



# Shenzhen General Testing & Inspection Technology Co.,Ltd.

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## TEST REPORT

**Report No.** .....: **GTI20181564F-5**

**FCC ID**.....: **2AC88-ELTP18A04**

**IC** .....: **24230-ELTP18A04**

**Applicant**.....: HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED

**Address**.....: Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong, China

**Manufacturer**.....: HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED

**Address**.....: Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong, China

**Product Name**.....: **Smart Phone**

**Trade Mark**.....: GlocalMe

**Model/Type reference**.....: ELTP18A04

**Listed Model(s)** .....: N/A

**Standard**.....: **FCC CFR Title 47 Part 2**  
**FCC CFR Title 47 Part 22H**  
**FCC Part 90S**  
**RSS-Gen, RSS-119 Issue 12**

**Date of receipt of test sample**...: 2018-07-25

**Date of testing**.....: 2018-07-26 to 2018-08-14

**Date of issue**.....: 2018-08-15

**Result**.....: **PASS**

Compiled by:

(Printed name+signature)

Terry Su

Supervised by:

( Printed name+signature)

Cary Luo

Approved by:

( Printed name+signature)

Walter Chen

**Testing Laboratory Name**..... **Shenzhen General Testing & Inspection Technology Co.,Ltd.**

**Address**..... 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park,  
Shenzhen, Guangdong, China

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Any objections must be raised to GTI within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit. The test report merely correspond to the test sample.

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# 1. SUMMARY

## 1.1. Test Standards

[FCC Part 22 Subpart H](#): Cellular Radiotelephone Service.

[FCC Part 90 Subpart S](#): Regulations Governing Licensing and Use of Frequencies in the 806-824, 851-869, 896-901, and 935-940 MHz Bands.

[FCC Part 2](#): FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS.

[ANSI C63.26: 2015](#): American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services.

[KDB 971168 D01 Power Meas License Digital Systems v03](#): MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS.

[ANSI/TIA-603-E\(2016\)](#): Land Mobile FM or PM Communications Equipment and Performance Standards.

[RSS-Gen Issue 5](#): General Requirements for Compliance of Radio Apparatus.

[RSS-119](#): Land Mobile and Fixed Equipment Operating in the Frequency Range 27.41-960 MHz.

## 1.2. Report version

| Revised No. | Date of issue | Description |
|-------------|---------------|-------------|
| 01          | 2018-08-15    | Original    |
|             |               |             |
|             |               |             |
|             |               |             |
|             |               |             |

### 1.3. Test Description

| Test Item                                   | Section in CFR 47                                  | RSS Rule                      | Result | Test Engineer |
|---------------------------------------------|----------------------------------------------------|-------------------------------|--------|---------------|
| Conducted Output Power                      | Part 2.1046<br>Part 22.913(a)                      | RSS-119(5.4)                  | Pass   | Young He      |
| Peak-to-Average Ratio                       | Part 24.232                                        | RSS-119()                     | Pass   | Young He      |
| 99% Occupied Bandwidth &<br>26 dB Bandwidth | Part 2.1049<br>Part 22.917(b)<br>Part 90.209       | RSS-119(5.5)                  | Pass   | Young He      |
| Band Edge                                   | Part 2.1051<br>Part 22.917<br>Part 90.691          | RSS-119(5.8)                  | Pass   | Young He      |
| Conducted Spurious<br>Emissions             | Part 2.1051<br>Part 22.917<br>Part 90.691          | RSS-119(5.3)                  | Pass   | Young He      |
| Frequency stability vs<br>temperature       | Part 2.1055(a)(1)(b)<br>Part 22.355<br>Part 90.213 | RSS-GEN(6.11)<br>RSS-119(5.3) | Pass   | Young He      |
| Frequency stability vs<br>voltage           | Part 2.1055(d)(1)(2)<br>Part 22.355<br>Part 90.213 | RSS-GEN(6.11)<br>RSS-119(5.3) | Pass   | Young He      |
| ERP and EIRP                                | Part 22.913(a)<br>Part 90.635                      | RSS-119(5.8)                  | Pass   | Young He      |
| Radiated Spurious<br>Emissions              | Part 2.1053<br>Part 22.917<br>Part 90.691          | RSS-119(5.8)                  | Pass   | Young He      |
| Receiver Spurious Emissions                 | /                                                  | RSS-GEN(7.1.3)                | Pass   | Young He      |

Note: The measurement uncertainty is not included in the test result.

## 1.4. Test Facility

### Address of the test laboratory

#### Shenzhen General Testing & Inspection Technology Co., Ltd.

Add: 1F, 2 Block, Jiaquan Building, Guanlan High-tech Park Baoan District, Shenzhen, Guangdong, China

### Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

#### IC Registration No.: 9783A

The 3m alternate test site of Shenzhen GTI Technology Co., Ltd. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Aug, 2011.

#### FCC-Registration No.:214666

Shenzhen GTI Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 214666, Sep 19, 2011

## 1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements and is documented in the Shenzhen General Testing & Inspection Technology Co., Ltd quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for General Testing & Inspection laboratory is reported:

| Test Items                                 | Measurement Uncertainty | Notes |
|--------------------------------------------|-------------------------|-------|
| Frequency stability                        | 25 Hz                   | (1)   |
| Transmitter power conducted                | 0.57 dB                 | (1)   |
| Transmitter power Radiated                 | 2.20 dB                 | (1)   |
| Conducted spurious emission 9KHz-12.75 GHz | 1.60 dB                 | (1)   |
| Conducted Emission 9KHz-30MHz              | 3.39 dB                 | (1)   |
| Radiated Emission 30~1000MHz               | 4.24 dB                 | (1)   |
| Radiated Emission 1~18GHz                  | 5.16 dB                 | (1)   |
| Radiated Emission 18-40GHz                 | 5.54 dB                 | (1)   |
| Occupied Bandwidth                         | -----                   | (1)   |
| Emission Mask                              | -----                   | (1)   |
| Modulation Characteristic                  | -----                   | (1)   |
| Transmitter Frequency Behavior             | -----                   | (1)   |

101 This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

## 1.6. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

|                     |         |
|---------------------|---------|
| Normal Temperature: | 25°C    |
| Relative Humidity:  | 55 %    |
| Air Pressure:       | 101 kPa |

## 2. GENERAL INFORMATION

### 2.1. Client Information

|               |                                                                                                                                       |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Applicant:    | HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED                                                                                        |
| Address:      | Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong, China                                             |
| Manufacturer: | HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED                                                                                        |
| Address:      | Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong, China                                             |
| Factory:      | Shenzhen uCloudlink Network Technology Co., Ltd.                                                                                      |
| Address:      | 3rd Floor, A part of Building 1, Shenzhen Software Industry Base, Nanshan District Xuefu Road, 518057 Shenzhen City, Guangdong, China |

### 2.2. General Description of EUT

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Product Name:         | Smart Phone                                                           |
| Model/Type reference: | ELTP18A04                                                             |
| Marketing Name:       | GlocalMe                                                              |
| Listed Model(s):      | /                                                                     |
| Power supply:         | 3.85Vdc 3400mAh from Li-ion Battery                                   |
| Adapter 1:            | Model:HJ-0502000W2-US<br>Input:100-240V 50/60Hz 0.3A<br>Output:5V/2A  |
| Adapter 2:            | Model:PS10J050K2000UU<br>Input:100-240V 50/60Hz 0.35A<br>Output:5V/2A |
| Hardware version:     | P3_MB_PCB_VA                                                          |
| Software version:     | P3S18_TSV1.0.000.001.180720                                           |
| <b>LTE</b>            |                                                                       |
| Operation Band:       | Band 26: UL: 814.7 MHz~823.3 MHz, DL: 859.7MHz~868.3 MHz              |
| Modulation Type:      | QPSK, 16QAM                                                           |
| Antenna type:         | PIFA Antenna                                                          |
| Antenna Gain:         | FDD Band 26: -2.19dBi                                                 |

**Remark:** The Test EUT support two SIM card(SIM1,SIM2),so all the tests are performed at each SIM card (SIM1,SIM2) mode, the datum recorded is the worst case for all the mode at SIM1 Card mode.

## 2.3. Description of Test Modes and Test Frequency

The EUT has been tested under typical operating condition. The CMW500 used to control the EUT staying in continuous transmitting and receiving mode for testing.

