



# CERTIFICATION TEST REPORT

**Report Number.** : 4789247757-E2V3

**Applicant** : SAMSUNG ELECTRONICS CO., LTD.  
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,  
GYEONGGI-DO, 16677, KOREA

**Model** : SM-G985F/DS, SM-G985F

**FCC ID** : A3LSMG985F

**EUT Description** : GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax,  
ANT+, NFC and WPT

**Test Standard(s)** : FCC CFR47 PART 22 SUBPART H  
FCC CFR47 PART 24 SUBPART E  
FCC CFR47 PART 27 SUBPART F  
FCC CFR47 PART 27 SUBPART H  
FCC CFR47 PART 27 SUBPART L  
FCC CFR47 PART 27 SUBPART M  
FCC CFR47 PART 90 SUBPART S

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ACCREDITED

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TL-637

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# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** SAMSUNG ELECTRONICS CO., LTD.

**EUT DESCRIPTION:** GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, ANT+, NFC and WPT

**MODEL NUMBER:** SM-G985F/DS, SM-G985F

**SERIAL NUMBER:** R3CM90FS92E, R3CM90FS9KW (CONDUCTED, Original)  
R3CM90FSACX, R3CM90FS9YL,  
R3CM90FSA4H (RADIATED, Original);  
R38MA0KHL5Y, R38MA0KHKTZ, R38MA0KHL8H (Spot Check);

**DATE TESTED:** OCT 10, 2019 – DEC 09, 2019 (Original);  
NOV 26, 2019 – DEC 09, 2019 (Spot Check);

| APPLICABLE STANDARDS                          |              |
|---|--------------|
| STANDARD                                      | TEST RESULTS |
| FCC PART 22H, 24E, 27H, 27L, 27F, 27M and 90S | Pass         |

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For  
UL Korea, Ltd. By:



Junwhan Lee  
Suwon Lab Engineer  
UL Korea, Ltd.

Tested By:



Seokhwan Hong  
Suwon Lab Engineer  
UL Korea, Ltd.

## 1.1. INTRODUCTION OF TEST DATA REUSE

This report referenced from the FCC ID: A3LSMG986B PCE WWAN (FCC CFR 47 Part 22,24,27,90). And the applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID.

## 1.2. DIFFERENCE

The FCC ID: A3LSMG985F shares the same enclosure and circuit board as FCC ID: A3LSMG986B. The WWAN antennas and surrounding circuitry and layout are identical between these two units.

After confirming through preliminary radiated emissions that the performance of the FCC ID: A3LSMG986B remains representative of FCC ID: A3LSMG985F. The test data of FCC ID: A3LSMG986B being submitted for this application to cover WWAN features.

## 1.3. SPOT CHECK VERIFICATION DATA (Worst case of the ERP/EIRP and radiated spurious emissions)

| Band                 | Test Item | Worst Mode | Frequency   | Test Limit | Original model      | Spot check model    | Deviation | Remark      |
|----------------------|-----------|------------|-------------|------------|---------------------|---------------------|-----------|-------------|
|                      |           |            |             |            | SM-G986B/DS         | SM-G985F/DS         |           |             |
|                      |           |            |             |            | FCC ID : A3LSMG986B | FCC ID : A3LSMG985F |           |             |
| GSM<br>850           | ERP       | GPRS       | 848.8 MHz   | 38.50 dBm  | 31.16 dBm           | 31.49 dBm           | 0.33 dB   | -           |
|                      | RSE       | GPRS       | 5019.6 MHz  | -13.00 dBm | -49.00 dBm          | -49.10 dBm          | -0.10 dB  | Noise floor |
| GSM<br>1900          | EIRP      | GPRS       | 1880.0 MHz  | 33.00 dBm  | 28.48 dBm           | 27.25 dBm           | -1.23 dB  | -           |
|                      | RSE       | GPRS       | 5640.0 MHz  | -13.00 dBm | -45.80 dBm          | -46.30 dBm          | -0.50 dB  | -           |
| WCDMA<br>Band 2      | EIRP      | REL99      | 1852.4 MHz  | 33.00 dBm  | 20.72 dBm           | 21.85 dBm           | 1.13 dB   | -           |
|                      | RSE       | REL99      | 7409.6 MHz  | -13.00 dBm | -46.70 dBm          | -48.20 dBm          | -1.50 dB  | Noise floor |
| WCDMA<br>Band 4      | ERP       | REL99      | 1752.6 MHz  | 30.00 dBm  | 23.29 dBm           | 24.54 dBm           | 1.25 dB   | -           |
|                      | RSE       | HSDPA      | 7010.4 MHz  | -13.00 dBm | -46.90 dBm          | -47.90 dBm          | -1.00 dB  | Noise floor |
| WCDMA<br>Band 5      | ERP       | REL99      | 846.6 MHz   | 38.50 dBm  | 20.90 dBm           | 21.20 dBm           | 0.30 dB   | -           |
|                      | RSE       | HSDPA      | 3386.4 MHz  | -13.00 dBm | -50.30 dBm          | -50.50 dBm          | -0.20 dB  | Noise floor |
| LTE<br>Band 12       | EIRP      | QPSK_3M    | 714.5 MHz   | 34.80 dBm  | 17.47 dBm           | 18.22 dBm           | 0.75 dB   | -           |
|                      | RSE       | QPSK_10M   | 2830.0 MHz  | -13.00 dBm | -54.20 dBm          | -54.70 dBm          | -0.50 dB  | Noise floor |
| LTE<br>Band 13       | EIRP      | QPSK_10M   | 782.0 MHz   | 34.80 dBm  | 20.30 dBm           | 20.64 dBm           | 0.34 dB   | -           |
|                      | RSE       | QPSK_5M    | 2346.0 MHz  | -40.00 dBm | -35.60 dBm          | -41.90 dBm          | -6.30 dB  | -           |
| LTE<br>Band 25       | ERP       | QPSK_3M    | 1913.5 MHz  | 33.00 dBm  | 24.39 dBm           | 23.79 dBm           | -0.60 dB  | -           |
|                      | RSE       | QPSK_3M    | 7654.0 MHz  | -13.00 dBm | -47.90 dBm          | -48.80 dBm          | -0.90 dB  | Noise floor |
| LTE<br>Band 26       | ERP       | QPSK_10M   | 831.5 MHz   | 38.50 dBm  | 19.57 dBm           | 19.16 dBm           | -0.41 dB  | -           |
|                      | RSE       | QPSK_5M    | 3386.0 MHz  | -13.00 dBm | -53.40 dBm          | -53.30 dBm          | 0.10 dB   | Noise floor |
| LTE<br>Band 41(PCL2) | EIRP      | QPSK_15M   | 2503.5 MHz  | 33.00 dBm  | 28.42 dBm           | 28.23 dBm           | -0.19 dB  | -           |
|                      | RSE       | QPSK_5M    | 16125.0 MHz | -25.00 dBm | -39.10 dBm          | -41.10 dBm          | -2.00 dB  | -           |
| LTE<br>Band 66       | EIRP      | QPSK_10M   | 1745.0 MHz  | 30.00 dBm  | 23.95 dBm           | 23.94 dBm           | -0.01 dB  | -           |
|                      | RSE       | QPSK_15M   | 7090.0 MHz  | -13.00 dBm | -48.00 dBm          | -48.00 dBm          | 0.00 dB   | Noise floor |

Comparison of two models, upper deviation is within 3 dB range and all test results are under FCC Technical Limits.

### 1.4. REFERENCE DETAIL

Reference application that contains the reused reference data in the individual test reports:

| Equipment Class | Reference FCC ID (Parent) | Application Type | Reference Test report number | Exhibit Type | Variant Test Report Number   | Data Re-used |
|-----------------|---------------------------|------------------|------------------------------|--------------|------------------------------|--------------|
| PCE             | A3LSMG986B                | Original Grant   | 4789219881-E2                | Test Report  | 4789247757-E2                | All          |
| DTS             | A3LSMG986B                | Original Grant   | 4789219881-E3 (802.11b/g/n)  | Test Report  | 4789247757-E3 (802.11b/g/n)  | All          |
|                 |                           |                  | 4789219881-E4 (802.11ax)     | Test Report  | 4789247757-E4 (802.11ax)     | All          |
|                 |                           |                  | 4789219881-E5 Bluetooth LE   | Test Report  | 4789247757-E5 Bluetooth LE   | All          |
| DSS             | A3LSMG986B                | Original Grant   | 4789219881-E6 (Bluetooth)    | Test Report  | 4789247757-E6 (Bluetooth)    | All          |
| NII             | A3LSMG986B                | Original Grant   | 4789219881-E7 (802.11a/n/ac) | Test Report  | 4789247757-E7 (802.11a/n/ac) | All          |
|                 |                           |                  | 4789219881-E8 (802.11ax)     | Test Report  | 4789247757-E8 (802.11ax)     | All          |
| DXX             | A3LSMG986B                | Original Grant   | 4789219881-E9 (ANT+)         | Test Report  | 4789247757-E9 (ANT+)         | All          |
|                 |                           |                  | 4789219881-E10 (NFC)         | Test Report  | 4789247757-E10 (NFC)         | All          |
| DCD             | A3LSMG986B                | Original Grant   | 4789219881-E11 (WPT)         | Test Report  | 4789247757-E11 (WPT)         | All          |

For this application the data reuse is summarized below for each equipment class:

| Equipment Class | Reference FCC ID (Parent) | Application Type | Test Item     | Data Re-used                                |
|-----------------|---------------------------|------------------|---------------|---|
| PCE             | A3LSMG986B                | Original Grant   | WWAN          | All except SAR (full test), HAC (full test) |
| DTS             | A3LSMG986B                | Original Grant   | BLE           | All   |
|                 |                           |                  | WLAN          | All except SAR (full test), HAC (full test) |
|                 |                           |                  | WLAN 802.11ax | All except HAC (full test)                  |
| DSS             | A3LSMG986B                | Original Grant   | BT            | All except SAR (full test)                  |
| NII             | A3LSMG986B                | Original Grant   | WLAN          | All except SAR (full test), HAC (full test) |
|                 |                           |                  | WLAN 802.11ax | All except HAC (full test)                  |
| DXX             | A3LSMG986B                | Original Grant   | ANT+          | All   |
|                 |                           |                  | NFC           | All   |
| DCD             | A3LSMG986B                | Original Grant   | WPT           | All except RF exposure                      |

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with following methods.

1. FCC CFR 47 Part 2.
2. FCC CFR 47 Part 22.
3. FCC CFR 47 Part 24.
4. FCC CFR 47 Part 27.
5. FCC CFR 47 Part 90.
6. ANSI TIA-603-E, 2016
7. ANSI C63.26, 2015
8. KDB 971168 D01 Power Meas License Digital Systems v03r01

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

| 218 Maeyeong-ro                     |           |
|-------------------------------------|-----------|
| <input checked="" type="checkbox"/> | Chamber 1 |
| <input checked="" type="checkbox"/> | Chamber 2 |
| <input type="checkbox"/>            | Chamber 3 |

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at <http://www.iasonline.org/wp-content/uploads/2017/05/TL-637.pdf>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$EIRP = \text{PSA reading with EUT worst orientation (dBm)} + \text{Path loss (dB)} - \text{cable loss (between the SG and substitution antenna)} + \text{Substitution Antenna Factor (dBi)}$

$ERP = \text{PSA reading with EUT worst orientation (dBm)} + \text{Path loss (dB)} - \text{cable loss (between the SG and substitution antenna)}$

(Path loss = Signal generator output – PSA reading with substitution antenna)

### 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| PARAMETER                              | UNCERTAINTY |
|--|-------------|
| Conducted Disturbance, 0.15 to 30 MHz  | 2.35 dB     |
| Radiated Disturbance, 30 MHz to 1 GHz  | 3.49 dB     |
| Radiated Disturbance, 1 GHz to 18 GHz  | 5.82 dB     |
| Radiated Disturbance, 18 GHz to 40 GHz | 5.49 dB     |

Uncertainty figures are valid to a confidence level of 95%.

### 4.4. DECISION RULE

Decision rule for statement(s) of conformity is based on Procedure 1, Clause 4.4.2 in IEC Guide 115:2007.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac/ax, ANT+, NFC and WPT. This test report addresses the WWAN operational mode.

This report covers the Samsung models SM-G985F/DS and SM-G985F. These models are identical in hardware except SM-G985F has single SIM tray. With some pre-scan, model SM-G985F/DS was set for spot check test.

