

## FCC Test Report (Part 90 Subpart S)

**Report No.:** RF190114C07-9

**FCC ID:** MSQI01WD

**Test Model:** ASUS\_I01WD

**Received Date:** Jan. 14, 2019

**Test Date:** Jan. 22 ~ Feb. 13, 2019

**Issued Date:** Feb. 20, 2019

**Applicant:** ASUSTek COMPUTER INC.

**Address:** 4F, No. 150, LI-TE Rd., PEITOU, TAIPEI 112, TAIWAN

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

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

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

**FCC Registration /** 788550 / TW0003

**Designation Number:**



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### Release Control Record

| Issue No.     | Description      | Date Issued   |
|---------------|------------------|---------------|
| RF190114C07-9 | Original release | Feb. 20, 2019 |

## 1 Certificate of Conformity

**Product:** ASUS Phone

**Brand:** ASUS

**Test Model:** ASUS\_I01WD

**Sample Status:** Identical Prototype

**Applicant:** ASUSTek COMPUTER INC.

**Test Date:** Jan. 22 ~ Feb. 13, 2019

**Standards:** FCC Part 90, Subpart I, S

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 :** Celine Chou , **Date:** Feb. 20, 2019  
Celine Chou / Senior Specialist

**Approved by :** Bruce Chen , **Date:** Feb. 20, 2019  
Bruce Chen / Project Engineer

## 2 Summary of Test Results

| Applied Standard: FCC Part 90 & Part 2 |  |        |  |
|--|--|--------|--|
| FCC Clause                             | Test Item  | Result | Remarks  |
| 2.1046<br>90.635(b)                    | Maximum Peak Output Power<br>Limit: max. 100 watts e.r.p peak<br>power | Pass   | Meet the requirement of limit.   |
| 2.1055<br>90.213                       | Frequency Stability  | Pass   | Meet the requirement of limit.   |
| 2.1049<br>90.209                       | Occupied Bandwidth   | Pass   | Meet the requirement of limit.   |
| 2.1051<br>90.691                       | Emission Masks   | Pass   | Meet the requirement of limit.   |
| ---                                    | Peak To Average Ratio  | Pass   | Meet the requirement of limit.   |
| 2.1051<br>90.691                       | Conducted Spurious Emissions   | Pass   | Meet the requirement of limit.   |
| 2.1053<br>90.691                       | Radiated Spurious Emissions  | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -46.00dB<br>at 1638.00MHz. |

Note: 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<br>(k=2) (±) |
|--------------------------------|-----------------|-----------------------------------|
| Radiated Emissions up to 1 GHz | 30MHz ~ 200MHz  | 3.63 dB                           |
|                                | 200MHz ~1000MHz | 3.64 dB                           |
| Radiated Emissions above 1 GHz | 1GHz ~ 18GHz    | 2.29 dB                           |
|                                | 18GHz ~ 40GHz   | 2.29 dB                           |

## 2.2 Test Site and Instruments

| Description & Manufacturer                       | Model No.                    | Serial No.            | Cal. Date     | Cal. Due      |
|--|------------------------------|-----------------------|---------------|---------------|
| Test Receiver<br>ROHDE & SCHWARZ                 | ESCI                         | 100424                | Jan. 03, 2019 | Jan. 02, 2020 |
| Spectrum Analyzer<br>ROHDE & SCHWARZ             | FSP40                        | 100040                | Sep. 25, 2018 | Sep. 24, 2019 |
| Spectrum Analyzer<br>KEYSIGHT                    | N9030B                       | MY57140953            | Jul. 02, 2018 | Jul. 01, 2019 |
| BILOG Antenna<br>SCHWARZBECK                     | VULB9168                     | 9168-155              | Nov. 21, 2018 | Nov. 20, 2019 |
| HORN Antenna<br>SCHWARZBECK                      | 9120D                        | 9120D-408             | Nov. 25, 2018 | Nov. 24, 2019 |
| HORN Antenna<br>SCHWARZBECK                      | BBHA 9170                    | BBHA9170241           | Nov. 25, 2018 | Nov. 24, 2019 |
| Loop Antenna<br>TESEQ                            | HLA 6121                     | 45745                 | Jun. 14, 2018 | Jun. 13, 2019 |
| Preamplifier<br>Agilent<br>(Below 1GHz)          | 8447D                        | 2944A10631            | Aug. 08, 2018 | Aug. 07, 2019 |
| Preamplifier<br>KEYSIGHT<br>(Above 1GHz)         | 83017A                       | MY53270295            | Jul. 02, 2018 | Jul. 01, 2019 |
| RF signal cable<br>HUBER+SUHNER                  | SUCOFLEX 104                 | MY 13380+295012/04    | Aug. 08, 2018 | Aug. 07, 2019 |
| RF signal cable<br>HUBER+SUHNER                  | SUCOFLEX 104                 | Cable-CH4-03 (250724) | Aug. 08, 2018 | Aug. 07, 2019 |
| RF signal cable<br>WOKEN                         | 8D-FB                        | Cable-CH4-01          | Aug. 29, 2018 | Aug. 28, 2019 |
| Software<br>BV ADT                               | ADT_Radiated_<br>V7.6.15.9.5 | NA                    | NA            | NA            |
| Antenna Tower<br>inn-co GmbH                     | MA 4000                      | 010303                | NA            | NA            |
| Antenna Tower Controller<br>BV ADT               | AT100                        | AT93021703            | NA            | NA            |
| Turn Table<br>BV ADT                             | TT100                        | TT93021703            | NA            | NA            |
| Turn Table Controller<br>BV ADT                  | SC100                        | SC93021703            | NA            | NA            |
| Boresight Antenna Fixture                        | FBA-01                       | FBA-SIP01             | NA            | NA            |
| Pre-amplifier (18GHz-40GHz)<br>EMC               | EMC184045B                   | 980175                | Nov. 14, 2018 | Nov. 13, 2019 |
| WIT Standard Temperature<br>And Humidity Chamber | TH-4S-C                      | W981030               | Jun. 04, 2018 | Jun. 03, 2019 |
| JFW 20dB attenuation                             | 50HF-020-SMA                 | NA                    | NA            | NA            |

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.  
2. The test was performed in HwaYa Chamber 4.  
3. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.  
4. The IC Site Registration No. is 7450F-4.

### 3 General Information

#### 3.1 General Description of EUT

|                     |  |                        |                        |                      |
|---------------------|--|------------------------|------------------------|----------------------|
| Product             | ASUS Phone   |                        |                        |                      |
| Brand               | ASUS   |                        |                        |                      |
| Test Model          | ASUS_I01WD   |                        |                        |                      |
| Sample Status       | Identical Prototype  |                        |                        |                      |
| Power Supply Rating | 3.85 Vdc (Battery)<br>5 or 9 Vdc (Adapter)<br>5 Vdc (Host equipment) |                        |                        |                      |
| Modulation Type     | QPSK, 16QAM, 64QAM   |                        |                        |                      |
| Operating Frequency | LTE Band 26 (Channel Bandwidth 1.4MHz)                               | 814.7~823.3MHz         |                        |                      |
|                     | LTE Band 26 (Channel Bandwidth 3MHz)                                 | 815.5~822.5MHz         |                        |                      |
|                     | LTE Band 26 (Channel Bandwidth 5MHz)                                 | 816.5~821.5MHz         |                        |                      |
|                     | LTE Band 26 (Channel Bandwidth 10MHz)                                | 819.0MHz               |                        |                      |
| Max. ERP Power      |  | QPSK                   | 16QAM                  | 64QAM                |
|                     | LTE Band 26 (Channel Bandwidth 1.4MHz)                               | 11.220mW<br>(10.50dBm) | 9.120mW<br>(9.60dBm)   | 8.128mW<br>(9.10dBm) |
|                     | LTE Band 26 (Channel Bandwidth 3MHz)                                 | 12.023mW<br>(10.80dBm) | 10.233mW<br>(10.10dBm) | 8.511mW<br>(9.30dBm) |
|                     | LTE Band 26 (Channel Bandwidth 5MHz)                                 | 11.482mW<br>(10.60dBm) | 10.233mW<br>(10.10dBm) | 8.710mW<br>(9.40dBm) |
|                     | LTE Band 26 (Channel Bandwidth 10MHz)                                | 10.965mW<br>(10.40dBm) | 9.550mW<br>(9.80dBm)   | 7.943mW<br>(9.00dBm) |
| Emission Designator |  | QPSK                   | 16QAM                  | 64QAM                |
|                     | LTE Band 26 (Channel Bandwidth 1.4MHz)                               | 1M09G7D                | 1M09D7W                | 1M09D7W              |
|                     | LTE Band 26 (Channel Bandwidth 3MHz)                                 | 2M70G7D                | 2M70D7W                | 2M70D7W              |
|                     | LTE Band 26 (Channel Bandwidth 5MHz)                                 | 4M49G7D                | 4M49D7W                | 4M49D7W              |
|                     | LTE Band 26 (Channel Bandwidth 10MHz)                                | 8M96G7D                | 8M97D7W                | 8M97D7W              |
| Antenna Type        | Refer to Note as below   |                        |                        |                      |
| Antenna Connector   | Refer to Note as below   |                        |                        |                      |
| Accessory Device    | Refer to Note as below   |                        |                        |                      |
| Cable Supplied      | Refer to Note as below   |                        |                        |                      |

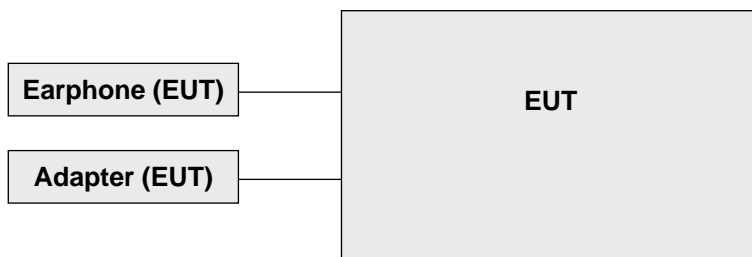
Note:

1. The EUT accessories list refers to EUT Photo.pdf.
2. The following antennas were provided to the EUT.

| Ant. No.       | Type | Connector | Gain (dBi) |          |          |          |          |        |        |        |        |         |         |         |
|----------------|------|-----------|------------|----------|----------|----------|----------|--------|--------|--------|--------|---------|---------|---------|
|                |      |           | GSM 850    | GSM 1900 | WCDMA B2 | WCDMA B4 | WCDMA B5 | LTE B2 | LTE B4 | LTE B5 | LTE B7 | LTE B26 | LTE B38 | LTE B41 |
| WWAN Antenna-0 | PIFA | NA        | -4.5       | -2.6     | -2.6     | -1.9     | -4.5     | -2.5   | -1.9   | -4.5   | -1.3   | -4.4    | -1.0    | -1.0    |
| WWAN Antenna-1 | PIFA | NA        | -3.4       | -3.2     | -3.2     | -5.3     | -3.4     | -3.2   | -5.3   | -3.3   | -4.7   | -3.3    | -5.7    | -5.7    |



### 3.2 Configuration of System under Test



-----  
Remote site



#### 3.2.1 Description of Support Units

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

| ID | Product                      | Brand   | Model No. | Serial No. | FCC ID | Remarks |
|----|------------------------------|---------|-----------|------------|--------|---------|
| A. | Radio Communication Analyzer | Anritsu | MT8860C   | 1702001    | NA     | -       |

Note:

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

### 3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on Z-plane. Following channel(s) was (were) selected for the final test as listed below.

#### LTE Band 26

| EUT Configure Mode | Test item                  | Available channel | Tested channel   | Channel Bandwidth | Modulation              | Mode                                      |
|--------------------|----------------------------|-------------------|--|-------------------|-------------------------|---|
| -                  | ERP                        | 26697 to 26783    | 26697 (814.7MHz),<br>26740 (819.0MHz),<br>26783 (823.3MHz) | 1.4MHz            | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset                        |
|                    |                            | 26705 to 26775    | 26705 (815.5MHz),<br>26740 (819.0MHz),<br>26775 (822.5MHz) | 3MHz              | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset                        |
|                    |                            | 26715 to 26765    | 26715 (816.5MHz),<br>26740 (819.0MHz),<br>26765 (821.5MHz) | 5MHz              | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset                        |
|                    |                            | 26740             | 26740 (819.0MHz)   | 10MHz             | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset                        |
| -                  | Modulation Characteristics | 26740             | 26740 (819.0MHz)   | 10MHz             | QPSK                    | 50 RB / 0 RB Offset                       |
| -                  | Frequency Stability        | 26697 to 26783    | 26697 (814.7MHz),<br>26783 (823.3MHz)                      | 1.4MHz            | QPSK                    | 1 RB / 0 RB Offset                        |
|                    |                            | 26705 to 26775    | 26705 (815.5MHz),<br>26775 (822.5MHz)                      | 3MHz              | QPSK                    | 1 RB / 0 RB Offset                        |
|                    |                            | 26715 to 26765    | 26715 (816.5MHz),<br>26765 (821.5MHz)                      | 5MHz              | QPSK                    | 1 RB / 0 RB Offset                        |
|                    |                            | 26740             | 26740 (819.0MHz)   | 10MHz             | QPSK                    | 1 RB / 0 RB Offset                        |
| -                  | Occupied Bandwidth         | 26697 to 26783    | 26697 (814.7MHz),<br>26740 (819.0MHz),<br>26783 (823.3MHz) | 1.4MHz            | QPSK / 16QAM /<br>64QAM | 6 RB / 0RB Offset                         |
|                    |                            | 26705 to 26775    | 26705 (815.5MHz),<br>26740 (819.0MHz),<br>26775 (822.5MHz) | 3MHz              | QPSK / 16QAM /<br>64QAM | 15 RB / 0RB Offset                        |
|                    |                            | 26715 to 26765    | 26715 (816.5MHz),<br>26740 (819.0MHz),<br>26765 (821.5MHz) | 5MHz              | QPSK / 16QAM /<br>64QAM | 25RB / 0RB Offset                         |
|                    |                            | 26740             | 26740 (819.0MHz)   | 10MHz             | QPSK / 16QAM /<br>64QAM | 50RB / 0RB Offset                         |
| -                  | Emission Masks             | 26697 to 26783    | 26697 (814.7MHz),<br>26783 (823.3MHz)                      | 1.4MHz            | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset<br>6 RB / 0 RB Offset  |
|                    |                            | 26705 to 26775    | 26705 (815.5MHz),<br>26775 (822.5MHz)                      | 3MHz              | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset<br>15 RB / 0 RB Offset |
|                    |                            | 26715 to 26765    | 26715 (816.5MHz),<br>26765 (821.5MHz)                      | 5MHz              | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset<br>25 RB / 0 RB Offset |
|                    |                            | 26740             | 26740 (819.0MHz)   | 10MHz             | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset<br>50 RB / 0 RB Offset |
| -                  | Peak to Average Ratio      | 26697 to 26783    | 26697 (814.7MHz),<br>26740 (819.0MHz),<br>26783 (823.3MHz) | 1.4MHz            | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset                        |
|                    |                            | 26705 to 26775    | 26705 (815.5MHz),<br>26740 (819.0MHz),<br>26775 (822.5MHz) | 3MHz              | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset                        |
|                    |                            | 26715 to 26765    | 26715 (816.5MHz),<br>26740 (819.0MHz),<br>26765 (821.5MHz) | 5MHz              | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset                        |
|                    |                            | 26740             | 26740 (819.0MHz)   | 10MHz             | QPSK / 16QAM /<br>64QAM | 1 RB / 0 RB Offset                        |

| EUT Configure Mode | Test item                    | Available channel | Tested channel   | Channel Bandwidth | Modulation | Mode               |
|--------------------|------------------------------|-------------------|--|-------------------|------------|--------------------|
| -                  | Conducted Emission           | 26697 to 26783    | 26697 (814.7MHz),<br>26740 (819.0MHz),<br>26783 (823.3MHz) | 1.4MHz            | QPSK       | 1 RB / 0 RB Offset |
|                    |                              | 26705 to 26775    | 26705 (815.5MHz),<br>26740 (819.0MHz),<br>26775 (822.5MHz) | 3MHz              | QPSK       | 1 RB / 0 RB Offset |
|                    |                              | 26715 to 26765    | 26715 (816.5MHz),<br>26740 (819.0MHz),<br>26765 (821.5MHz) | 5MHz              | QPSK       | 1 RB / 0 RB Offset |
|                    |                              | 26740             | 26740 (819.0MHz)   | 10MHz             | QPSK       | 1 RB / 0 RB Offset |
| -                  | Radiated Emission Below 1GHz | 26697 to 26783    | 26697 (814.7MHz)   | 1.4MHz            | QPSK       | 1 RB / 0 RB Offset |
| -                  | Radiated Emission Above 1GHz | 26697 to 26783    | 26697 (814.7MHz),<br>26740 (819.0MHz),<br>26783 (823.3MHz) | 1.4MHz            | QPSK       | 1 RB / 0 RB Offset |
|                    |                              | 26715 to 26765    | 26715 (816.5MHz),<br>26740 (819.0MHz),<br>26765 (821.5MHz) | 5MHz              | QPSK       | 1 RB / 0 RB Offset |
|                    |                              | 26740             | 26740 (819.0MHz)   | 10MHz             | QPSK       | 1 RB / 0 RB Offset |

**Note:**

1. For radiated emission below 1GHz, low, mid and high channels were pre-tested in chamber with 1.4MHz mode. Low channel was found to be the worst case and therefore had been chosen for all final tests.
2. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5MHz & highest channel bandwidth for final test.
3. The conducted output power for QPSK, 16QAM and 64QAM, measured value of QPSK is higher than 16QAM and 64QAM mode. Therefore, only Modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under QPSK, 16QAM and 64QAM modes, the other test items were performed under QPSK mode only.

**Test Condition:**

| Test Item                  | Environmental Conditions | Input Power  | Tested By  |
|----------------------------|--------------------------|--------------|------------|
| ERP                        | 25deg. C, 70%RH          | 120Vac, 60Hz | Han Wu     |
| Modulation characteristics | 24deg. C, 64%RH          | 120Vac, 60Hz | James Yang |
| Frequency Stability        | 24deg. C, 64%RH          | 120Vac, 60Hz | James Yang |
| Occupied Bandwidth         | 24deg. C, 64%RH          | 120Vac, 60Hz | James Yang |
| Emission Mask              | 24deg. C, 64%RH          | 120Vac, 60Hz | James Yang |
| Peak To Average Ratio      | 24deg. C, 64%RH          | 120Vac, 60Hz | James Yang |
| Conducted Emission         | 24deg. C, 64%RH          | 120Vac, 60Hz | James Yang |
| Radiated Emission          | 25deg. C, 70%RH          | 120Vac, 60Hz | Noah Chang |

### **3.4 EUT Operating Conditions**

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

### **3.5 General Description of Applied Standards**

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

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 90**

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

**KDB 971168 D02 Misc Rev Approv License Devices v02r01**

**ANSI/TIA/EIA-603-E 2016**

**ANSI 63.26-2015**

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

## 4 Test Types and Results

### 4.1 Output Power Measurement

#### 4.1.1 Limits of Output Power Measurement

The radiated peak output power shall be according to the specific rule Part 90.635 that “Mobile station are limited to 100 watts e.r.p”.

