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## SAR TEST REPORT

**Applicant Name:**

**SAMSUNG Electronics Co., Ltd.**

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of Korea

**Date of Issue:** Feb.24, 2022

**Test Report No:** HCT-SR-2202-FC003-R2

**Test Site:** HCT CO., LTD.

**FCC ID:**

**A3LSMA736B**

**Equipment Type:**

**Mobile Phone**

**Application Type**

**Certification**

**FCC Rule Part(s):**

**CFR §2.1093**

**Model Name:**

**SM-A736B/DS**

**Additional Model Name:**

**SM-A736B**

**Date of Test:**

**Jan. 03, 2022~Feb. 24, 2022**

This device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in FCC KDB procedures and had been tested in accordance with the measurement procedures specified in FCC KDB procedures.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Tested By

Da-sol, Lee  
Test Engineer  
SAR Team  
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Reviewed By

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SAR Team  
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**REVISION HISTORY**

The revision history for this test report is shown in table.

| Revision No. | Date of Issue | Description                                |
|--------------|---------------|--------------------------------------------|
| 0            | Feb. 24, 2022 | Initial Release                            |
| 1            | Feb. 18, 2022 | Revised Sec.1, Sec.4.5, 11.2 and Sec.13.3  |
| 2            | Feb. 24, 2022 | LTE 41 Hotspot,Grip,Ear-jack Backoff Added |

This test results were applied only to the test methods required by the standard.

## Table of Contents

|                                                       |     |
|-------------------------------------------------------|-----|
| 1. Test Regulations .....                             | 4   |
| 2. Test Location.....                                 | 5   |
| 3. Information of the EUT .....                       | 5   |
| 4. Device Under Test Description.....                 | 7   |
| 5. Introduction.....                                  | 23  |
| 6. Description of test equipment.....                 | 24  |
| 7. SAR Measurement Procedure .....                    | 25  |
| 8. Description of Test Position .....                 | 27  |
| 9. RF Exposure Limits .....                           | 32  |
| 10. FCC SAR General Measurement Procedures .....      | 33  |
| 11. Output Power Specifications.....                  | 40  |
| 12. System Verification .....                         | 163 |
| 13. SAR Test Data Summary.....                        | 168 |
| 14. Simultaneous SAR Analysis.....                    | 193 |
| 15. SAR Measurement Variability and Uncertainty ..... | 201 |
| 16. Measurement Uncertainty.....                      | 202 |
| 17. SAR Test Equipment .....                          | 203 |
| 18. Conclusion .....                                  | 205 |
| 19. References .....                                  | 206 |
| Appendix A. DUT Ant. Information & SETUP PHOTO .....  | 208 |

*Appendix A. DUT Ant. Information & Test SETUP PHOTO*

*Appendix B. SAR Test Plots*

*Appendix C. Dipole Verification Plots*

*Appendix D. SAR Tissue Characterization*

*Appendix E. SAR System Validation*

*Appendix F. Probe Calibration Data*

*Appendix G. Dipole Calibration Data*

*Appendix H. Power reduction verification*

*Appendix I. DLCA Power Measurement*

## 1. Test Regulations

The tests documented in this report were performed in accordance with FCC CFR § 2.1093, IEEE 1528-2013, ANSI C63.26-2015 the following FCC Published RF exposure KDB procedures:

- FCC KDB Publication 941225 D01 3G SAR Procedures v03r01
- FCC KDB Publication 941225 D06 Hot Spot SAR v02r01
- FCC KDB Publication 941225 D05 SAR for LTE Devices v02r05
- FCC KDB Publication 941225 D05A LTE Rel.10 KDB Inquiry sheet v01r02
- FCC KDB Publication 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB Publication 447498 D01 General SAR Guidance v06
- FCC KDB Publication 648474 D04 Handset SAR v01r03
- FCC KDB Publication 616217 D04 v01r02 (Proximity Sensor)
- FCC KDB Publication 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- FCC KDB Publication 865664 D02 SAR Reporting v01r02
- FCC KDB Publication 690783 D01 SAR Listings on Grants v01r03
- FCC KDB Publication 971168 D01 Power Meas License Digital Systems v03r01

In Addition to the above, the following information was used.

- October 2013 TCB Workshop Notes (GPRS testing criteria)
- October 2014 TCB Workshop Notes (Overlapping LTE Bands)
- April 2015 TCB Workshop Notes (Simultaneous transmission summation clarified)
- October 2016 TCB Workshop Notes (Bluetooth Duty Factor)
- November 2017 TCBC Workshop Notes (LTE Carrier Aggregation)
- April 2018 TCBC Workshop Notes (LTE DL CA SAR Test Exclusion)
- April 2019 TCBC Workshop Notes (Tissue Simulating Liquids)

## 2. Test Location

### 2.1 Test Laboratory

|              |                                                                                 |
|--------------|---------------------------------------------------------------------------------|
| Company Name | HCT Co., Ltd.                                                                   |
| Address      | 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA |
| Telephone    | 031-645-6300                                                                    |
| Fax.         | 031-645-6401                                                                    |

### 2.2 Test Facilities

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

|       |                                                         |
|-------|---------------------------------------------------------|
| Korea | National Radio Research Agency (Designation No. KR0032) |
|       | KOLAS (Testing No. KT197)                               |

## 3. Information of the EUT

### 3.1 General Information of the EUT

|                       |                               |
|-----------------------|-------------------------------|
| Model Name            | SM-A736B/DS                   |
| Additional Model Name | SM-A736B                      |
| Equipment Type        | Mobile Phone                  |
| FCC ID                | A3LSMA736B                    |
| Application Type      | Certification                 |
| Applicant             | SAMSUNG Electronics Co., Ltd. |

### 3.2 Attestation of test result of device under test

| The Highest Reported SAR                  |                            |                               |                     |              |             |               |
|-------------------------------------------|----------------------------|-------------------------------|---------------------|--------------|-------------|---------------|
| Band                                      | Tx. Frequency              | Equipment Class               | Reported SAR (W/kg) |              |             |               |
|                                           |                            |                               | 1g Head             | 1g Body-Worn | 1g Hotspot  | 10g Extremity |
| GSM/GPRS/EDGE 850                         | 824.2 MHz ~ 848.8 MHz      | PCE                           | 0.27                | 0.33         | 0.53        | N/A           |
| GSM/GPRS/EDGE 1900                        | 1 850.2 MHz~ 1 909.8 MHz   | PCE                           | 0.10                | 0.33         | 0.53        | N/A           |
| UMTS Band 5                               | 826.4 MHz~ 846.6 MHz       | PCE                           | 0.20                | 0.27         | 0.55        | N/A           |
| UMTS Band 4                               | 1 712.4 MHz~ 1 752.6 MHz   | PCE                           | 0.17                | <b>0.55</b>  | <b>0.99</b> | <b>2.96</b>   |
| UMTS Band 2                               | 1 852.4 MHz~ 1 907.6 MHz   | PCE                           | 0.16                | 0.46         | 0.89        | 2.01          |
| LTE Band 2 (PCS)                          | 1 850.7 MHz~ 1 909.3 MHz   | PCE                           | 0.13                | 0.32         | 0.74        | 1.62          |
| LTE Band 4 (AWS)                          | 1 710.7 MHz~ 1 754.3 MHz   | PCE                           | N/A                 | N/A          | N/A         | N/A           |
| LTE Band 5 (Cell)                         | 824.7 MHz~ 848.3 MHz       | PCE                           | 0.16                | 0.18         | 0.37        | N/A           |
| LTE Band 12                               | 699.7 MHz~ 715.3 MHz       | PCE                           | 0.17                | 0.22         | 0.28        | N/A           |
| LTE Band 13                               | 779.5 MHz~ 784.5 MHz       | PCE                           | 0.19                | 0.26         | 0.37        | N/A           |
| LTE Band 17                               | 706.5 MHz~ 713.5 MHz       | PCE                           | N/A                 | N/A          | N/A         | N/A           |
| LTE Band 26(Cell)                         | 814.7 MHz~ 848.3 MHz       | PCE                           | 0.18                | 0.17         | 0.38        | N/A           |
| LTE TDD Band 41                           | 2 498.5 MHz~ 2 687.5 MHz   | PCE                           | <0.10               | 0.24         | 0.31        | N/A           |
| LTE Band 66 (AWS)                         | 1 710.7 MHz ~ 1 779.3 MHz  | PCE                           | 0.16                | 0.50         | 0.66        | 1.50          |
| NR Band n5                                | 826.5 MHz~ 846.5 MHz       | PCE                           | <0.10               | 0.19         | 0.32        | N/A           |
| NR Band n41                               | 2 506.02 MHz~ 2 679.99 MHz | PCE                           | 0.59                | 0.33         | 0.51        | N/A           |
| NR Band n66(Main #1)                      | 1 712.5 MHz~ 1 777.5 MHz   | PCE                           | 0.14                | 0.46         | 0.75        | 1.78          |
| NR Band n66(Sub #2)                       | 1 712.5 MHz~ 1 777.5 MHz   | PCE                           | <b>0.68</b>         | 0.45         | 0.37        | N/A           |
| 802.11b                                   | 2 412 MHz~ 2 472 MHz       | DTS                           | 0.10                | 0.16         | 0.36        | N/A           |
| U-NII-1                                   | 5 180 MHz~ 5 240 MHz       | NII                           | N/A                 | N/A          | N/A         | N/A           |
| U-NII-2A                                  | 5 260 MHz~ 5 320 MHz       | NII                           | <b>0.53</b>         | 0.22         | N/A         | <b>2.23</b>   |
| U-NII-2C                                  | 5 500 MHz~ 5 720 MHz       | NII                           | 0.47                | 0.23         | N/A         | 1.27          |
| U-NII-3                                   | 5 745 MHz~ 5 825 MHz       | NII                           | 0.40                | <b>0.24</b>  | <b>0.90</b> | N/A           |
| Bluetooth                                 | 2 402 MHz~ 2 480 MHz       | DSS                           | 0.34                | <0.10        | 0.21        | N/A           |
| Simultaneous SAR per KDB 690783 D01v01r03 |                            |                               | <b>1.59</b>         | 1.13         | 1.14        | <b>3.65</b>   |
| Date(s) of Tests:                         |                            | Jan. 03, 2022 ~ Feb. 24, 2022 |                     |              |             |               |

## 4. Device Under Test Description

### 4.1 DUT specification

| Device Wireless specification overview |                                                                                                                                                                                        |                             |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Band & Mode                            | Operating Mode                                                                                                                                                                         | Tx Frequency                |
| GSM850                                 | Voice / Data                                                                                                                                                                           | 824.2 MHz~ 848.8 MHz        |
| GSM1900                                | Voice / Data                                                                                                                                                                           | 1 850.2 MHz~ 1 909.8 MHz    |
| UMTS Band 5                            | Voice / Data                                                                                                                                                                           | 826.4 MHz~ 846.6 MHz        |
| UMTS Band 4                            | Voice / Data                                                                                                                                                                           | 1 712.4 MHz~ 1 752.6 MHz    |
| UMTS Band 2                            | Voice / Data                                                                                                                                                                           | 1 852.4 MHz~ 1 907.6 MHz    |
| LTE Band 2 (PCS)                       | Voice / Data                                                                                                                                                                           | 1 850.7 MHz~ 1 909.3 MHz    |
| LTE Band 4 (AWS)                       | Voice / Data                                                                                                                                                                           | 1 710.7 MHz~ 1 754.3 MHz    |
| LTE Band 5 (Cell)                      | Voice / Data                                                                                                                                                                           | 824.7 MHz~ 848.3 MHz        |
| LTE Band 12                            | Voice / Data                                                                                                                                                                           | 699.7 MHz~ 715.3 MHz        |
| LTE Band 13                            | Voice / Data                                                                                                                                                                           | 779.5 MHz~ 784.5 MHz        |
| LTE Band 17                            | Voice / Data                                                                                                                                                                           | 706.5 MHz~ 713.5 MHz        |
| LTE Band 26                            | Voice / Data                                                                                                                                                                           | 814.7 MHz~ 848.3 MHz        |
| LTE TDD Band 41                        | Voice / Data                                                                                                                                                                           | 2 498.5 MHz~ 2 687.5 MHz    |
| LTE Band 66 (AWS)                      | Voice / Data                                                                                                                                                                           | 1 710.7 MHz ~ 1 779.3 MHz   |
| NR Band n5                             | Voice / Data                                                                                                                                                                           | 826.5 MHz~ 846.5 MHz        |
| NR Band n41                            | Voice / Data                                                                                                                                                                           | 2 506.02 MHz~ 2 679.99 MHz  |
| NR Band n66                            | Voice / Data                                                                                                                                                                           | 1 712.5 MHz~ 1 777.5 MHz    |
| U-NII-1                                | Voice / Data                                                                                                                                                                           | 5 180 MHz ~ 5 240 MHz       |
| U-NII-2A                               | Voice / Data                                                                                                                                                                           | 5 260 MHz ~ 5 320 MHz       |
| U-NII-2C                               | Voice / Data                                                                                                                                                                           | 5 500 MHz ~ 5 720 MHz       |
| U-NII-3                                | Voice / Data                                                                                                                                                                           | 5 745 MHz ~ 5 825 MHz       |
| 2.4 GHz WLAN                           | Voice / Data                                                                                                                                                                           | 2 412 MHz ~ 2 472 MHz       |
| Bluetooth / LE 5.0                     | Data                                                                                                                                                                                   | 2 402 MHz ~ 2 480 MHz       |
| NFC                                    | Data                                                                                                                                                                                   | 13.56 MHz                   |
| Device Serial Numbers                  | Mode                                                                                                                                                                                   | Serial Number               |
|                                        | GSM850,1900, UMTS Band 2,4,5,LTE Band 2,5,12,13,26,41,66, NR n5, n41, n66                                                                                                              | UKH1594M,UKH1583M, UKH1592M |
|                                        | Bluetooth, 2.4G WLAN, 5GHz WLAN                                                                                                                                                        | UL82232S,UKH1583M, UKH1588M |
|                                        | The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units. |                             |

## 4.4 Nominal and Maximum Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D01v06.

### 4.4.1 Maximum PCE Output Power

The maximum output power declared in this section is burst average and not time or frame average.

| Mode / Band |         | Voice     | Burst Average GMSK (dBm) |           |           |           | Burst Average 8-PSK (dBm) |           |           |           |
|-------------|---------|-----------|--------------------------|-----------|-----------|-----------|---------------------------|-----------|-----------|-----------|
|             |         | 1 Tx Slot | 1 Tx Slot                | 2 Tx Slot | 3 Tx Slot | 4 Tx Slot | 1 Tx Slot                 | 2 Tx Slot | 3 Tx Slot | 4 Tx Slot |
| GSM 850     | Maximum | 34.0      | 34.0                     | 32.5      | 30.5      | 28.5      | 28.0                      | 26.0      | 24.0      | 23.0      |
|             | Nominal | 33.0      | 33.0                     | 31.5      | 29.5      | 27.5      | 26.5                      | 25.0      | 23.0      | 22.0      |
| GSM 1900    | Maximum | 31.0      | 31.0                     | 30.0      | 27.5      | 26.0      | 27.0                      | 25.0      | 23.5      | 22.0      |
|             | Nominal | 30.0      | 30.0                     | 29.0      | 26.5      | 25.0      | 26.0                      | 24.0      | 22.5      | 21.0      |

(Tolerance: Nominal +1dB ~-1.5dB)

| Mode/ Band                |         | ModulatedAverage(dBm) |            |            |          |
|---------------------------|---------|-----------------------|------------|------------|----------|
|                           |         | 3GPP UMTS             | 3GPP HSDPA | 3GPP HSUPA | DC-HSDPA |
| UMTS Band 5<br>(850 MHz)  | Maximum | 25.0                  | 24.5       | 24.5       | 24.0     |
|                           | Nominal | 24.0                  | 23.5       | 23.5       | 23.0     |
| UMTS Band 4<br>(1700 MHz) | Maximum | 25.0                  | 24.5       | 24.5       | 24.0     |
|                           | Nominal | 24.0                  | 23.5       | 23.5       | 23.0     |
| UMTS Band 2<br>(1900 MHz) | Maximum | 25.0                  | 24.5       | 24.5       | 23.0     |
|                           | Nominal | 24.0                  | 23.5       | 23.5       | 22.0     |

(Tolerance: Nominal +1dB ~-1.5dB)

| Mode / Band        |         | Modulated Average (dBm) |
|--------------------|---------|-------------------------|
| LTE Band 2 (PCS)   | Maximum | 24.5                    |
|                    | Nominal | 23.5                    |
| LTE Band 4 (AWS)   | Maximum | 24.5                    |
|                    | Nominal | 23.5                    |
| LTE Band 5 (Cell)  | Maximum | 25.0                    |
|                    | Nominal | 24.0                    |
| LTE Band 12        | Maximum | 25.0                    |
|                    | Nominal | 24.0                    |
| LTE Band 13        | Maximum | 25.0                    |
|                    | Nominal | 24.0                    |
| LTE Band 17        | Maximum | 25.0                    |
|                    | Nominal | 24.0                    |
| LTE Band 26 (Cell) | Maximum | 25.0                    |
|                    | Nominal | 24.0                    |
| LTE Band 41        | Maximum | 25.0                    |
|                    | Nominal | 24.0                    |
| LTE Band 66 (AWS)  | Maximum | 24.5                    |
|                    | Nominal | 23.5                    |

(Tolerance: Nominal +1dB ~-1.5dB)

| Mode / Band          |         | Modulated Average (dBm) |
|----------------------|---------|-------------------------|
| NR Band n5(Cell)     | Maximum | 25.0                    |
|                      | Nominal | 24.0                    |
| NR Band n41          | Maximum | 24.0                    |
|                      | Nominal | 23.0                    |
| NR Band n66(Main #1) | Maximum | 24.5                    |
|                      | Nominal | 23.5                    |
| NR Band n66(Sub #2)  | Maximum | 23.0                    |
|                      | Nominal | 22.0                    |

(Tolerance: Nominal +1dB ~-1.5dB)

### 4.3.2 Reduced Output Power for 3G/4G/5G Bands –

#### EarJack/Grip/Hotspot

| Mode / Band |         | Voice     | Burst Average GMSK (dBm) |           |           |           | Burst Average 8-PSK (dBm) |           |           |           |
|-------------|---------|-----------|--------------------------|-----------|-----------|-----------|---------------------------|-----------|-----------|-----------|
|             |         | 1 Tx Slot | 1 Tx Slot                | 2 Tx Slot | 3 Tx Slot | 4 Tx Slot | 1 Tx Slot                 | 2 Tx Slot | 3 Tx Slot | 4 Tx Slot |
| GSM 1900    | Maximum | 28.0      | 28.0                     | 27.5      | 25.5      | 24.0      | 24.0                      | 23.5      | 22.0      | 21.0      |
|             | Nominal | 27.0      | 27.0                     | 26.5      | 24.5      | 23.0      | 23.0                      | 22.5      | 21.0      | 20.0      |

(Tolerance: Nominal +1dB ~-1.5dB)

#### EarJack/Grip/Hotspot

| Mode/ Band             |         | ModulatedAverage(dBm) |            |            |          |
|------------------------|---------|-----------------------|------------|------------|----------|
|                        |         | 3GPP UMTS             | 3GPP HSDPA | 3GPP HSUPA | DC-HSDPA |
| UMTS Band 4 (1700 MHz) | Maximum | 22.5                  | 22.0       | 21.5       | 22.0     |
|                        | Nominal | 21.5                  | 21.0       | 20.5       | 21.0     |
| UMTS Band 2 (1900 MHz) | Maximum | 22.5                  | 22.0       | 21.5       | 22.0     |
|                        | Nominal | 21.5                  | 21.0       | 20.5       | 21.0     |

(Tolerance: Nominal +1dB ~-1.5dB)

| Mode / Band       |         | Modulated Average (dBm) |      |         |
|-------------------|---------|-------------------------|------|---------|
|                   |         | Hotspot                 | Grip | Earjack |
| LTE Band 2 (PCS)  | Maximum | 21.5                    | 21.5 | 21.5    |
|                   | Nominal | 20.5                    | 20.5 | 20.5    |
| LTE Band 4 (AWS)  | Maximum | 21.5                    | 21.5 | 21.5    |
|                   | Nominal | 20.5                    | 20.5 | 20.5    |
| LTE Band 41       | Maximum | 23.0                    | 23.0 | 23.0    |
|                   | Nominal | 22.0                    | 22.0 | 22.0    |
| LTE Band 66 (AWS) | Maximum | 20.5                    | 20.5 | 20.5    |
|                   | Nominal | 19.5                    | 19.5 | 19.5    |

(Tolerance: Nominal +1dB ~-1.5dB)

| Mode / Band          |         | Modulated Average (dBm) |      |         |      |
|----------------------|---------|-------------------------|------|---------|------|
|                      |         | Hotspot                 | Grip | Earjack | RCV  |
| NR Band n41          | Maximum | 23.0                    | N/A  | N/A     | 21.5 |
|                      | Nominal | 22.0                    | N/A  | N/A     | 20.5 |
| NR Band n66(Main #1) | Maximum | 20.0                    | 20.0 | 20.0    | N/A  |
|                      | Nominal | 19.0                    | 19.0 | 19.0    | N/A  |
| NR Band n66(Sub #2)  | Maximum | 18.0                    | N/A  | N/A     | 18.0 |
|                      | Nominal | 17.0                    | N/A  | N/A     | 17.0 |

(Tolerance: Nominal +1dB ~-1.5dB)

### 4.3.3 Maximum 2.4 GHz, 5 GHz WIFI output power

| IEEE802.11(indBm)          |          |             |     |     |     |     |     |    |
|----------------------------|----------|-------------|-----|-----|-----|-----|-----|----|
| Mode                       | Protocol | SensorState | a   | b   | g   | n   | ac  | ax |
| 2.4GHz<br>Wi-Fi            | Ch.1~11  | Inactive    | N/A | 19  | 17  | 17  | N/A | 14 |
|                            | Ch.12    | Inactive    | N/A | 11  | 11  | 11  | N/A | 11 |
|                            | Ch.13    | Inactive    | N/A | 11  | 11  | 11  | N/A |    |
| 5GHz<br>Wi-Fi(20<br>MHzBW) | 5200MHz  | Inactive    | 14  | N/A | N/A | 14  | 13  | 12 |
|                            | 5300MHz  | Inactive    | 14  | N/A | N/A | 14  | 13  | 12 |
|                            | 5500MHz  | Inactive    | 14  | N/A | N/A | 14  | 13  | 12 |
|                            | 5700MHz  | Inactive    | 14  | N/A | N/A | 14  | 13  | 12 |
|                            | 5800MHz  | Inactive    | 14  | N/A | N/A | 14  | 13  | 12 |
| 5GHz<br>Wi-Fi(40<br>MHzBW) | 5190MHz  | Inactive    | N/A | N/A | N/A | 12  | 12  | 12 |
|                            | 5230MHz  | Inactive    | N/A | N/A | N/A | 12  | 12  | 12 |
|                            | 5300MHz  | Inactive    | N/A | N/A | N/A | 12  | 12  | 12 |
|                            | 5500MHz  | Inactive    | N/A | N/A | N/A | 12  | 12  | 12 |
|                            | 5800MHz  | Inactive    | N/A | N/A | N/A | 12  | 12  | 12 |
| 5GHz<br>Wi-Fi(80<br>MHzBW) | 5200MHz  | Inactive    | N/A | N/A | N/A | N/A | 11  | 10 |
|                            | 5300MHz  | Inactive    | N/A | N/A | N/A | N/A | 11  | 11 |
|                            | 5500MHz  | Inactive    | N/A | N/A | N/A | N/A | 11  | 11 |
|                            | 5800MHz  | Inactive    | N/A | N/A | N/A | N/A | 11  | 11 |

(Upper Tolerance: target ~ +1.0 dB)

#### 4.3.4 Reduced 2.4 GHz, 5 GHz WIFI output power –Receiver on.

| IEEE802.11(indBm)          |          |                 |     |     |     |     |     |    |
|----------------------------|----------|-----------------|-----|-----|-----|-----|-----|----|
| Mode                       | Protocol | SensorSta<br>te | a   | b   | g   | n   | ac  | ax |
| 2.4GHz<br>Wi-Fi            | Ch.1~11  | Active          | N/A | 11  | 11  | 11  | N/A | 11 |
|                            | Ch.12    | Active          | N/A | 11  | 11  | 11  | N/A | 11 |
|                            | Ch.13    | Active          | N/A | 11  | 11  | 11  | N/A | 11 |
| 5GHz<br>Wi-Fi(20<br>MHzBW) | 5200MHz  | Active          | 11  | N/A | N/A | 11  | 11  | 11 |
|                            | 5300MHz  | Active          | 11  | N/A | N/A | 11  | 11  | 11 |
|                            | 5500MHz  | Active          | 11  | N/A | N/A | 11  | 11  | 11 |
|                            | 5700MHz  | Active          | 11  | N/A | N/A | 11  | 11  | 11 |
|                            | 5800MHz  | Active          | 11  | N/A | N/A | 11  | 11  | 11 |
| 5GHz<br>Wi-Fi(40<br>MHzBW) | 5190MHz  | Active          | N/A | N/A | N/A | 11  | 11  | 11 |
|                            | 5230MHz  | Active          | N/A | N/A | N/A | 11  | 11  | 11 |
|                            | 5300MHz  | Active          | N/A | N/A | N/A | 11  | 11  | 11 |
|                            | 5500MHz  | Active          | N/A | N/A | N/A | 11  | 11  | 11 |
|                            | 5800MHz  | Active          | N/A | N/A | N/A | 11  | 11  | 11 |
| 5GHz<br>Wi-Fi(80<br>MHzBW) | 5200MHz  | Active          | N/A | N/A | N/A | N/A | 11  | 10 |
|                            | 5300MHz  | Active          | N/A | N/A | N/A | N/A | 11  | 11 |
|                            | 5500MHz  | Active          | N/A | N/A | N/A | N/A | 11  | 11 |
|                            | 5800MHz  | Active          | N/A | N/A | N/A | N/A | 11  | 11 |

(Upper Tolerance: target ~ +1.0 dB)

#### 4.3.5 Maximum Power 2.4 GHz, 5 GHz 802.11ax RU Power

| Tones | SISO(ANT1)/indBm     |             |             |               |
|-------|----------------------|-------------|-------------|---------------|
|       | 2.4G<br>802.11ax(HE) | 5G/20Mhz    | 5G/40Mhz    | 5G/80Mhz      |
|       | Ch& RUindex          | Ch& RUindex | Ch& RUindex | Ch& RUindex   |
| 26T   | 9<br>(Ch13:2)        | 9           | 9           | 9             |
| 52T   | 9<br>(Ch13:2.5)      | 9           | 9           | 9             |
| 106T  | 9<br>(Ch13:5)        | 9           | 9           | 9             |
| 242T  | 9<br>(Ch13:8)        | 9           | 9           | 9             |
| 484T  |                      |             | 9           | 9             |
| 996T  |                      |             |             | 9<br>(Ch42:8) |

(Upper Tolerance: target ~ +1.0 dB)

#### 4.3.6 Reduced Power 5 GHz 802.11ax RU Tx power – Receiver on

| Tones | SISO(ANT1)/indBm |              |              |               |
|-------|------------------|--------------|--------------|---------------|
|       | 2.4G             | 5G/20Mhz     | 5G/40Mhz     | 5G/80Mhz      |
|       | Ch& RU index     | Ch& RU index | Ch& RU index | Ch& RU index  |
| 26T   | 9<br>(Ch13:2)    | 9            | 9            | 9             |
| 52T   | 9<br>(Ch13:2.5)  | 9            | 9            | 9             |
| 106T  | 9<br>(Ch13:5)    | 9            | 9            | 9             |
| 242T  | 9<br>(Ch13:8)    | 9            | 9            | 9             |
| 484T  |                  |              | 9            | 9             |
| 96T   |                  |              |              | 9<br>(Ch42:8) |

(Upper Tolerance: target ~ +1.0 dB)

#### 4.3.7 Maximum Bluetooth Power

|                         |             | Targetpower(dBm) |
|-------------------------|-------------|------------------|
| Bluetooth<br>(indBm)    | DH5         | 16.0             |
|                         | 2-DH5       | 13               |
|                         | 3-DH5       |                  |
| Bluetooth LE<br>(indBm) | 125k        | 7.5              |
|                         | 125k HPM    | 13               |
|                         | 500k        | 7.5              |
|                         | 500k<br>HPM | 13               |
|                         | 1M          | 7.5              |
|                         | 1M<br>HPM   | 13               |
|                         | 2M          | 7.5              |
|                         | 2M<br>HPM   | 13               |

(Upper Tolerance: target ~ +1.0 dB)

## 4.5 LTE Information

| Item.              | Description                                                                 |
|--------------------|-----------------------------------------------------------------------------|
| Frequency Range    | LTE Band 2 (PCS) 1 850.7 MHz~ 1 909.3 MHz                                   |
|                    | LTE Band 4 (AWS) 1 710.7 MHz~ 1 754.3 MHz                                   |
|                    | LTE Band 5 (Cell) 824.7 MHz~ 848.3 MHz                                      |
|                    | LTE Band 12 699.7 MHz~ 715.3 MHz                                            |
|                    | LTE Band 13 779.5 MHz~ 784.5 MHz                                            |
|                    | LTE Band 17 706.5 MHz~ 713.5 MHz                                            |
|                    | LTE Band 26 (Cell) 814.7 MHz~ 848.3 MHz                                     |
|                    | LTE TDD Band 41 2 498.5 MHz~ 2 687.5 MHz                                    |
|                    | LTE Band 66 (AWS) 1 710.7 MHz ~ 1 779.3 MHz                                 |
|                    | NR Band n5 (Cell) 826.5 MHz~ 846.5 MHz                                      |
|                    | NR Band n41 2 506.02 MHz~ 2 679.99 MHz                                      |
|                    | NR Band n66 (AWS) 1 712.5 MHz~ 1 777.5 MHz                                  |
| Channel Bandwidths | LTE Band 2 (PCS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz              |
|                    | LTE Band 4 (AWS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz              |
|                    | LTE Band 5 (Cell) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz                             |
|                    | LTE Band 12 1.4 MHz, 3 MHz, 5 MHz, 10 MHz                                   |
|                    | LTE Band 13 5 MHz, 10 MHz                                                   |
|                    | LTE Band 17 5 MHz, 10 MHz                                                   |
|                    | LTE Band 26 (Cell) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz                    |
|                    | LTE TDD Band 41 5 MHz, 10 MHz, 15 MHz, 20 MHz                               |
|                    | LTE Band 66 (AWS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz             |
|                    | NR Band n5 (Cell) 5 MHz, 10 MHz, 15 MHz, 20 MHz                             |
|                    | NR Band n41 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 80 MHz, 90 MHz, 100 MHz |
|                    | NR Band n66(AWS) 5 MHz, 10 MHz, 15 MHz, 20 MHz                              |

| Ch. No.& Freq.(MHz) | Low                     | Mid             | High            |
|---------------------|-------------------------|-----------------|-----------------|
| LTE Band 2 (PCS)    | 1.4 MHz 1 850.7 (18607) | 1 880.0 (18900) | 1 909.3 (19193) |
|                     | 3 MHz 1 851.5 (18615)   | 1 880.0 (18900) | 1 908.5 (19185) |
|                     | 5 MHz 1 852.5 (18625)   | 1 880.0 (18900) | 1 907.5 (19175) |
|                     | 10 MHz 1 855.0 (18650)  | 1 880.0 (18900) | 1 905.0 (19150) |
|                     | 15 MHz 1 857.5 (18675)  | 1 880.0 (18900) | 1 902.5 (19125) |
|                     | 20 MHz 1 860.0 (18700)  | 1 880.0 (18900) | 1 900.0 (19100) |
| LTE Band 4 (AWS)    | 1.4 MHz 1 710.7 (19957) | 1 732.5 (20175) | 1 754.3 (20393) |
|                     | 3 MHz 1 711.5 (19965)   | 1 732.5 (20175) | 1 753.5 (20385) |
|                     | 5 MHz 1 712.5 (19975)   | 1 732.5 (20175) | 1 752.5 (20375) |
|                     | 10 MHz 1 715.0 (20000)  | 1 732.5 (20175) | 1 750.0 (20350) |
|                     | 15 MHz 1 717.5 (20025)  | 1 732.5 (20175) | 1 747.5 (20325) |
|                     | 20 MHz 1 720.0 (20050)  | 1 732.5 (20175) | 1 745.0 (20300) |
| LTE Band 5 (Cell)   | 1.4 MHz 824.7 (20407)   | 836.5 (20525)   | 848.3 (20643)   |
|                     | 3 MHz 825.5 (20415)     | 836.5 (20525)   | 847.5 (20635)   |
|                     | 5 MHz 826.5 (20425)     | 836.5 (20525)   | 846.5 (20625)   |
|                     | 10 MHz 829.0 (20450)    | 836.5 (20525)   | 844.0 (20600)   |
| LTE Band 12         | 1.4 MHz 699.7 (23017)   | 707.5 (23095)   | 715.3 (23173)   |
|                     | 3 MHz 700.5 (23025)     | 707.5 (23095)   | 714.5 (23165)   |
|                     | 5 MHz 701.5 (23035)     | 707.5 (23095)   | 713.5 (23155)   |
|                     | 10 MHz 704.0 (23060)    | 707.5 (23095)   | 711.0 (23130)   |
| LTE Band 13         | 5 MHz 779.5 (23205)     | 782 (23230)     | 784.5 (23255)   |
|                     | 10 MHz                  | 782 (23230)     |                 |
| LTE Band 17         | 5 MHz                   | 710 (23790)     |                 |
|                     | 10 MHz                  | 710 (23790)     |                 |

| Ch. No.& Freq.(MHz)                                              |         | Low                                                                                                                                                                                                                                                                                                                                      |                | Mid            |                | High             |  |
|------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|------------------|--|
| LTE Band 26<br>(Cell)                                            | 1.4 MHz | 814.7 (26697)                                                                                                                                                                                                                                                                                                                            |                | 831.5 (26865)  |                | 848.3 (27033)    |  |
|                                                                  | 3 MHz   | 815.5 (26705)                                                                                                                                                                                                                                                                                                                            |                | 831.5 (26865)  |                | 847.5 (27025)    |  |
|                                                                  | 5 MHz   | 816.5 (26715)                                                                                                                                                                                                                                                                                                                            |                | 831.5 (26865)  |                | 846.5 (27015)    |  |
|                                                                  | 10 MHz  | 819.0 (26740)                                                                                                                                                                                                                                                                                                                            |                | 831.5 (26865)  |                | 844.0 (26990)    |  |
|                                                                  | 15 MHz  | 821.5 (26765)                                                                                                                                                                                                                                                                                                                            |                | 831.5 (26865)  |                | 841.5 (26965)    |  |
| LTE Band 66<br>(AWS)                                             | 1.4 MHz | 1 710.7 (131979)                                                                                                                                                                                                                                                                                                                         |                | 1 745 (132322) |                | 1 779.3 (132665) |  |
|                                                                  | 3 MHz   | 1 711.5 (131987)                                                                                                                                                                                                                                                                                                                         |                | 1 745 (132322) |                | 1 778.5 (132657) |  |
|                                                                  | 5 MHz   | 1 712.5 (131997)                                                                                                                                                                                                                                                                                                                         |                | 1 745 (132322) |                | 1 777.5 (132647) |  |
|                                                                  | 10 MHz  | 1 715.0 (132022)                                                                                                                                                                                                                                                                                                                         |                | 1 745 (132322) |                | 1 775.0 (132622) |  |
|                                                                  | 15 MHz  | 1 717.5 (132047)                                                                                                                                                                                                                                                                                                                         |                | 1 745 (132322) |                | 1 772.5 (132597) |  |
|                                                                  | 20 MHz  | 1 720.0 (132072)                                                                                                                                                                                                                                                                                                                         |                | 1 745 (132322) |                | 1 770.0 (132572) |  |
| LTE TDD Band<br>41                                               | 5 MHz   | 2 506.0(39750)                                                                                                                                                                                                                                                                                                                           | 2 549.5(40185) | 2 593.0(40620) | 2 636.5(41055) | 2 680.0(41490)   |  |
|                                                                  | 10 MHz  | 2 506.0(39750)                                                                                                                                                                                                                                                                                                                           | 2 549.5(40185) | 2 593.0(40620) | 2 636.5(41055) | 2 680.0(41490)   |  |
|                                                                  | 15 MHz  | 2 506.0(39750)                                                                                                                                                                                                                                                                                                                           | 2 549.5(40185) | 2 593.0(40620) | 2 636.5(41055) | 2 680.0(41490)   |  |
|                                                                  | 20 MHz  | 2 506.0(39750)                                                                                                                                                                                                                                                                                                                           | 2 549.5(40185) | 2 593.0(40620) | 2 636.5(41055) | 2 680.0(41490)   |  |
| UE Category                                                      |         | LTE Rel. 15, UE DL: Category 18, UL: Category 18                                                                                                                                                                                                                                                                                         |                |                |                |                  |  |
| Modulations Supported in UL                                      |         | QPSK, 16QAM, 64QAM, 256 QAM                                                                                                                                                                                                                                                                                                              |                |                |                |                  |  |
| LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3 |         | Yes                                                                                                                                                                                                                                                                                                                                      |                |                |                |                  |  |
| A-MPR disabled for SAR Testing.                                  |         | Yes                                                                                                                                                                                                                                                                                                                                      |                |                |                |                  |  |
| LTE Carrier Aggregation                                          |         | This device supports Inter-band & Intra-band DL-link Carrier aggregationonly. Detaled information of Down-Link CA are included in the Appendix.I and Technical Description document.                                                                                                                                                     |                |                |                |                  |  |
| LTE Release information                                          |         | This device does not support full CA features on 3GPP Release 15. It supports carrier aggregation, downlink MIMO. All other uplink communications are identical to the release 8 specifications. The following LTE Release 15 Features are not supported: Relay, Hetnet, Enhanced eICI, MDH, cross-carrier Scheduling, Enhanced SC-FDMA. |                |                |                |                  |  |

| Ch. No.& Freq.(MHz)  | Low / Low-Mid | Mid              | Mid-High / High  |
|----------------------|---------------|------------------|------------------|
| NR Band n5<br>(Cell) | 5 MHz         | 826.5 (165300)   | 836.5 (167300)   |
|                      | 10 MHz        | 829 (165800)     | 836.5 (167300)   |
|                      | 15 MHz        | 831.5 (166300)   | 836.5 (167300)   |
|                      | 20 MHz        | 834 (166800)     | 836.5 (167300)   |
| NR Band<br>n66(AWS)  | 5 MHz         | 1712.5 (342500)  | 1745 (349000)    |
|                      | 10 MHz        | 1715 (343000)    | 1745 (349000)    |
|                      | 15 MHz        | 1717.5 (343500)  | 1745 (349000)    |
|                      | 20 MHz        | 1720 (344000)    | 1745 (349000)    |
| NR Band n41          | 20 MHz        | 2506.02 (501204) | 2549.49 (509898) |
|                      | 30 MHz        | 2511(502200)     | 2552.01(510402)  |
|                      | 40 MHz        | 2516.01 (503202) | 2567.34 (513468) |
|                      | 50 MHz        | 2521.02 (504204) | 2592.99 (518598) |
|                      | 60 MHz        | 2526 (505200)    | 2592.99 (518598) |
|                      | 80 MHz        | 2536.02 (507204) |                  |
|                      | 90 MHz        | 2541 (508200)    |                  |
|                      | 100 MHz       |                  | 2592.99 (518598) |

| Item.                                                                                                                                              | Description                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| NR Bandn5 /n66 SCS                                                                                                                                 | 15 kHz                                                                                                |
| NR Band n41 SCS                                                                                                                                    | 30 kHz                                                                                                |
| 3GPP Rel.                                                                                                                                          | Rel.16                                                                                                |
| A-MPR disabled for SAR Testing.                                                                                                                    | Yes                                                                                                   |
| 5G NR UL/DL FR1                                                                                                                                    | CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM<br>DFT-s-OFDM: $\pi/2$ -BPSK(UL Only), QPSK, 16QAM, 64QAM, 256QAM |
| Non-Standalone & Standalone are supported.<br>More detailed specifications of the 5G NR bands are contained in the Technical description document. |                                                                                                       |
| EN-DC Carrier Aggregation Possible Combinations                                                                                                    | The technical description includes all the possible carrier aggregation combinations                  |
| LTE Anchor Band for NR Band n5                                                                                                                     | LTE B2, 66                                                                                            |
| LTE Anchor Band for NR Band n66(Sub #2)                                                                                                            | LTE B2, 5, 12, 13                                                                                     |
| LTE Anchor Band for NR Band n41                                                                                                                    | LTE B66                                                                                               |

## 4.6 DUT Antenna Locations

The overall dimensions of this device are > 9 X 5 cm. A diagram showing device antenna can be found in SAR\_setup\_photos. Since the diagonal dimension of this device is > 160 mm and < 200 mm, it is considered a “phablet”.

This model allows users to exchange data or media files with other Bluetooth enabled devices using Bluetooth, which means they can connect to other Bluetooth enabled devices via Bluetooth tethering. Therefore, SAR test was performed for additional simultaneous transmissions.

Head and Bluetooth Tethering SAR were evaluated for BT BR tethering applications.

| Mode               | Antenna | Rear | Front | Left | Right | Top | Bottom |
|--------------------|---------|------|-------|------|-------|-----|--------|
| GSM/GPRS/EDGE 850  | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| GSM/GPRS/EDGE 1900 | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| UMTS Band 5        | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| UMTS Band 4        | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| UMTS Band 2        | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| LTE Band 2 (PCS)   | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| LTE Band 4 (AWS)   | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| LTE Band 5 (Cell)  | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| LTE Band 12        | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| LTE Band 13        | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| LTE Band 17        | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| LTE Band 26 (Cell) | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| LTE TDD Band 41    | Main #2 | Yes  | Yes   | Yes  | No    | No  | Yes    |
| LTE Band 66 (AWS)  | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| NR Band n5         | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| NR Band n41        | Sub #2  | Yes  | Yes   | Yes  | No    | Yes | No     |
| NR Band n66(SA)    | Main #1 | Yes  | Yes   | Yes  | Yes   | No  | Yes    |
| NR Band n66(NSA)   | Sub #2  | Yes  | Yes   | Yes  | No    | Yes | No     |
| 2.4 GHz WLAN       | Sub #2  | Yes  | Yes   | Yes  | No    | Yes | No     |
| 5 GHz WLAN         | Sub #3  | Yes  | Yes   | Yes  | No    | Yes | No     |
| Bluetooth          | Sub #2  | Yes  | Yes   | Yes  | No    | Yes | No     |

Particular EUT edges were not required to be evaluated for Bluetooth Tethering and Hotspot SAR if the edges were > 25 mm from the transmitting antenna according to FCC KDB 941225 D06v02r01 on page 2.

The distance between the transmit antennas and the edges of the device are included in the filing.

- Note: All test configurations are based on front view position.

## 4.7 Near Field Communications (NFC) Antenna

This EUT has NFC operations. The NFC antenna is integrated into the device for this model. Therefore, all SAR tests were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the NFC antenna can be found in SAR \_ Setup\_ photos.

## 4.8 SAR Summation Scenario

According to FCC KDB 447498 D01v06, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. Possible transmission paths for the EUT are shown below paths and are mode in same rectangle to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB 447498 D01v06

| Simultaneous Transmission Scenarios   |       |           |         |           |
|---------------------------------------|-------|-----------|---------|-----------|
| Applicable Combination                | Head  | Body-Worn | Hotspot | Extremity |
| GSM Voice + 2.4 GHz WiFi              | Yes   | Yes       | N/A     | Yes       |
| GSM Voice + 5 GHz WiFi                | Yes   | Yes       | N/A     | Yes       |
| GSM Voice + Bluetooth                 | Yes^  | Yes       | N/A     | Yes       |
| GSM Voice + 5 GHz WiFi + Bluetooth    | Yes^  | Yes       | N/A     | Yes       |
| GSMGPRS/EDGE + 2.4 GHz WiFi           | Yes*  | Yes       | Yes     | Yes       |
| GSMGPRS/EDGE + 5 GHz WiFi             | Yes*  | Yes       | Yes     | Yes       |
| GSMGPRS/EDGE + Bluetooth              | Yes^* | Yes       | Yes^    | Yes       |
| GSMGPRS/EDGE + 5 GHz WiFi + Bluetooth | Yes^* | Yes       | Yes^    | Yes       |
| UMTS + 2.4 GHz WiFi                   | Yes   | Yes       | Yes     | Yes       |
| UMTS + 5 GHz WiFi                     | Yes   | Yes       | Yes     | Yes       |
| UMTS + Bluetooth                      | Yes^  | Yes       | Yes^    | Yes       |
| UMTS + 5 GHz WiFi + Bluetooth         | Yes^  | Yes       | Yes^    | Yes       |
| LTE + 2.4 GHz WiFi                    | Yes*  | Yes       | Yes     | Yes       |
| LTE + 5 GHz WiFi                      | Yes*  | Yes       | Yes     | Yes       |
| LTE+ Bluetooth                        | Yes^  | Yes       | Yes^    | Yes       |
| LTE + 5 GHz WiFi + Bluetooth          | Yes^  | Yes       | Yes^    | Yes       |
| LTE+ 5GNR                             | Yes   | Yes       | N/A     | Yes       |
| LTE+ 5GNR + 2.4 GHz WiFi              | Yes*  | Yes       | Yes     | Yes       |
| LTE+ 5GNR + 5 GHz WiFi                | Yes*  | Yes       | Yes     | Yes       |
| LTE+ 5GNR+ Bluetooth                  | Yes^  | Yes       | Yes^    | Yes       |
| LTE+ 5GNR + 5 GHz WiFi + Bluetooth    | Yes^  | Yes       | Yes^    | Yes       |
| 5GNR + 2.4 GHz WiFi                   | Yes*  | Yes       | Yes     | Yes       |
| 5GNR + 5 GHz WiFi                     | Yes*  | Yes       | Yes     | Yes       |
| 5GNR+ Bluetooth                       | Yes^* | Yes       | Yes^    | Yes       |
| 5GNR + 5 GHz WiFi + Bluetooth         | Yes^* | Yes       | Yes^    | Yes       |

Note:

- 2.4GHz WLAN and 2.4GHz Bluetooth cannot transmit simultaneously
- The device does not support licensed bands simultaneously transmitting.
- UMTS +WLAN scenario also represents the UMTS Voice/DATA + WLAN hotspot scenario.
- VoIP is supported in GPRS/EDGE.
- The highest reported SAR for each exposure condition is used for SAR summation purpose.
- Wi-Fi Hotspot is supported for 2.4 GHz/ UNII-3 of 5 GHz WLAN.
- This device supports Bluetooth tethering. ^ BluetoothTetheringis considered.
- \* Pre-installed VOIP applications areconsidered
- Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held to ear or Body worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI Direct beyond that listed in the above table.
- This device supports VOLTE.
- This device supports VOWIFI

## 4.9 SAR Test Considerations

### 4.9.1 WiFi

Since wireless router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A & U-NII-2C WiFi, WiFi Hotspot SAR test and combinations are considered only 2.4 GHz and U-NII-3 for SAR with respected to wireless router configurations according to FCC KDB 941225 D06v02r01.

Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg for 1g SAR and is less than 3.0 W/kg for 10g SAR, SAR is not required for U-NII-1 band according to FCC KDB 248227D01v02r02.

This device supports IEEE 802.11ac with the following features:

- a) Up to 80 MHz Bandwidth only for 5 GHz
- b) Up to 20 MHz Bandwidth only for 2.4 GHz
- c) No aggregate channel configurations
- d) 1 Tx antenna output
- e) TDWR and Band gap channels are supported for 5 GHz

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is greater than 160mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A & U-NII-2C WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

### 4.9.2 Licensed Transmitter(s)

GSM/GPRS/EDGE DTM is not supported for US bands. Therefore, the GSM Voice modes in this report do not transmit simultaneously with GPRS/EDGE Data.

LTE SAR for the higher modulations and lower bandwidths were not tested since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest bandwidth; and the reported LTE SAR for the highest bandwidth was less than 1.45 W/kg for all configurations according to FCC KDB 941225 D05v02r05.

Per FCC KDB 648474 D04v01r03, this device is considered a "Phablet" since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. When hotspot mode applies, 10g SAR required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1g SAR > 1.2 W/kg.

This Device supports 64QAM and 256QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM and 256QAM uplink configurations were measured per section 5.1 of FCC KDB 941225 D05v02r05. SAR was not required for 64QAM or 256QAM since the highest maximum output power for 64QAM and 256QAM is  $\leq 0.5$  dB higher than the same configuration in QPSK and the reported SAR for QPSK configuration is  $\leq 1.45$  W/Kg, per section 5.2.4 for FCC KDB 941225 D05v02r05.

This device supports 5G NR/LTE capabilities with overlapping transmission frequency ranges. When the supported frequency range of LTE Band falls completely within an 5G NR/LTE Band with a larger transmission frequency range, both 5G NR/LTE bands have the same target power or the band with the larger transmission

frequency range has a higher target power and both 5G NR/LTE bands share the same transmission path and signal characteristics, SAR was only tested for the band with the larger transmission frequency range. LTE capabilities with overlapping transmission frequency ranges were applied LTE B66 and LTE B4 of this model.

This device supports LTE Carrier Aggregation (CA) in the downlink. All uplink communications are identical to Release 8 specifications. Per FCC KDB publication 941225 D05A v01r02, SAR for LTE DL CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.

This device supports downlink 4x4 MIMO operations for some LTE bands. Per Ma 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

This device is only capable of QPSK HSUPA in the uplink. Therefore, no additional SAR tests are required beyond that described for devices with HSUPA in KDB 941225 D01v03r01.

In order to satisfy the limitations of the duty factor of the 5G NR TDD band, these were tested as n41 band which duty factor 100% were applied to all SAR test configurations (Head/Body worn/Hotspot/Phablet SAR) in FTM Mode.

Per FCC KDB 941225 D01v03r01, 12.2 kbps RMC is the primary mode and HSPA (HSUPA/HSDPA with RMC) is the secondary mode.

Per FCC KDB 941225 D01v03r01, The SAR test exclusion is applied to the secondary mode by the following equation.

$$Adjusted\ SAR = Highest\ Reported\ SAR \times \frac{Secondary\ Max\ tune - up\ (mW)}{Primary\ Max\ tune - up\ (mW)} \leq 1.2\ W/kg.$$

Based on the highest Reported SAR, the secondary mode is not required.

Per FCC KDB 690783 1 D01 SAR Listings on Grants v01r03 and KDB 447498 D01 General RF Exposure Guidance v06 The SAR numbers listed must be consistent with the highest reported test results required by the published RF exposure KDB procedures. When the measured SAR is not at the maximum tune-up tolerance limit or maximum output power allowed for production units, the measured results are scaled to the maximum conditions to determine compliance; the scaled results are referred to as the reported SAR.

$$The\ Reported\ SAR = The\ Measured\ SAR \times \frac{Maximum\ tune - up\ (mW)}{Measured\ Conducted\ Power\ (mW)}$$

The Reported SAR for WLAN and Bluetooth

$$The\ Reported\ SAR = The\ Measured\ SAR \times \frac{Maximum\ tune - up\ (mW)}{Measured\ Conducted\ Power\ (mW)} \times Duty\ factor$$

## 5. Introduction

The FCC has adopted the guidelines for evaluating the environmental effects of radio frequency radiation in ET Docket 93-62 on Aug. 6, 1996 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices.

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York 10017. The measurement procedure described in IEEE/ANSI C95.3-1992 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave is used for guidance in measuring SAR due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields," NCRP Report No. 86 NCRP, 1986, Bethesda, MD 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

### SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative of the incremental electromagnetic energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (r ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body.

$$SAR = \frac{d}{dt} \left( \frac{dU}{dm} \right)$$

Figure 1. SAR Mathematical Equation  
SAR is expressed in units of Watts per Kilogram (W/kg)

Where:

- = conductivity of the tissue-simulant material (S/m)
- = mass density of the tissue-simulant material (kg/m<sup>3</sup>)
- = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.

## 6. Description of test equipment

### 6.1 SAR MEASUREMENT SETUP

These measurements are performed using the DASY4 automated dosimetric assessment system. It is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland. It consists of high precision robotics system (Staubli), robot controller, Pentium III computer, near-field probe, probe alignment sensor, and the generic twin phantom containing the brain equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF) (see Figure.2).

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC with Windows XP or Windows 7 is working with SAR Measurement system DASY4 & DASY5, A/D interface card, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

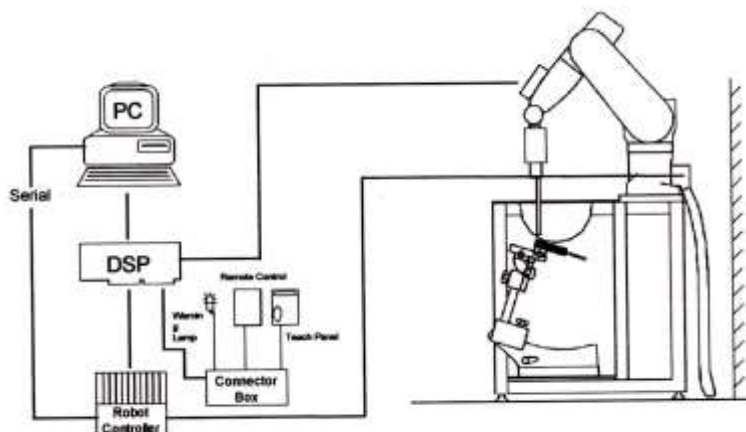


Figure 2. HCT SAR Lab. Test Measurement Set-up

The DAE consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer. The system is described in detail in.

## 7. SAR Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013.

1. The SAR distribution at the exposed side of the head or body was measured at a distance no more than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the DUT's head and body area and the horizontal grid resolution was depending on the FCC KDB 865664 D01v01r04 table 4-1 & IEEE 1528-2013.
2. Based on step, the area of the maximum absorption was determined by sophisticated interpolations routines implemented in DASY software. When an Area Scan has measured all reachable point. DASY system computes the field maximal found in the scanned are, within a range of the maximum. SAR at this fixed point was measured and used as a reference value.
3. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB 865664 D01v01r04 table 4-1 and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (reference from the DASY manual.)
  - a. The data at the surface were extrapolated, since the center of the dipoles is no more than 2.7 mm away from the tip of the probe (it is different from the probe type) and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.
  - b. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.
  - c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan. If the value changed by more than 5 %, the SAR evaluation and drift measurements were repeated.

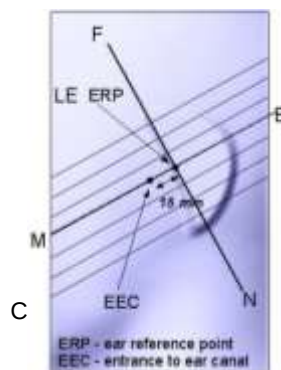
Area scan and zoom scan resolution setting follow KDB 865664 D01v01r04 quoted below.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |                                                                                             | $\leq 3 \text{ GHz}$                                                                                                                                                                                                                                                   | $> 3 \text{ GHz}$                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface                                                                                                                                                                                                                                                                                                                                                                               |                                           |                                                                                             | $5\pm 1 \text{ mm}$                                                                                                                                                                                                                                                    | $\cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$                                                                                                  |
| Maximum probe angle from probe axis to phantom surface normal at the measurement location                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                                                                             | $30^{\circ} \pm 1^{\circ}$                                                                                                                                                                                                                                             | $20^{\circ} \pm 1^{\circ}$                                                                                                                      |
| Maximum area scan Spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$                                                                                                                                                                                                                                                                                                                                                                                               |                                           |                                                                                             | $\leq 2 \text{ GHz: } \leq 15 \text{ mm}$<br>$2\text{-}3 \text{ GHz: } \leq 12 \text{ mm}$                                                                                                                                                                             | $3\text{-}4 \text{ GHz: } \leq 12 \text{ mm}$<br>$4\text{-}6 \text{ GHz: } \leq 10 \text{ mm}$                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |                                                                                             | When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device. |                                                                                                                                                 |
| Maximum zoom scan Spatial resolution: $\Delta x_{\text{zoom}}, \Delta y_{\text{zoom}}$                                                                                                                                                                                                                                                                                                                                                                                               |                                           |                                                                                             | $\leq 2 \text{ GHz: } \leq 8 \text{ mm}$<br>$2\text{-}3 \text{ GHz: } \leq 5 \text{ mm}^*$                                                                                                                                                                             | $3\text{-}4 \text{ GHz: } \leq 5 \text{ mm}^*$<br>$4\text{-}6 \text{ GHz: } \leq 4 \text{ mm}^*$                                                |
| Maximum zoom scan Spatial resolution normal to phantom surface                                                                                                                                                                                                                                                                                                                                                                                                                       | uniform grid: $\Delta z_{\text{zoom}}(n)$ |                                                                                             | $\leq 5 \text{ mm}$                                                                                                                                                                                                                                                    | $3\text{-}4 \text{ GHz: } \leq 4 \text{ mm}$<br>$4\text{-}5 \text{ GHz: } \leq 3 \text{ mm}$<br>$5\text{-}6 \text{ GHz: } \leq 2 \text{ mm}$    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | graded grid                               | $\Delta z_{\text{zoom}}(1)$ : between 1 <sup>st</sup> two Points closest to phantom surface | $\leq 4 \text{ mm}$                                                                                                                                                                                                                                                    | $3\text{-}4 \text{ GHz: } \leq 3 \text{ mm}$<br>$4\text{-}5 \text{ GHz: } \leq 2.5 \text{ mm}$<br>$5\text{-}6 \text{ GHz: } \leq 2 \text{ mm}$  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           | $\Delta z_{\text{zoom}}(n>1)$ : between subsequent Points                                   | $\leq 1.5 \cdot \Delta z_{\text{zoom}}(n-1)$                                                                                                                                                                                                                           |                                                                                                                                                 |
| Minimum zoom scan volume                                                                                                                                                                                                                                                                                                                                                                                                                                                             | x, y, z                                   |                                                                                             | $\geq 30 \text{ mm}$                                                                                                                                                                                                                                                   | $3\text{-}4 \text{ GHz: } \geq 28 \text{ mm}$<br>$4\text{-}5 \text{ GHz: } \geq 25 \text{ mm}$<br>$5\text{-}6 \text{ GHz: } \geq 22 \text{ mm}$ |
| Note: $\delta$ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.<br>* When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is $\leq 1.4 \text{ W/kg}$ , $\leq 8 \text{ mm}$ , $\leq 7 \text{ mm}$ and $\leq 5 \text{ mm}$ zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz. |                                           |                                                                                             |                                                                                                                                                                                                                                                                        |                                                                                                                                                 |

## 8. Description of Test Position

### 8.1 EAR REFERENCE POINT

Figure 8-2 shows the front, back and side views of the SAM phantom. The center-of-mouth reference point is labeled “M”, the left ear reference point (ERP) is marked “LE”, and the right ERP is marked “RE.” Each ERP is on the B-M (back-mouth) line located 15 mm behind the entrance-to-ear-canal (EEC) point, as shown in Figure 6-1. The Reference Plane is defined as passing through the two ears reference point and point M. The line N-F (Neck-Front), also called the Reference Pivoting Line, is not perpendicular to the reference plane (See Figure 5-1), Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning.



### 8.2 HANDSET REFERENCE POINTS

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The device under test was placed in a normal operating position with the acoustic output located along the “vertical centerline” on the front of the device aligned to the “ear reference point”(see Figure 8-3). The acoustic output was then located at the same level as the center of the ear reference point. The device under test was positioned so that the “vertical centerline” was bisecting the front surface of the handset at its top and bottom edges, positioning the “ear reference point” on the outer surface of the both the left and right head phantoms on the ear reference point.



Figure 8-2  
Front, back and side views of SAM Twin Phantom

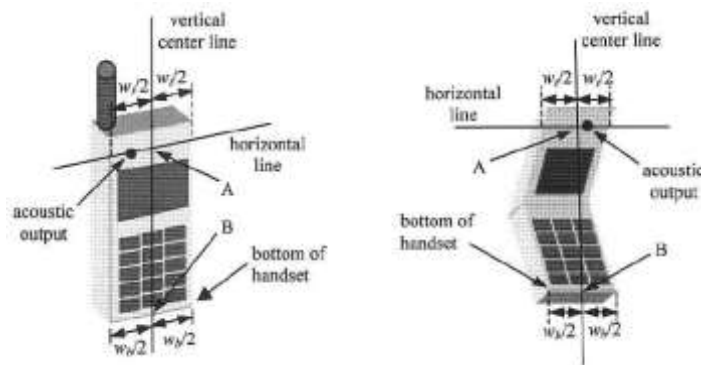


Figure 6-3. Handset vertical and horizontal reference lines

## 8.3 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameter; relative permittivity  $\epsilon=3$  and loss tangent  $\sigma=0.02$ .

## 8.4 Position for cheek

Figure 6.4. shows cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

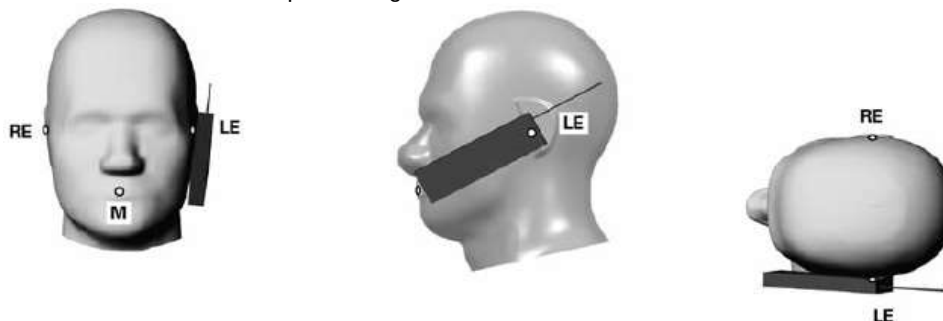


Figure 8.4 Cheek/ Touch position of the wireless device

## 8.5 Definition of the “tilted” position

Figure 6.5. shows tilted position. Place the device in the cheek position. Then while maintaining the orientation of the device, retract the device parallel to the reference plane far enough away from the phantom to enable a rotation of the device by 15°.



Figure 8.5. Tilt 15° position of the wireless device

## 8.6 Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-dips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 6-6). Per FCC KDB Publication 648474 D04v01r03 Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in Body-worn accessories. The Body-worn accessory procedures in FCC KDB Publication 447498 D01v06 should be used to test for Body-worn accessory SAR compliance, without a headset connected to it.. When the reported SAR for a body- worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body- worn accessory with a headset attached to the handset.



Figure 8-6  
Sample Body-Worn Diagram

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-dip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

## 8.7 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets (L x W≥9cmx5 cm) are based on a composite test separation distance of 10 mm from the front back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the Body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some Body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 publication procedures. The Portable Hotspot feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

## 8.8 Extremity Exposure Configurations

Devices that are designed or intended for use on extremities or mainly operated in extremity only exposure conditions: i.e., hands, wrists, feet and ankles, may require extremity SAR evaluation. When the device also operates in close proximity to the user's body, SAR compliance for the body is also required. The 1-g body and 10-g extremity SAR Exclusion Thresholds found in KDB Publication 447498 D01v06 should be applied to determine SAR test requirements.

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear. the phablets procedures outlined in KDB Publication 648474 D04 v01r03 should be applied to evaluate SAR compliance. A device marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. In addition to the normally required head and body-worm accessory SAR test procedures required for handsets, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna ≤25 mm from that surface or edge, in direct contact with the phantom, for 10-g SAR. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g SAR is required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1-g SAR > 1.2 W/kg.

## 8.9 Additional Test Positions due to Proximity Conditions

This device uses a sensor to reduce output powers in extremity (hand-held) use conditions.

When the sensor detects a user is touching the device on or near to the antenna the device reduces the maximum allowed output power. However, the proximity sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, an additional exposure condition is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level.

FCC KDB 616217 D04 v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional exposure conditions. The smallest separation distance determined by the sensor triggering and sensor coverage for each applicable edge, minus 1 mm. was used as the test separation distance for SAR testing. Sensor triggering distance summary data is included in below table.

| Wireless technologies                            | Position | §6.2<br>Triggering<br>Distance | §6.3<br>Coverage | §6.4<br>Tilt Angle | Worst case<br>distance for<br>Phablet SAR |
|--------------------------------------------------|----------|--------------------------------|------------------|--------------------|-------------------------------------------|
| GSM1900/UMTS B2/B4<br>LTEB2/B4/B41/B66<br>NR n66 | Rear     | 8                              | N/A              | N/A                | 7                                         |
|                                                  | Front    | 7                              | N/A              | N/A                | 6                                         |
|                                                  | Bottom   | 13                             | N/A              | N/A                | 12                                        |

## 8.10 Bluetooth tethering Configurations

Per May 2017 TCBC Workshop Document When Bluetooth tethering applies, simultaneous transmission SAR needs consideration.

This model allows users to exchange data or media files with other Bluetooth enabled devices using Bluetooth, which means they can connect to other Bluetooth enabled devices via Bluetooth tethering.

Therefore, SAR test was performed for additional simultaneous transmissions.

Head and Bluetooth tethering SAR were evaluated for BT BR tethering applications.

## 9. RF Exposure Limits

| HUMAN EXPOSURE                                         | UNCONTROLLED ENVIRONMENT<br>General Population<br>(W/kg) or (mW/g) | CONTROLLED ENVIRONMENT<br>Occupational<br>(W/kg) or (mW/g) |
|--------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------|
| SPATIAL PEAK SAR *<br>(Partial Body)                   | 1.6                                                                | 8.0                                                        |
| SPATIAL AVERAGE SAR **<br>(Whole Body)                 | 0.08                                                               | 0.4                                                        |
| SPATIAL PEAK SAR ***<br>(Hands / Feet / Ankle / Wrist) | 4.0                                                                | 20.0                                                       |

### NOTES:

\* The Spatial Peak value of the SAR averaged over any 1 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

\*\* The Spatial Average value of the SAR averaged over the whole-body.

\*\*\* The Spatial Peak value of the SAR averaged over any 10 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

**Uncontrolled Environments** are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

**Controlled Environments** are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

## 10. FCC SAR General Measurement Procedures

Power Measurements for licensed transmitters are performed using a base simulator under digital average power.

### 10.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as Reported SAR. The highest reported SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

### 10.2 3G SAR Test Reduction Procedure

#### 10.2.1 GSM, GPRS AND EDGE

The following procedures may be considered for each frequency band to determine SAR test reduction for devices operating in GSM/GPRS/EDGE modes to demonstrate RF exposure compliance. GSM voice mode transmits with 1 timeslot. GPRS and EDGE may transmit up to 4 time slots in the 8 time-slot frame according to the multi-slot class implemented in a device.

#### 10.2.2 SAR Test Reduction

In FCC KDB 941225 D01v03r01, certain transmission modes within a frequency band and wireless mode evaluated for SAR are defined as primary modes. The equivalent modes considered for SAR test reduction are denoted as secondary modes. When the maximum output power including tune-up tolerance specified for production units in a secondary mode is  $\leq 0.25$  dB higher than the primary mode or when the highest reported SAR of the primary mode, scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode, is  $\leq 1.2$  W/kg, SAR measurements are not required for the secondary mode. These criteria are referred to as the 3G SAR test reduction procedure. When the 3G SAR test reduction procedure is not satisfied, SAR measurements are additionally required for the secondary mode.

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested

#### 10.2.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB 941225 D01v03r01-3G SAR Measurement Procedures. The handset was placed into a simulated call using a base station simulator in a shielded chamber. Such test signals offer a consistent means for testing SAR and are recommended for evaluation SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR measurement Software calculates a reference point at the start and end of the test to Check for power drifts. If conducted Power deviations of more than 5 % occurred, the tests were repeated.

## 10.4 SAR Measurement Conditions for UMTS

### 10.4.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in sec. 5.2 of 3GPP TS 34.121, using the appropriate RMC with TPC (transmit power control) set to all “1s” or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

### 10.4.2 Body SAR measurements

SAR for body exposure configurations is measured using the 12.2kbps RMC with the TPC bits all “1s”. the 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using and applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest reported SAR configuration in 12.2kbps RMC.

### 10.4.3 SAR Measurements with Rel. 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSDPA is measured using and FRC with H-SET 1 in Sub-test and a 12.2 kbps RMC without HSDPA. Handsets with both HSDPA and HSUPA are tested according to release 6 HSPA test procedures. 8.4.5 SAR Measurement with Rel.6 HSUPA The 3G SAR test Reduction Procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, Using H-Set 1 and QPSK for FRC and a 12.2kbps RMC configured in Test Loop Mode 1 and Power Control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.

### 10.4.4 SAR Measurements with Rel. 6 HSUPA

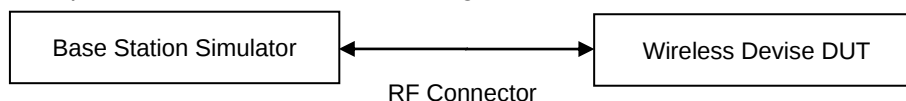
The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA.

### 10.4.5DC-HSDPA

SAR is required for Rel.8 DC-HSDPA when SAR is required for Rel.5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in table C.8.1.12 of 3GPP TS34.121-1 to determine SAR test reduction. Primary and secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

#### DC-HSDPA Configurations

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK)was conformed to be used during DC-HSDPA measurements.



## 10.5 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r05 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluation SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

### 10.5.1 Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

### 10.5.2 MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36. 101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

### 10.5.3 A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

### 10.5.4 Required RB Size and RB offsets for SAR testing

According to FCC KDB 941225 D05v02r05

- a. Per sec 4.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
  - i. The required channel and offset combination with the highest maximum output power is required for SAR.
  - ii. When the reported SAR is  $\leq 0.8$  W/Kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
  - iii. When the reported SAR for a required test channel is  $> 1.45$  W/kg, SAR is required for all RB offset configurations for that channel.
- b. Per Sec 4.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Sec 4.2.1.
- c. Per Sec. 4.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is  $< 0.8$  W/kg.
- d. Per Sec. 4.2.4 and 4.3, SAR test for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sec. 4.2.1 through 4.2.3 is less than or equal to 1/2 dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is  $< 1.45$  W/Kg.

### 10.5.5 Downlink Carrier Aggregation

Conducted power measurements with LTE Carrier aggregation (CA) downlink only active are made in accordance to KDB publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. For every supported combination of downlink only carrier aggregation, additional conducted output Powers are measured with downlink carrier aggregation active for the configuration with highest measured maximum conducted power with the downlink carrier aggregation inactive measured among the channel bandwidth, modulation and RB combinations in each frequency band. Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the

average output power with downlink only carrier aggregation active is not more than 0.25dB higher than the average output power with downlink only carrier aggregation inactive.

### 10.5.6 LTE(TDD) Considerations

According to KDB 941225 D05v02r05, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

SAR was tested with the highest transmission duty factor (63.33 %) using Uplink-downlink configuration 0 and Special subframe configuration 6. LTE TDD Band 41 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special sub frame configurations.

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

| Special subframe configuration | Normal cyclic prefix in downlink |                                |                                  | Extended cyclic prefix in downlink |                                |                                  |
|--------------------------------|----------------------------------|--------------------------------|----------------------------------|------------------------------------|--------------------------------|----------------------------------|
|                                | DwPTS                            | UpPTS                          |                                  | DwPTS                              | UpPTS                          |                                  |
|                                |                                  | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink |                                    | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink |
| 0                              | $6592 \cdot T_s$                 | $2192 \cdot T_s$               | $2560 \cdot T_s$                 | $7680 \cdot T_s$                   | $2192 \cdot T_s$               | $2560 \cdot T_s$                 |
| 1                              | $19760 \cdot T_s$                |                                |                                  | $20480 \cdot T_s$                  |                                |                                  |
| 2                              | $21952 \cdot T_s$                |                                |                                  | $23040 \cdot T_s$                  |                                |                                  |
| 3                              | $24144 \cdot T_s$                |                                |                                  | $25600 \cdot T_s$                  |                                |                                  |
| 4                              | $26336 \cdot T_s$                |                                |                                  | $7680 \cdot T_s$                   |                                |                                  |
| 5                              | $6592 \cdot T_s$                 | $4384 \cdot T_s$               | $5120 \cdot T_s$                 | $20480 \cdot T_s$                  | $4384 \cdot T_s$               | $5120 \cdot T_s$                 |
| 6                              | $19760 \cdot T_s$                |                                |                                  | $23040 \cdot T_s$                  |                                |                                  |
| 7                              | $21952 \cdot T_s$                |                                |                                  | $12800 \cdot T_s$                  |                                |                                  |
| 8                              | $24144 \cdot T_s$                |                                |                                  | -                                  | -                              | -                                |
| 9                              | $13168 \cdot T_s$                |                                |                                  | -                                  | -                              | -                                |

Calculated Duty Cycle – Extended cyclic prefix in uplink x ( $T_s$ ) x no of S + no of U

Table 4.2-2: Uplink-downlink configurations.

| Uplink-downlink configuration | Downlink-to-Uplink Switch-point periodicity | Subframe number |   |   |   |   |   |   |   |   |   |
|-------------------------------|---------------------------------------------|-----------------|---|---|---|---|---|---|---|---|---|
|                               |                                             | 0               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0                             | 5 ms                                        | D               | S | U | U | U | D | S | U | U | U |
| 1                             | 5 ms                                        | D               | S | U | U | D | D | S | U | U | D |
| 2                             | 5 ms                                        | D               | S | U | D | D | D | S | U | D | D |
| 3                             | 10 ms                                       | D               | S | U | U | U | D | D | D | D | D |
| 4                             | 10 ms                                       | D               | S | U | U | D | D | D | D | D | D |
| 5                             | 10 ms                                       | D               | S | U | D | D | D | D | D | D | D |
| 6                             | 5 ms                                        | D               | S | U | U | U | D | S | U | U | D |

Example for calculated Duty Cycle for Uplink-Downlink Configuration 0:

Calculated Duty Cycle =  $(5120 \times (1/(15000 \times 2048))) \times 2 + 0.006/0.01 = 63.33 \%$

Where

$T_s = 1/(15000 \times 2048)$  seconds

### 10.5.7The Call Box Setup for LTE(TDD)

When you Want to Test for LTE TDD, Please Change Frame Structure TDD and TDD Uplink Downlink Configuration 0 and Special Subframe Configuration 6.

| 2018/01/08 11:00                      |             | Idle( Regist )              |       | Phone-2                 | Phone-1          |
|---------------------------------------|-------------|-----------------------------|-------|-------------------------|------------------|
| <Fundamental Measurement> Output Main |             | Continuous                  |       | W-CDMA                  | LTE              |
| Parameter                             | Fundamental | UE Report                   |       |                         |                  |
| Reference Signal not found            |             | UE Power : -21.5 dBm        |       | Parameter               |                  |
| Power Measurement                     |             | (Meas. Count : 11/ 20)      |       | Common                  |                  |
| TX Power                              |             | Avg.                        | Max.  | Min.                    | Limit            |
| Channel Power                         |             | *****                       | ***** | *****                   | 20.3 to 25.7 dBm |
| Modulation Analysis                   |             | View                        |       | (Meas. Count : 1/ 1)    |                  |
| Common Parameter                      |             | TX1 - Max. Power(QPSK/1 RB) |       | Physical Channel        |                  |
| Test Parameter                        |             |                             |       | Call Processing         |                  |
| Call Processing                       |             | On                          |       | Scenario Normal         |                  |
| Frequency                             |             | TDD                         |       | TX Measurement Setup    |                  |
| Frame Structure                       |             | FDD Hz                      |       | RX Measurement Setup    |                  |
| Channel Bandwidth                     |             | TDD 20                      |       | Fundamental Measurement |                  |
| UL Channel & Frequency                |             | CH = 2593.000000 MHz        |       |                         |                  |
| DL Channel & Frequency                |             | 40620 CH = 2593.000000 MHz  |       |                         |                  |
| Operation Band                        |             | 41                          |       |                         |                  |
| Frequency Separation                  |             | ( 0 )MHz                    |       |                         |                  |
| Level                                 |             | 30.0 dBm                    |       |                         |                  |
| Input Level                           |             |                             |       | 1 2 3 4                 |                  |

| 2018/01/08 11:01                      |             | Idle( Regist )                 |       | Phone-2                 | Phone-1          |
|---------------------------------------|-------------|--------------------------------|-------|-------------------------|------------------|
| <Fundamental Measurement> Output Main |             | Continuous                     |       | W-CDMA                  | LTE              |
| Parameter                             | Fundamental | UE Report                      |       |                         |                  |
| Reference Signal not found            |             | UE Power : -21.5 dBm           |       | Parameter               |                  |
| Power Measurement                     |             | (Meas. Count : 11/ 20)         |       | Common                  |                  |
| TX Power                              |             | Avg.                           | Max.  | Min.                    | Limit            |
| Channel Power                         |             | *****                          | ***** | *****                   | 20.3 to 25.7 dBm |
| Modulation Analysis                   |             | View                           |       | (Meas. Count : 1/ 1)    |                  |
| MCS Index (-)                         |             | 5 (QPSK)                       | ( 5 ) | ( 2216 )                | -                |
| MCS Index (5)                         |             | 5 (QPSK)                       | ( 5 ) | ( 1864 )                | 4                |
| MCS Index (0)                         |             | 5 (QPSK)                       | ( 5 ) | ( 2216 )                | 2                |
| MCS Index (1,6)                       |             | N/A (-----)                    | (--)  | (-----)                 | 2                |
| CFI                                   |             | 3                              |       |                         |                  |
| TDD                                   |             | subframe 0 1 2 3 4 5 6 7 8 9   |       |                         |                  |
| Uplink Downlink Configuration         |             | 0 : ( 5ms) D S U U U D S U U U |       |                         |                  |
| Special Subframe Configuration        |             | 6                              |       |                         |                  |
| Physical Channel Parameter            |             |                                |       | Physical Channel        |                  |
| PSS Power                             |             | 0.0 dB                         |       | Call Processing         |                  |
| SSS Power                             |             | 0.0 dB                         |       | TX Measurement Setup    |                  |
| PBCH Power                            |             | 0.0 dB                         |       | RX Measurement Setup    |                  |
| PCFICH Power                          |             | 0.0 dB                         |       | Fundamental Measurement |                  |
| PHICH Power                           |             | 0.0 dB                         |       |                         |                  |
|                                       |             |                                |       | 1 2 3 4                 |                  |

## 10.6 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset base test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01v02r02 for more details.

### 10.6.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.

A periodic duty factor is required for current generation SAR system to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92-96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

### 10.6.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII-2A bands, when the same maximum output power is specified for both bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is  $> 1.2$  W/kg for 1g SAR or  $> 3.0$  W/kg for 10g SAR. When different maximum output powers are specified for the bands, SAR measurement for the U-NII band with the lower maximum output power is not required unless the highest reported SAR for the U-NII band with the higher maximum output power, adjusted by the ratio of lower to higher specified maximum output power for the two bands, is  $> 1.2$  W/kg for 1g SAR or  $> 3.0$  W/kg for 10g SAR.

### 10.6.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 MHz (5.47 GHz – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 GHz – 5.65 GHz in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification.

Unless band gap channels are permanently disabled, SAR must be considered for these channels.

### 10.6.4 Initial Test Position Procedure

For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is  $\leq 0.4$  W/kg for 1g SAR and  $\leq 1.0$  W/kg for 10g SAR, no additional testing for the remaining test position is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is  $\leq 0.8$  W/kg for 1g SAR and  $\leq 2.0$  W/kg for 10g SAR or all test positions are measured.

#### 10.6.5 2.4 GHz SAR test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

- 1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is  $\leq 0.8$  W/kg, no further SAR testing is required for 802.11b DSSS is that exposure configuration.
- 2) When the reported SAR is  $> 0.8$  W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is  $> 1.2$  W/kg, SAR is required for the third channel i.e., all channels require testing.

2.4 GHz 802.11 g/n OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is  $> 1.2$  W/kg. When SAR is required for OFDM modes in 2.4 GHz band, the Initial Test Configuration Procedures should be followed.

#### 10.6.6 OFDM Transmission Mode and SAR Test Channel Selection

For the 2.4 GHz and 5 GHz bands, when the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate and lowest order 802.11 a/g/n/ac mode. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11 ac or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

#### 10.6.7 Initial Test Configuration Procedure

For OFDM, in both 2.4 GHz and 5 GHz bands, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, and lowest data rate. If the average RF output powers of the highest identical transmission modes are within 0.25 dB of each other, mid channel of the transmission mode with highest average RF output power is the initial test channel. Otherwise, the channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

When the reported SAR is  $\leq 0.8$  W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements.

#### 10.6.8 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency band and aggregated band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position on procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is  $\leq 1.2$  W/kg for 1g SAR and  $\leq 3.0$  W/kg for 10g SAR, no additional SAR tests for the subsequent test configurations are required.

## 11. Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D01v06.

### Licensed bands

| Test Description       | Test Procedure Used                                                                     |
|------------------------|-----------------------------------------------------------------------------------------|
| Conducted Output Power | - KDB 971168 D01 v03r01 - Section 5.2.4<br>- ANSI C63.26-2015 - Section 5.2.1 & 5.2.4.2 |

### Test Overview

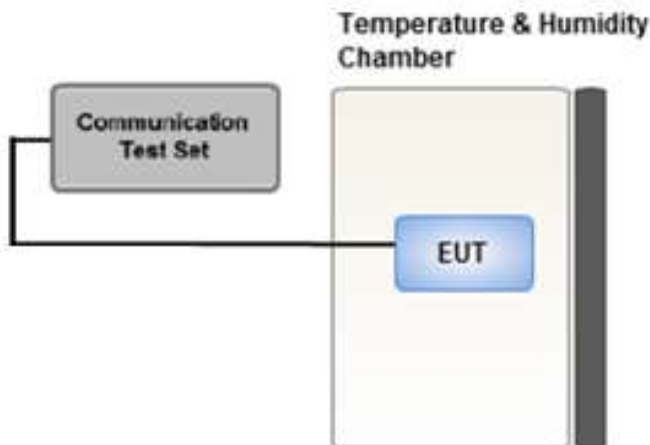
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base station emulator, communications test set, call box, or similar instrumentation that is capable of establishing a communications link with the EUT to enable control over variable parameters (e.g., output power, OBW, etc.).

In some cases, these instruments also include basic digital spectrum analyzer and/or power meter capabilities that can be utilized to measure the RF output power if the specified detectors and requirements can be realized and the measurement functions have been calibrated.

### Test Procedure

1. The RF port of the EUT was connected to the Communication Tester via an RF cable.
2. Conducted average power was measured using a calibrated Radio Communication Tester.

