



# FCC RF Test Report

**APPLICANT** : Xiaomi Communications Co., Ltd.  
**EQUIPMENT** : Mobile Phone  
**BRAND NAME** : MI  
**MODEL NAME** : M1803E1A  
**FCC ID** : 2AFZZ-XME1A  
**STANDARD** : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H), 27(M)  
**CLASSIFICATION** : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Apr. 20, 2018 and completely tested on Jun. 05, 2018. We, Sporton International (Kunshan) 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.

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



Approved by: James Huang / Manager

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## REVISION HISTORY



## 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 (Band 5)  | ERP < 7 Watt                        | PASS   | -  |
|                | §27.50(c)(10)   | Effective Radiated Power (Band 12) (Band 17)                                   | ERP < 3 Watt                        | PASS   | -  |
|                | §24.232(c)<br>§27.50(h)(2)                                    | Equivalent Isotropic Radiated Power (Band 2) (Band 7) (Band 38) (Band 41)      | EIRP < 2Watt                        | PASS   | -  |
|                | §27.50(d)(4)  | Equivalent Isotropic Radiated Power (Band 4)                                   | EIRP < 1Watt                        | PASS   | -  |
| 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(g)<br>§27.53(h) | Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 17) | < 43+10log <sub>10</sub> (P[Watts]) | PASS   | -  |
|                | §27.53(m)(4)  | Conducted Band Edge Measurement (Band 7) (Band 38) (Band 41)                   | §27.53(m)(4)                        |        |  |
| 3.8            | §2.1051<br>§22.917(a)<br>§24.238(a)<br>§27.53(g)<br>§27.53(h) | Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 17)     | < 43+10log <sub>10</sub> (P[Watts]) | PASS   | -  |
|                | §2.1051<br>§27.53(m)(4)                                       | Conducted Spurious Emission (Band 7) (Band 38) (Band 41)                       | < 55+10log <sub>10</sub> (P[Watts]) |        |  |
| 3.9            | §2.1055<br>§22.355  | Frequency Stability<br>Temperature & Voltage                                   | < 2.5 ppm for Part 22H              | PASS   | -  |
|                | §2.1055<br>§24.235<br>§27.54                                  |  | Within Authorized Band              |        |  |
| 4.4            | §2.1053<br>§22.917(a)<br>§24.238(a)<br>§27.53(g)<br>§27.53(h) | Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 17)      | < 43+10log <sub>10</sub> (P[Watts]) | PASS   | Under limit<br>17.67 dB at<br>10371.000<br>MHz |
|                | §2.1053<br>§27.53(m)(4)                                       | Radiated Spurious Emission (Band 7) (Band 38) (Band 41)                        | < 55+10log <sub>10</sub> (P[Watts]) |        |  |



## 1 General Description

### 1.1 Applicant

**Xiaomi Communications Co., Ltd.**

The Rainbow City of China Resources, NO.68, Qinghe Middle Street, Haidian District, Beijing, China

### 1.2 Manufacturer

**Xiaomi Communications Co., Ltd.**

The Rainbow City of China Resources, NO.68, Qinghe Middle Street, Haidian District, Beijing, China

### 1.3 Product Feature of Equipment Under Test

| Product Feature                        |  |
|--|--|
| <b>Equipment</b>                       | Mobile Phone   |
| <b>Brand Name</b>                      | MI   |
| <b>Model Name</b>                      | M1803E1A   |
| <b>FCC ID</b>                          | 2AFZZ-XME1A  |
| <b>EUT supports Radios application</b> | CDMA/EV-DO/GSM/GPRS/EGPRS/WCDMA/HSPA/<br>DC-HSDPA/HSPA+(16QAM uplink is not supported)/LTE/NFC<br>WLAN 2.4GHz 802.11b/g/n HT20<br>WLAN 5GHz 802.11a/n HT20/HT40<br>WLAN 5GHz 802.11ac VHT20/VHT40/VHT80<br>Bluetooth v3.0 + EDR/Bluetooth v4.0 LE/<br>Bluetooth v4.2 LE/ Bluetooth v5.0 LE |
| <b>IMEI Code</b>                       | Conducted: 867252030140452/867252030140460<br>Radiation: 867252030137797/867252030137805   |
| <b>HW Version</b>                      | P2   |
| <b>SW Version</b>                      | MIUI 9   |
| <b>EUT Stage</b>                       | Identical Prototype  |

**Remark:**

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. There are two types of EUT, the difference between two samples is for memory, the sample 1 is 6+64GB capacity and the sample 2 is 6+128GB capacity. According to the difference, we only choose sample 1 to perform full test.



## 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 7 : 2502.5 MHz ~ 2567.5 MHz<br>LTE Band 12 : 699.7 MHz ~ 715.3 MHz<br>LTE Band 17 : 706.5 MHz ~ 713.5 MHz<br>LTE Band 38 : 2572.5MHz ~ 2617.5MHz<br>LTE Band 41 : 2537.5 MHz ~ 2652.5 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 7 : 2622.5MHz ~ 2687.5 MHz<br>LTE Band 12 : 729.7 MHz ~ 745.3 MHz<br>LTE Band 17 : 736.5 MHz ~ 743.5 MHz<br>LTE Band 38 : 2572.5 MHz ~ 2617.5 MHz<br>LTE Band 41 : 2537.5 MHz ~ 2652.5 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 7 : 5MHz / 10MHz / 15MHz / 20MHz<br>LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz<br>LTE Band 17 : 5MHz / 10MHz<br>LTE Band 38 : 5MHz / 10MHz / 15MHz / 20MHz<br>LTE Band 41 : 5MHz / 10MHz / 15MHz / 20MHz |
| <b>Maximum Output Power to Antenna</b>  | LTE Band 2 : 22.44 dBm<br>LTE Band 4 : 22.31 dBm<br>LTE Band 5 : 22.97 dBm<br>LTE Band 7 : 22.17 dBm<br>LTE Band 12 : 23.96 dBm<br>LTE Band 17 : 23.90 dBm<br>LTE Band 38 : 23.66 dBm/LTE Band 38_CA : 23.95 dBm<br>LTE Band 41 : 23.27 dBm/LTE Band 41_CA : 23.86 dBm   |
| <b>Antenna Gain</b>                     | LTE Band 2 : -0.60 dBi<br>LTE Band 4 : 0.20 dBi<br>LTE Band 5 : 0.90 dBi<br>LTE Band 7 : 1.10 dBi<br>LTE Band 12 : -4.60 dBi<br>LTE Band 17 : -4.60 dBi<br>LTE Band 38 : 0.70 dBi<br>LTE Band 41 : 1.10 dBi  |
| <b>Type of Modulation</b>               | QPSK / 16QAM / 64QAM   |

## 1.5 Modification of EUT

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



## 1.6 Maximum ERF/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                      | -                         | 0.1489                    | 1M10W7D                      | -                         | 0.1202          |
| 3          | 1851.5 ~ 1908.5       | 2M72G7D                      | -                         | 0.1524                    | 2M72W7D                      | -                         | 0.1262          |
| 5          | 1852.5 ~ 1907.5       | 4M51G7D                      | -                         | 0.1455                    | 4M51W7D                      | -                         | 0.1274          |
| 10         | 1855.0 ~ 1905.0       | 9M07G7D                      | 0.0034                    | 0.1469                    | 9M05W7D                      | -                         | 0.1253          |
| 15         | 1857.5 ~ 1902.5       | 13M5G7D                      | -                         | 0.1496                    | 13M5W7D                      | -                         | 0.1300          |
| 20         | 1860.0 ~ 1900.0       | 18M4G7D                      | -                         | 0.1528                    | 18M4W7D                      | -                         | 0.1334          |
| 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                      |                           | -                         |                              | 0.0957                    |                 |
| 3          | 1851.5 ~ 1908.5       | 2M73W7D                      |                           | -                         |                              | 0.1030                    |                 |
| 5          | 1852.5 ~ 1907.5       | 4M50W7D                      |                           | -                         |                              | 0.1172                    |                 |
| 10         | 1855.0 ~ 1905.0       | 9M03W7D                      |                           | -                         |                              | 0.1202                    |                 |
| 15         | 1857.5 ~ 1902.5       | 13M4W7D                      |                           | -                         |                              | 0.1230                    |                 |
| 20         | 1860.0 ~ 1900.0       | 18M5W7D                      |                           | -                         |                              | 0.1227                    |                 |
| 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                      | -                         | 0.1687                    | 1M10W7D                      | -                         | 0.1493          |
| 3          | 1711.5 ~ 1753.5       | 2M72G7D                      | -                         | 0.1660                    | 2M72W7D                      | -                         | 0.1452          |
| 5          | 1712.5 ~ 1752.5       | 4M51G7D                      | -                         | 0.1694                    | 4M50W7D                      | -                         | 0.1531          |
| 10         | 1715.0 ~ 1750.0       | 9M05G7D                      | 0.0028                    | 0.1774                    | 9M05W7D                      | -                         | 0.1455          |
| 15         | 1717.5 ~ 1747.5       | 13M5G7D                      | -                         | 0.1778                    | 13M5W7D                      | -                         | 0.1563          |
| 20         | 1720.0 ~ 1745.0       | 18M4G7D                      | -                         | 0.1782                    | 18M4W7D                      | -                         | 0.1592          |



| 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       | 1M09W7D                      |                           | -                         |                              | 0.1164                    |                 |
| 3          | 1711.5 ~ 1753.5       | 2M73W7D                      |                           | -                         |                              | 0.1127                    |                 |
| 5          | 1712.5 ~ 1752.5       | 4M51W7D                      |                           | -                         |                              | 0.1197                    |                 |
| 10         | 1715.0 ~ 1750.0       | 9M05W7D                      |                           | -                         |                              | 0.1194                    |                 |
| 15         | 1717.5 ~ 1747.5       | 13M4W7D                      |                           | -                         |                              | 0.1268                    |                 |
| 20         | 1720.0 ~ 1745.0       | 18M5W7D                      |                           | -                         |                              | 0.1247                    |                 |
| LTE Band 5 |                       | 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        | 824.7 ~ 848.3         | 1M10G7D                      | -                         | 0.1476                    | 1M09W7D                      | -                         | 0.1262          |
| 3          | 825.5 ~ 847.5         | 2M73G7D                      | -                         | 0.1483                    | 2M73W7D                      | -                         | 0.1315          |
| 5          | 826.5 ~ 846.5         | 4M49G7D                      | -                         | 0.1472                    | 4M51W7D                      | -                         | 0.1294          |
| 10         | 829.0 ~ 844.0         | 9M11G7D                      | 0.0066                    | 0.1486                    | 9M01W7D                      | -                         | 0.1265          |
| LTE Band 5 |                       | 64QAM                        |                           |                           |                              |                           |                 |
| BW (MHz)   | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum EIRP(W)           |                 |
| 1.4        | 824.7 ~ 848.3         | 1M09W7D                      |                           | -                         |                              | 0.0979                    |                 |
| 3          | 825.5 ~ 847.5         | 2M73W7D                      |                           | -                         |                              | 0.1023                    |                 |
| 5          | 826.5 ~ 846.5         | 4M50W7D                      |                           | -                         |                              | 0.1007                    |                 |
| 10         | 829.0 ~ 844.0         | 9M07W7D                      |                           | -                         |                              | 0.0989                    |                 |
| LTE Band 7 |                       | 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) |
| 5          | 2502.5 ~ 2567.5       | 4M49G7D                      | -                         | 0.2070                    | 4M50W7D                      | -                         | 0.1656          |
| 10         | 2505.0 ~ 2565.0       | 9M05G7D                      | 0.0016                    | 0.2099                    | 9M05W7D                      | -                         | 0.1820          |
| 15         | 2507.5 ~ 2562.5       | 13M5G7D                      | -                         | 0.2080                    | 13M4W7D                      | -                         | 0.1820          |
| 20         | 2510.0 ~ 2560.0       | 18M4G7D                      | -                         | 0.2123                    | 18M5W7D                      | -                         | 0.1706          |



| LTE Band 7  |                       | 64QAM                        |                           |                           |                              |                           |                |
|-------------|-----------------------|------------------------------|---------------------------|---------------------------|------------------------------|---------------------------|----------------|
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum EIRP(W)           |                |
| 5           | 2502.5 ~ 2567.5       | 4M50W7D                      |                           | -                         |                              | 0.1368                    |                |
| 10          | 2505.0 ~ 2565.0       | 9M01W7D                      |                           | -                         |                              | 0.1422                    |                |
| 15          | 2507.5 ~ 2562.5       | 13M5W7D                      |                           | -                         |                              | 0.1439                    |                |
| 20          | 2510.0 ~ 2560.0       | 18M3W7D                      |                           | -                         |                              | 0.1445                    |                |
| 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         | 1M10G7D                      | -                         | 0.0511                    | 1M09W7D                      | -                         | 0.0438         |
| 3           | 700.5 ~ 714.5         | 2M71G7D                      | -                         | 0.0522                    | 2M73W7D                      | -                         | 0.0450         |
| 5           | 701.5 ~ 713.5         | 4M49G7D                      | -                         | 0.0514                    | 4M49W7D                      | -                         | 0.0442         |
| 10          | 704.0 ~ 711.0         | 9M07G7D                      | 0.0081                    | 0.0526                    | 9M09W7D                      | -                         | 0.0441         |
| 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                      |                           | -                         |                              | 0.0340                    |                |
| 3           | 700.5 ~ 714.5         | 2M73W7D                      |                           | -                         |                              | 0.0348                    |                |
| 5           | 701.5 ~ 713.5         | 4M48W7D                      |                           | -                         |                              | 0.0348                    |                |
| 10          | 704.0 ~ 711.0         | 9M05W7D                      |                           | -                         |                              | 0.0349                    |                |
| 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         | -                            | -                         | 0.0518                    | -                            | -                         | 0.0446         |
| 10          | 709.0 ~ 711.0         | -                            | -                         | 0.0519                    | -                            | -                         | 0.0444         |
| LTE Band 17 |                       | 64QAM                        |                           |                           |                              |                           |                |
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum ERP(W)            |                |
| 5           | 706.5 ~ 713.5         | -                            |                           | -                         |                              | 0.0351                    |                |
| 10          | 709.0 ~ 711.0         | -                            |                           | -                         |                              | 0.0349                    |                |



| LTE Band 38 |                       | 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) |
| 5           | 2572.5 ~ 2617.5       | -                            | -                         | 0.2649                    | -                            | -                         | 0.2158          |
| 10          | 2575.0 ~ 2615.0       | -                            | -                         | 0.2655                    | -                            | -                         | 0.2291          |
| 15          | 2577.5 ~ 2612.5       | -                            | -                         | 0.2723                    | -                            | -                         | 0.2158          |
| 20          | 2580.0 ~ 2610.0       | -                            | -                         | 0.2729                    | -                            | -                         | 0.2168          |
| LTE Band 38 |                       | 64QAM                        |                           |                           |                              |                           |                 |
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum EIRP(W)           |                 |
| 5           | 2572.5 ~ 2617.5       | -                            |                           | -                         |                              | 0.1603                    |                 |
| 10          | 2575.0 ~ 2615.0       | -                            |                           | -                         |                              | 0.1626                    |                 |
| 15          | 2577.5 ~ 2612.5       | -                            |                           | -                         |                              | 0.1592                    |                 |
| 20          | 2580.0 ~ 2610.0       | -                            |                           | -                         |                              | 0.1626                    |                 |
| LTE Band 41 |                       | 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) |
| 5           | 2537.5 ~ 2652.5       | 4M50G7D                      | -                         | 0.2630                    | 4M52W7D                      | -                         | 0.2028          |
| 10          | 2540.0 ~ 2650.0       | 9M01G7D                      | 0.0024                    | 0.2729                    | 9M07W7D                      | -                         | 0.2218          |
| 15          | 2542.5 ~ 2647.5       | 13M5G7D                      | -                         | 0.2667                    | 13M5W7D                      | -                         | 0.2138          |
| 20          | 2545.0 ~ 2645.0       | 18M4G7D                      | -                         | 0.2735                    | 18M3W7D                      | -                         | 0.2198          |
| LTE Band 41 |                       | 64QAM                        |                           |                           |                              |                           |                 |
| BW (MHz)    | Frequency Range (MHz) | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum EIRP(W)           |                 |
| 5           | 2537.5 ~ 2652.5       | 4M50W7D                      |                           | -                         |                              | 0.1542                    |                 |
| 10          | 2540.0 ~ 2650.0       | 9M01W7D                      |                           | -                         |                              | 0.1660                    |                 |
| 15          | 2542.5 ~ 2647.5       | 13M5W7D                      |                           | -                         |                              | 0.1600                    |                 |
| 20          | 2545.0 ~ 2645.0       | 18M3W7D                      |                           | -                         |                              | 0.1663                    |                 |



| LTE Band 38 CA | QPSK                         |                           |                           | 16QAM                        |                           |                 |
|----------------|------------------------------|---------------------------|---------------------------|------------------------------|---------------------------|-----------------|
| BW (MHz)       | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum EIRP(W)           | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum EIRP(W) |
| 15MHz+15MHz    | -                            | -                         | 0.2793                    | -                            | -                         | 0.2158          |
| 20MHz+20MHz    | -                            | -                         | 0.2917                    | -                            | -                         | 0.2495          |
| LTE Band 38 CA | 64QAM                        |                           |                           |                              |                           |                 |
| BW (MHz)       | Emission Designator (99%OBW) |                           | Frequency Tolerance (ppm) |                              | Maximum EIRP(W)           |                 |
| 15MHz+15MHz    | -                            |                           | -                         |                              | 0.1469                    |                 |
| 20MHz+20MHz    | -                            |                           | -                         |                              | 0.1795                    |                 |
| LTE Band 41 CA | QPSK                         |                           |                           | 16QAM                        |                           |                 |
| BW (MHz)       | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum EIRP(W)           | Emission Designator (99%OBW) | Frequency Tolerance (ppm) | Maximum EIRP(W) |
| 5MHz+20MHz     | 23M3G7D                      | -                         | 0.2944                    | 23M3W7D                      | -                         | 0.2312          |
| 10MHz+20MHz    | 28M1G7D                      | -                         | 0.2767                    | 28M1W7D                      | -                         | 0.2296          |
| 10MHz+15MHz    | 23M6G7D                      | -                         | 0.2812                    | 23M5W7D                      | -                         | 0.2323          |
| 15MHz+15MHz    | 28M6G7D                      | -                         | 0.2661                    | 28M7W7D                      | -                         | 0.2344          |
| 15MHz+20MHz    | 32M9G7D                      | -                         | 0.2858                    | 32M9W7D                      | -                         | 0.2371          |
| 15MHz+10MHz    | 23M6G7D                      | -                         | 0.2825                    | 23M6W7D                      | -                         | 0.2371          |
| 20MHz+5MHz     | 23M4G7D                      | -                         | 0.2838                    | 23M4W7D                      | -                         | 0.2360          |
| 20MHz+10MHz    | 28M2G7D                      | -                         | 0.2767                    | 28M1W7D                      | -                         | 0.2286          |
| 20MHz+15MHz    | 32M9G7D                      | -                         | 0.2877                    | 33M0W7D                      | -                         | 0.2312          |
| 20MHz+20MHz    | 37M7G7D                      | -                         | 0.3133                    | 37M8W7D                      | -                         | 0.2506          |



| LTE Band 41 CA | 64QAM                           |                              |                    |
|----------------|---------------------------------|------------------------------|--------------------|
| BW (MHz)       | Emission Designator<br>(99%OBW) | Frequency Tolerance<br>(ppm) | Maximum<br>EIRP(W) |
| 5MHz+20MHz     | 23M3W7D                         | -                            | 0.1607             |
| 10MHz+20MHz    | 28M1W7D                         | -                            | 0.1581             |
| 10MHz+15MHz    | 23M5W7D                         | -                            | 0.1514             |
| 15MHz+15MHz    | 28M7W7D                         | -                            | 0.1483             |
| 15MHz+20MHz    | 32M8W7D                         | -                            | 0.1552             |
| 15MHz+10MHz    | 23M4W7D                         | -                            | 0.1556             |
| 20MHz+5MHz     | 23M3W7D                         | -                            | 0.1489             |
| 20MHz+10MHz    | 28M0W7D                         | -                            | 0.1549             |
| 20MHz+15MHz    | 32M8W7D                         | -                            | 0.1611             |
| 20MHz+20MHz    | 37M8W7D                         | -                            | 0.2023             |

**Note:**

1. 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.
2. LTE Band 41 overlaps the entire frequency range of LTE Band 38. Therefore, the test results provided in this report covers Band 41 as well as Band 38.



## 1.7 Testing Location

Sportun International (Kunshan) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600155-0) and the FCC designation No is CN5013.

|                           |   |                                       |
|---------------------------|---|---------------------------------------|
| <b>Test Site</b>          | Sportun International (Kunshan) Inc.  |                                       |
| <b>Test Site Location</b> | No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China<br>TEL : +86-512-57900158<br>FAX : +86-512-57900958 |                                       |
| <b>Test Site No.</b>      | <b>Sportun Site No.</b>   | <b>FCC Test Firm Registration No.</b> |
|                           | TH01-KS   | 630927                                |

Sportun International (Shenzhen) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600156-0) and the FCC designation No. is CN5019.

|                           |   |                                       |
|---------------------------|---|---------------------------------------|
| <b>Test Site</b>          | Sportun International (Shenzhen) Inc.   |                                       |
| <b>Test Site Location</b> | No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan District Shenzhen City Guangdong Province 518055 China<br>TEL: +86-755-3320-2398 |                                       |
| <b>Test Site No.</b>      | <b>Sportun Site No.</b>   | <b>FCC Test Firm Registration No.</b> |
|                           | 03CH03-SZ<br>03CH04-SZ  | 577730                                |

**Note:**

1. The test site complies with ANSI C63.4 2014 requirement.
2. Test data subcontracted: radiated spurious emissions in section 4.4 of this report.



## 1.8 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(L), 27(H), 27(M)
- ♦ 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       | 16QAM | 64QAM | 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 |
|                       | 4    | v               | v | v | v  | v  | v  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                       | 5    | v               | v | v | v  | -  | -  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                       | 7    | -               | - | v | v  | v  | v  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                       | 12   | v               | v | v | v  | -  | -  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                       | 17   | -               | - | v | v  | -  | -  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                       | 38   | -               | - | v | v  | v  | v  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                       | 41   | -               | - | v | v  | v  | v  | v          | v     | v     | v    | v    | v    | v            | v | v |
| Peak-to-Average Ratio | 2    |                 |   |   |    |    | v  | v          | v     | v     | v    |      | v    | v            | v | v |
|                       | 4    |                 |   |   |    |    | v  | v          | v     | v     | v    |      | v    | v            | v | v |
|                       | 5    |                 |   |   | v  | -  | -  | v          | v     | v     | v    |      | v    | v            | v | v |
|                       | 7    | -               | - |   |    |    | v  | v          | v     | v     | v    |      | v    | v            | v | v |
|                       | 12   |                 |   |   | v  | -  | -  | v          | v     | v     | v    |      | v    | v            | v | v |
|                       | 41   | -               | - |   |    |    | v  | v          | v     | v     | v    |      | v    | v            | v | v |



| Test Items                  | Band | Bandwidth (MHz) |   |   |    |    |    | Modulation |       |       | RB # |      |      | Test Channel |   |   |
|-----------------------------|------|-----------------|---|---|----|----|----|------------|-------|-------|------|------|------|--------------|---|---|
|                             |      | 1.4             | 3 | 5 | 10 | 15 | 20 | QPSK       | 16QAM | 64QAM | 1    | Half | Full | L            | M | H |
| 26dB and 99% Bandwidth      | 2    | 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 |
|                             | 5    | v               | v | v | v  | -  | -  | v          | v     | v     |      |      |      | v            | v | v |
|                             | 7    | -               | - | v | v  | v  | v  | v          | v     | v     |      |      |      | v            | v | v |
|                             | 12   | v               | v | v | v  | -  | -  | v          | v     | v     |      |      |      | v            | v | v |
|                             | 41   | -               | - | v | v  | v  | v  | v          | v     | v     |      |      |      | v            | v | v |
| Conducted Band Edge         | 2    | 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 |
|                             | 5    | v               | v | v | v  | -  | -  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                             | 7    | -               | - | v | v  | v  | v  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                             | 12   | v               | v | v | v  | -  | -  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                             | 41   | -               | - | v | v  | v  | v  | v          | v     | v     | v    | v    | v    | v            | v | v |
| Conducted Spurious Emission | 2    | 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 |
|                             | 5    | v               | v | v | v  | -  | -  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                             | 7    | -               | - | v | v  | v  | v  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                             | 12   | v               | v | v | v  | -  | -  | v          | v     | v     | v    | v    | v    | v            | v | v |
|                             | 41   | -               | - | v | v  | v  | v  | v          | v     | v     | v    | v    | v    | v            | v | v |
| Frequency Stability         | 2    |                 |   |   | v  |    |    | v          |       |       |      |      |      | v            | v |   |
|                             | 4    |                 |   |   | v  |    |    | v          |       |       |      |      |      | v            | v |   |
|                             | 5    |                 |   |   | v  | -  | -  | v          |       |       |      |      |      | v            | v |   |
|                             | 7    | -               | - | v |    |    | v  |            |       | v     |      |      |      | v            | v |   |
|                             | 12   |                 |   |   | v  | -  | -  | v          |       |       |      |      |      | v            | v |   |
|                             | 41   | -               | - | v |    |    | v  |            |       | v     |      |      |      | v            | v |   |



