



# TEST REPORT

**Report Number** : TZ0439260501FRF10  
**Product Name** : SUPER MINI POC RADIO  
**Model/Type reference** : T-X5D, T-X52  
**FCC ID** : SV8-X5D  
**Prepared for** : Quanzhou YANTON Electronics Co., Ltd.  
YANTON Building, Jinxia Road, Xiamei Town, Nan'an, China

**Prepared By** : Shenzhen Tongzhou Testing Co., Ltd.  
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**Standards** : FCC CFR Title 47 Part 22, FCC CFR Title 47 Part 24, FCC CFR Title 47 Part 27, ANSI C63.26:2015  
**Date of Test** : 2026-05-06 ~ 2026-06-08  
**Date of Issue** : 2026-06-18

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(Authorized Officer)



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**\*\* Report Revise Record \*\***

| Report Version | Revise Time | Issued Date | Valid Version | Notes           |
|----------------|-------------|-------------|---------------|-----------------|
| V1.0           | /           | 2026-06-18  | Valid         | Initial release |





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## 1. SUMMARY

### 1.1. Client Information

|              |                                                            |
|--------------|------------------------------------------------------------|
| Applicant    | : Quanzhou YANTON Electronics Co., Ltd.                    |
| Address      | : YANTON Building, Jinxia Road, Xiamei Town, Nan'an, China |
| Manufacturer | : Quanzhou YANTON Electronics Co., Ltd.                    |
| Address      | : YANTON Building, Jinxia Road, Xiamei Town, Nan'an, China |

### 1.2. Description of Device (EUT)

|                   |                                                 |
|-------------------|-------------------------------------------------|
| Product Name      | : SUPER MINI POC RADIO                          |
| Trade Mark        | : YANTON                                        |
| Model Number      | : T-X5D, T-X52                                  |
| Model Declaration | : The appearance is different.                  |
| Test Model        | : T-X5D                                         |
| Power Supply      | : Input: DC 3.7V by battery or DC 5V by adapter |
| Hardware version  | : YUT-X5-EC800-MB-01 B                          |
| Software version  | : V1.0                                          |

### 1.3. Wireless Function Tested in this Report

|                            |                                                       |
|----------------------------|-------------------------------------------------------|
| E-UTRA                     |                                                       |
| E-UTRA Operation Frequency | FDD Band 2 (UL: 1850 – 1910 MHz/DL: 1930 – 1990 MHz)  |
|                            | FDD Band 4 (UL: 1710 – 1755 MHz/DL: 2110 – 2155 MHz)  |
|                            | : FDD Band 5 (UL: 824 – 849 MHz/DL: 869 – 894 MHz)    |
|                            | FDD Band 7 (UL: 2500 – 2570 MHz/DL: 2620 – 2690 MHz)  |
|                            | FDD Band 66 (UL: 1710 – 1780 MHz/DL: 2110 – 2200 MHz) |
| Modulation Technology      | : OFDM (16QAM, QPSK)                                  |
| Antenna Type And Gain      | : Internal Antenna with 1.5 dBi Max                   |

Note 1: Antenna position refer to EUT Photos.

Note 2: the above information was supplied by the applicant.

Note 3: Due to the product design, for LTE 16QAM operation with 10/15/20 MHz, the EUT does not support the full resource block (RB) allocation, the maximum supported RB allocation is 27 RB.





## Test Channel List:

| Band | Bandwidth(MHz) | UL Frequency(MHz) |        |        |
|------|----------------|-------------------|--------|--------|
|      |                | Low               | Middle | High   |
| 2    | 1.4            | 1850.7            | 1880   | 1909.3 |
|      | 3              | 1851.5            | 1880   | 1908.5 |
|      | 5              | 1852.5            | 1880   | 1907.5 |
|      | 10             | 1855              | 1880   | 1905   |
|      | 15             | 1857.5            | 1880   | 1902.5 |
|      | 20             | 1860              | 1880   | 1900   |
| 4    | 1.4            | 1710.7            | 1732.5 | 1754.3 |
|      | 3              | 1711.5            | 1732.5 | 1753.5 |
|      | 5              | 1712.5            | 1732.5 | 1752.5 |
|      | 10             | 1715              | 1732.5 | 1750   |
|      | 15             | 1717.5            | 1732.5 | 1747.5 |
|      | 20             | 1720              | 1732.5 | 1745   |
| 5    | 1.4            | 824.7             | 836.5  | 848.3  |
|      | 3              | 825.5             | 836.5  | 847.5  |
|      | 5              | 826.5             | 836.5  | 846.5  |
|      | 10             | 829               | 836.5  | 844    |
| 7    | 5              | 2502.5            | 2535   | 2567.5 |
|      | 10             | 2505              | 2535   | 2565   |
|      | 15             | 2507.5            | 2535   | 2562.5 |
|      | 20             | 2510              | 2535   | 2560   |
| 66   | 1.4            | 1710.7            | 1745   | 1779.3 |
|      | 3              | 1711.5            | 1745   | 1778.5 |
|      | 5              | 1712.5            | 1745   | 1777.5 |
|      | 10             | 1715              | 1745   | 1775   |
|      | 15             | 1717.5            | 1745   | 1772.5 |
|      | 20             | 1720              | 1745   | 1770   |





#### **1.4. Normal Accessory setting**

Fully charged battery was used during the test.

#### **1.5. Related Submittal(s) / Grant (s)**

This submittal(s) (test report) is intended for **FCC ID: SV8-X5D** filing to comply with FCC Rules.

#### **1.6. Modifications**

No modifications were implemented to meet testing criteria.





