



# FCC RF Test Report

**APPLICANT** : OnePlus Technology (Shenzhen) Co., Ltd.  
**EQUIPMENT** : Smart Phone  
**BRAND NAME** : ONEPLUS  
**MODEL NAME** : LE2127  
**FCC ID** : 2ABZ2-EF14A  
**STANDARD** : 47 CFR Part 2, 22, 24, 27  
**CLASSIFICATION** : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Oct. 27, 2020 and completely tested on Dec. 18, 2020. We, Sporton International (ShenZhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (ShenZhen) Inc., the test report shall not be reproduced except in full.

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager



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**People's Republic of China**



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## REVISION HISTORY

| REPORT NO.   | VERSION | DESCRIPTION             | ISSUED DATE   |
|--------------|---------|-------------------------|---------------|
| FG002703-02B | Rev. 01 | Initial issue of report | Feb. 05, 2021 |
|              |         |                         |               |
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## SUMMARY OF TEST RESULT

| Report Section | FCC Rule                                                                         | Description                                                                                                                     | Limit                  | Result | Remark |
|----------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------|--------|--------|
| 3.4            | §2.1046                                                                          | Conducted Output Power                                                                                                          | Reporting Only         | PASS   | -      |
|                | §22.913(a)(5)                                                                    | Effective Radiated Power<br>(Band 5) (Band 26)                                                                                  | ERP < 7 Watt           |        |        |
|                | §27.50(b)(10)<br>§27.50(c)(10)                                                   | Effective Radiated Power<br>(Band 12) (Band 13) (Band 17)                                                                       | ERP < 3 Watt           |        |        |
|                | §24.232(c)<br>§27.50(h)(2)                                                       | Equivalent Isotropic Radiated Power<br>(Band 2) (Band 25)                                                                       | EIRP < 2Watt           |        |        |
|                | §27.50(d)(4)                                                                     | Equivalent Isotropic Radiated Power<br>(Band 4) (Band 66)                                                                       | EIRP < 1Watt           |        |        |
| 3.5            | §24.232(d)                                                                       | Peak-to-Average Ratio                                                                                                           | <13 dB                 | PASS   | -      |
| 3.6            | §2.1049                                                                          | Occupied Bandwidth                                                                                                              | Reporting Only         | PASS   | -      |
| 3.7            | §2.1051<br>§22.917(a)<br>§24.238(a)<br>§27.53(c)(2)(4)<br>§27.53(g)<br>§27.53(h) | Conducted Band Edge Measurement<br>(Band 2) (Band 4) (Band 5)<br>(Band 12) (Band 13) (Band 17)<br>(Band 25) (Band 26) (Band 66) | < 43+10log10(P[Watts]) | PASS   | -      |
| 3.8            | §2.1051<br>§22.917(a)<br>§24.238(a)<br>§27.53(c)(2)<br>§27.53(g)<br>§27.53(h)    | Conducted Spurious Emission<br>(Band 2) (Band 4) (Band 5)<br>(Band 12) (Band 13) (Band 17)<br>(Band 25) (Band 26) (Band 66)     | < 43+10log10(P[Watts]) | PASS   | -      |
| 3.9            | §2.1055<br>§22.355                                                               | Frequency Stability<br>Temperature & Voltage                                                                                    | < 2.5 ppm for Part 22  | PASS   | -      |
|                | §2.1055<br>§24.235<br>§27.54                                                     |                                                                                                                                 | Within Authorized Band |        |        |



| Report Section | FCC Rule                                                                                   | Description                                                                                                                | Limit                                 | Result | Remark                                        |
|----------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------|-----------------------------------------------|
| 4.4            | §2.1053<br>§22.917(a)<br>§24.238(a)<br>§27.53(c)(2)<br>§27.53(f)<br>§27.53(g)<br>§27.53(h) | Radiated Spurious Emission<br>(Band 2) (Band 4) (Band 5)<br>(Band 12) (Band 13) (Band 17)<br>(Band 25) (Band 26) (Band 66) | $< 43 + 10\log_{10}(P[\text{Watts}])$ | PASS   | Under limit<br>17.24 dB at<br>2109.000<br>MHz |

**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.



# 1 General Description

## 1.1 Applicant

**OnePlus Technology (Shenzhen) Co., Ltd.**

18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen

## 1.2 Manufacturer

**OnePlus Technology (Shenzhen) Co., Ltd.**

18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen

## 1.3 Product Feature of Equipment Under Test

| Product Feature                 |                                                                                                                                                                                                                                                                                             |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment                       | Smart Phone                                                                                                                                                                                                                                                                                 |
| Brand Name                      | ONEPLUS                                                                                                                                                                                                                                                                                     |
| Model Name                      | LE2127                                                                                                                                                                                                                                                                                      |
| FCC ID                          | 2ABZ2-EF14A                                                                                                                                                                                                                                                                                 |
| EUT supports Radios application | CDMA/GSM/WCDMA/LTE/5G NR<br>WLAN 2.4GHz 802.11b/g/n/ac HT20/HT40/VHT20/VHT40<br>WLAN 2.4GHz 802.11ax HE20/HE40<br>WLAN 5GHz 802.11a/n HT20/HT40<br>WLAN 5GHz 802.11ac VHT20/VHT40/VHT80/VHT160<br>WLAN 5GHz 802.11ax HE20/HE40/HE80/HE160<br>Bluetooth BR / EDR / LE / ANT+<br>GNSS/NFC/WPT |
| IMEI Code                       | Conducted: 990016750029678<br>Radiation:<br>990016750030098 for LTE Band 12/13/26/66<br>990016750028282 for LTE Band 25                                                                                                                                                                     |
| HW Version                      | 22                                                                                                                                                                                                                                                                                          |
| SW Version                      | 11.2.0.0.LE5ACB                                                                                                                                                                                                                                                                             |
| EUT Stage                       | Production Unit                                                                                                                                                                                                                                                                             |

## 1.4 Product Specification of Equipment Under Test

| Standards-related Product Specification |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx Frequency</b>                     | LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz<br>LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz<br>LTE Band 5 : 824.7 MHz ~ 848.3 MHz<br>LTE Band 12 : 699.7 MHz ~ 715.3 MHz<br>LTE Band 13 : 779.5 MHz ~ 784.5 MHz<br>LTE Band 17 : 706.5 MHz ~ 713.5 MHz<br>LTE Band 25 : 1850.7MHz ~ 1914.3 MHz<br>LTE Band 26 : 824.7MHz ~ 848.3 MHz<br>LTE Band 66 : 1710.7 MHz ~ 1779.3 MHz                                                                                                  |
| <b>Rx Frequency</b>                     | LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz<br>LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz<br>LTE Band 5 : 869.7 MHz ~ 893.3 MHz<br>LTE Band 12 : 729.7 MHz ~ 745.3 MHz<br>LTE Band 13 : 748.5 MHz ~ 753.5 MHz<br>LTE Band 17 : 736.5 MHz ~ 743.5 MHz<br>LTE Band 25 : 1930.7MHz ~ 1994.3 MHz<br>LTE Band 26 : 869.7MHz ~ 893.3MHz<br>LTE Band 66 : 2110.7 MHz~ 2199.3 MHz                                                                                                    |
| <b>Bandwidth</b>                        | LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz<br>LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz<br>LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz<br>LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz<br>LTE Band 13 : 5MHz / 10MHz<br>LTE Band 17 : 5MHz / 10MHz<br>LTE Band 25 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz<br>LTE Band 26 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz<br>LTE Band 66 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz |
| <b>Maximum Output Power to Antenna</b>  | <b>Bottom Antenna:</b><br>LTE Band 2 : 23.47 dBm<br>LTE Band 4 : 23.50 dBm<br>LTE Band 5 : 23.98 dBm<br>LTE Band 12 : 24.02 dBm<br>LTE Band 13 : 23.97 dBm<br>LTE Band 17 : 24.01 dBm<br>LTE Band 25 : 23.65 dBm<br>LTE Band 26 : 24.01 dBm<br>LTE Band 66 : 23.51 dBm                                                                                                                                                                                          |
| <b>Antenna Gain</b>                     | <b>Top Antenna :</b><br>LTE Band 2 : -2.50 dBi<br>LTE Band 4 : -2.50 dBi<br>LTE Band 5 : -4.50 dBi<br>LTE Band 12 : -4.50 dBi<br>LTE Band 13 : -4.50 dBi<br>LTE Band 17 : -4.50 dBi<br>LTE Band 25 : -2.50 dBi<br>LTE Band 26 : -4.50 dBi<br>LTE Band 66 : -2.50 dBi<br><b>Bottom Antenna :</b><br>LTE Band 2 : -2.00 dBi<br>LTE Band 4 : -2.00 dBi                                                                                                             |

|                           |                                                                                                                                                                                          |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | LTE Band 5 : -4.00 dBi<br>LTE Band 12 : -4.00 dBi<br>LTE Band 13 : -4.00 dBi<br>LTE Band 17 : -4.00 dBi<br>LTE Band 25 : -2.00 dBi<br>LTE Band 26 : -4.00 dBi<br>LTE Band 66 : -2.00 dBi |
| <b>Type of Modulation</b> | QPSK / 16QAM / 64QAM / 256QAM                                                                                                                                                            |

Note: The Maximum ERP/EIRP is calculated from Max Output power and Max antenna gain, only the maximum ERP/EIRP of Bottom Antenna is shown in the report

## 1.5 Modification of EUT

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

## 1.6 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

| LTE Band 2 |                       | QPSK                         |                           |                 | 16QAM                        |                           |                 |
|------------|-----------------------|------------------------------|---------------------------|-----------------|------------------------------|---------------------------|-----------------|
| 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) |
| 1.4        | 1850.7 ~ 1909.3       | 1M09G7D                      | -                         | 0.1459          | 1M09W7D                      | -                         | 0.1247          |
| 3          | 1851.5 ~ 1908.5       | 2M72G7D                      | -                         | 0.1452          | 2M73W7D                      | -                         | 0.1279          |
| 5          | 1852.5 ~ 1907.5       | 4M50G7D                      | -                         | 0.1445          | 4M50W7D                      | -                         | 0.1250          |
| 10         | 1855.0 ~ 1905.0       | 9M01G7D                      | 0.0022                    | 0.1442          | 9M05W7D                      | -                         | 0.1265          |
| 15         | 1857.5 ~ 1902.5       | 13M4G7D                      | -                         | 0.1455          | 13M5W7D                      | -                         | 0.1242          |
| 20         | 1860.0 ~ 1900.0       | 17M9G7D                      | -                         | 0.1462          | 17M9W7D                      | -                         | 0.1247          |
| LTE Band 2 |                       | 64QAM                        |                           |                 |                              |                           |                 |
| BW (MHz)   | Frequency Range (MHz) | Emission Designator (99%OBW) | Frequency Tolerance (ppm) |                 | Maximum EIRP(W)              |                           |                 |
| 1.4        | 1850.7 ~ 1909.3       | 1M09W7D                      | -                         |                 | 0.0984                       |                           |                 |
| 3          | 1851.5 ~ 1908.5       | 2M73W7D                      | -                         |                 | 0.0998                       |                           |                 |
| 5          | 1852.5 ~ 1907.5       | 4M49W7D                      | -                         |                 | 0.0989                       |                           |                 |
| 10         | 1855.0 ~ 1905.0       | 9M05W7D                      | -                         |                 | 0.0989                       |                           |                 |
| 15         | 1857.5 ~ 1902.5       | 13M5W7D                      | -                         |                 | 0.0984                       |                           |                 |
| 20         | 1860.0 ~ 1900.0       | 17M9W7D                      | -                         |                 | 0.0973                       |                           |                 |





| LTE Band 25 |                       | QPSK                         |                           |                           | 16QAM                        |                           |                 |
|-------------|-----------------------|------------------------------|---------------------------|---------------------------|------------------------------|---------------------------|-----------------|
| 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) |
| 1.4         | 1850.7 ~ 1914.3       | 1M09G7D                      | -                         | 0.1459                    | 1M09W7D                      | -                         | 0.1247          |
| 3           | 1851.5 ~ 1913.5       | 2M72G7D                      | -                         | 0.1452                    | 2M73W7D                      | -                         | 0.1279          |
| 5           | 1852.5 ~ 1912.5       | 4M50G7D                      | -                         | 0.1445                    | 4M50W7D                      | -                         | 0.1250          |
| 10          | 1855.0 ~ 1910.0       | 9M01G7D                      | 0.0022                    | 0.1442                    | 9M05W7D                      | -                         | 0.1265          |
| 15          | 1857.5 ~ 1907.5       | 13M4G7D                      | -                         | 0.1455                    | 13M5W7D                      | -                         | 0.1242          |
| 20          | 1860.0 ~ 1905.0       | 17M9G7D                      | -                         | 0.1462                    | 17M9W7D                      | -                         | 0.1247          |
| LTE Band 25 |                       | 64QAM                        |                           |                           |                              |                           |                 |
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum EIRP(W)           |                 |
| 1.4         | 1850.7 ~ 1914.3       | 1M09W7D                      |                           | -                         |                              | 0.0984                    |                 |
| 3           | 1851.5 ~ 1913.5       | 2M73W7D                      |                           | -                         |                              | 0.0998                    |                 |
| 5           | 1852.5 ~ 1912.5       | 4M49W7D                      |                           | -                         |                              | 0.0989                    |                 |
| 10          | 1855.0 ~ 1910.0       | 9M05W7D                      |                           | -                         |                              | 0.0989                    |                 |
| 15          | 1857.5 ~ 1907.5       | 13M5W7D                      |                           | -                         |                              | 0.0984                    |                 |
| 20          | 1860.0 ~ 1905.0       | 17M9W7D                      |                           | -                         |                              | 0.0973                    |                 |
| LTE Band 4  |                       | QPSK                         |                           |                           | 16QAM                        |                           |                 |
| 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) |
| 1.4         | 1710.7 ~ 1754.3       | 1M09G7D                      | -                         | 0.1377                    | 1M10W7D                      | -                         | 0.1183          |
| 3           | 1711.5 ~ 1753.5       | 2M72G7D                      | -                         | 0.1380                    | 2M72W7D                      | -                         | 0.1175          |
| 5           | 1712.5 ~ 1752.5       | 4M49G7D                      | -                         | 0.1400                    | 4M51W7D                      | -                         | 0.1197          |
| 10          | 1715.0 ~ 1750.0       | 9M05G7D                      | 0.0044                    | 0.1390                    | 9M01W7D                      | -                         | 0.1199          |
| 15          | 1717.5 ~ 1747.5       | 13M5G7D                      | -                         | 0.1390                    | 13M5W7D                      | -                         | 0.1180          |
| 20          | 1720.0 ~ 1745.0       | 17M9G7D                      | -                         | 0.1416                    | 17M9W7D                      | -                         | 0.1199          |
| LTE Band 4  |                       | 64QAM                        |                           |                           |                              |                           |                 |
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum EIRP(W)           |                 |
| 1.4         | 1710.7 ~ 1754.3       | 1M10W7D                      |                           | -                         |                              | 0.0916                    |                 |
| 3           | 1711.5 ~ 1753.5       | 2M72W7D                      |                           | -                         |                              | 0.0912                    |                 |
| 5           | 1712.5 ~ 1752.5       | 4M51W7D                      |                           | -                         |                              | 0.0929                    |                 |
| 10          | 1715.0 ~ 1750.0       | 9M01W7D                      |                           | -                         |                              | 0.0946                    |                 |
| 15          | 1717.5 ~ 1747.5       | 13M5W7D                      |                           | -                         |                              | 0.0931                    |                 |



|             |                       |                              |                           |                           |                              |                           |                |
|-------------|-----------------------|------------------------------|---------------------------|---------------------------|------------------------------|---------------------------|----------------|
| 20          | 1720.0 ~ 1745.0       | 17M9W7D                      |                           | -                         |                              | 0.0933                    |                |
| LTE Band 5  |                       | QPSK                         |                           |                           | 16QAM                        |                           |                |
| 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) |
| 1.4         | 824.7 ~ 848.3         | 1M09G7D                      | -                         | 0.0608                    | 1M09W7D                      | -                         | 0.0525         |
| 3           | 825.5 ~ 847.5         | 2M75G7D                      | -                         | 0.0604                    | 2M73W7D                      | -                         | 0.0519         |
| 5           | 826.5 ~ 846.5         | 4M51G7D                      | -                         | 0.0610                    | 4M50W7D                      | -                         | 0.0515         |
| 10          | 829.0 ~ 844.0         | 9M07G7D                      | 0.0053                    | 0.0598                    | 9M01W7D                      | -                         | 0.0519         |
| LTE Band 5  |                       | 64QAM                        |                           |                           |                              |                           |                |
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum ERP(W)            |                |
| 1.4         | 824.7 ~ 848.3         | 1M09W7D                      |                           | -                         |                              | 0.0396                    |                |
| 3           | 825.5 ~ 847.5         | 2M73W7D                      |                           | -                         |                              | 0.0411                    |                |
| 5           | 826.5 ~ 846.5         | 4M51W7D                      |                           | -                         |                              | 0.0399                    |                |
| 10          | 829.0 ~ 844.0         | 9M01W7D                      |                           | -                         |                              | 0.0404                    |                |
| LTE Band 12 |                       | QPSK                         |                           |                           | 16QAM                        |                           |                |
| 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) |
| 1.4         | 699.7 ~ 715.3         | 1M09G7D                      | -                         | 0.0597                    | 1M09W7D                      | -                         | 0.0516         |
| 3           | 700.5 ~ 714.5         | 2M72G7D                      | -                         | 0.0611                    | 2M73W7D                      | -                         | 0.0519         |
| 5           | 701.5 ~ 713.5         | 4M50G7D                      | -                         | 0.0608                    | 4M49W7D                      | -                         | 0.0524         |
| 10          | 704.0 ~ 711.0         | 9M03G7D                      | 0.0033                    | 0.0612                    | 9M07W7D                      | -                         | 0.0524         |
| LTE Band 12 |                       | 64QAM                        |                           |                           |                              |                           |                |
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum ERP(W)            |                |
| 1.4         | 699.7 ~ 715.3         | 1M09W7D                      |                           | -                         |                              | 0.0403                    |                |
| 3           | 700.5 ~ 714.5         | 2M73W7D                      |                           | -                         |                              | 0.0408                    |                |
| 5           | 701.5 ~ 713.5         | 4M53W7D                      |                           | -                         |                              | 0.0402                    |                |
| 10          | 704.0 ~ 711.0         | 9M03W7D                      |                           | -                         |                              | 0.0409                    |                |
| LTE Band 13 |                       | QPSK                         |                           |                           | 16QAM                        |                           |                |
| 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) |
| 5           | 779.5 ~ 784.5         | 4M50G7D                      | -                         | 0.0600                    | 4M49W7D                      | -                         | 0.0514         |
| 10          | 782.0                 | 9M05G7D                      | 0.0066                    | 0.0605                    | 9M01W7D                      | -                         | 0.0518         |



| LTE Band 13 |                       | 64QAM                        |                           |                           |                              |                           |                |
|-------------|-----------------------|------------------------------|---------------------------|---------------------------|------------------------------|---------------------------|----------------|
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum ERP(W)            |                |
| 5           | 779.5 ~ 784.5         | 4M54W7D                      |                           | -                         |                              | 0.0394                    |                |
| 10          | 782.0                 | 9M03W7D                      |                           | -                         |                              | 0.0396                    |                |
| LTE Band 17 |                       | QPSK                         |                           |                           | 16QAM                        |                           |                |
| 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) |
| 5           | 706.5 ~ 713.5         | 4M50G7D                      | -                         | 0.0608                    | 4M49W7D                      | -                         | 0.0524         |
| 10          | 709.0 ~ 711.0         | 9M03G7D                      | 0.0033                    | 0.0612                    | 9M07W7D                      | -                         | 0.0524         |
| LTE Band 17 |                       | 64QAM                        |                           |                           |                              |                           |                |
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum ERP(W)            |                |
| 5           | 706.5 ~ 713.5         | 4M53W7D                      |                           | -                         |                              | 0.0402                    |                |
| 10          | 709.0 ~ 711.0         | 9M03W7D                      |                           | -                         |                              | 0.0409                    |                |
| LTE Band 26 |                       | QPSK                         |                           |                           | 16QAM                        |                           |                |
| 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) |
| 1.4         | 824.7 ~ 848.3         | 1M09G7D                      | -                         | 0.0608                    | 1M09W7D                      | -                         | 0.0525         |
| 3           | 825.5 ~ 847.5         | 2M75G7D                      | -                         | 0.0604                    | 2M73W7D                      | -                         | 0.0519         |
| 5           | 826.5 ~ 846.5         | 4M51G7D                      | -                         | 0.0610                    | 4M50W7D                      | -                         | 0.0515         |
| 10          | 829.0 ~ 844.0         | 9M07G7D                      | 0.0053                    | 0.0598                    | 9M01W7D                      | -                         | 0.0519         |
| 15          | 831.5 ~ 841.5         | 13M5G7D                      | -                         | 0.0611                    | 13M5W7D                      | -                         | 0.0500         |
| LTE Band 26 |                       | 64QAM                        |                           |                           |                              |                           |                |
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum ERP(W)            |                |
| 1.4         | 824.7 ~ 848.3         | 1M09W7D                      |                           | -                         |                              | 0.0396                    |                |
| 3           | 825.5 ~ 847.5         | 2M73W7D                      |                           | -                         |                              | 0.0411                    |                |
| 5           | 826.5 ~ 846.5         | 4M51W7D                      |                           | -                         |                              | 0.0399                    |                |
| 10          | 829.0 ~ 844.0         | 9M01W7D                      |                           | -                         |                              | 0.0404                    |                |
| 15          | 831.5 ~ 841.5         | 13M5W7D                      |                           | -                         |                              | 0.0390                    |                |



| LTE Band 66 |                       | QPSK                         |                           |                           | 16QAM                        |                           |                 |
|-------------|-----------------------|------------------------------|---------------------------|---------------------------|------------------------------|---------------------------|-----------------|
| 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) |
| 1.4         | 1710.7 ~ 1779.3       | 1M09G7D                      | -                         | 0.1377                    | 1M10W7D                      | -                         | 0.1183          |
| 3           | 1711.5 ~ 1778.5       | 2M72G7D                      | -                         | 0.1380                    | 2M72W7D                      | -                         | 0.1175          |
| 5           | 1712.5 ~ 1777.5       | 4M49G7D                      | -                         | 0.1400                    | 4M51W7D                      | -                         | 0.1197          |
| 10          | 1715.0 ~ 1775.0       | 9M05G7D                      | 0.0044                    | 0.1390                    | 9M01W7D                      | -                         | 0.1199          |
| 15          | 1717.5 ~ 1772.5       | 13M5G7D                      | -                         | 0.1390                    | 13M5W7D                      | -                         | 0.1180          |
| 20          | 1720.0 ~ 1770.0       | 17M9G7D                      | -                         | 0.1416                    | 17M9W7D                      | -                         | 0.1199          |
| LTE Band 66 |                       | 64QAM                        |                           |                           |                              |                           |                 |
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum EIRP(W)           |                 |
| 1.4         | 1710.7 ~ 1779.3       | 1M10W7D                      |                           | -                         |                              | 0.0916                    |                 |
| 3           | 1711.5 ~ 1778.5       | 2M72W7D                      |                           | -                         |                              | 0.0912                    |                 |
| 5           | 1712.5 ~ 1777.5       | 4M51W7D                      |                           | -                         |                              | 0.0929                    |                 |
| 10          | 1715.0 ~ 1775.0       | 9M01W7D                      |                           | -                         |                              | 0.0946                    |                 |
| 15          | 1717.5 ~ 1772.5       | 13M5W7D                      |                           | -                         |                              | 0.0931                    |                 |
| 20          | 1720.0 ~ 1770.0       | 17M9W7D                      |                           | -                         |                              | 0.0933                    |                 |

**Note:**

1. LTE Band 26 overlaps the entire frequency range of LTE Band 5. Therefore, the test results provided in this report covers Band 5 and the portion of Band 26 subject to Part 22.
2. LTE Band 66 overlaps the entire frequency range of LTE Band 4. Therefore, the test results provided in this report covers Band 66 as well as Band 4.
3. LTE Band 25 overlaps the entire frequency range of LTE Band 2. Therefore, the test results provided in this report covers Band 25 as well as Band 2.
4. LTE Band 12 overlaps the entire frequency range of LTE Band 17. Therefore, the test results provided in this report covers Band 12 as well as Band 17.

## 1.7 Testing Location

### <FCC>-SZ

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

|                           |                                                                                                                                                                         |                            |                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------|
| <b>Test Firm</b>          | Sporton International (Shenzhen) Inc.                                                                                                                                   |                            |                                       |
| <b>Test Site Location</b> | 1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China<br>TEL: +86-755-86379589<br>FAX: +86-755-86379595 |                            |                                       |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                                                 | <b>FCC Designation No.</b> | <b>FCC Test Firm Registration No.</b> |
|                           | CO01-SZ                                                                                                                                                                 | CN1256                     | 421272                                |

|                           |                                                                                                                                                                                           |                            |                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------|
| <b>Test Firm</b>          | Sporton International (Shenzhen) Inc.                                                                                                                                                     |                            |                                       |
| <b>Test Site Location</b> | 101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103<br>TEL: +86-755-33202398 |                            |                                       |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                                                                   | <b>FCC Designation No.</b> | <b>FCC Test Firm Registration No.</b> |
|                           | 03CH02-SZ                                                                                                                                                                                 | CN1256                     | 421272                                |

## 1.8 Test Software

| Item | Site      | Manufacturer | Name | Version      |
|------|-----------|--------------|------|--------------|
| 1.   | 03CH02-SZ | AUDIX        | E3   | 6.2009-8-24a |



## **1.9 Applicable Standards**

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

- ♦ 47 CFR Part 2, 22(H), 24(E), 27(F), 27(H), 27(L)
- ♦ ANSI C63.26-2015
- ♦ 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.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

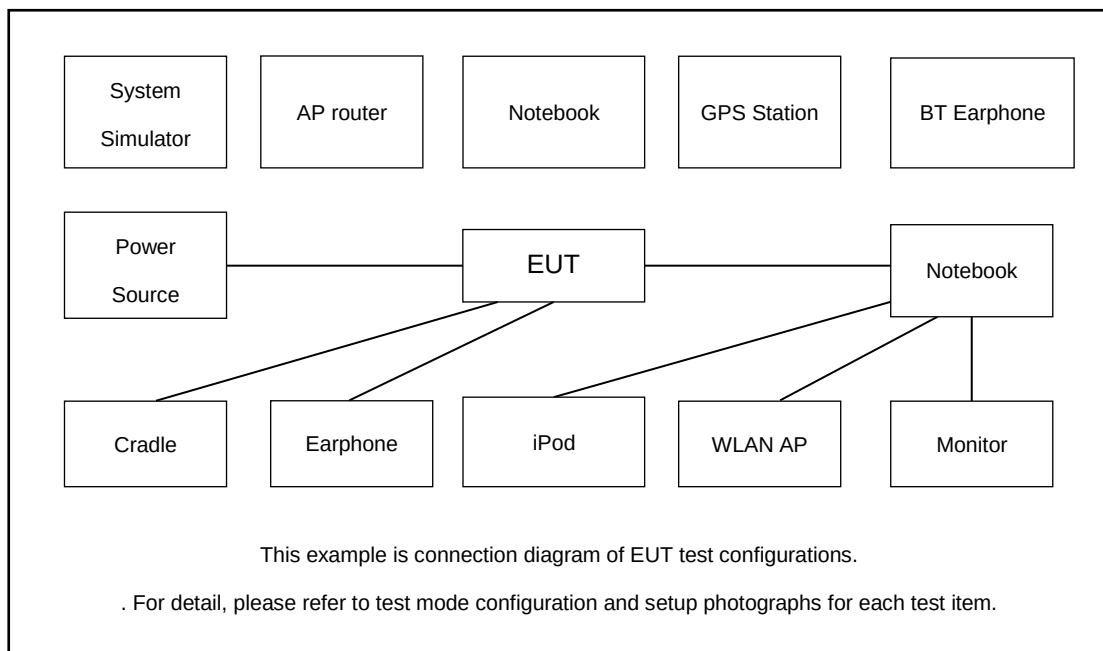
| Test Items             | Band | Bandwidth (MHz) |   |   |    |    |    | Modulation |        |        |         | RB # |      |      | Test Channel |   |   |
|------------------------|------|-----------------|---|---|----|----|----|------------|--------|--------|---------|------|------|------|--------------|---|---|
|                        |      | 1.4             | 3 | 5 | 10 | 15 | 20 | QPSK       | 16 QAM | 64 QAM | 256 QAM | 1    | Half | Full | L            | M | H |
| Max. Output Power      | 2    | v               | v | v | v  | v  | v  | v          | v      | v      | v       | v    | v    | v    | v            | v | v |
|                        | 4    | v               | 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 | v |
|                        | 12   | v               | 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 | v |
|                        | 17   | -               | - | v | v  | -  | -  | v          | v      | v      | v       | v    | v    | v    | v            | v | v |
|                        | 25   | v               | v | v | v  | v  | v  | v          | v      | v      | v       | v    | v    | v    | v            | v | v |
|                        | 26   | v               | v | v | v  | v  | -  | v          | v      | v      | v       | v    | v    | v    | v            | v | v |
|                        | 66   | v               | v | v | v  | v  | v  | v          | v      | v      | v       | v    | v    | v    | v            | v | v |
| Peak-to-Average Ratio  | 12   |                 |   |   | v  | -  | -  | v          | v      | v      |         | v    |      | v    | v            | v | v |
|                        | 13   | -               | - |   | v  | -  | -  | v          | v      | v      |         | v    |      | v    | v            | v | v |
|                        | 25   |                 |   |   |    |    | v  | v          | v      | v      |         | v    |      | v    | v            | v | v |
|                        | 26   |                 |   |   | v  |    | -  | v          | v      | v      |         | v    |      | v    | v            | v | v |
|                        | 66   |                 |   |   |    |    | v  | v          | v      | v      |         | v    |      | v    | v            | v | v |
| 26dB and 99% Bandwidth | 12   | v               | v | v | v  | -  | -  | v          | v      | v      |         |      |      | v    | v            | v | v |
|                        | 13   | -               | - | v |    | -  | -  | v          | v      | v      |         |      |      | v    | v            | v | v |
|                        |      | -               | - |   | v  | -  | -  | v          | v      | v      |         |      |      | v    |              | v |   |
|                        | 25   | v               | v | v | v  | v  | v  | v          | v      | v      |         |      |      | v    | v            | v | v |
|                        | 26   | v               | v | v | v  | v  | -  | v          | v      | v      |         |      |      | v    | v            | v | v |
|                        | 66   | v               | v | v | v  | v  | v  | v          | v      | v      |         |      |      | v    | v            | v | v |
| Conducted Band Edge    | 12   | v               | v | v | v  | -  | -  | v          | v      | v      |         | v    |      | v    | v            |   | v |
|                        | 13   | -               | - | v |    | -  | -  | v          | v      | v      |         | v    |      | v    | v            |   | v |
|                        |      |                 |   |   | v  |    |    | v          | v      | v      |         | v    |      | v    |              | v |   |
|                        | 25   | v               | v | v | v  | v  | v  | v          | v      | v      |         | v    |      | v    | v            |   | v |
|                        | 26   | v               | v | v | v  | v  | -  | v          | v      | v      |         | v    |      | v    | v            |   | v |
|                        | 66   | 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       | 16 QAM | 64 QAM | 256 QAM | 1    | Half | Full | L            | M | H |
| Conducted Spurious Emission | 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | v               | v | v | v  | -  | -  | v          | v      | v      |         | v    |      |      | v            | v | v |
|                             | 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -               | - | v |    | -  | -  | v          | v      | v      |         | v    |      |      | v            | v | v |
|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |   |   | v  | -  | -  | v          | v      | v      |         | v    |      |      |              | v |   |
|                             | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | v               | v | v | v  | v  | v  | v          | v      | v      |         | v    |      |      | v            | v | v |
|                             | 26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | v               | v | v | v  | v  | -  | v          | v      | v      |         | v    |      |      | v            | v | v |
|                             | 66                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | v               | v | v | v  | v  | v  | v          | v      | v      |         | v    |      |      | v            | v | v |
| Frequency Stability         | 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |   |   | v  | -  | -  | v          |        |        |         |      |      | v    |              | v |   |
|                             | 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -               | - |   | v  | -  | -  | v          |        |        |         |      |      | v    |              | v |   |
|                             | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |   |   | v  |    |    | v          |        |        |         |      |      | v    |              | v |   |
|                             | 26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |   |   | v  |    | -  | v          |        |        |         |      |      | v    |              | v |   |
|                             | 66                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |   |   | v  |    |    | v          |        |        |         |      |      | v    |              | v |   |
| E.R.P / E.I.R.P             | 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | v               | v | v | v  | -  | -  | v          | v      | v      |         | v    |      |      | v            | v | v |
|                             | 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -               | - | v | v  | -  | -  | v          | v      | v      |         | v    |      |      | v            | v | v |
|                             | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | v               | v | v | v  | v  | v  | v          | v      | v      |         | v    |      |      | v            | v | v |
|                             | 26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | v               | v | v | v  | v  | -  | v          | v      | v      |         | v    |      |      | v            | v | v |
|                             | 66                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | v               | v | v | v  | v  | v  | v          | v      | v      |         | v    |      |      | v            | v | v |
| Radiated Spurious Emission  | 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Worst Case      |   |   |    |    |    |            |        |        |         |      |      |      |              | v |   |
|                             | 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Worst Case      |   |   |    |    |    |            |        |        |         |      |      |      |              | v |   |
|                             | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Worst Case      |   |   |    |    |    |            |        |        |         |      |      |      |              | v |   |
|                             | 26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Worst Case      |   |   |    |    |    |            |        |        |         |      |      |      |              | v |   |
|                             | 66                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Worst Case      |   |   |    |    |    |            |        |        |         |      |      |      |              | v |   |
| Note                        | <div><div>1.</div><div>The mark “v ” means that this configuration is chosen for testing</div></div> <div><div>2.</div><div>The mark “-” means that this bandwidth is not supported.</div></div> <div><div>3.</div><div>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.</div></div> <div><div>4.</div><div>LTE Band 26 overlaps the entire frequency range of LTE Band 5. Therefore, the test results provided in this report covers Band 26 as well as Band 5.</div></div> <div><div>5.</div><div>LTE Band 66 overlaps the entire frequency range of LTE Band 4. Therefore, the test results provided in this report covers Band 66 as well as Band 4.</div></div> <div><div>6.</div><div>LTE Band 25 overlaps the entire frequency range of LTE Band 2. Therefore, the test results provided in this report covers Band 25 as well as Band 2.</div></div> <div><div>7.</div><div>LTE Band 12 overlaps the entire frequency range of LTE Band 17. Therefore, the test results provided in this report covers Band 12 as well as Band 17.</div></div> <div><div>8.</div><div>For QAM mode, the whole testing has assessed 16QAM/64QAM mode by referring to their higher conducted power.</div></div> |                 |   |   |    |    |    |            |        |        |         |      |      |      |              |   |   |



## 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.   | Power Supply     | GWINSTEK   | PSS-2002          | N/A    | N/A        | Unshielded, 1.8 m |
| 2.   | LTE Base Station | Anritsu    | MT8820C           | N/A    | N/A        | Unshielded, 1.8 m |
| 3.   | Fixture          | INTEL      | NGFF Card Carrier | N/A    | N/A        | N/A               |

## 2.4 Measurement Results Explanation Example

### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 4.0 dB and 10dB attenuator.