#### 4.1.2 Test Procedures

##### EIRP / ERP Measurement:

- a. All measurements were done at low, middle and high operational frequency range. RWB is 1MHz and VBW is 3MHz.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step b. Record the power level of S.G
- d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15dBi.

Where:

$$\text{ERP/EIRP} = P_{\text{Meas}} + G_T - L_C$$

$P_{\text{Meas}}$  : Measure transmitter output power.

$G_T$  : Gain of the transmitting antenna.

$L_C$  : signal attenuation in the connecting cable between the transmitter and antenna.

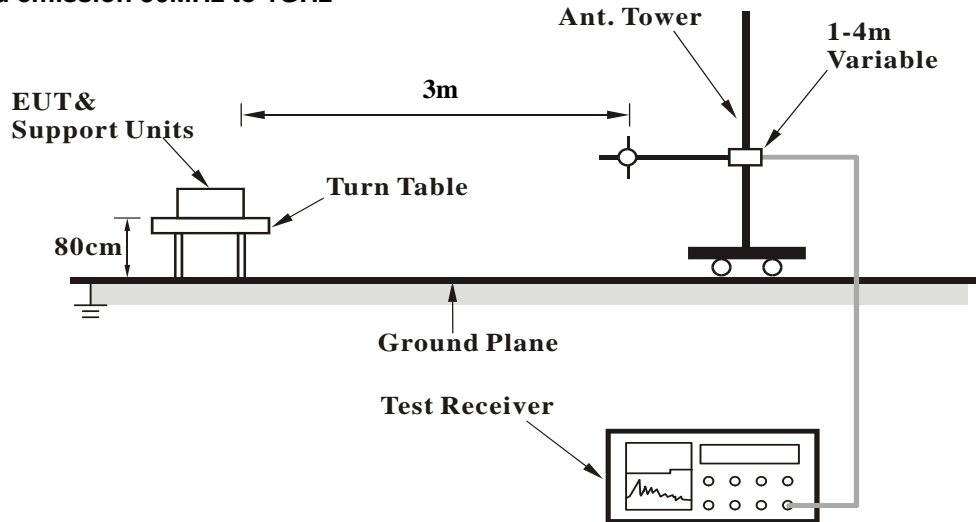
##### Conducted Power Measurement:

The EUT was set up for the maximum power with LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

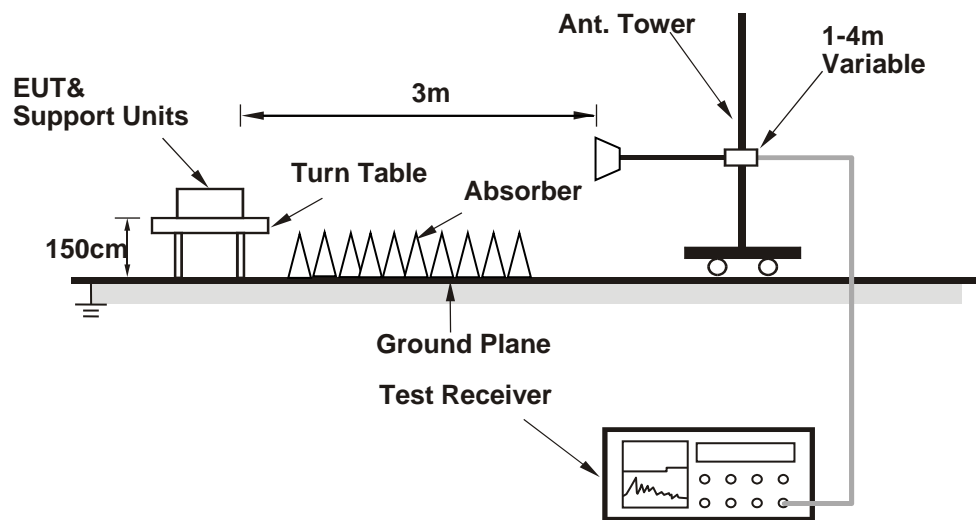
### 4.1.3 Test Setup

EIRP / ERP Measurement:

**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).

Conducted Power Measurement:



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

#### 4.1.4 Test Results

##### Conducted Output Power (dBm)

| LTE Band 26 |           |                 |           |       |       |       |               |                    |
|-------------|-----------|-----------------|-----------|-------|-------|-------|---------------|--------------------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid   | High  | 3GPP MPR (dB) | Max. Tune-up (dBm) |
|             |           | Channel         |           | 26697 | 26740 | 26783 |               |                    |
|             |           | Frequency (MHz) |           | 814.7 | 819   | 823.3 |               |                    |
| 1.4M        | QPSK      | 1               | 0         | 22.13 | 22.17 | 22.27 | 0             | 22.5               |
|             |           | 1               | 2         | 22.10 | 22.03 | 22.14 | 0             | 22.5               |
|             |           | 1               | 5         | 22.08 | 22.08 | 22.18 | 0             | 22.5               |
|             |           | 3               | 0         | 22.05 | 22.22 | 22.41 | 0             | 22.5               |
|             |           | 3               | 1         | 22.02 | 22.17 | 22.29 | 0             | 22.5               |
|             |           | 3               | 3         | 21.99 | 22.17 | 22.25 | 0             | 22.5               |
|             | 16QAM     | 6               | 0         | 21.19 | 21.14 | 21.29 | 1             | 21.5               |
|             |           | 1               | 0         | 21.11 | 21.07 | 21.23 | 1             | 21.5               |
|             |           | 1               | 2         | 21.08 | 21.01 | 21.11 | 1             | 21.5               |
|             |           | 1               | 5         | 21.06 | 21.10 | 21.14 | 1             | 21.5               |
|             |           | 3               | 0         | 21.03 | 21.26 | 21.40 | 1             | 21.5               |
|             |           | 3               | 1         | 21.00 | 21.19 | 21.30 | 1             | 21.5               |
|             | 64QAM     | 3               | 3         | 20.97 | 21.16 | 21.26 | 1             | 21.5               |
|             |           | 6               | 0         | 20.17 | 20.20 | 20.35 | 2             | 20.5               |
|             |           | 1               | 0         | 20.07 | 20.06 | 20.24 | 2             | 20.5               |
|             |           | 1               | 2         | 20.04 | 20.10 | 20.09 | 2             | 20.5               |
|             |           | 1               | 5         | 20.02 | 19.97 | 20.18 | 2             | 20.5               |
|             |           | 3               | 0         | 20.00 | 20.17 | 20.21 | 2             | 20.5               |
|             |           | 3               | 1         | 19.97 | 20.16 | 20.23 | 2             | 20.5               |
|             | 3         | 3               | 19.94     | 20.06 | 20.22 | 2     | 20.5          |                    |
|             |           |                 | 6         | 0     | 19.13 | 19.21 | 19.17         | 3                  |

| LTE Band 26 |           |                 |           |       |       |       |               |                    |
|-------------|-----------|-----------------|-----------|-------|-------|-------|---------------|--------------------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid   | High  | 3GPP MPR (dB) | Max. Tune-up (dBm) |
|             |           | Channel         |           | 26705 | 26740 | 26775 |               |                    |
|             |           | Frequency (MHz) |           | 815.5 | 819   | 822.5 |               |                    |
| 3M          | QPSK      | 1               | 0         | 22.15 | 22.09 | 22.22 | 0             | 22.5               |
|             |           | 1               | 7         | 22.12 | 22.15 | 22.23 | 0             | 22.5               |
|             |           | 1               | 14        | 22.10 | 22.07 | 22.26 | 0             | 22.5               |
|             |           | 8               | 0         | 21.26 | 21.18 | 21.27 | 1             | 21.5               |
|             |           | 8               | 3         | 21.23 | 21.14 | 21.32 | 1             | 21.5               |
|             |           | 8               | 7         | 21.20 | 21.26 | 21.22 | 1             | 21.5               |
|             |           | 15              | 0         | 21.21 | 21.21 | 21.23 | 1             | 21.5               |
|             | 16QAM     | 1               | 0         | 21.13 | 21.15 | 21.21 | 1             | 21.5               |
|             |           | 1               | 7         | 21.10 | 21.04 | 21.25 | 1             | 21.5               |
|             |           | 1               | 14        | 21.08 | 21.01 | 21.20 | 1             | 21.5               |
|             |           | 8               | 0         | 20.24 | 20.19 | 20.37 | 2             | 20.5               |
|             |           | 8               | 3         | 20.21 | 20.14 | 20.31 | 2             | 20.5               |
|             |           | 8               | 7         | 20.18 | 20.17 | 20.27 | 2             | 20.5               |
|             |           | 15              | 0         | 20.19 | 20.16 | 20.24 | 2             | 20.5               |
|             | 64QAM     | 1               | 0         | 20.09 | 20.04 | 20.24 | 2             | 20.5               |
|             |           | 1               | 7         | 20.06 | 20.05 | 20.21 | 2             | 20.5               |
|             |           | 1               | 14        | 20.04 | 19.97 | 20.08 | 2             | 20.5               |
|             |           | 8               | 0         | 19.20 | 19.12 | 19.36 | 3             | 19.5               |
|             |           | 8               | 3         | 19.17 | 19.23 | 19.24 | 3             | 19.5               |
|             |           | 8               | 7         | 19.14 | 19.08 | 19.15 | 3             | 19.5               |
|             |           | 15              | 0         | 19.15 | 19.17 | 19.19 | 3             | 19.5               |



| LTE Band 26 |           |                 |           |       |       |       |               |                    |
|-------------|-----------|-----------------|-----------|-------|-------|-------|---------------|--------------------|
| BW          | MCS Index | RB Size         | RB Offset | Low   | Mid   | High  | 3GPP MPR (dB) | Max. Tune-up (dBm) |
|             |           | Channel         |           | 26715 | 26740 | 26765 |               |                    |
|             |           | Frequency (MHz) |           | 816.5 | 819   | 821.5 |               |                    |
| 5M          | QPSK      | 1               | 0         | 22.19 | 22.21 | 22.31 | 0             | 22.5               |
|             |           | 1               | 12        | 22.16 | 22.18 | 22.28 | 0             | 22.5               |
|             |           | 1               | 24        | 22.14 | 22.16 | 22.26 | 0             | 22.5               |
|             |           | 12              | 0         | 21.30 | 21.32 | 21.42 | 1             | 21.5               |
|             |           | 12              | 6         | 21.27 | 21.29 | 21.39 | 1             | 21.5               |
|             |           | 12              | 13        | 21.24 | 21.26 | 21.36 | 1             | 21.5               |
|             |           | 25              | 0         | 21.25 | 21.27 | 21.37 | 1             | 21.5               |
|             | 16QAM     | 1               | 0         | 21.17 | 21.19 | 21.29 | 1             | 21.5               |
|             |           | 1               | 12        | 21.14 | 21.16 | 21.26 | 1             | 21.5               |
|             |           | 1               | 24        | 21.12 | 21.14 | 21.24 | 1             | 21.5               |
|             |           | 12              | 0         | 20.28 | 20.30 | 20.40 | 2             | 20.5               |
|             |           | 12              | 6         | 20.25 | 20.27 | 20.37 | 2             | 20.5               |
|             |           | 12              | 13        | 20.22 | 20.24 | 20.34 | 2             | 20.5               |
|             |           | 25              | 0         | 20.23 | 20.25 | 20.35 | 2             | 20.5               |
|             | 64QAM     | 1               | 0         | 20.13 | 20.15 | 20.25 | 2             | 20.5               |
|             |           | 1               | 12        | 20.10 | 20.12 | 20.22 | 2             | 20.5               |
|             |           | 1               | 24        | 20.08 | 20.10 | 20.20 | 2             | 20.5               |
|             |           | 12              | 0         | 19.24 | 19.26 | 19.36 | 3             | 19.5               |
|             |           | 12              | 6         | 19.21 | 19.23 | 19.33 | 3             | 19.5               |
|             |           | 12              | 13        | 19.18 | 19.20 | 19.30 | 3             | 19.5               |
|             |           | 25              | 0         | 19.19 | 19.21 | 19.31 | 3             | 19.5               |

| LTE Band 26 |           |                 |           |       |               |                    |
|-------------|-----------|-----------------|-----------|-------|---------------|--------------------|
| BW          | MCS Index | RB Size         | RB Offset | Mid   | 3GPP MPR (dB) | Max. Tune-up (dBm) |
|             |           | Channel         |           | 26740 |               |                    |
|             |           | Frequency (MHz) |           | 819   |               |                    |
| 10M         | QPSK      | 1               | 0         | 22.21 | 0             | 22.5               |
|             |           | 1               | 24        | 22.18 | 0             | 22.5               |
|             |           | 1               | 49        | 22.16 | 0             | 22.5               |
|             |           | 25              | 0         | 21.32 | 1             | 21.5               |
|             |           | 25              | 12        | 21.29 | 1             | 21.5               |
|             |           | 25              | 25        | 21.26 | 1             | 21.5               |
|             |           | 50              | 0         | 21.27 | 1             | 21.5               |
|             | 16QAM     | 1               | 0         | 21.19 | 1             | 21.5               |
|             |           | 1               | 24        | 21.16 | 1             | 21.5               |
|             |           | 1               | 49        | 21.14 | 1             | 21.5               |
|             |           | 25              | 0         | 20.30 | 2             | 20.5               |
|             |           | 25              | 12        | 20.27 | 2             | 20.5               |
|             |           | 25              | 25        | 20.24 | 2             | 20.5               |
|             |           | 50              | 0         | 20.25 | 2             | 20.5               |
|             | 64QAM     | 1               | 0         | 20.15 | 2             | 20.5               |
|             |           | 1               | 24        | 20.12 | 2             | 20.5               |
|             |           | 1               | 49        | 20.10 | 2             | 20.5               |
|             |           | 25              | 0         | 19.26 | 3             | 19.5               |
|             |           | 25              | 12        | 19.23 | 3             | 19.5               |
|             |           | 25              | 25        | 19.20 | 3             | 19.5               |
|             |           | 50              | 0         | 19.21 | 3             | 19.5               |

**ERP Power**

**Modulation Type: QPSK**

LTE Band 26, Channel Bandwidth 1.4MHz

| Mode  |             | TX channel 26697 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 814.70      | -27.30           | 4.10                  | -0.30                  | 3.80      | 50.00       | -46.20      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 814.70      | -21.80           | 10.40                 | -0.30                  | 10.10     | 50.00       | -39.90      |

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -26.60           | 4.70                  | -0.20                  | 4.50      | 50.00       | -45.50      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -21.50           | 10.60                 | -0.20                  | 10.40     | 50.00       | -39.60      |

| Mode  |             | TX channel 26783 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 823.30      | -27.10           | 4.30                  | -0.10                  | 4.20      | 50.00       | -45.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 823.30      | -21.50           | 10.60                 | -0.10                  | 10.50     | 50.00       | -39.50      |

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

LTE Band 26, Channel Bandwidth 3MHz

| Mode  |             | TX channel 26705 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 815.50      | -26.70           | 4.70                  | -0.30                  | 4.40      | 50.00       | -45.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 815.50      | -21.70           | 10.50                 | -0.30                  | 10.20     | 50.00       | -39.80      |

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -27.00           | 4.30                  | -0.20                  | 4.10      | 50.00       | -45.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -21.50           | 10.60                 | -0.20                  | 10.40     | 50.00       | -39.60      |

| Mode  |             | TX channel 26775 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 822.50      | -26.90           | 4.40                  | -0.10                  | 4.30      | 50.00       | -45.70      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 822.50      | -21.10           | 10.90                 | -0.10                  | 10.80     | 50.00       | -39.20      |

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

LTE Band 26, Channel Bandwidth 5MHz

| Mode  |             | TX channel 26715 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 816.50      | -27.10           | 4.20                  | -0.20                  | 4.00      | 50.00       | -46.00      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 816.50      | -21.20           | 10.80                 | -0.20                  | 10.60     | 50.00       | -39.40      |

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -27.20           | 4.10                  | -0.20                  | 3.90      | 50.00       | -46.10      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -21.60           | 10.50                 | -0.20                  | 10.30     | 50.00       | -39.70      |

| Mode  |             | TX channel 26765 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 821.50      | -26.90           | 4.40                  | -0.10                  | 4.30      | 50.00       | -45.70      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 821.50      | -21.80           | 10.20                 | -0.10                  | 10.10     | 50.00       | -39.90      |

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

LTE Band 26, Channel Bandwidth 10MHz

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -26.50           | 4.80                  | -0.20                  | 4.60      | 50.00       | -45.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -21.50           | 10.60                 | -0.20                  | 10.40     | 50.00       | -39.60      |

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

**Modulation Type: 16QAM**

LTE Band 26, Channel Bandwidth 1.4MHz

| Mode  |             | TX channel 26697 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 814.70      | -27.90           | 3.50                  | -0.30                  | 3.20      | 50.00       | -46.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 814.70      | -22.50           | 9.70                  | -0.30                  | 9.40      | 50.00       | -40.60      |

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -27.40           | 3.90                  | -0.20                  | 3.70      | 50.00       | -46.30      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -22.20           | 9.80                  | -0.20                  | 9.60      | 50.00       | -40.40      |

| Mode  |             | TX channel 26783 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 823.30      | -27.10           | 4.20                  | -0.10                  | 4.10      | 50.00       | -45.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 823.30      | -22.80           | 9.30                  | -0.10                  | 9.20      | 50.00       | -40.80      |

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

LTE Band 26, Channel Bandwidth 3MHz

| Mode  |             | TX channel 26705 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 815.50      | -26.70           | 4.70                  | -0.30                  | 4.40      | 50.00       | -45.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 815.50      | -22.50           | 9.70                  | -0.30                  | 9.40      | 50.00       | -40.60      |

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -27.50           | 3.80                  | -0.20                  | 3.60      | 50.00       | -46.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -22.20           | 9.90                  | -0.20                  | 9.70      | 50.00       | -40.30      |

| Mode  |             | TX channel 26775 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 822.50      | -27.40           | 3.90                  | -0.10                  | 3.80      | 50.00       | -46.20      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 822.50      | -21.80           | 10.20                 | -0.10                  | 10.10     | 50.00       | -39.90      |