### 5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum average radiated ERP / EIRP output powers as follows:

Note : Conducted output power results were excerpted from RF exposure test report.(4789219881-S1 FCC Report SAR)

#### GSM

| FCC Part 22/24 |                       |            |              |                |              |                |
|----------------|-----------------------|------------|--------------|----------------|--------------|----------------|
| Band           | Frequency Range [MHz] | Modulation | Conducted    |                | Radiated     |                |
|                |                       |            | Avg [dBm]    | Avg [mW]       | Avg [dBm]    | Avg [mW]       |
| GSM850         | 824~849               | GPRS       | <b>32.89</b> | <b>1943.17</b> | <b>31.16</b> | <b>1306.17</b> |
|                |                       | EGPRS      | 25.60        | 363.49         | 24.00        | 251.19         |
| GSM1900        | 1850~1910             | GPRS       | 28.82        | 761.46         | 28.48        | 704.86         |
|                |                       | EGPRS      | 23.76        | 237.88         | 24.47        | 279.90         |

#### WCDMA

| FCC Part 22/24/27 |                       |            |              |               |              |               |
|-------------------|-----------------------|------------|--------------|---------------|--------------|---------------|
| Band              | Frequency Range [MHz] | Modulation | Conducted    |               | Radiated     |               |
|                   |                       |            | Avg [dBm]    | Avg [mW]      | Avg [dBm]    | Avg [mW]      |
| Band 5            | 824~849               | Rel. 99    | <b>24.43</b> | <b>277.28</b> | 20.90        | 123.03        |
|                   |                       | HSDPA      | 22.65        | 184.08        | 18.57        | 71.94         |
| Band 4            | 1710~1755             | Rel. 99    | 23.31        | 214.23        | <b>23.29</b> | <b>213.30</b> |
|                   |                       | HSDPA      | 22.04        | 159.90        | 21.28        | 134.28        |
| Band 2            | 1850~1910             | Rel. 99    | 23.31        | 214.11        | 20.72        | 118.03        |
|                   |                       | HSDPA      | 21.00        | 125.81        | 17.61        | 57.68         |

**LTE Band 12**

| FCC Part 27 |                       |                 |            |              |               |              |              |
|-------------|-----------------------|-----------------|------------|--------------|---------------|--------------|--------------|
| Band        | Frequency Range [MHz] | BandWidth [MHz] | Modulation | Conducted    |               | Radiated     |              |
|             |                       |                 |            | Avg [dBm]    | Avg [mW]      | Avg [dBm]    | Avg [mW]     |
| Band 12     | 699 ~ 716             | 10              | QPSK       | <b>23.83</b> | <b>241.28</b> | 17.36        | 54.45        |
|             |                       |                 | 16QAM      | 23.06        | 202.13        | 16.38        | 43.45        |
|             |                       |                 | 64QAM      | 22.13        | 163.45        |              |              |
|             |                       |                 | 256QAM     | 19.22        | 83.63         |              |              |
|             |                       | 5               | QPSK       | 23.63        | 230.94        | 17.40        | 54.95        |
|             |                       |                 | 16QAM      | 22.88        | 193.94        | 16.63        | 46.03        |
|             |                       |                 | 64QAM      | 22.14        | 163.54        |              |              |
|             |                       |                 | 256QAM     | 19.03        | 80.06         |              |              |
|             |                       | 3               | QPSK       | 23.48        | 222.89        | <b>17.47</b> | <b>55.85</b> |
|             |                       |                 | 16QAM      | 22.86        | 193.21        | 16.39        | 43.55        |
|             |                       |                 | 64QAM      | 21.84        | 152.82        |              |              |
|             |                       |                 | 256QAM     | 18.86        | 76.97         |              |              |
|             |                       | 1.4             | QPSK       | 23.53        | 225.55        | 17.35        | 54.33        |
|             |                       |                 | 16QAM      | 22.93        | 196.44        | 16.49        | 44.57        |
|             |                       |                 | 64QAM      | 21.91        | 155.35        |              |              |
|             |                       |                 | 256QAM     | 18.97        | 78.80         |              |              |

**LTE Band 13**

| FCC Part 27 |                       |                 |            |              |               |              |               |
|-------------|-----------------------|-----------------|------------|--------------|---------------|--------------|---------------|
| Band        | Frequency Range [MHz] | BandWidth [MHz] | Modulation | Conducted    |               | Radiated     |               |
|             |                       |                 |            | Avg [dBm]    | Avg [mW]      | Avg [dBm]    | Avg [mW]      |
| Band 13     | 777 ~ 787             | 10              | QPSK       | 23.96        | 248.83        | <b>20.30</b> | <b>107.15</b> |
|             |                       |                 | 16QAM      | 22.93        | 196.17        | 18.93        | 78.16         |
|             |                       |                 | 64QAM      | 22.23        | 167.11        |              |               |
|             |                       |                 | 256QAM     | 19.19        | 82.99         |              |               |
|             |                       | 5               | QPSK       | <b>24.10</b> | <b>257.04</b> | 20.06        | 101.39        |
|             |                       |                 | 16QAM      | 23.00        | 199.53        | 19.13        | 81.85         |
|             |                       |                 | 64QAM      | 21.96        | 157.04        |              |               |
|             |                       |                 | 256QAM     | 19.00        | 79.43         |              |               |

**LTE Band 25**

| FCC Part 24 |                       |                 |            |              |               |              |               |
|-------------|-----------------------|-----------------|------------|--------------|---------------|--------------|---------------|
| Band        | Frequency Range [MHz] | BandWidth [MHz] | Modulation | Conducted    |               | Radiated     |               |
|             |                       |                 |            | Avg [dBm]    | Avg [mW]      | Avg [dBm]    | Avg [mW]      |
| Band 25     | 1850 ~ 1915           | 20              | QPSK       | 23.30        | 213.56        | 23.32        | 214.78        |
|             |                       |                 | 16QAM      | 22.58        | 181.00        | 23.28        | 212.81        |
|             |                       |                 | 64QAM      | 21.44        | 139.33        |              |               |
|             |                       |                 | 256QAM     | 18.66        | 73.50         |              |               |
|             |                       | 15              | QPSK       | 23.39        | 218.23        | 24.03        | 252.93        |
|             |                       |                 | 16QAM      | 22.53        | 179.26        | 23.65        | 231.74        |
|             |                       |                 | 64QAM      | 21.54        | 142.62        |              |               |
|             |                       |                 | 256QAM     | 18.51        | 71.00         |              |               |
|             |                       | 10              | QPSK       | 23.28        | 212.80        | 23.99        | 250.61        |
|             |                       |                 | 16QAM      | 22.50        | 178.01        | 23.25        | 211.35        |
|             |                       |                 | 64QAM      | 21.43        | 139.03        |              |               |
|             |                       |                 | 256QAM     | 18.40        | 69.13         |              |               |
|             |                       | 5               | QPSK       | 23.25        | 211.33        | 24.05        | 254.10        |
|             |                       |                 | 16QAM      | 22.80        | 190.59        | 22.68        | 185.35        |
|             |                       |                 | 64QAM      | 21.62        | 145.29        |              |               |
|             |                       |                 | 256QAM     | 18.54        | 71.45         |              |               |
|             |                       | 3               | QPSK       | <b>23.44</b> | <b>220.80</b> | <b>24.39</b> | <b>274.79</b> |
|             |                       |                 | 16QAM      | 22.79        | 190.00        | 23.17        | 207.49        |
|             |                       |                 | 64QAM      | 21.45        | 139.60        |              |               |
|             |                       |                 | 256QAM     | 18.45        | 70.00         |              |               |
|             |                       | 1.4             | QPSK       | 23.25        | 211.54        | 24.28        | 267.92        |
|             |                       |                 | 16QAM      | 22.41        | 174.27        | 23.18        | 207.97        |
|             |                       |                 | 64QAM      | 21.43        | 138.87        |              |               |
|             |                       |                 | 256QAM     | 18.30        | 67.59         |              |               |

**LTE Band 26 (Part90)**

| FCC Part 90 |                       |                 |            |           |              |               |              |       |
|-------------|-----------------------|-----------------|------------|-----------|--------------|---------------|--------------|-------|
| Band        | Frequency Range [MHz] | BandWidth [MHz] | Modulation | Conducted |              | Radiated      |              |       |
|             |                       |                 |            | Avg [dBm] | Avg [mW]     | Avg [dBm]     | Avg [mW]     |       |
| Band 26     | 814 ~ 824             | 15              | QPSK       | 23.83     | 241.55       | 19.39         | 86.90        |       |
|             |                       |                 | 16QAM      | 22.97     | 198.32       | 18.16         | 65.46        |       |
|             |                       |                 | 64QAM      | 21.84     | 152.67       |               |              |       |
|             |                       |                 | 256QAM     | 18.68     | 73.82        |               |              |       |
|             |                       | 10              | QPSK       | 23.70     | 234.53       | 19.39         | 86.90        |       |
|             |                       |                 | 16QAM      | 22.94     | 196.64       | 18.28         | 67.30        |       |
|             |                       |                 | 64QAM      | 21.83     | 152.44       |               |              |       |
|             |                       |                 | 256QAM     | 19.05     | 80.37        |               |              |       |
|             |                       | 5               | QPSK       | 23.75     | 237.14       | <b>19.49</b>  | <b>88.92</b> |       |
|             |                       |                 | 16QAM      | 23.23     | 210.38       | 18.12         | 64.86        |       |
|             |                       |                 | 64QAM      | 21.78     | 150.79       |               |              |       |
|             |                       |                 | 256QAM     | 18.80     | 75.90        |               |              |       |
|             |                       | 3               | QPSK       |           | <b>23.89</b> | <b>244.91</b> | 19.32        | 85.51 |
|             |                       |                 | 16QAM      | 23.20     | 208.93       | 18.57         | 71.94        |       |
|             |                       |                 | 64QAM      | 21.73     | 148.88       |               |              |       |
|             |                       |                 | 256QAM     | 18.75     | 74.95        |               |              |       |
|             |                       | 1.4             | QPSK       | 23.68     | 233.35       | 19.42         | 87.50        |       |
|             |                       |                 | 16QAM      | 22.97     | 198.15       | 18.22         | 66.37        |       |
|             |                       |                 | 64QAM      | 21.56     | 143.30       |               |              |       |
|             |                       |                 | 256QAM     | 18.53     | 71.26        |               |              |       |

**LTE Band 26 (Part22)**

| FCC Part 22 |                       |                 |            |              |               |              |              |
|-------------|-----------------------|-----------------|------------|--------------|---------------|--------------|--------------|
| Band        | Frequency Range [MHz] | BandWidth [MHz] | Modulation | Conducted    |               | Radiated     |              |
|             |                       |                 |            | Avg [dBm]    | Avg [mW]      | Avg [dBm]    | Avg [mW]     |
| Band 26     | 824 ~ 849             | 15              | QPSK       | 23.67        | 232.60        | 18.82        | 76.21        |
|             |                       |                 | 16QAM      | 23.08        | 203.21        | 18.46        | 70.15        |
|             |                       |                 | 64QAM      | 21.70        | 147.80        |              |              |
|             |                       |                 | 256QAM     | 18.75        | 74.97         |              |              |
|             |                       | 10              | QPSK       | 23.81        | 240.44        | <b>19.57</b> | <b>90.57</b> |
|             |                       |                 | 16QAM      | 23.07        | 202.87        | 18.57        | 71.94        |
|             |                       |                 | 64QAM      | 21.93        | 155.98        |              |              |
|             |                       |                 | 256QAM     | 18.65        | 73.22         |              |              |
|             |                       | 5               | QPSK       | <b>23.97</b> | <b>249.46</b> | 19.34        | 85.90        |
|             |                       |                 | 16QAM      | 23.32        | 214.78        | 18.25        | 66.83        |
|             |                       |                 | 64QAM      | 21.72        | 148.53        |              |              |
|             |                       |                 | 256QAM     | 18.90        | 77.64         |              |              |
|             |                       | 3               | QPSK       | 23.91        | 246.04        | 19.55        | 90.16        |
|             |                       |                 | 16QAM      | 23.21        | 209.17        | 18.46        | 70.15        |
|             |                       |                 | 64QAM      | 21.86        | 153.38        |              |              |
|             |                       |                 | 256QAM     | 19.17        | 82.58         |              |              |
|             |                       | 1.4             | QPSK       | 23.71        | 234.96        | 19.26        | 84.33        |
|             |                       |                 | 16QAM      | 23.18        | 207.97        | 18.28        | 67.30        |
|             |                       |                 | 64QAM      | 21.82        | 152.01        |              |              |
|             |                       |                 | 256QAM     | 18.66        | 73.40         |              |              |

**LTE Band 41(PC2)**

| FCC Part 27 |                       |                 |            |              |               |              |               |
|-------------|-----------------------|-----------------|------------|--------------|---------------|--------------|---------------|
| Band        | Frequency Range [MHz] | BandWidth [MHz] | Modulation | Conducted    |               | Radiated     |               |
|             |                       |                 |            | Avg [dBm]    | Avg [mW]      | Avg [dBm]    | Avg [mW]      |
| Band 41     | 2496 ~ 2690           | 20              | QPSK       | 25.00        | 315.97        | 27.45        | 555.90        |
|             |                       |                 | 16QAM      | 24.48        | 280.22        | 27.69        | 587.49        |
|             |                       |                 | 64QAM      | 23.05        | 201.87        |              |               |
|             |                       |                 | 256QAM     | 20.21        | 104.84        |              |               |
|             |                       | 15              | QPSK       | 25.02        | 318.04        | <b>28.42</b> | <b>695.02</b> |
|             |                       |                 | 16QAM      | 24.65        | 291.74        | 27.65        | 582.10        |
|             |                       |                 | 64QAM      | 23.32        | 214.56        |              |               |
|             |                       |                 | 256QAM     | 20.29        | 106.82        |              |               |
|             |                       | 10              | QPSK       | 25.06        | 320.38        | 28.32        | 679.20        |
|             |                       |                 | 16QAM      | 24.56        | 286.02        | 27.78        | 599.79        |
|             |                       |                 | 64QAM      | 23.32        | 214.56        |              |               |
|             |                       |                 | 256QAM     | 20.01        | 100.20        |              |               |
|             |                       | 5               | QPSK       | <b>25.12</b> | <b>325.39</b> | 27.02        | 503.50        |
|             |                       |                 | 16QAM      | 24.71        | 295.84        | 27.25        | 530.88        |
|             |                       |                 | 64QAM      | 23.31        | 214.27        |              |               |
|             |                       |                 | 256QAM     | 20.18        | 104.25        |              |               |

**LTE Band 66**

| FCC Part 27 |                       |                 |            |              |               |              |               |
|-------------|-----------------------|-----------------|------------|--------------|---------------|--------------|---------------|
| Band        | Frequency Range [MHz] | BandWidth [MHz] | Modulation | Conducted    |               | Radiated     |               |
|             |                       |                 |            | Avg [dBm]    | Avg [mW]      | Avg [dBm]    | Avg [mW]      |
| Band 66     | 1710 ~ 1780           | 20              | QPSK       | 22.85        | 192.54        | 23.92        | 246.60        |
|             |                       |                 | 16QAM      | 22.03        | 159.49        | 22.75        | 188.36        |
|             |                       |                 | 64QAM      | 21.19        | 131.55        |              |               |
|             |                       |                 | 256QAM     | 18.22        | 66.43         |              |               |
|             |                       | 15              | QPSK       | <b>23.05</b> | <b>201.78</b> | 23.90        | 245.47        |
|             |                       |                 | 16QAM      | 22.31        | 170.10        | 22.49        | 177.42        |
|             |                       |                 | 64QAM      | 20.96        | 124.73        |              |               |
|             |                       |                 | 256QAM     | 18.08        | 64.28         |              |               |
|             |                       | 10              | QPSK       | 22.78        | 189.85        | <b>23.95</b> | <b>248.31</b> |
|             |                       |                 | 16QAM      | 22.00        | 158.51        | 22.49        | 177.42        |
|             |                       |                 | 64QAM      | 20.84        | 121.42        |              |               |
|             |                       |                 | 256QAM     | 17.98        | 62.86         |              |               |
|             |                       | 5               | QPSK       | 22.81        | 190.82        | 23.80        | 239.88        |
|             |                       |                 | 16QAM      | 22.21        | 166.47        | 22.55        | 179.89        |
|             |                       |                 | 64QAM      | 21.03        | 126.83        |              |               |
|             |                       |                 | 256QAM     | 18.27        | 67.19         |              |               |
|             |                       | 3               | QPSK       | 22.80        | 190.55        | 23.60        | 229.09        |
|             |                       |                 | 16QAM      | 22.13        | 163.17        | 22.74        | 187.93        |
|             |                       |                 | 64QAM      | 20.85        | 121.48        |              |               |
|             |                       |                 | 256QAM     | 17.92        | 61.92         |              |               |
|             |                       | 1.4             | QPSK       | 22.66        | 184.47        | 23.40        | 218.78        |
|             |                       |                 | 16QAM      | 21.73        | 148.78        | 22.36        | 172.19        |
|             |                       |                 | 64QAM      | 20.80        | 120.26        |              |               |
|             |                       |                 | 256QAM     | 17.64        | 58.02         |              |               |

**LTE Band 2**

LTE Band 2(Frequency range: 1850-1910 MHz) is covered by LTE Band 25 (Frequency range: 1850-1915 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

**LTE Band 4**

LTE Band 4 (Frequency range: 1710-1755 MHz) is covered by LTE Band 66 (Frequency range: 1710-1780 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

**LTE Band 5**

LTE Band 5 (Frequency range: 824-849 MHz) is covered by LTE Band 26 (Frequency range: 814-849 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

**LTE Band 17**

LTE Band 17 (Frequency range: 704-716 MHz) is covered by LTE Band 12 (Frequency range: 699-716 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

**LTE Band41(PC3)**

LTE Band 41(PC3, Frequency range : 2496-2690 MHz) is covered by LTE Band 41(PC2) (Frequency range: 2496-2690 MHz) due to same frequency range, same channel bandwidth and maximum tune-up limit is higher than LTE Band41(PC3).

### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a internal antenna for the [List the bands supported] with a maximum peak gain as follow:

| Frequency (MHz)  | Peak Gain (dBi) |
|--|-----------------|
| GSM1900 / WCDMA Band 2 / LTE Band 2 / LTE Band 25<br>1850 ~ 1915 MHz | -4.2            |
| WCDMA Band 4 / LTE Band 4 / LTE Band 66<br>1710 ~ 1780 MHz           | -3.8            |
| GSM850 / WCDMA Band 5 / LTE Band 5 / LTE Band 26<br>814 ~ 849 MHz    | -5.7            |
| LTE Band 12 / LTE Band 17<br>699 ~ 716 MHz                           | -8.2            |
| LTE Band 41<br>2496 ~ 2690 MHz                                       | -5.2            |
| LTE Band 13<br>777 ~ 787 MHz   | -8.8            |

### 5.4. WORST-CASE ORIENTATION

Following modes should be considered as worst-case scenario for all other measurements.

- GSM GPRS/EGPRS
- UMTS REL 99/HSDPA

For all LTE Bands, the worst-case scenario for all measurements is based on the average conducted output power measurement investigation results. Output power measurements were measured on QPSK, 16QAM, 64QAM and 256QAM modulations. It was found that QPSK and 16QAM results were worst case. All testing was performed using QPSK and 16QAM modulations to represent the worst case. However, the out of band emissions and spurious radiation were only performed on bandwidth and RB offset(with RB size 1) with the highest power in QPSK.

| Highest power setting for each bands |                 |                 |         |           |
|--------------------------------------|-----------------|-----------------|---------|-----------|
| LTE Band                             | Frequency (MHz) | Bandwidth (MHz) | RB size | RB offset |
| 12                                   | 704.0           | 10              | 1       | 0         |
|                                      | 707.5           |                 | 1       | 0         |
|                                      | 711.0           |                 | 1       | 0         |
| 13                                   | 779.5           | 5               | 1       | 24        |
|                                      | 782.0           |                 | 1       | 24        |
|                                      | 784.5           |                 | 1       | 24        |
| 25                                   | 1851.5          | 3               | 1       | 14        |
|                                      | 1882.5          |                 | 1       | 0         |
|                                      | 1913.5          |                 | 1       | 8         |
| 26<br>(Part 90)                      | 815.5           | 3               | 1       | 8         |
|                                      | 822.5           |                 | 1       | 14        |
| 26<br>(Part 22)                      | 826.5           | 5               | 1       | 12        |
|                                      | 831.5           |                 | 1       | 24        |
|                                      | 846.5           |                 | 1       | 24        |
| 41(PC2)                              | 2498.5          | 5               | 1       | 12        |
|                                      | 2593.0          |                 | 1       | 12        |
|                                      | 2687.5          |                 | 1       | 12        |
| 66                                   | 1717.5          | 15              | 1       | 0         |
|                                      | 1745.0          |                 | 1       | 74        |
|                                      | 1772.5          |                 | 1       | 37        |

The fundamental and radiated spurious emission were investigated in three orthogonal orientations X, Y and Z, it was determined that below orientation was worst-case orientation for each band.

| Band         | ERP/EIRP |   |   | RSE |   |   |
|--------------|----------|---|---|-----|---|---|
|              | X        | Y | Z | X   | Y | Z |
| GSM850       |          |   | O | O   |   |   |
| GSM1900      | O        |   |   |     |   | O |
| WCDMA B5     |          |   | O |     |   | O |
| WCDMA B4     |          |   | O |     |   | O |
| WCDMA B2     |          | O |   |     | O |   |
| LTE B12      |          |   | O |     |   | O |
| LTE B13      |          |   | O | O   |   |   |
| LTE B25      |          |   | O |     |   | O |
| LTE B26      | O        |   |   | O   |   |   |
| LTE B41(PC2) | O        |   |   |     |   | O |
| LTE B66      |          | O |   |     | O |   |

Note : For ERP/EIRP testing, the EUT didn't attached with travel adapter. But radiated spurious testing, the EUT attached with travel adapter for the worst case condition. The EUT is continuously communicated with the call box during the tests.

## 5.5. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

| Support Equipment List |              |          |                |        |
|------------------------|--------------|----------|----------------|--------|
| Description            | Manufacturer | Model    | Serial Number  | FCC ID |
| Charger                | SAMSUNG      | EP-TA800 | R37M5DX86X1SE3 | N/A    |
| Data Cable             | SAMSUNG      | EP-DG977 | N/A            | N/A    |

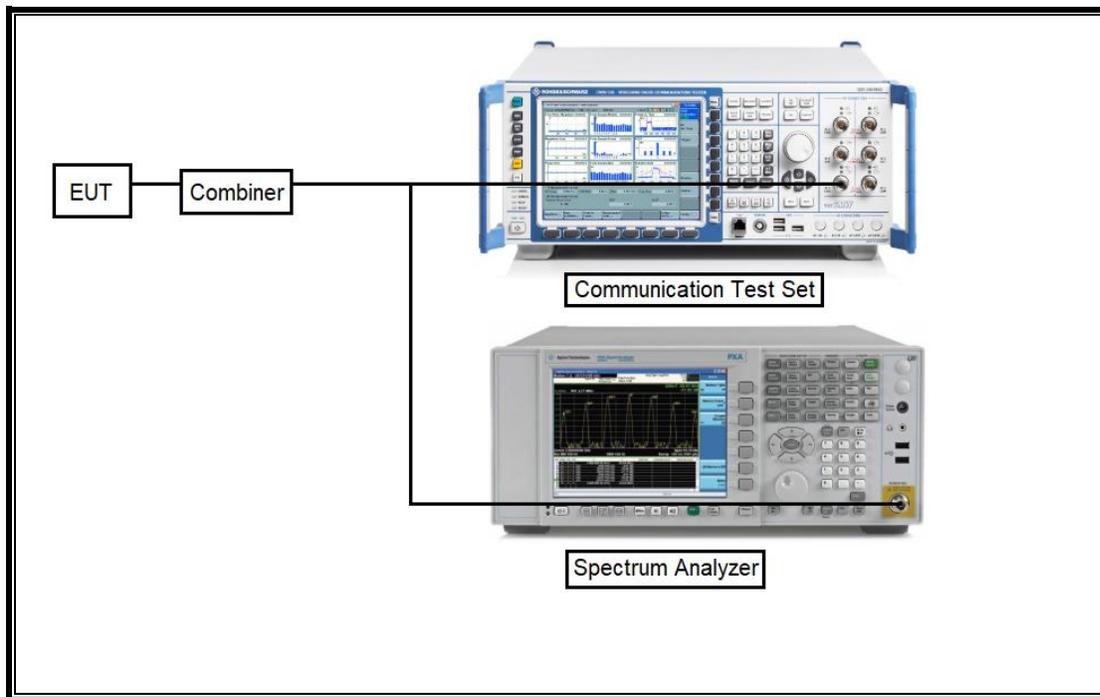
### I/O CABLE

| I/O Cable List |          |                      |                |            |                  |         |
|----------------|----------|----------------------|----------------|------------|------------------|---------|
| Cable No       | Port     | # of identical ports | Connector Type | Cable Type | Cable Length (m) | Remarks |
| 1              | DC Power | 1                    | C Type         | Shielded   | 1.0m             | N/A     |

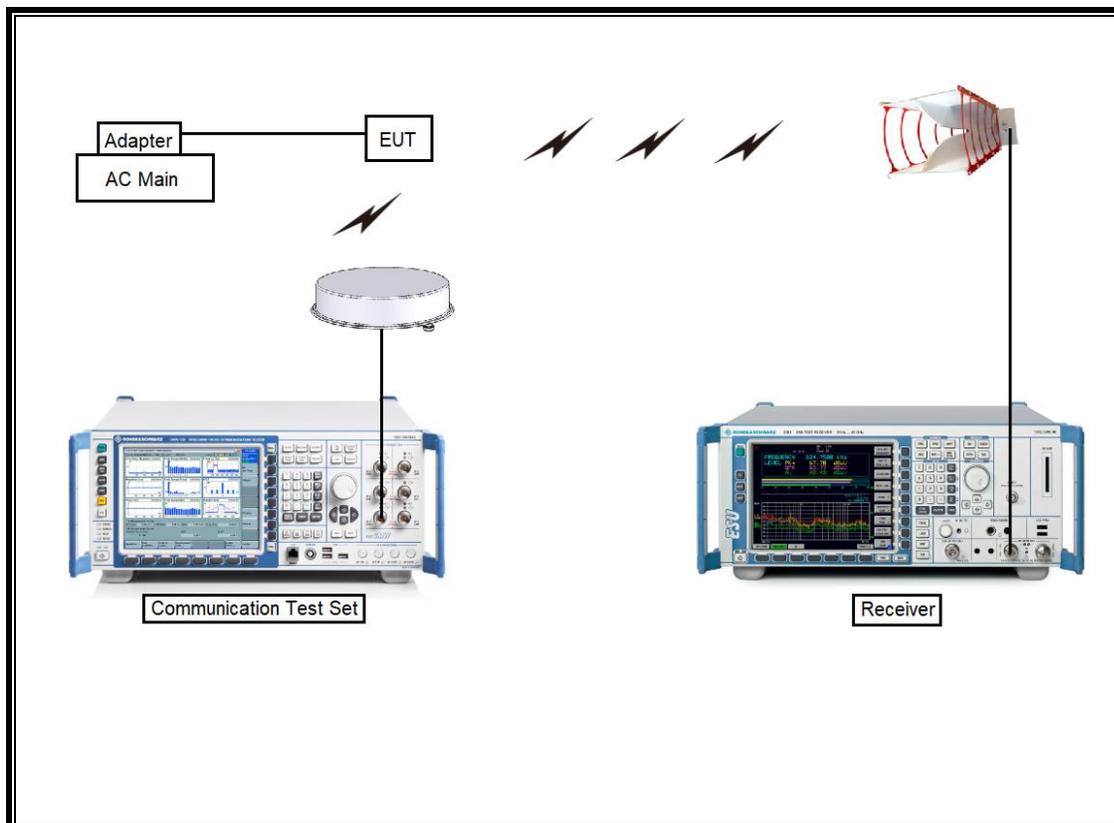
### TEST SETUP

The EUT is continuously communicated with the call box during the tests.

**SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)**



**SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)**



## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

| Test Equipment List                   |               |                        |            |          |
|---------------------------------------|---------------|------------------------|------------|----------|
| Description                           | Manufacturer  | Model                  | S/N        | Cal Due  |
| Antenna, Tuned Dipole<br>400~1000 MHz | ETS           | 3121D DB4              | 00164753   | 01-30-21 |
| Antenna, Horn, 40 GHz                 | ETS           | 3116C                  | 00166155   | 08-13-20 |
| Preamplifier                          | ETS           | 3116C-PA               | 00168841   | 08-08-20 |
| Antenna, Horn, 40 GHz                 | ETS           | 3116C                  | 00168645   | 10-02-21 |
| Antenna, Bilog, 30MHz-1GHz            | SCHWARZBECK   | VULB9163               | 750        | 08-04-20 |
| Antenna, Bilog, 30MHz-1GHz            | SCHWARZBECK   | VULB9163               | 845        | 08-04-20 |
| Antenna, Bilog, 30MHz-1GHz            | SCHWARZBECK   | VULB9163               | 749        | 08-04-20 |
| Antenna, Horn, 18 GHz                 | ETS           | 3115                   | 00167211   | 08-04-20 |
| Antenna, Horn, 18 GHz                 | ETS           | 3115                   | 00161451   | 08-04-20 |
| Antenna, Horn, 18 GHz                 | ETS           | 3117                   | 00168724   | 08-04-20 |
| Antenna, Horn, 18 GHz                 | ETS           | 3117                   | 00205959   | 08-04-20 |
| Antenna, Horn, 18 GHz                 | ETS           | 3117                   | 00168717   | 08-04-20 |
| Combiner                              | WEINSCHTEL    | 1575                   | 2150       | 08-08-20 |
| Communications Test Set               | R&S           | CMW500                 | 115331     | 08-05-20 |
| DC Power Supply                       | Agilent / HP  | E3640A                 | MY54226395 | 08-06-20 |
| Preamplifier, 1000 MHz                | Sonoma        | 310N                   | 341282     | 08-05-20 |
| Preamplifier, 1000 MHz                | Sonoma        | 310N                   | 370599     | 08-05-20 |
| Preamplifier, 1000 MHz                | Sonoma        | 310N                   | 351741     | 08-05-20 |
| Preamplifier, 18 GHz                  | Miteq         | AFS42-00101800-25-S-42 | 1876511    | 08-06-20 |
| Preamplifier, 18 GHz                  | Miteq         | AFS42-00101800-25-S-42 | 2029169    | 08-06-20 |
| Preamplifier, 18 GHz                  | Miteq         | AFS42-00101800-25-S-42 | 1896138    | 08-06-20 |
| Spectrum Analyzer, 44 GHz             | Agilent / HP  | N9030A                 | MY54490312 | 08-06-20 |
| EMI Test Receive, 40 GHz              | R&S           | ESU40                  | 100439     | 08-06-20 |
| EMI Test Receive, 40 GHz              | R&S           | ESU40                  | 100457     | 08-06-20 |
| Directional Antenna                   | Cobham        | FPA3-0.8-6.0R/1329     | 80108-0004 | N/A      |
| High Pass Filter 1.2GHz               | Micro-Tronics | HPM50108-02            | G005       | 08-05-20 |
| High Pass Filter 1.2GHz               | Micro-Tronics | HPM50108-02            | G006       | 08-05-20 |
| High Pass Filter 2.8GHz               | Micro-Tronics | HPM50111-02            | 010        | 08-05-20 |
| High Pass Filter 2.8GHz               | Micro-Tronics | HPM50111-02            | 011        | 08-05-20 |
| High Pass Filter 4GHz                 | Micro-Tronics | HPM50118-02            | G001       | 08-05-20 |
| High Pass Filter 4GHz                 | Micro-Tronics | HPM50118-02            | G002       | 08-05-20 |
| Attenuator                            | PASTERNAK     | PE7087-10              | A009       | 08-08-20 |
| Attenuator                            | PASTERNAK     | PE7087-10              | A001       | 08-08-20 |
| Attenuator                            | PASTERNAK     | PE7087-10              | A008       | 08-08-20 |
| Attenuator                            | PASTERNAK     | PE7087-10              | 2          | 08-08-20 |
| Attenuator                            | PASTERNAK     | PE7395-10              | A011       | 08-08-20 |
| Antenna, Loop, 9kHz-30MHz             | R&S           | HFH2-Z2                | 100418     | 10-02-21 |
| Temperature Chamber                   | ESPEC         | SH-642                 | 93001109   | 08-05-20 |
| UL Software                           |               |                        |            |          |
| Description                           | Manufacturer  | Model                  | Version    |          |
| Antenna port test software            | UL            | CLT                    | Ver 2.5    |          |

## 7. SUMMARY TABLE

| FCC Part Section                                      | Test Description                        | Test Limit    | Test Condition | Test Result |
|---|---|---------------|----------------|-------------|
| 2.1049  | Occupied Band width (99%)               | N/A           | Conducted      | Pass        |
| 22.917(a)<br>24.238(a)<br>27.53(c),(g),(h)<br>90.691  | Band Edge / Conducted Spurious Emission | -13dBm        |                | Pass        |
| 27.53(m)  | Conducted Spurious Emission             | -25 dBm       |                | Pass        |
| 27.53(m)<br>90.691                                    | Emission mask                           | Section 9.2.2 |                | Pass        |
| 2.1046  | Conducted output power                  | N/A           |                | Pass        |
| 22.355<br>24.235<br>27.54<br>90.213                   | Frequency Stability                     | 2.5PPM        |                | Pass        |
| 22.913(a)(5)  | Effective Radiated Power                | 38.5 dBm      |                | Pass        |
| 27.50(c)(10)<br>27.50(b)(10)                          |   | 34.77 dBm     | Pass           |             |
| 24.232(c)<br>27.50(h)(2)                              | Equivalent Isotropic Radiated Power     | 33dBm         | Pass           |             |
| 27.50(d)(4)   |   | 30dBm         | Pass           |             |
| 22.917(a)<br>24.238(a)<br>27.53 (c),(g),(h)<br>90.691 | Radiated Spurious Emission              | -13dBm        | Pass           |             |
| 27.53 (m)   |   | -25dBm        | Pass           |             |
|   |   |               | Radiated       |             |

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## 8. PEAK TO AVERAGE RATIO

### Test Procedure

Per KDB 971168 D01 Power Meas License Digital Systems v03r01;

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The PAR were measured on the Spectrum Analyzer.

