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# SAR TEST REPORT

|  |   |
|--|---|
| <b>Applicant Name:</b><br><b>SAMSUNG Electronics Co., Ltd.</b><br>129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do,<br>16677 Rep. of Korea | <b>Date of Issue:</b> Jul.14, 2020<br><b>Test Report No.:</b> HCT-SR-2006-FC013-R3<br><b>Test Site:</b> HCT CO., LTD. |
|--|---|

**FCC ID:**

**A3LSMA516U**

|                               |                                      |
|-------------------------------|--------------------------------------|
| <b>Equipment Type:</b>        | <b>Mobile Phone</b>                  |
| <b>Application Type</b>       | <b>Certification</b>                 |
| <b>FCC Rule Part(s):</b>      | <b>CFR §2.1093</b>                   |
| <b>Model Name:</b>            | <b>SM-A516U</b>                      |
| <b>Additional Model Name:</b> | <b>SM-A516U1</b>                     |
| <b>Date of Test:</b>          | <b>May. 07, 2020 ~ Jun. 26. 2020</b> |

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

Reviewed By

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Min-Young Kim  
 Test Engineer  
 SAR Team  
 Certification Division

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Yun-jeang, Heo  
 Technical Manager  
 SAR Team  
 Certification Division

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**REVISION HISTORY**

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

| <b>Revision No.</b> | <b>Date of Issue</b> | <b>Description</b>                                    |
|---------------------|----------------------|---|
| 0                   | Jun. 26, 2020        | Initial Release                                       |
| R1                  | Jul. 01, 2020        | Revised Sec 12.2<br>Appendix B.SAR Test Plots Revised |
| R2                  | Jul. 09, 2020        | Revised Sec 18  |
| R3                  | Jul. 14, 2020        | Revised page 26                                       |

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

The above Test Report is not related to the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.

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*Appendix B. SAR Test Plots*

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*Appendix F. Probe Calibration Data*

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*Appendix H. Power reduction verification*

## 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)
- May 2017 TCBC Workshop Notes (LTE Band 41 Power Class 2)
- April 2018 TCBC Workshop Notes (LTE DL CA SAR Test Exclusion)
- April 2019 TCBC Workshop Notes (Dynamic Antenna tuning)

## 2. Test Location

### 2.1 Test Laboratory

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

### 2.2 Test Facilities

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

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

## 3. Information of the EUT

### 3.1 General Information of the EUT

|                              |                               |
|------------------------------|-------------------------------|
| <b>Model Name</b>            | SM-A516U                      |
| <b>Additional Model Name</b> | SM-A516U1                     |
| <b>Equipment Type</b>        | Mobile Phone                  |
| <b>FCC ID</b>                | A3LSMA516U                    |
| <b>Application Type</b>      | Certification                 |
| <b>Applicant</b>             | 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 |
| CDMA/EVDO BC10                            | 817.90 MHz ~ 823.10 MHz     | PCE             | 0.28                | 0.46         | 1.00         | N/A           |
| CDMA/EVDO BC0                             | 824.70 MHz ~ 848.31 MHz     | PCE             | 0.40                | 0.48         | 1.36         | 1.75          |
| PCS CDMA/EVDO                             | 1 851.25 MHz ~ 1 908.75 MHz | PCE             | 0.33                | <b>1.20</b>  | 1.00         | 2.93          |
| GSM/GPRS/EDGE 850                         | 824.2 MHz ~ 848.8 MHz       | PCE             | 0.30                | 0.55         | 1.00         | N/A           |
| GSM/GPRS/EDGE 1900                        | 1 850.2 MHz ~ 1 909.8 MHz   | PCE             | 0.14                | 0.61         | 1.24         | 1.41          |
| UMTS 850                                  | 826.4 MHz ~ 846.6 MHz       | PCE             | 0.20                | 0.34         | 0.60         | N/A           |
| UMTS 1700                                 | 1 712.4 MHz ~ 1 752.6 MHz   | PCE             | 0.12                | 0.38         | 0.62         | 1.83          |
| UMTS 1900                                 | 1 852.4 MHz ~ 1 907.6 MHz   | PCE             | 0.30                | 0.57         | 1.13         | 2.31          |
| LTE Band 2 (PCS)                          | 1 850.7 MHz ~ 1 909.3 MHz   | PCE             | 0.32                | 1.13         | 1.33         | 3.12          |
| 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             | N/A                 | N/A          | N/A          | N/A           |
| LTE Band 7                                | 2 502.5 MHz ~ 2 567.5 MHz   | PCE             | 0.11                | 0.38         | 1.20         | 2.13          |
| LTE Band 12                               | 699.7 MHz ~ 715.3 MHz       | PCE             | 0.14                | 0.28         | 0.36         | N/A           |
| LTE Band 13                               | 779.5 MHz ~ 784.5 MHz       | PCE             | 0.24                | 0.47         | 0.61         | N/A           |
| LTE Band 14                               | 790.5 MHz ~ 795.5 MHz       | PCE             | 0.23                | 0.46         | 0.63         | N/A           |
| LTE Band 25 (PCS)                         | 1 850.7 MHz ~ 1 914.3 MHz   | PCE             | 0.30                | 0.90         | 1.17         | 3.00          |
| LTE Band 26 (Cell)                        | 814.7 MHz ~ 848.3 MHz       | PCE             | 0.21                | 0.39         | 0.64         | N/A           |
| LTE Band 30                               | 2 307.5 MHz ~ 2 312.5 MHz   | PCE             | 0.13                | 0.38         | 1.20         | 2.33          |
| LTE TDD Band 38                           | 2 572.5 MHz ~ 2 617.5 MHz   | PCE             | N/A                 | N/A          | N/A          | N/A           |
| LTE TDD Band 40                           | 2 302.5 MHz ~ 2 397.5 MHz   | PCE             | <0.10               | <0.10        | <0.10        | N/A           |
| LTE TDD Band 41                           | 2 498.5 MHz ~ 2 687.5 MHz   | PCE             | <0.10               | 0.30         | 0.56         | N/A           |
| LTE Band 66 (AWS)                         | 1 710.7 MHz ~ 1 779.3 MHz   | PCE             | 0.20                | 0.58         | 0.72         | N/A           |
| LTE Band 71                               | 665.5 MHz ~ 695.5 MHz       | PCE             | 0.21                | 0.41         | 0.58         | 2.84          |
| NR Band n2 (PCS)                          | 1 852.5 MHz ~ 1 907.5 MHz   | PCE             | 0.30                | 1.18         | <b>1.37</b>  | 3.12          |
| NR Band n5 (Cell)                         | 826.5 MHz ~ 846.5 MHz       | PCE             | 0.30                | 0.46         | 0.91         | N/A           |
| NR Band n41                               | 2 506.02 MHz ~ 2 679.99 MHz | PCE             | <b>1.18</b>         | 0.21         | 0.70         | N/A           |
| NR Band n66                               | 1 712.5 MHz ~ 1 777.5 MHz   | PCE             | 0.11                | 0.48         | 0.72         | <b>3.25</b>   |
| NR Band n71                               | 665.5 MHz - 695.5 MHz       | PCE             | 0.17                | 0.29         | 0.53         | N/A           |
| 802.11b                                   | 2 412 MHz ~ 2 472 MHz       | DTS             | 0.24                | 0.20         | 0.90         | 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             | 0.38                | 0.13         | N/A          | 1.55          |
| U-NII-2C                                  | 5 500 MHz ~ 5 720 MHz       | NII             | 0.20                | 0.16         | N/A          | 1.99          |
| U-NII-3                                   | 5 745 MHz ~ 5 825 MHz       | NII             | 0.22                | 0.13         | 0.28         | N/A           |
| Bluetooth                                 | 2 402 MHz ~ 2 480 MHz       | DSS             | 0.11                | <0.10        | <0.10        | N/A           |
| Simultaneous SAR per KDB 690783 D01v01r03 |                             |                 | 1.556               | 1.397        | <b>1.559</b> | 3.796         |
| Date(s) of Tests:                         | 05/07/2020 ~ 06/26/2020     |                 |                     |              |              |               |

## 4. Device Under Test Description

### 4.1 DUT specification

| Device Wireless specification overview |                |                             |
|--|----------------|-----------------------------|
| Band & Mode                            | Operating Mode | Tx Frequency                |
| CDMA/EVDO BC10                         | Voice / Data   | 817.90 MHz ~ 823.10 MHz     |
| CDMA/EVDO BC0                          | Voice / Data   | 824.70 MHz ~ 848.31 MHz     |
| PCS CDMA/EVDO                          | Voice / Data   | 1 851.25 MHz ~ 1 908.75 MHz |
| GSM850                                 | Voice / Data   | 824.2 MHz ~ 848.8 MHz       |
| GSM1900                                | Voice / Data   | 1 850.2 MHz ~ 1 909.8 MHz   |
| UMTS 850                               | Voice / Data   | 826.4 MHz ~ 846.6 MHz       |
| UMTS 1700                              | Voice / Data   | 1 712.4 MHz ~ 1 752.6 MHz   |
| UMTS 1900                              | 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 7                             | Voice / Data   | 2 502.5 MHz ~ 2 567.5 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 14                            | Voice / Data   | 790.5 MHz ~ 795.5 MHz       |
| LTE Band 25 (PCS)                      | Voice / Data   | 1 850.7 MHz ~ 1 914.3 MHz   |
| LTE Band 26 (Cell)                     | Voice / Data   | 814.7 MHz ~ 848.3 MHz       |
| LTE Band 29(RX Only)                   | Voice / Data   | 717 MHz ~ 728 MHz           |
| LTE Band 30                            | Voice / Data   | 2 307.5 MHz ~ 2 312.5 MHz   |
| LTE TDD Band 38                        | Voice / Data   | 2 572.5 MHz ~ 2 617.5 MHz   |
| LTE TDD Band 40                        | Voice / Data   | 2 302.5 MHz ~ 2 397.5 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   |
| LTE Band 71                            | Voice / Data   | 665.5 MHz ~ 695.5 MHz       |
| NR Band n2 (PCS)                       | Data           | 1 852.5 MHz ~ 1 907.5 MHz   |
| NR Band n5 (Cell)                      | Data           | 826.5 MHz ~ 846.5 MHz       |
| NR Band n41                            | Data           | 2 506.02 MHz ~ 2 679.99 MHz |
| NR Band n66                            | Data           | 1 712.5 MHz ~ 1 777.5 MHz   |
| NR Band n71                            | Data           | 665.5 MHz - 695.5 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       |
| ANT+                                   | Data           | 2 402 MHz ~ 2 480 MHz       |
| NFC                                    | Data           | 13.56 MHz                   |

| Device Description   |  |               |               |                    |          |                           |          |  |          |   |          |   |          |
|--|--|---------------|---------------|--------------------|----------|---------------------------|----------|--|----------|---|----------|---|----------|
| Device Dimension   | Overall (Length x Width): 159 mm x 74 mm<br>Overall Diagonal: 169 mm<br>Display Diagonal: 160 mm   |               |               |                    |          |                           |          |  |          |   |          |   |          |
| Battery Information  | Standard (Li-ion Polymer Battery)<br>Battery Model Name: EB-BA516ABY (ATL)   |               |               |                    |          |                           |          |  |          |   |          |   |          |
| Ear-jack   | Model Name: EHS64AVFWE (CRESYN)  |               |               |                    |          |                           |          |  |          |   |          |   |          |
| HW version   | REV0.4   |               |               |                    |          |                           |          |  |          |   |          |   |          |
| SW version   | A516U.001  |               |               |                    |          |                           |          |  |          |   |          |   |          |
| Device Serial Numbers  | <table border="1"> <thead> <tr> <th>Mode</th> <th>Serial Number</th> </tr> </thead> <tbody> <tr> <td>n66/n41/LTE7/LTE30</td> <td>TDM0609H</td> </tr> <tr> <td>BT/LTE40/LTE41/n41/GSM850</td> <td>TDM0558H</td> </tr> <tr> <td>n2/WLAN2G/LTE12/LTE13/LTE14<br/>LTE26/LTE71</td> <td>TDM0524H</td> </tr> <tr> <td>CDMA BC0/CDMA BC10/CDMA<br/>PCS/GSM1900/UMTS B2/</td> <td>TDM0465H</td> </tr> <tr> <td>n5/n71/WLAN5G/LTE2/LTE25/LTE66<br/>UMTS B4/UMTS B5</td> <td>TDM0203H</td> </tr> </tbody> </table> | Mode          | Serial Number | n66/n41/LTE7/LTE30 | TDM0609H | BT/LTE40/LTE41/n41/GSM850 | TDM0558H | n2/WLAN2G/LTE12/LTE13/LTE14<br>LTE26/LTE71 | TDM0524H | CDMA BC0/CDMA BC10/CDMA<br>PCS/GSM1900/UMTS B2/ | TDM0465H | n5/n71/WLAN5G/LTE2/LTE25/LTE66<br>UMTS B4/UMTS B5 | TDM0203H |
|  | Mode   | Serial Number |               |                    |          |                           |          |  |          |   |          |   |          |
|  | n66/n41/LTE7/LTE30   | TDM0609H      |               |                    |          |                           |          |  |          |   |          |   |          |
|  | BT/LTE40/LTE41/n41/GSM850  | TDM0558H      |               |                    |          |                           |          |  |          |   |          |   |          |
|  | n2/WLAN2G/LTE12/LTE13/LTE14<br>LTE26/LTE71   | TDM0524H      |               |                    |          |                           |          |  |          |   |          |   |          |
|  | CDMA BC0/CDMA BC10/CDMA<br>PCS/GSM1900/UMTS B2/  | TDM0465H      |               |                    |          |                           |          |  |          |   |          |   |          |
| n5/n71/WLAN5G/LTE2/LTE25/LTE66<br>UMTS B4/UMTS B5  | TDM0203H   |               |               |                    |          |                           |          |  |          |   |          |   |          |
| The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units. |  |               |               |                    |          |                           |          |  |          |   |          |   |          |



## 4.2 Power Reduction for SAR

This device utilizes power reduction mechanisms for some wireless modes and bands for SAR compliance under hotspot conditions and under some conditions when the device is being used in close proximity to the user's hand. All hotspot SAR evaluations for this device were performed at the maximum allowed output power when Hotspot is enabled. FCC KDB Publication 616217 D04v01r02 Sec.6 was used as a guideline for selection SAR test distances for device when being used in phablet use conditions.

This device uses an independent fixed level power reduction mechanism for WLAN modes during held-to-ear scenarios. Per FCC Guidance, the held-to-ear exposure conditions were evaluated at reduced power according to the head SAR Positions described in IEEE1528-2013. Detailed descriptions of the power reduction mechanism are include in the operational description.

The reduced powers for the power reduction mechanisms were conformed via conducted power measurements at the RF Port .

### 4.3 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.

#### 4.3.1 Maximum PCE Output Power

| Mode / Band         |         | Modulated Average (dBm) |            |            |
|---------------------|---------|-------------------------|------------|------------|
|                     |         | 1x-RTT                  | EVDO Rev 0 | EVDO Rev A |
| CDMA BC0 (835 MHz)  | Maximum | 25.5                    | 25.5       | 24.5       |
|                     | Nominal | 24.5                    | 24.5       | 23.5       |
| CDMA PCS (1900 MHz) | Maximum | 25.5                    | 25.5       | 25.5       |
|                     | Nominal | 24.5                    | 24.5       | 24.5       |
| CDMA BC10 (815 MHz) | Maximum | 25.5                    | 25.5       | 25.5       |
|                     | Nominal | 24.5                    | 24.5       | 24.5       |

| 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/GPRS/EDGE 850 | Maximum | 33.5      | 33.5                     | 31.0      | 30.5      | 29.0      | 28.0                      | 26.0      | 24.0      | 23.0      |
|                   | Nominal | 32.5      | 32.5                     | 30.0      | 29.5      | 28.0      | 27.0                      | 25.0      | 23.0      | 22.0      |
| GSM/GPRS/EDGE1900 | Maximum | 31.5      | 31.5                     | 29.0      | 27.5      | 26.0      | 26.5                      | 24.5      | 23.5      | 22.0      |
|                   | Nominal | 30.5      | 30.5                     | 28.0      | 26.5      | 25.0      | 25.5                      | 23.5      | 22.5      | 21.0      |

| Mode / Band            |         | Modulated Average (dBm) |            |            |          |
|------------------------|---------|-------------------------|------------|------------|----------|
|                        |         | 3GPP UMTS               | 3GPP HSDPA | 3GPP HSUPA | DC-HSDPA |
| UMTS Band 5 (850 MHz)  | Maximum | 24.0                    | 23.5       | 22.5       | 23.5     |
|                        | Nominal | 23.0                    | 22.5       | 21.5       | 22.5     |
| UMTS Band 4 (1700 MHz) | Maximum | 24.0                    | 23.5       | 21.5       | 23.5     |
|                        | Nominal | 23.0                    | 22.5       | 20.5       | 22.5     |
| UMTS Band 2 (1900 MHz) | Maximum | 24.0                    | 23.5       | 21.5       | 23.5     |
|                        | Nominal | 23.0                    | 22.5       | 20.5       | 22.5     |

| 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 7             | Maximum | 24.0                    |
|                        | Nominal | 23.0                    |
| LTE Band 12            | Maximum | 25.5                    |
|                        | Nominal | 24.5                    |
| LTE Band 13            | Maximum | 25.0                    |
|                        | Nominal | 24.0                    |
| LTE Band 14            | Maximum | 25.0                    |
|                        | Nominal | 24.0                    |
| LTE Band 25 (PCS)      | Maximum | 24.5                    |
|                        | Nominal | 23.5                    |
| LTE Band 26 (Cell)     | Maximum | 25.0                    |
|                        | Nominal | 24.0                    |
| LTE Band 30            | Maximum | 23.5                    |
|                        | Nominal | 22.5                    |
| LTE TDD Band 38        | Maximum | 24.0                    |
|                        | Nominal | 23.0                    |
| LTE TDD Band 40        | Maximum | 12.0                    |
|                        | Nominal | 11.0                    |
| LTE TDD Band 41        | Maximum | 24.0                    |
|                        | Nominal | 23.0                    |
| LTE TDD Band 41 (HUPE) | Maximum | 26.5                    |
|                        | Nominal | 25.5                    |
| LTE Band 66 (AWS)      | Maximum | 25.0                    |
|                        | Nominal | 24.0                    |
| LTE Band 71            | Maximum | 25.0                    |
|                        | Nominal | 24.0                    |

| Mode / Band       |         | Modulated Average (dBm) |
|-------------------|---------|-------------------------|
| NR Band n2 (PCS)  | Maximum | 25.0                    |
|                   | Nominal | 24.0                    |
| NR Band n5 (Cell) | Maximum | 25.0                    |
|                   | Nominal | 24.0                    |
| NR Band n41       | Maximum | 24.5                    |
|                   | Nominal | 23.5                    |
| NR Band n66       | Maximum | 25.0                    |
|                   | Nominal | 24.0                    |
| NR Band n71       | Maximum | 25.0                    |
|                   | Nominal | 24.0                    |

**4.3.2 Reduced PCE Power (Hotspot Mode / Grip Sensor on / Ear jack)**

| Mode / Band                      |         | Modulated Average (dBm) |            |            |
|----------------------------------|---------|-------------------------|------------|------------|
|                                  |         | 1x-RTT                  | EVDO Rev 0 | EVDO Rev A |
| CDMA PCS (1900 MHz)<br>(Hotspot) | Maximum | 18.5                    | 18.5       | 18.5       |
|                                  | Nominal | 17.5                    | 17.5       | 17.5       |

| Mode / Band                             |         | Modulated Average (dBm) |            |            |
|---|---------|-------------------------|------------|------------|
|   |         | 1x-RTT                  | EVDO Rev 0 | EVDO Rev A |
| CDMA PCS (1900 MHz)<br>(Grip Sensor on) | Maximum | 21.5                    | 21.5       | 21.5       |
|   | Nominal | 20.5                    | 20.5       | 20.5       |

| Mode / Band                       |         | Modulated Average (dBm) |            |            |
|-----------------------------------|---------|-------------------------|------------|------------|
|                                   |         | 1x-RTT                  | EVDO Rev 0 | EVDO Rev A |
| CDMA PCS (1900 MHz)<br>(Ear jack) | Maximum | 22.5                    | 22.5       | 22.5       |
|                                   | Nominal | 21.5                    | 21.5       | 21.5       |

| 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/GPRS/EDGE 850<br>(Ear jack) | Maximum | 32.0      | 32.0                     | 29.5      | 28.5      | 27.0      | 26.5                      | 24.5      | 23.5      | 22.0      |
|                                 | Nominal | 31.0      | 31.0                     | 28.5      | 27.5      | 26.0      | 25.5                      | 23.5      | 22.5      | 21.0      |
| GSM/GPRS/EDGE1900<br>(Ear jack) | Maximum | 30.5      | 30.5                     | 28.0      | 26.5      | 25.0      | 27.5                      | 26.0      | 24.5      | 23.5      |
|                                 | Nominal | 29.5      | 29.5                     | 27.0      | 25.5      | 24.0      | 26.5                      | 25.0      | 23.5      | 22.5      |

| 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/GPRS/EDGE1900<br>(Grip Sensor on, Hotspot) | Maximum | 28.5      | 28.5                     | 26.0      | 24.5      | 23.0      | 25.5                      | 24.0      | 22.5      | 21.5      |
|  | Nominal | 27.5      | 27.5                     | 25.0      | 23.5      | 22.0      | 24.5                      | 23.0      | 21.5      | 20.5      |

| Mode / Band                              |         | Modulated Average (dBm) |            |            |          |
|--|---------|-------------------------|------------|------------|----------|
|  |         | 3GPP UMTS               | 3GPP HSDPA | 3GPP HSUPA | DC-HSDPA |
| UMTS Band 2 (1900 MHz)<br>(Hotspot Mode) | Maximum | 20.0                    | 18.5       | 18.5       | 18.5     |
|  | Nominal | 19.0                    | 17.5       | 17.5       | 17.5     |

| Mode / Band                          |         | Modulated Average (dBm) |          |            |            |          |
|--------------------------------------|---------|-------------------------|----------|------------|------------|----------|
|                                      |         | UMTS RMC                | UMTS AMR | 3GPP HSDPA | 3GPP HSUPA | DC-HSDPA |
| UMTS Band 2 (1900 MHz)<br>(Ear jack) | Maximum | 21.0                    | 23.0     | 20.0       | 20.0       | 20.0     |
|                                      | Nominal | 20.0                    | 22.0     | 19.0       | 19.0       | 19.0     |

| Mode / Band  |         | Modulated Average (dBm) |            |            |          |
|--|---------|-------------------------|------------|------------|----------|
|  |         | 3GPP UMTS               | 3GPP HSDPA | 3GPP HSUPA | DC-HSDPA |
| UMTS Band 4 (1700 MHz)<br>(Ear jack, Grip Sensor on, Hotspot Mode) | Maximum | 21.0                    | 20.5       | 20.0       | 20.5     |
|  | Nominal | 20.0                    | 19.5       | 19.0       | 19.5     |
| UMTS Band 2 (1900 MHz)<br>(Grip Sensor on)                         | Maximum | 20.0                    | 20.0       | 20.0       | 20.0     |
|  | Nominal | 19.0                    | 19.0       | 19.0       | 19.0     |

| Mode / Band            |         | Modulated Average (dBm) |              |          |
|------------------------|---------|-------------------------|--------------|----------|
|                        |         | Grip Sensor on          | Hotspot Mode | Ear jack |
| LTE Band 2 (PCS)       | Maximum | 21.5                    | 19.5         | 22.5     |
|                        | Nominal | 20.5                    | 18.5         | 21.5     |
| LTE Band 4 (AWS)       | Maximum | 21.5                    | 20.5         | 21.5     |
|                        | Nominal | 20.5                    | 19.5         | 20.5     |
| LTE Band 7             | Maximum | 22.0                    | 22.0         | 22.0     |
|                        | Nominal | 21.0                    | 21.0         | 21.0     |
| LTE Band 25 (PCS)      | Maximum | 21.0                    | 18.5         | 23.0     |
|                        | Nominal | 20.0                    | 17.5         | 22.0     |
| LTE Band 30            | Maximum | 22.0                    | 22.0         | 22.0     |
|                        | Nominal | 21.0                    | 21.0         | 21.0     |
| LTE TDD Band 38        | Maximum | 22.0                    | 22.0         | 22.0     |
|                        | Nominal | 21.0                    | 21.0         | 21.0     |
| LTE TDD Band 40        | Maximum | 12.0                    | 12.0         | 12.0     |
|                        | Nominal | 11.0                    | 11.0         | 11.0     |
| LTE TDD Band 41        | Maximum | 22.0                    | 22.0         | 22.0     |
|                        | Nominal | 21.0                    | 21.0         | 21.0     |
| LTE TDD Band 41 (HUPE) | Maximum | 22.0                    | 22.0         | 22.0     |
|                        | Nominal | 21.0                    | 21.0         | 21.0     |
| LTE Band 66 (AWS)      | Maximum | 22.0                    | 21.0         | 22.0     |
|                        | Nominal | 21.0                    | 20.0         | 21.0     |

| Mode / Band      |         | Modulated Average (dBm) |              |          |
|------------------|---------|-------------------------|--------------|----------|
|                  |         | Grip Sensor on          | Hotspot Mode | Ear jack |
| NR Band n2 (PCS) | Maximum | 22.0                    | 20.0         | 22.0     |
|                  | Nominal | 21.0                    | 19.0         | 21.0     |
| NR Band n66      | Maximum | 22.0                    | 20.0         | 22.0     |
|                  | Nominal | 21.0                    | 19.0         | 21.0     |

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

| Mode                              | Protocol                          | Sensor State | IEEE 802.11(in dBm) |           |          |          |           |        |        |        |        |    |
|-----------------------------------|-----------------------------------|--------------|---------------------|-----------|----------|----------|-----------|--------|--------|--------|--------|----|
|                                   |                                   |              | a                   |           | b        | g        |           | n      |        | ac     |        |    |
|                                   |                                   |              | 6-36Mbps            | 48-54Mbps | 1-11Mbps | 6-36Mbps | 48-54Mbps | MCS0-4 | MCS5-7 | MCS0-4 | MCS5-8 |    |
| 2.4GHz Wi-Fi (Inactive)           | Ch.1 ~ 11                         | Maximum      | N/A                 |           | 21       | 19       | 18        | 19     | 18     | N/A    |        |    |
|                                   |                                   | Nominal      | N/A                 |           | 20       | 18       | 17        | 18     | 17     | N/A    |        |    |
|                                   | Ch.12                             | Maximum      | N/A                 |           | 8        | 8        | 8         | 7      | 7      | N/A    |        |    |
|                                   |                                   | Nominal      | N/A                 |           | 7        | 7        | 7         | 6      | 6      | N/A    |        |    |
|                                   | Ch.13                             | Maximum      | N/A                 |           | 8        | 7        | 7         | 4      | 4      | N/A    |        |    |
|                                   |                                   | Nominal      | N/A                 |           | 7        | 6        | 6         | 3      | 3      | N/A    |        |    |
| 5GHz Wi-Fi (20 MHz BW) (Inactive) | UNII-1                            | Maximum      | 18                  | 17        | N/A      | N/A      |           | 18     | 17     | 16     | 15     |    |
|                                   |                                   | Nominal      | 17                  | 16        | N/A      | N/A      |           | 17     | 16     | 15     | 14     |    |
|                                   | UNII-2A                           | Maximum      | 18                  | 17        | N/A      | N/A      |           | 18     | 17     | 16     | 15     |    |
|                                   |                                   | Nominal      | 17                  | 16        | N/A      | N/A      |           | 17     | 16     | 15     | 14     |    |
|                                   | UNII-2C                           | Maximum      | 18                  | 17        | N/A      | N/A      |           | 18     | 17     | 16     | 15     |    |
|                                   |                                   | Nominal      | 17                  | 16        | N/A      | N/A      |           | 17     | 16     | 15     | 14     |    |
|                                   | UNII-3                            | Maximum      | 18                  | 17        | N/A      | N/A      |           | 18     | 17     | 16     | 15     |    |
|                                   |                                   | Nominal      | 17                  | 16        | N/A      | N/A      |           | 17     | 16     | 15     | 14     |    |
|                                   | 5GHz Wi-Fi (40 MHz BW) (Inactive) | UNII-1       | Maximum             | N/A       |          | N/A      | N/A       |        | 17     | 16     | 16     | 15 |
|                                   |                                   |              | Nominal             | N/A       |          | N/A      | N/A       |        | 16     | 15     | 15     | 14 |
|                                   |                                   | UNII-2A      | Maximum             | N/A       |          | N/A      | N/A       |        | 17     | 16     | 16     | 15 |
|                                   |                                   |              | Nominal             | N/A       |          | N/A      | N/A       |        | 16     | 15     | 15     | 14 |
| UNII-2C                           |                                   | Maximum      | N/A                 |           | N/A      | N/A      |           | 17     | 16     | 16     | 15     |    |
|                                   |                                   | Nominal      | N/A                 |           | N/A      | N/A      |           | 16     | 15     | 15     | 14     |    |
| UNII-3                            |                                   | Maximum      | N/A                 |           | N/A      | N/A      |           | 17     | 16     | 16     | 15     |    |
|                                   |                                   | Nominal      | N/A                 |           | N/A      | N/A      |           | 16     | 15     | 15     | 14     |    |
| 5GHz Wi-Fi (80 MHz BW) (Inactive) |                                   | UNII-1       | Maximum             | N/A       |          | N/A      | N/A       |        | N/A    |        | 14     | 13 |
|                                   |                                   |              | Nominal             | N/A       |          | N/A      | N/A       |        | N/A    |        | 13     | 12 |
|                                   |                                   | UNII-2A      | Maximum             | N/A       |          | N/A      | N/A       |        | N/A    |        | 14     | 13 |
|                                   |                                   |              | Nominal             | N/A       |          | N/A      | N/A       |        | N/A    |        | 13     | 12 |
|                                   | UNII-2C                           | Maximum      | N/A                 |           | N/A      | N/A      |           | N/A    |        | 14     | 13     |    |
|                                   |                                   | Nominal      | N/A                 |           | N/A      | N/A      |           | N/A    |        | 13     | 12     |    |
|                                   | UNII-3                            | Maximum      | N/A                 |           | N/A      | N/A      |           | N/A    |        | 14     | 13     |    |
|                                   |                                   | Nominal      | N/A                 |           | N/A      | N/A      |           | N/A    |        | 13     | 12     |    |

**4.3.4 Reduced WLAN Power (Held to ear)**

| Mode                            | Protocol  | Sensor State | IEEE 802.11(in dBm) |           |          |          |           |        |        |        |        |
|---------------------------------|-----------|--------------|---------------------|-----------|----------|----------|-----------|--------|--------|--------|--------|
|                                 |           |              | a                   |           | b        | g        |           | n      |        | ac     |        |
|                                 |           |              | 6~36Mbps            | 48~54Mbps | 1~11Mbps | 6~36Mbps | 48~54Mbps | MCS0~4 | MCS5~7 | MCS0~4 | MCS5~8 |
| 2.4GHz Wi-Fi (Active)           | Ch.1 ~ 11 | Maximum      | N/A                 |           | 12       |          | 12        |        | 12     |        | N/A    |
|                                 |           | Nominal      | N/A                 |           | 11       |          | 11        |        | 11     |        | N/A    |
|                                 | Ch.12     | Maximum      | N/A                 |           | 8        |          | 8         |        | 7      |        | N/A    |
|                                 |           | Nominal      | N/A                 |           | 7        |          | 7         |        | 6      |        | N/A    |
|                                 | Ch.13     | Maximum      | N/A                 |           | 8        |          | 8         |        | 7      |        |        |
|                                 |           | Nominal      | N/A                 |           | 7        |          | 7         |        | 6      |        |        |
| 5GHz Wi-Fi (20 MHz BW) (Active) | UNII-1    | Maximum      | 12                  |           | N/A      |          | N/A       |        | 12     |        | 12     |
|                                 |           | Nominal      | 11                  |           | N/A      |          | N/A       |        | 11     |        | 11     |
|                                 | UNII-2A   | Maximum      | 12                  |           | N/A      |          | N/A       |        | 12     |        | 12     |
|                                 |           | Nominal      | 11                  |           | N/A      |          | N/A       |        | 11     |        | 11     |
|                                 | UNII-2C   | Maximum      | 12                  |           | N/A      |          | N/A       |        | 12     |        | 12     |
|                                 |           | Nominal      | 11                  |           | N/A      |          | N/A       |        | 11     |        | 11     |
|                                 | UNII-3    | Maximum      | 12                  |           | N/A      |          | N/A       |        | 12     |        | 12     |
|                                 |           | Nominal      | 11                  |           | N/A      |          | N/A       |        | 11     |        | 11     |
| 5GHz Wi-Fi (40 MHz BW) (Active) | UNII-1    | Maximum      | N/A                 |           | N/A      |          | N/A       |        | 12     |        | 12     |
|                                 |           | Nominal      | N/A                 |           | N/A      |          | N/A       |        | 11     |        | 11     |
|                                 | UNII-2A   | Maximum      | N/A                 |           | N/A      |          | N/A       |        | 12     |        | 12     |
|                                 |           | Nominal      | N/A                 |           | N/A      |          | N/A       |        | 11     |        | 11     |
|                                 | UNII-2C   | Maximum      | N/A                 |           | N/A      |          | N/A       |        | 12     |        | 12     |
|                                 |           | Nominal      | N/A                 |           | N/A      |          | N/A       |        | 11     |        | 11     |
|                                 | UNII-3    | Maximum      | N/A                 |           | N/A      |          | N/A       |        | 12     |        | 12     |
|                                 |           | Nominal      | N/A                 |           | N/A      |          | N/A       |        | 11     |        | 11     |
| 5GHz Wi-Fi (80 MHz BW) (Active) | UNII-1    | Maximum      | N/A                 |           | N/A      |          | N/A       |        | N/A    |        | 12     |
|                                 |           | Nominal      | N/A                 |           | N/A      |          | N/A       |        | N/A    |        | 11     |
|                                 | UNII-2A   | Maximum      | N/A                 |           | N/A      |          | N/A       |        | N/A    |        | 12     |
|                                 |           | Nominal      | N/A                 |           | N/A      |          | N/A       |        | N/A    |        | 11     |
|                                 | UNII-2C   | Maximum      | N/A                 |           | N/A      |          | N/A       |        | N/A    |        | 12     |
|                                 |           | Nominal      | N/A                 |           | N/A      |          | N/A       |        | N/A    |        | 11     |
|                                 | UNII-3    | Maximum      | N/A                 |           | N/A      |          | N/A       |        | N/A    |        | 12     |
|                                 |           | Nominal      | N/A                 |           | N/A      |          | N/A       |        | N/A    |        | 11     |



#### 4.3.5 Maximum Bluetooth Power

| Mode / Band     |       | Modulated Average (dBm) |      |
|-----------------|-------|-------------------------|------|
| Bluetooth       | DH5   | Maximum                 | 9.5  |
|                 |       | Nominal                 | 8.5  |
|                 | 2-DH5 | Maximum                 | 8.0  |
|                 |       | Nominal                 | 7.0  |
|                 | 3-DH5 | Maximum                 | 8.0  |
|                 |       | Nominal                 | 7.0  |
| 9.0Bluetooth LE | 1M    | Maximum                 | 6.5  |
|                 |       | Nominal                 | 5.5  |
|                 | 2M    | Maximum                 | 10.5 |
|                 |       | Nominal                 | 9.5  |

### 4.4 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 7 2 502.5 MHz ~ 2 567.5 MHz                            |
|                    | LTE Band 12 699.7 MHz ~ 715.3 MHz                               |
|                    | LTE Band 13 779.5 MHz ~ 784.5 MHz                               |
|                    | LTE Band 14 790.5 MHz ~ 795.5 MHz                               |
|                    | LTE Band 25 (PCS) 1 850.7 MHz ~ 1 914.3 MHz                     |
|                    | LTE Band 26 (Cell) 814.7 MHz ~ 848.3 MHz                        |
|                    | LTE Band 30 2 307.5 MHz ~ 2 312.5 MHz                           |
|                    | LTE TDD Band 38 2 572.5 MHz ~ 2 617.5 MHz                       |
|                    | LTE TDD Band 40 2 302.5 MHz ~ 2 397.5 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                     |
|                    | LTE Band 71 665.5 MHz ~ 695.5 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 7 5 MHz, 10 MHz, 15 MHz, 20 MHz                        |
|                    | LTE Band 12 1.4 MHz, 3 MHz, 5 MHz, 10 MHz                       |
|                    | LTE Band 13 5 MHz, 10 MHz                                       |
|                    | LTE Band 14 5 MHz, 10 MHz                                       |
|                    | LTE Band 25 (PCS) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz |
|                    | LTE Band 26 (Cell) 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz        |
|                    | LTE Band 30 5 MHz, 10 MHz                                       |
|                    | LTE TDD Band 38 5 MHz, 10 MHz, 15 MHz, 20 MHz                   |
|                    | LTE TDD Band 40 5 MHz, 10 MHz, 15 MHz, 20 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 |
|                    | LTE Band 71 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 7          | 5 MHz   | 2502.5 (20775)  | 2535 (21100)    | 2567.5 (21425)  |
|                     | 10 MHz  | 2505 (20800)    | 2535 (21100)    | 2565 (21400)    |
|                     | 15 MHz  | 2507.5 (20825)  | 2535 (21100)    | 2562.5 (21375)  |
|                     | 20 MHz  | 2510 (20850)    | 2535 (21100)    | 2560 (21350)    |
| 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 14         | 5 MHz   | 790.5 ( 23305)  | 793 (23330)     | 795.5 (23355)   |
|                     | 10 MHz  |                 | 793 (23330)     |                 |
| LTE Band 25(PCS)    | 1.4 MHz | 1 850.7 (26047) | 1 882.5 (26365) | 1 914.3 (26683) |
|                     | 3 MHz   | 1 851.5 (26055) | 1 882.5 (26365) | 1 913.5 (26675) |
|                     | 5 MHz   | 1 852.5 (26065) | 1 882.5 (26365) | 1 912.5 (26665) |
|                     | 10 MHz  | 1 855 (26090)   | 1 882.5 (26365) | 1 910 (26640)   |
|                     | 15 MHz  | 1 857.5 (26115) | 1 882.5 (26365) | 1 907.5 (26615) |
|                     | 20 MHz  | 1 860 (26140)   | 1 882.5 (26365) | 1 905 (26590)   |
| LTE Band 26 (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 30         | 5 MHz   | 2 307.5 (27685) | 2 310 (27710)   | 2 312.5 (27735) |
|                     | 10 MHz  |                 | 2 310 (27710)   |                 |
| LTE TDD Band 38     | 5 MHz   | 2 572.5 (37775) | 2 595 (38000)   | 2 617.5 (38225) |
|                     | 10 MHz  | 2 575 (37800)   | 2 595 (38000)   | 2 615 (38200)   |
|                     | 15 MHz  | 2 577.5 (37825) | 2 595 (38000)   | 2 612.5 (38175) |
|                     | 20 MHz  | 2 580 (37850)   | 2 595 (38000)   | 2 610 (38150)   |
| LTE TDD Band 40     | 5 MHz   | 2 302.5 (38675) | 2 350 (39150)   | 2 397.5 (39625) |
|                     | 10 MHz  | 2 305 (38700)   | 2 350 (39150)   | 2 395 (39600)   |
|                     | 15 MHz  | 2 307.5 (38725) | 2 350 (39150)   | 2 392.5 (39575) |
|                     | 20 MHz  | 2 310 (38750)   | 2 350 (39150)   | 2 390 (39550)   |

| Ch. No.& Freq.(MHz)  | Low  |  | Mid            |               | High             |               |
|--|--|--|----------------|---------------|------------------|---------------|
| LTE Band 66 (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 Band 71  | 5 MHz  | 665.5 (133147)   | 680.5 (133297) |               | 695.5 (133447)   |               |
|  | 10 MHz   | 668 (133172)   | 680.5 (133297) |               | 693 (133422)     |               |
|  | 15 MHz   | 670.5 (133197)   | 680.5 (133297) |               | 690.5 (133397)   |               |
|  | 20 MHz   | 673 (133222)   | 680.5 (133297) |               | 688 (133372)     |               |
| LTE TDD Band 41  | 5 MHz  | 2498.5(39675)  | 2545.8(40148)  | 2593.0(40620) | 2640.3(41093)    | 2687.5(41565) |
|  | 10 MHz   | 2501.0(39700)  | 2547.0(40160)  | 2593.0(40620) | 2639.0(41080)    | 2685.0(41540) |
|  | 15 MHz   | 2503.5(39725)  | 2548.3(41073)  | 2593.0(40620) | 2637.8(41068)    | 2682.5(41515) |
|  | 20 MHz   | 2506.0(39750)  | 2549.5(40185)  | 2593.0(40620) | 2636.5(41055)    | 2680.0(41490) |
| UE Category  | LTE Rel. 15, DL: Category 16, UL: Category 13(SPR) / UL: Category 5  |  |                |               |                  |               |
| HPUE Power Class   | TDD 41 Power Class 3 :(Duty: 63.3%) Power Class 2 : (Duty:43.3%)   |  |                |               |                  |               |
| Modulations Supported in UL                                      | QPSK, 16QAM, 64QAM   |  |                |               |                  |               |
| LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3 | Yes  |  |                |               |                  |               |
| A-MPR disabled for SAR Testing.                                  | Yes  |  |                |               |                  |               |
| LTE Carrier Aggregation  | Up-Link CA   | This device support Up-Link Carrier aggregation.in US.   |                |               |                  |               |
|  | Down-Link CA   | This device supports Inter-band & Intra-band DL DL-link Carrier aggregations only. Detailed information of Down-Link CA are included in the Attachment 8 |                |               |                  |               |
| LTE Release information  | This device does not support full CA features on 3GPP Release 15. It supports carrieraggregation, downlink MIMO. All other uplink communications are identical to te release 8 specifications. The following LTE Release 15 Features are not supported: Relay, Hetnet, Enhanced eICI, MDH, cross-carrier Scheduling, Enhanced SC-FDMA. |  |                |               |                  |               |

| Item.              | Description       |   |
|--------------------|-------------------|---|
| Frequency Range    | NR Band n2 (PCS)  | 1 852.5 MHz ~ 1 907.5 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                               |
|                    | NR Band n71       | 665.5 MHz - 695.5 MHz                                   |
| Channel Bandwidths | NR Band n2 (PCS)  | 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, 40 MHz, 50 MHz, 60 MHz, 80 MHz, 90 MHz, 100 MHz |
|                    | NR Band n66(AWS)  | 5 MHz, 10 MHz, 15 MHz, 20 MHz                           |
|                    | NR Band n71       | 5 MHz, 10 MHz, 15 MHz, 20 MHz                           |

| Ch. No. & Freq. (MHz)                           | Low  | Mid  | High             |
|---|--|--|------------------|
| NR Band n2 (PCS)                                | 5 MHz  | 1852.5 (370500)                                    | 1907.5 (381500)  |
|   | 10 MHz   | 1855 (371000)                                      | 1905 (381000)    |
|   | 15 MHz   | 1857.5 (371500)                                    | 1902.5 (380500)  |
|   | 20 MHz   | 1860 (372000)                                      | 1900 (380000)    |
| NR Band n5 (Cell)                               | 5 MHz  | 826.5 (165300)                                     | 846.5 (169300)   |
|   | 10 MHz   | 829 (165800)                                       | 844 (168800)     |
|   | 15 MHz   | 831.5 (166300)                                     | 841.5 (168300)   |
|   | 20 MHz   | 834 (166800)                                       | 839 (167800)     |
| NR Band n71                                     | 5 MHz  | 665.5 (133100)                                     | 695.5 (139100)   |
|   | 10 MHz   | 668 (133600)                                       | 693 (138600)     |
|   | 15 MHz   | 670.5 (134100)                                     | 690.5 (138100)   |
|   | 20 MHz   | 673 (134600)                                       | 688 (137600)     |
| NR Band n66 (AWS)                               | 5 MHz  | 1712.5 (342500) 1734.1 (346820)                    | 1777.5 (355500)  |
|   | 10 MHz   | 1715 (343000) 1735 (347000)                        | 1775 (355000)    |
|   | 15 MHz   | 1717.5 (343500) 1735.8 (347160)                    | 1772.5 (354500)  |
|   | 20 MHz   | 1720 (344000) 1745 (349000)                        | 1770 (354000)    |
| LTE TDD Band 41                                 | 20 MHz   | 2506.02 (501204) 2549.49 (509898) 2592.99 (518598) | 2679.99 (535998) |
|   | 40 MHz   | 2516.01 (503202) 2567.34 (513468)                  | 2670 (534000)    |
|   | 50 MHz   | 2521.02 (504204) 2592.99 (518598)                  | 2664.99 (532998) |
|   | 60 MHz   | 2526 (505200) 2592.99 (518598)                     | 2659.98 (531996) |
|   | 80 MHz   | 2536.02 (507204)                                   | 2649.99 (529998) |
|   | 90 MHz   | 2541 (508200)                                      | 2644.98 (528996) |
|   | 100 MHz  | 2592.99 (518598)                                   |                  |
| NR Band n71/n5/n2/n66 SCS                       | 15 kHz   |  |                  |
| NR Band n41 SCS                                 | 30 kHz   |  |                  |
| A-MPR disabled for SAR Testing.                 | Yes  |  |                  |
| Modulations Supported in UL                     | DFT-s-OFDM: QPSK, 16QAM, 64QAM, 256QAM<br>CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM        |  |                  |
| EN-DC Carrier Aggregation Possible Combinations | The technical description includes all the possible carrier aggregation combinations |  |                  |
| LTE Anchor Bands for NR Band n71                | LTE Band 2/66  |  |                  |
| LTE Anchor Bands for NR Band n5                 | LTE Band 2/30/66   |  |                  |
| LTE Anchor Bands for NR Band n66                | LTE Band 5/12  |  |                  |
| LTE Anchor Bands for NR Band n2                 | LTE Band 5/12  |  |                  |
| LTE Anchor Bands for NR Band n41                | LTE Band 2/25/41/66  |  |                  |

### 4.5 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               | Rear | Front | Left | Right | Bottom | Top |
|--------------------|------|-------|------|-------|--------|-----|
| EVDO BC10 (\$90S)  | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| EVDO BC0 (\$22H)   | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| PCS EVDO           | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| GSM/GPRS/EDGE 850  | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| GSM/GPRS/EDGE 1900 | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| UMTS 850           | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| UMTS 1700          | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| UMTS 1900          | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 2 (PCS)   | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 4 (AWS)   | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 5 (Cell)  | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 7         | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 12        | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 13        | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 14        | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 25 (PCS)  | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 26 (Cell) | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 30        | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE TDD Band 38    | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE TDD Band 40    | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE TDD Band 41    | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| NR Band n2 (PCS)   | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| NR Band n5 (Cell)  | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 66 (AWS)  | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| LTE Band 71        | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| NR Band n41        | Yes  | Yes   | Yes  | No    | Yes    | No  |
| NR Band n66(AWS)   | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| NR Band n71        | Yes  | Yes   | Yes  | Yes   | Yes    | No  |
| 2.4 GHz WLAN       | Yes  | Yes   | Yes  | No    | No     | Yes |
| 5 GHz WLAN         | Yes  | Yes   | Yes  | No    | No     | Yes |
| Bluetooth          | Yes  | Yes   | Yes  | No    | No     | Yes |

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.

#### **4.6 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.

### 4.7 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 |
| 1xCDMA Voice + 2.4 GHz WiFi         | Yes  | Yes       | N/A     | Yes       |
| 1xCDMA Voice + 5 GHz WiFi           | Yes  | Yes       | N/A     | Yes       |
| 1xCDMA Voice + Bluetooth            | Yes# | Yes       | N/A     | Yes       |
| 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       |
| CDMA/EVDO + 2.4 GHz WiFi            | Yes  | Yes       | Yes     | Yes       |
| CDMA/EVDO + 5 GHz WiFi              | Yes  | Yes       | Yes     | Yes       |
| CDMA/EVDO + Bluetooth               | Yes  | Yes       | Yes#    | Yes       |
| CDMA/EVDO + Bluetooth               | Yes  | Yes       | Yes#    | Yes       |
| GPRS + 2.4 GHz WiFi                 | Yes  | Yes       | Yes     | Yes       |
| GPRS + 5 GHz WiFi                   | Yes  | Yes       | Yes     | Yes       |
| GPRS + 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       |
| LTE + 2.4 GHz WiFi                  | Yes  | Yes       | Yes     | Yes       |
| LTE + 5 GHz WiFi                    | Yes  | Yes       | Yes     | Yes       |
| LTE+ Bluetooth                      | Yes# | Yes       | Yes#    | Yes       |
| LTE + 5G NR                         | Yes  | Yes       | N/A     | Yes       |
| LTE +2.4 GHz WiFi + 5G NR           | Yes  | Yes       | Yes     | Yes       |
| LTE + 5 GHz WI-FI + 5G NR           | Yes  | Yes       | Yes     | Yes       |
| LTE+ Bluetooth + 5G NR              | Yes# | Yes       | Yes#    | Yes       |

1. Bluetooth cannot transmit simultaneously with WLAN.
2. The device does not support licensed bands simultaneously transmitting.
3. UMTS +WLAN scenario also represents the UMTS Voice/DATA + WLAN hotspot scenario.
4. VoIP is supported in GPRS/EDGE and EVDA RevA
5. The highest reported SAR for each exposure condition is used for SAR summation purpose.
6. Wi-Fi Hotspot is supported for 2.4 GHz/ UNII-3 of 5 GHz WLAN.
7. This device supports # Bluetooth tethering.
8. 5 GHz Wireless Router is only supported for the UNII-3 by SW, therefore U-NII-1,U-NII2A and U-NII2C were not evaluated for wireless router conditions.
9. LTE + 5G NR FR1 Scenarios are limited to LTE Anchor Bands, LTE Band 2/66/5/12/25/30/41.



## 4.8 SAR Test Considerations

### 4.8.1 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 802.11 ac with the following features:

- a) Up to 80 MHz Bandwidth only
- b) No aggregate channel configurations
- c) 1Tx Antenna output
- d) 256 QAM is supported
- e) TDWR channels are supported.
- f) Straddle channels are supported
- g) Band gap channels are supported

### 4.8.2 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 on the uplink for LTE Operations. Conducted powers for 64QAM uplink configurations were measured per section 5.1 of FCC KDB 941225 D05v02r05. SAR was not required for 64QAM since the highest maximum output power for 64QAM 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 KDB941225 D05v02r05.

This device supports LTE capabilities with overlapping transmission frequency ranges. When the supported frequency range of LTE Band falls completely within an LTE Band with a larger transmission frequency range, both LTE bands have the same target power or the band with the larger transmission frequency range has a higher target power and both LTE bands share the same transmission path and signal characteristics, SAR was only tested for the band with the larger transmission frequency range.

This device support both Power class 2(PC2) and Power Class 3 (PC3) for LTE band 41. Per May 2017 TCB workshop Notes, SAR test were performed with Power Class 3(given the specific UL/DL Limitations for Power Class 2). Additionally, SAR testing for the power class condition was evaluated for the highest configuration in Power class 3 for each test configuration to confirm he results were scalable linearly.

This device supports LTE Carrier Aggregation(CA) in Uplink for LTE 41 with two component carriers in the uplink. SAR measurements and conducted powers were evaluated per Fall 2017 TCBC Workshop notes (LTE Carrier aggregation).

Because the maximum output for UL CA of LTE 41 is  $\leq$  standalone LTE mode (without CA), SAR for LTE B41 Up link CA was performed at the highest standalone SAR configuration without CA and also UL CA SAR is not required for all required test channels, Because the reported SAR for UL CA configuration is  $> 1.2$  W/kg, .

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 DUT supports Power Class 2 and Power Class 3 operations for LTE Band 41. The Highest available duty cycle for Power Class 2 operations is 43.3% using UL-DL configuration 1. Per May TCB Workshop notes, all SAR tests were performed using Power Class 3. SAR with power class 2 at the available duty factor was additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions.

This DUT support EN-DC. So it shares the power between NR and LTE if  $P_{LTE} + P_{NR} > P_{CMAX}$  ( $P_{CMAX}$  means the Maximum power for NR band)

This DUT were performed SAR test separately for each worst case NR and LTE anchor.

When the 5GNR is operational the total output power across the 5GNR transmitter and the LTE anchor channel can never exceed the maximum power for the individual transmitters. When the transmitters are operating at a reduced power (e.g. when the proximity sensor is triggered) the maximum total power across the two transmitters is limited to the maximum power for the individual transmitters at the reduced power setting. The SAR value for the simultaneous transmission case of LTE + 5GNR is therefore covered by the highest SAR value across the LTE and 5GNR transmitters measured and reported for the stand-alone test condition.

NR implementation of n71, n5, n66, n2, and n41 is limited to EN-DC operations only, with LTE Band. 2/66/5/12/ acting as the anchor band.

Per FCC KDB 941225 D05 SAR for LTE Devices v02r05, SAR tests were performed separately for NR Bands and LTE Anchor Bands. Please see Section 11 for more details.

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.

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.

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

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.

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

The Reported SAR for WLAN and Bluetooth

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

FCC KDB 447498 D01v06 General RF Exposure Guidance introduces a new formula for calculating the SAR a Peak Location Separation Ratio(SPLSR) between pairs of simultaneously transmitting antennas:

$$SPLSR_i = (SAR_1 + SAR_2)^{1.5} / R_i$$

Where:

$SAR_1$  is the highest measured or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

$SAR_2$  is the highest measured or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

$R_i$  is the separation distance between the pair of simultaneous transmitting antennas, When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of  $[(X_1 - X_2)^2 + (Y_1 - Y_2)^2 + (Z_1 - Z_2)^2]$

In order for a pair of simultaneous transmitting antennas with the sum 1-g of SAR > 1.6 W/kg and with the sum 10-g of SAR > 4W/Kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / R_i \leq 0.04 \text{ for 1g SAR and } (SAR_1 + SAR_2)^{1.5} / R_i \leq 0.1 \text{ for 10g SAR.}$$

## 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 ( $\rho$ ). 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)*

$$SAR = \sigma E^2 / \rho$$

Where:

- $\sigma$  = conductivity of the tissue-simulant material (S/m)
- $\rho$  = mass density of the tissue-simulant material (kg/m<sup>3</sup>)
- $E$  = 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.

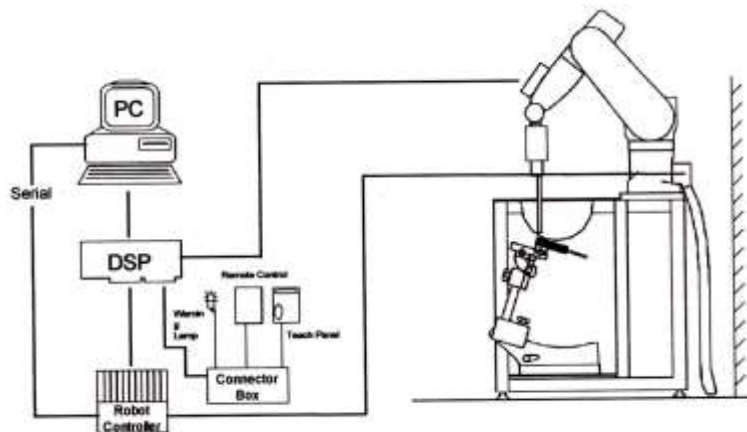


Figure 2. HCT SAR Lab. Test Measurement Set-up

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 DSP 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.

|  |                                    | ≤ 3 GHz   | > 3 GHz   |  |
|--|------------------------------------|---|---|--|
| Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface   |                                    | 5±1 mm  | $\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm    |  |
| Maximum probe angle from probe axis to phantom surface normal at the measurement location  |                                    | 30°±1°  | 20°±1°  |  |
| Maximum area scan Spatial resolution: $\Delta x_{Area}, \Delta y_{Area}$   |                                    | ≤ 2 GHz: ≤15 mm<br>2-3 GHz: ≤12 mm  | 3-4 GHz: ≤12 mm<br>4-6 GHz: ≤10 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 ≤ 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: $\Delta x_{zoom}, \Delta y_{zoom}$   |                                    | ≤ 2 GHz: ≤8mm<br>2-3 GHz: ≤5mm*   | 3-4 GHz: ≤5 mm*<br>4-6 GHz: ≤4 mm*                    |  |
| Maximum zoom scan Spatial resolution normal to phantom surface   | uniform grid: $\Delta z_{zoom}(n)$ | ≤ 5 mm  | 3-4 GHz: ≤4 mm<br>4-5 GHz: ≤3 mm<br>5-6 GHz: ≤2 mm    |  |
|  | graded grid                        | $\Delta z_{zoom}(1)$ : between 1 <sup>st</sup> two Points closest to phantom surface  | ≤ 4 mm  | 3-4 GHz: ≤3 mm<br>4-5 GHz: ≤2.5 mm<br>5-6 GHz: ≤2 mm |
|  |                                    | $\Delta z_{zoom}(n>1)$ : between subsequent Points  | ≤1.5 · $\Delta z_{zoom}(n-1)$                         |  |
| Minimum zoom scan volume   | x, y, z                            | ≥ 30 mm   | 3-4 GHz: ≥28 mm<br>4-5 GHz: ≥25 mm<br>5-6 GHz: ≥22 mm |  |
| <p>Note: <math>\delta</math> is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.</p> <p>* When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 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.</p> |                                    |   |   |  |



## 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 ear 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.

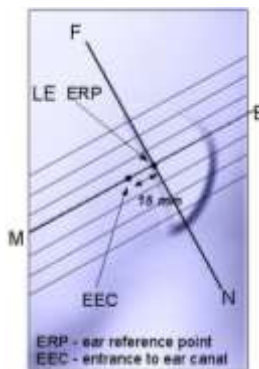


Figure 8-1  
Close-up side view of ERP

### 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



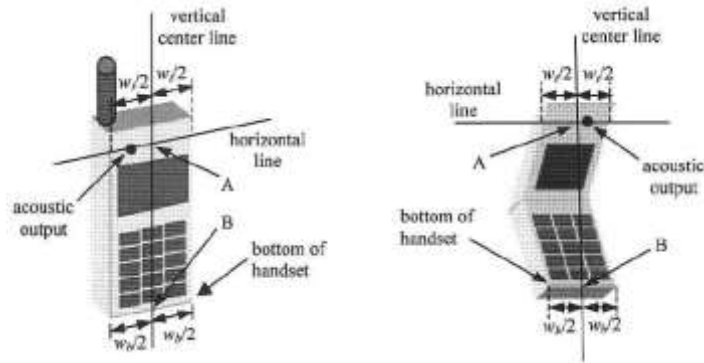


Figure 6-3. Handset vertical and horizontal reference lines

### 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.

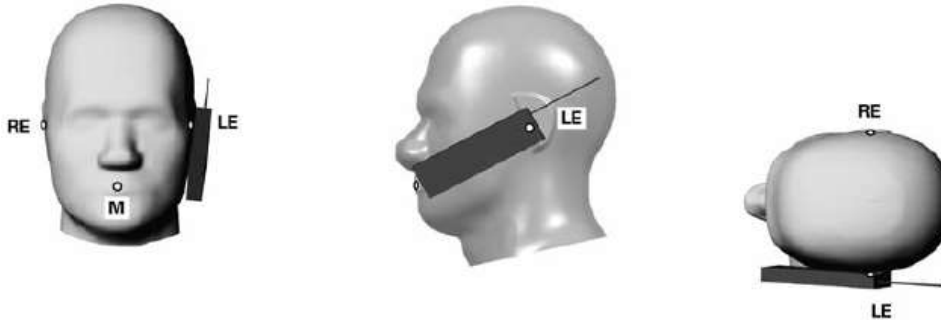


Figure 8.4 Cheek/ Touch position of the wireless device

### 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 $\geq$ 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  $\leq$ 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 Triggering Distance | §6.3 Coverage | §6.4 Tilt Angle | Worst case distance for Phablet SAR |
|-----------------------|--|----------|--------------------------|---------------|-----------------|-------------------------------------|
| ANT.1                 | WWAN<br>(GSM 1900/CDMA PCS/UMTS B2/B4<br>LTE B2/B4/B25/B66/n2/n66) | Rear     | 9                        | N/A           | N/A             | 8                                   |
|                       |  | Front    | 7                        | N/A           | N/A             | 6                                   |
|                       |  | Bottom   | 13                       | N/A           | N/A             | 12                                  |
| ANT.2                 | WWAN<br>LTE B7/B30/B38/B40/B41/B41(HUPE)                           | Rear     | 9                        | N/A           | N/A             | 8                                   |
|                       |  | Front    | 7                        | N/A           | N/A             | 6                                   |
|                       |  | Bottom   | 13                       | N/A           | N/A             | 12                                  |

### 8.10 Bluetooth tethering Configurations

Per May 2017 TCBC Workshop documents 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 mad 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 time-slot. 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.

### 10.3 SAR Measurement Conditions for CDMA2000

The following procedures were performed according to FCC KDB Publication 941225 D01v03r01 “3G SAR Measurement Procedures.”

#### 10.3.1 Output Power Verification

See 3GPP2 C.S0011/TIA-98-E as recommended by FCC KDB Publication 941225 D01v03r01 “3G SAR Measurement Procedures.” Maximum output power is verified on the High, Middle and Low channels according to procedures in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E. SO55 tests were measured with power control bits in the “All Up” condition.

1. If the mobile station (MS) supports Reverse TCH RC 1 and Forward TCH RC 1, set up a call using Fundamental Channel Test Mode 1 (RC=1/1) with 9600 bps data rate only.
2. Under RC1, C.S0011 Table 4.4.5.2-1, Table 8-1 parameters were applied.
3. If the MS supports the RC 3 Reverse FCH, RC3 Reverse SCH<sub>0</sub> and demodulation of RC 3,4, or 5, set up a call using Supplemental Channel Test Mode 3 (RC 3/3) with 9600 bps Fundamental Channel and 9600 bps SCH<sub>0</sub> data rate.
4. Under RC3, C.S0011 Table 4.4.5.2-2, Table 8-2 was applied.
5. FCHs were configured at full rate for maximum SAR with “All Up” power control bits.

**Parameters for Max. Power for RC1**

| Parameter                    | Units        | Value |
|------------------------------|--------------|-------|
| $I_{or}$                     | dBm/1.23 MHz | -104  |
| $\frac{Pilot E_c}{I_{or}}$   | dB           | -7    |
| $\frac{Traffic E_c}{I_{or}}$ | dB           | -7.4  |

**Parameters for Max. Power for RC3**

| Parameter                    | Units        | Value |
|------------------------------|--------------|-------|
| $I_{or}$                     | dBm/1.23 MHz | -86   |
| $\frac{Pilot E_c}{I_{or}}$   | dB           | -7    |
| $\frac{Traffic E_c}{I_{or}}$ | dB           | -7.4  |

#### 10.3.2 Head SAR Measurements

SAR for next to the ear head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55. The 3G SAR test reduction procedure is applied to RC1 with RC3 as the primary mode; otherwise, SAR is required for the channel with maximum measured output in RC1 using the head exposure configuration that results in the highest reported SAR in RC3.

Head SAR is additionally evaluated using EVDO Rev. A to support compliance for VoIP operations. See Section 8.4.5 for EVDO Rev. A configuration parameters

#### 10.3.3 Body-worn SAR Measurements

SAR for body-worn exposure configurations is measured in RC3 with the DUT configured to transmit at full rate on FCH with all other code channels disabled using TDSO / SO32. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCH<sub>n</sub>), with FCH only as the primary mode. Otherwise, SAR is required for multiple code channel configuration (FCH + SCH<sub>n</sub>), with FCH at full rate and SCH<sub>0</sub> enabled at 9600 bps, using the highest reported SAR configuration for FCH only. When multiple code channels are enabled, the transmitter output can shift by more than 0.5 dB and may lead to higher SAR drifts and SCH dropouts.

The 3G SAR test reduction procedure is applied to body-worn accessory SAR in RC1 with RC3 as the primary mode. Otherwise, SAR is required for RC1, with SO55 and full rate, using the highest reported SAR configuration for body-worn accessory exposure in RC3.



#### 10.3.4 Body-worn SAR Measurements for EVDO Devices

For handsets with EVDO capabilities, the 3G SAR test reduction procedure is applied to EVDO Rev. 0 with 1x RTT RC3 as the primary mode to determine body-worn accessory test requirements. Otherwise, body-worn accessory SAR is required for Rev. 0, at 153.6 kbps, using the highest reported SAR configuration for body-worn accessory exposure in RC3.

The 3G SAR test reduction procedure is applied to Rev. A, with Rev. 0 as the primary mode to determine body-worn accessory SAR test requirements. When SAR is not required for Rev. 0, the 3G SAR test reduction is applied with 1x RTT RC3 as the primary mode.

When SAR is required for EVDO Rev. A, SAR is measured with a Reverse Data Channel payload size of 4096 bits and a Termination Target of 16 slots defined for Subtype 2 Physical Layer configurations, using the highest reported SAR configuration for body-worn accessory exposure in Rev. 0 or 1x RTT RC3, as appropriate.

#### 10.3.4 Body SAR Measurements for EVDO Hotspot

Hotspot Body SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0. The 3G SAR test reduction procedure is applied to Rev. A, Subtype 2 Physical layer configuration, with Rev. 0 as the primary mode; otherwise, SAR is measured for Rev. A using the highest reported SAR configuration for body-worn accessory exposure in Rev. 0. The AT is tested with a Reverse Data Channel rate of 153.6 kbps in Subtype 0/1 Physical Layer configurations; and a Reverse Data Channel payload size of 4096 bits and Termination Target of 16 slots in Subtype 2 Physical Layer configurations.

For EVDO data devices that also support 1x RTT voice and/or data operations, the 3G SAR test reduction procedure is applied to 1x RTT RC3 and RC1 with EVDO Rev. 0 and Rev. A as the respective primary modes. Otherwise, the 'Body-Worn Accessory SAR' procedures in the '3GPP2 CDMA 2000 1x Handsets' section are applied.

#### 10.3.5 CDMA2000 1x Advanced

This device additionally supports 1x Advanced. Conducted powers are measured using SO75 with RC8 on the uplink and RC11 on the downlink per FCC KDB Publication 941225 D01v03r01. Smart blanking is disabled for all measurements. The EUT is configured with forward power control Mode 000 and reverse power control at 400 bps. Conducted powers are measured on an Agilent 8960 Series 10 Wireless Communications Test Set, Model E5515C using the CDMA2000 1x Advanced application, Option E1962B-410.

The 3G SAR test reduction procedure is applied to the 1x-Advanced transmission mode with 1x RTT RC3 as the primary mode. When SAR measurement is required, the 1x-Advanced power measurement configurations are used. The 1x Advanced SAR procedures are applied separately to head, body-worn accessory and other exposure conditions.



## 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 12.2 kbps 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 12.2 kbps 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

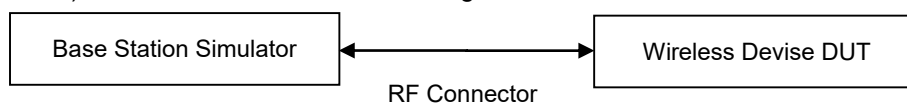
The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control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

### 10.4.5 DC-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 Uplink Carrier Aggregation SAR Measurement Procedure**

This device is specified with the same maximum output power and Tune-up tolerances for intra-band contiguous up-link LTE CA\_41C and the single carrier LTE 41. Both Uplink carrier aggregation and single carrier are operating with Power class 3.

This device support intra-band contiguous UL CA: LTE CA\_41C with a maximum of 20 MHz component carriers For intra-band contiguous carrier aggregation scenarios, 3GPP 36.101 Table 6.2.2A-1 specifies that aggregate maximum allowed output power is equivalent to the single carrier scenario.

This device does not have any operating restrictions, Power reduction or variations among the different LTE operating mode configurations on single carrier LTE 41 and intra-band contiguous up-link LTE CA\_41C operations.

The measured power results of single carrier LTE41 and intra-band contiguous up-link LTE CA\_41C satisfy Maximum output power and Tune-up tolerances.

Per Fall 2017 TCB Workshop Notes, the output Power with uplink CA active was measured for the configuration with the Highest Reported SAR with standalone condition.