### Test setup



## 11.1 GSM

### 11.1.1 GSM Maximum Conducted Output Power

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                |                |                | EDGE Data (dBm) |                |                |                |
|-------------|-----|-------|----------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
|             |     | GSM   | GPRS 1 TX Slot             | GPRS 2 TX Slot | GPRS 3 TX Slot | GPRS 4 TX Slot | EDGE 1 TX Slot  | EDGE 2 TX Slot | EDGE 3 TX Slot | EDGE 4 TX Slot |
| Maximum     |     | 34.0  | 34.0                       | 32.5           | 30.5           | 28.5           | 28.0            | 26.0           | 24.0           | 23.0           |
| Nominal     |     | 33.0  | 33.0                       | 31.5           | 29.5           | 27.5           | 26.5            | 25.0           | 23.0           | 22.0           |
| GSM 850     | 128 | 33.79 | 33.79                      | 31.61          | 29.65          | 27.53          | 26.62           | 25.37          | 23.40          | 22.52          |
|             | 190 | 33.39 | 33.34                      | 31.63          | 29.73          | 27.23          | 26.45           | 25.13          | 23.30          | 22.44          |
|             | 251 | 33.01 | 33.03                      | 31.22          | 28.74          | 26.68          | 26.08           | 24.57          | 22.73          | 21.21          |
| Maximum     |     | 31.0  | 31.0                       | 30.0           | 27.5           | 26.0           | 27.0            | 25.0           | 23.5           | 22.0           |
| Nominal     |     | 30.0  | 30.0                       | 29.0           | 26.5           | 25.0           | 26.0            | 24.0           | 22.5           | 21.0           |
| GSM 1900    | 512 | 30.54 | 30.68                      | 28.65          | 26.17          | 24.46          | 25.94           | 24.15          | 22.60          | 21.48          |
|             | 661 | 30.56 | 30.63                      | 28.66          | 26.16          | 24.65          | 26.11           | 24.25          | 22.45          | 21.28          |
|             | 810 | 30.90 | 30.85                      | 28.94          | 26.54          | 24.92          | 26.36           | 24.55          | 22.50          | 21.10          |

GSM Conducted output powers (Burst-Average)

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                |                |                | EDGE Data (dBm) |                |                |                |
|-------------|-----|-------|----------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
|             |     | GSM   | GPRS 1 TX Slot             | GPRS 2 TX Slot | GPRS 3 TX Slot | GPRS 4 TX Slot | EDGE 1 TX Slot  | EDGE 2 TX Slot | EDGE 3 TX Slot | EDGE 4 TX Slot |
| Maximum     |     | 24.97 | 24.97                      | 26.48          | 26.24          | 25.49          | 18.97           | 19.98          | 19.74          | 19.99          |
| Nominal     |     | 23.97 | 23.97                      | 25.48          | 25.24          | 24.49          | 17.47           | 18.98          | 18.74          | 18.99          |
| GSM 850     | 128 | 24.76 | 24.76                      | 25.59          | 25.39          | 24.52          | 17.59           | 19.35          | 19.14          | 19.51          |
|             | 190 | 24.36 | 24.31                      | 25.61          | 25.47          | 24.22          | 17.42           | 19.11          | 19.04          | 19.43          |
|             | 251 | 23.98 | 24.00                      | 25.20          | 24.48          | 23.67          | 17.05           | 18.55          | 18.47          | 18.20          |
| Maximum     |     | 21.97 | 21.97                      | 23.98          | 23.24          | 22.99          | 17.97           | 18.98          | 19.24          | 18.99          |
| Nominal     |     | 20.97 | 20.97                      | 22.98          | 22.24          | 21.99          | 16.97           | 17.98          | 18.24          | 17.99          |
| GSM 1900    | 512 | 21.51 | 21.65                      | 22.63          | 21.91          | 21.45          | 16.91           | 18.13          | 18.34          | 18.47          |
|             | 661 | 21.53 | 21.60                      | 22.64          | 21.90          | 21.64          | 17.08           | 18.23          | 18.19          | 18.27          |
|             | 810 | 21.87 | 21.82                      | 22.92          | 22.28          | 21.91          | 17.33           | 18.53          | 18.24          | 18.09          |

GSM Conducted output powers (Frame-Average)

#### Note:

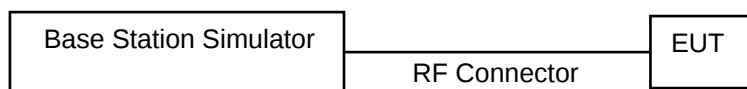
Time slot average factor is as follows:

1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB

2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB

3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB

4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB



### 11.1.2 GSM Reduced Conducted Output Power (Hotspot mode activated)

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                      |                      |                      | EDGE Data (dBm)      |                      |                      |                      |
|-------------|-----|-------|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|             |     | GSM   | GPRS<br>1 TX<br>Slot       | GPRS<br>2 TX<br>Slot | GPRS<br>3 TX<br>Slot | GPRS<br>4 TX<br>Slot | EDGE<br>1 TX<br>Slot | EDGE<br>2 TX<br>Slot | EDGE<br>3 TX<br>Slot | EDGE<br>4 TX<br>Slot |
| Maximum     |     | 28.0  | 28.0                       | 27.5                 | 25.5                 | 24.0                 | 24.0                 | 23.5                 | 22.0                 | 21.0                 |
| Nominal     |     | 27.0  | 27.0                       | 26.5                 | 24.5                 | 23.0                 | 23.0                 | 22.5                 | 21.0                 | 20.0                 |
| GSM 1900    | 512 | 26.84 | 27.59                      | 26.77                | 24.47                | 23.08                | 23.16                | 22.51                | 20.68                | 19.71                |
|             | 661 | 27.57 | 27.50                      | 26.73                | 24.42                | 23.02                | 23.14                | 22.52                | 20.81                | 19.43                |
|             | 810 | 27.97 | 27.97                      | 27.21                | 24.80                | 23.23                | 23.51                | 22.88                | 21.05                | 19.92                |

GSM Conducted output powers (Burst-Average)

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                      |                      |                      | EDGE Data (dBm)      |                      |                      |                      |
|-------------|-----|-------|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|             |     | GSM   | GPRS<br>1 TX<br>Slot       | GPRS<br>2 TX<br>Slot | GPRS<br>3 TX<br>Slot | GPRS<br>4 TX<br>Slot | EDGE<br>1 TX<br>Slot | EDGE<br>2 TX<br>Slot | EDGE<br>3 TX<br>Slot | EDGE<br>4 TX<br>Slot |
| Maximum     |     | 18.97 | 18.97                      | 21.48                | 21.24                | 20.99                | 14.97                | 17.48                | 17.74                | 17.99                |
| Nominal     |     | 17.97 | 17.97                      | 20.48                | 20.24                | 19.99                | 13.97                | 16.48                | 16.74                | 16.99                |
| GSM 1900    | 512 | 17.81 | 18.56                      | 20.75                | 20.21                | 20.07                | 14.13                | 16.49                | 16.42                | 16.70                |
|             | 661 | 18.54 | 18.47                      | 20.71                | 20.16                | 20.01                | 14.11                | 16.50                | 16.55                | 16.42                |
|             | 810 | 18.94 | 18.94                      | 21.19                | 20.54                | 20.22                | 14.48                | 16.86                | 16.79                | 16.91                |

GSM Conducted output powers (Frame-Average)

#### Note:

Time slot average factor is as follows:

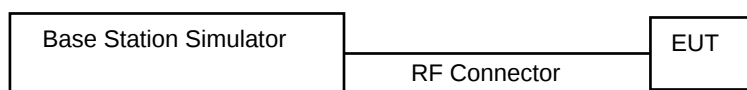
- 1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
- 2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
- 3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
- 4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB

GSM Class : B

GSM voice/GPRS VOIP: Head SAR , Body worn SAR

GPRS/EDGE Multi-slots 12 : Hotspot SAR with GPRS/EDGE

Multi-slot Class 12 with CS 1 (GMSK)



### 11.1.3 GSM Reduced Conducted Output Power (Grip back and Ear jack Activated)

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                      |                      |                      | EDGE Data (dBm)      |                      |                      |                      |
|-------------|-----|-------|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|             |     | GSM   | GPRS<br>1 TX<br>Slot       | GPRS<br>2 TX<br>Slot | GPRS<br>3 TX<br>Slot | GPRS<br>4 TX<br>Slot | EDGE<br>1 TX<br>Slot | EDGE<br>2 TX<br>Slot | EDGE<br>3 TX<br>Slot | EDGE<br>4 TX<br>Slot |
| Maximum     |     | 28.0  | 28.0                       | 27.5                 | 25.5                 | 24.0                 | 24.0                 | 23.5                 | 22.0                 | 21.0                 |
| Nominal     |     | 27.0  | 27.0                       | 26.5                 | 24.5                 | 23.0                 | 23.0                 | 22.5                 | 21.0                 | 20.0                 |
| GSM 1900    | 512 | 26.84 | 27.51                      | 26.74                | 24.42                | 23.01                | 23.17                | 22.57                | 20.57                | 19.56                |
|             | 661 | 27.56 | 27.36                      | 26.61                | 24.33                | 22.93                | 22.99                | 22.44                | 20.72                | 19.45                |
|             | 810 | 27.98 | 27.89                      | 27.18                | 24.71                | 23.18                | 23.42                | 22.82                | 20.93                | 19.96                |

GSM Conducted output powers (Burst-Average)

| Mode / Band |     | Voice | GPRS(GMSK) Data – CS1(dBm) |                      |                      |                      | EDGE Data (dBm)      |                      |                      |                      |
|-------------|-----|-------|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|             |     | GSM   | GPRS<br>1 TX<br>Slot       | GPRS<br>2 TX<br>Slot | GPRS<br>3 TX<br>Slot | GPRS<br>4 TX<br>Slot | EDGE<br>1 TX<br>Slot | EDGE<br>2 TX<br>Slot | EDGE<br>3 TX<br>Slot | EDGE<br>4 TX<br>Slot |
| Maximum     |     | 18.97 | 18.97                      | 21.48                | 21.24                | 20.99                | 14.97                | 17.48                | 17.74                | 17.99                |
| Nominal     |     | 17.97 | 17.97                      | 20.48                | 20.24                | 19.99                | 13.97                | 16.48                | 16.74                | 16.99                |
| GSM 1900    | 512 | 17.81 | 18.48                      | 20.72                | 20.16                | 20.00                | 14.14                | 16.55                | 16.31                | 16.55                |
|             | 661 | 18.53 | 18.33                      | 20.59                | 20.07                | 19.92                | 13.96                | 16.42                | 16.46                | 16.44                |
|             | 810 | 18.95 | 18.86                      | 21.16                | 20.45                | 20.17                | 14.39                | 16.80                | 16.67                | 16.95                |

GSM Conducted output powers (Frame-Average)

#### Note:

Time slot average factor is as follows:

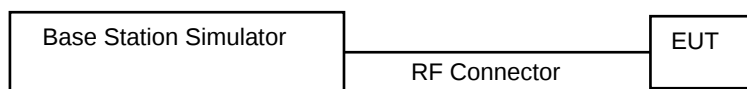
- 1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
- 2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
- 3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
- 4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB

GSM Class : B

GSM voice/GPRS VOIP: Head SAR , Body worn SAR

GPRS/EDGE Multi-slots 12 : Hotspot SAR with GPRS/EDGE

Multi-slot Class 12 with CS 1 (GMSK)



## 11.2 UMTS

### HSPA+

This DUT is only capable of QPSK HSPA+ in downlink. Therefore, the RF conducted power is not measured according to 941225 D01v03r01 3G SAR.

### 11.2.1 UMTS Maximum Conducted Output Power

#### UMTS Band 5 Maximum Conducted Output Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 5 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | DL 4357<br>UL 4132 | DL 4408<br>UL 4183 | DL 4458<br>UL 4233 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 24.86              | 24.68              | 24.37              | -        |
| 99                   |          | 12.2 kbps AMR | 24.77              | 24.63              | 24.35              | -        |
| 2                    | HSDPA    | Subtest 1     | 23.74              | 23.58              | 23.19              | 0        |
| 5                    |          | Subtest 2     | 23.75              | 23.61              | 23.20              | 0        |
| 5                    |          | Subtest 3     | 23.23              | 23.08              | 22.70              | 0.5      |
| 5                    |          | Subtest 4     | 23.24              | 23.09              | 22.72              | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 23.74              | 23.58              | 23.21              | 0        |
| 6                    |          | Subtest 2     | 21.70              | 21.58              | 21.20              | 2        |
| 6                    |          | Subtest 3     | 22.72              | 22.49              | 22.19              | 1        |
| 6                    |          | Subtest 4     | 21.70              | 21.57              | 21.18              | 2        |
| 6                    |          | Subtest 5     | 23.70              | 23.57              | 23.21              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 22.93              | 22.83              | 22.44              | 0        |
| 8                    |          | Subtest 2     | 22.88              | 22.87              | 22.47              | 0        |
| 8                    |          | Subtest 3     | 22.43              | 22.31              | 21.96              | 0.5      |
| 8                    |          | Subtest 4     | 22.35              | 22.32              | 21.97              | 0.5      |

UMTS Average Conducted output powers

#### UMTS Band 4 Maximum Conducted Output Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 4 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | DL 1537<br>UL 1312 | DL 1637<br>UL 1412 | DL 1738<br>UL 1513 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 24.43              | 24.43              | 24.41              | -        |
| 99                   |          | 12.2 kbps AMR | 24.43              | 24.43              | 24.41              | -        |
| 5                    | HSDPA    | Subtest 1     | 24.03              | 24.23              | 24.11              | 0        |
| 5                    |          | Subtest 2     | 24.02              | 24.24              | 24.12              | 0        |
| 5                    |          | Subtest 3     | 23.02              | 23.22              | 23.11              | 0.5      |
| 5                    |          | Subtest 4     | 23.01              | 23.21              | 23.11              | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 24.01              | 24.22              | 24.11              | 0        |
| 6                    |          | Subtest 2     | 21.54              | 21.73              | 21.32              | 2        |
| 6                    |          | Subtest 3     | 21.52              | 21.70              | 21.58              | 1        |
| 6                    |          | Subtest 4     | 20.71              | 21.70              | 21.56              | 2        |
| 6                    |          | Subtest 5     | 23.72              | 24.22              | 24.12              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 22.75              | 23.29              | 23.24              | 0        |
| 8                    |          | Subtest 2     | 22.75              | 23.30              | 23.21              | 0        |
| 8                    |          | Subtest 3     | 22.13              | 22.29              | 22.22              | 0.5      |
| 8                    |          | Subtest 4     | 22.13              | 22.28              | 22.20              | 0.5      |

UMTS Average Conducted output powers

### UMTS Band 2Maximum Conducted Output Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 2 [dBm] |                 |                 | 3GPP MPR |
|----------------------|----------|---------------|-------------------|-----------------|-----------------|----------|
|                      |          | Subtest       | DL 9662 UL 9262   | DL 9800 UL 9400 | DL 9938 UL 9538 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 24.16             | 24.19           | 24.40           | -        |
| 99                   |          | 12.2 kbps AMR | 24.12             | 24.18           | 24.40           | -        |
| 5                    | HSDPA    | Subtest 1     | 23.74             | 23.80           | 24.01           | 0        |
| 5                    |          | Subtest 2     | 23.73             | 23.81           | 24.05           | 0        |
| 5                    |          | Subtest 3     | 22.71             | 22.81           | 23.04           | 0.5      |
| 5                    |          | Subtest 4     | 22.73             | 22.81           | 23.04           | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 23.64             | 23.81           | 24.04           | 0        |
| 6                    |          | Subtest 2     | 21.26             | 21.33           | 21.23           | 2        |
| 6                    |          | Subtest 3     | 21.24             | 21.32           | 21.54           | 1        |
| 6                    |          | Subtest 4     | 20.53             | 21.32           | 21.52           | 2        |
| 6                    |          | Subtest 5     | 23.74             | 23.82           | 24.02           | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 22.74             | 22.66           | 22.51           | 0        |
| 8                    |          | Subtest 2     | 22.74             | 22.66           | 22.51           | 0        |
| 8                    |          | Subtest 3     | 21.77             | 21.66           | 21.73           | 0.5      |
| 8                    |          | Subtest 4     | 21.77             | 21.68           | 21.73           | 0.5      |

UMTS Average Conducted output powers

#### DC-HSDPA Configurations

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK)was conformed to be used during DC-HSDPA measurements.



### 11.2.2 UMTS Reduced Conducted Output Power (Hotspot mode activated)

#### UMTS Band 4 Hotspot Back-off Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 4 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | DL 1537<br>UL 1312 | DL 1637<br>UL 1412 | DL 1738<br>UL 1513 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 21.55              | 21.64              | 21.52              | -        |
| 99                   |          | 12.2 kbps AMR | 21.51              | 21.63              | 21.54              | -        |
| 5                    | HSDPA    | Subtest 1     | 21.02              | 21.18              | 21.09              | 0        |
| 5                    |          | Subtest 2     | 21.01              | 21.19              | 21.08              | 0        |
| 5                    |          | Subtest 3     | 20.03              | 20.19              | 20.07              | 0.5      |
| 5                    |          | Subtest 4     | 20.01              | 20.20              | 20.06              | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 20.98              | 21.20              | 20.82              | 0        |
| 6                    |          | Subtest 2     | 18.51              | 18.70              | 18.41              | 2        |
| 6                    |          | Subtest 3     | 18.52              | 18.70              | 18.40              | 1        |
| 6                    |          | Subtest 4     | 18.50              | 18.71              | 18.42              | 2        |
| 6                    |          | Subtest 5     | 21.02              | 21.23              | 20.84              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 20.70              | 20.78              | 20.75              | 0        |
| 8                    |          | Subtest 2     | 20.69              | 20.72              | 20.70              | 0        |
| 8                    |          | Subtest 3     | 19.70              | 19.75              | 19.72              | 0.5      |
| 8                    |          | Subtest 4     | 19.71              | 19.74              | 19.71              | 0.5      |

UMTS Average Conducted output powers

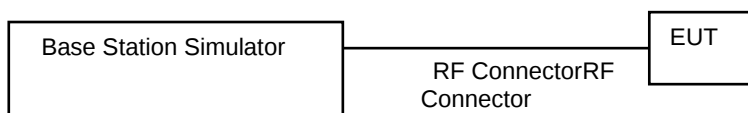
#### UMTS Band 2 Hotspot Back-off Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 2 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | DL 9662<br>UL 9262 | DL 9800<br>UL 9400 | DL 9938<br>UL 9538 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 21.23              | 21.29              | 21.48              | -        |
| 99                   |          | 12.2 kbps AMR | 21.22              | 21.28              | 21.47              | -        |
| 5                    | HSDPA    | Subtest 1     | 20.77              | 20.84              | 21.08              | 0        |
| 5                    |          | Subtest 2     | 20.79              | 20.88              | 21.07              | 0        |
| 5                    |          | Subtest 3     | 19.75              | 19.87              | 20.08              | 0.5      |
| 5                    |          | Subtest 4     | 19.76              | 19.84              | 20.06              | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 20.80              | 20.87              | 21.08              | 0        |
| 6                    |          | Subtest 2     | 18.31              | 18.39              | 18.61              | 2        |
| 6                    |          | Subtest 3     | 18.33              | 18.41              | 18.62              | 1        |
| 6                    |          | Subtest 4     | 18.34              | 18.37              | 18.57              | 2        |
| 6                    |          | Subtest 5     | 20.81              | 20.86              | 21.07              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 20.22              | 20.23              | 20.21              | 0        |
| 8                    |          | Subtest 2     | 20.20              | 20.21              | 20.18              | 0        |
| 8                    |          | Subtest 3     | 19.20              | 19.21              | 19.18              | 0.5      |
| 8                    |          | Subtest 4     | 19.19              | 19.20              | 19.17              | 0.5      |

UMTS Average Conducted output powers

#### DC-HSDPA Configurations

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK) was conformed to be used during DC-HSDPA measurements.



### 11.2.3 UMTS Reduced Conducted Output Power (Grip back Activated/ Ear jack Activated)

#### UMTS Band 4 Grip Back-off Power

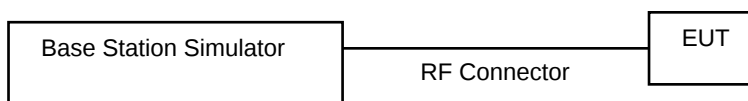
| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 4 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | DL 1537<br>UL 1312 | DL 1637<br>UL 1412 | DL 1738<br>UL 1513 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 21.71              | 21.63              | 21.62              | -        |
| 99                   |          | 12.2 kbps AMR | 21.72              | 21.64              | 21.63              | -        |
| 5                    | HSDPA    | Subtest 1     | 20.98              | 21.20              | 21.09              | 0        |
| 5                    |          | Subtest 2     | 20.97              | 21.21              | 21.07              | 0        |
| 5                    |          | Subtest 3     | 19.99              | 20.23              | 20.06              | 0.5      |
| 5                    |          | Subtest 4     | 19.98              | 20.22              | 20.08              | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 20.98              | 21.21              | 20.84              | 0        |
| 6                    |          | Subtest 2     | 18.54              | 18.71              | 18.44              | 2        |
| 6                    |          | Subtest 3     | 18.52              | 18.72              | 18.42              | 1        |
| 6                    |          | Subtest 4     | 18.51              | 18.72              | 18.42              | 2        |
| 6                    |          | Subtest 5     | 20.99              | 21.23              | 20.83              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 20.71              | 20.77              | 20.77              | 0        |
| 8                    |          | Subtest 2     | 20.68              | 20.74              | 20.71              | 0        |
| 8                    |          | Subtest 3     | 19.72              | 19.76              | 19.73              | 0.5      |
| 8                    |          | Subtest 4     | 19.70              | 19.75              | 19.74              | 0.5      |

UMTS Average Conducted output powers

#### UMTS Band 2 Grip back-off Power

| 3GPP Release Version | Mode     | 3GPP 34.121 | UMTS Band 2 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|-------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest     | DL 9662<br>UL 9262 | DL 9800<br>UL 9400 | DL 9938<br>UL 9538 |          |
| 99                   | UMTS     | 12.2kbpsRMC | 21.21              | 21.28              | 21.48              | -        |
| 99                   |          | 12.2kbpsAMR | 21.22              | 21.26              | 21.47              | -        |
| 5                    | HSDPA    | Subtest 1   | 20.79              | 20.86              | 21.06              | 0        |
| 5                    |          | Subtest 2   | 20.78              | 20.85              | 21.05              | 0        |
| 5                    |          | Subtest 3   | 19.76              | 19.86              | 20.07              | 0.5      |
| 5                    |          | Subtest 4   | 19.74              | 19.87              | 20.06              | 0.5      |
| 6                    | HSUPA    | Subtest 1   | 20.77              | 20.85              | 21.06              | 0        |
| 6                    |          | Subtest 2   | 18.35              | 18.40              | 18.60              | 2        |
| 6                    |          | Subtest 3   | 18.36              | 18.37              | 18.63              | 1        |
| 6                    |          | Subtest 4   | 18.33              | 18.36              | 18.59              | 2        |
| 6                    |          | Subtest 5   | 20.75              | 20.88              | 21.07              | 0        |
| 8                    | DC-HSDPA | Subtest 1   | 20.21              | 20.22              | 20.20              | 0        |
| 8                    |          | Subtest 2   | 20.19              | 20.20              | 20.19              | 0        |
| 8                    |          | Subtest 3   | 19.22              | 19.22              | 19.19              | 0.5      |
| 8                    |          | Subtest 4   | 19.20              | 19.21              | 19.18              | 0.5      |

- ◆ 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- ◆ H-set 12(QPSK) was conformed to be used during DC-HSDPA measurements.



### 11.3 LTE Maximum Output Power

LTEB2/B4/B5/B7/B12/B13/B14/B25/B26/B30/B38/B40/B41/B48/B66/B71 at 20 MHz Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

#### 11.3.1 LTE Maximum Conducted Power

##### [ LTE Band 2 Conducted Power]

LTE Band 2 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|------------------------|---------------------------|----------|
|           |            |         |           | 18607Ch.<br>1850.7 MHz   | 18900Ch.<br>1880 MHz | 19193Ch.<br>1909.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 23.77                    | 23.74                | 23.88                  | 0                         | 0        |
|           |            | 1       | 3         | 23.93                    | 23.76                | 24.00                  | 0                         | 0        |
|           |            | 1       | 5         | 23.80                    | 23.56                | 23.81                  | 0                         | 0        |
|           |            | 3       | 0         | 23.82                    | 23.77                | 23.92                  | 0                         | 0        |
|           |            | 3       | 1         | 23.88                    | 23.83                | 23.91                  | 0                         | 0        |
|           |            | 3       | 3         | 23.80                    | 23.68                | 23.89                  | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 22.78                    | 22.79                | 23.06                  | 0-1                       | 1        |
|           |            | 1       | 0         | 23.26                    | 23.11                | 23.31                  | 0-1                       | 1        |
|           |            | 1       | 3         | 23.18                    | 23.01                | 23.19                  | 0-1                       | 1        |
|           |            | 1       | 5         | 22.99                    | 22.93                | 23.19                  | 0-1                       | 1        |
|           |            | 3       | 0         | 23.15                    | 23.03                | 23.15                  | 0-1                       | 1        |
|           |            | 3       | 1         | 23.09                    | 23.00                | 23.23                  | 0-1                       | 1        |
|           | 64QAM      | 3       | 3         | 22.97                    | 22.97                | 23.11                  | 0-1                       | 1        |
|           |            | 6       | 0         | 21.94                    | 21.97                | 22.03                  | 0-2                       | 2        |
|           |            | 1       | 0         | 22.26                    | 22.15                | 22.14                  | 0-2                       | 2        |
|           |            | 1       | 3         | 22.01                    | 22.18                | 22.18                  | 0-2                       | 2        |
|           |            | 1       | 5         | 22.08                    | 21.96                | 22.08                  | 0-2                       | 2        |
|           |            | 3       | 0         | 21.98                    | 21.80                | 22.05                  | 0-2                       | 2        |
|           | 256QAM     | 3       | 1         | 22.01                    | 21.94                | 22.15                  | 0-2                       | 2        |
|           |            | 3       | 3         | 21.77                    | 21.86                | 21.99                  | 0-2                       | 2        |
|           |            | 6       | 0         | 20.99                    | 20.86                | 21.10                  | 0-3                       | 3        |
|           |            | 1       | 0         | 19.22                    | 19.14                | 19.32                  | 0-5                       | 5        |
|           |            | 1       | 3         | 19.14                    | 18.91                | 19.38                  | 0-5                       | 5        |
|           |            | 1       | 5         | 19.09                    | 19.00                | 19.12                  | 0-5                       | 5        |
|           |            | 3       | 0         | 19.18                    | 19.12                | 19.33                  | 0-5                       | 5        |
|           |            | 3       | 1         | 19.06                    | 19.00                | 19.41                  | 0-5                       | 5        |
|           |            | 3       | 3         | 19.05                    | 18.96                | 19.16                  | 0-5                       | 5        |
|           |            | 6       | 0         | 18.97                    | 18.85                | 18.51                  | 0-5                       | 5        |

## LTE Band 2 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 18615 Ch. 1851.5 MHz     | 18900 Ch. 1880 MHz | 19185 Ch. 1908.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 24.01                    | 23.90              | 24.12                | 0                         | 0        |
|           |            | 1       | 7         | 23.98                    | 23.87              | 24.17                | 0                         | 0        |
|           |            | 1       | 14        | 23.88                    | 23.74              | 23.86                | 0                         | 0        |
|           |            | 8       | 0         | 23.12                    | 22.88              | 23.14                | 0-1                       | 1        |
|           |            | 8       | 3         | 23.06                    | 22.87              | 23.21                | 0-1                       | 1        |
|           |            | 8       | 7         | 23.00                    | 22.81              | 23.04                | 0-1                       | 1        |
|           |            | 15      | 0         | 23.04                    | 22.95              | 23.14                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.30                    | 23.24              | 23.44                | 0-1                       | 1        |
|           |            | 1       | 7         | 23.10                    | 23.04              | 23.12                | 0-1                       | 1        |
|           |            | 1       | 14        | 23.15                    | 22.98              | 23.29                | 0-1                       | 1        |
|           |            | 8       | 0         | 22.14                    | 21.94              | 22.30                | 0-2                       | 2        |
|           |            | 8       | 3         | 22.20                    | 21.98              | 22.17                | 0-2                       | 2        |
|           |            | 8       | 7         | 22.03                    | 21.90              | 22.15                | 0-2                       | 2        |
|           |            | 15      | 0         | 22.09                    | 21.94              | 22.14                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.11                    | 22.12              | 22.24                | 0-2                       | 2        |
|           |            | 1       | 7         | 22.16                    | 22.04              | 22.12                | 0-2                       | 2        |
|           |            | 1       | 14        | 22.18                    | 22.00              | 22.11                | 0-2                       | 2        |
|           |            | 8       | 0         | 21.13                    | 20.97              | 21.15                | 0-3                       | 3        |
|           |            | 8       | 3         | 21.27                    | 21.09              | 21.24                | 0-3                       | 3        |
|           |            | 8       | 7         | 21.02                    | 20.93              | 21.25                | 0-3                       | 3        |
|           |            | 15      | 0         | 21.09                    | 20.93              | 21.10                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.02                    | 19.00              | 19.15                | 0-5                       | 5        |
|           |            | 1       | 7         | 19.17                    | 18.98              | 19.19                | 0-5                       | 5        |
|           |            | 1       | 14        | 19.14                    | 18.87              | 19.13                | 0-5                       | 5        |
|           |            | 8       | 0         | 19.10                    | 19.08              | 19.17                | 0-5                       | 5        |
|           |            | 8       | 3         | 19.14                    | 18.97              | 19.17                | 0-5                       | 5        |
|           |            | 8       | 7         | 19.15                    | 19.03              | 19.08                | 0-5                       | 5        |
|           |            | 15      | 0         | 18.95                    | 18.97              | 19.01                | 0-5                       | 5        |

## LTE Band 2 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18625 Ch.<br>1852.5 MHz  | 18900 Ch.<br>1880 MHz | 19175 Ch.<br>1907.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 23.84                    | 23.73                 | 23.81                   | 0                         | 0        |
|           |            | 1       | 12        | 23.82                    | 23.76                 | 23.99                   | 0                         | 0        |
|           |            | 1       | 24        | 23.81                    | 23.70                 | 23.88                   | 0                         | 0        |
|           |            | 12      | 0         | 23.08                    | 22.76                 | 22.99                   | 0-1                       | 1        |
|           |            | 12      | 6         | 23.05                    | 22.92                 | 23.00                   | 0-1                       | 1        |
|           |            | 12      | 11        | 22.94                    | 22.86                 | 23.04                   | 0-1                       | 1        |
|           |            | 25      | 0         | 22.99                    | 22.85                 | 22.94                   | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.18                    | 23.05                 | 23.27                   | 0-1                       | 1        |
|           |            | 1       | 12        | 23.10                    | 22.97                 | 23.20                   | 0-1                       | 1        |
|           |            | 1       | 24        | 23.07                    | 23.01                 | 23.05                   | 0-1                       | 1        |
|           |            | 12      | 0         | 22.01                    | 21.85                 | 22.02                   | 0-2                       | 2        |
|           |            | 12      | 6         | 22.12                    | 22.12                 | 22.10                   | 0-2                       | 2        |
|           |            | 12      | 11        | 22.03                    | 21.81                 | 22.06                   | 0-2                       | 2        |
|           |            | 25      | 0         | 22.01                    | 21.85                 | 22.01                   | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.98                    | 21.81                 | 22.14                   | 0-2                       | 2        |
|           |            | 1       | 12        | 22.07                    | 21.91                 | 22.02                   | 0-2                       | 2        |
|           |            | 1       | 24        | 22.00                    | 22.10                 | 22.12                   | 0-2                       | 2        |
|           |            | 12      | 0         | 20.95                    | 20.84                 | 21.06                   | 0-3                       | 3        |
|           |            | 12      | 6         | 21.11                    | 20.97                 | 21.07                   | 0-3                       | 3        |
|           |            | 12      | 11        | 20.93                    | 20.92                 | 20.92                   | 0-3                       | 3        |
|           |            | 25      | 0         | 21.04                    | 20.77                 | 21.07                   | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.14                    | 18.79                 | 19.06                   | 0-5                       | 5        |
|           |            | 1       | 12        | 19.16                    | 18.92                 | 19.23                   | 0-5                       | 5        |
|           |            | 1       | 24        | 18.93                    | 18.87                 | 18.99                   | 0-5                       | 5        |
|           |            | 12      | 0         | 18.97                    | 18.85                 | 19.00                   | 0-5                       | 5        |
|           |            | 12      | 6         | 19.01                    | 18.96                 | 19.07                   | 0-5                       | 5        |
|           |            | 12      | 11        | 19.00                    | 18.91                 | 19.04                   | 0-5                       | 5        |
|           |            | 25      | 0         | 19.02                    | 18.90                 | 19.01                   | 0-5                       | 5        |

## LTE Band 2 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 18650 Ch. 1855 MHz       | 18900 Ch. 1880 MHz | 19150 Ch. 1905 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.55                    | 23.36              | 23.83              | 0                         | 0        |
|           |            | 1       | 24        | 23.76                    | 23.90              | 24.07              | 0                         | 0        |
|           |            | 1       | 49        | 23.61                    | 23.65              | 24.06              | 0                         | 0        |
|           |            | 25      | 0         | 22.90                    | 22.76              | 22.97              | 0-1                       | 1        |
|           |            | 25      | 12        | 23.02                    | 22.97              | 23.12              | 0-1                       | 1        |
|           |            | 25      | 24        | 22.87                    | 22.82              | 22.96              | 0-1                       | 1        |
|           |            | 50      | 0         | 22.91                    | 22.83              | 23.00              | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.13                    | 22.74              | 23.21              | 0-1                       | 1        |
|           |            | 1       | 24        | 23.09                    | 22.94              | 23.34              | 0-1                       | 1        |
|           |            | 1       | 49        | 22.86                    | 22.88              | 23.19              | 0-1                       | 1        |
|           |            | 25      | 0         | 21.85                    | 21.76              | 21.80              | 0-2                       | 2        |
|           |            | 25      | 12        | 22.05                    | 21.98              | 22.09              | 0-2                       | 2        |
|           |            | 25      | 24        | 21.94                    | 22.00              | 22.04              | 0-2                       | 2        |
|           |            | 50      | 0         | 21.87                    | 21.85              | 22.00              | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.64                    | 21.56              | 22.32              | 0-2                       | 2        |
|           |            | 1       | 24        | 22.11                    | 22.09              | 22.29              | 0-2                       | 2        |
|           |            | 1       | 49        | 21.87                    | 21.74              | 22.25              | 0-2                       | 2        |
|           |            | 25      | 0         | 20.91                    | 20.75              | 20.95              | 0-3                       | 3        |
|           |            | 25      | 12        | 21.07                    | 21.04              | 21.16              | 0-3                       | 3        |
|           |            | 25      | 24        | 20.94                    | 20.89              | 21.12              | 0-3                       | 3        |
|           |            | 50      | 0         | 20.86                    | 20.95              | 21.08              | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.66                    | 18.63              | 18.62              | 0-5                       | 5        |
|           |            | 1       | 24        | 19.08                    | 19.06              | 19.20              | 0-5                       | 5        |
|           |            | 1       | 49        | 18.79                    | 18.79              | 19.01              | 0-5                       | 5        |
|           |            | 25      | 0         | 18.88                    | 18.78              | 19.00              | 0-5                       | 5        |
|           |            | 25      | 12        | 19.11                    | 18.99              | 19.13              | 0-5                       | 5        |
|           |            | 25      | 24        | 18.88                    | 18.90              | 19.04              | 0-5                       | 5        |
|           |            | 50      | 0         | 18.99                    | 18.85              | 19.04              | 0-5                       | 5        |

## LTE Band 2 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 18675 Ch. 1857.5 MHz     | 18900 Ch. 1880 MHz | 19125 Ch. 1902.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 23.55                    | 23.50              | 23.72                | 0                         | 0        |
|           |            | 1       | 36        | 23.54                    | 23.57              | 23.93                | 0                         | 0        |
|           |            | 1       | 74        | 23.54                    | 23.67              | 23.87                | 0                         | 0        |
|           |            | 36      | 0         | 22.70                    | 22.62              | 22.70                | 0-1                       | 1        |
|           |            | 36      | 18        | 22.78                    | 22.79              | 22.80                | 0-1                       | 1        |
|           |            | 36      | 39        | 22.86                    | 22.74              | 22.99                | 0-1                       | 1        |
|           |            | 75      | 0         | 22.74                    | 22.73              | 22.73                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.99                    | 23.26              | 23.43                | 0-1                       | 1        |
|           |            | 1       | 36        | 23.03                    | 22.99              | 23.15                | 0-1                       | 1        |
|           |            | 1       | 74        | 23.09                    | 23.06              | 23.20                | 0-1                       | 1        |
|           |            | 36      | 0         | 21.74                    | 21.60              | 21.76                | 0-2                       | 2        |
|           |            | 36      | 18        | 21.84                    | 21.76              | 21.83                | 0-2                       | 2        |
|           |            | 36      | 39        | 21.83                    | 21.77              | 21.94                | 0-2                       | 2        |
|           |            | 75      | 0         | 21.72                    | 21.71              | 21.76                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.69                    | 21.81              | 21.94                | 0-2                       | 2        |
|           |            | 1       | 36        | 21.84                    | 21.90              | 22.03                | 0-2                       | 2        |
|           |            | 1       | 74        | 21.84                    | 21.79              | 22.02                | 0-2                       | 2        |
|           |            | 36      | 0         | 20.71                    | 20.61              | 20.70                | 0-3                       | 3        |
|           |            | 36      | 18        | 20.94                    | 20.79              | 20.83                | 0-3                       | 3        |
|           |            | 36      | 39        | 20.83                    | 20.79              | 20.97                | 0-3                       | 3        |
|           |            | 75      | 0         | 20.82                    | 20.72              | 20.90                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.67                    | 18.40              | 18.72                | 0-5                       | 5        |
|           |            | 1       | 36        | 18.71                    | 18.76              | 18.94                | 0-5                       | 5        |
|           |            | 1       | 74        | 18.79                    | 18.73              | 18.93                | 0-5                       | 5        |
|           |            | 36      | 0         | 18.78                    | 18.68              | 18.78                | 0-5                       | 5        |
|           |            | 36      | 18        | 18.86                    | 18.77              | 18.97                | 0-5                       | 5        |
|           |            | 36      | 39        | 18.84                    | 18.80              | 19.00                | 0-5                       | 5        |
|           |            | 75      | 0         | 18.74                    | 18.76              | 18.85                | 0-5                       | 5        |

## LTE Band 2 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-----------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 18700 Ch.<br>1860 MHz    | 18900 Ch.<br>1880 MHz | 19100 Ch.<br>1900 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 23.63                    | 23.49                 | 23.69                 | 0                         | 0        |
|           |            | 1       | 49        | 23.72                    | 23.54                 | 23.85                 | 0                         | 0        |
|           |            | 1       | 99        | 23.80                    | 23.70                 | 23.78                 | 0                         | 0        |
|           |            | 50      | 0         | 22.75                    | 22.60                 | 22.69                 | 0-1                       | 1        |
|           |            | 50      | 25        | 22.87                    | 22.84                 | 22.94                 | 0-1                       | 1        |
|           |            | 50      | 49        | 22.81                    | 22.76                 | 22.86                 | 0-1                       | 1        |
|           |            | 100     | 0         | 22.72                    | 22.70                 | 22.84                 | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.12                    | 23.02                 | 23.20                 | 0-1                       | 1        |
|           |            | 1       | 49        | 23.08                    | 23.02                 | 23.25                 | 0-1                       | 1        |
|           |            | 1       | 99        | 22.97                    | 23.03                 | 23.16                 | 0-1                       | 1        |
|           |            | 50      | 0         | 21.66                    | 21.54                 | 21.76                 | 0-2                       | 2        |
|           |            | 50      | 25        | 21.85                    | 21.76                 | 21.89                 | 0-2                       | 2        |
|           |            | 50      | 49        | 21.76                    | 21.81                 | 21.93                 | 0-2                       | 2        |
|           |            | 100     | 0         | 21.76                    | 21.76                 | 21.91                 | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.87                    | 22.06                 | 22.02                 | 0-2                       | 2        |
|           |            | 1       | 49        | 21.97                    | 21.89                 | 22.07                 | 0-2                       | 2        |
|           |            | 1       | 99        | 22.00                    | 21.99                 | 21.88                 | 0-2                       | 2        |
|           |            | 50      | 0         | 20.75                    | 20.63                 | 20.68                 | 0-3                       | 3        |
|           |            | 50      | 25        | 20.85                    | 20.85                 | 20.96                 | 0-3                       | 3        |
|           |            | 50      | 49        | 20.87                    | 20.81                 | 20.95                 | 0-3                       | 3        |
|           |            | 100     | 0         | 20.74                    | 20.70                 | 20.83                 | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.42                    | 18.38                 | 18.60                 | 0-5                       | 5        |
|           |            | 1       | 49        | 18.81                    | 18.79                 | 18.95                 | 0-5                       | 5        |
|           |            | 1       | 99        | 18.82                    | 18.74                 | 18.79                 | 0-5                       | 5        |
|           |            | 50      | 0         | 18.71                    | 18.53                 | 18.72                 | 0-5                       | 5        |
|           |            | 50      | 25        | 18.82                    | 18.78                 | 18.94                 | 0-5                       | 5        |
|           |            | 50      | 49        | 18.83                    | 18.76                 | 18.93                 | 0-5                       | 5        |
|           |            | 100     | 0         | 18.79                    | 18.74                 | 18.90                 | 0-5                       | 5        |

# [ LTE Band 4 Conducted Power ]

LTE Band 4 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19957 Ch. 1710.7 MHz     | 20175 Ch. 1732.5 MHz | 20393 Ch. 1754.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 1                        | 0                    | 23.87                | 0                         | 0        |
|           |            | 1       | 3         | 1                        | 3                    | 23.92                | 0                         | 0        |
|           |            | 1       | 5         | 1                        | 5                    | 23.91                | 0                         | 0        |
|           |            | 3       | 0         | 3                        | 0                    | 24.01                | 0                         | 0        |
|           |            | 3       | 1         | 3                        | 1                    | 23.97                | 0                         | 0        |
|           |            | 3       | 3         | 3                        | 3                    | 23.93                | 0                         | 0        |
|           |            | 6       | 0         | 6                        | 0                    | 23.07                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 1                        | 0                    | 23.24                | 0-1                       | 1        |
|           |            | 1       | 3         | 1                        | 3                    | 23.30                | 0-1                       | 1        |
|           |            | 1       | 5         | 1                        | 5                    | 23.18                | 0-1                       | 1        |
|           |            | 3       | 0         | 3                        | 0                    | 23.15                | 0-1                       | 1        |
|           |            | 3       | 1         | 3                        | 1                    | 23.29                | 0-1                       | 1        |
|           |            | 3       | 3         | 3                        | 3                    | 23.16                | 0-1                       | 1        |
|           |            | 6       | 0         | 6                        | 0                    | 22.11                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 1                        | 0                    | 22.13                | 0-2                       | 2        |
|           |            | 1       | 3         | 1                        | 3                    | 22.22                | 0-2                       | 2        |
|           |            | 1       | 5         | 1                        | 5                    | 22.12                | 0-2                       | 2        |
|           |            | 3       | 0         | 3                        | 0                    | 21.96                | 0-2                       | 2        |
|           |            | 3       | 1         | 3                        | 1                    | 22.06                | 0-2                       | 2        |
|           |            | 3       | 3         | 3                        | 3                    | 22.03                | 0-2                       | 2        |
|           |            | 6       | 0         | 6                        | 0                    | 21.07                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 1                        | 0                    | 19.21                | 0-5                       | 5        |
|           |            | 1       | 3         | 1                        | 3                    | 19.20                | 0-5                       | 5        |
|           |            | 1       | 5         | 1                        | 5                    | 19.28                | 0-5                       | 5        |
|           |            | 3       | 0         | 3                        | 0                    | 18.95                | 0-5                       | 5        |
|           |            | 3       | 1         | 3                        | 1                    | 19.23                | 0-5                       | 5        |
|           |            | 3       | 3         | 3                        | 3                    | 19.30                | 0-5                       | 5        |
|           |            | 6       | 0         | 6                        | 0                    | 19.12                | 0-5                       | 5        |

## LTE Band 4 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                         |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-------------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 19965 Ch.<br>1711.5 MHz  | 20175 Ch.<br>1732.5 MHz | 20385 Ch.<br>1753.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 23.96                    | 24.26                   | 24.21                   | 0                         | 0        |
|           |            | 1       | 7         | 23.87                    | 24.11                   | 24.13                   | 0                         | 0        |
|           |            | 1       | 14        | 24.00                    | 24.23                   | 24.08                   | 0                         | 0        |
|           |            | 8       | 0         | 23.07                    | 23.42                   | 23.23                   | 0-1                       | 1        |
|           |            | 8       | 3         | 23.25                    | 23.35                   | 23.41                   | 0-1                       | 1        |
|           |            | 8       | 7         | 23.09                    | 23.30                   | 23.24                   | 0-1                       | 1        |
|           |            | 15      | 0         | 23.19                    | 23.36                   | 23.33                   | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.27                    | 23.48                   | 23.49                   | 0-1                       | 1        |
|           |            | 1       | 7         | 23.25                    | 23.38                   | 23.37                   | 0-1                       | 1        |
|           |            | 1       | 14        | 23.24                    | 23.31                   | 23.38                   | 0-1                       | 1        |
|           |            | 8       | 0         | 22.26                    | 22.43                   | 22.25                   | 0-2                       | 2        |
|           |            | 8       | 3         | 22.36                    | 22.48                   | 22.41                   | 0-2                       | 2        |
|           |            | 8       | 7         | 22.18                    | 22.40                   | 22.29                   | 0-2                       | 2        |
|           |            | 15      | 0         | 22.22                    | 22.32                   | 22.25                   | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.28                    | 22.45                   | 22.47                   | 0-2                       | 2        |
|           |            | 1       | 7         | 22.33                    | 22.46                   | 22.49                   | 0-2                       | 2        |
|           |            | 1       | 14        | 22.23                    | 22.27                   | 22.38                   | 0-2                       | 2        |
|           |            | 8       | 0         | 21.29                    | 21.42                   | 21.35                   | 0-3                       | 3        |
|           |            | 8       | 3         | 21.21                    | 21.35                   | 21.29                   | 0-3                       | 3        |
|           |            | 8       | 7         | 21.24                    | 21.37                   | 21.29                   | 0-3                       | 3        |
|           |            | 15      | 0         | 21.20                    | 21.32                   | 21.23                   | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.03                    | 19.47                   | 19.28                   | 0-5                       | 5        |
|           |            | 1       | 7         | 19.26                    | 19.37                   | 19.36                   | 0-5                       | 5        |
|           |            | 1       | 14        | 19.12                    | 19.41                   | 19.42                   | 0-5                       | 5        |
|           |            | 8       | 0         | 19.23                    | 19.41                   | 19.26                   | 0-5                       | 5        |
|           |            | 8       | 3         | 19.24                    | 19.43                   | 19.31                   | 0-5                       | 5        |
|           |            | 8       | 7         | 19.13                    | 19.26                   | 19.25                   | 0-5                       | 5        |
|           |            | 15      | 0         | 19.21                    | 19.37                   | 19.24                   | 0-5                       | 5        |

## LTE Band 4 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19975 Ch. 1712.5 MHz     | 20175 Ch. 1732.5 MHz | 20375 Ch. 1752.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 23.91                    | 24.08                | 24.16                | 0                         | 0        |
|           |            | 1       | 12        | 24.01                    | 24.23                | 24.32                | 0                         | 0        |
|           |            | 1       | 24        | 23.99                    | 24.13                | 23.99                | 0                         | 0        |
|           |            | 12      | 0         | 23.24                    | 23.22                | 23.28                | 0-1                       | 1        |
|           |            | 12      | 6         | 23.16                    | 23.34                | 23.32                | 0-1                       | 1        |
|           |            | 12      | 11        | 23.08                    | 23.26                | 23.25                | 0-1                       | 1        |
|           |            | 25      | 0         | 23.15                    | 23.20                | 23.32                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.37                    | 23.45                | 23.48                | 0-1                       | 1        |
|           |            | 1       | 12        | 23.26                    | 23.31                | 23.35                | 0-1                       | 1        |
|           |            | 1       | 24        | 23.31                    | 23.29                | 23.49                | 0-1                       | 1        |
|           |            | 12      | 0         | 22.13                    | 22.37                | 22.40                | 0-2                       | 2        |
|           |            | 12      | 6         | 22.31                    | 22.42                | 22.48                | 0-2                       | 2        |
|           |            | 12      | 11        | 22.25                    | 22.39                | 22.26                | 0-2                       | 2        |
|           |            | 25      | 0         | 22.16                    | 22.23                | 22.32                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.14                    | 22.37                | 22.47                | 0-2                       | 2        |
|           |            | 1       | 12        | 22.20                    | 22.37                | 22.37                | 0-2                       | 2        |
|           |            | 1       | 24        | 22.25                    | 22.42                | 22.34                | 0-2                       | 2        |
|           |            | 12      | 0         | 21.20                    | 21.34                | 21.30                | 0-3                       | 3        |
|           |            | 12      | 6         | 21.28                    | 21.41                | 21.42                | 0-3                       | 3        |
|           |            | 12      | 11        | 21.13                    | 21.37                | 21.22                | 0-3                       | 3        |
|           |            | 25      | 0         | 21.21                    | 21.36                | 21.32                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.05                    | 19.30                | 19.23                | 0-5                       | 5        |
|           |            | 1       | 12        | 19.26                    | 19.34                | 19.35                | 0-5                       | 5        |
|           |            | 1       | 24        | 19.15                    | 19.22                | 19.19                | 0-5                       | 5        |
|           |            | 12      | 0         | 19.11                    | 19.27                | 19.28                | 0-5                       | 5        |
|           |            | 12      | 6         | 19.21                    | 19.29                | 19.36                | 0-5                       | 5        |
|           |            | 12      | 11        | 19.15                    | 19.36                | 19.31                | 0-5                       | 5        |
|           |            | 25      | 0         | 19.14                    | 19.21                | 19.32                | 0-5                       | 5        |

## LTE Band 4 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 20000 Ch. 1715 MHz       | 20175 Ch. 1732.5 MHz | 20350 Ch. 1750 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.58                    | 23.70                | 23.82              | 0                         | 0        |
|           |            | 1       | 24        | 24.03                    | 24.20                | 24.19              | 0                         | 0        |
|           |            | 1       | 49        | 23.87                    | 23.89                | 23.95              | 0                         | 0        |
|           |            | 25      | 0         | 23.00                    | 23.14                | 23.10              | 0-1                       | 1        |
|           |            | 25      | 12        | 23.17                    | 23.26                | 23.18              | 0-1                       | 1        |
|           |            | 25      | 24        | 23.10                    | 23.21                | 23.22              | 0-1                       | 1        |
|           |            | 50      | 0         | 23.08                    | 23.16                | 23.16              | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.09                    | 23.14                | 23.26              | 0-1                       | 1        |
|           |            | 1       | 24        | 23.32                    | 23.41                | 23.40              | 0-1                       | 1        |
|           |            | 1       | 49        | 23.09                    | 23.29                | 23.26              | 0-1                       | 1        |
|           |            | 25      | 0         | 22.05                    | 22.20                | 22.15              | 0-2                       | 2        |
|           |            | 25      | 12        | 22.27                    | 22.30                | 22.19              | 0-2                       | 2        |
|           |            | 25      | 24        | 22.20                    | 22.29                | 22.15              | 0-2                       | 2        |
|           |            | 50      | 0         | 22.13                    | 22.18                | 22.12              | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.89                    | 21.91                | 21.92              | 0-2                       | 2        |
|           |            | 1       | 24        | 22.39                    | 22.46                | 22.49              | 0-2                       | 2        |
|           |            | 1       | 49        | 22.11                    | 22.32                | 22.08              | 0-2                       | 2        |
|           |            | 25      | 0         | 21.04                    | 21.21                | 21.16              | 0-3                       | 3        |
|           |            | 25      | 12        | 21.23                    | 21.33                | 21.32              | 0-3                       | 3        |
|           |            | 25      | 24        | 21.16                    | 21.24                | 21.24              | 0-3                       | 3        |
|           |            | 50      | 0         | 21.10                    | 21.25                | 21.18              | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.81                    | 19.02                | 18.91              | 0-5                       | 5        |
|           |            | 1       | 24        | 19.10                    | 19.46                | 19.33              | 0-5                       | 5        |
|           |            | 1       | 49        | 19.09                    | 19.25                | 19.14              | 0-5                       | 5        |
|           |            | 25      | 0         | 19.02                    | 19.08                | 19.11              | 0-5                       | 5        |
|           |            | 25      | 12        | 19.12                    | 19.32                | 19.20              | 0-5                       | 5        |
|           |            | 25      | 24        | 19.09                    | 19.16                | 19.12              | 0-5                       | 5        |
|           |            | 50      | 0         | 19.02                    | 19.13                | 19.16              | 0-5                       | 5        |

## LTE Band 4 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 20025 Ch. 1717.5 MHz     | 20175 Ch. 1732.5 MHz | 20325 Ch. 1747.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 23.68                    | 23.78                | 23.91                | 0                         | 0        |
|           |            | 1       | 36        | 23.84                    | 24.01                | 24.14                | 0                         | 0        |
|           |            | 1       | 74        | 24.02                    | 23.92                | 23.84                | 0                         | 0        |
|           |            | 36      | 0         | 22.99                    | 23.07                | 23.16                | 0-1                       | 1        |
|           |            | 36      | 18        | 23.12                    | 23.20                | 23.16                | 0-1                       | 1        |
|           |            | 36      | 39        | 23.16                    | 23.24                | 23.10                | 0-1                       | 1        |
|           |            | 75      | 0         | 23.06                    | 23.08                | 23.14                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.27                    | 23.25                | 23.32                | 0-1                       | 1        |
|           |            | 1       | 36        | 23.35                    | 23.49                | 23.47                | 0-1                       | 1        |
|           |            | 1       | 74        | 23.27                    | 23.34                | 23.32                | 0-1                       | 1        |
|           |            | 36      | 0         | 21.90                    | 22.04                | 22.14                | 0-2                       | 2        |
|           |            | 36      | 18        | 22.15                    | 22.16                | 22.17                | 0-2                       | 2        |
|           |            | 36      | 39        | 22.12                    | 22.16                | 22.15                | 0-2                       | 2        |
|           |            | 75      | 0         | 22.04                    | 22.07                | 22.17                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.82                    | 21.99                | 22.01                | 0-2                       | 2        |
|           |            | 1       | 36        | 22.24                    | 22.26                | 22.15                | 0-2                       | 2        |
|           |            | 1       | 74        | 22.15                    | 22.23                | 22.13                | 0-2                       | 2        |
|           |            | 36      | 0         | 20.97                    | 21.05                | 21.10                | 0-3                       | 3        |
|           |            | 36      | 18        | 21.15                    | 21.30                | 21.34                | 0-3                       | 3        |
|           |            | 36      | 39        | 21.06                    | 21.29                | 21.22                | 0-3                       | 3        |
|           |            | 75      | 0         | 21.03                    | 21.02                | 21.06                | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.77                    | 18.88                | 18.95                | 0-5                       | 5        |
|           |            | 1       | 36        | 19.02                    | 19.32                | 19.29                | 0-5                       | 5        |
|           |            | 1       | 74        | 19.04                    | 19.16                | 19.04                | 0-5                       | 5        |
|           |            | 36      | 0         | 18.91                    | 19.05                | 19.08                | 0-5                       | 5        |
|           |            | 36      | 18        | 19.09                    | 19.12                | 19.19                | 0-5                       | 5        |
|           |            | 36      | 39        | 19.15                    | 19.27                | 19.15                | 0-5                       | 5        |
|           |            | 75      | 0         | 19.00                    | 18.99                | 19.12                | 0-5                       | 5        |

## LTE Band 4 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 20175 ch.<br>1732.5 MHz  |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 23.72                    | 0                         | 0        |
|           |            | 1       | 49        | 24.10                    | 0                         | 0        |
|           |            | 1       | 99        | 23.86                    | 0                         | 0        |
|           |            | 50      | 0         | 23.00                    | 0-1                       | 1        |
|           |            | 50      | 25        | 23.15                    | 0-1                       | 1        |
|           |            | 50      | 49        | 23.15                    | 0-1                       | 1        |
|           |            | 100     | 0         | 23.01                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.02                    | 0-1                       | 1        |
|           |            | 1       | 49        | 23.53                    | 0-1                       | 1        |
|           |            | 1       | 99        | 23.44                    | 0-1                       | 1        |
|           |            | 50      | 0         | 22.04                    | 0-2                       | 2        |
|           |            | 50      | 25        | 22.17                    | 0-2                       | 2        |
|           |            | 50      | 49        | 22.14                    | 0-2                       | 2        |
|           |            | 100     | 0         | 22.00                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.87                    | 0-2                       | 2        |
|           |            | 1       | 49        | 22.22                    | 0-2                       | 2        |
|           |            | 1       | 99        | 22.14                    | 0-2                       | 2        |
|           |            | 50      | 0         | 21.00                    | 0-3                       | 3        |
|           |            | 50      | 25        | 21.24                    | 0-3                       | 3        |
|           |            | 50      | 49        | 21.19                    | 0-3                       | 3        |
|           |            | 100     | 0         | 21.08                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.76                    | 0-5                       | 5        |
|           |            | 1       | 49        | 19.23                    | 0-5                       | 5        |
|           |            | 1       | 99        | 19.04                    | 0-5                       | 5        |
|           |            | 50      | 0         | 19.00                    | 0-5                       | 5        |
|           |            | 50      | 25        | 19.17                    | 0-5                       | 5        |
|           |            | 50      | 49        | 19.12                    | 0-5                       | 5        |
|           |            | 100     | 0         | 19.06                    | 0-5                       | 5        |

# [ LTE Band 5 Conducted Power ]

LTE Band 5 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                        |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|------------------------|---------------------------|----------|
|           |            |         |           | 20407 Ch.<br>824.7 MHz   | 20525 Ch.<br>836.5 MHz | 20643 Ch.<br>848.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 24.31                    | 24.19                  | 23.76                  | 0                         | 0        |
|           |            | 1       | 3         | 24.33                    | 24.49                  | 23.98                  | 0                         | 0        |
|           |            | 1       | 5         | 24.26                    | 24.24                  | 23.84                  | 0                         | 0        |
|           |            | 3       | 0         | 24.28                    | 24.17                  | 23.85                  | 0                         | 0        |
|           |            | 3       | 1         | 24.47                    | 24.19                  | 23.78                  | 0                         | 0        |
|           |            | 3       | 3         | 24.36                    | 24.22                  | 23.72                  | 0                         | 0        |
|           |            | 6       | 0         | 23.43                    | 23.35                  | 22.91                  | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.63                    | 23.56                  | 23.17                  | 0-1                       | 1        |
|           |            | 1       | 3         | 23.78                    | 23.66                  | 23.24                  | 0-1                       | 1        |
|           |            | 1       | 5         | 23.52                    | 23.43                  | 23.11                  | 0-1                       | 1        |
|           |            | 3       | 0         | 23.62                    | 23.58                  | 23.08                  | 0-1                       | 1        |
|           |            | 3       | 1         | 23.65                    | 23.54                  | 23.18                  | 0-1                       | 1        |
|           |            | 3       | 3         | 23.59                    | 23.50                  | 23.07                  | 0-1                       | 1        |
|           |            | 6       | 0         | 22.51                    | 22.43                  | 21.99                  | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.73                    | 22.43                  | 22.15                  | 0-2                       | 2        |
|           |            | 1       | 3         | 22.71                    | 22.58                  | 22.15                  | 0-2                       | 2        |
|           |            | 1       | 5         | 22.62                    | 22.38                  | 22.08                  | 0-2                       | 2        |
|           |            | 3       | 0         | 22.53                    | 22.41                  | 21.94                  | 0-2                       | 2        |
|           |            | 3       | 1         | 22.55                    | 22.51                  | 22.10                  | 0-2                       | 2        |
|           |            | 3       | 3         | 22.55                    | 22.43                  | 21.88                  | 0-2                       | 2        |
|           |            | 6       | 0         | 21.50                    | 21.40                  | 20.91                  | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.59                    | 19.39                  | 19.13                  | 0-5                       | 5        |
|           |            | 1       | 3         | 19.65                    | 19.39                  | 19.12                  | 0-5                       | 5        |
|           |            | 1       | 5         | 19.67                    | 19.64                  | 19.43                  | 0-5                       | 5        |
|           |            | 3       | 0         | 19.71                    | 19.63                  | 19.06                  | 0-5                       | 5        |
|           |            | 3       | 1         | 19.67                    | 19.48                  | 19.05                  | 0-5                       | 5        |
|           |            | 3       | 3         | 19.63                    | 19.55                  | 19.02                  | 0-5                       | 5        |
|           |            | 6       | 0         | 19.52                    | 19.44                  | 18.84                  | 0-5                       | 5        |

## LTE Band 5 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 20415 Ch. 825.5 MHz      | 20525 Ch. 836.5 MHz | 20635 Ch. 847.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 24.47                    | 24.32               | 23.91               | 0                         | 0        |
|           |            | 1       | 7         | 24.41                    | 24.32               | 23.97               | 0                         | 0        |
|           |            | 1       | 14        | 24.42                    | 24.26               | 23.87               | 0                         | 0        |
|           |            | 8       | 0         | 23.55                    | 23.41               | 23.07               | 0-1                       | 1        |
|           |            | 8       | 3         | 23.61                    | 23.48               | 23.21               | 0-1                       | 1        |
|           |            | 8       | 7         | 23.56                    | 23.35               | 22.99               | 0-1                       | 1        |
|           |            | 15      | 0         | 23.59                    | 23.42               | 23.03               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.68                    | 23.69               | 23.26               | 0-1                       | 1        |
|           |            | 1       | 7         | 23.73                    | 23.52               | 23.16               | 0-1                       | 1        |
|           |            | 1       | 14        | 23.73                    | 23.60               | 23.21               | 0-1                       | 1        |
|           |            | 8       | 0         | 22.60                    | 22.49               | 22.07               | 0-2                       | 2        |
|           |            | 8       | 3         | 22.73                    | 22.47               | 22.16               | 0-2                       | 2        |
|           |            | 8       | 7         | 22.67                    | 22.43               | 22.09               | 0-2                       | 2        |
|           |            | 15      | 0         | 22.62                    | 22.51               | 22.08               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.63                    | 22.61               | 22.16               | 0-2                       | 2        |
|           |            | 1       | 7         | 22.71                    | 22.42               | 22.05               | 0-2                       | 2        |
|           |            | 1       | 14        | 22.70                    | 22.50               | 21.96               | 0-2                       | 2        |
|           |            | 8       | 0         | 21.64                    | 21.54               | 21.14               | 0-3                       | 3        |
|           |            | 8       | 3         | 21.68                    | 21.55               | 21.17               | 0-3                       | 3        |
|           |            | 8       | 7         | 21.58                    | 21.40               | 21.07               | 0-3                       | 3        |
|           |            | 15      | 0         | 21.61                    | 21.53               | 21.03               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.69                    | 19.55               | 19.18               | 0-5                       | 5        |
|           |            | 1       | 7         | 19.82                    | 19.55               | 19.17               | 0-5                       | 5        |
|           |            | 1       | 14        | 19.65                    | 19.41               | 18.90               | 0-5                       | 5        |
|           |            | 8       | 0         | 19.59                    | 19.60               | 18.94               | 0-5                       | 5        |
|           |            | 8       | 3         | 19.57                    | 19.49               | 19.09               | 0-5                       | 5        |
|           |            | 8       | 7         | 19.56                    | 19.43               | 19.07               | 0-5                       | 5        |
|           |            | 15      | 0         | 19.59                    | 19.42               | 18.97               | 0-5                       | 5        |

## LTE Band 5\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 20425 Ch. 826.5 MHz      | 20525 Ch. 836.5 MHz | 20625 Ch. 846.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 24.40                    | 24.31               | 24.00               | 0                         | 0        |
|           |            | 1       | 12        | 24.41                    | 24.41               | 23.89               | 0                         | 0        |
|           |            | 1       | 24        | 24.32                    | 24.24               | 23.88               | 0                         | 0        |
|           |            | 12      | 0         | 23.49                    | 23.41               | 23.02               | 0-1                       | 1        |
|           |            | 12      | 6         | 23.55                    | 23.53               | 23.06               | 0-1                       | 1        |
|           |            | 12      | 11        | 23.54                    | 23.39               | 22.91               | 0-1                       | 1        |
|           |            | 25      | 0         | 23.51                    | 23.44               | 22.99               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.73                    | 23.64               | 23.36               | 0-1                       | 1        |
|           |            | 1       | 12        | 23.58                    | 23.71               | 23.30               | 0-1                       | 1        |
|           |            | 1       | 24        | 23.62                    | 23.49               | 23.33               | 0-1                       | 1        |
|           |            | 12      | 0         | 22.55                    | 22.48               | 22.08               | 0-2                       | 2        |
|           |            | 12      | 6         | 22.65                    | 22.48               | 22.22               | 0-2                       | 2        |
|           |            | 12      | 11        | 22.57                    | 22.44               | 22.00               | 0-2                       | 2        |
|           |            | 25      | 0         | 22.52                    | 22.47               | 22.10               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.55                    | 22.57               | 22.29               | 0-2                       | 2        |
|           |            | 1       | 12        | 22.65                    | 22.53               | 22.22               | 0-2                       | 2        |
|           |            | 1       | 24        | 22.61                    | 22.41               | 22.02               | 0-2                       | 2        |
|           |            | 12      | 0         | 21.60                    | 21.38               | 21.01               | 0-3                       | 3        |
|           |            | 12      | 6         | 21.54                    | 21.47               | 21.12               | 0-3                       | 3        |
|           |            | 12      | 11        | 21.58                    | 21.31               | 20.90               | 0-3                       | 3        |
|           |            | 25      | 0         | 21.54                    | 21.42               | 21.12               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.61                    | 19.46               | 19.04               | 0-5                       | 5        |
|           |            | 1       | 12        | 19.68                    | 19.65               | 19.23               | 0-5                       | 5        |
|           |            | 1       | 24        | 19.59                    | 19.45               | 18.93               | 0-5                       | 5        |
|           |            | 12      | 0         | 19.61                    | 19.46               | 19.04               | 0-5                       | 5        |
|           |            | 12      | 6         | 19.52                    | 19.51               | 19.11               | 0-5                       | 5        |
|           |            | 12      | 11        | 19.58                    | 19.37               | 19.03               | 0-5                       | 5        |
|           |            | 25      | 0         | 19.61                    | 19.48               | 19.09               | 0-5                       | 5        |

## LTE Band 5 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 20525 Ch.<br>836.5 MHz   |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 24.44                    | 0                         | 0        |
|           |            | 1       | 24        | 24.29                    | 0                         | 0        |
|           |            | 1       | 49        | 24.22                    | 0                         | 0        |
|           |            | 25      | 0         | 23.53                    | 0-1                       | 1        |
|           |            | 25      | 12        | 23.49                    | 0-1                       | 1        |
|           |            | 25      | 24        | 23.34                    | 0-1                       | 1        |
|           |            | 50      | 0         | 23.27                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.78                    | 0-1                       | 1        |
|           |            | 1       | 24        | 23.82                    | 0-1                       | 1        |
|           |            | 1       | 49        | 23.70                    | 0-1                       | 1        |
|           |            | 25      | 0         | 22.54                    | 0-2                       | 2        |
|           |            | 25      | 12        | 22.52                    | 0-2                       | 2        |
|           |            | 25      | 24        | 22.35                    | 0-2                       | 2        |
|           |            | 50      | 0         | 22.34                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.65                    | 0-2                       | 2        |
|           |            | 1       | 24        | 22.64                    | 0-2                       | 2        |
|           |            | 1       | 49        | 22.49                    | 0-2                       | 2        |
|           |            | 25      | 0         | 21.54                    | 0-3                       | 3        |
|           |            | 25      | 12        | 21.49                    | 0-3                       | 3        |
|           |            | 25      | 24        | 21.37                    | 0-3                       | 3        |
|           |            | 50      | 0         | 21.37                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.36                    | 0-5                       | 5        |
|           |            | 1       | 24        | 19.66                    | 0-5                       | 5        |
|           |            | 1       | 49        | 19.08                    | 0-5                       | 5        |
|           |            | 25      | 0         | 19.53                    | 0-5                       | 5        |
|           |            | 25      | 12        | 19.47                    | 0-5                       | 5        |
|           |            | 25      | 24        | 19.30                    | 0-5                       | 5        |
|           |            | 50      | 0         | 19.37                    | 0-5                       | 5        |

# [LTE Band 12 Conducted Power]

LTE Band 12 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                        |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|------------------------|---------------------------|----------|
|           |            |         |           | 23017 Ch.<br>699.7 MHz   | 23095 Ch.<br>707.5 MHz | 23173 Ch.<br>715.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 24.41                    | 24.27                  | 24.41                  | 0                         | 0        |
|           |            | 1       | 3         | 24.43                    | 24.29                  | 24.47                  | 0                         | 0        |
|           |            | 1       | 5         | 24.32                    | 24.23                  | 24.27                  | 0                         | 0        |
|           |            | 3       | 0         | 24.41                    | 24.29                  | 24.21                  | 0                         | 0        |
|           |            | 3       | 1         | 24.50                    | 24.21                  | 24.41                  | 0                         | 0        |
|           |            | 3       | 3         | 24.41                    | 24.23                  | 24.30                  | 0                         | 0        |
|           |            | 6       | 0         | 23.52                    | 23.33                  | 23.41                  | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.85                    | 23.52                  | 23.68                  | 0-1                       | 1        |
|           |            | 1       | 3         | 23.80                    | 23.50                  | 23.59                  | 0-1                       | 1        |
|           |            | 1       | 5         | 23.58                    | 23.55                  | 23.57                  | 0-1                       | 1        |
|           |            | 3       | 0         | 23.62                    | 23.48                  | 23.55                  | 0-1                       | 1        |
|           |            | 3       | 1         | 23.74                    | 23.47                  | 23.61                  | 0-1                       | 1        |
|           |            | 3       | 3         | 23.56                    | 23.39                  | 23.50                  | 0-1                       | 1        |
|           |            | 6       | 0         | 22.55                    | 22.32                  | 22.28                  | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.85                    | 22.76                  | 22.56                  | 0-2                       | 2        |
|           |            | 1       | 3         | 22.77                    | 22.53                  | 22.66                  | 0-2                       | 2        |
|           |            | 1       | 5         | 22.61                    | 22.48                  | 22.46                  | 0-2                       | 2        |
|           |            | 3       | 0         | 22.54                    | 22.26                  | 22.38                  | 0-2                       | 2        |
|           |            | 3       | 1         | 22.66                    | 22.50                  | 22.52                  | 0-2                       | 2        |
|           |            | 3       | 3         | 22.39                    | 22.37                  | 22.44                  | 0-2                       | 2        |
|           |            | 6       | 0         | 21.50                    | 21.35                  | 21.38                  | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.85                    | 19.59                  | 19.43                  | 0-5                       | 5        |
|           |            | 1       | 3         | 19.64                    | 19.55                  | 19.38                  | 0-5                       | 5        |
|           |            | 1       | 5         | 19.54                    | 19.44                  | 19.43                  | 0-5                       | 5        |
|           |            | 3       | 0         | 19.63                    | 19.54                  | 19.52                  | 0-5                       | 5        |
|           |            | 3       | 1         | 19.79                    | 19.48                  | 19.47                  | 0-5                       | 5        |
|           |            | 3       | 3         | 19.85                    | 19.44                  | 19.43                  | 0-5                       | 5        |
|           |            | 6       | 0         | 19.47                    | 19.35                  | 19.30                  | 0-5                       | 5        |

## LTE Band 12\_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 23025 Ch. 700.5 MHz      | 23095 Ch. 707.5 MHz | 23165 Ch. 714.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 24.49                    | 24.35               | 24.43               | 0                         | 0        |
|           |            | 1       | 7         | 24.50                    | 24.28               | 24.49               | 0                         | 0        |
|           |            | 1       | 14        | 24.43                    | 24.32               | 24.39               | 0                         | 0        |
|           |            | 8       | 0         | 23.54                    | 23.39               | 23.43               | 0-1                       | 1        |
|           |            | 8       | 3         | 23.52                    | 23.48               | 23.46               | 0-1                       | 1        |
|           |            | 8       | 7         | 23.57                    | 23.46               | 23.45               | 0-1                       | 1        |
|           |            | 15      | 0         | 23.51                    | 23.43               | 23.40               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.90                    | 23.60               | 23.73               | 0-1                       | 1        |
|           |            | 1       | 7         | 23.79                    | 23.66               | 23.44               | 0-1                       | 1        |
|           |            | 1       | 14        | 23.67                    | 23.81               | 23.46               | 0-1                       | 1        |
|           |            | 8       | 0         | 22.77                    | 22.53               | 22.59               | 0-2                       | 2        |
|           |            | 8       | 3         | 22.76                    | 22.41               | 22.66               | 0-2                       | 2        |
|           |            | 8       | 7         | 22.58                    | 22.56               | 22.61               | 0-2                       | 2        |
|           |            | 15      | 0         | 22.54                    | 22.50               | 22.53               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.87                    | 22.73               | 22.63               | 0-2                       | 2        |
|           |            | 1       | 7         | 22.53                    | 22.25               | 22.68               | 0-2                       | 2        |
|           |            | 1       | 14        | 22.64                    | 22.42               | 22.64               | 0-2                       | 2        |
|           |            | 8       | 0         | 21.71                    | 21.69               | 21.53               | 0-3                       | 3        |
|           |            | 8       | 3         | 21.62                    | 21.52               | 21.50               | 0-3                       | 3        |
|           |            | 8       | 7         | 21.62                    | 21.48               | 21.58               | 0-3                       | 3        |
|           |            | 15      | 0         | 21.49                    | 21.45               | 21.47               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.78                    | 19.59               | 19.56               | 0-5                       | 5        |
|           |            | 1       | 7         | 19.72                    | 19.61               | 19.61               | 0-5                       | 5        |
|           |            | 1       | 14        | 19.79                    | 19.46               | 19.51               | 0-5                       | 5        |
|           |            | 8       | 0         | 19.70                    | 19.58               | 19.40               | 0-5                       | 5        |
|           |            | 8       | 3         | 19.58                    | 19.45               | 19.48               | 0-5                       | 5        |
|           |            | 8       | 7         | 19.54                    | 19.50               | 19.41               | 0-5                       | 5        |
|           |            | 15      | 0         | 19.43                    | 19.53               | 19.36               | 0-5                       | 5        |

## LTE Band 12\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 23035 Ch. 701.5 MHz      | 23095 Ch. 707.5 MHz | 23155 Ch. 713.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 24.50                    | 24.43               | 24.36               | 0                         | 0        |
|           |            | 1       | 12        | 24.45                    | 24.46               | 24.51               | 0                         | 0        |
|           |            | 1       | 24        | 24.36                    | 24.24               | 24.37               | 0                         | 0        |
|           |            | 12      | 0         | 23.58                    | 23.50               | 23.43               | 0-1                       | 1        |
|           |            | 12      | 6         | 23.59                    | 23.47               | 23.44               | 0-1                       | 1        |
|           |            | 12      | 11        | 23.44                    | 23.41               | 23.46               | 0-1                       | 1        |
|           |            | 25      | 0         | 23.55                    | 23.46               | 23.47               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.80                    | 23.85               | 23.73               | 0-1                       | 1        |
|           |            | 1       | 12        | 23.74                    | 23.58               | 23.62               | 0-1                       | 1        |
|           |            | 1       | 24        | 23.60                    | 23.56               | 23.57               | 0-1                       | 1        |
|           |            | 12      | 0         | 22.71                    | 22.59               | 22.39               | 0-2                       | 2        |
|           |            | 12      | 6         | 22.56                    | 22.41               | 22.71               | 0-2                       | 2        |
|           |            | 12      | 11        | 22.51                    | 22.37               | 22.51               | 0-2                       | 2        |
|           |            | 25      | 0         | 22.56                    | 22.41               | 22.48               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.66                    | 22.61               | 22.53               | 0-2                       | 2        |
|           |            | 1       | 12        | 22.66                    | 22.51               | 22.42               | 0-2                       | 2        |
|           |            | 1       | 24        | 22.57                    | 22.39               | 22.68               | 0-2                       | 2        |
|           |            | 12      | 0         | 21.65                    | 21.52               | 21.40               | 0-3                       | 3        |
|           |            | 12      | 6         | 21.69                    | 21.37               | 21.47               | 0-3                       | 3        |
|           |            | 12      | 11        | 21.54                    | 21.37               | 21.41               | 0-3                       | 3        |
|           |            | 25      | 0         | 21.59                    | 21.43               | 21.50               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.79                    | 19.65               | 19.51               | 0-5                       | 5        |
|           |            | 1       | 12        | 19.63                    | 19.42               | 19.58               | 0-5                       | 5        |
|           |            | 1       | 24        | 19.42                    | 19.53               | 19.47               | 0-5                       | 5        |
|           |            | 12      | 0         | 19.60                    | 19.42               | 19.45               | 0-5                       | 5        |
|           |            | 12      | 6         | 19.67                    | 19.48               | 19.56               | 0-5                       | 5        |
|           |            | 12      | 11        | 19.55                    | 19.44               | 19.49               | 0-5                       | 5        |
|           |            | 25      | 0         | 19.61                    | 19.52               | 19.45               | 0-5                       | 5        |

## LTE Band 12\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 23095 Ch.<br>707.5 MHz   |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 24.31                    | 0                         | 0        |
|           |            | 1       | 24        | 24.24                    | 0                         | 0        |
|           |            | 1       | 49        | 24.35                    | 0                         | 0        |
|           |            | 25      | 0         | 23.40                    | 0-1                       | 1        |
|           |            | 25      | 12        | 23.44                    | 0-1                       | 1        |
|           |            | 25      | 24        | 23.35                    | 0-1                       | 1        |
|           |            | 50      | 0         | 23.39                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.78                    | 0-1                       | 1        |
|           |            | 1       | 24        | 23.62                    | 0-1                       | 1        |
|           |            | 1       | 49        | 23.62                    | 0-1                       | 1        |
|           |            | 25      | 0         | 22.49                    | 0-2                       | 2        |
|           |            | 25      | 12        | 22.51                    | 0-2                       | 2        |
|           |            | 25      | 24        | 22.48                    | 0-2                       | 2        |
|           |            | 50      | 0         | 22.44                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.74                    | 0-2                       | 2        |
|           |            | 1       | 24        | 22.53                    | 0-2                       | 2        |
|           |            | 1       | 49        | 22.40                    | 0-2                       | 2        |
|           |            | 25      | 0         | 21.37                    | 0-3                       | 3        |
|           |            | 25      | 12        | 21.51                    | 0-3                       | 3        |
|           |            | 25      | 24        | 21.37                    | 0-3                       | 3        |
|           |            | 50      | 0         | 21.40                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.31                    | 0-5                       | 5        |
|           |            | 1       | 24        | 19.46                    | 0-5                       | 5        |
|           |            | 1       | 49        | 19.14                    | 0-5                       | 5        |
|           |            | 25      | 0         | 19.32                    | 0-5                       | 5        |
|           |            | 25      | 12        | 19.53                    | 0-5                       | 5        |
|           |            | 25      | 24        | 19.40                    | 0-5                       | 5        |
|           |            | 50      | 0         | 19.50                    | 0-5                       | 5        |

# [ LTE Band 13 Conducted Power ]

LTE Band 13 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                   |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-------------------|---------------------|---------------------------|----------|
|           |            |         |           | 23205 Ch. 779.5 MHz      | 23230 Ch. 782 MHz | 23255 Ch. 784.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 23.68                    | 23.83             | 23.97               | 0                         | 0        |
|           |            | 1       | 12        | 24.00                    | 24.01             | 24.11               | 0                         | 0        |
|           |            | 1       | 24        | 23.86                    | 24.02             | 24.10               | 0                         | 0        |
|           |            | 12      | 0         | 22.77                    | 22.95             | 23.10               | 0-1                       | 1        |
|           |            | 12      | 6         | 22.82                    | 23.06             | 23.20               | 0-1                       | 1        |
|           |            | 12      | 11        | 22.87                    | 23.12             | 23.13               | 0-1                       | 1        |
|           |            | 25      | 0         | 22.99                    | 22.96             | 23.18               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.12                    | 23.09             | 23.35               | 0-1                       | 1        |
|           |            | 1       | 12        | 23.31                    | 23.20             | 23.38               | 0-1                       | 1        |
|           |            | 1       | 24        | 23.24                    | 23.40             | 23.51               | 0-1                       | 1        |
|           |            | 12      | 0         | 21.85                    | 22.10             | 22.11               | 0-2                       | 2        |
|           |            | 12      | 6         | 21.92                    | 22.10             | 22.27               | 0-2                       | 2        |
|           |            | 12      | 11        | 21.97                    | 22.14             | 22.18               | 0-2                       | 2        |
|           |            | 25      | 0         | 21.90                    | 22.06             | 22.17               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.99                    | 22.01             | 22.13               | 0-2                       | 2        |
|           |            | 1       | 12        | 23.17                    | 21.96             | 22.22               | 0-2                       | 2        |
|           |            | 1       | 24        | 23.15                    | 22.37             | 22.25               | 0-2                       | 2        |
|           |            | 12      | 0         | 21.81                    | 20.94             | 21.11               | 0-3                       | 3        |
|           |            | 12      | 6         | 21.88                    | 21.00             | 21.09               | 0-3                       | 3        |
|           |            | 12      | 11        | 21.99                    | 21.00             | 21.26               | 0-3                       | 3        |
|           |            | 25      | 0         | 21.87                    | 20.96             | 21.16               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.80                    | 18.89             | 18.96               | 0-5                       | 5        |
|           |            | 1       | 12        | 19.02                    | 19.24             | 19.24               | 0-5                       | 5        |
|           |            | 1       | 24        | 19.07                    | 19.23             | 19.29               | 0-5                       | 5        |
|           |            | 12      | 0         | 18.93                    | 19.06             | 19.04               | 0-5                       | 5        |
|           |            | 12      | 6         | 18.88                    | 19.06             | 19.14               | 0-5                       | 5        |
|           |            | 12      | 11        | 19.00                    | 19.10             | 19.19               | 0-5                       | 5        |
|           |            | 25      | 0         | 18.92                    | 18.94             | 19.16               | 0-5                       | 5        |

## LTE Band 13\_10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 23230 Ch.<br>782 MHz     |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.66                    | 0                         | 0        |
|           |            | 1       | 24        | 24.06                    | 0                         | 0        |
|           |            | 1       | 49        | 24.32                    | 0                         | 0        |
|           |            | 25      | 0         | 23.00                    | 0-1                       | 1        |
|           |            | 25      | 12        | 22.98                    | 0-1                       | 1        |
|           |            | 25      | 24        | 23.36                    | 0-1                       | 1        |
|           |            | 50      | 0         | 23.06                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.18                    | 0-1                       | 1        |
|           |            | 1       | 24        | 23.28                    | 0-1                       | 1        |
|           |            | 1       | 49        | 23.46                    | 0-1                       | 1        |
|           |            | 25      | 0         | 22.05                    | 0-2                       | 2        |
|           |            | 25      | 12        | 22.10                    | 0-2                       | 2        |
|           |            | 25      | 24        | 22.16                    | 0-2                       | 2        |
|           |            | 50      | 0         | 21.98                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.96                    | 0-2                       | 2        |
|           |            | 1       | 24        | 22.09                    | 0-2                       | 2        |
|           |            | 1       | 49        | 22.19                    | 0-2                       | 2        |
|           |            | 25      | 0         | 21.02                    | 0-3                       | 3        |
|           |            | 25      | 12        | 21.09                    | 0-3                       | 3        |
|           |            | 25      | 24        | 21.19                    | 0-3                       | 3        |
|           |            | 50      | 0         | 21.04                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.60                    | 0-5                       | 5        |
|           |            | 1       | 24        | 19.06                    | 0-5                       | 5        |
|           |            | 1       | 49        | 18.96                    | 0-5                       | 5        |
|           |            | 25      | 0         | 18.85                    | 0-5                       | 5        |
|           |            | 25      | 12        | 19.03                    | 0-5                       | 5        |
|           |            | 25      | 24        | 19.05                    | 0-5                       | 5        |
|           |            | 50      | 0         | 19.02                    | 0-5                       | 5        |

# [ LTE Band 17 Conducted Power ]

LTE Band 17 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                   |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-------------------|---------------------|---------------------------|----------|
|           |            |         |           | 23755 Ch. 706.5 MHz      | 23790 Ch. 710 MHz | 23825 Ch. 713.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 24.41                    | 24.46             | 24.45               | 0                         | 0        |
|           |            | 1       | 12        | 24.55                    | 24.42             | 24.45               | 0                         | 0        |
|           |            | 1       | 24        | 24.40                    | 24.49             | 24.31               | 0                         | 0        |
|           |            | 12      | 0         | 23.63                    | 23.49             | 23.56               | 0-1                       | 1        |
|           |            | 12      | 6         | 23.56                    | 23.56             | 23.64               | 0-1                       | 1        |
|           |            | 12      | 11        | 23.51                    | 23.56             | 23.54               | 0-1                       | 1        |
|           |            | 25      | 0         | 23.59                    | 23.55             | 23.55               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.92                    | 23.80             | 23.81               | 0-1                       | 1        |
|           |            | 1       | 12        | 23.65                    | 23.70             | 23.73               | 0-1                       | 1        |
|           |            | 1       | 24        | 23.71                    | 23.77             | 23.80               | 0-1                       | 1        |
|           |            | 12      | 0         | 22.61                    | 22.48             | 22.49               | 0-2                       | 2        |
|           |            | 12      | 6         | 22.65                    | 22.67             | 22.66               | 0-2                       | 2        |
|           |            | 12      | 11        | 22.57                    | 22.56             | 22.55               | 0-2                       | 2        |
|           |            | 25      | 0         | 22.56                    | 22.58             | 22.47               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.62                    | 22.77             | 22.68               | 0-2                       | 2        |
|           |            | 1       | 12        | 22.49                    | 22.69             | 22.62               | 0-2                       | 2        |
|           |            | 1       | 24        | 22.57                    | 22.52             | 22.68               | 0-2                       | 2        |
|           |            | 12      | 0         | 21.64                    | 21.49             | 21.47               | 0-3                       | 3        |
|           |            | 12      | 6         | 21.70                    | 21.63             | 21.50               | 0-3                       | 3        |
|           |            | 12      | 11        | 21.61                    | 21.53             | 21.59               | 0-3                       | 3        |
|           |            | 25      | 0         | 21.61                    | 21.68             | 21.40               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.64                    | 19.57             | 19.34               | 0-5                       | 5        |
|           |            | 1       | 12        | 19.77                    | 19.71             | 19.59               | 0-5                       | 5        |
|           |            | 1       | 24        | 19.77                    | 19.50             | 19.55               | 0-5                       | 5        |
|           |            | 12      | 0         | 19.54                    | 19.46             | 19.43               | 0-5                       | 5        |
|           |            | 12      | 6         | 19.60                    | 19.54             | 19.54               | 0-5                       | 5        |
|           |            | 12      | 11        | 19.58                    | 19.60             | 19.66               | 0-5                       | 5        |
|           |            | 25      | 0         | 19.58                    | 19.56             | 19.57               | 0-5                       | 5        |

