



# FCC RF Test Report

APPLICANT : Wistron Corporation  
EQUIPMENT : Notebook Computer  
BRAND NAME : Lenovo  
MODEL NAME : TP00079A  
FCC ID : PU5-TP00079A  
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27  
CLASSIFICATION : PCS Licensed Transmitter (PCB)

This is a partial report which is included the conducted output power and ERP/EIRP and radiated test items. The product was received on Nov. 09, 2015 and completely tested on Dec. 16, 2015. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-D-2010 and the testing has shown the tested sample to be in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



**SPORTON INTERNATIONAL INC.**

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## REVISION HISTORY

| REPORT NO.   | VERSION | DESCRIPTION                              | ISSUED DATE   |
|--------------|---------|------------------------------------------|---------------|
| FG580531-05B | Rev. 01 | Initial issue of report                  | Jan .22, 2016 |
| FG580531-05B | Rev. 02 | Revising the antenna gain in section 1.3 | Jan .27, 2016 |
|              |         |                                          |               |
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|              |         |                                          |               |

**SUMMARY OF TEST RESULT**

| Report Section | FCC Rule                                                                                   | Description                                                                                            | Limit                  | Result | Remark                                    |
|----------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------|--------|-------------------------------------------|
| 3.1            | §2.1046                                                                                    | Conducted Output Power                                                                                 | Reporting Only         | PASS   | -                                         |
|                | §22.913(a)(2)                                                                              | Effective Radiated Power<br>(Band 5) (Band 26)                                                         | ERP < 7 Watt           | PASS   | -                                         |
|                | §27.50(b)(10)<br>§27.50(c)(10)                                                             | Effective Radiated Power<br>(Band 12) (Band 13)                                                        | ERP < 3 Watt           |        |                                           |
|                | §24.232(c)<br>§27.50(h)(2)                                                                 | Equivalent Isotropic Radiated<br>Power<br>(Band 2)(Band 25)<br>(Band 7)(Band 41)                       | EIRP < 2Watt           |        |                                           |
|                | §27.50(d)(4)                                                                               | Equivalent Isotropic Radiated<br>Power<br>(Band 4)                                                     | EIRP < 1Watt           |        |                                           |
| 4.4            | §2.1053<br>§22.917(a)<br>§24.238(a)<br>§27.53(c)(2)<br>§27.53(f)<br>§27.53(g)<br>§27.53(h) | Radiated Spurious Emission<br>(Band 2) (Band 4) (Band 5)<br>(Band 12) (Band 13)<br>(Band 25) (Band 26) | < 43+10log10(P[Watts]) | PASS   | Under limit<br>8.29 dB at<br>9222.000 MHz |
|                | §2.1053<br>§27.53(m)(4)                                                                    | Radiated Spurious Emission<br>(Band 7)(Band 41)                                                        | < 55+10log10(P[Watts]) |        |                                           |



# 1 General Description

## 1.1 Applicant

Wistron Corporation

21F, No. 88, Sec. 1, Hsin Tai Wu Rd., Hsichih Dist, New Taipei City 221, Taiwan R.O.C.

## 1.2 Manufacturer

Wistron Corporation

21F, No. 88, Sec. 1, Hsin Tai Wu Rd., Hsichih Dist, New Taipei City 221, Taiwan R.O.C.

## 1.3 Product Feature of Equipment Under Test

| Product Feature                 |                                                                                                    |
|---------------------------------|----------------------------------------------------------------------------------------------------|
| Equipment                       | Notebook Computer                                                                                  |
| Brand Name                      | Lenovo                                                                                             |
| Model Name                      | TP00079A                                                                                           |
| FCC ID                          | PU5-TP00079A                                                                                       |
| Integrated the WWAN Module      | Brand Name: Sierra<br>Model Name: EM7455                                                           |
| EUT supports Radios application | WCDMA/HSPA/LTE<br>WLAN 11a/b/g/n HT20/HT40<br>WLAN 11ac VHT20/VHT40/VHT80<br>Bluetooth v4.1 EDR/LE |
| EUT Stage                       | Production Unit                                                                                    |

| EM7455    |              |                |           | 3G & LTE |
|-----------|--------------|----------------|-----------|----------|
| Antenna 1 | Manufacturer | Jieng Tai      | Peak gain | 0.63 dBi |
|           | P/N          | 025.900BJ.0001 | Type      | PIFA     |



## 1.4 Product Specification subjective to this standard

| Product Specification subjective to this standard |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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 MHz ~ 716 MHz<br>LTE Band 13 : 779.5 MHz ~ 784.5 MHz<br>LTE Band 25 : 1850.7MHz ~ 1914.3 MHz<br>LTE Band 26 : 824.7 MHz ~ 848.3 MHz<br>LTE Band 41 : 2503.5 MHz ~ 2682.5 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 MHz ~ 746 MHz<br>LTE Band 13 : 748.5 MHz ~ 753.5 MHz<br>LTE Band 25 : 1930.7MHz ~ 1994.3 MHz<br>LTE Band 26 : 869.7 MHz ~ 893.3 MHz<br>LTE Band 41 : 2503.5 MHz ~ 2682.5 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 13 : 5MHz / 10MHz<br>LTE Band 25 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz<br>LTE Band 26 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz<br>LTE Band 41 : 5MHz / 10MHz / 15MHz / 20MHz |
| <b>Maximum Output Power to Antenna</b>            | LTE Band 2 : 23.45 dBm<br>LTE Band 4 : 23.50 dBm<br>LTE Band 5 : 22.72 dBm<br>LTE Band 7 : 21.71 dBm<br>LTE Band 13 : 23.62 dBm<br>LTE Band 12 : 22.96 dBm<br>LTE Band 25 : 23.51 dBm<br>LTE Band 26 : 22.87 dBm<br>LTE Band 41 : 21.58 dBm                                                                                                                                                                                                                    |

| Product Specification subjective to this standard |                         |
|---------------------------------------------------|-------------------------|
| Antenna Gain                                      | LTE Band 2 : -1.29 dBi  |
|                                                   | LTE Band 4 : -1.27 dBi  |
|                                                   | LTE Band 5 : 0.19 dBi   |
|                                                   | LTE Band 7 : -7.25 dBi  |
|                                                   | LTE Band 12 : -1.19 dBi |
|                                                   | LTE Band 13 : -0.18 dBi |
|                                                   | LTE Band 25 : -1.26 dBi |
|                                                   | LTE Band 26 : 0.63 dBi  |
|                                                   | LTE Band 41 : -7.20 dBi |
| Type of Modulation                                | QPSK / 16QAM            |

## 1.5 Modification of EUT

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

## 1.6 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

|                    |                                                                                                                                                                  |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Site          | SPORTON INTERNATIONAL INC.                                                                                                                                       |
| Test Site Location | No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park,<br>Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 |
| Test Site No.      | <b>Sporton Site No.</b>                                                                                                                                          |
|                    | TH02-HY                                                                                                                                                          |

|                    |                                                                                                                                        |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Test Site          | SPORTON INTERNATIONAL INC.                                                                                                             |
| Test Site Location | No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Dist,<br>Taoyuan City, Taiwan (R.O.C.)<br>TEL: +886-3-327-0868<br>FAX: +886-3-327-0855 |
| Test Site No.      | <b>Sporton Site No.</b>                                                                                                                |
|                    | 03CH11-HY                                                                                                                              |



## **1.7 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
- ♦ ANSI / TIA / EIA-603-D-2010
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.





## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

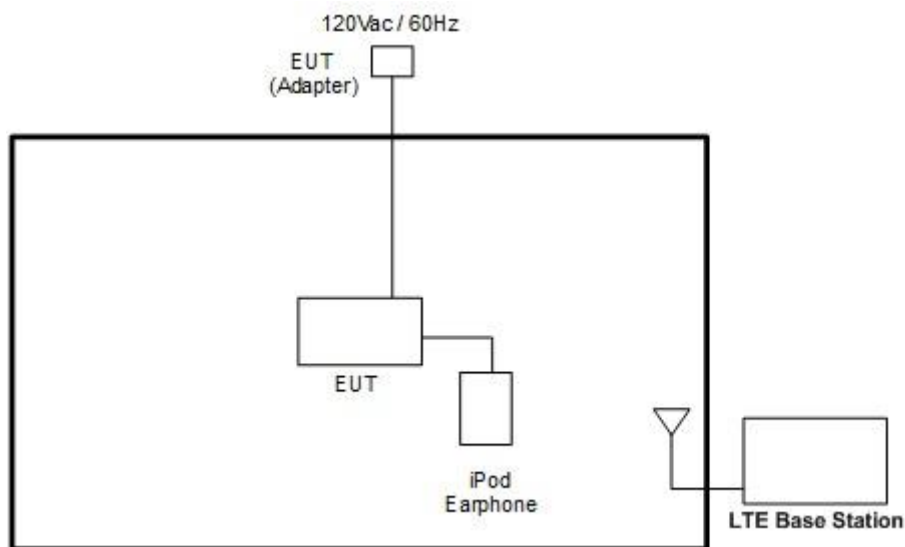
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 with maximum output power.

| Test Items        | Band | Bandwidth (MHz) |   |   |    |    |    | Modulation |       | RB # |      |      | Test Channel |   |   |
|-------------------|------|-----------------|---|---|----|----|----|------------|-------|------|------|------|--------------|---|---|
|                   |      | 1.4             | 3 | 5 | 10 | 15 | 20 | QPSK       | 16QAM | 1    | Half | Full | L            | M | H |
| Max. Output Power | 2    | ✓               | ✓ | ✓ | ✓  | ✓  | ✓  | ✓          | ✓     | ✓    | ✓    | ✓    | ✓            | ✓ | ✓ |
|                   | 4    | ✓               | ✓ | ✓ | ✓  | ✓  | ✓  | ✓          | ✓     | ✓    | ✓    | ✓    | ✓            | ✓ | ✓ |
|                   | 5    | ✓               | ✓ | ✓ | ✓  | -  | -  | ✓          | ✓     | ✓    | ✓    | ✓    | ✓            | ✓ | ✓ |
|                   | 7    | -               | - | ✓ | ✓  | ✓  | ✓  | ✓          | ✓     | ✓    | ✓    | ✓    | ✓            | ✓ | ✓ |
|                   | 12   | ✓               | ✓ | ✓ | ✓  | -  | -  | ✓          | ✓     | ✓    | ✓    | ✓    | ✓            | ✓ | ✓ |
|                   | 13   | -               | - | ✓ | ✓  | -  | -  | ✓          | ✓     | ✓    | ✓    | ✓    | ✓            | ✓ | ✓ |
|                   | 25   | ✓               | ✓ | ✓ | ✓  | ✓  | ✓  | ✓          | ✓     | ✓    | ✓    | ✓    | ✓            | ✓ | ✓ |
|                   | 26   | ✓               | ✓ | ✓ | ✓  | ✓  | -  | ✓          | ✓     | ✓    | ✓    | ✓    | ✓            | ✓ | ✓ |
|                   | 41   | -               | - | ✓ | ✓  | ✓  | ✓  | ✓          | ✓     | ✓    | ✓    | ✓    | ✓            | ✓ | ✓ |
| E.R.P./ E.I.R.P.  | 2    | ✓               | ✓ | ✓ | ✓  | ✓  | ✓  | ✓          | ✓     | ✓    |      |      | ✓            | ✓ | ✓ |
|                   | 4    | ✓               | ✓ | ✓ | ✓  | ✓  | ✓  | ✓          | ✓     | ✓    |      |      | ✓            | ✓ | ✓ |
|                   | 5    | ✓               | ✓ | ✓ | ✓  | -  | -  | ✓          | ✓     | ✓    |      |      | ✓            | ✓ | ✓ |
|                   | 7    | -               | - | ✓ | ✓  | ✓  | ✓  | ✓          | ✓     | ✓    |      |      | ✓            | ✓ | ✓ |
|                   | 12   | ✓               | ✓ | ✓ | ✓  | -  | -  | ✓          | ✓     | ✓    |      |      | ✓            | ✓ | ✓ |
|                   | 13   | -               | - | ✓ | ✓  | -  | -  | ✓          | ✓     | ✓    |      |      | ✓            | ✓ | ✓ |
|                   | 25   | ✓               | ✓ | ✓ | ✓  | ✓  | ✓  | ✓          | ✓     | ✓    |      |      | ✓            | ✓ | ✓ |
|                   | 26   | ✓               | ✓ | ✓ | ✓  | ✓  | -  | ✓          | ✓     | ✓    |      |      | ✓            | ✓ | ✓ |
|                   | 41   | -               | - | ✓ | ✓  | ✓  | ✓  | ✓          | ✓     | ✓    |      |      | ✓            | ✓ | ✓ |



| Test Items                 | Band                                                                                                                                                                                                                                                                                                                                                                               | Bandwidth (MHz) |   |   |    |    |    | Modulation |       | RB # |      |      | Test Channel |   |   |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|----|----|----|------------|-------|------|------|------|--------------|---|---|
|                            |                                                                                                                                                                                                                                                                                                                                                                                    | 1.4             | 3 | 5 | 10 | 15 | 20 | QPSK       | 16QAM | 1    | Half | Full | L            | M | H |
| Radiated Spurious Emission | 2                                                                                                                                                                                                                                                                                                                                                                                  | ✓               | ✓ | ✓ | ✓  | ✓  | ✓  | ✓          |       | ✓    |      |      | ✓            | ✓ | ✓ |
|                            | 4                                                                                                                                                                                                                                                                                                                                                                                  | ✓               | ✓ | ✓ | ✓  | ✓  | ✓  | ✓          |       | ✓    |      |      | ✓            | ✓ | ✓ |
|                            | 5                                                                                                                                                                                                                                                                                                                                                                                  | ✓               | ✓ | ✓ | ✓  | -  | -  | ✓          |       | ✓    |      |      | ✓            | ✓ | ✓ |
|                            | 7                                                                                                                                                                                                                                                                                                                                                                                  | -               | - | ✓ | ✓  | ✓  | ✓  | ✓          |       | ✓    |      |      | ✓            | ✓ | ✓ |
|                            | 12                                                                                                                                                                                                                                                                                                                                                                                 | ✓               | ✓ | ✓ | ✓  | -  | -  | ✓          |       | ✓    |      |      | ✓            | ✓ | ✓ |
|                            | 13                                                                                                                                                                                                                                                                                                                                                                                 | -               | - | ✓ | ✓  | -  | -  | ✓          |       | ✓    |      |      | ✓            | ✓ | ✓ |
|                            | 25                                                                                                                                                                                                                                                                                                                                                                                 | ✓               | ✓ | ✓ | ✓  | ✓  | ✓  | ✓          |       | ✓    |      |      | ✓            | ✓ | ✓ |
|                            | 26                                                                                                                                                                                                                                                                                                                                                                                 | ✓               | ✓ | ✓ | ✓  | ✓  | -  | ✓          |       | ✓    |      |      | ✓            | ✓ | ✓ |
|                            | 41                                                                                                                                                                                                                                                                                                                                                                                 | -               | - | ✓ | ✓  | ✓  | ✓  | ✓          |       | ✓    |      |      | ✓            | ✓ | ✓ |
| Note                       | 1. The mark “✓” 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.   | LTE Base Station | Anritsu    | MT8820C   | N/A          | N/A               | Unshielded, 1.8 m |
| 2.   | iPod Earphone    | Apple      | N/A       | Verification | Unshielded, 1.0 m | N/A               |



## 2.4 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 13 Channel and Frequency List |                        |        |        |         |
|----------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                               | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 10                                     | Channel                | -      | 23230  | -       |
|                                        | Frequency              | -      | 782    | -       |
| 5                                      | Channel                | 23205  | 23230  | 23255   |
|                                        | Frequency              | 779.5  | 782    | 784.5   |

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



| LTE Band 26 Channel and Frequency List |                        |        |        |         |
|----------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                               | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 15                                     | Channel                | 26865  | 26915  | 26965   |
|                                        | Frequency              | 831.5  | 836.5  | 884.5   |
| 10                                     | Channel                | 26840  | 26915  | 26990   |
|                                        | Frequency              | 829    | 836.5  | 844     |
| 5                                      | Channel                | 26815  | 26915  | 27015   |
|                                        | Frequency              | 826.5  | 836.5  | 846.5   |
| 3                                      | Channel                | 26805  | 26915  | 27025   |
|                                        | Frequency              | 825.5  | 836.5  | 847.5   |
| 1.4                                    | Channel                | 26797  | 26915  | 27033   |
|                                        | Frequency              | 824.7  | 836.5  | 848.3   |

| LTE Band 41 Channel and Frequency List |                        |        |        |         |
|----------------------------------------|------------------------|--------|--------|---------|
| BW [MHz]                               | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 20                                     | Channel                | 39750  | 40620  | 41490   |
|                                        | Frequency              | 2506   | 2593   | 2680    |
| 15                                     | Channel                | 39725  | 40620  | 41515   |
|                                        | Frequency              | 2503.5 | 2593   | 2682.5  |
| 10                                     | Channel                | 39700  | 40620  | 41540   |
|                                        | Frequency              | 2501   | 2593   | 2685    |
| 5                                      | Channel                | 39675  | 40620  | 41565   |
|                                        | Frequency              | 2498.5 | 2593   | 2687.5  |



### **3 Conducted Test Items**

#### **3.1 Conducted Output Power and ERP/EIRP**

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

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

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5 and Band 26.