### Test Frequency:

| Band 26      |                |                 |                           |
|--------------|----------------|-----------------|---------------------------|
| Test channel | Bandwidth(MHz) | N <sub>UL</sub> | Frequency of Uplink (MHz) |
| Low Range    | 1.4            | 26697           | 814.7                     |
|              | 3              | 26705           | 815.5                     |
|              | 5              | 26715           | 816.5                     |
|              | 10             | -               | -                         |
|              | 15             | 26765           | 821.5                     |
| Mid Range    | 1.4/3/5/10     | 26740           | 819.0                     |
| High Range   | 1.4            | 26783           | 823.3                     |
|              | 3              | 26775           | 822.5                     |
|              | 5              | 26765           | 821.5                     |
|              | 10             | -               | -                         |
|              | 15             | -               | -                         |

## 2.4. Measurement Instruments List

| Output Power (Radiated) & Radiated Spurious Emission |                                     |                              |             |            |                  |
|------------------------------------------------------|-------------------------------------|------------------------------|-------------|------------|------------------|
| Item                                                 | Test Equipment                      | Manufacturer                 | Model No.   | Serial No. | Calibrated until |
| 1                                                    | EMI Test Receiver                   | R&S                          | ESCI        | 100967     | Jan. 07, 2018    |
| 2                                                    | High pass filter                    | Compliance Direction systems | BSU-6       | 34202      | Jan. 07, 2018    |
| 3                                                    | Log-Bicon Antenna                   | Schwarzbeck                  | CBL6141A    | 4180       | Jan. 07, 2018    |
| 4                                                    | Log-Bicon Antenna                   | Schwarzbeck                  | CBL6141A    | 4181       | Jan. 07, 2018    |
| 5                                                    | Spectrum Analyzer                   | HP                           | 8563E       | 02052      | Jan. 07, 2018    |
| 6                                                    | Horn Antenna                        | Schwarzbeck                  | BBHA 9120D  | 648        | Jan. 07, 2018    |
| 7                                                    | Horn Antenna                        | Schwarzbeck                  | BBHA 9120D  | 649        | Jan. 07, 2018    |
| 8                                                    | Ultra-Broadband Antenna             | ShwarzBeck                   | BBHA9170    | 25841      | Jan. 07, 2018    |
| 9                                                    | Ultra-Broadband Antenna             | ShwarzBeck                   | BBHA9170    | 25842      | Jan. 07, 2018    |
| 10                                                   | Pre-Amplifier                       | HP                           | 8447D       | 1937A03050 | Jan. 07, 2018    |
| 11                                                   | Pre-Amplifier                       | EMCI                         | EMC051835   | 980075     | Jan. 07, 2018    |
| 12                                                   | Splitter                            | Mini-Circuit                 | ZAPD-4      | 400059     | Jan. 07, 2018    |
| 13                                                   | Signal Generator                    | Agilent                      | N5182A      | 1019356    | Jan. 07, 2018    |
| 14                                                   | Wideband Radio Communication Tester | Rohde & Schwarz              | CMW500      | 116410     | Jan. 07, 2018    |
| 15                                                   | Antenna Mast                        | UC                           | UC3000      | N/A        | N/A              |
| 16                                                   | Antenna mast                        | MATURO                       | TAM-4.0-P   | N/A        | N/A              |
| 17                                                   | Turn Table                          | UC                           | UC3000      | N/A        | N/A              |
| 18                                                   | Cable Below 1GHz                    | Schwarzbeck                  | AK9515E     | 33155      | Jan. 07,2018     |
| 19                                                   | Cable Above 1GHz                    | Hubersuhner                  | SUCOFLEX102 | DA1580     | Jan. 07,2018     |

| Output Power(Conducted) & Occupied Bandwidth & Emission Bandwidth & Band Edge Compliance & Conducted Spurious Emission |                               |                 |           |            |                  |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------|-----------|------------|------------------|
| Item                                                                                                                   | Test Equipment                | Manufacturer    | Model No. | Serial No. | Calibrated until |
| 1                                                                                                                      | UNIVERSAL RADIO COMMUNICATION | Rohde & Schwarz | CMU200    | 114694     | Jan. 04, 2019    |
| 2                                                                                                                      | Spectrum Analyzer             | Rohde & Schwarz | FSU       | 100105     | Jan. 04, 2019    |
| 3                                                                                                                      | Spectrum Analyzer             | Rohde & Schwarz | FUV40-N   | 101331     | Jan. 07, 2017    |
| 4                                                                                                                      | Splitter                      | Mini-Circuit    | ZAPD-4    | 400059     | Jan. 04, 2019    |

| Frequency Stability |                               |                 |           |            |                  |
|---------------------|-------------------------------|-----------------|-----------|------------|------------------|
| Item                | Test Equipment                | Manufacturer    | Model No. | Serial No. | Calibrated until |
| 1                   | UNIVERSAL RADIO COMMUNICATION | Rohde & Schwarz | CMU200    | 114694     | Jan. 04, 2019    |
| 2                   | Spectrum Analyzer             | Rohde & Schwarz | FSU       | 100105     | Jan. 04, 2019    |
| 3                   | Spectrum Analyzer             | Rohde & Schwarz | FUV40-N   | 101331     | Jan. 07, 2017    |
| 4                   | Splitter                      | Mini-Circuit    | ZAPD-4    | 400059     | Jan. 04, 2019    |
| 5                   | Climate Chamber               | ESPEC           | EL-10KA   | 05107008   | Jan. 04, 2019    |

Note: 1. The Cal. Interval was one year.

2. The cable loss has calculated in test result which connection between each test instruments.

### 3. TEST ITEM AND RESULTS

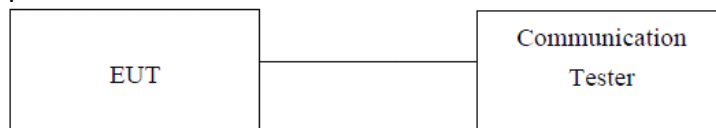
#### 3.1. Conducted Output Power

**LIMIT:**

Conducted Output Power: N/A

**TEST CONFIGURATION**

- For Conducted output Power



*Note: Measurement setup for testing on Antenna connector*

**TEST PROCEDURE**

- For Conducted output Power
  1. The transmitter output port was connected to base station.
  2. The RF output of EUT was connected to the power meter by RF cable and attenuator, the path loss was compensated to the results for each measurement.
  3. Set EUT at maximum power through base station.
  4. Select lowest, middle, and highest channels for each band and different modulation.
  5. Measure the maximum PK burst power and maximum Avg. burst power.

## TEST RESULTS

| LTE-FDD Band 26 |            |               |           | Actual output Power (dBm) |        |       |
|-----------------|------------|---------------|-----------|---------------------------|--------|-------|
| Band-width(MHz) | Modulation | RB allocation | RB offset | Low                       | Middle | High  |
| 1.4             | QPSK       | 1             | 0         | 21.69                     | 21.79  | 21.71 |
|                 |            |               | 2         | 21.32                     | 21.42  | 21.34 |
|                 |            |               | 5         | 21.55                     | 21.65  | 21.57 |
|                 |            | 3             | 0         | 22.04                     | 22.14  | 22.06 |
|                 |            |               | 1         | 22.09                     | 22.19  | 22.11 |
|                 |            |               | 3         | 21.98                     | 22.08  | 22.00 |
|                 |            | 6             | 0         | 21.81                     | 21.91  | 21.83 |
|                 | 16QAM      | 1             | 0         | 21.41                     | 21.51  | 21.43 |
|                 |            |               | 2         | 22.04                     | 22.14  | 22.06 |
|                 |            |               | 5         | 22.03                     | 22.13  | 22.05 |
|                 |            | 3             | 0         | 21.35                     | 21.45  | 21.37 |
|                 |            |               | 1         | 21.85                     | 21.95  | 21.87 |
|                 |            |               | 3         | 21.16                     | 21.26  | 21.18 |
|                 |            | 6             | 0         | 21.33                     | 21.43  | 21.35 |
| 3               | QPSK       | 1             | 0         | 21.35                     | 21.45  | 21.37 |
|                 |            |               | 8         | 21.51                     | 21.61  | 21.53 |
|                 |            |               | 14        | 21.52                     | 21.62  | 21.54 |
|                 |            | 8             | 0         | 22.06                     | 22.16  | 22.08 |
|                 |            |               | 4         | 21.55                     | 21.65  | 21.57 |
|                 |            |               | 7         | 22.02                     | 22.12  | 22.04 |
|                 |            | 15            | 0         | 21.77                     | 21.87  | 21.79 |
|                 | 16QAM      | 1             | 0         | 21.64                     | 21.74  | 21.66 |
|                 |            |               | 8         | 21.81                     | 21.91  | 21.83 |
|                 |            |               | 14        | 21.70                     | 21.80  | 21.72 |
|                 |            | 8             | 0         | 21.26                     | 21.36  | 21.28 |
|                 |            |               | 4         | 21.69                     | 21.79  | 21.71 |
|                 |            |               | 7         | 21.71                     | 21.81  | 21.73 |
|                 |            | 15            | 0         | 21.15                     | 21.25  | 21.17 |

| LTE-FDD Band 26 |            |               |           | Actual output Power (dBm) |        |       |
|-----------------|------------|---------------|-----------|---------------------------|--------|-------|
| Band-width(MHz) | Modulation | RB allocation | RB offset | Low                       | Middle | High  |
| 5               | QPSK       | 1             | 0         | 21.53                     | 21.63  | 21.55 |
|                 |            |               | 12        | 21.68                     | 21.78  | 21.70 |
|                 |            |               | 24        | 21.29                     | 21.39  | 21.31 |
|                 |            | 12            | 0         | 21.88                     | 21.98  | 21.90 |
|                 |            |               | 6         | 22.06                     | 22.16  | 22.08 |
|                 |            |               | 13        | 21.99                     | 22.09  | 22.01 |
|                 |            | 25            | 0         | 21.24                     | 21.34  | 21.26 |
|                 | 16QAM      | 1             | 0         | 21.66                     | 21.76  | 21.68 |
|                 |            |               | 12        | 21.79                     | 21.89  | 21.81 |
|                 |            |               | 24        | 21.81                     | 21.91  | 21.83 |
|                 |            | 12            | 0         | 21.48                     | 21.58  | 21.50 |
|                 |            |               | 6         | 21.69                     | 21.79  | 21.71 |
|                 |            |               | 13        | 21.94                     | 22.04  | 21.96 |
|                 |            | 25            | 0         | 21.32                     | 21.42  | 21.34 |
| 10              | QPSK       | 1             | 0         | /                         | 22.17  | /     |
|                 |            |               | 24        | /                         | 22.37  | /     |
|                 |            |               | 49        | /                         | 22.09  | /     |
|                 |            | 25            | 0         | /                         | 21.92  | /     |
|                 |            |               | 12        | /                         | 21.81  | /     |
|                 |            |               | 25        | /                         | 21.49  | /     |
|                 |            | 50            | 0         | /                         | 21.88  | /     |
|                 | 16QAM      | 1             | 0         | /                         | 21.65  | /     |
|                 |            |               | 24        | /                         | 21.91  | /     |
|                 |            |               | 49        | /                         | 21.67  | /     |
|                 |            | 25            | 0         | /                         | 21.90  | /     |
|                 |            |               | 12        | /                         | 21.82  | /     |
|                 |            |               | 25        | /                         | 21.86  | /     |
|                 |            | 50            | 0         | /                         | 22.03  | /     |

