

## Partial FCC Test Report (Part 96 – LTE B42/B48)

**Report No.:** RFCDVB-WTW-P22100074-4

**FCC ID:** QYLEM9190V

**Test Model:** EM9190

**Received Date:** Nov. 15, 2022

**Test Date:** Nov. 30, 2022 ~ Dec. 06, 2022

**Issued Date:** Apr. 07, 2023

**Applicant:** Getac Technology Corporation.

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

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

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

**FCC Registration /  
Designation Number:** 788550 / TW0003



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## Table of Contents

|  |           |
|--|-----------|
| <b>Release Control Record</b> .....                              | <b>3</b>  |
| <b>1 Certificate of Conformity</b> .....                         | <b>4</b>  |
| <b>2 Summary of Test Results</b> .....                           | <b>5</b>  |
| 2.1 Measurement Uncertainty.....                                 | 5         |
| 2.2 Modification Record.....                                     | 5         |
| <b>3 General Information</b> .....                               | <b>6</b>  |
| 3.1 General Description of EUT.....                              | 6         |
| 3.2 Test Mode Applicability and Tested Channel Detail.....       | 8         |
| 3.3 Description of Support Units.....                            | 10        |
| 3.3.1 Configuration of System under Test.....                    | 10        |
| 3.4 General Description of Applied Standards and References..... | 11        |
| <b>4 Test Types and Results</b> .....                            | <b>12</b> |
| 4.1 Maximum Output Power Measurement.....                        | 12        |
| 4.1.1 Limits of Maximum Output Power Measurement.....            | 12        |
| 4.1.2 Test Setup.....  | 12        |
| 4.1.3 Test Instruments.....                                      | 12        |
| 4.1.4 Test Procedures.....                                       | 13        |
| 4.1.5 Deviation from Test Standard.....                          | 13        |
| 4.1.6 EUT Operating Conditions.....                              | 13        |
| 4.1.7 Test Results.....  | 14        |
| 4.2 Radiated Emission Measurement.....                           | 34        |
| 4.2.1 Limits of Radiated Emission Measurement.....               | 34        |
| 4.2.2 Test Set Up.....   | 34        |
| 4.2.3 Test Instruments.....                                      | 35        |
| 4.2.4 Test Procedures.....                                       | 36        |
| 4.2.5 Deviation from Test Standard.....                          | 36        |
| 4.2.6 EUT Operating Conditions.....                              | 36        |
| 4.2.7 Test Results.....  | 37        |
| <b>5 Pictures of Test Arrangements</b> .....                     | <b>49</b> |
| <b>Appendix – Information of the Testing Laboratories</b> .....  | <b>50</b> |

### Release Control Record

| Issue No.              | Description      | Date Issued   |
|------------------------|------------------|---------------|
| RFCDVB-WTW-P22100074-4 | Original Release | Apr. 07, 2023 |

## 1 Certificate of Conformity

**Product:** Radio Module  
**Brand:** Getac  
**Test Model:** EM9190  
**Sample Status:** Engineering Sample  
**Applicant:** Getac Technology Corporation.  
**Test Date:** Nov. 30, 2022 ~ Dec. 06, 2022  
**Standards:** 47 CFR FCC Part 96

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 RF characteristics under the conditions specified in this report.

**Prepared by :** *Vera Huang* , **Date:** Apr. 07, 2023  
Vera Huang / Specialist

**Approved by :** *Jeremy Lin* , **Date:** Apr. 07, 2023  
Jeremy Lin / Project Engineer

## 2 Summary of Test Results

| 47 CFR FCC Part 96 |                                |        |  |
|--------------------|--------------------------------|--------|--|
| FCC Clause         | Test Item                      | Result | Remarks  |
| 2.1046<br>96.41(b) | Maximum Peak Output Power      | Pass   | Meet the requirement of limit.   |
| 2.1047<br>96.41(a) | Modulation Characteristics     | N/A    | Refer to Note  |
| 2.1046<br>96.41(b) | Maximum Power Spectral Density | N/A    | Refer to Note  |
| 96.41(g)           | Peak to Average Ration         | N/A    | Refer to Note  |
| 2.1049             | Emission Bandwidth             | N/A    | Refer to Note  |
| 2.1055             | Frequency Stability            | N/A    | Refer to Note  |
| 2.1051<br>96.41(e) | Conducted Spurious Emissions   | N/A    | Refer to Note  |
| 2.1053<br>96.41(e) | Radiated Spurious Emissions    | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -0.30dB at 7120.00MHz. |

### Note:

1. This report is a Class II change partial report. Therefore, only test item of Radiated Spurious Emissions tests and Equivalent Isotropically Radiated Power were performed for this report. Other testing data please refer to Sporton International (Shenzhen) Inc. report no.: FG021429A\_Rev. 01 for module (Brand: Airprime, Model: EM9190).
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### 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         | Expanded Uncertainty (k=2) ( $\pm$ ) |
|--------------------------------|-------------------|--------------------------------------|
| Radiated Emissions up to 1 GHz | 9 kHz ~ 30 MHz    | 3.59 dB                              |
|                                | 30 MHz ~ 1000 MHz | 3.6 dB                               |
| Radiated Emissions above 1 GHz | 1GHz ~ 18GHz      | 2.29 dB                              |
|                                | 18GHz ~ 40GHz     | 2.29 dB                              |

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

|                     |                                       |                       |
|---------------------|---------------------------------------|-----------------------|
| Product             | Radio Module                          |                       |
| Brand               | Getac                                 |                       |
| Test Model          | EM9190                                |                       |
| Status of EUT       | Engineering Sample                    |                       |
| Power Supply Rating | 3.3 Vdc (Host equipment)              |                       |
| Modulation Type     | QPSK, 16QAM, 64QAM, 256QAM            |                       |
| Operating Frequency | LTE Band 42 (Channel Bandwidth 5MHz)  | 3552.5MHz ~ 3597.5MHz |
|                     | LTE Band 42 (Channel Bandwidth 10MHz) | 3555.0MHz ~ 3595.0MHz |
|                     | LTE Band 42 (Channel Bandwidth 15MHz) | 3557.5MHz ~ 3592.5MHz |
|                     | LTE Band 42 (Channel Bandwidth 20MHz) | 3560.0MHz ~ 3590.0MHz |
|                     | LTE Band 48 (Channel Bandwidth 5MHz)  | 3552.5MHz ~ 3697.5MHz |
|                     | LTE Band 48 (Channel Bandwidth 10MHz) | 3555.0MHz ~ 3695.0MHz |
|                     | LTE Band 48 (Channel Bandwidth 15MHz) | 3557.5MHz ~ 3692.5MHz |
|                     | LTE Band 48 (Channel Bandwidth 20MHz) | 3560.0MHz ~ 3690.0MHz |
| Max. EIRP Power     | LTE Band 42 (Channel Bandwidth 5MHz)  | 145.546mW (21.63dBm)  |
|                     | LTE Band 42 (Channel Bandwidth 10MHz) | 145.546mW (21.63dBm)  |
|                     | LTE Band 42 (Channel Bandwidth 15MHz) | 144.877mW (21.61dBm)  |
|                     | LTE Band 42 (Channel Bandwidth 20MHz) | 146.218mW (21.65dBm)  |
|                     | LTE Band 48 (Channel Bandwidth 5MHz)  | 148.936mW (21.73dBm)  |
|                     | LTE Band 48 (Channel Bandwidth 10MHz) | 146.893mW (21.67dBm)  |
|                     | LTE Band 48 (Channel Bandwidth 15MHz) | 147.911mW (21.70dBm)  |
|                     | LTE Band 48 (Channel Bandwidth 20MHz) | 149.968mW (21.76dBm)  |
| Antenna Type        | Refer to Note as below                |                       |
| Accessory Device    | N/A                                   |                       |
| Cable Supplied      | N/A                                   |                       |

Note:

1. The EUT is authorized for use in specific End-product.

| Product  | Brand | Model  | Difference            |
|----------|-------|--|-----------------------|
| Notebook | Getac | V110   | For marketing purpose |
|          |       | V110G7   |                       |
|          |       | V110Y (Y= 10 characters, Y can be 0 to 9, A to Z, a to z, “/”, “\”, “-”, “_” or blank for marketing purpose) |                       |

\* The model of the V110G7 was chosen for final test.

2. The antenna information is listed as below.

| Antenna Type | Antenna Gain (dBi) |         |
|--------------|--------------------|---------|
|              | LTE B42            | LTE B48 |
| PIFA         | -1.36              | -1.3    |

\* Detail antenna specification please refer to antenna datasheet or an antenna gain measurement report.

3. The End-product contains following accessory devices.

| Part          | Brand                 | Model         | Specification  |
|---------------|-----------------------|---------------|--|
| Adapter 1     | FSP                   | FSP065-RBBN3  | I/P: 100-240Vac, 50-60Hz, 1.5A<br>O/P: 19.0Vdc, 3.42A<br>1.5m DC power cable with one core attached on adapter   |
| Adapter 2     | Getac                 | MTA190474W4   | I/P: 100-240Vac, 50-60Hz, 1.6A<br>O/P: 19.0Vdc, 4.74A<br>1.55m DC power cable with two cores attached on adapter |
| Battery       | Getac                 | BP3S1P2100-S  | Rating: 11.1Vdc, 2040mAh, 23Wh<br>Typical name: 2100mAh, 24Wh  |
| Digitizer Pen | EMpen Technology Corp | DIGITIZER PEN | -  |

4. The End-product has three SKUs for sale, after pre-test. SKU 3 was chosen for final test and presented in the test report.

| Part             | Brand     | Model       | Specification       | Configuration |       |       |
|------------------|-----------|-------------|---------------------|---------------|-------|-------|
|                  |           |             |                     | SKU 1         | SKU 2 | SKU 3 |
| CPU              | Intel     | Alder Lake  | i5-1235U (Non Vpro) | V             |       | V     |
|                  |           |             | i7-1265U (Vpro)     |               | V     |       |
| DDR              | Kingston  | ---         | 16GB (8GB+8GB)      | V             |       |       |
|                  |           | ---         | 32GB (16GB+16GB)    |               | V     |       |
|                  |           | ---         | 64GB (32GB+32GB)    |               |       | V     |
| SSD              | SSSTC     | ---         | 256GB               | V             |       |       |
|                  |           | ---         | 512GB               |               | V     |       |
|                  |           | ---         | 1TB                 |               |       | V     |
| LCD Panel        | AUO       | G116HAN01   | 11.6"               | V             | V     | V     |
| Finger Print     | Egistec   | ---         | ---                 | V             | V     | V     |
| WLAN Module      | Intel     | AX211NGW    | ---                 | V             | V     | V     |
| WWAN Module      | Sierra    | EM9190      | ---                 | V             | V     | V     |
| GPS              | GlobalSat | MC1010G     | ---                 | V             | V     | V     |
| RFID Module      | NXP       | PN-7462     | ---                 |               | V     | V     |
| Digitizer Module | Getac     | EMR116-UA00 | ---                 |               | V     | V     |
| Bottom Camera    | FOXLINK   | FN80AF-443H | ---                 | V             | V     | V     |
|                  | Chicony   | CKAM816     | ---                 | V             | V     | V     |
| Camera           | FOXLINK   | FN20FF-679H | ---                 | V             | V     | V     |
| IR Camera        | FOXLINK   | FN23FF-678H | ---                 |               | V     | V     |
| Option Bay       | Honeywell | N6703       | Barcode             | V             |       | V     |
|                  | Getac     | ---         | SD Card reader      |               | V     |       |
|                  | Getac     | ---         | Smart Card          |               | V     |       |

5. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

### 3.2 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 for tablet mode, and NB mode. The worst case was found when positioned as the table below. Following channel(s) was (were) selected for the final test as listed below:

| Band        | Radiated Emission |
|-------------|-------------------|
| LTE Band 42 | NB mode           |
| LTE Band 48 | NB mode           |

#### LTE Band 42

| Test Item                       | Available Channel | Tested Channel  | Channel Bandwidth | Modulation                       |
|---------------------------------|-------------------|---|-------------------|----------------------------------|
| Maximum Output Power            | 43115 to 43565    | 43115 (3552.5MHz),<br>43340 (3575.0MHz),<br>43565 (3597.5MHz) | 5MHz              | QPSK / 16QAM /<br>64QAM / 256QAM |
|                                 | 43140 to 43540    | 43140 (3555.0MHz),<br>43340 (3575.0MHz),<br>43540 (3595.0MHz) | 10MHz             | QPSK / 16QAM /<br>64QAM / 256QAM |
|                                 | 43165 to 43515    | 43165 (3557.5MHz),<br>43340 (3575.0MHz),<br>43515 (3592.5MHz) | 15MHz             | QPSK / 16QAM /<br>64QAM / 256QAM |
|                                 | 43190 to 43490    | 43190 (3560.0MHz),<br>43340 (3575.0MHz),<br>43490 (3590.0MHz) | 20MHz             | QPSK / 16QAM /<br>64QAM / 256QAM |
| Radiated Emission<br>Below 1GHz | 43190 to 43490    | 43190 (3560.0MHz)   | 20MHz             | QPSK                             |
| Radiated Emission<br>Above 1GHz | 43115 to 43565    | 43115 (3552.5MHz),<br>43340 (3575.0MHz),<br>43565 (3597.5MHz) | 5MHz              | QPSK                             |
|                                 | 43190 to 43490    | 43190 (3560.0MHz),<br>43340 (3575.0MHz),<br>43490 (3590.0MHz) | 20MHz             | QPSK                             |

**Note:**

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.
2. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
3. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the 5MHz & highest channel bandwidth for final test.