## LTE Band 17\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                   |                   | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-------------------|-------------------|---------------------------|----------|
|           |            |         |           | 23780 Ch. 709 MHz        | 23790 Ch. 710 MHz | 23800 Ch. 711 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 24.44                    | 24.39             | 24.34             | 0                         | 0        |
|           |            | 1       | 24        | 24.43                    | 24.52             | 24.42             | 0                         | 0        |
|           |            | 1       | 49        | 24.39                    | 24.40             | 24.36             | 0                         | 0        |
|           |            | 25      | 0         | 23.45                    | 23.41             | 23.54             | 0-1                       | 1        |
|           |            | 25      | 12        | 23.63                    | 23.61             | 23.46             | 0-1                       | 1        |
|           |            | 25      | 24        | 23.57                    | 23.48             | 23.49             | 0-1                       | 1        |
|           |            | 50      | 0         | 23.56                    | 23.60             | 23.56             | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.74                    | 23.71             | 23.71             | 0-1                       | 1        |
|           |            | 1       | 24        | 23.66                    | 23.69             | 23.81             | 0-1                       | 1        |
|           |            | 1       | 49        | 23.76                    | 23.77             | 23.51             | 0-1                       | 1        |
|           |            | 25      | 0         | 22.46                    | 22.43             | 22.47             | 0-2                       | 2        |
|           |            | 25      | 12        | 22.54                    | 22.60             | 22.54             | 0-2                       | 2        |
|           |            | 25      | 24        | 22.58                    | 22.58             | 22.63             | 0-2                       | 2        |
|           |            | 50      | 0         | 22.65                    | 22.63             | 22.59             | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.69                    | 22.73             | 22.68             | 0-2                       | 2        |
|           |            | 1       | 24        | 22.77                    | 22.78             | 22.69             | 0-2                       | 2        |
|           |            | 1       | 49        | 22.62                    | 22.71             | 22.66             | 0-2                       | 2        |
|           |            | 25      | 0         | 21.54                    | 21.58             | 21.55             | 0-3                       | 3        |
|           |            | 25      | 12        | 21.65                    | 21.71             | 21.53             | 0-3                       | 3        |
|           |            | 25      | 24        | 21.60                    | 21.58             | 21.55             | 0-3                       | 3        |
|           |            | 50      | 0         | 21.53                    | 21.57             | 21.55             | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.59                    | 19.51             | 19.61             | 0-5                       | 5        |
|           |            | 1       | 24        | 19.44                    | 19.64             | 19.45             | 0-5                       | 5        |
|           |            | 1       | 49        | 19.48                    | 19.56             | 19.63             | 0-5                       | 5        |
|           |            | 25      | 0         | 19.58                    | 19.50             | 19.41             | 0-5                       | 5        |
|           |            | 25      | 12        | 19.66                    | 19.58             | 19.57             | 0-5                       | 5        |
|           |            | 25      | 24        | 19.53                    | 19.60             | 19.56             | 0-5                       | 5        |
|           |            | 50      | 0         | 19.64                    | 19.64             | 19.54             | 0-5                       | 5        |

# [ LTE Band 26 Conducted Power ]

LTE Band 26\_1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 26697 Ch. 814.7 MHz      | 26865 Ch. 831.5 MHz | 27033 Ch. 848.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 24.33                    | 23.53               | 23.76               | 0                         | 0        |
|           |            | 1       | 3         | 24.39                    | 24.43               | 23.90               | 0                         | 0        |
|           |            | 1       | 5         | 24.38                    | 24.25               | 23.79               | 0                         | 0        |
|           |            | 3       | 0         | 24.35                    | 24.28               | 23.91               | 0                         | 0        |
|           |            | 3       | 1         | 24.36                    | 24.41               | 23.96               | 0                         | 0        |
|           |            | 3       | 3         | 24.31                    | 24.27               | 23.89               | 0                         | 0        |
|           |            | 6       | 0         | 23.49                    | 23.34               | 23.00               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.73                    | 23.72               | 23.17               | 0-1                       | 1        |
|           |            | 1       | 3         | 23.70                    | 23.62               | 23.29               | 0-1                       | 1        |
|           |            | 1       | 5         | 23.62                    | 23.66               | 23.15               | 0-1                       | 1        |
|           |            | 3       | 0         | 23.81                    | 23.65               | 23.21               | 0-1                       | 1        |
|           |            | 3       | 1         | 23.73                    | 23.60               | 23.22               | 0-1                       | 1        |
|           |            | 3       | 3         | 23.56                    | 23.50               | 23.15               | 0-1                       | 1        |
|           |            | 6       | 0         | 22.55                    | 22.37               | 22.07               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.72                    | 22.51               | 22.27               | 0-2                       | 2        |
|           |            | 1       | 3         | 22.89                    | 22.70               | 22.15               | 0-2                       | 2        |
|           |            | 1       | 5         | 22.64                    | 22.62               | 22.18               | 0-2                       | 2        |
|           |            | 3       | 0         | 22.63                    | 22.49               | 22.14               | 0-2                       | 2        |
|           |            | 3       | 1         | 22.64                    | 22.66               | 22.03               | 0-2                       | 2        |
|           |            | 3       | 3         | 22.46                    | 22.41               | 22.14               | 0-2                       | 2        |
|           |            | 6       | 0         | 21.56                    | 21.35               | 21.05               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.99                    | 19.61               | 19.37               | 0-5                       | 5        |
|           |            | 1       | 3         | 19.70                    | 19.45               | 19.03               | 0-5                       | 5        |
|           |            | 1       | 5         | 19.61                    | 19.50               | 19.20               | 0-5                       | 5        |
|           |            | 3       | 0         | 19.72                    | 19.59               | 19.16               | 0-5                       | 5        |
|           |            | 3       | 1         | 19.63                    | 19.54               | 19.17               | 0-5                       | 5        |
|           |            | 3       | 3         | 19.65                    | 19.49               | 19.08               | 0-5                       | 5        |
|           |            | 6       | 0         | 19.49                    | 19.34               | 19.00               | 0-5                       | 5        |

## LTE Band 26 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 26705 Ch. 815.5 MHz      | 26865 Ch. 831.5 MHz | 27025 Ch. 847.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 24.42                    | 24.37               | 24.00               | 0                         | 0        |
|           |            | 1       | 7         | 24.51                    | 24.50               | 24.02               | 0                         | 0        |
|           |            | 1       | 14        | 24.41                    | 24.38               | 23.93               | 0                         | 0        |
|           |            | 8       | 0         | 23.60                    | 23.42               | 23.10               | 0-1                       | 1        |
|           |            | 8       | 3         | 23.56                    | 23.50               | 23.32               | 0-1                       | 1        |
|           |            | 8       | 7         | 23.55                    | 23.41               | 23.06               | 0-1                       | 1        |
|           |            | 15      | 0         | 23.52                    | 23.47               | 23.09               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.80                    | 23.74               | 23.31               | 0-1                       | 1        |
|           |            | 1       | 7         | 23.62                    | 23.60               | 23.19               | 0-1                       | 1        |
|           |            | 1       | 14        | 23.81                    | 23.53               | 23.27               | 0-1                       | 1        |
|           |            | 8       | 0         | 22.61                    | 21.73               | 22.16               | 0-2                       | 2        |
|           |            | 8       | 3         | 22.61                    | 21.74               | 22.20               | 0-2                       | 2        |
|           |            | 8       | 7         | 22.65                    | 22.29               | 22.06               | 0-2                       | 2        |
|           |            | 15      | 0         | 22.54                    | 22.34               | 22.12               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.83                    | 22.66               | 22.34               | 0-2                       | 2        |
|           |            | 1       | 7         | 22.57                    | 22.60               | 22.21               | 0-2                       | 2        |
|           |            | 1       | 14        | 22.58                    | 22.58               | 22.23               | 0-2                       | 2        |
|           |            | 8       | 0         | 21.74                    | 21.61               | 21.10               | 0-3                       | 3        |
|           |            | 8       | 3         | 21.65                    | 21.51               | 21.15               | 0-3                       | 3        |
|           |            | 8       | 7         | 21.67                    | 21.44               | 21.14               | 0-3                       | 3        |
|           |            | 15      | 0         | 21.63                    | 21.50               | 21.13               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.74                    | 19.50               | 19.23               | 0-5                       | 5        |
|           |            | 1       | 7         | 19.63                    | 19.63               | 19.13               | 0-5                       | 5        |
|           |            | 1       | 14        | 19.62                    | 19.46               | 19.10               | 0-5                       | 5        |
|           |            | 8       | 0         | 19.60                    | 19.43               | 19.17               | 0-5                       | 5        |
|           |            | 8       | 3         | 19.60                    | 19.50               | 19.12               | 0-5                       | 5        |
|           |            | 8       | 7         | 19.65                    | 19.58               | 19.19               | 0-5                       | 5        |
|           |            | 15      | 0         | 19.60                    | 19.47               | 19.11               | 0-5                       | 5        |

## LTE Band 26 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 26715 Ch. 816.5 MHz      | 26865 Ch. 831.5 MHz | 27015 Ch. 846.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 24.28                    | 24.41               | 24.14               | 0                         | 0        |
|           |            | 1       | 12        | 24.57                    | 24.43               | 23.99               | 0                         | 0        |
|           |            | 1       | 24        | 24.34                    | 24.43               | 24.01               | 0                         | 0        |
|           |            | 12      | 0         | 23.56                    | 23.47               | 23.14               | 0-1                       | 1        |
|           |            | 12      | 6         | 23.60                    | 23.49               | 23.13               | 0-1                       | 1        |
|           |            | 12      | 11        | 23.48                    | 23.47               | 23.05               | 0-1                       | 1        |
|           |            | 25      | 0         | 23.54                    | 23.45               | 23.11               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.71                    | 23.88               | 23.38               | 0-1                       | 1        |
|           |            | 1       | 12        | 23.75                    | 23.84               | 23.24               | 0-1                       | 1        |
|           |            | 1       | 24        | 23.81                    | 23.63               | 23.32               | 0-1                       | 1        |
|           |            | 12      | 0         | 22.48                    | 22.44               | 22.13               | 0-2                       | 2        |
|           |            | 12      | 6         | 22.64                    | 22.59               | 22.20               | 0-2                       | 2        |
|           |            | 12      | 11        | 22.52                    | 22.50               | 22.12               | 0-2                       | 2        |
|           |            | 25      | 0         | 22.48                    | 22.50               | 22.17               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.71                    | 22.59               | 22.33               | 0-2                       | 2        |
|           |            | 1       | 12        | 22.75                    | 22.71               | 22.24               | 0-2                       | 2        |
|           |            | 1       | 24        | 22.60                    | 22.60               | 22.33               | 0-2                       | 2        |
|           |            | 12      | 0         | 21.58                    | 21.36               | 21.04               | 0-3                       | 3        |
|           |            | 12      | 6         | 21.56                    | 21.51               | 21.12               | 0-3                       | 3        |
|           |            | 12      | 11        | 21.54                    | 21.49               | 21.12               | 0-3                       | 3        |
|           |            | 25      | 0         | 21.49                    | 21.46               | 21.11               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.60                    | 19.41               | 19.13               | 0-5                       | 5        |
|           |            | 1       | 12        | 19.56                    | 19.70               | 19.31               | 0-5                       | 5        |
|           |            | 1       | 24        | 19.46                    | 19.31               | 19.21               | 0-5                       | 5        |
|           |            | 12      | 0         | 19.51                    | 19.47               | 19.03               | 0-5                       | 5        |
|           |            | 12      | 6         | 19.56                    | 19.50               | 19.07               | 0-5                       | 5        |
|           |            | 12      | 11        | 19.52                    | 19.45               | 19.09               | 0-5                       | 5        |
|           |            | 25      | 0         | 19.52                    | 19.46               | 19.15               | 0-5                       | 5        |

## LTE Band 26\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                   | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|-------------------|---------------------------|----------|
|           |            |         |           | 26750 Ch. 820 MHz        | 26865 Ch. 831.5 MHz | 26990 Ch. 844 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 24.41                    | 24.27               | 24.16             | 0                         | 0        |
|           |            | 1       | 24        | 24.36                    | 24.46               | 24.05             | 0                         | 0        |
|           |            | 1       | 49        | 24.40                    | 24.40               | 23.83             | 0                         | 0        |
|           |            | 25      | 0         | 23.32                    | 23.30               | 23.06             | 0-1                       | 1        |
|           |            | 25      | 12        | 23.47                    | 23.44               | 23.12             | 0-1                       | 1        |
|           |            | 25      | 24        | 23.40                    | 23.34               | 23.02             | 0-1                       | 1        |
|           |            | 50      | 0         | 23.42                    | 23.33               | 23.06             | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.73                    | 23.69               | 23.59             | 0-1                       | 1        |
|           |            | 1       | 24        | 23.55                    | 23.69               | 23.45             | 0-1                       | 1        |
|           |            | 1       | 49        | 23.64                    | 23.65               | 23.37             | 0-1                       | 1        |
|           |            | 25      | 0         | 22.36                    | 22.41               | 22.06             | 0-2                       | 2        |
|           |            | 25      | 12        | 22.51                    | 22.44               | 22.18             | 0-2                       | 2        |
|           |            | 25      | 24        | 22.50                    | 22.38               | 22.14             | 0-2                       | 2        |
|           |            | 50      | 0         | 22.45                    | 22.35               | 22.08             | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.63                    | 22.61               | 22.37             | 0-2                       | 2        |
|           |            | 1       | 24        | 22.66                    | 22.71               | 22.28             | 0-2                       | 2        |
|           |            | 1       | 49        | 22.72                    | 22.51               | 22.28             | 0-2                       | 2        |
|           |            | 25      | 0         | 21.39                    | 21.40               | 21.11             | 0-3                       | 3        |
|           |            | 25      | 12        | 21.59                    | 21.49               | 21.18             | 0-3                       | 3        |
|           |            | 25      | 24        | 21.43                    | 21.41               | 21.09             | 0-3                       | 3        |
|           |            | 50      | 0         | 21.46                    | 21.44               | 21.13             | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.28                    | 19.21               | 19.07             | 0-5                       | 5        |
|           |            | 1       | 24        | 19.58                    | 19.63               | 19.20             | 0-5                       | 5        |
|           |            | 1       | 49        | 19.24                    | 19.11               | 18.89             | 0-5                       | 5        |
|           |            | 25      | 0         | 19.36                    | 19.38               | 19.09             | 0-5                       | 5        |
|           |            | 25      | 12        | 19.50                    | 19.54               | 19.16             | 0-5                       | 5        |
|           |            | 25      | 24        | 19.38                    | 19.43               | 19.15             | 0-5                       | 5        |
|           |            | 50      | 0         | 19.36                    | 19.35               | 19.07             | 0-5                       | 5        |

## LTE Band 26\_15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 26775 Ch. 822.5 MHz      | 26865 Ch. 831.5 MHz | 26965 Ch. 841.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 24.26                    | 24.31               | 24.15               | 0                         | 0        |
|           |            | 1       | 36        | 24.37                    | 24.33               | 24.04               | 0                         | 0        |
|           |            | 1       | 74        | 24.03                    | 23.99               | 23.83               | 0                         | 0        |
|           |            | 36      | 0         | 23.21                    | 23.26               | 23.06               | 0-1                       | 1        |
|           |            | 36      | 18        | 23.31                    | 23.32               | 23.10               | 0-1                       | 1        |
|           |            | 36      | 39        | 23.28                    | 23.18               | 22.89               | 0-1                       | 1        |
|           |            | 75      | 0         | 23.34                    | 23.24               | 23.04               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.66                    | 23.66               | 23.63               | 0-1                       | 1        |
|           |            | 1       | 36        | 23.52                    | 23.81               | 23.37               | 0-1                       | 1        |
|           |            | 1       | 74        | 23.74                    | 23.52               | 23.12               | 0-1                       | 1        |
|           |            | 36      | 0         | 22.20                    | 22.24               | 22.11               | 0-2                       | 2        |
|           |            | 36      | 18        | 22.40                    | 22.29               | 22.09               | 0-2                       | 2        |
|           |            | 36      | 39        | 22.32                    | 22.21               | 21.89               | 0-2                       | 2        |
|           |            | 75      | 0         | 22.32                    | 22.16               | 22.05               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.51                    | 22.74               | 22.29               | 0-2                       | 2        |
|           |            | 1       | 36        | 22.52                    | 22.61               | 22.01               | 0-2                       | 2        |
|           |            | 1       | 74        | 22.45                    | 22.28               | 21.95               | 0-2                       | 2        |
|           |            | 36      | 0         | 21.32                    | 21.29               | 21.10               | 0-3                       | 3        |
|           |            | 36      | 18        | 21.44                    | 21.44               | 21.17               | 0-3                       | 3        |
|           |            | 36      | 39        | 21.33                    | 21.17               | 21.03               | 0-3                       | 3        |
|           |            | 75      | 0         | 21.32                    | 21.19               | 21.12               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.18                    | 19.11               | 19.02               | 0-5                       | 5        |
|           |            | 1       | 36        | 19.42                    | 19.34               | 19.07               | 0-5                       | 5        |
|           |            | 1       | 74        | 19.35                    | 19.23               | 18.87               | 0-5                       | 5        |
|           |            | 36      | 0         | 19.27                    | 19.25               | 19.07               | 0-5                       | 5        |
|           |            | 36      | 18        | 19.42                    | 19.39               | 19.09               | 0-5                       | 5        |
|           |            | 36      | 39        | 19.31                    | 19.24               | 18.85               | 0-5                       | 5        |
|           |            | 75      | 0         | 19.28                    | 19.25               | 18.96               | 0-5                       | 5        |

# [ LTE Band 41 Conducted Power

LTE Band 41 \_ 5 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|--------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 23.89                    | 23.93                | 23.80                | 23.80                | 24.03                | 0                        | 0        |
|            |            | 1       | 12        | 24.00                    | 23.92                | 23.89                | 23.90                | 24.03                | 0                        | 0        |
|            |            | 1       | 24        | 23.94                    | 23.81                | 23.75                | 23.82                | 24.07                | 0                        | 0        |
|            |            | 12      | 0         | 23.02                    | 23.05                | 22.96                | 22.88                | 23.29                | 0-1                      | 1        |
|            |            | 12      | 6         | 23.06                    | 23.03                | 22.92                | 22.98                | 23.35                | 0-1                      | 1        |
|            |            | 12      | 11        | 23.04                    | 22.92                | 22.86                | 22.98                | 23.34                | 0-1                      | 1        |
|            |            | 25      | 0         | 23.05                    | 23.04                | 22.89                | 22.95                | 23.31                | 0-1                      | 1        |
|            | 16QAM      | 1       | 0         | 23.09                    | 23.11                | 22.95                | 22.99                | 23.41                | 0-1                      | 1        |
|            |            | 1       | 12        | 23.09                    | 23.09                | 22.89                | 22.96                | 23.41                | 0-1                      | 1        |
|            |            | 1       | 24        | 23.15                    | 23.02                | 22.87                | 22.98                | 23.36                | 0-1                      | 1        |
|            |            | 12      | 0         | 22.02                    | 21.98                | 21.83                | 21.79                | 22.25                | 0-2                      | 2        |
|            |            | 12      | 6         | 22.05                    | 22.02                | 21.78                | 21.94                | 22.30                | 0-2                      | 2        |
|            |            | 12      | 11        | 22.05                    | 21.87                | 21.84                | 21.92                | 22.35                | 0-2                      | 2        |
|            |            | 25      | 0         | 22.07                    | 22.12                | 21.95                | 22.02                | 22.37                | 0-2                      | 2        |
|            | 64QAM      | 1       | 0         | 22.95                    | 21.70                | 21.40                | 21.49                | 21.92                | 0-2                      | 2        |
|            |            | 1       | 12        | 22.90                    | 21.68                | 21.49                | 21.58                | 22.03                | 0-2                      | 2        |
|            |            | 1       | 24        | 22.97                    | 21.54                | 21.45                | 21.55                | 22.01                | 0-2                      | 2        |
|            |            | 12      | 0         | 21.97                    | 20.99                | 20.84                | 20.87                | 21.29                | 0-3                      | 3        |
|            |            | 12      | 6         | 21.98                    | 20.99                | 20.90                | 20.91                | 21.27                | 0-3                      | 3        |
|            |            | 12      | 11        | 21.96                    | 20.88                | 20.86                | 20.93                | 21.37                | 0-3                      | 3        |
|            |            | 25      | 0         | 21.89                    | 21.02                | 20.84                | 20.94                | 21.30                | 0-3                      | 3        |
|            | 256QAM     | 1       | 0         | 18.69                    | 18.80                | 18.50                | 18.67                | 19.02                | 0-5                      | 5        |
|            |            | 1       | 12        | 18.87                    | 18.84                | 18.73                | 18.74                | 19.22                | 0-5                      | 5        |
|            |            | 1       | 24        | 18.84                    | 18.64                | 18.62                | 18.71                | 19.13                | 0-5                      | 5        |
|            |            | 12      | 0         | 19.15                    | 19.14                | 19.04                | 19.01                | 19.41                | 0-5                      | 5        |
|            |            | 12      | 6         | 19.23                    | 19.20                | 19.03                | 19.10                | 19.47                | 0-5                      | 5        |
|            |            | 12      | 11        | 19.22                    | 19.08                | 19.03                | 19.09                | 19.53                | 0-5                      | 5        |
|            |            | 25      | 0         | 19.14                    | 19.13                | 18.97                | 19.05                | 19.39                | 0-5                      | 5        |

## LTE Band 41 \_ 10 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 24.05                    | 23.72                | 23.58                | 23.59                | 24.01                | 0                         | 0        |
|            |            | 1       | 24        | 24.07                    | 23.93                | 23.81                | 23.85                | 24.06                | 0                         | 0        |
|            |            | 1       | 49        | 24.01                    | 23.66                | 23.52                | 23.59                | 24.03                | 0                         | 0        |
|            |            | 25      | 0         | 23.10                    | 23.01                | 22.88                | 22.83                | 23.26                | 0-1                       | 1        |
|            |            | 25      | 12        | 23.20                    | 23.11                | 22.94                | 22.99                | 23.33                | 0-1                       | 1        |
|            |            | 25      | 24        | 23.14                    | 22.88                | 22.82                | 22.87                | 23.32                | 0-1                       | 1        |
|            |            | 50      | 0         | 23.10                    | 23.02                | 22.89                | 22.91                | 23.27                | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 23.21                    | 22.90                | 22.61                | 22.65                | 23.10                | 0-1                       | 1        |
|            |            | 1       | 24        | 23.17                    | 23.08                | 22.89                | 22.99                | 23.37                | 0-1                       | 1        |
|            |            | 1       | 49        | 23.24                    | 22.74                | 22.71                | 22.72                | 23.22                | 0-1                       | 1        |
|            |            | 25      | 0         | 22.11                    | 22.04                | 21.92                | 21.89                | 22.28                | 0-2                       | 2        |
|            |            | 25      | 12        | 22.21                    | 22.15                | 21.98                | 22.06                | 22.42                | 0-2                       | 2        |
|            |            | 25      | 24        | 22.19                    | 21.91                | 21.88                | 21.91                | 22.35                | 0-2                       | 2        |
|            |            | 50      | 0         | 22.11                    | 22.07                | 21.86                | 21.96                | 22.30                | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 21.73                    | 21.49                | 21.15                | 21.26                | 21.72                | 0-2                       | 2        |
|            |            | 1       | 24        | 21.77                    | 21.72                | 21.46                | 21.59                | 21.99                | 0-2                       | 2        |
|            |            | 1       | 49        | 21.80                    | 21.30                | 21.24                | 21.34                | 21.81                | 0-2                       | 2        |
|            |            | 25      | 0         | 21.07                    | 21.06                | 20.88                | 20.87                | 21.29                | 0-3                       | 3        |
|            |            | 25      | 12        | 21.18                    | 21.12                | 20.97                | 21.03                | 21.40                | 0-3                       | 3        |
|            |            | 25      | 24        | 21.20                    | 20.91                | 20.84                | 20.89                | 21.36                | 0-3                       | 3        |
|            |            | 50      | 0         | 21.18                    | 21.11                | 20.96                | 21.01                | 21.37                | 0-3                       | 3        |
|            | 256QAM     | 1       | 0         | 18.63                    | 18.72                | 18.50                | 18.58                | 18.92                | 0-5                       | 4        |
|            |            | 1       | 24        | 19.04                    | 18.92                | 18.82                | 18.87                | 19.19                | 0-5                       | 4        |
|            |            | 1       | 49        | 18.80                    | 18.58                | 18.57                | 18.62                | 19.03                | 0-5                       | 4        |
|            |            | 25      | 0         | 19.01                    | 19.09                | 18.97                | 18.93                | 19.30                | 0-5                       | 5        |
|            |            | 25      | 12        | 19.23                    | 19.18                | 19.02                | 19.07                | 19.38                | 0-5                       | 5        |
|            |            | 25      | 24        | 19.10                    | 18.98                | 18.89                | 19.01                | 19.43                | 0-5                       | 5        |
|            |            | 50      | 0         | 19.21                    | 19.09                | 18.99                | 19.02                | 19.38                | 0-5                       | 5        |

## LTE Band 41 \_ 15 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 23.84                    | 23.66                | 23.47                | 23.59                | 23.81                | 0                         | 0        |
|            |            | 1       | 36        | 23.89                    | 23.75                | 23.65                | 23.69                | 24.02                | 0                         | 0        |
|            |            | 1       | 74        | 23.95                    | 23.48                | 23.49                | 23.47                | 24.01                | 0                         | 0        |
|            |            | 36      | 0         | 22.89                    | 22.83                | 22.69                | 22.75                | 23.04                | 0-1                       | 1        |
|            |            | 36      | 18        | 23.06                    | 22.93                | 22.77                | 22.88                | 23.21                | 0-1                       | 1        |
|            |            | 36      | 39        | 23.01                    | 22.71                | 22.70                | 22.78                | 23.29                | 0-1                       | 1        |
|            |            | 75      | 0         | 22.95                    | 22.82                | 22.71                | 22.78                | 23.14                | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 22.97                    | 22.75                | 22.54                | 22.69                | 22.94                | 0-1                       | 1        |
|            |            | 1       | 36        | 22.91                    | 22.80                | 22.71                | 22.82                | 23.22                | 0-1                       | 1        |
|            |            | 1       | 74        | 23.05                    | 22.56                | 22.55                | 22.58                | 23.30                | 0-1                       | 1        |
|            |            | 36      | 0         | 21.87                    | 21.81                | 21.65                | 21.72                | 22.00                | 0-2                       | 2        |
|            |            | 36      | 18        | 21.98                    | 21.81                | 21.71                | 21.82                | 22.14                | 0-2                       | 2        |
|            |            | 36      | 39        | 21.98                    | 21.69                | 21.66                | 21.72                | 22.25                | 0-2                       | 2        |
|            |            | 75      | 0         | 21.96                    | 21.84                | 21.75                | 21.78                | 22.16                | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 21.54                    | 21.35                | 21.15                | 21.29                | 21.54                | 0-2                       | 2        |
|            |            | 1       | 36        | 21.65                    | 21.56                | 21.38                | 21.47                | 21.92                | 0-2                       | 2        |
|            |            | 1       | 74        | 21.69                    | 21.17                | 21.20                | 21.22                | 21.88                | 0-2                       | 2        |
|            |            | 36      | 0         | 20.94                    | 20.83                | 20.69                | 20.78                | 21.11                | 0-3                       | 3        |
|            |            | 36      | 18        | 21.04                    | 20.91                | 20.81                | 20.89                | 21.24                | 0-3                       | 3        |
|            |            | 36      | 39        | 21.04                    | 20.71                | 20.74                | 20.75                | 21.31                | 0-3                       | 3        |
|            |            | 75      | 0         | 21.02                    | 20.86                | 20.76                | 20.82                | 21.19                | 0-3                       | 3        |
|            | 256QAM     | 1       | 0         | 18.61                    | 18.70                | 18.49                | 18.66                | 18.85                | 0-5                       | 5        |
|            |            | 1       | 36        | 18.88                    | 18.81                | 18.72                | 18.81                | 19.21                | 0-5                       | 5        |
|            |            | 1       | 74        | 18.89                    | 18.51                | 18.59                | 18.60                | 19.21                | 0-5                       | 5        |
|            |            | 36      | 0         | 18.84                    | 18.88                | 18.80                | 18.80                | 19.14                | 0-5                       | 5        |
|            |            | 36      | 18        | 19.03                    | 18.92                | 18.87                | 18.90                | 19.28                | 0-5                       | 5        |
|            |            | 36      | 39        | 19.04                    | 18.73                | 18.80                | 18.84                | 19.37                | 0-5                       | 5        |
|            |            | 75      | 0         | 18.99                    | 18.85                | 18.80                | 18.87                | 19.22                | 0-5                       | 5        |

## LTE Band 41 \_ 20 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz     | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 20 MHz     | QPSK       | 1       | 0         | 23.90                    | 23.91                | 23.28                | 23.46                | 23.62                | 0                         | 0        |
|            |            | 1       | 49        | 23.91                    | 23.75                | 23.61                | 23.67                | 24.08                | 0                         | 0        |
|            |            | 1       | 99        | 23.95                    | 23.65                | 23.29                | 23.32                | 24.01                | 0                         | 0        |
|            |            | 50      | 0         | 22.92                    | 22.89                | 22.63                | 22.69                | 22.99                | 0-1                       | 1        |
|            |            | 50      | 25        | 22.98                    | 22.86                | 22.75                | 22.83                | 23.19                | 0-1                       | 1        |
|            |            | 50      | 49        | 22.99                    | 22.72                | 22.66                | 22.67                | 23.28                | 0-1                       | 1        |
|            |            | 100     | 0         | 22.93                    | 22.75                | 22.64                | 22.73                | 23.09                | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 22.96                    | 23.03                | 22.36                | 22.52                | 22.68                | 0-1                       | 1        |
|            |            | 1       | 49        | 22.96                    | 22.83                | 22.67                | 22.76                | 23.20                | 0-1                       | 1        |
|            |            | 1       | 99        | 23.04                    | 22.74                | 22.37                | 22.39                | 23.21                | 0-1                       | 1        |
|            |            | 50      | 0         | 21.88                    | 21.93                | 21.68                | 21.73                | 22.01                | 0-2                       | 2        |
|            |            | 50      | 25        | 22.01                    | 21.92                | 21.78                | 21.87                | 22.21                | 0-2                       | 2        |
|            |            | 50      | 49        | 22.02                    | 21.76                | 21.73                | 21.71                | 22.29                | 0-2                       | 2        |
|            |            | 100     | 0         | 21.91                    | 21.81                | 21.68                | 21.77                | 22.15                | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 21.51                    | 21.65                | 20.97                | 21.13                | 21.36                | 0-2                       | 2        |
|            |            | 1       | 49        | 21.56                    | 21.52                | 21.36                | 21.37                | 21.79                | 0-2                       | 2        |
|            |            | 1       | 99        | 21.62                    | 21.42                | 21.04                | 21.08                | 21.78                | 0-2                       | 2        |
|            |            | 50      | 0         | 20.89                    | 20.97                | 20.71                | 20.75                | 21.06                | 0-3                       | 3        |
|            |            | 50      | 25        | 21.05                    | 20.95                | 20.83                | 20.88                | 21.26                | 0-3                       | 3        |
|            |            | 50      | 49        | 21.05                    | 20.79                | 20.74                | 20.75                | 21.34                | 0-3                       | 3        |
|            |            | 100     | 0         | 20.92                    | 20.79                | 20.70                | 20.77                | 21.12                | 0-3                       | 3        |
|            | 256QAM     | 1       | 0         | 18.23                    | 18.57                | 18.32                | 18.33                | 18.69                | 0-5                       | 5        |
|            |            | 1       | 49        | 18.86                    | 18.75                | 18.65                | 18.77                | 19.10                | 0-5                       | 5        |
|            |            | 1       | 99        | 18.69                    | 18.34                | 18.41                | 18.44                | 19.11                | 0-5                       | 5        |
|            |            | 50      | 0         | 18.84                    | 18.91                | 18.79                | 18.80                | 19.09                | 0-5                       | 5        |
|            |            | 50      | 25        | 19.05                    | 18.96                | 18.89                | 18.95                | 19.28                | 0-5                       | 5        |
|            |            | 50      | 49        | 19.03                    | 18.73                | 18.80                | 18.81                | 19.40                | 0-5                       | 5        |
|            |            | 100     | 0         | 18.92                    | 18.82                | 18.74                | 18.81                | 19.18                | 0-5                       | 5        |

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

# [LTE Band 66 Conducted Power]

LTE Band 66 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 131979Ch.<br>1710.7 MHz  | 132322 Ch.<br>1745 MHz | 132665 Ch.<br>1779.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 24.13                    | 24.33                  | 24.49                    | 0                         | 0        |
|           |            | 1       | 3         | 24.17                    | 24.52                  | 24.49                    | 0                         | 0        |
|           |            | 1       | 5         | 24.13                    | 24.31                  | 24.50                    | 0                         | 0        |
|           |            | 3       | 0         | 24.17                    | 24.47                  | 24.49                    | 0                         | 0        |
|           |            | 3       | 1         | 24.14                    | 24.49                  | 24.64                    | 0                         | 0        |
|           |            | 3       | 3         | 24.13                    | 24.35                  | 24.45                    | 0                         | 0        |
|           |            | 6       | 0         | 23.25                    | 23.54                  | 23.50                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.48                    | 23.75                  | 23.91                    | 0-1                       | 1        |
|           |            | 1       | 3         | 23.47                    | 23.79                  | 23.91                    | 0-1                       | 1        |
|           |            | 1       | 5         | 23.46                    | 23.73                  | 23.80                    | 0-1                       | 1        |
|           |            | 3       | 0         | 23.34                    | 23.74                  | 23.73                    | 0-1                       | 1        |
|           |            | 3       | 1         | 23.54                    | 23.70                  | 23.87                    | 0-1                       | 1        |
|           |            | 3       | 3         | 23.25                    | 23.64                  | 23.87                    | 0-1                       | 1        |
|           |            | 6       | 0         | 22.64                    | 22.63                  | 22.61                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.83                    | 22.85                  | 22.93                    | 0-2                       | 2        |
|           |            | 1       | 3         | 22.83                    | 22.67                  | 22.77                    | 0-2                       | 2        |
|           |            | 1       | 5         | 22.84                    | 22.60                  | 22.74                    | 0-2                       | 2        |
|           |            | 3       | 0         | 22.96                    | 22.55                  | 22.60                    | 0-2                       | 2        |
|           |            | 3       | 1         | 22.96                    | 22.65                  | 22.61                    | 0-2                       | 2        |
|           |            | 3       | 3         | 22.75                    | 22.71                  | 22.46                    | 0-2                       | 2        |
|           |            | 6       | 0         | 21.37                    | 21.65                  | 21.60                    | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.57                    | 19.77                  | 19.76                    | 0-5                       | 5        |
|           |            | 1       | 3         | 19.48                    | 19.78                  | 19.79                    | 0-5                       | 5        |
|           |            | 1       | 5         | 19.50                    | 19.67                  | 19.63                    | 0-5                       | 5        |
|           |            | 3       | 0         | 19.35                    | 19.78                  | 19.79                    | 0-5                       | 5        |
|           |            | 3       | 1         | 19.41                    | 19.63                  | 19.70                    | 0-5                       | 5        |
|           |            | 3       | 3         | 19.45                    | 19.63                  | 19.68                    | 0-5                       | 5        |
|           |            | 6       | 0         | 19.17                    | 19.54                  | 19.55                    | 0-5                       | 5        |

## LTE Band 66 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131987 Ch. 1711.5 MHz    | 132322 Ch. 1745 MHz | 132657 Ch. 1778.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 24.25                    | 24.44               | 24.58                 | 0                         | 0        |
|           |            | 1       | 7         | 24.40                    | 24.32               | 24.64                 | 0                         | 0        |
|           |            | 1       | 14        | 24.20                    | 24.40               | 24.41                 | 0                         | 0        |
|           |            | 8       | 0         | 23.32                    | 23.47               | 23.67                 | 0-1                       | 1        |
|           |            | 8       | 3         | 23.39                    | 23.56               | 23.85                 | 0-1                       | 1        |
|           |            | 8       | 7         | 23.26                    | 23.58               | 23.59                 | 0-1                       | 1        |
|           |            | 15      | 0         | 23.33                    | 23.50               | 23.61                 | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.49                    | 23.55               | 23.66                 | 0-1                       | 1        |
|           |            | 1       | 7         | 23.56                    | 23.88               | 23.96                 | 0-1                       | 1        |
|           |            | 1       | 14        | 23.40                    | 23.78               | 23.71                 | 0-1                       | 1        |
|           |            | 8       | 0         | 22.29                    | 22.53               | 22.67                 | 0-2                       | 2        |
|           |            | 8       | 3         | 22.43                    | 22.53               | 22.69                 | 0-2                       | 2        |
|           |            | 8       | 7         | 22.20                    | 22.52               | 22.63                 | 0-2                       | 2        |
|           |            | 15      | 0         | 22.33                    | 22.51               | 22.67                 | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.39                    | 22.62               | 22.76                 | 0-2                       | 2        |
|           |            | 1       | 7         | 22.33                    | 22.54               | 22.65                 | 0-2                       | 2        |
|           |            | 1       | 14        | 22.41                    | 22.78               | 22.68                 | 0-2                       | 2        |
|           |            | 8       | 0         | 21.37                    | 21.52               | 21.66                 | 0-3                       | 3        |
|           |            | 8       | 3         | 21.43                    | 21.57               | 21.71                 | 0-3                       | 3        |
|           |            | 8       | 7         | 21.27                    | 21.48               | 21.71                 | 0-3                       | 3        |
|           |            | 15      | 0         | 21.36                    | 21.54               | 21.70                 | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.48                    | 19.56               | 19.90                 | 0-5                       | 5        |
|           |            | 1       | 7         | 19.26                    | 19.59               | 19.68                 | 0-5                       | 5        |
|           |            | 1       | 14        | 19.31                    | 19.53               | 19.55                 | 0-5                       | 5        |
|           |            | 8       | 0         | 19.31                    | 19.58               | 19.61                 | 0-5                       | 5        |
|           |            | 8       | 3         | 19.27                    | 19.49               | 19.61                 | 0-5                       | 5        |
|           |            | 8       | 7         | 19.30                    | 19.45               | 19.68                 | 0-5                       | 5        |
|           |            | 15      | 0         | 19.31                    | 19.44               | 19.60                 | 0-5                       | 5        |

## LTE Band 66 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131997 Ch. 1712.5 MHz    | 132322Ch. 1745 MHz | 132647 Ch. 1777.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 24.14                    | 24.47              | 24.56                 | 0                         | 0        |
|           |            | 1       | 12        | 24.09                    | 24.49              | 24.51                 | 0                         | 0        |
|           |            | 1       | 24        | 24.12                    | 24.39              | 24.42                 | 0                         | 0        |
|           |            | 12      | 0         | 23.35                    | 23.52              | 23.54                 | 0-1                       | 1        |
|           |            | 12      | 6         | 23.32                    | 23.51              | 23.53                 | 0-1                       | 1        |
|           |            | 12      | 11        | 23.19                    | 23.52              | 23.63                 | 0-1                       | 1        |
|           |            | 25      | 0         | 23.33                    | 23.47              | 23.55                 | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.27                    | 23.75              | 23.88                 | 0-1                       | 1        |
|           |            | 1       | 12        | 23.50                    | 23.64              | 23.92                 | 0-1                       | 1        |
|           |            | 1       | 24        | 23.38                    | 23.65              | 23.82                 | 0-1                       | 1        |
|           |            | 12      | 0         | 22.29                    | 22.52              | 22.60                 | 0-2                       | 2        |
|           |            | 12      | 6         | 22.26                    | 22.59              | 22.64                 | 0-2                       | 2        |
|           |            | 12      | 11        | 22.35                    | 22.58              | 22.62                 | 0-2                       | 2        |
|           |            | 25      | 0         | 22.32                    | 22.51              | 22.48                 | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.31                    | 22.49              | 22.71                 | 0-2                       | 2        |
|           |            | 1       | 12        | 22.35                    | 22.59              | 22.69                 | 0-2                       | 2        |
|           |            | 1       | 24        | 22.28                    | 22.53              | 22.61                 | 0-2                       | 2        |
|           |            | 12      | 0         | 21.32                    | 21.56              | 21.69                 | 0-3                       | 3        |
|           |            | 12      | 6         | 21.46                    | 21.58              | 21.70                 | 0-3                       | 3        |
|           |            | 12      | 11        | 21.41                    | 21.61              | 21.64                 | 0-3                       | 3        |
|           |            | 25      | 0         | 21.31                    | 21.50              | 21.53                 | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.18                    | 19.38              | 19.67                 | 0-5                       | 5        |
|           |            | 1       | 12        | 19.29                    | 19.56              | 19.65                 | 0-5                       | 5        |
|           |            | 1       | 24        | 19.35                    | 19.58              | 19.49                 | 0-5                       | 5        |
|           |            | 12      | 0         | 19.31                    | 19.46              | 19.59                 | 0-5                       | 5        |
|           |            | 12      | 6         | 19.27                    | 19.44              | 19.61                 | 0-5                       | 5        |
|           |            | 12      | 11        | 19.27                    | 19.53              | 19.68                 | 0-5                       | 5        |
|           |            | 25      | 0         | 19.23                    | 19.42              | 19.41                 | 0-5                       | 5        |

## LTE Band 66 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 132022 Ch. 1715 MHz      | 132322 Ch. 1745 MHz | 132622 Ch. 1775 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.75                    | 23.91               | 24.08               | 0                         | 0        |
|           |            | 1       | 24        | 24.25                    | 24.38               | 24.57               | 0                         | 0        |
|           |            | 1       | 49        | 24.03                    | 24.27               | 24.40               | 0                         | 0        |
|           |            | 25      | 0         | 23.16                    | 23.32               | 23.50               | 0-1                       | 1        |
|           |            | 25      | 12        | 23.26                    | 23.45               | 23.60               | 0-1                       | 1        |
|           |            | 25      | 24        | 23.24                    | 23.43               | 23.60               | 0-1                       | 1        |
|           |            | 50      | 0         | 23.29                    | 23.43               | 23.48               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.14                    | 23.67               | 23.70               | 0-1                       | 1        |
|           |            | 1       | 24        | 23.64                    | 23.72               | 23.76               | 0-1                       | 1        |
|           |            | 1       | 49        | 23.62                    | 23.49               | 23.72               | 0-1                       | 1        |
|           |            | 25      | 0         | 22.19                    | 22.49               | 22.53               | 0-2                       | 2        |
|           |            | 25      | 12        | 22.40                    | 22.55               | 22.67               | 0-2                       | 2        |
|           |            | 25      | 24        | 22.31                    | 22.57               | 22.64               | 0-2                       | 2        |
|           |            | 50      | 0         | 22.28                    | 22.46               | 22.47               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.19                    | 22.39               | 22.43               | 0-2                       | 2        |
|           |            | 1       | 24        | 22.39                    | 22.58               | 22.68               | 0-2                       | 2        |
|           |            | 1       | 49        | 22.22                    | 22.53               | 22.49               | 0-2                       | 2        |
|           |            | 25      | 0         | 21.26                    | 21.47               | 21.49               | 0-3                       | 3        |
|           |            | 25      | 12        | 21.33                    | 21.58               | 21.61               | 0-3                       | 3        |
|           |            | 25      | 24        | 21.25                    | 21.54               | 21.68               | 0-3                       | 3        |
|           |            | 50      | 0         | 21.33                    | 21.40               | 21.60               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.95                    | 19.13               | 19.21               | 0-5                       | 5        |
|           |            | 1       | 24        | 19.38                    | 19.64               | 19.61               | 0-5                       | 5        |
|           |            | 1       | 49        | 19.34                    | 19.49               | 19.47               | 0-5                       | 5        |
|           |            | 25      | 0         | 19.10                    | 19.29               | 19.34               | 0-5                       | 5        |
|           |            | 25      | 12        | 19.32                    | 19.47               | 19.64               | 0-5                       | 5        |
|           |            | 25      | 24        | 19.17                    | 19.34               | 19.45               | 0-5                       | 5        |
|           |            | 50      | 0         | 19.21                    | 19.31               | 19.49               | 0-5                       | 5        |

## LTE Band 66 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 132047 Ch. 1717.5 MHz    | 132322 Ch. 1745 MHz | 132597 Ch. 1772.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 23.83                    | 24.18               | 24.32                 | 0                         | 0        |
|           |            | 1       | 36        | 24.02                    | 24.23               | 24.19                 | 0                         | 0        |
|           |            | 1       | 74        | 24.08                    | 24.31               | 24.41                 | 0                         | 0        |
|           |            | 36      | 0         | 23.16                    | 23.35               | 23.40                 | 0-1                       | 1        |
|           |            | 36      | 18        | 23.27                    | 23.38               | 23.54                 | 0-1                       | 1        |
|           |            | 36      | 39        | 23.20                    | 23.41               | 23.56                 | 0-1                       | 1        |
|           |            | 75      | 0         | 23.19                    | 23.34               | 23.48                 | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.47                    | 23.36               | 23.64                 | 0-1                       | 1        |
|           |            | 1       | 36        | 23.28                    | 23.85               | 23.73                 | 0-1                       | 1        |
|           |            | 1       | 74        | 23.54                    | 23.57               | 23.57                 | 0-1                       | 1        |
|           |            | 36      | 0         | 22.16                    | 22.31               | 22.42                 | 0-2                       | 2        |
|           |            | 36      | 18        | 22.30                    | 22.36               | 22.51                 | 0-2                       | 2        |
|           |            | 36      | 39        | 22.26                    | 22.38               | 22.46                 | 0-2                       | 2        |
|           |            | 75      | 0         | 22.25                    | 22.35               | 22.47                 | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.20                    | 22.37               | 22.67                 | 0-2                       | 2        |
|           |            | 1       | 36        | 22.48                    | 22.31               | 22.70                 | 0-2                       | 2        |
|           |            | 1       | 74        | 22.07                    | 22.54               | 22.71                 | 0-2                       | 2        |
|           |            | 36      | 0         | 21.25                    | 21.35               | 21.51                 | 0-3                       | 3        |
|           |            | 36      | 18        | 21.28                    | 21.46               | 21.55                 | 0-3                       | 3        |
|           |            | 36      | 39        | 21.31                    | 21.45               | 21.56                 | 0-3                       | 3        |
|           |            | 75      | 0         | 21.22                    | 21.37               | 21.51                 | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 19.06                    | 19.22               | 19.36                 | 0-5                       | 5        |
|           |            | 1       | 36        | 19.17                    | 19.44               | 19.51                 | 0-5                       | 5        |
|           |            | 1       | 74        | 19.16                    | 19.42               | 19.42                 | 0-5                       | 5        |
|           |            | 36      | 0         | 19.17                    | 19.30               | 19.54                 | 0-5                       | 5        |
|           |            | 36      | 18        | 19.25                    | 19.39               | 19.54                 | 0-5                       | 5        |
|           |            | 36      | 39        | 19.26                    | 19.50               | 19.53                 | 0-5                       | 5        |
|           |            | 75      | 0         | 19.23                    | 19.36               | 19.45                 | 0-5                       | 5        |

## LTE Band 66 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 132072 Ch. 1720 MHz      | 132322 Ch. 1745 MHz | 132572 Ch. 1770 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 23.79                    | 24.10               | 24.39               | 0                         | 0        |
|           |            | 1       | 49        | 24.22                    | 24.56               | 24.31               | 0                         | 0        |
|           |            | 1       | 99        | 24.02                    | 24.16               | 24.55               | 0                         | 0        |
|           |            | 50      | 0         | 23.12                    | 23.24               | 23.35               | 0-1                       | 1        |
|           |            | 50      | 25        | 23.53                    | 23.37               | 23.51               | 0-1                       | 1        |
|           |            | 50      | 49        | 23.23                    | 23.35               | 23.44               | 0-1                       | 1        |
|           |            | 100     | 0         | 23.19                    | 23.29               | 23.48               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.14                    | 23.25               | 23.60               | 0-1                       | 1        |
|           |            | 1       | 49        | 23.45                    | 23.72               | 23.83               | 0-1                       | 1        |
|           |            | 1       | 99        | 23.43                    | 23.51               | 23.68               | 0-1                       | 1        |
|           |            | 50      | 0         | 22.15                    | 22.36               | 22.40               | 0-2                       | 2        |
|           |            | 50      | 25        | 22.35                    | 22.43               | 22.58               | 0-2                       | 2        |
|           |            | 50      | 49        | 22.24                    | 22.43               | 22.48               | 0-2                       | 2        |
|           |            | 100     | 0         | 22.22                    | 22.25               | 22.47               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.01                    | 22.24               | 22.56               | 0-2                       | 2        |
|           |            | 1       | 49        | 22.44                    | 22.56               | 22.74               | 0-2                       | 2        |
|           |            | 1       | 99        | 22.25                    | 22.50               | 22.60               | 0-2                       | 2        |
|           |            | 50      | 0         | 21.13                    | 21.35               | 21.39               | 0-3                       | 3        |
|           |            | 50      | 25        | 21.32                    | 21.39               | 21.59               | 0-3                       | 3        |
|           |            | 50      | 49        | 21.21                    | 21.42               | 21.54               | 0-3                       | 3        |
|           |            | 100     | 0         | 21.23                    | 21.32               | 21.48               | 0-3                       | 3        |
|           | 256QAM     | 1       | 0         | 18.90                    | 18.95               | 19.27               | 0-5                       | 5        |
|           |            | 1       | 49        | 19.39                    | 19.34               | 19.65               | 0-5                       | 5        |
|           |            | 1       | 99        | 19.02                    | 19.29               | 19.41               | 0-5                       | 5        |
|           |            | 50      | 0         | 19.01                    | 19.23               | 19.36               | 0-5                       | 5        |
|           |            | 50      | 25        | 19.22                    | 19.25               | 19.46               | 0-5                       | 5        |
|           |            | 50      | 49        | 19.21                    | 19.34               | 19.45               | 0-5                       | 5        |
|           |            | 100     | 0         | 19.18                    | 19.30               | 19.46               | 0-5                       | 5        |

### 11.3.2 LTE Reduced Conducted Power (Hotspot activated)

[ LTE Band 2 Conducted Power ]

LTE Band 2 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18607 Ch.<br>1850.7 MHz | 18900 Ch.<br>1880 MHz | 19193 Ch.<br>1909.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 20.80                   | 20.80                 | 20.43                   | 0                         | 0        |
|           |            | 1       | 3         | 20.59                   | 20.38                 | 20.66                   | 0                         | 0        |
|           |            | 1       | 5         | 20.60                   | 20.61                 | 20.72                   | 0                         | 0        |
|           |            | 3       | 0         | 20.54                   | 20.43                 | 20.65                   | 0                         | 0        |
|           |            | 3       | 1         | 20.66                   | 20.73                 | 20.78                   | 0                         | 0        |
|           |            | 3       | 3         | 20.76                   | 20.70                 | 20.76                   | 0                         | 0        |
|           |            | 6       | 0         | 20.73                   | 20.63                 | 20.69                   | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 21.20                   | 20.88                 | 20.96                   | 0                         | 0        |
|           |            | 1       | 3         | 20.90                   | 21.03                 | 21.12                   | 0                         | 0        |
|           |            | 1       | 5         | 20.86                   | 21.05                 | 21.23                   | 0                         | 0        |
|           |            | 3       | 0         | 20.42                   | 20.50                 | 20.65                   | 0                         | 0        |
|           |            | 3       | 1         | 20.62                   | 20.65                 | 20.80                   | 0                         | 0        |
|           |            | 3       | 3         | 20.68                   | 20.58                 | 20.90                   | 0                         | 0        |
|           |            | 6       | 0         | 20.56                   | 20.72                 | 20.88                   | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.91                   | 20.62                 | 20.74                   | 0                         | 0        |
|           |            | 1       | 3         | 20.75                   | 20.76                 | 21.05                   | 0                         | 0        |
|           |            | 1       | 5         | 20.80                   | 20.94                 | 20.92                   | 0                         | 0        |
|           |            | 3       | 0         | 20.66                   | 20.48                 | 20.62                   | 0                         | 0        |
|           |            | 3       | 1         | 20.72                   | 20.67                 | 20.91                   | 0                         | 0        |
|           |            | 3       | 3         | 20.64                   | 20.80                 | 20.88                   | 0                         | 0        |
|           |            | 6       | 0         | 20.71                   | 20.65                 | 20.81                   | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.31                   | 18.47                 | 18.61                   | 0-2                       | 2        |
|           |            | 1       | 3         | 18.65                   | 18.66                 | 18.79                   | 0-2                       | 2        |
|           |            | 1       | 5         | 18.70                   | 18.47                 | 18.66                   | 0-2                       | 2        |
|           |            | 3       | 0         | 18.50                   | 18.51                 | 18.77                   | 0-2                       | 2        |
|           |            | 3       | 1         | 18.68                   | 18.72                 | 18.79                   | 0-2                       | 2        |
|           |            | 3       | 3         | 18.62                   | 18.55                 | 18.97                   | 0-2                       | 2        |
|           |            | 6       | 0         | 18.72                   | 18.59                 | 18.91                   | 0-2                       | 2        |

## LTE Band 2 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 18615 Ch. 1851.5 MHz | 18900 Ch. 1880 MHz | 19185 Ch. 1908.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 20.78                | 20.82              | 20.58                | 0                         | 0        |
|           |            | 1       | 7         | 20.69                | 20.54              | 20.71                | 0                         | 0        |
|           |            | 1       | 14        | 20.62                | 20.64              | 20.82                | 0                         | 0        |
|           |            | 8       | 0         | 20.66                | 20.52              | 20.67                | 0                         | 0        |
|           |            | 8       | 3         | 20.77                | 20.78              | 20.90                | 0                         | 0        |
|           |            | 8       | 7         | 20.79                | 20.73              | 20.93                | 0                         | 0        |
|           |            | 15      | 0         | 20.72                | 20.67              | 20.81                | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 21.19                | 20.93              | 21.11                | 0                         | 0        |
|           |            | 1       | 7         | 21.06                | 20.99              | 21.24                | 0                         | 0        |
|           |            | 1       | 14        | 21.02                | 21.07              | 21.23                | 0                         | 0        |
|           |            | 8       | 0         | 20.62                | 20.54              | 20.60                | 0                         | 0        |
|           |            | 8       | 3         | 20.78                | 20.69              | 20.87                | 0                         | 0        |
|           |            | 8       | 7         | 20.75                | 20.74              | 20.98                | 0                         | 0        |
|           |            | 15      | 0         | 20.72                | 20.73              | 20.87                | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.88                | 20.77              | 20.91                | 0                         | 0        |
|           |            | 1       | 7         | 20.87                | 20.90              | 21.04                | 0                         | 0        |
|           |            | 1       | 14        | 20.95                | 20.95              | 21.06                | 0                         | 0        |
|           |            | 8       | 0         | 20.71                | 20.66              | 20.81                | 0                         | 0        |
|           |            | 8       | 3         | 20.87                | 20.79              | 21.02                | 0                         | 0        |
|           |            | 8       | 7         | 20.73                | 20.78              | 20.86                | 0                         | 0        |
|           |            | 15      | 0         | 20.72                | 20.61              | 20.90                | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.32                | 18.55              | 18.66                | 0-2                       | 2        |
|           |            | 1       | 7         | 18.74                | 18.61              | 19.00                | 0-2                       | 2        |
|           |            | 1       | 14        | 18.82                | 18.56              | 18.81                | 0-2                       | 2        |
|           |            | 8       | 0         | 18.63                | 18.60              | 18.75                | 0-2                       | 2        |
|           |            | 8       | 3         | 18.79                | 18.71              | 19.00                | 0-2                       | 2        |
|           |            | 8       | 7         | 18.73                | 18.70              | 18.95                | 0-2                       | 2        |
|           |            | 15      | 0         | 18.67                | 18.70              | 18.90                | 0-2                       | 2        |

## LTE Band 2 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18625 Ch.<br>1852.5 MHz | 18900 Ch.<br>1880 MHz | 19175 Ch.<br>1907.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 20.80                   | 20.83                 | 20.58                   | 0                         | 0        |
|           |            | 1       | 12        | 20.69                   | 20.54                 | 20.75                   | 0                         | 0        |
|           |            | 1       | 24        | 20.59                   | 20.66                 | 20.87                   | 0                         | 0        |
|           |            | 12      | 0         | 20.62                   | 20.43                 | 20.63                   | 0                         | 0        |
|           |            | 12      | 6         | 20.76                   | 20.77                 | 20.88                   | 0                         | 0        |
|           |            | 12      | 11        | 20.78                   | 20.67                 | 20.83                   | 0                         | 0        |
|           |            | 25      | 0         | 20.74                   | 20.65                 | 20.87                   | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 21.15                   | 20.96                 | 21.16                   | 0                         | 0        |
|           |            | 1       | 12        | 20.97                   | 20.94                 | 21.24                   | 0                         | 0        |
|           |            | 1       | 24        | 20.94                   | 21.01                 | 21.30                   | 0                         | 0        |
|           |            | 12      | 0         | 20.62                   | 20.42                 | 20.56                   | 0                         | 0        |
|           |            | 12      | 6         | 20.80                   | 20.69                 | 20.86                   | 0                         | 0        |
|           |            | 12      | 11        | 20.77                   | 20.69                 | 20.98                   | 0                         | 0        |
|           |            | 25      | 0         | 20.73                   | 20.70                 | 20.86                   | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.89                   | 20.72                 | 20.84                   | 0                         | 0        |
|           |            | 1       | 12        | 20.84                   | 20.90                 | 20.99                   | 0                         | 0        |
|           |            | 1       | 24        | 20.85                   | 20.94                 | 21.04                   | 0                         | 0        |
|           |            | 12      | 0         | 20.74                   | 20.66                 | 20.69                   | 0                         | 0        |
|           |            | 12      | 6         | 20.82                   | 20.76                 | 21.02                   | 0                         | 0        |
|           |            | 12      | 11        | 20.75                   | 20.81                 | 20.89                   | 0                         | 0        |
|           |            | 25      | 0         | 20.65                   | 20.64                 | 20.91                   | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.26                   | 18.46                 | 18.68                   | 0-2                       | 2        |
|           |            | 1       | 12        | 18.62                   | 18.62                 | 18.99                   | 0-2                       | 2        |
|           |            | 1       | 24        | 18.78                   | 18.48                 | 18.85                   | 0-2                       | 2        |
|           |            | 12      | 0         | 18.69                   | 18.63                 | 18.72                   | 0-2                       | 2        |
|           |            | 12      | 6         | 18.81                   | 18.74                 | 18.91                   | 0-2                       | 2        |
|           |            | 12      | 11        | 18.69                   | 18.63                 | 18.95                   | 0-2                       | 2        |
|           |            | 25      | 0         | 18.69                   | 18.74                 | 18.94                   | 0-2                       | 2        |

## LTE Band 2 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 18650 Ch. 1855 MHz  | 18900 Ch. 1880 MHz | 19150 Ch. 1905 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 20.75               | 20.85              | 20.51              | 0                         | 0        |
|           |            | 1       | 24        | 20.70               | 20.55              | 20.78              | 0                         | 0        |
|           |            | 1       | 49        | 20.62               | 20.64              | 20.84              | 0                         | 0        |
|           |            | 25      | 0         | 20.56               | 20.41              | 20.55              | 0                         | 0        |
|           |            | 25      | 12        | 20.80               | 20.61              | 20.97              | 0                         | 0        |
|           |            | 25      | 24        | 20.67               | 20.61              | 20.80              | 0                         | 0        |
|           |            | 50      | 0         | 20.66               | 20.68              | 20.84              | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 21.14               | 20.81              | 21.14              | 0                         | 0        |
|           |            | 1       | 24        | 20.95               | 21.03              | 21.10              | 0                         | 0        |
|           |            | 1       | 49        | 20.89               | 20.94              | 21.13              | 0                         | 0        |
|           |            | 25      | 0         | 20.60               | 20.39              | 20.67              | 0                         | 0        |
|           |            | 25      | 12        | 20.78               | 20.70              | 20.87              | 0                         | 0        |
|           |            | 25      | 24        | 20.78               | 20.78              | 20.93              | 0                         | 0        |
|           |            | 50      | 0         | 20.63               | 20.64              | 20.81              | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.93               | 20.69              | 20.86              | 0                         | 0        |
|           |            | 1       | 24        | 20.73               | 20.86              | 20.95              | 0                         | 0        |
|           |            | 1       | 49        | 20.87               | 20.78              | 20.99              | 0                         | 0        |
|           |            | 25      | 0         | 20.72               | 20.52              | 20.65              | 0                         | 0        |
|           |            | 25      | 12        | 20.87               | 20.79              | 20.91              | 0                         | 0        |
|           |            | 25      | 24        | 20.71               | 20.77              | 20.73              | 0                         | 0        |
|           |            | 50      | 0         | 20.59               | 20.59              | 20.82              | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.27               | 18.48              | 18.68              | 0-2                       | 2        |
|           |            | 1       | 24        | 18.71               | 18.58              | 18.92              | 0-2                       | 2        |
|           |            | 1       | 49        | 18.77               | 18.48              | 18.84              | 0-2                       | 2        |
|           |            | 25      | 0         | 18.66               | 18.55              | 18.77              | 0-2                       | 2        |
|           |            | 25      | 12        | 18.67               | 18.61              | 18.99              | 0-2                       | 2        |
|           |            | 25      | 24        | 18.63               | 18.52              | 18.82              | 0-2                       | 2        |
|           |            | 50      | 0         | 18.57               | 18.59              | 18.86              | 0-2                       | 2        |

## LTE Band 2 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18675 Ch.<br>1857.5 MHz | 18900 Ch.<br>1880 MHz | 19125 Ch.<br>1902.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 20.79                   | 20.80                 | 20.45                   | 0                         | 0        |
|           |            | 1       | 36        | 20.60                   | 20.44                 | 20.73                   | 0                         | 0        |
|           |            | 1       | 74        | 20.55                   | 20.59                 | 20.82                   | 0                         | 0        |
|           |            | 36      | 0         | 20.62                   | 20.41                 | 20.57                   | 0                         | 0        |
|           |            | 36      | 18        | 20.74                   | 20.70                 | 20.86                   | 0                         | 0        |
|           |            | 36      | 39        | 20.79                   | 20.72                 | 20.76                   | 0                         | 0        |
|           |            | 75      | 0         | 20.62                   | 20.71                 | 20.85                   | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 21.13                   | 20.98                 | 21.04                   | 0                         | 0        |
|           |            | 1       | 36        | 20.94                   | 21.00                 | 21.27                   | 0                         | 0        |
|           |            | 1       | 74        | 20.90                   | 21.04                 | 21.21                   | 0                         | 0        |
|           |            | 36      | 0         | 20.53                   | 20.44                 | 20.55                   | 0                         | 0        |
|           |            | 36      | 18        | 20.69                   | 20.62                 | 20.82                   | 0                         | 0        |
|           |            | 36      | 39        | 20.71                   | 20.71                 | 20.91                   | 0                         | 0        |
|           |            | 75      | 0         | 20.67                   | 20.61                 | 20.76                   | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.84                   | 20.72                 | 20.74                   | 0                         | 0        |
|           |            | 1       | 36        | 20.72                   | 20.86                 | 20.97                   | 0                         | 0        |
|           |            | 1       | 74        | 20.92                   | 20.95                 | 21.01                   | 0                         | 0        |
|           |            | 36      | 0         | 20.65                   | 20.55                 | 20.76                   | 0                         | 0        |
|           |            | 36      | 18        | 20.88                   | 20.81                 | 20.89                   | 0                         | 0        |
|           |            | 36      | 39        | 20.79                   | 20.63                 | 20.81                   | 0                         | 0        |
|           |            | 75      | 0         | 20.70                   | 20.65                 | 20.77                   | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.20                   | 18.55                 | 18.57                   | 0-2                       | 2        |
|           |            | 1       | 36        | 18.59                   | 18.51                 | 18.88                   | 0-2                       | 2        |
|           |            | 1       | 74        | 18.80                   | 18.46                 | 18.85                   | 0-2                       | 2        |
|           |            | 36      | 0         | 18.61                   | 18.60                 | 18.63                   | 0-2                       | 2        |
|           |            | 36      | 18        | 18.76                   | 18.60                 | 18.96                   | 0-2                       | 2        |
|           |            | 36      | 39        | 18.77                   | 18.70                 | 18.81                   | 0-2                       | 2        |
|           |            | 75      | 0         | 18.65                   | 18.64                 | 18.80                   | 0-2                       | 2        |

## LTE Band 2 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 18700 Ch.<br>1860 MHz | 18900 Ch.<br>1880 MHz | 19100 Ch.<br>1900 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 20.81                 | 20.87                 | 20.63                 | 0                         | 0        |
|           |            | 1       | 49        | 20.72                 | 20.62                 | 20.78                 | 0                         | 0        |
|           |            | 1       | 99        | 20.71                 | 20.69                 | 20.89                 | 0                         | 0        |
|           |            | 50      | 0         | 20.74                 | 20.55                 | 20.68                 | 0                         | 0        |
|           |            | 50      | 25        | 20.84                 | 20.78                 | 20.98                 | 0                         | 0        |
|           |            | 50      | 49        | 20.85                 | 20.74                 | 20.95                 | 0                         | 0        |
|           |            | 100     | 0         | 20.78                 | 20.71                 | 20.90                 | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 21.21                 | 20.99                 | 21.12                 | 0                         | 0        |
|           |            | 1       | 49        | 21.07                 | 21.04                 | 21.28                 | 0                         | 0        |
|           |            | 1       | 99        | 21.05                 | 21.13                 | 21.31                 | 0                         | 0        |
|           |            | 50      | 0         | 20.66                 | 20.55                 | 20.68                 | 0                         | 0        |
|           |            | 50      | 25        | 20.82                 | 20.75                 | 20.96                 | 0                         | 0        |
|           |            | 50      | 49        | 20.79                 | 20.78                 | 21.00                 | 0                         | 0        |
|           |            | 100     | 0         | 20.79                 | 20.76                 | 20.90                 | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.94                 | 20.80                 | 20.93                 | 0                         | 0        |
|           |            | 1       | 49        | 20.88                 | 20.93                 | 21.10                 | 0                         | 0        |
|           |            | 1       | 99        | 20.97                 | 20.97                 | 21.11                 | 0                         | 0        |
|           |            | 50      | 0         | 20.75                 | 20.68                 | 20.81                 | 0                         | 0        |
|           |            | 50      | 25        | 20.89                 | 20.87                 | 21.02                 | 0                         | 0        |
|           |            | 50      | 49        | 20.82                 | 20.82                 | 20.93                 | 0                         | 0        |
|           |            | 100     | 0         | 20.75                 | 20.68                 | 20.92                 | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.36                 | 18.58                 | 18.72                 | 0-2                       | 2        |
|           |            | 1       | 49        | 18.74                 | 18.69                 | 19.01                 | 0-2                       | 2        |
|           |            | 1       | 99        | 18.87                 | 18.59                 | 18.89                 | 0-2                       | 2        |
|           |            | 50      | 0         | 18.72                 | 18.65                 | 18.79                 | 0-2                       | 2        |
|           |            | 50      | 25        | 18.85                 | 18.74                 | 19.00                 | 0-2                       | 2        |
|           |            | 50      | 49        | 18.78                 | 18.71                 | 18.98                 | 0-2                       | 2        |
|           |            | 100     | 0         | 18.74                 | 18.77                 | 18.95                 | 0-2                       | 2        |

# [ LTE Band 4 Conducted Power]

LTE Band 4 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19957 Ch. 1710.7 MHz | 20175 Ch. 1732.5 MHz | 20393 Ch. 1754.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 20.47                | 20.73                | 20.82                | 0                         | 0        |
|           |            | 1       | 3         | 20.91                | 21.09                | 20.88                | 0                         | 0        |
|           |            | 1       | 5         | 20.72                | 20.96                | 20.96                | 0                         | 0        |
|           |            | 3       | 0         | 20.84                | 20.99                | 20.90                | 0                         | 0        |
|           |            | 3       | 1         | 21.05                | 21.13                | 21.11                | 0                         | 0        |
|           |            | 3       | 3         | 21.04                | 21.12                | 20.85                | 0                         | 0        |
|           |            | 6       | 0         | 20.87                | 21.06                | 20.93                | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.77                | 21.17                | 21.24                | 0                         | 0        |
|           |            | 1       | 3         | 21.33                | 21.49                | 21.30                | 0                         | 0        |
|           |            | 1       | 5         | 21.03                | 21.20                | 21.20                | 0                         | 0        |
|           |            | 3       | 0         | 20.88                | 20.95                | 20.93                | 0                         | 0        |
|           |            | 3       | 1         | 21.15                | 21.14                | 21.05                | 0                         | 0        |
|           |            | 3       | 3         | 21.12                | 21.21                | 20.85                | 0                         | 0        |
|           |            | 6       | 0         | 21.01                | 21.04                | 21.01                | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.76                | 20.99                | 21.22                | 0                         | 0        |
|           |            | 1       | 3         | 21.07                | 21.35                | 21.16                | 0                         | 0        |
|           |            | 1       | 5         | 21.08                | 21.05                | 21.03                | 0                         | 0        |
|           |            | 3       | 0         | 20.87                | 21.13                | 21.11                | 0                         | 0        |
|           |            | 3       | 1         | 21.07                | 21.21                | 21.05                | 0                         | 0        |
|           |            | 3       | 3         | 21.00                | 21.17                | 21.03                | 0                         | 0        |
|           |            | 6       | 0         | 20.95                | 21.15                | 20.94                | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.67                | 18.78                | 18.77                | 0-2                       | 2        |
|           |            | 1       | 3         | 18.96                | 19.19                | 19.00                | 0-2                       | 2        |
|           |            | 1       | 5         | 19.01                | 18.99                | 18.80                | 0-2                       | 2        |
|           |            | 3       | 0         | 18.88                | 18.91                | 18.94                | 0-2                       | 2        |
|           |            | 3       | 1         | 19.06                | 19.04                | 19.10                | 0-2                       | 2        |
|           |            | 3       | 3         | 18.95                | 19.22                | 18.92                | 0-2                       | 2        |
|           |            | 6       | 0         | 18.97                | 19.03                | 19.01                | 0-2                       | 2        |

## LTE Band 4 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19965 Ch. 1711.5 MHz | 20175 Ch. 1732.5 MHz | 20385 Ch. 1753.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 20.42                | 20.58                | 20.77                | 0                         | 0        |
|           |            | 1       | 7         | 20.81                | 20.95                | 20.78                | 0                         | 0        |
|           |            | 1       | 14        | 20.59                | 20.92                | 20.99                | 0                         | 0        |
|           |            | 8       | 0         | 20.74                | 20.85                | 20.91                | 0                         | 0        |
|           |            | 8       | 3         | 21.03                | 21.07                | 21.11                | 0                         | 0        |
|           |            | 8       | 7         | 21.00                | 21.22                | 20.70                | 0                         | 0        |
|           |            | 15      | 0         | 20.93                | 21.14                | 21.01                | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.79                | 21.15                | 21.19                | 0                         | 0        |
|           |            | 1       | 7         | 21.16                | 21.38                | 21.19                | 0                         | 0        |
|           |            | 1       | 14        | 21.00                | 21.23                | 21.12                | 0                         | 0        |
|           |            | 8       | 0         | 20.91                | 20.91                | 21.03                | 0                         | 0        |
|           |            | 8       | 3         | 20.99                | 20.98                | 20.89                | 0                         | 0        |
|           |            | 8       | 7         | 21.01                | 21.25                | 20.88                | 0                         | 0        |
|           |            | 15      | 0         | 21.00                | 21.05                | 20.90                | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.71                | 20.84                | 21.27                | 0                         | 0        |
|           |            | 1       | 7         | 21.05                | 21.29                | 21.08                | 0                         | 0        |
|           |            | 1       | 14        | 21.16                | 20.92                | 21.00                | 0                         | 0        |
|           |            | 8       | 0         | 20.82                | 21.12                | 21.07                | 0                         | 0        |
|           |            | 8       | 3         | 21.07                | 21.22                | 21.03                | 0                         | 0        |
|           |            | 8       | 7         | 20.94                | 21.15                | 20.96                | 0                         | 0        |
|           |            | 15      | 0         | 20.96                | 21.08                | 20.96                | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.70                | 18.79                | 18.71                | 0-2                       | 2        |
|           |            | 1       | 7         | 18.90                | 19.07                | 18.97                | 0-2                       | 2        |
|           |            | 1       | 14        | 18.93                | 19.03                | 18.74                | 0-2                       | 2        |
|           |            | 8       | 0         | 18.79                | 18.98                | 18.84                | 0-2                       | 2        |
|           |            | 8       | 3         | 19.06                | 18.97                | 19.04                | 0-2                       | 2        |
|           |            | 8       | 7         | 18.90                | 19.23                | 18.97                | 0-2                       | 2        |
|           |            | 15      | 0         | 18.99                | 18.97                | 19.02                | 0-2                       | 2        |

## LTE Band 4 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19975 Ch. 1712.5 MHz | 20175 Ch. 1732.5 MHz | 20375 Ch. 1752.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 20.18                | 20.38                | 20.57                | 0                         | 0        |
|           |            | 1       | 12        | 20.73                | 20.81                | 20.71                | 0                         | 0        |
|           |            | 1       | 24        | 20.40                | 21.02                | 20.74                | 0                         | 0        |
|           |            | 12      | 0         | 20.68                | 20.74                | 20.66                | 0                         | 0        |
|           |            | 12      | 6         | 20.83                | 20.90                | 20.86                | 0                         | 0        |
|           |            | 12      | 11        | 20.99                | 21.00                | 20.68                | 0                         | 0        |
|           |            | 25      | 0         | 20.66                | 21.07                | 20.93                | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.83                | 21.08                | 21.27                | 0                         | 0        |
|           |            | 1       | 12        | 21.28                | 21.42                | 21.21                | 0                         | 0        |
|           |            | 1       | 24        | 20.73                | 21.27                | 21.04                | 0                         | 0        |
|           |            | 12      | 0         | 20.83                | 20.95                | 20.67                | 0                         | 0        |
|           |            | 12      | 6         | 20.90                | 20.77                | 20.90                | 0                         | 0        |
|           |            | 12      | 11        | 20.78                | 21.11                | 20.52                | 0                         | 0        |
|           |            | 25      | 0         | 20.88                | 21.00                | 20.72                | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.72                | 20.89                | 21.20                | 0                         | 0        |
|           |            | 1       | 12        | 21.13                | 21.08                | 20.99                | 0                         | 0        |
|           |            | 1       | 24        | 21.09                | 21.01                | 20.72                | 0                         | 0        |
|           |            | 12      | 0         | 20.66                | 20.90                | 21.04                | 0                         | 0        |
|           |            | 12      | 6         | 20.73                | 20.88                | 21.05                | 0                         | 0        |
|           |            | 12      | 11        | 20.78                | 20.99                | 20.88                | 0                         | 0        |
|           |            | 25      | 0         | 21.00                | 20.95                | 20.78                | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.70                | 18.58                | 18.46                | 0-2                       | 2        |
|           |            | 1       | 12        | 18.74                | 18.92                | 18.71                | 0-2                       | 2        |
|           |            | 1       | 24        | 18.62                | 18.75                | 18.62                | 0-2                       | 2        |
|           |            | 12      | 0         | 18.55                | 19.02                | 18.81                | 0-2                       | 2        |
|           |            | 12      | 6         | 18.78                | 19.04                | 18.83                | 0-2                       | 2        |
|           |            | 12      | 11        | 18.81                | 18.99                | 18.84                | 0-2                       | 2        |
|           |            | 25      | 0         | 18.89                | 19.01                | 19.04                | 0-2                       | 2        |

## LTE Band 4 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                         |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-------------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 20000 Ch.<br>1715 MHz | 20175 Ch.<br>1732.5 MHz | 20350 Ch.<br>1750 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 20.17                 | 20.72                   | 20.62                 | 0                         | 0        |
|           |            | 1       | 24        | 20.74                 | 20.98                   | 20.68                 | 0                         | 0        |
|           |            | 1       | 49        | 20.46                 | 20.89                   | 20.93                 | 0                         | 0        |
|           |            | 25      | 0         | 20.82                 | 20.85                   | 20.74                 | 0                         | 0        |
|           |            | 25      | 12        | 21.02                 | 21.21                   | 20.86                 | 0                         | 0        |
|           |            | 25      | 24        | 20.88                 | 21.21                   | 20.86                 | 0                         | 0        |
|           |            | 50      | 0         | 20.80                 | 21.05                   | 21.02                 | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.72                 | 20.90                   | 21.29                 | 0                         | 0        |
|           |            | 1       | 24        | 21.22                 | 21.48                   | 21.08                 | 0                         | 0        |
|           |            | 1       | 49        | 20.84                 | 21.14                   | 21.26                 | 0                         | 0        |
|           |            | 25      | 0         | 20.70                 | 20.83                   | 20.68                 | 0                         | 0        |
|           |            | 25      | 12        | 20.87                 | 21.12                   | 20.95                 | 0                         | 0        |
|           |            | 25      | 24        | 21.09                 | 20.92                   | 20.53                 | 0                         | 0        |
|           |            | 50      | 0         | 20.87                 | 20.69                   | 20.75                 | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.70                 | 20.72                   | 21.30                 | 0                         | 0        |
|           |            | 1       | 24        | 20.90                 | 20.99                   | 20.98                 | 0                         | 0        |
|           |            | 1       | 49        | 21.02                 | 20.67                   | 20.75                 | 0                         | 0        |
|           |            | 25      | 0         | 20.87                 | 20.89                   | 20.88                 | 0                         | 0        |
|           |            | 25      | 12        | 21.03                 | 21.16                   | 20.74                 | 0                         | 0        |
|           |            | 25      | 24        | 20.72                 | 21.05                   | 20.77                 | 0                         | 0        |
|           |            | 50      | 0         | 20.71                 | 20.94                   | 20.86                 | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.70                 | 18.63                   | 18.81                 | 0-2                       | 2        |
|           |            | 1       | 24        | 19.01                 | 18.86                   | 18.94                 | 0-2                       | 2        |
|           |            | 1       | 49        | 18.72                 | 18.73                   | 18.79                 | 0-2                       | 2        |
|           |            | 25      | 0         | 18.79                 | 18.74                   | 18.97                 | 0-2                       | 2        |
|           |            | 25      | 12        | 18.87                 | 19.04                   | 18.73                 | 0-2                       | 2        |
|           |            | 25      | 24        | 18.80                 | 19.09                   | 18.67                 | 0-2                       | 2        |
|           |            | 50      | 0         | 18.65                 | 18.73                   | 18.70                 | 0-2                       | 2        |

## LTE Band 4 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 20025 Ch. 1717.5 MHz | 20175 Ch. 1732.5 MHz | 20325 Ch. 1747.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 20.47                | 20.73                | 20.82                | 0                         | 0        |
|           |            | 1       | 36        | 20.89                | 21.00                | 20.80                | 0                         | 0        |
|           |            | 1       | 74        | 20.64                | 20.86                | 20.94                | 0                         | 0        |
|           |            | 36      | 0         | 20.86                | 20.92                | 20.94                | 0                         | 0        |
|           |            | 36      | 18        | 21.16                | 21.09                | 21.09                | 0                         | 0        |
|           |            | 36      | 39        | 20.96                | 21.17                | 20.78                | 0                         | 0        |
|           |            | 75      | 0         | 20.95                | 21.03                | 20.92                | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.78                | 21.11                | 21.20                | 0                         | 0        |
|           |            | 1       | 36        | 21.22                | 21.38                | 21.23                | 0                         | 0        |
|           |            | 1       | 74        | 21.04                | 21.26                | 21.28                | 0                         | 0        |
|           |            | 36      | 0         | 20.84                | 21.01                | 20.91                | 0                         | 0        |
|           |            | 36      | 18        | 21.14                | 21.03                | 21.04                | 0                         | 0        |
|           |            | 36      | 39        | 21.06                | 21.12                | 20.76                | 0                         | 0        |
|           |            | 75      | 0         | 20.98                | 20.97                | 20.96                | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.79                | 20.98                | 21.25                | 0                         | 0        |
|           |            | 1       | 36        | 21.04                | 21.39                | 21.08                | 0                         | 0        |
|           |            | 1       | 74        | 21.12                | 20.95                | 21.06                | 0                         | 0        |
|           |            | 36      | 0         | 20.87                | 21.00                | 20.97                | 0                         | 0        |
|           |            | 36      | 18        | 21.06                | 21.14                | 21.01                | 0                         | 0        |
|           |            | 36      | 39        | 20.90                | 21.18                | 21.03                | 0                         | 0        |
|           |            | 75      | 0         | 20.87                | 21.06                | 20.97                | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.60                | 18.68                | 18.83                | 0-2                       | 2        |
|           |            | 1       | 36        | 19.04                | 19.07                | 18.94                | 0-2                       | 2        |
|           |            | 1       | 74        | 18.98                | 18.96                | 18.71                | 0-2                       | 2        |
|           |            | 36      | 0         | 18.79                | 18.99                | 18.85                | 0-2                       | 2        |
|           |            | 36      | 18        | 18.98                | 19.10                | 18.99                | 0-2                       | 2        |
|           |            | 36      | 39        | 18.96                | 19.24                | 18.89                | 0-2                       | 2        |
|           |            | 75      | 0         | 18.98                | 19.09                | 19.04                | 0-2                       | 2        |

## LTE Band 4 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 20050 Ch. 1720 MHz  | 20175 Ch. 1732.5 MHz | 20300 Ch. 1745 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 20.51               | 20.76                | 20.86              | 0                         | 0        |
|           |            | 1       | 49        | 20.97               | 21.12                | 20.91              | 0                         | 0        |
|           |            | 1       | 99        | 20.75               | 21.02                | 21.01              | 0                         | 0        |
|           |            | 50      | 0         | 20.90               | 21.05                | 21.00              | 0                         | 0        |
|           |            | 50      | 25        | 21.17               | 21.24                | 21.14              | 0                         | 0        |
|           |            | 50      | 49        | 21.08               | 21.22                | 20.90              | 0                         | 0        |
|           |            | 100     | 0         | 20.97               | 21.14                | 21.04              | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.88               | 21.17                | 21.33              | 0                         | 0        |
|           |            | 1       | 49        | 21.34               | 21.53                | 21.34              | 0                         | 0        |
|           |            | 1       | 99        | 21.09               | 21.29                | 21.29              | 0                         | 0        |
|           |            | 50      | 0         | 20.92               | 21.06                | 21.03              | 0                         | 0        |
|           |            | 50      | 25        | 21.18               | 21.16                | 21.06              | 0                         | 0        |
|           |            | 50      | 49        | 21.14               | 21.27                | 20.91              | 0                         | 0        |
|           |            | 100     | 0         | 21.02               | 21.08                | 21.04              | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.84               | 21.01                | 21.31              | 0                         | 0        |
|           |            | 1       | 49        | 21.17               | 21.39                | 21.20              | 0                         | 0        |
|           |            | 1       | 99        | 21.18               | 21.05                | 21.07              | 0                         | 0        |
|           |            | 50      | 0         | 20.94               | 21.15                | 21.13              | 0                         | 0        |
|           |            | 50      | 25        | 21.07               | 21.25                | 21.13              | 0                         | 0        |
|           |            | 50      | 49        | 21.01               | 21.26                | 21.07              | 0                         | 0        |
|           |            | 100     | 0         | 21.01               | 21.20                | 20.99              | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.72               | 18.82                | 18.85              | 0-2                       | 2        |
|           |            | 1       | 49        | 19.07               | 19.22                | 19.02              | 0-2                       | 2        |
|           |            | 1       | 99        | 19.01               | 19.08                | 18.81              | 0-2                       | 2        |
|           |            | 50      | 0         | 18.89               | 19.02                | 19.01              | 0-2                       | 2        |
|           |            | 50      | 25        | 19.08               | 19.15                | 19.11              | 0-2                       | 2        |
|           |            | 50      | 49        | 19.04               | 19.26                | 18.97              | 0-2                       | 2        |
|           |            | 100     | 0         | 19.05               | 19.11                | 19.06              | 0-2                       | 2        |