| LTE-FDD Band 26 |            |               |           | Actual output Power (dBm) |        |      |
|-----------------|------------|---------------|-----------|---------------------------|--------|------|
| Band-width(MHz) | Modulation | RB allocation | RB offset | Low                       | Middle | High |
| 15              | QPSK       | 1             | 0         | /                         | 22.09  | /    |
|                 |            |               | 38        | /                         | 22.34  | /    |
|                 |            |               | 74        | /                         | 22.07  | /    |
|                 |            | 38            | 0         | /                         | 21.87  | /    |
|                 |            |               | 18        | /                         | 21.95  | /    |
|                 |            |               | 37        | /                         | 22.07  | /    |
|                 |            | 75            | 0         | /                         | 21.35  | /    |
|                 | 16QAM      | 1             | 0         | /                         | 21.77  | /    |
|                 |            |               | 38        | /                         | 21.80  | /    |
|                 |            |               | 74        | /                         | 21.67  | /    |
|                 |            | 38            | 0         | /                         | 22.02  | /    |
|                 |            |               | 18        | /                         | 21.52  | /    |
|                 |            |               | 37        | /                         | 21.57  | /    |
|                 |            | 75            | 0         | /                         | 22.26  | /    |

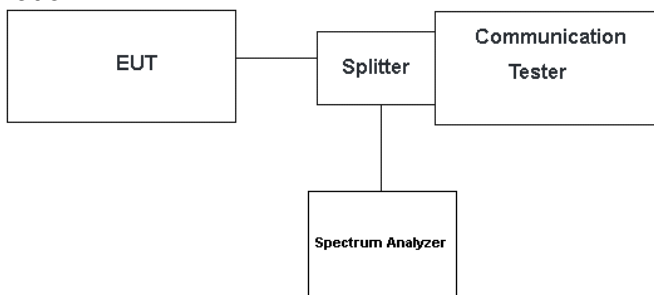
## 3.2. Peak-to-Average Ratio

### LIMIT:

The Peak-to-Average Ratio (PAR) of the transmission may not exceed 13dB.

### TEST CONFIGURATION

- For Peak-to-Average Ratio



### TEST PROCEDURE

- For Peak-to-Average Ratio
  1. The testing follows FCC KDB 971168 v02r02 Section 5.7.1.
  2. The EUT was connected to spectrum and communication tester via a splitter
  3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
  4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
  6. Record the deviation as Peak to Average Ratio.

### TEST RESULTS

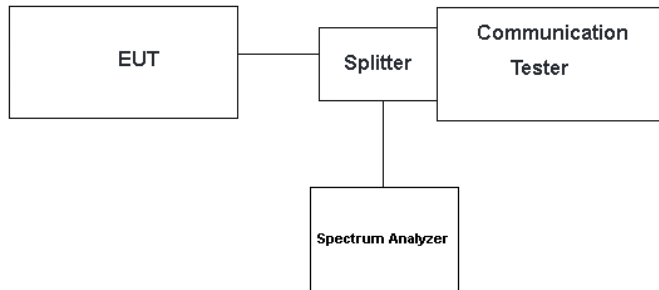
Please see the Appendix for every tested Band.

### 3.3. Occupy Bandwidth

#### LIMIT

N/A

#### TEST CONFIGURATION



#### TEST PROCEDURE

1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer
2. RBW was set to about 1% of emission BW, VBW  $\geq 3$  times RBW.
3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

#### TEST RESULTS

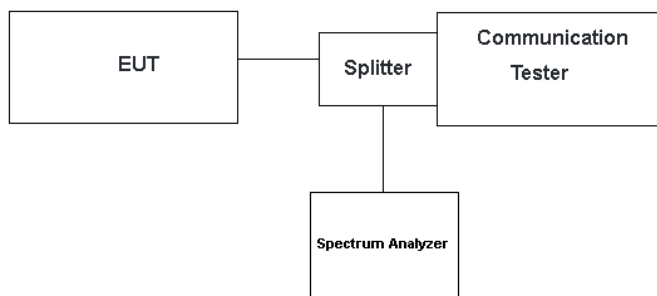
Please see the Appendix for every tested Band.

### 3.4. Out of band emission at antenna terminals

#### LIMIT

**FDD Band 26:** The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

The specification that emissions shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

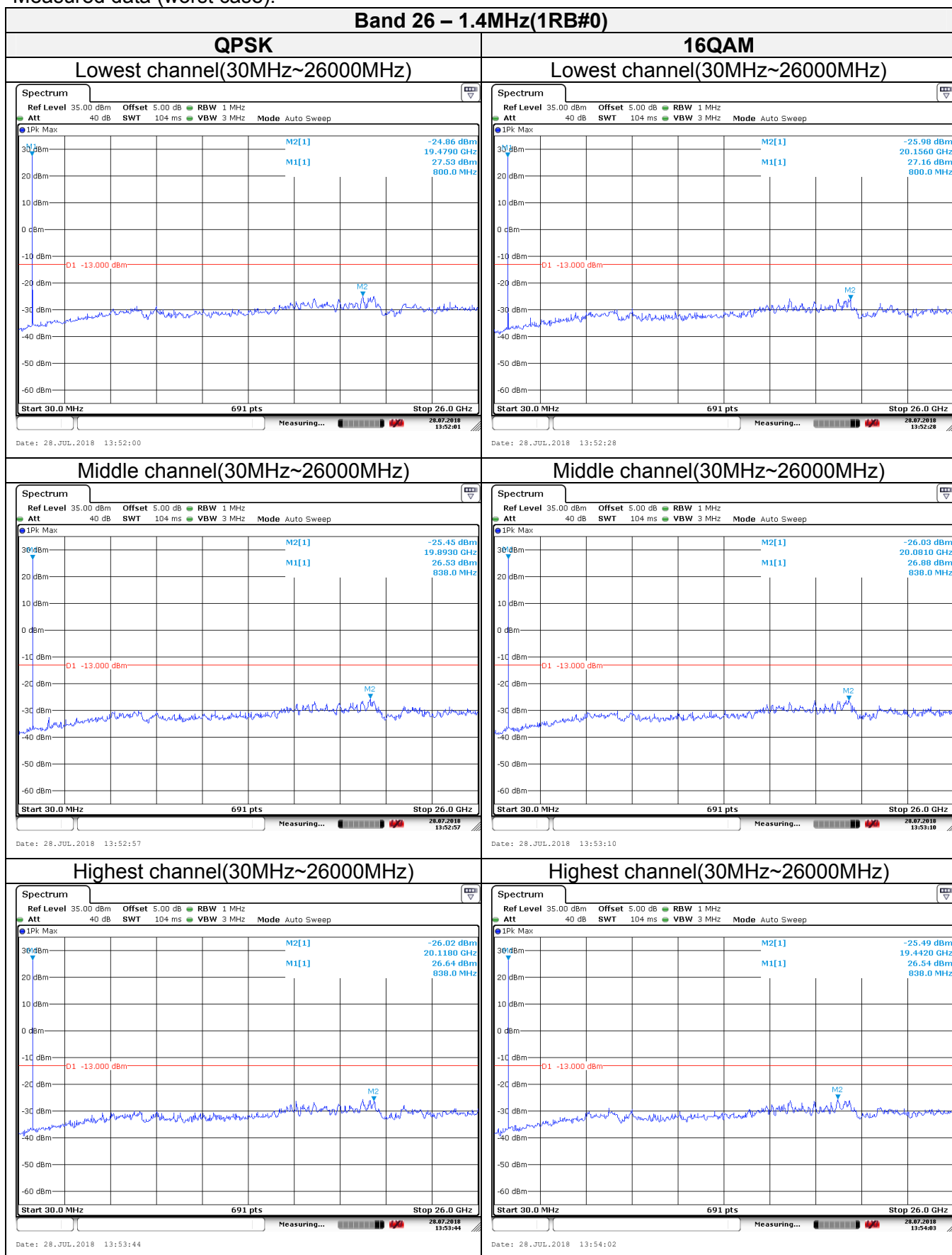


#### TEST PROCEDURE

1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
2. The resolution bandwidth of the spectrum analyzer was set at 1MHz; sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.
3. For the out of band: Set the RBW = 1MHz VBW  $\geq 3$  times RBW, Start=30MHz, Stop= 10th harmonic.