**LTE Band 48**

| Test Item                       | Available Channel | Tested Channel  | Channel Bandwidth | Modulation                       |
|---------------------------------|-------------------|---|-------------------|----------------------------------|
| Maximum Output Power            | 55265 to 56715    | 55265 (3552.5MHz),<br>55990 (3625.0MHz),<br>56715 (3697.5MHz) | 5MHz              | QPSK / 16QAM /<br>64QAM / 256QAM |
|                                 | 55290 to 56690    | 55290 (3555.0MHz),<br>55990 (3625.0MHz),<br>56690 (3695.0MHz) | 10MHz             | QPSK / 16QAM /<br>64QAM / 256QAM |
|                                 | 55315 to 56665    | 55315 (3557.5MHz),<br>55990 (3625.0MHz),<br>56665 (3692.5MHz) | 15MHz             | QPSK / 16QAM /<br>64QAM / 256QAM |
|                                 | 55340 to 56640    | 55340 (3560.0MHz),<br>55990 (3625.0MHz),<br>56640 (3690.0MHz) | 20MHz             | QPSK / 16QAM /<br>64QAM / 256QAM |
| Radiated Emission<br>Below 1GHz | 55265 to 56715    | 55265 (3552.5MHz)   | 5MHz              | QPSK                             |
| Radiated Emission<br>Above 1GHz | 55265 to 56715    | 55265 (3552.5MHz),<br>55990 (3625.0MHz),<br>56715 (3697.5MHz) | 5MHz              | QPSK                             |
|                                 | 55340 to 56640    | 55340 (3560.0MHz),<br>55990 (3625.0MHz),<br>56640 (3690.0MHz) | 20MHz             | QPSK                             |

**Note:**

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.
2. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
3. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the 5MHz & highest channel bandwidth for final test.

**Test Condition:**

| Test Item            | Environmental Conditions | Input Power           | Tested By              |
|----------------------|--------------------------|-----------------------|------------------------|
| Maximum Output Power | 25deg. C, 60%RH          | 120Vac, 60Hz (System) | Willy Cheng            |
| Radiated Emission    | 23deg. C, 67%RH          | 120Vac, 60Hz (System) | Rex Wang<br>Adair Peng |

### 3.3 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. | Notebook                     | Getac   | V110G7       | NA           | NA     | Provided by manufacturer |
| B. | Adapter                      | FSP     | FSP065-RBBN3 | NA           | NA     | Provided by manufacturer |
| C. | USB Flash x 3                | SanDisk | SDDDC3-032G  | NA           | NA     | -                        |
| D. | Monitor                      | ASUS    | VA24EHE      | LCLMTF243824 | NA     | -                        |
| E. | Earphone                     | Apple   | MB77PFEB     | NA           | NA     | -                        |
| F. | Load                         | NA      | NA           | NA           | NA     | -                        |
| G. | Radio Communication Analyzer | Anritsu | MT8821C      | 6201462755   | NA     | -                        |

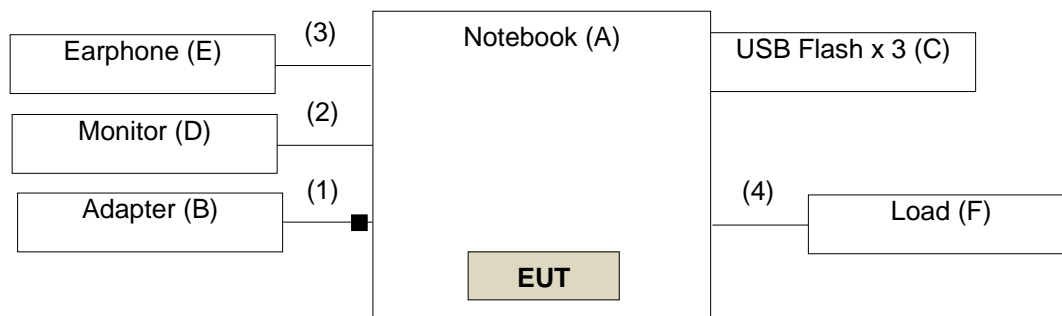
Note:

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

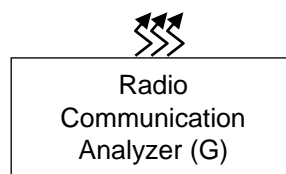
| ID | Descriptions   | Qty. | Length (m) | Shielding (Yes/No) | Cores (Qty.) | Remarks   |
|----|----------------|------|------------|--------------------|--------------|---|
| 1. | DC Power Cable | 1    | 1.5        | N                  | 1            | Provided by manufacturer<br>Attached on adapter |
| 2. | HDMI Cable     | 1    | 1.0        | Y                  | 0            | -   |
| 3. | Earphone Cable | 1    | 1.5        | N                  | 0            | -   |
| 4. | RJ45 Cable     | 1    | 1.5        | N                  | 0            | -   |

Note: The core(s) is(are) originally attached to the cable(s).

#### 3.3.1 Configuration of System under Test



Remote site



### **3.4 General Description of Applied Standards and References**

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

**Test standard:**

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 96**

**ANSI C63.26-2015**

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

**References Test Guidance:**

**KDB 971168 D01 Power Meas License Digital Systems v03r01**

**KDB 940660 D01 Part 96 CBRS Eqpt v03**

All test items have been performed as a reference to the above KDB test guidance.

## 4 Test Types and Results

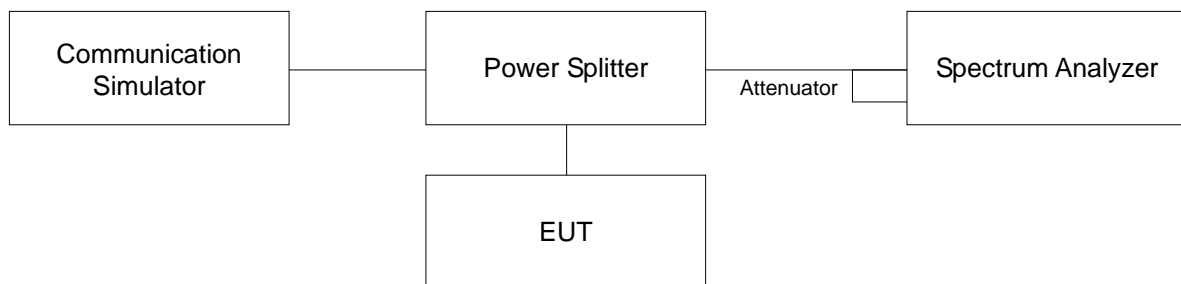
### 4.1 Maximum Output Power Measurement

#### 4.1.1 Limits of Maximum Output Power Measurement

| Device                              |                 | Maximum EIRP<br>(dBm/10 MHz) |
|-------------------------------------|-----------------|------------------------------|
| <input checked="" type="checkbox"/> | End User Device | 23                           |
| <input type="checkbox"/>            | Category A CBSD | 30                           |
| <input type="checkbox"/>            | Category B CBSD | 47                           |

#### 4.1.2 Test Setup

Conducted Power Measurement:



#### 4.1.3 Test Instruments

| Description & Manufacturer                    | Model No.   | Serial No.    | Cal. Date     | Cal. Due      |
|---|-------------|---------------|---------------|---------------|
| Spectrum Analyzer<br>KEYSIGHT                 | N9030B      | MY57140953    | Jul. 01, 2022 | Jun. 30, 2023 |
| Radio Communication<br>Analyzer<br>Anritsu    | MT8821C     | 6272278310    | Jun. 22, 2022 | Jun. 21, 2023 |
| RF cable                                      | JB200       | Cable-OVEN-02 | NA            | NA            |
| DC-6GHz 20dB 50W Fixed<br>attenuator<br>Woken | MDC9331N-20 | 0724          | Jul. 01, 2022 | Jun. 30, 2024 |
| Temperature & Humidity<br>Chamber<br>TERCHY   | HRM-120RF   | 931022        | Jan. 03, 2022 | Jan. 02, 2023 |
| AC Power Supply<br>Extech                     | CFW-105     | E000603       | NA            | NA            |
| Digital Multimeter<br>Fluke                   | 87-III      | 70360742      | Jun. 23, 2022 | Jun. 22, 2023 |

Note: The calibration interval of the above test instruments is 12/24 months and the calibrations are traceable to NML/ROC and NIST/USA.

#### 4.1.4 Test Procedures

Conducted output power measurement

- a. Connect the DUT transmitter output to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
- b. Set span to at least 1.5 times the OBW.
- c. Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
- d. Set VBW  $\geq 3 \times$  RBW.
- e. Set number of points in sweep  $\geq 2 \times$  span / RBW.
- f. Sweep time = auto-couple.
- g. Detector = RMS (power averaging).
- h. If the EUT can be configured to transmit continuously (i.e., burst duty cycle  $\geq 98\%$ ), then set the trigger to free run.
- i. If the EUT cannot be configured to transmit continuously (i.e., burst duty cycle  $< 98\%$ ), then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Ensure that the sweep time is less than or equal to the transmission burst duration.
- j. Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- k. Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band or channel power measurement function, with the band/channel limits set equal to the OBW band edges. If the instrument does not have a band or channel power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.
- l. Measurement method refers to ANSI C63.26 section 5.2.7 & 5.2.4.

#### Maximum EIRP

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}}$$

where

ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively  
(expressed in the same units as  $P_{\text{Meas}}$ , e.g., dBm or dBW)

$P_{\text{Meas}}$  measured transmitter output power or PSD, in dBm or dBW

$G_{\text{T}}$  gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

#### 4.1.5 Deviation from Test Standard

No deviation.