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



LTE Band 26, Channel Bandwidth 5MHz

| Mode  |             | TX channel 26715 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 816.50      | -27.60           | 3.70                  | -0.20                  | 3.50      | 50.00       | -46.50      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 816.50      | -21.80           | 10.30                 | -0.20                  | 10.10     | 50.00       | -39.90      |

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -27.90           | 3.40                  | -0.20                  | 3.20      | 50.00       | -46.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -22.40           | 9.70                  | -0.20                  | 9.50      | 50.00       | -40.50      |

| Mode  |             | TX channel 26765 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 821.50      | -27.40           | 3.90                  | -0.10                  | 3.80      | 50.00       | -46.20      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 821.50      | -22.60           | 9.40                  | -0.10                  | 9.30      | 50.00       | -40.70      |

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

LTE Band 26, Channel Bandwidth 10MHz

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -26.40           | 4.90                  | -0.20                  | 4.70      | 50.00       | -45.30      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -22.10           | 10.00                 | -0.20                  | 9.80      | 50.00       | -40.20      |

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

**Modulation Type: 64QAM**

LTE Band 26, Channel Bandwidth 1.4MHz

| Mode  |             | TX channel 26697 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 814.70      | -28.30           | 3.10                  | -0.30                  | 2.80      | 50.00       | -47.20      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 814.70      | -23.10           | 9.10                  | -0.30                  | 8.80      | 50.00       | -41.20      |

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -27.90           | 3.40                  | -0.20                  | 3.20      | 50.00       | -46.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -22.80           | 9.30                  | -0.20                  | 9.10      | 50.00       | -40.90      |

| Mode  |             | TX channel 26783 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 823.30      | -27.90           | 3.50                  | -0.10                  | 3.40      | 50.00       | -46.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 823.30      | -23.20           | 8.90                  | -0.10                  | 8.80      | 50.00       | -41.20      |

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

LTE Band 26, Channel Bandwidth 3MHz

| Mode  |             | TX channel 26705 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 815.50      | -27.30           | 4.10                  | -0.30                  | 3.80      | 50.00       | -46.20      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 815.50      | -22.90           | 9.30                  | -0.30                  | 9.00      | 50.00       | -41.00      |

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -28.30           | 3.00                  | -0.20                  | 2.80      | 50.00       | -47.20      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -23.70           | 8.40                  | -0.20                  | 8.20      | 50.00       | -41.80      |

| Mode  |             | TX channel 26775 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 822.50      | -27.90           | 3.40                  | -0.10                  | 3.30      | 50.00       | -46.70      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 822.50      | -22.60           | 9.40                  | -0.10                  | 9.30      | 50.00       | -40.70      |

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

LTE Band 26, Channel Bandwidth 5MHz

| Mode  |             | TX channel 26715 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 816.50      | -28.40           | 2.90                  | -0.20                  | 2.70      | 50.00       | -47.30      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 816.50      | -22.50           | 9.60                  | -0.20                  | 9.40      | 50.00       | -40.60      |

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -28.60           | 2.70                  | -0.20                  | 2.50      | 50.00       | -47.50      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -22.80           | 9.30                  | -0.20                  | 9.10      | 50.00       | -40.90      |

| Mode  |             | TX channel 26765 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 821.50      | -28.10           | 3.30                  | -0.10                  | 3.20      | 50.00       | -46.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 821.50      | -23.20           | 8.80                  | -0.10                  | 8.70      | 50.00       | -41.30      |

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

LTE Band 26, Channel Bandwidth 10MHz

| Mode  |             | TX channel 26740 |                       |                        |           |             |             |
|---|-------------|------------------|-----------------------|------------------------|-----------|-------------|-------------|
| Antenna Polarity & Test Distance: Horizontal at 3 M |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -27.10           | 4.20                  | -0.20                  | 4.00      | 50.00       | -46.00      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |                  |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm)    | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 819.00      | -22.90           | 9.20                  | -0.20                  | 9.00      | 50.00       | -41.00      |

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

## 4.2 Modulation Characteristics Measurement

### 4.2.1 Limits of Modulation Characteristics

N/A

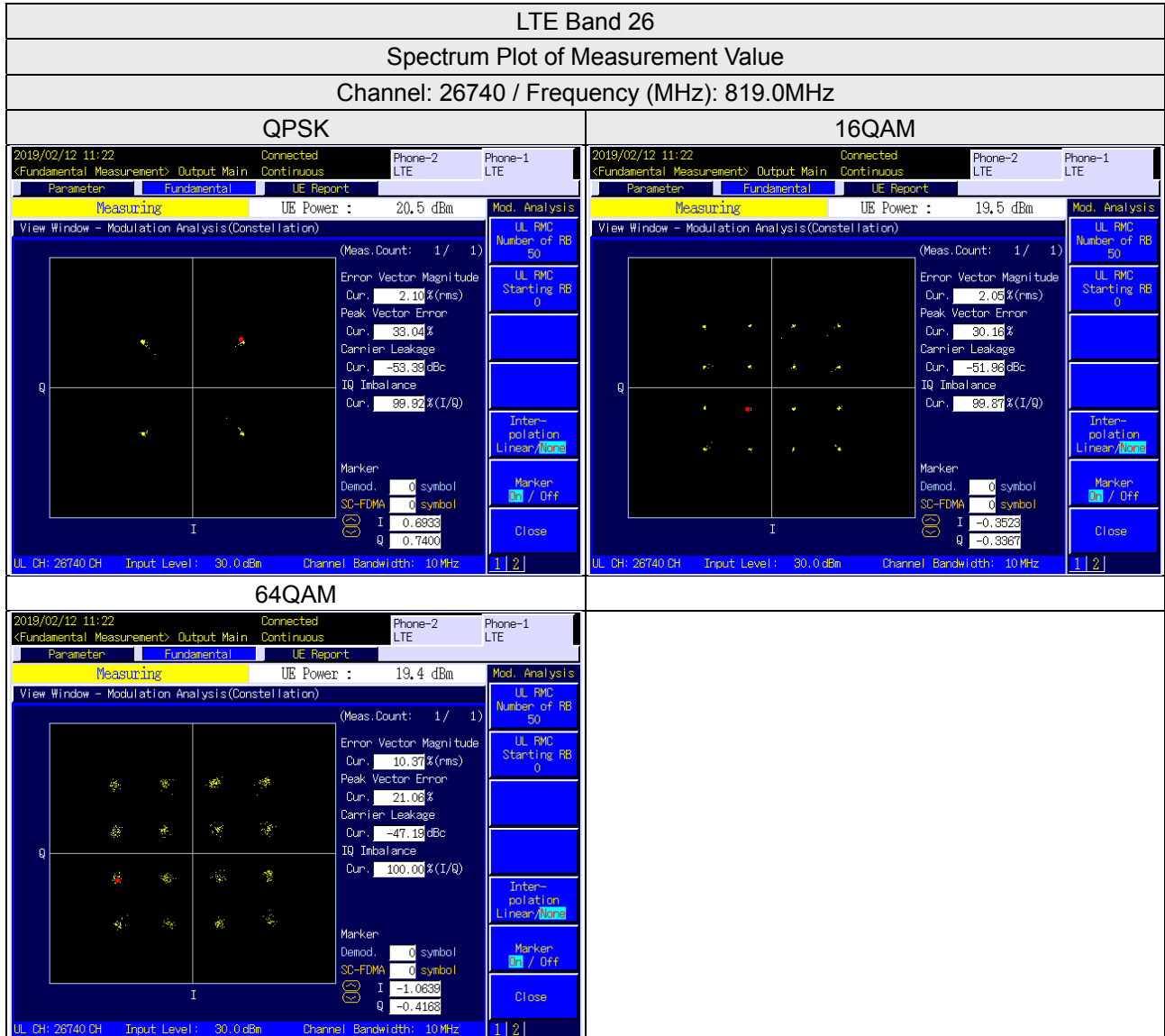
### 4.2.2 Test Procedure

Connect the EUT to Communication Simulator via the antenna connector, The frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

### 4.2.3 Test Setu



### 4.2.4 Test Results





### 4.3 Frequency Stability Measurement

#### 4.3.1 Limits of Frequency Stability Measurement

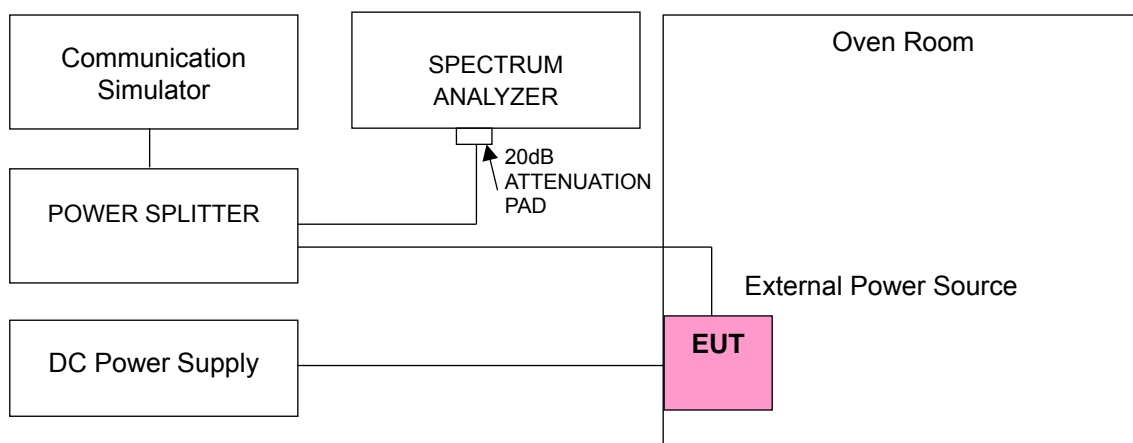
1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

#### 4.3.2 Test Procedure

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

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

#### 4.3.3 Test Setup



#### 4.3.4 Test Results

##### Frequency Error vs. Voltage

| Voltage (Volts) | LTE Band 26                |                       |                 |                       |
|-----------------|----------------------------|-----------------------|-----------------|-----------------------|
|                 | Channel Bandwidth: 1.4 MHz |                       |                 |                       |
|                 | Low Channel                |                       | High Channel    |                       |
|                 | Frequency (MHz)            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 4.4275          | 814.700002                 | 0.002                 | 823.300000      | 0.003                 |
| 3.85            | 814.700001                 | 0.001                 | 823.300000      | 0.002                 |
| 3.2725          | 814.700001                 | 0.002                 | 823.300000      | 0.004                 |

Note: The applicant defined the normal working voltage is from 3.2725Vdc to 4.4275Vdc.

##### Frequency Error vs. Temperature

| Temp. (°C) | LTE Band 26                |                       |                 |                       |
|------------|----------------------------|-----------------------|-----------------|-----------------------|
|            | Channel Bandwidth: 1.4 MHz |                       |                 |                       |
|            | Low Channel                |                       | High Channel    |                       |
|            | Frequency (MHz)            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 814.700003                 | 0.004                 | 823.300000      | 0.003                 |
| -20        | 814.700003                 | 0.004                 | 823.300000      | 0.005                 |
| -10        | 814.700003                 | 0.004                 | 823.300000      | 0.003                 |
| 0          | 814.700003                 | 0.003                 | 823.300000      | 0.004                 |
| 10         | 814.700003                 | 0.004                 | 823.300000      | 0.002                 |
| 20         | 814.699998                 | -0.003                | 823.300000      | -0.002                |
| 30         | 814.699999                 | -0.002                | 823.300000      | -0.003                |
| 40         | 814.699996                 | -0.004                | 823.300000      | -0.002                |
| 50         | 814.699999                 | -0.002                | 823.300000      | -0.003                |
| 55         | 814.699998                 | -0.003                | 823.300000      | -0.003                |

Frequency Error vs. Voltage

| Voltage (Volts) | LTE Band 26              |                       |                 |                       |
|-----------------|--------------------------|-----------------------|-----------------|-----------------------|
|                 | Channel Bandwidth: 3 MHz |                       |                 |                       |
|                 | Low Channel              |                       | High Channel    |                       |
|                 | Frequency (MHz)          | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 4.4275          | 815.500004               | 0.005                 | 822.500000      | 0.005                 |
| 3.85            | 815.500003               | 0.003                 | 822.500000      | 0.004                 |
| 3.2725          | 815.500003               | 0.004                 | 822.500000      | 0.003                 |

Note: The applicant defined the normal working voltage is from 3.2725Vdc to 4.4275Vdc.

Frequency Error vs. Temperature

| Temp. (°C) | LTE Band 26              |                       |                 |                       |
|------------|--------------------------|-----------------------|-----------------|-----------------------|
|            | Channel Bandwidth: 3 MHz |                       |                 |                       |
|            | Low Channel              |                       | High Channel    |                       |
|            | Frequency (MHz)          | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 815.500003               | 0.004                 | 822.500000      | 0.001                 |
| -20        | 815.500002               | 0.002                 | 822.500000      | 0.004                 |
| -10        | 815.500004               | 0.004                 | 822.500000      | 0.004                 |
| 0          | 815.500002               | 0.003                 | 822.500000      | 0.004                 |
| 10         | 815.500004               | 0.005                 | 822.500000      | 0.004                 |
| 20         | 815.499999               | -0.002                | 822.500000      | -0.004                |
| 30         | 815.499999               | -0.001                | 822.500000      | -0.002                |
| 40         | 815.499997               | -0.004                | 822.500000      | -0.005                |
| 50         | 815.499998               | -0.003                | 822.500000      | -0.004                |
| 55         | 815.499999               | -0.001                | 822.500000      | -0.003                |

Frequency Error vs. Voltage

| Voltage (Volts) | LTE Band 26              |                       |                 |                       |
|-----------------|--------------------------|-----------------------|-----------------|-----------------------|
|                 | Channel Bandwidth: 5 MHz |                       |                 |                       |
|                 | Low Channel              |                       | High Channel    |                       |
|                 | Frequency (MHz)          | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 4.4275          | 816.500001               | 0.002                 | 821.500000      | 0.002                 |
| 3.85            | 816.500001               | 0.001                 | 821.500000      | 0.003                 |
| 3.2725          | 816.500002               | 0.003                 | 821.500000      | 0.001                 |

Note: The applicant defined the normal working voltage is from 3.2725Vdc to 4.4275Vdc.

Frequency Error vs. Temperature

| Temp. (°C) | LTE Band 26              |                       |                 |                       |
|------------|--------------------------|-----------------------|-----------------|-----------------------|
|            | Channel Bandwidth: 5 MHz |                       |                 |                       |
|            | Low Channel              |                       | High Channel    |                       |
|            | Frequency (MHz)          | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 816.500002               | 0.002                 | 821.500000      | 0.001                 |
| -20        | 816.500004               | 0.005                 | 821.500000      | 0.004                 |
| -10        | 816.500003               | 0.004                 | 821.500000      | 0.005                 |
| 0          | 816.500003               | 0.003                 | 821.500000      | 0.003                 |
| 10         | 816.500003               | 0.004                 | 821.500000      | 0.004                 |
| 20         | 816.499997               | -0.004                | 821.500000      | -0.004                |
| 30         | 816.499998               | -0.003                | 821.500000      | -0.002                |
| 40         | 816.499997               | -0.004                | 821.500000      | -0.001                |
| 50         | 816.499998               | -0.003                | 821.500000      | -0.005                |
| 55         | 816.499997               | -0.003                | 821.500000      | -0.003                |

Frequency Error vs. Voltage

| Voltage (Volts) | LTE Band 26               |                       |
|-----------------|---------------------------|-----------------------|
|                 | Channel Bandwidth: 10 MHz |                       |
|                 | Frequency (MHz)           | Frequency Error (ppm) |
| 4.4275          | 819.000001                | 0.002                 |
| 3.85            | 819.000002                | 0.002                 |
| 3.2725          | 819.000001                | 0.001                 |

Note: The applicant defined the normal working voltage is from 3.2725Vdc to 4.4275Vdc.