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

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

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

According to KDB 412172 D01 Power Approach,

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

$P_T$  = transmitter output power in dBm

$G_T$  = gain of the transmitting antenna in dBi

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

##### **3.1.2 Test Procedures**

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



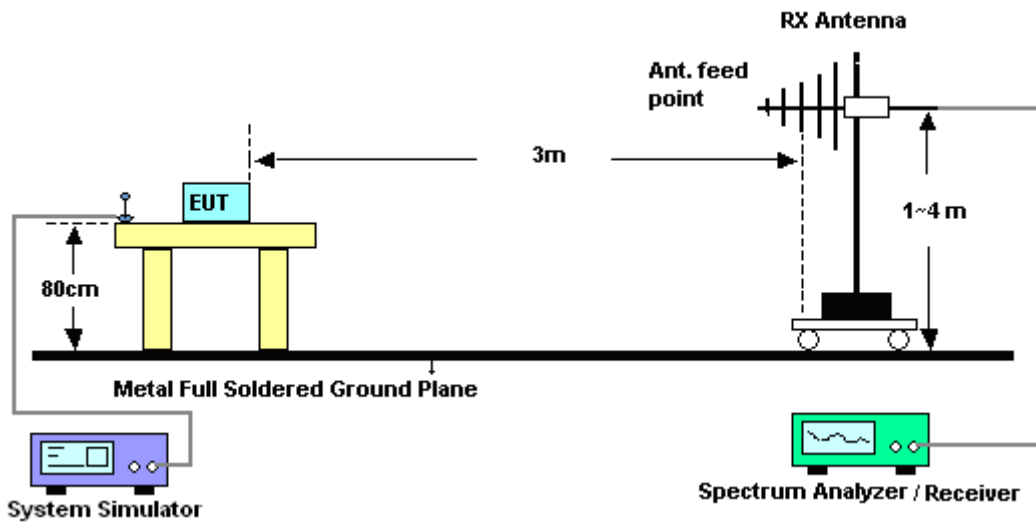
## 4 Radiated Test Items

### 4.1 Measuring Instruments

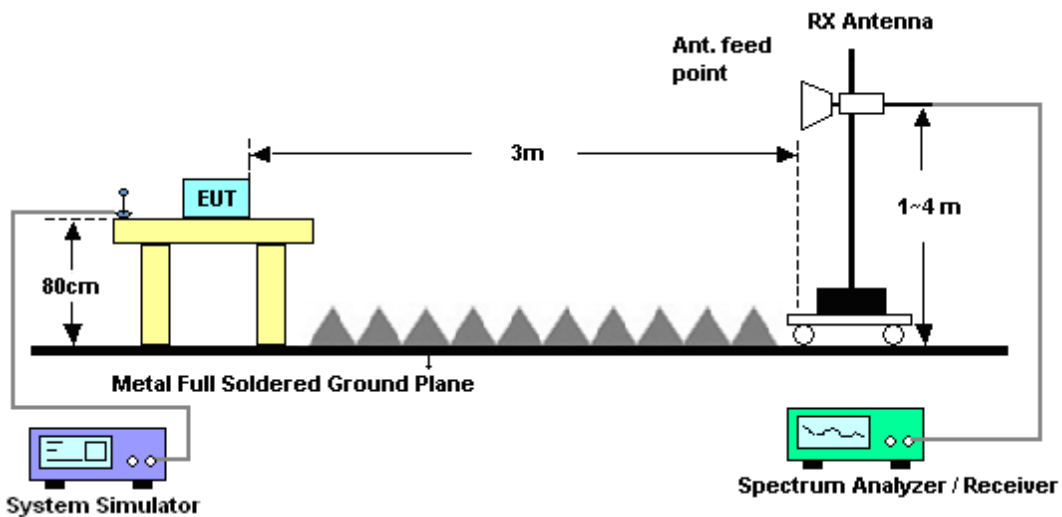
See list of measuring instruments of this test report.

### 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 / TIA / EIA-603-D-2010. 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 7,41

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

For LTE Band 12,13

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

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



#### 4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
2. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
3. The EUT was set 3 meters from the receiving antenna, which was 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 one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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

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

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

$= -13\text{dBm}$ .

For Band 7, 41:

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

12. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
13. ERP (dBm) = EIRP - 2.15



## 5 List of Measuring Equipment

| Instrument           | Manufacturer    | Model No.     | Serial No.  | Characteristics          | Calibration Date | Test Date                         | Due Date      | Remark                |
|----------------------|-----------------|---------------|-------------|--------------------------|------------------|-----------------------------------|---------------|-----------------------|
| Base Station         | Anritsu         | MT8820C       | 6201074414  | GSM / GPRS / WCDMA / LTE | Feb. 06, 2015    | Nov. 17, 2015~<br>Dec. 16, 2015   | Feb. 05, 2016 | Conducted (TH02-HY)   |
| Base Station         | Agilent         | E5515C        | MY50266977  | GSM/GPRS/WCDMA           | May 14, 2015     | Nov. 17, 2015~<br>Dec. 16, 2015   | May 13, 2016  | Conducted (TH02-HY)   |
| SHF-EHF Horn Antenna | SCHWARZBECK     | BBHA 9170     | BBHA9170251 | 18GHz- 40GHz             | Oct. 12, 2015    | Nov. 22, 2015~<br>Dec. 06, 2015   | Oct. 11, 2016 | Radiation (03CH11-HY) |
| Horn Antenna         | SCHWARZBECK     | BBHA 9170     | BBHA9170576 | 18GHz- 40GHz             | Apr. 20, 2015    | Nov. 22, 2015~<br>Dec. 06, 2015   | Apr 19, 2016  | Radiation (03CH11-HY) |
| Bilog Antenna        | TESEQ           | CBL 6111D     | 35414       | 30MHz~1GHz               | Nov. 17, 2015    | Nov 22. , 2015 ~<br>Dec. 06, 2015 | Nov. 16, 2016 | Radiation (03CH11-HY) |
| EMI Test Receiver    | Keysight        | N9038A        | MY54130085  | 20Hz ~ 8.4GHz            | Nov. 04, 2015    | Nov 22. , 2015 ~<br>Dec. 06, 2015 | Nov. 03, 2016 | Radiation (03CH11-HY) |
| Horn Antenna         | SCHWARZBECK     | BBHA 9120 D   | 9120D-1325  | 1GHz ~ 18GHz             | Sep. 30, 2015    | Nov 22. , 2015 ~<br>Dec. 06, 2015 | Sep. 29, 2016 | Radiation (03CH11-HY) |
| Amplifier            | SONOMA          | 310N          | 187312      | 9kHz~1GHz                | Nov. 20, 2015    | Nov 22. , 2015 ~<br>Dec. 06, 2015 | Nov. 19, 2016 | Radiation (03CH11-HY) |
| Bilog Antenna        | TESEQ           | CBL 6111D     | 35413       | 30MHz~1GHz               | Oct. 31, 2015    | Nov 22. , 2015 ~<br>Dec. 06, 2015 | Oct. 30, 2016 | Radiation (03CH11-HY) |
| Horn Antenna         | SCHWARZBECK     | BBHA 9120 D   | 9120D-1326  | 1GHz ~ 18GHz             | Oct. 08, 2015    | Nov 22. , 2015 ~<br>Dec. 06, 2015 | Oct. 07, 2016 | Radiation (03CH11-HY) |
| Preamplifier         | Keysight        | 83017A        | MY53270080  | 1GHz~26.5GHz             | Nov. 19, 2015    | Nov 22. , 2015 ~<br>Dec. 06, 2015 | Nov. 18, 2016 | Radiation (03CH11-HY) |
| Spectrum Analyzer    | Keysight        | N9010A        | MY54200486  | 10Hz ~ 44GHZ             | Sep. 24, 2015    | Nov 22. , 2015 ~<br>Dec. 06, 2015 | Sep. 23, 2016 | Radiation (03CH11-HY) |
| Antenna Mast         | EMEC            | AM-BS-450 0-B | N/A         | 1~4m                     | N/A              | Nov 22. , 2015 ~<br>Dec. 06, 2015 | N/A           | Radiation (03CH11-HY) |
| Signal Generator     | Rohde & Schwarz | SMF100A       | 101107      | 100kHz~40GHz             | May 22, 2015     | Nov 22. , 2015 ~<br>Dec. 06, 2015 | May 21, 2016  | Radiation (03CH11-HY) |
| Turn Table           | EMEC            | TT 2000       | N/A         | 0-360 degree             | N/A              | Nov 22. , 2015 ~<br>Dec. 06, 2015 | N/A           | Radiation (03CH11-HY) |



## 6 Uncertainty of Evaluation

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

|                                                                            |      |
|----------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of<br>Confidence of 95% ( $U = 2Uc(y)$ ) | 4.90 |
|----------------------------------------------------------------------------|------|

### Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

|                                                                            |      |
|----------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of<br>Confidence of 95% ( $U = 2Uc(y)$ ) | 5.20 |
|----------------------------------------------------------------------------|------|



## 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   | 23.42  | 23.45  | 23.31   |
| 20                                     | 1       | 49        |        | 22.99  | 23.01  | 22.92   |
| 20                                     | 1       | 99        |        | 23.21  | 23.13  | 22.98   |
| 20                                     | 50      | 0         |        | 22.35  | 22.46  | 22.40   |
| 20                                     | 50      | 24        |        | 22.16  | 22.10  | 22.08   |
| 20                                     | 50      | 50        |        | 22.09  | 22.07  | 21.92   |
| 20                                     | 100     | 0         |        | 22.30  | 22.31  | 22.19   |
| 20                                     | 1       | 0         | 16-QAM | 22.45  | 22.47  | 22.34   |
| 20                                     | 1       | 49        |        | 22.27  | 22.27  | 22.13   |
| 20                                     | 1       | 99        |        | 22.42  | 22.39  | 22.23   |
| 20                                     | 50      | 0         |        | 21.48  | 21.36  | 21.34   |
| 20                                     | 50      | 24        |        | 21.12  | 21.11  | 21.01   |
| 20                                     | 50      | 50        |        | 21.10  | 21.05  | 20.92   |
| 20                                     | 100     | 0         |        | 21.29  | 21.26  | 21.15   |
| 15                                     | 1       | 0         | QPSK   | 23.37  | 23.38  | 23.22   |
| 15                                     | 1       | 37        |        | 22.94  | 22.95  | 22.85   |
| 15                                     | 1       | 74        |        | 23.18  | 23.12  | 22.88   |
| 15                                     | 36      | 0         |        | 22.28  | 22.44  | 22.32   |
| 15                                     | 36      | 20        |        | 22.13  | 22.02  | 22.02   |
| 15                                     | 36      | 39        |        | 22.02  | 22.03  | 21.88   |
| 15                                     | 75      | 0         |        | 22.29  | 22.29  | 22.13   |
| 15                                     | 1       | 0         | 16-QAM | 22.43  | 22.45  | 22.24   |
| 15                                     | 1       | 37        |        | 22.26  | 22.23  | 22.03   |
| 15                                     | 1       | 74        |        | 22.39  | 22.38  | 22.20   |
| 15                                     | 36      | 0         |        | 21.40  | 21.28  | 21.28   |
| 15                                     | 36      | 20        |        | 21.02  | 21.07  | 20.98   |
| 15                                     | 36      | 39        |        | 21.06  | 21.03  | 20.84   |
| 15                                     | 75      | 0         |        | 21.21  | 21.25  | 21.10   |



| LTE Band 2 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                     | 1       | 0         | QPSK   | 23.37  | 23.38  | 23.15   |
| 10                                     | 1       | 25        |        | 22.89  | 22.90  | 22.79   |
| 10                                     | 1       | 49        |        | 23.11  | 23.03  | 22.86   |
| 10                                     | 25      | 0         |        | 22.25  | 22.39  | 22.27   |
| 10                                     | 25      | 12        |        | 22.11  | 21.96  | 21.98   |
| 10                                     | 25      | 25        |        | 21.99  | 22.02  | 21.85   |
| 10                                     | 50      | 0         |        | 22.29  | 22.19  | 22.10   |
| 10                                     | 1       | 0         | 16-QAM | 22.35  | 22.41  | 22.24   |
| 10                                     | 1       | 25        |        | 22.21  | 22.23  | 21.97   |
| 10                                     | 1       | 49        |        | 22.32  | 22.31  | 22.19   |
| 10                                     | 25      | 0         |        | 21.35  | 21.27  | 21.28   |
| 10                                     | 25      | 12        |        | 21.00  | 20.97  | 20.90   |
| 10                                     | 25      | 25        |        | 20.96  | 20.98  | 20.81   |
| 10                                     | 50      | 0         |        | 21.19  | 21.19  | 21.07   |
| 5                                      | 1       | 0         | QPSK   | 23.18  | 23.26  | 23.14   |
| 5                                      | 1       | 12        |        | 22.78  | 22.87  | 22.70   |
| 5                                      | 1       | 24        |        | 23.04  | 22.94  | 22.87   |
| 5                                      | 12      | 0         |        | 22.11  | 22.34  | 22.32   |
| 5                                      | 12      | 7         |        | 21.97  | 21.90  | 21.96   |
| 5                                      | 12      | 13        |        | 21.86  | 21.94  | 21.83   |
| 5                                      | 25      | 0         |        | 22.13  | 22.26  | 22.08   |
| 5                                      | 1       | 0         | 16-QAM | 22.27  | 22.35  | 22.19   |
| 5                                      | 1       | 12        |        | 22.13  | 22.06  | 21.93   |
| 5                                      | 1       | 24        |        | 22.24  | 22.29  | 22.05   |
| 5                                      | 12      | 0         |        | 21.38  | 21.26  | 21.10   |
| 5                                      | 12      | 7         |        | 20.95  | 20.97  | 20.83   |
| 5                                      | 12      | 13        |        | 20.97  | 20.92  | 20.80   |
| 5                                      | 25      | 0         |        | 21.16  | 21.15  | 20.96   |