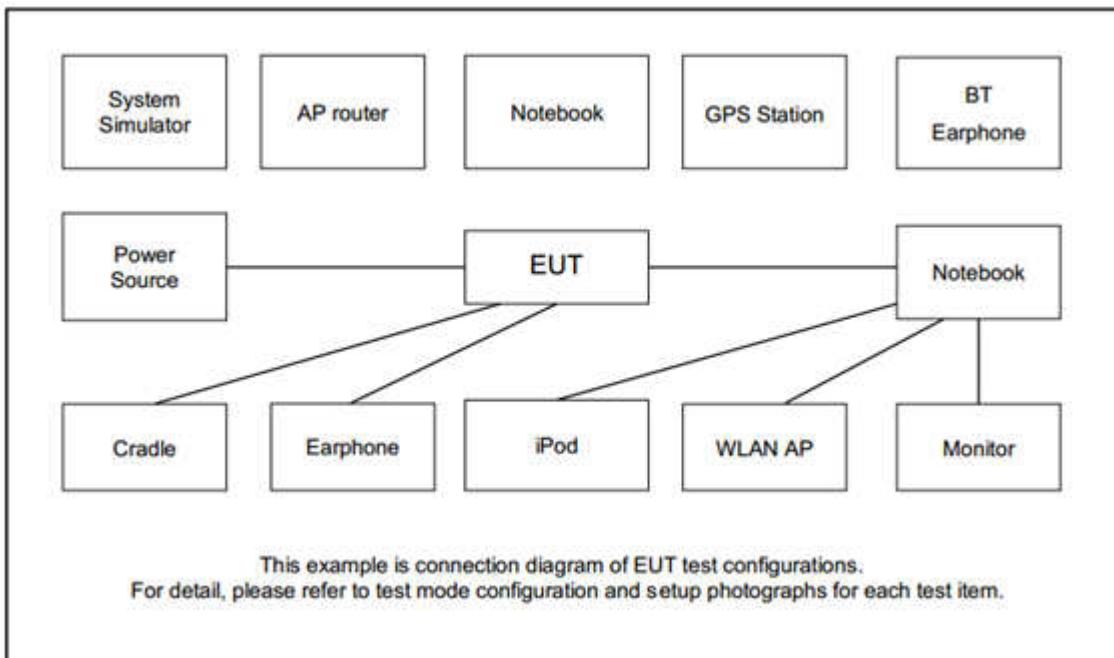
| Test Items                 | Band   | Bandwidth (MHz) |   |   |    |    |    | Modulation |       |       | RB # |      |      | Test Channel |   |   |
|----------------------------|--|-----------------|---|---|----|----|----|------------|-------|-------|------|------|------|--------------|---|---|
|                            |  | 1.4             | 3 | 5 | 10 | 15 | 20 | QPSK       | 16QAM | 64QAM | 1    | Half | Full | L            | M | H |
| E.R.P / E.I.R.P            | 2  | 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 |
|                            | 5  | v               | v | v | v  | -  | -  | v          | v     | v     | v    | v    |      | v            | v | v |
|                            | 7  | -               | - | v | v  | v  | v  | v          | v     | v     | v    | v    |      | v            | v | v |
|                            | 12   | v               | v | v | v  | -  | -  | v          | v     | v     | v    | v    |      | v            | v | v |
|                            | 17   | -               | - | v | v  | -  | -  | v          | v     | v     | v    | v    |      | v            | v | v |
|                            | 38   | -               | - | v | v  | v  | v  | v          | v     | v     | v    | v    |      | v            | v | v |
|                            | 41   | -               | - | v | v  | v  | v  | v          | v     | v     | v    | v    |      | v            | v | v |
| Radiated Spurious Emission | 2  | v               | v | v | v  | v  | v  | v          |       |       |      | v    |      |              | v |   |
|                            | 4  | v               | v | v | v  | v  | v  | v          |       |       |      | v    |      |              | v |   |
|                            | 5  | v               | v | v | v  | -  | -  | v          |       |       |      | v    |      |              | v |   |
|                            | 7  | -               | - | v | v  | v  | v  | v          |       |       |      | v    |      |              | v |   |
|                            | 12   | v               | v | v | v  | -  | -  | v          |       |       |      | v    |      |              | v |   |
|                            | 17   | -               | - | v | v  | -  | -  | v          |       |       |      | v    |      |              | v |   |
|                            | 38   | -               | - | v | v  | v  | v  | v          |       |       |      | v    |      |              | v |   |
|                            | 41   | -               | - | v | v  | v  | v  | v          |       |       |      | v    |      |              | v |   |
| Note                       | 1. The mark "v" means that this configuration is chosen for testing<br>2. The mark "-" means that this bandwidth is not supported.<br>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. |                 |   |   |    |    |    |            |       |       |      |      |      |              |   |   |



| Test Items                  | Band   | Bandwidth (MHz) |       |       |       |       |      |      |       |       |       | Modulation |       |       | RB # |      |      | Test Channel |   |   |
|-----------------------------|--|-----------------|-------|-------|-------|-------|------|------|-------|-------|-------|------------|-------|-------|------|------|------|--------------|---|---|
|                             |  | 20+20           | 20+15 | 15+20 | 20+10 | 10+20 | 20+5 | 5+20 | 15+15 | 15+10 | 10+15 | QPSK       | 16QAM | 64QAM | 1    | Half | Full | L            | M | H |
| Max. Output Power           | 38_CA  | v               | -     | -     | -     | -     | -    | -    | v     | -     | -     | v          | v     | v     | v    | v    | v    | v            | v |   |
|                             | 41_CA  | v               | v     | v     | v     | v     | v    | v    | v     | v     | v     | v          | v     | v     | v    | v    | v    | v            | v |   |
| 26dB and 99% Bandwidth      | 41_CA  | v               | v     | v     | v     | v     | v    | v    | v     | v     | v     | v          | v     | v     | v    | v    | v    | v            | v |   |
| Conducted Band Edge         | 41_CA  | v               | v     | v     | v     | v     | v    | v    | v     | v     | v     | v          | v     | v     | v    | v    | v    | v            | v |   |
| Conducted Spurious Emission | 41_CA  | v               | v     | v     | v     | v     | v    | v    | v     | v     | v     | v          | v     | v     | v    | v    | v    | v            | v |   |
| E.I.R.P.                    | 38_CA  | v               | -     | -     | -     | -     | -    | -    | v     | -     | -     | v          | v     | v     | v    | v    | v    | v            | v |   |
|                             | 41_CA  | v               | v     | v     | v     | v     | v    | v    | v     | v     | v     | v          | v     | v     | v    | v    | v    | v            | v |   |
| Radiated Spurious Emission  | 38_CA  | v               |       |       |       |       |      |      | v     |       |       | v          |       |       | v    |      |      | v            |   |   |
|                             | 41_CA  | v               | v     | v     | v     | v     | v    | v    | v     | v     | v     | v          |       |       | v    |      |      | v            |   |   |
| Note                        | 1. The mark "v" means that this configuration is chosen for testing<br>2. The mark "-" means that this bandwidth is not supported.<br>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. |                 |       |       |       |       |      |      |       |       |       |            |       |       |      |      |      |              |   |   |



## 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.   | DC Power Supply  | GW         | GPS-3030D | N/A    | N/A               | Unshielded, 1.8 m |
| 2.   | LTE Base Station | Anritsu    | MT8820C   | N/A    | N/A               | Unshielded, 1.8 m |
| 3.   | Earphone         | Lenovo     | SH100     | N/A    | Unshielded, 1.0 m | 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 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.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 5.1 dB.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} \\ &= 5.1 \text{ (dB)} \end{aligned}$$



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

| LTE Band 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 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 38 Channel and Frequency List |                        |        |        |         |
|--|------------------------|--------|--------|---------|
| BW [MHz]                               | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 20                                     | Channel                | 37850  | 38000  | 38150   |
|  | Frequency              | 2580   | 2595   | 2610    |
| 15                                     | Channel                | 37825  | 38000  | 38175   |
|  | Frequency              | 2577.5 | 2595   | 2612.5  |
| 10                                     | Channel                | 37800  | 38000  | 38200   |
|  | Frequency              | 2575   | 2595   | 2615    |
| 5                                      | Channel                | 37775  | 38000  | 38225   |
|  | Frequency              | 2572.5 | 2595   | 2617.5  |

| LTE Band 41 Channel and Frequency List |                        |        |        |         |
|--|------------------------|--------|--------|---------|
| BW [MHz]                               | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 20                                     | Channel                | 40140  | 40640  | 41140   |
|  | Frequency              | 2545   | 2595   | 2645    |
| 15                                     | Channel                | 40115  | 40640  | 41165   |
|  | Frequency              | 2542.5 | 2595   | 2647.5  |
| 10                                     | Channel                | 40090  | 40640  | 41190   |
|  | Frequency              | 2540   | 2595   | 2650    |
| 5                                      | Channel                | 40065  | 40640  | 41215   |
|  | Frequency              | 2537.5 | 2595   | 2652.5  |



| LTE Band 38 Channel and Frequency List_CA |                        |           |        |        |         |
|---|------------------------|-----------|--------|--------|---------|
| BW [MHz]                                  | Channel/Frequency(MHz) |           | Lowest | Middle | Highest |
| 20 + 20                                   | PCC                    | Channel   | 37850  | 37901  | 37952   |
|   |                        | Frequency | 2580.0 | 2585.1 | 2590.2  |
|   | SCC                    | Channel   | 38048  | 38099  | 38150   |
|   |                        | Frequency | 2599.8 | 2604.9 | 2610.0  |
| 15+ 15                                    | PCC                    | Channel   | 37825  | 37925  | 38025   |
|   |                        | Frequency | 2577.5 | 2587.5 | 2597.5  |
|   | SCC                    | Channel   | 37975  | 38075  | 38175   |
|   |                        | Frequency | 2592.5 | 2602.5 | 2612.5  |

| LTE Band 41 Channel and Frequency List_CA |                        |           |        |        |         |
|---|------------------------|-----------|--------|--------|---------|
| BW [MHz]                                  | Channel/Frequency(MHz) |           | Lowest | Middle | Highest |
| 20 + 20                                   | PCC                    | Channel   | 40140  | 40541  | 40942   |
|   |                        | Frequency | 2545   | 2585.1 | 2625.2  |
|   | SCC                    | Channel   | 40338  | 40739  | 41140   |
|   |                        | Frequency | 2564.8 | 2604.9 | 2645    |
| 20 + 15                                   | PCC                    | Channel   | 40140  | 40566  | 40991   |
|   |                        | Frequency | 2545   | 2587.6 | 2630.1  |
|   | SCC                    | Channel   | 40311  | 40737  | 41162   |
|   |                        | Frequency | 2562.1 | 2604.7 | 2647.2  |
| 15 + 20                                   | PCC                    | Channel   | 40118  | 40544  | 40969   |
|   |                        | Frequency | 2542.8 | 2585.4 | 2627.9  |
|   | SCC                    | Channel   | 40289  | 40715  | 41140   |
|   |                        | Frequency | 2559.9 | 2602.5 | 2645    |
| 20 + 10                                   | PCC                    | Channel   | 40140  | 40591  | 41041   |
|   |                        | Frequency | 2545   | 2590.1 | 2635.1  |
|   | SCC                    | Channel   | 40284  | 40735  | 41185   |
|   |                        | Frequency | 2559.4 | 2604.5 | 2649.5  |
| 10 + 20                                   | PCC                    | Channel   | 40095  | 40546  | 40996   |
|   |                        | Frequency | 2540.5 | 2585.6 | 2630.6  |
|   | SCC                    | Channel   | 40239  | 40690  | 41140   |
|   |                        | Frequency | 2554.9 | 2600.0 | 2645    |



| LTE Band 41 Channel and Frequency List_CA |                        |           |        |        |         |
|---|------------------------|-----------|--------|--------|---------|
| BW [MHz]                                  | Channel/Frequency(MHz) |           | Lowest | Middle | Highest |
| 20 + 5                                    | PCC                    | Channel   | 40140  | 40615  | 41090   |
|   |                        | Frequency | 2545   | 2592.5 | 2640    |
|   | SCC                    | Channel   | 40257  | 40732  | 41207   |
|   |                        | Frequency | 2556.7 | 2604.2 | 2651.7  |
| 5 + 20                                    | PCC                    | Channel   | 40073  | 40548  | 41023   |
|   |                        | Frequency | 2538.3 | 2585.8 | 2633.3  |
|   | SCC                    | Channel   | 40190  | 40665  | 41140   |
|   |                        | Frequency | 2550   | 2597.5 | 2645    |
| 15 + 15                                   | PCC                    | Channel   | 40115  | 40565  | 41015   |
|   |                        | Frequency | 2542.5 | 2587.5 | 2632.5  |
|   | SCC                    | Channel   | 40265  | 40715  | 41165   |
|   |                        | Frequency | 2557.5 | 2602.5 | 2647.5  |
| 10 + 15                                   | PCC                    | Channel   | 40093  | 40569  | 41045   |
|   |                        | Frequency | 2540.3 | 2587.9 | 2635.5  |
|   | SCC                    | Channel   | 40213  | 40689  | 41165   |
|   |                        | Frequency | 2552.3 | 2599.9 | 2647.5  |
| 15 + 10                                   | PCC                    | Channel   | 40115  | 40591  | 41067   |
|   |                        | Frequency | 2542.5 | 2590.1 | 2637.7  |
|   | SCC                    | Channel   | 40235  | 40711  | 41187   |
|   |                        | Frequency | 2554.5 | 2602.1 | 2649.7  |

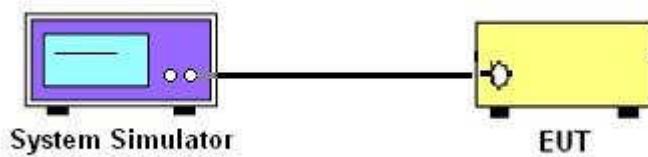
### 3 Conducted Test Items

#### 3.1 Measuring Instruments

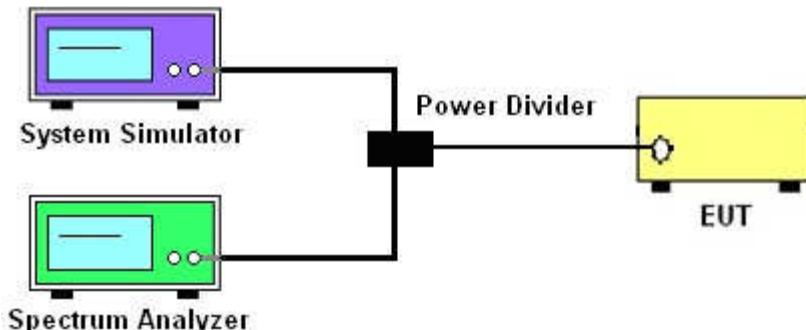
See list of measuring instruments of this test report.

#### 3.2 Test Setup

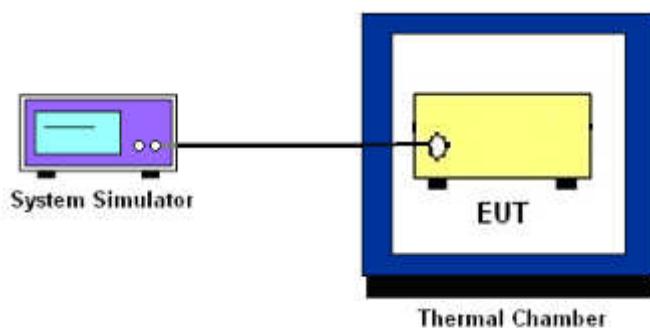
##### 3.2.1 Conducted Output Power



##### 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.

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

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

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

According to KDB 412172 D01 Power Approach,

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

$P_T$  = transmitter output power in dBm

$G_T$  = gain of the transmitting antenna in dBi

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

#### 3.4.2 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(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(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 (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(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(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.



27.53(m)(4)

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

### 3.7.2 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. Offset has included the duty factor for LTE Band 38/41. Duty factor = $10 \log (1/x)$ , where x is the measured duty cycle.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. Checked that all the results comply with the emission limit line.

Example:

$$\begin{aligned} \text{The limit line is derived from } & 43 + 10\log(P)\text{dB below the transmitter power } P(\text{Watts}) \\ & = P(\text{W}) - [43 + 10\log(P)] \text{ (dB)} \\ & = [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm}. \end{aligned}$$

10. For LTE Band 7, 38, 41, the other 40 dB, and 55 dB have additionally applied same calculation above.



## 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.

For Band 7,38,41:

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

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10<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. Offset has included the duty factor for LTE Band 38/41. Duty factor = $10 \log(1/x)$ , where x is the measured duty cycle.
8. Set spectrum analyzer with RMS detector.
9. Taking the record of maximum spurious emission.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
11. 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.
12. For Band 7, 38, 41  
The limit line is derived from  $55 + 10\log(P)$  dB below the transmitter power P(Watts)  
 $= P(W) - [55 + 10\log(P)]$  (dB)  
 $= [30 + 10\log(P)]$  (dBm) -  $[55 + 10\log(P)]$  (dB)  
 $= -25$  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.

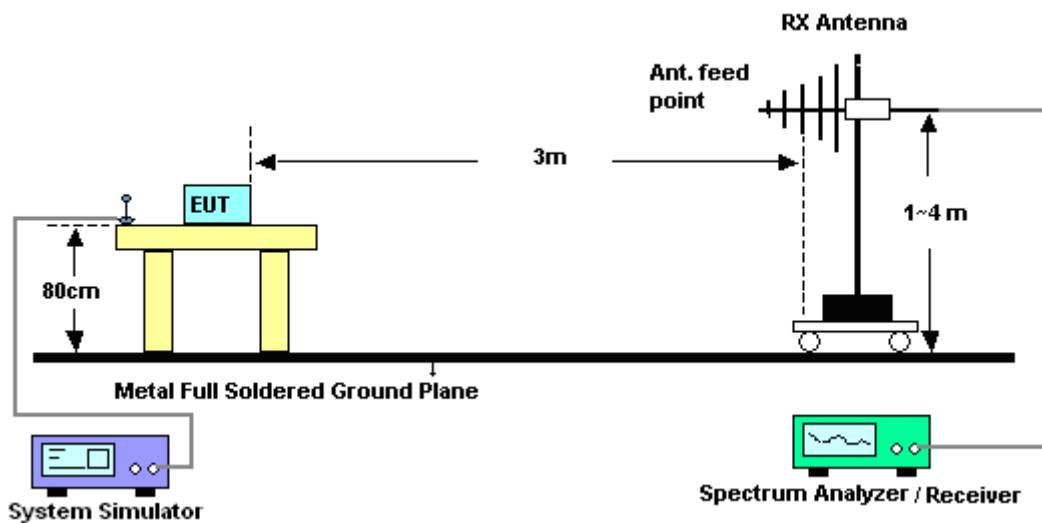
## 4 Radiated Test Items

### 4.1 Measuring Instruments

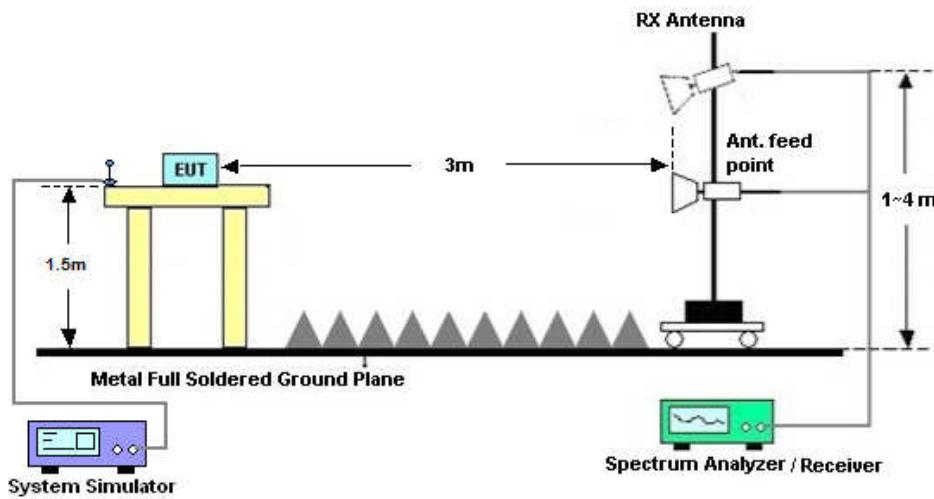
See list of measuring instruments of this test report.

### 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 Band 7, 38, 41

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

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.  $EIRP (\text{dBm}) = S.G. \text{ Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$
11.  $ERP (\text{dBm}) = EIRP - 2.15$
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)

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

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

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

13. For Band 7, 38, 41:

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                            | 101040     | 10Hz~40GHz          | Aug. 08, 2017    | May 10, 2018~Jun. 05, 2018 | Aug. 07, 2018 | Conducted (TH01-KS)   |
| Radio communication analyzer | Anritsu              | MT8820C                          | 6201300652 | 2G/3G/LTE_full band | Aug. 08, 2017    | May 10, 2018~Jun. 05, 2018 | Aug. 07, 2018 | Conducted (TH01-KS)   |
| Thermal Chamber              | Ten Billion          | TTC-B3S                          | TBN-960502 | -40~+150°C          | Oct. 12, 2017    | May 10, 2018~Jun. 05, 2018 | Oct. 11, 2018 | Conducted (TH01-KS)   |
| EXA Spectrum Analyzer        | KEYSIGHT             | N9010A                           | MY55150213 | 10Hz~44GHz          | Apr. 19, 2018    | May 25, 2018~May 26, 2018  | Apr. 18, 2019 | Radiation (03CH04-SZ) |
| Bilog Antenna                | TeseQ                | CBL6111D                         | 41909      | 30MHz~1GHz          | Aug. 29, 2017    | May 25, 2018~May 26, 2018  | Aug 28, 2018  | Radiation (03CH04-SZ) |
| Double Ridge Horn Antenna    | SCHWARZBECK          | BBHA9120D                        | 9120D-1285 | 1GHz~18GHz          | Dec. 13, 2017    | May 25, 2018~May 26, 2018  | Dec. 12, 2018 | Radiation (03CH04-SZ) |
| Horn Antenna                 | SCHWARZBECK          | BBHA9170                         | 9170#679   | 15GHz~40GHz         | Apr. 20 2018     | May 25, 2018~May 26, 2018  | Apr. 19, 2019 | Radiation (03CH04-SZ) |
| Amplifier                    | Burgeon              | BPA-530                          | 102211     | 0.01Hz ~3000MHz     | Oct. 19, 2017    | May 25, 2018~May 26, 2018  | Oct. 18, 2018 | Radiation (03CH04-SZ) |
| HF Amplifier                 | MITEQ                | AMF-7D-00<br>101800-30-1<br>OP_P | 1989346    | 1GHz~18GHz          | Jul. 27, 2017    | May 25, 2018~May 26, 2018  | Jul. 26, 2018 | Radiation (03CH04-SZ) |
| HF Amplifier                 | MITEQ                | TTA1840-35<br>-HG                | 1988315    | 18GHz~40GHz         | Jul. 27, 2017    | May 25, 2018~May 26, 2018  | Jul. 26, 2018 | Radiation (03CH04-SZ) |
| Amplifier                    | Agilent Technologies | 83017A                           | MY53270156 | 500MHz~26.5GHz      | Apr. 19, 2018    | May 25, 2018~May 26, 2018  | Apr. 18, 2019 | Radiation (03CH04-SZ) |
| AC Power Source              | Chroma               | 61601                            | N/A        | N/A                 | NCR              | May 25, 2018~May 26, 2018  | NCR           | Radiation (03CH04-SZ) |
| Turn Table                   | EM                   | EM1000                           | N/A        | 0~360 degree        | NCR              | May 25, 2018~May 26, 2018  | NCR           | Radiation (03CH04-SZ) |
| Antenna Mast                 | EM                   | EM1000                           | N/A        | 1 m~4 m             | NCR              | May 25, 2018~May 26, 2018  | NCR           | Radiation (03CH04-SZ) |
| EXA Spectrum Analyzer        | KEYSIGHT             | N9010A                           | MY55150246 | 10Hz~44GHz;         | Apr. 19, 2018    | May 29, 2018               | Apr. 18, 2019 | Radiation (03CH03-SZ) |
| Bilog Antenna                | TeseQ                | CBL6112D                         | 35408      | 30MHz-2GHz          | Apr. 19, 2018    | May 29, 2018               | Apr. 18, 2019 | Radiation (03CH03-SZ) |
| Double Ridge Horn Antenna    | SCHWARZBECK          | BBHA9120D                        | 9120D-1355 | 1GHz~18GHz          | Jul. 09, 2017    | May 29, 2018               | Jul. 08, 2018 | Radiation (03CH03-SZ) |
| Amplifier                    | Burgeon              | BPA-530                          | 102210     | 0.01Hz ~3000MHz     | Oct. 19, 2017    | May 29, 2018               | Oct. 18, 2018 | Radiation (03CH03-SZ) |
| HF Amplifier                 | MITEQ                | TTA1840-35<br>-HG                | 1871923    | 18GHz~40GHz         | Jul. 18, 2017    | May 29, 2018               | Jul. 17, 2018 | Radiation (03CH03-SZ) |
| SHF-EHF Horn                 | com-power            | AH-840                           | 101071     | 18Ghz~40GHz         | Jun.16, 2017     | May 29, 2018               | Jun. 15, 2018 | Radiation (03CH03-SZ) |



|                 |                      |        |              |                |               |              |               |                       |
|-----------------|----------------------|--------|--------------|----------------|---------------|--------------|---------------|-----------------------|
| Amplifier       | Agilent Technologies | 83017A | MY39501302   | 500MHz~26.5GHz | Dec. 27, 2017 | May 29, 2018 | Dec. 26, 2018 | Radiation (03CH03-SZ) |
| AC Power Source | Chroma               | 61601  | 616010001985 | N/A            | NCR           | May 29, 2018 | NCR           | Radiation (03CH03-SZ) |
| Turn Table      | EM                   | EM1000 | N/A          | 0~360 degree   | NCR           | May 29, 2018 | NCR           | Radiation (03CH03-SZ) |
| Antenna Mast    | EM                   | EM1000 | N/A          | 1 m~4 m        | NCR           | May 29, 2018 | NCR           | Radiation (03CH03-SZ) |

NCR: No Calibration Required



## 6 Uncertainty of Evaluation

### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz) for 03CH04-SZ

|   |       |
|---|-------|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 2.8dB |
|---|-------|

### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz) for 03CH04-SZ

|   |       |
|---|-------|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 3.1dB |
|---|-------|

### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz) for 03CH04-SZ

|   |       |
|---|-------|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 3.9dB |
|---|-------|

### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz) for 03CH03-SZ

|   |       |
|---|-------|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 3.0dB |
|---|-------|

### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz) for 03CH03-SZ

|   |       |
|---|-------|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 3.6dB |
|---|-------|

### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz) for 03CH03-SZ

|   |       |
|---|-------|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 3.8dB |
|---|-------|