#### 4.1.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

#### 4.1.7 Test Results

##### Conducted Output Power (dBm)

| LTE Band 42 |           |                 |           |       |       |       |
|-------------|-----------|-----------------|-----------|-------|-------|-------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid   | High  |
|             |           | Channel         |           | 43190 | 43340 | 43490 |
|             |           | Frequency (MHz) |           | 3560  | 3575  | 3590  |
| 20M         | QPSK      | 1               | 0         | 22.86 | 22.95 | 23.01 |
|             |           | 1               | 50        | 22.85 | 22.93 | 22.98 |
|             |           | 1               | 99        | 22.83 | 22.91 | 22.95 |
|             |           | 50              | 0         | 22.03 | 22.07 | 22.12 |
|             |           | 50              | 25        | 21.95 | 21.98 | 22.08 |
|             |           | 50              | 50        | 21.93 | 22.02 | 22.06 |
|             |           | 100             | 0         | 21.94 | 21.95 | 22.04 |
| 20M         | 16QAM     | 1               | 0         | 22.11 | 22.16 | 22.23 |
|             |           | 1               | 50        | 22.06 | 22.10 | 22.14 |
|             |           | 1               | 99        | 21.96 | 22.01 | 22.06 |
|             |           | 50              | 0         | 21.09 | 21.14 | 21.15 |
|             |           | 50              | 25        | 20.99 | 21.07 | 21.11 |
|             |           | 50              | 50        | 20.98 | 21.00 | 21.08 |
|             |           | 100             | 0         | 21.00 | 21.02 | 21.04 |
| 20M         | 64QAM     | 1               | 0         | 20.98 | 21.00 | 21.08 |
|             |           | 1               | 50        | 20.95 | 21.03 | 21.04 |
|             |           | 1               | 99        | 20.87 | 20.88 | 20.98 |
|             |           | 50              | 0         | 20.05 | 20.05 | 20.15 |
|             |           | 50              | 25        | 20.01 | 20.03 | 20.13 |
|             |           | 50              | 50        | 19.92 | 19.99 | 20.09 |
|             |           | 100             | 0         | 19.85 | 19.95 | 20.05 |
| 20M         | 256QAM    | 1               | 0         | 18.02 | 18.11 | 18.14 |
|             |           | 1               | 50        | 18.01 | 18.08 | 18.08 |
|             |           | 1               | 99        | 17.92 | 17.95 | 18.04 |
|             |           | 50              | 0         | 17.90 | 17.98 | 18.00 |
|             |           | 50              | 25        | 17.84 | 17.93 | 17.96 |
|             |           | 50              | 50        | 17.81 | 17.84 | 17.92 |
|             |           | 100             | 0         | 17.83 | 17.83 | 17.90 |

| LTE Band 42 |           |                 |           |        |       |        |
|-------------|-----------|-----------------|-----------|--------|-------|--------|
| BW          | MCS Index | RB Size         | RB Offset | Low    | Mid   | High   |
|             |           | Channel         |           | 43165  | 43340 | 43515  |
|             |           | Frequency (MHz) |           | 3557.5 | 3575  | 3592.5 |
| 15M         | QPSK      | 1               | 0         | 22.86  | 22.92 | 22.91  |
|             |           | 1               | 37        | 22.84  | 22.86 | 22.97  |
|             |           | 1               | 74        | 22.82  | 22.81 | 22.93  |
|             |           | 36              | 0         | 22.01  | 22.05 | 22.08  |
|             |           | 36              | 19        | 21.94  | 21.94 | 22.03  |
|             |           | 36              | 39        | 21.91  | 21.97 | 21.98  |
|             |           | 75              | 0         | 21.85  | 21.86 | 21.96  |
| 15M         | 16QAM     | 1               | 0         | 22.03  | 22.06 | 22.18  |
|             |           | 1               | 37        | 22.01  | 22.04 | 22.13  |
|             |           | 1               | 74        | 21.92  | 21.97 | 21.99  |
|             |           | 36              | 0         | 21.03  | 21.05 | 21.05  |
|             |           | 36              | 19        | 20.91  | 21.06 | 21.09  |
|             |           | 36              | 39        | 20.94  | 20.94 | 21.00  |
|             |           | 75              | 0         | 20.92  | 20.98 | 20.94  |
| 15M         | 64QAM     | 1               | 0         | 20.89  | 21.00 | 20.98  |
|             |           | 1               | 37        | 20.93  | 20.98 | 20.99  |
|             |           | 1               | 74        | 20.83  | 20.87 | 20.96  |
|             |           | 36              | 0         | 20.01  | 20.05 | 20.08  |
|             |           | 36              | 19        | 19.96  | 20.02 | 20.11  |
|             |           | 36              | 39        | 19.89  | 19.94 | 20.09  |
|             |           | 75              | 0         | 19.81  | 19.86 | 20.02  |
| 15M         | 256QAM    | 1               | 0         | 17.94  | 18.06 | 18.11  |
|             |           | 1               | 37        | 18.01  | 17.99 | 18.05  |
|             |           | 1               | 74        | 17.84  | 17.86 | 17.96  |
|             |           | 36              | 0         | 17.86  | 17.98 | 17.97  |
|             |           | 36              | 19        | 17.84  | 17.88 | 17.95  |
|             |           | 36              | 39        | 17.81  | 17.82 | 17.87  |
|             |           | 75              | 0         | 17.81  | 17.81 | 17.83  |

| LTE Band 42 |           |                 |           |       |       |       |
|-------------|-----------|-----------------|-----------|-------|-------|-------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid   | High  |
|             |           | Channel         |           | 43140 | 43340 | 43540 |
|             |           | Frequency (MHz) |           | 3555  | 3575  | 3595  |
| 10M         | QPSK      | 1               | 0         | 22.88 | 22.90 | 22.99 |
|             |           | 1               | 24        | 22.85 | 22.86 | 22.94 |
|             |           | 1               | 49        | 22.83 | 22.82 | 22.85 |
|             |           | 25              | 0         | 22.00 | 21.99 | 22.04 |
|             |           | 25              | 12        | 21.85 | 21.91 | 21.99 |
|             |           | 25              | 25        | 21.86 | 22.02 | 22.04 |
|             |           | 50              | 0         | 21.93 | 21.85 | 21.95 |
| 10M         | 16QAM     | 1               | 0         | 22.07 | 22.12 | 22.21 |
|             |           | 1               | 24        | 21.96 | 22.00 | 22.04 |
|             |           | 1               | 49        | 21.94 | 21.93 | 21.97 |
|             |           | 25              | 0         | 20.99 | 21.09 | 21.10 |
|             |           | 25              | 12        | 20.93 | 20.99 | 21.05 |
|             |           | 25              | 25        | 20.93 | 20.95 | 21.04 |
|             |           | 50              | 0         | 20.91 | 21.01 | 21.02 |
| 10M         | 64QAM     | 1               | 0         | 20.95 | 20.90 | 21.05 |
|             |           | 1               | 24        | 20.87 | 20.96 | 21.01 |
|             |           | 1               | 49        | 20.81 | 20.86 | 20.92 |
|             |           | 25              | 0         | 20.01 | 19.99 | 20.06 |
|             |           | 25              | 12        | 20.01 | 20.02 | 20.13 |
|             |           | 25              | 25        | 19.84 | 19.95 | 20.08 |
|             |           | 50              | 0         | 19.83 | 19.86 | 19.97 |
| 10M         | 256QAM    | 1               | 0         | 17.95 | 18.10 | 18.04 |
|             |           | 1               | 24        | 17.93 | 18.01 | 17.98 |
|             |           | 1               | 49        | 17.87 | 17.88 | 18.03 |
|             |           | 25              | 0         | 17.82 | 17.97 | 17.96 |
|             |           | 25              | 12        | 17.84 | 17.84 | 17.95 |
|             |           | 25              | 25        | 17.82 | 17.81 | 17.90 |
|             |           | 50              | 0         | 17.82 | 17.81 | 17.90 |



| LTE Band 42 |           |                 |           |        |       |        |
|-------------|-----------|-----------------|-----------|--------|-------|--------|
| BW          | MCS Index | RB Size         | RB Offset | Low    | Mid   | High   |
|             |           | Channel         |           | 43115  | 43340 | 43565  |
|             |           | Frequency (MHz) |           | 3552.5 | 3575  | 3597.5 |
| 5M          | QPSK      | 1               | 0         | 22.85  | 22.85 | 22.99  |
|             |           | 1               | 12        | 22.84  | 22.87 | 22.98  |
|             |           | 1               | 24        | 22.81  | 22.90 | 22.95  |
|             |           | 12              | 0         | 21.97  | 21.98 | 22.03  |
|             |           | 12              | 6         | 21.85  | 21.97 | 22.03  |
|             |           | 12              | 13        | 21.85  | 22.00 | 21.97  |
|             |           | 25              | 0         | 21.84  | 21.87 | 21.97  |
| 5M          | 16QAM     | 1               | 0         | 22.07  | 22.12 | 22.15  |
|             |           | 1               | 12        | 21.99  | 22.07 | 22.12  |
|             |           | 1               | 24        | 21.90  | 21.93 | 22.03  |
|             |           | 12              | 0         | 21.02  | 21.07 | 21.09  |
|             |           | 12              | 6         | 20.94  | 20.97 | 21.03  |
|             |           | 12              | 13        | 20.95  | 21.00 | 21.00  |
|             |           | 25              | 0         | 20.98  | 21.00 | 21.01  |
| 5M          | 64QAM     | 1               | 0         | 20.90  | 20.96 | 21.02  |
|             |           | 1               | 12        | 20.89  | 20.96 | 20.96  |
|             |           | 1               | 24        | 20.81  | 20.81 | 20.90  |
|             |           | 12              | 0         | 20.01  | 20.02 | 20.10  |
|             |           | 12              | 6         | 20.01  | 19.99 | 20.10  |
|             |           | 12              | 13        | 19.88  | 19.93 | 20.01  |
|             |           | 25              | 0         | 19.84  | 19.93 | 19.96  |
| 5M          | 256QAM    | 1               | 0         | 18.00  | 18.04 | 18.14  |
|             |           | 1               | 12        | 18.01  | 18.00 | 17.98  |
|             |           | 1               | 24        | 17.89  | 17.88 | 17.94  |
|             |           | 12              | 0         | 17.83  | 17.98 | 17.92  |
|             |           | 12              | 6         | 17.81  | 17.88 | 17.90  |
|             |           | 12              | 13        | 17.83  | 17.84 | 17.86  |
|             |           | 25              | 0         | 17.82  | 17.82 | 17.86  |

**Conducted Output Power (dBm/10MHz)**

| LTE Band 48 |           |                 |           |       |       |       |
|-------------|-----------|-----------------|-----------|-------|-------|-------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid   | High  |
|             |           | Channel         |           | 55340 | 55990 | 56640 |
|             |           | Frequency (MHz) |           | 3560  | 3625  | 3690  |
| 20M         | QPSK      | 1               | 0         | 22.80 | 22.83 | 22.64 |
|             |           | 1               | 50        | 22.70 | 22.75 | 22.78 |
|             |           | 1               | 99        | 22.59 | 22.87 | 22.61 |
|             |           | 50              | 0         | 21.79 | 21.79 | 21.83 |
|             |           | 50              | 25        | 21.79 | 21.98 | 21.73 |
|             |           | 50              | 50        | 21.68 | 21.92 | 21.79 |
|             |           | 100             | 0         | 21.81 | 21.80 | 21.73 |
| 20M         | 16QAM     | 1               | 0         | 21.95 | 22.11 | 22.04 |
|             |           | 1               | 50        | 21.89 | 21.93 | 21.91 |
|             |           | 1               | 99        | 21.86 | 22.05 | 21.97 |
|             |           | 50              | 0         | 20.83 | 20.82 | 20.78 |
|             |           | 50              | 25        | 20.90 | 20.91 | 20.93 |
|             |           | 50              | 50        | 20.76 | 20.80 | 20.77 |
|             |           | 100             | 0         | 20.84 | 20.81 | 20.65 |
| 20M         | 64QAM     | 1               | 0         | 20.72 | 20.89 | 20.78 |
|             |           | 1               | 50        | 20.65 | 20.86 | 20.68 |
|             |           | 1               | 99        | 20.65 | 20.90 | 20.81 |
|             |           | 50              | 0         | 19.88 | 19.88 | 19.86 |
|             |           | 50              | 25        | 19.72 | 19.80 | 19.74 |
|             |           | 50              | 50        | 19.80 | 19.93 | 19.71 |
|             |           | 100             | 0         | 19.69 | 19.80 | 19.82 |
| 20M         | 256QAM    | 1               | 0         | 17.97 | 18.05 | 17.96 |
|             |           | 1               | 50        | 18.08 | 18.27 | 18.12 |
|             |           | 1               | 99        | 17.84 | 17.99 | 18.09 |
|             |           | 50              | 0         | 18.04 | 18.08 | 17.93 |
|             |           | 50              | 25        | 17.86 | 18.09 | 18.05 |
|             |           | 50              | 50        | 17.86 | 17.99 | 18.06 |
|             |           | 100             | 0         | 17.75 | 17.78 | 17.88 |