Frequency Error vs. Temperature

| Temp. (°C) | LTE Band 26               |                       |
|------------|---------------------------|-----------------------|
|            | Channel Bandwidth: 10 MHz |                       |
|            | Frequency (MHz)           | Frequency Error (ppm) |
| -30        | 819.000003                | 0.004                 |
| -20        | 819.000001                | 0.001                 |
| -10        | 819.000003                | 0.003                 |
| 0          | 819.000002                | 0.002                 |
| 10         | 819.000002                | 0.003                 |
| 20         | 818.999998                | -0.003                |
| 30         | 818.999999                | -0.002                |
| 40         | 818.999997                | -0.003                |
| 50         | 818.999999                | -0.002                |
| 55         | 818.999998                | -0.003                |

#### 4.4 Occupied Bandwidth Measurement

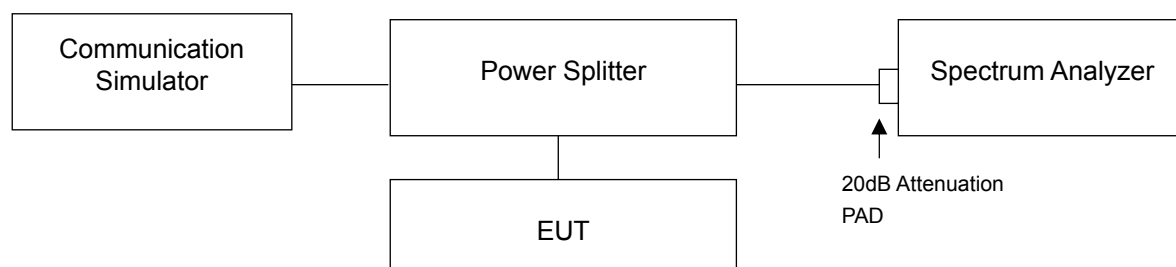
##### 4.4.1 Limits of Occupied Bandwidth Measurement

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

##### 4.4.2 Test Procedure

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

##### 4.4.3 Test Setup



#### 4.4.4 Test Result

##### Occupied Bandwidth

| LTE Band 26, Channel Bandwidth 1.4MHz |                 |                              |       |       |
|---------------------------------------|-----------------|------------------------------|-------|-------|
| Channel                               | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       |       |
|                                       |                 | QPSK                         | 16QAM | 64QAM |
| 26697                                 | 814.7           | 1.09                         | 1.09  | 1.09  |
| 26740                                 | 819.0           | 1.09                         | 1.09  | 1.09  |
| 26783                                 | 823.3           | 1.09                         | 1.09  | 1.09  |
| LTE Band 26, Channel Bandwidth 3MHz   |                 |                              |       |       |
| Channel                               | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       |       |
|                                       |                 | QPSK                         | 16QAM | 64QAM |
| 26705                                 | 815.5           | 2.70                         | 2.70  | 2.69  |
| 26740                                 | 819.0           | 2.70                         | 2.70  | 2.70  |
| 26775                                 | 822.5           | 2.70                         | 2.70  | 2.70  |
| LTE Band 26, Channel Bandwidth 5MHz   |                 |                              |       |       |
| Channel                               | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       |       |
|                                       |                 | QPSK                         | 16QAM | 64QAM |
| 26715                                 | 816.5           | 4.49                         | 4.49  | 4.49  |
| 26740                                 | 819.0           | 4.49                         | 4.49  | 4.49  |
| 26765                                 | 821.5           | 4.49                         | 4.46  | 4.49  |
| LTE Band 26, Channel Bandwidth 10MHz  |                 |                              |       |       |
| Channel                               | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       |       |
|                                       |                 | QPSK                         | 16QAM | 64QAM |
| 26740                                 | 819.0           | 8.96                         | 8.97  | 8.97  |

### Spectrum Plot of Worst Value

#### 1.4MHz / 64QAM



#### 3MHz / QPSK



#### 5MHz / 16QAM



#### 10MHz / 16QAM





26dB Bandwidth

| LTE Band 26, Channel Bandwidth 1.4MHz |                 |                      |       |       |
|---------------------------------------|-----------------|----------------------|-------|-------|
| Channel                               | Frequency (MHz) | 26dB Bandwidth (MHz) |       |       |
|                                       |                 | QPSK                 | 16QAM | 64QAM |
| 26697                                 | 814.7           | 1.23                 | 1.22  | 1.21  |
| 26740                                 | 819.0           | 1.21                 | 1.22  | 1.22  |
| 26783                                 | 823.3           | 1.21                 | 1.22  | 1.19  |
| LTE Band 26, Channel Bandwidth 3MHz   |                 |                      |       |       |
| Channel                               | Frequency (MHz) | 26dB Bandwidth (MHz) |       |       |
|                                       |                 | QPSK                 | 16QAM | 64QAM |
| 26705                                 | 815.5           | 2.91                 | 2.92  | 2.92  |
| 26740                                 | 819.0           | 2.92                 | 2.92  | 2.85  |
| 26775                                 | 822.5           | 2.92                 | 2.90  | 2.93  |
| LTE Band 26, Channel Bandwidth 5MHz   |                 |                      |       |       |
| Channel                               | Frequency (MHz) | 26dB Bandwidth (MHz) |       |       |
|                                       |                 | QPSK                 | 16QAM | 64QAM |
| 26715                                 | 816.5           | 4.73                 | 4.73  | 4.80  |
| 26740                                 | 819.0           | 4.80                 | 4.80  | 4.73  |
| 26765                                 | 821.5           | 4.79                 | 4.83  | 4.80  |
| LTE Band 26, Channel Bandwidth 10MHz  |                 |                      |       |       |
| Channel                               | Frequency (MHz) | 26dB Bandwidth (MHz) |       |       |
|                                       |                 | QPSK                 | 16QAM | 64QAM |
| 26740                                 | 819.0           | 9.50                 | 9.51  | 9.52  |

### Spectrum Plot of Worst Value

1.4MHz / QPSK



3MHz / 64QAM



5MHz / 16QAM



10MHz / 64QAM



## 4.5 Emission Mask Measurement

### 4.5.1 Limits of Emission Mask Measurement

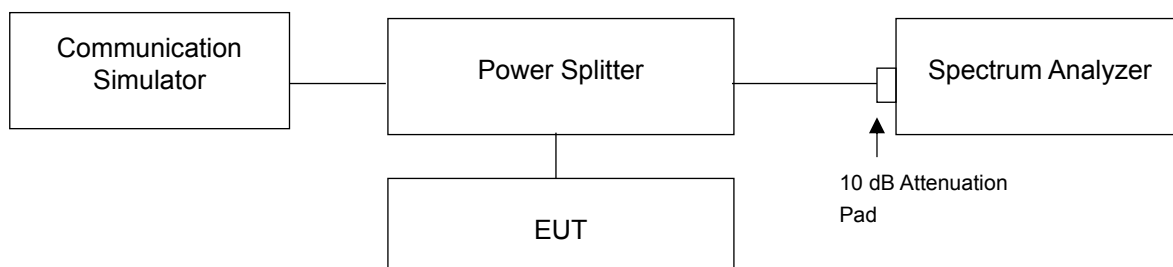
According to FCC part 90.691 shall be tested the emission mask. For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $116 \text{ Log}_{10}(f/6.1)$  decibels or  $50 + 10\text{Log}_{10}(P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10\text{Log}_{10}(P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

Refer KDB 971168 D02 Misc Rev Approv License Devices v02r01

For § 90.691(a), RBW=300 Hz for offset less than 37.5 kHz from channel edge and RBW=100 kHz for offsets greater than 37.5 kHz is allowed.

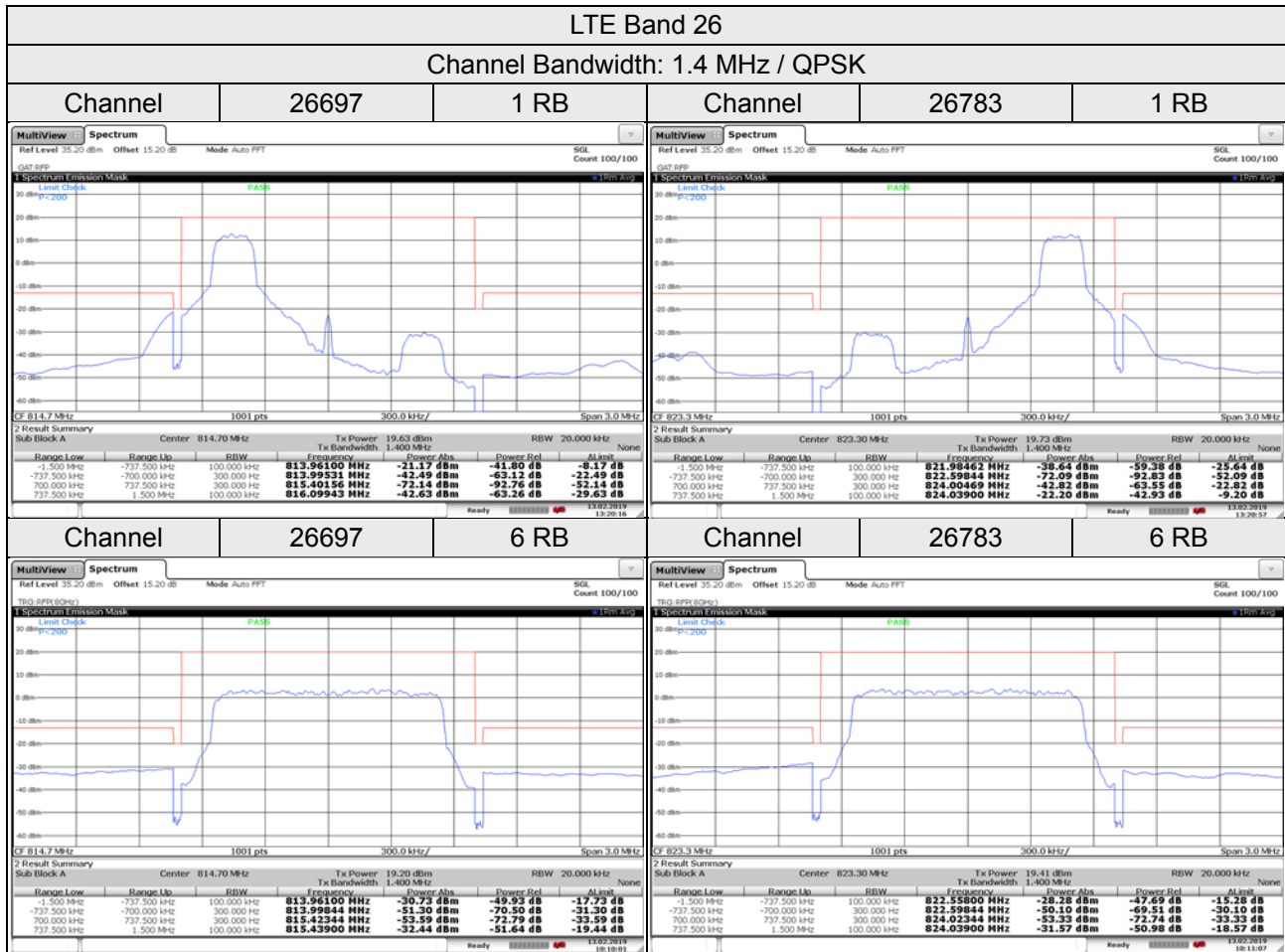
### 4.5.2 Test Setup



### 4.5.3 Test Procedures

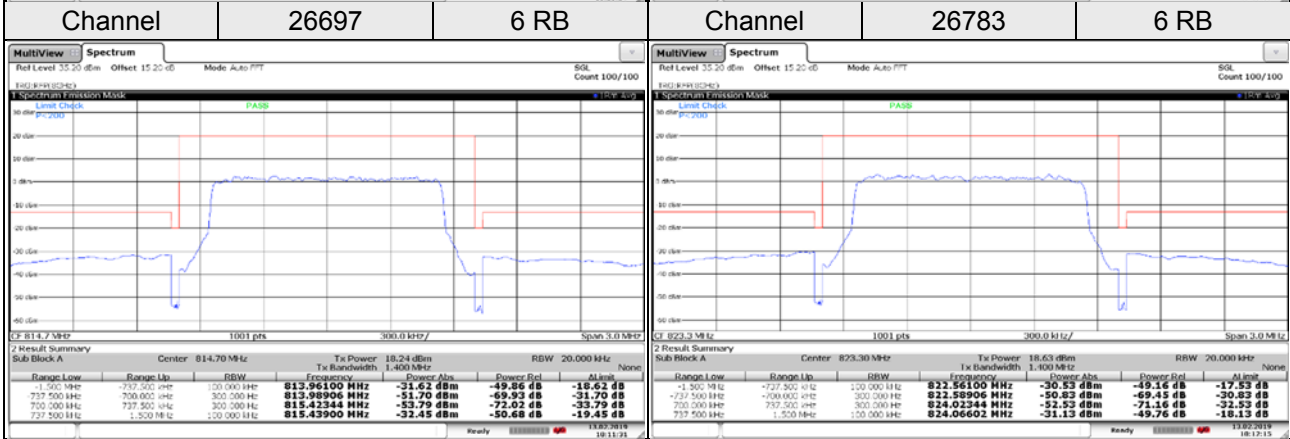
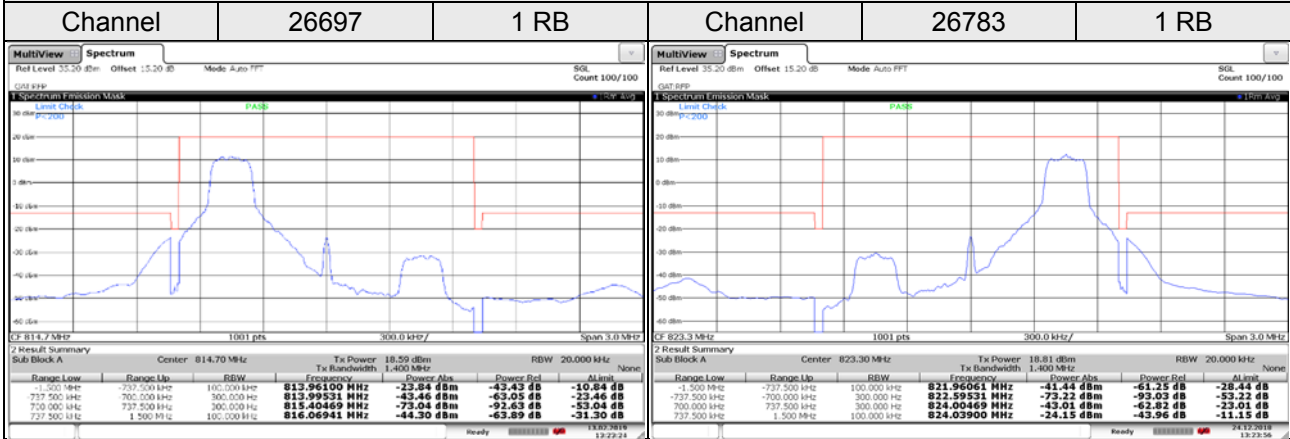
- The measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- Record the test plot.

### 4.5.4 Test Results



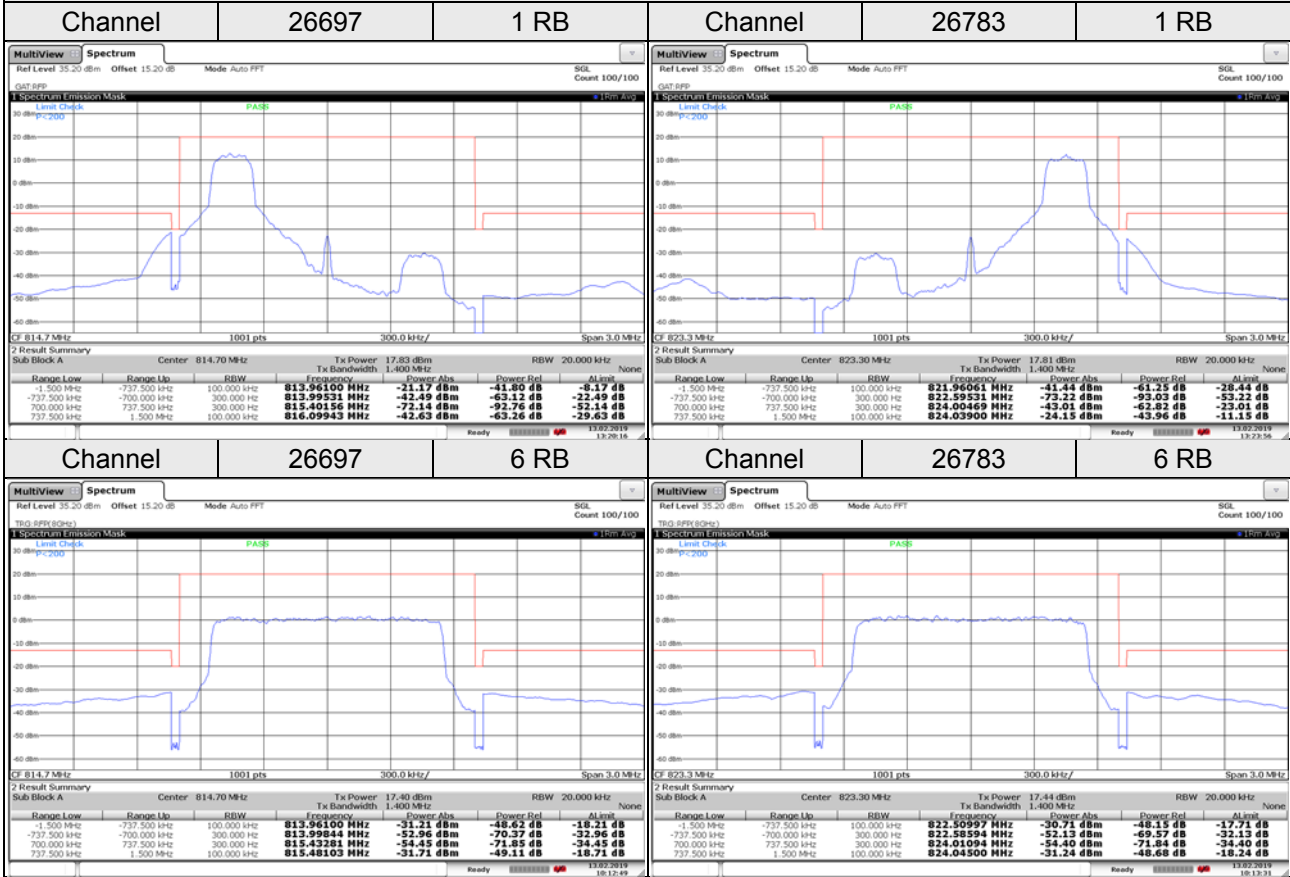
### LTE Band 26

Channel Bandwidth: 1.4 MHz / 16QAM



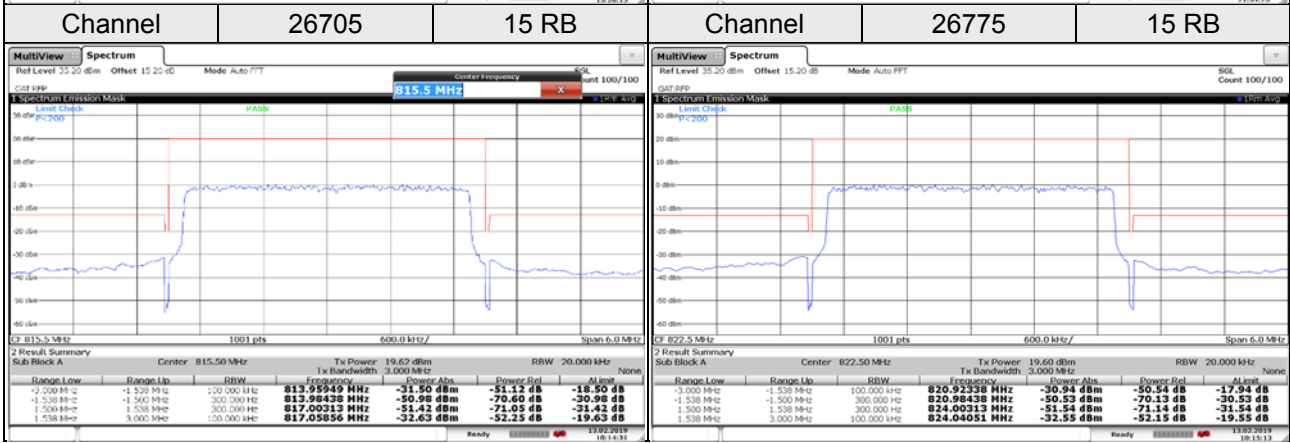
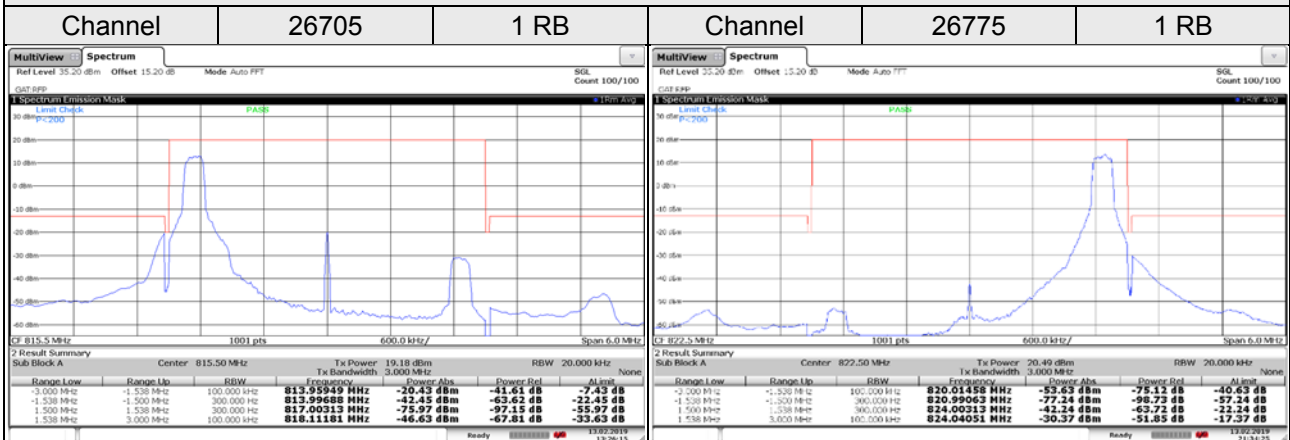
### LTE Band 26