## TEST RESULTS

Measured data (worst case):



Shenzhen General Testing & Inspection Technology Co., Ltd.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

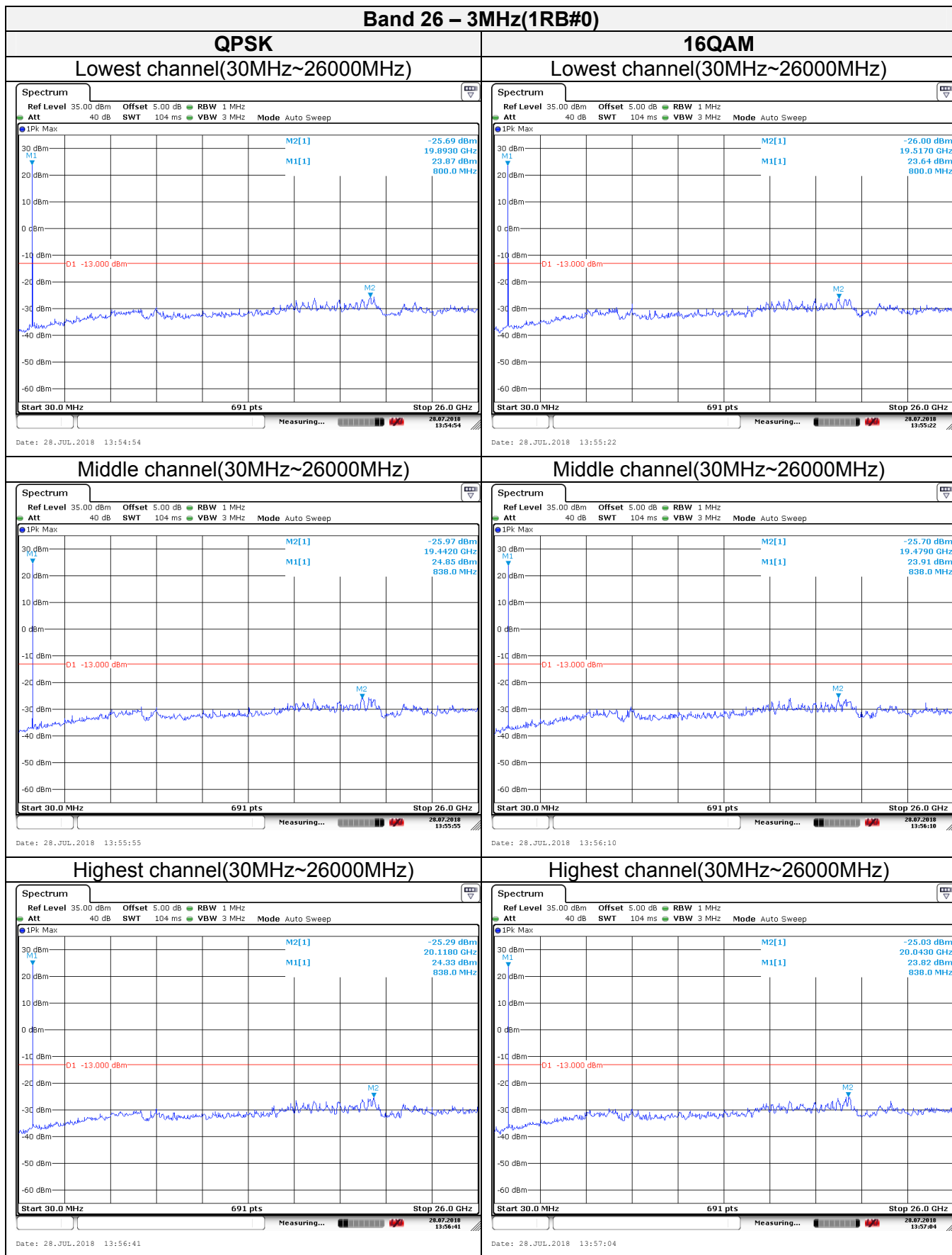
Tel.: (86)755-27521059

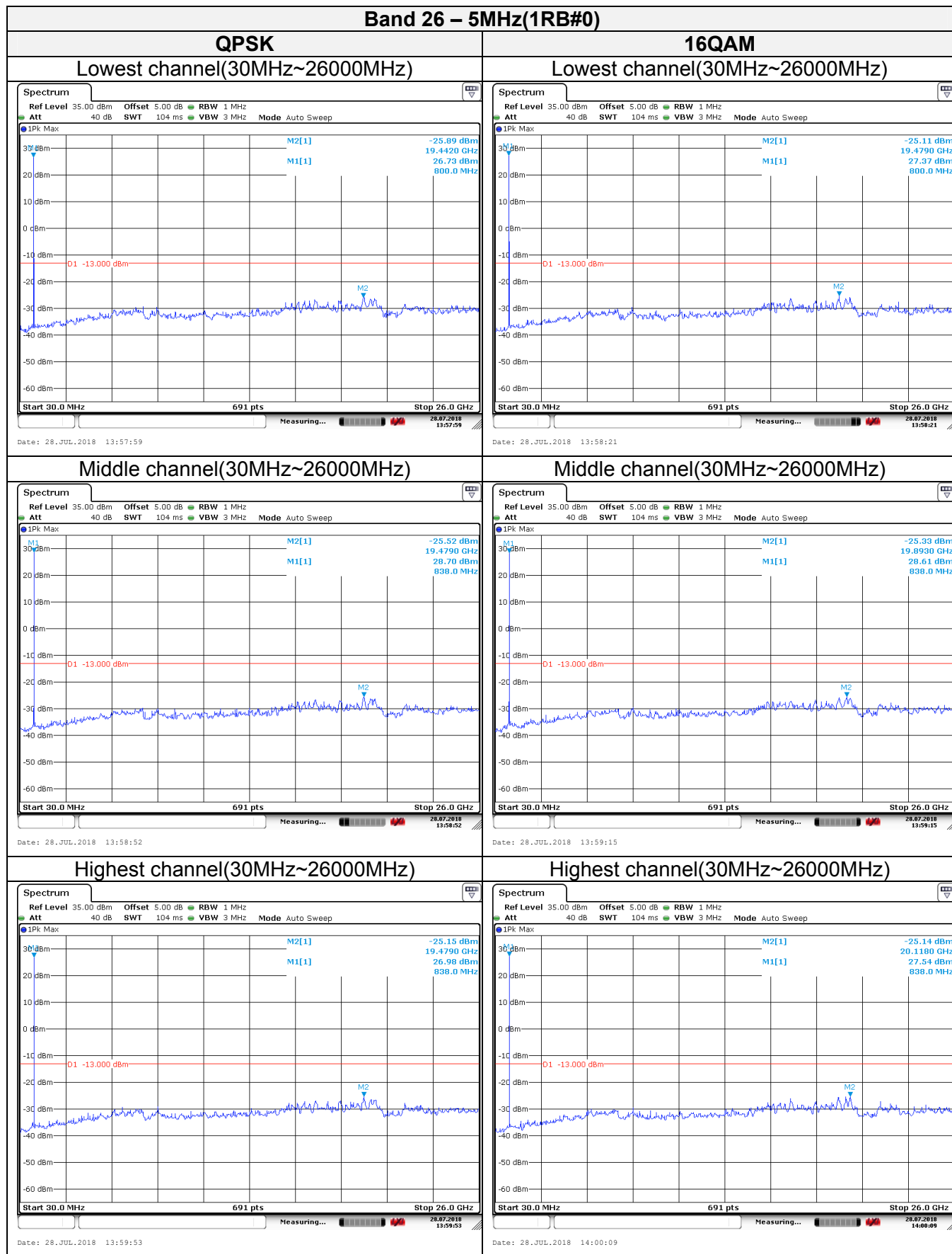
Fax: (86)755-27521011

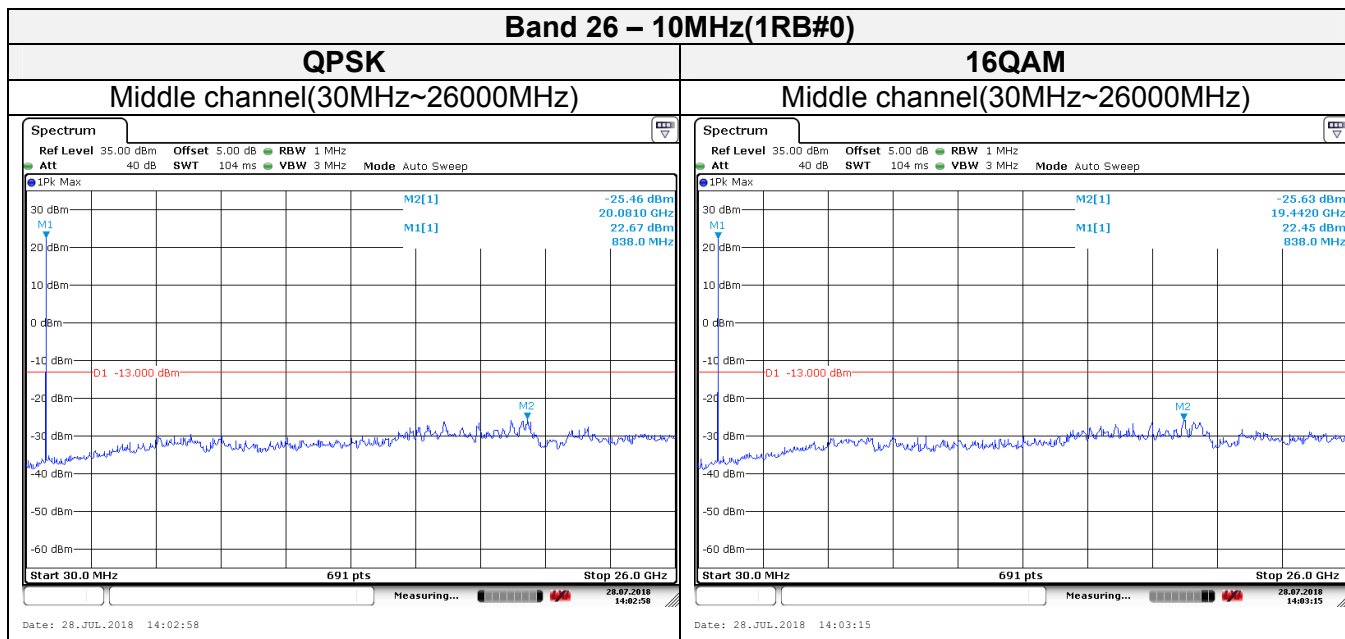
Http://www.sz-ctc.org.cn

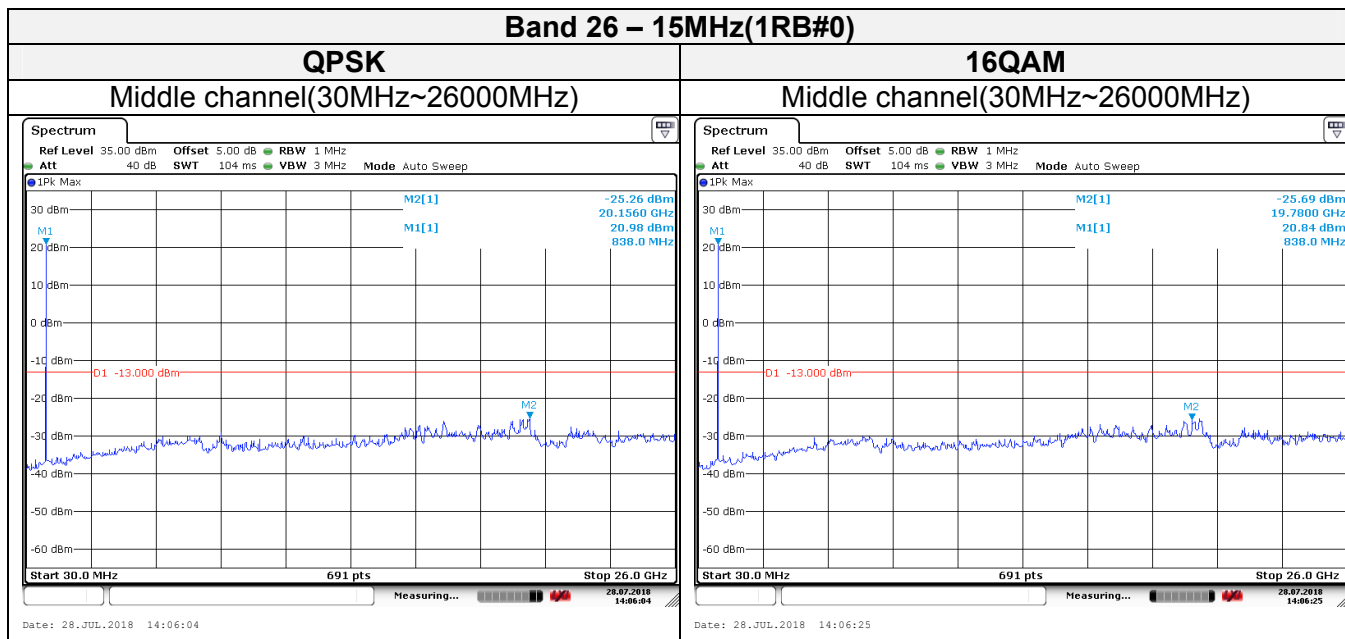


For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cncaic.cn](http://yz.cncaic.cn)







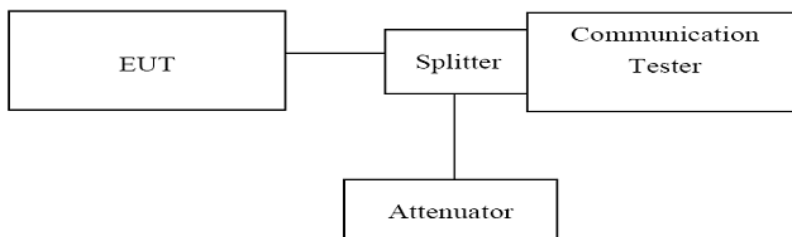