| LTE Band 48 |           |                 |           |        |       |        |
|-------------|-----------|-----------------|-----------|--------|-------|--------|
| BW          | MCS Index | RB Size         | RB Offset | Low    | Mid   | High   |
|             |           | Channel         |           | 55315  | 55990 | 56665  |
|             |           | Frequency (MHz) |           | 3557.5 | 3625  | 3692.5 |
| 15M         | QPSK      | 1               | 0         | 22.61  | 22.78 | 22.80  |
|             |           | 1               | 37        | 22.51  | 22.87 | 22.57  |
|             |           | 1               | 74        | 22.60  | 22.80 | 22.66  |
|             |           | 36              | 0         | 21.55  | 21.75 | 21.85  |
|             |           | 36              | 19        | 21.56  | 21.67 | 21.78  |
|             |           | 36              | 39        | 21.78  | 21.70 | 21.72  |
|             |           | 75              | 0         | 21.63  | 21.82 | 21.65  |
| 15M         | 16QAM     | 1               | 0         | 22.02  | 21.93 | 21.80  |
|             |           | 1               | 37        | 21.71  | 21.88 | 21.84  |
|             |           | 1               | 74        | 21.75  | 21.89 | 21.95  |
|             |           | 36              | 0         | 20.87  | 20.90 | 20.68  |
|             |           | 36              | 19        | 20.70  | 20.96 | 20.72  |
|             |           | 36              | 39        | 20.87  | 20.74 | 20.83  |
|             |           | 75              | 0         | 20.58  | 20.84 | 20.84  |
| 15M         | 64QAM     | 1               | 0         | 20.77  | 20.94 | 20.58  |
|             |           | 1               | 37        | 20.64  | 20.83 | 20.76  |
|             |           | 1               | 74        | 20.57  | 20.75 | 20.60  |
|             |           | 36              | 0         | 19.53  | 20.02 | 19.59  |
|             |           | 36              | 19        | 19.86  | 19.75 | 19.62  |
|             |           | 36              | 39        | 19.60  | 19.96 | 19.86  |
|             |           | 75              | 0         | 19.67  | 19.95 | 19.62  |
| 15M         | 256QAM    | 1               | 0         | 18.07  | 18.03 | 18.01  |
|             |           | 1               | 37        | 17.98  | 17.95 | 17.91  |
|             |           | 1               | 74        | 17.68  | 18.05 | 18.02  |
|             |           | 36              | 0         | 17.72  | 18.11 | 17.91  |
|             |           | 36              | 19        | 17.73  | 17.99 | 17.79  |
|             |           | 36              | 39        | 17.74  | 17.98 | 17.94  |
|             |           | 75              | 0         | 17.68  | 17.96 | 17.75  |

**Full Conducted Output Power (dBm/20MHz)**

| LTE Band 48 |           |                 |           |       |       |       |
|-------------|-----------|-----------------|-----------|-------|-------|-------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid   | High  |
|             |           | Channel         |           | 55340 | 55990 | 56640 |
|             |           | Frequency (MHz) |           | 3560  | 3625  | 3690  |
| 20M         | QPSK      | 1               | 0         | 22.92 | 23.06 | 22.96 |
|             |           | 1               | 50        | 22.91 | 22.98 | 22.92 |
|             |           | 1               | 99        | 22.81 | 22.95 | 22.85 |
|             |           | 50              | 0         | 21.93 | 22.11 | 22.03 |
|             |           | 50              | 25        | 21.93 | 22.06 | 21.93 |
|             |           | 50              | 50        | 21.90 | 22.03 | 21.93 |
|             |           | 100             | 0         | 21.89 | 22.01 | 21.91 |
| 20M         | 16QAM     | 1               | 0         | 22.09 | 22.17 | 22.09 |
|             |           | 1               | 50        | 21.99 | 22.14 | 22.03 |
|             |           | 1               | 99        | 22.04 | 22.11 | 22.04 |
|             |           | 50              | 0         | 21.01 | 21.15 | 21.03 |
|             |           | 50              | 25        | 20.96 | 21.13 | 21.06 |
|             |           | 50              | 50        | 21.02 | 21.08 | 21.06 |
|             |           | 100             | 0         | 20.87 | 21.05 | 20.88 |
| 20M         | 64QAM     | 1               | 0         | 20.82 | 21.12 | 20.92 |
|             |           | 1               | 50        | 20.93 | 21.08 | 20.94 |
|             |           | 1               | 99        | 20.87 | 21.04 | 20.96 |
|             |           | 50              | 0         | 19.91 | 20.15 | 19.99 |
|             |           | 50              | 25        | 19.97 | 20.12 | 20.03 |
|             |           | 50              | 50        | 19.97 | 20.08 | 20.01 |
|             |           | 100             | 0         | 19.93 | 20.04 | 20.01 |
| 20M         | 256QAM    | 1               | 0         | 18.21 | 18.36 | 18.25 |
|             |           | 1               | 50        | 18.14 | 18.32 | 18.24 |
|             |           | 1               | 99        | 18.10 | 18.27 | 18.18 |
|             |           | 50              | 0         | 18.12 | 18.23 | 18.16 |
|             |           | 50              | 25        | 18.01 | 18.18 | 18.11 |
|             |           | 50              | 50        | 18.08 | 18.15 | 18.10 |
|             |           | 100             | 0         | 17.90 | 18.10 | 17.94 |

### Full Conducted Output Power (dBm/15MHz)

| LTE Band 48 |           |                 |           |        |       |        |
|-------------|-----------|-----------------|-----------|--------|-------|--------|
| BW          | MCS Index | RB Size         | RB Offset | Low    | Mid   | High   |
|             |           | Channel         |           | 55315  | 55990 | 56665  |
|             |           | Frequency (MHz) |           | 3557.5 | 3625  | 3692.5 |
| 15M         | QPSK      | 1               | 0         | 22.84  | 23.00 | 22.95  |
|             |           | 1               | 37        | 22.81  | 22.91 | 22.84  |
|             |           | 1               | 74        | 22.81  | 22.92 | 22.82  |
|             |           | 36              | 0         | 21.85  | 22.05 | 22.02  |
|             |           | 36              | 19        | 21.85  | 21.98 | 21.85  |
|             |           | 36              | 39        | 21.90  | 21.99 | 21.83  |
|             |           | 75              | 0         | 21.89  | 21.91 | 21.90  |
| 15M         | 16QAM     | 1               | 0         | 22.05  | 22.07 | 22.05  |
|             |           | 1               | 37        | 21.99  | 22.04 | 22.02  |
|             |           | 1               | 74        | 22.01  | 22.08 | 22.02  |
|             |           | 36              | 0         | 20.95  | 21.14 | 20.99  |
|             |           | 36              | 19        | 20.96  | 21.12 | 21.05  |
|             |           | 36              | 39        | 20.93  | 21.07 | 20.98  |
|             |           | 75              | 0         | 20.85  | 21.01 | 20.87  |
| 15M         | 64QAM     | 1               | 0         | 20.81  | 21.12 | 20.85  |
|             |           | 1               | 37        | 20.83  | 21.05 | 20.87  |
|             |           | 1               | 74        | 20.83  | 21.03 | 20.93  |
|             |           | 36              | 0         | 19.82  | 20.10 | 19.92  |
|             |           | 36              | 19        | 19.93  | 20.03 | 19.94  |
|             |           | 36              | 39        | 19.89  | 20.08 | 19.92  |
|             |           | 75              | 0         | 19.88  | 20.03 | 19.95  |
| 15M         | 256QAM    | 1               | 0         | 18.20  | 18.28 | 18.19  |
|             |           | 1               | 37        | 18.08  | 18.28 | 18.15  |
|             |           | 1               | 74        | 18.01  | 18.24 | 18.15  |
|             |           | 36              | 0         | 18.04  | 18.22 | 18.16  |
|             |           | 36              | 19        | 17.95  | 18.16 | 18.04  |
|             |           | 36              | 39        | 17.98  | 18.09 | 18.04  |
|             |           | 75              | 0         | 17.88  | 18.02 | 17.91  |

**Full Conducted Output Power (dBm/10MHz)**

| LTE Band 48 |           |                 |           |       |       |       |
|-------------|-----------|-----------------|-----------|-------|-------|-------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid   | High  |
|             |           | Channel         |           | 55290 | 55990 | 56690 |
|             |           | Frequency (MHz) |           | 3555  | 3625  | 3695  |
| 10M         | QPSK      | 1               | 0         | 22.89 | 22.97 | 22.96 |
|             |           | 1               | 24        | 22.81 | 22.90 | 22.82 |
|             |           | 1               | 49        | 22.81 | 22.89 | 22.85 |
|             |           | 25              | 0         | 21.93 | 22.04 | 22.00 |
|             |           | 25              | 12        | 21.90 | 22.04 | 21.91 |
|             |           | 25              | 25        | 21.90 | 21.98 | 21.86 |
|             |           | 50              | 0         | 21.83 | 21.99 | 21.86 |
| 10M         | 16QAM     | 1               | 0         | 22.01 | 22.15 | 22.02 |
|             |           | 1               | 24        | 21.96 | 22.04 | 21.96 |
|             |           | 1               | 49        | 21.97 | 22.04 | 21.98 |
|             |           | 25              | 0         | 20.93 | 21.14 | 20.99 |
|             |           | 25              | 12        | 20.92 | 21.09 | 20.96 |
|             |           | 25              | 25        | 21.02 | 21.05 | 20.96 |
|             |           | 50              | 0         | 20.84 | 20.95 | 20.87 |
| 10M         | 64QAM     | 1               | 0         | 20.82 | 21.05 | 20.84 |
|             |           | 1               | 24        | 20.86 | 21.00 | 20.91 |
|             |           | 1               | 49        | 20.81 | 20.94 | 20.89 |
|             |           | 25              | 0         | 19.84 | 20.11 | 19.98 |
|             |           | 25              | 12        | 19.90 | 20.04 | 19.98 |
|             |           | 25              | 25        | 19.91 | 19.98 | 19.94 |
|             |           | 50              | 0         | 19.86 | 20.03 | 19.93 |
| 10M         | 256QAM    | 1               | 0         | 18.14 | 18.35 | 18.22 |
|             |           | 1               | 24        | 18.04 | 18.22 | 18.19 |
|             |           | 1               | 49        | 18.00 | 18.23 | 18.09 |
|             |           | 25              | 0         | 18.04 | 18.22 | 18.12 |
|             |           | 25              | 12        | 18.01 | 18.09 | 18.04 |
|             |           | 25              | 25        | 18.02 | 18.11 | 18.07 |
|             |           | 50              | 0         | 17.82 | 18.06 | 17.88 |

**Full Conducted Output Power (dBm/5MHz)**

| LTE Band 48 |           |                 |           |        |       |        |
|-------------|-----------|-----------------|-----------|--------|-------|--------|
| BW          | MCS Index | RB Size         | RB Offset | Low    | Mid   | High   |
|             |           | Channel         |           | 55265  | 55990 | 56715  |
|             |           | Frequency (MHz) |           | 3552.5 | 3625  | 3697.5 |
| 5M          | QPSK      | 1               | 0         | 22.88  | 23.03 | 22.92  |
|             |           | 1               | 12        | 22.87  | 22.90 | 22.82  |
|             |           | 1               | 24        | 22.81  | 22.91 | 22.84  |
|             |           | 12              | 0         | 21.92  | 22.02 | 22.02  |
|             |           | 12              | 6         | 21.92  | 22.05 | 21.90  |
|             |           | 12              | 13        | 21.87  | 22.01 | 21.89  |
|             |           | 25              | 0         | 21.84  | 21.96 | 21.83  |
| 5M          | 16QAM     | 1               | 0         | 22.05  | 22.12 | 22.01  |
|             |           | 1               | 12        | 21.95  | 22.11 | 21.98  |
|             |           | 1               | 24        | 21.99  | 22.06 | 22.04  |
|             |           | 12              | 0         | 20.93  | 21.10 | 21.02  |
|             |           | 12              | 6         | 20.91  | 21.07 | 20.99  |
|             |           | 12              | 13        | 20.94  | 21.03 | 20.98  |
|             |           | 25              | 0         | 20.87  | 20.97 | 20.87  |
| 5M          | 64QAM     | 1               | 0         | 20.83  | 21.11 | 20.85  |
|             |           | 1               | 12        | 20.90  | 21.08 | 20.88  |
|             |           | 1               | 24        | 20.82  | 21.01 | 20.86  |
|             |           | 12              | 0         | 19.81  | 20.09 | 19.95  |
|             |           | 12              | 6         | 19.96  | 20.03 | 20.01  |
|             |           | 12              | 13        | 19.90  | 19.99 | 19.92  |
|             |           | 25              | 0         | 19.85  | 19.94 | 20.01  |
| 5M          | 256QAM    | 1               | 0         | 18.19  | 18.36 | 18.16  |
|             |           | 1               | 12        | 18.06  | 18.31 | 18.15  |
|             |           | 1               | 24        | 18.06  | 18.27 | 18.11  |
|             |           | 12              | 0         | 18.10  | 18.16 | 18.16  |
|             |           | 12              | 6         | 17.92  | 18.12 | 18.11  |
|             |           | 12              | 13        | 17.99  | 18.11 | 18.06  |
|             |           | 25              | 0         | 17.89  | 18.07 | 17.88  |