## 2. TEST ENVIRONMENT

### 2.1. Test Facility

#### FCC

Designation Number: CN1275

Test Firm Registration Number: 167722

Shenzhen Tongzhou Testing Co.,Ltd has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

#### A2LA

Certificate Number: 5463.01

Shenzhen Tongzhou Testing Co.,Ltd has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

#### IC

ISED#: 22033

CAB identifier: CN0099

Shenzhen Tongzhou Testing Co.,Ltd has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4 and CISPR 16-1-4:2010

### 2.2. 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 ETSI TR 100 028 " Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics" and is documented in the Shenzhen Tongzhou Testing Co.,Ltd. quality system acc. to 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 Shenzhen Tongzhou Testing Co.,Ltd. is reported:

| Test                                | Range      | Measurement Uncertainty | Notes |
|-------------------------------------|------------|-------------------------|-------|
| Radiated Emission                   | 30~1000MHz | 3.10 dB                 | (1)   |
| Radiated Emission                   | 1~18GHz    | 3.70 dB                 | (1)   |
| Radiated Emission                   | 18-40GHz   | 3.90 dB                 | (1)   |
| Conducted Disturbance               | 0.15~30MHz | 1.63 dB                 | (1)   |
| Conducted Power                     | 9KHz~18GHz | 0.61 dB                 | (1)   |
| Spurious RF Conducted Emission      | 9KHz~40GHz | 1.22 dB                 | (1)   |
| Band Edge Compliance of RF Emission | 9KHz~40GHz | 1.22 dB                 | (1)   |
| Occupied Bandwidth                  | 9KHz~40GHz | -                       | (1)   |
| Frequency Error                     | 9KHz~40GHz | $1 \times 10^{-7}$      | (1)   |

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





### 3. SUMMARY OF TEST RESULTS

#### FDD Band 2[Part 24]

| Test Item                              | FCC Rule No.      | Requirements                                                          | Judgement | Sample ID       |
|----------------------------------------|-------------------|-----------------------------------------------------------------------|-----------|-----------------|
| Effective (Isotropic) Radiated Power   | 2.1046, 24.232(c) | EIRP $\leq$ 2W(33dBm)                                                 | Pass      | TZ0439260501-1# |
| Bandwidth                              | 2.1049, 24.238(a) | OBW: No limit.<br>EBW: No limit.                                      | Pass      | TZ0439260501-1# |
| Band Edges                             | 2.1051, 24.238(a) | -13dBm                                                                | Pass      | TZ0439260501-1# |
| Spurious Emission at Antenna Terminals | 2.1051, 24.238(a) | -13dBm                                                                | Pass      | TZ0439260501-1# |
| Field Strength of Spurious Radiation   | 2.1053, 24.238(a) | -13dBm                                                                | Pass      | TZ0439260501-2# |
| Frequency Stability                    | 2.1055, 24.235    | the fundamental emission stays within the authorized frequency block. | Pass      | TZ0439260501-1# |
| Peak to average ratio                  | 24.232(d)         | <13dB                                                                 | Pass      | TZ0439260501-1# |

#### FDD Band 5[Part 22]

| Test Item                              | FCC Rule No.         | Requirements                                                                      | Judgement | Sample ID       |
|----------------------------------------|----------------------|-----------------------------------------------------------------------------------|-----------|-----------------|
| Effective (Isotropic) Radiated Power   | 2.1046, 22.913(a)    | ERP $\leq$ 7W(38.5dBm)                                                            | Pass      | TZ0439260501-1# |
| Occupied Bandwidth                     | 2.1049               | OBW: No limit.                                                                    | Pass      | TZ0439260501-1# |
| Emission Bandwidth                     | 22.917(b)            | EBW: No limit.                                                                    | Pass      | TZ0439260501-1# |
| Band Edges Compliance                  | 2.1051, 22.917(a)(b) | -13dBm                                                                            | Pass      | TZ0439260501-1# |
| Spurious Emission at Antenna Terminals | 2.1051, 22.917       | -13dBm                                                                            | Pass      | TZ0439260501-1# |
| Field Strength of Spurious Radiation   | 2.1053, 22.917       | -13dBm                                                                            | Pass      | TZ0439260501-2# |
| Frequency Stability                    | 2.1055, 22.355       | the fundamental emissions stay within the authorized bands of operation. (2.5ppm) | Pass      | TZ0439260501-1# |
| Peak to average ratio                  | 2.1046, 22.913(a)    | <13dB                                                                             | Pass      | TZ0439260501-1# |

#### FDD Band 4/66[Part 27]

| Test Item                              | FCC Rule No.     | Requirements                                                                                   | Judgement | Sample ID       |
|----------------------------------------|------------------|------------------------------------------------------------------------------------------------|-----------|-----------------|
| Effective (Isotropic) Radiated Power   | 2.1046, 27.50(d) | EIRP $\leq$ 1W(30dBm)                                                                          | Pass      | TZ0439260501-1# |
| Occupied Bandwidth                     | 2.1049           | OBW: No limit.                                                                                 | Pass      | TZ0439260501-1# |
| Emission Bandwidth                     | 2.1049           | EBW: No limit.                                                                                 | Pass      | TZ0439260501-1# |
| Band Edges Compliance                  | 2.1051, 27.53(h) | $\leq$ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block. | Pass      | TZ0439260501-1# |
| Spurious Emission at Antenna Terminals | 2.1051, 27.53(h) | -13dBm                                                                                         | Pass      | TZ0439260501-1# |
| Field Strength of Spurious Radiation   | 2.1053, 27.53(h) | -13dBm                                                                                         | Pass      | TZ0439260501-2# |
| Frequency Stability                    | 2.1055, 27.54    | the fundamental emissions stay within the authorized bands of operation. (2.5ppm)              | Pass      | TZ0439260501-1# |
| Peak to average ratio                  | 2.1046, 27.50(d) | <13dB                                                                                          | Pass      | TZ0439260501-1# |