Channel Bandwidth: 1.4 MHz / 64QAM



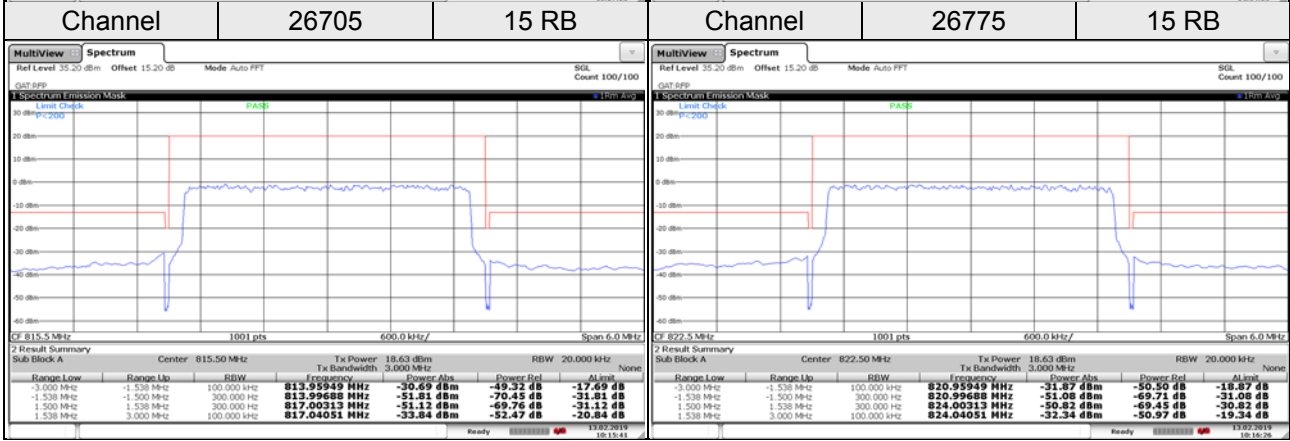
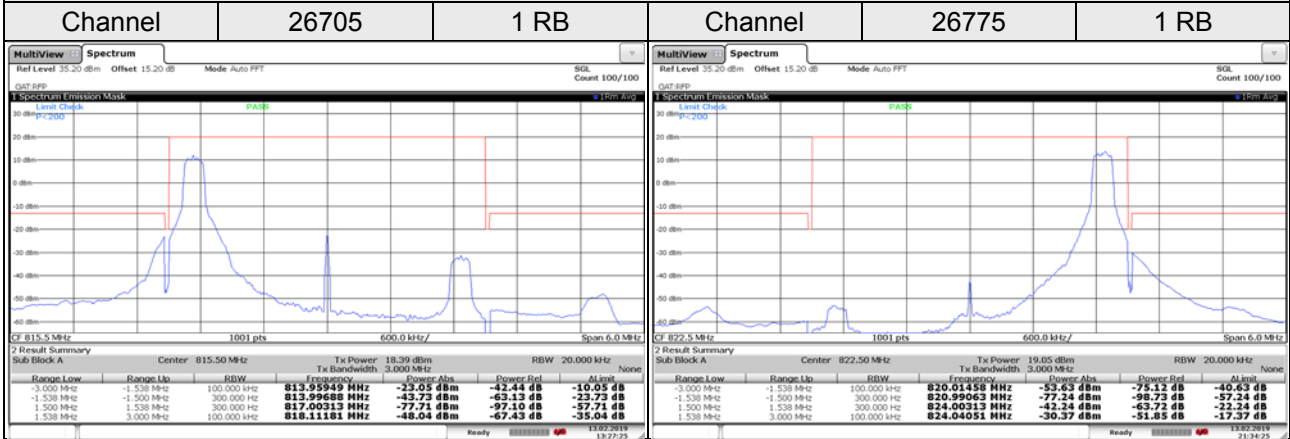
### LTE Band 26