## Appendix A. Test Results of Conducted Test

### Conducted Output Power(Average power)

| LTE Band 2 Maximum Average Power [dBm] |         |           |        |        |        |         |
|--|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 20                                     | 1       | 0         | QPSK   | 22.22  | 22.44  | 22.43   |
|  | 1       | 49        |        | 21.80  | 21.86  | 22.30   |
|  | 1       | 99        |        | 21.85  | 21.99  | 22.38   |
|  | 50      | 0         |        | 21.05  | 21.37  | 21.35   |
|  | 50      | 24        |        | 20.97  | 21.10  | 21.30   |
|  | 50      | 50        |        | 20.85  | 21.30  | 21.21   |
|  | 100     | 0         |        | 20.96  | 21.30  | 21.28   |
|  | 1       | 0         |        | 21.53  | 21.65  | 21.85   |
| 20                                     | 1       | 49        | 16-QAM | 21.19  | 21.22  | 21.72   |
|  | 1       | 99        |        | 21.43  | 21.42  | 21.67   |
|  | 50      | 0         |        | 20.10  | 20.24  | 20.32   |
|  | 50      | 24        |        | 20.09  | 20.15  | 20.42   |
|  | 50      | 50        |        | 20.05  | 20.17  | 20.44   |
|  | 100     | 0         |        | 20.07  | 20.23  | 20.44   |
|  | 1       | 0         |        | 21.47  | 21.44  | 21.40   |
|  | 1       | 49        |        | 20.83  | 20.90  | 21.49   |
| 20                                     | 1       | 99        | 64QAM  | 21.05  | 21.05  | 21.49   |
|  | 50      | 0         |        | 20.12  | 20.27  | 20.35   |
|  | 50      | 24        |        | 20.04  | 20.11  | 20.48   |
|  | 50      | 50        |        | 19.95  | 20.10  | 20.40   |
|  | 100     | 0         |        | 20.03  | 20.21  | 20.47   |
|  | 1       | 0         |        | 21.47  | 21.44  | 21.40   |
|  | 1       | 49        |        | 20.83  | 20.90  | 21.49   |
|  | 1       | 99        |        | 21.05  | 21.05  | 21.49   |
| 15                                     | 1       | 0         | QPSK   | 22.04  | 22.18  | 22.35   |
|  | 1       | 37        |        | 21.89  | 21.89  | 22.29   |
|  | 1       | 74        |        | 21.86  | 21.96  | 22.27   |
|  | 36      | 0         |        | 20.96  | 21.15  | 21.42   |
|  | 36      | 20        |        | 20.95  | 21.08  | 21.39   |
|  | 36      | 39        |        | 20.93  | 21.06  | 21.34   |
|  | 75      | 0         |        | 20.96  | 21.02  | 21.29   |
|  | 1       | 0         |        | 21.63  | 21.74  | 21.58   |



|    |    |    |       |       |       |       |
|----|----|----|-------|-------|-------|-------|
| 15 | 1  | 37 | 64QAM | 21.40 | 21.54 | 21.48 |
| 15 | 1  | 74 |       | 21.45 | 21.06 | 21.40 |
| 15 | 36 | 0  |       | 20.01 | 20.26 | 20.48 |
| 15 | 36 | 20 |       | 20.05 | 20.14 | 20.49 |
| 15 | 36 | 39 |       | 20.01 | 20.16 | 20.37 |
| 15 | 75 | 0  |       | 20.02 | 20.13 | 20.36 |
| 15 | 1  | 0  |       | 21.45 | 21.39 | 21.45 |
| 15 | 1  | 37 |       | 21.44 | 21.14 | 21.50 |
| 15 | 1  | 74 |       | 21.36 | 21.10 | 21.49 |
| 15 | 36 | 0  |       | 20.10 | 20.22 | 20.43 |
| 15 | 36 | 20 |       | 20.10 | 20.21 | 20.46 |
| 15 | 36 | 39 |       | 20.02 | 20.13 | 20.46 |
| 15 | 75 | 0  |       | 20.02 | 20.13 | 20.37 |



| LTE Band 2 Maximum Average Power [dBm] |         |           |        |        |        |         |
|--|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                     | 1       | 0         | QPSK   | 22.24  | 22.27  | 22.27   |
|  | 1       | 25        |        | 21.92  | 22.00  | 22.17   |
|  | 1       | 49        |        | 22.03  | 22.08  | 22.17   |
|  | 25      | 0         |        | 20.97  | 21.06  | 21.33   |
|  | 25      | 12        |        | 20.98  | 21.01  | 21.30   |
|  | 25      | 25        |        | 20.91  | 21.02  | 21.26   |
|  | 50      | 0         |        | 20.95  | 21.04  | 21.33   |
| 10                                     | 1       | 0         | 16-QAM | 21.26  | 21.38  | 21.58   |
|  | 1       | 25        |        | 21.01  | 21.12  | 21.53   |
|  | 1       | 49        |        | 21.26  | 21.22  | 21.43   |
|  | 25      | 0         |        | 20.06  | 20.25  | 20.38   |
|  | 25      | 12        |        | 20.03  | 20.13  | 20.37   |
|  | 25      | 25        |        | 19.98  | 20.09  | 20.35   |
|  | 50      | 0         |        | 19.90  | 20.10  | 20.42   |
| 10                                     | 1       | 0         | 64QAM  | 21.40  | 21.31  | 21.24   |
|  | 1       | 25        |        | 21.11  | 20.92  | 21.32   |
|  | 1       | 49        |        | 21.28  | 21.00  | 21.34   |
|  | 25      | 0         |        | 20.02  | 20.09  | 20.43   |
|  | 25      | 12        |        | 19.99  | 20.06  | 20.29   |
|  | 25      | 25        |        | 20.01  | 20.02  | 20.36   |
|  | 50      | 0         |        | 20.00  | 20.07  | 20.39   |
| 5                                      | 1       | 0         | QPSK   | 21.92  | 22.01  | 22.23   |
|  | 1       | 12        |        | 21.78  | 21.99  | 22.19   |
|  | 1       | 24        |        | 21.77  | 21.88  | 22.22   |
|  | 12      | 0         |        | 20.91  | 21.06  | 21.35   |
|  | 12      | 7         |        | 20.87  | 21.07  | 21.30   |
|  | 12      | 13        |        | 20.91  | 21.04  | 21.30   |
|  | 25      | 0         |        | 20.88  | 21.00  | 21.32   |
| 5                                      | 1       | 0         | 16-QAM | 21.25  | 21.36  | 21.65   |
|  | 1       | 12        |        | 21.14  | 21.19  | 21.51   |
|  | 1       | 24        |        | 21.15  | 21.25  | 21.55   |
|  | 12      | 0         |        | 20.06  | 20.10  | 20.37   |
|  | 12      | 7         |        | 20.01  | 19.95  | 20.27   |



|   |    |    |       |       |       |       |
|---|----|----|-------|-------|-------|-------|
| 5 | 12 | 13 | 64QAM | 20.02 | 19.98 | 20.30 |
| 5 | 25 | 0  |       | 19.97 | 20.06 | 20.40 |
| 5 | 1  | 0  |       | 21.07 | 20.96 | 21.29 |
| 5 | 1  | 12 |       | 20.97 | 20.91 | 21.23 |
| 5 | 1  | 24 |       | 20.98 | 20.94 | 21.23 |
| 5 | 12 | 0  |       | 19.99 | 20.26 | 20.44 |
| 5 | 12 | 7  |       | 19.88 | 20.21 | 20.43 |
| 5 | 12 | 13 |       | 19.88 | 20.13 | 20.46 |
| 5 | 25 | 0  |       | 19.91 | 20.10 | 20.41 |



| LTE Band 2 Maximum Average Power [dBm] |         |           |        |        |        |         |
|--|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 3                                      | 1       | 0         | QPSK   | 21.86  | 22.02  | 22.34   |
|  | 1       | 8         |        | 21.97  | 22.15  | 22.43   |
|  | 1       | 14        |        | 21.77  | 22.03  | 22.28   |
|  | 8       | 0         |        | 20.86  | 21.00  | 21.30   |
|  | 8       | 4         |        | 20.86  | 21.02  | 21.27   |
|  | 8       | 7         |        | 20.86  | 20.96  | 21.26   |
|  | 15      | 0         |        | 20.79  | 20.95  | 21.28   |
| 3                                      | 1       | 0         | 16-QAM | 21.44  | 21.53  | 21.46   |
|  | 1       | 8         |        | 21.43  | 21.61  | 21.56   |
|  | 1       | 14        |        | 21.30  | 21.47  | 21.53   |
|  | 8       | 0         |        | 20.00  | 20.13  | 20.55   |
|  | 8       | 4         |        | 20.06  | 20.19  | 20.54   |
|  | 8       | 7         |        | 20.01  | 20.21  | 20.53   |
|  | 15      | 0         |        | 19.92  | 20.13  | 20.42   |
| 3                                      | 1       | 0         | 64QAM  | 20.04  | 20.28  | 20.59   |
|  | 1       | 8         |        | 20.14  | 20.29  | 20.73   |
|  | 1       | 14        |        | 20.00  | 20.20  | 20.60   |
|  | 8       | 0         |        | 19.23  | 19.12  | 19.59   |
|  | 8       | 4         |        | 19.08  | 19.26  | 19.55   |
|  | 8       | 7         |        | 19.18  | 19.06  | 19.56   |
|  | 15      | 0         |        | 19.10  | 19.07  | 19.33   |
| 1.4                                    | 1       | 0         | QPSK   | 21.75  | 21.94  | 22.22   |
|  | 1       | 3         |        | 21.80  | 21.99  | 22.29   |
|  | 1       | 5         |        | 21.69  | 21.87  | 22.13   |
|  | 3       | 0         |        | 21.69  | 21.92  | 22.22   |
|  | 3       | 1         |        | 21.71  | 21.94  | 22.23   |
|  | 3       | 3         |        | 21.79  | 21.90  | 22.33   |
|  | 6       | 0         |        | 20.74  | 20.98  | 21.20   |
| 1.4                                    | 1       | 0         | 16-QAM | 20.77  | 20.85  | 21.26   |
|  | 1       | 3         |        | 20.88  | 20.90  | 21.40   |
|  | 1       | 5         |        | 20.70  | 21.02  | 21.29   |
|  | 3       | 0         |        | 20.93  | 21.08  | 21.23   |
|  | 3       | 1         |        | 21.07  | 20.96  | 21.19   |



|     |   |   |       |       |       |       |
|-----|---|---|-------|-------|-------|-------|
| 1.4 | 3 | 3 | 64QAM | 20.97 | 21.12 | 21.22 |
| 1.4 | 6 | 0 |       | 19.85 | 20.06 | 20.24 |
| 1.4 | 1 | 0 |       | 20.14 | 20.05 | 20.25 |
| 1.4 | 1 | 3 |       | 20.19 | 20.01 | 20.37 |
| 1.4 | 1 | 5 |       | 20.13 | 20.12 | 20.29 |
| 1.4 | 3 | 0 |       | 20.14 | 20.05 | 20.35 |
| 1.4 | 3 | 1 |       | 20.17 | 20.13 | 20.41 |
| 1.4 | 3 | 3 |       | 20.17 | 20.09 | 20.38 |
| 1.4 | 6 | 0 |       | 19.15 | 19.02 | 19.26 |



| LTE Band 4 Maximum Average Power [dBm] |         |           |        |        |        |         |
|--|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 20                                     | 1       | 0         | QPSK   | 22.31  | 22.09  | 22.21   |
|  | 1       | 49        |        | 22.06  | 21.95  | 21.88   |
|  | 1       | 99        |        | 21.90  | 21.78  | 21.66   |
|  | 50      | 0         |        | 21.30  | 21.12  | 21.09   |
|  | 50      | 24        |        | 21.27  | 21.14  | 21.06   |
|  | 50      | 50        |        | 21.06  | 21.00  | 20.85   |
|  | 100     | 0         |        | 21.15  | 21.10  | 21.00   |
| 20                                     | 1       | 0         | 16-QAM | 21.62  | 21.74  | 21.82   |
|  | 1       | 49        |        | 21.28  | 21.51  | 21.48   |
|  | 1       | 99        |        | 21.24  | 21.35  | 21.15   |
|  | 50      | 0         |        | 20.35  | 20.10  | 20.12   |
|  | 50      | 24        |        | 20.24  | 20.17  | 20.05   |
|  | 50      | 50        |        | 20.18  | 20.14  | 19.83   |
|  | 100     | 0         |        | 20.26  | 20.15  | 20.05   |
| 20                                     | 1       | 0         | 64QAM  | 20.76  | 20.63  | 20.61   |
|  | 1       | 49        |        | 20.42  | 20.25  | 20.23   |
|  | 1       | 99        |        | 20.39  | 20.17  | 20.15   |
|  | 50      | 0         |        | 19.38  | 19.12  | 19.15   |
|  | 50      | 24        |        | 19.23  | 19.23  | 19.08   |
|  | 50      | 50        |        | 19.20  | 19.09  | 18.87   |
|  | 100     | 0         |        | 19.27  | 19.13  | 19.18   |
| 15                                     | 1       | 0         | QPSK   | 22.30  | 22.13  | 22.16   |
|  | 1       | 37        |        | 22.12  | 21.93  | 21.80   |
|  | 1       | 74        |        | 22.05  | 21.93  | 21.64   |
|  | 36      | 0         |        | 21.24  | 21.02  | 21.01   |
|  | 36      | 20        |        | 21.21  | 21.11  | 21.01   |
|  | 36      | 39        |        | 21.08  | 21.01  | 20.85   |
|  | 75      | 0         |        | 21.12  | 21.08  | 20.98   |
| 15                                     | 1       | 0         | 16-QAM | 21.74  | 21.74  | 21.64   |
|  | 1       | 37        |        | 21.49  | 21.59  | 21.39   |
|  | 1       | 74        |        | 21.48  | 21.49  | 21.22   |
|  | 36      | 0         |        | 20.32  | 20.15  | 20.16   |
|  | 36      | 20        |        | 20.25  | 20.15  | 20.10   |



|    |    |    |       |       |       |       |
|----|----|----|-------|-------|-------|-------|
| 15 | 36 | 39 | 64QAM | 20.24 | 20.13 | 19.91 |
| 15 | 75 | 0  |       | 20.27 | 20.17 | 20.03 |
| 15 | 1  | 0  |       | 20.83 | 20.40 | 20.44 |
| 15 | 1  | 37 |       | 20.45 | 20.27 | 20.15 |
| 15 | 1  | 74 |       | 20.13 | 20.10 | 19.86 |
| 15 | 36 | 0  |       | 19.32 | 19.10 | 19.16 |
| 15 | 36 | 20 |       | 19.33 | 19.19 | 19.04 |
| 15 | 36 | 39 |       | 19.29 | 19.13 | 18.94 |
| 15 | 75 | 0  |       | 19.24 | 19.15 | 19.00 |



| LTE Band 4 Maximum Average Power [dBm] |         |           |        |        |        |         |
|--|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                     | 1       | 0         | QPSK   | 22.29  | 21.97  | 21.97   |
|  | 1       | 25        |        | 22.18  | 21.85  | 21.82   |
|  | 1       | 49        |        | 22.15  | 21.85  | 21.64   |
|  | 25      | 0         |        | 21.22  | 21.03  | 20.99   |
|  | 25      | 12        |        | 21.19  | 21.04  | 20.89   |
|  | 25      | 25        |        | 21.10  | 21.02  | 20.76   |
|  | 50      | 0         |        | 21.09  | 21.05  | 20.89   |
| 10                                     | 1       | 0         | 16-QAM | 21.43  | 20.96  | 20.96   |
|  | 1       | 25        |        | 21.33  | 20.94  | 20.75   |
|  | 1       | 49        |        | 21.26  | 20.89  | 20.57   |
|  | 25      | 0         |        | 20.35  | 20.01  | 20.09   |
|  | 25      | 12        |        | 20.34  | 20.10  | 19.92   |
|  | 25      | 25        |        | 20.20  | 20.09  | 19.91   |
|  | 50      | 0         |        | 20.19  | 20.18  | 19.91   |
| 10                                     | 1       | 0         | 64QAM  | 20.57  | 20.47  | 20.09   |
|  | 1       | 25        |        | 20.55  | 20.27  | 19.97   |
|  | 1       | 49        |        | 20.44  | 20.20  | 19.82   |
|  | 25      | 0         |        | 19.15  | 19.03  | 19.07   |
|  | 25      | 12        |        | 19.14  | 19.09  | 18.98   |
|  | 25      | 25        |        | 19.15  | 19.05  | 18.86   |
|  | 50      | 0         |        | 19.30  | 19.13  | 18.93   |
| 5                                      | 1       | 0         | QPSK   | 22.09  | 21.96  | 21.85   |
|  | 1       | 12        |        | 21.90  | 21.94  | 21.64   |
|  | 1       | 24        |        | 22.03  | 21.95  | 21.67   |
|  | 12      | 0         |        | 21.02  | 20.94  | 20.85   |
|  | 12      | 7         |        | 21.07  | 21.03  | 20.70   |
|  | 12      | 13        |        | 21.07  | 21.03  | 20.72   |
|  | 25      | 0         |        | 21.07  | 21.05  | 20.79   |
| 5                                      | 1       | 0         | 16-QAM | 21.65  | 21.55  | 21.41   |
|  | 1       | 12        |        | 21.63  | 21.58  | 21.29   |
|  | 1       | 24        |        | 21.63  | 21.51  | 21.19   |
|  | 12      | 0         |        | 20.26  | 20.04  | 19.85   |
|  | 12      | 7         |        | 20.23  | 20.17  | 19.80   |



|   |    |    |       |       |       |       |
|---|----|----|-------|-------|-------|-------|
| 5 | 12 | 13 | 64QAM | 20.18 | 20.08 | 19.79 |
| 5 | 25 | 0  |       | 20.15 | 20.04 | 19.93 |
| 5 | 1  | 0  |       | 20.53 | 20.38 | 19.81 |
| 5 | 1  | 12 |       | 20.58 | 20.05 | 19.63 |
| 5 | 1  | 24 |       | 20.45 | 19.86 | 19.59 |
| 5 | 12 | 0  |       | 19.26 | 19.08 | 18.93 |
| 5 | 12 | 7  |       | 19.17 | 19.23 | 18.90 |
| 5 | 12 | 13 |       | 19.18 | 19.14 | 18.86 |
| 5 | 25 | 0  |       | 19.16 | 19.10 | 18.95 |



| LTE Band 4 Maximum Average Power [dBm] |         |           |        |        |        |         |
|--|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 3                                      | 1       | 0         | QPSK   | 22.00  | 21.89  | 21.52   |
|  | 1       | 8         |        | 22.00  | 21.98  | 21.64   |
|  | 1       | 14        |        | 21.99  | 21.92  | 21.55   |
|  | 8       | 0         |        | 21.07  | 21.04  | 20.76   |
|  | 8       | 4         |        | 21.09  | 21.02  | 20.78   |
|  | 8       | 7         |        | 21.07  | 20.98  | 20.68   |
|  | 15      | 0         |        | 21.02  | 20.98  | 20.64   |
| 3                                      | 1       | 0         | 16-QAM | 21.42  | 21.17  | 20.96   |
|  | 1       | 8         |        | 21.41  | 21.38  | 21.07   |
|  | 1       | 14        |        | 21.26  | 21.15  | 20.97   |
|  | 8       | 0         |        | 20.20  | 20.15  | 19.72   |
|  | 8       | 4         |        | 20.18  | 20.13  | 19.88   |
|  | 8       | 7         |        | 20.22  | 20.08  | 19.67   |
|  | 15      | 0         |        | 20.11  | 20.07  | 19.77   |
| 3                                      | 1       | 0         | 64QAM  | 20.24  | 20.03  | 19.78   |
|  | 1       | 8         |        | 20.32  | 20.22  | 19.88   |
|  | 1       | 14        |        | 20.25  | 20.07  | 19.83   |
|  | 8       | 0         |        | 19.17  | 19.03  | 18.82   |
|  | 8       | 4         |        | 19.16  | 19.12  | 18.85   |
|  | 8       | 7         |        | 19.13  | 19.04  | 18.76   |
|  | 15      | 0         |        | 19.24  | 19.07  | 18.70   |
| 1.4                                    | 1       | 0         | QPSK   | 21.94  | 21.77  | 21.58   |
|  | 1       | 3         |        | 22.04  | 21.94  | 21.62   |
|  | 1       | 5         |        | 22.01  | 21.85  | 21.54   |
|  | 3       | 0         |        | 21.92  | 21.77  | 21.66   |
|  | 3       | 1         |        | 21.96  | 21.94  | 21.64   |
|  | 3       | 3         |        | 22.03  | 22.07  | 21.64   |
|  | 6       | 0         |        | 21.06  | 20.97  | 20.54   |
| 1.4                                    | 1       | 0         | 16-QAM | 21.36  | 21.20  | 21.13   |
|  | 1       | 3         |        | 21.54  | 21.30  | 21.14   |
|  | 1       | 5         |        | 21.38  | 21.27  | 21.13   |
|  | 3       | 0         |        | 21.05  | 20.87  | 20.72   |
|  | 3       | 1         |        | 21.16  | 21.02  | 20.73   |



|     |   |   |       |       |       |       |
|-----|---|---|-------|-------|-------|-------|
| 1.4 | 3 | 3 | 64QAM | 21.08 | 21.01 | 20.73 |
| 1.4 | 6 | 0 |       | 20.19 | 20.25 | 19.78 |
| 1.4 | 1 | 0 |       | 20.39 | 20.21 | 19.86 |
| 1.4 | 1 | 3 |       | 20.46 | 20.33 | 19.85 |
| 1.4 | 1 | 5 |       | 20.40 | 20.31 | 19.81 |
| 1.4 | 3 | 0 |       | 20.33 | 20.08 | 19.91 |
| 1.4 | 3 | 1 |       | 20.27 | 20.23 | 19.99 |
| 1.4 | 3 | 3 |       | 20.29 | 20.28 | 19.89 |
| 1.4 | 6 | 0 |       | 19.05 | 18.98 | 18.69 |



| LTE Band 5 Maximum Average Power [dBm] |         |           |        |        |        |         |
|--|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                     | 1       | 0         | QPSK   | 22.93  | 22.97  | 22.88   |
|  | 1       | 25        |        | 22.85  | 22.77  | 22.79   |
|  | 1       | 49        |        | 22.64  | 22.66  | 22.70   |
|  | 25      | 0         |        | 21.86  | 21.91  | 21.81   |
|  | 25      | 12        |        | 21.89  | 21.83  | 21.77   |
|  | 25      | 25        |        | 21.83  | 21.79  | 21.81   |
|  | 50      | 0         |        | 21.78  | 21.87  | 21.74   |
| 10                                     | 1       | 0         | 16-QAM | 22.27  | 22.08  | 22.20   |
|  | 1       | 25        |        | 22.18  | 22.10  | 22.12   |
|  | 1       | 49        |        | 21.99  | 22.02  | 22.03   |
|  | 25      | 0         |        | 21.07  | 20.92  | 20.87   |
|  | 25      | 12        |        | 21.04  | 20.90  | 20.83   |
|  | 25      | 25        |        | 20.95  | 20.90  | 20.88   |
|  | 50      | 0         |        | 21.01  | 20.93  | 20.85   |
| 10                                     | 1       | 0         | 64QAM  | 21.20  | 20.96  | 21.18   |
|  | 1       | 25        |        | 21.15  | 21.01  | 21.10   |
|  | 1       | 49        |        | 20.93  | 20.94  | 21.00   |
|  | 25      | 0         |        | 20.05  | 19.96  | 19.86   |
|  | 25      | 12        |        | 20.05  | 19.91  | 19.87   |
|  | 25      | 25        |        | 20.00  | 19.88  | 19.89   |
|  | 50      | 0         |        | 20.00  | 19.90  | 19.84   |
| 5                                      | 1       | 0         | QPSK   | 22.93  | 22.69  | 22.82   |
|  | 1       | 12        |        | 22.79  | 22.74  | 22.76   |
|  | 1       | 24        |        | 22.86  | 22.71  | 22.75   |
|  | 12      | 0         |        | 21.96  | 21.82  | 21.81   |
|  | 12      | 7         |        | 22.07  | 21.80  | 21.81   |
|  | 12      | 13        |        | 21.92  | 21.77  | 21.80   |
|  | 25      | 0         |        | 21.93  | 21.78  | 21.81   |
| 5                                      | 1       | 0         | 16-QAM | 22.27  | 22.04  | 22.18   |
|  | 1       | 12        |        | 22.37  | 22.13  | 22.14   |
|  | 1       | 24        |        | 22.25  | 22.09  | 22.09   |
|  | 12      | 0         |        | 21.04  | 20.94  | 20.91   |
|  | 12      | 7         |        | 21.14  | 20.90  | 20.90   |



|   |    |    |       |       |       |       |
|---|----|----|-------|-------|-------|-------|
| 5 | 12 | 13 | 64QAM | 21.00 | 20.89 | 20.90 |
| 5 | 25 | 0  |       | 21.05 | 20.89 | 20.91 |
| 5 | 1  | 0  |       | 21.17 | 20.95 | 21.09 |
| 5 | 1  | 12 |       | 21.28 | 21.00 | 21.00 |
| 5 | 1  | 24 |       | 21.14 | 20.99 | 20.95 |
| 5 | 12 | 0  |       | 20.09 | 19.96 | 19.96 |
| 5 | 12 | 7  |       | 20.19 | 19.94 | 19.98 |
| 5 | 12 | 13 |       | 20.05 | 19.92 | 19.92 |
| 5 | 25 | 0  |       | 20.05 | 19.88 | 19.88 |
|   |    |    |       |       |       |       |



| LTE Band 5 Maximum Average Power [dBm] |         |           |        |        |        |         |
|--|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 3                                      | 1       | 0         | QPSK   | 22.92  | 22.73  | 22.77   |
|  | 1       | 8         |        | 22.82  | 22.81  | 22.84   |
|  | 1       | 14        |        | 22.96  | 22.71  | 22.71   |
|  | 8       | 0         |        | 21.95  | 21.77  | 21.77   |
|  | 8       | 4         |        | 22.05  | 21.77  | 21.78   |
|  | 8       | 7         |        | 22.02  | 21.73  | 21.75   |
|  | 15      | 0         |        | 21.93  | 21.78  | 21.76   |
| 3                                      | 1       | 0         | 16-QAM | 22.24  | 22.08  | 22.13   |
|  | 1       | 8         |        | 22.44  | 22.18  | 22.21   |
|  | 1       | 14        |        | 22.28  | 22.04  | 22.07   |
|  | 8       | 0         |        | 21.07  | 20.93  | 20.93   |
|  | 8       | 4         |        | 21.17  | 20.93  | 20.93   |
|  | 8       | 7         |        | 21.11  | 20.87  | 20.90   |
|  | 15      | 0         |        | 21.03  | 20.89  | 20.89   |
| 3                                      | 1       | 0         | 64QAM  | 21.17  | 21.02  | 21.06   |
|  | 1       | 8         |        | 21.35  | 21.09  | 21.13   |
|  | 1       | 14        |        | 21.25  | 20.98  | 21.00   |
|  | 8       | 0         |        | 20.08  | 19.91  | 19.91   |
|  | 8       | 4         |        | 20.17  | 19.91  | 19.93   |
|  | 8       | 7         |        | 20.14  | 19.91  | 19.90   |
|  | 15      | 0         |        | 20.05  | 19.88  | 19.88   |
| 1.4                                    | 1       | 0         | QPSK   | 22.81  | 22.64  | 22.67   |
|  | 1       | 3         |        | 22.90  | 22.72  | 22.50   |
|  | 1       | 5         |        | 22.94  | 22.65  | 22.61   |
|  | 3       | 0         |        | 22.86  | 22.66  | 22.70   |
|  | 3       | 1         |        | 22.90  | 22.72  | 22.72   |
|  | 3       | 3         |        | 22.89  | 22.71  | 22.71   |
|  | 6       | 0         |        | 21.85  | 21.70  | 21.74   |
| 1.4                                    | 1       | 0         | 16-QAM | 22.15  | 22.00  | 22.03   |
|  | 1       | 3         |        | 22.25  | 22.09  | 22.12   |
|  | 1       | 5         |        | 22.26  | 22.02  | 22.02   |
|  | 3       | 0         |        | 21.95  | 21.78  | 21.76   |
|  | 3       | 1         |        | 21.99  | 21.83  | 21.82   |



|     |   |   |       |       |       |       |
|-----|---|---|-------|-------|-------|-------|
| 1.4 | 3 | 3 | 64QAM | 22.00 | 21.80 | 21.83 |
| 1.4 | 6 | 0 |       | 21.03 | 20.87 | 20.88 |
| 1.4 | 1 | 0 |       | 21.11 | 20.92 | 20.96 |
| 1.4 | 1 | 3 |       | 21.16 | 20.97 | 20.99 |
| 1.4 | 1 | 5 |       | 21.16 | 20.92 | 20.93 |
| 1.4 | 3 | 0 |       | 21.11 | 20.93 | 20.92 |
| 1.4 | 3 | 1 |       | 21.11 | 20.97 | 20.94 |
| 1.4 | 3 | 3 |       | 21.08 | 20.93 | 20.93 |
| 1.4 | 6 | 0 |       | 19.98 | 19.78 | 19.78 |



| LTE Band 7 Maximum Average Power [dBm] |         |           |        |        |        |         |
|--|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 20                                     | 1       | 0         | QPSK   | 22.05  | 22.17  | 22.16   |
|  | 1       | 49        |        | 21.86  | 21.93  | 22.02   |
|  | 1       | 99        |        | 21.90  | 21.94  | 21.91   |
|  | 50      | 0         |        | 21.02  | 21.10  | 21.05   |
|  | 50      | 24        |        | 21.00  | 20.98  | 21.02   |
|  | 50      | 50        |        | 20.88  | 20.95  | 20.95   |
|  | 100     | 0         |        | 20.96  | 21.03  | 21.00   |
| 20                                     | 1       | 0         | 16-QAM | 21.07  | 21.12  | 21.22   |
|  | 1       | 49        |        | 20.85  | 20.96  | 21.13   |
|  | 1       | 99        |        | 20.90  | 20.95  | 21.09   |
|  | 50      | 0         |        | 20.05  | 20.17  | 20.10   |
|  | 50      | 24        |        | 20.11  | 20.18  | 20.03   |
|  | 50      | 50        |        | 20.07  | 20.08  | 20.03   |
|  | 100     | 0         |        | 19.97  | 20.06  | 20.09   |
| 20                                     | 1       | 0         | 64QAM  | 20.46  | 20.50  | 20.14   |
|  | 1       | 49        |        | 20.19  | 20.06  | 20.13   |
|  | 1       | 99        |        | 20.30  | 20.32  | 20.04   |
|  | 50      | 0         |        | 19.07  | 19.10  | 19.13   |
|  | 50      | 24        |        | 18.99  | 19.18  | 19.10   |
|  | 50      | 50        |        | 19.06  | 19.05  | 19.12   |
|  | 100     | 0         |        | 19.10  | 19.08  | 19.12   |
| 15                                     | 1       | 0         | QPSK   | 22.08  | 22.03  | 22.00   |
|  | 1       | 37        |        | 21.77  | 21.97  | 22.03   |
|  | 1       | 74        |        | 21.94  | 21.92  | 21.95   |
|  | 36      | 0         |        | 20.98  | 21.10  | 21.08   |
|  | 36      | 20        |        | 20.99  | 21.06  | 21.06   |
|  | 36      | 39        |        | 20.97  | 21.02  | 21.04   |
|  | 75      | 0         |        | 20.93  | 21.01  | 21.01   |
| 15                                     | 1       | 0         | 16-QAM | 21.22  | 21.49  | 21.45   |
|  | 1       | 37        |        | 21.08  | 21.50  | 21.43   |
|  | 1       | 74        |        | 21.07  | 21.50  | 21.46   |
|  | 36      | 0         |        | 20.05  | 20.05  | 20.11   |
|  | 36      | 20        |        | 20.04  | 20.03  | 20.13   |



