

## FCC Test Report

### (Part 27)

**Report No.:** RF150504C40-2

**FCC ID:** T5UAQT80

**Test Model:** AQT80

**Received Date:** May 04, 2015

**Test Date:** May 07 ~ Jul. 21, 2015

**Issued Date:** Aug. 24, 2015

**Applicant:** Quanta Microsystems, Inc.

**Address:** 188 Wenhwa 2nd Rd., Guishan Dist., Tao Yuan City, Taiwan, 33377

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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### Release Control Record

| Issue No.     | Description      | Date Issued   |
|---------------|------------------|---------------|
| RF150504C40-2 | Original release | Aug. 24, 2015 |

## 1 Certificate of Conformity

**Product:** LTE Tablet PC

**Brand:** Sprint

**Test Model:** AQT80

**Sample Status:** Engineering sample

**Applicant:** Quanta Microsystems, Inc.

**Test Date:** May 07 ~ Jul. 21, 2015

**Standards:** FCC Part 27, Subpart C, H, L, M

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :** Celine Chou , **Date:** Aug. 24, 2015  
Celine Chou / Specialist

**Approved by :** Jeremy Lin , **Date:** Aug. 24, 2015  
Jeremy Lin / Project Engineer

## 2 Summary of Test Results

| Applied Standard: FCC Part 27 & Part 2 |                        |                          |                                                                    |        |                                                                                      |
|----------------------------------------|------------------------|--------------------------|--------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------|
| FCC Clause                             |                        |                          | Test Item                                                          | Result | Remarks                                                                              |
| LTE Band 4                             | LTE Band 12            | LTE Band 41              |                                                                    |        |                                                                                      |
| 2.1046<br>27.50(h)(2)                  | 2.1046<br>27.50(c)(10) | 2.1046 27.50(h)          | Equivalent Isotropically Radiated Power                            | Pass   | Meet the requirement of limit.                                                       |
| ----                                   | ----                   | ----                     | Peak To Average Ratio                                              | Pass   | Meet the requirement of limit.                                                       |
| 2.1055<br>27.54                        | 2.1055<br>27.54        | 2.1055<br>27.54          | Frequency Stability<br>Stay with the authorized bands of operation | Pass   | Meet the requirement of limit.                                                       |
| 2.1049<br>27.53(m)(6)                  | 2.1049 27.53(g)        | 2.1049<br>27.53(m)(6)    | Emission Bandwidth                                                 | Pass   | Meet the requirement of limit.                                                       |
| 2.1051<br>27.53(h)                     | 2.1051<br>27.53(g)     | 2.1051<br>27.53(m)       | Band Edge Measurements                                             | Pass   | Meet the requirement of limit.                                                       |
| 2.1051<br>27.53(h)                     | 2.1051 27.53(g)        | 2.1051<br>27.53(h)       | Conducted Spurious Emissions                                       | Pass   | Meet the requirement of limit.                                                       |
| 2.1053<br>27.53(m)(4)(6)               | 2.1053 27.53(g)        | 2.1053<br>27.53(m)(4)(6) | Radiated Spurious Emissions                                        | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -13.50 dB at 4997.00MHz. |

### 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| Measurement                        | Frequency       | Expended Uncertainty (k=2) (±) |
|------------------------------------|-----------------|--------------------------------|
| Conducted Emissions at mains ports | 150kHz ~ 30MHz  | 2.44 dB                        |
| Radiated Emissions up to 1 GHz     | 30MHz ~ 200MHz  | 3.63 dB                        |
|                                    | 200MHz ~1000MHz | 3.64 dB                        |
| Radiated Emissions above 1 GHz     | 1GHz ~ 18GHz    | 2.29 dB                        |
|                                    | 18GHz ~ 40GHz   | 2.29 dB                        |

## 2.2 Test Site and Instruments

| Description & Manufacturer                          | Model No.                    | Serial No.                       | Cal. Date     | Cal. Due      |
|-----------------------------------------------------|------------------------------|----------------------------------|---------------|---------------|
| Test Receiver<br>ROHDE & SCHWARZ                    | ESCS30                       | 100289                           | Dec. 01, 2014 | Nov. 30, 2015 |
| Spectrum Analyzer<br>ROHDE & SCHWARZ                | FSP40                        | 100269                           | Mar. 30, 2015 | Mar. 29, 2016 |
| BILOG Antenna<br>SCHWARZBECK                        | VULB9168                     | 9168-156                         | Feb. 06, 2015 | Feb. 05, 2016 |
| HORN Antenna<br>SCHWARZBECK                         | BBHA 9120 D                  | 9120D-1169                       | Feb. 09, 2015 | Feb. 08, 2016 |
| HORN Antenna<br>SCHWARZBECK                         | BBHA 9170                    | BBHA9170241                      | Feb. 09, 2015 | Feb. 08, 2016 |
| Preamplifier<br>Agilent                             | 8449B                        | 3008A01911                       | Aug. 09, 2014 | Aug. 08, 2015 |
| Preamplifier<br>Agilent                             | 8447D                        | 2944A10638                       | Aug. 09, 2014 | Aug. 08, 2015 |
| RF signal cable<br>HUBER+SUHNNER                    | SUCOFLEX 104                 | 248780/4<br>309222/4<br>274092/4 | Aug. 09, 2014 | Aug. 08, 2015 |
| RF signal cable<br>Worken                           | 8D-FB                        | Cable-CH9-01                     | Aug. 11, 2014 | Aug. 10, 2015 |
| Software<br>BV ADT                                  | ADT_Radiated_<br>V7.6.15.9.4 | NA                               | NA            | NA            |
| Antenna Tower<br>EMCO                               | 2070/2080                    | 512.835.4684                     | NA            | NA            |
| Turn Table<br>EMCO                                  | 2087-2.03                    | NA                               | NA            | NA            |
| Antenna Tower & Turn<br>BV ADT                      | AT100                        | AT93021705                       | NA            | NA            |
| Turn Table<br>BV ADT                                | TT100                        | TT93021705                       | NA            | NA            |
| Turn Table Controller<br>BV ADT                     | SC100                        | SC93021705                       | NA            | NA            |
| WIT Standard<br>Temperature And Humidity<br>Chamber | TH-4S-C                      | W981030                          | Jun. 08, 2014 | Jun. 07, 2015 |
|                                                     |                              |                                  | Jun. 08, 2015 | Jun. 07, 2016 |
| Mini-Circuits Power<br>Splitter                     | ZN2PD-9G                     | NA                               | Jun. 09, 2014 | Jun. 08, 2015 |
|                                                     |                              |                                  | Jun. 09, 2015 | Jun. 08, 2016 |
| JFW 20dB attenuation                                | 50HF-020-SMA                 | NA                               | NA            | NA            |

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 215374.
5. The IC Site Registration No. is IC 7450F-9.

### 3 General Information

#### 3.1 General Description of EUT

|                     |                                           |                       |
|---------------------|-------------------------------------------|-----------------------|
| Product             | LTE Tablet PC                             |                       |
| Brand               | Sprint                                    |                       |
| Test Model          | AQT80                                     |                       |
| Status of EUT       | Engineering sample                        |                       |
| Power Supply Rating | 5Vdc (adapter)<br>3.8Vdc (battery)        |                       |
| Modulation Type     | QPSK, 16QAM                               |                       |
| Operating Frequency | LTE Band 4<br>(Channel Bandwidth 1.4MHz)  | 1710.7MHz ~ 1754.3MHz |
|                     | LTE Band 4<br>(Channel Bandwidth 3MHz)    | 1711.5MHz ~ 1753.5MHz |
|                     | LTE Band 4<br>(Channel Bandwidth 5MHz)    | 1712.5MHz ~ 1752.5MHz |
|                     | LTE Band 4<br>(Channel Bandwidth 10MHz)   | 1715MHz ~ 1750MHz     |
|                     | LTE Band 4<br>(Channel Bandwidth 15MHz)   | 1717.5MHz ~ 1747.5MHz |
|                     | LTE Band 4<br>(Channel Bandwidth 20MHz)   | 1720MHz ~ 1745MHz     |
|                     | LTE Band 12<br>(Channel Bandwidth 1.4MHz) | 699.7MHz ~ 715.3MHz   |
|                     | LTE Band 12<br>(Channel Bandwidth 3MHz)   | 700.5MHz ~ 714.5MHz   |
|                     | LTE Band 12<br>(Channel Bandwidth 5MHz)   | 701.5MHz ~ 713.5MHz   |
|                     | LTE Band 12<br>(Channel Bandwidth 10MHz)  | 704MHz ~ 711MHz       |
|                     | LTE Band 41<br>(Channel Bandwidth 5MHz)   | 2498.5MHz ~ 2687.5MHz |
|                     | LTE Band 41<br>(Channel Bandwidth 10MHz)  | 2501MHz ~ 2685MHz     |
|                     | LTE Band 41<br>(Channel Bandwidth 15MHz)  | 2503.5MHz ~ 2682.5MHz |
|                     | LTE Band 41<br>(Channel Bandwidth 20MHz)  | 2506MHz ~ 2680MHz     |

|                     |                                           |                                                                                       |
|---------------------|-------------------------------------------|---------------------------------------------------------------------------------------|
| Max. EIRP Power     | LTE Band 4<br>(Channel Bandwidth 1.4MHz)  | 125.893mW (21.00dBm)                                                                  |
|                     | LTE Band 4<br>(Channel Bandwidth 3MHz)    | 216.272mW (23.35dBm)                                                                  |
|                     | LTE Band 4<br>(Channel Bandwidth 5MHz)    | 190.985mW (22.81dBm)                                                                  |
|                     | LTE Band 4<br>(Channel Bandwidth 10MHz)   | 130.918mW (21.17dBm)                                                                  |
|                     | LTE Band 4<br>(Channel Bandwidth 15MHz)   | 188.799mW (22.76dBm)                                                                  |
|                     | LTE Band 4<br>(Channel Bandwidth 20MHz)   | 73.790mW (18.68dBm)                                                                   |
|                     | LTE Band 12<br>(Channel Bandwidth 1.4MHz) | 788.860mW (28.97dBm)                                                                  |
|                     | LTE Band 12<br>(Channel Bandwidth 3MHz)   | 138.038mW (21.40dBm)                                                                  |
|                     | LTE Band 12<br>(Channel Bandwidth 5MHz)   | 132.739mW (21.23dBm)                                                                  |
|                     | LTE Band 12<br>(Channel Bandwidth 10MHz)  | 109.901mW (20.41dBm)                                                                  |
|                     | LTE Band 41<br>(Channel Bandwidth 5MHz)   | 177.419mW (22.49dBm)                                                                  |
|                     | LTE Band 41<br>(Channel Bandwidth 10MHz)  | 201.372mW (23.04dBm)                                                                  |
|                     | LTE Band 41<br>(Channel Bandwidth 15MHz)  | 154.525mW (21.89dBm)                                                                  |
|                     | LTE Band 41<br>(Channel Bandwidth 20MHz)  | 111.686mW (20.48dBm)                                                                  |
| Antenna Type        | LTE Band 4                                | Main Ant.: LDS antenna with 0.31dBi gain<br>Aux Ant.: LDS antenna with -2.43dBi gain  |
|                     | LTE Band 12                               | Main Ant.: LDS antenna with -1.36dBi gain<br>Aux Ant.: LDS antenna with -6.45dBi gain |
|                     | LTE Band 41                               | Main Ant.: LDS antenna with 3.98dBi gain<br>Aux Ant.: LDS antenna with 0.08dBi gain   |
| Antenna Connector   | U.FL                                      |                                                                                       |
| Accessory Device    | Adapter, Battery                          |                                                                                       |
| Data Cable Supplied | 0.9m shielded USB Cable                   |                                                                                       |

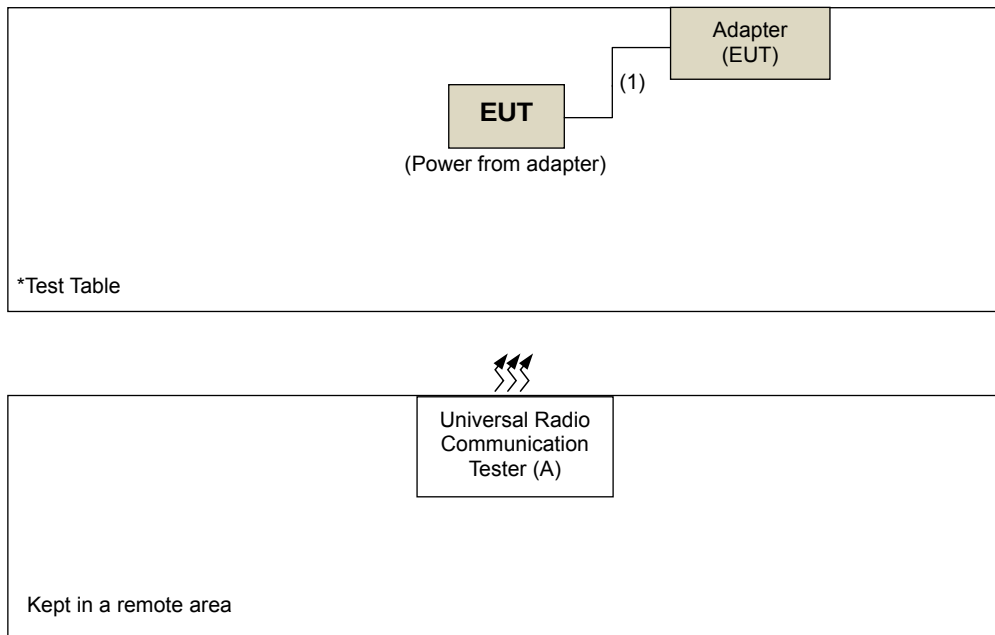
Note:

1. The EUT uses following adapter and battery.

| Adapter      |                           |
|--------------|---------------------------|
| Brand        | TPT                       |
| Model        | NSS050200B                |
| Input Power  | 100-240Vac, 50-60Hz, 0.3A |
| Output Power | 5Vdc, 2A                  |

| Battery |                          |
|---------|--------------------------|
| Brand   | Ningbo Veken Battery     |
| Model   | NKS                      |
| Rating  | 3.8Vdc, 4450mAh, 16.91Wh |

### 3.2 Configuration of System Under Test



#### 3.2.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| ID | Product                              | Brand   | Model No. | Serial No. | FCC ID | Remarks |
|----|--------------------------------------|---------|-----------|------------|--------|---------|
| A. | Universal Radio Communication Tester | Anritsu | MT8820C   | 6201010284 | NA     | -       |

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

| ID | Descriptions | Qty. | Length (m) | Shielding (Yes/No) | Cores (Qty.) | Remarks          |
|----|--------------|------|------------|--------------------|--------------|------------------|
| 1. | USB cable    | 1    | 0.9        | Y                  | 0            | Accessory of EUT |

### 3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.

The worst case was found when positioned on Z-plane for LTE Band 4 and 41, X-plane for LTE Band 12. Following channel(s) was (were) selected for the final test as listed below:

#### LTE Band 4

| Test item           | Available channel | Tested channel      | Channel Bandwidth | Modulation   | Mode                 |
|---------------------|-------------------|---------------------|-------------------|--------------|----------------------|
| EIRP                | 19957 to 20393    | 19957, 20175, 20393 | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset   |
|                     | 19965 to 20385    | 19965, 20175, 20385 | 3MHz              | QPSK         | 1 RB / 0 RB Offset   |
|                     | 19975 to 20375    | 19975, 20175, 20375 | 5MHz              | QPSK         | 1 RB / 0 RB Offset   |
|                     | 20000 to 20350    | 20000, 20175, 20350 | 10MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                     | 20025 to 20325    | 20025, 20175, 20325 | 15MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                     | 20050 to 20300    | 20050, 20175, 20300 | 20MHz             | QPSK         | 1 RB / 0 RB Offset   |
| Frequency Stability | 19957 to 20393    | 20175               | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset   |
|                     | 19965 to 20385    | 20175               | 3MHz              | QPSK         | 1 RB / 0 RB Offset   |
|                     | 19975 to 20375    | 20175               | 5MHz              | QPSK         | 1 RB / 0 RB Offset   |
|                     | 20000 to 20350    | 20175               | 10MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                     | 20025 to 20325    | 20175               | 15MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                     | 20050 to 20300    | 20175               | 20MHz             | QPSK         | 1 RB / 0 RB Offset   |
| Emission Bandwidth  | 19957 to 20393    | 19957, 20175, 20393 | 1.4MHz            | QPSK / 16QAM | 1 RB / 0 RB Offset   |
|                     | 19965 to 20385    | 19965, 20175, 20385 | 3MHz              | QPSK / 16QAM | 1 RB / 0 RB Offset   |
|                     | 19975 to 20375    | 19975, 20175, 20375 | 5MHz              | QPSK / 16QAM | 1 RB / 0 RB Offset   |
|                     | 20000 to 20350    | 20000, 20175, 20350 | 10MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset   |
|                     | 20025 to 20325    | 20025, 20175, 20325 | 15MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset   |
|                     | 20050 to 20300    | 20050, 20175, 20300 | 20MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset   |
| Band Edge           | 18607 to 19193    | 19957               | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset   |
|                     |                   |                     |                   |              | 6 RB / 0 RB Offset   |
|                     |                   | 20393               | 1.4MHz            | QPSK         | 1 RB / 5 RB Offset   |
|                     |                   |                     |                   |              | 6 RB / 0 RB Offset   |
|                     | 18615 to 19185    | 19965               | 3MHz              | QPSK         | 1 RB / 0 RB Offset   |
|                     |                   |                     |                   |              | 15 RB / 0 RB Offset  |
|                     |                   | 20385               | 3MHz              | QPSK         | 1 RB / 14 RB Offset  |
|                     |                   |                     |                   |              | 15 RB / 0 RB Offset  |
|                     | 18625 to 19175    | 19975               | 5MHz              | QPSK         | 1 RB / 0 RB Offset   |
|                     |                   |                     |                   |              | 25 RB / 0 RB Offset  |
|                     |                   | 20375               | 5MHz              | QPSK         | 1 RB / 24 RB Offset  |
|                     |                   |                     |                   |              | 25 RB / 0 RB Offset  |
|                     | 18650 to 19150    | 20000               | 10MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                     |                   |                     |                   |              | 50 RB / 0 RB Offset  |
|                     |                   | 20350               | 10MHz             | QPSK         | 1 RB / 49 RB Offset  |
|                     |                   |                     |                   |              | 50 RB / 0 RB Offset  |
|                     | 18675 to 19125    | 20025               | 15MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                     |                   |                     |                   |              | 75 RB / 0 RB Offset  |
|                     |                   | 20325               | 15MHz             | QPSK         | 1 RB / 74 RB Offset  |
|                     |                   |                     |                   |              | 75 RB / 0 RB Offset  |
|                     | 18700 to 19100    | 20050               | 20MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                     |                   |                     |                   |              | 100 RB / 0 RB Offset |
|                     |                   | 20300               | 20MHz             | QPSK         | 1 RB / 99 RB Offset  |
|                     |                   |                     |                   |              | 100 RB / 0 RB Offset |

| Test item                       | Available channel | Tested channel      | Channel Bandwidth | Modulation   | Mode               |
|---------------------------------|-------------------|---------------------|-------------------|--------------|--------------------|
| Peak to Average Ratio           | 19957 to 20393    | 19957, 20175, 20393 | 1.4MHz            | QPSK / 16QAM | 1 RB / 0 RB Offset |
|                                 | 19965 to 20385    | 19965, 20175, 20385 | 3MHz              | QPSK / 16QAM | 1 RB / 0 RB Offset |
|                                 | 19975 to 20375    | 19975, 20175, 20375 | 5MHz              | QPSK / 16QAM | 1 RB / 0 RB Offset |
|                                 | 20000 to 20350    | 20000, 20175, 20350 | 10MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset |
|                                 | 20025 to 20325    | 20025, 20175, 20325 | 15MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset |
|                                 | 20050 to 20300    | 20050, 20175, 20300 | 20MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset |
| Conducuted Emission             | 19957 to 20393    | 19957, 20175, 20393 | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset |
|                                 | 19965 to 20385    | 19965, 20175, 20385 | 3MHz              | QPSK         | 1 RB / 0 RB Offset |
|                                 | 19975 to 20375    | 19975, 20175, 20375 | 5MHz              | QPSK         | 1 RB / 0 RB Offset |
|                                 | 20000 to 20350    | 20000, 20175, 20350 | 10MHz             | QPSK         | 1 RB / 0 RB Offset |
|                                 | 20025 to 20325    | 20025, 20175, 20325 | 15MHz             | QPSK         | 1 RB / 0 RB Offset |
|                                 | 20050 to 20300    | 20050, 20175, 20300 | 20MHz             | QPSK         | 1 RB / 0 RB Offset |
| Radiated Emission<br>Below 1GHz | 19957 to 20393    | 19957               | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset |
|                                 | 19965 to 20385    | 19965               | 3MHz              | QPSK         | 1 RB / 0 RB Offset |
|                                 | 19975 to 20375    | 19975               | 5MHz              | QPSK         | 1 RB / 0 RB Offset |
|                                 | 20000 to 20350    | 20000               | 10MHz             | QPSK         | 1 RB / 0 RB Offset |
|                                 | 20025 to 20325    | 20025               | 15MHz             | QPSK         | 1 RB / 0 RB Offset |
|                                 | 20050 to 20300    | 20050               | 20MHz             | QPSK         | 1 RB / 0 RB Offset |
| Radiated Emission<br>Above 1GHz | 19957 to 20393    | 19957, 20175, 20393 | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset |
|                                 | 19965 to 20385    | 19965, 20175, 20385 | 3MHz              | QPSK         | 1 RB / 0 RB Offset |
|                                 | 19975 to 20375    | 19975, 20175, 20375 | 5MHz              | QPSK         | 1 RB / 0 RB Offset |
|                                 | 20000 to 20350    | 20000, 20175, 20350 | 10MHz             | QPSK         | 1 RB / 0 RB Offset |
|                                 | 20025 to 20325    | 20025, 20175, 20325 | 15MHz             | QPSK         | 1 RB / 0 RB Offset |
|                                 | 20050 to 20300    | 20050, 20175, 20300 | 20MHz             | QPSK         | 1 RB / 0 RB Offset |

#### Test Condition:

| Test Item             | Environmental Conditions | Input Power  | Tested By  |
|-----------------------|--------------------------|--------------|------------|
| EIRP                  | 16deg. C, 70%RH          | 120Vac, 60Hz | Frank Liu  |
| Frequency Stability   | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Occupied Bandwidth    | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Band Edge             | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Peak To Average Ratio | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Conducted Emission    | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Radiated Emission     | 16deg. C, 70%RH          | 120Vac, 60Hz | Frank Liu  |

## LTE Band 12

| Test item                    | Available channel | Tested channel      | Channel Bandwidth | Modulation   | Mode                |
|------------------------------|-------------------|---------------------|-------------------|--------------|---------------------|
| EIRP                         | 23017 to 23171    | 23017, 23095, 23173 | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23025 to 23165    | 23025, 23095, 23165 | 3MHz              | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23035 to 23155    | 23035, 23095, 23155 | 5MHz              | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23060 to 23130    | 23060, 23095, 23130 | 10MHz             | QPSK         | 1 RB / 0 RB Offset  |
| Frequency Stability          | 23017 to 23171    | 23095               | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23025 to 23165    | 23095               | 3MHz              | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23035 to 23155    | 23095               | 5MHz              | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23060 to 23130    | 23095               | 10MHz             | QPSK         | 1 RB / 0 RB Offset  |
| Emission Bandwidth           | 23017 to 23171    | 23017, 23095, 23173 | 1.4MHz            | QPSK / 16QAM | 1 RB / 0 RB Offset  |
|                              | 23025 to 23165    | 23025, 23095, 23165 | 3MHz              | QPSK / 16QAM | 1 RB / 0 RB Offset  |
|                              | 23035 to 23155    | 23035, 23095, 23155 | 5MHz              | QPSK / 16QAM | 1 RB / 0 RB Offset  |
|                              | 23060 to 23130    | 23060, 23095, 23130 | 10MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset  |
| Band Edge                    | 23017 to 23171    | 23017               | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset  |
|                              |                   | 23171               | 1.4MHz            | QPSK         | 6 RB / 0 RB Offset  |
|                              | 23025 to 23165    | 23025               | 3MHz              | QPSK         | 1 RB / 5 RB Offset  |
|                              |                   | 23165               | 3MHz              | QPSK         | 6 RB / 0 RB Offset  |
|                              | 23035 to 23155    | 23035               | 5MHz              | QPSK         | 1 RB / 0 RB Offset  |
|                              |                   | 23155               | 5MHz              | QPSK         | 15 RB / 0 RB Offset |
|                              | 23060 to 23130    | 23060               | 10MHz             | QPSK         | 1 RB / 14 RB Offset |
|                              |                   | 23130               | 10MHz             | QPSK         | 15 RB / 0 RB Offset |
|                              | 23017 to 23171    | 23017               | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset  |
|                              |                   | 23171               | 1.4MHz            | QPSK         | 25 RB / 0 RB Offset |
|                              | 23025 to 23165    | 23025               | 3MHz              | QPSK         | 1 RB / 24 RB Offset |
|                              |                   | 23165               | 3MHz              | QPSK         | 25 RB / 0 RB Offset |
| Peak to Average Ratio        | 23017 to 23171    | 23017, 23095, 23173 | 1.4MHz            | QPSK / 16QAM | 1 RB / 0 RB Offset  |
|                              | 23025 to 23165    | 23025, 23095, 23165 | 3MHz              | QPSK / 16QAM | 1 RB / 0 RB Offset  |
|                              | 23035 to 23155    | 23035, 23095, 23155 | 5MHz              | QPSK / 16QAM | 1 RB / 0 RB Offset  |
|                              | 23060 to 23130    | 23060, 23095, 23130 | 10MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset  |
| Conducuted Emission          | 23017 to 23171    | 23017, 23095, 23173 | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23025 to 23165    | 23025, 23095, 23165 | 3MHz              | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23035 to 23155    | 23035, 23095, 23155 | 5MHz              | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23060 to 23130    | 23060, 23095, 23130 | 10MHz             | QPSK         | 1 RB / 0 RB Offset  |
| Radiated Emission Below 1GHz | 23017 to 23171    | 23017               | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23025 to 23165    | 23025               | 3MHz              | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23035 to 23155    | 23035               | 5MHz              | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23060 to 23130    | 23060               | 10MHz             | QPSK         | 1 RB / 0 RB Offset  |
| Radiated Emission Above 1GHz | 23017 to 23171    | 23017, 23095, 23173 | 1.4MHz            | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23025 to 23165    | 23025, 23095, 23165 | 3MHz              | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23035 to 23155    | 23035, 23095, 23155 | 5MHz              | QPSK         | 1 RB / 0 RB Offset  |
|                              | 23060 to 23130    | 23060, 23095, 23130 | 10MHz             | QPSK         | 1 RB / 0 RB Offset  |

**Test Condition:**

| Test Item             | Environmental Conditions | Input Power  | Tested By  |
|-----------------------|--------------------------|--------------|------------|
| EIRP                  | 16deg. C, 70%RH          | 120Vac, 60Hz | Frank Liu  |
| Frequency Stability   | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Occupied Bandwidth    | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Band Edge             | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Peak To Average Ratio | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Conducted Emission    | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Radiated Emission     | 16deg. C, 70%RH          | 120Vac, 60Hz | Frank Liu  |

# LTE Band 41

| Test item                    | Available channel | Tested channel                    | Channel Bandwidth | Modulation   | Mode                 |
|------------------------------|-------------------|-----------------------------------|-------------------|--------------|----------------------|
| EIRP                         | 39675 to 41565    | 39675, 40148, 40620, 41093, 41565 | 5MHz              | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39700 to 41540    | 39700, 40160, 40620, 41080, 41540 | 10MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39725 to 41515    | 39725, 40173, 40620, 41068, 41515 | 15MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39750 to 41490    | 39750, 40185, 40620, 41055, 41490 | 20MHz             | QPSK         | 1 RB / 0 RB Offset   |
| Frequency Stability          | 39675 to 41565    | 40620                             | 5MHz              | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39700 to 41540    | 40620                             | 10MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39725 to 41515    | 40620                             | 15MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39750 to 41490    | 40620                             | 20MHz             | QPSK         | 1 RB / 0 RB Offset   |
| Emission Bandwidth           | 39675 to 41565    | 39675, 40148, 40620, 41093, 41565 | 5MHz              | QPSK / 16QAM | 1 RB / 0 RB Offset   |
|                              | 39700 to 41540    | 39700, 40160, 40620, 41080, 41540 | 10MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset   |
|                              | 39725 to 41515    | 39725, 40173, 40620, 40068, 41515 | 15MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset   |
|                              | 39750 to 41490    | 39750, 40185, 40620, 41055, 41490 | 20MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset   |
| Band Edge                    | 39675 to 41565    | 39675, 40148, 40620, 41093, 41565 | 5MHz              | QPSK / 16QAM | 25 RB / 0 RB Offset  |
|                              | 39700 to 41540    | 39700, 40160, 40620, 41080, 41540 | 10MHz             | QPSK / 16QAM | 50 RB / 0 RB Offset  |
|                              | 39725 to 41515    | 39725, 40173, 40620, 40068, 41515 | 15MHz             | QPSK / 16QAM | 75 RB / 0 RB Offset  |
|                              | 39750 to 41490    | 39750, 40185, 40620, 41055, 41490 | 20MHz             | QPSK / 16QAM | 100 RB / 0 RB Offset |
| Peak to Average Ratio        | 39675 to 41565    | 39675, 40148, 40620, 41093, 41565 | 5MHz              | QPSK / 16QAM | 1 RB / 0 RB Offset   |
|                              | 39700 to 41540    | 39700, 40160, 40620, 41080, 41540 | 10MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset   |
|                              | 39725 to 41515    | 39725, 40173, 40620, 40068, 41515 | 15MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset   |
|                              | 39750 to 41490    | 39750, 40185, 40620, 41055, 41490 | 20MHz             | QPSK / 16QAM | 1 RB / 0 RB Offset   |
| Condcudeted Emission         | 39675 to 41565    | 39675, 40148, 40620, 41093, 41565 | 5MHz              | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39700 to 41540    | 39700, 40160, 40620, 41080, 41540 | 10MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39725 to 41515    | 39725, 40173, 40620, 40068, 41515 | 15MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39750 to 41490    | 39750, 40185, 40620, 41055, 41490 | 20MHz             | QPSK         | 1 RB / 0 RB Offset   |
| Radiated Emission Below 1GHz | 39675 to 41565    | 39675                             | 5MHz              | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39700 to 41540    | 39700                             | 10MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39725 to 41515    | 39725                             | 15MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39750 to 41490    | 39750                             | 20MHz             | QPSK         | 1 RB / 0 RB Offset   |
| Radiated Emission Above 1GHz | 39675 to 41565    | 39675, 40148, 40620, 41093, 41565 | 5MHz              | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39700 to 41540    | 39700, 40160, 40620, 41080, 41540 | 10MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39725 to 41515    | 39725, 40173, 40620, 40068, 41515 | 15MHz             | QPSK         | 1 RB / 0 RB Offset   |
|                              | 39750 to 41490    | 39750, 40185, 40620, 41055, 41490 | 20MHz             | QPSK         | 1 RB / 0 RB Offset   |

**Test Condition:**

| Test Item             | Environmental Conditions | Input Power  | Tested By  |
|-----------------------|--------------------------|--------------|------------|
| EIRP                  | 25deg. C, 65%RH          | 120Vac, 60Hz | Ted Chang  |
| Frequency Stability   | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Occupied Bandwidth    | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Band Edge             | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Peak To Average Ratio | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Conducted Emission    | 24deg. C, 64%RH          | 3.8Vdc       | Match Tsui |
| Radiated Emission     | 25deg. C, 65%RH          | 120Vac, 60Hz | Ted Chang  |

### 3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

### 3.5 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 27**

**KDB 971168 D01 Power Meas License Digital Systems v02r02**

**ANSI/TIA/EIA-603-C 2004**

**Note:** All test items have been performed and recorded as per the above standards.

## 4 Test Types and Results

### 4.1 Output Power Measurement

#### 4.1.1 Limits of Output Power Measurement

Mobile / Portable station are limited to 1 watts e.i.r.p for LTE Band 4, 3 watts e.i.r.p for LTE Band 12 and 2 watts e.i.r.p for LTE Band 14.

#### 4.1.2 Test Procedures

##### EIRP / ERP Measurement:

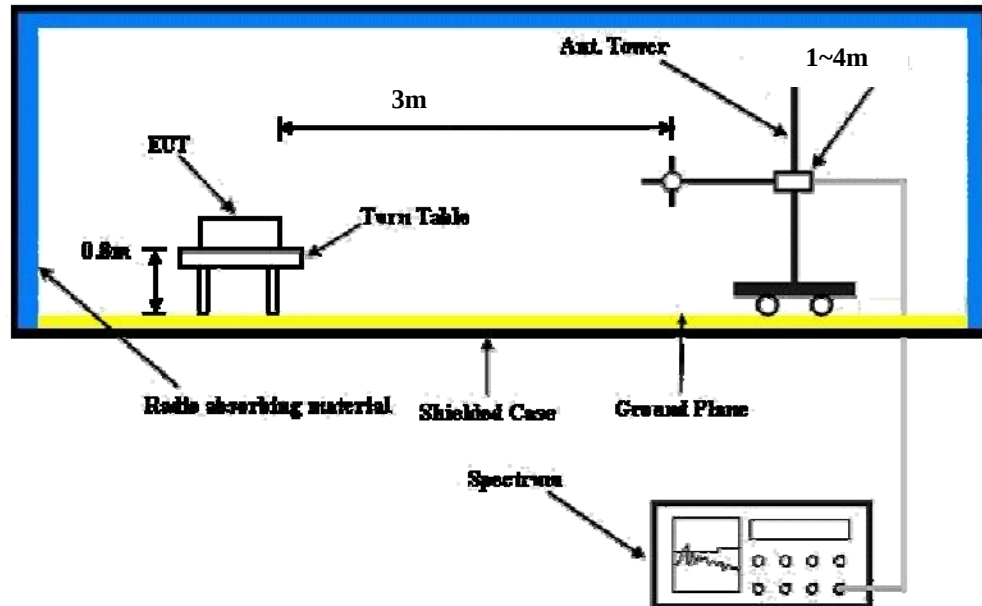
- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 5MHz for LTE Mode.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step b. Record the power level of S.G
- d.  $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$ . E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,  $E.R.P \text{ power} = E.I.R.P \text{ power} - 2.15\text{dBi}$ .

##### Conducted Power Measurement:

A power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

### 4.1.3 Test Setup

EIRP / ERP MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

CONDUCTED POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.1.4 Test Results

##### CONDUCTED OUTPUT POWER (dBm)

| Band / BW | RB Size | RB Offset | QPSK       |            |            | 16QAM      |            |            |
|-----------|---------|-----------|------------|------------|------------|------------|------------|------------|
|           |         |           | Low CH     | Mid CH     | High CH    | Low CH     | Mid CH     | High CH    |
|           |         |           | 19957      | 20175      | 20393      | 19957      | 20175      | 20393      |
|           |         |           | 1710.7 MHz | 1732.5 MHz | 1754.3 MHz | 1710.7 MHz | 1732.5 MHz | 1754.3 MHz |
| 4 / 1.4M  | 1       | 0         | 23.04      | 22.84      | 22.87      | 22.02      | 21.82      | 21.85      |
|           | 1       | 2         | 22.96      | 22.76      | 22.79      | 21.94      | 21.74      | 21.77      |
|           | 1       | 5         | 22.92      | 22.72      | 22.75      | 21.90      | 21.70      | 21.73      |
|           | 3       | 0         | 22.88      | 22.82      | 22.85      | 21.93      | 21.87      | 21.90      |
|           | 3       | 1         | 22.86      | 22.71      | 22.74      | 21.91      | 21.76      | 21.79      |
|           | 3       | 3         | 22.84      | 22.64      | 22.67      | 21.89      | 21.69      | 21.72      |
|           | 6       | 0         | 22.07      | 21.94      | 21.97      | 21.12      | 20.99      | 21.02      |
| Band / BW | RB Size | RB Offset | QPSK       |            |            | 16QAM      |            |            |
|           |         |           | Low CH     | Mid CH     | High CH    | Low CH     | Mid CH     | High CH    |
|           |         |           | 19965      | 20175      | 20385      | 19965      | 20175      | 20385      |
|           |         |           | 1711.5 MHz | 1732.5 MHz | 1753.5 MHz | 1711.5 MHz | 1732.5 MHz | 1753.5 MHz |
| 4 / 3M    | 1       | 0         | 23.08      | 22.88      | 22.91      | 22.06      | 21.86      | 21.89      |
|           | 1       | 7         | 23.00      | 22.80      | 22.83      | 21.98      | 21.78      | 21.81      |
|           | 1       | 14        | 22.96      | 22.76      | 22.79      | 21.94      | 21.74      | 21.77      |
|           | 8       | 0         | 22.12      | 22.06      | 22.09      | 21.17      | 21.11      | 21.14      |
|           | 8       | 3         | 22.10      | 21.95      | 21.98      | 21.15      | 21.00      | 21.03      |
|           | 8       | 7         | 22.08      | 21.88      | 21.91      | 21.13      | 20.93      | 20.96      |
|           | 15      | 0         | 22.11      | 21.98      | 22.01      | 21.16      | 21.03      | 21.06      |
| Band / BW | RB Size | RB Offset | QPSK       |            |            | 16QAM      |            |            |
|           |         |           | Low CH     | Mid CH     | High CH    | Low CH     | Mid CH     | High CH    |
|           |         |           | 19975      | 20175      | 20375      | 19975      | 20175      | 20375      |
|           |         |           | 1712.5 MHz | 1732.5 MHz | 1752.5 MHz | 1712.5 MHz | 1732.5 MHz | 1752.5 MHz |
| 4 / 5M    | 1       | 0         | 23.21      | 23.01      | 23.04      | 22.19      | 21.99      | 22.02      |
|           | 1       | 12        | 23.13      | 22.93      | 22.96      | 22.11      | 21.91      | 21.94      |
|           | 1       | 24        | 23.09      | 22.89      | 22.92      | 22.07      | 21.87      | 21.90      |
|           | 12      | 0         | 22.25      | 22.19      | 22.22      | 21.30      | 21.24      | 21.27      |
|           | 12      | 6         | 22.23      | 22.08      | 22.11      | 21.28      | 21.13      | 21.16      |
|           | 12      | 13        | 22.21      | 22.01      | 22.04      | 21.26      | 21.06      | 21.09      |
|           | 25      | 0         | 22.24      | 22.11      | 22.14      | 21.29      | 21.16      | 21.19      |

| Band / BW | RB Size | RB Offset | QPSK       |            |            | 16QAM      |            |            |
|-----------|---------|-----------|------------|------------|------------|------------|------------|------------|
|           |         |           | Low CH     | Mid CH     | High CH    | Low CH     | Mid CH     | High CH    |
|           |         |           | 20000      | 20175      | 20350      | 20000      | 20175      | 20350      |
|           |         |           | 1715 MHz   | 1732.5 MHz | 1750 MHz   | 1715 MHz   | 1732.5 MHz | 1750 MHz   |
| 4 / 10M   | 1       | 0         | 23.32      | 23.12      | 23.15      | 22.30      | 22.10      | 22.13      |
|           | 1       | 24        | 23.24      | 23.04      | 23.07      | 22.22      | 22.02      | 22.05      |
|           | 1       | 49        | 23.20      | 23.00      | 23.03      | 22.18      | 21.98      | 22.01      |
|           | 25      | 0         | 22.36      | 22.30      | 22.33      | 21.41      | 21.35      | 21.38      |
|           | 25      | 12        | 22.34      | 22.19      | 22.22      | 21.39      | 21.24      | 21.27      |
|           | 25      | 25        | 22.32      | 22.12      | 22.15      | 21.37      | 21.17      | 21.20      |
|           | 50      | 0         | 22.35      | 22.22      | 22.25      | 21.40      | 21.27      | 21.30      |
| Band / BW | RB Size | RB Offset | QPSK       |            |            | 16QAM      |            |            |
|           |         |           | Low CH     | Mid CH     | High CH    | Low CH     | Mid CH     | High CH    |
|           |         |           | 20025      | 20175      | 20325      | 20025      | 20175      | 20325      |
|           |         |           | 1717.5 MHz | 1732.5 MHz | 1747.5 MHz | 1717.5 MHz | 1732.5 MHz | 1747.5 MHz |
| 4 / 15M   | 1       | 0         | 23.41      | 23.21      | 23.24      | 22.39      | 22.19      | 22.22      |
|           | 1       | 37        | 23.33      | 23.13      | 23.16      | 22.31      | 22.11      | 22.14      |
|           | 1       | 74        | 23.29      | 23.09      | 23.12      | 22.27      | 22.07      | 22.10      |
|           | 36      | 0         | 22.45      | 22.39      | 22.42      | 21.50      | 21.44      | 21.47      |
|           | 36      | 19        | 22.43      | 22.28      | 22.31      | 21.48      | 21.33      | 21.36      |
|           | 36      | 39        | 22.41      | 22.21      | 22.24      | 21.46      | 21.26      | 21.29      |
|           | 75      | 0         | 22.44      | 22.31      | 22.34      | 21.49      | 21.36      | 21.39      |
| Band / BW | RB Size | RB Offset | QPSK       |            |            | 16QAM      |            |            |
|           |         |           | Low CH     | Mid CH     | High CH    | Low CH     | Mid CH     | High CH    |
|           |         |           | 20050      | 20175      | 20300      | 20050      | 20175      | 20300      |
|           |         |           | 1720 MHz   | 1732.5 MHz | 1745 MHz   | 1720 MHz   | 1732.5 MHz | 1745 MHz   |
| 4 / 20M   | 1       | 0         | 23.46      | 23.33      | 23.36      | 22.51      | 22.31      | 22.34      |
|           | 1       | 50        | 23.45      | 23.25      | 23.28      | 22.43      | 22.23      | 22.26      |
|           | 1       | 99        | 23.41      | 23.21      | 23.24      | 22.39      | 22.19      | 22.22      |
|           | 50      | 0         | 22.50      | 22.44      | 22.47      | 21.55      | 21.49      | 21.52      |
|           | 50      | 25        | 22.48      | 22.33      | 22.36      | 21.53      | 21.38      | 21.41      |
|           | 50      | 50        | 22.46      | 22.26      | 22.29      | 21.51      | 21.31      | 21.34      |
|           | 100     | 0         | 22.49      | 22.36      | 22.39      | 21.54      | 21.41      | 21.44      |

| Band / BW | RB Size | RB Offset | QPSK      |           |           | 16QAM     |           |           |
|-----------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|           |         |           | Low CH    | Mid CH    | High CH   | Low CH    | Mid CH    | High CH   |
|           |         |           | 23017     | 23095     | 23173     | 23017     | 23095     | 23173     |
|           |         |           | 699.7 MHz | 707.5 MHz | 715.3 MHz | 699.7 MHz | 707.5 MHz | 715.3 MHz |
| 12 / 1.4M | 1       | 0         | 22.25     | 22.41     | 22.55     | 21.22     | 21.38     | 21.52     |
|           | 1       | 2         | 22.46     | 22.62     | 22.76     | 21.43     | 21.59     | 21.73     |
|           | 1       | 5         | 22.41     | 22.57     | 22.71     | 21.38     | 21.54     | 21.68     |
|           | 3       | 0         | 21.42     | 21.58     | 21.72     | 20.39     | 20.55     | 20.69     |
|           | 3       | 1         | 21.45     | 21.61     | 21.75     | 20.42     | 20.58     | 20.72     |
|           | 3       | 3         | 21.41     | 21.57     | 21.71     | 20.38     | 20.54     | 20.68     |
|           | 6       | 0         | 21.31     | 21.47     | 21.61     | 20.28     | 20.44     | 20.58     |
| Band / BW | RB Size | RB Offset | QPSK      |           |           | 16QAM     |           |           |
|           |         |           | Low CH    | Mid CH    | High CH   | Low CH    | Mid CH    | High CH   |
|           |         |           | 23025     | 23095     | 23165     | 23025     | 23095     | 23165     |
|           |         |           | 700.5 MHz | 707.5 MHz | 714.5 MHz | 700.5 MHz | 707.5 MHz | 714.5 MHz |
| 12 / 3M   | 1       | 0         | 22.38     | 22.54     | 22.68     | 21.35     | 21.51     | 21.65     |
|           | 1       | 7         | 22.59     | 22.75     | 22.89     | 21.56     | 21.72     | 21.86     |
|           | 1       | 14        | 22.54     | 22.70     | 22.84     | 21.51     | 21.67     | 21.81     |
|           | 8       | 0         | 21.55     | 21.71     | 21.85     | 20.52     | 20.68     | 20.82     |
|           | 8       | 3         | 21.58     | 21.74     | 21.88     | 20.55     | 20.71     | 20.85     |
|           | 8       | 7         | 21.54     | 21.70     | 21.84     | 20.51     | 20.67     | 20.81     |
|           | 15      | 0         | 21.44     | 21.60     | 21.74     | 20.41     | 20.57     | 20.71     |
| Band / BW | RB Size | RB Offset | QPSK      |           |           | 16QAM     |           |           |
|           |         |           | Low CH    | Mid CH    | High CH   | Low CH    | Mid CH    | High CH   |
|           |         |           | 23035     | 23095     | 23155     | 23035     | 23095     | 23155     |
|           |         |           | 701.5 MHz | 707.5 MHz | 713.5 MHz | 701.5 MHz | 707.5 MHz | 713.5 MHz |
| 12 / 5M   | 1       | 0         | 22.47     | 22.63     | 22.77     | 21.44     | 21.60     | 21.74     |
|           | 1       | 12        | 22.68     | 22.84     | 22.98     | 21.65     | 21.81     | 21.95     |
|           | 1       | 24        | 22.63     | 22.79     | 22.93     | 21.60     | 21.76     | 21.90     |
|           | 12      | 0         | 21.64     | 21.80     | 21.94     | 20.61     | 20.77     | 20.91     |
|           | 12      | 6         | 21.67     | 21.83     | 21.97     | 20.64     | 20.80     | 20.94     |
|           | 12      | 13        | 21.63     | 21.79     | 21.93     | 20.60     | 20.76     | 20.90     |
|           | 25      | 0         | 21.53     | 21.69     | 21.83     | 20.50     | 20.66     | 20.80     |
| Band / BW | RB Size | RB Offset | QPSK      |           |           | 16QAM     |           |           |
|           |         |           | Low CH    | Mid CH    | High CH   | Low CH    | Mid CH    | High CH   |
|           |         |           | 23060     | 23095     | 23130     | 23060     | 23095     | 23130     |
|           |         |           | 704 MHz   | 707.5 MHz | 711 MHz   | 704 MHz   | 707.5 MHz | 711 MHz   |
| 12 / 10M  | 1       | 0         | 22.59     | 22.75     | 22.89     | 21.56     | 21.72     | 21.86     |
|           | 1       | 24        | 22.80     | 22.96     | 23.10     | 21.77     | 21.93     | 22.07     |
|           | 1       | 49        | 22.75     | 22.91     | 23.05     | 21.72     | 21.88     | 22.02     |
|           | 25      | 0         | 21.76     | 21.92     | 22.06     | 20.73     | 20.89     | 21.03     |
|           | 25      | 12        | 21.79     | 21.95     | 22.09     | 20.76     | 20.92     | 21.06     |
|           | 25      | 25        | 21.75     | 21.91     | 22.05     | 20.72     | 20.88     | 21.02     |
|           | 50      | 0         | 21.65     | 21.81     | 21.95     | 20.62     | 20.78     | 20.92     |