Example :

$$\begin{aligned}
 \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\
 &= 4.0 + 10 = 14.0 \text{ (dB)}
 \end{aligned}$$



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

| LTE Band 2 Channel and Frequency List |                        |        |        |         |
|---------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                              | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 20                                    | Channel                | 18700  | 18900  | 19100   |
|                                       | Frequency              | 1860   | 1880   | 1900    |
| 15                                    | Channel                | 18675  | 18900  | 19125   |
|                                       | Frequency              | 1857.5 | 1880   | 1902.5  |
| 10                                    | Channel                | 18650  | 18900  | 19150   |
|                                       | Frequency              | 1855   | 1880   | 1905    |
| 5                                     | Channel                | 18625  | 18900  | 19175   |
|                                       | Frequency              | 1852.5 | 1880   | 1907.5  |
| 3                                     | Channel                | 18615  | 18900  | 19185   |
|                                       | Frequency              | 1851.5 | 1880   | 1908.5  |
| 1.4                                   | Channel                | 18607  | 18900  | 19193   |
|                                       | Frequency              | 1850.7 | 1880   | 1909.3  |

| 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 12 Channel and Frequency List |                        |        |        |         |
|----------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                               | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 10                                     | Channel                | 23060  | 23095  | 23130   |
|                                        | Frequency              | 704    | 707.5  | 711     |
| 5                                      | Channel                | 23035  | 23095  | 23155   |
|                                        | Frequency              | 701.5  | 707.5  | 713.5   |
| 3                                      | Channel                | 23025  | 23095  | 23165   |
|                                        | Frequency              | 700.5  | 707.5  | 714.5   |
| 1.4                                    | Channel                | 23017  | 23095  | 23173   |
|                                        | Frequency              | 699.7  | 707.5  | 715.3   |

| 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 25 Channel and Frequency List |                        |        |        |         |
|----------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                               | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 20                                     | Channel                | 26140  | 26340  | 26590   |
|                                        | Frequency              | 1860   | 1880   | 1905    |
| 15                                     | Channel                | 26115  | 26340  | 26615   |
|                                        | Frequency              | 1857.5 | 1880   | 1907.5  |
| 10                                     | Channel                | 26090  | 26340  | 26640   |
|                                        | Frequency              | 1855   | 1880   | 1910    |
| 5                                      | Channel                | 26065  | 26340  | 26665   |
|                                        | Frequency              | 1852.5 | 1880   | 1912.5  |
| 3                                      | Channel                | 26055  | 26340  | 26675   |
|                                        | Frequency              | 1851.5 | 1880   | 1913.5  |
| 1.4                                    | Channel                | 26047  | 26340  | 26683   |
|                                        | Frequency              | 1850.7 | 1880   | 1914.3  |

| LTE Band 26 Channel and Frequency List |                        |        |        |         |
|----------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                               | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 15                                     | Channel                | 26865  | 26915  | 26965   |
|                                        | Frequency              | 831.5  | 836.5  | 841.5   |
| 10                                     | Channel                | 26840  | 26915  | 26990   |
|                                        | Frequency              | 829    | 836.5  | 844     |
| 5                                      | Channel                | 26815  | 26915  | 27015   |
|                                        | Frequency              | 826.5  | 836.5  | 846.5   |
| 3                                      | Channel                | 26805  | 26915  | 27025   |
|                                        | Frequency              | 825.5  | 836.5  | 847.5   |
| 1.4                                    | Channel                | 26797  | 26915  | 27033   |
|                                        | Frequency              | 824.7  | 836.5  | 848.3   |



| LTE Band 66 Channel and Frequency List |                        |        |        |         |
|----------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                               | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 20                                     | Channel                | 132072 | 132322 | 132572  |
|                                        | Frequency              | 1720   | 1745   | 1770    |
| 15                                     | Channel                | 132047 | 132322 | 132597  |
|                                        | Frequency              | 1717.5 | 1745   | 1772.5  |
| 10                                     | Channel                | 132022 | 132322 | 132622  |
|                                        | Frequency              | 1715   | 1745   | 1775    |
| 5                                      | Channel                | 131997 | 132322 | 132647  |
|                                        | Frequency              | 1712.5 | 1745   | 1777.5  |
| 3                                      | Channel                | 131987 | 132322 | 132657  |
|                                        | Frequency              | 1711.5 | 1745   | 1778.5  |
| 1.4                                    | Channel                | 131979 | 132322 | 132665  |
|                                        | Frequency              | 1710.7 | 1745   | 1779.3  |

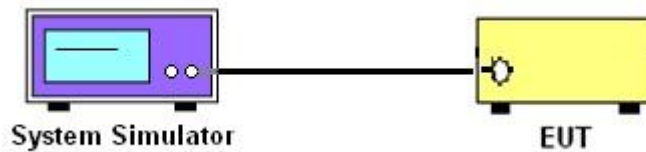
### 3 Conducted Test Items

#### 3.1 Measuring Instruments

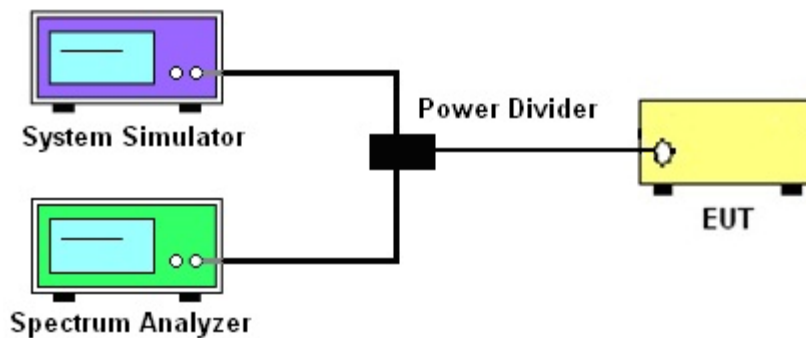
See list of measuring instruments of this test report.

#### 3.2 Test Setup

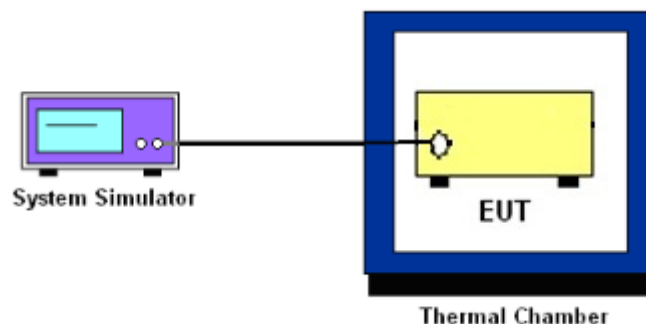
##### 3.2.1 Conducted Output Power



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



##### 3.2.3 Frequency Stability



### 3.3 Test Result of Conducted Test

Please refer to Appendix A.

### 3.4 Conducted Output Power and ERP/EIRP

#### 3.4.1 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 and Band 26.

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12, Band 13 and Band 17 and Band 71.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 25 and Band 7 and Band 38 and Band 41.

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4 and Band 66.

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

#### 3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

## 3.5 Peak-to-Average Ratio

### 3.5.1 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.

### 3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.





## **3.6 Occupied Bandwidth**

### **3.6.1 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.

### **3.6.2 Test Procedures**

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. 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.
4. 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.
5. Set the detection mode to peak, and the trace mode to max hold.
6. 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)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. 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.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

## 3.7 Conducted Band Edge

### 3.7.1 Description of Conducted Band Edge Measurement

#### 22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  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.

#### 24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the 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  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  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  $65 + 10 \log_{10} p(\text{watts})$ , dB, for mobile and portable equipment.

#### 27.53 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  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  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  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.

### 3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW  $\geq$  1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

Example:

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

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm}.$$

## 3.8 Conducted Spurious Emission

### 3.8.1 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.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10<sup>th</sup> harmonic.

### 3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. 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.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from  $43 + 10\log(P)$ dB below the transmitter power P(Watts)  
 $= P(W) - [43 + 10\log(P)]$  (dB)  
 $= [30 + 10\log(P)]$  (dBm) -  $[43 + 10\log(P)]$  (dB)  
 $= -13$ dBm.

### 3.9 Frequency Stability

#### 3.9.1 Description of Frequency Stability Measurement

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  $\pm 0.00025\%$  ( $\pm 2.5\text{ppm}$ ) of the center frequency.

#### 3.9.2 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to  $-30^{\circ}\text{C}$  and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in  $10^{\circ}\text{C}$  step up to  $50^{\circ}\text{C}$ . 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.

#### 3.9.3 Test Procedures for Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at  $20\pm 5^{\circ}\text{C}$  and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

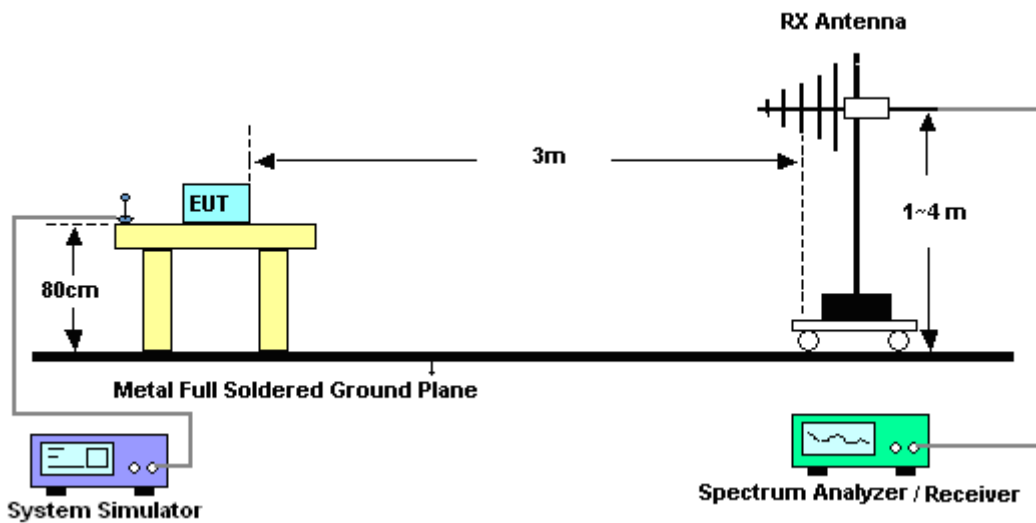
## 4 Radiated Test Items

### 4.1 Measuring Instruments

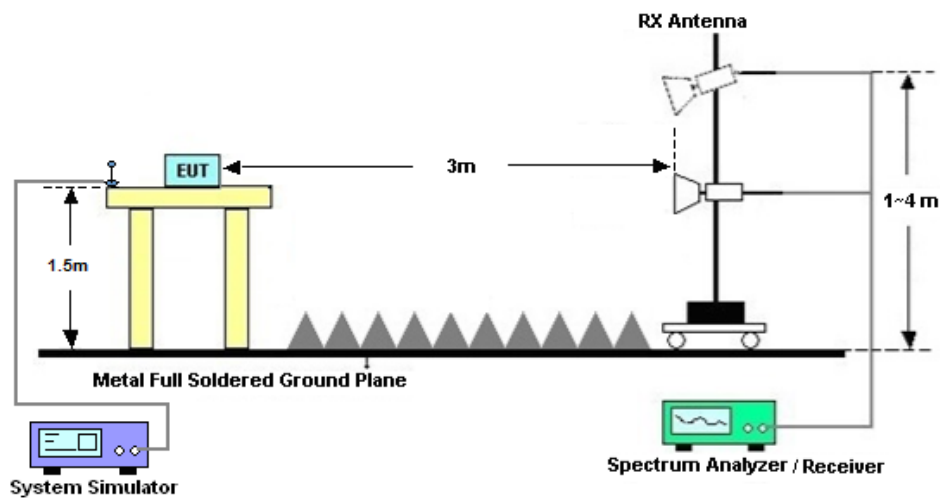
See list of measuring instruments of this test report.

### 4.2 Test Setup

#### 4.2.1 For radiated test from 30MHz to 1GHz



#### 4.2.2 For radiated test above 1GHz



### 4.3 Test Result of Radiated Test

Please refer to Appendix B.



## **4.4 Radiated Spurious Emission**

### **4.4.1 Description of Radiated Spurious Emission**

The radiated spurious emission was measured by substitution method according to ANSI C63.26. 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 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.

### **4.4.2 Test Procedures**

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10.  $\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$
11.  $\text{ERP (dBm)} = \text{EIRP} - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm}$$

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



## 5 List of Measuring Equipment

| Instrument                | Manufacturer              | Model No.     | Serial No.   | Characteristics | Calibration Date | Test Date                       | Due Date      | Remark                |
|---------------------------|---------------------------|---------------|--------------|-----------------|------------------|---------------------------------|---------------|-----------------------|
| Spectrum Analyzer         | R&S                       | FSV40         | 101078       | 10Hz~40GHz      | Apr. 17, 2020    | Dec. 02, 2020~<br>Dec. 08, 2020 | Apr. 16, 2021 | Conducted (TH01-SZ)   |
| DC Power Supply           | TTI                       | PL330P        | 290070       | Max 32V , 3A    | Oct. 15, 2020    | Dec. 02, 2020~<br>Dec. 08, 2020 | Oct. 14, 2021 | Conducted (TH01-SZ)   |
| Thermal Chamber           | Ten Billion Hongzhangroup | LP-150U       | H2014081803  | -40~+150°C      | Jul. 22, 2020    | Dec. 02, 2020~<br>Dec. 08, 2020 | Jul. 21, 2021 | Conducted (TH01-SZ)   |
| EXA Spectrum Analyzer     | KEYSIGHT                  | N9010A        | MY55150213   | 10Hz~44GHz      | Jul. 21, 2020    | Dec. 14, 2020~<br>Dec. 18, 2020 | Jul. 20, 2021 | Radiation (03CH02-SZ) |
| Bilog Antenna             | TeseQ                     | CBL6112D      | 35407        | 30MHz-2GHz      | Jul. 15, 2020    | Dec. 14, 2020~<br>Dec. 18, 2020 | Jul. 14, 2021 | Radiation (03CH02-SZ) |
| Double Ridge Horn Antenna | ETS-Lindgren              | 3117          | 00119436     | 1GHz~18GHz      | Jul. 25, 2020    | Dec. 14, 2020~<br>Dec. 18, 2020 | Jul. 24, 2021 | Radiation (03CH02-SZ) |
| HF Amplifier              | MITEQ                     | TTA1840-35-HG | 1871923      | 18GHz~40GHz     | Jul. 21, 2020    | Dec. 14, 2020~<br>Dec. 18, 2020 | Jul. 20, 2021 | Radiation (03CH02-SZ) |
| SHF-EHF Horn              | com-power                 | AH-840        | 101071       | 18Ghz-40GHz     | Apr. 23, 2020    | Dec. 14, 2020~<br>Dec. 18, 2020 | Apr. 22, 2021 | Radiation (03CH02-SZ) |
| LF Amplifier              | Burgeon                   | BPA-530       | 102211       | 0.01~3000Mhz    | Oct. 16, 2020    | Dec. 14, 2020~<br>Dec. 18, 2020 | Oct. 15, 2021 | Radiation (03CH02-SZ) |
| HF Amplifier              | KEYSIGHT                  | 83017A        | MY53270105   | 0.5GHz~26.5Ghz  | Oct. 16, 2020    | Dec. 14, 2020~<br>Dec. 18, 2020 | Oct. 15, 2021 | Radiation (03CH02-SZ) |
| AC Power Source           | Chroma                    | 61601         | 616010002470 | N/A             | NCR              | Dec. 14, 2020~<br>Dec. 18, 2020 | NCR           | Radiation (03CH02-SZ) |
| Turn Table                | Chaintek                  | T-200         | N/A          | 0~360 degree    | NCR              | Dec. 14, 2020~<br>Dec. 18, 2020 | NCR           | Radiation (03CH02-SZ) |
| Antenna Mast              | Chaintek                  | MBS-400       | N/A          | 1 m~4 m         | NCR              | Dec. 14, 2020~<br>Dec. 18, 2020 | NCR           | Radiation (03CH02-SZ) |

NCR: No Calibration Required



## 6 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage  $K=2$  to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

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

|                                                                         |        |
|-------------------------------------------------------------------------|--------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 2.47dB |
|-------------------------------------------------------------------------|--------|

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

|                                                                         |        |
|-------------------------------------------------------------------------|--------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 3.31dB |
|-------------------------------------------------------------------------|--------|

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

|                                                                         |        |
|-------------------------------------------------------------------------|--------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 3.72dB |
|-------------------------------------------------------------------------|--------|



## Appendix A. Test Results of Conducted Test

### Conducted Output Power(Average power)

#### Bottom Antenna

#### LTE Band 2

| BW [MHz]        | Modulation | RB Size | RB Offset | Power<br>Low<br>Ch. / Freq. | Power<br>Middle<br>Ch. / Freq. | Power<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|------------------------------|
| Channel         |            |         |           | 18700                       | 18900                          | 19100                        |
| Frequency (MHz) |            |         |           | 1860                        | 1880                           | 1900                         |
| 20              | QPSK       | 1       | 0         | 23.32                       | 23.47                          | 23.33                        |
| 20              | QPSK       | 1       | 49        | 23.30                       | 23.35                          | 23.32                        |
| 20              | QPSK       | 1       | 99        | 23.16                       | 23.28                          | 23.24                        |
| 20              | QPSK       | 50      | 0         | 22.29                       | 22.43                          | 22.36                        |
| 20              | QPSK       | 50      | 24        | 22.37                       | 22.45                          | 22.39                        |
| 20              | QPSK       | 50      | 50        | 22.35                       | 22.47                          | 22.44                        |
| 20              | QPSK       | 100     | 0         | 22.30                       | 22.40                          | 22.36                        |
| 20              | 16QAM      | 1       | 0         | 22.61                       | 22.76                          | 22.70                        |
| 20              | 16QAM      | 1       | 49        | 22.58                       | 22.71                          | 22.65                        |
| 20              | 16QAM      | 1       | 99        | 22.51                       | 22.66                          | 22.55                        |
| 20              | 16QAM      | 50      | 0         | 21.31                       | 21.42                          | 21.37                        |
| 20              | 16QAM      | 50      | 24        | 21.40                       | 21.41                          | 21.39                        |
| 20              | 16QAM      | 50      | 50        | 21.36                       | 21.47                          | 21.44                        |
| 20              | 16QAM      | 100     | 0         | 21.36                       | 21.40                          | 21.34                        |
| 20              | 64QAM      | 1       | 0         | 21.52                       | 21.54                          | 21.56                        |
| 20              | 64QAM      | 1       | 49        | 21.42                       | 21.46                          | 21.52                        |
| 20              | 64QAM      | 1       | 99        | 21.33                       | 21.58                          | 21.58                        |
| 20              | 64QAM      | 50      | 0         | 20.33                       | 20.44                          | 20.40                        |
| 20              | 64QAM      | 50      | 24        | 20.41                       | 20.47                          | 20.41                        |
| 20              | 64QAM      | 50      | 50        | 20.37                       | 20.52                          | 20.48                        |
| 20              | 64QAM      | 100     | 0         | 20.40                       | 20.43                          | 20.39                        |
| 20              | 256QAM     | 1       | 0         | 18.91                       | 18.82                          | 18.93                        |
| 20              | 256QAM     | 1       | 49        | 18.86                       | 18.89                          | 19.01                        |
| 20              | 256QAM     | 1       | 99        | 19.01                       | 19.02                          | 18.98                        |



|                 |        |     |    |        |       |        |
|-----------------|--------|-----|----|--------|-------|--------|
| 20              | 256QAM | 50  | 0  | 18.77  | 18.80 | 18.78  |
| 20              | 256QAM | 50  | 24 | 18.85  | 18.83 | 18.86  |
| 20              | 256QAM | 50  | 50 | 18.87  | 18.92 | 18.97  |
| 20              | 256QAM | 100 | 0  | 18.88  | 18.83 | 18.84  |
| Channel         |        |     |    | 18675  | 18900 | 19125  |
| Frequency (MHz) |        |     |    | 1857.5 | 1880  | 1902.5 |
| 15              | QPSK   | 1   | 0  | 23.38  | 23.42 | 23.41  |
| 15              | QPSK   | 1   | 37 | 23.33  | 23.43 | 23.40  |
| 15              | QPSK   | 1   | 74 | 23.36  | 23.42 | 23.41  |
| 15              | QPSK   | 36  | 0  | 22.39  | 22.50 | 22.42  |
| 15              | QPSK   | 36  | 20 | 22.49  | 22.53 | 22.45  |
| 15              | QPSK   | 36  | 39 | 22.47  | 22.60 | 22.53  |
| 15              | QPSK   | 75  | 0  | 22.45  | 22.54 | 22.47  |
| 15              | 16QAM  | 1   | 0  | 22.68  | 22.79 | 22.82  |
| 15              | 16QAM  | 1   | 37 | 22.66  | 22.83 | 22.70  |
| 15              | 16QAM  | 1   | 74 | 22.59  | 22.76 | 22.70  |
| 15              | 16QAM  | 36  | 0  | 21.43  | 21.52 | 21.44  |
| 15              | 16QAM  | 36  | 20 | 21.46  | 21.54 | 21.46  |
| 15              | 16QAM  | 36  | 39 | 21.44  | 21.61 | 21.53  |
| 15              | 16QAM  | 75  | 0  | 21.47  | 21.56 | 21.46  |
| 15              | 64QAM  | 1   | 0  | 21.62  | 21.72 | 21.66  |
| 15              | 64QAM  | 1   | 37 | 21.54  | 21.73 | 21.70  |
| 15              | 64QAM  | 1   | 74 | 21.50  | 21.57 | 21.62  |
| 15              | 64QAM  | 36  | 0  | 20.44  | 20.56 | 20.47  |
| 15              | 64QAM  | 36  | 20 | 20.52  | 20.57 | 20.51  |
| 15              | 64QAM  | 36  | 39 | 20.50  | 20.67 | 20.55  |
| 15              | 64QAM  | 75  | 0  | 20.50  | 20.55 | 20.46  |
| 15              | 256QAM | 1   | 0  | 18.84  | 18.98 | 18.94  |
| 15              | 256QAM | 1   | 37 | 18.99  | 19.04 | 19.06  |
| 15              | 256QAM | 1   | 74 | 18.89  | 19.10 | 19.07  |
| 15              | 256QAM | 36  | 0  | 18.80  | 18.81 | 18.84  |
| 15              | 256QAM | 36  | 20 | 18.82  | 18.86 | 18.90  |
| 15              | 256QAM | 36  | 39 | 18.95  | 18.94 | 18.99  |
| 15              | 256QAM | 75  | 0  | 18.84  | 18.85 | 18.82  |
| Channel         |        |     |    | 18650  | 18900 | 19150  |



| Frequency (MHz) |        |    |    | 1855   | 1880  | 1905   |
|-----------------|--------|----|----|--------|-------|--------|
| 10              | QPSK   | 1  | 0  | 23.41  | 23.46 | 23.41  |
| 10              | QPSK   | 1  | 25 | 23.36  | 23.41 | 23.33  |
| 10              | QPSK   | 1  | 49 | 23.38  | 23.41 | 23.35  |
| 10              | QPSK   | 25 | 0  | 22.48  | 22.48 | 22.40  |
| 10              | QPSK   | 25 | 12 | 22.51  | 22.56 | 22.44  |
| 10              | QPSK   | 25 | 25 | 22.49  | 22.62 | 22.54  |
| 10              | QPSK   | 50 | 0  | 22.49  | 22.51 | 22.44  |
| 10              | 16QAM  | 1  | 0  | 22.80  | 22.90 | 22.75  |
| 10              | 16QAM  | 1  | 25 | 22.70  | 22.85 | 22.73  |
| 10              | 16QAM  | 1  | 49 | 22.75  | 22.91 | 22.67  |
| 10              | 16QAM  | 25 | 0  | 21.42  | 21.50 | 21.43  |
| 10              | 16QAM  | 25 | 12 | 21.51  | 21.54 | 21.46  |
| 10              | 16QAM  | 25 | 25 | 21.48  | 21.62 | 21.53  |
| 10              | 16QAM  | 50 | 0  | 21.49  | 21.55 | 21.43  |
| 10              | 64QAM  | 1  | 0  | 21.72  | 21.72 | 21.62  |
| 10              | 64QAM  | 1  | 25 | 21.60  | 21.75 | 21.67  |
| 10              | 64QAM  | 1  | 49 | 21.58  | 21.82 | 21.56  |
| 10              | 64QAM  | 25 | 0  | 20.49  | 20.61 | 20.44  |
| 10              | 64QAM  | 25 | 12 | 20.54  | 20.62 | 20.50  |
| 10              | 64QAM  | 25 | 25 | 20.48  | 20.66 | 20.56  |
| 10              | 64QAM  | 50 | 0  | 20.51  | 20.55 | 20.43  |
| 10              | 256QAM | 1  | 0  | 18.82  | 18.95 | 18.92  |
| 10              | 256QAM | 1  | 25 | 18.97  | 19.01 | 19.04  |
| 10              | 256QAM | 1  | 49 | 18.87  | 19.07 | 19.05  |
| 10              | 256QAM | 25 | 0  | 18.78  | 18.78 | 18.82  |
| 10              | 256QAM | 25 | 12 | 18.80  | 18.83 | 18.88  |
| 10              | 256QAM | 25 | 25 | 18.93  | 18.91 | 18.97  |
| 10              | 256QAM | 50 | 0  | 18.82  | 18.82 | 18.80  |
| Channel         |        |    |    | 18625  | 18900 | 19175  |
| Frequency (MHz) |        |    |    | 1852.5 | 1880  | 1907.5 |
| 5               | QPSK   | 1  | 0  | 23.40  | 23.42 | 23.39  |
| 5               | QPSK   | 1  | 12 | 23.46  | 23.32 | 23.41  |
| 5               | QPSK   | 1  | 24 | 23.44  | 23.45 | 23.40  |
| 5               | QPSK   | 12 | 0  | 22.48  | 22.53 | 22.44  |



|                 |        |    |    |        |       |        |
|-----------------|--------|----|----|--------|-------|--------|
| 5               | QPSK   | 12 | 7  | 22.50  | 22.56 | 22.52  |
| 5               | QPSK   | 12 | 13 | 22.47  | 22.61 | 22.48  |
| 5               | QPSK   | 25 | 0  | 22.46  | 22.54 | 22.49  |
| 5               | 16QAM  | 1  | 0  | 22.74  | 22.75 | 22.77  |
| 5               | 16QAM  | 1  | 12 | 22.77  | 22.84 | 22.76  |
| 5               | 16QAM  | 1  | 24 | 22.82  | 22.81 | 22.75  |
| 5               | 16QAM  | 12 | 0  | 21.52  | 21.54 | 21.46  |
| 5               | 16QAM  | 12 | 7  | 21.54  | 21.58 | 21.50  |
| 5               | 16QAM  | 12 | 13 | 21.56  | 21.61 | 21.50  |
| 5               | 16QAM  | 25 | 0  | 21.49  | 21.52 | 21.49  |
| 5               | 64QAM  | 1  | 0  | 21.68  | 21.72 | 21.66  |
| 5               | 64QAM  | 1  | 12 | 21.64  | 21.79 | 21.65  |
| 5               | 64QAM  | 1  | 24 | 21.70  | 21.80 | 21.73  |
| 5               | 64QAM  | 12 | 0  | 20.56  | 20.63 | 20.57  |
| 5               | 64QAM  | 12 | 7  | 20.60  | 20.65 | 20.54  |
| 5               | 64QAM  | 12 | 13 | 20.60  | 20.65 | 20.57  |
| 5               | 64QAM  | 25 | 0  | 20.52  | 20.41 | 20.52  |
| 5               | 256QAM | 1  | 0  | 18.90  | 18.94 | 18.89  |
| 5               | 256QAM | 1  | 12 | 19.05  | 19.00 | 19.01  |
| 5               | 256QAM | 1  | 24 | 18.95  | 19.06 | 19.02  |
| 5               | 256QAM | 12 | 0  | 18.86  | 18.77 | 18.79  |
| 5               | 256QAM | 12 | 7  | 18.88  | 18.82 | 18.85  |
| 5               | 256QAM | 12 | 13 | 19.01  | 18.90 | 18.94  |
| 5               | 256QAM | 25 | 0  | 18.90  | 18.81 | 18.77  |
| Channel         |        |    |    | 18615  | 18900 | 19185  |
| Frequency (MHz) |        |    |    | 1851.5 | 1880  | 1908.5 |
| 3               | QPSK   | 1  | 0  | 23.42  | 23.44 | 23.35  |
| 3               | QPSK   | 1  | 8  | 23.33  | 23.39 | 23.41  |
| 3               | QPSK   | 1  | 14 | 23.44  | 23.37 | 23.39  |
| 3               | QPSK   | 8  | 0  | 22.48  | 22.55 | 22.42  |
| 3               | QPSK   | 8  | 4  | 22.54  | 22.58 | 22.46  |
| 3               | QPSK   | 8  | 7  | 22.53  | 22.62 | 22.47  |
| 3               | QPSK   | 15 | 0  | 22.48  | 22.54 | 22.44  |
| 3               | 16QAM  | 1  | 0  | 22.77  | 22.81 | 22.75  |
| 3               | 16QAM  | 1  | 8  | 22.80  | 22.96 | 22.75  |



|                 |        |    |    |        |       |        |
|-----------------|--------|----|----|--------|-------|--------|
| 3               | 16QAM  | 1  | 14 | 22.74  | 22.86 | 22.71  |
| 3               | 16QAM  | 8  | 0  | 21.54  | 21.61 | 21.49  |
| 3               | 16QAM  | 8  | 4  | 21.63  | 21.64 | 21.53  |
| 3               | 16QAM  | 8  | 7  | 21.55  | 21.66 | 21.57  |
| 3               | 16QAM  | 15 | 0  | 21.55  | 21.56 | 21.49  |
| 3               | 64QAM  | 1  | 0  | 21.68  | 21.70 | 21.62  |
| 3               | 64QAM  | 1  | 8  | 21.75  | 21.82 | 21.72  |
| 3               | 64QAM  | 1  | 14 | 21.68  | 21.80 | 21.66  |
| 3               | 64QAM  | 8  | 0  | 20.55  | 20.54 | 20.55  |
| 3               | 64QAM  | 8  | 4  | 20.59  | 20.70 | 20.51  |
| 3               | 64QAM  | 8  | 7  | 20.59  | 20.63 | 20.51  |
| 3               | 64QAM  | 15 | 0  | 20.51  | 20.57 | 20.51  |
| 3               | 256QAM | 1  | 0  | 18.92  | 18.96 | 18.91  |
| 3               | 256QAM | 1  | 8  | 19.07  | 19.02 | 19.03  |
| 3               | 256QAM | 1  | 14 | 18.97  | 19.08 | 19.04  |
| 3               | 256QAM | 8  | 0  | 18.88  | 18.79 | 18.81  |
| 3               | 256QAM | 8  | 4  | 18.90  | 18.84 | 18.87  |
| 3               | 256QAM | 8  | 7  | 19.03  | 18.92 | 18.96  |
| 3               | 256QAM | 15 | 0  | 18.92  | 18.83 | 18.79  |
| Channel         |        |    |    | 18607  | 18900 | 19193  |
| Frequency (MHz) |        |    |    | 1850.7 | 1880  | 1909.3 |
| 1.4             | QPSK   | 1  | 0  | 23.39  | 23.40 | 23.28  |
| 1.4             | QPSK   | 1  | 3  | 23.42  | 23.35 | 23.38  |
| 1.4             | QPSK   | 1  | 5  | 23.40  | 23.42 | 23.30  |
| 1.4             | QPSK   | 3  | 0  | 23.36  | 23.34 | 23.31  |
| 1.4             | QPSK   | 3  | 1  | 23.44  | 23.42 | 23.36  |
| 1.4             | QPSK   | 3  | 3  | 23.42  | 23.45 | 23.31  |
| 1.4             | QPSK   | 6  | 0  | 22.46  | 22.54 | 22.35  |
| 1.4             | 16QAM  | 1  | 0  | 22.64  | 22.74 | 22.53  |
| 1.4             | 16QAM  | 1  | 3  | 22.72  | 22.84 | 22.70  |
| 1.4             | 16QAM  | 1  | 5  | 22.71  | 22.71 | 22.63  |
| 1.4             | 16QAM  | 3  | 0  | 22.43  | 22.56 | 22.40  |
| 1.4             | 16QAM  | 3  | 1  | 22.52  | 22.61 | 22.47  |
| 1.4             | 16QAM  | 3  | 3  | 22.50  | 22.57 | 22.39  |
| 1.4             | 16QAM  | 6  | 0  | 21.52  | 21.59 | 21.48  |



|     |        |   |   |       |       |       |
|-----|--------|---|---|-------|-------|-------|
| 1.4 | 64QAM  | 1 | 0 | 21.59 | 21.73 | 21.60 |
| 1.4 | 64QAM  | 1 | 3 | 21.72 | 21.77 | 21.58 |
| 1.4 | 64QAM  | 1 | 5 | 21.57 | 21.66 | 21.55 |
| 1.4 | 64QAM  | 3 | 0 | 21.60 | 21.67 | 21.56 |
| 1.4 | 64QAM  | 3 | 1 | 21.61 | 21.73 | 21.56 |
| 1.4 | 64QAM  | 3 | 3 | 21.58 | 21.66 | 21.52 |
| 1.4 | 64QAM  | 6 | 0 | 20.49 | 20.54 | 20.38 |
| 1.4 | 256QAM | 1 | 0 | 18.91 | 18.93 | 18.92 |
| 1.4 | 256QAM | 1 | 3 | 19.06 | 18.99 | 19.04 |
| 1.4 | 256QAM | 1 | 5 | 18.96 | 19.05 | 19.05 |
| 1.4 | 256QAM | 3 | 0 | 18.87 | 18.76 | 18.82 |
| 1.4 | 256QAM | 3 | 1 | 18.89 | 18.81 | 18.88 |
| 1.4 | 256QAM | 3 | 3 | 19.02 | 18.89 | 18.97 |
| 1.4 | 256QAM | 6 | 0 | 18.91 | 18.80 | 18.80 |

