# FCC RADIO TEST REPORT

| | | |
|---|---|---|
| **FCC ID** | : | **PY7-87607S** |
| **Equipment** | : | **GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS, WPC and NFC** |
| **Brand Name** | : | **Sony** |
| **Applicant** | : | **Sony Mobile Communications Inc.<br>4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan** |
| **Manufacturer** | : | **Sony Mobile Communications Inc.<br>4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan** |
| **Standard** | : | **47 CFR Part 2, 22(H), 27** |

**The product was received on Dec. 04, 2019 and testing was started from Jan. 25, 2020 and completed on Jan. 24, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.**

**The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.**

**The test results in this spot check data report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.**

Louis Wu

**Approved by: Louis Wu**

***SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory***
*No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)*

# Table of Contents

**History of this test report** ..... **3**
**Summary of Test Result** ..... **4**
**1 General Description** ..... **6**
1.1 Product Feature of Equipment Under Test ..... 6
1.2 Modification of EUT ..... 6
1.3 Emission Designator ..... 7
1.4 Testing Location ..... 9
1.5 Applicable Standards ..... 9
**2 Test Configuration of Equipment Under Test** ..... **10**
2.1 Test Mode ..... 10
2.2 Connection Diagram of Test System ..... 11
2.3 Support Unit used in test configuration and system ..... 11
2.4 Frequency List of Low/Middle/High Channels ..... 12
**3 Conducted Test Items** ..... **14**
3.1 Measuring Instruments ..... 14
3.2 Conducted Output Power and ERP/EIRP ..... 15
3.3 Peak-to-Average Ratio ..... 16
3.4 Occupied Bandwidth ..... 17
3.5 Conducted Band Edge ..... 18
3.6 Conducted Spurious Emission ..... 20
3.7 Frequency Stability ..... 21
**4 Radiated Test Items** ..... **22**
4.1 Measuring Instruments ..... 22
4.2 Radiated Spurious Emission Measurement ..... 23
**5 List of Measuring Equipment** ..... **24**
**6 Uncertainty of Evaluation** ..... **26**
**Appendix A. Test Results of Conducted Test**
**Appendix B. Test Results of ERP/EIRP and Radiated Test**

# History of this test report

| Report No. | Version | Description | Issued Date |
|---|---|---|---|
| FG9O1543-01B | 01 | Initial issue of report | Feb. 20, 2020 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

# Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---|---|---|---|---|
| 3.2 | §2.1046 | Conducted Output Power | Reporting only | - |
| | §22.913 (a)(2) | Effective Radiated Power (Band 5) | Pass | |
| | §27.50 (b)(10)<br>§27.50 (c)(10) | Effective Radiated Power (Band 13) (Band 17) | | |
| | §27.50 (h)(2) | Equivalent Isotropic Radiated Power (Band 7) (Band 41) | | |
| | §27.50 (d)(4) | Equivalent Isotropic Radiated Power (Band 4) | | |
| 3.3 | §27.50 (d)(5) | Peak-to-Average Ratio | Pass | - |
| 3.4 | §2.1049 | Occupied Bandwidth | Reporting only | - |
| 3.5 | §2.1051<br>§22.917 (a)<br>§27.53 (c)(2)(4)<br>§27.53 (g)<br>§27.53 (h) | Conducted Band Edge Measurement (Band 4) (Band 5) (Band 13) (Band 17) | Pass | - |
| | §2.1051<br>§27.53 (m)(4) | Conducted Band Edge Measurement (Band 7) (Band 41) | | |
| 3.6 | §2.1051<br>§22.917 (a)<br>§27.53 (c)(2)<br>§27.53 (g)<br>§27.53 (h) | Conducted Spurious Emission (Band 4) (Band 5) (Band 13) (Band 17) | Pass | - |
| | §2.1051<br>§27.53 (m)(4) | Conducted Spurious Emission (Band 7) (Band 41) | | |
| 3.7 | §2.1055<br>§22.355<br>§27.54 | Frequency Stability Temperature & Voltage | Pass | - |

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---|---|---|---|---|
| 4.2 | §2.1053<br>§22.917 (a)<br>§27.53 (c)(2)<br>§27.53 (f)<br>§27.53 (g)<br>§27.53 (h) | Radiated Spurious Emission<br>(Band 4) (Band 5) (Band 13)<br>(Band 17) | Pass | Under limit<br>15.86 dB at<br>10737.000 MHz |
| | §2.1051<br>§27.53 (m)(4) | Radiated Spurious Emission<br>(Band 7) (Band 41) | | |

**Remark:** Except LTE band 17 test data are carrying out, this is a spot check data report and data performed in appendix of this report are chosen from the worst case of the original FCC ID report. All the test cases were performed on original report which can be referred to Sporton Report Number FG9O1542-02B.

| **Declaration of Conformity:** |
|---|
| The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. |
| **Comments and Explanations:** |
| The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification. |

**Reviewed by: Wii Chang**

**Report Producer: Ann Lee**

# 1 General Description

## 1.1 Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, DTS/UNII a/b/g/n/ac/ax, NFC, GNSS and WPC.

| Product Specification subjective to this standard | |
|---|---|
| **Antenna Type** | Loop Antenna |

| EUT Information List | | | |
|---|---|---|---|
| HW Version | SW Version | S/N | Performed Test Item |
| A | 0.198 | BH950070J7 | Conducted Measurement |
| | 0.360 | QV7100132C | Radiated Spurious Emission |
| | | | ERP/EIRP Test |

| Accessory List | |
|---|---|
| **AC Adapter** | Model Name : UCH32 |
| | S/N: 6218W30200140 |
| **Earphone** | Model Name : STH40D |
| | S/N : N/A |
| **USB Cable** | Model Name : UCB24 |
| | S/N : N/A |
| **Audio Cable** | Model Name : EC234 |
| | S/N : N/A |

**Note:**

1. Above EUT list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test, and the serial number of each type of accessories is listed in each section of this report. .
3. For other wireless features of this EUT, test report will be issued separately.

## 1.2 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.3 Emission Designator

| LTE Band 4 | | QPSK | | | 16QAM | | | 64QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BW (MHz) | Frequency Range (MHz) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum EIRP(W) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum EIRP(W) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum EIRP(W) |
| **1.4** | 1710.7~1754.3 | - | - | 0.0323 | - | - | 0.0308 | - | - | 0.0301 |
| **3** | 1711.5~1753.5 | - | - | 0.0330 | - | - | 0.0314 | - | - | 0.0306 |
| **5** | 1712.5~1752.5 | - | - | 0.0331 | - | - | 0.0313 | - | - | 0.0308 |
| **10** | 1715.0~1750.0 | - | - | 0.0336 | - | - | 0.0317 | - | - | 0.0310 |
| **15** | 1717.5~1747.5 | - | - | 0.0349 | - | - | 0.0332 | - | - | 0.0324 |
| **20** | 1720.0~1745.0 | - | - | 0.0351 | - | - | 0.0335 | - | - | 0.0325 |
| **LTE Band 5** | | **QPSK** | | | **16QAM** | | | **64QAM** | | |
| **BW (MHz)** | **Frequency Range (MHz)** | **Emission Designator (99%OBW)** | **Frequency Tolerance (ppm)** | **Maximum ERP(W)** | **Emission Designator (99%OBW)** | **Frequency Tolerance (ppm)** | **Maximum ERP(W)** | **Emission Designator (99%OBW)** | **Frequency Tolerance (ppm)** | **Maximum ERP(W)** |
| **1.4** | 824.7~848.3 | - | - | 0.0333 | - | - | 0.0254 | - | - | 0.0199 |
| **3** | 825.5~847.5 | - | - | 0.0336 | - | - | 0.0256 | - | - | 0.0201 |
| **5** | 826.5~846.5 | - | - | 0.0337 | - | - | 0.0260 | - | - | 0.0201 |
| **10** | 829.0~844.0 | - | - | 0.0337 | - | - | 0.0259 | - | - | 0.0201 |
| **LTE Band 7** | | **QPSK** | | | **16QAM** | | | **64QAM** | | |
| **BW (MHz)** | **Frequency Range (MHz)** | **Emission Designator (99%OBW)** | **Frequency Tolerance (ppm)** | **Maximum EIRP(W)** | **Emission Designator (99%OBW)** | **Frequency Tolerance (ppm)** | **Maximum EIRP(W)** | **Emission Designator (99%OBW)** | **Frequency Tolerance (ppm)** | **Maximum EIRP(W)** |
| **5** | 2502.5~2567.5 | - | - | 0.0444 | - | - | 0.0415 | - | - | 0.0408 |
| **10** | 2505.0~2565.0 | - | - | 0.0444 | - | - | 0.0418 | - | - | 0.0410 |
| **15** | 2507.5~2562.5 | - | - | 0.0471 | - | - | 0.0443 | - | - | 0.0436 |
| **20** | 2510.0~2560.0 | - | - | 0.0474 | - | - | 0.0444 | - | - | 0.0436 |

| LTE Band 13 | | QPSK | | | 16QAM | | | 64QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BW (MHz) | Frequency Range (MHz) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum ERP(W) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum ERP(W) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum ERP(W) |
| 5 | 779.5 ~ 784.5 | - | - | 0.0404 | - | - | 0.0307 | - | - | 0.0239 |
| 10 | 782.0 | - | - | 0.0405 | - | - | 0.0306 | - | - | 0.0238 |
| LTE Band 17 | | QPSK | | | 16QAM | | | 64QAM | | |
| BW (MHz) | Frequency Range (MHz) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum ERP(W) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum ERP(W) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum ERP(W) |
| 5 | 706.5 ~ 713.5 | 4M49G7D | - | 0.0332 | 4M50W7D | - | 0.0254 | 4M50W7D | - | 0.0200 |
| 10 | 709.0~711.0 | 9M01G7D | 0.0090 | 0.0333 | 9M03W7D | - | 0.0254 | 9M03W7D | - | 0.0196 |
| LTE Band 41 | | QPSK | | | 16QAM | | | 64QAM | | |
| BW (MHz) | Frequency Range (MHz) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum EIRP(W) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum EIRP(W) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum EIRP(W) |
| 5 | 2498.5 ~ 2687.5 | - | - | 0.0431 | - | - | 0.0399 | - | - | 0.0390 |
| 10 | 2501.0 ~ 2685.0 | - | - | 0.0431 | - | - | 0.0398 | - | - | 0.0393 |
| 15 | 2503.5 ~ 2682.5 | - | - | 0.0445 | - | - | 0.0418 | - | - | 0.0401 |
| 20 | 2506.0 ~ 2680.0 | - | - | 0.0446 | - | - | 0.0409 | - | - | 0.0399 |

## 1.4 Testing Location

| | |
|---|---|
| **Test Site** | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory |
| **Test Site Location** | No.52, Huaya 1st Rd., Guishan Dist.,<br>Taoyuan City, Taiwan (R.O.C.)<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 |
| **Test Site No.** | **Sporton Site No.** |
| | TH05-HY |
| **Test Engineer** | George Chen |
| **Temperature** | 24~26 ℃ |
| **Relative Humidity** | 54~56 % |

**Note:** The test site complies with ANSI C63.4 2014 requirement.

| | |
|---|---|
| **Test Site** | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory |
| **Test Site Location** | No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist.,<br>Taoyuan City, Taiwan (R.O.C.)<br>TEL: +886-3-327-0868<br>FAX: +886-3-327-0855 |
| **Test Site No.** | **Sporton Site No.** |
| | 03CH12-HY |
| **Test Engineer** | Jack Cheng and Lance Chiang |
| **Temperature** | 22~26 ℃ |
| **Relative Humidity** | 52~62 % |

**Note:** The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW0007

## 1.5 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.26-2015
- ANSI / TIA-603-E
- 47 CFR Part 2, 22(H), 27
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

# 2 Test Configuration of Equipment Under Test

## 2.1 Test Mode

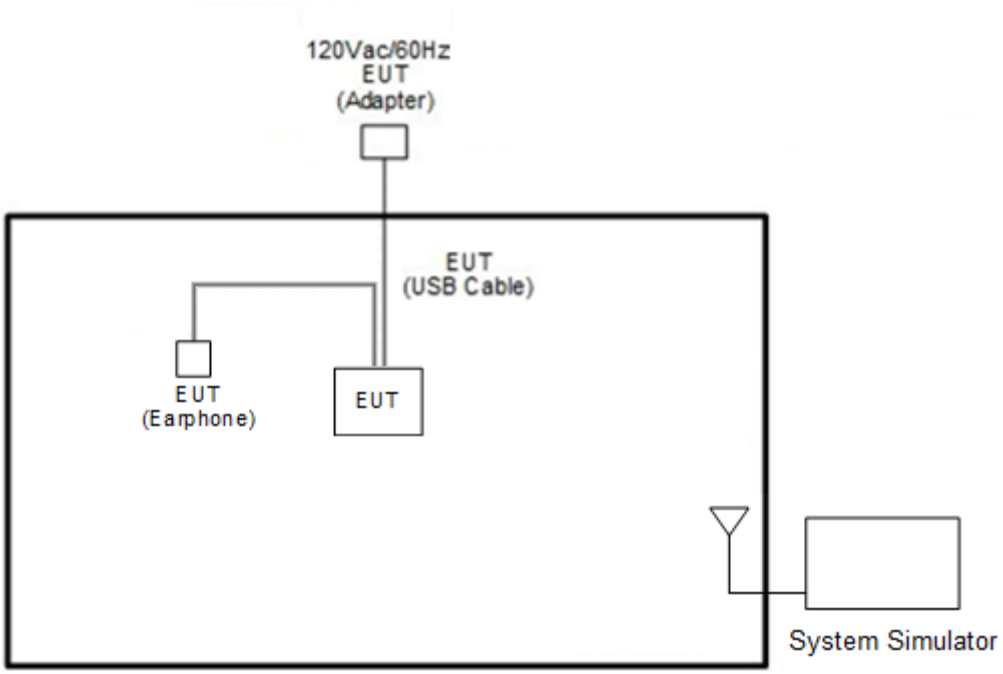
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane for Band 4,7,17,41; Y plane for Band 5 and 13) were recorded in this report.

| Test Items | Band | Bandwidth (MHz) | | | | | | Modulation | | | RB # | | | Test Channel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.4 | 3 | 5 | 10 | 15 | 20 | QPSK | 16QAM | 64QAM | 1 | Half | Full | L | M | H |
| Max. Output Power | 4 | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v |
| | 5 | v | v | v | v | - | - | v | v | v | v | v | v | v | v | v |
| | 7 | - | - | v | v | v | v | v | v | v | v | v | v | v | v | v |
| | 13 | - | - | v | v | - | - | v | v | v | v | v | v | v | v | v |
| | 17 | - | - | v | v | - | - | v | v | v | v | v | v | v | v | v |
| | 41 | - | - | v | v | v | v | v | v | v | v | v | v | v | v | v |
| Peak-to-Average Ratio | 17 | - | - | | v | - | - | v | v | v | v | | v | v | v | v |
| 26dB and 99% Bandwidth | 17 | - | - | v | v | - | - | v | v | v | | | v | v | v | v |
| Conducted Band Edge | 17 | - | - | v | v | - | - | v | v | v | | | v | v | v | v |
| Conducted Spurious Emission | 17 | - | - | v | v | - | - | v | v | v | v | | | v | v | v |
| Frequency Stability | 17 | - | - | | v | - | - | v | | | | | v | | v | |
| E.R.P / E.I.R.P | 4 | v | v | v | v | v | v | v | v | v | v | v | v | v | v | v |
| | 5 | v | v | v | v | - | - | v | v | v | v | v | v | v | v | v |
| | 7 | - | - | v | v | v | v | v | v | v | v | v | v | v | v | v |
| | 13 | - | - | v | v | - | - | v | v | v | v | v | v | v | v | v |
| | 17 | - | - | v | v | - | - | v | v | v | v | v | v | v | v | v |
| | 41 | - | - | v | v | v | v | v | v | v | v | v | v | v | v | v |

| Test Items | Band | Bandwidth (MHz) | | | | | | Modulation | | | RB # | | | Test Channel | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.4 | 3 | 5 | 10 | 15 | 20 | QPSK | 16QAM | 64QAM | 1 | Half | Full | L | M | H |
| Radiated Spurious Emission | 4 | Worst Case | | | | | | | | | | | | | | v |
| | 5 | Worst Case | | | | | | | | | | | | | v | |
| | 7 | Worst Case | | | | | | | | | | | | | v | |
| | 13 | Worst Case | | | | | | | | | | | | | | v |
| | 17 | Worst Case | | | | | | | | | | | | v | v | v |
| | 41 | Worst Case | | | | | | | | | | | | | | v |
| Remark | 1. The mark "**v** " means that this configuration is chosen for testing<br>2. The mark "-" means that this bandwidth is not supported.<br>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.<br>4. Wider operating range bandwidth covers narrower one when the power is higher or the same. | | | | | | | | | | | | | | | |

## 2.2 Connection Diagram of Test System




## 2.3 Support Unit used in test configuration and system

| Item | Equipment | Trade Name | Model No. | FCC ID | Data Cable | Power Cord |
|---|---|---|---|---|---|---|
| 1. | LTE Base Station | Anritsu | MT8820C | N/A | N/A | Unshielded, 1.8 m |

## 2.4 Frequency List of Low/Middle/High Channels

| LTE Band 4 Channel and Frequency List | | | | |
|---|---|---|---|---|
| **BW [MHz]** | **Channel/Frequency(MHz)** | **Lowest** | **Middle** | **Highest** |
| 20 | Channel | 20050 | 20175 | 20300 |
| | Frequency | 1720 | 1732.5 | 1745 |
| 15 | Channel | 20025 | 20175 | 20325 |
| | Frequency | 1717.5 | 1732.5 | 1747.5 |
| 10 | Channel | 20000 | 20175 | 20350 |
| | Frequency | 1715 | 1732.5 | 1750 |
| 5 | Channel | 19975 | 20175 | 20375 |
| | Frequency | 1712.5 | 1732.5 | 1752.5 |
| 3 | Channel | 19965 | 20175 | 20385 |
| | Frequency | 1711.5 | 1732.5 | 1753.5 |
| 1.4 | Channel | 19957 | 20175 | 20393 |
| | Frequency | 1710.7 | 1732.5 | 1754.3 |

| LTE Band 5 Channel and Frequency List | | | | |
|---|---|---|---|---|
| **BW [MHz]** | **Channel/Frequency(MHz)** | **Lowest** | **Middle** | **Highest** |
| 10 | Channel | 20450 | 20525 | 20600 |
| | Frequency | 829 | 836.5 | 844 |
| 5 | Channel | 20425 | 20525 | 20625 |
| | Frequency | 826.5 | 836.5 | 846.5 |
| 3 | Channel | 20415 | 20525 | 20635 |
| | Frequency | 825.5 | 836.5 | 847.5 |
| 1.4 | Channel | 20407 | 20525 | 20643 |
| | Frequency | 824.7 | 836.5 | 848.3 |

| LTE Band 7 Channel and Frequency List | | | | |
|---|---|---|---|---|
| **BW [MHz]** | **Channel/Frequency(MHz)** | **Lowest** | **Middle** | **Highest** |
| 20 | Channel | 20850 | 21100 | 21350 |
| | Frequency | 2510 | 2535 | 2560 |
| 15 | Channel | 20825 | 21100 | 21375 |
| | Frequency | 2507.5 | 2535 | 2562.5 |
| 10 | Channel | 20800 | 21100 | 21400 |
| | Frequency | 2505 | 2535 | 2565 |
| 5 | Channel | 20775 | 21100 | 21425 |
| | Frequency | 2502.5 | 2535 | 2567.5 |

| LTE Band 13 Channel and Frequency List | | | | |
|---|---|---|---|---|
| **BW [MHz]** | **Channel/Frequency(MHz)** | **Lowest** | **Middle** | **Highest** |
| 10 | Channel | - | 23230 | - |
| | Frequency | - | 782 | - |
| 5 | Channel | 23205 | 23230 | 23255 |
| | Frequency | 779.5 | 782 | 784.5 |

| LTE Band 17 Channel and Frequency List | | | | |
|---|---|---|---|---|
| **BW [MHz]** | **Channel/Frequency(MHz)** | **Lowest** | **Middle** | **Highest** |
| 10 | Channel | 23780 | 23790 | 23800 |
| | Frequency | 709 | 710 | 711 |
| 5 | Channel | 23755 | 23790 | 23825 |
| | Frequency | 706.5 | 710 | 713.5 |

| LTE Band 41 Channel and Frequency List | | | | |
|---|---|---|---|---|
| **BW [MHz]** | **Channel/Frequency(MHz)** | **Lowest** | **Middle** | **Highest** |
| 20 | Channel | 39750 | 40620 | 41490 |
| | Frequency | 2506.0 | 2593.0 | 2680.0 |
| 15 | Channel | 39725 | 40620 | 41515 |
| | Frequency | 2503.5 | 2593.0 | 2682.5 |
| 10 | Channel | 39700 | 40620 | 41540 |
| | Frequency | 2501.0 | 2593.0 | 2685.0 |
| 5 | Channel | 39675 | 40620 | 41565 |
| | Frequency | 2498.5 | 2593.0 | 2687.5 |

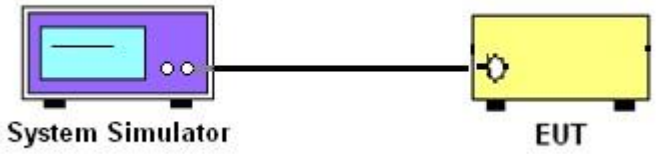
# 3 Conducted Test Items

## 3.1 Measuring Instruments

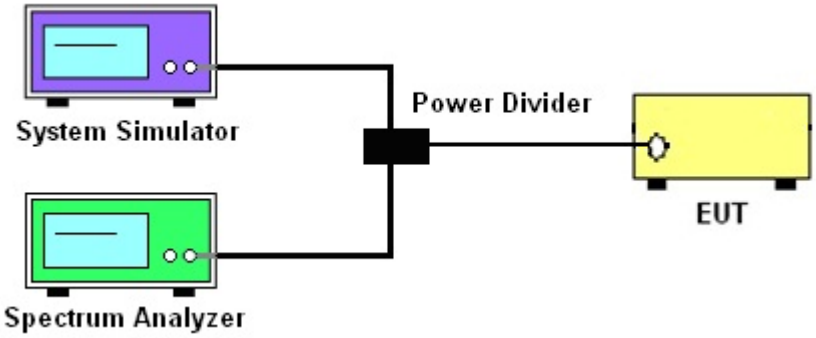
See list of measuring instruments of this test report.

### 3.1.1 Test Setup

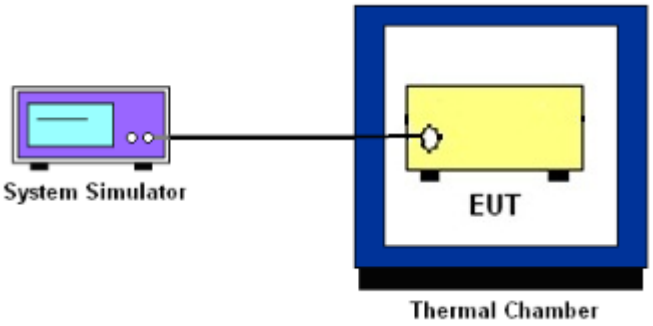
### 3.1.2 Conducted Output Power




### 3.1.3 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission




### 3.1.4 Frequency Stability




### 3.1.5 Test Result of Conducted Test

Please refer to Appendix A.

## 3.2 Conducted Output Power and ERP/EIRP

### 3.2.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 13 and Band 17

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 7 and Band 41

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4

According to KDB 412172 D01 Power Approach,

EIRP = $P_T + G_T – L_C$, ERP = EIRP -2.15, where

$P_T$ = transmitter output power in dBm

$G_T$ = gain of the transmitting antenna in dBi

$L_C$ = signal attenuation in the connecting cable between the transmitter and antenna in dB

### 3.2.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

## 3.3 Peak-to-Average Ratio

### 3.3.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

### 3.3.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.2.6

1. The EUT was connected to spectrum and system simulator via a power divider.
2. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
3. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
4. Record the deviation as Peak to Average Ratio.

## 3.4 Occupied Bandwidth

### 3.4.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

### 3.4.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.4.3 (26dB) and Section 5.4.4 (99OB)

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
3. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
4. Set the detection mode to peak, and the trace mode to max hold.
5. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
   (this is the reference value)
6. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
7. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “–X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

## 3.5 Conducted Band Edge

### 3.5.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (c)

For operations in the 776-788 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least 65 + 10 log10 p(watts), dB, for mobile and portable equipment.

27.53 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53 (h)

For operations in the 1710 – 1755 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

### 3.5.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
5. Set spectrum analyzer with RMS detector.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. Checked that all the results comply with the emission limit line.

   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   For LTE Band 7, 41

   The other 40 dB, and 55 dB have additionally applied same calculation above.

## 3.6 Conducted Spurious Emission

### 3.6.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For LTE Band 7, 41

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its $10^{th}$ harmonic.

### 3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
6. Set spectrum analyzer with RMS detector.
7. Taking the record of maximum spurious emission.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   For LTE Band 7, 41

   The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

## 3.7 Frequency Stability

### 3.7.1 Description of Frequency Stability Measurement

22.355

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

### 3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

### 3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at 20±5° C and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

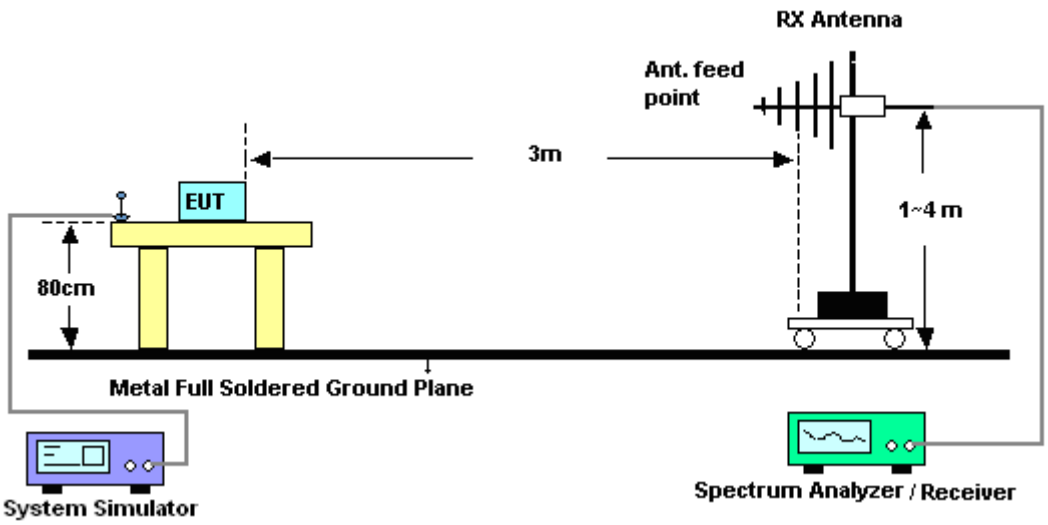
# 4 Radiated Test Items

## 4.1 Measuring Instruments

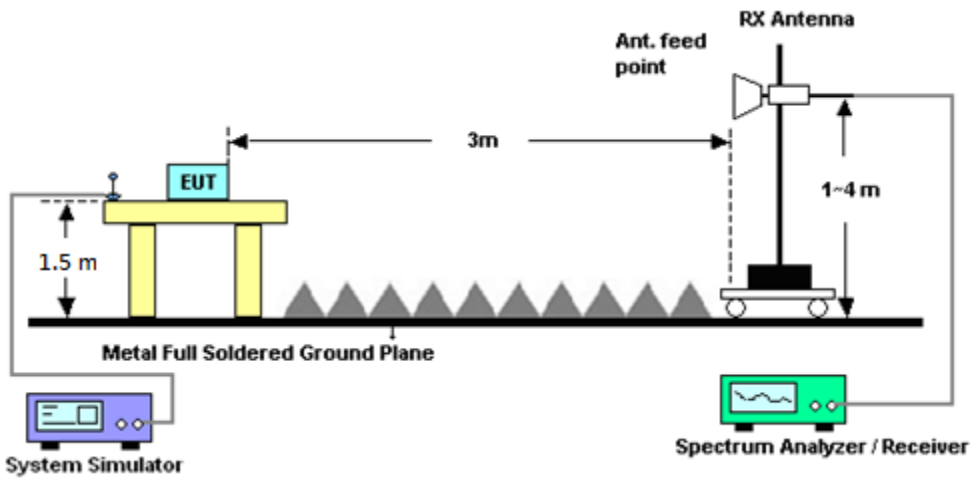
See list of measuring instruments of this test report.