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| Band / BW | RB Size | RB Offset | QPSK       |            |          |            |            | 16QAM      |            |          |            |            |
|-----------|---------|-----------|------------|------------|----------|------------|------------|------------|------------|----------|------------|------------|
|           |         |           | L-CH       | M-CH       | M-CH     | M-CH       | H-CH       | L-CH       | M-CH       | M-CH     | M-CH       | H-CH       |
|           |         |           | 39675      | 40148      | 40620    | 41093      | 41565      | 39675      | 40148      | 40620    | 41093      | 41565      |
|           |         |           | 2498.5 MHz | 2545.8 MHz | 2593 MHz | 2640.3 MHz | 2687.5 MHz | 2498.5 MHz | 2545.8 MHz | 2593 MHz | 2640.3 MHz | 2687.5 MHz |
| 41 / 5M   | 1       | 0         | 21.71      | 21.78      | 21.84    | 21.30      | 21.29      | 20.69      | 20.76      | 20.82    | 20.28      | 20.27      |
|           | 1       | 12        | 21.67      | 21.74      | 21.80    | 21.26      | 21.25      | 20.65      | 20.72      | 20.78    | 20.24      | 20.23      |
|           | 1       | 24        | 21.57      | 21.64      | 21.70    | 21.16      | 21.15      | 20.55      | 20.62      | 20.68    | 20.14      | 20.13      |
|           | 12      | 0         | 20.79      | 20.86      | 20.92    | 20.38      | 20.37      | 19.77      | 19.84      | 19.90    | 19.36      | 19.35      |
|           | 12      | 6         | 20.72      | 20.79      | 20.85    | 20.31      | 20.30      | 19.70      | 19.77      | 19.83    | 19.29      | 19.28      |
|           | 12      | 13        | 20.65      | 20.72      | 20.78    | 20.24      | 20.23      | 19.63      | 19.70      | 19.76    | 19.22      | 19.21      |
|           | 25      | 0         | 20.73      | 20.80      | 20.86    | 20.32      | 20.31      | 19.71      | 19.78      | 19.84    | 19.30      | 19.29      |
| Band / BW | RB Size | RB Offset | QPSK       |            |          |            |            | 16QAM      |            |          |            |            |
|           |         |           | L-CH       | M-CH       | M-CH     | M-CH       | H-CH       | L-CH       | M-CH       | M-CH     | M-CH       | H-CH       |
|           |         |           | 39700      | 40160      | 40620    | 41080      | 41540      | 39700      | 40160      | 40620    | 41080      | 41540      |
|           |         |           | 2501 MHz   | 2547 MHz   | 2593 MHz | 2639 MHz   | 2685 MHz   | 2501 MHz   | 2547 MHz   | 2593 MHz | 2639 MHz   | 2685 MHz   |
| 41 / 10M  | 1       | 0         | 21.82      | 21.89      | 21.95    | 21.41      | 21.40      | 20.80      | 20.87      | 20.93    | 20.39      | 20.38      |
|           | 1       | 24        | 21.78      | 21.85      | 21.91    | 21.37      | 21.36      | 20.76      | 20.83      | 20.89    | 20.35      | 20.34      |
|           | 1       | 49        | 21.68      | 21.75      | 21.81    | 21.27      | 21.26      | 20.66      | 20.73      | 20.79    | 20.25      | 20.24      |
|           | 25      | 0         | 20.90      | 20.97      | 21.03    | 20.49      | 20.48      | 19.88      | 19.95      | 20.01    | 19.47      | 19.46      |
|           | 25      | 12        | 20.83      | 20.90      | 20.96    | 20.42      | 20.41      | 19.81      | 19.88      | 19.94    | 19.40      | 19.39      |
|           | 25      | 25        | 20.76      | 20.83      | 20.89    | 20.35      | 20.34      | 19.74      | 19.81      | 19.87    | 19.33      | 19.32      |
|           | 50      | 0         | 20.84      | 20.91      | 20.97    | 20.43      | 20.42      | 19.82      | 19.89      | 19.95    | 19.41      | 19.40      |
| Band / BW | RB Size | RB Offset | QPSK       |            |          |            |            | 16QAM      |            |          |            |            |
|           |         |           | L-CH       | M-CH       | M-CH     | M-CH       | H-CH       | L-CH       | M-CH       | M-CH     | M-CH       | H-CH       |
|           |         |           | 39725      | 40173      | 40620    | 41068      | 41515      | 39725      | 40173      | 40620    | 41068      | 41515      |
|           |         |           | 2503.5 MHz | 2548.3 MHz | 2593 MHz | 2637.8 MHz | 2682.5 MHz | 2503.5 MHz | 2548.3 MHz | 2593 MHz | 2637.8 MHz | 2682.5 MHz |
| 41 / 15M  | 1       | 0         | 21.92      | 21.99      | 22.05    | 21.51      | 21.50      | 20.90      | 20.97      | 21.03    | 20.49      | 20.48      |
|           | 1       | 37        | 21.88      | 21.95      | 22.01    | 21.47      | 21.46      | 20.86      | 20.93      | 20.99    | 20.45      | 20.44      |
|           | 1       | 74        | 21.78      | 21.85      | 21.91    | 21.37      | 21.36      | 20.76      | 20.83      | 20.89    | 20.35      | 20.34      |
|           | 36      | 0         | 21.00      | 21.07      | 21.13    | 20.59      | 20.58      | 19.98      | 20.05      | 20.11    | 19.57      | 19.56      |
|           | 36      | 19        | 20.93      | 21.00      | 21.06    | 20.52      | 20.51      | 19.91      | 19.98      | 20.04    | 19.50      | 19.49      |
|           | 36      | 39        | 20.86      | 20.93      | 20.99    | 20.45      | 20.44      | 19.84      | 19.91      | 19.97    | 19.43      | 19.42      |
|           | 75      | 0         | 20.94      | 21.01      | 21.07    | 20.53      | 20.52      | 19.92      | 19.99      | 20.05    | 19.51      | 19.50      |
| Band / BW | RB Size | RB Offset | QPSK       |            |          |            |            | 16QAM      |            |          |            |            |
|           |         |           | L-CH       | M-CH       | M-CH     | M-CH       | H-CH       | L-CH       | M-CH       | M-CH     | M-CH       | H-CH       |
|           |         |           | 39750      | 40185      | 40620    | 41055      | 41490      | 39750      | 40185      | 40620    | 41055      | 41490      |
|           |         |           | 2506 MHz   | 2549.5 MHz | 2593 MHz | 2636.5 MHz | 2680 MHz   | 2506 MHz   | 2549.5 MHz | 2593 MHz | 2636.5 MHz | 2680 MHz   |
| 41 / 20M  | 1       | 0         | 22.04      | 22.11      | 22.17    | 21.63      | 21.62      | 21.02      | 21.09      | 21.15    | 20.61      | 20.60      |
|           | 1       | 50        | 22.00      | 22.07      | 22.13    | 21.59      | 21.58      | 20.98      | 21.05      | 21.11    | 20.57      | 20.56      |
|           | 1       | 99        | 21.90      | 21.97      | 22.03    | 21.49      | 21.48      | 20.88      | 20.95      | 21.01    | 20.47      | 20.46      |
|           | 50      | 0         | 21.12      | 21.19      | 21.25    | 20.71      | 20.70      | 20.10      | 20.17      | 20.23    | 19.69      | 19.68      |
|           | 50      | 25        | 21.05      | 21.12      | 21.18    | 20.64      | 20.63      | 20.03      | 20.10      | 20.16    | 19.62      | 19.61      |
|           | 50      | 50        | 20.98      | 21.05      | 21.11    | 20.57      | 20.56      | 19.96      | 20.03      | 20.09    | 19.55      | 19.54      |
|           | 100     | 0         | 21.06      | 21.13      | 21.19    | 20.65      | 20.64      | 20.04      | 20.11      | 20.17    | 19.63      | 19.62      |

EIRP Power (dBm)

LTE Band 4

Channel Bandwidth: 1.4MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 19957 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1710.70     | -23.00           | 20.60                 | -4.90                  | 15.70      | 30.00       | -14.30      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1710.70     | -21.20           | 22.20                 | -4.90                  | 17.30      | 30.00       | -12.70      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20175 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -22.40           | 21.50                 | -4.90                  | 16.60      | 30.00       | -13.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -20.90           | 22.90                 | -4.90                  | 18.00      | 30.00       | -12.00      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20393 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1754.30     | -19.20           | 25.10                 | -5.00                  | 20.10      | 30.00       | -9.90       |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1754.30     | -18.40           | 26.00                 | -5.00                  | 21.00      | 30.00       | -9.00       |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

### Channel Bandwidth: 3MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 19965 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1711.50     | -19.28           | 18.78                 | 0.68                   | 19.46      | 30.00       | -10.54      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1711.50     | -18.93           | 18.92                 | 0.68                   | 19.60      | 30.00       | -10.40      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20175 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -18.98           | 19.45                 | 0.59                   | 20.04      | 30.00       | -9.96       |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -17.75           | 20.61                 | 0.59                   | 21.20      | 30.00       | -8.80       |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20385 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1753.50     | -19.73           | 19.07                 | 0.50                   | 19.57      | 30.00       | -10.43      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1753.50     | -16.02           | 22.85                 | 0.50                   | 23.35      | 30.00       | -6.65       |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

### Channel Bandwidth: 5MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 19975 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1712.50     | -19.90           | 18.17                 | 0.68                   | 18.85      | 30.00       | -11.15      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1712.50     | -18.45           | 19.42                 | 0.68                   | 20.10      | 30.00       | -9.90       |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20175 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -19.48           | 18.95                 | 0.59                   | 19.54      | 30.00       | -10.46      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -17.40           | 20.96                 | 0.59                   | 21.55      | 30.00       | -8.45       |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20375 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1752.50     | -18.70           | 20.09                 | 0.50                   | 20.59      | 30.00       | -9.41       |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1752.50     | -16.54           | 22.31                 | 0.50                   | 22.81      | 30.00       | -7.19       |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

### Channel Bandwidth: 10MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20000 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1715.00     | -20.04           | 18.07                 | 0.67                   | 18.74      | 30.00       | -11.26      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1715.00     | -19.41           | 18.52                 | 0.67                   | 19.19      | 30.00       | -10.81      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20175 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -18.71           | 19.72                 | 0.59                   | 20.31      | 30.00       | -9.69       |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -18.51           | 19.85                 | 0.59                   | 20.44      | 30.00       | -9.56       |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20350 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1750.00     | -18.77           | 19.97                 | 0.52                   | 20.49      | 30.00       | -9.51       |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1750.00     | -18.13           | 20.65                 | 0.52                   | 21.17      | 30.00       | -8.83       |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

## Channel Bandwidth: 15MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20025 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1717.50     | -19.56           | 18.60                 | 0.66                   | 19.26      | 30.00       | -10.74      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1717.50     | -19.04           | 18.95                 | 0.66                   | 19.61      | 30.00       | -10.39      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20175 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -18.53           | 19.90                 | 0.59                   | 20.49      | 30.00       | -9.51       |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -16.19           | 22.17                 | 0.59                   | 22.76      | 30.00       | -7.24       |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20325 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1747.50     | -21.02           | 17.67                 | 0.53                   | 18.20      | 30.00       | -11.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1747.50     | -20.79           | 17.93                 | 0.53                   | 18.46      | 30.00       | -11.54      |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

## Channel Bandwidth: 20MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20050 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1720.00     | -20.49           | 17.71                 | 0.65                   | 18.36      | 30.00       | -11.64      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1720.00     | -20.02           | 18.03                 | 0.65                   | 18.68      | 30.00       | -11.32      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20175 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -20.83           | 17.60                 | 0.59                   | 18.19      | 30.00       | -11.81      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1732.50     | -20.42           | 17.94                 | 0.59                   | 18.53      | 30.00       | -11.47      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 20300 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1745.00     | -20.84           | 17.81                 | 0.54                   | 18.35      | 30.00       | -11.65      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1745.00     | -20.88           | 17.78                 | 0.54                   | 18.32      | 30.00       | -11.68      |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

## LTE Band 12

Channel Bandwidth: 1.4MHz

|                                                     |             |                  |                       |                        |              |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|--------------|-------------|-------------|
| MODE                                                |             | TX channel 23017 |                       |                        |              |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |              |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm)   | Limit (dBm) | Margin (dB) |
| 1                                                   | 699.70      | -7.63            | 32.71                 | -3.74                  | <b>28.97</b> | 34.77       | -5.80       |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |              |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm)   | Limit (dBm) | Margin (dB) |
| 1                                                   | 699.70      | -13.27           | 26.17                 | -3.74                  | 22.43        | 34.77       | -12.34      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 23095 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 707.50      | -8.91            | 31.43                 | -3.74                  | 27.69      | 34.77       | -7.08       |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 707.50      | -20.03           | 19.41                 | -3.74                  | 15.67      | 34.77       | -19.10      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 23173 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 715.30      | -7.77            | 32.57                 | -3.74                  | 28.83      | 34.77       | -5.94       |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 715.30      | -18.30           | 21.14                 | -3.74                  | 17.40      | 34.77       | -17.37      |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

### Channel Bandwidth: 3MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 23025 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 700.50      | -7.24            | 17.31                 | 3.42                   | 20.73      | 34.77       | -14.04      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 700.50      | -14.25           | 13.33                 | 3.42                   | 16.75      | 34.77       | -18.02      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 23095 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 707.50      | -9.28            | 15.46                 | 3.50                   | 18.96      | 34.77       | -15.81      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 707.50      | -16.20           | 11.50                 | 3.50                   | 15.00      | 34.77       | -19.77      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 23165 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 714.50      | -7.07            | 17.90                 | 3.50                   | 21.40      | 34.77       | -13.37      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 714.50      | -15.17           | 12.51                 | 3.50                   | 16.01      | 34.77       | -18.76      |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

## Channel Bandwidth: 5MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 23035 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 701.50      | -7.67            | 16.86                 | 3.43                   | 20.29      | 34.77       | -14.48      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 701.50      | -13.76           | 13.82                 | 3.43                   | 17.25      | 34.77       | -17.52      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 23095 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 707.50      | -9.50            | 15.24                 | 3.50                   | 18.74      | 34.77       | -16.03      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 707.50      | -16.51           | 11.19                 | 3.50                   | 14.69      | 34.77       | -20.08      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 23155 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 713.50      | -7.27            | 17.74                 | 3.49                   | 21.23      | 34.77       | -13.54      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 713.50      | -14.54           | 13.20                 | 3.49                   | 16.69      | 34.77       | -18.08      |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

## Channel Bandwidth: 10MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 23060 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 704.00      | -7.70            | 16.89                 | 3.52                   | 20.41      | 34.77       | -14.36      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 704.00      | -14.23           | 13.41                 | 3.52                   | 16.93      | 34.77       | -17.84      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 23095 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 707.50      | -9.37            | 15.37                 | 3.50                   | 18.87      | 34.77       | -15.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 707.50      | -15.81           | 11.89                 | 3.50                   | 15.39      | 34.77       | -19.38      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 23130 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 711.00      | -9.29            | 15.64                 | 3.47                   | 19.11      | 34.77       | -15.66      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 711.00      | -15.97           | 11.66                 | 3.47                   | 15.13      | 34.77       | -19.64      |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

# LTE Band 41

Channel Bandwidth: 5MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 39675 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2498.50     | -20.44           | 21.03                 | 0.17                   | 21.20      | 33.00       | -11.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2498.50     | -23.88           | 19.63                 | 0.17                   | 19.80      | 33.00       | -13.20      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 40148 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2545.80     | -20.50           | 21.30                 | 0.20                   | 21.50      | 33.00       | -11.50      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2545.80     | -24.10           | 19.50                 | 0.20                   | 19.70      | 33.00       | -13.30      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 40620 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2593.00     | -20.58           | 21.63                 | 0.20                   | 21.83      | 33.00       | -11.17      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2593.00     | -24.55           | 19.24                 | 0.20                   | 19.44      | 33.00       | -13.56      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 41093 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2640.30     | -20.70           | 21.80                 | 0.30                   | 22.10      | 33.00       | -10.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2640.30     | -24.80           | 18.90                 | 0.30                   | 19.20      | 33.00       | -13.80      |

|                                                     |             |                  |                       |                        |              |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|--------------|-------------|-------------|
| MODE                                                |             | TX channel 41565 |                       |                        |              |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |              |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm)   | Limit (dBm) | Margin (dB) |
| 1                                                   | 2687.50     | -20.75           | 22.23                 | 0.26                   | <b>22.49</b> | 33.00       | -10.51      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |              |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm)   | Limit (dBm) | Margin (dB) |
| 1                                                   | 2687.50     | -25.96           | 17.81                 | 0.26                   | 18.07        | 33.00       | -14.93      |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

# Channel Bandwidth: 10MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 39700 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2501.00     | -21.30           | 20.18                 | 0.17                   | 20.35      | 33.00       | -12.65      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2501.00     | -22.70           | 20.83                 | 0.17                   | 21.00      | 33.00       | -12.00      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 40160 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2547.00     | -20.10           | 21.70                 | 0.20                   | 21.90      | 33.00       | -11.10      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2547.00     | -23.00           | 20.60                 | 0.20                   | 20.80      | 33.00       | -12.20      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 40620 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2593.00     | -20.02           | 22.19                 | 0.20                   | 22.39      | 33.00       | -10.61      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2593.00     | -22.42           | 21.37                 | 0.20                   | 21.57      | 33.00       | -11.43      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 41080 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2639.00     | -20.10           | 22.40                 | 0.30                   | 22.70      | 33.00       | -10.30      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2639.00     | -23.00           | 20.70                 | 0.30                   | 21.00      | 33.00       | -12.00      |

|                                                     |             |                  |                       |                        |              |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|--------------|-------------|-------------|
| MODE                                                |             | TX channel 41540 |                       |                        |              |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |              |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm)   | Limit (dBm) | Margin (dB) |
| 1                                                   | 2685.00     | -20.18           | 22.79                 | 0.25                   | <b>23.04</b> | 33.00       | -9.96       |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |              |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm)   | Limit (dBm) | Margin (dB) |
| 1                                                   | 2685.00     | -23.11           | 20.67                 | 0.25                   | 20.92        | 33.00       | -12.08      |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

# Channel Bandwidth: 15MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 39725 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2503.50     | -26.17           | 15.33                 | 0.17                   | 15.50      | 33.00       | -17.50      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2503.50     | -22.53           | 21.00                 | 0.17                   | 21.17      | 33.00       | -11.83      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 40173 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2548.30     | -26.40           | 15.40                 | 0.20                   | 15.60      | 33.00       | -17.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2548.30     | -22.30           | 21.30                 | 0.20                   | 21.50      | 33.00       | -11.50      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 40620 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2593.00     | -26.53           | 15.68                 | 0.20                   | 15.88      | 33.00       | -17.12      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2593.00     | -22.17           | 21.62                 | 0.20                   | 21.82      | 33.00       | -11.18      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 41068 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2637.80     | -26.20           | 16.40                 | 0.20                   | 16.60      | 33.00       | -16.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2637.80     | -22.40           | 21.40                 | 0.20                   | 21.60      | 33.00       | -11.40      |

|                                                     |             |                  |                       |                        |              |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|--------------|-------------|-------------|
| MODE                                                |             | TX channel 41515 |                       |                        |              |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |              |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm)   | Limit (dBm) | Margin (dB) |
| 1                                                   | 2682.50     | -26.38           | 16.56                 | 0.26                   | 16.82        | 33.00       | -16.18      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |              |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm)   | Limit (dBm) | Margin (dB) |
| 1                                                   | 2682.50     | -22.14           | 21.63                 | 0.26                   | <b>21.89</b> | 33.00       | -11.11      |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

# Channel Bandwidth: 20MHz

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 39750 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2506.00     | -25.31           | 16.21                 | 0.17                   | 16.38      | 33.00       | -16.62      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2506.00     | -23.23           | 20.31                 | 0.17                   | 20.48      | 33.00       | -12.52      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 40185 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2549.50     | -25.40           | 16.40                 | 0.20                   | 16.60      | 33.00       | -16.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2549.50     | -23.60           | 20.10                 | 0.20                   | 20.30      | 33.00       | -12.70      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 40620 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2593.00     | -25.48           | 16.73                 | 0.20                   | 16.93      | 33.00       | -16.07      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2593.00     | -23.78           | 20.01                 | 0.20                   | 20.21      | 33.00       | -12.79      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 41055 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2636.50     | -25.70           | 16.90                 | 0.20                   | 17.10      | 33.00       | -15.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2636.50     | -24.40           | 19.40                 | 0.20                   | 19.60      | 33.00       | -13.40      |

|                                                     |             |                  |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|------------------|-----------------------|------------------------|------------|-------------|-------------|
| MODE                                                |             | TX channel 41490 |                       |                        |            |             |             |
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2680.00     | -25.73           | 17.19                 | 0.25                   | 17.44      | 33.00       | -15.56      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 2680.00     | -24.97           | 18.81                 | 0.25                   | 19.06      | 33.00       | -13.94      |

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

## 4.2 Frequency Stability Measurement

### 4.2.1 Limits of Frequency Stability Measurement

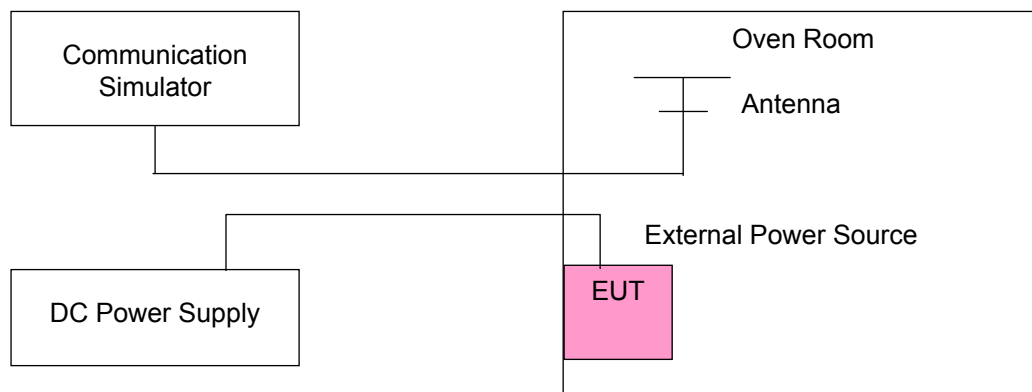
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

### 4.2.2 Test Procedure

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the  $\pm 0.5$  °C during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

**Note:** The frequency error was recorded frequency error from the communication simulator.

### 4.2.3 Test Setup



#### 4.2.4 Test Results

##### Frequency Error vs. Voltage

| Voltage<br>(Volts) | Frequency Error (ppm) |          |          |           |           |           |             |          |          |           |             |           |           |           | Limit<br>(ppm) |
|--------------------|-----------------------|----------|----------|-----------|-----------|-----------|-------------|----------|----------|-----------|-------------|-----------|-----------|-----------|----------------|
|                    | LTE Band 4            |          |          |           |           |           | LTE Band 12 |          |          |           | LTE Band 41 |           |           |           |                |
|                    | 1.4<br>MHz            | 3<br>MHz | 5<br>MHz | 10<br>MHz | 15<br>MHz | 20<br>MHz | 1.4<br>MHz  | 3<br>MHz | 5<br>MHz | 10<br>MHz | 5<br>MHz    | 10<br>MHz | 15<br>MHz | 20<br>MHz |                |
| 4.35               | -0.010                | -0.009   | -0.009   | -0.006    | -0.009    | -0.010    | -0.024      | -0.021   | -0.020   | -0.020    | -0.005      | -0.005    | -0.006    | -0.006    | 2.5            |
| 3.8                | -0.009                | -0.008   | -0.009   | -0.006    | -0.008    | -0.009    | -0.023      | -0.016   | -0.018   | -0.021    | -0.005      | -0.005    | -0.005    | -0.005    | 2.5            |
| 3.5                | -0.009                | -0.009   | -0.008   | -0.008    | -0.009    | -0.010    | -0.018      | -0.018   | -0.020   | -0.018    | -0.004      | -0.004    | -0.005    | -0.006    | 2.5            |

Note: The applicant defined the normal working voltage is from 3.5Vdc to 4.35Vdc.

##### Frequency Error vs. Temperature

| Voltage<br>(Volts) | Frequency Error (ppm) |          |          |           |           |           |             |          |          |           |             |           |           |           | Limit<br>(ppm) |
|--------------------|-----------------------|----------|----------|-----------|-----------|-----------|-------------|----------|----------|-----------|-------------|-----------|-----------|-----------|----------------|
|                    | LTE Band 4            |          |          |           |           |           | LTE Band 12 |          |          |           | LTE Band 41 |           |           |           |                |
|                    | 1.4<br>MHz            | 3<br>MHz | 5<br>MHz | 10<br>MHz | 15<br>MHz | 20<br>MHz | 1.4<br>MHz  | 3<br>MHz | 5<br>MHz | 10<br>MHz | 5<br>MHz    | 10<br>MHz | 15<br>MHz | 20<br>MHz |                |
| 55                 | -0.017                | -0.015   | -0.017   | -0.016    | -0.015    | -0.014    | -0.042      | -0.031   | -0.030   | -0.038    | -0.011      | -0.011    | -0.011    | -0.010    | 2.5            |
| 50                 | -0.020                | -0.015   | -0.016   | -0.015    | -0.016    | -0.014    | -0.044      | -0.037   | -0.031   | -0.037    | -0.012      | -0.012    | -0.011    | -0.010    | 2.5            |
| 40                 | -0.015                | -0.014   | -0.015   | -0.014    | -0.012    | -0.015    | -0.044      | -0.034   | -0.028   | -0.030    | -0.009      | -0.009    | -0.011    | -0.009    | 2.5            |
| 30                 | -0.014                | -0.010   | -0.013   | -0.009    | -0.010    | -0.012    | -0.034      | -0.021   | -0.020   | -0.027    | -0.006      | -0.006    | -0.008    | -0.007    | 2.5            |
| 20                 | -0.009                | -0.008   | -0.009   | -0.006    | -0.008    | -0.009    | -0.023      | -0.016   | -0.018   | -0.021    | -0.005      | -0.005    | -0.005    | -0.005    | 2.5            |
| 10                 | -0.012                | -0.012   | -0.012   | -0.010    | -0.014    | -0.014    | -0.027      | -0.023   | -0.021   | -0.024    | -0.007      | -0.007    | -0.007    | -0.008    | 2.5            |
| 0                  | -0.017                | -0.016   | -0.016   | -0.014    | -0.017    | -0.014    | -0.037      | -0.030   | -0.041   | -0.033    | -0.011      | -0.011    | -0.009    | -0.007    | 2.5            |
| -10                | -0.020                | -0.019   | -0.020   | -0.018    | -0.020    | -0.018    | -0.048      | -0.040   | -0.038   | -0.041    | -0.013      | -0.013    | -0.011    | -0.011    | 2.5            |
| -20                | -0.019                | -0.021   | -0.018   | -0.020    | -0.021    | -0.019    | -0.052      | -0.048   | -0.042   | -0.049    | -0.012      | -0.012    | -0.012    | -0.012    | 2.5            |

### 4.3 Emission Bandwidth Measurement

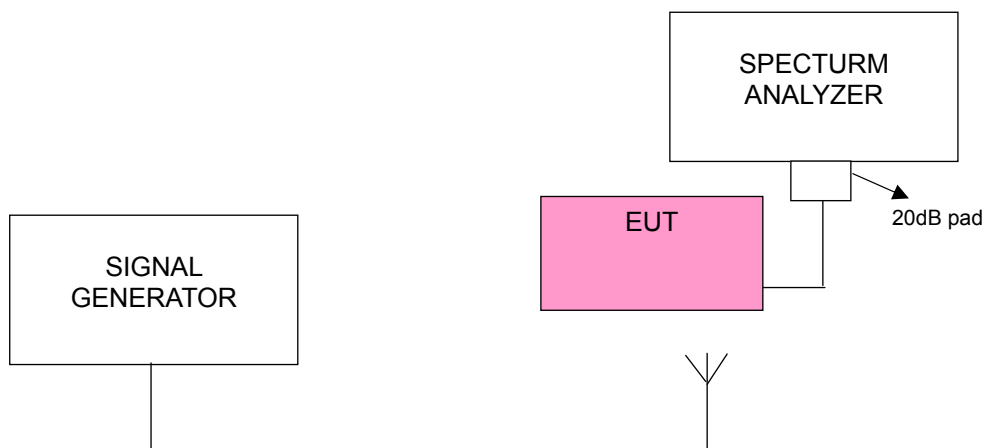
#### 4.3.1 Limits of Emission Bandwidth Measurement

According to FCC 27.53(m)(6) specified that emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power.

#### 4.3.2 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW = 150kHz and VBW = 430kHz (Channel Bandwidth: 1.4MHz), RBW = 100kHz and VBW = 300kHz (Channel Bandwidth: 3MHz and 5MHz), RBW = 200kHz and VBW = 620kHz (Channel Bandwidth: 10MHz and 15MHz) and RBW = 430kHz and VBW = 1.2MHz (Channel Bandwidth: 20MHz). The 26dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 26dB.

#### 4.3.3 Test Setup



#### 4.3.4 Test Result

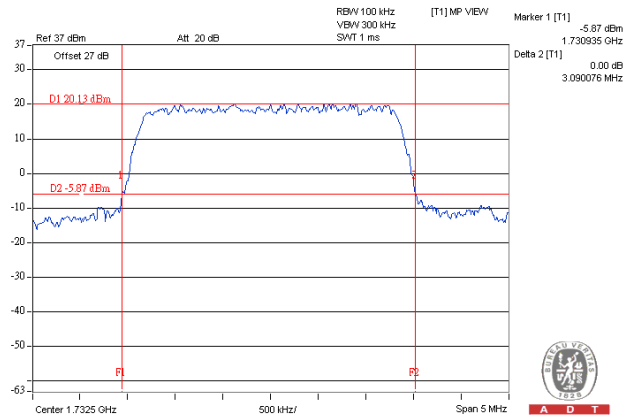
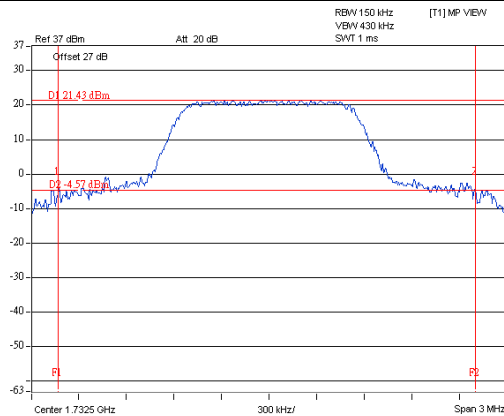
| LTE Band 4                |                 |                        |       |                          |       |
|---------------------------|-----------------|------------------------|-------|--------------------------|-------|
| Channel Bandwidth: 1.4MHz |                 |                        |       |                          |       |
| Channel                   | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                           |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 19957                     | 1710.7          | 1.56                   | 1.53  | 1.09                     | 1.10  |
| 20175                     | 1732.5          | 2.28                   | 2.64  | 1.11                     | 1.11  |
| 20393                     | 1754.3          | 1.64                   | 1.64  | 1.10                     | 1.11  |
| Channel Bandwidth: 3MHz   |                 |                        |       |                          |       |
| Channel                   | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                           |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 19965                     | 1711.5          | 3.06                   | 3.07  | 2.69                     | 2.71  |
| 20175                     | 1732.5          | 3.09                   | 3.08  | 2.69                     | 2.69  |
| 20385                     | 1753.5          | 3.07                   | 3.09  | 2.70                     | 2.69  |
| Channel Bandwidth: 5MHz   |                 |                        |       |                          |       |
| Channel                   | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                           |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 19975                     | 1712.5          | 4.99                   | 5.08  | 4.48                     | 4.47  |
| 20175                     | 1732.5          | 5.09                   | 5.06  | 4.48                     | 4.47  |
| 20375                     | 1752.5          | 5.03                   | 5.02  | 4.47                     | 4.48  |
| Channel Bandwidth: 10MHz  |                 |                        |       |                          |       |
| Channel                   | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                           |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 20000                     | 1715            | 9.95                   | 9.88  | 8.93                     | 8.93  |
| 20175                     | 1732.5          | 9.82                   | 9.92  | 8.93                     | 8.93  |
| 20350                     | 1750            | 9.90                   | 9.93  | 8.93                     | 8.93  |
| Channel Bandwidth: 15MHz  |                 |                        |       |                          |       |
| Channel                   | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                           |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 20025                     | 1717.5          | 14.52                  | 14.53 | 13.43                    | 13.40 |
| 20175                     | 1732.5          | 14.69                  | 14.47 | 13.43                    | 13.40 |
| 20325                     | 1747.5          | 14.57                  | 14.62 | 13.40                    | 13.40 |
| Channel Bandwidth: 20MHz  |                 |                        |       |                          |       |
| Channel                   | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                           |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 20050                     | 1720            | 19.25                  | 19.32 | 17.87                    | 17.93 |
| 20175                     | 1732.5          | 19.14                  | 19.14 | 18.20                    | 18.20 |
| 20300                     | 1745            | 19.38                  | 19.16 | 17.87                    | 17.87 |

## -26dBc Bandwidth

## Spectrum Plot Of Worst Value

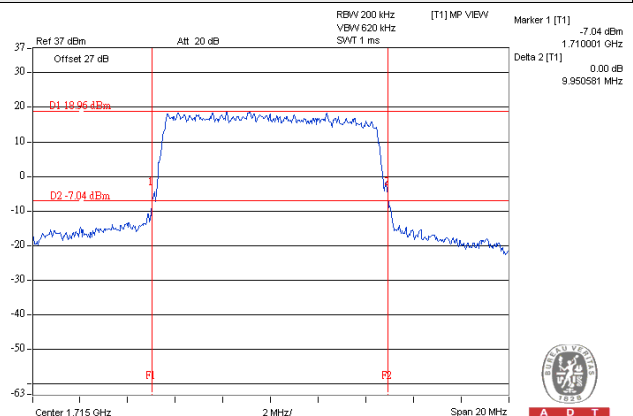
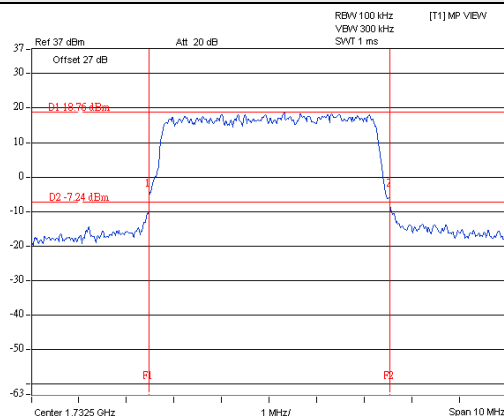
## 1.4MHz / 16QAM

## 3MHz / QPSK



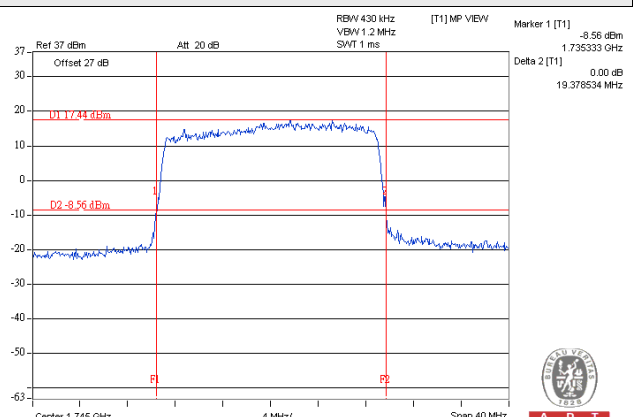
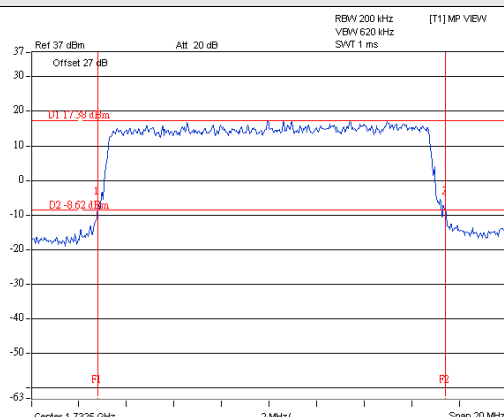
## 5MHz / QPSK

## 10MHz / QPSK



## 15MHz / QPSK

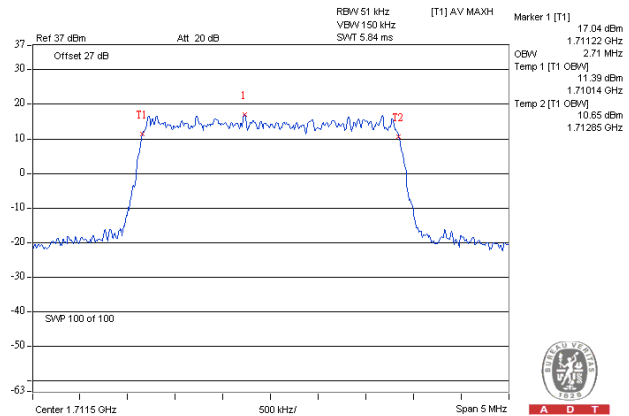
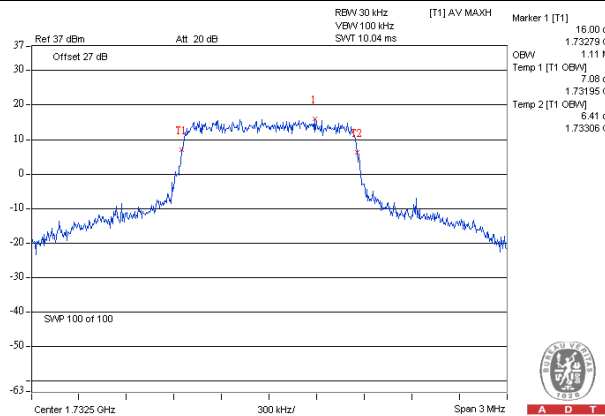
## 20MHz / QPSK



# Occupied Bandwidth Spectrum Plot Of Worst Value

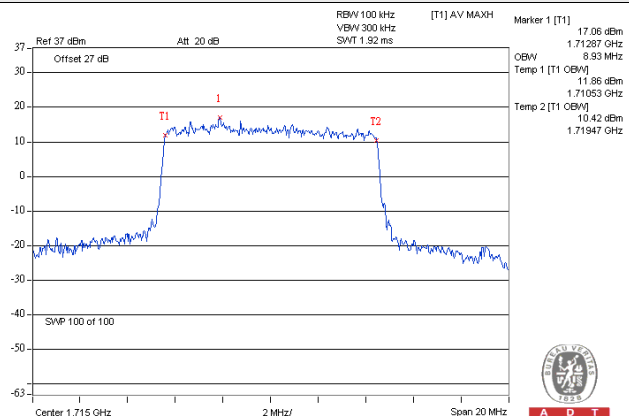
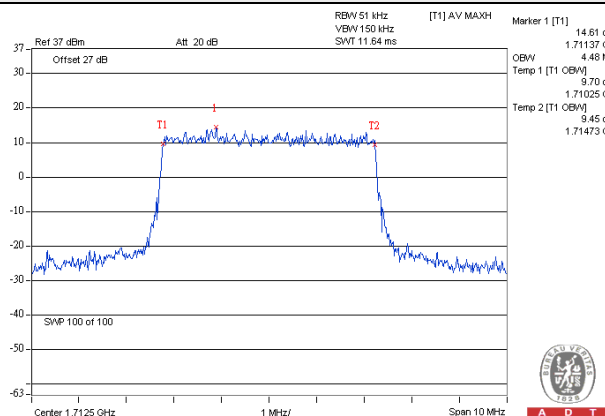
1.4MHz / QPSK

3MHz / 16QAM



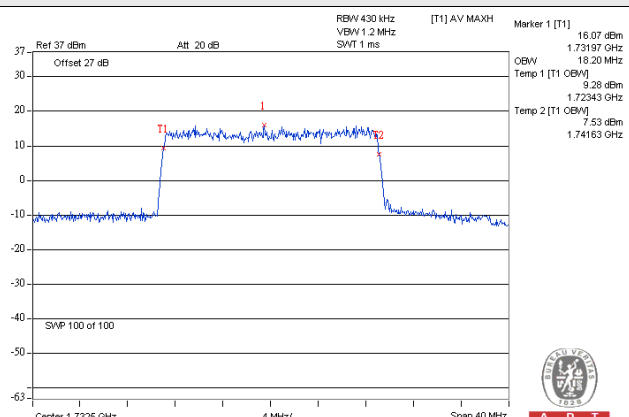
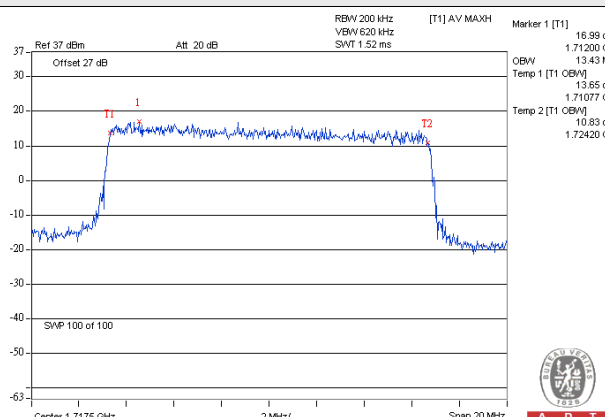
5MHz / QPSK

10MHz / QPSK



15MHz / QPSK

20MHz / QPSK



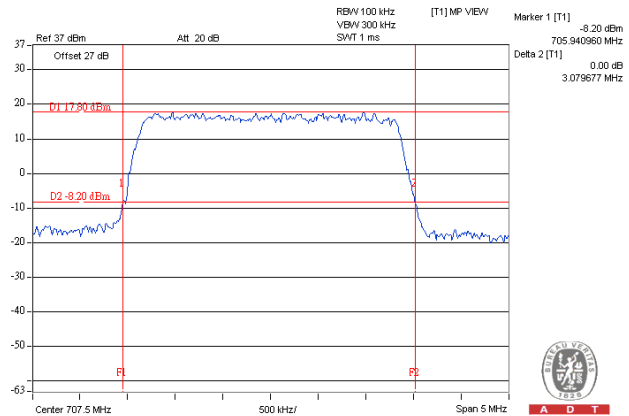
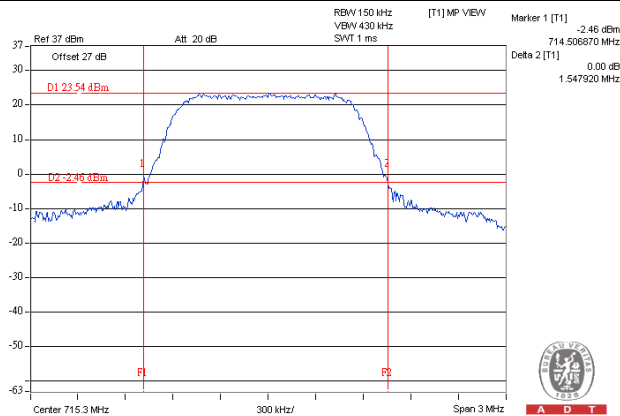
| LTE Band 12               |                 |                        |       |                          |       |
|---------------------------|-----------------|------------------------|-------|--------------------------|-------|
| Channel Bandwidth: 1.4MHz |                 |                        |       |                          |       |
| Channel                   | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                           |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 23017                     | 699.7           | 1.54                   | 1.53  | 1.09                     | 1.10  |
| 23095                     | 707.5           | 1.52                   | 1.52  | 1.09                     | 1.09  |
| 23173                     | 715.3           | 1.55                   | 1.55  | 1.10                     | 1.09  |
| Channel Bandwidth: 3MHz   |                 |                        |       |                          |       |
| Channel                   | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                           |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 23025                     | 700.5           | 3.05                   | 3.07  | 2.69                     | 2.68  |
| 23095                     | 707.5           | 3.06                   | 3.08  | 2.69                     | 2.69  |
| 23165                     | 714.5           | 3.03                   | 3.04  | 2.69                     | 2.68  |
| Channel Bandwidth: 5MHz   |                 |                        |       |                          |       |
| Channel                   | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                           |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 23035                     | 701.5           | 4.99                   | 5.02  | 4.45                     | 4.47  |
| 23095                     | 707.5           | 5.03                   | 5.00  | 4.47                     | 4.47  |
| 23155                     | 713.5           | 5.04                   | 5.03  | 4.47                     | 4.47  |
| Channel Bandwidth: 10MHz  |                 |                        |       |                          |       |
| Channel                   | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                           |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 23060                     | 704             | 9.92                   | 9.93  | 8.93                     | 8.93  |
| 23095                     | 707.5           | 9.94                   | 9.98  | 8.97                     | 8.93  |
| 23130                     | 711             | 9.91                   | 9.86  | 8.93                     | 8.93  |