|    |    |    |       |       |       |       |
|----|----|----|-------|-------|-------|-------|
| 15 | 36 | 39 | 64QAM | 19.95 | 19.97 | 20.03 |
| 15 | 75 | 0  |       | 20.02 | 20.10 | 20.12 |
| 15 | 1  | 0  |       | 20.39 | 20.48 | 20.27 |
| 15 | 1  | 37 |       | 20.03 | 20.29 | 20.34 |
| 15 | 1  | 74 |       | 20.23 | 20.28 | 20.23 |
| 15 | 36 | 0  |       | 19.07 | 19.16 | 19.12 |
| 15 | 36 | 20 |       | 19.01 | 19.17 | 19.11 |
| 15 | 36 | 39 |       | 18.97 | 19.01 | 19.11 |
| 15 | 75 | 0  |       | 19.01 | 19.08 | 19.12 |



| LTE Band 7 Maximum Average Power [dBm] |         |           |        |        |        |         |
|--|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                     | 1       | 0         | QPSK   | 21.98  | 22.06  | 22.12   |
|  | 1       | 25        |        | 21.91  | 21.99  | 22.01   |
|  | 1       | 49        |        | 21.76  | 21.97  | 21.96   |
|  | 25      | 0         |        | 20.91  | 21.03  | 21.02   |
|  | 25      | 12        |        | 20.92  | 21.01  | 21.03   |
|  | 25      | 25        |        | 20.88  | 20.98  | 21.00   |
|  | 50      | 0         |        | 20.96  | 20.91  | 20.90   |
| 10                                     | 1       | 0         | 16-QAM | 21.50  | 21.27  | 21.04   |
|  | 1       | 25        |        | 21.46  | 21.16  | 21.20   |
|  | 1       | 49        |        | 20.95  | 21.16  | 21.15   |
|  | 25      | 0         |        | 19.97  | 20.16  | 20.13   |
|  | 25      | 12        |        | 20.11  | 20.13  | 20.06   |
|  | 25      | 25        |        | 19.94  | 20.03  | 20.02   |
|  | 50      | 0         |        | 19.96  | 20.07  | 20.05   |
| 10                                     | 1       | 0         | 64QAM  | 20.30  | 20.37  | 20.43   |
|  | 1       | 25        |        | 20.29  | 20.25  | 20.36   |
|  | 1       | 49        |        | 20.08  | 20.27  | 20.34   |
|  | 25      | 0         |        | 19.08  | 19.08  | 19.05   |
|  | 25      | 12        |        | 19.00  | 19.14  | 19.05   |
|  | 25      | 25        |        | 18.94  | 19.09  | 19.00   |
|  | 50      | 0         |        | 18.97  | 19.09  | 19.07   |
| 5                                      | 1       | 0         | QPSK   | 21.97  | 22.02  | 21.96   |
|  | 1       | 12        |        | 21.94  | 22.06  | 21.99   |
|  | 1       | 24        |        | 21.90  | 21.96  | 21.93   |
|  | 12      | 0         |        | 20.99  | 20.90  | 20.93   |
|  | 12      | 7         |        | 20.98  | 20.99  | 21.03   |
|  | 12      | 13        |        | 20.87  | 20.97  | 20.96   |
|  | 25      | 0         |        | 20.95  | 20.94  | 21.00   |
| 5                                      | 1       | 0         | 16-QAM | 20.87  | 21.06  | 21.09   |
|  | 1       | 12        |        | 20.93  | 21.07  | 21.03   |
|  | 1       | 24        |        | 20.95  | 21.02  | 21.03   |
|  | 12      | 0         |        | 20.05  | 20.04  | 20.04   |
|  | 12      | 7         |        | 19.95  | 20.01  | 20.15   |



|   |    |    |       |       |       |       |
|---|----|----|-------|-------|-------|-------|
| 5 | 12 | 13 | 64QAM | 19.99 | 20.08 | 20.07 |
| 5 | 25 | 0  |       | 19.96 | 19.99 | 19.95 |
| 5 | 1  | 0  |       | 19.99 | 20.09 | 20.26 |
| 5 | 1  | 12 |       | 19.93 | 20.02 | 20.24 |
| 5 | 1  | 24 |       | 19.90 | 20.01 | 20.26 |
| 5 | 12 | 0  |       | 18.94 | 19.08 | 19.20 |
| 5 | 12 | 7  |       | 19.01 | 19.04 | 19.20 |
| 5 | 12 | 13 |       | 19.02 | 19.02 | 19.13 |
| 5 | 25 | 0  |       | 19.07 | 19.04 | 19.03 |



| LTE Band 12 Maximum Average Power [dBm] |         |           |        |        |        |         |
|---|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                      | 1       | 0         | QPSK   | 23.80  | 23.96  | 23.85   |
|   | 1       | 25        |        | 23.78  | 23.87  | 23.83   |
|   | 1       | 49        |        | 23.83  | 23.81  | 23.68   |
|   | 25      | 0         |        | 22.84  | 22.93  | 22.86   |
|   | 25      | 12        |        | 22.91  | 22.92  | 22.87   |
|   | 25      | 25        |        | 22.87  | 22.84  | 22.81   |
|   | 50      | 0         |        | 22.88  | 22.89  | 22.84   |
| 10                                      | 1       | 0         | 16-QAM | 23.14  | 23.09  | 23.19   |
|   | 1       | 25        |        | 23.10  | 23.17  | 23.19   |
|   | 1       | 49        |        | 23.19  | 23.14  | 22.98   |
|   | 25      | 0         |        | 21.94  | 21.99  | 21.95   |
|   | 25      | 12        |        | 22.03  | 22.00  | 21.97   |
|   | 25      | 25        |        | 21.98  | 21.94  | 21.89   |
|   | 50      | 0         |        | 22.02  | 21.96  | 21.95   |
| 10                                      | 1       | 0         | 64QAM  | 22.14  | 22.05  | 22.08   |
|   | 1       | 25        |        | 22.03  | 22.16  | 22.09   |
|   | 1       | 49        |        | 22.18  | 22.12  | 21.96   |
|   | 25      | 0         |        | 20.95  | 21.00  | 20.96   |
|   | 25      | 12        |        | 21.05  | 21.00  | 20.98   |
|   | 25      | 25        |        | 21.01  | 20.96  | 20.95   |
|   | 50      | 0         |        | 21.06  | 21.00  | 20.97   |
| 5                                       | 1       | 0         | QPSK   | 23.81  | 23.86  | 23.78   |
|   | 1       | 12        |        | 23.80  | 23.82  | 23.84   |
|   | 1       | 24        |        | 23.80  | 23.84  | 23.60   |
|   | 12      | 0         |        | 22.83  | 22.84  | 22.80   |
|   | 12      | 7         |        | 22.88  | 22.89  | 22.92   |
|   | 12      | 13        |        | 22.84  | 22.87  | 22.90   |
|   | 25      | 0         |        | 22.84  | 22.87  | 22.78   |
| 5                                       | 1       | 0         | 16-QAM | 23.17  | 23.19  | 23.13   |
|   | 1       | 12        |        | 23.09  | 23.16  | 23.19   |
|   | 1       | 24        |        | 23.10  | 23.20  | 22.78   |
|   | 12      | 0         |        | 21.93  | 21.94  | 21.87   |
|   | 12      | 7         |        | 21.96  | 21.97  | 21.99   |



|   |    |    |       |       |       |       |
|---|----|----|-------|-------|-------|-------|
| 5 | 12 | 13 | 64QAM | 21.93 | 21.95 | 21.97 |
| 5 | 25 | 0  |       | 21.92 | 21.93 | 21.84 |
| 5 | 1  | 0  |       | 22.11 | 22.16 | 22.08 |
| 5 | 1  | 12 |       | 22.04 | 22.14 | 22.10 |
| 5 | 1  | 24 |       | 22.06 | 22.13 | 21.79 |
| 5 | 12 | 0  |       | 21.00 | 21.02 | 20.95 |
| 5 | 12 | 7  |       | 21.01 | 21.04 | 21.08 |
| 5 | 12 | 13 |       | 20.98 | 21.00 | 21.05 |
| 5 | 25 | 0  |       | 20.93 | 20.95 | 20.88 |



| LTE Band 12 Maximum Average Power [dBm] |         |           |        |        |        |         |
|---|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 3                                       | 1       | 0         | QPSK   | 23.81  | 23.85  | 23.83   |
|   | 1       | 8         |        | 23.85  | 23.93  | 23.93   |
|   | 1       | 14        |        | 23.51  | 23.82  | 23.64   |
|   | 8       | 0         |        | 22.84  | 22.83  | 22.88   |
|   | 8       | 4         |        | 22.83  | 22.85  | 22.90   |
|   | 8       | 7         |        | 22.79  | 22.84  | 22.83   |
|   | 15      | 0         |        | 22.80  | 22.83  | 22.87   |
| 3                                       | 1       | 0         | 16-QAM | 23.10  | 23.17  | 23.17   |
|   | 1       | 8         |        | 23.22  | 23.28  | 23.23   |
|   | 1       | 14        |        | 23.09  | 23.17  | 22.69   |
|   | 8       | 0         |        | 21.94  | 21.97  | 21.98   |
|   | 8       | 4         |        | 21.95  | 22.00  | 22.03   |
|   | 8       | 7         |        | 21.92  | 21.95  | 21.99   |
|   | 15      | 0         |        | 21.90  | 21.95  | 21.95   |
| 3                                       | 1       | 0         | 64QAM  | 22.04  | 22.09  | 22.08   |
|   | 1       | 8         |        | 22.10  | 22.16  | 22.14   |
|   | 1       | 14        |        | 22.02  | 22.09  | 21.70   |
|   | 8       | 0         |        | 20.93  | 20.97  | 21.00   |
|   | 8       | 4         |        | 20.97  | 21.00  | 21.03   |
|   | 8       | 7         |        | 20.94  | 20.98  | 21.00   |
|   | 15      | 0         |        | 20.93  | 20.93  | 20.99   |
| 1.4                                     | 1       | 0         | QPSK   | 23.72  | 23.75  | 23.73   |
|   | 1       | 3         |        | 23.69  | 23.83  | 23.74   |
|   | 1       | 5         |        | 23.69  | 23.75  | 23.50   |
|   | 3       | 0         |        | 23.78  | 23.81  | 23.72   |
|   | 3       | 1         |        | 23.79  | 23.83  | 23.64   |
|   | 3       | 3         |        | 23.79  | 23.82  | 23.59   |
|   | 6       | 0         |        | 22.77  | 22.77  | 22.62   |
| 1.4                                     | 1       | 0         | 16-QAM | 23.05  | 23.07  | 23.01   |
|   | 1       | 3         |        | 23.10  | 23.16  | 23.01   |
|   | 1       | 5         |        | 23.03  | 23.12  | 22.57   |
|   | 3       | 0         |        | 22.86  | 22.88  | 22.74   |
|   | 3       | 1         |        | 22.89  | 22.90  | 22.77   |



|     |   |   |       |       |       |       |
|-----|---|---|-------|-------|-------|-------|
| 1.4 | 3 | 3 | 64QAM | 22.88 | 22.90 | 22.73 |
| 1.4 | 6 | 0 |       | 21.91 | 21.95 | 21.80 |
| 1.4 | 1 | 0 |       | 21.99 | 22.02 | 22.02 |
| 1.4 | 1 | 3 |       | 22.04 | 22.06 | 21.97 |
| 1.4 | 1 | 5 |       | 22.01 | 22.01 | 21.64 |
| 1.4 | 3 | 0 |       | 21.99 | 22.02 | 21.97 |
| 1.4 | 3 | 1 |       | 22.03 | 22.04 | 21.93 |
| 1.4 | 3 | 3 |       | 22.04 | 22.03 | 21.84 |
| 1.4 | 6 | 0 |       | 20.87 | 20.88 | 20.86 |



| LTE Band 17 Maximum Average Power [dBm] |         |           |        |        |        |         |
|---|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                      | 1       | 0         | QPSK   | 23.72  | 23.90  | 23.81   |
|   | 1       | 25        |        | 23.86  | 23.81  | 23.88   |
|   | 1       | 49        |        | 23.84  | 23.87  | 23.58   |
|   | 25      | 0         |        | 22.81  | 22.94  | 22.93   |
|   | 25      | 12        |        | 22.92  | 22.93  | 22.93   |
|   | 25      | 25        |        | 22.86  | 22.88  | 22.87   |
|   | 50      | 0         |        | 22.90  | 22.92  | 22.91   |
| 10                                      | 1       | 0         | 16-QAM | 23.02  | 23.11  | 23.11   |
|   | 1       | 25        |        | 23.21  | 23.22  | 23.22   |
|   | 1       | 49        |        | 23.17  | 23.12  | 22.90   |
|   | 25      | 0         |        | 21.93  | 22.01  | 22.00   |
|   | 25      | 12        |        | 22.02  | 22.02  | 21.99   |
|   | 25      | 25        |        | 21.96  | 21.94  | 21.96   |
|   | 50      | 0         |        | 21.97  | 22.00  | 21.99   |
| 10                                      | 1       | 0         | 64QAM  | 21.97  | 22.09  | 22.06   |
|   | 1       | 25        |        | 22.16  | 22.18  | 22.15   |
|   | 1       | 49        |        | 22.11  | 22.11  | 21.91   |
|   | 25      | 0         |        | 20.93  | 21.02  | 21.03   |
|   | 25      | 12        |        | 21.05  | 21.03  | 21.06   |
|   | 25      | 25        |        | 21.01  | 21.01  | 21.02   |
|   | 50      | 0         |        | 21.05  | 21.01  | 21.00   |
| 5                                       | 1       | 0         | QPSK   | 23.75  | 23.78  | 23.85   |
|   | 1       | 12        |        | 23.80  | 23.85  | 23.84   |
|   | 1       | 24        |        | 23.89  | 23.85  | 23.70   |
|   | 12      | 0         |        | 22.87  | 22.89  | 22.87   |
|   | 12      | 7         |        | 22.89  | 22.93  | 22.87   |
|   | 12      | 13        |        | 22.85  | 22.88  | 22.85   |
|   | 25      | 0         |        | 22.84  | 22.90  | 22.87   |
| 5                                       | 1       | 0         | 16-QAM | 23.03  | 23.12  | 23.19   |
|   | 1       | 12        |        | 23.13  | 23.22  | 23.17   |
|   | 1       | 24        |        | 23.24  | 23.21  | 22.72   |
|   | 12      | 0         |        | 21.97  | 22.01  | 21.96   |
|   | 12      | 7         |        | 21.95  | 22.01  | 21.97   |



|   |    |    |       |       |       |       |
|---|----|----|-------|-------|-------|-------|
| 5 | 12 | 13 | 64QAM | 21.94 | 21.97 | 21.93 |
| 5 | 25 | 0  |       | 21.92 | 21.96 | 21.92 |
| 5 | 1  | 0  |       | 22.02 | 22.07 | 22.16 |
| 5 | 1  | 12 |       | 22.11 | 22.18 | 22.08 |
| 5 | 1  | 24 |       | 22.20 | 22.16 | 21.72 |
| 5 | 12 | 0  |       | 21.01 | 21.04 | 21.02 |
| 5 | 12 | 7  |       | 21.01 | 21.07 | 21.01 |
| 5 | 12 | 13 |       | 21.01 | 21.05 | 21.00 |
| 5 | 25 | 0  |       | 20.94 | 20.99 | 20.96 |



| LTE Band 38 Maximum Average Power [dBm] |         |           |        |        |        |         |
|---|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 20                                      | 1       | 0         | QPSK   | 23.66  | 23.40  | 23.48   |
|   | 1       | 49        |        | 23.32  | 23.23  | 23.32   |
|   | 1       | 99        |        | 23.37  | 23.26  | 23.22   |
|   | 50      | 0         |        | 22.53  | 22.37  | 22.40   |
|   | 50      | 24        |        | 22.51  | 22.43  | 22.27   |
|   | 50      | 50        |        | 22.34  | 22.37  | 22.42   |
|   | 100     | 0         |        | 22.52  | 22.46  | 22.40   |
| 20                                      | 1       | 0         | 16-QAM | 22.66  | 22.60  | 22.53   |
|   | 1       | 49        |        | 22.43  | 22.26  | 22.44   |
|   | 1       | 99        |        | 22.39  | 22.36  | 22.31   |
|   | 50      | 0         |        | 21.60  | 21.44  | 21.46   |
|   | 50      | 24        |        | 21.39  | 21.60  | 21.48   |
|   | 50      | 50        |        | 21.60  | 21.44  | 21.47   |
|   | 100     | 0         |        | 21.69  | 21.54  | 21.37   |
| 20                                      | 1       | 0         | 64QAM  | 21.41  | 21.26  | 21.26   |
|   | 1       | 49        |        | 21.17  | 21.00  | 21.25   |
|   | 1       | 99        |        | 21.25  | 21.11  | 21.05   |
|   | 50      | 0         |        | 20.77  | 20.62  | 20.42   |
|   | 50      | 24        |        | 20.45  | 20.57  | 20.43   |
|   | 50      | 50        |        | 20.57  | 20.42  | 20.37   |
|   | 100     | 0         |        | 20.56  | 20.42  | 20.43   |
| 15                                      | 1       | 0         | QPSK   | 23.65  | 23.32  | 23.39   |
|   | 1       | 37        |        | 23.30  | 23.33  | 23.32   |
|   | 1       | 74        |        | 23.27  | 23.20  | 23.25   |
|   | 36      | 0         |        | 22.58  | 22.35  | 22.44   |
|   | 36      | 20        |        | 22.42  | 22.45  | 22.44   |
|   | 36      | 39        |        | 22.40  | 22.43  | 22.40   |
|   | 75      | 0         |        | 22.57  | 22.34  | 22.34   |
| 15                                      | 1       | 0         | 16-QAM | 22.64  | 22.50  | 22.47   |
|   | 1       | 37        |        | 22.50  | 22.35  | 22.36   |
|   | 1       | 74        |        | 22.30  | 22.31  | 22.39   |
|   | 36      | 0         |        | 21.51  | 21.47  | 21.45   |
|   | 36      | 20        |        | 21.46  | 21.48  | 21.50   |



|    |    |    |       |       |       |       |
|----|----|----|-------|-------|-------|-------|
| 15 | 36 | 39 | 64QAM | 21.44 | 21.36 | 21.40 |
| 15 | 75 | 0  |       | 21.66 | 21.42 | 21.35 |
| 15 | 1  | 0  |       | 21.32 | 21.26 | 21.31 |
| 15 | 1  | 37 |       | 21.17 | 21.19 | 21.11 |
| 15 | 1  | 74 |       | 21.05 | 21.15 | 21.03 |
| 15 | 36 | 0  |       | 20.63 | 20.58 | 20.41 |
| 15 | 36 | 20 |       | 20.46 | 20.49 | 20.49 |
| 15 | 36 | 39 |       | 20.45 | 20.46 | 20.40 |
| 15 | 75 | 0  |       | 20.55 | 20.39 | 20.32 |



| LTE Band 38 Maximum Average Power [dBm] |         |           |        |        |        |         |
|---|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                      | 1       | 0         | QPSK   | 23.54  | 23.49  | 23.41   |
|   | 1       | 25        |        | 23.31  | 23.25  | 23.30   |
|   | 1       | 49        |        | 23.25  | 23.34  | 23.36   |
|   | 25      | 0         |        | 22.50  | 22.41  | 22.46   |
|   | 25      | 12        |        | 22.42  | 22.37  | 22.39   |
|   | 25      | 25        |        | 22.33  | 22.34  | 22.29   |
|   | 50      | 0         |        | 22.52  | 22.48  | 22.42   |
| 10                                      | 1       | 0         | 16-QAM | 22.63  | 22.90  | 22.61   |
|   | 1       | 25        |        | 22.34  | 22.29  | 22.41   |
|   | 1       | 49        |        | 22.35  | 22.25  | 22.38   |
|   | 25      | 0         |        | 21.60  | 21.60  | 21.44   |
|   | 25      | 12        |        | 21.42  | 21.46  | 21.56   |
|   | 25      | 25        |        | 21.33  | 21.52  | 21.36   |
|   | 50      | 0         |        | 21.52  | 21.47  | 21.37   |
| 10                                      | 1       | 0         | 64QAM  | 21.41  | 21.27  | 21.27   |
|   | 1       | 25        |        | 21.19  | 21.23  | 21.24   |
|   | 1       | 49        |        | 21.12  | 21.10  | 21.04   |
|   | 25      | 0         |        | 20.61  | 20.52  | 20.63   |
|   | 25      | 12        |        | 20.54  | 20.48  | 20.47   |
|   | 25      | 25        |        | 20.45  | 20.44  | 20.46   |
|   | 50      | 0         |        | 20.60  | 20.45  | 20.54   |
| 5                                       | 1       | 0         | QPSK   | 23.53  | 23.37  | 23.49   |
|   | 1       | 12        |        | 23.30  | 23.33  | 23.40   |
|   | 1       | 24        |        | 23.24  | 23.24  | 23.31   |
|   | 12      | 0         |        | 22.49  | 22.49  | 22.45   |
|   | 12      | 7         |        | 22.33  | 22.36  | 22.38   |
|   | 12      | 13        |        | 22.33  | 22.33  | 22.38   |
|   | 25      | 0         |        | 22.42  | 22.47  | 22.46   |
| 5                                       | 1       | 0         | 16-QAM | 22.64  | 22.49  | 22.60   |
|   | 1       | 12        |        | 22.34  | 22.28  | 22.40   |
|   | 1       | 24        |        | 22.34  | 22.42  | 22.37   |
|   | 12      | 0         |        | 21.59  | 21.49  | 21.52   |
|   | 12      | 7         |        | 21.42  | 21.45  | 21.46   |



|   |    |    |       |       |       |       |
|---|----|----|-------|-------|-------|-------|
| 5 | 12 | 13 | 64QAM | 21.42 | 21.51 | 21.35 |
| 5 | 25 | 0  |       | 21.70 | 21.46 | 21.36 |
| 5 | 1  | 0  |       | 21.30 | 21.35 | 21.26 |
| 5 | 1  | 12 |       | 21.18 | 21.02 | 21.14 |
| 5 | 1  | 24 |       | 21.11 | 21.18 | 21.13 |
| 5 | 12 | 0  |       | 20.61 | 20.51 | 20.62 |
| 5 | 12 | 7  |       | 20.53 | 20.56 | 20.46 |
| 5 | 12 | 13 |       | 20.54 | 20.43 | 20.45 |
| 5 | 25 | 0  |       | 20.49 | 20.44 | 20.52 |



| LTE Band 41 Maximum Average Power [dBm] |         |           |        |        |        |         |
|---|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 20                                      | 1       | 0         | QPSK   | 22.93  | 22.65  | 23.27   |
|   | 1       | 49        |        | 22.80  | 22.71  | 22.60   |
|   | 1       | 99        |        | 22.70  | 22.78  | 22.83   |
|   | 50      | 0         |        | 21.89  | 22.53  | 21.99   |
|   | 50      | 24        |        | 21.86  | 22.61  | 21.66   |
|   | 50      | 50        |        | 21.93  | 22.71  | 21.60   |
|   | 100     | 0         |        | 21.86  | 22.68  | 21.92   |
| 20                                      | 1       | 0         | 16-QAM | 22.18  | 22.01  | 22.32   |
|   | 1       | 49        |        | 21.89  | 21.68  | 21.60   |
|   | 1       | 99        |        | 21.82  | 21.68  | 21.90   |
|   | 50      | 0         |        | 21.12  | 20.82  | 20.83   |
|   | 50      | 24        |        | 21.09  | 20.71  | 20.60   |
|   | 50      | 50        |        | 20.90  | 20.58  | 20.72   |
|   | 100     | 0         |        | 20.91  | 20.79  | 20.73   |
| 20                                      | 1       | 0         | 64QAM  | 20.98  | 20.81  | 21.11   |
|   | 1       | 49        |        | 20.70  | 20.71  | 20.63   |
|   | 1       | 99        |        | 20.65  | 20.52  | 20.72   |
|   | 50      | 0         |        | 20.07  | 19.83  | 19.81   |
|   | 50      | 24        |        | 20.04  | 19.81  | 19.66   |
|   | 50      | 50        |        | 19.98  | 19.75  | 19.61   |
|   | 100     | 0         |        | 19.97  | 19.65  | 19.71   |
| 15                                      | 1       | 0         | QPSK   | 23.16  | 22.78  | 22.86   |
|   | 1       | 37        |        | 22.90  | 22.79  | 22.64   |
|   | 1       | 74        |        | 22.82  | 22.65  | 22.60   |
|   | 36      | 0         |        | 22.14  | 21.95  | 21.73   |
|   | 36      | 20        |        | 22.00  | 21.75  | 21.72   |
|   | 36      | 39        |        | 21.85  | 21.89  | 21.60   |
|   | 75      | 0         |        | 22.02  | 22.01  | 21.76   |
| 15                                      | 1       | 0         | 16-QAM | 22.20  | 22.08  | 21.91   |
|   | 1       | 37        |        | 22.01  | 21.78  | 21.60   |
|   | 1       | 74        |        | 21.97  | 21.78  | 21.60   |
|   | 36      | 0         |        | 21.06  | 21.08  | 20.72   |
|   | 36      | 20        |        | 20.93  | 20.91  | 20.72   |



|    |    |    |       |       |       |       |
|----|----|----|-------|-------|-------|-------|
| 15 | 36 | 39 | 64QAM | 20.91 | 20.85 | 20.65 |
| 15 | 75 | 0  |       | 21.14 | 20.95 | 20.72 |
| 15 | 1  | 0  |       | 20.94 | 20.85 | 20.65 |
| 15 | 1  | 37 |       | 20.85 | 20.76 | 20.61 |
| 15 | 1  | 74 |       | 20.73 | 20.63 | 20.63 |
| 15 | 36 | 0  |       | 20.06 | 20.01 | 19.83 |
| 15 | 36 | 20 |       | 20.12 | 19.82 | 19.72 |
| 15 | 36 | 39 |       | 20.03 | 19.87 | 19.65 |
| 15 | 75 | 0  |       | 20.10 | 19.83 | 19.80 |



| LTE Band 41 Maximum Average Power [dBm] |         |           |        |        |        |         |
|---|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                      | 1       | 0         | QPSK   | 22.89  | 22.69  | 23.26   |
|   | 1       | 25        |        | 22.85  | 22.71  | 22.62   |
|   | 1       | 49        |        | 22.77  | 22.78  | 23.10   |
|   | 25      | 0         |        | 21.92  | 21.91  | 21.76   |
|   | 25      | 12        |        | 21.92  | 21.78  | 21.77   |
|   | 25      | 25        |        | 21.80  | 21.75  | 21.74   |
|   | 50      | 0         |        | 21.83  | 21.78  | 21.86   |
| 10                                      | 1       | 0         | 16-QAM | 21.99  | 21.68  | 22.36   |
|   | 1       | 25        |        | 21.87  | 21.78  | 21.72   |
|   | 1       | 49        |        | 21.92  | 21.61  | 22.13   |
|   | 25      | 0         |        | 21.09  | 20.88  | 20.82   |
|   | 25      | 12        |        | 21.08  | 20.81  | 20.83   |
|   | 25      | 25        |        | 20.87  | 20.78  | 20.70   |
|   | 50      | 0         |        | 21.00  | 20.89  | 20.91   |
| 10                                      | 1       | 0         | 64QAM  | 20.80  | 20.68  | 21.10   |
|   | 1       | 25        |        | 20.69  | 20.65  | 20.62   |
|   | 1       | 49        |        | 20.65  | 20.68  | 20.89   |
|   | 25      | 0         |        | 20.09  | 19.71  | 19.93   |
|   | 25      | 12        |        | 20.08  | 19.78  | 19.84   |
|   | 25      | 25        |        | 20.07  | 19.65  | 19.81   |
|   | 50      | 0         |        | 20.04  | 19.86  | 19.89   |
| 5                                       | 1       | 0         | QPSK   | 22.74  | 22.61  | 23.10   |
|   | 1       | 12        |        | 22.78  | 22.68  | 22.60   |
|   | 1       | 24        |        | 22.69  | 22.71  | 22.60   |
|   | 12      | 0         |        | 21.94  | 21.68  | 21.61   |
|   | 12      | 7         |        | 21.86  | 21.65  | 21.65   |
|   | 12      | 13        |        | 21.87  | 21.98  | 21.63   |
|   | 25      | 0         |        | 21.87  | 21.78  | 21.61   |
| 5                                       | 1       | 0         | 16-QAM | 21.87  | 21.81  | 21.60   |
|   | 1       | 12        |        | 21.97  | 21.62  | 21.60   |
|   | 1       | 24        |        | 21.93  | 21.68  | 21.62   |
|   | 12      | 0         |        | 20.93  | 21.35  | 20.65   |
|   | 12      | 7         |        | 20.94  | 20.74  | 21.20   |



|   |    |    |       |       |       |       |
|---|----|----|-------|-------|-------|-------|
| 5 | 12 | 13 | 64QAM | 20.96 | 20.80 | 20.65 |
| 5 | 25 | 0  |       | 20.93 | 20.71 | 20.64 |
| 5 | 1  | 0  |       | 20.78 | 20.58 | 20.63 |
| 5 | 1  | 12 |       | 20.68 | 20.73 | 20.65 |
| 5 | 1  | 24 |       | 20.66 | 20.76 | 20.65 |
| 5 | 12 | 0  |       | 19.92 | 20.01 | 19.64 |
| 5 | 12 | 7  |       | 19.93 | 20.05 | 19.72 |
| 5 | 12 | 13 |       | 19.96 | 19.96 | 19.73 |
| 5 | 25 | 0  |       | 19.91 | 19.94 | 19.65 |