### 4.1.1 Test Setup

**For radiated test from 30MHz to 1GHz**




**For radiated test above 1GHz**




### 4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

## 4.2 Radiated Spurious Emission Measurement

### 4.2.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For LTE Band 7, 41

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

For LTE Band 13

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

### 4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

    For LTE Band 7, 41

    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

    EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain

    ERP (dBm) = EIRP - 2.15

# 5 List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|---|---|---|---|---|---|---|---|---|
| Loop Antenna | Rohde & Schwarz | HFH2-Z2 | 100315 | 9 kHz~30 MHz | Dec. 26, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Dec. 25, 2020 | Radiation (03CH12-HY) |
| Bilog Antenna | TESEQ | CBL 6111D & 00800N1D01N -06 | 41912 & 05 | 30MHz~1GHz | Feb. 12, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Feb. 11, 2020 | Radiation (03CH12-HY) |
| Horn Antenna | SCHWARZBECK | BBHA 9120D | 9120D-1328 | 1GHz ~ 18GHz | Nov. 14, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Nov. 13, 2020 | Radiation (03CH12-HY) |
| Horn Antenna | SCHWARZBECK | BBHA 9120D | 9120D-1522 | 1GHz ~ 18GHz | Sep. 19, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Sep. 18, 2020 | Radiation (03CH12-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK | BBHA 9170 | BBHA9170584 | 18GHz ~ 40GHz | Dec. 10, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Dec. 09, 2020 | Radiation (03CH12-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK | BBHA 9170 | BBHA9170251 | 18GHz- 40GHz | Nov. 26, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Nov. 25, 2020 | Radiation (03CH12-HY) |
| Preamplifier | COM-POWER | PA-103 | 161075 | 10MHz~1GHz | Mar. 25, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Mar. 24, 2020 | Radiation (03CH12-HY) |
| Preamplifier | Jet-Power | JPA00101800-30-10P | 1601180002 | 1GHz~18GHz | Aug. 01, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Jul. 01, 2020 | Radiation (03CH12-HY) |
| Preamplifier | EMEC | EM18G40G | 060715 | 18GHz ~ 40GHz | Dec. 13, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Dec. 12, 2020 | Radiation (03CH12-HY) |
| Preamplifier | Agilent | 8449B | 3008A02375 | 1GHz~26.5GHz | May 27, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | May 26, 2020 | Radiation (03CH12-HY) |
| EMI Test Receiver | Agilent | N9038A(MXE) | MY53290045 | 20MHz~8.4GHz | Jan. 18, 2020 | Jan. 25, 2020~ Jan. 28, 2020 | Jan. 17, 2021 | Radiation (03CH12-HY) |
| Spectrum Analyzer | Keysight | N9010A | MY55370526 | 10Hz~44GHz | Mar. 19, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Mar. 18, 2020 | Radiation (03CH12-HY) |
| Signal Generator | Rohde & Schwarz | SMB100A | 101107 | 100kHz~40GHz | Aug. 27, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Aug. 26, 2020 | Radiation (03CH12-HY) |
| Hygrometer | TECPEL | DTM-303B | TP161243 | N/A | May 11, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | May 10, 2020 | Radiation (03CH12-HY) |
| Notch Filter | Wainwright | WRCG1710/1755-1690/1775-45/7SS | SN2 | AWS Band | Nov. 05, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Nov. 04, 2020 | Radiation (03CH12-HY) |
| Notch Filter | Wainwright | WRCT2500/2570-10/40-10SSK | SN1 R | LTE Band 7 | Aug. 22, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Aug. 21, 2020 | Radiation (03CH12-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 126E | 0058/126E | 30M-18G | Mar. 13, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Mar. 12, 2020 | Radiation (03CH12-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 102 | 505134/2 | 30M~40GHz | Feb. 26, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Feb. 25, 2020 | Radiation (03CH12-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 102 | 800740/2 | 30M~40GHz | Feb. 26, 2019 | Jan. 25, 2020~ Jan. 28, 2020 | Feb. 25, 2020 | Radiation (03CH12-HY) |
| Controller | EMEC | EM1000 | N/A | Control Turn table & Ant Mast | N/A | Jan. 25, 2020~ Jan. 28, 2020 | N/A | Radiation (03CH12-HY) |
| Antenna Mast | EMEC | AM-BS-4500-B | N/A | 1m~4m | N/A | Jan. 25, 2020~ Jan. 28, 2020 | N/A | Radiation (03CH12-HY) |
| Turn Table | EMEC | TT2000 | N/A | 0~360 Degree | N/A | Jan. 25, 2020~ Jan. 28, 2020 | N/A | Radiation (03CH12-HY) |
| Software | Audix | E3 6.2009-8-24 | RK-000989 | N/A | N/A | Jan. 25, 2020~ Jan. 28, 2020 | N/A | Radiation (03CH12-HY) |

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|---|---|---|---|---|---|---|---|---|
| Base Station (Measure) | Anritsu | MT8821C | 6201664755 | GSM / GPRS /WCDMA / LTE FDD/TDD with 44) /LTE-3CC DLCA,2CC ULCA | Mar. 03, 2019 | Dec. 28, 2019~ Jan. 06, 2020 | Mar. 02, 2020 | Conducted (TH05-HY) |
| Spectrum Analyzer | Rohde & Schwarz | FSV40 | 101397 | 10Hz~40GHz | Nov. 15, 2019 | Dec. 28, 2019~ Jan. 06, 2020 | Nov. 14, 2020 | Conducted (TH05-HY) |
| Temperature Chamber | ESPEC | SH-641 | 92013720 | -40℃~90℃ | Sep. 02, 2019 | Dec. 28, 2019~ Jan. 06, 2020 | Sep. 01, 2020 | Conducted (TH05-HY) |
| Programmable Power Supply | GW Instek | PSS-2005 | EL890089 | 1V~20V 0.5A~5A | Feb. 21, 2019 | Dec. 28, 2019~ Jan. 06, 2020 | Feb. 20, 2020 | Conducted (TH05-HY) |
| Coupler | Warison | 20dB 25W SMA Directional Coupler | #A | 1-18GHz | Jan. 14, 2019 | Dec. 28, 2019~ Jan. 06, 2020 | Jan. 13, 2020 | Conducted (TH05-HY) |
| Hygrometer | TECPEL | HTC-1 | 2 | N/A | Mar. 05, 2019 | Dec. 28, 2019~ Jan. 06, 2020 | Mar. 04, 2020 | Conducted (TH05-HY) |

# 6 Uncertainty of Evaluation

**Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)**

| | |
|---|---|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 3.24 |

**Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)**

| | |
|---|---|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 3.62 |

**Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)**

| | |
|---|---|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 4.06 |

# Appendix A. Test Results of Conducted Test

## Conducted Output Power(Average power)

| LTE Band 4 Maximum Average Power [dBm] | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest |
| 20 | 1 | 0 | QPSK | 18.00 | 17.97 | 17.99 |
| 20 | 1 | 49 | | 17.81 | 17.81 | 17.78 |
| 20 | 1 | 99 | | 17.79 | 17.76 | 17.73 |
| 20 | 50 | 0 | | **18.05** | 18.02 | 17.99 |
| 20 | 50 | 24 | | 18.03 | 17.96 | 17.91 |
| 20 | 50 | 50 | | 17.95 | 17.92 | 17.92 |
| 20 | 100 | 0 | | 17.99 | 17.98 | 17.89 |
| 20 | 1 | 0 | 16-QAM | 17.85 | 17.83 | 17.82 |
| 20 | 1 | 49 | | 17.65 | 17.72 | 17.63 |
| 20 | 1 | 99 | | 17.66 | 17.73 | 17.58 |
| 20 | 50 | 0 | | 17.53 | 17.56 | 17.52 |
| 20 | 50 | 24 | | 17.55 | 17.46 | 17.45 |
| 20 | 50 | 50 | | 17.46 | 17.47 | 17.41 |
| 20 | 100 | 0 | | 17.51 | 17.44 | 17.40 |
| 20 | 1 | 0 | 64-QAM | 17.70 | 17.70 | 17.72 |
| 20 | 1 | 49 | | 17.54 | 17.58 | 17.52 |
| 20 | 1 | 99 | | 17.58 | 17.54 | 17.52 |
| 20 | 50 | 0 | | 17.55 | 17.60 | 17.55 |
| 20 | 50 | 24 | | 17.58 | 17.50 | 17.47 |
| 20 | 50 | 50 | | 17.48 | 17.49 | 17.44 |
| 20 | 100 | 0 | | 17.56 | 17.50 | 17.45 |
| 15 | 1 | 0 | QPSK | 18.00 | 18.01 | 17.98 |
| 15 | 1 | 37 | | 17.81 | 17.82 | 17.76 |
| 15 | 1 | 74 | | 17.82 | 17.81 | 17.76 |
| 15 | 36 | 0 | | 18.03 | 18.02 | 17.97 |
| 15 | 36 | 20 | | 18.01 | 17.95 | 17.99 |
| 15 | 36 | 39 | | 17.96 | 17.94 | 17.90 |
| 15 | 75 | 0 | | 18.02 | 17.95 | 17.90 |
| 15 | 1 | 0 | 16-QAM | 17.80 | 17.81 | 17.79 |
| 15 | 1 | 37 | | 17.61 | 17.72 | 17.62 |
| 15 | 1 | 74 | | 17.60 | 17.67 | 17.57 |
| 15 | 36 | 0 | | 17.49 | 17.54 | 17.49 |
| 15 | 36 | 20 | | 17.50 | 17.43 | 17.49 |
| 15 | 36 | 39 | | 17.45 | 17.46 | 17.41 |
| 15 | 75 | 0 | | 17.51 | 17.47 | 17.41 |
| 15 | 1 | 0 | 64-QAM | 17.70 | 17.69 | 17.63 |
| 15 | 1 | 37 | | 17.57 | 17.57 | 17.57 |
| 15 | 1 | 74 | | 17.52 | 17.52 | 17.47 |
| 15 | 36 | 0 | | 17.56 | 17.58 | 17.53 |
| 15 | 36 | 20 | | 17.53 | 17.50 | 17.51 |
| 15 | 36 | 39 | | 17.50 | 17.53 | 17.45 |
| 15 | 75 | 0 | | 17.52 | 17.49 | 17.42 |

| LTE Band 4 Maximum Average Power [dBm] | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest |
| 10 | 1 | 0 | QPSK | 17.70 | 17.70 | 17.64 |
| 10 | 1 | 25 | | 17.64 | 17.69 | 17.62 |
| 10 | 1 | 49 | | 17.68 | 17.66 | 17.62 |
| 10 | 25 | 0 | | 17.79 | 17.75 | 17.68 |
| 10 | 25 | 12 | | 17.80 | 17.78 | 17.70 |
| 10 | 25 | 25 | | 17.80 | 17.86 | 17.76 |
| 10 | 50 | 0 | | 17.81 | 17.77 | 17.70 |
| 10 | 1 | 0 | 16-QAM | 17.57 | 17.61 | 17.53 |
| 10 | 1 | 25 | | 17.53 | 17.55 | 17.51 |
| 10 | 1 | 49 | | 17.54 | 17.51 | 17.49 |
| 10 | 25 | 0 | | 17.29 | 17.28 | 17.20 |
| 10 | 25 | 12 | | 17.34 | 17.27 | 17.22 |
| 10 | 25 | 25 | | 17.31 | 17.36 | 17.31 |
| 10 | 50 | 0 | | 17.32 | 17.26 | 17.21 |
| 10 | 1 | 0 | 64-QAM | 17.45 | 17.40 | 17.36 |
| 10 | 1 | 25 | | 17.48 | 17.52 | 17.45 |
| 10 | 1 | 49 | | 17.46 | 17.50 | 17.38 |
| 10 | 25 | 0 | | 17.34 | 17.30 | 17.24 |
| 10 | 25 | 12 | | 17.36 | 17.35 | 17.24 |
| 10 | 25 | 25 | | 17.35 | 17.40 | 17.31 |
| 10 | 50 | 0 | | 17.35 | 17.27 | 17.25 |
| 5 | 1 | 0 | QPSK | 17.63 | 17.59 | 17.61 |
| 5 | 1 | 12 | | 17.65 | 17.71 | 17.65 |
| 5 | 1 | 24 | | 17.67 | 17.70 | 17.63 |
| 5 | 12 | 0 | | 17.75 | 17.70 | 17.70 |
| 5 | 12 | 7 | | 17.80 | 17.75 | 17.74 |
| 5 | 12 | 13 | | 17.76 | 17.75 | 17.70 |
| 5 | 25 | 0 | | 17.76 | 17.70 | 17.67 |
| 5 | 1 | 0 | 16-QAM | 17.52 | 17.47 | 17.40 |
| 5 | 1 | 12 | | 17.46 | 17.43 | 17.40 |
| 5 | 1 | 24 | | 17.48 | 17.55 | 17.43 |
| 5 | 12 | 0 | | 17.27 | 17.23 | 17.24 |
| 5 | 12 | 7 | | 17.28 | 17.25 | 17.25 |
| 5 | 12 | 13 | | 17.28 | 17.30 | 17.25 |
| 5 | 25 | 0 | | 17.25 | 17.24 | 17.22 |
| 5 | 1 | 0 | 64-QAM | 17.49 | 17.40 | 17.36 |
| 5 | 1 | 12 | | 17.37 | 17.36 | 17.31 |
| 5 | 1 | 24 | | 17.41 | 17.39 | 17.35 |
| 5 | 12 | 0 | | 17.32 | 17.31 | 17.28 |
| 5 | 12 | 7 | | 17.37 | 17.33 | 17.32 |
| 5 | 12 | 13 | | 17.31 | 17.35 | 17.30 |
| 5 | 25 | 0 | | 17.30 | 17.28 | 17.23 |

| LTE Band 4 Maximum Average Power [dBm] | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest |
| 3 | 1 | 0 | QPSK | 17.63 | 17.60 | 17.59 |
| 3 | 1 | 8 | | 17.75 | 17.72 | 17.67 |
| 3 | 1 | 14 | | 17.68 | 17.71 | 17.61 |
| 3 | 8 | 0 | | 17.74 | 17.68 | 17.67 |
| 3 | 8 | 4 | | 17.77 | 17.79 | 17.71 |
| 3 | 8 | 7 | | 17.75 | 17.76 | 17.67 |
| 3 | 15 | 0 | | 17.75 | 17.69 | 17.71 |
| 3 | 1 | 0 | 16-QAM | 17.46 | 17.43 | 17.40 |
| 3 | 1 | 8 | | 17.57 | 17.48 | 17.48 |
| 3 | 1 | 14 | | 17.47 | 17.53 | 17.42 |
| 3 | 8 | 0 | | 17.31 | 17.26 | 17.24 |
| 3 | 8 | 4 | | 17.35 | 17.32 | 17.26 |
| 3 | 8 | 7 | | 17.34 | 17.31 | 17.23 |
| 3 | 15 | 0 | | 17.28 | 17.23 | 17.23 |
| 3 | 1 | 0 | 64-QAM | 17.46 | 17.37 | 17.32 |
| 3 | 1 | 8 | | 17.46 | 17.46 | 17.39 |
| 3 | 1 | 14 | | 17.41 | 17.39 | 17.36 |
| 3 | 8 | 0 | | 17.32 | 17.27 | 17.25 |
| 3 | 8 | 4 | | 17.37 | 17.36 | 17.28 |
| 3 | 8 | 7 | | 17.31 | 17.35 | 17.26 |
| 3 | 15 | 0 | | 17.31 | 17.26 | 17.22 |
| 1.4 | 1 | 0 | QPSK | 17.56 | 17.57 | 17.50 |
| 1.4 | 1 | 3 | | 17.63 | 17.66 | 17.58 |
| 1.4 | 1 | 5 | | 17.58 | 17.59 | 17.49 |
| 1.4 | 3 | 0 | | 17.61 | 17.60 | 17.52 |
| 1.4 | 3 | 1 | | 17.63 | 17.61 | 17.53 |
| 1.4 | 3 | 3 | | 17.63 | 17.60 | 17.54 |
| 1.4 | 6 | 0 | | 17.69 | 17.66 | 17.60 |
| 1.4 | 1 | 0 | 16-QAM | 17.38 | 17.42 | 17.33 |
| 1.4 | 1 | 3 | | 17.46 | 17.48 | 17.41 |
| 1.4 | 1 | 5 | | 17.43 | 17.39 | 17.34 |
| 1.4 | 3 | 0 | | 17.19 | 17.16 | 17.10 |
| 1.4 | 3 | 1 | | 17.23 | 17.21 | 17.15 |
| 1.4 | 3 | 3 | | 17.19 | 17.16 | 17.08 |
| 1.4 | 6 | 0 | | 17.26 | 17.27 | 17.17 |
| 1.4 | 1 | 0 | 64-QAM | 17.33 | 17.32 | 17.24 |
| 1.4 | 1 | 3 | | 17.39 | 17.38 | 17.31 |
| 1.4 | 1 | 5 | | 17.34 | 17.33 | 17.23 |
| 1.4 | 3 | 0 | | 17.31 | 17.32 | 17.24 |
| 1.4 | 3 | 1 | | 17.35 | 17.36 | 17.30 |
| 1.4 | 3 | 3 | | 17.30 | 17.34 | 17.25 |
| 1.4 | 6 | 0 | | 17.20 | 17.21 | 17.12 |

| LTE Band 5 Maximum Average Power [dBm] | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest |
| 10 | 1 | 0 | QPSK | 23.74 | 23.70 | 23.59 |
| 10 | 1 | 25 | | 23.59 | 23.53 | 23.49 |
| 10 | 1 | 49 | | 23.56 | 23.49 | 23.39 |
| 10 | 25 | 0 | | 22.78 | 22.66 | 22.58 |
| 10 | 25 | 12 | | 22.77 | 22.64 | 22.58 |
| 10 | 25 | 25 | | 22.71 | 22.66 | 22.58 |
| 10 | 50 | 0 | | 22.76 | 22.65 | 22.57 |
| 10 | 1 | 0 | 16-QAM | 22.59 | 22.49 | 22.44 |
| 10 | 1 | 25 | | 22.46 | 22.45 | 22.37 |
| 10 | 1 | 49 | | 22.45 | 22.38 | 22.28 |
| 10 | 25 | 0 | | 21.25 | 21.18 | 21.10 |
| 10 | 25 | 12 | | 21.27 | 21.15 | 21.08 |
| 10 | 25 | 25 | | 21.18 | 21.16 | 21.05 |
| 10 | 50 | 0 | | 21.26 | 21.14 | 21.06 |
| 10 | 1 | 0 | 64-QAM | 21.49 | 21.36 | 21.29 |
| 10 | 1 | 25 | | 21.40 | 21.37 | 21.28 |
| 10 | 1 | 49 | | 21.35 | 21.29 | 21.14 |
| 10 | 25 | 0 | | 20.29 | 20.20 | 20.14 |
| 10 | 25 | 12 | | 20.31 | 20.20 | 20.13 |
| 10 | 25 | 25 | | 20.25 | 20.21 | 20.11 |
| 10 | 50 | 0 | | 20.30 | 20.18 | 20.12 |
| 5 | 1 | 0 | QPSK | 23.73 | 23.64 | 23.59 |
| 5 | 1 | 12 | | 23.68 | 23.60 | 23.45 |
| 5 | 1 | 24 | | 23.60 | 23.55 | 23.36 |
| 5 | 12 | 0 | | 22.82 | 22.70 | 22.60 |
| 5 | 12 | 7 | | 22.75 | 22.69 | 22.54 |
| 5 | 12 | 13 | | 22.68 | 22.65 | 22.47 |
| 5 | 25 | 0 | | 22.75 | 22.60 | 22.55 |
| 5 | 1 | 0 | 16-QAM | 22.61 | 22.46 | 22.41 |
| 5 | 1 | 12 | | 22.47 | 22.40 | 22.27 |
| 5 | 1 | 24 | | 22.42 | 22.41 | 22.21 |
| 5 | 12 | 0 | | 21.35 | 21.21 | 21.13 |
| 5 | 12 | 7 | | 21.29 | 21.25 | 21.10 |
| 5 | 12 | 13 | | 21.19 | 21.16 | 21.00 |
| 5 | 25 | 0 | | 21.30 | 21.13 | 21.06 |
| 5 | 1 | 0 | 64-QAM | 21.50 | 21.39 | 21.36 |
| 5 | 1 | 12 | | 21.38 | 21.30 | 21.17 |
| 5 | 1 | 24 | | 21.36 | 21.33 | 21.15 |
| 5 | 12 | 0 | | 20.39 | 20.26 | 20.11 |
| 5 | 12 | 7 | | 20.36 | 20.27 | 20.00 |
| 5 | 12 | 13 | | 20.30 | 20.20 | 20.00 |
| 5 | 25 | 0 | | 20.30 | 20.15 | 20.05 |

| LTE Band 5 Maximum Average Power [dBm] | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest |
| 3 | 1 | 0 | QPSK | 23.72 | 23.57 | 23.44 |
| 3 | 1 | 8 | | 23.69 | 23.61 | 23.46 |
| 3 | 1 | 14 | | 23.57 | 23.52 | 23.34 |
| 3 | 8 | 0 | | 22.77 | 22.64 | 22.48 |
| 3 | 8 | 4 | | 22.76 | 22.70 | 22.49 |
| 3 | 8 | 7 | | 22.69 | 22.60 | 22.45 |
| 3 | 15 | 0 | | 22.71 | 22.58 | 22.48 |
| 3 | 1 | 0 | 16-QAM | 22.54 | 22.40 | 22.31 |
| 3 | 1 | 8 | | 22.55 | 22.48 | 22.32 |
| 3 | 1 | 14 | | 22.41 | 22.33 | 22.16 |
| 3 | 8 | 0 | | 21.36 | 21.21 | 21.10 |
| 3 | 8 | 4 | | 21.33 | 21.27 | 21.09 |
| 3 | 8 | 7 | | 21.27 | 21.21 | 21.02 |
| 3 | 15 | 0 | | 21.32 | 21.14 | 21.05 |
| 3 | 1 | 0 | 64-QAM | 21.50 | 21.35 | 21.01 |
| 3 | 1 | 8 | | 21.49 | 21.41 | 21.05 |
| 3 | 1 | 14 | | 21.37 | 21.29 | 21.03 |
| 3 | 8 | 0 | | 20.39 | 20.21 | 20.50 |
| 3 | 8 | 4 | | 20.35 | 20.30 | 20.02 |
| 3 | 8 | 7 | | 20.26 | 20.17 | 20.06 |
| 3 | 15 | 0 | | 20.29 | 20.14 | 20.07 |
| 1.4 | 1 | 0 | QPSK | 23.62 | 23.45 | 23.36 |
| 1.4 | 1 | 3 | | 23.64 | 23.56 | 23.38 |
| 1.4 | 1 | 5 | | 23.58 | 23.45 | 23.19 |
| 1.4 | 3 | 0 | | 23.66 | 23.49 | 23.37 |
| 1.4 | 3 | 1 | | 23.68 | 23.59 | 23.39 |
| 1.4 | 3 | 3 | | 23.63 | 23.51 | 23.33 |
| 1.4 | 6 | 0 | | 22.68 | 22.59 | 22.41 |
| 1.4 | 1 | 0 | 16-QAM | 22.45 | 22.30 | 22.19 |
| 1.4 | 1 | 3 | | 22.50 | 22.40 | 22.22 |
| 1.4 | 1 | 5 | | 22.38 | 22.32 | 22.13 |
| 1.4 | 3 | 0 | | 22.22 | 22.08 | 22.06 |
| 1.4 | 3 | 1 | | 22.28 | 22.19 | 22.02 |
| 1.4 | 3 | 3 | | 22.21 | 22.12 | 22.04 |
| 1.4 | 6 | 0 | | 21.27 | 21.18 | 21.08 |
| 1.4 | 1 | 0 | 64-QAM | 21.41 | 21.24 | 21.06 |
| 1.4 | 1 | 3 | | 21.44 | 21.34 | 21.10 |
| 1.4 | 1 | 5 | | 21.34 | 21.22 | 21.01 |
| 1.4 | 3 | 0 | | 21.33 | 21.17 | 21.02 |
| 1.4 | 3 | 1 | | 21.39 | 21.29 | 21.09 |
| 1.4 | 3 | 3 | | 21.35 | 21.22 | 21.05 |
| 1.4 | 6 | 0 | | 20.24 | 20.13 | 20.06 |

| LTE Band 7 Maximum Average Power [dBm] | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest |
| 20 | 1 | 0 | QPSK | 18.75 | 18.83 | 19.00 |
| 20 | 1 | 49 | | 18.80 | 18.97 | 18.99 |
| 20 | 1 | 99 | | 18.88 | 19.02 | 19.03 |
| 20 | 50 | 0 | | 18.84 | 19.02 | 19.05 |
| 20 | 50 | 24 | | 18.96 | 19.06 | **19.16** |
| 20 | 50 | 50 | | 18.96 | 19.14 | 19.14 |
| 20 | 100 | 0 | | 18.95 | 19.04 | 19.06 |
| 20 | 1 | 0 | 16-QAM | 18.61 | 18.71 | 18.84 |
| 20 | 1 | 49 | | 18.64 | 18.84 | 18.83 |
| 20 | 1 | 99 | | 18.76 | 18.87 | 18.87 |
| 20 | 50 | 0 | | 18.37 | 18.55 | 18.60 |
| 20 | 50 | 24 | | 18.47 | 18.58 | 18.69 |
| 20 | 50 | 50 | | 18.49 | 18.66 | 18.66 |
| 20 | 100 | 0 | | 18.47 | 18.55 | 18.60 |
| 20 | 1 | 0 | 64-QAM | 18.47 | 18.59 | 18.69 |
| 20 | 1 | 49 | | 18.54 | 18.72 | 18.74 |
| 20 | 1 | 99 | | 18.68 | 18.79 | 18.76 |
| 20 | 50 | 0 | | 18.39 | 18.56 | 18.61 |
| 20 | 50 | 24 | | 18.52 | 18.63 | 18.73 |
| 20 | 50 | 50 | | 18.52 | 18.67 | 18.68 |
| 20 | 100 | 0 | | 18.49 | 18.58 | 18.62 |
| 15 | 1 | 0 | QPSK | 18.73 | 18.89 | 18.98 |
| 15 | 1 | 37 | | 18.77 | 18.96 | 18.98 |
| 15 | 1 | 74 | | 18.87 | 19.03 | 19.03 |
| 15 | 36 | 0 | | 18.80 | 19.02 | 19.06 |
| 15 | 36 | 20 | | 18.93 | 19.03 | 19.08 |
| 15 | 36 | 39 | | 18.94 | 19.11 | 19.13 |
| 15 | 75 | 0 | | 18.90 | 19.03 | 19.04 |
| 15 | 1 | 0 | 16-QAM | 18.57 | 18.72 | 18.83 |
| 15 | 1 | 37 | | 18.59 | 18.81 | 18.85 |
| 15 | 1 | 74 | | 18.70 | 18.85 | 18.86 |
| 15 | 36 | 0 | | 18.32 | 18.52 | 18.57 |
| 15 | 36 | 20 | | 18.43 | 18.55 | 18.60 |
| 15 | 36 | 39 | | 18.43 | 18.61 | 18.64 |
| 15 | 75 | 0 | | 18.42 | 18.52 | 18.58 |
| 15 | 1 | 0 | 64-QAM | 18.42 | 18.65 | 18.71 |
| 15 | 1 | 37 | | 18.56 | 18.75 | 18.79 |
| 15 | 1 | 74 | | 18.62 | 18.73 | 18.75 |
| 15 | 36 | 0 | | 18.38 | 18.57 | 18.60 |
| 15 | 36 | 20 | | 18.49 | 18.58 | 18.63 |
| 15 | 36 | 39 | | 18.49 | 18.67 | 18.68 |
| 15 | 75 | 0 | | 18.43 | 18.54 | 18.59 |