# -26dBc Bandwidth

## Spectrum Plot Of Worst Value

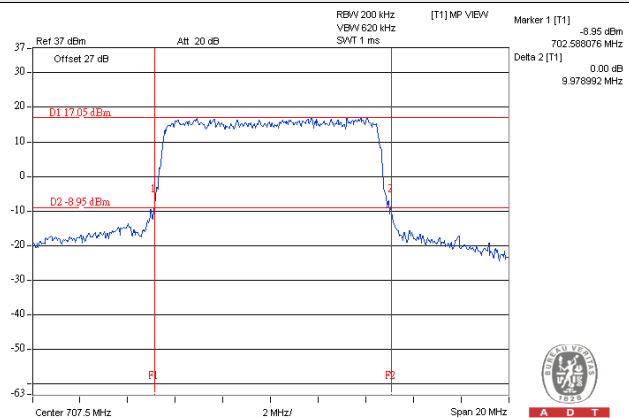
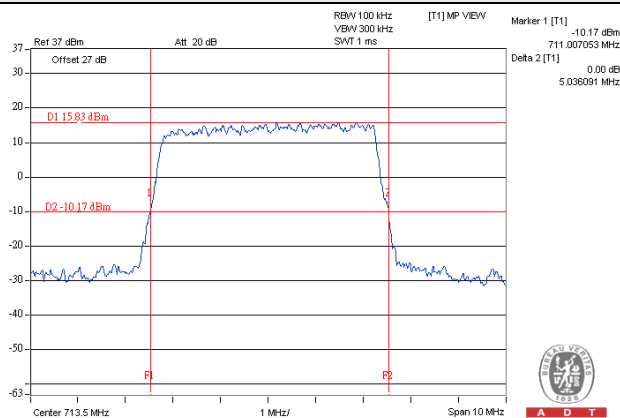
1.4MHz / QPSK

3MHz / 16QAM



5MHz / QPSK

10MHz / 16QAM

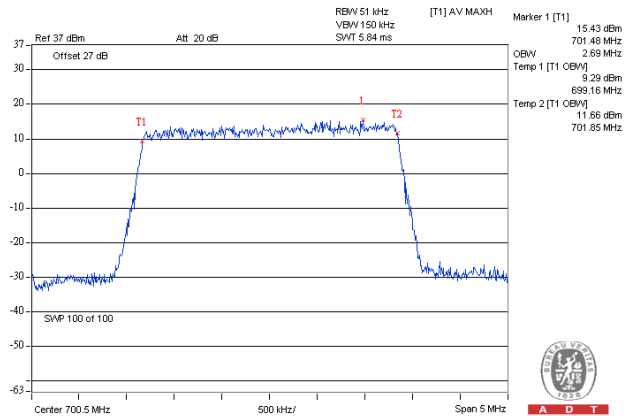
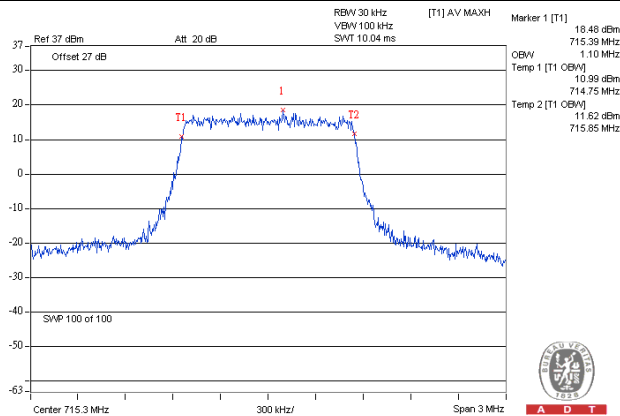


# Occupied Bandwidth

## Spectrum Plot Of Worst Value

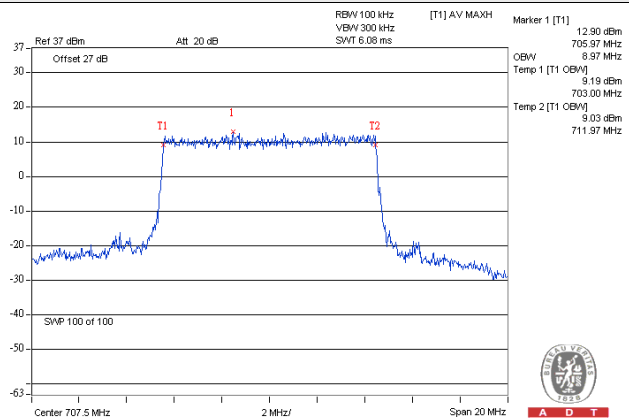
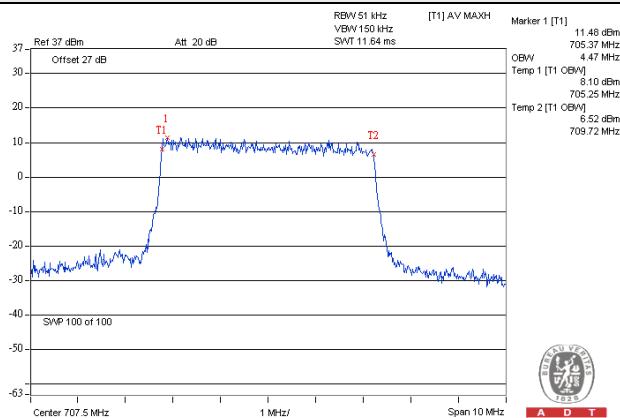
### 1.4MHz / QPSK

### 3MHz / QPSK



### 5MHz / QPSK

### 10MHz / QPSK



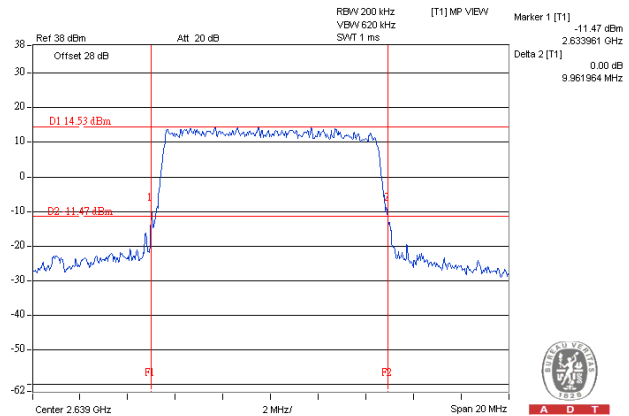
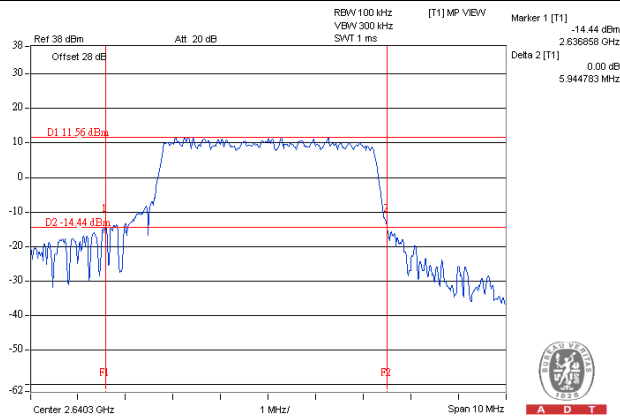
| LTE Band 41              |                 |                        |       |                          |       |
|--------------------------|-----------------|------------------------|-------|--------------------------|-------|
| Channel Bandwidth: 5MHz  |                 |                        |       |                          |       |
| Channel                  | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                          |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 39675                    | 2498.5          | 5.26                   | 5.14  | 4.48                     | 4.47  |
| 40148                    | 2545.8          | 5.19                   | 5.22  | 4.48                     | 4.47  |
| 40620                    | 2593            | 5.42                   | 5.34  | 4.47                     | 4.48  |
| 41093                    | 2640.3          | 5.78                   | 5.94  | 4.48                     | 4.48  |
| 41565                    | 2687.5          | 5.82                   | 5.86  | 4.48                     | 4.48  |
| Channel Bandwidth: 10MHz |                 |                        |       |                          |       |
| Channel                  | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                          |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 39700                    | 2501            | 9.75                   | 9.74  | 8.93                     | 8.93  |
| 40160                    | 2547            | 9.78                   | 9.78  | 8.90                     | 8.90  |
| 40620                    | 2593            | 9.76                   | 9.80  | 8.93                     | 8.93  |
| 41080                    | 2639            | 9.73                   | 9.96  | 8.93                     | 8.93  |
| 41540                    | 2685            | 9.76                   | 9.79  | 8.90                     | 8.93  |
| Channel Bandwidth: 15MHz |                 |                        |       |                          |       |
| Channel                  | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                          |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 39725                    | 2503.5          | 14.33                  | 14.29 | 13.40                    | 13.43 |
| 40173                    | 2548.3          | 14.71                  | 14.54 | 13.43                    | 13.40 |
| 40620                    | 2593            | 14.86                  | 14.80 | 13.40                    | 13.40 |
| 41068                    | 2637.8          | 14.42                  | 15.25 | 13.43                    | 13.43 |
| 41515                    | 2682.5          | 16.19                  | 14.78 | 13.40                    | 13.43 |
| Channel Bandwidth: 20MHz |                 |                        |       |                          |       |
| Channel                  | Frequency (MHz) | -26dBc Bandwidth (MHz) |       | Occupied Bandwidth (MHz) |       |
|                          |                 | QPSK                   | 16QAM | QPSK                     | 16QAM |
| 39750                    | 2506            | 19.37                  | 19.25 | 17.93                    | 17.87 |
| 40185                    | 2549.5          | 19.35                  | 19.30 | 18.00                    | 17.93 |
| 40620                    | 2593            | 19.39                  | 19.28 | 17.93                    | 18.00 |
| 41055                    | 2636.5          | 20.22                  | 20.21 | 17.93                    | 17.93 |
| 41490                    | 2680            | 19.47                  | 19.40 | 17.93                    | 17.93 |

## -26dBc Bandwidth

## Spectrum Plot Of Worst Value

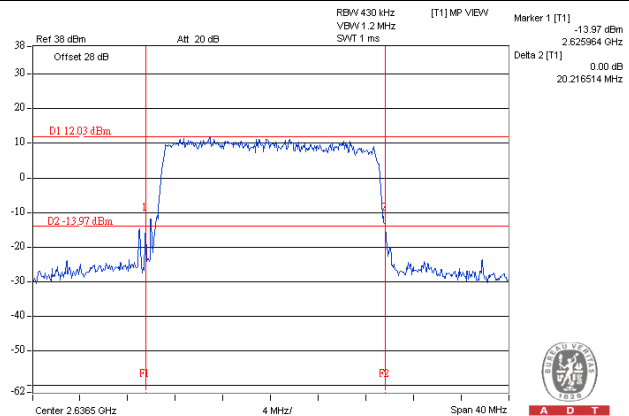
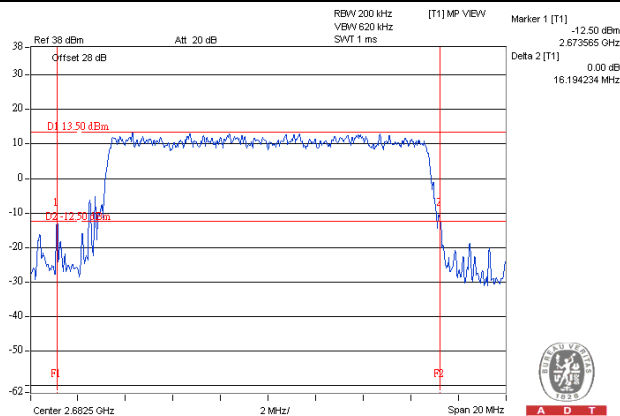
## 5MHz / 16QAM

## 10MHz / 16QAM



## 15MHz / QPSK

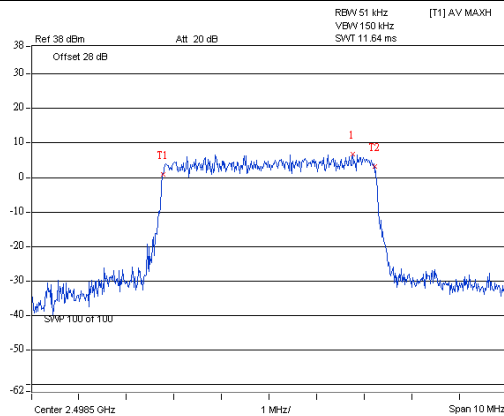
## 20MHz / QPSK



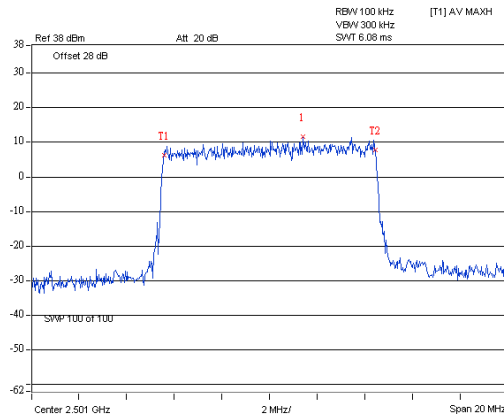
# Occupied Bandwidth Spectrum Plot Of Worst Value

5MHz / QPSK

10MHz / QPSK



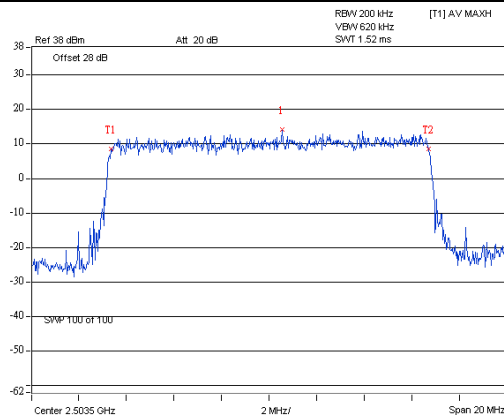
A D T



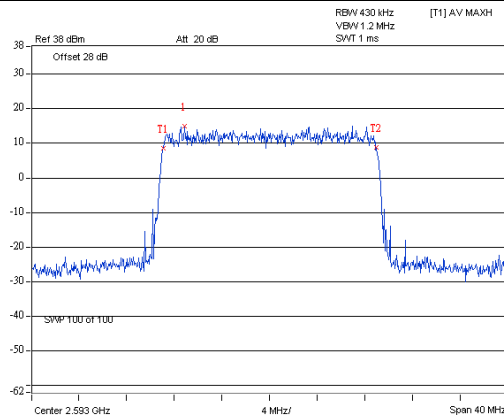
A D T

15MHz / 16QAM

20MHz / 16QAM



A D T



A D T

## 4.4 Channel Edge Measurement

### 4.4.1 Limits of Band Edge Measurement

For LTE Band 4

According to FCC 27.53(h) for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log_{10} (P)$  dB.

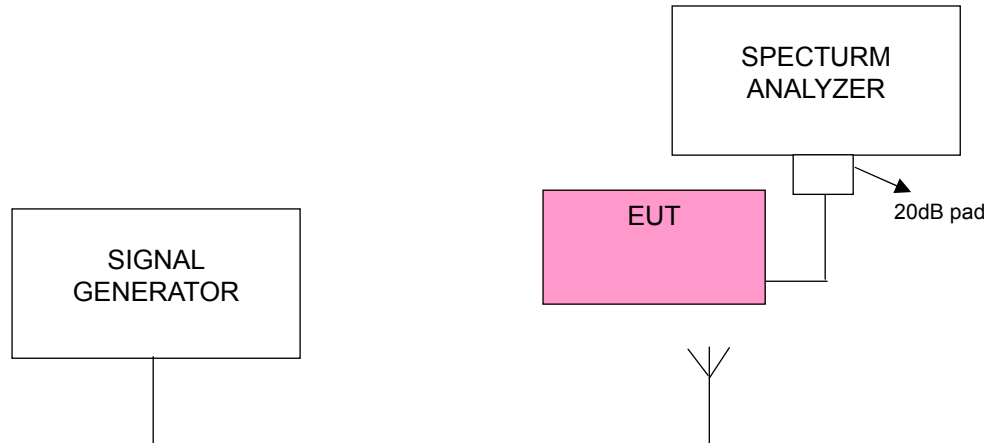
For LTE Band 12

According to FCC 27.53(g) for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

For LTE Band 41

According to FCC 27.53(m)(4) specified that power of any emission outside of the channel edge must be attenuated below the transmitting power (P) by a factor shall be not less than  $43 + 10 \log (P)$  dB at the channel edge, the limit of emission equal to  $-13\text{dBm}$ . And  $55 + 10 \log (P)$  dB at 5.5 MHz from the channel edges, the limit of emission equal to  $-25\text{dBm}$ . In the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

### 4.4.2 Test Setup



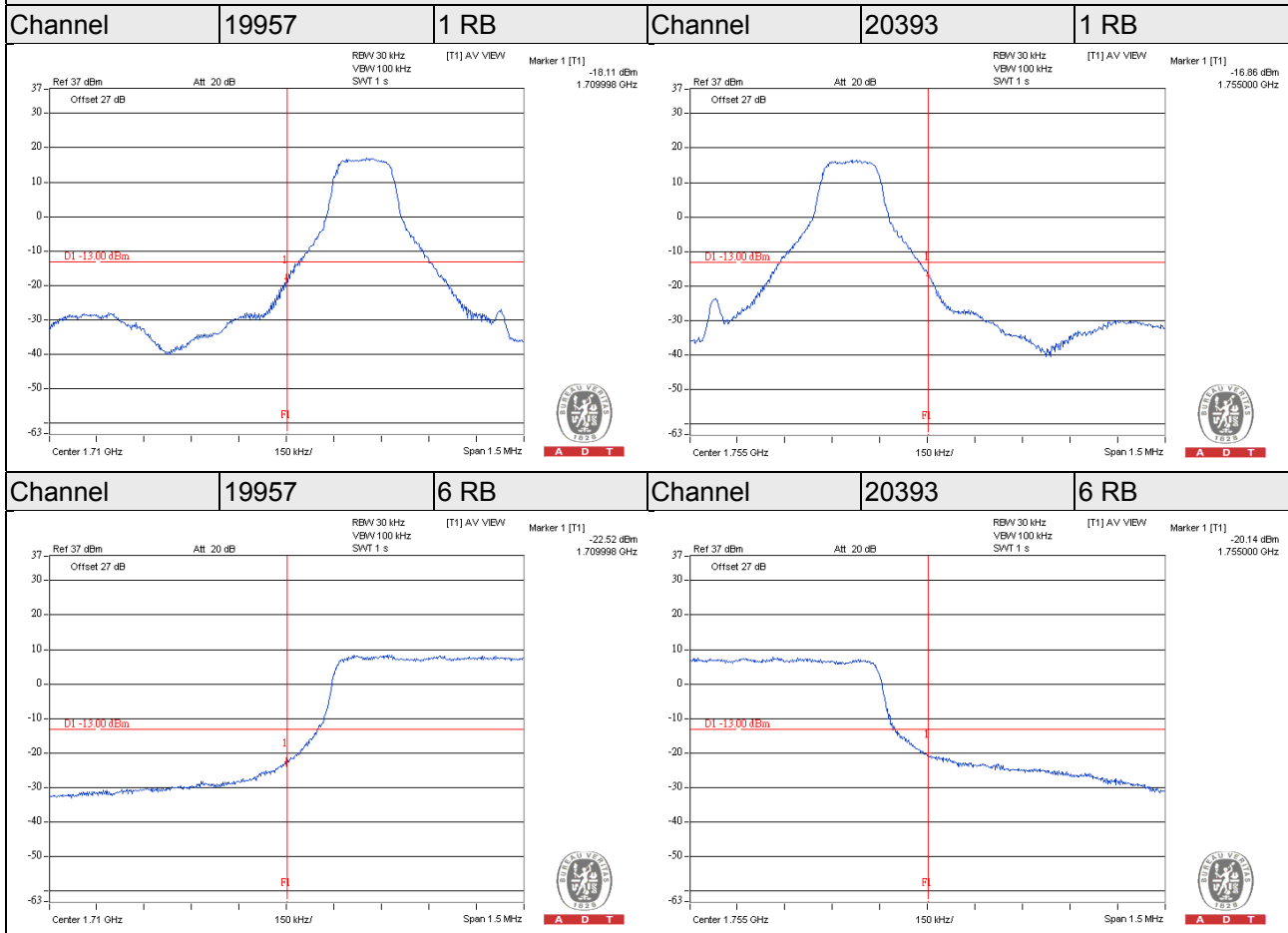
### 4.4.3 Test Procedures

- The EUT was set up for the rated peak power. The power was measured with Spectrum Analyzer. For LTE band 4 & 12 measurements were done at 3 channels for LTE Band 41 measurements were done at 5 channels: low, middle and high operational frequency range.
- The center frequency of spectrum is the band edge frequency and span is 1.5MHz. RBW = 30kHz and VBW = 100kHz (Channel Bandwidth: 1.4MHz), RBW = 51kHz and VBW = 150kHz (Channel Bandwidth: 3MHz and 5MHz), RBW = 100kHz and VBW = 300kHz (Channel Bandwidth: 10MHz), RBW = 200kHz and VBW = 620kHz (Channel Bandwidth: 15MHz) and RBW = 430kHz and VBW = 1.2MHz (Channel Bandwidth: 20MHz).
- Record the max trace plot into the test report.

## 4.4.4 Test Results

### LTE Band 4

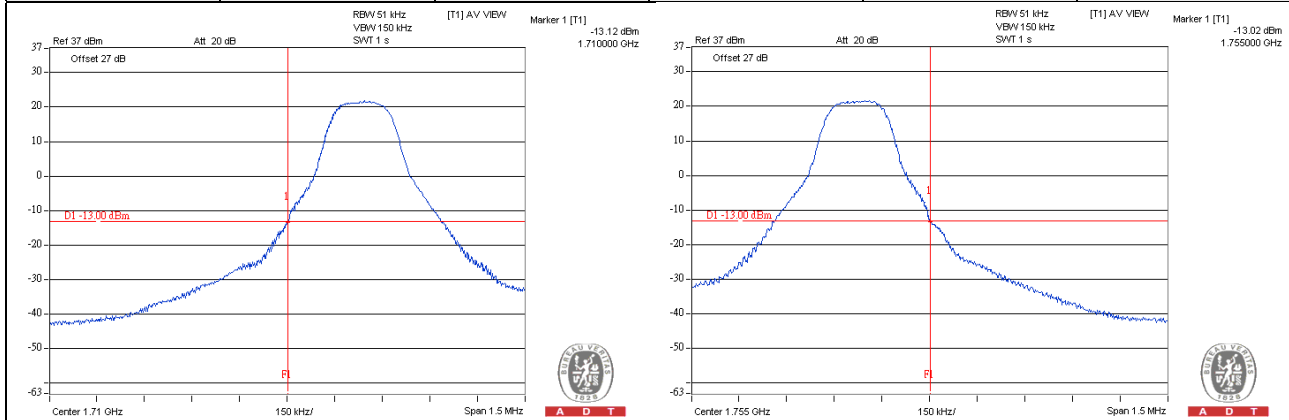
#### Channel Bandwidth 1.4MHz



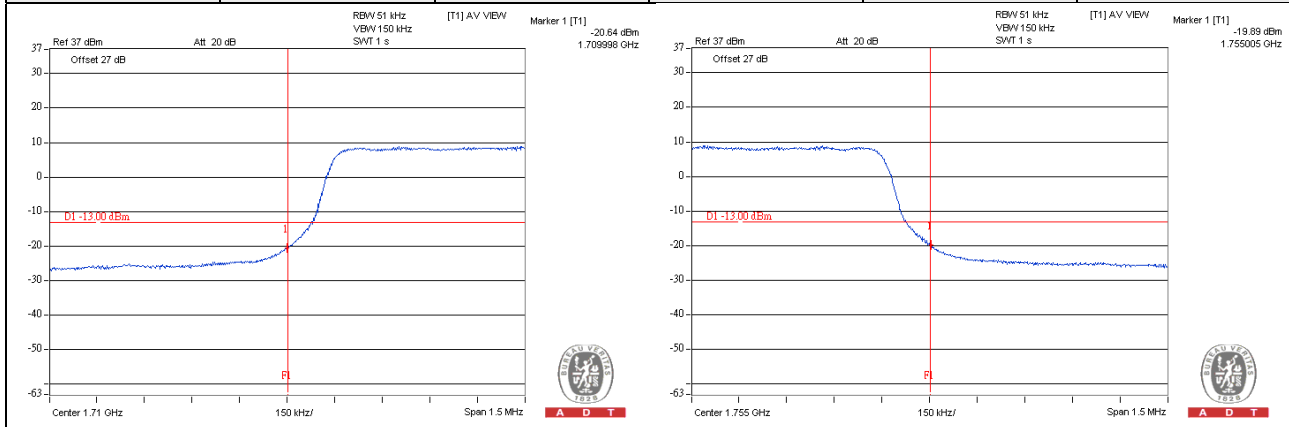
# LTE Band 4

## Channel Bandwidth 3MHz

|         |       |      |         |       |      |
|---------|-------|------|---------|-------|------|
| Channel | 19965 | 1 RB | Channel | 20385 | 1 RB |
|---------|-------|------|---------|-------|------|



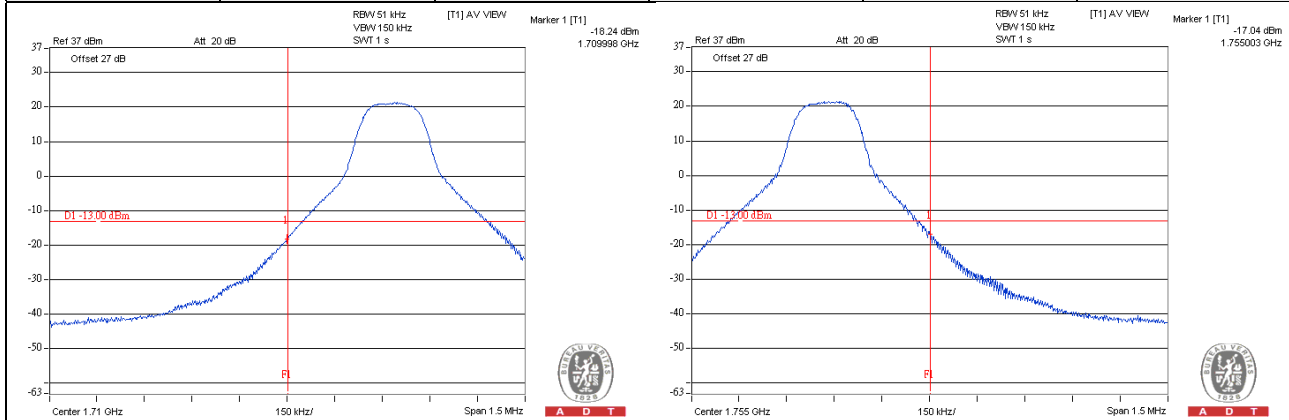
|         |       |       |         |       |       |
|---------|-------|-------|---------|-------|-------|
| Channel | 19965 | 15 RB | Channel | 20385 | 15 RB |
|---------|-------|-------|---------|-------|-------|



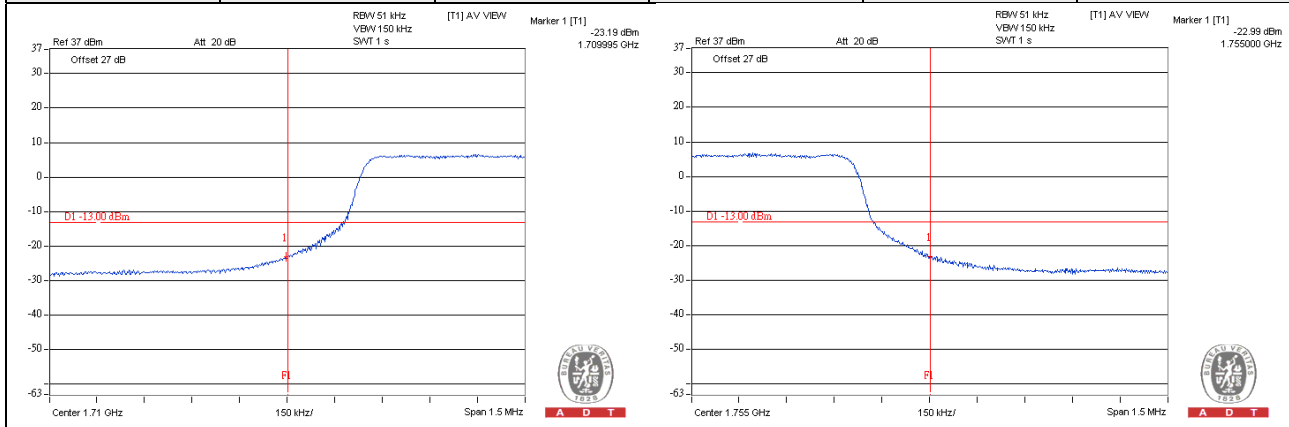
# LTE Band 4

## Channel Bandwidth 5MHz

|         |       |      |         |       |      |
|---------|-------|------|---------|-------|------|
| Channel | 19975 | 1 RB | Channel | 20375 | 1 RB |
|---------|-------|------|---------|-------|------|



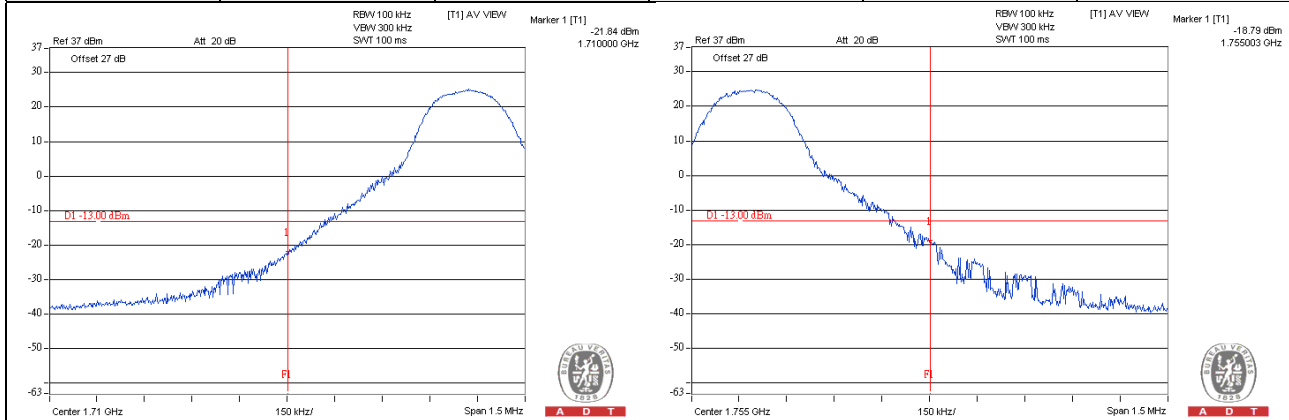
|         |       |       |         |       |       |
|---------|-------|-------|---------|-------|-------|
| Channel | 19975 | 25 RB | Channel | 20375 | 25 RB |
|---------|-------|-------|---------|-------|-------|



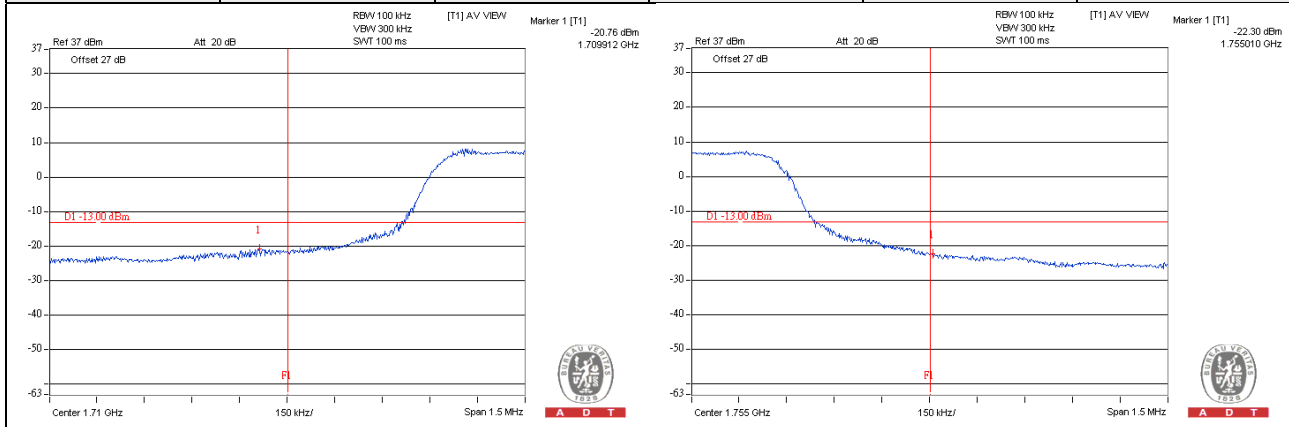
# LTE Band 4

## Channel Bandwidth 10MHz

|         |       |      |         |       |      |
|---------|-------|------|---------|-------|------|
| Channel | 20000 | 1 RB | Channel | 20350 | 1 RB |
|---------|-------|------|---------|-------|------|



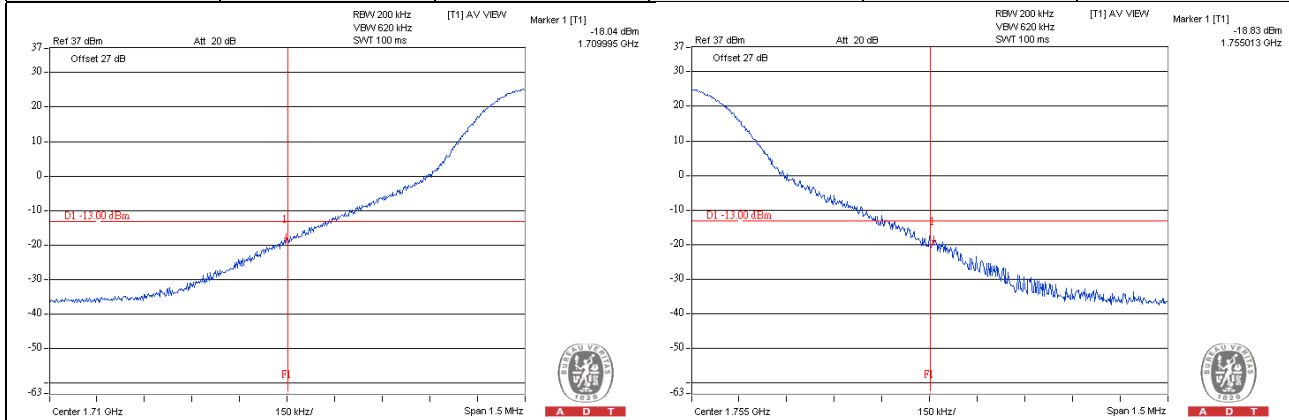
|         |       |       |         |       |       |
|---------|-------|-------|---------|-------|-------|
| Channel | 20000 | 50 RB | Channel | 20350 | 50 RB |
|---------|-------|-------|---------|-------|-------|



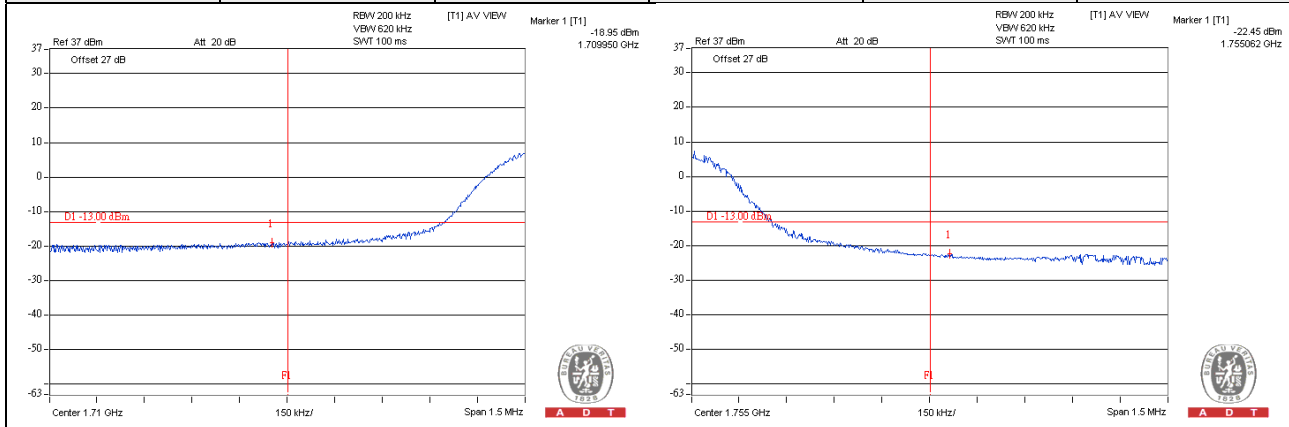
# LTE Band 4

## Channel Bandwidth 15MHz

|         |       |      |         |       |      |
|---------|-------|------|---------|-------|------|
| Channel | 20025 | 1 RB | Channel | 20325 | 1 RB |
|---------|-------|------|---------|-------|------|



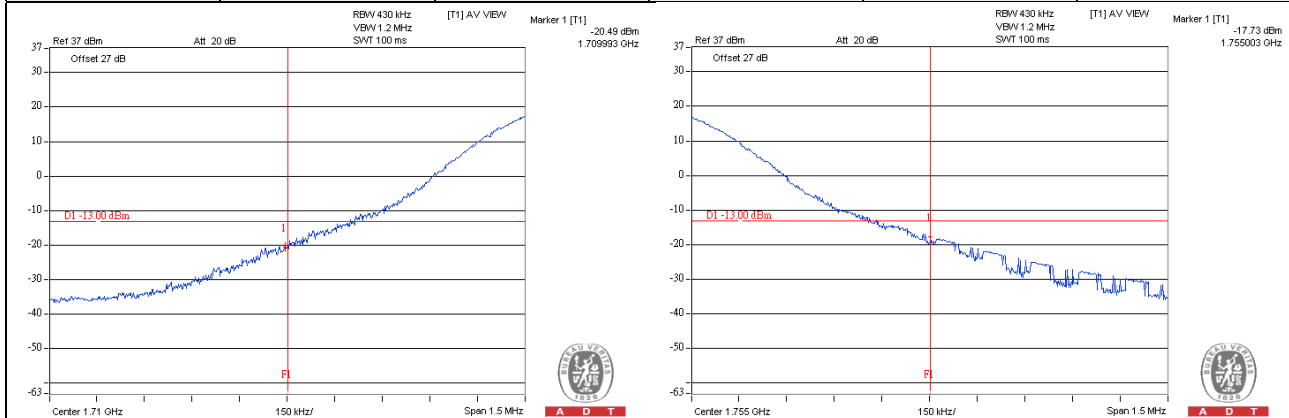
|         |       |       |         |       |       |
|---------|-------|-------|---------|-------|-------|
| Channel | 20025 | 75 RB | Channel | 20325 | 75 RB |
|---------|-------|-------|---------|-------|-------|



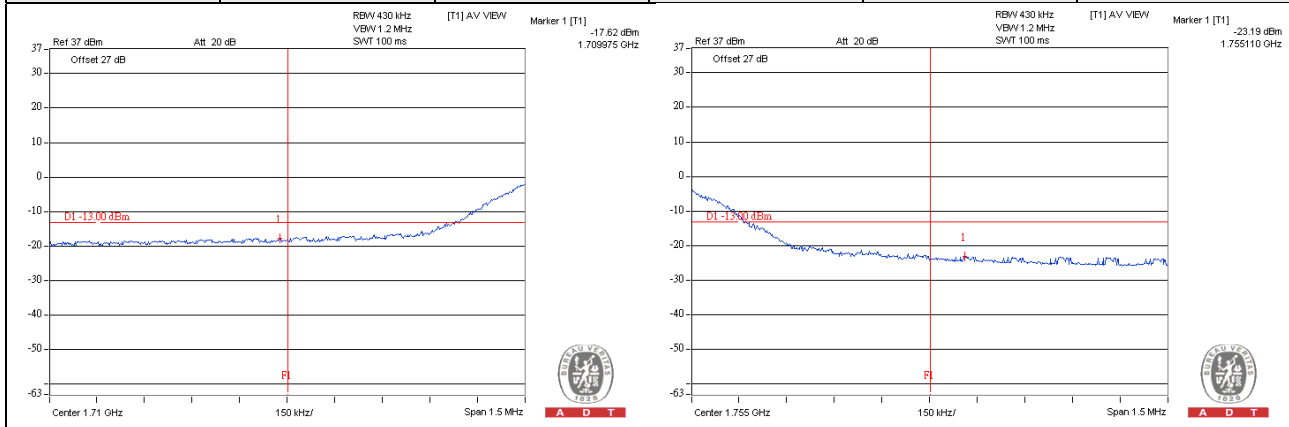
# LTE Band 4

## Channel Bandwidth 20MHz

|         |       |      |         |       |      |
|---------|-------|------|---------|-------|------|
| Channel | 20050 | 1 RB | Channel | 20300 | 1 RB |
|---------|-------|------|---------|-------|------|



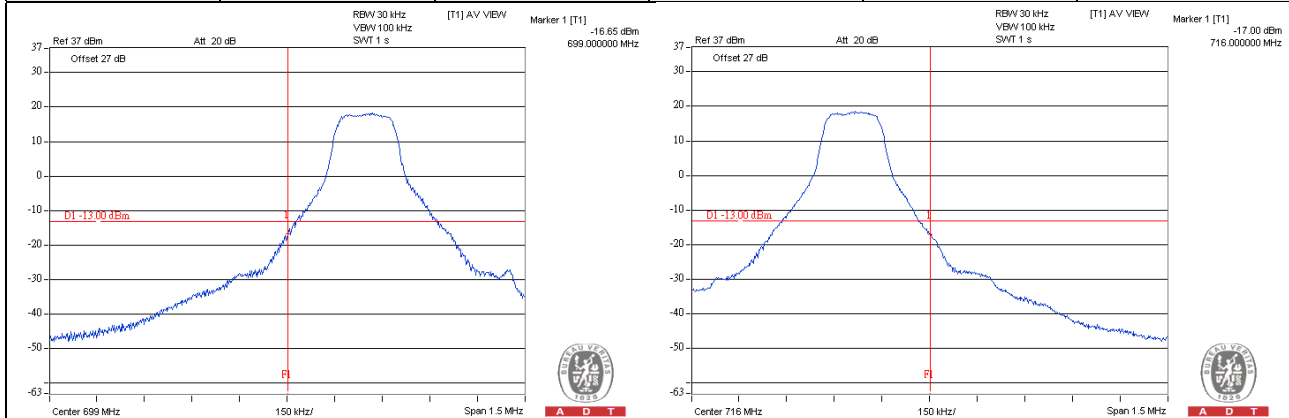
|         |       |        |         |       |        |
|---------|-------|--------|---------|-------|--------|
| Channel | 20050 | 100 RB | Channel | 20300 | 100 RB |
|---------|-------|--------|---------|-------|--------|



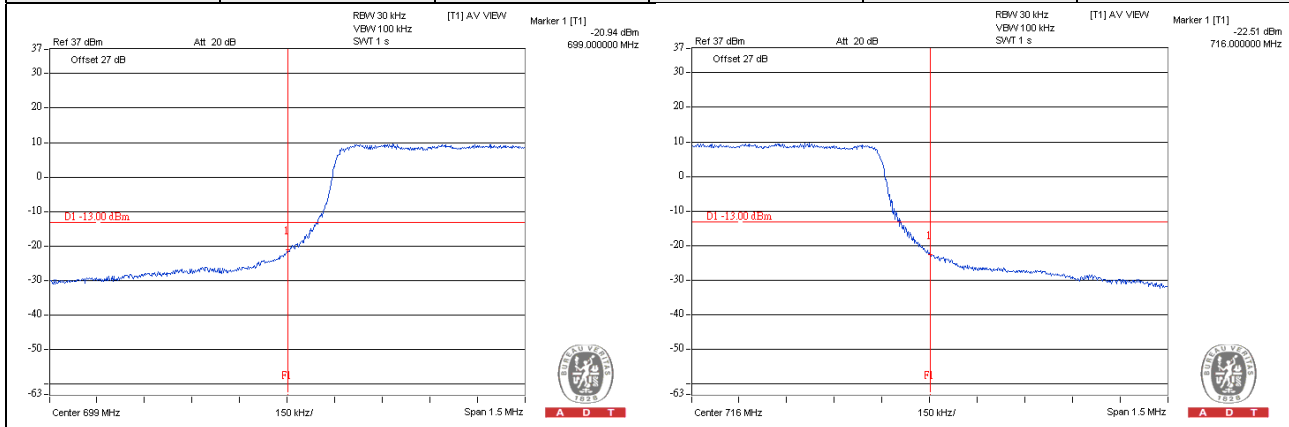
## LTE Band 12

### Channel Bandwidth 1.4MHz

|         |       |      |         |       |      |
|---------|-------|------|---------|-------|------|
| Channel | 23017 | 1 RB | Channel | 23171 | 1 RB |
|---------|-------|------|---------|-------|------|



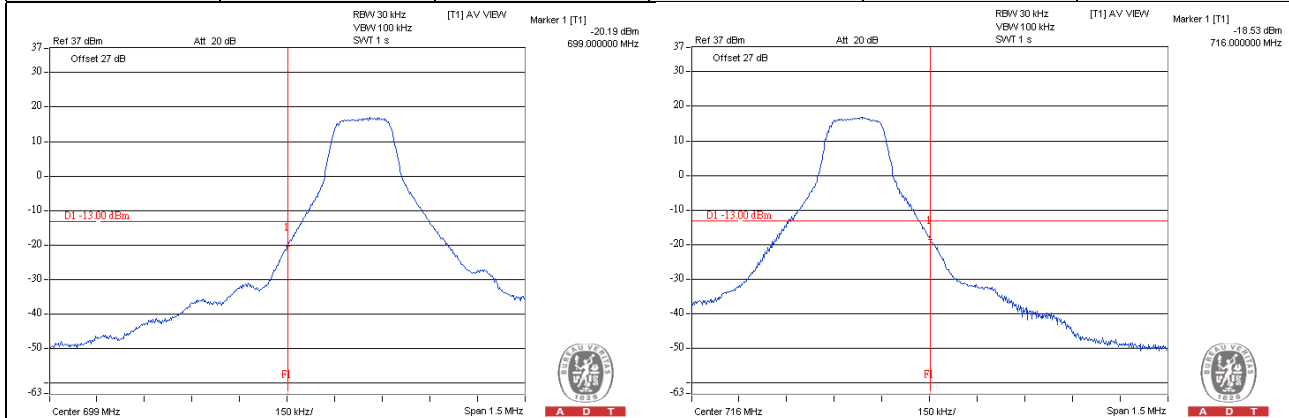
|         |       |      |         |       |      |
|---------|-------|------|---------|-------|------|
| Channel | 23017 | 6 RB | Channel | 23171 | 6 RB |
|---------|-------|------|---------|-------|------|