Because the maximum output for UL CA of LTE 41 is  $\leq$  standalone LTE mode (without CA), SAR for LTE B41 Up link CA was performed at the highest standalone SAR configuration without CA and also UL CA SAR is not required for all required test channels, Because the reported SAR for UL CA configuration is  $> 1.2$  W/kg

#### **10.5.7 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<sub>s</sub>) 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

HPUE :  
 Calculated Duty Cycle for Uplink-Downlink Configuration 1:  
 Calculated Duty Cycle =  $5120 \times (1/(15000 \times 2048)) \times 2 + 0.004/0.01 = 43.33 \%$

### 10.5.6 The 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 W-CDMA Phone-1 LTE  
 <Fundamental Measurement> Output Main Continuous

Reference Signal not found UE Power : -21.5 dBm

Power Measurement (Meas. Count : 11/ 20)  
 Avg. Max. Min. Limit  
 TX Power \*\*\*\*\* dBm 20.3 to 25.7 dBm  
 Channel Power \*\*\*\*\* dBm

Modulation Analysis View (Meas. Count : 1/ 1)

Common Parameter  
 Test Parameter TX1 - Max. Power(QPSK/1 RB)  
 Call Processing On Scenario Normal  
 Frequency  
 Frame Structure TDD  
 Channel Bandwidth FDD Hz  
 UL Channel & Frequency TDD 20 CH = 2593.000000 MHz  
 DL Channel & Frequency 40620 CH = 2593.000000 MHz  
 Operation Band 41  
 Frequency Separation ( 0 )MHz  
 Level  
 Input Level 30.0 dBm

2018/01/08 11:01 Idle( Regist ) Phone-2 W-CDMA Phone-1 LTE  
 <Fundamental Measurement> Output Main Continuous

Reference Signal not found UE Power : -21.5 dBm

Power Measurement (Meas. Count : 11/ 20)  
 Avg. Max. Min. Limit  
 TX Power \*\*\*\*\* dBm 20.3 to 25.7 dBm  
 Channel Power \*\*\*\*\* dBm

Modulation Analysis View (Meas. Count : 1/ 1)

|                 |     |         |      |         |   |   |
|-----------------|-----|---------|------|---------|---|---|
| MCS Index (-)   | 5   | (QPSK)  | (5)  | (2216)  | - | - |
| MCS Index (5)   | 5   | (QPSK)  | (5)  | (1884)  | 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  
 PSS Power 0.0 dB  
 SSS Power 0.0 dB  
 PBCH Power 0.0 dB  
 PCFICH Power 0.0 dB  
 PHICH Power 0.0 dB

## 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 based 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

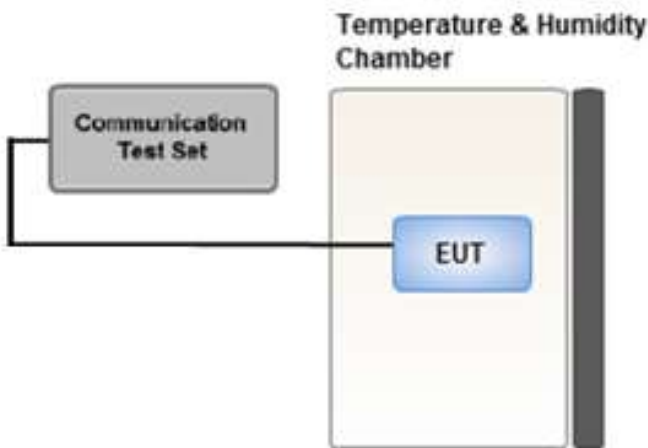
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base 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 CDMA

### 11.1.1 CDMA Maximum Conducted Output Power

| Band             | Ch.  | SO2   | SO2   | SO55  | SO55  | TDSO  | 1xEvDO | 1xEvDO | 1xEvDO | 1xEvDO |
|------------------|------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
|                  |      | RC1/1 | RC3/3 | RC1/1 | RC3/3 | SO32  | Rev.0  | Rev.0  | Rev.A  | Rev.A  |
|                  |      | (dBm) | (dBm) | (dBm) | (dBm) | RC3/3 | FTAP   | RTAP   | FETAP  | RETAP  |
| CDMA(BC0)        | 1013 | 23.66 | 23.75 | 23.71 | 23.74 | 23.86 | 23.42  | 23.64  | 22.54  | 23.29  |
|                  | 384  | 24.38 | 24.39 | 24.39 | 24.40 | 24.36 | 24.37  | 24.35  | 23.63  | 24.33  |
|                  | 777  | 23.52 | 23.57 | 23.52 | 23.55 | 23.73 | 23.37  | 23.51  | 22.53  | 23.40  |
| PCS(BC1)         | 25   | 25.14 | 25.16 | 25.16 | 25.16 | 25.02 | 24.98  | 25.04  | 24.17  | 25.18  |
|                  | 600  | 25.15 | 25.15 | 25.15 | 25.16 | 25.00 | 24.90  | 25.19  | 24.18  | 25.15  |
|                  | 1175 | 25.02 | 25.17 | 25.00 | 25.17 | 25.10 | 24.91  | 25.01  | 24.07  | 25.10  |
| Secondary (BC10) | 450  | 24.61 | 24.63 | 24.63 | 24.64 | 24.58 | 24.35  | 24.62  | 23.81  | 24.59  |
|                  | 560  | 24.62 | 24.64 | 24.64 | 24.66 | 24.57 | 24.38  | 24.63  | 23.70  | 24.55  |
|                  | 670  | 24.62 | 24.65 | 24.65 | 24.66 | 24.58 | 24.24  | 24.50  | 23.60  | 24.43  |

CDMA Average Conducted output powers (dBm)

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

| Band     | Ch.  | SO2   | SO2   | SO55  | SO55  | TDSO  | 1xEvDO | 1xEvDO | 1xEvDO | 1xEvDO |
|----------|------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
|          |      | RC1/1 | RC3/3 | RC1/1 | RC3/3 | SO32  | Rev.0  | Rev.0  | Rev.A  | Rev.A  |
|          |      | (dBm) | (dBm) | (dBm) | (dBm) | RC3/3 | FTAP   | RTAP   | FETAP  | RETAP  |
| PCS(BC1) | 25   | 18.07 | 18.05 | 17.04 | 18.04 | 17.96 | 18.40  | 18.11  | 17.29  | 18.09  |
|          | 600  | 18.04 | 18.02 | 18.03 | 18.02 | 17.89 | 18.31  | 18.05  | 17.17  | 18.04  |
|          | 1175 | 18.11 | 18.10 | 18.12 | 18.09 | 18.01 | 18.32  | 18.08  | 17.27  | 18.00  |

CDMA Average Conducted output powers (dBm)

### 11.2.3 CDMA Reduced Conducted Output Power (Grip Sensor on)

| Band     | Ch.  | SO2   | SO2   | SO55  | SO55  | TDSO  | 1xEvDO | 1xEvDO | 1xEvDO | 1xEvDO |
|----------|------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
|          |      | RC1/1 | RC3/3 | RC1/1 | RC3/3 | SO32  | Rev.0  | Rev.0  | Rev.A  | Rev.A  |
|          |      | (dBm) | (dBm) | (dBm) | (dBm) | RC3/3 | FTAP   | RTAP   | FETAP  | RETAP  |
| PCS(BC1) | 25   | 21.20 | 21.12 | 21.18 | 21.11 | 20.98 | 21.35  | 21.19  | 20.40  | 21.12  |
|          | 600  | 21.16 | 21.08 | 21.15 | 21.09 | 20.93 | 21.36  | 21.13  | 20.21  | 21.09  |
|          | 1175 | 21.22 | 21.18 | 21.23 | 21.17 | 21.01 | 21.14  | 21.11  | 20.34  | 21.02  |

CDMA Average Conducted output powers (dBm)

### 11.2.3 CDMA Reduced Conducted Output Power (Ear jack activated)

| Band     | Ch.  | SO2   | SO2   | SO55  | SO55  | TDSO  | 1xEvDO | 1xEvDO | 1xEvDO | 1xEvDO |
|----------|------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
|          |      | RC1/1 | RC3/3 | RC1/1 | RC3/3 | SO32  | Rev.0  | Rev.0  | Rev.A  | Rev.A  |
|          |      | (dBm) | (dBm) | (dBm) | (dBm) | RC3/3 | FTAP   | RTAP   | FETAP  | RETAP  |
| PCS(BC1) | 25   | 22.02 | 22.02 | 22.04 | 22.02 | 22.01 | 22.00  | 21.97  | 21.16  | 21.94  |
|          | 600  | 21.97 | 21.96 | 21.99 | 22.00 | 21.99 | 21.96  | 21.95  | 21.14  | 21.94  |
|          | 1175 | 21.99 | 22.00 | 22.02 | 21.98 | 21.98 | 21.98  | 21.95  | 21.20  | 21.92  |

CDMA Average Conducted output powers (dBm)

## 11.2 GSM

### 11.2.1 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     | 33.5  | 33.5                       | 31.0           | 30.5           | 29.0           | 28.0            | 26.0           | 24.0           | 23.0           |       |
| Nominal     | 32.5  | 32.5                       | 30.0           | 29.5           | 28.0           | 27.0            | 25.0           | 23.0           | 22.0           |       |
| GSM 850     | 32.56 | 32.56                      | 32.57          | 30.72          | 29.00          | 27.63           | 26.90          | 24.91          | 23.51          | 22.35 |
|             | 32.42 | 32.42                      | 32.42          | 30.61          | 28.88          | 27.58           | 26.82          | 24.84          | 23.52          | 22.03 |
|             | 32.55 | 32.55                      | 32.56          | 30.54          | 29.06          | 27.50           | 26.75          | 25.03          | 23.42          | 22.25 |
| Maximum     | 31.5  | 31.5                       | 29.0           | 27.5           | 26.0           | 26.5            | 24.5           | 23.5           | 22.0           |       |
| Nominal     | 30.5  | 30.5                       | 28.0           | 26.5           | 25.0           | 25.5            | 23.5           | 22.5           | 21.0           |       |
| GSM 1900    | 30.40 | 30.40                      | 30.40          | 27.50          | 26.03          | 24.54           | 25.81          | 23.75          | 22.65          | 21.41 |
|             | 30.34 | 30.34                      | 30.35          | 27.61          | 26.15          | 24.67           | 25.92          | 23.84          | 22.71          | 21.56 |
|             | 30.52 | 30.52                      | 30.53          | 27.83          | 26.14          | 24.53           | 26.11          | 24.02          | 22.93          | 21.74 |

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     | 24.47 | 24.47                      | 24.98          | 26.24          | 25.99          | 18.97           | 19.98          | 19.74          | 19.99          |       |
| Nominal     | 23.47 | 23.47                      | 23.98          | 25.24          | 24.99          | 17.97           | 18.98          | 18.74          | 18.99          |       |
| GSM 850     | 128   | 23.53                      | 23.54          | 24.70          | 24.74          | 24.62           | 17.87          | 18.89          | 19.25          | 19.34 |
|             | 190   | 23.39                      | 23.39          | 24.59          | 24.62          | 24.57           | 17.79          | 18.82          | 19.26          | 19.02 |
|             | 251   | 23.52                      | 23.53          | 24.52          | 24.80          | 24.49           | 17.72          | 19.01          | 19.16          | 19.24 |
| Maximum     | 22.47 | 22.47                      | 22.98          | 23.24          | 22.99          | 17.47           | 18.48          | 19.24          | 18.99          |       |
| Nominal     | 21.47 | 21.47                      | 21.98          | 22.24          | 21.99          | 16.47           | 17.48          | 18.24          | 17.99          |       |
| GSM 1900    | 512   | 21.37                      | 21.37          | 21.48          | 21.77          | 21.53           | 16.78          | 17.73          | 18.39          | 18.40 |
|             | 661   | 21.31                      | 21.32          | 21.59          | 21.89          | 21.66           | 16.89          | 17.82          | 18.45          | 18.55 |
|             | 810   | 21.49                      | 21.50          | 21.81          | 21.88          | 21.52           | 17.08          | 18.00          | 18.67          | 18.73 |

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: Head SAR , Body worn SAR  
 GPRS/EDGE Multi-slots 12 : Hotspot SAR with GPRS/EDGE  
 Multi-slot Class 12 with CS 1 (GMSK)



**11.2.2 GSM Reduced Conducted Output Power (Hotspot mode activated)**

| 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     |     | 28.5  | 28.5                       | 26.0           | 24.5           | 23.0           | 25.5            | 24.0           | 22.5           | 21.5           |
| Nominal     |     | 27.5  | 27.5                       | 25.0           | 23.5           | 22.0           | 24.5            | 23.0           | 21.5           | 20.5           |
| GSM 1900    | 512 | 27.25 | 27.25                      | 24.68          | 23.14          | 21.56          | 24.88           | 22.81          | 21.60          | 20.41          |
|             | 661 | 27.43 | 27.43                      | 24.84          | 23.04          | 21.66          | 24.98           | 22.90          | 21.71          | 20.52          |
|             | 810 | 27.69 | 27.69                      | 25.10          | 23.30          | 21.68          | 25.14           | 23.20          | 21.94          | 20.82          |

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     |     | 19.47 | 19.47                      | 19.98          | 20.24          | 19.99          | 16.47           | 17.98          | 18.24          | 18.49          |
| Nominal     |     | 18.47 | 18.47                      | 18.98          | 19.24          | 18.99          | 15.47           | 16.98          | 17.24          | 17.49          |
| GSM 1900    | 512 | 18.22 | 18.22                      | 18.66          | 18.88          | 18.55          | 15.85           | 16.79          | 17.34          | 17.40          |
|             | 661 | 18.40 | 18.40                      | 18.82          | 18.78          | 18.65          | 15.95           | 16.88          | 17.45          | 17.51          |
|             | 810 | 18.66 | 18.66                      | 19.08          | 19.04          | 18.67          | 16.11           | 17.18          | 17.68          | 17.81          |

GSM Conducted output powers (Frame-Average)

**Note:**

Time slot average factor is as follows:

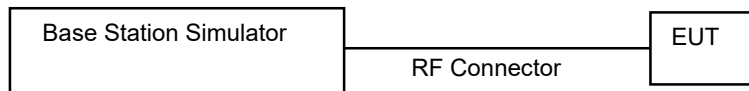
- 1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
- 2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
- 3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
- 4 Tx slot = 3.01 dB, Frame-Average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



**11.2.3 GSM Reduced Conducted Output Power (Grip back Activated)**

| 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     |     | 28.5  | 28.5                       | 26.0           | 24.5           | 23.0           | 25.5            | 24.0           | 22.5           | 21.5           |
| Nominal     |     | 27.5  | 27.5                       | 25.0           | 23.5           | 22.0           | 24.5            | 23.0           | 21.5           | 20.5           |
| GSM 1900    | 512 | 27.20 | 27.21                      | 24.67          | 22.91          | 21.60          | 24.77           | 23.00          | 21.62          | 20.22          |
|             | 661 | 27.38 | 27.39                      | 24.84          | 23.10          | 21.79          | 25.12           | 23.09          | 21.74          | 20.59          |
|             | 810 | 27.64 | 27.65                      | 25.11          | 23.34          | 21.78          | 25.09           | 23.30          | 21.96          | 20.84          |

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     |     | 19.47 | 19.47                      | 19.98          | 20.24          | 19.99          | 16.47           | 17.98          | 18.24          | 18.49          |
| Nominal     |     | 18.47 | 18.47                      | 18.98          | 19.24          | 18.99          | 15.47           | 16.98          | 17.24          | 17.49          |
| GSM 1900    | 512 | 27.20 | 27.21                      | 24.67          | 22.91          | 21.60          | 24.77           | 23.00          | 21.62          | 20.22          |
|             | 661 | 27.38 | 27.39                      | 24.84          | 23.10          | 21.79          | 25.12           | 23.09          | 21.74          | 20.59          |
|             | 810 | 27.64 | 27.65                      | 25.11          | 23.34          | 21.78          | 25.09           | 23.30          | 21.96          | 20.84          |

GSM Conducted output powers (Frame-Average)

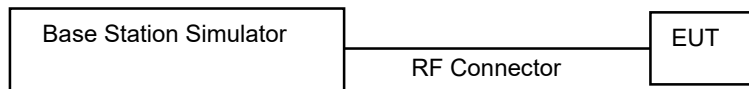
**Note:**

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)



**11.2.4 GSM Reduced Conducted Output Power (Ear jack Activated)**

| 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     |     | 32.0  | 32.0                       | 29.5           | 28.5           | 27.0           | 26.5            | 24.5           | 23.5           | 22.0           |
| Nominal     |     | 31.0  | 31.0                       | 28.5           | 27.5           | 26.0           | 25.5            | 23.5           | 22.5           | 21.0           |
| GSM 850     | 128 | 31.00 | 31.01                      | 28.56          | 26.94          | 26.14          | 25.90           | 24.03          | 22.66          | 21.30          |
|             | 190 | 30.93 | 30.94                      | 28.47          | 26.87          | 26.06          | 25.89           | 23.84          | 22.41          | 21.23          |
|             | 251 | 30.83 | 30.83                      | 28.38          | 27.04          | 25.97          | 25.83           | 23.78          | 22.56          | 21.18          |
| Maximum     |     | 30.5  | 30.5                       | 28.0           | 26.5           | 25.0           | 27.5            | 26.0           | 24.5           | 23.5           |
| Nominal     |     | 29.5  | 29.5                       | 27.0           | 25.5           | 24.0           | 26.5            | 25.0           | 23.5           | 22.5           |
| GSM 1900    | 512 | 29.46 | 29.46                      | 26.84          | 25.44          | 23.55          | 27.11           | 25.07          | 23.71          | 22.61          |
|             | 661 | 29.52 | 29.52                      | 26.77          | 25.60          | 23.73          | 27.10           | 25.08          | 23.76          | 22.68          |
|             | 810 | 29.45 | 29.45                      | 26.80          | 25.30          | 23.45          | 26.82           | 25.01          | 23.66          | 22.60          |

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     |     | 22.97 | 22.97                      | 23.48          | 24.24          | 23.99          | 17.47           | 18.48          | 19.24          | 18.99          |
| Nominal     |     | 21.97 | 21.97                      | 22.48          | 23.24          | 22.99          | 16.47           | 17.48          | 18.24          | 17.99          |
| GSM 850     | 128 | 21.97 | 21.98                      | 22.54          | 22.68          | 23.13          | 16.87           | 18.01          | 18.40          | 18.29          |
|             | 190 | 21.90 | 21.91                      | 22.45          | 22.61          | 23.05          | 16.86           | 17.82          | 18.15          | 18.22          |
|             | 251 | 21.80 | 21.80                      | 22.36          | 22.78          | 22.96          | 16.80           | 17.76          | 18.30          | 18.17          |
| Maximum     |     | 21.47 | 21.47                      | 21.98          | 22.24          | 21.99          | 18.47           | 19.98          | 20.24          | 20.49          |
| Nominal     |     | 20.47 | 20.47                      | 20.98          | 21.24          | 20.99          | 17.47           | 18.98          | 19.24          | 19.49          |
| GSM 1900    | 512 | 20.43 | 20.43                      | 20.82          | 21.18          | 20.54          | 18.08           | 19.05          | 19.45          | 19.60          |
|             | 661 | 20.49 | 20.49                      | 20.75          | 21.34          | 20.72          | 18.07           | 19.06          | 19.50          | 19.67          |
|             | 810 | 20.42 | 20.42                      | 20.78          | 21.04          | 20.44          | 17.79           | 18.99          | 19.40          | 19.59          |

GSM Conducted output powers (Frame-Average)

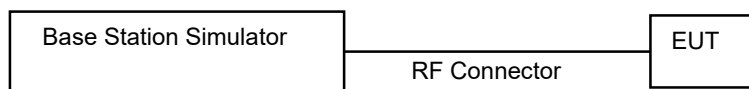
**Note:**

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)



### 11.3 UMTS

#### HSPA+

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

#### 11.3.1 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       | UL 4132<br>DL 4357 | UL 4183<br>DL 4408 | UL 4233<br>DL 4458 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 22.58              | 22.56              | 22.56              | -        |
| 99                   |          | 12.2 kbps AMR | 22.60              | 22.56              | 22.56              | -        |
| 5                    | HSDPA    | Subtest 1     | 22.43              | 22.41              | 22.43              | 0        |
| 5                    |          | Subtest 2     | 22.00              | 21.99              | 21.99              | 0        |
| 5                    |          | Subtest 3     | 21.47              | 21.51              | 21.51              | 0.5      |
| 5                    |          | Subtest 4     | 21.48              | 21.50              | 21.51              | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 21.48              | 21.47              | 21.52              | 0        |
| 6                    |          | Subtest 2     | 19.91              | 19.92              | 19.95              | 2        |
| 6                    |          | Subtest 3     | 19.95              | 19.94              | 19.97              | 1        |
| 6                    |          | Subtest 4     | 19.92              | 19.92              | 19.94              | 2        |
| 6                    |          | Subtest 5     | 21.48              | 21.49              | 21.52              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 22.27              | 22.28              | 22.15              | 0        |
| 8                    |          | Subtest 2     | 22.20              | 22.20              | 22.24              | 0        |
| 8                    |          | Subtest 3     | 21.29              | 21.29              | 21.25              | 0.5      |
| 8                    |          | Subtest 4     | 21.35              | 21.33              | 21.21              | 0.5      |

UMTS Average Conducted output powers

##### UMTS Band 4 Maximum Conducted Output Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 5 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 1312<br>DL 1537 | UL 1412<br>DL 1637 | UL 1513<br>DL 1738 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 22.93              | 22.91              | 23.13              | -        |
| 99                   |          | 12.2 kbps AMR | 22.92              | 22.92              | 23.12              | -        |
| 5                    | HSDPA    | Subtest 1     | 22.85              | 22.86              | 23.08              | 0        |
| 5                    |          | Subtest 2     | 21.88              | 21.89              | 22.14              | 0        |
| 5                    |          | Subtest 3     | 21.89              | 21.91              | 22.13              | 0.5      |
| 5                    |          | Subtest 4     | 21.88              | 21.89              | 22.10              | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 20.64              | 20.68              | 20.87              | 0        |
| 6                    |          | Subtest 2     | 18.84              | 18.96              | 19.26              | 2        |
| 6                    |          | Subtest 3     | 19.62              | 19.76              | 20.03              | 1        |
| 6                    |          | Subtest 4     | 18.77              | 18.89              | 19.22              | 2        |
| 6                    |          | Subtest 5     | 20.57              | 20.62              | 20.88              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 22.87              | 22.98              | 23.04              | 0        |
| 8                    |          | Subtest 2     | 22.88              | 22.02              | 23.07              | 0        |
| 8                    |          | Subtest 3     | 21.87              | 21.99              | 22.12              | 0.5      |
| 8                    |          | Subtest 4     | 21.82              | 21.95              | 22.17              | 0.5      |

UMTS Average Conducted output powers

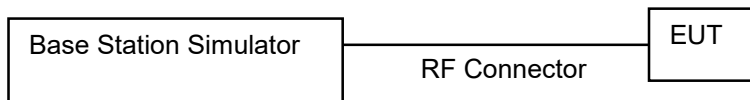
UMTS Band 2 Maximum Conducted Output Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 2 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 9262<br>DL 9662 | UL 9400<br>DL 9800 | UL 9538<br>DL 9938 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 22.56              | 22.64              | 22.69              | -        |
| 99                   |          | 12.2 kbps AMR | 22.54              | 22.64              | 22.68              | -        |
| 5                    | HSDPA    | Subtest 1     | 22.09              | 22.13              | 22.18              | 0        |
| 5                    |          | Subtest 2     | 21.65              | 21.95              | 21.81              | 0        |
| 5                    |          | Subtest 3     | 21.20              | 21.23              | 21.25              | 0.5      |
| 5                    |          | Subtest 4     | 20.69              | 20.74              | 20.81              | 0.5      |
| 6                    | HSUPA    | Subtest 1     | 20.34              | 20.30              | 20.40              | 0        |
| 6                    |          | Subtest 2     | 18.81              | 18.57              | 18.83              | 2        |
| 6                    |          | Subtest 3     | 19.47              | 19.44              | 19.42              | 1        |
| 6                    |          | Subtest 4     | 18.68              | 18.45              | 18.70              | 2        |
| 6                    |          | Subtest 5     | 20.28              | 20.31              | 20.40              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 22.76              | 22.68              | 22.81              | 0        |
| 8                    |          | Subtest 2     | 22.26              | 22.18              | 22.32              | 0        |
| 8                    |          | Subtest 3     | 21.19              | 21.16              | 21.35              | 0.5      |
| 8                    |          | Subtest 4     | 21.24              | 21.12              | 21.32              | 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.



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

When Power reduction is applied , MPR set to 0

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

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 2 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 1312<br>DL 1537 | UL 1412<br>DL 1637 | UL 1513<br>DL 1738 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 19.90              | 19.87              | 20.07              | -        |
| 99                   |          | 12.2 kbps AMR | 19.86              | 19.84              | 20.04              |          |
| 5                    | HSDPA    | Subtest 1     | 19.87              | 19.92              | 20.17              | 0        |
| 5                    |          | Subtest 2     | 19.88              | 19.94              | 20.19              | 0        |
| 5                    |          | Subtest 3     | 19.93              | 19.99              | 20.21              | 0        |
| 5                    |          | Subtest 4     | 19.89              | 19.96              | 20.20              | 0        |
| 6                    | HSUPA    | Subtest 1     | 18.91              | 19.05              | 19.30              | 0        |
| 6                    |          | Subtest 2     | 18.63              | 18.74              | 19.07              | 0        |
| 6                    |          | Subtest 3     | 18.99              | 19.13              | 19.37              | 0        |
| 6                    |          | Subtest 4     | 18.65              | 18.74              | 19.08              | 0        |
| 6                    |          | Subtest 5     | 18.99              | 19.09              | 19.36              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 19.73              | 19.95              | 19.85              | 0        |
| 8                    |          | Subtest 2     | 19.75              | 19.99              | 19.90              | 0        |
| 8                    |          | Subtest 3     | 19.73              | 19.98              | 19.88              | 0        |
| 8                    |          | Subtest 4     | 19.76              | 20.01              | 19.92              | 0        |

UMTS Average Conducted output powers

When Power reduction is applied , MPR set to 0

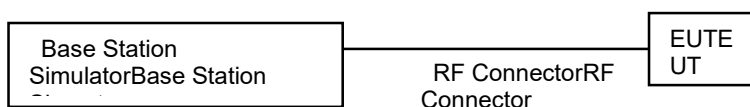
#### UMTS Band 2 Hotspot Back-off Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 2 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 9262<br>DL 9662 | UL 9400<br>DL 9800 | UL 9538<br>DL 9938 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 17.58              | 17.64              | 17.61              | -        |
| 99                   |          | 12.2 kbps AMR | 17.55              | 17.64              | 17.60              |          |
| 5                    | HSDPA    | Subtest 1     | 18.26              | 18.00              | 18.32              | 0        |
| 5                    |          | Subtest 2     | 18.25              | 18.00              | 18.30              | 0        |
| 5                    |          | Subtest 3     | 18.26              | 17.99              | 18.31              | 0        |
| 5                    |          | Subtest 4     | 18.24              | 17.95              | 18.28              | 0        |
| 6                    | HSUPA    | Subtest 1     | 17.79              | 17.55              | 17.86              | 0        |
| 6                    |          | Subtest 2     | 17.71              | 17.45              | 17.80              | 0        |
| 6                    |          | Subtest 3     | 17.66              | 17.41              | 17.77              | 0        |
| 6                    |          | Subtest 4     | 17.63              | 17.33              | 17.70              | 0        |
| 6                    |          | Subtest 5     | 17.72              | 17.44              | 17.80              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 18.30              | 17.93              | 17.74              | 0        |
| 8                    |          | Subtest 2     | 18.31              | 17.92              | 17.73              | 0        |
| 8                    |          | Subtest 3     | 18.26              | 17.84              | 17.67              | 0        |
| 8                    |          | Subtest 4     | 18.30              | 17.90              | 17.70              | 0        |

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.





**11.3.3 UMTS Reduced Conducted Output Power – (Grip back Activated/ Ear jack Activated)**

When Power reduction is applied , MPR set to 0

UMTS Band 4 Grip Back-off Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 2 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 1312<br>DL 1537 | UL 1412<br>DL 1637 | UL 1513<br>DL 1738 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 19.86              | 19.83              | 20.04              | -        |
| 99                   |          | 12.2 kbps AMR | 19.86              | 19.84              | 20.04              |          |
| 5                    | HSDPA    | Subtest 1     | 19.85              | 19.91              | 20.18              | 0        |
| 5                    |          | Subtest 2     | 19.82              | 19.94              | 20.19              | 0        |
| 5                    |          | Subtest 3     | 19.89              | 19.96              | 20.20              | 0        |
| 5                    |          | Subtest 4     | 19.88              | 19.95              | 20.23              | 0        |
| 6                    | HSUPA    | Subtest 1     | 18.98              | 19.09              | 19.90              | 0        |
| 6                    |          | Subtest 2     | 18.66              | 18.76              | 19.09              | 0        |
| 6                    |          | Subtest 3     | 18.97              | 19.11              | 19.33              | 0        |
| 6                    |          | Subtest 4     | 18.60              | 18.72              | 19.06              | 0        |
| 6                    |          | Subtest 5     | 18.94              | 19.06              | 19.34              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 19.81              | 19.94              | 19.87              | 0        |
| 8                    |          | Subtest 2     | 19.85              | 19.99              | 19.89              | 0        |
| 8                    |          | Subtest 3     | 19.82              | 19.97              | 19.90              | 0        |
| 8                    |          | Subtest 4     | 19.86              | 20.02              | 19.93              | 0        |

UMTS Average Conducted output powers

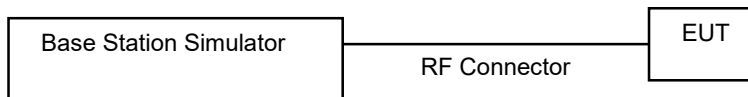
**11.3.3 UMTS Reduced Conducted Output Power – (Grip back Activated)**

When Power reduction is applied , MPR set to 0

UMTS Band 2 Grip back-off Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 2 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 9262<br>DL 9662 | UL 9400<br>DL 9800 | UL 9538<br>DL 9938 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 19.65              | 19.77              | 19.83              | -        |
| 99                   |          | 12.2 kbps AMR | 19.64              | 19.73              | 19.81              |          |
| 5                    | HSDPA    | Subtest 1     | 19.64              | 19.72              | 19.85              | 0        |
| 5                    |          | Subtest 2     | 19.67              | 19.70              | 19.82              | 0        |
| 5                    |          | Subtest 3     | 19.64              | 19.76              | 19.86              | 0        |
| 5                    |          | Subtest 4     | 19.65              | 19.75              | 19.84              | 0        |
| 6                    | HSUPA    | Subtest 1     | 18.82              | 18.80              | 18.87              | 0        |
| 6                    |          | Subtest 2     | 18.67              | 18.40              | 18.71              | 0        |
| 6                    |          | Subtest 3     | 18.81              | 18.79              | 18.83              | 0        |
| 6                    |          | Subtest 4     | 18.61              | 18.30              | 18.61              | 0        |
| 6                    |          | Subtest 5     | 18.82              | 18.81              | 18.83              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 19.28              | 19.41              | 19.60              | 0        |
| 8                    |          | Subtest 2     | 19.27              | 19.39              | 19.58              | 0        |
| 8                    |          | Subtest 3     | 19.23              | 19.36              | 19.52              | 0        |
| 8                    |          | Subtest 4     | 19.28              | 19.39              | 19.56              | 0        |

- ◆ 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.



**11.3.3 UMTS Reduced Conducted Output Power – (Ear jack Activated)**

When Power reduction is applied , MPR set to 0

UMTS Band 2 Grip back-off Power

| 3GPP Release Version | Mode     | 3GPP 34.121   | UMTS Band 2 [dBm]  |                    |                    | 3GPP MPR |
|----------------------|----------|---------------|--------------------|--------------------|--------------------|----------|
|                      |          | Subtest       | UL 9262<br>DL 9662 | UL 9400<br>DL 9800 | UL 9538<br>DL 9938 |          |
| 99                   | UMTS     | 12.2 kbps RMC | 19.67              | 19.80              | 19.90              | -        |
| 99                   |          | 12.2 kbps AMR | 21.65              | 21.82              | 21.88              |          |
| 5                    | HSDPA    | Subtest 1     | 19.54              | 19.64              | 19.87              | 0        |
| 5                    |          | Subtest 2     | 19.53              | 19.68              | 19.82              | 0        |
| 5                    |          | Subtest 3     | 19.53              | 19.68              | 19.81              | 0        |
| 5                    |          | Subtest 4     | 19.51              | 19.66              | 19.82              | 0        |
| 6                    | HSUPA    | Subtest 1     | 18.62              | 18.72              | 18.80              | 0        |
| 6                    |          | Subtest 2     | 18.45              | 18.30              | 18.60              | 0        |
| 6                    |          | Subtest 3     | 18.63              | 18.71              | 18.80              | 0        |
| 6                    |          | Subtest 4     | 18.37              | 18.21              | 18.54              | 0        |
| 6                    |          | Subtest 5     | 18.65              | 18.72              | 18.80              | 0        |
| 8                    | DC-HSDPA | Subtest 1     | 19.54              | 19.68              | 19.65              | 0        |
| 8                    |          | Subtest 2     | 19.55              | 19.65              | 19.62              | 0        |
| 8                    |          | Subtest 3     | 19.50              | 19.59              | 19.56              | 0        |
| 8                    |          | Subtest 4     | 19.54              | 19.62              | 19.59              | 0        |

## 11.4 LTE Maximum Output Power

LTE B2/4/5/7/12/13/14/25/26/30/40 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.

### 11.4.1 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] |
|-----------|------------|---------|-----------|--------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18607 Ch.<br>1850.7 MHz  | 18900 Ch.<br>1880 MHz | 19193 Ch.<br>1909.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 23.03                    | 23.56                 | 23.16                   | 0                         | 0        |
|           |            | 1       | 3         | 23.04                    | 23.60                 | 23.19                   | 0                         | 0        |
|           |            | 1       | 5         | 23.05                    | 23.59                 | 23.16                   | 0                         | 0        |
|           |            | 3       | 0         | 23.01                    | 23.54                 | 23.09                   | 0                         | 0        |
|           |            | 3       | 1         | 23.17                    | 23.69                 | 23.25                   | 0                         | 0        |
|           |            | 3       | 3         | 23.06                    | 23.63                 | 23.20                   | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 22.07                    | 22.57                 | 22.17                   | 0-1                       | 1        |
|           |            | 1       | 0         | 22.33                    | 22.75                 | 22.42                   | 0-1                       | 1        |
|           |            | 1       | 3         | 22.17                    | 22.69                 | 22.32                   | 0-1                       | 1        |
|           |            | 1       | 5         | 22.37                    | 22.83                 | 22.40                   | 0-1                       | 1        |
|           |            | 3       | 0         | 22.08                    | 22.60                 | 22.19                   | 0-1                       | 1        |
|           |            | 3       | 1         | 22.23                    | 22.71                 | 22.23                   | 0-1                       | 1        |
|           | 64QAM      | 3       | 3         | 22.17                    | 22.68                 | 22.27                   | 0-1                       | 1        |
|           |            | 6       | 0         | 21.21                    | 21.70                 | 21.29                   | 0-2                       | 2        |
|           |            | 1       | 0         | 21.31                    | 21.61                 | 21.46                   | 0-2                       | 2        |
|           |            | 1       | 3         | 21.28                    | 21.58                 | 21.30                   | 0-2                       | 2        |
|           |            | 1       | 5         | 21.35                    | 21.54                 | 21.38                   | 0-2                       | 2        |
|           |            | 3       | 0         | 21.27                    | 21.48                 | 21.23                   | 0-2                       | 2        |
|           |            | 3       | 1         | 21.34                    | 21.49                 | 21.41                   | 0-2                       | 2        |
|           |            | 3       | 3         | 21.20                    | 21.52                 | 21.26                   | 0-2                       | 2        |
|           |            | 6       | 0         | 20.31                    | 20.66                 | 20.41                   | 0-3                       | 3        |

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.<br>1851.5 MHz  | 18900 Ch.<br>1880 MHz | 19185 Ch.<br>1908.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 23.05                    | 23.56                 | 23.14                   | 0                         | 0        |
|           |            | 1       | 7         | 23.03                    | 23.58                 | 23.15                   | 0                         | 0        |
|           |            | 1       | 14        | 23.07                    | 23.59                 | 23.17                   | 0                         | 0        |
|           |            | 8       | 0         | 22.13                    | 22.67                 | 22.30                   | 0-1                       | 1        |
|           |            | 8       | 3         | 22.15                    | 22.67                 | 22.25                   | 0-1                       | 1        |
|           |            | 8       | 7         | 22.15                    | 22.67                 | 22.30                   | 0-1                       | 1        |
|           |            | 15      | 0         | 22.19                    | 22.72                 | 22.28                   | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.30                    | 22.81                 | 22.41                   | 0-1                       | 1        |
|           |            | 1       | 7         | 22.39                    | 22.84                 | 22.42                   | 0-1                       | 1        |
|           |            | 1       | 14        | 22.28                    | 22.87                 | 22.47                   | 0-1                       | 1        |
|           |            | 8       | 0         | 21.19                    | 21.67                 | 21.32                   | 0-2                       | 2        |
|           |            | 8       | 3         | 21.16                    | 21.65                 | 21.28                   | 0-2                       | 2        |
|           |            | 8       | 7         | 21.22                    | 21.71                 | 21.32                   | 0-2                       | 2        |
|           |            | 15      | 0         | 21.19                    | 21.76                 | 21.31                   | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.26                    | 21.86                 | 21.39                   | 0-2                       | 2        |
|           |            | 1       | 7         | 21.17                    | 21.81                 | 21.30                   | 0-2                       | 2        |
|           |            | 1       | 14        | 21.30                    | 21.70                 | 21.31                   | 0-2                       | 2        |
|           |            | 8       | 0         | 20.15                    | 20.68                 | 20.31                   | 0-3                       | 3        |
|           |            | 8       | 3         | 20.14                    | 20.68                 | 20.29                   | 0-3                       | 3        |
|           |            | 8       | 7         | 20.20                    | 20.72                 | 20.29                   | 0-3                       | 3        |
|           |            | 15      | 0         | 20.22                    | 20.71                 | 20.33                   | 0-3                       | 3        |

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. 1852.5 MHz     | 18900 Ch. 1880 MHz | 19175 Ch. 1907.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 23.07                    | 23.65              | 23.21                | 0                         | 0        |
|           |            | 1       | 12        | 23.09                    | 23.60              | 23.17                | 0                         | 0        |
|           |            | 1       | 24        | 23.09                    | 23.60              | 23.20                | 0                         | 0        |
|           |            | 12      | 0         | 22.19                    | 22.74              | 22.29                | 0-1                       | 1        |
|           |            | 12      | 6         | 22.19                    | 22.71              | 22.32                | 0-1                       | 1        |
|           |            | 12      | 11        | 22.23                    | 22.74              | 22.32                | 0-1                       | 1        |
|           |            | 25      | 0         | 22.17                    | 22.70              | 22.28                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.21                    | 22.85              | 22.43                | 0-1                       | 1        |
|           |            | 1       | 12        | 22.29                    | 22.77              | 22.42                | 0-1                       | 1        |
|           |            | 1       | 24        | 22.33                    | 22.91              | 22.40                | 0-1                       | 1        |
|           |            | 12      | 0         | 21.22                    | 21.72              | 21.31                | 0-2                       | 2        |
|           |            | 12      | 6         | 21.20                    | 21.74              | 21.26                | 0-2                       | 2        |
|           |            | 12      | 11        | 21.21                    | 21.73              | 21.32                | 0-2                       | 2        |
|           |            | 25      | 0         | 21.21                    | 21.70              | 21.29                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.22                    | 21.85              | 21.32                | 0-2                       | 2        |
|           |            | 1       | 12        | 21.18                    | 21.73              | 21.38                | 0-2                       | 2        |
|           |            | 1       | 24        | 21.31                    | 21.81              | 21.34                | 0-2                       | 2        |
|           |            | 12      | 0         | 20.22                    | 20.75              | 20.31                | 0-3                       | 3        |
|           |            | 12      | 6         | 20.21                    | 20.71              | 20.31                | 0-3                       | 3        |
|           |            | 12      | 11        | 20.19                    | 20.71              | 20.31                | 0-3                       | 3        |
|           |            | 25      | 0         | 20.21                    | 20.72              | 20.31                | 0-3                       | 3        |

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         | 23.57                    | 23.60              | 23.73              | 0                         | 0        |
|           |            | 1       | 24        | 23.58                    | 23.59              | 23.71              | 0                         | 0        |
|           |            | 1       | 49        | 23.64                    | 23.66              | 23.74              | 0                         | 0        |
|           |            | 25      | 0         | 22.68                    | 22.74              | 22.78              | 0-1                       | 1        |
|           |            | 25      | 12        | 22.67                    | 22.71              | 22.75              | 0-1                       | 1        |
|           |            | 25      | 24        | 22.68                    | 22.73              | 22.76              | 0-1                       | 1        |
|           |            | 50      | 0         | 22.74                    | 22.73              | 22.90              | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.77                    | 22.92              | 23.00              | 0-1                       | 1        |
|           |            | 1       | 24        | 22.66                    | 22.80              | 22.78              | 0-1                       | 1        |
|           |            | 1       | 49        | 22.78                    | 22.89              | 22.95              | 0-1                       | 1        |
|           |            | 25      | 0         | 21.66                    | 21.76              | 21.81              | 0-2                       | 2        |
|           |            | 25      | 12        | 21.64                    | 21.67              | 21.77              | 0-2                       | 2        |
|           |            | 25      | 24        | 21.67                    | 21.69              | 21.75              | 0-2                       | 2        |
|           |            | 50      | 0         | 21.69                    | 21.72              | 21.80              | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.80                    | 21.78              | 21.90              | 0-2                       | 2        |
|           |            | 1       | 24        | 21.72                    | 21.61              | 21.81              | 0-2                       | 2        |
|           |            | 1       | 49        | 21.82                    | 21.71              | 21.83              | 0-2                       | 2        |
|           |            | 25      | 0         | 20.69                    | 20.71              | 20.82              | 0-3                       | 3        |
|           |            | 25      | 12        | 20.65                    | 20.67              | 20.81              | 0-3                       | 3        |
|           |            | 25      | 24        | 20.68                    | 20.68              | 20.79              | 0-3                       | 3        |
|           |            | 50      | 0         | 20.72                    | 20.74              | 20.88              | 0-3                       | 3        |

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         | 23.56                    | 23.63              | 23.71                | 0                         | 0        |
|           |            | 1       | 36        | 23.52                    | 23.62              | 23.67                | 0                         | 0        |
|           |            | 1       | 74        | 23.62                    | 23.67              | 23.66                | 0                         | 0        |
|           |            | 36      | 0         | 22.70                    | 22.74              | 22.78                | 0-1                       | 1        |
|           |            | 36      | 18        | 22.69                    | 22.67              | 22.81                | 0-1                       | 1        |
|           |            | 36      | 39        | 22.70                    | 22.74              | 22.78                | 0-1                       | 1        |
|           | 16QAM      | 75      | 0         | 22.70                    | 22.73              | 22.81                | 0-1                       | 1        |
|           |            | 1       | 0         | 22.76                    | 22.94              | 22.83                | 0-1                       | 1        |
|           |            | 1       | 36        | 22.77                    | 22.93              | 22.89                | 0-1                       | 1        |
|           |            | 1       | 74        | 22.85                    | 22.83              | 22.82                | 0-1                       | 1        |
|           |            | 36      | 0         | 21.67                    | 21.69              | 21.79                | 0-2                       | 2        |
|           |            | 36      | 18        | 21.69                    | 21.70              | 21.77                | 0-2                       | 2        |
|           | 64QAM      | 36      | 39        | 21.69                    | 21.71              | 21.78                | 0-2                       | 2        |
|           |            | 75      | 0         | 21.65                    | 21.72              | 21.75                | 0-2                       | 2        |
|           |            | 1       | 0         | 21.87                    | 21.86              | 21.85                | 0-2                       | 2        |
|           |            | 1       | 36        | 21.75                    | 21.82              | 21.90                | 0-2                       | 2        |
|           |            | 1       | 74        | 21.84                    | 21.98              | 21.92                | 0-2                       | 2        |
|           |            | 36      | 0         | 20.68                    | 20.68              | 20.79                | 0-3                       | 3        |
|           | 36         | 18      | 20.68     | 20.71                    | 20.78              | 0-3                  | 3                         |          |
|           | 36         | 39      | 20.69     | 20.73                    | 20.75              | 0-3                  | 3                         |          |
|           | 75         | 0       | 20.71     | 20.66                    | 20.79              | 0-3                  | 3                         |          |

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. 1860 MHz       | 18900 Ch. 1880 MHz | 19100 Ch. 1900 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 23.62                    | 23.63              | 23.75              | 0                         | 0        |
|           |            | 1       | 49        | 23.60                    | 23.59              | 23.64              | 0                         | 0        |
|           |            | 1       | 99        | 23.68                    | 23.65              | 23.69              | 0                         | 0        |
|           |            | 50      | 0         | 22.73                    | 22.74              | 22.83              | 0-1                       | 1        |
|           |            | 50      | 25        | 22.74                    | 22.73              | 22.76              | 0-1                       | 1        |
|           |            | 50      | 49        | 22.76                    | 22.72              | 22.82              | 0-1                       | 1        |
|           |            | 100     | 0         | 22.76                    | 22.73              | 22.81              | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.77                    | 22.87              | 23.00              | 0-1                       | 1        |
|           |            | 1       | 49        | 22.70                    | 22.73              | 22.83              | 0-1                       | 1        |
|           |            | 1       | 99        | 22.86                    | 22.98              | 22.93              | 0-1                       | 1        |
|           |            | 50      | 0         | 21.72                    | 21.68              | 21.81              | 0-2                       | 2        |
|           |            | 50      | 25        | 21.73                    | 21.69              | 21.80              | 0-2                       | 2        |
|           |            | 50      | 49        | 21.72                    | 21.70              | 21.76              | 0-2                       | 2        |
|           |            | 100     | 0         | 21.72                    | 21.70              | 21.80              | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.86                    | 21.81              | 22.02              | 0-2                       | 2        |
|           |            | 1       | 49        | 21.79                    | 21.84              | 21.87              | 0-2                       | 2        |
|           |            | 1       | 99        | 21.92                    | 21.92              | 21.98              | 0-2                       | 2        |
|           |            | 50      | 0         | 20.71                    | 20.69              | 20.77              | 0-3                       | 3        |
|           |            | 50      | 25        | 20.74                    | 20.68              | 20.78              | 0-3                       | 3        |
|           |            | 50      | 49        | 20.71                    | 20.70              | 20.75              | 0-3                       | 3        |
|           |            | 100     | 0         | 20.70                    | 20.71              | 20.76              | 0-3                       | 3        |

**[ 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         | 22.88                    | 23.39                | 23.20                | 0                         | 0        |
|           |            | 1       | 3         | 22.91                    | 23.42                | 23.23                | 0                         | 0        |
|           |            | 1       | 5         | 22.90                    | 23.39                | 23.15                | 0                         | 0        |
|           |            | 3       | 0         | 22.84                    | 23.35                | 23.16                | 0                         | 0        |
|           |            | 3       | 1         | 23.01                    | 23.47                | 23.32                | 0                         | 0        |
|           |            | 3       | 3         | 22.96                    | 23.42                | 23.24                | 0                         | 0        |
|           |            | 6       | 0         | 21.93                    | 22.38                | 22.25                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.11                    | 22.73                | 22.51                | 0-1                       | 1        |
|           |            | 1       | 3         | 21.80                    | 22.52                | 22.11                | 0-1                       | 1        |
|           |            | 1       | 5         | 22.10                    | 22.71                | 22.47                | 0-1                       | 1        |
|           |            | 3       | 0         | 21.90                    | 22.41                | 22.21                | 0-1                       | 1        |
|           |            | 3       | 1         | 21.98                    | 22.56                | 22.37                | 0-1                       | 1        |
|           |            | 3       | 3         | 22.10                    | 22.51                | 22.37                | 0-1                       | 1        |
|           |            | 6       | 0         | 21.05                    | 21.53                | 21.31                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.11                    | 21.54                | 21.48                | 0-2                       | 2        |
|           |            | 1       | 3         | 21.10                    | 21.51                | 21.37                | 0-2                       | 2        |
|           |            | 1       | 5         | 21.08                    | 21.59                | 21.38                | 0-2                       | 2        |
|           |            | 3       | 0         | 21.01                    | 21.56                | 21.32                | 0-2                       | 2        |
|           |            | 3       | 1         | 21.19                    | 21.55                | 21.45                | 0-2                       | 2        |
|           |            | 3       | 3         | 21.15                    | 21.65                | 21.45                | 0-2                       | 2        |
|           |            | 6       | 0         | 20.09                    | 20.59                | 20.39                | 0-3                       | 3        |

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. 1711.5 MHz     | 20175 Ch. 1732.5 MHz | 20385 Ch. 1753.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 22.89                    | 23.41                | 23.17                | 0                         | 0        |
|           |            | 1       | 7         | 22.90                    | 23.45                | 23.23                | 0                         | 0        |
|           |            | 1       | 14        | 22.91                    | 23.44                | 23.22                | 0                         | 0        |
|           |            | 8       | 0         | 22.04                    | 22.52                | 22.27                | 0-1                       | 1        |
|           |            | 8       | 3         | 21.96                    | 22.48                | 22.28                | 0-1                       | 1        |
|           |            | 8       | 7         | 22.02                    | 22.50                | 22.27                | 0-1                       | 1        |
|           |            | 15      | 0         | 22.03                    | 22.57                | 22.30                | 0-1                       | 1        |
|           |            | 16QAM   | 1         | 0                        | 22.28                | 22.70                | 22.44                     | 0-1      |
|           | 1          |         | 7         | 22.20                    | 22.61                | 22.30                | 0-1                       | 1        |
|           | 1          |         | 14        | 22.15                    | 22.58                | 22.40                | 0-1                       | 1        |
|           | 8          |         | 0         | 21.05                    | 21.60                | 21.35                | 0-2                       | 2        |
|           | 8          |         | 3         | 21.02                    | 21.59                | 21.33                | 0-2                       | 2        |
|           | 8          |         | 7         | 21.10                    | 21.57                | 21.40                | 0-2                       | 2        |
|           | 15         |         | 0         | 21.09                    | 21.58                | 21.37                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.06                    | 21.65                | 21.60                | 0-2                       | 2        |
|           |            | 1       | 7         | 21.05                    | 21.74                | 21.36                | 0-2                       | 2        |
|           |            | 1       | 14        | 21.20                    | 21.62                | 21.42                | 0-2                       | 2        |
|           |            | 8       | 0         | 20.10                    | 20.62                | 20.34                | 0-3                       | 3        |
|           |            | 8       | 3         | 20.04                    | 20.58                | 20.31                | 0-3                       | 3        |
|           |            | 8       | 7         | 20.10                    | 20.60                | 20.38                | 0-3                       | 3        |
|           |            | 15      | 0         | 20.04                    | 20.56                | 20.36                | 0-3                       | 3        |

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         | 22.97                    | 23.47                | 23.29                | 0                         | 0        |
|           |            | 1       | 12        | 22.97                    | 23.44                | 23.21                | 0                         | 0        |
|           |            | 1       | 24        | 22.96                    | 23.47                | 23.24                | 0                         | 0        |
|           |            | 12      | 0         | 22.05                    | 22.55                | 22.35                | 0-1                       | 1        |
|           |            | 12      | 6         | 22.07                    | 22.57                | 22.35                | 0-1                       | 1        |
|           |            | 12      | 11        | 22.10                    | 22.58                | 22.38                | 0-1                       | 1        |
|           | 16QAM      | 25      | 0         | 22.05                    | 22.53                | 22.36                | 0-1                       | 1        |
|           |            | 1       | 0         | 22.19                    | 22.75                | 22.59                | 0-1                       | 1        |
|           |            | 1       | 12        | 22.16                    | 22.76                | 22.52                | 0-1                       | 1        |
|           |            | 1       | 24        | 22.26                    | 22.69                | 22.55                | 0-1                       | 1        |
|           |            | 12      | 0         | 21.06                    | 21.63                | 21.38                | 0-2                       | 2        |
|           |            | 12      | 6         | 21.10                    | 21.59                | 21.45                | 0-2                       | 2        |
|           | 64QAM      | 12      | 11        | 21.12                    | 21.68                | 21.41                | 0-2                       | 2        |
|           |            | 25      | 0         | 21.07                    | 21.58                | 21.37                | 0-2                       | 2        |
|           |            | 1       | 0         | 21.15                    | 21.67                | 21.48                | 0-2                       | 2        |
|           |            | 1       | 12        | 21.20                    | 21.57                | 21.48                | 0-2                       | 2        |
|           |            | 1       | 24        | 21.18                    | 21.72                | 21.51                | 0-2                       | 2        |
|           |            | 12      | 0         | 20.11                    | 20.61                | 20.36                | 0-3                       | 3        |
|           | 12         | 6       | 20.08     | 20.59                    | 20.40                | 0-3                  | 3                         |          |
|           | 12         | 11      | 20.12     | 20.56                    | 20.40                | 0-3                  | 3                         |          |
|           | 25         | 0       | 20.09     | 20.58                    | 20.36                | 0-3                  | 3                         |          |

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         | 23.44                    | 23.50                | 23.65              | 0                         | 0        |
|           |            | 1       | 24        | 23.44                    | 23.48                | 23.69              | 0                         | 0        |
|           |            | 1       | 49        | 23.51                    | 23.53                | 23.78              | 0                         | 0        |
|           |            | 25      | 0         | 22.56                    | 22.60                | 22.77              | 0-1                       | 1        |
|           |            | 25      | 12        | 22.56                    | 22.57                | 22.71              | 0-1                       | 1        |
|           |            | 25      | 24        | 22.59                    | 22.58                | 22.78              | 0-1                       | 1        |
|           |            | 50      | 0         | 22.61                    | 22.61                | 22.80              | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.67                    | 22.86                | 22.95              | 0-1                       | 1        |
|           |            | 1       | 24        | 22.57                    | 22.66                | 22.93              | 0-1                       | 1        |
|           |            | 1       | 49        | 22.81                    | 22.70                | 22.94              | 0-1                       | 1        |
|           |            | 25      | 0         | 21.56                    | 21.59                | 21.76              | 0-2                       | 2        |
|           |            | 25      | 12        | 21.59                    | 21.56                | 21.81              | 0-2                       | 2        |
|           |            | 25      | 24        | 21.58                    | 21.57                | 21.80              | 0-2                       | 2        |
|           |            | 50      | 0         | 21.61                    | 21.63                | 21.79              | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.62                    | 21.70                | 21.81              | 0-2                       | 2        |
|           |            | 1       | 24        | 21.62                    | 21.55                | 21.89              | 0-2                       | 2        |
|           |            | 1       | 49        | 21.76                    | 21.66                | 21.84              | 0-2                       | 2        |
|           |            | 25      | 0         | 20.60                    | 20.59                | 20.80              | 0-3                       | 3        |
|           |            | 25      | 12        | 20.61                    | 20.63                | 20.78              | 0-3                       | 3        |
|           |            | 25      | 24        | 20.59                    | 20.55                | 20.81              | 0-3                       | 3        |
|           |            | 50      | 0         | 20.59                    | 20.56                | 20.83              | 0-3                       | 3        |



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         | 23.44                    | 23.56                | 23.74                | 0                         | 0        |
|           |            | 1       | 36        | 23.40                    | 23.42                | 23.69                | 0                         | 0        |
|           |            | 1       | 74        | 23.46                    | 23.54                | 23.79                | 0                         | 0        |
|           |            | 36      | 0         | 22.60                    | 22.61                | 22.87                | 0-1                       | 1        |
|           |            | 36      | 18        | 22.59                    | 22.64                | 22.88                | 0-1                       | 1        |
|           |            | 36      | 39        | 22.58                    | 22.67                | 22.87                | 0-1                       | 1        |
|           | 16QAM      | 75      | 0         | 22.60                    | 22.66                | 22.89                | 0-1                       | 1        |
|           |            | 1       | 0         | 22.63                    | 22.83                | 22.94                | 0-1                       | 1        |
|           |            | 1       | 36        | 22.66                    | 22.75                | 23.00                | 0-1                       | 1        |
|           |            | 1       | 74        | 22.81                    | 22.76                | 23.05                | 0-1                       | 1        |
|           |            | 36      | 0         | 21.59                    | 21.56                | 21.83                | 0-2                       | 2        |
|           |            | 36      | 18        | 21.59                    | 21.62                | 21.87                | 0-2                       | 2        |
|           | 64QAM      | 36      | 39        | 21.59                    | 21.62                | 21.88                | 0-2                       | 2        |
|           |            | 75      | 0         | 21.63                    | 21.61                | 21.84                | 0-2                       | 2        |
|           |            | 1       | 0         | 21.68                    | 21.80                | 21.94                | 0-2                       | 2        |
|           |            | 1       | 36        | 21.60                    | 21.58                | 21.81                | 0-2                       | 2        |
|           |            | 1       | 74        | 21.74                    | 21.71                | 22.03                | 0-2                       | 2        |
|           |            | 36      | 0         | 20.60                    | 20.57                | 20.86                | 0-3                       | 3        |
|           | 36         | 18      | 20.56     | 20.59                    | 20.86                | 0-3                  | 3                         |          |
|           | 36         | 39      | 20.62     | 20.58                    | 20.88                | 0-3                  | 3                         |          |
|           | 75         | 0       | 20.58     | 20.64                    | 20.85                | 0-3                  | 3                         |          |

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. 1732.5 MHz     |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 23.51                    | 0                         | 0        |
|           |            | 1       | 49        | 23.49                    | 0                         | 0        |
|           |            | 1       | 99        | 23.54                    | 0                         | 0        |
|           |            | 50      | 0         | 22.57                    | 0-1                       | 1        |
|           |            | 50      | 25        | 22.60                    | 0-1                       | 1        |
|           |            | 50      | 49        | 22.61                    | 0-1                       | 1        |
|           | 16QAM      | 100     | 0         | 22.62                    | 0-1                       | 1        |
|           |            | 1       | 0         | 22.81                    | 0-1                       | 1        |
|           |            | 1       | 49        | 22.61                    | 0-1                       | 1        |
|           |            | 1       | 99        | 22.84                    | 0-1                       | 1        |
|           |            | 50      | 0         | 21.59                    | 0-2                       | 2        |
|           |            | 50      | 25        | 21.58                    | 0-2                       | 2        |
|           | 64QAM      | 50      | 49        | 21.64                    | 0-2                       | 2        |
|           |            | 100     | 0         | 21.58                    | 0-2                       | 2        |
|           |            | 1       | 0         | 21.80                    | 0-2                       | 2        |
|           |            | 1       | 49        | 21.70                    | 0-2                       | 2        |
|           |            | 1       | 99        | 21.74                    | 0-2                       | 2        |
|           |            | 50      | 0         | 20.61                    | 0-3                       | 3        |
|           | 50         | 25      | 20.60     | 0-3                      | 3                         |          |
|           | 50         | 49      | 20.60     | 0-3                      | 3                         |          |
|           | 100        | 0       | 20.61     | 0-3                      | 3                         |          |

**[ 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. 824.7 MHz      | 20525 Ch. 836.5 MHz | 20643 Ch. 848.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 23.72                    | 23.76               | 23.18               | 0                         | 0        |
|           |            | 1       | 3         | 23.72                    | 23.76               | 23.19               | 0                         | 0        |
|           |            | 1       | 5         | 23.73                    | 23.77               | 23.22               | 0                         | 0        |
|           |            | 3       | 0         | 23.68                    | 23.71               | 23.16               | 0                         | 0        |
|           |            | 3       | 1         | 23.84                    | 23.82               | 23.28               | 0                         | 0        |
|           |            | 3       | 3         | 23.74                    | 23.71               | 23.23               | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 22.72                    | 22.71               | 22.19               | 0-1                       | 1        |
|           |            | 1       | 0         | 22.93                    | 23.03               | 22.46               | 0-1                       | 1        |
|           |            | 1       | 3         | 22.81                    | 22.81               | 22.26               | 0-1                       | 1        |
|           |            | 1       | 5         | 22.93                    | 22.96               | 22.45               | 0-1                       | 1        |
|           |            | 3       | 0         | 22.75                    | 22.76               | 22.20               | 0-1                       | 1        |
|           |            | 3       | 1         | 22.83                    | 22.76               | 22.34               | 0-1                       | 1        |
|           | 64QAM      | 3       | 3         | 22.79                    | 22.79               | 22.31               | 0-1                       | 1        |
|           |            | 6       | 0         | 21.84                    | 21.82               | 21.23               | 0-2                       | 2        |
|           |            | 1       | 0         | 21.92                    | 21.91               | 21.37               | 0-2                       | 2        |
|           |            | 1       | 3         | 21.88                    | 21.85               | 21.33               | 0-2                       | 2        |
|           |            | 1       | 5         | 21.91                    | 21.86               | 21.44               | 0-2                       | 2        |
|           |            | 3       | 0         | 21.76                    | 21.71               | 21.29               | 0-2                       | 2        |
|           |            | 3       | 1         | 21.88                    | 21.82               | 21.43               | 0-2                       | 2        |
|           |            | 3       | 3         | 21.81                    | 21.78               | 21.36               | 0-2                       | 2        |
|           | 6          | 0       | 20.78     | 20.71                    | 20.26               | 0-3                 | 3                         |          |

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         | 23.13                    | 23.69               | 23.19               | 0                         | 0        |
|           |            | 1       | 7         | 23.11                    | 23.67               | 23.12               | 0                         | 0        |
|           |            | 1       | 14        | 23.16                    | 23.74               | 23.25               | 0                         | 0        |
|           |            | 8       | 0         | 22.23                    | 22.83               | 22.30               | 0-1                       | 1        |
|           |            | 8       | 3         | 22.21                    | 22.75               | 22.27               | 0-1                       | 1        |
|           |            | 8       | 7         | 22.25                    | 22.83               | 22.29               | 0-1                       | 1        |
|           |            | 15      | 0         | 22.30                    | 22.85               | 22.35               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.40                    | 22.99               | 22.56               | 0-1                       | 1        |
|           |            | 1       | 7         | 22.36                    | 22.91               | 22.50               | 0-1                       | 1        |
|           |            | 1       | 14        | 22.39                    | 23.06               | 22.41               | 0-1                       | 1        |
|           |            | 8       | 0         | 21.34                    | 21.83               | 21.34               | 0-2                       | 2        |
|           |            | 8       | 3         | 21.31                    | 21.80               | 21.29               | 0-2                       | 2        |
|           |            | 8       | 7         | 21.37                    | 21.82               | 21.36               | 0-2                       | 2        |
|           |            | 15      | 0         | 21.32                    | 21.83               | 21.29               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.36                    | 21.88               | 21.39               | 0-2                       | 2        |
|           |            | 1       | 7         | 21.21                    | 21.83               | 21.27               | 0-2                       | 2        |
|           |            | 1       | 14        | 21.47                    | 21.82               | 21.29               | 0-2                       | 2        |
|           |            | 8       | 0         | 20.35                    | 20.80               | 20.25               | 0-3                       | 3        |
|           |            | 8       | 3         | 20.30                    | 20.77               | 20.28               | 0-3                       | 3        |
|           |            | 8       | 7         | 20.34                    | 20.80               | 20.25               | 0-3                       | 3        |
|           |            | 15      | 0         | 20.29                    | 20.79               | 20.30               | 0-3                       | 3        |

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         | 23.23                    | 23.82               | 23.29               | 0                         | 0        |
|           |            | 1       | 12        | 23.18                    | 23.74               | 23.20               | 0                         | 0        |
|           |            | 1       | 24        | 23.24                    | 23.73               | 23.26               | 0                         | 0        |
|           |            | 12      | 0         | 22.35                    | 22.90               | 22.41               | 0-1                       | 1        |
|           |            | 12      | 6         | 22.33                    | 22.83               | 22.39               | 0-1                       | 1        |
|           |            | 12      | 11        | 22.31                    | 22.85               | 22.36               | 0-1                       | 1        |
|           | 16QAM      | 25      | 0         | 22.31                    | 22.84               | 22.36               | 0-1                       | 1        |
|           |            | 1       | 0         | 22.50                    | 23.07               | 22.51               | 0-1                       | 1        |
|           |            | 1       | 12        | 22.54                    | 23.07               | 22.51               | 0-1                       | 1        |
|           |            | 1       | 24        | 22.50                    | 23.02               | 22.50               | 0-1                       | 1        |
|           |            | 12      | 0         | 21.30                    | 21.87               | 21.38               | 0-2                       | 2        |
|           |            | 12      | 6         | 21.35                    | 21.82               | 21.28               | 0-2                       | 2        |
|           | 64QAM      | 12      | 11        | 21.38                    | 21.78               | 21.34               | 0-2                       | 2        |
|           |            | 25      | 0         | 21.34                    | 21.79               | 21.31               | 0-2                       | 2        |
|           |            | 1       | 0         | 21.41                    | 21.81               | 21.50               | 0-2                       | 2        |
|           |            | 1       | 12        | 21.39                    | 21.80               | 21.35               | 0-2                       | 2        |
|           |            | 1       | 24        | 21.44                    | 21.80               | 21.47               | 0-2                       | 2        |
|           |            | 12      | 0         | 20.36                    | 20.83               | 20.35               | 0-3                       | 3        |
|           | 64QAM      | 12      | 6         | 20.38                    | 20.79               | 20.34               | 0-3                       | 3        |
|           |            | 12      | 11        | 20.35                    | 20.82               | 20.33               | 0-3                       | 3        |
|           | 25         | 0       | 20.30     | 20.76                    | 20.29               | 0-3                 | 3                         |          |

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. 836.5 MHz      |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.79                    | 0                         | 0        |
|           |            | 1       | 24        | 23.75                    | 0                         | 0        |
|           |            | 1       | 49        | 23.84                    | 0                         | 0        |
|           |            | 25      | 0         | 22.86                    | 0-1                       | 1        |
|           |            | 25      | 12        | 22.85                    | 0-1                       | 1        |
|           |            | 25      | 24        | 22.81                    | 0-1                       | 1        |
|           | 16QAM      | 50      | 0         | 22.94                    | 0-1                       | 1        |
|           |            | 1       | 0         | 22.98                    | 0-1                       | 1        |
|           |            | 1       | 24        | 22.90                    | 0-1                       | 1        |
|           |            | 1       | 49        | 23.02                    | 0-1                       | 1        |
|           |            | 25      | 0         | 21.83                    | 0-2                       | 2        |
|           |            | 25      | 12        | 21.76                    | 0-2                       | 2        |
|           | 64QAM      | 25      | 24        | 21.76                    | 0-2                       | 2        |
|           |            | 50      | 0         | 21.84                    | 0-2                       | 2        |
|           |            | 1       | 0         | 21.92                    | 0-2                       | 2        |
|           |            | 1       | 24        | 21.82                    | 0-2                       | 2        |
|           |            | 1       | 49        | 21.84                    | 0-2                       | 2        |
|           |            | 25      | 0         | 20.83                    | 0-3                       | 3        |
|           | 64QAM      | 25      | 12        | 20.81                    | 0-3                       | 3        |
|           |            | 25      | 24        | 20.77                    | 0-3                       | 3        |
|           |            | 50      | 0         | 20.84                    | 0-3                       | 3        |

**[LTE Band 7 Conducted Power]**

LTE Band 7\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 20775 Ch. 2502.5 MHz     | 21100 Ch. 2535 MHz | 21425 Ch. 2567.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 22.86                    | 22.61              | 22.58                | 0                         | 0        |
|           |            | 1       | 12        | 22.87                    | 22.60              | 22.61                | 0                         | 0        |
|           |            | 1       | 24        | 22.81                    | 22.52              | 22.58                | 0                         | 0        |
|           |            | 12      | 0         | 21.90                    | 21.68              | 21.71                | 0-1                       | 1        |
|           |            | 12      | 6         | 21.97                    | 21.65              | 21.71                | 0-1                       | 1        |
|           |            | 12      | 11        | 21.96                    | 21.65              | 21.71                | 0-1                       | 1        |
|           | 16QAM      | 25      | 0         | 21.96                    | 21.60              | 21.67                | 0-1                       | 1        |
|           |            | 1       | 0         | 22.01                    | 21.90              | 21.72                | 0-1                       | 1        |
|           |            | 1       | 12        | 22.11                    | 21.84              | 21.82                | 0-1                       | 1        |
|           |            | 1       | 24        | 22.11                    | 21.85              | 21.81                | 0-1                       | 1        |
|           |            | 12      | 0         | 20.96                    | 20.68              | 20.62                | 0-2                       | 2        |
|           |            | 12      | 6         | 20.95                    | 20.66              | 20.65                | 0-2                       | 2        |
|           | 64QAM      | 12      | 11        | 20.96                    | 20.62              | 20.70                | 0-2                       | 2        |
|           |            | 25      | 0         | 20.95                    | 20.62              | 20.62                | 0-2                       | 2        |
|           |            | 1       | 0         | 20.95                    | 20.84              | 20.71                | 0-2                       | 2        |
|           |            | 1       | 12        | 21.09                    | 20.75              | 20.71                | 0-2                       | 2        |
|           |            | 1       | 24        | 21.02                    | 20.80              | 20.68                | 0-2                       | 2        |
|           |            | 12      | 0         | 19.95                    | 19.66              | 19.65                | 0-3                       | 3        |
|           |            | 12      | 6         | 20.01                    | 19.58              | 19.66                | 0-3                       | 3        |
|           |            | 12      | 11        | 19.94                    | 19.61              | 19.66                | 0-3                       | 3        |
|           |            | 25      | 0         | 19.91                    | 19.62              | 19.66                | 0-3                       | 3        |

LTE Band 7\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 20800 Ch. 2505 MHz       | 21100 Ch. 2535 MHz | 21400 Ch. 2565 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 22.88                    | 22.67              | 22.65              | 0                         | 0        |
|           |            | 1       | 24        | 22.86                    | 22.55              | 22.64              | 0                         | 0        |
|           |            | 1       | 49        | 22.87                    | 22.57              | 22.68              | 0                         | 0        |
|           |            | 25      | 0         | 21.93                    | 21.68              | 21.71              | 0-1                       | 1        |
|           |            | 25      | 12        | 21.95                    | 21.61              | 21.69              | 0-1                       | 1        |
|           |            | 25      | 24        | 21.91                    | 21.61              | 21.70              | 0-1                       | 1        |
|           | 16QAM      | 50      | 0         | 21.93                    | 21.74              | 21.84              | 0-1                       | 1        |
|           |            | 1       | 0         | 22.13                    | 21.95              | 21.88              | 0-1                       | 1        |
|           |            | 1       | 24        | 22.02                    | 21.66              | 21.71              | 0-1                       | 1        |
|           |            | 1       | 49        | 22.10                    | 21.76              | 21.82              | 0-1                       | 1        |
|           |            | 25      | 0         | 20.95                    | 20.64              | 20.63              | 0-2                       | 2        |
|           |            | 25      | 12        | 20.97                    | 20.62              | 20.63              | 0-2                       | 2        |
|           | 64QAM      | 25      | 24        | 20.89                    | 20.58              | 20.62              | 0-2                       | 2        |
|           |            | 50      | 0         | 20.96                    | 20.67              | 20.75              | 0-2                       | 2        |
|           |            | 1       | 0         | 21.01                    | 20.77              | 20.81              | 0-2                       | 2        |
|           |            | 1       | 24        | 21.05                    | 20.53              | 20.67              | 0-2                       | 2        |
|           |            | 1       | 49        | 20.99                    | 20.58              | 20.83              | 0-2                       | 2        |
|           |            | 25      | 0         | 19.93                    | 19.65              | 19.67              | 0-3                       | 3        |
|           |            | 25      | 12        | 19.89                    | 19.64              | 19.67              | 0-3                       | 3        |
|           |            | 25      | 24        | 19.92                    | 19.60              | 19.65              | 0-3                       | 3        |
|           |            | 50      | 0         | 20.00                    | 19.69              | 19.75              | 0-3                       | 3        |

LTE Band 7 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 20825 Ch. 2507.5 MHz     | 21100 Ch. 2535 MHz | 21375 Ch. 2562.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 22.93                    | 22.74              | 22.75                | 0                         | 0        |
|           |            | 1       | 36        | 22.88                    | 22.61              | 22.76                | 0                         | 0        |
|           |            | 1       | 74        | 22.85                    | 22.56              | 22.70                | 0                         | 0        |
|           |            | 36      | 0         | 21.97                    | 21.79              | 21.85                | 0-1                       | 1        |
|           |            | 36      | 18        | 21.96                    | 21.72              | 21.80                | 0-1                       | 1        |
|           |            | 36      | 39        | 21.91                    | 21.65              | 21.85                | 0-1                       | 1        |
|           |            | 75      | 0         | 21.95                    | 21.73              | 21.83                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.06                    | 22.03              | 22.00                | 0-1                       | 1        |
|           |            | 1       | 36        | 22.08                    | 21.77              | 21.91                | 0-1                       | 1        |
|           |            | 1       | 74        | 22.02                    | 21.77              | 21.94                | 0-1                       | 1        |
|           |            | 36      | 0         | 20.95                    | 20.74              | 20.77                | 0-2                       | 2        |
|           |            | 36      | 18        | 20.95                    | 20.65              | 20.79                | 0-2                       | 2        |
|           |            | 36      | 39        | 20.94                    | 20.62              | 20.75                | 0-2                       | 2        |
|           |            | 75      | 0         | 20.97                    | 20.68              | 20.77                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.15                    | 20.91              | 20.96                | 0-2                       | 2        |
|           |            | 1       | 36        | 21.01                    | 20.64              | 20.77                | 0-2                       | 2        |
|           |            | 1       | 74        | 21.05                    | 20.80              | 20.90                | 0-2                       | 2        |
|           |            | 36      | 0         | 19.96                    | 19.73              | 19.80                | 0-3                       | 3        |
|           |            | 36      | 18        | 19.93                    | 19.70              | 19.79                | 0-3                       | 3        |
|           |            | 36      | 39        | 19.93                    | 19.65              | 19.75                | 0-3                       | 3        |
|           |            | 75      | 0         | 19.95                    | 19.68              | 19.75                | 0-3                       | 3        |