| LTE Band 7 Maximum Average Power [dBm] | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest |
| 10 | 1 | 0 | QPSK | 18.46 | 18.67 | 18.70 |
| 10 | 1 | 25 | | 18.43 | 18.65 | 18.67 |
| 10 | 1 | 49 | | 18.52 | 18.74 | 18.72 |
| 10 | 25 | 0 | | 18.62 | 18.75 | 18.77 |
| 10 | 25 | 12 | | 18.63 | 18.79 | 18.81 |
| 10 | 25 | 25 | | 18.64 | 18.86 | 18.87 |
| 10 | 50 | 0 | | 18.65 | 18.80 | 18.80 |
| 10 | 1 | 0 | 16-QAM | 18.34 | 18.52 | 18.55 |
| 10 | 1 | 25 | | 18.33 | 18.58 | 18.57 |
| 10 | 1 | 49 | | 18.39 | 18.61 | 18.60 |
| 10 | 25 | 0 | | 18.12 | 18.27 | 18.29 |
| 10 | 25 | 12 | | 18.18 | 18.32 | 18.33 |
| 10 | 25 | 25 | | 18.16 | 18.39 | 18.38 |
| 10 | 50 | 0 | | 18.15 | 18.31 | 18.32 |
| 10 | 1 | 0 | 64-QAM | 18.27 | 18.38 | 18.43 |
| 10 | 1 | 25 | | 18.23 | 18.48 | 18.50 |
| 10 | 1 | 49 | | 18.29 | 18.53 | 18.52 |
| 10 | 25 | 0 | | 18.17 | 18.33 | 18.34 |
| 10 | 25 | 12 | | 18.21 | 18.36 | 18.40 |
| 10 | 25 | 25 | | 18.20 | 18.40 | 18.42 |
| 10 | 50 | 0 | | 18.18 | 18.35 | 18.33 |
| 5 | 1 | 0 | QPSK | 18.49 | 18.65 | 18.68 |
| 5 | 1 | 12 | | 18.52 | 18.74 | 18.75 |
| 5 | 1 | 24 | | 18.50 | 18.72 | 18.73 |
| 5 | 12 | 0 | | 18.63 | 18.79 | 18.86 |
| 5 | 12 | 7 | | 18.63 | 18.85 | 18.84 |
| 5 | 12 | 13 | | 18.63 | 18.87 | 18.86 |
| 5 | 25 | 0 | | 18.63 | 18.78 | 18.83 |
| 5 | 1 | 0 | 16-QAM | 18.38 | 18.46 | 18.57 |
| 5 | 1 | 12 | | 18.28 | 18.49 | 18.53 |
| 5 | 1 | 24 | | 18.34 | 18.58 | 18.56 |
| 5 | 12 | 0 | | 18.17 | 18.34 | 18.36 |
| 5 | 12 | 7 | | 18.15 | 18.38 | 18.38 |
| 5 | 12 | 13 | | 18.15 | 18.41 | 18.37 |
| 5 | 25 | 0 | | 18.17 | 18.30 | 18.35 |
| 5 | 1 | 0 | 64-QAM | 18.29 | 18.43 | 18.51 |
| 5 | 1 | 12 | | 18.20 | 18.47 | 18.45 |
| 5 | 1 | 24 | | 18.24 | 18.51 | 18.44 |
| 5 | 12 | 0 | | 18.18 | 18.40 | 18.44 |
| 5 | 12 | 7 | | 18.23 | 18.46 | 18.40 |
| 5 | 12 | 13 | | 18.20 | 18.42 | 18.42 |
| 5 | 25 | 0 | | 18.17 | 18.35 | 18.41 |

| LTE Band 13 Maximum Average Power [dBm] | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest |
| 10 | 1 | 0 | QPSK | - | 23.99 | - |
| 10 | 1 | 25 | | | 23.92 | |
| 10 | 1 | 49 | | | 23.95 | |
| 10 | 25 | 0 | | | 23.00 | |
| 10 | 25 | 12 | | | 23.02 | |
| 10 | 25 | 25 | | | 23.06 | |
| 10 | 50 | 0 | | | 23.02 | |
| 10 | 1 | 0 | 16-QAM | | 22.75 | |
| 10 | 1 | 25 | | | 22.78 | |
| 10 | 1 | 49 | | | 22.77 | |
| 10 | 25 | 0 | | | 21.54 | |
| 10 | 25 | 12 | | | 21.56 | |
| 10 | 25 | 25 | | | 21.58 | |
| 10 | 50 | 0 | | | 21.54 | |
| 10 | 1 | 0 | 64-QAM | | 21.58 | |
| 10 | 1 | 25 | | | 21.68 | |
| 10 | 1 | 49 | | | 21.68 | |
| 10 | 25 | 0 | | | 20.51 | |
| 10 | 25 | 12 | | | 20.60 | |
| 10 | 25 | 25 | | | 20.63 | |
| 10 | 50 | 0 | | | 20.57 | |
| 5 | 1 | 0 | QPSK | 23.89 | 23.89 | 23.89 |
| 5 | 1 | 12 | | 23.81 | 23.98 | 23.96 |
| 5 | 1 | 24 | | 23.95 | 23.96 | 23.94 |
| 5 | 12 | 0 | | 23.02 | 23.02 | 23.01 |
| 5 | 12 | 7 | | 22.98 | 23.04 | 23.01 |
| 5 | 12 | 13 | | 23.07 | 23.07 | 23.04 |
| 5 | 25 | 0 | | 23.01 | 23.00 | 22.99 |
| 5 | 1 | 0 | 16-QAM | 22.73 | 22.73 | 22.70 |
| 5 | 1 | 12 | | 22.72 | 22.74 | 22.71 |
| 5 | 1 | 24 | | 22.79 | 22.74 | 22.77 |
| 5 | 12 | 0 | | 21.59 | 21.58 | 21.57 |
| 5 | 12 | 7 | | 21.61 | 21.56 | 21.50 |
| 5 | 12 | 13 | | 21.61 | 21.60 | 21.55 |
| 5 | 25 | 0 | | 21.62 | 21.55 | 21.54 |
| 5 | 1 | 0 | 64-QAM | 21.39 | 21.58 | 21.63 |
| 5 | 1 | 12 | | 21.36 | 21.70 | 21.60 |
| 5 | 1 | 24 | | 21.63 | 21.68 | 21.62 |
| 5 | 12 | 0 | | 20.37 | 20.65 | 20.63 |
| 5 | 12 | 7 | | 20.46 | 20.61 | 20.59 |
| 5 | 12 | 13 | | 20.58 | 20.67 | 20.62 |
| 5 | 25 | 0 | | 20.38 | 20.55 | 20.56 |

| LTE Band 17 Maximum Average Power [dBm] | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest |
| 10 | 1 | 0 | QPSK | 23.79 | 23.70 | 23.69 |
| 10 | 1 | 25 | | 23.66 | 23.64 | 23.62 |
| 10 | 1 | 49 | | 23.65 | 23.61 | 23.59 |
| 10 | 25 | 0 | | 22.77 | 22.69 | 22.66 |
| 10 | 25 | 12 | | 22.84 | 22.74 | 22.73 |
| 10 | 25 | 25 | | 22.85 | 22.80 | 22.81 |
| 10 | 50 | 0 | | 22.83 | 22.80 | 22.71 |
| 10 | 1 | 0 | 16-QAM | 22.62 | 22.53 | 22.50 |
| 10 | 1 | 25 | | 22.54 | 22.51 | 22.53 |
| 10 | 1 | 49 | | 22.54 | 22.50 | 22.48 |
| 10 | 25 | 0 | | 21.29 | 21.22 | 21.17 |
| 10 | 25 | 12 | | 21.33 | 21.24 | 21.22 |
| 10 | 25 | 25 | | 21.26 | 21.30 | 21.23 |
| 10 | 50 | 0 | | 21.31 | 21.29 | 21.20 |
| 10 | 1 | 0 | 64-QAM | 21.50 | 21.43 | 21.41 |
| 10 | 1 | 25 | | 21.48 | 21.48 | 21.44 |
| 10 | 1 | 49 | | 21.43 | 21.41 | 21.41 |
| 10 | 25 | 0 | | 20.33 | 20.25 | 20.21 |
| 10 | 25 | 12 | | 20.39 | 20.26 | 20.29 |
| 10 | 25 | 25 | | 20.35 | 20.34 | 20.33 |
| 10 | 50 | 0 | | 20.34 | 20.31 | 20.24 |
| 5 | 1 | 0 | QPSK | 23.78 | 23.67 | 23.65 |
| 5 | 1 | 12 | | 23.76 | 23.70 | 23.64 |
| 5 | 1 | 24 | | 23.77 | 23.70 | 23.62 |
| 5 | 12 | 0 | | 22.84 | 22.70 | 22.71 |
| 5 | 12 | 7 | | 22.87 | 22.79 | 22.72 |
| 5 | 12 | 13 | | 22.83 | 22.77 | 22.70 |
| 5 | 25 | 0 | | 22.83 | 22.78 | 22.70 |
| 5 | 1 | 0 | 16-QAM | 22.62 | 22.45 | 22.49 |
| 5 | 1 | 12 | | 22.57 | 22.50 | 22.45 |
| 5 | 1 | 24 | | 22.62 | 22.56 | 22.45 |
| 5 | 12 | 0 | | 21.40 | 21.28 | 21.25 |
| 5 | 12 | 7 | | 21.41 | 21.31 | 21.26 |
| 5 | 12 | 13 | | 21.34 | 21.28 | 21.22 |
| 5 | 25 | 0 | | 21.38 | 21.27 | 21.23 |
| 5 | 1 | 0 | 64-QAM | 21.57 | 21.37 | 21.39 |
| 5 | 1 | 12 | | 21.50 | 21.40 | 21.35 |
| 5 | 1 | 24 | | 21.56 | 21.44 | 21.38 |
| 5 | 12 | 0 | | 20.47 | 20.32 | 20.31 |
| 5 | 12 | 7 | | 20.45 | 20.33 | 20.30 |
| 5 | 12 | 13 | | 20.40 | 20.34 | 20.28 |
| 5 | 25 | 0 | | 20.38 | 20.32 | 20.26 |

| LTE Band 41 Maximum Average Power [dBm] | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest |
| 20 | 1 | 0 | QPSK | 18.50 | 18.86 | 19.07 |
| 20 | 1 | 49 | | 18.49 | 18.76 | 19.03 |
| 20 | 1 | 99 | | 18.57 | 18.76 | 19.11 |
| 20 | 50 | 0 | | 18.71 | 18.98 | 19.28 |
| 20 | 50 | 24 | | 18.77 | 18.97 | 19.27 |
| 20 | 50 | 50 | | 18.76 | 19.00 | **19.36** |
| 20 | 100 | 0 | | 18.77 | 18.96 | 19.25 |
| 20 | 1 | 0 | 16-QAM | 18.37 | 18.72 | 18.95 |
| 20 | 1 | 49 | | 18.40 | 18.59 | 18.96 |
| 20 | 1 | 99 | | 18.43 | 18.62 | 18.99 |
| 20 | 50 | 0 | | 18.24 | 18.53 | 18.80 |
| 20 | 50 | 24 | | 18.33 | 18.49 | 18.79 |
| 20 | 50 | 50 | | 18.32 | 18.55 | 18.87 |
| 20 | 100 | 0 | | 18.30 | 18.49 | 18.79 |
| 20 | 1 | 0 | 64-QAM | 18.24 | 18.47 | 18.69 |
| 20 | 1 | 49 | | 18.24 | 18.49 | 18.76 |
| 20 | 1 | 99 | | 18.34 | 18.51 | 18.87 |
| 20 | 50 | 0 | | 18.25 | 18.52 | 18.81 |
| 20 | 50 | 24 | | 18.34 | 18.50 | 18.80 |
| 20 | 50 | 50 | | 18.33 | 18.55 | 18.88 |
| 20 | 100 | 0 | | 18.33 | 18.48 | 18.79 |
| 15 | 1 | 0 | QPSK | 18.57 | 18.90 | 19.21 |
| 15 | 1 | 37 | | 18.56 | 18.91 | 19.23 |
| 15 | 1 | 74 | | 18.57 | 18.92 | 19.22 |
| 15 | 36 | 0 | | 18.67 | 18.97 | 19.30 |
| 15 | 36 | 20 | | 18.77 | 18.96 | 19.29 |
| 15 | 36 | 39 | | 18.73 | 19.02 | 19.35 |
| 15 | 75 | 0 | | 18.78 | 18.98 | 19.28 |
| 15 | 1 | 0 | 16-QAM | 18.37 | 18.66 | 19.00 |
| 15 | 1 | 37 | | 18.32 | 18.59 | 18.95 |
| 15 | 1 | 74 | | 18.35 | 18.71 | 19.08 |
| 15 | 36 | 0 | | 18.19 | 18.45 | 18.78 |
| 15 | 36 | 20 | | 18.26 | 18.44 | 18.75 |
| 15 | 36 | 39 | | 18.25 | 18.52 | 18.83 |
| 15 | 75 | 0 | | 18.31 | 18.48 | 18.80 |
| 15 | 1 | 0 | 64-QAM | 18.23 | 18.44 | 18.75 |
| 15 | 1 | 37 | | 18.26 | 18.42 | 18.80 |
| 15 | 1 | 74 | | 18.27 | 18.57 | 18.90 |
| 15 | 36 | 0 | | 18.22 | 18.50 | 18.83 |
| 15 | 36 | 20 | | 18.30 | 18.48 | 18.80 |
| 15 | 36 | 39 | | 18.28 | 18.56 | 18.88 |
| 15 | 75 | 0 | | 18.31 | 18.48 | 18.80 |

| LTE Band 41 Maximum Average Power [dBm] | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest |
| 10 | 1 | 0 | QPSK | 18.48 | 18.62 | 18.93 |
| 10 | 1 | 25 | | 18.34 | 18.63 | 18.98 |
| 10 | 1 | 49 | | 18.44 | 18.70 | 18.96 |
| 10 | 25 | 0 | | 18.55 | 18.78 | 19.12 |
| 10 | 25 | 12 | | 18.57 | 18.81 | 19.15 |
| 10 | 25 | 25 | | 18.55 | 18.85 | 19.21 |
| 10 | 50 | 0 | | 18.57 | 18.81 | 19.12 |
| 10 | 1 | 0 | 16-QAM | 18.27 | 18.54 | 18.85 |
| 10 | 1 | 25 | | 18.21 | 18.51 | 18.87 |
| 10 | 1 | 49 | | 18.28 | 18.49 | 18.84 |
| 10 | 25 | 0 | | 18.11 | 18.33 | 18.64 |
| 10 | 25 | 12 | | 18.14 | 18.37 | 18.67 |
| 10 | 25 | 25 | | 18.10 | 18.38 | 18.71 |
| 10 | 50 | 0 | | 18.15 | 18.34 | 18.68 |
| 10 | 1 | 0 | 64-QAM | 18.23 | 18.31 | 18.70 |
| 10 | 1 | 25 | | 18.21 | 18.49 | 18.81 |
| 10 | 1 | 49 | | 18.19 | 18.40 | 18.76 |
| 10 | 25 | 0 | | 18.18 | 18.41 | 18.70 |
| 10 | 25 | 12 | | 18.21 | 18.41 | 18.77 |
| 10 | 25 | 25 | | 18.17 | 18.43 | 18.75 |
| 10 | 50 | 0 | | 18.13 | 18.34 | 18.66 |
| 5 | 1 | 0 | QPSK | 18.44 | 18.63 | 19.03 |
| 5 | 1 | 12 | | 18.34 | 18.70 | 19.04 |
| 5 | 1 | 24 | | 18.37 | 18.69 | 18.97 |
| 5 | 12 | 0 | | 18.58 | 18.81 | 19.20 |
| 5 | 12 | 7 | | 18.59 | 18.90 | 19.21 |
| 5 | 12 | 13 | | 18.56 | 18.85 | 19.20 |
| 5 | 25 | 0 | | 18.53 | 18.80 | 19.17 |
| 5 | 1 | 0 | 16-QAM | 18.26 | 18.47 | 18.88 |
| 5 | 1 | 12 | | 18.16 | 18.50 | 18.88 |
| 5 | 1 | 24 | | 18.20 | 18.50 | 18.85 |
| 5 | 12 | 0 | | 18.12 | 18.35 | 18.73 |
| 5 | 12 | 7 | | 18.13 | 18.40 | 18.76 |
| 5 | 12 | 13 | | 18.11 | 18.40 | 18.70 |
| 5 | 25 | 0 | | 18.11 | 18.37 | 18.74 |
| 5 | 1 | 0 | 64-QAM | 18.17 | 18.33 | 18.75 |
| 5 | 1 | 12 | | 18.10 | 18.40 | 18.75 |
| 5 | 1 | 24 | | 18.13 | 18.41 | 18.73 |
| 5 | 12 | 0 | | 18.14 | 18.37 | 18.76 |
| 5 | 12 | 7 | | 18.17 | 18.45 | 18.76 |
| 5 | 12 | 13 | | 18.14 | 18.41 | 18.75 |
| 5 | 25 | 0 | | 18.13 | 18.37 | 18.78 |

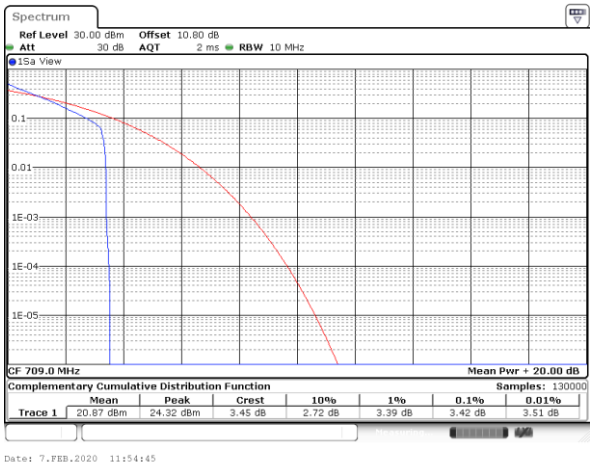
# LTE Band 17

## Peak-to-Average Ratio

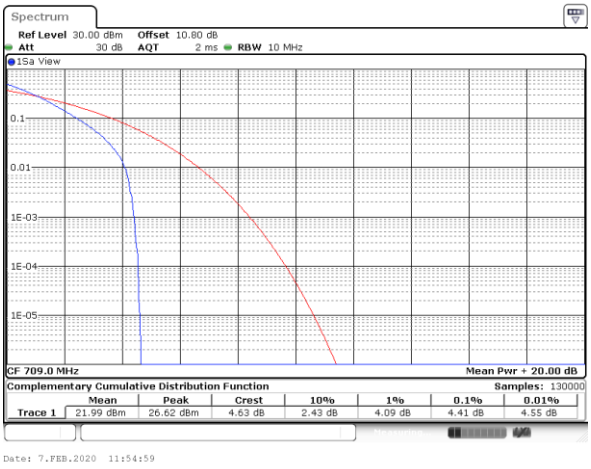
| Mode | LTE Band 17 / 10MHz | | | | |
|---|---|---|---|---|---|
| Mod. | QPSK | | 16QAM | | Limit: 13dB |
| RB Size | 1RB | Full RB | 1RB | Full RB | Result |
| Lowest CH | 3.42 | 4.41 | 5.01 | 5.48 | PASS |
| Middle CH | 3.48 | 4.43 | 4.99 | 5.45 | |
| Highest CH | 3.51 | 4.52 | 5.33 | 5.48 | |
| Mode | LTE Band 17 / 10MHz | | | | |
| Mod. | 64QAM | | | | Limit: 13dB |
| RB Size | 1RB | Full RB | | | Result |
| Lowest CH | 5.71 | 6.32 | - | - | PASS |
| Middle CH | 5.71 | 6.35 | - | - | |
| Highest CH | 5.59 | 6.43 | - | - | |