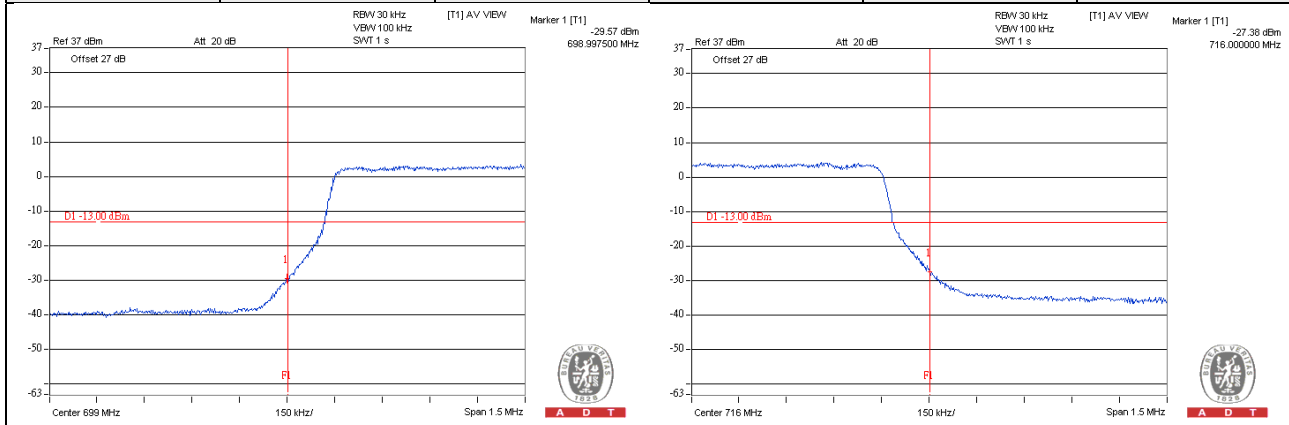
## LTE Band 12

### Channel Bandwidth 3MHz

|         |       |      |         |       |      |
|---------|-------|------|---------|-------|------|
| Channel | 23025 | 1 RB | Channel | 23165 | 1 RB |
|---------|-------|------|---------|-------|------|



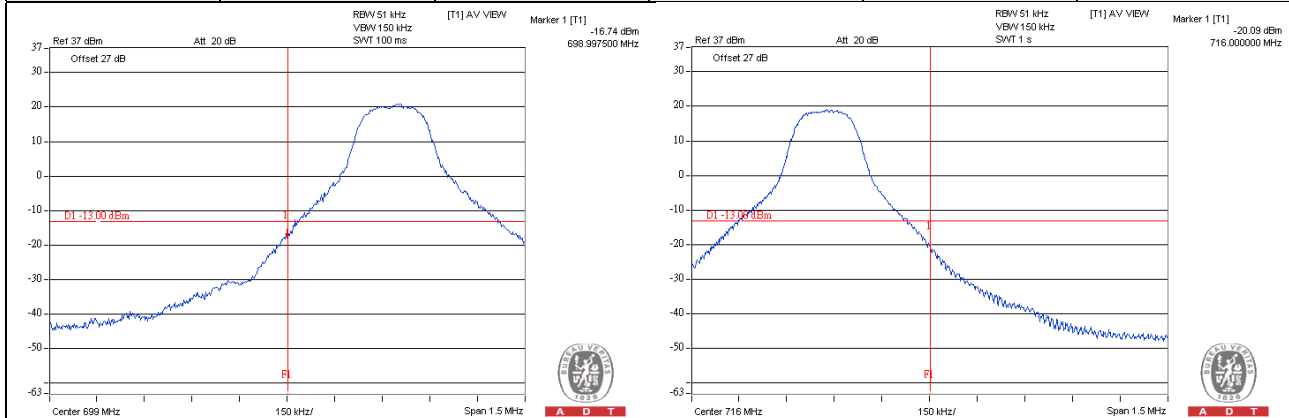
|         |       |       |         |       |       |
|---------|-------|-------|---------|-------|-------|
| Channel | 23025 | 15 RB | Channel | 23165 | 15 RB |
|---------|-------|-------|---------|-------|-------|



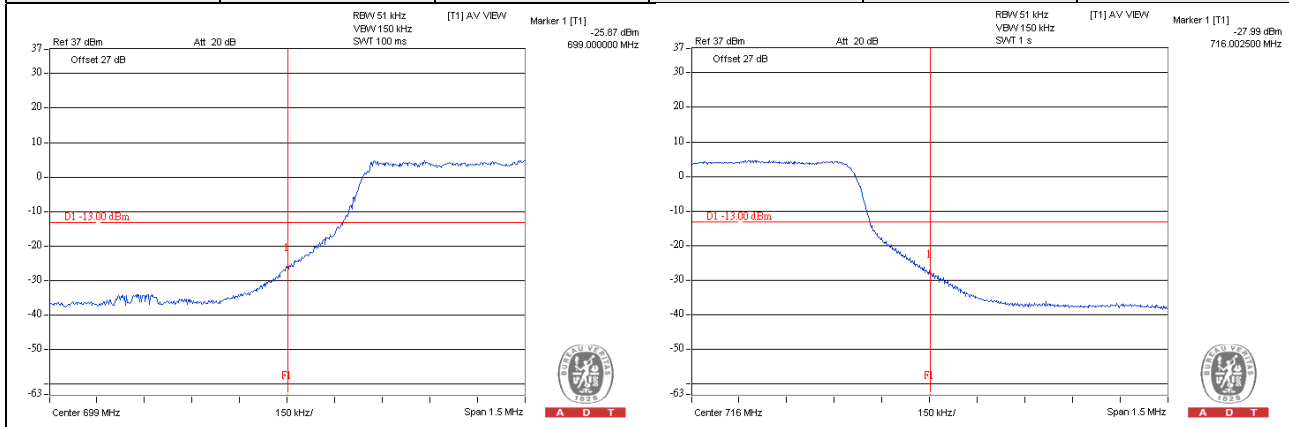
## LTE Band 12

### Channel Bandwidth 5MHz

|         |       |      |         |       |      |
|---------|-------|------|---------|-------|------|
| Channel | 23035 | 1 RB | Channel | 23155 | 1 RB |
|---------|-------|------|---------|-------|------|



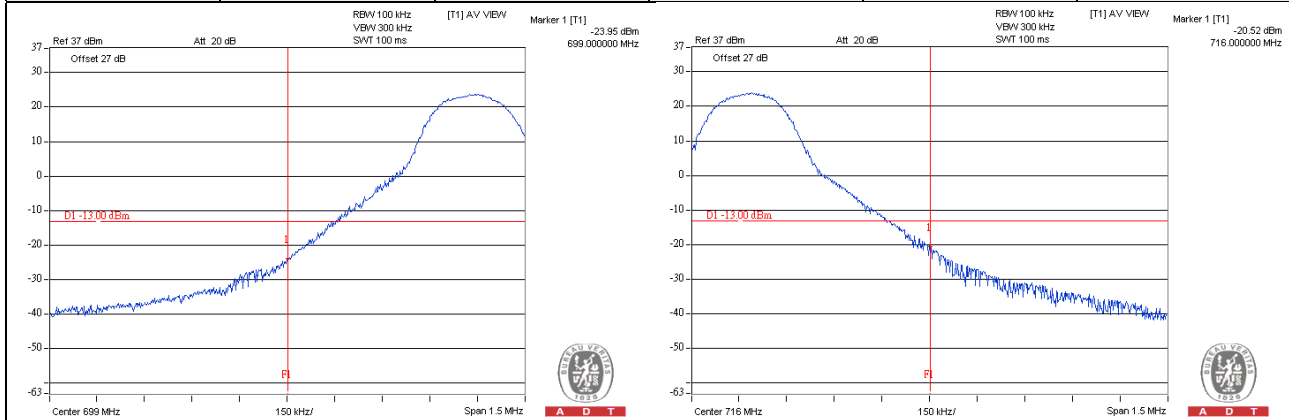
|         |       |       |         |       |       |
|---------|-------|-------|---------|-------|-------|
| Channel | 23035 | 25 RB | Channel | 23155 | 25 RB |
|---------|-------|-------|---------|-------|-------|



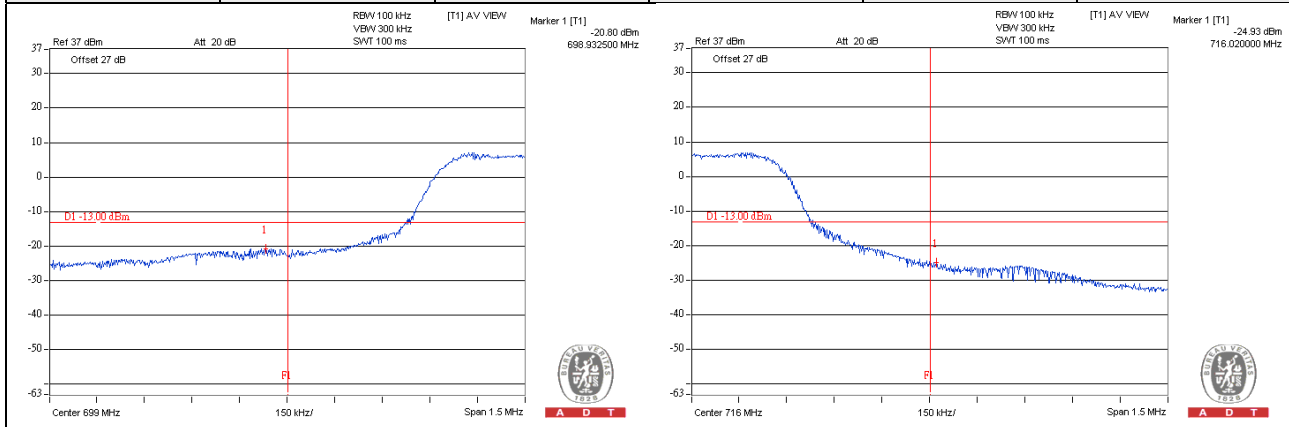
## LTE Band 12

### Channel Bandwidth 10MHz

|         |       |      |         |       |      |
|---------|-------|------|---------|-------|------|
| Channel | 23060 | 1 RB | Channel | 23130 | 1 RB |
|---------|-------|------|---------|-------|------|

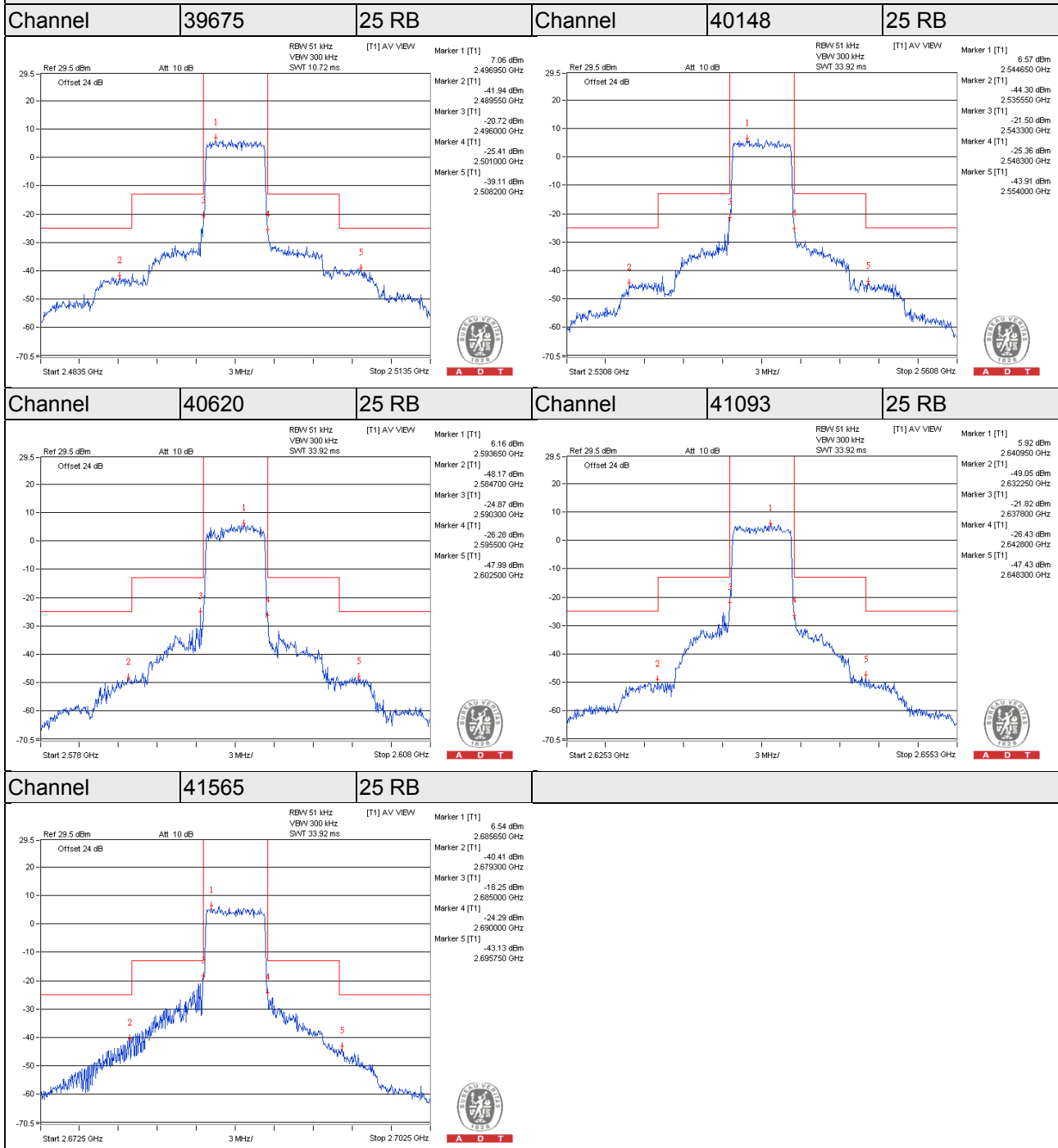


|         |       |       |         |       |       |
|---------|-------|-------|---------|-------|-------|
| Channel | 23060 | 50 RB | Channel | 23130 | 50 RB |
|---------|-------|-------|---------|-------|-------|



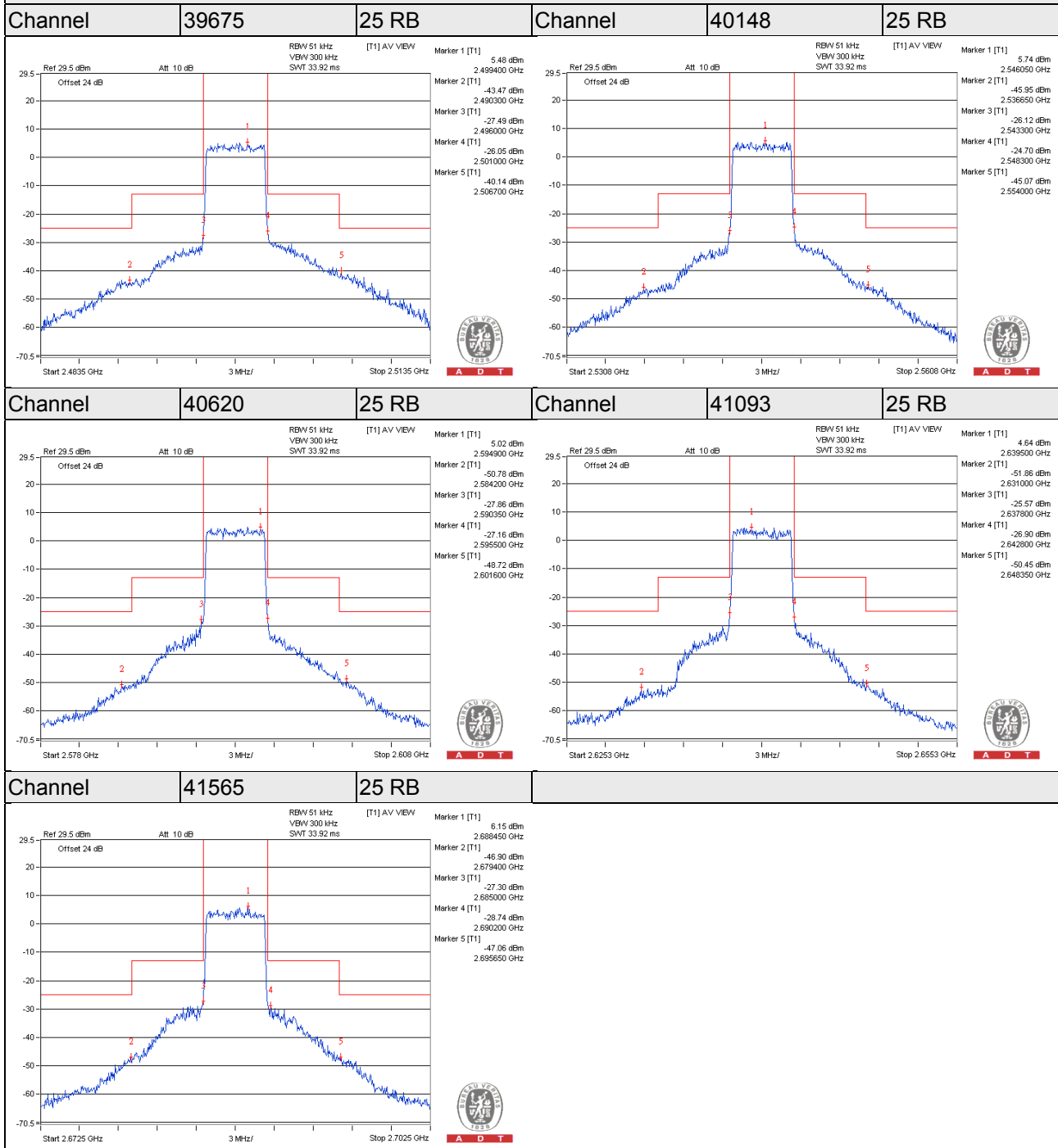
# LTE Band 41 / QPSK

## Channel Bandwidth 5MHz



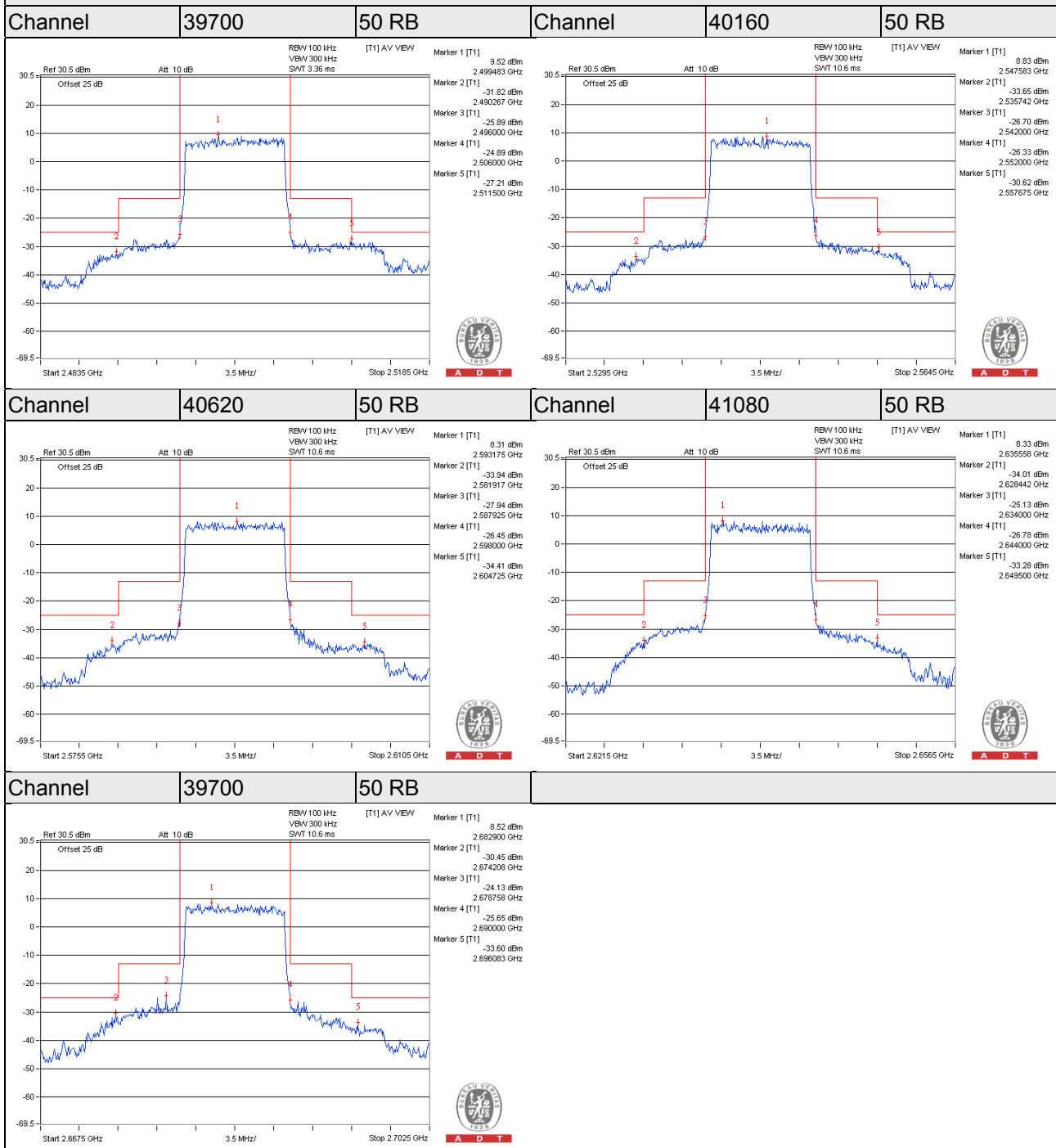
# LTE Band 41 / 16QAM

## Channel Bandwidth 5MHz



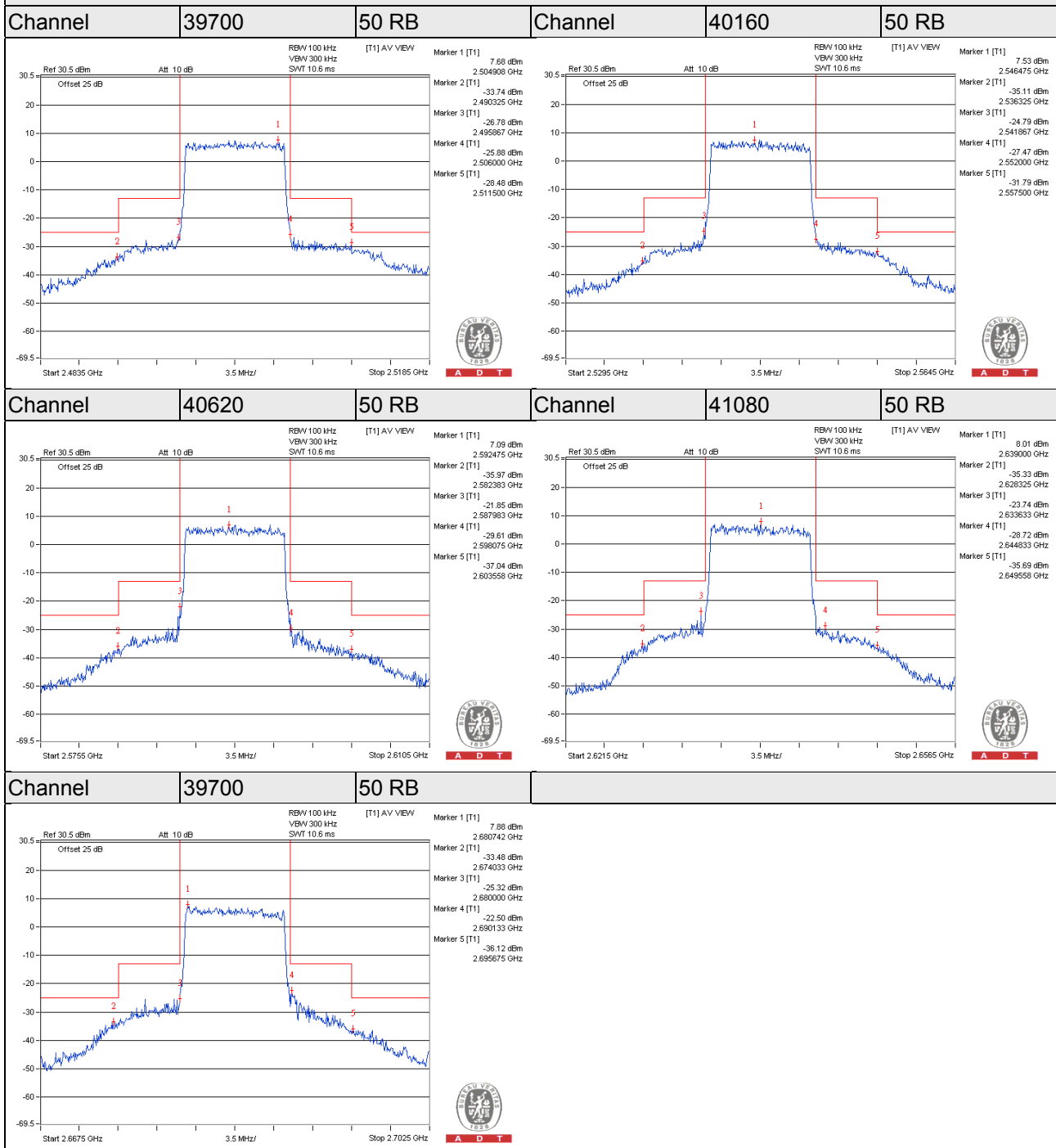
# LTE Band 41 / QPSK

## Channel Bandwidth 10MHz



# LTE Band 41 / 16QAM

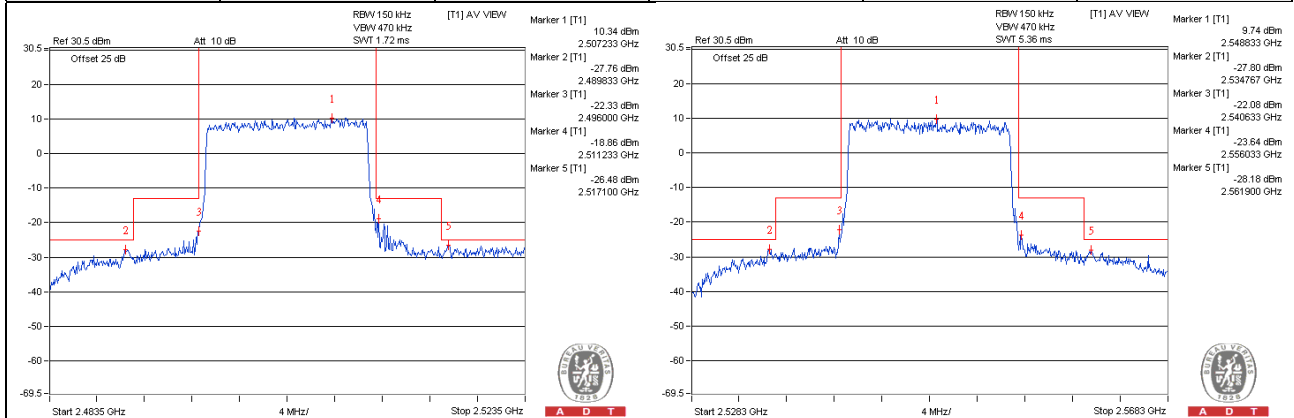
## Channel Bandwidth 10MHz



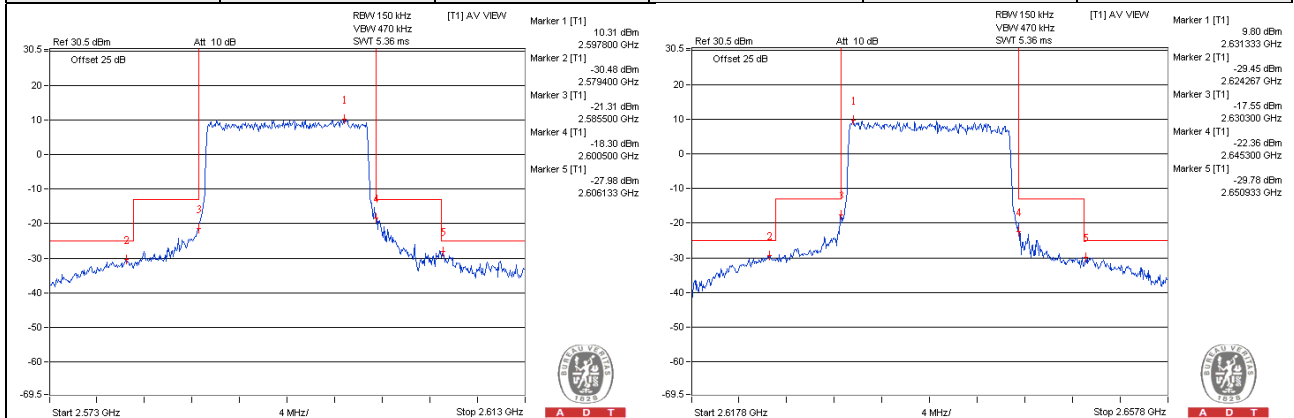
# LTE Band 41 / QPSK

## Channel Bandwidth 15MHz

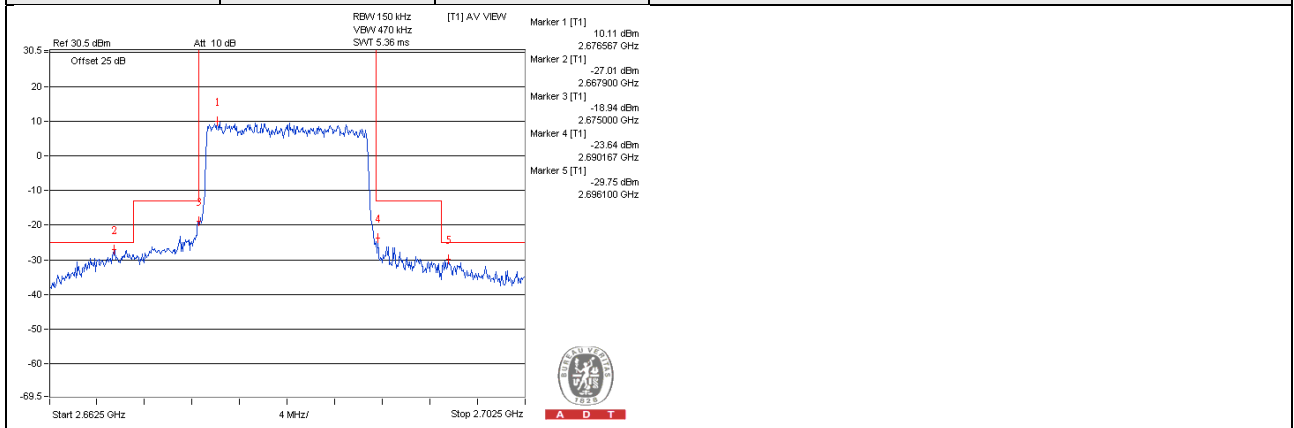
| Channel | 39725 | 75 RB | Channel | 40173 | 75 RB |
|---------|-------|-------|---------|-------|-------|
|---------|-------|-------|---------|-------|-------|



| Channel | 40620 | 75 RB | Channel | 40068 | 75 RB |
|---------|-------|-------|---------|-------|-------|
|---------|-------|-------|---------|-------|-------|

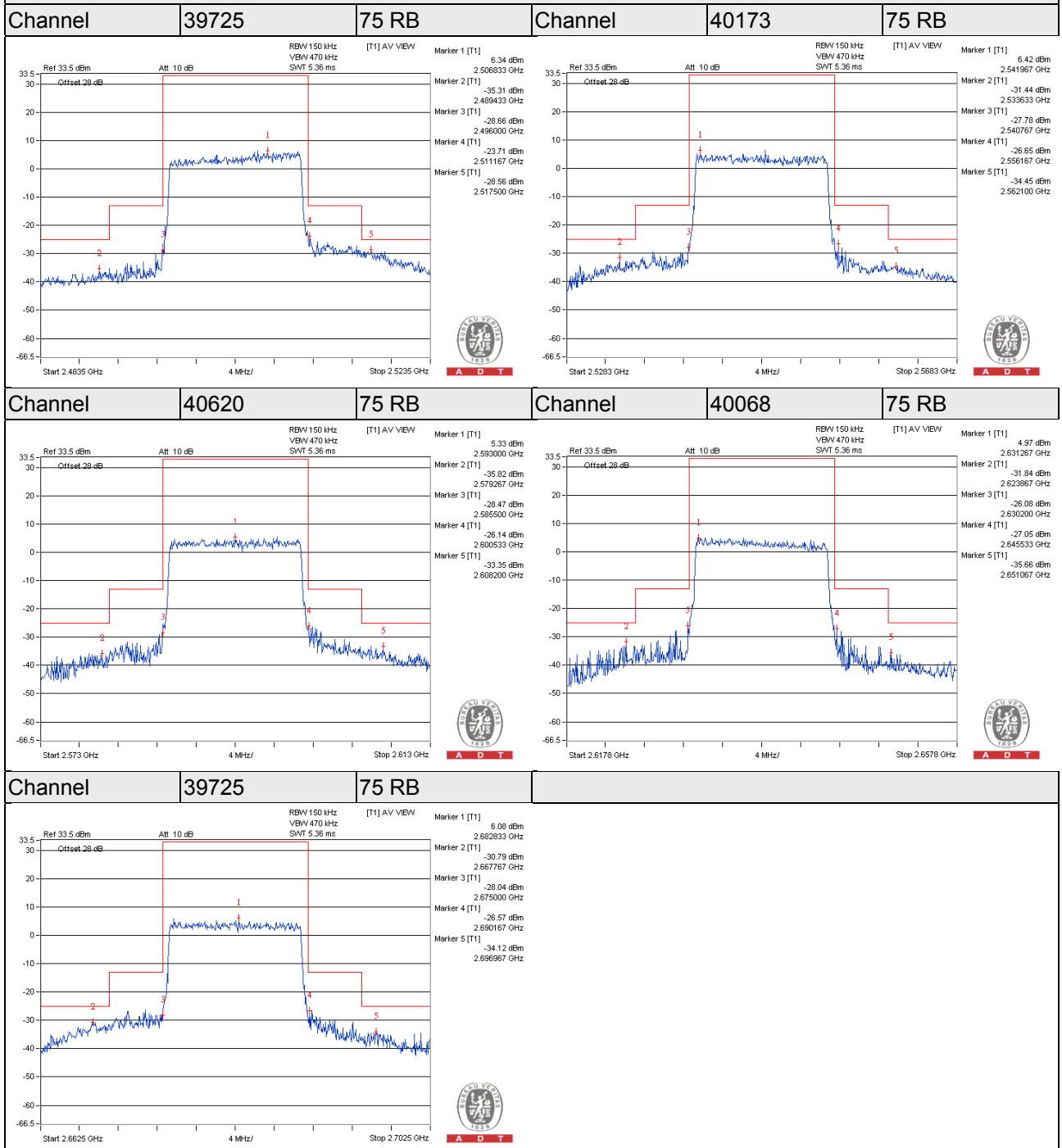


| Channel | 39725 | 75 RB |  |
|---------|-------|-------|--|
|---------|-------|-------|--|



# LTE Band 41 / 16QAM

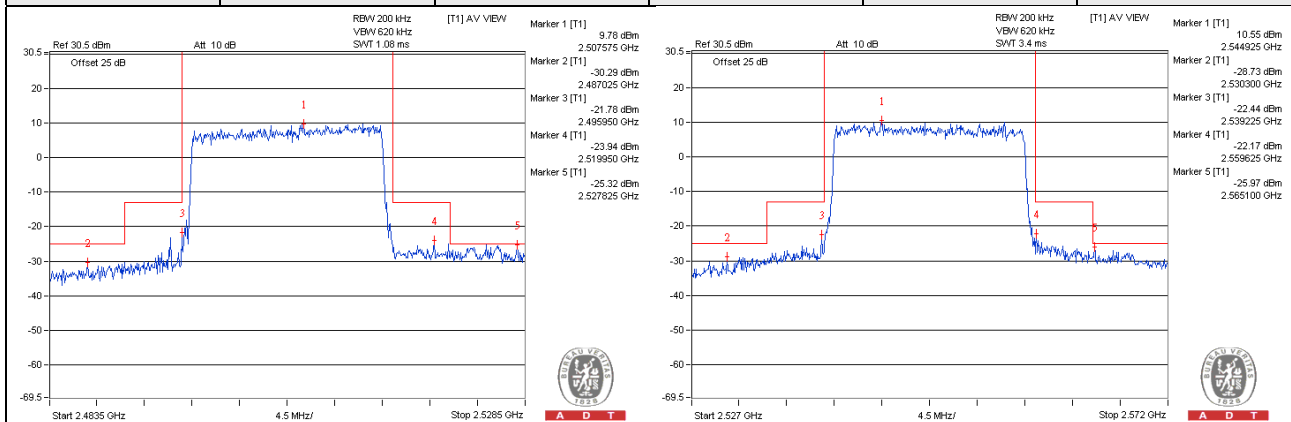
## Channel Bandwidth 15MHz



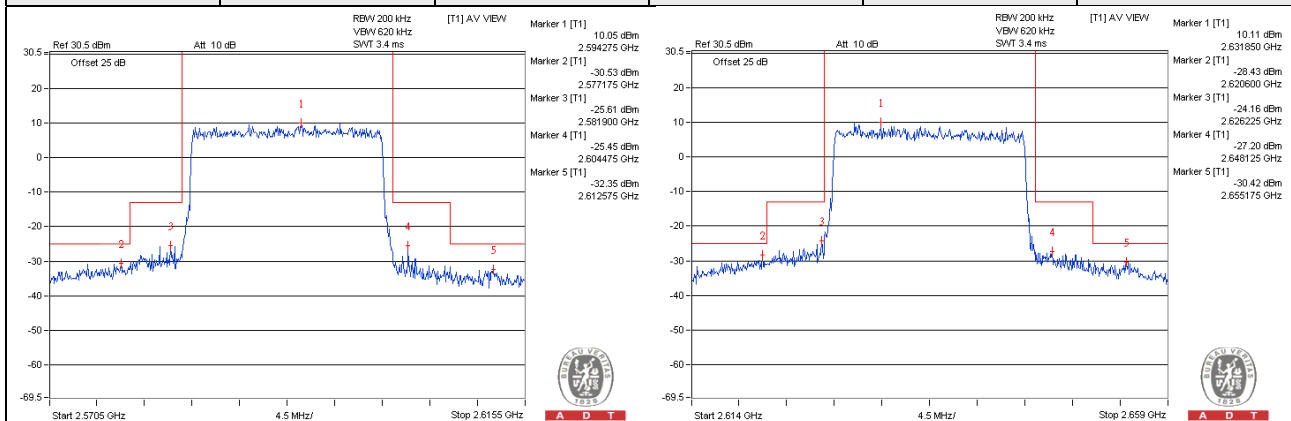
# LTE Band 41 / QPSK

## Channel Bandwidth 20MHz

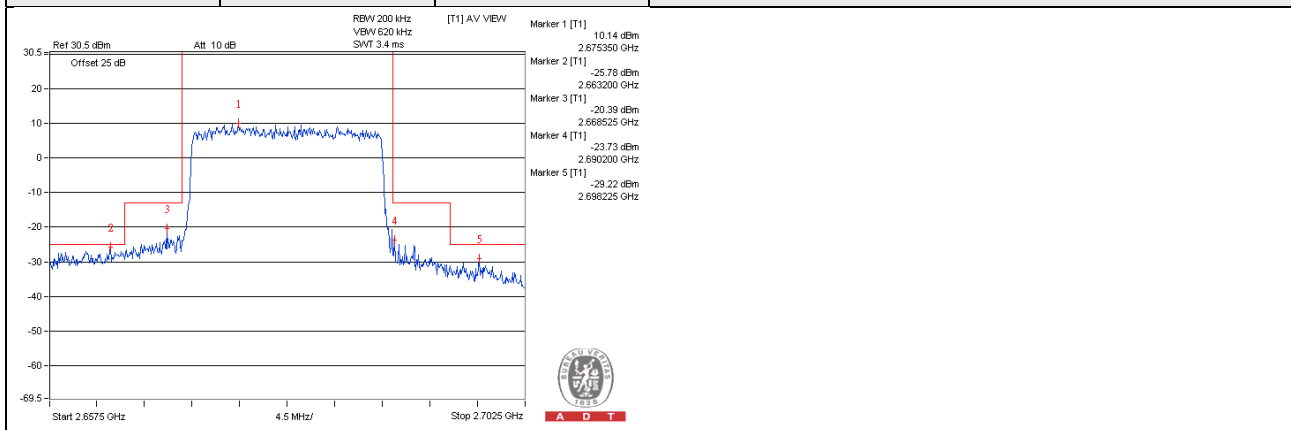
| Channel | 39750 | 100 RB | Channel | 40185 | 100 RB |
|---------|-------|--------|---------|-------|--------|
|---------|-------|--------|---------|-------|--------|



| Channel | 40620 | 100 RB | Channel | 41055 | 100 RB |
|---------|-------|--------|---------|-------|--------|
|---------|-------|--------|---------|-------|--------|



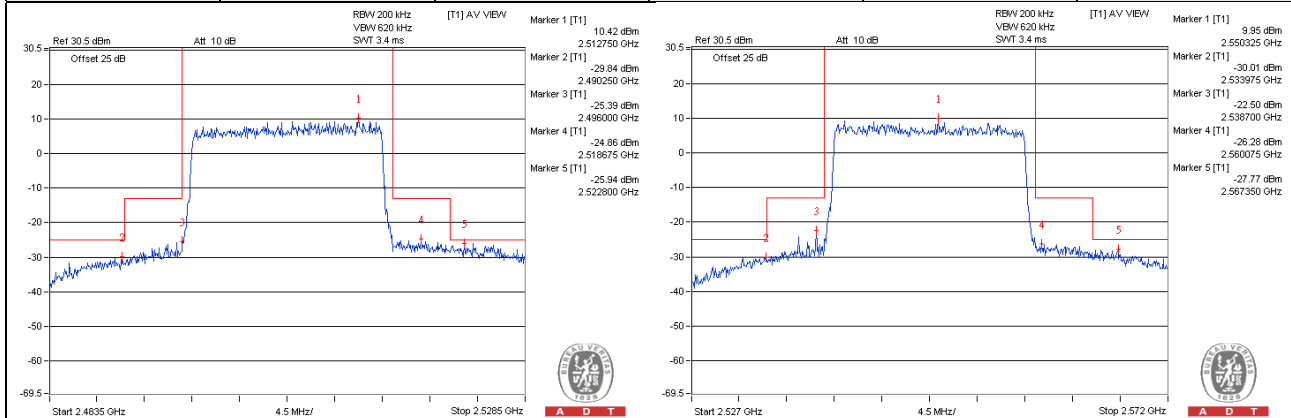
| Channel | 40620 | 100 RB |  |  |  |
|---------|-------|--------|--|--|--|
|---------|-------|--------|--|--|--|



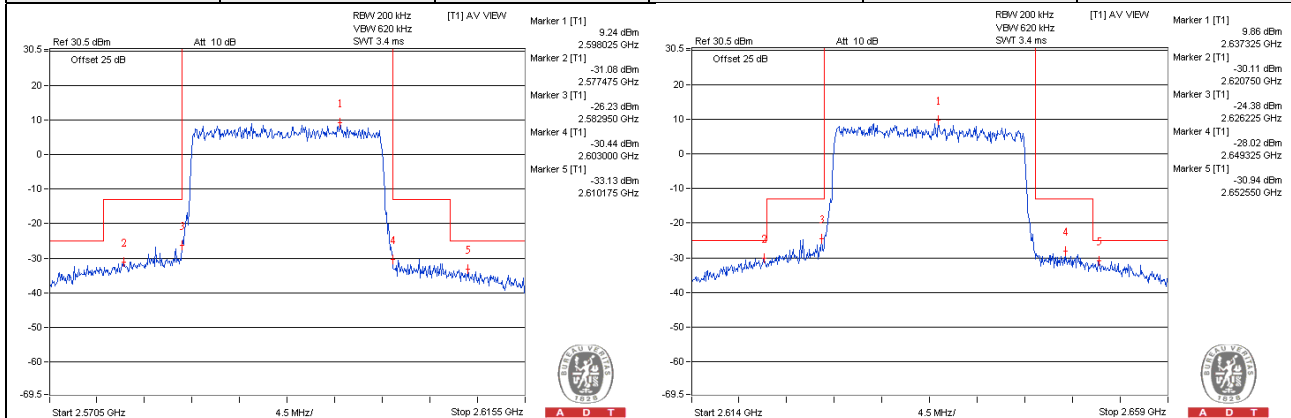
# LTE Band 41 / 16QAM

## Channel Bandwidth 20MHz

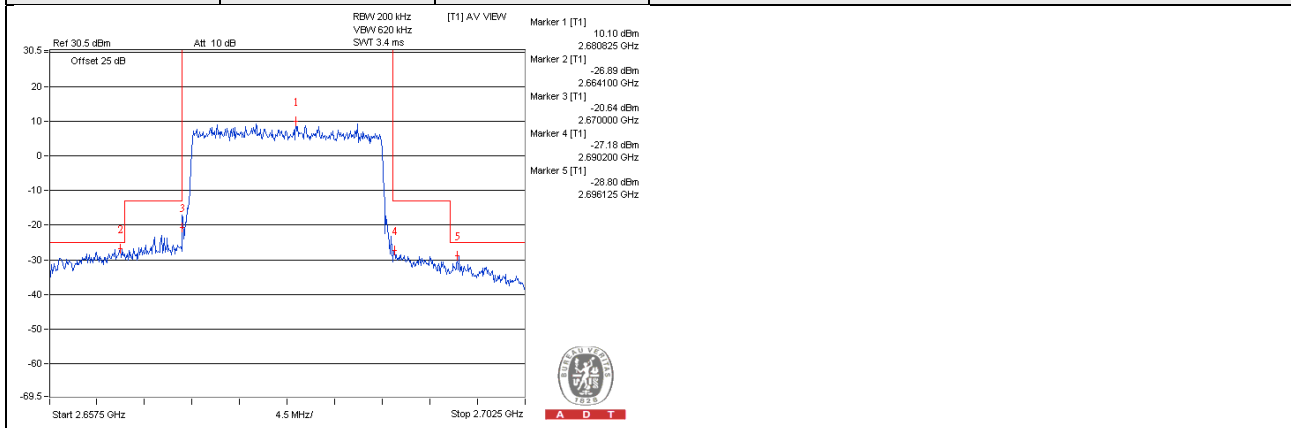
|         |       |        |         |       |        |
|---------|-------|--------|---------|-------|--------|
| Channel | 39750 | 100 RB | Channel | 40185 | 100 RB |
|---------|-------|--------|---------|-------|--------|



|         |       |        |         |       |        |
|---------|-------|--------|---------|-------|--------|
| Channel | 40620 | 100 RB | Channel | 41055 | 100 RB |
|---------|-------|--------|---------|-------|--------|



|         |       |        |  |  |  |
|---------|-------|--------|--|--|--|
| Channel | 40620 | 100 RB |  |  |  |
|---------|-------|--------|--|--|--|

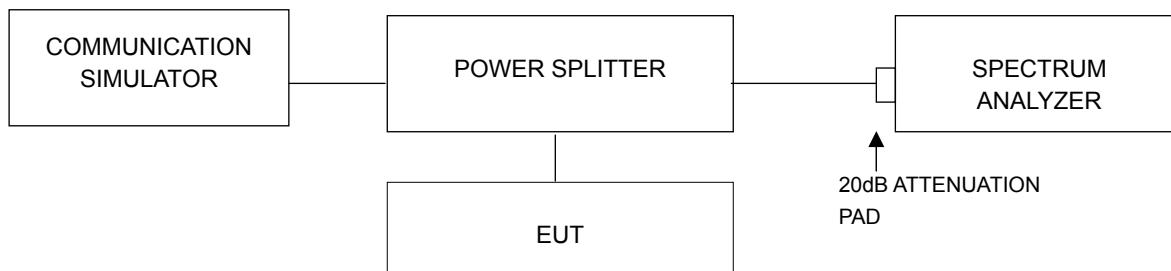


## 4.5 Peak To Average Ratio

### 4.5.1 Limits of Peak To Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

### 4.5.2 Test Setup



### 4.5.3 Test Procedures

- Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
- Set the number of counts to a value that stabilizes the measured CCDF curve;
- Record the maximum PAPR level associated with a probability of 0.1%.