Channel Bandwidth: 3 MHz / QPSK



### LTE Band 26

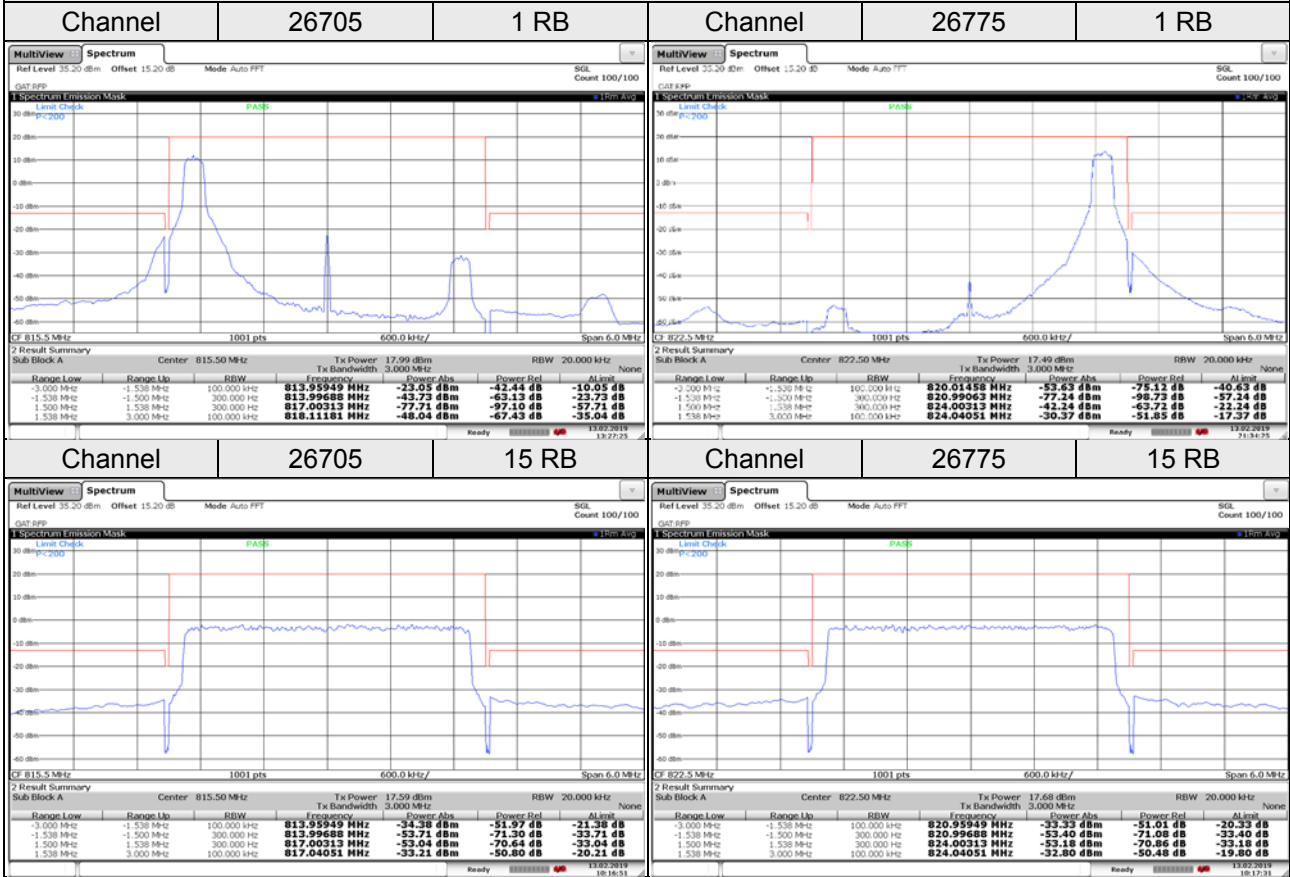
Channel Bandwidth: 3 MHz / 16QAM





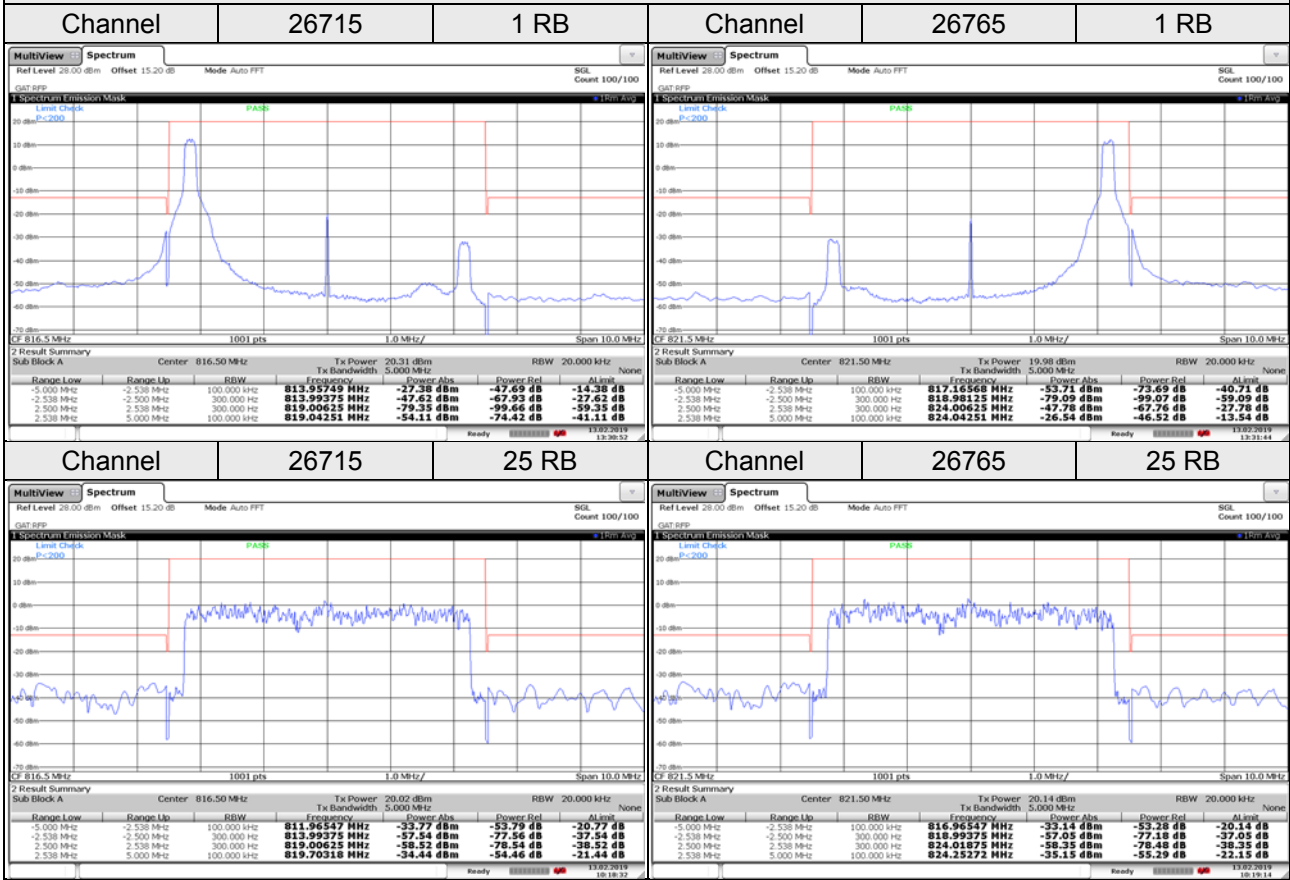
### LTE Band 26

Channel Bandwidth: 3 MHz / 64QAM



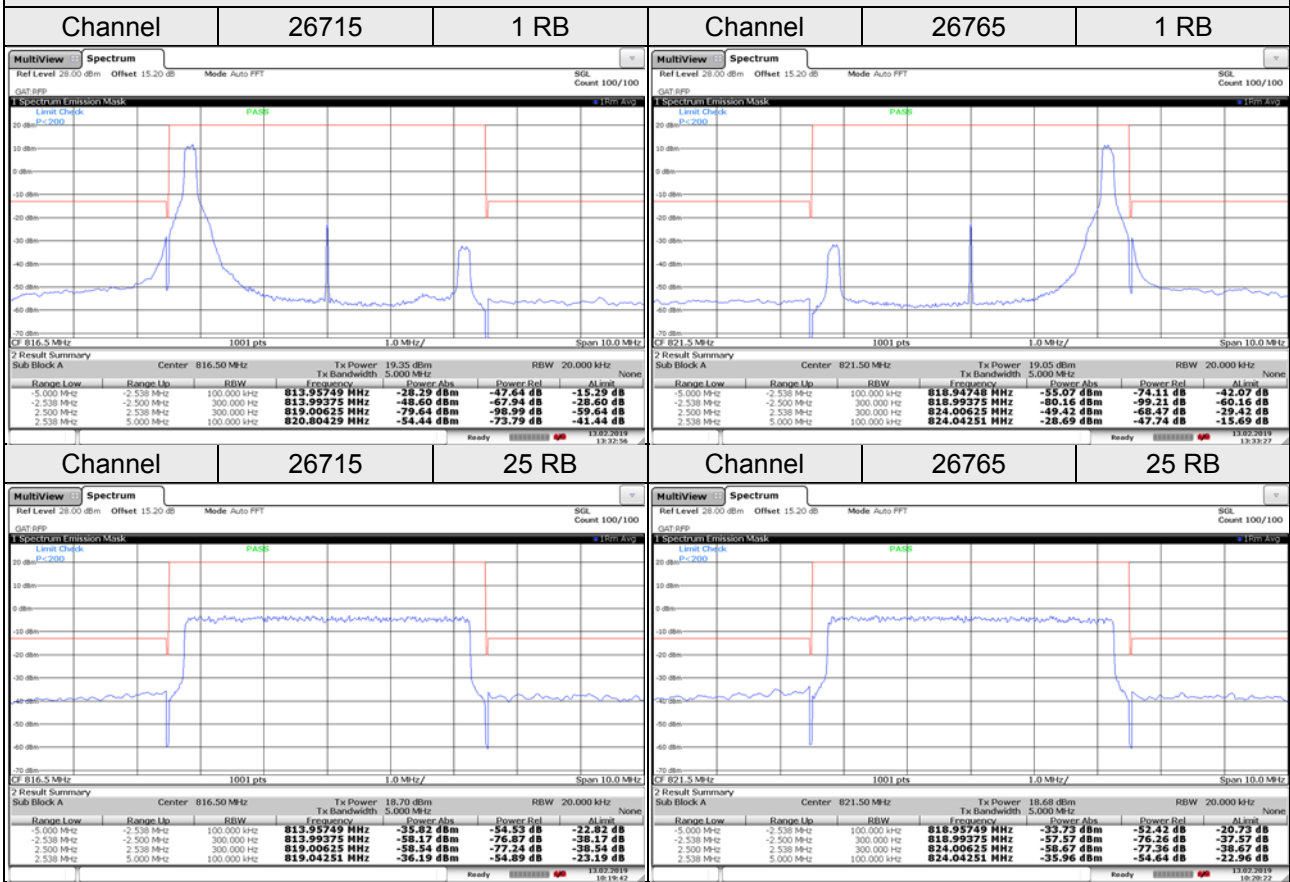
### LTE Band 26

### Channel Bandwidth: 5 MHz / QPSK



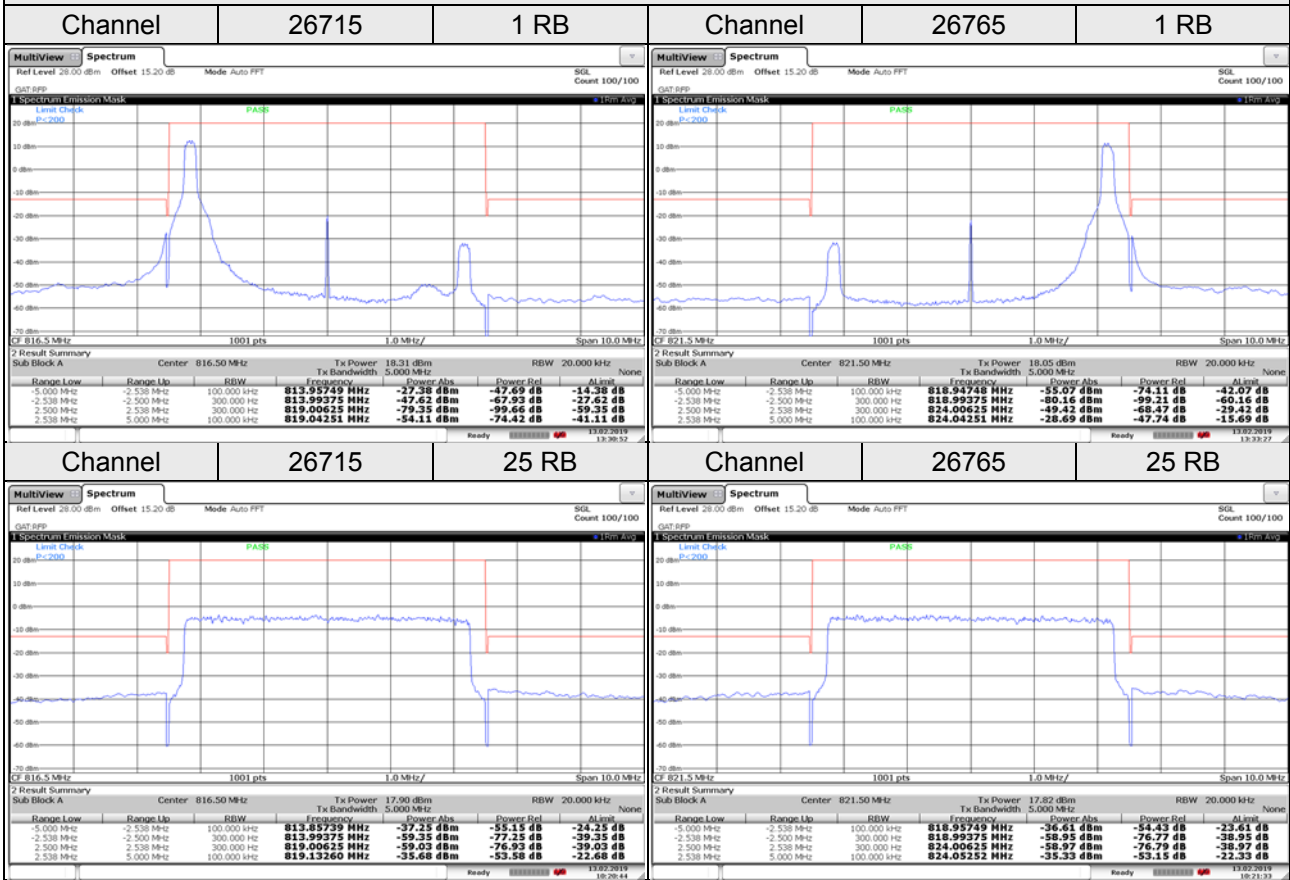
### LTE Band 26

Channel Bandwidth: 5 MHz / 16QAM



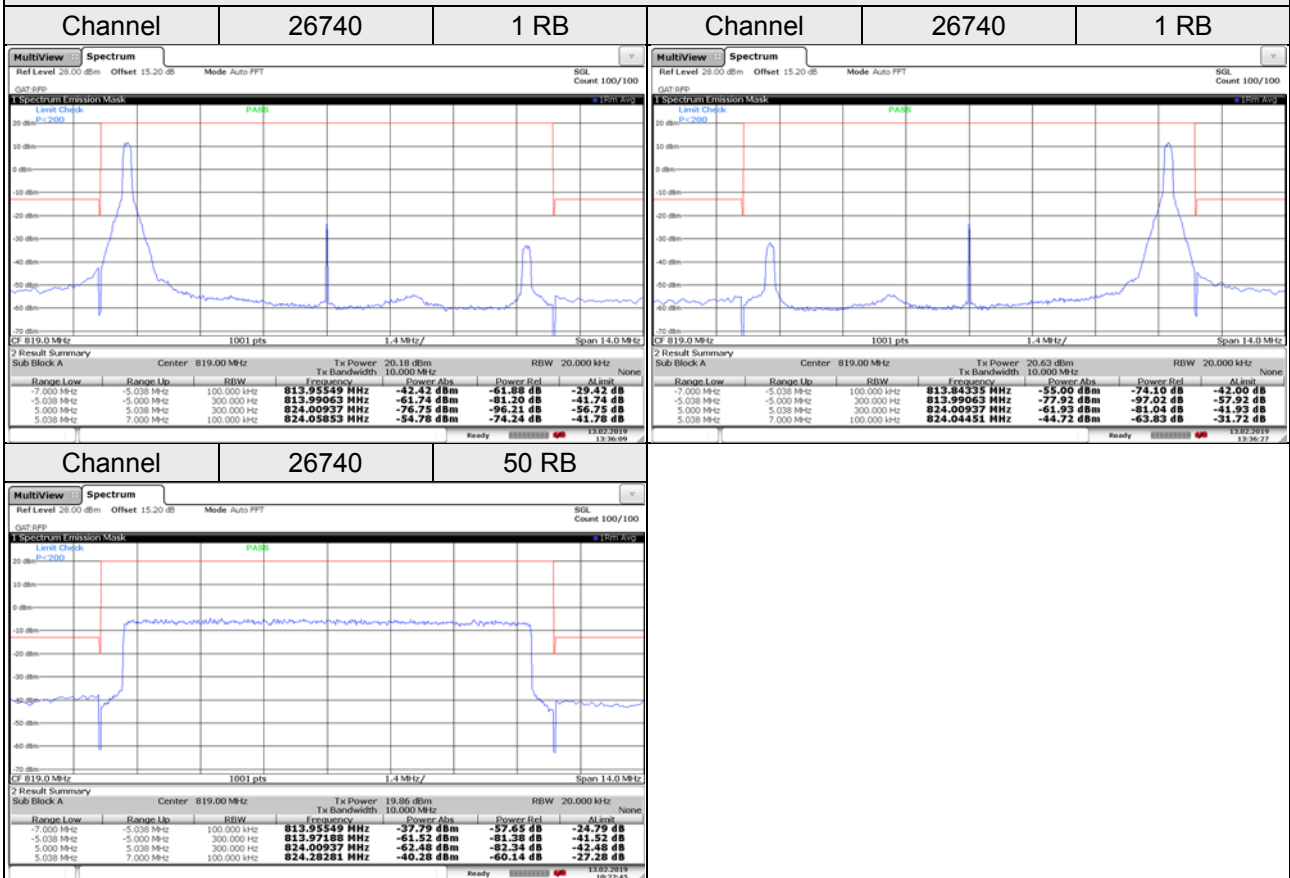
### LTE Band 26

Channel Bandwidth: 5 MHz / 64QAM



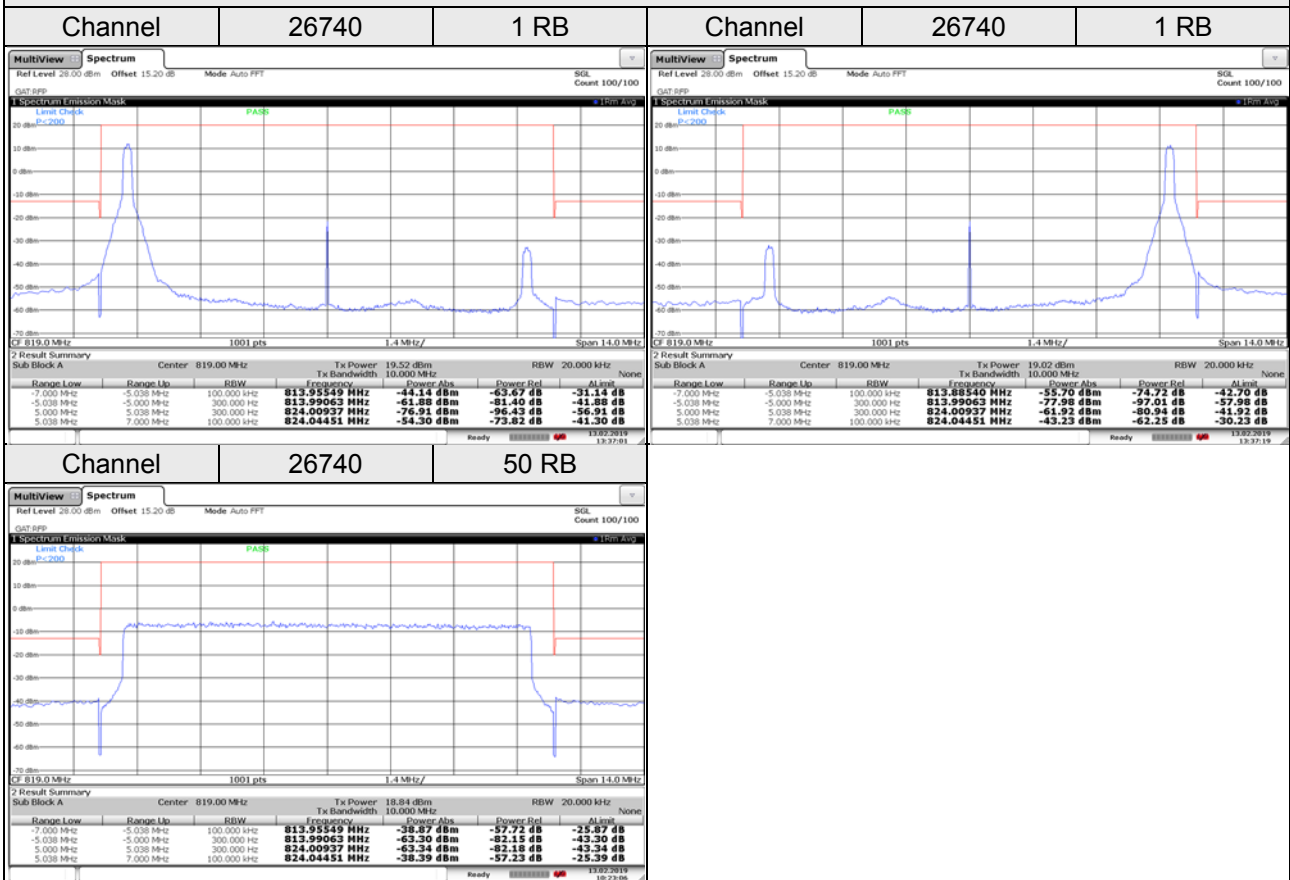
### LTE Band 26

Channel Bandwidth: 10 MHz / QPSK



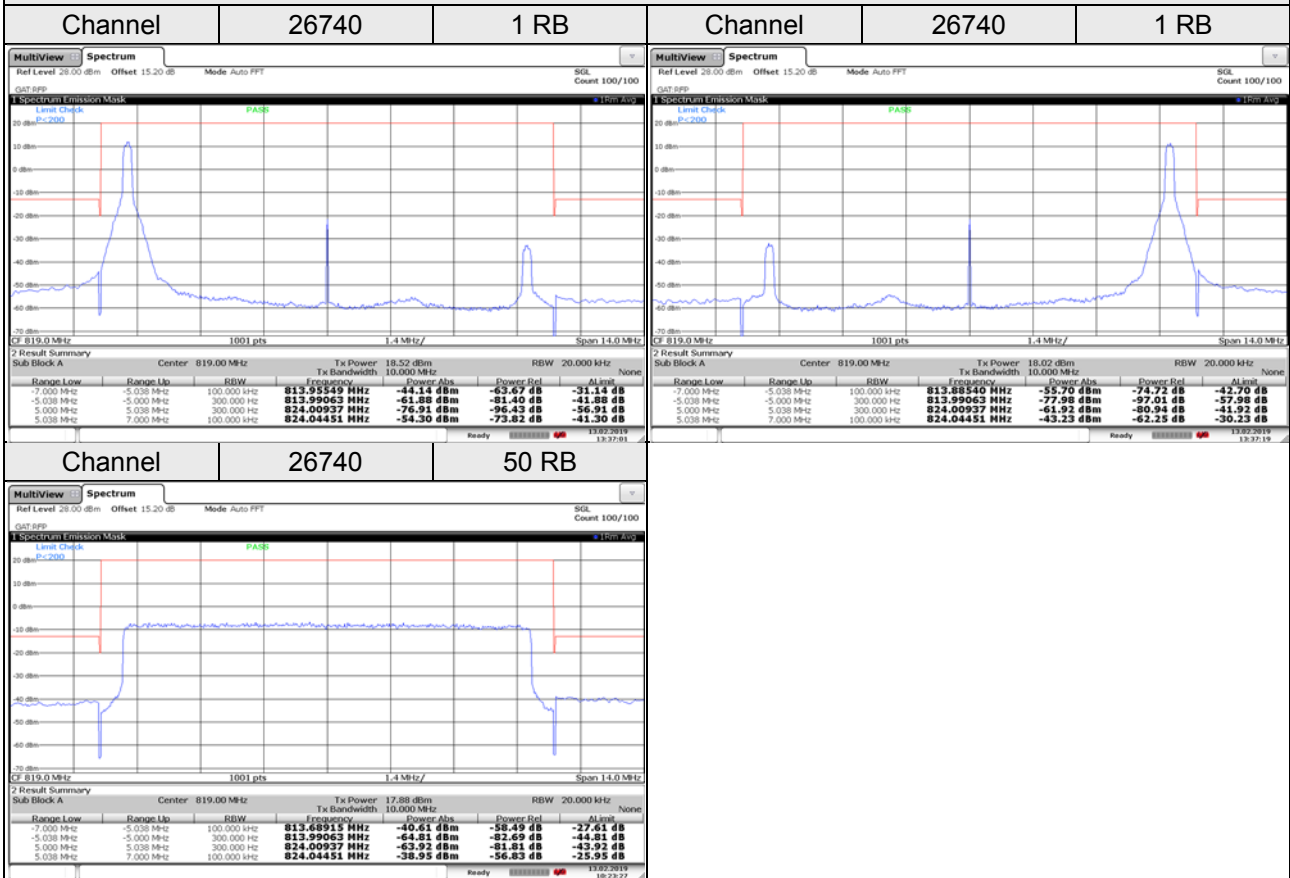
### LTE Band 26

Channel Bandwidth: 10 MHz / 16QAM



### LTE Band 26

Channel Bandwidth: 10 MHz / 64QAM

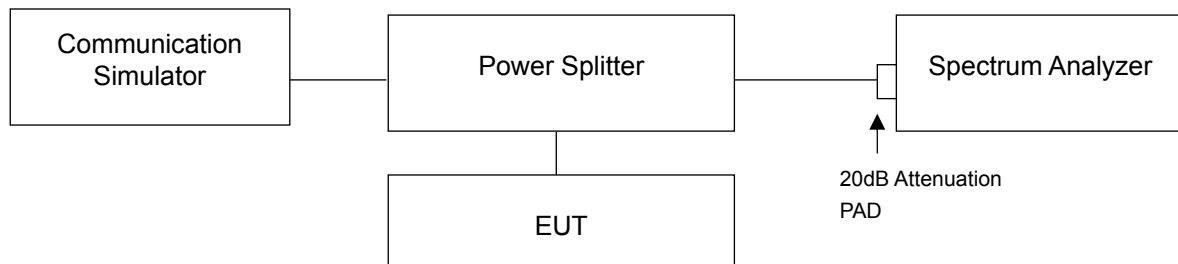


## 4.6 Peak to Average Ratio

### 4.6.1 Limits of Peak to Average Ratio Measurement

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

### 4.6.2 Test Setup



### 4.6.3 Test Procedures

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

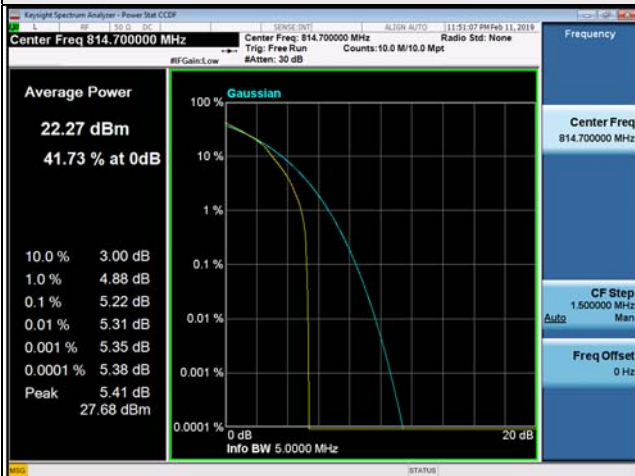


#### 4.6.4 Test Results

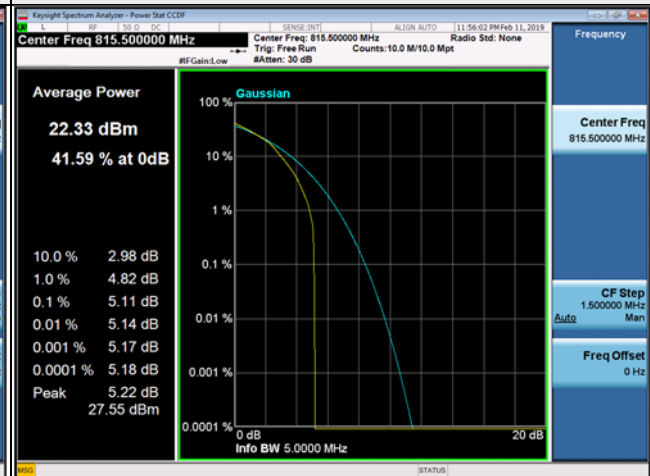
| LTE Band 26, Channel Bandwidth 1.4MHz |                 |                            |       |       |
|---------------------------------------|-----------------|----------------------------|-------|-------|
| Channel                               | Frequency (MHz) | Peak To Average Ratio (dB) |       |       |
|                                       |                 | QPSK                       | 16QAM | 64QAM |
| 26697                                 | 814.7           | 3.76                       | 5.04  | 5.22  |
| 26740                                 | 819.0           | 3.70                       | 5.05  | 5.12  |
| 26783                                 | 823.3           | 3.72                       | 5.12  | 5.17  |
| LTE Band 26, Channel Bandwidth 3MHz   |                 |                            |       |       |
| Channel                               | Frequency (MHz) | Peak To Average Ratio (dB) |       |       |
|                                       |                 | QPSK                       | 16QAM | 64QAM |
| 26705                                 | 815.5           | 3.60                       | 5.03  | 5.11  |
| 26740                                 | 819.0           | 3.52                       | 4.98  | 5.05  |
| 26775                                 | 822.5           | 3.51                       | 4.96  | 5.03  |
| LTE Band 26, Channel Bandwidth 5MHz   |                 |                            |       |       |
| Channel                               | Frequency (MHz) | Peak To Average Ratio (dB) |       |       |
|                                       |                 | QPSK                       | 16QAM | 64QAM |
| 26715                                 | 816.5           | 3.63                       | 5.03  | 5.91  |
| 26740                                 | 819.0           | 3.57                       | 5.00  | 5.90  |
| 26765                                 | 821.5           | 3.58                       | 4.93  | 5.93  |
| LTE Band 26, Channel Bandwidth 10MHz  |                 |                            |       |       |
| Channel                               | Frequency (MHz) | Peak To Average Ratio (dB) |       |       |
|                                       |                 | QPSK                       | 16QAM | 64QAM |
| 26740                                 | 819.0           | 3.65                       | 4.99  | 5.96  |