### LTE Band 7[Part 27]

| Test Item                                    | FCC Rule No.        | Requirements                                                                      | Judgement | Sample ID       |
|----------------------------------------------|---------------------|-----------------------------------------------------------------------------------|-----------|-----------------|
| Effective (Isotropic) Radiated Power         | 2.1046, 27.50(h)(2) | EIRP $\leq$ 2W(33dBm)                                                             | Pass      | TZ0439260501-1# |
| Occupied Bandwidth                           | 2.1049              | OBW: No limit.                                                                    | Pass      | TZ0439260501-1# |
| Emission Bandwidth                           | 2.1049              | EBW: No limit.                                                                    | Pass      | TZ0439260501-1# |
| Band Edges (Out of Band Emission) Compliance | 2.1051, 27.53(m)    | 27.53(m) for detail the limit                                                     | Pass      | TZ0439260501-1# |
| Spurious Emission at Antenna Terminals       | 2.1051, 27.53(g)    | -25dBm                                                                            | Pass      | TZ0439260501-1# |
| Field Strength of Spurious Radiation         | 2.1053, 27.53(g)    | -25dBm                                                                            | Pass      | TZ0439260501-2# |
| Frequency Stability                          | 2.1055, 27.54       | the fundamental emissions stay within the authorized bands of operation. (2.5ppm) | Pass      | TZ0439260501-1# |
| Peak to average ratio                        | 2.1046, 27.50(h)    | <13dB                                                                             | Pass      | TZ0439260501-1# |

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

### 3.1. Environmental conditions

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

|                       |              |
|-----------------------|--------------|
| Temperature:          | 15-35 ° C    |
|                       |              |
| Humidity:             | 30-60 %      |
|                       |              |
| Atmospheric pressure: | 950-1050mbar |





#### 4. EQUIPMENTS USED DURING THE TEST

| Item | Test Equipment                | Manufacturer | Model No.    | Serial No.  | Calibration Date | Calibration Due Date |
|------|-------------------------------|--------------|--------------|-------------|------------------|----------------------|
| 1    | MXA Signal Analyzer           | Keysight     | N9020A       | MY52091623  | 2026-01-11       | 2027-01-11           |
| 2    | Power Sensor                  | Agilent      | U2021XA      | MY5365004   | 2026-01-11       | 2027-01-11           |
| 3    | Loop Antenna                  | schwarzbeck  | FMZB1519 B   | 00023       | 2025-10-18       | 2028-10-17           |
| 4    | Wideband Antenna              | schwarzbeck  | VULB 9163    | 958         | 2025-10-18       | 2028-10-17           |
| 5    | Horn Antenna                  | schwarzbeck  | BBHA 9120D   | 01989       | 2025-10-18       | 2028-10-17           |
| 6    | EMI Test Receiver             | R&S          | ESCI         | 100849/003  | 2026-01-11       | 2027-01-11           |
| 7    | Controller                    | MF           | MF7802       | N/A         | N/A              | N/A                  |
| 8    | Amplifier                     | schwarzbeck  | BBV 9743     | 209         | 2026-01-11       | 2027-01-11           |
| 9    | Amplifier                     | Tonscend     | TSAMP-0518SE | --          | 2026-01-11       | 2027-01-11           |
| 10   | RF Cable(below 1GHz)          | HUBER+SUHNER | RG214        | N/A         | 2026-01-11       | 2027-01-11           |
| 11   | RF Cable(above 1GHz)          | HUBER+SUHNER | RG214        | N/A         | 2026-01-11       | 2027-01-11           |
| 12   | RE test software              | Tonscend     | JS32-RE      | V5.0.0.0    | N/A              | N/A                  |
| 13   | Test Software                 | Tonscend     | JS1120-3     | V3.2.22     | N/A              | N/A                  |
| 14   | Horn Antenna                  | A-INFO       | LB-180400-KF | J211020657  | 2026-01-11       | 2027-01-11           |
| 15   | Amplifier                     | Chengyi      | EMC18404 5SE | 980508      | 2026-01-11       | 2027-01-11           |
| 16   | Spectrum Analyzer             | R&S          | FSV40        | 101321      | 2026-01-11       | 2027-01-11           |
| 17   | UNIVERSAL RADIO COMMUNICATION | R&S          | CMW500       | 101855      | 2026-01-11       | 2027-01-11           |
| 18   | Signal Generator              | Keysight     | N5182A       | MY4620709   | 2026-01-11       | 2027-01-11           |
| 19   | Climate Chamber               | KRUOMR       | KRM-1000     | KRM16072901 | 2026-01-11       | 2027-01-11           |
| 20   | Horn Antenna                  | ETS          | 3117         | 00218874    | 2025-10-18       | 2028-10-17           |
| 21   | Wideband Antenna              | Sunol        | JB3          | A020115     | 2025-10-18       | 2028-10-17           |
| 22   | RF Coupler                    | Anritsu      | K241B        | N/A         | 2026-01-11       | 2027-01-11           |





## 5. TEST CONDITIONS AND RESULTS

### 5.1. Conducted Output Power / E.I.R.P / E.R.P / Peak-to-Average Ratio (PAR)

#### 5.1.1. TEST APPLICABLE

During the process of testing, the EUT was controlled via R&S Digital Radio Communication tester (CMW500) to ensure max power transmission and proper modulation. This result contains output power and EIRP measurements for the EUT. In all cases, output power is within the specified limits.

#### 5.1.2. LIMIT

##### For Conducted Power

Within Tune-up Value

##### For Radiated Power

The conduction test is carried out in a shielded room.