| LTE Band 2 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 3                                      | 1       | 0         | QPSK   | 23.17  | 23.20  | 23.19   |
| 3                                      | 1       | 8         |        | 22.78  | 22.78  | 22.68   |
| 3                                      | 1       | 14        |        | 22.99  | 22.91  | 22.79   |
| 3                                      | 8       | 0         |        | 22.12  | 22.35  | 22.18   |
| 3                                      | 8       | 4         |        | 21.89  | 21.79  | 22.00   |
| 3                                      | 8       | 7         |        | 21.75  | 21.92  | 21.73   |
| 3                                      | 15      | 0         |        | 22.08  | 22.22  | 21.97   |
| 3                                      | 1       | 0         | 16-QAM | 22.26  | 22.27  | 22.11   |
| 3                                      | 1       | 8         |        | 22.11  | 22.01  | 21.82   |
| 3                                      | 1       | 14        |        | 22.16  | 22.29  | 22.05   |
| 3                                      | 8       | 0         |        | 21.25  | 21.24  | 21.10   |
| 3                                      | 8       | 4         |        | 20.90  | 20.82  | 20.86   |
| 3                                      | 8       | 7         |        | 20.90  | 20.95  | 20.71   |
| 3                                      | 15      | 0         |        | 21.08  | 21.13  | 20.93   |
| 1.4                                    | 1       | 0         | QPSK   | 23.11  | 23.14  | 23.12   |
| 1.4                                    | 1       | 3         |        | 22.71  | 22.66  | 22.56   |
| 1.4                                    | 1       | 5         |        | 22.97  | 22.96  | 22.78   |
| 1.4                                    | 3       | 0         |        | 22.02  | 22.21  | 22.08   |
| 1.4                                    | 3       | 1         |        | 22.89  | 22.62  | 22.59   |
| 1.4                                    | 3       | 3         |        | 22.90  | 22.67  | 22.55   |
| 1.4                                    | 6       | 0         |        | 22.12  | 22.21  | 21.95   |
| 1.4                                    | 1       | 0         | 16-QAM | 22.24  | 22.28  | 22.15   |
| 1.4                                    | 1       | 3         |        | 22.11  | 21.97  | 21.86   |
| 1.4                                    | 1       | 5         |        | 22.06  | 22.11  | 21.99   |
| 1.4                                    | 3       | 0         |        | 21.21  | 21.09  | 21.06   |
| 1.4                                    | 3       | 1         |        | 21.98  | 21.55  | 21.48   |
| 1.4                                    | 3       | 3         |        | 22.02  | 21.70  | 21.50   |
| 1.4                                    | 6       | 0         |        | 20.91  | 21.00  | 20.83   |





| LTE Band 25 Maximum Average Power [dBm] |         |           |        |        |        |         |
|-----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 20                                      | 1       | 0         | QPSK   | 23.46  | 23.51  | 23.43   |
| 20                                      | 1       | 49        |        | 22.63  | 22.46  | 22.43   |
| 20                                      | 1       | 99        |        | 22.85  | 22.69  | 22.53   |
| 20                                      | 50      | 0         |        | 21.98  | 21.99  | 21.96   |
| 20                                      | 50      | 24        |        | 21.86  | 21.57  | 21.58   |
| 20                                      | 50      | 50        |        | 21.69  | 21.57  | 21.47   |
| 20                                      | 100     | 0         |        | 21.76  | 21.81  | 21.77   |
| 20                                      | 1       | 0         | 16-QAM | 22.60  | 22.61  | 22.58   |
| 20                                      | 1       | 49        |        | 21.91  | 21.65  | 21.64   |
| 20                                      | 1       | 99        |        | 22.10  | 21.86  | 21.82   |
| 20                                      | 50      | 0         |        | 21.15  | 20.84  | 20.85   |
| 20                                      | 50      | 24        |        | 20.81  | 20.61  | 20.55   |
| 20                                      | 50      | 50        |        | 20.65  | 20.56  | 20.48   |
| 20                                      | 100     | 0         |        | 20.91  | 20.69  | 20.76   |
| 15                                      | 1       | 0         | QPSK   | 23.46  | 23.47  | 23.41   |
| 15                                      | 1       | 37        |        | 22.58  | 22.46  | 22.37   |
| 15                                      | 1       | 74        |        | 22.76  | 22.59  | 22.53   |
| 15                                      | 36      | 0         |        | 21.94  | 21.96  | 21.96   |
| 15                                      | 36      | 20        |        | 21.83  | 21.50  | 21.54   |
| 15                                      | 36      | 39        |        | 21.64  | 21.50  | 21.38   |
| 15                                      | 75      | 0         |        | 21.75  | 21.71  | 21.73   |
| 15                                      | 1       | 0         | 16-QAM | 22.51  | 22.57  | 22.56   |
| 15                                      | 1       | 37        |        | 21.84  | 21.65  | 21.60   |
| 15                                      | 1       | 74        |        | 22.10  | 21.79  | 21.78   |
| 15                                      | 36      | 0         |        | 21.06  | 20.77  | 20.85   |
| 15                                      | 36      | 20        |        | 20.71  | 20.60  | 20.52   |
| 15                                      | 36      | 39        |        | 20.55  | 20.54  | 20.47   |
| 15                                      | 75      | 0         |        | 20.86  | 20.65  | 20.70   |



| LTE Band 25 Maximum Average Power [dBm] |         |           |        |        |        |         |
|-----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                      | 1       | 0         | QPSK   | 23.33  | 23.43  | 23.32   |
| 10                                      | 1       | 25        |        | 22.48  | 22.28  | 22.34   |
| 10                                      | 1       | 49        |        | 22.69  | 22.59  | 22.43   |
| 10                                      | 25      | 0         |        | 21.85  | 21.85  | 21.82   |
| 10                                      | 25      | 12        |        | 21.79  | 21.41  | 21.46   |
| 10                                      | 25      | 25        |        | 21.56  | 21.56  | 21.32   |
| 10                                      | 50      | 0         |        | 21.75  | 21.63  | 21.76   |
| 10                                      | 1       | 0         | 16-QAM | 22.52  | 22.53  | 22.48   |
| 10                                      | 1       | 25        |        | 21.85  | 21.63  | 21.55   |
| 10                                      | 1       | 49        |        | 22.05  | 21.75  | 21.70   |
| 10                                      | 25      | 0         |        | 21.06  | 20.80  | 20.78   |
| 10                                      | 25      | 12        |        | 20.68  | 20.60  | 20.41   |
| 10                                      | 25      | 25        |        | 20.62  | 20.44  | 20.41   |
| 10                                      | 50      | 0         |        | 20.72  | 20.52  | 20.65   |
| 5                                       | 1       | 0         | QPSK   | 23.29  | 23.37  | 23.26   |
| 5                                       | 1       | 12        |        | 22.48  | 22.23  | 22.27   |
| 5                                       | 1       | 24        |        | 22.63  | 22.51  | 22.43   |
| 5                                       | 12      | 0         |        | 21.76  | 21.79  | 21.75   |
| 5                                       | 12      | 7         |        | 21.69  | 21.34  | 21.46   |
| 5                                       | 12      | 13        |        | 21.55  | 21.56  | 21.23   |
| 5                                       | 25      | 0         |        | 21.72  | 21.63  | 21.74   |
| 5                                       | 1       | 0         | 16-QAM | 22.42  | 22.43  | 22.42   |
| 5                                       | 1       | 12        |        | 21.84  | 21.57  | 21.49   |
| 5                                       | 1       | 24        |        | 22.02  | 21.71  | 21.66   |
| 5                                       | 12      | 0         |        | 21.01  | 20.70  | 20.78   |
| 5                                       | 12      | 7         |        | 20.62  | 20.53  | 20.41   |
| 5                                       | 12      | 13        |        | 20.57  | 20.44  | 20.39   |
| 5                                       | 25      | 0         |        | 20.72  | 20.44  | 20.56   |



| LTE Band 25 Maximum Average Power [dBm] |         |           |        |        |        |         |
|-----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 3                                       | 1       | 0         | QPSK   | 23.23  | 23.30  | 23.16   |
| 3                                       | 1       | 8         |        | 22.41  | 22.14  | 22.19   |
| 3                                       | 1       | 14        |        | 22.62  | 22.42  | 22.33   |
| 3                                       | 8       | 0         |        | 21.69  | 21.76  | 21.67   |
| 3                                       | 8       | 4         |        | 21.66  | 21.25  | 21.46   |
| 3                                       | 8       | 7         |        | 21.52  | 21.55  | 21.16   |
| 3                                       | 15      | 0         |        | 21.72  | 21.58  | 21.68   |
| 3                                       | 1       | 0         | 16-QAM | 22.33  | 22.43  | 22.42   |
| 3                                       | 1       | 8         |        | 21.74  | 21.55  | 21.39   |
| 3                                       | 1       | 14        |        | 21.99  | 21.67  | 21.66   |
| 3                                       | 8       | 0         |        | 20.96  | 20.62  | 20.68   |
| 3                                       | 8       | 4         |        | 20.62  | 20.52  | 20.32   |
| 3                                       | 8       | 7         |        | 20.54  | 20.42  | 20.29   |
| 3                                       | 15      | 0         |        | 20.67  | 20.43  | 20.52   |
| 1.4                                     | 1       | 0         | QPSK   | 23.21  | 23.30  | 23.11   |
| 1.4                                     | 1       | 3         |        | 22.36  | 22.06  | 22.10   |
| 1.4                                     | 1       | 5         |        | 22.59  | 22.36  | 22.29   |
| 1.4                                     | 3       | 0         |        | 22.93  | 22.97  | 22.84   |
| 1.4                                     | 3       | 1         |        | 23.03  | 23.05  | 22.93   |
| 1.4                                     | 3       | 3         |        | 23.07  | 22.98  | 22.97   |
| 1.4                                     | 6       | 0         |        | 21.62  | 21.56  | 21.63   |
| 1.4                                     | 1       | 0         | 16-QAM | 22.31  | 22.35  | 22.34   |
| 1.4                                     | 1       | 3         |        | 21.74  | 21.45  | 21.29   |
| 1.4                                     | 1       | 5         |        | 21.89  | 21.64  | 21.57   |
| 1.4                                     | 3       | 0         |        | 21.84  | 21.80  | 21.87   |
| 1.4                                     | 3       | 1         |        | 21.85  | 21.65  | 21.86   |
| 1.4                                     | 3       | 3         |        | 21.88  | 21.87  | 21.86   |
| 1.4                                     | 6       | 0         |        | 20.60  | 20.42  | 20.51   |



| LTE Band 4 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 20                                     | 1       | 0         | QPSK   | 23.38  | 23.50  | 23.47   |
| 20                                     | 1       | 49        |        | 22.86  | 22.94  | 22.66   |
| 20                                     | 1       | 99        |        | 23.03  | 23.04  | 22.96   |
| 20                                     | 50      | 0         |        | 22.23  | 22.41  | 22.19   |
| 20                                     | 50      | 24        |        | 21.97  | 21.92  | 21.79   |
| 20                                     | 50      | 50        |        | 21.89  | 21.79  | 21.81   |
| 20                                     | 100     | 0         |        | 22.13  | 22.32  | 22.01   |
| 20                                     | 1       | 0         | 16-QAM | 22.30  | 22.46  | 22.45   |
| 20                                     | 1       | 49        |        | 22.19  | 22.10  | 21.92   |
| 20                                     | 1       | 99        |        | 22.30  | 22.21  | 22.20   |
| 20                                     | 50      | 0         |        | 21.20  | 21.23  | 21.19   |
| 20                                     | 50      | 24        |        | 20.89  | 20.93  | 20.79   |
| 20                                     | 50      | 50        |        | 20.83  | 20.77  | 20.79   |
| 20                                     | 100     | 0         |        | 21.08  | 21.11  | 21.00   |
| 15                                     | 1       | 0         | QPSK   | 23.29  | 23.47  | 23.45   |
| 15                                     | 1       | 37        |        | 22.86  | 22.84  | 22.63   |
| 15                                     | 1       | 74        |        | 22.99  | 23.04  | 22.90   |
| 15                                     | 36      | 0         |        | 22.22  | 22.36  | 22.12   |
| 15                                     | 36      | 20        |        | 21.91  | 21.86  | 21.70   |
| 15                                     | 36      | 39        |        | 21.83  | 21.75  | 21.79   |
| 15                                     | 75      | 0         |        | 22.07  | 22.25  | 21.95   |
| 15                                     | 1       | 0         | 16-QAM | 22.24  | 22.42  | 22.36   |
| 15                                     | 1       | 37        |        | 22.19  | 22.08  | 21.92   |
| 15                                     | 1       | 74        |        | 22.30  | 22.18  | 22.17   |
| 15                                     | 36      | 0         |        | 21.12  | 21.19  | 21.18   |
| 15                                     | 36      | 20        |        | 20.85  | 20.84  | 20.70   |
| 15                                     | 36      | 39        |        | 20.76  | 20.71  | 20.78   |
| 15                                     | 75      | 0         |        | 20.99  | 21.08  | 20.91   |



| LTE Band 4 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                     | 1       | 0         | QPSK   | 23.28  | 23.42  | 23.37   |
| 10                                     | 1       | 25        |        | 22.85  | 22.76  | 22.63   |
| 10                                     | 1       | 49        |        | 22.98  | 23.03  | 22.90   |
| 10                                     | 25      | 0         |        | 22.20  | 22.26  | 22.12   |
| 10                                     | 25      | 12        |        | 21.87  | 21.80  | 21.68   |
| 10                                     | 25      | 25        |        | 21.83  | 21.73  | 21.70   |
| 10                                     | 50      | 0         |        | 21.97  | 22.15  | 21.86   |
| 10                                     | 1       | 0         | 16-QAM | 22.22  | 22.41  | 22.36   |
| 10                                     | 1       | 25        |        | 22.10  | 22.00  | 21.83   |
| 10                                     | 1       | 49        |        | 22.25  | 22.16  | 22.14   |
| 10                                     | 25      | 0         |        | 21.11  | 21.15  | 21.10   |
| 10                                     | 25      | 12        |        | 20.81  | 20.84  | 20.64   |
| 10                                     | 25      | 25        |        | 20.73  | 20.68  | 20.74   |
| 10                                     | 50      | 0         |        | 20.89  | 21.04  | 20.84   |
| 5                                      | 1       | 0         | QPSK   | 23.22  | 23.42  | 23.27   |
| 5                                      | 1       | 12        |        | 22.81  | 22.76  | 22.61   |
| 5                                      | 1       | 24        |        | 22.98  | 22.94  | 22.85   |
| 5                                      | 12      | 0         |        | 22.20  | 22.23  | 22.06   |
| 5                                      | 12      | 7         |        | 21.83  | 21.74  | 21.62   |
| 5                                      | 12      | 13        |        | 21.83  | 21.73  | 21.65   |
| 5                                      | 25      | 0         |        | 21.92  | 22.06  | 21.85   |
| 5                                      | 1       | 0         | 16-QAM | 22.16  | 22.32  | 22.31   |
| 5                                      | 1       | 12        |        | 22.04  | 21.97  | 21.78   |
| 5                                      | 1       | 24        |        | 22.22  | 22.06  | 22.11   |
| 5                                      | 12      | 0         |        | 21.03  | 21.13  | 21.10   |
| 5                                      | 12      | 7         |        | 20.71  | 20.77  | 20.64   |
| 5                                      | 12      | 13        |        | 20.63  | 20.62  | 20.72   |
| 5                                      | 25      | 0         |        | 20.79  | 20.98  | 20.78   |