**CA Power**

| CA_38C                                |             |            |         |           |         |           |                      |
|---------------------------------------|-------------|------------|---------|-----------|---------|-----------|----------------------|
| Combination 20MHz+20MHz (100RB+100RB) |             |            |         |           |         |           |                      |
| PCC Channel                           | SCC Channel | Modulation | PCC     |           | SCC     |           | Measured Power (dBm) |
|                                       |             |            | RB Size | RB offset | RB Size | RB offset |                      |
| 37850                                 | 38048       | QPSK       | 0       | 0         | 1       | 99        | 23.6                 |
|                                       |             |            | 1       | 0         | 0       | 0         | 23.95                |
|                                       |             |            | 100     | 0         | 0       | 0         | 23.04                |
|                                       |             |            | 100     | 0         | 100     | 0         | 21.85                |
|                                       |             |            | 1       | 0         | 1       | 99        | 15.46                |
|                                       |             |            | 1       | 0         | 1       | 0         | 19.48                |
|                                       |             |            | 1       | 99        | 1       | 0         | 23.77                |
|                                       |             |            | 100     | 0         | 1       | 99        | 20.44                |
|                                       |             | 16QAM      | 0       | 0         | 1       | 99        | 22.55                |
|                                       |             |            | 1       | 0         | 0       | 0         | 23.27                |
|                                       |             |            | 100     | 0         | 0       | 0         | 22.19                |
|                                       |             |            | 100     | 0         | 100     | 0         | 21.02                |
|                                       |             |            | 1       | 0         | 1       | 99        | 15.64                |
|                                       |             |            | 1       | 0         | 1       | 0         | 19.53                |
|                                       |             |            | 1       | 99        | 1       | 0         | 22.59                |
|                                       |             |            | 100     | 0         | 1       | 99        | 20.41                |
|                                       |             | 64QAM      | 0       | 0         | 1       | 99        | 21.29                |
|                                       |             |            | 1       | 0         | 0       | 0         | 21.84                |
|                                       |             |            | 100     | 0         | 0       | 0         | 21.08                |
|                                       |             |            | 100     | 0         | 100     | 0         | 20.88                |
|                                       |             |            | 1       | 0         | 1       | 99        | 15.17                |
|                                       |             |            | 1       | 0         | 1       | 0         | 19.13                |
|                                       |             |            | 1       | 99        | 1       | 0         | 20.32                |
|                                       |             |            | 100     | 0         | 1       | 99        | 20.22                |



|       |       |       |     |    |     |    |     |       |
|-------|-------|-------|-----|----|-----|----|-----|-------|
| 37901 | 38099 | QPSK  | 0   | 0  | 1   | 99 | 1   | 23.55 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 23.78 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 22.98 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 21.86 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.49 |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.52 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 23.79 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.32 |
|       |       | 16QAM | 0   | 0  | 1   | 99 | 1   | 22.46 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 23.21 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 22.32 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 21.12 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.13 |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.42 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 22.39 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.51 |
|       |       | 64QAM | 0   | 0  | 1   | 99 | 1   | 21.23 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 21.65 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 21.15 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 20.69 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.13 |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.23 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 20.23 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.29 |



|       |       |       |     |    |     |    |     |       |
|-------|-------|-------|-----|----|-----|----|-----|-------|
| 37952 | 38150 | QPSK  | 0   | 0  | 1   | 99 | 1   | 23.67 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 23.86 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 23.08 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 21.95 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.56 |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.61 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 23.69 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.29 |
| 37952 | 38150 | 16QAM | 0   | 0  | 1   | 99 | 1   | 22.32 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 23.05 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 22.23 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 21.09 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.1  |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.36 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 22.32 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.56 |
| 37952 | 38150 | 64QAM | 0   | 0  | 1   | 99 | 1   | 21.13 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 21.36 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 21.06 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 20.56 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.16 |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.32 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 20.34 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.39 |



| CA_38C                              |         |            |         |           |         |           |                      |       |
|-------------------------------------|---------|------------|---------|-----------|---------|-----------|----------------------|-------|
| Combination 15MHz+15MHz (75RB+75RB) |         |            |         |           |         |           |                      |       |
| PCC                                 | SCC     | Modulation | PCC     |           | SCC     |           | Measured Power (dBm) |       |
| Channel                             | Channel |            | RB Size | RB offset | RB Size | RB offset |                      |       |
| 37825                               | 37975   | QPSK       | 75      | 0         | 75      | 0         | 150                  | 21.88 |
|                                     |         | QPSK       | 1       | 0         | 1       | 74        | 2                    | 15.38 |
|                                     |         | QPSK       | 1       | 74        | 1       | 0         | 2                    | 23.62 |
|                                     |         | 16QAM      | 75      | 0         | 75      | 0         | 150                  | 20.92 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 74        | 2                    | 15.58 |
|                                     |         | 16QAM      | 1       | 74        | 1       | 0         | 2                    | 22.64 |
|                                     |         | 64QAM      | 75      | 0         | 75      | 0         | 150                  | 20.97 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 74        | 2                    | 15.18 |
|                                     |         | 64QAM      | 1       | 74        | 1       | 0         | 2                    | 20.37 |
| 37925                               | 38075   | QPSK       | 75      | 0         | 75      | 0         | 150                  | 21.9  |
|                                     |         | QPSK       | 1       | 0         | 1       | 74        | 2                    | 15.41 |
|                                     |         | QPSK       | 1       | 74        | 1       | 0         | 2                    | 23.71 |
|                                     |         | 16QAM      | 75      | 0         | 75      | 0         | 150                  | 20.93 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 74        | 2                    | 15.46 |
|                                     |         | 16QAM      | 1       | 74        | 1       | 0         | 2                    | 22.64 |
|                                     |         | 64QAM      | 75      | 0         | 75      | 0         | 150                  | 20.85 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 74        | 2                    | 15.17 |
|                                     |         | 64QAM      | 1       | 74        | 1       | 0         | 2                    | 20.42 |
| 38025                               | 38175   | QPSK       | 75      | 0         | 75      | 0         | 150                  | 21.81 |
|                                     |         | QPSK       | 1       | 0         | 1       | 74        | 2                    | 15.32 |
|                                     |         | QPSK       | 1       | 74        | 1       | 0         | 2                    | 23.76 |
|                                     |         | 16QAM      | 75      | 0         | 75      | 0         | 150                  | 20.82 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 74        | 2                    | 15.36 |
|                                     |         | 16QAM      | 1       | 74        | 1       | 0         | 2                    | 22.52 |
|                                     |         | 64QAM      | 75      | 0         | 75      | 0         | 150                  | 20.72 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 74        | 2                    | 15.21 |
|                                     |         | 64QAM      | 1       | 74        | 1       | 0         | 2                    | 20.52 |



| CA_41C                                |             |            |         |           |         |           |                      |       |
|---------------------------------------|-------------|------------|---------|-----------|---------|-----------|----------------------|-------|
| Combination 20MHz+20MHz (100RB+100RB) |             |            |         |           |         |           |                      |       |
| PCC Channel                           | SCC Channel | Modulation | PCC     |           | SCC     |           | Measured Power (dBm) |       |
|                                       |             |            | RB Size | RB offset | RB Size | RB offset |                      |       |
| 40140                                 | 40338       | QPSK       | 0       | 0         | 1       | 99        | 1                    | 23.45 |
|                                       |             |            | 1       | 0         | 0       | 0         | 1                    | 23.85 |
|                                       |             |            | 100     | 0         | 0       | 0         | 100                  | 22.80 |
|                                       |             |            | 100     | 0         | 100     | 0         | 200                  | 21.65 |
|                                       |             |            | 1       | 0         | 1       | 99        | 2                    | 15.31 |
|                                       |             |            | 1       | 0         | 1       | 0         | 2                    | 19.33 |
|                                       |             |            | 1       | 99        | 1       | 0         | 2                    | 23.54 |
|                                       |             |            | 100     | 0         | 1       | 99        | 101                  | 20.09 |
|                                       |             | 16QAM      | 0       | 0         | 1       | 99        | 1                    | 22.42 |
|                                       |             |            | 1       | 0         | 0       | 0         | 1                    | 22.85 |
|                                       |             |            | 100     | 0         | 0       | 0         | 100                  | 21.87 |
|                                       |             |            | 100     | 0         | 100     | 0         | 200                  | 20.72 |
|                                       |             |            | 1       | 0         | 1       | 99        | 2                    | 15.34 |
|                                       |             |            | 1       | 0         | 1       | 0         | 2                    | 19.36 |
|                                       |             |            | 1       | 99        | 1       | 0         | 2                    | 22.50 |
|                                       |             |            | 100     | 0         | 1       | 99        | 101                  | 20.17 |
|                                       |             | 64QAM      | 0       | 0         | 1       | 99        | 1                    | 21.94 |
|                                       |             |            | 1       | 0         | 0       | 0         | 1                    | 21.72 |
|                                       |             |            | 100     | 0         | 0       | 0         | 100                  | 20.79 |
|                                       |             |            | 100     | 0         | 100     | 0         | 200                  | 20.75 |
|                                       |             |            | 1       | 0         | 1       | 99        | 2                    | 15.05 |
|                                       |             |            | 1       | 0         | 1       | 0         | 2                    | 19.07 |
|                                       |             |            | 1       | 99        | 1       | 0         | 2                    | 20.85 |
|                                       |             |            | 100     | 0         | 1       | 99        | 101                  | 20.06 |



|       |       |       |     |    |     |    |     |       |
|-------|-------|-------|-----|----|-----|----|-----|-------|
| 40541 | 40739 | QPSK  | 0   | 0  | 1   | 99 | 1   | 23.49 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 23.86 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 22.62 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 21.75 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.34 |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.48 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 23.63 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.16 |
|       |       | 16QAM | 0   | 0  | 1   | 99 | 1   | 22.53 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 22.85 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 21.75 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 20.63 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.43 |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.48 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 22.36 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.26 |
|       |       | 64QAM | 0   | 0  | 1   | 99 | 1   | 21.28 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 21.96 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 20.95 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 20.38 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.23 |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.01 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 20.85 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.15 |



|       |       |       |     |    |     |    |     |       |
|-------|-------|-------|-----|----|-----|----|-----|-------|
| 40942 | 41140 | QPSK  | 0   | 0  | 1   | 99 | 1   | 23.46 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 23.83 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 22.72 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 21.36 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.42 |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.45 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 23.46 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.16 |
|       |       | 16QAM | 0   | 0  | 1   | 99 | 1   | 22.66 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 22.89 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 21.63 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 20.96 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.49 |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.41 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 22.42 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.32 |
|       |       | 64QAM | 0   | 0  | 1   | 99 | 1   | 21.91 |
|       |       |       | 1   | 0  | 0   | 0  | 1   | 21.96 |
|       |       |       | 100 | 0  | 0   | 0  | 100 | 20.98 |
|       |       |       | 100 | 0  | 100 | 0  | 200 | 20.47 |
|       |       |       | 1   | 0  | 1   | 99 | 2   | 15.32 |
|       |       |       | 1   | 0  | 1   | 0  | 2   | 19.14 |
|       |       |       | 1   | 99 | 1   | 0  | 2   | 20.89 |
|       |       |       | 100 | 0  | 1   | 99 | 101 | 20.46 |



| CA_41C         |                |            |         |           |         |           |               |                            |
|----------------|----------------|------------|---------|-----------|---------|-----------|---------------|----------------------------|
| PCC<br>Channel | SCC<br>Channel | Modulation | PCC     |           | SCC     |           | Total RB Size | Measured<br>Power<br>(dBm) |
|                |                |            | RB Size | RB offset | RB Size | RB offset |               |                            |
| 40140          | 40311          | QPSK       | 100     | 0         | 75      | 0         | 175           | 21.64                      |
|                |                | QPSK       | 1       | 0         | 1       | 74        | 2             | 15.20                      |
|                |                | QPSK       | 1       | 99        | 1       | 0         | 2             | 23.49                      |
|                |                | 16QAM      | 100     | 0         | 75      | 0         | 175           | 20.73                      |
|                |                | 16QAM      | 1       | 0         | 1       | 74        | 2             | 15.33                      |
|                |                | 16QAM      | 1       | 99        | 1       | 0         | 2             | 22.54                      |
|                |                | 64QAM      | 100     | 0         | 75      | 0         | 175           | 20.74                      |
|                |                | 64QAM      | 1       | 0         | 1       | 74        | 2             | 15.20                      |
|                |                | 64QAM      | 1       | 99        | 1       | 0         | 2             | 20.48                      |
| 40566          | 40737          | QPSK       | 100     | 0         | 75      | 0         | 175           | 21.73                      |
|                |                | QPSK       | 1       | 0         | 1       | 74        | 2             | 15.16                      |
|                |                | QPSK       | 1       | 99        | 1       | 0         | 2             | 23.45                      |
|                |                | 16QAM      | 100     | 0         | 75      | 0         | 175           | 20.80                      |
|                |                | 16QAM      | 1       | 0         | 1       | 74        | 2             | 15.22                      |
|                |                | 16QAM      | 1       | 99        | 1       | 0         | 2             | 22.40                      |
|                |                | 64QAM      | 100     | 0         | 75      | 0         | 175           | 20.82                      |
|                |                | 64QAM      | 1       | 0         | 1       | 74        | 2             | 14.93                      |
|                |                | 64QAM      | 1       | 99        | 1       | 0         | 2             | 20.83                      |
| 40991          | 41162          | QPSK       | 100     | 0         | 75      | 0         | 175           | 21.78                      |
|                |                | QPSK       | 1       | 0         | 1       | 74        | 2             | 15.46                      |
|                |                | QPSK       | 1       | 99        | 1       | 0         | 2             | 23.29                      |
|                |                | 16QAM      | 100     | 0         | 75      | 0         | 175           | 20.97                      |
|                |                | 16QAM      | 1       | 0         | 1       | 74        | 2             | 15.25                      |
|                |                | 16QAM      | 1       | 99        | 1       | 0         | 2             | 22.52                      |
|                |                | 64QAM      | 100     | 0         | 75      | 0         | 175           | 20.97                      |
|                |                | 64QAM      | 1       | 0         | 1       | 74        | 2             | 14.56                      |
|                |                | 64QAM      | 1       | 99        | 1       | 0         | 2             | 20.89                      |



| Combination 15MHz+20MHz (75RB+100RB) |             |            |         |           |         |           |               |                      |
|--------------------------------------|-------------|------------|---------|-----------|---------|-----------|---------------|----------------------|
| PCC Channel                          | SCC Channel | Modulation | PCC     |           | SCC     |           | Total RB Size | Measured Power (dBm) |
|                                      |             |            | RB Size | RB offset | RB Size | RB offset |               |                      |
| 40118                                | 40289       | QPSK       | 75      | 0         | 100     | 0         | 175           | 21.85                |
|                                      |             | QPSK       | 1       | 0         | 1       | 99        | 2             | 15.32                |
|                                      |             | QPSK       | 1       | 74        | 1       | 0         | 2             | 23.42                |
|                                      |             | 16QAM      | 75      | 0         | 100     | 0         | 175           | 20.62                |
|                                      |             | 16QAM      | 1       | 0         | 1       | 99        | 2             | 15.42                |
|                                      |             | 16QAM      | 1       | 74        | 1       | 0         | 2             | 22.46                |
|                                      |             | 64QAM      | 75      | 0         | 100     | 0         | 175           | 20.51                |
|                                      |             | 64QAM      | 1       | 0         | 1       | 99        | 2             | 15.49                |
|                                      |             | 64QAM      | 1       | 74        | 1       | 0         | 2             | 20.56                |
| 40544                                | 40715       | QPSK       | 75      | 0         | 100     | 0         | 175           | 21.84                |
|                                      |             | QPSK       | 1       | 0         | 1       | 99        | 2             | 15.32                |
|                                      |             | QPSK       | 1       | 74        | 1       | 0         | 2             | 23.46                |
|                                      |             | 16QAM      | 75      | 0         | 100     | 0         | 175           | 20.71                |
|                                      |             | 16QAM      | 1       | 0         | 1       | 99        | 2             | 15.36                |
|                                      |             | 16QAM      | 1       | 74        | 1       | 0         | 2             | 22.65                |
|                                      |             | 64QAM      | 75      | 0         | 100     | 0         | 175           | 20.71                |
|                                      |             | 64QAM      | 1       | 0         | 1       | 99        | 2             | 14.82                |
|                                      |             | 64QAM      | 1       | 74        | 1       | 0         | 2             | 20.36                |
| 40969                                | 41140       | QPSK       | 75      | 0         | 100     | 0         | 175           | 21.62                |
|                                      |             | QPSK       | 1       | 0         | 1       | 99        | 2             | 15.46                |
|                                      |             | QPSK       | 1       | 74        | 1       | 0         | 2             | 23.13                |
|                                      |             | 16QAM      | 75      | 0         | 100     | 0         | 175           | 20.81                |
|                                      |             | 16QAM      | 1       | 0         | 1       | 99        | 2             | 15.41                |
|                                      |             | 16QAM      | 1       | 74        | 1       | 0         | 2             | 22.36                |
|                                      |             | 64QAM      | 75      | 0         | 100     | 0         | 175           | 20.81                |
|                                      |             | 64QAM      | 1       | 0         | 1       | 99        | 2             | 15.40                |
|                                      |             | 64QAM      | 1       | 74        | 1       | 0         | 2             | 20.03                |



| Combination 20MHz+10MHz (100RB+50RB) |         |            |         |           |         |           |                      |       |
|--------------------------------------|---------|------------|---------|-----------|---------|-----------|----------------------|-------|
| PCC                                  | SCC     | Modulation | PCC     |           | SCC     |           | Measured Power (dBm) |       |
| Channel                              | Channel |            | RB Size | RB offset | RB Size | RB offset |                      |       |
| 40140                                | 40284   | QPSK       | 100     | 0         | 50      | 0         | 150                  | 21.69 |
|                                      |         | QPSK       | 1       | 0         | 1       | 49        | 2                    | 15.31 |
|                                      |         | QPSK       | 1       | 99        | 1       | 0         | 2                    | 23.32 |
|                                      |         | 16QAM      | 100     | 0         | 50      | 0         | 150                  | 20.46 |
|                                      |         | 16QAM      | 1       | 0         | 1       | 49        | 2                    | 15.26 |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2                    | 22.25 |
|                                      |         | 64QAM      | 100     | 0         | 50      | 0         | 150                  | 20.62 |
|                                      |         | 64QAM      | 1       | 0         | 1       | 49        | 2                    | 15.47 |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2                    | 20.56 |
| 40591                                | 40735   | QPSK       | 100     | 0         | 50      | 0         | 150                  | 21.68 |
|                                      |         | QPSK       | 1       | 0         | 1       | 49        | 2                    | 15.42 |
|                                      |         | QPSK       | 1       | 99        | 1       | 0         | 2                    | 23.23 |
|                                      |         | 16QAM      | 100     | 0         | 50      | 0         | 150                  | 20.55 |
|                                      |         | 16QAM      | 1       | 0         | 1       | 49        | 2                    | 15.20 |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2                    | 22.49 |
|                                      |         | 64QAM      | 100     | 0         | 50      | 0         | 150                  | 20.55 |
|                                      |         | 64QAM      | 1       | 0         | 1       | 49        | 2                    | 14.66 |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2                    | 20.80 |
| 41041                                | 41185   | QPSK       | 100     | 0         | 50      | 0         | 150                  | 21.74 |
|                                      |         | QPSK       | 1       | 0         | 1       | 49        | 2                    | 14.72 |
|                                      |         | QPSK       | 1       | 99        | 1       | 0         | 2                    | 23.25 |
|                                      |         | 16QAM      | 100     | 0         | 50      | 0         | 150                  | 20.93 |
|                                      |         | 16QAM      | 1       | 0         | 1       | 49        | 2                    | 15.43 |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2                    | 22.48 |
|                                      |         | 64QAM      | 100     | 0         | 50      | 0         | 150                  | 20.79 |
|                                      |         | 64QAM      | 1       | 0         | 1       | 49        | 2                    | 15.31 |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2                    | 20.23 |



| Combination 10MHz+20MHz (50RB+100RB) |         |            |         |           |         |           |                      |       |
|--------------------------------------|---------|------------|---------|-----------|---------|-----------|----------------------|-------|
| PCC                                  | SCC     | Modulation | PCC     |           | SCC     |           | Measured Power (dBm) |       |
| Channel                              | Channel |            | RB Size | RB offset | RB Size | RB offset |                      |       |
| 40095                                | 40239   | QPSK       | 50      | 0         | 100     | 0         | 150                  | 21.76 |
|                                      |         | QPSK       | 1       | 0         | 1       | 99        | 2                    | 15.19 |
|                                      |         | QPSK       | 1       | 49        | 1       | 0         | 2                    | 23.23 |
|                                      |         | 16QAM      | 50      | 0         | 100     | 0         | 150                  | 20.43 |
|                                      |         | 16QAM      | 1       | 0         | 1       | 99        | 2                    | 15.25 |
|                                      |         | 16QAM      | 1       | 49        | 1       | 0         | 2                    | 22.37 |
|                                      |         | 64QAM      | 50      | 0         | 100     | 0         | 150                  | 20.37 |
|                                      |         | 64QAM      | 1       | 0         | 1       | 99        | 2                    | 15.43 |
|                                      |         | 64QAM      | 1       | 49        | 1       | 0         | 2                    | 20.49 |
| 40546                                | 40690   | QPSK       | 50      | 0         | 100     | 0         | 150                  | 21.73 |
|                                      |         | QPSK       | 1       | 0         | 1       | 99        | 2                    | 15.16 |
|                                      |         | QPSK       | 1       | 49        | 1       | 0         | 2                    | 23.32 |
|                                      |         | 16QAM      | 50      | 0         | 100     | 0         | 150                  | 20.52 |
|                                      |         | 16QAM      | 1       | 0         | 1       | 99        | 2                    | 15.24 |
|                                      |         | 16QAM      | 1       | 49        | 1       | 0         | 2                    | 22.51 |
|                                      |         | 64QAM      | 50      | 0         | 100     | 0         | 150                  | 20.59 |
|                                      |         | 64QAM      | 1       | 0         | 1       | 99        | 2                    | 14.63 |
|                                      |         | 64QAM      | 1       | 49        | 1       | 0         | 2                    | 20.22 |
| 40996                                | 41140   | QPSK       | 50      | 0         | 100     | 0         | 150                  | 21.41 |
|                                      |         | QPSK       | 1       | 0         | 1       | 99        | 2                    | 15.46 |
|                                      |         | QPSK       | 1       | 49        | 1       | 0         | 2                    | 22.92 |
|                                      |         | 16QAM      | 50      | 0         | 100     | 0         | 150                  | 20.67 |
|                                      |         | 16QAM      | 1       | 0         | 1       | 99        | 2                    | 15.43 |
|                                      |         | 16QAM      | 1       | 49        | 1       | 0         | 2                    | 22.22 |
|                                      |         | 64QAM      | 50      | 0         | 100     | 0         | 150                  | 20.67 |
|                                      |         | 64QAM      | 1       | 0         | 1       | 99        | 2                    | 15.26 |
|                                      |         | 64QAM      | 1       | 49        | 1       | 0         | 2                    | 20.89 |