LTE Band 7 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 20850 Ch. 2510 MHz       | 21100 Ch. 2535 MHz | 21350 Ch. 2560 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | <b>23.01</b>             | 22.78              | 22.81              | 0                         | 0        |
|           |            | 1       | 49        | 22.89                    | 22.61              | 22.71              | 0                         | 0        |
|           |            | 1       | 99        | 22.82                    | 22.56              | 22.74              | 0                         | 0        |
|           |            | 50      | 0         | <b>22.03</b>             | 21.79              | 21.87              | 0-1                       | 1        |
|           |            | 50      | 25        | 21.97                    | 21.70              | 21.85              | 0-1                       | 1        |
|           |            | 50      | 49        | 21.91                    | 21.68              | 21.84              | 0-1                       | 1        |
|           |            | 100     | 0         | 21.99                    | 21.73              | 21.89              | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.27                    | 21.99              | 22.12              | 0-1                       | 1        |
|           |            | 1       | 49        | 21.97                    | 21.74              | 21.74              | 0-1                       | 1        |
|           |            | 1       | 99        | 22.04                    | 21.76              | 21.94              | 0-1                       | 1        |
|           |            | 50      | 0         | 21.00                    | 20.74              | 20.85              | 0-2                       | 2        |
|           |            | 50      | 25        | 20.98                    | 20.67              | 20.78              | 0-2                       | 2        |
|           |            | 50      | 49        | 20.90                    | 20.62              | 20.78              | 0-2                       | 2        |
|           |            | 100     | 0         | 20.94                    | 20.69              | 20.79              | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.20                    | 20.95              | 21.09              | 0-2                       | 2        |
|           |            | 1       | 49        | 21.04                    | 20.62              | 20.71              | 0-2                       | 2        |
|           |            | 1       | 99        | 21.14                    | 20.66              | 20.94              | 0-2                       | 2        |
|           |            | 50      | 0         | 20.00                    | 19.77              | 19.84              | 0-3                       | 3        |
|           |            | 50      | 25        | 19.96                    | 19.69              | 19.83              | 0-3                       | 3        |
|           |            | 50      | 49        | 19.90                    | 19.63              | 19.77              | 0-3                       | 3        |
|           |            | 100     | 0         | 19.96                    | 19.68              | 19.83              | 0-3                       | 3        |

**[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. 699.7 MHz      | 23095 Ch. 707.5 MHz | 23173 Ch. 715.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 23.66                    | 24.24               | 23.59               | 0                         | 0        |
|           |            | 1       | 3         | 23.67                    | 24.24               | 23.55               | 0                         | 0        |
|           |            | 1       | 5         | 23.68                    | 24.22               | 23.60               | 0                         | 0        |
|           |            | 3       | 0         | 23.63                    | 24.20               | 23.53               | 0                         | 0        |
|           |            | 3       | 1         | 23.78                    | 24.32               | 23.72               | 0                         | 0        |
|           |            | 3       | 3         | 23.68                    | 24.23               | 23.57               | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 22.69                    | 23.23               | 22.55               | 0-1                       | 1        |
|           |            | 1       | 0         | 22.86                    | 23.41               | 22.85               | 0-1                       | 1        |
|           |            | 1       | 3         | 22.83                    | 23.40               | 22.74               | 0-1                       | 1        |
|           |            | 1       | 5         | 22.88                    | 23.51               | 22.81               | 0-1                       | 1        |
|           |            | 3       | 0         | 22.71                    | 23.26               | 22.57               | 0-1                       | 1        |
|           |            | 3       | 1         | 22.81                    | 23.28               | 22.75               | 0-1                       | 1        |
|           | 64QAM      | 3       | 3         | 22.85                    | 23.25               | 22.62               | 0-1                       | 1        |
|           |            | 6       | 0         | 21.73                    | 22.30               | 21.67               | 0-2                       | 2        |
|           |            | 1       | 0         | 21.92                    | 22.44               | 21.73               | 0-2                       | 2        |
|           |            | 1       | 3         | 21.82                    | 22.39               | 21.73               | 0-2                       | 2        |
|           |            | 1       | 5         | 21.95                    | 22.41               | 21.72               | 0-2                       | 2        |
|           |            | 3       | 0         | 21.80                    | 22.34               | 21.69               | 0-2                       | 2        |
|           | 64QAM      | 3       | 1         | 21.90                    | 22.44               | 21.77               | 0-2                       | 2        |
|           |            | 3       | 3         | 21.76                    | 22.31               | 21.60               | 0-2                       | 2        |
|           |            | 6       | 0         | 20.71                    | 21.28               | 20.60               | 0-3                       | 3        |

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         | 23.60                    | 24.25               | 23.60               | 0                         | 0        |
|           |            | 1       | 7         | 23.60                    | 24.20               | 23.54               | 0                         | 0        |
|           |            | 1       | 14        | 23.69                    | 24.31               | 23.61               | 0                         | 0        |
|           |            | 8       | 0         | 22.77                    | 23.39               | 22.68               | 0-1                       | 1        |
|           |            | 8       | 3         | 22.74                    | 23.36               | 22.66               | 0-1                       | 1        |
|           |            | 8       | 7         | 22.80                    | 23.35               | 22.68               | 0-1                       | 1        |
|           | 16QAM      | 15      | 0         | 22.80                    | 23.35               | 22.76               | 0-1                       | 1        |
|           |            | 1       | 0         | 22.82                    | 23.55               | 22.87               | 0-1                       | 1        |
|           |            | 1       | 7         | 22.82                    | 23.55               | 22.97               | 0-1                       | 1        |
|           |            | 1       | 14        | 22.90                    | 23.43               | 22.92               | 0-1                       | 1        |
|           |            | 8       | 0         | 21.79                    | 22.38               | 21.77               | 0-2                       | 2        |
|           |            | 8       | 3         | 21.77                    | 22.34               | 21.72               | 0-2                       | 2        |
|           | 64QAM      | 8       | 7         | 21.81                    | 22.41               | 21.77               | 0-2                       | 2        |
|           |            | 15      | 0         | 21.76                    | 22.38               | 21.76               | 0-2                       | 2        |
|           |            | 1       | 0         | 21.84                    | 22.40               | 21.83               | 0-2                       | 2        |
|           |            | 1       | 7         | 21.80                    | 22.37               | 21.78               | 0-2                       | 2        |
|           |            | 1       | 14        | 21.95                    | 22.45               | 21.85               | 0-2                       | 2        |
|           |            | 8       | 0         | 20.71                    | 21.30               | 20.69               | 0-3                       | 3        |
|           | 64QAM      | 8       | 3         | 20.74                    | 21.36               | 20.69               | 0-3                       | 3        |
|           |            | 8       | 7         | 20.72                    | 21.35               | 20.71               | 0-3                       | 3        |
|           |            | 15      | 0         | 20.74                    | 21.33               | 20.71               | 0-3                       | 3        |

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         | 23.73                    | 24.32               | 23.74               | 0                         | 0        |   |
|           |            | 1       | 12        | 23.67                    | 24.24               | 23.63               | 0                         | 0        |   |
|           |            | 1       | 24        | 23.78                    | 24.28               | 23.67               | 0                         | 0        |   |
|           |            | 12      | 0         | 22.88                    | 23.45               | 22.82               | 0-1                       | 1        |   |
|           |            | 12      | 6         | 22.87                    | 23.43               | 22.79               | 0-1                       | 1        |   |
|           |            | 12      | 11        | 22.88                    | 23.44               | 22.84               | 0-1                       | 1        |   |
|           | 16QAM      | 25      | 0         | 22.84                    | 23.40               | 22.80               | 0-1                       | 1        |   |
|           |            | 1       | 0         | 22.98                    | 23.62               | 23.02               | 0-1                       | 1        |   |
|           |            | 1       | 12        | 23.04                    | 23.52               | 23.03               | 0-1                       | 1        |   |
|           |            | 1       | 24        | 23.12                    | 23.57               | 22.98               | 0-1                       | 1        |   |
|           |            | 12      | 0         | 21.84                    | 22.45               | 21.77               | 0-2                       | 2        |   |
|           |            | 12      | 6         | 21.85                    | 22.41               | 21.79               | 0-2                       | 2        |   |
|           | 64QAM      | 12      | 11        | 21.87                    | 22.40               | 21.80               | 0-2                       | 2        |   |
|           |            | 25      | 0         | 21.80                    | 22.34               | 21.76               | 0-2                       | 2        |   |
|           |            | 1       | 0         | 21.88                    | 22.58               | 21.76               | 0-2                       | 2        |   |
|           |            | 1       | 12        | 21.70                    | 22.30               | 21.79               | 0-2                       | 2        |   |
|           |            | 1       | 24        | 21.97                    | 22.43               | 21.82               | 0-2                       | 2        |   |
|           |            | 12      | 0         | 20.79                    | 21.36               | 20.78               | 0-3                       | 3        |   |
|           |            | 64QAM   | 12        | 6                        | 20.80               | 21.32               | 20.75                     | 0-3      | 3 |
|           |            |         | 12        | 11                       | 20.81               | 21.37               | 20.78                     | 0-3      | 3 |
|           |            | 25      | 0         | 20.76                    | 21.36               | 20.73               | 0-3                       | 3        |   |

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. 707.5 MHz      |                           |          |   |
| 10 MHz    | QPSK       | 1       | 0         | 24.29                    | 0                         | 0        |   |
|           |            | 1       | 24        | 24.23                    | 0                         | 0        |   |
|           |            | 1       | 49        | 24.28                    | 0                         | 0        |   |
|           |            | 25      | 0         | 23.38                    | 0-1                       | 1        |   |
|           |            | 25      | 12        | 23.35                    | 0-1                       | 1        |   |
|           |            | 25      | 24        | 23.35                    | 0-1                       | 1        |   |
|           | 16QAM      | 50      | 0         | 23.41                    | 0-1                       | 1        |   |
|           |            | 1       | 0         | 23.60                    | 0-1                       | 1        |   |
|           |            | 1       | 24        | 23.44                    | 0-1                       | 1        |   |
|           |            | 1       | 49        | 23.43                    | 0-1                       | 1        |   |
|           |            | 25      | 0         | 22.32                    | 0-2                       | 2        |   |
|           |            | 25      | 12        | 22.34                    | 0-2                       | 2        |   |
|           | 64QAM      | 25      | 24        | 22.30                    | 0-2                       | 2        |   |
|           |            | 50      | 0         | 22.39                    | 0-2                       | 2        |   |
|           |            | 1       | 0         | 22.48                    | 0-2                       | 2        |   |
|           |            | 1       | 24        | 22.30                    | 0-2                       | 2        |   |
|           |            | 1       | 49        | 22.42                    | 0-2                       | 2        |   |
|           |            | 25      | 0         | 21.34                    | 0-3                       | 3        |   |
|           |            | 64QAM   | 25        | 12                       | 21.33                     | 0-3      | 3 |
|           |            |         | 25        | 24                       | 21.33                     | 0-3      | 3 |
|           |            | 50      | 0         | 21.37                    | 0-3                       | 3        |   |

**[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         | 23.38                    | 23.37             | 23.42               | 0                         | 0        |   |
|           |            | 1       | 12        | 23.29                    | 23.25             | 23.26               | 0                         | 0        |   |
|           |            | 1       | 24        | 23.38                    | 23.34             | 23.28               | 0                         | 0        |   |
|           |            | 12      | 0         | 22.50                    | 22.48             | 22.50               | 0-1                       | 1        |   |
|           |            | 12      | 6         | 22.49                    | 22.50             | 22.47               | 0-1                       | 1        |   |
|           |            | 12      | 11        | 22.52                    | 22.47             | 22.43               | 0-1                       | 1        |   |
|           | 16QAM      | 25      | 0         | 22.43                    | 22.42             | 22.43               | 0-1                       | 1        |   |
|           |            | 1       | 0         | 22.55                    | 22.58             | 22.64               | 0-1                       | 1        |   |
|           |            | 1       | 12        | 22.48                    | 22.63             | 22.63               | 0-1                       | 1        |   |
|           |            | 1       | 24        | 22.62                    | 22.68             | 22.58               | 0-1                       | 1        |   |
|           |            | 12      | 0         | 21.44                    | 21.45             | 21.49               | 0-2                       | 2        |   |
|           |            | 12      | 6         | 21.48                    | 21.46             | 21.43               | 0-2                       | 2        |   |
|           | 64QAM      | 12      | 11        | 21.53                    | 21.45             | 21.45               | 0-2                       | 2        |   |
|           |            | 25      | 0         | 21.48                    | 21.45             | 21.42               | 0-2                       | 2        |   |
|           |            | 1       | 0         | 21.48                    | 21.50             | 21.62               | 0-2                       | 2        |   |
|           |            | 1       | 12        | 21.39                    | 21.42             | 21.50               | 0-2                       | 2        |   |
|           |            | 1       | 24        | 21.61                    | 21.59             | 21.49               | 0-2                       | 2        |   |
|           |            | 12      | 0         | 20.52                    | 20.49             | 20.47               | 0-3                       | 3        |   |
|           |            |         | 12        | 6                        | 20.46             | 20.45               | 20.51                     | 0-3      | 3 |
|           |            |         | 12        | 11                       | 20.48             | 20.45               | 20.46                     | 0-3      | 3 |
|           |            |         | 25        | 0                        | 20.48             | 20.46               | 20.45                     | 0-3      | 3 |

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. 782 MHz        |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.39                    | 0                         | 0        |
|           |            | 1       | 24        | 23.39                    | 0                         | 0        |
|           |            | 1       | 49        | 23.32                    | 0                         | 0        |
|           |            | 25      | 0         | 22.47                    | 0-1                       | 1        |
|           |            | 25      | 12        | 22.44                    | 0-1                       | 1        |
|           |            | 25      | 24        | 22.44                    | 0-1                       | 1        |
|           |            | 50      | 0         | 22.50                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.59                    | 0-1                       | 1        |
|           |            | 1       | 24        | 22.48                    | 0-1                       | 1        |
|           |            | 1       | 49        | 22.52                    | 0-1                       | 1        |
|           |            | 25      | 0         | 21.43                    | 0-2                       | 2        |
|           |            | 25      | 12        | 21.46                    | 0-2                       | 2        |
|           |            | 25      | 24        | 21.40                    | 0-2                       | 2        |
|           |            | 50      | 0         | 21.46                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.60                    | 0-2                       | 2        |
|           |            | 1       | 24        | 21.61                    | 0-2                       | 2        |
|           |            | 1       | 49        | 21.49                    | 0-2                       | 2        |
|           |            | 25      | 0         | 20.44                    | 0-3                       | 3        |
|           |            | 25      | 12        | 20.40                    | 0-3                       | 3        |
|           |            | 25      | 24        | 20.42                    | 0-3                       | 3        |
|           |            | 50      | 0         | 20.47                    | 0-3                       | 3        |



**[ LTE Band 14 Conducted Power ]**

LTE Band 14 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                   |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|-------------------|---------------------|---------------------------|----------|
|           |            |         |           | 23305 Ch. 790.5 MHz      | 23330 Ch. 793 MHz | 23355 Ch. 795.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 23.43                    | 23.42             | 23.35               | 0                         | 0        |
|           |            | 1       | 12        | 23.35                    | 23.25             | 23.18               | 0                         | 0        |
|           |            | 1       | 24        | 23.28                    | 23.28             | 23.20               | 0                         | 0        |
|           |            | 12      | 0         | 22.52                    | 22.52             | 22.41               | 0-1                       | 1        |
|           |            | 12      | 6         | 22.51                    | 22.47             | 22.39               | 0-1                       | 1        |
|           |            | 12      | 11        | 22.48                    | 22.43             | 22.39               | 0-1                       | 1        |
|           | 16QAM      | 25      | 0         | 22.42                    | 22.41             | 22.34               | 0-1                       | 1        |
|           |            | 1       | 0         | 22.60                    | 22.64             | 22.43               | 0-1                       | 1        |
|           |            | 1       | 12        | 22.58                    | 22.53             | 22.36               | 0-1                       | 1        |
|           |            | 1       | 24        | 22.65                    | 22.44             | 22.47               | 0-1                       | 1        |
|           |            | 12      | 0         | 21.50                    | 21.47             | 21.41               | 0-2                       | 2        |
|           |            | 12      | 6         | 21.47                    | 21.42             | 21.35               | 0-2                       | 2        |
|           | 64QAM      | 12      | 11        | 21.48                    | 21.42             | 21.38               | 0-2                       | 2        |
|           |            | 25      | 0         | 21.44                    | 21.40             | 21.34               | 0-2                       | 2        |
|           |            | 1       | 0         | 21.65                    | 21.68             | 21.51               | 0-2                       | 2        |
|           |            | 1       | 12        | 21.43                    | 21.37             | 21.33               | 0-2                       | 2        |
|           |            | 1       | 24        | 21.54                    | 21.47             | 21.48               | 0-2                       | 2        |
|           |            | 12      | 0         | 20.53                    | 20.48             | 20.40               | 0-3                       | 3        |
|           |            | 12      | 6         | 20.46                    | 20.43             | 20.35               | 0-3                       | 3        |
|           |            | 12      | 11        | 20.46                    | 20.41             | 20.32               | 0-3                       | 3        |
|           |            | 25      | 0         | 20.45                    | 20.41             | 20.33               | 0-3                       | 3        |

LTE Band 14 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 23330 Ch. 793 MHz        |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.51                    | 0                         | 0        |
|           |            | 1       | 24        | 23.37                    | 0                         | 0        |
|           |            | 1       | 49        | 23.27                    | 0                         | 0        |
|           |            | 25      | 0         | 22.47                    | 0-1                       | 1        |
|           |            | 25      | 12        | 22.42                    | 0-1                       | 1        |
|           |            | 25      | 24        | 22.37                    | 0-1                       | 1        |
|           | 16QAM      | 50      | 0         | 22.56                    | 0-1                       | 1        |
|           |            | 1       | 0         | 22.73                    | 0-1                       | 1        |
|           |            | 1       | 24        | 22.28                    | 0-1                       | 1        |
|           |            | 1       | 49        | 22.34                    | 0-1                       | 1        |
|           |            | 25      | 0         | 21.49                    | 0-2                       | 2        |
|           |            | 25      | 12        | 21.36                    | 0-2                       | 2        |
|           | 64QAM      | 25      | 24        | 21.30                    | 0-2                       | 2        |
|           |            | 50      | 0         | 21.44                    | 0-2                       | 2        |
|           |            | 1       | 0         | 21.74                    | 0-2                       | 2        |
|           |            | 1       | 24        | 21.39                    | 0-2                       | 2        |
|           |            | 1       | 49        | 21.34                    | 0-2                       | 2        |
|           |            | 25      | 0         | 20.48                    | 0-3                       | 3        |
|           |            | 25      | 12        | 20.39                    | 0-3                       | 3        |
|           |            | 25      | 24        | 20.36                    | 0-3                       | 3        |
|           |            | 50      | 0         | 20.48                    | 0-3                       | 3        |

**[ LTE Band 25 Conducted Power ]**

LTE Band 25\_ 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26047 Ch. 1850.7 MHz     | 26365 Ch. 1882.5 MHz | 26683 Ch. 1914.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 22.91                    | 23.55                | 22.50                | 0                         | 0        |
|           |            | 1       | 3         | 22.95                    | 23.62                | 22.57                | 0                         | 0        |
|           |            | 1       | 5         | 22.94                    | 23.55                | 22.55                | 0                         | 0        |
|           |            | 3       | 0         | 22.87                    | 23.51                | 22.46                | 0                         | 0        |
|           |            | 3       | 1         | 22.98                    | 23.66                | 22.63                | 0                         | 0        |
|           |            | 3       | 3         | 22.97                    | 23.59                | 22.56                | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 21.97                    | 22.59                | 21.51                | 0-1                       | 1        |
|           |            | 1       | 0         | 22.22                    | 22.80                | 21.69                | 0-1                       | 1        |
|           |            | 1       | 3         | 22.00                    | 22.59                | 21.51                | 0-1                       | 1        |
|           |            | 1       | 5         | 22.18                    | 22.77                | 21.70                | 0-1                       | 1        |
|           |            | 3       | 0         | 21.99                    | 22.58                | 21.56                | 0-1                       | 1        |
|           |            | 3       | 1         | 22.03                    | 22.68                | 21.59                | 0-1                       | 1        |
|           | 64QAM      | 3       | 3         | 22.06                    | 22.68                | 21.65                | 0-1                       | 1        |
|           |            | 6       | 0         | 21.08                    | 21.64                | 20.58                | 0-2                       | 2        |
|           |            | 1       | 0         | 21.12                    | 21.87                | 20.83                | 0-2                       | 2        |
|           |            | 1       | 3         | 21.17                    | 21.87                | 20.76                | 0-2                       | 2        |
|           |            | 1       | 5         | 21.26                    | 21.78                | 20.69                | 0-2                       | 2        |
|           |            | 3       | 0         | 20.99                    | 21.66                | 20.59                | 0-2                       | 2        |
|           |            | 3       | 1         | 21.21                    | 21.77                | 20.71                | 0-2                       | 2        |
|           |            | 3       | 3         | 21.16                    | 21.75                | 20.69                | 0-2                       | 2        |
|           |            | 6       | 0         | 19.99                    | 20.69                | 19.64                | 0-3                       | 3        |

LTE Band 25\_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26055 Ch. 1851.5 MHz     | 26365 Ch. 1882.5 MHz | 26675 Ch. 1913.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 22.90                    | 23.54                | 22.52                | 0                         | 0        |
|           |            | 1       | 7         | 22.81                    | 23.57                | 22.55                | 0                         | 0        |
|           |            | 1       | 14        | 22.95                    | 23.58                | 22.55                | 0                         | 0        |
|           |            | 8       | 0         | 22.06                    | 22.66                | 21.63                | 0-1                       | 1        |
|           |            | 8       | 3         | 22.09                    | 22.64                | 21.60                | 0-1                       | 1        |
|           |            | 8       | 7         | 22.06                    | 22.67                | 21.67                | 0-1                       | 1        |
|           |            | 15      | 0         | 22.08                    | 22.69                | 21.67                | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.14                    | 22.91                | 21.71                | 0-1                       | 1        |
|           |            | 1       | 7         | 22.06                    | 22.71                | 21.62                | 0-1                       | 1        |
|           |            | 1       | 14        | 22.09                    | 22.73                | 21.74                | 0-1                       | 1        |
|           |            | 8       | 0         | 21.13                    | 21.69                | 20.72                | 0-2                       | 2        |
|           |            | 8       | 3         | 21.14                    | 21.69                | 20.68                | 0-2                       | 2        |
|           |            | 8       | 7         | 21.14                    | 21.72                | 20.74                | 0-2                       | 2        |
|           |            | 15      | 0         | 21.12                    | 21.70                | 20.67                | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.24                    | 21.89                | 20.76                | 0-2                       | 2        |
|           |            | 1       | 7         | 21.12                    | 21.75                | 20.69                | 0-2                       | 2        |
|           |            | 1       | 14        | 21.08                    | 21.76                | 20.70                | 0-2                       | 2        |
|           |            | 8       | 0         | 20.06                    | 20.64                | 19.67                | 0-3                       | 3        |
|           |            | 8       | 3         | 20.08                    | 20.65                | 19.65                | 0-3                       | 3        |
|           |            | 8       | 7         | 20.17                    | 20.69                | 19.65                | 0-3                       | 3        |
|           |            | 15      | 0         | 20.10                    | 20.71                | 19.68                | 0-3                       | 3        |

LTE Band 25\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26065 Ch. 1852.5 MHz     | 26365 Ch. 1882.5 MHz | 26665 Ch. 1912.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 22.96                    | 23.61                | 22.56                | 0                         | 0        |
|           |            | 1       | 12        | 22.97                    | 23.60                | 22.53                | 0                         | 0        |
|           |            | 1       | 24        | 22.99                    | 23.57                | 22.58                | 0                         | 0        |
|           |            | 12      | 0         | 22.07                    | 22.70                | 21.68                | 0-1                       | 1        |
|           |            | 12      | 6         | 22.10                    | 22.71                | 21.65                | 0-1                       | 1        |
|           |            | 12      | 11        | 22.12                    | 22.74                | 21.72                | 0-1                       | 1        |
|           | 16QAM      | 25      | 0         | 22.07                    | 22.65                | 21.71                | 0-1                       | 1        |
|           |            | 1       | 0         | 22.07                    | 22.85                | 21.75                | 0-1                       | 1        |
|           |            | 1       | 12        | 22.18                    | 22.86                | 21.82                | 0-1                       | 1        |
|           |            | 1       | 24        | 22.21                    | 22.90                | 21.81                | 0-1                       | 1        |
|           |            | 12      | 0         | 21.08                    | 21.68                | 20.70                | 0-2                       | 2        |
|           |            | 12      | 6         | 21.08                    | 21.67                | 20.66                | 0-2                       | 2        |
|           | 64QAM      | 12      | 11        | 21.10                    | 21.72                | 20.69                | 0-2                       | 2        |
|           |            | 25      | 0         | 21.12                    | 21.71                | 20.67                | 0-2                       | 2        |
|           |            | 1       | 0         | 21.27                    | 21.74                | 20.78                | 0-2                       | 2        |
|           |            | 1       | 12        | 21.23                    | 21.69                | 20.66                | 0-2                       | 2        |
|           |            | 1       | 24        | 21.26                    | 21.80                | 20.77                | 0-2                       | 2        |
|           |            | 12      | 0         | 20.13                    | 20.69                | 19.68                | 0-3                       | 3        |
|           |            | 12      | 6         | 20.10                    | 20.69                | 19.65                | 0-3                       | 3        |
|           |            | 12      | 11        | 20.08                    | 20.70                | 19.65                | 0-3                       | 3        |
|           |            | 25      | 0         | 20.11                    | 20.67                | 19.70                | 0-3                       | 3        |

LTE Band 25\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 26090 Ch. 1855 MHz       | 26365 Ch. 1882.5 MHz | 26640 Ch. 1910 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 22.98                    | 23.65                | 22.64              | 0                         | 0        |
|           |            | 1       | 24        | 23.01                    | 23.62                | 22.63              | 0                         | 0        |
|           |            | 1       | 49        | 23.09                    | 23.64                | 22.63              | 0                         | 0        |
|           |            | 25      | 0         | 22.10                    | 22.72                | 21.75              | 0-1                       | 1        |
|           |            | 25      | 12        | 22.12                    | 22.72                | 21.74              | 0-1                       | 1        |
|           |            | 25      | 24        | 22.13                    | 22.71                | 21.75              | 0-1                       | 1        |
|           | 16QAM      | 50      | 0         | 22.15                    | 22.77                | 21.76              | 0-1                       | 1        |
|           |            | 1       | 0         | 22.39                    | 22.94                | 21.95              | 0-1                       | 1        |
|           |            | 1       | 24        | 22.26                    | 22.80                | 21.84              | 0-1                       | 1        |
|           |            | 1       | 49        | 22.33                    | 22.85                | 21.90              | 0-1                       | 1        |
|           |            | 25      | 0         | 21.13                    | 21.72                | 20.75              | 0-2                       | 2        |
|           |            | 25      | 12        | 21.10                    | 21.71                | 20.75              | 0-2                       | 2        |
|           | 64QAM      | 25      | 24        | 21.13                    | 21.74                | 20.70              | 0-2                       | 2        |
|           |            | 50      | 0         | 21.19                    | 21.75                | 20.79              | 0-2                       | 2        |
|           |            | 1       | 0         | 21.19                    | 21.94                | 20.82              | 0-2                       | 2        |
|           |            | 1       | 24        | 21.21                    | 21.78                | 20.85              | 0-2                       | 2        |
|           |            | 1       | 49        | 21.20                    | 21.77                | 20.72              | 0-2                       | 2        |
|           |            | 25      | 0         | 20.15                    | 20.75                | 19.77              | 0-3                       | 3        |
|           |            | 25      | 12        | 20.15                    | 20.71                | 19.74              | 0-3                       | 3        |
|           |            | 25      | 24        | 20.17                    | 20.71                | 19.74              | 0-3                       | 3        |
|           |            | 50      | 0         | 20.15                    | 20.73                | 19.73              | 0-3                       | 3        |

LTE Band 25 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26115 Ch. 1857.5 MHz     | 26365 Ch. 1882.5 MHz | 26615 Ch. 1907.5 MHz |                           |          |
| 15        | QPSK       | 1       | 0         | 23.11                    | 23.72                | 22.71                | 0                         | 0        |
|           |            | 1       | 36        | 23.08                    | 23.63                | 22.62                | 0                         | 0        |
|           |            | 1       | 74        | 23.13                    | 23.69                | 22.69                | 0                         | 0        |
|           |            | 36      | 0         | 22.24                    | 22.79                | 21.81                | 0-1                       | 1        |
|           |            | 36      | 18        | 22.21                    | 22.81                | 21.83                | 0-1                       | 1        |
|           |            | 36      | 39        | 22.23                    | 22.83                | 21.78                | 0-1                       | 1        |
|           | 16QAM      | 75      | 0         | 22.23                    | 22.80                | 21.80                | 0-1                       | 1        |
|           |            | 1       | 0         | 22.34                    | 22.93                | 22.03                | 0-1                       | 1        |
|           |            | 1       | 36        | 22.29                    | 22.93                | 21.87                | 0-1                       | 1        |
|           |            | 1       | 74        | 22.30                    | 22.92                | 21.92                | 0-1                       | 1        |
|           |            | 36      | 0         | 21.21                    | 21.76                | 20.77                | 0-2                       | 2        |
|           |            | 36      | 18        | 21.19                    | 21.77                | 20.79                | 0-2                       | 2        |
|           | 64QAM      | 36      | 39        | 21.21                    | 21.76                | 20.77                | 0-2                       | 2        |
|           |            | 75      | 0         | 21.16                    | 21.79                | 20.76                | 0-2                       | 2        |
|           |            | 1       | 0         | 21.29                    | 21.85                | 20.96                | 0-2                       | 2        |
|           |            | 1       | 36        | 21.33                    | 21.84                | 20.86                | 0-2                       | 2        |
|           |            | 1       | 74        | 21.43                    | 21.93                | 20.86                | 0-2                       | 2        |
|           |            | 36      | 0         | 20.17                    | 20.77                | 19.79                | 0-3                       | 3        |
|           |            | 36      | 18        | 20.20                    | 20.76                | 19.81                | 0-3                       | 3        |
|           | 36         | 39      | 20.22     | 20.76                    | 19.77                | 0-3                  | 3                         |          |
|           | 75         | 0       | 20.17     | 20.75                    | 19.73                | 0-3                  | 3                         |          |

LTE Band 25 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 26140 Ch. 1860 MHz       | 26365 Ch. 1882.5 MHz | 26590 Ch. 1905 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 23.15                    | 23.68                | 22.78              | 0                         | 0        |
|           |            | 1       | 49        | 23.05                    | 23.66                | 22.68              | 0                         | 0        |
|           |            | 1       | 99        | 23.22                    | 23.69                | 22.74              | 0                         | 0        |
|           |            | 50      | 0         | 22.25                    | 22.80                | 21.78              | 0-1                       | 1        |
|           |            | 50      | 25        | 22.20                    | 22.77                | 21.82              | 0-1                       | 1        |
|           |            | 50      | 49        | 22.25                    | 22.78                | 21.82              | 0-1                       | 1        |
|           | 16QAM      | 100     | 0         | 22.28                    | 22.81                | 21.81              | 0-1                       | 1        |
|           |            | 1       | 0         | 22.40                    | 23.01                | 22.00              | 0-1                       | 1        |
|           |            | 1       | 49        | 22.22                    | 22.77                | 21.89              | 0-1                       | 1        |
|           |            | 1       | 99        | 22.40                    | 22.94                | 21.82              | 0-1                       | 1        |
|           |            | 50      | 0         | 21.23                    | 21.77                | 20.81              | 0-2                       | 2        |
|           |            | 50      | 25        | 21.20                    | 21.75                | 20.76              | 0-2                       | 2        |
|           | 64QAM      | 50      | 49        | 21.23                    | 21.77                | 20.81              | 0-2                       | 2        |
|           |            | 100     | 0         | 21.22                    | 21.76                | 20.76              | 0-2                       | 2        |
|           |            | 1       | 0         | 21.36                    | 21.88                | 21.08              | 0-2                       | 2        |
|           |            | 1       | 49        | 21.43                    | 21.80                | 20.85              | 0-2                       | 2        |
|           |            | 1       | 99        | 21.38                    | 21.90                | 21.00              | 0-2                       | 2        |
|           |            | 50      | 0         | 20.24                    | 20.80                | 19.83              | 0-3                       | 3        |
|           |            | 50      | 25        | 20.22                    | 20.76                | 19.80              | 0-3                       | 3        |
|           | 50         | 49      | 20.24     | 20.75                    | 19.81                | 0-3                | 3                         |          |
|           | 100        | 0       | 20.22     | 20.74                    | 19.78                | 0-3                | 3                         |          |

**[ 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         | 23.19                    | 23.78               | 23.09               | 0                         | 0        |
|           |            | 1       | 3         | 23.17                    | 23.76               | 23.08               | 0                         | 0        |
|           |            | 1       | 5         | 23.16                    | 23.79               | 23.13               | 0                         | 0        |
|           |            | 3       | 0         | 23.11                    | 23.75               | 23.07               | 0                         | 0        |
|           |            | 3       | 1         | 23.29                    | 23.85               | 23.20               | 0                         | 0        |
|           |            | 3       | 3         | 23.22                    | 23.77               | 23.09               | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 22.20                    | 22.69               | 22.05               | 0-1                       | 1        |
|           |            | 1       | 0         | 22.44                    | 22.97               | 22.32               | 0-1                       | 1        |
|           |            | 1       | 3         | 22.30                    | 22.90               | 22.25               | 0-1                       | 1        |
|           |            | 1       | 5         | 22.41                    | 22.99               | 22.29               | 0-1                       | 1        |
|           |            | 3       | 0         | 22.22                    | 22.80               | 22.06               | 0-1                       | 1        |
|           |            | 3       | 1         | 22.29                    | 22.91               | 22.15               | 0-1                       | 1        |
|           | 64QAM      | 3       | 3         | 22.32                    | 22.88               | 22.18               | 0-1                       | 1        |
|           |            | 6       | 0         | 21.28                    | 21.87               | 21.09               | 0-2                       | 2        |
|           |            | 1       | 0         | 21.38                    | 22.04               | 21.29               | 0-2                       | 2        |
|           |            | 1       | 3         | 21.37                    | 21.94               | 21.22               | 0-2                       | 2        |
|           |            | 1       | 5         | 21.51                    | 22.01               | 21.31               | 0-2                       | 2        |
|           |            | 3       | 0         | 21.31                    | 21.78               | 21.07               | 0-2                       | 2        |
|           |            | 3       | 1         | 21.45                    | 21.95               | 21.19               | 0-2                       | 2        |
|           |            | 3       | 3         | 21.31                    | 21.84               | 21.05               | 0-2                       | 2        |
|           |            | 6       | 0         | 20.33                    | 20.80               | 20.15               | 0-3                       | 3        |

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         | 23.08                    | 23.73               | 23.08               | 0                         | 0        |
|           |            | 1       | 7         | 23.07                    | 23.74               | 23.01               | 0                         | 0        |
|           |            | 1       | 14        | 23.18                    | 23.83               | 23.13               | 0                         | 0        |
|           |            | 8       | 0         | 22.22                    | 22.88               | 22.19               | 0-1                       | 1        |
|           |            | 8       | 3         | 22.21                    | 22.84               | 22.12               | 0-1                       | 1        |
|           |            | 8       | 7         | 22.22                    | 22.84               | 22.21               | 0-1                       | 1        |
|           |            | 15      | 0         | 22.28                    | 22.91               | 22.22               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.41                    | 23.09               | 22.38               | 0-1                       | 1        |
|           |            | 1       | 7         | 22.47                    | 23.04               | 22.35               | 0-1                       | 1        |
|           |            | 1       | 14        | 22.39                    | 23.00               | 22.28               | 0-1                       | 1        |
|           |            | 8       | 0         | 21.29                    | 21.88               | 21.23               | 0-2                       | 2        |
|           |            | 8       | 3         | 21.25                    | 21.87               | 21.22               | 0-2                       | 2        |
|           |            | 8       | 7         | 21.27                    | 21.90               | 21.19               | 0-2                       | 2        |
|           |            | 15      | 0         | 21.28                    | 21.87               | 21.23               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.41                    | 22.03               | 21.33               | 0-2                       | 2        |
|           |            | 1       | 7         | 21.15                    | 21.75               | 21.12               | 0-2                       | 2        |
|           |            | 1       | 14        | 21.32                    | 21.92               | 21.27               | 0-2                       | 2        |
|           |            | 8       | 0         | 20.22                    | 20.82               | 20.14               | 0-3                       | 3        |
|           |            | 8       | 3         | 20.25                    | 20.87               | 20.16               | 0-3                       | 3        |
|           |            | 8       | 7         | 20.24                    | 20.83               | 20.12               | 0-3                       | 3        |
|           |            | 15      | 0         | 20.24                    | 20.85               | 20.17               | 0-3                       | 3        |

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         | 23.17                    | 23.80               | 23.17               | 0                         | 0        |   |
|           |            | 1       | 12        | 23.12                    | 23.74               | 23.14               | 0                         | 0        |   |
|           |            | 1       | 24        | 23.15                    | 23.77               | 23.16               | 0                         | 0        |   |
|           |            | 12      | 0         | 22.30                    | 22.93               | 22.25               | 0-1                       | 1        |   |
|           |            | 12      | 6         | 22.31                    | 22.94               | 22.28               | 0-1                       | 1        |   |
|           |            | 12      | 11        | 22.27                    | 22.95               | 22.28               | 0-1                       | 1        |   |
|           | 16QAM      | 25      | 0         | 22.24                    | 22.90               | 22.26               | 0-1                       | 1        |   |
|           |            | 1       | 0         | 22.35                    | 23.00               | 22.44               | 0-1                       | 1        |   |
|           |            | 1       | 12        | 22.43                    | 23.15               | 22.44               | 0-1                       | 1        |   |
|           |            | 1       | 24        | 22.48                    | 23.19               | 22.37               | 0-1                       | 1        |   |
|           |            | 12      | 0         | 21.26                    | 21.93               | 21.28               | 0-2                       | 2        |   |
|           |            | 12      | 6         | 21.26                    | 21.91               | 21.29               | 0-2                       | 2        |   |
|           | 64QAM      | 12      | 11        | 21.25                    | 21.87               | 21.32               | 0-2                       | 2        |   |
|           |            | 25      | 0         | 21.22                    | 21.85               | 21.23               | 0-2                       | 2        |   |
|           |            | 1       | 0         | 21.38                    | 21.98               | 21.30               | 0-2                       | 2        |   |
|           |            | 1       | 12        | 21.23                    | 21.80               | 21.23               | 0-2                       | 2        |   |
|           |            | 1       | 24        | 21.37                    | 21.93               | 21.40               | 0-2                       | 2        |   |
|           |            | 12      | 0         | 20.21                    | 20.85               | 20.30               | 0-3                       | 3        |   |
|           |            |         | 12        | 6                        | 20.22               | 20.87               | 20.25                     | 0-3      | 3 |
|           |            |         | 12        | 11                       | 20.20               | 20.86               | 20.19                     | 0-3      | 3 |
|           |            |         | 25        | 0                        | 20.21               | 20.79               | 20.26                     | 0-3      | 3 |

LTE Band 26\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                   | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|--------------------------|---------------------|-------------------|---------------------------|----------|---|
|           |            |         |           | 26740 Ch. 819 MHz        | 26865 Ch. 831.5 MHz | 26990 Ch. 844 MHz |                           |          |   |
| 10 MHz    | QPSK       | 1       | 0         | 23.68                    | 23.85               | 23.75             | 0                         | 0        |   |
|           |            | 1       | 24        | 23.61                    | 23.79               | 23.77             | 0                         | 0        |   |
|           |            | 1       | 49        | 23.72                    | 23.86               | 23.75             | 0                         | 0        |   |
|           |            | 25      | 0         | 22.74                    | 22.92               | 22.82             | 0-1                       | 1        |   |
|           |            | 25      | 12        | 22.71                    | 22.86               | 22.84             | 0-1                       | 1        |   |
|           |            | 25      | 24        | 22.74                    | 22.89               | 22.83             | 0-1                       | 1        |   |
|           | 16QAM      | 50      | 0         | 22.83                    | 22.97               | 22.94             | 0-1                       | 1        |   |
|           |            | 1       | 0         | 23.04                    | 23.12               | 23.07             | 0-1                       | 1        |   |
|           |            | 1       | 24        | 22.75                    | 22.97               | 22.91             | 0-1                       | 1        |   |
|           |            | 1       | 49        | 22.82                    | 22.95               | 23.06             | 0-1                       | 1        |   |
|           |            | 25      | 0         | 21.70                    | 21.91               | 21.82             | 0-2                       | 2        |   |
|           |            | 25      | 12        | 21.69                    | 21.85               | 21.80             | 0-2                       | 2        |   |
|           | 64QAM      | 25      | 24        | 21.71                    | 21.85               | 21.76             | 0-2                       | 2        |   |
|           |            | 50      | 0         | 21.77                    | 21.88               | 21.88             | 0-2                       | 2        |   |
|           |            | 1       | 0         | 21.84                    | 22.11               | 22.06             | 0-2                       | 2        |   |
|           |            | 1       | 24        | 21.73                    | 21.96               | 21.85             | 0-2                       | 2        |   |
|           |            | 1       | 49        | 21.80                    | 21.92               | 21.89             | 0-2                       | 2        |   |
|           |            | 25      | 0         | 20.76                    | 20.91               | 20.81             | 0-3                       | 3        |   |
|           |            |         | 25        | 12                       | 20.71               | 20.87             | 20.77                     | 0-3      | 3 |
|           |            |         | 25        | 24                       | 20.68               | 20.88             | 20.75                     | 0-3      | 3 |
|           |            |         | 50        | 0                        | 20.77               | 20.86             | 20.81                     | 0-3      | 3 |

LTE Band 26 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                     |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|---------------------|---------------------------|----------|
|           |            |         |           | 26765 Ch. 821.5 MHz      | 26865 Ch. 831.5 MHz | 26965 Ch. 841.5 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.80                    | 23.91               | 23.83               | 0                         | 0        |
|           |            | 1       | 24        | 23.74                    | 23.78               | 23.75               | 0                         | 0        |
|           |            | 1       | 49        | 23.86                    | 23.88               | 23.67               | 0                         | 0        |
|           |            | 25      | 0         | 22.98                    | 22.96               | 22.97               | 0-1                       | 1        |
|           |            | 25      | 12        | 22.96                    | 23.01               | 22.92               | 0-1                       | 1        |
|           |            | 25      | 24        | 22.95                    | 22.99               | 22.94               | 0-1                       | 1        |
|           | 16QAM      | 50      | 0         | 22.94                    | 22.96               | 22.95               | 0-1                       | 1        |
|           |            | 1       | 0         | 22.87                    | 23.13               | 23.01               | 0-1                       | 1        |
|           |            | 1       | 24        | 22.86                    | 23.05               | 22.98               | 0-1                       | 1        |
|           |            | 1       | 49        | 23.00                    | 23.09               | 22.97               | 0-1                       | 1        |
|           |            | 25      | 0         | 21.85                    | 21.91               | 21.90               | 0-2                       | 2        |
|           |            | 25      | 12        | 21.86                    | 21.89               | 21.89               | 0-2                       | 2        |
|           | 64QAM      | 25      | 24        | 21.86                    | 21.93               | 21.88               | 0-2                       | 2        |
|           |            | 50      | 0         | 21.89                    | 21.91               | 21.91               | 0-2                       | 2        |
|           |            | 1       | 0         | 21.90                    | 22.04               | 21.98               | 0-2                       | 2        |
|           |            | 1       | 24        | 21.86                    | 21.84               | 21.94               | 0-2                       | 2        |
|           |            | 1       | 49        | 21.99                    | 21.92               | 21.84               | 0-2                       | 2        |
|           |            | 25      | 0         | 20.86                    | 20.94               | 20.87               | 0-3                       | 3        |
|           |            | 25      | 12        | 20.87                    | 20.90               | 20.85               | 0-3                       | 3        |
|           |            | 25      | 24        | 20.88                    | 20.87               | 20.82               | 0-3                       | 3        |
|           |            | 50      | 0         | 20.85                    | 20.83               | 20.83               | 0-3                       | 3        |

[ LTE Band 30 Conducted Power ]

LTE Band 30\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|--------------------------|--------------------|----------------------|---------------------------|----------|---|
|           |            |         |           | 27685 Ch. 2307.5 MHz     | 27710 Ch. 2310 MHz | 27735 Ch. 2312.5 MHz |                           |          |   |
| 5 MHz     | QPSK       | 1       | 0         | 22.12                    | 22.44              | 22.12                | 0                         | 0        |   |
|           |            | 1       | 12        | 22.16                    | 22.40              | 22.02                | 0                         | 0        |   |
|           |            | 1       | 24        | 22.11                    | 22.37              | 22.01                | 0                         | 0        |   |
|           |            | 12      | 0         | 21.24                    | 21.54              | 21.19                | 0-1                       | 1        |   |
|           |            | 12      | 6         | 21.28                    | 21.54              | 21.17                | 0-1                       | 1        |   |
|           |            | 12      | 11        | 21.23                    | 21.52              | 21.23                | 0-1                       | 1        |   |
|           | 16QAM      | 25      | 0         | 21.18                    | 21.46              | 21.18                | 0-1                       | 1        |   |
|           |            | 1       | 0         | 21.37                    | 21.62              | 21.31                | 0-1                       | 1        |   |
|           |            | 1       | 12        | 21.24                    | 21.55              | 21.31                | 0-1                       | 1        |   |
|           |            | 1       | 24        | 21.24                    | 21.51              | 21.17                | 0-1                       | 1        |   |
|           |            | 12      | 0         | 20.22                    | 20.49              | 20.15                | 0-2                       | 2        |   |
|           |            | 12      | 6         | 20.26                    | 20.47              | 20.07                | 0-2                       | 2        |   |
|           | 64QAM      | 12      | 11        | 20.20                    | 20.47              | 20.10                | 0-2                       | 2        |   |
|           |            | 25      | 0         | 20.12                    | 20.41              | 20.10                | 0-2                       | 2        |   |
|           |            | 1       | 0         | 20.31                    | 20.60              | 20.19                | 0-2                       | 2        |   |
|           |            | 1       | 12        | 20.21                    | 20.44              | 20.19                | 0-2                       | 2        |   |
|           |            | 1       | 24        | 20.25                    | 20.49              | 20.17                | 0-2                       | 2        |   |
|           |            | 12      | 0         | 19.17                    | 19.45              | 19.10                | 0-3                       | 3        |   |
|           | 5 MHz      | 64QAM   | 12        | 6                        | 19.15              | 19.46                | 19.10                     | 0-3      | 3 |
|           |            |         | 12        | 11                       | 19.13              | 19.40                | 19.06                     | 0-3      | 3 |
|           |            |         | 25        | 0                        | 19.16              | 19.40                | 19.02                     | 0-3      | 3 |

LTE Band 30\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 27710 Ch. 2310 MHz       |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | <b>22.45</b>             | 0                         | 0        |
|           |            | 1       | 24        | 22.42                    | 0                         | 0        |
|           |            | 1       | 49        | 22.42                    | 0                         | 0        |
|           |            | 25      | 0         | <b>21.53</b>             | 0-1                       | 1        |
|           |            | 25      | 12        | 21.49                    | 0-1                       | 1        |
|           |            | 25      | 24        | 21.47                    | 0-1                       | 1        |
|           |            | 50      | 0         | 21.58                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 21.70                    | 0-1                       | 1        |
|           |            | 1       | 24        | 21.45                    | 0-1                       | 1        |
|           |            | 1       | 49        | 21.54                    | 0-1                       | 1        |
|           |            | 25      | 0         | 20.48                    | 0-2                       | 2        |
|           |            | 25      | 12        | 20.42                    | 0-2                       | 2        |
|           |            | 25      | 24        | 20.40                    | 0-2                       | 2        |
|           | 64QAM      | 50      | 0         | 20.47                    | 0-2                       | 2        |
|           |            | 1       | 0         | 20.61                    | 0-2                       | 2        |
|           |            | 1       | 24        | 20.35                    | 0-2                       | 2        |
|           |            | 1       | 49        | 20.41                    | 0-2                       | 2        |
|           |            | 25      | 0         | 19.39                    | 0-3                       | 3        |
|           |            | 25      | 12        | 19.41                    | 0-3                       | 3        |
|           |            | 25      | 24        | 19.34                    | 0-3                       | 3        |
|           | 50         | 0       | 19.50     | 0-3                      | 3                         |          |



**[LTE TDD Band 38 Conducted Power]**

LTE Band 38\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 37775 Ch. 2572.5 MHz     | 38000 Ch. 2595 MHz | 38225 Ch. 2617.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 23.09                    | 23.19              | 23.00                | 0                         | 0        |
|           |            | 1       | 12        | 23.17                    | 23.22              | 22.91                | 0                         | 0        |
|           |            | 1       | 24        | 23.14                    | 23.23              | 23.02                | 0                         | 0        |
|           |            | 12      | 0         | 22.18                    | 22.27              | 22.08                | 0-1                       | 1        |
|           |            | 12      | 6         | 22.15                    | 22.23              | 22.12                | 0-1                       | 1        |
|           |            | 12      | 11        | 22.17                    | 22.25              | 22.12                | 0-1                       | 1        |
|           | 16QAM      | 25      | 0         | 22.20                    | 22.31              | 22.10                | 0-1                       | 1        |
|           |            | 1       | 0         | 22.18                    | 22.35              | 22.16                | 0-1                       | 1        |
|           |            | 1       | 12        | 22.19                    | 22.34              | 21.98                | 0-1                       | 1        |
|           |            | 1       | 24        | 22.21                    | 22.37              | 22.15                | 0-1                       | 1        |
|           |            | 12      | 0         | 21.16                    | 21.28              | 21.06                | 0-2                       | 2        |
|           |            | 12      | 6         | 21.14                    | 21.25              | 21.09                | 0-2                       | 2        |
|           | 64QAM      | 12      | 11        | 21.18                    | 21.26              | 21.10                | 0-2                       | 2        |
|           |            | 25      | 0         | 21.21                    | 21.34              | 21.14                | 0-2                       | 2        |
|           |            | 1       | 0         | 20.94                    | 21.04              | 20.87                | 0-2                       | 2        |
|           |            | 1       | 12        | 20.88                    | 20.98              | 20.69                | 0-2                       | 2        |
|           |            | 1       | 24        | 20.93                    | 21.04              | 20.82                | 0-2                       | 2        |
|           |            | 12      | 0         | 20.19                    | 20.29              | 20.07                | 0-3                       | 3        |
|           | 64QAM      | 12      | 6         | 20.16                    | 20.24              | 20.10                | 0-3                       | 3        |
|           |            | 12      | 11        | 20.17                    | 20.29              | 20.11                | 0-3                       | 3        |
|           |            | 25      | 0         | 20.20                    | 20.29              | 20.10                | 0-3                       | 3        |

LTE Band 38\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 37800 Ch. 2575 MHz       | 38000 Ch. 2595 MHz | 38200 Ch. 2615 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.23                    | 23.30              | 23.15              | 0                         | 0        |
|           |            | 1       | 24        | 23.11                    | 23.16              | 22.98              | 0                         | 0        |
|           |            | 1       | 49        | 23.15                    | 23.18              | 22.99              | 0                         | 0        |
|           |            | 25      | 0         | 22.27                    | 22.33              | 22.15              | 0-1                       | 1        |
|           |            | 25      | 12        | 22.27                    | 22.31              | 22.11              | 0-1                       | 1        |
|           |            | 25      | 24        | 22.26                    | 22.29              | 22.10              | 0-1                       | 1        |
|           | 16QAM      | 50      | 0         | 22.31                    | 22.34              | 22.13              | 0-1                       | 1        |
|           |            | 1       | 0         | 22.27                    | 22.36              | 22.15              | 0-1                       | 1        |
|           |            | 1       | 24        | 22.14                    | 22.24              | 22.03              | 0-1                       | 1        |
|           |            | 1       | 49        | 22.21                    | 22.24              | 22.10              | 0-1                       | 1        |
|           |            | 25      | 0         | 21.31                    | 21.38              | 21.18              | 0-2                       | 2        |
|           |            | 25      | 12        | 21.30                    | 21.35              | 21.13              | 0-2                       | 2        |
|           | 64QAM      | 25      | 24        | 21.28                    | 21.31              | 21.12              | 0-2                       | 2        |
|           |            | 50      | 0         | 21.30                    | 21.33              | 21.12              | 0-2                       | 2        |
|           |            | 1       | 0         | 21.00                    | 21.09              | 20.81              | 0-2                       | 2        |
|           |            | 1       | 24        | 20.89                    | 20.93              | 20.71              | 0-2                       | 2        |
|           |            | 1       | 49        | 20.94                    | 20.96              | 20.83              | 0-2                       | 2        |
|           |            | 25      | 0         | 20.27                    | 20.30              | 20.15              | 0-3                       | 3        |
|           | 64QAM      | 25      | 12        | 20.26                    | 20.27              | 20.09              | 0-3                       | 3        |
|           |            | 25      | 24        | 20.25                    | 20.27              | 20.11              | 0-3                       | 3        |
|           |            | 50      | 0         | 20.29                    | 20.32              | 20.10              | 0-3                       | 3        |

LTE Band 38 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 37825 Ch. 2507.5 MHz     | 38000 Ch. 2595 MHz | 38175 Ch. 2612.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 23.22                    | 23.31              | 23.16                | 0                         | 0        |
|           |            | 1       | 36        | 23.26                    | 23.25              | 22.97                | 0                         | 0        |
|           |            | 1       | 74        | 23.19                    | 23.21              | 23.02                | 0                         | 0        |
|           |            | 36      | 0         | 22.28                    | 22.35              | 22.19                | 0-1                       | 1        |
|           |            | 36      | 18        | 22.23                    | 22.30              | 22.15                | 0-1                       | 1        |
|           |            | 36      | 39        | 22.24                    | 22.28              | 22.10                | 0-1                       | 1        |
|           | 16QAM      | 75      | 0         | 22.25                    | 22.30              | 22.12                | 0-1                       | 1        |
|           |            | 1       | 0         | 22.31                    | 22.36              | 22.26                | 0-1                       | 1        |
|           |            | 1       | 36        | 22.24                    | 22.21              | 21.94                | 0-1                       | 1        |
|           |            | 1       | 74        | 22.26                    | 22.27              | 22.10                | 0-1                       | 1        |
|           |            | 36      | 0         | 21.26                    | 21.33              | 21.18                | 0-2                       | 2        |
|           |            | 36      | 18        | 21.20                    | 21.28              | 21.13                | 0-2                       | 2        |
|           | 64QAM      | 36      | 39        | 21.22                    | 21.26              | 21.08                | 0-2                       | 2        |
|           |            | 75      | 0         | 21.25                    | 21.31              | 21.12                | 0-2                       | 2        |
|           |            | 1       | 0         | 21.09                    | 21.14              | 20.94                | 0-2                       | 2        |
|           |            | 1       | 36        | 21.05                    | 21.03              | 20.68                | 0-2                       | 2        |
|           |            | 1       | 74        | 21.06                    | 21.02              | 20.77                | 0-2                       | 2        |
|           |            | 36      | 0         | 20.30                    | 20.36              | 20.19                | 0-3                       | 3        |
|           |            | 36      | 18        | 20.24                    | 20.30              | 20.16                | 0-3                       | 3        |
|           |            | 36      | 39        | 20.27                    | 20.29              | 20.11                | 0-3                       | 3        |
|           |            | 75      | 0         | 20.26                    | 20.30              | 20.12                | 0-3                       | 3        |

LTE Band 38 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 37850 Ch. 2580 MHz       | 38000 Ch. 2595 MHz | 38150 Ch. 2610 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         |                          | 23.37              |                    | 0                         | 0        |
|           |            | 1       | 49        |                          | 23.18              |                    | 0                         | 0        |
|           |            | 1       | 99        |                          | 23.17              |                    | 0                         | 0        |
|           |            | 50      | 0         |                          | 22.40              |                    | 0-1                       | 1        |
|           |            | 50      | 25        |                          | 22.36              |                    | 0-1                       | 1        |
|           |            | 50      | 49        |                          | 22.32              |                    | 0-1                       | 1        |
|           | 16QAM      | 100     | 0         |                          | 22.34              |                    | 0-1                       | 1        |
|           |            | 1       | 0         |                          | 22.45              |                    | 0-1                       | 1        |
|           |            | 1       | 49        |                          | 22.26              |                    | 0-1                       | 1        |
|           |            | 1       | 99        |                          | 22.25              |                    | 0-1                       | 1        |
|           |            | 50      | 0         |                          | 21.39              |                    | 0-2                       | 2        |
|           |            | 50      | 25        |                          | 21.34              |                    | 0-2                       | 2        |
|           | 64QAM      | 50      | 49        |                          | 21.31              |                    | 0-2                       | 2        |
|           |            | 100     | 0         |                          | 21.33              |                    | 0-2                       | 2        |
|           |            | 1       | 0         |                          | 21.39              |                    | 0-2                       | 2        |
|           |            | 1       | 49        |                          | 21.24              |                    | 0-2                       | 2        |
|           |            | 1       | 99        |                          | 21.23              |                    | 0-2                       | 2        |
|           |            | 50      | 0         |                          | 20.36              |                    | 0-3                       | 3        |
|           |            | 50      | 25        |                          | 20.31              |                    | 0-3                       | 3        |
|           |            | 50      | 49        |                          | 20.27              |                    | 0-3                       | 3        |
|           |            | 100     | 0         |                          | 20.32              |                    | 0-3                       | 3        |

[LTE Band 40 Low Side (MCC310) Conducted Power]  
 LTE Band 40 Low Side (MCC310) \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 38725 Ch. 2307.5 MHz     | 38750 Ch. 2310 MHz | 38775 Ch. 2312.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 10.89                    | 10.92              | 10.93                | 0                         | 0        |
|           |            | 1       | 12        | 10.99                    | 11.00              | 11.00                | 0                         | 0        |
|           |            | 1       | 24        | 10.91                    | 10.93              | 10.96                | 0                         | 0        |
|           |            | 12      | 0         | 10.93                    | 10.96              | 10.97                | 0-1                       | 0        |
|           |            | 12      | 6         | 10.88                    | 10.90              | 10.91                | 0-1                       | 0        |
|           |            | 12      | 11        | 10.91                    | 10.92              | 10.94                | 0-1                       | 0        |
|           |            | 25      | 0         | 10.83                    | 10.86              | 10.89                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 11.09                    | 11.02              | 11.05                | 0-1                       | 0        |
|           |            | 1       | 12        | 11.05                    | 11.00              | 11.00                | 0-1                       | 0        |
|           |            | 1       | 24        | 11.01                    | 11.01              | 10.97                | 0-1                       | 0        |
|           |            | 12      | 0         | 10.95                    | 11.01              | 10.99                | 0-2                       | 0        |
|           |            | 12      | 6         | 10.90                    | 10.95              | 10.94                | 0-2                       | 0        |
|           |            | 12      | 11        | 10.93                    | 10.99              | 10.96                | 0-2                       | 0        |
|           |            | 25      | 0         | 10.95                    | 10.96              | 10.98                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 10.97                    | 11.09              | 11.07                | 0-2                       | 0        |
|           |            | 1       | 12        | 10.94                    | 11.05              | 11.01                | 0-2                       | 0        |
|           |            | 1       | 24        | 10.96                    | 11.04              | 11.04                | 0-2                       | 0        |
|           |            | 12      | 0         | 10.93                    | 10.94              | 10.96                | 0-3                       | 0        |
|           |            | 12      | 6         | 10.88                    | 10.89              | 10.91                | 0-3                       | 0        |
|           |            | 12      | 11        | 10.91                    | 10.92              | 10.94                | 0-3                       | 0        |
|           |            | 25      | 0         | 10.87                    | 10.96              | 10.91                | 0-3                       | 0        |

LTE Band 40 Low Side (MCC310) \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 38750 Ch. 2310 MHz       |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 11.01                    | 0                         | 0        |
|           |            | 1       | 24        | 10.85                    | 0                         | 0        |
|           |            | 1       | 49        | 10.89                    | 0                         | 0        |
|           |            | 25      | 0         | 10.89                    | 0-1                       | 0        |
|           |            | 25      | 12        | 10.88                    | 0-1                       | 0        |
|           |            | 25      | 24        | 10.87                    | 0-1                       | 0        |
|           |            | 50      | 0         | 10.87                    | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 11.13                    | 0-1                       | 0        |
|           |            | 1       | 24        | 10.98                    | 0-1                       | 0        |
|           |            | 1       | 49        | 11.04                    | 0-1                       | 0        |
|           |            | 25      | 0         | 11.00                    | 0-2                       | 0        |
|           |            | 25      | 12        | 10.99                    | 0-2                       | 0        |
|           |            | 25      | 24        | 10.95                    | 0-2                       | 0        |
|           |            | 50      | 0         | 10.95                    | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 11.02                    | 0-2                       | 0        |
|           |            | 1       | 24        | 10.90                    | 0-2                       | 0        |
|           |            | 1       | 49        | 10.99                    | 0-2                       | 0        |
|           |            | 25      | 0         | 10.98                    | 0-3                       | 0        |
|           |            | 25      | 12        | 10.95                    | 0-3                       | 0        |
|           |            | 25      | 24        | 10.95                    | 0-3                       | 0        |

|  |  |    |   |       |     |   |
|--|--|----|---|-------|-----|---|
|  |  | 50 | 0 | 10.95 | 0-3 | 0 |
|--|--|----|---|-------|-----|---|

[LTE Band 40 Upper Side (MCC310) Conducted Power]

LTE Band 40 Upper Side (MCC310) 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 39175 Ch. 2352.5 MHz     | 39200 Ch. 2355 MHz | 39225 Ch. 2357.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 10.92                    | 10.95              | 10.96                | 0                         | 0        |
|           |            | 1       | 12        | 10.93                    | 10.99              | 10.94                | 0                         | 0        |
|           |            | 1       | 24        | 10.96                    | 11.00              | 11.00                | 0                         | 0        |
|           |            | 12      | 0         | 10.98                    | 11.02              | 11.01                | 0-1                       | 0        |
|           |            | 12      | 6         | 10.94                    | 10.96              | 10.99                | 0-1                       | 0        |
|           |            | 12      | 11        | 10.95                    | 10.96              | 11.00                | 0-1                       | 0        |
|           | 16QAM      | 25      | 0         | 10.92                    | 10.96              | 10.96                | 0-1                       | 0        |
|           |            | 1       | 0         | 11.00                    | 11.06              | 11.08                | 0-1                       | 0        |
|           |            | 1       | 12        | 10.98                    | 11.02              | 11.00                | 0-1                       | 0        |
|           |            | 1       | 24        | 10.94                    | 11.05              | 10.96                | 0-1                       | 0        |
|           |            | 12      | 0         | 11.03                    | 11.06              | 11.06                | 0-2                       | 0        |
|           |            | 12      | 6         | 10.97                    | 11.01              | 11.01                | 0-2                       | 0        |
|           | 64QAM      | 12      | 11        | 11.03                    | 11.05              | 11.05                | 0-2                       | 0        |
|           |            | 25      | 0         | 11.00                    | 11.04              | 11.05                | 0-2                       | 0        |
|           |            | 1       | 0         | 10.94                    | 10.78              | 10.82                | 0-2                       | 0        |
|           |            | 1       | 12        | 10.95                    | 10.69              | 10.73                | 0-2                       | 0        |
|           |            | 1       | 24        | 10.92                    | 10.72              | 10.92                | 0-2                       | 0        |
|           |            | 12      | 0         | 11.02                    | 11.05              | 11.05                | 0-3                       | 0        |
|           |            | 12      | 6         | 10.98                    | 10.99              | 11.03                | 0-3                       | 0        |
|           |            | 12      | 11        | 11.00                    | 11.04              | 11.05                | 0-3                       | 0        |
|           |            | 25      | 0         | 11.00                    | 11.02              | 11.02                | 0-3                       | 0        |

LTE Band 40 Upper Side (MCC310) 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------------|----------|
|           |            |         |           | 39200 Ch. 2355 MHz       |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 11.03                    | 0                         | 0        |
|           |            | 1       | 24        | 10.90                    | 0                         | 0        |
|           |            | 1       | 49        | 10.94                    | 0                         | 0        |
|           |            | 25      | 0         | 10.95                    | 0-1                       | 0        |
|           |            | 25      | 12        | 10.94                    | 0-1                       | 0        |
|           |            | 25      | 24        | 10.93                    | 0-1                       | 0        |
|           | 16QAM      | 50      | 0         | 10.93                    | 0-1                       | 0        |
|           |            | 1       | 0         | 11.02                    | 0-1                       | 0        |
|           |            | 1       | 24        | 10.92                    | 0-1                       | 0        |
|           |            | 1       | 49        | 11.06                    | 0-1                       | 0        |
|           |            | 25      | 0         | 11.06                    | 0-2                       | 0        |
|           |            | 25      | 12        | 11.06                    | 0-2                       | 0        |
|           | 64QAM      | 25      | 24        | 11.04                    | 0-2                       | 0        |
|           |            | 50      | 0         | 10.99                    | 0-2                       | 0        |
|           |            | 1       | 0         | 10.96                    | 0-2                       | 0        |
|           |            | 1       | 24        | 10.84                    | 0-2                       | 0        |
|           |            | 1       | 49        | 10.87                    | 0-2                       | 0        |
|           |            | 25      | 0         | 11.03                    | 0-3                       | 0        |
|           |            | 25      | 12        | 10.99                    | 0-3                       | 0        |
|           |            | 25      | 24        | 11.01                    | 0-3                       | 0        |
|           |            | 50      | 0         | 10.99                    | 0-3                       | 0        |

**[ LTE Band 41 Conducted Power ] - Power Class 3**

LTE Band 41 \_ 5 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                         |                         |                         |                         | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|----------|
|            |            |         |           | 39675 Ch.<br>2498.5 MHz  | 40148 Ch.<br>2545.8 MHz | 40620 Ch.<br>2593.0 MHz | 41093 Ch.<br>2640.3 MHz | 41565 Ch.<br>2687.5 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 22.31                    | 22.29                   | 22.45                   | 22.27                   | 22.11                   | 0                        | 0        |
|            |            | 1       | 12        | 22.24                    | 22.22                   | 22.47                   | 22.34                   | 22.17                   | 0                        | 0        |
|            |            | 1       | 24        | 22.35                    | 22.33                   | 22.51                   | 22.31                   | 22.13                   | 0                        | 0        |
|            |            | 12      | 0         | 21.39                    | 21.38                   | 21.54                   | 21.31                   | 21.16                   | 0-1                      | 1        |
|            |            | 12      | 6         | 21.40                    | 21.41                   | 21.48                   | 21.25                   | 21.09                   | 0-1                      | 1        |
|            |            | 12      | 11        | 21.41                    | 21.41                   | 21.49                   | 21.27                   | 21.11                   | 0-1                      | 1        |
|            | 16QAM      | 25      | 0         | 21.59                    | 21.61                   | 21.62                   | 21.47                   | 21.30                   | 0-1                      | 1        |
|            |            | 1       | 0         | 21.35                    | 21.24                   | 21.50                   | 21.40                   | 21.17                   | 0-1                      | 1        |
|            |            | 1       | 12        | 21.25                    | 21.13                   | 21.44                   | 21.37                   | 21.15                   | 0-1                      | 1        |
|            |            | 1       | 24        | 21.36                    | 21.21                   | 21.44                   | 21.38                   | 21.09                   | 0-1                      | 1        |
|            |            | 12      | 0         | 20.27                    | 20.24                   | 20.44                   | 20.18                   | 20.04                   | 0-2                      | 2        |
|            |            | 12      | 6         | 20.27                    | 20.28                   | 20.39                   | 20.09                   | 19.96                   | 0-2                      | 2        |
|            | 64QAM      | 12      | 11        | 20.29                    | 20.28                   | 20.42                   | 20.15                   | 19.99                   | 0-2                      | 2        |
|            |            | 25      | 0         | 20.49                    | 20.46                   | 20.59                   | 20.41                   | 20.26                   | 0-2                      | 2        |
|            |            | 1       | 0         | 20.11                    | 20.08                   | 20.28                   | 20.06                   | 19.81                   | 0-2                      | 2        |
|            |            | 1       | 12        | 19.99                    | 19.92                   | 20.21                   | 20.02                   | 19.80                   | 0-2                      | 2        |
|            |            | 1       | 24        | 20.08                    | 19.98                   | 20.27                   | 19.99                   | 19.71                   | 0-2                      | 2        |
|            |            | 12      | 0         | 19.25                    | 19.19                   | 19.45                   | 19.22                   | 19.07                   | 0-3                      | 3        |
|            |            | 12      | 6         | 19.27                    | 19.24                   | 19.39                   | 19.15                   | 18.99                   | 0-3                      | 3        |
|            |            | 12      | 11        | 19.28                    | 19.25                   | 19.42                   | 19.19                   | 19.00                   | 0-3                      | 3        |
|            |            | 25      | 0         | 19.42                    | 19.40                   | 19.54                   | 19.33                   | 19.17                   | 0-3                      | 3        |

LTE Band 41 \_ 10 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                       |                       |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|            |            |         |           | 39700 Ch.<br>2501 MHz    | 40160 Ch.<br>2547 MHz | 40620 Ch.<br>2593 MHz | 41080 Ch.<br>2639 MHz | 41540 Ch.<br>2685 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 22.38                    | 22.38                 | 22.56                 | 22.40                 | 22.25                 | 0                         | 0        |
|            |            | 1       | 24        | 22.23                    | 22.21                 | 22.42                 | 22.24                 | 22.08                 | 0                         | 0        |
|            |            | 1       | 49        | 22.26                    | 22.25                 | 22.43                 | 22.25                 | 22.06                 | 0                         | 0        |
|            |            | 25      | 0         | 21.57                    | 21.62                 | 21.62                 | 21.51                 | 21.33                 | 0-1                       | 1        |
|            |            | 25      | 12        | 21.53                    | 21.57                 | 21.60                 | 21.50                 | 21.32                 | 0-1                       | 1        |
|            |            | 25      | 24        | 21.55                    | 21.57                 | 21.59                 | 21.46                 | 21.28                 | 0-1                       | 1        |
|            |            | 50      | 0         | 21.61                    | 21.64                 | 21.67                 | 21.58                 | 21.40                 | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 21.35                    | 21.26                 | 21.51                 | 21.23                 | 21.15                 | 0-1                       | 1        |
|            |            | 1       | 24        | 21.20                    | 21.10                 | 21.39                 | 21.11                 | 21.03                 | 0-1                       | 1        |
|            |            | 1       | 49        | 21.24                    | 21.19                 | 21.37                 | 21.18                 | 21.00                 | 0-1                       | 1        |
|            |            | 25      | 0         | 20.48                    | 20.46                 | 20.60                 | 20.47                 | 20.32                 | 0-2                       | 2        |
|            |            | 25      | 12        | 20.45                    | 20.43                 | 20.58                 | 20.45                 | 20.29                 | 0-2                       | 2        |
|            |            | 25      | 24        | 20.43                    | 20.44                 | 20.55                 | 20.41                 | 20.25                 | 0-2                       | 2        |
|            |            | 50      | 0         | 20.48                    | 20.47                 | 20.63                 | 20.48                 | 20.33                 | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 20.11                    | 19.93                 | 20.27                 | 20.02                 | 19.97                 | 0-2                       | 2        |
|            |            | 1       | 24        | 20.01                    | 19.84                 | 20.16                 | 19.86                 | 19.84                 | 0-2                       | 2        |
|            |            | 1       | 49        | 20.07                    | 19.88                 | 20.18                 | 19.94                 | 19.84                 | 0-2                       | 2        |
|            |            | 25      | 0         | 19.40                    | 19.41                 | 19.56                 | 19.39                 | 19.24                 | 0-3                       | 3        |
|            |            | 25      | 12        | 19.36                    | 19.35                 | 19.52                 | 19.36                 | 19.21                 | 0-3                       | 3        |
|            |            | 25      | 24        | 19.38                    | 19.38                 | 19.52                 | 19.34                 | 19.18                 | 0-3                       | 3        |
|            |            | 50      | 0         | 19.45                    | 19.44                 | 19.59                 | 19.45                 | 19.30                 | 0-3                       | 3        |