# [ LTE Band 41 Conducted Power ]

LTE Band 41 \_ 5 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 21.70                | 22.39                | 22.37                | 21.91                | 21.76                | 0                        | 0        |
|            |            | 1       | 12        | 21.70                | 22.44                | 22.33                | 21.99                | 21.74                | 0                        | 0        |
|            |            | 1       | 24        | 21.75                | 22.43                | 22.23                | 21.85                | 21.66                | 0                        | 0        |
|            |            | 12      | 0         | 21.72                | 22.44                | 22.46                | 22.07                | 21.86                | 0                        | 0        |
|            |            | 12      | 6         | 21.83                | 22.58                | 22.48                | 22.09                | 21.84                | 0                        | 0        |
|            |            | 12      | 11        | 21.81                | 22.52                | 22.36                | 22.01                | 21.82                | 0                        | 0        |
|            |            | 25      | 0         | 21.82                | 22.52                | 22.45                | 22.05                | 21.85                | 0                        | 0        |
|            | 16QAM      | 1       | 0         | 21.84                | 22.58                | 22.48                | 22.10                | 21.84                | 0                        | 0        |
|            |            | 1       | 12        | 21.85                | 22.56                | 22.43                | 22.05                | 21.85                | 0                        | 0        |
|            |            | 1       | 24        | 21.90                | 22.58                | 22.40                | 22.00                | 21.78                | 0                        | 0        |
|            |            | 12      | 0         | 21.67                | 22.19                | 22.20                | 21.76                | 21.58                | 0                        | 0        |
|            |            | 12      | 6         | 21.78                | 22.29                | 22.15                | 21.79                | 21.60                | 0                        | 0        |
|            |            | 12      | 11        | 21.82                | 22.31                | 22.11                | 21.78                | 21.59                | 0                        | 0        |
|            |            | 25      | 0         | 21.81                | 22.43                | 22.29                | 21.93                | 21.71                | 0                        | 0        |
|            | 64QAM      | 1       | 0         | 21.70                | 21.94                | 21.89                | 21.48                | 21.28                | 0                        | 0        |
|            |            | 1       | 12        | 21.66                | 21.96                | 21.89                | 21.46                | 21.30                | 0                        | 0        |
|            |            | 1       | 24        | 21.73                | 22.03                | 21.76                | 21.49                | 21.20                | 0                        | 0        |
|            |            | 12      | 0         | 21.76                | 21.26                | 21.22                | 20.78                | 20.60                | 0-1                      | 1        |
|            |            | 12      | 6         | 21.84                | 21.38                | 21.26                | 20.84                | 20.61                | 0-1                      | 1        |
|            |            | 12      | 11        | 21.83                | 21.31                | 21.12                | 20.78                | 20.63                | 0-1                      | 1        |
|            |            | 25      | 0         | 21.78                | 21.34                | 21.21                | 20.81                | 20.65                | 0-1                      | 1        |
|            | 256QAM     | 1       | 0         | 18.49                | 19.03                | 19.05                | 18.66                | 18.44                | 0-3                      | 3        |
|            |            | 1       | 12        | 18.61                | 19.16                | 19.09                | 18.65                | 18.52                | 0-3                      | 3        |
|            |            | 1       | 24        | 18.60                | 19.12                | 18.91                | 18.58                | 18.30                | 0-3                      | 3        |
|            |            | 12      | 0         | 18.83                | 19.36                | 19.38                | 18.97                | 18.79                | 0-3                      | 3        |
|            |            | 12      | 6         | 18.94                | 19.46                | 19.41                | 19.01                | 18.79                | 0-3                      | 3        |
|            |            | 12      | 11        | 18.93                | 19.47                | 19.28                | 18.97                | 18.70                | 0-3                      | 3        |
|            |            | 25      | 0         | 18.87                | 19.41                | 19.33                | 18.94                | 18.68                | 0-3                      | 3        |

## LTE Band 41 \_ 10 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 21.63                | 22.14                | 22.15                | 21.76                | 21.71                | 0                         | 0        |
|            |            | 1       | 24        | 21.68                | 22.47                | 22.36                | 21.96                | 21.90                | 0                         | 0        |
|            |            | 1       | 49        | 21.75                | 22.19                | 21.99                | 21.64                | 21.62                | 0                         | 0        |
|            |            | 25      | 0         | 21.73                | 22.40                | 22.41                | 22.05                | 21.92                | 0                         | 0        |
|            |            | 25      | 12        | 21.87                | 22.59                | 22.46                | 22.10                | 21.99                | 0                         | 0        |
|            |            | 25      | 24        | 21.84                | 22.50                | 22.29                | 21.98                | 21.90                | 0                         | 0        |
|            |            | 50      | 0         | 21.75                | 22.54                | 22.33                | 22.05                | 21.91                | 0                         | 0        |
|            | 16QAM      | 1       | 0         | 21.74                | 22.28                | 22.30                | 21.93                | 21.75                | 0                         | 0        |
|            |            | 1       | 24        | 21.79                | 22.55                | 22.45                | 22.06                | 21.93                | 0                         | 0        |
|            |            | 1       | 49        | 21.98                | 22.39                | 22.12                | 21.72                | 21.62                | 0                         | 0        |
|            |            | 25      | 0         | 21.77                | 22.24                | 22.30                | 21.90                | 21.71                | 0                         | 0        |
|            |            | 25      | 12        | 21.90                | 22.47                | 22.32                | 21.93                | 21.83                | 0                         | 0        |
|            |            | 25      | 24        | 21.85                | 22.38                | 22.13                | 21.79                | 21.66                | 0                         | 0        |
|            |            | 50      | 0         | 21.80                | 22.32                | 22.14                | 21.87                | 21.72                | 0                         | 0        |
|            | 64QAM      | 1       | 0         | 21.38                | 21.73                | 21.66                | 21.26                | 21.18                | 0                         | 0        |
|            |            | 1       | 24        | 21.38                | 22.01                | 21.88                | 21.46                | 21.36                | 0                         | 0        |
|            |            | 1       | 49        | 21.57                | 21.82                | 21.49                | 21.12                | 21.04                | 0                         | 0        |
|            |            | 25      | 0         | 20.74                | 21.25                | 21.28                | 20.86                | 20.71                | 0-1                       | 1        |
|            |            | 25      | 12        | 20.89                | 21.44                | 21.31                | 20.94                | 20.81                | 0-1                       | 1        |
|            |            | 25      | 24        | 20.87                | 21.31                | 21.11                | 20.80                | 20.72                | 0-1                       | 1        |
|            |            | 50      | 0         | 20.87                | 21.41                | 21.22                | 20.90                | 20.78                | 0-1                       | 1        |
|            | 256QAM     | 1       | 0         | 18.22                | 18.89                | 18.85                | 18.54                | 18.37                | 0-3                       | 3        |
|            |            | 1       | 24        | 18.62                | 19.24                | 19.13                | 18.82                | 18.63                | 0-3                       | 3        |
|            |            | 1       | 49        | 18.42                | 19.01                | 18.80                | 18.42                | 18.27                | 0-3                       | 3        |
|            |            | 25      | 0         | 18.72                | 19.28                | 19.25                | 18.90                | 18.74                | 0-3                       | 3        |
|            |            | 25      | 12        | 18.92                | 19.47                | 19.39                | 18.97                | 18.81                | 0-3                       | 3        |
|            |            | 25      | 24        | 18.83                | 19.35                | 19.16                | 18.87                | 18.71                | 0-3                       | 3        |
|            |            | 50      | 0         | 18.86                | 19.39                | 19.27                | 18.93                | 18.80                | 0-3                       | 3        |

## LTE Band 41 \_ 15 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 21.56                | 21.96                | 22.11                | 21.82                | 21.57                | 0                         | 0        |
|            |            | 1       | 36        | 21.58                | 22.30                | 22.19                | 21.89                | 21.66                | 0                         | 0        |
|            |            | 1       | 74        | 21.72                | 22.10                | 21.99                | 21.62                | 21.65                | 0                         | 0        |
|            |            | 36      | 0         | 21.62                | 22.23                | 22.31                | 22.01                | 21.75                | 0                         | 0        |
|            |            | 36      | 18        | 21.77                | 22.44                | 22.37                | 22.04                | 21.81                | 0                         | 0        |
|            |            | 36      | 39        | 21.74                | 22.35                | 22.21                | 21.95                | 21.77                | 0                         | 0        |
|            |            | 75      | 0         | 21.68                | 22.34                | 22.22                | 22.00                | 21.80                | 0                         | 0        |
|            | 16QAM      | 1       | 0         | 21.68                | 22.10                | 22.21                | 21.97                | 21.58                | 0                         | 0        |
|            |            | 1       | 36        | 21.67                | 22.40                | 22.28                | 21.96                | 21.78                | 0                         | 0        |
|            |            | 1       | 74        | 21.81                | 22.26                | 22.09                | 21.71                | 21.76                | 0                         | 0        |
|            |            | 36      | 0         | 21.56                | 22.01                | 22.06                | 21.81                | 21.52                | 0                         | 0        |
|            |            | 36      | 18        | 21.67                | 22.16                | 22.12                | 21.84                | 21.62                | 0                         | 0        |
|            |            | 36      | 39        | 21.72                | 22.10                | 22.00                | 21.73                | 21.56                | 0                         | 0        |
|            |            | 75      | 0         | 21.67                | 22.14                | 22.04                | 21.81                | 21.62                | 0                         | 0        |
|            | 64QAM      | 1       | 0         | 21.21                | 21.52                | 21.61                | 21.38                | 20.99                | 0                         | 0        |
|            |            | 1       | 36        | 21.33                | 21.84                | 21.76                | 21.46                | 21.24                | 0                         | 0        |
|            |            | 1       | 74        | 21.41                | 21.65                | 21.33                | 21.13                | 21.09                | 0                         | 0        |
|            |            | 36      | 0         | 20.62                | 21.07                | 21.13                | 20.87                | 20.61                | 0-1                       | 1        |
|            |            | 36      | 18        | 20.75                | 21.26                | 21.21                | 20.89                | 20.70                | 0-1                       | 1        |
|            |            | 36      | 39        | 20.80                | 21.18                | 21.03                | 20.78                | 20.60                | 0-1                       | 1        |
|            |            | 75      | 0         | 20.72                | 21.22                | 21.07                | 20.83                | 20.65                | 0-1                       | 1        |
|            | 256QAM     | 1       | 0         | 18.26                | 18.80                | 18.98                | 18.70                | 18.32                | 0-3                       | 3        |
|            |            | 1       | 36        | 18.62                | 19.14                | 19.10                | 18.75                | 18.55                | 0-3                       | 3        |
|            |            | 1       | 74        | 18.65                | 18.96                | 18.83                | 18.44                | 18.44                | 0-3                       | 3        |
|            |            | 36      | 0         | 18.54                | 19.08                | 19.15                | 18.86                | 18.62                | 0-3                       | 3        |
|            |            | 36      | 18        | 18.76                | 19.26                | 19.22                | 18.88                | 18.68                | 0-3                       | 3        |
|            |            | 36      | 39        | 18.83                | 19.16                | 19.09                | 18.81                | 18.59                | 0-3                       | 3        |
|            |            | 75      | 0         | 18.73                | 19.19                | 19.08                | 18.85                | 18.66                | 0-3                       | 3        |

## LTE Band 41 \_ 20 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 20 MHz     | QPSK       | 1       | 0         | 21.59                | 22.18                | 21.97                | 21.71                | 21.51                | 0                         | 0        |
|            |            | 1       | 49        | 21.55                | 22.23                | 22.22                | 21.85                | 21.70                | 0                         | 0        |
|            |            | 1       | 99        | 21.72                | 22.36                | 21.84                | 21.52                | 21.57                | 0                         | 0        |
|            |            | 50      | 0         | 21.59                | 22.29                | 22.25                | 22.00                | 21.67                | 0                         | 0        |
|            |            | 50      | 25        | 21.74                | 22.40                | 22.30                | 22.03                | 21.84                | 0                         | 0        |
|            |            | 50      | 49        | 21.77                | 22.38                | 22.20                | 21.89                | 21.74                | 0                         | 0        |
|            |            | 100     | 0         | 21.64                | 22.21                | 22.19                | 21.95                | 21.77                | 0                         | 0        |
|            | 16QAM      | 1       | 0         | 21.65                | 22.29                | 22.05                | 21.84                | 21.55                | 0                         | 0        |
|            |            | 1       | 49        | 21.65                | 22.39                | 22.33                | 21.96                | 21.79                | 0                         | 0        |
|            |            | 1       | 99        | 21.81                | 22.43                | 21.91                | 21.58                | 21.70                | 0                         | 0        |
|            |            | 50      | 0         | 21.62                | 22.11                | 22.11                | 21.85                | 21.54                | 0                         | 0        |
|            |            | 50      | 25        | 21.73                | 22.25                | 22.08                | 21.89                | 21.68                | 0                         | 0        |
|            |            | 50      | 49        | 21.77                | 22.25                | 22.00                | 21.75                | 21.61                | 0                         | 0        |
|            |            | 100     | 0         | 21.66                | 22.03                | 22.02                | 21.80                | 21.60                | 0                         | 0        |
|            | 64QAM      | 1       | 0         | 21.19                | 21.68                | 21.52                | 21.24                | 20.89                | 0                         | 0        |
|            |            | 1       | 49        | 21.25                | 21.83                | 21.76                | 21.43                | 21.24                | 0                         | 0        |
|            |            | 1       | 99        | 21.43                | 21.87                | 21.23                | 20.93                | 21.06                | 0                         | 0        |
|            |            | 50      | 0         | 20.63                | 21.16                | 21.14                | 20.92                | 20.58                | 0-1                       | 1        |
|            |            | 50      | 25        | 20.80                | 21.26                | 21.14                | 20.93                | 20.71                | 0-1                       | 1        |
|            |            | 50      | 49        | 20.84                | 21.25                | 21.05                | 20.77                | 20.64                | 0-1                       | 1        |
|            |            | 100     | 0         | 20.66                | 21.03                | 21.00                | 20.77                | 20.60                | 0-1                       | 1        |
|            | 256QAM     | 1       | 0         | 18.06                | 18.58                | 18.82                | 18.58                | 18.15                | 0-3                       | 3        |
|            |            | 1       | 49        | 18.57                | 19.13                | 19.08                | 18.71                | 18.54                | 0-3                       | 3        |
|            |            | 1       | 99        | 18.55                | 18.79                | 18.67                | 18.22                | 18.40                | 0-3                       | 3        |
|            |            | 50      | 0         | 18.54                | 19.11                | 19.21                | 18.93                | 18.59                | 0-3                       | 3        |
|            |            | 50      | 25        | 18.82                | 19.29                | 19.20                | 18.91                | 18.75                | 0-3                       | 3        |
|            |            | 50      | 49        | 18.85                | 19.19                | 19.11                | 18.76                | 18.67                | 0-3                       | 3        |
|            |            | 100     | 0         | 18.68                | 19.04                | 19.08                | 18.77                | 18.58                | 0-3                       | 3        |

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

# [LTE Band 66 Conducted Power]

LTE Band 66 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 131979Ch.<br>1710.7 MHz | 132322 Ch.<br>1745 MHz | 132665 Ch.<br>1779.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 19.80                   | 19.79                  | 19.82                    | 0                         | 0        |
|           |            | 1       | 3         | 19.64                   | 20.03                  | 19.93                    | 0                         | 0        |
|           |            | 1       | 5         | 19.42                   | 19.81                  | 19.85                    | 0                         | 0        |
|           |            | 3       | 0         | 19.57                   | 19.80                  | 19.86                    | 0                         | 0        |
|           |            | 3       | 1         | 19.53                   | 19.81                  | 20.00                    | 0                         | 0        |
|           |            | 3       | 3         | 19.50                   | 19.84                  | 19.81                    | 0                         | 0        |
|           |            | 6       | 0         | 19.69                   | 19.88                  | 19.87                    | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 19.74                   | 20.06                  | 20.15                    | 0                         | 0        |
|           |            | 1       | 3         | 20.11                   | 20.23                  | 20.27                    | 0                         | 0        |
|           |            | 1       | 5         | 19.89                   | 20.05                  | 20.17                    | 0                         | 0        |
|           |            | 3       | 0         | 19.83                   | 20.09                  | 20.19                    | 0                         | 0        |
|           |            | 3       | 1         | 19.79                   | 20.12                  | 20.24                    | 0                         | 0        |
|           |            | 3       | 3         | 19.54                   | 20.02                  | 20.13                    | 0                         | 0        |
|           |            | 6       | 0         | 19.77                   | 19.87                  | 19.85                    | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 19.79                   | 20.12                  | 20.18                    | 0                         | 0        |
|           |            | 1       | 3         | 19.94                   | 20.18                  | 20.18                    | 0                         | 0        |
|           |            | 1       | 5         | 19.70                   | 19.99                  | 20.20                    | 0                         | 0        |
|           |            | 3       | 0         | 19.82                   | 19.99                  | 20.03                    | 0                         | 0        |
|           |            | 3       | 1         | 19.76                   | 20.02                  | 20.13                    | 0                         | 0        |
|           |            | 3       | 3         | 19.79                   | 19.97                  | 20.16                    | 0                         | 0        |
|           |            | 6       | 0         | 19.64                   | 19.95                  | 20.03                    | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 19.91                   | 19.62                  | 19.75                    | 0-1                       | 1        |
|           |            | 1       | 3         | 19.42                   | 19.52                  | 19.65                    | 0-1                       | 1        |
|           |            | 1       | 5         | 19.28                   | 19.46                  | 19.60                    | 0-1                       | 1        |
|           |            | 3       | 0         | 19.52                   | 19.75                  | 19.66                    | 0-1                       | 1        |
|           |            | 3       | 1         | 19.29                   | 19.57                  | 19.66                    | 0-1                       | 1        |
|           |            | 3       | 3         | 19.21                   | 19.42                  | 19.61                    | 0-1                       | 1        |
|           |            | 6       | 0         | 19.12                   | 19.38                  | 19.41                    | 0-1                       | 1        |

## LTE Band 66 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                     |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|---------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131987 Ch. 1711.5 MHz | 132322 Ch. 1745 MHz | 132657 Ch. 1778.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 19.65                 | 19.83               | 20.05                 | 0                         | 0        |
|           |            | 1       | 7         | 19.64                 | 19.91               | 20.27                 | 0                         | 0        |
|           |            | 1       | 14        | 19.60                 | 19.76               | 19.93                 | 0                         | 0        |
|           |            | 8       | 0         | 19.79                 | 19.88               | 20.13                 | 0                         | 0        |
|           |            | 8       | 3         | 19.78                 | 19.95               | 20.07                 | 0                         | 0        |
|           |            | 8       | 7         | 19.76                 | 19.99               | 20.10                 | 0                         | 0        |
|           |            | 15      | 0         | 19.70                 | 19.97               | 20.12                 | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 19.99                 | 20.29               | 20.44                 | 0                         | 0        |
|           |            | 1       | 7         | 19.97                 | 20.12               | 20.26                 | 0                         | 0        |
|           |            | 1       | 14        | 19.96                 | 20.14               | 20.24                 | 0                         | 0        |
|           |            | 8       | 0         | 19.90                 | 19.98               | 20.18                 | 0                         | 0        |
|           |            | 8       | 3         | 19.90                 | 20.12               | 20.26                 | 0                         | 0        |
|           |            | 8       | 7         | 19.81                 | 20.06               | 20.19                 | 0                         | 0        |
|           |            | 15      | 0         | 19.70                 | 19.97               | 20.12                 | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 19.72                 | 20.08               | 20.22                 | 0                         | 0        |
|           |            | 1       | 7         | 19.93                 | 19.95               | 20.22                 | 0                         | 0        |
|           |            | 1       | 14        | 19.86                 | 20.10               | 20.13                 | 0                         | 0        |
|           |            | 8       | 0         | 19.92                 | 20.03               | 20.19                 | 0                         | 0        |
|           |            | 8       | 3         | 19.96                 | 20.11               | 20.36                 | 0                         | 0        |
|           |            | 8       | 7         | 19.90                 | 19.96               | 20.17                 | 0                         | 0        |
|           |            | 15      | 0         | 19.86                 | 19.96               | 20.09                 | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 19.28                 | 19.55               | 19.81                 | 0-1                       | 1        |
|           |            | 1       | 7         | 19.35                 | 19.57               | 19.66                 | 0-1                       | 1        |
|           |            | 1       | 14        | 19.47                 | 19.61               | 19.70                 | 0-1                       | 1        |
|           |            | 8       | 0         | 19.36                 | 19.50               | 19.55                 | 0-1                       | 1        |
|           |            | 8       | 3         | 19.34                 | 19.50               | 19.63                 | 0-1                       | 1        |
|           |            | 8       | 7         | 19.32                 | 19.57               | 19.61                 | 0-1                       | 1        |
|           |            | 15      | 0         | 19.33                 | 19.45               | 19.51                 | 0-1                       | 1        |

## LTE Band 66 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                    |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|--------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131997 Ch. 1712.5 MHz | 132322Ch. 1745 MHz | 132647 Ch. 1777.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 19.63                 | 19.79              | 19.95                 | 0                         | 0        |
|           |            | 1       | 12        | 19.75                 | 19.93              | 20.23                 | 0                         | 0        |
|           |            | 1       | 24        | 19.58                 | 19.80              | 19.96                 | 0                         | 0        |
|           |            | 12      | 0         | 19.80                 | 19.98              | 20.00                 | 0                         | 0        |
|           |            | 12      | 6         | 19.79                 | 19.95              | 20.00                 | 0                         | 0        |
|           |            | 12      | 11        | 19.59                 | 19.90              | 20.03                 | 0                         | 0        |
|           |            | 25      | 0         | 19.74                 | 19.89              | 20.05                 | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 19.90                 | 20.16              | 20.34                 | 0                         | 0        |
|           |            | 1       | 12        | 19.96                 | 20.11              | 20.25                 | 0                         | 0        |
|           |            | 1       | 24        | 20.03                 | 20.07              | 20.15                 | 0                         | 0        |
|           |            | 12      | 0         | 19.83                 | 19.97              | 20.03                 | 0                         | 0        |
|           |            | 12      | 6         | 19.87                 | 20.01              | 20.11                 | 0                         | 0        |
|           |            | 12      | 11        | 19.83                 | 19.93              | 20.09                 | 0                         | 0        |
|           |            | 25      | 0         | 19.74                 | 19.94              | 20.01                 | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 19.91                 | 19.94              | 19.98                 | 0                         | 0        |
|           |            | 1       | 12        | 19.80                 | 20.19              | 20.19                 | 0                         | 0        |
|           |            | 1       | 24        | 19.91                 | 19.93              | 20.12                 | 0                         | 0        |
|           |            | 12      | 0         | 19.77                 | 19.99              | 20.06                 | 0                         | 0        |
|           |            | 12      | 6         | 19.82                 | 20.01              | 20.05                 | 0                         | 0        |
|           |            | 12      | 11        | 19.74                 | 20.00              | 20.12                 | 0                         | 0        |
|           |            | 25      | 0         | 19.75                 | 19.97              | 20.04                 | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 19.21                 | 19.39              | 19.52                 | 0-1                       | 1        |
|           |            | 1       | 12        | 19.36                 | 19.54              | 19.63                 | 0-1                       | 1        |
|           |            | 1       | 24        | 19.30                 | 19.47              | 19.64                 | 0-1                       | 1        |
|           |            | 12      | 0         | 19.35                 | 19.49              | 19.53                 | 0-1                       | 1        |
|           |            | 12      | 6         | 19.34                 | 19.48              | 19.53                 | 0-1                       | 1        |
|           |            | 12      | 11        | 19.28                 | 19.47              | 19.64                 | 0-1                       | 1        |
|           |            | 25      | 0         | 19.29                 | 19.50              | 19.44                 | 0-1                       | 1        |

## LTE Band 66 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 132022 Ch. 1715 MHz | 132322 Ch. 1745 MHz | 132622 Ch. 1775 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 19.23               | 19.47               | 19.50               | 0                         | 0        |
|           |            | 1       | 24        | 19.60               | 19.91               | 20.05               | 0                         | 0        |
|           |            | 1       | 49        | 19.48               | 19.72               | 19.83               | 0                         | 0        |
|           |            | 25      | 0         | 19.67               | 19.79               | 19.96               | 0                         | 0        |
|           |            | 25      | 12        | 19.71               | 19.96               | 20.05               | 0                         | 0        |
|           |            | 25      | 24        | 19.69               | 19.95               | 20.01               | 0                         | 0        |
|           | 16QAM      | 50      | 0         | 19.71               | 19.80               | 19.95               | 0                         | 0        |
|           |            | 1       | 0         | 19.72               | 19.89               | 19.97               | 0                         | 0        |
|           |            | 1       | 24        | 19.92               | 20.11               | 20.31               | 0                         | 0        |
|           |            | 1       | 49        | 19.78               | 20.12               | 19.95               | 0                         | 0        |
|           |            | 25      | 0         | 19.74               | 19.88               | 19.84               | 0                         | 0        |
|           |            | 25      | 12        | 19.81               | 20.01               | 20.06               | 0                         | 0        |
|           | 64QAM      | 25      | 24        | 19.75               | 19.97               | 20.06               | 0                         | 0        |
|           |            | 50      | 0         | 19.71               | 19.87               | 19.99               | 0                         | 0        |
|           |            | 1       | 0         | 19.49               | 19.75               | 19.87               | 0                         | 0        |
|           |            | 1       | 24        | 19.86               | 20.08               | 20.27               | 0                         | 0        |
|           |            | 1       | 49        | 19.80               | 19.99               | 19.93               | 0                         | 0        |
|           |            | 25      | 0         | 19.72               | 19.92               | 20.02               | 0                         | 0        |
|           | 256QAM     | 25      | 12        | 19.83               | 20.05               | 20.13               | 0                         | 0        |
|           |            | 25      | 24        | 19.82               | 19.99               | 20.06               | 0                         | 0        |
|           |            | 50      | 0         | 19.69               | 19.92               | 20.01               | 0                         | 0        |
|           |            | 1       | 0         | 19.02               | 19.11               | 19.26               | 0-1                       | 1        |
|           |            | 1       | 24        | 19.42               | 19.56               | 19.74               | 0-1                       | 1        |
|           |            | 1       | 49        | 19.27               | 19.47               | 19.45               | 0-1                       | 1        |
|           |            | 25      | 0         | 19.15               | 19.39               | 19.54               | 0-1                       | 1        |
|           |            | 25      | 12        | 19.38               | 19.41               | 19.55               | 0-1                       | 1        |
|           |            | 25      | 24        | 19.20               | 19.52               | 19.53               | 0-1                       | 1        |
|           |            | 50      | 0         | 19.26               | 19.43               | 19.45               | 0-1                       | 1        |

## LTE Band 66 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                     |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|---------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 132047 Ch. 1717.5 MHz | 132322 Ch. 1745 MHz | 132597 Ch. 1772.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 19.31                 | 19.59               | 19.82                 | 0                         | 0        |
|           |            | 1       | 36        | 19.56                 | 19.88               | 20.06                 | 0                         | 0        |
|           |            | 1       | 74        | 19.47                 | 19.65               | 19.92                 | 0                         | 0        |
|           |            | 36      | 0         | 19.54                 | 19.80               | 19.94                 | 0                         | 0        |
|           |            | 36      | 18        | 19.70                 | 19.82               | 19.98                 | 0                         | 0        |
|           |            | 36      | 39        | 19.70                 | 19.80               | 19.94                 | 0                         | 0        |
|           |            | 75      | 0         | 19.65                 | 19.83               | 19.90                 | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 19.84                 | 20.11               | 20.30                 | 0                         | 0        |
|           |            | 1       | 36        | 19.96                 | 20.16               | 20.06                 | 0                         | 0        |
|           |            | 1       | 74        | 19.94                 | 20.15               | 20.27                 | 0                         | 0        |
|           |            | 36      | 0         | 19.57                 | 19.80               | 19.89                 | 0                         | 0        |
|           |            | 36      | 18        | 19.72                 | 19.84               | 20.05                 | 0                         | 0        |
|           |            | 36      | 39        | 19.69                 | 19.84               | 19.99                 | 0                         | 0        |
|           |            | 75      | 0         | 19.71                 | 19.80               | 19.98                 | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 19.63                 | 19.82               | 20.12                 | 0                         | 0        |
|           |            | 1       | 36        | 19.86                 | 20.10               | 20.20                 | 0                         | 0        |
|           |            | 1       | 74        | 19.73                 | 19.84               | 20.24                 | 0                         | 0        |
|           |            | 36      | 0         | 19.63                 | 19.88               | 19.89                 | 0                         | 0        |
|           |            | 36      | 18        | 19.73                 | 19.94               | 20.07                 | 0                         | 0        |
|           |            | 36      | 39        | 19.73                 | 19.97               | 20.07                 | 0                         | 0        |
|           |            | 75      | 0         | 19.70                 | 19.78               | 20.00                 | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 19.10                 | 19.20               | 19.38                 | 0-1                       | 1        |
|           |            | 1       | 36        | 19.00                 | 19.54               | 19.26                 | 0-1                       | 1        |
|           |            | 1       | 74        | 19.23                 | 19.29               | 19.43                 | 0-1                       | 1        |
|           |            | 36      | 0         | 19.21                 | 19.28               | 19.36                 | 0-1                       | 1        |
|           |            | 36      | 18        | 19.27                 | 19.36               | 19.56                 | 0-1                       | 1        |
|           |            | 36      | 39        | 19.24                 | 19.46               | 19.48                 | 0-1                       | 1        |
|           |            | 75      | 0         | 19.21                 | 19.39               | 19.51                 | 0-1                       | 1        |

## LTE Band 66 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 132072 Ch. 1720 MHz | 132322 Ch. 1745 MHz | 132572 Ch. 1770 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 19.27               | 19.45               | 19.88               | 0                         | 0        |
|           |            | 1       | 49        | 19.46               | 19.71               | 19.85               | 0                         | 0        |
|           |            | 1       | 99        | 19.40               | 19.58               | 19.90               | 0                         | 0        |
|           |            | 50      | 0         | 19.61               | 19.75               | 19.77               | 0                         | 0        |
|           |            | 50      | 25        | 19.75               | 19.81               | 19.97               | 0                         | 0        |
|           |            | 50      | 49        | 19.66               | 19.86               | 19.98               | 0                         | 0        |
|           |            | 100     | 0         | 19.59               | 19.73               | 19.88               | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 19.73               | 19.78               | 20.37               | 0                         | 0        |
|           |            | 1       | 49        | 19.90               | 20.02               | 20.26               | 0                         | 0        |
|           |            | 1       | 99        | 19.88               | 19.87               | 20.28               | 0                         | 0        |
|           |            | 50      | 0         | 19.59               | 19.76               | 19.85               | 0                         | 0        |
|           |            | 50      | 25        | 19.70               | 19.81               | 19.97               | 0                         | 0        |
|           |            | 50      | 49        | 19.73               | 19.82               | 19.84               | 0                         | 0        |
|           |            | 100     | 0         | 19.66               | 19.78               | 19.92               | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 19.47               | 19.70               | 20.00               | 0                         | 0        |
|           |            | 1       | 49        | 19.82               | 20.14               | 20.09               | 0                         | 0        |
|           |            | 1       | 99        | 19.70               | 19.88               | 19.98               | 0                         | 0        |
|           |            | 50      | 0         | 19.57               | 19.82               | 19.81               | 0                         | 0        |
|           |            | 50      | 25        | 19.77               | 19.91               | 20.08               | 0                         | 0        |
|           |            | 50      | 49        | 19.63               | 19.94               | 19.92               | 0                         | 0        |
|           |            | 100     | 0         | 19.72               | 19.86               | 20.00               | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.82               | 18.99               | 19.10               | 0-1                       | 1        |
|           |            | 1       | 49        | 19.28               | 19.52               | 19.54               | 0-1                       | 1        |
|           |            | 1       | 99        | 19.12               | 19.31               | 19.24               | 0-1                       | 1        |
|           |            | 50      | 0         | 19.07               | 19.37               | 19.40               | 0-1                       | 1        |
|           |            | 50      | 25        | 19.26               | 19.34               | 19.50               | 0-1                       | 1        |
|           |            | 50      | 49        | 19.21               | 19.41               | 19.44               | 0-1                       | 1        |
|           |            | 100     | 0         | 19.23               | 19.33               | 19.48               | 0-1                       | 1        |

### 11.3.3 LTE Reduced Conducted Power(Grip Sensor on, Earjack)

#### [ LTE Band 2 Conducted Power ]

LTE Band 2 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18607 Ch.<br>1850.7 MHz | 18900 Ch.<br>1880 MHz | 19193 Ch.<br>1909.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 20.93                   | 21.00                 | 20.91                   | 0                         | 0        |
|           |            | 1       | 3         | 20.91                   | 21.00                 | 20.99                   | 0                         | 0        |
|           |            | 1       | 5         | 20.96                   | 20.94                 | 21.35                   | 0                         | 0        |
|           |            | 3       | 0         | 20.71                   | 20.53                 | 20.72                   | 0                         | 0        |
|           |            | 3       | 1         | 20.81                   | 20.71                 | 20.92                   | 0                         | 0        |
|           |            | 3       | 3         | 20.76                   | 20.76                 | 20.98                   | 0                         | 0        |
|           |            | 6       | 0         | 20.70                   | 20.68                 | 20.94                   | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.70                   | 20.77                 | 20.73                   | 0                         | 0        |
|           |            | 1       | 3         | 20.69                   | 20.65                 | 20.86                   | 0                         | 0        |
|           |            | 1       | 5         | 20.67                   | 20.71                 | 20.80                   | 0                         | 0        |
|           |            | 3       | 0         | 20.68                   | 20.49                 | 20.63                   | 0                         | 0        |
|           |            | 3       | 1         | 20.82                   | 20.77                 | 20.91                   | 0                         | 0        |
|           |            | 3       | 3         | 20.74                   | 20.86                 | 20.89                   | 0                         | 0        |
|           |            | 6       | 0         | 20.73                   | 20.74                 | 20.85                   | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.99                   | 20.91                 | 20.85                   | 0                         | 0        |
|           |            | 1       | 3         | 20.90                   | 20.74                 | 20.92                   | 0                         | 0        |
|           |            | 1       | 5         | 20.96                   | 20.79                 | 20.88                   | 0                         | 0        |
|           |            | 3       | 0         | 20.70                   | 20.54                 | 20.73                   | 0                         | 0        |
|           |            | 3       | 1         | 20.87                   | 20.80                 | 20.94                   | 0                         | 0        |
|           |            | 3       | 3         | 20.77                   | 20.81                 | 20.84                   | 0                         | 0        |
|           |            | 6       | 0         | 20.82                   | 20.69                 | 20.84                   | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.51                   | 18.39                 | 18.54                   | 0-2                       | 2        |
|           |            | 1       | 3         | 18.79                   | 18.77                 | 19.02                   | 0-2                       | 2        |
|           |            | 1       | 5         | 18.72                   | 18.56                 | 18.84                   | 0-2                       | 2        |
|           |            | 3       | 0         | 18.68                   | 18.51                 | 18.70                   | 0-2                       | 2        |
|           |            | 3       | 1         | 18.85                   | 18.73                 | 18.95                   | 0-2                       | 2        |
|           |            | 3       | 3         | 18.75                   | 18.71                 | 18.99                   | 0-2                       | 2        |
|           |            | 6       | 0         | 18.77                   | 18.63                 | 18.87                   | 0-2                       | 2        |

## LTE Band 2 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 18615 Ch. 1851.5 MHz | 18900 Ch. 1880 MHz | 19185 Ch. 1908.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 20.06                | 20.59              | 20.52                | 0                         | 0        |
|           |            | 1       | 7         | 20.08                | 20.30              | 20.73                | 0                         | 0        |
|           |            | 1       | 14        | 20.05                | 20.63              | 20.40                | 0                         | 0        |
|           |            | 8       | 0         | 20.35                | 20.27              | 20.09                | 0                         | 0        |
|           |            | 8       | 3         | 20.06                | 19.98              | 20.83                | 0                         | 0        |
|           |            | 8       | 7         | 19.88                | 20.12              | 20.66                | 0                         | 0        |
|           |            | 15      | 0         | 20.52                | 20.59              | 20.63                | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.92                | 20.47              | 20.69                | 0                         | 0        |
|           |            | 1       | 7         | 20.10                | 20.11              | 20.96                | 0                         | 0        |
|           |            | 1       | 14        | 20.89                | 20.97              | 20.50                | 0                         | 0        |
|           |            | 8       | 0         | 20.14                | 20.40              | 19.83                | 0                         | 0        |
|           |            | 8       | 3         | 20.10                | 20.70              | 20.35                | 0                         | 0        |
|           |            | 8       | 7         | 20.30                | 20.03              | 20.51                | 0                         | 0        |
|           |            | 15      | 0         | 19.88                | 20.12              | 20.43                | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.86                | 20.19              | 20.63                | 0                         | 0        |
|           |            | 1       | 7         | 20.69                | 20.03              | 20.10                | 0                         | 0        |
|           |            | 1       | 14        | 20.89                | 20.53              | 20.79                | 0                         | 0        |
|           |            | 8       | 0         | 20.55                | 19.73              | 20.74                | 0                         | 0        |
|           |            | 8       | 3         | 19.94                | 19.95              | 20.17                | 0                         | 0        |
|           |            | 8       | 7         | 20.42                | 20.11              | 20.79                | 0                         | 0        |
|           |            | 15      | 0         | 20.10                | 20.25              | 20.52                | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 17.68                | 18.33              | 18.02                | 0-2                       | 2        |
|           |            | 1       | 7         | 18.32                | 18.78              | 18.58                | 0-2                       | 2        |
|           |            | 1       | 14        | 18.10                | 17.97              | 17.99                | 0-2                       | 2        |
|           |            | 8       | 0         | 17.94                | 18.42              | 18.26                | 0-2                       | 2        |
|           |            | 8       | 3         | 18.16                | 17.76              | 18.76                | 0-2                       | 2        |
|           |            | 8       | 7         | 18.12                | 18.06              | 18.21                | 0-2                       | 2        |
|           |            | 15      | 0         | 18.05                | 18.21              | 17.92                | 0-2                       | 2        |

## LTE Band 2 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18625 Ch.<br>1852.5 MHz | 18900 Ch.<br>1880 MHz | 19175 Ch.<br>1907.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 20.64                   | 20.70                 | 20.72                   | 0                         | 0        |
|           |            | 1       | 12        | 20.69                   | 20.64                 | 20.86                   | 0                         | 0        |
|           |            | 1       | 24        | 20.66                   | 20.73                 | 20.83                   | 0                         | 0        |
|           |            | 12      | 0         | 20.68                   | 20.50                 | 20.62                   | 0                         | 0        |
|           |            | 12      | 6         | 20.83                   | 20.79                 | 20.91                   | 0                         | 0        |
|           |            | 12      | 11        | 20.75                   | 20.87                 | 20.92                   | 0                         | 0        |
|           |            | 25      | 0         | 20.72                   | 20.75                 | 20.84                   | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.97                   | 21.28                 | 21.11                   | 0                         | 0        |
|           |            | 1       | 12        | 20.91                   | 20.99                 | 21.22                   | 0                         | 0        |
|           |            | 1       | 24        | 20.99                   | 21.24                 | 21.26                   | 0                         | 0        |
|           |            | 12      | 0         | 20.74                   | 20.54                 | 20.72                   | 0                         | 0        |
|           |            | 12      | 6         | 20.80                   | 20.73                 | 20.92                   | 0                         | 0        |
|           |            | 12      | 11        | 20.81                   | 20.76                 | 20.97                   | 0                         | 0        |
|           |            | 25      | 0         | 20.70                   | 20.69                 | 20.92                   | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.98                   | 20.90                 | 20.85                   | 0                         | 0        |
|           |            | 1       | 12        | 20.90                   | 20.76                 | 20.91                   | 0                         | 0        |
|           |            | 1       | 24        | 20.99                   | 20.80                 | 20.89                   | 0                         | 0        |
|           |            | 12      | 0         | 20.73                   | 20.56                 | 20.75                   | 0                         | 0        |
|           |            | 12      | 6         | 20.85                   | 20.81                 | 20.97                   | 0                         | 0        |
|           |            | 12      | 11        | 20.79                   | 20.84                 | 20.87                   | 0                         | 0        |
|           |            | 25      | 0         | 20.83                   | 20.71                 | 20.85                   | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.52                   | 18.38                 | 18.57                   | 0-2                       | 2        |
|           |            | 1       | 12        | 18.81                   | 18.77                 | 19.03                   | 0-2                       | 2        |
|           |            | 1       | 24        | 18.75                   | 18.58                 | 18.87                   | 0-2                       | 2        |
|           |            | 12      | 0         | 18.69                   | 18.55                 | 18.71                   | 0-2                       | 2        |
|           |            | 12      | 6         | 18.85                   | 18.74                 | 18.94                   | 0-2                       | 2        |
|           |            | 12      | 11        | 18.75                   | 18.73                 | 19.01                   | 0-2                       | 2        |
|           |            | 25      | 0         | 18.77                   | 18.66                 | 18.87                   | 0-2                       | 2        |

## LTE Band 2 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 18650 Ch. 1855 MHz  | 18900 Ch. 1880 MHz | 19150 Ch. 1905 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 20.52               | 20.75              | 20.65              | 0                         | 0        |
|           |            | 1       | 24        | 20.69               | 20.65              | 20.85              | 0                         | 0        |
|           |            | 1       | 49        | 20.66               | 20.74              | 20.82              | 0                         | 0        |
|           |            | 25      | 0         | 20.69               | 20.49              | 20.62              | 0                         | 0        |
|           |            | 25      | 12        | 20.81               | 20.80              | 20.91              | 0                         | 0        |
|           |            | 25      | 24        | 20.76               | 20.86              | 20.91              | 0                         | 0        |
|           |            | 50      | 0         | 20.74               | 20.75              | 20.83              | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.95               | 21.27              | 21.00              | 0                         | 0        |
|           |            | 1       | 24        | 20.91               | 20.99              | 20.94              | 0                         | 0        |
|           |            | 1       | 49        | 21.00               | 21.02              | 20.98              | 0                         | 0        |
|           |            | 25      | 0         | 20.74               | 20.56              | 20.72              | 0                         | 0        |
|           |            | 25      | 12        | 20.79               | 20.73              | 20.92              | 0                         | 0        |
|           |            | 25      | 24        | 20.79               | 20.78              | 20.98              | 0                         | 0        |
|           |            | 50      | 0         | 20.69               | 20.69              | 20.93              | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.99               | 20.89              | 20.85              | 0                         | 0        |
|           |            | 1       | 24        | 20.90               | 20.77              | 20.93              | 0                         | 0        |
|           |            | 1       | 49        | 20.99               | 20.79              | 20.88              | 0                         | 0        |
|           |            | 25      | 0         | 20.73               | 20.56              | 20.74              | 0                         | 0        |
|           |            | 25      | 12        | 20.86               | 20.80              | 20.97              | 0                         | 0        |
|           |            | 25      | 24        | 20.80               | 20.85              | 20.86              | 0                         | 0        |
|           |            | 50      | 0         | 20.84               | 20.71              | 20.85              | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.51               | 18.38              | 18.57              | 0-2                       | 2        |
|           |            | 1       | 24        | 18.83               | 18.76              | 18.69              | 0-2                       | 2        |
|           |            | 1       | 49        | 18.75               | 18.58              | 18.88              | 0-2                       | 2        |
|           |            | 25      | 0         | 18.67               | 18.54              | 18.72              | 0-2                       | 2        |
|           |            | 25      | 12        | 18.84               | 18.75              | 18.94              | 0-2                       | 2        |
|           |            | 25      | 24        | 18.76               | 18.74              | 18.88              | 0-2                       | 2        |
|           |            | 50      | 0         | 18.76               | 18.66              | 18.87              | 0-2                       | 2        |

## LTE Band 2 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18675 Ch.<br>1857.5 MHz | 18900 Ch.<br>1880 MHz | 19125 Ch.<br>1902.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 20.70                   | 20.74                 | 20.69                   | 0                         | 0        |
|           |            | 1       | 36        | 20.70                   | 20.61                 | 20.86                   | 0                         | 0        |
|           |            | 1       | 74        | 20.64                   | 20.70                 | 20.84                   | 0                         | 0        |
|           |            | 36      | 0         | 20.65                   | 20.44                 | 20.62                   | 0                         | 0        |
|           |            | 36      | 18        | 20.82                   | 20.75                 | 20.87                   | 0                         | 0        |
|           |            | 36      | 39        | 20.75                   | 20.85                 | 20.89                   | 0                         | 0        |
|           |            | 75      | 0         | 20.70                   | 20.72                 | 20.82                   | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.95                   | 20.98                 | 21.08                   | 0                         | 0        |
|           |            | 1       | 36        | 20.88                   | 21.00                 | 21.18                   | 0                         | 0        |
|           |            | 1       | 74        | 20.97                   | 21.20                 | 21.21                   | 0                         | 0        |
|           |            | 36      | 0         | 20.70                   | 20.53                 | 20.70                   | 0                         | 0        |
|           |            | 36      | 18        | 20.77                   | 20.69                 | 20.91                   | 0                         | 0        |
|           |            | 36      | 39        | 20.79                   | 20.75                 | 20.94                   | 0                         | 0        |
|           |            | 75      | 0         | 20.77                   | 20.69                 | 20.90                   | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.94                   | 20.88                 | 20.84                   | 0                         | 0        |
|           |            | 1       | 36        | 20.88                   | 20.75                 | 20.92                   | 0                         | 0        |
|           |            | 1       | 74        | 20.95                   | 20.78                 | 20.84                   | 0                         | 0        |
|           |            | 36      | 0         | 20.67                   | 20.55                 | 20.73                   | 0                         | 0        |
|           |            | 36      | 18        | 20.85                   | 20.77                 | 20.94                   | 0                         | 0        |
|           |            | 36      | 39        | 20.75                   | 20.85                 | 20.86                   | 0                         | 0        |
|           |            | 75      | 0         | 20.80                   | 20.72                 | 20.83                   | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.48                   | 18.35                 | 18.56                   | 0-2                       | 2        |
|           |            | 1       | 36        | 18.80                   | 18.72                 | 18.94                   | 0-2                       | 2        |
|           |            | 1       | 74        | 18.73                   | 18.54                 | 18.84                   | 0-2                       | 2        |
|           |            | 36      | 0         | 18.67                   | 18.51                 | 18.70                   | 0-2                       | 2        |
|           |            | 36      | 18        | 18.86                   | 18.75                 | 18.95                   | 0-2                       | 2        |
|           |            | 36      | 39        | 18.76                   | 18.72                 | 18.81                   | 0-2                       | 2        |
|           |            | 75      | 0         | 18.75                   | 18.63                 | 18.84                   | 0-2                       | 2        |

## LTE Band 2 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 18700 Ch.<br>1860 MHz | 18900 Ch.<br>1880 MHz | 19100 Ch.<br>1900 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 20.72                 | 20.79                 | 20.73                 | 0                         | 0        |
|           |            | 1       | 49        | 20.70                 | 20.66                 | 20.87                 | 0                         | 0        |
|           |            | 1       | 99        | 20.67                 | 20.75                 | 20.84                 | 0                         | 0        |
|           |            | 50      | 0         | 20.69                 | 20.50                 | 20.64                 | 0                         | 0        |
|           |            | 50      | 25        | 20.83                 | 20.81                 | 20.98                 | 0                         | 0        |
|           |            | 50      | 49        | 20.77                 | 20.87                 | 20.93                 | 0                         | 0        |
|           |            | 100     | 0         | 20.74                 | 20.75                 | 20.85                 | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.97                 | 21.29                 | 21.13                 | 0                         | 0        |
|           |            | 1       | 49        | 20.92                 | 21.00                 | 21.24                 | 0                         | 0        |
|           |            | 1       | 99        | 21.00                 | 21.26                 | 21.27                 | 0                         | 0        |
|           |            | 50      | 0         | 20.75                 | 20.56                 | 20.73                 | 0                         | 0        |
|           |            | 50      | 25        | 20.81                 | 20.75                 | 20.93                 | 0                         | 0        |
|           |            | 50      | 49        | 20.81                 | 20.78                 | 20.99                 | 0                         | 0        |
|           |            | 100     | 0         | 20.70                 | 20.70                 | 20.94                 | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.99                 | 20.91                 | 20.86                 | 0                         | 0        |
|           |            | 1       | 49        | 20.91                 | 20.78                 | 20.93                 | 0                         | 0        |
|           |            | 1       | 99        | 21.00                 | 20.80                 | 20.90                 | 0                         | 0        |
|           |            | 50      | 0         | 20.73                 | 20.57                 | 20.76                 | 0                         | 0        |
|           |            | 50      | 25        | 20.87                 | 20.81                 | 20.97                 | 0                         | 0        |
|           |            | 50      | 49        | 20.80                 | 20.85                 | 20.87                 | 0                         | 0        |
|           |            | 100     | 0         | 20.84                 | 20.72                 | 20.86                 | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.52                 | 18.39                 | 18.59                 | 0-2                       | 2        |
|           |            | 1       | 49        | 18.83                 | 18.78                 | 19.03                 | 0-2                       | 2        |
|           |            | 1       | 99        | 18.76                 | 18.59                 | 18.88                 | 0-2                       | 2        |
|           |            | 50      | 0         | 18.69                 | 18.55                 | 18.73                 | 0-2                       | 2        |
|           |            | 50      | 25        | 18.86                 | 18.76                 | 18.95                 | 0-2                       | 2        |
|           |            | 50      | 49        | 18.77                 | 18.74                 | 19.02                 | 0-2                       | 2        |
|           |            | 100     | 0         | 18.77                 | 18.66                 | 18.89                 | 0-2                       | 2        |

# [ LTE Band 4 Conducted Power ]

LTE Band 4 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19957 Ch. 1710.7 MHz | 20175 Ch. 1732.5 MHz | 20393 Ch. 1754.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 20.56                | 20.73                | 20.85                | 0                         | 0        |
|           |            | 1       | 3         | 21.01                | 21.10                | 20.95                | 0                         | 0        |
|           |            | 1       | 5         | 20.77                | 20.93                | 21.02                | 0                         | 0        |
|           |            | 3       | 0         | 20.96                | 21.06                | 21.05                | 0                         | 0        |
|           |            | 3       | 1         | 21.17                | 21.15                | 21.21                | 0                         | 0        |
|           |            | 3       | 3         | 21.14                | 21.24                | 20.97                | 0                         | 0        |
|           |            | 6       | 0         | 21.01                | 21.09                | 21.07                | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.90                | 21.11                | 21.35                | 0                         | 0        |
|           |            | 1       | 3         | 21.34                | 21.38                | 21.33                | 0                         | 0        |
|           |            | 1       | 5         | 21.18                | 21.42                | 21.30                | 0                         | 0        |
|           |            | 3       | 0         | 20.92                | 21.04                | 21.06                | 0                         | 0        |
|           |            | 3       | 1         | 21.18                | 21.19                | 21.13                | 0                         | 0        |
|           |            | 3       | 3         | 21.16                | 21.23                | 20.90                | 0                         | 0        |
|           |            | 6       | 0         | 21.02                | 21.09                | 21.06                | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.90                | 20.99                | 21.33                | 0                         | 0        |
|           |            | 1       | 3         | 21.24                | 21.43                | 21.19                | 0                         | 0        |
|           |            | 1       | 5         | 21.24                | 21.13                | 21.13                | 0                         | 0        |
|           |            | 3       | 0         | 20.99                | 21.13                | 21.19                | 0                         | 0        |
|           |            | 3       | 1         | 21.10                | 21.24                | 21.18                | 0                         | 0        |
|           |            | 3       | 3         | 21.05                | 21.27                | 21.08                | 0                         | 0        |
|           |            | 6       | 0         | 21.07                | 21.14                | 21.00                | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.71                | 18.84                | 18.89                | 0-2                       | 2        |
|           |            | 1       | 3         | 19.08                | 19.22                | 19.04                | 0-2                       | 2        |
|           |            | 1       | 5         | 19.02                | 18.98                | 18.87                | 0-2                       | 2        |
|           |            | 3       | 0         | 18.96                | 19.08                | 19.05                | 0-2                       | 2        |
|           |            | 3       | 1         | 19.08                | 19.18                | 19.10                | 0-2                       | 2        |
|           |            | 3       | 3         | 19.11                | 19.13                | 18.97                | 0-2                       | 2        |
|           |            | 6       | 0         | 19.10                | 19.10                | 19.07                | 0-2                       | 2        |

## LTE Band 4 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19965 Ch. 1711.5 MHz | 20175 Ch. 1732.5 MHz | 20385 Ch. 1753.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 20.56                | 20.72                | 20.80                | 0                         | 0        |
|           |            | 1       | 7         | 21.02                | 21.09                | 20.95                | 0                         | 0        |
|           |            | 1       | 14        | 20.77                | 20.93                | 21.02                | 0                         | 0        |
|           |            | 8       | 0         | 20.96                | 21.05                | 21.04                | 0                         | 0        |
|           |            | 8       | 3         | 21.17                | 21.15                | 21.20                | 0                         | 0        |
|           |            | 8       | 7         | 21.14                | 21.24                | 20.96                | 0                         | 0        |
|           |            | 15      | 0         | 21.02                | 21.11                | 21.08                | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.90                | 21.12                | 21.35                | 0                         | 0        |
|           |            | 1       | 7         | 21.34                | 21.36                | 21.34                | 0                         | 0        |
|           |            | 1       | 14        | 21.17                | 21.43                | 21.29                | 0                         | 0        |
|           |            | 8       | 0         | 20.93                | 21.03                | 21.06                | 0                         | 0        |
|           |            | 8       | 3         | 21.18                | 21.19                | 21.13                | 0                         | 0        |
|           |            | 8       | 7         | 21.17                | 21.25                | 20.90                | 0                         | 0        |
|           |            | 15      | 0         | 21.03                | 21.09                | 21.07                | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.90                | 20.98                | 21.32                | 0                         | 0        |
|           |            | 1       | 7         | 21.25                | 21.43                | 21.20                | 0                         | 0        |
|           |            | 1       | 14        | 21.24                | 21.15                | 21.14                | 0                         | 0        |
|           |            | 8       | 0         | 20.99                | 21.14                | 21.18                | 0                         | 0        |
|           |            | 8       | 3         | 21.12                | 21.23                | 21.18                | 0                         | 0        |
|           |            | 8       | 7         | 21.05                | 21.27                | 21.08                | 0                         | 0        |
|           |            | 15      | 0         | 21.07                | 21.14                | 21.01                | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.72                | 18.84                | 18.87                | 0-2                       | 2        |
|           |            | 1       | 7         | 19.07                | 19.22                | 19.05                | 0-2                       | 2        |
|           |            | 1       | 14        | 19.02                | 18.97                | 18.87                | 0-2                       | 2        |
|           |            | 8       | 0         | 18.97                | 19.08                | 19.03                | 0-2                       | 2        |
|           |            | 8       | 3         | 19.10                | 19.19                | 19.11                | 0-2                       | 2        |
|           |            | 8       | 7         | 19.10                | 19.14                | 18.97                | 0-2                       | 2        |
|           |            | 15      | 0         | 19.10                | 19.11                | 19.06                | 0-2                       | 2        |

## LTE Band 4 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 19975 Ch. 1712.5 MHz | 20175 Ch. 1732.5 MHz | 20375 Ch. 1752.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 20.51                | 20.65                | 20.87                | 0                         | 0        |
|           |            | 1       | 12        | 21.02                | 21.08                | 20.96                | 0                         | 0        |
|           |            | 1       | 24        | 20.77                | 20.93                | 21.02                | 0                         | 0        |
|           |            | 12      | 0         | 20.97                | 21.06                | 21.04                | 0                         | 0        |
|           |            | 12      | 6         | 21.15                | 21.14                | 21.20                | 0                         | 0        |
|           |            | 12      | 11        | 21.13                | 21.25                | 20.97                | 0                         | 0        |
|           |            | 25      | 0         | 21.02                | 21.11                | 21.08                | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.89                | 21.13                | 21.36                | 0                         | 0        |
|           |            | 1       | 12        | 21.35                | 21.38                | 21.34                | 0                         | 0        |
|           |            | 1       | 24        | 21.16                | 21.43                | 21.29                | 0                         | 0        |
|           |            | 12      | 0         | 20.92                | 21.03                | 21.06                | 0                         | 0        |
|           |            | 12      | 6         | 21.18                | 21.18                | 21.14                | 0                         | 0        |
|           |            | 12      | 11        | 21.16                | 21.25                | 20.90                | 0                         | 0        |
|           |            | 25      | 0         | 21.03                | 21.09                | 21.07                | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.89                | 20.98                | 21.33                | 0                         | 0        |
|           |            | 1       | 12        | 21.25                | 21.41                | 21.19                | 0                         | 0        |
|           |            | 1       | 24        | 21.24                | 21.13                | 21.12                | 0                         | 0        |
|           |            | 12      | 0         | 20.99                | 21.12                | 21.18                | 0                         | 0        |
|           |            | 12      | 6         | 21.11                | 21.23                | 21.19                | 0                         | 0        |
|           |            | 12      | 11        | 21.04                | 21.26                | 21.08                | 0                         | 0        |
|           |            | 25      | 0         | 21.07                | 21.14                | 21.00                | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.73                | 18.83                | 18.87                | 0-2                       | 2        |
|           |            | 1       | 12        | 19.08                | 19.22                | 19.05                | 0-2                       | 2        |
|           |            | 1       | 24        | 19.01                | 18.98                | 18.87                | 0-2                       | 2        |
|           |            | 12      | 0         | 18.97                | 19.07                | 19.04                | 0-2                       | 2        |
|           |            | 12      | 6         | 19.10                | 19.19                | 19.11                | 0-2                       | 2        |
|           |            | 12      | 11        | 19.10                | 19.13                | 18.98                | 0-2                       | 2        |
|           |            | 25      | 0         | 19.08                | 19.09                | 19.07                | 0-2                       | 2        |

## LTE Band 4 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                         |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-------------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 20000 Ch.<br>1715 MHz | 20175 Ch.<br>1732.5 MHz | 20350 Ch.<br>1750 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 20.54                 | 20.71                   | 20.85                 | 0                         | 0        |
|           |            | 1       | 24        | 21.02                 | 21.09                   | 20.96                 | 0                         | 0        |
|           |            | 1       | 49        | 20.77                 | 20.93                   | 21.04                 | 0                         | 0        |
|           |            | 25      | 0         | 20.97                 | 21.05                   | 21.05                 | 0                         | 0        |
|           |            | 25      | 12        | 21.17                 | 21.15                   | 21.20                 | 0                         | 0        |
|           |            | 25      | 24        | 21.15                 | 21.25                   | 20.96                 | 0                         | 0        |
|           | 16QAM      | 50      | 0         | 21.02                 | 21.11                   | 21.08                 | 0                         | 0        |
|           |            | 1       | 0         | 20.90                 | 21.11                   | 21.35                 | 0                         | 0        |
|           |            | 1       | 24        | 21.33                 | 21.37                   | 21.34                 | 0                         | 0        |
|           |            | 1       | 49        | 21.17                 | 21.42                   | 21.29                 | 0                         | 0        |
|           |            | 25      | 0         | 20.93                 | 21.05                   | 21.05                 | 0                         | 0        |
|           |            | 25      | 12        | 21.19                 | 21.20                   | 21.13                 | 0                         | 0        |
|           | 64QAM      | 25      | 24        | 21.15                 | 21.24                   | 20.91                 | 0                         | 0        |
|           |            | 50      | 0         | 21.03                 | 21.09                   | 21.06                 | 0                         | 0        |
|           |            | 1       | 0         | 20.89                 | 20.98                   | 21.32                 | 0                         | 0        |
|           |            | 1       | 24        | 21.25                 | 21.42                   | 21.19                 | 0                         | 0        |
|           |            | 1       | 49        | 21.24                 | 21.15                   | 21.13                 | 0                         | 0        |
|           |            | 25      | 0         | 20.98                 | 21.13                   | 21.19                 | 0                         | 0        |
|           | 256QAM     | 25      | 12        | 21.11                 | 21.25                   | 21.18                 | 0                         | 0        |
|           |            | 25      | 24        | 21.04                 | 21.26                   | 21.08                 | 0                         | 0        |
|           |            | 50      | 0         | 21.06                 | 21.16                   | 21.01                 | 0                         | 0        |
|           |            | 1       | 0         | 18.72                 | 18.84                   | 18.88                 | 0-2                       | 2        |
|           |            | 1       | 24        | 19.08                 | 19.22                   | 19.04                 | 0-2                       | 2        |
|           |            | 1       | 49        | 19.01                 | 18.98                   | 18.87                 | 0-2                       | 2        |
|           |            | 25      | 0         | 18.96                 | 19.09                   | 19.03                 | 0-2                       | 2        |
|           |            | 25      | 12        | 19.10                 | 19.17                   | 19.10                 | 0-2                       | 2        |
|           |            | 25      | 24        | 19.10                 | 19.14                   | 18.96                 | 0-2                       | 2        |
|           |            | 50      | 0         | 19.09                 | 19.10                   | 19.06                 | 0-2                       | 2        |

## LTE Band 4 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 20025 Ch. 1717.5 MHz | 20175 Ch. 1732.5 MHz | 20325 Ch. 1747.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 20.53                | 20.69                | 20.78                | 0                         | 0        |
|           |            | 1       | 36        | 21.02                | 21.09                | 20.95                | 0                         | 0        |
|           |            | 1       | 74        | 20.78                | 20.93                | 21.02                | 0                         | 0        |
|           |            | 36      | 0         | 20.96                | 21.06                | 21.04                | 0                         | 0        |
|           |            | 36      | 18        | 21.15                | 21.16                | 21.19                | 0                         | 0        |
|           |            | 36      | 39        | 21.14                | 21.23                | 20.96                | 0                         | 0        |
|           |            | 75      | 0         | 21.01                | 21.11                | 21.07                | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.90                | 21.11                | 21.35                | 0                         | 0        |
|           |            | 1       | 36        | 21.34                | 21.37                | 21.34                | 0                         | 0        |
|           |            | 1       | 74        | 21.16                | 21.41                | 21.29                | 0                         | 0        |
|           |            | 36      | 0         | 20.92                | 21.03                | 21.06                | 0                         | 0        |
|           |            | 36      | 18        | 21.18                | 21.19                | 21.12                | 0                         | 0        |
|           |            | 36      | 39        | 21.17                | 21.24                | 20.91                | 0                         | 0        |
|           |            | 75      | 0         | 21.03                | 21.09                | 21.07                | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.90                | 20.99                | 21.33                | 0                         | 0        |
|           |            | 1       | 36        | 21.25                | 21.42                | 21.20                | 0                         | 0        |
|           |            | 1       | 74        | 21.23                | 21.13                | 21.13                | 0                         | 0        |
|           |            | 36      | 0         | 21.00                | 21.12                | 21.19                | 0                         | 0        |
|           |            | 36      | 18        | 21.12                | 21.24                | 21.18                | 0                         | 0        |
|           |            | 36      | 39        | 21.04                | 21.26                | 21.07                | 0                         | 0        |
|           |            | 75      | 0         | 21.07                | 21.15                | 21.00                | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.73                | 18.85                | 18.88                | 0-2                       | 2        |
|           |            | 1       | 36        | 19.08                | 19.23                | 19.05                | 0-2                       | 2        |
|           |            | 1       | 74        | 19.02                | 18.98                | 18.87                | 0-2                       | 2        |
|           |            | 36      | 0         | 18.96                | 19.08                | 19.04                | 0-2                       | 2        |
|           |            | 36      | 18        | 19.09                | 19.17                | 19.10                | 0-2                       | 2        |
|           |            | 36      | 39        | 19.10                | 19.15                | 18.96                | 0-2                       | 2        |
|           |            | 75      | 0         | 19.10                | 19.10                | 19.07                | 0-2                       | 2        |

## LTE Band 4 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 20050 Ch. 1720 MHz  | 20175 Ch. 1732.5 MHz | 20300 Ch. 1745 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 20.57               | 20.75                | 20.88              | 0                         | 0        |
|           |            | 1       | 49        | 21.03               | 21.10                | 20.97              | 0                         | 0        |
|           |            | 1       | 99        | 20.78               | 20.94                | 21.04              | 0                         | 0        |
|           |            | 50      | 0         | 20.97               | 21.07                | 21.06              | 0                         | 0        |
|           |            | 50      | 25        | 21.17               | 21.16                | 21.21              | 0                         | 0        |
|           |            | 50      | 49        | 21.15               | 21.25                | 20.97              | 0                         | 0        |
|           |            | 100     | 0         | 21.02               | 21.11                | 21.09              | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.90               | 21.13                | 21.37              | 0                         | 0        |
|           |            | 1       | 49        | 21.35               | 21.38                | 21.34              | 0                         | 0        |
|           |            | 1       | 99        | 21.18               | 21.43                | 21.31              | 0                         | 0        |
|           |            | 50      | 0         | 20.94               | 21.05                | 21.07              | 0                         | 0        |
|           |            | 50      | 25        | 21.19               | 21.20                | 21.14              | 0                         | 0        |
|           |            | 50      | 49        | 21.17               | 21.25                | 20.91              | 0                         | 0        |
|           |            | 100     | 0         | 21.04               | 21.10                | 21.07              | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 20.91               | 20.99                | 21.34              | 0                         | 0        |
|           |            | 1       | 49        | 21.25               | 21.43                | 21.20              | 0                         | 0        |
|           |            | 1       | 99        | 21.25               | 21.15                | 21.14              | 0                         | 0        |
|           |            | 50      | 0         | 21.00               | 21.14                | 21.20              | 0                         | 0        |
|           |            | 50      | 25        | 21.12               | 21.25                | 21.19              | 0                         | 0        |
|           |            | 50      | 49        | 21.06               | 21.27                | 21.09              | 0                         | 0        |
|           |            | 100     | 0         | 21.07               | 21.16                | 21.02              | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.73               | 18.85                | 18.89              | 0-2                       | 2        |
|           |            | 1       | 49        | 19.09               | 19.23                | 19.05              | 0-2                       | 2        |
|           |            | 1       | 99        | 19.03               | 18.99                | 18.89              | 0-2                       | 2        |
|           |            | 50      | 0         | 18.97               | 19.09                | 19.05              | 0-2                       | 2        |
|           |            | 50      | 25        | 19.10               | 19.19                | 19.11              | 0-2                       | 2        |
|           |            | 50      | 49        | 19.11               | 19.15                | 18.98              | 0-2                       | 2        |
|           |            | 100     | 0         | 19.10               | 19.11                | 19.08              | 0-2                       | 2        |

# [ LTE Band 41 Conducted Power ]

LTE Band 41 \_ 5 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                         |                         |                         |                         | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|----------|
|            |            |         |           | 39750 Ch.<br>2506.0 MHz | 40185 Ch.<br>2549.5 MHz | 40620 Ch.<br>2593.0 MHz | 41055 Ch.<br>2636.5 MHz | 41490 Ch.<br>2680.0 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 21.57                   | 22.18                   | 22.15                   | 21.71                   | 21.53                   | 0                        | 0        |
|            |            | 1       | 12        | 21.59                   | 22.26                   | 22.15                   | 21.79                   | 21.56                   | 0                        | 0        |
|            |            | 1       | 24        | 21.54                   | 22.23                   | 22.08                   | 21.68                   | 21.56                   | 0                        | 0        |
|            |            | 12      | 0         | 21.53                   | 22.25                   | 22.29                   | 21.88                   | 21.65                   | 0                        | 0        |
|            |            | 12      | 6         | 21.64                   | 22.41                   | 22.31                   | 21.86                   | 21.69                   | 0                        | 0        |
|            |            | 12      | 11        | 21.66                   | 22.35                   | 22.18                   | 21.84                   | 21.66                   | 0                        | 0        |
|            |            | 25      | 0         | 21.60                   | 22.34                   | 22.27                   | 21.85                   | 21.67                   | 0                        | 0        |
|            | 16QAM      | 1       | 0         | 21.65                   | 22.36                   | 22.33                   | 21.86                   | 21.66                   | 0                        | 0        |
|            |            | 1       | 12        | 21.60                   | 22.38                   | 22.25                   | 21.87                   | 21.69                   | 0                        | 0        |
|            |            | 1       | 24        | 21.72                   | 22.41                   | 22.24                   | 21.83                   | 21.59                   | 0                        | 0        |
|            |            | 12      | 0         | 21.47                   | 22.00                   | 21.99                   | 21.60                   | 21.38                   | 0                        | 0        |
|            |            | 12      | 6         | 21.60                   | 22.09                   | 21.97                   | 21.58                   | 21.39                   | 0                        | 0        |
|            |            | 12      | 11        | 21.64                   | 22.13                   | 21.93                   | 21.60                   | 21.38                   | 0                        | 0        |
|            |            | 25      | 0         | 21.64                   | 22.25                   | 22.11                   | 21.73                   | 21.50                   | 0                        | 0        |
|            | 64QAM      | 1       | 0         | 21.37                   | 21.79                   | 21.73                   | 21.29                   | 21.07                   | 0                        | 0        |
|            |            | 1       | 12        | 21.47                   | 21.88                   | 21.71                   | 21.28                   | 21.10                   | 0                        | 0        |
|            |            | 1       | 24        | 21.54                   | 21.90                   | 21.61                   | 21.23                   | 20.97                   | 0                        | 0        |
|            |            | 12      | 0         | 21.54                   | 21.04                   | 21.04                   | 20.62                   | 20.40                   | 0-1                      | 1        |
|            |            | 12      | 6         | 21.69                   | 21.21                   | 21.08                   | 20.65                   | 20.46                   | 0-1                      | 1        |
|            |            | 12      | 11        | 21.65                   | 21.16                   | 20.97                   | 20.62                   | 20.42                   | 0-1                      | 1        |
|            |            | 25      | 0         | 21.61                   | 21.15                   | 21.05                   | 20.65                   | 20.44                   | 0-1                      | 1        |
|            | 256QAM     | 1       | 0         | 18.27                   | 18.88                   | 18.85                   | 18.45                   | 18.21                   | 0-3                      | 3        |
|            |            | 1       | 12        | 18.45                   | 19.01                   | 18.88                   | 18.51                   | 18.25                   | 0-3                      | 3        |
|            |            | 1       | 24        | 18.43                   | 18.92                   | 18.75                   | 18.42                   | 18.07                   | 0-3                      | 3        |
|            |            | 12      | 0         | 18.64                   | 19.19                   | 19.18                   | 18.81                   | 18.59                   | 0-3                      | 3        |
|            |            | 12      | 6         | 18.75                   | 19.33                   | 19.22                   | 18.80                   | 18.57                   | 0-3                      | 3        |
|            |            | 12      | 11        | 18.78                   | 19.26                   | 19.12                   | 18.80                   | 18.59                   | 0-3                      | 3        |
|            |            | 25      | 0         | 18.70                   | 19.22                   | 19.16                   | 18.75                   | 18.50                   | 0-3                      | 3        |

## LTE Band 41 \_ 10 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 21.53                | 21.95                | 21.97                | 21.50                | 21.52                | 0                         | 0        |
|            |            | 1       | 24        | 21.51                | 22.26                | 22.15                | 21.75                | 21.55                | 0                         | 0        |
|            |            | 1       | 49        | 21.66                | 22.03                | 21.88                | 21.52                | 21.55                | 0                         | 0        |
|            |            | 25      | 0         | 22.51                | 22.21                | 22.25                | 21.85                | 21.61                | 0                         | 0        |
|            |            | 25      | 12        | 21.64                | 22.42                | 22.33                | 21.90                | 21.67                | 0                         | 0        |
|            |            | 25      | 24        | 21.66                | 22.32                | 22.11                | 21.78                | 21.56                | 0                         | 0        |
|            |            | 50      | 0         | 21.58                | 22.31                | 22.17                | 21.83                | 21.60                | 0                         | 0        |
|            | 16QAM      | 1       | 0         | 21.67                | 22.15                | 22.01                | 21.66                | 21.58                | 0                         | 0        |
|            |            | 1       | 24        | 21.65                | 22.38                | 22.28                | 21.81                | 21.64                | 0                         | 0        |
|            |            | 1       | 49        | 21.77                | 22.21                | 21.92                | 21.53                | 21.52                | 0                         | 0        |
|            |            | 25      | 0         | 21.57                | 22.06                | 22.12                | 21.61                | 21.40                | 0                         | 0        |
|            |            | 25      | 12        | 21.68                | 22.26                | 22.17                | 21.72                | 21.51                | 0                         | 0        |
|            |            | 25      | 24        | 21.66                | 22.19                | 21.97                | 21.58                | 21.43                | 0                         | 0        |
|            |            | 50      | 0         | 21.61                | 22.18                | 21.99                | 21.62                | 21.45                | 0                         | 0        |
|            | 64QAM      | 1       | 0         | 21.17                | 21.57                | 21.56                | 21.06                | 20.87                | 0                         | 0        |
|            |            | 1       | 24        | 21.21                | 21.86                | 21.70                | 21.26                | 21.07                | 0                         | 0        |
|            |            | 1       | 49        | 21.41                | 21.66                | 21.36                | 20.92                | 20.76                | 0                         | 0        |
|            |            | 25      | 0         | 20.56                | 21.08                | 21.08                | 20.65                | 20.41                | 0-1                       | 1        |
|            |            | 25      | 12        | 20.70                | 21.24                | 21.11                | 20.75                | 20.50                | 0-1                       | 1        |
|            |            | 25      | 24        | 20.68                | 21.18                | 20.95                | 20.60                | 20.41                | 0-1                       | 1        |
|            |            | 50      | 0         | 20.66                | 21.24                | 21.06                | 20.67                | 20.49                | 0-1                       | 1        |
|            | 256QAM     | 1       | 0         | 18.03                | 18.72                | 18.75                | 18.32                | 18.07                | 0-3                       | 3        |
|            |            | 1       | 24        | 18.33                | 19.05                | 18.98                | 18.53                | 18.28                | 0-3                       | 3        |
|            |            | 1       | 49        | 18.32                | 18.85                | 18.65                | 18.20                | 18.00                | 0-3                       | 3        |
|            |            | 25      | 0         | 18.54                | 19.10                | 19.09                | 18.68                | 18.46                | 0-3                       | 3        |
|            |            | 25      | 12        | 18.75                | 19.26                | 19.19                | 18.78                | 18.55                | 0-3                       | 3        |
|            |            | 25      | 24        | 18.65                | 19.18                | 18.97                | 18.68                | 18.43                | 0-3                       | 3        |
|            |            | 50      | 0         | 18.70                | 19.22                | 19.05                | 18.74                | 18.48                | 0-3                       | 3        |

## LTE Band 41 \_ 15 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 21.64                | 22.15                | 22.24                | 21.82                | 21.57                | 0                         | 0        |
|            |            | 1       | 36        | 21.64                | 22.45                | 22.37                | 21.89                | 21.74                | 0                         | 0        |
|            |            | 1       | 74        | 21.80                | 22.31                | 22.16                | 21.62                | 21.66                | 0                         | 0        |
|            |            | 36      | 0         | 21.71                | 22.35                | 22.42                | 22.03                | 21.74                | 0                         | 0        |
|            |            | 36      | 18        | 21.88                | 22.52                | 22.53                | 22.04                | 21.84                | 0                         | 0        |
|            |            | 36      | 39        | 21.87                | 22.50                | 22.37                | 21.93                | 21.75                | 0                         | 0        |
|            |            | 75      | 0         | 21.77                | 22.46                | 22.35                | 22.00                | 21.78                | 0                         | 0        |
|            | 16QAM      | 1       | 0         | 21.83                | 22.20                | 22.33                | 21.99                | 21.59                | 0                         | 0        |
|            |            | 1       | 36        | 21.80                | 22.55                | 22.45                | 21.97                | 21.80                | 0                         | 0        |
|            |            | 1       | 74        | 21.91                | 22.37                | 22.23                | 21.70                | 21.76                | 0                         | 0        |
|            |            | 36      | 0         | 21.38                | 21.81                | 21.88                | 21.50                | 21.23                | 0                         | 0        |
|            |            | 36      | 18        | 21.50                | 21.99                | 21.95                | 21.52                | 21.32                | 0                         | 0        |
|            |            | 36      | 39        | 21.53                | 21.96                | 21.80                | 21.41                | 21.26                | 0                         | 0        |
|            |            | 75      | 0         | 21.49                | 21.96                | 21.85                | 21.52                | 21.29                | 0                         | 0        |
|            | 64QAM      | 1       | 0         | 21.04                | 21.34                | 21.43                | 21.09                | 20.69                | 0                         | 0        |
|            |            | 1       | 36        | 21.15                | 21.65                | 21.62                | 21.16                | 20.94                | 0                         | 0        |
|            |            | 1       | 74        | 21.26                | 21.46                | 20.93                | 20.79                | 20.66                | 0                         | 0        |
|            |            | 36      | 0         | 20.45                | 20.88                | 20.95                | 20.60                | 20.26                | 0-1                       | 1        |
|            |            | 36      | 18        | 20.59                | 21.08                | 21.03                | 20.60                | 20.39                | 0-1                       | 1        |
|            |            | 36      | 39        | 20.62                | 20.99                | 20.89                | 20.46                | 20.30                | 0-1                       | 1        |
|            |            | 75      | 0         | 20.55                | 21.02                | 20.91                | 20.54                | 20.37                | 0-1                       | 1        |
|            | 256QAM     | 1       | 0         | 18.08                | 18.64                | 18.74                | 18.40                | 17.99                | 0-3                       | 3        |
|            |            | 1       | 36        | 18.43                | 18.96                | 18.87                | 18.31                | 18.22                | 0-3                       | 3        |
|            |            | 1       | 74        | 18.48                | 18.78                | 18.59                | 18.12                | 18.15                | 0-3                       | 3        |
|            |            | 36      | 0         | 18.38                | 18.91                | 18.97                | 18.55                | 18.30                | 0-3                       | 3        |
|            |            | 36      | 18        | 18.57                | 19.08                | 19.02                | 18.62                | 18.40                | 0-3                       | 3        |
|            |            | 36      | 39        | 18.63                | 19.00                | 18.87                | 18.47                | 18.32                | 0-3                       | 3        |
|            |            | 75      | 0         | 18.56                | 18.99                | 18.95                | 18.54                | 18.33                | 0-3                       | 3        |

## LTE Band 41 \_ 20 MHz Bandwidth

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39750 Ch. 2506.0 MHz | 40185 Ch. 2549.5 MHz | 40620 Ch. 2593.0 MHz | 41055 Ch. 2636.5 MHz | 41490 Ch. 2680.0 MHz |                           |          |
| 20 MHz     | QPSK       | 1       | 0         | 21.59                | 22.32                | 22.11                | 21.70                | 21.55                | 0                         | 0        |
|            |            | 1       | 49        | 21.65                | 22.37                | 22.35                | 21.87                | 21.69                | 0                         | 0        |
|            |            | 1       | 99        | 21.82                | 22.43                | 22.02                | 21.55                | 21.58                | 0                         | 0        |
|            |            | 50      | 0         | 21.70                | 22.38                | 22.40                | 21.99                | 21.67                | 0                         | 0        |
|            |            | 50      | 25        | 21.83                | 22.50                | 22.40                | 22.05                | 21.82                | 0                         | 0        |
|            |            | 50      | 49        | 21.84                | 22.50                | 22.32                | 21.90                | 21.75                | 0                         | 0        |
|            |            | 100     | 0         | 21.73                | 22.36                | 22.32                | 21.96                | 21.76                | 0                         | 0        |
|            | 16QAM      | 1       | 0         | 21.80                | 22.49                | 22.17                | 21.80                | 21.56                | 0                         | 0        |
|            |            | 1       | 49        | 21.80                | 22.51                | 22.43                | 21.98                | 21.81                | 0                         | 0        |
|            |            | 1       | 99        | 21.93                | 22.58                | 22.04                | 21.57                | 21.71                | 0                         | 0        |
|            |            | 50      | 0         | 21.42                | 21.93                | 21.94                | 21.51                | 21.27                | 0                         | 0        |
|            |            | 50      | 25        | 21.55                | 22.08                | 21.91                | 21.58                | 21.38                | 0                         | 0        |
|            |            | 50      | 49        | 21.56                | 22.04                | 21.82                | 21.44                | 21.32                | 0                         | 0        |
|            |            | 100     | 0         | 21.47                | 21.86                | 21.85                | 21.49                | 21.31                | 0                         | 0        |
|            | 64QAM      | 1       | 0         | 21.00                | 21.52                | 21.34                | 20.97                | 20.57                | 0                         | 0        |
|            |            | 1       | 49        | 21.04                | 21.64                | 21.56                | 21.15                | 20.92                | 0                         | 0        |
|            |            | 1       | 99        | 21.28                | 21.71                | 20.88                | 20.64                | 20.77                | 0                         | 0        |
|            |            | 50      | 0         | 20.44                | 20.99                | 20.96                | 20.53                | 20.28                | 0-1                       | 1        |
|            |            | 50      | 25        | 20.58                | 21.08                | 20.96                | 20.62                | 20.42                | 0-1                       | 1        |
|            |            | 50      | 49        | 20.63                | 21.09                | 20.88                | 20.48                | 20.34                | 0-1                       | 1        |
|            |            | 100     | 0         | 20.46                | 20.89                | 20.85                | 20.52                | 20.32                | 0-1                       | 1        |
|            | 256QAM     | 1       | 0         | 17.86                | 18.42                | 18.59                | 18.26                | 17.83                | 0-3                       | 3        |
|            |            | 1       | 49        | 18.36                | 18.93                | 18.84                | 18.45                | 18.23                | 0-3                       | 3        |
|            |            | 1       | 99        | 18.34                | 18.61                | 18.44                | 17.94                | 18.07                | 0-3                       | 3        |
|            |            | 50      | 0         | 18.37                | 18.88                | 19.03                | 18.60                | 18.30                | 0-3                       | 3        |
|            |            | 50      | 25        | 18.60                | 19.11                | 19.03                | 18.63                | 18.44                | 0-3                       | 3        |
|            |            | 50      | 49        | 18.64                | 19.05                | 18.95                | 18.51                | 18.35                | 0-3                       | 3        |
|            |            | 100     | 0         | 18.50                | 18.89                | 18.89                | 18.47                | 18.32                | 0-3                       | 3        |

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

# [LTE Band 66 Conducted Power]

LTE Band 66 \_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 131979Ch.<br>1710.7 MHz | 132322 Ch.<br>1745 MHz | 132665 Ch.<br>1779.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 19.58                   | 19.93                  | 19.94                    | 0                         | 0        |
|           |            | 1       | 3         | 19.72                   | 20.17                  | 20.26                    | 0                         | 0        |
|           |            | 1       | 5         | 19.64                   | 19.80                  | 19.89                    | 0                         | 0        |
|           |            | 3       | 0         | 19.66                   | 19.94                  | 19.91                    | 0                         | 0        |
|           |            | 3       | 1         | 19.67                   | 20.05                  | 20.04                    | 0                         | 0        |
|           |            | 3       | 3         | 19.55                   | 19.76                  | 19.90                    | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 19.76                   | 20.02                  | 19.99                    | 0                         | 0        |
|           |            | 1       | 0         | 19.92                   | 20.28                  | 20.26                    | 0                         | 0        |
|           |            | 1       | 3         | 20.17                   | 20.34                  | 20.48                    | 0                         | 0        |
|           |            | 1       | 5         | 19.94                   | 20.22                  | 20.29                    | 0                         | 0        |
|           |            | 3       | 0         | 19.77                   | 20.25                  | 20.15                    | 0                         | 0        |
|           |            | 3       | 1         | 19.89                   | 20.22                  | 20.37                    | 0                         | 0        |
|           | 64QAM      | 3       | 3         | 19.82                   | 20.13                  | 20.30                    | 0                         | 0        |
|           |            | 6       | 0         | 20.05                   | 19.98                  | 20.04                    | 0                         | 0        |
|           |            | 1       | 0         | 19.91                   | 20.19                  | 20.32                    | 0                         | 0        |
|           |            | 1       | 3         | 19.95                   | 20.18                  | 20.23                    | 0                         | 0        |
|           |            | 1       | 5         | 19.74                   | 20.06                  | 20.25                    | 0                         | 0        |
|           |            | 3       | 0         | 19.84                   | 20.12                  | 20.07                    | 0                         | 0        |
|           | 256QAM     | 3       | 1         | 19.93                   | 20.14                  | 20.24                    | 0                         | 0        |
|           |            | 3       | 3         | 19.80                   | 20.11                  | 20.19                    | 0                         | 0        |
|           |            | 6       | 0         | 19.78                   | 19.98                  | 20.11                    | 0                         | 0        |
|           |            | 1       | 0         | 19.76                   | 19.98                  | 19.94                    | 0-1                       | 1        |
|           |            | 1       | 3         | 19.54                   | 19.68                  | 19.67                    | 0-1                       | 1        |
|           |            | 1       | 5         | 19.29                   | 19.63                  | 19.54                    | 0-1                       | 1        |
|           |            | 3       | 0         | 19.57                   | 19.77                  | 19.63                    | 0-1                       | 1        |
|           |            | 3       | 1         | 19.43                   | 19.64                  | 19.74                    | 0-1                       | 1        |
|           |            | 3       | 3         | 19.46                   | 19.58                  | 19.81                    | 0-1                       | 1        |
|           |            | 6       | 0         | 19.31                   | 19.47                  | 19.52                    | 0-1                       | 1        |