According to the test, connect the device under test to the antenna port on the non-conductive platform directly to the test device for evaluation and measurement (ANSI-C63.26-2015 Clause 5.2)

The following rules are for the maximum radiated power limit requirements of the product:

| Mode        | Nominal Max. Power           |
|-------------|------------------------------|
| LTE Band 2  | < 2 Watts max. EIRP (33dBm)  |
| LTE Band 4  | < 1 Watts max. EIRP (30dBm)  |
| LTE Band 5  | < 7 Watts max. ERP (38.5dBm) |
| LTE Band 7  | < 2 Watts max. EIRP (33dBm)  |
| LTE Band 66 | < 1 Watts max. EIRP (30dBm)  |

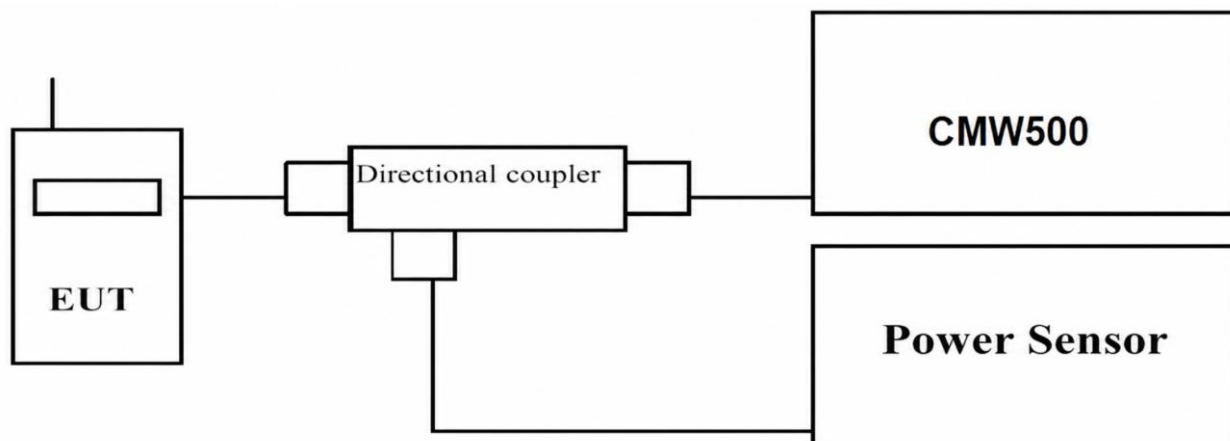
##### For Peak-to-Average Ratio (PAR)

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





### 5.1.3. TEST CONFIGURATION



### 5.1.4. TEST PROCEDURE

1. Place the EUT on a bench and set it in transmitting mode.
2. Connect a low loss RF cable from the antenna port to a CMW500 by an Att.
3. EUT Communicate with CMW500 then selects a channel for testing.
4. Add a correction factor to the display CMW500, and then measurement of peak power and average power with a power sensor.
5. Record the Peak power(P1) and Average power(P2).
6. Peak-to-Average Ratio (PAR) = Peak power(P1) - Average power(P2)
7. EIRP = Average power(P2) + Antenna Gain(dBi), ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

### 5.1.5. TEST RESULTS

#### Pass

#### Remark:

1. We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth as list in section 3.3 of this report;
2. please refer to RF output power in Appendix Test data for LTE Band2.
3. please refer to RF output power in Appendix Test data for LTE Band4.
4. please refer to RF output power in Appendix Test data for LTE Band5.
5. please refer to RF output power in Appendix Test data for LTE Band7.
6. please refer to RF output power in Appendix Test data for LTE Band66.



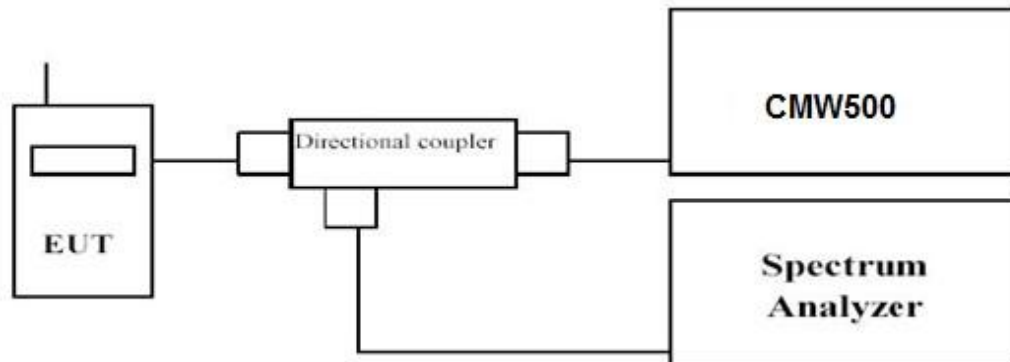


## 5.2. Occupied Bandwidth and Emission Bandwidth

### 5.2.1. LIMIT

N/A

### 5.2.2. TEST CONFIGURATION



### 5.2.3. TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at low, middle and high channel in each band. The -26dBc Emission bandwidth was also measured and recorded. Set RBW was set to about 1% of emission BW, VBW $\geq$ 3 times RBW. -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.

### 5.2.4. TEST RESULTS

**Pass**

Remark:

1. We were tested full RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth as list in section 3.3 of this report;
2. please refer to Emission bandwidth and OBW in Appendix Test data for LTE Band2.
3. please refer to Emission bandwidth and OBW in Appendix Test data for LTE Band4.
4. please refer to Emission bandwidth and OBW in Appendix Test data for LTE Band5.
5. please refer to Emission bandwidth and OBW in Appendix Test data for LTE Band7.
6. please refer to Emission bandwidth and OBW in Appendix Test data for LTE Band66.





### 5.3. Band Edge compliance

#### 5.3.1. LIMIT

*For LTE Band 2/25:* Per §24.238(a): Out of band emissions. 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.

*For LTE Band 5:* Per 22.917(a): 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.