**LTE Band 4**

| BW [MHz]        | Modulation | RB Size | RB Offset | Power<br>Low<br>Ch. / Freq. | Power<br>Middle<br>Ch. / Freq. | Power<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|------------------------------|
| Channel         |            |         |           | 20050                       | 20175                          | 20300                        |
| Frequency (MHz) |            |         |           | 1720                        | 1732.5                         | 1745                         |
| 20              | QPSK       | 1       | 0         | 23.44                       | 23.46                          | 23.50                        |
| 20              | QPSK       | 1       | 49        | 23.28                       | 23.42                          | 23.29                        |
| 20              | QPSK       | 1       | 99        | 23.34                       | 23.34                          | 23.25                        |
| 20              | QPSK       | 50      | 0         | 22.49                       | 22.62                          | 22.64                        |
| 20              | QPSK       | 50      | 24        | 22.50                       | 22.57                          | 22.55                        |
| 20              | QPSK       | 50      | 50        | 22.41                       | 22.44                          | 22.47                        |
| 20              | QPSK       | 100     | 0         | 22.48                       | 22.52                          | 22.51                        |
| 20              | 16QAM      | 1       | 0         | 22.80                       | 22.85                          | 22.92                        |
| 20              | 16QAM      | 1       | 49        | 22.63                       | 22.77                          | 22.70                        |
| 20              | 16QAM      | 1       | 99        | 22.69                       | 22.67                          | 22.56                        |
| 20              | 16QAM      | 50      | 0         | 21.49                       | 21.62                          | 21.62                        |
| 20              | 16QAM      | 50      | 24        | 21.48                       | 21.58                          | 21.53                        |
| 20              | 16QAM      | 50      | 50        | 21.42                       | 21.48                          | 21.46                        |
| 20              | 16QAM      | 100     | 0         | 21.47                       | 21.51                          | 21.52                        |



|                 |        |     |    |        |        |        |
|-----------------|--------|-----|----|--------|--------|--------|
| 20              | 64QAM  | 1   | 0  | 21.60  | 21.76  | 21.84  |
| 20              | 64QAM  | 1   | 49 | 21.56  | 21.59  | 21.43  |
| 20              | 64QAM  | 1   | 99 | 21.57  | 21.46  | 21.43  |
| 20              | 64QAM  | 50  | 0  | 20.50  | 20.63  | 20.66  |
| 20              | 64QAM  | 50  | 24 | 20.53  | 20.58  | 20.58  |
| 20              | 64QAM  | 50  | 50 | 20.45  | 20.48  | 20.50  |
| 20              | 64QAM  | 100 | 0  | 20.48  | 20.59  | 20.57  |
| 20              | 256QAM | 1   | 0  | 19.11  | 18.94  | 18.97  |
| 20              | 256QAM | 1   | 49 | 18.95  | 18.83  | 18.73  |
| 20              | 256QAM | 1   | 99 | 19.00  | 18.78  | 18.65  |
| 20              | 256QAM | 50  | 0  | 18.89  | 18.83  | 18.77  |
| 20              | 256QAM | 50  | 24 | 18.94  | 18.75  | 18.70  |
| 20              | 256QAM | 50  | 50 | 18.87  | 18.74  | 18.66  |
| 20              | 256QAM | 100 | 0  | 18.92  | 18.77  | 18.70  |
| Channel         |        |     |    | 20025  | 20175  | 20325  |
| Frequency (MHz) |        |     |    | 1717.5 | 1732.5 | 1747.5 |
| 15              | QPSK   | 1   | 0  | 23.43  | 23.45  | 23.42  |
| 15              | QPSK   | 1   | 37 | 23.26  | 23.41  | 23.32  |
| 15              | QPSK   | 1   | 74 | 23.24  | 23.35  | 23.26  |
| 15              | QPSK   | 36  | 0  | 22.45  | 22.61  | 22.58  |
| 15              | QPSK   | 36  | 20 | 22.45  | 22.55  | 22.51  |
| 15              | QPSK   | 36  | 39 | 22.42  | 22.47  | 22.43  |
| 15              | QPSK   | 75  | 0  | 22.46  | 22.53  | 22.48  |
| 15              | 16QAM  | 1   | 0  | 22.69  | 22.89  | 22.89  |
| 15              | 16QAM  | 1   | 37 | 22.60  | 22.77  | 22.56  |
| 15              | 16QAM  | 1   | 74 | 22.62  | 22.76  | 22.58  |
| 15              | 16QAM  | 36  | 0  | 21.42  | 21.58  | 21.55  |
| 15              | 16QAM  | 36  | 20 | 21.47  | 21.55  | 21.48  |
| 15              | 16QAM  | 36  | 39 | 21.42  | 21.49  | 21.40  |
| 15              | 16QAM  | 75  | 0  | 21.45  | 21.52  | 21.49  |
| 15              | 64QAM  | 1   | 0  | 21.58  | 21.76  | 21.64  |
| 15              | 64QAM  | 1   | 37 | 21.48  | 21.72  | 21.51  |
| 15              | 64QAM  | 1   | 74 | 21.55  | 21.52  | 21.48  |
| 15              | 64QAM  | 36  | 0  | 20.51  | 20.65  | 20.61  |
| 15              | 64QAM  | 36  | 20 | 20.51  | 20.55  | 20.53  |





|                 |        |    |    |       |        |       |
|-----------------|--------|----|----|-------|--------|-------|
| 15              | 64QAM  | 36 | 39 | 20.45 | 20.50  | 20.48 |
| 15              | 64QAM  | 75 | 0  | 20.48 | 20.53  | 20.53 |
| 15              | 256QAM | 1  | 0  | 19.14 | 18.95  | 18.91 |
| 15              | 256QAM | 1  | 37 | 18.98 | 18.86  | 18.76 |
| 15              | 256QAM | 1  | 74 | 19.03 | 18.81  | 18.68 |
| 15              | 256QAM | 36 | 0  | 18.92 | 18.86  | 18.80 |
| 15              | 256QAM | 36 | 20 | 18.97 | 18.78  | 18.73 |
| 15              | 256QAM | 36 | 39 | 18.90 | 18.77  | 18.69 |
| 15              | 256QAM | 75 | 0  | 18.95 | 18.80  | 18.73 |
| Channel         |        |    |    | 20000 | 20175  | 20350 |
| Frequency (MHz) |        |    |    | 1715  | 1732.5 | 1750  |
| 10              | QPSK   | 1  | 0  | 23.32 | 23.42  | 23.40 |
| 10              | QPSK   | 1  | 25 | 23.36 | 23.49  | 23.33 |
| 10              | QPSK   | 1  | 49 | 23.34 | 23.46  | 23.31 |
| 10              | QPSK   | 25 | 0  | 22.46 | 22.52  | 22.47 |
| 10              | QPSK   | 25 | 12 | 22.50 | 22.56  | 22.47 |
| 10              | QPSK   | 25 | 25 | 22.49 | 22.55  | 22.48 |
| 10              | QPSK   | 50 | 0  | 22.45 | 22.55  | 22.48 |
| 10              | 16QAM  | 1  | 0  | 22.75 | 22.86  | 22.76 |
| 10              | 16QAM  | 1  | 25 | 22.76 | 22.86  | 22.67 |
| 10              | 16QAM  | 1  | 49 | 22.70 | 22.84  | 22.70 |
| 10              | 16QAM  | 25 | 0  | 21.47 | 21.53  | 21.47 |
| 10              | 16QAM  | 25 | 12 | 21.45 | 21.57  | 21.52 |
| 10              | 16QAM  | 25 | 25 | 21.47 | 21.50  | 21.44 |
| 10              | 16QAM  | 50 | 0  | 21.52 | 21.56  | 21.49 |
| 10              | 64QAM  | 1  | 0  | 21.68 | 21.70  | 21.68 |
| 10              | 64QAM  | 1  | 25 | 21.65 | 21.84  | 21.66 |
| 10              | 64QAM  | 1  | 49 | 21.61 | 21.72  | 21.58 |
| 10              | 64QAM  | 25 | 0  | 20.50 | 20.55  | 20.45 |
| 10              | 64QAM  | 25 | 12 | 20.53 | 20.62  | 20.56 |
| 10              | 64QAM  | 25 | 25 | 20.49 | 20.59  | 20.51 |
| 10              | 64QAM  | 50 | 0  | 20.50 | 20.60  | 20.49 |
| 10              | 256QAM | 1  | 0  | 19.13 | 18.91  | 18.80 |
| 10              | 256QAM | 1  | 25 | 18.97 | 18.85  | 18.75 |
| 10              | 256QAM | 1  | 49 | 19.02 | 18.80  | 18.67 |



|                 |        |    |    |        |        |        |
|-----------------|--------|----|----|--------|--------|--------|
| 10              | 256QAM | 25 | 0  | 18.91  | 18.85  | 18.79  |
| 10              | 256QAM | 25 | 12 | 18.96  | 18.77  | 18.72  |
| 10              | 256QAM | 25 | 25 | 18.89  | 18.76  | 18.68  |
| 10              | 256QAM | 50 | 0  | 18.94  | 18.79  | 18.72  |
| Channel         |        |    |    | 19975  | 20175  | 20375  |
| Frequency (MHz) |        |    |    | 1712.5 | 1732.5 | 1752.5 |
| 5               | QPSK   | 1  | 0  | 23.37  | 23.45  | 23.34  |
| 5               | QPSK   | 1  | 12 | 23.42  | 23.49  | 23.34  |
| 5               | QPSK   | 1  | 24 | 23.40  | 23.44  | 23.34  |
| 5               | QPSK   | 12 | 0  | 22.46  | 22.55  | 22.38  |
| 5               | QPSK   | 12 | 7  | 22.48  | 22.59  | 22.43  |
| 5               | QPSK   | 12 | 13 | 22.44  | 22.60  | 22.40  |
| 5               | QPSK   | 25 | 0  | 22.47  | 22.53  | 22.40  |
| 5               | 16QAM  | 1  | 0  | 22.69  | 22.77  | 22.66  |
| 5               | 16QAM  | 1  | 12 | 22.73  | 22.85  | 22.63  |
| 5               | 16QAM  | 1  | 24 | 22.74  | 22.85  | 22.67  |
| 5               | 16QAM  | 12 | 0  | 21.49  | 21.57  | 21.44  |
| 5               | 16QAM  | 12 | 7  | 21.54  | 21.61  | 21.45  |
| 5               | 16QAM  | 12 | 13 | 21.52  | 21.67  | 21.47  |
| 5               | 16QAM  | 25 | 0  | 21.45  | 21.57  | 21.47  |
| 5               | 64QAM  | 1  | 0  | 21.69  | 21.72  | 21.58  |
| 5               | 64QAM  | 1  | 12 | 21.64  | 21.83  | 21.58  |
| 5               | 64QAM  | 1  | 24 | 21.67  | 21.77  | 21.60  |
| 5               | 64QAM  | 12 | 0  | 20.50  | 20.58  | 20.49  |
| 5               | 64QAM  | 12 | 7  | 20.57  | 20.69  | 20.48  |
| 5               | 64QAM  | 12 | 13 | 20.55  | 20.67  | 20.46  |
| 5               | 64QAM  | 25 | 0  | 20.48  | 20.57  | 20.48  |
| 5               | 256QAM | 1  | 0  | 19.07  | 18.89  | 18.70  |
| 5               | 256QAM | 1  | 12 | 18.98  | 18.82  | 18.77  |
| 5               | 256QAM | 1  | 24 | 19.03  | 18.77  | 18.69  |
| 5               | 256QAM | 12 | 0  | 18.92  | 18.82  | 18.81  |
| 5               | 256QAM | 12 | 7  | 18.97  | 18.74  | 18.74  |
| 5               | 256QAM | 12 | 13 | 18.90  | 18.73  | 18.70  |
| 5               | 256QAM | 25 | 0  | 18.95  | 18.76  | 18.74  |
| Channel         |        |    |    | 19965  | 20175  | 20385  |



| Frequency (MHz) |        |    |    | 1711.5 | 1732.5 | 1753.5 |
|-----------------|--------|----|----|--------|--------|--------|
| 3               | QPSK   | 1  | 0  | 23.41  | 23.44  | 23.31  |
| 3               | QPSK   | 1  | 8  | 23.45  | 23.47  | 23.40  |
| 3               | QPSK   | 1  | 14 | 23.37  | 23.43  | 23.30  |
| 3               | QPSK   | 8  | 0  | 22.46  | 22.51  | 22.40  |
| 3               | QPSK   | 8  | 4  | 22.52  | 22.55  | 22.44  |
| 3               | QPSK   | 8  | 7  | 22.49  | 22.63  | 22.42  |
| 3               | QPSK   | 15 | 0  | 22.47  | 22.52  | 22.43  |
| 3               | 16QAM  | 1  | 0  | 22.74  | 22.84  | 22.65  |
| 3               | 16QAM  | 1  | 8  | 22.78  | 22.99  | 22.72  |
| 3               | 16QAM  | 1  | 14 | 22.77  | 22.87  | 22.63  |
| 3               | 16QAM  | 8  | 0  | 21.54  | 21.64  | 21.48  |
| 3               | 16QAM  | 8  | 4  | 21.55  | 21.61  | 21.53  |
| 3               | 16QAM  | 8  | 7  | 21.54  | 21.68  | 21.48  |
| 3               | 16QAM  | 15 | 0  | 21.52  | 21.54  | 21.46  |
| 3               | 64QAM  | 1  | 0  | 21.60  | 21.69  | 21.59  |
| 3               | 64QAM  | 1  | 8  | 21.77  | 21.89  | 21.63  |
| 3               | 64QAM  | 1  | 14 | 21.61  | 21.78  | 21.59  |
| 3               | 64QAM  | 8  | 0  | 20.48  | 20.55  | 20.43  |
| 3               | 64QAM  | 8  | 4  | 20.57  | 20.62  | 20.50  |
| 3               | 64QAM  | 8  | 7  | 20.54  | 20.69  | 20.48  |
| 3               | 64QAM  | 15 | 0  | 20.53  | 20.55  | 20.42  |
| 3               | 256QAM | 1  | 0  | 19.06  | 18.94  | 18.76  |
| 3               | 256QAM | 1  | 8  | 18.96  | 18.81  | 18.78  |
| 3               | 256QAM | 1  | 14 | 19.01  | 18.76  | 18.70  |
| 3               | 256QAM | 8  | 0  | 18.90  | 18.81  | 18.82  |
| 3               | 256QAM | 8  | 4  | 18.95  | 18.73  | 18.75  |
| 3               | 256QAM | 8  | 7  | 18.88  | 18.72  | 18.71  |
| 3               | 256QAM | 15 | 0  | 18.93  | 18.75  | 18.75  |
| Channel         |        |    |    | 19957  | 20175  | 20393  |
| Frequency (MHz) |        |    |    | 1710.7 | 1732.5 | 1754.3 |
| 1.4             | QPSK   | 1  | 0  | 23.30  | 23.46  | 23.21  |
| 1.4             | QPSK   | 1  | 3  | 23.39  | 23.49  | 23.31  |
| 1.4             | QPSK   | 1  | 5  | 23.32  | 23.47  | 23.21  |
| 1.4             | QPSK   | 3  | 0  | 23.33  | 23.44  | 23.30  |



|     |        |   |   |       |       |       |
|-----|--------|---|---|-------|-------|-------|
| 1.4 | QPSK   | 3 | 1 | 23.39 | 23.44 | 23.31 |
| 1.4 | QPSK   | 3 | 3 | 23.32 | 23.48 | 23.24 |
| 1.4 | QPSK   | 6 | 0 | 22.42 | 22.53 | 22.29 |
| 1.4 | 16QAM  | 1 | 0 | 22.68 | 22.73 | 22.57 |
| 1.4 | 16QAM  | 1 | 3 | 22.71 | 22.87 | 22.65 |
| 1.4 | 16QAM  | 1 | 5 | 22.66 | 22.81 | 22.47 |
| 1.4 | 16QAM  | 3 | 0 | 22.46 | 22.60 | 22.38 |
| 1.4 | 16QAM  | 3 | 1 | 22.50 | 22.61 | 22.41 |
| 1.4 | 16QAM  | 3 | 3 | 22.43 | 22.56 | 22.36 |
| 1.4 | 16QAM  | 6 | 0 | 21.48 | 21.63 | 21.46 |
| 1.4 | 64QAM  | 1 | 0 | 21.57 | 21.74 | 21.56 |
| 1.4 | 64QAM  | 1 | 3 | 21.70 | 21.76 | 21.59 |
| 1.4 | 64QAM  | 1 | 5 | 21.53 | 21.70 | 21.49 |
| 1.4 | 64QAM  | 3 | 0 | 21.54 | 21.63 | 21.48 |
| 1.4 | 64QAM  | 3 | 1 | 21.56 | 21.77 | 21.54 |
| 1.4 | 64QAM  | 3 | 3 | 21.55 | 21.69 | 21.53 |
| 1.4 | 64QAM  | 6 | 0 | 20.41 | 20.55 | 20.34 |
| 1.4 | 256QAM | 1 | 0 | 19.07 | 18.86 | 18.68 |
| 1.4 | 256QAM | 1 | 3 | 18.99 | 18.84 | 18.81 |
| 1.4 | 256QAM | 1 | 5 | 19.04 | 18.79 | 18.73 |
| 1.4 | 256QAM | 3 | 0 | 18.93 | 18.84 | 18.85 |
| 1.4 | 256QAM | 3 | 1 | 18.98 | 18.76 | 18.78 |
| 1.4 | 256QAM | 3 | 3 | 18.91 | 18.75 | 18.74 |
| 1.4 | 256QAM | 6 | 0 | 18.96 | 18.78 | 18.78 |

## LTE Band 5

| BW [MHz]        | Modulation | RB Size | RB Offset | Power<br>Low<br>Ch. / Freq. | Power<br>Middle<br>Ch. / Freq. | Power<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|------------------------------|
| Channel         |            |         |           | 20450                       | 20525                          | 20600                        |
| Frequency (MHz) |            |         |           | 829                         | 836.5                          | 844                          |
| 10              | QPSK       | 1       | 0         | 23.98                       | 23.76                          | 23.84                        |
| 10              | QPSK       | 1       | 25        | 23.76                       | 23.70                          | 23.68                        |
| 10              | QPSK       | 1       | 49        | 23.76                       | 23.75                          | 23.75                        |
| 10              | QPSK       | 25      | 0         | 22.86                       | 22.83                          | 22.84                        |



|                 |        |    |    |       |       |       |
|-----------------|--------|----|----|-------|-------|-------|
| 10              | QPSK   | 25 | 12 | 22.93 | 22.90 | 22.91 |
| 10              | QPSK   | 25 | 25 | 22.89 | 22.85 | 22.85 |
| 10              | QPSK   | 50 | 0  | 22.93 | 22.90 | 22.83 |
| 10              | 16QAM  | 1  | 0  | 23.22 | 23.11 | 23.23 |
| 10              | 16QAM  | 1  | 25 | 23.15 | 23.08 | 23.10 |
| 10              | 16QAM  | 1  | 49 | 23.12 | 23.14 | 23.07 |
| 10              | 16QAM  | 25 | 0  | 21.85 | 21.82 | 21.84 |
| 10              | 16QAM  | 25 | 12 | 21.94 | 21.90 | 21.92 |
| 10              | 16QAM  | 25 | 25 | 21.91 | 21.85 | 21.83 |
| 10              | 16QAM  | 50 | 0  | 21.94 | 21.90 | 21.81 |
| 10              | 64QAM  | 1  | 0  | 22.07 | 21.99 | 21.97 |
| 10              | 64QAM  | 1  | 25 | 22.07 | 22.11 | 22.03 |
| 10              | 64QAM  | 1  | 49 | 22.05 | 22.04 | 22.05 |
| 10              | 64QAM  | 25 | 0  | 20.90 | 20.82 | 20.86 |
| 10              | 64QAM  | 25 | 12 | 20.97 | 20.94 | 20.98 |
| 10              | 64QAM  | 25 | 25 | 20.94 | 20.92 | 20.89 |
| 10              | 64QAM  | 50 | 0  | 20.95 | 20.90 | 20.86 |
| 10              | 256QAM | 1  | 0  | 18.15 | 18.05 | 18.18 |
| 10              | 256QAM | 1  | 25 | 18.14 | 18.10 | 18.11 |
| 10              | 256QAM | 1  | 49 | 18.22 | 18.23 | 18.20 |
| 10              | 256QAM | 25 | 0  | 18.10 | 18.05 | 18.10 |
| 10              | 256QAM | 25 | 12 | 18.15 | 18.10 | 18.09 |
| 10              | 256QAM | 25 | 25 | 18.08 | 17.98 | 18.01 |
| 10              | 256QAM | 50 | 0  | 18.06 | 18.01 | 18.04 |
| Channel         |        |    |    | 20425 | 20525 | 20625 |
| Frequency (MHz) |        |    |    | 826.5 | 836.5 | 846.5 |
| 5               | QPSK   | 1  | 0  | 23.96 | 23.83 | 23.80 |
| 5               | QPSK   | 1  | 12 | 23.88 | 23.79 | 23.81 |
| 5               | QPSK   | 1  | 24 | 23.83 | 23.79 | 23.73 |
| 5               | QPSK   | 12 | 0  | 22.98 | 22.86 | 22.87 |
| 5               | QPSK   | 12 | 7  | 22.95 | 22.86 | 22.82 |
| 5               | QPSK   | 12 | 13 | 22.91 | 22.87 | 22.84 |
| 5               | QPSK   | 25 | 0  | 22.94 | 22.88 | 22.81 |
| 5               | 16QAM  | 1  | 0  | 23.33 | 23.16 | 23.16 |
| 5               | 16QAM  | 1  | 12 | 23.14 | 23.15 | 23.11 |



|                 |        |    |    |       |       |       |
|-----------------|--------|----|----|-------|-------|-------|
| 5               | 16QAM  | 1  | 24 | 23.15 | 23.12 | 23.06 |
| 5               | 16QAM  | 12 | 0  | 22.01 | 21.91 | 21.92 |
| 5               | 16QAM  | 12 | 7  | 21.99 | 21.91 | 21.83 |
| 5               | 16QAM  | 12 | 13 | 21.91 | 21.87 | 21.85 |
| 5               | 16QAM  | 25 | 0  | 21.94 | 21.91 | 21.86 |
| 5               | 64QAM  | 1  | 0  | 22.17 | 22.05 | 22.10 |
| 5               | 64QAM  | 1  | 12 | 22.03 | 22.00 | 22.02 |
| 5               | 64QAM  | 1  | 24 | 22.02 | 21.99 | 21.95 |
| 5               | 64QAM  | 12 | 0  | 21.08 | 20.98 | 20.96 |
| 5               | 64QAM  | 12 | 7  | 21.03 | 20.94 | 20.90 |
| 5               | 64QAM  | 12 | 13 | 20.97 | 20.92 | 20.90 |
| 5               | 64QAM  | 25 | 0  | 20.98 | 20.89 | 20.85 |
| 5               | 256QAM | 1  | 0  | 18.23 | 18.13 | 18.26 |
| 5               | 256QAM | 1  | 12 | 18.22 | 18.18 | 18.19 |
| 5               | 256QAM | 1  | 24 | 18.30 | 18.31 | 18.28 |
| 5               | 256QAM | 12 | 0  | 18.18 | 18.13 | 18.18 |
| 5               | 256QAM | 12 | 7  | 18.23 | 18.18 | 18.17 |
| 5               | 256QAM | 12 | 13 | 18.16 | 18.06 | 18.09 |
| 5               | 256QAM | 25 | 0  | 18.14 | 18.09 | 18.12 |
| Channel         |        |    |    | 20415 | 20525 | 20635 |
| Frequency (MHz) |        |    |    | 825.5 | 836.5 | 847.5 |
| 3               | QPSK   | 1  | 0  | 23.91 | 23.75 | 23.80 |
| 3               | QPSK   | 1  | 8  | 23.87 | 23.83 | 23.81 |
| 3               | QPSK   | 1  | 14 | 23.82 | 23.76 | 23.65 |
| 3               | QPSK   | 8  | 0  | 22.95 | 22.84 | 22.87 |
| 3               | QPSK   | 8  | 4  | 22.96 | 22.89 | 22.85 |
| 3               | QPSK   | 8  | 7  | 22.87 | 22.82 | 22.81 |
| 3               | QPSK   | 15 | 0  | 22.91 | 22.84 | 22.83 |
| 3               | 16QAM  | 1  | 0  | 23.13 | 23.13 | 23.10 |
| 3               | 16QAM  | 1  | 8  | 23.32 | 23.17 | 23.21 |
| 3               | 16QAM  | 1  | 14 | 23.15 | 23.08 | 23.05 |
| 3               | 16QAM  | 8  | 0  | 22.01 | 21.88 | 21.96 |
| 3               | 16QAM  | 8  | 4  | 22.01 | 21.95 | 21.92 |
| 3               | 16QAM  | 8  | 7  | 21.95 | 21.91 | 21.89 |
| 3               | 16QAM  | 15 | 0  | 21.97 | 21.89 | 21.89 |



|                 |        |    |    |       |       |       |
|-----------------|--------|----|----|-------|-------|-------|
| 3               | 64QAM  | 1  | 0  | 22.13 | 22.02 | 22.07 |
| 3               | 64QAM  | 1  | 8  | 22.16 | 22.08 | 22.12 |
| 3               | 64QAM  | 1  | 14 | 22.02 | 21.96 | 21.94 |
| 3               | 64QAM  | 8  | 0  | 21.04 | 20.89 | 20.97 |
| 3               | 64QAM  | 8  | 4  | 21.03 | 20.99 | 20.95 |
| 3               | 64QAM  | 8  | 7  | 20.96 | 20.92 | 20.87 |
| 3               | 64QAM  | 15 | 0  | 20.98 | 20.90 | 20.87 |
| 3               | 256QAM | 1  | 0  | 18.13 | 18.03 | 18.16 |
| 3               | 256QAM | 1  | 8  | 18.12 | 18.08 | 18.09 |
| 3               | 256QAM | 1  | 14 | 18.20 | 18.21 | 18.18 |
| 3               | 256QAM | 8  | 0  | 18.08 | 18.03 | 18.08 |
| 3               | 256QAM | 8  | 4  | 18.13 | 18.08 | 18.07 |
| 3               | 256QAM | 8  | 7  | 18.06 | 17.96 | 17.99 |
| 3               | 256QAM | 15 | 0  | 18.04 | 17.99 | 18.02 |
| Channel         |        |    |    | 20407 | 20525 | 20643 |
| Frequency (MHz) |        |    |    | 824.7 | 836.5 | 848.3 |
| 1.4             | QPSK   | 1  | 0  | 23.79 | 23.69 | 23.69 |
| 1.4             | QPSK   | 1  | 3  | 23.87 | 23.76 | 23.74 |
| 1.4             | QPSK   | 1  | 5  | 23.76 | 23.67 | 23.63 |
| 1.4             | QPSK   | 3  | 0  | 23.83 | 23.70 | 23.71 |
| 1.4             | QPSK   | 3  | 1  | 23.87 | 23.74 | 23.73 |
| 1.4             | QPSK   | 3  | 3  | 23.77 | 23.70 | 23.65 |
| 1.4             | QPSK   | 6  | 0  | 22.87 | 22.78 | 22.74 |
| 1.4             | 16QAM  | 1  | 0  | 23.16 | 23.04 | 22.96 |
| 1.4             | 16QAM  | 1  | 3  | 23.26 | 23.11 | 23.04 |
| 1.4             | 16QAM  | 1  | 5  | 23.09 | 23.02 | 22.92 |
| 1.4             | 16QAM  | 3  | 0  | 22.92 | 22.82 | 22.80 |
| 1.4             | 16QAM  | 3  | 1  | 23.02 | 22.87 | 22.82 |
| 1.4             | 16QAM  | 3  | 3  | 22.88 | 22.74 | 22.81 |
| 1.4             | 16QAM  | 6  | 0  | 21.96 | 21.86 | 21.85 |
| 1.4             | 64QAM  | 1  | 0  | 22.02 | 22.01 | 21.97 |
| 1.4             | 64QAM  | 1  | 3  | 22.17 | 22.00 | 22.04 |
| 1.4             | 64QAM  | 1  | 5  | 21.99 | 21.90 | 21.92 |
| 1.4             | 64QAM  | 3  | 0  | 22.02 | 21.91 | 21.91 |
| 1.4             | 64QAM  | 3  | 1  | 22.04 | 22.02 | 21.94 |



|     |        |   |   |       |       |       |
|-----|--------|---|---|-------|-------|-------|
| 1.4 | 64QAM  | 3 | 3 | 22.01 | 21.91 | 21.85 |
| 1.4 | 64QAM  | 6 | 0 | 20.87 | 20.82 | 20.78 |
| 1.4 | 256QAM | 1 | 0 | 18.21 | 18.11 | 18.24 |
| 1.4 | 256QAM | 1 | 3 | 18.20 | 18.16 | 18.17 |
| 1.4 | 256QAM | 1 | 5 | 18.28 | 18.29 | 18.26 |
| 1.4 | 256QAM | 3 | 0 | 18.16 | 18.11 | 18.16 |
| 1.4 | 256QAM | 3 | 1 | 18.21 | 18.16 | 18.15 |
| 1.4 | 256QAM | 3 | 3 | 18.14 | 18.04 | 18.07 |
| 1.4 | 256QAM | 6 | 0 | 18.12 | 18.07 | 18.10 |

**LTE Band 12**

| BW [MHz]        | Modulation | RB Size | RB Offset | Power<br>Low<br>Ch. / Freq. | Power<br>Middle<br>Ch. / Freq. | Power<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|------------------------------|
| Channel         |            |         |           | 23060                       | 23095                          | 23130                        |
| Frequency (MHz) |            |         |           | 704                         | 707.5                          | 711                          |
| 10              | QPSK       | 1       | 0         | 23.87                       | 24.02                          | 23.88                        |
| 10              | QPSK       | 1       | 25        | 23.85                       | 23.90                          | 23.92                        |
| 10              | QPSK       | 1       | 49        | 23.99                       | 23.90                          | 23.93                        |
| 10              | QPSK       | 25      | 0         | 22.99                       | 23.01                          | 23.03                        |
| 10              | QPSK       | 25      | 12        | 23.05                       | 23.05                          | 23.04                        |
| 10              | QPSK       | 25      | 25        | 23.06                       | 23.07                          | 23.01                        |
| 10              | QPSK       | 50      | 0         | 23.09                       | 23.10                          | 23.01                        |
| 10              | 16QAM      | 1       | 0         | 23.34                       | 23.34                          | 23.24                        |
| 10              | 16QAM      | 1       | 25        | 23.26                       | 23.24                          | 23.26                        |
| 10              | 16QAM      | 1       | 49        | 23.27                       | 23.29                          | 23.30                        |
| 10              | 16QAM      | 25      | 0         | 22.00                       | 22.03                          | 22.03                        |
| 10              | 16QAM      | 25      | 12        | 22.08                       | 22.09                          | 22.09                        |
| 10              | 16QAM      | 25      | 25        | 22.02                       | 22.09                          | 22.11                        |
| 10              | 16QAM      | 50      | 0         | 22.07                       | 22.10                          | 22.04                        |
| 10              | 64QAM      | 1       | 0         | 22.16                       | 22.09                          | 22.16                        |
| 10              | 64QAM      | 1       | 25        | 22.16                       | 22.19                          | 22.25                        |
| 10              | 64QAM      | 1       | 49        | 22.18                       | 22.27                          | 22.22                        |
| 10              | 64QAM      | 25      | 0         | 21.03                       | 21.05                          | 21.09                        |





|                 |        |    |    |       |       |       |
|-----------------|--------|----|----|-------|-------|-------|
| 10              | 64QAM  | 25 | 12 | 21.14 | 21.11 | 21.07 |
| 10              | 64QAM  | 25 | 25 | 21.12 | 21.11 | 21.14 |
| 10              | 64QAM  | 50 | 0  | 21.10 | 21.15 | 21.07 |
| 10              | 256QAM | 1  | 0  | 18.21 | 18.22 | 18.31 |
| 10              | 256QAM | 1  | 25 | 18.28 | 18.25 | 18.35 |
| 10              | 256QAM | 1  | 49 | 18.16 | 18.14 | 18.25 |
| 10              | 256QAM | 25 | 0  | 18.05 | 18.15 | 18.11 |
| 10              | 256QAM | 25 | 12 | 18.09 | 18.10 | 18.08 |
| 10              | 256QAM | 25 | 25 | 18.15 | 18.11 | 18.16 |
| 10              | 256QAM | 50 | 0  | 18.16 | 18.14 | 18.12 |
| Channel         |        |    |    | 23035 | 23095 | 23155 |
| Frequency (MHz) |        |    |    | 701.5 | 707.5 | 713.5 |
| 5               | QPSK   | 1  | 0  | 23.98 | 23.91 | 23.93 |
| 5               | QPSK   | 1  | 12 | 23.94 | 23.97 | 23.98 |
| 5               | QPSK   | 1  | 24 | 23.93 | 23.99 | 23.97 |
| 5               | QPSK   | 12 | 0  | 23.07 | 23.03 | 23.04 |
| 5               | QPSK   | 12 | 7  | 23.05 | 23.07 | 23.04 |
| 5               | QPSK   | 12 | 13 | 23.02 | 23.03 | 23.03 |
| 5               | QPSK   | 25 | 0  | 23.05 | 23.05 | 23.00 |
| 5               | 16QAM  | 1  | 0  | 23.25 | 23.26 | 23.24 |
| 5               | 16QAM  | 1  | 12 | 23.21 | 23.27 | 23.26 |
| 5               | 16QAM  | 1  | 24 | 23.23 | 23.26 | 23.34 |
| 5               | 16QAM  | 12 | 0  | 22.12 | 22.03 | 22.05 |
| 5               | 16QAM  | 12 | 7  | 22.06 | 22.12 | 22.04 |
| 5               | 16QAM  | 12 | 13 | 22.03 | 22.05 | 22.03 |
| 5               | 16QAM  | 25 | 0  | 22.07 | 22.08 | 22.04 |
| 5               | 64QAM  | 1  | 0  | 22.17 | 22.18 | 22.18 |
| 5               | 64QAM  | 1  | 12 | 22.15 | 22.17 | 22.19 |
| 5               | 64QAM  | 1  | 24 | 22.17 | 22.19 | 22.17 |
| 5               | 64QAM  | 12 | 0  | 21.15 | 21.10 | 21.12 |
| 5               | 64QAM  | 12 | 7  | 21.11 | 21.14 | 21.09 |
| 5               | 64QAM  | 12 | 13 | 21.09 | 21.10 | 21.13 |
| 5               | 64QAM  | 25 | 0  | 21.06 | 21.09 | 21.07 |
| 5               | 256QAM | 1  | 0  | 18.29 | 18.30 | 18.39 |
| 5               | 256QAM | 1  | 12 | 18.36 | 18.33 | 18.43 |



|                 |        |    |    |       |       |       |
|-----------------|--------|----|----|-------|-------|-------|
| 5               | 256QAM | 1  | 24 | 18.24 | 18.22 | 18.33 |
| 5               | 256QAM | 12 | 0  | 18.13 | 18.23 | 18.19 |
| 5               | 256QAM | 12 | 7  | 18.17 | 18.18 | 18.16 |
| 5               | 256QAM | 12 | 13 | 18.23 | 18.19 | 18.24 |
| 5               | 256QAM | 25 | 0  | 18.24 | 18.22 | 18.20 |
| Channel         |        |    |    | 23025 | 23095 | 23165 |
| Frequency (MHz) |        |    |    | 700.5 | 707.5 | 714.5 |
| 3               | QPSK   | 1  | 0  | 23.99 | 23.93 | 23.97 |
| 3               | QPSK   | 1  | 8  | 23.99 | 23.96 | 24.01 |
| 3               | QPSK   | 1  | 14 | 23.92 | 23.95 | 23.93 |
| 3               | QPSK   | 8  | 0  | 23.03 | 23.01 | 23.01 |
| 3               | QPSK   | 8  | 4  | 23.07 | 23.07 | 23.07 |
| 3               | QPSK   | 8  | 7  | 23.03 | 23.02 | 23.01 |
| 3               | QPSK   | 15 | 0  | 23.02 | 23.03 | 23.00 |
| 3               | 16QAM  | 1  | 0  | 23.22 | 23.24 | 23.20 |
| 3               | 16QAM  | 1  | 8  | 23.30 | 23.27 | 23.24 |
| 3               | 16QAM  | 1  | 14 | 23.28 | 23.29 | 23.25 |
| 3               | 16QAM  | 8  | 0  | 22.10 | 22.05 | 22.04 |
| 3               | 16QAM  | 8  | 4  | 22.09 | 22.10 | 22.13 |
| 3               | 16QAM  | 8  | 7  | 22.05 | 22.08 | 22.13 |
| 3               | 16QAM  | 15 | 0  | 22.09 | 22.07 | 22.00 |
| 3               | 64QAM  | 1  | 0  | 22.26 | 22.10 | 22.22 |
| 3               | 64QAM  | 1  | 8  | 22.16 | 22.22 | 22.22 |
| 3               | 64QAM  | 1  | 14 | 22.16 | 22.24 | 22.14 |
| 3               | 64QAM  | 8  | 0  | 21.16 | 21.09 | 21.08 |
| 3               | 64QAM  | 8  | 4  | 21.09 | 21.16 | 21.14 |
| 3               | 64QAM  | 8  | 7  | 21.06 | 21.13 | 21.11 |
| 3               | 64QAM  | 15 | 0  | 21.10 | 21.07 | 21.04 |
| 3               | 256QAM | 1  | 0  | 18.13 | 18.11 | 18.16 |
| 3               | 256QAM | 1  | 8  | 18.20 | 18.14 | 18.20 |
| 3               | 256QAM | 1  | 14 | 18.08 | 18.03 | 18.10 |
| 3               | 256QAM | 8  | 0  | 17.97 | 18.04 | 17.96 |
| 3               | 256QAM | 8  | 4  | 18.01 | 17.99 | 17.93 |
| 3               | 256QAM | 8  | 7  | 18.07 | 18.00 | 18.01 |
| 3               | 256QAM | 15 | 0  | 18.08 | 18.03 | 17.97 |



| Channel         |        |   |   | 23017 | 23095 | 23173 |
|-----------------|--------|---|---|-------|-------|-------|
| Frequency (MHz) |        |   |   | 699.7 | 707.5 | 715.3 |
| 1.4             | QPSK   | 1 | 0 | 23.86 | 23.81 | 23.86 |
| 1.4             | QPSK   | 1 | 3 | 23.90 | 23.88 | 23.91 |
| 1.4             | QPSK   | 1 | 5 | 23.84 | 23.85 | 23.85 |
| 1.4             | QPSK   | 3 | 0 | 23.88 | 23.83 | 23.86 |
| 1.4             | QPSK   | 3 | 1 | 23.90 | 23.88 | 23.91 |
| 1.4             | QPSK   | 3 | 3 | 23.85 | 23.84 | 23.88 |
| 1.4             | QPSK   | 6 | 0 | 22.93 | 22.93 | 22.94 |
| 1.4             | 16QAM  | 1 | 0 | 23.20 | 23.10 | 23.17 |
| 1.4             | 16QAM  | 1 | 3 | 23.24 | 23.21 | 23.28 |
| 1.4             | 16QAM  | 1 | 5 | 23.14 | 23.14 | 23.19 |
| 1.4             | 16QAM  | 3 | 0 | 23.01 | 22.93 | 22.98 |
| 1.4             | 16QAM  | 3 | 1 | 22.97 | 23.02 | 22.96 |
| 1.4             | 16QAM  | 3 | 3 | 22.94 | 22.96 | 22.98 |
| 1.4             | 16QAM  | 6 | 0 | 22.08 | 22.04 | 22.03 |
| 1.4             | 64QAM  | 1 | 0 | 22.10 | 22.03 | 22.18 |
| 1.4             | 64QAM  | 1 | 3 | 22.14 | 22.20 | 22.10 |
| 1.4             | 64QAM  | 1 | 5 | 22.10 | 22.09 | 22.08 |
| 1.4             | 64QAM  | 3 | 0 | 22.12 | 22.06 | 22.04 |
| 1.4             | 64QAM  | 3 | 1 | 22.15 | 22.14 | 22.14 |
| 1.4             | 64QAM  | 3 | 3 | 22.06 | 22.07 | 22.07 |
| 1.4             | 64QAM  | 6 | 0 | 20.96 | 20.96 | 20.96 |
| 1.4             | 256QAM | 1 | 0 | 18.28 | 18.29 | 18.34 |
| 1.4             | 256QAM | 1 | 3 | 18.35 | 18.32 | 18.38 |
| 1.4             | 256QAM | 1 | 5 | 18.23 | 18.21 | 18.28 |
| 1.4             | 256QAM | 3 | 0 | 18.12 | 18.22 | 18.14 |
| 1.4             | 256QAM | 3 | 1 | 18.16 | 18.17 | 18.11 |
| 1.4             | 256QAM | 3 | 3 | 18.22 | 18.18 | 18.19 |
| 1.4             | 256QAM | 6 | 0 | 18.23 | 18.21 | 18.15 |