#### 4.5.4 Test Results

| LTE Band 4               |                 |                              |       |                         |                 |                              |       |
|--------------------------|-----------------|------------------------------|-------|-------------------------|-----------------|------------------------------|-------|
| Channel Bandwidth 1.4MHz |                 |                              |       | Channel Bandwidth 3MHz  |                 |                              |       |
| Channel                  | Frequency (MHz) | Peak To Average Ratio (dB)   |       | Channel                 | Frequency (MHz) | Peak To Average Ratio (dB)   |       |
|                          |                 | QPSK                         | 16QAM |                         |                 | QPSK                         | 16QAM |
| 19957                    | 1710.7          | 4.67                         | 4.71  | 19965                   | 1711.5          | 4.81                         | 4.79  |
| 20175                    | 1732.5          | 4.99                         | 5.05  | 20175                   | 1732.5          | 5.15                         | 5.15  |
| 20393                    | 1754.3          | 4.79                         | 4.85  | 20385                   | 1753.5          | 5.00                         | 5.03  |
| Channel Bandwidth 5MHz   |                 |                              |       | Channel Bandwidth 10MHz |                 |                              |       |
| Channel                  | Frequency (MHz) | Peak To Average Ratio (dB)   |       | Channel                 | Frequency (MHz) | Peak To Average Ratio (dB)   |       |
|                          |                 | QPSK                         | 16QAM |                         |                 | QPSK                         | 16QAM |
| 19975                    | 1712.5          | 4.58                         | 5.03  | 20000                   | 1715            | 4.72                         | 5.27  |
| 20175                    | 1732.5          | 4.77                         | 5.21  | 20175                   | 1732.5          | 5.21                         | 5.24  |
| 20375                    | 1752.5          | 5.09                         | 5.11  | 20350                   | 1750            | 5.17                         | 5.19  |
| Channel Bandwidth 15MHz  |                 |                              |       | Channel Bandwidth 20MHz |                 |                              |       |
| Channel                  | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       | Channel                 | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       |
|                          |                 | QPSK                         | 16QAM |                         |                 | QPSK                         | 16QAM |
| 20025                    | 1717.5          | 5.09                         | 5.09  | 20050                   | 1720            | 5.03                         | 5.38  |
| 20175                    | 1732.5          | 5.23                         | 5.36  | 20175                   | 1732.5          | 5.32                         | 5.37  |
| 20325                    | 1747.5          | 5.24                         | 5.30  | 20300                   | 1745            | 5.25                         | 5.30  |

# Spectrum Plot Of Worst Value

1.4MHz / 16QAM



3MHz / QPSK



5MHz / 16QAM



10MHz / 16QAM



15MHz / 16QAM



20MHz / 16QAM



### LTE Band 12

| Channel Bandwidth 1.4MHz |                 |                            |       | Channel Bandwidth 3MHz  |                 |                            |       |
|--------------------------|-----------------|----------------------------|-------|-------------------------|-----------------|----------------------------|-------|
| Channel                  | Frequency (MHz) | Peak To Average Ratio (dB) |       | Channel                 | Frequency (MHz) | Peak To Average Ratio (dB) |       |
|                          |                 | QPSK                       | 16QAM |                         |                 | QPSK                       | 16QAM |
| 23017                    | 699.7           | 4.97                       | 4.96  | 23025                   | 700.5           | 5.22                       | 5.22  |
| 23095                    | 707.5           | 4.32                       | 4.38  | 23095                   | 707.5           | 4.54                       | 4.48  |
| 23173                    | 715.3           | 4.37                       | 4.31  | 23165                   | 714.5           | 4.78                       | 4.80  |
| Channel Bandwidth 5MHz   |                 |                            |       | Channel Bandwidth 10MHz |                 |                            |       |
| Channel                  | Frequency (MHz) | Peak To Average Ratio (dB) |       | Channel                 | Frequency (MHz) | Peak To Average Ratio (dB) |       |
|                          |                 | QPSK                       | 16QAM |                         |                 | QPSK                       | 16QAM |
| 23035                    | 701.5           | 5.19                       | 5.19  | 23060                   | 704             | 5.01                       | 4.89  |
| 23095                    | 707.5           | 4.86                       | 4.87  | 23095                   | 707.5           | 5.22                       | 5.18  |
| 23155                    | 713.5           | 5.16                       | 5.12  | 23130                   | 711             | 5.28                       | 5.23  |

### Spectrum Plot Of Worst Value

#### 1.4MHz / QPSK



#### 3MHz / QPSK



#### 5MHz / QPSK



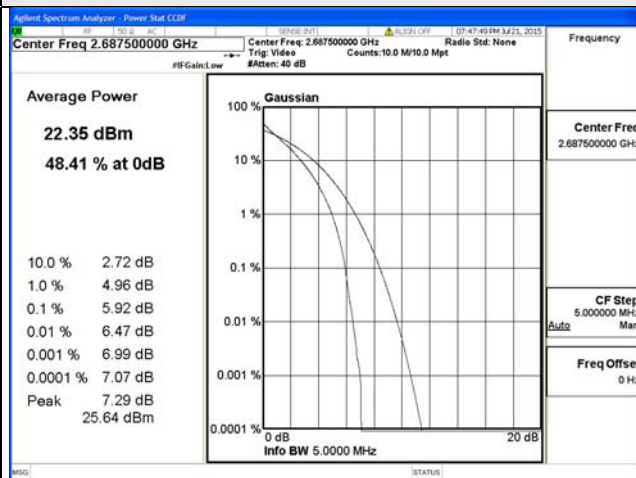
#### 10MHz / QPSK



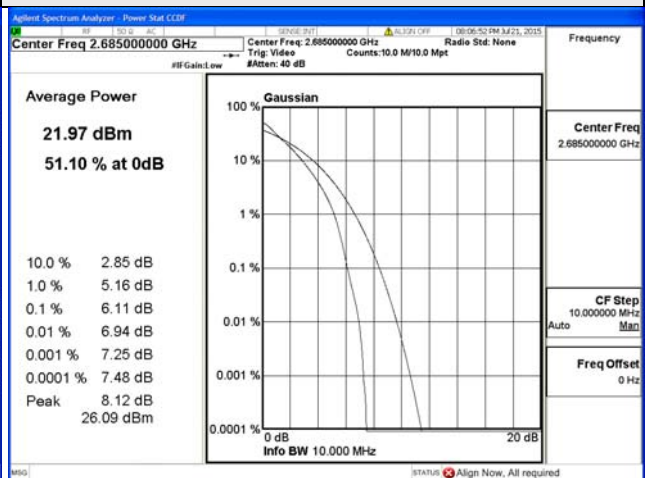
| LTE Band 41             |                 |                              |       |                         |                 |                              |       |
|-------------------------|-----------------|------------------------------|-------|-------------------------|-----------------|------------------------------|-------|
| Channel Bandwidth 5MHz  |                 |                              |       | Channel Bandwidth 10MHz |                 |                              |       |
| Channel                 | Frequency (MHz) | Peak To Average Ratio (dB)   |       | Channel                 | Frequency (MHz) | Peak To Average Ratio (dB)   |       |
|                         |                 | QPSK                         | 16QAM |                         |                 | QPSK                         | 16QAM |
| 39675                   | 2498.5          | 5.67                         | 5.73  | 39700                   | 2501            | 5.94                         | 5.72  |
| 40148                   | 2545.8          | 5.76                         | 5.76  | 40160                   | 2547            | 5.92                         | 5.98  |
| 40620                   | 2593            | 5.76                         | 5.73  | 40620                   | 2593            | 5.90                         | 5.80  |
| 41093                   | 2640.3          | 5.80                         | 5.83  | 41080                   | 2639            | 5.92                         | 5.96  |
| 41565                   | 2687.5          | 5.92                         | 5.92  | 41540                   | 2685            | 6.06                         | 6.11  |
| Channel Bandwidth 15MHz |                 |                              |       | Channel Bandwidth 20MHz |                 |                              |       |
| Channel                 | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       | Channel                 | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       |
|                         |                 | QPSK                         | 16QAM |                         |                 | QPSK                         | 16QAM |
| 39725                   | 2503.5          | 5.72                         | 5.65  | 39750                   | 2506            | 5.68                         | 5.68  |
| 40173                   | 2548.3          | 5.92                         | 5.95  | 40185                   | 2549.5          | 5.69                         | 5.73  |
| 40620                   | 2593            | 5.83                         | 5.74  | 40620                   | 2593            | 5.76                         | 5.75  |
| 41068                   | 2637.8          | 5.87                         | 5.85  | 41055                   | 2636.5          | 5.73                         | 5.74  |
| 41515                   | 2682.5          | 6.00                         | 6.04  | 41490                   | 2680            | 5.76                         | 5.86  |

# Spectrum Plot Of Worst Value

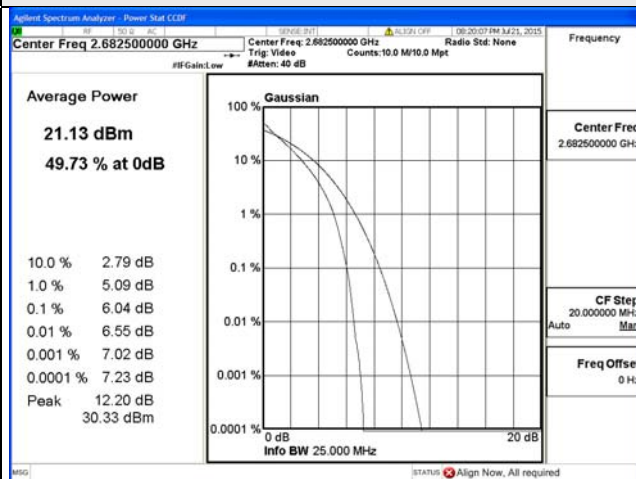
## 5MHz / QPSK



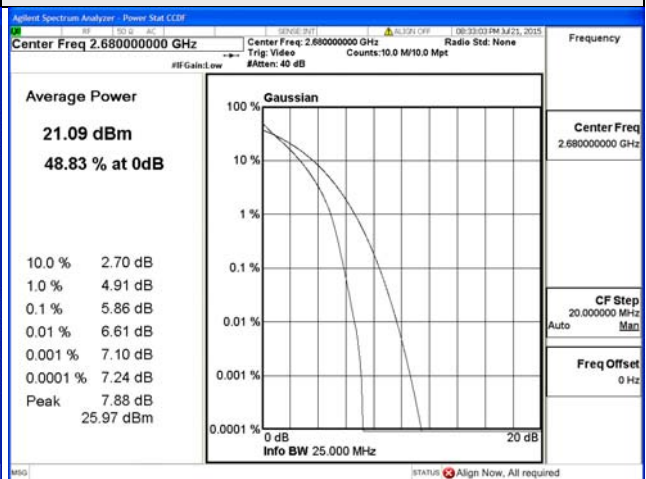
## 10MHz / 16QAM



## 15MHz / 16QAM



## 20MHz / 16QAM



## 4.6 Conducted Spurious Emissions

### 4.6.1 Limits of Conducted Spurious Emissions Measurement

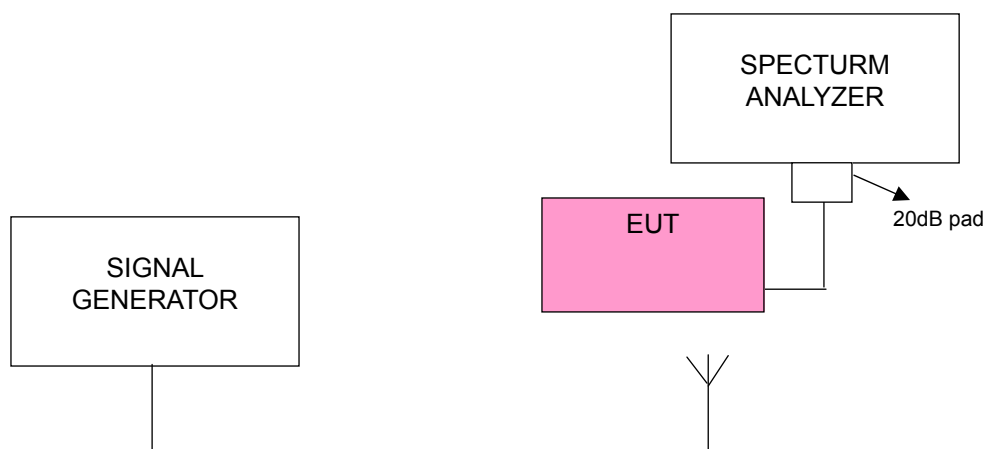
For LTE Band 4 and 12

On any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB. The emission limit equal to  $-13\text{dBm}$ .

For LTE Band 41

On any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least  $55 + 10 \log (P)$  dB. The emission limit equal to  $-25\text{dBm}$ .

### 4.6.2 Test Setup



### 4.6.3 Test Procedure

- For LTE band 4 & 12 measurements were done at 3 channels for LTE Band 41 measurements were done at 5 channels: low, middle and high operational frequency range.
- When the spectrum scanned from 9kHz to 20GHz, it shall be connected to the 20dB pad attenuated the carried frequency. The spectrum set RB = 1MHz, VB = 3MHz for LTE Band 4 and 41.
- When the spectrum scanned from 9kHz to 9GHz, it shall be connected to the 20dB pad attenuated the carried frequency. The spectrum set RB = 1MHz, VB = 3MHz for LTE Band 12.

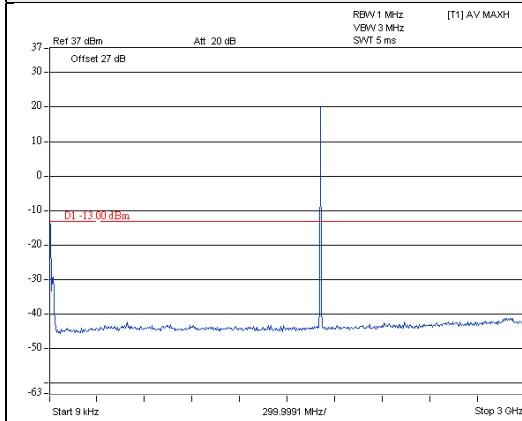
#### 4.6.4 Test Results

LTE Band 4 Channel Band width: 1.4MHz

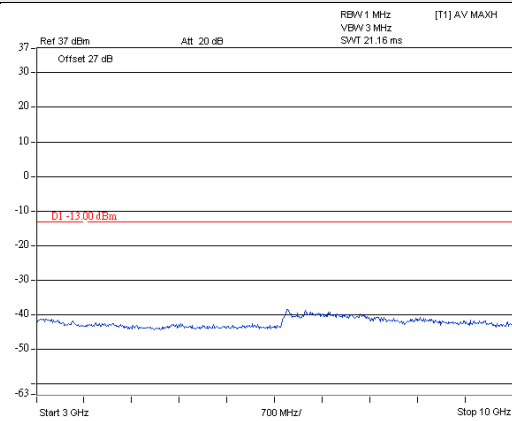
Channel 19957

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

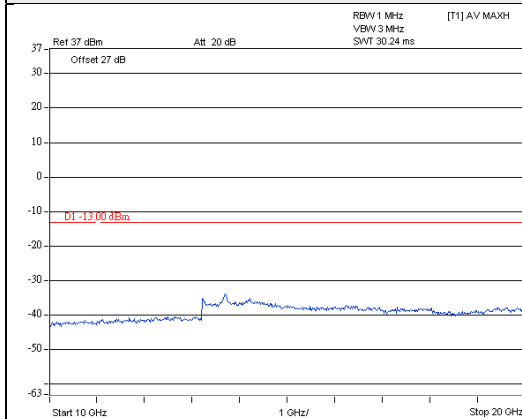


A D T



A D T

Frequency Range : 10GHz~20GHz



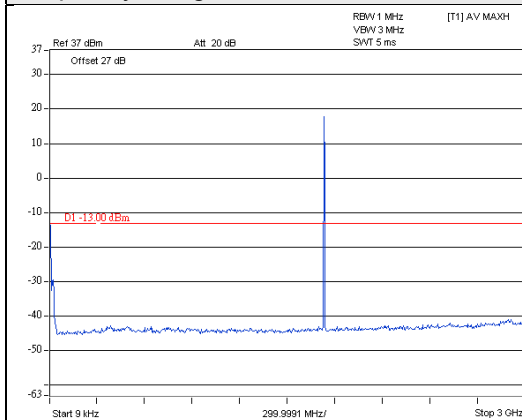
A D T

LTE Band 4 Channel Band width: 1.4MHz

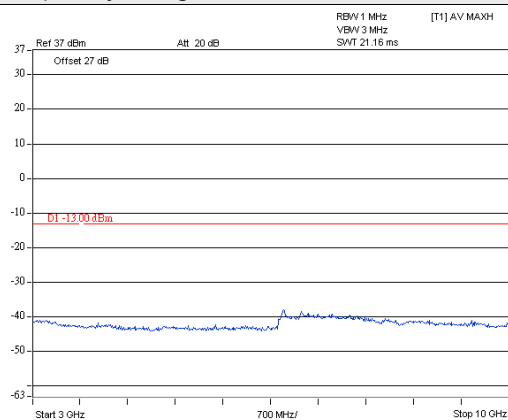
Channel 20175

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

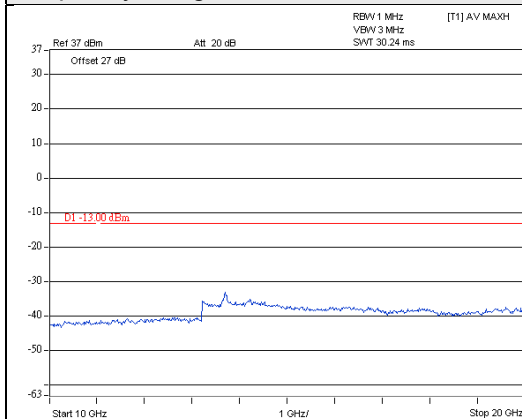


A D T



A D T

Frequency Range : 10GHz~20GHz



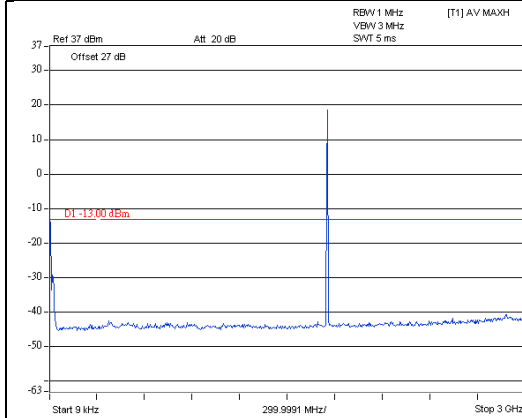
A D T

LTE Band 4 Channel Band width: 1.4MHz

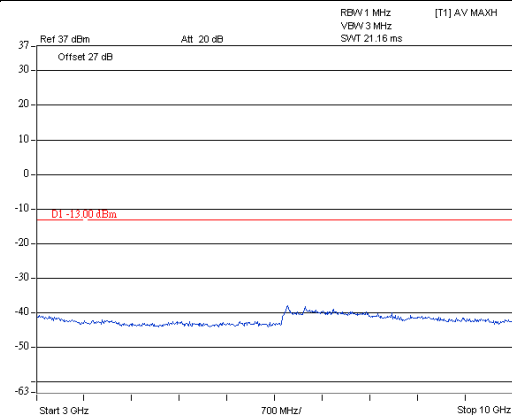
Channel 20393

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

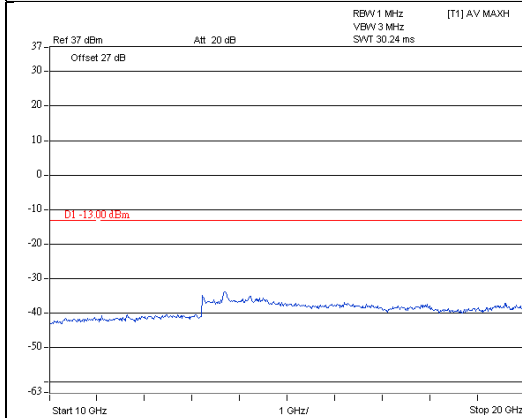


A D T



A D T

Frequency Range : 10GHz~20GHz



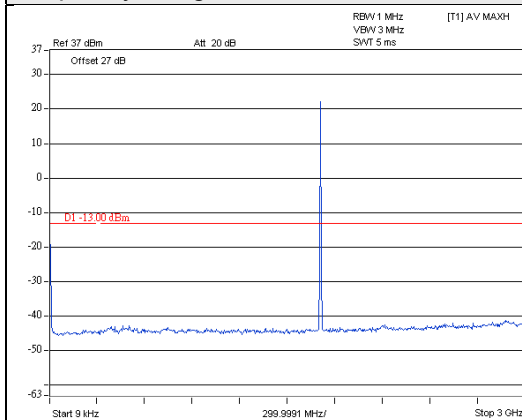
A D T

LTE Band 4 Channel Band width: 3MHz

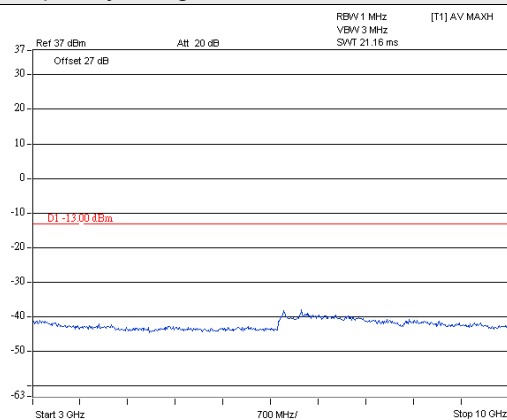
Channel 19965

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

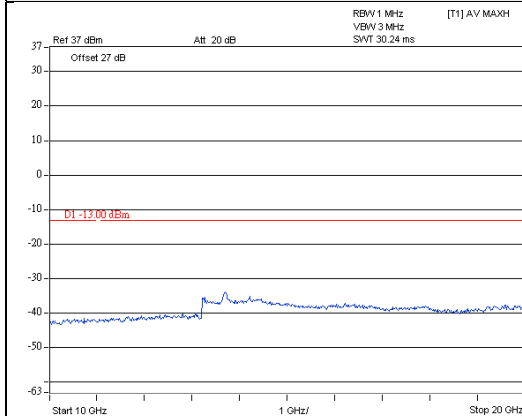


A D T



A D T

Frequency Range : 10GHz~20GHz



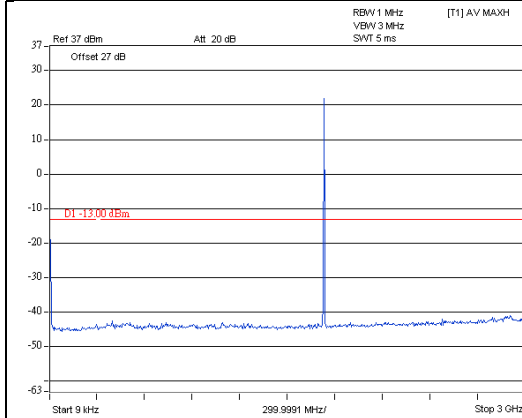
A D T

LTE Band 4 Channel Band width: 3MHz

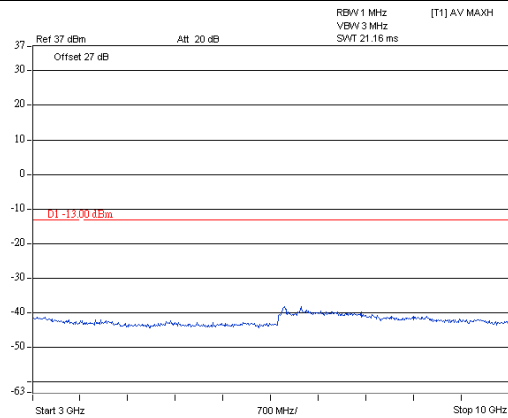
Channel 20175

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

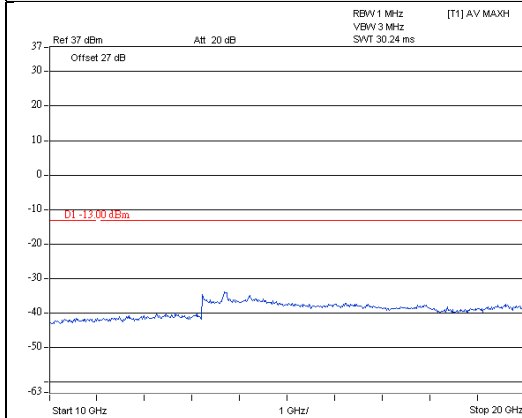


A D T



A D T

Frequency Range : 10GHz~20GHz



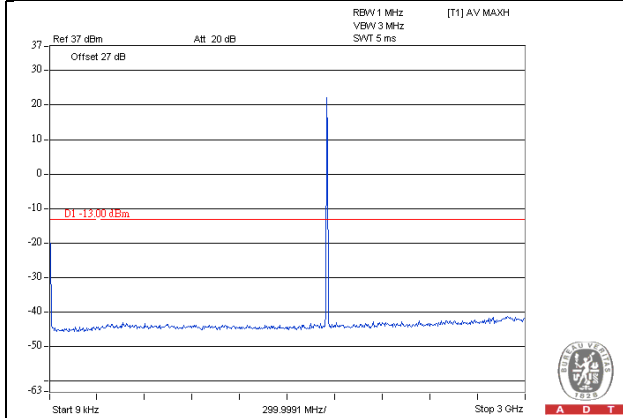
A D T

LTE Band 4 Channel Band width: 3MHz

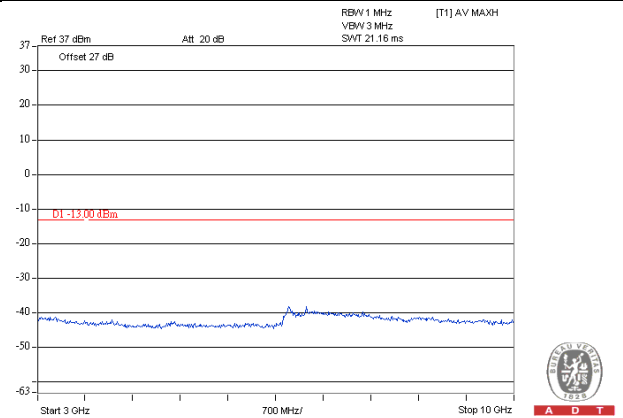
Channel 20385

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

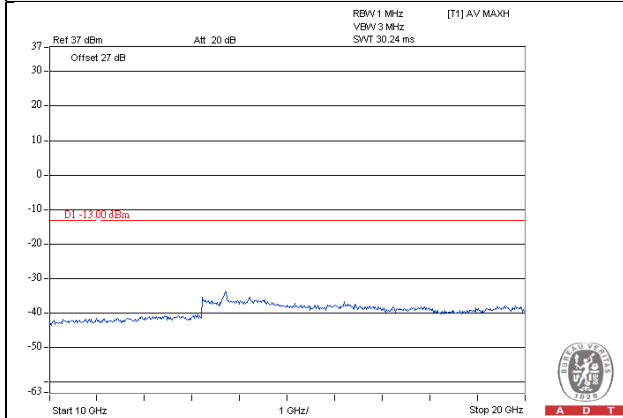


A D T



A D T

Frequency Range : 10GHz~20GHz



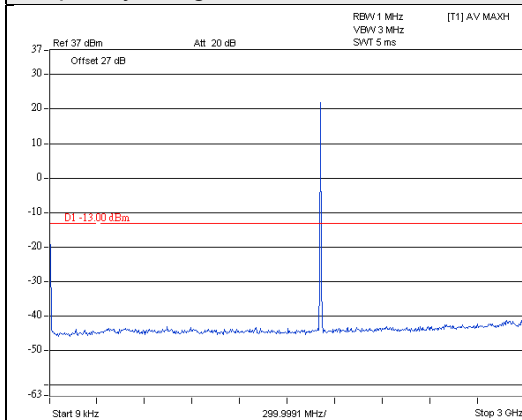
A D T

LTE Band 4 Channel Band width: 5MHz

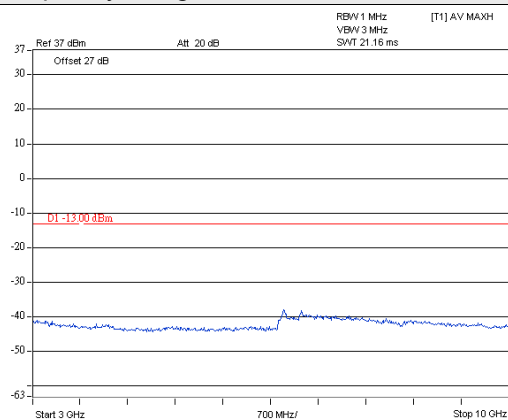
Channel 19975,

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

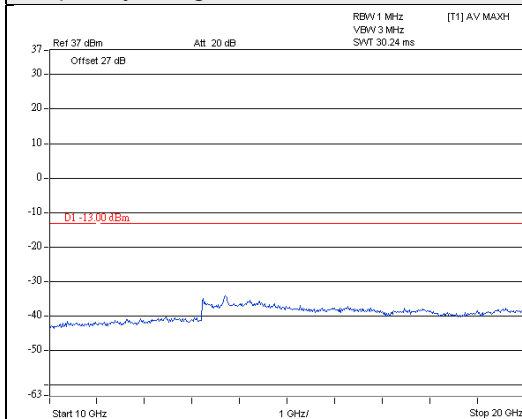


A D T



A D T

Frequency Range : 10GHz~20GHz



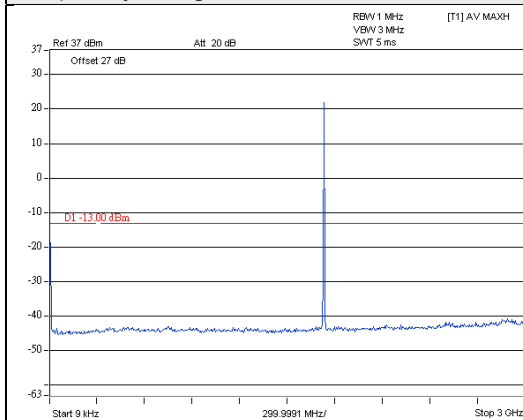
A D T

LTE Band 4 Channel Band width: 5MHz

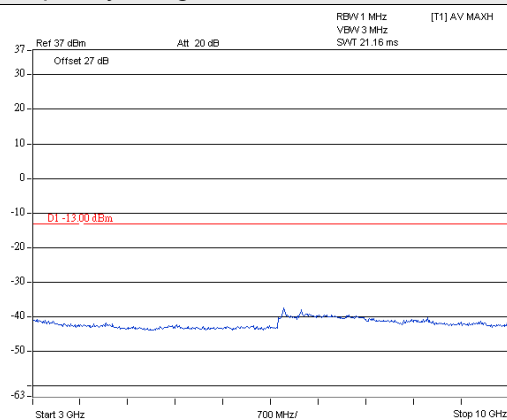
Channel 20175

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

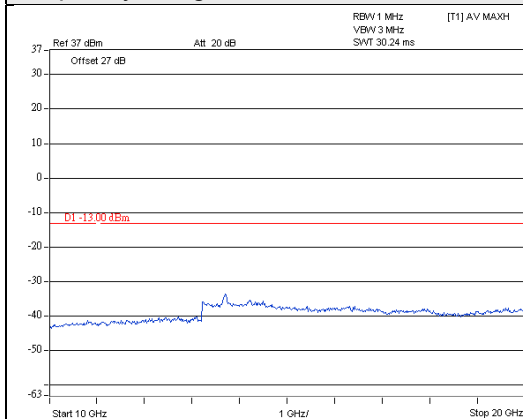


A D T



A D T

Frequency Range : 10GHz~20GHz



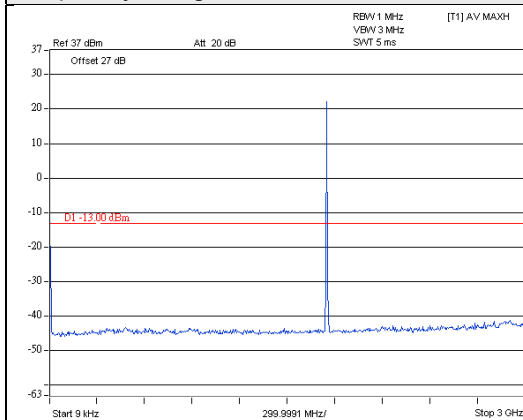
A D T

LTE Band 4 Channel Band width: 5MHz

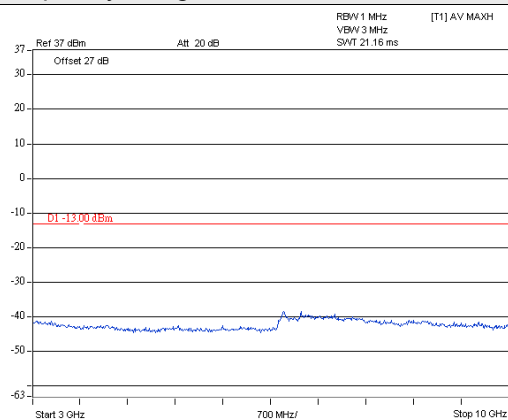
Channel 20375

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

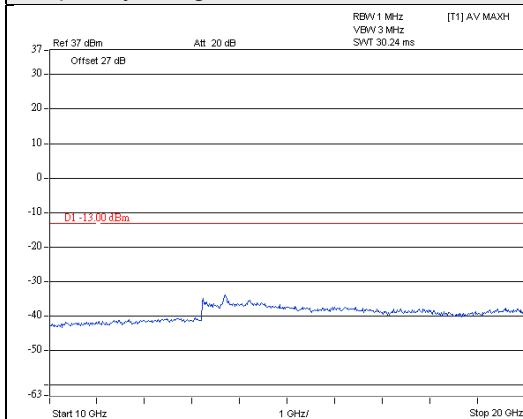


A D T



A D T

Frequency Range : 10GHz~20GHz



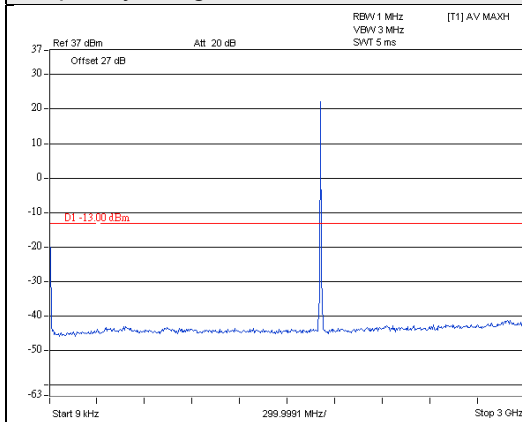
A D T

LTE Band 4 Channel Band width: 10MHz

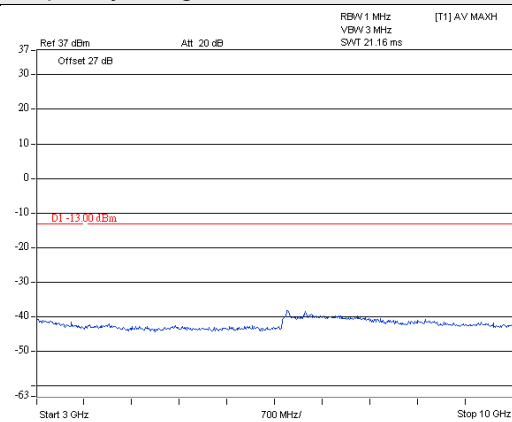
Channel 20000

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

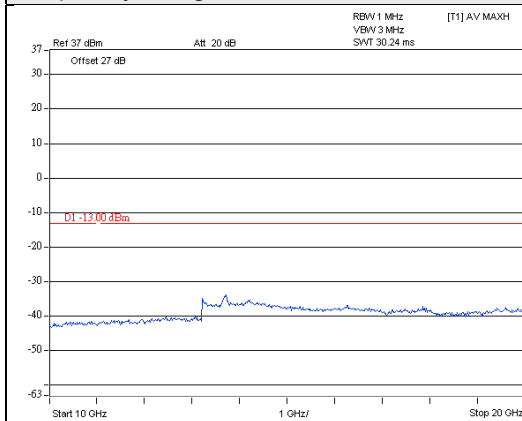


A D T



A D T

Frequency Range : 10GHz~20GHz



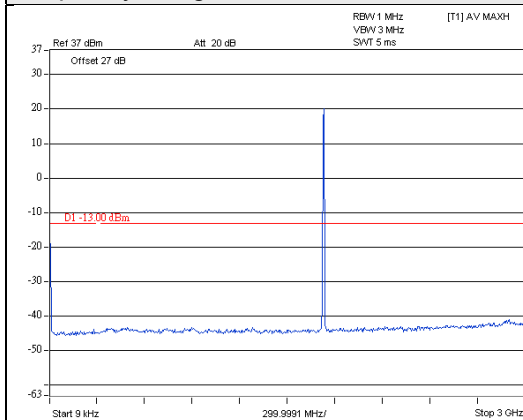
A D T

LTE Band 4 Channel Band width: 10MHz

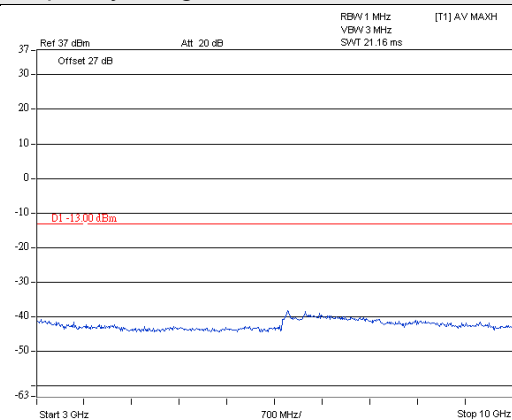
Channel 20175

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

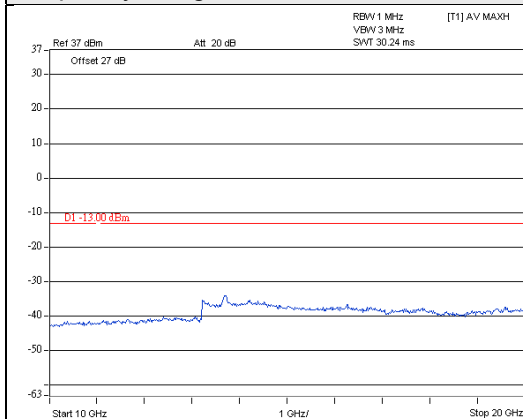


A D T



A D T

Frequency Range : 10GHz~20GHz



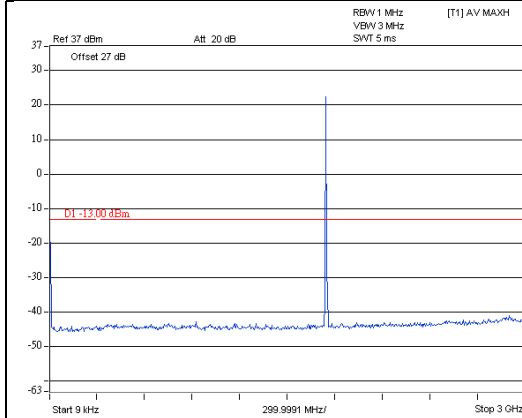
A D T

LTE Band 4 Channel Band width: 10MHz

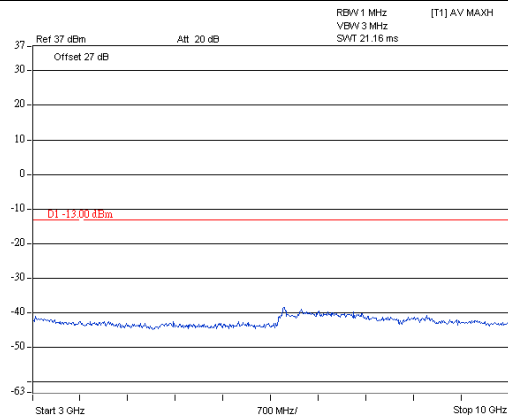
Channel 20350

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

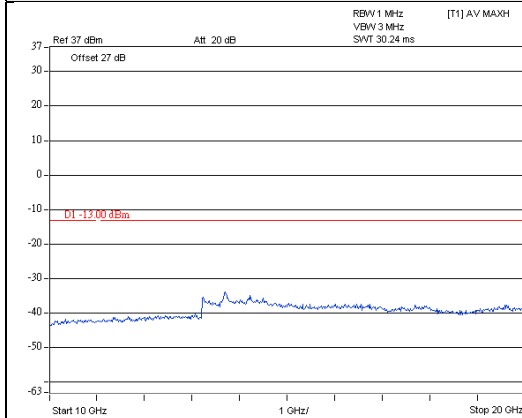


A D T



A D T

Frequency Range : 10GHz~20GHz



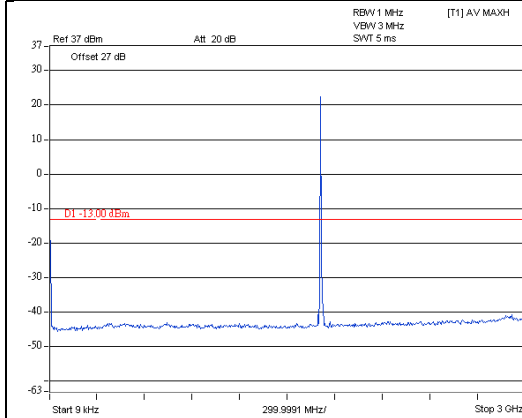
A D T

LTE Band 4 Channel Band width: 15MHz

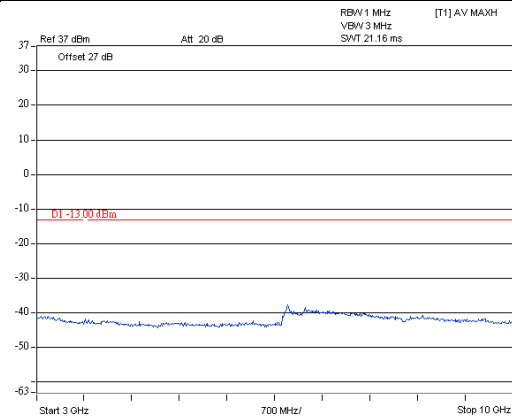
Channel 20025,

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

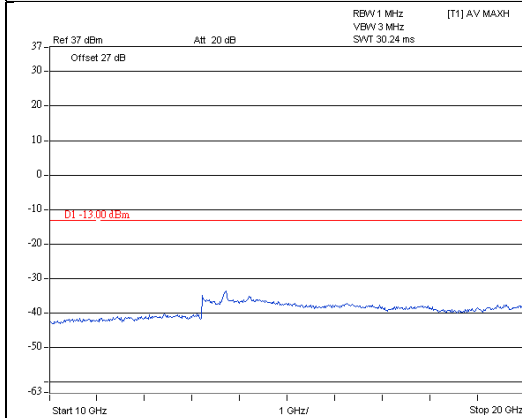


A D T



A D T

Frequency Range : 10GHz~20GHz



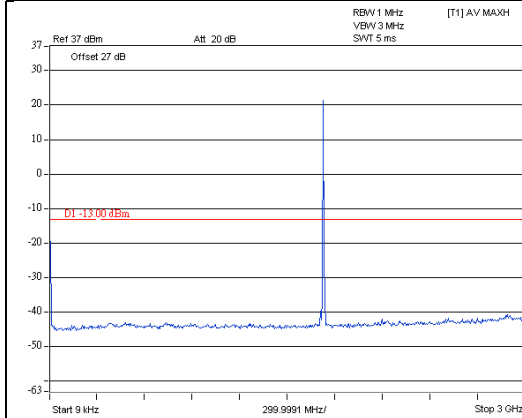
A D T

LTE Band 4 Channel Band width: 15MHz

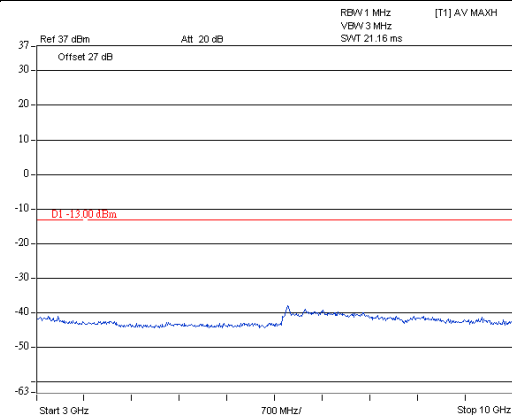
Channel 20175

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

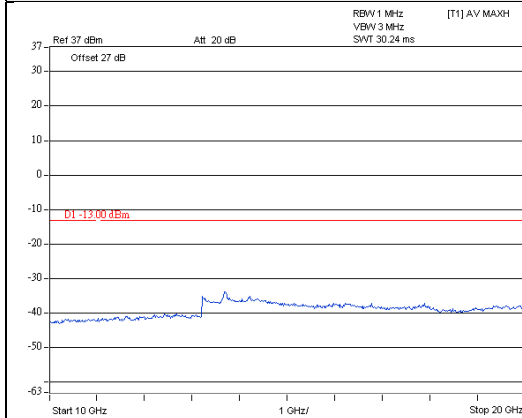


A D T



A D T

Frequency Range : 10GHz~20GHz



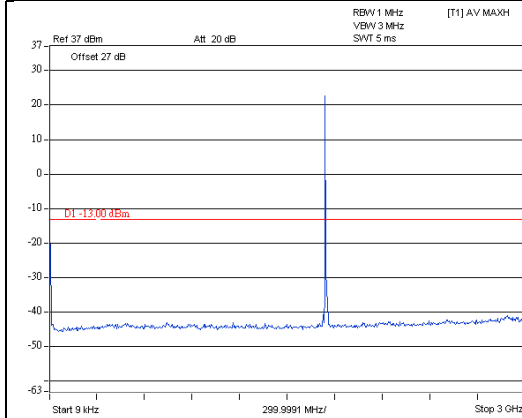
A D T

LTE Band 4 Channel Band width: 15MHz

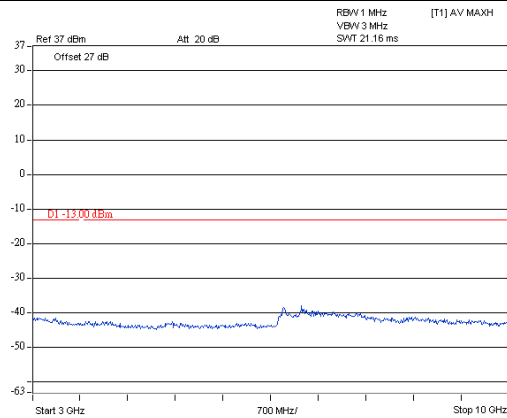
Channel 20325

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

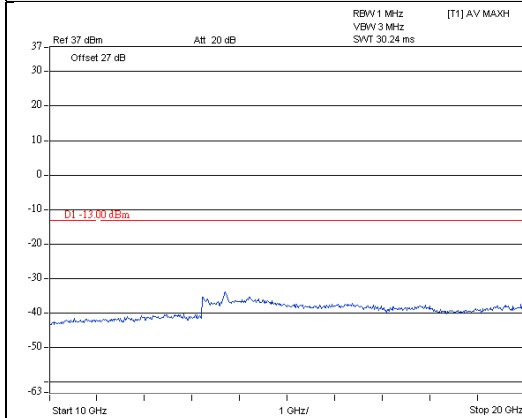


A D T



A D T

Frequency Range : 10GHz~20GHz



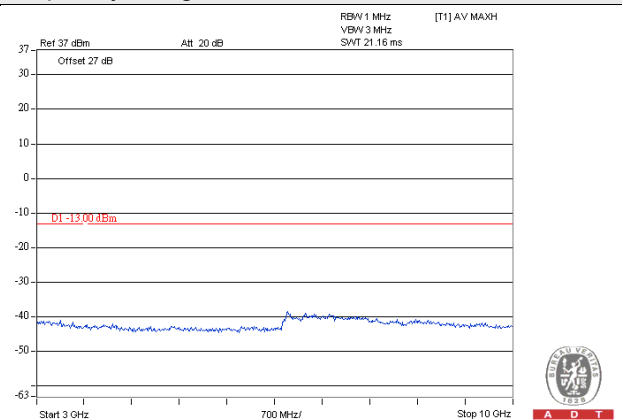
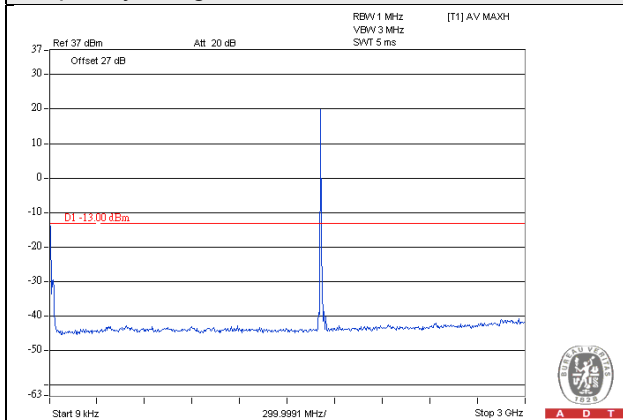
A D T