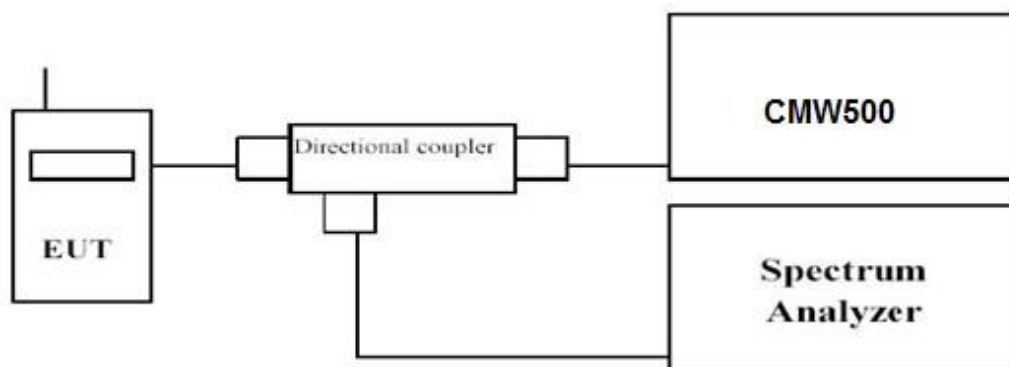
*For LTE Band 4/66:* Per §27.53(h): For operations in the 1710–1780 MHz band, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

*For LTE Band 7/38/41:* Per §27.53(m)(4): For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log(P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log(P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log(P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than  $43 + 10 \log(P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log(P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.





### 5.3.2. TEST CONFIGURATION



### 5.3.3. TEST PROCEDURE

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 and highest channels for each band and different modulation.
5. Measure Band edge using RMS (Average) detector by spectrum

### 5.3.4. TEST RESULTS

#### Pass

#### Remark:

1. We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth as list in section 3.3 of this report;
2. please refer to Band Edge Emission in Appendix Test data for LTE Band2.
3. please refer to Band Edge Emission in Appendix Test data for LTE Band4.
4. please refer to Band Edge Emission in Appendix Test data for LTE Band5.
5. please refer to Band Edge Emission in Appendix Test data for LTE Band7.
6. please refer to Band Edge Emission in Appendix Test data for LTE Band66.



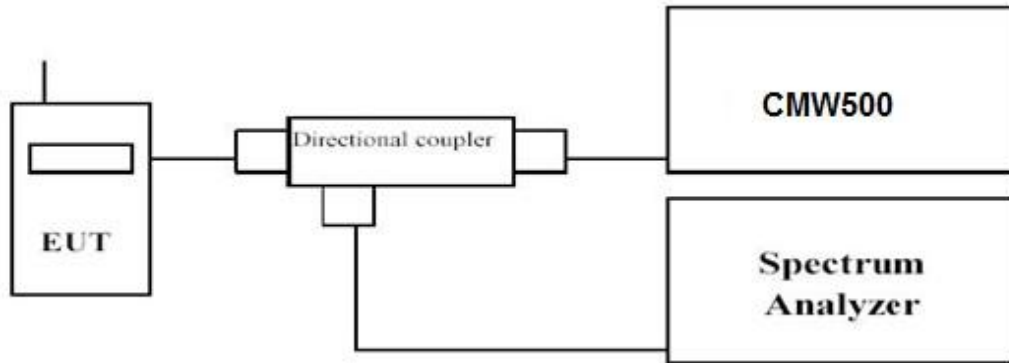


## 5.4. Spurious Emission on Antenna Port

### 5.4.1. LIMIT

Refer to section 5.3 of this report for each frequency band

### 5.4.2. TEST CONFIGURATION



### 5.4.3. TEST PROCEDURE

The EUT was setup according to ANSI C63.26

- Place the EUT on a bench and set it in transmitting mode.
- Connect a low loss RF cable from the antenna port to a spectrum analyzer and CMW500 by a Directional Couple.
- EUT Communicate with CMW500, then select a channel for testing.
- Add a correction factor to the display of spectrum, and then test.
- The resolution bandwidth of the spectrum analyzer was set sufficient scans were taken to show the out of band Emission if any up to 10<sup>th</sup> harmonic.
- Please refer to following tables for test antenna conducted emissions.

| Sub range (GHz)   | RBW   | VBW   | Sweep time (s) |
|-------------------|-------|-------|----------------|
| 0.000009~0.000015 | 1KHz  | 3KHz  | Auto           |
| 0.000015~0.03     | 10KHz | 30KHz | Auto           |
| 0.03~26           | 1 MHz | 3 MHz | Auto           |

### 5.4.4. TEST RESULTS

#### Pass

Remark:

- We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth as list in section 3.3 of this report;
- please refer to Conducted Spurious Emission in Appendix Test data for LTE Band2.
- please refer to Conducted Spurious Emission in Appendix Test data for LTE Band4.
- please refer to Conducted Spurious Emission in Appendix Test data for LTE Band5.
- please refer to Conducted Spurious Emission in Appendix Test data for LTE Band7.
- please refer to Conducted Spurious Emission in Appendix Test data for LTE Band66.