LTE Band 41 \_ 15 MHz Bandwidth- Power Class 3

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39725 Ch. 2503.5 MHz     | 40173 Ch. 2548.3 MHz | 40620 Ch. 2593.0 MHz | 41068 Ch. 2637.8 MHz | 41515 Ch. 2682.5 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 22.36                    | 22.37                | 22.55                | 22.37                | 22.25                | 0                         | 0        |
|            |            | 1       | 36        | 22.23                    | 22.22                | 22.48                | 22.37                | 22.23                | 0                         | 0        |
|            |            | 1       | 74        | 22.27                    | 22.28                | 22.47                | 22.29                | 22.11                | 0                         | 0        |
|            |            | 36      | 0         | 21.49                    | 21.52                | 21.62                | 21.46                | 21.33                | 0-1                       | 1        |
|            |            | 36      | 18        | 21.48                    | 21.49                | 21.58                | 21.41                | 21.26                | 0-1                       | 1        |
|            |            | 36      | 39        | 21.44                    | 21.44                | 21.56                | 21.41                | 21.25                | 0-1                       | 1        |
|            | 16QAM      | 75      | 0         | 21.54                    | 21.58                | 21.59                | 21.46                | 21.30                | 0-1                       | 1        |
|            |            | 1       | 0         | 21.28                    | 21.35                | 21.61                | 21.39                | 21.25                | 0-1                       | 1        |
|            |            | 1       | 36        | 21.10                    | 21.17                | 21.44                | 21.36                | 21.19                | 0-1                       | 1        |
|            |            | 1       | 74        | 21.16                    | 21.30                | 21.50                | 21.37                | 21.07                | 0-1                       | 1        |
|            |            | 36      | 0         | 20.35                    | 20.34                | 20.53                | 20.35                | 20.22                | 0-2                       | 2        |
|            |            | 36      | 18        | 20.34                    | 20.33                | 20.49                | 20.29                | 20.15                | 0-2                       | 2        |
|            | 64QAM      | 36      | 39        | 20.29                    | 20.30                | 20.47                | 20.29                | 20.13                | 0-2                       | 2        |
|            |            | 75      | 0         | 20.42                    | 20.42                | 20.55                | 20.39                | 20.24                | 0-2                       | 2        |
|            |            | 1       | 0         | 20.16                    | 20.07                | 20.20                | 20.09                | 19.99                | 0-2                       | 2        |
|            |            | 1       | 36        | 19.96                    | 19.86                | 20.07                | 19.95                | 19.89                | 0-2                       | 2        |
|            |            | 1       | 74        | 20.04                    | 19.97                | 20.06                | 19.95                | 19.81                | 0-2                       | 2        |
|            |            | 36      | 0         | 19.36                    | 19.34                | 19.53                | 19.33                | 19.22                | 0-3                       | 3        |
|            | 36         | 18      | 19.34     | 19.32                    | 19.49                | 19.29                | 19.15                | 0-3                  | 3                         |          |
|            | 36         | 39      | 19.30     | 19.27                    | 19.47                | 19.28                | 19.13                | 0-3                  | 3                         |          |
|            | 75         | 0       | 19.39     | 19.39                    | 19.53                | 19.35                | 19.22                | 0-3                  | 3                         |          |

LTE Band 41 \_ 20 MHz Bandwidth - Power Class 3

| 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         | 22.70                    | 22.40                | 22.57                | 22.45                | 22.61                | 0                         | 0        |
|            |            | 1       | 49        | 22.50                    | 22.18                | 22.40                | 22.24                | 22.40                | 0                         | 0        |
|            |            | 1       | 99        | 22.50                    | 22.24                | 22.42                | 22.25                | 22.37                | 0                         | 0        |
|            |            | 50      | 0         | 21.96                    | 21.68                | 21.70                | 21.60                | 21.77                | 0-1                       | 1        |
|            |            | 50      | 25        | 21.92                    | 21.61                | 21.64                | 21.56                | 21.72                | 0-1                       | 1        |
|            |            | 50      | 49        | 21.89                    | 21.57                | 21.62                | 21.52                | 21.67                | 0-1                       | 1        |
|            |            | 100     | 0         | 21.89                    | 21.59                | 21.63                | 21.50                | 21.66                | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 21.68                    | 21.35                | 21.53                | 21.55                | 21.74                | 0-1                       | 1        |
|            |            | 1       | 49        | 21.50                    | 21.12                | 21.34                | 21.32                | 21.49                | 0-1                       | 1        |
|            |            | 1       | 99        | 21.51                    | 21.21                | 21.36                | 21.35                | 21.41                | 0-1                       | 1        |
|            |            | 50      | 0         | 20.81                    | 20.52                | 20.66                | 20.52                | 20.71                | 0-2                       | 2        |
|            |            | 50      | 25        | 20.76                    | 20.46                | 20.60                | 20.48                | 20.66                | 0-2                       | 2        |
|            |            | 50      | 49        | 20.73                    | 20.44                | 20.57                | 20.45                | 20.59                | 0-2                       | 2        |
|            |            | 100     | 0         | 20.75                    | 20.46                | 20.60                | 20.44                | 20.60                | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 20.28                    | 19.98                | 20.29                | 20.21                | 20.32                | 0-2                       | 2        |
|            |            | 1       | 49        | 20.11                    | 19.79                | 20.12                | 19.97                | 20.12                | 0-2                       | 2        |
|            |            | 1       | 99        | 20.08                    | 19.87                | 20.16                | 19.98                | 20.00                | 0-2                       | 2        |
|            |            | 50      | 0         | 19.78                    | 19.47                | 19.63                | 19.48                | 19.66                | 0-3                       | 3        |
|            |            | 50      | 25        | 19.73                    | 19.42                | 19.57                | 19.44                | 19.62                | 0-3                       | 3        |
|            |            | 50      | 49        | 19.70                    | 19.40                | 19.55                | 19.39                | 19.55                | 0-3                       | 3        |
|            |            | 100     | 0         | 19.69                    | 19.39                | 19.56                | 19.40                | 19.56                | 0-3                       | 3        |

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

**[ LTE Band 41 Conducted Power ] - Power Class 2**

LTE Band 41 \_ 5 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                         |                         |                         |                         | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|----------|
|            |            |         |           | 39675 Ch.<br>2498.5 MHz  | 40148 Ch.<br>2545.8 MHz | 40620 Ch.<br>2593.0 MHz | 41093 Ch.<br>2640.3 MHz | 41565 Ch.<br>2687.5 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 25.36                    | 25.43                   | 25.42                   | 25.16                   | 25.05                   | 0                        | 0        |
|            |            | 1       | 12        | 25.33                    | 25.38                   | 25.51                   | 25.24                   | 25.12                   | 0                        | 0        |
|            |            | 1       | 24        | 25.34                    | 25.40                   | 25.38                   | 25.11                   | 24.99                   | 0                        | 0        |
|            |            | 12      | 0         | 24.43                    | 24.50                   | 24.52                   | 24.20                   | 24.13                   | 0-1                      | 1        |
|            |            | 12      | 6         | 24.47                    | 24.56                   | 24.45                   | 24.13                   | 24.10                   | 0-1                      | 1        |
|            |            | 12      | 11        | 24.42                    | 24.48                   | 24.51                   | 24.20                   | 24.10                   | 0-1                      | 1        |
|            | 16QAM      | 25      | 0         | 24.35                    | 24.41                   | 24.49                   | 24.17                   | 24.10                   | 0-1                      | 1        |
|            |            | 1       | 0         | 24.55                    | 24.80                   | 24.70                   | 24.43                   | 24.23                   | 0-1                      | 1        |
|            |            | 1       | 12        | 24.51                    | 24.70                   | 24.77                   | 24.51                   | 24.25                   | 0-1                      | 1        |
|            |            | 1       | 24        | 24.55                    | 24.79                   | 24.67                   | 24.40                   | 24.17                   | 0-1                      | 1        |
|            |            | 12      | 0         | 23.43                    | 23.45                   | 23.51                   | 23.09                   | 23.07                   | 0-2                      | 2        |
|            |            | 12      | 6         | 23.46                    | 23.48                   | 23.53                   | 23.03                   | 23.01                   | 0-2                      | 2        |
|            | 64QAM      | 12      | 11        | 23.41                    | 23.42                   | 23.57                   | 23.08                   | 23.01                   | 0-2                      | 2        |
|            |            | 25      | 0         | 23.30                    | 23.36                   | 23.54                   | 23.12                   | 23.09                   | 0-2                      | 2        |
|            |            | 1       | 0         | 23.12                    | 23.27                   | 22.82                   | 23.32                   | 23.15                   | 0-2                      | 2        |
|            |            | 1       | 12        | 22.90                    | 23.21                   | 22.80                   | 23.35                   | 23.13                   | 0-2                      | 2        |
|            |            | 1       | 24        | 23.14                    | 23.26                   | 22.81                   | 23.32                   | 23.09                   | 0-2                      | 2        |
|            |            | 12      | 0         | 22.35                    | 22.30                   | 22.50                   | 22.20                   | 22.13                   | 0-3                      | 3        |
|            | 12         | 6       | 22.38     | 22.35                    | 22.47                   | 22.15                   | 22.09                   | 0-3                     | 3                        |          |
|            | 12         | 11      | 22.30     | 22.29                    | 22.50                   | 22.17                   | 22.07                   | 0-3                     | 3                        |          |
|            | 25         | 0       | 22.19     | 22.27                    | 22.45                   | 22.10                   | 22.09                   | 0-3                     | 3                        |          |

LTE Band 41 \_ 10 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                       |                       |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|            |            |         |           | 39700 Ch.<br>2501 MHz    | 40160 Ch.<br>2547 MHz | 40620 Ch.<br>2593 MHz | 41080 Ch.<br>2639 MHz | 41540 Ch.<br>2685 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 25.33                    | 25.44                 | 25.44                 | 25.17                 | 25.13                 | 0                         | 0        |
|            |            | 1       | 24        | 25.28                    | 25.35                 | 25.37                 | 25.08                 | 25.03                 | 0                         | 0        |
|            |            | 1       | 49        | 25.29                    | 25.33                 | 25.33                 | 25.12                 | 25.01                 | 0                         | 0        |
|            |            | 25      | 0         | 24.31                    | 24.39                 | 24.44                 | 24.16                 | 24.11                 | 0-1                       | 1        |
|            |            | 25      | 12        | 24.29                    | 24.37                 | 24.43                 | 24.13                 | 24.07                 | 0-1                       | 1        |
|            |            | 25      | 24        | 24.29                    | 24.36                 | 24.39                 | 24.12                 | 24.06                 | 0-1                       | 1        |
|            |            | 50      | 0         | 24.51                    | 24.65                 | 24.49                 | 24.29                 | 24.24                 | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 24.64                    | 24.60                 | 24.75                 | 24.35                 | 24.27                 | 0-1                       | 1        |
|            |            | 1       | 24        | 24.51                    | 24.53                 | 24.66                 | 24.24                 | 24.17                 | 0-1                       | 1        |
|            |            | 1       | 49        | 24.55                    | 24.48                 | 24.64                 | 24.25                 | 24.16                 | 0-1                       | 1        |
|            |            | 25      | 0         | 23.32                    | 23.36                 | 23.51                 | 23.10                 | 23.06                 | 0-2                       | 2        |
|            |            | 25      | 12        | 23.29                    | 23.33                 | 23.49                 | 23.07                 | 23.02                 | 0-2                       | 2        |
|            |            | 25      | 24        | 23.29                    | 23.35                 | 23.46                 | 23.06                 | 23.00                 | 0-2                       | 2        |
|            | 64QAM      | 50      | 0         | 23.46                    | 23.56                 | 23.47                 | 23.22                 | 23.18                 | 0-2                       | 2        |
|            |            | 1       | 0         | 22.98                    | 23.29                 | 23.30                 | 23.29                 | 23.26                 | 0-2                       | 2        |
|            |            | 1       | 24        | 22.91                    | 23.18                 | 23.17                 | 23.17                 | 23.13                 | 0-2                       | 2        |
|            |            | 1       | 49        | 22.90                    | 23.22                 | 23.15                 | 23.17                 | 23.10                 | 0-2                       | 2        |
|            |            | 25      | 0         | 22.26                    | 22.27                 | 22.45                 | 22.10                 | 22.07                 | 0-3                       | 3        |
|            |            | 25      | 12        | 22.22                    | 22.24                 | 22.42                 | 22.08                 | 22.04                 | 0-3                       | 3        |
|            |            | 25      | 24        | 22.23                    | 22.24                 | 22.38                 | 22.07                 | 22.01                 | 0-3                       | 3        |
|            |            | 50      | 0         | 22.40                    | 22.50                 | 22.45                 | 22.23                 | 22.20                 | 0-3                       | 3        |

LTE Band 41\_ 15 MHz Bandwidth- Power Class 2

| Band width | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|--------------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39725 Ch. 2503.5 MHz     | 40173 Ch. 2548.3 MHz | 40620 Ch. 2593.0 MHz | 41068 Ch. 2637.8 MHz | 41515 Ch. 2682.5 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 25.33                    | 25.47                | 25.47                | 25.22                | 25.19                | 0                         | 0        |
|            |            | 1       | 36        | 25.32                    | 25.38                | 25.40                | 25.23                | 25.13                | 0                         | 0        |
|            |            | 1       | 74        | 25.27                    | 25.36                | 25.32                | 25.11                | 25.03                | 0                         | 0        |
|            |            | 36      | 0         | 24.46                    | 24.60                | 24.55                | 24.28                | 24.25                | 0-1                       | 1        |
|            |            | 36      | 18        | 24.41                    | 24.52                | 24.53                | 24.23                | 24.19                | 0-1                       | 1        |
|            |            | 36      | 39        | 24.42                    | 24.51                | 24.45                | 24.25                | 24.19                | 0-1                       | 1        |
|            | 16QAM      | 75      | 0         | 24.41                    | 24.53                | 24.50                | 24.27                | 24.22                | 0-1                       | 1        |
|            |            | 1       | 0         | 24.34                    | 24.73                | 24.52                | 24.52                | 24.44                | 0-1                       | 1        |
|            |            | 1       | 36        | 24.28                    | 24.63                | 24.43                | 24.46                | 24.51                | 0-1                       | 1        |
|            |            | 1       | 74        | 24.23                    | 24.63                | 24.33                | 24.39                | 24.41                | 0-1                       | 1        |
|            |            | 36      | 0         | 23.38                    | 23.47                | 23.49                | 23.21                | 23.22                | 0-2                       | 2        |
|            |            | 36      | 18        | 23.34                    | 23.41                | 23.47                | 23.16                | 23.13                | 0-2                       | 2        |
|            | 64QAM      | 36      | 39        | 23.36                    | 23.40                | 23.39                | 23.17                | 23.12                | 0-2                       | 2        |
|            |            | 75      | 0         | 23.35                    | 23.44                | 23.47                | 23.21                | 23.18                | 0-2                       | 2        |
|            |            | 1       | 0         | 23.23                    | 23.38                | 23.47                | 23.15                | 23.41                | 0-2                       | 2        |
|            |            | 1       | 36        | 23.20                    | 23.46                | 23.40                | 23.04                | 23.19                | 0-2                       | 2        |
|            |            | 1       | 74        | 23.13                    | 23.43                | 23.31                | 23.03                | 23.23                | 0-2                       | 2        |
|            |            | 36      | 0         | 22.31                    | 22.44                | 22.49                | 22.25                | 22.22                | 0-3                       | 3        |
|            | 36         | 18      | 22.27     | 22.41                    | 22.47                | 22.19                | 22.16                | 0-3                  | 3                         |          |
|            | 36         | 39      | 22.27     | 22.40                    | 22.40                | 22.19                | 22.16                | 0-3                  | 3                         |          |
|            | 75         | 0       | 22.30     | 22.42                    | 22.46                | 22.18                | 22.15                | 0-3                  | 3                         |          |

LTE Band 41\_ 20 MHz Bandwidth - Power Class 2

| 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         | 25.64                    | 25.47                | 25.49                | 25.27                | 25.52                | 0                         | 0        |
|            |            | 1       | 49        | 25.52                    | 25.30                | 25.33                | 25.10                | 25.35                | 0                         | 0        |
|            |            | 1       | 99        | 25.49                    | 25.32                | 25.26                | 25.10                | 25.30                | 0                         | 0        |
|            |            | 50      | 0         | 24.79                    | 24.63                | 24.54                | 24.32                | 24.59                | 0-1                       | 1        |
|            |            | 50      | 25        | 24.76                    | 24.57                | 24.47                | 24.27                | 24.56                | 0-1                       | 1        |
|            |            | 50      | 49        | 24.74                    | 24.51                | 24.42                | 24.24                | 24.51                | 0-1                       | 1        |
|            |            | 100     | 0         | 24.79                    | 24.57                | 24.50                | 24.30                | 24.58                | 0-1                       | 1        |
|            | 16QAM      | 1       | 0         | 24.87                    | 24.61                | 24.74                | 24.26                | 24.69                | 0-1                       | 1        |
|            |            | 1       | 49        | 24.58                    | 24.37                | 24.56                | 24.06                | 24.49                | 0-1                       | 1        |
|            |            | 1       | 99        | 24.56                    | 24.40                | 24.52                | 24.11                | 24.47                | 0-1                       | 1        |
|            |            | 50      | 0         | 23.72                    | 23.53                | 23.52                | 23.30                | 23.56                | 0-2                       | 2        |
|            |            | 50      | 25        | 23.69                    | 23.48                | 23.44                | 23.24                | 23.54                | 0-2                       | 2        |
|            |            | 50      | 49        | 23.66                    | 23.43                | 23.39                | 23.21                | 23.46                | 0-2                       | 2        |
|            |            | 100     | 0         | 23.70                    | 23.50                | 23.48                | 23.26                | 23.53                | 0-2                       | 2        |
|            | 64QAM      | 1       | 0         | 23.66                    | 23.63                | 23.78                | 23.20                | 23.54                | 0-2                       | 2        |
|            |            | 1       | 49        | 23.50                    | 23.44                | 23.57                | 23.00                | 23.37                | 0-2                       | 2        |
|            |            | 1       | 99        | 23.50                    | 23.50                | 23.55                | 23.00                | 23.32                | 0-2                       | 2        |
|            |            | 50      | 0         | 22.66                    | 22.49                | 22.48                | 22.25                | 22.54                | 0-3                       | 3        |
|            |            | 50      | 25        | 22.62                    | 22.45                | 22.40                | 22.21                | 22.50                | 0-3                       | 3        |
|            |            | 50      | 49        | 22.60                    | 22.39                | 22.36                | 22.19                | 22.44                | 0-3                       | 3        |
|            |            | 100     | 0         | 22.65                    | 22.44                | 22.45                | 22.24                | 22.50                | 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 | Max. Average Power [dBm] |                     |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|---------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131979 Ch. 1710.7 MHz    | 132322 Ch. 1745 MHz | 132665 Ch. 1779.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 23.46                    | 24.17               | 23.62                 | 0                         | 0        |
|           |            | 1       | 3         | 23.53                    | 24.24               | 23.69                 | 0                         | 0        |
|           |            | 1       | 5         | 23.52                    | 24.18               | 23.63                 | 0                         | 0        |
|           |            | 3       | 0         | 23.46                    | 24.14               | 23.56                 | 0                         | 0        |
|           |            | 3       | 1         | 23.60                    | 24.31               | 23.74                 | 0                         | 0        |
|           |            | 3       | 3         | 23.56                    | 24.24               | 23.66                 | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 22.56                    | 23.24               | 22.68                 | 0-1                       | 1        |
|           |            | 1       | 0         | 22.74                    | 23.44               | 22.87                 | 0-1                       | 1        |
|           |            | 1       | 3         | 22.55                    | 23.30               | 22.64                 | 0-1                       | 1        |
|           |            | 1       | 5         | 22.71                    | 23.47               | 22.84                 | 0-1                       | 1        |
|           |            | 3       | 0         | 22.56                    | 23.28               | 22.62                 | 0-1                       | 1        |
|           |            | 3       | 1         | 22.63                    | 23.38               | 22.86                 | 0-1                       | 1        |
|           | 64QAM      | 3       | 3         | 22.67                    | 23.30               | 22.73                 | 0-1                       | 1        |
|           |            | 6       | 0         | 21.72                    | 22.38               | 21.81                 | 0-2                       | 2        |
|           |            | 1       | 0         | 21.82                    | 22.40               | 21.90                 | 0-2                       | 2        |
|           |            | 1       | 3         | 21.75                    | 22.40               | 21.86                 | 0-2                       | 2        |
|           |            | 1       | 5         | 21.72                    | 22.32               | 21.82                 | 0-2                       | 2        |
|           |            | 3       | 0         | 21.66                    | 22.33               | 21.77                 | 0-2                       | 2        |
|           | 3          | 1       | 21.77     | 22.46                    | 21.95               | 0-2                   | 2                         |          |
|           | 3          | 3       | 21.69     | 22.37                    | 21.84               | 0-2                   | 2                         |          |
|           | 6          | 0       | 20.69     | 21.34                    | 20.80               | 0-3                   | 3                         |          |

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         | 23.54                    | 24.13               | 23.64                 | 0                         | 0        |
|           |            | 1       | 7         | 23.44                    | 24.16               | 23.65                 | 0                         | 0        |
|           |            | 1       | 14        | 23.56                    | 24.23               | 23.65                 | 0                         | 0        |
|           |            | 8       | 0         | 22.65                    | 23.30               | 22.78                 | 0-1                       | 1        |
|           |            | 8       | 3         | 22.65                    | 23.29               | 22.76                 | 0-1                       | 1        |
|           |            | 8       | 7         | 22.64                    | 23.28               | 22.78                 | 0-1                       | 1        |
|           |            | 15      | 0         | 22.67                    | 23.38               | 22.79                 | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 22.73                    | 23.56               | 22.86                 | 0-1                       | 1        |
|           |            | 1       | 7         | 22.71                    | 23.51               | 22.85                 | 0-1                       | 1        |
|           |            | 1       | 14        | 22.66                    | 23.37               | 22.92                 | 0-1                       | 1        |
|           |            | 8       | 0         | 21.68                    | 22.34               | 21.82                 | 0-2                       | 2        |
|           |            | 8       | 3         | 21.70                    | 22.33               | 21.75                 | 0-2                       | 2        |
|           |            | 8       | 7         | 21.68                    | 22.34               | 21.82                 | 0-2                       | 2        |
|           |            | 15      | 0         | 21.70                    | 22.38               | 21.83                 | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 21.77                    | 22.41               | 21.87                 | 0-2                       | 2        |
|           |            | 1       | 7         | 21.83                    | 22.46               | 21.84                 | 0-2                       | 2        |
|           |            | 1       | 14        | 21.73                    | 22.37               | 21.91                 | 0-2                       | 2        |
|           |            | 8       | 0         | 20.76                    | 21.36               | 20.78                 | 0-3                       | 3        |
|           |            | 8       | 3         | 20.70                    | 21.38               | 20.78                 | 0-3                       | 3        |
|           |            | 8       | 7         | 20.76                    | 21.40               | 20.85                 | 0-3                       | 3        |
|           |            | 15      | 0         | 20.72                    | 21.35               | 20.78                 | 0-3                       | 3        |

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         | 23.56                    | 24.24              | 23.71                 | 0                         | 0        |
|           |            | 1       | 12        | 23.60                    | 24.21              | 23.66                 | 0                         | 0        |
|           |            | 1       | 24        | 23.59                    | 24.22              | 23.65                 | 0                         | 0        |
|           |            | 12      | 0         | 22.68                    | 23.35              | 22.79                 | 0-1                       | 1        |
|           |            | 12      | 6         | 22.65                    | 23.33              | 22.77                 | 0-1                       | 1        |
|           |            | 12      | 11        | 22.69                    | 23.31              | 22.80                 | 0-1                       | 1        |
|           | 16QAM      | 25      | 0         | 22.64                    | 23.30              | 22.77                 | 0-1                       | 1        |
|           |            | 1       | 0         | 22.76                    | 23.43              | 22.99                 | 0-1                       | 1        |
|           |            | 1       | 12        | 22.70                    | 23.51              | 22.88                 | 0-1                       | 1        |
|           |            | 1       | 24        | 22.92                    | 23.55              | 22.97                 | 0-1                       | 1        |
|           |            | 12      | 0         | 21.73                    | 22.37              | 21.82                 | 0-2                       | 2        |
|           |            | 12      | 6         | 21.65                    | 22.33              | 21.82                 | 0-2                       | 2        |
|           | 64QAM      | 12      | 11        | 21.72                    | 22.33              | 21.76                 | 0-2                       | 2        |
|           |            | 25      | 0         | 21.73                    | 22.36              | 21.80                 | 0-2                       | 2        |
|           |            | 1       | 0         | 21.75                    | 22.34              | 21.86                 | 0-2                       | 2        |
|           |            | 1       | 12        | 21.79                    | 22.41              | 21.90                 | 0-2                       | 2        |
|           |            | 1       | 24        | 21.92                    | 22.56              | 21.91                 | 0-2                       | 2        |
|           |            | 12      | 0         | 20.73                    | 21.35              | 20.86                 | 0-3                       | 3        |
|           | 12         | 6       | 20.71     | 21.37                    | 20.79              | 0-3                   | 3                         |          |
|           | 12         | 11      | 20.72     | 21.39                    | 20.82              | 0-3                   | 3                         |          |
|           | 25         | 0       | 20.71     | 21.38                    | 20.81              | 0-3                   | 3                         |          |

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         | 24.00                    | 24.20               | 24.22               | 0                         | 0        |
|           |            | 1       | 24        | 24.03                    | 24.24               | 24.19               | 0                         | 0        |
|           |            | 1       | 49        | 24.10                    | 24.29               | 24.19               | 0                         | 0        |
|           |            | 25      | 0         | 23.13                    | 23.28               | 23.26               | 0-1                       | 1        |
|           |            | 25      | 12        | 23.14                    | 23.32               | 23.28               | 0-1                       | 1        |
|           |            | 25      | 24        | 23.13                    | 23.34               | 23.26               | 0-1                       | 1        |
|           |            | 50      | 0         | 23.21                    | 23.39               | 23.27               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.16                    | 23.40               | 23.37               | 0-1                       | 1        |
|           |            | 1       | 24        | 23.08                    | 23.31               | 23.29               | 0-1                       | 1        |
|           |            | 1       | 49        | 23.38                    | 23.53               | 23.36               | 0-1                       | 1        |
|           |            | 25      | 0         | 22.13                    | 22.30               | 22.28               | 0-2                       | 2        |
|           |            | 25      | 12        | 22.14                    | 22.32               | 22.30               | 0-2                       | 2        |
|           |            | 25      | 24        | 22.18                    | 22.34               | 22.25               | 0-2                       | 2        |
|           |            | 50      | 0         | 22.16                    | 22.30               | 22.31               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.25                    | 22.38               | 22.44               | 0-2                       | 2        |
|           |            | 1       | 24        | 22.20                    | 22.30               | 22.36               | 0-2                       | 2        |
|           |            | 1       | 49        | 22.23                    | 22.36               | 22.30               | 0-2                       | 2        |
|           |            | 25      | 0         | 21.23                    | 21.32               | 21.28               | 0-3                       | 3        |
|           |            | 25      | 12        | 21.18                    | 21.31               | 21.32               | 0-3                       | 3        |
|           |            | 25      | 24        | 21.22                    | 21.35               | 21.30               | 0-3                       | 3        |
|           |            | 50      | 0         | 21.19                    | 21.38               | 21.29               | 0-3                       | 3        |

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         | 24.12                    | 24.25               | 24.26                 | 0                         | 0        |
|           |            | 1       | 36        | 24.06                    | 24.21               | 24.22                 | 0                         | 0        |
|           |            | 1       | 74        | 24.19                    | 24.29               | 24.26                 | 0                         | 0        |
|           |            | 36      | 0         | 23.26                    | 23.38               | 23.43                 | 0-1                       | 1        |
|           |            | 36      | 18        | 23.27                    | 23.38               | 23.38                 | 0-1                       | 1        |
|           |            | 36      | 39        | 23.29                    | 23.41               | 23.38                 | 0-1                       | 1        |
|           |            | 75      | 0         | 23.27                    | 23.39               | 23.39                 | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.26                    | 23.48               | 23.53                 | 0-1                       | 1        |
|           |            | 1       | 36        | 23.29                    | 23.52               | 23.51                 | 0-1                       | 1        |
|           |            | 1       | 74        | 23.44                    | 23.67               | 23.51                 | 0-1                       | 1        |
|           |            | 36      | 0         | 22.25                    | 22.37               | 22.38                 | 0-2                       | 2        |
|           |            | 36      | 18        | 22.24                    | 22.38               | 22.38                 | 0-2                       | 2        |
|           |            | 36      | 39        | 22.24                    | 22.42               | 22.39                 | 0-2                       | 2        |
|           |            | 75      | 0         | 22.30                    | 22.37               | 22.41                 | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.26                    | 22.33               | 22.56                 | 0-2                       | 2        |
|           |            | 1       | 36        | 22.21                    | 22.38               | 22.33                 | 0-2                       | 2        |
|           |            | 1       | 74        | 22.35                    | 22.44               | 22.46                 | 0-2                       | 2        |
|           |            | 36      | 0         | 21.27                    | 21.36               | 21.35                 | 0-3                       | 3        |
| 36        |            | 18      | 21.26     | 21.38                    | 21.37               | 0-3                   | 3                         |          |
| 36        |            | 39      | 21.24     | 21.39                    | 21.36               | 0-3                   | 3                         |          |
| 75        |            | 0       | 21.26     | 21.36                    | 21.36               | 0-3                   | 3                         |          |

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         | 24.07                    | 24.19               | 24.32               | 0                         | 0        |
|           |            | 1       | 49        | 24.04                    | 24.20               | 24.23               | 0                         | 0        |
|           |            | 1       | 99        | 24.12                    | 24.33               | 24.27               | 0                         | 0        |
|           |            | 50      | 0         | 23.20                    | 23.40               | 23.37               | 0-1                       | 1        |
|           |            | 50      | 25        | 23.17                    | 23.38               | 23.41               | 0-1                       | 1        |
|           |            | 50      | 49        | 23.19                    | 23.34               | 23.37               | 0-1                       | 1        |
|           |            | 100     | 0         | 23.23                    | 23.37               | 23.40               | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.26                    | 23.34               | 23.55               | 0-1                       | 1        |
|           |            | 1       | 49        | 23.10                    | 23.37               | 23.31               | 0-1                       | 1        |
|           |            | 1       | 99        | 23.43                    | 23.56               | 23.44               | 0-1                       | 1        |
|           |            | 50      | 0         | 22.17                    | 22.35               | 22.32               | 0-2                       | 2        |
|           |            | 50      | 25        | 22.17                    | 22.31               | 22.31               | 0-2                       | 2        |
|           |            | 50      | 49        | 22.15                    | 22.31               | 22.31               | 0-2                       | 2        |
|           |            | 100     | 0         | 22.21                    | 22.32               | 22.33               | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.21                    | 22.48               | 22.51               | 0-2                       | 2        |
|           |            | 1       | 49        | 22.25                    | 22.41               | 22.35               | 0-2                       | 2        |
|           |            | 1       | 99        | 22.40                    | 22.49               | 22.43               | 0-2                       | 2        |
|           |            | 50      | 0         | 21.17                    | 21.32               | 21.37               | 0-3                       | 3        |
|           |            | 50      | 25        | 21.17                    | 21.36               | 21.32               | 0-3                       | 3        |
|           |            | 50      | 49        | 21.18                    | 21.37               | 21.31               | 0-3                       | 3        |
|           |            | 100     | 0         | 21.17                    | 21.31               | 21.31               | 0-3                       | 3        |

[ LTE Band 71 Conducted Power ]

LTE Band 71\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 133147 Ch. 665.5 MHz     | 133297 Ch. 680.5 MHz | 133447 Ch. 695.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 23.41                    | 24.28                | 24.07                | 0                         | 0        |
|           |            | 1       | 12        | 23.30                    | 24.19                | 23.97                | 0                         | 0        |
|           |            | 1       | 24        | 23.40                    | 24.27                | 24.03                | 0                         | 0        |
|           |            | 12      | 0         | 22.50                    | 23.37                | 23.13                | 0-1                       | 1        |
|           |            | 12      | 6         | 22.50                    | 23.37                | 23.16                | 0-1                       | 1        |
|           |            | 12      | 11        | 22.52                    | 23.37                | 23.20                | 0-1                       | 1        |
|           | 25         | 0       | 22.48     | 23.34                    | 23.15                | 0-1                  | 1                         |          |
|           | 16QAM      | 1       | 0         | 22.65                    | 23.50                | 23.35                | 0-1                       | 1        |
|           |            | 1       | 12        | 22.78                    | 23.43                | 23.27                | 0-1                       | 1        |
|           |            | 1       | 24        | 22.68                    | 23.56                | 23.28                | 0-1                       | 1        |
|           |            | 12      | 0         | 21.54                    | 22.35                | 22.14                | 0-2                       | 2        |
|           |            | 12      | 6         | 21.50                    | 22.38                | 22.15                | 0-2                       | 2        |
|           |            | 12      | 11        | 21.53                    | 22.34                | 22.09                | 0-2                       | 2        |
|           | 25         | 0       | 21.49     | 22.29                    | 22.09                | 0-2                  | 2                         |          |
|           | 64QAM      | 1       | 0         | 21.67                    | 22.37                | 22.21                | 0-2                       | 2        |
|           |            | 1       | 12        | 21.50                    | 22.17                | 21.88                | 0-2                       | 2        |
|           |            | 1       | 24        | 21.60                    | 22.38                | 22.13                | 0-2                       | 2        |
|           |            | 12      | 0         | 20.48                    | 21.31                | 21.09                | 0-3                       | 3        |
| 12        |            | 6       | 20.50     | 21.35                    | 21.12                | 0-3                  | 3                         |          |
| 12        |            | 11      | 20.48     | 21.30                    | 21.15                | 0-3                  | 3                         |          |
| 25        | 0          | 20.49   | 21.32     | 21.09                    | 0-3                  | 3                    |                           |          |

LTE Band 71\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 133172 Ch. 668 MHz       | 133297 Ch. 680.5 MHz | 133422 Ch. 693 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 23.89                    | 24.22                | 24.06              | 0                         | 0        |
|           |            | 1       | 24        | 23.92                    | 24.21                | 24.00              | 0                         | 0        |
|           |            | 1       | 49        | 23.96                    | 24.27                | 24.04              | 0                         | 0        |
|           |            | 25      | 0         | 22.99                    | 23.26                | 23.08              | 0-1                       | 1        |
|           |            | 25      | 12        | 23.00                    | 23.24                | 23.04              | 0-1                       | 1        |
|           |            | 25      | 24        | 22.94                    | 23.28                | 23.04              | 0-1                       | 1        |
|           |            | 50      | 0         | 23.02                    | 23.39                | 23.08              | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 23.17                    | 23.49                | 23.35              | 0-1                       | 1        |
|           |            | 1       | 24        | 22.99                    | 23.32                | 23.23              | 0-1                       | 1        |
|           |            | 1       | 49        | 23.17                    | 23.49                | 23.24              | 0-1                       | 1        |
|           |            | 25      | 0         | 22.00                    | 22.26                | 22.04              | 0-2                       | 2        |
|           |            | 25      | 12        | 21.96                    | 22.30                | 22.07              | 0-2                       | 2        |
|           |            | 25      | 24        | 21.94                    | 22.26                | 22.05              | 0-2                       | 2        |
|           |            | 50      | 0         | 22.00                    | 22.32                | 22.09              | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 22.16                    | 22.31                | 22.15              | 0-2                       | 2        |
|           |            | 1       | 24        | 21.99                    | 22.22                | 22.14              | 0-2                       | 2        |
|           |            | 1       | 49        | 22.11                    | 22.41                | 22.09              | 0-2                       | 2        |
|           |            | 25      | 0         | 21.00                    | 21.29                | 21.07              | 0-3                       | 3        |
|           |            | 25      | 12        | 21.01                    | 21.30                | 21.07              | 0-3                       | 3        |
|           |            | 25      | 24        | 20.97                    | 21.28                | 21.03              | 0-3                       | 3        |
|           |            | 50      | 0         | 21.00                    | 21.26                | 21.09              | 0-3                       | 3        |

LTE Band 71 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 133197 Ch. 670.5 MHz     | 133297 Ch. 680.5 MHz | 133397 Ch. 690.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         |                          | 24.23                |                      | 0                         | 0        |
|           |            | 1       | 36        |                          | 24.10                |                      | 0                         | 0        |
|           |            | 1       | 74        |                          | 24.27                |                      | 0                         | 0        |
|           |            | 36      | 0         |                          | 23.35                |                      | 0-1                       | 1        |
|           |            | 36      | 18        |                          | 23.35                |                      | 0-1                       | 1        |
|           |            | 36      | 39        |                          | 23.33                |                      | 0-1                       | 1        |
|           |            | 75      | 0         |                          | 23.38                |                      | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         |                          | 23.45                |                      | 0-1                       | 1        |
|           |            | 1       | 36        |                          | 23.37                |                      | 0-1                       | 1        |
|           |            | 1       | 74        |                          | 23.58                |                      | 0-1                       | 1        |
|           |            | 36      | 0         |                          | 22.30                |                      | 0-2                       | 2        |
|           |            | 36      | 18        |                          | 22.32                |                      | 0-2                       | 2        |
|           |            | 36      | 39        |                          | 22.27                |                      | 0-2                       | 2        |
|           |            | 75      | 0         |                          | 22.28                |                      | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         |                          | 22.37                |                      | 0-2                       | 2        |
|           |            | 1       | 36        |                          | 22.17                |                      | 0-2                       | 2        |
|           |            | 1       | 74        |                          | 22.49                |                      | 0-2                       | 2        |
|           |            | 36      | 0         |                          | 21.29                |                      | 0-3                       | 3        |
|           |            | 36      | 18        |                          | 21.28                |                      | 0-3                       | 3        |
|           |            | 36      | 39        |                          | 21.30                |                      | 0-3                       | 3        |
|           |            | 75      | 0         |                          | 21.22                |                      | 0-3                       | 3        |

LTE Band 71 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Max. Average Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 133222 Ch. 673 MHz       | 133297 Ch. 680.5 MHz | 133372 Ch. 688 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         |                          | 24.27                |                    | 0                         | 0        |
|           |            | 1       | 49        |                          | 24.23                |                    | 0                         | 0        |
|           |            | 1       | 99        |                          | 24.36                |                    | 0                         | 0        |
|           |            | 50      | 0         |                          | 23.44                |                    | 0-1                       | 1        |
|           |            | 50      | 25        |                          | 23.42                |                    | 0-1                       | 1        |
|           |            | 50      | 49        |                          | 23.45                |                    | 0-1                       | 1        |
|           |            | 100     | 0         |                          | 23.43                |                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         |                          | 23.55                |                    | 0-1                       | 1        |
|           |            | 1       | 49        |                          | 23.43                |                    | 0-1                       | 1        |
|           |            | 1       | 99        |                          | 23.60                |                    | 0-1                       | 1        |
|           |            | 50      | 0         |                          | 22.38                |                    | 0-2                       | 2        |
|           |            | 50      | 25        |                          | 22.39                |                    | 0-2                       | 2        |
|           |            | 50      | 49        |                          | 22.40                |                    | 0-2                       | 2        |
|           |            | 100     | 0         |                          | 22.36                |                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         |                          | 22.50                |                    | 0-2                       | 2        |
|           |            | 1       | 49        |                          | 22.39                |                    | 0-2                       | 2        |
|           |            | 1       | 99        |                          | 22.55                |                    | 0-2                       | 2        |
|           |            | 50      | 0         |                          | 21.33                |                    | 0-3                       | 3        |
|           |            | 50      | 25        |                          | 21.34                |                    | 0-3                       | 3        |
|           |            | 50      | 49        |                          | 21.35                |                    | 0-3                       | 3        |
|           |            | 100     | 0         |                          | 21.31                |                    | 0-3                       | 3        |

The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

### 11.4.2 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         | 18.54                   | 18.82                 | 18.48                   | 0                         | 0        |
|           |            | 1       | 3         | 18.65                   | 18.90                 | 18.54                   | 0                         | 0        |
|           |            | 1       | 5         | 18.62                   | 18.83                 | 18.52                   | 0                         | 0        |
|           |            | 3       | 0         | 18.56                   | 18.76                 | 18.48                   | 0                         | 0        |
|           |            | 3       | 1         | 18.70                   | 18.97                 | 18.62                   | 0                         | 0        |
|           |            | 3       | 3         | 18.64                   | 18.92                 | 18.59                   | 0                         | 0        |
|           | 6          | 0       | 18.57     | 18.80                   | 18.47                 | 0-1                     | 0                         |          |
|           | 16QAM      | 1       | 0         | 18.94                   | 19.21                 | 18.77                   | 0-1                       | 0        |
|           |            | 1       | 3         | 18.86                   | 19.01                 | 18.59                   | 0-1                       | 0        |
|           |            | 1       | 5         | 18.97                   | 19.23                 | 18.75                   | 0-1                       | 0        |
|           |            | 3       | 0         | 18.72                   | 18.88                 | 18.55                   | 0-1                       | 0        |
|           |            | 3       | 1         | 18.69                   | 18.98                 | 18.63                   | 0-1                       | 0        |
|           |            | 3       | 3         | 18.76                   | 18.94                 | 18.67                   | 0-1                       | 0        |
|           | 6          | 0       | 18.65     | 18.93                   | 18.60                 | 0-2                     | 0                         |          |
|           | 64QAM      | 1       | 0         | 18.80                   | 19.02                 | 18.57                   | 0-2                       | 0        |
|           |            | 1       | 3         | 18.73                   | 18.90                 | 18.60                   | 0-2                       | 0        |
|           |            | 1       | 5         | 18.72                   | 18.98                 | 18.74                   | 0-2                       | 0        |
|           |            | 3       | 0         | 18.67                   | 18.84                 | 18.57                   | 0-2                       | 0        |
| 3         |            | 1       | 18.76     | 19.01                   | 18.70                 | 0-2                     | 0                         |          |
| 3         |            | 3       | 18.61     | 18.95                   | 18.59                 | 0-2                     | 0                         |          |
| 6         | 0          | 18.58   | 18.87     | 18.56                   | 0-3                   | 0                       |                           |          |

LTE Band 2 \_ 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                       |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------------|----------|
|           |            |         |           | 18615 Ch.<br>1851.5 MHz | 18900 Ch.<br>1880 MHz | 19185 Ch.<br>1908.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 18.53                   | 18.80                 | 18.48                   | 0                         | 0        |
|           |            | 1       | 7         | 18.61                   | 18.86                 | 18.48                   | 0                         | 0        |
|           |            | 1       | 14        | 18.58                   | 18.82                 | 18.47                   | 0                         | 0        |
|           |            | 8       | 0         | 18.62                   | 18.90                 | 18.54                   | 0-1                       | 0        |
|           |            | 8       | 3         | 18.58                   | 18.83                 | 18.52                   | 0-1                       | 0        |
|           |            | 8       | 7         | 18.63                   | 18.90                 | 18.58                   | 0-1                       | 0        |
|           |            | 15      | 0         | 18.63                   | 18.89                 | 18.60                   | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.00                   | 19.18                 | 18.81                   | 0-1                       | 0        |
|           |            | 1       | 7         | 18.89                   | 19.07                 | 18.81                   | 0-1                       | 0        |
|           |            | 1       | 14        | 18.95                   | 19.12                 | 18.79                   | 0-1                       | 0        |
|           |            | 8       | 0         | 18.64                   | 18.92                 | 18.61                   | 0-2                       | 0        |
|           |            | 8       | 3         | 18.65                   | 18.87                 | 18.58                   | 0-2                       | 0        |
|           |            | 8       | 7         | 18.68                   | 19.00                 | 18.68                   | 0-2                       | 0        |
|           | 64QAM      | 15      | 0         | 18.66                   | 18.92                 | 18.62                   | 0-2                       | 0        |
|           |            | 1       | 0         | 18.74                   | 18.92                 | 18.65                   | 0-2                       | 0        |
|           |            | 1       | 7         | 18.58                   | 18.91                 | 18.45                   | 0-2                       | 0        |
|           |            | 1       | 14        | 18.76                   | 18.97                 | 18.70                   | 0-2                       | 0        |
|           |            | 8       | 0         | 18.70                   | 18.91                 | 18.60                   | 0-3                       | 0        |
|           |            | 8       | 3         | 18.58                   | 18.85                 | 18.59                   | 0-3                       | 0        |
|           |            | 8       | 7         | 18.70                   | 18.90                 | 18.59                   | 0-3                       | 0        |
|           | 15         | 0       | 18.66     | 18.88                   | 18.60                 | 0-3                     | 0                         |          |

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         | 18.54                   | 18.85                 | 18.56                   | 0                         | 0        |
|           |            | 1       | 12        | 18.57                   | 18.81                 | 18.46                   | 0                         | 0        |
|           |            | 1       | 24        | 18.53                   | 18.80                 | 18.54                   | 0                         | 0        |
|           |            | 12      | 0         | 18.63                   | 18.91                 | 18.58                   | 0-1                       | 0        |
|           |            | 12      | 6         | 18.64                   | 18.91                 | 18.61                   | 0-1                       | 0        |
|           |            | 12      | 11        | 18.64                   | 18.94                 | 18.60                   | 0-1                       | 0        |
|           | 25         | 0       | 18.58     | 18.93                   | 18.59                 | 0-1                     | 0                         |          |
|           | 16QAM      | 1       | 0         | 18.91                   | 19.07                 | 18.79                   | 0-1                       | 0        |
|           |            | 1       | 12        | 18.88                   | 19.11                 | 18.72                   | 0-1                       | 0        |
|           |            | 1       | 24        | 18.90                   | 19.09                 | 18.81                   | 0-1                       | 0        |
|           |            | 12      | 0         | 18.65                   | 18.86                 | 18.63                   | 0-2                       | 0        |
|           |            | 12      | 6         | 18.67                   | 18.89                 | 18.59                   | 0-2                       | 0        |
|           |            | 12      | 11        | 18.66                   | 18.93                 | 18.59                   | 0-2                       | 0        |
|           | 64QAM      | 25      | 0         | 18.60                   | 18.90                 | 18.59                   | 0-2                       | 0        |
|           |            | 1       | 0         | 18.72                   | 19.01                 | 18.64                   | 0-2                       | 0        |
|           |            | 1       | 12        | 18.79                   | 18.86                 | 18.68                   | 0-2                       | 0        |
|           |            | 1       | 24        | 18.79                   | 18.99                 | 18.73                   | 0-2                       | 0        |
|           |            | 12      | 0         | 18.63                   | 18.92                 | 18.58                   | 0-3                       | 0        |
| 12        |            | 6       | 18.60     | 18.93                   | 18.61                 | 0-3                     | 0                         |          |
|           |            | 12      | 11        | 18.62                   | 18.90                 | 18.65                   | 0-3                       | 0        |
|           |            | 25      | 0         | 18.65                   | 18.89                 | 18.59                   | 0-3                       | 0        |

LTE Band 2 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 18650 Ch.<br>1855 MHz | 18900 Ch.<br>1880 MHz | 19150 Ch.<br>1905 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 18.92                 | 18.82                 | 18.98                 | 0                         | 0        |
|           |            | 1       | 24        | 18.86                 | 18.84                 | 19.00                 | 0                         | 0        |
|           |            | 1       | 49        | 18.93                 | 18.89                 | 19.08                 | 0                         | 0        |
|           |            | 25      | 0         | 18.95                 | 18.88                 | 19.06                 | 0-1                       | 0        |
|           |            | 25      | 12        | 18.93                 | 18.87                 | 19.07                 | 0-1                       | 0        |
|           |            | 25      | 24        | 18.96                 | 18.85                 | 19.07                 | 0-1                       | 0        |
|           | 16QAM      | 50      | 0         | 18.88                 | 18.88                 | 19.06                 | 0-1                       | 0        |
|           |            | 1       | 0         | 19.19                 | 19.07                 | 19.35                 | 0-1                       | 0        |
|           |            | 1       | 24        | 19.01                 | 18.96                 | 19.10                 | 0-1                       | 0        |
|           |            | 1       | 49        | 19.08                 | 19.02                 | 19.22                 | 0-1                       | 0        |
|           |            | 25      | 0         | 18.94                 | 18.89                 | 19.03                 | 0-2                       | 0        |
|           |            | 25      | 12        | 18.90                 | 18.86                 | 19.06                 | 0-2                       | 0        |
|           | 64QAM      | 25      | 24        | 18.91                 | 18.86                 | 19.06                 | 0-2                       | 0        |
|           |            | 50      | 0         | 18.94                 | 18.90                 | 19.11                 | 0-2                       | 0        |
|           |            | 1       | 0         | 19.16                 | 19.05                 | 19.28                 | 0-2                       | 0        |
|           |            | 1       | 24        | 18.92                 | 18.94                 | 19.20                 | 0-2                       | 0        |
|           |            | 1       | 49        | 19.06                 | 19.07                 | 19.24                 | 0-2                       | 0        |
|           |            | 25      | 0         | 18.95                 | 18.89                 | 19.03                 | 0-3                       | 0        |
|           |            | 25      | 12        | 18.92                 | 18.87                 | 19.04                 | 0-3                       | 0        |
|           |            | 25      | 24        | 18.93                 | 18.89                 | 19.05                 | 0-3                       | 0        |
|           |            | 50      | 0         | 18.91                 | 18.90                 | 19.11                 | 0-3                       | 0        |

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         | 18.92                   | 18.86                 | 18.97                   | 0                         | 0        |
|           |            | 1       | 36        | 18.84                   | 18.82                 | 18.97                   | 0                         | 0        |
|           |            | 1       | 74        | 18.87                   | 18.83                 | 19.01                   | 0                         | 0        |
|           |            | 36      | 0         | 18.89                   | 18.83                 | 19.01                   | 0-1                       | 0        |
|           |            | 36      | 18        | 18.90                   | 18.83                 | 19.01                   | 0-1                       | 0        |
|           |            | 36      | 39        | 18.91                   | 18.89                 | 19.03                   | 0-1                       | 0        |
|           | 16QAM      | 75      | 0         | 18.91                   | 18.89                 | 19.00                   | 0-1                       | 0        |
|           |            | 1       | 0         | 19.20                   | 19.05                 | 19.25                   | 0-1                       | 0        |
|           |            | 1       | 36        | 19.07                   | 19.04                 | 19.16                   | 0-1                       | 0        |
|           |            | 1       | 74        | 19.25                   | 19.27                 | 19.27                   | 0-1                       | 0        |
|           |            | 36      | 0         | 18.89                   | 18.86                 | 18.99                   | 0-2                       | 0        |
|           |            | 36      | 18        | 18.89                   | 18.86                 | 19.01                   | 0-2                       | 0        |
|           | 64QAM      | 36      | 39        | 18.87                   | 18.84                 | 19.02                   | 0-2                       | 0        |
|           |            | 75      | 0         | 18.87                   | 18.85                 | 19.01                   | 0-2                       | 0        |
|           |            | 1       | 0         | 19.15                   | 18.97                 | 19.23                   | 0-2                       | 0        |
|           |            | 1       | 36        | 18.94                   | 18.96                 | 19.08                   | 0-2                       | 0        |
|           |            | 1       | 74        | 19.11                   | 19.17                 | 19.21                   | 0-2                       | 0        |
|           |            | 36      | 0         | 18.91                   | 18.88                 | 19.00                   | 0-3                       | 0        |
|           | 36         | 18      | 18.91     | 18.85                   | 19.03                 | 0-3                     | 0                         |          |
|           | 36         | 39      | 18.92     | 18.85                   | 19.03                 | 0-3                     | 0                         |          |
|           | 75         | 0       | 18.89     | 18.82                   | 19.00                 | 0-3                     | 0                         |          |

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         | 18.94                 | 18.84                 | 18.94                 | 0                         | 0        |
|           |            | 1       | 49        | 18.85                 | 18.79                 | 18.93                 | 0                         | 0        |
|           |            | 1       | 99        | 18.92                 | 18.88                 | 19.01                 | 0                         | 0        |
|           |            | 50      | 0         | 18.93                 | 18.83                 | 18.98                 | 0-1                       | 0        |
|           |            | 50      | 25        | 18.91                 | 18.84                 | 18.97                 | 0-1                       | 0        |
|           |            | 50      | 49        | 18.90                 | 18.86                 | 18.99                 | 0-1                       | 0        |
|           |            | 100     | 0         | 18.93                 | 18.85                 | 18.99                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.25                 | 19.22                 | 19.29                 | 0-1                       | 0        |
|           |            | 1       | 49        | 18.99                 | 19.09                 | 19.11                 | 0-1                       | 0        |
|           |            | 1       | 99        | 19.20                 | 19.17                 | 19.34                 | 0-1                       | 0        |
|           |            | 50      | 0         | 18.93                 | 18.82                 | 18.99                 | 0-2                       | 0        |
|           |            | 50      | 25        | 18.92                 | 18.83                 | 18.98                 | 0-2                       | 0        |
|           |            | 50      | 49        | 18.90                 | 18.86                 | 19.00                 | 0-2                       | 0        |
|           |            | 100     | 0         | 18.93                 | 18.85                 | 18.99                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.10                 | 19.04                 | 19.13                 | 0-2                       | 0        |
|           |            | 1       | 49        | 18.98                 | 18.93                 | 19.11                 | 0-2                       | 0        |
|           |            | 1       | 99        | 19.20                 | 19.06                 | 19.17                 | 0-2                       | 0        |
|           |            | 50      | 0         | 18.94                 | 18.87                 | 19.00                 | 0-3                       | 0        |
|           |            | 50      | 25        | 18.86                 | 18.83                 | 18.99                 | 0-3                       | 0        |
|           |            | 50      | 49        | 18.92                 | 18.86                 | 19.02                 | 0-3                       | 0        |
|           |            | 100     | 0         | 18.90                 | 18.85                 | 18.99                 | 0-3                       | 0        |



**[ 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         | 18.97                | 19.51                | 19.24                | 0                         | 0        |   |
|           |            | 1       | 3         | 19.03                | 19.54                | 19.27                | 0                         | 0        |   |
|           |            | 1       | 5         | 18.99                | 19.47                | 19.20                | 0                         | 0        |   |
|           |            | 3       | 0         | 18.98                | 19.43                | 19.17                | 0                         | 0        |   |
|           |            | 3       | 1         | 19.11                | 19.59                | 19.36                | 0                         | 0        |   |
|           |            | 3       | 3         | 19.06                | 19.54                | 19.31                | 0                         | 0        |   |
|           | 16QAM      | 6       | 0         | 18.98                | 19.45                | 19.23                | 0-1                       | 0        |   |
|           |            | 1       | 0         | 19.21                | 19.72                | 19.46                | 0-1                       | 0        |   |
|           |            | 1       | 3         | 19.07                | 19.52                | 19.38                | 0-1                       | 0        |   |
|           |            | 1       | 5         | 19.32                | 19.69                | 19.40                | 0-1                       | 0        |   |
|           |            | 3       | 0         | 19.08                | 19.61                | 19.28                | 0-1                       | 0        |   |
|           |            | 3       | 1         | 19.18                | 19.59                | 19.31                | 0-1                       | 0        |   |
|           | 64QAM      | 3       | 3         | 19.17                | 19.66                | 19.43                | 0-1                       | 0        |   |
|           |            | 6       | 0         | 19.08                | 19.60                | 19.32                | 0-2                       | 0        |   |
|           |            | 1       | 0         | 19.14                | 19.55                | 19.30                | 0-2                       | 0        |   |
|           |            | 1       | 3         | 19.06                | 19.58                | 19.35                | 0-2                       | 0        |   |
|           |            | 1       | 5         | 19.24                | 19.65                | 19.37                | 0-2                       | 0        |   |
|           |            | 3       | 0         | 19.10                | 19.54                | 19.30                | 0-2                       | 0        |   |
|           |            |         | 3         | 1                    | 19.20                | 19.75                | 19.53                     | 0-2      | 0 |
|           |            |         | 3         | 3                    | 19.06                | 19.63                | 19.44                     | 0-2      | 0 |
|           |            |         | 6         | 0                    | 19.11                | 19.55                | 19.32                     | 0-3      | 0 |

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         | 19.00                | 19.50                | 19.23                | 0                         | 0        |
|           |            | 1       | 7         | 18.98                | 19.46                | 19.21                | 0                         | 0        |
|           |            | 1       | 14        | 19.03                | 19.46                | 19.24                | 0                         | 0        |
|           |            | 8       | 0         | 19.06                | 19.54                | 19.26                | 0-1                       | 0        |
|           |            | 8       | 3         | 19.06                | 19.45                | 19.28                | 0-1                       | 0        |
|           |            | 8       | 7         | 19.06                | 19.55                | 19.31                | 0-1                       | 0        |
|           |            | 15      | 0         | 19.12                | 19.53                | 19.29                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.44                | 19.76                | 19.62                | 0-1                       | 0        |
|           |            | 1       | 7         | 19.33                | 19.67                | 19.52                | 0-1                       | 0        |
|           |            | 1       | 14        | 19.32                | 19.74                | 19.44                | 0-1                       | 0        |
|           |            | 8       | 0         | 19.14                | 19.63                | 19.39                | 0-2                       | 0        |
|           |            | 8       | 3         | 19.13                | 19.56                | 19.33                | 0-2                       | 0        |
|           |            | 8       | 7         | 19.11                | 19.60                | 19.34                | 0-2                       | 0        |
|           |            | 15      | 0         | 19.14                | 19.61                | 19.32                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.22                | 19.75                | 19.50                | 0-2                       | 0        |
|           |            | 1       | 7         | 19.19                | 19.71                | 19.52                | 0-2                       | 0        |
|           |            | 1       | 14        | 19.32                | 19.70                | 19.36                | 0-2                       | 0        |
|           |            | 8       | 0         | 19.08                | 19.62                | 19.33                | 0-3                       | 0        |
|           |            | 8       | 3         | 19.12                | 19.60                | 19.37                | 0-3                       | 0        |
|           |            | 8       | 7         | 19.12                | 19.58                | 19.35                | 0-3                       | 0        |
|           |            | 15      | 0         | 19.07                | 19.57                | 19.38                | 0-3                       | 0        |

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         | 19.04                | 19.52                | 19.27                | 0                         | 0        |
|           |            | 1       | 12        | 19.00                | 19.50                | 19.25                | 0                         | 0        |
|           |            | 1       | 24        | 19.02                | 19.48                | 19.29                | 0                         | 0        |
|           |            | 12      | 0         | 19.09                | 19.59                | 19.35                | 0-1                       | 0        |
|           |            | 12      | 6         | 19.10                | 19.55                | 19.36                | 0-1                       | 0        |
|           |            | 12      | 11        | 19.10                | 19.58                | 19.35                | 0-1                       | 0        |
|           |            | 25      | 0         | 19.10                | 19.58                | 19.32                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.29                | 19.75                | 19.58                | 0-1                       | 0        |
|           |            | 1       | 12        | 19.28                | 19.72                | 19.58                | 0-1                       | 0        |
|           |            | 1       | 24        | 19.30                | 19.76                | 19.60                | 0-1                       | 0        |
|           |            | 12      | 0         | 19.13                | 19.61                | 19.39                | 0-2                       | 0        |
|           |            | 12      | 6         | 19.15                | 19.57                | 19.39                | 0-2                       | 0        |
|           |            | 12      | 11        | 19.15                | 19.64                | 19.44                | 0-2                       | 0        |
|           |            | 25      | 0         | 19.11                | 19.57                | 19.39                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.16                | 19.75                | 19.54                | 0-2                       | 0        |
|           |            | 1       | 12        | 19.18                | 19.62                | 19.22                | 0-2                       | 0        |
|           |            | 1       | 24        | 19.18                | 19.67                | 19.43                | 0-2                       | 0        |
|           |            | 12      | 0         | 19.10                | 19.57                | 19.36                | 0-3                       | 0        |
|           |            | 12      | 6         | 19.11                | 19.58                | 19.34                | 0-3                       | 0        |
|           |            | 12      | 11        | 19.12                | 19.54                | 19.33                | 0-3                       | 0        |
| 25        |            | 0       | 19.12     | 19.58                | 19.35                | 0-3                  | 0                         |          |

LTE Band 4 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced 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         | 19.08               | 19.59                | 19.68              | 0                         | 0        |
|           |            | 1       | 24        | 19.04               | 19.55                | 19.70              | 0                         | 0        |
|           |            | 1       | 49        | 19.09               | 19.55                | 19.73              | 0                         | 0        |
|           |            | 25      | 0         | 19.09               | 19.59                | 19.74              | 0-1                       | 0        |
|           |            | 25      | 12        | 19.09               | 19.58                | 19.76              | 0-1                       | 0        |
|           |            | 25      | 24        | 19.10               | 19.60                | 19.77              | 0-1                       | 0        |
|           |            | 50      | 0         | 19.06               | 19.60                | 19.74              | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.28               | 19.85                | 19.95              | 0-1                       | 0        |
|           |            | 1       | 24        | 19.16               | 19.77                | 19.76              | 0-1                       | 0        |
|           |            | 1       | 49        | 19.23               | 19.72                | 20.03              | 0-1                       | 0        |
|           |            | 25      | 0         | 19.12               | 19.60                | 19.76              | 0-2                       | 0        |
|           |            | 25      | 12        | 19.08               | 19.59                | 19.80              | 0-2                       | 0        |
|           |            | 25      | 24        | 19.14               | 19.55                | 19.78              | 0-2                       | 0        |
|           |            | 50      | 0         | 19.08               | 19.57                | 19.73              | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.31               | 19.78                | 19.96              | 0-2                       | 0        |
|           |            | 1       | 24        | 19.16               | 19.60                | 19.87              | 0-2                       | 0        |
|           |            | 1       | 49        | 19.34               | 19.65                | 19.93              | 0-2                       | 0        |
|           |            | 25      | 0         | 19.11               | 19.59                | 19.80              | 0-3                       | 0        |
|           |            | 25      | 12        | 19.14               | 19.59                | 19.78              | 0-3                       | 0        |
|           |            | 25      | 24        | 19.12               | 19.57                | 19.83              | 0-3                       | 0        |
|           |            | 50      | 0         | 19.10               | 19.60                | 19.79              | 0-3                       | 0        |

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         | 19.04                | 19.57                | 19.78                | 0                         | 0        |
|           |            | 1       | 36        | 18.96                | 19.53                | 19.71                | 0                         | 0        |
|           |            | 1       | 74        | 19.07                | 19.57                | 19.78                | 0                         | 0        |
|           |            | 36      | 0         | 19.09                | 19.59                | 19.79                | 0-1                       | 0        |
|           |            | 36      | 18        | 19.07                | 19.57                | 19.77                | 0-1                       | 0        |
|           |            | 36      | 39        | 19.04                | 19.59                | 19.80                | 0-1                       | 0        |
|           |            | 75      | 0         | 19.06                | 19.55                | 19.82                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.29                | 19.89                | 20.09                | 0-1                       | 0        |
|           |            | 1       | 36        | 19.24                | 19.76                | 19.93                | 0-1                       | 0        |
|           |            | 1       | 74        | 19.31                | 19.80                | 20.14                | 0-1                       | 0        |
|           |            | 36      | 0         | 19.10                | 19.62                | 19.82                | 0-2                       | 0        |
|           |            | 36      | 18        | 19.09                | 19.59                | 19.85                | 0-2                       | 0        |
|           |            | 36      | 39        | 19.10                | 19.59                | 19.78                | 0-2                       | 0        |
|           |            | 75      | 0         | 19.06                | 19.62                | 19.81                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.28                | 19.81                | 19.98                | 0-2                       | 0        |
|           |            | 1       | 36        | 19.26                | 19.72                | 19.88                | 0-2                       | 0        |
|           |            | 1       | 74        | 19.22                | 19.75                | 19.99                | 0-2                       | 0        |
|           |            | 36      | 0         | 19.11                | 19.61                | 19.82                | 0-3                       | 0        |
|           |            | 36      | 18        | 19.10                | 19.60                | 19.82                | 0-3                       | 0        |
|           |            | 36      | 39        | 19.11                | 19.60                | 19.79                | 0-3                       | 0        |
|           |            | 75      | 0         | 19.11                | 19.60                | 19.76                | 0-3                       | 0        |

LTE Band 4 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|---------------------------|----------|
|           |            |         |           | 20175 Ch. 1732.5 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 19.56                | 0                         | 0        |
|           |            | 1       | 49        | 19.55                | 0                         | 0        |
|           |            | 1       | 99        | 19.57                | 0                         | 0        |
|           |            | 50      | 0         | 19.55                | 0-1                       | 0        |
|           |            | 50      | 25        | 19.54                | 0-1                       | 0        |
|           |            | 50      | 49        | 19.57                | 0-1                       | 0        |
|           |            | 100     | 0         | 19.55                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.99                | 0-1                       | 0        |
|           |            | 1       | 49        | 19.69                | 0-1                       | 0        |
|           |            | 1       | 99        | 19.85                | 0-1                       | 0        |
|           |            | 50      | 0         | 19.58                | 0-2                       | 0        |
|           |            | 50      | 25        | 19.63                | 0-2                       | 0        |
|           |            | 50      | 49        | 19.59                | 0-2                       | 0        |
|           |            | 100     | 0         | 19.57                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.71                | 0-2                       | 0        |
|           |            | 1       | 49        | 19.76                | 0-2                       | 0        |
|           |            | 1       | 99        | 19.85                | 0-2                       | 0        |
|           |            | 50      | 0         | 19.59                | 0-3                       | 0        |
|           |            | 50      | 25        | 19.55                | 0-3                       | 0        |
|           |            | 50      | 49        | 19.60                | 0-3                       | 0        |
|           |            | 100     | 0         | 19.62                | 0-3                       | 0        |

**[LTE Band 7 Conducted Power]**

LTE Band 7\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 20775 Ch. 2502.5 MHz | 21100 Ch. 2535 MHz | 21425 Ch. 2567.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 20.90                | 20.70              | 20.70                | 0                         | 0        |
|           |            | 1       | 12        | 20.89                | 20.68              | 20.69                | 0                         | 0        |
|           |            | 1       | 24        | 20.85                | 20.62              | 20.65                | 0                         | 0        |
|           |            | 12      | 0         | 20.96                | 20.78              | 20.78                | 0-1                       | 0        |
|           |            | 12      | 6         | 20.91                | 20.75              | 20.77                | 0-1                       | 0        |
|           |            | 12      | 11        | 20.94                | 20.74              | 20.74                | 0-1                       | 0        |
|           | 16QAM      | 25      | 0         | 20.92                | 20.73              | 20.74                | 0-1                       | 0        |
|           |            | 1       | 0         | 21.08                | 20.86              | 20.78                | 0-1                       | 0        |
|           |            | 1       | 12        | 21.10                | 20.85              | 20.87                | 0-1                       | 0        |
|           |            | 1       | 24        | 21.16                | 20.89              | 20.86                | 0-1                       | 0        |
|           |            | 12      | 0         | 20.91                | 20.75              | 20.72                | 0-2                       | 0        |
|           |            | 12      | 6         | 20.96                | 20.70              | 20.71                | 0-2                       | 0        |
|           | 64QAM      | 12      | 11        | 20.93                | 20.70              | 20.77                | 0-2                       | 0        |
|           |            | 25      | 0         | 20.92                | 20.72              | 20.66                | 0-2                       | 0        |
|           |            | 1       | 0         | 20.98                | 20.79              | 20.77                | 0-2                       | 0        |
|           |            | 1       | 12        | 21.01                | 20.80              | 20.75                | 0-2                       | 0        |
|           |            | 1       | 24        | 21.05                | 20.83              | 20.74                | 0-2                       | 0        |
|           |            | 12      | 0         | 19.94                | 19.74              | 19.68                | 0-3                       | 0        |
|           |            | 12      | 6         | 19.93                | 19.71              | 19.77                | 0-3                       | 0        |
|           |            | 12      | 11        | 19.88                | 19.69              | 19.68                | 0-3                       | 0        |
|           |            | 25      | 0         | 19.94                | 19.73              | 19.71                | 0-3                       | 0        |

LTE Band 7\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 20800 Ch. 2505 MHz  | 21100 Ch. 2535 MHz | 21400 Ch. 2565 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 20.88               | 20.72              | 20.81              | 0                         | 0        |
|           |            | 1       | 24        | 20.84               | 20.64              | 20.74              | 0                         | 0        |
|           |            | 1       | 49        | 20.93               | 20.67              | 20.75              | 0                         | 0        |
|           |            | 25      | 0         | 20.91               | 20.77              | 20.82              | 0-1                       | 0        |
|           |            | 25      | 12        | 20.96               | 20.74              | 20.76              | 0-1                       | 0        |
|           |            | 25      | 24        | 20.89               | 20.73              | 20.77              | 0-1                       | 0        |
|           |            | 50      | 0         | 20.93               | 20.79              | 20.84              | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 21.17               | 21.06              | 20.95              | 0-1                       | 0        |
|           |            | 1       | 24        | 20.94               | 20.73              | 20.73              | 0-1                       | 0        |
|           |            | 1       | 49        | 21.05               | 20.87              | 20.97              | 0-1                       | 0        |
|           |            | 25      | 0         | 20.94               | 20.74              | 20.74              | 0-2                       | 0        |
|           |            | 25      | 12        | 20.92               | 20.67              | 20.72              | 0-2                       | 0        |
|           |            | 25      | 24        | 20.91               | 20.66              | 20.69              | 0-2                       | 0        |
|           |            | 50      | 0         | 20.95               | 20.76              | 20.79              | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 21.09               | 20.85              | 20.85              | 0-2                       | 0        |
|           |            | 1       | 24        | 20.96               | 20.85              | 20.68              | 0-2                       | 0        |
|           |            | 1       | 49        | 21.12               | 20.77              | 20.70              | 0-2                       | 0        |
|           |            | 25      | 0         | 19.93               | 19.75              | 19.77              | 0-3                       | 0        |
|           |            | 25      | 12        | 19.93               | 19.71              | 19.76              | 0-3                       | 0        |
|           |            | 25      | 24        | 19.94               | 19.69              | 19.73              | 0-3                       | 0        |
|           |            | 50      | 0         | 19.99               | 19.77              | 19.83              | 0-3                       | 0        |

LTE Band 7 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|---|
|           |            |         |           | 20825 Ch. 2507.5 MHz | 21100 Ch. 2535 MHz | 21375 Ch. 2562.5 MHz |                           |          |   |
| 15 MHz    | QPSK       | 1       | 0         | 20.99                | 20.84              | 20.86                | 0                         | 0        |   |
|           |            | 1       | 36        | 20.88                | 20.74              | 20.82                | 0                         | 0        |   |
|           |            | 1       | 74        | 20.87                | 20.69              | 20.77                | 0                         | 0        |   |
|           |            | 36      | 0         | 20.99                | 20.86              | 20.93                | 0-1                       | 0        |   |
|           |            | 36      | 18        | 20.98                | 20.76              | 20.89                | 0-1                       | 0        |   |
|           |            | 36      | 39        | 20.93                | 20.75              | 20.91                | 0-1                       | 0        |   |
|           | 16QAM      | 75      | 0         | 20.98                | 20.83              | 20.88                | 0-1                       | 0        |   |
|           |            | 1       | 0         | 21.08                | 21.00              | 21.12                | 0-1                       | 0        |   |
|           |            | 1       | 36        | 21.04                | 20.89              | 20.97                | 0-1                       | 0        |   |
|           |            | 1       | 74        | 21.23                | 20.86              | 21.01                | 0-1                       | 0        |   |
|           |            | 36      | 0         | 20.96                | 20.83              | 20.85                | 0-2                       | 0        |   |
|           |            | 36      | 18        | 20.97                | 20.79              | 20.85                | 0-2                       | 0        |   |
|           | 64QAM      | 36      | 39        | 20.97                | 20.73              | 20.82                | 0-2                       | 0        |   |
|           |            | 75      | 0         | 20.98                | 20.78              | 20.83                | 0-2                       | 0        |   |
|           |            | 1       | 0         | 21.11                | 20.88              | 20.99                | 0-2                       | 0        |   |
|           |            | 1       | 36        | 20.93                | 20.75              | 20.87                | 0-2                       | 0        |   |
|           |            | 1       | 74        | 21.04                | 20.83              | 20.91                | 0-2                       | 0        |   |
|           |            | 36      | 0         | 19.99                | 19.83              | 19.90                | 0-3                       | 0        |   |
|           |            |         | 36        | 18                   | 20.01              | 19.80                | 19.84                     | 0-3      | 0 |
|           |            |         | 36        | 39                   | 20.01              | 19.76                | 19.87                     | 0-3      | 0 |
|           |            |         | 75        | 0                    | 19.94              | 19.79                | 19.86                     | 0-3      | 0 |