### Spectrum Plot of Worst Value

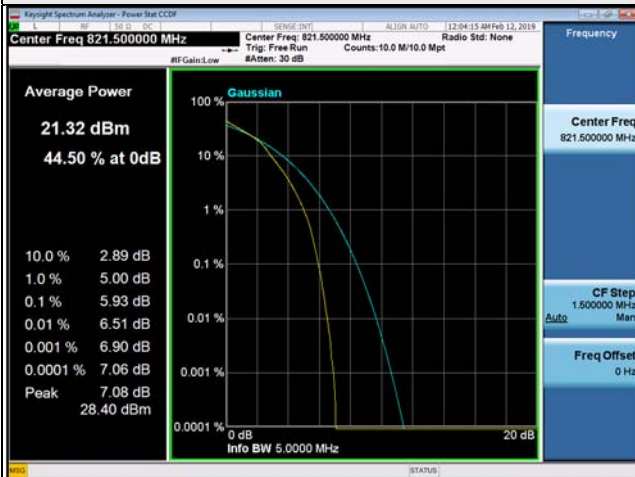
1.4MHz / 64QAM



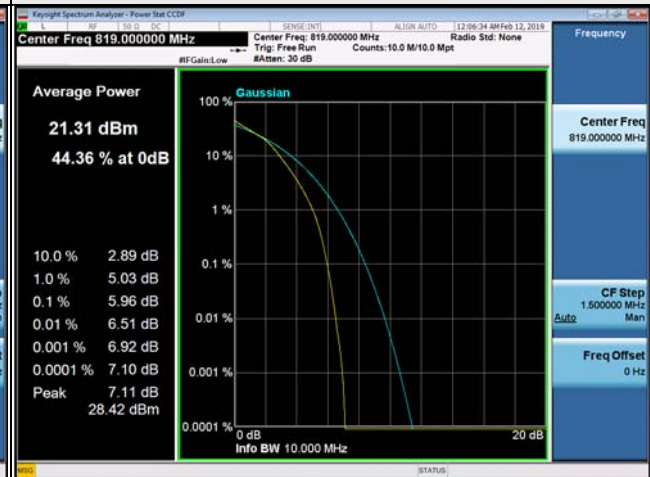
3MHz / 64QAM



5MHz / 64QAM



10MHz / 64QAM

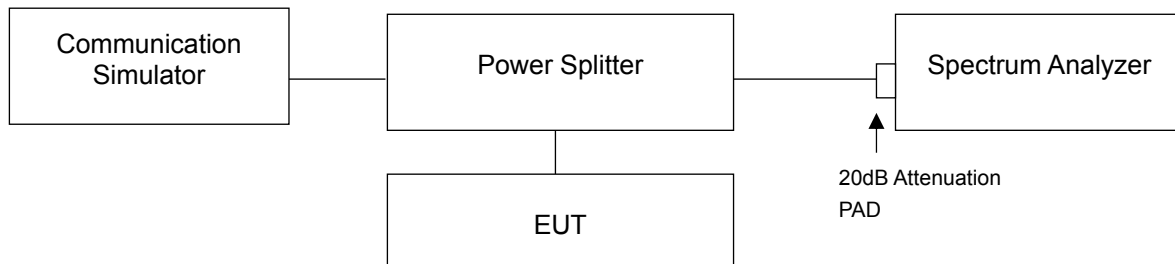


## 4.7 Conducted Spurious Emissions

### 4.7.1 Limits of Conducted Spurious Emissions Measurement

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

### 4.7.2 Test Setup



### 4.7.3 Test Procedure

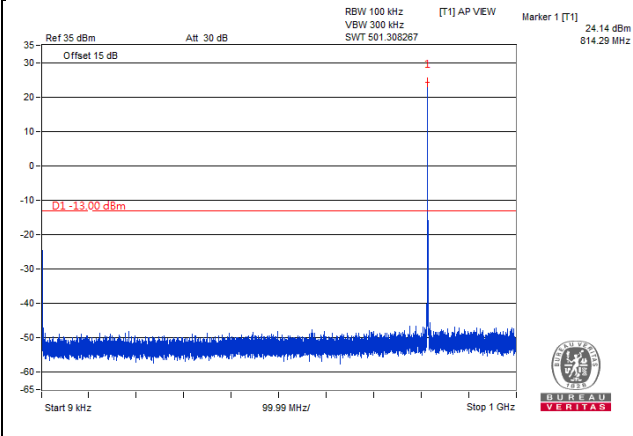
- The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz to 1GHz. 20dB attenuation pad is connected with spectrum. RBW=100kHz and VBW=300kHz is used for conducted emission measurement.
- Measuring frequency range is from 1GHz to 10GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

### 4.7.4 Test Results

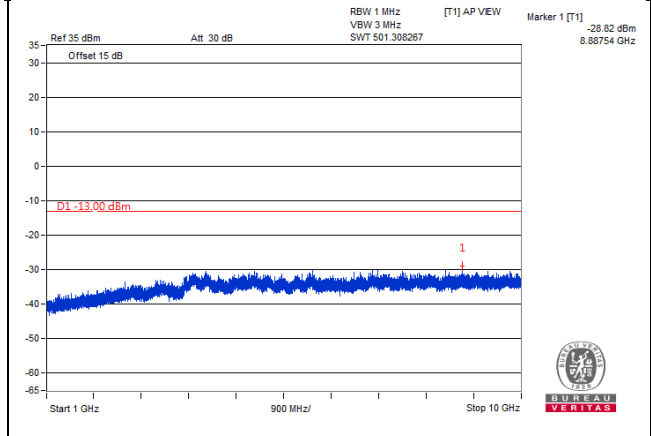
LTE Band 26, Channel Bandwidth 1.4MHz

Channel 26697 (814.7MHz)

Frequency Range : 9kHz~1GHz

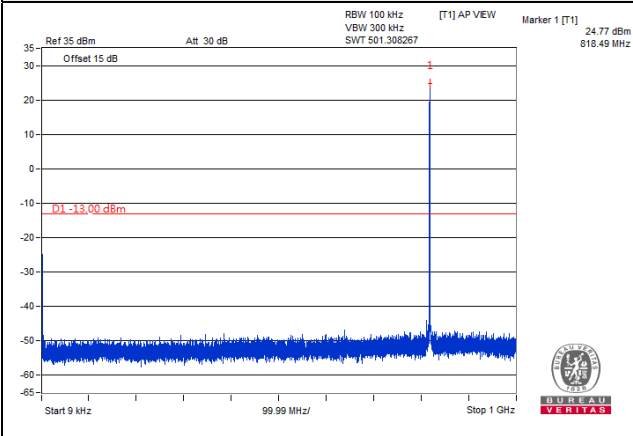


Frequency Range : 1GHz~10GHz

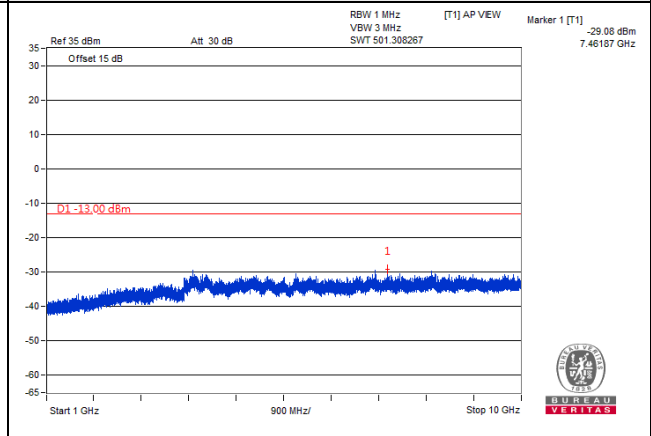


Channel 26740 (819.0MHz)

Frequency Range : 9kHz~1GHz

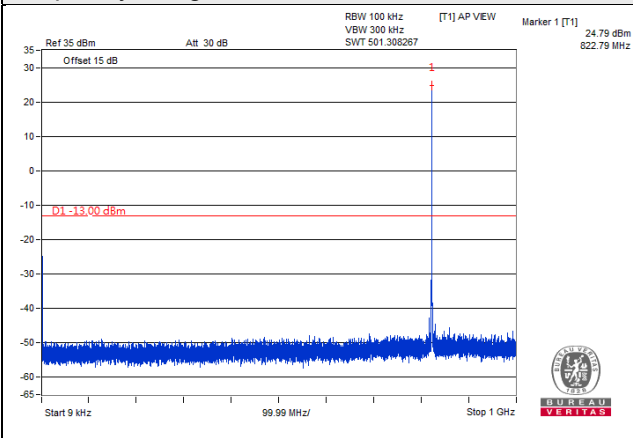


Frequency Range : 1GHz~10GHz

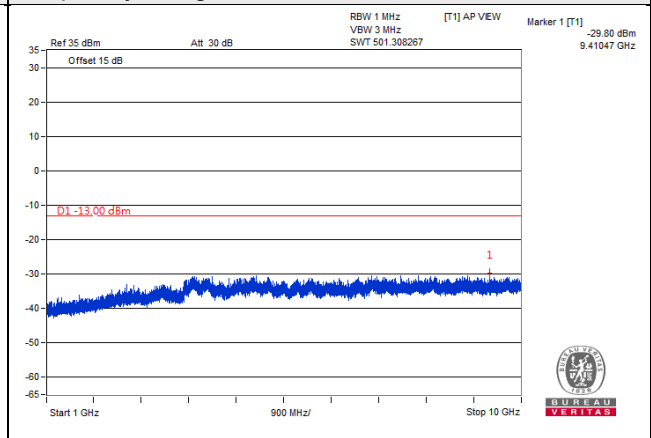


Channel 26783 (823.3MHz)

Frequency Range : 9kHz~1GHz



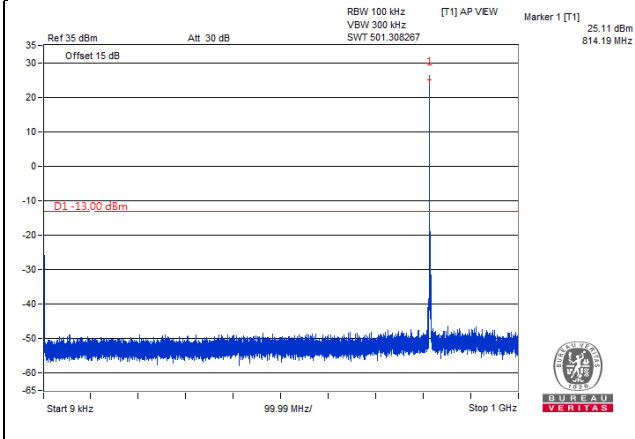
Frequency Range : 1GHz~10GHz



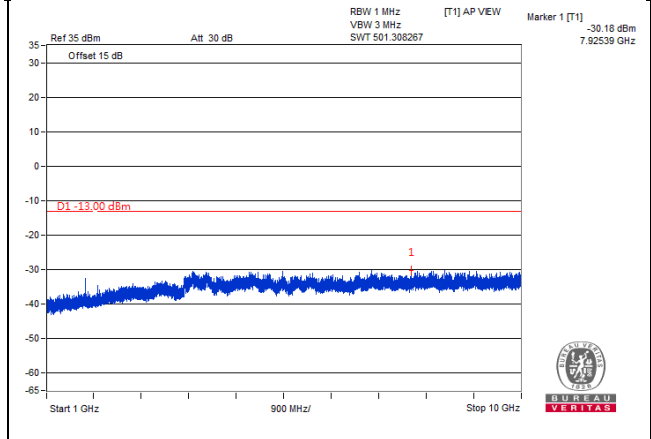
LTE Band 26, Channel Bandwidth 3MHz

Channel 26705 (815.5MHz)

Frequency Range : 9kHz~1GHz

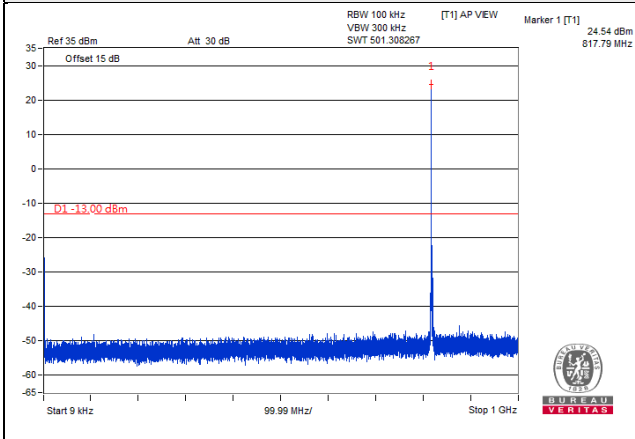


Frequency Range : 1GHz~10GHz

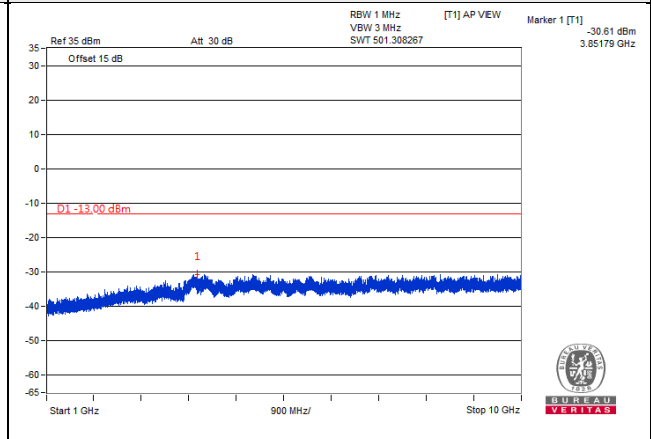


Channel 26740 (819.0MHz)

Frequency Range : 9kHz~1GHz

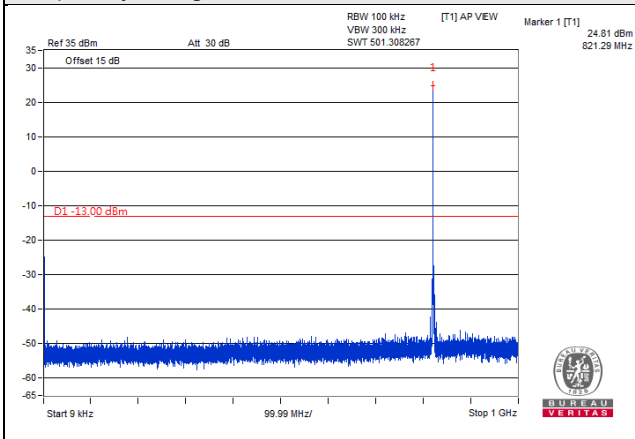


Frequency Range : 1GHz~10GHz

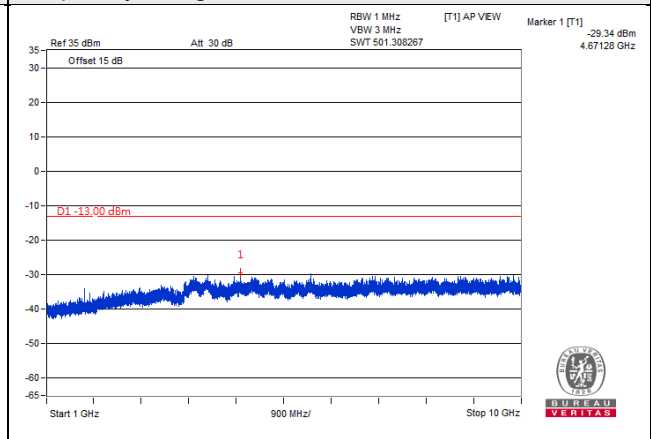


Channel 26775 (822.5MHz)

Frequency Range : 9kHz~1GHz



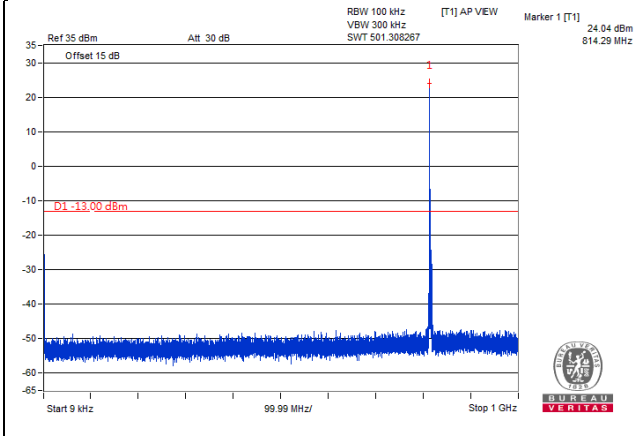
Frequency Range : 1GHz~10GHz



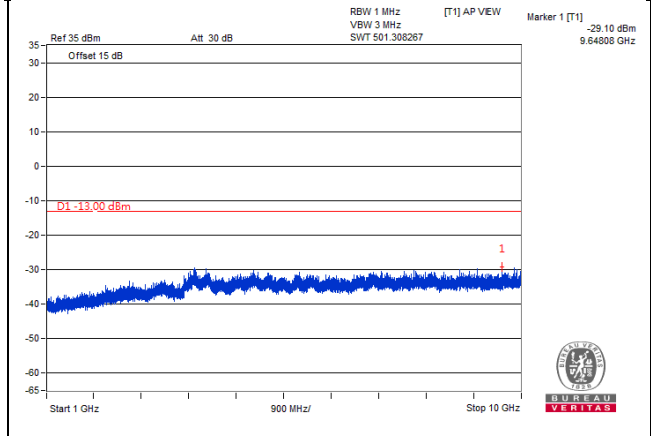
LTE Band 26, Channel Bandwidth 5MHz

Channel 26715 (816.5MHz)

Frequency Range : 9kHz~1GHz

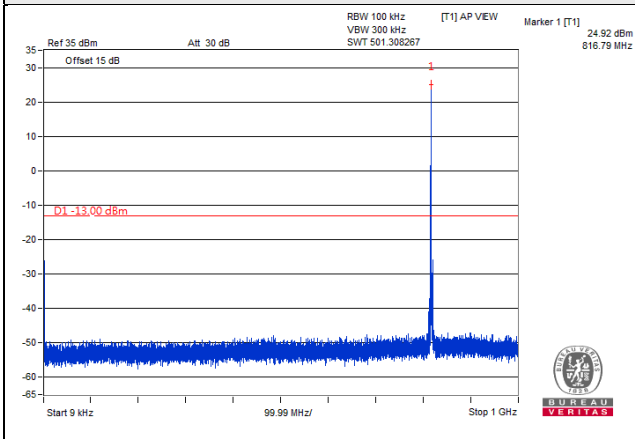


Frequency Range : 1GHz~10GHz

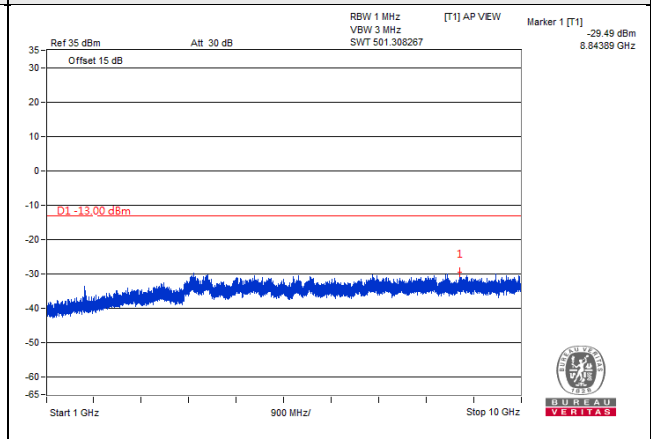


Channel 26740 (819.0MHz)