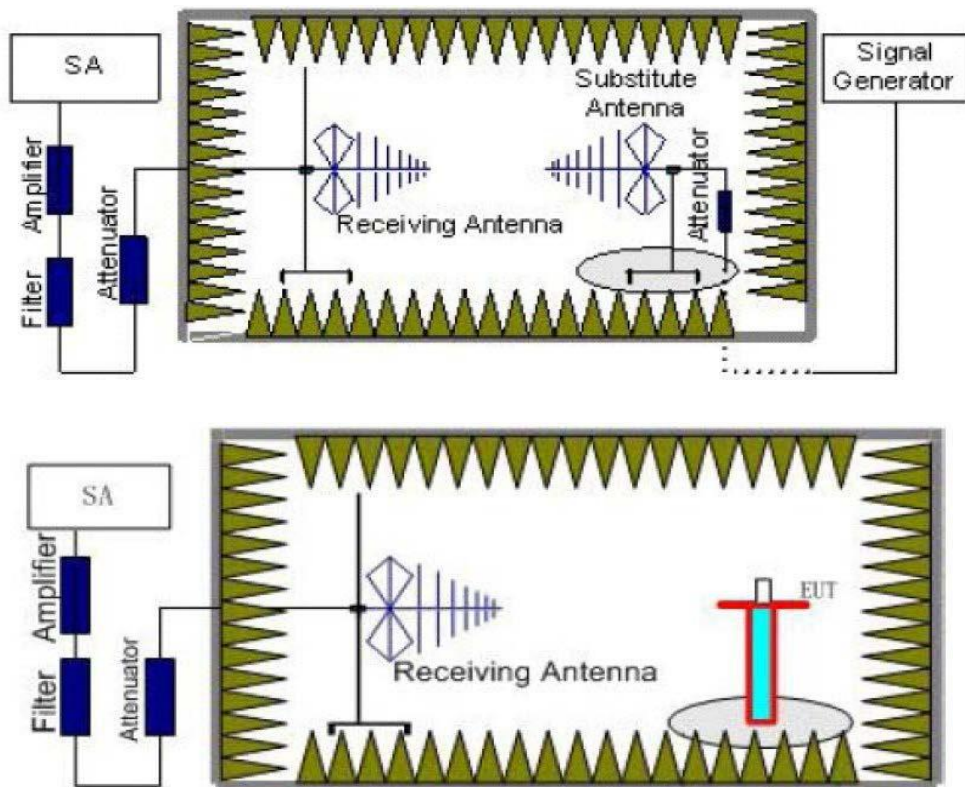


## 5.5. Radiated Spurious Emission

### 5.5.1. LIMIT

Refer to section 5.3 of this report for each frequency band

### 5.5.2. TEST CONFIGURATION



### 5.5.3. TEST PROCEDURE

1. Setup as illustrated above the DUT placed on the 0.8m height (for frequencies < 1GHz) or 1.5m (for frequencies > 1GHz) 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.
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 ( $P_r$ ).
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 ( $P_{Mea}$ ) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded ( $P_r$ ). The power of signal source ( $P_{Mea}$ ) is recorded. The test should be performed by





rotating the test item and adjusting the receiving antenna polarization.

5. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss ( $P_{cl}$ ), the Substitution Antenna Gain ( $G_a$ ) and the Amplifier Gain ( $P_{Ag}$ ) should be recorded after test.

The measurement results are obtained as described below:  $\text{Power(EIRP)} = P_{\text{Mea}} + P_{\text{Ag}} - P_{\text{cl}} + G_a$

It can omit power amplifier if signal generator level meets requirement;

6. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.

7. ERP can be calculated from EIRP by subtracting the gain of the dipole,  $\text{ERP} = \text{EIRP} - 2.15\text{dBi}$ .

8. In order to make sure test results more clearly, we set frequency range and sweep time for difference frequency range as follows table:

| Subrange (GHz)     | RBW    | VBW    | Sweep time (s) |
|--------------------|--------|--------|----------------|
| 0.00009~0.15       | 1KHz   | 3KHz   | 30             |
| 0.00015~0.03       | 10KHz  | 30KHz  | 10             |
| 0.03~1             | 100KHz | 300KHz | 10             |
| 1~2                | 1 MHz  | 3 MHz  | 2              |
| 2~5                | 1 MHz  | 3 MHz  | 3              |
| 5~8                | 1 MHz  | 3 MHz  | 3              |
| 8~10 <sup>th</sup> | 1 MHz  | 3 MHz  | 3              |

#### 5.5.4. TEST RESULTS

##### Pass

|               |         |          |     |
|---------------|---------|----------|-----|
| Temperature   | 24.8℃   | Humidity | 58% |
| Test Engineer | Anna Hu |          |     |

Remark:

1. We tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth as list in section 3.3 of this report;
2.  $\text{EIRP} = P_{\text{Mea}}(\text{dBm}) - P_{\text{cl}}(\text{dB}) + G_a(\text{dBi})$
3. We were not recorded other points as values lower than limits.
4.  $\text{Margin} = \text{EIRP} - \text{Limit}$



*LTE FDD Band 2\_Channel Bandwidth 5MHz\_QPSK\_Low Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 658.57          | -53.46                 | 0.95                 | 3        | 8.61                            | -45.80          | -13         | 32.80       | H            |
| 659.63          | -53.44                 | 0.95                 | 3        | 8.61                            | -45.78          | -13         | 32.78       | V            |
| 3705            | -47.71                 | 1.26                 | 3        | 12.1                            | -36.87          | -13         | 23.87       | H            |
| 3705            | -55.49                 | 1.26                 | 3        | 12.1                            | -44.65          | -13         | 31.65       | V            |
| 5557.5          | -52.30                 | 1.7                  | 3        | 12.58                           | -41.42          | -13         | 28.42       | H            |
| 5557.5          | -55.00                 | 1.7                  | 3        | 12.58                           | -44.12          | -13         | 31.12       | V            |

*LTE FDD Band 2\_Channel Bandwidth 5MHz\_QPSK\_Middle Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 662.41          | -55.92                 | 0.95                 | 3        | 8.61                            | -48.26          | -13         | 35.26       | H            |
| 659.32          | -53.30                 | 0.95                 | 3        | 8.61                            | -45.64          | -13         | 32.64       | V            |
| 3760            | -53.73                 | 1.28                 | 3        | 12.16                           | -42.85          | -13         | 29.85       | H            |
| 3760            | -58.45                 | 1.28                 | 3        | 12.16                           | -47.57          | -13         | 34.57       | V            |
| 5640            | -47.00                 | 1.72                 | 3        | 12.62                           | -36.10          | -13         | 23.10       | H            |
| 5640            | -58.53                 | 1.72                 | 3        | 12.62                           | -47.63          | -13         | 34.63       | V            |