| LTE Band 4 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 3                                      | 1       | 0         | QPSK   | 23.22  | 23.28  | 23.23   |
| 3                                      | 1       | 8         |        | 22.75  | 22.65  | 22.54   |
| 3                                      | 1       | 14        |        | 22.82  | 23.00  | 22.82   |
| 3                                      | 8       | 0         |        | 22.17  | 22.22  | 21.99   |
| 3                                      | 8       | 4         |        | 21.85  | 21.66  | 21.58   |
| 3                                      | 8       | 7         |        | 21.72  | 21.69  | 21.64   |
| 3                                      | 15      | 0         |        | 21.80  | 22.12  | 21.82   |
| 3                                      | 1       | 0         | 16-QAM | 22.12  | 22.35  | 22.34   |
| 3                                      | 1       | 8         |        | 22.01  | 21.87  | 21.73   |
| 3                                      | 1       | 14        |        | 22.07  | 22.07  | 22.04   |
| 3                                      | 8       | 0         |        | 20.99  | 21.11  | 21.05   |
| 3                                      | 8       | 4         |        | 20.66  | 20.74  | 20.64   |
| 3                                      | 8       | 7         |        | 20.62  | 20.56  | 20.67   |
| 3                                      | 15      | 0         |        | 20.81  | 21.03  | 20.69   |
| 1.4                                    | 1       | 0         | QPSK   | 23.14  | 23.24  | 23.23   |
| 1.4                                    | 1       | 3         |        | 22.68  | 22.55  | 22.44   |
| 1.4                                    | 1       | 5         |        | 22.80  | 22.98  | 22.79   |
| 1.4                                    | 3       | 0         |        | 22.86  | 22.56  | 22.44   |
| 1.4                                    | 3       | 1         |        | 22.89  | 22.64  | 22.59   |
| 1.4                                    | 3       | 3         |        | 22.93  | 22.68  | 22.55   |
| 1.4                                    | 6       | 0         |        | 21.74  | 22.02  | 21.79   |
| 1.4                                    | 1       | 0         | 16-QAM | 22.05  | 22.34  | 22.32   |
| 1.4                                    | 1       | 3         |        | 21.91  | 21.87  | 21.73   |
| 1.4                                    | 1       | 5         |        | 22.05  | 22.02  | 21.99   |
| 1.4                                    | 3       | 0         |        | 21.93  | 21.56  | 21.47   |
| 1.4                                    | 3       | 1         |        | 21.90  | 21.59  | 21.49   |
| 1.4                                    | 3       | 3         |        | 22.02  | 21.69  | 21.52   |
| 1.4                                    | 6       | 0         |        | 20.72  | 20.96  | 20.64   |



| LTE Band 5 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                     | 1       | 0         | QPSK   | 22.59  | 22.72  | 22.62   |
| 10                                     | 1       | 25        |        | 22.54  | 22.54  | 22.45   |
| 10                                     | 1       | 49        |        | 22.44  | 22.38  | 22.13   |
| 10                                     | 25      | 0         |        | 21.49  | 21.56  | 21.49   |
| 10                                     | 25      | 12        |        | 21.38  | 21.31  | 21.44   |
| 10                                     | 25      | 25        |        | 21.47  | 21.21  | 21.39   |
| 10                                     | 50      | 0         |        | 21.49  | 21.52  | 21.28   |
| 10                                     | 1       | 0         | 16-QAM | 21.86  | 21.79  | 21.79   |
| 10                                     | 1       | 25        |        | 21.86  | 21.89  | 21.67   |
| 10                                     | 1       | 49        |        | 21.68  | 21.54  | 21.43   |
| 10                                     | 25      | 0         |        | 20.49  | 20.39  | 20.32   |
| 10                                     | 25      | 12        |        | 20.49  | 20.32  | 20.36   |
| 10                                     | 25      | 25        |        | 20.48  | 20.21  | 20.27   |
| 10                                     | 50      | 0         |        | 20.48  | 20.35  | 20.29   |
| 5                                      | 1       | 0         | QPSK   | 22.53  | 22.64  | 22.52   |
| 5                                      | 1       | 12        |        | 22.47  | 22.46  | 22.44   |
| 5                                      | 1       | 24        |        | 22.43  | 22.34  | 22.04   |
| 5                                      | 12      | 0         |        | 21.39  | 21.47  | 21.49   |
| 5                                      | 12      | 7         |        | 21.31  | 21.31  | 21.36   |
| 5                                      | 12      | 13        |        | 21.46  | 21.14  | 21.29   |
| 5                                      | 25      | 0         |        | 21.47  | 21.43  | 21.20   |
| 5                                      | 1       | 0         | 16-QAM | 21.76  | 21.76  | 21.74   |
| 5                                      | 1       | 12        |        | 21.81  | 21.86  | 21.66   |
| 5                                      | 1       | 24        |        | 21.64  | 21.54  | 21.33   |
| 5                                      | 12      | 0         |        | 20.42  | 20.39  | 20.26   |
| 5                                      | 12      | 7         |        | 20.47  | 20.24  | 20.32   |
| 5                                      | 12      | 13        |        | 20.40  | 20.13  | 20.23   |
| 5                                      | 25      | 0         |        | 20.39  | 20.32  | 20.28   |



| LTE Band 5 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 3                                      | 1       | 0         | QPSK   | 22.50  | 22.61  | 22.51   |
| 3                                      | 1       | 8         |        | 22.35  | 22.38  | 22.32   |
| 3                                      | 1       | 14        |        | 22.39  | 22.28  | 22.21   |
| 3                                      | 8       | 0         |        | 21.44  | 21.44  | 21.39   |
| 3                                      | 8       | 4         |        | 21.31  | 21.23  | 21.42   |
| 3                                      | 8       | 7         |        | 21.44  | 21.08  | 21.25   |
| 3                                      | 15      | 0         |        | 21.39  | 21.40  | 21.20   |
| 3                                      | 1       | 0         | 16-QAM | 21.83  | 21.75  | 21.70   |
| 3                                      | 1       | 8         |        | 21.78  | 21.88  | 21.58   |
| 3                                      | 1       | 14        |        | 21.55  | 21.45  | 21.31   |
| 3                                      | 8       | 0         |        | 20.47  | 20.25  | 20.26   |
| 3                                      | 8       | 4         |        | 20.32  | 20.20  | 20.25   |
| 3                                      | 8       | 7         |        | 20.41  | 20.12  | 20.24   |
| 3                                      | 15      | 0         |        | 20.42  | 20.20  | 20.19   |
| 1.4                                    | 1       | 0         | QPSK   | 22.50  | 22.57  | 22.51   |
| 1.4                                    | 1       | 3         |        | 22.44  | 22.33  | 22.19   |
| 1.4                                    | 1       | 5         |        | 22.44  | 22.40  | 22.30   |
| 1.4                                    | 3       | 0         |        | 22.40  | 22.46  | 22.29   |
| 1.4                                    | 3       | 1         |        | 22.45  | 22.50  | 22.31   |
| 1.4                                    | 3       | 3         |        | 22.41  | 22.50  | 22.34   |
| 1.4                                    | 6       | 0         |        | 21.32  | 21.41  | 21.16   |
| 1.4                                    | 1       | 0         | 16-QAM | 21.74  | 21.75  | 21.57   |
| 1.4                                    | 1       | 3         |        | 21.73  | 21.74  | 21.57   |
| 1.4                                    | 1       | 5         |        | 21.49  | 21.40  | 21.23   |
| 1.4                                    | 3       | 0         |        | 21.48  | 21.53  | 21.42   |
| 1.4                                    | 3       | 1         |        | 21.48  | 21.46  | 21.36   |
| 1.4                                    | 3       | 3         |        | 21.51  | 21.51  | 21.44   |
| 1.4                                    | 6       | 0         |        | 20.33  | 20.18  | 20.16   |





| LTE Band 7 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 20                                     | 1       | 0         | QPSK   | 21.58  | 21.71  | 21.45   |
| 20                                     | 1       | 49        |        | 21.56  | 21.65  | 21.41   |
| 20                                     | 1       | 99        |        | 21.12  | 21.24  | 21.03   |
| 20                                     | 50      | 0         |        | 20.62  | 20.71  | 20.51   |
| 20                                     | 50      | 24        |        | 20.50  | 20.68  | 20.40   |
| 20                                     | 50      | 50        |        | 20.36  | 20.64  | 20.19   |
| 20                                     | 100     | 0         |        | 20.43  | 20.64  | 20.36   |
| 20                                     | 1       | 0         | 16-QAM | 20.70  | 20.87  | 20.70   |
| 20                                     | 1       | 49        |        | 20.75  | 20.96  | 20.62   |
| 20                                     | 1       | 99        |        | 20.38  | 20.49  | 20.10   |
| 20                                     | 50      | 0         |        | 19.54  | 19.74  | 19.52   |
| 20                                     | 50      | 24        |        | 19.49  | 19.77  | 19.40   |
| 20                                     | 50      | 50        |        | 19.35  | 19.65  | 19.19   |
| 20                                     | 100     | 0         |        | 19.48  | 19.69  | 19.35   |
| 15                                     | 1       | 0         | QPSK   | 21.55  | 21.65  | 21.40   |
| 15                                     | 1       | 37        |        | 21.50  | 21.64  | 21.32   |
| 15                                     | 1       | 74        |        | 21.03  | 21.15  | 21.03   |
| 15                                     | 36      | 0         |        | 20.57  | 20.66  | 20.42   |
| 15                                     | 36      | 20        |        | 20.41  | 20.58  | 20.39   |
| 15                                     | 36      | 39        |        | 20.27  | 20.64  | 20.12   |
| 15                                     | 75      | 0         |        | 20.37  | 20.61  | 20.29   |
| 15                                     | 1       | 0         | 16-QAM | 20.60  | 20.87  | 20.64   |
| 15                                     | 1       | 37        |        | 20.68  | 20.86  | 20.61   |
| 15                                     | 1       | 74        |        | 20.37  | 20.41  | 20.07   |
| 15                                     | 36      | 0         |        | 19.47  | 19.66  | 19.51   |
| 15                                     | 36      | 20        |        | 19.39  | 19.72  | 19.40   |
| 15                                     | 36      | 39        |        | 19.33  | 19.60  | 19.12   |
| 15                                     | 75      | 0         |        | 19.47  | 19.59  | 19.35   |



| LTE Band 7 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                     | 1       | 0         | QPSK   | 21.53  | 21.63  | 21.36   |
| 10                                     | 1       | 25        |        | 21.43  | 21.62  | 21.37   |
| 10                                     | 1       | 49        |        | 21.03  | 21.11  | 21.10   |
| 10                                     | 25      | 0         |        | 20.45  | 20.63  | 20.40   |
| 10                                     | 25      | 12        |        | 20.39  | 20.63  | 20.24   |
| 10                                     | 25      | 25        |        | 20.25  | 20.52  | 20.09   |
| 10                                     | 50      | 0         |        | 20.41  | 20.60  | 20.22   |
| 10                                     | 1       | 0         | 16-QAM | 20.60  | 20.84  | 20.54   |
| 10                                     | 1       | 25        |        | 20.74  | 20.88  | 20.52   |
| 10                                     | 1       | 49        |        | 20.24  | 20.47  | 20.22   |
| 10                                     | 25      | 0         |        | 19.42  | 19.73  | 19.40   |
| 10                                     | 25      | 12        |        | 19.46  | 19.66  | 19.36   |
| 10                                     | 25      | 25        |        | 19.23  | 19.52  | 19.11   |
| 10                                     | 50      | 0         |        | 19.35  | 19.62  | 19.29   |
| 5                                      | 1       | 0         | QPSK   | 21.41  | 21.57  | 21.26   |
| 5                                      | 1       | 12        |        | 21.46  | 21.56  | 21.25   |
| 5                                      | 1       | 24        |        | 21.00  | 21.12  | 21.02   |
| 5                                      | 12      | 0         |        | 20.36  | 20.61  | 20.39   |
| 5                                      | 12      | 7         |        | 20.35  | 20.52  | 20.18   |
| 5                                      | 12      | 13        |        | 20.09  | 20.48  | 20.03   |
| 5                                      | 25      | 0         |        | 20.28  | 20.55  | 20.18   |
| 5                                      | 1       | 0         | 16-QAM | 20.52  | 20.68  | 20.51   |
| 5                                      | 1       | 12        |        | 20.57  | 20.82  | 20.47   |
| 5                                      | 1       | 24        |        | 20.26  | 20.36  | 20.28   |
| 5                                      | 12      | 0         |        | 19.42  | 19.65  | 19.39   |
| 5                                      | 12      | 7         |        | 19.39  | 19.57  | 19.20   |
| 5                                      | 12      | 13        |        | 19.21  | 19.44  | 19.06   |
| 5                                      | 25      | 0         |        | 19.38  | 19.62  | 19.15   |



| LTE Band 12 Maximum Average Power [dBm] |         |           |        |        |        |         |
|-----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                      | 1       | 0         | QPSK   | 22.93  | 22.96  | 22.94   |
| 10                                      | 1       | 25        |        | 22.86  | 22.91  | 22.88   |
| 10                                      | 1       | 49        |        | 22.85  | 22.91  | 22.78   |
| 10                                      | 25      | 0         |        | 21.86  | 21.91  | 21.87   |
| 10                                      | 25      | 12        |        | 21.82  | 21.90  | 21.85   |
| 10                                      | 25      | 25        |        | 21.79  | 21.89  | 21.86   |
| 10                                      | 50      | 0         |        | 21.78  | 21.93  | 21.86   |
| 10                                      | 1       | 0         | 16-QAM | 22.20  | 22.23  | 22.18   |
| 10                                      | 1       | 25        |        | 22.16  | 22.18  | 22.17   |
| 10                                      | 1       | 49        |        | 22.12  | 22.07  | 22.10   |
| 10                                      | 25      | 0         |        | 20.81  | 20.82  | 20.95   |
| 10                                      | 25      | 12        |        | 20.93  | 20.90  | 20.84   |
| 10                                      | 25      | 25        |        | 20.81  | 20.92  | 20.86   |
| 10                                      | 50      | 0         |        | 20.79  | 20.93  | 20.86   |
| 5                                       | 1       | 0         | QPSK   | 22.90  | 22.92  | 22.89   |
| 5                                       | 1       | 12        |        | 22.89  | 22.91  | 22.79   |
| 5                                       | 1       | 24        |        | 22.87  | 22.90  | 22.81   |
| 5                                       | 12      | 0         |        | 21.82  | 21.90  | 21.77   |
| 5                                       | 12      | 7         |        | 21.82  | 21.89  | 21.85   |
| 5                                       | 12      | 13        |        | 21.86  | 21.94  | 21.85   |
| 5                                       | 25      | 0         |        | 21.83  | 21.95  | 21.81   |
| 5                                       | 1       | 0         | 16-QAM | 22.18  | 22.29  | 22.13   |
| 5                                       | 1       | 12        |        | 22.26  | 22.27  | 22.20   |
| 5                                       | 1       | 24        |        | 22.09  | 22.15  | 22.13   |
| 5                                       | 12      | 0         |        | 20.78  | 20.91  | 20.78   |
| 5                                       | 12      | 7         |        | 20.77  | 20.84  | 20.85   |
| 5                                       | 12      | 13        |        | 20.83  | 20.93  | 20.87   |
| 5                                       | 25      | 0         |        | 20.85  | 20.84  | 20.79   |