LTE Band 7 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|---------------------|--------------------|--------------------|---------------------------|----------|---|
|           |            |         |           | 20850 Ch. 2510 MHz  | 21100 Ch. 2535 MHz | 21350 Ch. 2560 MHz |                           |          |   |
| 20 MHz    | QPSK       | 1       | 0         | 21.01               | 20.90              | 20.96              | 0                         | 0        |   |
|           |            | 1       | 49        | 20.92               | 20.67              | 20.80              | 0                         | 0        |   |
|           |            | 1       | 99        | 20.89               | 20.67              | 20.85              | 0                         | 0        |   |
|           |            | 50      | 0         | 21.01               | 20.87              | 20.93              | 0-1                       | 0        |   |
|           |            | 50      | 25        | 20.96               | 20.78              | 20.88              | 0-1                       | 0        |   |
|           |            | 50      | 49        | 20.97               | 20.73              | 20.91              | 0-1                       | 0        |   |
|           | 16QAM      | 100     | 0         | 21.00               | 20.79              | 20.97              | 0-1                       | 0        |   |
|           |            | 1       | 0         | 21.26               | 21.20              | 21.31              | 0-1                       | 0        |   |
|           |            | 1       | 49        | 21.12               | 20.84              | 20.85              | 0-1                       | 0        |   |
|           |            | 1       | 99        | 21.20               | 20.88              | 20.95              | 0-1                       | 0        |   |
|           |            | 50      | 0         | 21.03               | 20.85              | 20.92              | 0-2                       | 0        |   |
|           |            | 50      | 25        | 20.98               | 20.73              | 20.85              | 0-2                       | 0        |   |
|           | 64QAM      | 50      | 49        | 20.97               | 20.72              | 20.85              | 0-2                       | 0        |   |
|           |            | 100     | 0         | 20.98               | 20.75              | 20.90              | 0-2                       | 0        |   |
|           |            | 1       | 0         | 21.19               | 21.00              | 21.06              | 0-2                       | 0        |   |
|           |            | 1       | 49        | 21.06               | 20.83              | 20.88              | 0-2                       | 0        |   |
|           |            | 1       | 99        | 21.07               | 20.82              | 20.95              | 0-2                       | 0        |   |
|           |            | 50      | 0         | 20.04               | 19.87              | 19.92              | 0-3                       | 0        |   |
|           |            |         | 50        | 25                  | 19.98              | 19.76              | 19.83                     | 0-3      | 0 |
|           |            |         | 50        | 49                  | 19.99              | 19.73              | 19.82                     | 0-3      | 0 |
|           |            |         | 100       | 0                   | 20.01              | 19.75              | 19.89                     | 0-3      | 0 |

**[ LTE Band 25 Conducted Power ]**

LTE Band 25 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26047 Ch. 1850.7 MHz | 26365 Ch. 1882.5 MHz | 26683 Ch. 1914.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 17.02                | 17.60                | 17.08                | 0                         | 0        |
|           |            | 1       | 3         | 17.03                | 17.69                | 17.16                | 0                         | 0        |
|           |            | 1       | 5         | 17.05                | 17.62                | 17.10                | 0                         | 0        |
|           |            | 3       | 0         | 17.01                | 17.55                | 17.03                | 0                         | 0        |
|           |            | 3       | 1         | 17.15                | 17.73                | 17.24                | 0                         | 0        |
|           |            | 3       | 3         | 17.07                | 17.69                | 17.13                | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 17.00                | 17.57                | 17.07                | 0-1                       | 0        |
|           |            | 1       | 0         | 17.29                | 17.97                | 17.40                | 0-1                       | 0        |
|           |            | 1       | 3         | 17.15                | 17.69                | 17.18                | 0-1                       | 0        |
|           |            | 1       | 5         | 17.20                | 17.94                | 17.36                | 0-1                       | 0        |
|           |            | 3       | 0         | 17.06                | 17.64                | 17.17                | 0-1                       | 0        |
|           |            | 3       | 1         | 17.07                | 17.73                | 17.22                | 0-1                       | 0        |
|           | 64QAM      | 3       | 3         | 17.06                | 17.73                | 17.30                | 0-1                       | 0        |
|           |            | 6       | 0         | 17.03                | 17.67                | 17.22                | 0-2                       | 0        |
|           |            | 1       | 0         | 17.16                | 17.78                | 17.31                | 0-2                       | 0        |
|           |            | 1       | 3         | 17.15                | 17.83                | 17.34                | 0-2                       | 0        |
|           |            | 1       | 5         | 17.19                | 17.71                | 17.21                | 0-2                       | 0        |
|           |            | 3       | 0         | 17.06                | 17.66                | 17.24                | 0-2                       | 0        |
|           |            | 3       | 1         | 17.19                | 17.77                | 17.33                | 0-2                       | 0        |
|           |            | 3       | 3         | 17.09                | 17.78                | 17.20                | 0-2                       | 0        |
|           |            | 6       | 0         | 17.11                | 17.69                | 17.22                | 0-3                       | 0        |

LTE Band 25 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26055 Ch. 1851.5 MHz | 26365 Ch. 1882.5 MHz | 26675 Ch. 1913.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 17.02                | 17.58                | 17.07                | 0                         | 0        |
|           |            | 1       | 7         | 17.00                | 17.58                | 17.15                | 0                         | 0        |
|           |            | 1       | 14        | 17.04                | 17.61                | 17.14                | 0                         | 0        |
|           |            | 8       | 0         | 17.09                | 17.69                | 17.16                | 0-1                       | 0        |
|           |            | 8       | 3         | 17.03                | 17.63                | 17.14                | 0-1                       | 0        |
|           |            | 8       | 7         | 17.01                | 17.66                | 17.20                | 0-1                       | 0        |
|           |            | 15      | 0         | 17.00                | 17.68                | 17.18                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 17.36                | 17.86                | 17.41                | 0-1                       | 0        |
|           |            | 1       | 7         | 17.21                | 18.00                | 17.36                | 0-1                       | 0        |
|           |            | 1       | 14        | 17.26                | 17.84                | 17.49                | 0-1                       | 0        |
|           |            | 8       | 0         | 17.03                | 17.72                | 17.26                | 0-2                       | 0        |
|           |            | 8       | 3         | 17.03                | 17.72                | 17.26                | 0-2                       | 0        |
|           |            | 8       | 7         | 17.07                | 17.79                | 17.23                | 0-2                       | 0        |
|           |            | 15      | 0         | 17.10                | 17.72                | 17.24                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 17.14                | 17.81                | 17.38                | 0-2                       | 0        |
|           |            | 1       | 7         | 17.02                | 17.67                | 17.24                | 0-2                       | 0        |
|           |            | 1       | 14        | 17.09                | 17.76                | 17.30                | 0-2                       | 0        |
|           |            | 8       | 0         | 17.04                | 17.72                | 17.21                | 0-3                       | 0        |
|           |            | 8       | 3         | 17.02                | 17.65                | 17.18                | 0-3                       | 0        |
|           |            | 8       | 7         | 17.05                | 17.67                | 17.22                | 0-3                       | 0        |
|           |            | 15      | 0         | 17.00                | 17.69                | 17.19                | 0-3                       | 0        |

LTE Band 25\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|---|
|           |            |         |           | 26065 Ch. 1852.5 MHz | 26365 Ch. 1882.5 MHz | 26665 Ch. 1912.5 MHz |                           |          |   |
| 5 MHz     | QPSK       | 1       | 0         | 17.02                | 17.65                | 17.19                | 0                         | 0        |   |
|           |            | 1       | 12        | 17.02                | 17.62                | 17.16                | 0                         | 0        |   |
|           |            | 1       | 24        | 17.03                | 17.62                | 17.18                | 0                         | 0        |   |
|           |            | 12      | 0         | 17.04                | 17.71                | 17.25                | 0-1                       | 0        |   |
|           |            | 12      | 6         | 17.03                | 17.69                | 17.22                | 0-1                       | 0        |   |
|           |            | 12      | 11        | 17.06                | 17.67                | 17.27                | 0-1                       | 0        |   |
|           | 16QAM      | 25      | 0         | 17.03                | 17.69                | 17.21                | 0-1                       | 0        |   |
|           |            | 1       | 0         | 17.27                | 17.79                | 17.39                | 0-1                       | 0        |   |
|           |            | 1       | 12        | 17.23                | 17.89                | 17.44                | 0-1                       | 0        |   |
|           |            | 1       | 24        | 17.34                | 18.00                | 17.41                | 0-1                       | 0        |   |
|           |            | 12      | 0         | 17.07                | 17.72                | 17.29                | 0-2                       | 0        |   |
|           |            | 12      | 6         | 17.06                | 17.73                | 17.25                | 0-2                       | 0        |   |
|           | 64QAM      | 12      | 11        | 17.10                | 17.77                | 17.25                | 0-2                       | 0        |   |
|           |            | 25      | 0         | 17.07                | 17.72                | 17.25                | 0-2                       | 0        |   |
|           |            | 1       | 0         | 17.20                | 17.90                | 17.38                | 0-2                       | 0        |   |
|           |            | 1       | 12        | 17.10                | 17.76                | 17.16                | 0-2                       | 0        |   |
|           |            | 1       | 24        | 17.16                | 17.87                | 17.34                | 0-2                       | 0        |   |
|           |            | 12      | 0         | 17.07                | 17.74                | 17.22                | 0-3                       | 0        |   |
|           |            |         | 12        | 6                    | 17.02                | 17.70                | 17.27                     | 0-3      | 0 |
|           |            |         | 12        | 11                   | 17.03                | 17.70                | 17.25                     | 0-3      | 0 |
|           |            |         | 25        | 0                    | 17.04                | 17.69                | 17.26                     | 0-3      | 0 |

LTE Band 25\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|---|
|           |            |         |           | 26090 Ch. 1855 MHz  | 26365 Ch. 1882.5 MHz | 26640 Ch. 1910 MHz |                           |          |   |
| 10 MHz    | QPSK       | 1       | 0         | 17.01               | 17.64                | 17.20              | 0                         | 0        |   |
|           |            | 1       | 24        | 17.03               | 17.64                | 17.19              | 0                         | 0        |   |
|           |            | 1       | 49        | 17.05               | 17.72                | 17.24              | 0                         | 0        |   |
|           |            | 25      | 0         | 17.08               | 17.69                | 17.27              | 0-1                       | 0        |   |
|           |            | 25      | 12        | 17.06               | 17.71                | 17.26              | 0-1                       | 0        |   |
|           |            | 25      | 24        | 17.10               | 17.69                | 17.23              | 0-1                       | 0        |   |
|           | 16QAM      | 50      | 0         | 17.05               | 17.71                | 17.28              | 0-1                       | 0        |   |
|           |            | 1       | 0         | 17.25               | 18.06                | 17.52              | 0-1                       | 0        |   |
|           |            | 1       | 24        | 17.15               | 17.95                | 17.44              | 0-1                       | 0        |   |
|           |            | 1       | 49        | 17.32               | 17.85                | 17.42              | 0-1                       | 0        |   |
|           |            | 25      | 0         | 17.09               | 17.70                | 17.25              | 0-2                       | 0        |   |
|           |            | 25      | 12        | 17.08               | 17.67                | 17.26              | 0-2                       | 0        |   |
|           | 64QAM      | 25      | 24        | 17.07               | 17.71                | 17.27              | 0-2                       | 0        |   |
|           |            | 50      | 0         | 17.07               | 17.71                | 17.26              | 0-2                       | 0        |   |
|           |            | 1       | 0         | 17.06               | 17.67                | 17.27              | 0-2                       | 0        |   |
|           |            | 1       | 24        | 17.10               | 17.79                | 17.30              | 0-2                       | 0        |   |
|           |            | 1       | 49        | 17.21               | 17.68                | 17.32              | 0-2                       | 0        |   |
|           |            | 25      | 0         | 17.09               | 17.68                | 17.21              | 0-3                       | 0        |   |
|           |            |         | 25        | 12                  | 17.05                | 17.73              | 17.25                     | 0-3      | 0 |
|           |            |         | 25        | 24                  | 17.10                | 17.67              | 17.24                     | 0-3      | 0 |
|           |            |         | 50        | 0                   | 17.11                | 17.73              | 17.27                     | 0-3      | 0 |

LTE Band 25\_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26115 Ch. 1857.5 MHz | 26365 Ch. 1882.5 MHz | 26615 Ch. 1907.5 MHz |                           |          |
| 15        | QPSK       | 1       | 0         | 17.05                | 17.65                | 17.24                | 0                         | 0        |
|           |            | 1       | 36        | 17.02                | 17.64                | 17.18                | 0                         | 0        |
|           |            | 1       | 74        | 17.11                | 17.69                | 17.21                | 0                         | 0        |
|           |            | 36      | 0         | 17.08                | 17.68                | 17.24                | 0-1                       | 0        |
|           |            | 36      | 18        | 17.06                | 17.72                | 17.26                | 0-1                       | 0        |
|           |            | 36      | 39        | 17.13                | 17.75                | 17.27                | 0-1                       | 0        |
|           |            | 75      | 0         | 17.08                | 17.68                | 17.22                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 17.41                | 18.10                | 17.48                | 0-1                       | 0        |
|           |            | 1       | 36        | 17.31                | 17.95                | 17.55                | 0-1                       | 0        |
|           |            | 1       | 74        | 17.36                | 18.02                | 17.53                | 0-1                       | 0        |
|           |            | 36      | 0         | 17.09                | 17.69                | 17.26                | 0-2                       | 0        |
|           |            | 36      | 18        | 17.11                | 17.70                | 17.24                | 0-2                       | 0        |
|           |            | 36      | 39        | 17.12                | 17.71                | 17.27                | 0-2                       | 0        |
|           |            | 75      | 0         | 17.10                | 17.69                | 17.23                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 17.28                | 17.85                | 17.42                | 0-2                       | 0        |
|           |            | 1       | 36        | 17.13                | 17.70                | 17.24                | 0-2                       | 0        |
|           |            | 1       | 74        | 17.31                | 17.90                | 17.37                | 0-2                       | 0        |
|           |            | 36      | 0         | 17.10                | 17.73                | 17.24                | 0-3                       | 0        |
|           |            | 36      | 18        | 17.13                | 17.71                | 17.24                | 0-3                       | 0        |
|           |            | 36      | 39        | 17.10                | 17.72                | 17.25                | 0-3                       | 0        |
|           |            | 75      | 0         | 17.11                | 17.68                | 17.23                | 0-3                       | 0        |

LTE Band 25\_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 26140 Ch. 1860 MHz  | 26365 Ch. 1882.5 MHz | 26590 Ch. 1905 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 17.11               | 17.69                | 17.21              | 0                         | 0        |
|           |            | 1       | 49        | 17.07               | 17.66                | 17.20              | 0                         | 0        |
|           |            | 1       | 99        | 17.13               | 17.72                | 17.27              | 0                         | 0        |
|           |            | 50      | 0         | 17.10               | 17.70                | 17.26              | 0-1                       | 0        |
|           |            | 50      | 25        | 17.12               | 17.69                | 17.27              | 0-1                       | 0        |
|           |            | 50      | 49        | 17.11               | 17.72                | 17.28              | 0-1                       | 0        |
|           |            | 100     | 0         | 17.13               | 17.72                | 17.30              | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 17.39               | 17.96                | 17.60              | 0-1                       | 0        |
|           |            | 1       | 49        | 17.29               | 17.81                | 17.42              | 0-1                       | 0        |
|           |            | 1       | 99        | 17.45               | 17.99                | 17.56              | 0-1                       | 0        |
|           |            | 50      | 0         | 17.11               | 17.68                | 17.24              | 0-2                       | 0        |
|           |            | 50      | 25        | 17.14               | 17.71                | 17.25              | 0-2                       | 0        |
|           |            | 50      | 49        | 17.12               | 17.70                | 17.24              | 0-2                       | 0        |
|           |            | 100     | 0         | 17.13               | 17.70                | 17.27              | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 17.28               | 17.89                | 17.37              | 0-2                       | 0        |
|           |            | 1       | 49        | 17.14               | 17.70                | 17.34              | 0-2                       | 0        |
|           |            | 1       | 99        | 17.29               | 17.83                | 17.28              | 0-2                       | 0        |
|           |            | 50      | 0         | 17.12               | 17.69                | 17.29              | 0-3                       | 0        |
|           |            | 50      | 25        | 17.14               | 17.70                | 17.26              | 0-3                       | 0        |
|           |            | 50      | 49        | 17.16               | 17.71                | 17.25              | 0-3                       | 0        |
|           |            | 100     | 0         | 17.10               | 17.69                | 17.21              | 0-3                       | 0        |



[ LTE Band 30 Conducted Power ]

LTE Band 30\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 27685 Ch. 2307.5 MHz | 27710 Ch. 2310 MHz | 27735 Ch. 2312.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 20.25                | 20.54              | 20.20                | 0                         | 0        |
|           |            | 1       | 12        | 20.23                | 20.50              | 20.17                | 0                         | 0        |
|           |            | 1       | 24        | 20.19                | 20.47              | 20.13                | 0                         | 0        |
|           |            | 12      | 0         | 20.31                | 20.63              | 20.26                | 0-1                       | 0        |
|           |            | 12      | 6         | 20.32                | 20.59              | 20.27                | 0-1                       | 0        |
|           |            | 12      | 11        | 20.30                | 20.59              | 20.25                | 0-1                       | 0        |
|           | 16QAM      | 25      | 0         | 20.28                | 20.58              | 20.21                | 0-1                       | 0        |
|           |            | 1       | 0         | 20.29                | 20.68              | 20.34                | 0-1                       | 0        |
|           |            | 1       | 12        | 20.43                | 20.67              | 20.26                | 0-1                       | 0        |
|           |            | 1       | 24        | 20.32                | 20.70              | 20.23                | 0-1                       | 0        |
|           |            | 12      | 0         | 20.21                | 20.55              | 20.19                | 0-2                       | 0        |
|           |            | 12      | 6         | 20.20                | 20.54              | 20.19                | 0-2                       | 0        |
|           | 64QAM      | 12      | 11        | 20.27                | 20.53              | 20.16                | 0-2                       | 0        |
|           |            | 25      | 0         | 20.20                | 20.46              | 20.15                | 0-2                       | 0        |
|           |            | 1       | 0         | 20.35                | 20.60              | 20.33                | 0-2                       | 0        |
|           |            | 1       | 12        | 20.26                | 20.59              | 20.18                | 0-2                       | 0        |
|           |            | 1       | 24        | 20.34                | 20.58              | 20.21                | 0-2                       | 0        |
|           |            | 12      | 0         | 19.27                | 19.54              | 19.22                | 0-3                       | 0        |
|           |            | 12      | 6         | 19.19                | 19.49              | 19.18                | 0-3                       | 0        |
|           |            | 12      | 11        | 19.22                | 19.49              | 19.10                | 0-3                       | 0        |
|           |            | 25      | 0         | 19.21                | 19.46              | 19.13                | 0-3                       | 0        |

LTE Band 30\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|---------------------------|----------|
|           |            |         |           | 27710 Ch. 2310 MHz  |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 20.51               | 0                         | 0        |
|           |            | 1       | 24        | 20.47               | 0                         | 0        |
|           |            | 1       | 49        | 20.48               | 0                         | 0        |
|           |            | 25      | 0         | 20.57               | 0-1                       | 0        |
|           |            | 25      | 12        | 20.53               | 0-1                       | 0        |
|           |            | 25      | 24        | 20.51               | 0-1                       | 0        |
|           | 16QAM      | 50      | 0         | 20.66               | 0-1                       | 0        |
|           |            | 1       | 0         | 20.79               | 0-1                       | 0        |
|           |            | 1       | 24        | 20.49               | 0-1                       | 0        |
|           |            | 1       | 49        | 20.52               | 0-1                       | 0        |
|           |            | 25      | 0         | 20.51               | 0-2                       | 0        |
|           |            | 25      | 12        | 20.43               | 0-2                       | 0        |
|           | 64QAM      | 25      | 24        | 20.44               | 0-2                       | 0        |
|           |            | 50      | 0         | 20.61               | 0-2                       | 0        |
|           |            | 1       | 0         | 20.67               | 0-2                       | 0        |
|           |            | 1       | 24        | 20.57               | 0-2                       | 0        |
|           |            | 1       | 49        | 20.54               | 0-2                       | 0        |
|           |            | 25      | 0         | 19.49               | 0-3                       | 0        |
|           |            | 25      | 12        | 19.47               | 0-3                       | 0        |
|           |            | 25      | 24        | 19.39               | 0-3                       | 0        |
|           |            | 50      | 0         | 19.59               | 0-3                       | 0        |

**[LTE TDD Band 38 Conducted Power]**

LTE Band 38\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                   |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|-------------------|----------------------|---------------------------|----------|
|           |            |         |           | 3775 Ch. 2572.5 MHz | 3800 Ch. 2595 MHz | 38225 Ch. 2617.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 21.02               | 21.08             | 20.89                | 0                         | 0        |
|           |            | 1       | 12        | 21.09               | 21.15             | 20.82                | 0                         | 0        |
|           |            | 1       | 24        | 21.07               | 21.11             | 20.92                | 0                         | 0        |
|           |            | 12      | 0         | 21.09               | 21.14             | 20.95                | 0-1                       | 0        |
|           |            | 12      | 6         | 21.09               | 21.07             | 20.95                | 0-1                       | 0        |
|           |            | 12      | 11        | 21.10               | 21.09             | 20.96                | 0-1                       | 0        |
|           |            | 25      | 0         | 21.10               | 21.15             | 20.95                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 21.16               | 21.28             | 21.05                | 0-1                       | 0        |
|           |            | 1       | 12        | 21.08               | 21.30             | 20.94                | 0-1                       | 0        |
|           |            | 1       | 24        | 21.09               | 21.22             | 20.98                | 0-1                       | 0        |
|           |            | 12      | 0         | 21.07               | 21.15             | 20.93                | 0-2                       | 0        |
|           |            | 12      | 6         | 21.08               | 21.08             | 20.93                | 0-2                       | 0        |
|           |            | 12      | 11        | 21.10               | 21.10             | 20.95                | 0-2                       | 0        |
|           |            | 25      | 0         | 21.14               | 21.19             | 21.00                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.93               | 21.07             | 20.82                | 0-2                       | 0        |
|           |            | 1       | 12        | 20.88               | 21.00             | 20.64                | 0-2                       | 0        |
|           |            | 1       | 24        | 20.88               | 21.01             | 20.74                | 0-2                       | 0        |
|           |            | 12      | 0         | 20.11               | 20.16             | 19.96                | 0-3                       | 0        |
|           |            | 12      | 6         | 20.11               | 20.08             | 19.94                | 0-3                       | 0        |
|           |            | 12      | 11        | 20.13               | 20.11             | 19.96                | 0-3                       | 0        |
|           |            | 25      | 0         | 20.12               | 20.16             | 19.97                | 0-3                       | 0        |

LTE Band 38\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 37800 Ch. 2575 MHz  | 38000 Ch. 2595 MHz | 38200 Ch. 2615 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 21.21               | 21.23              | 21.06              | 0                         | 0        |
|           |            | 1       | 24        | 21.13               | 21.06              | 20.88              | 0                         | 0        |
|           |            | 1       | 49        | 21.18               | 21.06              | 20.90              | 0                         | 0        |
|           |            | 25      | 0         | 21.21               | 21.21              | 21.01              | 0-1                       | 0        |
|           |            | 25      | 12        | 21.20               | 21.19              | 20.99              | 0-1                       | 0        |
|           |            | 25      | 24        | 21.20               | 21.15              | 20.98              | 0-1                       | 0        |
|           |            | 50      | 0         | 21.23               | 21.23              | 21.02              | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 21.34               | 21.28              | 21.08              | 0-1                       | 0        |
|           |            | 1       | 24        | 21.21               | 21.13              | 20.93              | 0-1                       | 0        |
|           |            | 1       | 49        | 21.26               | 21.15              | 20.93              | 0-1                       | 0        |
|           |            | 25      | 0         | 21.27               | 21.25              | 21.06              | 0-2                       | 0        |
|           |            | 25      | 12        | 21.25               | 21.23              | 21.04              | 0-2                       | 0        |
|           |            | 25      | 24        | 21.24               | 21.19              | 21.01              | 0-2                       | 0        |
|           |            | 50      | 0         | 21.22               | 21.23              | 21.04              | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 21.06               | 21.00              | 20.89              | 0-2                       | 0        |
|           |            | 1       | 24        | 20.94               | 20.73              | 20.69              | 0-2                       | 0        |
|           |            | 1       | 49        | 20.95               | 20.77              | 20.72              | 0-2                       | 0        |
|           |            | 25      | 0         | 20.22               | 20.24              | 20.04              | 0-3                       | 0        |
|           |            | 25      | 12        | 20.20               | 20.22              | 20.01              | 0-3                       | 0        |
|           |            | 25      | 24        | 20.21               | 20.19              | 20.01              | 0-3                       | 0        |
|           |            | 50      | 0         | 20.22               | 20.23              | 20.02              | 0-3                       | 0        |

LTE Band 38\_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 37825 Ch. 2507.5 MHz | 38000 Ch. 2595 MHz | 38175 Ch. 2612.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 21.21                | 21.25              | 21.08                | 0                         | 0        |
|           |            | 1       | 36        | 21.16                | 21.24              | 20.98                | 0                         | 0        |
|           |            | 1       | 74        | 21.16                | 21.11              | 20.95                | 0                         | 0        |
|           |            | 36      | 0         | 21.23                | 21.25              | 21.08                | 0-1                       | 0        |
|           |            | 36      | 18        | 21.19                | 21.18              | 21.02                | 0-1                       | 0        |
|           |            | 36      | 39        | 21.17                | 21.17              | 20.99                | 0-1                       | 0        |
|           | 16QAM      | 75      | 0         | 21.19                | 21.19              | 21.00                | 0-1                       | 0        |
|           |            | 1       | 0         | 21.29                | 21.32              | 21.06                | 0-1                       | 0        |
|           |            | 1       | 36        | 21.13                | 21.24              | 20.92                | 0-1                       | 0        |
|           |            | 1       | 74        | 21.21                | 21.17              | 20.92                | 0-1                       | 0        |
|           |            | 36      | 0         | 21.20                | 21.24              | 21.05                | 0-2                       | 0        |
|           |            | 36      | 18        | 21.18                | 21.16              | 20.99                | 0-2                       | 0        |
|           | 64QAM      | 36      | 39        | 21.15                | 21.15              | 20.96                | 0-2                       | 0        |
|           |            | 75      | 0         | 21.20                | 21.21              | 21.01                | 0-2                       | 0        |
|           |            | 1       | 0         | 20.97                | 20.99              | 20.78                | 0-2                       | 0        |
|           |            | 1       | 36        | 20.87                | 20.96              | 20.64                | 0-2                       | 0        |
|           |            | 1       | 74        | 20.95                | 20.82              | 20.64                | 0-2                       | 0        |
|           |            | 36      | 0         | 20.24                | 20.26              | 20.09                | 0-3                       | 0        |
|           |            | 36      | 18        | 20.21                | 20.19              | 20.03                | 0-3                       | 0        |
|           |            | 36      | 39        | 20.19                | 20.18              | 20.01                | 0-3                       | 0        |
|           |            | 75      | 0         | 20.21                | 20.21              | 20.03                | 0-3                       | 0        |

LTE Band 38\_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 37850 Ch. 2580 MHz  | 38000 Ch. 2595 MHz | 38150 Ch. 2610 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         |                     | <b>21.20</b>       |                    | 0                         | 0        |
|           |            | 1       | 49        |                     | 21.10              |                    | 0                         | 0        |
|           |            | 1       | 99        |                     | 21.10              |                    | 0                         | 0        |
|           |            | 50      | 0         |                     | <b>21.27</b>       |                    | 0-1                       | 0        |
|           |            | 50      | 25        |                     | 21.23              |                    | 0-1                       | 0        |
|           |            | 50      | 49        |                     | 21.17              |                    | 0-1                       | 0        |
|           | 16QAM      | 100     | 0         |                     | 21.19              |                    | 0-1                       | 0        |
|           |            | 1       | 0         |                     | 21.45              |                    | 0-1                       | 0        |
|           |            | 1       | 49        |                     | 21.20              |                    | 0-1                       | 0        |
|           |            | 1       | 99        |                     | 21.22              |                    | 0-1                       | 0        |
|           |            | 50      | 0         |                     | 21.30              |                    | 0-2                       | 0        |
|           |            | 50      | 25        |                     | 21.24              |                    | 0-2                       | 0        |
|           | 64QAM      | 50      | 49        |                     | 21.19              |                    | 0-2                       | 0        |
|           |            | 100     | 0         |                     | 21.22              |                    | 0-2                       | 0        |
|           |            | 1       | 0         |                     | 21.15              |                    | 0-2                       | 0        |
|           |            | 1       | 49        |                     | 20.93              |                    | 0-2                       | 0        |
|           |            | 1       | 99        |                     | 20.92              |                    | 0-2                       | 0        |
|           |            | 50      | 0         |                     | 20.29              |                    | 0-3                       | 0        |
|           |            | 50      | 25        |                     | 20.23              |                    | 0-3                       | 0        |
|           |            | 50      | 49        |                     | 20.18              |                    | 0-3                       | 0        |
|           |            | 100     | 0         |                     | 20.20              |                    | 0-3                       | 0        |

**[ LTE Band 41 Conducted Power ] - Power Class 3**

LTE Band 41 \_ 5 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                         |                         |                         |                         | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|----------|
|            |            |         |           | 39675 Ch.<br>2498.5 MHz | 40148 Ch.<br>2545.8 MHz | 40620 Ch.<br>2593.0 MHz | 41093 Ch.<br>2640.3 MHz | 41565 Ch.<br>2687.5 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 20.30                   | 20.29                   | 20.36                   | 20.21                   | 20.11                   | 0                        | 0        |
|            |            | 1       | 12        | 20.31                   | 20.26                   | 20.44                   | 20.18                   | 20.08                   | 0                        | 0        |
|            |            | 1       | 24        | 20.32                   | 20.31                   | 20.37                   | 20.25                   | 20.12                   | 0                        | 0        |
|            |            | 12      | 0         | 20.38                   | 20.35                   | 20.43                   | 20.29                   | 20.18                   | 0-1                      | 0        |
|            |            | 12      | 6         | 20.33                   | 20.33                   | 20.38                   | 20.32                   | 20.22                   | 0-1                      | 0        |
|            |            | 12      | 11        | 20.32                   | 20.32                   | 20.37                   | 20.34                   | 20.22                   | 0-1                      | 0        |
|            | 16QAM      | 25      | 0         | 20.55                   | 20.58                   | 20.50                   | 20.46                   | 20.35                   | 0-1                      | 0        |
|            |            | 1       | 0         | 20.35                   | 20.33                   | 20.42                   | 20.33                   | 20.09                   | 0-1                      | 0        |
|            |            | 1       | 12        | 20.22                   | 20.23                   | 20.44                   | 20.27                   | 19.99                   | 0-1                      | 0        |
|            |            | 1       | 24        | 20.30                   | 20.29                   | 20.42                   | 20.30                   | 20.07                   | 0-1                      | 0        |
|            |            | 12      | 0         | 20.22                   | 20.22                   | 20.39                   | 20.19                   | 20.10                   | 0-2                      | 0        |
|            |            | 12      | 6         | 20.17                   | 20.20                   | 20.33                   | 20.22                   | 20.12                   | 0-2                      | 0        |
|            | 64QAM      | 12      | 11        | 20.20                   | 20.21                   | 20.35                   | 20.24                   | 20.12                   | 0-2                      | 0        |
|            |            | 25      | 0         | 20.46                   | 20.44                   | 20.46                   | 20.41                   | 20.27                   | 0-2                      | 0        |
|            |            | 1       | 0         | 20.00                   | 19.95                   | 20.08                   | 20.12                   | 19.99                   | 0-2                      | 0        |
|            |            | 1       | 12        | 19.95                   | 19.83                   | 20.09                   | 20.01                   | 19.79                   | 0-2                      | 0        |
|            |            | 1       | 24        | 20.02                   | 19.87                   | 20.01                   | 20.06                   | 19.90                   | 0-2                      | 0        |
|            |            | 12      | 0         | 19.24                   | 19.18                   | 19.40                   | 19.18                   | 19.04                   | 0-3                      | 0        |
|            |            | 12      | 6         | 19.20                   | 19.15                   | 19.34                   | 19.21                   | 19.06                   | 0-3                      | 0        |
|            | 12         | 11      | 19.20     | 19.19                   | 19.36                   | 19.21                   | 19.09                   | 0-3                     | 0                        |          |
|            | 25         | 0       | 19.40     | 19.40                   | 19.43                   | 19.36                   | 19.23                   | 0-3                     | 0                        |          |

LTE Band 41 \_ 10 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|            |            |         |           | 39700 Ch.<br>2501 MHz | 40160 Ch.<br>2547 MHz | 40620 Ch.<br>2593 MHz | 41080 Ch.<br>2639 MHz | 41540 Ch.<br>2685 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 20.41                 | 20.39                 | 20.48                 | 20.39                 | 20.24                 | 0                         | 0        |
|            |            | 1       | 24        | 20.24                 | 20.23                 | 20.32                 | 20.28                 | 20.08                 | 0                         | 0        |
|            |            | 1       | 49        | 20.24                 | 20.24                 | 20.32                 | 20.35                 | 20.08                 | 0                         | 0        |
|            |            | 25      | 0         | 20.59                 | 20.61                 | 20.58                 | 20.51                 | 20.39                 | 0-1                       | 0        |
|            |            | 25      | 12        | 20.56                 | 20.58                 | 20.57                 | 20.51                 | 20.36                 | 0-1                       | 0        |
|            |            | 25      | 24        | 20.55                 | 20.58                 | 20.53                 | 20.50                 | 20.37                 | 0-1                       | 0        |
|            | 16QAM      | 50      | 0         | 20.62                 | 20.65                 | 20.64                 | 20.57                 | 20.44                 | 0-1                       | 0        |
|            |            | 1       | 0         | 20.32                 | 20.25                 | 20.51                 | 20.31                 | 20.22                 | 0-1                       | 0        |
|            |            | 1       | 24        | 20.22                 | 20.14                 | 20.37                 | 20.19                 | 20.04                 | 0-1                       | 0        |
|            |            | 1       | 49        | 20.22                 | 20.20                 | 20.37                 | 20.24                 | 20.03                 | 0-1                       | 0        |
|            |            | 25      | 0         | 20.49                 | 20.49                 | 20.57                 | 20.41                 | 20.32                 | 0-2                       | 0        |
|            |            | 25      | 12        | 20.47                 | 20.47                 | 20.55                 | 20.40                 | 20.29                 | 0-2                       | 0        |
|            | 64QAM      | 25      | 24        | 20.43                 | 20.45                 | 20.51                 | 20.40                 | 20.28                 | 0-2                       | 0        |
|            |            | 50      | 0         | 20.50                 | 20.49                 | 20.58                 | 20.46                 | 20.32                 | 0-2                       | 0        |
|            |            | 1       | 0         | 20.17                 | 20.00                 | 20.18                 | 20.12                 | 20.07                 | 0-2                       | 0        |
|            |            | 1       | 24        | 20.04                 | 19.87                 | 20.05                 | 19.95                 | 19.93                 | 0-2                       | 0        |
|            |            | 1       | 49        | 20.08                 | 19.92                 | 20.09                 | 20.04                 | 19.93                 | 0-2                       | 0        |
|            |            | 25      | 0         | 19.44                 | 19.43                 | 19.53                 | 19.38                 | 19.28                 | 0-3                       | 0        |
|            |            | 25      | 12        | 19.40                 | 19.40                 | 19.50                 | 19.36                 | 19.23                 | 0-3                       | 0        |
|            | 25         | 24      | 19.39     | 19.39                 | 19.44                 | 19.38                 | 19.24                 | 0-3                   | 0                         |          |
|            | 50         | 0       | 19.48     | 19.45                 | 19.56                 | 19.43                 | 19.31                 | 0-3                   | 0                         |          |

LTE Band 41 \_ 15 MHz Bandwidth- Power Class 3

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39725 Ch. 2503.5 MHz | 40173 Ch. 2548.3 MHz | 40620 Ch. 2593.0 MHz | 41068 Ch. 2637.8 MHz | 41515 Ch. 2682.5 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 20.37                | 20.36                | 20.48                | 20.33                | 20.28                | 0                         | 0        |
|            |            | 1       | 36        | 20.22                | 20.23                | 20.47                | 20.22                | 20.10                | 0                         | 0        |
|            |            | 1       | 74        | 20.24                | 20.30                | 20.36                | 20.26                | 20.12                | 0                         | 0        |
|            |            | 36      | 0         | 20.49                | 20.52                | 20.57                | 20.45                | 20.37                | 0-1                       | 0        |
|            |            | 36      | 18        | 20.46                | 20.49                | 20.49                | 20.43                | 20.35                | 0-1                       | 0        |
|            |            | 36      | 39        | 20.42                | 20.45                | 20.48                | 20.40                | 20.30                | 0-1                       | 0        |
|            | 16QAM      | 75      | 0         | 20.53                | 20.58                | 20.55                | 20.50                | 20.38                | 0-1                       | 0        |
|            |            | 1       | 0         | 20.38                | 20.33                | 20.55                | 20.34                | 20.35                | 0-1                       | 0        |
|            |            | 1       | 36        | 20.15                | 20.18                | 20.44                | 20.22                | 20.11                | 0-1                       | 0        |
|            |            | 1       | 74        | 20.24                | 20.25                | 20.40                | 20.27                | 20.12                | 0-1                       | 0        |
|            |            | 36      | 0         | 20.35                | 20.34                | 20.48                | 20.34                | 20.26                | 0-2                       | 0        |
|            |            | 36      | 18        | 20.33                | 20.32                | 20.41                | 20.33                | 20.24                | 0-2                       | 0        |
|            | 64QAM      | 36      | 39        | 20.28                | 20.32                | 20.40                | 20.29                | 20.17                | 0-2                       | 0        |
|            |            | 75      | 0         | 20.42                | 20.44                | 20.50                | 20.39                | 20.29                | 0-2                       | 0        |
|            |            | 1       | 0         | 20.05                | 20.05                | 20.28                | 20.15                | 20.13                | 0-2                       | 0        |
|            |            | 1       | 36        | 19.91                | 19.90                | 20.27                | 19.97                | 19.94                | 0-2                       | 0        |
|            |            | 1       | 74        | 19.91                | 19.99                | 20.14                | 20.09                | 19.94                | 0-2                       | 0        |
|            |            | 36      | 0         | 19.37                | 19.33                | 19.51                | 19.34                | 19.30                | 0-3                       | 0        |
|            | 36         | 18      | 19.34     | 19.31                | 19.45                | 19.32                | 19.27                | 0-3                  | 0                         |          |
|            | 36         | 39      | 19.30     | 19.30                | 19.43                | 19.30                | 19.20                | 0-3                  | 0                         |          |
|            | 75         | 0       | 19.38     | 19.40                | 19.49                | 19.37                | 19.28                | 0-3                  | 0                         |          |

LTE Band 41 \_ 20 MHz Bandwidth - Power Class 3

| 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         | 20.69                | 20.51                | 20.56                | 20.31                | 20.56                | 0                         | 0        |
|            |            | 1       | 49        | 20.51                | 20.29                | 20.34                | 20.09                | 20.36                | 0                         | 0        |
|            |            | 1       | 99        | 20.54                | 20.32                | 20.32                | 20.12                | 20.36                | 0                         | 0        |
|            |            | 50      | 0         | 20.96                | 20.77                | 20.68                | 20.50                | 20.76                | 0-1                       | 0        |
|            |            | 50      | 25        | 20.93                | 20.70                | 20.59                | 20.47                | 20.72                | 0-1                       | 0        |
|            |            | 50      | 49        | 20.91                | 20.66                | 20.56                | 20.44                | 20.70                | 0-1                       | 0        |
|            |            | 100     | 0         | 20.90                | 20.66                | 20.60                | 20.42                | 20.67                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 20.61                | 20.43                | 20.59                | 20.39                | 20.60                | 0-1                       | 0        |
|            |            | 1       | 49        | 20.43                | 20.25                | 20.38                | 20.18                | 20.41                | 0-1                       | 0        |
|            |            | 1       | 99        | 20.44                | 20.32                | 20.36                | 20.23                | 20.38                | 0-1                       | 0        |
|            |            | 50      | 0         | 20.82                | 20.62                | 20.64                | 20.42                | 20.69                | 0-2                       | 0        |
|            |            | 50      | 25        | 20.78                | 20.57                | 20.56                | 20.37                | 20.66                | 0-2                       | 0        |
|            |            | 50      | 49        | 20.76                | 20.54                | 20.53                | 20.33                | 20.60                | 0-2                       | 0        |
|            |            | 100     | 0         | 20.76                | 20.55                | 20.57                | 20.34                | 20.60                | 0-2                       | 0        |
|            | 64QAM      | 1       | 0         | 20.27                | 20.06                | 20.26                | 20.05                | 20.29                | 0-2                       | 0        |
|            |            | 1       | 49        | 20.10                | 19.88                | 19.99                | 19.80                | 20.08                | 0-2                       | 0        |
|            |            | 1       | 99        | 20.18                | 19.93                | 20.07                | 19.87                | 20.09                | 0-2                       | 0        |
|            |            | 50      | 0         | 19.79                | 19.59                | 19.62                | 19.39                | 19.66                | 0-3                       | 0        |
|            |            | 50      | 25        | 19.77                | 19.55                | 19.53                | 19.35                | 19.61                | 0-3                       | 0        |
|            |            | 50      | 49        | 19.73                | 19.51                | 19.50                | 19.31                | 19.57                | 0-3                       | 0        |
|            |            | 100     | 0         | 19.71                | 19.49                | 19.54                | 19.31                | 19.55                | 0-3                       | 0        |

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

**[LTE Band 41 Conducted Power] - Power Class 2**

LTE Band 41 \_ 5 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                         |                         |                         |                         | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|----------|
|            |            |         |           | 39675 Ch.<br>2498.5 MHz | 40148 Ch.<br>2545.8 MHz | 40620 Ch.<br>2593.0 MHz | 41093 Ch.<br>2640.3 MHz | 41565 Ch.<br>2687.5 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 20.22                   | 20.31                   | 20.35                   | 20.21                   | 20.04                   | 0                        | 0        |
|            |            | 1       | 12        | 20.26                   | 20.35                   | 20.33                   | 20.27                   | 20.12                   | 0                        | 0        |
|            |            | 1       | 24        | 20.21                   | 20.28                   | 20.30                   | 20.19                   | 19.97                   | 0                        | 0        |
|            |            | 12      | 0         | 20.29                   | 20.40                   | 20.37                   | 20.29                   | 20.09                   | 0-1                      | 0        |
|            |            | 12      | 6         | 20.29                   | 20.42                   | 20.41                   | 20.24                   | 20.01                   | 0-1                      | 0        |
|            |            | 12      | 11        | 20.27                   | 20.37                   | 20.37                   | 20.28                   | 20.06                   | 0-1                      | 0        |
|            | 16QAM      | 25      | 0         | 20.21                   | 20.30                   | 20.33                   | 20.21                   | 20.04                   | 0-1                      | 0        |
|            |            | 1       | 0         | 20.30                   | 20.65                   | 20.31                   | 20.57                   | 20.31                   | 0-1                      | 0        |
|            |            | 1       | 12        | 20.37                   | 20.65                   | 20.24                   | 20.62                   | 20.33                   | 0-1                      | 0        |
|            |            | 1       | 24        | 20.32                   | 20.64                   | 20.29                   | 20.57                   | 20.23                   | 0-1                      | 0        |
|            |            | 12      | 0         | 20.19                   | 20.29                   | 20.31                   | 20.24                   | 19.95                   | 0-2                      | 0        |
|            |            | 12      | 6         | 20.17                   | 20.27                   | 20.34                   | 20.17                   | 19.88                   | 0-2                      | 0        |
|            | 64QAM      | 12      | 11        | 20.15                   | 20.25                   | 20.30                   | 20.18                   | 19.93                   | 0-2                      | 0        |
|            |            | 25      | 0         | 20.21                   | 20.23                   | 20.33                   | 20.15                   | 20.00                   | 0-2                      | 0        |
|            |            | 1       | 0         | 20.11                   | 20.11                   | 20.14                   | 20.18                   | 19.96                   | 0-2                      | 0        |
|            |            | 1       | 12        | 20.14                   | 20.07                   | 20.08                   | 20.21                   | 19.96                   | 0-2                      | 0        |
|            |            | 1       | 24        | 20.12                   | 20.12                   | 20.23                   | 20.20                   | 19.93                   | 0-2                      | 0        |
|            |            | 12      | 0         | 19.18                   | 19.28                   | 19.40                   | 19.17                   | 19.08                   | 0-3                      | 0        |
|            |            | 12      | 6         | 19.18                   | 19.17                   | 19.42                   | 19.14                   | 18.96                   | 0-3                      | 0        |
|            |            | 12      | 11        | 19.17                   | 19.15                   | 19.38                   | 19.14                   | 18.94                   | 0-3                      | 0        |
| 25         | 0          | 19.15   | 19.19     | 19.30                   | 19.16                   | 18.98                   | 0-3                     | 0                       |                          |          |

LTE Band 41 \_ 10 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|            |            |         |           | 39700 Ch.<br>2501 MHz | 40160 Ch.<br>2547 MHz | 40620 Ch.<br>2593 MHz | 41080 Ch.<br>2639 MHz | 41540 Ch.<br>2685 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 20.25                 | 20.35                 | 20.41                 | 20.25                 | 20.11                 | 0                         | 0        |
|            |            | 1       | 24        | 20.19                 | 20.26                 | 20.33                 | 20.19                 | 20.00                 | 0                         | 0        |
|            |            | 1       | 49        | 20.20                 | 20.28                 | 20.30                 | 20.19                 | 19.97                 | 0                         | 0        |
|            |            | 25      | 0         | 20.22                 | 20.32                 | 20.36                 | 20.22                 | 20.05                 | 0-1                       | 0        |
|            |            | 25      | 12        | 20.20                 | 20.29                 | 20.33                 | 20.20                 | 20.01                 | 0-1                       | 0        |
|            |            | 25      | 24        | 20.20                 | 20.29                 | 20.30                 | 20.20                 | 20.00                 | 0-1                       | 0        |
|            | 16QAM      | 50      | 0         | 20.44                 | 20.58                 | 20.44                 | 20.42                 | 20.17                 | 0-1                       | 0        |
|            |            | 1       | 0         | 20.49                 | 20.61                 | 20.70                 | 20.25                 | 20.08                 | 0-1                       | 0        |
|            |            | 1       | 24        | 20.40                 | 20.57                 | 20.57                 | 20.12                 | 19.97                 | 0-1                       | 0        |
|            |            | 1       | 49        | 20.45                 | 20.63                 | 20.59                 | 20.13                 | 19.91                 | 0-1                       | 0        |
|            |            | 25      | 0         | 20.15                 | 20.26                 | 20.35                 | 20.14                 | 20.02                 | 0-2                       | 0        |
|            |            | 25      | 12        | 20.13                 | 20.22                 | 20.32                 | 20.12                 | 19.96                 | 0-2                       | 0        |
|            | 64QAM      | 25      | 24        | 20.13                 | 20.22                 | 20.28                 | 20.12                 | 19.94                 | 0-2                       | 0        |
|            |            | 50      | 0         | 20.38                 | 20.49                 | 20.44                 | 20.37                 | 20.16                 | 0-2                       | 0        |
|            |            | 1       | 0         | 20.26                 | 20.50                 | 20.46                 | 19.97                 | 19.85                 | 0-2                       | 0        |
|            |            | 1       | 24        | 20.17                 | 20.27                 | 20.33                 | 19.91                 | 19.72                 | 0-2                       | 0        |
|            |            | 1       | 49        | 20.17                 | 20.29                 | 20.29                 | 19.91                 | 19.69                 | 0-2                       | 0        |
|            |            | 25      | 0         | 19.12                 | 19.19                 | 19.34                 | 19.09                 | 18.97                 | 0-3                       | 0        |
|            |            | 25      | 12        | 19.10                 | 19.16                 | 19.30                 | 19.07                 | 18.94                 | 0-3                       | 0        |
|            |            | 25      | 24        | 19.10                 | 19.16                 | 19.26                 | 19.08                 | 18.91                 | 0-3                       | 0        |
| 50         | 0          | 19.30   | 19.45     | 19.39                 | 19.32                 | 19.12                 | 0-3                   | 0                     |                           |          |

LTE Band 41 \_ 15 MHz Bandwidth- Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                         |                         |                         |                         | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------------|----------|
|            |            |         |           | 39725 Ch.<br>2503.5 MHz | 40173 Ch.<br>2548.3 MHz | 40620 Ch.<br>2593.0 MHz | 41068 Ch.<br>2637.8 MHz | 41515 Ch.<br>2682.5 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 20.36                   | 20.38                   | 20.45                   | 20.18                   | 20.16                   | 0                         | 0        |
|            |            | 1       | 36        | 20.30                   | 20.36                   | 20.31                   | 20.20                   | 20.15                   | 0                         | 0        |
|            |            | 1       | 74        | 20.19                   | 20.28                   | 20.30                   | 20.07                   | 20.01                   | 0                         | 0        |
|            |            | 36      | 0         | 20.39                   | 20.52                   | 20.46                   | 20.27                   | 20.22                   | 0-1                       | 0        |
|            |            | 36      | 18        | 20.35                   | 20.44                   | 20.45                   | 20.21                   | 20.15                   | 0-1                       | 0        |
|            |            | 36      | 39        | 20.36                   | 20.44                   | 20.37                   | 20.20                   | 20.14                   | 0-1                       | 0        |
|            | 16QAM      | 75      | 0         | 20.35                   | 20.48                   | 20.42                   | 20.21                   | 20.18                   | 0-1                       | 0        |
|            |            | 1       | 0         | 20.55                   | 20.63                   | 20.75                   | 20.19                   | 20.29                   | 0-1                       | 0        |
|            |            | 1       | 36        | 20.56                   | 20.62                   | 20.66                   | 20.09                   | 20.14                   | 0-1                       | 0        |
|            |            | 1       | 74        | 20.47                   | 20.59                   | 20.66                   | 20.06                   | 20.00                   | 0-1                       | 0        |
|            |            | 36      | 0         | 20.28                   | 20.38                   | 20.40                   | 20.21                   | 20.19                   | 0-2                       | 0        |
|            |            | 36      | 18        | 20.22                   | 20.32                   | 20.39                   | 20.16                   | 20.12                   | 0-2                       | 0        |
|            | 64QAM      | 36      | 39        | 20.23                   | 20.33                   | 20.32                   | 20.15                   | 20.11                   | 0-2                       | 0        |
|            |            | 75      | 0         | 20.26                   | 20.36                   | 20.38                   | 20.15                   | 20.11                   | 0-2                       | 0        |
|            |            | 1       | 0         | 20.17                   | 20.14                   | 20.50                   | 20.26                   | 20.08                   | 0-2                       | 0        |
|            |            | 1       | 36        | 20.20                   | 20.39                   | 20.26                   | 20.16                   | 20.08                   | 0-2                       | 0        |
|            |            | 1       | 74        | 20.10                   | 20.36                   | 20.25                   | 20.03                   | 19.97                   | 0-2                       | 0        |
|            |            | 36      | 0         | 19.28                   | 19.38                   | 19.42                   | 19.18                   | 19.16                   | 0-3                       | 0        |
|            | 36         | 18      | 19.24     | 19.32                   | 19.41                   | 19.14                   | 19.09                   | 0-3                     | 0                         |          |
|            | 36         | 39      | 19.24     | 19.32                   | 19.35                   | 19.12                   | 19.08                   | 0-3                     | 0                         |          |
|            | 75         | 0       | 19.25     | 19.33                   | 19.40                   | 19.13                   | 19.10                   | 0-3                     | 0                         |          |

LTE Band 41 \_ 20 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                         |                         |                         |                         | MPR Allowed Per 3GPP [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 |                           |          |
| 20 MHz     | QPSK       | 1       | 0         | 20.59                   | 20.41                   | 20.51                   | 20.20                   | 20.50                   | 0                         | 0        |
|            |            | 1       | 49        | 20.47                   | 20.25                   | 20.33                   | 20.04                   | 20.33                   | 0                         | 0        |
|            |            | 1       | 99        | 20.43                   | 20.26                   | 20.27                   | 20.07                   | 20.24                   | 0                         | 0        |
|            |            | 50      | 0         | 20.77                   | 20.61                   | 20.49                   | 20.29                   | 20.55                   | 0-1                       | 0        |
|            |            | 50      | 25        | 20.71                   | 20.53                   | 20.42                   | 20.24                   | 20.51                   | 0-1                       | 0        |
|            |            | 50      | 49        | 20.72                   | 20.48                   | 20.35                   | 20.22                   | 20.48                   | 0-1                       | 0        |
|            |            | 100     | 0         | 20.75                   | 20.55                   | 20.45                   | 20.28                   | 20.54                   | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 20.68                   | 20.57                   | 20.48                   | 20.39                   | 20.58                   | 0-1                       | 0        |
|            |            | 1       | 49        | 20.54                   | 20.31                   | 20.29                   | 20.19                   | 20.43                   | 0-1                       | 0        |
|            |            | 1       | 99        | 20.51                   | 20.38                   | 20.25                   | 20.17                   | 20.36                   | 0-1                       | 0        |
|            |            | 50      | 0         | 20.69                   | 20.48                   | 20.48                   | 20.23                   | 20.49                   | 0-2                       | 0        |
|            |            | 50      | 25        | 20.63                   | 20.42                   | 20.42                   | 20.18                   | 20.45                   | 0-2                       | 0        |
|            |            | 50      | 49        | 20.63                   | 20.40                   | 20.36                   | 20.14                   | 20.41                   | 0-2                       | 0        |
|            |            | 100     | 0         | 20.64                   | 20.44                   | 20.43                   | 20.21                   | 20.50                   | 0-2                       | 0        |
|            | 64QAM      | 1       | 0         | 20.39                   | 20.37                   | 20.30                   | 20.09                   | 20.41                   | 0-2                       | 0        |
|            |            | 1       | 49        | 20.24                   | 20.08                   | 20.12                   | 19.89                   | 20.23                   | 0-2                       | 0        |
|            |            | 1       | 99        | 20.24                   | 20.13                   | 20.07                   | 19.90                   | 20.17                   | 0-2                       | 0        |
|            |            | 50      | 0         | 19.62                   | 19.46                   | 19.47                   | 19.27                   | 19.52                   | 0-3                       | 0        |
|            |            | 50      | 25        | 19.60                   | 19.41                   | 19.40                   | 19.16                   | 19.50                   | 0-3                       | 0        |
|            |            | 50      | 49        | 19.59                   | 19.37                   | 19.34                   | 19.12                   | 19.42                   | 0-3                       | 0        |
|            |            | 100     | 0         | 19.62                   | 19.41                   | 19.41                   | 19.18                   | 19.45                   | 0-3                       | 0        |

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] |
|-----------|------------|---------|-----------|-----------------------|---------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 131979 Ch. 1710.7 MHz | 132322 Ch. 1745 MHz | 132665 Ch. 1779.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 18.96                 | 19.42               | 19.49                 | 0                         | 0        |
|           |            | 1       | 3         | 19.03                 | 19.48               | 19.69                 | 0                         | 0        |
|           |            | 1       | 5         | 18.98                 | 19.44               | 19.51                 | 0                         | 0        |
|           |            | 3       | 0         | 19.04                 | 19.33               | 19.53                 | 0                         | 0        |
|           |            | 3       | 1         | 19.05                 | 19.44               | 19.58                 | 0                         | 0        |
|           |            | 3       | 3         | 18.93                 | 19.35               | 19.53                 | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 19.12                 | 19.48               | 19.63                 | 0-1                       | 0        |
|           |            | 1       | 0         | 19.25                 | 19.77               | 19.97                 | 0-1                       | 0        |
|           |            | 1       | 3         | 19.45                 | 19.73               | 19.95                 | 0-1                       | 0        |
|           |            | 1       | 5         | 19.35                 | 19.72               | 19.85                 | 0-1                       | 0        |
|           |            | 3       | 0         | 19.17                 | 19.43               | 19.64                 | 0-1                       | 0        |
|           |            | 3       | 1         | 19.09                 | 19.47               | 19.79                 | 0-1                       | 0        |
|           | 64QAM      | 3       | 3         | 19.13                 | 19.40               | 19.73                 | 0-1                       | 0        |
|           |            | 6       | 0         | 19.18                 | 19.52               | 19.81                 | 0-2                       | 0        |
|           |            | 1       | 0         | 19.21                 | 19.70               | 19.79                 | 0-2                       | 0        |
|           |            | 1       | 3         | 19.37                 | 19.74               | 19.94                 | 0-2                       | 0        |
|           |            | 1       | 5         | 19.30                 | 19.57               | 19.86                 | 0-2                       | 0        |
|           |            | 3       | 0         | 19.16                 | 19.50               | 19.74                 | 0-2                       | 0        |
|           | 3          | 1       | 19.31     | 19.72                 | 19.89               | 0-2                   | 0                         |          |
|           | 3          | 3       | 19.16     | 19.61                 | 19.80               | 0-2                   | 0                         |          |
|           | 6          | 0       | 19.12     | 19.55                 | 19.66               | 0-3                   | 0                         |          |

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         | 19.06                 | 19.46               | 19.68                 | 0                         | 0        |
|           |            | 1       | 7         | 19.28                 | 19.59               | 19.63                 | 0                         | 0        |
|           |            | 1       | 14        | 18.99                 | 19.40               | 19.56                 | 0                         | 0        |
|           |            | 8       | 0         | 19.11                 | 19.60               | 19.69                 | 0-1                       | 0        |
|           |            | 8       | 3         | 19.22                 | 19.55               | 19.78                 | 0-1                       | 0        |
|           |            | 8       | 7         | 19.16                 | 19.53               | 19.75                 | 0-1                       | 0        |
|           |            | 15      | 0         | 19.20                 | 19.52               | 19.73                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.32                 | 19.81               | 19.97                 | 0-1                       | 0        |
|           |            | 1       | 7         | 19.47                 | 19.81               | 19.83                 | 0-1                       | 0        |
|           |            | 1       | 14        | 19.39                 | 19.71               | 19.95                 | 0-1                       | 0        |
|           |            | 8       | 0         | 19.22                 | 19.60               | 19.77                 | 0-2                       | 0        |
|           |            | 8       | 3         | 19.29                 | 19.62               | 19.87                 | 0-2                       | 0        |
|           |            | 8       | 7         | 19.20                 | 19.64               | 19.74                 | 0-2                       | 0        |
|           | 64QAM      | 15      | 0         | 19.27                 | 19.56               | 19.77                 | 0-2                       | 0        |
|           |            | 1       | 0         | 19.28                 | 19.70               | 19.85                 | 0-2                       | 0        |
|           |            | 1       | 7         | 19.34                 | 19.70               | 19.85                 | 0-2                       | 0        |
|           |            | 1       | 14        | 19.36                 | 19.73               | 19.80                 | 0-2                       | 0        |
|           |            | 8       | 0         | 19.19                 | 19.62               | 19.85                 | 0-3                       | 0        |
|           |            | 8       | 3         | 19.26                 | 19.60               | 19.93                 | 0-3                       | 0        |
|           |            | 8       | 7         | 19.15                 | 19.56               | 19.81                 | 0-3                       | 0        |
|           | 15         | 0       | 19.27     | 19.53                 | 19.74               | 0-3                   | 0                         |          |



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         | 19.07                 | 19.36              | 19.54                 | 0                         | 0        |
|           |            | 1       | 12        | 19.02                 | 19.49              | 19.64                 | 0                         | 0        |
|           |            | 1       | 24        | 19.06                 | 19.42              | 19.59                 | 0                         | 0        |
|           |            | 12      | 0         | 19.23                 | 19.55              | 19.70                 | 0-1                       | 0        |
|           |            | 12      | 6         | 19.21                 | 19.54              | 19.84                 | 0-1                       | 0        |
|           |            | 12      | 11        | 19.15                 | 19.53              | 19.73                 | 0-1                       | 0        |
|           | 25         | 0       | 19.24     | 19.55                 | 19.73              | 0-1                   | 0                         |          |
|           | 16QAM      | 1       | 0         | 19.53                 | 19.74              | 19.97                 | 0-1                       | 0        |
|           |            | 1       | 12        | 19.37                 | 19.85              | 19.94                 | 0-1                       | 0        |
|           |            | 1       | 24        | 19.40                 | 19.81              | 19.82                 | 0-1                       | 0        |
|           |            | 12      | 0         | 19.20                 | 19.60              | 19.85                 | 0-2                       | 0        |
|           |            | 12      | 6         | 19.29                 | 19.57              | 19.80                 | 0-2                       | 0        |
|           |            | 12      | 11        | 19.21                 | 19.57              | 19.78                 | 0-2                       | 0        |
|           | 25         | 0       | 19.22     | 19.52                 | 19.70              | 0-2                   | 0                         |          |
|           | 64QAM      | 1       | 0         | 19.26                 | 19.64              | 19.91                 | 0-2                       | 0        |
|           |            | 1       | 12        | 19.47                 | 19.74              | 19.96                 | 0-2                       | 0        |
|           |            | 1       | 24        | 19.37                 | 19.83              | 19.83                 | 0-2                       | 0        |
|           |            | 12      | 0         | 19.22                 | 19.61              | 19.86                 | 0-3                       | 0        |
| 12        |            | 6       | 19.32     | 19.59                 | 19.90              | 0-3                   | 0                         |          |
| 12        |            | 11      | 19.25     | 19.58                 | 19.80              | 0-3                   | 0                         |          |
| 25        | 0          | 19.22   | 19.48     | 19.79                 | 0-3                | 0                     |                           |          |

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         | 18.85               | 19.27               | 19.31               | 0                         | 0        |
|           |            | 1       | 24        | 19.20               | 19.48               | 19.60               | 0                         | 0        |
|           |            | 1       | 49        | 18.94               | 19.40               | 19.41               | 0                         | 0        |
|           |            | 25      | 0         | 19.09               | 19.50               | 19.62               | 0-1                       | 0        |
|           |            | 25      | 12        | 19.24               | 19.48               | 19.67               | 0-1                       | 0        |
|           |            | 25      | 24        | 19.17               | 19.52               | 19.66               | 0-1                       | 0        |
|           | 50         | 0       | 19.24     | 19.45               | 19.70               | 0-1                 | 0                         |          |
|           | 16QAM      | 1       | 0         | 19.19               | 19.58               | 19.70               | 0-1                       | 0        |
|           |            | 1       | 24        | 19.25               | 19.71               | 19.96               | 0-1                       | 0        |
|           |            | 1       | 49        | 19.30               | 19.54               | 19.94               | 0-1                       | 0        |
|           |            | 25      | 0         | 19.18               | 19.46               | 19.62               | 0-2                       | 0        |
|           |            | 25      | 12        | 19.34               | 19.55               | 19.65               | 0-2                       | 0        |
|           |            | 25      | 24        | 19.22               | 19.61               | 19.70               | 0-2                       | 0        |
|           | 50         | 0       | 19.11     | 19.46               | 19.67               | 0-2                 | 0                         |          |
|           | 64QAM      | 1       | 0         | 19.00               | 19.34               | 19.49               | 0-2                       | 0        |
|           |            | 1       | 24        | 19.31               | 19.68               | 19.79               | 0-2                       | 0        |
|           |            | 1       | 49        | 19.27               | 19.51               | 19.80               | 0-2                       | 0        |
|           |            | 25      | 0         | 19.13               | 19.49               | 19.68               | 0-3                       | 0        |
|           |            | 25      | 12        | 19.23               | 19.51               | 19.64               | 0-3                       | 0        |
|           |            | 25      | 24        | 19.14               | 19.57               | 19.74               | 0-3                       | 0        |
|           | 50         | 0       | 19.21     | 19.44               | 19.67               | 0-3                 | 0                         |          |

LTE Band 66 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]      |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 132047 Ch.<br>1717.5 MHz | 132322 Ch.<br>1745 MHz | 132597 Ch.<br>1772.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 19.01                    | 19.20                  | 19.60                    | 0                         | 0        |
|           |            | 1       | 36        | 19.03                    | 19.43                  | 19.62                    | 0                         | 0        |
|           |            | 1       | 74        | 19.05                    | 19.17                  | 19.51                    | 0                         | 0        |
|           |            | 36      | 0         | 19.19                    | 19.52                  | 19.72                    | 0-1                       | 1        |
|           |            | 36      | 18        | 19.18                    | 19.54                  | 19.69                    | 0-1                       | 1        |
|           |            | 36      | 39        | 19.25                    | 19.46                  | 19.67                    | 0-1                       | 1        |
|           |            | 75      | 0         | 19.27                    | 19.50                  | 19.66                    | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 19.26                    | 19.54                  | 19.99                    | 0-1                       | 1        |
|           |            | 1       | 36        | 19.47                    | 19.73                  | 19.90                    | 0-1                       | 1        |
|           |            | 1       | 74        | 19.34                    | 19.54                  | 19.82                    | 0-1                       | 1        |
|           |            | 36      | 0         | 19.21                    | 19.43                  | 19.67                    | 0-2                       | 2        |
|           |            | 36      | 18        | 19.18                    | 19.49                  | 19.73                    | 0-2                       | 2        |
|           |            | 36      | 39        | 19.31                    | 19.53                  | 19.64                    | 0-2                       | 2        |
|           |            | 75      | 0         | 19.26                    | 19.47                  | 19.55                    | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 19.02                    | 19.44                  | 19.82                    | 0-2                       | 2        |
|           |            | 1       | 36        | 19.28                    | 19.73                  | 19.91                    | 0-2                       | 2        |
|           |            | 1       | 74        | 19.34                    | 19.48                  | 19.92                    | 0-2                       | 2        |
|           |            | 36      | 0         | 19.20                    | 19.51                  | 19.70                    | 0-3                       | 3        |
| 36        |            | 18      | 19.24     | 19.51                    | 19.66                  | 0-3                      | 3                         |          |
| 36        |            | 39      | 19.30     | 19.49                    | 19.72                  | 0-3                      | 3                         |          |
| 75        |            | 0       | 19.31     | 19.51                    | 19.70                  | 0-3                      | 3                         |          |

LTE Band 66 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]    |                        |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|------------------------|------------------------|------------------------|---------------------------|----------|
|           |            |         |           | 132072 Ch.<br>1720 MHz | 132322 Ch.<br>1745 MHz | 132572 Ch.<br>1770 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 18.81                  | 19.04                  | 19.57                  | 0                         | 0        |
|           |            | 1       | 49        | 19.14                  | 19.37                  | 19.43                  | 0                         | 0        |
|           |            | 1       | 99        | 19.04                  | 19.19                  | 19.54                  | 0                         | 0        |
|           |            | 50      | 0         | 19.18                  | 19.44                  | 19.68                  | 0-1                       | 1        |
|           |            | 50      | 25        | 19.37                  | 19.51                  | 19.80                  | 0-1                       | 1        |
|           |            | 50      | 49        | 19.22                  | 19.48                  | 19.64                  | 0-1                       | 1        |
|           |            | 100     | 0         | 19.23                  | 19.48                  | 19.70                  | 0-1                       | 1        |
|           | 16QAM      | 1       | 0         | 19.20                  | 19.47                  | 19.92                  | 0-1                       | 1        |
|           |            | 1       | 49        | 19.48                  | 19.72                  | 19.98                  | 0-1                       | 1        |
|           |            | 1       | 99        | 19.28                  | 19.55                  | 19.90                  | 0-1                       | 1        |
|           |            | 50      | 0         | 19.25                  | 19.51                  | 19.63                  | 0-2                       | 2        |
|           |            | 50      | 25        | 19.32                  | 19.55                  | 19.76                  | 0-2                       | 2        |
|           |            | 50      | 49        | 19.36                  | 19.63                  | 19.62                  | 0-2                       | 2        |
|           |            | 100     | 0         | 19.20                  | 19.39                  | 19.65                  | 0-2                       | 2        |
|           | 64QAM      | 1       | 0         | 19.01                  | 19.32                  | 19.79                  | 0-2                       | 2        |
|           |            | 1       | 49        | 19.36                  | 19.71                  | 19.76                  | 0-2                       | 2        |
|           |            | 1       | 99        | 19.27                  | 19.51                  | 19.75                  | 0-2                       | 2        |
|           |            | 50      | 0         | 19.19                  | 19.49                  | 19.71                  | 0-3                       | 3        |
|           |            | 50      | 25        | 19.35                  | 19.45                  | 19.77                  | 0-3                       | 3        |
|           |            | 50      | 49        | 19.20                  | 19.54                  | 19.64                  | 0-3                       | 3        |
|           |            | 100     | 0         | 19.19                  | 19.45                  | 19.70                  | 0-3                       | 3        |

### 11.3.3 LTE Reduced Conducted Power (Grip Sensor-on)

#### [ 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. 1850.7 MHz | 18900 Ch. 1880 MHz | 19193 Ch. 1909.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 19.15                | 19.61              | 19.24                | 0                         | 0        |
|           |            | 1       | 3         | 19.21                | 19.66              | 19.31                | 0                         | 0        |
|           |            | 1       | 5         | 19.14                | 19.58              | 19.25                | 0                         | 0        |
|           |            | 3       | 0         | 19.12                | 19.56              | 19.24                | 0                         | 0        |
|           |            | 3       | 1         | 19.25                | 19.73              | 19.38                | 0                         | 0        |
|           |            | 3       | 3         | 19.21                | 19.64              | 19.30                | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 19.07                | 19.53              | 19.16                | 0-1                       | 0        |
|           |            | 1       | 0         | 19.12                | 19.89              | 19.43                | 0-1                       | 0        |
|           |            | 1       | 3         | 19.13                | 19.70              | 19.23                | 0-1                       | 0        |
|           |            | 1       | 5         | 19.44                | 19.81              | 19.42                | 0-1                       | 0        |
|           |            | 3       | 0         | 19.26                | 19.66              | 19.34                | 0-1                       | 0        |
|           |            | 3       | 1         | 19.25                | 19.76              | 19.38                | 0-1                       | 0        |
|           | 64QAM      | 3       | 3         | 19.28                | 19.90              | 19.46                | 0-1                       | 0        |
|           |            | 6       | 0         | 19.27                | 19.71              | 19.38                | 0-2                       | 0        |
|           |            | 1       | 0         | 19.28                | 19.79              | 19.54                | 0-2                       | 0        |
|           |            | 1       | 3         | 19.38                | 19.84              | 19.38                | 0-2                       | 0        |
|           |            | 1       | 5         | 19.28                | 19.80              | 19.45                | 0-2                       | 0        |
|           |            | 3       | 0         | 19.20                | 19.70              | 19.30                | 0-2                       | 0        |
|           |            | 3       | 1         | 19.37                | 19.82              | 19.42                | 0-2                       | 0        |
|           |            | 3       | 3         | 19.29                | 19.81              | 19.36                | 0-2                       | 0        |
|           |            | 6       | 0         | 19.20                | 19.73              | 19.35                | 0-3                       | 0        |