LTE Band 4 Channel Band width: 20MHz

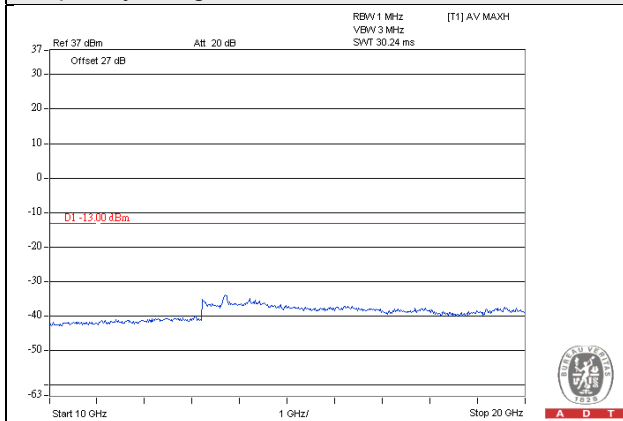
Channel 20050

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz



Frequency Range : 10GHz~20GHz

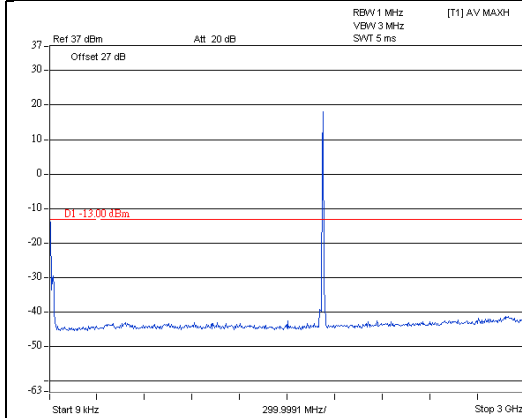


LTE Band 4 Channel Band width: 20MHz

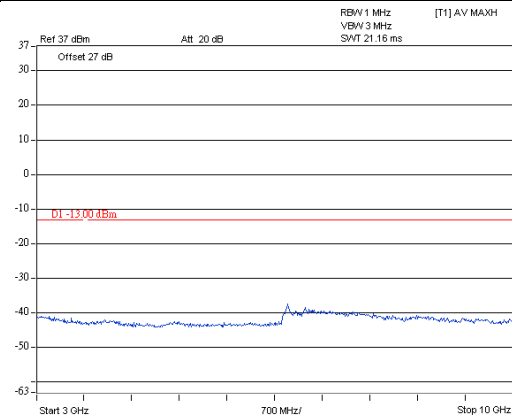
Channel 20175

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

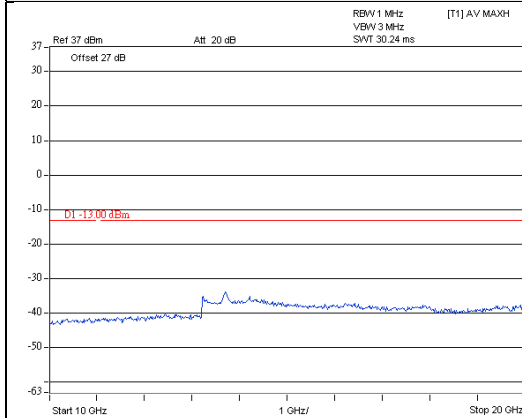


A D T



A D T

Frequency Range : 10GHz~20GHz



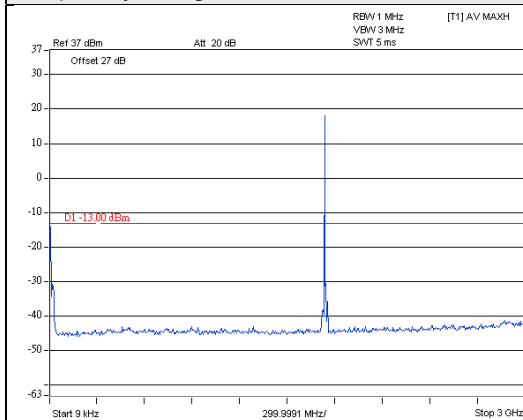
A D T

LTE Band 4 Channel Band width: 20MHz

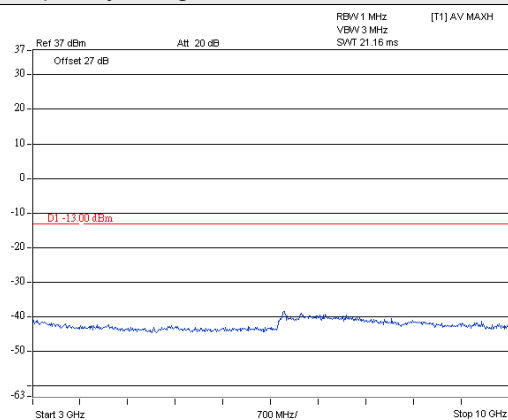
Channel 20300

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

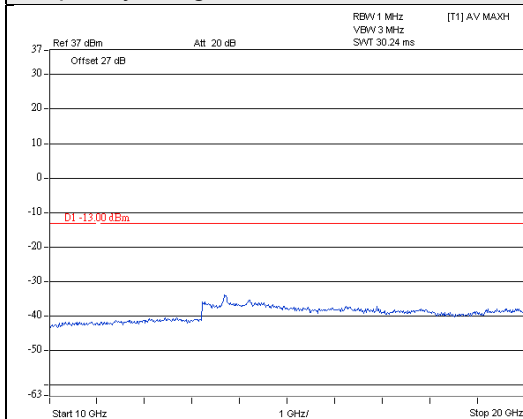


A D T



A D T

Frequency Range : 10GHz~20GHz



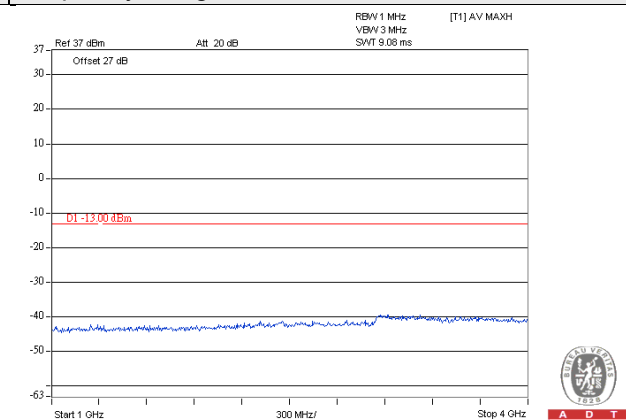
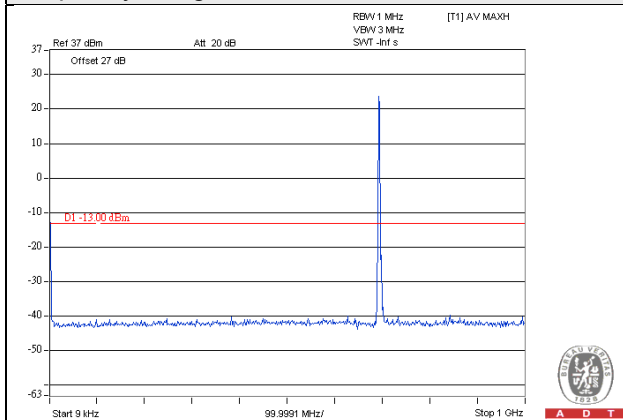
A D T

LTE Band 12 Channel Band width: 1.4MHz

Channel 23017

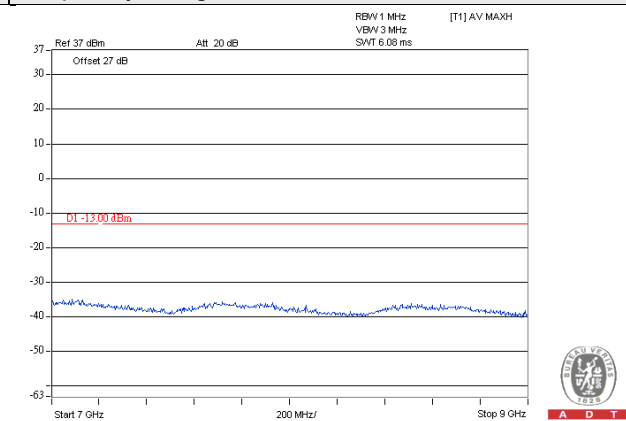
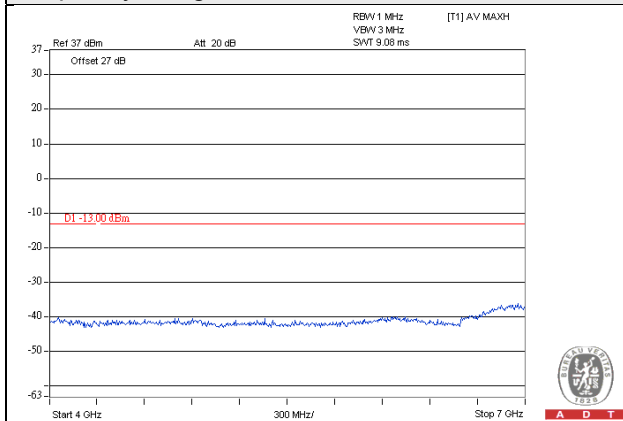
Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz

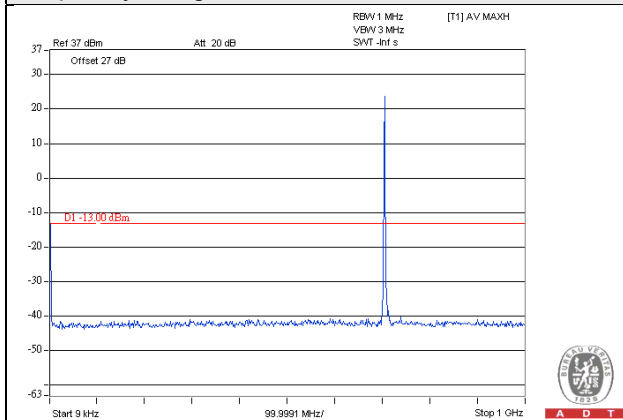


LTE Band 12 Channel Band width: 1.4MHz

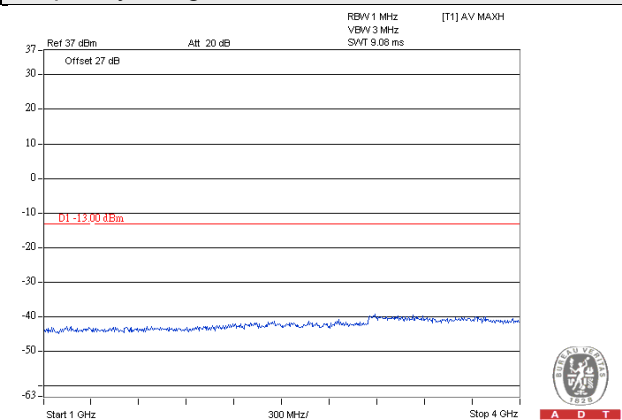
Channel 23095

Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



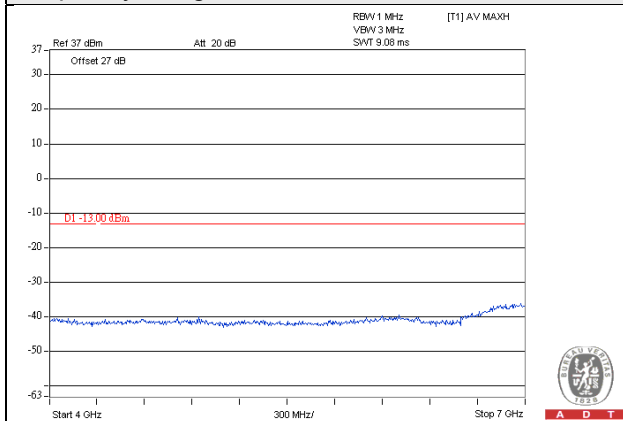
A D T



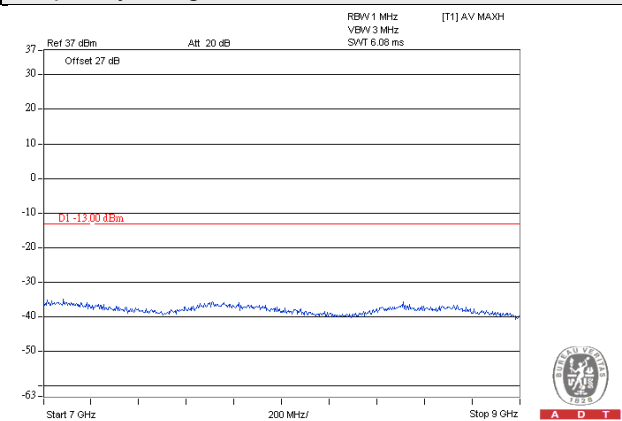
A D T

Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz



A D T



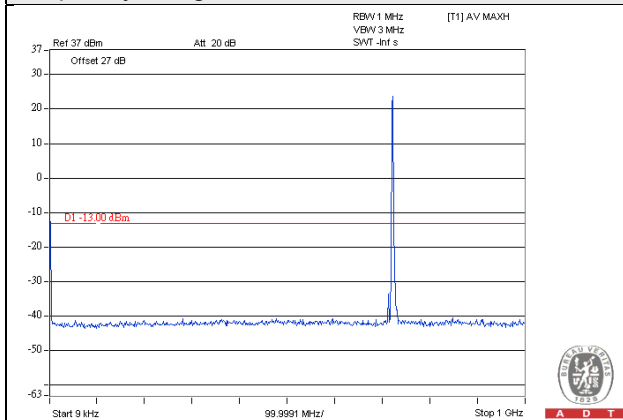
A D T

LTE Band 12 Channel Band width: 1.4MHz

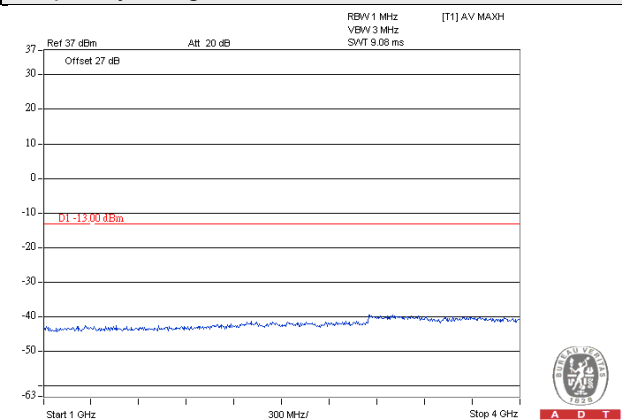
Channel 23173

Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



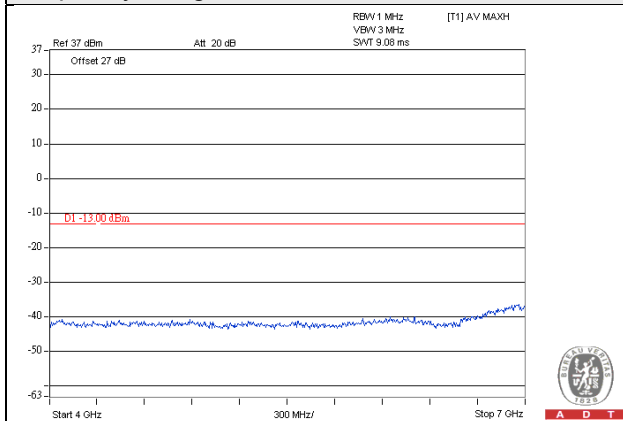
A D T



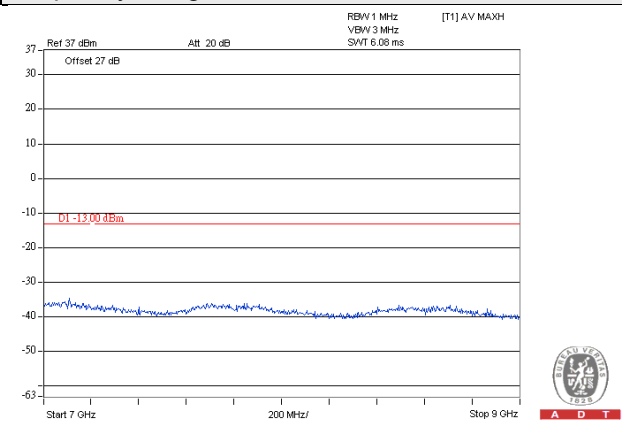
A D T

Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz



A D T



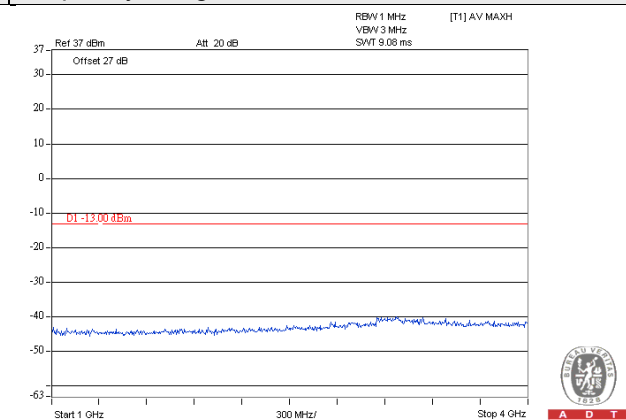
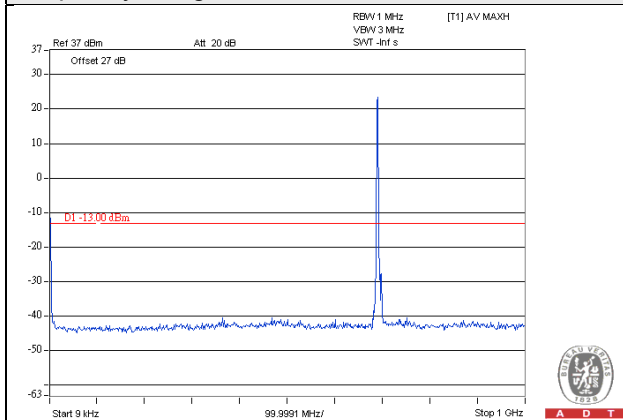
A D T

LTE Band 12 Channel Band width: 3MHz

Channel 23025

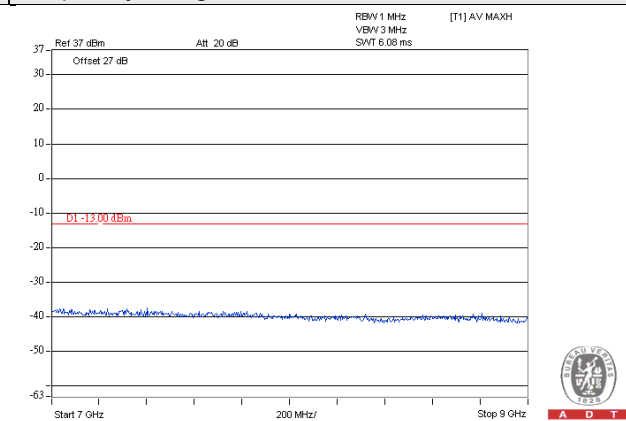
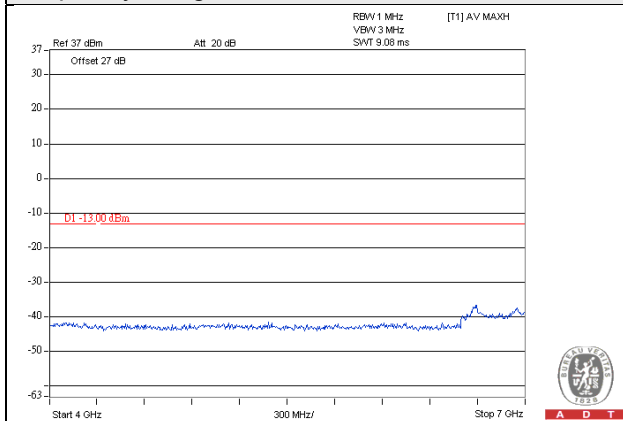
Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz

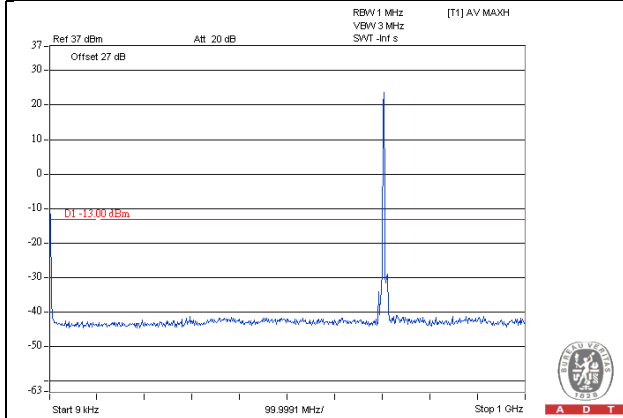


LTE Band 12 Channel Band width: 3MHz

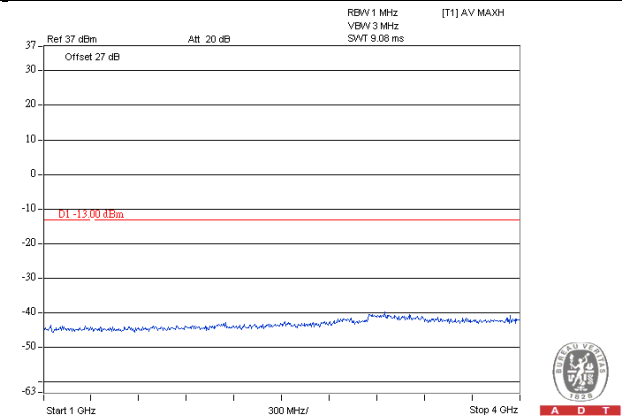
Channel 23095

Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



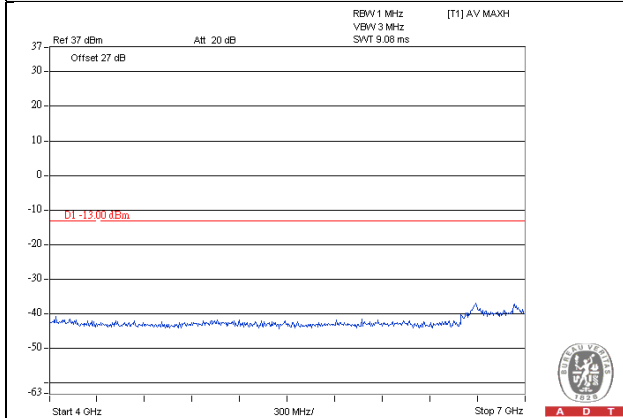
A D T



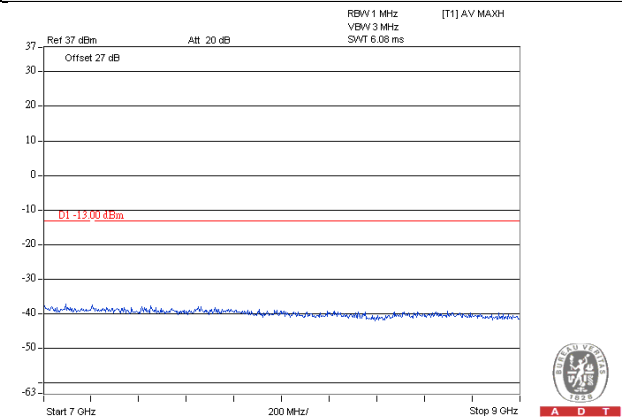
A D T

Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz



A D T



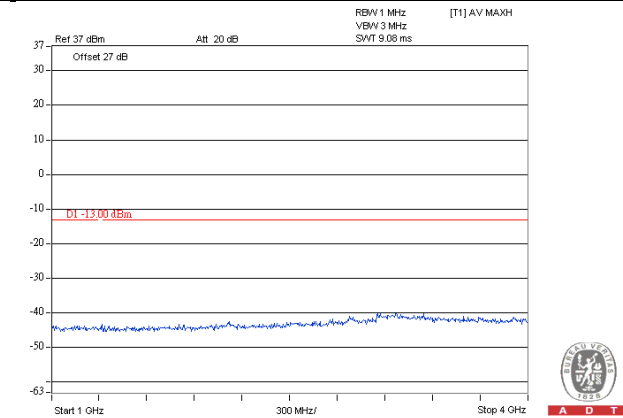
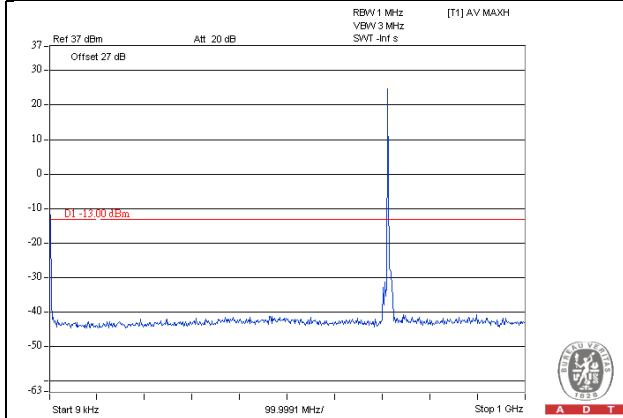
A D T

LTE Band 12 Channel Band width: 3MHz

Channel 23165

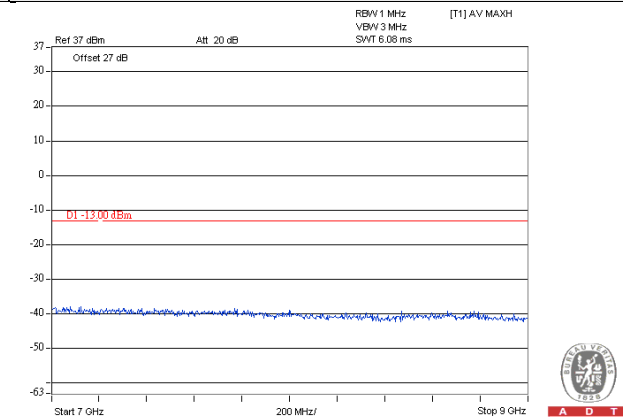
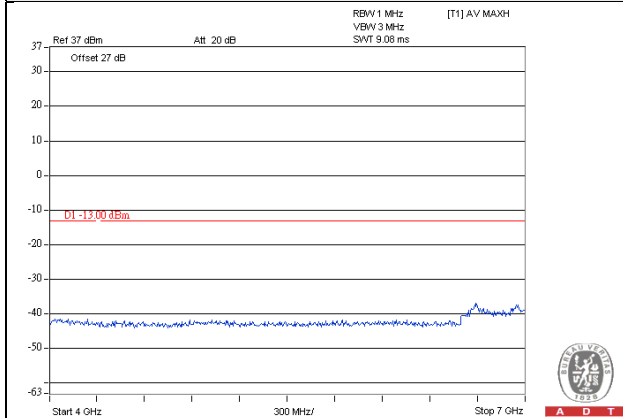
Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz

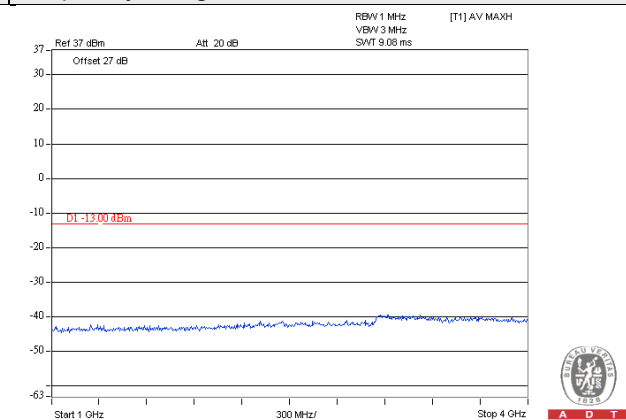
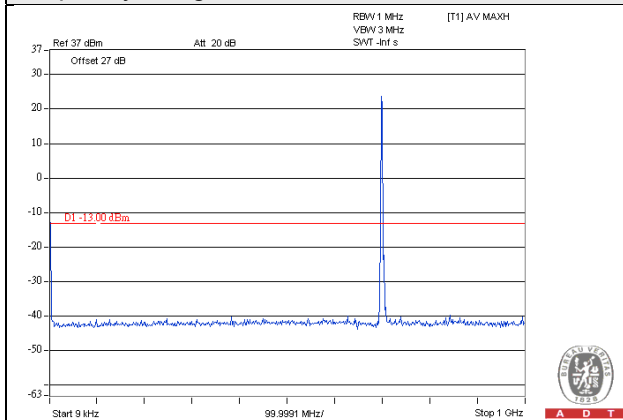


LTE Band 12 Channel Band width: 5MHz

Channel 23035

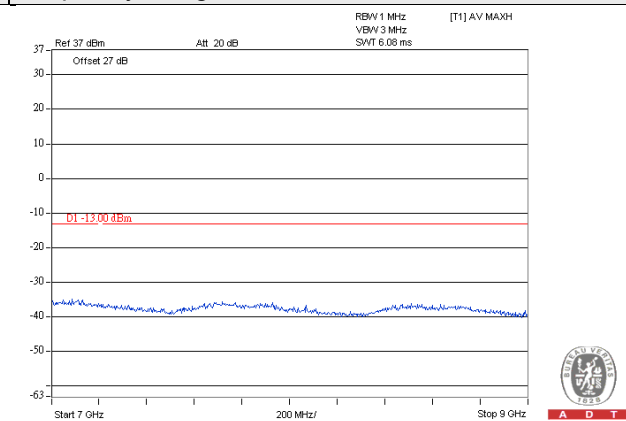
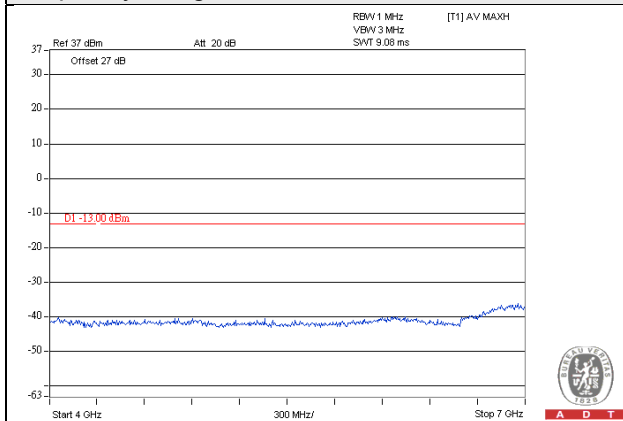
Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz

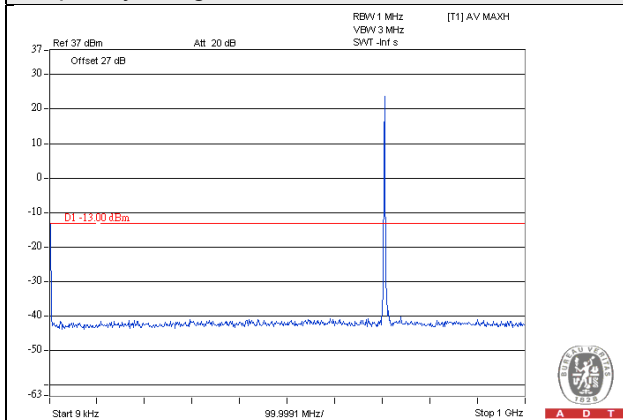


LTE Band 12 Channel Band width: 5MHz

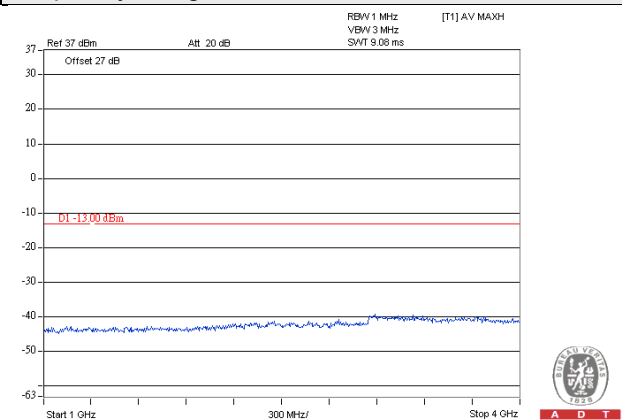
Channel 23095

Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



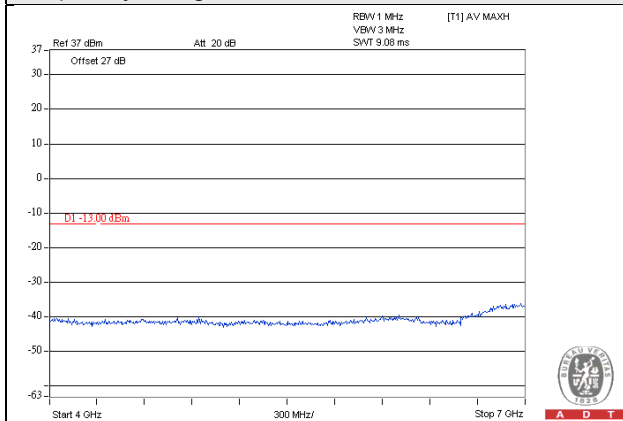
A D T



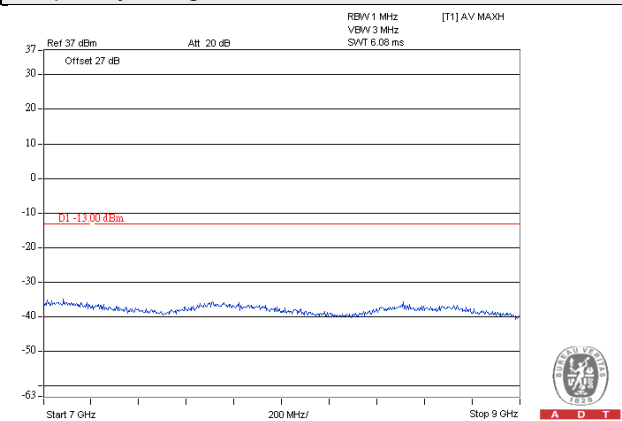
A D T

Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz



A D T



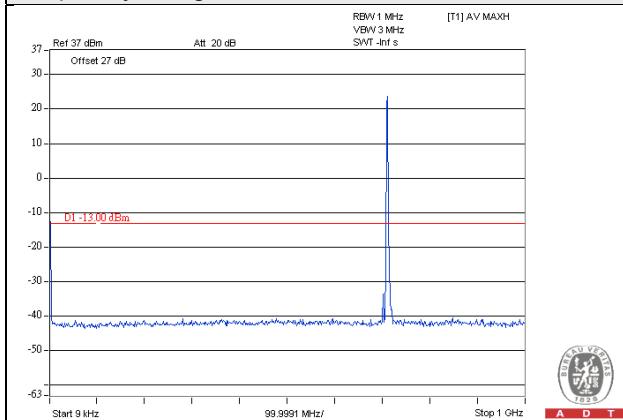
A D T

LTE Band 12 Channel Band width: 5MHz

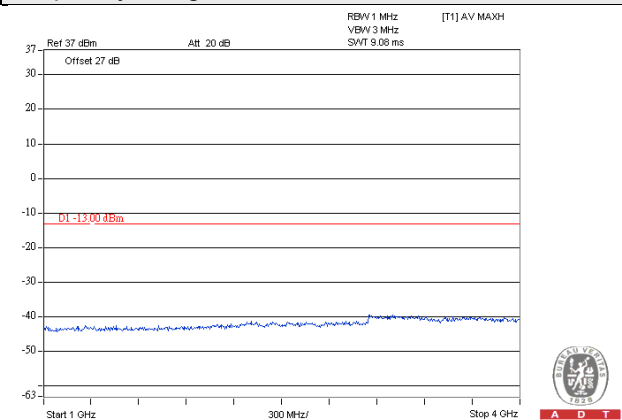
Channel 23155

Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



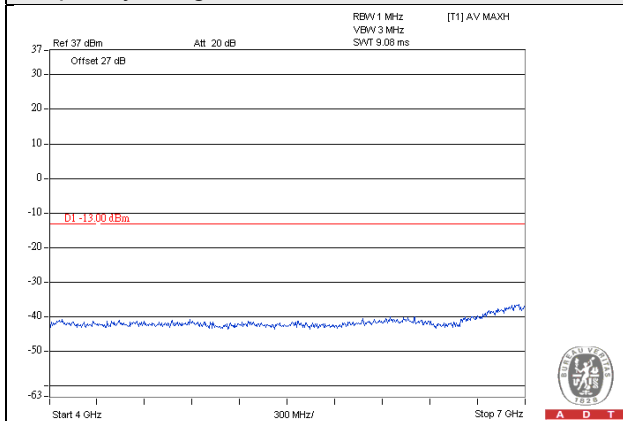
A D T



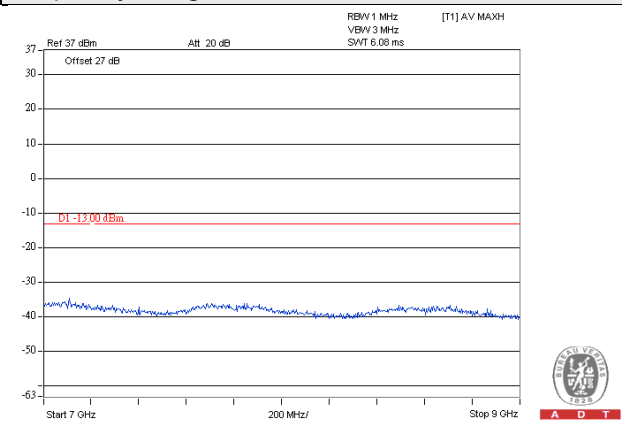
A D T

Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz



A D T



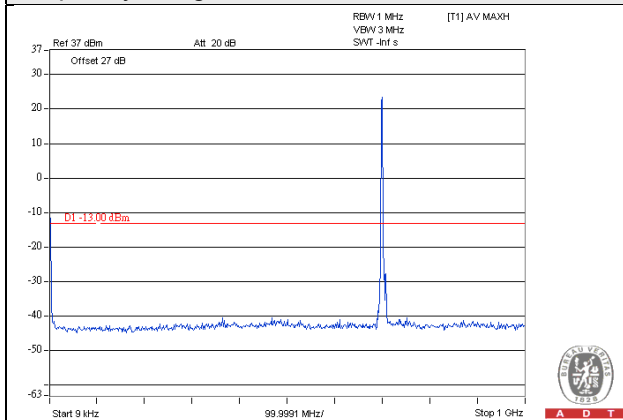
A D T

LTE Band 12 Channel Band width: 10MHz

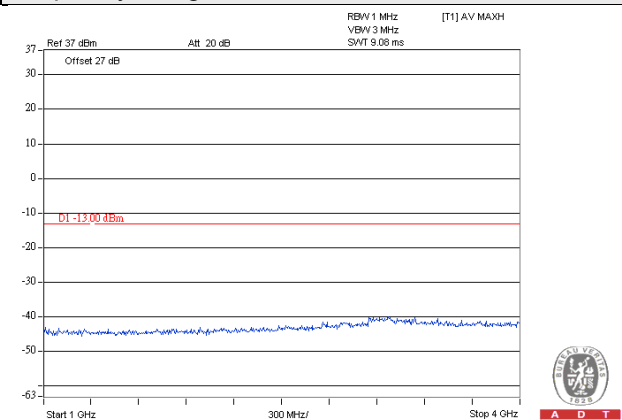
Channel 23060

Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



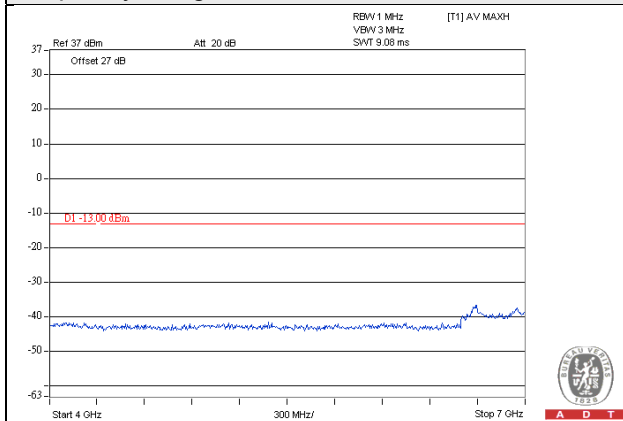
A D T



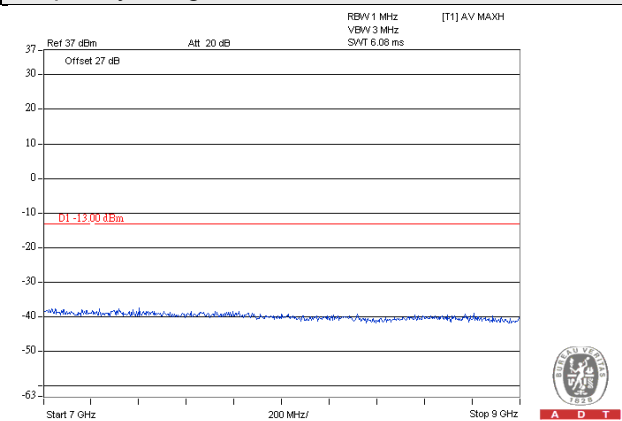
A D T

Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz



A D T



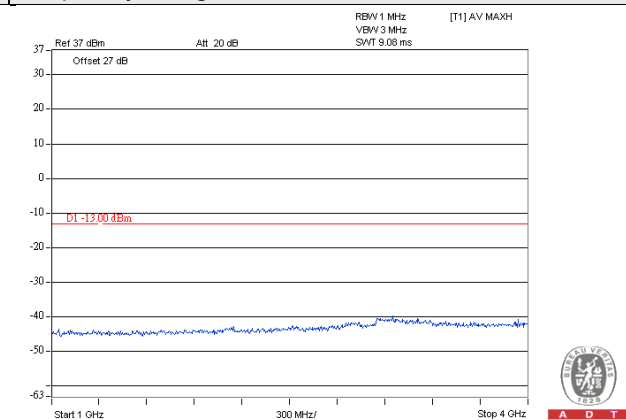
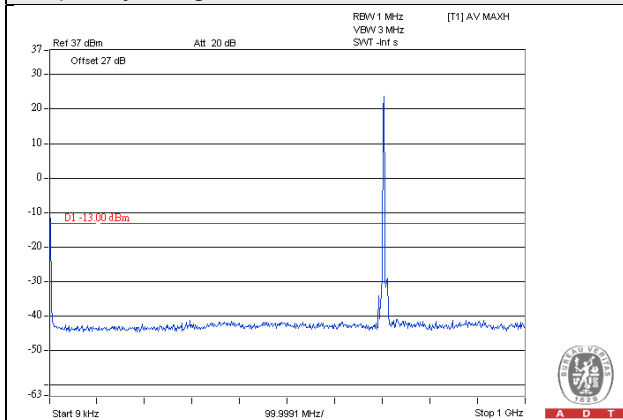
A D T