| LTE Band 12 Maximum Average Power [dBm] |         |           |        |        |        |         |
|-----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 3                                       | 1       | 0         | QPSK   | 22.89  | 22.89  | 22.87   |
| 3                                       | 1       | 8         |        | 22.87  | 22.87  | 22.14   |
| 3                                       | 1       | 14        |        | 22.80  | 22.83  | 22.77   |
| 3                                       | 8       | 0         |        | 21.87  | 21.92  | 21.85   |
| 3                                       | 8       | 4         |        | 21.87  | 21.98  | 21.85   |
| 3                                       | 8       | 7         |        | 21.81  | 21.86  | 21.79   |
| 3                                       | 15      | 0         |        | 21.86  | 21.93  | 21.86   |
| 3                                       | 1       | 0         | 16-QAM | 22.14  | 22.27  | 22.03   |
| 3                                       | 1       | 8         |        | 22.25  | 22.20  | 22.25   |
| 3                                       | 1       | 14        |        | 22.05  | 22.09  | 22.05   |
| 3                                       | 8       | 0         |        | 20.98  | 20.95  | 20.93   |
| 3                                       | 8       | 4         |        | 20.93  | 20.98  | 20.84   |
| 3                                       | 8       | 7         |        | 20.87  | 20.87  | 20.91   |
| 3                                       | 15      | 0         |        | 20.87  | 20.91  | 20.87   |
| 1.4                                     | 1       | 0         | QPSK   | 22.91  | 22.92  | 22.90   |
| 1.4                                     | 1       | 3         |        | 22.89  | 22.84  | 22.80   |
| 1.4                                     | 1       | 5         |        | 22.90  | 22.91  | 22.92   |
| 1.4                                     | 3       | 0         |        | 22.81  | 22.83  | 22.84   |
| 1.4                                     | 3       | 1         |        | 22.88  | 22.84  | 22.89   |
| 1.4                                     | 3       | 3         |        | 22.86  | 22.86  | 22.85   |
| 1.4                                     | 6       | 0         |        | 21.87  | 21.78  | 21.72   |
| 1.4                                     | 1       | 0         | 16-QAM | 22.26  | 22.35  | 22.22   |
| 1.4                                     | 1       | 3         |        | 22.23  | 22.21  | 22.26   |
| 1.4                                     | 1       | 5         |        | 22.35  | 22.29  | 22.26   |
| 1.4                                     | 3       | 0         |        | 21.89  | 21.81  | 21.89   |
| 1.4                                     | 3       | 1         |        | 21.93  | 21.83  | 21.85   |
| 1.4                                     | 3       | 3         |        | 21.95  | 21.96  | 21.83   |
| 1.4                                     | 6       | 0         |        | 20.93  | 20.88  | 20.76   |



| LTE Band 13 Maximum Average Power [dBm] |         |           |        |        |        |         |
|-----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                      | 1       | 0         | QPSK   |        | 22.00  |         |
| 10                                      | 1       | 25        |        |        | 23.62  |         |
| 10                                      | 1       | 49        |        |        | 23.50  |         |
| 10                                      | 25      | 0         |        |        | 22.67  |         |
| 10                                      | 25      | 12        |        |        | 22.64  |         |
| 10                                      | 25      | 25        |        |        | 22.64  |         |
| 10                                      | 50      | 0         |        |        | 22.72  |         |
| 10                                      | 1       | 0         | 16-QAM |        | 22.00  |         |
| 10                                      | 1       | 25        |        |        | 22.96  |         |
| 10                                      | 1       | 49        |        |        | 22.86  |         |
| 10                                      | 25      | 0         |        |        | 21.56  |         |
| 10                                      | 25      | 12        |        |        | 21.56  |         |
| 10                                      | 25      | 25        |        |        | 21.55  |         |
| 10                                      | 50      | 0         |        |        | 21.60  |         |
| 5                                       | 1       | 0         | QPSK   | 22.66  | 23.58  | 23.54   |
| 5                                       | 1       | 12        |        | 23.48  | 23.52  | 23.55   |
| 5                                       | 1       | 24        |        | 23.57  | 23.57  | 23.57   |
| 5                                       | 12      | 0         |        | 22.03  | 22.52  | 22.68   |
| 5                                       | 12      | 7         |        | 22.56  | 22.58  | 22.65   |
| 5                                       | 12      | 13        |        | 22.52  | 22.55  | 22.63   |
| 5                                       | 25      | 0         |        | 22.56  | 22.46  | 22.69   |
| 5                                       | 1       | 0         | 16-QAM | 22.21  | 22.85  | 22.84   |
| 5                                       | 1       | 12        |        | 22.78  | 22.79  | 22.80   |
| 5                                       | 1       | 24        |        | 22.79  | 22.77  | 22.82   |
| 5                                       | 12      | 0         |        | 21.00  | 21.49  | 21.72   |
| 5                                       | 12      | 7         |        | 21.61  | 21.51  | 21.75   |
| 5                                       | 12      | 13        |        | 21.51  | 21.54  | 21.71   |
| 5                                       | 25      | 0         |        | 21.56  | 21.56  | 21.69   |



| LTE Band 26 Maximum Average Power [dBm] |         |           |        |        |        |         |
|-----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 15                                      | 1       | 0         | QPSK   | 22.76  | 22.87  | 22.81   |
| 15                                      | 1       | 37        |        | 22.61  | 22.57  | 22.65   |
| 15                                      | 1       | 74        |        | 22.55  | 22.51  | 22.55   |
| 15                                      | 36      | 0         |        | 21.72  | 21.81  | 21.78   |
| 15                                      | 36      | 20        |        | 21.67  | 21.71  | 21.77   |
| 15                                      | 36      | 39        |        | 21.55  | 21.53  | 21.63   |
| 15                                      | 75      | 0         |        | 21.66  | 21.75  | 21.74   |
| 15                                      | 1       | 0         | 16-QAM | 21.96  | 22.11  | 22.10   |
| 15                                      | 1       | 37        |        | 21.90  | 21.87  | 21.91   |
| 15                                      | 1       | 74        |        | 21.80  | 21.77  | 21.83   |
| 15                                      | 36      | 0         |        | 20.70  | 20.75  | 20.74   |
| 15                                      | 36      | 20        |        | 20.65  | 20.67  | 20.75   |
| 15                                      | 36      | 39        |        | 20.51  | 20.50  | 20.56   |
| 15                                      | 75      | 0         |        | 20.63  | 20.67  | 20.70   |
| 10                                      | 1       | 0         | QPSK   | 22.74  | 22.80  | 22.78   |
| 10                                      | 1       | 25        |        | 22.56  | 22.53  | 22.63   |
| 10                                      | 1       | 49        |        | 22.46  | 22.51  | 22.49   |
| 10                                      | 25      | 0         |        | 21.66  | 21.74  | 21.72   |
| 10                                      | 25      | 12        |        | 21.64  | 21.63  | 21.70   |
| 10                                      | 25      | 25        |        | 21.52  | 21.48  | 21.62   |
| 10                                      | 50      | 0         |        | 21.62  | 21.72  | 21.74   |
| 10                                      | 1       | 0         | 16-QAM | 21.91  | 22.11  | 22.10   |
| 10                                      | 1       | 25        |        | 21.82  | 21.79  | 21.85   |
| 10                                      | 1       | 49        |        | 21.74  | 21.73  | 21.79   |
| 10                                      | 25      | 0         |        | 20.69  | 20.65  | 20.72   |
| 10                                      | 25      | 12        |        | 20.55  | 20.59  | 20.66   |
| 10                                      | 25      | 25        |        | 20.51  | 20.40  | 20.50   |
| 10                                      | 50      | 0         |        | 20.62  | 20.57  | 20.64   |



| LTE Band 26 Maximum Average Power [dBm] |         |           |        |        |        |         |
|-----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 5                                       | 1       | 0         | QPSK   | 22.65  | 22.79  | 22.77   |
| 5                                       | 1       | 12        |        | 22.47  | 22.53  | 22.55   |
| 5                                       | 1       | 24        |        | 22.41  | 22.43  | 22.40   |
| 5                                       | 12      | 0         |        | 21.59  | 21.70  | 21.72   |
| 5                                       | 12      | 7         |        | 21.58  | 21.56  | 21.69   |
| 5                                       | 12      | 13        |        | 21.49  | 21.46  | 21.59   |
| 5                                       | 25      | 0         |        | 21.59  | 21.67  | 21.73   |
| 5                                       | 1       | 0         | 16-QAM | 21.87  | 22.04  | 22.02   |
| 5                                       | 1       | 12        |        | 21.73  | 21.79  | 21.85   |
| 5                                       | 1       | 24        |        | 21.66  | 21.72  | 21.72   |
| 5                                       | 12      | 0         |        | 20.66  | 20.57  | 20.65   |
| 5                                       | 12      | 7         |        | 20.52  | 20.56  | 20.58   |
| 5                                       | 12      | 13        |        | 20.45  | 20.37  | 20.44   |
| 5                                       | 25      | 0         |        | 20.61  | 20.49  | 20.60   |
| 3                                       | 1       | 0         | QPSK   | 22.60  | 22.73  | 22.71   |
| 3                                       | 1       | 8         |        | 22.47  | 22.52  | 22.53   |
| 3                                       | 1       | 14        |        | 22.40  | 22.43  | 22.31   |
| 3                                       | 8       | 0         |        | 21.54  | 21.62  | 21.66   |
| 3                                       | 8       | 4         |        | 21.51  | 21.52  | 21.61   |
| 3                                       | 8       | 7         |        | 21.45  | 21.38  | 21.54   |
| 3                                       | 15      | 0         |        | 21.52  | 21.59  | 21.63   |
| 3                                       | 1       | 0         | 16-QAM | 21.86  | 22.01  | 22.00   |
| 3                                       | 1       | 8         |        | 21.66  | 21.69  | 21.81   |
| 3                                       | 1       | 14        |        | 21.60  | 21.68  | 21.63   |
| 3                                       | 8       | 0         |        | 20.59  | 20.49  | 20.65   |
| 3                                       | 8       | 4         |        | 20.43  | 20.55  | 20.53   |
| 3                                       | 8       | 7         |        | 20.43  | 20.30  | 20.44   |
| 3                                       | 15      | 0         |        | 20.60  | 20.47  | 20.52   |



| LTE Band 26 Maximum Average Power [dBm] |         |           |        |        |        |         |
|-----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 1.4                                     | 1       | 0         | QPSK   | 22.57  | 22.67  | 22.61   |
| 1.4                                     | 1       | 3         |        | 22.38  | 22.49  | 22.46   |
| 1.4                                     | 1       | 5         |        | 22.31  | 22.38  | 22.27   |
| 1.4                                     | 3       | 0         |        | 22.50  | 22.60  | 22.65   |
| 1.4                                     | 3       | 1         |        | 22.44  | 22.42  | 22.57   |
| 1.4                                     | 3       | 3         |        | 22.43  | 22.36  | 22.44   |
| 1.4                                     | 6       | 0         |        | 21.50  | 21.52  | 21.54   |
| 1.4                                     | 1       | 0         | 16-QAM | 21.86  | 22.00  | 21.94   |
| 1.4                                     | 1       | 3         |        | 21.59  | 21.62  | 21.72   |
| 1.4                                     | 1       | 5         |        | 21.56  | 21.62  | 21.58   |
| 1.4                                     | 3       | 0         |        | 21.52  | 21.46  | 21.63   |
| 1.4                                     | 3       | 1         |        | 21.40  | 21.45  | 21.48   |
| 1.4                                     | 3       | 3         |        | 21.37  | 21.23  | 21.34   |
| 1.4                                     | 6       | 0         |        | 20.50  | 20.38  | 20.52   |





| LTE Band 41 Maximum Average Power [dBm] |         |           |        |        |        |         |
|-----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 20                                      | 1       | 0         | QPSK   | 21.52  | 21.58  | 21.40   |
| 20                                      | 1       | 49        |        | 21.35  | 21.56  | 21.25   |
| 20                                      | 1       | 99        |        | 21.31  | 21.55  | 21.24   |
| 20                                      | 50      | 0         |        | 20.49  | 20.70  | 20.47   |
| 20                                      | 50      | 24        |        | 20.35  | 20.54  | 20.35   |
| 20                                      | 50      | 50        |        | 20.17  | 20.24  | 20.29   |
| 20                                      | 100     | 0         |        | 20.29  | 20.46  | 20.39   |
| 20                                      | 1       | 0         | 16-QAM | 20.55  | 20.54  | 20.42   |
| 20                                      | 1       | 49        |        | 20.40  | 20.58  | 20.53   |
| 20                                      | 1       | 99        |        | 20.38  | 20.48  | 20.50   |
| 20                                      | 50      | 0         |        | 19.51  | 19.60  | 19.48   |
| 20                                      | 50      | 24        |        | 19.36  | 19.60  | 19.51   |
| 20                                      | 50      | 50        |        | 19.08  | 19.60  | 19.50   |
| 20                                      | 100     | 0         |        | 19.25  | 19.48  | 19.40   |
| 15                                      | 1       | 0         | QPSK   | 21.45  | 21.56  | 21.46   |
| 15                                      | 1       | 37        |        | 21.39  | 21.55  | 21.37   |
| 15                                      | 1       | 74        |        | 21.38  | 21.47  | 21.37   |
| 15                                      | 36      | 0         |        | 20.44  | 20.54  | 20.60   |
| 15                                      | 36      | 20        |        | 20.42  | 20.53  | 20.63   |
| 15                                      | 36      | 39        |        | 20.15  | 20.21  | 20.40   |
| 15                                      | 75      | 0         |        | 20.30  | 20.30  | 20.38   |
| 15                                      | 1       | 0         | 16-QAM | 20.48  | 20.57  | 20.56   |
| 15                                      | 1       | 37        |        | 20.44  | 20.53  | 20.55   |
| 15                                      | 1       | 74        |        | 20.43  | 20.40  | 20.52   |
| 15                                      | 36      | 0         |        | 19.45  | 19.57  | 19.69   |
| 15                                      | 36      | 20        |        | 19.39  | 19.53  | 19.60   |
| 15                                      | 36      | 39        |        | 19.21  | 19.56  | 19.65   |
| 15                                      | 75      | 0         |        | 19.38  | 19.45  | 19.41   |



| LTE Band 41 Maximum Average Power [dBm] |         |           |        |        |        |         |
|-----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                                | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 10                                      | 1       | 0         | QPSK   | 21.43  | 21.55  | 21.45   |
| 10                                      | 1       | 25        |        | 21.30  | 21.54  | 21.30   |
| 10                                      | 1       | 49        |        | 21.28  | 21.40  | 21.34   |
| 10                                      | 25      | 0         |        | 20.34  | 20.49  | 20.57   |
| 10                                      | 25      | 12        |        | 20.42  | 20.43  | 20.60   |
| 10                                      | 25      | 25        |        | 20.13  | 20.21  | 20.32   |
| 10                                      | 50      | 0         |        | 20.29  | 20.20  | 20.32   |
| 10                                      | 1       | 0         | 16-QAM | 20.41  | 20.53  | 20.52   |
| 10                                      | 1       | 25        |        | 20.35  | 20.43  | 20.46   |
| 10                                      | 1       | 49        |        | 20.36  | 20.40  | 20.51   |
| 10                                      | 25      | 0         |        | 19.42  | 19.52  | 19.66   |
| 10                                      | 25      | 12        |        | 19.30  | 19.48  | 19.55   |
| 10                                      | 25      | 25        |        | 19.12  | 19.50  | 19.58   |
| 10                                      | 50      | 0         |        | 19.31  | 19.35  | 19.32   |
| 5                                       | 1       | 0         | QPSK   | 21.43  | 21.55  | 21.35   |
| 5                                       | 1       | 12        |        | 21.26  | 21.54  | 21.21   |
| 5                                       | 1       | 24        |        | 21.20  | 21.33  | 21.31   |
| 5                                       | 12      | 0         |        | 20.33  | 20.43  | 20.47   |
| 5                                       | 12      | 7         |        | 20.34  | 20.37  | 20.58   |
| 5                                       | 12      | 13        |        | 20.12  | 20.11  | 20.32   |
| 5                                       | 25      | 0         |        | 20.27  | 20.15  | 20.25   |
| 5                                       | 1       | 0         | 16-QAM | 20.37  | 20.51  | 20.50   |
| 5                                       | 1       | 12        |        | 20.27  | 20.37  | 20.39   |
| 5                                       | 1       | 24        |        | 20.34  | 20.38  | 20.47   |
| 5                                       | 12      | 0         |        | 19.35  | 19.50  | 19.57   |
| 5                                       | 12      | 7         |        | 19.25  | 19.40  | 19.50   |
| 5                                       | 12      | 13        |        | 19.03  | 19.45  | 19.50   |
| 5                                       | 25      | 0         |        | 19.23  | 19.25  | 19.23   |