## LTE Band 13

| BW [MHz]        | Modulation | RB Size | RB Offset | Power<br>Low<br>Ch. / Freq. | Power<br>Middle<br>Ch. / Freq. | Power<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|------------------------------|
| Channel         |            |         |           | 23230                       |                                |                              |
| Frequency (MHz) |            |         |           | 782                         |                                |                              |
| 10              | QPSK       | 1       | 0         | -                           | 23.79                          | -                            |
| 10              | QPSK       | 1       | 25        | -                           | 23.97                          | -                            |
| 10              | QPSK       | 1       | 49        | -                           | 23.81                          | -                            |
| 10              | QPSK       | 25      | 0         | -                           | 22.87                          | -                            |
| 10              | QPSK       | 25      | 12        | -                           | 22.98                          | -                            |
| 10              | QPSK       | 25      | 25        | -                           | 22.97                          | -                            |
| 10              | QPSK       | 50      | 0         | -                           | 22.98                          | -                            |
| 10              | 16QAM      | 1       | 0         | -                           | 23.15                          | -                            |
| 10              | 16QAM      | 1       | 25        | -                           | 23.29                          | -                            |
| 10              | 16QAM      | 1       | 49        | -                           | 23.07                          | -                            |
| 10              | 16QAM      | 25      | 0         | -                           | 21.92                          | -                            |
| 10              | 16QAM      | 25      | 12        | -                           | 21.95                          | -                            |
| 10              | 16QAM      | 25      | 25        | -                           | 22.02                          | -                            |
| 10              | 16QAM      | 50      | 0         | -                           | 21.99                          | -                            |
| 10              | 64QAM      | 1       | 0         | -                           | 21.97                          | -                            |
| 10              | 64QAM      | 1       | 25        | -                           | 22.12                          | -                            |
| 10              | 64QAM      | 1       | 49        | -                           | 22.13                          | -                            |
| 10              | 64QAM      | 25      | 0         | -                           | 20.97                          | -                            |
| 10              | 64QAM      | 25      | 12        | -                           | 21.02                          | -                            |
| 10              | 64QAM      | 25      | 25        | -                           | 21.00                          | -                            |
| 10              | 64QAM      | 50      | 0         | -                           | 21.01                          | -                            |
| 10              | 256QAM     | 1       | 0         | -                           | 18.23                          | -                            |
| 10              | 256QAM     | 1       | 25        | -                           | 18.33                          | -                            |
| 10              | 256QAM     | 1       | 49        | -                           | 18.22                          | -                            |
| 10              | 256QAM     | 25      | 0         | -                           | 18.14                          | -                            |
| 10              | 256QAM     | 25      | 12        | -                           | 18.20                          | -                            |
| 10              | 256QAM     | 25      | 25        | -                           | 18.28                          | -                            |
| 10              | 256QAM     | 50      | 0         | -                           | 18.23                          | -                            |
| Channel         |            |         |           | 23205                       | 23230                          | 23255                        |



| Frequency (MHz) |        |    |    | 779.5 | 782   | 784.5 |
|-----------------|--------|----|----|-------|-------|-------|
| 5               | QPSK   | 1  | 0  | 23.79 | 23.78 | 23.85 |
| 5               | QPSK   | 1  | 12 | 23.87 | 23.91 | 23.86 |
| 5               | QPSK   | 1  | 24 | 23.93 | 23.85 | 23.84 |
| 5               | QPSK   | 12 | 0  | 22.92 | 22.96 | 22.97 |
| 5               | QPSK   | 12 | 7  | 22.98 | 22.98 | 22.96 |
| 5               | QPSK   | 12 | 13 | 23.01 | 23.00 | 22.93 |
| 5               | QPSK   | 25 | 0  | 22.99 | 22.96 | 22.94 |
| 5               | 16QAM  | 1  | 0  | 23.16 | 23.19 | 23.18 |
| 5               | 16QAM  | 1  | 12 | 23.15 | 23.11 | 23.16 |
| 5               | 16QAM  | 1  | 24 | 23.26 | 23.17 | 23.17 |
| 5               | 16QAM  | 12 | 0  | 21.98 | 21.96 | 22.02 |
| 5               | 16QAM  | 12 | 7  | 22.09 | 21.93 | 22.00 |
| 5               | 16QAM  | 12 | 13 | 22.01 | 22.00 | 21.97 |
| 5               | 16QAM  | 25 | 0  | 21.99 | 21.98 | 21.97 |
| 5               | 64QAM  | 1  | 0  | 22.00 | 22.08 | 22.06 |
| 5               | 64QAM  | 1  | 12 | 22.09 | 22.00 | 22.03 |
| 5               | 64QAM  | 1  | 24 | 22.07 | 22.10 | 22.07 |
| 5               | 64QAM  | 12 | 0  | 21.04 | 21.04 | 21.09 |
| 5               | 64QAM  | 12 | 7  | 21.10 | 21.02 | 21.05 |
| 5               | 64QAM  | 12 | 13 | 21.07 | 21.07 | 20.99 |
| 5               | 64QAM  | 25 | 0  | 21.02 | 21.00 | 20.97 |
| 5               | 256QAM | 1  | 0  | 18.33 | 18.28 | 18.39 |
| 5               | 256QAM | 1  | 12 | 18.19 | 18.33 | 18.31 |
| 5               | 256QAM | 1  | 24 | 18.35 | 18.35 | 18.26 |
| 5               | 256QAM | 12 | 0  | 18.16 | 18.15 | 18.18 |
| 5               | 256QAM | 12 | 7  | 18.08 | 18.17 | 18.12 |
| 5               | 256QAM | 12 | 13 | 18.25 | 18.22 | 18.23 |
| 5               | 256QAM | 25 | 0  | 18.22 | 18.25 | 18.16 |



## LTE Band 17

| BW [MHz]        | Modulation | RB Size | RB Offset | Power<br>Low<br>Ch. / Freq. | Power<br>Middle<br>Ch. / Freq. | Power<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|------------------------------|
| Channel         |            |         |           | 23780                       | 23790                          | 23800                        |
| Frequency (MHz) |            |         |           | 709                         | 710                            | 711                          |
| 10              | QPSK       | 1       | 0         | 24.01                       | 23.85                          | 23.84                        |
| 10              | QPSK       | 1       | 25        | 23.94                       | 23.89                          | 23.92                        |
| 10              | QPSK       | 1       | 49        | 24.00                       | 23.99                          | 23.97                        |
| 10              | QPSK       | 25      | 0         | 22.97                       | 22.97                          | 22.97                        |
| 10              | QPSK       | 25      | 12        | 23.13                       | 23.05                          | 23.04                        |
| 10              | QPSK       | 25      | 25        | 23.17                       | 23.14                          | 23.13                        |
| 10              | QPSK       | 50      | 0         | 23.11                       | 23.04                          | 23.02                        |
| 10              | 16QAM      | 1       | 0         | 23.33                       | 23.21                          | 23.22                        |
| 10              | 16QAM      | 1       | 25        | 23.23                       | 23.32                          | 23.27                        |
| 10              | 16QAM      | 1       | 49        | 23.34                       | 23.32                          | 23.32                        |
| 10              | 16QAM      | 25      | 0         | 21.98                       | 21.98                          | 22.02                        |
| 10              | 16QAM      | 25      | 12        | 22.14                       | 22.03                          | 22.04                        |
| 10              | 16QAM      | 25      | 25        | 22.14                       | 22.12                          | 22.17                        |
| 10              | 16QAM      | 50      | 0         | 22.11                       | 22.01                          | 22.00                        |
| 10              | 64QAM      | 1       | 0         | 22.19                       | 22.12                          | 22.17                        |
| 10              | 64QAM      | 1       | 25        | 22.28                       | 22.33                          | 22.22                        |
| 10              | 64QAM      | 1       | 49        | 22.27                       | 22.18                          | 22.19                        |
| 10              | 64QAM      | 25      | 0         | 21.02                       | 21.03                          | 21.02                        |
| 10              | 64QAM      | 25      | 12        | 21.16                       | 21.12                          | 21.10                        |
| 10              | 64QAM      | 25      | 25        | 21.19                       | 21.18                          | 21.18                        |
| 10              | 64QAM      | 50      | 0         | 21.14                       | 21.08                          | 21.06                        |
| 10              | 256QAM     | 1       | 0         | 18.42                       | 18.62                          | 18.43                        |
| 10              | 256QAM     | 1       | 25        | 18.50                       | 18.74                          | 18.52                        |
| 10              | 256QAM     | 1       | 49        | 18.66                       | 18.68                          | 18.78                        |
| 10              | 256QAM     | 25      | 0         | 18.46                       | 18.52                          | 18.51                        |
| 10              | 256QAM     | 25      | 12        | 18.61                       | 18.45                          | 18.48                        |
| 10              | 256QAM     | 25      | 25        | 18.62                       | 18.67                          | 18.59                        |
| 10              | 256QAM     | 50      | 0         | 18.50                       | 18.57                          | 18.53                        |
| Channel         |            |         |           | 23755                       | 23790                          | 23825                        |



| Frequency (MHz) |        |    |    | 706.5 | 710   | 713.5 |
|-----------------|--------|----|----|-------|-------|-------|
| 5               | QPSK   | 1  | 0  | 23.91 | 23.90 | 23.86 |
| 5               | QPSK   | 1  | 12 | 23.99 | 24.00 | 24.00 |
| 5               | QPSK   | 1  | 24 | 23.94 | 24.00 | 23.99 |
| 5               | QPSK   | 12 | 0  | 23.05 | 23.02 | 23.01 |
| 5               | QPSK   | 12 | 7  | 23.11 | 23.13 | 23.10 |
| 5               | QPSK   | 12 | 13 | 23.12 | 23.09 | 23.08 |
| 5               | QPSK   | 25 | 0  | 23.11 | 23.04 | 23.03 |
| 5               | 16QAM  | 1  | 0  | 23.24 | 23.17 | 23.16 |
| 5               | 16QAM  | 1  | 12 | 23.24 | 23.24 | 23.24 |
| 5               | 16QAM  | 1  | 24 | 23.39 | 23.34 | 23.32 |
| 5               | 16QAM  | 12 | 0  | 22.05 | 22.06 | 22.04 |
| 5               | 16QAM  | 12 | 7  | 22.13 | 22.13 | 22.12 |
| 5               | 16QAM  | 12 | 13 | 22.14 | 22.10 | 22.10 |
| 5               | 16QAM  | 25 | 0  | 22.13 | 22.06 | 22.06 |
| 5               | 64QAM  | 1  | 0  | 22.13 | 22.14 | 22.12 |
| 5               | 64QAM  | 1  | 12 | 22.23 | 22.19 | 22.13 |
| 5               | 64QAM  | 1  | 24 | 22.26 | 22.20 | 22.22 |
| 5               | 64QAM  | 12 | 0  | 21.10 | 21.10 | 21.08 |
| 5               | 64QAM  | 12 | 7  | 21.21 | 21.16 | 21.18 |
| 5               | 64QAM  | 12 | 13 | 21.19 | 21.18 | 21.13 |
| 5               | 64QAM  | 25 | 0  | 21.13 | 21.09 | 21.08 |
| 5               | 256QAM | 1  | 0  | 18.69 | 18.62 | 18.65 |
| 5               | 256QAM | 1  | 12 | 18.68 | 18.73 | 18.65 |
| 5               | 256QAM | 1  | 24 | 18.78 | 18.71 | 18.63 |
| 5               | 256QAM | 12 | 0  | 18.50 | 18.52 | 18.55 |
| 5               | 256QAM | 12 | 7  | 18.57 | 18.53 | 18.50 |
| 5               | 256QAM | 12 | 13 | 18.57 | 18.54 | 18.48 |
| 5               | 256QAM | 25 | 0  | 18.58 | 18.53 | 18.51 |

**LTE Band 25**

| BW [MHz]        | Modulation | RB Size | RB Offset | Power<br>Low<br>Ch. / Freq. | Power<br>Middle<br>Ch. / Freq. | Power<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|------------------------------|
| Channel         |            |         |           | 26140                       | 26340                          | 26590                        |
| Frequency (MHz) |            |         |           | 1860                        | 1880                           | 1905                         |
| 20              | QPSK       | 1       | 0         | 23.55                       | 23.65                          | 23.52                        |
| 20              | QPSK       | 1       | 49        | 23.46                       | 23.61                          | 23.41                        |
| 20              | QPSK       | 1       | 99        | 23.39                       | 23.51                          | 23.38                        |
| 20              | QPSK       | 50      | 0         | 22.57                       | 22.71                          | 22.58                        |
| 20              | QPSK       | 50      | 24        | 22.65                       | 22.75                          | 22.66                        |
| 20              | QPSK       | 50      | 50        | 22.57                       | 22.71                          | 22.62                        |
| 20              | QPSK       | 100     | 0         | 22.60                       | 22.75                          | 22.54                        |
| 20              | 16QAM      | 1       | 0         | 22.84                       | 22.96                          | 22.89                        |
| 20              | 16QAM      | 1       | 49        | 22.81                       | 22.94                          | 22.80                        |
| 20              | 16QAM      | 1       | 99        | 22.77                       | 22.94                          | 22.74                        |
| 20              | 16QAM      | 50      | 0         | 21.57                       | 21.69                          | 21.59                        |
| 20              | 16QAM      | 50      | 24        | 21.65                       | 21.77                          | 21.54                        |
| 20              | 16QAM      | 50      | 50        | 21.56                       | 21.70                          | 21.59                        |
| 20              | 16QAM      | 100     | 0         | 21.59                       | 21.74                          | 21.54                        |
| 20              | 64QAM      | 1       | 0         | 21.78                       | 21.88                          | 21.65                        |
| 20              | 64QAM      | 1       | 49        | 21.70                       | 21.86                          | 21.62                        |
| 20              | 64QAM      | 1       | 99        | 21.53                       | 21.82                          | 21.58                        |
| 20              | 64QAM      | 50      | 0         | 20.56                       | 20.70                          | 20.59                        |
| 20              | 64QAM      | 50      | 24        | 20.65                       | 20.81                          | 20.58                        |
| 20              | 64QAM      | 50      | 50        | 20.56                       | 20.76                          | 20.61                        |
| 20              | 64QAM      | 100     | 0         | 20.61                       | 20.76                          | 20.55                        |
| 20              | 256QAM     | 1       | 0         | 18.91                       | 18.96                          | 18.93                        |
| 20              | 256QAM     | 1       | 49        | 18.89                       | 18.93                          | 18.83                        |
| 20              | 256QAM     | 1       | 99        | 18.79                       | 18.89                          | 18.86                        |
| 20              | 256QAM     | 50      | 0         | 18.73                       | 18.72                          | 18.73                        |
| 20              | 256QAM     | 50      | 24        | 18.74                       | 18.78                          | 18.71                        |
| 20              | 256QAM     | 50      | 50        | 18.77                       | 18.76                          | 18.69                        |
| 20              | 256QAM     | 100     | 0         | 18.81                       | 18.71                          | 18.68                        |
| Channel         |            |         |           | 26115                       | 26340                          | 26615                        |





| Frequency (MHz) |        |    |    | 1857.5 | 1880  | 1907.5 |
|-----------------|--------|----|----|--------|-------|--------|
| 15              | QPSK   | 1  | 0  | 23.55  | 23.61 | 23.50  |
| 15              | QPSK   | 1  | 37 | 23.46  | 23.63 | 23.44  |
| 15              | QPSK   | 1  | 74 | 23.45  | 23.57 | 23.47  |
| 15              | QPSK   | 36 | 0  | 22.57  | 22.70 | 22.56  |
| 15              | QPSK   | 36 | 20 | 22.64  | 22.75 | 22.58  |
| 15              | QPSK   | 36 | 39 | 22.54  | 22.70 | 22.55  |
| 15              | QPSK   | 75 | 0  | 22.60  | 22.76 | 22.58  |
| 15              | 16QAM  | 1  | 0  | 22.80  | 22.94 | 22.86  |
| 15              | 16QAM  | 1  | 37 | 22.83  | 22.92 | 22.78  |
| 15              | 16QAM  | 1  | 74 | 22.80  | 22.87 | 22.69  |
| 15              | 16QAM  | 36 | 0  | 21.58  | 21.70 | 21.53  |
| 15              | 16QAM  | 36 | 20 | 21.61  | 21.75 | 21.59  |
| 15              | 16QAM  | 36 | 39 | 21.56  | 21.69 | 21.54  |
| 15              | 16QAM  | 75 | 0  | 21.62  | 21.76 | 21.59  |
| 15              | 64QAM  | 1  | 0  | 21.78  | 21.79 | 21.68  |
| 15              | 64QAM  | 1  | 37 | 21.65  | 21.93 | 21.74  |
| 15              | 64QAM  | 1  | 74 | 21.63  | 21.85 | 21.60  |
| 15              | 64QAM  | 36 | 0  | 20.60  | 20.77 | 20.59  |
| 15              | 64QAM  | 36 | 20 | 20.64  | 20.79 | 20.63  |
| 15              | 64QAM  | 36 | 39 | 20.60  | 20.73 | 20.61  |
| 15              | 64QAM  | 75 | 0  | 20.61  | 20.79 | 20.60  |
| 15              | 256QAM | 1  | 0  | 18.89  | 18.94 | 18.91  |
| 15              | 256QAM | 1  | 37 | 18.87  | 18.91 | 18.81  |
| 15              | 256QAM | 1  | 74 | 18.77  | 18.87 | 18.84  |
| 15              | 256QAM | 36 | 0  | 18.71  | 18.70 | 18.71  |
| 15              | 256QAM | 36 | 20 | 18.72  | 18.76 | 18.69  |
| 15              | 256QAM | 36 | 39 | 18.75  | 18.74 | 18.67  |
| 15              | 256QAM | 75 | 0  | 18.79  | 18.69 | 18.66  |
| Channel         |        |    |    | 26090  | 26340 | 26640  |
| Frequency (MHz) |        |    |    | 1855   | 1880  | 1910   |
| 10              | QPSK   | 1  | 0  | 23.51  | 23.59 | 23.44  |
| 10              | QPSK   | 1  | 25 | 23.45  | 23.59 | 23.42  |
| 10              | QPSK   | 1  | 49 | 23.44  | 23.56 | 23.40  |
| 10              | QPSK   | 25 | 0  | 22.57  | 22.67 | 22.47  |



|                 |        |    |    |        |       |        |
|-----------------|--------|----|----|--------|-------|--------|
| 10              | QPSK   | 25 | 12 | 22.61  | 22.77 | 22.47  |
| 10              | QPSK   | 25 | 25 | 22.57  | 22.76 | 22.56  |
| 10              | QPSK   | 50 | 0  | 22.61  | 22.77 | 22.49  |
| 10              | 16QAM  | 1  | 0  | 22.89  | 22.99 | 22.81  |
| 10              | 16QAM  | 1  | 25 | 22.86  | 23.02 | 22.75  |
| 10              | 16QAM  | 1  | 49 | 22.85  | 22.99 | 22.82  |
| 10              | 16QAM  | 25 | 0  | 21.60  | 21.64 | 21.46  |
| 10              | 16QAM  | 25 | 12 | 21.61  | 21.82 | 21.51  |
| 10              | 16QAM  | 25 | 25 | 21.60  | 21.72 | 21.55  |
| 10              | 16QAM  | 50 | 0  | 21.63  | 21.75 | 21.52  |
| 10              | 64QAM  | 1  | 0  | 21.77  | 21.86 | 21.68  |
| 10              | 64QAM  | 1  | 25 | 21.74  | 21.92 | 21.79  |
| 10              | 64QAM  | 1  | 49 | 21.72  | 21.95 | 21.77  |
| 10              | 64QAM  | 25 | 0  | 20.66  | 20.73 | 20.51  |
| 10              | 64QAM  | 25 | 12 | 20.70  | 20.80 | 20.55  |
| 10              | 64QAM  | 25 | 25 | 20.64  | 20.78 | 20.64  |
| 10              | 64QAM  | 50 | 0  | 20.67  | 20.78 | 20.58  |
| 10              | 256QAM | 1  | 0  | 18.85  | 18.91 | 18.88  |
| 10              | 256QAM | 1  | 25 | 18.83  | 18.88 | 18.78  |
| 10              | 256QAM | 1  | 49 | 18.73  | 18.84 | 18.81  |
| 10              | 256QAM | 25 | 0  | 18.67  | 18.67 | 18.68  |
| 10              | 256QAM | 25 | 12 | 18.68  | 18.73 | 18.66  |
| 10              | 256QAM | 25 | 25 | 18.71  | 18.71 | 18.64  |
| 10              | 256QAM | 50 | 0  | 18.75  | 18.66 | 18.63  |
| Channel         |        |    |    | 26065  | 26340 | 26665  |
| Frequency (MHz) |        |    |    | 1852.5 | 1880  | 1912.5 |
| 5               | QPSK   | 1  | 0  | 23.55  | 23.60 | 23.47  |
| 5               | QPSK   | 1  | 12 | 23.56  | 23.58 | 23.48  |
| 5               | QPSK   | 1  | 24 | 23.54  | 23.50 | 23.51  |
| 5               | QPSK   | 12 | 0  | 22.61  | 22.68 | 22.47  |
| 5               | QPSK   | 12 | 7  | 22.65  | 22.80 | 22.57  |
| 5               | QPSK   | 12 | 13 | 22.66  | 22.76 | 22.54  |
| 5               | QPSK   | 25 | 0  | 22.59  | 22.76 | 22.54  |
| 5               | 16QAM  | 1  | 0  | 22.81  | 22.94 | 22.82  |
| 5               | 16QAM  | 1  | 12 | 22.85  | 22.97 | 22.84  |



|                 |        |    |    |        |       |        |
|-----------------|--------|----|----|--------|-------|--------|
| 5               | 16QAM  | 1  | 24 | 22.84  | 22.97 | 22.78  |
| 5               | 16QAM  | 12 | 0  | 21.62  | 21.71 | 21.51  |
| 5               | 16QAM  | 12 | 7  | 21.66  | 21.83 | 21.58  |
| 5               | 16QAM  | 12 | 13 | 21.64  | 21.79 | 21.59  |
| 5               | 16QAM  | 25 | 0  | 21.62  | 21.77 | 21.53  |
| 5               | 64QAM  | 1  | 0  | 21.79  | 21.88 | 21.68  |
| 5               | 64QAM  | 1  | 12 | 21.76  | 21.89 | 21.69  |
| 5               | 64QAM  | 1  | 24 | 21.79  | 21.95 | 21.69  |
| 5               | 64QAM  | 12 | 0  | 20.64  | 20.78 | 20.57  |
| 5               | 64QAM  | 12 | 7  | 20.67  | 20.83 | 20.61  |
| 5               | 64QAM  | 12 | 13 | 20.70  | 20.87 | 20.65  |
| 5               | 64QAM  | 25 | 0  | 20.66  | 20.77 | 20.55  |
| 5               | 256QAM | 1  | 0  | 18.83  | 18.89 | 18.86  |
| 5               | 256QAM | 1  | 12 | 18.81  | 18.86 | 18.76  |
| 5               | 256QAM | 1  | 24 | 18.71  | 18.82 | 18.79  |
| 5               | 256QAM | 12 | 0  | 18.65  | 18.65 | 18.66  |
| 5               | 256QAM | 12 | 7  | 18.66  | 18.71 | 18.64  |
| 5               | 256QAM | 12 | 13 | 18.69  | 18.69 | 18.62  |
| 5               | 256QAM | 25 | 0  | 18.73  | 18.64 | 18.61  |
| Channel         |        |    |    | 26055  | 26340 | 26675  |
| Frequency (MHz) |        |    |    | 1851.5 | 1880  | 1913.5 |
| 3               | QPSK   | 1  | 0  | 23.50  | 23.57 | 23.40  |
| 3               | QPSK   | 1  | 8  | 23.62  | 23.55 | 23.50  |
| 3               | QPSK   | 1  | 14 | 23.59  | 23.54 | 23.50  |
| 3               | QPSK   | 8  | 0  | 22.62  | 22.66 | 22.47  |
| 3               | QPSK   | 8  | 4  | 22.66  | 22.79 | 22.55  |
| 3               | QPSK   | 8  | 7  | 22.63  | 22.75 | 22.57  |
| 3               | QPSK   | 15 | 0  | 22.59  | 22.76 | 22.53  |
| 3               | 16QAM  | 1  | 0  | 22.88  | 22.86 | 22.72  |
| 3               | 16QAM  | 1  | 8  | 22.94  | 23.07 | 22.84  |
| 3               | 16QAM  | 1  | 14 | 22.90  | 23.01 | 22.80  |
| 3               | 16QAM  | 8  | 0  | 21.64  | 21.75 | 21.54  |
| 3               | 16QAM  | 8  | 4  | 21.70  | 21.84 | 21.60  |
| 3               | 16QAM  | 8  | 7  | 21.70  | 21.83 | 21.61  |
| 3               | 16QAM  | 15 | 0  | 21.67  | 21.78 | 21.55  |



|                 |        |    |    |        |       |        |
|-----------------|--------|----|----|--------|-------|--------|
| 3               | 64QAM  | 1  | 0  | 21.77  | 21.73 | 21.57  |
| 3               | 64QAM  | 1  | 8  | 21.81  | 21.98 | 21.79  |
| 3               | 64QAM  | 1  | 14 | 21.85  | 21.99 | 21.74  |
| 3               | 64QAM  | 8  | 0  | 20.64  | 20.76 | 20.49  |
| 3               | 64QAM  | 8  | 4  | 20.71  | 20.82 | 20.60  |
| 3               | 64QAM  | 8  | 7  | 20.72  | 20.81 | 20.61  |
| 3               | 64QAM  | 15 | 0  | 20.64  | 20.77 | 20.52  |
| 3               | 256QAM | 1  | 0  | 18.90  | 18.87 | 18.83  |
| 3               | 256QAM | 1  | 8  | 18.88  | 18.84 | 18.73  |
| 3               | 256QAM | 1  | 14 | 18.78  | 18.80 | 18.76  |
| 3               | 256QAM | 8  | 0  | 18.72  | 18.63 | 18.63  |
| 3               | 256QAM | 8  | 4  | 18.73  | 18.69 | 18.61  |
| 3               | 256QAM | 8  | 7  | 18.76  | 18.67 | 18.59  |
| 3               | 256QAM | 15 | 0  | 18.80  | 18.62 | 18.58  |
| Channel         |        |    |    | 26047  | 26340 | 26683  |
| Frequency (MHz) |        |    |    | 1850.7 | 1880  | 1914.3 |
| 1.4             | QPSK   | 1  | 0  | 23.47  | 23.56 | 23.33  |
| 1.4             | QPSK   | 1  | 3  | 23.55  | 23.64 | 23.40  |
| 1.4             | QPSK   | 1  | 5  | 23.51  | 23.57 | 23.36  |
| 1.4             | QPSK   | 3  | 0  | 23.51  | 23.59 | 23.29  |
| 1.4             | QPSK   | 3  | 1  | 23.53  | 23.63 | 23.42  |
| 1.4             | QPSK   | 3  | 3  | 23.49  | 23.63 | 23.35  |
| 1.4             | QPSK   | 6  | 0  | 22.54  | 22.64 | 22.41  |
| 1.4             | 16QAM  | 1  | 0  | 22.78  | 22.85 | 22.61  |
| 1.4             | 16QAM  | 1  | 3  | 22.88  | 22.96 | 22.71  |
| 1.4             | 16QAM  | 1  | 5  | 22.85  | 22.94 | 22.66  |
| 1.4             | 16QAM  | 3  | 0  | 22.57  | 22.60 | 22.45  |
| 1.4             | 16QAM  | 3  | 1  | 22.59  | 22.70 | 22.42  |
| 1.4             | 16QAM  | 3  | 3  | 22.59  | 22.74 | 22.50  |
| 1.4             | 16QAM  | 6  | 0  | 21.64  | 21.75 | 21.49  |
| 1.4             | 64QAM  | 1  | 0  | 21.67  | 21.83 | 21.55  |
| 1.4             | 64QAM  | 1  | 3  | 21.86  | 21.93 | 21.66  |
| 1.4             | 64QAM  | 1  | 5  | 21.70  | 21.80 | 21.57  |
| 1.4             | 64QAM  | 3  | 0  | 21.68  | 21.74 | 21.51  |
| 1.4             | 64QAM  | 3  | 1  | 21.79  | 21.92 | 21.61  |



|     |        |   |   |       |       |       |
|-----|--------|---|---|-------|-------|-------|
| 1.4 | 64QAM  | 3 | 3 | 21.71 | 21.86 | 21.60 |
| 1.4 | 64QAM  | 6 | 0 | 20.60 | 20.71 | 20.45 |
| 1.4 | 256QAM | 1 | 0 | 18.88 | 18.85 | 18.81 |
| 1.4 | 256QAM | 1 | 3 | 18.86 | 18.82 | 18.71 |
| 1.4 | 256QAM | 1 | 5 | 18.76 | 18.78 | 18.74 |
| 1.4 | 256QAM | 3 | 0 | 18.70 | 18.61 | 18.61 |
| 1.4 | 256QAM | 3 | 1 | 18.71 | 18.67 | 18.59 |
| 1.4 | 256QAM | 3 | 3 | 18.74 | 18.65 | 18.57 |
| 1.4 | 256QAM | 6 | 0 | 18.78 | 18.60 | 18.56 |