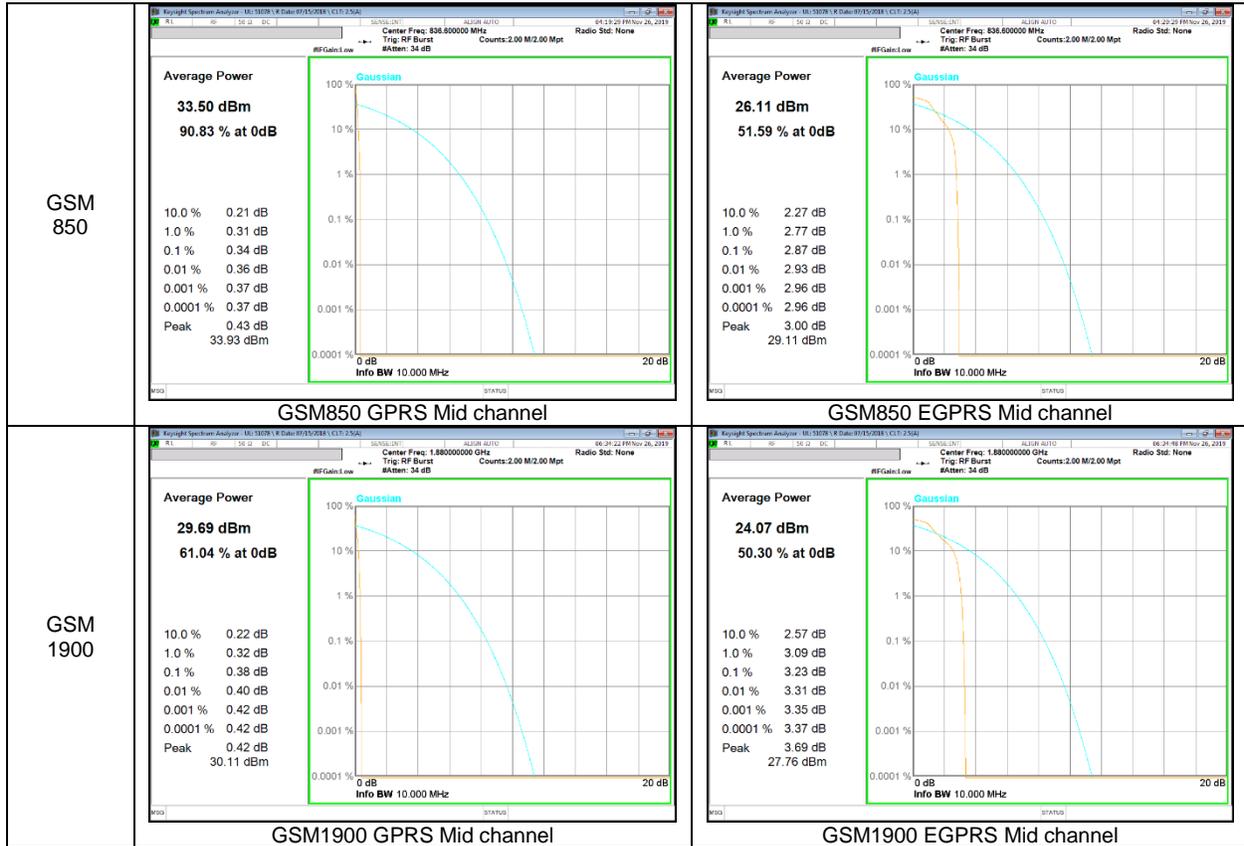
### Test Spec

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

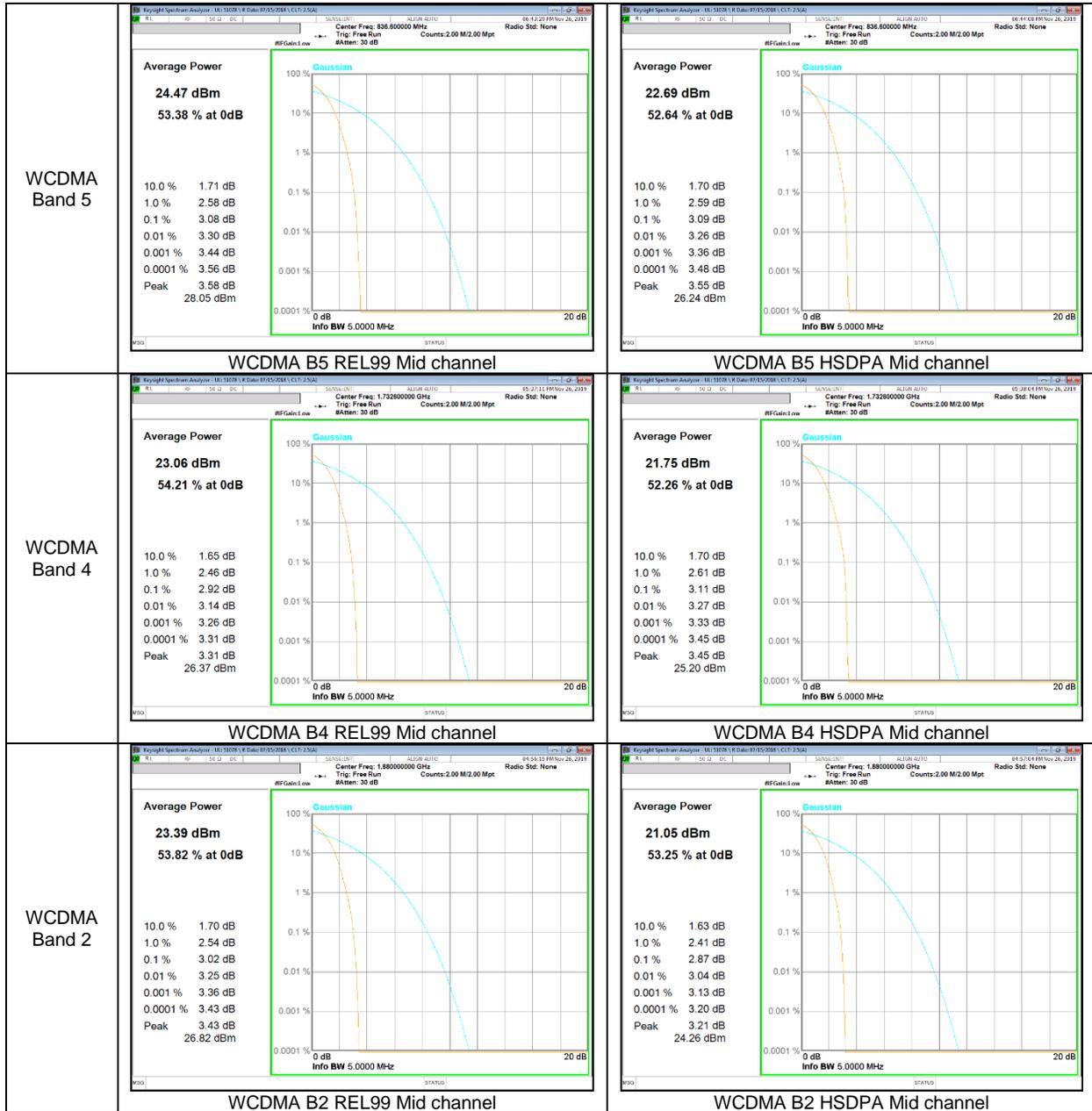
## RESULTS

## 8.1. CONDUCTED PEAK TO AVERAGE RESULT

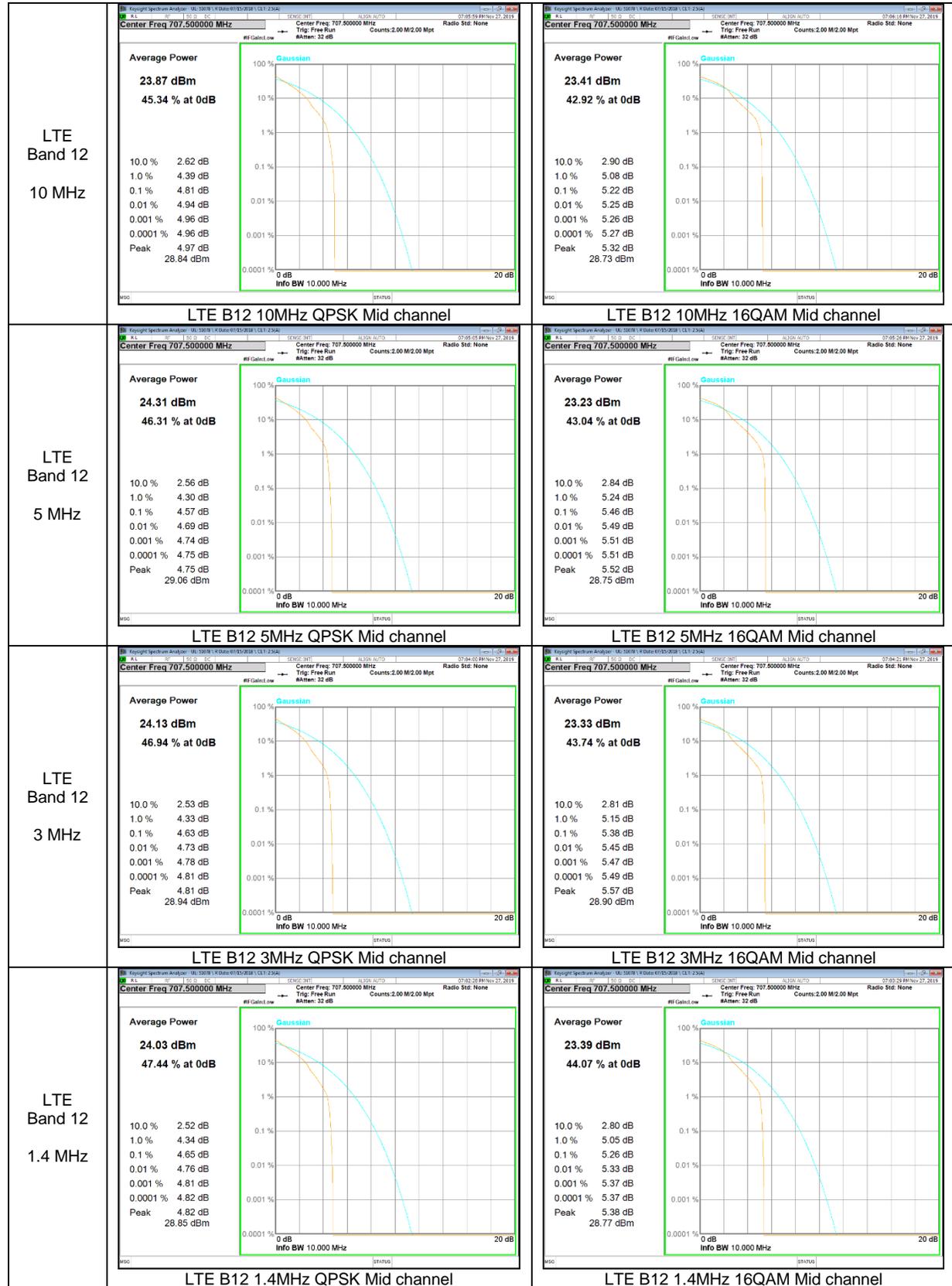
### GSM



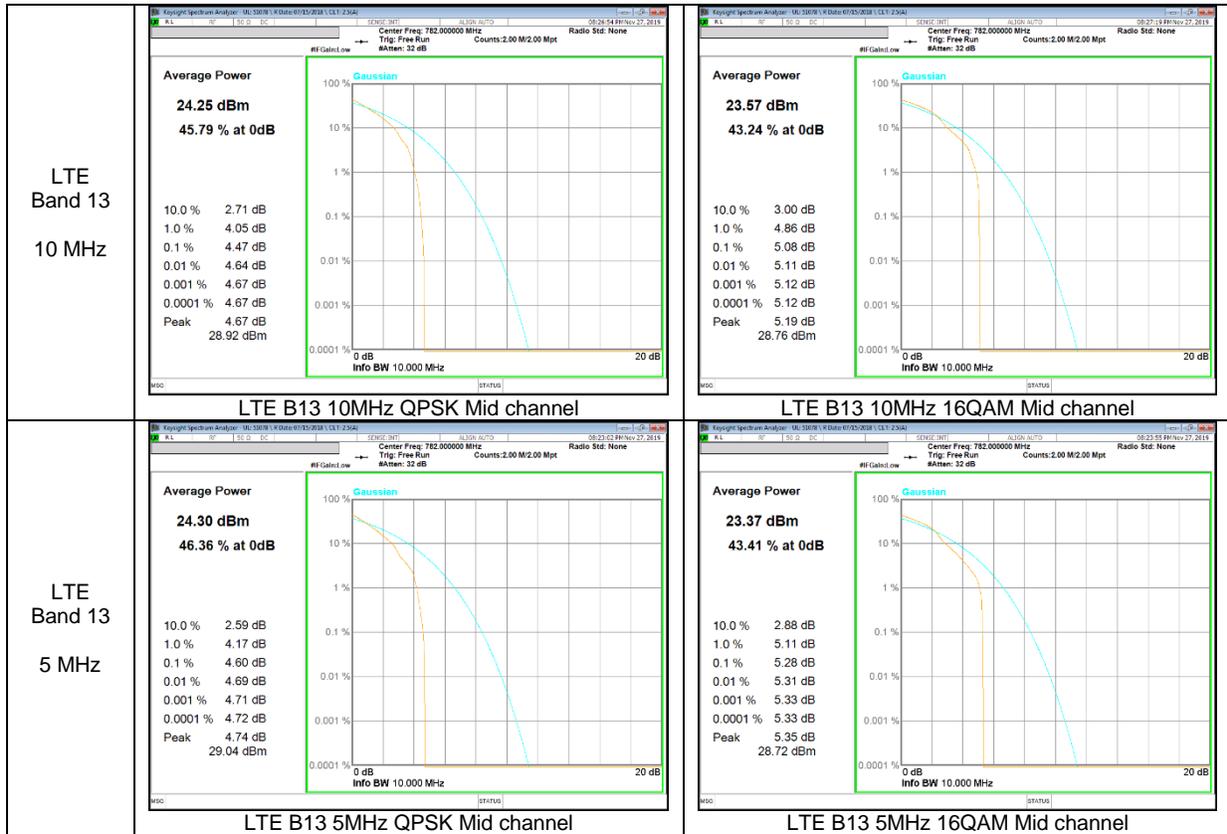
**WCDMA**



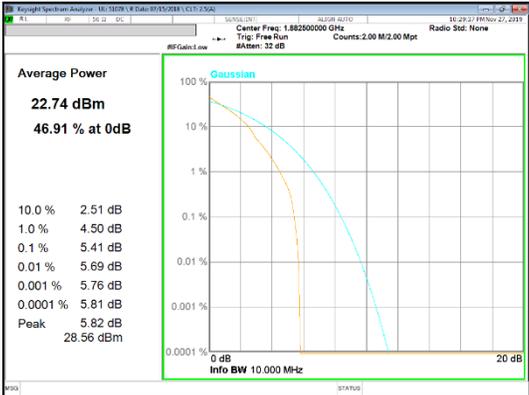
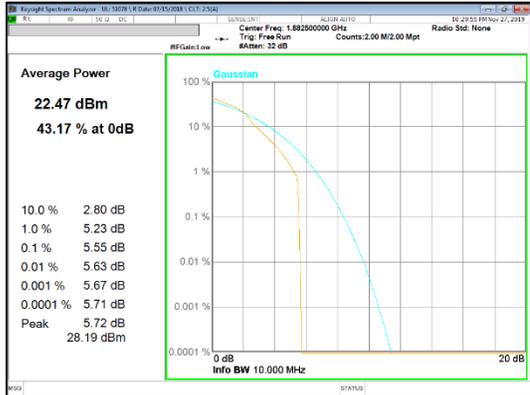
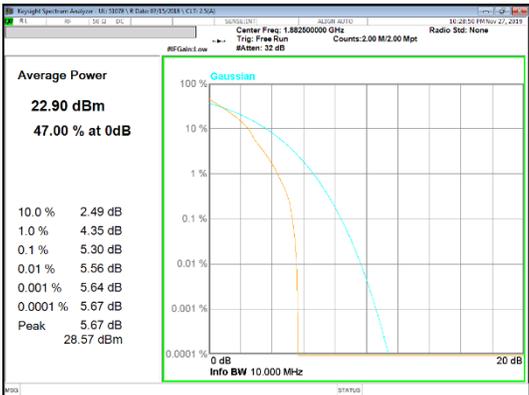
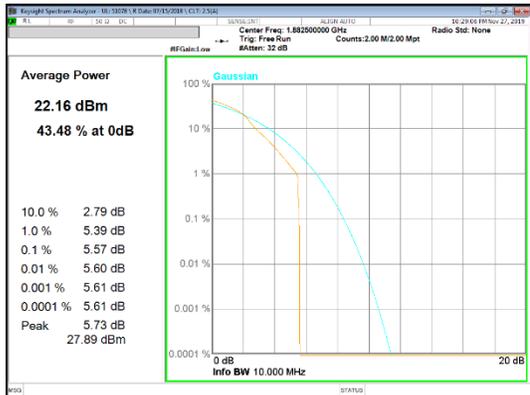
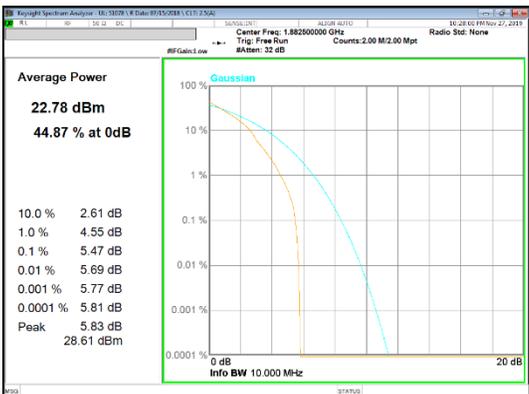
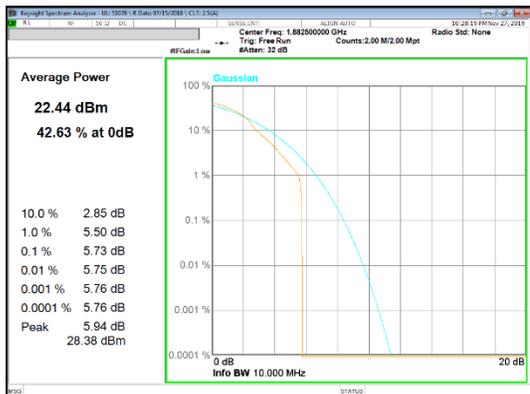
**LTE Band 12**

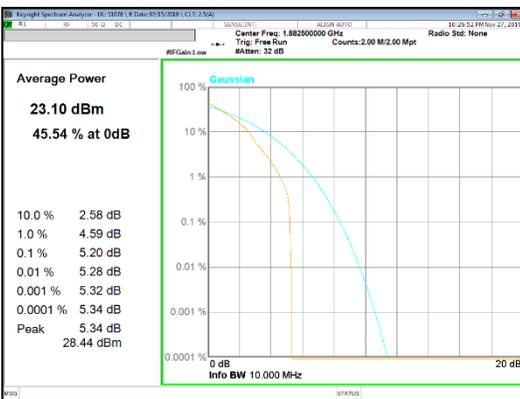
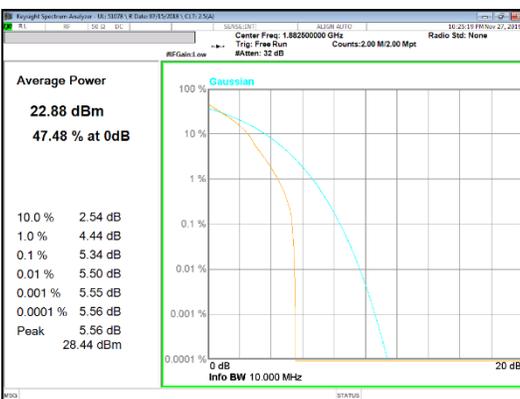


**LTE Band 13**

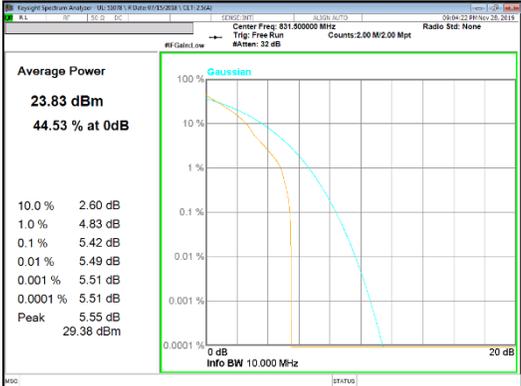
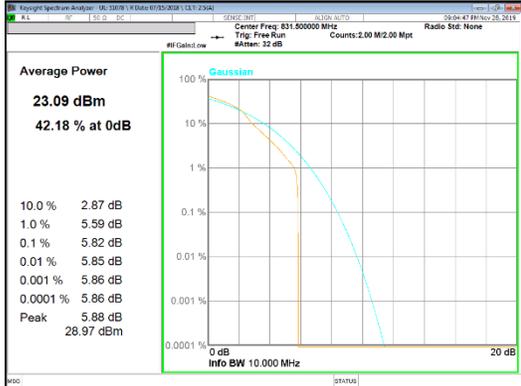
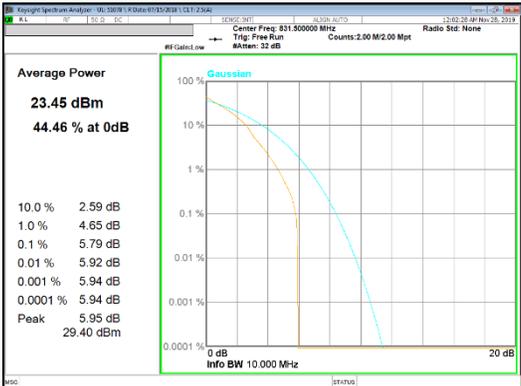
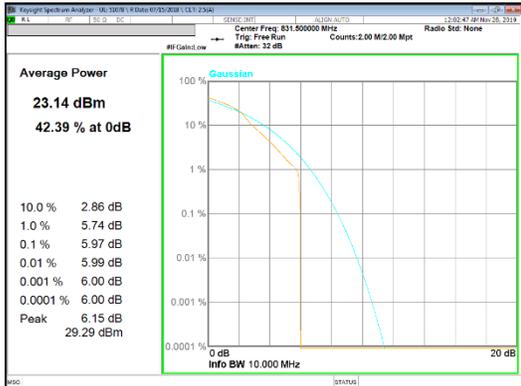
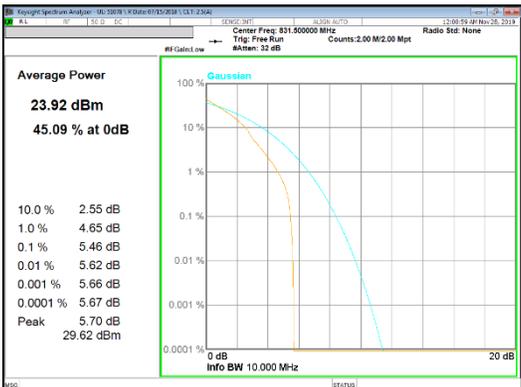
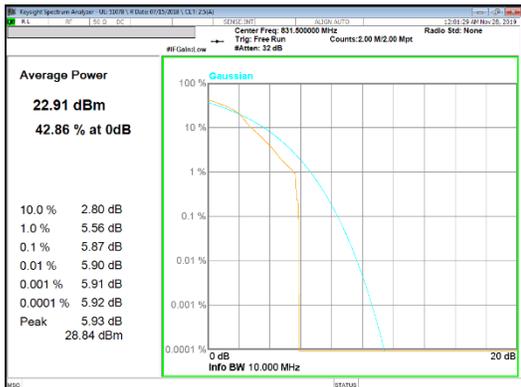