| Combination 20MHz+5MHz (100RB+25RB) |         |            |         |           |         |           |                      |       |
|-------------------------------------|---------|------------|---------|-----------|---------|-----------|----------------------|-------|
| PCC                                 | SCC     | Modulation | PCC     |           | SCC     |           | Measured Power (dBm) |       |
| Channel                             | Channel |            | RB Size | RB offset | RB Size | RB offset |                      |       |
| 40140                               | 40257   | QPSK       | 100     | 0         | 25      | 0         | 125                  | 21.42 |
|                                     |         | QPSK       | 1       | 0         | 1       | 24        | 2                    | 15.46 |
|                                     |         | QPSK       | 1       | 99        | 1       | 0         | 2                    | 23.43 |
|                                     |         | 16QAM      | 100     | 0         | 25      | 0         | 125                  | 20.65 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 24        | 2                    | 15.43 |
|                                     |         | 16QAM      | 1       | 99        | 1       | 0         | 2                    | 22.23 |
|                                     |         | 64QAM      | 100     | 0         | 25      | 0         | 125                  | 20.43 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 24        | 2                    | 15.42 |
|                                     |         | 64QAM      | 1       | 99        | 1       | 0         | 2                    | 20.56 |
| 40615                               | 40732   | QPSK       | 100     | 0         | 25      | 0         | 125                  | 21.46 |
|                                     |         | QPSK       | 1       | 0         | 1       | 24        | 2                    | 15.36 |
|                                     |         | QPSK       | 1       | 99        | 1       | 0         | 2                    | 23.39 |
|                                     |         | 16QAM      | 100     | 0         | 25      | 0         | 125                  | 20.65 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 24        | 2                    | 15.34 |
|                                     |         | 16QAM      | 1       | 99        | 1       | 0         | 2                    | 22.63 |
|                                     |         | 64QAM      | 100     | 0         | 25      | 0         | 125                  | 20.53 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 24        | 2                    | 15.45 |
|                                     |         | 64QAM      | 1       | 99        | 1       | 0         | 2                    | 20.63 |
| 41090                               | 41207   | QPSK       | 100     | 0         | 25      | 0         | 125                  | 21.46 |
|                                     |         | QPSK       | 1       | 0         | 1       | 24        | 2                    | 14.96 |
|                                     |         | QPSK       | 1       | 99        | 1       | 0         | 2                    | 23.32 |
|                                     |         | 16QAM      | 100     | 0         | 25      | 0         | 125                  | 20.35 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 24        | 2                    | 15.46 |
|                                     |         | 16QAM      | 1       | 99        | 1       | 0         | 2                    | 22.49 |
|                                     |         | 64QAM      | 100     | 0         | 25      | 0         | 125                  | 20.46 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 24        | 2                    | 15.35 |
|                                     |         | 64QAM      | 1       | 99        | 1       | 0         | 2                    | 20.36 |



| Combination 5MHz+20MHz (25RB+100RB) |         |            |         |           |         |           |                      |       |
|-------------------------------------|---------|------------|---------|-----------|---------|-----------|----------------------|-------|
| PCC                                 | SCC     | Modulation | PCC     |           | SCC     |           | Measured Power (dBm) |       |
| Channel                             | Channel |            | RB Size | RB offset | RB Size | RB offset |                      |       |
| 40073                               | 40190   | QPSK       | 25      | 0         | 100     | 0         | 125                  | 21.53 |
|                                     |         | QPSK       | 1       | 0         | 1       | 99        | 2                    | 15.39 |
|                                     |         | QPSK       | 1       | 24        | 1       | 0         | 2                    | 23.29 |
|                                     |         | 16QAM      | 25      | 0         | 100     | 0         | 125                  | 20.42 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 99        | 2                    | 15.45 |
|                                     |         | 16QAM      | 1       | 24        | 1       | 0         | 2                    | 22.49 |
|                                     |         | 64QAM      | 25      | 0         | 100     | 0         | 125                  | 20.88 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 99        | 2                    | 15.34 |
|                                     |         | 64QAM      | 1       | 24        | 1       | 0         | 2                    | 20.63 |
| 40548                               | 40665   | QPSK       | 25      | 0         | 100     | 0         | 125                  | 21.87 |
|                                     |         | QPSK       | 1       | 0         | 1       | 99        | 2                    | 15.30 |
|                                     |         | QPSK       | 1       | 24        | 1       | 0         | 2                    | 23.59 |
|                                     |         | 16QAM      | 25      | 0         | 100     | 0         | 125                  | 20.94 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 99        | 2                    | 15.36 |
|                                     |         | 16QAM      | 1       | 24        | 1       | 0         | 2                    | 22.54 |
|                                     |         | 64QAM      | 25      | 0         | 100     | 0         | 125                  | 20.96 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 99        | 2                    | 15.07 |
|                                     |         | 64QAM      | 1       | 24        | 1       | 0         | 2                    | 20.37 |
| 41023                               | 41140   | QPSK       | 25      | 0         | 100     | 0         | 125                  | 21.65 |
|                                     |         | QPSK       | 1       | 0         | 1       | 99        | 2                    | 15.33 |
|                                     |         | QPSK       | 1       | 24        | 1       | 0         | 2                    | 23.16 |
|                                     |         | 16QAM      | 25      | 0         | 100     | 0         | 125                  | 20.84 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 99        | 2                    | 14.25 |
|                                     |         | 16QAM      | 1       | 24        | 1       | 0         | 2                    | 22.39 |
|                                     |         | 64QAM      | 25      | 0         | 100     | 0         | 125                  | 20.84 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 99        | 2                    | 15.43 |
|                                     |         | 64QAM      | 1       | 24        | 1       | 0         | 2                    | 20.03 |



| Combination 15MHz+15MHz (75RB+75RB) |         |            |         |           |         |           |                      |       |
|-------------------------------------|---------|------------|---------|-----------|---------|-----------|----------------------|-------|
| PCC                                 | SCC     | Modulation | PCC     |           | SCC     |           | Measured Power (dBm) |       |
| Channel                             | Channel |            | RB Size | RB offset | RB Size | RB offset |                      |       |
| 40115                               | 40265   | QPSK       | 75      | 0         | 75      | 0         | 150                  | 21.14 |
|                                     |         | QPSK       | 1       | 0         | 1       | 74        | 2                    | 15.18 |
|                                     |         | QPSK       | 1       | 74        | 1       | 0         | 2                    | 23.15 |
|                                     |         | 16QAM      | 75      | 0         | 75      | 0         | 150                  | 20.37 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 74        | 2                    | 15.35 |
|                                     |         | 16QAM      | 1       | 74        | 1       | 0         | 2                    | 21.95 |
|                                     |         | 64QAM      | 75      | 0         | 75      | 0         | 150                  | 20.15 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 74        | 2                    | 15.35 |
|                                     |         | 64QAM      | 1       | 74        | 1       | 0         | 2                    | 20.28 |
| 40565                               | 40715   | QPSK       | 75      | 0         | 75      | 0         | 150                  | 21.18 |
|                                     |         | QPSK       | 1       | 0         | 1       | 74        | 2                    | 15.08 |
|                                     |         | QPSK       | 1       | 74        | 1       | 0         | 2                    | 23.11 |
|                                     |         | 16QAM      | 75      | 0         | 75      | 0         | 150                  | 20.37 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 74        | 2                    | 15.06 |
|                                     |         | 16QAM      | 1       | 74        | 1       | 0         | 2                    | 22.35 |
|                                     |         | 64QAM      | 75      | 0         | 75      | 0         | 150                  | 20.51 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 74        | 2                    | 15.45 |
|                                     |         | 64QAM      | 1       | 74        | 1       | 0         | 2                    | 20.61 |
| 41015                               | 41165   | QPSK       | 75      | 0         | 75      | 0         | 150                  | 21.57 |
|                                     |         | QPSK       | 1       | 0         | 1       | 74        | 2                    | 15.38 |
|                                     |         | QPSK       | 1       | 74        | 1       | 0         | 2                    | 22.43 |
|                                     |         | 16QAM      | 75      | 0         | 75      | 0         | 150                  | 20.46 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 74        | 2                    | 15.17 |
|                                     |         | 16QAM      | 1       | 74        | 1       | 0         | 2                    | 22.6  |
|                                     |         | 64QAM      | 75      | 0         | 75      | 0         | 150                  | 20.57 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 74        | 2                    | 15.41 |
|                                     |         | 64QAM      | 1       | 74        | 1       | 0         | 2                    | 20.47 |



| Combination 15MHz+10MHz (75RB+50RB) |         |            |         |           |         |           |                      |       |
|-------------------------------------|---------|------------|---------|-----------|---------|-----------|----------------------|-------|
| PCC                                 | SCC     | Modulation | PCC     |           | SCC     |           | Measured Power (dBm) |       |
| Channel                             | Channel |            | RB Size | RB offset | RB Size | RB offset |                      |       |
| 40115                               | 40235   | QPSK       | 75      | 0         | 50      | 0         | 125                  | 21.85 |
|                                     |         | QPSK       | 1       | 0         | 1       | 49        | 2                    | 15.36 |
|                                     |         | QPSK       | 1       | 74        | 1       | 0         | 2                    | 21.36 |
|                                     |         | 16QAM      | 75      | 0         | 50      | 0         | 125                  | 20.68 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 49        | 2                    | 15.36 |
|                                     |         | 16QAM      | 1       | 74        | 1       | 0         | 2                    | 22.65 |
|                                     |         | 64QAM      | 75      | 0         | 50      | 0         | 125                  | 20.23 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 49        | 2                    | 15.43 |
|                                     |         | 64QAM      | 1       | 74        | 1       | 0         | 2                    | 20.58 |
| 40591                               | 40711   | QPSK       | 75      | 0         | 50      | 0         | 125                  | 21.86 |
|                                     |         | QPSK       | 1       | 0         | 1       | 49        | 2                    | 15.35 |
|                                     |         | QPSK       | 1       | 74        | 1       | 0         | 2                    | 23.41 |
|                                     |         | 16QAM      | 75      | 0         | 50      | 0         | 125                  | 20.23 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 49        | 2                    | 15.36 |
|                                     |         | 16QAM      | 1       | 74        | 1       | 0         | 2                    | 22.49 |
|                                     |         | 64QAM      | 75      | 0         | 50      | 0         | 125                  | 20.46 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 49        | 2                    | 15.21 |
|                                     |         | 64QAM      | 1       | 74        | 1       | 0         | 2                    | 20.35 |
| 41067                               | 41187   | QPSK       | 75      | 0         | 50      | 0         | 125                  | 21.56 |
|                                     |         | QPSK       | 1       | 0         | 1       | 49        | 2                    | 15.32 |
|                                     |         | QPSK       | 1       | 74        | 1       | 0         | 2                    | 23.07 |
|                                     |         | 16QAM      | 75      | 0         | 50      | 0         | 125                  | 20.82 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 49        | 2                    | 15.42 |
|                                     |         | 16QAM      | 1       | 74        | 1       | 0         | 2                    | 22.37 |
|                                     |         | 64QAM      | 75      | 0         | 50      | 0         | 125                  | 20.82 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 49        | 2                    | 15.41 |
|                                     |         | 64QAM      | 1       | 74        | 1       | 0         | 2                    | 20.04 |



| Combination 10MHz+15MHz (50RB+75RB) |         |            |         |           |         |           |                      |       |
|-------------------------------------|---------|------------|---------|-----------|---------|-----------|----------------------|-------|
| PCC                                 | SCC     | Modulation | PCC     |           | SCC     |           | Measured Power (dBm) |       |
| Channel                             | Channel |            | RB Size | RB offset | RB Size | RB offset |                      |       |
| 40093                               | 40213   | QPSK       | 50      | 0         | 75      | 0         | 125                  | 21.23 |
|                                     |         | QPSK       | 1       | 49        | 1       | 0         | 2                    | 15.27 |
|                                     |         | QPSK       | 1       | 0         | 1       | 74        | 2                    | 23.24 |
|                                     |         | 16QAM      | 50      | 0         | 75      | 0         | 125                  | 20.46 |
|                                     |         | 16QAM      | 1       | 49        | 1       | 0         | 2                    | 15.44 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 74        | 2                    | 22.04 |
|                                     |         | 64QAM      | 50      | 0         | 75      | 0         | 125                  | 20.24 |
|                                     |         | 64QAM      | 1       | 49        | 1       | 0         | 2                    | 15.44 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 74        | 2                    | 20.37 |
| 40569                               | 40689   | QPSK       | 50      | 0         | 75      | 0         | 125                  | 21.27 |
|                                     |         | QPSK       | 1       | 49        | 1       | 0         | 2                    | 15.17 |
|                                     |         | QPSK       | 1       | 0         | 1       | 74        | 2                    | 23.20 |
|                                     |         | 16QAM      | 50      | 0         | 75      | 0         | 125                  | 20.46 |
|                                     |         | 16QAM      | 1       | 49        | 1       | 0         | 2                    | 15.15 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 74        | 2                    | 22.44 |
|                                     |         | 64QAM      | 50      | 0         | 75      | 0         | 125                  | 20.60 |
|                                     |         | 64QAM      | 1       | 49        | 1       | 0         | 2                    | 15.42 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 74        | 2                    | 20.70 |
| 41045                               | 41165   | QPSK       | 50      | 0         | 75      | 0         | 125                  | 21.53 |
|                                     |         | QPSK       | 1       | 49        | 1       | 0         | 2                    | 15.43 |
|                                     |         | QPSK       | 1       | 0         | 1       | 74        | 2                    | 23.39 |
|                                     |         | 16QAM      | 50      | 0         | 75      | 0         | 125                  | 20.42 |
|                                     |         | 16QAM      | 1       | 49        | 1       | 0         | 2                    | 15.42 |
|                                     |         | 16QAM      | 1       | 0         | 1       | 74        | 2                    | 22.56 |
|                                     |         | 64QAM      | 50      | 0         | 75      | 0         | 125                  | 20.53 |
|                                     |         | 64QAM      | 1       | 49        | 1       | 0         | 2                    | 15.18 |
|                                     |         | 64QAM      | 1       | 0         | 1       | 74        | 2                    | 20.43 |

**ERP/EIRP**

| LTE Band 2 ( $G_T - L_C = -0.60 \text{ dBi}$ ) QPSK |        |        |        |        |        |        |        |        |        |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth   | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel   | 18607  | 18900  | 19193  | 18615  | 18900  | 19185  | 18625  | 18900  | 19175  |
|   | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                  | 1850.7 | 1880   | 1909.3 | 1851.5 | 1880   | 1908.5 | 1852.5 | 1880   | 1907.5 |
|   |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                               | 21.79  | 21.90  | 22.33  | 21.97  | 22.15  | 22.43  | 21.92  | 22.01  | 22.23  |
| Conducted Power (Watts)                             | 0.1510 | 0.1549 | 0.1710 | 0.1574 | 0.1641 | 0.1750 | 0.1556 | 0.1589 | 0.1671 |
| EIRP(dBm)   | 21.19  | 21.30  | 21.73  | 21.37  | 21.55  | 21.83  | 21.32  | 21.41  | 21.63  |
| EIRP(Watts)   | 0.1315 | 0.1349 | 0.1489 | 0.1371 | 0.1429 | 0.1524 | 0.1355 | 0.1384 | 0.1455 |

| LTE Band 2 ( $G_T - L_C = -0.60 \text{ dBi}$ ) QPSK |        |        |        |        |        |        |        |        |        |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth   | 10M    |        |        | 15M    |        |        | 20M    |        |        |
| Channel   | 18650  | 18900  | 19150  | 18675  | 18900  | 19125  | 18650  | 18900  | 19100  |
|   | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                  | 1855   | 1880   | 1905   | 1857.5 | 1880   | 1902.5 | 1860   | 1880   | 1900   |
|   |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                               | 22.24  | 22.27  | 22.27  | 22.04  | 22.18  | 22.35  | 22.22  | 22.44  | 22.43  |
| Conducted Power (Watts)                             | 0.1675 | 0.1687 | 0.1687 | 0.1600 | 0.1652 | 0.1718 | 0.1667 | 0.1754 | 0.1750 |
| EIRP(dBm)   | 21.64  | 21.67  | 21.67  | 21.44  | 21.58  | 21.75  | 21.62  | 21.84  | 21.83  |
| EIRP(Watts)   | 0.1459 | 0.1469 | 0.1469 | 0.1393 | 0.1439 | 0.1496 | 0.1452 | 0.1528 | 0.1524 |



| LTE Band 2 ( $G_T - L_C = -0.60 \text{ dBi}$ ) 16QAM |        |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth  | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel  | 18607  | 18900  | 19193  | 18615  | 18900  | 19185  | 18625  | 18900  | 19175  |
|  | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                   | 1850.7 | 1880   | 1909.3 | 1851.5 | 1880   | 1908.5 | 1852.5 | 1880   | 1907.5 |
|  | 20.88  | 20.90  | 21.40  | 21.43  | 21.61  | 21.56  | 21.25  | 21.36  | 21.65  |
| Conducted Power (dBm)                                | 0.1225 | 0.1230 | 0.1380 | 0.1390 | 0.1449 | 0.1432 | 0.1334 | 0.1368 | 0.1462 |
| EIRP(dBm)  | 20.28  | 20.30  | 20.80  | 20.83  | 21.01  | 20.96  | 20.65  | 20.76  | 21.05  |
| EIRP(Watts)  | 0.1067 | 0.1072 | 0.1202 | 0.1211 | 0.1262 | 0.1247 | 0.1161 | 0.1191 | 0.1274 |

| LTE Band 2 ( $G_T - L_C = -0.60 \text{ dBi}$ ) 16QAM |        |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth  | 10M    |        |        | 15M    |        |        | 20M    |        |        |
| Channel  | 18650  | 18900  | 19150  | 18675  | 18900  | 19125  | 18650  | 18900  | 19100  |
|  | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                   | 1855   | 1880   | 1905   | 1857.5 | 1880   | 1902.5 | 1860   | 1880   | 1900   |
|  | 21.26  | 21.38  | 21.58  | 21.63  | 21.74  | 21.58  | 21.53  | 21.65  | 21.85  |
| Conducted Power (dBm)                                | 0.1337 | 0.1374 | 0.1439 | 0.1455 | 0.1493 | 0.1439 | 0.1422 | 0.1462 | 0.1531 |
| EIRP(dBm)  | 20.66  | 20.78  | 20.98  | 21.03  | 21.14  | 20.98  | 20.93  | 21.05  | 21.25  |
| EIRP(Watts)  | 0.1164 | 0.1197 | 0.1253 | 0.1268 | 0.1300 | 0.1253 | 0.1239 | 0.1274 | 0.1334 |



| LTE Band 2 ( $G_T - L_C = -0.60 \text{ dBi}$ ) 64QAM |        |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth  | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel  | 18607  | 18900  | 19193  | 18615  | 18900  | 19185  | 18625  | 18900  | 19175  |
|  | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                   | 1850.7 | 1880   | 1909.3 | 1851.5 | 1880   | 1908.5 | 1852.5 | 1880   | 1907.5 |
|  | 20.17  | 20.13  | 20.41  | 20.14  | 20.29  | 20.73  | 21.07  | 20.96  | 21.29  |
| Conducted Power (dBm)                                | 0.1040 | 0.1030 | 0.1099 | 0.1033 | 0.1069 | 0.1183 | 0.1279 | 0.1247 | 0.1346 |
| EIRP(dBm)  | 19.57  | 19.53  | 19.81  | 19.54  | 19.69  | 20.13  | 20.47  | 20.36  | 20.69  |
| EIRP(Watts)  | 0.0906 | 0.0897 | 0.0957 | 0.0899 | 0.0931 | 0.1030 | 0.1114 | 0.1086 | 0.1172 |

| LTE Band 2 ( $G_T - L_C = -0.60 \text{ dBi}$ ) 64QAM |        |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth  | 10M    |        |        | 15M    |        |        | 20M    |        |        |
| Channel  | 18650  | 18900  | 19150  | 18675  | 18900  | 19125  | 18650  | 18900  | 19100  |
|  | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                   | 1855   | 1880   | 1905   | 1857.5 | 1880   | 1902.5 | 1860   | 1880   | 1900   |
|  | 21.40  | 21.31  | 21.24  | 21.44  | 21.14  | 21.50  | 20.83  | 20.90  | 21.49  |
| Conducted Power (dBm)                                | 0.1380 | 0.1352 | 0.1330 | 0.1393 | 0.1300 | 0.1413 | 0.1211 | 0.1230 | 0.1409 |
| EIRP(dBm)  | 20.80  | 20.71  | 20.64  | 20.84  | 20.54  | 20.90  | 20.23  | 20.30  | 20.89  |
| EIRP(Watts)  | 0.1202 | 0.1178 | 0.1159 | 0.1213 | 0.1132 | 0.1230 | 0.1054 | 0.1072 | 0.1227 |



| LTE Band 4 ( $G_T - L_C = 0.20 \text{ dBi}$ ) QPSK |                |                |                 |                |                |                 |                |                |                 |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth  | 1.4M           |                |                 | 3M             |                |                 | 5M             |                |                 |
| Channel  | 19957<br>(Low) | 20175<br>(Mid) | 20393<br>(High) | 19965<br>(Low) | 20175<br>(Mid) | 20385<br>(High) | 19975<br>(Low) | 20175<br>(Mid) | 20375<br>(High) |
|  | 1710.7         | 1732.5         | 1754.3          | 1711.5         | 1732.5         | 1753.5          | 1712.5         | 1732.5         | 1752.5          |
| Conducted Power (dBm)                              | 22.03          | 22.07          | 21.64           | 22.00          | 21.98          | 21.64           | 22.09          | 21.96          | 21.85           |
| Conducted Power (Watts)                            | 0.1596         | 0.1611         | 0.1459          | 0.1585         | 0.1578         | 0.1459          | 0.1618         | 0.1570         | 0.1531          |
| EIRP(dBm)  | 22.23          | 22.27          | 21.84           | 22.20          | 22.18          | 21.84           | 22.29          | 22.16          | 22.05           |
| EIRP(Watts)  | 0.1671         | 0.1687         | 0.1528          | 0.1660         | 0.1652         | 0.1528          | 0.1694         | 0.1644         | 0.1603          |

| LTE Band 4 ( $G_T - L_C = 0.20 \text{ dBi}$ ) QPSK |                |                |                 |                |                |                 |                |                |                 |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth  | 10M            |                |                 | 15M            |                |                 | 20M            |                |                 |
| Channel  | 20000<br>(Low) | 20175<br>(Mid) | 20350<br>(High) | 20025<br>(Low) | 20175<br>(Mid) | 20325<br>(High) | 20050<br>(Low) | 20175<br>(Mid) | 20300<br>(High) |
|  | 1715           | 1732.5         | 1750            | 1717.5         | 1732.5         | 1747.5          | 1720           | 1732.5         | 1745            |
| Conducted Power (dBm)                              | 22.29          | 21.97          | 21.97           | 22.30          | 22.13          | 22.16           | 22.31          | 22.09          | 22.21           |
| Conducted Power (Watts)                            | 0.1694         | 0.1574         | 0.1574          | 0.1698         | 0.1633         | 0.1644          | 0.1702         | 0.1618         | 0.1663          |
| EIRP(dBm)  | 22.49          | 22.17          | 22.17           | 22.50          | 22.33          | 22.36           | 22.51          | 22.29          | 22.41           |
| EIRP(Watts)  | 0.1774         | 0.1648         | 0.1648          | 0.1778         | 0.1710         | 0.1722          | 0.1782         | 0.1694         | 0.1742          |



| LTE Band 4 ( $G_T - L_C = 0.20 \text{ dBi}$ ) 16QAM |                |                |                 |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth   | 1.4M           |                |                 | 3M             |                |                 | 5M             |                |                 |
| Channel   | 19957<br>(Low) | 20175<br>(Mid) | 20393<br>(High) | 19965<br>(Low) | 20175<br>(Mid) | 20385<br>(High) | 19975<br>(Low) | 20175<br>(Mid) | 20375<br>(High) |
|   | 1710.7         | 1732.5         | 1754.3          | 1711.5         | 1732.5         | 1753.5          | 1712.5         | 1732.5         | 1752.5          |
| Conducted Power (dBm)                               | 21.54          | 21.30          | 21.14           | 21.42          | 21.17          | 20.96           | 21.65          | 21.55          | 21.41           |
| Conducted Power (Watts)                             | 0.1426         | 0.1349         | 0.1300          | 0.1387         | 0.1309         | 0.1247          | 0.1462         | 0.1429         | 0.1384          |
| EIRP(dBm)   | 21.74          | 21.50          | 21.34           | 21.62          | 21.37          | 21.16           | 21.85          | 21.75          | 21.61           |
| EIRP(Watts)   | 0.1493         | 0.1413         | 0.1361          | 0.1452         | 0.1371         | 0.1306          | 0.1531         | 0.1496         | 0.1449          |

| LTE Band 4 ( $G_T - L_C = 0.20 \text{ dBi}$ ) 16QAM |                |                |                 |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth   | 10M            |                |                 | 15M            |                |                 | 20M            |                |                 |
| Channel   | 20000<br>(Low) | 20175<br>(Mid) | 20350<br>(High) | 20025<br>(Low) | 20175<br>(Mid) | 20325<br>(High) | 20050<br>(Low) | 20175<br>(Mid) | 20300<br>(High) |
|   | 1715           | 1732.5         | 1750            | 1717.5         | 1732.5         | 1747.5          | 1720           | 1732.5         | 1745            |
| Conducted Power (dBm)                               | 21.43          | 20.96          | 20.96           | 21.74          | 21.74          | 21.64           | 21.62          | 21.74          | 21.82           |
| Conducted Power (Watts)                             | 0.1390         | 0.1247         | 0.1247          | 0.1493         | 0.1493         | 0.1459          | 0.1452         | 0.1493         | 0.1521          |
| EIRP(dBm)   | 21.63          | 21.16          | 21.16           | 21.94          | 21.94          | 21.84           | 21.82          | 21.94          | 22.02           |
| EIRP(Watts)   | 0.1455         | 0.1306         | 0.1306          | 0.1563         | 0.1563         | 0.1528          | 0.1521         | 0.1563         | 0.1592          |



| LTE Band 4 ( $G_T - L_C = 0.20 \text{ dBi}$ ) 64QAM |                |                |                 |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth   | 1.4M           |                |                 | 3M             |                |                 | 5M             |                |                 |
| Channel   | 19957<br>(Low) | 20175<br>(Mid) | 20393<br>(High) | 19965<br>(Low) | 20175<br>(Mid) | 20385<br>(High) | 19975<br>(Low) | 20175<br>(Mid) | 20375<br>(High) |
|   | 1710.7         | 1732.5         | 1754.3          | 1711.5         | 1732.5         | 1753.5          | 1712.5         | 1732.5         | 1752.5          |
| Conducted Power (dBm)                               | 20.46          | 20.33          | 19.85           | 20.32          | 20.22          | 19.88           | 20.58          | 20.05          | 19.63           |
| Conducted Power (Watts)                             | 0.1112         | 0.1079         | 0.0966          | 0.1076         | 0.1052         | 0.0973          | 0.1143         | 0.1012         | 0.0918          |
| EIRP(dBm)   | 20.66          | 20.53          | 20.05           | 20.52          | 20.42          | 20.08           | 20.78          | 20.25          | 19.83           |
| EIRP(Watts)   | 0.1164         | 0.1130         | 0.1012          | 0.1127         | 0.1102         | 0.1019          | 0.1197         | 0.1059         | 0.0962          |

| LTE Band 4 ( $G_T - L_C = 0.20 \text{ dBi}$ ) 64QAM |                |                |                 |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth   | 10M            |                |                 | 15M            |                |                 | 20M            |                |                 |
| Channel   | 20000<br>(Low) | 20175<br>(Mid) | 20350<br>(High) | 20025<br>(Low) | 20175<br>(Mid) | 20325<br>(High) | 20050<br>(Low) | 20175<br>(Mid) | 20300<br>(High) |
|   | 1715           | 1732.5         | 1750            | 1717.5         | 1732.5         | 1747.5          | 1720           | 1732.5         | 1745            |
| Conducted Power (dBm)                               | 20.57          | 20.47          | 20.09           | 20.83          | 20.40          | 20.44           | 20.76          | 20.63          | 20.61           |
| Conducted Power (Watts)                             | 0.1140         | 0.1114         | 0.1021          | 0.1211         | 0.1096         | 0.1107          | 0.1191         | 0.1156         | 0.1151          |
| EIRP(dBm)   | 20.77          | 20.67          | 20.29           | 21.03          | 20.60          | 20.64           | 20.96          | 20.83          | 20.81           |
| EIRP(Watts)   | 0.1194         | 0.1167         | 0.1069          | 0.1268         | 0.1148         | 0.1159          | 0.1247         | 0.1211         | 0.1205          |