### 3.5. Receiver Spurious Emissions at Antenna Terminal

#### LIMIT

RSS-GEN7.1.3, Receiver-spurious emissions at any discrete frequency shall not exceed 2 nW in the band 30-1000 MHz, nor 5 nW above 1000 MHz.

#### TEST CONFIGURATION

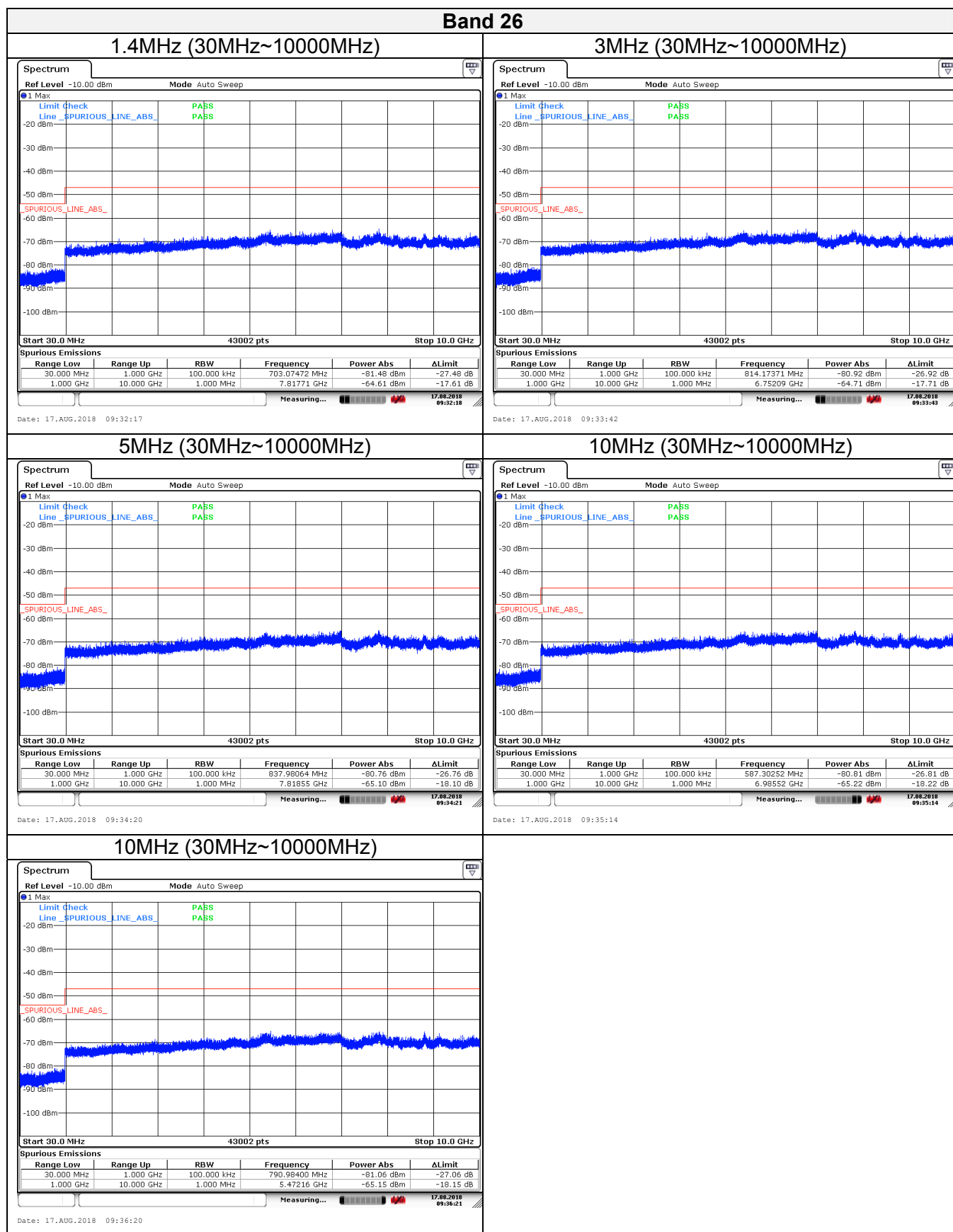


#### TEST PROCEDURE

1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
2. The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.
3. Set the RBW= 100kHz, VBW =300kHz,below 1GHz
4. Set the RBW= 1MHz, VBW = 3MHz,above1GHz,
5. Start=30MHz, Stop= 10th harmonic.

#### TEST RESULTS

Remark: we test all modulation type, but only show worst case at report.