**EIRP Power (dBm)**

| LTE Band 42 |           |                 |           |       |       |              |
|-------------|-----------|-----------------|-----------|-------|-------|--------------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid   | High         |
|             |           | Channel         |           | 43190 | 43340 | 43490        |
|             |           | Frequency (MHz) |           | 3560  | 3575  | 3590         |
| 20M         | QPSK      | 1               | 0         | 21.50 | 21.59 | <b>21.65</b> |
|             |           | 1               | 50        | 21.49 | 21.57 | 21.62        |
|             |           | 1               | 99        | 21.47 | 21.55 | 21.59        |
|             |           | 50              | 0         | 20.67 | 20.71 | 20.76        |
|             |           | 50              | 25        | 20.59 | 20.62 | 20.72        |
|             |           | 50              | 50        | 20.57 | 20.66 | 20.70        |
|             |           | 100             | 0         | 20.58 | 20.59 | 20.68        |
| 20M         | 16QAM     | 1               | 0         | 20.75 | 20.80 | 20.87        |
|             |           | 1               | 50        | 20.70 | 20.74 | 20.78        |
|             |           | 1               | 99        | 20.60 | 20.65 | 20.70        |
|             |           | 50              | 0         | 19.73 | 19.78 | 19.79        |
|             |           | 50              | 25        | 19.63 | 19.71 | 19.75        |
|             |           | 50              | 50        | 19.62 | 19.64 | 19.72        |
|             |           | 100             | 0         | 19.64 | 19.66 | 19.68        |
| 20M         | 64QAM     | 1               | 0         | 19.62 | 19.64 | 19.72        |
|             |           | 1               | 50        | 19.59 | 19.67 | 19.68        |
|             |           | 1               | 99        | 19.51 | 19.52 | 19.62        |
|             |           | 50              | 0         | 18.69 | 18.69 | 18.79        |
|             |           | 50              | 25        | 18.65 | 18.67 | 18.77        |
|             |           | 50              | 50        | 18.56 | 18.63 | 18.73        |
|             |           | 100             | 0         | 18.49 | 18.59 | 18.69        |
| 20M         | 256QAM    | 1               | 0         | 16.66 | 16.75 | 16.78        |
|             |           | 1               | 50        | 16.65 | 16.72 | 16.72        |
|             |           | 1               | 99        | 16.56 | 16.59 | 16.68        |
|             |           | 50              | 0         | 16.54 | 16.62 | 16.64        |
|             |           | 50              | 25        | 16.48 | 16.57 | 16.60        |
|             |           | 50              | 50        | 16.45 | 16.48 | 16.56        |
|             |           | 100             | 0         | 16.47 | 16.47 | 16.54        |

\*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi).



| LTE Band 42 |           |                 |           |        |       |              |
|-------------|-----------|-----------------|-----------|--------|-------|--------------|
| BW          | MCS Index | RB Size         | RB Offset | Low    | Mid   | High         |
|             |           | Channel         |           | 43165  | 43340 | 43515        |
|             |           | Frequency (MHz) |           | 3557.5 | 3575  | 3592.5       |
| 15M         | QPSK      | 1               | 0         | 21.50  | 21.56 | 21.55        |
|             |           | 1               | 37        | 21.48  | 21.50 | <b>21.61</b> |
|             |           | 1               | 74        | 21.46  | 21.45 | 21.57        |
|             |           | 36              | 0         | 20.65  | 20.69 | 20.72        |
|             |           | 36              | 19        | 20.58  | 20.58 | 20.67        |
|             |           | 36              | 39        | 20.55  | 20.61 | 20.62        |
|             |           | 75              | 0         | 20.49  | 20.50 | 20.60        |
| 15M         | 16QAM     | 1               | 0         | 20.67  | 20.70 | 20.82        |
|             |           | 1               | 37        | 20.65  | 20.68 | 20.77        |
|             |           | 1               | 74        | 20.56  | 20.61 | 20.63        |
|             |           | 36              | 0         | 19.67  | 19.69 | 19.69        |
|             |           | 36              | 19        | 19.55  | 19.70 | 19.73        |
|             |           | 36              | 39        | 19.58  | 19.58 | 19.64        |
|             |           | 75              | 0         | 19.56  | 19.62 | 19.58        |
| 15M         | 64QAM     | 1               | 0         | 19.53  | 19.64 | 19.62        |
|             |           | 1               | 37        | 19.57  | 19.62 | 19.63        |
|             |           | 1               | 74        | 19.47  | 19.51 | 19.60        |
|             |           | 36              | 0         | 18.65  | 18.69 | 18.72        |
|             |           | 36              | 19        | 18.60  | 18.66 | 18.75        |
|             |           | 36              | 39        | 18.53  | 18.58 | 18.73        |
|             |           | 75              | 0         | 18.45  | 18.50 | 18.66        |
| 15M         | 256QAM    | 1               | 0         | 16.58  | 16.70 | 16.75        |
|             |           | 1               | 37        | 16.65  | 16.63 | 16.69        |
|             |           | 1               | 74        | 16.48  | 16.50 | 16.60        |
|             |           | 36              | 0         | 16.50  | 16.62 | 16.61        |
|             |           | 36              | 19        | 16.48  | 16.52 | 16.59        |
|             |           | 36              | 39        | 16.45  | 16.46 | 16.51        |
|             |           | 75              | 0         | 16.45  | 16.45 | 16.47        |

\*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi).

| LTE Band 42 |           |                 |           |       |       |              |
|-------------|-----------|-----------------|-----------|-------|-------|--------------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid   | High         |
|             |           | Channel         |           | 43140 | 43340 | 43540        |
|             |           | Frequency (MHz) |           | 3555  | 3575  | 3595         |
| 10M         | QPSK      | 1               | 0         | 21.52 | 21.54 | <b>21.63</b> |
|             |           | 1               | 24        | 21.49 | 21.50 | 21.58        |
|             |           | 1               | 49        | 21.47 | 21.46 | 21.49        |
|             |           | 25              | 0         | 20.64 | 20.63 | 20.68        |
|             |           | 25              | 12        | 20.49 | 20.55 | 20.63        |
|             |           | 25              | 25        | 20.50 | 20.66 | 20.68        |
|             |           | 50              | 0         | 20.57 | 20.49 | 20.59        |
| 10M         | 16QAM     | 1               | 0         | 20.71 | 20.76 | 20.85        |
|             |           | 1               | 24        | 20.60 | 20.64 | 20.68        |
|             |           | 1               | 49        | 20.58 | 20.57 | 20.61        |
|             |           | 25              | 0         | 19.63 | 19.73 | 19.74        |
|             |           | 25              | 12        | 19.57 | 19.63 | 19.69        |
|             |           | 25              | 25        | 19.57 | 19.59 | 19.68        |
|             |           | 50              | 0         | 19.55 | 19.65 | 19.66        |
| 10M         | 64QAM     | 1               | 0         | 19.59 | 19.54 | 19.69        |
|             |           | 1               | 24        | 19.51 | 19.60 | 19.65        |
|             |           | 1               | 49        | 19.45 | 19.50 | 19.56        |
|             |           | 25              | 0         | 18.65 | 18.63 | 18.70        |
|             |           | 25              | 12        | 18.65 | 18.66 | 18.77        |
|             |           | 25              | 25        | 18.48 | 18.59 | 18.72        |
|             |           | 50              | 0         | 18.47 | 18.50 | 18.61        |
| 10M         | 256QAM    | 1               | 0         | 16.59 | 16.74 | 16.68        |
|             |           | 1               | 24        | 16.57 | 16.65 | 16.62        |
|             |           | 1               | 49        | 16.51 | 16.52 | 16.67        |
|             |           | 25              | 0         | 16.46 | 16.61 | 16.60        |
|             |           | 25              | 12        | 16.48 | 16.48 | 16.59        |
|             |           | 25              | 25        | 16.46 | 16.45 | 16.54        |
|             |           | 50              | 0         | 16.46 | 16.45 | 16.54        |

\*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi).

| LTE Band 42 |           |                 |           |        |       |              |
|-------------|-----------|-----------------|-----------|--------|-------|--------------|
| BW          | MCS Index | RB Size         | RB Offset | Low    | Mid   | High         |
|             |           | Channel         |           | 43115  | 43340 | 43565        |
|             |           | Frequency (MHz) |           | 3552.5 | 3575  | 3597.5       |
| 5M          | QPSK      | 1               | 0         | 21.49  | 21.49 | <b>21.63</b> |
|             |           | 1               | 12        | 21.48  | 21.51 | 21.62        |
|             |           | 1               | 24        | 21.45  | 21.54 | 21.59        |
|             |           | 12              | 0         | 20.61  | 20.62 | 20.67        |
|             |           | 12              | 6         | 20.49  | 20.61 | 20.67        |
|             |           | 12              | 13        | 20.49  | 20.64 | 20.61        |
|             |           | 25              | 0         | 20.48  | 20.51 | 20.61        |
| 5M          | 16QAM     | 1               | 0         | 20.71  | 20.76 | 20.79        |
|             |           | 1               | 12        | 20.63  | 20.71 | 20.76        |
|             |           | 1               | 24        | 20.54  | 20.57 | 20.67        |
|             |           | 12              | 0         | 19.66  | 19.71 | 19.73        |
|             |           | 12              | 6         | 19.58  | 19.61 | 19.67        |
|             |           | 12              | 13        | 19.59  | 19.64 | 19.64        |
|             |           | 25              | 0         | 19.62  | 19.64 | 19.65        |
| 5M          | 64QAM     | 1               | 0         | 19.54  | 19.60 | 19.66        |
|             |           | 1               | 12        | 19.53  | 19.60 | 19.60        |
|             |           | 1               | 24        | 19.45  | 19.45 | 19.54        |
|             |           | 12              | 0         | 18.65  | 18.66 | 18.74        |
|             |           | 12              | 6         | 18.65  | 18.63 | 18.74        |
|             |           | 12              | 13        | 18.52  | 18.57 | 18.65        |
|             |           | 25              | 0         | 18.48  | 18.57 | 18.60        |
| 5M          | 256QAM    | 1               | 0         | 16.64  | 16.68 | 16.78        |
|             |           | 1               | 12        | 16.65  | 16.64 | 16.62        |
|             |           | 1               | 24        | 16.53  | 16.52 | 16.58        |
|             |           | 12              | 0         | 16.47  | 16.62 | 16.56        |
|             |           | 12              | 6         | 16.45  | 16.52 | 16.54        |
|             |           | 12              | 13        | 16.47  | 16.48 | 16.50        |
|             |           | 25              | 0         | 16.46  | 16.46 | 16.50        |

\*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi).