**LTE Band 26**

| BW [MHz]        | Modulation | RB Size | RB Offset | Power       | Power       | Power       |
|-----------------|------------|---------|-----------|-------------|-------------|-------------|
|                 |            |         |           | Low         | Middle      | High        |
|                 |            |         |           | Ch. / Freq. | Ch. / Freq. | Ch. / Freq. |
| Channel         |            |         |           | 26765       | 26865       | 26965       |
| Frequency (MHz) |            |         |           | 821.5       | 831.5       | 841.5       |
| 15              | QPSK       | 1       | 0         | 23.85       | 24.01       | 23.75       |
| 15              | QPSK       | 1       | 37        | 23.75       | 23.91       | 23.73       |
| 15              | QPSK       | 1       | 74        | 23.69       | 23.81       | 23.68       |
| 15              | QPSK       | 36      | 0         | 22.91       | 22.96       | 22.85       |
| 15              | QPSK       | 36      | 20        | 22.95       | 23.00       | 22.94       |
| 15              | QPSK       | 36      | 39        | 22.93       | 22.97       | 22.86       |
| 15              | QPSK       | 75      | 0         | 22.85       | 22.92       | 22.84       |
| 15              | 16QAM      | 1       | 0         | 23.14       | 22.99       | 23.07       |
| 15              | 16QAM      | 1       | 37        | 23.04       | 22.98       | 23.09       |
| 15              | 16QAM      | 1       | 74        | 23.10       | 23.09       | 23.06       |
| 15              | 16QAM      | 36      | 0         | 21.94       | 21.87       | 21.93       |
| 15              | 16QAM      | 36      | 20        | 21.97       | 21.92       | 21.96       |
| 15              | 16QAM      | 36      | 39        | 21.95       | 21.85       | 21.91       |
| 15              | 16QAM      | 75      | 0         | 21.98       | 21.93       | 21.90       |
| 15              | 64QAM      | 1       | 0         | 21.96       | 21.88       | 21.76       |
| 15              | 64QAM      | 1       | 37        | 22.06       | 21.97       | 21.93       |
| 15              | 64QAM      | 1       | 74        | 21.95       | 21.97       | 21.83       |
| 15              | 64QAM      | 36      | 0         | 20.97       | 20.90       | 20.96       |
| 15              | 64QAM      | 36      | 20        | 20.98       | 20.97       | 21.00       |



|                 |        |    |    |       |       |       |
|-----------------|--------|----|----|-------|-------|-------|
| 15              | 64QAM  | 36 | 39 | 20.94 | 20.91 | 20.95 |
| 15              | 64QAM  | 75 | 0  | 21.00 | 20.94 | 20.89 |
| 15              | 256QAM | 1  | 0  | 18.77 | 18.60 | 18.54 |
| 15              | 256QAM | 1  | 37 | 18.73 | 18.55 | 18.58 |
| 15              | 256QAM | 1  | 74 | 18.65 | 18.56 | 18.56 |
| 15              | 256QAM | 36 | 0  | 18.65 | 18.49 | 18.47 |
| 15              | 256QAM | 36 | 20 | 18.68 | 18.49 | 18.50 |
| 15              | 256QAM | 36 | 39 | 18.58 | 18.46 | 18.42 |
| 15              | 256QAM | 75 | 0  | 18.65 | 18.59 | 18.45 |
| Channel         |        |    |    | 26740 | 26865 | 26990 |
| Frequency (MHz) |        |    |    | 819   | 831.5 | 844   |
| 10              | QPSK   | 1  | 0  | 23.92 | 23.80 | 23.88 |
| 10              | QPSK   | 1  | 25 | 23.78 | 23.78 | 23.84 |
| 10              | QPSK   | 1  | 49 | 23.84 | 23.74 | 23.74 |
| 10              | QPSK   | 25 | 0  | 23.01 | 22.89 | 22.92 |
| 10              | QPSK   | 25 | 12 | 23.01 | 22.87 | 22.93 |
| 10              | QPSK   | 25 | 25 | 22.91 | 22.85 | 22.87 |
| 10              | QPSK   | 50 | 0  | 23.01 | 22.90 | 22.86 |
| 10              | 16QAM  | 1  | 0  | 23.30 | 23.27 | 23.19 |
| 10              | 16QAM  | 1  | 25 | 23.22 | 23.14 | 23.16 |
| 10              | 16QAM  | 1  | 49 | 23.17 | 23.13 | 23.14 |
| 10              | 16QAM  | 25 | 0  | 22.03 | 21.85 | 21.89 |
| 10              | 16QAM  | 25 | 12 | 22.02 | 21.88 | 21.88 |
| 10              | 16QAM  | 25 | 25 | 21.94 | 21.88 | 21.83 |
| 10              | 16QAM  | 50 | 0  | 21.99 | 21.91 | 21.86 |
| 10              | 64QAM  | 1  | 0  | 22.19 | 22.07 | 22.13 |
| 10              | 64QAM  | 1  | 25 | 22.21 | 22.04 | 22.13 |
| 10              | 64QAM  | 1  | 49 | 22.14 | 22.07 | 22.08 |
| 10              | 64QAM  | 25 | 0  | 21.05 | 20.93 | 20.93 |
| 10              | 64QAM  | 25 | 12 | 21.06 | 20.93 | 20.95 |
| 10              | 64QAM  | 25 | 25 | 20.96 | 20.92 | 20.93 |
| 10              | 64QAM  | 50 | 0  | 21.00 | 20.95 | 20.88 |
| 10              | 256QAM | 1  | 0  | 18.77 | 18.55 | 18.59 |
| 10              | 256QAM | 1  | 25 | 18.82 | 18.61 | 18.71 |
| 10              | 256QAM | 1  | 49 | 18.73 | 18.48 | 18.68 |



|                 |        |    |    |       |       |       |
|-----------------|--------|----|----|-------|-------|-------|
| 10              | 256QAM | 25 | 0  | 18.71 | 18.44 | 18.46 |
| 10              | 256QAM | 25 | 12 | 18.66 | 18.51 | 18.52 |
| 10              | 256QAM | 25 | 25 | 18.70 | 18.44 | 18.55 |
| 10              | 256QAM | 50 | 0  | 18.76 | 18.40 | 18.41 |
| Channel         |        |    |    | 26715 | 26865 | 27015 |
| Frequency (MHz) |        |    |    | 816.5 | 831.5 | 846.5 |
| 5               | QPSK   | 1  | 0  | 24.00 | 23.77 | 23.88 |
| 5               | QPSK   | 1  | 12 | 23.95 | 23.82 | 23.85 |
| 5               | QPSK   | 1  | 24 | 23.82 | 23.81 | 23.78 |
| 5               | QPSK   | 12 | 0  | 23.08 | 22.88 | 22.93 |
| 5               | QPSK   | 12 | 7  | 23.05 | 22.95 | 22.94 |
| 5               | QPSK   | 12 | 13 | 22.99 | 22.88 | 22.87 |
| 5               | QPSK   | 25 | 0  | 23.03 | 22.88 | 22.88 |
| 5               | 16QAM  | 1  | 0  | 23.27 | 23.10 | 23.17 |
| 5               | 16QAM  | 1  | 12 | 23.18 | 23.16 | 23.09 |
| 5               | 16QAM  | 1  | 24 | 23.15 | 23.12 | 23.08 |
| 5               | 16QAM  | 12 | 0  | 22.11 | 21.91 | 21.98 |
| 5               | 16QAM  | 12 | 7  | 22.10 | 21.95 | 21.95 |
| 5               | 16QAM  | 12 | 13 | 21.98 | 21.86 | 21.84 |
| 5               | 16QAM  | 25 | 0  | 22.02 | 21.92 | 21.90 |
| 5               | 64QAM  | 1  | 0  | 22.16 | 21.97 | 22.11 |
| 5               | 64QAM  | 1  | 12 | 22.13 | 21.96 | 22.02 |
| 5               | 64QAM  | 1  | 24 | 22.04 | 21.98 | 21.92 |
| 5               | 64QAM  | 12 | 0  | 21.17 | 20.99 | 21.05 |
| 5               | 64QAM  | 12 | 7  | 21.13 | 21.03 | 21.01 |
| 5               | 64QAM  | 12 | 13 | 21.06 | 20.97 | 20.92 |
| 5               | 64QAM  | 25 | 0  | 21.07 | 20.97 | 20.94 |
| 5               | 256QAM | 1  | 0  | 18.68 | 18.46 | 18.50 |
| 5               | 256QAM | 1  | 12 | 18.73 | 18.52 | 18.62 |
| 5               | 256QAM | 1  | 24 | 18.67 | 18.39 | 18.59 |
| 5               | 256QAM | 12 | 0  | 18.62 | 18.35 | 18.37 |
| 5               | 256QAM | 12 | 7  | 18.67 | 18.41 | 18.43 |
| 5               | 256QAM | 12 | 13 | 18.66 | 18.35 | 18.46 |
| 5               | 256QAM | 25 | 0  | 18.67 | 18.31 | 18.32 |
| Channel         |        |    |    | 26705 | 26865 | 27025 |



| Frequency (MHz) |        |    |    | 815.5 | 831.5 | 847.5 |
|-----------------|--------|----|----|-------|-------|-------|
| 3               | QPSK   | 1  | 0  | 23.94 | 23.80 | 23.79 |
| 3               | QPSK   | 1  | 8  | 23.96 | 23.85 | 23.81 |
| 3               | QPSK   | 1  | 14 | 23.88 | 23.85 | 23.78 |
| 3               | QPSK   | 8  | 0  | 23.07 | 22.87 | 22.92 |
| 3               | QPSK   | 8  | 4  | 23.07 | 22.94 | 22.89 |
| 3               | QPSK   | 8  | 7  | 22.99 | 22.85 | 22.87 |
| 3               | QPSK   | 15 | 0  | 23.03 | 22.89 | 22.89 |
| 3               | 16QAM  | 1  | 0  | 23.30 | 23.13 | 23.14 |
| 3               | 16QAM  | 1  | 8  | 23.29 | 23.14 | 23.17 |
| 3               | 16QAM  | 1  | 14 | 23.21 | 23.17 | 23.05 |
| 3               | 16QAM  | 8  | 0  | 22.10 | 21.95 | 21.95 |
| 3               | 16QAM  | 8  | 4  | 22.07 | 22.01 | 21.94 |
| 3               | 16QAM  | 8  | 7  | 22.05 | 21.92 | 21.88 |
| 3               | 16QAM  | 15 | 0  | 22.05 | 21.94 | 21.93 |
| 3               | 64QAM  | 1  | 0  | 22.29 | 22.00 | 22.04 |
| 3               | 64QAM  | 1  | 8  | 22.12 | 22.17 | 22.09 |
| 3               | 64QAM  | 1  | 14 | 22.08 | 22.00 | 21.93 |
| 3               | 64QAM  | 8  | 0  | 21.10 | 20.97 | 21.01 |
| 3               | 64QAM  | 8  | 4  | 21.14 | 21.01 | 20.96 |
| 3               | 64QAM  | 8  | 7  | 21.09 | 20.97 | 20.93 |
| 3               | 64QAM  | 15 | 0  | 21.04 | 20.95 | 20.93 |
| 3               | 256QAM | 1  | 0  | 18.76 | 18.54 | 18.58 |
| 3               | 256QAM | 1  | 8  | 18.81 | 18.60 | 18.70 |
| 3               | 256QAM | 1  | 14 | 18.75 | 18.47 | 18.67 |
| 3               | 256QAM | 8  | 0  | 18.77 | 18.43 | 18.48 |
| 3               | 256QAM | 8  | 4  | 18.75 | 18.49 | 18.51 |
| 3               | 256QAM | 8  | 7  | 18.71 | 18.43 | 18.59 |
| 3               | 256QAM | 15 | 0  | 18.72 | 18.39 | 18.44 |
| Channel         |        |    |    | 26697 | 26865 | 27033 |
| Frequency (MHz) |        |    |    | 814.7 | 831.5 | 848.3 |
| 1.4             | QPSK   | 1  | 0  | 23.92 | 23.67 | 23.67 |
| 1.4             | QPSK   | 1  | 3  | 23.99 | 23.77 | 23.75 |
| 1.4             | QPSK   | 1  | 5  | 23.84 | 23.71 | 23.65 |
| 1.4             | QPSK   | 3  | 0  | 23.90 | 23.74 | 23.71 |





|     |        |   |   |       |       |       |
|-----|--------|---|---|-------|-------|-------|
| 1.4 | QPSK   | 3 | 1 | 23.97 | 23.78 | 23.75 |
| 1.4 | QPSK   | 3 | 3 | 23.90 | 23.73 | 23.71 |
| 1.4 | QPSK   | 6 | 0 | 22.98 | 22.84 | 22.79 |
| 1.4 | 16QAM  | 1 | 0 | 23.27 | 23.07 | 23.05 |
| 1.4 | 16QAM  | 1 | 3 | 23.35 | 23.09 | 23.05 |
| 1.4 | 16QAM  | 1 | 5 | 23.21 | 23.06 | 23.02 |
| 1.4 | 16QAM  | 3 | 0 | 23.00 | 22.82 | 22.83 |
| 1.4 | 16QAM  | 3 | 1 | 23.03 | 22.89 | 22.81 |
| 1.4 | 16QAM  | 3 | 3 | 22.98 | 22.87 | 22.77 |
| 1.4 | 16QAM  | 6 | 0 | 22.07 | 21.91 | 21.86 |
| 1.4 | 64QAM  | 1 | 0 | 22.05 | 21.90 | 21.95 |
| 1.4 | 64QAM  | 1 | 3 | 22.10 | 22.06 | 21.91 |
| 1.4 | 64QAM  | 1 | 5 | 22.10 | 21.95 | 21.89 |
| 1.4 | 64QAM  | 3 | 0 | 22.13 | 21.93 | 21.96 |
| 1.4 | 64QAM  | 3 | 1 | 22.13 | 22.02 | 21.98 |
| 1.4 | 64QAM  | 3 | 3 | 22.04 | 21.96 | 21.92 |
| 1.4 | 64QAM  | 6 | 0 | 21.00 | 20.88 | 20.79 |
| 1.4 | 256QAM | 1 | 0 | 18.86 | 18.64 | 18.68 |
| 1.4 | 256QAM | 1 | 3 | 18.81 | 18.70 | 18.80 |
| 1.4 | 256QAM | 1 | 5 | 18.85 | 18.57 | 18.77 |
| 1.4 | 256QAM | 3 | 0 | 18.77 | 18.53 | 18.58 |
| 1.4 | 256QAM | 3 | 1 | 18.85 | 18.59 | 18.61 |
| 1.4 | 256QAM | 3 | 3 | 18.71 | 18.53 | 18.69 |
| 1.4 | 256QAM | 6 | 0 | 18.72 | 18.47 | 18.54 |

## LTE Band 66

| BW [MHz]        | Modulation | RB Size | RB Offset | Power<br>Low<br>Ch. / Freq. | Power<br>Middle<br>Ch. / Freq. | Power<br>High<br>Ch. / Freq. |
|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|------------------------------|
| Channel         |            |         |           | 132072                      | 132322                         | 132572                       |
| Frequency (MHz) |            |         |           | 1720                        | 1745                           | 1770                         |
| 20              | QPSK       | 1       | 0         | 23.43                       | 23.51                          | 23.41                        |
| 20              | QPSK       | 1       | 49        | 23.38                       | 23.46                          | 23.32                        |
| 20              | QPSK       | 1       | 99        | 23.27                       | 23.32                          | 23.18                        |
| 20              | QPSK       | 50      | 0         | 22.45                       | 22.49                          | 22.42                        |



|                 |        |     |    |        |        |        |
|-----------------|--------|-----|----|--------|--------|--------|
| 20              | QPSK   | 50  | 24 | 22.41  | 22.50  | 22.38  |
| 20              | QPSK   | 50  | 50 | 22.49  | 22.44  | 22.37  |
| 20              | QPSK   | 100 | 0  | 22.41  | 22.45  | 22.36  |
| 20              | 16QAM  | 1   | 0  | 22.78  | 22.79  | 22.74  |
| 20              | 16QAM  | 1   | 49 | 22.73  | 22.75  | 22.65  |
| 20              | 16QAM  | 1   | 99 | 22.60  | 22.60  | 22.51  |
| 20              | 16QAM  | 50  | 0  | 21.47  | 21.48  | 21.43  |
| 20              | 16QAM  | 50  | 24 | 21.56  | 21.46  | 21.37  |
| 20              | 16QAM  | 50  | 50 | 21.51  | 21.46  | 21.37  |
| 20              | 16QAM  | 100 | 0  | 21.52  | 21.40  | 21.36  |
| 20              | 64QAM  | 1   | 0  | 21.65  | 21.70  | 21.60  |
| 20              | 64QAM  | 1   | 49 | 21.60  | 21.66  | 21.58  |
| 20              | 64QAM  | 1   | 99 | 21.50  | 21.54  | 21.44  |
| 20              | 64QAM  | 50  | 0  | 20.53  | 20.51  | 20.45  |
| 20              | 64QAM  | 50  | 24 | 20.58  | 20.47  | 20.39  |
| 20              | 64QAM  | 50  | 50 | 20.51  | 20.46  | 20.40  |
| 20              | 64QAM  | 100 | 0  | 20.54  | 20.46  | 20.36  |
| 20              | 256QAM | 1   | 0  | 18.83  | 18.86  | 18.74  |
| 20              | 256QAM | 1   | 49 | 18.89  | 18.68  | 18.61  |
| 20              | 256QAM | 1   | 99 | 18.92  | 18.73  | 18.74  |
| 20              | 256QAM | 50  | 0  | 18.78  | 18.59  | 18.55  |
| 20              | 256QAM | 50  | 24 | 18.78  | 18.58  | 18.62  |
| 20              | 256QAM | 50  | 50 | 18.79  | 18.62  | 18.66  |
| 20              | 256QAM | 100 | 0  | 18.81  | 18.61  | 18.70  |
| Channel         |        |     |    | 132047 | 132322 | 132597 |
| Frequency (MHz) |        |     |    | 1717.5 | 1745   | 1772.5 |
| 15              | QPSK   | 1   | 0  | 23.43  | 23.40  | 23.36  |
| 15              | QPSK   | 1   | 37 | 23.41  | 23.40  | 23.30  |
| 15              | QPSK   | 1   | 74 | 23.34  | 23.27  | 23.18  |
| 15              | QPSK   | 36  | 0  | 22.56  | 22.47  | 22.33  |
| 15              | QPSK   | 36  | 20 | 22.54  | 22.44  | 22.44  |
| 15              | QPSK   | 36  | 39 | 22.46  | 22.43  | 22.35  |
| 15              | QPSK   | 75  | 0  | 22.50  | 22.41  | 22.39  |
| 15              | 16QAM  | 1   | 0  | 22.71  | 22.71  | 22.70  |
| 15              | 16QAM  | 1   | 37 | 22.70  | 22.72  | 22.63  |



|                 |        |    |    |        |        |        |
|-----------------|--------|----|----|--------|--------|--------|
| 15              | 16QAM  | 1  | 74 | 22.60  | 22.66  | 22.54  |
| 15              | 16QAM  | 36 | 0  | 21.52  | 21.45  | 21.35  |
| 15              | 16QAM  | 36 | 20 | 21.53  | 21.43  | 21.43  |
| 15              | 16QAM  | 36 | 39 | 21.47  | 21.46  | 21.35  |
| 15              | 16QAM  | 75 | 0  | 21.54  | 21.41  | 21.41  |
| 15              | 64QAM  | 1  | 0  | 21.59  | 21.58  | 21.47  |
| 15              | 64QAM  | 1  | 37 | 21.68  | 21.69  | 21.56  |
| 15              | 64QAM  | 1  | 74 | 21.55  | 21.53  | 21.46  |
| 15              | 64QAM  | 36 | 0  | 20.54  | 20.49  | 20.39  |
| 15              | 64QAM  | 36 | 20 | 20.57  | 20.47  | 20.44  |
| 15              | 64QAM  | 36 | 39 | 20.49  | 20.48  | 20.37  |
| 15              | 64QAM  | 75 | 0  | 20.52  | 20.43  | 20.40  |
| 15              | 256QAM | 1  | 0  | 18.72  | 18.75  | 18.63  |
| 15              | 256QAM | 1  | 37 | 18.78  | 18.57  | 18.50  |
| 15              | 256QAM | 1  | 74 | 18.81  | 18.62  | 18.63  |
| 15              | 256QAM | 36 | 0  | 18.67  | 18.49  | 18.44  |
| 15              | 256QAM | 36 | 20 | 18.67  | 18.47  | 18.51  |
| 15              | 256QAM | 36 | 39 | 18.68  | 18.51  | 18.55  |
| 15              | 256QAM | 75 | 0  | 18.70  | 18.52  | 18.69  |
| Channel         |        |    |    | 132022 | 132322 | 132622 |
| Frequency (MHz) |        |    |    | 1715   | 1745   | 1775   |
| 10              | QPSK   | 1  | 0  | 23.43  | 23.35  | 23.26  |
| 10              | QPSK   | 1  | 25 | 23.39  | 23.38  | 23.24  |
| 10              | QPSK   | 1  | 49 | 23.32  | 23.28  | 23.16  |
| 10              | QPSK   | 25 | 0  | 22.50  | 22.44  | 22.31  |
| 10              | QPSK   | 25 | 12 | 22.51  | 22.43  | 22.31  |
| 10              | QPSK   | 25 | 25 | 22.48  | 22.44  | 22.34  |
| 10              | QPSK   | 50 | 0  | 22.51  | 22.43  | 22.29  |
| 10              | 16QAM  | 1  | 0  | 22.78  | 22.79  | 22.70  |
| 10              | 16QAM  | 1  | 25 | 22.75  | 22.76  | 22.60  |
| 10              | 16QAM  | 1  | 49 | 22.70  | 22.63  | 22.52  |
| 10              | 16QAM  | 25 | 0  | 21.52  | 21.43  | 21.31  |
| 10              | 16QAM  | 25 | 12 | 21.54  | 21.43  | 21.34  |
| 10              | 16QAM  | 25 | 25 | 21.47  | 21.44  | 21.30  |
| 10              | 16QAM  | 50 | 0  | 21.50  | 21.41  | 21.30  |



|                 |        |    |    |        |        |        |
|-----------------|--------|----|----|--------|--------|--------|
| 10              | 64QAM  | 1  | 0  | 21.76  | 21.59  | 21.57  |
| 10              | 64QAM  | 1  | 25 | 21.61  | 21.70  | 21.59  |
| 10              | 64QAM  | 1  | 49 | 21.62  | 21.61  | 21.47  |
| 10              | 64QAM  | 25 | 0  | 20.55  | 20.49  | 20.33  |
| 10              | 64QAM  | 25 | 12 | 20.56  | 20.45  | 20.34  |
| 10              | 64QAM  | 25 | 25 | 20.48  | 20.46  | 20.36  |
| 10              | 64QAM  | 50 | 0  | 20.51  | 20.44  | 20.31  |
| 10              | 256QAM | 1  | 0  | 18.60  | 18.63  | 18.51  |
| 10              | 256QAM | 1  | 25 | 18.66  | 18.45  | 18.38  |
| 10              | 256QAM | 1  | 49 | 18.69  | 18.50  | 18.51  |
| 10              | 256QAM | 25 | 0  | 18.55  | 18.37  | 18.32  |
| 10              | 256QAM | 25 | 12 | 18.55  | 18.35  | 18.39  |
| 10              | 256QAM | 25 | 25 | 18.56  | 18.39  | 18.43  |
| 10              | 256QAM | 50 | 0  | 18.58  | 18.40  | 18.57  |
| Channel         |        |    |    | 131997 | 132322 | 132647 |
| Frequency (MHz) |        |    |    | 1712.5 | 1745   | 1777.5 |
| 5               | QPSK   | 1  | 0  | 23.43  | 23.34  | 23.28  |
| 5               | QPSK   | 1  | 12 | 23.46  | 23.46  | 23.31  |
| 5               | QPSK   | 1  | 24 | 23.34  | 23.34  | 23.19  |
| 5               | QPSK   | 12 | 0  | 22.52  | 22.44  | 22.39  |
| 5               | QPSK   | 12 | 7  | 22.55  | 22.48  | 22.38  |
| 5               | QPSK   | 12 | 13 | 22.44  | 22.43  | 22.35  |
| 5               | QPSK   | 25 | 0  | 22.49  | 22.40  | 22.35  |
| 5               | 16QAM  | 1  | 0  | 22.75  | 22.67  | 22.61  |
| 5               | 16QAM  | 1  | 12 | 22.78  | 22.74  | 22.60  |
| 5               | 16QAM  | 1  | 24 | 22.70  | 22.65  | 22.55  |
| 5               | 16QAM  | 12 | 0  | 21.56  | 21.46  | 21.42  |
| 5               | 16QAM  | 12 | 7  | 21.56  | 21.44  | 21.42  |
| 5               | 16QAM  | 12 | 13 | 21.50  | 21.49  | 21.34  |
| 5               | 16QAM  | 25 | 0  | 21.48  | 21.46  | 21.36  |
| 5               | 64QAM  | 1  | 0  | 21.68  | 21.61  | 21.57  |
| 5               | 64QAM  | 1  | 12 | 21.67  | 21.62  | 21.51  |
| 5               | 64QAM  | 1  | 24 | 21.63  | 21.57  | 21.46  |
| 5               | 64QAM  | 12 | 0  | 20.55  | 20.51  | 20.41  |
| 5               | 64QAM  | 12 | 7  | 20.57  | 20.50  | 20.44  |



|                 |        |    |    |        |        |        |
|-----------------|--------|----|----|--------|--------|--------|
| 5               | 64QAM  | 12 | 13 | 20.56  | 20.51  | 20.39  |
| 5               | 64QAM  | 25 | 0  | 20.54  | 20.44  | 20.35  |
| 5               | 256QAM | 1  | 0  | 18.64  | 18.67  | 18.55  |
| 5               | 256QAM | 1  | 12 | 18.70  | 18.49  | 18.42  |
| 5               | 256QAM | 1  | 24 | 18.73  | 18.54  | 18.55  |
| 5               | 256QAM | 12 | 0  | 18.59  | 18.48  | 18.36  |
| 5               | 256QAM | 12 | 7  | 18.59  | 18.42  | 18.43  |
| 5               | 256QAM | 12 | 13 | 18.60  | 18.43  | 18.47  |
| 5               | 256QAM | 25 | 0  | 18.68  | 18.44  | 18.67  |
| Channel         |        |    |    | 131987 | 132322 | 132657 |
| Frequency (MHz) |        |    |    | 1711.5 | 1745   | 1778.5 |
| 3               | QPSK   | 1  | 0  | 23.35  | 23.28  | 23.20  |
| 3               | QPSK   | 1  | 8  | 23.38  | 23.40  | 23.23  |
| 3               | QPSK   | 1  | 14 | 23.26  | 23.28  | 23.11  |
| 3               | QPSK   | 8  | 0  | 22.44  | 22.38  | 22.33  |
| 3               | QPSK   | 8  | 4  | 22.47  | 22.42  | 22.32  |
| 3               | QPSK   | 8  | 7  | 22.36  | 22.37  | 22.29  |
| 3               | QPSK   | 15 | 0  | 22.41  | 22.34  | 22.29  |
| 3               | 16QAM  | 1  | 0  | 22.67  | 22.61  | 22.55  |
| 3               | 16QAM  | 1  | 8  | 22.70  | 22.68  | 22.54  |
| 3               | 16QAM  | 1  | 14 | 22.62  | 22.59  | 22.49  |
| 3               | 16QAM  | 8  | 0  | 21.48  | 21.40  | 21.32  |
| 3               | 16QAM  | 8  | 4  | 21.48  | 21.38  | 21.32  |
| 3               | 16QAM  | 8  | 7  | 21.42  | 21.43  | 21.24  |
| 3               | 16QAM  | 15 | 0  | 21.40  | 21.40  | 21.26  |
| 3               | 64QAM  | 1  | 0  | 21.60  | 21.55  | 21.47  |
| 3               | 64QAM  | 1  | 8  | 21.59  | 21.56  | 21.41  |
| 3               | 64QAM  | 1  | 14 | 21.55  | 21.51  | 21.36  |
| 3               | 64QAM  | 8  | 0  | 20.47  | 20.45  | 20.31  |
| 3               | 64QAM  | 8  | 4  | 20.49  | 20.44  | 20.34  |
| 3               | 64QAM  | 8  | 7  | 20.48  | 20.45  | 20.29  |
| 3               | 64QAM  | 15 | 0  | 20.46  | 20.38  | 20.25  |
| 3               | 256QAM | 1  | 0  | 18.52  | 18.65  | 18.43  |
| 3               | 256QAM | 1  | 8  | 18.58  | 18.37  | 18.30  |
| 3               | 256QAM | 1  | 14 | 18.61  | 18.42  | 18.43  |



|                 |        |    |   |        |        |        |
|-----------------|--------|----|---|--------|--------|--------|
| 3               | 256QAM | 8  | 0 | 18.47  | 18.36  | 18.24  |
| 3               | 256QAM | 8  | 4 | 18.47  | 18.30  | 18.31  |
| 3               | 256QAM | 8  | 7 | 18.48  | 18.37  | 18.45  |
| 3               | 256QAM | 15 | 0 | 18.56  | 18.32  | 18.55  |
| Channel         |        |    |   | 131979 | 132322 | 132665 |
| Frequency (MHz) |        |    |   | 1710.7 | 1745   | 1779.3 |
| 1.4             | QPSK   | 1  | 0 | 23.32  | 23.26  | 23.10  |
| 1.4             | QPSK   | 1  | 3 | 23.39  | 23.30  | 23.08  |
| 1.4             | QPSK   | 1  | 5 | 23.27  | 23.22  | 23.02  |
| 1.4             | QPSK   | 3  | 0 | 23.35  | 23.23  | 23.11  |
| 1.4             | QPSK   | 3  | 1 | 23.39  | 23.27  | 23.11  |
| 1.4             | QPSK   | 3  | 3 | 23.30  | 23.25  | 23.09  |
| 1.4             | QPSK   | 6  | 0 | 22.36  | 22.33  | 22.10  |
| 1.4             | 16QAM  | 1  | 0 | 22.65  | 22.58  | 22.36  |
| 1.4             | 16QAM  | 1  | 3 | 22.73  | 22.60  | 22.47  |
| 1.4             | 16QAM  | 1  | 5 | 22.60  | 22.55  | 22.42  |
| 1.4             | 16QAM  | 3  | 0 | 22.41  | 22.33  | 22.19  |
| 1.4             | 16QAM  | 3  | 1 | 22.47  | 22.35  | 22.21  |
| 1.4             | 16QAM  | 3  | 3 | 22.43  | 22.31  | 22.15  |
| 1.4             | 16QAM  | 6  | 0 | 21.47  | 21.40  | 21.24  |
| 1.4             | 64QAM  | 1  | 0 | 21.59  | 21.44  | 21.31  |
| 1.4             | 64QAM  | 1  | 3 | 21.62  | 21.55  | 21.40  |
| 1.4             | 64QAM  | 1  | 5 | 21.57  | 21.46  | 21.26  |
| 1.4             | 64QAM  | 3  | 0 | 21.54  | 21.47  | 21.28  |
| 1.4             | 64QAM  | 3  | 1 | 21.62  | 21.52  | 21.31  |
| 1.4             | 64QAM  | 3  | 3 | 21.58  | 21.46  | 21.29  |
| 1.4             | 64QAM  | 6  | 0 | 20.44  | 20.36  | 20.17  |
| 1.4             | 256QAM | 1  | 0 | 18.67  | 18.78  | 18.58  |
| 1.4             | 256QAM | 1  | 3 | 18.73  | 18.52  | 18.45  |
| 1.4             | 256QAM | 1  | 5 | 18.76  | 18.57  | 18.58  |
| 1.4             | 256QAM | 3  | 0 | 18.62  | 18.61  | 18.39  |
| 1.4             | 256QAM | 3  | 1 | 18.62  | 18.45  | 18.46  |
| 1.4             | 256QAM | 3  | 3 | 18.63  | 18.52  | 18.62  |
| 1.4             | 256QAM | 6  | 0 | 18.71  | 18.67  | 18.70  |

**ERP/EIRP**

| LTE Band 12 (GT - LC = -4.00 dB) QPSK |        |        |        |        |        |        |        |        |        |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                             | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                               | 23017  | 23095  | 23173  | 23025  | 23095  | 23165  | 23035  | 23095  | 23155  |
|                                       | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                             | 699.7  | 707.5  | 715.3  | 700.5  | 707.5  | 714.5  | 701.5  | 707.5  | 713.5  |
| (MHz)                                 |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                 | 23.90  | 23.88  | 23.91  | 23.99  | 23.96  | 24.01  | 23.93  | 23.99  | 23.97  |
| Conducted Power (Watts)               | 0.2455 | 0.2443 | 0.2460 | 0.2506 | 0.2489 | 0.2518 | 0.2472 | 0.2506 | 0.2495 |
| ERP(dBm)                              | 17.75  | 17.73  | 17.76  | 17.84  | 17.81  | 17.86  | 17.78  | 17.84  | 17.82  |
| ERP(Watts)                            | 0.0596 | 0.0593 | 0.0597 | 0.0608 | 0.0604 | 0.0611 | 0.0600 | 0.0608 | 0.0605 |

| LTE Band 12 (GT - LC = -4.00 dB) QPSK |        |        |        |
|---------------------------------------|--------|--------|--------|
| Bandwidth                             | 10M    |        |        |
| Channel                               | 23060  | 23095  | 23130  |
|                                       | (Low)  | (Mid)  | (High) |
| Frequency                             | 704    | 707.5  | 711    |
| (MHz)                                 |        |        |        |
| Conducted Power (dBm)                 | 23.87  | 24.02  | 23.88  |
| Conducted Power (Watts)               | 0.2438 | 0.2523 | 0.2443 |
| ERP(dBm)                              | 17.72  | 17.87  | 17.73  |
| ERP(Watts)                            | 0.0592 | 0.0612 | 0.0593 |



| LTE Band 12 (GT - LC = -4.00 dB) 16QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                                | 23017  | 23095  | 23173  | 23025  | 23095  | 23165  | 23035  | 23095  | 23155  |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                     | 699.7  | 707.5  | 715.3  | 700.5  | 707.5  | 714.5  | 701.5  | 707.5  | 713.5  |
| Conducted Power (dBm)                  | 23.24  | 23.21  | 23.28  | 23.30  | 23.27  | 23.24  | 23.23  | 23.26  | 23.34  |
| Conducted Power (Watts)                | 0.2109 | 0.2094 | 0.2128 | 0.2138 | 0.2123 | 0.2109 | 0.2104 | 0.2118 | 0.2158 |
| ERP(dBm)                               | 17.09  | 17.06  | 17.13  | 17.15  | 17.12  | 17.09  | 17.08  | 17.11  | 17.19  |
| ERP(Watts)                             | 0.0512 | 0.0508 | 0.0516 | 0.0519 | 0.0515 | 0.0512 | 0.0511 | 0.0514 | 0.0524 |

| LTE Band 12 (GT - LC = -4.00 dB) 16QAM |        |        |        |
|----------------------------------------|--------|--------|--------|
| Bandwidth                              | 10M    |        |        |
| Channel                                | 23060  | 23095  | 23130  |
|                                        | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                     | 704    | 707.5  | 711    |
| Conducted Power (dBm)                  | 23.34  | 23.34  | 23.24  |
| Conducted Power (Watts)                | 0.2158 | 0.2158 | 0.2109 |
| ERP(dBm)                               | 17.19  | 17.19  | 17.09  |
| ERP(Watts)                             | 0.0524 | 0.0524 | 0.0512 |





| LTE Band 12 (GT - LC = -4.00 dB) 64QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                                | 23017  | 23095  | 23173  | 23025  | 23095  | 23165  | 23035  | 23095  | 23155  |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                              | 699.7  | 707.5  | 715.3  | 700.5  | 707.5  | 714.5  | 701.5  | 707.5  | 713.5  |
| (MHz)                                  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 22.14  | 22.20  | 22.10  | 22.26  | 22.10  | 22.22  | 22.15  | 22.17  | 22.19  |
| Conducted Power (Watts)                | 0.1637 | 0.1660 | 0.1622 | 0.1683 | 0.1622 | 0.1667 | 0.1641 | 0.1648 | 0.1656 |
| ERP(dBm)                               | 15.99  | 16.05  | 15.95  | 16.11  | 15.95  | 16.07  | 16.00  | 16.02  | 16.04  |
| ERP(Watts)                             | 0.0397 | 0.0403 | 0.0394 | 0.0408 | 0.0394 | 0.0405 | 0.0398 | 0.0400 | 0.0402 |

| LTE Band 12 (GT - LC = -4.00 dB) 64QAM |        |        |        |
|----------------------------------------|--------|--------|--------|
| Bandwidth                              | 10M    |        |        |
| Channel                                | 23060  | 23095  | 23130  |
|                                        | (Low)  | (Mid)  | (High) |
| Frequency                              | 704    | 707.5  | 711    |
| (MHz)                                  |        |        |        |
| Conducted Power (dBm)                  | 22.18  | 22.27  | 22.22  |
| Conducted Power (Watts)                | 0.1652 | 0.1687 | 0.1667 |
| ERP(dBm)                               | 16.03  | 16.12  | 16.07  |
| ERP(Watts)                             | 0.0401 | 0.0409 | 0.0405 |



| LTE Band 13 (GT - LC = -4.00 dB) QPSK |        |        |        |       |        |   |
|---------------------------------------|--------|--------|--------|-------|--------|---|
| Bandwidth                             | 5M     |        |        | 10M   |        |   |
| Channel                               | 23205  | 23230  | 23255  | 23230 |        |   |
|                                       | (Low)  | (Mid)  | (High) | -     | (Mid)  | - |
| Frequency                             | 779.5  | 782    | 784.5  | -     | 782    | - |
| (MHz)                                 |        |        |        |       |        |   |
| Conducted Power (dBm)                 | 23.54  | 23.54  | 23.43  |       | 23.97  | - |
| Conducted Power (Watts)               | 0.2259 | 0.2259 | 0.2203 |       | 0.2495 | - |
| ERP(dBm)                              | 17.39  | 17.39  | 17.28  |       | 17.82  | - |
| ERP(Watts)                            | 0.0548 | 0.0548 | 0.0535 |       | 0.0605 | - |

| LTE Band 13 (GT - LC = -4.00 dB) 16QAM |        |        |        |       |        |   |
|----------------------------------------|--------|--------|--------|-------|--------|---|
| Bandwidth                              | 5M     |        |        | 10M   |        |   |
| Channel                                | 23205  | 23230  | 23255  | 23230 |        |   |
|                                        | (Low)  | (Mid)  | (High) | -     | (Mid)  | - |
| Frequency                              | 779.5  | 782    | 784.5  | -     | 782    | - |
| (MHz)                                  |        |        |        |       |        |   |
| Conducted Power (dBm)                  | 23.26  | 23.17  | 23.17  |       | 23.29  | - |
| Conducted Power (Watts)                | 0.2118 | 0.2075 | 0.2075 |       | 0.2133 | - |
| ERP(dBm)                               | 17.11  | 17.02  | 17.02  |       | 17.14  | - |
| ERP(Watts)                             | 0.0514 | 0.0504 | 0.0504 |       | 0.0518 | - |