## Test Results of Conducted Output Power

### ERP/EIRP

| LTE ( $G_T - L_C = 0.19$ dB)  |                            |             |              |                             |             |              |
|-------------------------------|----------------------------|-------------|--------------|-----------------------------|-------------|--------------|
| Modes                         | LTE Band 5 (QPSK, BW=1.4M) |             |              | LTE Band 5 (16QAM, BW=1.4M) |             |              |
| Channel                       | 20407 (Low)                | 20525 (Mid) | 20643 (High) | 20407 (Low)                 | 20525 (Mid) | 20643 (High) |
| Frequency (MHz)               | 824.7                      | 836.5       | 848.3        | 824.7                       | 836.5       | 848.3        |
| Conducted Power $P_T$ (dBm)   | 22.50                      | 22.57       | 22.51        | 21.74                       | 21.75       | 21.57        |
| Conducted Power $P_T$ (Watts) | 0.18                       | 0.18        | 0.18         | 0.15                        | 0.15        | 0.14         |
| ERP(dBm)                      | 20.54                      | 20.61       | 20.55        | 19.78                       | 19.79       | 19.61        |
| ERP(Watts)                    | 0.1132                     | 0.1151      | 0.1135       | 0.0951                      | 0.0953      | 0.0914       |

| LTE ( $G_T - L_C = 0.19$ dB)  |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 5 (QPSK, BW=3M) |             |              | LTE Band 5 (16QAM, BW=3M) |             |              |
| Channel                       | 20415 (Low)              | 20525 (Mid) | 20635 (High) | 20415 (Low)               | 20525 (Mid) | 20635 (High) |
| Frequency (MHz)               | 825.5                    | 836.5       | 847.5        | 825.5                     | 836.5       | 847.5        |
| Conducted Power $P_T$ (dBm)   | 22.50                    | 22.61       | 22.51        | 21.78                     | 21.88       | 21.58        |
| Conducted Power $P_T$ (Watts) | 0.18                     | 0.18        | 0.18         | 0.15                      | 0.15        | 0.14         |
| ERP(dBm)                      | 20.54                    | 20.65       | 20.55        | 19.82                     | 19.92       | 19.62        |
| ERP(Watts)                    | 0.1132                   | 0.1161      | 0.1135       | 0.0959                    | 0.0982      | 0.0916       |



| LTE ( $G_T - L_C = 0.19$ dB)  |                         |             |              |                          |             |              |
|-------------------------------|-------------------------|-------------|--------------|--------------------------|-------------|--------------|
| Modes                         | LTE Band 5 (QPSK,BW=5M) |             |              | LTE Band 5 (16QAM,BW=5M) |             |              |
| Channel                       | 20425 (Low)             | 20525 (Mid) | 20625 (High) | 20425 (Low)              | 20525 (Mid) | 20625 (High) |
| Frequency (MHz)               | 826.5                   | 836.5       | 846.5        | 826.5                    | 836.5       | 846.5        |
| Conducted Power $P_T$ (dBm)   | 22.53                   | 22.64       | 22.52        | 21.81                    | 21.86       | 21.66        |
| Conducted Power $P_T$ (Watts) | 0.18                    | 0.18        | 0.18         | 0.15                     | 0.15        | 0.15         |
| ERP(dBm)                      | 20.57                   | 20.68       | 20.56        | 19.85                    | 19.90       | 19.70        |
| ERP(Watts)                    | 0.1140                  | 0.1169      | 0.1138       | 0.0966                   | 0.0977      | 0.0933       |

| LTE ( $G_T - L_C = 0.19$ dB)  |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 5 (QPSK,BW=10M) |             |              | LTE Band 5 (16QAM,BW=10M) |             |              |
| Channel                       | 20450 (Low)              | 20525 (Mid) | 20600 (High) | 20450 (Low)               | 20525 (Mid) | 20600 (High) |
| Frequency (MHz)               | 829                      | 836.5       | 844          | 829                       | 836.5       | 844          |
| Conducted Power $P_T$ (dBm)   | 22.59                    | 22.72       | 22.62        | 21.86                     | 21.89       | 21.67        |
| Conducted Power $P_T$ (Watts) | 0.18                     | 0.19        | 0.18         | 0.15                      | 0.15        | 0.15         |
| ERP(dBm)                      | 20.63                    | 20.76       | 20.66        | 19.90                     | 19.93       | 19.71        |
| ERP(Watts)                    | 0.1156                   | 0.1191      | 0.1164       | 0.0977                    | 0.0984      | 0.0935       |

| LTE ( $G_T - L_C = -1.29$ dB) |                           |             |              |                            |             |              |
|-------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                         | LTE Band 2 (QPSK,BW=1.4M) |             |              | LTE Band 2 (16QAM,BW=1.4M) |             |              |
| Channel                       | 18607(Low)                | 18900 (Mid) | 19193 (High) | 18607(Low)                 | 18900 (Mid) | 19193 (High) |
| Frequency (MHz)               | 1850.7                    | 1880        | 1909.3       | 1850.7                     | 1880        | 1909.3       |
| Conducted Power $P_T$ (dBm)   | 23.11                     | 23.14       | 23.12        | 22.24                      | 22.28       | 22.15        |
| Conducted Power $P_T$ (Watts) | 0.20                      | 0.21        | 0.21         | 0.17                       | 0.17        | 0.16         |
| EIRP(dBm)                     | 21.82                     | 21.85       | 21.83        | 20.95                      | 20.99       | 20.86        |
| EIRP(Watts)                   | 0.1521                    | 0.1531      | 0.1524       | 0.1245                     | 0.1256      | 0.1219       |

| LTE ( $G_T - L_C = -1.29$ dB) |                         |             |              |                          |             |              |
|-------------------------------|-------------------------|-------------|--------------|--------------------------|-------------|--------------|
| Modes                         | LTE Band 2 (QPSK,BW=3M) |             |              | LTE Band 2 (16QAM,BW=3M) |             |              |
| Channel                       | 18615(Low)              | 18900 (Mid) | 19185 (High) | 18615(Low)               | 18900 (Mid) | 19185 (High) |
| Frequency (MHz)               | 1851.5                  | 1880        | 1908.5       | 1851.5                   | 1880        | 1908.5       |
| Conducted Power $P_T$ (dBm)   | 23.17                   | 23.20       | 23.19        | 22.16                    | 22.29       | 22.05        |
| Conducted Power $P_T$ (Watts) | 0.21                    | 0.21        | 0.21         | 0.16                     | 0.17        | 0.16         |
| EIRP(dBm)                     | 21.88                   | 21.91       | 21.90        | 20.87                    | 21.00       | 20.76        |
| EIRP(Watts)                   | 0.1542                  | 0.1552      | 0.1549       | 0.1222                   | 0.1259      | 0.1191       |

| LTE ( $G_T - L_C = -1.29$ dB) |                         |             |              |                          |             |              |
|-------------------------------|-------------------------|-------------|--------------|--------------------------|-------------|--------------|
| Modes                         | LTE Band 2 (QPSK,BW=5M) |             |              | LTE Band 2 (16QAM,BW=5M) |             |              |
| Channel                       | 18625(Low)              | 18900 (Mid) | 19175 (High) | 18625(Low)               | 18900 (Mid) | 19175 (High) |
| Frequency (MHz)               | 1852.5                  | 1880        | 1907.5       | 1852.5                   | 1880        | 1907.5       |
| Conducted Power $P_T$ (dBm)   | 23.18                   | 23.26       | 23.14        | 22.27                    | 22.35       | 22.19        |
| Conducted Power $P_T$ (Watts) | 0.21                    | 0.21        | 0.21         | 0.17                     | 0.17        | 0.17         |
| EIRP(dBm)                     | 21.89                   | 21.97       | 21.85        | 20.98                    | 21.06       | 20.90        |
| EIRP(Watts)                   | 0.1545                  | 0.1574      | 0.1531       | 0.1253                   | 0.1276      | 0.1230       |

| LTE ( $G_T - L_C = -1.29$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 2 (QPSK,BW=10M) |             |              | LTE Band 2 (16QAM,BW=10M) |             |              |
| Channel                       | 18650(Low)               | 18900 (Mid) | 19150 (High) | 18650(Low)                | 18900 (Mid) | 19150 (High) |
| Frequency (MHz)               | 1855                     | 1880        | 1905         | 1855                      | 1880        | 1905         |
| Conducted Power $P_T$ (dBm)   | 23.37                    | 23.38       | 23.15        | 22.35                     | 22.41       | 22.24        |
| Conducted Power $P_T$ (Watts) | 0.22                     | 0.22        | 0.21         | 0.17                      | 0.17        | 0.17         |
| EIRP(dBm)                     | 22.08                    | 22.09       | 21.86        | 21.06                     | 21.12       | 20.95        |
| EIRP(Watts)                   | 0.1614                   | 0.1618      | 0.1535       | 0.1276                    | 0.1294      | 0.1245       |

| LTE ( $G_T - L_C = -1.29$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 2 (QPSK,BW=15M) |             |              | LTE Band 2 (16QAM,BW=15M) |             |              |
| Channel                       | 18675(Low)               | 18900 (Mid) | 19125 (High) | 18675(Low)                | 18900 (Mid) | 19125 (High) |
| Frequency (MHz)               | 1857.5                   | 1880        | 1902.5       | 1857.5                    | 1880        | 1902.5       |
| Conducted Power $P_T$ (dBm)   | 23.37                    | 23.38       | 23.22        | 22.43                     | 22.45       | 22.24        |
| Conducted Power $P_T$ (Watts) | 0.22                     | 0.22        | 0.21         | 0.17                      | 0.18        | 0.17         |
| EIRP(dBm)                     | 22.08                    | 22.09       | 21.93        | 21.14                     | 21.16       | 20.95        |
| EIRP(Watts)                   | 0.1614                   | 0.1618      | 0.1560       | 0.1300                    | 0.1306      | 0.1245       |

| LTE ( $G_T - L_C = -1.29$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 2 (QPSK,BW=20M) |             |              | LTE Band 2 (16QAM,BW=20M) |             |              |
| Channel                       | 18700(Low)               | 18900 (Mid) | 19100 (High) | 18700(Low)                | 18900 (Mid) | 19100 (High) |
| Frequency (MHz)               | 1860                     | 1880        | 1900         | 1860                      | 1880        | 1900         |
| Conducted Power $P_T$ (dBm)   | 23.42                    | 23.45       | 23.31        | 22.45                     | 22.47       | 22.34        |
| Conducted Power $P_T$ (Watts) | 0.22                     | 0.22        | 0.21         | 0.18                      | 0.18        | 0.17         |
| EIRP(dBm)                     | 22.13                    | 22.16       | 22.02        | 21.16                     | 21.18       | 21.05        |
| EIRP(Watts)                   | 0.1633                   | 0.1644      | 0.1592       | 0.1306                    | 0.1312      | 0.1274       |

| LTE (G <sub>T</sub> - L <sub>C</sub> = -1.26 dB) |                             |             |              |                              |             |              |
|--------------------------------------------------|-----------------------------|-------------|--------------|------------------------------|-------------|--------------|
| Modes                                            | LTE Band 25 (QPSK, BW=1.4M) |             |              | LTE Band 25 (16QAM, BW=1.4M) |             |              |
| Channel                                          | 26047 (Low)                 | 26340 (Mid) | 26683 (High) | 26047 (Low)                  | 26340 (Mid) | 26683 (High) |
| Frequency (MHz)                                  | 1850.7                      | 1880        | 1914.3       | 1850.7                       | 1880        | 1914.3       |
| Conducted Power P <sub>T</sub> (dBm)             | 23.21                       | 23.30       | 23.11        | 22.31                        | 22.35       | 22.34        |
| Conducted Power P <sub>T</sub> (Watts)           | 0.21                        | 0.21        | 0.20         | 0.17                         | 0.17        | 0.17         |
| EIRP(dBm)                                        | 21.95                       | 22.04       | 21.85        | 21.05                        | 21.09       | 21.08        |
| EIRP(Watts)                                      | 0.1567                      | 0.1600      | 0.1531       | 0.1274                       | 0.1285      | 0.1282       |

| LTE (G <sub>T</sub> - L <sub>C</sub> = -1.26 dB) |                           |             |              |                            |             |              |
|--------------------------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                                            | LTE Band 25 (QPSK, BW=3M) |             |              | LTE Band 25 (16QAM, BW=3M) |             |              |
| Channel                                          | 26055 (Low)               | 26340 (Mid) | 26675 (High) | 26055 (Low)                | 26340 (Mid) | 26675 (High) |
| Frequency (MHz)                                  | 1851.5                    | 1880        | 1913.5       | 1851.5                     | 1880        | 1913.5       |
| Conducted Power P <sub>T</sub> (dBm)             | 23.23                     | 23.30       | 23.16        | 22.33                      | 22.43       | 22.42        |
| Conducted Power P <sub>T</sub> (Watts)           | 0.21                      | 0.21        | 0.21         | 0.17                       | 0.17        | 0.17         |
| EIRP(dBm)                                        | 21.97                     | 22.04       | 21.90        | 21.07                      | 21.17       | 21.16        |
| EIRP(Watts)                                      | 0.1574                    | 0.1600      | 0.1549       | 0.1279                     | 0.1309      | 0.1306       |