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         | 19.08                | 19.67              | 19.25                | 0                         | 0        |
|           |            | 1       | 7         | 19.05                | 19.71              | 19.33                | 0                         | 0        |
|           |            | 1       | 14        | 19.13                | 19.69              | 19.30                | 0                         | 0        |
|           |            | 8       | 0         | 19.19                | 19.73              | 19.38                | 0-1                       | 0        |
|           |            | 8       | 3         | 19.18                | 19.72              | 19.33                | 0-1                       | 0        |
|           |            | 8       | 7         | 19.20                | 19.73              | 19.39                | 0-1                       | 0        |
|           |            | 15      | 0         | 19.22                | 19.76              | 19.45                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.41                | 19.89              | 19.56                | 0-1                       | 0        |
|           |            | 1       | 7         | 19.29                | 19.94              | 19.65                | 0-1                       | 0        |
|           |            | 1       | 14        | 19.44                | 19.81              | 19.47                | 0-1                       | 0        |
|           |            | 8       | 0         | 19.27                | 19.77              | 19.45                | 0-2                       | 0        |
|           |            | 8       | 3         | 19.24                | 19.75              | 19.40                | 0-2                       | 0        |
|           |            | 8       | 7         | 19.24                | 19.78              | 19.43                | 0-2                       | 0        |
|           |            | 15      | 0         | 19.24                | 19.80              | 19.44                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.33                | 19.89              | 19.52                | 0-2                       | 0        |
|           |            | 1       | 7         | 19.26                | 19.89              | 19.56                | 0-2                       | 0        |
|           |            | 1       | 14        | 19.18                | 19.94              | 19.46                | 0-2                       | 0        |
|           |            | 8       | 0         | 19.24                | 19.78              | 19.43                | 0-3                       | 0        |
|           |            | 8       | 3         | 19.22                | 19.76              | 19.40                | 0-3                       | 0        |
|           |            | 8       | 7         | 19.23                | 19.80              | 19.44                | 0-3                       | 0        |
|           |            | 15      | 0         | 19.19                | 19.74              | 19.41                | 0-3                       | 0        |

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         | 19.15                   | 19.70                 | 19.33                   | 0                         | 0        |
|           |            | 1       | 12        | 19.13                   | 19.65                 | 19.32                   | 0                         | 0        |
|           |            | 1       | 24        | 19.16                   | 19.64                 | 19.35                   | 0                         | 0        |
|           |            | 12      | 0         | 19.23                   | 19.76                 | 19.40                   | 0-1                       | 0        |
|           |            | 12      | 6         | 19.23                   | 19.76                 | 19.43                   | 0-1                       | 0        |
|           |            | 12      | 11        | 19.25                   | 19.74                 | 19.41                   | 0-1                       | 0        |
|           | 16QAM      | 25      | 0         | 19.22                   | 19.75                 | 19.38                   | 0-1                       | 0        |
|           |            | 1       | 0         | 19.45                   | 19.96                 | 19.62                   | 0-1                       | 0        |
|           |            | 1       | 12        | 19.43                   | 19.88                 | 19.62                   | 0-1                       | 0        |
|           |            | 1       | 24        | 19.37                   | 19.95                 | 19.57                   | 0-1                       | 0        |
|           |            | 12      | 0         | 19.22                   | 19.74                 | 19.42                   | 0-2                       | 0        |
|           |            | 12      | 6         | 19.19                   | 19.74                 | 19.39                   | 0-2                       | 0        |
|           | 64QAM      | 12      | 11        | 19.23                   | 19.77                 | 19.41                   | 0-2                       | 0        |
|           |            | 25      | 0         | 19.20                   | 19.75                 | 19.41                   | 0-2                       | 0        |
|           |            | 1       | 0         | 19.36                   | 19.87                 | 19.52                   | 0-2                       | 0        |
|           |            | 1       | 12        | 19.21                   | 19.68                 | 19.39                   | 0-2                       | 0        |
|           |            | 1       | 24        | 19.37                   | 19.90                 | 19.56                   | 0-2                       | 0        |
|           |            | 12      | 0         | 19.22                   | 19.77                 | 19.37                   | 0-3                       | 0        |
|           |            | 12      | 6         | 19.24                   | 19.79                 | 19.38                   | 0-3                       | 0        |
|           |            | 12      | 11        | 19.21                   | 19.74                 | 19.42                   | 0-3                       | 0        |
|           |            | 25      | 0         | 19.23                   | 19.74                 | 19.42                   | 0-3                       | 0        |

LTE Band 2 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|           |            |         |           | 18650 Ch.<br>1855 MHz | 18900 Ch.<br>1880 MHz | 19150 Ch.<br>1905 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 19.67                 | 19.67                 | 19.84                 | 0                         | 0        |
|           |            | 1       | 24        | 19.66                 | 19.66                 | 19.80                 | 0                         | 0        |
|           |            | 1       | 49        | 19.71                 | 19.72                 | 19.86                 | 0                         | 0        |
|           |            | 25      | 0         | 19.73                 | 19.74                 | 19.90                 | 0-1                       | 0        |
|           |            | 25      | 12        | 19.72                 | 19.70                 | 19.90                 | 0-1                       | 0        |
|           |            | 25      | 24        | 19.74                 | 19.75                 | 19.91                 | 0-1                       | 0        |
|           |            | 50      | 0         | 19.71                 | 19.70                 | 19.88                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.01                 | 19.90                 | 20.09                 | 0-1                       | 0        |
|           |            | 1       | 24        | 19.86                 | 19.71                 | 20.06                 | 0-1                       | 0        |
|           |            | 1       | 49        | 20.00                 | 19.89                 | 19.99                 | 0-1                       | 0        |
|           |            | 25      | 0         | 19.73                 | 19.69                 | 19.85                 | 0-2                       | 0        |
|           |            | 25      | 12        | 19.73                 | 19.72                 | 19.86                 | 0-2                       | 0        |
|           |            | 25      | 24        | 19.77                 | 19.71                 | 19.92                 | 0-2                       | 0        |
|           | 64QAM      | 50      | 0         | 19.68                 | 19.70                 | 19.88                 | 0-2                       | 0        |
|           |            | 1       | 0         | 19.79                 | 19.86                 | 20.01                 | 0-2                       | 0        |
|           |            | 1       | 24        | 19.78                 | 19.79                 | 19.95                 | 0-2                       | 0        |
|           |            | 1       | 49        | 19.89                 | 19.80                 | 19.91                 | 0-2                       | 0        |
|           |            | 25      | 0         | 19.71                 | 19.72                 | 19.88                 | 0-3                       | 0        |
|           |            | 25      | 12        | 19.73                 | 19.73                 | 19.85                 | 0-3                       | 0        |
|           |            | 25      | 24        | 19.75                 | 19.71                 | 19.88                 | 0-3                       | 0        |
|           |            |         | 50        | 0                     | 19.74                 | 19.76                 | 19.88                     | 0-3      |

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         | 19.67                   | 19.74                 | 19.85                   | 0                         | 0        |
|           |            | 1       | 36        | 19.61                   | 19.70                 | 19.84                   | 0                         | 0        |
|           |            | 1       | 74        | 19.67                   | 19.80                 | 19.85                   | 0                         | 0        |
|           |            | 36      | 0         | 19.71                   | 19.76                 | 19.90                   | 0-1                       | 0        |
|           |            | 36      | 18        | 19.75                   | 19.77                 | 19.89                   | 0-1                       | 0        |
|           |            | 36      | 39        | 19.69                   | 19.79                 | 19.88                   | 0-1                       | 0        |
|           |            | 75      | 0         | 19.73                   | 19.80                 | 19.88                   | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.94                   | 20.01                 | 20.13                   | 0-1                       | 0        |
|           |            | 1       | 36        | 19.82                   | 19.96                 | 20.10                   | 0-1                       | 0        |
|           |            | 1       | 74        | 19.92                   | 20.19                 | 20.21                   | 0-1                       | 0        |
|           |            | 36      | 0         | 19.71                   | 19.77                 | 19.91                   | 0-2                       | 0        |
|           |            | 36      | 18        | 19.73                   | 19.81                 | 19.91                   | 0-2                       | 0        |
|           |            | 36      | 39        | 19.75                   | 19.80                 | 19.87                   | 0-2                       | 0        |
|           |            | 75      | 0         | 19.71                   | 19.79                 | 19.86                   | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.86                   | 19.82                 | 20.06                   | 0-2                       | 0        |
|           |            | 1       | 36        | 19.70                   | 19.74                 | 19.90                   | 0-2                       | 0        |
|           |            | 1       | 74        | 19.90                   | 19.93                 | 19.99                   | 0-2                       | 0        |
|           |            | 36      | 0         | 19.70                   | 19.79                 | 19.87                   | 0-3                       | 0        |
| 36        |            | 18      | 19.75     | 19.83                   | 19.88                 | 0-3                     | 0                         |          |
| 36        |            | 39      | 19.73     | 19.81                   | 19.88                 | 0-3                     | 0                         |          |
| 75        |            | 0       | 19.77     | 19.78                   | 19.89                 | 0-3                     | 0                         |          |

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         | 19.76                 | 19.73                 | 19.88                 | 0                         | 0        |
|           |            | 1       | 49        | 19.74                 | 19.70                 | 19.87                 | 0                         | 0        |
|           |            | 1       | 99        | 19.84                 | 19.80                 | 19.91                 | 0                         | 0        |
|           |            | 50      | 0         | 19.79                 | 19.76                 | 19.90                 | 0-1                       | 0        |
|           |            | 50      | 25        | 19.83                 | 19.76                 | 19.89                 | 0-1                       | 0        |
|           |            | 50      | 49        | 19.81                 | 19.79                 | 19.89                 | 0-1                       | 0        |
|           |            | 100     | 0         | 19.81                 | 19.79                 | 19.92                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.04                 | 20.03                 | 20.10                 | 0-1                       | 0        |
|           |            | 1       | 49        | 19.81                 | 19.84                 | 19.91                 | 0-1                       | 0        |
|           |            | 1       | 99        | 20.07                 | 20.03                 | 20.12                 | 0-1                       | 0        |
|           |            | 50      | 0         | 19.78                 | 19.76                 | 19.91                 | 0-2                       | 0        |
|           |            | 50      | 25        | 19.77                 | 19.78                 | 19.88                 | 0-2                       | 0        |
|           |            | 50      | 49        | 19.82                 | 19.78                 | 19.91                 | 0-2                       | 0        |
|           |            | 100     | 0         | 19.80                 | 19.77                 | 19.87                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.98                 | 19.98                 | 20.13                 | 0-2                       | 0        |
|           |            | 1       | 49        | 19.91                 | 19.83                 | 20.06                 | 0-2                       | 0        |
|           |            | 1       | 99        | 20.03                 | 20.00                 | 20.08                 | 0-2                       | 0        |
|           |            | 50      | 0         | 19.80                 | 19.78                 | 19.92                 | 0-3                       | 0        |
|           |            | 50      | 25        | 19.80                 | 19.78                 | 19.91                 | 0-3                       | 0        |
|           |            | 50      | 49        | 19.83                 | 19.80                 | 19.90                 | 0-3                       | 0        |
|           |            | 100     | 0         | 19.79                 | 19.75                 | 19.93                 | 0-3                       | 0        |

**[ 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         | 19.59                | 20.14                | 19.85                | 0                         | 0        |
|           |            | 1       | 3         | 19.67                | 20.16                | 19.90                | 0                         | 0        |
|           |            | 1       | 5         | 19.64                | 20.13                | 19.86                | 0                         | 0        |
|           |            | 3       | 0         | 19.59                | 20.09                | 19.80                | 0                         | 0        |
|           |            | 3       | 1         | 19.75                | 20.22                | 19.98                | 0                         | 0        |
|           |            | 3       | 3         | 19.71                | 20.15                | 19.91                | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 19.65                | 20.17                | 19.84                | 0-1                       | 0        |
|           |            | 1       | 0         | 19.94                | 20.38                | 20.02                | 0-1                       | 0        |
|           |            | 1       | 3         | 19.80                | 20.26                | 19.98                | 0-1                       | 0        |
|           |            | 1       | 5         | 19.84                | 20.40                | 20.10                | 0-1                       | 0        |
|           |            | 3       | 0         | 19.72                | 20.18                | 19.94                | 0-1                       | 0        |
|           |            | 3       | 1         | 19.78                | 20.25                | 19.99                | 0-1                       | 0        |
|           | 64QAM      | 3       | 3         | 19.85                | 20.25                | 20.03                | 0-1                       | 0        |
|           |            | 6       | 0         | 19.71                | 20.26                | 19.97                | 0-2                       | 0        |
|           |            | 1       | 0         | 19.77                | 20.42                | 20.06                | 0-2                       | 0        |
|           |            | 1       | 3         | 19.83                | 20.20                | 19.91                | 0-2                       | 0        |
|           |            | 1       | 5         | 19.91                | 20.29                | 20.09                | 0-2                       | 0        |
|           |            | 3       | 0         | 19.77                | 20.16                | 20.00                | 0-2                       | 0        |
|           | 64QAM      | 3       | 1         | 19.86                | 20.32                | 20.11                | 0-2                       | 0        |
|           |            | 3       | 3         | 19.83                | 20.20                | 19.90                | 0-2                       | 0        |
|           |            | 6       | 0         | 19.76                | 20.21                | 19.97                | 0-3                       | 0        |

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         | 19.61                | 20.09                | 19.85                | 0                         | 0        |
|           |            | 1       | 7         | 19.61                | 20.06                | 19.83                | 0                         | 0        |
|           |            | 1       | 14        | 19.65                | 20.17                | 19.86                | 0                         | 0        |
|           |            | 8       | 0         | 19.69                | 20.14                | 19.91                | 0-1                       | 0        |
|           |            | 8       | 3         | 19.70                | 20.11                | 19.89                | 0-1                       | 0        |
|           |            | 8       | 7         | 19.71                | 20.19                | 19.94                | 0-1                       | 0        |
|           |            | 15      | 0         | 19.72                | 20.27                | 19.91                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.99                | 20.49                | 20.15                | 0-1                       | 0        |
|           |            | 1       | 7         | 19.99                | 20.49                | 20.07                | 0-1                       | 0        |
|           |            | 1       | 14        | 19.96                | 20.44                | 20.10                | 0-1                       | 0        |
|           |            | 8       | 0         | 19.74                | 20.29                | 19.97                | 0-2                       | 0        |
|           |            | 8       | 3         | 19.70                | 20.20                | 20.02                | 0-2                       | 0        |
|           |            | 8       | 7         | 19.74                | 20.26                | 19.96                | 0-2                       | 0        |
|           |            | 15      | 0         | 19.80                | 20.26                | 19.99                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.95                | 20.32                | 20.12                | 0-2                       | 0        |
|           |            | 1       | 7         | 19.87                | 20.29                | 19.83                | 0-2                       | 0        |
|           |            | 1       | 14        | 19.89                | 20.39                | 20.06                | 0-2                       | 0        |
|           |            | 8       | 0         | 19.74                | 20.19                | 19.95                | 0-3                       | 0        |
|           |            | 8       | 3         | 19.73                | 20.14                | 19.95                | 0-3                       | 0        |
|           |            | 8       | 7         | 19.77                | 20.21                | 20.01                | 0-3                       | 0        |
|           |            | 15      | 0         | 19.79                | 20.21                | 20.02                | 0-3                       | 0        |

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         | 19.62                | 20.22                | 19.96                | 0                         | 0        |
|           |            | 1       | 12        | 19.64                | 20.09                | 19.88                | 0                         | 0        |
|           |            | 1       | 24        | 19.66                | 20.16                | 19.93                | 0                         | 0        |
|           |            | 12      | 0         | 19.74                | 20.23                | 19.96                | 0-1                       | 0        |
|           |            | 12      | 6         | 19.75                | 20.22                | 20.02                | 0-1                       | 0        |
|           |            | 12      | 11        | 19.78                | 20.24                | 20.00                | 0-1                       | 0        |
|           |            | 25      | 0         | 19.73                | 20.25                | 19.98                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.94                | 20.44                | 20.10                | 0-1                       | 0        |
|           |            | 1       | 12        | 20.01                | 20.50                | 20.15                | 0-1                       | 0        |
|           |            | 1       | 24        | 20.05                | 20.39                | 20.26                | 0-1                       | 0        |
|           |            | 12      | 0         | 19.75                | 20.21                | 20.02                | 0-2                       | 0        |
|           |            | 12      | 6         | 19.78                | 20.28                | 19.98                | 0-2                       | 0        |
|           |            | 12      | 11        | 19.77                | 20.26                | 20.05                | 0-2                       | 0        |
|           |            | 25      | 0         | 19.75                | 20.27                | 20.01                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.88                | 20.35                | 20.10                | 0-2                       | 0        |
|           |            | 1       | 12        | 19.71                | 20.14                | 19.93                | 0-2                       | 0        |
|           |            | 1       | 24        | 19.88                | 20.29                | 20.08                | 0-2                       | 0        |
|           |            | 12      | 0         | 19.71                | 20.19                | 20.04                | 0-3                       | 0        |
|           |            | 12      | 6         | 19.76                | 20.21                | 19.99                | 0-3                       | 0        |
|           |            | 12      | 11        | 19.74                | 20.19                | 19.98                | 0-3                       | 0        |
| 25        |            | 0       | 19.78     | 20.26                | 20.01                | 0-3                  | 0                         |          |

LTE Band 4 \_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced 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         | 20.19               | 20.19                | 20.41              | 0                         | 0        |
|           |            | 1       | 24        | 20.17               | 20.15                | 20.40              | 0                         | 0        |
|           |            | 1       | 49        | 20.24               | 20.25                | 20.41              | 0                         | 0        |
|           |            | 25      | 0         | 20.27               | 20.23                | 20.44              | 0-1                       | 0        |
|           |            | 25      | 12        | 20.27               | 20.22                | 20.46              | 0-1                       | 0        |
|           |            | 25      | 24        | 20.28               | 20.21                | 20.40              | 0-1                       | 0        |
|           |            | 50      | 0         | 20.22               | 20.21                | 20.35              | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.44               | 20.56                | 20.72              | 0-1                       | 0        |
|           |            | 1       | 24        | 20.39               | 20.31                | 20.57              | 0-1                       | 0        |
|           |            | 1       | 49        | 20.39               | 20.39                | 20.67              | 0-1                       | 0        |
|           |            | 25      | 0         | 20.23               | 20.26                | 20.43              | 0-2                       | 0        |
|           |            | 25      | 12        | 20.23               | 20.23                | 20.45              | 0-2                       | 0        |
|           |            | 25      | 24        | 20.25               | 20.28                | 20.39              | 0-2                       | 0        |
|           |            | 50      | 0         | 20.24               | 20.23                | 20.39              | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.36               | 20.33                | 20.59              | 0-2                       | 0        |
|           |            | 1       | 24        | 20.37               | 20.34                | 20.47              | 0-2                       | 0        |
|           |            | 1       | 49        | 20.44               | 20.38                | 20.50              | 0-2                       | 0        |
|           |            | 25      | 0         | 20.28               | 20.24                | 20.44              | 0-3                       | 0        |
|           |            | 25      | 12        | 20.23               | 20.22                | 20.42              | 0-3                       | 0        |
|           |            | 25      | 24        | 20.27               | 20.26                | 20.46              | 0-3                       | 0        |
|           |            | 50      | 0         | 20.28               | 20.26                | 20.44              | 0-3                       | 0        |

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         | 20.14                | 20.27                | 20.44                | 0                         | 0        |
|           |            | 1       | 36        | 20.17                | 20.15                | 20.33                | 0                         | 0        |
|           |            | 1       | 74        | 20.17                | 20.24                | 20.43                | 0                         | 0        |
|           |            | 36      | 0         | 20.22                | 20.23                | 20.47                | 0-1                       | 0        |
|           |            | 36      | 18        | 20.19                | 20.22                | 20.45                | 0-1                       | 0        |
|           |            | 36      | 39        | 20.21                | 20.24                | 20.47                | 0-1                       | 0        |
|           |            | 75      | 0         | 20.23                | 20.25                | 20.45                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.43                | 20.49                | 20.59                | 0-1                       | 0        |
|           |            | 1       | 36        | 20.41                | 20.45                | 20.61                | 0-1                       | 0        |
|           |            | 1       | 74        | 20.39                | 20.44                | 20.83                | 0-1                       | 0        |
|           |            | 36      | 0         | 20.23                | 20.23                | 20.47                | 0-2                       | 0        |
|           |            | 36      | 18        | 20.22                | 20.18                | 20.45                | 0-2                       | 0        |
|           |            | 36      | 39        | 20.23                | 20.23                | 20.49                | 0-2                       | 0        |
|           |            | 75      | 0         | 20.23                | 20.23                | 20.51                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.31                | 20.41                | 20.65                | 0-2                       | 0        |
|           |            | 1       | 36        | 20.30                | 20.20                | 20.43                | 0-2                       | 0        |
|           |            | 1       | 74        | 20.41                | 20.44                | 20.51                | 0-2                       | 0        |
|           |            | 36      | 0         | 20.21                | 20.25                | 20.49                | 0-3                       | 0        |
|           |            | 36      | 18        | 20.24                | 20.26                | 20.48                | 0-3                       | 0        |
|           |            | 36      | 39        | 20.24                | 20.27                | 20.48                | 0-3                       | 0        |
|           |            | 75      | 0         | 20.23                | 20.27                | 20.46                | 0-3                       | 0        |

LTE Band 4 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|---------------------------|----------|
|           |            |         |           | 20175 Ch. 1732.5 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 20.18                | 0                         | 0        |
|           |            | 1       | 49        | 20.09                | 0                         | 0        |
|           |            | 1       | 99        | 20.20                | 0                         | 0        |
|           |            | 50      | 0         | 20.20                | 0-1                       | 0        |
|           |            | 50      | 25        | 20.17                | 0-1                       | 0        |
|           |            | 50      | 49        | 20.17                | 0-1                       | 0        |
|           |            | 100     | 0         | 20.20                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.45                | 0-1                       | 0        |
|           |            | 1       | 49        | 20.39                | 0-1                       | 0        |
|           |            | 1       | 99        | 20.55                | 0-1                       | 0        |
|           |            | 50      | 0         | 20.22                | 0-2                       | 0        |
|           |            | 50      | 25        | 20.19                | 0-2                       | 0        |
|           |            | 50      | 49        | 20.21                | 0-2                       | 0        |
|           |            | 100     | 0         | 20.20                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.45                | 0-2                       | 0        |
|           |            | 1       | 49        | 20.39                | 0-2                       | 0        |
|           |            | 1       | 99        | 20.46                | 0-2                       | 0        |
|           |            | 50      | 0         | 20.23                | 0-3                       | 0        |
|           |            | 50      | 25        | 20.25                | 0-3                       | 0        |
|           |            | 50      | 49        | 20.21                | 0-3                       | 0        |
|           |            | 100     | 0         | 20.25                | 0-3                       | 0        |





LTE Band 7 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 20825 Ch. 2507.5 MHz | 21100 Ch. 2535 MHz | 21375 Ch. 2562.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 20.93                | 20.83              | 20.87                | 0                         | 0        |
|           |            | 1       | 36        | 20.92                | 20.69              | 20.77                | 0                         | 0        |
|           |            | 1       | 74        | 20.88                | 20.62              | 20.77                | 0                         | 0        |
|           |            | 36      | 0         | 21.00                | 20.84              | 20.89                | 0-1                       | 0        |
|           |            | 36      | 18        | 20.99                | 20.76              | 20.84                | 0-1                       | 0        |
|           |            | 36      | 39        | 20.93                | 20.71              | 20.88                | 0-1                       | 0        |
|           |            | 75      | 0         | 20.98                | 20.80              | 20.88                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 21.20                | 20.97              | 21.12                | 0-1                       | 0        |
|           |            | 1       | 36        | 21.09                | 20.91              | 21.02                | 0-1                       | 0        |
|           |            | 1       | 74        | 21.18                | 20.89              | 20.99                | 0-1                       | 0        |
|           |            | 36      | 0         | 20.98                | 20.84              | 20.88                | 0-2                       | 0        |
|           |            | 36      | 18        | 20.98                | 20.76              | 20.86                | 0-2                       | 0        |
|           |            | 36      | 39        | 20.92                | 20.72              | 20.81                | 0-2                       | 0        |
|           |            | 75      | 0         | 20.92                | 20.73              | 20.82                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 21.12                | 20.91              | 21.10                | 0-2                       | 0        |
|           |            | 1       | 36        | 20.98                | 20.81              | 20.81                | 0-2                       | 0        |
|           |            | 1       | 74        | 21.13                | 20.82              | 20.82                | 0-2                       | 0        |
|           |            | 36      | 0         | 19.99                | 19.81              | 19.89                | 0-3                       | 0        |
|           |            | 36      | 18        | 19.96                | 19.81              | 19.80                | 0-3                       | 0        |
|           |            | 36      | 39        | 19.94                | 19.70              | 19.82                | 0-3                       | 0        |
|           |            | 75      | 0         | 19.94                | 19.75              | 19.81                | 0-3                       | 0        |

LTE Band 7 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 20850 Ch. 2510 MHz  | 21100 Ch. 2535 MHz | 21350 Ch. 2560 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 21.00               | 20.86              | 20.92              | 0                         | 0        |
|           |            | 1       | 49        | 20.89               | 20.70              | 20.77              | 0                         | 0        |
|           |            | 1       | 99        | 20.87               | 20.64              | 20.81              | 0                         | 0        |
|           |            | 50      | 0         | 21.01               | 20.87              | 20.94              | 0-1                       | 0        |
|           |            | 50      | 25        | 20.94               | 20.78              | 20.91              | 0-1                       | 0        |
|           |            | 50      | 49        | 20.95               | 20.69              | 20.92              | 0-1                       | 0        |
|           |            | 100     | 0         | 20.95               | 20.78              | 20.93              | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 21.31               | 21.14              | 21.30              | 0-1                       | 0        |
|           |            | 1       | 49        | 21.00               | 20.78              | 20.97              | 0-1                       | 0        |
|           |            | 1       | 99        | 21.08               | 20.85              | 20.97              | 0-1                       | 0        |
|           |            | 50      | 0         | 21.00               | 20.82              | 20.92              | 0-2                       | 0        |
|           |            | 50      | 25        | 20.98               | 20.76              | 20.83              | 0-2                       | 0        |
|           |            | 50      | 49        | 20.95               | 20.67              | 20.84              | 0-2                       | 0        |
|           |            | 100     | 0         | 20.98               | 20.76              | 20.89              | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 21.22               | 21.04              | 21.26              | 0-2                       | 0        |
|           |            | 1       | 49        | 21.10               | 20.73              | 20.89              | 0-2                       | 0        |
|           |            | 1       | 99        | 21.02               | 20.68              | 20.81              | 0-2                       | 0        |
|           |            | 50      | 0         | 19.99               | 19.83              | 19.91              | 0-3                       | 0        |
|           |            | 50      | 25        | 19.96               | 19.74              | 19.86              | 0-3                       | 0        |
|           |            | 50      | 49        | 19.91               | 19.69              | 19.84              | 0-3                       | 0        |
|           |            | 100     | 0         | 19.95               | 19.73              | 19.89              | 0-3                       | 0        |

**[ LTE Band 25 Conducted Power ]**

LTE Band 25 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26047 Ch. 1850.7 MHz | 26365 Ch. 1882.5 MHz | 26683 Ch. 1914.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 18.99                | 19.66                | 18.63                | 0                         | 0        |
|           |            | 1       | 3         | 19.00                | 19.71                | 18.67                | 0                         | 0        |
|           |            | 1       | 5         | 18.99                | 19.66                | 18.63                | 0                         | 0        |
|           |            | 3       | 0         | 18.99                | 19.64                | 18.59                | 0                         | 0        |
|           |            | 3       | 1         | 19.15                | 19.76                | 18.77                | 0                         | 0        |
|           |            | 3       | 3         | 19.12                | 19.65                | 18.70                | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 19.02                | 19.67                | 18.65                | 0-1                       | 0        |
|           |            | 1       | 0         | 19.31                | 19.97                | 18.87                | 0-1                       | 0        |
|           |            | 1       | 3         | 19.11                | 19.68                | 18.71                | 0-1                       | 0        |
|           |            | 1       | 5         | 19.25                | 19.93                | 18.86                | 0-1                       | 0        |
|           |            | 3       | 0         | 19.13                | 19.74                | 18.69                | 0-1                       | 0        |
|           |            | 3       | 1         | 19.25                | 19.77                | 18.80                | 0-1                       | 0        |
|           | 64QAM      | 3       | 3         | 19.20                | 19.78                | 18.89                | 0-1                       | 0        |
|           |            | 6       | 0         | 19.09                | 19.70                | 18.75                | 0-2                       | 0        |
|           |            | 1       | 0         | 19.25                | 19.72                | 18.93                | 0-2                       | 0        |
|           |            | 1       | 3         | 19.21                | 19.70                | 18.72                | 0-2                       | 0        |
|           |            | 1       | 5         | 19.31                | 19.85                | 18.81                | 0-2                       | 0        |
|           |            | 3       | 0         | 19.13                | 19.72                | 18.71                | 0-2                       | 0        |
|           |            | 3       | 1         | 19.21                | 19.84                | 18.91                | 0-2                       | 0        |
|           |            | 3       | 3         | 19.14                | 19.86                | 18.80                | 0-2                       | 0        |
|           |            | 6       | 0         | 19.13                | 19.71                | 18.72                | 0-3                       | 0        |

LTE Band 25 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26055 Ch. 1851.5 MHz | 26365 Ch. 1882.5 MHz | 26675 Ch. 1913.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 18.99                | 19.67                | 18.70                | 0                         | 0        |
|           |            | 1       | 7         | 18.97                | 19.66                | 18.69                | 0                         | 0        |
|           |            | 1       | 14        | 19.05                | 19.70                | 18.72                | 0                         | 0        |
|           |            | 8       | 0         | 19.12                | 19.73                | 18.75                | 0-1                       | 0        |
|           |            | 8       | 3         | 19.08                | 19.71                | 18.75                | 0-1                       | 0        |
|           |            | 8       | 7         | 19.13                | 19.76                | 18.76                | 0-1                       | 0        |
|           |            | 15      | 0         | 19.14                | 19.77                | 18.76                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 19.41                | 19.98                | 18.99                | 0-1                       | 0        |
|           |            | 1       | 7         | 19.32                | 19.87                | 19.01                | 0-1                       | 0        |
|           |            | 1       | 14        | 19.23                | 19.90                | 18.98                | 0-1                       | 0        |
|           |            | 8       | 0         | 19.18                | 19.78                | 18.81                | 0-2                       | 0        |
|           |            | 8       | 3         | 19.13                | 19.76                | 18.79                | 0-2                       | 0        |
|           |            | 8       | 7         | 19.18                | 19.80                | 18.82                | 0-2                       | 0        |
|           |            | 15      | 0         | 19.18                | 19.78                | 18.84                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 19.32                | 19.91                | 18.89                | 0-2                       | 0        |
|           |            | 1       | 7         | 19.15                | 19.86                | 18.80                | 0-2                       | 0        |
|           |            | 1       | 14        | 19.30                | 19.75                | 18.87                | 0-2                       | 0        |
|           |            | 8       | 0         | 19.15                | 19.77                | 18.78                | 0-3                       | 0        |
|           |            | 8       | 3         | 19.17                | 19.75                | 18.79                | 0-3                       | 0        |
|           |            | 8       | 7         | 19.19                | 19.77                | 18.86                | 0-3                       | 0        |
|           |            | 15      | 0         | 19.11                | 19.78                | 18.81                | 0-3                       | 0        |

LTE Band 25\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|---|
|           |            |         |           | 26065 Ch. 1852.5 MHz | 26365 Ch. 1882.5 MHz | 26665 Ch. 1912.5 MHz |                           |          |   |
| 5 MHz     | QPSK       | 1       | 0         | 19.09                | 19.73                | 18.72                | 0                         | 0        |   |
|           |            | 1       | 12        | 19.11                | 19.69                | 18.71                | 0                         | 0        |   |
|           |            | 1       | 24        | 19.08                | 19.67                | 18.74                | 0                         | 0        |   |
|           |            | 12      | 0         | 19.11                | 19.76                | 18.83                | 0-1                       | 0        |   |
|           |            | 12      | 6         | 19.15                | 19.75                | 18.83                | 0-1                       | 0        |   |
|           |            | 12      | 11        | 19.18                | 19.78                | 18.86                | 0-1                       | 0        |   |
|           | 16QAM      | 25      | 0         | 19.15                | 19.76                | 18.81                | 0-1                       | 0        |   |
|           |            | 1       | 0         | 19.37                | 20.08                | 18.95                | 0-1                       | 0        |   |
|           |            | 1       | 12        | 19.25                | 19.90                | 18.99                | 0-1                       | 0        |   |
|           |            | 1       | 24        | 19.33                | 20.00                | 18.96                | 0-1                       | 0        |   |
|           |            | 12      | 0         | 19.17                | 19.81                | 18.81                | 0-2                       | 0        |   |
|           |            | 12      | 6         | 19.18                | 19.78                | 18.85                | 0-2                       | 0        |   |
|           | 64QAM      | 12      | 11        | 19.18                | 19.81                | 18.80                | 0-2                       | 0        |   |
|           |            | 25      | 0         | 19.16                | 19.76                | 18.82                | 0-2                       | 0        |   |
|           |            | 1       | 0         | 19.30                | 19.80                | 18.86                | 0-2                       | 0        |   |
|           |            | 1       | 12        | 19.29                | 19.80                | 18.79                | 0-2                       | 0        |   |
|           |            | 1       | 24        | 19.28                | 19.94                | 18.85                | 0-2                       | 0        |   |
|           |            | 12      | 0         | 19.18                | 19.78                | 18.83                | 0-3                       | 0        |   |
|           |            |         | 12        | 6                    | 19.16                | 19.80                | 18.84                     | 0-3      | 0 |
|           |            |         | 12        | 11                   | 19.16                | 19.81                | 18.82                     | 0-3      | 0 |
|           |            |         | 25        | 0                    | 19.17                | 19.78                | 18.84                     | 0-3      | 0 |

LTE Band 25\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|---|
|           |            |         |           | 26090 Ch. 1855 MHz  | 26365 Ch. 1882.5 MHz | 26640 Ch. 1910 MHz |                           |          |   |
| 10 MHz    | QPSK       | 1       | 0         | 19.09               | 19.72                | 18.74              | 0                         | 0        |   |
|           |            | 1       | 24        | 19.04               | 19.73                | 18.76              | 0                         | 0        |   |
|           |            | 1       | 49        | 19.17               | 19.73                | 18.79              | 0                         | 0        |   |
|           |            | 25      | 0         | 19.19               | 19.73                | 18.83              | 0-1                       | 0        |   |
|           |            | 25      | 12        | 19.20               | 19.75                | 18.80              | 0-1                       | 0        |   |
|           |            | 25      | 24        | 19.16               | 19.75                | 18.83              | 0-1                       | 0        |   |
|           | 16QAM      | 50      | 0         | 19.15               | 19.79                | 18.83              | 0-1                       | 0        |   |
|           |            | 1       | 0         | 19.44               | 20.08                | 19.09              | 0-1                       | 0        |   |
|           |            | 1       | 24        | 19.17               | 19.83                | 18.93              | 0-1                       | 0        |   |
|           |            | 1       | 49        | 19.33               | 19.92                | 18.95              | 0-1                       | 0        |   |
|           |            | 25      | 0         | 19.17               | 19.73                | 18.83              | 0-2                       | 0        |   |
|           |            | 25      | 12        | 19.14               | 19.76                | 18.81              | 0-2                       | 0        |   |
|           | 64QAM      | 25      | 24        | 19.19               | 19.78                | 18.82              | 0-2                       | 0        |   |
|           |            | 50      | 0         | 19.19               | 19.77                | 18.83              | 0-2                       | 0        |   |
|           |            | 1       | 0         | 19.28               | 19.89                | 19.01              | 0-2                       | 0        |   |
|           |            | 1       | 24        | 19.16               | 19.79                | 18.86              | 0-2                       | 0        |   |
|           |            | 1       | 49        | 19.32               | 19.90                | 18.93              | 0-2                       | 0        |   |
|           |            | 25      | 0         | 19.21               | 19.81                | 18.82              | 0-3                       | 0        |   |
|           |            |         | 25        | 12                  | 19.18                | 19.75              | 18.79                     | 0-3      | 0 |
|           |            |         | 25        | 24                  | 19.21                | 19.75              | 18.82                     | 0-3      | 0 |
|           |            |         | 50        | 0                   | 19.20                | 19.75              | 18.84                     | 0-3      | 0 |

LTE Band 25\_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26115 Ch. 1857.5 MHz | 26365 Ch. 1882.5 MHz | 26615 Ch. 1907.5 MHz |                           |          |
| 15        | QPSK       | 1       | 0         | 19.16                | 19.76                | 18.78                | 0                         | 0        |
|           |            | 1       | 36        | 19.09                | 19.71                | 18.74                | 0                         | 0        |
|           |            | 1       | 74        | 19.17                | 19.74                | 18.80                | 0                         | 0        |
|           |            | 36      | 0         | 19.17                | 19.78                | 18.84                | 0-1                       | 0        |
|           |            | 36      | 18        | 19.22                | 19.76                | 18.83                | 0-1                       | 0        |
|           |            | 36      | 39        | 19.21                | 19.77                | 18.82                | 0-1                       | 0        |
|           | 16QAM      | 75      | 0         | 19.18                | 19.76                | 18.79                | 0-1                       | 0        |
|           |            | 1       | 0         | 19.43                | 20.06                | 19.08                | 0-1                       | 0        |
|           |            | 1       | 36        | 19.33                | 19.97                | 18.93                | 0-1                       | 0        |
|           |            | 1       | 74        | 19.42                | 20.13                | 19.02                | 0-1                       | 0        |
|           |            | 36      | 0         | 19.22                | 19.77                | 18.84                | 0-2                       | 0        |
|           |            | 36      | 18        | 19.24                | 19.79                | 18.83                | 0-2                       | 0        |
|           | 64QAM      | 36      | 39        | 19.22                | 19.76                | 18.83                | 0-2                       | 0        |
|           |            | 75      | 0         | 19.24                | 19.75                | 18.83                | 0-2                       | 0        |
|           |            | 1       | 0         | 19.37                | 19.85                | 18.92                | 0-2                       | 0        |
|           |            | 1       | 36        | 19.28                | 19.76                | 18.86                | 0-2                       | 0        |
|           |            | 1       | 74        | 19.32                | 19.94                | 19.09                | 0-2                       | 0        |
|           |            | 36      | 0         | 19.22                | 19.76                | 18.85                | 0-3                       | 0        |
|           |            | 36      | 18        | 19.23                | 19.79                | 18.84                | 0-3                       | 0        |
|           |            | 36      | 39        | 19.21                | 19.79                | 18.81                | 0-3                       | 0        |
|           |            | 75      | 0         | 19.18                | 19.77                | 18.83                | 0-3                       | 0        |

LTE Band 25\_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|
|           |            |         |           | 26140 Ch. 1860 MHz  | 26365 Ch. 1882.5 MHz | 26590 Ch. 1905 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 19.18               | 19.76                | 18.82              | 0                         | 0        |
|           |            | 1       | 49        | 19.15               | 19.70                | 18.77              | 0                         | 0        |
|           |            | 1       | 99        | 19.46               | 19.77                | 18.83              | 0                         | 0        |
|           |            | 50      | 0         | 19.21               | 19.77                | 18.81              | 0-1                       | 0        |
|           |            | 50      | 25        | 19.24               | 19.76                | 18.81              | 0-1                       | 0        |
|           |            | 50      | 49        | 19.36               | 19.78                | 18.83              | 0-1                       | 0        |
|           | 16QAM      | 100     | 0         | 19.23               | 19.76                | 18.82              | 0-1                       | 0        |
|           |            | 1       | 0         | 19.51               | 20.05                | 19.09              | 0-1                       | 0        |
|           |            | 1       | 49        | 19.37               | 19.82                | 18.97              | 0-1                       | 0        |
|           |            | 1       | 99        | 19.44               | 19.96                | 19.05              | 0-1                       | 0        |
|           |            | 50      | 0         | 19.22               | 19.73                | 18.86              | 0-2                       | 0        |
|           |            | 50      | 25        | 19.20               | 19.77                | 18.84              | 0-2                       | 0        |
|           | 64QAM      | 50      | 49        | 19.24               | 19.80                | 18.83              | 0-2                       | 0        |
|           |            | 100     | 0         | 19.23               | 19.80                | 18.82              | 0-2                       | 0        |
|           |            | 1       | 0         | 19.41               | 19.96                | 19.02              | 0-2                       | 0        |
|           |            | 1       | 49        | 19.25               | 19.88                | 18.82              | 0-2                       | 0        |
|           |            | 1       | 99        | 19.40               | 20.01                | 19.01              | 0-2                       | 0        |
|           |            | 50      | 0         | 19.21               | 19.79                | 18.90              | 0-3                       | 0        |
|           |            | 50      | 25        | 19.20               | 19.78                | 18.88              | 0-3                       | 0        |
|           |            | 50      | 49        | 19.28               | 19.79                | 18.84              | 0-3                       | 0        |
|           |            | 100     | 0         | 19.25               | 19.81                | 18.85              | 0-3                       | 0        |

[ LTE Band 30 Conducted Power ]

LTE Band 30\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 27685 Ch. 2307.5 MHz | 27710 Ch. 2310 MHz | 27735 Ch. 2312.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 20.18                | 20.44              | 20.12                | 0                         | 0        |
|           |            | 1       | 12        | 20.16                | 20.41              | 20.12                | 0                         | 0        |
|           |            | 1       | 24        | 20.10                | 20.39              | 20.05                | 0                         | 0        |
|           |            | 12      | 0         | 20.19                | 20.53              | 20.17                | 0-1                       | 0        |
|           |            | 12      | 6         | 20.25                | 20.53              | 20.15                | 0-1                       | 0        |
|           |            | 12      | 11        | 20.24                | 20.53              | 20.19                | 0-1                       | 0        |
|           | 16QAM      | 25      | 0         | 20.18                | 20.47              | 20.12                | 0-1                       | 0        |
|           |            | 1       | 0         | 20.33                | 20.57              | 20.26                | 0-1                       | 0        |
|           |            | 1       | 12        | 20.32                | 20.56              | 20.26                | 0-1                       | 0        |
|           |            | 1       | 24        | 20.33                | 20.54              | 20.22                | 0-1                       | 0        |
|           |            | 12      | 0         | 20.20                | 20.45              | 20.12                | 0-2                       | 0        |
|           |            | 12      | 6         | 20.12                | 20.43              | 20.10                | 0-2                       | 0        |
|           | 64QAM      | 12      | 11        | 20.14                | 20.43              | 20.08                | 0-2                       | 0        |
|           |            | 25      | 0         | 20.12                | 20.41              | 20.08                | 0-2                       | 0        |
|           |            | 1       | 0         | 20.16                | 20.48              | 20.17                | 0-2                       | 0        |
|           |            | 1       | 12        | 20.23                | 20.51              | 20.22                | 0-2                       | 0        |
|           |            | 1       | 24        | 20.21                | 20.52              | 20.15                | 0-2                       | 0        |
|           |            | 12      | 0         | 19.14                | 19.45              | 19.15                | 0-3                       | 0        |
|           |            | 12      | 6         | 19.18                | 19.42              | 19.12                | 0-3                       | 0        |
|           |            | 12      | 11        | 19.17                | 19.42              | 19.09                | 0-3                       | 0        |
|           |            | 25      | 0         | 19.13                | 19.38              | 19.07                | 0-3                       | 0        |

LTE Band 30\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|---------------------------|----------|
|           |            |         |           | 27710 Ch. 2310 MHz  |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | <b>20.48</b>        | 0                         | 0        |
|           |            | 1       | 24        | 20.41               | 0                         | 0        |
|           |            | 1       | 49        | 20.39               | 0                         | 0        |
|           |            | 25      | 0         | <b>20.50</b>        | 0-1                       | 0        |
|           |            | 25      | 12        | 20.45               | 0-1                       | 0        |
|           |            | 25      | 24        | 20.43               | 0-1                       | 0        |
|           | 16QAM      | 50      | 0         | 20.56               | 0-1                       | 0        |
|           |            | 1       | 0         | 20.61               | 0-1                       | 0        |
|           |            | 1       | 24        | 20.47               | 0-1                       | 0        |
|           |            | 1       | 49        | 20.40               | 0-1                       | 0        |
|           |            | 25      | 0         | 20.46               | 0-2                       | 0        |
|           |            | 25      | 12        | 20.41               | 0-2                       | 0        |
|           | 64QAM      | 25      | 24        | 20.36               | 0-2                       | 0        |
|           |            | 50      | 0         | 20.52               | 0-2                       | 0        |
|           |            | 1       | 0         | 20.60               | 0-2                       | 0        |
|           |            | 1       | 24        | 20.43               | 0-2                       | 0        |
|           |            | 1       | 49        | 20.30               | 0-2                       | 0        |
|           |            | 25      | 0         | 19.40               | 0-3                       | 0        |
|           |            | 25      | 12        | 19.39               | 0-3                       | 0        |
|           |            | 25      | 24        | 19.31               | 0-3                       | 0        |
|           |            | 50      | 0         | 19.51               | 0-3                       | 0        |

**[LTE TDD Band 38 Conducted Power]**

LTE Band 38\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                   |                     | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|-------------------|---------------------|---------------------------|----------|
|           |            |         |           | 3775 Ch. 2572.5 MHz | 3800 Ch. 2595 MHz | 3825 Ch. 2617.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 21.14               | 21.15             | 20.91               | 0                         | 0        |
|           |            | 1       | 12        | 21.24               | 21.10             | 20.87               | 0                         | 0        |
|           |            | 1       | 24        | 21.18               | 21.17             | 20.92               | 0                         | 0        |
|           |            | 12      | 0         | 21.20               | 21.21             | 20.96               | 0-1                       | 0        |
|           |            | 12      | 6         | 21.13               | 21.19             | 20.99               | 0-1                       | 0        |
|           |            | 12      | 11        | 21.17               | 21.21             | 21.01               | 0-1                       | 0        |
|           | 16QAM      | 25      | 0         | 21.20               | 21.23             | 20.97               | 0-1                       | 0        |
|           |            | 1       | 0         | 21.20               | 21.31             | 20.93               | 0-1                       | 0        |
|           |            | 1       | 12        | 21.21               | 21.13             | 20.80               | 0-1                       | 0        |
|           |            | 1       | 24        | 21.20               | 21.27             | 20.85               | 0-1                       | 0        |
|           |            | 12      | 0         | 21.17               | 21.21             | 20.93               | 0-2                       | 0        |
|           |            | 12      | 6         | 21.11               | 21.18             | 20.95               | 0-2                       | 0        |
|           | 64QAM      | 12      | 11        | 21.14               | 21.19             | 20.97               | 0-2                       | 0        |
|           |            | 25      | 0         | 21.24               | 21.25             | 21.01               | 0-2                       | 0        |
|           |            | 1       | 0         | 20.91               | 21.03             | 20.86               | 0-2                       | 0        |
|           |            | 1       | 12        | 20.95               | 20.87             | 20.67               | 0-2                       | 0        |
|           |            | 1       | 24        | 20.90               | 20.96             | 20.80               | 0-2                       | 0        |
|           |            | 12      | 0         | 20.19               | 20.22             | 19.98               | 0-3                       | 0        |
|           |            | 12      | 6         | 20.10               | 20.20             | 20.01               | 0-3                       | 0        |
|           |            | 12      | 11        | 20.12               | 20.20             | 20.04               | 0-3                       | 0        |
|           |            | 25      | 0         | 20.21               | 20.24             | 19.99               | 0-3                       | 0        |

LTE Band 38\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                   |                   | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|-------------------|-------------------|---------------------------|----------|
|           |            |         |           | 3780 Ch. 2575 MHz   | 3800 Ch. 2595 MHz | 3820 Ch. 2615 MHz |                           |          |
| 10 MHz    | QPSK       | 1       | 0         | 21.29               | 21.27             | 21.07             | 0                         | 0        |
|           |            | 1       | 24        | 21.21               | 21.10             | 20.89             | 0                         | 0        |
|           |            | 1       | 49        | 21.26               | 21.10             | 20.89             | 0                         | 0        |
|           |            | 25      | 0         | 21.27               | 21.25             | 21.01             | 0-1                       | 0        |
|           |            | 25      | 12        | 21.27               | 21.21             | 20.98             | 0-1                       | 0        |
|           |            | 25      | 24        | 21.24               | 21.20             | 20.97             | 0-1                       | 0        |
|           |            | 50      | 0         | 21.30               | 21.21             | 21.00             | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 21.30               | 21.23             | 21.13             | 0-1                       | 0        |
|           |            | 1       | 24        | 21.20               | 21.09             | 20.95             | 0-1                       | 0        |
|           |            | 1       | 49        | 21.20               | 21.05             | 20.95             | 0-1                       | 0        |
|           |            | 25      | 0         | 21.30               | 21.24             | 21.08             | 0-2                       | 0        |
|           |            | 25      | 12        | 21.29               | 21.21             | 21.03             | 0-2                       | 0        |
|           |            | 25      | 24        | 21.26               | 21.19             | 21.02             | 0-2                       | 0        |
|           | 64QAM      | 50      | 0         | 21.31               | 21.23             | 21.01             | 0-2                       | 0        |
|           |            | 1       | 0         | 21.15               | 20.97             | 20.89             | 0-2                       | 0        |
|           |            | 1       | 24        | 21.00               | 20.86             | 20.70             | 0-2                       | 0        |
|           |            | 1       | 49        | 21.06               | 20.93             | 20.72             | 0-2                       | 0        |
|           |            | 25      | 0         | 20.26               | 20.26             | 20.04             | 0-3                       | 0        |
|           |            | 25      | 12        | 20.25               | 20.20             | 19.97             | 0-3                       | 0        |
|           |            | 25      | 24        | 20.24               | 20.20             | 19.99             | 0-3                       | 0        |
|           |            | 50      | 0         | 20.30               | 20.21             | 20.00             | 0-3                       | 0        |

LTE Band 38\_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 37825 Ch. 2507.5 MHz | 38000 Ch. 2595 MHz | 38175 Ch. 2612.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 21.28                | 21.28              | 21.09                | 0                         | 0        |
|           |            | 1       | 36        | 21.27                | 21.11              | 20.92                | 0                         | 0        |
|           |            | 1       | 74        | 21.18                | 21.12              | 20.91                | 0                         | 0        |
|           |            | 36      | 0         | 21.29                | 21.28              | 21.07                | 0-1                       | 0        |
|           |            | 36      | 18        | 21.23                | 21.24              | 21.03                | 0-1                       | 0        |
|           |            | 36      | 39        | 21.22                | 21.18              | 20.97                | 0-1                       | 0        |
|           | 16QAM      | 75      | 0         | 21.24                | 21.21              | 21.00                | 0-1                       | 0        |
|           |            | 1       | 0         | 21.37                | 21.33              | 21.18                | 0-1                       | 0        |
|           |            | 1       | 36        | 21.24                | 21.14              | 20.94                | 0-1                       | 0        |
|           |            | 1       | 74        | 21.22                | 21.23              | 20.97                | 0-1                       | 0        |
|           |            | 36      | 0         | 21.25                | 21.27              | 21.04                | 0-2                       | 0        |
|           |            | 36      | 18        | 21.19                | 21.23              | 21.00                | 0-2                       | 0        |
|           | 64QAM      | 36      | 39        | 21.19                | 21.18              | 20.94                | 0-2                       | 0        |
|           |            | 75      | 0         | 21.23                | 21.22              | 21.01                | 0-2                       | 0        |
|           |            | 1       | 0         | 21.29                | 20.97              | 21.03                | 0-2                       | 0        |
|           |            | 1       | 36        | 21.20                | 20.73              | 20.80                | 0-2                       | 0        |
|           |            | 1       | 74        | 21.17                | 20.82              | 20.81                | 0-2                       | 0        |
|           |            | 36      | 0         | 20.30                | 20.29              | 20.09                | 0-3                       | 0        |
|           |            | 36      | 18        | 20.24                | 20.25              | 20.05                | 0-3                       | 0        |
|           |            | 36      | 39        | 20.23                | 20.19              | 19.98                | 0-3                       | 0        |
|           |            | 75      | 0         | 20.25                | 20.22              | 20.02                | 0-3                       | 0        |

LTE Band 38\_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                    |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|---------------------|--------------------|--------------------|---------------------------|----------|
|           |            |         |           | 37850 Ch. 2580 MHz  | 38000 Ch. 2595 MHz | 38150 Ch. 2610 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         |                     | 21.33              |                    | 0                         | 0        |
|           |            | 1       | 49        |                     | 21.11              |                    | 0                         | 0        |
|           |            | 1       | 99        |                     | 21.08              |                    | 0                         | 0        |
|           |            | 50      | 0         |                     | 21.31              |                    | 0-1                       | 0        |
|           |            | 50      | 25        |                     | 21.22              |                    | 0-1                       | 0        |
|           |            | 50      | 49        |                     | 21.18              |                    | 0-1                       | 0        |
|           | 16QAM      | 100     | 0         |                     | 21.24              |                    | 0-1                       | 0        |
|           |            | 1       | 0         |                     | 21.40              |                    | 0-1                       | 0        |
|           |            | 1       | 49        |                     | 21.19              |                    | 0-1                       | 0        |
|           |            | 1       | 99        |                     | 21.12              |                    | 0-1                       | 0        |
|           |            | 50      | 0         |                     | 21.31              |                    | 0-2                       | 0        |
|           |            | 50      | 25        |                     | 21.22              |                    | 0-2                       | 0        |
|           | 64QAM      | 50      | 49        |                     | 21.20              |                    | 0-2                       | 0        |
|           |            | 100     | 0         |                     | 21.27              |                    | 0-2                       | 0        |
|           |            | 1       | 0         |                     | 21.14              |                    | 0-2                       | 0        |
|           |            | 1       | 49        |                     | 20.94              |                    | 0-2                       | 0        |
|           |            | 1       | 99        |                     | 20.93              |                    | 0-2                       | 0        |
|           |            | 50      | 0         |                     | 20.30              |                    | 0-3                       | 0        |
|           |            | 50      | 25        |                     | 20.21              |                    | 0-3                       | 0        |
|           |            | 50      | 49        |                     | 20.18              |                    | 0-3                       | 0        |
|           |            | 100     | 0         |                     | 20.24              |                    | 0-3                       | 0        |



**[ LTE Band 41 Conducted Power ] - Power Class 3**

LTE Band 41\_ 5 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                         |                         |                         |                         | MPR Allowed Per GPP [dB] | MPR [dB] |   |
|------------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|----------|---|
|            |            |         |           | 39675 Ch.<br>2498.5 MHz | 40148 Ch.<br>2545.8 MHz | 40620 Ch.<br>2593.0 MHz | 41093 Ch.<br>2640.3 MHz | 41565 Ch.<br>2687.5 MHz |                          |          |   |
| 5 MHz      | QPSK       | 1       | 0         | 20.25                   | 20.35                   | 20.36                   | 20.10                   | 20.04                   | 0                        | 0        |   |
|            |            | 1       | 12        | 20.19                   | 20.34                   | 20.29                   | 20.13                   | 20.03                   | 0                        | 0        |   |
|            |            | 1       | 24        | 20.29                   | 20.37                   | 20.38                   | 20.14                   | 20.05                   | 0                        | 0        |   |
|            |            | 12      | 0         | 20.33                   | 20.41                   | 20.43                   | 20.19                   | 20.11                   | 0-1                      | 0        |   |
|            |            | 12      | 6         | 20.36                   | 20.44                   | 20.42                   | 20.14                   | 20.07                   | 0-1                      | 0        |   |
|            |            | 12      | 11        | 20.37                   | 20.44                   | 20.43                   | 20.16                   | 20.08                   | 0-1                      | 0        |   |
|            | 16QAM      | 25      | 0         | 20.53                   | 20.64                   | 20.53                   | 20.37                   | 20.29                   | 0-1                      | 0        |   |
|            |            | 1       | 0         | 20.27                   | 20.38                   | 20.50                   | 20.15                   | 20.08                   | 0-1                      | 0        |   |
|            |            | 1       | 12        | 20.16                   | 20.34                   | 20.34                   | 20.06                   | 19.95                   | 0-1                      | 0        |   |
|            |            | 1       | 24        | 20.25                   | 20.32                   | 20.40                   | 20.18                   | 20.00                   | 0-1                      | 0        |   |
|            |            | 12      | 0         | 20.15                   | 20.22                   | 20.35                   | 20.02                   | 19.98                   | 0-2                      | 0        |   |
|            |            | 12      | 6         | 20.19                   | 20.24                   | 20.35                   | 19.97                   | 19.92                   | 0-2                      | 0        |   |
|            | 64QAM      | 12      | 11        | 20.20                   | 20.26                   | 20.35                   | 20.01                   | 19.95                   | 0-2                      | 0        |   |
|            |            | 25      | 0         | 20.42                   | 20.52                   | 20.50                   | 20.28                   | 20.23                   | 0-2                      | 0        |   |
|            |            | 1       | 0         | 20.15                   | 20.05                   | 20.25                   | 19.85                   | 19.72                   | 0-2                      | 0        |   |
|            |            | 1       | 12        | 20.06                   | 19.97                   | 20.16                   | 19.76                   | 19.59                   | 0-2                      | 0        |   |
|            |            | 1       | 24        | 20.12                   | 20.01                   | 20.20                   | 19.82                   | 19.59                   | 0-2                      | 0        |   |
|            |            | 12      | 0         | 19.17                   | 19.25                   | 19.37                   | 19.10                   | 19.02                   | 0-3                      | 0        |   |
|            |            | 64QAM   | 12        | 6                       | 19.21                   | 19.25                   | 19.37                   | 19.06                   | 18.97                    | 0-3      | 0 |
|            |            |         | 12        | 11                      | 19.24                   | 19.26                   | 19.37                   | 19.08                   | 18.99                    | 0-3      | 0 |
|            |            |         | 25        | 0                       | 19.36                   | 19.45                   | 19.46                   | 19.22                   | 19.14                    | 0-3      | 0 |

LTE Band 41\_ 10 MHz Bandwidth - Power Class 3

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|------------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|----------|---|
|            |            |         |           | 39700 Ch.<br>2501 MHz | 40160 Ch.<br>2547 MHz | 40620 Ch.<br>2593 MHz | 41080 Ch.<br>2639 MHz | 41540 Ch.<br>2685 MHz |                           |          |   |
| 10 MHz     | QPSK       | 1       | 0         | 20.31                 | 20.43                 | 20.45                 | 20.20                 | 20.16                 | 0                         | 0        |   |
|            |            | 1       | 24        | 20.18                 | 20.27                 | 20.29                 | 20.06                 | 20.01                 | 0                         | 0        |   |
|            |            | 1       | 49        | 20.22                 | 20.30                 | 20.30                 | 20.08                 | 20.01                 | 0                         | 0        |   |
|            |            | 25      | 0         | 20.50                 | 20.65                 | 20.53                 | 20.36                 | 20.28                 | 0-1                       | 0        |   |
|            |            | 25      | 12        | 20.49                 | 20.63                 | 20.49                 | 20.35                 | 20.27                 | 0-1                       | 0        |   |
|            |            | 25      | 24        | 20.49                 | 20.59                 | 20.48                 | 20.32                 | 20.26                 | 0-1                       | 0        |   |
|            | 16QAM      | 50      | 0         | 20.56                 | 20.69                 | 20.54                 | 20.41                 | 20.35                 | 0-1                       | 0        |   |
|            |            | 1       | 0         | 20.30                 | 20.45                 | 20.58                 | 20.15                 | 20.24                 | 0-1                       | 0        |   |
|            |            | 1       | 24        | 20.20                 | 20.30                 | 20.40                 | 20.00                 | 20.09                 | 0-1                       | 0        |   |
|            |            | 1       | 49        | 20.25                 | 20.34                 | 20.41                 | 20.04                 | 20.07                 | 0-1                       | 0        |   |
|            |            | 25      | 0         | 20.40                 | 20.53                 | 20.50                 | 20.28                 | 20.24                 | 0-2                       | 0        |   |
|            |            | 25      | 12        | 20.39                 | 20.51                 | 20.46                 | 20.26                 | 20.21                 | 0-2                       | 0        |   |
|            | 64QAM      | 25      | 24        | 20.38                 | 20.48                 | 20.45                 | 20.23                 | 20.19                 | 0-2                       | 0        |   |
|            |            | 50      | 0         | 20.45                 | 20.55                 | 20.50                 | 20.32                 | 20.28                 | 0-2                       | 0        |   |
|            |            | 1       | 0         | 19.96                 | 20.19                 | 20.20                 | 20.01                 | 19.97                 | 0-2                       | 0        |   |
|            |            | 1       | 24        | 19.84                 | 20.02                 | 20.07                 | 19.89                 | 19.81                 | 0-2                       | 0        |   |
|            |            | 1       | 49        | 19.91                 | 20.14                 | 20.12                 | 19.94                 | 19.77                 | 0-2                       | 0        |   |
|            |            | 25      | 0         | 19.36                 | 19.47                 | 19.48                 | 19.24                 | 19.19                 | 0-3                       | 0        |   |
|            |            | 64QAM   | 25        | 12                    | 19.34                 | 19.45                 | 19.44                 | 19.21                 | 19.17                     | 0-3      | 0 |
|            |            |         | 25        | 24                    | 19.35                 | 19.43                 | 19.44                 | 19.20                 | 19.15                     | 0-3      | 0 |
|            |            |         | 50        | 0                     | 19.42                 | 19.51                 | 19.47                 | 19.29                 | 19.25                     | 0-3      | 0 |



LTE Band 41 \_ 15 MHz Bandwidth- Power Class 3

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39725 Ch. 2503.5 MHz | 40173 Ch. 2548.3 MHz | 40620 Ch. 2593.0 MHz | 41068 Ch. 2637.8 MHz | 41515 Ch. 2682.5 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 20.30                | 20.43                | 20.46                | 20.32                | 20.18                | 0                         | 0        |
|            |            | 1       | 36        | 20.28                | 20.38                | 20.29                | 20.22                | 20.14                | 0                         | 0        |
|            |            | 1       | 74        | 20.23                | 20.32                | 20.31                | 20.21                | 20.05                | 0                         | 0        |
|            |            | 36      | 0         | 20.43                | 20.57                | 20.52                | 20.31                | 20.26                | 0-1                       | 0        |
|            |            | 36      | 18        | 20.39                | 20.50                | 20.49                | 20.26                | 20.20                | 0-1                       | 0        |
|            |            | 36      | 39        | 20.39                | 20.49                | 20.43                | 20.26                | 20.19                | 0-1                       | 0        |
|            | 16QAM      | 75      | 0         | 20.47                | 20.61                | 20.50                | 20.32                | 20.26                | 0-1                       | 0        |
|            |            | 1       | 0         | 20.35                | 20.48                | 20.45                | 20.21                | 20.29                | 0-1                       | 0        |
|            |            | 1       | 36        | 20.28                | 20.36                | 20.19                | 20.08                | 20.20                | 0-1                       | 0        |
|            |            | 1       | 74        | 20.22                | 20.38                | 20.29                | 20.12                | 20.11                | 0-1                       | 0        |
|            |            | 36      | 0         | 20.29                | 20.40                | 20.46                | 20.20                | 20.19                | 0-2                       | 0        |
|            |            | 36      | 18        | 20.26                | 20.35                | 20.44                | 20.16                | 20.13                | 0-2                       | 0        |
|            | 64QAM      | 36      | 39        | 20.25                | 20.35                | 20.38                | 20.15                | 20.11                | 0-2                       | 0        |
|            |            | 75      | 0         | 20.38                | 20.48                | 20.46                | 20.24                | 20.20                | 0-2                       | 0        |
|            |            | 1       | 0         | 19.98                | 20.07                | 20.19                | 20.00                | 19.96                | 0-2                       | 0        |
|            |            | 1       | 36        | 19.87                | 19.96                | 19.99                | 19.89                | 19.90                | 0-2                       | 0        |
|            |            | 1       | 74        | 19.81                | 19.96                | 20.02                | 19.81                | 19.76                | 0-2                       | 0        |
|            |            | 36      | 0         | 19.30                | 19.40                | 19.47                | 19.20                | 19.19                | 0-3                       | 0        |
|            | 36         | 18      | 19.26     | 19.35                | 19.43                | 19.15                | 19.12                | 0-3                  | 0                         |          |
|            | 36         | 39      | 19.26     | 19.34                | 19.38                | 19.14                | 19.10                | 0-3                  | 0                         |          |
|            | 75         | 0       | 19.34     | 19.46                | 19.45                | 19.21                | 19.18                | 0-3                  | 0                         |          |

LTE Band 41 \_ 20 MHz Bandwidth - Power Class 3

| 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         | <b>20.63</b>         | 20.47                | 20.51                | 20.26                | 20.50                | 0                         | 0        |
|            |            | 1       | 49        | 20.46                | 20.26                | 20.29                | 20.16                | 20.32                | 0                         | 0        |
|            |            | 1       | 99        | 20.48                | 20.29                | 20.28                | 20.20                | 20.31                | 0                         | 0        |
|            |            | 50      | 0         | <b>20.90</b>         | 20.73                | 20.63                | 20.45                | 20.71                | 0-1                       | 0        |
|            |            | 50      | 25        | 20.88                | 20.68                | 20.55                | 20.42                | 20.67                | 0-1                       | 0        |
|            |            | 50      | 49        | 20.85                | 20.63                | 20.52                | 20.38                | 20.64                | 0-1                       | 0        |
|            |            | 100     | 0         | 20.83                | 20.63                | 20.55                | 20.37                | 20.62                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 20.59                | 20.30                | 20.49                | 20.25                | 20.54                | 0-1                       | 0        |
|            |            | 1       | 49        | 20.37                | 20.12                | 20.29                | 20.04                | 20.33                | 0-1                       | 0        |
|            |            | 1       | 99        | 20.41                | 20.19                | 20.25                | 20.11                | 20.32                | 0-1                       | 0        |
|            |            | 50      | 0         | 20.76                | 20.59                | 20.59                | 20.37                | 20.64                | 0-2                       | 0        |
|            |            | 50      | 25        | 20.74                | 20.55                | 20.51                | 20.32                | 20.60                | 0-2                       | 0        |
|            |            | 50      | 49        | 20.70                | 20.51                | 20.49                | 20.30                | 20.56                | 0-2                       | 0        |
|            |            | 100     | 0         | 20.70                | 20.52                | 20.53                | 20.30                | 20.55                | 0-2                       | 0        |
|            | 64QAM      | 1       | 0         | 20.22                | 20.06                | 20.20                | 19.90                | 20.21                | 0-2                       | 0        |
|            |            | 1       | 49        | 20.06                | 19.86                | 20.00                | 19.70                | 20.01                | 0-2                       | 0        |
|            |            | 1       | 99        | 20.09                | 19.92                | 19.98                | 19.72                | 19.99                | 0-2                       | 0        |
|            |            | 50      | 0         | 19.73                | 19.56                | 19.58                | 19.35                | 19.60                | 0-3                       | 0        |
|            |            | 50      | 25        | 19.71                | 19.52                | 19.50                | 19.30                | 19.56                | 0-3                       | 0        |
|            |            | 50      | 49        | 19.67                | 19.47                | 19.46                | 19.27                | 19.52                | 0-3                       | 0        |
|            |            | 100     | 0         | 19.66                | 19.46                | 19.49                | 19.25                | 19.51                | 0-3                       | 0        |

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

**[ LTE Band 41 Conducted Power ] - Power Class 2**

LTE Band 41 \_ 5 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]     |                         |                         |                         |                         | MPR Allowed Per GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|----------|
|            |            |         |           | 39675 Ch.<br>2498.5 MHz | 40148 Ch.<br>2545.8 MHz | 40620 Ch.<br>2593.0 MHz | 41093 Ch.<br>2640.3 MHz | 41565 Ch.<br>2687.5 MHz |                          |          |
| 5 MHz      | QPSK       | 1       | 0         | 20.21                   | 20.31                   | 20.36                   | 20.07                   | 20.04                   | 0                        | 0        |
|            |            | 1       | 12        | 20.27                   | 20.36                   | 20.31                   | 20.21                   | 20.13                   | 0                        | 0        |
|            |            | 1       | 24        | 20.20                   | 20.27                   | 20.30                   | 20.08                   | 19.97                   | 0                        | 0        |
|            |            | 12      | 0         | 20.30                   | 20.40                   | 20.38                   | 20.16                   | 20.09                   | 0-1                      | 0        |
|            |            | 12      | 6         | 20.26                   | 20.36                   | 20.41                   | 20.12                   | 20.03                   | 0-1                      | 0        |
|            |            | 12      | 11        | 20.28                   | 20.38                   | 20.37                   | 20.14                   | 20.08                   | 0-1                      | 0        |
|            | 16QAM      | 25      | 0         | 20.23                   | 20.31                   | 20.34                   | 20.11                   | 20.03                   | 0-1                      | 0        |
|            |            | 1       | 0         | 20.33                   | 20.56                   | 20.65                   | 20.47                   | 20.32                   | 0-1                      | 0        |
|            |            | 1       | 12        | 20.37                   | 20.68                   | 20.56                   | 20.56                   | 20.39                   | 0-1                      | 0        |
|            |            | 1       | 24        | 20.32                   | 20.63                   | 20.60                   | 20.45                   | 20.24                   | 0-1                      | 0        |
|            |            | 12      | 0         | 20.27                   | 20.33                   | 20.28                   | 20.06                   | 20.05                   | 0-2                      | 0        |
|            |            | 12      | 6         | 20.25                   | 20.30                   | 20.45                   | 20.00                   | 19.97                   | 0-2                      | 0        |
|            | 64QAM      | 12      | 11        | 20.23                   | 20.30                   | 20.38                   | 20.05                   | 20.01                   | 0-2                      | 0        |
|            |            | 25      | 0         | 20.18                   | 20.22                   | 20.30                   | 20.06                   | 19.94                   | 0-2                      | 0        |
|            |            | 1       | 0         | 20.24                   | 20.36                   | 20.55                   | 20.16                   | 19.97                   | 0-2                      | 0        |
|            |            | 1       | 12        | 20.12                   | 20.21                   | 20.31                   | 20.06                   | 19.82                   | 0-2                      | 0        |
|            |            | 1       | 24        | 20.27                   | 20.48                   | 20.32                   | 20.07                   | 19.94                   | 0-2                      | 0        |
|            |            | 12      | 0         | 19.17                   | 19.28                   | 19.36                   | 19.16                   | 18.97                   | 0-3                      | 0        |
|            | 12         | 6       | 19.14     | 19.21                   | 19.37                   | 19.11                   | 18.91                   | 0-3                     | 0                        |          |
|            | 12         | 11      | 19.15     | 19.19                   | 19.31                   | 19.15                   | 18.92                   | 0-3                     | 0                        |          |
|            | 25         | 0       | 19.16     | 19.18                   | 19.30                   | 19.07                   | 18.99                   | 0-3                     | 0                        |          |