| LTE Band 5 ( $G_T - L_C = 0.90 \text{ dBi}$ ) QPSK |        |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth  | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel  | 20407  | 20525  | 20643  | 20415  | 20525  | 20635  | 20425  | 20525  | 20625  |
|  | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                 | 824.7  | 836.5  | 848.3  | 825.5  | 836.5  | 847.5  | 826.5  | 836.5  | 846.5  |
| Conducted Power (dBm)                              | 22.94  | 22.65  | 22.61  | 22.96  | 22.71  | 22.71  | 22.93  | 22.69  | 22.82  |
| Conducted Power (Watts)                            | 0.1968 | 0.1841 | 0.1824 | 0.1977 | 0.1866 | 0.1866 | 0.1963 | 0.1858 | 0.1914 |
| ERP(dBm)   | 21.69  | 21.40  | 21.36  | 21.71  | 21.46  | 21.46  | 21.68  | 21.44  | 21.57  |
| ERP(Watts)   | 0.1476 | 0.1380 | 0.1368 | 0.1483 | 0.1400 | 0.1400 | 0.1472 | 0.1393 | 0.1435 |

| LTE Band 5 ( $G_T - L_C = 0.90 \text{ dBi}$ ) QPSK |        |        |        |
|--|--------|--------|--------|
| Bandwidth  | 10M    |        |        |
| Channel  | 20450  | 20525  | 20600  |
|  | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                 | 829    | 836.5  | 844    |
| Conducted Power (dBm)                              | 22.93  | 22.97  | 22.88  |
| Conducted Power (Watts)                            | 0.1963 | 0.1982 | 0.1941 |
| ERP(dBm)   | 21.68  | 21.72  | 21.63  |
| ERP(Watts)   | 0.1472 | 0.1486 | 0.1455 |



| LTE Band 5 ( $G_T - L_C = 0.90 \text{ dBi}$ ) 16QAM |        |        |        |        |        |        |        |        |        |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth   | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel   | 20407  | 20525  | 20643  | 20415  | 20525  | 20635  | 20425  | 20525  | 20625  |
|   | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                  | 824.7  | 836.5  | 848.3  | 825.5  | 836.5  | 847.5  | 826.5  | 836.5  | 846.5  |
| Conducted Power (dBm)                               | 22.26  | 22.02  | 22.02  | 22.44  | 22.18  | 22.21  | 22.37  | 22.13  | 22.14  |
| Conducted Power (Watts)                             | 0.1683 | 0.1592 | 0.1592 | 0.1754 | 0.1652 | 0.1663 | 0.1726 | 0.1633 | 0.1637 |
| ERP(dBm)  | 21.01  | 20.77  | 20.77  | 21.19  | 20.93  | 20.96  | 21.12  | 20.88  | 20.89  |
| ERP(Watts)  | 0.1262 | 0.1194 | 0.1194 | 0.1315 | 0.1239 | 0.1247 | 0.1294 | 0.1225 | 0.1227 |

| LTE Band 5 ( $G_T - L_C = 0.90 \text{ dBi}$ ) 16QAM |        |        |        |
|---|--------|--------|--------|
| Bandwidth   | 10M    |        |        |
| Channel   | 20450  | 20525  | 20600  |
|   | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                  | 829    | 836.5  | 844    |
| Conducted Power (dBm)                               | 22.27  | 22.08  | 22.20  |
| Conducted Power (Watts)                             | 0.1687 | 0.1614 | 0.1660 |
| ERP(dBm)  | 21.02  | 20.83  | 20.95  |
| ERP(Watts)  | 0.1265 | 0.1211 | 0.1245 |



| LTE Band 5 ( $G_T - L_C = 0.90 \text{ dBi}$ ) 64QAM |        |        |        |        |        |        |        |        |        |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth   | 1.4M   |        |        | 3M     |        |        | 5M     |        |        |
| Channel   | 20407  | 20525  | 20643  | 20415  | 20525  | 20635  | 20425  | 20525  | 20625  |
|   | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                  | 824.7  | 836.5  | 848.3  | 825.5  | 836.5  | 847.5  | 826.5  | 836.5  | 846.5  |
| Conducted<br>Power (dBm)                            | 21.16  | 20.97  | 20.99  | 21.35  | 21.09  | 21.13  | 21.28  | 21.00  | 21.00  |
| Conducted<br>Power (Watts)                          | 0.1306 | 0.1250 | 0.1256 | 0.1365 | 0.1285 | 0.1297 | 0.1343 | 0.1259 | 0.1259 |
| ERP(dBm)  | 19.91  | 19.72  | 19.74  | 20.10  | 19.84  | 19.88  | 20.03  | 19.75  | 19.75  |
| ERP(Watts)  | 0.0979 | 0.0938 | 0.0942 | 0.1023 | 0.0964 | 0.0973 | 0.1007 | 0.0944 | 0.0944 |

| LTE Band 5 ( $G_T - L_C = 0.90 \text{ dBi}$ ) 64QAM |        |        |        |
|---|--------|--------|--------|
| Bandwidth   | 10M    |        |        |
| Channel   | 20450  | 20525  | 20600  |
|   | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                  | 829    | 836.5  | 844    |
| Conducted<br>Power (dBm)                            | 21.20  | 20.96  | 21.18  |
| Conducted<br>Power (Watts)                          | 0.1318 | 0.1247 | 0.1312 |
| ERP(dBm)  | 19.95  | 19.71  | 19.93  |
| ERP(Watts)  | 0.0989 | 0.0935 | 0.0984 |



| LTE Band 7 ( $G_T - L_C = 1.10 \text{ dBi}$ ) QPSK |                |                |                 |  |
|--|----------------|----------------|-----------------|--|
| Bandwidth  | 5M             |                |                 |  |
| Channel  | 20775<br>(Low) | 21100<br>(Mid) | 21425<br>(High) |  |
|  | 2502.5         | 2535           | 2567.5          |  |
| Frequency<br>(MHz)                                 |                |                |                 |  |
| Conducted<br>Power (dBm)                           | 21.94          | 22.06          | 21.99           |  |
| Conducted<br>Power (Watts)                         | 0.1563         | 0.1607         | 0.1581          |  |
| EIRP(dBm)  | 23.04          | 23.16          | 23.09           |  |
| EIRP(Watts)  | 0.2014         | 0.2070         | 0.2037          |  |

| LTE Band 7 ( $G_T - L_C = 1.10 \text{ dBi}$ ) QPSK |                |                |                 |                |                |                 |                |                |                 |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth  | 10M            |                |                 | 15M            |                |                 | 20M            |                |                 |
| Channel  | 20800<br>(Low) | 21100<br>(Mid) | 21400<br>(High) | 20825<br>(Low) | 21100<br>(Mid) | 21375<br>(High) | 20850<br>(Low) | 21100<br>(Mid) | 21350<br>(High) |
|  | 2505           | 2535           | 2565            | 2507.5         | 2535           | 2562.5          | 2510           | 2535           | 2560            |
| Frequency<br>(MHz)                                 |                |                |                 |                |                |                 |                |                |                 |
| Conducted<br>Power (dBm)                           | 21.98          | 22.06          | 22.12           | 22.08          | 22.03          | 22.00           | 22.05          | 22.17          | 22.16           |
| Conducted<br>Power (Watts)                         | 0.1578         | 0.1607         | 0.1629          | 0.1614         | 0.1596         | 0.1585          | 0.1603         | 0.1648         | 0.1644          |
| EIRP(dBm)  | 23.08          | 23.16          | 23.22           | 23.18          | 23.13          | 23.10           | 23.15          | 23.27          | 23.26           |
| EIRP(Watts)  | 0.2032         | 0.2070         | 0.2099          | 0.2080         | 0.2056         | 0.2042          | 0.2065         | 0.2123         | 0.2118          |



| LTE Band 7 ( $G_T - L_C = 1.10 \text{ dBi}$ ) 16QAM |                |                |                 |
|---|----------------|----------------|-----------------|
| Bandwidth   | 5M             |                |                 |
| Channel   | 20775<br>(Low) | 21100<br>(Mid) | 21425<br>(High) |
|   | 2502.5         | 2535           | 2567.5          |
| Frequency<br>(MHz)                                  | 20.87          | 21.06          | 21.09           |
| Conducted<br>Power (dBm)                            | 0.1222         | 0.1276         | 0.1285          |
| EIRP(dBm)   | 21.97          | 22.16          | 22.19           |
| EIRP(Watts)   | 0.1574         | 0.1644         | 0.1656          |

| LTE Band 7 ( $G_T - L_C = 1.10 \text{ dBi}$ ) 16QAM |                |                |                 |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth   | 10M            |                |                 | 15M            |                |                 | 20M            |                |                 |
| Channel   | 20800<br>(Low) | 21100<br>(Mid) | 21400<br>(High) | 20825<br>(Low) | 21100<br>(Mid) | 21375<br>(High) | 20850<br>(Low) | 21100<br>(Mid) | 21350<br>(High) |
|   | 2505           | 2535           | 2565            | 2507.5         | 2535           | 2562.5          | 2510           | 2535           | 2560            |
| Frequency<br>(MHz)                                  | 21.50          | 21.27          | 21.04           | 21.07          | 21.50          | 21.46           | 21.07          | 21.12          | 21.22           |
| Conducted<br>Power (dBm)                            | 0.1413         | 0.1340         | 0.1271          | 0.1279         | 0.1413         | 0.1400          | 0.1279         | 0.1294         | 0.1324          |
| EIRP(dBm)   | 22.60          | 22.37          | 22.14           | 22.17          | 22.60          | 22.56           | 22.17          | 22.22          | 22.32           |
| EIRP(Watts)   | 0.1820         | 0.1726         | 0.1637          | 0.1648         | 0.1820         | 0.1803          | 0.1648         | 0.1667         | 0.1706          |



| LTE Band 7 ( $G_T - L_C = 1.10 \text{ dBi}$ ) 64QAM |                |                |                 |
|---|----------------|----------------|-----------------|
| Bandwidth   | 5M             |                |                 |
| Channel   | 20775<br>(Low) | 21100<br>(Mid) | 21425<br>(High) |
|   | 2502.5         | 2535           | 2567.5          |
| Conducted Power (dBm)                               | 19.99          | 20.09          | 20.26           |
| Conducted Power (Watts)                             | 0.0998         | 0.1021         | 0.1062          |
| EIRP(dBm)   | 21.09          | 21.19          | 21.36           |
| EIRP(Watts)   | 0.1285         | 0.1315         | 0.1368          |

| LTE Band 7 ( $G_T - L_C = 1.10 \text{ dBi}$ ) 64QAM |                |                |                 |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth   | 10M            |                |                 | 15M            |                |                 | 20M            |                |                 |
| Channel   | 20800<br>(Low) | 21100<br>(Mid) | 21400<br>(High) | 20825<br>(Low) | 21100<br>(Mid) | 21375<br>(High) | 20850<br>(Low) | 21100<br>(Mid) | 21350<br>(High) |
|   | 2505           | 2535           | 2565            | 2507.5         | 2535           | 2562.5          | 2510           | 2535           | 2560            |
| Conducted Power (dBm)                               | 20.30          | 20.37          | 20.43           | 20.39          | 20.48          | 20.27           | 20.46          | 20.50          | 20.14           |
| Conducted Power (Watts)                             | 0.1072         | 0.1089         | 0.1104          | 0.1094         | 0.1117         | 0.1064          | 0.1112         | 0.1122         | 0.1033          |
| EIRP(dBm)   | 21.40          | 21.47          | 21.53           | 21.49          | 21.58          | 21.37           | 21.56          | 21.60          | 21.24           |
| EIRP(Watts)   | 0.1380         | 0.1403         | 0.1422          | 0.1409         | 0.1439         | 0.1371          | 0.1432         | 0.1445         | 0.1330          |



| LTE Band 12 ( $G_T - L_C = -4.60 \text{ dBi}$ ) QPSK |                |                |                 |                |                |                 |                |                |                 |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth  | 1.4M           |                |                 | 3M             |                |                 | 5M             |                |                 |
| Channel  | 23017<br>(Low) | 23095<br>(Mid) | 23173<br>(High) | 23025<br>(Low) | 23095<br>(Mid) | 23165<br>(High) | 23035<br>(Low) | 23095<br>(Mid) | 23155<br>(High) |
|  | 699.7          | 707.5          | 715.3           | 700.5          | 707.5          | 714.5           | 701.5          | 707.5          | 713.5           |
| Conducted Power (dBm)                                | 23.79          | 23.83          | 23.64           | 23.85          | 23.93          | 23.93           | 23.81          | 23.86          | 23.78           |
| Conducted Power (Watts)                              | 0.2393         | 0.2415         | 0.2312          | 0.2427         | 0.2472         | 0.2472          | 0.2404         | 0.2432         | 0.2388          |
| ERP(dBm)   | 17.04          | 17.08          | 16.89           | 17.10          | 17.18          | 17.18           | 17.06          | 17.11          | 17.03           |
| ERP(Watts)   | 0.0506         | 0.0511         | 0.0489          | 0.0513         | 0.0522         | 0.0522          | 0.0508         | 0.0514         | 0.0505          |

| LTE Band 12 ( $G_T - L_C = -4.60 \text{ dBi}$ ) QPSK |                |                |                 |
|--|----------------|----------------|-----------------|
| Bandwidth  | 10M            |                |                 |
| Channel  | 23060<br>(Low) | 23095<br>(Mid) | 23130<br>(High) |
|  | 704            | 707.5          | 711             |
| Conducted Power (dBm)                                | 23.80          | 23.96          | 23.85           |
| Conducted Power (Watts)                              | 0.2399         | 0.2489         | 0.2427          |
| ERP(dBm)   | 17.05          | 17.21          | 17.10           |
| ERP(Watts)   | 0.0507         | 0.0526         | 0.0513          |



| LTE Band 12 ( $G_T - L_C = -4.60 \text{ dBi}$ ) 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)                                 | 23.10  | 23.16  | 23.01  | 23.22  | 23.28  | 23.23  | 23.10  | 23.20  | 22.78  |
| Conducted Power (Watts)                               | 0.2042 | 0.2070 | 0.2000 | 0.2099 | 0.2128 | 0.2104 | 0.2042 | 0.2089 | 0.1897 |
| ERP(dBm)  | 16.35  | 16.41  | 16.26  | 16.47  | 16.53  | 16.48  | 16.35  | 16.45  | 16.03  |
| ERP(Watts)  | 0.0432 | 0.0438 | 0.0423 | 0.0444 | 0.0450 | 0.0445 | 0.0432 | 0.0442 | 0.0401 |

| LTE Band 12 ( $G_T - L_C = -4.60 \text{ dBi}$ ) 16QAM |        |        |        |
|---|--------|--------|--------|
| Bandwidth   | 10M    |        |        |
| Channel   | 23060  | 23095  | 23130  |
|   | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                    | 704    | 707.5  | 711    |
|   |        |        |        |
| Conducted Power (dBm)                                 | 23.10  | 23.17  | 23.19  |
| Conducted Power (Watts)                               | 0.2042 | 0.2075 | 0.2084 |
| ERP(dBm)  | 16.35  | 16.42  | 16.44  |
| ERP(Watts)  | 0.0432 | 0.0439 | 0.0441 |



| LTE Band 12 ( $G_T - L_C = -4.60 \text{ dBi}$ ) 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<br>(MHz)                                    | 699.7  | 707.5  | 715.3  | 700.5  | 707.5  | 714.5  | 701.5  | 707.5  | 713.5  |
|   |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                                 | 22.04  | 22.06  | 21.97  | 22.10  | 22.16  | 22.14  | 22.11  | 22.16  | 22.08  |
| Conducted Power (Watts)                               | 0.1600 | 0.1607 | 0.1574 | 0.1622 | 0.1644 | 0.1637 | 0.1626 | 0.1644 | 0.1614 |
| ERP(dBm)  | 15.29  | 15.31  | 15.22  | 15.35  | 15.41  | 15.39  | 15.36  | 15.41  | 15.33  |
| ERP(Watts)  | 0.0338 | 0.0340 | 0.0333 | 0.0343 | 0.0348 | 0.0346 | 0.0344 | 0.0348 | 0.0341 |

| LTE Band 12 ( $G_T - L_C = -4.60 \text{ dBi}$ ) 64QAM |        |        |        |
|---|--------|--------|--------|
| Bandwidth   | 10M    |        |        |
| Channel   | 23060  | 23095  | 23130  |
|   | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                    | 704    | 707.5  | 711    |
|   |        |        |        |
| Conducted Power (dBm)                                 | 22.18  | 22.12  | 21.96  |
| Conducted Power (Watts)                               | 0.1652 | 0.1629 | 0.1570 |
| ERP(dBm)  | 15.43  | 15.37  | 15.21  |
| ERP(Watts)  | 0.0349 | 0.0344 | 0.0332 |



| LTE Band 17 ( $G_T - L_C = -4.60 \text{ dBi}$ ) QPSK |                |                |                 |                |                |                 |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth  | 5M             |                |                 | 10M            |                |                 |
| Channel  | 23755<br>(Low) | 23790<br>(Mid) | 23825<br>(High) | 23780<br>(Low) | 23790<br>(Mid) | 23800<br>(High) |
|  | 706.5          | 710            | 713.5           | 709            | 710            | 711             |
| Conducted Power (dBm)                                | 23.89          | 23.85          | 23.70           | 23.72          | 23.90          | 23.81           |
| Conducted Power (Watts)                              | 0.2449         | 0.2427         | 0.2344          | 0.2355         | 0.2455         | 0.2404          |
| ERP(dBm)   | 17.14          | 17.10          | 16.95           | 16.97          | 17.15          | 17.06           |
| ERP(Watts)   | 0.0518         | 0.0513         | 0.0495          | 0.0498         | 0.0519         | 0.0508          |

| LTE Band 17 ( $G_T - L_C = -4.60 \text{ dBi}$ ) 16QAM |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth   | 5M             |                |                 | 10M            |                |                 |
| Channel   | 23755<br>(Low) | 23790<br>(Mid) | 23825<br>(High) | 23780<br>(Low) | 23790<br>(Mid) | 23800<br>(High) |
|   | 706.5          | 710            | 713.5           | 709            | 710            | 711             |
| Conducted Power (dBm)                                 | 23.24          | 23.21          | 22.72           | 23.21          | 23.22          | 23.22           |
| Conducted Power (Watts)                               | 0.2109         | 0.2094         | 0.1871          | 0.2094         | 0.2099         | 0.2099          |
| ERP(dBm)  | 16.49          | 16.46          | 15.97           | 16.46          | 16.47          | 16.47           |
| ERP(Watts)  | 0.0446         | 0.0443         | 0.0395          | 0.0443         | 0.0444         | 0.0444          |

| LTE Band 17 ( $G_T - L_C = -4.60 \text{ dBi}$ ) 64QAM |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth   | 5M             |                |                 | 10M            |                |                 |
| Channel   | 23755<br>(Low) | 23790<br>(Mid) | 23825<br>(High) | 23780<br>(Low) | 23790<br>(Mid) | 23800<br>(High) |
|   | 706.5          | 710            | 713.5           | 709            | 710            | 711             |
| Conducted Power (dBm)                                 | 22.20          | 22.16          | 21.72           | 22.16          | 22.18          | 22.15           |
| Conducted Power (Watts)                               | 0.1660         | 0.1644         | 0.1486          | 0.1644         | 0.1652         | 0.1641          |
| ERP(dBm)  | 15.45          | 15.41          | 14.97           | 15.41          | 15.43          | 15.40           |
| ERP(Watts)  | 0.0351         | 0.0348         | 0.0314          | 0.0348         | 0.0349         | 0.0347          |



| LTE Band 38 ( $G_T - L_C = 0.70 \text{ dBi}$ ) QPSK |                |  |                |  |                 |
|---|----------------|--|----------------|--|-----------------|
| Bandwidth   | 5M             |  |                |  |                 |
| Channel   | 37775<br>(Low) |  | 38000<br>(Mid) |  | 38225<br>(High) |
|   | 2572.5         |  | 2595           |  | 2617.5          |
| Frequency<br>(MHz)                                  |                |  |                |  |                 |
| Conducted Power (dBm)                               | 23.53          |  | 23.37          |  | 23.49           |
| Conducted Power (Watts)                             | 0.2254         |  | 0.2173         |  | 0.2234          |
| EIRP(dBm)   | 24.23          |  | 24.07          |  | 24.19           |
| EIRP(Watts)   | 0.2649         |  | 0.2553         |  | 0.2624          |

| LTE Band 38 ( $G_T - L_C = 0.70 \text{ dBi}$ ) QPSK |                |                |                 |                |                |                 |                |                |                |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
| Bandwidth   | 10M            |                |                 | 15M            |                |                 | 20M            |                |                |
| Channel   | 37800<br>(Low) | 38000<br>(Mid) | 38200<br>(High) | 37825<br>(Low) | 38000<br>(Mid) | 38175<br>(High) | 37850<br>(Low) | 38000<br>(Mid) | 38150<br>(Mid) |
|   | 2575           | 2595           | 2615            | 2577.5         | 2595           | 2612.5          | 2580           | 2595           | 2610           |
| Frequency<br>(MHz)                                  | 23.54          | 23.49          | 23.41           | 23.65          | 23.32          | 23.39           | 23.66          | 23.40          | 23.48          |
| Conducted Power (dBm)                               | 0.2259         | 0.2234         | 0.2193          | 0.2317         | 0.2148         | 0.2183          | 0.2323         | 0.2188         | 0.2228         |
| EIRP(dBm)   | 24.24          | 24.19          | 24.11           | 24.35          | 24.02          | 24.09           | 24.36          | 24.10          | 24.18          |
| EIRP(Watts)   | 0.2655         | 0.2624         | 0.2576          | 0.2723         | 0.2523         | 0.2564          | 0.2729         | 0.2570         | 0.2618         |



| LTE Band 38 ( $G_T - L_C = 0.70 \text{ dBi}$ ) 16QAM |                |  |                |  |                 |
|--|----------------|--|----------------|--|-----------------|
| Bandwidth  | 5M             |  |                |  |                 |
| Channel  | 37775<br>(Low) |  | 38000<br>(Mid) |  | 38225<br>(High) |
|  | 2572.5         |  | 2595           |  | 2617.5          |
| Frequency<br>(MHz)                                   |                |  |                |  |                 |
| Conducted Power (dBm)                                | 22.64          |  | 22.49          |  | 22.60           |
| Conducted Power (Watts)                              | 0.1837         |  | 0.1774         |  | 0.1820          |
| EIRP(dBm)  | 23.34          |  | 23.19          |  | 23.30           |
| EIRP(Watts)  | 0.2158         |  | 0.2084         |  | 0.2138          |

| LTE Band 38 ( $G_T - L_C = 0.70 \text{ dBi}$ ) 16QAM |                |                |                 |                |                |                 |                |                |                |  |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|----------------|--|
| Bandwidth  | 10M            |                |                 | 15M            |                |                 | 20M            |                |                |  |
| Channel  | 37800<br>(Low) | 38000<br>(Mid) | 38200<br>(High) | 37825<br>(Low) | 38000<br>(Mid) | 38175<br>(High) | 37850<br>(Low) | 38000<br>(Mid) | 38150<br>(Mid) |  |
|  | 2575           | 2595           | 2615            | 2577.5         | 2595           | 2612.5          | 2580           | 2595           | 2610           |  |
| Frequency<br>(MHz)                                   |                |                |                 |                |                |                 |                |                |                |  |
| Conducted Power (dBm)                                | 22.63          | 22.90          | 22.61           | 22.64          | 22.50          | 22.47           | 22.66          | 22.60          | 22.53          |  |
| Conducted Power (Watts)                              | 0.1832         | 0.1950         | 0.1824          | 0.1837         | 0.1778         | 0.1766          | 0.1845         | 0.1820         | 0.1791         |  |
| EIRP(dBm)  | 23.33          | 23.60          | 23.31           | 23.34          | 23.20          | 23.17           | 23.36          | 23.30          | 23.23          |  |
| EIRP(Watts)  | 0.2153         | 0.2291         | 0.2143          | 0.2158         | 0.2089         | 0.2075          | 0.2168         | 0.2138         | 0.2104         |  |



| LTE Band 38 ( $G_T - L_C = 0.70 \text{ dBi}$ ) 64QAM |        |  |        |  |        |
|--|--------|--|--------|--|--------|
| Bandwidth  | 5M     |  |        |  |        |
| Channel  | 37775  |  | 38000  |  | 38225  |
|  | (Low)  |  | (Mid)  |  | (High) |
| Frequency<br>(MHz)                                   | 2572.5 |  | 2595   |  | 2617.5 |
|  |        |  |        |  |        |
| Conducted Power (dBm)                                | 21.30  |  | 21.35  |  | 21.26  |
| Conducted Power (Watts)                              | 0.1349 |  | 0.1365 |  | 0.1337 |
| EIRP(dBm)  | 22.00  |  | 22.05  |  | 21.96  |
| EIRP(Watts)  | 0.1585 |  | 0.1603 |  | 0.1570 |

| LTE Band 38 ( $G_T - L_C = 0.70 \text{ dBi}$ ) 64QAM |        |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth  | 10M    |        |        | 15M    |        |        | 20M    |        |        |
| Channel  | 37800  | 38000  | 38200  | 37825  | 38000  | 38175  | 37850  | 38000  | 38150  |
|  | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (Mid)  |
| Frequency<br>(MHz)                                   | 2575   | 2595   | 2615   | 2577.5 | 2595   | 2612.5 | 2580   | 2595   | 2610   |
|  |        |        |        |        |        |        |        |        |        |
| Conducted Power (dBm)                                | 21.41  | 21.27  | 21.27  | 21.32  | 21.26  | 21.31  | 21.41  | 21.26  | 21.26  |
| Conducted Power (Watts)                              | 0.1384 | 0.1340 | 0.1340 | 0.1355 | 0.1337 | 0.1352 | 0.1384 | 0.1337 | 0.1337 |
| EIRP(dBm)  | 22.11  | 21.97  | 21.97  | 22.02  | 21.96  | 22.01  | 22.11  | 21.96  | 21.96  |
| EIRP(Watts)  | 0.1626 | 0.1574 | 0.1574 | 0.1592 | 0.1570 | 0.1589 | 0.1626 | 0.1570 | 0.1570 |



| LTE Band 41 ( $G_T - L_c = 1.10 \text{ dBi}$ ) QPSK |        |        |        |        |        |        |        |        |        |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth   | 5M     |        |        | 10M    |        |        | 15M    |        |        |
| Channel   | 40065  | 40640  | 41215  | 40090  | 40640  | 41190  | 40115  | 40640  | 41165  |
|   | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                  | 2537.5 | 2595   | 2652.5 | 2540   | 2595   | 2650   | 2542.5 | 2595   | 2647.5 |
| Conducted Power (dBm)                               | 22.74  | 22.61  | 23.10  | 22.89  | 22.69  | 23.26  | 23.16  | 22.78  | 22.86  |
| Conducted Power (Watts)                             | 0.1879 | 0.1824 | 0.2042 | 0.1945 | 0.1858 | 0.2118 | 0.2070 | 0.1897 | 0.1932 |
| EIRP(dBm)   | 23.84  | 23.71  | 24.20  | 23.99  | 23.79  | 24.36  | 24.26  | 23.88  | 23.96  |
| EIRP(Watts)   | 0.2421 | 0.2350 | 0.2630 | 0.2506 | 0.2393 | 0.2729 | 0.2667 | 0.2443 | 0.2489 |

| LTE Band 41 ( $G_T - L_c = 1.10 \text{ dBi}$ ) QPSK |        |        |        |
|---|--------|--------|--------|
| Bandwidth   | 20M    |        |        |
| Channel   | 40140  | 40640  | 41140  |
|   | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                  | 2545   | 2595   | 2645   |
| Conducted Power (dBm)                               | 22.93  | 22.65  | 23.27  |
| Conducted Power (Watts)                             | 0.1963 | 0.1841 | 0.2123 |
| EIRP(dBm)   | 24.03  | 23.75  | 24.37  |
| EIRP(Watts)   | 0.2529 | 0.2371 | 0.2735 |



| LTE Band 41 ( $G_T - L_C = 1.10 \text{ dBi}$ ) 16QAM |        |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth  | 5M     |        |        | 10M    |        |        | 15M    |        |        |
| Channel  | 40065  | 40640  | 41215  | 40090  | 40640  | 41190  | 40115  | 40640  | 41165  |
|  | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                   | 2537.5 | 2595   | 2652.5 | 2540   | 2595   | 2650   | 2542.5 | 2595   | 2647.5 |
| Conducted<br>Power (dBm)                             | 21.97  | 21.62  | 21.60  | 21.99  | 21.68  | 22.36  | 22.20  | 22.08  | 21.91  |
| Conducted<br>Power (Watts)                           | 0.1574 | 0.1452 | 0.1445 | 0.1581 | 0.1472 | 0.1722 | 0.1660 | 0.1614 | 0.1552 |
| EIRP(dBm)  | 23.07  | 22.72  | 22.70  | 23.09  | 22.78  | 23.46  | 23.30  | 23.18  | 23.01  |
| EIRP(Watts)  | 0.2028 | 0.1871 | 0.1862 | 0.2037 | 0.1897 | 0.2218 | 0.2138 | 0.2080 | 0.2000 |

| LTE Band 41 ( $G_T - L_C = 1.10 \text{ dBi}$ ) 16QAM |        |        |        |
|--|--------|--------|--------|
| Bandwidth  | 20M    |        |        |
| Channel  | 40140  | 40640  | 41140  |
|  | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                   | 2545   | 2595   | 2645   |
| Conducted<br>Power (dBm)                             | 22.18  | 22.01  | 22.32  |
| Conducted<br>Power (Watts)                           | 0.1652 | 0.1589 | 0.1706 |
| EIRP(dBm)  | 23.28  | 23.11  | 23.42  |
| EIRP(Watts)  | 0.2128 | 0.2046 | 0.2198 |



| LTE Band 41 ( $G_T - L_C = 1.10 \text{ dBi}$ ) 64QAM |        |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Bandwidth  | 5M     |        |        | 10M    |        |        | 15M    |        |        |
| Channel  | 40065  | 40640  | 41215  | 40090  | 40640  | 41190  | 40115  | 40640  | 41165  |
|  | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                   | 2537.5 | 2595   | 2652.5 | 2540   | 2595   | 2650   | 2542.5 | 2595   | 2647.5 |
| Conducted<br>Power (dBm)                             | 20.78  | 20.58  | 20.63  | 20.80  | 20.68  | 21.10  | 20.94  | 20.85  | 20.65  |
| Conducted<br>Power (Watts)                           | 0.1197 | 0.1143 | 0.1156 | 0.1202 | 0.1169 | 0.1288 | 0.1242 | 0.1216 | 0.1161 |
| EIRP(dBm)  | 21.88  | 21.68  | 21.73  | 21.90  | 21.78  | 22.20  | 22.04  | 21.95  | 21.75  |
| EIRP(Watts)  | 0.1542 | 0.1472 | 0.1489 | 0.1549 | 0.1507 | 0.1660 | 0.1600 | 0.1567 | 0.1496 |

| LTE Band 41 ( $G_T - L_C = 1.10 \text{ dBi}$ ) 64QAM |        |        |        |
|--|--------|--------|--------|
| Bandwidth  | 20M    |        |        |
| Channel  | 40140  | 40640  | 41140  |
|  | (Low)  | (Mid)  | (High) |
| Frequency<br>(MHz)                                   | 2545   | 2595   | 2645   |
| Conducted<br>Power (dBm)                             | 20.98  | 20.81  | 21.11  |
| Conducted<br>Power (Watts)                           | 0.1253 | 0.1205 | 0.1291 |
| EIRP(dBm)  | 22.08  | 21.91  | 22.21  |
| EIRP(Watts)  | 0.1614 | 0.1552 | 0.1663 |