## LTE Band 66 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                     |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|---------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131987 Ch. 1711.5 MHz | 132322 Ch. 1745 MHz | 132657 Ch. 1778.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 19.74                 | 19.96               | 20.08                 | 0                         | 0        |
|           |            | 1       | 7         | 19.59                 | 20.02               | 20.17                 | 0                         | 0        |
|           |            | 1       | 14        | 19.69                 | 19.95               | 20.00                 | 0                         | 0        |
|           |            | 8       | 0         | 19.83                 | 20.03               | 20.17                 | 0                         | 0        |
|           |            | 8       | 3         | 19.86                 | 20.02               | 20.20                 | 0                         | 0        |
|           |            | 8       | 7         | 19.82                 | 20.10               | 20.13                 | 0                         | 0        |
|           |            | 15      | 0         | 19.81                 | 20.09               | 20.11                 | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.19                 | 20.42               | 20.48                 | 0                         | 0        |
|           |            | 1       | 7         | 19.88                 | 20.20               | 20.19                 | 0                         | 0        |
|           |            | 1       | 14        | 20.00                 | 20.44               | 20.37                 | 0                         | 0        |
|           |            | 8       | 0         | 20.02                 | 20.15               | 20.32                 | 0                         | 0        |
|           |            | 8       | 3         | 20.02                 | 20.13               | 20.26                 | 0                         | 0        |
|           |            | 8       | 7         | 19.90                 | 20.05               | 20.21                 | 0                         | 0        |
|           |            | 15      | 0         | 19.91                 | 20.02               | 20.17                 | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 19.89                 | 20.28               | 20.40                 | 0                         | 0        |
|           |            | 1       | 7         | 19.87                 | 20.05               | 20.10                 | 0                         | 0        |
|           |            | 1       | 14        | 19.89                 | 20.10               | 20.30                 | 0                         | 0        |
|           |            | 8       | 0         | 20.03                 | 20.30               | 20.32                 | 0                         | 0        |
|           |            | 8       | 3         | 20.04                 | 20.31               | 20.40                 | 0                         | 0        |
|           |            | 8       | 7         | 19.96                 | 20.10               | 20.22                 | 0                         | 0        |
|           |            | 15      | 0         | 20.01                 | 20.06               | 20.20                 | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 19.34                 | 19.66               | 19.99                 | 0-1                       | 1        |
|           |            | 1       | 7         | 19.42                 | 19.67               | 19.73                 | 0-1                       | 1        |
|           |            | 1       | 14        | 19.54                 | 19.70               | 19.70                 | 0-1                       | 1        |
|           |            | 8       | 0         | 19.44                 | 19.57               | 19.67                 | 0-1                       | 1        |
|           |            | 8       | 3         | 19.51                 | 19.48               | 19.71                 | 0-1                       | 1        |
|           |            | 8       | 7         | 19.40                 | 19.61               | 19.75                 | 0-1                       | 1        |
|           |            | 15      | 0         | 19.35                 | 19.47               | 19.68                 | 0-1                       | 1        |

## LTE Band 66 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                    |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|--------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131997 Ch. 1712.5 MHz | 132322Ch. 1745 MHz | 132647 Ch. 1777.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 19.66                 | 20.00              | 19.99                 | 0                         | 0        |
|           |            | 1       | 12        | 19.70                 | 20.04              | 20.33                 | 0                         | 0        |
|           |            | 1       | 24        | 19.65                 | 19.93              | 20.00                 | 0                         | 0        |
|           |            | 12      | 0         | 19.89                 | 20.07              | 20.12                 | 0                         | 0        |
|           |            | 12      | 6         | 19.91                 | 20.05              | 20.13                 | 0                         | 0        |
|           |            | 12      | 11        | 19.74                 | 20.12              | 20.05                 | 0                         | 0        |
|           |            | 25      | 0         | 19.88                 | 20.02              | 20.14                 | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 20.14                 | 20.32              | 20.47                 | 0                         | 0        |
|           |            | 1       | 12        | 19.99                 | 20.20              | 20.27                 | 0                         | 0        |
|           |            | 1       | 24        | 20.01                 | 20.29              | 20.32                 | 0                         | 0        |
|           |            | 12      | 0         | 19.94                 | 20.08              | 20.24                 | 0                         | 0        |
|           |            | 12      | 6         | 19.98                 | 20.16              | 20.37                 | 0                         | 0        |
|           |            | 12      | 11        | 19.90                 | 20.16              | 20.30                 | 0                         | 0        |
|           |            | 25      | 0         | 19.82                 | 19.96              | 20.13                 | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 19.89                 | 20.17              | 20.40                 | 0                         | 0        |
|           |            | 1       | 12        | 20.08                 | 20.02              | 20.26                 | 0                         | 0        |
|           |            | 1       | 24        | 19.83                 | 20.19              | 20.24                 | 0                         | 0        |
|           |            | 12      | 0         | 19.94                 | 20.11              | 20.21                 | 0                         | 0        |
|           |            | 12      | 6         | 20.02                 | 20.12              | 20.13                 | 0                         | 0        |
|           |            | 12      | 11        | 19.86                 | 20.10              | 20.23                 | 0                         | 0        |
|           |            | 25      | 0         | 19.86                 | 20.07              | 20.05                 | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 19.46                 | 19.64              | 19.63                 | 0-1                       | 1        |
|           |            | 1       | 12        | 19.49                 | 19.75              | 19.76                 | 0-1                       | 1        |
|           |            | 1       | 24        | 19.40                 | 19.51              | 19.71                 | 0-1                       | 1        |
|           |            | 12      | 0         | 19.49                 | 19.60              | 19.65                 | 0-1                       | 1        |
|           |            | 12      | 6         | 19.43                 | 19.45              | 19.70                 | 0-1                       | 1        |
|           |            | 12      | 11        | 19.38                 | 19.57              | 19.65                 | 0-1                       | 1        |
|           |            | 25      | 0         | 19.34                 | 19.58              | 19.57                 | 0-1                       | 1        |

## LTE Band 66 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 132022 Ch. 1715 MHz | 132322 Ch. 1745 MHz | 132622 Ch. 1775 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 19.44               | 19.47               | 19.62               | 0                         | 0        |
|           |            | 1       | 24        | 19.78               | 20.06               | 20.12               | 0                         | 0        |
|           |            | 1       | 49        | 19.61               | 19.80               | 20.05               | 0                         | 0        |
|           |            | 25      | 0         | 19.75               | 19.97               | 20.06               | 0                         | 0        |
|           |            | 25      | 12        | 19.80               | 20.02               | 20.19               | 0                         | 0        |
|           |            | 25      | 24        | 19.86               | 20.03               | 20.04               | 0                         | 0        |
|           |            | 50      | 0         | 19.81               | 19.94               | 20.05               | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 19.72               | 20.07               | 20.04               | 0                         | 0        |
|           |            | 1       | 24        | 20.18               | 20.27               | 20.58               | 0                         | 0        |
|           |            | 1       | 49        | 19.95               | 20.04               | 20.26               | 0                         | 0        |
|           |            | 25      | 0         | 19.83               | 19.94               | 20.00               | 0                         | 0        |
|           |            | 25      | 12        | 19.92               | 20.11               | 20.13               | 0                         | 0        |
|           |            | 25      | 24        | 19.93               | 20.06               | 20.12               | 0                         | 0        |
|           |            | 50      | 0         | 19.89               | 20.06               | 20.06               | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 19.66               | 19.87               | 20.01               | 0                         | 0        |
|           |            | 1       | 24        | 20.01               | 20.36               | 20.32               | 0                         | 0        |
|           |            | 1       | 49        | 19.82               | 20.19               | 20.19               | 0                         | 0        |
|           |            | 25      | 0         | 19.82               | 20.02               | 20.11               | 0                         | 0        |
|           |            | 25      | 12        | 19.94               | 20.11               | 20.21               | 0                         | 0        |
|           |            | 25      | 24        | 19.88               | 20.07               | 20.24               | 0                         | 0        |
|           |            | 50      | 0         | 19.88               | 20.00               | 20.19               | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 19.09               | 19.35               | 19.39               | 0-1                       | 1        |
|           |            | 1       | 24        | 19.51               | 19.72               | 19.93               | 0-1                       | 1        |
|           |            | 1       | 49        | 19.31               | 19.49               | 19.73               | 0-1                       | 1        |
|           |            | 25      | 0         | 19.27               | 19.55               | 19.61               | 0-1                       | 1        |
|           |            | 25      | 12        | 19.40               | 19.65               | 19.67               | 0-1                       | 1        |
|           |            | 25      | 24        | 19.29               | 19.56               | 19.66               | 0-1                       | 1        |
|           |            | 50      | 0         | 19.37               | 19.51               | 19.56               | 0-1                       | 1        |

## LTE Band 66 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                     |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|---------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 132047 Ch. 1717.5 MHz | 132322 Ch. 1745 MHz | 132597 Ch. 1772.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 19.40                 | 19.79               | 19.94                 | 0                         | 0        |
|           |            | 1       | 36        | 19.60                 | 19.82               | 19.85                 | 0                         | 0        |
|           |            | 1       | 74        | 19.57                 | 19.78               | 19.90                 | 0                         | 0        |
|           |            | 36      | 0         | 19.71                 | 19.88               | 19.99                 | 0                         | 0        |
|           |            | 36      | 18        | 19.77                 | 19.96               | 20.05                 | 0                         | 0        |
|           |            | 36      | 39        | 19.78                 | 19.91               | 20.05                 | 0                         | 0        |
|           |            | 75      | 0         | 19.75                 | 19.93               | 20.07                 | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 19.97                 | 20.06               | 20.44                 | 0                         | 0        |
|           |            | 1       | 36        | 19.98                 | 20.16               | 20.30                 | 0                         | 0        |
|           |            | 1       | 74        | 20.05                 | 20.24               | 20.43                 | 0                         | 0        |
|           |            | 36      | 0         | 19.74                 | 19.99               | 20.00                 | 0                         | 0        |
|           |            | 36      | 18        | 19.82                 | 19.95               | 20.08                 | 0                         | 0        |
|           |            | 36      | 39        | 19.75                 | 20.01               | 20.10                 | 0                         | 0        |
|           |            | 75      | 0         | 19.82                 | 19.93               | 20.10                 | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 19.71                 | 19.93               | 20.22                 | 0                         | 0        |
|           |            | 1       | 36        | 19.87                 | 20.18               | 20.29                 | 0                         | 0        |
|           |            | 1       | 74        | 19.77                 | 20.09               | 20.15                 | 0                         | 0        |
|           |            | 36      | 0         | 19.71                 | 19.99               | 20.08                 | 0                         | 0        |
|           |            | 36      | 18        | 19.92                 | 19.98               | 20.18                 | 0                         | 0        |
|           |            | 36      | 39        | 19.83                 | 20.05               | 20.07                 | 0                         | 0        |
|           |            | 75      | 0         | 19.77                 | 19.94               | 20.11                 | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 19.10                 | 19.33               | 19.44                 | 0-1                       | 1        |
|           |            | 1       | 36        | 19.27                 | 19.40               | 19.45                 | 0-1                       | 1        |
|           |            | 1       | 74        | 19.29                 | 19.56               | 19.57                 | 0-1                       | 1        |
|           |            | 36      | 0         | 19.29                 | 19.50               | 19.57                 | 0-1                       | 1        |
|           |            | 36      | 18        | 19.39                 | 19.49               | 19.64                 | 0-1                       | 1        |
|           |            | 36      | 39        | 19.32                 | 19.56               | 19.62                 | 0-1                       | 1        |
|           |            | 75      | 0         | 19.30                 | 19.41               | 19.63                 | 0-1                       | 1        |

## LTE Band 66 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 132072 Ch. 1720 MHz | 132322 Ch. 1745 MHz | 132572 Ch. 1770 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 19.31               | 19.65               | 19.94               | 0                         | 0        |
|           |            | 1       | 49        | 19.61               | 19.89               | 19.98               | 0                         | 0        |
|           |            | 1       | 99        | 19.50               | 19.62               | 19.90               | 0                         | 0        |
|           |            | 50      | 0         | 19.65               | 19.78               | 19.89               | 0                         | 0        |
|           |            | 50      | 25        | 19.82               | 19.97               | 20.11               | 0                         | 0        |
|           |            | 50      | 49        | 19.74               | 19.88               | 20.01               | 0                         | 0        |
|           |            | 100     | 0         | 19.76               | 19.82               | 19.99               | 0                         | 0        |
|           | 16QAM      | 1       | 0         | 19.78               | 20.03               | 20.34               | 0                         | 0        |
|           |            | 1       | 49        | 20.00               | 20.26               | 20.22               | 0                         | 0        |
|           |            | 1       | 99        | 19.98               | 20.06               | 20.28               | 0                         | 0        |
|           |            | 50      | 0         | 19.67               | 19.82               | 19.94               | 0                         | 0        |
|           |            | 50      | 25        | 19.81               | 19.91               | 20.10               | 0                         | 0        |
|           |            | 50      | 49        | 19.76               | 19.91               | 19.97               | 0                         | 0        |
|           |            | 100     | 0         | 19.79               | 19.95               | 20.06               | 0                         | 0        |
|           | 64QAM      | 1       | 0         | 19.52               | 19.73               | 20.20               | 0                         | 0        |
|           |            | 1       | 49        | 19.88               | 20.16               | 20.27               | 0                         | 0        |
|           |            | 1       | 99        | 19.79               | 19.95               | 20.29               | 0                         | 0        |
|           |            | 50      | 0         | 19.75               | 19.93               | 19.97               | 0                         | 0        |
|           |            | 50      | 25        | 19.94               | 20.04               | 20.13               | 0                         | 0        |
|           |            | 50      | 49        | 19.87               | 20.05               | 20.08               | 0                         | 0        |
|           |            | 100     | 0         | 19.88               | 19.88               | 20.08               | 0                         | 0        |
|           | 256QAM     | 1       | 0         | 18.93               | 19.20               | 19.33               | 0-1                       | 1        |
|           |            | 1       | 49        | 19.41               | 19.59               | 19.63               | 0-1                       | 1        |
|           |            | 1       | 99        | 19.29               | 19.31               | 19.49               | 0-1                       | 1        |
|           |            | 50      | 0         | 19.23               | 19.39               | 19.49               | 0-1                       | 1        |
|           |            | 50      | 25        | 19.35               | 19.47               | 19.65               | 0-1                       | 1        |
|           |            | 50      | 49        | 19.34               | 19.48               | 19.60               | 0-1                       | 1        |
|           |            | 100     | 0         | 19.24               | 19.44               | 19.60               | 0-1                       | 1        |

## 11.4 NR Maximum Output Power

### 11.4.1 NR Band Maximum Conducted Power

[ NR Band n5 Conducted Power]

NR Band n5\_ 5 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |           |           | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|-----------|-----------|----------|
|           |          |       |            |         |           | 165300                   | 167300    | 169300    |          |
|           |          |       |            |         |           | 826.5 MHz                | 836.5 MHz | 846.5 MHz |          |
| 5 MHz     | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 24.95                    | 24.69     | 24.40     | 0        |
|           |          |       |            | 1       | 13        | 24.93                    | 24.73     | 24.41     | 0        |
|           |          |       |            | 1       | 23        | 24.90                    | 24.66     | 24.43     | 0        |
|           |          |       |            | 12      | 0         | 24.41                    | 24.33     | 24.01     | 0.5      |
|           |          |       |            | 12      | 7         | 24.98                    | 24.83     | 24.50     | 0        |
|           |          |       |            | 12      | 13        | 24.47                    | 24.32     | 23.96     | 0.5      |
|           |          |       |            | 25      | 0         | 24.48                    | 24.33     | 24.03     | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 24.83                    | 24.66     | 24.33     | 0        |
|           |          |       |            | 1       | 13        | 24.82                    | 24.64     | 24.26     | 0        |
|           |          |       |            | 1       | 23        | 24.74                    | 24.61     | 24.25     | 0        |
|           |          |       |            | 12      | 0         | 23.96                    | 23.88     | 23.49     | 1        |
|           |          |       |            | 12      | 7         | 24.93                    | 24.80     | 24.46     | 0        |
|           |          |       |            | 12      | 13        | 23.93                    | 23.83     | 23.47     | 1        |
|           |          |       |            | 25      | 0         | 23.91                    | 23.87     | 23.52     | 1        |
|           |          |       | 16QAM      | 1       | 1         | 23.91                    | 23.79     | 23.89     | 1        |
|           |          |       | 64QAM      | 1       | 1         | 22.32                    | 22.16     | 21.82     | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 20.42                    | 20.09     | 19.76     | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 23.35                    | 23.23     | 22.88     | 1.5      |

NR Band n5\_ 10 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |           |  | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|-----------|--|----------|
|           |          |       |            |         |           |                          | 167300    |  |          |
|           |          |       |            |         |           |                          | 836.5 MHz |  |          |
| 10 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         |                          | 24.80     |  | 0        |
|           |          |       |            | 1       | 26        |                          | 24.75     |  | 0        |
|           |          |       |            | 1       | 50        |                          | 24.68     |  | 0        |
|           |          |       |            | 25      | 0         |                          | 24.41     |  | 0.5      |
|           |          |       |            | 25      | 14        |                          | 24.87     |  | 0        |
|           |          |       |            | 25      | 27        |                          | 24.31     |  | 0.5      |
|           |          |       |            | 50      | 0         |                          | 24.35     |  | 0.5      |
|           |          |       | QPSK       | 1       | 1         |                          | 24.73     |  | 0        |
|           |          |       |            | 1       | 26        |                          | 24.63     |  | 0        |
|           |          |       |            | 1       | 50        |                          | 24.46     |  | 0        |
|           |          |       |            | 25      | 0         |                          | 23.93     |  | 1        |
|           |          |       |            | 25      | 14        |                          | 24.86     |  | 0        |
|           |          |       |            | 25      | 27        |                          | 23.86     |  | 1        |
|           |          |       |            | 50      | 0         |                          | 23.90     |  | 1        |
|           |          |       | 16QAM      | 1       | 1         |                          | 23.95     |  | 1        |
|           |          |       | 64QAM      | 1       | 1         |                          | 22.22     |  | 2.5      |
|           |          |       | 256QAM     | 1       | 1         |                          | 20.18     |  | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         |                          | 23.29     |  | 1.5      |

## NR Band n5\_15 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |           |  | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|-----------|--|----------|
|           |          |       |            |         |           |                          | 167300    |  |          |
|           |          |       |            |         |           |                          | 836.5 Mhz |  |          |
| 15 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         |                          | 24.60     |  | 0        |
|           |          |       |            | 1       | 40        |                          | 24.47     |  | 0        |
|           |          |       |            | 1       | 77        |                          | 24.38     |  | 0        |
|           |          |       |            | 36      | 0         |                          | 24.30     |  | 0.5      |
|           |          |       |            | 36      | 22        |                          | 24.72     |  | 0        |
|           |          |       |            | 36      | 43        |                          | 24.19     |  | 0.5      |
|           |          |       |            | 75      | 0         |                          | 24.29     |  | 0.5      |
|           |          |       | QPSK       | 1       | 1         |                          | 24.61     |  | 0        |
|           |          |       |            | 1       | 40        |                          | 24.53     |  | 0        |
|           |          |       |            | 1       | 77        |                          | 24.32     |  | 0        |
|           |          |       |            | 36      | 0         |                          | 23.80     |  | 1        |
|           |          |       |            | 36      | 22        |                          | 24.76     |  | 0        |
|           |          |       |            | 36      | 43        |                          | 23.71     |  | 1        |
|           |          |       |            | 75      | 0         |                          | 23.80     |  | 1        |
|           |          |       | 16QAM      | 1       | 1         |                          | 23.97     |  | 1        |
|           |          |       | 64QAM      | 1       | 1         |                          | 22.09     |  | 2.5      |
|           |          |       | 256QAM     | 1       | 1         |                          | 19.99     |  | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         |                          | 23.26     |  | 1.5      |

## NR Band n5\_20 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |           |  | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|-----------|--|----------|
|           |          |       |            |         |           |                          | 167300    |  |          |
|           |          |       |            |         |           |                          | 836.5 Mhz |  |          |
| 20 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         |                          | 24.61     |  | 0        |
|           |          |       |            | 1       | 53        |                          | 24.49     |  | 0        |
|           |          |       |            | 1       | 104       |                          | 24.22     |  | 0        |
|           |          |       |            | 50      | 0         |                          | 24.34     |  | 0.5      |
|           |          |       |            | 50      | 28        |                          | 24.73     |  | 0        |
|           |          |       |            | 50      | 56        |                          | 24.15     |  | 0.5      |
|           |          |       |            | 100     | 0         |                          | 24.26     |  | 0.5      |
|           |          |       | QPSK       | 1       | 1         |                          | 24.77     |  | 0        |
|           |          |       |            | 1       | 53        |                          | 24.66     |  | 0        |
|           |          |       |            | 1       | 104       |                          | 24.36     |  | 0        |
|           |          |       |            | 50      | 0         |                          | 23.85     |  | 1        |
|           |          |       |            | 50      | 28        |                          | 24.78     |  | 0        |
|           |          |       |            | 50      | 56        |                          | 23.70     |  | 1        |
|           |          |       |            | 100     | 0         |                          | 23.81     |  | 1        |
|           |          |       | 16QAM      | 1       | 1         |                          | 23.99     |  | 1        |
|           |          |       | 64QAM      | 1       | 1         |                          | 22.43     |  | 2.5      |
|           |          |       | 256QAM     | 1       | 1         |                          | 20.11     |  | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         |                          | 23.33     |  | 1.5      |

### [ NR Band n41Conducted Power ]

NR Band n41 \_20 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power (dBm) |                |                |                |                | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|----------------|----------------|----------------|----------------|----------|
|           |          |       |            |         |           | 501204                   | 509898         | 518598         | 527298         | 535998         |          |
|           |          |       |            |         |           | 2506.02<br>MHz           | 2549.49<br>MHz | 2592.99<br>MHz | 2636.49<br>MHz | 2679.99<br>MHz |          |
| 20MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 23.99                    | 23.94          | 23.51          | 23.40          | 23.67          | 0        |
|           |          |       |            | 1       | 26        | 23.94                    | 23.87          | 23.44          | 23.79          | 23.77          | 0        |
|           |          |       |            | 1       | 49        | 23.91                    | 23.81          | 23.58          | 23.48          | 23.71          | 0        |
|           |          |       |            | 25      | 0         | 23.41                    | 23.44          | 23.05          | 23.32          | 23.48          | 0.5      |
|           |          |       |            | 25      | 13        | 23.94                    | 23.86          | 23.52          | 23.80          | 23.87          | 0        |
|           |          |       |            | 25      | 26        | 23.44                    | 23.45          | 23.17          | 23.35          | 23.41          | 0.5      |
|           |          |       |            | 50      | 0         | 23.49                    | 23.48          | 23.12          | 23.34          | 23.47          | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 23.04                    | 23.79          | 23.40          | 23.33          | 23.52          | 0        |
|           |          |       |            | 1       | 26        | 23.80                    | 23.73          | 23.36          | 23.71          | 23.74          | 0        |
|           |          |       |            | 1       | 49        | 23.91                    | 23.66          | 23.48          | 23.40          | 23.47          | 0        |
|           |          |       |            | 25      | 0         | 22.91                    | 22.97          | 22.57          | 22.86          | 22.61          | 1        |
|           |          |       |            | 25      | 13        | 23.98                    | 23.89          | 23.49          | 23.84          | 23.01          | 0        |
|           |          |       |            | 25      | 26        | 22.88                    | 22.98          | 22.66          | 22.88          | 22.14          | 1        |
|           |          |       |            | 50      | 0         | 22.87                    | 22.79          | 22.60          | 22.84          | 22.39          | 1        |
|           |          |       | 16QAM      | 1       | 1         | 22.30                    | 22.99          | 22.60          | 22.52          | 22.72          | 1        |
|           |          |       | 64QAM      | 1       | 1         | 20.64                    | 21.40          | 20.62          | 20.60          | 20.78          | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 19.48                    | 19.44          | 19.19          | 19.08          | 19.26          | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.41                    | 22.27          | 22.13          | 22.16          | 22.36          | 1.5      |

NR Band n41 \_30 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power (dBm) |                |                |          |                | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|----------------|----------------|----------|----------------|----------|
|           |          |       |            |         |           | 502200                   | 510402         | 518598         | 526800   | 534996         |          |
|           |          |       |            |         |           | 2511 MHz                 | 2552.01<br>MHz | 2592.99<br>MHz | 2634 MHz | 2674.98<br>MHz |          |
| 30MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 23.53                    | 23.88          | 23.41          | 23.40    | 23.68          | 0        |
|           |          |       |            | 1       | 39        | 23.85                    | 23.54          | 23.28          | 23.37    | 23.74          | 0        |
|           |          |       |            | 1       | 76        | 23.94                    | 23.69          | 23.47          | 23.62    | 23.85          | 0        |
|           |          |       |            | 36      | 0         | 23.49                    | 23.33          | 22.93          | 23.03    | 23.33          | 0.5      |
|           |          |       |            | 36      | 21        | 23.87                    | 23.66          | 23.36          | 23.56    | 23.79          | 0        |
|           |          |       |            | 36      | 42        | 23.48                    | 23.23          | 23.02          | 23.17    | 23.18          | 0.5      |
|           |          |       |            | 75      | 0         | 23.49                    | 23.25          | 22.89          | 23.02    | 23.17          | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 23.55                    | 23.80          | 23.38          | 23.44    | 23.68          | 0        |
|           |          |       |            | 1       | 39        | 23.99                    | 23.62          | 23.28          | 23.49    | 23.75          | 0        |
|           |          |       |            | 1       | 76        | 23.94                    | 23.68          | 23.51          | 23.64    | 23.51          | 0        |
|           |          |       |            | 36      | 0         | 22.86                    | 22.83          | 22.40          | 22.58    | 22.70          | 1        |
|           |          |       |            | 36      | 21        | 23.94                    | 23.71          | 23.36          | 23.52    | 23.63          | 0        |
|           |          |       |            | 36      | 42        | 22.89                    | 22.72          | 22.53          | 22.63    | 22.91          | 1        |
|           |          |       |            | 75      | 0         | 22.99                    | 22.75          | 22.40          | 22.59    | 22.74          | 1        |
|           |          |       | 16QAM      | 1       | 1         | 22.72                    | 22.92          | 22.41          | 22.73    | 22.66          | 1        |
|           |          |       | 64QAM      | 1       | 1         | 20.83                    | 20.97          | 20.53          | 20.57    | 20.84          | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 19.14                    | 19.19          | 18.80          | 18.92    | 19.18          | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.15                    | 22.36          | 21.84          | 22.03    | 22.14          | 1.5      |

## NR Band n41 \_40 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power (dBm) |                |  |                |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|----------------|--|----------------|-------------|----------|
|           |          |       |            |         |           | 503202                   | 513468         |  | 523734         | 534000      |          |
|           |          |       |            |         |           | 2516.01<br>MHz           | 2567.34<br>MHz |  | 2618.67<br>MHz | 2670<br>MHz |          |
| 40MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 23.71                    | 23.82          |  | 23.50          | 23.78       | 0        |
|           |          |       |            | 1       | 53        | 23.88                    | 23.54          |  | 23.61          | 23.80       | 0        |
|           |          |       |            | 1       | 104       | 23.90                    | 23.53          |  | 23.69          | 23.93       | 0        |
|           |          |       |            | 50      | 0         | 23.44                    | 23.30          |  | 23.13          | 23.39       | 0.5      |
|           |          |       |            | 50      | 28        | 23.95                    | 23.64          |  | 23.66          | 23.92       | 0        |
|           |          |       |            | 50      | 56        | 23.41                    | 23.16          |  | 23.34          | 23.44       | 0.5      |
|           |          |       |            | 100     | 0         | 23.48                    | 23.30          |  | 23.20          | 23.47       | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 23.74                    | 23.82          |  | 23.50          | 23.78       | 0        |
|           |          |       |            | 1       | 53        | 23.96                    | 23.57          |  | 23.60          | 23.74       | 0        |
|           |          |       |            | 1       | 104       | 23.87                    | 23.56          |  | 23.79          | 23.74       | 0        |
|           |          |       |            | 50      | 0         | 22.91                    | 22.82          |  | 22.68          | 22.88       | 1        |
|           |          |       |            | 50      | 28        | 23.94                    | 23.66          |  | 23.69          | 23.86       | 0        |
|           |          |       |            | 50      | 56        | 22.76                    | 22.64          |  | 22.79          | 22.91       | 1        |
|           |          |       |            | 100     | 0         | 22.49                    | 22.79          |  | 22.70          | 22.94       | 1        |
|           |          |       | 16QAM      | 1       | 1         | 22.63                    | 22.87          |  | 22.71          | 22.97       | 1        |
|           |          |       | 64QAM      | 1       | 1         | 20.91                    | 20.98          |  | 20.54          | 20.92       | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 19.21                    | 19.32          |  | 19.11          | 19.32       | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.26                    | 22.39          |  | 22.02          | 22.31       | 1.5      |

## NR Band n41 \_50 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power (dBm) |  |             |  |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|--|-------------|--|-------------|----------|
|           |          |       |            |         |           | 504204                   |  | 518598      |  | 532998      |          |
|           |          |       |            |         |           | 2521.02 MHz              |  | 2592.99 MHz |  | 2664.99 MHz |          |
| 50MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 23.62                    |  | 23.39       |  | 23.51       | 0        |
|           |          |       |            | 1       | 67        | 23.78                    |  | 23.38       |  | 23.62       | 0        |
|           |          |       |            | 1       | 131       | 23.87                    |  | 23.61       |  | 23.84       | 0        |
|           |          |       |            | 64      | 0         | 23.05                    |  | 22.87       |  | 23.16       | 0.5      |
|           |          |       |            | 64      | 35        | 23.72                    |  | 23.42       |  | 23.64       | 0        |
|           |          |       |            | 64      | 69        | 23.44                    |  | 23.06       |  | 23.19       | 0.5      |
|           |          |       |            | 128     | 0         | 23.43                    |  | 22.92       |  | 23.19       | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 23.64                    |  | 23.42       |  | 23.65       | 0        |
|           |          |       |            | 1       | 67        | 23.94                    |  | 23.37       |  | 23.71       | 0        |
|           |          |       |            | 1       | 131       | 23.84                    |  | 23.63       |  | 23.86       | 0        |
|           |          |       |            | 64      | 0         | 22.92                    |  | 22.40       |  | 22.67       | 1        |
|           |          |       |            | 64      | 35        | 23.68                    |  | 23.50       |  | 23.77       | 0        |
|           |          |       |            | 64      | 69        | 22.91                    |  | 22.59       |  | 22.75       | 1        |
|           |          |       |            | 128     | 0         | 22.73                    |  | 22.39       |  | 22.66       | 1        |
|           |          |       | 16QAM      | 1       | 1         | 22.79                    |  | 22.61       |  | 22.81       | 1        |
|           |          |       | 64QAM      | 1       | 1         | 20.76                    |  | 20.42       |  | 21.07       | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 19.11                    |  | 18.99       |  | 18.63       | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.15                    |  | 21.92       |  | 22.07       | 1.5      |

## NR Band n41\_60 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power (dBm) |  |             |  |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|--|-------------|--|-------------|----------|
|           |          |       |            |         |           | 505200                   |  | 518598      |  | 531996      |          |
|           |          |       |            |         |           | 2526 MHz                 |  | 2592.99 MHz |  | 2659.98 MHz |          |
| 60MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 23.38                    |  | 23.39       |  | 23.39       | 0        |
|           |          |       |            | 1       | 81        | 23.86                    |  | 23.40       |  | 23.45       | 0        |
|           |          |       |            | 1       | 160       | 23.66                    |  | 23.65       |  | 23.78       | 0        |
|           |          |       |            | 81      | 0         | 23.37                    |  | 22.89       |  | 23.03       | 0.5      |
|           |          |       |            | 81      | 41        | 23.94                    |  | 23.45       |  | 23.64       | 0        |
|           |          |       |            | 81      | 81        | 23.31                    |  | 23.09       |  | 23.22       | 0.5      |
|           |          |       |            | 162     | 0         | 23.44                    |  | 22.93       |  | 23.10       | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 23.48                    |  | 23.32       |  | 23.41       | 0        |
|           |          |       |            | 1       | 81        | 23.86                    |  | 23.38       |  | 23.44       | 0        |
|           |          |       |            | 1       | 160       | 23.69                    |  | 23.60       |  | 23.85       | 0        |
|           |          |       |            | 81      | 0         | 22.93                    |  | 22.39       |  | 22.60       | 1        |
|           |          |       |            | 81      | 41        | 23.96                    |  | 23.45       |  | 23.60       | 0        |
|           |          |       |            | 81      | 81        | 22.87                    |  | 22.63       |  | 22.67       | 1        |
|           |          |       |            | 162     | 0         | 22.98                    |  | 22.43       |  | 22.64       | 1        |
|           |          |       | 16QAM      | 1       | 1         | 22.43                    |  | 22.47       |  | 22.61       | 1        |
|           |          |       | 64QAM      | 1       | 1         | 20.54                    |  | 20.46       |  | 20.56       | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 18.96                    |  | 18.86       |  | 19.11       | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.00                    |  | 21.85       |  | 21.92       | 1.5      |

## NR Band n41\_80 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power (dBm) |  |  |  | MPR [dB] |             |
|-----------|----------|-------|------------|---------|-----------|--------------------------|--|--|--|----------|-------------|
|           |          |       |            |         |           | 507204                   |  |  |  |          | 529998      |
|           |          |       |            |         |           | 2536.02 MHz              |  |  |  |          | 2649.99 MHz |
| 80MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 23.38                    |  |  |  | 23.21    | 0           |
|           |          |       |            | 1       | 109       | 23.73                    |  |  |  | 23.56    | 0           |
|           |          |       |            | 1       | 215       | 23.48                    |  |  |  | 23.76    | 0           |
|           |          |       |            | 108     | 0         | 23.37                    |  |  |  | 23.04    | 0.5         |
|           |          |       |            | 108     | 55        | 23.78                    |  |  |  | 23.61    | 0           |
|           |          |       |            | 108     | 109       | 23.11                    |  |  |  | 23.27    | 0.5         |
|           |          |       |            | 216     | 0         | 23.31                    |  |  |  | 23.12    | 0.5         |
|           |          |       | QPSK       | 1       | 1         | 23.43                    |  |  |  | 23.24    | 0           |
|           |          |       |            | 1       | 109       | 23.68                    |  |  |  | 23.59    | 0           |
|           |          |       |            | 1       | 215       | 23.45                    |  |  |  | 23.65    | 0           |
|           |          |       |            | 108     | 0         | 22.99                    |  |  |  | 22.57    | 1           |
|           |          |       |            | 108     | 55        | 23.78                    |  |  |  | 23.60    | 0           |
|           |          |       |            | 108     | 109       | 22.65                    |  |  |  | 22.74    | 1           |
|           |          |       |            | 216     | 0         | 22.80                    |  |  |  | 22.63    | 1           |
|           |          |       | 16QAM      | 1       | 1         | 22.60                    |  |  |  | 22.31    | 1           |
|           |          |       | 64QAM      | 1       | 1         | 20.52                    |  |  |  | 20.44    | 2.5         |
|           |          |       | 256QAM     | 1       | 1         | 18.92                    |  |  |  | 18.79    | 4.5         |
|           |          | CP    | QPSK       | 1       | 1         | 21.97                    |  |  |  | 21.73    | 1.5         |

## NR Band n41\_90 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power (dBm) |  |  |  | MPR [dB] |             |
|-----------|----------|-------|------------|---------|-----------|--------------------------|--|--|--|----------|-------------|
|           |          |       |            |         |           | 508200                   |  |  |  |          | 528996      |
|           |          |       |            |         |           | 2541 MHz                 |  |  |  |          | 2644.98 MHz |
| 90MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 23.45                    |  |  |  | 23.31    | 0           |
|           |          |       |            | 1       | 123       | 23.84                    |  |  |  | 23.71    | 0           |
|           |          |       |            | 1       | 243       | 23.59                    |  |  |  | 23.81    | 0           |
|           |          |       |            | 120     | 0         | 23.45                    |  |  |  | 23.03    | 0.5         |
|           |          |       |            | 120     | 63        | 23.87                    |  |  |  | 23.81    | 0           |
|           |          |       |            | 120     | 125       | 23.24                    |  |  |  | 23.38    | 0.5         |
|           |          |       |            | 243     | 0         | 23.36                    |  |  |  | 23.19    | 0.5         |
|           |          |       | QPSK       | 1       | 1         | 23.59                    |  |  |  | 23.28    | 0           |
|           |          |       |            | 1       | 123       | 23.86                    |  |  |  | 23.73    | 0           |
|           |          |       |            | 1       | 243       | 23.57                    |  |  |  | 23.61    | 0           |
|           |          |       |            | 120     | 0         | 22.97                    |  |  |  | 22.56    | 1           |
|           |          |       |            | 120     | 63        | 23.89                    |  |  |  | 23.79    | 0           |
|           |          |       |            | 120     | 125       | 22.76                    |  |  |  | 22.91    | 1           |
|           |          |       |            | 243     | 0         | 22.89                    |  |  |  | 22.82    | 1           |
|           |          |       | 16QAM      | 1       | 1         | 22.59                    |  |  |  | 22.56    | 1           |
|           |          |       | 64QAM      | 1       | 1         | 21.15                    |  |  |  | 20.41    | 2.5         |
|           |          |       | 256QAM     | 1       | 1         | 19.06                    |  |  |  | 18.86    | 4.5         |
|           |          | CP    | QPSK       | 1       | 1         | 22.10                    |  |  |  | 21.85    | 1.5         |

## NR Band n41\_100 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power (dBm) |  |             |  | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|--|-------------|--|----------|
|           |          |       |            |         |           |                          |  | 518598      |  |          |
|           |          |       |            |         |           |                          |  | 2592.99 MHz |  |          |
| 100MHz    | 30       | DFT-s | pi/2 BPSK  | 1       | 1         |                          |  | 23.79       |  | 0        |
|           |          |       |            | 1       | 137       |                          |  | 23.51       |  | 0        |
|           |          |       |            | 1       | 271       |                          |  | 23.75       |  | 0        |
|           |          |       |            | 135     | 0         |                          |  | 23.28       |  | 0.5      |
|           |          |       |            | 135     | 69        |                          |  | 23.52       |  | 0        |
|           |          |       |            | 135     | 138       |                          |  | 23.22       |  | 0.5      |
|           |          |       |            | 270     | 0         |                          |  | 23.24       |  | 0.5      |
|           |          |       | QPSK       | 1       | 1         |                          |  | 23.94       |  | 0        |
|           |          |       |            | 1       | 137       |                          |  | 23.40       |  | 0        |
|           |          |       |            | 1       | 271       |                          |  | 23.68       |  | 0        |
|           |          |       |            | 135     | 0         |                          |  | 22.85       |  | 1        |
|           |          |       |            | 135     | 69        |                          |  | 23.89       |  | 0        |
|           |          |       |            | 135     | 138       |                          |  | 22.78       |  | 1        |
|           |          |       |            | 270     | 0         |                          |  | 22.73       |  | 1        |
|           |          |       | 16QAM      | 1       | 1         |                          |  | 22.87       |  | 1        |
|           |          |       | 64QAM      | 1       | 1         |                          |  | 20.84       |  | 2.5      |
|           |          |       | 256QAM     | 1       | 1         |                          |  | 19.38       |  | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         |                          |  | 22.47       |  | 1.5      |

# [ NR Band n66Conducted Power Main Ant.\_SA]

NR Band n66 \_5 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |         |           | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|---------|-----------|----------|
|           |          |       |            |         |           | 342500                   | 349000  | 355500    |          |
|           |          |       |            |         |           | 1712.5 MHz               | 1745MHz | 1777.5MHz |          |
| 5 MHz     | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 24.11                    | 24.30   | 24.23     | 0        |
|           |          |       |            | 1       | 13        | 24.16                    | 24.45   | 24.32     | 0        |
|           |          |       |            | 1       | 23        | 24.14                    | 24.42   | 24.26     | 0        |
|           |          |       |            | 12      | 0         | 23.74                    | 23.96   | 23.84     | 0.5      |
|           |          |       |            | 12      | 7         | 24.28                    | 24.45   | 24.41     | 0        |
|           |          |       |            | 12      | 13        | 23.73                    | 23.98   | 23.89     | 0.5      |
|           |          |       |            | 25      | 0         | 23.82                    | 23.95   | 23.90     | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 24.09                    | 24.24   | 24.20     | 0        |
|           |          |       |            | 1       | 13        | 24.10                    | 24.38   | 24.20     | 0        |
|           |          |       |            | 1       | 23        | 24.09                    | 24.37   | 24.19     | 0        |
|           |          |       |            | 12      | 0         | 23.30                    | 23.49   | 23.39     | 1        |
|           |          |       |            | 12      | 7         | 24.29                    | 24.48   | 24.40     | 0        |
|           |          |       |            | 12      | 13        | 23.29                    | 23.48   | 23.41     | 1        |
|           |          |       |            | 25      | 0         | 23.35                    | 23.48   | 23.47     | 1        |
|           |          |       | 16QAM      | 1       | 1         | 23.01                    | 23.40   | 23.40     | 1        |
|           |          |       | 64QAM      | 1       | 1         | 21.68                    | 21.72   | 21.68     | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 19.49                    | 19.50   | 19.70     | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.63                    | 22.80   | 22.77     | 1.5      |

NR Band n66 \_10 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|----------|----------|----------|
|           |          |       |            |         |           | 343000                   | 349000   | 355500   |          |
|           |          |       |            |         |           | 1715MHz                  | 1745 MHz | 1775 MHz |          |
| 10 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 24.17                    | 24.27    | 24.17    | 0        |
|           |          |       |            | 1       | 26        | 24.20                    | 24.38    | 24.22    | 0        |
|           |          |       |            | 1       | 50        | 24.17                    | 24.39    | 24.18    | 0        |
|           |          |       |            | 25      | 0         | 23.80                    | 23.88    | 23.77    | 0.5      |
|           |          |       |            | 25      | 14        | 24.32                    | 24.49    | 24.31    | 0        |
|           |          |       |            | 25      | 27        | 23.77                    | 23.88    | 23.79    | 0.5      |
|           |          |       |            | 50      | 0         | 23.81                    | 23.90    | 23.79    | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 24.06                    | 24.29    | 24.13    | 0        |
|           |          |       |            | 1       | 26        | 24.09                    | 24.41    | 24.17    | 0        |
|           |          |       |            | 1       | 50        | 24.07                    | 24.38    | 24.13    | 0        |
|           |          |       |            | 25      | 0         | 23.35                    | 23.49    | 23.38    | 1        |
|           |          |       |            | 25      | 14        | 24.39                    | 24.48    | 24.43    | 0        |
|           |          |       |            | 25      | 27        | 23.30                    | 23.28    | 23.41    | 1        |
|           |          |       |            | 50      | 0         | 23.34                    | 23.37    | 23.39    | 1        |
|           |          |       | 16QAM      | 1       | 1         | 23.46                    | 23.48    | 23.47    | 1        |
|           |          |       | 64QAM      | 1       | 1         | 21.70                    | 21.87    | 21.66    | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 19.43                    | 19.65    | 19.57    | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.65                    | 22.81    | 22.75    | 1.5      |

## NR Band n66 \_ 15 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |          |            | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|----------|------------|----------|
|           |          |       |            |         |           | 343500                   | 349000   | 354500     |          |
|           |          |       |            |         |           | 1717.5 MHz               | 1745 MHz | 1772.5 MHz |          |
| 15 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 24.01                    | 24.12    | 24.22      | 0        |
|           |          |       |            | 1       | 40        | 23.96                    | 24.22    | 24.19      | 0        |
|           |          |       |            | 1       | 77        | 24.05                    | 24.29    | 24.30      | 0        |
|           |          |       |            | 36      | 0         | 23.63                    | 23.85    | 23.91      | 0.5      |
|           |          |       |            | 36      | 22        | 24.11                    | 24.38    | 24.35      | 0        |
|           |          |       |            | 36      | 43        | 23.67                    | 23.91    | 23.94      | 0.5      |
|           |          |       |            | 75      | 0         | 23.70                    | 23.91    | 23.92      | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 23.96                    | 24.07    | 24.16      | 0        |
|           |          |       |            | 1       | 40        | 23.95                    | 24.12    | 24.16      | 0        |
|           |          |       |            | 1       | 77        | 23.99                    | 24.25    | 24.23      | 0        |
|           |          |       |            | 36      | 0         | 23.23                    | 23.43    | 23.42      | 1        |
|           |          |       |            | 36      | 22        | 24.23                    | 24.43    | 24.47      | 0        |
|           |          |       |            | 36      | 43        | 23.26                    | 23.37    | 23.48      | 1        |
|           |          |       |            | 75      | 0         | 23.27                    | 23.46    | 23.47      | 1        |
|           |          |       | 16QAM      | 1       | 1         | 23.47                    | 23.27    | 23.45      | 1        |
|           |          |       | 64QAM      | 1       | 1         | 21.59                    | 21.48    | 21.58      | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 19.41                    | 19.68    | 19.62      | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.57                    | 22.68    | 22.80      | 1.5      |

## NR Band n66 \_ 20 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|----------|----------|----------|
|           |          |       |            |         |           | 344000                   | 349000   | 354000   |          |
|           |          |       |            |         |           | 1720 MHz                 | 1745 MHz | 1770 MHz |          |
| 20 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 24.06                    | 24.12    | 24.35    | 0        |
|           |          |       |            | 1       | 53        | 24.02                    | 24.25    | 24.31    | 0        |
|           |          |       |            | 1       | 104       | 24.14                    | 24.38    | 24.42    | 0        |
|           |          |       |            | 50      | 0         | 23.73                    | 23.84    | 23.94    | 0.5      |
|           |          |       |            | 50      | 28        | 24.19                    | 24.37    | 24.40    | 0        |
|           |          |       |            | 50      | 56        | 23.70                    | 23.96    | 23.99    | 0.5      |
|           |          |       |            | 100     | 0         | 23.75                    | 23.99    | 23.98    | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 24.03                    | 24.09    | 24.46    | 0        |
|           |          |       |            | 1       | 53        | 23.95                    | 24.23    | 24.30    | 0        |
|           |          |       |            | 1       | 104       | 24.09                    | 24.30    | 24.36    | 0        |
|           |          |       |            | 50      | 0         | 23.24                    | 23.49    | 23.41    | 1        |
|           |          |       |            | 50      | 28        | 24.27                    | 24.30    | 24.49    | 0        |
|           |          |       |            | 50      | 56        | 23.27                    | 23.48    | 23.45    | 1        |
|           |          |       |            | 100     | 0         | 23.29                    | 23.28    | 23.30    | 1        |
|           |          |       | 16QAM      | 1       | 1         | 23.37                    | 23.40    | 23.39    | 1        |
|           |          |       | 64QAM      | 1       | 1         | 21.62                    | 21.04    | 21.98    | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 19.46                    | 19.65    | 19.73    | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.65                    | 22.68    | 22.86    | 1.5      |

# [ NR Band n66Conducted Power Sub Ant.\_NSA]

NR Band n66 \_5 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |         |           | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|---------|-----------|----------|
|           |          |       |            |         |           | 342500                   | 349000  | 355500    |          |
|           |          |       |            |         |           | 1712.5 MHz               | 1745MHz | 1777.5MHz |          |
| 5 MHz     | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 22.71                    | 22.34   | 21.70     | 0        |
|           |          |       |            | 1       | 13        | 22.72                    | 22.29   | 21.63     | 0        |
|           |          |       |            | 1       | 23        | 22.69                    | 22.23   | 21.59     | 0        |
|           |          |       |            | 12      | 0         | 22.29                    | 21.88   | 21.23     | 0.5      |
|           |          |       |            | 12      | 7         | 22.80                    | 22.35   | 21.67     | 0        |
|           |          |       |            | 12      | 13        | 22.30                    | 21.78   | 21.13     | 0.5      |
|           |          |       |            | 25      | 0         | 22.31                    | 21.85   | 21.20     | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 22.65                    | 22.25   | 21.61     | 0        |
|           |          |       |            | 1       | 13        | 22.61                    | 22.19   | 21.53     | 0        |
|           |          |       |            | 1       | 23        | 22.63                    | 22.12   | 21.49     | 0        |
|           |          |       |            | 12      | 0         | 21.83                    | 21.42   | 20.72     | 1        |
|           |          |       |            | 12      | 7         | 22.81                    | 22.38   | 21.69     | 0        |
|           |          |       |            | 12      | 13        | 21.77                    | 21.35   | 20.64     | 1        |
|           |          |       |            | 25      | 0         | 21.77                    | 21.37   | 20.67     | 1        |
|           |          |       | 16QAM      | 1       | 1         | 21.98                    | 21.56   | 21.03     | 1        |
|           |          |       | 64QAM      | 1       | 1         | 20.44                    | 19.71   | 19.06     | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 17.98                    | 17.42   | 16.92     | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 21.21                    | 20.73   | 20.10     | 1.5      |

NR Band n66 \_10 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|----------|----------|----------|
|           |          |       |            |         |           | 343000                   | 349000   | 355500   |          |
|           |          |       |            |         |           | 1715MHz                  | 1745 MHz | 1775 MHz |          |
| 10 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 22.49                    | 22.00    | 21.85    | 0        |
|           |          |       |            | 1       | 26        | 22.94                    | 22.56    | 21.75    | 0        |
|           |          |       |            | 1       | 50        | 22.38                    | 21.97    | 21.62    | 0        |
|           |          |       |            | 25      | 0         | 22.43                    | 21.87    | 21.36    | 0.5      |
|           |          |       |            | 25      | 14        | 22.98                    | 22.54    | 21.79    | 0        |
|           |          |       |            | 25      | 27        | 22.32                    | 21.78    | 21.19    | 0.5      |
|           |          |       |            | 50      | 0         | 22.39                    | 21.91    | 21.28    | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 22.43                    | 21.91    | 21.75    | 0        |
|           |          |       |            | 1       | 26        | 22.92                    | 22.49    | 21.64    | 0        |
|           |          |       |            | 1       | 50        | 22.31                    | 21.88    | 21.49    | 0        |
|           |          |       |            | 25      | 0         | 21.92                    | 21.37    | 20.94    | 1        |
|           |          |       |            | 25      | 14        | 22.99                    | 22.60    | 21.80    | 0        |
|           |          |       |            | 25      | 27        | 21.84                    | 21.30    | 20.75    | 1        |
|           |          |       |            | 50      | 0         | 21.90                    | 21.43    | 20.78    | 1        |
|           |          |       | 16QAM      | 1       | 1         | 21.77                    | 21.26    | 21.25    | 1        |
|           |          |       | 64QAM      | 1       | 1         | 19.92                    | 19.38    | 19.27    | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 17.71                    | 17.21    | 17.15    | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 20.95                    | 20.46    | 20.34    | 1.5      |

## NR Band n66 \_ 15 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |          |            | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|----------|------------|----------|
|           |          |       |            |         |           | 343500                   | 349000   | 354500     |          |
|           |          |       |            |         |           | 1717.5 MHz               | 1745 MHz | 1772.5 MHz |          |
| 15 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 22.73                    | 22.37    | 21.90      | 0        |
|           |          |       |            | 1       | 40        | 22.59                    | 22.15    | 21.58      | 0        |
|           |          |       |            | 1       | 77        | 22.60                    | 22.25    | 21.52      | 0        |
|           |          |       |            | 36      | 0         | 22.33                    | 21.93    | 21.44      | 0.5      |
|           |          |       |            | 36      | 22        | 22.71                    | 22.22    | 21.69      | 0        |
|           |          |       |            | 36      | 43        | 22.21                    | 21.73    | 21.12      | 0.5      |
|           |          |       |            | 75      | 0         | 22.26                    | 21.80    | 21.26      | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 22.66                    | 22.31    | 21.80      | 0        |
|           |          |       |            | 1       | 40        | 22.49                    | 22.06    | 21.50      | 0        |
|           |          |       |            | 1       | 77        | 22.51                    | 22.15    | 21.40      | 0        |
|           |          |       |            | 36      | 0         | 21.81                    | 21.43    | 20.90      | 1        |
|           |          |       |            | 36      | 22        | 22.70                    | 22.22    | 21.72      | 0        |
|           |          |       |            | 36      | 43        | 21.69                    | 21.26    | 20.63      | 1        |
|           |          |       |            | 75      | 0         | 21.80                    | 21.07    | 20.75      | 1        |
|           |          |       | 16QAM      | 1       | 1         | 21.90                    | 21.67    | 21.25      | 1        |
|           |          |       | 64QAM      | 1       | 1         | 20.10                    | 19.83    | 19.38      | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 18.13                    | 17.59    | 17.14      | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 21.25                    | 20.84    | 20.40      | 1.5      |

## NR Band n66 \_ 20 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|--------------------------|----------|----------|----------|
|           |          |       |            |         |           | 344000                   | 349000   | 354000   |          |
|           |          |       |            |         |           | 1720 MHz                 | 1745 MHz | 1770 MHz |          |
| 20 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 22.61                    | 22.67    | 22.72    | 0        |
|           |          |       |            | 1       | 53        | 22.58                    | 22.69    | 22.71    | 0        |
|           |          |       |            | 1       | 104       | 22.72                    | 22.76    | 22.71    | 0        |
|           |          |       |            | 50      | 0         | 22.32                    | 22.41    | 22.46    | 0.5      |
|           |          |       |            | 50      | 28        | 22.73                    | 22.82    | 22.85    | 0        |
|           |          |       |            | 50      | 56        | 22.38                    | 22.47    | 22.49    | 0.5      |
|           |          |       |            | 100     | 0         | 22.39                    | 22.42    | 22.49    | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 22.77                    | 22.66    | 22.68    | 0        |
|           |          |       |            | 1       | 53        | 22.61                    | 22.67    | 22.70    | 0        |
|           |          |       |            | 1       | 104       | 22.69                    | 22.73    | 22.70    | 0        |
|           |          |       |            | 50      | 0         | 21.91                    | 21.93    | 21.98    | 1        |
|           |          |       |            | 50      | 28        | 22.92                    | 22.86    | 22.90    | 0        |
|           |          |       |            | 50      | 56        | 21.98                    | 21.93    | 21.99    | 1        |
|           |          |       |            | 100     | 0         | 21.95                    | 21.94    | 21.89    | 1        |
|           |          |       | 16QAM      | 1       | 1         | 21.94                    | 21.95    | 21.92    | 1        |
|           |          |       | 64QAM      | 1       | 1         | 20.25                    | 20.27    | 20.25    | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 18.06                    | 18.01    | 18.06    | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 21.30                    | 21.26    | 21.29    | 1.5      |

### 11.4.2 NR Bands Conducted Power for Hotspot activated

#### [ NR Band n41 Conducted Power ]

NR Band n41\_20 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power (dBm) |             |             |             |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|-------------|-------------|-------------|-------------|----------|
|           |          |       |            |         |           | 501204              | 509898      | 518598      | 527298      | 535998      |          |
|           |          |       |            |         |           | 2506.02 MHz         | 2549.49 MHz | 2592.99 MHz | 2636.49 MHz | 2679.99 MHz |          |
| 20MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 22.60               | 22.69       | 22.45       | 21.84       | 21.17       | 0        |
|           |          |       |            | 1       | 26        | 22.76               | 22.58       | 22.28       | 21.62       | 21.45       | 0        |
|           |          |       |            | 1       | 49        | 22.84               | 22.60       | 22.38       | 21.68       | 21.02       | 0        |
|           |          |       |            | 25      | 0         | 22.61               | 22.68       | 22.36       | 21.77       | 21.47       | 0        |
|           |          |       |            | 25      | 13        | 22.77               | 22.60       | 22.32       | 21.75       | 21.49       | 0        |
|           |          |       |            | 25      | 26        | 22.75               | 22.70       | 22.38       | 21.76       | 21.39       | 0        |
|           |          |       |            | 50      | 0         | 22.75               | 22.62       | 22.36       | 21.77       | 21.38       | 0        |
|           |          |       | QPSK       | 1       | 1         | 22.51               | 22.59       | 22.36       | 21.82       | 21.11       | 0        |
|           |          |       |            | 1       | 26        | 22.66               | 22.49       | 22.19       | 21.58       | 21.39       | 0        |
|           |          |       |            | 1       | 49        | 22.73               | 22.52       | 22.32       | 21.60       | 21.60       | 0        |
|           |          |       |            | 25      | 0         | 22.63               | 22.68       | 22.35       | 21.76       | 21.46       | 0        |
|           |          |       |            | 25      | 13        | 22.76               | 22.60       | 22.35       | 21.77       | 21.49       | 0        |
|           |          |       |            | 25      | 26        | 22.75               | 22.66       | 22.41       | 21.75       | 21.38       | 0        |
|           |          |       |            | 50      | 0         | 22.80               | 22.62       | 22.34       | 21.76       | 21.37       | 0        |
|           |          |       | 16QAM      | 1       | 1         | 22.51               | 22.53       | 22.12       | 22.09       | 21.44       | 0        |
|           |          |       | 64QAM      | 1       | 1         | 21.49               | 22.06       | 21.90       | 21.34       | 21.68       | 0        |
|           |          |       | 256QAM     | 1       | 1         | 21.06               | 21.13       | 20.91       | 20.44       | 19.65       | 1.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.66               | 22.71       | 22.46       | 21.91       | 21.18       | 0        |

NR Band n41\_30 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power (dBm) |             |             |          |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|-------------|-------------|----------|-------------|----------|
|           |          |       |            |         |           | 502200              | 510402      | 518598      | 526800   | 534996      |          |
|           |          |       |            |         |           | 2511 MHz            | 2552.01 MHz | 2592.99 MHz | 2634 MHz | 2674.98 MHz |          |
| 30MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 22.77               | 22.88       | 22.64       | 22.26    | 21.63       | 0        |
|           |          |       |            | 1       | 39        | 22.93               | 22.82       | 22.48       | 21.96    | 21.50       | 0        |
|           |          |       |            | 1       | 76        | 22.94               | 22.84       | 22.44       | 21.92    | 21.43       | 0        |
|           |          |       |            | 36      | 0         | 22.80               | 22.88       | 22.50       | 22.09    | 21.62       | 0        |
|           |          |       |            | 36      | 21        | 22.95               | 22.85       | 22.43       | 21.95    | 21.47       | 0        |
|           |          |       |            | 36      | 42        | 22.95               | 22.82       | 22.48       | 21.90    | 21.49       | 0        |
|           |          |       |            | 75      | 0         | 22.92               | 22.84       | 22.55       | 21.99    | 21.53       | 0        |
|           |          |       | QPSK       | 1       | 1         | 22.71               | 22.77       | 22.50       | 22.17    | 21.53       | 0        |
|           |          |       |            | 1       | 39        | 22.85               | 22.73       | 22.36       | 21.86    | 21.41       | 0        |
|           |          |       |            | 1       | 76        | 22.96               | 22.70       | 22.32       | 21.82    | 21.31       | 0        |
|           |          |       |            | 36      | 0         | 22.82               | 22.91       | 22.53       | 22.11    | 21.62       | 0        |
|           |          |       |            | 36      | 21        | 22.99               | 22.83       | 22.41       | 21.97    | 21.49       | 0        |
|           |          |       |            | 36      | 42        | 22.91               | 22.82       | 22.47       | 21.90    | 21.46       | 0        |
|           |          |       |            | 75      | 0         | 22.99               | 22.87       | 22.52       | 22.00    | 21.52       | 0        |
|           |          |       | 16QAM      | 1       | 1         | 22.77               | 22.84       | 22.55       | 22.16    | 21.59       | 0        |
|           |          |       | 64QAM      | 1       | 1         | 22.20               | 22.31       | 22.10       | 21.70    | 21.40       | 0        |
|           |          |       | 256QAM     | 1       | 1         | 21.24               | 21.31       | 21.09       | 20.88    | 20.17       | 1.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.78               | 22.83       | 22.62       | 22.26    | 21.70       | 0        |

## NR Band n41 \_40 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power (dBm) |                |  |                |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------------|--|----------------|-------------|----------|
|           |          |       |            |         |           | 503202              | 513468         |  | 523734         | 534000      |          |
|           |          |       |            |         |           | 2516.01<br>MHz      | 2567.34<br>MHz |  | 2618.67<br>MHz | 2670<br>MHz |          |
| 40MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 22.68               | 22.72          |  | 22.29          | 21.60       | 0        |
|           |          |       |            | 1       | 53        | 22.81               | 22.62          |  | 22.04          | 21.39       | 0        |
|           |          |       |            | 1       | 104       | 22.91               | 22.55          |  | 21.96          | 21.31       | 0        |
|           |          |       |            | 50      | 0         | 22.80               | 22.66          |  | 22.21          | 21.51       | 0        |
|           |          |       |            | 50      | 28        | 22.85               | 22.64          |  | 22.10          | 21.39       | 0        |
|           |          |       |            | 50      | 56        | 22.98               | 22.58          |  | 22.02          | 21.37       | 0        |
|           |          |       |            | 100     | 0         | 22.90               | 22.64          |  | 22.13          | 21.54       | 0        |
|           |          |       | QPSK       | 1       | 1         | 22.56               | 22.62          |  | 22.26          | 21.54       | 0        |
|           |          |       |            | 1       | 53        | 22.75               | 22.54          |  | 21.98          | 21.30       | 0        |
|           |          |       |            | 1       | 104       | 22.89               | 22.41          |  | 21.84          | 21.21       | 0        |
|           |          |       |            | 50      | 0         | 22.81               | 22.66          |  | 22.21          | 21.51       | 0        |
|           |          |       |            | 50      | 28        | 22.83               | 22.64          |  | 22.06          | 21.41       | 0        |
|           |          |       |            | 50      | 56        | 22.95               | 22.57          |  | 22.01          | 21.35       | 0        |
|           |          |       |            | 100     | 0         | 22.89               | 22.65          |  | 22.10          | 21.57       | 0        |
|           |          |       | 16QAM      | 1       | 1         | 22.69               | 22.67          |  | 22.29          | 21.48       | 0        |
|           |          |       | 64QAM      | 1       | 1         | 22.20               | 22.14          |  | 21.81          | 21.11       | 0        |
|           |          |       | 256QAM     | 1       | 1         | 21.11               | 21.16          |  | 20.85          | 20.19       | 1.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.59               | 22.71          |  | 22.30          | 21.63       | 0        |

## NR Band n41 \_50 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power (dBm) |  |             |  |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|--|-------------|--|-------------|----------|
|           |          |       |            |         |           | 504204              |  | 518598      |  | 532998      |          |
|           |          |       |            |         |           | 2521.02 MHz         |  | 2592.99 MHz |  | 2664.99 MHz |          |
| 50MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 22.46               |  | 22.58       |  | 21.92       | 0        |
|           |          |       |            | 1       | 67        | 22.68               |  | 22.44       |  | 21.52       | 0        |
|           |          |       |            | 1       | 131       | 22.65               |  | 22.30       |  | 21.43       | 0        |
|           |          |       |            | 64      | 0         | 22.70               |  | 22.38       |  | 21.72       | 0        |
|           |          |       |            | 64      | 35        | 22.71               |  | 22.48       |  | 21.55       | 0        |
|           |          |       |            | 64      | 69        | 22.64               |  | 22.43       |  | 21.46       | 0        |
|           |          |       |            | 128     | 0         | 22.72               |  | 22.43       |  | 21.53       | 0        |
|           |          |       | QPSK       | 1       | 1         | 22.37               |  | 22.54       |  | 21.83       | 0        |
|           |          |       |            | 1       | 67        | 22.64               |  | 22.34       |  | 21.43       | 0        |
|           |          |       |            | 1       | 131       | 22.55               |  | 22.18       |  | 21.32       | 0        |
|           |          |       |            | 64      | 0         | 22.67               |  | 22.40       |  | 21.74       | 0        |
|           |          |       |            | 64      | 35        | 22.72               |  | 22.47       |  | 21.53       | 0        |
|           |          |       |            | 64      | 69        | 22.66               |  | 22.44       |  | 21.45       | 0        |
|           |          |       |            | 128     | 0         | 22.71               |  | 22.44       |  | 21.52       | 0        |
|           |          |       | 16QAM      | 1       | 1         | 22.42               |  | 22.47       |  | 21.84       | 0        |
|           |          |       | 64QAM      | 1       | 1         | 22.37               |  | 22.06       |  | 21.41       | 0        |
|           |          |       | 256QAM     | 1       | 1         | 20.96               |  | 21.11       |  | 20.11       | 1.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.41               |  | 22.57       |  | 21.91       | 0        |

## NR Band n41\_60 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power (dBm) |  |             |  |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|--|-------------|--|-------------|----------|
|           |          |       |            |         |           | 505200              |  | 518598      |  | 531996      |          |
|           |          |       |            |         |           | 2526 MHz            |  | 2592.99 MHz |  | 2659.98 MHz |          |
| 60MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 22.15               |  | 22.55       |  | 21.81       | 0        |
|           |          |       |            | 1       | 81        | 22.52               |  | 22.40       |  | 21.50       | 0        |
|           |          |       |            | 1       | 160       | 22.56               |  | 22.25       |  | 21.39       | 0        |
|           |          |       |            | 81      | 0         | 22.52               |  | 22.50       |  | 21.63       | 0        |
|           |          |       |            | 81      | 41        | 22.56               |  | 22.47       |  | 21.53       | 0        |
|           |          |       |            | 81      | 81        | 22.67               |  | 22.31       |  | 21.42       | 0        |
|           |          |       |            | 162     | 0         | 22.58               |  | 22.47       |  | 21.57       | 0        |
|           |          |       | QPSK       | 1       | 1         | 22.05               |  | 22.46       |  | 21.70       | 0        |
|           |          |       |            | 1       | 81        | 22.44               |  | 22.33       |  | 21.43       | 0        |
|           |          |       |            | 1       | 160       | 22.46               |  | 22.11       |  | 21.25       | 0        |
|           |          |       |            | 81      | 0         | 22.51               |  | 22.50       |  | 21.63       | 0        |
|           |          |       |            | 81      | 41        | 22.58               |  | 22.47       |  | 21.53       | 0        |
|           |          |       |            | 81      | 81        | 22.63               |  | 22.32       |  | 21.43       | 0        |
|           |          |       |            | 162     | 0         | 22.55               |  | 22.47       |  | 21.58       | 0        |
|           |          |       | 16QAM      | 1       | 1         | 22.16               |  | 22.48       |  | 21.72       | 0        |
|           |          |       | 64QAM      | 1       | 1         | 21.57               |  | 22.05       |  | 21.31       | 0        |
|           |          |       | 256QAM     | 1       | 1         | 20.79               |  | 21.20       |  | 19.95       | 1.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.08               |  | 22.50       |  | 21.84       | 0        |

## NR Band n41\_80 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power (dBm) |  |  |  | MPR [dB] |             |
|-----------|----------|-------|------------|---------|-----------|---------------------|--|--|--|----------|-------------|
|           |          |       |            |         |           | 507204              |  |  |  |          | 529998      |
|           |          |       |            |         |           | 2536.02 MHz         |  |  |  |          | 2649.99 MHz |
| 80MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 22.43               |  |  |  | 22.00    | 0           |
|           |          |       |            | 1       | 109       | 22.58               |  |  |  | 21.58    | 0           |
|           |          |       |            | 1       | 215       | 22.62               |  |  |  | 21.25    | 0           |
|           |          |       |            | 108     | 0         | 22.63               |  |  |  | 21.77    | 0           |
|           |          |       |            | 108     | 55        | 22.54               |  |  |  | 21.58    | 0           |
|           |          |       |            | 108     | 109       | 22.66               |  |  |  | 21.43    | 0           |
|           |          |       |            | 216     | 0         | 22.58               |  |  |  | 21.64    | 0           |
|           |          |       | QPSK       | 1       | 1         | 22.31               |  |  |  | 21.85    | 0           |
|           |          |       |            | 1       | 109       | 22.45               |  |  |  | 21.47    | 0           |
|           |          |       |            | 1       | 215       | 22.49               |  |  |  | 21.13    | 0           |
|           |          |       |            | 108     | 0         | 22.65               |  |  |  | 21.76    | 0           |
|           |          |       |            | 108     | 55        | 22.57               |  |  |  | 21.57    | 0           |
|           |          |       |            | 108     | 109       | 22.69               |  |  |  | 21.40    | 0           |
|           |          |       |            | 216     | 0         | 22.59               |  |  |  | 21.60    | 0           |
|           |          |       | 16QAM      | 1       | 1         | 22.41               |  |  |  | 21.93    | 0           |
|           |          |       | 64QAM      | 1       | 1         | 22.57               |  |  |  | 21.32    | 0           |
|           |          |       | 256QAM     | 1       | 1         | 20.90               |  |  |  | 20.56    | 1.5         |
|           |          | CP    | QPSK       | 1       | 1         | 22.42               |  |  |  | 21.96    | 0           |

## NR Band n41\_90 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power (dBm) |  |  |  |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|--|--|--|-------------|----------|
|           |          |       |            |         |           | 508200              |  |  |  | 528996      |          |
|           |          |       |            |         |           | 2541 MHz            |  |  |  | 2644.98 MHz |          |
| 90MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 22.52               |  |  |  | 22.19       | 0        |
|           |          |       |            | 1       | 123       | 22.76               |  |  |  | 21.70       | 0        |
|           |          |       |            | 1       | 243       | 22.52               |  |  |  | 21.21       | 0        |
|           |          |       |            | 120     | 0         | 22.65               |  |  |  | 22.02       | 0.5      |
|           |          |       |            | 120     | 63        | 22.68               |  |  |  | 21.77       | 0        |
|           |          |       |            | 120     | 125       | 22.68               |  |  |  | 21.45       | 0.5      |
|           |          |       |            | 243     | 0         | 22.72               |  |  |  | 21.82       | 0.5      |
|           |          |       | QPSK       | 1       | 1         | 22.41               |  |  |  | 22.07       | 0        |
|           |          |       |            | 1       | 123       | 22.66               |  |  |  | 21.62       | 0        |
|           |          |       |            | 1       | 243       | 22.44               |  |  |  | 21.10       | 0        |
|           |          |       |            | 120     | 0         | 22.64               |  |  |  | 22.02       | 1        |
|           |          |       |            | 120     | 63        | 22.72               |  |  |  | 21.82       | 0        |
|           |          |       |            | 120     | 125       | 22.70               |  |  |  | 21.44       | 1        |
|           |          |       |            | 243     | 0         | 22.69               |  |  |  | 21.84       | 1        |
|           |          |       | 16QAM      | 1       | 1         | 22.62               |  |  |  | 22.11       | 1        |
|           |          |       | 64QAM      | 1       | 1         | 22.65               |  |  |  | 21.48       | 2.5      |
|           |          |       | 256QAM     | 1       | 1         | 21.00               |  |  |  | 20.63       | 4.5      |
|           |          | CP    | QPSK       | 1       | 1         | 22.48               |  |  |  | 22.15       | 1.5      |

## NR Band n41\_100 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power (dBm) |  |             |  | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|--|-------------|--|----------|
|           |          |       |            |         |           |                     |  | 518598      |  |          |
|           |          |       |            |         |           |                     |  | 2592.99 Mhz |  |          |
| 100MHz    | 30       | DFT-s | pi/2 BPSK  | 1       | 1         |                     |  | 22.51       |  | 0        |
|           |          |       |            | 1       | 137       |                     |  | 22.32       |  | 0        |
|           |          |       |            | 1       | 271       |                     |  | 21.77       |  | 0        |
|           |          |       |            | 135     | 0         |                     |  | 22.44       |  | 0        |
|           |          |       |            | 135     | 69        |                     |  | 22.37       |  | 0        |
|           |          |       |            | 135     | 138       |                     |  | 22.05       |  | 0        |
|           |          |       |            | 270     | 0         |                     |  | 22.29       |  | 0        |
|           |          |       | QPSK       | 1       | 1         |                     |  | 22.64       |  | 0        |
|           |          |       |            | 1       | 137       |                     |  | 22.24       |  | 0        |
|           |          |       |            | 1       | 271       |                     |  | 21.67       |  | 0        |
|           |          |       |            | 135     | 0         |                     |  | 22.59       |  | 0        |
|           |          |       |            | 135     | 69        |                     |  | 22.30       |  | 0        |
|           |          |       |            | 135     | 138       |                     |  | 22.07       |  | 0        |
|           |          |       |            | 270     | 0         |                     |  | 22.23       |  | 0        |
|           |          |       | 16QAM      | 1       | 1         |                     |  | 22.41       |  | 0        |
|           |          |       | 64QAM      | 1       | 1         |                     |  | 22.00       |  | 0        |
|           |          |       | 256QAM     | 1       | 1         |                     |  | 21.07       |  | 1.5      |
|           |          | CP    | QPSK       | 1       | 1         |                     |  | 22.49       |  | 0        |

# [ NR Band n66 Conducted Power Main Ant.\_SA]

NR Band n66 \_5 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |            | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|------------|----------|
|           |          |       |            |         |           | 342500              | 349000   | 355500     |          |
|           |          |       |            |         |           | 1712.5 MHz          | 1745 MHz | 1777.5 MHz |          |
| 5 MHz     | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 19.56               | 19.71    | 19.55      | 0        |
|           |          |       |            | 1       | 13        | 19.60               | 19.83    | 19.64      | 0        |
|           |          |       |            | 1       | 23        | 19.55               | 19.83    | 19.63      | 0        |
|           |          |       |            | 12      | 0         | 19.59               | 19.89    | 19.71      | 0        |
|           |          |       |            | 12      | 7         | 19.61               | 19.91    | 19.70      | 0        |
|           |          |       |            | 12      | 13        | 19.59               | 19.91    | 19.70      | 0        |
|           |          |       | QPSK       | 25      | 0         | 19.65               | 19.90    | 19.76      | 0        |
|           |          |       |            | 1       | 1         | 19.60               | 19.64    | 19.62      | 0        |
|           |          |       |            | 1       | 13        | 19.56               | 19.81    | 19.68      | 0        |
|           |          |       |            | 1       | 23        | 19.52               | 19.82    | 19.62      | 0        |
|           |          |       |            | 12      | 0         | 19.62               | 19.69    | 19.77      | 0        |
|           |          |       |            | 12      | 7         | 19.67               | 19.76    | 19.76      | 0        |
|           |          |       |            | 12      | 13        | 19.63               | 19.78    | 19.79      | 0        |
|           |          |       |            | 25      | 0         | 19.64               | 19.77    | 19.76      | 0        |
|           |          |       | 16QAM      | 1       | 1         | 19.54               | 19.70    | 19.67      | 0        |
|           |          |       | 64QAM      | 1       | 1         | 19.52               | 19.65    | 19.62      | 0        |
|           |          |       | 256QAM     | 1       | 1         | 18.89               | 19.29    | 18.93      | 0.5      |
|           |          | CP    | QPSK       | 1       | 1         | 19.50               | 19.74    | 19.63      | 0        |

NR Band n66 \_10 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|----------|----------|
|           |          |       |            |         |           | 343000              | 349000   | 355000   |          |
|           |          |       |            |         |           | 1715 MHz            | 1745 MHz | 1775 MHz |          |
| 10 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 19.41               | 19.66    | 19.66    | 0        |
|           |          |       |            | 1       | 26        | 19.46               | 19.81    | 19.70    | 0        |
|           |          |       |            | 1       | 50        | 19.47               | 19.79    | 19.66    | 0        |
|           |          |       |            | 25      | 0         | 19.50               | 19.76    | 19.72    | 0        |
|           |          |       |            | 25      | 14        | 19.53               | 19.88    | 19.77    | 0        |
|           |          |       |            | 25      | 27        | 19.53               | 19.91    | 19.75    | 0        |
|           |          |       |            | 50      | 0         | 19.53               | 19.88    | 19.78    | 0        |
|           |          |       | QPSK       | 1       | 1         | 19.49               | 19.59    | 19.59    | 0        |
|           |          |       |            | 1       | 26        | 19.47               | 19.73    | 19.64    | 0        |
|           |          |       |            | 1       | 50        | 19.47               | 19.70    | 19.59    | 0        |
|           |          |       |            | 25      | 0         | 19.56               | 19.83    | 19.81    | 0        |
|           |          |       |            | 25      | 14        | 19.57               | 19.88    | 19.85    | 0        |
|           |          |       |            | 25      | 27        | 19.59               | 19.91    | 19.85    | 0        |
|           |          |       |            | 50      | 0         | 19.56               | 19.89    | 19.86    | 0        |
|           |          |       | 16QAM      | 1       | 1         | 19.69               | 19.77    | 19.70    | 0        |
|           |          |       | 64QAM      | 1       | 1         | 19.47               | 19.68    | 19.62    | 0        |
|           |          |       | 256QAM     | 1       | 1         | 18.94               | 19.10    | 19.06    | 0.5      |
|           |          | CP    | QPSK       | 1       | 1         | 19.53               | 19.73    | 19.68    | 0        |

## NR Band n66 \_ 15 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |            | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|------------|----------|
|           |          |       |            |         |           | 343500              | 349000   | 354500     |          |
|           |          |       |            |         |           | 1717.5 MHz          | 1745 MHz | 1772.5 MHz |          |
| 15 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 19.52               | 19.58    | 19.71      | 0        |
|           |          |       |            | 1       | 40        | 19.45               | 19.61    | 19.68      | 0        |
|           |          |       |            | 1       | 77        | 19.54               | 19.72    | 19.77      | 0        |
|           |          |       |            | 36      | 0         | 19.61               | 19.80    | 19.76      | 0        |
|           |          |       |            | 36      | 22        | 19.59               | 19.78    | 19.78      | 0        |
|           |          |       |            | 36      | 43        | 19.63               | 19.80    | 19.76      | 0        |
|           |          |       |            | 75      | 0         | 19.64               | 19.79    | 19.82      | 0        |
|           |          |       | QPSK       | 1       | 1         | 19.52               | 19.55    | 19.69      | 0        |
|           |          |       |            | 1       | 40        | 19.52               | 19.56    | 19.68      | 0        |
|           |          |       |            | 1       | 77        | 19.56               | 19.70    | 19.74      | 0        |
|           |          |       |            | 36      | 0         | 19.66               | 19.86    | 19.81      | 0        |
|           |          |       |            | 36      | 22        | 19.59               | 19.86    | 19.81      | 0        |
|           |          |       |            | 36      | 43        | 19.64               | 19.82    | 19.84      | 0        |
|           |          |       |            | 75      | 0         | 19.65               | 19.88    | 19.84      | 0        |
|           |          |       | 16QAM      | 1       | 1         | 19.70               | 19.82    | 19.85      | 0        |
|           |          |       | 64QAM      | 1       | 1         | 19.58               | 19.50    | 19.71      | 0        |
|           |          |       | 256QAM     | 1       | 1         | 18.86               | 18.99    | 19.05      | 0.5      |
|           |          | CP    | QPSK       | 1       | 1         | 19.55               | 19.71    | 19.73      | 0        |

## NR Band n66 \_ 20 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|----------|----------|
|           |          |       |            |         |           | 344000              | 349000   | 354000   |          |
|           |          |       |            |         |           | 1720 MHz            | 1745 MHz | 1770 MHz |          |
| 20 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 19.58               | 19.50    | 19.58    | 0        |
|           |          |       |            | 1       | 53        | 19.53               | 19.63    | 19.58    | 0        |
|           |          |       |            | 1       | 104       | 19.57               | 19.70    | 19.62    | 0        |
|           |          |       |            | 50      | 0         | 19.69               | 19.68    | 19.73    | 0        |
|           |          |       |            | 50      | 28        | 19.66               | 19.80    | 19.70    | 0        |
|           |          |       |            | 50      | 56        | 19.64               | 19.77    | 19.68    | 0        |
|           |          |       |            | 100     | 0         | 19.68               | 19.82    | 19.68    | 0        |
|           |          |       | QPSK       | 1       | 1         | 19.52               | 19.46    | 19.56    | 0        |
|           |          |       |            | 1       | 53        | 19.46               | 19.63    | 19.49    | 0        |
|           |          |       |            | 1       | 104       | 19.88               | 19.63    | 19.55    | 0        |
|           |          |       |            | 50      | 0         | 19.66               | 19.76    | 19.72    | 0        |
|           |          |       |            | 50      | 28        | 19.70               | 19.83    | 19.85    | 0        |
|           |          |       |            | 50      | 56        | 19.65               | 19.82    | 19.75    | 0        |
|           |          |       |            | 100     | 0         | 19.69               | 19.86    | 19.72    | 0        |
|           |          |       | 16QAM      | 1       | 1         | 19.94               | 19.89    | 19.57    | 0        |
|           |          |       | 64QAM      | 1       | 1         | 19.53               | 19.45    | 19.85    | 0        |
|           |          |       | 256QAM     | 1       | 1         | 19.34               | 19.46    | 19.46    | 0.5      |
|           |          | CP    | QPSK       | 1       | 1         | 19.54               | 19.56    | 19.76    | 0        |

# [ NR Band n66 Conducted Power Sub Ant.\_NSA]

NR Band n66 \_5 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |            | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|------------|----------|
|           |          |       |            |         |           | 342500              | 349000   | 355500     |          |
|           |          |       |            |         |           | 1712.5 MHz          | 1745 MHz | 1777.5 MHz |          |
| 5 MHz     | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 17.63               | 17.87    | 17.76      | 0        |
|           |          |       |            | 1       | 13        | 17.67               | 17.96    | 17.81      | 0        |
|           |          |       |            | 1       | 23        | 17.65               | 17.93    | 17.80      | 0        |
|           |          |       |            | 12      | 0         | 17.68               | 17.96    | 17.82      | 0        |
|           |          |       |            | 12      | 7         | 17.68               | 17.97    | 17.84      | 0        |
|           |          |       |            | 12      | 13        | 17.73               | 17.99    | 17.83      | 0        |
|           |          |       | QPSK       | 25      | 0         | 17.70               | 17.99    | 17.82      | 0        |
|           |          |       |            | 1       | 1         | 17.59               | 17.78    | 17.70      | 0        |
|           |          |       |            | 1       | 13        | 17.58               | 17.86    | 17.75      | 0        |
|           |          |       |            | 1       | 23        | 17.61               | 17.84    | 17.72      | 0        |
|           |          |       |            | 12      | 0         | 17.73               | 17.98    | 17.87      | 0        |
|           |          |       |            | 12      | 7         | 17.73               | 17.88    | 17.87      | 0        |
|           |          |       |            | 12      | 13        | 17.72               | 17.92    | 17.90      | 0        |
|           |          |       |            | 25      | 0         | 17.70               | 17.97    | 17.90      | 0        |
|           |          |       | 16QAM      | 1       | 1         | 17.96               | 17.92    | 17.89      | 0        |
|           |          |       | 64QAM      | 1       | 1         | 17.56               | 17.82    | 17.72      | 0        |
|           |          |       | 256QAM     | 1       | 1         | 17.53               | 17.70    | 17.63      | 0        |
|           |          | CP    | QPSK       | 1       | 1         | 17.62               | 17.88    | 17.84      | 0        |