*LTE FDD Band 2\_Channel Bandwidth 5MHz\_QPSK\_High Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 661.25          | -52.74                 | 0.95                 | 3        | 8.61                            | -45.08          | -13         | 32.08       | H            |
| 663.20          | -52.65                 | 0.95                 | 3        | 8.61                            | -44.99          | -13         | 31.99       | V            |
| 3815            | -55.65                 | 1.29                 | 3        | 12.22                           | -44.72          | -13         | 31.72       | H            |
| 3815            | -55.43                 | 1.29                 | 3        | 12.22                           | -44.50          | -13         | 31.50       | V            |
| 5722.5          | -52.93                 | 1.74                 | 3        | 12.66                           | -42.01          | -13         | 29.01       | H            |
| 5722.5          | -60.11                 | 1.74                 | 3        | 12.66                           | -49.19          | -13         | 36.19       | V            |

*Note: All modes were tested. The QPSK 5 MHz bandwidth was identified as the worst case and is therefore recorded in this report. Other observed spurious emissions were considered to be at the noise-floor level and were therefore not recorded.*





*LTE FDD Band 4\_Channel Bandwidth 5MHz\_QPSK\_ Low Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 662.80          | -46.92                 | 0.95                 | 3        | 8.61                            | -39.26          | -13         | 26.26       | H            |
| 663.23          | -52.98                 | 0.95                 | 3        | 8.61                            | -45.32          | -13         | 32.32       | V            |
| 3425            | -46.39                 | 1.2                  | 3        | 11.82                           | -35.77          | -13         | 22.77       | H            |
| 3425            | -53.54                 | 1.2                  | 3        | 11.82                           | -42.92          | -13         | 29.92       | V            |
| 5137.5          | -50.32                 | 1.6                  | 3        | 12.37                           | -39.55          | -13         | 26.55       | H            |
| 5137.5          | -53.03                 | 1.6                  | 3        | 12.37                           | -42.26          | -13         | 29.26       | V            |

*LTE FDD Band 4\_Channel Bandwidth 5MHz\_QPSK\_ Middle Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 661.29          | -46.71                 | 0.95                 | 3        | 8.61                            | -39.05          | -13         | 26.05       | H            |
| 661.79          | -53.59                 | 0.95                 | 3        | 8.61                            | -45.93          | -13         | 32.93       | V            |
| 3465            | -55.99                 | 1.21                 | 3        | 11.86                           | -45.34          | -13         | 32.34       | H            |
| 3465            | -54.32                 | 1.21                 | 3        | 11.86                           | -43.67          | -13         | 30.67       | V            |
| 5197.5          | -46.65                 | 1.61                 | 3        | 12.4                            | -35.86          | -13         | 22.86       | H            |
| 5197.5          | -52.41                 | 1.61                 | 3        | 12.4                            | -41.62          | -13         | 28.62       | V            |

*LTE FDD Band 4\_Channel Bandwidth 5MHz\_QPSK\_ High Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 662.21          | -52.97                 | 0.95                 | 3        | 8.61                            | -45.31          | -13         | 32.31       | H            |
| 659.98          | -53.08                 | 0.95                 | 3        | 8.61                            | -45.42          | -13         | 32.42       | V            |
| 3505            | -54.04                 | 1.22                 | 3        | 11.9                            | -43.36          | -13         | 30.36       | H            |
| 3505            | -54.73                 | 1.22                 | 3        | 11.9                            | -44.05          | -13         | 31.05       | V            |
| 5257.5          | -46.01                 | 1.63                 | 3        | 12.43                           | -35.21          | -13         | 22.21       | H            |
| 5257.5          | -57.55                 | 1.63                 | 3        | 12.43                           | -46.75          | -13         | 33.75       | V            |

*Note: All modes were tested. The QPSK 5 MHz bandwidth was identified as the worst case and is therefore recorded in this report. Other observed spurious emissions were considered to be at the noise-floor level and were therefore not recorded.*



*LTE FDD Band 5\_Channel Bandwidth 5MHz\_QPSK\_Low Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub><br>Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|------------------------------------|-----------------|-------------|-------------|--------------|
| 659.92          | -53.33                 | 0.95                 | 3        | 8.61                               | -45.67          | -13         | 32.67       | H            |
| 662.93          | -52.92                 | 0.95                 | 3        | 8.61                               | -45.26          | -13         | 32.26       | V            |
| 1653            | -52.97                 | 0.83                 | 3        | 8.61                               | -45.19          | -13         | 32.19       | H            |
| 1653            | -52.19                 | 0.83                 | 3        | 8.61                               | -44.41          | -13         | 31.41       | V            |
| 2479.5          | -50.59                 | 1                    | 3        | 10.72                              | -40.87          | -13         | 27.87       | H            |
| 2479.5          | -53.77                 | 1                    | 3        | 10.72                              | -44.05          | -13         | 31.05       | V            |

*LTE FDD Band 5\_Channel Bandwidth 5MHz\_QPSK\_Middle Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub><br>Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|------------------------------------|-----------------|-------------|-------------|--------------|
| 659.20          | -53.50                 | 0.95                 | 3        | 8.61                               | -45.84          | -13         | 32.84       | H            |
| 658.50          | -53.56                 | 0.95                 | 3        | 8.61                               | -45.90          | -13         | 32.90       | V            |
| 1673            | -52.47                 | 0.83                 | 3        | 8.69                               | -44.61          | -13         | 31.61       | H            |
| 1673            | -50.62                 | 0.83                 | 3        | 8.69                               | -42.76          | -13         | 29.76       | V            |
| 2509.5          | -51.21                 | 1                    | 3        | 10.76                              | -41.45          | -13         | 28.45       | H            |
| 2509.5          | -54.60                 | 1                    | 3        | 10.76                              | -44.84          | -13         | 31.84       | V            |