| LTE Band 13 (GT - LC = -4.00 dB) 64QAM |        |        |        |       |        |   |
|----------------------------------------|--------|--------|--------|-------|--------|---|
| Bandwidth                              | 5M     |        |        | 10M   |        |   |
| Channel                                | 23205  | 23230  | 23255  | 23230 |        |   |
|                                        | (Low)  | (Mid)  | (High) | -     | (Mid)  | - |
| Frequency                              | 779.5  | 782    | 784.5  | -     | 782    | - |
| (MHz)                                  |        |        |        |       |        |   |
| Conducted Power (dBm)                  | 22.07  | 22.10  | 22.07  |       | 22.13  | - |
| Conducted Power (Watts)                | 0.1611 | 0.1622 | 0.1611 |       | 0.1633 | - |
| ERP(dBm)                               | 15.92  | 15.95  | 15.92  |       | 15.98  | - |
| ERP(Watts)                             | 0.0391 | 0.0394 | 0.0391 |       | 0.0396 | - |



| LTE Band 25 (GT - LC = -2.00 dB) QPSK |        |        |        |        |        |        |        |        |        |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                             | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                               | 26407  | 26340  | 26683  | 26055  | 26340  | 26675  | 26065  | 26340  | 26665  |
|                                       | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                             | 1850.7 | 1880   | 1914.3 | 1851.5 | 1880   | 1913.5 | 1852.5 | 1880   | 1912.5 |
| (MHz)                                 |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                 | 23.55  | 23.64  | 23.40  | 23.62  | 23.55  | 23.50  | 23.55  | 23.60  | 23.47  |
| Conducted Power (Watts)               | 0.2265 | 0.2312 | 0.2188 | 0.2301 | 0.2265 | 0.2239 | 0.2265 | 0.2291 | 0.2223 |
| EIRP(dBm)                             | 21.55  | 21.64  | 21.40  | 21.62  | 21.55  | 21.50  | 21.55  | 21.60  | 21.47  |
| EIRP(Watts)                           | 0.1429 | 0.1459 | 0.1380 | 0.1452 | 0.1429 | 0.1413 | 0.1429 | 0.1445 | 0.1403 |

| LTE Band 25 (GT - LC = -2.00 dB) QPSK |        |        |        |        |        |        |        |        |        |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                             | 10M    |        |        | 15M    |        |        | 20M    |        |        |
| Channel                               | 26090  | 26340  | 26640  | 26115  | 26340  | 26615  | 26140  | 26340  | 26590  |
|                                       | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                             | 1855   | 1880   | 1910   | 1857.5 | 1880   | 1907.5 | 1860   | 1880   | 1905   |
| (MHz)                                 |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                 | 23.51  | 23.59  | 23.44  | 23.46  | 23.63  | 23.44  | 23.55  | 23.65  | 23.52  |
| Conducted Power (Watts)               | 0.2244 | 0.2286 | 0.2208 | 0.2218 | 0.2307 | 0.2208 | 0.2265 | 0.2317 | 0.2249 |
| EIRP(dBm)                             | 21.51  | 21.59  | 21.44  | 21.46  | 21.63  | 21.44  | 21.55  | 21.65  | 21.52  |
| EIRP(Watts)                           | 0.1416 | 0.1442 | 0.1393 | 0.1400 | 0.1455 | 0.1393 | 0.1429 | 0.1462 | 0.1419 |



| LTE Band 25 (GT - LC = -2.00 dB) 16QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                                | 26407  | 26340  | 26683  | 26055  | 26340  | 26675  | 26065  | 26340  | 26665  |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                              | 1850.7 | 1880   | 1914.3 | 1851.5 | 1880   | 1913.5 | 1852.5 | 1880   | 1912.5 |
| (MHz)                                  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 22.88  | 22.96  | 22.71  | 22.94  | 23.07  | 22.84  | 22.85  | 22.97  | 22.84  |
| Conducted Power (Watts)                | 0.1941 | 0.1977 | 0.1866 | 0.1968 | 0.2028 | 0.1923 | 0.1928 | 0.1982 | 0.1923 |
| EIRP(dBm)                              | 20.88  | 20.96  | 20.71  | 20.94  | 21.07  | 20.84  | 20.85  | 20.97  | 20.84  |
| EIRP(Watts)                            | 0.1225 | 0.1247 | 0.1178 | 0.1242 | 0.1279 | 0.1213 | 0.1216 | 0.1250 | 0.1213 |

| LTE Band 25 (GT - LC = -2.00 dB) 16QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 10M    |        |        | 15M    |        |        | 20M    |        |        |
| Channel                                | 26090  | 26340  | 26640  | 26115  | 26340  | 26615  | 26140  | 26340  | 26590  |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                              | 1855   | 1880   | 1910   | 1857.5 | 1880   | 1907.5 | 1860   | 1880   | 1905   |
| (MHz)                                  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 22.86  | 23.02  | 22.75  | 22.80  | 22.94  | 22.86  | 22.84  | 22.96  | 22.89  |
| Conducted Power (Watts)                | 0.1932 | 0.2004 | 0.1884 | 0.1905 | 0.1968 | 0.1932 | 0.1923 | 0.1977 | 0.1945 |
| EIRP(dBm)                              | 20.86  | 21.02  | 20.75  | 20.80  | 20.94  | 20.86  | 20.84  | 20.96  | 20.89  |
| EIRP(Watts)                            | 0.1219 | 0.1265 | 0.1189 | 0.1202 | 0.1242 | 0.1219 | 0.1213 | 0.1247 | 0.1227 |



| LTE Band 25 (GT - LC = -2.00 dB) 64QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                                | 26407  | 26340  | 26683  | 26055  | 26340  | 26675  | 26065  | 26340  | 26665  |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                              | 1850.7 | 1880   | 1914.3 | 1851.5 | 1880   | 1913.5 | 1852.5 | 1880   | 1912.5 |
| (MHz)                                  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 21.86  | 21.93  | 21.66  | 21.85  | 21.99  | 21.74  | 21.79  | 21.95  | 21.69  |
| Conducted Power (Watts)                | 0.1535 | 0.1560 | 0.1466 | 0.1531 | 0.1581 | 0.1493 | 0.1510 | 0.1567 | 0.1476 |
| EIRP(dBm)                              | 19.86  | 19.93  | 19.66  | 19.85  | 19.99  | 19.74  | 19.79  | 19.95  | 19.69  |
| EIRP(Watts)                            | 0.0968 | 0.0984 | 0.0925 | 0.0966 | 0.0998 | 0.0942 | 0.0953 | 0.0989 | 0.0931 |

| LTE Band 25 (GT - LC = -2.00 dB) 64QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 10M    |        |        | 15M    |        |        | 20M    |        |        |
| Channel                                | 26090  | 26340  | 26640  | 26115  | 26340  | 26615  | 26140  | 26340  | 26590  |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                              | 1855   | 1880   | 1910   | 1857.5 | 1880   | 1907.5 | 1860   | 1880   | 1905   |
| (MHz)                                  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 21.72  | 21.95  | 21.77  | 21.65  | 21.93  | 21.74  | 21.78  | 21.88  | 21.65  |
| Conducted Power (Watts)                | 0.1486 | 0.1567 | 0.1503 | 0.1462 | 0.1560 | 0.1493 | 0.1507 | 0.1542 | 0.1462 |
| EIRP(dBm)                              | 19.72  | 19.95  | 19.77  | 19.65  | 19.93  | 19.74  | 19.78  | 19.88  | 19.65  |
| EIRP(Watts)                            | 0.0938 | 0.0989 | 0.0948 | 0.0923 | 0.0984 | 0.0942 | 0.0951 | 0.0973 | 0.0923 |



| LTE Band 26 (GT - LC = -4.00 dB) QPSK |        |        |        |        |        |        |        |        |        |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                             | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                               | 26797  | 26915  | 27033  | 26805  | 26915  | 27025  | 26815  | 26915  | 27015  |
|                                       | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                             | 824.7  | 836.5  | 848.3  | 825.5  | 836.5  | 847.5  | 826.5  | 836.5  | 846.5  |
| (MHz)                                 |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                 | 22.13  | 22.02  | 21.98  | 23.96  | 23.85  | 23.81  | 24.00  | 23.77  | 23.88  |
| Conducted Power (Watts)               | 0.1633 | 0.1592 | 0.1578 | 0.2489 | 0.2427 | 0.2404 | 0.2512 | 0.2382 | 0.2443 |
| ERP(dBm)                              | 15.98  | 15.87  | 15.83  | 17.81  | 17.70  | 17.66  | 17.85  | 17.62  | 17.73  |
| ERP(Watts)                            | 0.0396 | 0.0386 | 0.0383 | 0.0604 | 0.0589 | 0.0583 | 0.0610 | 0.0578 | 0.0593 |

| LTE Band 26 (GT - LC = -4.00 dB) QPSK |        |        |        |        |        |        |
|---------------------------------------|--------|--------|--------|--------|--------|--------|
| Bandwidth                             | 10M    |        |        | 15M    |        |        |
| Channel                               | 26840  | 26915  | 26990  | 26865  | 26915  | 26965  |
|                                       | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                             | 829    | 836.5  | 844    | 831.5  | 836.5  | 841.5  |
| (MHz)                                 |        |        |        |        |        |        |
| Conducted Power (dBm)                 | 23.92  | 23.80  | 23.88  | 23.85  | 24.01  | 23.75  |
| Conducted Power (Watts)               | 0.2466 | 0.2399 | 0.2443 | 0.2427 | 0.2518 | 0.2371 |
| ERP(dBm)                              | 17.77  | 17.65  | 17.73  | 17.70  | 17.86  | 17.60  |
| ERP(Watts)                            | 0.0598 | 0.0582 | 0.0593 | 0.0589 | 0.0611 | 0.0575 |



| LTE Band 26 (GT - LC = -4.00 dB) 16QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                                | 26797  | 26915  | 27033  | 26805  | 26915  | 27025  | 26815  | 26915  | 27015  |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                              | 824.7  | 836.5  | 848.3  | 825.5  | 836.5  | 847.5  | 826.5  | 836.5  | 846.5  |
| (MHz)                                  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 23.35  | 23.09  | 23.05  | 23.30  | 23.13  | 23.14  | 23.27  | 23.10  | 23.17  |
| Conducted Power (Watts)                | 0.2163 | 0.2037 | 0.2018 | 0.2138 | 0.2056 | 0.2061 | 0.2123 | 0.2042 | 0.2075 |
| ERP(dBm)                               | 17.20  | 16.94  | 16.90  | 17.15  | 16.98  | 16.99  | 17.12  | 16.95  | 17.02  |
| ERP(Watts)                             | 0.0525 | 0.0494 | 0.0490 | 0.0519 | 0.0499 | 0.0500 | 0.0515 | 0.0495 | 0.0504 |

| LTE Band 26 (GT - LC = -4.00 dB) 16QAM |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 10M    |        |        | 15M    |        |        |
| Channel                                | 26840  | 26915  | 26990  | 26865  | 26915  | 26965  |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                              | 829    | 836.5  | 844    | 831.5  | 836.5  | 841.5  |
| (MHz)                                  |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 23.30  | 23.27  | 23.19  | 23.14  | 22.99  | 23.07  |
| Conducted Power (Watts)                | 0.2138 | 0.2123 | 0.2084 | 0.2061 | 0.1991 | 0.2028 |
| ERP(dBm)                               | 17.15  | 17.12  | 17.04  | 16.99  | 16.84  | 16.92  |
| ERP(Watts)                             | 0.0519 | 0.0515 | 0.0506 | 0.0500 | 0.0483 | 0.0492 |



| LTE Band 26 (GT - LC = -4.00 dB) 64QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                                | 26797  | 26915  | 27033  | 26805  | 26915  | 27025  | 26815  | 26915  | 27015  |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                              | 824.7  | 836.5  | 848.3  | 825.5  | 836.5  | 847.5  | 826.5  | 836.5  | 846.5  |
| (MHz)                                  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 22.13  | 22.02  | 21.98  | 22.29  | 22.00  | 22.04  | 22.16  | 21.97  | 22.11  |
| Conducted Power (Watts)                | 0.1633 | 0.1592 | 0.1578 | 0.1694 | 0.1585 | 0.1600 | 0.1644 | 0.1574 | 0.1626 |
| ERP(dBm)                               | 15.98  | 15.87  | 15.83  | 16.14  | 15.85  | 15.89  | 16.01  | 15.82  | 15.96  |
| ERP(Watts)                             | 0.0396 | 0.0386 | 0.0383 | 0.0411 | 0.0385 | 0.0388 | 0.0399 | 0.0382 | 0.0394 |

| LTE Band 26 (GT - LC = -4.00 dB) 64QAM |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 10M    |        |        | 15M    |        |        |
| Channel                                | 26840  | 26915  | 26990  | 26865  | 26915  | 26965  |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                              | 829    | 836.5  | 844    | 831.5  | 836.5  | 841.5  |
| (MHz)                                  |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 22.21  | 22.04  | 22.13  | 22.06  | 21.97  | 21.93  |
| Conducted Power (Watts)                | 0.1663 | 0.1600 | 0.1633 | 0.1607 | 0.1574 | 0.1560 |
| ERP(dBm)                               | 16.06  | 15.89  | 15.98  | 15.91  | 15.82  | 15.78  |
| ERP(Watts)                             | 0.0404 | 0.0388 | 0.0396 | 0.0390 | 0.0382 | 0.0378 |





| LTE Band 66 (GT - LC = -2.00 dB) QPSK |        |        |        |        |        |        |        |        |        |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                             | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                               | 131979 | 132322 | 132665 | 131987 | 132322 | 132657 | 131997 | 132322 | 132647 |
|                                       | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                             | 1710.7 | 1745   | 1779.3 | 1711.5 | 1745   | 1778.5 | 1712.5 | 1745   | 1777.5 |
| (MHz)                                 |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                 | 23.39  | 23.30  | 23.08  | 23.38  | 23.40  | 23.23  | 23.46  | 23.46  | 23.31  |
| Conducted Power (Watts)               | 0.2183 | 0.2138 | 0.2032 | 0.2178 | 0.2188 | 0.2104 | 0.2218 | 0.2218 | 0.2143 |
| EIRP(dBm)                             | 21.39  | 21.30  | 21.08  | 21.38  | 21.40  | 21.23  | 21.46  | 21.46  | 21.31  |
| EIRP(Watts)                           | 0.1377 | 0.1349 | 0.1282 | 0.1374 | 0.1380 | 0.1327 | 0.1400 | 0.1400 | 0.1352 |

| LTE Band 66 (GT - LC = -2.00 dB) QPSK |        |        |        |        |        |        |        |        |        |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                             | 10M    |        |        | 15M    |        |        | 20M    |        |        |
| Channel                               | 132022 | 132322 | 132622 | 132047 | 132322 | 132597 | 132072 | 132322 | 132572 |
|                                       | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (Mid)  |
| Frequency                             | 1715   | 1745   | 1775   | 1717.5 | 1745   | 1772.5 | 1720   | 1745   | 1770   |
| (MHz)                                 |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                 | 23.43  | 23.35  | 23.26  | 23.43  | 23.40  | 23.36  | 23.43  | 23.51  | 23.41  |
| Conducted Power (Watts)               | 0.2203 | 0.2163 | 0.2118 | 0.2203 | 0.2188 | 0.2168 | 0.2203 | 0.2244 | 0.2193 |
| EIRP(dBm)                             | 21.43  | 21.35  | 21.26  | 21.43  | 21.40  | 21.36  | 21.43  | 21.51  | 21.41  |
| EIRP(Watts)                           | 0.1390 | 0.1365 | 0.1337 | 0.1390 | 0.1380 | 0.1368 | 0.1390 | 0.1416 | 0.1384 |

| LTE Band 66 (GT - LC = -2.00 dB) 16QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                                | 131979 | 132322 | 132665 | 131987 | 132322 | 132657 | 131997 | 132322 | 132647 |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                              | 1710.7 | 1745   | 1779.3 | 1711.5 | 1745   | 1778.5 | 1712.5 | 1745   | 1777.5 |
| (MHz)                                  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 22.73  | 22.60  | 22.47  | 22.70  | 22.68  | 22.54  | 22.78  | 22.74  | 22.60  |
| Conducted Power (Watts)                | 0.1875 | 0.1820 | 0.1766 | 0.1862 | 0.1854 | 0.1795 | 0.1897 | 0.1879 | 0.1820 |
| EIRP(dBm)                              | 20.73  | 20.60  | 20.47  | 20.70  | 20.68  | 20.54  | 20.78  | 20.74  | 20.60  |
| EIRP(Watts)                            | 0.1183 | 0.1148 | 0.1114 | 0.1175 | 0.1169 | 0.1132 | 0.1197 | 0.1186 | 0.1148 |

| LTE Band 66 (GT - LC = -2.00 dB) 16QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 10M    |        |        | 15M    |        |        | 20M    |        |        |
| Channel                                | 132022 | 132322 | 132622 | 132047 | 132322 | 132597 | 132072 | 132322 | 132572 |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (Mid)  |
| Frequency                              | 1715   | 1745   | 1775   | 1717.5 | 1745   | 1772.5 | 1720   | 1745   | 1770   |
| (MHz)                                  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 22.78  | 22.79  | 22.70  | 22.70  | 22.72  | 22.63  | 22.78  | 22.79  | 22.74  |
| Conducted Power (Watts)                | 0.1897 | 0.1901 | 0.1862 | 0.1862 | 0.1871 | 0.1832 | 0.1897 | 0.1901 | 0.1879 |
| EIRP(dBm)                              | 20.78  | 20.79  | 20.70  | 20.70  | 20.72  | 20.63  | 20.78  | 20.79  | 20.74  |
| EIRP(Watts)                            | 0.1197 | 0.1199 | 0.1175 | 0.1175 | 0.1180 | 0.1156 | 0.1197 | 0.1199 | 0.1186 |

| LTE Band 66 (GT - LC = -2.00 dB) 64QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel                                | 131979 | 132322 | 132665 | 131987 | 132322 | 132657 | 131997 | 132322 | 132647 |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency                              | 1710.7 | 1745   | 1779.3 | 1711.5 | 1745   | 1778.5 | 1712.5 | 1745   | 1777.5 |
| (MHz)                                  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 21.62  | 21.55  | 21.40  | 21.60  | 21.55  | 21.47  | 21.68  | 21.61  | 21.57  |
| Conducted Power (Watts)                | 0.1452 | 0.1429 | 0.1380 | 0.1445 | 0.1429 | 0.1403 | 0.1472 | 0.1449 | 0.1435 |
| EIRP(dBm)                              | 19.62  | 19.55  | 19.40  | 19.60  | 19.55  | 19.47  | 19.68  | 19.61  | 19.57  |
| EIRP(Watts)                            | 0.0916 | 0.0902 | 0.0871 | 0.0912 | 0.0902 | 0.0885 | 0.0929 | 0.0914 | 0.0906 |

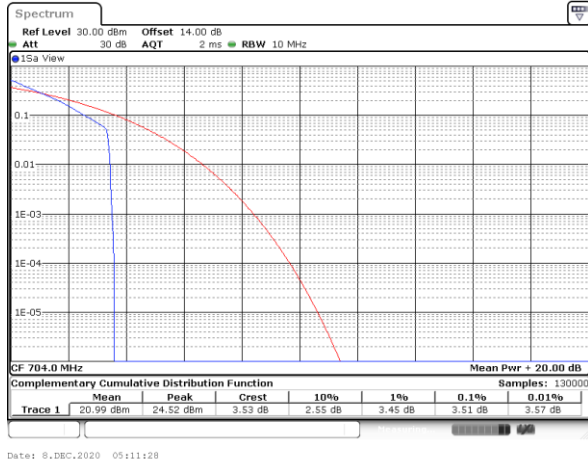
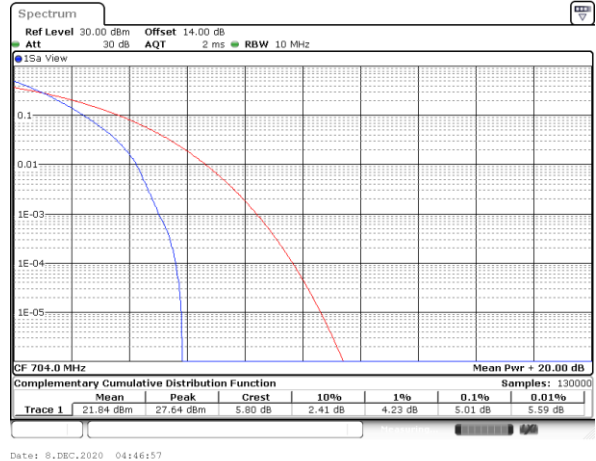
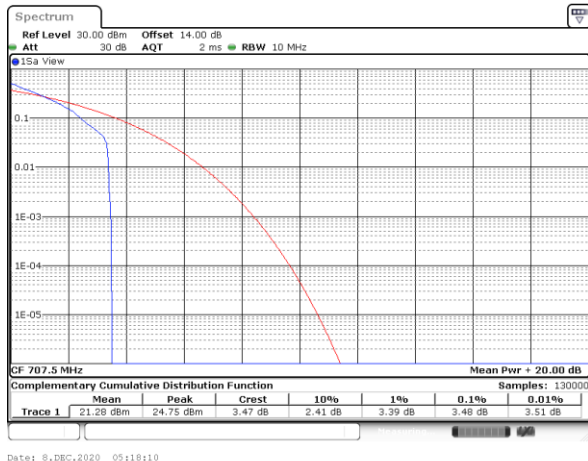
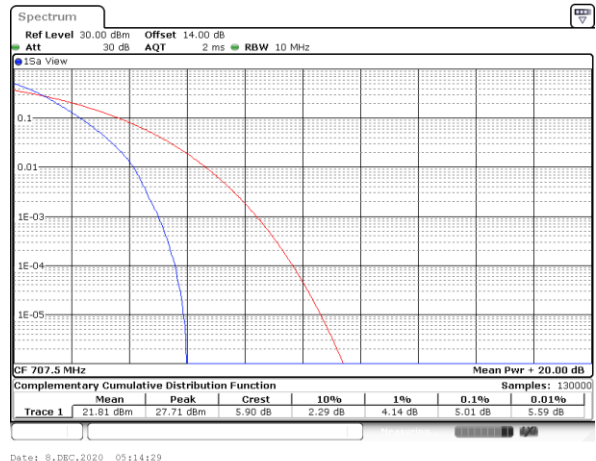
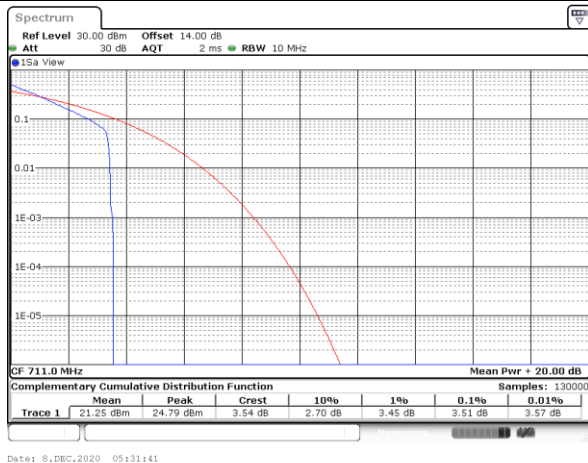
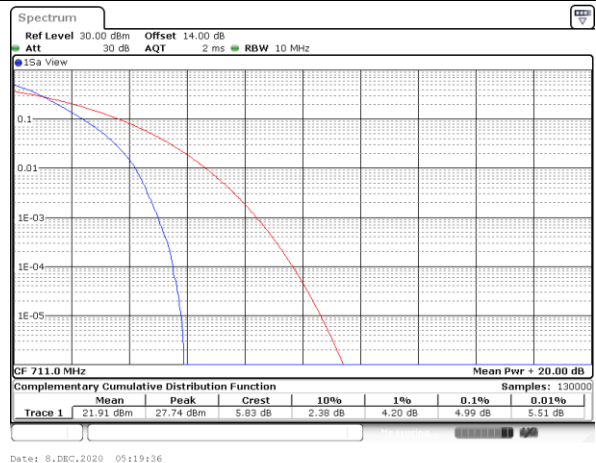
| LTE Band 66 (GT - LC = -2.00 dB) 64QAM |        |        |        |        |        |        |        |        |        |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth                              | 10M    |        |        | 15M    |        |        | 20M    |        |        |
| Channel                                | 132022 | 132322 | 132622 | 132047 | 132322 | 132597 | 132072 | 132322 | 132572 |
|                                        | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (Mid)  |
| Frequency                              | 1715   | 1745   | 1775   | 1717.5 | 1745   | 1772.5 | 1720   | 1745   | 1770   |
| (MHz)                                  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                  | 21.76  | 21.59  | 21.57  | 21.68  | 21.69  | 21.56  | 22.78  | 22.79  | 22.74  |
| Conducted Power (Watts)                | 0.1500 | 0.1442 | 0.1435 | 0.1472 | 0.1476 | 0.1432 | 0.1897 | 0.1901 | 0.1879 |
| EIRP(dBm)                              | 19.76  | 19.59  | 19.57  | 19.68  | 19.69  | 19.56  | 20.78  | 20.79  | 20.74  |
| EIRP(Watts)                            | 0.0946 | 0.0910 | 0.0906 | 0.0929 | 0.0931 | 0.0904 | 0.1197 | 0.1199 | 0.1186 |

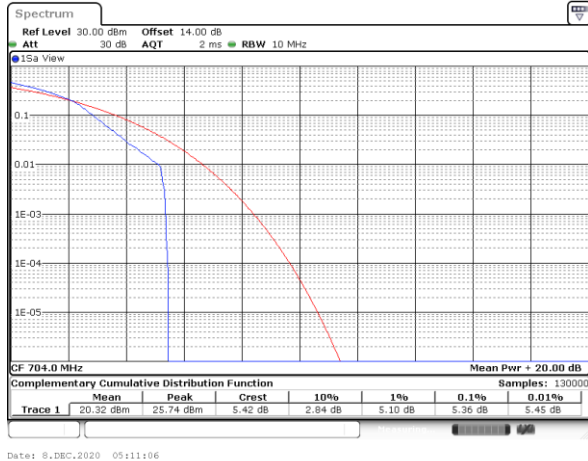
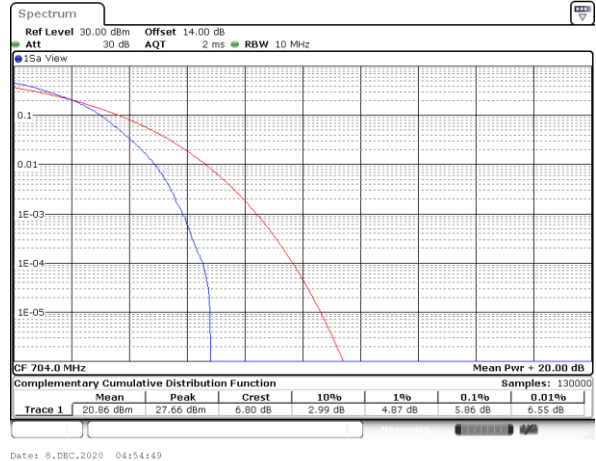
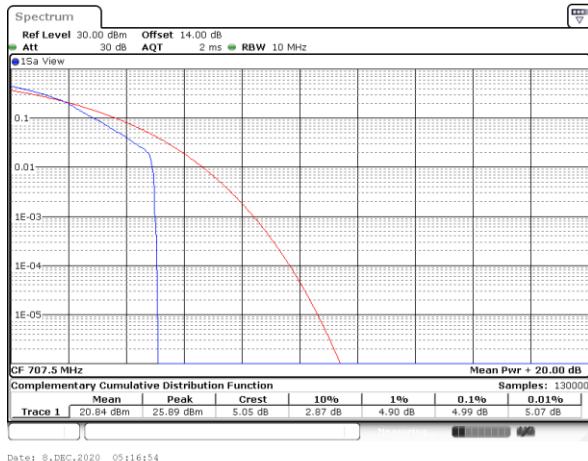
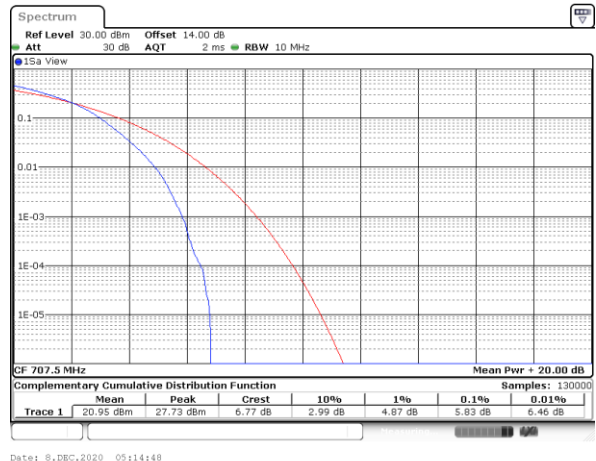
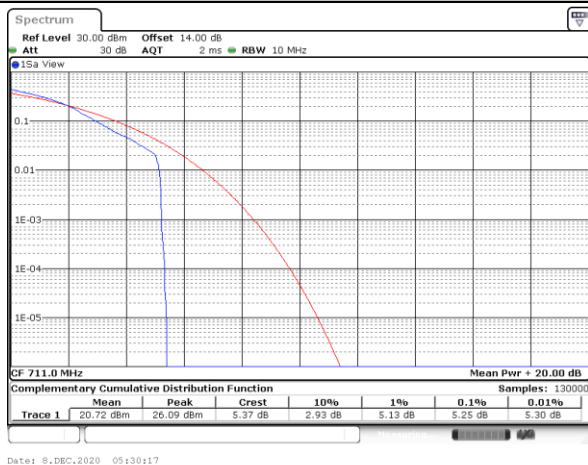
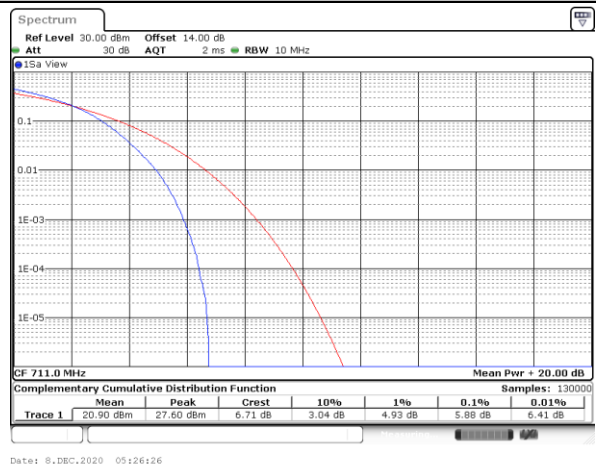


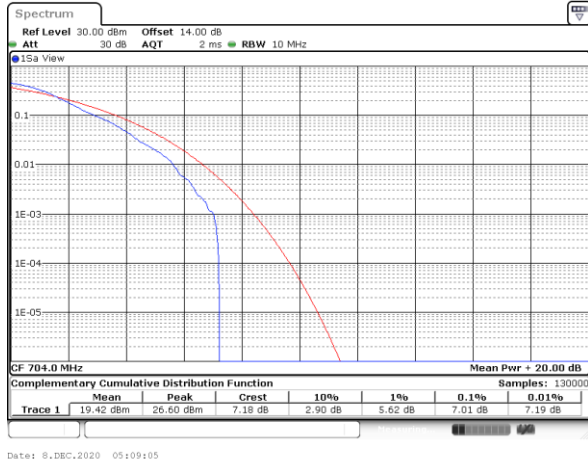
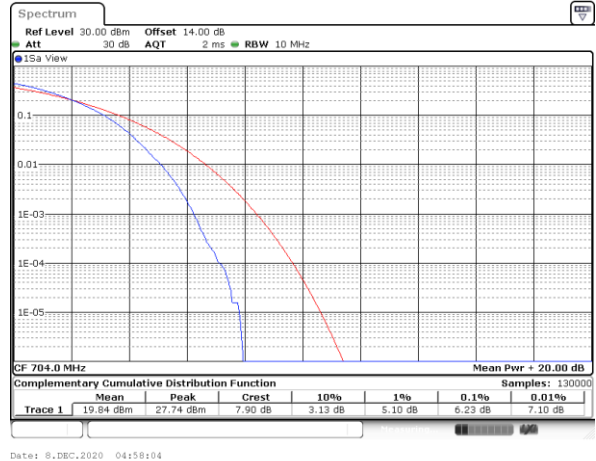
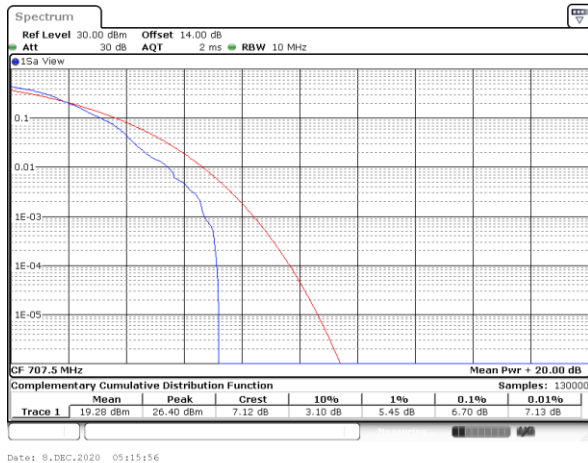
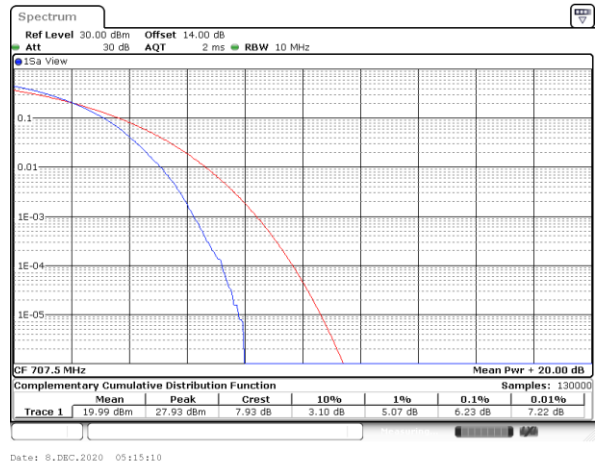
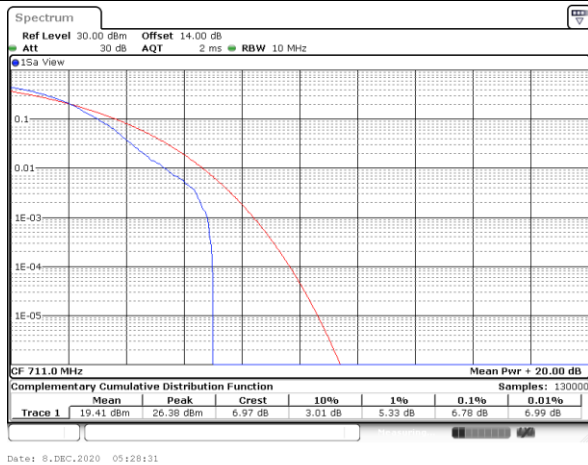
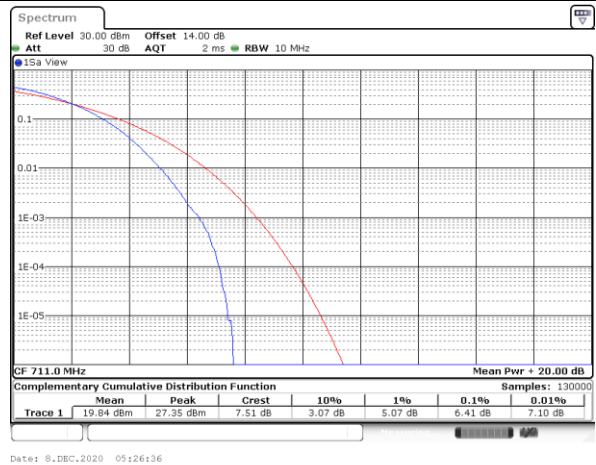
## LTE Band 12