### 3.6. Band Edge compliance

#### LIMIT

Part 22.917 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

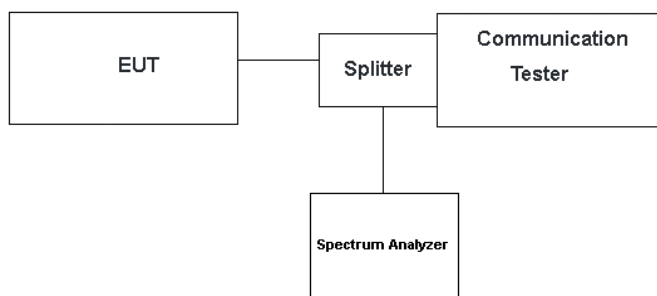
The specification that emissions shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

Part 90.691 (a) Out of band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) 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  $116 \log_{10}(f/6.1)$  decibels or  $50 + 10 \log_{10}(P)$  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.

(2) 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  $43 + 10 \log_{10}(P)$  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.

#### TEST CONFIGURATION



#### TEST PROCEDURE

6. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
7. RBW was set to about 1% of emission BW,  $VBW \geq 3$  times RBW.

#### TEST RESULTS

Please see the Appendix for every tested Band.

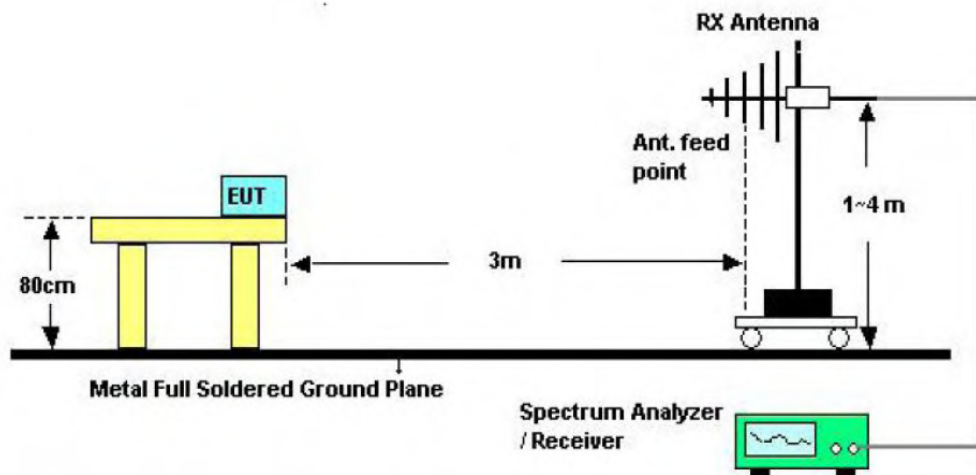
### 3.7. Radiated Power Measurement

#### LIMIT

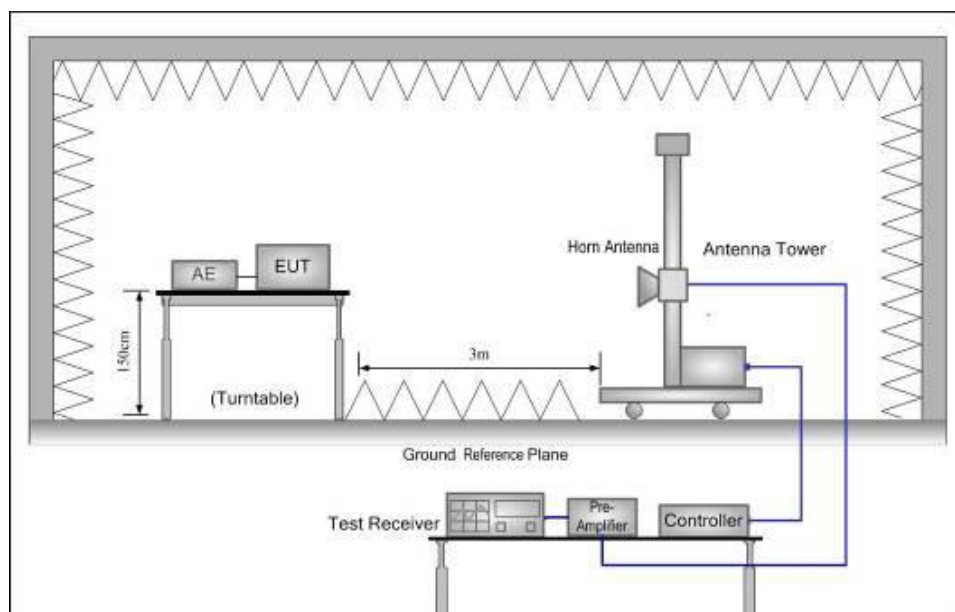
LTE FDD Band 26: 7W(38.45dBm) EPR

#### TEST CONFIGURATION

For the actual test configuration, please refer to the related Item – EUT Test Photos.



Below 1GHz



Above 1GHz

## **TEST PROCEDURE**

1. EUT was placed on a 1.50 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.50m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
3. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz, and the maximum value of the receiver should be recorded as (Pr).
4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
5. An amplifier should be connected to the Signal Source output port. And the cable should be connecting between the Amplifier and the Substitution Antenna. The cable loss (Pcl), the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
6. The measurement results are obtained as described below:  
Power(EIRP)=PMea- PAg - Pcl + Ga  
We used N5182A microwave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substitution test; The measurement results are amend as described below:  
Power(EIRP)=PMea- Pcl + Ga
7. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.  
ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

## **TEST RESULTS**

Remark:

1. By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that "Z axis" position was the worst, and test data recorded in this report.

| LTE Band 26 - 1.4MHz |         |           |            |             |        |
|----------------------|---------|-----------|------------|-------------|--------|
| Modulation           | Channel | ERP (dBm) |            | Limit (dBm) | Result |
|                      |         | Vertical  | Horizontal |             |        |
| QPSK                 | Low     | 20.25     | 17.71      | ≤38.45      | PASS   |
|                      | Mid     | 20.62     | 17.23      |             |        |
|                      | High    | 20.41     | 17.32      |             |        |
| 16QAM                | Low     | 20.12     | 17.75      |             |        |
|                      | Mid     | 20.52     | 17.35      |             |        |
|                      | High    | 20.16     | 17.36      |             |        |

| LTE Band 26 - 3MHz |         |           |            |             |        |
|--------------------|---------|-----------|------------|-------------|--------|
| Modulation         | Channel | ERP (dBm) |            | Limit (dBm) | Result |
|                    |         | Vertical  | Horizontal |             |        |
| QPSK               | Low     | 21.12     | 18.02      | ≤38.45      | PASS   |
|                    | Mid     | 20.84     | 17.45      |             |        |
|                    | High    | 20.53     | 17.62      |             |        |
| 16QAM              | Low     | 19.74     | 17.12      |             |        |
|                    | Mid     | 19.12     | 17.08      |             |        |
|                    | High    | 20.16     | 17.53      |             |        |

| LTE Band 26 - 5MHz |         |           |            |             |        |
|--------------------|---------|-----------|------------|-------------|--------|
| Modulation         | Channel | ERP (dBm) |            | Limit (dBm) | Result |
|                    |         | Vertical  | Horizontal |             |        |
| QPSK               | Low     | 20.15     | 17.11      | ≤38.45      | PASS   |
|                    | Mid     | 20.23     | 17.21      |             |        |
|                    | High    | 20.54     | 17.35      |             |        |
| 16QAM              | Low     | 20.74     | 17.85      |             |        |
|                    | Mid     | 20.56     | 17.46      |             |        |
|                    | High    | 20.20     | 17.55      |             |        |

| LTE Band 26 - 10MHz |         |           |            |             |        |
|---------------------|---------|-----------|------------|-------------|--------|
| Modulation          | Channel | ERP (dBm) |            | Limit (dBm) | Result |
|                     |         | Vertical  | Horizontal |             |        |
| QPSK                | Mid     | 20.65     | 17.24      | ≤38.45      | PASS   |
| 16QAM               | Mid     | 20.79     | 18.03      |             |        |

| LTE Band 26 - 15MHz |         |           |            |             |        |
|---------------------|---------|-----------|------------|-------------|--------|
| Modulation          | Channel | ERP (dBm) |            | Limit (dBm) | Result |
|                     |         | Vertical  | Horizontal |             |        |
| QPSK                | Mid     | 20.41     | 17.42      | ≤38.45      | PASS   |
| 16QAM               | Mid     | 20.95     | 18.13      |             |        |