## LTE Band 17 / 10MHz / QPSK

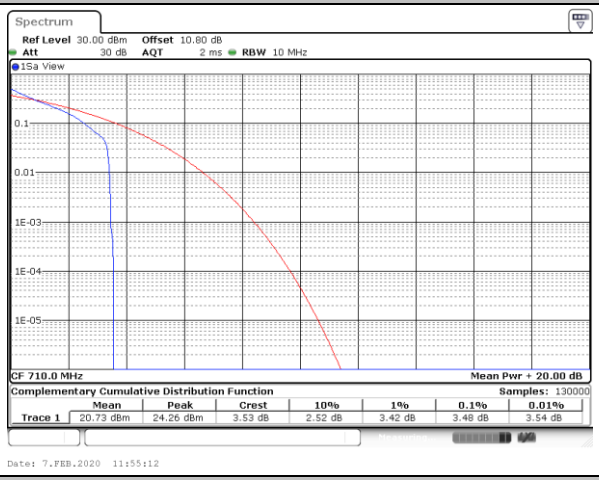
### Lowest Channel / 1RB



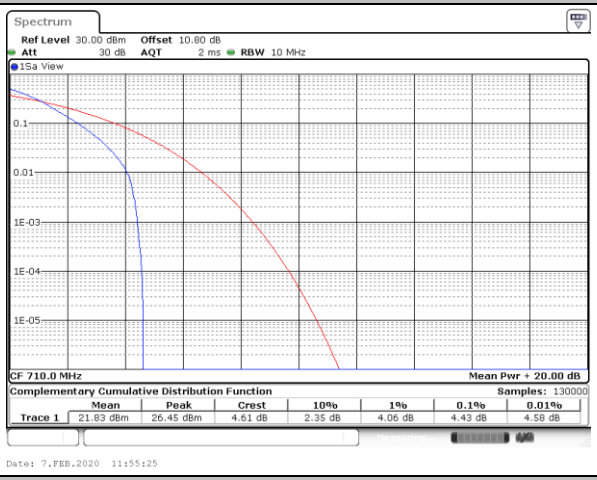

### Lowest Channel / Full RB



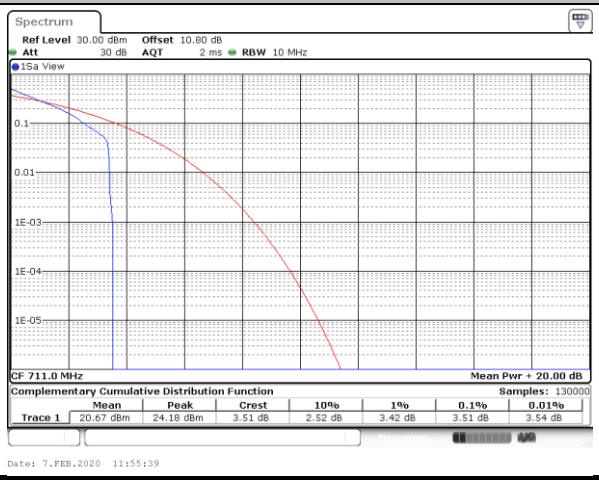

### Middle Channel / 1RB



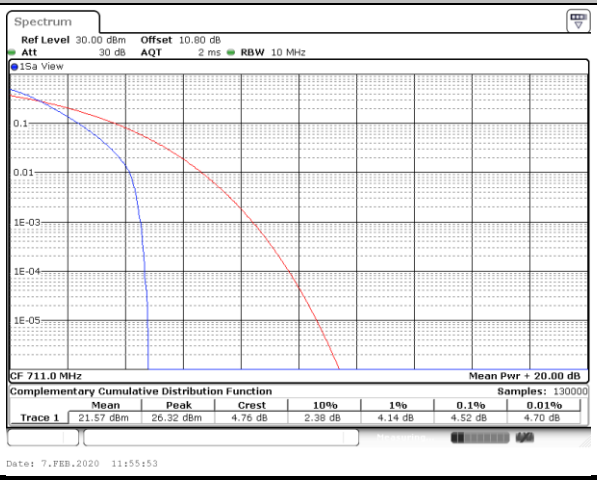

### Middle Channel / Full RB




### Highest Channel / 1RB

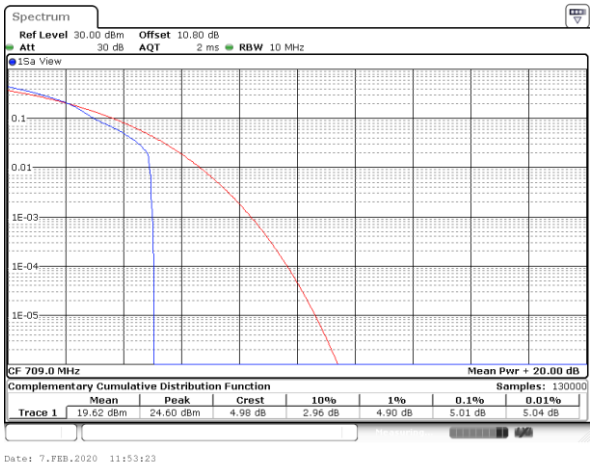



### Highest Channel / Full RB

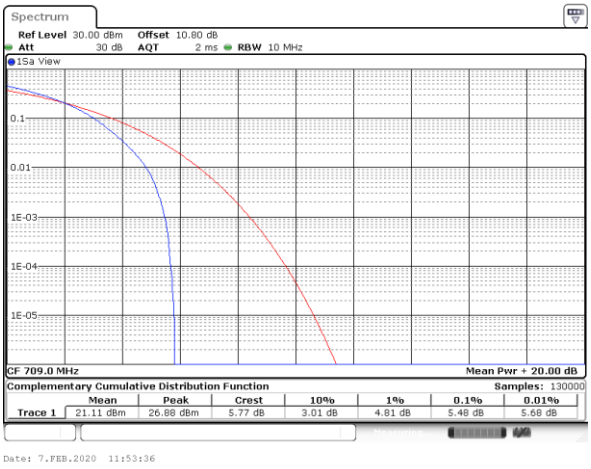


## LTE Band 17 / 10MHz / 16QAM

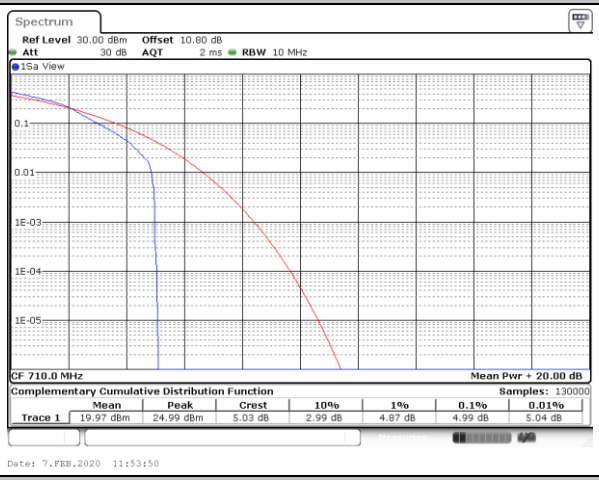
### Lowest Channel / 1RB



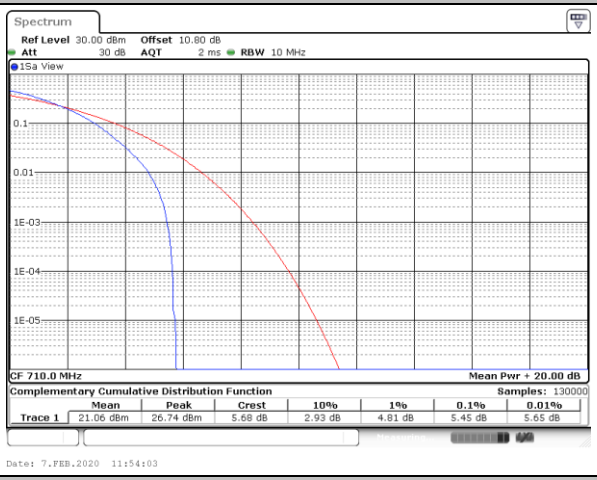

### Lowest Channel / Full RB



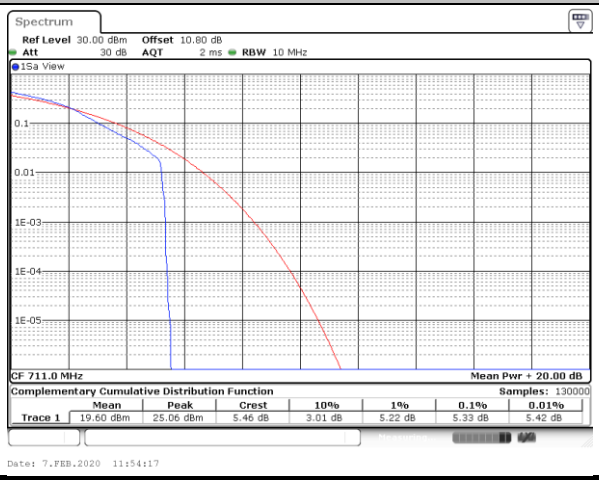

### Middle Channel / 1RB



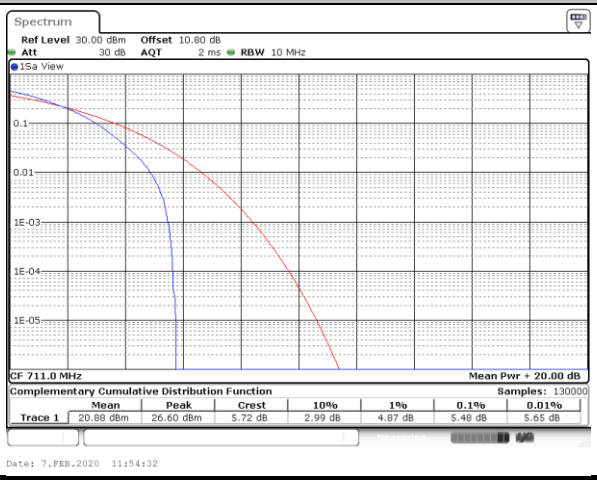

### Middle Channel / Full RB




### Highest Channel / 1RB

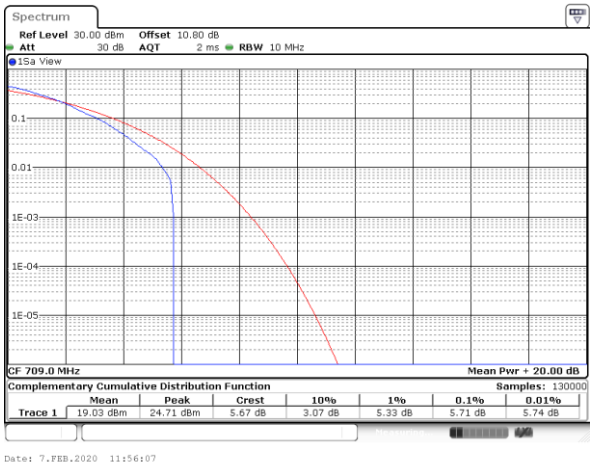



### Highest Channel / Full RB

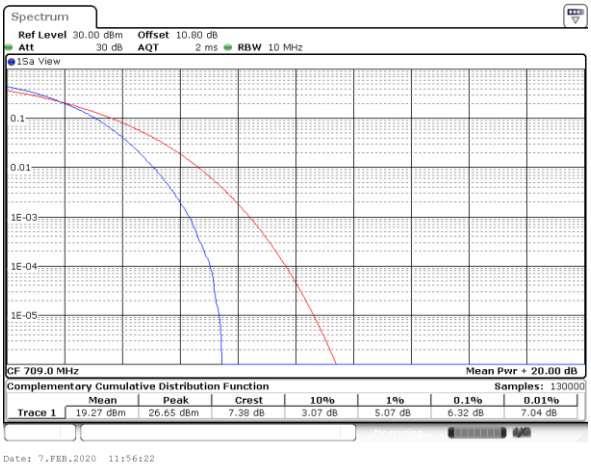


## LTE Band 17 / 10MHz / 64QAM

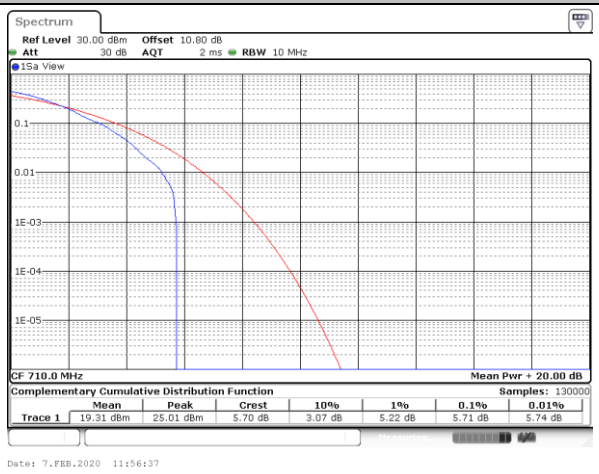
### Lowest Channel / 1RB



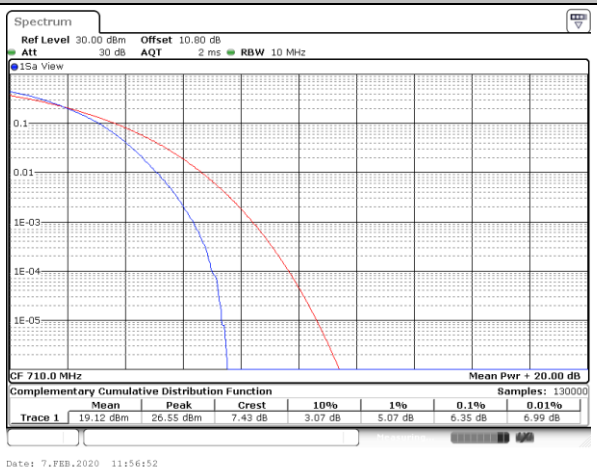

### Lowest Channel / Full RB



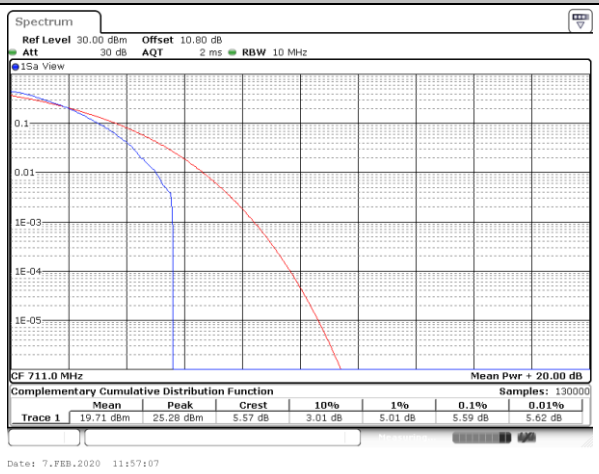

### Middle Channel / 1RB



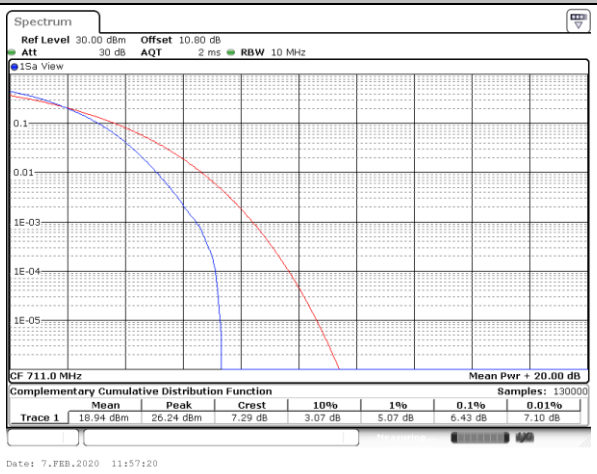

### Middle Channel / Full RB




### Highest Channel / 1RB




### Highest Channel / Full RB

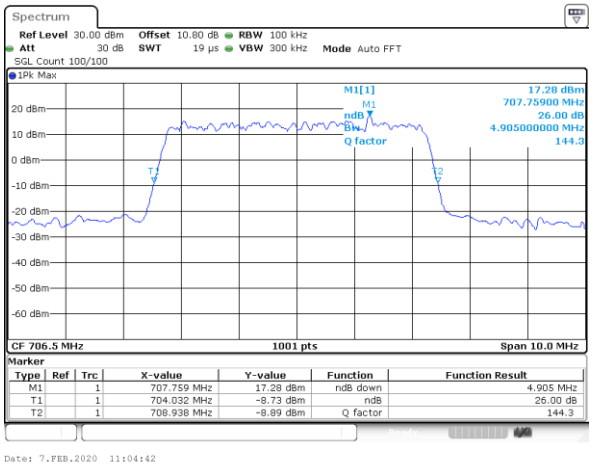


# 26dB Bandwidth

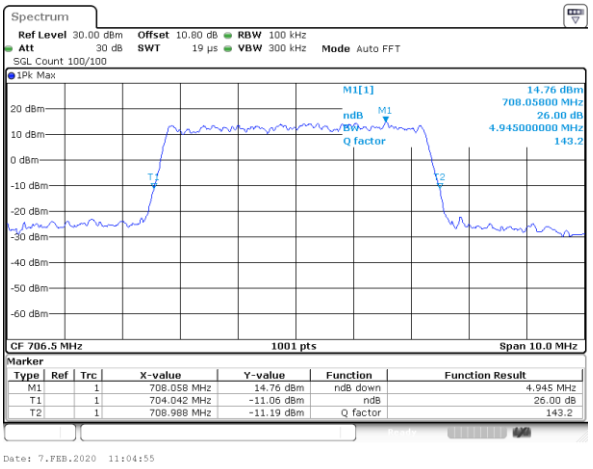
| Mode | LTE Band 17 : 26dB BW(MHz) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Lowest CH | - | - | - | - | 4.91 | 4.95 | 9.81 | 9.69 | - | - | - | - |
| Middle CH | - | - | - | - | 4.82 | 4.92 | 9.75 | 9.75 | - | - | - | - |
| Highest CH | - | - | - | - | 4.86 | 4.87 | 9.73 | 9.85 | - | - | - | - |
| Mode | LTE Band 17 : 26dB BW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | - | - | - | - | 4.97 | - | 9.73 | - | - | - | - | - |
| Middle CH | - | - | - | - | 4.91 | - | 9.85 | - | - | - | - | - |
| Highest CH | - | - | - | - | 4.94 | - | 9.75 | - | - | - | - | - |

## LTE Band 17

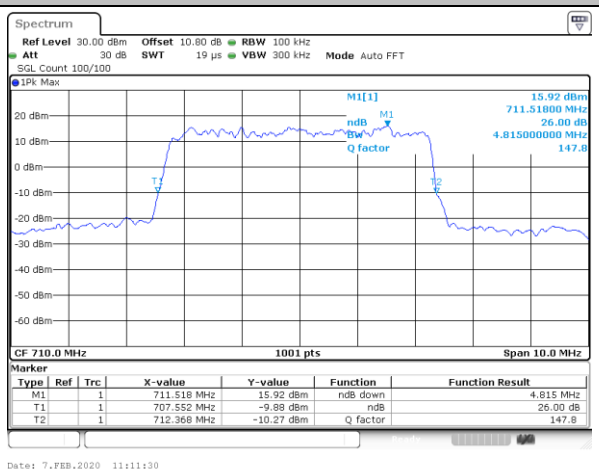
### Lowest Channel / 5MHz / QPSK



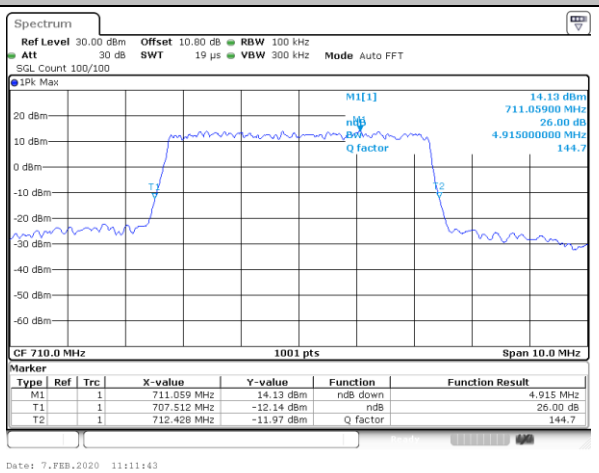

### Lowest Channel / 5MHz / 16QAM



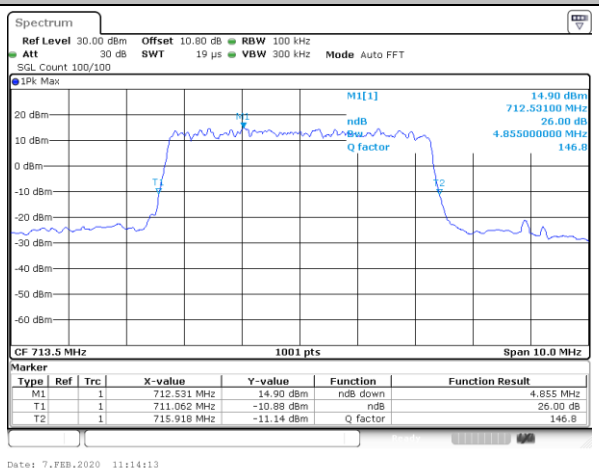

### Middle Channel / 5MHz / QPSK



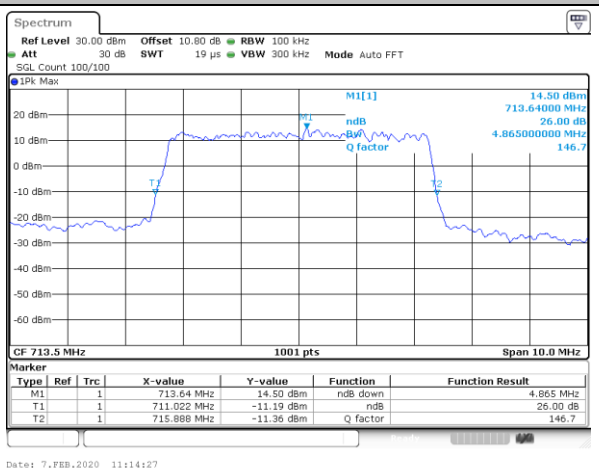

### Middle Channel / 5MHz / 16QAM




### Highest Channel / 5MHz / QPSK

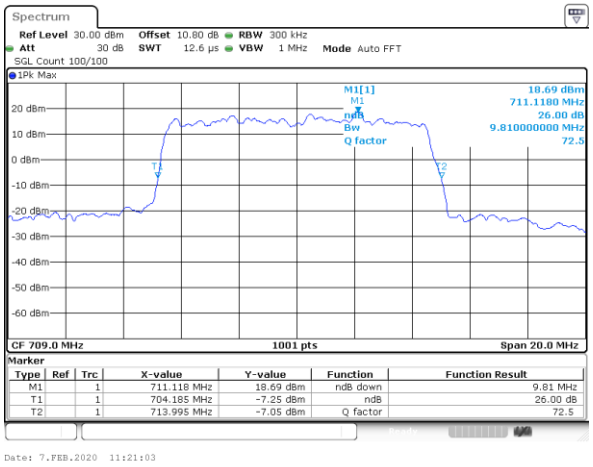



### Highest Channel / 5MHz / 16QAM

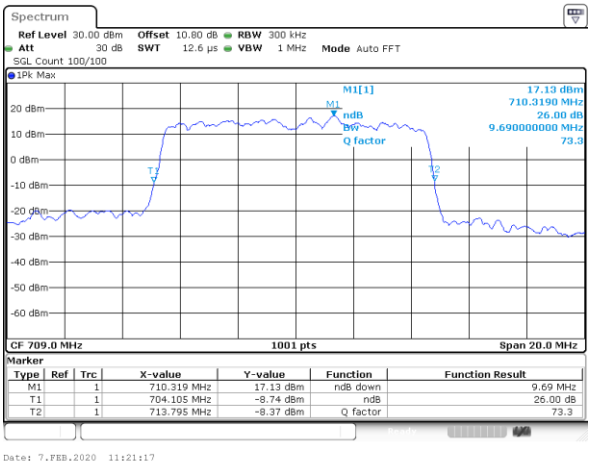


## LTE Band 17

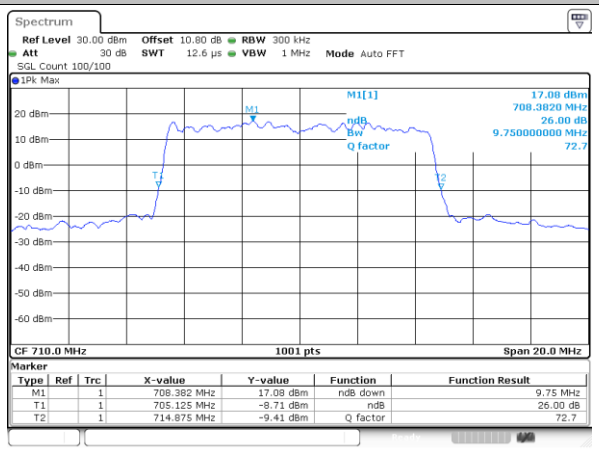
### Lowest Channel / 10MHz / QPSK



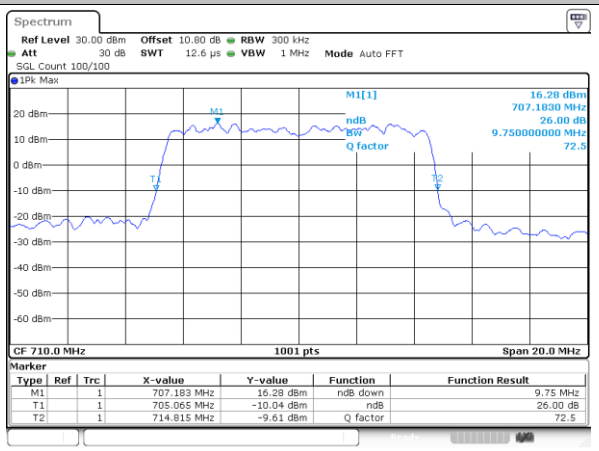

### Lowest Channel / 10MHz / 16QAM



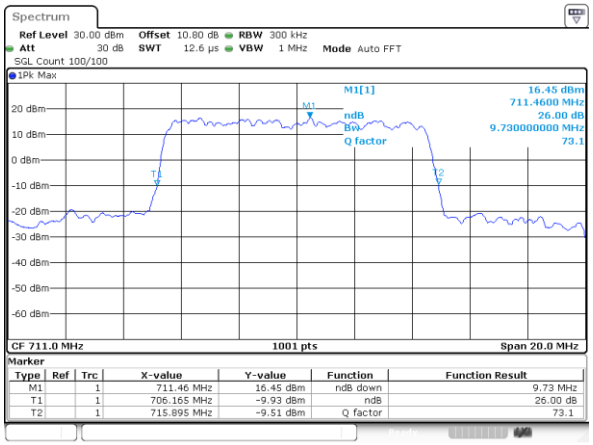

### Middle Channel / 10MHz / QPSK



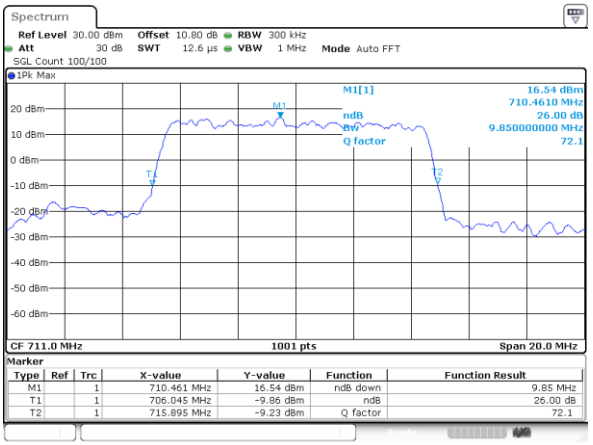

### Middle Channel / 10MHz / 16QAM




### Highest Channel / 10MHz / QPSK

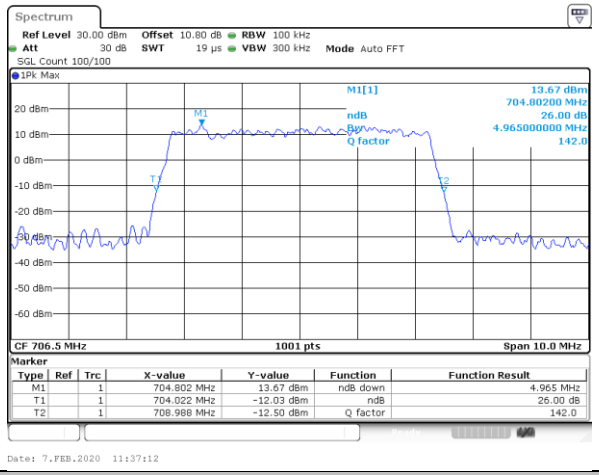



### Highest Channel / 10MHz / 16QAM

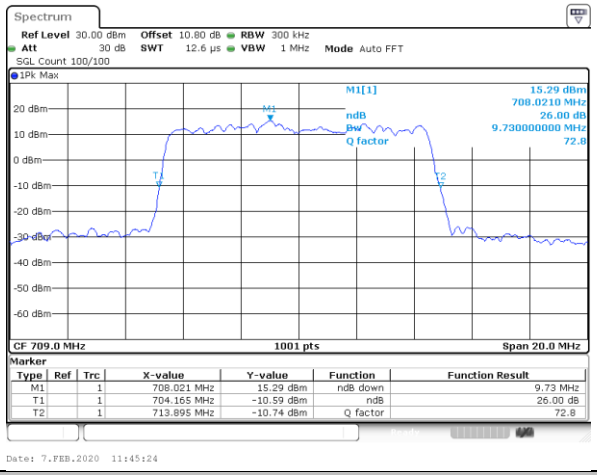


## LTE Band 17

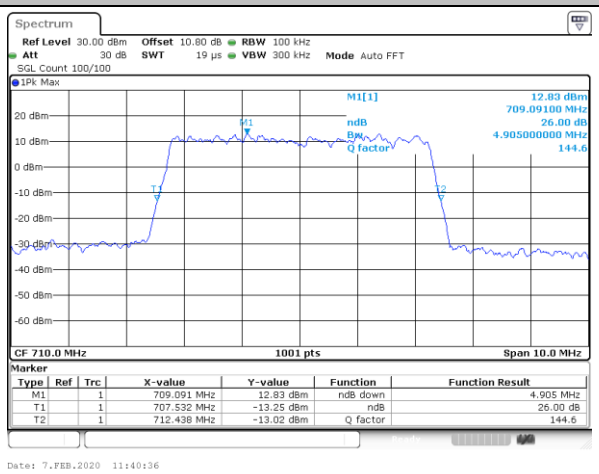
### Lowest Channel / 5MHz / 64QAM



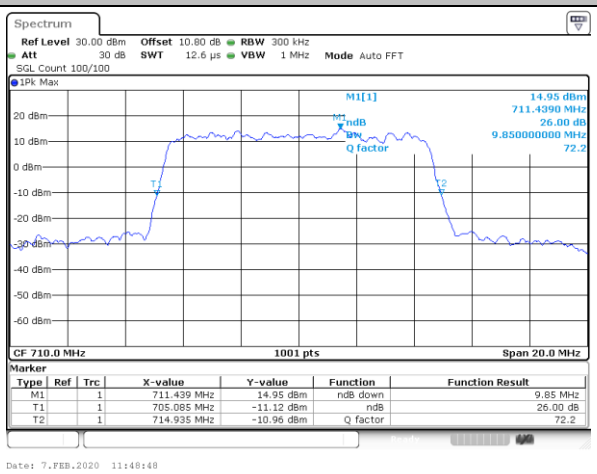

### Lowest Channel / 10MHz / 64QAM



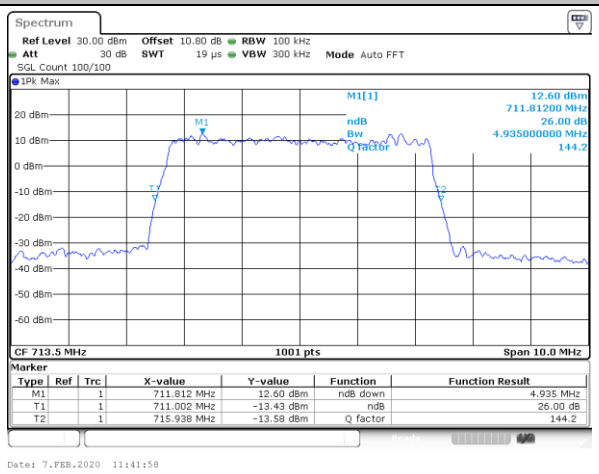

### Middle Channel / 5MHz / 64QAM



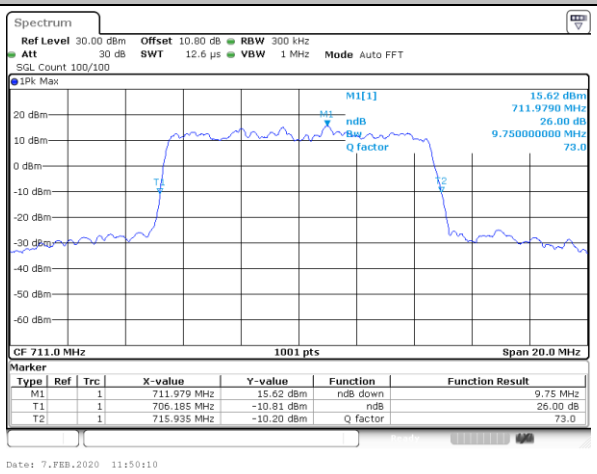

### Middle Channel / 10MHz / 64QAM




### Highest Channel / 5MHz / 64QAM




### Highest Channel / 10MHz / 64QAM

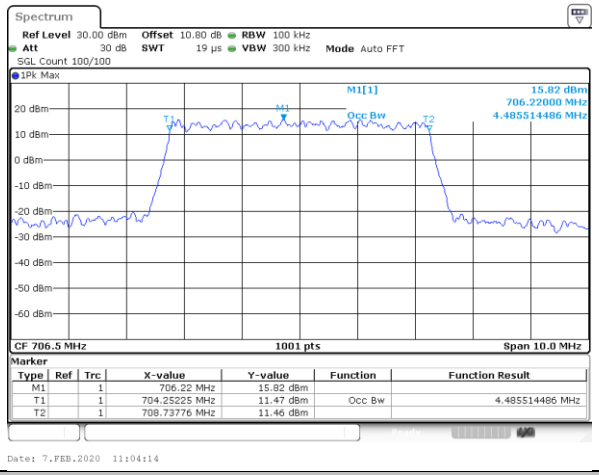


# Occupied Bandwidth

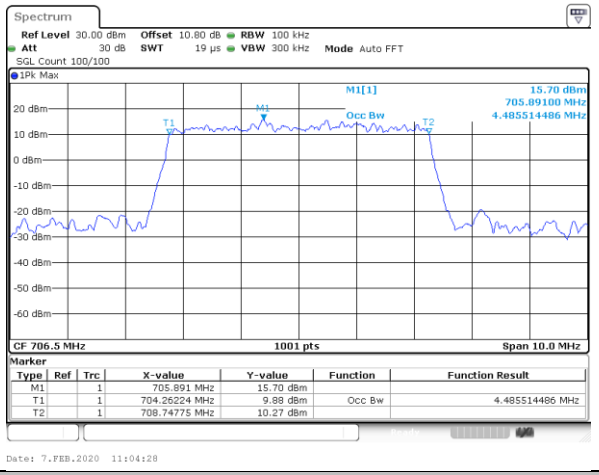
| Mode | LTE Band 17 : 99%OBW(MHz) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM | QPSK | 16QAM |
| Lowest CH | - | - | - | - | 4.49 | 4.49 | 9.01 | 8.95 | - | - | - | - |
| Middle CH | - | - | - | - | 4.49 | 4.50 | 8.99 | 8.97 | - | - | - | - |
| Highest CH | - | - | - | - | 4.49 | 4.49 | 9.01 | 9.03 | - | - | - | - |
| Mode | LTE Band 17 : 99%OBW(MHz) | | | | | | | | | | | |
| BW | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | |
| Mod. | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | | 64QAM | |
| Lowest CH | - | - | - | - | 4.49 | - | 9.03 | - | - | - | - | - |
| Middle CH | - | - | - | - | 4.48 | - | 9.01 | - | - | - | - | - |
| Highest CH | - | - | - | - | 4.50 | - | 9.03 | - | - | - | - | - |