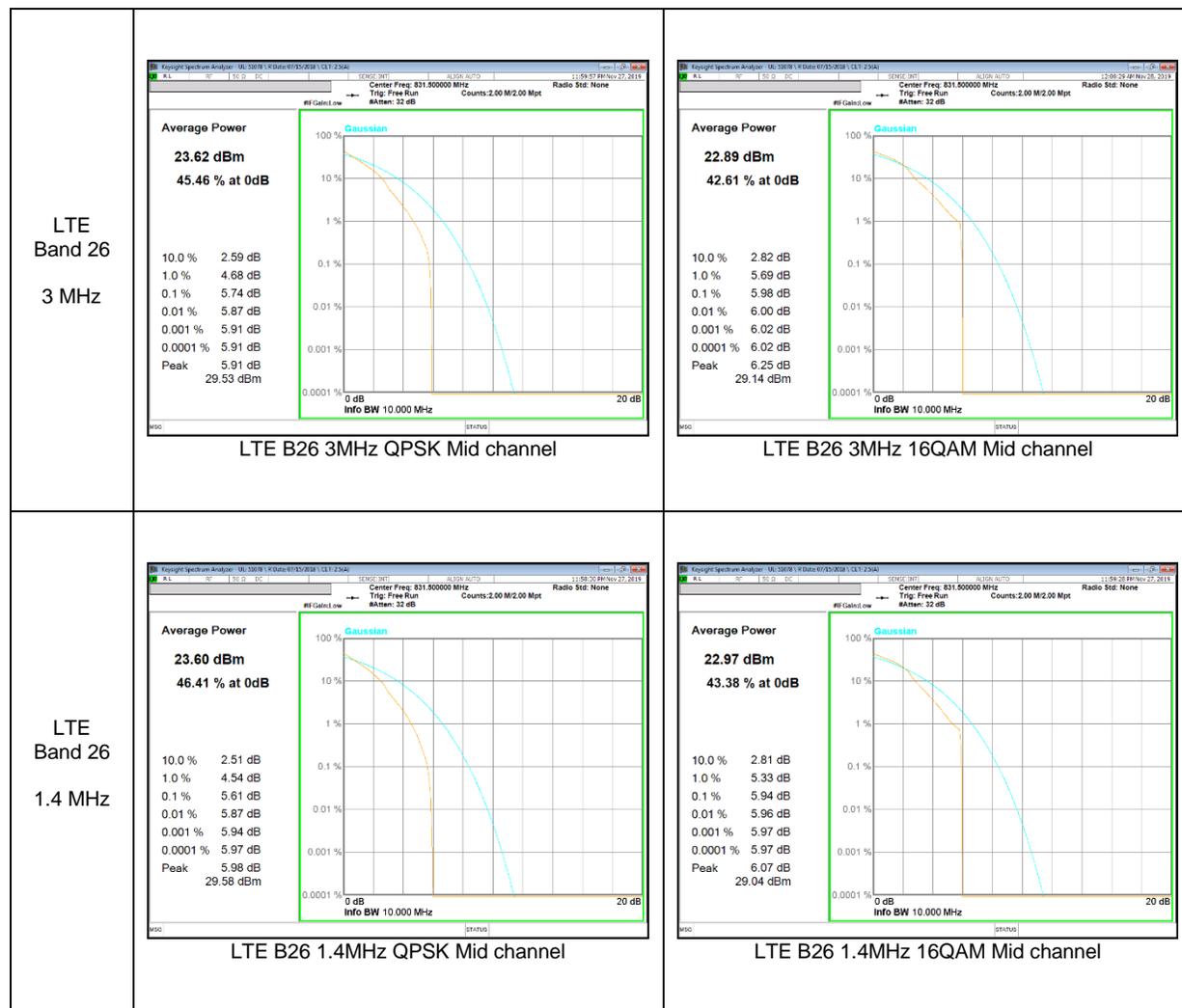
**LTE Band 25**

|                               |  |  |
|-------------------------------|--|--|
| <p>LTE Band 25<br/>20 MHz</p> |  <p>Average Power<br/>22.74 dBm<br/>46.91 % at 0dB</p> <p>10.0 % 2.51 dB<br/>1.0 % 4.50 dB<br/>0.1 % 5.41 dB<br/>0.01 % 5.69 dB<br/>0.001 % 5.76 dB<br/>0.0001 % 5.81 dB<br/>Peak 5.82 dB<br/>28.56 dBm</p> <p>LTE B25 20MHz QPSK Mid channel</p>   |  <p>Average Power<br/>22.47 dBm<br/>43.17 % at 0dB</p> <p>10.0 % 2.80 dB<br/>1.0 % 5.23 dB<br/>0.1 % 5.55 dB<br/>0.01 % 5.63 dB<br/>0.001 % 5.67 dB<br/>0.0001 % 5.71 dB<br/>Peak 5.72 dB<br/>28.19 dBm</p> <p>LTE B25 20MHz 16QAM Mid channel</p>   |
| <p>LTE Band 25<br/>15 MHz</p> |  <p>Average Power<br/>22.90 dBm<br/>47.00 % at 0dB</p> <p>10.0 % 2.49 dB<br/>1.0 % 4.35 dB<br/>0.1 % 5.30 dB<br/>0.01 % 5.56 dB<br/>0.001 % 5.64 dB<br/>0.0001 % 5.67 dB<br/>Peak 5.67 dB<br/>28.57 dBm</p> <p>LTE B25 15MHz QPSK Mid channel</p>  |  <p>Average Power<br/>22.16 dBm<br/>43.48 % at 0dB</p> <p>10.0 % 2.79 dB<br/>1.0 % 5.39 dB<br/>0.1 % 5.57 dB<br/>0.01 % 5.60 dB<br/>0.001 % 5.61 dB<br/>0.0001 % 5.61 dB<br/>Peak 5.73 dB<br/>27.89 dBm</p> <p>LTE B25 15MHz 16QAM Mid channel</p>  |
| <p>LTE Band 25<br/>10 MHz</p> |  <p>Average Power<br/>22.78 dBm<br/>44.87 % at 0dB</p> <p>10.0 % 2.61 dB<br/>1.0 % 4.55 dB<br/>0.1 % 5.47 dB<br/>0.01 % 5.69 dB<br/>0.001 % 5.77 dB<br/>0.0001 % 5.81 dB<br/>Peak 5.83 dB<br/>28.61 dBm</p> <p>LTE B25 10MHz QPSK Mid channel</p> |  <p>Average Power<br/>22.44 dBm<br/>42.63 % at 0dB</p> <p>10.0 % 2.85 dB<br/>1.0 % 5.50 dB<br/>0.1 % 5.73 dB<br/>0.01 % 5.75 dB<br/>0.001 % 5.76 dB<br/>0.0001 % 5.76 dB<br/>Peak 5.94 dB<br/>28.38 dBm</p> <p>LTE B25 10MHz 16QAM Mid channel</p> |

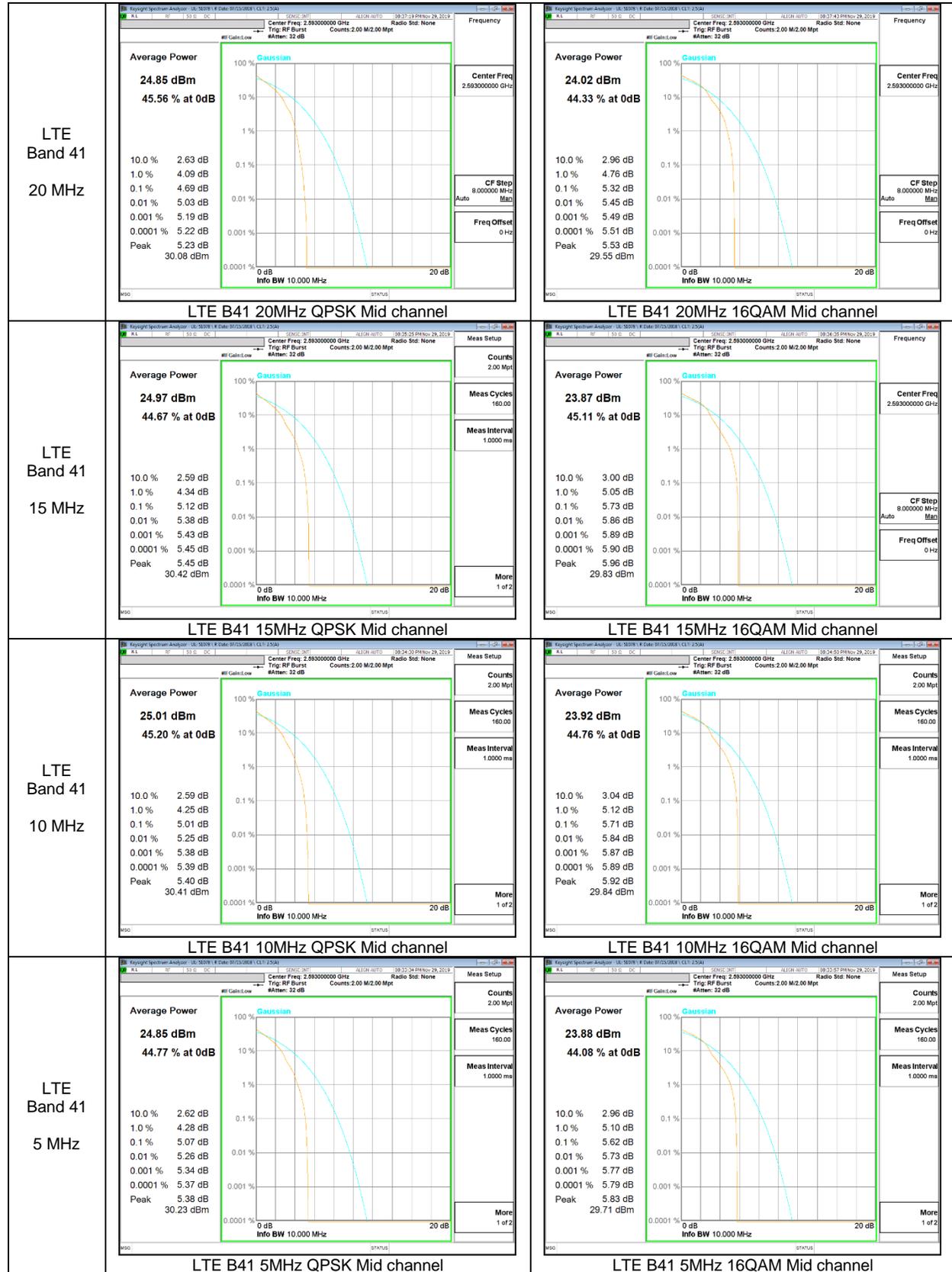
|   |  |  |
|---|--|--|
| <p>LTE<br/>Band 25<br/><br/>5 MHz</p>   |  <p>Average Power<br/><b>23.10 dBm</b><br/>45.54 % at 0dB</p> <p>10.0 % 2.58 dB<br/>1.0 % 4.59 dB<br/>0.1 % 5.20 dB<br/>0.01 % 5.28 dB<br/>0.001 % 5.32 dB<br/>0.0001 % 5.34 dB<br/>Peak 5.34 dB<br/>28.44 dBm</p> <p>LTE B25 5MHz QPSK Mid channel</p>     |  <p>Average Power<br/><b>22.32 dBm</b><br/>42.40 % at 0dB</p> <p>10.0 % 2.89 dB<br/>1.0 % 5.57 dB<br/>0.1 % 5.79 dB<br/>0.01 % 5.82 dB<br/>0.001 % 5.83 dB<br/>0.0001 % 5.83 dB<br/>Peak 5.94 dB<br/>28.26 dBm</p> <p>LTE B25 5MHz 16QAM Mid channel</p>     |
| <p>LTE<br/>Band 25<br/><br/>3 MHz</p>   |  <p>Average Power<br/><b>22.91 dBm</b><br/>47.02 % at 0dB</p> <p>10.0 % 2.56 dB<br/>1.0 % 4.52 dB<br/>0.1 % 5.31 dB<br/>0.01 % 5.39 dB<br/>0.001 % 5.43 dB<br/>0.0001 % 5.44 dB<br/>Peak 5.44 dB<br/>28.35 dBm</p> <p>LTE B25 3MHz QPSK Mid channel</p>    |  <p>Average Power<br/><b>22.20 dBm</b><br/>43.06 % at 0dB</p> <p>10.0 % 2.83 dB<br/>1.0 % 5.41 dB<br/>0.1 % 5.64 dB<br/>0.01 % 5.67 dB<br/>0.001 % 5.68 dB<br/>0.0001 % 5.68 dB<br/>Peak 5.71 dB<br/>27.91 dBm</p> <p>LTE B25 3MHz 16QAM Mid channel</p>    |
| <p>LTE<br/>Band 25<br/><br/>1.4 MHz</p> |  <p>Average Power<br/><b>22.88 dBm</b><br/>47.48 % at 0dB</p> <p>10.0 % 2.54 dB<br/>1.0 % 4.44 dB<br/>0.1 % 5.34 dB<br/>0.01 % 5.50 dB<br/>0.001 % 5.55 dB<br/>0.0001 % 5.56 dB<br/>Peak 5.56 dB<br/>28.44 dBm</p> <p>LTE B25 1.4MHz QPSK Mid channel</p> |  <p>Average Power<br/><b>22.23 dBm</b><br/>43.30 % at 0dB</p> <p>10.0 % 2.85 dB<br/>1.0 % 5.32 dB<br/>0.1 % 5.70 dB<br/>0.01 % 5.74 dB<br/>0.001 % 5.76 dB<br/>0.0001 % 5.76 dB<br/>Peak 5.76 dB<br/>27.99 dBm</p> <p>LTE B25 1.4MHz 16QAM Mid channel</p> |