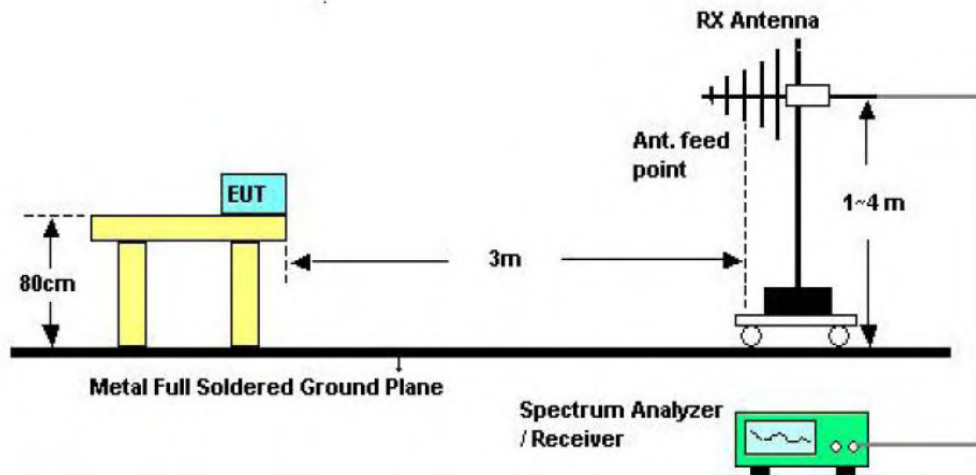
### 3.8. Radiated Spurious Emission

#### LIMIT

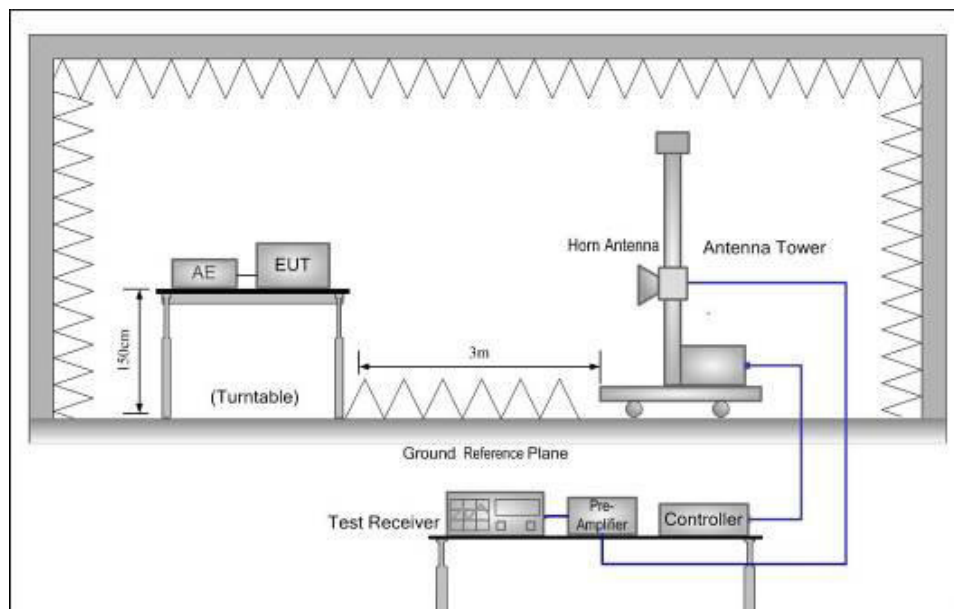
**FDD Band 26:** The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

#### TEST CONFIGURATION

For the actual test configuration, please refer to the related Item – EUT Test Photos.



Below 1GHz



Above 1GHz

## **TEST PROCEDURE**

1. EUT was placed on a 1.50 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.50m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
3. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz, and the maximum value of the receiver should be recorded as (Pr).
4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
5. An amplifier should be connected to the Signal Source output port. And the cable should be connecting between the Amplifier and the Substitution Antenna. The cable loss (Pcl), the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
6. The measurement results are obtained as described below:  
Power(EIRP)=PMea- PAg - Pcl + Ga  
We used SMF100A microwave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substitution test; The measurement results are amend as described below:  
Power(EIRP)=PMea- Pcl + Ga
7. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.  
ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.
8. Test frequency range should extend to 10<sup>th</sup> harmonic of highest fundamental frequency.

## **TEST RESULTS**

Remark:

1. By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that "Z axis" position was the worst, and test data recorded in this report.
2. We test all modulation type and record worst case at Voice mode.
3. Remark"---" means that the emission level is too low to be measured
4. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

| Band 26 Radiated Spurious Emissions |            |              |                   |             |              |             |        |
|-------------------------------------|------------|--------------|-------------------|-------------|--------------|-------------|--------|
| Bandwidth                           | Modulation | Test Channel | Spurious Emission |             |              | Limit (dBm) | Result |
|                                     |            |              | Frequency         | Level (dBm) | Polarization |             |        |
| 1.4MHz                              | QPSK       | L            | 1629.40           | -42.68      | Vertical     | -13.00      | Pass   |
|                                     |            |              | 2444.10           | -48.38      | Vertical     |             |        |
|                                     |            |              | 1629.40           | -45.13      | Horizontal   |             |        |
|                                     |            |              | 2444.10           | -52.39      | Horizontal   |             |        |
| 1.4MHz                              | QPSK       | M            | 1638.00           | -41.84      | Vertical     | -13.00      | Pass   |
|                                     |            |              | 2457.00           | -49.26      | Vertical     |             |        |
|                                     |            |              | 1638.00           | -40.20      | Horizontal   |             |        |
|                                     |            |              | 2457.00           | -54.13      | Horizontal   |             |        |
| 1.4MHz                              | QPSK       | H            | 1646.60           | -40.35      | Vertical     | -13.00      | Pass   |
|                                     |            |              | 2469.90           | -48.74      | Vertical     |             |        |
|                                     |            |              | 1646.60           | -40.42      | Horizontal   |             |        |
|                                     |            |              | 2469.90           | -53.69      | Horizontal   |             |        |
| 3MHz                                | QPSK       | L            | 1631.00           | -40.63      | Vertical     | -13.00      | Pass   |
|                                     |            |              | 2446.50           | -48.97      | Vertical     |             |        |
|                                     |            |              | 1631.00           | -40.02      | Horizontal   |             |        |
|                                     |            |              | 2446.50           | -53.95      | Horizontal   |             |        |
| 3MHz                                | QPSK       | M            | 1638.00           | -40.77      | Vertical     | -13.00      | Pass   |
|                                     |            |              | 2457.00           | -48.29      | Vertical     |             |        |
|                                     |            |              | 1638.00           | -42.60      | Horizontal   |             |        |
|                                     |            |              | 2457.00           | -53.63      | Horizontal   |             |        |
| 3MHz                                | QPSK       | H            | 1645.00           | -41.84      | Vertical     | -13.00      | Pass   |
|                                     |            |              | 2467.50           | -47.04      | Vertical     |             |        |
|                                     |            |              | 1645.00           | -40.11      | Horizontal   |             |        |
|                                     |            |              | 2467.50           | -54.40      | Horizontal   |             |        |

Remark :

1. The emission behavior belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.

| Band 26 Radiated Spurious Emissions |            |              |                   |             |              |             |        |
|-------------------------------------|------------|--------------|-------------------|-------------|--------------|-------------|--------|
| Bandwidth                           | Modulation | Test Channel | Spurious Emission |             |              | Limit (dBm) | Result |
|                                     |            |              | Frequency         | Level (dBm) | Polarization |             |        |
| 5MHz                                | QPSK       | L            | 1633.00           | -40.89      | Vertical     | -13.00      | Pass   |
|                                     |            |              | 2449.50           | -49.51      | Vertical     |             |        |
|                                     |            |              | 1633.00           | -46.27      | Horizontal   |             |        |
|                                     |            |              | 2449.50           | -54.23      | Horizontal   |             |        |
| 5MHz                                | QPSK       | M            | 1638.00           | -42.86      | Vertical     | -13.00      | Pass   |
|                                     |            |              | 2457.00           | -48.80      | Vertical     |             |        |
|                                     |            |              | 1638.00           | -42.70      | Horizontal   |             |        |
|                                     |            |              | 2457.00           | -52.56      | Horizontal   |             |        |
| 5MHz                                | QPSK       | H            | 1643.00           | -42.42      | Vertical     | -13.00      | Pass   |
|                                     |            |              | 2464.50           | -47.63      | Vertical     |             |        |
|                                     |            |              | 1643.00           | -40.50      | Horizontal   |             |        |
|                                     |            |              | 2464.50           | -53.42      | Horizontal   |             |        |
| 10MHz                               | QPSK       | M            | 1638.00           | -41.79      | Vertical     | -13.00      | Pass   |
|                                     |            |              | 2457.00           | -48.40      | Vertical     |             |        |
|                                     |            |              | 1638.00           | -42.96      | Horizontal   |             |        |
|                                     |            |              | 2457.00           | -53.31      | Horizontal   |             |        |

Remark :

1. The emission behavior belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.

| Band 26 Radiated Spurious Emissions |            |              |                   |             |              |             |        |
|-------------------------------------|------------|--------------|-------------------|-------------|--------------|-------------|--------|
| Bandwidth                           | Modulation | Test Channel | Spurious Emission |             |              | Limit (dBm) | Result |
|                                     |            |              | Frequency         | Level (dBm) | Polarization |             |        |
| 15MHz                               | QPSK       | M            | 1643.00           | -40.35      | Vertical     | -13.00      | Pass   |
|                                     |            |              | 2464.50           | -49.48      | Vertical     |             |        |
|                                     |            |              | 1643.00           | -46.95      | Horizontal   |             |        |
|                                     |            |              | 2464.50           | -52.86      | Horizontal   |             |        |

Remark :

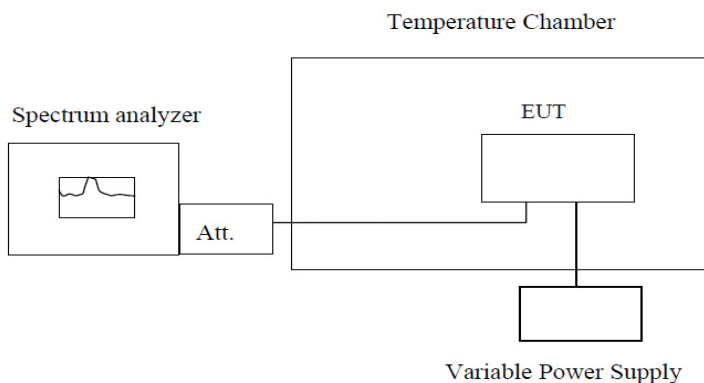
1. The emission behavior belongs to narrowband spurious emission.
2. The emission levels of below 1 GHz are very lower than the limit above 10dB and not show in test report.