## LTE Band 17

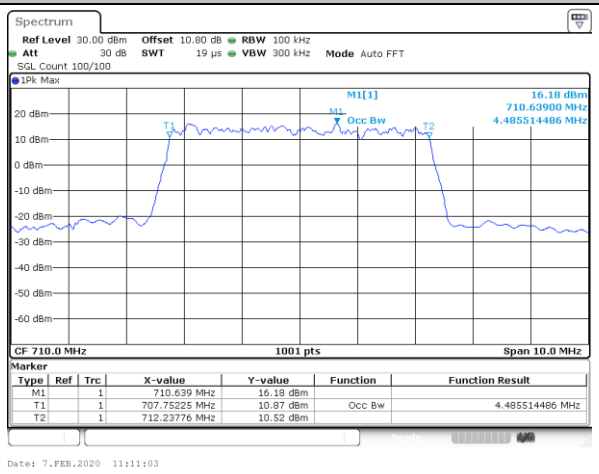
### Lowest Channel / 5MHz / QPSK



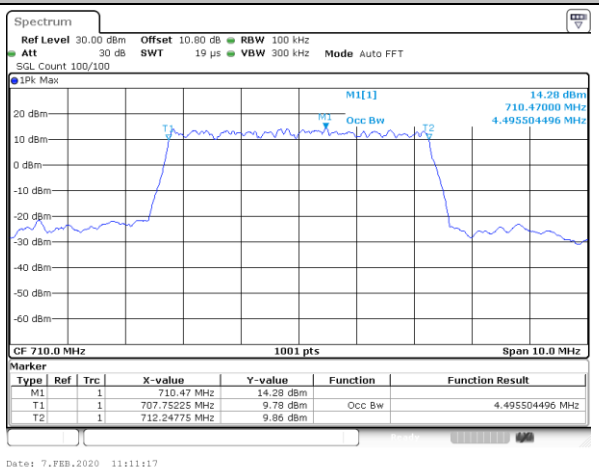

### Lowest Channel / 5MHz / 16QAM



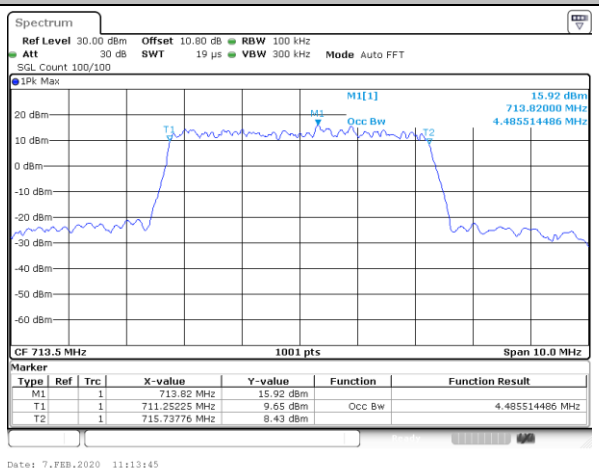

### Middle Channel / 5MHz / QPSK



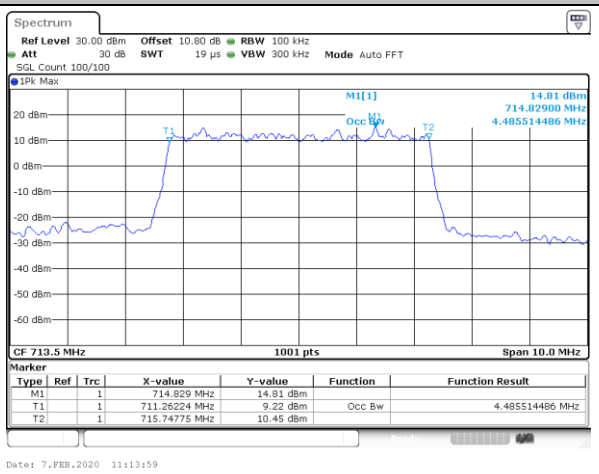

### Middle Channel / 5MHz / 16QAM




### Highest Channel / 5MHz / QPSK

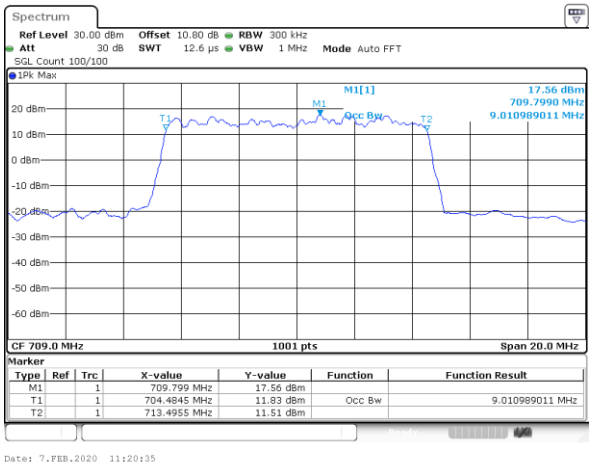



### Highest Channel / 5MHz / 16QAM

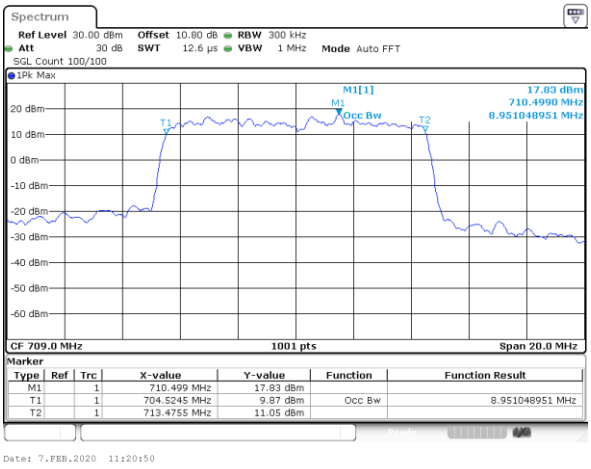


## LTE Band 17

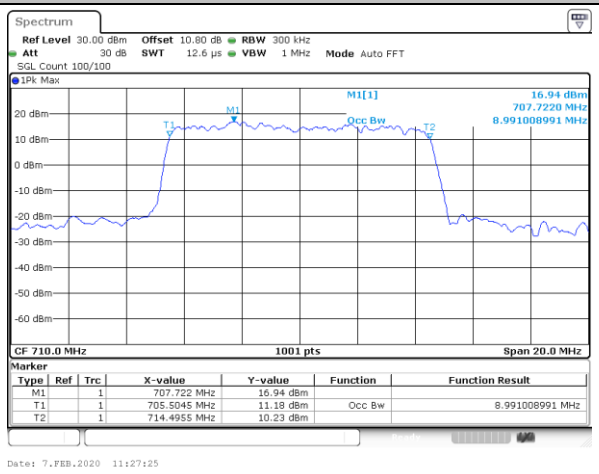
### Lowest Channel / 10MHz / QPSK



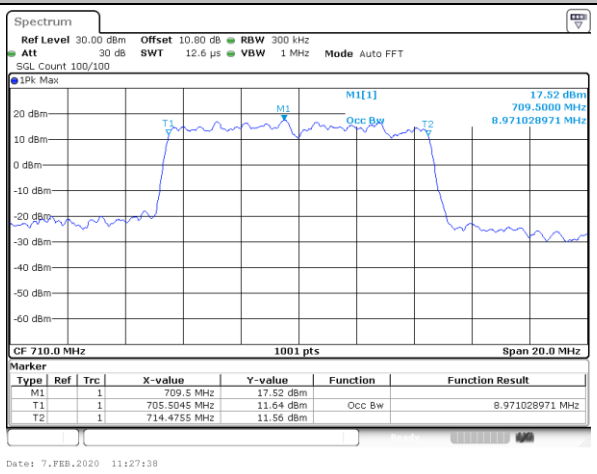

### Lowest Channel / 10MHz / 16QAM



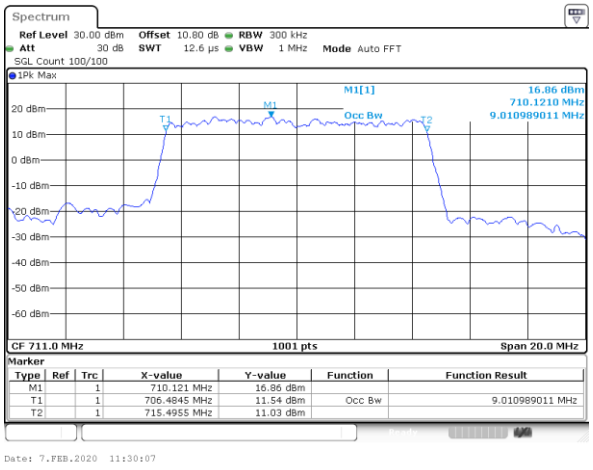

### Middle Channel / 10MHz / QPSK



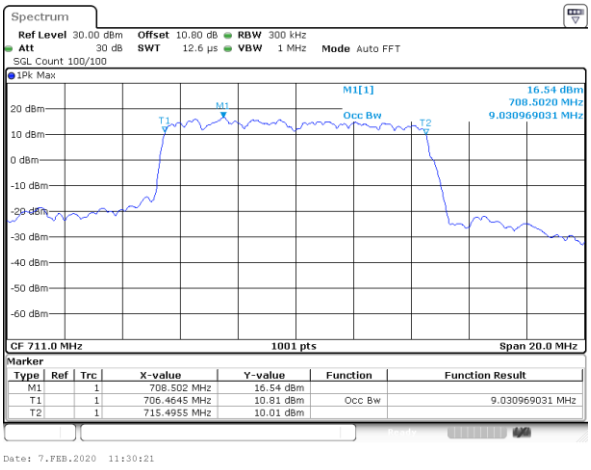

### Middle Channel / 10MHz / 16QAM




### Highest Channel / 10MHz / QPSK

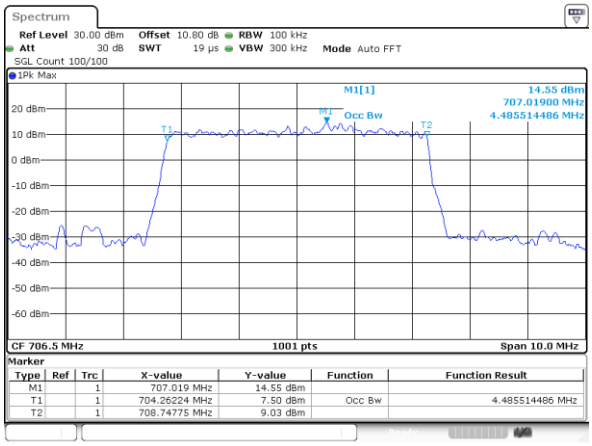



### Highest Channel / 10MHz / 16QAM

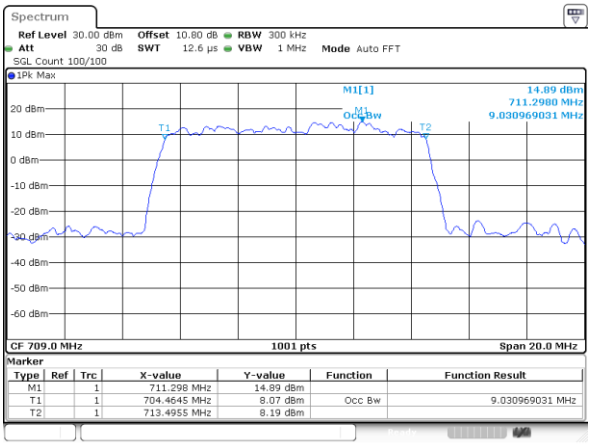


## LTE Band 17

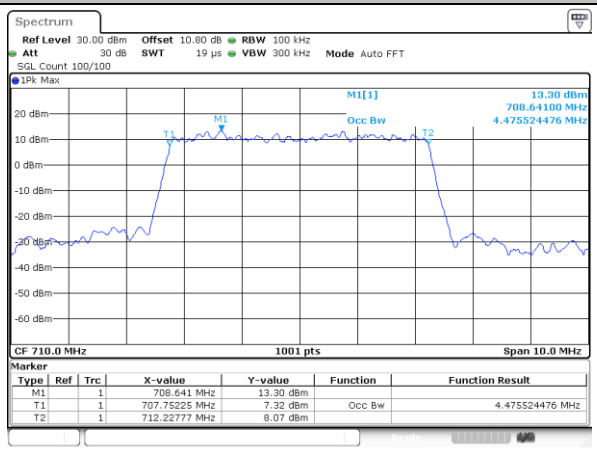
### Lowest Channel / 5MHz / 64QAM



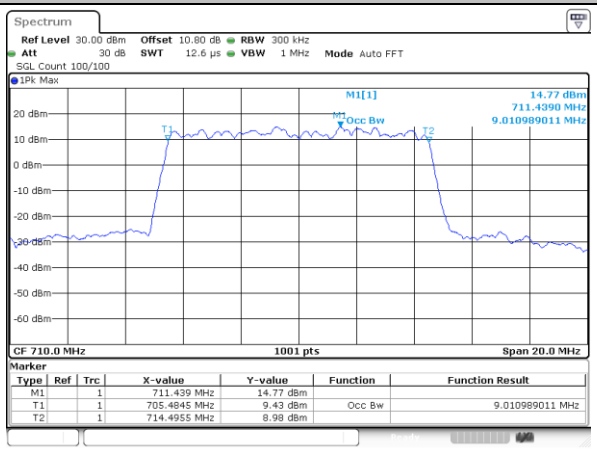

### Lowest Channel / 10MHz / 64QAM



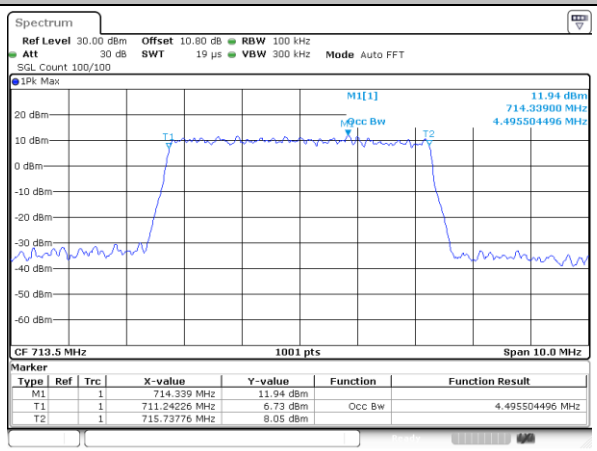

### Middle Channel / 5MHz / 64QAM



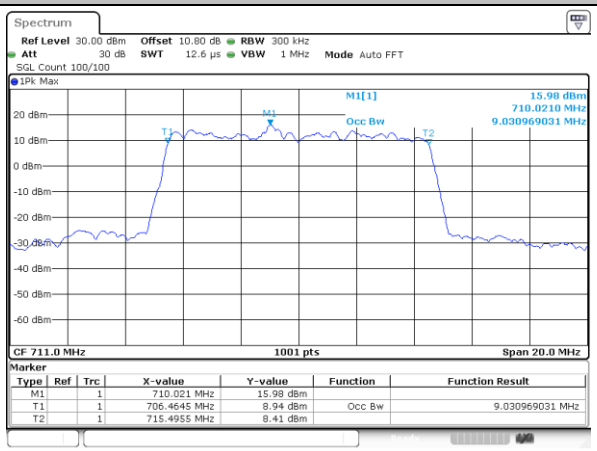

### Middle Channel / 10MHz / 64QAM




### Highest Channel / 5MHz / 64QAM



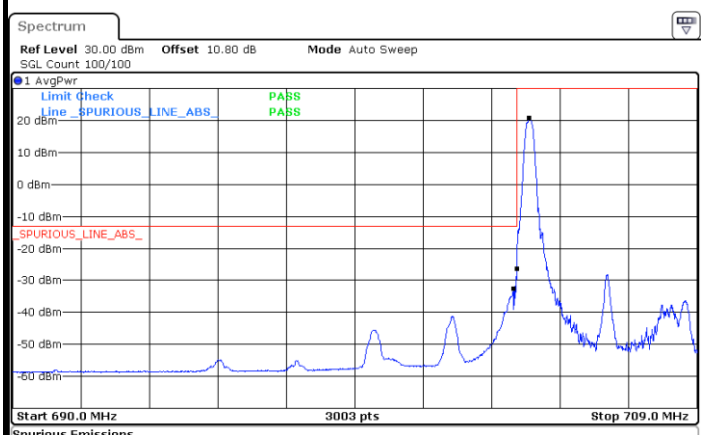

### Highest Channel / 10MHz / 64QAM



# Conducted Band Edge

## LTE Band 17 / 5MHz / QPSK

### Lowest Band Edge / 1 RB

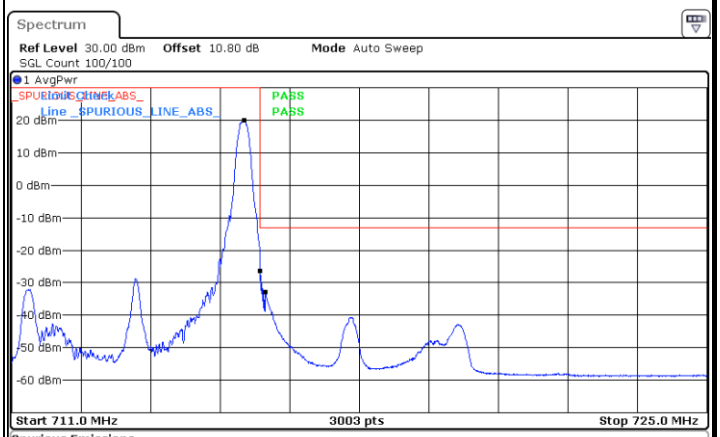



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.89306 MHz | -32.66 dBm | -19.66 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.99965 MHz | -26.32 dBm | -13.32 dB |
| 704.000 MHz | 709.000 MHz | 100.000 kHz | 704.32717 MHz | 20.70 dBm | -9.30 dB |

Date: 7.FEB.2020 11:05:57

### Highest Band Edge / 1 RB

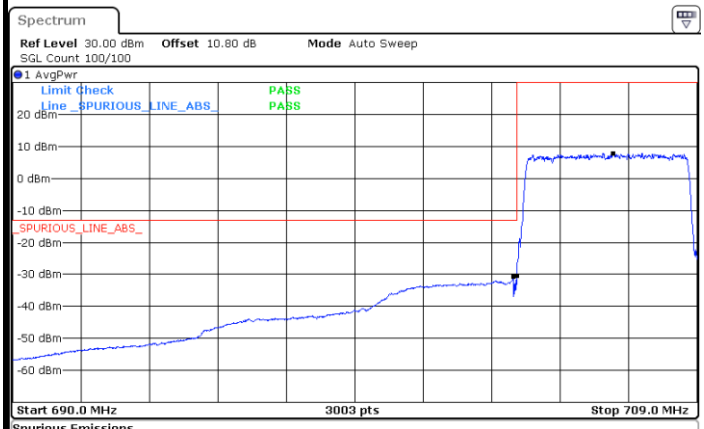



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 711.000 MHz | 716.000 MHz | 100.000 kHz | 715.68781 MHz | 19.89 dBm | -10.11 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00085 MHz | -26.47 dBm | -13.47 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -32.78 dBm | -19.78 dB |

Date: 7.FEB.2020 11:15:28

### Lowest Band Edge / Full RB

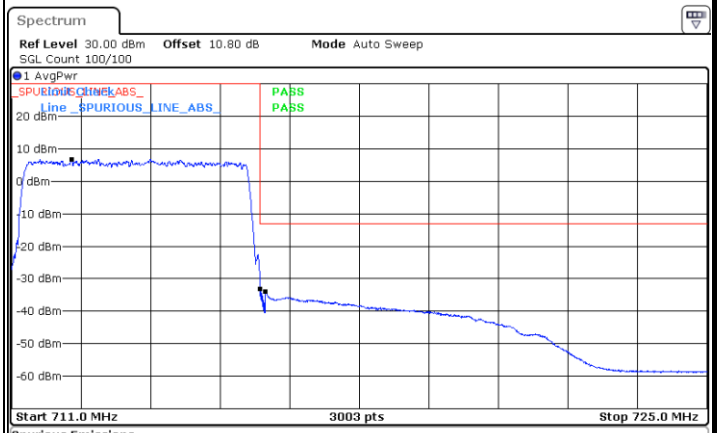



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.89306 MHz | -30.79 dBm | -17.79 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.99785 MHz | -30.51 dBm | -17.51 dB |
| 704.000 MHz | 709.000 MHz | 100.000 kHz | 706.65984 MHz | 7.84 dBm | -22.16 dB |

Date: 7.FEB.2020 11:07:59

### Highest Band Edge / Full RB



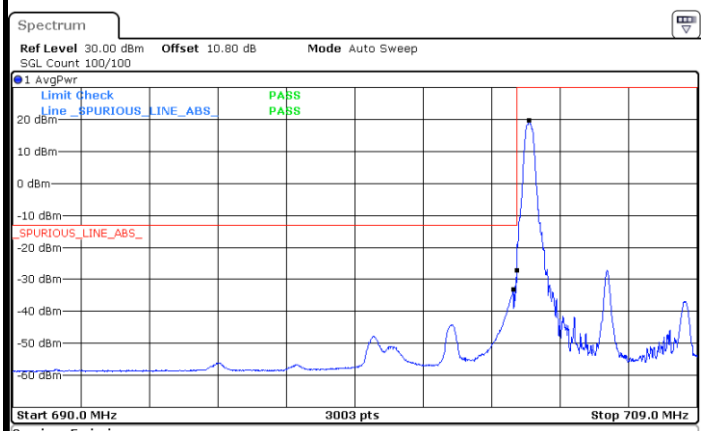

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 711.000 MHz | 716.000 MHz | 100.000 kHz | 712.20130 MHz | 6.80 dBm | -23.20 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00315 MHz | -33.24 dBm | -20.24 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -33.84 dBm | -20.84 dB |

Date: 7.FEB.2020 11:17:30

## LTE Band 17 / 5MHz / 16QAM

### Lowest Band Edge / 1 RB

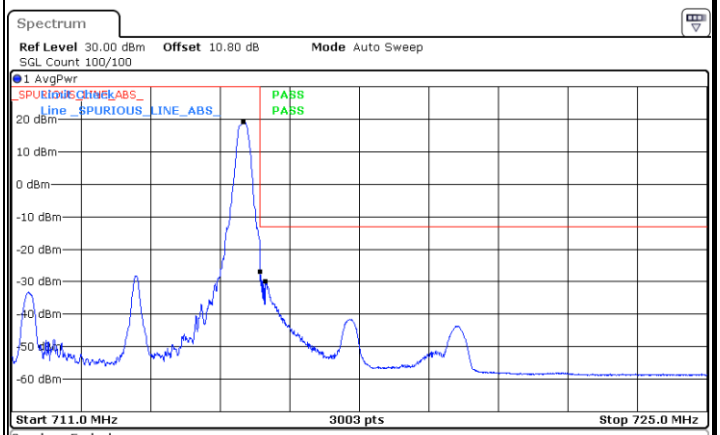



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.89306 MHz | -33.08 dBm | -20.08 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.99985 MHz | -27.17 dBm | -14.17 dB |
| 704.000 MHz | 709.000 MHz | 100.000 kHz | 704.33716 MHz | 19.83 dBm | -10.17 dB |

Date: 7.FEB.2020 11:06:58

### Highest Band Edge / 1 RB

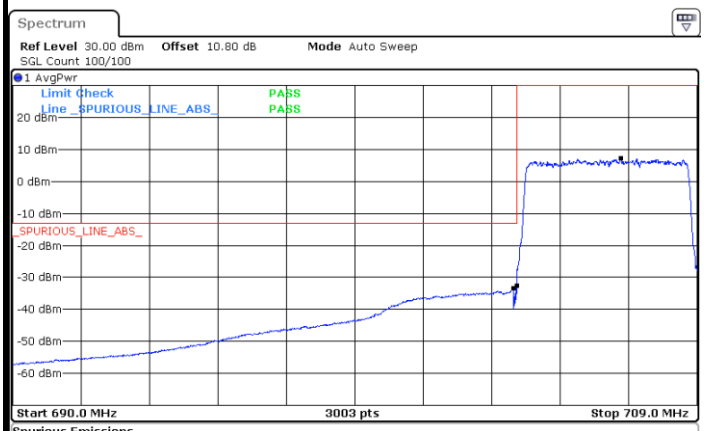



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 711.000 MHz | 716.000 MHz | 100.000 kHz | 715.65285 MHz | 19.21 dBm | -10.79 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00135 MHz | -26.97 dBm | -13.97 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -30.00 dBm | -17.00 dB |