**LTE Band 26**

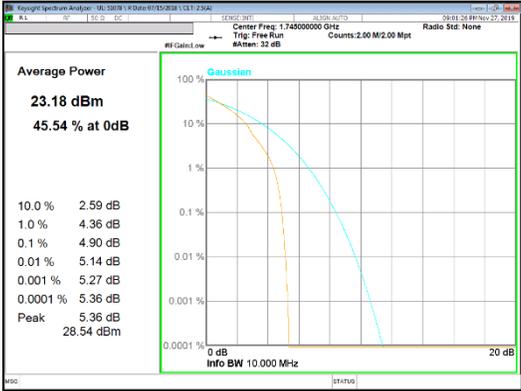
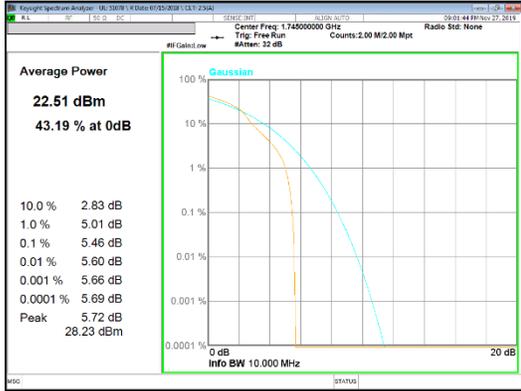
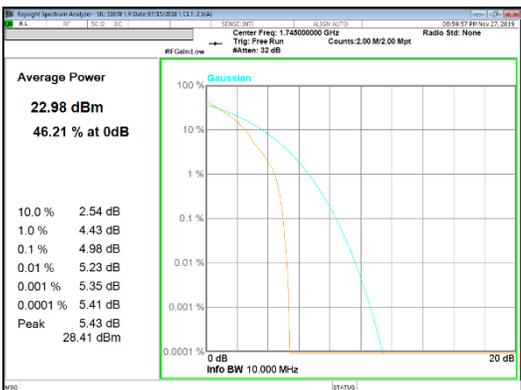
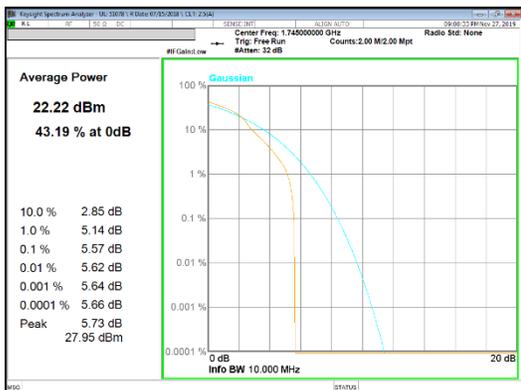
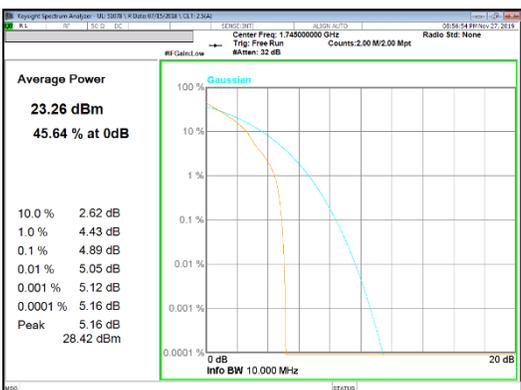
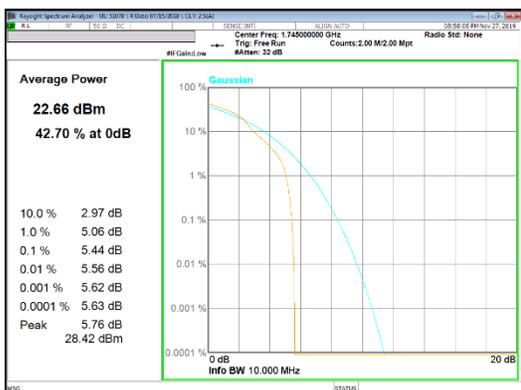
|                               |  |  |
|-------------------------------|--|--|
| <p>LTE Band 26<br/>15 MHz</p> |  <p>LTE B26 15MHz QPSK Mid channel</p>  |  <p>LTE B26 15MHz 16QAM Mid channel</p>  |
| <p>LTE Band 26<br/>10 MHz</p> |  <p>LTE B26 10MHz QPSK Mid channel</p> |  <p>LTE B26 10MHz 16QAM Mid channel</p> |
| <p>LTE Band 26<br/>5 MHz</p>  |  <p>LTE B26 5MHz QPSK Mid channel</p> |  <p>LTE B26 5MHz 16QAM Mid channel</p> |

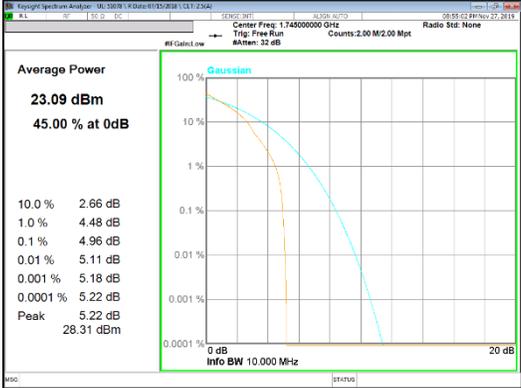
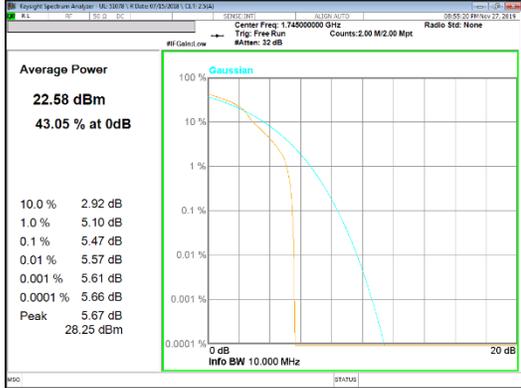
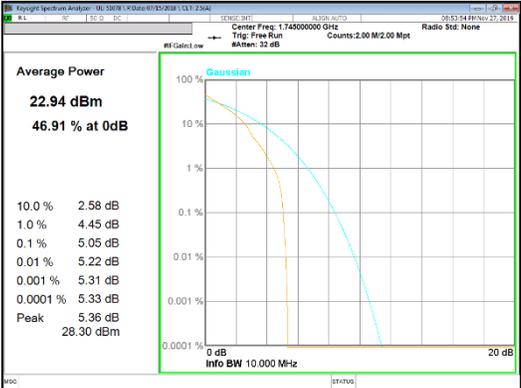
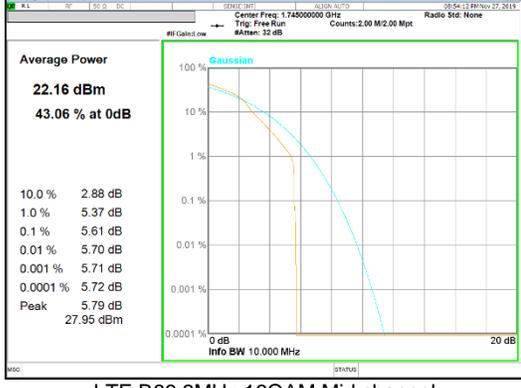
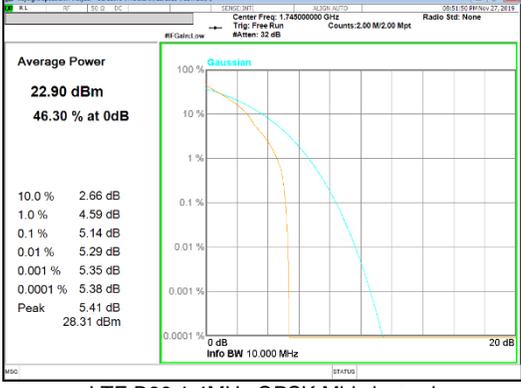
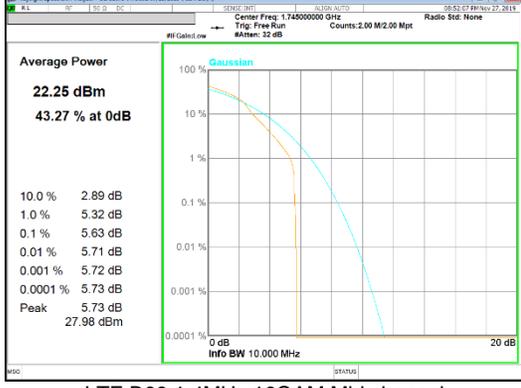


**LTE Band 41(PC2)**



**LTE Band 66**

|                               |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
|-------------------------------|---|--------|---------|-------|---------|-------|---------|--------|---------|---------|---------|----------|---------|------|---------|------|-----------|---|--------|---------|-------|---------|-------|---------|--------|---------|---------|---------|----------|---------|------|---------|------|-----------|
| <p>LTE Band 66<br/>20 MHz</p> |  <p><b>Average Power</b><br/>23.18 dBm<br/>45.54 % at 0dB</p> <table border="1"> <tr><td>10.0 %</td><td>2.59 dB</td></tr> <tr><td>1.0 %</td><td>4.36 dB</td></tr> <tr><td>0.1 %</td><td>4.90 dB</td></tr> <tr><td>0.01 %</td><td>5.14 dB</td></tr> <tr><td>0.001 %</td><td>5.27 dB</td></tr> <tr><td>0.0001 %</td><td>5.36 dB</td></tr> <tr><td>Peak</td><td>5.36 dB</td></tr> <tr><td>Peak</td><td>28.54 dBm</td></tr> </table> <p>LTE B66 20MHz QPSK Mid channel</p>   | 10.0 % | 2.59 dB | 1.0 % | 4.36 dB | 0.1 % | 4.90 dB | 0.01 % | 5.14 dB | 0.001 % | 5.27 dB | 0.0001 % | 5.36 dB | Peak | 5.36 dB | Peak | 28.54 dBm |  <p><b>Average Power</b><br/>22.51 dBm<br/>43.19 % at 0dB</p> <table border="1"> <tr><td>10.0 %</td><td>2.83 dB</td></tr> <tr><td>1.0 %</td><td>5.01 dB</td></tr> <tr><td>0.1 %</td><td>5.46 dB</td></tr> <tr><td>0.01 %</td><td>5.60 dB</td></tr> <tr><td>0.001 %</td><td>5.66 dB</td></tr> <tr><td>0.0001 %</td><td>5.69 dB</td></tr> <tr><td>Peak</td><td>5.72 dB</td></tr> <tr><td>Peak</td><td>28.23 dBm</td></tr> </table> <p>LTE B66 20MHz 16QAM Mid channel</p>   | 10.0 % | 2.83 dB | 1.0 % | 5.01 dB | 0.1 % | 5.46 dB | 0.01 % | 5.60 dB | 0.001 % | 5.66 dB | 0.0001 % | 5.69 dB | Peak | 5.72 dB | Peak | 28.23 dBm |
| 10.0 %                        | 2.59 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 1.0 %                         | 4.36 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.1 %                         | 4.90 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.01 %                        | 5.14 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.001 %                       | 5.27 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.0001 %                      | 5.36 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 5.36 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 28.54 dBm   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 10.0 %                        | 2.83 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 1.0 %                         | 5.01 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.1 %                         | 5.46 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.01 %                        | 5.60 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.001 %                       | 5.66 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.0001 %                      | 5.69 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 5.72 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 28.23 dBm   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| <p>LTE Band 66<br/>15 MHz</p> |  <p><b>Average Power</b><br/>22.98 dBm<br/>46.21 % at 0dB</p> <table border="1"> <tr><td>10.0 %</td><td>2.54 dB</td></tr> <tr><td>1.0 %</td><td>4.43 dB</td></tr> <tr><td>0.1 %</td><td>4.98 dB</td></tr> <tr><td>0.01 %</td><td>5.23 dB</td></tr> <tr><td>0.001 %</td><td>5.35 dB</td></tr> <tr><td>0.0001 %</td><td>5.41 dB</td></tr> <tr><td>Peak</td><td>5.43 dB</td></tr> <tr><td>Peak</td><td>28.41 dBm</td></tr> </table> <p>LTE B66 15MHz QPSK Mid channel</p>  | 10.0 % | 2.54 dB | 1.0 % | 4.43 dB | 0.1 % | 4.98 dB | 0.01 % | 5.23 dB | 0.001 % | 5.35 dB | 0.0001 % | 5.41 dB | Peak | 5.43 dB | Peak | 28.41 dBm |  <p><b>Average Power</b><br/>22.22 dBm<br/>43.19 % at 0dB</p> <table border="1"> <tr><td>10.0 %</td><td>2.85 dB</td></tr> <tr><td>1.0 %</td><td>5.14 dB</td></tr> <tr><td>0.1 %</td><td>5.57 dB</td></tr> <tr><td>0.01 %</td><td>5.62 dB</td></tr> <tr><td>0.001 %</td><td>5.64 dB</td></tr> <tr><td>0.0001 %</td><td>5.66 dB</td></tr> <tr><td>Peak</td><td>5.73 dB</td></tr> <tr><td>Peak</td><td>27.95 dBm</td></tr> </table> <p>LTE B66 15MHz 16QAM Mid channel</p>  | 10.0 % | 2.85 dB | 1.0 % | 5.14 dB | 0.1 % | 5.57 dB | 0.01 % | 5.62 dB | 0.001 % | 5.64 dB | 0.0001 % | 5.66 dB | Peak | 5.73 dB | Peak | 27.95 dBm |
| 10.0 %                        | 2.54 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 1.0 %                         | 4.43 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.1 %                         | 4.98 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.01 %                        | 5.23 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.001 %                       | 5.35 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.0001 %                      | 5.41 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 5.43 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 28.41 dBm   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 10.0 %                        | 2.85 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 1.0 %                         | 5.14 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.1 %                         | 5.57 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.01 %                        | 5.62 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.001 %                       | 5.64 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.0001 %                      | 5.66 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 5.73 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 27.95 dBm   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| <p>LTE Band 66<br/>10 MHz</p> |  <p><b>Average Power</b><br/>23.26 dBm<br/>45.64 % at 0dB</p> <table border="1"> <tr><td>10.0 %</td><td>2.62 dB</td></tr> <tr><td>1.0 %</td><td>4.43 dB</td></tr> <tr><td>0.1 %</td><td>4.89 dB</td></tr> <tr><td>0.01 %</td><td>5.05 dB</td></tr> <tr><td>0.001 %</td><td>5.12 dB</td></tr> <tr><td>0.0001 %</td><td>5.16 dB</td></tr> <tr><td>Peak</td><td>5.16 dB</td></tr> <tr><td>Peak</td><td>28.42 dBm</td></tr> </table> <p>LTE B66 10MHz QPSK Mid channel</p> | 10.0 % | 2.62 dB | 1.0 % | 4.43 dB | 0.1 % | 4.89 dB | 0.01 % | 5.05 dB | 0.001 % | 5.12 dB | 0.0001 % | 5.16 dB | Peak | 5.16 dB | Peak | 28.42 dBm |  <p><b>Average Power</b><br/>22.66 dBm<br/>42.70 % at 0dB</p> <table border="1"> <tr><td>10.0 %</td><td>2.97 dB</td></tr> <tr><td>1.0 %</td><td>5.06 dB</td></tr> <tr><td>0.1 %</td><td>5.44 dB</td></tr> <tr><td>0.01 %</td><td>5.56 dB</td></tr> <tr><td>0.001 %</td><td>5.62 dB</td></tr> <tr><td>0.0001 %</td><td>5.63 dB</td></tr> <tr><td>Peak</td><td>5.76 dB</td></tr> <tr><td>Peak</td><td>28.42 dBm</td></tr> </table> <p>LTE B66 10MHz 16QAM Mid channel</p> | 10.0 % | 2.97 dB | 1.0 % | 5.06 dB | 0.1 % | 5.44 dB | 0.01 % | 5.56 dB | 0.001 % | 5.62 dB | 0.0001 % | 5.63 dB | Peak | 5.76 dB | Peak | 28.42 dBm |
| 10.0 %                        | 2.62 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 1.0 %                         | 4.43 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.1 %                         | 4.89 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.01 %                        | 5.05 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.001 %                       | 5.12 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.0001 %                      | 5.16 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 5.16 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 28.42 dBm   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 10.0 %                        | 2.97 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 1.0 %                         | 5.06 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.1 %                         | 5.44 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.01 %                        | 5.56 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.001 %                       | 5.62 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| 0.0001 %                      | 5.63 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 5.76 dB   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |
| Peak                          | 28.42 dBm   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |   |        |         |       |         |       |         |        |         |         |         |          |         |      |         |      |           |