NR Band n66 \_10 Mhz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|----------|----------|
|           |          |       |            |         |           | 343000              | 349000   | 355000   |          |
|           |          |       |            |         |           | 1715 MHz            | 1745 MHz | 1775 MHz |          |
| 10 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 17.73               | 17.83    | 17.82    | 0        |
|           |          |       |            | 1       | 26        | 17.77               | 17.91    | 17.91    | 0        |
|           |          |       |            | 1       | 50        | 17.78               | 17.92    | 17.90    | 0        |
|           |          |       |            | 25      | 0         | 17.79               | 17.96    | 17.89    | 0        |
|           |          |       |            | 25      | 14        | 17.78               | 17.94    | 17.92    | 0        |
|           |          |       |            | 25      | 27        | 17.80               | 17.92    | 17.96    | 0        |
|           |          |       | QPSK       | 50      | 0         | 17.83               | 17.91    | 17.91    | 0        |
|           |          |       |            | 1       | 1         | 17.67               | 17.75    | 17.78    | 0        |
|           |          |       |            | 1       | 26        | 17.70               | 17.91    | 17.79    | 0        |
|           |          |       |            | 1       | 50        | 17.70               | 17.91    | 17.80    | 0        |
|           |          |       |            | 25      | 0         | 17.86               | 17.99    | 17.96    | 0        |
|           |          |       |            | 25      | 14        | 17.84               | 17.94    | 17.94    | 0        |
|           |          |       |            | 25      | 27        | 17.85               | 17.97    | 17.99    | 0        |
|           |          |       |            | 50      | 0         | 17.83               | 17.85    | 17.95    | 0        |
|           |          |       | 16QAM      | 1       | 1         | 17.96               | 17.84    | 17.99    | 0        |
|           |          |       | 64QAM      | 1       | 1         | 17.64               | 17.76    | 17.78    | 0        |
|           |          |       | 256QAM     | 1       | 1         | 17.58               | 17.63    | 17.67    | 0        |
|           |          | CP    | QPSK       | 1       | 1         | 17.75               | 17.86    | 17.90    | 0        |

## NR Band n66 \_ 15 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |            | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|------------|----------|
|           |          |       |            |         |           | 343500              | 349000   | 354500     |          |
|           |          |       |            |         |           | 1717.5 MHz          | 1745 MHz | 1772.5 MHz |          |
| 15 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 17.80               | 17.85    | 17.87      | 0        |
|           |          |       |            | 1       | 40        | 17.75               | 17.87    | 17.88      | 0        |
|           |          |       |            | 1       | 77        | 17.91               | 17.93    | 17.97      | 0        |
|           |          |       |            | 36      | 0         | 17.84               | 17.97    | 17.98      | 0        |
|           |          |       |            | 36      | 22        | 17.83               | 17.95    | 17.95      | 0        |
|           |          |       |            | 36      | 43        | 17.91               | 17.92    | 17.99      | 0        |
|           |          |       |            | 75      | 0         | 17.92               | 17.98    | 17.99      | 0        |
|           |          |       | QPSK       | 1       | 1         | 17.76               | 17.77    | 17.82      | 0        |
|           |          |       |            | 1       | 40        | 17.70               | 17.78    | 17.78      | 0        |
|           |          |       |            | 1       | 77        | 17.80               | 17.95    | 17.91      | 0        |
|           |          |       |            | 36      | 0         | 17.88               | 17.91    | 17.92      | 0        |
|           |          |       |            | 36      | 22        | 17.86               | 17.96    | 17.96      | 0        |
|           |          |       |            | 36      | 43        | 17.90               | 17.94    | 17.91      | 0        |
|           |          |       |            | 75      | 0         | 17.92               | 17.96    | 17.89      | 0        |
|           |          |       | 16QAM      | 1       | 1         | 17.91               | 17.96    | 17.99      | 0        |
|           |          |       | 64QAM      | 1       | 1         | 17.69               | 17.77    | 17.87      | 0        |
|           |          |       | 256QAM     | 1       | 1         | 17.77               | 17.56    | 17.67      | 0        |
|           |          | CP    | QPSK       | 1       | 1         | 17.82               | 17.90    | 17.93      | 0        |

## NR Band n66 \_ 20 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|----------|----------|
|           |          |       |            |         |           | 344000              | 349000   | 354000   |          |
|           |          |       |            |         |           | 1720 MHz            | 1745 MHz | 1770 MHz |          |
| 20 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 17.72               | 17.76    | 17.72    | 0        |
|           |          |       |            | 1       | 53        | 17.68               | 17.80    | 17.74    | 0        |
|           |          |       |            | 1       | 104       | 17.78               | 17.81    | 17.82    | 0        |
|           |          |       |            | 50      | 0         | 17.81               | 17.84    | 17.86    | 0        |
|           |          |       |            | 50      | 28        | 17.76               | 17.84    | 17.84    | 0        |
|           |          |       |            | 50      | 56        | 17.85               | 17.91    | 17.89    | 0        |
|           |          |       |            | 100     | 0         | 17.79               | 17.91    | 17.89    | 0        |
|           |          |       | QPSK       | 1       | 1         | 17.92               | 17.66    | 17.73    | 0        |
|           |          |       |            | 1       | 53        | 17.63               | 17.67    | 17.69    | 0        |
|           |          |       |            | 1       | 104       | 17.72               | 17.84    | 17.75    | 0        |
|           |          |       |            | 50      | 0         | 17.78               | 17.87    | 17.88    | 0        |
|           |          |       |            | 50      | 28        | 17.98               | 17.86    | 17.87    | 0        |
|           |          |       |            | 50      | 56        | 17.81               | 17.89    | 17.89    | 0        |
|           |          |       |            | 100     | 0         | 17.80               | 17.86    | 17.87    | 0        |
|           |          |       | 16QAM      | 1       | 1         | 17.93               | 17.88    | 17.89    | 0        |
|           |          |       | 64QAM      | 1       | 1         | 17.65               | 17.72    | 17.73    | 0        |
|           |          |       | 256QAM     | 1       | 1         | 17.52               | 17.46    | 17.46    | 0        |
|           |          | CP    | QPSK       | 1       | 1         | 17.88               | 17.76    | 17.77    | 0        |

### 11.4.3 NR Bands Conducted Power for Grip sensor and Earjack activated

#### [ NR Band n66 Conducted Power Main Ant.\_SA]

NR Band n66 \_5 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |            | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|------------|----------|
|           |          |       |            |         |           | 342500              | 349000   | 355500     |          |
|           |          |       |            |         |           | 1712.5 MHz          | 1745 MHz | 1777.5 MHz |          |
| 5 MHz     | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 19.56               | 19.80    | 19.69      | 0        |
|           |          |       |            | 1       | 13        | 19.62               | 19.86    | 19.71      | 0        |
|           |          |       |            | 1       | 23        | 19.61               | 19.87    | 19.71      | 0        |
|           |          |       |            | 12      | 0         | 19.63               | 19.84    | 19.79      | 0        |
|           |          |       |            | 12      | 7         | 19.64               | 19.83    | 19.79      | 0        |
|           |          |       |            | 12      | 13        | 19.62               | 19.90    | 19.79      | 0        |
|           |          |       |            | 25      | 0         | 19.66               | 19.77    | 19.85      | 0        |
|           |          |       | QPSK       | 1       | 1         | 19.53               | 19.81    | 19.64      | 0        |
|           |          |       |            | 1       | 13        | 19.51               | 19.95    | 19.70      | 0        |
|           |          |       |            | 1       | 23        | 19.50               | 19.88    | 19.69      | 0        |
|           |          |       |            | 12      | 0         | 19.64               | 19.95    | 19.79      | 0        |
|           |          |       |            | 12      | 7         | 19.68               | 19.93    | 19.75      | 0        |
|           |          |       |            | 12      | 13        | 19.65               | 19.90    | 19.83      | 0        |
|           |          |       |            | 25      | 0         | 19.66               | 19.93    | 19.84      | 0        |
|           |          |       | 16QAM      | 1       | 1         | 19.81               | 19.94    | 19.80      | 0        |
|           |          |       | 64QAM      | 1       | 1         | 19.52               | 19.84    | 19.76      | 0        |
|           |          |       | 256QAM     | 1       | 1         | 18.90               | 19.32    | 19.26      | 0.5      |
|           |          | CP    | QPSK       | 1       | 1         | 19.50               | 19.81    | 19.69      | 0        |

NR Band n66 \_10 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|----------|----------|
|           |          |       |            |         |           | 343000              | 349000   | 355000   |          |
|           |          |       |            |         |           | 1715 MHz            | 1745 MHz | 1775 MHz |          |
| 10 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 19.58               | 19.88    | 19.73    | 0        |
|           |          |       |            | 1       | 26        | 19.59               | 19.73    | 19.81    | 0        |
|           |          |       |            | 1       | 50        | 19.55               | 19.84    | 19.74    | 0        |
|           |          |       |            | 25      | 0         | 19.65               | 19.95    | 19.72    | 0        |
|           |          |       |            | 25      | 14        | 19.60               | 19.79    | 19.84    | 0        |
|           |          |       |            | 25      | 27        | 19.63               | 19.80    | 19.84    | 0        |
|           |          |       | QPSK       | 50      | 0         | 19.61               | 19.76    | 19.85    | 0        |
|           |          |       |            | 1       | 1         | 19.58               | 19.83    | 19.66    | 0        |
|           |          |       |            | 1       | 26        | 19.59               | 19.95    | 19.74    | 0        |
|           |          |       |            | 1       | 50        | 19.57               | 19.94    | 19.68    | 0        |
|           |          |       |            | 25      | 0         | 19.67               | 19.94    | 19.77    | 0        |
|           |          |       |            | 25      | 14        | 19.63               | 19.93    | 19.82    | 0        |
|           |          |       |            | 25      | 27        | 19.65               | 19.90    | 19.74    | 0        |
|           |          |       |            | 50      | 0         | 19.66               | 19.93    | 19.78    | 0        |
|           |          |       | 16QAM      | 1       | 1         | 19.63               | 19.83    | 19.76    | 0        |
|           |          |       | 64QAM      | 1       | 1         | 19.53               | 19.91    | 19.62    | 0        |
|           |          |       | 256QAM     | 1       | 1         | 18.99               | 19.38    | 19.30    | 0.5      |
|           |          | CP    | QPSK       | 1       | 1         | 19.54               | 19.86    | 19.76    | 0        |

## NR Band n66 \_ 15 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |            | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|------------|----------|
|           |          |       |            |         |           | 343500              | 349000   | 354500     |          |
|           |          |       |            |         |           | 1717.5 MHz          | 1745 MHz | 1772.5 MHz |          |
| 15 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 19.51               | 19.74    | 19.67      | 0        |
|           |          |       |            | 1       | 40        | 19.49               | 19.77    | 19.65      | 0        |
|           |          |       |            | 1       | 77        | 19.57               | 19.89    | 19.77      | 0        |
|           |          |       |            | 36      | 0         | 19.59               | 19.86    | 19.79      | 0        |
|           |          |       |            | 36      | 22        | 19.60               | 19.92    | 19.79      | 0        |
|           |          |       |            | 36      | 43        | 19.60               | 19.94    | 19.83      | 0        |
|           |          |       |            | 75      | 0         | 19.59               | 19.87    | 19.85      | 0        |
|           |          |       | QPSK       | 1       | 1         | 19.57               | 19.65    | 19.65      | 0        |
|           |          |       |            | 1       | 40        | 19.48               | 19.76    | 19.60      | 0        |
|           |          |       |            | 1       | 77        | 19.60               | 19.84    | 19.72      | 0        |
|           |          |       |            | 36      | 0         | 19.70               | 19.95    | 19.84      | 0        |
|           |          |       |            | 36      | 22        | 19.62               | 19.95    | 19.85      | 0        |
|           |          |       |            | 36      | 43        | 19.65               | 19.95    | 19.77      | 0        |
|           |          |       |            | 75      | 0         | 19.69               | 19.89    | 19.76      | 0        |
|           |          |       | 16QAM      | 1       | 1         | 19.77               | 19.85    | 19.69      | 0        |
|           |          |       | 64QAM      | 1       | 1         | 19.54               | 19.68    | 19.68      | 0        |
|           |          |       | 256QAM     | 1       | 1         | 18.86               | 19.14    | 18.97      | 0.5      |
|           |          | CP    | QPSK       | 1       | 1         | 19.56               | 19.79    | 19.77      | 0        |

## NR Band n66 \_ 20 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|----------|----------|
|           |          |       |            |         |           | 344000              | 349000   | 354000   |          |
|           |          |       |            |         |           | 1720 MHz            | 1745 MHz | 1770 MHz |          |
| 20 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 19.56               | 19.53    | 19.53    | 0        |
|           |          |       |            | 1       | 53        | 19.51               | 19.66    | 19.51    | 0        |
|           |          |       |            | 1       | 104       | 19.49               | 19.74    | 19.58    | 0        |
|           |          |       |            | 50      | 0         | 19.60               | 19.72    | 19.68    | 0        |
|           |          |       |            | 50      | 28        | 19.61               | 19.79    | 19.69    | 0        |
|           |          |       |            | 50      | 56        | 19.64               | 19.84    | 19.67    | 0        |
|           |          |       |            | 100     | 0         | 19.66               | 19.82    | 19.69    | 0        |
|           |          |       | QPSK       | 1       | 1         | 19.47               | 19.49    | 19.60    | 0        |
|           |          |       |            | 1       | 53        | 19.41               | 19.64    | 19.60    | 0        |
|           |          |       |            | 1       | 104       | 19.43               | 19.87    | 19.66    | 0        |
|           |          |       |            | 50      | 0         | 19.65               | 19.94    | 19.73    | 0        |
|           |          |       |            | 50      | 28        | 19.62               | 19.87    | 19.71    | 0        |
|           |          |       |            | 50      | 56        | 19.66               | 19.85    | 19.75    | 0        |
|           |          |       |            | 100     | 0         | 19.66               | 19.89    | 19.71    | 0        |
|           |          |       | 16QAM      | 1       | 1         | 19.95               | 19.97    | 19.62    | 0        |
|           |          |       | 64QAM      | 1       | 1         | 19.53               | 19.51    | 19.62    | 0        |
|           |          |       | 256QAM     | 1       | 1         | 19.27               | 19.48    | 19.47    | 0.5      |
|           |          | CP    | QPSK       | 1       | 1         | 19.69               | 19.53    | 19.65    | 0        |

#### 11.4.4 NR BandReduced Conducted Power(RCV Sensor On )

##### [ NR Band n41 Conducted Power ]

NR Band n41\_20 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |             |             |             |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|-------------|-------------|-------------|-------------|----------|
|           |          |       |            |         |           | 501204              | 509898      | 518598      | 527298      | 535998      |          |
|           |          |       |            |         |           | 2506.02 MHz         | 2549.49 MHz | 2592.99 MHz | 2636.49 MHz | 2679.99 MHz |          |
| 20MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 21.17               | 21.19       | 20.92       | 20.36       | 19.71       | 0        |
|           |          |       |            | 1       | 26        | 21.27               | 21.08       | 20.75       | 20.20       | 20.02       | 0        |
|           |          |       |            | 1       | 49        | 21.38               | 21.12       | 20.89       | 20.16       | 19.57       | 0        |
|           |          |       |            | 25      | 0         | 21.20               | 21.21       | 20.90       | 20.31       | 19.99       | 0        |
|           |          |       |            | 25      | 13        | 21.36               | 21.10       | 20.86       | 20.25       | 20.07       | 0        |
|           |          |       |            | 25      | 26        | 21.35               | 21.17       | 20.90       | 20.30       | 19.92       | 0        |
|           |          |       |            | 50      | 0         | 21.29               | 21.18       | 20.90       | 20.29       | 19.91       | 0        |
|           |          |       | QPSK       | 1       | 1         | 21.08               | 21.14       | 20.87       | 20.32       | 19.67       | 0        |
|           |          |       |            | 1       | 26        | 21.22               | 21.04       | 20.74       | 20.12       | 19.96       | 0        |
|           |          |       |            | 1       | 49        | 21.31               | 21.08       | 20.80       | 20.09       | 20.59       | 0        |
|           |          |       |            | 25      | 0         | 21.23               | 21.24       | 20.90       | 20.31       | 20.06       | 0        |
|           |          |       |            | 25      | 13        | 21.33               | 21.14       | 20.87       | 20.31       | 20.09       | 0        |
|           |          |       |            | 25      | 26        | 21.35               | 21.18       | 20.91       | 20.28       | 19.91       | 0        |
|           |          |       |            | 50      | 0         | 21.32               | 21.19       | 20.90       | 20.33       | 19.97       | 0        |
|           |          |       | 16QAM      | 1       | 1         | 21.14               | 21.14       | 20.88       | 20.35       | 19.72       | 0        |
|           |          |       | 64QAM      | 1       | 1         | 20.56               | 20.73       | 20.22       | 19.77       | 20.27       | 0        |
|           |          |       | 256QAM     | 1       | 1         | 21.10               | 21.12       | 20.89       | 21.13       | 19.68       | 0        |
|           |          | CP    | QPSK       | 1       | 1         | 21.18               | 21.17       | 20.97       | 20.40       | 19.71       | 0        |

NR Band n41\_30 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |             |             |          |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|-------------|-------------|----------|-------------|----------|
|           |          |       |            |         |           | 502200              | 510402      | 518598      | 526800   | 534996      |          |
|           |          |       |            |         |           | 2511 MHz            | 2552.01 MHz | 2592.99 MHz | 2634 MHz | 2674.98 MHz |          |
| 30MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 21.32               | 21.41       | 21.11       | 20.72    | 20.18       | 0        |
|           |          |       |            | 1       | 39        | 21.34               | 21.38       | 21.01       | 20.48    | 20.04       | 0        |
|           |          |       |            | 1       | 76        | 21.47               | 21.34       | 20.94       | 20.47    | 19.93       | 0        |
|           |          |       |            | 36      | 0         | 21.39               | 21.41       | 21.03       | 20.66    | 20.14       | 0        |
|           |          |       |            | 36      | 21        | 21.49               | 21.30       | 20.92       | 20.46    | 19.99       | 0        |
|           |          |       |            | 36      | 42        | 21.48               | 21.38       | 21.00       | 20.42    | 19.96       | 0        |
|           |          |       |            | 75      | 0         | 21.44               | 21.36       | 21.03       | 20.51    | 20.03       | 0        |
|           |          |       | QPSK       | 1       | 1         | 21.22               | 21.29       | 21.03       | 20.68    | 20.10       | 0        |
|           |          |       |            | 1       | 39        | 21.44               | 21.23       | 20.88       | 20.41    | 19.90       | 0        |
|           |          |       |            | 1       | 76        | 21.43               | 21.28       | 20.88       | 20.36    | 19.84       | 0        |
|           |          |       |            | 36      | 0         | 21.43               | 21.41       | 21.03       | 20.65    | 20.12       | 0        |
|           |          |       |            | 36      | 21        | 21.49               | 21.30       | 20.94       | 20.47    | 20.03       | 0        |
|           |          |       |            | 36      | 42        | 21.47               | 21.35       | 20.99       | 20.44    | 19.94       | 0        |
|           |          |       |            | 75      | 0         | 21.39               | 21.36       | 21.04       | 20.53    | 20.06       | 0        |
|           |          |       | 16QAM      | 1       | 1         | 21.33               | 21.33       | 21.09       | 20.66    | 20.10       | 0        |
|           |          |       | 64QAM      | 1       | 1         | 20.79               | 20.89       | 20.66       | 20.34    | 19.64       | 0        |
|           |          |       | 256QAM     | 1       | 1         | 21.24               | 21.34       | 21.09       | 20.64    | 20.14       | 0        |
|           |          | CP    | QPSK       | 1       | 1         | 21.38               | 21.40       | 21.12       | 20.76    | 20.12       | 0        |

## NR Band n41\_40 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |             |  |             |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|-------------|--|-------------|----------|----------|
|           |          |       |            |         |           | 503202              | 513468      |  | 523734      | 534000   |          |
|           |          |       |            |         |           | 2516.01 MHz         | 2567.34 MHz |  | 2618.67 MHz | 2670 MHz |          |
| 40MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 21.19               | 21.21       |  | 20.87       | 20.16    | 0        |
|           |          |       |            | 1       | 53        | 21.37               | 21.12       |  | 20.52       | 19.89    | 0        |
|           |          |       |            | 1       | 104       | 21.41               | 21.02       |  | 20.45       | 19.83    | 0        |
|           |          |       |            | 50      | 0         | 21.35               | 21.19       |  | 20.70       | 20.09    | 0        |
|           |          |       |            | 50      | 28        | 21.41               | 21.11       |  | 20.60       | 19.98    | 0        |
|           |          |       |            | 50      | 56        | 21.40               | 21.06       |  | 20.55       | 19.92    | 0        |
|           |          |       |            | 100     | 0         | 21.40               | 21.15       |  | 20.64       | 20.06    | 0        |
|           |          |       | QPSK       | 1       | 1         | 21.08               | 21.13       |  | 20.73       | 20.07    | 0        |
|           |          |       |            | 1       | 53        | 21.25               | 21.01       |  | 20.52       | 19.80    | 0        |
|           |          |       |            | 1       | 104       | 21.44               | 20.96       |  | 20.42       | 19.76    | 0        |
|           |          |       |            | 50      | 0         | 21.37               | 21.19       |  | 20.76       | 20.08    | 0        |
|           |          |       |            | 50      | 28        | 21.40               | 21.13       |  | 20.56       | 19.92    | 0        |
|           |          |       |            | 50      | 56        | 21.47               | 21.04       |  | 20.60       | 19.92    | 0        |
|           |          |       |            | 100     | 0         | 21.40               | 21.18       |  | 20.67       | 20.10    | 0        |
|           |          |       | 16QAM      | 1       | 1         | 21.28               | 21.13       |  | 20.80       | 20.06    | 0        |
|           |          |       | 64QAM      | 1       | 1         | 20.67               | 20.74       |  | 20.49       | 19.83    | 0        |
|           |          |       | 256QAM     | 1       | 1         | 21.07               | 21.14       |  | 20.78       | 20.50    | 0        |
|           |          | CP    | QPSK       | 1       | 1         | 21.20               | 21.22       |  | 20.88       | 20.17    | 0        |

## NR Band n41\_50 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |  |             |  |             | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|--|-------------|--|-------------|----------|
|           |          |       |            |         |           | 504204              |  | 518598      |  | 532998      |          |
|           |          |       |            |         |           | 2521.02 MHz         |  | 2592.99 MHz |  | 2664.99 MHz |          |
| 50MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 20.97               |  | 21.15       |  | 20.44       | 0        |
|           |          |       |            | 1       | 67        | 21.20               |  | 20.93       |  | 20.04       | 0        |
|           |          |       |            | 1       | 131       | 21.18               |  | 20.75       |  | 19.98       | 0        |
|           |          |       |            | 64      | 0         | 21.22               |  | 20.90       |  | 20.28       | 0        |
|           |          |       |            | 64      | 35        | 21.20               |  | 20.94       |  | 20.04       | 0        |
|           |          |       |            | 64      | 69        | 21.17               |  | 20.90       |  | 19.97       | 0        |
|           |          |       |            | 128     | 0         | 21.24               |  | 20.90       |  | 20.09       | 0        |
|           |          |       | QPSK       | 1       | 1         | 20.93               |  | 21.01       |  | 20.37       | 0        |
|           |          |       |            | 1       | 67        | 21.14               |  | 20.83       |  | 19.99       | 0        |
|           |          |       |            | 1       | 131       | 21.10               |  | 20.69       |  | 19.86       | 0        |
|           |          |       |            | 64      | 0         | 21.25               |  | 20.90       |  | 20.29       | 0        |
|           |          |       |            | 64      | 35        | 21.25               |  | 20.97       |  | 20.08       | 0        |
|           |          |       |            | 64      | 69        | 21.18               |  | 20.92       |  | 19.99       | 0        |
|           |          |       |            | 128     | 0         | 21.20               |  | 20.94       |  | 20.03       | 0        |
|           |          |       | 16QAM      | 1       | 1         | 20.96               |  | 21.04       |  | 20.26       | 0        |
|           |          |       | 64QAM      | 1       | 1         | 20.35               |  | 20.75       |  | 20.04       | 0        |
|           |          |       | 256QAM     | 1       | 1         | 21.07               |  | 21.12       |  | 20.78       | 0        |
|           |          | CP    | QPSK       | 1       | 1         | 20.98               |  | 21.15       |  | 20.44       | 0        |

## NR Band n41\_60 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |       |             |       |             | MPR [dB] |   |
|-----------|----------|-------|------------|---------|-----------|---------------------|-------|-------------|-------|-------------|----------|---|
|           |          |       |            |         |           | 505200              |       | 518598      |       | 531996      |          |   |
|           |          |       |            |         |           | 2526 MHz            |       | 2592.99 MHz |       | 2659.98 MHz |          |   |
| 60MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 20.66               |       | 21.05       |       | 20.37       | 0        |   |
|           |          |       |            | 1       | 81        | 21.02               |       | 20.96       |       | 20.01       | 0        |   |
|           |          |       |            | 1       | 160       | 21.07               |       | 20.81       |       | 19.97       | 0        |   |
|           |          |       |            | 81      | 0         | 20.99               |       | 20.99       |       | 20.19       | 0        |   |
|           |          |       |            | 81      | 41        | 21.08               |       | 20.99       |       | 20.07       | 0        |   |
|           |          |       |            | 81      | 81        | 21.14               |       | 20.85       |       | 19.98       | 0        |   |
|           |          |       | QPSK       | 162     | 0         | 21.07               |       | 20.96       |       | 20.10       | 0        |   |
|           |          |       |            | 1       | 1         | 20.57               |       | 20.97       |       | 20.26       | 0        |   |
|           |          |       |            | 1       | 81        | 20.96               |       | 20.86       |       | 19.99       | 0        |   |
|           |          |       |            | 1       | 160       | 20.95               |       | 20.67       |       | 19.85       | 0        |   |
|           |          |       |            | 81      | 0         | 21.03               |       | 21.02       |       | 20.18       | 0        |   |
|           |          |       |            | 81      | 41        | 21.05               |       | 20.98       |       | 20.06       | 0        |   |
|           |          |       |            | 81      | 81        | 21.17               |       | 20.87       |       | 19.94       | 0        |   |
|           |          |       |            | 162     | 0         | 21.09               |       | 20.97       |       | 20.13       | 0        |   |
|           |          |       |            | 16QAM   | 1         | 1                   | 20.61 |             | 20.98 |             | 20.50    | 0 |
|           |          |       |            | 64QAM   | 1         | 1                   | 20.18 |             | 20.68 |             | 19.96    | 0 |
|           |          |       | 256QAM     | 1       | 1         | 20.54               |       | 21.12       |       | 20.87       | 0        |   |
|           |          | CP    | QPSK       | 1       | 1         | 20.71               |       | 21.13       |       | 20.37       | 0        |   |

## NR Band n41\_80 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |  |  |  | MPR [dB] |             |
|-----------|----------|-------|------------|---------|-----------|---------------------|--|--|--|----------|-------------|
|           |          |       |            |         |           | 507204              |  |  |  |          | 529998      |
|           |          |       |            |         |           | 2536.02 MHz         |  |  |  |          | 2649.99 MHz |
| 80MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 20.95               |  |  |  | 20.46    | 0           |
|           |          |       |            | 1       | 109       | 21.09               |  |  |  | 20.08    | 0           |
|           |          |       |            | 1       | 215       | 21.10               |  |  |  | 19.80    | 0           |
|           |          |       |            | 108     | 0         | 21.15               |  |  |  | 20.30    | 0           |
|           |          |       |            | 108     | 55        | 21.09               |  |  |  | 20.11    | 0           |
|           |          |       |            | 108     | 109       | 21.22               |  |  |  | 19.93    | 0           |
|           |          |       |            | 216     | 0         | 21.11               |  |  |  | 20.14    | 0           |
|           |          |       | QPSK       | 1       | 1         | 20.85               |  |  |  | 20.39    | 0           |
|           |          |       |            | 1       | 109       | 20.97               |  |  |  | 19.97    | 0           |
|           |          |       |            | 1       | 215       | 20.98               |  |  |  | 19.65    | 0           |
|           |          |       |            | 108     | 0         | 21.20               |  |  |  | 20.26    | 0           |
|           |          |       |            | 108     | 55        | 21.15               |  |  |  | 20.05    | 0           |
|           |          |       |            | 108     | 109       | 21.22               |  |  |  | 19.90    | 0           |
|           |          |       |            | 216     | 0         | 21.12               |  |  |  | 20.12    | 0           |
|           |          |       | 16QAM      | 1       | 1         | 20.94               |  |  |  | 20.43    | 0           |
|           |          |       | 64QAM      | 1       | 1         | 20.39               |  |  |  | 20.26    | 0           |
|           |          |       | 256QAM     | 1       | 1         | 20.90               |  |  |  | 20.59    | 0           |
|           |          | CP    | QPSK       | 1       | 1         | 20.93               |  |  |  | 20.53    | 0           |

## NR Band n41\_90 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |       |  |       | MPR [dB] |             |
|-----------|----------|-------|------------|---------|-----------|---------------------|-------|--|-------|----------|-------------|
|           |          |       |            |         |           | 508200              |       |  |       |          | 528996      |
|           |          |       |            |         |           | 2541 MHz            |       |  |       |          | 2644.98 MHz |
| 90MHz     | 30       | DFT-s | pi/2 BPSK  | 1       | 1         | 21.05               |       |  |       | 20.69    | 0           |
|           |          |       |            | 1       | 123       | 21.24               |       |  |       | 20.21    | 0           |
|           |          |       |            | 1       | 243       | 21.04               |       |  |       | 19.74    | 0           |
|           |          |       |            | 120     | 0         | 21.19               |       |  |       | 20.48    | 0           |
|           |          |       |            | 120     | 63        | 21.16               |       |  |       | 20.33    | 0           |
|           |          |       |            | 120     | 125       | 21.17               |       |  |       | 19.95    | 0           |
|           |          |       | 243        | 0       | 21.19     |                     |       |  | 20.32 | 0        |             |
|           |          |       | QPSK       | 1       | 1         | 20.91               |       |  |       | 20.59    | 0           |
|           |          |       |            | 1       | 123       | 21.16               |       |  |       | 20.15    | 0           |
|           |          |       |            | 1       | 243       | 20.95               |       |  |       | 19.58    | 0           |
|           |          |       |            | 120     | 0         | 21.15               |       |  |       | 20.49    | 0           |
|           |          |       |            | 120     | 63        | 21.18               |       |  |       | 20.32    | 0           |
|           |          |       |            | 120     | 125       | 21.20               |       |  |       | 19.95    | 0           |
|           |          |       |            | 243     | 0         | 21.20               |       |  |       | 20.36    | 0           |
|           |          |       |            | 16QAM   | 1         | 1                   | 20.97 |  |       |          | 20.59       |
|           |          |       | 64QAM      | 1       | 1         | 20.99               |       |  |       | 20.29    | 0           |
|           |          |       | 256QAM     | 1       | 1         | 21.27               |       |  |       | 20.40    | 0           |
|           |          | CP    | QPSK       | 1       | 1         | 21.02               |       |  |       | 20.74    | 0           |

## NR Band n41\_100 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |  |             |  | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|--|-------------|--|----------|
|           |          |       |            |         |           |                     |  | 518598      |  |          |
|           |          |       |            |         |           |                     |  | 2592.99 MHz |  |          |
| 100MHz    | 30       | DFT-s | pi/2 BPSK  | 1       | 1         |                     |  | 21.01       |  | 0        |
|           |          |       |            | 1       | 137       |                     |  | 20.77       |  | 0        |
|           |          |       |            | 1       | 271       |                     |  | 20.26       |  | 0        |
|           |          |       |            | 135     | 0         |                     |  | 20.94       |  | 0        |
|           |          |       |            | 135     | 69        |                     |  | 20.82       |  | 0        |
|           |          |       |            | 135     | 138       |                     |  | 20.54       |  | 0        |
|           |          |       |            | 270     | 0         |                     |  | 20.78       |  | 0        |
|           |          |       | QPSK       | 1       | 1         |                     |  | 21.00       |  | 0        |
|           |          |       |            | 1       | 137       |                     |  | 20.76       |  | 0        |
|           |          |       |            | 1       | 271       |                     |  | 20.14       |  | 0        |
|           |          |       |            | 135     | 0         |                     |  | 20.99       |  | 0        |
|           |          |       |            | 135     | 69        |                     |  | 21.01       |  | 0        |
|           |          |       |            | 135     | 138       |                     |  | 20.58       |  | 0        |
|           |          |       |            | 270     | 0         |                     |  | 20.74       |  | 0        |
|           |          |       | 16QAM      | 1       | 1         |                     |  | 20.97       |  | 0        |
|           |          |       | 64QAM      | 1       | 1         |                     |  | 20.64       |  | 0        |
|           |          |       | 256QAM     | 1       | 1         |                     |  | 20.88       |  | 0        |
|           |          | CP    | QPSK       | 1       | 1         |                     |  | 21.06       |  | 0        |

# [ NR Band n66 Conducted PowerSub Ant.\_NSA]

NR Band n66 \_5 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |            | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|------------|----------|
|           |          |       |            |         |           | 342500              | 349000   | 355500     |          |
|           |          |       |            |         |           | 1712.5 MHz          | 1745 MHz | 1777.5 MHz |          |
| 5 MHz     | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 17.82               | 17.88    | 17.69      | 0        |
|           |          |       |            | 1       | 13        | 17.85               | 17.91    | 17.69      | 0        |
|           |          |       |            | 1       | 23        | 17.86               | 17.90    | 17.71      | 0        |
|           |          |       |            | 12      | 0         | 17.86               | 17.97    | 17.78      | 0        |
|           |          |       |            | 12      | 7         | 17.92               | 17.95    | 17.75      | 0        |
|           |          |       |            | 12      | 13        | 17.92               | 17.96    | 17.77      | 0        |
|           |          |       |            | 25      | 0         | 17.92               | 17.93    | 17.75      | 0        |
|           |          |       | QPSK       | 1       | 1         | 17.75               | 17.83    | 17.62      | 0        |
|           |          |       |            | 1       | 13        | 17.82               | 17.82    | 17.62      | 0        |
|           |          |       |            | 1       | 23        | 17.78               | 17.86    | 17.66      | 0        |
|           |          |       |            | 12      | 0         | 17.94               | 17.98    | 17.80      | 0        |
|           |          |       |            | 12      | 7         | 17.94               | 17.97    | 17.82      | 0        |
|           |          |       |            | 12      | 13        | 17.95               | 17.93    | 17.78      | 0        |
|           |          |       |            | 25      | 0         | 17.95               | 17.95    | 17.78      | 0        |
|           |          |       | 16QAM      | 1       | 1         | 17.93               | 17.90    | 17.88      | 0        |
|           |          |       | 64QAM      | 1       | 1         | 17.75               | 17.83    | 17.65      | 0        |
|           |          |       | 256QAM     | 1       | 1         | 17.15               | 17.07    | 16.99      | 0.5      |
|           |          | CP    | QPSK       | 1       | 1         | 17.86               | 17.96    | 17.65      | 0        |

NR Band n66 \_10 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|----------|----------|
|           |          |       |            |         |           | 343000              | 349000   | 355000   |          |
|           |          |       |            |         |           | 1715 MHz            | 1745 MHz | 1775 MHz |          |
| 10 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 17.91               | 17.93    | 17.74    | 0        |
|           |          |       |            | 1       | 26        | 17.95               | 17.95    | 17.77    | 0        |
|           |          |       |            | 1       | 50        | 17.90               | 17.91    | 17.77    | 0        |
|           |          |       |            | 25      | 0         | 17.92               | 17.90    | 17.82    | 0        |
|           |          |       |            | 25      | 14        | 17.95               | 17.78    | 17.86    | 0        |
|           |          |       |            | 25      | 27        | 17.92               | 17.97    | 17.84    | 0        |
|           |          |       |            | 50      | 0         | 17.88               | 17.89    | 17.82    | 0        |
|           |          |       | QPSK       | 1       | 1         | 17.87               | 17.83    | 17.72    | 0        |
|           |          |       |            | 1       | 26        | 17.90               | 17.89    | 17.73    | 0        |
|           |          |       |            | 1       | 50        | 17.85               | 17.82    | 17.69    | 0        |
|           |          |       |            | 25      | 0         | 17.88               | 17.88    | 17.88    | 0        |
|           |          |       |            | 25      | 14        | 17.92               | 17.85    | 17.89    | 0        |
|           |          |       |            | 25      | 27        | 17.86               | 17.84    | 17.84    | 0        |
|           |          |       |            | 50      | 0         | 17.87               | 17.84    | 17.84    | 0        |
|           |          |       | 16QAM      | 1       | 1         | 17.93               | 17.95    | 17.91    | 0        |
|           |          |       | 64QAM      | 1       | 1         | 17.87               | 17.87    | 17.70    | 0        |
|           |          |       | 256QAM     | 1       | 1         | 17.24               | 17.48    | 17.08    | 0.5      |
|           |          | CP    | QPSK       | 1       | 1         | 17.87               | 17.96    | 17.78    | 0        |

## NR Band n66 \_ 15 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |            | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|------------|----------|
|           |          |       |            |         |           | 343500              | 349000   | 354500     |          |
|           |          |       |            |         |           | 1717.5 MHz          | 1745 MHz | 1772.5 MHz |          |
| 15 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 17.86               | 17.92    | 17.81      | 0        |
|           |          |       |            | 1       | 40        | 17.92               | 17.81    | 17.75      | 0        |
|           |          |       |            | 1       | 77        | 17.93               | 17.92    | 17.85      | 0        |
|           |          |       |            | 36      | 0         | 17.90               | 17.92    | 17.87      | 0        |
|           |          |       |            | 36      | 22        | 17.91               | 17.89    | 17.83      | 0        |
|           |          |       |            | 36      | 43        | 17.85               | 17.95    | 17.87      | 0        |
|           |          |       |            | 75      | 0         | 17.86               | 17.94    | 17.85      | 0        |
|           |          |       | QPSK       | 1       | 1         | 17.88               | 17.81    | 17.75      | 0        |
|           |          |       |            | 1       | 40        | 17.85               | 17.76    | 17.68      | 0        |
|           |          |       |            | 1       | 77        | 17.94               | 17.86    | 17.75      | 0        |
|           |          |       |            | 36      | 0         | 17.93               | 17.96    | 17.92      | 0        |
|           |          |       |            | 36      | 22        | 17.87               | 17.92    | 17.88      | 0        |
|           |          |       |            | 36      | 43        | 17.86               | 17.95    | 17.91      | 0        |
|           |          |       |            | 75      | 0         | 17.86               | 17.96    | 17.89      | 0        |
|           |          |       | 16QAM      | 1       | 1         | 17.91               | 17.98    | 17.96      | 0        |
|           |          |       | 64QAM      | 1       | 1         | 17.92               | 17.85    | 17.76      | 0        |
|           |          |       | 256QAM     | 1       | 1         | 17.22               | 17.21    | 17.03      | 0.5      |
|           |          | CP    | QPSK       | 1       | 1         | 17.86               | 17.91    | 17.81      | 0        |

## NR Band n66 \_ 20 MHz Bandwidth

| Bandwidth | SCS(kHz) | OFDM  | Modulation | RB Size | RB Offset | Reduced Power [dBm] |          |          | MPR [dB] |
|-----------|----------|-------|------------|---------|-----------|---------------------|----------|----------|----------|
|           |          |       |            |         |           | 344000              | 349000   | 354000   |          |
|           |          |       |            |         |           | 1720 MHz            | 1745 MHz | 1770 MHz |          |
| 20 MHz    | 15       | DFT-s | pi/2 BPSK  | 1       | 1         | 17.90               | 17.90    | 17.95    | 0        |
|           |          |       |            | 1       | 53        | 17.84               | 17.87    | 17.91    | 0        |
|           |          |       |            | 1       | 104       | 17.95               | 17.94    | 17.97    | 0        |
|           |          |       |            | 50      | 0         | 17.95               | 17.97    | 17.93    | 0        |
|           |          |       |            | 50      | 28        | 17.95               | 17.97    | 17.90    | 0        |
|           |          |       |            | 50      | 56        | 17.91               | 17.94    | 17.94    | 0        |
|           |          |       |            | 100     | 0         | 17.90               | 17.96    | 17.90    | 0        |
|           |          |       | QPSK       | 1       | 1         | 17.98               | 17.80    | 17.86    | 0        |
|           |          |       |            | 1       | 53        | 17.87               | 17.78    | 17.82    | 0        |
|           |          |       |            | 1       | 104       | 17.88               | 17.79    | 17.89    | 0        |
|           |          |       |            | 50      | 0         | 17.92               | 17.98    | 17.93    | 0        |
|           |          |       |            | 50      | 28        | 17.96               | 17.99    | 17.93    | 0        |
|           |          |       |            | 50      | 56        | 17.91               | 17.92    | 17.98    | 0        |
|           |          |       |            | 100     | 0         | 17.96               | 17.99    | 17.93    | 0        |
|           |          |       | 16QAM      | 1       | 1         | 17.98               | 17.98    | 17.97    | 0        |
|           |          |       | 64QAM      | 1       | 1         | 17.79               | 17.84    | 17.91    | 0        |
|           |          |       | 256QAM     | 1       | 1         | 17.59               | 17.61    | 17.67    | 0        |
|           |          | CP    | QPSK       | 1       | 1         | 17.83               | 17.90    | 17.89    | 0        |

## 11.5 WIFI Conducted Power measurement method

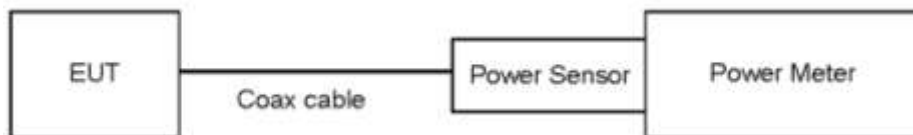
### Un-Licensed bands (DTS Band)

| Test Description       | Test Procedure Used                                                        |
|------------------------|----------------------------------------------------------------------------|
| Conducted Output Power | - KDB 558074 v05 - Section 8.3.2.3<br>- ANSI 63.10-2013 - Section 11.9.2.3 |

#### Test Procedure

1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add  $10 \log(1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

#### Test setup



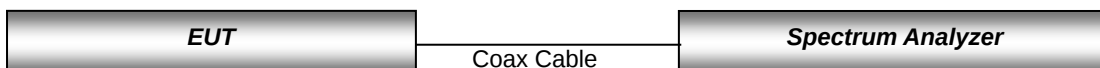
### Un-Licensed bands(NII Band)

| Test Description       | Test Procedure Used                     |
|------------------------|-----------------------------------------|
| Conducted Output Power | - KDB 789033 D02 v02r01 - Section E.3.a |

#### Test Procedure

1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add  $10 \log(1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

#### Test setup



### 11.5.1 IEEE 802.11 (2.4 GHz) Maximum Conducted Power

| Mode           | Frequency [MHz] | Channel | IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm] |
|----------------|-----------------|---------|--------------------------------------------------------|
|                |                 |         | Ant                                                    |
| 802.11b        | 2 412           | 1       | 18.91                                                  |
|                | 2 437           | 6       | 18.84                                                  |
|                | 2 462           | 11      | 18.73                                                  |
|                | 2 467           | 12      | 11.11                                                  |
|                | 2 472           | 13      | 11.07                                                  |
| 802.11g        | 2 412           | 1       | 17.38                                                  |
|                | 2 437           | 6       | 17.17                                                  |
|                | 2 462           | 11      | 17.11                                                  |
|                | 2 467           | 12      | 11.21                                                  |
|                | 2 472           | 13      | 10.98                                                  |
| 802.11n (HT20) | 2 412           | 1       | 17.03                                                  |
|                | 2 437           | 6       | 16.84                                                  |
|                | 2 462           | 11      | 16.72                                                  |
|                | 2 467           | 12      | 10.81                                                  |
|                | 2 472           | 13      | 11.04                                                  |

### 11.5.2 IEEE 802.11 (2.4 GHz) Reduced Conducted Power

| Mode           | Frequency [MHz] | Channel | IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm] |
|----------------|-----------------|---------|--------------------------------------------------------|
|                |                 |         | Ant                                                    |
| 802.11b        | 2 412           | 1       | 10.63                                                  |
|                | 2 437           | 6       | 10.82                                                  |
|                | 2 462           | 11      | 10.60                                                  |
| 802.11g        | 2 412           | 1       | 11.18                                                  |
|                | 2 437           | 6       | 11.21                                                  |
|                | 2 462           | 11      | 11.01                                                  |
| 802.11n (HT20) | 2 412           | 1       | 10.87                                                  |
|                | 2 437           | 6       | 10.84                                                  |
|                | 2 462           | 11      | 10.63                                                  |

### 11.5.3 IEEE 802.11 (5 GHz) Maximum Conducted Power

| Mode                   | Frequency [MHz] | Channel | IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm] |
|------------------------|-----------------|---------|------------------------------------------------------|
|                        |                 |         | Ant                                                  |
| 802.11a<br>(20 MHz BW) | 5 180           | 36      | 13.86                                                |
|                        | 5 200           | 40      | 13.92                                                |
|                        | 5 220           | 44      | 13.85                                                |
|                        | 5 240           | 48      | 14.06                                                |
|                        | 5 260           | 52      | 14.21                                                |
|                        | 5 280           | 56      | 14.21                                                |
|                        | 5 300           | 60      | 14.27                                                |
|                        | 5 320           | 64      | 14.22                                                |
|                        | 5 500           | 100     | 13.96                                                |
|                        | 5 600           | 120     | 13.98                                                |
|                        | 5 620           | 124     | 13.97                                                |
|                        | 5 720           | 144     | 14.20                                                |
|                        | 5 745           | 149     | 13.99                                                |
|                        | 5 785           | 157     | 13.90                                                |
|                        | 5 825           | 165     | 13.98                                                |

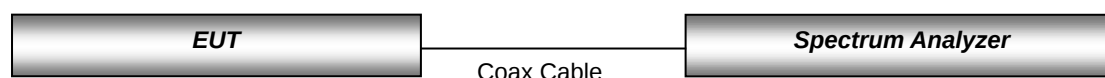
### 11.5.4 IEEE 802.11 (5 GHz) Reduced Conducted Power

| Mode                   | Frequency [MHz] | Channel | IEEE 802.11 (5 GHz) Average RF Conducted Power [dBm] |
|------------------------|-----------------|---------|------------------------------------------------------|
|                        |                 |         | Ant                                                  |
| 802.11ac<br>(80MHz BW) | 5 210           | 42      | 11.67                                                |
|                        | 5 290           | 58      | 11.56                                                |
|                        | 5 530           | 106     | 11.36                                                |
|                        | 5 610           | 122     | 11.62                                                |
|                        | 5 690           | 138     | 11.70                                                |
|                        | 5 775           | 155     | 11.59                                                |

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission mode with the same maximum output power specification, powers were measured for the largest channel bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-band channels, due to an even number of channels, both channels were measured.

### Test Configuration



## 11.6. Bluetooth Conducted Power

### 11.6.1 Bluetooth Maximum Conducted Power

The Burst averaged-conducted power

| Mode  | Channel | Bluetooth Power [dBm] |
|-------|---------|-----------------------|
| DH5   | 0       | 16.10                 |
|       | 39      | 15.79                 |
|       | 78      | 15.06                 |
| 2-DH5 | 0       | 12.87                 |
|       | 39      | 12.29                 |
|       | 78      | 11.83                 |
| 3-DH5 | 0       | 12.86                 |
|       | 39      | 12.28                 |
|       | 78      | 11.84                 |

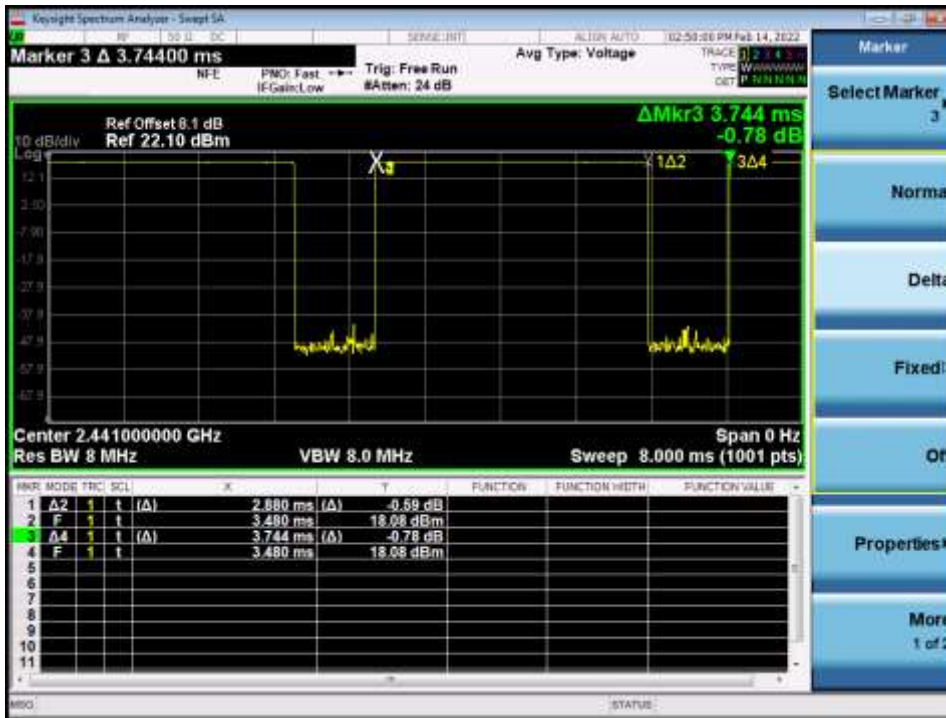
| Mode         | Datarate | Packet | Channel | BluetoothLE Power [dBm] |
|--------------|----------|--------|---------|-------------------------|
| LE HighPower | 1M       | 37     | 0       | 13.53                   |
|              |          |        | 19      | 12.93                   |
|              |          |        | 39      | 12.59                   |
|              |          | 255    | 0       | 13.04                   |
|              |          |        | 19      | 12.40                   |
|              |          |        | 39      | 12.16                   |
|              | 2M       | 37     | 0       | 13.75                   |
|              |          |        | 19      | 13.40                   |
|              |          |        | 39      | 13.14                   |
|              |          | 255    | 0       | 13.52                   |
|              |          |        | 19      | 12.75                   |
|              |          |        | 39      | 12.55                   |
|              | 125K     | 37     | 0       | 13.24                   |
|              |          |        | 19      | 12.77                   |
|              |          |        | 39      | 13.22                   |
|              |          | 255    | 0       | 13.00                   |
|              |          |        | 19      | 12.46                   |
|              |          |        | 39      | 12.14                   |
|              | 500K     | 37     | 0       | 13.50                   |
|              |          |        | 19      | 13.05                   |
|              |          |        | 39      | 12.75                   |
|              |          | 255    | 0       | 13.16                   |
|              |          |        | 19      | 12.51                   |
|              |          |        | 39      | 12.20                   |

| Mode | Datarate | Packet | Channel | BluetoothLE Power [dBm] |
|------|----------|--------|---------|-------------------------|
| LE   | 1M       | 37     | 0       | 8.49                    |
|      |          |        | 19      | 8.17                    |
|      |          |        | 39      | 8.34                    |
|      |          | 255    | 0       | 8.40                    |
|      |          |        | 19      | 8.13                    |
|      |          |        | 39      | 8.17                    |
|      | 2M       | 37     | 0       | 8.44                    |
|      |          |        | 19      | 8.06                    |
|      |          |        | 39      | 8.27                    |
|      |          | 255    | 0       | 8.42                    |
|      |          |        | 19      | 8.12                    |
|      |          |        | 39      | 8.17                    |
|      | 125K     | 37     | 0       | 8.45                    |
|      |          |        | 19      | 8.14                    |
|      |          |        | 39      | 8.12                    |
|      |          | 255    | 0       | 8.31                    |
|      |          |        | 19      | 8.07                    |
|      |          |        | 39      | 8.03                    |
|      | 500K     | 37     | 0       | 8.47                    |
|      |          |        | 19      | 8.14                    |
|      |          |        | 39      | 8.21                    |
|      |          | 255    | 0       | 8.34                    |
|      |          |        | 19      | 8.06                    |
|      |          |        | 39      | 8.12                    |

Per October 2016 TCB Workshop Notes:

When call box and Bluetooth protocol are used for Bluetooth SAR measurement, time-domain plot is required to identify duty factor for supporting the test setup and result.

Bluetooth duty cycle was measured using Bluetooth tester equipment (CBT / R&S) with Bluetooth DH5 mode.



Duty Cycle

$$= (\text{BT-On time} / \text{BT-Full time}) = (2.880 / 3.744) = 0.769 \text{ (DH5)}$$

Duty factor= 1/Duty cycle : 1.300

## 12. System Verification

### 12.1 Tissue Verification

The body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity.

| Table for Head Tissue Verification |                   |             |             |                                      |                                          |                                    |                                        |                |                  |
|------------------------------------|-------------------|-------------|-------------|--------------------------------------|------------------------------------------|------------------------------------|----------------------------------------|----------------|------------------|
| Date of Tests                      | Tissue Temp. (°C) | Tissue Type | Freq. (MHz) | Measured Conductivity $\sigma$ (S/m) | Measured Dielectric Constant, $\epsilon$ | Target Conductivity $\sigma$ (S/m) | Target Dielectric Constant, $\epsilon$ | % dev $\sigma$ | % dev $\epsilon$ |
| 01/06/2022                         | 21.3              | 750H        | 705         | 0.851                                | 43.196                                   | 0.889                              | 42.174                                 | -4.27          | 2.42             |
|                                    |                   |             | 710         | 0.858                                | 43.120                                   | 0.890                              | 42.148                                 | -3.60          | 2.31             |
|                                    |                   |             | 750         | 0.893                                | 42.522                                   | 0.893                              | 41.940                                 | -0.11          | 1.39             |
| 02/07/2022                         | 23.8              | 750H        | 705         | 0.884                                | 43.294                                   | 0.889                              | 42.174                                 | -0.56          | 2.66             |
|                                    |                   |             | 710         | 0.890                                | 43.216                                   | 0.890                              | 42.148                                 | 0.00           | 2.53             |
|                                    |                   |             | 750         | 0.885                                | 42.605                                   | 0.893                              | 41.940                                 | -0.90          | 1.59             |
| 01/13/2022                         | 20.3              | 835H        | 820         | 0.910                                | 40.760                                   | 0.899                              | 41.577                                 | 1.22           | -1.97            |
|                                    |                   |             | 835         | 0.928                                | 40.527                                   | 0.900                              | 41.500                                 | 3.00           | -2.34            |
|                                    |                   |             | 850         | 0.943                                | 40.301                                   | 0.916                              | 41.500                                 | 2.95           | -2.89            |
| 01/14/2022                         | 20.2              | 835H        | 820         | 0.909                                | 40.897                                   | 0.899                              | 41.577                                 | 1.11           | -1.64            |
|                                    |                   |             | 835         | 0.927                                | 40.662                                   | 0.900                              | 41.500                                 | 2.89           | -2.02            |
|                                    |                   |             | 850         | 0.942                                | 40.432                                   | 0.916                              | 41.500                                 | 2.84           | -2.57            |
| 01/12/2022                         | 21.9              | 835H        | 820         | 0.910                                | 41.339                                   | 0.899                              | 41.577                                 | 1.22           | -0.57            |
|                                    |                   |             | 835         | 0.916                                | 41.105                                   | 0.900                              | 41.500                                 | 1.67           | -0.95            |
|                                    |                   |             | 850         | 0.932                                | 40.875                                   | 0.916                              | 41.500                                 | 1.75           | -1.51            |
| 01/13/2022                         | 21.4              | 835H        | 820         | 0.910                                | 40.406                                   | 0.899                              | 41.577                                 | 1.22           | -2.82            |
|                                    |                   |             | 835         | 0.928                                | 40.622                                   | 0.900                              | 41.500                                 | 3.00           | -2.12            |
|                                    |                   |             | 850         | 0.944                                | 40.394                                   | 0.916                              | 41.500                                 | 3.06           | -2.67            |
| 01/14/2022                         | 20.5              | 1800H       | 1710        | 1.317                                | 41.596                                   | 1.348                              | 40.144                                 | -2.30          | 3.62             |
|                                    |                   |             | 1750        | 1.355                                | 41.382                                   | 1.371                              | 40.080                                 | -1.17          | 3.25             |
|                                    |                   |             | 1800        | 1.358                                | 41.165                                   | 1.400                              | 40.000                                 | -3.00          | 2.91             |
| 01/19/2022                         | 20.9              | 1800H       | 1710        | 1.316                                | 41.014                                   | 1.348                              | 40.144                                 | -2.37          | 2.17             |
|                                    |                   |             | 1750        | 1.357                                | 40.836                                   | 1.371                              | 40.080                                 | -1.02          | 1.89             |
|                                    |                   |             | 1800        | 1.404                                | 40.551                                   | 1.400                              | 40.000                                 | 0.29           | 1.38             |
| 01/17/2022                         | 20.6              | 1900H       | 1850        | 1.365                                | 41.175                                   | 1.400                              | 40.000                                 | -2.50          | 2.94             |
|                                    |                   |             | 1900        | 1.413                                | 40.991                                   | 1.400                              | 40.000                                 | 0.93           | 2.48             |
|                                    |                   |             | 1910        | 1.423                                | 40.960                                   | 1.400                              | 40.000                                 | 1.64           | 2.40             |
| 01/13/2022                         | 21.9              | 1900H       | 1850        | 1.364                                | 41.527                                   | 1.400                              | 40.000                                 | -2.57          | 3.82             |
|                                    |                   |             | 1900        | 1.413                                | 41.343                                   | 1.400                              | 40.000                                 | 0.93           | 3.36             |
|                                    |                   |             | 1910        | 1.423                                | 41.312                                   | 1.400                              | 40.000                                 | 1.64           | 3.28             |
| 01/18/2022                         | 21.4              | 1900H       | 1850        | 1.364                                | 40.515                                   | 1.400                              | 40.000                                 | -2.57          | 1.29             |
|                                    |                   |             | 1900        | 1.413                                | 40.332                                   | 1.400                              | 40.000                                 | 0.93           | 0.83             |
|                                    |                   |             | 1910        | 1.423                                | 40.301                                   | 1.400                              | 40.000                                 | 1.64           | 0.75             |
| 01/12/2022                         | 24.4              | 2450H       | 2400        | 1.726                                | 39.379                                   | 1.756                              | 39.290                                 | -1.71          | 0.23             |
|                                    |                   |             | 2450        | 1.775                                | 39.127                                   | 1.800                              | 39.200                                 | -1.39          | -0.19            |
|                                    |                   |             | 2500        | 1.823                                | 38.925                                   | 1.855                              | 39.140                                 | -1.73          | -0.55            |
| 01/10/2022                         | 22.9              | 2450H       | 2400        | 1.799                                | 38.805                                   | 1.756                              | 39.290                                 | 2.45           | -1.23            |
|                                    |                   |             | 2450        | 1.850                                | 38.560                                   | 1.800                              | 39.200                                 | 2.78           | -1.63            |
|                                    |                   |             | 2500        | 1.900                                | 38.367                                   | 1.855                              | 39.140                                 | 2.43           | -1.97            |
| 01/13/2022                         | 23.9              | 2600H       | 2500        | 1.862                                | 39.209                                   | 1.855                              | 39.140                                 | 0.38           | 0.18             |
|                                    |                   |             | 2550        | 1.905                                | 39.019                                   | 1.909                              | 39.070                                 | -0.21          | -0.13            |
|                                    |                   |             | 2600        | 1.963                                | 38.813                                   | 1.964                              | 39.010                                 | -0.05          | -0.50            |

| Table for Head Tissue Verification |                   |             |             |                                      |                                          |                                    |                                        |                |                  |
|------------------------------------|-------------------|-------------|-------------|--------------------------------------|------------------------------------------|------------------------------------|----------------------------------------|----------------|------------------|
| Date of Tests                      | Tissue Temp. (°C) | Tissue Type | Freq. (MHz) | Measured Conductivity $\sigma$ (S/m) | Measured Dielectric Constant, $\epsilon$ | Target Conductivity $\sigma$ (S/m) | Target Dielectric Constant, $\epsilon$ | % dev $\sigma$ | % dev $\epsilon$ |
| 02/24/2022                         | 19.3              | 2600H       | 2500        | 1.840                                | 38.502                                   | 1.855                              | 39.140                                 | -0.81          | -1.63            |
|                                    |                   |             | 2550        | 1.890                                | 38.294                                   | 1.909                              | 39.070                                 | -1.00          | -1.99            |
|                                    |                   |             | 2600        | 1.937                                | 38.048                                   | 1.964                              | 39.010                                 | -1.37          | -2.47            |
| 01/03/2022                         | 22.1              | 5180H-5320H | 5180        | 4.764                                | 36.493                                   | 4.635                              | 36.010                                 | 2.78           | 1.34             |
|                                    |                   |             | 5250        | 4.749                                | 36.555                                   | 4.706                              | 35.930                                 | 0.91           | 1.74             |
|                                    |                   |             | 5280        | 4.724                                | 36.411                                   | 4.737                              | 35.894                                 | -0.27          | 1.44             |
| 01/04/2022                         | 22.7              | 5500H-5600H | 5320        | 4.744                                | 36.538                                   | 4.778                              | 35.846                                 | -0.71          | 1.93             |
|                                    |                   |             | 5500        | 4.903                                | 36.447                                   | 4.963                              | 35.640                                 | -1.21          | 2.26             |
|                                    |                   |             | 5600        | 4.970                                | 35.777                                   | 5.065                              | 35.530                                 | -1.88          | 0.70             |
| 01/05/2022                         | 24.0              | 5750H-5825H | 5750        | 5.195                                | 36.052                                   | 5.219                              | 35.360                                 | -0.46          | 1.96             |
|                                    |                   |             | 5800        | 5.206                                | 36.465                                   | 5.270                              | 35.300                                 | -1.21          | 3.30             |
|                                    |                   |             | 5825        | 5.288                                | 36.206                                   | 5.296                              | 35.270                                 | -0.15          | 2.65             |

#### \* 5G NR Band

| Table for Head Tissue Verification |                   |             |             |                                      |                                          |                                    |                                        |                |                  |
|------------------------------------|-------------------|-------------|-------------|--------------------------------------|------------------------------------------|------------------------------------|----------------------------------------|----------------|------------------|
| Date of Tests                      | Tissue Temp. (°C) | Tissue Type | Freq. (MHz) | Measured Conductivity $\sigma$ (S/m) | Measured Dielectric Constant, $\epsilon$ | Target Conductivity $\sigma$ (S/m) | Target Dielectric Constant, $\epsilon$ | % dev $\sigma$ | % dev $\epsilon$ |
| 01/17/2022                         | 20.4              | 835H        | 820         | 0.908                                | 41.477                                   | 0.899                              | 41.577                                 | 1.00           | -0.24            |
|                                    |                   |             | 835         | 0.909                                | 41.457                                   | 0.900                              | 41.500                                 | 0.89           | -0.10            |
|                                    |                   |             | 850         | 0.925                                | 41.226                                   | 0.916                              | 41.500                                 | 0.98           | -0.66            |
| 01/21/2022                         | 20.0              | 1800H       | 1710        | 1.323                                | 41.387                                   | 1.348                              | 40.144                                 | -1.85          | 3.10             |
|                                    |                   |             | 1750        | 1.365                                | 41.239                                   | 1.371                              | 40.080                                 | -0.44          | 2.89             |
|                                    |                   |             | 1800        | 1.420                                | 41.016                                   | 1.400                              | 40.000                                 | 1.29           | 2.54             |
| 02/04/2022                         | 20.5              | 1800H       | 1710        | 1.350                                | 41.288                                   | 1.348                              | 40.144                                 | 0.15           | 2.85             |
|                                    |                   |             | 1750        | 1.391                                | 41.233                                   | 1.371                              | 40.080                                 | 1.46           | 2.88             |
|                                    |                   |             | 1800        | 1.445                                | 41.005                                   | 1.400                              | 40.000                                 | 3.21           | 2.51             |
| 01/24/2022                         | 20.6              | 2600H       | 2500        | 1.857                                | 38.541                                   | 1.855                              | 39.140                                 | 0.11           | -1.53            |
|                                    |                   |             | 2600        | 1.955                                | 38.074                                   | 1.964                              | 39.010                                 | -0.46          | -2.40            |
|                                    |                   |             | 2690        | 2.066                                | 37.740                                   | 2.062                              | 38.894                                 | 0.19           | -2.97            |

## \* Phablet SAR

| Table for Head Tissue Verification |                   |             |             |                                      |                                          |                                    |                                        |                |                  |
|------------------------------------|-------------------|-------------|-------------|--------------------------------------|------------------------------------------|------------------------------------|----------------------------------------|----------------|------------------|
| Date of Tests                      | Tissue Temp. (°C) | Tissue Type | Freq. (MHz) | Measured Conductivity $\sigma$ (S/m) | Measured Dielectric Constant, $\epsilon$ | Target Conductivity $\sigma$ (S/m) | Target Dielectric Constant, $\epsilon$ | % dev $\sigma$ | % dev $\epsilon$ |
| 01/25/2022                         | 22.0              | 1800H       | 1710        | 1.338                                | 40.950                                   | 1.348                              | 40.144                                 | -0.74          | 2.01             |
|                                    |                   |             | 1750        | 1.381                                | 41.033                                   | 1.371                              | 40.080                                 | 0.73           | 2.38             |
|                                    |                   |             | 1800        | 1.389                                | 40.814                                   | 1.400                              | 40.000                                 | -0.79          | 2.04             |
| 01/27/2022                         | 20.1              | 1800H       | 1710        | 1.321                                | 41.550                                   | 1.348                              | 40.144                                 | -2.00          | 3.50             |
|                                    |                   |             | 1750        | 1.362                                | 41.351                                   | 1.371                              | 40.080                                 | -0.66          | 3.17             |
|                                    |                   |             | 1800        | 1.408                                | 41.118                                   | 1.400                              | 40.000                                 | 0.57           | 2.80             |
| 02/06/2022                         | 22.0              | 1800H       | 1710        | 1.335                                | 41.656                                   | 1.348                              | 40.144                                 | -0.96          | 3.77             |
|                                    |                   |             | 1750        | 1.351                                | 41.648                                   | 1.371                              | 40.080                                 | -1.46          | 3.91             |
|                                    |                   |             | 1800        | 1.375                                | 41.422                                   | 1.400                              | 40.000                                 | -1.79          | 3.55             |
| 01/24/2022                         | 20.4              | 1900H       | 1850        | 1.386                                | 40.982                                   | 1.400                              | 40.000                                 | -1.00          | 2.46             |
|                                    |                   |             | 1900        | 1.413                                | 40.796                                   | 1.400                              | 40.000                                 | 0.93           | 1.99             |
|                                    |                   |             | 1910        | 1.422                                | 40.764                                   | 1.400                              | 40.000                                 | 1.57           | 1.91             |
| 01/26/2022                         | 21.4              | 1900H       | 1850        | 1.363                                | 41.518                                   | 1.400                              | 40.000                                 | -2.64          | 3.79             |
|                                    |                   |             | 1900        | 1.414                                | 41.333                                   | 1.400                              | 40.000                                 | 1.00           | 3.33             |
|                                    |                   |             | 1910        | 1.423                                | 41.302                                   | 1.400                              | 40.000                                 | 1.64           | 3.26             |
| 01/03/2022                         | 22.1              | 5180H-5320H | 5180        | 4.764                                | 36.493                                   | 4.635                              | 36.010                                 | 2.78           | 1.34             |
|                                    |                   |             | 5250        | 4.749                                | 36.555                                   | 4.706                              | 35.930                                 | 0.91           | 1.74             |
|                                    |                   |             | 5280        | 4.724                                | 36.411                                   | 4.737                              | 35.894                                 | -0.27          | 1.44             |
| 01/04/2022                         | 22.7              | 5500H-5600H | 5320        | 4.744                                | 36.538                                   | 4.778                              | 35.846                                 | -0.71          | 1.93             |
|                                    |                   |             | 5500        | 4.903                                | 36.447                                   | 4.963                              | 35.640                                 | -1.21          | 2.26             |
|                                    |                   |             | 5600        | 4.970                                | 35.777                                   | 5.065                              | 35.530                                 | -1.88          | 0.70             |

## 12.2 System Verification

Input Power: 50 mW

| Freq. [MHz] | Date       | Probe (S/N) | Dipole (S/N) | Liquid | Amb. Temp. [°C] | Liquid Temp. [°C] | 1 W Target SAR <sub>1g</sub> (SPEAG) [W/kg] | 50mW Measured SAR <sub>1g</sub> [W/kg] | 1 W Normalized SAR <sub>1g</sub> [W/kg] | Deviation [%] | Limit [%] |
|-------------|------------|-------------|--------------|--------|-----------------|-------------------|---------------------------------------------|----------------------------------------|-----------------------------------------|---------------|-----------|
| 750         | 01/06/2022 | 3972        | 1014         | Head   | 21.4            | 21.3              | 8.55                                        | 0.446                                  | 8.92                                    | 4.33          | ± 10      |
| 750         | 02/07/2022 | 3903        |              | Head   | 23.9            | 23.8              | 8.55                                        | 0.403                                  | 8.06                                    | -5.73         | ± 10      |
| 835         | 01/13/2022 | 7679        | 4d165        | Head   | 20.4            | 20.3              | 9.68                                        | 0.509                                  | 10.18                                   | 5.17          | ± 10      |
| 835         | 01/14/2022 | 7679        |              | Head   | 20.3            | 20.2              | 9.68                                        | 0.510                                  | 10.2                                    | 5.37          | ± 10      |
| 835         | 01/12/2022 | 7681        |              | Head   | 22.0            | 21.9              | 9.68                                        | 0.474                                  | 9.48                                    | -2.07         | ± 10      |
| 835         | 01/13/2022 | 7681        |              | Head   | 21.5            | 21.4              | 9.68                                        | 0.481                                  | 9.62                                    | -0.62         | ± 10      |
| 1 800       | 01/14/2022 | 7681        | 2d015        | Head   | 20.6            | 20.5              | 38.8                                        | 1.85                                   | 37.0                                    | -4.64         | ± 10      |
| 1 800       | 01/19/2022 | 7681        |              | Head   | 21.0            | 20.9              | 38.8                                        | 1.86                                   | 37.2                                    | -4.12         | ± 10      |
| 1 900       | 01/17/2022 | 7681        | 5d061        | Head   | 20.7            | 20.6              | 41.2                                        | 2.06                                   | 41.2                                    | 0.00          | ± 10      |
| 1 900       | 01/13/2022 | 7681        |              | Head   | 22.0            | 21.9              | 41.2                                        | 2.03                                   | 40.6                                    | -1.46         | ± 10      |
| 1 900       | 01/18/2022 | 7681        |              | Head   | 21.5            | 21.4              | 41.2                                        | 2.05                                   | 41.0                                    | -0.49         | ± 10      |
| 2 450       | 01/12/2022 | 3903        | 965          | Head   | 24.5            | 24.4              | 53.3                                        | 2.44                                   | 48.8                                    | -8.44         | ± 10      |
| 2 450       | 01/10/2022 | 3903        |              | Head   | 23.0            | 22.9              | 53.3                                        | 2.44                                   | 48.8                                    | -8.44         | ± 10      |
| 2 600       | 01/13/2022 | 3903        | 1106         | Head   | 24.0            | 23.9              | 56.3                                        | 2.85                                   | 57.0                                    | 1.24          | ± 10      |
| 2 600       | 02/24/2022 | 3903        |              | Head   | 19.4            | 19.3              | 56.3                                        | 2.56                                   | 51.2                                    | -9.06         | ± 10      |
| 5 250       | 01/03/2022 | 3903        | 1107         | Head   | 22.2            | 22.1              | 80.6                                        | 3.92                                   | 78.4                                    | -2.73         | ± 10      |
| 5 600       | 01/04/2022 | 3903        |              | Head   | 22.8            | 22.7              | 84.2                                        | 4.21                                   | 84.2                                    | 0.00          | ± 10      |
| 5 750       | 01/05/2022 | 3903        |              | Head   | 24.1            | 24.0              | 80.9                                        | 3.86                                   | 77.2                                    | -4.57         | ± 10      |

### \* 5G NR Band

Input Power: 50 mW

| Freq. [MHz] | Date       | Probe (S/N) | Dipole (S/N) | Liquid | Amb. Temp. [°C] | Liquid Temp. [°C] | 1 W Target SAR <sub>1g</sub> (SPEAG) [W/kg] | 50mW Measured SAR <sub>1g</sub> [W/kg] | 1 W Normalized SAR <sub>1g</sub> [W/kg] | Deviation [%] | Limit [%] |
|-------------|------------|-------------|--------------|--------|-----------------|-------------------|---------------------------------------------|----------------------------------------|-----------------------------------------|---------------|-----------|
| 835         | 01/17/2022 | 7370        | 4d165        | Head   | 20.5            | 20.4              | 9.68                                        | 0.481                                  | 9.62                                    | -0.62         | ± 10      |
| 1 800       | 01/21/2022 | 7681        | 2d015        | Head   | 20.1            | 20.0              | 38.8                                        | 1.96                                   | 39.2                                    | 1.03          | ± 10      |
| 1 800       | 02/04/2022 | 7681        |              | Head   | 20.6            | 20.5              | 38.8                                        | 2.00                                   | 40.0                                    | 3.09          | ± 10      |
| 2 600       | 01/24/2022 | 3903        | 1106         | Head   | 20.7            | 20.6              | 56.3                                        | 2.81                                   | 56.2                                    | -0.18         | ± 10      |

### System Verification Results – Phablet SAR Input Power: 50 mW

| Freq. [MHz] | Date       | Probe (S/N) | Dipole (S/N) | Liquid | Amb. Temp. [°C] | Liquid Temp. [°C] | 1 W Target SAR <sub>10g</sub> (SPEAG) [W/kg] | 50mW Measured SAR <sub>10g</sub> [W/kg] | 1 W Normalized SAR <sub>10g</sub> [W/kg] | Deviation [%] | Limit [%] |
|-------------|------------|-------------|--------------|--------|-----------------|-------------------|----------------------------------------------|-----------------------------------------|------------------------------------------|---------------|-----------|
| 1 800       | 01/25/2022 | 7681        | 2d015        | Head   | 22.1            | 22.0              | 20.0                                         | 1.09                                    | 21.8                                     | 9.00          | ± 10      |
| 1 800       | 01/27/2022 | 7681        |              | Head   | 20.2            | 20.1              | 20.0                                         | 0.986                                   | 19.7                                     | -1.40         | ± 10      |
| 1 800       | 02/06/2022 | 7681        |              | Head   | 22.1            | 22.0              | 20.0                                         | 1.09                                    | 21.8                                     | 9.00          | ± 10      |
| 1 900       | 01/24/2022 | 7681        | 5d061        | Head   | 20.5            | 20.4              | 21.4                                         | 1.01                                    | 20.2                                     | -5.61         | ± 10      |
| 1 900       | 01/26/2022 | 7681        |              | Head   | 21.5            | 21.4              | 21.4                                         | 1.01                                    | 20.2                                     | -5.61         | ± 10      |
| 5 250       | 01/03/2022 | 3903        | 1107         | Head   | 22.2            | 22.1              | 23.2                                         | 1.16                                    | 23.2                                     | 0.00          | ± 10      |
| 5 600       | 01/04/2022 | 3903        |              | Head   | 22.8            | 22.7              | 24.2                                         | 1.21                                    | 24.2                                     | 0.00          | ± 10      |

### 12.3 System Verification Procedure

SAR measurement was prior to assessment, the system is verified to the  $\pm 10\%$  of the specifications at each frequency band by using the system verification kit. (Graphic Plots Attached)

- Cabling the system, using the verification kit equipment.
- Generate about 50 mW Input level from the signal generator to the Dipole Antenna.
- Dipole antenna was placed below the flat phantom.
- The measured one-gram SAR at the surface of the phantom above the dipole feed-point should be within 10 % of the target reference value.
- The results are normalized to 1 W input power.

Note;

SAR Verification was performed according to the FCC KDB 865664 D01v01r04.