| LTE ( $G_T - L_C = -1.26$ dB) |                           |             |              |                            |             |              |
|-------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                         | LTE Band 25 (QPSK, BW=5M) |             |              | LTE Band 25 (16QAM, BW=5M) |             |              |
| Channel                       | 26065 (Low)               | 26340 (Mid) | 26665 (High) | 26065 (Low)                | 26340 (Mid) | 26665 (High) |
| Frequency (MHz)               | 1852.5                    | 1880        | 1912.5       | 1852.5                     | 1880        | 1912.5       |
| Conducted Power $P_T$ (dBm)   | 23.29                     | 23.37       | 23.26        | 22.42                      | 22.43       | 22.42        |
| Conducted Power $P_T$ (Watts) | 0.21                      | 0.22        | 0.21         | 0.17                       | 0.17        | 0.17         |
| EIRP(dBm)                     | 22.03                     | 22.11       | 22.00        | 21.16                      | 21.17       | 21.16        |
| EIRP(Watts)                   | 0.1596                    | 0.1626      | 0.1585       | 0.1306                     | 0.1309      | 0.1306       |

| LTE ( $G_T - L_C = -1.26$ dB) |                            |             |              |                             |             |              |
|-------------------------------|----------------------------|-------------|--------------|-----------------------------|-------------|--------------|
| Modes                         | LTE Band 25 (QPSK, BW=10M) |             |              | LTE Band 25 (16QAM, BW=10M) |             |              |
| Channel                       | 26090 (Low)                | 26340 (Mid) | 26640 (High) | 26090 (Low)                 | 26340 (Mid) | 26640 (High) |
| Frequency (MHz)               | 1855                       | 1880        | 1910         | 1855                        | 1880        | 1910         |
| Conducted Power $P_T$ (dBm)   | 23.33                      | 23.43       | 23.32        | 22.52                       | 22.53       | 22.48        |
| Conducted Power $P_T$ (Watts) | 0.22                       | 0.22        | 0.21         | 0.18                        | 0.18        | 0.18         |
| EIRP(dBm)                     | 22.07                      | 22.17       | 22.06        | 21.26                       | 21.27       | 21.22        |
| EIRP(Watts)                   | 0.1611                     | 0.1648      | 0.1607       | 0.1337                      | 0.1340      | 0.1324       |

| LTE ( $G_T - L_C = -1.26$ dB) |                            |             |              |                             |             |              |
|-------------------------------|----------------------------|-------------|--------------|-----------------------------|-------------|--------------|
| Modes                         | LTE Band 25 (QPSK, BW=15M) |             |              | LTE Band 25 (16QAM, BW=15M) |             |              |
| Channel                       | 26115 (Low)                | 26340 (Mid) | 26615 (High) | 26115 (Low)                 | 26340 (Mid) | 26615 (High) |
| Frequency (MHz)               | 1857.5                     | 1880        | 1907.5       | 1857.5                      | 1880        | 1907.5       |
| Conducted Power $P_T$ (dBm)   | 23.46                      | 23.47       | 23.41        | 22.51                       | 22.57       | 22.56        |
| Conducted Power $P_T$ (Watts) | 0.22                       | 0.22        | 0.22         | 0.18                        | 0.18        | 0.18         |
| EIRP(dBm)                     | 22.20                      | 22.21       | 22.15        | 21.25                       | 21.31       | 21.30        |
| EIRP(Watts)                   | 0.1660                     | 0.1663      | 0.1641       | 0.1334                      | 0.1352      | 0.1349       |

| LTE ( $G_T - L_C = -1.26$ dB) |                            |             |              |                             |             |              |
|-------------------------------|----------------------------|-------------|--------------|-----------------------------|-------------|--------------|
| Modes                         | LTE Band 25 (QPSK, BW=20M) |             |              | LTE Band 25 (16QAM, BW=20M) |             |              |
| Channel                       | 26140 (Low)                | 26340 (Mid) | 26590 (High) | 26140 (Low)                 | 26340 (Mid) | 26590 (High) |
| Frequency (MHz)               | 1860                       | 1880        | 1905         | 1860                        | 1880        | 1905         |
| Conducted Power $P_T$ (dBm)   | 23.46                      | 23.51       | 23.43        | 22.6                        | 22.61       | 22.58        |
| Conducted Power $P_T$ (Watts) | 0.22                       | 0.22        | 0.22         | 0.18                        | 0.18        | 0.18         |
| EIRP(dBm)                     | 22.20                      | 22.25       | 22.17        | 21.34                       | 21.35       | 21.32        |
| EIRP(Watts)                   | 0.1660                     | 0.1679      | 0.1648       | 0.1361                      | 0.1365      | 0.1355       |

| LTE ( $G_T - L_C = -1.27$ dB) |                           |             |              |                            |             |              |
|-------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                         | LTE Band 4 (QPSK,BW=1.4M) |             |              | LTE Band 4 (16QAM,BW=1.4M) |             |              |
| Channel                       | 19957 (Low)               | 20175 (Mid) | 20393 (High) | 19957 (Low)                | 20175 (Mid) | 20393 (High) |
| Frequency (MHz)               | 1710.7                    | 1732.5      | 1754.3       | 1710.7                     | 1732.5      | 1754.3       |
| Conducted Power $P_T$ (dBm)   | 23.14                     | 23.24       | 23.23        | 22.05                      | 22.34       | 22.32        |
| Conducted Power $P_T$ (Watts) | 0.21                      | 0.21        | 0.21         | 0.16                       | 0.17        | 0.17         |
| EIRP(dBm)                     | 21.87                     | 21.97       | 21.96        | 20.78                      | 21.07       | 21.05        |
| EIRP(Watts)                   | 0.1538                    | 0.1574      | 0.1570       | 0.1197                     | 0.1279      | 0.1274       |

| LTE ( $G_T - L_C = -1.27$ dB) |                         |             |              |                          |             |              |
|-------------------------------|-------------------------|-------------|--------------|--------------------------|-------------|--------------|
| Modes                         | LTE Band 4 (QPSK,BW=3M) |             |              | LTE Band 4 (16QAM,BW=3M) |             |              |
| Channel                       | 19965(Low)              | 20175 (Mid) | 20385 (High) | 19965(Low)               | 20175 (Mid) | 20385 (High) |
| Frequency (MHz)               | 1711.5                  | 1732.5      | 1753.5       | 1711.5                   | 1732.5      | 1753.5       |
| Conducted Power $P_T$ (dBm)   | 23.22                   | 23.28       | 23.23        | 22.12                    | 22.35       | 22.34        |
| Conducted Power $P_T$ (Watts) | 0.21                    | 0.21        | 0.21         | 0.16                     | 0.17        | 0.17         |
| EIRP(dBm)                     | 21.95                   | 22.01       | 21.96        | 20.85                    | 21.08       | 21.07        |
| EIRP(Watts)                   | 0.1567                  | 0.1589      | 0.1570       | 0.1216                   | 0.1282      | 0.1279       |

| LTE ( $G_T - L_C = -1.27$ dB) |                         |             |              |                          |             |              |
|-------------------------------|-------------------------|-------------|--------------|--------------------------|-------------|--------------|
| Modes                         | LTE Band 4 (QPSK,BW=5M) |             |              | LTE Band 4 (16QAM,BW=5M) |             |              |
| Channel                       | 19975(Low)              | 20175 (Mid) | 20375 (High) | 19975(Low)               | 20175 (Mid) | 20375 (High) |
| Frequency (MHz)               | 1712.5                  | 1732.5      | 1752.5       | 1712.5                   | 1732.5      | 1752.5       |
| Conducted Power $P_T$ (dBm)   | 23.22                   | 23.42       | 23.27        | 22.16                    | 22.32       | 22.31        |
| Conducted Power $P_T$ (Watts) | 0.21                    | 0.22        | 0.21         | 0.16                     | 0.17        | 0.17         |
| EIRP(dBm)                     | 21.95                   | 22.15       | 22.00        | 20.89                    | 21.05       | 21.04        |
| EIRP(Watts)                   | 0.1567                  | 0.1641      | 0.1585       | 0.1227                   | 0.1274      | 0.1271       |

| LTE ( $G_T - L_C = -1.27$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 4 (QPSK,BW=10M) |             |              | LTE Band 4 (16QAM,BW=10M) |             |              |
| Channel                       | 20000 (Low)              | 20175 (Mid) | 20350 (High) | 20000 (Low)               | 20175 (Mid) | 20350 (High) |
| Frequency (MHz)               | 1715                     | 1732.5      | 1750         | 1715                      | 1732.5      | 1750         |
| Conducted Power $P_T$ (dBm)   | 23.28                    | 23.42       | 23.37        | 22.22                     | 22.41       | 22.36        |
| Conducted Power $P_T$ (Watts) | 0.21                     | 0.22        | 0.22         | 0.17                      | 0.17        | 0.17         |
| EIRP(dBm)                     | 22.01                    | 22.15       | 22.10        | 20.95                     | 21.14       | 21.09        |
| EIRP(Watts)                   | 0.1589                   | 0.1641      | 0.1622       | 0.1245                    | 0.1300      | 0.1285       |

| LTE ( $G_T - L_C = -1.27$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 4 (QPSK,BW=15M) |             |              | LTE Band 4 (16QAM,BW=15M) |             |              |
| Channel                       | 20025 (Low)              | 20175 (Mid) | 20325 (High) | 20025 (Low)               | 20175 (Mid) | 20325 (High) |
| Frequency (MHz)               | 1717.5                   | 1732.5      | 1747.5       | 1717.5                    | 1732.5      | 1747.5       |
| Conducted Power $P_T$ (dBm)   | 23.29                    | 23.47       | 23.45        | 22.24                     | 22.42       | 22.36        |
| Conducted Power $P_T$ (Watts) | 0.21                     | 0.22        | 0.22         | 0.17                      | 0.17        | 0.17         |
| EIRP(dBm)                     | 22.02                    | 22.20       | 22.18        | 20.97                     | 21.15       | 21.09        |
| EIRP(Watts)                   | 0.1592                   | 0.1660      | 0.1652       | 0.1250                    | 0.1303      | 0.1285       |

| LTE ( $G_T - L_C = -1.27$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 4 (QPSK,BW=20M) |             |              | LTE Band 4 (16QAM,BW=20M) |             |              |
| Channel                       | 20050 (Low)              | 20175 (Mid) | 20300 (High) | 20050 (Low)               | 20175 (Mid) | 20300 (High) |
| Frequency (MHz)               | 1720                     | 1732.5      | 1745         | 1720                      | 1732.5      | 1745         |
| Conducted Power $P_T$ (dBm)   | 23.38                    | 23.50       | 23.47        | 22.30                     | 22.46       | 22.45        |
| Conducted Power $P_T$ (Watts) | 0.22                     | 0.22        | 0.22         | 0.17                      | 0.18        | 0.18         |
| EIRP(dBm)                     | 22.11                    | 22.23       | 22.20        | 21.03                     | 21.19       | 21.18        |
| EIRP(Watts)                   | 0.1626                   | 0.1671      | 0.1660       | 0.1268                    | 0.1315      | 0.1312       |

| LTE ( $G_T - L_C = -1.19$ dB) |                            |             |              |                             |             |              |
|-------------------------------|----------------------------|-------------|--------------|-----------------------------|-------------|--------------|
| Modes                         | LTE Band 12 (QPSK,BW=1.4M) |             |              | LTE Band 12 (16QAM,BW=1.4M) |             |              |
| Channel                       | 23017(Low)                 | 23095 (Mid) | 23173 (High) | 23017(Low)                  | 23095 (Mid) | 23173 (High) |
| Frequency (MHz)               | 699.7                      | 707.5       | 715.3        | 699.7                       | 707.5       | 715.3        |
| Conducted Power $P_T$ (dBm)   | 22.91                      | 22.92       | 22.9         | 22.26                       | 22.35       | 22.22        |
| Conducted Power $P_T$ (Watts) | 0.20                       | 0.20        | 0.19         | 0.17                        | 0.17        | 0.17         |
| ERP(dBm)                      | 19.57                      | 19.58       | 19.56        | 18.92                       | 19.01       | 18.88        |
| ERP(Watts)                    | 0.0906                     | 0.0908      | 0.0904       | 0.0780                      | 0.0796      | 0.0773       |

| LTE ( $G_T - L_C = -1.19$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 12 (QPSK,BW=3M) |             |              | LTE Band 12 (16QAM,BW=3M) |             |              |
| Channel                       | 23025(Low)               | 23095 (Mid) | 23165 (High) | 23025(Low)                | 23095 (Mid) | 23165 (High) |
| Frequency (MHz)               | 700.5                    | 707.5       | 714.5        | 700.5                     | 707.5       | 714.5        |
| Conducted Power $P_T$ (dBm)   | 22.89                    | 22.89       | 22.87        | 22.14                     | 22.27       | 22.03        |
| Conducted Power $P_T$ (Watts) | 0.19                     | 0.19        | 0.19         | 0.16                      | 0.17        | 0.16         |
| ERP(dBm)                      | 19.55                    | 19.55       | 19.53        | 18.80                     | 18.93       | 18.69        |
| ERP(Watts)                    | 0.0902                   | 0.0902      | 0.0897       | 0.0759                    | 0.0782      | 0.0740       |

| LTE ( $G_T - L_C = -1.19$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 12 (QPSK,BW=5M) |             |              | LTE Band 12 (16QAM,BW=5M) |             |              |
| Channel                       | 23035(Low)               | 23095 (Mid) | 23155 (High) | 23035(Low)                | 23095 (Mid) | 23155 (High) |
| Frequency (MHz)               | 701.5                    | 707.5       | 713.5        | 701.5                     | 707.5       | 713.5        |
| Conducted Power $P_T$ (dBm)   | 22.9                     | 22.92       | 22.89        | 22.18                     | 22.29       | 22.13        |
| Conducted Power $P_T$ (Watts) | 0.19                     | 0.20        | 0.19         | 0.17                      | 0.17        | 0.16         |
| ERP(dBm)                      | 19.56                    | 19.58       | 19.55        | 18.84                     | 18.95       | 18.79        |
| ERP(Watts)                    | 0.0904                   | 0.0908      | 0.0902       | 0.0766                    | 0.0785      | 0.0757       |

| LTE ( $G_T - L_C = -1.19$ dB) |                           |             |              |                            |             |              |
|-------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                         | LTE Band 12 (QPSK,BW=10M) |             |              | LTE Band 12 (16QAM,BW=10M) |             |              |
| Channel                       | 23060(Low)                | 23095 (Mid) | 23130 (High) | 23060(Low)                 | 23095 (Mid) | 23130 (High) |
| Frequency (MHz)               | 704                       | 707.5       | 711          | 704                        | 707.5       | 711          |
| Conducted Power $P_T$ (dBm)   | 22.93                     | 22.96       | 22.94        | 22.2                       | 22.23       | 22.18        |
| Conducted Power $P_T$ (Watts) | 0.20                      | 0.20        | 0.20         | 0.17                       | 0.17        | 0.17         |
| ERP(dBm)                      | 19.59                     | 19.62       | 19.60        | 18.86                      | 18.89       | 18.84        |
| ERP(Watts)                    | 0.0910                    | 0.0916      | 0.0912       | 0.0769                     | 0.0774      | 0.0766       |