**Maximum EIRP (dBm/10MHz)**

| LTE Band 48 |           |                 |           |       |       |       |
|-------------|-----------|-----------------|-----------|-------|-------|-------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid   | High  |
|             |           | Channel         |           | 55340 | 55990 | 56640 |
|             |           | Frequency (MHz) |           | 3560  | 3625  | 3690  |
| 20M         | QPSK      | 1               | 0         | 21.50 | 21.53 | 21.34 |
|             |           | 1               | 50        | 21.40 | 21.45 | 21.48 |
|             |           | 1               | 99        | 21.29 | 21.57 | 21.31 |
|             |           | 50              | 0         | 20.49 | 20.49 | 20.53 |
|             |           | 50              | 25        | 20.49 | 20.68 | 20.43 |
|             |           | 50              | 50        | 20.38 | 20.62 | 20.49 |
|             |           | 100             | 0         | 20.51 | 20.50 | 20.43 |
| 20M         | 16QAM     | 1               | 0         | 20.65 | 20.81 | 20.74 |
|             |           | 1               | 50        | 20.59 | 20.63 | 20.61 |
|             |           | 1               | 99        | 20.56 | 20.75 | 20.67 |
|             |           | 50              | 0         | 19.53 | 19.52 | 19.48 |
|             |           | 50              | 25        | 19.60 | 19.61 | 19.63 |
|             |           | 50              | 50        | 19.46 | 19.50 | 19.47 |
|             |           | 100             | 0         | 19.54 | 19.51 | 19.35 |
| 20M         | 64QAM     | 1               | 0         | 19.42 | 19.59 | 19.48 |
|             |           | 1               | 50        | 19.35 | 19.56 | 19.38 |
|             |           | 1               | 99        | 19.35 | 19.60 | 19.51 |
|             |           | 50              | 0         | 18.58 | 18.58 | 18.56 |
|             |           | 50              | 25        | 18.42 | 18.50 | 18.44 |
|             |           | 50              | 50        | 18.50 | 18.63 | 18.41 |
|             |           | 100             | 0         | 18.39 | 18.50 | 18.52 |
| 20M         | 256QAM    | 1               | 0         | 16.67 | 16.75 | 16.66 |
|             |           | 1               | 50        | 16.78 | 16.97 | 16.82 |
|             |           | 1               | 99        | 16.54 | 16.69 | 16.79 |
|             |           | 50              | 0         | 16.74 | 16.78 | 16.63 |
|             |           | 50              | 25        | 16.56 | 16.79 | 16.75 |
|             |           | 50              | 50        | 16.56 | 16.69 | 16.76 |
|             |           | 100             | 0         | 16.45 | 16.48 | 16.58 |

\*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi).

| LTE Band 48 |           |                 |           |        |       |        |
|-------------|-----------|-----------------|-----------|--------|-------|--------|
| BW          | MCS Index | RB Size         | RB Offset | Low    | Mid   | High   |
|             |           | Channel         |           | 55315  | 55990 | 56665  |
|             |           | Frequency (MHz) |           | 3557.5 | 3625  | 3692.5 |
| 15M         | QPSK      | 1               | 0         | 21.31  | 21.48 | 21.50  |
|             |           | 1               | 37        | 21.21  | 21.57 | 21.27  |
|             |           | 1               | 74        | 21.30  | 21.50 | 21.36  |
|             |           | 36              | 0         | 20.25  | 20.45 | 20.55  |
|             |           | 36              | 19        | 20.26  | 20.37 | 20.48  |
|             |           | 36              | 39        | 20.48  | 20.40 | 20.42  |
|             |           | 75              | 0         | 20.33  | 20.52 | 20.35  |
| 15M         | 16QAM     | 1               | 0         | 20.72  | 20.63 | 20.50  |
|             |           | 1               | 37        | 20.41  | 20.58 | 20.54  |
|             |           | 1               | 74        | 20.45  | 20.59 | 20.65  |
|             |           | 36              | 0         | 19.57  | 19.60 | 19.38  |
|             |           | 36              | 19        | 19.40  | 19.66 | 19.42  |
|             |           | 36              | 39        | 19.57  | 19.44 | 19.53  |
|             |           | 75              | 0         | 19.28  | 19.54 | 19.54  |
| 15M         | 64QAM     | 1               | 0         | 19.47  | 19.64 | 19.28  |
|             |           | 1               | 37        | 19.34  | 19.53 | 19.46  |
|             |           | 1               | 74        | 19.27  | 19.45 | 19.30  |
|             |           | 36              | 0         | 18.23  | 18.72 | 18.29  |
|             |           | 36              | 19        | 18.56  | 18.45 | 18.32  |
|             |           | 36              | 39        | 18.30  | 18.66 | 18.56  |
|             |           | 75              | 0         | 18.37  | 18.65 | 18.32  |
| 15M         | 256QAM    | 1               | 0         | 16.77  | 16.73 | 16.71  |
|             |           | 1               | 37        | 16.68  | 16.65 | 16.61  |
|             |           | 1               | 74        | 16.38  | 16.75 | 16.72  |
|             |           | 36              | 0         | 16.42  | 16.81 | 16.61  |
|             |           | 36              | 19        | 16.43  | 16.69 | 16.49  |
|             |           | 36              | 39        | 16.44  | 16.68 | 16.64  |
|             |           | 75              | 0         | 16.38  | 16.66 | 16.45  |

\*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi).

**Full EIRP (dBm/20MHz)**

| LTE Band 48 |           |                 |           |       |              |       |
|-------------|-----------|-----------------|-----------|-------|--------------|-------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid          | High  |
|             |           | Channel         |           | 55340 | 55990        | 56640 |
|             |           | Frequency (MHz) |           | 3560  | 3625         | 3690  |
| 20M         | QPSK      | 1               | 0         | 21.62 | <b>21.76</b> | 21.66 |
|             |           | 1               | 50        | 21.61 | 21.68        | 21.62 |
|             |           | 1               | 99        | 21.51 | 21.65        | 21.55 |
|             |           | 50              | 0         | 20.63 | 20.81        | 20.73 |
|             |           | 50              | 25        | 20.63 | 20.76        | 20.63 |
|             |           | 50              | 50        | 20.60 | 20.73        | 20.63 |
|             |           | 100             | 0         | 20.59 | 20.71        | 20.61 |
| 20M         | 16QAM     | 1               | 0         | 20.79 | 20.87        | 20.79 |
|             |           | 1               | 50        | 20.69 | 20.84        | 20.73 |
|             |           | 1               | 99        | 20.74 | 20.81        | 20.74 |
|             |           | 50              | 0         | 19.71 | 19.85        | 19.73 |
|             |           | 50              | 25        | 19.66 | 19.83        | 19.76 |
|             |           | 50              | 50        | 19.72 | 19.78        | 19.76 |
|             |           | 100             | 0         | 19.57 | 19.75        | 19.58 |
| 20M         | 64QAM     | 1               | 0         | 19.52 | 19.82        | 19.62 |
|             |           | 1               | 50        | 19.63 | 19.78        | 19.64 |
|             |           | 1               | 99        | 19.57 | 19.74        | 19.66 |
|             |           | 50              | 0         | 18.61 | 18.85        | 18.69 |
|             |           | 50              | 25        | 18.67 | 18.82        | 18.73 |
|             |           | 50              | 50        | 18.67 | 18.78        | 18.71 |
|             |           | 100             | 0         | 18.63 | 18.74        | 18.71 |
| 20M         | 256QAM    | 1               | 0         | 16.91 | 17.06        | 16.95 |
|             |           | 1               | 50        | 16.84 | 17.02        | 16.94 |
|             |           | 1               | 99        | 16.80 | 16.97        | 16.88 |
|             |           | 50              | 0         | 16.82 | 16.93        | 16.86 |
|             |           | 50              | 25        | 16.71 | 16.88        | 16.81 |
|             |           | 50              | 50        | 16.78 | 16.85        | 16.80 |
|             |           | 100             | 0         | 16.60 | 16.80        | 16.64 |

\*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi).

**Full EIRP (dBm/15MHz)**

| LTE Band 48 |           |                 |           |        |              |        |
|-------------|-----------|-----------------|-----------|--------|--------------|--------|
| BW          | MCS Index | RB Size         | RB Offset | Low    | Mid          | High   |
|             |           | Channel         |           | 55315  | 55990        | 56665  |
|             |           | Frequency (MHz) |           | 3557.5 | 3625         | 3692.5 |
| 15M         | QPSK      | 1               | 0         | 21.54  | <b>21.70</b> | 21.65  |
|             |           | 1               | 37        | 21.51  | 21.61        | 21.54  |
|             |           | 1               | 74        | 21.51  | 21.62        | 21.52  |
|             |           | 36              | 0         | 20.55  | 20.75        | 20.72  |
|             |           | 36              | 19        | 20.55  | 20.68        | 20.55  |
|             |           | 36              | 39        | 20.60  | 20.69        | 20.53  |
|             |           | 75              | 0         | 20.59  | 20.61        | 20.60  |
| 15M         | 16QAM     | 1               | 0         | 20.75  | 20.77        | 20.75  |
|             |           | 1               | 37        | 20.69  | 20.74        | 20.72  |
|             |           | 1               | 74        | 20.71  | 20.78        | 20.72  |
|             |           | 36              | 0         | 19.65  | 19.84        | 19.69  |
|             |           | 36              | 19        | 19.66  | 19.82        | 19.75  |
|             |           | 36              | 39        | 19.63  | 19.77        | 19.68  |
|             |           | 75              | 0         | 19.55  | 19.71        | 19.57  |
| 15M         | 64QAM     | 1               | 0         | 19.51  | 19.82        | 19.55  |
|             |           | 1               | 37        | 19.53  | 19.75        | 19.57  |
|             |           | 1               | 74        | 19.53  | 19.73        | 19.63  |
|             |           | 36              | 0         | 18.52  | 18.80        | 18.62  |
|             |           | 36              | 19        | 18.63  | 18.73        | 18.64  |
|             |           | 36              | 39        | 18.59  | 18.78        | 18.62  |
|             |           | 75              | 0         | 18.58  | 18.73        | 18.65  |
| 15M         | 256QAM    | 1               | 0         | 16.90  | 16.98        | 16.89  |
|             |           | 1               | 37        | 16.78  | 16.98        | 16.85  |
|             |           | 1               | 74        | 16.71  | 16.94        | 16.85  |
|             |           | 36              | 0         | 16.74  | 16.92        | 16.86  |
|             |           | 36              | 19        | 16.65  | 16.86        | 16.74  |
|             |           | 36              | 39        | 16.68  | 16.79        | 16.74  |
|             |           | 75              | 0         | 16.58  | 16.72        | 16.61  |

\*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi).

**Full EIRP (dBm/10MHz)**

| LTE Band 48 |           |                 |           |       |              |       |
|-------------|-----------|-----------------|-----------|-------|--------------|-------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid          | High  |
|             |           | Channel         |           | 55290 | 55990        | 56690 |
|             |           | Frequency (MHz) |           | 3555  | 3625         | 3695  |
| 10M         | QPSK      | 1               | 0         | 21.59 | <b>21.67</b> | 21.66 |
|             |           | 1               | 24        | 21.51 | 21.60        | 21.52 |
|             |           | 1               | 49        | 21.51 | 21.59        | 21.55 |
|             |           | 25              | 0         | 20.63 | 20.74        | 20.70 |
|             |           | 25              | 12        | 20.60 | 20.74        | 20.61 |
|             |           | 25              | 25        | 20.60 | 20.68        | 20.56 |
|             |           | 50              | 0         | 20.53 | 20.69        | 20.56 |
| 10M         | 16QAM     | 1               | 0         | 20.71 | 20.85        | 20.72 |
|             |           | 1               | 24        | 20.66 | 20.74        | 20.66 |
|             |           | 1               | 49        | 20.67 | 20.74        | 20.68 |
|             |           | 25              | 0         | 19.63 | 19.84        | 19.69 |
|             |           | 25              | 12        | 19.62 | 19.79        | 19.66 |
|             |           | 25              | 25        | 19.72 | 19.75        | 19.66 |
|             |           | 50              | 0         | 19.54 | 19.65        | 19.57 |
| 10M         | 64QAM     | 1               | 0         | 19.52 | 19.75        | 19.54 |
|             |           | 1               | 24        | 19.56 | 19.70        | 19.61 |
|             |           | 1               | 49        | 19.51 | 19.64        | 19.59 |
|             |           | 25              | 0         | 18.54 | 18.81        | 18.68 |
|             |           | 25              | 12        | 18.60 | 18.74        | 18.68 |
|             |           | 25              | 25        | 18.61 | 18.68        | 18.64 |
|             |           | 50              | 0         | 18.56 | 18.73        | 18.63 |
| 10M         | 256QAM    | 1               | 0         | 16.84 | 17.05        | 16.92 |
|             |           | 1               | 24        | 16.74 | 16.92        | 16.89 |
|             |           | 1               | 49        | 16.70 | 16.93        | 16.79 |
|             |           | 25              | 0         | 16.74 | 16.92        | 16.82 |
|             |           | 25              | 12        | 16.71 | 16.79        | 16.74 |
|             |           | 25              | 25        | 16.72 | 16.81        | 16.77 |
|             |           | 50              | 0         | 16.52 | 16.76        | 16.58 |

\*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi).