## 13. SAR Test Data Summary

### 13.1 SAR Measurement Results

| GSM 850 Head SAR                                                                                   |     |          |               |             |             |                                          |            |              |                |              |          |
|----------------------------------------------------------------------------------------------------|-----|----------|---------------|-------------|-------------|------------------------------------------|------------|--------------|----------------|--------------|----------|
| Frequency                                                                                          |     | Mode     | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Meas. SAR    | Scaling Factor | Scaled SAR   | Plot No. |
| MHz                                                                                                | Ch. |          | (dB)          | (dB)        | (dB)        |                                          |            | (W/kg)       |                | (W/kg)       |          |
| 824.2                                                                                              | 128 | GSM      | 34.0          | 33.79       | -0.14       | Left Touch                               | 1:8.30     | 0.206        | 1.050          | 0.216        | -        |
| 824.2                                                                                              | 128 | GSM      | 34.0          | 33.79       | -0.15       | Left Tilt                                | 1:8.30     | 0.124        | 1.050          | 0.130        | -        |
| 824.2                                                                                              | 128 | GSM      | 34.0          | 33.79       | -0.14       | Right Touch                              | 1:8.30     | <b>0.252</b> | 1.050          | 0.264        | 1        |
| 824.2                                                                                              | 128 | GSM      | 34.0          | 33.79       | -0.05       | Right Tilt                               | 1:8.30     | 0.127        | 1.050          | 0.133        | -        |
| 836.6                                                                                              | 190 | GPRS 2Tx | 32.5          | 31.63       | 0.14        | Left Touch                               | 1:4.15     | 0.179        | 1.222          | 0.219        | -        |
| 836.6                                                                                              | 190 | GPRS 2Tx | 32.5          | 31.63       | 0.13        | Left Tilt                                | 1:4.15     | 0.084        | 1.222          | 0.103        | -        |
| 836.6                                                                                              | 190 | GPRS 2Tx | 32.5          | 31.63       | -0.18       | Right Touch                              | 1:4.15     | 0.220        | 1.222          | <b>0.269</b> | 2        |
| 836.6                                                                                              | 190 | GPRS 2Tx | 32.5          | 31.63       | -0.15       | Right Tilt                               | 1:4.15     | 0.105        | 1.222          | 0.128        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |            |              |                |              |          |

| GSM 1900 Head SAR                                                                                  |     |          |               |             |             |                                          |            |           |                |              |          |
|----------------------------------------------------------------------------------------------------|-----|----------|---------------|-------------|-------------|------------------------------------------|------------|-----------|----------------|--------------|----------|
| Frequency                                                                                          |     | Mode     | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
| MHz                                                                                                | Ch. |          | (dB)          | (dB)        | (dB)        |                                          |            | (W/kg)    |                | (W/kg)       |          |
| 1880.0                                                                                             | 661 | GSM      | 31.0          | 30.56       | -0.18       | Left Touch                               | 1:8.30     | 0.067     | 1.107          | 0.074        | -        |
| 1880.0                                                                                             | 661 | GSM      | 31.0          | 30.56       | 0.13        | Left Tilt                                | 1:8.30     | 0.030     | 1.107          | 0.033        | -        |
| 1880.0                                                                                             | 661 | GSM      | 31.0          | 30.56       | -0.10       | Right Touch                              | 1:8.30     | 0.061     | 1.107          | 0.068        | -        |
| 1880.0                                                                                             | 661 | GSM      | 31.0          | 30.56       | 0.16        | Right Tilt                               | 1:8.30     | 0.030     | 1.107          | 0.033        | -        |
| 1880.0                                                                                             | 661 | GPRS 2Tx | 30.0          | 28.66       | -0.08       | Left Touch                               | 1:4.15     | 0.074     | 1.361          | <b>0.101</b> | 3        |
| 1880.0                                                                                             | 661 | GPRS 2Tx | 30.0          | 28.66       | 0.10        | Left Tilt                                | 1:4.15     | 0.037     | 1.361          | 0.050        | -        |
| 1880.0                                                                                             | 661 | GPRS 2Tx | 30.0          | 28.66       | -0.10       | Right Touch                              | 1:4.15     | 0.072     | 1.361          | 0.098        | -        |
| 1880.0                                                                                             | 661 | GPRS 2Tx | 30.0          | 28.66       | -0.14       | Right Tilt                               | 1:4.15     | 0.033     | 1.361          | 0.045        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |            |           |                |              |          |

### UMTS Band 5 Head SAR

| Frequency                                                                                          |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                                   | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|-------------------------------------------------|------------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.  |      | (dB)          | (dB)        | (dB)        |                                                 |            | (W/kg)    |                | (W/kg)       |          |
| 836.6                                                                                              | 4183 | RMC  | 25.0          | 24.68       | 0.10        | Left Touch                                      | 1:1        | 0.147     | 1.076          | 0.158        | -        |
| 836.6                                                                                              | 4183 | RMC  | 25.0          | 24.68       | 0.05        | Left Tilt                                       | 1:1        | 0.089     | 1.076          | 0.096        | -        |
| 836.6                                                                                              | 4183 | RMC  | 25.0          | 24.68       | -0.07       | Right Touch                                     | 1:1        | 0.189     | 1.076          | <b>0.203</b> | 4        |
| 836.6                                                                                              | 4183 | RMC  | 25.0          | 24.68       | -0.13       | Right Tilt                                      | 1:1        | 0.085     | 1.076          | 0.091        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Head<br>1.6 W/kg (mW/g)<br>Averaged over 1 gram |            |           |                |              |          |

### UMTS Band 4 Head SAR.

| Frequency                                                                                          |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                                   | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|-------------------------------------------------|------------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.  |      | (dB)          | (dB)        | (dB)        |                                                 |            | (W/kg)    |                | (W/kg)       |          |
| 1 732.4                                                                                            | 1412 | RMC  | 25.0          | 24.43       | -0.11       | Left Touch                                      | 1:1        | 0.145     | 1.140          | <b>0.165</b> | 5        |
| 1 732.4                                                                                            | 1412 | RMC  | 25.0          | 24.43       | 0.17        | Left Tilt                                       | 1:1        | 0.099     | 1.140          | 0.113        | -        |
| 1 732.4                                                                                            | 1412 | RMC  | 25.0          | 24.43       | -0.13       | Right Touch                                     | 1:1        | 0.132     | 1.140          | 0.151        | -        |
| 1 732.4                                                                                            | 1412 | RMC  | 25.0          | 24.43       | -0.14       | Right Tilt                                      | 1:1        | 0.094     | 1.140          | 0.107        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Head<br>1.6 W/kg (mW/g)<br>Averaged over 1 gram |            |           |                |              |          |

### UMTS Band 2 Head SAR

| Frequency                                                                                          |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                                   | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|-------------------------------------------------|------------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.  |      | (dB)          | (dB)        | (dB)        |                                                 |            | (W/kg)    |                | (W/kg)       |          |
| 1 880.0                                                                                            | 9400 | RMC  | 25.0          | 24.19       | 0.02        | Left Touch                                      | 1:1        | 0.129     | 1.205          | <b>0.155</b> | 6        |
| 1 880.0                                                                                            | 9400 | RMC  | 25.0          | 24.19       | 0.11        | Left Tilt                                       | 1:1        | 0.072     | 1.205          | 0.087        | -        |
| 1 880.0                                                                                            | 9400 | RMC  | 25.0          | 24.19       | 0.13        | Right Touch                                     | 1:1        | 0.108     | 1.205          | 0.130        | -        |
| 1 880.0                                                                                            | 9400 | RMC  | 25.0          | 24.19       | 0.14        | Right Tilt                                      | 1:1        | 0.046     | 1.205          | 0.088        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Head<br>1.6 W/kg (mW/g)<br>Averaged over 1 gram |            |           |                |              |          |

### LTE Band 2 Head SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|-----------|----------------|--------------|----------|
| MHz                                                                                                | Ch.   |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (W/kg)    |                | (W/kg)       |          |
| 1 900                                                                                              | 19100 | QPSK | 20         | 24.5          | 23.85       | 0.14        | Left Cheek                               | 0    | 1       | 49        | 1:1        | 0.113     | 1.161          | <b>0.131</b> | 7        |
| 1 900                                                                                              | 19100 | QPSK | 20         | 23.5          | 22.94       | 0.11        | Left Cheek                               | 1    | 50      | 25        | 1:1        | 0.093     | 1.138          | 0.106        | -        |
| 1 900                                                                                              | 19100 | QPSK | 20         | 24.5          | 23.85       | 0.10        | Left Cheek                               | 0    | 1       | 49        | 1:1        | 0.059     | 1.161          | 0.069        | -        |
| 1 900                                                                                              | 19100 | QPSK | 20         | 23.5          | 22.94       | 0.11        | Left Cheek                               | 1    | 50      | 25        | 1:1        | 0.049     | 1.138          | 0.056        | -        |
| 1 900                                                                                              | 19100 | QPSK | 20         | 24.5          | 23.85       | 0.13        | Right Cheek                              | 0    | 1       | 49        | 1:1        | 0.091     | 1.161          | 0.106        | -        |
| 1 900                                                                                              | 19100 | QPSK | 20         | 23.5          | 22.94       | 0.00        | Right Cheek                              | 1    | 50      | 25        | 1:1        | 0.084     | 1.138          | 0.096        | -        |
| 1 900                                                                                              | 19100 | QPSK | 20         | 24.5          | 23.85       | 0.13        | Right Tilt                               | 0    | 1       | 49        | 1:1        | 0.070     | 1.161          | 0.081        | -        |
| 1 900                                                                                              | 19100 | QPSK | 20         | 23.5          | 22.94       | 0.02        | Right Tilt                               | 1    | 50      | 25        | 1:1        | 0.056     | 1.138          | 0.064        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |           |                |              |          |

### LTE Band 5 Head SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|-----------|----------------|--------------|----------|
| MHz                                                                                                | Ch.   |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (W/kg)    |                | (W/kg)       |          |
| 836.5                                                                                              | 20525 | QPSK | 10         | 25.0          | 24.44       | 0.04        | Left Cheek                               | 0    | 1       | 0         | 1:1        | 0.105     | 1.138          | 0.119        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 24.0          | 23.53       | 0.01        | Left Cheek                               | 1    | 25      | 0         | 1:1        | 0.081     | 1.114          | 0.090        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 25.0          | 24.44       | 0.16        | Left Tilt                                | 0    | 1       | 0         | 1:1        | 0.061     | 1.138          | 0.069        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 24.0          | 23.53       | 0.11        | Left Tilt                                | 1    | 25      | 0         | 1:1        | 0.047     | 1.114          | 0.052        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 25.0          | 24.44       | 0.18        | Right Cheek                              | 0    | 1       | 0         | 1:1        | 0.137     | 1.138          | <b>0.156</b> | 8        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 24.0          | 23.53       | 0.15        | Right Cheek                              | 1    | 25      | 0         | 1:1        | 0.112     | 1.114          | 0.125        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 25.0          | 24.44       | 0.19        | Right Tilt                               | 0    | 1       | 0         | 1:1        | 0.065     | 1.138          | 0.074        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 24.0          | 23.53       | 0.06        | Right Tilt                               | 1    | 25      | 0         | 1:1        | 0.051     | 1.114          | 0.057        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |           |                |              |          |

### LTE Band 12 Head SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|-----------|----------------|--------------|----------|
| MHz                                                                                                | Ch.   |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (W/kg)    |                | (W/kg)       |          |
| 707.5                                                                                              | 23095 | QPSK | 10         | 25.0          | 24.35       | -0.13       | Left Cheek                               | 0    | 1       | 49        | 1:1        | 0.112     | 1.161          | 0.130        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 24.0          | 23.44       | -0.13       | Left Cheek                               | 1    | 25      | 12        | 1:1        | 0.078     | 1.138          | 0.089        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 25.0          | 24.35       | -0.12       | Left Tilt                                | 0    | 1       | 49        | 1:1        | 0.027     | 1.161          | 0.031        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 24.0          | 23.44       | -0.10       | Left Tilt                                | 1    | 25      | 12        | 1:1        | 0.020     | 1.138          | 0.023        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 25.0          | 24.35       | -0.12       | Right Cheek                              | 0    | 1       | 49        | 1:1        | 0.148     | 1.161          | <b>0.172</b> | 9        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 24.0          | 23.44       | -0.11       | Right Cheek                              | 1    | 25      | 12        | 1:1        | 0.124     | 1.138          | 0.141        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 25.0          | 24.35       | -0.15       | Right Tilt                               | 0    | 1       | 49        | 1:1        | 0.059     | 1.161          | 0.069        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 24.0          | 23.44       | -0.11       | Right Tilt                               | 1    | 25      | 12        | 1:1        | 0.052     | 1.138          | 0.059        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |           |                |              |          |

### LTE Band 13 Head SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.   |      | (Mhz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (W/kg)    |                | (W/kg)       |          |
| 782                                                                                                | 23230 | QPSK | 10         | 25.0          | 24.42       | -0.14       | Left Cheek                               | 0    | 1       | 49        | 1:1        | 0.121     | 1.143          | 0.138        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 24.0          | 23.36       | 0.14        | Left Cheek                               | 1    | 25      | 24        | 1:1        | 0.100     | 1.159          | 0.116        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 25.0          | 24.42       | -0.16       | Left Tilt                                | 0    | 1       | 49        | 1:1        | 0.076     | 1.143          | 0.087        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 24.0          | 23.36       | -0.10       | Left Tilt                                | 1    | 25      | 24        | 1:1        | 0.058     | 1.159          | 0.067        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 25.0          | 24.42       | -0.10       | Right Cheek                              | 0    | 1       | 49        | 1:1        | 0.169     | 1.143          | <b>0.193</b> | 10       |
| 782                                                                                                | 23230 | QPSK | 10         | 24.0          | 23.36       | -0.13       | Right Cheek                              | 1    | 25      | 24        | 1:1        | 0.138     | 1.159          | 0.160        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 25.0          | 24.42       | -0.03       | Right Tilt                               | 0    | 1       | 49        | 1:1        | 0.077     | 1.143          | 0.088        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 24.0          | 23.36       | 0.17        | Right Tilt                               | 1    | 25      | 24        | 1:1        | 0.066     | 1.159          | 0.076        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |           |                |              |          |

### LTE Band 26 Head SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.   |      | (Mhz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (W/kg)    |                | (W/kg)       |          |
| 822.5                                                                                              | 26775 | QPSK | 15         | 25.0          | 24.37       | 0.16        | Left Cheek                               | 0    | 1       | 36        | 1:1        | 0.107     | 1.156          | 0.124        | -        |
| 831.5                                                                                              | 26865 | QPSK | 15         | 24.0          | 23.32       | 0.19        | Left Cheek                               | 1    | 36      | 18        | 1:1        | 0.086     | 1.169          | 0.101        | -        |
| 822.5                                                                                              | 26775 | QPSK | 15         | 25.0          | 24.37       | 0.09        | Left Tilt                                | 0    | 1       | 36        | 1:1        | 0.064     | 1.156          | 0.074        | -        |
| 831.5                                                                                              | 26865 | QPSK | 15         | 24.0          | 23.32       | 0.16        | Left Tilt                                | 1    | 36      | 18        | 1:1        | 0.050     | 1.169          | 0.058        | -        |
| 822.5                                                                                              | 26775 | QPSK | 15         | 25.0          | 24.37       | -0.13       | Right Cheek                              | 0    | 1       | 36        | 1:1        | 0.155     | 1.156          | <b>0.179</b> | 11       |
| 831.5                                                                                              | 26865 | QPSK | 15         | 24.0          | 23.32       | 0.07        | Right Cheek                              | 1    | 36      | 18        | 1:1        | 0.112     | 1.169          | 0.131        | -        |
| 822.5                                                                                              | 26775 | QPSK | 15         | 25.0          | 24.37       | 0.10        | Right Tilt                               | 0    | 1       | 36        | 1:1        | 0.071     | 1.156          | 0.082        | -        |
| 831.5                                                                                              | 26865 | QPSK | 15         | 24.0          | 23.32       | 0.13        | Right Tilt                               | 1    | 36      | 18        | 1:1        | 0.054     | 1.169          | 0.063        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |           |                |              |          |

### LTE Band 41 Head SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.   |      | (Mhz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (W/kg)    |                | (W/kg)       |          |
| 2680                                                                                               | 41490 | QPSK | 20         | 25.0          | 24.08       | 0.00        | Left Cheek                               | 0    | 1       | 49        | 1:1.58     | 0.023     | 1.236          | 0.028        | -        |
| 2680                                                                                               | 41490 | QPSK | 20         | 24.0          | 23.28       | 0.00        | Left Cheek                               | 1    | 50      | 49        | 1:1.58     | 0.023     | 1.180          | 0.027        | -        |
| 2680                                                                                               | 41490 | QPSK | 20         | 25.0          | 24.08       | -0.08       | Left Tilt                                | 0    | 1       | 49        | 1:1.58     | 0.039     | 1.236          | <b>0.048</b> | 12       |
| 2680                                                                                               | 41490 | QPSK | 20         | 24.0          | 23.28       | 0.08        | Left Tilt                                | 1    | 50      | 49        | 1:1.58     | 0.037     | 1.180          | 0.044        | -        |
| 2680                                                                                               | 41490 | QPSK | 20         | 25.0          | 24.08       | -0.02       | Right Cheek                              | 0    | 1       | 49        | 1:1.58     | 0.037     | 1.236          | 0.046        | -        |
| 2680                                                                                               | 41490 | QPSK | 20         | 24.0          | 23.28       | 0.00        | Right Cheek                              | 1    | 50      | 49        | 1:1.58     | 0.030     | 1.180          | 0.035        | -        |
| 2680                                                                                               | 41490 | QPSK | 20         | 25.0          | 24.08       | -0.05       | Right Tilt                               | 0    | 1       | 49        | 1:1.58     | 0.027     | 1.236          | 0.033        | -        |
| 2680                                                                                               | 41490 | QPSK | 20         | 24.0          | 23.28       | 0.11        | Right Tilt                               | 1    | 50      | 49        | 1:1.58     | 0.020     | 1.180          | 0.024        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |           |                |              |          |

### LTE Band 66 Head SAR

| Frequency                                                                                          |        | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|--------|------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|-----------|----------------|--------------|----------|
| MHz                                                                                                | Ch.    |      | (MHz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (W/kg)    |                | (W/kg)       |          |
| 1 745                                                                                              | 132322 | QPSK | 20         | 25.0          | 24.56       | -0.16       | Left Cheek                               | 0    | 1       | 49        | 1:1        | 0.140     | 1.107          | <b>0.155</b> | 13       |
| 1 720                                                                                              | 132072 | QPSK | 20         | 24.0          | 23.53       | 0.06        | Left Cheek                               | 1    | 50      | 25        | 1:1        | 0.109     | 1.114          | 0.121        | -        |
| 1 745                                                                                              | 132322 | QPSK | 20         | 25.0          | 24.56       | 0.12        | Left Tilt                                | 0    | 1       | 49        | 1:1        | 0.086     | 1.107          | 0.095        | -        |
| 1 720                                                                                              | 132072 | QPSK | 20         | 24.0          | 23.53       | 0.17        | Left Tilt                                | 1    | 50      | 25        | 1:1        | 0.056     | 1.114          | 0.062        | -        |
| 1 745                                                                                              | 132322 | QPSK | 20         | 25.0          | 24.56       | -0.02       | Right Cheek                              | 0    | 1       | 49        | 1:1        | 0.131     | 1.107          | 0.145        | -        |
| 1 720                                                                                              | 132072 | QPSK | 20         | 24.0          | 23.53       | -0.10       | Right Cheek                              | 1    | 50      | 25        | 1:1        | 0.109     | 1.114          | 0.121        | -        |
| 1 745                                                                                              | 132322 | QPSK | 20         | 25.0          | 24.56       | 0.06        | Right Tilt                               | 0    | 1       | 49        | 1:1        | 0.097     | 1.107          | 0.107        | -        |
| 1 720                                                                                              | 132072 | QPSK | 20         | 24.0          | 23.53       | 0.17        | Right Tilt                               | 1    | 50      | 25        | 1:1        | 0.070     | 1.114          | 0.078        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |      |            |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |           |                |              |          |

### NR Band n5 (Cell) Head SAR

| Frequency                                                                                          |        | Mode            | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|--------|-----------------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|-----------|----------------|--------------|----------|
| MHz                                                                                                | Ch.    |                 | (MHz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (W/kg)    |                | (W/kg)       |          |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.77       | -0.10       | Left Cheek                               | 0    | 1       | 1         | 1:1        | 0.052     | 1.054          | 0.055        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.78       | -0.08       | Left Cheek                               | 0    | 50      | 28        | 1:1        | 0.060     | 1.052          | 0.063        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.77       | 0.03        | Left Tilt                                | 0    | 1       | 1         | 1:1        | 0.027     | 1.054          | 0.028        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.78       | 0.15        | Left Tilt                                | 0    | 50      | 28        | 1:1        | 0.027     | 1.052          | 0.028        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.77       | -0.19       | Right Cheek                              | 0    | 1       | 1         | 1:1        | 0.075     | 1.054          | 0.079        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.78       | -0.17       | Right Cheek                              | 0    | 50      | 28        | 1:1        | 0.090     | 1.052          | <b>0.095</b> | 14       |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.77       | 0.09        | Right Tilt                               | 0    | 1       | 1         | 1:1        | 0.033     | 1.054          | 0.035        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.78       | 0.12        | Right Tilt                               | 0    | 50      | 28        | 1:1        | 0.034     | 1.052          | 0.036        | -        |
| 836.5                                                                                              | 167300 | CP OFDM QPSK    | 20         | 23.5          | 23.33       | -0.09       | Right Cheek                              | 1.5  | 1       | 1         | 1:1        | 0.045     | 1.040          | 0.047        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |                 |            |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |           |                |              |          |

### NR Band n41 Head SAR

| Frequency                                                                                          |        | Modulation      | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|--------|-----------------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|-----------|----------------|--------------|----------|
| MHz                                                                                                | Ch.    |                 | (MHz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (W/kg)    |                | (W/kg)       |          |
| 2592.99                                                                                            | 518598 | DFT-s OFDM QPSK | 100        | 21.5          | 21.00       | -0.14       | Left Cheek                               | 0    | 1       | 1         | 1:1        | 0.337     | 1.122          | 0.378        | -        |
| 2592.99                                                                                            | 518598 | DFT-s OFDM QPSK | 100        | 21.5          | 21.01       | -0.14       | Left Cheek                               | 0    | 135     | 69        | 1:1        | 0.234     | 1.119          | 0.262        | -        |
| 2592.99                                                                                            | 518598 | DFT-s OFDM QPSK | 100        | 21.5          | 21.00       | -0.17       | Left Tilt                                | 0    | 1       | 1         | 1:1        | 0.436     | 1.122          | 0.489        | -        |
| 2592.99                                                                                            | 518598 | DFT-s OFDM QPSK | 100        | 21.5          | 21.01       | -0.09       | Left Tilt                                | 0    | 135     | 69        | 1:1        | 0.318     | 1.119          | 0.356        | -        |
| 2592.99                                                                                            | 518598 | DFT-s OFDM QPSK | 100        | 21.5          | 21.00       | 0.06        | Right Cheek                              | 0    | 1       | 1         | 1:1        | 0.392     | 1.122          | 0.440        | -        |
| 2592.99                                                                                            | 518598 | DFT-s OFDM QPSK | 100        | 21.5          | 21.01       | 0.19        | Right Cheek                              | 0    | 135     | 69        | 1:1        | 0.326     | 1.119          | 0.365        | -        |
| 2592.99                                                                                            | 518598 | DFT-s OFDM QPSK | 100        | 21.5          | 21.00       | 0.13        | Right Tilt                               | 0    | 1       | 1         | 1:1        | 0.490     | 1.122          | 0.550        | -        |
| 2592.99                                                                                            | 518598 | DFT-s OFDM QPSK | 100        | 21.5          | 21.01       | 0.11        | Right Tilt                               | 0    | 135     | 69        | 1:1        | 0.438     | 1.119          | 0.490        | -        |
| 2592.99                                                                                            | 518598 | CP OFDM QPSK    | 100        | 21.5          | 21.06       | 0.08        | Right Tilt                               | 0    | 1       | 1         | 1:1        | 0.529     | 1.107          | <b>0.585</b> | 15       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |                 |            |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |           |                |              |          |

### NR Band n66(Main #1) (SA) Head SAR

| Frequency                                                                                          |        | Mode            | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No.  |
|----------------------------------------------------------------------------------------------------|--------|-----------------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|-----------|----------------|--------------|-----------|
| Mhz                                                                                                | Ch.    |                 | (Mhz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (W/kg)    |                | (W/kg)       |           |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5          | 24.46       | -0.09       | Left Cheek                               | 0    | 1       | 1         | 1:1        | 0.134     | 1.009          | 0.135        | -         |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5          | 24.49       | -0.03       | Left Cheek                               | 0    | 50      | 28        | 1:1        | 0.137     | 1.002          | <b>0.137</b> | <b>16</b> |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5          | 24.46       | 0.15        | Left Tilt                                | 0    | 1       | 1         | 1:1        | 0.095     | 1.009          | 0.096        | -         |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5          | 24.49       | 0.16        | Left Tilt                                | 0    | 50      | 28        | 1:1        | 0.101     | 1.002          | 0.101        | -         |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5          | 24.46       | -0.02       | Right Cheek                              | 0    | 1       | 1         | 1:1        | 0.116     | 1.009          | 0.117        | -         |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5          | 24.49       | -0.18       | Right Cheek                              | 0    | 50      | 28        | 1:1        | 0.131     | 1.002          | 0.131        | -         |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5          | 24.46       | 0.14        | Right Tilt                               | 0    | 1       | 1         | 1:1        | 0.070     | 1.009          | 0.071        | -         |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5          | 24.49       | 0.16        | Right Tilt                               | 0    | 50      | 28        | 1:1        | 0.069     | 1.002          | 0.069        | -         |
| 1770                                                                                               | 354000 | CP OFDM QPSK    | 20         | 23.0          | 22.86       | -0.10       | Left Cheek                               | 1.5  | 1       | 1         | 1:1        | 0.109     | 1.033          | 0.113        | -         |
| ANSI/ IEEE C95.1 - 2005- Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |                 |            |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |           |                |              |           |

### NR Band n66(Sub #2)(NSA)Head SAR

| Frequency                                                                                          |        | Mode            | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No.  |
|----------------------------------------------------------------------------------------------------|--------|-----------------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|-----------|----------------|--------------|-----------|
| Mhz                                                                                                | Ch.    |                 | (Mhz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (W/kg)    |                | (W/kg)       |           |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.98       | -0.01       | Left Cheek                               | 0    | 1       | 1         | 1:1        | 0.401     | 1.005          | 0.403        | -         |
| 1745                                                                                               | 349000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.99       | -0.04       | Left Cheek                               | 0    | 50      | 28        | 1:1        | 0.352     | 1.002          | 0.353        | -         |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.98       | 0.03        | Left Tilt                                | 0    | 1       | 1         | 1:1        | 0.547     | 1.005          | 0.550        | -         |
| 1745                                                                                               | 349000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.99       | 0.14        | Left Tilt                                | 0    | 50      | 28        | 1:1        | 0.456     | 1.002          | 0.457        | -         |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.98       | 0.04        | Right Cheek                              | 0    | 1       | 1         | 1:1        | 0.589     | 1.005          | 0.592        | -         |
| 1745                                                                                               | 349000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.99       | -0.12       | Right Cheek                              | 0    | 50      | 28        | 1:1        | 0.548     | 1.002          | 0.549        | -         |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.98       | -0.02       | Right Tilt                               | 0    | 1       | 1         | 1:1        | 0.677     | 1.005          | <b>0.680</b> | <b>17</b> |
| 1745                                                                                               | 349000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.99       | 0.08        | Right Tilt                               | 0    | 50      | 28        | 1:1        | 0.662     | 1.002          | 0.664        | -         |
| 1745                                                                                               | 349000 | CP OFDM QPSK    | 20         | 18.0          | 17.90       | 0.06        | Right Tilt                               | 0    | 1       | 1         | 1:1        | 0.618     | 1.023          | 0.632        | -         |
| ANSI/ IEEE C95.1 - 2005- Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |                 |            |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |           |                |              |           |

| DTS Head SAR 1g (RCV-ON)                                                                           |     |         |                  |                  |                     |                   |                  |                                          |            |                           |                  |                |                       |                   |          |
|----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|------------------------------------------|------------|---------------------------|------------------|----------------|-----------------------|-------------------|----------|
| Frequency                                                                                          |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position                            | Duty Cycle | Area Scan Peak SAR (W/kg) | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
| MHz                                                                                                | Ch. |         |                  |                  |                     |                   |                  |                                          |            |                           |                  |                |                       |                   |          |
| 2 437                                                                                              | 6   | 802.11b | 20               | 1                | 12.0                | 10.82             | 0.19             | Left Cheek                               | 98.8       | 0.100                     | 0.049            | 1.312          | 1.012                 | 0.065             | -        |
| 2 437                                                                                              | 6   | 802.11b | 20               | 1                | 12.0                | 10.82             | -0.10            | Left Tilt                                | 98.8       | 0.113                     | 0.069            | 1.312          | 1.012                 | 0.092             | -        |
| 2 437                                                                                              | 6   | 802.11b | 20               | 1                | 12.0                | 10.82             | -0.18            | Right Cheek                              | 98.8       | 0.147                     | 0.064            | 1.312          | 1.012                 | 0.085             | -        |
| 2 437                                                                                              | 6   | 802.11b | 20               | 1                | 12.0                | 10.82             | -0.18            | Right Tilt                               | 98.8       | 0.141                     | 0.076            | 1.312          | 1.012                 | <b>0.101</b>      | 18       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  | Head<br>1.6 W/kg<br>Averaged over 1 gram |            |                           |                  |                |                       |                   |          |

| NII Head SAR 1g (RCV-ON)                                                                           |     |          |            |           |               |             |             |                                          |            |                    |           |                |                |              |          |
|----------------------------------------------------------------------------------------------------|-----|----------|------------|-----------|---------------|-------------|-------------|------------------------------------------|------------|--------------------|-----------|----------------|----------------|--------------|----------|
| Frequency                                                                                          |     | Mode     | Band width | Data Rate | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Area Scan Peak SAR | Meas. SAR | Scaling Factor | Scaling Factor | Scaled SAR   | Plot No. |
|                                                                                                    |     |          |            |           |               |             |             |                                          |            | (MHz)              | (Mbps)    |                | (dBm)          | (dBm)        |          |
| Mhz                                                                                                | Ch. |          | (MHz)      | (Mbps)    | (dBm)         | (dBm)       | (dB)        |                                          |            | (W/kg)             | (W/kg)    |                | (Duty)         | (W/kg)       |          |
| 5 290                                                                                              | 58  | 802.11ac | 80         | MCS0      | 12.0          | 11.56       | -0.16       | Left Cheek                               | 86.0       | 0.446              | 0.095     | 1.107          | 1.163          | 0.122        | -        |
| 5 290                                                                                              | 58  | 802.11ac | 80         | MCS0      | 12.0          | 11.56       | -0.06       | Left Tilt                                | 86.0       | 0.280              | 0.093     | 1.107          | 1.163          | 0.120        | -        |
| 5 290                                                                                              | 58  | 802.11ac | 80         | MCS0      | 12.0          | 11.56       | -0.08       | Right Cheek                              | 86.0       | 1.020              | 0.412     | 1.107          | 1.163          | <b>0.530</b> | 19       |
| 5 290                                                                                              | 58  | 802.11ac | 80         | MCS0      | 12.0          | 11.56       | 0.10        | Right Tilt                               | 86.0       | 0.557              | 0.209     | 1.107          | 1.163          | 0.269        | -        |
| 5 690                                                                                              | 138 | 802.11ac | 80         | MCS0      | 12.0          | 11.70       | -0.15       | Left Cheek                               | 86.0       | 0.280              | 0.068     | 1.072          | 1.163          | 0.085        | -        |
| 5 690                                                                                              | 138 | 802.11ac | 80         | MCS0      | 12.0          | 11.70       | 0.00        | Left Tilt                                | 86.0       | 0.405              | 0.032     | 1.072          | 1.163          | 0.040        | -        |
| 5 690                                                                                              | 138 | 802.11ac | 80         | MCS0      | 12.0          | 11.70       | 0.00        | Right Cheek                              | 86.0       | 0.904              | 0.377     | 1.072          | 1.163          | <b>0.470</b> | -        |
| 5 690                                                                                              | 138 | 802.11ac | 80         | MCS0      | 12.0          | 11.70       | 0.14        | Right Tilt                               | 86.0       | 0.304              | 0.109     | 1.072          | 1.163          | 0.136        | -        |
| 5 775                                                                                              | 155 | 802.11ac | 80         | MCS0      | 12.0          | 11.59       | 0.10        | Left Cheek                               | 86.0       | 0.322              | 0.069     | 1.099          | 1.163          | 0.088        | -        |
| 5 775                                                                                              | 155 | 802.11ac | 80         | MCS0      | 12.0          | 11.59       | -0.17       | Left Tilt                                | 86.0       | 0.148              | 0.035     | 1.099          | 1.163          | 0.045        | -        |
| 5 775                                                                                              | 155 | 802.11ac | 80         | MCS0      | 12.0          | 11.59       | 0.00        | Right Cheek                              | 86.0       | 0.829              | 0.314     | 1.099          | 1.163          | <b>0.401</b> | -        |
| 5 775                                                                                              | 155 | 802.11ac | 80         | MCS0      | 12.0          | 11.59       | 0.10        | Right Tilt                               | 86.0       | 0.411              | 0.083     | 1.099          | 1.163          | 0.106        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |            |           |               |             |             | Head<br>1.6 W/kg<br>Averaged over 1 gram |            |                    |           |                |                |              |          |

| DSS Head SAR 1g                                                                                    |     |               |               |             |             |                                                 |           |                |                |              |          |
|----------------------------------------------------------------------------------------------------|-----|---------------|---------------|-------------|-------------|-------------------------------------------------|-----------|----------------|----------------|--------------|----------|
| Frequency                                                                                          |     | Mode          | Tune-Up Limit | Meas. Power | Power Drift | Test Position                                   | Meas. SAR | Scaling Factor | Scaling Factor | Scaled SAR   | Plot No. |
| Mhz                                                                                                | Ch. |               | (dBm)         | (dBm)       | (dB)        |                                                 | (W/kg)    |                | (Duty)         | (W/kg)       |          |
| 2 402                                                                                              | 0   | Bluetooth DH5 | 17.0          | 16.10       | 0.02        | Left Cheek                                      | 0.116     | 1.230          | 1.300          | 0.186        | -        |
| 2 402                                                                                              | 0   | Bluetooth DH5 | 17.0          | 16.10       | 0.10        | Left Tilt                                       | 0.188     | 1.230          | 1.300          | 0.301        | -        |
| 2 402                                                                                              | 0   | Bluetooth DH5 | 17.0          | 16.10       | 0.10        | Right Cheek                                     | 0.174     | 1.230          | 1.300          | 0.278        | -        |
| 2 402                                                                                              | 0   | Bluetooth DH5 | 17.0          | 16.10       | -0.13       | Right Tilt                                      | 0.214     | 1.230          | 1.300          | <b>0.342</b> | 20       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |               |               |             |             | Head<br>1.6 W/kg (mW/g)<br>Averaged over 1 gram |           |                |                |              |          |

## 13.2 Body-worn SAR Measurement Results

### GSM/ UMTS Body-Worn SAR

| Frequency                                                                                          |      | Mode              |     | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Distance | Meas. SAR    | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|------|-------------------|-----|---------------|-------------|-------------|------------------------------------------|------------|----------|--------------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.  |                   |     | (dB)          | (dB)        | (dB)        |                                          |            | (mm)     | (W/kg)       |                | (W/kg)       |          |
| 824.2                                                                                              | 128  | GSM 850 Voice     |     | 34.00         | 33.79       | 0.12        | Rear                                     | 1:8.30     | 15       | 0.291        | 1.050          | 0.305        | -        |
| 824.2                                                                                              | 128  | GSM 850 Voice     |     | 34.00         | 33.79       | -0.13       | Front                                    | 1:8.30     | 15       | <b>0.295</b> | 1.050          | 0.310        | 21       |
| 836.6                                                                                              | 190  | GSM 850 GPRS 2Tx  |     | 32.50         | 31.63       | -0.15       | Rear                                     | 1:4.15     | 15       | 0.272        | 1.222          | <b>0.332</b> | 22       |
| 836.6                                                                                              | 190  | GSM 850 GPRS 2Tx  |     | 32.50         | 31.63       | 0.04        | Front                                    | 1:4.15     | 15       | 0.217        | 1.222          | 0.265        | -        |
| 1 880.0                                                                                            | 661  | GSM 1900 Voice    |     | 31.00         | 30.56       | 0.09        | Rear                                     | 1:8.3      | 15       | 0.152        | 1.107          | 0.168        | -        |
| 1 880.0                                                                                            | 661  | GSM 1900 Voice    |     | 31.00         | 30.56       | -0.12       | Front                                    | 1:8.3      | 15       | 0.117        | 1.107          | 0.129        | -        |
| 1 880.0                                                                                            | 661  | GSM 1900 GPRS 2Tx |     | 30.00         | 28.66       | 0.00        | Rear                                     | 1:4.15     | 15       | 0.245        | 1.361          | <b>0.334</b> | 23       |
| 1 880.0                                                                                            | 661  | GSM 1900 GPRS 2Tx |     | 30.00         | 28.66       | -0.15       | Front                                    | 1:4.15     | 15       | 0.160        | 1.361          | 0.218        | -        |
| 836.6                                                                                              | 4183 | UMTS Band 5       | RMC | 25.0          | 24.68       | -0.04       | Rear                                     | 1:1        | 15       | 0.247        | 1.076          | <b>0.266</b> | 24       |
| 836.6                                                                                              | 4183 | UMTS Band 5       | RMC | 25.0          | 24.68       | 0.08        | Front                                    | 1:1        | 15       | 0.234        | 1.076          | 0.252        | -        |
| 1 732.4                                                                                            | 1412 | UMTS Band 4       | RMC | 25.0          | 24.43       | -0.17       | Rear                                     | 1:1        | 15       | 0.481        | 1.140          | <b>0.548</b> | 25       |
| 1 732.4                                                                                            | 1412 | UMTS Band 4       | RMC | 25.0          | 24.43       | -0.17       | Front                                    | 1:1        | 15       | 0.399        | 1.140          | 0.455        | -        |
| 1 880.0                                                                                            | 9400 | UMTS Band 2       | RMC | 25.0          | 24.19       | 0.00        | Rear                                     | 1:1        | 15       | 0.379        | 1.205          | <b>0.457</b> | 26       |
| 1 880.0                                                                                            | 9400 | UMTS Band 2       | RMC | 25.0          | 24.19       | -0.04       | Front                                    | 1:1        | 15       | 0.292        | 1.205          | 0.352        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |                   |     |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |          |              |                |              |          |

### LTE Band Bodyworn SAR

| Frequency                                                                                          |        | Mode        | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR  | RB Size                                  | RB offset | Duty Cycle | Distance | Meas SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|--------|-------------|------------|---------------|-------------|-------------|---------------|------|------------------------------------------|-----------|------------|----------|----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.    |             | (Mhz)      | (dBm)         | (dBm)       | (dB)        |               | (dB) |                                          |           |            |          | (mm)     | (W/kg)         |              |          |
| 1900                                                                                               | 19100  | LTE 2 QPSK  | 20         | 24.5          | 23.85       | -0.07       | Rear          | 0    | 1                                        | 49        | 1:1        | 15       | 0.271    | 1.161          | <b>0.315</b> | 27       |
| 1900                                                                                               | 19100  |             | 20         | 23.5          | 22.94       | 0.07        | Rear          | 1    | 50                                       | 25        | 1:1        | 15       | 0.226    | 1.138          | 0.257        | -        |
| 1900                                                                                               | 19100  |             | 20         | 24.5          | 23.85       | -0.01       | Front         | 0    | 1                                        | 49        | 1:1        | 15       | 0.218    | 1.161          | 0.253        | -        |
| 1900                                                                                               | 19100  |             | 20         | 23.5          | 22.94       | -0.04       | Front         | 1    | 50                                       | 25        | 1:1        | 15       | 0.179    | 1.138          | 0.204        | -        |
| 836.5                                                                                              | 20525  | LTE 5 QPSK  | 10         | 25.0          | 24.44       | 0.04        | Rear          | 0    | 1                                        | 0         | 1:1        | 15       | 0.161    | 1.138          | <b>0.183</b> | 28       |
| 836.5                                                                                              | 20525  |             | 10         | 24.0          | 23.53       | 0.06        | Rear          | 1    | 25                                       | 0         | 1:1        | 15       | 0.136    | 1.114          | 0.152        | -        |
| 836.5                                                                                              | 20525  |             | 10         | 25.0          | 24.44       | -0.06       | Front         | 0    | 1                                        | 0         | 1:1        | 15       | 0.146    | 1.138          | 0.166        | -        |
| 836.5                                                                                              | 20525  |             | 10         | 24.0          | 23.53       | -0.06       | Front         | 1    | 25                                       | 0         | 1:1        | 15       | 0.115    | 1.114          | 0.128        | -        |
| 707.5                                                                                              | 23095  | LTE 12 QPSK | 10         | 25.0          | 24.35       | -0.01       | Rear          | 0    | 1                                        | 49        | 1:1        | 15       | 0.191    | 1.161          | <b>0.222</b> | 29       |
| 707.5                                                                                              | 23095  |             | 10         | 24.0          | 23.44       | -0.05       | Rear          | 1    | 25                                       | 12        | 1:1        | 15       | 0.152    | 1.138          | 0.173        | -        |
| 707.5                                                                                              | 23095  |             | 10         | 25.0          | 24.35       | -0.03       | Front         | 0    | 1                                        | 49        | 1:1        | 15       | 0.141    | 1.161          | 0.164        | -        |
| 707.5                                                                                              | 23095  |             | 10         | 24.0          | 23.44       | -0.06       | Front         | 1    | 25                                       | 12        | 1:1        | 15       | 0.114    | 1.138          | 0.130        | -        |
| 782                                                                                                | 23230  | LTE 13 QPSK | 10         | 25.0          | 24.42       | -0.18       | Rear          | 0    | 1                                        | 49        | 1:1        | 15       | 0.229    | 1.143          | <b>0.262</b> | 30       |
| 782                                                                                                | 23230  |             | 10         | 24.0          | 23.36       | -0.07       | Rear          | 1    | 25                                       | 24        | 1:1        | 15       | 0.185    | 1.159          | 0.214        | -        |
| 782                                                                                                | 23230  |             | 10         | 25.0          | 24.42       | -0.02       | Front         | 0    | 1                                        | 49        | 1:1        | 15       | 0.215    | 1.143          | 0.246        | -        |
| 782                                                                                                | 23230  |             | 10         | 24.0          | 23.36       | -0.05       | Front         | 1    | 25                                       | 24        | 1:1        | 15       | 0.180    | 1.159          | 0.209        | -        |
| 822.5                                                                                              | 26775  | LTE 26 QPSK | 15         | 25.0          | 24.37       | 0.07        | Rear          | 0    | 1                                        | 36        | 1:1        | 15       | 0.148    | 1.156          | 0.171        | -        |
| 831.5                                                                                              | 26865  |             | 15         | 24.0          | 23.32       | 0.05        | Rear          | 1    | 36                                       | 18        | 1:1        | 15       | 0.130    | 1.169          | 0.152        | -        |
| 822.5                                                                                              | 26775  |             | 15         | 25.0          | 24.37       | 0.05        | Front         | 0    | 1                                        | 36        | 1:1        | 15       | 0.158    | 1.156          | <b>0.183</b> | 31       |
| 831.5                                                                                              | 26865  |             | 15         | 24.0          | 23.32       | 0.02        | Front         | 1    | 36                                       | 18        | 1:1        | 15       | 0.130    | 1.169          | 0.152        | -        |
| 2680                                                                                               | 41490  | LTE 41 QPSK | 20         | 25.0          | 24.08       | 0.11        | Rear          | 0    | 1                                        | 49        | 1:1.58     | 15       | 0.191    | 1.236          | <b>0.236</b> | 32       |
| 2680                                                                                               | 41490  |             | 20         | 24.0          | 23.28       | -0.03       | Rear          | 1    | 50                                       | 49        | 1:1.58     | 15       | 0.161    | 1.180          | 0.190        | -        |
| 2680                                                                                               | 41490  |             | 20         | 25.0          | 24.08       | 0.10        | Front         | 0    | 1                                        | 49        | 1:1.58     | 15       | 0.180    | 1.236          | 0.222        | -        |
| 2680                                                                                               | 41490  |             | 20         | 24.0          | 23.28       | 0.11        | Front         | 1    | 50                                       | 49        | 1:1.58     | 15       | 0.151    | 1.180          | 0.178        | -        |
| 1745                                                                                               | 132322 | LTE 66 QPSK | 20         | 25.0          | 24.56       | -0.09       | Rear          | 0    | 1                                        | 49        | 1:1        | 15       | 0.447    | 1.107          | <b>0.495</b> | 33       |
| 1720                                                                                               | 132072 |             | 20         | 24.0          | 23.53       | -0.01       | Rear          | 1    | 50                                       | 25        | 1:1        | 15       | 0.372    | 1.114          | 0.415        | -        |
| 1745                                                                                               | 132322 |             | 20         | 25.0          | 24.56       | -0.07       | Front         | 0    | 1                                        | 49        | 1:1        | 15       | 0.355    | 1.107          | 0.393        | -        |
| 1720                                                                                               | 132072 |             | 20         | 24.0          | 23.53       | -0.19       | Front         | 1    | 50                                       | 25        | 1:1        | 15       | 0.314    | 1.114          | 0.350        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |             |            |               |             |             |               |      | Body<br>1.6 W/kg<br>Averaged over 1 gram |           |            |          |          |                |              |          |

### NR Body-Worn SAR

| Frequency                                                                                         |        | Mode                                     | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|---------------------------------------------------------------------------------------------------|--------|------------------------------------------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                               | Ch.    |                                          | (Mhz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 836.5                                                                                             | 167300 | NR n5<br>DFT-s OFDM<br>QPSK              | 20         | 25.0          | 24.77       | 0.06        | Rear                                     | 0    | 1       | 1         | 1:1        | 15       | 0.148     | 1.054          | 0.156        | -        |
| 836.5                                                                                             | 167300 |                                          | 20         | 25.0          | 24.78       | 0.04        | Rear                                     | 0    | 50      | 28        | 1:1        | 15       | 0.179     | 1.052          | <b>0.188</b> | 34       |
| 836.5                                                                                             | 167300 |                                          | 20         | 25.0          | 24.77       | 0.02        | Front                                    | 0    | 1       | 1         | 1:1        | 15       | 0.081     | 1.054          | 0.085        | -        |
| 836.5                                                                                             | 167300 |                                          | 20         | 25.0          | 24.78       | 0.02        | Front                                    | 0    | 50      | 28        | 1:1        | 15       | 0.104     | 1.052          | 0.109        | -        |
| 836.5                                                                                             | 167300 | CP OFDM QPSK                             | 20         | 23.5          | 23.33       | 0.05        | Rear                                     | 1.5  | 1       | 1         | 1:1        | 15       | 0.115     | 1.040          | 0.120        | -        |
| 2592.99                                                                                           | 518598 | NR n41<br>DFT-s OFDM<br>QPSK             | 100        | 24.0          | 23.94       | -0.00       | Rear                                     | 0    | 1       | 1         | 1:1        | 15       | 0.329     | 1.014          | <b>0.334</b> | 35       |
| 2592.99                                                                                           | 518598 |                                          | 100        | 24.0          | 23.89       | -0.00       | Rear                                     | 0    | 135     | 69        | 1:1        | 15       | 0.199     | 1.026          | 0.204        | -        |
| 2592.99                                                                                           | 518598 |                                          | 100        | 24.0          | 23.94       | -0.18       | Front                                    | 0    | 1       | 1         | 1:1        | 15       | 0.140     | 1.014          | 0.142        | -        |
| 2592.99                                                                                           | 518598 |                                          | 100        | 24.0          | 23.89       | -0.07       | Front                                    | 0    | 135     | 69        | 1:1        | 15       | 0.120     | 1.026          | 0.123        | -        |
| 2592.99                                                                                           | 518598 | CP OFDM QPSK                             | 100        | 22.5          | 22.47       | -0.07       | Rear                                     | 1.5  | 1       | 1         | 1:1        | 15       | 0.214     | 1.007          | 0.215        | -        |
| 1770                                                                                              | 354000 | NR n66<br>(Main #1)<br>DFT-s<br>QPSK(SA) | 20         | 24.5          | 24.46       | -0.19       | Rear                                     | 0    | 1       | 1         | 1:1        | 15       | 0.453     | 1.009          | <b>0.457</b> | 36       |
| 1770                                                                                              | 354000 |                                          | 20         | 24.5          | 24.49       | -0.09       | Rear                                     | 0    | 50      | 28        | 1:1        | 15       | 0.442     | 1.002          | 0.443        | -        |
| 1770                                                                                              | 354000 |                                          | 20         | 24.5          | 24.46       | -0.19       | Front                                    | 0    | 1       | 1         | 1:1        | 15       | 0.420     | 1.009          | 0.424        | -        |
| 1770                                                                                              | 354000 |                                          | 20         | 24.5          | 24.49       | -0.10       | Front                                    | 0    | 50      | 28        | 1:1        | 15       | 0.415     | 1.002          | 0.416        | -        |
| 1770                                                                                              | 354000 | CP OFDM QPSK                             | 20         | 23.0          | 22.86       | -0.08       | Rear                                     | 1.5  | 1       | 1         | 1:1        | 15       | 0.328     | 1.033          | 0.339        | -        |
| 1720                                                                                              | 344000 | NR n66<br>(Sub #2)<br>DFT-s<br>QPSK(NSA) | 20         | 23.0          | 22.77       | 0.01        | Rear                                     | 0    | 1       | 1         | 1:1        | 15       | 0.423     | 1.054          | <b>0.446</b> | 37       |
| 1720                                                                                              | 344000 |                                          | 20         | 23.0          | 22.92       | 0.10        | Rear                                     | 0    | 50      | 28        | 1:1        | 15       | 0.407     | 1.019          | 0.415        | -        |
| 1720                                                                                              | 344000 |                                          | 20         | 23.0          | 22.77       | 0.14        | Front                                    | 0    | 1       | 1         | 1:1        | 15       | 0.205     | 1.054          | 0.216        | -        |
| 1720                                                                                              | 344000 |                                          | 20         | 23.0          | 22.92       | 0.06        | Front                                    | 0    | 50      | 28        | 1:1        | 15       | 0.201     | 1.019          | 0.205        | -        |
| 1720                                                                                              | 344000 | CP OFDM QPSK                             | 20         | 21.5          | 21.30       | -0.00       | Rear                                     | 1.5  | 1       | 1         | 1:1        | 15       | 0.283     | 1.047          | 0.296        | -        |
| ANSI/ IEEE C95.1 –2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |                                          |            |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |          |           |                |              |          |

### DTS Body-Worn SAR

| Frequency                                                                                          |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle | Distance (mm) | Area Scan Peak SAR (W/kg)                | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
|----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|---------------|--------------|------------|---------------|------------------------------------------|------------------|----------------|-----------------------|-------------------|----------|
| MHz                                                                                                | Ch. |         |                  |                  |                     |                   |                  |               |              |            |               |                                          |                  |                |                       |                   |          |
| 2 412                                                                                              | 1   | 802.11b | 20               | 1                | 20.0                | 18.91             | 0.00             | Rear          | Ant1         | 98.8       | 15            | 0.1910                                   | 0.121            | 1.285          | 1.012                 | <b>0.157</b>      | 38       |
| 2 412                                                                                              | 1   | 802.11b | 20               | 1                | 20.0                | 18.91             | -0.16            | Front         | Ant1         | 98.8       | 15            | 0.0919                                   | 0.060            | 1.285          | 1.012                 | 0.078             | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  |               |              |            |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |                  |                |                       |                   |          |

### NII Body-Worn SAR

| Frequency                                                                                          |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config. | Duty Cycle | Distance (mm) | Area Scan Peak SAR (W/kg)                | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
|----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|---------------|--------------|------------|---------------|------------------------------------------|------------------|----------------|-----------------------|-------------------|----------|
| MHz                                                                                                | Ch. |         |                  |                  |                     |                   |                  |               |              |            |               |                                          |                  |                |                       |                   |          |
| 5 300                                                                                              | 60  | 802.11a | 20               | 6                | 15.0                | 14.27             | -0.17            | Rear          | Ant1         | 93.2       | 15            | 0.409                                    | 0.171            | 1.183          | 1.073                 | 0.217             | -        |
| 5 300                                                                                              | 60  | 802.11a | 20               | 6                | 15.0                | 14.27             | 0.13             | Front         | Ant1         | 93.2       | 15            | 0.264                                    | 0.119            | 1.183          | 1.073                 | 0.151             | -        |
| 5 720                                                                                              | 144 | 802.11a | 20               | 6                | 15.0                | 14.20             | 0.00             | Rear          | Ant1         | 93.2       | 15            | 0.277                                    | 0.110            | 1.202          | 1.073                 | 0.142             | -        |
| 5 720                                                                                              | 144 | 802.11a | 20               | 6                | 15.0                | 14.20             | -0.13            | Front         | Ant1         | 93.2       | 15            | 0.438                                    | 0.176            | 1.202          | 1.073                 | 0.227             | -        |
| 5 745                                                                                              | 149 | 802.11a | 20               | 6                | 15.0                | 13.99             | -0.02            | Rear          | Ant1         | 93.2       | 15            | 0.397                                    | 0.159            | 1.262          | 1.073                 | 0.215             | -        |
| 5 745                                                                                              | 149 | 802.11a | 20               | 6                | 15.0                | 13.99             | 0.10             | Front         | Ant1         | 93.2       | 15            | 0.420                                    | 0.176            | 1.262          | 1.073                 | <b>0.238</b>      | 39       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  |               |              |            |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |                  |                |                       |                   |          |

### DSS Body-Worn SAR

| Frequency                                                                                          |     | Mode          | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Distance (mm) | Meas. SAR (W/kg)                         | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
|----------------------------------------------------------------------------------------------------|-----|---------------|---------------------|-------------------|------------------|---------------|---------------|------------------------------------------|----------------|-----------------------|-------------------|----------|
| MHz                                                                                                | Ch. |               |                     |                   |                  |               |               |                                          |                |                       |                   |          |
| 2 402                                                                                              | 0   | Bluetooth DH5 | 17.0                | 16.10             | 0.00             | Rear          | 15            | 0.050                                    | 1.230          | 1.300                 | <b>0.080</b>      | 40       |
| 2 402                                                                                              | 0   | Bluetooth DH5 | 17.0                | 16.10             | -0.10            | Front         | 15            | 0.027                                    | 1.230          | 1.300                 | 0.043             | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |               |                     |                   |                  |               |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |                |                       |                   |          |

### 13.3 Hotspot SAR Measurement Results

#### GSM 850 Hotspot SAR

| Frequency                                                                                          |     | Mode     | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Distance (mm) | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-----|----------|---------------|-------------|-------------|------------------------------------------|------------|---------------|-----------|----------------|--------------|----------|
| MHz                                                                                                | Ch. |          | (dB)          | (dB)        | (dB)        |                                          |            |               | (W/kg)    |                | (W/kg)       |          |
| 836.6                                                                                              | 190 | GPRS 2Tx | 32.50         | 31.63       | 0.11        | Rear                                     | 1:4.15     | 10            | 0.433     | 1.222          | <b>0.529</b> | 41       |
| 836.6                                                                                              | 190 | GPRS 2Tx | 32.50         | 31.63       | 0.04        | Front                                    | 1:4.15     | 10            | 0.331     | 1.222          | 0.404        | -        |
| 836.6                                                                                              | 190 | GPRS 2Tx | 32.50         | 31.63       | 0.03        | Left                                     | 1:4.15     | 10            | 0.119     | 1.222          | 0.145        | -        |
| 836.6                                                                                              | 190 | GPRS 2Tx | 32.50         | 31.63       | 0.01        | Right                                    | 1:4.15     | 10            | 0.276     | 1.222          | 0.337        | -        |
| 836.6                                                                                              | 190 | GPRS 2Tx | 32.50         | 31.63       | -0.18       | Bottom                                   | 1:4.15     | 10            | 0.305     | 1.222          | 0.373        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |               |           |                |              |          |

#### GSM 1900 Hotspot SAR

| Frequency                                                                                          |     | Mode     | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Distance (mm) | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-----|----------|---------------|-------------|-------------|------------------------------------------|------------|---------------|-----------|----------------|--------------|----------|
| MHz                                                                                                | Ch. |          | (dB)          | (dB)        | (dB)        |                                          |            |               | (W/kg)    |                | (W/kg)       |          |
| 1880.0                                                                                             | 661 | GPRS 2Tx | 27.50         | 26.73       | -0.13       | Rear                                     | 1:4.15     | 10            | 0.214     | 1.194          | 0.256        | -        |
| 1880.0                                                                                             | 661 | GPRS 2Tx | 27.50         | 26.73       | -0.06       | Front                                    | 1:4.15     | 10            | 0.332     | 1.194          | 0.396        | -        |
| 1880.0                                                                                             | 661 | GPRS 2Tx | 27.50         | 26.73       | 0.11        | Left                                     | 1:4.15     | 10            | 0.126     | 1.194          | 0.150        | -        |
| 1880.0                                                                                             | 661 | GPRS 2Tx | 27.50         | 26.73       | 0.19        | Right                                    | 1:4.15     | 10            | 0.064     | 1.194          | 0.076        | -        |
| 1880.0                                                                                             | 661 | GPRS 2Tx | 27.50         | 26.73       | -0.14       | Bottom                                   | 1:4.15     | 10            | 0.444     | 1.194          | <b>0.530</b> | 42       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |          |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |               |           |                |              |          |

#### UMTS Band 5 Hotspot SAR

| Frequency                                                                                          |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|------------------------------------------|------------|----------|-----------|----------------|--------------|----------|
| MHz                                                                                                | Ch.  |      | (dB)          | (dB)        | (dB)        |                                          |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 836.6                                                                                              | 4183 | RMC  | 25.0          | 24.68       | 0.05        | Rear                                     | 1:1        | 10       | 0.508     | 1.076          | <b>0.547</b> | 43       |
| 836.6                                                                                              | 4183 | RMC  | 25.0          | 24.68       | 0.14        | Front                                    | 1:1        | 10       | 0.384     | 1.076          | 0.413        | -        |
| 836.6                                                                                              | 4183 | RMC  | 25.0          | 24.68       | 0.15        | Left                                     | 1:1        | 10       | 0.116     | 1.076          | 0.125        | -        |
| 836.6                                                                                              | 4183 | RMC  | 25.0          | 24.68       | 0.05        | Right                                    | 1:1        | 10       | 0.242     | 1.076          | 0.261        | -        |
| 836.6                                                                                              | 4183 | RMC  | 25.0          | 24.68       | -0.01       | Bottom                                   | 1:1        | 10       | 0.305     | 1.076          | 0.328        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |          |           |                |              |          |

### UMTS Band 4 Hotspot SAR

| Frequency                                                                                          |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|------------------------------------------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.  |      | (dB)          | (dB)        | (dB)        |                                          |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 1 732.4                                                                                            | 1412 | RMC  | 22.5          | 21.64       | -0.11       | Rear                                     | 1:1        | 10       | 0.713     | 1.219          | 0.869        | -        |
| 1 712.4                                                                                            | 1312 | RMC  | 22.5          | 21.55       | -0.17       | Rear                                     | 1:1        | 10       | 0.682     | 1.245          | 0.849        | -        |
| 1 752.6                                                                                            | 1513 | RMC  | 22.5          | 21.52       | -0.07       | Rear                                     | 1:1        | 10       | 0.701     | 1.253          | 0.878        | -        |
| 1 732.4                                                                                            | 1412 | RMC  | 22.5          | 21.64       | -0.19       | Front                                    | 1:1        | 10       | 0.587     | 1.219          | 0.716        | -        |
| 1 732.4                                                                                            | 1412 | RMC  | 22.5          | 21.64       | -0.04       | Left                                     | 1:1        | 10       | 0.136     | 1.219          | 0.166        | -        |
| 1 732.4                                                                                            | 1412 | RMC  | 22.5          | 21.64       | 0.02        | Right                                    | 1:1        | 10       | 0.093     | 1.219          | 0.113        | -        |
| 1 732.4                                                                                            | 1412 | RMC  | 22.5          | 21.64       | -0.06       | Bottom                                   | 1:1        | 10       | 0.729     | 1.219          | 0.889        | -        |
| 1 712.4                                                                                            | 1312 | RMC  | 22.5          | 21.55       | -0.01       | Bottom                                   | 1:1        | 10       | 0.718     | 1.245          | 0.914        | -        |
| 1 752.6                                                                                            | 1513 | RMC  | 22.5          | 21.52       | -0.01       | Bottom                                   | 1:1        | 10       | 0.790     | 1.253          | <b>0.990</b> | 44       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |          |           |                |              |          |

### UMTS Band 2 Hotspot SAR

| Frequency                                                                                          |      | Mode | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|------|------|---------------|-------------|-------------|------------------------------------------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.  |      | (dB)          | (dB)        | (dB)        |                                          |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 1 880                                                                                              | 9400 | RMC  | 22.5          | 21.29       | -0.16       | Rear                                     | 1:1        | 10       | 0.414     | 1.321          | 0.547        | -        |
| 1 880                                                                                              | 9400 | RMC  | 22.5          | 21.29       | -0.08       | Front                                    | 1:1        | 10       | 0.347     | 1.321          | 0.458        | -        |
| 1 880                                                                                              | 9400 | RMC  | 22.5          | 21.29       | -0.04       | Left                                     | 1:1        | 10       | 0.097     | 1.321          | 0.128        | -        |
| 1 880                                                                                              | 9400 | RMC  | 22.5          | 21.29       | 0.14        | Right                                    | 1:1        | 10       | 0.053     | 1.321          | 0.070        | -        |
| 1 880                                                                                              | 9400 | RMC  | 22.5          | 21.29       | -0.01       | Bottom                                   | 1:1        | 10       | 0.674     | 1.321          | <b>0.891</b> | 45       |
| 1 852.4                                                                                            | 9262 | RMC  | 22.5          | 21.23       | -0.09       | Bottom                                   | 1:1        | 10       | 0.574     | 1.340          | 0.769        | -        |
| 1 907.6                                                                                            | 9538 | RMC  | 22.5          | 21.48       | -0.06       | Bottom                                   | 1:1        | 10       | 0.601     | 1.265          | 0.760        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |            |          |           |                |              |          |

Note: \* Data entry indicate Variability measurement.

### LTE Band 2 Hotspot SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.   |      | (Mhz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 1900                                                                                               | 19100 | QPSK | 20         | 21.5          | 20.89       | -0.01       | Rear                                     | 0    | 1       | 99        | 1:1        | 10       | 0.323     | 1.151          | 0.372        | -        |
| 1900                                                                                               | 19100 | QPSK | 20         | 21.5          | 20.98       | -0.09       | Rear                                     | 0    | 50      | 25        | 1:1        | 10       | 0.338     | 1.127          | 0.381        | -        |
| 1900                                                                                               | 19100 | QPSK | 20         | 21.5          | 20.89       | -0.17       | Front                                    | 0    | 1       | 99        | 1:1        | 10       | 0.218     | 1.151          | 0.251        | -        |
| 1900                                                                                               | 19100 | QPSK | 20         | 21.5          | 20.98       | -0.10       | Front                                    | 0    | 50      | 25        | 1:1        | 10       | 0.226     | 1.127          | 0.255        | -        |
| 1900                                                                                               | 19100 | QPSK | 20         | 21.5          | 20.89       | -0.03       | Left                                     | 0    | 1       | 99        | 1:1        | 10       | 0.087     | 1.151          | 0.100        | -        |
| 1900                                                                                               | 19100 | QPSK | 20         | 21.5          | 20.98       | 0.01        | Left                                     | 0    | 50      | 25        | 1:1        | 10       | 0.089     | 1.127          | 0.100        | -        |
| 1900                                                                                               | 19100 | QPSK | 20         | 21.5          | 20.89       | -0.08       | Right                                    | 0    | 1       | 99        | 1:1        | 10       | 0.045     | 1.151          | 0.052        | -        |
| 1900                                                                                               | 19100 | QPSK | 20         | 21.5          | 20.98       | -0.11       | Right                                    | 0    | 50      | 25        | 1:1        | 10       | 0.046     | 1.127          | 0.052        | -        |
| 1900                                                                                               | 19100 | QPSK | 20         | 21.5          | 20.89       | -0.01       | Bottom                                   | 0    | 1       | 99        | 1:1        | 10       | 0.631     | 1.151          | 0.726        | -        |
| 1900                                                                                               | 19100 | QPSK | 20         | 21.5          | 20.98       | -0.04       | Bottom                                   | 0    | 50      | 25        | 1:1        | 10       | 0.653     | 1.127          | <b>0.736</b> | 46       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |          |           |                |              |          |

### LTE Band 5 Hotspot SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.   |      | (Mhz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 836.5                                                                                              | 20525 | QPSK | 10         | 25.0          | 24.44       | 0.00        | Rear                                     | 0    | 1       | 0         | 1:1        | 10       | 0.328     | 1.138          | <b>0.373</b> | 47       |
| 836.5                                                                                              | 20525 | QPSK | 10         | 24.0          | 23.53       | 0.03        | Rear                                     | 1    | 25      | 0         | 1:1        | 10       | 0.267     | 1.114          | 0.298        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 25.0          | 24.44       | -0.04       | Front                                    | 0    | 1       | 0         | 1:1        | 10       | 0.204     | 1.138          | 0.232        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 24.0          | 23.53       | -0.00       | Front                                    | 1    | 25      | 0         | 1:1        | 10       | 0.164     | 1.114          | 0.183        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 25.0          | 24.44       | 0.13        | Left                                     | 0    | 1       | 0         | 1:1        | 10       | 0.084     | 1.138          | 0.096        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 24.0          | 23.53       | 0.13        | Left                                     | 1    | 25      | 0         | 1:1        | 10       | 0.069     | 1.114          | 0.077        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 25.0          | 24.44       | 0.08        | Right                                    | 0    | 1       | 0         | 1:1        | 10       | 0.143     | 1.138          | 0.163        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 24.0          | 23.53       | 0.07        | Right                                    | 1    | 25      | 0         | 1:1        | 10       | 0.115     | 1.114          | 0.128        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 25.0          | 24.44       | -0.09       | Bottom                                   | 0    | 1       | 0         | 1:1        | 10       | 0.147     | 1.138          | 0.167        | -        |
| 836.5                                                                                              | 20525 | QPSK | 10         | 24.0          | 23.53       | -0.10       | Bottom                                   | 1    | 25      | 0         | 1:1        | 10       | 0.121     | 1.114          | 0.135        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |          |           |                |              |          |

### LTE Band 12 Hotspot SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position                            | MPR  | RB Size | RB Offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|------------------------------------------|------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.   |      | (Mhz)      | (dBm)         | (dBm)       | (dB)        |                                          | (dB) |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 707.5                                                                                              | 23095 | QPSK | 10         | 25.0          | 24.35       | -0.04       | Rear                                     | 0    | 1       | 49        | 1:1        | 10       | 0.242     | 1.161          | <b>0.281</b> | 48       |
| 707.5                                                                                              | 23095 | QPSK | 10         | 24.0          | 23.44       | 0.02        | Rear                                     | 1    | 25      | 12        | 1:1        | 10       | 0.222     | 1.138          | 0.253        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 25.0          | 24.35       | -0.04       | Front                                    | 0    | 1       | 49        | 1:1        | 10       | 0.188     | 1.161          | 0.218        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 24.0          | 23.44       | -0.01       | Front                                    | 1    | 25      | 12        | 1:1        | 10       | 0.152     | 1.138          | 0.173        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 25.0          | 24.35       | -0.04       | Left                                     | 0    | 1       | 49        | 1:1        | 10       | 0.072     | 1.161          | 0.084        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 24.0          | 23.44       | -0.13       | Left                                     | 1    | 25      | 12        | 1:1        | 10       | 0.066     | 1.138          | 0.075        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 25.0          | 24.35       | 0.05        | Right                                    | 0    | 1       | 49        | 1:1        | 10       | 0.102     | 1.161          | 0.118        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 24.0          | 23.44       | -0.13       | Right                                    | 1    | 25      | 12        | 1:1        | 10       | 0.083     | 1.138          | 0.094        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 25.0          | 24.35       | -0.10       | Bottom                                   | 0    | 1       | 49        | 1:1        | 10       | 0.132     | 1.161          | 0.153        | -        |
| 707.5                                                                                              | 23095 | QPSK | 10         | 24.0          | 23.44       | -0.12       | Bottom                                   | 1    | 25      | 12        | 1:1        | 10       | 0.111     | 1.138          | 0.126        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             | Body<br>1.6 W/kg<br>Averaged over 1 gram |      |         |           |            |          |           |                |              |          |

### LTE Band 13 Hotspot SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB Offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.   |      | (Mhz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 782                                                                                                | 23230 | QPSK | 10         | 25.0          | 24.42       | -0.12       | Rear          | 0                                        | 1       | 49        | 1:1        | 10       | 0.321     | 1.143          | <b>0.367</b> | 49       |
| 782                                                                                                | 23230 | QPSK | 10         | 24.0          | 23.36       | -0.04       | Rear          | 1                                        | 25      | 24        | 1:1        | 10       | 0.254     | 1.159          | 0.294        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 25.0          | 24.42       | -0.15       | Front         | 0                                        | 1       | 49        | 1:1        | 10       | 0.270     | 1.143          | 0.309        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 24.0          | 23.36       | -0.01       | Front         | 1                                        | 25      | 24        | 1:1        | 10       | 0.220     | 1.159          | 0.255        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 25.0          | 24.42       | -0.00       | Left          | 0                                        | 1       | 49        | 1:1        | 10       | 0.122     | 1.143          | 0.139        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 24.0          | 23.36       | -0.03       | Left          | 1                                        | 25      | 24        | 1:1        | 10       | 0.108     | 1.159          | 0.125        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 25.0          | 24.42       | 0.01        | Right         | 0                                        | 1       | 49        | 1:1        | 10       | 0.263     | 1.143          | 0.301        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 24.0          | 23.36       | 0.07        | Right         | 1                                        | 25      | 24        | 1:1        | 10       | 0.221     | 1.159          | 0.256        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 25.0          | 24.42       | -0.14       | Bottom        | 0                                        | 1       | 49        | 1:1        | 10       | 0.218     | 1.143          | 0.249        | -        |
| 782                                                                                                | 23230 | QPSK | 10         | 24.0          | 23.36       | -0.09       | Bottom        | 1                                        | 25      | 24        | 1:1        | 10       | 0.176     | 1.159          | 0.204        |          |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

### LTE Band 26 Hotspot SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB Offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.   |      | (Mhz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 822.5                                                                                              | 26775 | QPSK | 15         | 25.0          | 24.37       | 0.03        | Rear          | 0                                        | 1       | 36        | 1:1        | 10       | 0.325     | 1.156          | <b>0.376</b> | 50       |
| 831.5                                                                                              | 26865 | QPSK | 15         | 24.0          | 23.32       | 0.01        | Rear          | 1                                        | 36      | 18        | 1:1        | 10       | 0.267     | 1.169          | 0.312        | -        |
| 822.5                                                                                              | 26775 | QPSK | 15         | 25.0          | 24.37       | -0.05       | Front         | 0                                        | 1       | 36        | 1:1        | 10       | 0.208     | 1.156          | 0.240        | -        |
| 831.5                                                                                              | 26865 | QPSK | 15         | 24.0          | 23.32       | 0.02        | Front         | 1                                        | 36      | 18        | 1:1        | 10       | 0.164     | 1.169          | 0.192        | -        |
| 822.5                                                                                              | 26775 | QPSK | 15         | 25.0          | 24.37       | 0.13        | Left          | 0                                        | 1       | 36        | 1:1        | 10       | 0.089     | 1.156          | 0.103        | -        |
| 831.5                                                                                              | 26865 | QPSK | 15         | 24.0          | 23.32       | 0.08        | Left          | 1                                        | 36      | 18        | 1:1        | 10       | 0.068     | 1.169          | 0.080        | -        |
| 822.5                                                                                              | 26775 | QPSK | 15         | 25.0          | 24.37       | 0.05        | Right         | 0                                        | 1       | 36        | 1:1        | 10       | 0.139     | 1.156          | 0.161        | -        |
| 831.5                                                                                              | 26865 | QPSK | 15         | 24.0          | 23.32       | 0.11        | Right         | 1                                        | 36      | 18        | 1:1        | 10       | 0.119     | 1.169          | 0.139        | -        |
| 822.5                                                                                              | 26775 | QPSK | 15         | 25.0          | 24.37       | -0.11       | Bottom        | 0                                        | 1       | 36        | 1:1        | 10       | 0.124     | 1.156          | 0.143        | -        |
| 831.5                                                                                              | 26865 | QPSK | 15         | 24.0          | 23.32       | -0.11       | Bottom        | 1                                        | 36      | 18        | 1:1        | 10       | 0.119     | 1.169          | 0.139        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

### LTE Band 66 Hotspot SAR

| Frequency                                                                                          |        | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB Offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|--------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.    |      | (Mhz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 1 770                                                                                              | 132572 | QPSK | 20         | 21.0          | 19.90       | -0.11       | Rear          | 0                                        | 1       | 99        | 1:1        | 10       | 0.126     | 1.288          | 0.162        | -        |
| 1 770                                                                                              | 132572 | QPSK | 20         | 21.0          | 19.98       | -0.19       | Rear          | 0                                        | 50      | 49        | 1:1        | 10       | 0.131     | 1.265          | 0.166        | -        |
| 1 770                                                                                              | 132572 | QPSK | 20         | 21.0          | 19.90       | -0.04       | Front         | 0                                        | 1       | 99        | 1:1        | 10       | 0.208     | 1.288          | 0.268        | -        |
| 1 770                                                                                              | 132572 | QPSK | 20         | 21.0          | 19.98       | -0.12       | Front         | 0                                        | 50      | 49        | 1:1        | 10       | 0.214     | 1.265          | 0.271        | -        |
| 1 770                                                                                              | 132572 | QPSK | 20         | 21.0          | 19.90       | 0.08        | Left          | 0                                        | 1       | 99        | 1:1        | 10       | 0.069     | 1.288          | 0.089        | -        |
| 1 770                                                                                              | 132572 | QPSK | 20         | 21.0          | 19.98       | 0.10        | Left          | 0                                        | 50      | 49        | 1:1        | 10       | 0.072     | 1.265          | 0.091        | -        |
| 1 770                                                                                              | 132572 | QPSK | 20         | 21.0          | 19.90       | 0.17        | Right         | 0                                        | 1       | 99        | 1:1        | 10       | 0.050     | 1.288          | 0.064        | -        |
| 1 770                                                                                              | 132572 | QPSK | 20         | 21.0          | 19.98       | 0.11        | Right         | 0                                        | 50      | 49        | 1:1        | 10       | 0.052     | 1.265          | 0.066        | -        |
| 1 770                                                                                              | 132572 | QPSK | 20         | 21.0          | 19.90       | 0.11        | Bottom        | 0                                        | 1       | 99        | 1:1        | 10       | 0.495     | 1.288          | 0.638        | -        |
| 1 770                                                                                              | 132572 | QPSK | 20         | 21.0          | 19.98       | 0.02        | Bottom        | 0                                        | 50      | 49        | 1:1        | 10       | 0.520     | 1.265          | <b>0.658</b> | 51       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

### LTE Band 41 Hotspot SAR

| Frequency                                                                                          |       | Mode | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB Offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|-------|------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.   |      | (Mhz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 2549.5                                                                                             | 40185 | QPSK | 20         | 23.0          | 22.36       | -0.01       | Rear          | 0                                        | 1       | 99        | 1:1.58     | 10       | 0.213     | 1.159          | 0.247        | -        |
| 2549.5                                                                                             | 40185 | QPSK | 20         | 23.0          | 22.40       | -0.12       | Rear          | 0                                        | 50      | 25        | 1:1.58     | 10       | 0.213     | 1.148          | 0.245        | -        |
| 2549.5                                                                                             | 40185 | QPSK | 20         | 23.0          | 22.36       | -0.06       | Front         | 0                                        | 1       | 99        | 1:1.58     | 10       | 0.168     | 1.159          | 0.195        | -        |
| 2549.5                                                                                             | 40185 | QPSK | 20         | 23.0          | 22.40       | -0.09       | Front         | 0                                        | 50      | 25        | 1:1.58     | 10       | 0.172     | 1.148          | 0.197        | -        |
| 2549.5                                                                                             | 40185 | QPSK | 20         | 23.0          | 22.36       | -0.16       | Left          | 0                                        | 1       | 99        | 1:1.58     | 10       | 0.084     | 1.159          | 0.097        | -        |
| 2549.5                                                                                             | 40185 | QPSK | 20         | 23.0          | 22.40       | -0.00       | Left          | 0                                        | 50      | 25        | 1:1.58     | 10       | 0.088     | 1.148          | 0.101        | -        |
| 2549.5                                                                                             | 40185 | QPSK | 20         | 23.0          | 22.36       | 0.05        | Bottom        | 0                                        | 1       | 99        | 1:1.58     | 10       | 0.271     | 1.159          | <b>0.314</b> | 52       |
| 2549.5                                                                                             | 40185 | QPSK | 20         | 23.0          | 22.40       | 0.08        | Bottom        | 0                                        | 50      | 25        | 1:1.58     | 10       | 0.260     | 1.148          | 0.299        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

### NR Band n5 (Cell) Hotspot SAR

| Frequency                                                                                          |        | Mode            | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB Offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|--------|-----------------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| MHz                                                                                                | Ch.    |                 | (MHz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.77       | -0.08       | Rear          | 0                                        | 1       | 1         | 1:1        | 10       | 0.254     | 1.054          | 0.268        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.78       | 0.06        | Rear          | 0                                        | 50      | 28        | 1:1        | 10       | 0.305     | 1.052          | <b>0.321</b> | 53       |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.77       | -0.03       | Front         | 0                                        | 1       | 1         | 1:1        | 10       | 0.179     | 1.054          | 0.189        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.78       | -0.02       | Front         | 0                                        | 50      | 28        | 1:1        | 10       | 0.181     | 1.052          | 0.190        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.77       | 0.05        | Left          | 0                                        | 1       | 1         | 1:1        | 10       | 0.047     | 1.054          | 0.050        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.78       | -0.08       | Left          | 0                                        | 50      | 28        | 1:1        | 10       | 0.051     | 1.052          | 0.054        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.77       | -0.05       | Right         | 0                                        | 1       | 1         | 1:1        | 10       | 0.063     | 1.054          | 0.066        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.78       | 0.03        | Right         | 0                                        | 50      | 28        | 1:1        | 10       | 0.080     | 1.052          | 0.084        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.77       | -0.01       | Bottom        | 0                                        | 1       | 1         | 1:1        | 10       | 0.072     | 1.054          | 0.076        | -        |
| 836.5                                                                                              | 167300 | DFT-s OFDM QPSK | 20         | 25.0          | 24.78       | -0.07       | Bottom        | 0                                        | 50      | 28        | 1:1        | 10       | 0.102     | 1.052          | 0.107        | -        |
| 836.5                                                                                              | 167300 | CP OFDM QPSK    | 20         | 23.5          | 23.33       | 0.01        | Rear          | 1.5                                      | 1       | 1         | 1:1        | 10       | 0.191     | 1.040          | 0.199        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |                 |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

### NR Band n41 Hotspot SAR

| Frequency                                                                                          |        | Mode            | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB Offset | Duty Cycle | Distance | Meas. SAR    | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|--------|-----------------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|--------------|----------------|--------------|----------|
| MHz                                                                                                | Ch.    |                 | (MHz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)       |                | (W/kg)       |          |
| 2 592.99                                                                                           | 518598 | DFT-s OFDM QPSK | 100        | 23.0          | 22.64       | -0.00       | Rear          | 0                                        | 1       | 1         | 1:1        | 10       | 0.348        | 1.086          | 0.378        | -        |
| 2 592.99                                                                                           | 518598 | DFT-s OFDM QPSK | 100        | 23.0          | 22.59       | 0.00        | Rear          | 0                                        | 135     | 0         | 1:1        | 10       | 0.292        | 1.099          | 0.321        | -        |
| 2 592.99                                                                                           | 518598 | DFT-s OFDM QPSK | 100        | 23.0          | 22.64       | -0.05       | Front         | 0                                        | 1       | 1         | 1:1        | 10       | 0.133        | 1.086          | 0.144        | -        |
| 2 592.99                                                                                           | 518598 | DFT-s OFDM QPSK | 100        | 23.0          | 22.59       | 0.09        | Front         | 0                                        | 135     | 0         | 1:1        | 10       | 0.117        | 1.099          | 0.129        | -        |
| 2 592.99                                                                                           | 518598 | DFT-s OFDM QPSK | 100        | 23.0          | 22.64       | -0.00       | Left          | 0                                        | 1       | 1         | 1:1        | 10       | 0.044        | 1.086          | 0.048        | -        |
| 2 592.99                                                                                           | 518598 | DFT-s OFDM QPSK | 100        | 23.0          | 22.59       | 0.04        | Left          | 0                                        | 135     | 0         | 1:1        | 10       | 0.034        | 1.099          | 0.037        | -        |
| 2 592.99                                                                                           | 518598 | DFT-s OFDM QPSK | 100        | 23.0          | 22.64       | 0.09        | Right         | 0                                        | 1       | 1         | 1:1        | 10       | 0.066        | 1.086          | 0.072        | -        |
| 2 592.99                                                                                           | 518598 | DFT-s OFDM QPSK | 100        | 23.0          | 22.59       | 0.15        | Right         | 0                                        | 135     | 0         | 1:1        | 10       | 0.058        | 1.099          | 0.064        | -        |
| 2 592.99                                                                                           | 518598 | DFT-s OFDM QPSK | 100        | 23.0          | 22.64       | 0.04        | Top           | 0                                        | 1       | 1         | 1:1        | 10       | <b>0.462</b> | 1.086          | 0.502        | 54       |
| 2 592.99                                                                                           | 518598 | DFT-s OFDM QPSK | 100        | 23.0          | 22.59       | 0.06        | Top           | 0                                        | 135     | 0         | 1:1        | 10       | 0.400        | 1.099          | 0.440        | -        |
| 2 592.99                                                                                           | 518598 | CP OFDM QPSK    | 100        | 23.0          | 22.49       | 0.15        | Top           | 0                                        | 1       | 1         | 1:1        | 10       | 0.449        | 1.125          | <b>0.505</b> | 55       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |                 |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |              |                |              |          |

### NR Band n66(Main #1) (SA)Hotspot SAR

| Frequency                                                                                          |        | Mode            | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB Offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|--------|-----------------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.    |                 | (Mhz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 20.0          | 19.88       | -0.13       | Rear          | 0                                        | 1       | 104       | 1:1        | 10       | 0.423     | 1.028          | 0.435        | -        |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 20.0          | 19.85       | -0.01       | Rear          | 0                                        | 50      | 28        | 1:1        | 10       | 0.418     | 1.035          | 0.433        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 20.0          | 19.88       | -0.03       | Front         | 0                                        | 1       | 104       | 1:1        | 10       | 0.406     | 1.028          | 0.417        | -        |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 20.0          | 19.85       | -0.09       | Front         | 0                                        | 50      | 28        | 1:1        | 10       | 0.358     | 1.035          | 0.371        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 20.0          | 19.88       | 0.11        | Left          | 0                                        | 1       | 104       | 1:1        | 10       | 0.083     | 1.028          | 0.085        | -        |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 20.0          | 19.85       | -0.06       | Left          | 0                                        | 50      | 28        | 1:1        | 10       | 0.077     | 1.035          | 0.080        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 20.0          | 19.88       | 0.13        | Right         | 0                                        | 1       | 104       | 1:1        | 10       | 0.056     | 1.028          | 0.058        | -        |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 20.0          | 19.85       | 0.05        | Right         | 0                                        | 50      | 28        | 1:1        | 10       | 0.056     | 1.035          | 0.058        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 20.0          | 19.88       | -0.03       | Bottom        | 0                                        | 1       | 104       | 1:1        | 10       | 0.502     | 1.028          | 0.516        | -        |
| 1770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 20.0          | 19.85       | -0.05       | Bottom        | 0                                        | 50      | 28        | 1:1        | 10       | 0.619     | 1.035          | 0.641        | -        |
| 1770                                                                                               | 354000 | CP OFDM QPSK    | 20         | 20.0          | 19.76       | 0.13        | Bottom        | 0                                        | 1       | 1         | 1:1        | 10       | 0.710     | 1.057          | <b>0.750</b> | 56       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |                 |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

### NR Band n66(Sub #2) (NSA) Hotspot SAR

| Frequency                                                                                          |        | Mode            | Band width | Tune-Up Limit | Meas. Power | Power Drift | Test Position | MPR                                      | RB Size | RB Offset | Duty Cycle | Distance | Meas. SAR | Scaling Factor | Scaled SAR   | Plot No. |
|----------------------------------------------------------------------------------------------------|--------|-----------------|------------|---------------|-------------|-------------|---------------|------------------------------------------|---------|-----------|------------|----------|-----------|----------------|--------------|----------|
| Mhz                                                                                                | Ch.    |                 | (Mhz)      | (dBm)         | (dBm)       | (dB)        |               | (dB)                                     |         |           |            | (mm)     | (W/kg)    |                | (W/kg)       |          |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.92       | 0.08        | Rear          | 0                                        | 1       | 1         | 1:1        | 10       | 0.267     | 1.019          | 0.272        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.98       | 0.10        | Rear          | 0                                        | 50      | 28        | 1:1        | 10       | 0.248     | 1.005          | 0.249        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.92       | -0.10       | Front         | 0                                        | 1       | 1         | 1:1        | 10       | 0.178     | 1.019          | 0.181        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.98       | -0.13       | Front         | 0                                        | 50      | 28        | 1:1        | 10       | 0.146     | 1.005          | 0.147        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.92       | 0.14        | Left          | 0                                        | 1       | 1         | 1:1        | 10       | 0.064     | 1.019          | 0.065        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.98       | -0.16       | Left          | 0                                        | 50      | 28        | 1:1        | 10       | 0.054     | 1.005          | 0.054        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.92       | 0.05        | Right         | 0                                        | 1       | 1         | 1:1        | 10       | 0.092     | 1.019          | 0.094        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.98       | 0.01        | Right         | 0                                        | 50      | 28        | 1:1        | 10       | 0.084     | 1.005          | 0.084        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.92       | -0.06       | Top           | 0                                        | 1       | 1         | 1:1        | 10       | 0.337     | 1.019          | 0.343        | -        |
| 1720                                                                                               | 344000 | DFT-s OFDM QPSK | 20         | 18.0          | 17.98       | 0.04        | Top           | 0                                        | 50      | 28        | 1:1        | 10       | 0.372     | 1.005          | <b>0.374</b> | 57       |
| 1720                                                                                               | 344000 | CP OFDM QPSK    | 20         | 18.0          | 17.88       | 0.17        | Top           | 0                                        | 1       | 1         | 1:1        | 10       | 0.353     | 1.028          | 0.363        | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |                 |            |               |             |             |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |         |           |            |          |           |                |              |          |

### DTS Hotspot SAR

| Frequency                                                                                          |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Duty Cycle | Distance (mm) | Area Scan Peak SAR (W/kg)                | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Reported SAR (W/kg) | Plot No. |
|----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|---------------|------------|---------------|------------------------------------------|------------------|----------------|-----------------------|---------------------|----------|
| MHz                                                                                                | Ch. |         |                  |                  |                     |                   |                  |               |            |               |                                          |                  |                |                       |                     |          |
| 2412                                                                                               | 1   | 802.11b | 20               | 1                | 20.0                | 18.91             | -0.15            | Rear          | 98.8       | 10            | 0.351                                    | 0.208            | 1.285          | 1.012                 | 0.270               | -        |
| 2412                                                                                               | 1   | 802.11b | 20               | 1                | 20.0                | 18.91             | -0.10            | Front         | 98.8       | 10            | 0.150                                    | 0.093            | 1.285          | 1.012                 | 0.121               | -        |
| 2412                                                                                               | 1   | 802.11b | 20               | 1                | 20.0                | 18.91             | 0.18             | Left          | 98.8       | 10            | 0.0977                                   | 0.056            | 1.285          | 1.012                 | 0.073               | -        |
| 2412                                                                                               | 1   | 802.11b | 20               | 1                | 20.0                | 18.91             | 0.01             | Top           | 98.8       | 10            | 0.462                                    | 0.280            | 1.285          | 1.012                 | <b>0.364</b>        | 58       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  |               |            |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |                  |                |                       |                     |          |

### NII Hotspot SAR

| Frequency                                                                                          |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Duty Cycle | Distance (mm) | Area Scan Peak SAR (W/kg)                | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Reported SAR (W/kg) | Plot No. |
|----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|---------------|------------|---------------|------------------------------------------|------------------|----------------|-----------------------|---------------------|----------|
| MHz                                                                                                | Ch. |         |                  |                  |                     |                   |                  |               |            |               |                                          |                  |                |                       |                     |          |
| 5745                                                                                               | 149 | 802.11a | 20               | 6                | 15.0                | 13.99             | -0.17            | Rear          | 93.2       | 10            | 0.495                                    | 0.216            | 1.262          | 1.073                 | 0.292               | -        |
| 5745                                                                                               | 149 | 802.11a | 20               | 6                | 15.0                | 13.99             | 0.15             | Front         | 93.2       | 10            | 0.349                                    | 0.128            | 1.262          | 1.073                 | 0.173               | -        |
| 5745                                                                                               | 149 | 802.11a | 20               | 6                | 15.0                | 13.99             | -0.16            | Left          | 93.2       | 10            | 1.550                                    | 0.661            | 1.262          | 1.073                 | <b>0.895</b>        | 59       |
| 5 825                                                                                              | 165 | 802.11a | 20               | 6                | 15.0                | 13.98             | -0.06            | Left          | 93.2       | 10            | 1.090                                    | 0.443            | 1.265          | 1.073                 | 0.601               |          |
| 5745                                                                                               | 149 | 802.11a | 20               | 6                | 15.0                | 13.99             | 0.14             | Top           | 93.2       | 10            | 0.199                                    | 0.069            | 1.262          | 1.073                 | 0.093               | -        |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  |               |            |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |                  |                |                       |                     |          |

### DSS Hotspot SAR

| Frequency                                                                                          |     | Mode          | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Distance (mm)                            | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
|----------------------------------------------------------------------------------------------------|-----|---------------|---------------------|-------------------|------------------|---------------|------------------------------------------|------------------|----------------|-----------------------|-------------------|----------|
| MHz                                                                                                | Ch. |               |                     |                   |                  |               |                                          |                  |                |                       |                   |          |
| 2402                                                                                               | 0   | Bluetooth DH5 | 17.0                | 16.10             | -0.10            | Rear          | 10                                       | 0.088            | 1.230          | 1.300                 | 0.141             | -        |
| 2402                                                                                               | 0   | Bluetooth DH5 | 17.0                | 16.10             | -0.14            | Front         | 10                                       | 0.049            | 1.230          | 1.300                 | 0.078             | -        |
| 2402                                                                                               | 0   | Bluetooth DH5 | 17.0                | 16.10             | 0.13             | Left          | 10                                       | 0.028            | 1.230          | 1.300                 | 0.045             | -        |
| 2402                                                                                               | 0   | Bluetooth DH5 | 17.0                | 16.10             | -0.17            | Top           | 10                                       | 0.132            | 1.230          | 1.300                 | <b>0.211</b>      | 60       |
| ANSI/ IEEE C95.1 - 2005– Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |               |                     |                   |                  |               | Body<br>1.6 W/kg<br>Averaged over 1 gram |                  |                |                       |                   |          |

### 13.4 Phablet SAR Measurement Considerations

Per FCC KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR >1.2 W/kg. When hotspot mode applies, 10g SAR required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1g SAR > 1.2 W/kg.