Date: 7.FEB.2020 11:16:29

### Lowest Band Edge / Full RB

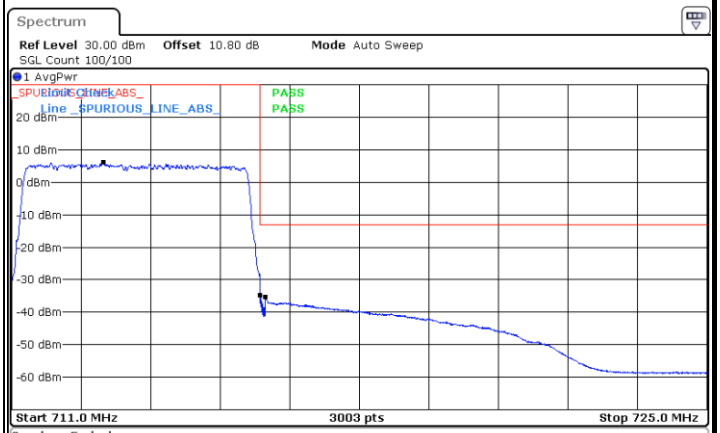



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.89306 MHz | -33.33 dBm | -20.33 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.99945 MHz | -32.60 dBm | -19.60 dB |
| 704.000 MHz | 709.000 MHz | 100.000 kHz | 706.87962 MHz | 7.15 dBm | -22.85 dB |

Date: 7.FEB.2020 11:09:00

### Highest Band Edge / Full RB



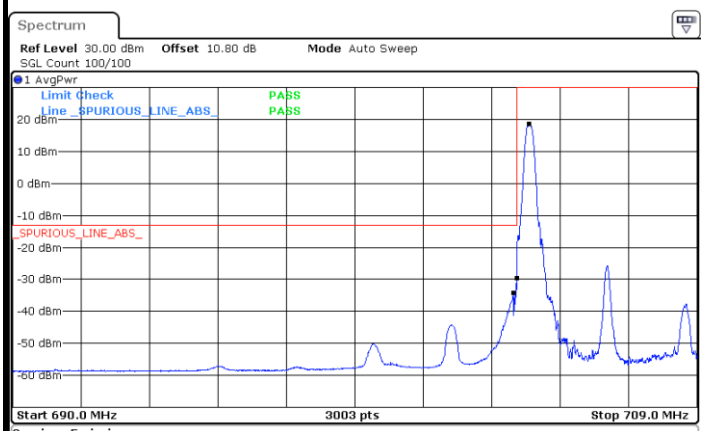

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 711.000 MHz | 716.000 MHz | 100.000 kHz | 712.85065 MHz | 6.08 dBm | -23.92 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00085 MHz | -34.83 dBm | -21.83 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -35.23 dBm | -22.23 dB |

Date: 7.FEB.2020 11:18:31

## LTE Band 17 / 5MHz / 64QAM

### Lowest Band Edge / 1 RB

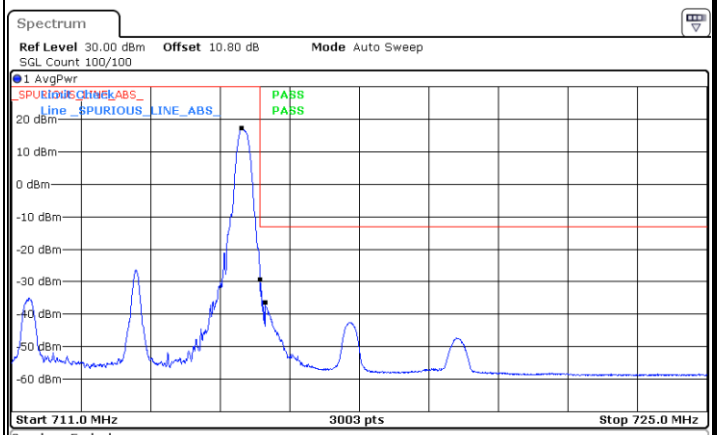



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.89306 MHz | -34.22 dBm | -21.22 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.99885 MHz | -29.63 dBm | -16.63 dB |
| 704.000 MHz | 709.000 MHz | 100.000 kHz | 704.32218 MHz | 18.64 dBm | -11.36 dB |

Date: 7.FEB.2020 11:38:13

### Highest Band Edge / 1 RB

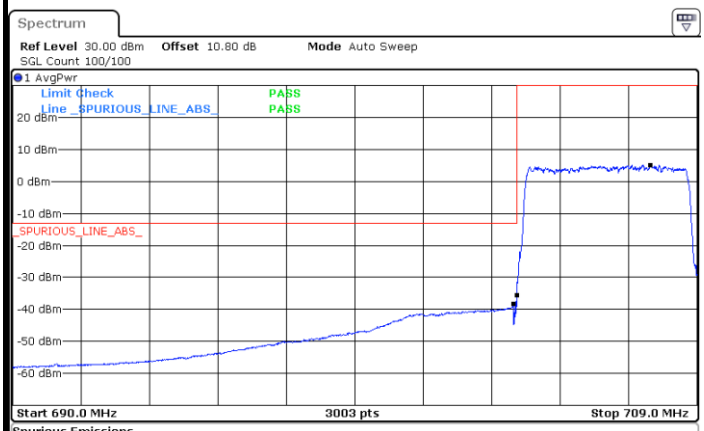



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 711.000 MHz | 716.000 MHz | 100.000 kHz | 715.62288 MHz | 17.21 dBm | -12.79 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00035 MHz | -29.29 dBm | -16.29 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -36.34 dBm | -23.34 dB |

Date: 7.FEB.2020 11:42:59

### Lowest Band Edge / Full RB

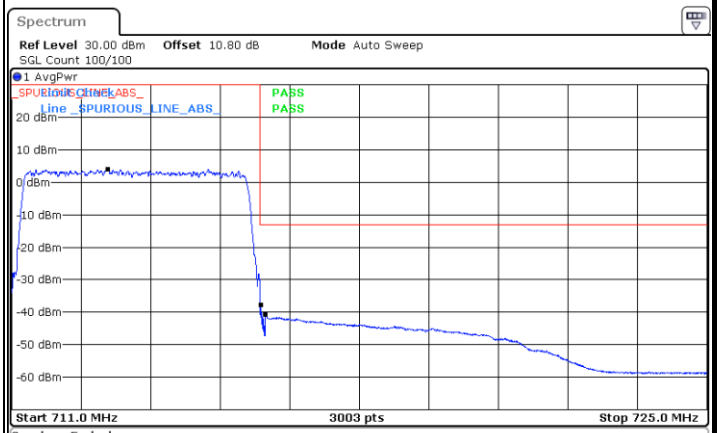



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.89306 MHz | -38.20 dBm | -25.20 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.99885 MHz | -35.66 dBm | -22.66 dB |
| 704.000 MHz | 709.000 MHz | 100.000 kHz | 707.70380 MHz | 5.17 dBm | -24.83 dB |

Date: 7.FEB.2020 11:39:15

### Highest Band Edge / Full RB



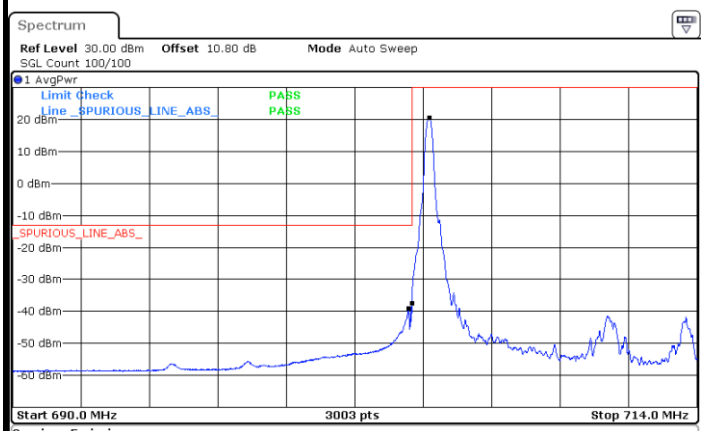

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 711.000 MHz | 716.000 MHz | 100.000 kHz | 712.93556 MHz | 4.04 dBm | -25.96 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00854 MHz | -37.76 dBm | -24.76 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -40.68 dBm | -27.68 dB |

Date: 7.FEB.2020 11:44:00

## LTE Band 17 / 10MHz / QPSK

### Lowest Band Edge / 1 RB

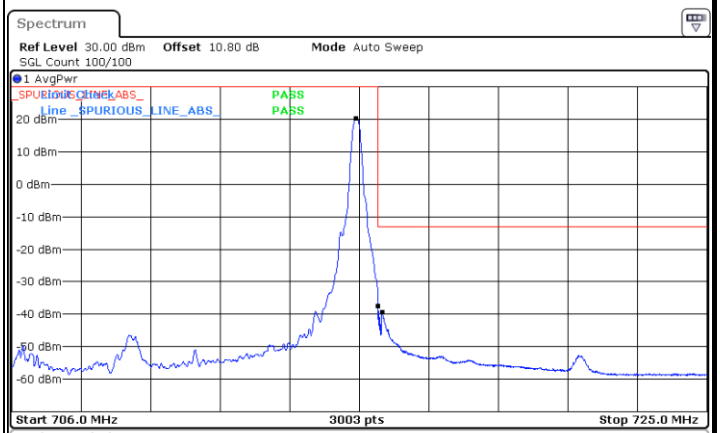



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.89306 MHz | -39.16 dBm | -26.16 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.99595 MHz | -37.58 dBm | -24.58 dB |
| 704.000 MHz | 714.000 MHz | 100.000 kHz | 704.61439 MHz | 20.55 dBm | -9.45 dB |

Date: 7.FEB.2020 11:22:19

### Highest Band Edge / 1 RB

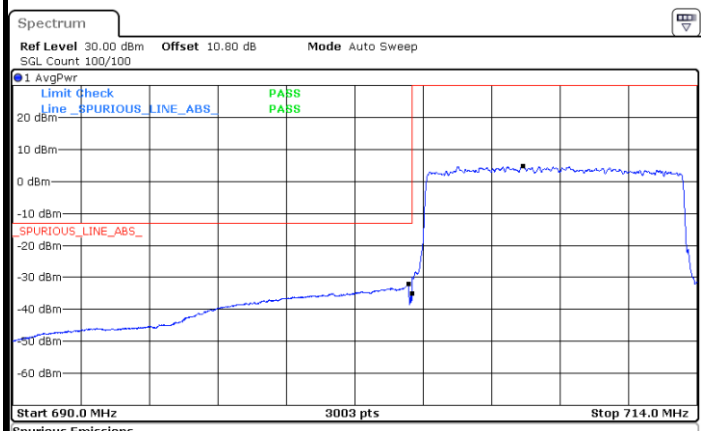



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 706.000 MHz | 716.000 MHz | 100.000 kHz | 715.40559 MHz | 20.33 dBm | -9.67 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00185 MHz | -37.43 dBm | -24.43 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.12223 MHz | -39.27 dBm | -26.27 dB |

Date: 7.FEB.2020 11:31:50

### Lowest Band Edge / Full RB

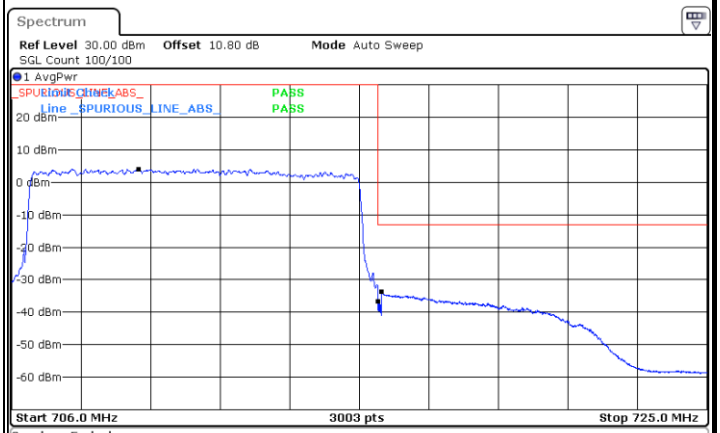



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.89306 MHz | -32.15 dBm | -19.15 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.99735 MHz | -34.99 dBm | -21.99 dB |
| 704.000 MHz | 714.000 MHz | 100.000 kHz | 707.88112 MHz | 4.84 dBm | -25.16 dB |

Date: 7.FEB.2020 11:24:21

### Highest Band Edge / Full RB



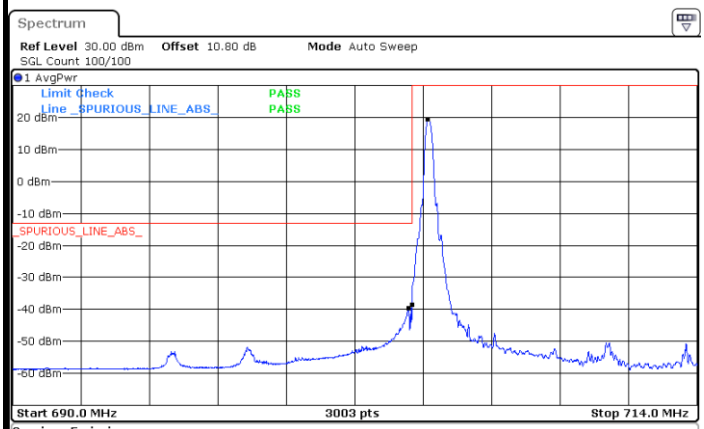

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 706.000 MHz | 716.000 MHz | 100.000 kHz | 709.47153 MHz | 4.02 dBm | -25.98 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.01533 MHz | -36.59 dBm | -23.59 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -33.81 dBm | -20.81 dB |

Date: 7.FEB.2020 11:33:53

## LTE Band 17 / 10MHz / 16QAM

### Lowest Band Edge / 1 RB

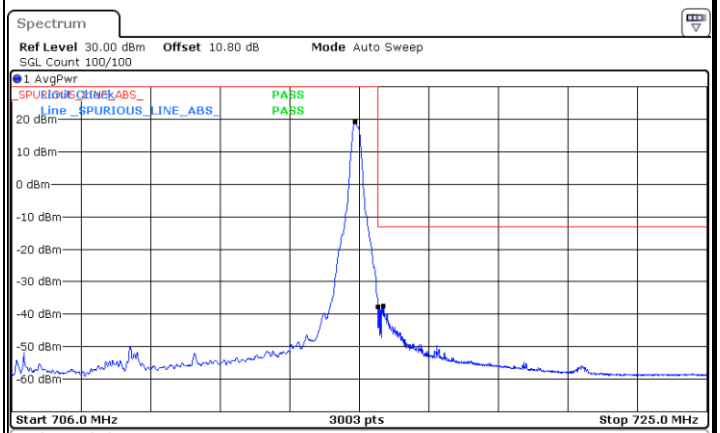



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.87917 MHz | -39.52 dBm | -26.52 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.99835 MHz | -38.64 dBm | -25.64 dB |
| 704.000 MHz | 714.000 MHz | 100.000 kHz | 704.56444 MHz | 19.31 dBm | -10.69 dB |

Date: 7.FEB.2020 11:23:20

### Highest Band Edge / 1 RB

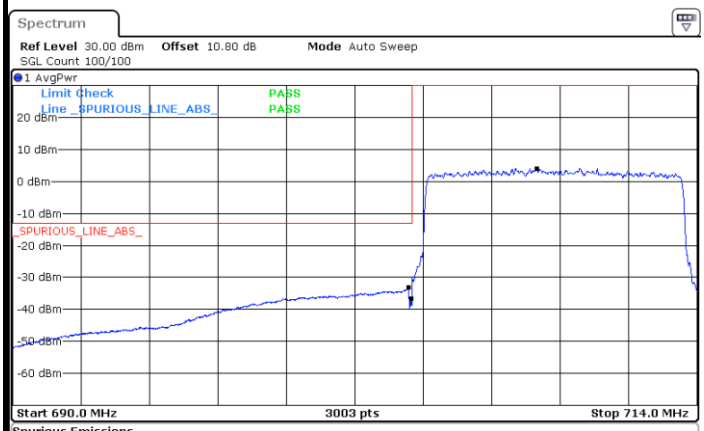



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 706.000 MHz | 716.000 MHz | 100.000 kHz | 715.38561 MHz | 19.14 dBm | -10.86 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00015 MHz | -37.82 dBm | -24.82 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.14001 MHz | -37.51 dBm | -24.51 dB |

Date: 7.FEB.2020 11:32:51

### Lowest Band Edge / Full RB

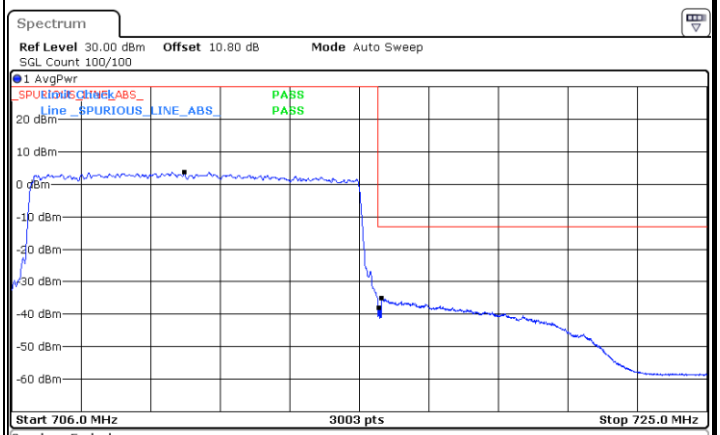



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.89306 MHz | -33.13 dBm | -20.13 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.95949 MHz | -36.66 dBm | -23.66 dB |
| 704.000 MHz | 714.000 MHz | 100.000 kHz | 708.38062 MHz | 3.99 dBm | -26.01 dB |

Date: 7.FEB.2020 11:25:22

### Highest Band Edge / Full RB



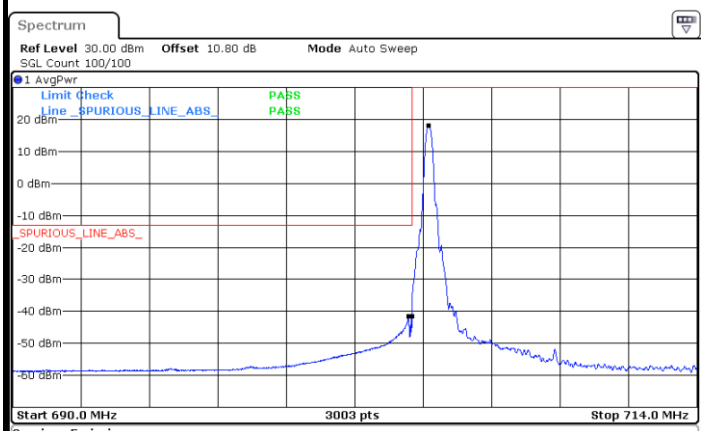

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 706.000 MHz | 716.000 MHz | 100.000 kHz | 710.72028 MHz | 3.64 dBm | -26.36 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.01803 MHz | -37.91 dBm | -24.91 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -34.98 dBm | -21.98 dB |

Date: 7.FEB.2020 11:34:54

## LTE Band 17 / 10MHz / 64QAM

### Lowest Band Edge / 1 RB

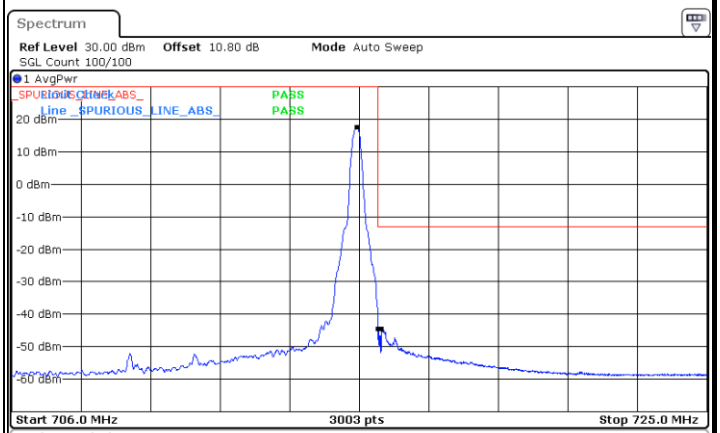



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.89306 MHz | -41.54 dBm | -28.54 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.99845 MHz | -41.42 dBm | -28.42 dB |
| 704.000 MHz | 714.000 MHz | 100.000 kHz | 704.58442 MHz | 18.01 dBm | -11.99 dB |

Date: 7.FEB.2020 11:46:25

### Highest Band Edge / 1 RB

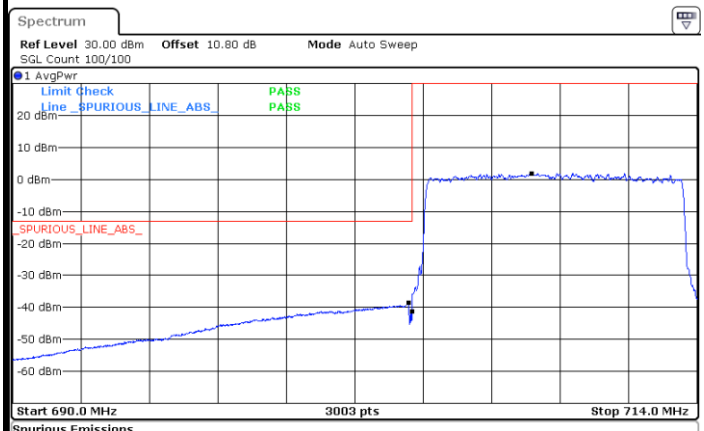



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 706.000 MHz | 716.000 MHz | 100.000 kHz | 715.42557 MHz | 17.59 dBm | -12.41 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.01214 MHz | -44.45 dBm | -31.45 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -44.41 dBm | -31.41 dB |

Date: 7.FEB.2020 11:51:11

### Lowest Band Edge / Full RB

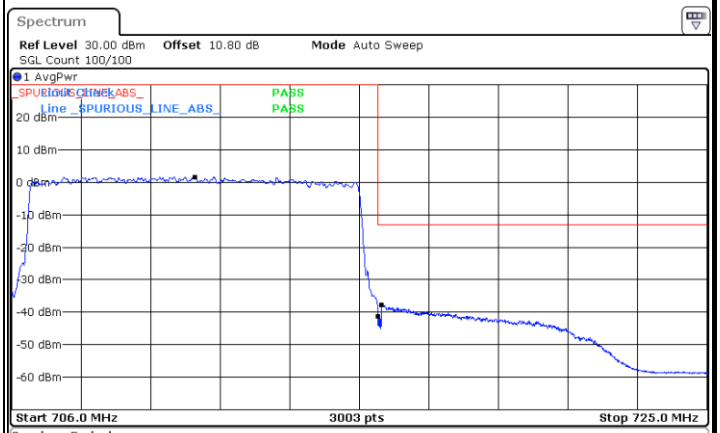



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 690.000 MHz | 703.900 MHz | 100.000 kHz | 703.89306 MHz | -38.53 dBm | -25.53 dB |
| 703.900 MHz | 704.000 MHz | 30.000 kHz | 703.99206 MHz | -41.38 dBm | -28.38 dB |
| 704.000 MHz | 714.000 MHz | 100.000 kHz | 708.18082 MHz | 1.84 dBm | -28.16 dB |

Date: 7.FEB.2020 11:47:27

### Highest Band Edge / Full RB




Spurious Emissions

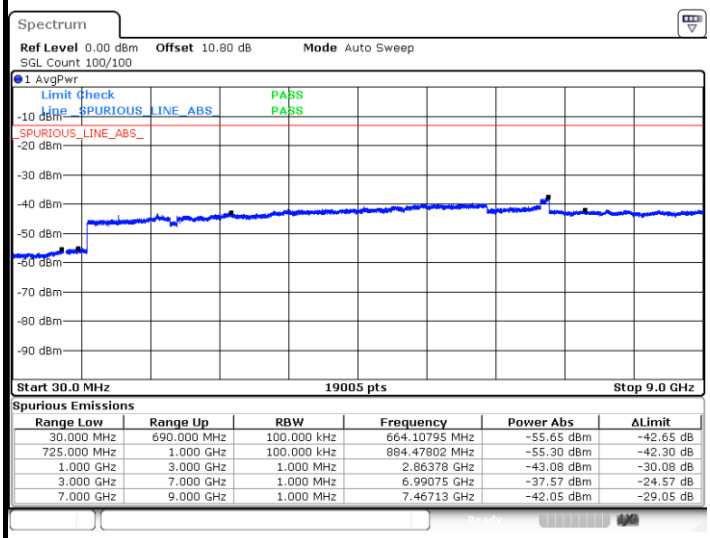
| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 706.000 MHz | 716.000 MHz | 100.000 kHz | 711.00000 MHz | 1.62 dBm | -28.38 dB |
| 716.000 MHz | 716.100 MHz | 30.000 kHz | 716.00974 MHz | -41.39 dBm | -28.39 dB |
| 716.100 MHz | 725.000 MHz | 100.000 kHz | 716.10445 MHz | -37.78 dBm | -24.78 dB |

Date: 7.FEB.2020 11:52:12

# Conducted Spurious Emission

## LTE Band 17 / 5MHz

### Lowest Channel / QPSK

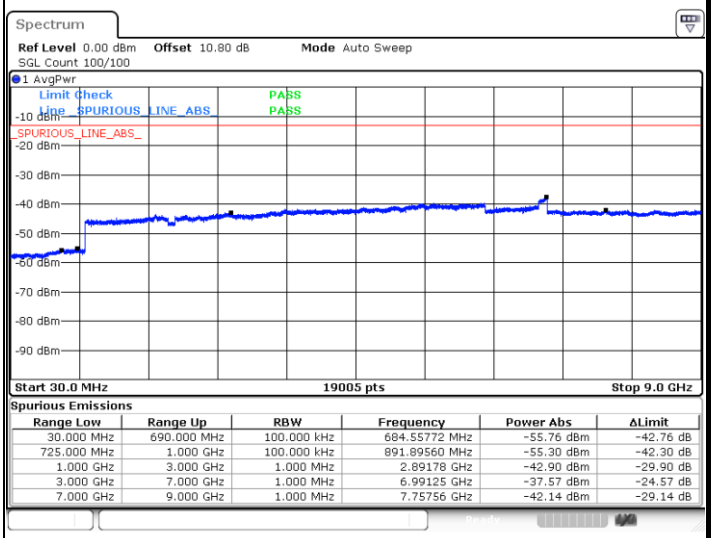



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 664.10795 MHz | -55.65 dBm | -42.65 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 884.47802 MHz | -55.30 dBm | -42.30 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.86378 GHz | -43.08 dBm | -30.08 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99075 GHz | -37.57 dBm | -24.57 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.46713 GHz | -42.05 dBm | -29.05 dB |

Date: 7.FEB.2020 11:09:54

### Lowest Channel / 16QAM

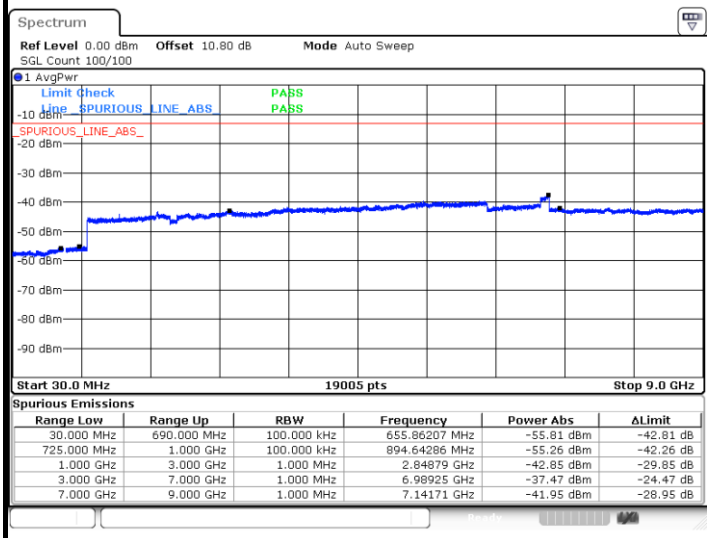



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 684.55772 MHz | -55.76 dBm | -42.76 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 891.89560 MHz | -55.30 dBm | -42.30 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.89178 GHz | -42.90 dBm | -29.90 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99125 GHz | -37.57 dBm | -24.57 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.75756 GHz | -42.14 dBm | -29.14 dB |