LTE Band 41 \_ 10 MHz Bandwidth - Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]   |                       |                       |                       |                       | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|----------|
|            |            |         |           | 39700 Ch.<br>2501 MHz | 40160 Ch.<br>2547 MHz | 40620 Ch.<br>2593 MHz | 41080 Ch.<br>2639 MHz | 41540 Ch.<br>2685 MHz |                           |          |
| 10 MHz     | QPSK       | 1       | 0         | 20.25                 | 20.35                 | 20.41                 | 20.16                 | 20.12                 | 0                         | 0        |
|            |            | 1       | 24        | 20.19                 | 20.27                 | 20.33                 | 20.10                 | 20.02                 | 0                         | 0        |
|            |            | 1       | 49        | 20.20                 | 20.28                 | 20.30                 | 20.10                 | 19.99                 | 0                         | 0        |
|            |            | 25      | 0         | 20.23                 | 20.34                 | 20.37                 | 20.13                 | 20.07                 | 0-1                       | 0        |
|            |            | 25      | 12        | 20.22                 | 20.30                 | 20.35                 | 20.10                 | 20.03                 | 0-1                       | 0        |
|            |            | 25      | 24        | 20.22                 | 20.30                 | 20.32                 | 20.08                 | 20.02                 | 0-1                       | 0        |
|            | 16QAM      | 50      | 0         | 20.44                 | 20.58                 | 20.45                 | 20.28                 | 20.22                 | 0-1                       | 0        |
|            |            | 1       | 0         | 20.49                 | 20.64                 | 20.70                 | 20.39                 | 20.41                 | 0-1                       | 0        |
|            |            | 1       | 24        | 20.32                 | 20.53                 | 20.48                 | 20.36                 | 20.20                 | 0-1                       | 0        |
|            |            | 1       | 49        | 20.44                 | 20.63                 | 20.59                 | 20.41                 | 20.22                 | 0-1                       | 0        |
|            |            | 25      | 0         | 20.16                 | 20.27                 | 20.34                 | 20.07                 | 20.01                 | 0-2                       | 0        |
|            |            | 25      | 12        | 20.13                 | 20.23                 | 20.30                 | 20.09                 | 20.00                 | 0-2                       | 0        |
|            | 64QAM      | 25      | 24        | 20.13                 | 20.23                 | 20.28                 | 20.07                 | 19.97                 | 0-2                       | 0        |
|            |            | 50      | 0         | 20.32                 | 20.51                 | 20.38                 | 20.20                 | 20.18                 | 0-2                       | 0        |
|            |            | 1       | 0         | 20.03                 | 20.31                 | 20.41                 | 20.21                 | 19.95                 | 0-2                       | 0        |
|            |            | 1       | 24        | 20.12                 | 20.21                 | 20.30                 | 20.03                 | 19.81                 | 0-2                       | 0        |
|            |            | 1       | 49        | 20.13                 | 20.23                 | 20.27                 | 20.03                 | 19.77                 | 0-2                       | 0        |
|            |            | 25      | 0         | 19.11                 | 19.22                 | 19.32                 | 19.05                 | 18.99                 | 0-3                       | 0        |
|            |            | 25      | 12        | 19.09                 | 19.18                 | 19.28                 | 19.05                 | 18.95                 | 0-3                       | 0        |
|            |            | 25      | 24        | 19.10                 | 19.19                 | 19.26                 | 19.03                 | 18.93                 | 0-3                       | 0        |
|            |            | 50      | 0         | 19.32                 | 19.43                 | 19.39                 | 19.16                 | 19.16                 | 0-3                       | 0        |

LTE Band 41 \_ 15 MHz Bandwidth- Power Class 2

| Band width | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|----------|
|            |            |         |           | 39725 Ch. 2503.5 MHz | 40173 Ch. 2548.3 MHz | 40620 Ch. 2593.0 MHz | 41068 Ch. 2637.8 MHz | 41515 Ch. 2682.5 MHz |                           |          |
| 15 MHz     | QPSK       | 1       | 0         | 20.30                | 20.38                | 20.46                | 20.22                | 20.17                | 0                         | 0        |
|            |            | 1       | 36        | 20.34                | 20.37                | 20.32                | 20.22                | 20.15                | 0                         | 0        |
|            |            | 1       | 74        | 20.21                | 20.28                | 20.31                | 20.09                | 20.02                | 0                         | 0        |
|            |            | 36      | 0         | 20.40                | 20.55                | 20.48                | 20.27                | 20.22                | 0-1                       | 0        |
|            |            | 36      | 18        | 20.34                | 20.45                | 20.44                | 20.23                | 20.15                | 0-1                       | 0        |
|            |            | 36      | 39        | 20.36                | 20.46                | 20.39                | 20.22                | 20.16                | 0-1                       | 0        |
|            | 16QAM      | 75      | 0         | 20.36                | 20.47                | 20.42                | 20.24                | 20.19                | 0-1                       | 0        |
|            |            | 1       | 0         | 20.39                | 20.72                | 20.65                | 20.51                | 20.31                | 0-1                       | 0        |
|            |            | 1       | 36        | 20.43                | 20.69                | 20.51                | 20.40                | 20.28                | 0-1                       | 0        |
|            |            | 1       | 74        | 20.29                | 20.64                | 20.46                | 20.38                | 20.14                | 0-1                       | 0        |
|            |            | 36      | 0         | 20.29                | 20.41                | 20.42                | 20.18                | 20.12                | 0-2                       | 0        |
|            |            | 36      | 18        | 20.25                | 20.34                | 20.41                | 20.11                | 20.05                | 0-2                       | 0        |
|            | 64QAM      | 36      | 39        | 20.25                | 20.34                | 20.33                | 20.10                | 20.05                | 0-2                       | 0        |
|            |            | 75      | 0         | 20.27                | 20.35                | 20.39                | 20.16                | 20.14                | 0-2                       | 0        |
|            |            | 1       | 0         | 20.26                | 20.20                | 20.55                | 19.97                | 20.04                | 0-2                       | 0        |
|            |            | 1       | 36        | 20.26                | 20.34                | 20.27                | 19.95                | 19.97                | 0-2                       | 0        |
|            |            | 1       | 74        | 20.24                | 20.27                | 20.39                | 19.85                | 19.85                | 0-2                       | 0        |
|            |            | 36      | 0         | 19.28                | 19.38                | 19.42                | 19.18                | 19.16                | 0-3                       | 0        |
|            | 36         | 18      | 19.26     | 19.33                | 19.42                | 19.14                | 19.09                | 0-3                  | 0                         |          |
|            | 36         | 39      | 19.25     | 19.33                | 19.35                | 19.13                | 19.08                | 0-3                  | 0                         |          |
|            | 75         | 0       | 19.24     | 19.33                | 19.38                | 19.15                | 19.14                | 0-3                  | 0                         |          |

LTE Band 41 \_ 20 MHz Bandwidth - Power Class 2

| 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         | <b>20.59</b>         | 20.42                | 20.51                | 20.26                | 20.50                | 0                         | 0        |
|            |            | 1       | 49        | 20.47                | 20.26                | 20.33                | 20.08                | 20.33                | 0                         | 0        |
|            |            | 1       | 99        | 20.46                | 20.27                | 20.28                | 20.09                | 20.29                | 0                         | 0        |
|            |            | 50      | 0         | <b>20.76</b>         | 20.61                | 20.49                | 20.29                | 20.56                | 0-1                       | 0        |
|            |            | 50      | 25        | 20.73                | 20.53                | 20.44                | 20.24                | 20.52                | 0-1                       | 0        |
|            |            | 50      | 49        | 20.72                | 20.48                | 20.36                | 20.25                | 20.48                | 0-1                       | 0        |
|            |            | 100     | 0         | 20.76                | 20.55                | 20.45                | 20.30                | 20.55                | 0-1                       | 0        |
|            | 16QAM      | 1       | 0         | 20.85                | 20.50                | 20.48                | 20.57                | 20.71                | 0-1                       | 0        |
|            |            | 1       | 49        | 20.73                | 20.33                | 20.30                | 20.17                | 20.27                | 0-1                       | 0        |
|            |            | 1       | 99        | 20.69                | 20.37                | 20.25                | 20.17                | 20.21                | 0-1                       | 0        |
|            |            | 50      | 0         | 20.65                | 20.50                | 20.48                | 20.26                | 20.52                | 0-2                       | 0        |
|            |            | 50      | 25        | 20.60                | 20.43                | 20.47                | 20.19                | 20.48                | 0-2                       | 0        |
|            |            | 50      | 49        | 20.59                | 20.39                | 20.40                | 20.18                | 20.43                | 0-2                       | 0        |
|            |            | 100     | 0         | 20.65                | 20.45                | 20.46                | 20.24                | 20.49                | 0-2                       | 0        |
|            | 64QAM      | 1       | 0         | 20.59                | 20.39                | 20.39                | 19.90                | 20.31                | 0-2                       | 0        |
|            |            | 1       | 49        | 20.42                | 20.22                | 20.21                | 19.68                | 20.14                | 0-2                       | 0        |
|            |            | 1       | 99        | 20.38                | 20.29                | 20.17                | 19.70                | 20.08                | 0-2                       | 0        |
|            |            | 50      | 0         | 19.65                | 19.47                | 19.47                | 19.23                | 19.51                | 0-3                       | 0        |
|            |            | 50      | 25        | 19.59                | 19.40                | 19.42                | 19.15                | 19.47                | 0-3                       | 0        |
|            |            | 50      | 49        | 19.58                | 19.37                | 19.35                | 19.14                | 19.42                | 0-3                       | 0        |
|            |            | 100     | 0         | 19.61                | 19.39                | 19.40                | 19.19                | 19.46                | 0-3                       | 0        |

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. 1710.7 MHz | 132322 Ch. 1745 MHz | 132665 Ch. 1779.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 20.66                | 21.33               | 20.72                 | 0                         | 0        |
|           |            | 1       | 3         | 20.74                | 21.37               | 20.74                 | 0                         | 0        |
|           |            | 1       | 5         | 20.65                | 21.32               | 20.70                 | 0                         | 0        |
|           |            | 3       | 0         | 20.64                | 21.29               | 20.65                 | 0                         | 0        |
|           |            | 3       | 1         | 20.82                | 21.40               | 20.75                 | 0                         | 0        |
|           |            | 3       | 3         | 20.75                | 21.37               | 20.73                 | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 20.66                | 21.31               | 20.68                 | 0-1                       | 0        |
|           |            | 1       | 0         | 20.89                | 21.57               | 20.93                 | 0-1                       | 0        |
|           |            | 1       | 3         | 20.77                | 21.49               | 20.79                 | 0-1                       | 0        |
|           |            | 1       | 5         | 20.86                | 21.61               | 20.97                 | 0-1                       | 0        |
|           |            | 3       | 0         | 20.80                | 21.36               | 20.84                 | 0-1                       | 0        |
|           |            | 3       | 1         | 20.88                | 21.52               | 20.91                 | 0-1                       | 0        |
|           | 64QAM      | 3       | 3         | 20.89                | 21.51               | 20.89                 | 0-1                       | 0        |
|           |            | 6       | 0         | 20.80                | 21.46               | 20.76                 | 0-2                       | 0        |
|           |            | 1       | 0         | 20.93                | 21.53               | 20.93                 | 0-2                       | 0        |
|           |            | 1       | 3         | 20.78                | 21.57               | 20.75                 | 0-2                       | 0        |
|           |            | 1       | 5         | 20.84                | 21.55               | 20.86                 | 0-2                       | 0        |
|           |            | 3       | 0         | 20.82                | 21.42               | 20.80                 | 0-2                       | 0        |
|           |            | 3       | 1         | 20.89                | 21.54               | 20.90                 | 0-2                       | 0        |
|           |            | 3       | 3         | 20.86                | 21.49               | 20.81                 | 0-2                       | 0        |
|           |            | 6       | 0         | 20.81                | 21.37               | 20.81                 | 0-3                       | 0        |

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         | 20.63                 | 21.33               | 20.72                 | 0                         | 0        |
|           |            | 1       | 7         | 20.64                 | 21.34               | 20.68                 | 0                         | 0        |
|           |            | 1       | 14        | 20.69                 | 21.36               | 20.71                 | 0                         | 0        |
|           |            | 8       | 0         | 20.79                 | 21.37               | 20.75                 | 0-1                       | 0        |
|           |            | 8       | 3         | 20.70                 | 21.40               | 20.74                 | 0-1                       | 0        |
|           |            | 8       | 7         | 20.76                 | 21.41               | 20.78                 | 0-1                       | 0        |
|           |            | 15      | 0         | 20.78                 | 21.44               | 20.81                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 20.97                 | 21.69               | 21.07                 | 0-1                       | 0        |
|           |            | 1       | 7         | 20.98                 | 21.71               | 20.96                 | 0-1                       | 0        |
|           |            | 1       | 14        | 20.89                 | 21.49               | 20.94                 | 0-1                       | 0        |
|           |            | 8       | 0         | 20.82                 | 21.45               | 20.82                 | 0-2                       | 0        |
|           |            | 8       | 3         | 20.81                 | 21.40               | 20.76                 | 0-2                       | 0        |
|           |            | 8       | 7         | 20.82                 | 21.46               | 20.85                 | 0-2                       | 0        |
|           |            | 15      | 0         | 20.84                 | 21.47               | 20.81                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 20.89                 | 21.50               | 20.95                 | 0-2                       | 0        |
|           |            | 1       | 7         | 20.89                 | 21.45               | 20.92                 | 0-2                       | 0        |
|           |            | 1       | 14        | 20.95                 | 21.52               | 20.88                 | 0-2                       | 0        |
|           |            | 8       | 0         | 20.78                 | 21.45               | 20.81                 | 0-3                       | 0        |
|           |            | 8       | 3         | 20.78                 | 21.36               | 20.79                 | 0-3                       | 0        |
|           |            | 8       | 7         | 20.81                 | 21.44               | 20.83                 | 0-3                       | 0        |
|           |            | 8       | 0         | 20.81                 | 21.44               | 20.83                 | 0-3                       | 0        |
|           |            | 15      | 0         | 20.81                 | 21.46               | 20.81                 | 0-3                       | 0        |

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         | 20.73                 | 21.39              | 20.78                 | 0                         | 0        |
|           |            | 1       | 12        | 20.73                 | 21.33              | 20.75                 | 0                         | 0        |
|           |            | 1       | 24        | 20.69                 | 21.40              | 20.76                 | 0                         | 0        |
|           |            | 12      | 0         | 20.80                 | 21.42              | 20.84                 | 0-1                       | 0        |
|           |            | 12      | 6         | 20.81                 | 21.43              | 20.81                 | 0-1                       | 0        |
|           |            | 12      | 11        | 20.84                 | 21.47              | 20.79                 | 0-1                       | 0        |
|           | 25         | 0       | 20.79     | 21.45                 | 20.83              | 0-1                   | 0                         |          |
|           | 16QAM      | 1       | 0         | 20.95                 | 21.74              | 21.07                 | 0-1                       | 0        |
|           |            | 1       | 12        | 20.91                 | 21.67              | 21.03                 | 0-1                       | 0        |
|           |            | 1       | 24        | 21.00                 | 21.60              | 20.99                 | 0-1                       | 0        |
|           |            | 12      | 0         | 20.77                 | 21.42              | 20.83                 | 0-2                       | 0        |
|           |            | 12      | 6         | 20.82                 | 21.42              | 20.80                 | 0-2                       | 0        |
|           |            | 12      | 11        | 20.78                 | 21.46              | 20.83                 | 0-2                       | 0        |
|           | 25         | 0       | 20.81     | 21.46                 | 20.81              | 0-2                   | 0                         |          |
|           | 64QAM      | 1       | 0         | 20.86                 | 21.57              | 21.05                 | 0-2                       | 0        |
|           |            | 1       | 12        | 20.93                 | 21.56              | 20.94                 | 0-2                       | 0        |
|           |            | 1       | 24        | 21.03                 | 21.70              | 20.88                 | 0-2                       | 0        |
|           |            | 12      | 0         | 20.85                 | 21.42              | 20.78                 | 0-3                       | 0        |
| 12        |            | 6       | 20.79     | 21.44                 | 20.77              | 0-3                   | 0                         |          |
| 12        |            | 11      | 20.79     | 21.45                 | 20.86              | 0-3                   | 0                         |          |
| 25        | 0          | 20.79   | 21.46     | 20.81                 | 0-3                | 0                     |                           |          |

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         | 21.22               | 21.41               | 21.32               | 0                         | 0        |
|           |            | 1       | 24        | 21.23               | 21.41               | 21.32               | 0                         | 0        |
|           |            | 1       | 49        | 21.28               | 21.48               | 21.33               | 0                         | 0        |
|           |            | 25      | 0         | 21.31               | 21.46               | 21.38               | 0-1                       | 0        |
|           |            | 25      | 12        | 21.29               | 21.44               | 21.38               | 0-1                       | 0        |
|           |            | 25      | 24        | 21.31               | 21.47               | 21.34               | 0-1                       | 0        |
|           | 50         | 0       | 21.30     | 21.46               | 21.37               | 0-1                 | 0                         |          |
|           | 16QAM      | 1       | 0         | 21.52               | 21.75               | 21.61               | 0-1                       | 0        |
|           |            | 1       | 24        | 21.45               | 21.43               | 21.31               | 0-1                       | 0        |
|           |            | 1       | 49        | 21.54               | 21.61               | 21.54               | 0-1                       | 0        |
|           |            | 25      | 0         | 21.31               | 21.49               | 21.33               | 0-2                       | 0        |
|           |            | 25      | 12        | 21.33               | 21.46               | 21.40               | 0-2                       | 0        |
|           |            | 25      | 24        | 21.32               | 21.46               | 21.34               | 0-2                       | 0        |
|           | 50         | 0       | 21.33     | 21.44               | 21.37               | 0-2                 | 0                         |          |
|           | 64QAM      | 1       | 0         | 21.46               | 21.59               | 21.54               | 0-2                       | 0        |
|           |            | 1       | 24        | 21.40               | 21.51               | 21.50               | 0-2                       | 0        |
|           |            | 1       | 49        | 21.49               | 21.54               | 21.40               | 0-2                       | 0        |
|           |            | 25      | 0         | 21.33               | 21.47               | 21.39               | 0-3                       | 0        |
|           |            | 25      | 12        | 21.32               | 21.49               | 21.36               | 0-3                       | 0        |
|           |            | 25      | 24        | 21.35               | 21.48               | 21.37               | 0-3                       | 0        |
|           | 50         | 0       | 21.34     | 21.50               | 21.38               | 0-3                 | 0                         |          |

LTE Band 66 \_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]      |                        |                          | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|--------------------------|------------------------|--------------------------|---------------------------|----------|
|           |            |         |           | 132047 Ch.<br>1717.5 MHz | 132322 Ch.<br>1745 MHz | 132597 Ch.<br>1772.5 MHz |                           |          |
| 15 MHz    | QPSK       | 1       | 0         | 21.31                    | 21.45                  | 21.42                    | 0                         | 0        |
|           |            | 1       | 36        | 21.18                    | 21.40                  | 21.43                    | 0                         | 0        |
|           |            | 1       | 74        | 21.32                    | 21.47                  | 21.40                    | 0                         | 0        |
|           |            | 36      | 0         | 21.36                    | 21.48                  | 21.47                    | 0-1                       | 1        |
|           |            | 36      | 18        | 21.35                    | 21.45                  | 21.44                    | 0-1                       | 1        |
|           |            | 36      | 39        | 21.37                    | 21.49                  | 21.41                    | 0-1                       | 1        |
|           | 16QAM      | 75      | 0         | 21.38                    | 21.50                  | 21.42                    | 0-1                       | 1        |
|           |            | 1       | 0         | 21.57                    | 21.71                  | 21.66                    | 0-1                       | 1        |
|           |            | 1       | 36        | 21.47                    | 21.69                  | 21.62                    | 0-1                       | 1        |
|           |            | 1       | 74        | 21.58                    | 21.77                  | 21.67                    | 0-1                       | 1        |
|           |            | 36      | 0         | 21.36                    | 21.47                  | 21.41                    | 0-2                       | 2        |
|           |            | 36      | 18        | 21.33                    | 21.45                  | 21.43                    | 0-2                       | 2        |
|           | 64QAM      | 36      | 39        | 21.35                    | 21.50                  | 21.44                    | 0-2                       | 2        |
|           |            | 75      | 0         | 21.38                    | 21.50                  | 21.44                    | 0-2                       | 2        |
|           |            | 1       | 0         | 21.49                    | 21.63                  | 21.53                    | 0-2                       | 2        |
|           |            | 1       | 36        | 21.34                    | 21.39                  | 21.39                    | 0-2                       | 2        |
|           |            | 1       | 74        | 21.49                    | 21.69                  | 21.56                    | 0-2                       | 2        |
|           |            | 36      | 0         | 21.35                    | 21.52                  | 21.48                    | 0-3                       | 3        |
|           | 36         | 18      | 21.39     | 21.51                    | 21.41                  | 0-3                      | 3                         |          |
|           | 36         | 39      | 21.35     | 21.51                    | 21.46                  | 0-3                      | 3                         |          |
|           | 75         | 0       | 21.37     | 21.46                    | 21.40                  | 0-3                      | 3                         |          |

LTE Band 66 \_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]    |                        |                        | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|------------------------|------------------------|------------------------|---------------------------|----------|
|           |            |         |           | 132072 Ch.<br>1720 MHz | 132322 Ch.<br>1745 MHz | 132572 Ch.<br>1770 MHz |                           |          |
| 20 MHz    | QPSK       | 1       | 0         | 21.28                  | 21.44                  | 21.48                  | 0                         | 0        |
|           |            | 1       | 49        | 21.23                  | 21.39                  | 21.37                  | 0                         | 0        |
|           |            | 1       | 99        | 21.35                  | 21.49                  | 21.44                  | 0                         | 0        |
|           |            | 50      | 0         | 21.31                  | 21.46                  | 21.48                  | 0-1                       | 1        |
|           |            | 50      | 25        | 21.28                  | 21.45                  | 21.41                  | 0-1                       | 1        |
|           |            | 50      | 49        | 21.29                  | 21.47                  | 21.40                  | 0-1                       | 1        |
|           | 16QAM      | 100     | 0         | 21.30                  | 21.52                  | 21.44                  | 0-1                       | 1        |
|           |            | 1       | 0         | 21.61                  | 21.74                  | 21.62                  | 0-1                       | 1        |
|           |            | 1       | 49        | 21.54                  | 21.56                  | 21.55                  | 0-1                       | 1        |
|           |            | 1       | 99        | 21.55                  | 21.85                  | 21.67                  | 0-1                       | 1        |
|           |            | 50      | 0         | 21.30                  | 21.47                  | 21.44                  | 0-2                       | 2        |
|           |            | 50      | 25        | 21.30                  | 21.48                  | 21.44                  | 0-2                       | 2        |
|           | 64QAM      | 50      | 49        | 21.32                  | 21.49                  | 21.41                  | 0-2                       | 2        |
|           |            | 100     | 0         | 21.31                  | 21.48                  | 21.44                  | 0-2                       | 2        |
|           |            | 1       | 0         | 21.44                  | 21.67                  | 21.66                  | 0-2                       | 2        |
|           |            | 1       | 49        | 21.58                  | 21.63                  | 21.68                  | 0-2                       | 2        |
|           |            | 1       | 99        | 21.64                  | 21.73                  | 21.60                  | 0-2                       | 2        |
|           |            | 50      | 0         | 21.34                  | 21.48                  | 21.45                  | 0-3                       | 3        |
|           | 50         | 25      | 21.36     | 21.43                  | 21.44                  | 0-3                    | 3                         |          |
|           | 50         | 49      | 21.31     | 21.47                  | 21.42                  | 0-3                    | 3                         |          |
|           | 100        | 0       | 21.32     | 21.46                  | 21.42                  | 0-3                    | 3                         |          |

The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.



### 11.3.4 LTE Reduced Conducted Power (Ear jack 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. 1850.7 MHz | 18900 Ch. 1880 MHz | 19193 Ch. 1909.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 21.45                | 21.65              | 21.36                | 0                         | 0        |
|           |            | 1       | 3         | 21.52                | 21.74              | 21.36                | 0                         | 0        |
|           |            | 1       | 5         | 21.46                | 21.63              | 21.35                | 0                         | 0        |
|           |            | 3       | 0         | 21.32                | 21.59              | 21.29                | 0                         | 0        |
|           |            | 3       | 1         | 21.58                | 21.79              | 21.46                | 0                         | 0        |
|           |            | 3       | 3         | 21.41                | 21.69              | 21.43                | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 21.47                | 21.68              | 21.34                | 0-1                       | 0        |
|           |            | 1       | 0         | 21.41                | 21.88              | 21.54                | 0-1                       | 0        |
|           |            | 1       | 3         | 21.27                | 21.82              | 21.32                | 0-1                       | 0        |
|           |            | 1       | 5         | 21.88                | 21.49              | 21.35                | 0-1                       | 0        |
|           |            | 3       | 0         | 21.37                | 21.73              | 21.41                | 0-1                       | 0        |
|           |            | 3       | 1         | 21.61                | 21.89              | 21.33                | 0-1                       | 0        |
|           | 64QAM      | 3       | 3         | 21.68                | 21.86              | 21.48                | 0-1                       | 0        |
|           |            | 6       | 0         | 21.54                | 21.78              | 21.43                | 0-2                       | 0        |
|           |            | 1       | 0         | 21.85                | 21.57              | 21.60                | 0-2                       | 0        |
|           |            | 1       | 3         | 21.60                | 21.77              | 21.38                | 0-2                       | 0        |
|           |            | 1       | 5         | 21.52                | 21.98              | 21.33                | 0-2                       | 0        |
|           |            | 3       | 0         | 21.64                | 21.76              | 21.32                | 0-2                       | 0        |
|           |            | 3       | 1         | 21.50                | 21.88              | 21.37                | 0-2                       | 0        |
|           |            | 3       | 3         | 21.64                | 21.73              | 21.53                | 0-2                       | 0        |
|           |            | 6       | 0         | 20.65                | 20.84              | 20.21                | 0-3                       | 0        |

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         | 21.43                | 21.66              | 21.37                | 0                         | 0        |
|           |            | 1       | 7         | 21.50                | 21.75              | 21.37                | 0                         | 0        |
|           |            | 1       | 14        | 21.45                | 21.71              | 21.31                | 0                         | 0        |
|           |            | 8       | 0         | 21.56                | 21.85              | 21.41                | 0-1                       | 0        |
|           |            | 8       | 3         | 21.41                | 21.77              | 21.34                | 0-1                       | 0        |
|           |            | 8       | 7         | 21.55                | 21.74              | 21.44                | 0-1                       | 0        |
|           |            | 15      | 0         | 21.59                | 21.83              | 21.42                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 21.57                | 21.46              | 21.67                | 0-1                       | 0        |
|           |            | 1       | 7         | 21.61                | 21.93              | 21.42                | 0-1                       | 0        |
|           |            | 1       | 14        | 21.49                | 21.96              | 21.55                | 0-1                       | 0        |
|           |            | 8       | 0         | 21.45                | 21.83              | 21.44                | 0-2                       | 0        |
|           |            | 8       | 3         | 21.50                | 21.81              | 21.41                | 0-2                       | 0        |
|           |            | 8       | 7         | 21.53                | 21.84              | 21.47                | 0-2                       | 0        |
|           |            | 15      | 0         | 21.42                | 21.79              | 21.46                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 21.52                | 21.94              | 21.64                | 0-2                       | 0        |
|           |            | 1       | 7         | 21.70                | 21.54              | 21.56                | 0-2                       | 0        |
|           |            | 1       | 14        | 21.55                | 21.70              | 21.37                | 0-2                       | 0        |
|           |            | 8       | 0         | 20.58                | 20.77              | 20.58                | 0-3                       | 0        |
|           |            | 8       | 3         | 20.55                | 20.72              | 20.49                | 0-3                       | 0        |
|           |            | 8       | 7         | 20.61                | 20.87              | 20.40                | 0-3                       | 0        |
|           |            | 15      | 0         | 20.49                | 20.75              | 20.38                | 0-3                       | 0        |

LTE Band 2 \_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                    |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|--------------------|----------------------|---------------------------|----------|
|           |            |         |           | 18625 Ch. 1852.5 MHz | 18900 Ch. 1880 MHz | 19175 Ch. 1907.5 MHz |                           |          |
| 5 MHz     | QPSK       | 1       | 0         | 21.41                | 21.86              | 21.38                | 0                         | 0        |
|           |            | 1       | 12        | 21.29                | 21.81              | 21.35                | 0                         | 0        |
|           |            | 1       | 24        | 21.42                | 21.71              | 21.37                | 0                         | 0        |
|           |            | 12      | 0         | 21.58                | 21.84              | 21.48                | 0-1                       | 0        |
|           |            | 12      | 6         | 21.57                | 21.77              | 21.49                | 0-1                       | 0        |
|           |            | 12      | 11        | 21.56                | 21.82              | 21.45                | 0-1                       | 0        |
|           | 25         | 0       | 21.49     | 21.82                | 21.47              | 0-1                  | 0                         |          |
|           | 16QAM      | 1       | 0         | 21.82                | 21.84              | 21.77                | 0-1                       | 0        |
|           |            | 1       | 12        | 21.72                | 22.00              | 21.33                | 0-1                       | 0        |
|           |            | 1       | 24        | 21.70                | 21.68              | 21.22                | 0-1                       | 0        |
|           |            | 12      | 0         | 21.57                | 21.89              | 21.51                | 0-2                       | 0        |
|           |            | 12      | 6         | 21.57                | 21.77              | 21.57                | 0-2                       | 0        |
|           |            | 12      | 11        | 21.51                | 21.67              | 21.38                | 0-2                       | 0        |
|           | 64QAM      | 25      | 0         | 21.46                | 21.84              | 21.40                | 0-2                       | 0        |
|           |            | 1       | 0         | 21.79                | 22.18              | 21.85                | 0-2                       | 0        |
|           |            | 1       | 12        | 21.74                | 21.71              | 21.49                | 0-2                       | 0        |
|           |            | 1       | 24        | 20.53                | 22.04              | 21.16                | 0-2                       | 0        |
|           |            | 12      | 0         | 20.39                | 20.86              | 20.51                | 0-3                       | 0        |
| 12        |            | 6       | 20.66     | 20.81                | 20.48              | 0-3                  | 0                         |          |
|           |            | 12      | 11        | 20.42                | 20.91              | 20.32                | 0-3                       | 0        |
|           |            | 25      | 0         | 20.47                | 20.79              | 20.51                | 0-3                       | 0        |

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         | 21.88               | 21.66              | 21.95              | 0                         | 0        |
|           |            | 1       | 24        | 21.76               | 21.76              | 21.82              | 0                         | 0        |
|           |            | 1       | 49        | 21.75               | 21.71              | 21.91              | 0                         | 0        |
|           |            | 25      | 0         | 21.87               | 21.88              | 21.92              | 0-1                       | 0        |
|           |            | 25      | 12        | 21.93               | 21.78              | 21.92              | 0-1                       | 0        |
|           |            | 25      | 24        | 21.86               | 21.78              | 21.84              | 0-1                       | 0        |
|           |            | 50      | 0         | 21.87               | 21.79              | 21.91              | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 21.77               | 22.16              | 21.84              | 0-1                       | 0        |
|           |            | 1       | 24        | 21.73               | 21.95              | 21.86              | 0-1                       | 0        |
|           |            | 1       | 49        | 22.07               | 22.18              | 21.82              | 0-1                       | 0        |
|           |            | 25      | 0         | 21.81               | 21.79              | 21.83              | 0-2                       | 0        |
|           |            | 25      | 12        | 21.71               | 21.82              | 21.86              | 0-2                       | 0        |
|           |            | 25      | 24        | 21.76               | 21.72              | 21.88              | 0-2                       | 0        |
|           |            | 50      | 0         | 21.84               | 21.75              | 21.93              | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 21.98               | 21.97              | 21.85              | 0-2                       | 0        |
|           |            | 1       | 24        | 22.07               | 21.77              | 22.11              | 0-2                       | 0        |
|           |            | 1       | 49        | 21.99               | 21.94              | 21.89              | 0-2                       | 0        |
|           |            | 25      | 0         | 20.90               | 20.83              | 20.93              | 0-3                       | 0        |
|           |            | 25      | 12        | 20.83               | 20.77              | 20.89              | 0-3                       | 0        |
|           |            | 25      | 24        | 20.77               | 20.87              | 20.92              | 0-3                       | 0        |
|           |            | 50      | 0         | 20.94               | 20.88              | 20.92              | 0-3                       | 0        |

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         | 21.95                   | 21.71                 | 21.91                   | 0                         | 0        |
|           |            | 1       | 36        | 21.70                   | 21.61                 | 21.81                   | 0                         | 0        |
|           |            | 1       | 74        | 21.74                   | 21.81                 | 21.91                   | 0                         | 0        |
|           |            | 36      | 0         | 21.89                   | 21.83                 | 21.97                   | 0-1                       | 0        |
|           |            | 36      | 18        | 21.87                   | 21.78                 | 22.00                   | 0-1                       | 0        |
|           |            | 36      | 39        | 21.83                   | 21.79                 | 21.88                   | 0-1                       | 0        |
|           |            | 75      | 0         | 21.87                   | 21.81                 | 22.00                   | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 22.14                   | 21.80                 | 21.97                   | 0-1                       | 0        |
|           |            | 1       | 36        | 22.02                   | 21.69                 | 21.56                   | 0-1                       | 0        |
|           |            | 1       | 74        | 22.16                   | 21.77                 | 22.18                   | 0-1                       | 0        |
|           |            | 36      | 0         | 21.99                   | 21.82                 | 22.01                   | 0-2                       | 0        |
|           |            | 36      | 18        | 21.88                   | 21.87                 | 21.90                   | 0-2                       | 0        |
|           |            | 36      | 39        | 21.92                   | 21.78                 | 21.93                   | 0-2                       | 0        |
|           |            | 75      | 0         | 21.82                   | 21.81                 | 21.96                   | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 21.70                   | 22.06                 | 21.85                   | 0-2                       | 0        |
|           |            | 1       | 36        | 21.74                   | 21.67                 | 22.06                   | 0-2                       | 0        |
|           |            | 1       | 74        | 21.72                   | 21.93                 | 22.07                   | 0-2                       | 0        |
|           |            | 36      | 0         | 20.93                   | 20.87                 | 20.99                   | 0-3                       | 0        |
| 36        |            | 18      | 20.84     | 20.83                   | 20.98                 | 0-3                     | 0                         |          |
| 36        |            | 39      | 20.85     | 20.82                   | 20.88                 | 0-3                     | 0                         |          |
| 75        |            | 0       | 20.88     | 20.83                   | 20.90                 | 0-3                     | 0                         |          |

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         | 21.93                 | 21.76                 | 21.89                 | 0                         | 0        |
|           |            | 1       | 49        | 21.84                 | 21.68                 | 21.80                 | 0                         | 0        |
|           |            | 1       | 99        | 21.79                 | 21.69                 | 21.82                 | 0                         | 0        |
|           |            | 50      | 0         | 21.92                 | 21.81                 | 21.92                 | 0-1                       | 0        |
|           |            | 50      | 25        | 21.90                 | 21.79                 | 21.89                 | 0-1                       | 0        |
|           |            | 50      | 49        | 21.85                 | 21.76                 | 21.89                 | 0-1                       | 0        |
|           |            | 100     | 0         | 21.91                 | 21.80                 | 21.91                 | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 22.16                 | 22.05                 | 22.05                 | 0-1                       | 0        |
|           |            | 1       | 49        | 21.94                 | 21.91                 | 21.00                 | 0-1                       | 0        |
|           |            | 1       | 99        | 21.99                 | 21.96                 | 22.05                 | 0-1                       | 0        |
|           |            | 50      | 0         | 21.93                 | 21.84                 | 21.93                 | 0-2                       | 0        |
|           |            | 50      | 25        | 21.90                 | 21.80                 | 21.88                 | 0-2                       | 0        |
|           |            | 50      | 49        | 21.84                 | 21.77                 | 21.87                 | 0-2                       | 0        |
|           |            | 100     | 0         | 21.91                 | 21.81                 | 21.89                 | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 22.04                 | 21.93                 | 21.99                 | 0-2                       | 0        |
|           |            | 1       | 49        | 21.92                 | 21.84                 | 21.89                 | 0-2                       | 0        |
|           |            | 1       | 99        | 21.83                 | 21.80                 | 21.90                 | 0-2                       | 0        |
|           |            | 50      | 0         | 20.91                 | 20.84                 | 20.90                 | 0-3                       | 0        |
|           |            | 50      | 25        | 20.89                 | 21.81                 | 20.87                 | 0-3                       | 0        |
|           |            | 50      | 49        | 20.85                 | 20.79                 | 20.88                 | 0-3                       | 0        |
|           |            | 100     | 0         | 20.88                 | 20.80                 | 20.90                 | 0-3                       | 0        |

**[ LTE Band 25 Conducted Power ]**

LTE Band 25 1.4 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26047 Ch. 1850.7 MHz | 26365 Ch. 1882.5 MHz | 26683 Ch. 1914.3 MHz |                           |          |
| 1.4 MHz   | QPSK       | 1       | 0         | 21.99                | 21.89                | 21.93                | 0                         | 0        |
|           |            | 1       | 3         | 22.03                | 21.91                | 21.97                | 0                         | 0        |
|           |            | 1       | 5         | 22.00                | 21.89                | 21.92                | 0                         | 0        |
|           |            | 3       | 0         | 21.99                | 21.84                | 21.85                | 0                         | 0        |
|           |            | 3       | 1         | 22.16                | 22.00                | 22.02                | 0                         | 0        |
|           |            | 3       | 3         | 22.08                | 21.96                | 21.97                | 0                         | 0        |
|           | 16QAM      | 6       | 0         | 22.05                | 21.89                | 21.87                | 0-1                       | 0        |
|           |            | 1       | 0         | 22.26                | 22.14                | 22.13                | 0-1                       | 0        |
|           |            | 1       | 3         | 21.97                | 21.96                | 21.90                | 0-1                       | 0        |
|           |            | 1       | 5         | 22.28                | 22.10                | 22.09                | 0-1                       | 0        |
|           |            | 3       | 0         | 22.05                | 21.89                | 21.90                | 0-1                       | 0        |
|           |            | 3       | 1         | 22.12                | 21.98                | 21.99                | 0-1                       | 0        |
|           | 64QAM      | 3       | 3         | 22.09                | 21.96                | 21.98                | 0-1                       | 0        |
|           |            | 6       | 0         | 21.15                | 20.97                | 21.02                | 0-2                       | 0        |
|           |            | 1       | 0         | 21.30                | 21.05                | 21.06                | 0-2                       | 0        |
|           |            | 1       | 3         | 21.13                | 20.99                | 20.97                | 0-2                       | 0        |
|           |            | 1       | 5         | 21.23                | 21.08                | 21.02                | 0-2                       | 0        |
|           |            | 3       | 0         | 21.12                | 20.97                | 20.96                | 0-2                       | 0        |
|           |            | 3       | 1         | 21.27                | 21.13                | 21.07                | 0-2                       | 0        |
|           |            | 3       | 3         | 21.16                | 20.99                | 20.97                | 0-2                       | 0        |
|           |            | 6       | 0         | 20.15                | 19.97                | 20.01                | 0-3                       | 0        |

LTE Band 25 3 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|
|           |            |         |           | 26055 Ch. 1851.5 MHz | 26365 Ch. 1882.5 MHz | 26675 Ch. 1913.5 MHz |                           |          |
| 3 MHz     | QPSK       | 1       | 0         | 22.07                | 21.88                | 21.93                | 0                         | 0        |
|           |            | 1       | 7         | 22.07                | 21.87                | 21.93                | 0                         | 0        |
|           |            | 1       | 14        | 22.08                | 21.85                | 21.95                | 0                         | 0        |
|           |            | 8       | 0         | 22.15                | 21.94                | 22.03                | 0-1                       | 0        |
|           |            | 8       | 3         | 22.10                | 21.91                | 21.97                | 0-1                       | 0        |
|           |            | 8       | 7         | 22.13                | 21.95                | 22.03                | 0-1                       | 0        |
|           |            | 15      | 0         | 22.18                | 22.00                | 22.05                | 0-1                       | 0        |
|           | 16QAM      | 1       | 0         | 22.30                | 22.18                | 22.06                | 0-1                       | 0        |
|           |            | 1       | 7         | 22.29                | 22.13                | 22.15                | 0-1                       | 0        |
|           |            | 1       | 14        | 22.23                | 22.15                | 22.06                | 0-1                       | 0        |
|           |            | 8       | 0         | 21.20                | 20.98                | 21.06                | 0-2                       | 0        |
|           |            | 8       | 3         | 21.17                | 20.93                | 20.98                | 0-2                       | 0        |
|           |            | 8       | 7         | 21.23                | 20.99                | 21.03                | 0-2                       | 0        |
|           |            | 15      | 0         | 21.21                | 20.98                | 21.05                | 0-2                       | 0        |
|           | 64QAM      | 1       | 0         | 21.27                | 21.15                | 21.08                | 0-2                       | 0        |
|           |            | 1       | 7         | 21.23                | 21.11                | 21.00                | 0-2                       | 0        |
|           |            | 1       | 14        | 21.22                | 21.11                | 21.02                | 0-2                       | 0        |
|           |            | 8       | 0         | 20.18                | 19.97                | 20.05                | 0-3                       | 0        |
|           |            | 8       | 3         | 20.14                | 19.98                | 19.98                | 0-3                       | 0        |
|           |            | 8       | 7         | 20.25                | 20.02                | 20.04                | 0-3                       | 0        |
|           |            | 15      | 0         | 20.19                | 19.98                | 20.02                | 0-3                       | 0        |

LTE Band 25\_ 5 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|---|
|           |            |         |           | 26065 Ch. 1852.5 MHz | 26365 Ch. 1882.5 MHz | 26665 Ch. 1912.5 MHz |                           |          |   |
| 5 MHz     | QPSK       | 1       | 0         | 22.12                | 21.96                | 21.98                | 0                         | 0        |   |
|           |            | 1       | 12        | 22.08                | 21.93                | 21.96                | 0                         | 0        |   |
|           |            | 1       | 24        | 22.06                | 21.91                | 21.97                | 0                         | 0        |   |
|           |            | 12      | 0         | 22.19                | 22.00                | 22.08                | 0-1                       | 0        |   |
|           |            | 12      | 6         | 22.19                | 22.03                | 22.06                | 0-1                       | 0        |   |
|           |            | 12      | 11        | 22.18                | 22.01                | 22.11                | 0-1                       | 0        |   |
|           | 16QAM      | 25      | 0         | 22.15                | 22.01                | 22.04                | 0-1                       | 0        |   |
|           |            | 1       | 0         | 22.29                | 22.17                | 22.20                | 0-1                       | 0        |   |
|           |            | 1       | 12        | 22.27                | 22.15                | 22.21                | 0-1                       | 0        |   |
|           |            | 1       | 24        | 22.30                | 22.16                | 22.16                | 0-1                       | 0        |   |
|           |            | 12      | 0         | 21.20                | 21.02                | 21.11                | 0-2                       | 0        |   |
|           |            | 12      | 6         | 21.16                | 21.01                | 21.10                | 0-2                       | 0        |   |
|           | 64QAM      | 12      | 11        | 21.17                | 21.03                | 21.08                | 0-2                       | 0        |   |
|           |            | 25      | 0         | 21.16                | 21.01                | 21.04                | 0-2                       | 0        |   |
|           |            | 1       | 0         | 21.24                | 21.06                | 21.17                | 0-2                       | 0        |   |
|           |            | 1       | 12        | 21.17                | 21.08                | 21.07                | 0-2                       | 0        |   |
|           |            | 1       | 24        | 20.17                | 21.12                | 21.16                | 0-2                       | 0        |   |
|           |            | 12      | 0         | 20.21                | 20.03                | 20.09                | 0-3                       | 0        |   |
|           |            | 64QAM   | 12        | 6                    | 20.21                | 20.02                | 20.07                     | 0-3      | 0 |
|           |            |         | 12        | 11                   | 20.23                | 20.01                | 20.08                     | 0-3      | 0 |
|           |            | 25      | 0         | 20.19                | 20.04                | 20.10                | 0-3                       | 0        |   |

LTE Band 25\_ 10 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|---|
|           |            |         |           | 26090 Ch. 1855 MHz  | 26365 Ch. 1882.5 MHz | 26640 Ch. 1910 MHz |                           |          |   |
| 10 MHz    | QPSK       | 1       | 0         | 22.45               | 21.98                | 22.03              | 0                         | 0        |   |
|           |            | 1       | 24        | 22.43               | 21.90                | 22.01              | 0                         | 0        |   |
|           |            | 1       | 49        | 22.40               | 21.92                | 22.07              | 0                         | 0        |   |
|           |            | 25      | 0         | 22.47               | 22.01                | 22.10              | 0-1                       | 0        |   |
|           |            | 25      | 12        | 22.47               | 22.00                | 22.08              | 0-1                       | 0        |   |
|           |            | 25      | 24        | 22.46               | 21.99                | 22.07              | 0-1                       | 0        |   |
|           | 16QAM      | 50      | 0         | 22.54               | 22.04                | 22.18              | 0-1                       | 0        |   |
|           |            | 1       | 0         | 22.63               | 22.26                | 22.24              | 0-1                       | 0        |   |
|           |            | 1       | 24        | 22.54               | 22.13                | 22.17              | 0-1                       | 0        |   |
|           |            | 1       | 49        | 22.54               | 22.13                | 22.20              | 0-1                       | 0        |   |
|           |            | 25      | 0         | 21.50               | 21.03                | 21.11              | 0-2                       | 0        |   |
|           |            | 25      | 12        | 21.48               | 21.01                | 21.11              | 0-2                       | 0        |   |
|           | 64QAM      | 25      | 24        | 21.47               | 20.98                | 21.05              | 0-2                       | 0        |   |
|           |            | 50      | 0         | 21.52               | 21.03                | 21.14              | 0-2                       | 0        |   |
|           |            | 1       | 0         | 21.64               | 21.16                | 21.25              | 0-2                       | 0        |   |
|           |            | 1       | 24        | 21.55               | 21.09                | 21.12              | 0-2                       | 0        |   |
|           |            | 1       | 49        | 21.53               | 21.18                | 21.08              | 0-2                       | 0        |   |
|           |            | 25      | 0         | 20.49               | 20.03                | 20.21              | 0-3                       | 0        |   |
|           |            | 64QAM   | 25        | 12                  | 20.49                | 20.02              | 20.10                     | 0-3      | 0 |
|           |            |         | 25        | 24                  | 20.48                | 20.01              | 20.10                     | 0-3      | 0 |
|           |            | 50      | 0         | 20.53               | 20.03                | 20.16              | 0-3                       | 0        |   |

LTE Band 25\_ 15 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm]  |                      |                      | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|----------------------|----------------------|----------------------|---------------------------|----------|---|
|           |            |         |           | 26115 Ch. 1857.5 MHz | 26365 Ch. 1882.5 MHz | 26615 Ch. 1907.5 MHz |                           |          |   |
| 15        | QPSK       | 1       | 0         | 22.04                | 22.03                | 22.05                | 0                         | 0        |   |
|           |            | 1       | 36        | 21.98                | 21.92                | 21.95                | 0                         | 0        |   |
|           |            | 1       | 74        | 21.93                | 21.97                | 22.01                | 0                         | 0        |   |
|           |            | 36      | 0         | 22.11                | 22.10                | 22.15                | 0-1                       | 0        |   |
|           |            | 36      | 18        | 22.08                | 22.04                | 22.11                | 0-1                       | 0        |   |
|           |            | 36      | 39        | 22.04                | 22.03                | 22.11                | 0-1                       | 0        |   |
|           | 16QAM      | 75      | 0         | 22.09                | 22.09                | 22.11                | 0-1                       | 0        |   |
|           |            | 1       | 0         | 22.24                | 22.26                | 22.27                | 0-1                       | 0        |   |
|           |            | 1       | 36        | 22.19                | 22.14                | 22.13                | 0-1                       | 0        |   |
|           |            | 1       | 74        | 22.13                | 22.12                | 22.15                | 0-1                       | 0        |   |
|           |            | 36      | 0         | 21.09                | 21.08                | 21.22                | 0-2                       | 0        |   |
|           |            | 36      | 18        | 21.07                | 21.05                | 21.09                | 0-2                       | 0        |   |
|           | 64QAM      | 36      | 39        | 21.04                | 21.04                | 21.05                | 0-2                       | 0        |   |
|           |            | 75      | 0         | 21.04                | 21.04                | 21.12                | 0-2                       | 0        |   |
|           |            | 1       | 0         | 21.20                | 21.22                | 21.20                | 0-2                       | 0        |   |
|           |            | 1       | 36        | 21.16                | 21.09                | 21.08                | 0-2                       | 0        |   |
|           |            | 1       | 74        | 21.15                | 21.13                | 21.17                | 0-2                       | 0        |   |
|           |            | 36      | 0         | 20.07                | 20.10                | 20.25                | 0-3                       | 0        |   |
|           |            |         | 36        | 18                   | 20.07                | 20.00                | 20.09                     | 0-3      | 0 |
|           |            |         | 36        | 39                   | 20.02                | 20.02                | 20.03                     | 0-3      | 0 |
|           |            |         | 75        | 0                    | 20.04                | 20.00                | 20.09                     | 0-3      | 0 |

LTE Band 25\_ 20 MHz Bandwidth

| Bandwidth | Modulation | RB Size | RB Offset | Reduced Power [dBm] |                      |                    | MPR Allowed Per 3GPP [dB] | MPR [dB] |   |
|-----------|------------|---------|-----------|---------------------|----------------------|--------------------|---------------------------|----------|---|
|           |            |         |           | 26140 Ch. 1860 MHz  | 26365 Ch. 1882.5 MHz | 26590 Ch. 1905 MHz |                           |          |   |
| 20 MHz    | QPSK       | 1       | 0         | 22.18               | 22.05                | 22.09              | 0                         | 0        |   |
|           |            | 1       | 49        | 21.15               | 21.97                | 22.01              | 0                         | 0        |   |
|           |            | 1       | 99        | 22.08               | 21.96                | 22.03              | 0                         | 0        |   |
|           |            | 50      | 0         | 22.12               | 22.05                | 22.13              | 0-1                       | 0        |   |
|           |            | 50      | 25        | 22.09               | 22.04                | 22.13              | 0-1                       | 0        |   |
|           |            | 50      | 49        | 22.04               | 22.03                | 22.12              | 0-1                       | 0        |   |
|           | 16QAM      | 100     | 0         | 22.08               | 22.07                | 22.15              | 0-1                       | 0        |   |
|           |            | 1       | 0         | 22.29               | 22.26                | 22.40              | 0-1                       | 0        |   |
|           |            | 1       | 49        | 22.15               | 22.12                | 22.22              | 0-1                       | 0        |   |
|           |            | 1       | 99        | 22.14               | 22.18                | 22.20              | 0-1                       | 0        |   |
|           |            | 50      | 0         | 21.08               | 21.07                | 21.13              | 0-2                       | 0        |   |
|           |            | 50      | 25        | 21.06               | 21.04                | 21.10              | 0-2                       | 0        |   |
|           | 64QAM      | 50      | 49        | 21.03               | 21.01                | 21.09              | 0-2                       | 0        |   |
|           |            | 100     | 0         | 21.06               | 21.04                | 21.12              | 0-2                       | 0        |   |
|           |            | 1       | 0         | 21.30               | 21.29                | 21.36              | 0-2                       | 0        |   |
|           |            | 1       | 49        | 21.15               | 21.15                | 21.20              | 0-2                       | 0        |   |
|           |            | 1       | 99        | 21.19               | 21.16                | 21.27              | 0-2                       | 0        |   |
|           |            | 50      | 0         | 20.10               | 20.07                | 20.27              | 0-3                       | 0        |   |
|           |            |         | 50        | 25                  | 20.05                | 20.04              | 20.09                     | 0-3      | 0 |
|           |            |         | 50        | 49                  | 20.03                | 20.01              | 20.05                     | 0-3      | 0 |
|           |            |         | 100       | 0                   | 20.05                | 20.02              | 20.09                     | 0-3      | 0 |

#### 11.4.4 LTE Down-link Carrier Aggregation Conducted Powers

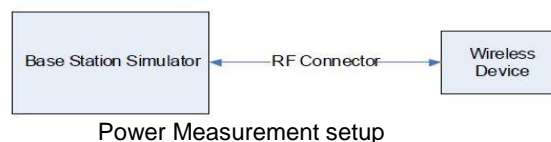
SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by test product implementation. For those configurations required by April 2018 TCBC Workshop notes, conducted power measurements with LTE Carrier Aggregation (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(s) (SCC) on the downlink only.

##### **Downlink Carrier aggregation:**

1. This device only supports downlink carrier aggregation. For every supported combination of downlink carrier aggregation, power measurements were performed with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.
2. All control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.
3. Per FCC KDB publication 941225 D05A v01r02, Section C)3)b)ii), PCC uplink channel was selected at downlink carrier aggregation combinations. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
4. For continuous intra-band carrier aggregation, the downlink channel spacing between the component carriers was set to multiple of 300kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521.
5. For non-continuous intra-band carrier aggregation, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.
6. All selected downlink channels remained fully within the downlink transmission band of the respective component carrier.

##### **Uplink Carrier aggregation :**

1. This device supports uplink carrier aggregation for LTE CA\_41C with a maximum of 20 MHz component carriers. For intra-band contiguous carrier aggregation scenarios, 3GPP 36.101 Table 6.2.2A-1 specifies that aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when non-contiguous RB allocation is implemented. The conducted Powers and MPR setting in this device are permanently implemented per the above 3GPP requirements.
2. Per Fall 2017 TCBC Workshop Notes, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.



### LTE Down Link 2CA Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation

### SCC Setting : Channel/ RB/ BW/ Modulation and call Connection



## 2CA Downlink Carrier aggregation conducted Powers

LTE Downlink 2CA Maximum Conducted Power

| Combination   | PCC  |    |                |                  |                |                  |            |    |        | SCC  |    |                |                  | Tx Power                          |                                      | Deviation (2)-(1) |
|---------------|------|----|----------------|------------------|----------------|------------------|------------|----|--------|------|----|----------------|------------------|-----------------------------------|--------------------------------------|-------------------|
|               | Band | BW | PCC UL Channel | PCC UL Frequency | PCC DL Channel | PCC DL Frequency | Modulation | RB | offset | Band | BW | SCC DL Channel | SCC DL Frequency | LTE Single Carrier Tx Power (dBm) | LTE Tx Power with DL CA Enabled(dBm) |                   |
| 2A-2A(0)      | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 23.75                             | 23.84                                | 0.09              |
| 2A-4A(0,2)    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.94                                | 0.19              |
| 2A-4A(1)      | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 49     | 4    | 10 | 2175           | 2132.5           | 23.74                             | 23.79                                | 0.05              |
| 4A-2A         | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 23.79                             | 23.74                                | -0.05             |
| 2A-5A(0)      | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 5    | 10 | 2525           | 881.5            | 23.75                             | 23.83                                | 0.08              |
| 2A-5A(1)      | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 24     | 5    | 10 | 2525           | 881.5            | 23.74                             | 23.84                                | 0.1               |
| 5A-2A         | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 2    | 20 | 900            | 1960             | 23.84                             | 24.05                                | 0.21              |
| 2A-13A(0)     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 13   | 10 | 5230           | 751              | 23.75                             | 23.88                                | 0.13              |
| 2A-13A(1)     | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 24     | 13   | 10 | 5230           | 751              | 23.74                             | 23.87                                | 0.13              |
| 13A-2A        | 13   | 5  | 23255          | 784.5            | 5255           | 753.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 23.42                             | 23.66                                | 0.24              |
| 2A-29A(0,1)   | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 49     | 29   | 10 | 9715           | 722.5            | 23.74                             | 23.89                                | 0.15              |
| 2A-29A(2)     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 29   | 10 | 9715           | 722.5            | 23.75                             | 23.86                                | 0.11              |
| 2A-30A        | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 30   | 10 | 9820           | 2355             | 23.75                             | 23.92                                | 0.17              |
| 30A-2A        | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 22.45                             | 22.6                                 | 0.15              |
| 2A-66A(0,2)   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 66   | 20 | 66786          | 2145             | 23.75                             | 23.95                                | 0.2               |
| 2A-66A(1)     | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 49     | 66   | 10 | 66786          | 2145             | 23.74                             | 23.88                                | 0.14              |
| 66A-2A        | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 24.33                             | 24.23                                | -0.1              |
| 4A-4A(0)      | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 4    | 20 | 2175           | 2132.5           | 23.79                             | 23.73                                | -0.06             |
| 4A-4A(1)      | 4    | 10 | 20350          | 1750             | 2350           | 2150             | QPSK       | 1  | 49     | 4    | 10 | 2000           | 2115             | 23.78                             | 23.7                                 | -0.08             |
| 4A-5A(0)      | 4    | 10 | 20350          | 1750             | 2350           | 2150             | QPSK       | 1  | 49     | 5    | 10 | 2525           | 881.5            | 23.78                             | 23.63                                | -0.15             |
| 4A-5A(1)      | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 5    | 10 | 2525           | 881.5            | 23.79                             | 23.68                                | -0.11             |
| 5A-4A         | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 4    | 20 | 2175           | 2132.5           | 23.84                             | 24.07                                | 0.23              |
| 4A-12A(1,2,4) | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 12   | 10 | 5095           | 737.5            | 23.79                             | 23.66                                | -0.13             |
| 4A-12A(0,3)   | 4    | 10 | 20350          | 1750             | 2350           | 2150             | QPSK       | 1  | 49     | 12   | 10 | 5095           | 737.5            | 23.78                             | 23.63                                | -0.15             |
| 4A-12A(5)     | 4    | 10 | 20350          | 1750             | 2350           | 2150             | QPSK       | 1  | 49     | 12   | 5  | 5095           | 737.5            | 23.78                             | 23.62                                | -0.16             |
| 12A-4A        | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 4    | 20 | 2175           | 2132.5           | 24.32                             | 24.35                                | 0.03              |
| 5A-30A        | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 30   | 10 | 9820           | 2355             | 23.48                             | 23.73                                | 0.25              |
| 30A-5A        | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 5    | 10 | 2525           | 881.5            | 22.45                             | 22.67                                | 0.22              |
| 5A-66A        | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 66   | 20 | 66786          | 2145             | 23.48                             | 23.66                                | 0.18              |
| 66A-5A        | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 5    | 10 | 2525           | 881.5            | 24.33                             | 24.2                                 | -0.13             |
| 5A-5A(0)      | 5    | 10 | 20450          | 829              | 2450           | 874              | QPSK       | 1  | 0      | 5    | 10 | 2600           | 889              | 24.18                             | 24.04                                | -0.14             |
| 5A-5A(1)      | 5    | 3  | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 5    | 5  | 2625           | 891.5            | 23.74                             | 24.14                                | 0.4               |
| 5B            | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 5    | 10 | 2426           | 871.6            | 23.84                             | 24.05                                | 0.21              |
| 12A-30A       | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 30   | 10 | 9820           | 2355             | 24.32                             | 24.38                                | 0.06              |
| 30A-12A       | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 12   | 10 | 5095           | 737.5            | 22.45                             | 22.63                                | 0.18              |
| 13A-66A       | 13   | 5  | 23255          | 784.5            | 5255           | 753.5            | QPSK       | 1  | 0      | 66   | 20 | 66786          | 2145             | 23.42                             | 23.63                                | 0.21              |
| 66A-13A       | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 13   | 10 | 5230           | 751              | 24.33                             | 24.31                                | -0.02             |
| 25A-25A(0)    | 25   | 10 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 25   | 10 | 8640           | 1990             | 23.65                             | 23.31                                | -0.34             |
| 25A-25A(1)    | 25   | 15 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 25   | 20 | 8590           | 1985             | 23.72                             | 23.33                                | -0.39             |
| 25A-26A(0)    | 25   | 15 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 26   | 15 | 8865           | 876.5            | 23.72                             | 23.12                                | -0.6              |
| 25A-26A(1,2)  | 25   | 10 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 26   | 10 | 8865           | 876.5            | 23.65                             | 23.59                                | -0.06             |
| 26A-25A       | 26   | 15 | 26865          | 831.5            | 8865           | 876.5            | QPSK       | 1  | 0      | 25   | 20 | 8365           | 1962.5           | 23.91                             | 23.84                                | -0.07             |
| 25A-41A       | 25   | 15 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 41   | 20 | 40620          | 2593             | 23.72                             | 23.24                                | -0.48             |
| 26A-41A       | 26   | 15 | 26865          | 831.5            | 8865           | 876.5            | QPSK       | 1  | 0      | 41   | 20 | 40620          | 2593             | 23.91                             | 24.13                                | 0.22              |
| 30A-29A       | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 29   | 10 | 9715           | 722.5            | 22.45                             | 22.62                                | 0.17              |
| 30A-66A       | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 66   | 20 | 66786          | 2145             | 22.45                             | 22.68                                | 0.23              |
| 66A-30A       | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 30   | 10 | 9820           | 2355             | 24.33                             | 24.15                                | -0.18             |
| 41A-41A(0,1)  | 41   | 20 | 39750          | 2506             | 39750          | 2506             | QPSK       | 1  | 0      | 41   | 20 | 41490          | 2680             | 22.7                              | 22.67                                | -0.03             |
| 41C(0,1,2,3)  | 41   | 20 | 39750          | 2506             | 39750          | 2506             | QPSK       | 1  | 0      | 41   | 20 | 40383          | 2569.3           | 22.7                              | 22.71                                | 0.01              |
| 66A-66A       | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 66   | 20 | 67036          | 2170             | 24.33                             | 24.17                                | -0.16             |
| 66B           | 66   | 15 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 74     | 66   | 5  | 66879          | 2154.3           | 24.3                              | 24.18                                | -0.12             |
| 66C           | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 66   | 20 | 66984          | 2164.8           | 24.33                             | 24.16                                | -0.17             |

| Combination<br>HPUE | PCC  |    |                   |                     |                   |                     |            |    |        | SCC  |    |                   |                     | Tx Power                                   |   | Deviaion<br>(2)-(1) |
|---------------------|------|----|-------------------|---------------------|-------------------|---------------------|------------|----|--------|------|----|-------------------|---------------------|--|---|---------------------|
|                     | Band | BW | PCC UL<br>Channel | PCC UL<br>Frequency | PCC DL<br>Channel | PCC DL<br>Frequency | Modulation | RB | offset | Band | BW | SCC DL<br>Channel | SCC DL<br>Frequency | LTE Single<br>Carrier Tx<br>Power<br>(dBm) | LTE Tx<br>Power<br>with DL CA<br>Enabled(dBm) |                     |
| 41A-41A(0,1)        | 41   | 20 | 39750             | 2506                | 39750             | 2506                | QPSK       | 1  | 0      | 41   | 20 | 41490             | 2680                | 25.64                                      | 25.52   | -0.12               |
| 41C(0,1,2,3)        | 41   | 20 | 39750             | 2506                | 39750             | 2506                | QPSK       | 1  | 0      | 41   | 20 | 40383             | 2569.3              | 25.64                                      | 25.52   | -0.12               |

**ULCA**

| Combination    | PCC  |    |                      |                        |                      |                        |            |    |        | SCC  |    |                   |                     |            |    | Tx Power |   | Deviaion<br>(2)-(1) |   |
|----------------|------|----|----------------------|------------------------|----------------------|------------------------|------------|----|--------|------|----|-------------------|---------------------|------------|----|----------|---|---------------------|---|
|                | Band | BW | PCC UL/DL<br>Channel | PCC UL/DL<br>Frequency | PCC UL/DL<br>Channel | PCC UL/DL<br>Frequency | Modulation | RB | offset | Band | BW | SCC UL<br>Channel | SCC UL<br>Frequency | Modulation | RB | offset   | LTE Single<br>Carrier Tx<br>Power (dBm) |                     | LTE Tx<br>Power<br>with UL CA<br>Enabled(dBm) |
| CA_41C MAX     | 41   | 20 | 39750                | 2506                   | 39750                | 2506                   | QPSK       | 1  | 99     | 41   | 20 | 39948             | 2525.8              | QPSK       | 1  | 0        | 22.50                                   | 23.23               | 0.73  |
| CA_41C Hotspot | 41   | 20 | 39750                | 2506                   | 39750                | 2506                   | QPSK       | 1  | 99     | 41   | 20 | 39948             | 2525.8              | QPSK       | 1  | 0        | 20.54                                   | 21.24               | 0.7   |

### LTE Down Link 3CA Call Setup

#### 1) PCC Setting: Channel /RB/BW/Modulation

Phone2 SCC for Phone1

Phone1 LTE 30.705#005

DL Channel 2175 ch

TPC Pattern All +3dB

Input Level 30.0 dBm

Channel Bandwidth 5 MHz

Output Level -60.2 dBm

Channel Bandwidth BANDWIDTH

Measurement

Occupied Bandwidth

Spectrum Emission Mask

TX Power \*\*\*\*\* dBm

Freq. Err -7.48 ppm

EVM 111.69 %(rms)

Adjacent Channel Power

In-Band Emission

Spectrum Flatness

EVM 111.69 %(rms)

Phase Error

Magnitude Error

Constellation

Throughput

UE Power : -21.5 dBm

MT8821C 2019/03/18 13:36 RF Output : On DL 3CCs

#### 2) SCC1 Setting : Channel /RB/BW/Modulation

Phone2 SCC for Phone1

Phone1 LTE 30.705#005

DL Channel 5035 ch

Activation On

Output On

Channel Bandwidth 5 MHz

Output Level -60.2 dBm

SCC-1/2/3/4/5 - Channel Bandwidth [21C only] BANDWIDTH\_SCC1

Measurement

Occupied Bandwidth

Spectrum Emission Mask

TX Power \*\*\*\*\* dBm

Freq. Err \*\*\*\*\* ppm

EVM \*\*\*\*\* %(rms)

Adjacent Channel Power

In-Band Emission

Spectrum Flatness

EVM \*\*\*\*\* %(rms)

Phase Error

Magnitude Error

Constellation

Throughput

UE Power : -21.5 dBm

MT8821C 2019/03/18 13:37 RF Output : On DL 3CCs

### 3) SCC2 Setting (Channel /RB/BW/Modulation )and call Connection

The screenshot displays a mobile testing application interface. At the top, it shows 'Phone2 SCC for Phone1' and 'Phone1 LTE 30.70S#005'. Below this, there are tabs for 'PCC', 'SCC1', 'SCC2', and 'SCC3', with 'SCC2' selected. The 'DL Channel' is set to '5154 ch', 'Operation Band' to '12', and 'Channel Bandwidth' to '5 MHz'. The 'Activation' and 'Output' are both 'On', and the 'Output Level' is '-60.2 dBm'. A 'UE Power' indicator shows '21.8 dBm'. The interface is divided into several sections: 'Measurement' (showing TX Power: 21.81 dBm, Freq. Err: 0.01 ppm, EVM: 4.07 %(rms)), 'Occupied Bandwidth', 'Spectrum Emission Mask', 'Adjacent Channel Power', 'In-Band Emission', 'Spectrum Flatness', 'EVM', 'Phase Error', 'Magnitude Error', 'Constellation', and 'Throughput'. The 'EVM' section shows a value of 4.07 %(rms). On the right side, there are controls for 'Main Screen' (Fundamental, Sub Screen, Top), 'Measuring...' (Tx, Rx), and 'Connected' status. At the bottom right, there are buttons for 'Start Call', 'End Call', and 'Menu'.