|                                    |  |  |
|------------------------------------|--|--|
| <p>LTE<br/>Band 66<br/>5 MHz</p>   |  <p>Average Power<br/><b>23.09 dBm</b><br/>45.00 % at 0dB</p> <p>10.0 % 2.66 dB<br/>1.0 % 4.48 dB<br/>0.1 % 4.96 dB<br/>0.01 % 5.11 dB<br/>0.001 % 5.18 dB<br/>0.0001 % 5.22 dB<br/>Peak 5.22 dB<br/>28.31 dBm</p> <p>LTE B66 5MHz QPSK Mid channel</p>     |  <p>Average Power<br/><b>22.58 dBm</b><br/>43.05 % at 0dB</p> <p>10.0 % 2.92 dB<br/>1.0 % 5.10 dB<br/>0.1 % 5.47 dB<br/>0.01 % 5.57 dB<br/>0.001 % 5.61 dB<br/>0.0001 % 5.66 dB<br/>Peak 5.67 dB<br/>28.25 dBm</p> <p>LTE B66 5MHz 16QAM Mid channel</p>     |
| <p>LTE<br/>Band 66<br/>3 MHz</p>   |  <p>Average Power<br/><b>22.94 dBm</b><br/>46.91 % at 0dB</p> <p>10.0 % 2.58 dB<br/>1.0 % 4.45 dB<br/>0.1 % 5.05 dB<br/>0.01 % 5.22 dB<br/>0.001 % 5.31 dB<br/>0.0001 % 5.33 dB<br/>Peak 5.36 dB<br/>28.30 dBm</p> <p>LTE B66 3MHz QPSK Mid channel</p>    |  <p>Average Power<br/><b>22.16 dBm</b><br/>43.06 % at 0dB</p> <p>10.0 % 2.88 dB<br/>1.0 % 5.37 dB<br/>0.1 % 5.61 dB<br/>0.01 % 5.70 dB<br/>0.001 % 5.71 dB<br/>0.0001 % 5.72 dB<br/>Peak 5.79 dB<br/>27.95 dBm</p> <p>LTE B66 3MHz 16QAM Mid channel</p>    |
| <p>LTE<br/>Band 66<br/>1.4 MHz</p> |  <p>Average Power<br/><b>22.90 dBm</b><br/>46.30 % at 0dB</p> <p>10.0 % 2.66 dB<br/>1.0 % 4.59 dB<br/>0.1 % 5.14 dB<br/>0.01 % 5.29 dB<br/>0.001 % 5.35 dB<br/>0.0001 % 5.38 dB<br/>Peak 5.41 dB<br/>28.31 dBm</p> <p>LTE B66 1.4MHz QPSK Mid channel</p> |  <p>Average Power<br/><b>22.25 dBm</b><br/>43.27 % at 0dB</p> <p>10.0 % 2.89 dB<br/>1.0 % 5.32 dB<br/>0.1 % 5.63 dB<br/>0.01 % 5.71 dB<br/>0.001 % 5.72 dB<br/>0.0001 % 5.73 dB<br/>Peak 5.73 dB<br/>27.98 dBm</p> <p>LTE B66 1.4MHz 16QAM Mid channel</p> |

**LTE Band 2**

LTE Band 2(Frequency range: 1850-1910 MHz) is covered by LTE Band 25 (Frequency range: 1850-1915 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

**LTE Band 4**

LTE Band 4 (Frequency range: 1710-1755 MHz) is covered by LTE Band 66 (Frequency range: 1710-1780 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

**LTE Band 5**

LTE Band 5 (Frequency range: 824-849 MHz) is covered by LTE Band 26 (Frequency range: 814-849 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

**LTE Band 17**

LTE Band 17 (Frequency range: 704-716 MHz) is covered by LTE Band 12 (Frequency range: 699-716 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

**LTE Band41(PC3)**

LTE Band 41(PC3, Frequency range : 2496-2690 MHz) is covered by LTE Band 41(PC2) (Frequency range: 2496-2690 MHz) due to same frequency range, same channel bandwidth and maximum tune-up limit is higher than LTE Band41(PC3).

## 9. LIMITS AND CONDUCTED RESULTS

### 9.1. OCCUPIED BANDWIDTH

#### RULE PART(S)

FCC: §2.1049

#### LIMITS

For reporting purposes only

#### TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

(KDB 971168 D01 Power Meas License Digital Systems v03r01)

#### RESULTS

See the following pages.

### 9.1.1. OCCUPIED BANDWIDTH RESULTS

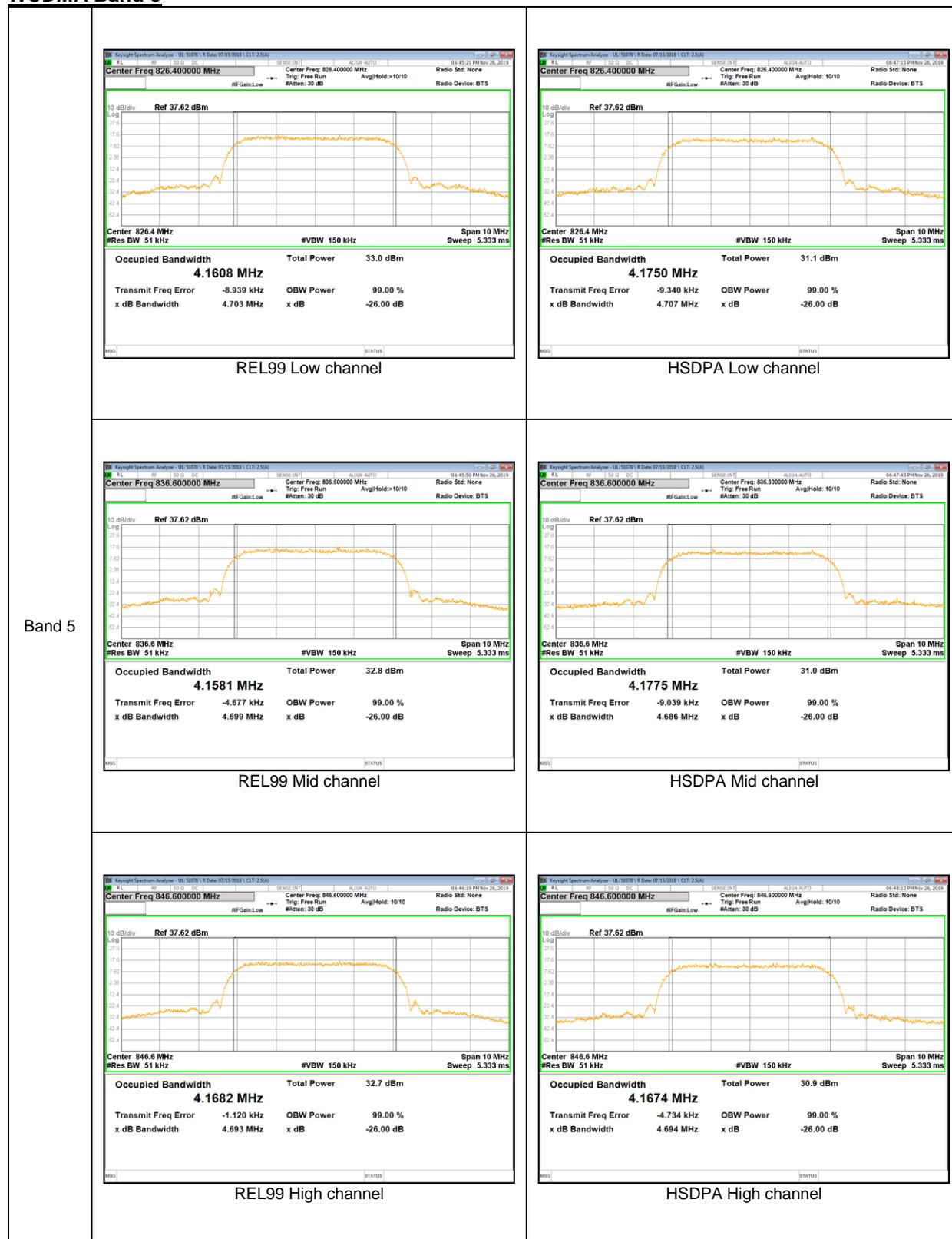
#### GSM 850



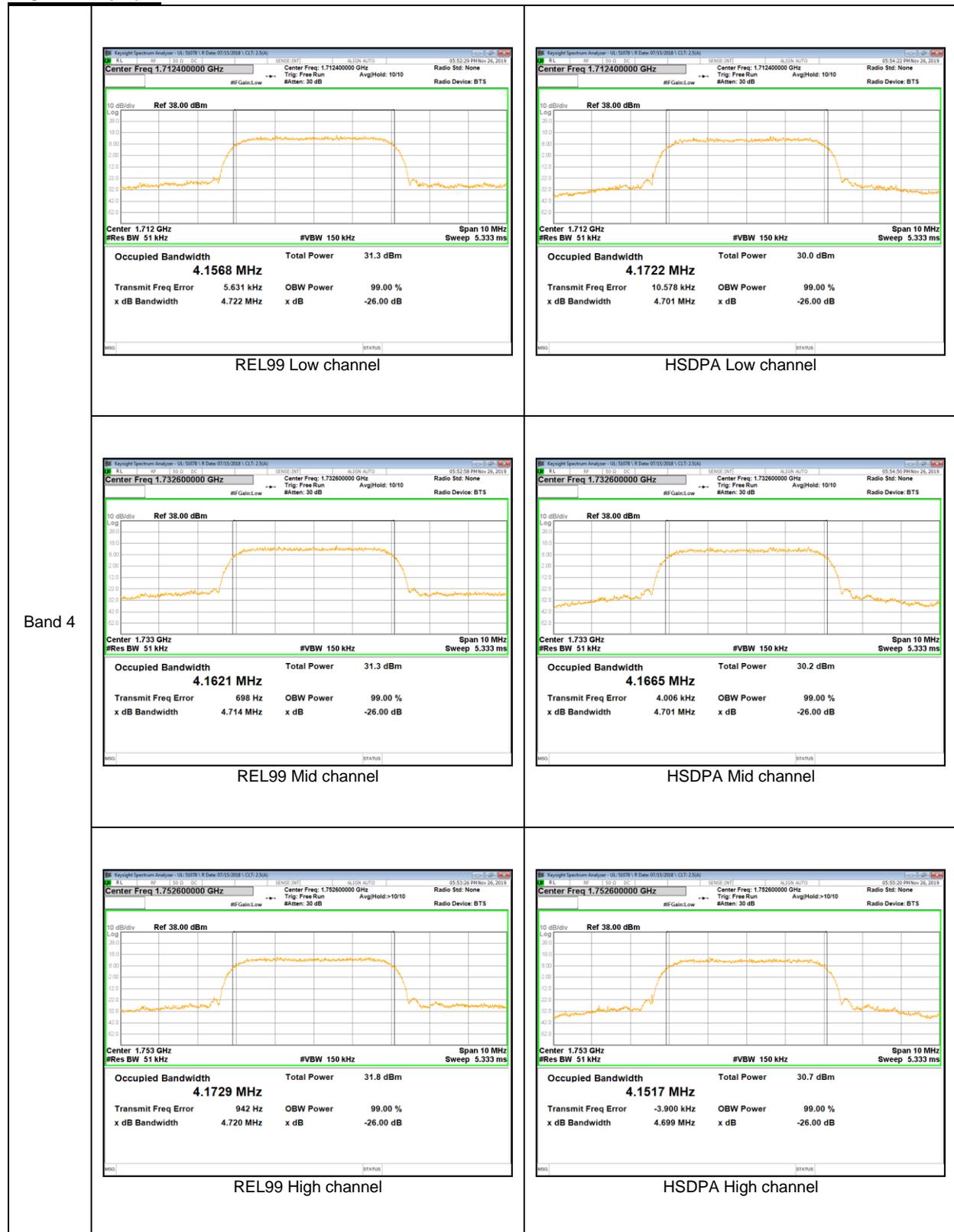
**GSM 1900**



**WCDMA Band 5**



**WCDMA Band 4**



**WCDMA Band 2**



**LTE Band 12**