Date: 7.FEB.2020 11:10:49

### Middle Channel / QPSK

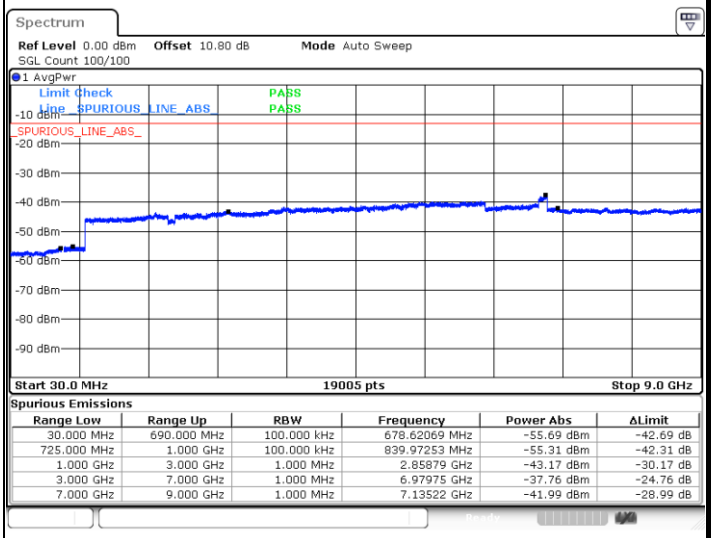



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 655.86207 MHz | -55.81 dBm | -42.81 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 894.64286 MHz | -55.26 dBm | -42.26 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.84879 GHz | -42.85 dBm | -29.85 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98925 GHz | -37.47 dBm | -24.47 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.14171 GHz | -41.95 dBm | -28.95 dB |

Date: 7.FEB.2020 11:12:37

### Middle Channel / 16QAM



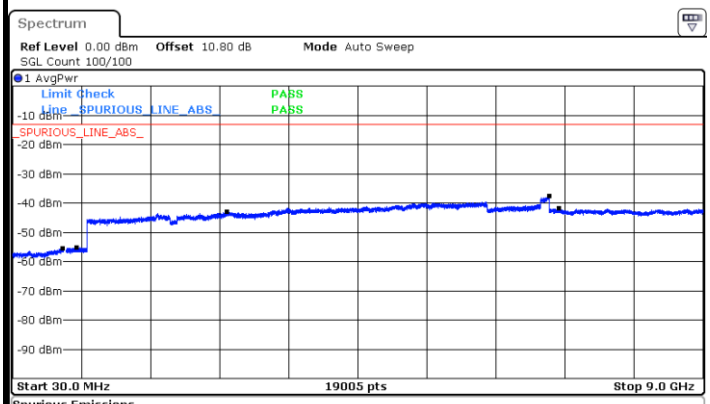

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 678.62069 MHz | -55.69 dBm | -42.69 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 839.97253 MHz | -55.31 dBm | -42.31 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.85879 GHz | -43.17 dBm | -30.17 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.97975 GHz | -37.76 dBm | -24.76 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.13522 GHz | -41.99 dBm | -28.99 dB |

Date: 7.FEB.2020 11:13:31

## LTE Band 17 / 5MHz

### Highest Channel / QPSK

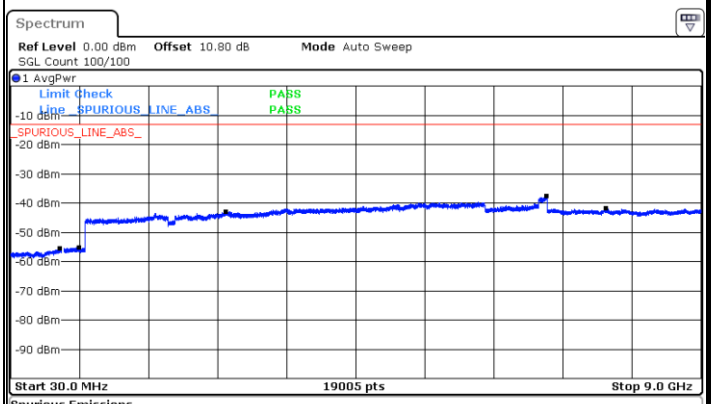



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 675.32234 MHz | -55.66 dBm | -42.66 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 862.50000 MHz | -55.17 dBm | -42.17 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.81480 GHz | -43.07 dBm | -30.07 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99725 GHz | -37.67 dBm | -24.67 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.12872 GHz | -41.89 dBm | -28.89 dB |

Date: 7.FEB.2020 11:19:25

### Highest Channel / 16QAM



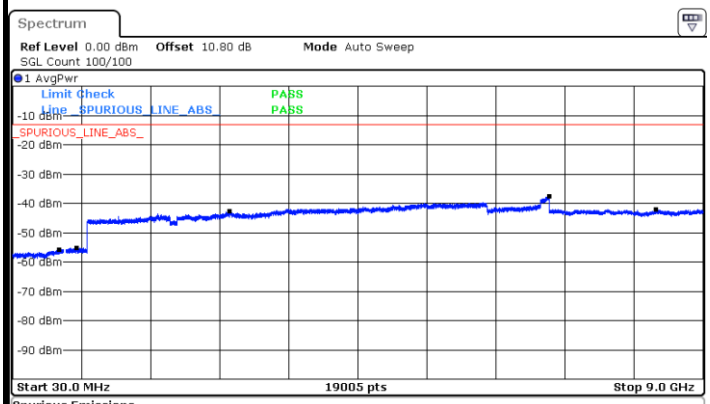

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 667.73613 MHz | -55.65 dBm | -42.65 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 914.42308 MHz | -55.27 dBm | -42.27 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.82129 GHz | -42.90 dBm | -29.90 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99275 GHz | -37.49 dBm | -24.49 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.75956 GHz | -41.90 dBm | -28.90 dB |

Date: 7.FEB.2020 11:20:20

## LTE Band 17 / 10MHz

### Lowest Channel / QPSK

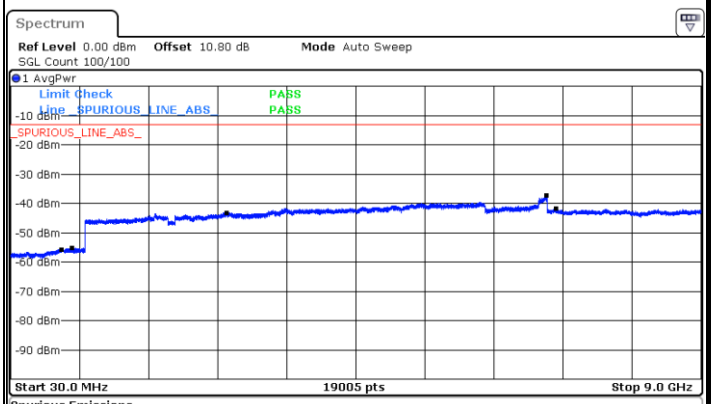



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 630.46477 MHz | -55.72 dBm | -42.72 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 863.32418 MHz | -55.09 dBm | -42.09 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.85079 GHz | -42.82 dBm | -29.82 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99775 GHz | -37.46 dBm | -24.46 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 8.38790 GHz | -42.07 dBm | -29.07 dB |

Date: 7.FEB.2020 11:26:16

### Lowest Channel / 16QAM



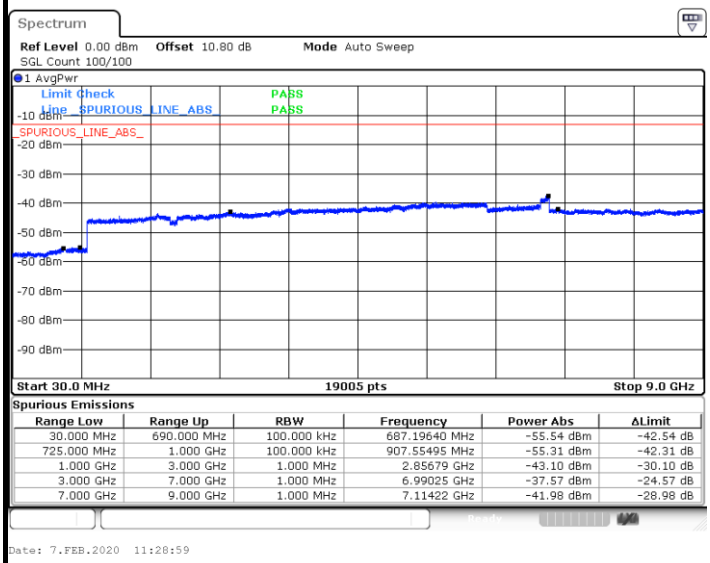

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 683.56822 MHz | -55.77 dBm | -42.77 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 821.84066 MHz | -55.33 dBm | -42.33 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.82929 GHz | -43.17 dBm | -30.17 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99125 GHz | -37.40 dBm | -24.40 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.11022 GHz | -41.85 dBm | -28.85 dB |

Date: 7.FEB.2020 11:27:11

## LTE Band 17 / 10MHz

### Middle Channel / QPSK

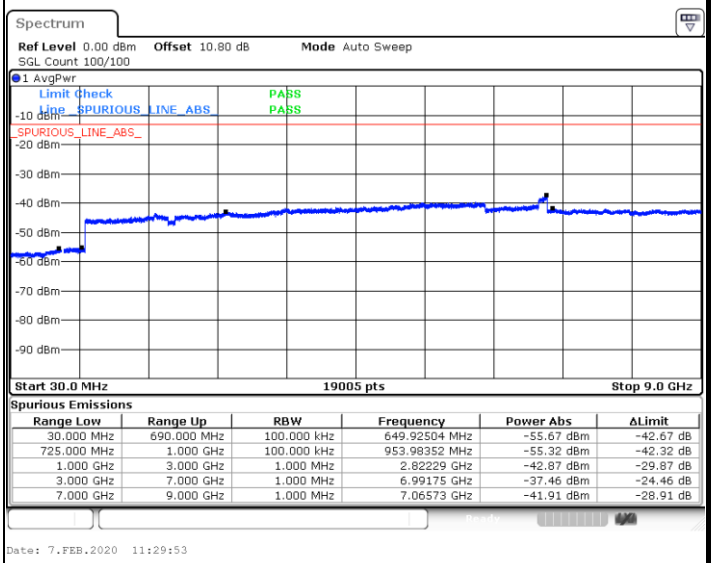



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 687.19640 MHz | -55.54 dBm | -42.54 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 907.55495 MHz | -55.31 dBm | -42.31 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.85679 GHz | -43.10 dBm | -30.10 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99025 GHz | -37.57 dBm | -24.57 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.11422 GHz | -41.98 dBm | -28.98 dB |

Date: 7.FEB.2020 11:28:59

### Middle Channel / 16QAM

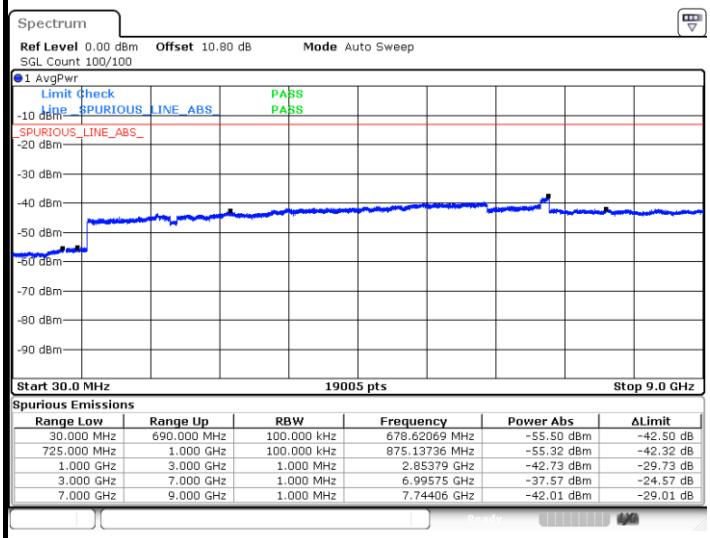



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 649.92504 MHz | -55.67 dBm | -42.67 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 953.98352 MHz | -55.32 dBm | -42.32 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.82229 GHz | -42.87 dBm | -29.87 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99175 GHz | -37.46 dBm | -24.46 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.06573 GHz | -41.91 dBm | -28.91 dB |

Date: 7.FEB.2020 11:29:53

### Highest Channel / QPSK

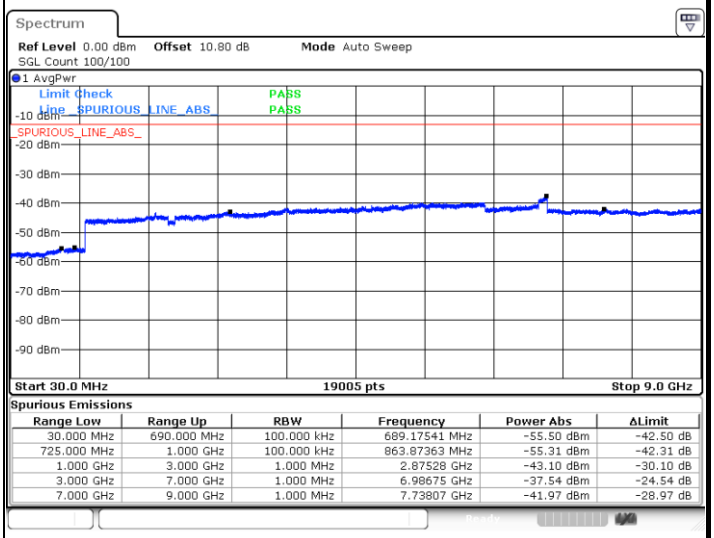



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 678.62069 MHz | -55.50 dBm | -42.50 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 875.13736 MHz | -55.32 dBm | -42.32 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.85379 GHz | -42.73 dBm | -29.73 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99575 GHz | -37.57 dBm | -24.57 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.74406 GHz | -42.01 dBm | -29.01 dB |

Date: 7.FEB.2020 11:35:48

### Highest Channel / 16QAM



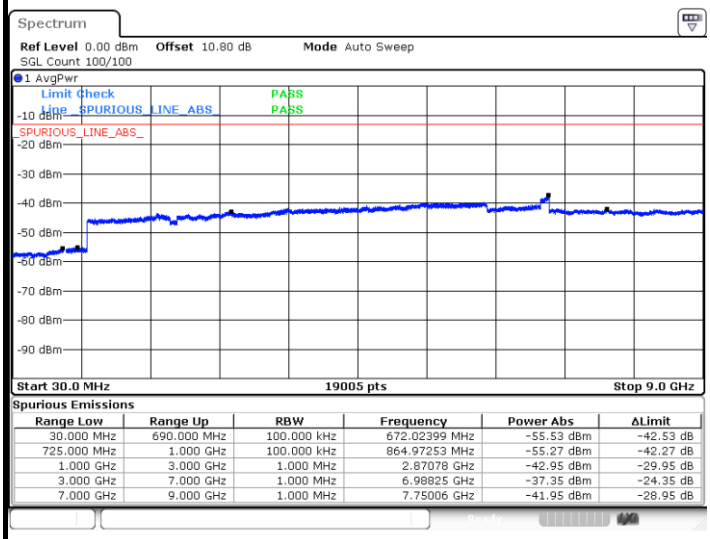

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 689.17541 MHz | -55.50 dBm | -42.50 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 863.87363 MHz | -55.31 dBm | -42.31 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.87528 GHz | -43.10 dBm | -30.10 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98675 GHz | -37.54 dBm | -24.54 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.73807 GHz | -41.97 dBm | -28.97 dB |

Date: 7.FEB.2020 11:36:42

## LTE Band 17 / 5MHz

### Lowest Channel / 64QAM

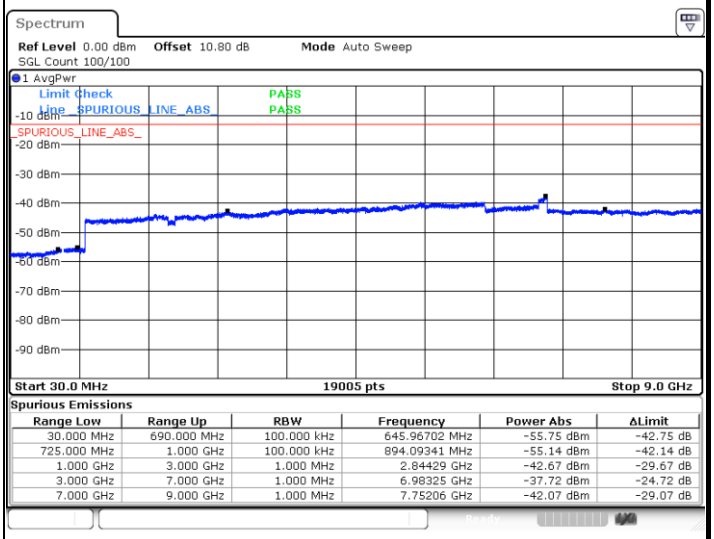



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 672.02399 MHz | -55.53 dBm | -42.53 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 864.97253 MHz | -55.27 dBm | -42.27 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.87078 GHz | -42.95 dBm | -29.95 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98825 GHz | -37.35 dBm | -24.35 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.75006 GHz | -41.95 dBm | -28.95 dB |

Date: 7.FEB.2020 11:40:08

### Middle Channel / 64QAM

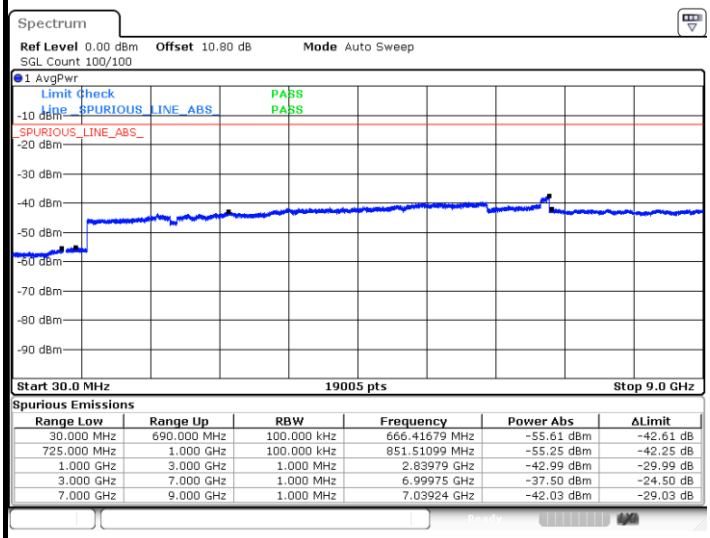



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 645.96702 MHz | -55.75 dBm | -42.75 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 894.09341 MHz | -55.14 dBm | -42.14 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.84429 GHz | -42.67 dBm | -29.67 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98325 GHz | -37.72 dBm | -24.72 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.75206 GHz | -42.07 dBm | -29.07 dB |

Date: 7.FEB.2020 11:41:30

### Highest Channel / 64QAM



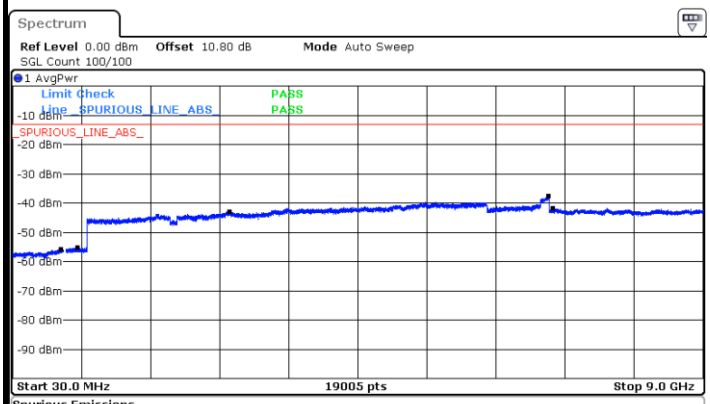

Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 666.41679 MHz | -55.61 dBm | -42.61 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 851.51099 MHz | -55.25 dBm | -42.25 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.83979 GHz | -42.99 dBm | -29.99 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99975 GHz | -37.50 dBm | -24.50 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.03924 GHz | -42.03 dBm | -29.03 dB |

Date: 7.FEB.2020 11:44:54

## LTE Band 17 / 10MHz

### Lowest Channel / 64QAM

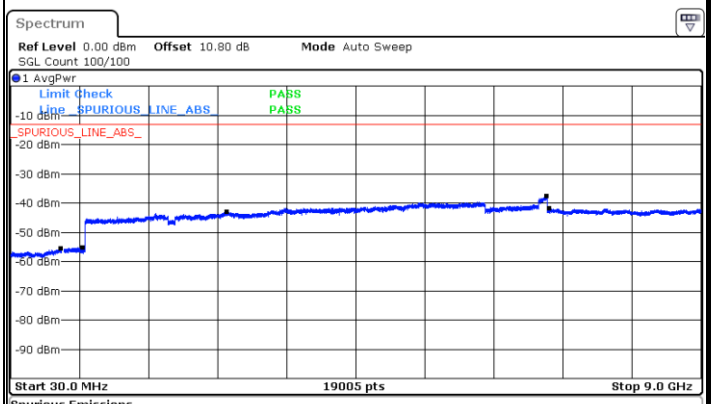



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 658.50075 MHz | -55.80 dBm | -42.80 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 871.56593 MHz | -55.26 dBm | -42.26 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.84879 GHz | -43.00 dBm | -30.00 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98725 GHz | -37.61 dBm | -24.61 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.04174 GHz | -41.83 dBm | -28.83 dB |

Date: 7.FEB.2020 11:48:21

### Middle Channel / 64QAM

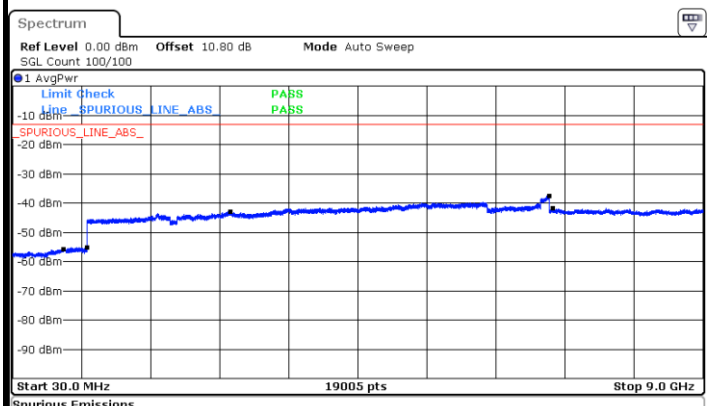



Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 673.67316 MHz | -55.59 dBm | -42.59 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 958.37912 MHz | -55.34 dBm | -42.34 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.83379 GHz | -43.02 dBm | -30.02 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.98725 GHz | -37.54 dBm | -24.54 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.02824 GHz | -41.93 dBm | -28.93 dB |

Date: 7.FEB.2020 11:49:42

### Highest Channel / 64QAM




Spurious Emissions

| Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit |
|---|---|---|---|---|---|
| 30.000 MHz | 690.000 MHz | 100.000 kHz | 683.23838 MHz | -55.68 dBm | -42.68 dB |
| 725.000 MHz | 1.000 GHz | 100.000 kHz | 996.56593 MHz | -55.12 dBm | -42.12 dB |
| 1.000 GHz | 3.000 GHz | 1.000 MHz | 2.86078 GHz | -43.04 dBm | -30.04 dB |
| 3.000 GHz | 7.000 GHz | 1.000 MHz | 6.99675 GHz | -37.49 dBm | -24.49 dB |
| 7.000 GHz | 9.000 GHz | 1.000 MHz | 7.04374 GHz | -41.78 dBm | -28.78 dB |

Date: 7.FEB.2020 11:53:06

# Frequency Stability

| Test Conditions | | LTE Band 17 (QPSK) / Middle Channel | Limit |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | BW 10MHz | Note 2. |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0090 | PASS |
| 40 | Normal Voltage | 0.0068 | |
| 30 | Normal Voltage | 0.0073 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0001 | |
| 0 | Normal Voltage | 0.0045 | |
| -10 | Normal Voltage | 0.0054 | |
| -20 | Normal Voltage | 0.0068 | |
| -30 | Normal Voltage | 0.0079 | |
| 20 | Maximum Voltage | 0.0017 | |
| 20 | Normal Voltage | 0.0000 | |
| 20 | Battery End Point | 0.0073 | |

**Note:**

1. Normal Voltage =3.85 V.；Battery End Point (BEP) =3.65 V.；Maximum Voltage =4.25 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