**Full EIRP (dBm/5MHz)**

| LTE Band 48 |           |                 |           |        |              |        |
|-------------|-----------|-----------------|-----------|--------|--------------|--------|
| BW          | MCS Index | RB Size         | RB Offset | Low    | Mid          | High   |
|             |           | Channel         |           | 55265  | 55990        | 56715  |
|             |           | Frequency (MHz) |           | 3552.5 | 3625         | 3697.5 |
| 5M          | QPSK      | 1               | 0         | 21.58  | <b>21.73</b> | 21.62  |
|             |           | 1               | 12        | 21.57  | 21.60        | 21.52  |
|             |           | 1               | 24        | 21.51  | 21.61        | 21.54  |
|             |           | 12              | 0         | 20.62  | 20.72        | 20.72  |
|             |           | 12              | 6         | 20.62  | 20.75        | 20.60  |
|             |           | 12              | 13        | 20.57  | 20.71        | 20.59  |
|             |           | 25              | 0         | 20.54  | 20.66        | 20.53  |
| 5M          | 16QAM     | 1               | 0         | 20.75  | 20.82        | 20.71  |
|             |           | 1               | 12        | 20.65  | 20.81        | 20.68  |
|             |           | 1               | 24        | 20.69  | 20.76        | 20.74  |
|             |           | 12              | 0         | 19.63  | 19.80        | 19.72  |
|             |           | 12              | 6         | 19.61  | 19.77        | 19.69  |
|             |           | 12              | 13        | 19.64  | 19.73        | 19.68  |
|             |           | 25              | 0         | 19.57  | 19.67        | 19.57  |
| 5M          | 64QAM     | 1               | 0         | 19.53  | 19.81        | 19.55  |
|             |           | 1               | 12        | 19.60  | 19.78        | 19.58  |
|             |           | 1               | 24        | 19.52  | 19.71        | 19.56  |
|             |           | 12              | 0         | 18.51  | 18.79        | 18.65  |
|             |           | 12              | 6         | 18.66  | 18.73        | 18.71  |
|             |           | 12              | 13        | 18.60  | 18.69        | 18.62  |
|             |           | 25              | 0         | 18.55  | 18.64        | 18.71  |
| 5M          | 256QAM    | 1               | 0         | 16.89  | 17.06        | 16.86  |
|             |           | 1               | 12        | 16.76  | 17.01        | 16.85  |
|             |           | 1               | 24        | 16.76  | 16.97        | 16.81  |
|             |           | 12              | 0         | 16.80  | 16.86        | 16.86  |
|             |           | 12              | 6         | 16.62  | 16.82        | 16.81  |
|             |           | 12              | 13        | 16.69  | 16.81        | 16.76  |
|             |           | 25              | 0         | 16.59  | 16.77        | 16.58  |

\*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi).

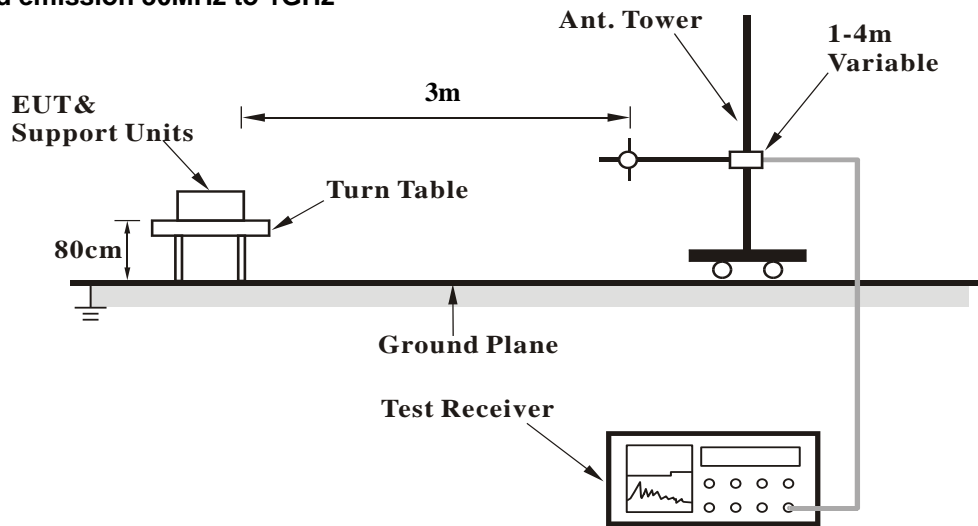
## 4.2 Radiated Emission Measurement

### 4.2.1 Limits of Radiated Emission Measurement

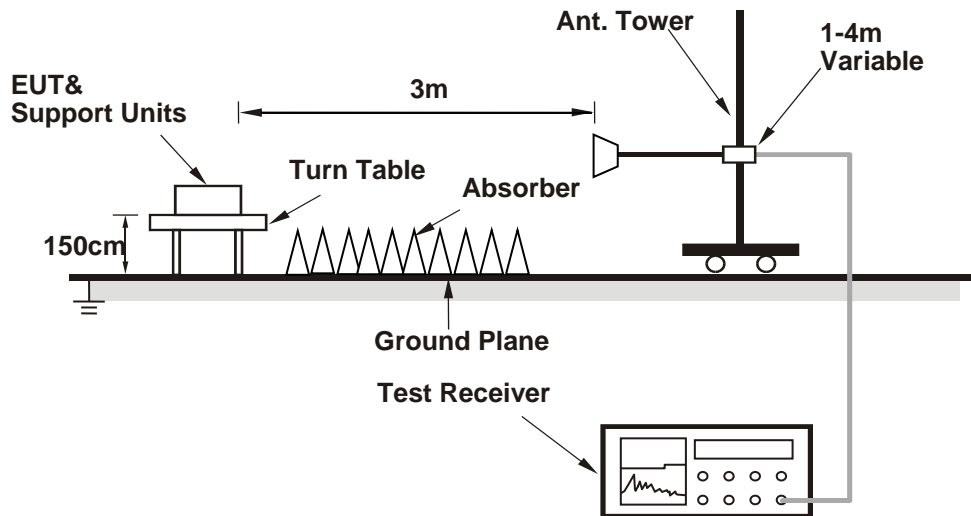
The power of any emissions below 3530 MHz or above 3720 MHz shall not exceed  $-40\text{dBm/MHz}$ .

### 4.2.2 Test Set Up

For radiated emission 30MHz to 1GHz



For radiated emission above 1GHz



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

### 4.2.3 Test Instruments

| Description & Manufacturer              | Model no.                         | Serial No.                      | Calibrated Date | Calibrated Until |
|---|-----------------------------------|---------------------------------|-----------------|------------------|
| Software<br>BV ADT                      | ADT_Radiated_<br>V7.6.15.9.5      | 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               |
| Test Receiver<br>KEYSIGHT               | N9038A                            | MY55420137                      | Apr. 27, 2022   | Apr. 26, 2023    |
| Spectrum Analyzer<br>R&S                | FSW43                             | 101867                          | Jan. 07, 2022   | Jan. 06, 2023    |
| Loop Antenna<br>TESEQ                   | HLA 6121                          | 45745                           | Jul. 27, 2022   | Jul. 26, 2023    |
| Loop Antenna<br>EMCI                    | EM-6879                           | 269                             | Sep. 19, 2022   | Sep. 18, 2023    |
| Pre-amplifier<br>EMCI                   | EMC001340                         | 980201                          | Sep. 23, 2022   | Sep. 22, 2023    |
| RF Coaxial Cable<br>EMCI                | 5D-NM-BM                          | 140903+140902                   | Jan. 15, 2022   | Jan. 14, 2023    |
| Preamplifier<br>Agilent                 | 8447D                             | 2944A10638                      | May 14, 2022    | May 13, 2023     |
| Bi_Log Antenna<br>Schwarzbeck           | VULB9168                          | 9168-160                        | Oct. 20, 2022   | Oct. 19, 2023    |
| RF Coaxial Cable<br>WOKEN               | 8D-FB                             | Cable-CH9-01                    | May 14, 2022    | May 13, 2023     |
| Horn Antenna<br>Schwarzbeck             | 9120D                             | 9120D-1169                      | Nov. 13, 2022   | Nov. 12, 2023    |
| Preamplifier<br>Agilent                 | 8449B                             | 3008A02367                      | Feb. 16, 2022   | Feb. 15, 2023    |
| RF Coaxial Cable<br>HUBER+SUHNER&EMCI   | SUCOFLEX 104&<br>EMC104-SM-SM8000 | CABLE-CH9-02<br>(248780+171006) | Jan. 15, 2022   | Jan. 14, 2023    |
| RF Coaxial Cable<br>HUBER+SUHNER        | SUCOFLEX 104                      | CABLE-CH9-<br>(250795/4)        | Jan. 15, 2022   | Jan. 14, 2023    |
| RF FLITER<br>MICRO-TRONICS              | BRM50716                          | 060                             | Jan. 10, 2022   | Jan. 09, 2023    |
| RF FLITER<br>MICRO-TRONICS              | BRM17690                          | 004                             | Jan. 10, 2022   | Jan. 09, 2023    |
| Boresight antenna tower fixture<br>BV   | BAF-02                            | 5                               | NA              | NA               |
| Pre-Amplifier<br>EMCI                   | EMC 184045                        | 980116                          | Oct. 01, 2022   | Sep. 30, 2023    |
| Horn Antenna<br>Schwarzbeck             | BBHA 9170                         | 9170-480                        | Nov. 13, 2022   | Nov. 12, 2023    |
| Horn Antenna<br>Schwarzbeck             | BBHA 9170                         | BBHA9170243                     | Nov. 13, 2022   | Nov. 12, 2023    |
| RF Coaxial Cable<br>EMCI                | EMC102-KM-KM-3000                 | 150929                          | Jul. 09, 2022   | Jul. 08, 2023    |
| RF Coaxial Cable<br>EMCI                | EMC102-KM-KM-600                  | 150928                          | Jul. 09, 2022   | Jul. 08, 2023    |
| Boresight antenna tower fixture<br>BV   | BAF-02                            | 5                               | NA              | NA               |
| Radio Communication Analyzer<br>Anritsu | MT8821C                           | 6201462755                      | Mar. 03, 2022   | Mar. 02, 2023    |

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 HY - 966 chamber 4.

#### 4.2.4 Test Procedures

- a. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) 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 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- d. Following C63.26 section 5.5 and 5.2.7.  
EIRP (dBm) = E (dB $\mu$ V/m) + 20log (D) - 104.8; where D is the measurement distance (in the far field region) in m.  
ERP (dBm) = E (dB $\mu$ V/m) + 20log (D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:  
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

#### 4.2.5 Deviation from Test Standard

No deviation.

#### 4.2.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

#### 4.2.7 Test Results

##### Below 1GHz

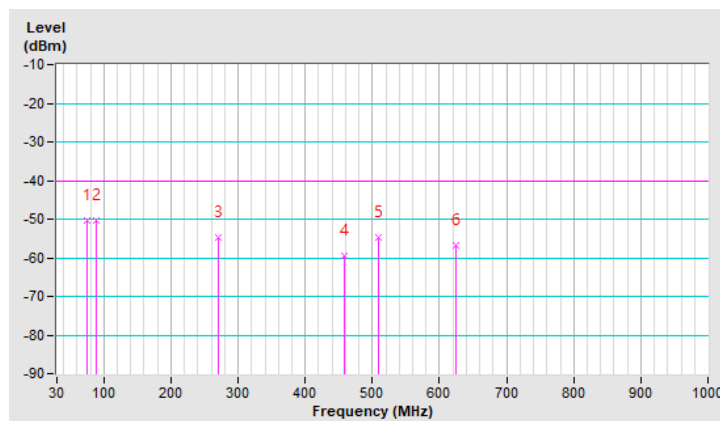
LTE Band 42, Channel Bandwidth 20MHz

|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 43190<br>(3560.0MHz) | Frequency Range | Below 1000 MHz        |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Adair Peng                      |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 75.59           | -50.45     | -40.00      | -10.45      | 1.00 H             | 281                  | 57.24            | -107.69                  |
| 2  | 88.20           | -50.36     | -40.00      | -10.36      | 2.00 H             | 221                  | 59.65            | -110.01                  |
| 3  | 269.59          | -54.85     | -40.00      | -14.85      | 1.00 H             | 247                  | 48.35            | -103.20                  |
| 4  | 458.74          | -59.62     | -40.00      | -19.62      | 2.00 H             | 160                  | 38.94            | -98.56                   |
| 5  | 509.18          | -54.68     | -40.00      | -14.68      | 1.50 H             | 192                  | 42.94            | -97.62                   |
| 6  | 624.61          | -56.62     | -40.00      | -16.62      | 1.00 H             | 129                  | 38.61            | -95.23                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$ .
4. The other EIRP levels were very low against the limit.