LTE Band 12 Channel Band width: 10MHz

Channel 23095

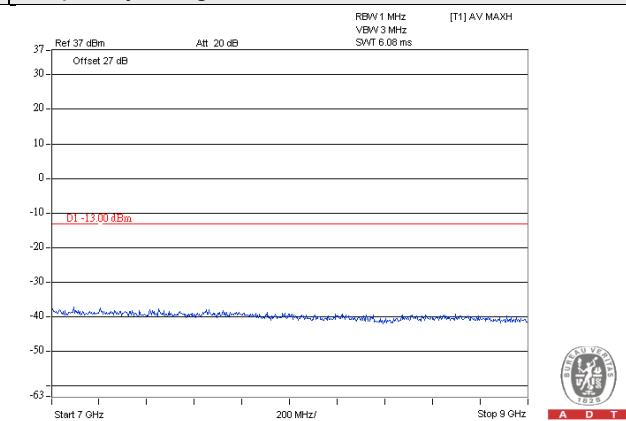
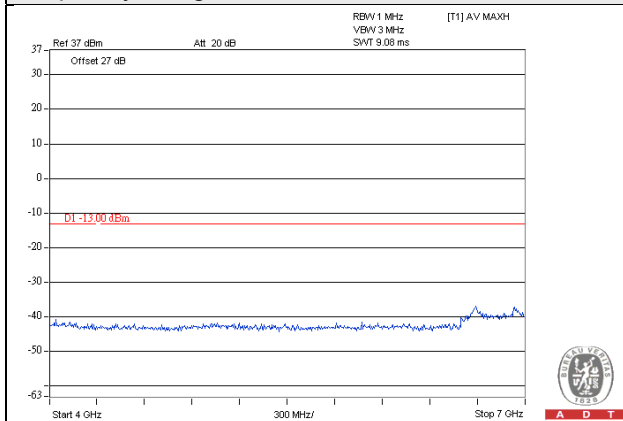
Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz

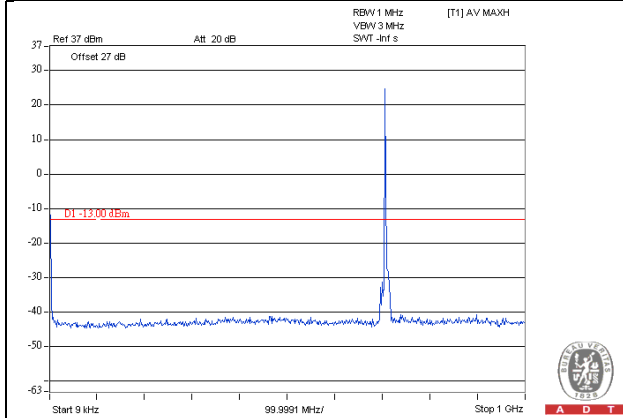


LTE Band 12 Channel Band width: 10MHz

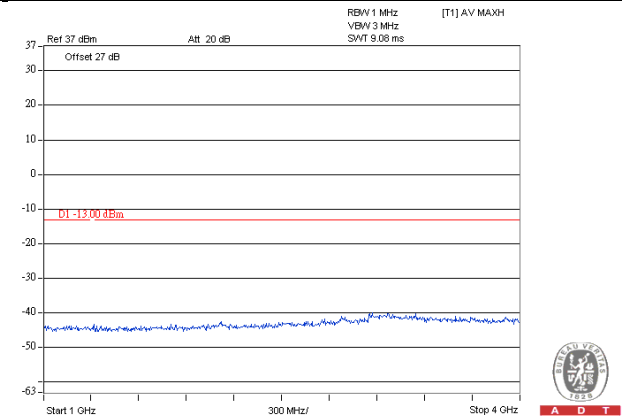
Channel 23130

Frequency Range : 9kHz~1GHz

Frequency Range : 1GHz~4GHz



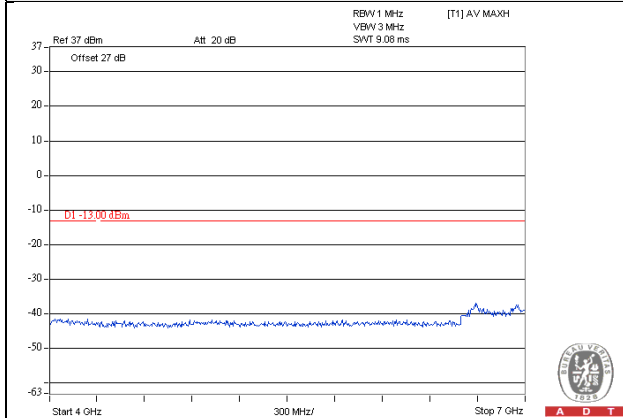
A D T



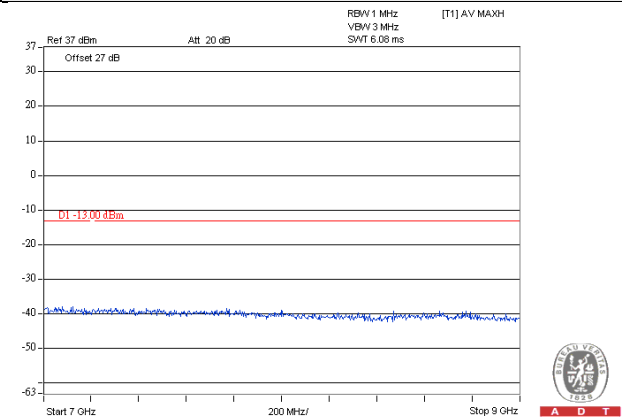
A D T

Frequency Range : 4GHz~7GHz

Frequency Range : 7GHz~9GHz



A D T



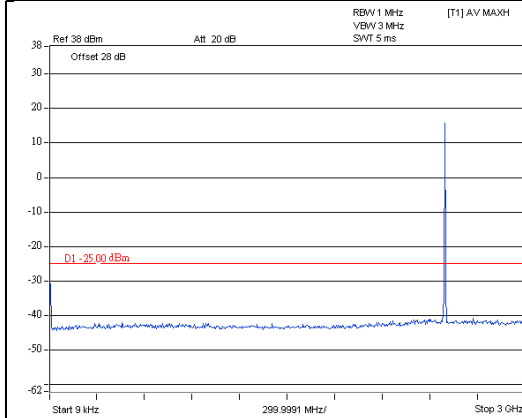
A D T

LTE Band 41 Channel Band width: 5MHz

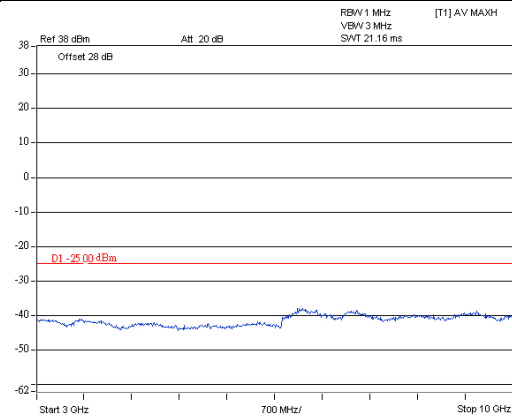
Channel 39675

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

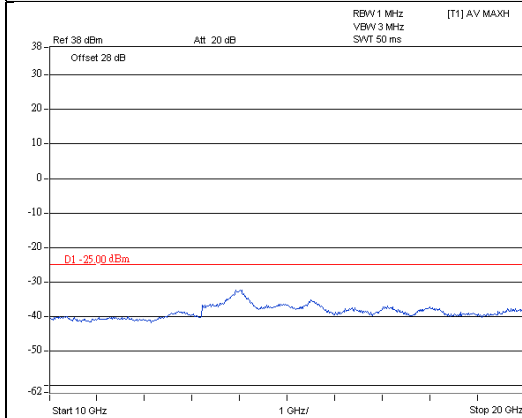


A D T



A D T

Frequency Range : 10GHz~20GHz



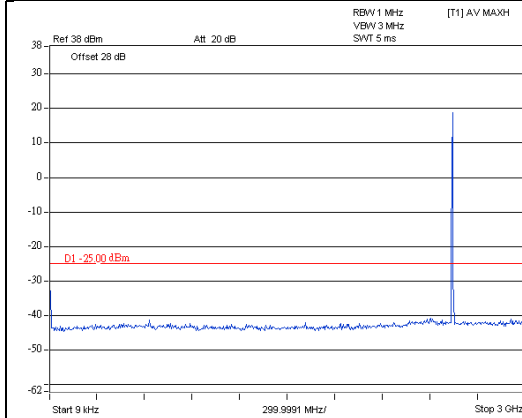
A D T

LTE Band 41 Channel Band width: 5MHz

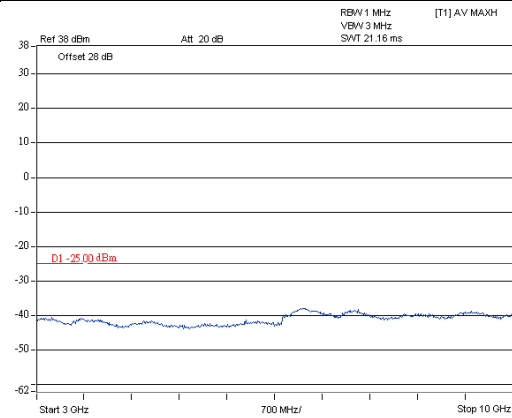
Channel 40148

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

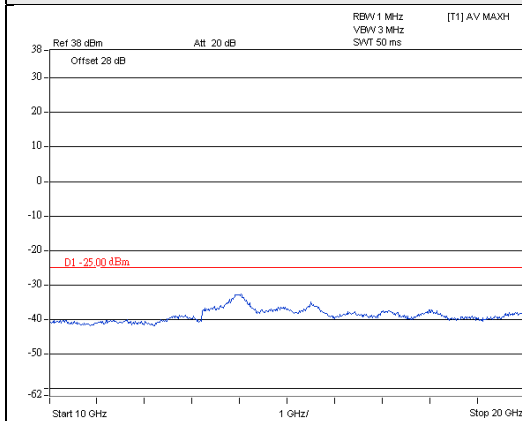


A D T



A D T

Frequency Range : 10GHz~20GHz



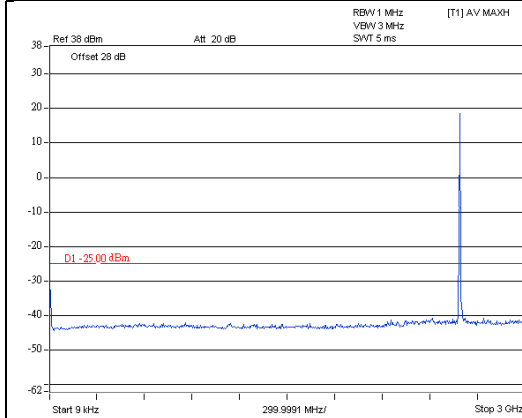
A D T

LTE Band 41 Channel Band width: 5MHz

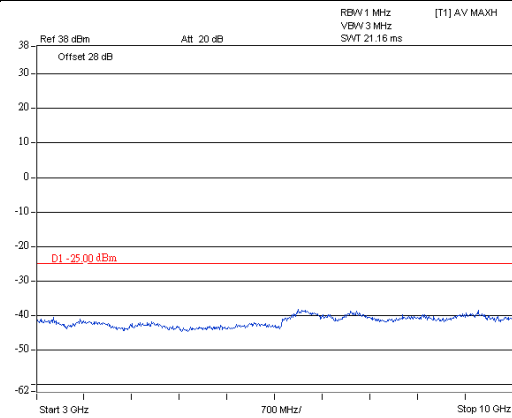
Channel 40620

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

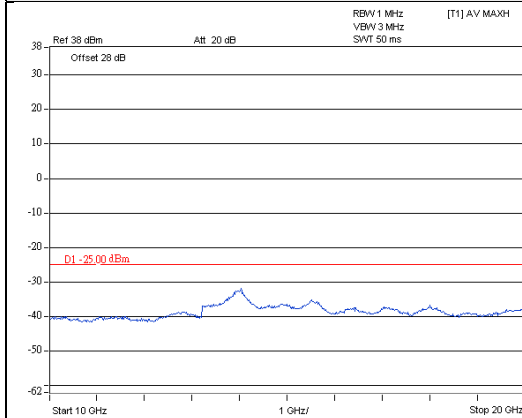


A D T



A D T

Frequency Range : 10GHz~20GHz



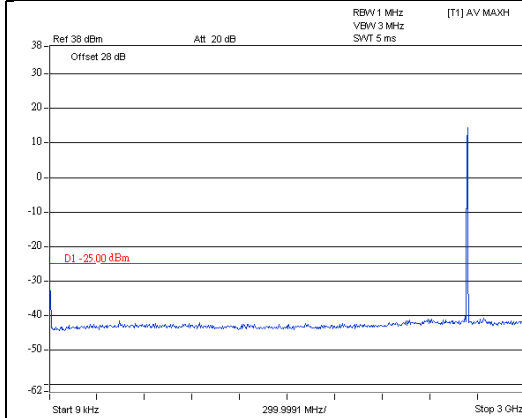
A D T

LTE Band 41 Channel Band width: 5MHz

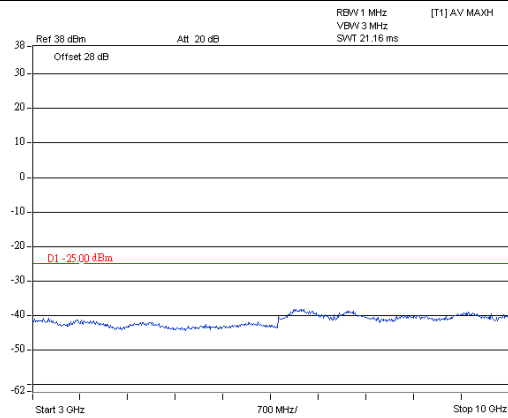
Channel 41093

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

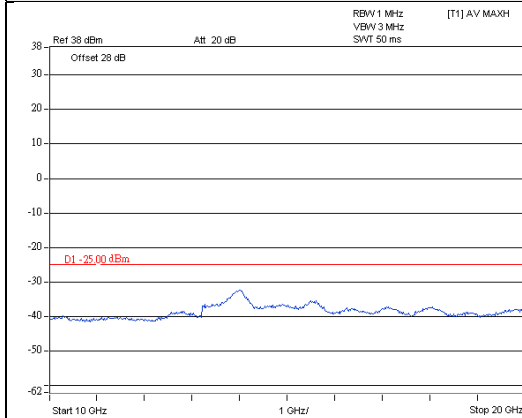


A D T



A D T

Frequency Range : 10GHz~20GHz



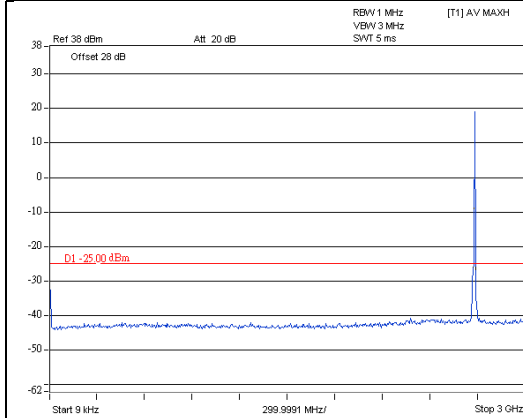
A D T

LTE Band 41 Channel Band width: 5MHz

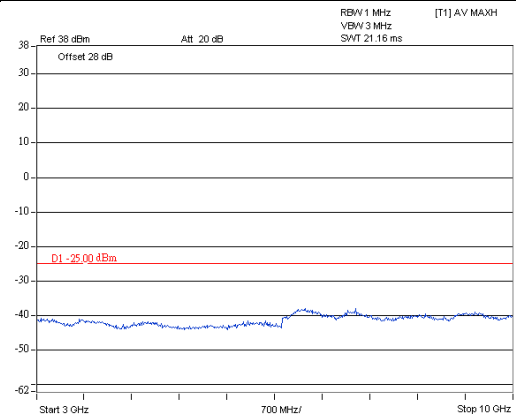
Channel 41565

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

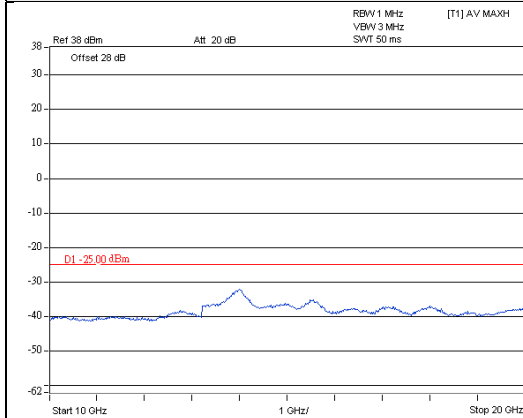


A D T



A D T

Frequency Range : 10GHz~20GHz



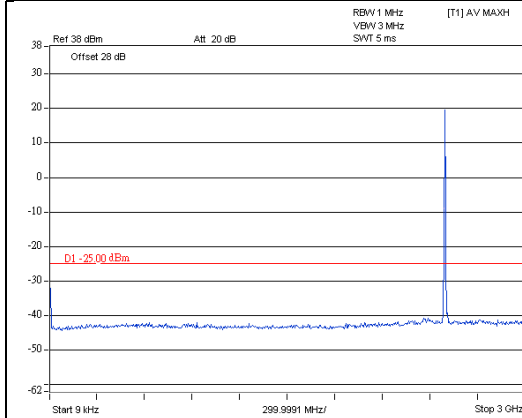
A D T

LTE Band 41 Channel Band width: 10MHz

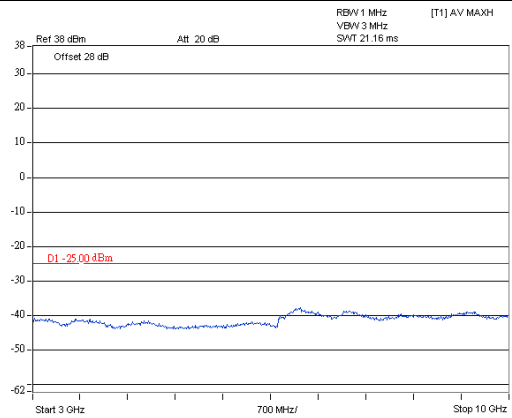
Channel 39700

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

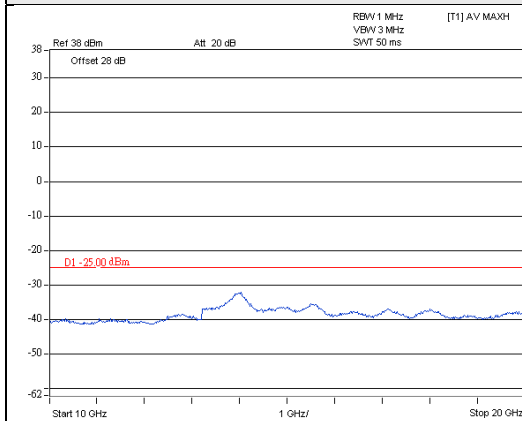


A D T



A D T

Frequency Range : 10GHz~20GHz



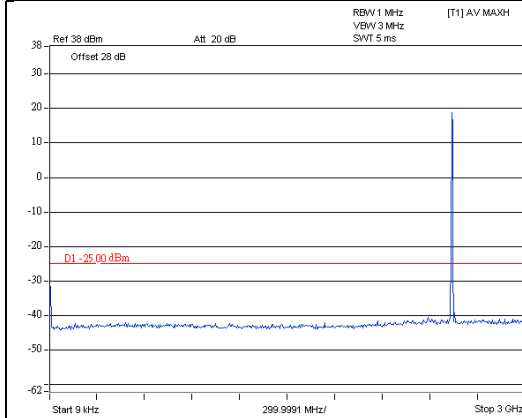
A D T

LTE Band 41 Channel Band width: 10MHz

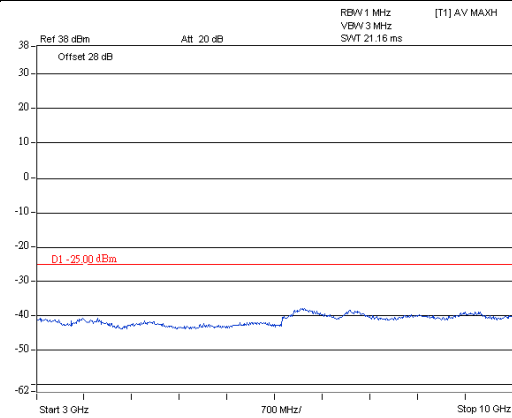
Channel 40160

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

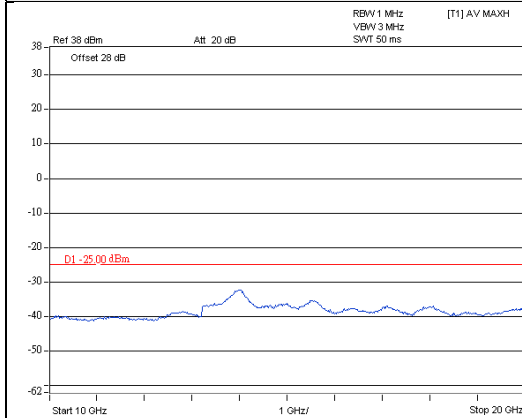


A D T



A D T

Frequency Range : 10GHz~20GHz



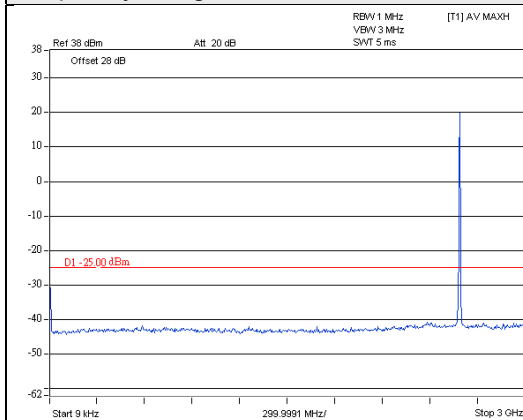
A D T

LTE Band 41 Channel Band width: 10MHz

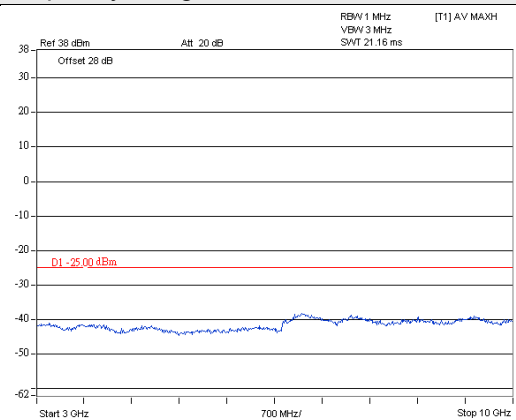
Channel 40620,

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

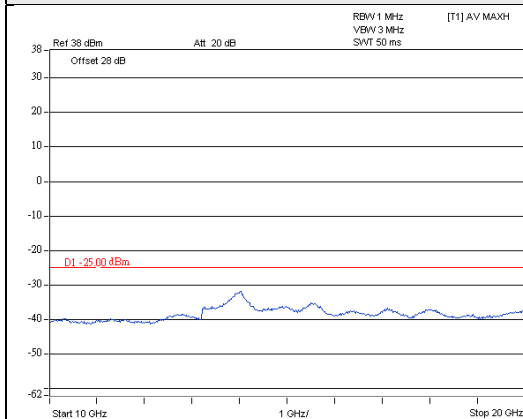


A D T



A D T

Frequency Range : 10GHz~20GHz



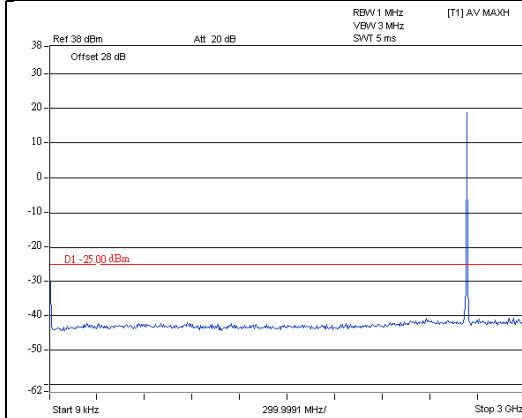
A D T

LTE Band 41 Channel Band width: 10MHz

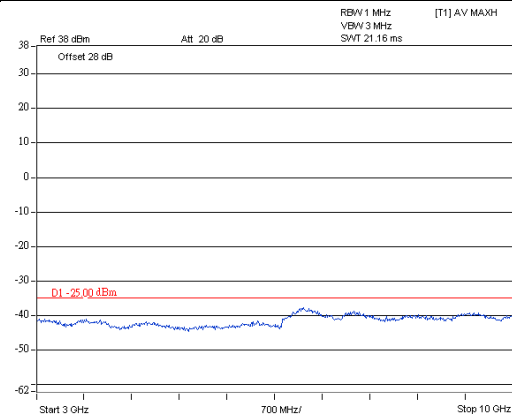
Channel 41080

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

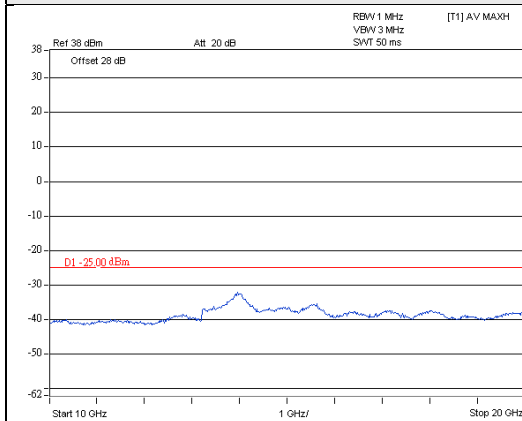


A D T



A D T

Frequency Range : 10GHz~20GHz



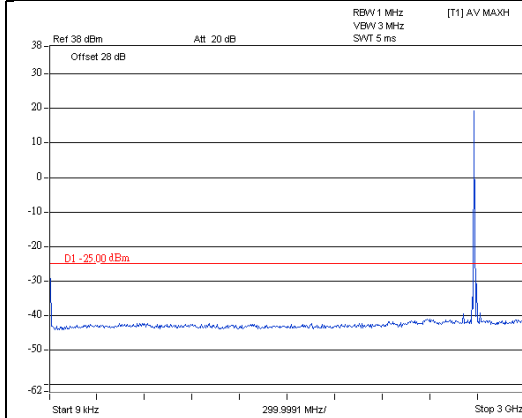
A D T

LTE Band 41 Channel Band width: 10MHz

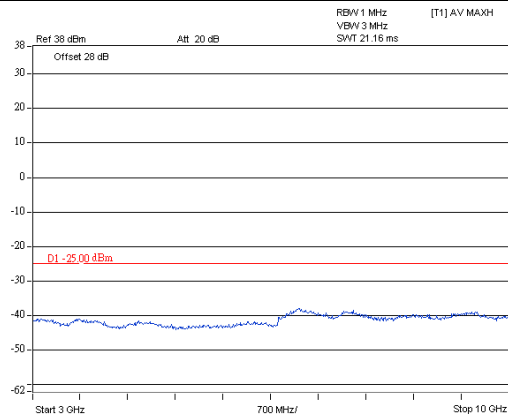
Channel 41540

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

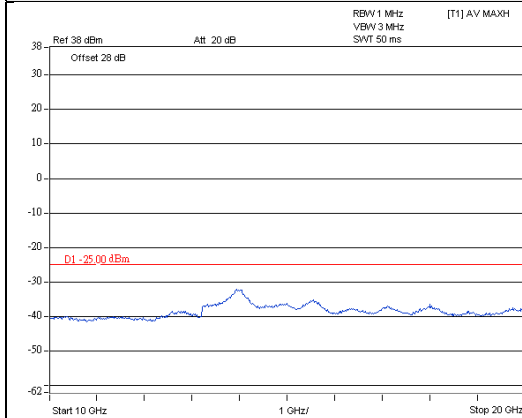


A D T



A D T

Frequency Range : 10GHz~20GHz



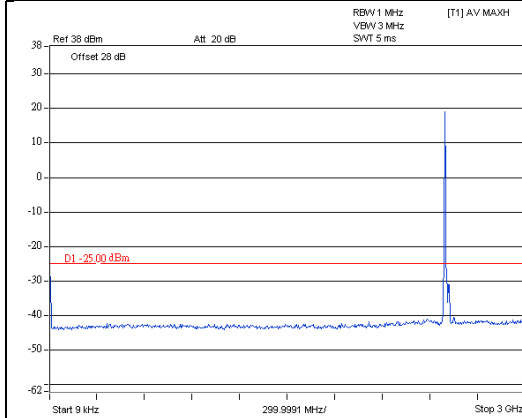
A D T

LTE Band 41 Channel Band width: 15MHz

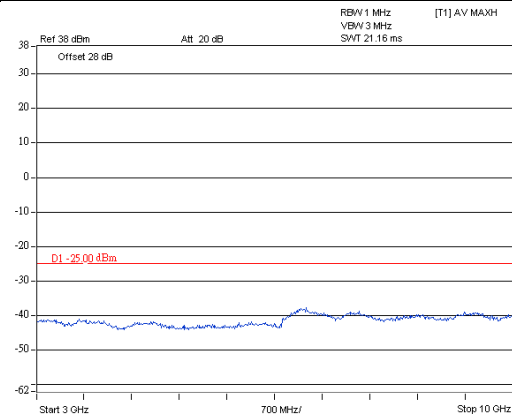
Channel 39725

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

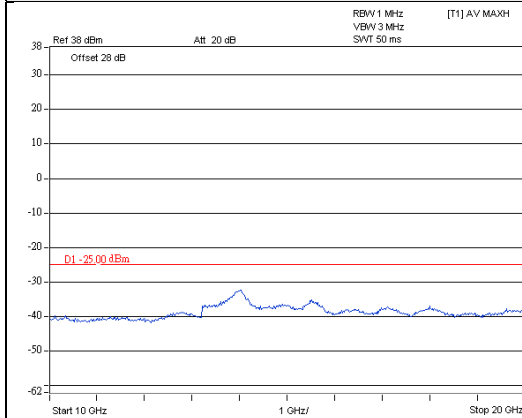


A D T



A D T

Frequency Range : 10GHz~20GHz



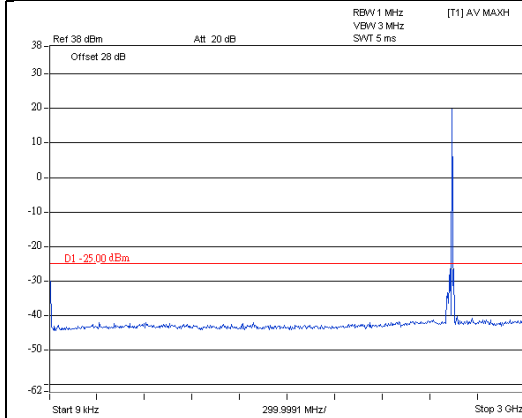
A D T

LTE Band 41 Channel Band width: 15MHz

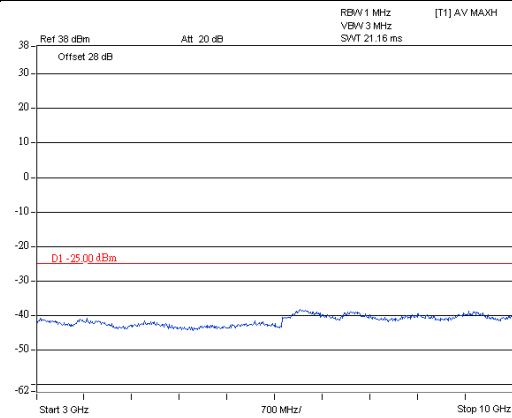
Channel 40173

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

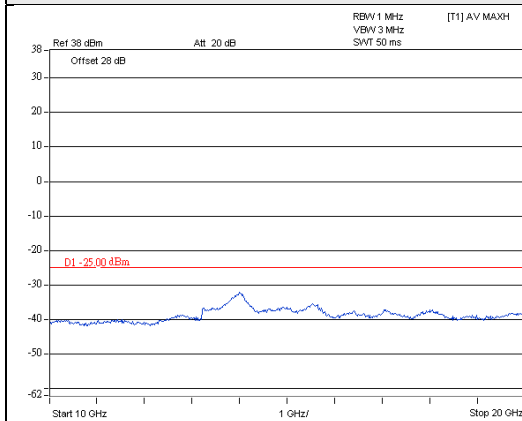


A D T



A D T

Frequency Range : 10GHz~20GHz



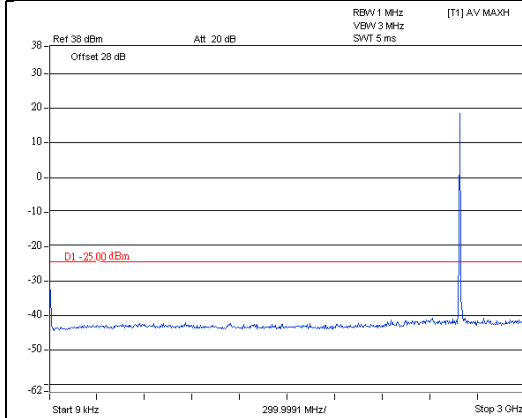
A D T

LTE Band 41 Channel Band width: 15MHz

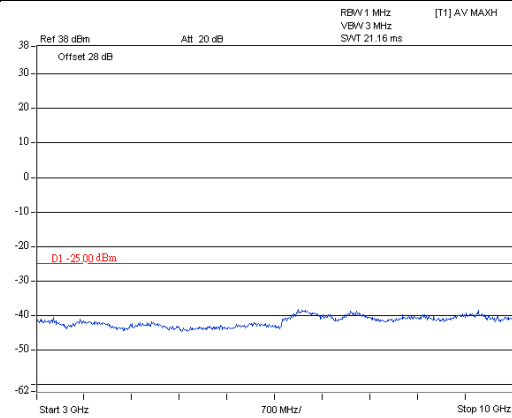
Channel 40620,

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

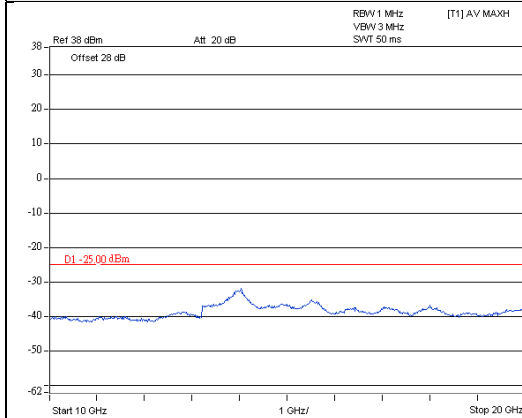


A D T



A D T

Frequency Range : 10GHz~20GHz



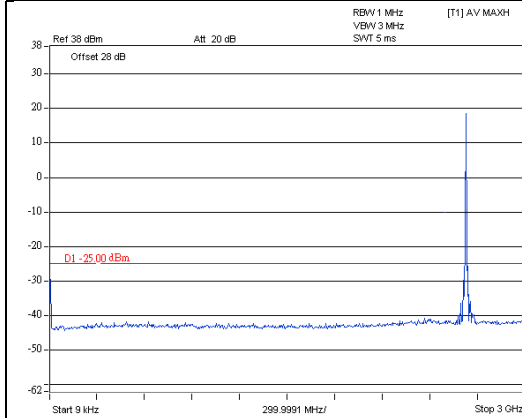
A D T

LTE Band 41 Channel Band width: 15MHz

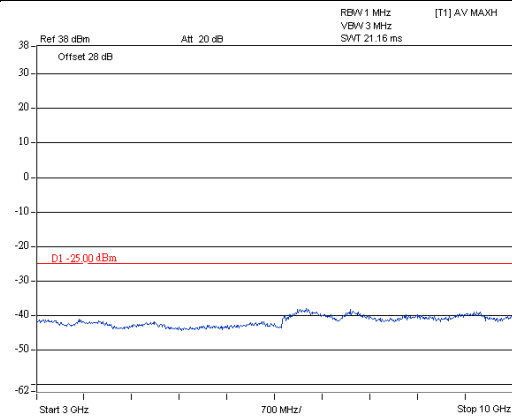
Channel 41068

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

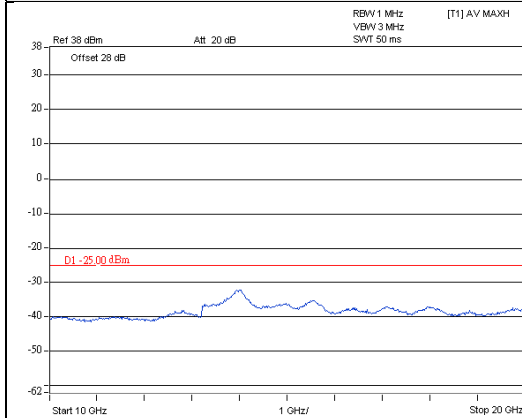


A D T



A D T

Frequency Range : 10GHz~20GHz



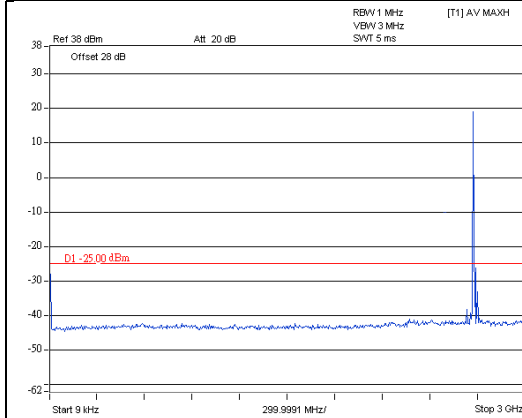
A D T

LTE Band 41 Channel Band width: 15MHz

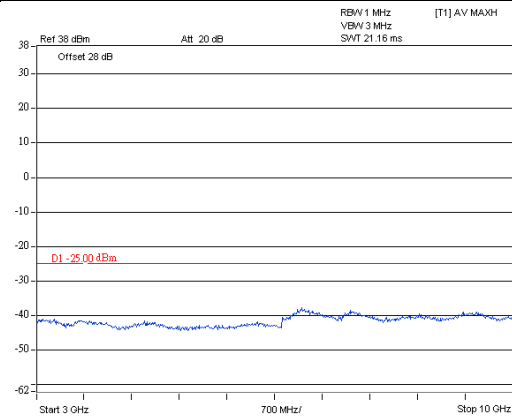
Channel 41515

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

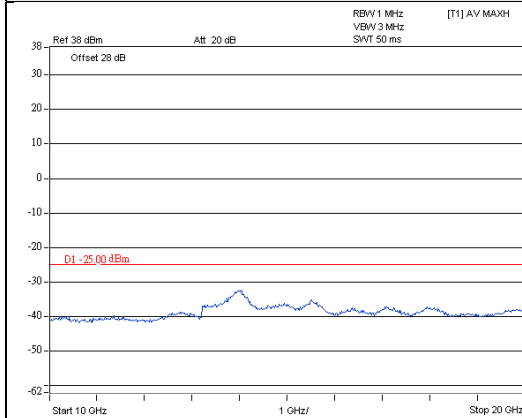


A D T



A D T

Frequency Range : 10GHz~20GHz



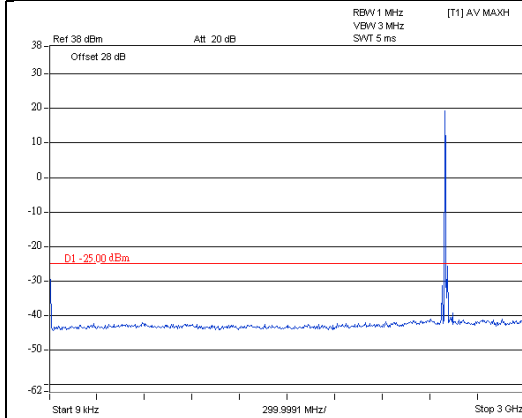
A D T

LTE Band 41 Channel Band width: 20MHz

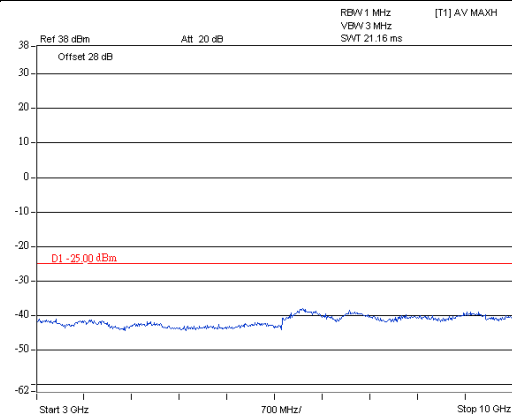
Channel 39750

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

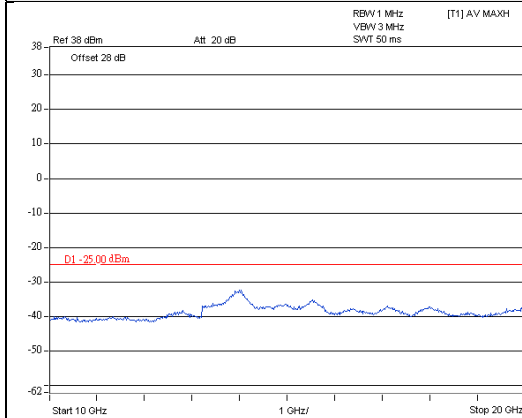


A D T



A D T

Frequency Range : 10GHz~20GHz



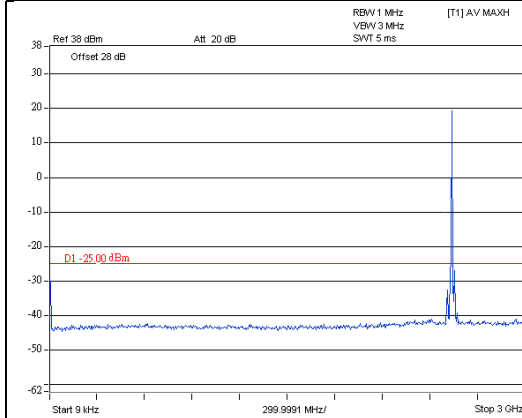
A D T

LTE Band 41 Channel Band width: 20MHz

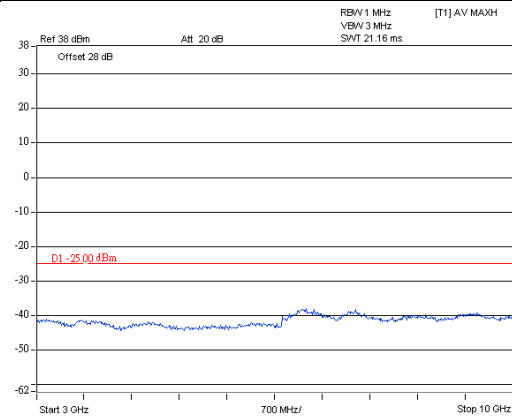
Channel 40185

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

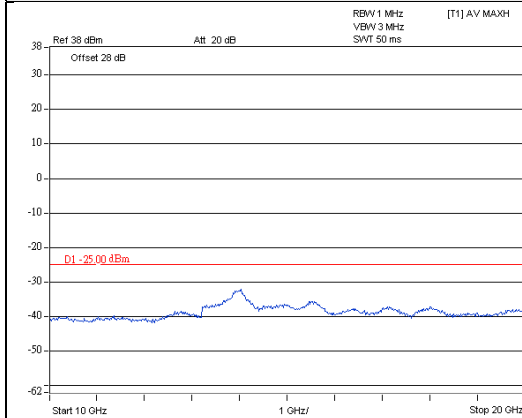


A D T



A D T

Frequency Range : 10GHz~20GHz



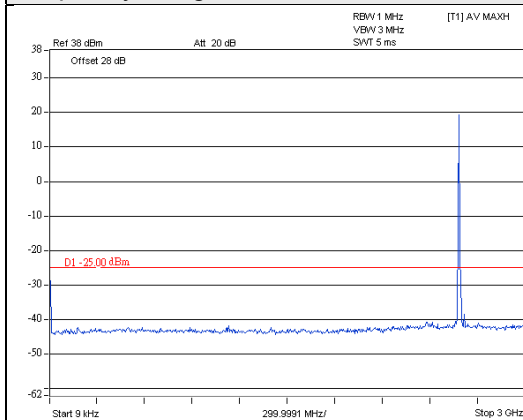
A D T

LTE Band 41 Channel Band width: 20MHz

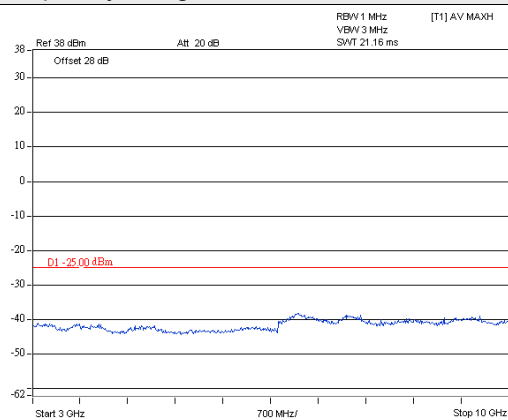
Channel 40620

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

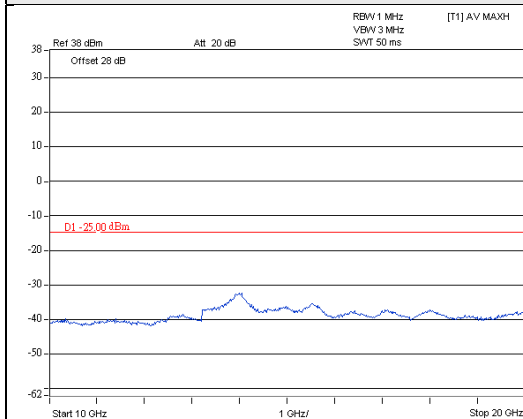


A D T



A D T

Frequency Range : 10GHz~20GHz



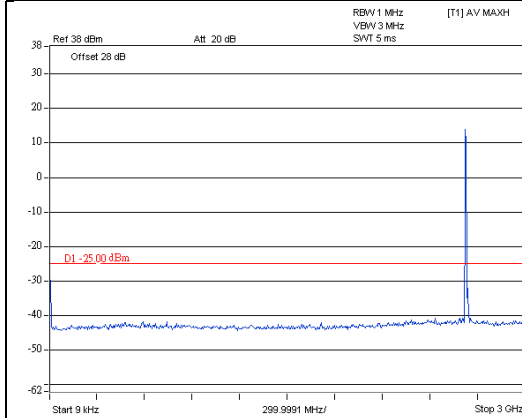
A D T

LTE Band 41 Channel Band width: 20MHz

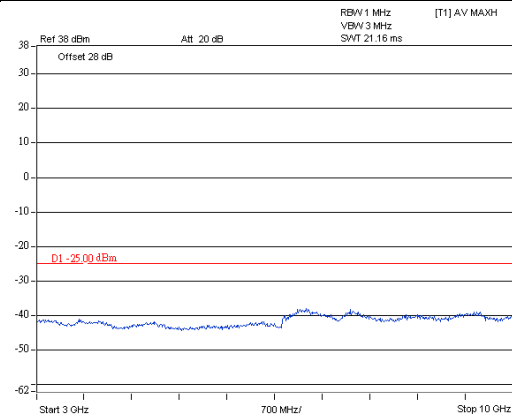
Channel 41055

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

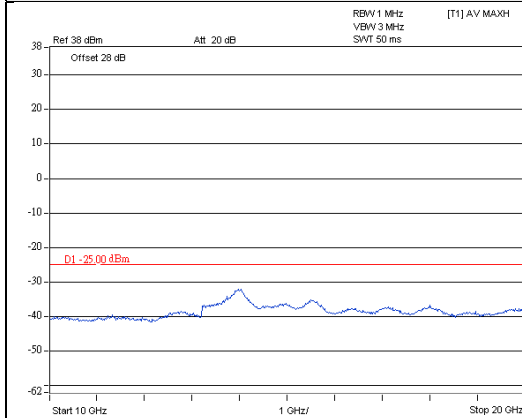


A D T



A D T

Frequency Range : 10GHz~20GHz



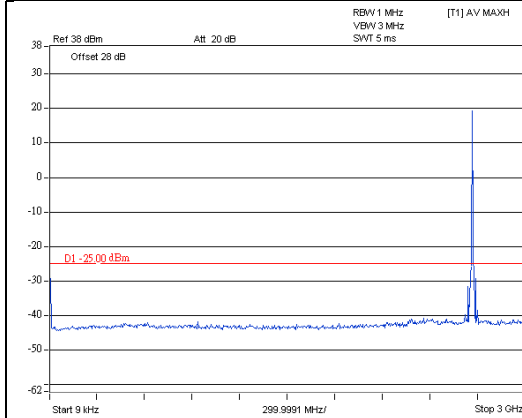
A D T

LTE Band 41 Channel Band width: 20MHz

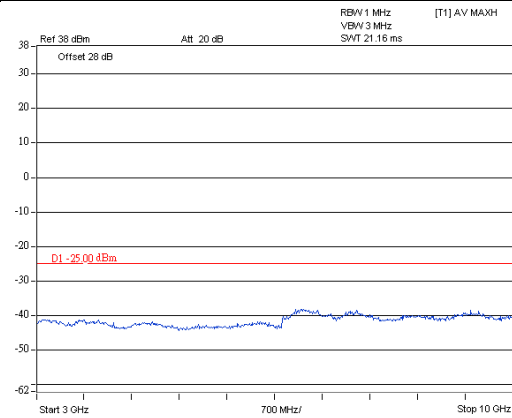
Channel 41490

Frequency Range : 9kHz~3GHz

Frequency Range : 3GHz~10GHz

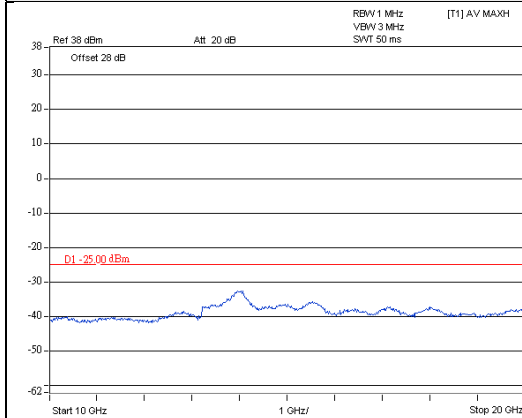


A D T



A D T

Frequency Range : 10GHz~20GHz



A D T

## 4.7 Radiated Emission Measurement

### 4.7.1 Limits of Radiated Emission Measurement

For LTE Band 4 and 12

On any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB. The emission limit equal to  $-13\text{dBm}$ .