# Appendix B. Test Results of ERP/EIRP and Radiated Test

## ERP/EIRP

| LTE Band 4 / 1.4MHz (Average) (GT - LC = -2.6 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 6 | 0 | 17.69 | 0.0587 | 15.09 | 0.0323 |
| Middle | | 6 | 0 | 17.66 | 0.0583 | 15.06 | 0.0321 |
| Highest | | 6 | 0 | 17.60 | 0.0575 | 15.00 | 0.0316 |
| Lowest | 16QAM | 1 | 3 | 17.46 | 0.0557 | 14.86 | 0.0306 |
| Middle | | 1 | 3 | 17.48 | 0.0560 | 14.88 | 0.0308 |
| Highest | | 1 | 3 | 17.41 | 0.0551 | 14.81 | 0.0303 |
| Lowest | 64QAM | 1 | 3 | 17.39 | 0.0548 | 14.79 | 0.0301 |
| Middle | | 1 | 3 | 17.38 | 0.0547 | 14.78 | 0.0301 |
| Highest | | 1 | 3 | 17.31 | 0.0538 | 14.71 | 0.0296 |
| Limit | EIRP < 1W | | | Result | | PASS | |

| LTE Band 4 / 3MHz (Average) (GT - LC = -2.6 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 8 | 4 | 17.77 | 0.0598 | 15.17 | 0.0329 |
| Middle | | 8 | 4 | 17.79 | 0.0601 | 15.19 | 0.0330 |
| Highest | | 8 | 4 | 17.71 | 0.0590 | 15.11 | 0.0324 |
| Lowest | 16QAM | 1 | 8 | 17.57 | 0.0571 | 14.97 | 0.0314 |
| Middle | | 1 | 8 | 17.48 | 0.0560 | 14.88 | 0.0308 |
| Highest | | 1 | 8 | 17.48 | 0.0560 | 14.88 | 0.0308 |
| Lowest | 64QAM | 1 | 0 | 17.46 | 0.0557 | 14.86 | 0.0306 |
| Middle | | 1 | 0 | 17.37 | 0.0546 | 14.77 | 0.0300 |
| Highest | | 1 | 0 | 17.32 | 0.0540 | 14.72 | 0.0296 |
| Limit | EIRP < 1W | | | Result | | PASS | |

| LTE Band 4 / 5MHz (Average) (GT - LC = -2.6 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 12 | 7 | 17.80 | 0.0603 | 15.20 | 0.0331 |
| Middle | | 12 | 7 | 17.75 | 0.0596 | 15.15 | 0.0327 |
| Highest | | 12 | 7 | 17.74 | 0.0594 | 15.14 | 0.0327 |
| Lowest | 16QAM | 1 | 24 | 17.48 | 0.0560 | 14.88 | 0.0308 |
| Middle | | 1 | 24 | 17.55 | 0.0569 | 14.95 | 0.0313 |
| Highest | | 1 | 24 | 17.43 | 0.0553 | 14.83 | 0.0304 |
| Lowest | 64QAM | 1 | 0 | 17.49 | 0.0561 | 14.89 | 0.0308 |
| Middle | | 1 | 0 | 17.40 | 0.0550 | 14.80 | 0.0302 |
| Highest | | 1 | 0 | 17.36 | 0.0545 | 14.76 | 0.0299 |
| Limit | EIRP < 1W | | | Result | | PASS | |

| LTE Band 4 / 10MHz (Average) (GT - LC = -2.6 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 25 | 25 | 17.80 | 0.0603 | 15.20 | 0.0331 |
| Middle | | 25 | 25 | 17.86 | 0.0611 | 15.26 | 0.0336 |
| Highest | | 25 | 25 | 17.76 | 0.0597 | 15.16 | 0.0328 |
| Lowest | 16QAM | 1 | 0 | 17.57 | 0.0571 | 14.97 | 0.0314 |
| Middle | | 1 | 0 | 17.61 | 0.0577 | 15.01 | 0.0317 |
| Highest | | 1 | 0 | 17.53 | 0.0566 | 14.93 | 0.0311 |
| Lowest | 64QAM | 1 | 25 | 17.48 | 0.0560 | 14.88 | 0.0308 |
| Middle | | 1 | 25 | 17.52 | 0.0565 | 14.92 | 0.0310 |
| Highest | | 1 | 25 | 17.45 | 0.0556 | 14.85 | 0.0305 |
| Limit | EIRP < 1W | | | Result | | PASS | |

| LTE Band 4 / 15MHz (Average) (GT - LC = -2.6 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 36 | 0 | 18.03 | 0.0635 | 15.43 | 0.0349 |
| Middle | | 36 | 0 | 18.02 | 0.0634 | 15.42 | 0.0348 |
| Highest | | 36 | 0 | 17.97 | 0.0627 | 15.37 | 0.0344 |
| Lowest | 16QAM | 1 | 0 | 17.80 | 0.0603 | 15.20 | 0.0331 |
| Middle | | 1 | 0 | 17.81 | 0.0604 | 15.21 | 0.0332 |
| Highest | | 1 | 0 | 17.79 | 0.0601 | 15.19 | 0.0330 |
| Lowest | 64QAM | 1 | 0 | 17.70 | 0.0589 | 15.10 | 0.0324 |
| Middle | | 1 | 0 | 17.69 | 0.0587 | 15.09 | 0.0323 |
| Highest | | 1 | 0 | 17.63 | 0.0579 | 15.03 | 0.0318 |
| Limit | EIRP < 1W | | | Result | | PASS | |

| LTE Band 4 / 20MHz (Average) (GT - LC = -2.6 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 50 | 0 | 18.05 | 0.0638 | 15.45 | 0.0351 |
| Middle | | 50 | 0 | 18.02 | 0.0634 | 15.42 | 0.0348 |
| Highest | | 50 | 0 | 17.99 | 0.0630 | 15.39 | 0.0346 |
| Lowest | 16QAM | 1 | 0 | 17.85 | 0.0610 | 15.25 | 0.0335 |
| Middle | | 1 | 0 | 17.83 | 0.0607 | 15.23 | 0.0333 |
| Highest | | 1 | 0 | 17.82 | 0.0605 | 15.22 | 0.0333 |
| Lowest | 64QAM | 1 | 0 | 17.70 | 0.0589 | 15.10 | 0.0324 |
| Middle | | 1 | 0 | 17.70 | 0.0589 | 15.10 | 0.0324 |
| Highest | | 1 | 0 | 17.72 | 0.0592 | 15.12 | 0.0325 |
| Limit | EIRP < 1W | | | Result | | PASS | |

| LTE Band 5 / 1.4MHz (Average) (GT - LC = -6.31 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | ERP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | ERP(dBm) | ERP(W) |
| Lowest | QPSK | 3 | 1 | 23.68 | 0.2333 | 15.22 | 0.0333 |
| Middle | | 3 | 1 | 23.59 | 0.2286 | 15.13 | 0.0326 |
| Highest | | 3 | 1 | 23.39 | 0.2183 | 14.93 | 0.0311 |
| Lowest | 16QAM | 1 | 3 | 22.50 | 0.1778 | 14.04 | 0.0254 |
| Middle | | 1 | 3 | 22.40 | 0.1738 | 13.94 | 0.0248 |
| Highest | | 1 | 3 | 22.22 | 0.1667 | 13.76 | 0.0238 |
| Lowest | 64QAM | 1 | 3 | 21.44 | 0.1393 | 12.98 | 0.0199 |
| Middle | | 1 | 3 | 21.34 | 0.1361 | 12.88 | 0.0194 |
| Highest | | 1 | 3 | 21.10 | 0.1288 | 12.64 | 0.0184 |
| Limit | ERP < 7W | | | Result | | PASS | |

| LTE Band 5 / 3MHz (Average) (GT - LC = -6.31 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | ERP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | ERP(dBm) | ERP(W) |
| Lowest | QPSK | 1 | 0 | 23.72 | 0.2355 | 15.26 | 0.0336 |
| Middle | | 1 | 0 | 23.57 | 0.2275 | 15.11 | 0.0324 |
| Highest | | 1 | 0 | 23.44 | 0.2208 | 14.98 | 0.0315 |
| Lowest | 16QAM | 1 | 8 | 22.55 | 0.1799 | 14.09 | 0.0256 |
| Middle | | 1 | 8 | 22.48 | 0.1770 | 14.02 | 0.0252 |
| Highest | | 1 | 8 | 22.32 | 0.1706 | 13.86 | 0.0243 |
| Lowest | 64QAM | 1 | 0 | 21.50 | 0.1413 | 13.04 | 0.0201 |
| Middle | | 1 | 0 | 21.35 | 0.1365 | 12.89 | 0.0195 |
| Highest | | 1 | 0 | 21.01 | 0.1262 | 12.55 | 0.0180 |
| Limit | ERP < 7W | | | Result | | PASS | |

| LTE Band 5 / 5MHz (Average) (GT - LC = -6.31 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | ERP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | ERP(dBm) | ERP(W) |
| Lowest | QPSK | 1 | 0 | 23.73 | 0.2360 | 15.27 | 0.0337 |
| Middle | | 1 | 0 | 23.64 | 0.2312 | 15.18 | 0.0330 |
| Highest | | 1 | 0 | 23.59 | 0.2286 | 15.13 | 0.0326 |
| Lowest | 16QAM | 1 | 0 | 22.61 | 0.1824 | 14.15 | 0.0260 |
| Middle | | 1 | 0 | 22.46 | 0.1762 | 14.00 | 0.0251 |
| Highest | | 1 | 0 | 22.41 | 0.1742 | 13.95 | 0.0248 |
| Lowest | 64QAM | 1 | 0 | 21.50 | 0.1413 | 13.04 | 0.0201 |
| Middle | | 1 | 0 | 21.39 | 0.1377 | 12.93 | 0.0196 |
| Highest | | 1 | 0 | 21.36 | 0.1368 | 12.90 | 0.0195 |
| Limit | ERP < 7W | | | Result | | PASS | |

| LTE Band 5 / 10MHz (Average) (GT - LC = -6.31 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | ERP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | ERP(dBm) | ERP(W) |
| Lowest | QPSK | 1 | 0 | 23.74 | 0.2366 | 15.28 | 0.0337 |
| Middle | | 1 | 0 | 23.70 | 0.2344 | 15.24 | 0.0334 |
| Highest | | 1 | 0 | 23.59 | 0.2286 | 15.13 | 0.0326 |
| Lowest | 16QAM | 1 | 0 | 22.59 | 0.1816 | 14.13 | 0.0259 |
| Middle | | 1 | 0 | 22.49 | 0.1774 | 14.03 | 0.0253 |
| Highest | | 1 | 0 | 22.44 | 0.1754 | 13.98 | 0.0250 |
| Lowest | 64QAM | 1 | 0 | 21.49 | 0.1409 | 13.03 | 0.0201 |
| Middle | | 1 | 0 | 21.36 | 0.1368 | 12.90 | 0.0195 |
| Highest | | 1 | 0 | 21.29 | 0.1346 | 12.83 | 0.0192 |
| Limit | ERP < 7W | | | Result | | PASS | |

| LTE Band 7 / 5MHz (Average) (GT - LC = -2.4 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 12 | 13 | 18.63 | 0.0729 | 16.23 | 0.0420 |
| Middle | | 12 | 13 | 18.87 | 0.0771 | 16.47 | 0.0444 |
| Highest | | 12 | 13 | 18.86 | 0.0769 | 16.46 | 0.0443 |
| Lowest | 16QAM | 1 | 24 | 18.34 | 0.0682 | 15.94 | 0.0393 |
| Middle | | 1 | 24 | 18.58 | 0.0721 | 16.18 | 0.0415 |
| Highest | | 1 | 24 | 18.56 | 0.0718 | 16.16 | 0.0413 |
| Lowest | 64QAM | 1 | 0 | 18.29 | 0.0675 | 15.89 | 0.0388 |
| Middle | | 1 | 0 | 18.43 | 0.0697 | 16.03 | 0.0401 |
| Highest | | 1 | 0 | 18.51 | 0.0710 | 16.11 | 0.0408 |
| Limit | EIRP < 2W | | | Result | | PASS | |

| LTE Band 7 / 10MHz (Average) (GT - LC = -2.4 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 25 | 25 | 18.64 | 0.0731 | 16.24 | 0.0421 |
| Middle | | 25 | 25 | 18.86 | 0.0769 | 16.46 | 0.0443 |
| Highest | | 25 | 25 | 18.87 | 0.0771 | 16.47 | 0.0444 |
| Lowest | 16QAM | 1 | 49 | 18.39 | 0.0690 | 15.99 | 0.0397 |
| Middle | | 1 | 49 | 18.61 | 0.0726 | 16.21 | 0.0418 |
| Highest | | 1 | 49 | 18.60 | 0.0724 | 16.20 | 0.0417 |
| Lowest | 64QAM | 1 | 49 | 18.29 | 0.0675 | 15.89 | 0.0388 |
| Middle | | 1 | 49 | 18.53 | 0.0713 | 16.13 | 0.0410 |
| Highest | | 1 | 49 | 18.52 | 0.0711 | 16.12 | 0.0409 |
| Limit | EIRP < 2W | | | Result | | PASS | |

| LTE Band 7 / 15MHz (Average) (GT - LC = -2.4 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 36 | 39 | 18.94 | 0.0783 | 16.54 | 0.0451 |
| Middle | | 36 | 39 | 19.11 | 0.0815 | 16.71 | 0.0469 |
| Highest | | 36 | 39 | 19.13 | 0.0818 | 16.73 | 0.0471 |
| Lowest | 16QAM | 1 | 74 | 18.70 | 0.0741 | 16.30 | 0.0427 |
| Middle | | 1 | 74 | 18.85 | 0.0767 | 16.45 | 0.0442 |
| Highest | | 1 | 74 | 18.86 | 0.0769 | 16.46 | 0.0443 |
| Lowest | 64QAM | 1 | 37 | 18.56 | 0.0718 | 16.16 | 0.0413 |
| Middle | | 1 | 37 | 18.75 | 0.0750 | 16.35 | 0.0432 |
| Highest | | 1 | 37 | 18.79 | 0.0757 | 16.39 | 0.0436 |
| Limit | EIRP < 2W | | | Result | | PASS | |

| LTE Band 7 / 20MHz (Average) (GT - LC = -2.4 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 50 | 24 | 18.96 | 0.0787 | 16.56 | 0.0453 |
| Middle | | 50 | 24 | 19.06 | 0.0805 | 16.66 | 0.0463 |
| Highest | | 50 | 24 | 19.16 | 0.0824 | 16.76 | 0.0474 |
| Lowest | 16QAM | 1 | 99 | 18.76 | 0.0752 | 16.36 | 0.0433 |
| Middle | | 1 | 99 | 18.87 | 0.0771 | 16.47 | 0.0444 |
| Highest | | 1 | 99 | 18.87 | 0.0771 | 16.47 | 0.0444 |
| Lowest | 64QAM | 1 | 99 | 18.68 | 0.0738 | 16.28 | 0.0425 |
| Middle | | 1 | 99 | 18.79 | 0.0757 | 16.39 | 0.0436 |
| Highest | | 1 | 99 | 18.76 | 0.0752 | 16.36 | 0.0433 |
| Limit | EIRP < 2W | | | Result | | PASS | |

| LTE Band 13 / 5MHz (Average) (GT - LC = -5.77 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | ERP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | ERP(dBm) | ERP(W) |
| Lowest | QPSK | 1 | 12 | 23.81 | 0.2404 | 15.89 | 0.0388 |
| Middle | | 1 | 12 | 23.98 | 0.2500 | 16.06 | 0.0404 |
| Highest | | 1 | 12 | 23.96 | 0.2489 | 16.04 | 0.0402 |
| Lowest | 16QAM | 1 | 24 | 22.79 | 0.1901 | 14.87 | 0.0307 |
| Middle | | 1 | 24 | 22.74 | 0.1879 | 14.82 | 0.0303 |
| Highest | | 1 | 24 | 22.77 | 0.1892 | 14.85 | 0.0305 |
| Lowest | 64QAM | 1 | 12 | 21.36 | 0.1368 | 13.44 | 0.0221 |
| Middle | | 1 | 12 | 21.70 | 0.1479 | 13.78 | 0.0239 |
| Highest | | 1 | 12 | 21.60 | 0.1445 | 13.68 | 0.0233 |
| Limit | ERP < 3W | | | Result | | PASS | |

| LTE Band 13 / 10MHz (Average) (GT - LC = -5.77 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | ERP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | ERP(dBm) | ERP(W) |
| Lowest | QPSK | - | - | - | - | - | - |
| Middle | | 1 | 0 | 23.99 | 0.2506 | 16.07 | 0.0405 |
| Highest | | - | - | - | - | - | - |
| Lowest | 16QAM | - | - | - | - | - | - |
| Middle | | 1 | 25 | 22.78 | 0.1897 | 14.86 | 0.0306 |
| Highest | | - | - | - | - | - | - |
| Lowest | 64QAM | - | - | - | - | - | - |
| Middle | | 1 | 25 | 21.68 | 0.1472 | 13.76 | 0.0238 |
| Highest | | - | - | - | - | - | - |
| Limit | ERP < 3W | | | Result | | PASS | |

| LTE Band 17 / 5MHz (Average) (GT - LC = -6.42 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | ERP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | ERP(dBm) | ERP(W) |
| Lowest | QPSK | 1 | 0 | 23.78 | 0.2388 | 15.21 | 0.0332 |
| Middle | | 1 | 0 | 23.67 | 0.2328 | 15.10 | 0.0324 |
| Highest | | 1 | 0 | 23.65 | 0.2317 | 15.08 | 0.0322 |
| Lowest | 16QAM | 1 | 0 | 22.62 | 0.1828 | 14.05 | 0.0254 |
| Middle | | 1 | 0 | 22.45 | 0.1758 | 13.88 | 0.0244 |
| Highest | | 1 | 0 | 22.49 | 0.1774 | 13.92 | 0.0247 |
| Lowest | 64QAM | 1 | 0 | 21.57 | 0.1435 | 13.00 | 0.0200 |
| Middle | | 1 | 0 | 21.37 | 0.1371 | 12.80 | 0.0191 |
| Highest | | 1 | 0 | 21.39 | 0.1377 | 12.82 | 0.0191 |
| Limit | ERP < 3W | | | Result | | PASS | |

| LTE Band 17 / 10MHz (Average) (GT - LC = -6.42 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | ERP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | ERP(dBm) | ERP(W) |
| Lowest | QPSK | 1 | 0 | 23.79 | 0.2393 | 15.22 | 0.0333 |
| Middle | | 1 | 0 | 23.70 | 0.2344 | 15.13 | 0.0326 |
| Highest | | 1 | 0 | 23.69 | 0.2339 | 15.12 | 0.0325 |
| Lowest | 16QAM | 1 | 0 | 22.62 | 0.1828 | 14.05 | 0.0254 |
| Middle | | 1 | 0 | 22.53 | 0.1791 | 13.96 | 0.0249 |
| Highest | | 1 | 0 | 22.50 | 0.1778 | 13.93 | 0.0247 |
| Lowest | 64QAM | 1 | 0 | 21.50 | 0.1413 | 12.93 | 0.0196 |
| Middle | | 1 | 0 | 21.43 | 0.1390 | 12.86 | 0.0193 |
| Highest | | 1 | 0 | 21.41 | 0.1384 | 12.84 | 0.0192 |
| Limit | ERP < 3W | | | Result | | PASS | |

| LTE Band 41 / 5MHz (Average) (GT - LC = -2.87 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 12 | 7 | 18.59 | 0.0723 | 15.72 | 0.0373 |
| Middle | | 12 | 7 | 18.90 | 0.0776 | 16.03 | 0.0401 |
| Highest | | 12 | 7 | 19.21 | 0.0834 | 16.34 | 0.0431 |
| Lowest | 16QAM | 1 | 0 | 18.26 | 0.0670 | 15.39 | 0.0346 |
| Middle | | 1 | 0 | 18.47 | 0.0703 | 15.60 | 0.0363 |
| Highest | | 1 | 0 | 18.88 | 0.0773 | 16.01 | 0.0399 |
| Lowest | 64QAM | 25 | 0 | 18.13 | 0.0650 | 15.26 | 0.0336 |
| Middle | | 25 | 0 | 18.37 | 0.0687 | 15.50 | 0.0355 |
| Highest | | 25 | 0 | 18.78 | 0.0755 | 15.91 | 0.0390 |
| Limit | EIRP < 2W | | | Result | | PASS | |

| LTE Band 41 / 10MHz (Average) (GT - LC = -2.87 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 25 | 25 | 18.55 | 0.0716 | 15.68 | 0.0370 |
| Middle | | 25 | 25 | 18.85 | 0.0767 | 15.98 | 0.0396 |
| Highest | | 25 | 25 | 19.21 | 0.0834 | 16.34 | 0.0431 |
| Lowest | 16QAM | 1 | 25 | 18.21 | 0.0662 | 15.34 | 0.0342 |
| Middle | | 1 | 25 | 18.51 | 0.0710 | 15.64 | 0.0366 |
| Highest | | 1 | 25 | 18.87 | 0.0771 | 16.00 | 0.0398 |
| Lowest | 64QAM | 1 | 25 | 18.21 | 0.0662 | 15.34 | 0.0342 |
| Middle | | 1 | 25 | 18.49 | 0.0706 | 15.62 | 0.0365 |
| Highest | | 1 | 25 | 18.81 | 0.0760 | 15.94 | 0.0393 |
| Limit | EIRP < 2W | | | Result | | PASS | |

| LTE Band 41 / 15MHz (Average) (GT - LC = -2.87 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 36 | 39 | 18.73 | 0.0746 | 15.86 | 0.0385 |
| Middle | | 36 | 39 | 19.02 | 0.0798 | 16.15 | 0.0412 |
| Highest | | 36 | 39 | 19.35 | 0.0861 | 16.48 | 0.0445 |
| Lowest | 16QAM | 1 | 74 | 18.35 | 0.0684 | 15.48 | 0.0353 |
| Middle | | 1 | 74 | 18.71 | 0.0743 | 15.84 | 0.0384 |
| Highest | | 1 | 74 | 19.08 | 0.0809 | 16.21 | 0.0418 |
| Lowest | 64QAM | 1 | 74 | 18.27 | 0.0671 | 15.40 | 0.0347 |
| Middle | | 1 | 74 | 18.57 | 0.0719 | 15.70 | 0.0372 |
| Highest | | 1 | 74 | 18.90 | 0.0776 | 16.03 | 0.0401 |
| Limit | EIRP < 2W | | | Result | | PASS | |

| LTE Band 41 / 20MHz (Average) (GT - LC = -2.87 dB) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Mode | RB | | Conducted | | EIRP | |
| | | Size | Offset | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest | QPSK | 50 | 50 | 18.76 | 0.0752 | 15.89 | 0.0388 |
| Middle | | 50 | 50 | 19.00 | 0.0794 | 16.13 | 0.0410 |
| Highest | | 50 | 50 | 19.36 | 0.0863 | 16.49 | 0.0446 |
| Lowest | 16QAM | 1 | 99 | 18.43 | 0.0697 | 15.56 | 0.0360 |
| Middle | | 1 | 99 | 18.62 | 0.0728 | 15.75 | 0.0376 |
| Highest | | 1 | 99 | 18.99 | 0.0793 | 16.12 | 0.0409 |
| Lowest | 64QAM | 50 | 50 | 18.33 | 0.0681 | 15.46 | 0.0352 |
| Middle | | 50 | 50 | 18.55 | 0.0716 | 15.68 | 0.0370 |
| Highest | | 50 | 50 | 18.88 | 0.0773 | 16.01 | 0.0399 |
| Limit | EIRP < 2W | | | Result | | PASS | |

# Radiated Spurious Emission

## LTE Band 4

| LTE Band 4 / 20MHz / QPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Highest | 3483 | -53.35 | -13 | -40.35 | -70.27 | -64.45 | 1.36 | 12.46 | H |
| | 5219 | -48.84 | -13 | -35.84 | -70.67 | -60.08 | 1.67 | 12.91 | H |
| | 6962 | -43.39 | -13 | -30.39 | -69.48 | -53.62 | 1.73 | 11.95 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 3483 | -53.87 | -13 | -40.87 | -71.16 | -64.97 | 1.36 | 12.46 | V |
| | 5219 | -49.27 | -13 | -36.27 | -70.92 | -60.51 | 1.67 | 12.91 | V |
| | 6962 | -43.51 | -13 | -30.51 | -69.12 | -53.74 | 1.73 | 11.95 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# LTE Band 5

| LTE Band 5 / 10MHz / QPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 1664 | -61.45 | -13 | -48.45 | -71.58 | -67.10 | 0.93 | 8.72 | H |
| | 2496 | -57.51 | -13 | -44.51 | -71.81 | -64.91 | 1.15 | 10.69 | H |
| | 3328 | -55.88 | -13 | -42.88 | -71.47 | -64.49 | 1.33 | 12.09 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 1664 | -61.86 | -13 | -48.86 | -71.4 | -67.51 | 0.93 | 8.72 | V |
| | 2496 | -57.33 | -13 | -44.33 | -71.84 | -64.73 | 1.15 | 10.69 | V |
| | 3328 | -55.92 | -13 | -42.92 | -71.97 | -64.53 | 1.33 | 12.09 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# LTE Band 7

| LTE Band 7 / 20MHz / QPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Middle | 5070 | -50.77 | -25 | -25.77 | -72.47 | -61.84 | 1.63 | 12.70 | H |
| | 7602 | -46.36 | -25 | -21.36 | -72.42 | -55.48 | 2.00 | 11.12 | H |
| | 10143 | -42.96 | -25 | -17.96 | -72.43 | -51.75 | 2.40 | 11.19 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 5070 | -51.15 | -25 | -26.15 | -72.5 | -62.22 | 1.63 | 12.70 | V |
| | 7602 | -46.51 | -25 | -21.51 | -72.52 | -55.63 | 2.00 | 11.12 | V |
| | 10143 | -42.13 | -25 | -17.13 | -72.09 | -50.92 | 2.40 | 11.19 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# LTE Band 13

| LTE Band 13 / 5MHz / QPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Highest | 1568 | -61.36 | -42.15 | -19.21 | -71.56 | -66.68 | 0.89 | 8.36 | H |
| | 2344 | -56.98 | -13 | -43.98 | -71.73 | -64.20 | 1.12 | 10.48 | H |
| | 3128 | -56.15 | -13 | -43.15 | -71.95 | -64.31 | 1.29 | 11.61 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 1568 | -62.00 | -42.15 | -19.85 | -71.61 | -67.32 | 0.89 | 8.36 | V |
| | 2344 | -57.65 | -13 | -44.65 | -72.03 | -64.87 | 1.12 | 10.48 | V |
| | 3128 | -55.77 | -13 | -42.77 | -71.95 | -63.93 | 1.29 | 11.61 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# LTE Band 17

| LTE Band 17 / 20MHz / QPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest | 1408 | -59.20 | -13 | -46.20 | -70.46 | -63.88 | 0.85 | 7.68 | H |
| | 2112 | -56.70 | -13 | -43.70 | -71.10 | -63.64 | 1.06 | 10.16 | H |
| | 2816 | -57.14 | -13 | -44.14 | -72.06 | -64.84 | 1.23 | 11.08 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 1408 | -60.41 | -13 | -47.41 | -70.45 | -65.09 | 0.85 | 7.68 | V |
| | 2112 | -58.16 | -13 | -45.16 | -71.45 | -65.10 | 1.06 | 10.16 | V |
| | 2816 | -57.17 | -13 | -44.17 | -72.05 | -64.87 | 1.23 | 11.08 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| Middle | 1411 | -59.27 | -13 | -46.27 | -70.52 | -63.96 | 0.85 | 7.69 | H |
| | 2117 | -56.97 | -13 | -43.97 | -71.44 | -63.92 | 1.07 | 10.16 | H |
| | 2822 | -56.44 | -13 | -43.44 | -71.38 | -64.15 | 1.23 | 11.09 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 1411 | -60.70 | -13 | -47.70 | -70.73 | -65.39 | 0.85 | 7.69 | V |
| | 2117 | -58.24 | -13 | -45.24 | -71.58 | -65.19 | 1.07 | 10.16 | V |
| | 2822 | -57.10 | -13 | -44.10 | -72.00 | -64.81 | 1.23 | 11.09 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Highest | 1416 | -59.39 | -13 | -46.39 | -70.61 | -64.11 | 0.85 | 7.71 | H |
| | 2120 | -57.27 | -13 | -44.27 | -71.79 | -64.22 | 1.07 | 10.17 | H |
| | 2824 | -56.75 | -13 | -43.75 | -71.70 | -64.46 | 1.23 | 11.09 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 1416 | -60.26 | -13 | -47.26 | -70.27 | -64.98 | 0.85 | 7.71 | V |
| | 2120 | -58.27 | -13 | -45.27 | -71.66 | -65.22 | 1.07 | 10.17 | V |
| | 2824 | -57.12 | -13 | -44.12 | -72.04 | -64.83 | 1.23 | 11.09 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

# LTE Band 41

| LTE Band 4 / 20MHz / QPSK | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Channel | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Highest | 5370 | -50.41 | -25 | -25.41 | -72.81 | -61.82 | 1.71 | 13.12 | H |
| | 8052 | -44.70 | -25 | -19.70 | -71.95 | -53.94 | 2.06 | 11.30 | H |
| | 10737 | -40.86 | -25 | -15.86 | -72.47 | -49.25 | 2.51 | 10.90 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 5370 | -50.68 | -25 | -25.68 | -72.7 | -62.09 | 1.71 | 13.12 | V |
| | 8052 | -45.22 | -25 | -20.22 | -72.45 | -54.46 | 2.06 | 11.30 | V |
| | 10737 | -40.99 | -25 | -15.99 | -72.37 | -49.38 | 2.51 | 10.90 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.