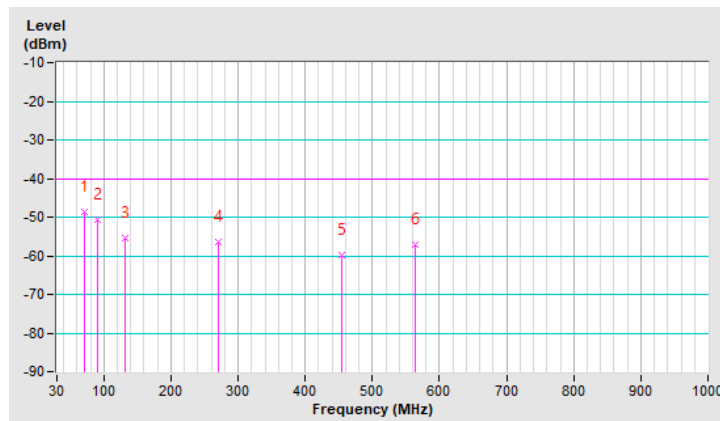


|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 43190<br>(3560.0MHz) | Frequency Range | Below 1000 MHz        |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Adair Peng                      |                 |                       |

| Antenna Polarity & Test Distance : Vertical at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBUV) | Correction Factor (dB/m) |
| 1  | 70.74           | -48.54     | -40.00      | -8.54       | 1.00 V             | 18                   | 57.95            | -106.49                  |
| 2  | 91.11           | -50.84     | -40.00      | -10.84      | 1.50 V             | 95                   | 59.11            | -109.95                  |
| 3  | 130.88          | -55.59     | -40.00      | -15.59      | 1.50 V             | 132                  | 49.82            | -105.41                  |
| 4  | 269.59          | -56.30     | -40.00      | -16.30      | 1.00 V             | 160                  | 46.90            | -103.20                  |
| 5  | 454.86          | -59.97     | -40.00      | -19.97      | 1.00 V             | 100                  | 38.61            | -98.58                   |
| 6  | 564.47          | -57.02     | -40.00      | -17.02      | 1.50 V             | 160                  | 39.68            | -96.70                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.



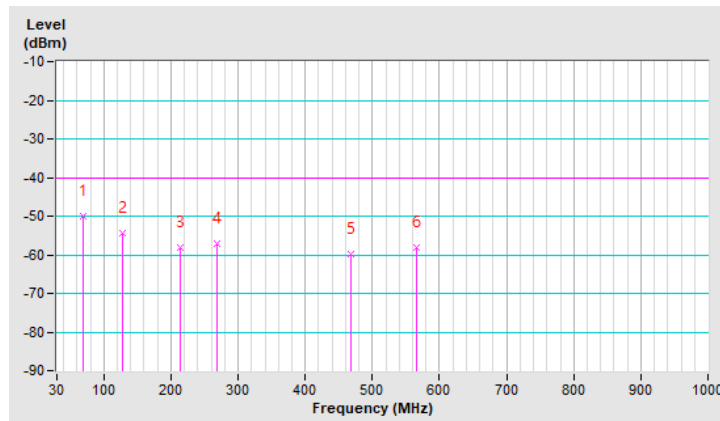
LTE Band 48, Channel Bandwidth 5MHz

|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 55265<br>(3552.5MHz) | Frequency Range | Below 1000 MHz        |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Adair Peng                      |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 69.77           | -50.12     | -40.00      | -10.12      | 1.50 H             | 92                   | 56.19            | -106.31                  |
| 2  | 127.00          | -54.50     | -40.00      | -14.50      | 1.00 H             | 40                   | 51.38            | -105.88                  |
| 3  | 213.33          | -58.03     | -40.00      | -18.03      | 1.50 H             | 255                  | 48.50            | -106.53                  |
| 4  | 268.62          | -57.00     | -40.00      | -17.00      | 2.00 H             | 160                  | 46.28            | -103.28                  |
| 5  | 468.44          | -59.94     | -40.00      | -19.94      | 1.00 H             | 208                  | 38.45            | -98.39                   |
| 6  | 566.41          | -58.11     | -40.00      | -18.11      | 1.00 H             | 234                  | 38.57            | -96.68                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$ .
4. The other EIRP levels were very low against the limit.

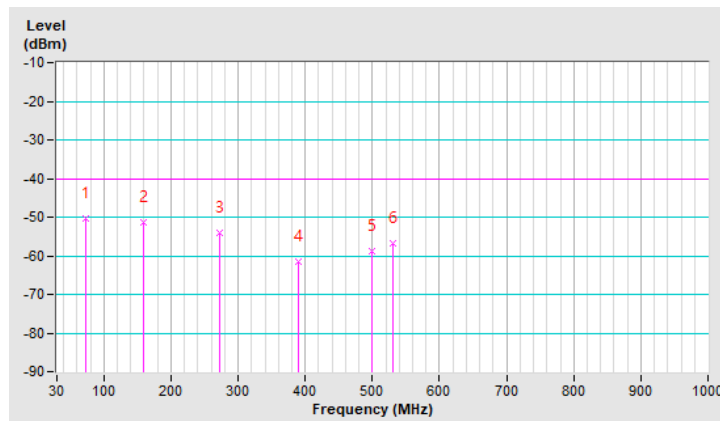


|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 55265<br>(3552.5MHz) | Frequency Range | Below 1000 MHz        |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Adair Peng                      |                 |                       |

| Antenna Polarity & Test Distance : Vertical at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 73.65           | -50.35     | -40.00      | -10.35      | 1.00 V             | 208                  | 56.91            | -107.26                  |
| 2  | 159.01          | -51.24     | -40.00      | -11.24      | 2.00 V             | 148                  | 52.66            | -103.90                  |
| 3  | 271.53          | -54.05     | -40.00      | -14.05      | 1.00 V             | 350                  | 49.04            | -103.09                  |
| 4  | 388.90          | -61.61     | -40.00      | -21.61      | 1.50 V             | 250                  | 38.78            | -100.39                  |
| 5  | 498.51          | -58.89     | -40.00      | -18.89      | 1.00 V             | 264                  | 39.03            | -97.92                   |
| 6  | 530.52          | -56.84     | -40.00      | -16.84      | 1.50 V             | 164                  | 40.39            | -97.23                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.





**Above 1GHz**

LTE Band 42, Channel Bandwidth 5MHz

|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 43115<br>(3552.5MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Adair Peng                      |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7105.00         | -41.87     | -40.00      | -1.87       | 3.26 H             | 129                  | 42.57            | -84.44                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7105.00         | -40.57     | -40.00      | -0.57       | 2.58 V             | 273                  | 43.87            | -84.44                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.

|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 43340<br>(3575.0MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Adair Peng                      |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7150.00         | -41.50     | -40.00      | -1.50       | 3.23 H             | 132                  | 42.97            | -84.47                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7150.00         | -41.40     | -40.00      | -1.40       | 2.53 V             | 274                  | 43.07            | -84.47                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.

|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 43565<br>(3597.5MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Adair Peng                      |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7195.00         | -41.56     | -40.00      | -1.56       | 3.25 H             | 136                  | 42.72            | -84.28                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7195.00         | -40.85     | -40.00      | -0.85       | 2.58 V             | 277                  | 43.43            | -84.28                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m).$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value.$
4. The other EIRP levels were very low against the limit.

LTE Band 42, Channel Bandwidth 20MHz

|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 43190<br>(3560.0MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Adair Peng                      |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |               |               |              |                    |                      |                  |                          |
|--|-----------------|---------------|---------------|--------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm)    | Limit (dBm)   | Margin (dB)  | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7120.00         | -42.00        | -40.00        | -2.00        | 3.25 H             | 133                  | 42.45            | -84.45                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |               |               |              |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm)    | Limit (dBm)   | Margin (dB)  | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| <b>1</b>   | <b>7120.00</b>  | <b>-40.30</b> | <b>-40.00</b> | <b>-0.30</b> | <b>2.49 V</b>      | <b>272</b>           | <b>44.15</b>     | <b>-84.45</b>            |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.

|                          |                                  |                 |                       |
|--------------------------|----------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 43340<br>(3575.00MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                  | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Adair Peng                       |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7150.00         | -41.40     | -40.00      | -1.40       | 3.29 H             | 139                  | 43.07            | -84.47                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7150.00         | -40.89     | -40.00      | -0.89       | 2.48 V             | 270                  | 43.58            | -84.47                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.

|                          |                                  |                 |                       |
|--------------------------|----------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 43490<br>(3590.00MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                  | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Adair Peng                       |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7180.00         | -41.27     | -40.00      | -1.27       | 3.39 H             | 134                  | 43.08            | -84.35                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7180.00         | -40.40     | -40.00      | -0.40       | 2.52 V             | 273                  | 43.95            | -84.35                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m).$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.

LTE Band 48, Channel Bandwidth 5MHz

|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 55265<br>(3552.5MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Rex Wang                        |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7105.00         | -42.97     | -40.00      | -2.97       | 1.65 H             | 248                  | 41.47            | -84.44                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7105.00         | -40.54     | -40.00      | -0.54       | 1.93 V             | 19                   | 43.90            | -84.44                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.

|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 55990<br>(3625.0MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Rex Wang                        |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7250.00         | -42.45     | -40.00      | -2.45       | 1.71 H             | 249                  | 41.66            | -84.11                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7250.00         | -40.94     | -40.00      | -0.94       | 1.91 V             | 19                   | 43.17            | -84.11                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.

|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 56715<br>(3697.5MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Rex Wang                        |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7395.00         | -41.85     | -40.00      | -1.85       | 1.73 H             | 246                  | 42.10            | -83.95                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7395.00         | -40.93     | -40.00      | -0.93       | 1.98 V             | 22                   | 43.02            | -83.95                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m).$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value.$
4. The other EIRP levels were very low against the limit.

LTE Band 48, Channel Bandwidth 20MHz

|                          |                                 |                 |                       |
|--------------------------|---------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 55340<br>(3560.0MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                 | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Rex Wang                        |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7120.00         | -42.37     | -40.00      | -2.37       | 1.68 H             | 251                  | 42.08            | -84.45                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7120.00         | -41.52     | -40.00      | -1.52       | 1.91 V             | 17                   | 42.93            | -84.45                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.

|                          |                                  |                 |                       |
|--------------------------|----------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 55990<br>(3625.00MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                  | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Rex Wang                         |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7250.00         | -41.79     | -40.00      | -1.79       | 1.65 H             | 244                  | 42.32            | -84.11                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7250.00         | -40.77     | -40.00      | -0.77       | 1.96 V             | 19                   | 43.34            | -84.11                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$ .
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.

|                          |                                  |                 |                       |
|--------------------------|----------------------------------|-----------------|-----------------------|
| Mode                     | TX channel 56640<br>(3690.00MHz) | Frequency Range | 1GHz ~ 40GHz          |
| Environmental Conditions | 23deg. C, 67%RH                  | Input Power     | 120Vac, 60Hz (System) |
| Tested By                | Rex Wang                         |                 |                       |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|--|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7380.00         | -42.00     | -40.00      | -2.00       | 1.64 H             | 248                  | 41.98            | -83.98                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1  | 7380.00         | -40.84     | -40.00      | -0.84       | 1.91 V             | 20                   | 43.14            | -83.98                   |

Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m).$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value.
4. The other EIRP levels were very low against the limit.



## 5 Pictures of Test Arrangements

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

## Appendix – Information of 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 FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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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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