For LTE Band 41

On any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least  $55 + 10 \log (P)$  dB. The emission limit equal to  $-25\text{dBm}$ .

### 4.7.2 Test Procedure

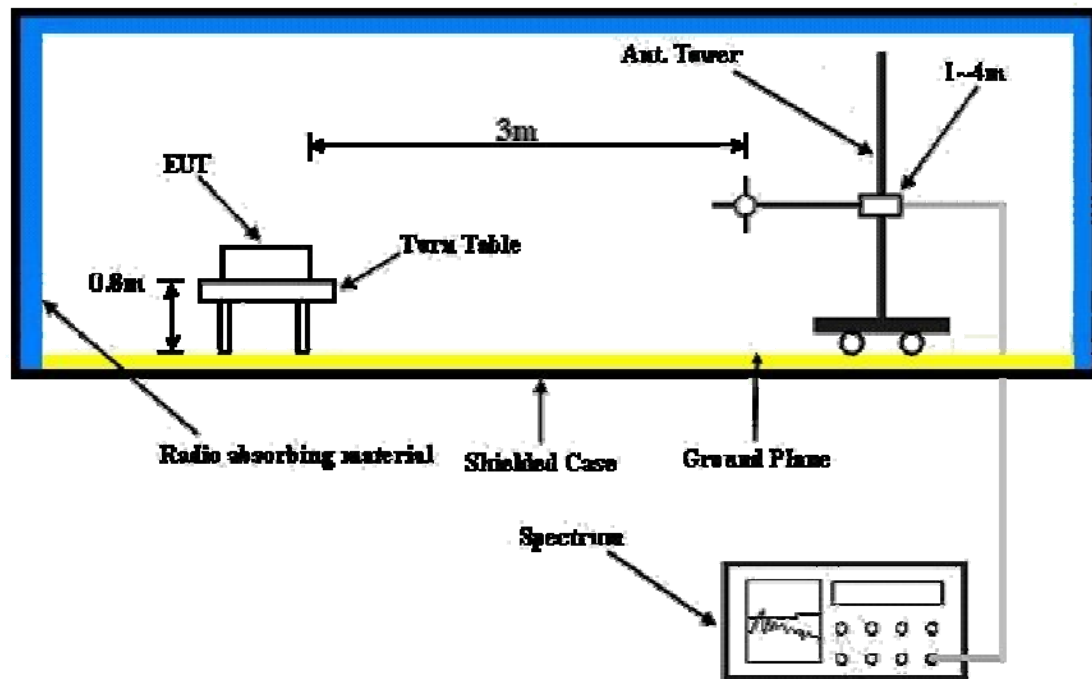
- The power was measured with R&S Spectrum Analyzer. For LTE band 4 & 12 measurements were done at 3 channels for LTE Band 41 measurements were done at 5 channels (low, middle and high channel of operational frequency range.)
- Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- The substitution antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step b. Record the power level of S.G
- $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution antenna}$ .

**Note:** The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

### 4.7.3 Deviation from Test Standard

No deviation.

#### 4.7.4 Test Setup



For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.7.5 Test Results

Below 1GHz

LTE Band 4

Channel Bandwidth: 1.4MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 19957 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 80.44       | -44.20        | -49.60                | 0.50                   | -49.10     | -13.00      | -36.10      |
| 2                                                   | 111.48      | -47.70        | -52.90                | -2.50                  | -55.40     | -13.00      | -42.40      |
| 3                                                   | 134.76      | -48.90        | -51.70                | -3.20                  | -54.90     | -13.00      | -41.90      |
| 4                                                   | 171.62      | -43.00        | -47.20                | -2.90                  | -50.10     | -13.00      | -37.10      |
| 5                                                   | 220.12      | -45.10        | -51.30                | -1.90                  | -53.20     | -13.00      | -40.20      |
| 6                                                   | 260.86      | -47.10        | -50.30                | -1.50                  | -51.80     | -13.00      | -38.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 84.32       | -47.30        | -52.70                | 0.40                   | -52.30     | -13.00      | -39.30      |
| 2                                                   | 134.76      | -44.90        | -45.30                | -3.20                  | -48.50     | -13.00      | -35.50      |
| 3                                                   | 187.14      | -37.50        | -37.20                | -2.70                  | -39.90     | -13.00      | -26.90      |
| 4                                                   | 262.80      | -50.10        | -47.50                | -1.60                  | -49.10     | -13.00      | -36.10      |
| 5                                                   | 319.06      | -50.60        | -54.70                | 4.00                   | -50.70     | -13.00      | -37.70      |
| 6                                                   | 421.88      | -52.20        | -56.00                | 3.40                   | -52.60     | -13.00      | -39.60      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

## Channel Bandwidth: 3MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 19965 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 82.38       | -43.30        | -49.10                | 0.40                   | -48.70     | -13.00      | -35.70      |
| 2                                                   | 132.82      | -47.00        | -49.80                | -3.30                  | -53.10     | -13.00      | -40.10      |
| 3                                                   | 187.14      | -41.50        | -47.00                | -2.70                  | -49.70     | -13.00      | -36.70      |
| 4                                                   | 260.86      | -47.00        | -50.20                | -1.50                  | -51.70     | -13.00      | -38.70      |
| 5                                                   | 305.48      | -56.60        | -64.80                | 3.80                   | -61.00     | -13.00      | -48.00      |
| 6                                                   | 429.64      | -61.00        | -65.00                | 3.50                   | -61.50     | -13.00      | -48.50      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 82.38       | -48.10        | -53.00                | 0.40                   | -52.60     | -13.00      | -39.60      |
| 2                                                   | 134.76      | -45.40        | -45.80                | -3.20                  | -49.00     | -13.00      | -36.00      |
| 3                                                   | 187.14      | -39.80        | -39.50                | -2.70                  | -42.20     | -13.00      | -29.20      |
| 4                                                   | 225.94      | -48.80        | -51.10                | -1.70                  | -52.80     | -13.00      | -39.80      |
| 5                                                   | 260.86      | -51.50        | -49.00                | -1.50                  | -50.50     | -13.00      | -37.50      |
| 6                                                   | 423.82      | -53.00        | -56.70                | 3.40                   | -53.30     | -13.00      | -40.30      |

## Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



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Channel Bandwidth: 5MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 19975 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 80.44       | -44.50        | -49.90                | 0.50                   | -49.40     | -13.00      | -36.40      |
| 2                                                   | 132.82      | -48.50        | -51.30                | -3.30                  | -54.60     | -13.00      | -41.60      |
| 3                                                   | 169.68      | -43.20        | -47.20                | -2.80                  | -50.00     | -13.00      | -37.00      |
| 4                                                   | 220.12      | -45.40        | -51.60                | -1.90                  | -53.50     | -13.00      | -40.50      |
| 5                                                   | 260.86      | -46.70        | -49.90                | -1.50                  | -51.40     | -13.00      | -38.40      |
| 6                                                   | 297.72      | -55.10        | -56.10                | -1.70                  | -57.80     | -13.00      | -44.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 84.32       | -47.70        | -53.10                | 0.40                   | -52.70     | -13.00      | -39.70      |
| 2                                                   | 134.76      | -45.50        | -45.90                | -3.20                  | -49.10     | -13.00      | -36.10      |
| 3                                                   | 189.08      | -40.10        | -39.50                | -2.80                  | -42.30     | -13.00      | -29.30      |
| 4                                                   | 260.86      | -51.50        | -49.00                | -1.50                  | -50.50     | -13.00      | -37.50      |
| 5                                                   | 317.12      | -51.10        | -55.20                | 4.10                   | -51.10     | -13.00      | -38.10      |
| 6                                                   | 425.76      | -52.90        | -56.80                | 3.50                   | -53.30     | -13.00      | -40.30      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Channel Bandwidth: 10MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 20000 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 80.44       | -44.70        | -50.10                | 0.50                   | -49.60     | -13.00      | -36.60      |
| 2                                                   | 134.76      | -48.50        | -51.30                | -3.20                  | -54.50     | -13.00      | -41.50      |
| 3                                                   | 169.68      | -43.70        | -47.70                | -2.80                  | -50.50     | -13.00      | -37.50      |
| 4                                                   | 218.18      | -45.10        | -51.40                | -2.10                  | -53.50     | -13.00      | -40.50      |
| 5                                                   | 260.86      | -46.90        | -50.10                | -1.50                  | -51.60     | -13.00      | -38.60      |
| 6                                                   | 297.72      | -54.90        | -55.90                | -1.70                  | -57.60     | -13.00      | -44.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 82.38       | -49.20        | -54.10                | 0.40                   | -53.70     | -13.00      | -40.70      |
| 2                                                   | 134.76      | -45.60        | -46.00                | -3.20                  | -49.20     | -13.00      | -36.20      |
| 3                                                   | 169.68      | -45.00        | -45.40                | -2.80                  | -48.20     | -13.00      | -35.20      |
| 4                                                   | 187.14      | -37.90        | -37.60                | -2.70                  | -40.30     | -13.00      | -27.30      |
| 5                                                   | 198.78      | -46.20        | -44.80                | -2.40                  | -47.20     | -13.00      | -34.20      |
| 6                                                   | 260.86      | -50.90        | -48.40                | -1.50                  | -49.90     | -13.00      | -36.90      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



## Channel Bandwidth: 15MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 20025 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 37.76       | -58.60        | -40.60                | -14.70                 | -55.30     | -13.00      | -42.30      |
| 2                                                   | 82.38       | -44.10        | -49.90                | 0.40                   | -49.50     | -13.00      | -36.50      |
| 3                                                   | 134.76      | -48.30        | -51.10                | -3.20                  | -54.30     | -13.00      | -41.30      |
| 4                                                   | 171.62      | -43.40        | -47.60                | -2.90                  | -50.50     | -13.00      | -37.50      |
| 5                                                   | 260.86      | -47.30        | -50.50                | -1.50                  | -52.00     | -13.00      | -39.00      |
| 6                                                   | 297.72      | -54.70        | -55.70                | -1.70                  | -57.40     | -13.00      | -44.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 59.10       | -46.20        | -49.20                | -3.80                  | -53.00     | -13.00      | -40.00      |
| 2                                                   | 82.38       | -49.80        | -54.70                | 0.40                   | -54.30     | -13.00      | -41.30      |
| 3                                                   | 134.76      | -45.40        | -45.80                | -3.20                  | -49.00     | -13.00      | -36.00      |
| 4                                                   | 187.14      | -37.70        | -37.40                | -2.70                  | -40.10     | -13.00      | -27.10      |
| 5                                                   | 198.78      | -46.70        | -45.30                | -2.40                  | -47.70     | -13.00      | -34.70      |
| 6                                                   | 260.86      | -51.80        | -49.30                | -1.50                  | -50.80     | -13.00      | -37.80      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

# Channel Bandwidth: 20MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 20050 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 41.64       | -58.00        | -43.60                | -12.30                 | -55.90     | -13.00      | -42.90      |
| 2                                                   | 80.44       | -44.70        | -50.10                | 0.50                   | -49.60     | -13.00      | -36.60      |
| 3                                                   | 136.70      | -47.70        | -50.50                | -3.20                  | -53.70     | -13.00      | -40.70      |
| 4                                                   | 196.84      | -39.20        | -45.10                | -2.50                  | -47.60     | -13.00      | -34.60      |
| 5                                                   | 235.64      | -45.00        | -50.70                | -1.50                  | -52.20     | -13.00      | -39.20      |
| 6                                                   | 260.86      | -47.10        | -50.30                | -1.50                  | -51.80     | -13.00      | -38.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 82.38       | -49.60        | -54.50                | 0.40                   | -54.10     | -13.00      | -41.10      |
| 2                                                   | 134.76      | -45.10        | -45.50                | -3.20                  | -48.70     | -13.00      | -35.70      |
| 3                                                   | 187.14      | -38.20        | -37.90                | -2.70                  | -40.60     | -13.00      | -27.60      |
| 4                                                   | 231.76      | -49.20        | -50.40                | -1.60                  | -52.00     | -13.00      | -39.00      |
| 5                                                   | 260.86      | -51.10        | -48.60                | -1.50                  | -50.10     | -13.00      | -37.10      |
| 6                                                   | 315.18      | -51.20        | -55.30                | 4.00                   | -51.30     | -13.00      | -38.30      |

## Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



## LTE Band 12

Channel Bandwidth: 1.4MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 23017 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 39.70       | -42.40        | -28.50                | -13.70                 | -42.20     | -13.00      | -29.20      |
| 2                                                   | 80.40       | -47.80        | -55.40                | 0.50                   | -54.90     | -13.00      | -41.90      |
| 3                                                   | 130.90      | -45.80        | -50.90                | -3.30                  | -54.20     | -13.00      | -41.20      |
| 4                                                   | 204.60      | -44.90        | -53.00                | -2.00                  | -55.00     | -13.00      | -42.00      |
| 5                                                   | 359.80      | -27.80        | -36.60                | 4.00                   | -32.60     | -13.00      | -19.60      |
| 6                                                   | 480.10      | -43.80        | -49.70                | 3.60                   | -46.10     | -13.00      | -33.10      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 132.80      | -44.80        | -47.80                | -3.30                  | -51.10     | -13.00      | -38.10      |
| 2                                                   | 185.20      | -47.90        | -50.10                | -2.80                  | -52.90     | -13.00      | -39.90      |
| 3                                                   | 198.80      | -46.10        | -46.90                | -2.40                  | -49.30     | -13.00      | -36.30      |
| 4                                                   | 247.30      | -49.30        | -50.80                | -1.50                  | -52.30     | -13.00      | -39.30      |
| 5                                                   | 359.80      | -29.60        | -36.10                | 4.00                   | -32.10     | -13.00      | -19.10      |
| 6                                                   | 480.10      | -49.20        | -55.20                | 3.60                   | -51.60     | -13.00      | -38.60      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

# Channel Bandwidth: 3MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 23025 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 30.00       | -50.80        | -29.50                | -19.40                 | -48.90     | -13.00      | -35.90      |
| 2                                                   | 39.70       | -42.90        | -29.10                | -13.70                 | -42.80     | -13.00      | -29.80      |
| 3                                                   | 80.40       | -47.20        | -54.80                | 0.50                   | -54.30     | -13.00      | -41.30      |
| 4                                                   | 204.60      | -45.00        | -53.10                | -2.00                  | -55.10     | -13.00      | -42.10      |
| 5                                                   | 359.80      | -27.60        | -36.50                | 4.00                   | -32.50     | -13.00      | -19.50      |
| 6                                                   | 480.10      | -44.20        | -50.20                | 3.60                   | -46.60     | -13.00      | -33.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 132.80      | -44.90        | -48.00                | -3.30                  | -51.30     | -13.00      | -38.30      |
| 2                                                   | 185.20      | -47.40        | -49.60                | -2.80                  | -52.40     | -13.00      | -39.40      |
| 3                                                   | 198.80      | -45.40        | -46.10                | -2.40                  | -48.50     | -13.00      | -35.50      |
| 4                                                   | 247.30      | -48.60        | -50.10                | -1.50                  | -51.60     | -13.00      | -38.60      |
| 5                                                   | 359.80      | -29.10        | -35.60                | 4.00                   | -31.60     | -13.00      | -18.60      |
| 6                                                   | 480.10      | -49.50        | -55.50                | 3.60                   | -51.90     | -13.00      | -38.90      |

## Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

### Channel Bandwidth: 5MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 23035 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 39.70       | -42.60        | -28.80                | -13.70                 | -42.50     | -13.00      | -29.50      |
| 2                                                   | 82.40       | -48.00        | -55.90                | 0.40                   | -55.50     | -13.00      | -42.50      |
| 3                                                   | 130.90      | -46.70        | -51.80                | -3.30                  | -55.10     | -13.00      | -42.10      |
| 4                                                   | 202.70      | -44.40        | -52.40                | -2.10                  | -54.50     | -13.00      | -41.50      |
| 5                                                   | 359.80      | -27.90        | -36.70                | 4.00                   | -32.70     | -13.00      | -19.70      |
| 6                                                   | 480.10      | -44.10        | -50.10                | 3.60                   | -46.50     | -13.00      | -33.50      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 55.20       | -46.00        | -49.60                | -5.40                  | -55.00     | -13.00      | -42.00      |
| 2                                                   | 132.80      | -44.20        | -47.30                | -3.30                  | -50.60     | -13.00      | -37.60      |
| 3                                                   | 196.80      | -45.40        | -45.90                | -2.50                  | -48.40     | -13.00      | -35.40      |
| 4                                                   | 247.30      | -48.90        | -50.40                | -1.50                  | -51.90     | -13.00      | -38.90      |
| 5                                                   | 359.80      | -29.10        | -35.60                | 4.00                   | -31.60     | -13.00      | -18.60      |
| 6                                                   | 480.10      | -47.20        | -53.20                | 3.60                   | -49.60     | -13.00      | -36.60      |

#### Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



## Channel Bandwidth: 10MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 23060 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 37.80       | -43.50        | -27.70                | -14.70                 | -42.40     | -13.00      | -29.40      |
| 2                                                   | 132.80      | -46.50        | -51.40                | -3.30                  | -54.70     | -13.00      | -41.70      |
| 3                                                   | 204.60      | -44.60        | -52.80                | -2.00                  | -54.80     | -13.00      | -41.80      |
| 4                                                   | 359.80      | -27.60        | -36.50                | 4.00                   | -32.50     | -13.00      | -19.50      |
| 5                                                   | 379.20      | -50.80        | -58.10                | 3.60                   | -54.50     | -13.00      | -41.50      |
| 6                                                   | 480.10      | -44.10        | -50.10                | 3.60                   | -46.50     | -13.00      | -33.50      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 132.80      | -44.60        | -47.70                | -3.30                  | -51.00     | -13.00      | -38.00      |
| 2                                                   | 196.80      | -45.10        | -45.60                | -2.50                  | -48.10     | -13.00      | -35.10      |
| 3                                                   | 247.30      | -48.80        | -50.30                | -1.50                  | -51.80     | -13.00      | -38.80      |
| 4                                                   | 260.90      | -53.00        | -52.60                | -1.50                  | -54.10     | -13.00      | -41.10      |
| 5                                                   | 359.80      | -28.60        | -35.10                | 4.00                   | -31.10     | -13.00      | -18.10      |
| 6                                                   | 480.10      | -47.00        | -53.00                | 3.60                   | -49.40     | -13.00      | -36.40      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 41

Channel Bandwidth: 5MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 39675 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Ted Chang        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 35.82       | -57.40        | -38.00                | -15.90                 | -53.90     | -25.00      | -28.90      |
| 2                                                   | 80.44       | -44.70        | -50.10                | 0.50                   | -49.60     | -25.00      | -24.60      |
| 3                                                   | 136.70      | -47.60        | -50.40                | -3.20                  | -53.60     | -25.00      | -28.60      |
| 4                                                   | 161.92      | -44.90        | -47.50                | -2.90                  | -50.40     | -25.00      | -25.40      |
| 5                                                   | 198.78      | -36.90        | -42.90                | -2.40                  | -45.30     | -25.00      | -20.30      |
| 6                                                   | 260.86      | -47.30        | -50.50                | -1.50                  | -52.00     | -25.00      | -27.00      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 134.76      | -46.00        | -46.40                | -3.20                  | -49.60     | -25.00      | -24.60      |
| 2                                                   | 189.08      | -43.80        | -43.20                | -2.80                  | -46.00     | -25.00      | -21.00      |
| 3                                                   | 206.54      | -44.50        | -45.00                | -2.00                  | -47.00     | -25.00      | -22.00      |
| 4                                                   | 229.82      | -47.70        | -49.50                | -1.70                  | -51.20     | -25.00      | -26.20      |
| 5                                                   | 258.92      | -50.00        | -47.80                | -1.50                  | -49.30     | -25.00      | -24.30      |
| 6                                                   | 317.12      | -48.80        | -52.90                | 4.10                   | -48.80     | -25.00      | -23.80      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Channel Bandwidth: 10MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 39700 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Ted Chang        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 82.38       | -45.00        | -50.80                | 0.40                   | -50.40     | -25.00      | -25.40      |
| 2                                                   | 136.70      | -46.60        | -49.40                | -3.20                  | -52.60     | -25.00      | -27.60      |
| 3                                                   | 158.04      | -44.70        | -46.90                | -2.70                  | -49.60     | -25.00      | -24.60      |
| 4                                                   | 185.20      | -43.30        | -48.80                | -2.80                  | -51.60     | -25.00      | -26.60      |
| 5                                                   | 198.78      | -37.50        | -43.50                | -2.40                  | -45.90     | -25.00      | -20.90      |
| 6                                                   | 256.98      | -46.90        | -50.60                | -1.50                  | -52.10     | -25.00      | -27.10      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 134.76      | -46.10        | -46.50                | -3.20                  | -49.70     | -25.00      | -24.70      |
| 2                                                   | 158.04      | -48.00        | -48.20                | -2.70                  | -50.90     | -25.00      | -25.90      |
| 3                                                   | 187.14      | -42.40        | -42.10                | -2.70                  | -44.80     | -25.00      | -19.80      |
| 4                                                   | 233.70      | -48.50        | -49.10                | -1.70                  | -50.80     | -25.00      | -25.80      |
| 5                                                   | 256.98      | -49.80        | -47.80                | -1.50                  | -49.30     | -25.00      | -24.30      |
| 6                                                   | 317.12      | -49.00        | -53.10                | 4.10                   | -49.00     | -25.00      | -24.00      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

# Channel Bandwidth: 15MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 39725 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 35.82       | -57.40        | -38.00                | -15.90                 | -53.90     | -25.00      | -28.90      |
| 2                                                   | 82.38       | -44.90        | -50.70                | 0.40                   | -50.30     | -25.00      | -25.30      |
| 3                                                   | 134.76      | -47.50        | -50.30                | -3.20                  | -53.50     | -25.00      | -28.50      |
| 4                                                   | 161.92      | -44.70        | -47.30                | -2.90                  | -50.20     | -25.00      | -25.20      |
| 5                                                   | 198.78      | -37.90        | -43.90                | -2.40                  | -46.30     | -25.00      | -21.30      |
| 6                                                   | 260.86      | -47.20        | -50.40                | -1.50                  | -51.90     | -25.00      | -26.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 134.76      | -46.20        | -46.60                | -3.20                  | -49.80     | -25.00      | -24.80      |
| 2                                                   | 187.14      | -43.20        | -42.90                | -2.70                  | -45.60     | -25.00      | -20.60      |
| 3                                                   | 208.48      | -44.70        | -45.70                | -2.00                  | -47.70     | -25.00      | -22.70      |
| 4                                                   | 231.76      | -47.90        | -49.10                | -1.60                  | -50.70     | -25.00      | -25.70      |
| 5                                                   | 260.86      | -49.60        | -47.10                | -1.50                  | -48.60     | -25.00      | -23.60      |
| 6                                                   | 317.12      | -48.70        | -52.80                | 4.10                   | -48.70     | -25.00      | -23.70      |

## Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



## Channel Bandwidth: 20MHz

|                          |                  |                 |                |
|--------------------------|------------------|-----------------|----------------|
| Mode                     | TX channel 39750 | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz   |
| Tested By                | Frank Liu        |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 80.44       | -46.60        | -52.00                | 0.50                   | -51.50     | -25.00      | -26.50      |
| 2                                                   | 111.48      | -47.60        | -52.80                | -2.50                  | -55.30     | -25.00      | -30.30      |
| 3                                                   | 159.98      | -43.80        | -46.10                | -3.00                  | -49.10     | -25.00      | -24.10      |
| 4                                                   | 167.74      | -45.30        | -49.10                | -2.90                  | -52.00     | -25.00      | -27.00      |
| 5                                                   | 198.78      | -37.50        | -43.50                | -2.40                  | -45.90     | -25.00      | -20.90      |
| 6                                                   | 260.86      | -46.80        | -50.00                | -1.50                  | -51.50     | -25.00      | -26.50      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 66.86       | -41.60        | -47.30                | -1.50                  | -48.80     | -25.00      | -23.80      |
| 2                                                   | 134.76      | -46.90        | -47.30                | -3.20                  | -50.50     | -25.00      | -25.50      |
| 3                                                   | 156.10      | -47.40        | -47.30                | -2.90                  | -50.20     | -25.00      | -25.20      |
| 4                                                   | 200.72      | -42.70        | -41.60                | -2.30                  | -43.90     | -25.00      | -18.90      |
| 5                                                   | 260.86      | -49.50        | -47.00                | -1.50                  | -48.50     | -25.00      | -23.50      |
| 6                                                   | 313.24      | -50.40        | -54.50                | 4.00                   | -50.50     | -25.00      | -25.50      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Above 1GHz

LTE Band 4

Channel Bandwidth: 1.4MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 19957 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3421.40     | -46.34        | -37.73                | 1.29                   | -36.44     | -13.00      | -23.44      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3421.40     | -48.22        | -40.10                | 1.29                   | -38.81     | -13.00      | -25.81      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20175 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -49.31        | -40.92                | 1.38                   | -39.54     | -13.00      | -26.54      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -48.46        | -40.62                | 1.38                   | -39.24     | -13.00      | -26.24      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20393 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3508.60     | -46.60        | -38.37                | 1.46                   | -36.91     | -13.00      | -23.91      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3508.60     | -48.19        | -40.56                | 1.46                   | -39.10     | -13.00      | -26.10      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

### Channel Bandwidth: 3 MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 19965 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3423.00     | -55.50        | -49.10                | 1.30                   | -47.80     | -13.00      | -34.80      |
| 2                                                   | 5134.50     | -58.00        | -48.00                | 1.40                   | -46.60     | -13.00      | -33.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3423.00     | -60.00        | -54.00                | 1.30                   | -52.70     | -13.00      | -39.70      |
| 2                                                   | 5134.50     | -61.30        | -51.70                | 1.40                   | -50.30     | -13.00      | -37.30      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20175 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -56.90        | -50.60                | 1.40                   | -49.20     | -13.00      | -36.20      |
| 2                                                   | 5197.50     | -55.80        | -46.30                | 1.40                   | -44.90     | -13.00      | -31.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -59.40        | -53.80                | 1.40                   | -52.40     | -13.00      | -39.40      |
| 2                                                   | 5197.50     | -61.00        | -50.90                | 1.40                   | -49.50     | -13.00      | -36.50      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20385 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3507.00     | -56.90        | -50.80                | 1.40                   | -49.40     | -13.00      | -36.40      |
| 2                                                   | 5260.50     | -58.40        | -48.80                | 1.50                   | -47.30     | -13.00      | -34.30      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3507.00     | -59.50        | -54.00                | 1.40                   | -52.60     | -13.00      | -39.60      |
| 2                                                   | 5260.50     | -61.70        | -52.20                | 1.50                   | -50.70     | -13.00      | -37.70      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

### Channel Bandwidth: 5MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 19975 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3425.00     | -55.10        | -48.70                | 1.30                   | -47.40     | -13.00      | -34.40      |
| 2                                                   | 5137.50     | -60.00        | -50.00                | 1.40                   | -48.60     | -13.00      | -35.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3425.00     | -59.00        | -53.10                | 1.30                   | -51.80     | -13.00      | -38.80      |
| 2                                                   | 5137.50     | -61.80        | -52.00                | 1.40                   | -50.60     | -13.00      | -37.60      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20175 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -56.80        | -50.50                | 1.40                   | -49.10     | -13.00      | -36.10      |
| 2                                                   | 5197.50     | -59.10        | -49.60                | 1.40                   | -48.20     | -13.00      | -35.20      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -60.50        | -54.90                | 1.40                   | -53.50     | -13.00      | -40.50      |
| 2                                                   | 5197.50     | -61.50        | -51.40                | 1.40                   | -50.00     | -13.00      | -37.00      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



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|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20375 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3505.00     | -56.60        | -50.60                | 1.50                   | -49.10     | -13.00      | -36.10      |
| 2                                                   | 5257.50     | -58.10        | -48.50                | 1.50                   | -47.00     | -13.00      | -34.00      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3505.00     | -58.20        | -52.70                | 1.50                   | -51.20     | -13.00      | -38.20      |
| 2                                                   | 5257.50     | -62.00        | -52.50                | 1.50                   | -51.00     | -13.00      | -38.00      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

### Channel Bandwidth: 10MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20000 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3430.00     | -56.00        | -49.70                | 1.40                   | -48.30     | -13.00      | -35.30      |
| 2                                                   | 5145.00     | -61.00        | -51.00                | 1.40                   | -49.60     | -13.00      | -36.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3430.00     | -59.20        | -53.40                | 1.40                   | -52.00     | -13.00      | -39.00      |
| 2                                                   | 5145.00     | -61.40        | -51.70                | 1.40                   | -50.30     | -13.00      | -37.30      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20175 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -56.80        | -50.50                | 1.40                   | -49.10     | -13.00      | -36.10      |
| 2                                                   | 5197.50     | -58.60        | -49.20                | 1.40                   | -47.80     | -13.00      | -34.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -60.50        | -54.90                | 1.40                   | -53.50     | -13.00      | -40.50      |
| 2                                                   | 5197.50     | -61.80        | -51.70                | 1.40                   | -50.30     | -13.00      | -37.30      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



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|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20350 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3500.00     | -55.40        | -49.40                | 1.50                   | -47.90     | -13.00      | -34.90      |
| 2                                                   | 5250.00     | -60.60        | -51.10                | 1.50                   | -49.60     | -13.00      | -36.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3500.00     | -59.50        | -54.10                | 1.50                   | -52.60     | -13.00      | -39.60      |
| 2                                                   | 5250.00     | -61.20        | -51.70                | 1.50                   | -50.20     | -13.00      | -37.20      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

### Channel Bandwidth: 15MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20025 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3435.00     | -56.50        | -50.10                | 1.30                   | -48.80     | -13.00      | -35.80      |
| 2                                                   | 5152.50     | -61.20        | -51.40                | 1.40                   | -50.00     | -13.00      | -37.00      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3435.00     | -60.50        | -54.60                | 1.30                   | -53.30     | -13.00      | -40.30      |
| 2                                                   | 5152.50     | -65.00        | -55.20                | 1.40                   | -53.80     | -13.00      | -40.80      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20175 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -57.40        | -51.20                | 1.40                   | -49.80     | -13.00      | -36.80      |
| 2                                                   | 5197.50     | -59.80        | -50.30                | 1.40                   | -48.90     | -13.00      | -35.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -60.30        | -54.70                | 1.40                   | -53.30     | -13.00      | -40.30      |
| 2                                                   | 5197.50     | -61.70        | -51.60                | 1.40                   | -50.20     | -13.00      | -37.20      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20325 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3495.00     | -57.40        | -51.40                | 1.50                   | -49.90     | -13.00      | -36.90      |
| 2                                                   | 5242.50     | -61.00        | -51.40                | 1.40                   | -50.00     | -13.00      | -37.00      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3495.00     | -59.00        | -53.50                | 1.50                   | -52.00     | -13.00      | -39.00      |
| 2                                                   | 5242.50     | -61.90        | -52.10                | 1.40                   | -50.70     | -13.00      | -37.70      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

### Channel Bandwidth: 20MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20050 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3440.00     | -58.10        | -51.80                | 1.30                   | -50.50     | -13.00      | -37.50      |
| 2                                                   | 5160.00     | -61.50        | -51.70                | 1.40                   | -50.30     | -13.00      | -37.30      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3440.00     | -60.20        | -54.40                | 1.30                   | -53.10     | -13.00      | -40.10      |
| 2                                                   | 5160.00     | -62.40        | -52.50                | 1.40                   | -51.10     | -13.00      | -38.10      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20175 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -58.50        | -52.30                | 1.40                   | -50.90     | -13.00      | -37.90      |
| 2                                                   | 5197.50     | -59.20        | -49.80                | 1.40                   | -48.40     | -13.00      | -35.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3465.00     | -60.50        | -54.90                | 1.40                   | -53.50     | -13.00      | -40.50      |
| 2                                                   | 5197.50     | -60.70        | -50.60                | 1.40                   | -49.20     | -13.00      | -36.20      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



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|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 20300 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3490.00     | -57.00        | -51.00                | 1.50                   | -49.50     | -13.00      | -36.50      |
| 2                                                   | 5235.00     | -61.30        | -51.70                | 1.40                   | -50.30     | -13.00      | -37.30      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 3490.00     | -60.80        | -55.40                | 1.50                   | -53.90     | -13.00      | -40.90      |
| 2                                                   | 5235.00     | -61.90        | -52.10                | 1.40                   | -50.70     | -13.00      | -37.70      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



## LTE Band 12

Channel Bandwidth: 1.4MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23017 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1399.40     | -55.63        | -49.33                | 0.85                   | -48.48     | -13.00      | -35.48      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1399.40     | -57.27        | -52.10                | 0.85                   | -51.25     | -13.00      | -38.25      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23095 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1415.00     | -55.57        | -49.08                | 0.94                   | -48.14     | -13.00      | -35.14      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1415.00     | -57.39        | -52.03                | 0.94                   | -51.09     | -13.00      | -38.09      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23173 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1430.60     | -55.66        | -49.01                | 1.05                   | -47.96     | -13.00      | -34.96      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1430.60     | -69.29        | -63.77                | 1.05                   | -62.72     | -13.00      | -49.72      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

### Channel Bandwidth: 3 MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23025 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1401.00     | -61.20        | -55.00                | 0.90                   | -54.10     | -13.00      | -41.10      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1401.00     | -56.60        | -51.50                | 0.90                   | -50.60     | -13.00      | -37.60      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23095 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1415.00     | -61.20        | -54.70                | 0.90                   | -53.80     | -13.00      | -40.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1415.00     | -57.00        | -51.70                | 0.90                   | -50.80     | -13.00      | -37.80      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23165 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1429.00     | -61.40        | -54.70                | 1.00                   | -53.70     | -13.00      | -40.70      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1429.00     | -57.60        | -52.10                | 1.00                   | -51.10     | -13.00      | -38.10      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

### Channel Bandwidth: 5MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23035 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1403.00     | -61.10        | -54.80                | 0.90                   | -53.90     | -13.00      | -40.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1403.00     | -57.10        | -52.00                | 0.90                   | -51.10     | -13.00      | -38.10      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23095 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1415.00     | -61.80        | -55.30                | 0.90                   | -54.40     | -13.00      | -41.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1415.00     | -58.40        | -53.00                | 0.90                   | -52.10     | -13.00      | -39.10      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



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|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23155 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1427.00     | -61.80        | -55.10                | 1.00                   | -54.10     | -13.00      | -41.10      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1427.00     | -57.30        | -51.80                | 1.00                   | -50.80     | -13.00      | -37.80      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



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## Channel Bandwidth: 10MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23060 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1408.00     | -61.80        | -55.30                | 0.90                   | -54.40     | -13.00      | -41.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1408.00     | -57.60        | -52.40                | 0.90                   | -51.50     | -13.00      | -38.50      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23095 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1415.00     | -62.30        | -55.80                | 0.90                   | -54.90     | -13.00      | -41.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1415.00     | -60.00        | -54.70                | 0.90                   | -53.80     | -13.00      | -40.80      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 23130 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 16deg. C, 70%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Frank Liu        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1422.00     | -61.60        | -55.10                | 1.00                   | -54.10     | -13.00      | -41.10      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 1422.00     | -58.30        | -52.90                | 1.00                   | -51.90     | -13.00      | -38.90      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



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## LTE Band 41

Channel Bandwidth: 5MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 39675 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 4997.00     | -52.20        | -39.90                | 1.40                   | -38.50     | -25.00      | -13.50      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 4997.00     | -55.60        | -44.60                | 1.40                   | -43.20     | -25.00      | -18.20      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 40148 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5091.60     | -53.50        | -41.00                | 1.40                   | -39.60     | -25.00      | -14.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5091.60     | -56.80        | -45.20                | 1.40                   | -43.80     | -25.00      | -18.80      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 40620 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5186.00     | -53.10        | -41.40                | 1.40                   | -40.00     | -25.00      | -15.00      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5186.00     | -56.80        | -44.60                | 1.40                   | -43.20     | -25.00      | -18.20      |

Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 41093 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5280.60     | -54.10        | -42.30                | 1.50                   | -40.80     | -25.00      | -15.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5280.60     | -57.00        | -45.60                | 1.50                   | -44.10     | -25.00      | -19.10      |

Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 41565 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5375.00     | -54.20        | -42.20                | 1.50                   | -40.70     | -25.00      | -15.70      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5375.00     | -57.30        | -45.90                | 1.50                   | -44.40     | -25.00      | -19.40      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



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## Channel Bandwidth: 10MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 39700 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5002.00     | -57.30        | -45.00                | 1.40                   | -43.60     | -25.00      | -18.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5002.00     | -60.20        | -51.40                | 1.40                   | -50.00     | -25.00      | -25.00      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 40160 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5094.00     | -57.60        | -45.10                | 1.40                   | -43.70     | -25.00      | -18.70      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5094.00     | -60.80        | -49.20                | 1.40                   | -47.80     | -25.00      | -22.80      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 40620 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5186.00     | -56.20        | -44.50                | 1.40                   | -43.10     | -25.00      | -18.10      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5186.00     | -62.70        | -50.50                | 1.40                   | -49.10     | -25.00      | -24.10      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 41080 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5275.60     | -51.90        | -40.10                | 1.50                   | -38.60     | -25.00      | -13.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5275.60     | -57.30        | -45.80                | 1.50                   | -44.30     | -25.00      | -19.30      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 41540 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5370.00     | -52.10        | -40.10                | 1.50                   | -38.60     | -25.00      | -13.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5370.00     | -58.40        | -47.10                | 1.50                   | -45.60     | -25.00      | -20.60      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



## Channel Bandwidth: 15MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 39725 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5007.00     | -57.70        | -45.40                | 1.40                   | -44.00     | -25.00      | -19.00      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5007.00     | -62.40        | -51.40                | 1.40                   | -50.00     | -25.00      | -25.00      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 40173 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5096.60     | -56.90        | -44.40                | 1.40                   | -43.00     | -25.00      | -18.00      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5096.60     | -61.90        | -50.30                | 1.40                   | -48.90     | -25.00      | -23.90      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 40620 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5186.00     | -56.80        | -45.10                | 1.40                   | -43.70     | -25.00      | -18.70      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5186.00     | -62.70        | -50.50                | 1.40                   | -49.10     | -25.00      | -24.10      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 41068 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5275.60     | -55.70        | -43.90                | 1.50                   | -42.40     | -25.00      | -17.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5275.60     | -62.00        | -50.50                | 1.50                   | -49.00     | -25.00      | -24.00      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 41515 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5365.00     | -56.30        | -44.30                | 1.50                   | -42.80     | -25.00      | -17.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5365.00     | -62.40        | -51.10                | 1.50                   | -49.60     | -25.00      | -24.60      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

### Channel Bandwidth: 20MHz

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 39750 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5012.00     | -58.30        | -46.00                | 1.40                   | -44.60     | -25.00      | -19.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5012.00     | -62.60        | -51.50                | 1.40                   | -50.10     | -25.00      | -25.10      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 40185 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5099.00     | -58.60        | -46.10                | 1.40                   | -44.70     | -25.00      | -19.70      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5099.00     | -62.70        | -51.10                | 1.40                   | -49.70     | -25.00      | -24.70      |

#### Remarks:

- Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 40620 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5186.00     | -57.20        | -45.50                | 1.40                   | -44.10     | -25.00      | -19.10      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5186.00     | -63.70        | -51.50                | 1.40                   | -50.10     | -25.00      | -25.10      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 41055 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5273.00     | -56.60        | -44.80                | 1.50                   | -43.30     | -25.00      | -18.30      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5273.00     | -61.50        | -50.00                | 1.50                   | -48.50     | -25.00      | -23.50      |

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



|                          |                  |                 |               |
|--------------------------|------------------|-----------------|---------------|
| Mode                     | TX channel 41490 | Frequency Range | Above 1000MHz |
| Environmental Conditions | 25deg. C, 65%RH  | Input Power     | 120Vac, 60Hz  |
| Tested By                | Ted Chang        |                 |               |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |            |             |             |
|-----------------------------------------------------|-------------|---------------|-----------------------|------------------------|------------|-------------|-------------|
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5360.00     | -57.40        | -45.40                | 1.50                   | -43.90     | -25.00      | -18.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |            |             |             |
| No.                                                 | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
| 1                                                   | 5360.00     | -62.10        | -50.80                | 1.50                   | -49.30     | -25.00      | -24.30      |

## Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

## 5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

## Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

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The address and road map of all our labs can be found in our web site also.

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