| LTE ( $G_T - L_C = -0.18$ dB) |                           |             |              |                            |             |              |
|-------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                         | LTE Band 13 (QPSK, BW=5M) |             |              | LTE Band 13 (16QAM, BW=5M) |             |              |
| Channel                       | 23205 (Low)               | 23230 (Mid) | 23255 (High) | 23205 (Low)                | 23230 (Mid) | 23255 (High) |
| Frequency (MHz)               | 779.5                     | 782         | 784.5        | 779.5                      | 782         | 784.5        |
| Conducted Power $P_T$ (dBm)   | 22.66                     | 23.58       | 23.54        | 22.21                      | 22.85       | 22.84        |
| Conducted Power $P_T$ (Watts) | 0.18                      | 0.23        | 0.23         | 0.17                       | 0.19        | 0.19         |
| ERP(dBm)                      | 20.33                     | 21.25       | 21.21        | 19.88                      | 20.52       | 20.51        |
| ERP(Watts)                    | 0.1079                    | 0.1334      | 0.1321       | 0.0973                     | 0.1127      | 0.1125       |

| LTE ( $G_T - L_C = -0.18$ dB) |                            |                             |
|-------------------------------|----------------------------|-----------------------------|
| Modes                         | LTE Band 13 (QPSK, BW=10M) | LTE Band 13 (16QAM, BW=10M) |
| Channel                       | 23230 (Mid)                | 23230 (Mid)                 |
| Frequency (MHz)               | 782                        | 782                         |
| Conducted Power $P_T$ (dBm)   | 23.62                      | 22.96                       |
| Conducted Power $P_T$ (Watts) | 0.23                       | 0.20                        |
| ERP(dBm)                      | 21.29                      | 20.63                       |
| ERP(Watts)                    | 0.1346                     | 0.1156                      |





| LTE ( $G_T - L_C = 0.63$ dB)  |                             |             |              |                              |             |              |
|-------------------------------|-----------------------------|-------------|--------------|------------------------------|-------------|--------------|
| Modes                         | LTE Band 26 (QPSK, BW=1.4M) |             |              | LTE Band 26 (16QAM, BW=1.4M) |             |              |
| Channel                       | 26697 (Low)                 | 26865 (Mid) | 27033 (High) | 26697 (Low)                  | 26865 (Mid) | 27033 (High) |
| Frequency (MHz)               | 814.7                       | 831.5       | 848.3        | 814.7                        | 831.5       | 848.3        |
| Conducted Power $P_T$ (dBm)   | 22.57                       | 22.67       | 22.61        | 21.86                        | 22.00       | 21.94        |
| Conducted Power $P_T$ (Watts) | 0.18                        | 0.18        | 0.18         | 0.15                         | 0.16        | 0.16         |
| ERP(dBm)                      | 21.05                       | 21.15       | 21.09        | 20.34                        | 20.48       | 20.42        |
| ERP(Watts)                    | 0.1274                      | 0.1303      | 0.1285       | 0.1081                       | 0.1117      | 0.1102       |

| LTE ( $G_T - L_C = 0.63$ dB)  |                           |             |              |                            |             |              |
|-------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                         | LTE Band 26 (QPSK, BW=3M) |             |              | LTE Band 26 (16QAM, BW=3M) |             |              |
| Channel                       | 26705 (Low)               | 26865 (Mid) | 27025 (High) | 26705 (Low)                | 26865 (Mid) | 27025 (High) |
| Frequency (MHz)               | 815.5                     | 831.5       | 847.5        | 815.5                      | 831.5       | 847.5        |
| Conducted Power $P_T$ (dBm)   | 22.60                     | 22.73       | 22.71        | 21.86                      | 22.01       | 22.00        |
| Conducted Power $P_T$ (Watts) | 0.18                      | 0.19        | 0.19         | 0.15                       | 0.16        | 0.16         |
| ERP(dBm)                      | 21.08                     | 21.21       | 21.19        | 20.34                      | 20.49       | 20.48        |
| ERP(Watts)                    | 0.1282                    | 0.1321      | 0.1315       | 0.1081                     | 0.1119      | 0.1117       |



| LTE ( $G_T - L_C = 0.63$ dB)  |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 26 (QPSK,BW=5M) |             |              | LTE Band 26 (16QAM,BW=5M) |             |              |
| Channel                       | 26715 (Low)              | 26865 (Mid) | 27015 (High) | 26715 (Low)               | 26865 (Mid) | 27015 (High) |
| Frequency (MHz)               | 816.5                    | 831.5       | 846.5        | 816.5                     | 831.5       | 846.5        |
| Conducted Power $P_T$ (dBm)   | 22.65                    | 22.79       | 22.77        | 21.87                     | 22.04       | 22.02        |
| Conducted Power $P_T$ (Watts) | 0.18                     | 0.19        | 0.19         | 0.15                      | 0.16        | 0.16         |
| ERP(dBm)                      | 21.13                    | 21.27       | 21.25        | 20.35                     | 20.52       | 20.50        |
| ERP(Watts)                    | 0.1297                   | 0.1340      | 0.1334       | 0.1084                    | 0.1127      | 0.1122       |

| LTE ( $G_T - L_C = 0.63$ dB)  |                           |             |              |                            |             |              |
|-------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                         | LTE Band 26 (QPSK,BW=10M) |             |              | LTE Band 26 (16QAM,BW=10M) |             |              |
| Channel                       | 26740 (Low)               | 26865 (Mid) | 26990 (High) | 26740 (Low)                | 26865 (Mid) | 26990 (High) |
| Frequency (MHz)               | 819                       | 831.5       | 844          | 819                        | 831.5       | 844          |
| Conducted Power $P_T$ (dBm)   | 22.74                     | 22.80       | 22.78        | 21.91                      | 22.11       | 22.10        |
| Conducted Power $P_T$ (Watts) | 0.19                      | 0.19        | 0.19         | 0.16                       | 0.16        | 0.16         |
| ERP(dBm)                      | 21.22                     | 21.28       | 21.26        | 20.39                      | 20.59       | 20.58        |
| ERP(Watts)                    | 0.1324                    | 0.1343      | 0.1337       | 0.1094                     | 0.1146      | 0.1143       |



| LTE ( $G_T - L_C = 0.63$ dB)  |                            |             |              |                             |             |              |
|-------------------------------|----------------------------|-------------|--------------|-----------------------------|-------------|--------------|
| Modes                         | LTE Band 26 (QPSK, BW=15M) |             |              | LTE Band 26 (16QAM, BW=15M) |             |              |
| Channel                       | 26765 (Low)                | 26865 (Mid) | 26965 (High) | 26765 (Low)                 | 26865 (Mid) | 26965 (High) |
| Frequency (MHz)               | 821.5                      | 831.5       | 841.5        | 821.5                       | 831.5       | 841.5        |
| Conducted Power $P_T$ (dBm)   | 22.76                      | 22.87       | 22.81        | 21.96                       | 22.11       | 22.10        |
| Conducted Power $P_T$ (Watts) | 0.19                       | 0.19        | 0.19         | 0.16                        | 0.16        | 0.16         |
| ERP(dBm)                      | 21.24                      | 21.35       | 21.29        | 20.44                       | 20.59       | 20.58        |
| ERP(Watts)                    | 0.1330                     | 0.1365      | 0.1346       | 0.1107                      | 0.1146      | 0.1143       |

| LTE ( $G_T - L_C = -7.25$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 7 (QPSK, BW=5M) |             |              | LTE Band 7 (16QAM, BW=5M) |             |              |
| Channel                       | 20775 (Low)              | 21100 (Mid) | 21425 (High) | 20775 (Low)               | 21100 (Mid) | 21425 (High) |
| Frequency (MHz)               | 2502.5                   | 2535        | 2567.5       | 2502.5                    | 2535        | 2567.5       |
| Conducted Power $P_T$ (dBm)   | 21.41                    | 21.57       | 21.26        | 20.57                     | 20.82       | 20.47        |
| Conducted Power $P_T$ (Watts) | 0.14                     | 0.14        | 0.13         | 0.11                      | 0.12        | 0.11         |
| ERP(dBm)                      | 14.16                    | 14.32       | 14.01        | 13.32                     | 13.57       | 13.22        |
| ERP(Watts)                    | 0.0261                   | 0.0270      | 0.0252       | 0.0215                    | 0.0228      | 0.0210       |

| LTE ( $G_T - L_C = -7.25$ dB) |                           |             |              |                            |             |              |
|-------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                         | LTE Band 7 (QPSK, BW=10M) |             |              | LTE Band 7 (16QAM, BW=10M) |             |              |
| Channel                       | 20800 (Low)               | 21100 (Mid) | 21400 (High) | 20800 (Low)                | 21100 (Mid) | 21400 (High) |
| Frequency (MHz)               | 2505                      | 2535        | 2565         | 2505                       | 2535        | 2565         |
| Conducted Power $P_T$ (dBm)   | 21.53                     | 21.63       | 21.36        | 20.74                      | 20.88       | 20.52        |
| Conducted Power $P_T$ (Watts) | 0.14                      | 0.15        | 0.14         | 0.12                       | 0.12        | 0.11         |
| ERP(dBm)                      | 14.28                     | 14.38       | 14.11        | 13.49                      | 13.63       | 13.27        |
| ERP(Watts)                    | 0.0268                    | 0.0274      | 0.0258       | 0.0223                     | 0.0231      | 0.0212       |

| LTE ( $G_T - L_C = -7.25$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 7 (QPSK,BW=15M) |             |              | LTE Band 7 (16QAM,BW=15M) |             |              |
| Channel                       | 20825 (Low)              | 21100 (Mid) | 21375 (High) | 20825 (Low)               | 21100 (Mid) | 21375 (High) |
| Frequency (MHz)               | 2507.5                   | 2535        | 2562.5       | 2507.5                    | 2535        | 2562.5       |
| Conducted Power $P_T$ (dBm)   | 21.55                    | 21.65       | 21.4         | 20.6                      | 20.87       | 20.64        |
| Conducted Power $P_T$ (Watts) | 0.14                     | 0.15        | 0.14         | 0.11                      | 0.12        | 0.12         |
| ERP(dBm)                      | 14.30                    | 14.40       | 14.15        | 13.35                     | 13.62       | 13.39        |
| ERP(Watts)                    | 0.0269                   | 0.0275      | 0.0260       | 0.022                     | 0.0230      | 0.0218       |

| LTE ( $G_T - L_C = -7.25$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 7 (QPSK,BW=20M) |             |              | LTE Band 7 (16QAM,BW=20M) |             |              |
| Channel                       | 20850 (Low)              | 21100 (Mid) | 21350 (High) | 20850 (Low)               | 21100 (Mid) | 21350 (High) |
| Frequency (MHz)               | 2510                     | 2535        | 2560         | 2510                      | 2535        | 2560         |
| Conducted Power $P_T$ (dBm)   | 21.58                    | 21.71       | 21.45        | 20.75                     | 20.96       | 20.62        |
| Conducted Power $P_T$ (Watts) | 0.14                     | 0.15        | 0.14         | 0.12                      | 0.12        | 0.12         |
| ERP(dBm)                      | 14.33                    | 14.46       | 14.20        | 13.50                     | 13.71       | 13.37        |
| ERP(Watts)                    | 0.0271                   | 0.0279      | 0.0263       | 0.0224                    | 0.0235      | 0.0217       |

| LTE ( $G_T - L_C = -7.20$ dB) |                          |             |              |                           |             |              |
|-------------------------------|--------------------------|-------------|--------------|---------------------------|-------------|--------------|
| Modes                         | LTE Band 41 (QPSK,BW=5M) |             |              | LTE Band 41 (16QAM,BW=5M) |             |              |
| Channel                       | 39675 (Low)              | 40620 (Mid) | 41565 (High) | 39675 (Low)               | 40620 (Mid) | 41565 (High) |
| Frequency (MHz)               | 2498.5                   | 2593        | 2687.5       | 2498.5                    | 2593        | 2687.5       |
| Conducted Power $P_T$ (dBm)   | 21.43                    | 21.55       | 21.35        | 20.37                     | 20.51       | 20.5         |
| Conducted Power $P_T$ (Watts) | 0.14                     | 0.14        | 0.14         | 0.11                      | 0.11        | 0.11         |
| ERP(dBm)                      | 14.23                    | 14.35       | 14.15        | 13.17                     | 13.31       | 13.30        |
| ERP(Watts)                    | 0.0265                   | 0.0272      | 0.0260       | 0.0207                    | 0.0214      | 0.0214       |

| LTE ( $G_T - L_C = -7.20$ dB) |                           |             |              |                            |             |              |
|-------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                         | LTE Band 41 (QPSK,BW=10M) |             |              | LTE Band 41 (16QAM,BW=10M) |             |              |
| Channel                       | 39700 (Low)               | 40620 (Mid) | 41540 (High) | 39700 (Low)                | 40620 (Mid) | 41540 (High) |
| Frequency (MHz)               | 2501                      | 2593        | 2685         | 2501                       | 2593        | 2685         |
| Conducted Power $P_T$ (dBm)   | 21.43                     | 21.55       | 21.45        | 20.41                      | 20.53       | 20.52        |
| Conducted Power $P_T$ (Watts) | 0.14                      | 0.14        | 0.14         | 0.11                       | 0.11        | 0.11         |
| ERP(dBm)                      | 14.23                     | 14.35       | 14.25        | 13.21                      | 13.33       | 13.32        |
| ERP(Watts)                    | 0.0265                    | 0.0272      | 0.0266       | 0.0209                     | 0.0215      | 0.0215       |



| LTE ( $G_T - L_C = -7.20$ dB) |                           |             |              |                            |             |              |
|-------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                         | LTE Band 41 (QPSK,BW=15M) |             |              | LTE Band 41 (16QAM,BW=15M) |             |              |
| Channel                       | 39725 (Low)               | 40620 (Mid) | 41515 (High) | 39725 (Low)                | 40620 (Mid) | 41515 (High) |
| Frequency (MHz)               | 2503.5                    | 2593        | 2682.5       | 2503.5                     | 2593        | 2682.5       |
| Conducted Power $P_T$ (dBm)   | 21.45                     | 21.56       | 21.46        | 20.48                      | 20.57       | 20.56        |
| Conducted Power $P_T$ (Watts) | 0.14                      | 0.14        | 0.14         | 0.11                       | 0.11        | 0.11         |
| ERP(dBm)                      | 14.25                     | 14.36       | 14.26        | 13.28                      | 13.37       | 13.36        |
| ERP(Watts)                    | 0.0266                    | 0.0273      | 0.0267       | 0.0213                     | 0.0217      | 0.0217       |

| LTE ( $G_T - L_C = -7.20$ dB) |                           |             |              |                            |             |              |
|-------------------------------|---------------------------|-------------|--------------|----------------------------|-------------|--------------|
| Modes                         | LTE Band 41 (QPSK,BW=20M) |             |              | LTE Band 41 (16QAM,BW=20M) |             |              |
| Channel                       | 39750 (Low)               | 40620 (Mid) | 41490 (High) | 39750 (Low)                | 40620 (Mid) | 41490 (High) |
| Frequency (MHz)               | 2506                      | 2593        | 2680         | 2506                       | 2593        | 2680         |
| Conducted Power $P_T$ (dBm)   | 21.51                     | 21.58       | 21.49        | 20.5                       | 20.54       | 20.66        |
| Conducted Power $P_T$ (Watts) | 0.14                      | 0.14        | 0.14         | 0.11                       | 0.11        | 0.12         |
| ERP(dBm)                      | 14.31                     | 14.38       | 14.29        | 13.30                      | 13.34       | 13.46        |
| ERP(Watts)                    | 0.0270                    | 0.0274      | 0.0269       | 0.0214                     | 0.0216      | 0.0222       |