## Peak-to-Average Ratio

| Mode       | LTE Band 12 / 10MHz |         |       |         |             |
|------------|---------------------|---------|-------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB   | Full RB | Result      |
| Lowest CH  | 3.51                | 5.01    | 5.36  | 5.86    | PASS        |
| Middle CH  | 3.48                | 5.01    | 4.99  | 5.83    |             |
| Highest CH | 3.51                | 4.99    | 5.25  | 5.88    |             |
| Mode       | LTE Band 12 / 10MHz |         |       |         |             |
| Mod.       | 64QAM               |         |       |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB |       |         | Result      |
| Lowest CH  | 7.01                | 6.23    | -     | -       | PASS        |
| Middle CH  | 6.70                | 6.23    | -     | -       |             |
| Highest CH | 6.78                | 6.41    | -     | -       |             |

**LTE Band 12 / 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 12 / 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 12 / 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**

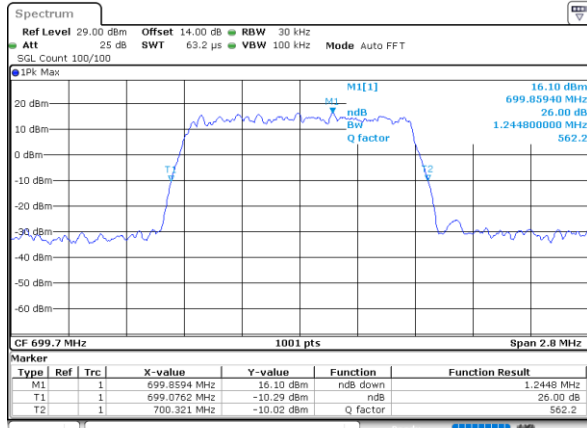
| Mode       | LTE Band 12 : 26dB BW(MHz) |       |       |       |       |       |       |       |
|------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|
| BW         | 1.4MHz                     |       | 3MHz  |       | 5MHz  |       | 10MHz |       |
| Mod.       | QPSK                       | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Lowest CH  | 1.24                       | 1.21  | 3.02  | 3.04  | 4.96  | 4.89  | 9.89  | 9.77  |
| Middle CH  | 1.23                       | 1.24  | 3.06  | 3.05  | 4.92  | 4.91  | 9.79  | 9.63  |
| Highest CH | 1.24                       | 1.25  | 3.01  | 3.02  | 4.83  | 4.95  | 9.73  | 9.79  |
| Mode       | LTE Band 12 : 26dB BW(MHz) |       |       |       |       |       |       |       |
| BW         | 1.4MHz                     |       | 3MHz  |       | 5MHz  |       | 10MHz |       |
| Mod.       | 64QAM                      |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | 1.22                       | -     | 3.01  | -     | 4.93  | -     | 9.79  | -     |
| Middle CH  | 1.24                       | -     | 3.02  | -     | 4.96  | -     | 9.81  | -     |
| Highest CH | 1.23                       | -     | 2.99  | -     | 4.89  | -     | 9.83  | -     |





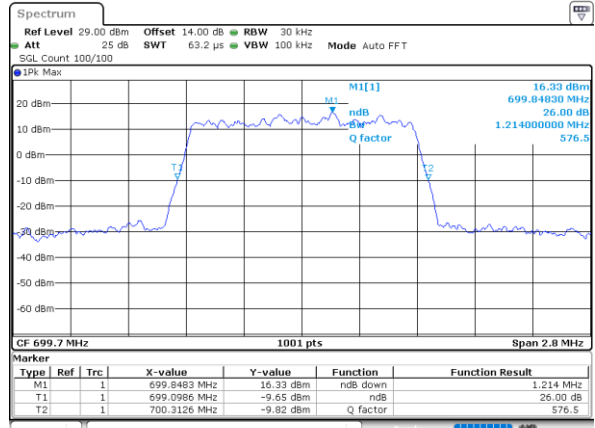
## LTE Band 12

## Lowest Channel / 1.4MHz / QPSK



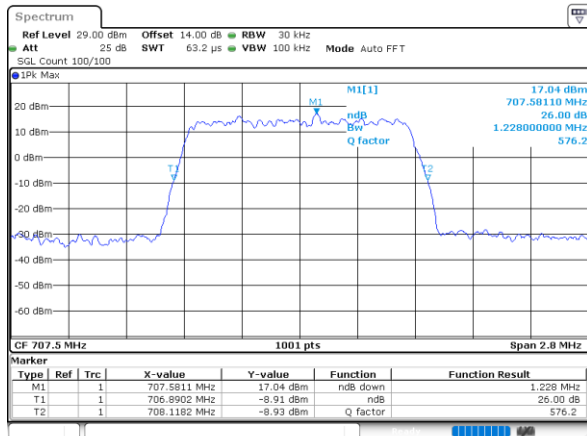
Date: 8,DEC,2020 14:20:52

## Lowest Channel / 1.4MHz / 16QAM



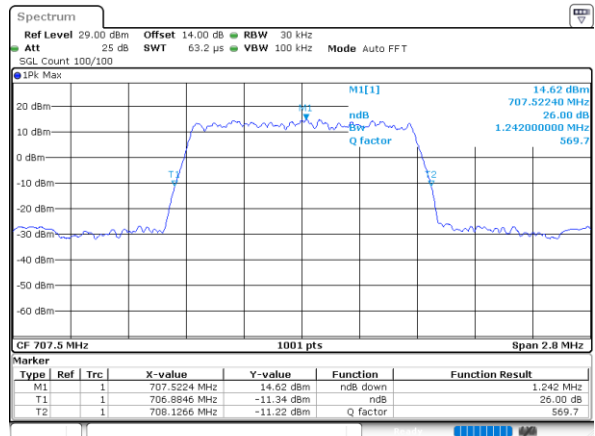
Date: 8,DEC,2020 14:20:40

## Middle Channel / 1.4MHz / QPSK



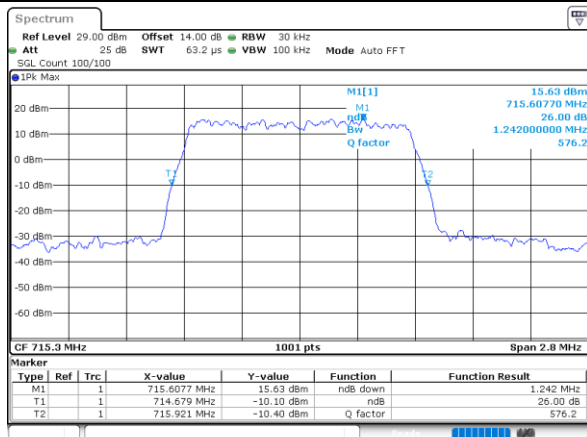
Date: 8,DEC,2020 14:20:11

## Middle Channel / 1.4MHz / 16QAM



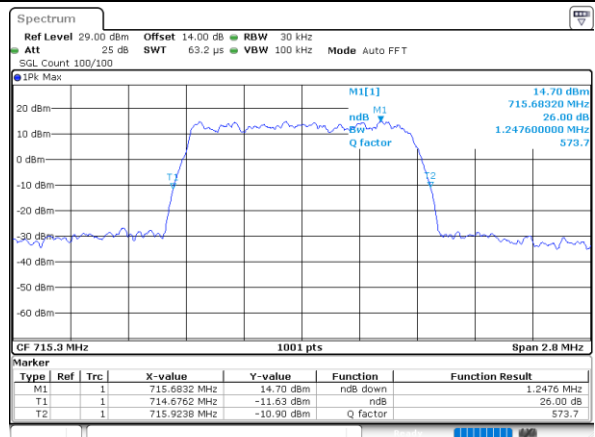
Date: 8,DEC,2020 14:20:22

## Highest Channel / 1.4MHz / QPSK



Date: 8,DEC,2020 14:26:56

## Highest Channel / 1.4MHz / 16QAM

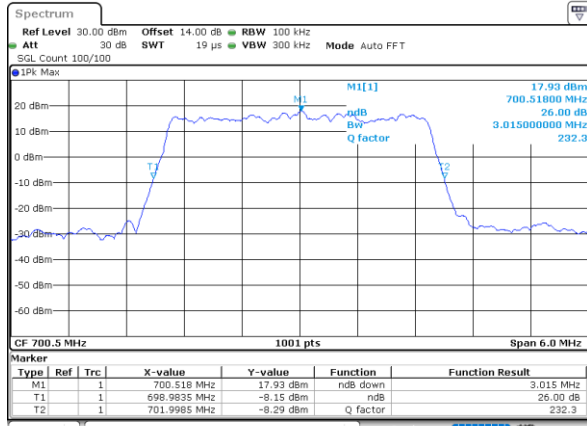


Date: 8,DEC,2020 14:26:45

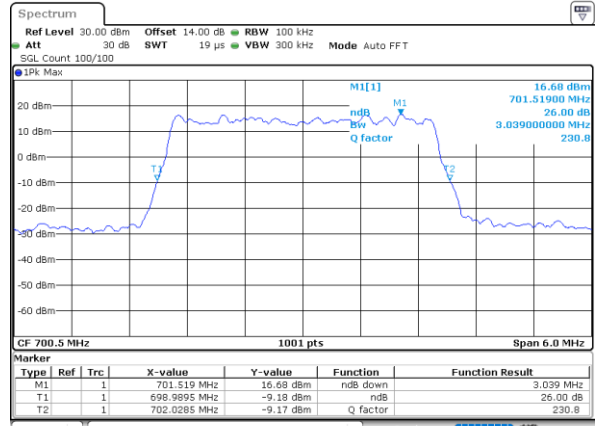


## LTE Band 12

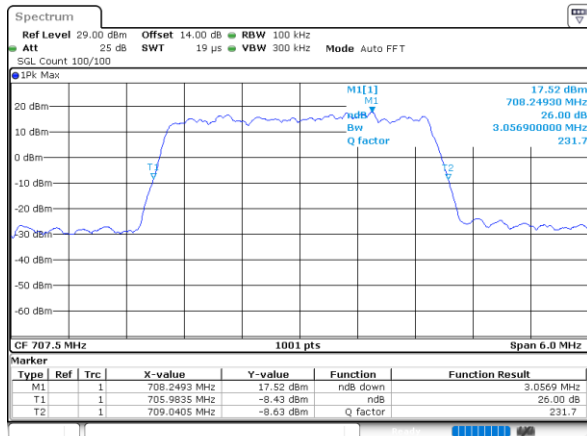
## Lowest Channel / 3MHz / QPSK



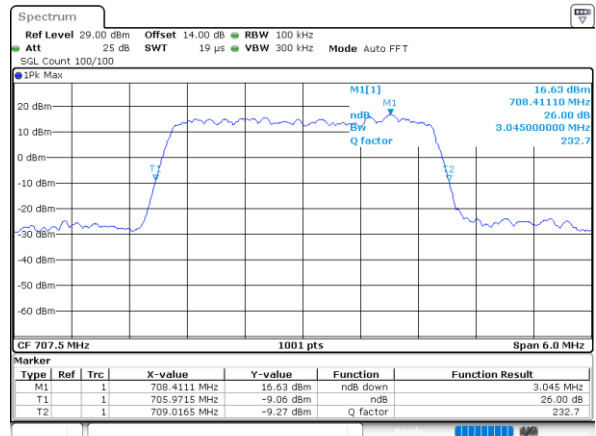
## Lowest Channel / 3MHz / 16QAM



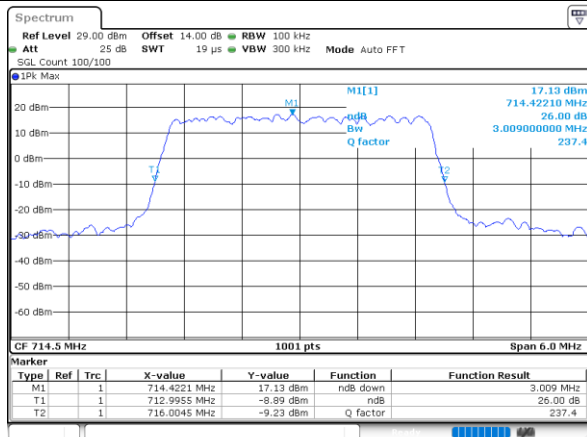
## Middle Channel / 3MHz / QPSK



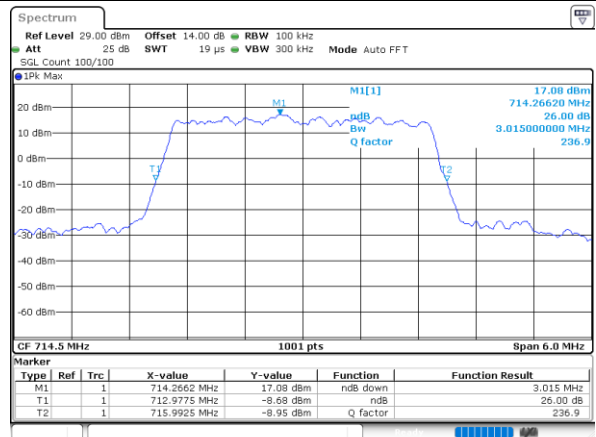
## Middle Channel / 3MHz / 16QAM



## Highest Channel / 3MHz / QPSK



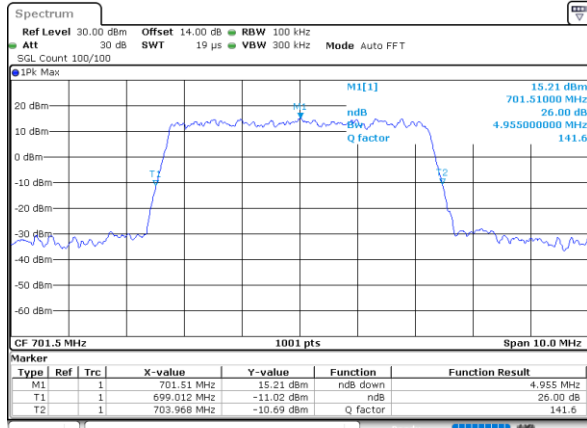
## Highest Channel / 3MHz / 16QAM





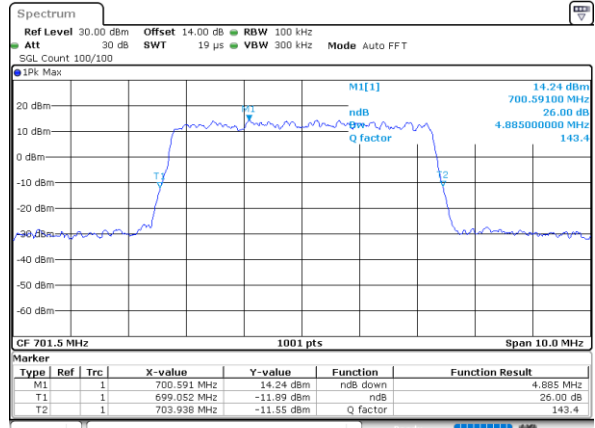
## LTE Band 12

## Lowest Channel / 5MHz / QPSK



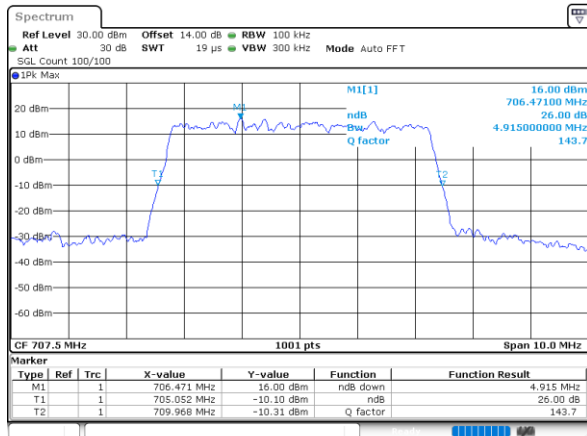
Date: 8,DEC,2020 05:42:31

## Lowest Channel / 5MHz / 16QAM



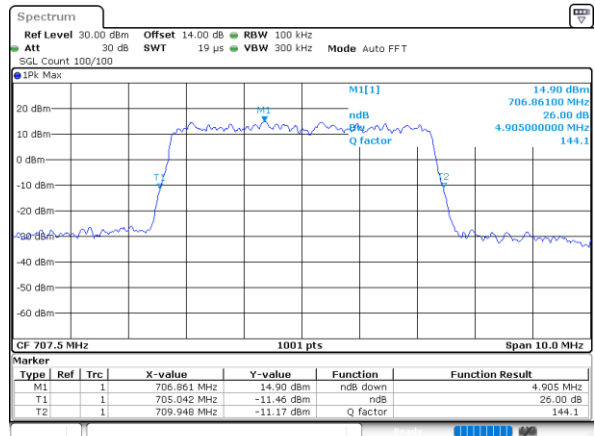
Date: 8,DEC,2020 05:40:02

## Middle Channel / 5MHz / QPSK



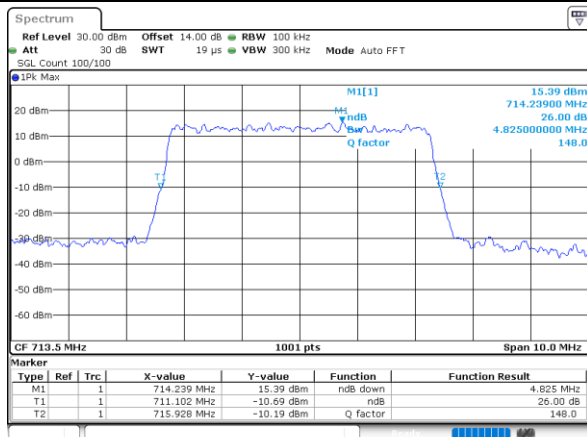
Date: 8,DEC,2020 05:57:20

## Middle Channel / 5MHz / 16QAM



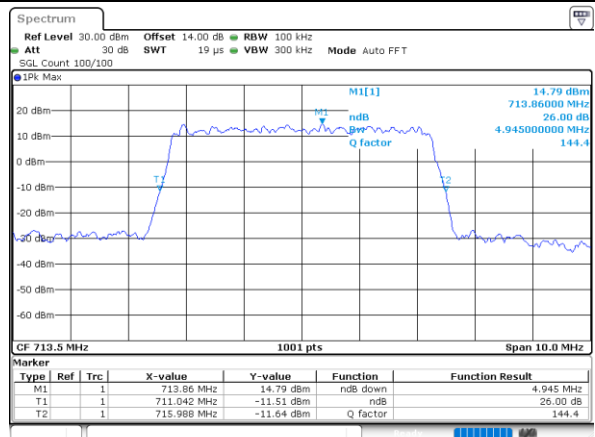
Date: 8,DEC,2020 05:57:35

## Highest Channel / 5MHz / QPSK



Date: 8,DEC,2020 07:23:53

## Highest Channel / 5MHz / 16QAM

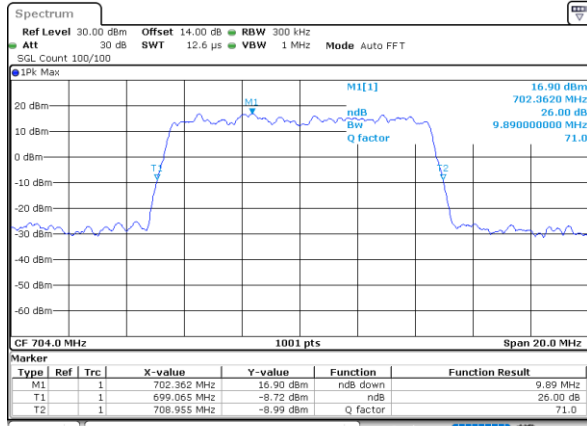


Date: 8,DEC,2020 07:38:01

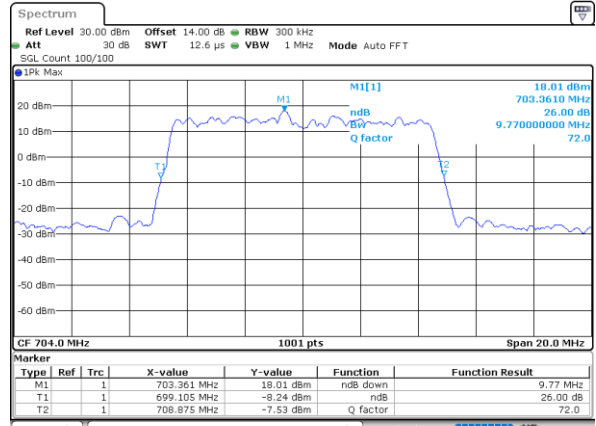


## LTE Band 12

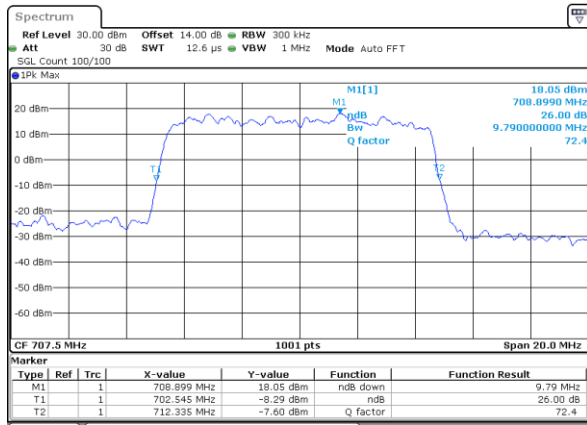
## Lowest Channel / 10MHz / QPSK



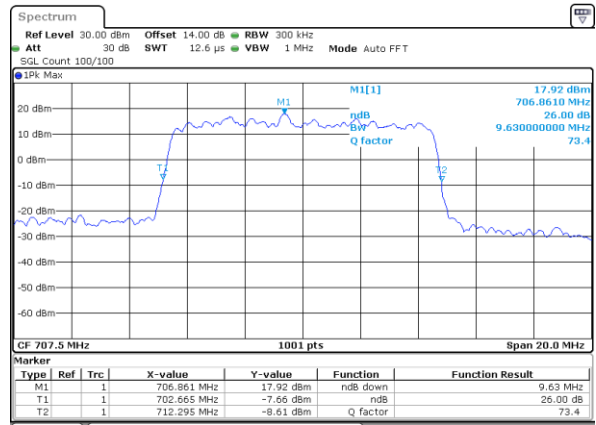
## Lowest Channel / 10MHz / 16QAM



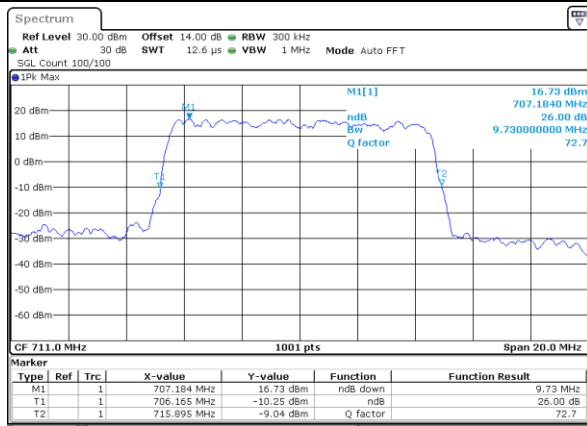
## Middle Channel / 10MHz / QPSK



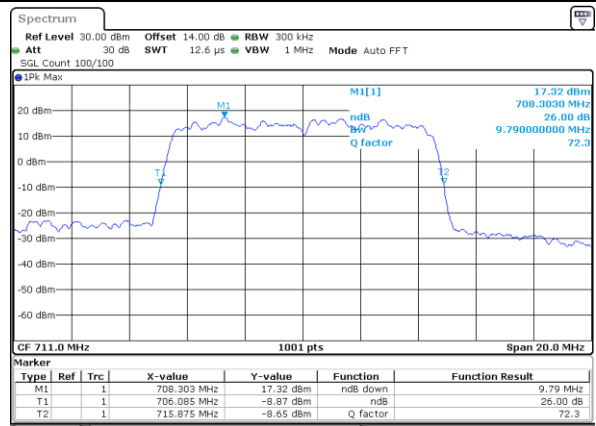
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



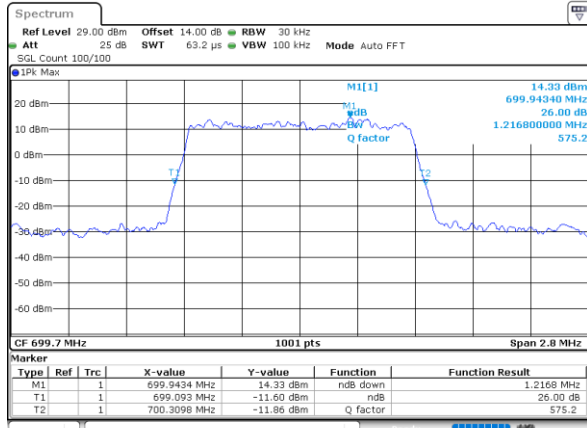
## Highest Channel / 10MHz / 16QAM





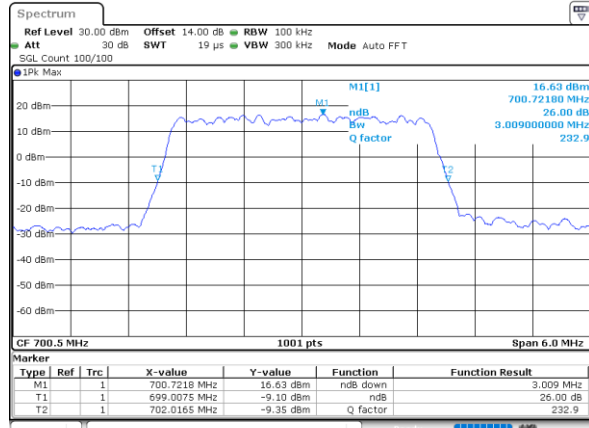
## LTE Band 12

## Lowest Channel / 1.4MHz / 64QAM



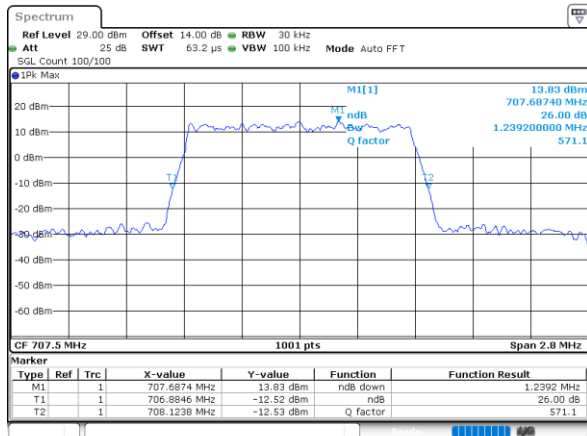
Date: 8,DEC,2020 14:34:21

## Lowest Channel / 3MHz / 64QAM



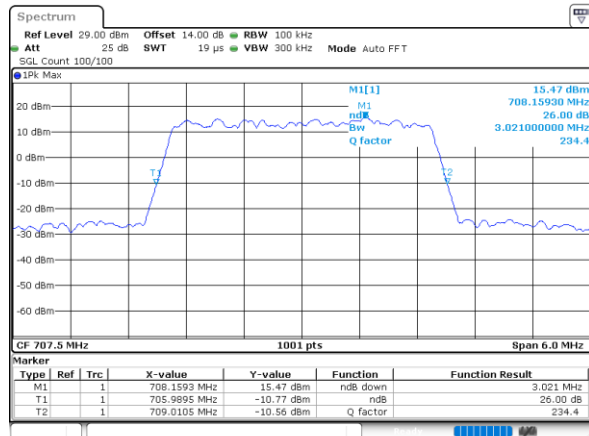
Date: 8,DEC,2020 07:50:46

## Middle Channel / 1.4MHz / 64QAM



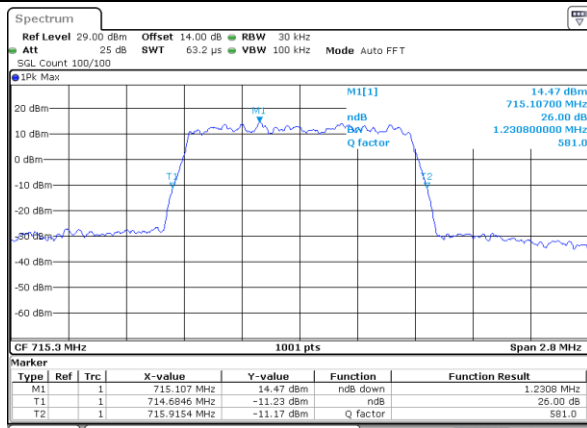
Date: 8,DEC,2020 14:36:36

## Middle Channel / 3MHz / 64QAM



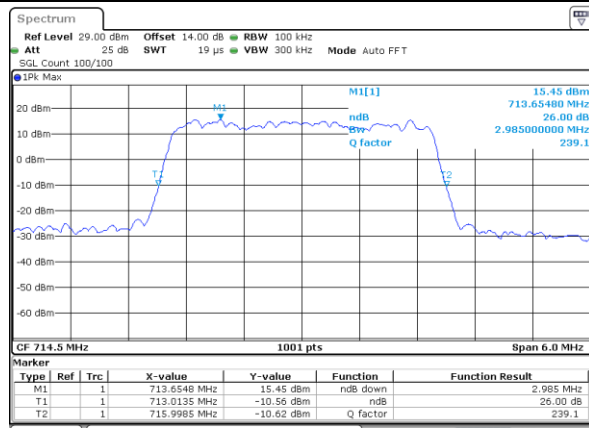
Date: 8,DEC,2020 14:13:17

## Highest Channel / 1.4MHz / 64QAM



Date: 8,DEC,2020 14:37:23

## Highest Channel / 3MHz / 64QAM

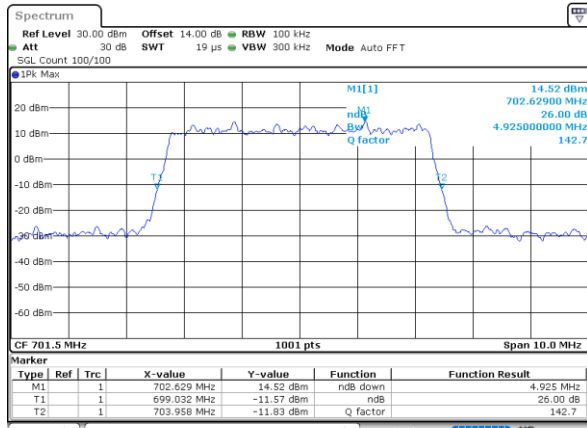


Date: 8,DEC,2020 14:14:04

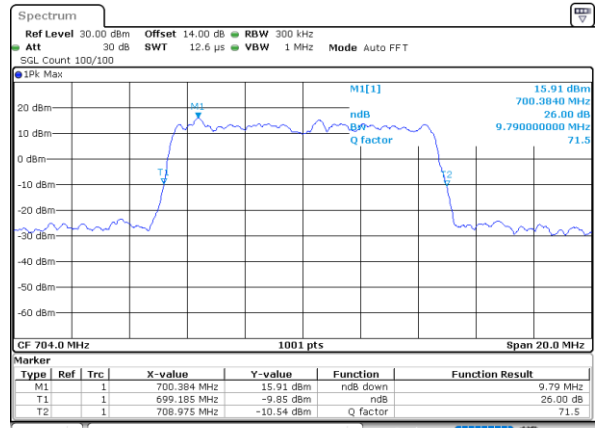


## LTE Band 12

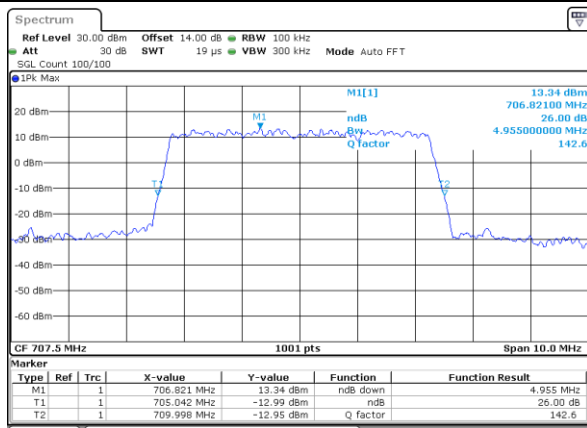
## Lowest Channel / 5MHz / 64QAM



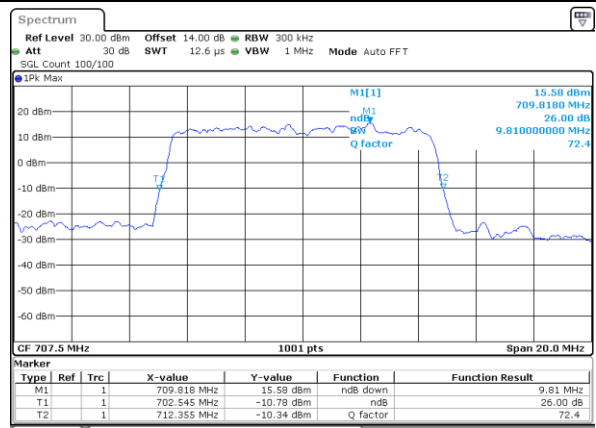
## Lowest Channel / 10MHz / 64QAM



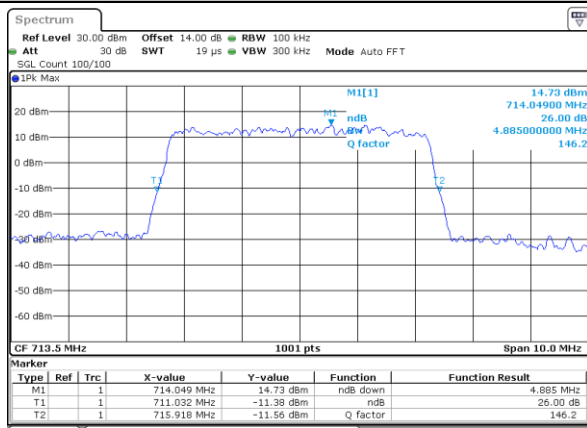
## Middle Channel / 5MHz / 64QAM



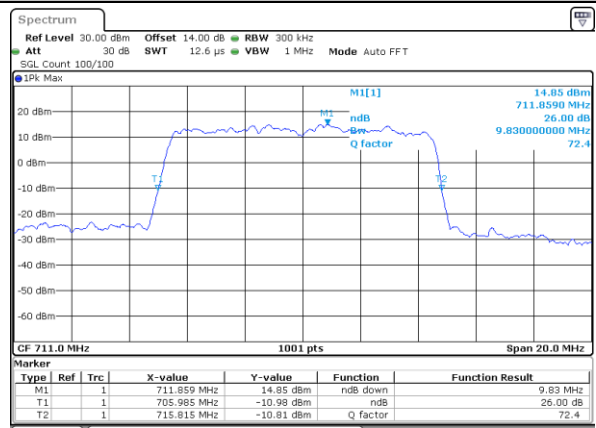
## Middle Channel / 10MHz / 64QAM



## Highest Channel / 5MHz / 64QAM



## Highest Channel / 10MHz / 64QAM



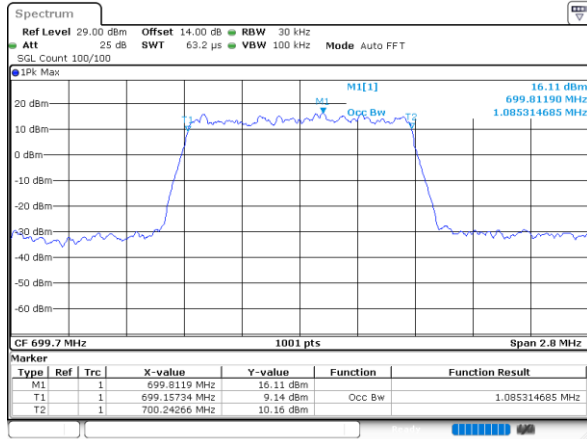
**Occupied Bandwidth**

| Mode       | LTE Band 12 : 99%OBW(MHz) |       |       |       |       |       |       |       |
|------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       |
| Mod.       | QPSK                      | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM | QPSK  | 16QAM |
| Lowest CH  | 1.09                      | 1.09  | 2.72  | 2.72  | 4.49  | 4.48  | 9.03  | 9.07  |
| Middle CH  | 1.09                      | 1.09  | 2.70  | 2.73  | 4.50  | 4.48  | 9.01  | 8.95  |
| Highest CH | 1.09                      | 1.09  | 2.72  | 2.72  | 4.49  | 4.49  | 8.99  | 8.99  |
| Mode       | LTE Band 12 : 99%OBW(MHz) |       |       |       |       |       |       |       |
| BW         | 1.4MHz                    |       | 3MHz  |       | 5MHz  |       | 10MHz |       |
| Mod.       | 64QAM                     |       | 64QAM |       | 64QAM |       | 64QAM |       |
| Lowest CH  | 1.09                      | -     | 2.73  | -     | 4.49  | -     | 8.97  | -     |
| Middle CH  | 1.09                      | -     | 2.72  | -     | 4.53  | -     | 9.03  | -     |
| Highest CH | 1.09                      | -     | 2.72  | -     | 4.50  | -     | 8.99  | -     |