### 3CA Downlink Carrier aggregation conducted Powers

LTE Downlink 3CA Maximum Conducted Power

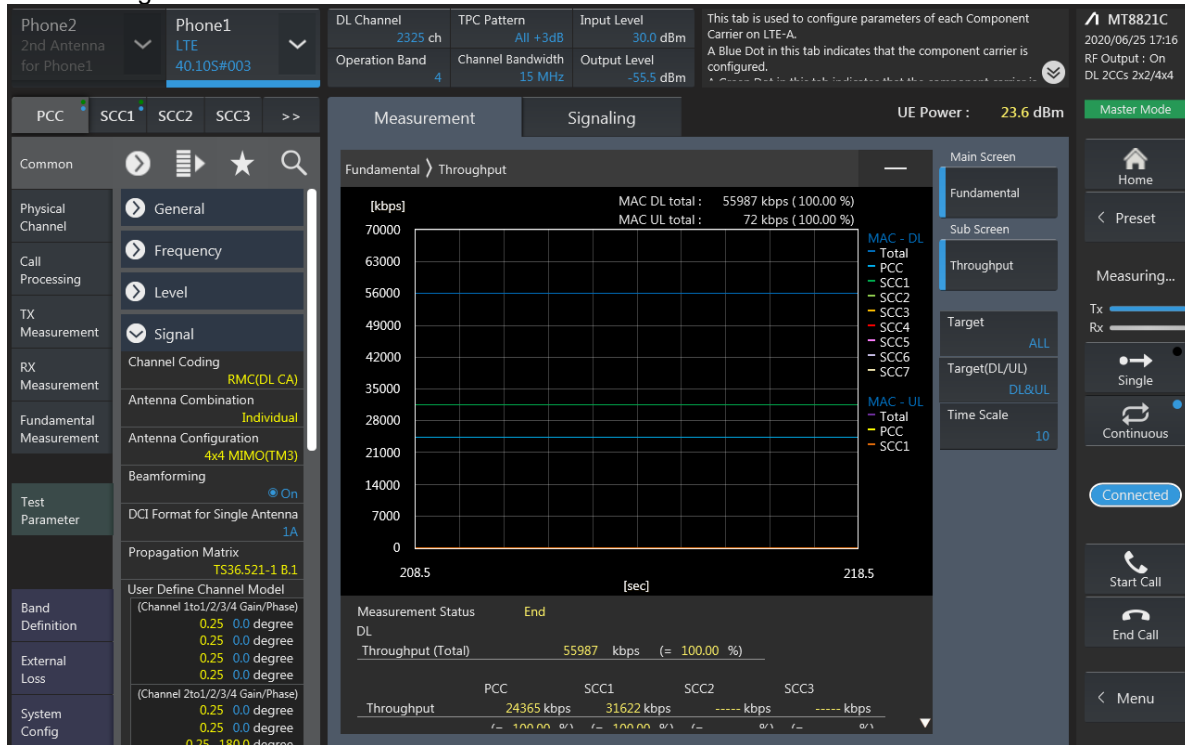
| Combination   | PCC  |    |                |                  |                |                  |            |    |        | SCC  |    |                |                  | SCC  |    |                |                  | Tx Power                          |                                      | Deviation (2)-(1) |
|---------------|------|----|----------------|------------------|----------------|------------------|------------|----|--------|------|----|----------------|------------------|------|----|----------------|------------------|-----------------------------------|--------------------------------------|-------------------|
|               | Band | BW | PCC UL Channel | PCC UL Frequency | PCC DL Channel | PCC DL Frequency | Modulation | RB | offset | Band | BW | SCC DL Channel | SCC DL Frequency | Band | BW | SCC DL Channel | SCC DL Frequency | LTE Single Carrier Tx Power (dBm) | LTE Tx Power with DL CA Enabled(dBm) |                   |
| 2A-2A-4A      | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.66                                | -0.09             |
| 4A-2A-2A      | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.79                             | 23.83                                | 0.04              |
| 2A-2A-5A      | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 5    | 10 | 2525           | 881.5            | 23.75                             | 24.15                                | 0.4               |
| 5A-2A-2A      | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.84                             | 23.92                                | 0.08              |
| 2A-2A-12A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 12   | 10 | 5095           | 737.5            | 23.75                             | 23.67                                | -0.08             |
| 12A-2A-2A     | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.32                             | 24.3                                 | -0.02             |
| 2A-2A-13A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 13   | 10 | 5230           | 751              | 23.75                             | 23.64                                | -0.11             |
| 13A-2A-2A     | 13   | 5  | 23255          | 784.5            | 5255           | 753.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.42                             | 23.44                                | 0.02              |
| 2A-2A-14A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 14   | 10 | 5330           | 763              | 23.75                             | 23.71                                | -0.04             |
| 14A-2A-2A     | 14   | 10 | 23330          | 793              | 5330           | 763              | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.51                             | 23.55                                | 0.04              |
| 2A-2A-29A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 29   | 10 | 9715           | 722.5            | 23.75                             | 23.72                                | -0.03             |
| 2A-2A-30A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 30   | 10 | 9820           | 2355             | 23.75                             | 23.69                                | -0.06             |
| 30A-2A-2A     | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 22.45                             | 22.44                                | -0.01             |
| 2A-2A-66A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 66   | 20 | 67036          | 2170             | 23.75                             | 24.25                                | 0.5               |
| 66A-2A-2A     | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.33                             | 24.37                                | 0.04              |
| 2C-66A        | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 902            | 1960.2           | 66   | 20 | 67036          | 2170             | 23.75                             | 23.77                                | 0.02              |
| 66A-2C        | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1098           | 1979.8           | 24.33                             | 24.4                                 | 0.07              |
| 2A-2A-71A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 71   | 20 | 68786          | 637              | 23.75                             | 23.76                                | 0.01              |
| 71A-2A-2A     | 71   | 20 | 133322         | 683              | 68786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.36                             | 24.48                                | 0.12              |
| 2A-4A-4A      | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 15 | 2325           | 2147.5           | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.74                                | -0.01             |
| 4A-4A-2A      | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 4    | 20 | 2175           | 2132.5           | 2    | 20 | 900            | 1960             | 23.79                             | 23.88                                | 0.09              |
| 2A-4A-5A      | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 20 | 2175           | 2132.5           | 5    | 10 | 2525           | 881.5            | 23.75                             | 23.71                                | -0.04             |
| 4A-2A-5A      | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 5    | 10 | 2525           | 881.5            | 23.79                             | 23.85                                | 0.06              |
| 5A-2A-4A      | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 2    | 20 | 900            | 1960             | 4    | 20 | 2175           | 2132.5           | 23.84                             | 24.34                                | 0.5               |
| 2A-4A-12A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 20 | 2175           | 2132.5           | 12   | 10 | 5095           | 737.5            | 23.75                             | 23.74                                | -0.01             |
| 4A-2A-12A     | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 12   | 10 | 5095           | 737.5            | 23.79                             | 23.61                                | -0.18             |
| 12A-2A-4A     | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 4    | 20 | 2175           | 2132.5           | 24.32                             | 24.38                                | 0.06              |
| 2A-4A-13A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 20 | 2175           | 2132.5           | 13   | 10 | 5230           | 751              | 23.75                             | 23.73                                | -0.02             |
| 4A-2A-13A     | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 13   | 10 | 5230           | 751              | 23.79                             | 23.82                                | 0.03              |
| 13A-2A-4A     | 13   | 5  | 23255          | 784.5            | 5255           | 753.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 4    | 20 | 2175           | 2132.5           | 23.42                             | 23.44                                | 0.02              |
| 2A-4A-71A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 20 | 2175           | 2132.5           | 71   | 20 | 68786          | 637              | 23.75                             | 23.68                                | -0.07             |
| 4A-2A-71A     | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 71   | 20 | 68786          | 637              | 23.79                             | 23.84                                | 0.05              |
| 71A-2A-4A     | 71   | 20 | 133322         | 683              | 68786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 4    | 20 | 2175           | 2132.5           | 24.36                             | 24.56                                | 0.2               |
| 2A-5A-30A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 5    | 10 | 2525           | 881.5            | 30   | 10 | 9820           | 2355             | 23.75                             | 23.58                                | -0.17             |
| 5A-2A-30A     | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 2    | 20 | 900            | 1960             | 30   | 10 | 9820           | 2355             | 23.84                             | 23.86                                | 0.02              |
| 30A-2A-5A     | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 5    | 10 | 2525           | 881.5            | 22.45                             | 22.46                                | 0.01              |
| 2A-5A-66A     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 5    | 10 | 2525           | 881.5            | 66   | 20 | 67036          | 2170             | 23.75                             | 23.73                                | -0.02             |
| 5A-2A-66A     | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 2    | 20 | 900            | 1960             | 66   | 20 | 67036          | 2170             | 23.84                             | 23.91                                | 0.07              |
| 66A-2A-5A     | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 5    | 10 | 2525           | 881.5            | 24.33                             | 24.36                                | 0.03              |
| 2A-5B         | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 5    | 10 | 2525           | 881.5            | 5    | 10 | 2426           | 871.6            | 23.75                             | 23.67                                | -0.08             |
| 5B-2A         | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 5    | 10 | 2426           | 871.6            | 2    | 20 | 900            | 1960             | 23.84                             | 23.88                                | 0.04              |
| 2A-12B        | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 12   | 5  | 5095           | 737.5            | 12   | 10 | 5167           | 744.7            | 23.75                             | 23.62                                | -0.13             |
| 12B-2A        | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 12   | 10 | 5167           | 744.7            | 2    | 20 | 900            | 1960             | 24.32                             | 24.27                                | -0.05             |
| 2A-12A-30A    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 12   | 10 | 5095           | 737.5            | 30   | 10 | 9820           | 2355             | 23.75                             | 23.54                                | -0.21             |
| 12A-2A-30A    | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 30   | 10 | 9820           | 2355             | 24.32                             | 24.28                                | -0.04             |
| 30A-2A-12A    | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 12   | 10 | 5095           | 737.5            | 22.45                             | 22.49                                | 0.04              |
| 2A-12A-66A(0) | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 12   | 10 | 5095           | 737.5            | 66   | 20 | 67036          | 2170             | 23.75                             | 23.77                                | 0.02              |
| 2A-12A-66A(1) | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 49     | 12   | 10 | 5095           | 737.5            | 66   | 20 | 67036          | 2170             | 23.74                             | 23.89                                | 0.15              |
| 12A-2A-66A    | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 66   | 20 | 67036          | 2170             | 24.32                             | 24.35                                | 0.03              |
| 66A-2A-12A    | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 12   | 10 | 5095           | 737.5            | 24.33                             | 24.43                                | 0.1               |
| 2A-13A-66A    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 13   | 10 | 5230           | 751              | 66   | 20 | 67036          | 2170             | 23.75                             | 23.71                                | -0.04             |
| 13A-2A-66A    | 13   | 5  | 23255          | 784.5            | 5255           | 753.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 66   | 20 | 67036          | 2170             | 23.42                             | 23.47                                | 0.05              |
| 66A-2A-13A    | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 13   | 10 | 5230           | 751              | 24.33                             | 24.45                                | 0.12              |
| 2A-14A-30A    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 14   | 10 | 5330           | 763              | 30   | 10 | 9820           | 2355             | 23.75                             | 23.59                                | -0.16             |
| 14A-2A-30A    | 14   | 10 | 23330          | 793              | 5330           | 763              | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 30   | 10 | 9820           | 2355             | 23.51                             | 23.58                                | 0.07              |
| 30A-2A-14A    | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 14   | 10 | 5330           | 763              | 22.45                             | 22.48                                | 0.03              |
| 2A-14A-66A    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 14   | 10 | 5330           | 763              | 66   | 20 | 67036          | 2170             | 23.75                             | 24.25                                | 0.5               |
| 14A-2A-66A    | 14   | 10 | 23330          | 793              | 5330           | 763              | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 66   | 20 | 67036          | 2170             | 23.51                             | 23.56                                | 0.05              |
| 66A-2A-14A    | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 14   | 10 | 5330           | 763              | 24.33                             | 24.43                                | 0.1               |
| 2A-29A-30A    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 29   | 10 | 9715           | 722.5            | 30   | 10 | 9820           | 2355             | 23.75                             | 23.62                                | -0.13             |
| 30A-2A-29A    | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 29   | 10 | 9715           | 722.5            | 22.45                             | 22.48                                | 0.03              |
| 2A-29A-66A    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 29   | 10 | 9715           | 722.5            | 66   | 20 | 67036          | 2170             | 23.75                             | 23.74                                | -0.01             |
| 66A-2A-29A    | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 29   | 10 | 9715           | 722.5            | 24.33                             | 24.47                                | 0.14              |

|             |    |    |        |        |       |        |      |   |    |    |    |       |        |    |    |       |        |       |       |       |
|-------------|----|----|--------|--------|-------|--------|------|---|----|----|----|-------|--------|----|----|-------|--------|-------|-------|-------|
| 2A-66B      | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 15 | 66786 | 2145   | 66 | 5  | 66879 | 2154.3 | 23.75 | 23.83 | 0.08  |
| 66B-2A      | 66 | 15 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 74 | 66 | 5  | 66879 | 2154.3 | 2  | 20 | 900   | 1960   | 24.33 | 24.46 | 0.13  |
| 2A-66C      | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 66984 | 2164.8 | 23.75 | 23.86 | 0.11  |
| 66C-2A      | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 66984 | 2164.8 | 2  | 20 | 900   | 1960   | 24.33 | 24.4  | 0.07  |
| 2A-66A-71A  | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 71 | 20 | 68786 | 637    | 23.75 | 23.81 | 0.06  |
| 66A-2A-71A  | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 71 | 20 | 68786 | 637    | 24.33 | 24.42 | 0.09  |
| 71A-2A-66A  | 71 | 20 | 133322 | 683    | 68786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 66 | 20 | 67036 | 2170   | 24.36 | 24.5  | 0.14  |
| 4A-4A-5A    | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 4  | 20 | 2175  | 2132.5 | 5  | 10 | 2525  | 881.5  | 23.79 | 23.89 | 0.1   |
| 5A-4A-4A    | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 4  | 15 | 2325  | 2147.5 | 4  | 20 | 2175  | 2132.5 | 23.84 | 23.94 | 0.1   |
| 4A-4A-12A   | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 4  | 20 | 2175  | 2132.5 | 12 | 10 | 5167  | 744.7  | 23.79 | 23.91 | 0.12  |
| 12A-4A-4A   | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 4  | 15 | 2325  | 2147.5 | 4  | 20 | 2175  | 2132.5 | 24.32 | 24.42 | 0.1   |
| 4A-4A-13A   | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 4  | 20 | 2175  | 2132.5 | 13 | 10 | 5230  | 751    | 23.79 | 23.92 | 0.13  |
| 13A-4A-4A   | 13 | 5  | 23255  | 784.5  | 5255  | 753.5  | QPSK | 1 | 0  | 4  | 15 | 2325  | 2147.5 | 4  | 20 | 2175  | 2132.5 | 23.42 | 23.55 | 0.13  |
| 4A-4A-71A   | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 4  | 20 | 2175  | 2132.5 | 71 | 20 | 68786 | 637    | 23.79 | 23.88 | 0.09  |
| 71A-4A-4A   | 71 | 20 | 133322 | 683    | 68786 | 2145   | QPSK | 1 | 99 | 4  | 15 | 2325  | 2147.5 | 4  | 20 | 2175  | 2132.5 | 24.36 | 24.6  | 0.24  |
| 4A-5B       | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 5  | 10 | 2525  | 881.5  | 5  | 10 | 2426  | 871.6  | 23.79 | 23.92 | 0.13  |
| 5B-4A       | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 5  | 10 | 2426  | 871.6  | 4  | 20 | 2175  | 2132.5 | 23.84 | 24.01 | 0.17  |
| 4A-12B      | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 12 | 5  | 5095  | 737.5  | 12 | 10 | 5167  | 744.7  | 23.79 | 23.87 | 0.08  |
| 12B-4A      | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 12 | 10 | 5167  | 744.7  | 4  | 20 | 2175  | 2132.5 | 24.32 | 24.4  | 0.08  |
| 5A-5A-66A   | 5  | 10 | 20450  | 829    | 2450  | 874    | QPSK | 1 | 0  | 5  | 10 | 2600  | 889    | 66 | 20 | 66786 | 2145   | 23.84 | 23.89 | 0.05  |
| 66A-5A-5A   | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 5  | 10 | 2450  | 874    | 5  | 10 | 2600  | 889    | 24.33 | 24.44 | 0.11  |
| 5A-30A-66A  | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 30 | 10 | 9820  | 2355   | 66 | 20 | 66786 | 2145   | 23.84 | 23.99 | 0.15  |
| 30A-5A-66A  | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 5  | 10 | 2525  | 881.5  | 66 | 20 | 66786 | 2145   | 22.45 | 22.59 | 0.14  |
| 66A-5A-30A  | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 5  | 10 | 2525  | 881.5  | 30 | 10 | 9820  | 2355   | 24.33 | 24.47 | 0.14  |
| 5A-66A-66A  | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 66 | 20 | 66786 | 2145   | 66 | 20 | 67036 | 2170   | 23.84 | 24.02 | 0.18  |
| 66A-66A-5A  | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 67036 | 2170   | 5  | 10 | 2525  | 881.5  | 24.33 | 24.45 | 0.12  |
| 5A-66B      | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 66 | 15 | 66786 | 2145   | 66 | 5  | 66879 | 2154.3 | 23.84 | 24.02 | 0.18  |
| 66B-5A      | 66 | 15 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 74 | 66 | 5  | 66879 | 2154.3 | 5  | 10 | 2525  | 881.5  | 24.3  | 24.48 | 0.18  |
| 5A-66C      | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 66 | 20 | 66786 | 2145   | 66 | 20 | 66984 | 2164.8 | 23.84 | 23.98 | 0.14  |
| 66C-5A      | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 66984 | 2164.8 | 5  | 10 | 2525  | 881.5  | 24.33 | 24.45 | 0.12  |
| 5B-30A      | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 5  | 10 | 2426  | 871.6  | 30 | 10 | 9820  | 2355   | 23.84 | 23.93 | 0.09  |
| 30A-5B      | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 5  | 10 | 2525  | 881.5  | 5  | 10 | 2426  | 871.6  | 22.45 | 22.51 | 0.06  |
| 5B-66A      | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 5  | 10 | 2426  | 871.6  | 66 | 20 | 67036 | 2170   | 23.84 | 23.93 | 0.09  |
| 66A-5B      | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 5  | 10 | 2525  | 881.5  | 5  | 10 | 2426  | 871.6  | 24.33 | 24.47 | 0.14  |
| 12A-30A-66A | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 30 | 10 | 9820  | 2355   | 66 | 20 | 66786 | 2145   | 24.32 | 24.52 | 0.2   |
| 30A-12A-66A | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 12 | 10 | 5095  | 737.5  | 66 | 20 | 66786 | 2145   | 22.45 | 22.52 | 0.07  |
| 66A-12A-30A | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 12 | 10 | 5095  | 737.5  | 30 | 10 | 9820  | 2355   | 24.33 | 24.46 | 0.13  |
| 12A-66A-66A | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 67036 | 2170   | 24.32 | 24.39 | 0.07  |
| 66A-66A-12A | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 67036 | 2170   | 12 | 10 | 5167  | 744.7  | 24.33 | 24.49 | 0.16  |
| 12A-66C     | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 66984 | 2164.8 | 24.32 | 24.55 | 0.23  |
| 66C-12A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 66984 | 2164.8 | 12 | 10 | 5167  | 744.7  | 24.33 | 24.46 | 0.13  |
| 12B-66A     | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 12 | 10 | 744.7 | 5167   | 66 | 20 | 66786 | 2145   | 24.32 | 24.38 | 0.06  |
| 66A-12B     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 12 | 5  | 5095  | 737.5  | 12 | 10 | 5167  | 744.7  | 24.33 | 24.49 | 0.16  |
| 13A-66A-66A | 13 | 5  | 23255  | 784.5  | 5255  | 753.5  | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 67036 | 2170   | 23.42 | 23.46 | 0.04  |
| 66A-66A-13A | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 67036 | 2170   | 13 | 10 | 5230  | 751    | 24.33 | 24.48 | 0.15  |
| 13A-66B     | 13 | 5  | 23255  | 784.5  | 5255  | 753.5  | QPSK | 1 | 0  | 66 | 15 | 66786 | 2145   | 66 | 5  | 66879 | 2154.3 | 23.42 | 23.46 | 0.04  |
| 66B-13A     | 66 | 15 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 74 | 66 | 5  | 66879 | 2154.3 | 13 | 10 | 5230  | 751    | 24.3  | 24.47 | 0.17  |
| 13A-66C     | 13 | 5  | 23255  | 784.5  | 5255  | 753.5  | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 66984 | 2164.8 | 23.42 | 23.62 | 0.2   |
| 66C-13A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 66984 | 2164.8 | 13 | 10 | 5230  | 751    | 24.33 | 24.42 | 0.09  |
| 14A-30A-66A | 14 | 10 | 23330  | 793    | 5330  | 763    | QPSK | 1 | 0  | 30 | 10 | 9820  | 2355   | 66 | 20 | 66786 | 2145   | 23.51 | 23.58 | 0.07  |
| 30A-14A-66A | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 14 | 10 | 5330  | 763    | 66 | 20 | 66786 | 2145   | 22.45 | 22.63 | 0.18  |
| 66A-14A-30A | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 14 | 10 | 5330  | 763    | 30 | 10 | 9820  | 2355   | 24.33 | 24.48 | 0.15  |
| 14A-66A-66A | 14 | 10 | 23330  | 793    | 5330  | 763    | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 67036 | 2170   | 23.51 | 23.55 | 0.04  |
| 66A-66A-14A | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 67036 | 2170   | 14 | 10 | 5330  | 763    | 24.33 | 24.49 | 0.16  |
| 25A-25A-26A | 25 | 15 | 26365  | 1882.5 | 8365  | 1962.5 | QPSK | 1 | 0  | 25 | 20 | 8590  | 1985   | 26 | 15 | 8865  | 876.5  | 23.72 | 23.12 | -0.6  |
| 26A-25A-25A | 26 | 15 | 26865  | 831.5  | 8865  | 876.5  | QPSK | 1 | 0  | 25 | 10 | 8365  | 1962.5 | 25 | 10 | 8640  | 1990   | 23.91 | 24.14 | 0.23  |
| 25A-25A-41A | 25 | 15 | 26365  | 1882.5 | 8365  | 1962.5 | QPSK | 1 | 0  | 25 | 20 | 8590  | 1985   | 41 | 20 | 40620 | 2593   | 23.72 | 23.21 | -0.51 |
| 41A-25A-25A | 41 | 20 | 39750  | 2506   | 39750 | 2506   | QPSK | 1 | 0  | 25 | 20 | 8365  | 1962.5 | 25 | 20 | 8615  | 1987.5 | 22.7  | 22.85 | 0.15  |
| 25A-41C     | 25 | 15 | 26365  | 1882.5 | 8365  | 1962.5 | QPSK | 1 | 0  | 41 | 20 | 39750 | 2506   | 41 | 20 | 40383 | 2569.3 | 23.72 | 23.2  | -0.52 |
| 26A-41C     | 26 | 15 | 26865  | 831.5  | 8865  | 876.5  | QPSK | 1 | 0  | 41 | 20 | 39750 | 2506   | 41 | 20 | 40383 | 2569.3 | 23.91 | 24.13 | 0.22  |
| 30A-29A-66A | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 29 | 10 | 9715  | 722.5  | 66 | 20 | 66786 | 2145   | 22.45 | 22.52 | 0.07  |
| 66A-29A-30A | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 29 | 10 | 9715  | 722.5  | 30 | 10 | 9820  | 2355   | 24.33 | 24.49 | 0.16  |
| 30A-66A-66A | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 67036 | 2170   | 22.45 | 22.54 | 0.09  |
| 66A-66A-30A | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 67036 | 2170   | 30 | 10 | 9820  | 2355   | 24.33 | 24.5  | 0.17  |
| 66A-66C     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 67038 | 2170.2 | 66 | 20 | 67236 | 2190   | 24.33 | 24.48 | 0.15  |
| 66C-66A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 66984 | 2164.8 | 66 |    |       |        |       |       |       |

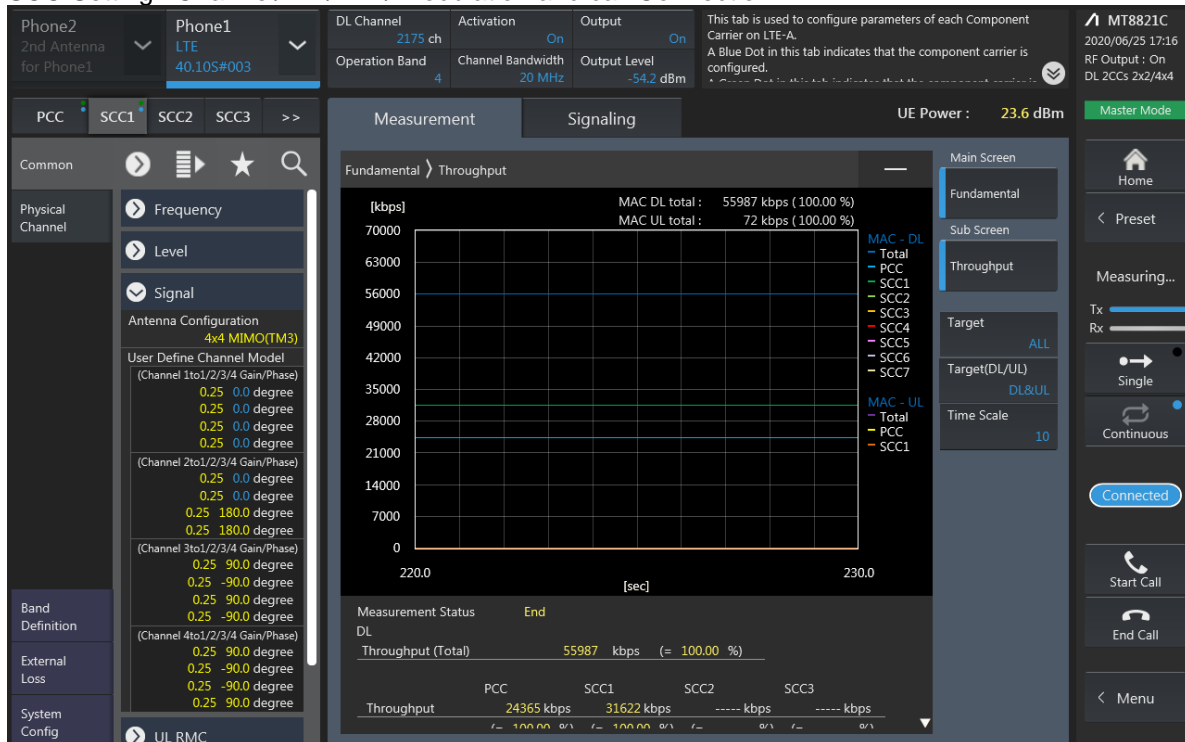


### LTE Down Link 2CA 4x4 MIMO Call Setup

#### PCC Setting : Channel/ RB/ BW/ Modulation



#### SCC Setting : Channel/ RB/ BW/ Modulation and call Connection



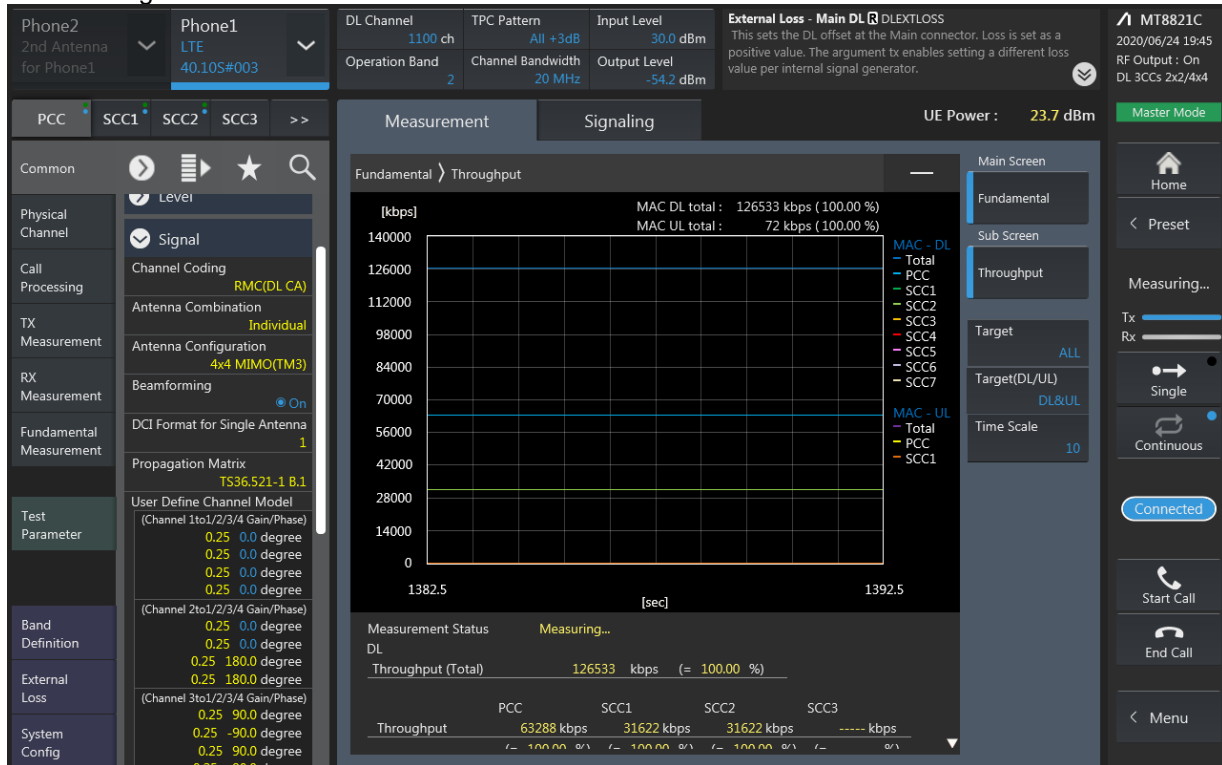
LTE Downlink 2CA 4X4 MIMO **Maximum** Conducted Power

| Combination      | PCC  |    |                |                  |                |                  |            |    |        | SCC  |    |                |                  | Tx Power                          |                                       | Deviaion (2)-(1) |
|------------------|------|----|----------------|------------------|----------------|------------------|------------|----|--------|------|----|----------------|------------------|-----------------------------------|---------------------------------------|------------------|
|                  | Band | BW | PCC UL Channel | PCC UL Frequency | PCC DL Channel | PCC DL Frequency | Modulation | RB | offset | Band | BW | SCC DL Channel | SCC DL Frequency | LTE Single Carrier Tx Power (dBm) | LTE Tx Power with DL CA Enabled (dBm) |                  |
| 2A-[2A](0)       | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 23.75                             | 23.77                                 | 0.02             |
| [2A]-2A(0)       | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 23.75                             | 23.8                                  | 0.05             |
| [2A]-[2A](0)     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 23.75                             | 23.78                                 | 0.03             |
| [2A]-4A(0,2)     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.79                                 | 0.04             |
| 2A-[4A](0,2)     | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.81                                 | 0.06             |
| [2A]-[4A](0,2)   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.77                                 | 0.02             |
| [2A]-4A(1)       | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 49     | 4    | 10 | 2175           | 2132.5           | 23.74                             | 23.83                                 | 0.09             |
| 2A-[4A](1)       | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 49     | 4    | 10 | 2175           | 2132.5           | 23.74                             | 23.9                                  | 0.16             |
| [2A]-[4A](1)     | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 49     | 4    | 10 | 2175           | 2132.5           | 23.74                             | 23.78                                 | 0.04             |
| 4A-[2A]          | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 23.79                             | 23.84                                 | 0.05             |
| [4A]-2A          | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 23.79                             | 23.82                                 | 0.03             |
| [4A]-[2A]        | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 23.79                             | 23.8                                  | 0.01             |
| [2A]-5A(0)       | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 5    | 10 | 2525           | 881.5            | 23.75                             | 23.86                                 | 0.11             |
| [2A]-5A(1)       | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 24     | 5    | 10 | 2525           | 881.5            | 23.74                             | 23.84                                 | 0.1              |
| 5A-[2A]          | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 2    | 20 | 900            | 1960             | 23.84                             | 23.88                                 | 0.04             |
| [2A]-13A(0)      | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 13   | 10 | 5230           | 751              | 23.75                             | 23.85                                 | 0.1              |
| [2A]-13A(1)      | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 24     | 13   | 10 | 5230           | 751              | 23.74                             | 23.91                                 | 0.17             |
| 13A-[2A]         | 13   | 5  | 23255          | 784.5            | 5255           | 753.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 23.42                             | 23.47                                 | 0.05             |
| [2A]-29A(0,1)    | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 49     | 29   | 10 | 9715           | 722.5            | 23.74                             | 23.86                                 | 0.12             |
| [2A]-29A(2)      | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 29   | 10 | 9715           | 722.5            | 23.75                             | 23.85                                 | 0.1              |
| [2A]-30A         | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 30   | 10 | 9820           | 2355             | 23.75                             | 23.84                                 | 0.09             |
| 30A-[2A]         | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 22.45                             | 22.56                                 | 0.11             |
| [2A]-66A(0,2)    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 66   | 20 | 66786          | 2145             | 23.75                             | 23.83                                 | 0.08             |
| 2A-[66A](0,2)    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 66   | 20 | 66786          | 2145             | 23.75                             | 23.87                                 | 0.12             |
| [2A]-[66A](0,2)  | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 66   | 20 | 66786          | 2145             | 23.75                             | 23.87                                 | 0.12             |
| [2A]-66A(1)      | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 49     | 66   | 10 | 66786          | 2145             | 23.74                             | 23.82                                 | 0.08             |
| 2A-[66A](1)      | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 49     | 66   | 10 | 66786          | 2145             | 23.74                             | 23.91                                 | 0.17             |
| [2A]-[66A](1)    | 2    | 10 | 19150          | 1905             | 1150           | 1985             | QPSK       | 1  | 49     | 66   | 10 | 66786          | 2145             | 23.74                             | 23.8                                  | 0.06             |
| 66A-[2A]         | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 24.33                             | 24.41                                 | 0.08             |
| [66A]-2A         | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 24.33                             | 24.33                                 | 0                |
| [66A]-[2A]       | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 24.33                             | 24.35                                 | 0.02             |
| [4A]-4A(0)       | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 4    | 20 | 2175           | 2132.5           | 23.79                             | 23.84                                 | 0.05             |
| 4A-[4A](0)       | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 4    | 20 | 2175           | 2132.5           | 23.79                             | 23.82                                 | 0.03             |
| [4A]-[4A](0)     | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 4    | 20 | 2175           | 2132.5           | 23.79                             | 23.89                                 | 0.1              |
| [4A]-4A(1)       | 4    | 10 | 20350          | 1750             | 2350           | 2150             | QPSK       | 1  | 49     | 4    | 10 | 2000           | 2115             | 23.78                             | 23.88                                 | 0.1              |
| 4A-[4A](1)       | 4    | 10 | 20350          | 1750             | 2350           | 2150             | QPSK       | 1  | 49     | 4    | 10 | 2000           | 2115             | 23.78                             | 23.91                                 | 0.13             |
| [4A]-[4A](1)     | 4    | 10 | 20350          | 1750             | 2350           | 2150             | QPSK       | 1  | 49     | 4    | 10 | 2000           | 2115             | 23.78                             | 23.85                                 | 0.07             |
| [4A]-5A(0)       | 4    | 10 | 20350          | 1750             | 2350           | 2150             | QPSK       | 1  | 49     | 5    | 10 | 2525           | 881.5            | 23.78                             | 23.84                                 | 0.06             |
| [4A]-5A(1)       | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 5    | 10 | 2525           | 881.5            | 23.79                             | 23.78                                 | -0.01            |
| 5A-[4A]          | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 4    | 20 | 2175           | 2132.5           | 23.84                             | 23.88                                 | 0.04             |
| [4A]-12A(1,2,4)  | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 12   | 10 | 5095           | 737.5            | 23.79                             | 23.86                                 | 0.07             |
| [4A]-12A(0,3)    | 4    | 10 | 20350          | 1750             | 2350           | 2150             | QPSK       | 1  | 49     | 12   | 10 | 5095           | 737.5            | 23.78                             | 23.81                                 | 0.03             |
| [4A]-12A(5)      | 4    | 10 | 20350          | 1750             | 2350           | 2150             | QPSK       | 1  | 49     | 12   | 5  | 5095           | 737.5            | 23.78                             | 23.83                                 | 0.05             |
| 12A-[4A]         | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 4    | 20 | 2175           | 2132.5           | 24.32                             | 24.48                                 | 0.16             |
| 5A-[66A]         | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 66   | 20 | 66786          | 2145             | 23.79                             | 23.84                                 | 0.05             |
| [66A]-5A         | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 5    | 10 | 2525           | 881.5            | 24.33                             | 24.32                                 | -0.01            |
| 12A-[66A](0,1,3) | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 66   | 20 | 66786          | 2145             | 23.48                             | 23.49                                 | 0.01             |
| 12A-[66A](4)     | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 66   | 15 | 66786          | 2145             | 23.48                             | 23.54                                 | 0.06             |
| 12A-[66A](2)     | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 66   | 10 | 66786          | 2145             | 23.48                             | 23.48                                 | 0                |
| 13A-[66A]        | 13   | 5  | 23255          | 784.5            | 5255           | 753.5            | QPSK       | 1  | 0      | 66   | 20 | 66786          | 2145             | 23.42                             | 23.37                                 | -0.05            |
| [66A]-13A        | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 13   | 10 | 5230           | 751              | 24.33                             | 24.32                                 | -0.01            |
| 25A-[25A](0)     | 25   | 10 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 25   | 10 | 8640           | 1990             | 23.65                             | 23.71                                 | 0.06             |
| [25A]-25A(0)     | 25   | 10 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 25   | 10 | 8640           | 1990             | 23.65                             | 23.78                                 | 0.13             |
| [25A]-[25A](0)   | 25   | 10 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 25   | 10 | 8640           | 1990             | 23.65                             | 23.76                                 | 0.11             |
| 25A-[25A](1)     | 25   | 15 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 25   | 20 | 8590           | 1985             | 23.72                             | 23.73                                 | 0.01             |
| [25A]-25A(1)     | 25   | 15 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 25   | 20 | 8590           | 1985             | 23.72                             | 23.81                                 | 0.09             |
| [25A]-[25A](1)   | 25   | 15 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 25   | 20 | 8590           | 1985             | 23.72                             | 23.7                                  | -0.02            |
| [25A]-26A(0)     | 25   | 15 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 26   | 15 | 8865           | 876.5            | 23.72                             | 23.74                                 | 0.02             |
| [25A]-26A(1,2)   | 25   | 10 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 26   | 10 | 8865           | 876.5            | 23.65                             | 23.69                                 | 0.04             |
| 26A-[25A]        | 26   | 15 | 26865          | 831.5            | 8865           | 876.5            | QPSK       | 1  | 0      | 25   | 20 | 8365           | 1962.5           | 23.91                             | 23.94                                 | 0.03             |
| [25A]-41A        | 25   | 15 | 26365          | 1882.5           | 8365           | 1962.5           | QPSK       | 1  | 0      | 41   | 20 | 40620          | 2593             | 23.72                             | 23.79                                 | 0.07             |
| [66A]-29A        | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 29   | 10 | 9715           | 722.5            | 24.33                             | 24.38                                 | 0.05             |
| 30A-[66A]        | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 66   | 20 | 66786          | 2145             | 22.45                             | 22.5                                  | 0.05             |
| [66A]-30A        | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 30   | 10 | 9820           | 2355             | 24.33                             | 24.37                                 | 0.04             |
| 66A-[66A]        | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 66   | 20 | 67036          | 2170             | 24.33                             | 24.38                                 | 0.05             |
| [66A]-66A        | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 66   | 20 | 67036          | 2170             | 24.33                             | 24.35                                 | 0.02             |
| [66A]-[66A]      | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 66   | 20 | 67036          | 2170             | 24.33                             | 24.33                                 | 0                |
| [66B]            | 66   | 15 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 74     | 66   | 5  | 66879          | 2154.3           | 24.3                              | 24.38                                 | 0.08             |
| [66C]            | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 66   | 20 | 66984          | 2164.8           | 24.33                             | 24.34                                 | 0.01             |
| [66A]-71A        | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 71   | 20 | 68786          | 637              | 24.33                             | 24.34                                 | 0.01             |

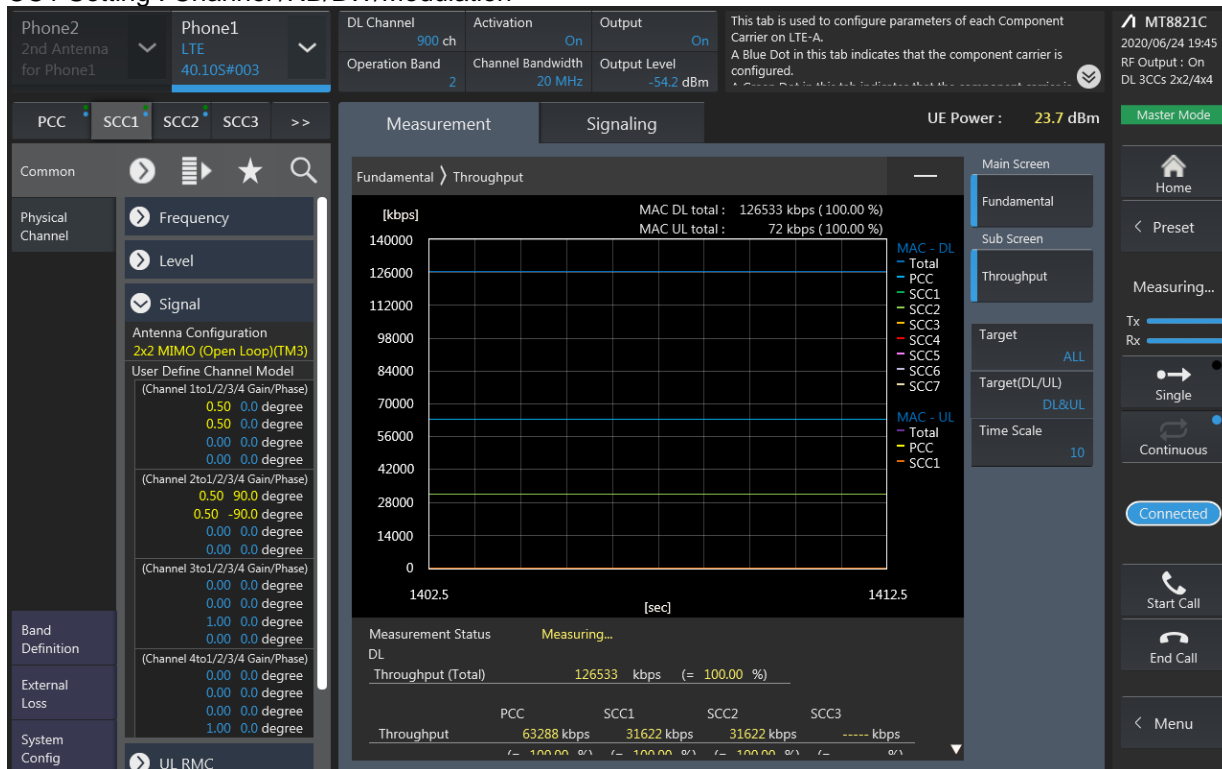


### LTE Down Link 3CA 4x4 MIMO Call Setup

#### PCC Setting: Channel /RB/BW/Modulation



#### CC1 Setting : Channel /RB/BW/Modulation



SCC2 Setting (Channel /RB/BW/Modulation )and call Connection

Phone2  
2nd Antenna  
for Phone1

Phone1  
LTE  
40.10S#003

PCC SCC1 SCC2 SCC3 >>

Common

Physical Channel

Frequency

Level

Signal

Antenna Configuration  
2x2 MIMO (Open Loop)(TM3)

User Define Channel Model

(Channel 1to1/2/3/4 Gain/Phase)

|      |            |
|------|------------|
| 0.50 | 0.0 degree |
| 0.50 | 0.0 degree |
| 0.00 | 0.0 degree |
| 0.00 | 0.0 degree |

(Channel 2to1/2/3/4 Gain/Phase)

|      |              |
|------|--------------|
| 0.50 | 90.0 degree  |
| 0.50 | -90.0 degree |
| 0.00 | 0.0 degree   |
| 0.00 | 0.0 degree   |

(Channel 3to1/2/3/4 Gain/Phase)

|      |            |
|------|------------|
| 0.00 | 0.0 degree |
| 0.00 | 0.0 degree |
| 1.00 | 0.0 degree |
| 0.00 | 0.0 degree |

(Channel 4to1/2/3/4 Gain/Phase)

|      |            |
|------|------------|
| 0.00 | 0.0 degree |
| 0.00 | 0.0 degree |
| 0.00 | 0.0 degree |
| 1.00 | 0.0 degree |

Band Definition

External Loss

System Config

DL RMC

DL Channel 2175 ch Activation On Output On

Operation Band 4 Channel Bandwidth 20 MHz Output Level -54.2 dBm

This tab is used to configure parameters of each Component Carrier on LTE-A.  
A Blue Dot in this tab indicates that the component carrier is configured.

Measurement Signaling

UE Power : 23.7 dBm

Fundamental > Throughput

[kbps]

MAC DL total : 126533 kbps (100.00 %)

MAC UL total : 72 kbps (100.00 %)

MAC - DL

- Total
- PCC
- SCC1
- SCC2
- SCC3
- SCC4
- SCC5
- SCC6
- SCC7

MAC - UL

- Total
- PCC
- SCC1

Measurement Status Measuring...

DL

Throughput (Total) 126533 kbps (= 100.00 %)

|            | PCC        | SCC1       | SCC2       | SCC3       |
|------------|------------|------------|------------|------------|
| Throughput | 63288 kbps | 31622 kbps | 31622 kbps | ----- kbps |
|            | 100.00 %   | 100.00 %   | 100.00 %   | 0.00 %     |

MT8821C

2020/06/24 19:45

RF Output : On

DL 3CCs 2x2/4x4

Master Mode

Home

Preset

Measuring...

Tx

Rx

Single

Continuous

Connected

Start Call

End Call

Menu

LTE Downlink 3CA 4X4 MIMO **Maximum** Conducted Power

| Combination   | PCC  |    |                |                  |                |                  |            |    |        | SCC  |    |                |                  | SCC  |    |                |                  | Tx Power                          |                                      | Deviation (2)-(1) |
|---------------|------|----|----------------|------------------|----------------|------------------|------------|----|--------|------|----|----------------|------------------|------|----|----------------|------------------|-----------------------------------|--------------------------------------|-------------------|
|               | Band | BW | PCC UL Channel | PCC UL Frequency | PCC DL Channel | PCC DL Frequency | Modulation | RB | offset | Band | BW | SCC DL Channel | SCC DL Frequency | Band | BW | SCC DL Channel | SCC DL Frequency | LTE Single Carrier Tx Power (dBm) | LTE Tx Power with DL CA Enabled(dBm) |                   |
| [2A]-2A-4A    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.86                                | 0.11              |
| 2A-2A-[4A]    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.88                                | 0.13              |
| [2A]-2A-[4A]  | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.83                                | 0.08              |
| [2A]-[2A]-4A  | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.81                                | 0.06              |
| 4A-[2A]-2A    | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.79                             | 23.81                                | 0.02              |
| [4A]-2A-2A    | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.79                             | 23.78                                | -0.01             |
| [4A]-2A-[2A]  | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.79                             | 23.78                                | -0.01             |
| 4A-[2A]-[2A]  | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.79                             | 23.81                                | 0.02              |
| 2A-[2A]-5A    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 5    | 10 | 2525           | 881.5            | 23.75                             | 23.78                                | 0.03              |
| [2A]-2A-5A    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 5    | 10 | 2525           | 881.5            | 23.75                             | 23.82                                | 0.07              |
| [2A]-[2A]-5A  | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 5    | 10 | 2525           | 881.5            | 23.75                             | 23.81                                | 0.06              |
| 5A-2A-[2A]    | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.84                             | 23.88                                | 0.04              |
| 5A-[2A]-2A    | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.84                             | 24.01                                | 0.17              |
| 5A-[2A]-[2A]  | 5    | 10 | 20525          | 836.5            | 2525           | 881.5            | QPSK       | 1  | 49     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.84                             | 23.91                                | 0.07              |
| 2A-[2A]-12A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 12   | 10 | 5095           | 737.5            | 23.75                             | 23.83                                | 0.08              |
| [2A]-2A-12A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 12   | 10 | 5095           | 737.5            | 23.75                             | 23.78                                | 0.03              |
| [2A]-[2A]-12A | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 12   | 10 | 5095           | 737.5            | 23.75                             | 23.81                                | 0.06              |
| 12A-2A-[2A]   | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.32                             | 24.4                                 | 0.08              |
| 12A-[2A]-2A   | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.32                             | 24.38                                | 0.06              |
| 12A-[2A]-[2A] | 12   | 5  | 23095          | 707.5            | 5095           | 737.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.32                             | 24.38                                | 0.06              |
| 2A-[2A]-13A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 13   | 10 | 5230           | 751              | 23.75                             | 23.84                                | 0.09              |
| [2A]-2A-13A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 13   | 10 | 5230           | 751              | 23.75                             | 23.82                                | 0.07              |
| [2A]-[2A]-13A | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 13   | 10 | 5230           | 751              | 23.75                             | 23.86                                | 0.11              |
| 13A-[2A]-2A   | 13   | 5  | 23255          | 784.5            | 5255           | 753.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.42                             | 23.51                                | 0.09              |
| 13A-2A-[2A]   | 13   | 5  | 23255          | 784.5            | 5255           | 753.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.42                             | 23.48                                | 0.06              |
| 13A-[2A]-[2A] | 13   | 5  | 23255          | 784.5            | 5255           | 753.5            | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.42                             | 23.51                                | 0.09              |
| 2A-[2A]-14A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 14   | 10 | 5330           | 763              | 23.75                             | 23.85                                | 0.1               |
| [2A]-2A-14A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 14   | 10 | 5330           | 763              | 23.75                             | 23.81                                | 0.06              |
| [2A]-[2A]-14A | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 14   | 10 | 5330           | 763              | 23.75                             | 23.79                                | 0.04              |
| 14A-2A-[2A]   | 14   | 10 | 23330          | 793              | 5330           | 763              | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.51                             | 23.6                                 | 0.09              |
| 14A-[2A]-2A   | 14   | 10 | 23330          | 793              | 5330           | 763              | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.51                             | 23.54                                | 0.03              |
| 14A-[2A]-[2A] | 14   | 10 | 23330          | 793              | 5330           | 763              | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 23.51                             | 23.61                                | 0.1               |
| 2A-[2A]-29A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 29   | 10 | 9715           | 722.5            | 23.75                             | 23.83                                | 0.08              |
| [2A]-2A-29A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 29   | 10 | 9715           | 722.5            | 23.75                             | 23.79                                | 0.04              |
| [2A]-[2A]-29A | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 29   | 10 | 9715           | 722.5            | 23.75                             | 23.76                                | 0.01              |
| 2A-[2A]-30A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 30   | 10 | 9820           | 2355             | 23.75                             | 23.77                                | 0.02              |
| [2A]-2A-30A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 30   | 10 | 9820           | 2355             | 23.75                             | 23.82                                | 0.07              |
| [2A]-[2A]-30A | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 30   | 10 | 9820           | 2355             | 23.75                             | 23.74                                | -0.01             |
| 30A-2A-[2A]   | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 22.45                             | 22.49                                | 0.04              |
| 30A-[2A]-2A   | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 22.45                             | 22.46                                | 0.01              |
| 30A-[2A]-[2A] | 30   | 10 | 27710          | 2310             | 9820           | 2355             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 22.45                             | 22.48                                | 0.03              |
| 2A-[2A]-66A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 66   | 20 | 67036          | 2170             | 23.75                             | 23.79                                | 0.04              |
| [2A]-2A-66A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 66   | 20 | 67036          | 2170             | 23.75                             | 23.76                                | 0.01              |
| 2A-2A-[66A]   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 66   | 20 | 67036          | 2170             | 23.75                             | 23.74                                | -0.01             |
| [2A]-2A-[66A] | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 66   | 20 | 67036          | 2170             | 23.75                             | 23.81                                | 0.06              |
| [2A]-[2A]-66A | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 66   | 20 | 67036          | 2170             | 23.75                             | 23.83                                | 0.08              |
| 66A-2A-[2A]   | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.33                             | 24.35                                | 0.02              |
| 66A-[2A]-2A   | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.33                             | 24.37                                | 0.04              |
| [66A]-2A-2A   | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.33                             | 24.31                                | -0.02             |
| [66A]-[2A]-2A | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.33                             | 24.36                                | 0.03              |
| 66A-[2A]-[2A] | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.33                             | 24.36                                | 0.03              |
| [2C]-66A      | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 902            | 1960.2           | 66   | 20 | 67036          | 2170             | 23.75                             | 23.75                                | 0                 |
| 2C-[66A]      | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 902            | 1960.2           | 66   | 20 | 67036          | 2170             | 23.75                             | 23.79                                | 0.04              |
| 66A-[2C]      | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1098           | 1979.8           | 24.33                             | 24.37                                | 0.04              |
| [66A]-2C      | 66   | 20 | 132322         | 1745             | 66786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1098           | 1979.8           | 24.33                             | 24.36                                | 0.03              |
| 2A-[2A]-71A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 71   | 20 | 68786          | 637              | 23.75                             | 23.87                                | 0.12              |
| [2A]-2A-71A   | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 71   | 20 | 68786          | 637              | 23.75                             | 23.84                                | 0.09              |
| [2A]-[2A]-71A | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 2    | 20 | 900            | 1960             | 71   | 20 | 68786          | 637              | 23.75                             | 23.9                                 | 0.15              |
| 71A-2A-[2A]   | 71   | 20 | 133322         | 683              | 68786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.36                             | 24.38                                | 0.02              |
| 71A-[2A]-2A   | 71   | 20 | 133322         | 683              | 68786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.36                             | 24.33                                | -0.03             |
| 71A-[2A]-[2A] | 71   | 20 | 133322         | 683              | 68786          | 2145             | QPSK       | 1  | 99     | 2    | 20 | 900            | 1960             | 2    | 20 | 1100           | 1980             | 24.36                             | 24.35                                | -0.01             |
| [2A]-4A-4A    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 15 | 2325           | 2147.5           | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.91                                | 0.16              |
| 2A-[4A]-4A    | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 15 | 2325           | 2147.5           | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.86                                | 0.11              |
| 2A-[4A]-[4A]  | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 15 | 2325           | 2147.5           | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.92                                | 0.17              |
| [2A]-[4A]-4A  | 2    | 20 | 19100          | 1900             | 1100           | 1980             | QPSK       | 1  | 0      | 4    | 15 | 2325           | 2147.5           | 4    | 20 | 2175           | 2132.5           | 23.75                             | 23.87                                | 0.12              |
| 4A-4A-[2A]    | 4    | 15 | 20325          | 1747.5           | 2325           | 2147.5           | QPSK       | 1  | 74     | 4    | 20 | 2175           |                  |      |    |                |                  |                                   |                                      |                   |

|                   |    |    |        |        |       |        |      |   |    |    |    |      |        |    |    |       |        |       |       |       |
|-------------------|----|----|--------|--------|-------|--------|------|---|----|----|----|------|--------|----|----|-------|--------|-------|-------|-------|
| [2A]-4A-5A        | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 5  | 10 | 2525  | 881.5  | 23.75 | 23.89 | 0.14  |
| 2A-[4A]-5A        | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 5  | 10 | 2525  | 881.5  | 23.75 | 23.88 | 0.13  |
| [2A]-[4A]-5A      | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 5  | 10 | 2525  | 881.5  | 23.75 | 23.92 | 0.17  |
| 4A-[2A]-5A        | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 5  | 10 | 2525  | 881.5  | 23.79 | 23.8  | 0.01  |
| [4A]-2A-5A        | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 5  | 10 | 2525  | 881.5  | 23.79 | 23.79 | 0     |
| [4A]-[2A]-5A      | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 5  | 10 | 2525  | 881.5  | 23.79 | 23.82 | 0.03  |
| 5A-[2A]-4A        | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 23.84 | 23.95 | 0.11  |
| 5A-2A-[4A]        | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 23.84 | 23.99 | 0.15  |
| 5A-[2A]-[4A]      | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 23.84 | 23.89 | 0.05  |
| [2A]-4A-12A       | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 12 | 10 | 5095  | 737.5  | 23.75 | 23.86 | 0.11  |
| 2A-[4A]-12A       | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 12 | 10 | 5095  | 737.5  | 23.75 | 23.89 | 0.14  |
| [2A]-[4A]-12A     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 12 | 10 | 5095  | 737.5  | 23.75 | 23.84 | 0.09  |
| 4A-[2A]-12A       | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 12 | 10 | 5095  | 737.5  | 23.79 | 23.76 | -0.03 |
| [4A]-2A-12A       | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 12 | 10 | 5095  | 737.5  | 23.79 | 23.79 | 0     |
| [4A]-[2A]-12A     | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 12 | 10 | 5095  | 737.5  | 23.79 | 23.75 | -0.04 |
| 12A-[2A]-4A       | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 24.32 | 24.26 | -0.06 |
| 12A-2A-[4A]       | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 24.32 | 24.06 | -0.26 |
| [2A]-[2A]-[4A]    | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 24.32 | 24.29 | -0.03 |
| [2A]-4A-13A       | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 13 | 10 | 5230  | 751    | 23.75 | 23.86 | 0.11  |
| 2A-[4A]-13A       | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 13 | 10 | 5230  | 751    | 23.75 | 23.89 | 0.14  |
| [2A]-[4A]-13A     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 13 | 10 | 5230  | 751    | 23.75 | 23.92 | 0.17  |
| 4A-[2A]-13A       | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 13 | 10 | 5230  | 751    | 23.79 | 23.8  | 0.01  |
| [4A]-2A-13A       | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 13 | 10 | 5230  | 751    | 23.79 | 23.79 | 0     |
| [4A]-[2A]-13A     | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 13 | 10 | 5230  | 751    | 23.79 | 23.77 | -0.02 |
| 13A-[2A]-4A       | 13 | 5  | 23255  | 784.5  | 5255  | 753.5  | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 23.42 | 23.48 | 0.06  |
| 13A-2A-[4A]       | 13 | 5  | 23255  | 784.5  | 5255  | 753.5  | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 23.42 | 23.52 | 0.1   |
| [13A]-[2A]-[4A]   | 13 | 5  | 23255  | 784.5  | 5255  | 753.5  | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 23.42 | 23.47 | 0.05  |
| [2A]-4A-71A       | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 71 | 20 | 68786 | 637    | 23.75 | 23.92 | 0.17  |
| 2A-[4A]-71A       | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 71 | 20 | 68786 | 637    | 23.75 | 23.93 | 0.18  |
| [2A]-[4A]-71A     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 4  | 20 | 2175 | 2132.5 | 71 | 20 | 68786 | 637    | 23.75 | 23.82 | 0.07  |
| 4A-[2A]-71A       | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 71 | 20 | 68786 | 637    | 23.79 | 23.82 | 0.03  |
| [4A]-2A-71A       | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 71 | 20 | 68786 | 637    | 23.79 | 23.8  | 0.01  |
| [4A]-[2A]-71A     | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 2  | 20 | 900  | 1960   | 71 | 20 | 68786 | 637    | 23.79 | 23.79 | 0     |
| 71A-[2A]-4A       | 71 | 20 | 133322 | 683    | 68786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 24.36 | 24.38 | 0.02  |
| 71A-2A-[4A]       | 71 | 20 | 133322 | 683    | 68786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 24.36 | 24.39 | 0.03  |
| 71A-[2A]-[4A]     | 71 | 20 | 133322 | 683    | 68786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900  | 1960   | 4  | 20 | 2175  | 2132.5 | 24.36 | 24.38 | 0.02  |
| [2A]-5A-30A       | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 5  | 10 | 2525 | 881.5  | 30 | 10 | 9820  | 2355   | 23.75 | 23.92 | 0.17  |
| 5A-[2A]-30A       | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 2  | 20 | 900  | 1960   | 30 | 10 | 9820  | 2355   | 23.84 | 23.9  | 0.06  |
| 30A-[2A]-5A       | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 5  | 10 | 2525  | 881.5  | 22.45 | 22.41 | -0.04 |
| [2A]-5A-66A       | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 5  | 10 | 2525 | 881.5  | 66 | 20 | 67036 | 2170   | 23.75 | 23.93 | 0.18  |
| 2A-5A-[66A]       | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 5  | 10 | 2525 | 881.5  | 66 | 20 | 67036 | 2170   | 23.75 | 23.94 | 0.19  |
| [2A]-5A-[66A]     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 5  | 10 | 2525 | 881.5  | 66 | 20 | 67036 | 2170   | 23.75 | 23.86 | 0.11  |
| 5A-[2A]-66A       | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 2  | 20 | 900  | 1960   | 66 | 20 | 67036 | 2170   | 23.84 | 24.03 | 0.19  |
| 5A-2A-[66A]       | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 2  | 20 | 900  | 1960   | 66 | 20 | 67036 | 2170   | 23.84 | 24.01 | 0.17  |
| 5A-[2A]-[66A]     | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 2  | 20 | 900  | 1960   | 66 | 20 | 67036 | 2170   | 23.84 | 23.88 | 0.04  |
| 66A-[2A]-5A       | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900  | 1960   | 5  | 10 | 2525  | 881.5  | 24.33 | 24.35 | 0.02  |
| [66A]-2A-5A       | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900  | 1960   | 5  | 10 | 2525  | 881.5  | 24.33 | 24.36 | 0.03  |
| [66A]-[2A]-5A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900  | 1960   | 5  | 10 | 2525  | 881.5  | 24.33 | 24.35 | 0.02  |
| [2A]-5B           | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 5  | 10 | 2525 | 881.5  | 5  | 10 | 2426  | 871.6  | 23.75 | 23.92 | 0.17  |
| 5B-[2A]           | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 5  | 10 | 2426 | 871.6  | 2  | 20 | 900   | 1960   | 23.84 | 23.75 | -0.09 |
| [2A]-12A-30A      | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 12 | 10 | 5095 | 737.5  | 30 | 10 | 9820  | 2355   | 23.75 | 23.87 | 0.12  |
| 12A-[2A]-30A      | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 30 | 10 | 9820  | 2355   | 24.32 | 24.42 | 0.1   |
| 30A-[2A]-12A      | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 12 | 10 | 5095  | 737.5  | 22.45 | 22.47 | 0.02  |
| [2A]-12A-[66A](0) | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 12 | 10 | 5095 | 737.5  | 66 | 20 | 67036 | 2170   | 23.75 | 23.88 | 0.13  |
| 2A-12A-[66A](0)   | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 12 | 10 | 5095 | 737.5  | 66 | 20 | 67036 | 2170   | 23.75 | 23.84 | 0.09  |
| [2A]-12A-[66A](0) | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 12 | 10 | 5095 | 737.5  | 66 | 20 | 67036 | 2170   | 23.75 | 23.89 | 0.14  |
| [2A]-12A-[66A](1) | 2  | 10 | 19150  | 1905   | 1150  | 1985   | QPSK | 1 | 49 | 12 | 10 | 5095 | 737.5  | 66 | 20 | 67036 | 2170   | 23.74 | 23.82 | 0.08  |
| 2A-12A-[66A](1)   | 2  | 10 | 19150  | 1905   | 1150  | 1985   | QPSK | 1 | 49 | 12 | 10 | 5095 | 737.5  | 66 | 20 | 67036 | 2170   | 23.74 | 23.79 | 0.05  |
| [2A]-12A-[66A](1) | 2  | 10 | 19150  | 1905   | 1150  | 1985   | QPSK | 1 | 49 | 12 | 10 | 5095 | 737.5  | 66 | 20 | 67036 | 2170   | 23.74 | 23.77 | 0.03  |
| 12A-[2A]-66A      | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 66 | 20 | 67036 | 2170   | 24.32 | 24.5  | 0.18  |
| 12A-2A-[66A]      | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 66 | 20 | 67036 | 2170   | 24.32 | 24.48 | 0.16  |
| [12A]-[2A]-[66A]  | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 2  | 20 | 900  | 1960   | 66 | 20 | 67036 | 2170   | 24.32 | 24.39 | 0.07  |
| 66A-[2A]-12A      | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900  | 1960   | 12 | 10 | 5095  | 737.5  | 24.33 | 24.32 | -0.01 |
| [66A]-2A-12A      | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900  | 1960   | 12 | 10 | 5095  | 737.5  | 24.33 | 24.35 | 0.02  |
| [66A]-[2A]-12A    | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900  | 1960   | 12 | 10 | 5095  | 737.5  | 24.33 | 24.34 | 0.01  |
| [2A]-13A-66A      | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 13 | 10 | 5230 | 751    | 66 | 20 | 67036 | 2170   | 23.75 | 23.84 | 0.09  |
| 2A-13A-[66A]      | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK |   |    |    |    |      |        |    |    |       |        |       |       |       |



|                  |    |    |        |        |       |        |      |   |    |    |    |       |        |    |    |       |        |       |       |       |
|------------------|----|----|--------|--------|-------|--------|------|---|----|----|----|-------|--------|----|----|-------|--------|-------|-------|-------|
| [2A]-14A-30A     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 14 | 10 | 5330  | 763    | 30 | 10 | 9820  | 2355   | 23.75 | 23.89 | 0.14  |
| 14A-[2A]-30A     | 14 | 10 | 23330  | 793    | 5330  | 763    | QPSK | 1 | 0  | 2  | 20 | 900   | 1960   | 30 | 10 | 9820  | 2355   | 23.51 | 23.55 | 0.04  |
| 30A-[2A]-14A     | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 2  | 20 | 900   | 1960   | 14 | 10 | 5330  | 763    | 22.45 | 22.48 | 0.03  |
| [2A]-14A-66A     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 14 | 10 | 5330  | 763    | 66 | 20 | 67036 | 2170   | 23.75 | 23.92 | 0.17  |
| 2A-14A-[66A]     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 14 | 10 | 5330  | 763    | 66 | 20 | 67036 | 2170   | 23.75 | 23.87 | 0.12  |
| [2A]-14A-[66A]   | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 14 | 10 | 5330  | 763    | 66 | 20 | 67036 | 2170   | 23.75 | 23.96 | 0.21  |
| 14A-[2A]-66A     | 14 | 10 | 23330  | 793    | 5330  | 763    | QPSK | 1 | 0  | 2  | 20 | 900   | 1960   | 66 | 20 | 67036 | 2170   | 23.51 | 23.58 | 0.07  |
| 14A-2A-[66A]     | 14 | 10 | 23330  | 793    | 5330  | 763    | QPSK | 1 | 0  | 2  | 20 | 900   | 1960   | 66 | 20 | 67036 | 2170   | 23.51 | 23.55 | 0.04  |
| [14A]-[2A]-[66A] | 14 | 10 | 23330  | 793    | 5330  | 763    | QPSK | 1 | 0  | 2  | 20 | 900   | 1960   | 66 | 20 | 67036 | 2170   | 23.51 | 23.63 | 0.12  |
| 66A-[2A]-14A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 14 | 10 | 5330  | 763    | 24.33 | 24.33 | 0     |
| [66A]-2A-14A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 14 | 10 | 5330  | 763    | 24.33 | 24.34 | 0.01  |
| [66A]-[2A]-14A   | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 14 | 10 | 5330  | 763    | 24.33 | 24.36 | 0.03  |
| [2A]-29A-30A     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 29 | 10 | 9715  | 722.5  | 30 | 10 | 9820  | 2355   | 23.75 | 23.94 | 0.19  |
| 30A-[2A]-29A     | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 2  | 20 | 900   | 1960   | 29 | 10 | 9715  | 722.5  | 22.45 | 22.44 | -0.01 |
| [2A]-29A-66A     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 29 | 10 | 9715  | 722.5  | 66 | 20 | 67036 | 2170   | 23.75 | 23.86 | 0.11  |
| 2A-29A-[66A]     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 29 | 10 | 9715  | 722.5  | 66 | 20 | 67036 | 2170   | 23.75 | 23.95 | 0.22  |
| [2A]-29A-[66A]   | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 29 | 10 | 9715  | 722.5  | 66 | 20 | 67036 | 2170   | 23.75 | 23.97 | 0.22  |
| 66A-[2A]-29A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 29 | 10 | 9715  | 722.5  | 24.33 | 24.38 | 0.05  |
| [66A]-2A-29A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 29 | 10 | 9715  | 722.5  | 24.33 | 24.31 | -0.02 |
| [66A]-[2A]-29A   | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 29 | 10 | 9715  | 722.5  | 24.33 | 24.34 | 0.01  |
| 30A-[2A]-66A     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 30 | 10 | 9820  | 2355   | 66 | 20 | 67036 | 2170   | 23.75 | 23.86 | 0.11  |
| 2A-30A-[66A]     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 30 | 10 | 9820  | 2355   | 66 | 20 | 67036 | 2170   | 23.75 | 23.91 | 0.16  |
| [2A]-30A-[66A]   | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 30 | 10 | 9820  | 2355   | 66 | 20 | 67036 | 2170   | 23.75 | 23.93 | 0.18  |
| 30A-[2A]-66A     | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 2  | 20 | 900   | 1960   | 66 | 20 | 67036 | 2170   | 22.45 | 22.53 | 0.08  |
| 30A-2A-[66A]     | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 2  | 20 | 900   | 1960   | 66 | 20 | 67036 | 2170   | 22.45 | 22.48 | 0.03  |
| 30A-[2A]-[66A]   | 30 | 10 | 27710  | 2310   | 9820  | 2355   | QPSK | 1 | 0  | 2  | 20 | 900   | 1960   | 66 | 20 | 67036 | 2170   | 22.45 | 22.49 | 0.04  |
| 66A-[2A]-30A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 30 | 10 | 9820  | 2355   | 24.33 | 24.32 | -0.01 |
| [66A]-2A-30A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 30 | 10 | 9820  | 2355   | 24.33 | 24.35 | 0.02  |
| [66A]-[2A]-30A   | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 30 | 10 | 9820  | 2355   | 24.33 | 24.37 | 0.04  |
| [2A]-66A-66A     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 67036 | 2170   | 23.75 | 23.87 | 0.12  |
| [2A]-[66A]-66A   | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 67036 | 2170   | 23.75 | 23.9  | 0.15  |
| [2A]-[66A]-66A   | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 67036 | 2170   | 23.75 | 23.86 | 0.11  |
| 2A-[66A]-[66A]   | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 67036 | 2170   | 23.75 | 23.93 | 0.18  |
| 66A-66A-[2A]     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 67036 | 2170   | 2  | 20 | 900   | 1960   | 24.33 | 24.37 | 0.04  |
| [66A]-66A-2A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 67036 | 2170   | 2  | 20 | 900   | 1960   | 24.33 | 24.36 | 0.03  |
| [66A]-[66A]-2A   | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 67036 | 2170   | 2  | 20 | 900   | 1960   | 24.33 | 24.31 | -0.02 |
| [66A]-[66A]-2A   | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 67036 | 2170   | 2  | 20 | 900   | 1960   | 24.33 | 24.35 | 0.02  |
| [2A]-66B         | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 15 | 66786 | 2145   | 66 | 5  | 66879 | 2154.3 | 23.75 | 23.91 | 0.16  |
| 2A-[66B]         | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 15 | 66786 | 2145   | 66 | 5  | 66879 | 2154.3 | 23.75 | 23.88 | 0.13  |
| 66B-[2A]         | 66 | 15 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 74 | 66 | 5  | 66879 | 2154.3 | 2  | 20 | 900   | 1960   | 24.33 | 23.38 | -0.95 |
| [66B]-2A         | 66 | 15 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 74 | 66 | 5  | 66879 | 2154.3 | 2  | 20 | 900   | 1960   | 24.33 | 24.36 | 0.03  |
| [2A]-66C         | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 66984 | 2164.8 | 23.75 | 23.89 | 0.14  |
| 2A-[66C]         | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 66 | 20 | 66984 | 2164.8 | 23.75 | 23.85 | 0.1   |
| 66C-[2A]         | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 66984 | 2164.8 | 2  | 20 | 900   | 1960   | 24.33 | 24.2  | -0.13 |
| [66C]-2A         | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 66 | 20 | 66984 | 2164.8 | 2  | 20 | 900   | 1960   | 24.33 | 24.2  | -0.13 |
| [2A]-66A-71A     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 71 | 20 | 68786 | 637    | 23.75 | 23.88 | 0.13  |
| 2A-[66A]-71A     | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 71 | 20 | 68786 | 637    | 23.75 | 23.86 | 0.11  |
| [2A]-[66A]-71A   | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 66 | 20 | 66786 | 2145   | 71 | 20 | 68786 | 637    | 23.75 | 23.9  | 0.15  |
| 66A-[2A]-71A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 71 | 20 | 68786 | 637    | 24.33 | 24.31 | -0.02 |
| [66A]-2A-71A     | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 71 | 20 | 68786 | 637    | 24.33 | 24.25 | -0.08 |
| [66A]-[2A]-71A   | 66 | 20 | 132322 | 1745   | 66786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 71 | 20 | 68786 | 637    | 24.33 | 24.35 | 0.02  |
| 71A-[2A]-66A     | 71 | 20 | 133322 | 683    | 68786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 66 | 20 | 67036 | 2170   | 24.36 | 24.38 | 0.02  |
| 71A-2A-[66A]     | 71 | 20 | 133322 | 683    | 68786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 66 | 20 | 67036 | 2170   | 24.36 | 24.21 | -0.15 |
| 71A-[2A]-[66A]   | 71 | 20 | 133322 | 683    | 68786 | 2145   | QPSK | 1 | 99 | 2  | 20 | 900   | 1960   | 66 | 20 | 67036 | 2170   | 24.36 | 24.22 | -0.14 |
| [2A]-12B         | 2  | 20 | 19100  | 1900   | 1100  | 1980   | QPSK | 1 | 0  | 12 | 5  | 5095  | 737.5  | 12 | 10 | 5167  | 744.7  | 23.75 | 23.88 | 0.13  |
| 12B-[2A]         | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 12 | 10 | 5167  | 744.7  | 2  | 20 | 900   | 1960   | 24.32 | 24.48 | 0.16  |
| 4A-[4A]-5A       | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 4  | 20 | 2175  | 2132.5 | 5  | 10 | 2525  | 881.5  | 23.79 | 23.77 | -0.02 |
| [4A]-4A-5A       | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 4  | 20 | 2175  | 2132.5 | 5  | 10 | 2525  | 881.5  | 23.79 | 23.78 | -0.01 |
| [4A]-[4A]-5A     | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 4  | 20 | 2175  | 2132.5 | 5  | 10 | 2525  | 881.5  | 23.79 | 23.82 | 0.03  |
| 5A-4A-[4A]       | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 4  | 15 | 2325  | 2147.5 | 4  | 20 | 2175  | 2132.5 | 23.84 | 23.93 | 0.09  |
| 5A-[4A]-4A       | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 4  | 15 | 2325  | 2147.5 | 4  | 20 | 2175  | 2132.5 | 23.84 | 23.99 | 0.15  |
| 5A-[4A]-[4A]     | 5  | 10 | 20525  | 836.5  | 2525  | 881.5  | QPSK | 1 | 49 | 4  | 15 | 2325  | 2147.5 | 4  | 20 | 2175  | 2132.5 | 23.84 | 23.92 | 0.08  |
| 4A-[4A]-12A      | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 4  | 20 | 2175  | 2132.5 | 12 | 10 | 5167  | 744.7  | 23.79 | 23.76 | -0.03 |
| [4A]-4A-12A      | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 4  | 20 | 2175  | 2132.5 | 12 | 10 | 5167  | 744.7  | 23.79 | 23.78 | -0.01 |
| [4A]-[4A]-12A    | 4  | 15 | 20325  | 1747.5 | 2325  | 2147.5 | QPSK | 1 | 74 | 4  | 20 | 2175  | 2132.5 | 12 | 10 | 5167  | 744.7  | 23.79 | 23.79 | 0     |
| 12A-4A-[4A]      | 12 | 5  | 23095  | 707.5  | 5095  | 737.5  | QPSK | 1 | 0  | 4  | 15 | 2325  | 2147.5 | 4  | 20 | 2175  | 2132.5 | 24.32 | 24.41 | 0.09  |
| 12A-[4A]-4A      | 12 | 5  | 23     |        |       |        |      |   |    |    |    |       |        |    |    |       |        |       |       |       |