**CA EIRP**

| LTE Band 38 CA (GT - LC = 0.70 dBi) QPSK |                |                |                 |                |                |                 |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                | 15M + 15M      |                |                 | 20M+20M        |                |                 |
| Channel PCC                              | 37825<br>(Low) | 37925<br>(Mid) | 38025<br>(High) | 37850<br>(Low) | 37901<br>(Mid) | 37952<br>(High) |
|  | 37975<br>(Low) | 38075<br>(Mid) | 38175<br>(High) | 38048<br>(Low) | 38099<br>(Mid) | 38150<br>(High) |
| Conducted Power (dBm)                    | 23.62          | 23.71          | 23.76           | 23.95          | 23.79          | 23.86           |
| Conducted Power (Watts)                  | 0.2301         | 0.2350         | 0.2377          | 0.2483         | 0.2393         | 0.2432          |
| EIRP(dBm)                                | 24.32          | 24.41          | 24.46           | 24.65          | 24.49          | 24.56           |
| EIRP(Watts)                              | 0.2704         | 0.2761         | 0.2793          | 0.2917         | 0.2812         | 0.2858          |

| LTE Band 38 CA (GT - LC = 0.70 dBi) 16QAM |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                 | 15M + 15M      |                |                 | 20M+20M        |                |                 |
| Channel PCC                               | 37825<br>(Low) | 37925<br>(Mid) | 38025<br>(High) | 37850<br>(Low) | 37901<br>(Mid) | 37952<br>(High) |
|   | 37975<br>(Low) | 38075<br>(Mid) | 38175<br>(High) | 38048<br>(Low) | 38099<br>(Mid) | 38150<br>(High) |
| Conducted Power (dBm)                     | 22.64          | 22.64          | 22.52           | 23.27          | 23.21          | 23.05           |
| Conducted Power (Watts)                   | 0.1837         | 0.1837         | 0.1786          | 0.2123         | 0.2094         | 0.2018          |
| EIRP(dBm)                                 | 23.34          | 23.34          | 23.22           | 23.97          | 23.91          | 23.75           |
| EIRP(Watts)                               | 0.2158         | 0.2158         | 0.2099          | 0.2495         | 0.2460         | 0.2371          |



| LTE Band 38 CA (GT - LC = 0.70 dBi) 64QAM |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                 | 15M + 15M      |                |                 | 20M+20M        |                |                 |
| Channel PCC                               | 37825<br>(Low) | 37925<br>(Mid) | 38025<br>(High) | 37850<br>(Low) | 37901<br>(Mid) | 37952<br>(High) |
|   | 37975<br>(Low) | 38075<br>(Mid) | 38175<br>(High) | 38048<br>(Low) | 38099<br>(Mid) | 38150<br>(High) |
| Conducted Power (dBm)                     | 20.97          | 20.85          | 20.72           | 21.84          | 21.65          | 21.36           |
| Conducted Power (Watts)                   | 0.1250         | 0.1216         | 0.1180          | 0.1528         | 0.1462         | 0.1368          |
| EIRP(dBm)                                 | 21.67          | 21.55          | 21.42           | 22.54          | 22.35          | 22.06           |
| EIRP(Watts)                               | 0.1469         | 0.1429         | 0.1387          | 0.1795         | 0.1718         | 0.1607          |



| LTE Band 41 CA (GT - LC = 1.10 dBi) QPSK |                |                |                 |                |                |                 |                |                |                 |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                | 15M + 15M      |                |                 | 5M + 20M       |                |                 | 20M + 5M       |                |                 |
| Channel PCC                              | 40115<br>(Low) | 40565<br>(Mid) | 41015<br>(High) | 40073<br>(Low) | 40548<br>(Mid) | 41023<br>(High) | 40140<br>(Low) | 40615<br>(Mid) | 41090<br>(High) |
|  | 40265<br>(Low) | 40715<br>(Mid) | 41165<br>(High) | 40190<br>(Low) | 40665<br>(Mid) | 41140<br>(High) | 40257<br>(Low) | 40732<br>(Mid) | 41207<br>(High) |
| Conducted Power (dBm)                    | 23.15          | 23.11          | 22.43           | 23.29          | 23.59          | 23.16           | 23.43          | 23.39          | 23.32           |
| Conducted Power (Watts)                  | 0.2065         | 0.2046         | 0.1750          | 0.2133         | 0.2286         | 0.2070          | 0.2203         | 0.2183         | 0.2148          |
| EIRP(dBm)                                | 24.25          | 24.21          | 23.53           | 24.39          | 24.69          | 24.26           | 24.53          | 24.49          | 24.42           |
| EIRP(Watts)                              | 0.2661         | 0.2636         | 0.2254          | 0.2748         | 0.2944         | 0.2667          | 0.2838         | 0.2812         | 0.2767          |

| LTE Band 41 CA (GT - LC = 1.10 dBi) QPSK |                |                |                 |                |                |                 |                |                |                 |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                | 10M + 20M      |                |                 | 20M + 10M      |                |                 | 15M + 20M      |                |                 |
| Channel PCC                              | 40095<br>(Low) | 40546<br>(Mid) | 40996<br>(High) | 40140<br>(Low) | 40591<br>(Mid) | 41041<br>(High) | 40118<br>(Low) | 40544<br>(Mid) | 40969<br>(High) |
|  | 40239<br>(Low) | 40690<br>(Mid) | 41140<br>(High) | 40284<br>(Low) | 40735<br>(Mid) | 41185<br>(High) | 40289<br>(Low) | 40715<br>(Mid) | 41140<br>(High) |
| Conducted Power (dBm)                    | 23.23          | 23.32          | 22.92           | 23.32          | 23.23          | 23.25           | 23.42          | 23.46          | 23.13           |
| Conducted Power (Watts)                  | 0.2104         | 0.2148         | 0.1959          | 0.2148         | 0.2104         | 0.2113          | 0.2198         | 0.2218         | 0.2056          |
| EIRP(dBm)                                | 24.33          | 24.42          | 24.02           | 24.42          | 24.33          | 24.35           | 24.52          | 24.56          | 24.23           |
| EIRP(Watts)                              | 0.2710         | 0.2767         | 0.2523          | 0.2767         | 0.2710         | 0.2723          | 0.2831         | 0.2858         | 0.2649          |



| LTE Band 41 CA (GT - LC = 1.10 dBi) QPSK |                |                |                 |                |                |                 |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                | 20M+15M        |                |                 | 20M+20M        |                |                 |
| Channel PCC                              | 40140<br>(Low) | 40566<br>(Mid) | 40991<br>(High) | 40140<br>(Low) | 40541<br>(Mid) | 40942<br>(High) |
|  | 40311<br>(Low) | 40737<br>(Mid) | 41162<br>(High) | 40338<br>(Low) | 40739<br>(Mid) | 41140<br>(High) |
| Conducted Power (dBm)                    | 23.49          | 23.45          | 23.29           | 23.85          | 23.86          | 23.83           |
| Conducted Power (Watts)                  | 0.2234         | 0.2213         | 0.2133          | 0.2427         | 0.2432         | 0.2415          |
| EIRP(dBm)                                | 24.59          | 24.55          | 24.39           | 24.95          | 24.96          | 24.93           |
| EIRP(Watts)                              | 0.2877         | 0.2851         | 0.2748          | 0.3126         | 0.3133         | 0.3112          |

| LTE Band 41 CA (GT - LC = 1.10 dBi) QPSK |                |                |                 |                |                |                 |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                | 15M+10M        |                |                 | 10M+15M        |                |                 |
| Channel PCC                              | 40115<br>(Low) | 40591<br>(Mid) | 41067<br>(High) | 40093<br>(Low) | 40569<br>(Mid) | 41045<br>(High) |
|  | 40235<br>(Low) | 40711<br>(Mid) | 41187<br>(High) | 40213<br>(Low) | 40689<br>(Mid) | 41165<br>(High) |
| Conducted Power (dBm)                    | 21.85          | 23.41          | 23.07           | 23.24          | 23.20          | 23.39           |
| Conducted Power (Watts)                  | 0.1531         | 0.2193         | 0.2028          | 0.2109         | 0.2089         | 0.2183          |
| EIRP(dBm)                                | 22.95          | 24.51          | 24.17           | 24.34          | 24.30          | 24.49           |
| EIRP(Watts)                              | 0.1972         | 0.2825         | 0.2612          | 0.2716         | 0.2692         | 0.2812          |



| LTE Band 41 CA (GT - LC = 1.10 dBi) 16QAM |                |                |                 |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                 | 15M + 15M      |                |                 | 5M + 20M       |                |                 | 20M + 5M       |                |                 |
| Channel PCC                               | 40115<br>(Low) | 40565<br>(Mid) | 41015<br>(High) | 40073<br>(Low) | 40548<br>(Mid) | 41023<br>(High) | 40140<br>(Low) | 40615<br>(Mid) | 41090<br>(High) |
|   | 40265<br>(Low) | 40715<br>(Mid) | 41165<br>(High) | 40190<br>(Low) | 40665<br>(Mid) | 41140<br>(High) | 40257<br>(Low) | 40732<br>(Mid) | 41207<br>(High) |
| Conducted Power (dBm)                     | 21.95          | 22.35          | 22.60           | 22.49          | 22.54          | 22.39           | 22.23          | 22.63          | 22.49           |
| Conducted Power (Watts)                   | 0.1567         | 0.1718         | 0.1820          | 0.1774         | 0.1795         | 0.1734          | 0.1671         | 0.1832         | 0.1774          |
| EIRP(dBm)                                 | 23.05          | 23.45          | 23.70           | 23.59          | 23.64          | 23.49           | 23.33          | 23.73          | 23.59           |
| EIRP(Watts)                               | 0.2018         | 0.2213         | 0.2344          | 0.2286         | 0.2312         | 0.2234          | 0.2153         | 0.2360         | 0.2286          |

| LTE Band 41 CA (GT - LC = 1.10 dBi) 16QAM |                |                |                 |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                 | 10M + 20M      |                |                 | 20M + 10M      |                |                 | 15M + 20M      |                |                 |
| Channel PCC                               | 40095<br>(Low) | 40546<br>(Mid) | 40996<br>(High) | 40140<br>(Low) | 40591<br>(Mid) | 41041<br>(High) | 40118<br>(Low) | 40544<br>(Mid) | 40969<br>(High) |
|   | 40239<br>(Low) | 40690<br>(Mid) | 41140<br>(High) | 40284<br>(Low) | 40735<br>(Mid) | 41185<br>(High) | 40289<br>(Low) | 40715<br>(Mid) | 41140<br>(High) |
| Conducted Power (dBm)                     | 22.37          | 22.51          | 22.22           | 22.25          | 22.49          | 22.48           | 22.46          | 22.65          | 22.36           |
| Conducted Power (Watts)                   | 0.1726         | 0.1782         | 0.1667          | 0.1679         | 0.1774         | 0.1770          | 0.1762         | 0.1841         | 0.1722          |
| EIRP(dBm)                                 | 23.47          | 23.61          | 23.32           | 23.35          | 23.59          | 23.58           | 23.56          | 23.75          | 23.46           |
| EIRP(Watts)                               | 0.2223         | 0.2296         | 0.2148          | 0.2163         | 0.2286         | 0.2280          | 0.2270         | 0.2371         | 0.2218          |



| LTE Band 41 CA (GT - LC = 1.10 dBi) 16QAM |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                 | 20M+15M        |                |                 | 20M+20M        |                |                 |
| Channel PCC                               | 40140<br>(Low) | 40566<br>(Mid) | 40991<br>(High) | 40140<br>(Low) | 40541<br>(Mid) | 40942<br>(High) |
|   | 40311<br>(Low) | 40737<br>(Mid) | 41162<br>(High) | 40338<br>(Low) | 40739<br>(Mid) | 41140<br>(High) |
| Conducted Power (dBm)                     | 22.54          | 22.40          | 22.52           | 22.85          | 22.85          | 22.89           |
| Conducted Power (Watts)                   | 0.1795         | 0.1738         | 0.1786          | 0.1928         | 0.1928         | 0.1945          |
| EIRP(dBm)                                 | 23.64          | 23.50          | 23.62           | 23.95          | 23.95          | 23.99           |
| EIRP(Watts)                               | 0.2312         | 0.2239         | 0.2301          | 0.2483         | 0.2483         | 0.2506          |

| LTE Band 41 CA (GT - LC = 1.10 dBi) 16QAM |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                 | 15M+10M        |                |                 | 10M+15M        |                |                 |
| Channel PCC                               | 40115<br>(Low) | 40591<br>(Mid) | 41067<br>(High) | 40093<br>(Low) | 40569<br>(Mid) | 41045<br>(High) |
|   | 40235<br>(Low) | 40711<br>(Mid) | 41187<br>(High) | 40213<br>(Low) | 40689<br>(Mid) | 41165<br>(High) |
| Conducted Power (dBm)                     | 22.65          | 22.49          | 22.37           | 22.04          | 22.44          | 22.56           |
| Conducted Power (Watts)                   | 0.1841         | 0.1774         | 0.1726          | 0.1600         | 0.1754         | 0.1803          |
| EIRP(dBm)                                 | 23.75          | 23.59          | 23.47           | 23.14          | 23.54          | 23.66           |
| EIRP(Watts)                               | 0.2371         | 0.2286         | 0.2223          | 0.2061         | 0.2259         | 0.2323          |



| LTE Band 41 CA (GT - LC = 1.10 dBi) 64QAM |                |                |                 |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                 | 15M + 15M      |                |                 | 5M + 20M       |                |                 | 20M + 5M       |                |                 |
| Channel PCC                               | 40115<br>(Low) | 40565<br>(Mid) | 41015<br>(High) | 40073<br>(Low) | 40548<br>(Mid) | 41023<br>(High) | 40140<br>(Low) | 40615<br>(Mid) | 41090<br>(High) |
|   | 40265<br>(Low) | 40715<br>(Mid) | 41165<br>(High) | 40190<br>(Low) | 40665<br>(Mid) | 41140<br>(High) | 40257<br>(Low) | 40732<br>(Mid) | 41207<br>(High) |
| Conducted Power (dBm)                     | 20.28          | 20.61          | 20.57           | 20.88          | 20.96          | 20.84           | 20.56          | 20.63          | 20.46           |
| Conducted Power (Watts)                   | 0.1067         | 0.1151         | 0.1140          | 0.1225         | 0.1247         | 0.1213          | 0.1138         | 0.1156         | 0.1112          |
| EIRP(dBm)                                 | 21.38          | 21.71          | 21.67           | 21.98          | 22.06          | 21.94           | 21.66          | 21.73          | 21.56           |
| EIRP(Watts)                               | 0.1374         | 0.1483         | 0.1469          | 0.1578         | 0.1607         | 0.1563          | 0.1466         | 0.1489         | 0.1432          |

| LTE Band 41 CA (GT - LC = 1.10 dBi) 64QAM |                |                |                 |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                 | 10M + 20M      |                |                 | 20M + 10M      |                |                 | 15M + 20M      |                |                 |
| Channel PCC                               | 40095<br>(Low) | 40546<br>(Mid) | 40996<br>(High) | 40140<br>(Low) | 40591<br>(Mid) | 41041<br>(High) | 40118<br>(Low) | 40544<br>(Mid) | 40969<br>(High) |
|   | 40239<br>(Low) | 40690<br>(Mid) | 41140<br>(High) | 40284<br>(Low) | 40735<br>(Mid) | 41185<br>(High) | 40289<br>(Low) | 40715<br>(Mid) | 41140<br>(High) |
| Conducted Power (dBm)                     | 20.49          | 20.59          | 20.89           | 20.62          | 20.8           | 20.79           | 20.56          | 20.71          | 20.81           |
| Conducted Power (Watts)                   | 0.1119         | 0.1146         | 0.1227          | 0.1153         | 0.1202         | 0.1199          | 0.1138         | 0.1178         | 0.1205          |
| EIRP(dBm)                                 | 21.59          | 21.69          | 21.99           | 21.72          | 21.90          | 21.89           | 21.66          | 21.81          | 21.91           |
| EIRP(Watts)                               | 0.1442         | 0.1476         | 0.1581          | 0.1486         | 0.1549         | 0.1545          | 0.1466         | 0.1517         | 0.1552          |



| LTE Band 41 CA (GT - LC = 1.10 dBi) 64QAM |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                 | 20M+15M        |                |                 | 20M+20M        |                |                 |
| Channel PCC                               | 40140<br>(Low) | 40566<br>(Mid) | 40991<br>(High) | 40140<br>(Low) | 40541<br>(Mid) | 40942<br>(High) |
|   | 40311<br>(Low) | 40737<br>(Mid) | 41162<br>(High) | 40338<br>(Low) | 40739<br>(Mid) | 41140<br>(High) |
| Conducted Power (dBm)                     | 20.74          | 20.83          | 20.97           | 21.94          | 21.96          | 21.96           |
| Conducted Power (Watts)                   | 0.1186         | 0.1211         | 0.1250          | 0.1563         | 0.1570         | 0.1570          |
| EIRP(dBm)                                 | 21.84          | 21.93          | 22.07           | 23.04          | 23.06          | 23.06           |
| EIRP(Watts)                               | 0.1528         | 0.1560         | 0.1611          | 0.2014         | 0.2023         | 0.2023          |

| LTE Band 41 CA (GT - LC = 1.10 dBi) 64QAM |                |                |                 |                |                |                 |
|---|----------------|----------------|-----------------|----------------|----------------|-----------------|
| Bandwidth                                 | 15M+10M        |                |                 | 10M+15M        |                |                 |
| Channel PCC                               | 40115<br>(Low) | 40591<br>(Mid) | 41067<br>(High) | 40093<br>(Low) | 40569<br>(Mid) | 41045<br>(High) |
|   | 40235<br>(Low) | 40711<br>(Mid) | 41187<br>(High) | 40213<br>(Low) | 40689<br>(Mid) | 41165<br>(High) |
| Conducted Power (dBm)                     | 20.58          | 20.46          | 20.82           | 20.37          | 20.70          | 20.53           |
| Conducted Power (Watts)                   | 0.1143         | 0.1112         | 0.1208          | 0.1089         | 0.1175         | 0.1130          |
| EIRP(dBm)                                 | 21.68          | 21.56          | 21.92           | 21.47          | 21.80          | 21.63           |
| EIRP(Watts)                               | 0.1472         | 0.1432         | 0.1556          | 0.1403         | 0.1514         | 0.1455          |



## Peak-to-Average Ratio

| Mode       | LTE Band 2 / 20MHz |         |             |         |             |  |
|------------|--------------------|---------|-------------|---------|-------------|--|
| Mod.       | QPSK               |         | 16QAM       |         | Limit: 13dB |  |
| RB Size    | 1RB                | Full RB | 1RB         | Full RB | Result      |  |
| Lowest CH  | 3.54               | 4.55    | 5.45        | 5.91    | PASS        |  |
| Middle CH  | 3.51               | 4.55    | 4.64        | 5.91    |             |  |
| Highest CH | 3.54               | 4.41    | 4.70        | 5.86    |             |  |
| Mod.       | 64QAM              |         | Limit: 13dB |         |             |  |
| RB Size    | 1RB                | Full RB | Result      |         |             |  |
| Lowest CH  | 6.43               | 6.49    | PASS        |         |             |  |
| Middle CH  | 5.51               | 6.41    |             |         |             |  |
| Highest CH | 5.59               | 6.41    |             |         |             |  |

| Mode       | LTE Band 4 / 20MHz |         |             |         |             |  |
|------------|--------------------|---------|-------------|---------|-------------|--|
| Mod.       | QPSK               |         | 16QAM       |         | Limit: 13dB |  |
| RB Size    | 1RB                | Full RB | 1RB         | Full RB | Result      |  |
| Lowest CH  | 3.57               | 4.46    | 5.04        | 5.80    | PASS        |  |
| Middle CH  | 3.57               | 4.46    | 5.54        | 5.88    |             |  |
| Highest CH | 3.57               | 4.46    | 5.57        | 5.86    |             |  |
| Mod.       | 64QAM              |         | Limit: 13dB |         |             |  |
| RB Size    | 1RB                | Full RB | Result      |         |             |  |
| Lowest CH  | 6.00               | 6.29    | PASS        |         |             |  |
| Middle CH  | 6.52               | 6.41    |             |         |             |  |
| Highest CH | 6.70               | 6.43    |             |         |             |  |

| Mode       | LTE Band 5 / 10MHz |         |             |         |             |  |
|------------|--------------------|---------|-------------|---------|-------------|--|
| Mod.       | QPSK               |         | 16QAM       |         | Limit: 13dB |  |
| RB Size    | 1RB                | Full RB | 1RB         | Full RB | Result      |  |
| Lowest CH  | 3.62               | 4.58    | 4.64        | 6.00    | PASS        |  |
| Middle CH  | 3.62               | 4.67    | 5.19        | 5.91    |             |  |
| Highest CH | 3.65               | 4.64    | 5.57        | 5.91    |             |  |
| Mod.       | 64QAM              |         | Limit: 13dB |         |             |  |
| RB Size    | 1RB                | Full RB | Result      |         |             |  |
| Lowest CH  | 5.86               | 6.43    | PASS        |         |             |  |
| Middle CH  | 6.81               | 6.43    |             |         |             |  |
| Highest CH | 6.75               | 6.46    |             |         |             |  |



| Mode       | LTE Band 7 / 20MHz |         |             |         |             |
|------------|--------------------|---------|-------------|---------|-------------|
| Mod.       | QPSK               |         | 16QAM       |         | Limit: 13dB |
| RB Size    | 1RB                | Full RB | 1RB         | Full RB | Result      |
| Lowest CH  | 3.51               | 4.49    | 4.55        | 5.65    | PASS        |
| Middle CH  | 3.54               | 4.49    | 4.87        | 5.80    |             |
| Highest CH | 3.48               | 4.41    | 4.35        | 5.74    |             |
| Mod.       | 64QAM              |         | Limit: 13dB |         |             |
| RB Size    | 1RB                | Full RB | Result      |         |             |
| Lowest CH  | 4.52               | 5.71    | PASS        |         |             |
| Middle CH  | 4.84               | 5.80    |             |         |             |
| Highest CH | 4.26               | 5.74    |             |         |             |

| Mode       | LTE Band 12 / 10MHz |         |             |         |             |
|------------|---------------------|---------|-------------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM       |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB         | Full RB | Result      |
| Lowest CH  | 3.62                | 4.46    | 5.36        | 5.65    | PASS        |
| Middle CH  | 3.59                | 4.67    | 4.78        | 5.83    |             |
| Highest CH | 3.54                | 4.55    | 4.49        | 5.86    |             |
| Mod.       | 64QAM               |         | Limit: 13dB |         |             |
| RB Size    | 1RB                 | Full RB | Result      |         |             |
| Lowest CH  | 6.17                | 6.35    | PASS        |         |             |
| Middle CH  | 5.54                | 6.41    |             |         |             |
| Highest CH | 5.28                | 6.49    |             |         |             |

| Mode       | LTE Band 41 / 20MHz |         |             |         |             |
|------------|---------------------|---------|-------------|---------|-------------|
| Mod.       | QPSK                |         | 16QAM       |         | Limit: 13dB |
| RB Size    | 1RB                 | Full RB | 1RB         | Full RB | Result      |
| Lowest CH  | 5.77                | 5.13    | 5.16        | 5.71    | PASS        |
| Middle CH  | 3.28                | 5.65    | 5.62        | 5.65    |             |
| Highest CH | 3.91                | 4.52    | 5.94        | 5.77    |             |
| Mod.       | 64QAM               |         | Limit: 13dB |         |             |
| RB Size    | 1RB                 | Full RB | Result      |         |             |
| Lowest CH  | 5.10                | 5.71    | PASS        |         |             |
| Middle CH  | 5.59                | 5.65    |             |         |             |
| Highest CH | 4.75                | 5.36    |             |         |             |