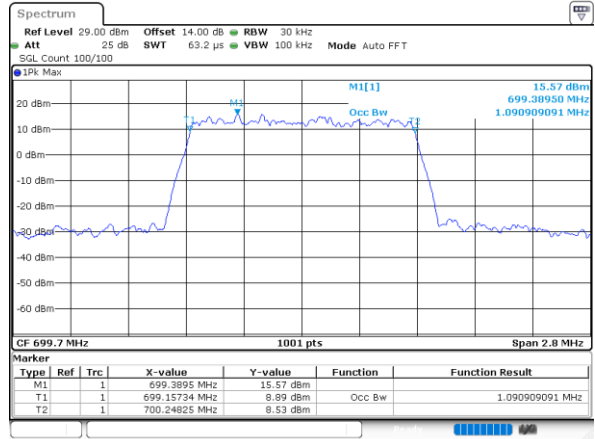
## LTE Band 12

## Lowest Channel / 1.4MHz / QPSK



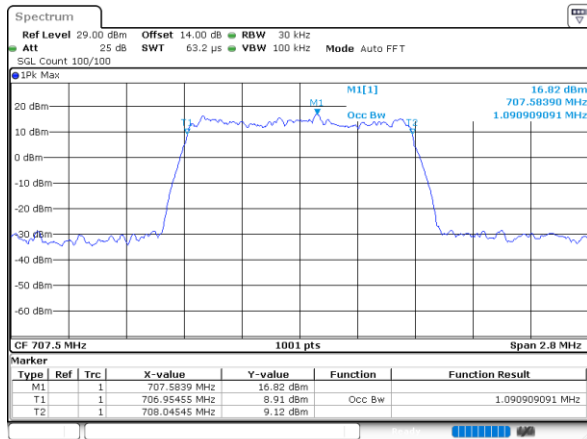
Date: 8,DEC,2020 14:20:18

## Lowest Channel / 1.4MHz / 16QAM



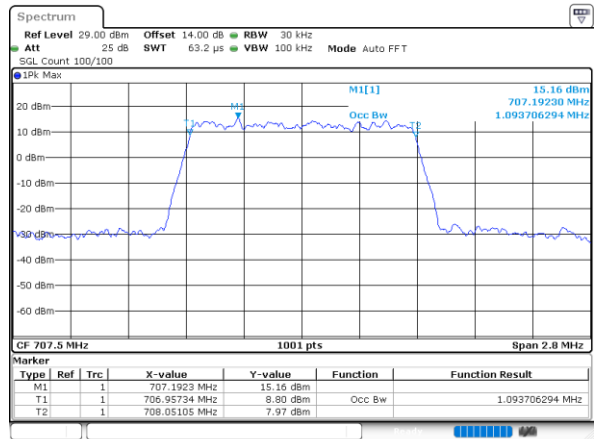
Date: 8,DEC,2020 14:20:29

## Middle Channel / 1.4MHz / QPSK



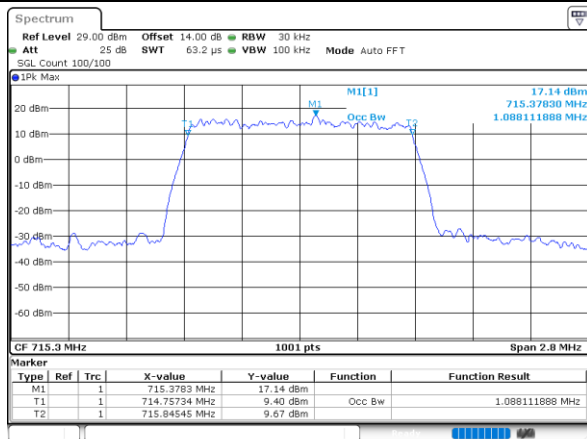
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## Middle Channel / 1.4MHz / 16QAM



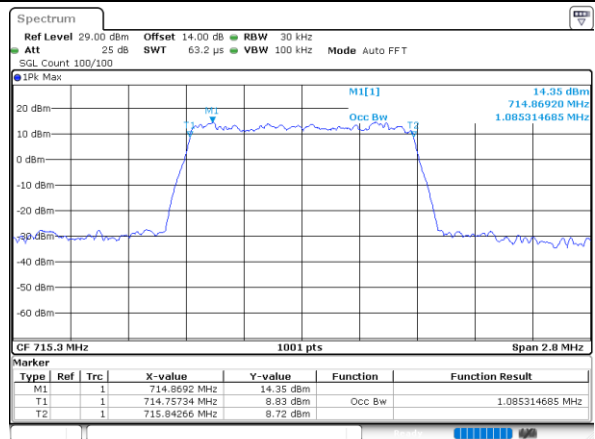
Date: 8,DEC,2020 14:24:48

## Highest Channel / 1.4MHz / QPSK



Date: 8,DEC,2020 14:26:22

## Highest Channel / 1.4MHz / 16QAM



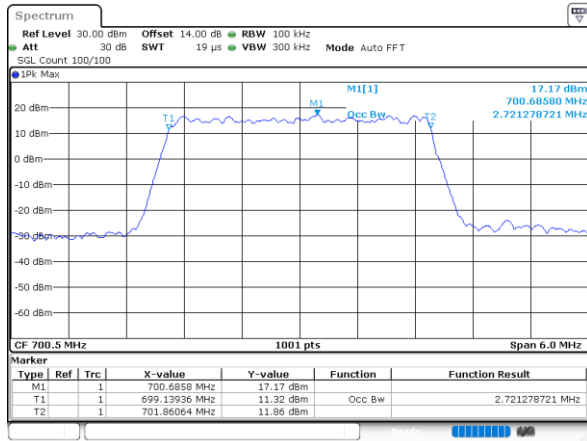
Date: 8,DEC,2020 14:26:33



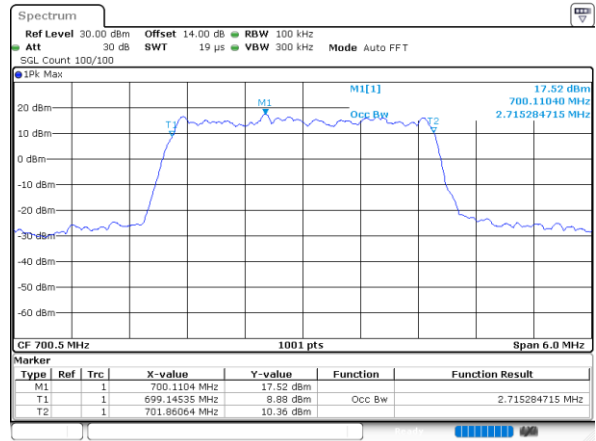


## LTE Band 12

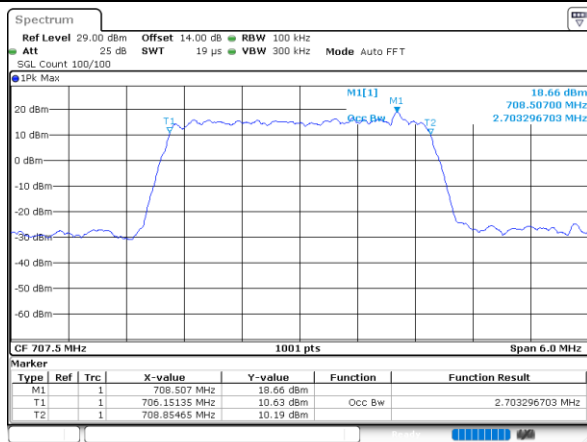
## Lowest Channel / 3MHz / QPSK



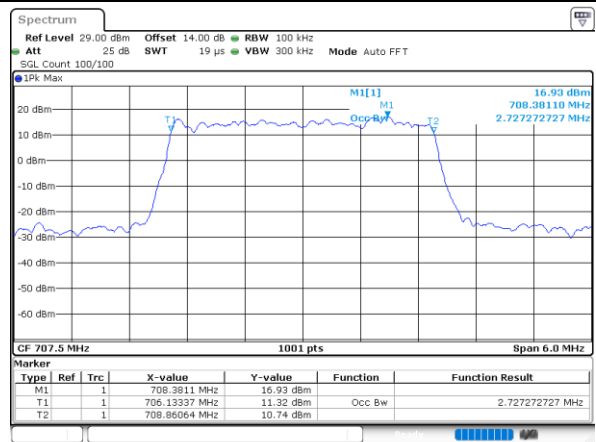
## Lowest Channel / 3MHz / 16QAM



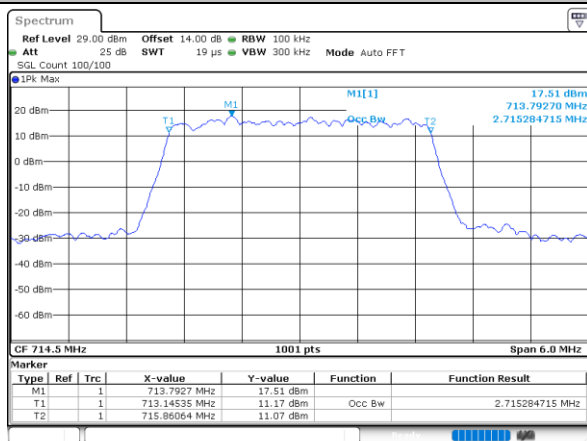
## Middle Channel / 3MHz / QPSK



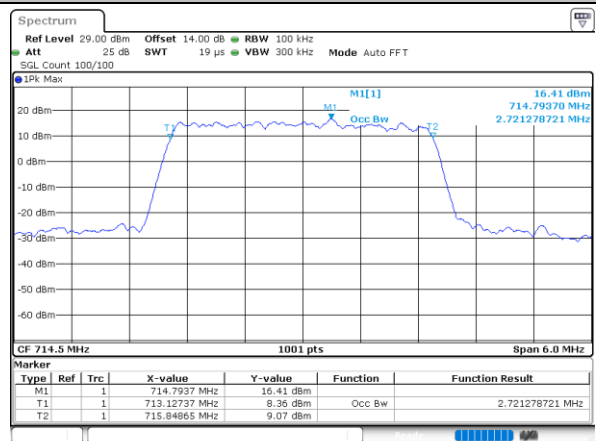
## Middle Channel / 3MHz / 16QAM



## Highest Channel / 3MHz / QPSK



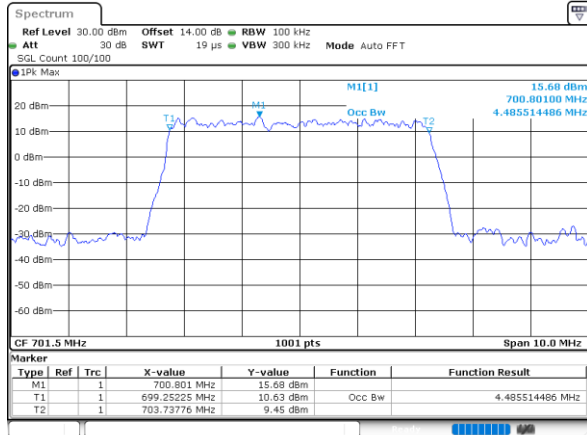
## Highest Channel / 3MHz / 16QAM



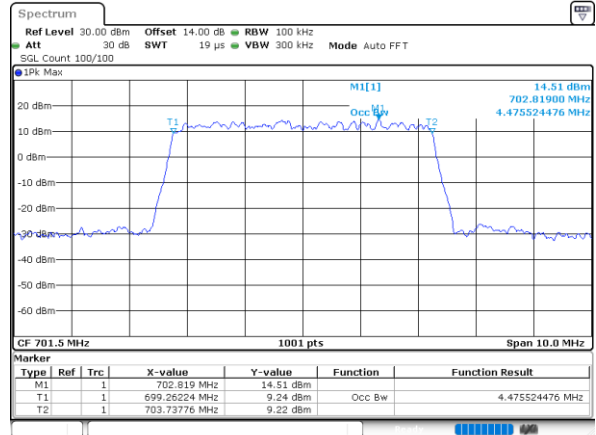


## LTE Band 12

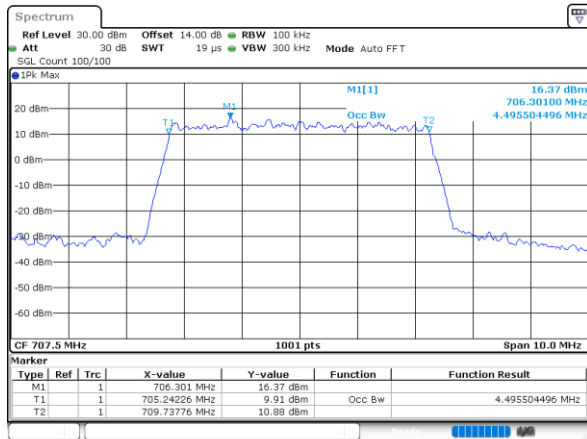
## Lowest Channel / 5MHz / QPSK



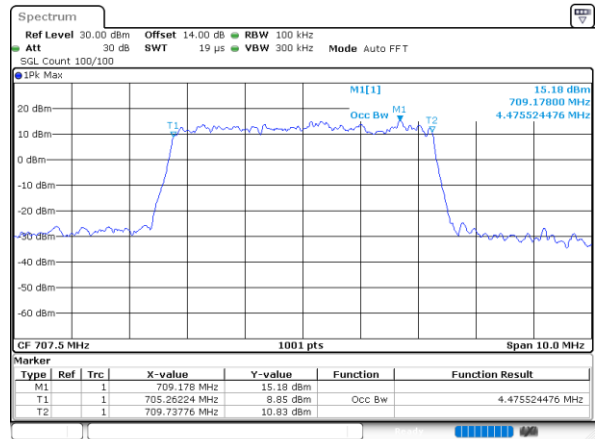
## Lowest Channel / 5MHz / 16QAM



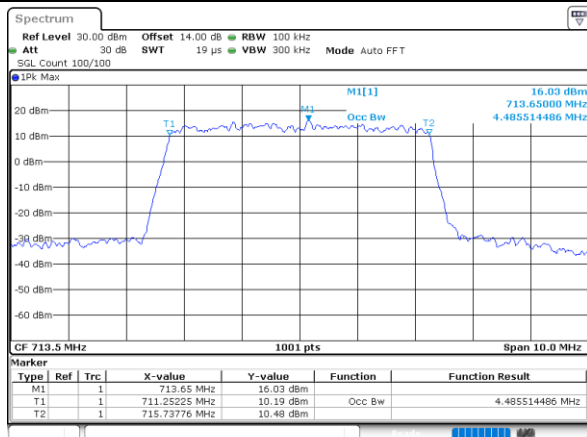
## Middle Channel / 5MHz / QPSK



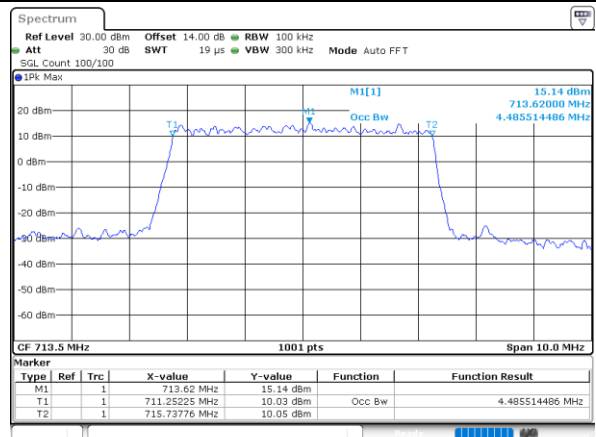
## Middle Channel / 5MHz / 16QAM



## Highest Channel / 5MHz / QPSK



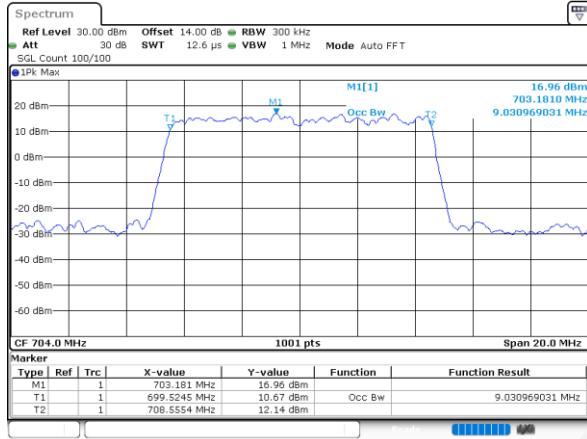
## Highest Channel / 5MHz / 16QAM



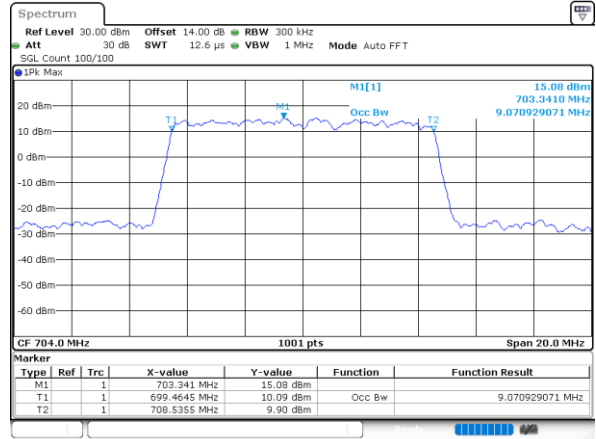


## LTE Band 12

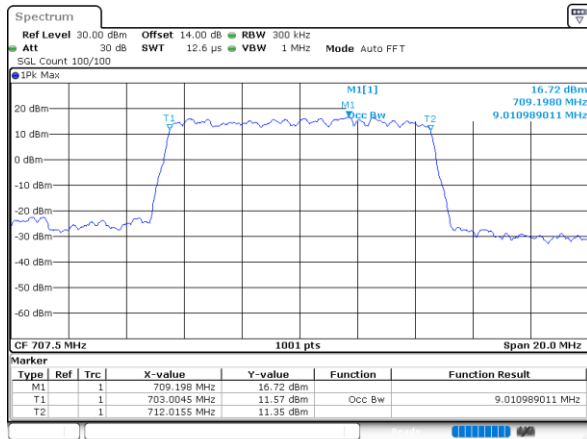
## Lowest Channel / 10MHz / QPSK



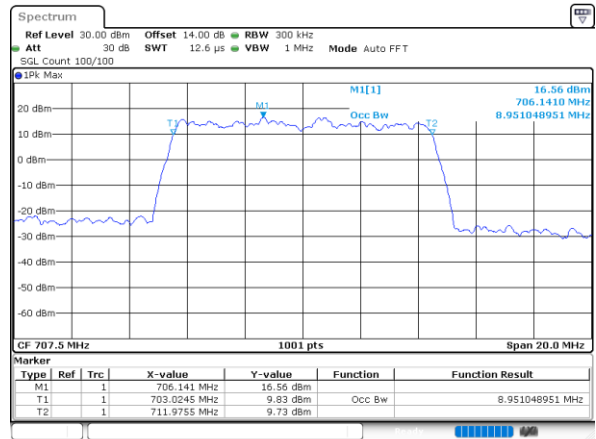
## Lowest Channel / 10MHz / 16QAM



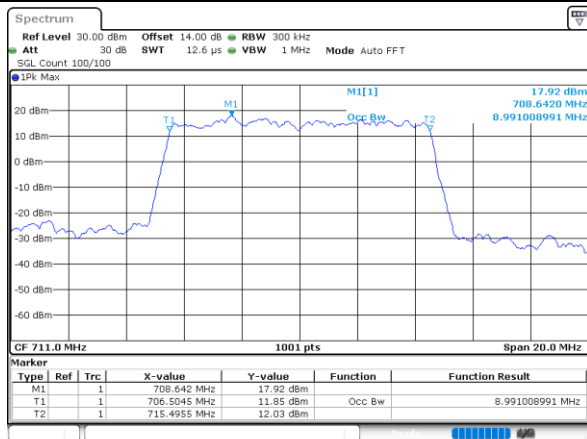
## Middle Channel / 10MHz / QPSK



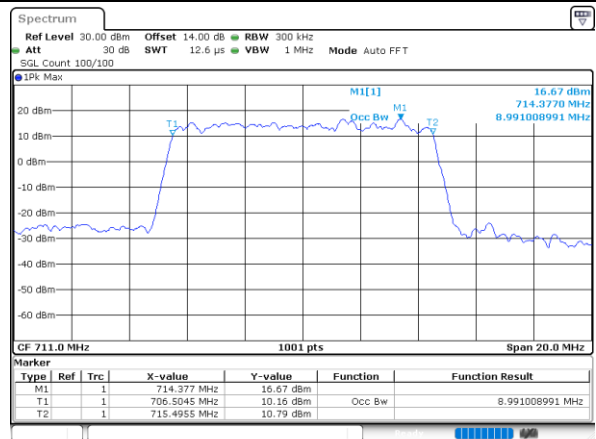
## Middle Channel / 10MHz / 16QAM



## Highest Channel / 10MHz / QPSK



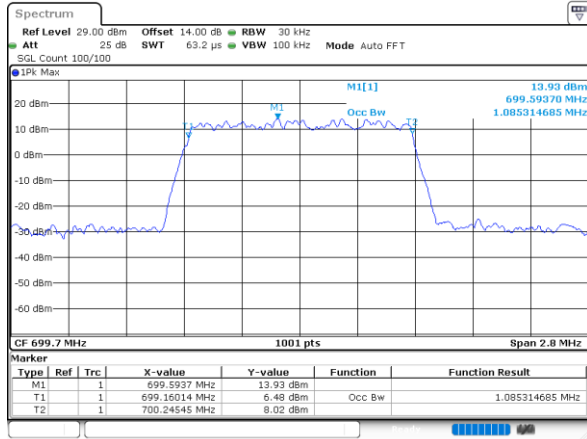
## Highest Channel / 10MHz / 16QAM



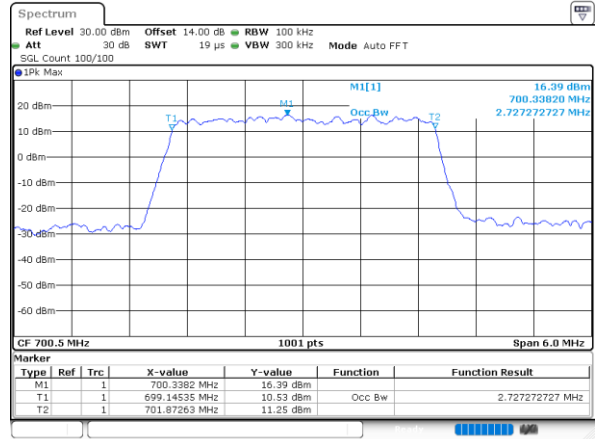


## LTE Band 12

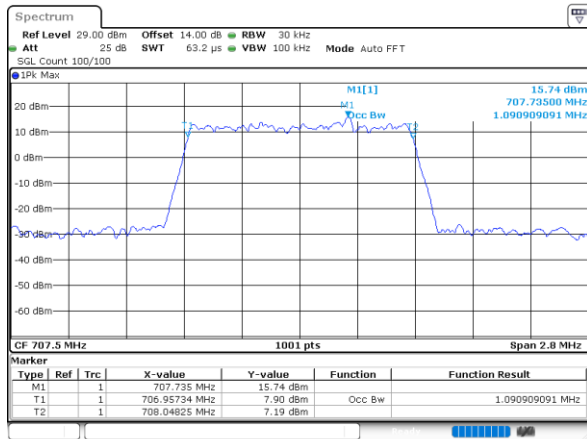
## Lowest Channel / 1.4MHz / 64QAM



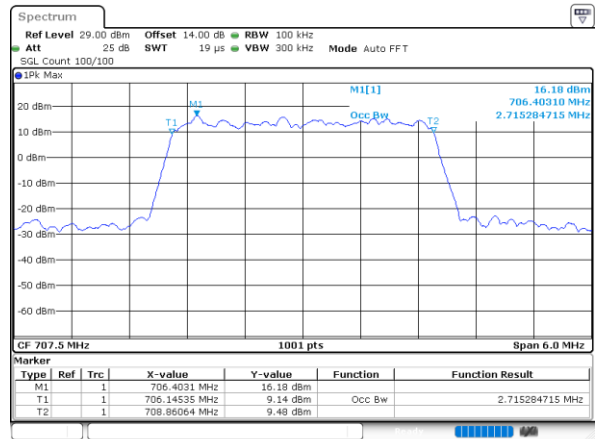
## Lowest Channel / 3MHz / 64QAM



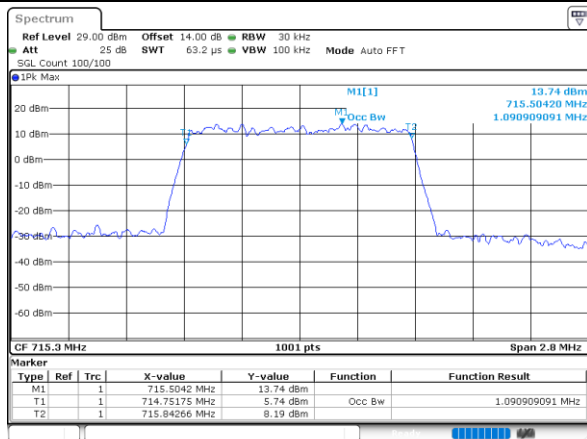
## Middle Channel / 1.4MHz / 64QAM



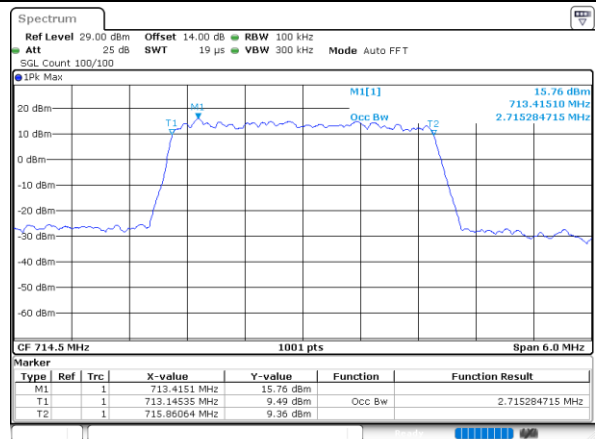
## Middle Channel / 3MHz / 64QAM



## Highest Channel / 1.4MHz / 64QAM



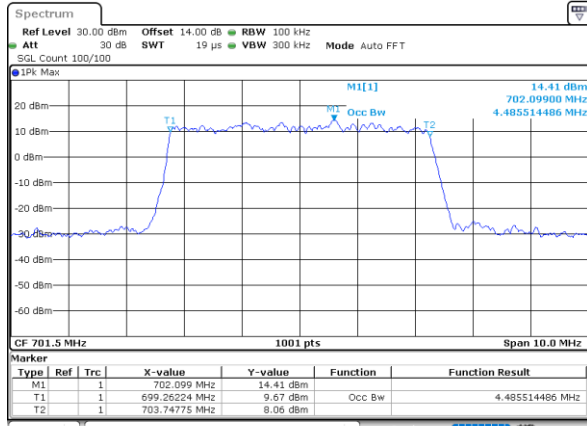
## Highest Channel / 3MHz / 64QAM



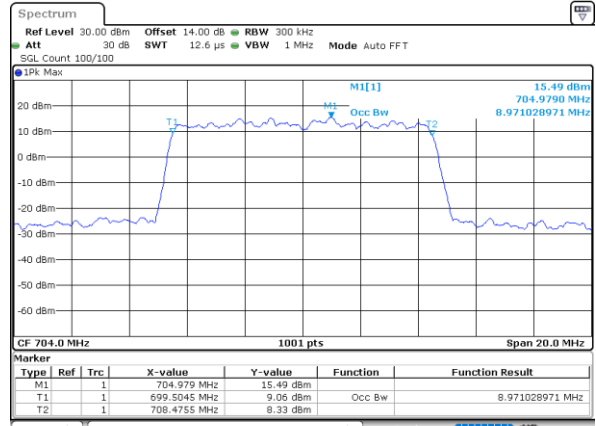


## LTE Band 12

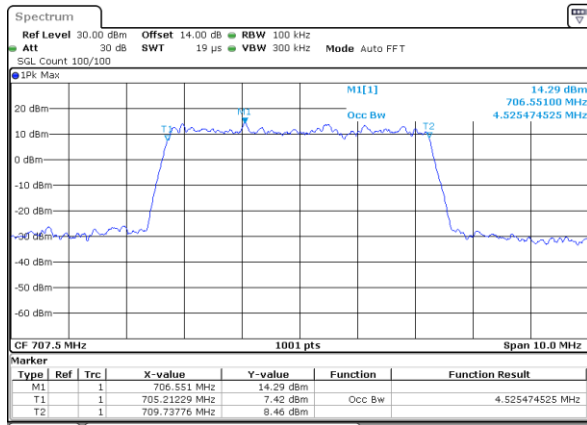
## Lowest Channel / 5MHz / 64QAM



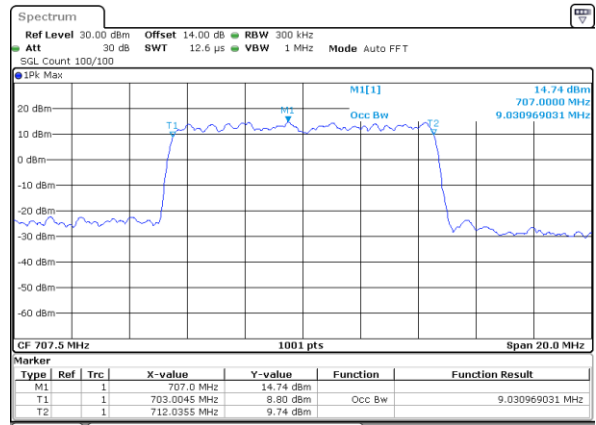
## Lowest Channel / 10MHz / 64QAM



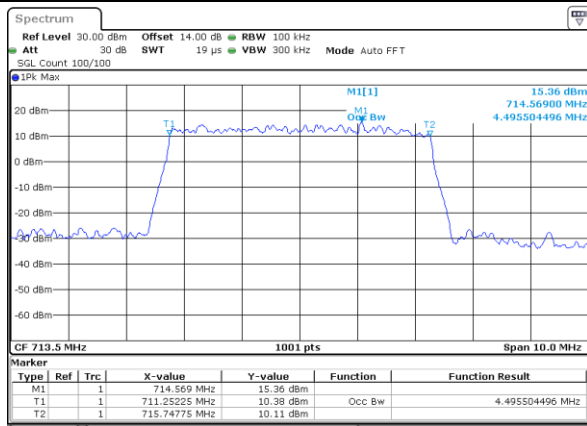
## Middle Channel / 5MHz / 64QAM



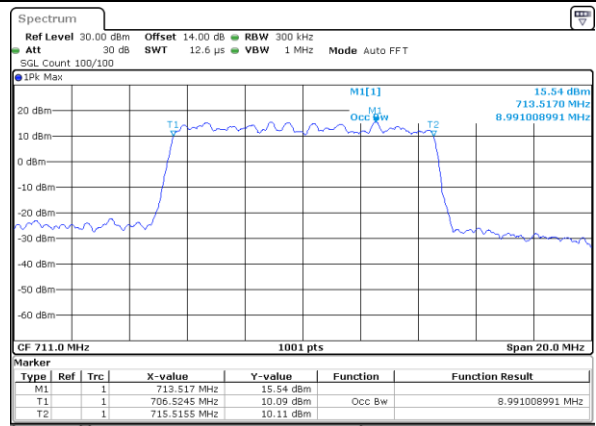
## Middle Channel / 10MHz / 64QAM



## Highest Channel / 5MHz / 64QAM



## Highest Channel / 10MHz / 64QAM

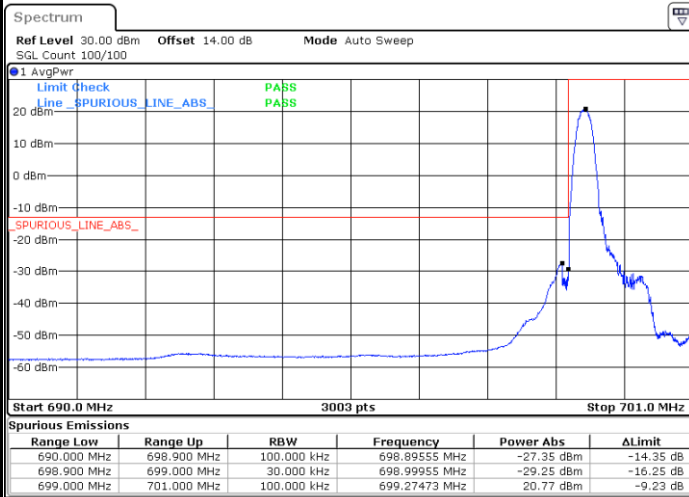




# Conducted Band Edge

## LTE Band 12 / 1.4MHz / QPSK

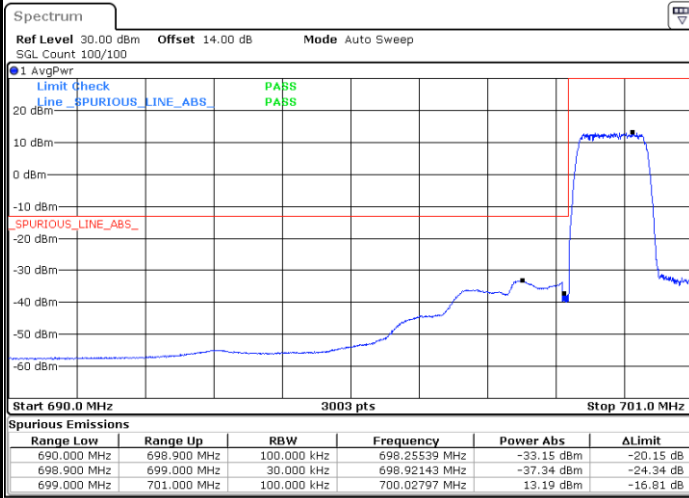
### Lowest Band Edge / 1 RB



### Highest Band Edge / 1RB



### Lowest Band Edge / Full RB



### Highest Band Edge / Full RB