Frequency Range : 9kHz~1GHz

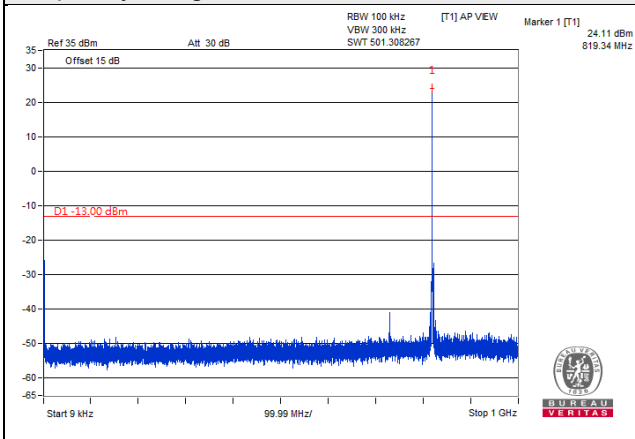


Frequency Range : 1GHz~10GHz

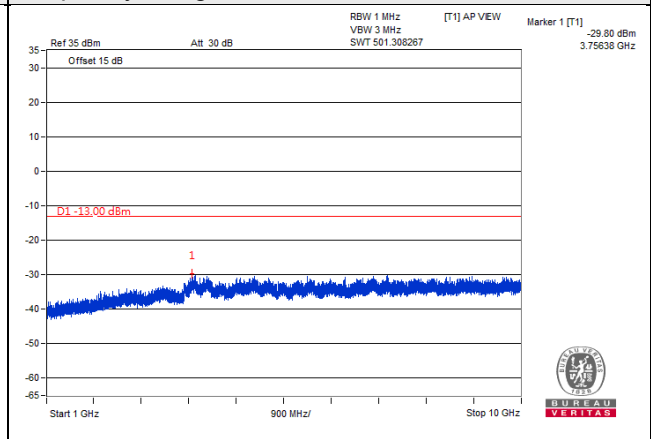


Channel 26765 (821.5MHz)

Frequency Range : 9kHz~1GHz



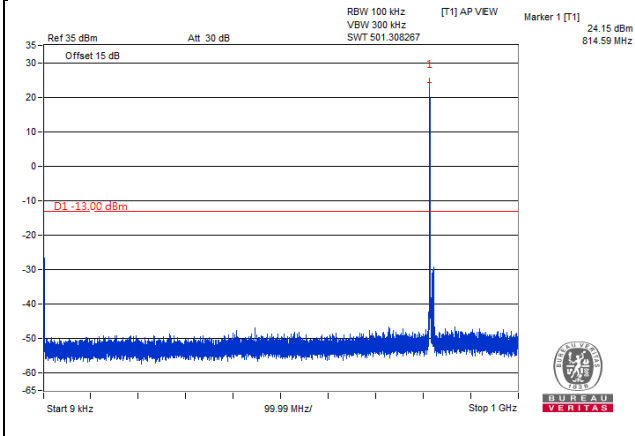
Frequency Range : 1GHz~10GHz



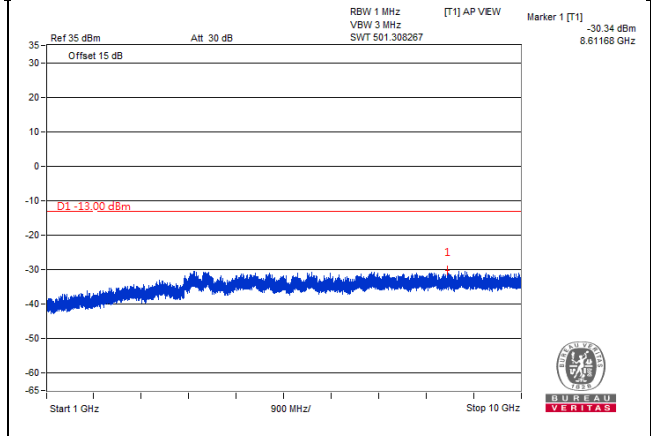
LTE Band 26, Channel Bandwidth 10MHz

Channel 26740 (819.0MHz)

Frequency Range : 9kHz~1GHz



Frequency Range : 1GHz~10GHz



## 4.8 Radiated Emission Measurement

### 4.8.1 Limits of Radiated Emission Measurement

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

### 4.8.2 Test Procedure

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

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

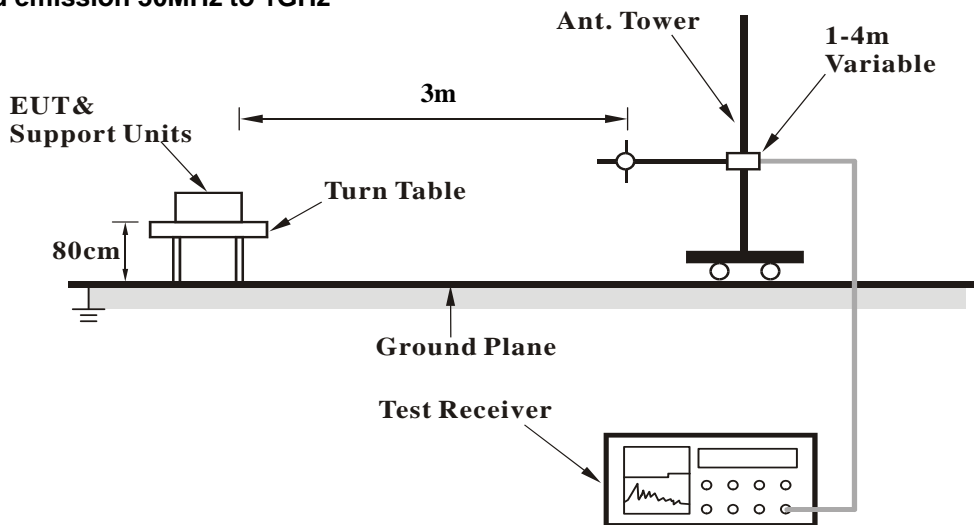
### 4.8.3 Deviation from Test Standard

No deviation.

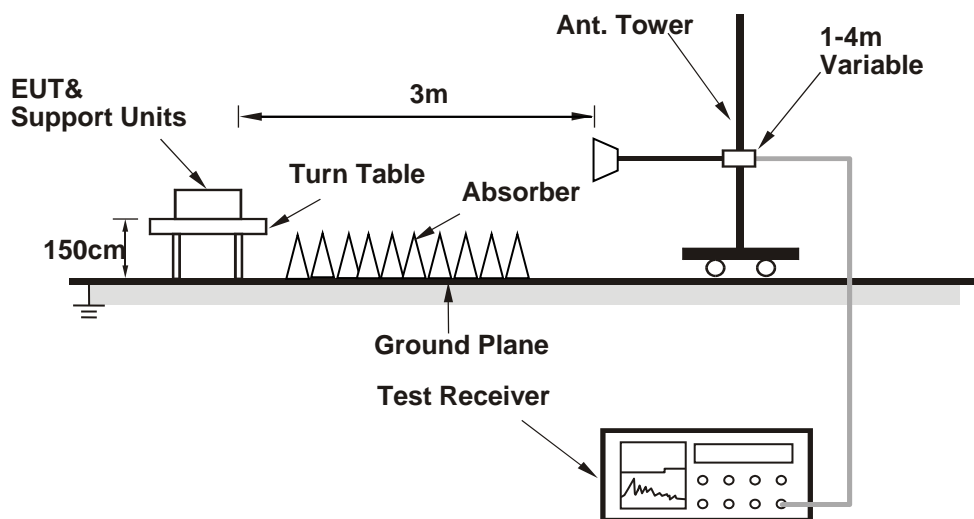


#### 4.8.4 Test Setup

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).

#### 4.8.5 Test Results

Below 1GHz

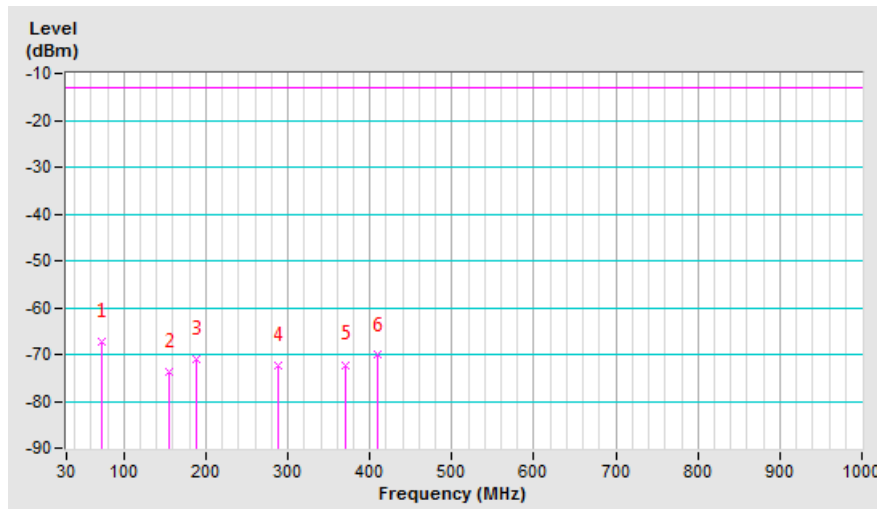
LTE Band 26, Channel Bandwidth 1.4MHz

|                          |                                |                 |                |
|--------------------------|--------------------------------|-----------------|----------------|
| Mode                     | TX channel 26697<br>(814.7MHz) | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 25deg. C, 70%RH                | Input Power     | 120Vac, 60Hz   |
| Tested By                | Noah Chang                     |                 |                |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |           |             |             |
|---|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 73.65       | -59.20        | -67.30                | 0.10                   | -67.20    | -13.00      | -54.20      |
| 2   | 155.13      | -67.10        | -70.90                | -2.90                  | -73.80    | -13.00      | -60.80      |
| 3   | 189.08      | -60.50        | -68.20                | -2.80                  | -71.00    | -13.00      | -58.00      |
| 4   | 288.02      | -66.80        | -70.70                | -1.80                  | -72.50    | -13.00      | -59.50      |
| 5   | 369.50      | -67.80        | -76.10                | 3.90                   | -72.20    | -13.00      | -59.20      |
| 6   | 410.24      | -67.90        | -73.50                | 3.30                   | -70.20    | -13.00      | -57.20      |

Remarks:

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

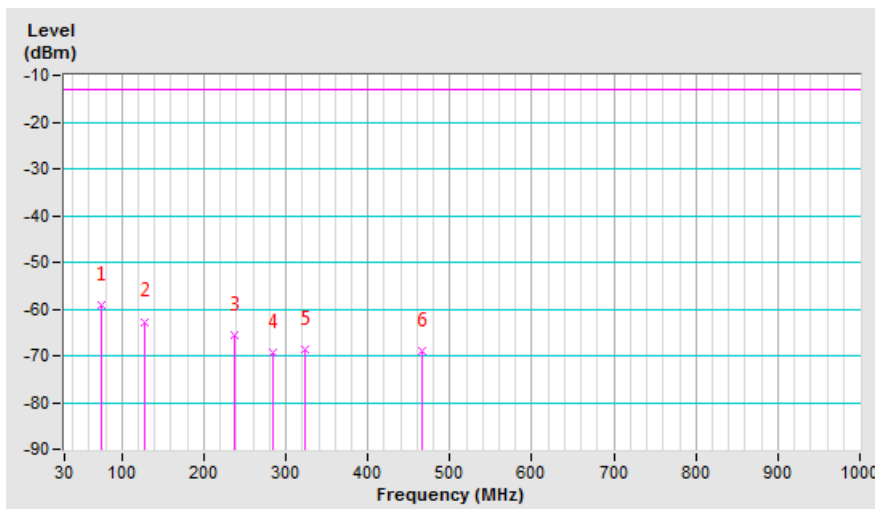


|                          |                             |                 |                |
|--------------------------|-----------------------------|-----------------|----------------|
| Mode                     | TX channel 26697 (814.7MHz) | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 25deg. C, 70%RH             | Input Power     | 120Vac, 60Hz   |
| Tested By                | Noah Chang                  |                 |                |

| Antenna Polarity & Test Distance: Vertical at 3 M |             |               |                       |                        |           |             |             |
|---|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 74.62       | -51.40        | -59.20                | 0.10                   | -59.10    | -13.00      | -46.10      |
| 2   | 127.00      | -54.90        | -59.40                | -3.30                  | -62.70    | -13.00      | -49.70      |
| 3   | 236.61      | -61.20        | -64.00                | -1.50                  | -65.50    | -13.00      | -52.50      |
| 4   | 285.11      | -69.30        | -67.70                | -1.60                  | -69.30    | -13.00      | -56.30      |
| 5   | 322.94      | -66.20        | -72.70                | 4.10                   | -68.60    | -13.00      | -55.60      |
| 6   | 466.50      | -66.80        | -72.70                | 3.60                   | -69.10    | -13.00      | -56.10      |

Remarks:

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



Above 1GHz  
 LTE Band 26, Channel Bandwidth 1.4MHz

|                          |                                |                 |              |
|--------------------------|--------------------------------|-----------------|--------------|
| Mode                     | TX channel 26697<br>(814.7MHz) | Frequency Range | 1GHz~10GHz   |
| Environmental Conditions | 25deg. C, 70%RH                | Input Power     | 120Vac, 60Hz |
| Tested By                | Noah Chang                     |                 |              |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |           |             |             |
|---|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1629.40     | -63.20        | -66.60                | 5.40                   | -61.20    | -13.00      | -48.20      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1629.40     | -64.20        | -65.60                | 5.40                   | -60.20    | -13.00      | -47.20      |

Remarks:

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

|                          |                                |                 |              |
|--------------------------|--------------------------------|-----------------|--------------|
| Mode                     | TX channel 26740<br>(819.0MHz) | Frequency Range | 1GHz~10GHz   |
| Environmental Conditions | 25deg. C, 70%RH                | Input Power     | 120Vac, 60Hz |
| Tested By                | Noah Chang                     |                 |              |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |           |             |             |
|---|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1638.00     | -64.00        | -67.40                | 5.50                   | -61.90    | -13.00      | -48.90      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1638.00     | -64.00        | -65.30                | 5.50                   | -59.80    | -13.00      | -46.80      |

Remarks:

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

|                          |                                |                 |              |
|--------------------------|--------------------------------|-----------------|--------------|
| Mode                     | TX channel 26783<br>(823.3MHz) | Frequency Range | 1GHz~10GHz   |
| Environmental Conditions | 25deg. C, 70%RH                | Input Power     | 120Vac, 60Hz |
| Tested By                | Noah Chang                     |                 |              |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |           |             |             |
|---|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1646.60     | -63.90        | -67.10                | 5.50                   | -61.60    | -13.00      | -48.60      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1646.60     | -63.80        | -64.90                | 5.50                   | -59.40    | -13.00      | -46.40      |

Remarks:

1.  $ERP (dBm) = S.G \text{ Value (dBm)} + \text{Correction Factor (dB)}$ .
2.  $\text{Correction Factor (dB)} = \text{Substitution Antenna Gain (dB)} + \text{Cable Loss (dB)}$ .

LTE Band 26, Channel Bandwidth 5MHz

|                          |                                |                 |              |
|--------------------------|--------------------------------|-----------------|--------------|
| Mode                     | TX channel 26715<br>(816.5MHz) | Frequency Range | 1GHz~10GHz   |
| Environmental Conditions | 25deg. C, 70%RH                | Input Power     | 120Vac, 60Hz |
| Tested By                | Noah Chang                     |                 |              |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |           |             |             |
|---|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1633.00     | -63.80        | -67.30                | 5.50                   | -61.80    | -13.00      | -48.80      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1633.00     | -63.40        | -64.70                | 5.50                   | -59.20    | -13.00      | -46.20      |

Remarks:

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

|                          |                              |                 |              |
|--------------------------|------------------------------|-----------------|--------------|
| Mode                     | TX channel 26740<br>(819MHz) | Frequency Range | 1GHz~10GHz   |
| Environmental Conditions | 25deg. C, 70%RH              | Input Power     | 120Vac, 60Hz |
| Tested By                | Noah Chang                   |                 |              |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |           |             |             |
|---|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1638.00     | -64.50        | -67.90                | 5.50                   | -62.40    | -13.00      | -49.40      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1638.00     | -64.20        | -65.50                | 5.50                   | -60.00    | -13.00      | -47.00      |

Remarks:

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

|                          |                                |                 |              |
|--------------------------|--------------------------------|-----------------|--------------|
| Mode                     | TX channel 26765<br>(821.5MHz) | Frequency Range | 1GHz~10GHz   |
| Environmental Conditions | 25deg. C, 70%RH                | Input Power     | 120Vac, 60Hz |
| Tested By                | Noah Chang                     |                 |              |

| Antenna Polarity & Test Distance: Horizontal at 3 M |             |               |                       |                        |           |             |             |
|---|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1643.00     | -64.20        | -67.60                | 5.50                   | -62.10    | -13.00      | -49.10      |
| Antenna Polarity & Test Distance: Vertical at 3 M   |             |               |                       |                        |           |             |             |
| No.   | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1   | 1643.00     | -64.50        | -65.70                | 5.50                   | -60.20    | -13.00      | -47.20      |

Remarks:

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

LTE Band 26, Channel Bandwidth 10MHz

|                          |                                |                 |              |
|--------------------------|--------------------------------|-----------------|--------------|
| Mode                     | TX channel 26740<br>(819.0MHz) | Frequency Range | 1GHz~10GHz   |
| Environmental Conditions | 25deg. C, 70%RH                | Input Power     | 120Vac, 60Hz |
| Tested By                | Noah Chang                     |                 |              |

| Antenna Polarity & Test Distance: Horizontal at 3 M |                |               |                       |                        |               |               |               |
|---|----------------|---------------|-----------------------|------------------------|---------------|---------------|---------------|
| No.   | Freq. (MHz)    | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm)     | Limit (dBm)   | Margin (dB)   |
| 1   | 1638.00        | -64.80        | -68.10                | 5.50                   | -62.60        | -13.00        | -49.60        |
| Antenna Polarity & Test Distance: Vertical at 3 M   |                |               |                       |                        |               |               |               |
| No.   | Freq. (MHz)    | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm)     | Limit (dBm)   | Margin (dB)   |
| <b>1</b>  | <b>1638.00</b> | <b>-63.20</b> | <b>-64.50</b>         | <b>5.50</b>            | <b>-59.00</b> | <b>-13.00</b> | <b>-46.00</b> |

Remarks:

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



## 5 Pictures of Test Arrangements

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

## Appendix – Information 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.

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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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