### 3.9. Frequency stability

#### LIMIT

Within the authorized frequency block

#### TEST CONFIGURATION



**Note :** Measurement setup for testing on Antenna connector

#### TEST PROCEDURE

1. The equipment under test was connected to an external DC power supply and input rated voltage.
2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.
3. The EUT was placed inside the temperature chamber.
4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.
5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.
6. Repeat step measure with 10°C increased per stage until the highest temperature of +55°C reached.
7. Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.

#### TEST RESULTS

Remark: For this item, all test of Low/Middle/High channel have been test, the report only present the worse case

## 1. Temperature measurement:

7. Temperature measurement:

| Reference Frequency: Band 26(1.4MHz) Middle channel=26740 channel=819.00MHz |                    |                 |       |                |        |
|-----------------------------------------------------------------------------|--------------------|-----------------|-------|----------------|--------|
| Voltage<br>( V )                                                            | Temperature<br>(℃) | Frequency error |       | Limit<br>(ppm) | Result |
|                                                                             |                    | Hz              | ppm   |                |        |
| 3.85                                                                        | -30                | 275             | 0.33  | 2.5            | Pass   |
|                                                                             | -20                | -231            | -0.28 |                |        |
|                                                                             | -10                | 274             | 0.33  |                |        |
|                                                                             | 0                  | 102             | -0.12 |                |        |
|                                                                             | 10                 | 114             | 0.14  |                |        |
|                                                                             | 20                 | 111             | 0.13  |                |        |
|                                                                             | 30                 | 110             | 0.13  |                |        |
|                                                                             | 40                 | 159             | 0.19  |                |        |
|                                                                             | 50                 | 235             | 0.28  |                |        |
| Reference Frequency: Band 26(3MHz) Middle channel=26740 channel=819.00MHz   |                    |                 |       |                |        |
| Voltage<br>( V )                                                            | Temperature<br>(℃) | Frequency error |       | Limit<br>(ppm) | Result |
|                                                                             |                    | Hz              | ppm   |                |        |
| 3.85                                                                        | -30                | 228             | 0.27  | 2.5            | Pass   |
|                                                                             | -20                | 266             | 0.32  |                |        |
|                                                                             | -10                | 120             | 0.14  |                |        |
|                                                                             | 0                  | 192             | 0.23  |                |        |
|                                                                             | 10                 | 126             | 0.15  |                |        |
|                                                                             | 20                 | 174             | 0.21  |                |        |
|                                                                             | 30                 | -232            | -0.28 |                |        |
|                                                                             | 40                 | 158             | 0.19  |                |        |
|                                                                             | 50                 | -281            | -0.34 |                |        |

| Reference Frequency: Band 26(5MHz) Middle channel=26740 channel=819.00MHz |                     |                 |       |                |        |
|---------------------------------------------------------------------------|---------------------|-----------------|-------|----------------|--------|
| Voltage<br>( V )                                                          | Temperature<br>(°C) | Frequency error |       | Limit<br>(ppm) | Result |
|                                                                           |                     | Hz              | ppm   |                |        |
| 3.85                                                                      | -30                 | 129             | 0.16  | 2.5            | Pass   |
|                                                                           | -20                 | 255             | 0.31  |                |        |
|                                                                           | -10                 | 165             | -0.20 |                |        |
|                                                                           | 0                   | 294             | 0.35  |                |        |
|                                                                           | 10                  | -256            | -0.31 |                |        |
|                                                                           | 20                  | 185             | 0.22  |                |        |
|                                                                           | 30                  | 140             | 0.17  |                |        |
|                                                                           | 40                  | 168             | 0.20  |                |        |
|                                                                           | 50                  | 290             | 0.35  |                |        |

| Reference Frequency: Band 26(10MHz) Middle channel=26740 channel=819.00MHz |                     |                 |       |                |        |
|----------------------------------------------------------------------------|---------------------|-----------------|-------|----------------|--------|
| Voltage<br>( V )                                                           | Temperature<br>(°C) | Frequency error |       | Limit<br>(ppm) | Result |
|                                                                            |                     | Hz              | ppm   |                |        |
| 3.85                                                                       | -30                 | -262            | -0.32 | 2.5            | Pass   |
|                                                                            | -20                 | 196             | 0.24  |                |        |
|                                                                            | -10                 | -215            | -0.26 |                |        |
|                                                                            | 0                   | 289             | 0.35  |                |        |
|                                                                            | 10                  | 216             | 0.26  |                |        |
|                                                                            | 20                  | 150             | 0.18  |                |        |
|                                                                            | 30                  | 205             | 0.25  |                |        |
|                                                                            | 40                  | 278             | 0.33  |                |        |
|                                                                            | 50                  | 220             | 0.26  |                |        |

| Reference Frequency: Band 26(15MHz) Middle channel=26765 channel=821.50MHz |                     |                 |       |                |        |
|----------------------------------------------------------------------------|---------------------|-----------------|-------|----------------|--------|
| Voltage<br>( V )                                                           | Temperature<br>(°C) | Frequency error |       | Limit<br>(ppm) | Result |
|                                                                            |                     | Hz              | ppm   |                |        |
| 3.85                                                                       | -30                 | -177            | -0.21 | 2.5            | Pass   |
|                                                                            | -20                 | 262             | 0.32  |                |        |
|                                                                            | -10                 | 273             | 0.33  |                |        |
|                                                                            | 0                   | 276             | 0.33  |                |        |
|                                                                            | 10                  | -232            | -0.28 |                |        |
|                                                                            | 20                  | 101             | 0.12  |                |        |
|                                                                            | 30                  | 152             | 0.18  |                |        |
|                                                                            | 40                  | 253             | 0.30  |                |        |
|                                                                            | 50                  | 229             | 0.28  |                |        |

## 2. Voltage measurement:

| Reference Frequency: Band 26(1.4MHz) Middle channel=26740 channel=819.00MHz |               |                 |       |             |        |
|-----------------------------------------------------------------------------|---------------|-----------------|-------|-------------|--------|
| Temperature (℃)                                                             | Voltage ( V ) | Frequency error |       | Limit (ppm) | Result |
|                                                                             |               | Hz              | ppm   |             |        |
| 25                                                                          | 4.42          | -290            | -0.35 | 2.5         | Pass   |
|                                                                             | 3.85          | 171             | 0.21  |             |        |
|                                                                             | 3.27          | 197             | 0.24  |             |        |
| Reference Frequency: Band 26(3MHz) Middle channel=26740 channel=819.00MHz   |               |                 |       |             |        |
| Temperature (℃)                                                             | Voltage ( V ) | Frequency error |       | Limit (ppm) | Result |
|                                                                             |               | Hz              | ppm   |             |        |
| 25                                                                          | 4.42          | 188             | 0.23  | 2.5         | Pass   |
|                                                                             | 3.85          | 241             | 0.29  |             |        |
|                                                                             | 3.27          | 159             | 0.19  |             |        |
| Reference Frequency: Band 26(5MHz) Middle channel=26740 channel=819.00MHz   |               |                 |       |             |        |
| Temperature (℃)                                                             | Voltage ( V ) | Frequency error |       | Limit (ppm) | Result |
|                                                                             |               | Hz              | ppm   |             |        |
| 25                                                                          | 4.42          | 270             | 0.32  | 2.5         | Pass   |
|                                                                             | 3.85          | 150             | 0.18  |             |        |
|                                                                             | 3.27          | 275             | 0.33  |             |        |
| Reference Frequency: Band 26(10MHz) Middle channel=26740 channel=819.00MHz  |               |                 |       |             |        |
| Temperature (℃)                                                             | Voltage ( V ) | Frequency error |       | Limit (ppm) | Result |
|                                                                             |               | Hz              | ppm   |             |        |
| 25                                                                          | 4.42          | 226             | 0.27  | 2.5         | Pass   |
|                                                                             | 3.85          | 201             | 0.24  |             |        |
|                                                                             | 3.27          | 127             | 0.15  |             |        |
| Reference Frequency: Band 26(15MHz) Middle channel=26765 channel=821.50MHz  |               |                 |       |             |        |
| Temperature (℃)                                                             | Voltage ( V ) | Frequency error |       | Limit (ppm) | Result |
|                                                                             |               | Hz              | ppm   |             |        |
| 25                                                                          | 4.42          | 209             | 0.25  | 2.5         | Pass   |
|                                                                             | 3.85          | 347             | 0.42  |             |        |
|                                                                             | 3.27          | 316             | 0.38  |             |        |

## 4. EUT TEST PHOTOS

Reference to the document No.: Test Photographs 2.

## 5. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

Reference to the document No.: External Photographs and Internal Photographs.

\*\*\*\*\*THE END\*\*\*\*\*