### 13.5 Phablet SAR Measurement Results

#### UMTS Band 4 Phablet SAR 10g

| Frequency                                                                                           |      | Mode | Tune-Up Limit (dB) | Meas. Power (dB) | Power Drift (dB) | Test Position | Sensor                                    | Duty Cycle | Distance (mm) | Meas. SAR (W/kg) | Scaling Factor | Scaled SAR (W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|------|------|--------------------|------------------|------------------|---------------|-------------------------------------------|------------|---------------|------------------|----------------|-------------------|----------|
| MHz                                                                                                 | Ch.  |      |                    |                  |                  |               |                                           |            |               |                  |                |                   |          |
| 1 732.4                                                                                             | 1412 | RMC  | 22.5               | 21.63            | 0.13             | Rear          | ON                                        | 1:1        | 0             | 1.410            | 1.222          | 1.723             | -        |
| 1 732.4                                                                                             | 1412 | RMC  | 22.5               | 21.63            | 0.02             | Front         | ON                                        | 1:1        | 0             | 1.270            | 1.222          | 1.552             | -        |
| 1 732.4                                                                                             | 1412 | RMC  | 25.0               | 24.43            | -0.12            | Left          | N/A                                       | 1:1        | 0             | 0.971            | 1.140          | 1.107             | -        |
| 1 732.4                                                                                             | 1412 | RMC  | 25.0               | 24.43            | 0.06             | Right         | N/A                                       | 1:1        | 0             | 0.215            | 1.140          | 0.245             | -        |
| 1 732.4                                                                                             | 1412 | RMC  | 22.5               | 21.63            | 0.13             | Bottom        | ON                                        | 1:1        | 0             | 2.400            | 1.222          | 2.932             | -        |
| 1 712.4                                                                                             | 1312 | RMC  | 22.5               | 21.71            | 0.11             | Bottom        | ON                                        | 1:1        | 0             | 2.470            | 1.199          | <b>2.963</b>      | 61       |
| 1 752.6                                                                                             | 1513 | RMC  | 22.5               | 21.62            | 0.12             | Bottom        | ON                                        | 1:1        | 0             | 2.270            | 1.225          | 2.780             | -        |
| 1 712.4                                                                                             | 1312 | RMC  | 22.5               | 21.71            | -0.16            | Bottom        | ON                                        | 1:1        | 0             | 2.410            | 1.199          | 2.891             | *        |
| 1 732.4                                                                                             | 1412 | RMC  | 25.0               | 24.43            | -0.01            | Rear          | OFF                                       | 1:1        | 7             | 0.557            | 1.140          | 0.635             | -        |
| 1 732.4                                                                                             | 1412 | RMC  | 25.0               | 24.43            | -0.10            | Front         | OFF                                       | 1:1        | 6             | 0.536            | 1.140          | 0.611             | -        |
| 1 732.4                                                                                             | 1412 | RMC  | 25.0               | 24.43            | 0.19             | Bottom        | OFF                                       | 1:1        | 12            | 0.898            | 1.140          | 1.024             | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |                    |                  |                  |               | Hand<br>4.0 W/kg<br>Averaged over 10 gram |            |               |                  |                |                   |          |

Note: \* Data entry indicate Variability measurement.

#### UMTS Band 2 Phablet SAR 10g

| Frequency                                                                                           |      | Mode | Tune-Up Limit (dB) | Meas. Power (dB) | Power Drift (dB) | Test Position | Sensor                                    | Duty Cycle | Distance (mm) | Meas. SAR (W/kg) | Scaling Factor | Scaled SAR (W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|------|------|--------------------|------------------|------------------|---------------|-------------------------------------------|------------|---------------|------------------|----------------|-------------------|----------|
| MHz                                                                                                 | Ch.  |      |                    |                  |                  |               |                                           |            |               |                  |                |                   |          |
| 1 880.0                                                                                             | 9400 | RMC  | 22.5               | 21.28            | -0.19            | Rear          | ON                                        | 1:1        | 0             | 1.520            | 1.324          | <b>2.013</b>      | 62       |
| 1 852.4                                                                                             | 9262 | RMC  | 22.5               | 21.21            | 0.19             | Rear          | ON                                        | 1:1        | 0             | 1.310            | 1.346          | 1.763             | -        |
| 1 907.6                                                                                             | 9538 | RMC  | 22.5               | 21.48            | -0.17            | Rear          | ON                                        | 1:1        | 0             | 1.520            | 1.265          | 1.922             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 22.5               | 21.28            | 0.01             | Front         | ON                                        | 1:1        | 0             | 0.919            | 1.324          | 1.217             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 25.0               | 24.19            | -0.15            | Left          | N/A                                       | 1:1        | 0             | 0.939            | 1.205          | 1.132             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 25.0               | 24.19            | -0.13            | Right         | N/A                                       | 1:1        | 0             | 0.132            | 1.205          | 0.159             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 22.5               | 21.28            | 0.19             | Bottom        | ON                                        | 1:1        | 0             | 1.430            | 1.324          | 1.894             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 25.0               | 24.19            | -0.19            | Rear          | OFF                                       | 1:1        | 7             | 0.370            | 1.205          | 0.446             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 25.0               | 24.19            | -0.02            | Front         | OFF                                       | 1:1        | 6             | 0.377            | 1.205          | 0.454             | -        |
| 1 880.0                                                                                             | 9400 | RMC  | 25.0               | 24.19            | -0.12            | Bottom        | OFF                                       | 1:1        | 12            | 0.771            | 1.205          | 0.929             | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |      |      |                    |                  |                  |               | Hand<br>4.0 W/kg<br>Averaged over 10 gram |            |               |                  |                |                   |          |

### LTE Band 2 Phablet SAR 10 g

| Frequency                                                                                           |       | Mode | Band Width | Tune-Up Limit (dB) | Meas. Power (dB) | Power Drift (dB) | Test Position | Sensor | MPR (dB)                                  | RB Size | RB Offset | Duty Cycle | Distance (mm) | Meas. SAR (W/kg) | Scaling Factor | Scaled SAR (W/kg) | Plot No.  |
|-----------------------------------------------------------------------------------------------------|-------|------|------------|--------------------|------------------|------------------|---------------|--------|-------------------------------------------|---------|-----------|------------|---------------|------------------|----------------|-------------------|-----------|
| MHz                                                                                                 | Ch.   |      |            |                    |                  |                  |               |        |                                           |         |           |            |               |                  |                |                   |           |
| 1 900                                                                                               | 19100 | QPSK | 20         | 21.5               | 20.87            | -0.05            | Rear          | ON     | 0                                         | 1       | 49        | 1:1        | 0             | 1.370            | 1.156          | 1.584             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 21.5               | 20.98            | -0.08            | Rear          | ON     | 0                                         | 50      | 25        | 1:1        | 0             | 1.440            | 1.127          | <b>1.623</b>      | <b>63</b> |
| 1 900                                                                                               | 19100 | QPSK | 20         | 21.5               | 20.87            | 0.05             | Front         | ON     | 0                                         | 1       | 49        | 1:1        | 0             | 0.802            | 1.156          | 0.927             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 21.5               | 20.98            | 0.06             | Front         | ON     | 0                                         | 50      | 25        | 1:1        | 0             | 0.845            | 1.127          | 0.952             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 24.5               | 23.85            | -0.12            | Left          | N/A    | 0                                         | 1       | 49        | 1:1        | 0             | 0.934            | 1.161          | 1.085             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 23.5               | 22.94            | -0.13            | Left          | N/A    | 1                                         | 50      | 25        | 1:1        | 0             | 0.791            | 1.138          | 0.900             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 24.5               | 23.85            | -0.19            | Right         | N/A    | 0                                         | 1       | 49        | 1:1        | 0             | 0.116            | 1.161          | 0.135             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 23.5               | 22.94            | -0.14            | Right         | N/A    | 1                                         | 50      | 25        | 1:1        | 0             | 0.097            | 1.138          | 0.110             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 21.5               | 20.87            | 0.18             | Bottom        | ON     | 0                                         | 1       | 49        | 1:1        | 0             | 1.230            | 1.156          | 1.422             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 21.5               | 20.98            | 0.12             | Bottom        | ON     | 0                                         | 50      | 25        | 1:1        | 0             | 1.300            | 1.127          | 1.465             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 24.5               | 23.85            | 0.05             | Rear          | OFF    | 0                                         | 1       | 49        | 1:1        | 7             | 0.450            | 1.161          | 0.523             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 23.5               | 22.94            | -0.16            | Rear          | OFF    | 1                                         | 50      | 25        | 1:1        | 7             | 0.376            | 1.138          | 0.428             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 24.5               | 23.85            | -0.19            | Front         | OFF    | 0                                         | 1       | 49        | 1:1        | 6             | 0.366            | 1.161          | 0.425             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 23.5               | 22.94            | -0.17            | Front         | OFF    | 1                                         | 50      | 25        | 1:1        | 6             | 0.305            | 1.138          | 0.347             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 24.5               | 23.85            | 0.01             | Bottom        | OFF    | 0                                         | 1       | 49        | 1:1        | 12            | 0.557            | 1.161          | 0.647             | -         |
| 1 900                                                                                               | 19100 | QPSK | 20         | 23.5               | 22.94            | -0.02            | Bottom        | OFF    | 1                                         | 50      | 25        | 1:1        | 12            | 0.457            | 1.138          | 0.520             | -         |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |       |      |            |                    |                  |                  |               |        | Hand<br>4.0 W/kg<br>Averaged over 10 gram |         |           |            |               |                  |                |                   |           |

### LTE Band 66 Phablet SAR10g

| Frequency                                                                                           |        | Mode | Band Width | Tune-Up Limit (dB) | Meas. Power (dB) | Power Drift (dB) | Test Position | Sensor | MPR (dB)                                  | RB Size | RB Offset | Duty Cycle | Distance (mm) | Meas. SAR (W/kg) | Scaling Factor | Scaled SAR (W/kg) | Plot No.  |
|-----------------------------------------------------------------------------------------------------|--------|------|------------|--------------------|------------------|------------------|---------------|--------|-------------------------------------------|---------|-----------|------------|---------------|------------------|----------------|-------------------|-----------|
| MHz                                                                                                 | Ch.    |      |            |                    |                  |                  |               |        |                                           |         |           |            |               |                  |                |                   |           |
| 1 770                                                                                               | 132572 | QPSK | 20         | 21.0               | 19.98            | 0.08             | Rear          | ON     | 0                                         | 1       | 49        | 1:1        | 0             | 1.040            | 1.265          | 1.315             | -         |
| 1 770                                                                                               | 132572 | QPSK | 20         | 21.0               | 20.11            | 0.06             | Rear          | ON     | 0                                         | 50      | 25        | 1:1        | 0             | 1.090            | 1.227          | 1.338             | -         |
| 1 770                                                                                               | 132572 | QPSK | 20         | 21.0               | 19.98            | 0.03             | Front         | ON     | 0                                         | 1       | 49        | 1:1        | 0             | 0.721            | 1.265          | 0.912             | -         |
| 1 770                                                                                               | 132572 | QPSK | 20         | 21.0               | 20.11            | 0.09             | Front         | ON     | 0                                         | 50      | 25        | 1:1        | 0             | 0.760            | 1.227          | 0.933             | -         |
| 1 745                                                                                               | 132322 | QPSK | 20         | 25.0               | 24.56            | -0.10            | Left          | N/A    | 0                                         | 1       | 49        | 1:1        | 0             | 0.974            | 1.107          | 1.078             | -         |
| 1 720                                                                                               | 132072 | QPSK | 20         | 24.0               | 23.53            | -0.11            | Left          | N/A    | 1                                         | 50      | 25        | 1:1        | 0             | 0.768            | 1.114          | 0.856             | -         |
| 1 745                                                                                               | 132322 | QPSK | 20         | 25.0               | 24.56            | 0.10             | Right         | N/A    | 0                                         | 1       | 49        | 1:1        | 0             | 0.220            | 1.107          | 0.243             | -         |
| 1 720                                                                                               | 132072 | QPSK | 20         | 24.0               | 23.53            | -0.15            | Right         | N/A    | 1                                         | 50      | 25        | 1:1        | 0             | 0.174            | 1.114          | 0.194             | -         |
| 1 770                                                                                               | 132572 | QPSK | 20         | 21.0               | 19.98            | 0.03             | Bottom        | ON     | 0                                         | 1       | 49        | 1:1        | 0             | 1.140            | 1.265          | 1.442             | -         |
| 1 770                                                                                               | 132572 | QPSK | 20         | 21.0               | 20.11            | -0.05            | Bottom        | ON     | 0                                         | 50      | 25        | 1:1        | 0             | 1.220            | 1.227          | <b>1.497</b>      | <b>64</b> |
| 1 745                                                                                               | 132322 | QPSK | 20         | 25.0               | 24.56            | -0.17            | Rear          | OFF    | 0                                         | 1       | 49        | 1:1        | 7             | 0.776            | 1.107          | 0.859             | -         |
| 1 720                                                                                               | 132072 | QPSK | 20         | 24.0               | 23.53            | -0.03            | Rear          | OFF    | 1                                         | 50      | 25        | 1:1        | 7             | 0.649            | 1.114          | 0.723             | -         |
| 1 745                                                                                               | 132322 | QPSK | 20         | 25.0               | 24.56            | -0.18            | Front         | OFF    | 0                                         | 1       | 49        | 1:1        | 6             | 0.664            | 1.107          | 0.735             | -         |
| 1 720                                                                                               | 132072 | QPSK | 20         | 24.0               | 23.53            | -0.12            | Front         | OFF    | 1                                         | 50      | 25        | 1:1        | 6             | 0.548            | 1.114          | 0.611             | -         |
| 1 745                                                                                               | 132322 | QPSK | 20         | 25.0               | 24.56            | 0.04             | Bottom        | OFF    | 0                                         | 1       | 49        | 1:1        | 12            | 0.747            | 1.107          | 0.827             | -         |
| 1 720                                                                                               | 132072 | QPSK | 20         | 24.0               | 23.53            | 0.05             | Bottom        | OFF    | 1                                         | 50      | 25        | 1:1        | 12            | 0.591            | 1.114          | 0.659             | -         |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |      |            |                    |                  |                  |               |        | Hand<br>4.0 W/kg<br>Averaged over 10 gram |         |           |            |               |                  |                |                   |           |

**NR Band n66(Main #1) (SA) Phablet SAR10g**

| Frequency                                                                                           |        | Mode            | Band Width | Tune-Up Limit (dB) | Meas. Power (dB) | Power Drift (dB) | Test Position | Sensor | MPR (dB)                                  | RB Size | RB Offset | Duty Cycle | Distance (mm) | Meas. SAR (W/kg) | Scaling Factor | Scaled SAR (W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|--------|-----------------|------------|--------------------|------------------|------------------|---------------|--------|-------------------------------------------|---------|-----------|------------|---------------|------------------|----------------|-------------------|----------|
| Mhz                                                                                                 | Ch.    |                 |            |                    |                  |                  |               |        |                                           |         |           |            |               |                  |                |                   |          |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 20.0               | 19.87            | -0.08            | Rear          | ON     | 0                                         | 1       | 104       | 1:1        | 0             | 1.300            | 1.030          | 1.340             | -        |
| 1 745                                                                                               | 349000 | DFT-s OFDM QPSK | 20         | 20.0               | 19.94            | -0.00            | Rear          | ON     | 0                                         | 50      | 0         | 1:1        | 0             | 1.470            | 1.014          | 1.490             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 20.0               | 19.87            | 0.00             | Front         | ON     | 0                                         | 1       | 104       | 1:1        | 0             | 0.868            | 1.030          | 0.894             | -        |
| 1 745                                                                                               | 349000 | DFT-s OFDM QPSK | 20         | 20.0               | 19.94            | 0.00             | Front         | ON     | 0                                         | 50      | 0         | 1:1        | 0             | 0.930            | 1.014          | 0.943             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5               | 24.46            | -0.02            | Left          | N/A    | 0                                         | 1       | 1         | 1:1        | 0             | 0.992            | 1.009          | 1.001             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5               | 24.49            | 0.07             | Left          | N/A    | 0                                         | 50      | 28        | 1:1        | 0             | 0.902            | 1.002          | 0.904             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5               | 24.46            | -0.07            | Right         | N/A    | 0                                         | 1       | 1         | 1:1        | 0             | 0.205            | 1.009          | 0.207             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5               | 24.49            | 0.17             | Right         | N/A    | 0                                         | 50      | 28        | 1:1        | 0             | 0.189            | 1.002          | 0.189             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 20.0               | 19.87            | 0.07             | Bottom        | ON     | 0                                         | 1       | 104       | 1:1        | 0             | 1.350            | 1.030          | 1.391             | -        |
| 1 745                                                                                               | 349000 | DFT-s OFDM QPSK | 20         | 20.0               | 19.94            | 0.07             | Bottom        | ON     | 0                                         | 50      | 0         | 1:1        | 0             | 1.650            | 1.014          | 1.673             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5               | 24.46            | 0.04             | Rear          | N/A    | 0                                         | 1       | 1         | 1:1        | 7             | 0.556            | 1.009          | 0.561             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5               | 24.49            | -0.13            | Rear          | N/A    | 0                                         | 50      | 28        | 1:1        | 7             | 0.546            | 1.002          | 0.547             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5               | 24.46            | -0.01            | Front         | N/A    | 0                                         | 1       | 1         | 1:1        | 6             | 0.537            | 1.009          | 0.542             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5               | 24.49            | -0.05            | Front         | N/A    | 0                                         | 50      | 28        | 1:1        | 6             | 0.562            | 1.002          | 0.563             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5               | 24.46            | -0.14            | Bottom        | N/A    | 0                                         | 1       | 1         | 1:1        | 12            | 0.963            | 1.009          | 0.972             | -        |
| 1 770                                                                                               | 354000 | DFT-s OFDM QPSK | 20         | 24.5               | 24.49            | -0.17            | Bottom        | N/A    | 0                                         | 50      | 28        | 1:1        | 12            | 0.968            | 1.002          | 0.970             | -        |
| 1 720                                                                                               | 344000 | CP OFDM QPSK    | 20         | 20.0               | 19.69            | -0.07            | Bottom        | ON     | 0                                         | 1       | 1         | 1:1        | 0             | 1.660            | 1.074          | <b>1.783</b>      | 65       |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |        |                 |            |                    |                  |                  |               |        | Hand<br>4.0 W/kg<br>Averaged over 10 gram |         |           |            |               |                  |                |                   |          |

**5 GHz WLAN Phablet SAR10g**

| Frequency                                                                                           |     | Mode    | Band width (MHz) | Data Rate (Mbps) | Tune-Up Limit (dBm) | Meas. Power (dBm) | Power Drift (dB) | Test Position | Ant. Config.                              | Duty Cycle | Distance (mm) | Area Scan Peak SAR (W/kg) | Meas. SAR (W/kg) | Scaling Factor | Scaling Factor (Duty) | Scaled SAR (W/kg) | Plot No. |
|-----------------------------------------------------------------------------------------------------|-----|---------|------------------|------------------|---------------------|-------------------|------------------|---------------|-------------------------------------------|------------|---------------|---------------------------|------------------|----------------|-----------------------|-------------------|----------|
| Mhz                                                                                                 | Ch. |         |                  |                  |                     |                   |                  |               |                                           |            |               |                           |                  |                |                       |                   |          |
| 5 300                                                                                               | 60  | 802.11a | 20               | 6                | 15.0                | 14.27             | 0.00             | Rear          | Ant1                                      | 93.2       | 0             | 15.80                     | 1.290            | 1.183          | 1.073                 | 1.637             | -        |
| 5 300                                                                                               | 60  | 802.11a | 20               | 6                | 15.0                | 14.27             | 0.00             | Front         | Ant1                                      | 93.2       | 0             | 3.85                      | 0.511            | 1.183          | 1.073                 | 0.649             | -        |
| 5 300                                                                                               | 60  | 802.11a | 20               | 6                | 15.0                | 14.27             | -0.04            | Left          | Ant1                                      | 93.2       | 0             | 22.80                     | 1.760            | 1.183          | 1.073                 | <b>2.234</b>      | 66       |
| 5 320                                                                                               | 64  | 802.11a | 20               | 6                | 15.0                | 14.22             | 0.13             | Left          | Ant1                                      | 93.2       | 0             | 19.10                     | 1.620            | 1.197          | 1.073                 | 2.079             | -        |
| 5 300                                                                                               | 60  | 802.11a | 20               | 6                | 15.0                | 14.27             | 0.14             | Top           | Ant1                                      | 93.2       | 0             | 1.14                      | 0.162            | 1.183          | 1.073                 | 0.206             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20               | 6                | 15.0                | 14.20             | 0.00             | Rear          | Ant1                                      | 93.2       | 0             | 8.09                      | 0.763            | 1.202          | 1.073                 | 0.984             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20               | 6                | 15.0                | 14.20             | 0.00             | Front         | Ant1                                      | 93.2       | 0             | 4.77                      | 0.451            | 1.202          | 1.073                 | 0.582             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20               | 6                | 15.0                | 14.20             | -0.14            | Left          | Ant1                                      | 93.2       | 0             | 11.50                     | 0.981            | 1.202          | 1.073                 | 1.265             | -        |
| 5 720                                                                                               | 144 | 802.11a | 20               | 6                | 15.0                | 14.20             | -0.06            | Top           | Ant1                                      | 93.2       | 0             | 2.70                      | 0.147            | 1.202          | 1.073                 | 0.190             | -        |
| ANSI/ IEEE C95.1 - 2005 – Safety Limit<br>Spatial Peak<br>Uncontrolled Exposure/ General Population |     |         |                  |                  |                     |                   |                  |               | Hand<br>4.0 W/kg<br>Averaged over 10 gram |            |               |                           |                  |                |                       |                   |          |

## 13.6 SAR Test Notes

### General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, FCC KDB Procedure.
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 15 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB 648474 D04v01r03, SAR was evaluated without a headset connected to the device. Since the standalone reported SAR was 1.2 W/kg, no additional SAR evaluation using a headset cable were required.
8. Per KDB 648474 D04v01r03, this device is considered a "Phablet" since the diagonal dimension is > 160 mm and < 200 mm. When hotspot mode applies, extremity SAR is required only for the surfaces and edges with hotspot mode scaled to the maximum output power (with tolerance) is 1 g SAR > 1.2 W/kg.
9. Per FCC KDB 865664 D01v01r04, variability SAR measurement were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg for 1g SAR and >2 for 10g SAR Please see Section 15 for variability analysis.
10. This device utilizes power reduction for some wireless mode and technologies, as outlined in sec. 4 The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous scenarios.
11. During SAR testing for the Hotspot conditions per KDB 941225 D06v02r01, the actual portable hotspotoperation (with actual simultaneous transmission of a transmitter with WiFi) was not activated.

### GSM/GPRS Test Notes:

1. This EUT'S GSM and GPRS device class is B.
2. This device supports GPRS VOIP in the head and the body-worn configurations therefore GPRS was additionally evaluated for head and body-worn compliance.
3. Justification for reduced test configurations per KDB 941225 D01v03r01: The source-based time-averaged output power was evaluated for all multi-slot operations. The multi-slot configuration with the highest frame averaged output power including tolerance was evaluated for SAR.
4. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is 1/2 dB, instead of the middle channel, the highest output power channel must be used.

### UMTS Notes:

1. The 12.2 kbps RMC mode is the primary mode per KDB 941225 D01v03r01.
2. UMTS SAR was tested under RMC 12.2 kbps with HSPA inactive per KDB publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
3. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels

is not required for such test configuration(s). When the maximum output power variation across the channel highest output power channel was used.

**LTE Notes:**

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Consideration for LTE Devices in FCC KDB 941225 D05v02r05.
2. According to FCC KDB 941225 D05v02r05:  
When the reported SAR is 0.8 W/kg, testing of the 100% RB allocation and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the 1RB, 50%RB and 100%RB allocation with highest output power for that channel.  
Only one channel, and as reported SAR values for 1RB allocation and 50%RB allocation were less than 1.45W/Kg only the highest power RB offset for each allocation was required.
3. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to target MPR is indicated alongside the SAR results.
4. When Power reduction is applied, MPR is 0 for some modes.
5. A-MPR was disabled for all SAR tests by setting NS=01 on the base station simulator.
6. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) LTE TDD Band 41 SAR measured at the highest output power channel for each test configuration is 0.6 W/kg then testing at the other channels is not required for such test configurations.
7. TDD LTE (Power Class 3) was tested using UL-DL configuration 0 with 6 UL sub frames and 2S subframes using extended cyclic prefix only and special sub frame configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Sec. 4, the duty factor using extended cyclic prefix is 0.633(cf=1.58).
8. Per KDB 941225 D05Av01r02, SAR for LTE Carrier Aggregation operations was not needed because the maximum average output power in LTE CA mode was not > 0.25 dB higher than the maximum output power when downlink CA was not activated.
9. SAR test reduction is applied using the following criteria:  
Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is >0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel. Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are >0.8 W/kg, testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation <1.45 W/kg. Testing for 16-QAM modulation is not required because the reported SAR for QPSK is <1.45 W/kg and its output power is not more than 0.5 dB higher than that a QPSK. Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is <1.45 W/kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

**NR Notes:**

1. Due to Limitations of the SAR measurement equipment, SAR testing for NR was performed using test mode (FTM) software.
2. More detailed specifications of the NR bands are contained in the Technical description document.
3. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
4. For NR modulations and RB Sizes/Offsets were selected for testing such that configurations with the highest output power were evaluated for SAR tests.
5. For final implementation, TDD NR slot configuration is synchronized using maximum duty cycle of 100% measurement power. Therefore, 100% duty factor was applied to perform SAR measurement.

**WLAN Notes:**

1. For held-to-ear and hotspot operations, the initial test position procedures were applied. For initial test position, the highest extrapolated peak SAR will be used. When reported SAR for the initial test position is  $\leq 0.4$  W/kg for 1g SAR and  $\leq 1.0$  W/kg for 10g SAR, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR results is  $\leq 0.8$  W/kg for 1g SAR and  $\leq 2.0$  W/kg for 10g SAR or all test position are measured.
2. Per KDB 2482227 D01v02r02 justification for test configurations of 2.4 GHz WiFi Single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11 g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR
3. Per KDB 2482227 D01v02r02 justification for test configurations of 5 GHz WiFi Single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission mode were not investigated since the highest reported SAR for initial test configuration adjusted by the ration of maximum output powers is less than 1.2 W/kg for 1g SAR and less than 3.0 W/kg for 10 g SAR.
4. When the maximum reported 1g averaged SAR is  $\leq 0.8$  W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was  $\leq 1.20$  W/kg or all test channels were measured.
5. The device was configured to transmit continuously at the required data rated, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated WLAN test reports.

**Bluetooth Notes:**

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests mode type. Per October 2016 TCBC Workshop Notes, the reported SAR was scaled to 100% transmission duty factor to determine compliance. Please see sec.11 for the time-domain plot and calculation for duty factor of the device.
2. Head and Bluetooth tethering SAR were evaluated for BT BR tethering applications.

## 14. Simultaneous SAR Analysis

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per KDB Publication 447498 D01v06 4.3.2, simultaneous transmission SAR test exclusion may be applied when the sum of 1g SAR and 10g SAR for all the simultaneous transmitting antennas in a specific physical test configuration is  $\leq 1.6\text{W/kg}$  for 1g SAR and  $\leq 4\text{ W/kg}$  for 10g SAR. The different test positions in an exposure condition may be considered collectively to determine SAR exclusion according to the sum of 1g or 10g SAR.

## 14.1 Head SAR Simultaneous Transmission Analysis.

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN, 5GHz WLAN & BT |                     |             |          |                 |               |        |                  |                  |                  |                  |                   |
|--------------------------------------------------------------------------------|---------------------|-------------|----------|-----------------|---------------|--------|------------------|------------------|------------------|------------------|-------------------|
| Exposure condition                                                             | Band                | Position    | WWAN SAR | 2.4GHz WLAN SAR | 5GHz WLAN SAR | BT SAR | $\Sigma$ 1-g SAR | $\Sigma$ 1-g SAR | $\Sigma$ 1-g SAR | $\Sigma$ 1-g SAR | SPLSR<br>(Yes/No) |
|                                                                                |                     |             | (W/kg)   | (W/kg)          | (W/kg)        | (W/kg) | (W/kg)           | (W/kg)           | (W/kg)           | (W/kg)           |                   |
|                                                                                |                     |             | 1        | 2               | 3             | 4      | 1+2              | 1+3              | 1+4              | 1+3+4            |                   |
| Head SAR                                                                       | GSM850              | Left Touch  | 0.219    | 0.065           | 0.122         | 0.186  | 0.284            | 0.341            | 0.405            | 0.527            | No                |
|                                                                                |                     | Left Tilt   | 0.130    | 0.092           | 0.120         | 0.301  | 0.222            | 0.250            | 0.431            | 0.551            | No                |
|                                                                                |                     | Right Touch | 0.269    | 0.085           | 0.530         | 0.278  | 0.354            | 0.799            | 0.547            | 1.077            | No                |
|                                                                                |                     | Right Tilt  | 0.133    | 0.101           | 0.269         | 0.342  | 0.234            | 0.402            | 0.475            | 0.744            | No                |
|                                                                                | GSM 1900            | Left Touch  | 0.101    | 0.065           | 0.122         | 0.186  | 0.166            | 0.223            | 0.287            | 0.409            | No                |
|                                                                                |                     | Left Tilt   | 0.050    | 0.092           | 0.120         | 0.301  | 0.142            | 0.170            | 0.351            | 0.471            | No                |
|                                                                                |                     | Right Touch | 0.098    | 0.085           | 0.530         | 0.278  | 0.183            | 0.628            | 0.376            | 0.906            | No                |
|                                                                                |                     | Right Tilt  | 0.045    | 0.101           | 0.269         | 0.342  | 0.146            | 0.314            | 0.387            | 0.656            | No                |
|                                                                                | UMTS 2              | Left Touch  | 0.158    | 0.065           | 0.122         | 0.186  | 0.223            | 0.280            | 0.344            | 0.466            | No                |
|                                                                                |                     | Left Tilt   | 0.096    | 0.092           | 0.120         | 0.301  | 0.188            | 0.216            | 0.397            | 0.517            | No                |
|                                                                                |                     | Right Touch | 0.203    | 0.085           | 0.530         | 0.278  | 0.288            | 0.733            | 0.481            | 1.011            | No                |
|                                                                                |                     | Right Tilt  | 0.091    | 0.101           | 0.269         | 0.342  | 0.192            | 0.360            | 0.433            | 0.702            | No                |
|                                                                                | UMTS 4              | Left Touch  | 0.165    | 0.065           | 0.122         | 0.186  | 0.230            | 0.287            | 0.351            | 0.473            | No                |
|                                                                                |                     | Left Tilt   | 0.113    | 0.092           | 0.120         | 0.301  | 0.205            | 0.233            | 0.414            | 0.534            | No                |
|                                                                                |                     | Right Touch | 0.151    | 0.085           | 0.530         | 0.278  | 0.236            | 0.681            | 0.429            | 0.959            | No                |
|                                                                                |                     | Right Tilt  | 0.107    | 0.101           | 0.269         | 0.342  | 0.208            | 0.376            | 0.449            | 0.718            | No                |
|                                                                                | UMTS 5              | Left Touch  | 0.155    | 0.065           | 0.122         | 0.186  | 0.220            | 0.277            | 0.341            | 0.463            | No                |
|                                                                                |                     | Left Tilt   | 0.087    | 0.092           | 0.120         | 0.301  | 0.179            | 0.207            | 0.388            | 0.508            | No                |
|                                                                                |                     | Right Touch | 0.130    | 0.085           | 0.530         | 0.278  | 0.215            | 0.660            | 0.408            | 0.938            | No                |
|                                                                                |                     | Right Tilt  | 0.088    | 0.101           | 0.269         | 0.342  | 0.189            | 0.357            | 0.430            | 0.699            | No                |
|                                                                                | LTE 2               | Left Touch  | 0.131    | 0.065           | 0.122         | 0.186  | 0.196            | 0.253            | 0.317            | 0.439            | No                |
|                                                                                |                     | Left Tilt   | 0.069    | 0.092           | 0.120         | 0.301  | 0.161            | 0.189            | 0.370            | 0.490            | No                |
|                                                                                |                     | Right Touch | 0.106    | 0.085           | 0.530         | 0.278  | 0.191            | 0.636            | 0.384            | 0.914            | No                |
|                                                                                |                     | Right Tilt  | 0.081    | 0.101           | 0.269         | 0.342  | 0.182            | 0.350            | 0.423            | 0.692            | No                |
|                                                                                | LTE 5               | Left Touch  | 0.119    | 0.065           | 0.122         | 0.186  | 0.184            | 0.241            | 0.305            | 0.427            | No                |
|                                                                                |                     | Left Tilt   | 0.069    | 0.092           | 0.120         | 0.301  | 0.161            | 0.189            | 0.370            | 0.490            | No                |
|                                                                                |                     | Right Touch | 0.156    | 0.085           | 0.530         | 0.278  | 0.241            | 0.686            | 0.434            | 0.964            | No                |
|                                                                                |                     | Right Tilt  | 0.074    | 0.101           | 0.269         | 0.342  | 0.175            | 0.343            | 0.416            | 0.685            | No                |
|                                                                                | LTE 12              | Left Touch  | 0.130    | 0.065           | 0.122         | 0.186  | 0.195            | 0.252            | 0.316            | 0.438            | No                |
|                                                                                |                     | Left Tilt   | 0.031    | 0.092           | 0.120         | 0.301  | 0.123            | 0.151            | 0.332            | 0.452            | No                |
|                                                                                |                     | Right Touch | 0.172    | 0.085           | 0.530         | 0.278  | 0.257            | 0.702            | 0.450            | 0.980            | No                |
|                                                                                |                     | Right Tilt  | 0.069    | 0.101           | 0.269         | 0.342  | 0.170            | 0.338            | 0.411            | 0.680            | No                |
|                                                                                | LTE 13              | Left Touch  | 0.138    | 0.065           | 0.122         | 0.186  | 0.203            | 0.260            | 0.324            | 0.446            | No                |
|                                                                                |                     | Left Tilt   | 0.087    | 0.092           | 0.120         | 0.301  | 0.179            | 0.207            | 0.388            | 0.508            | No                |
|                                                                                |                     | Right Touch | 0.193    | 0.085           | 0.530         | 0.278  | 0.278            | 0.723            | 0.471            | 1.001            | No                |
|                                                                                |                     | Right Tilt  | 0.088    | 0.101           | 0.269         | 0.342  | 0.189            | 0.357            | 0.430            | 0.699            | No                |
|                                                                                | LTE 26              | Left Touch  | 0.124    | 0.065           | 0.122         | 0.186  | 0.189            | 0.246            | 0.310            | 0.432            | No                |
|                                                                                |                     | Left Tilt   | 0.074    | 0.092           | 0.120         | 0.301  | 0.166            | 0.194            | 0.375            | 0.495            | No                |
|                                                                                |                     | Right Touch | 0.179    | 0.085           | 0.530         | 0.278  | 0.264            | 0.709            | 0.457            | 0.987            | No                |
|                                                                                |                     | Right Tilt  | 0.082    | 0.101           | 0.269         | 0.342  | 0.183            | 0.351            | 0.424            | 0.693            | No                |
|                                                                                | LTE 41              | Left Touch  | 0.028    | 0.065           | 0.122         | 0.186  | 0.093            | 0.150            | 0.214            | 0.336            | No                |
|                                                                                |                     | Left Tilt   | 0.048    | 0.092           | 0.120         | 0.301  | 0.140            | 0.168            | 0.349            | 0.469            | No                |
|                                                                                |                     | Right Touch | 0.046    | 0.085           | 0.530         | 0.278  | 0.131            | 0.576            | 0.324            | 0.854            | No                |
|                                                                                |                     | Right Tilt  | 0.033    | 0.101           | 0.269         | 0.342  | 0.134            | 0.302            | 0.375            | 0.644            | No                |
|                                                                                | LTE 66              | Left Touch  | 0.155    | 0.065           | 0.122         | 0.186  | 0.220            | 0.277            | 0.341            | 0.463            | No                |
|                                                                                |                     | Left Tilt   | 0.095    | 0.092           | 0.120         | 0.301  | 0.187            | 0.215            | 0.396            | 0.516            | No                |
|                                                                                |                     | Right Touch | 0.145    | 0.085           | 0.530         | 0.278  | 0.230            | 0.675            | 0.423            | 0.953            | No                |
|                                                                                |                     | Right Tilt  | 0.107    | 0.101           | 0.269         | 0.342  | 0.208            | 0.376            | 0.449            | 0.718            | No                |
|                                                                                | NR n66<br>(Main #1) | Left Touch  | 0.137    | 0.065           | 0.122         | 0.186  | 0.202            | 0.259            | 0.323            | 0.445            | No                |
|                                                                                |                     | Left Tilt   | 0.101    | 0.092           | 0.120         | 0.301  | 0.193            | 0.221            | 0.402            | 0.522            | No                |
|                                                                                |                     | Right Touch | 0.131    | 0.085           | 0.530         | 0.278  | 0.216            | 0.661            | 0.409            | 0.939            | No                |
|                                                                                |                     | Right Tilt  | 0.071    | 0.101           | 0.269         | 0.342  | 0.172            | 0.340            | 0.413            | 0.682            | No                |

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN, 5GHz WLAN & BT |        |             |          |                  |                      |                    |        |                |                |                |                |          |
|--------------------------------------------------------------------------------|--------|-------------|----------|------------------|----------------------|--------------------|--------|----------------|----------------|----------------|----------------|----------|
| Band                                                                           |        |             | Main SAR | EN-DC Anchor SAR | 2.4 GHz WLAN RCV SAR | 5 GHz WLAN RCV SAR | BT SAR | $\sum$ 1-g SAR | $\sum$ 1-g SAR | $\sum$ 1-g SAR | $\sum$ 1-g SAR | SPLSR    |
|                                                                                |        |             | (W/kg)   | (W/kg)           | (W/kg)               | (W/kg)             | (W/kg) | (W/kg)         | (W/kg)         | (W/kg)         | (W/kg)         | (Yes/No) |
|                                                                                |        |             | 1        | 2                | 3                    | 4                  | 5      | 1+2+3          | 1+2+4          | 1+2+5          | 1+2+4+5        |          |
| NR n5                                                                          | LTE 2  | Left Touch  | 0.063    | 0.131            | 0.065                | 0.122              | 0.186  | 0.259          | 0.316          | 0.380          | 0.502          | No       |
|                                                                                |        | Left Tilt   | 0.028    | 0.069            | 0.092                | 0.120              | 0.301  | 0.189          | 0.217          | 0.398          | 0.518          | No       |
|                                                                                |        | Right Touch | 0.095    | 0.106            | 0.085                | 0.530              | 0.278  | 0.286          | 0.731          | 0.479          | 1.009          | No       |
|                                                                                |        | Right Tilt  | 0.036    | 0.081            | 0.101                | 0.269              | 0.342  | 0.218          | 0.386          | 0.459          | 0.728          | No       |
|                                                                                | LTE 66 | Left Touch  | 0.063    | 0.155            | 0.065                | 0.122              | 0.186  | 0.283          | 0.340          | 0.404          | 0.526          | No       |
|                                                                                |        | Left Tilt   | 0.028    | 0.095            | 0.092                | 0.120              | 0.301  | 0.215          | 0.243          | 0.424          | 0.544          | No       |
|                                                                                |        | Right Touch | 0.095    | 0.145            | 0.085                | 0.530              | 0.278  | 0.325          | 0.770          | 0.518          | 1.048          | No       |
|                                                                                |        | Right Tilt  | 0.036    | 0.107            | 0.101                | 0.269              | 0.342  | 0.244          | 0.412          | 0.485          | 0.754          | No       |
| NR n41                                                                         | LTE 66 | Left Touch  | 0.378    | 0.155            | 0.065                | 0.122              | 0.186  | 0.598          | 0.655          | 0.719          | 0.841          | No       |
|                                                                                |        | Left Tilt   | 0.489    | 0.095            | 0.092                | 0.120              | 0.301  | 0.676          | 0.704          | 0.885          | 1.005          | No       |
|                                                                                |        | Right Touch | 0.440    | 0.145            | 0.085                | 0.530              | 0.278  | 0.670          | 1.115          | 0.863          | 1.393          | No       |
|                                                                                |        | Right Tilt  | 0.585    | 0.107            | 0.101                | 0.269              | 0.342  | 0.793          | 0.961          | 1.034          | 1.303          | No       |
| NR n66 (Sub #2)                                                                | LTE 2  | Left Touch  | 0.403    | 0.131            | 0.065                | 0.122              | 0.186  | 0.599          | 0.656          | 0.720          | 0.842          | No       |
|                                                                                |        | Left Tilt   | 0.550    | 0.069            | 0.092                | 0.120              | 0.301  | 0.711          | 0.739          | 0.920          | 1.040          | No       |
|                                                                                |        | Right Touch | 0.592    | 0.106            | 0.085                | 0.530              | 0.278  | 0.783          | 1.228          | 0.976          | 1.506          | No       |
|                                                                                |        | Right Tilt  | 0.680    | 0.081            | 0.101                | 0.269              | 0.342  | 0.862          | 1.030          | 1.103          | 1.372          | No       |
|                                                                                | LTE 5  | Left Touch  | 0.403    | 0.119            | 0.065                | 0.122              | 0.186  | 0.587          | 0.644          | 0.708          | 0.830          | No       |
|                                                                                |        | Left Tilt   | 0.550    | 0.069            | 0.092                | 0.120              | 0.301  | 0.711          | 0.739          | 0.920          | 1.040          | No       |
|                                                                                |        | Right Touch | 0.592    | 0.156            | 0.085                | 0.530              | 0.278  | 0.833          | 1.278          | 1.026          | 1.556          | No       |
|                                                                                | LTE 12 | Right Tilt  | 0.680    | 0.074            | 0.101                | 0.269              | 0.342  | 0.855          | 1.023          | 1.096          | 1.365          | No       |
|                                                                                |        | Left Touch  | 0.403    | 0.130            | 0.065                | 0.122              | 0.186  | 0.598          | 0.655          | 0.719          | 0.841          | No       |
|                                                                                |        | Left Tilt   | 0.550    | 0.031            | 0.092                | 0.120              | 0.301  | 0.673          | 0.701          | 0.882          | 1.002          | No       |
|                                                                                |        | Right Touch | 0.592    | 0.172            | 0.085                | 0.530              | 0.278  | 0.849          | 1.294          | 1.042          | 1.572          | No       |
|                                                                                |        | Right Tilt  | 0.680    | 0.069            | 0.101                | 0.269              | 0.342  | 0.850          | 1.018          | 1.091          | 1.360          | No       |
|                                                                                | LTE 13 | Left Touch  | 0.403    | 0.138            | 0.065                | 0.122              | 0.186  | 0.606          | 0.663          | 0.727          | 0.849          | No       |
|                                                                                |        | Left Tilt   | 0.550    | 0.087            | 0.092                | 0.120              | 0.301  | 0.729          | 0.757          | 0.938          | 1.058          | No       |
|                                                                                |        | Right Touch | 0.592    | 0.193            | 0.085                | 0.530              | 0.278  | 0.870          | 1.315          | 1.063          | 1.593          | No       |
|                                                                                |        | Right Tilt  | 0.680    | 0.088            | 0.101                | 0.269              | 0.342  | 0.869          | 1.037          | 1.110          | 1.379          | No       |

## 14.2 BodyWorn SAR Simultaneous Transmission Analysis.

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN, 5GHz WLAN & BT |                  |          |          |                 |               |        |           |           |           |           |                   |
|--------------------------------------------------------------------------------|------------------|----------|----------|-----------------|---------------|--------|-----------|-----------|-----------|-----------|-------------------|
| Exposure condition                                                             | Band             | Position | WWAN SAR | 2.4GHz WLAN SAR | 5GHz WLAN SAR | BT SAR | Σ 1-g SAR | Σ 1-g SAR | Σ 1-g SAR | Σ 1-g SAR | SPLSR<br>(Yes/No) |
|                                                                                |                  |          | (W/kg)   | (W/kg)          | (W/kg)        | (W/kg) | (W/kg)    | (W/kg)    | (W/kg)    | (W/kg)    |                   |
|                                                                                |                  |          | 1        | 2               | 3             | 4      | 1+2       | 1+3       | 1+4       | 1+3+4     |                   |
| Bodyworn SAR                                                                   | GSM850           | Rear     | 0.332    | 0.157           | 0.217         | 0.080  | 0.489     | 0.549     | 0.412     | 0.629     | No                |
|                                                                                |                  | Front    | 0.265    | 0.078           | 0.238         | 0.043  | 0.343     | 0.503     | 0.308     | 0.546     | No                |
|                                                                                | GSM 1900         | Rear     | 0.334    | 0.157           | 0.217         | 0.080  | 0.491     | 0.551     | 0.414     | 0.631     | No                |
|                                                                                |                  | Front    | 0.218    | 0.078           | 0.238         | 0.043  | 0.296     | 0.456     | 0.261     | 0.499     | No                |
|                                                                                | UMTS 2           | Rear     | 0.457    | 0.157           | 0.217         | 0.080  | 0.614     | 0.674     | 0.537     | 0.754     | No                |
|                                                                                |                  | Front    | 0.352    | 0.078           | 0.238         | 0.043  | 0.430     | 0.590     | 0.395     | 0.633     | No                |
|                                                                                | UMTS 4           | Rear     | 0.548    | 0.157           | 0.217         | 0.080  | 0.705     | 0.765     | 0.628     | 0.845     | No                |
|                                                                                |                  | Front    | 0.455    | 0.078           | 0.238         | 0.043  | 0.533     | 0.693     | 0.498     | 0.736     | No                |
|                                                                                | UMTS 5           | Rear     | 0.266    | 0.157           | 0.217         | 0.080  | 0.423     | 0.483     | 0.346     | 0.563     | No                |
|                                                                                |                  | Front    | 0.252    | 0.078           | 0.238         | 0.043  | 0.330     | 0.490     | 0.295     | 0.533     | No                |
|                                                                                | LTE 2            | Rear     | 0.315    | 0.157           | 0.217         | 0.080  | 0.472     | 0.532     | 0.395     | 0.612     | No                |
|                                                                                |                  | Front    | 0.253    | 0.078           | 0.238         | 0.043  | 0.331     | 0.491     | 0.296     | 0.534     | No                |
|                                                                                | LTE 5            | Rear     | 0.183    | 0.157           | 0.217         | 0.080  | 0.340     | 0.400     | 0.263     | 0.480     | No                |
|                                                                                |                  | Front    | 0.166    | 0.078           | 0.238         | 0.043  | 0.244     | 0.404     | 0.209     | 0.447     | No                |
|                                                                                | LTE 12           | Rear     | 0.222    | 0.157           | 0.217         | 0.080  | 0.379     | 0.439     | 0.302     | 0.519     | No                |
|                                                                                |                  | Front    | 0.164    | 0.078           | 0.238         | 0.043  | 0.242     | 0.402     | 0.207     | 0.445     | No                |
|                                                                                | LTE 13           | Rear     | 0.262    | 0.157           | 0.217         | 0.080  | 0.419     | 0.479     | 0.342     | 0.559     | No                |
|                                                                                |                  | Front    | 0.246    | 0.078           | 0.238         | 0.043  | 0.324     | 0.484     | 0.289     | 0.527     | No                |
|                                                                                | LTE 26           | Rear     | 0.171    | 0.157           | 0.217         | 0.080  | 0.328     | 0.388     | 0.251     | 0.468     | No                |
|                                                                                |                  | Front    | 0.183    | 0.078           | 0.238         | 0.043  | 0.261     | 0.421     | 0.226     | 0.464     | No                |
|                                                                                | LTE 41           | Rear     | 0.236    | 0.157           | 0.217         | 0.080  | 0.393     | 0.453     | 0.316     | 0.533     | No                |
|                                                                                |                  | Front    | 0.222    | 0.078           | 0.238         | 0.043  | 0.300     | 0.460     | 0.265     | 0.503     | No                |
|                                                                                | LTE 66           | Rear     | 0.495    | 0.157           | 0.217         | 0.080  | 0.652     | 0.712     | 0.575     | 0.792     | No                |
|                                                                                |                  | Front    | 0.393    | 0.078           | 0.238         | 0.043  | 0.471     | 0.631     | 0.436     | 0.674     | No                |
|                                                                                | NR n66 (Main #1) | Rear     | 0.457    | 0.157           | 0.217         | 0.080  | 0.614     | 0.674     | 0.537     | 0.754     | No                |
|                                                                                |                  | Front    | 0.424    | 0.078           | 0.238         | 0.043  | 0.502     | 0.662     | 0.467     | 0.705     | No                |

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN, 5GHz WLAN & BT |        |       |          |                  |                  |                |        |           |           |           |           |        |          |
|--------------------------------------------------------------------------------|--------|-------|----------|------------------|------------------|----------------|--------|-----------|-----------|-----------|-----------|--------|----------|
| Band                                                                           |        |       | Main SAR | EN-DC Anchor SAR | 2.4 GHz WLAN SAR | 5 GHz WLAN SAR | BT SAR | Σ 1-g SAR | Σ 1-g SAR | Σ 1-g SAR | Σ 1-g SAR | SPLSR  |          |
|                                                                                |        |       | (W/kg)   | (W/kg)           | (W/kg)           | (W/kg)         | (W/kg) | (W/kg)    | (W/kg)    | (W/kg)    | (W/kg)    | (W/kg) | (Yes/No) |
|                                                                                |        |       | 1        | 2                | 3                | 4              | 5      | 1+2+3     | 1+2+4     | 1+2+5     | 1+2+4+5   |        |          |
| NR n5                                                                          | LTE 2  | Rear  | 0.188    | 0.315            | 0.157            | 0.217          | 0.080  | 0.660     | 0.720     | 0.583     | 0.800     | No     |          |
|                                                                                |        | Front | 0.109    | 0.253            | 0.078            | 0.238          | 0.043  | 0.440     | 0.600     | 0.405     | 0.643     | No     |          |
|                                                                                | LTE 66 | Rear  | 0.188    | 0.495            | 0.157            | 0.217          | 0.080  | 0.840     | 0.900     | 0.763     | 0.980     | No     |          |
|                                                                                |        | Front | 0.109    | 0.393            | 0.078            | 0.238          | 0.043  | 0.580     | 0.740     | 0.545     | 0.783     | No     |          |
| NR n41                                                                         | LTE 66 | Rear  | 0.334    | 0.495            | 0.157            | 0.217          | 0.080  | 0.986     | 1.046     | 0.909     | 1.126     | No     |          |
|                                                                                |        | Front | 0.142    | 0.393            | 0.078            | 0.238          | 0.043  | 0.613     | 0.773     | 0.578     | 0.816     | No     |          |
| NR n66<br>(Sub #2)                                                             | LTE 2  | Rear  | 0.446    | 0.315            | 0.157            | 0.217          | 0.080  | 0.918     | 0.978     | 0.841     | 1.058     | No     |          |
|                                                                                |        | Front | 0.216    | 0.253            | 0.078            | 0.238          | 0.043  | 0.547     | 0.707     | 0.512     | 0.750     | No     |          |
|                                                                                | LTE 5  | Rear  | 0.446    | 0.183            | 0.157            | 0.217          | 0.080  | 0.786     | 0.846     | 0.709     | 0.926     | No     |          |
|                                                                                |        | Front | 0.216    | 0.166            | 0.078            | 0.238          | 0.043  | 0.460     | 0.620     | 0.425     | 0.663     | No     |          |
|                                                                                | LTE 12 | Rear  | 0.446    | 0.222            | 0.157            | 0.217          | 0.080  | 0.825     | 0.885     | 0.748     | 0.965     | No     |          |
|                                                                                |        | Front | 0.216    | 0.164            | 0.078            | 0.238          | 0.043  | 0.458     | 0.618     | 0.423     | 0.661     | No     |          |
|                                                                                | LTE 13 | Rear  | 0.446    | 0.262            | 0.157            | 0.217          | 0.080  | 0.865     | 0.925     | 0.788     | 1.005     | No     |          |
|                                                                                |        | Front | 0.216    | 0.246            | 0.078            | 0.238          | 0.043  | 0.540     | 0.700     | 0.505     | 0.743     | No     |          |

### 14.3 Hotspot SAR Simultaneous Transmission Analysis.

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN, 5GHz WLAN & BT |          |          |          |                 |               |               |                  |                  |                  |                  |                   |
|--------------------------------------------------------------------------------|----------|----------|----------|-----------------|---------------|---------------|------------------|------------------|------------------|------------------|-------------------|
| Exposure condition                                                             | Band     | Position | WWAN SAR | 2.4GHz WLAN SAR | 5GHz WLAN SAR | Bluetooth SAR | $\Sigma$ 1-g SAR | $\Sigma$ 1-g SAR | $\Sigma$ 1-g SAR | $\Sigma$ 1-g SAR | SPLSR<br>(Yes/No) |
|                                                                                |          |          | (W/kg)   | (W/kg)          | (W/kg)        | (W/kg)        | (W/kg)           | (W/kg)           | (W/kg)           | (W/kg)           |                   |
|                                                                                |          |          | 1        | 2               | 3             | 4             | 1+2              | 1+3              | 1+4              | 1+3+4            |                   |
| Hotspot SAR                                                                    | GSM850   | Rear     | 0.529    | 0.270           | 0.292         | 0.141         | 0.799            | 0.821            | 0.670            | 0.962            | No                |
|                                                                                |          | Front    | 0.404    | 0.121           | 0.173         | 0.078         | 0.525            | 0.577            | 0.482            | 0.655            | No                |
|                                                                                |          | Left     | 0.145    | 0.073           | 0.895         | 0.045         | 0.218            | 1.040            | 0.190            | 1.085            | No                |
|                                                                                |          | Right    | 0.337    |                 |               |               | 0.337            | 0.337            | 0.337            | 0.337            | No                |
|                                                                                |          | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |          | Bottom   | 0.373    |                 |               |               | 0.373            | 0.373            | 0.373            | 0.373            | No                |
|                                                                                | GSM 1900 | Rear     | 0.256    | 0.270           | 0.292         | 0.141         | 0.526            | 0.548            | 0.397            | 0.689            | No                |
|                                                                                |          | Front    | 0.396    | 0.121           | 0.173         | 0.078         | 0.517            | 0.569            | 0.474            | 0.647            | No                |
|                                                                                |          | Left     | 0.150    | 0.073           | 0.895         | 0.045         | 0.223            | 1.045            | 0.195            | 1.090            | No                |
|                                                                                |          | Right    | 0.076    |                 |               |               | 0.076            | 0.076            | 0.076            | 0.076            | No                |
|                                                                                |          | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |          | Bottom   | 0.530    |                 |               |               | 0.530            | 0.530            | 0.530            | 0.530            | No                |
|                                                                                | UMTS 2   | Rear     | 0.547    | 0.270           | 0.292         | 0.141         | 0.817            | 0.839            | 0.688            | 0.980            | No                |
|                                                                                |          | Front    | 0.458    | 0.121           | 0.173         | 0.078         | 0.579            | 0.631            | 0.536            | 0.709            | No                |
|                                                                                |          | Left     | 0.128    | 0.073           | 0.895         | 0.045         | 0.201            | 1.023            | 0.173            | 1.068            | No                |
|                                                                                |          | Right    | 0.070    |                 |               |               | 0.070            | 0.070            | 0.070            | 0.070            | No                |
|                                                                                |          | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |          | Bottom   | 0.891    |                 |               |               | 0.891            | 0.891            | 0.891            | 0.891            | No                |
|                                                                                | UMTS 4   | Rear     | 0.878    | 0.270           | 0.292         | 0.141         | 1.148            | 1.170            | 1.019            | 1.311            | No                |
|                                                                                |          | Front    | 0.716    | 0.121           | 0.173         | 0.078         | 0.837            | 0.889            | 0.794            | 0.967            | No                |
|                                                                                |          | Left     | 0.166    | 0.073           | 0.895         | 0.045         | 0.239            | 1.061            | 0.211            | 1.106            | No                |
|                                                                                |          | Right    | 0.113    |                 |               |               | 0.113            | 0.113            | 0.113            | 0.113            | No                |
|                                                                                |          | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |          | Bottom   | 0.990    |                 |               |               | 0.990            | 0.990            | 0.990            | 0.990            | No                |
|                                                                                | UMTS 5   | Rear     | 0.547    | 0.270           | 0.292         | 0.141         | 0.817            | 0.839            | 0.688            | 0.980            | No                |
|                                                                                |          | Front    | 0.413    | 0.121           | 0.173         | 0.078         | 0.534            | 0.586            | 0.491            | 0.664            | No                |
|                                                                                |          | Left     | 0.125    | 0.073           | 0.895         | 0.045         | 0.198            | 1.020            | 0.170            | 1.065            | No                |
|                                                                                |          | Right    | 0.261    |                 |               |               | 0.261            | 0.261            | 0.261            | 0.261            | No                |
|                                                                                |          | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |          | Bottom   | 0.328    |                 |               |               | 0.328            | 0.328            | 0.328            | 0.328            | No                |
|                                                                                | LTE 2    | Rear     | 0.381    | 0.270           | 0.292         | 0.141         | 0.651            | 0.673            | 0.522            | 0.814            | No                |
|                                                                                |          | Front    | 0.255    | 0.121           | 0.173         | 0.078         | 0.376            | 0.428            | 0.333            | 0.506            | No                |
|                                                                                |          | Left     | 0.100    | 0.073           | 0.895         | 0.045         | 0.173            | 0.995            | 0.145            | 1.040            | No                |
|                                                                                |          | Right    | 0.052    |                 |               |               | 0.052            | 0.052            | 0.052            | 0.052            | No                |
|                                                                                |          | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |          | Bottom   | 0.736    |                 |               |               | 0.736            | 0.736            | 0.736            | 0.736            | No                |
|                                                                                | LTE 5    | Rear     | 0.373    | 0.270           | 0.292         | 0.141         | 0.643            | 0.665            | 0.514            | 0.806            | No                |
|                                                                                |          | Front    | 0.232    | 0.121           | 0.173         | 0.078         | 0.353            | 0.405            | 0.310            | 0.483            | No                |
|                                                                                |          | Left     | 0.096    | 0.073           | 0.895         | 0.045         | 0.169            | 0.991            | 0.141            | 1.036            | No                |
|                                                                                |          | Right    | 0.163    |                 |               |               | 0.163            | 0.163            | 0.163            | 0.163            | No                |
|                                                                                |          | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |          | Bottom   | 0.167    |                 |               |               | 0.167            | 0.167            | 0.167            | 0.167            | No                |

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN, 5GHz WLAN & BT |                     |          |          |                 |               |               |                  |                  |                  |                  |                   |
|--------------------------------------------------------------------------------|---------------------|----------|----------|-----------------|---------------|---------------|------------------|------------------|------------------|------------------|-------------------|
| Exposure condition                                                             | Band                | Position | WWAN SAR | 2.4GHz WLAN SAR | 5GHz WLAN SAR | Bluetooth SAR | $\Sigma$ 1-g SAR | $\Sigma$ 1-g SAR | $\Sigma$ 1-g SAR | $\Sigma$ 1-g SAR | SPLSR<br>(Yes/No) |
|                                                                                |                     |          | (W/kg)   | (W/kg)          | (W/kg)        | (W/kg)        | (W/kg)           | (W/kg)           | (W/kg)           | (W/kg)           |                   |
|                                                                                |                     |          | 1        | 2               | 3             | 4             | 1+2              | 1+3              | 1+4              | 1+3+4            |                   |
| Hotspot SAR                                                                    | LTE 12              | Rear     | 0.281    | 0.270           | 0.292         | 0.141         | 0.551            | 0.573            | 0.422            | 0.714            | No                |
|                                                                                |                     | Front    | 0.218    | 0.121           | 0.173         | 0.078         | 0.339            | 0.391            | 0.296            | 0.469            | No                |
|                                                                                |                     | Left     | 0.084    | 0.073           | 0.895         | 0.045         | 0.157            | 0.979            | 0.129            | 1.024            | No                |
|                                                                                |                     | Right    | 0.118    |                 |               |               | 0.118            | 0.118            | 0.118            | 0.118            | No                |
|                                                                                |                     | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |                     | Bottom   | 0.153    |                 |               |               | 0.153            | 0.153            | 0.153            | 0.153            | No                |
|                                                                                | LTE 13              | Rear     | 0.367    | 0.270           | 0.292         | 0.141         | 0.637            | 0.659            | 0.508            | 0.800            | No                |
|                                                                                |                     | Front    | 0.309    | 0.121           | 0.173         | 0.078         | 0.430            | 0.482            | 0.387            | 0.560            | No                |
|                                                                                |                     | Left     | 0.139    | 0.073           | 0.895         | 0.045         | 0.212            | 1.034            | 0.184            | 1.079            | No                |
|                                                                                |                     | Right    | 0.301    |                 |               |               | 0.301            | 0.301            | 0.301            | 0.301            | No                |
|                                                                                |                     | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |                     | Bottom   | 0.249    |                 |               |               | 0.249            | 0.249            | 0.249            | 0.249            | No                |
|                                                                                | LTE 26              | Rear     | 0.376    | 0.270           | 0.292         | 0.141         | 0.646            | 0.668            | 0.517            | 0.809            | No                |
|                                                                                |                     | Front    | 0.240    | 0.121           | 0.173         | 0.078         | 0.361            | 0.413            | 0.318            | 0.491            | No                |
|                                                                                |                     | Left     | 0.103    | 0.073           | 0.895         | 0.045         | 0.176            | 0.998            | 0.148            | 1.043            | No                |
|                                                                                |                     | Right    | 0.161    |                 |               |               | 0.161            | 0.161            | 0.161            | 0.161            | No                |
|                                                                                |                     | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |                     | Bottom   | 0.143    |                 |               |               | 0.143            | 0.143            | 0.143            | 0.143            | No                |
|                                                                                | LTE 41              | Rear     | 0.247    | 0.270           | 0.292         | 0.141         | 0.517            | 0.539            | 0.388            | 0.680            | No                |
|                                                                                |                     | Front    | 0.197    | 0.121           | 0.173         | 0.078         | 0.318            | 0.370            | 0.275            | 0.448            | No                |
|                                                                                |                     | Left     | 0.101    | 0.073           | 0.895         | 0.045         | 0.174            | 0.996            | 0.146            | 1.041            | No                |
|                                                                                |                     | Right    |          |                 |               |               | 0.000            | 0.000            | 0.000            | 0.000            | No                |
|                                                                                |                     | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |                     | Bottom   | 0.314    |                 |               |               | 0.314            | 0.314            | 0.314            | 0.314            | No                |
|                                                                                | LTE 66              | Rear     | 0.166    | 0.270           | 0.292         | 0.141         | 0.436            | 0.458            | 0.307            | 0.599            | No                |
|                                                                                |                     | Front    | 0.271    | 0.121           | 0.173         | 0.078         | 0.392            | 0.444            | 0.349            | 0.522            | No                |
|                                                                                |                     | Left     | 0.091    | 0.073           | 0.895         | 0.045         | 0.164            | 0.986            | 0.136            | 1.031            | No                |
|                                                                                |                     | Right    | 0.066    |                 |               |               | 0.066            | 0.066            | 0.066            | 0.066            | No                |
|                                                                                |                     | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |                     | Bottom   | 0.658    |                 |               |               | 0.658            | 0.658            | 0.658            | 0.658            | No                |
|                                                                                | NR n66<br>(Main #1) | Rear     | 0.435    | 0.270           | 0.292         | 0.141         | 0.705            | 0.727            | 0.576            | 0.868            | No                |
|                                                                                |                     | Front    | 0.417    | 0.121           | 0.173         | 0.078         | 0.538            | 0.590            | 0.495            | 0.668            | No                |
|                                                                                |                     | Left     | 0.085    | 0.073           | 0.895         | 0.045         | 0.158            | 0.980            | 0.130            | 1.025            | No                |
|                                                                                |                     | Right    | 0.058    |                 |               |               | 0.058            | 0.058            | 0.058            | 0.058            | No                |
|                                                                                |                     | Top      |          | 0.364           | 0.093         | 0.211         | 0.364            | 0.093            | 0.211            | 0.304            | No                |
|                                                                                |                     | Bottom   | 0.750    |                 |               |               | 0.750            | 0.750            | 0.750            | 0.750            | No                |

| Simultaneous Transmission Summation Scenario with 2.4 GHz WLAN, 5GHz WLAN & BT |        |        |          |                  |                  |                |        |           |           |           |           |          |
|--------------------------------------------------------------------------------|--------|--------|----------|------------------|------------------|----------------|--------|-----------|-----------|-----------|-----------|----------|
| Band                                                                           |        |        | Main SAR | EN-DC Anchor SAR | 2.4 GHz WLAN SAR | 5 GHz WLAN SAR | BT SAR | Σ 1-g SAR | Σ 1-g SAR | Σ 1-g SAR | Σ 1-g SAR | SPLSR    |
|                                                                                |        |        | (W/kg)   | (W/kg)           | (W/kg)           | (W/kg)         | (W/kg) | (W/kg)    | (W/kg)    | (W/kg)    | (W/kg)    | (Yes/No) |
|                                                                                |        |        | 1        | 2                | 3                | 4              | 5      | 1+2+3     | 1+2+4     | 1+2+5     | 1+2+4+5   |          |
| NR n5                                                                          | LTE 2  | Rear   | 0.321    | 0.381            | 0.270            | 0.292          | 0.141  | 0.972     | 0.994     | 0.843     | 1.135     | No       |
|                                                                                |        | Front  | 0.190    | 0.255            | 0.121            | 0.173          | 0.078  | 0.566     | 0.618     | 0.523     | 0.696     | No       |
|                                                                                |        | Left   | 0.054    | 0.100            | 0.073            | 0.895          | 0.045  | 0.227     | 1.049     | 0.199     | 1.094     | No       |
|                                                                                |        | Right  | 0.084    | 0.052            |                  |                |        | 0.136     | 0.136     | 0.136     | 0.136     | No       |
|                                                                                |        | Top    |          |                  | 0.364            | 0.093          | 0.211  | 0.364     | 0.093     | 0.211     | 0.304     | No       |
|                                                                                |        | Bottom | 0.107    | 0.736            |                  |                |        | 0.843     | 0.843     | 0.843     | 0.843     | No       |
|                                                                                | LTE 66 | Rear   | 0.321    | 0.166            | 0.270            | 0.292          | 0.141  | 0.757     | 0.779     | 0.628     | 0.920     | No       |
|                                                                                |        | Front  | 0.190    | 0.271            | 0.121            | 0.173          | 0.078  | 0.582     | 0.634     | 0.539     | 0.712     | No       |
|                                                                                |        | Left   | 0.054    | 0.091            | 0.073            | 0.895          | 0.045  | 0.218     | 1.040     | 0.190     | 1.085     | No       |
|                                                                                |        | Right  | 0.084    | 0.066            |                  |                |        | 0.150     | 0.150     | 0.150     | 0.150     | No       |
|                                                                                |        | Top    |          |                  | 0.364            | 0.093          | 0.211  | 0.364     | 0.093     | 0.211     | 0.304     | No       |
|                                                                                |        | Bottom | 0.107    | 0.658            |                  |                |        | 0.765     | 0.765     | 0.765     | 0.765     | No       |
| NR n41                                                                         | LTE 66 | Rear   | 0.378    | 0.166            | 0.270            | 0.292          | 0.141  | 0.814     | 0.836     | 0.685     | 0.977     | No       |
|                                                                                |        | Front  | 0.144    | 0.271            | 0.121            | 0.173          | 0.078  | 0.536     | 0.588     | 0.493     | 0.666     | No       |
|                                                                                |        | Left   | 0.048    | 0.091            | 0.073            | 0.895          | 0.045  | 0.212     | 1.034     | 0.184     | 1.079     | No       |
|                                                                                |        | Right  | 0.072    | 0.066            |                  |                |        | 0.138     | 0.138     | 0.138     | 0.138     | No       |
|                                                                                |        | Top    | 0.505    |                  | 0.364            | 0.093          | 0.211  | 0.869     | 0.598     | 0.716     | 0.809     | No       |
|                                                                                |        | Bottom |          | 0.658            |                  |                |        | 0.658     | 0.658     | 0.658     | 0.658     | No       |
| NR n66 (Sub #2)                                                                | LTE 2  | Rear   | 0.272    | 0.381            | 0.270            | 0.292          | 0.141  | 0.923     | 0.945     | 0.794     | 1.086     | No       |
|                                                                                |        | Front  | 0.181    | 0.255            | 0.121            | 0.173          | 0.078  | 0.557     | 0.609     | 0.514     | 0.687     | No       |
|                                                                                |        | Left   | 0.065    | 0.100            | 0.073            | 0.895          | 0.045  | 0.238     | 1.060     | 0.210     | 1.105     | No       |
|                                                                                |        | Right  | 0.094    | 0.052            |                  |                |        | 0.146     | 0.146     | 0.146     | 0.146     | No       |
|                                                                                |        | Top    | 0.374    |                  | 0.364            | 0.093          | 0.211  | 0.738     | 0.467     | 0.585     | 0.678     | No       |
|                                                                                |        | Bottom |          | 0.736            |                  |                |        | 0.736     | 0.736     | 0.736     | 0.736     | No       |
|                                                                                | LTE 5  | Rear   | 0.272    | 0.373            | 0.270            | 0.292          | 0.141  | 0.915     | 0.937     | 0.786     | 1.078     | No       |
|                                                                                |        | Front  | 0.181    | 0.232            | 0.121            | 0.173          | 0.078  | 0.534     | 0.586     | 0.491     | 0.664     | No       |
|                                                                                |        | Left   | 0.065    | 0.096            | 0.073            | 0.895          | 0.045  | 0.234     | 1.056     | 0.206     | 1.101     | No       |
|                                                                                |        | Right  | 0.094    | 0.163            |                  |                |        | 0.257     | 0.257     | 0.257     | 0.257     | No       |
|                                                                                |        | Top    | 0.374    |                  | 0.364            | 0.093          | 0.211  | 0.738     | 0.467     | 0.585     | 0.678     | No       |
|                                                                                |        | Bottom |          | 0.167            |                  |                |        | 0.167     | 0.167     | 0.167     | 0.167     | No       |
|                                                                                | LTE 12 | Rear   | 0.272    | 0.281            | 0.270            | 0.292          | 0.141  | 0.823     | 0.845     | 0.694     | 0.986     | No       |
|                                                                                |        | Front  | 0.181    | 0.218            | 0.121            | 0.173          | 0.078  | 0.520     | 0.572     | 0.477     | 0.650     | No       |
|                                                                                |        | Left   | 0.065    | 0.084            | 0.073            | 0.895          | 0.045  | 0.222     | 1.044     | 0.194     | 1.089     | No       |
|                                                                                |        | Right  | 0.094    | 0.118            |                  |                |        | 0.212     | 0.212     | 0.212     | 0.212     | No       |
|                                                                                |        | Top    | 0.374    |                  | 0.364            | 0.093          | 0.211  | 0.738     | 0.467     | 0.585     | 0.678     | No       |
|                                                                                |        | Bottom |          | 0.153            |                  |                |        | 0.153     | 0.153     | 0.153     | 0.153     | No       |
|                                                                                | LTE 13 | Rear   | 0.272    | 0.367            | 0.270            | 0.292          | 0.141  | 0.909     | 0.931     | 0.780     | 1.072     | No       |
|                                                                                |        | Front  | 0.181    | 0.309            | 0.121            | 0.173          | 0.078  | 0.611     | 0.663     | 0.568     | 0.741     | No       |
|                                                                                |        | Left   | 0.065    | 0.139            | 0.073            | 0.895          | 0.045  | 0.277     | 1.099     | 0.249     | 1.144     | No       |
|                                                                                |        | Right  | 0.094    | 0.301            |                  |                |        | 0.395     | 0.395     | 0.395     | 0.395     | No       |
|                                                                                |        | Top    | 0.374    |                  | 0.364            | 0.093          | 0.211  | 0.738     | 0.467     | 0.585     | 0.678     | No       |
|                                                                                |        | Bottom |          | 0.249            |                  |                |        | 0.249     | 0.249     | 0.249     | 0.249     | No       |

## 14.4 Phablet SAR Simultaneous Transmission Analysis

| Simultaneous Transmission Summation Scenario with 5 GHz Ant WLAN |                  |          |          |              |                  |                   |
|------------------------------------------------------------------|------------------|----------|----------|--------------|------------------|-------------------|
| Exposure condition                                               | Band             | Position | WWAN SAR | 5GHzWLAN SAR | $\Sigma$ 1-g SAR | SPLSR<br>(Yes/No) |
|                                                                  |                  |          | (W/kg)   | (W/kg)       | (W/kg)           |                   |
|                                                                  |                  |          | 1        | 2            | 1+2              |                   |
| Phablet SAR                                                      | UMTS 2           | Rear     | 2.013    | 1.637        | 3.650            | No                |
|                                                                  |                  | Front    | 1.217    | 0.649        | 1.866            | No                |
|                                                                  |                  | Left     | 1.132    | 2.234        | 3.366            | No                |
|                                                                  |                  | Right    | 0.159    |              | 0.159            | No                |
|                                                                  |                  | Top      |          | 0.206        | 0.206            | No                |
|                                                                  |                  | Bottom   | 1.894    |              | 1.894            | No                |
|                                                                  | UMTS 4           | Rear     | 1.723    | 1.637        | 3.360            | No                |
|                                                                  |                  | Front    | 1.552    | 0.649        | 2.201            | No                |
|                                                                  |                  | Left     | 1.107    | 2.233        | 3.340            | No                |
|                                                                  |                  | Right    | 0.245    |              | 0.245            | No                |
|                                                                  |                  | Top      |          | 0.206        | 0.206            | No                |
|                                                                  |                  | Bottom   | 2.963    |              | 2.963            | No                |
|                                                                  | LTE 2            | Rear     | 1.623    | 1.637        | 3.260            | No                |
|                                                                  |                  | Front    | 0.952    | 0.649        | 1.601            | No                |
|                                                                  |                  | Left     | 1.085    | 2.233        | 3.318            | No                |
|                                                                  |                  | Right    | 0.350    |              | 0.350            | No                |
|                                                                  |                  | Top      |          | 0.206        | 0.206            | No                |
|                                                                  |                  | Bottom   | 1.465    |              | 1.465            | No                |
|                                                                  | LTE 66           | Rear     | 1.338    | 1.637        | 2.975            | No                |
|                                                                  |                  | Front    | 0.933    | 0.649        | 1.582            | No                |
|                                                                  |                  | Left     | 1.078    | 2.233        | 3.311            | No                |
|                                                                  |                  | Right    | 0.243    |              | 0.243            | No                |
|                                                                  |                  | Top      |          | 0.206        | 0.206            | No                |
|                                                                  |                  | Bottom   | 1.497    |              | 1.497            | No                |
|                                                                  | NR n66 (Main #1) | Rear     | 1.490    | 1.637        | 3.127            | No                |
|                                                                  |                  | Front    | 0.943    | 0.649        | 1.592            | No                |
|                                                                  |                  | Left     | 1.001    | 2.233        | 3.234            | No                |
|                                                                  |                  | Right    | 0.207    |              | 0.207            | No                |
|                                                                  |                  | Top      |          | 0.206        | 0.206            | No                |
|                                                                  |                  | Bottom   | 1.783    |              | 1.783            | No                |

## 14.5 Simultaneous Transmission Conclusion

The above numerical summed SAR Results are sufficient to determine that simultaneous transmission cases will not exceed the SAR Limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE1528-2013.

## 15. SAR Measurement Variability and Uncertainty

In accordance with KDB procedure 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz, SAR additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement variability was assessed using the following procedures for each frequency band:

- 1) Repeated measurement is not required when the original highest measured SAR is  $< 0.80$  W/kg for 1g SAR or  $< 2.0$  W/kg for 10g SAR; steps 2) through 4) do not apply.
- 2) When the original highest measured 1g SAR is  $\geq 0.80$  W/kg or 10g SAR  $\geq 2.0$ W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is  $> 1.20$  or when the original or repeated measurement is  $\geq 1.45$  W/kg for 1g SAR or  $\geq 3.625$  W/kg for 10g SAR ( $\sim 10\%$  from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is  $\geq 1.5$  W/kg for 1g SAR or  $\geq 3.75$  W/kg for 10g SAR and the ratio of largest to smallest SAR for the original, first and second repeated measurements is  $> 1.20$ .

Phablet10g SAR measurement variability Results

| Frequency |         | Mode/Band   | Configuration | Measured SAR (W/kg) | Repeated SAR (W/kg) | SAR Ratio |
|-----------|---------|-------------|---------------|---------------------|---------------------|-----------|
| MHz       | Channel |             |               |                     |                     |           |
| 1 712.4   | 1312    | UMTS Band 4 | Bottom        | 2.47                | 2.41                | 1.02      |

## 16. Measurement Uncertainty

The measured SAR was <1.5 W/Kg for 1g SAR and <3.75 W/Kg For 10g SAR for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE1528-2013 was not required.

## 17. SAR Test Equipment

| Manufacturer | Type / Model                           | S/N                | Calib. Date | Calib.Interval | Calib.Due  |
|--------------|----------------------------------------|--------------------|-------------|----------------|------------|
| SPEAG        | SAM Phantom                            | -                  | N/A         | N/A            | N/A        |
| HP           | SAR System Control PC                  | -                  | N/A         | N/A            | N/A        |
| Staubli      | CS8Cspeag-TX60                         | F/20/0018446/C/001 | N/A         | N/A            | N/A        |
| Staubli      | CS8Cspeag-TX90                         | F17/ 59CHA1/ C/ 01 | N/A         | N/A            | N/A        |
| Staubli      | CS8Cspeag-TX90                         | F13/ 5R4XF1/ C/ 01 | N/A         | N/A            | N/A        |
| Staubli      | CS8Cspeag-TX90                         | F13/ 5SD0A1/ C/ 01 | N/A         | N/A            | N/A        |
| Staubli      | TX60 XLspeag                           | F/20/0018446/A/001 | N/A         | N/A            | N/A        |
| Staubli      | TX90 XLspeag                           | F17/ 59CHA1/ A/ 01 | N/A         | N/A            | N/A        |
| Staubli      | TX90 XLspeag                           | F13/ 5R4XF1/ A/ 01 | N/A         | N/A            | N/A        |
| Staubli      | TX90 XLspeag                           | F13/ 5SD0A1/ A/ 01 | N/A         | N/A            | N/A        |
| Staubli      | Teach Pendant (Joystick)               | 020885             | N/A         | N/A            | N/A        |
| Staubli      | Teach Pendant (Joystick)               | 010963             | N/A         | N/A            | N/A        |
| Staubli      | Teach Pendant (Joystick)               | S-1338 1332        | N/A         | N/A            | N/A        |
| Staubli      | Teach Pendant (Joystick)               | 001729             | N/A         | N/A            | N/A        |
| TESTO        | 175-H1/Thermometer                     | 44606559906        | 01/04/2022  | Annual         | 01/04/2023 |
| TESTO        | 175-H1/Thermometer                     | 40331915309        | 01/04/2022  | Annual         | 01/04/2023 |
| TESTO        | 175-H1/Thermometer                     | 40332651310        | 01/04/2022  | Annual         | 01/04/2023 |
| TESTO        | 175-H1/Thermometer                     | 83348029           | 05/06/2021  | Annual         | 05/06/2022 |
| SPEAG        | DAE4                                   | 1417               | 06/02/2021  | Annual         | 06/02/2022 |
| SPEAG        | DAE4                                   | 446                | 03/29/2021  | Annual         | 03/29/2022 |
| SPEAG        | DAE4                                   | 648                | 07/26/2021  | Annual         | 07/26/2022 |
| SPEAG        | DAE4                                   | 869                | 07/26/2021  | Annual         | 07/26/2022 |
| SPEAG        | E-Field Probe EX3DV4                   | 3903               | 03/24/2021  | Annual         | 03/24/2022 |
| SPEAG        | E-Field Probe EX3DV4                   | 3972               | 05/21/2021  | Annual         | 05/21/2022 |
| SPEAG        | E-Field Probe EX3DV4                   | 7679               | 09/10/2021  | Annual         | 09/10/2022 |
| SPEAG        | E-Field Probe EX3DV4                   | 7681               | 12/14/2021  | Annual         | 12/14/2022 |
| SPEAG        | Dipole D750V3                          | 1014               | 06/01/2021  | Annual         | 06/01/2022 |
| SPEAG        | Dipole D835V2                          | 4d165              | 08/03/2021  | Annual         | 08/03/2022 |
| SPEAG        | Dipole D1800V2                         | 2d015              | 07/30/2021  | Annual         | 07/30/2022 |
| SPEAG        | Dipole D1900V2                         | 5d061              | 11/24/2021  | Annual         | 11/24/2022 |
| SPEAG        | Dipole D2450V2                         | 965                | 06/15/2021  | Annual         | 06/15/2022 |
| SPEAG        | Dipole D2600V2                         | 1106               | 07/30/2021  | Annual         | 07/30/2022 |
| SPEAG        | Dipole D5GHzV2                         | 1107               | 07/22/2021  | Annual         | 07/22/2022 |
| Agilent      | Power Meter E4419B                     | MY41291386         | 10/06/2021  | Annual         | 10/06/2022 |
| Agilent      | Power Meter N1911A                     | MY45101406         | 07/08/2021  | Annual         | 07/08/2022 |
| Agilent      | Power Sensor 8481A                     | SG1091286          | 10/06/2021  | Annual         | 10/06/2022 |
| Agilent      | Power Sensor 8481A                     | MY41090675         | 10/06/2021  | Annual         | 10/06/2022 |
| Agilent      | Power Sensor N1921A                    | MY55220026         | 08/05/2021  | Annual         | 08/05/2022 |
| SPEAG        | DAKS 3.5                               | 1038               | 03/17/2021  | Annual         | 03/17/2022 |
| SPEAG        | DAKS_VNA R140                          | 0141013            | 04/07/2021  | Annual         | 04/07/2022 |
| R&S          | Wireless Communication Test Set CMW500 | 115733             | 04/15/2021  | Annual         | 04/15/2022 |
| Agilent      | 11636B/Power Divider                   | 58698              | 02/26/2021  | Annual         | 02/26/2022 |
| OSI          | Power Divider                          | #1                 | 06/24/2021  | Annual         | 06/24/2022 |
| OSI          | Power Divider                          | #2                 | 06/24/2021  | Annual         | 06/24/2022 |
| OSI          | Power Divider                          | #3                 | 06/24/2021  | Annual         | 06/24/2022 |
| OSI          | Power Divider                          | #4                 | 06/24/2021  | Annual         | 06/24/2022 |
| OSI          | Power Divider                          | #5                 | 06/24/2021  | Annual         | 06/24/2022 |
| Agilent      | SIGNAL GENERATOR E4438C                | MY49071736         | 01/03/2022  | Annual         | 01/03/2023 |

| Manufacturer       | Type / Model                             | S/N        | Calib. Date | Calib.Interval | Calib.Due  |
|--------------------|------------------------------------------|------------|-------------|----------------|------------|
| Agilent            | SIGNAL GENERATOR N5182A                  | MY47070230 | 05/10/2021  | Annual         | 05/10/2022 |
| EMPOWER            | RF Power Amplifier                       | 1084       | 06/25/2021  | Annual         | 06/25/2022 |
| EMPOWER            | RF Power Amplifier                       | 1011       | 10/06/2021  | Annual         | 10/06/2022 |
| MICRO LAB          | LP Filter / LA-15N                       | 10453      | 10/06/2021  | Annual         | 10/06/2022 |
| MICRO LAB          | LP Filter / LA-30N                       | -          | 10/06/2021  | Annual         | 10/06/2022 |
| MICRO LAB          | LP Filter / LA-60N                       | 32011      | 10/06/2021  | Annual         | 10/06/2022 |
| HP                 | Attenuator (3dB) 333340A                 | 02427      | 09/06/2021  | Annual         | 09/06/2022 |
| HP                 | Attenuator (20dB) 8493C                  | 09271      | 09/06/2021  | Annual         | 09/17/2022 |
| Aeroflex/Weinschel | Fixed Coaxial Attenuator (30 dB)         | CE6106     | 11/11/2021  | Annual         | 11/11/2022 |
| Agilent            | Directional Bridge 86205A                | 3140A03878 | 05/28/2021  | Annual         | 05/28/2022 |
| Agilent            | MXA Signal Analyzer N9020A               | MY50510407 | 10/20/2021  | Annual         | 10/20/2022 |
| Anritsu            | Radio Communication Tester MT8820C       | 6200695605 | 04/15/2021  | Annual         | 04/15/2022 |
| Anritsu            | Radio Communication Tester MT8821C       | 6201502997 | 07/08/2021  | Annual         | 07/08/2022 |
| Anritsu            | Radio Communication Tester MT8821C       | 6262044720 | 12/20/2021  | Annual         | 12/20/2022 |
| Anritsu            | Radio Communication Tester MT8821C       | 6262287674 | 05/25/2021  | Annual         | 05/25/2022 |
| Anritsu            | Radio Communication Tester MT8821C       | 6262287678 | 05/25/2021  | Annual         | 05/25/2022 |
| Anritsu            | Radio Communication Test Station MT8000A | 6262036812 | 12/20/2021  | Annual         | 12/20/2022 |
| Agilent            | WIRELESS COMMUNICATION E5515C            | MY48360252 | 07/23/2021  | Annual         | 07/23/2022 |
| ROHDE&SCHWARZ      | BLUETOOTH TESTER CBT                     | 100272     | 02/26/2021  | Annual         | 02/26/2022 |

\* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

## 18. Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/IEEE C95.1 - 2005.

These measurements were taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

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## Appendix A. DUT Ant. Information & SETUP PHOTO

Please refer to test DUT Ant. Information & setup photo file no. as follows:

| Report No.          |
|---------------------|
| HCT-SR-2202-FC003-P |