*LTE FDD Band 5\_Channel Bandwidth 5MHz\_QPSK\_High Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub><br>Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|------------------------------------|-----------------|-------------|-------------|--------------|
| 658.88          | -52.95                 | 0.95                 | 3        | 8.61                               | -45.29          | -13         | 32.29       | H            |
| 658.46          | -53.29                 | 0.95                 | 3        | 8.61                               | -45.63          | -13         | 32.63       | V            |
| 1693            | -55.24                 | 0.84                 | 3        | 8.78                               | -47.30          | -13         | 34.30       | H            |
| 1693            | -51.18                 | 0.84                 | 3        | 8.78                               | -43.24          | -13         | 30.24       | V            |
| 2539.5          | -46.53                 | 1.01                 | 3        | 10.8                               | -36.74          | -13         | 23.74       | H            |
| 2539.5          | -51.70                 | 1.01                 | 3        | 10.8                               | -41.91          | -13         | 28.91       | V            |

*Note: All modes were tested. The QPSK 5 MHz bandwidth was identified as the worst case and is therefore recorded in this report. Other observed spurious emissions were considered to be at the noise-floor level and were therefore not recorded.*



*LTE FDD Band 7\_Channel Bandwidth 5MHz\_QPSK\_Low Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 661.44          | -52.63                 | 0.95                 | 3        | 8.61                            | -44.97          | -25         | 19.97       | H            |
| 661.17          | -53.31                 | 0.95                 | 3        | 8.61                            | -45.65          | -25         | 20.65       | V            |
| 5005            | -54.03                 | 1.57                 | 3        | 12.3                            | -43.30          | -25         | 18.30       | H            |
| 5005            | -55.50                 | 1.57                 | 3        | 12.3                            | -44.77          | -25         | 19.77       | V            |
| 7507.5          | -46.65                 | 2                    | 3        | 11.25                           | -37.40          | -25         | 12.40       | H            |
| 7507.5          | -55.61                 | 2                    | 3        | 11.25                           | -46.36          | -25         | 21.36       | V            |

*LTE FDD Band 7\_Channel Bandwidth 5MHz\_QPSK\_Middle Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 661.15          | -52.79                 | 0.95                 | 3        | 8.61                            | -45.13          | -25         | 20.13       | H            |
| 659.57          | -52.84                 | 0.95                 | 3        | 8.61                            | -45.18          | -25         | 20.18       | V            |
| 5070            | -54.45                 | 1.58                 | 3        | 12.34                           | -43.69          | -25         | 18.69       | H            |
| 5070            | -57.27                 | 1.58                 | 3        | 12.34                           | -46.51          | -25         | 21.51       | V            |
| 7605            | -51.88                 | 2.01                 | 3        | 11.22                           | -42.67          | -25         | 17.67       | H            |
| 7605            | -54.42                 | 2.01                 | 3        | 11.22                           | -45.21          | -25         | 20.21       | V            |

*LTE FDD Band 7\_Channel Bandwidth 5MHz\_QPSK\_High Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 659.86          | -53.27                 | 0.95                 | 3        | 8.61                            | -45.61          | -25         | 20.61       | H            |
| 660.24          | -53.28                 | 0.95                 | 3        | 8.61                            | -45.62          | -25         | 20.62       | V            |
| 5135            | -56.51                 | 1.6                  | 3        | 12.37                           | -45.74          | -25         | 20.74       | H            |
| 5135            | -53.40                 | 1.6                  | 3        | 12.37                           | -42.63          | -25         | 17.63       | V            |
| 7702.5          | -46.81                 | 2.03                 | 3        | 11.19                           | -37.65          | -25         | 12.65       | H            |
| 7702.5          | -51.69                 | 2.03                 | 3        | 11.19                           | -42.53          | -25         | 17.53       | V            |

*Note: All modes were tested. The QPSK 5 MHz bandwidth was identified as the worst case and is therefore recorded in this report. Other observed spurious emissions were considered to be at the noise-floor level and were therefore not recorded.*



*LTE FDD Band 66\_Channel Bandwidth 5MHz\_QPSK\_Low Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 660.48          | -52.91                 | 0.95                 | 3        | 8.61                            | -45.25          | -13         | 32.25       | H            |
| 659.67          | -52.66                 | 0.95                 | 3        | 8.61                            | -45.00          | -13         | 32.00       | V            |
| 3425            | -55.80                 | 1.2                  | 3        | 11.82                           | -45.18          | -13         | 32.18       | H            |
| 3425            | -53.73                 | 1.2                  | 3        | 11.82                           | -43.11          | -13         | 30.11       | V            |
| 5137.5          | -50.54                 | 1.6                  | 3        | 12.37                           | -39.77          | -13         | 26.77       | H            |
| 5137.5          | -52.52                 | 1.6                  | 3        | 12.37                           | -41.75          | -13         | 28.75       | V            |

*LTE FDD Band 66\_Channel Bandwidth 5MHz\_QPSK\_Middle Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 662.14          | -53.48                 | 0.95                 | 3        | 8.61                            | -45.82          | -13         | 32.82       | H            |
| 661.10          | -52.79                 | 0.95                 | 3        | 8.61                            | -45.13          | -13         | 32.13       | V            |
| 3490            | -55.55                 | 1.21                 | 3        | 11.86                           | -44.90          | -13         | 31.90       | H            |
| 3490            | -54.67                 | 1.21                 | 3        | 11.86                           | -44.02          | -13         | 31.02       | V            |
| 5235            | -46.44                 | 1.61                 | 3        | 12.4                            | -35.65          | -13         | 22.65       | H            |
| 5235            | -52.27                 | 1.61                 | 3        | 12.4                            | -41.48          | -13         | 28.48       | V            |

*LTE FDD Band 66\_Channel Bandwidth 5MHz\_QPSK\_High Channel*

| Frequency (MHz) | P <sub>Mea</sub> (dBm) | P <sub>cl</sub> (dB) | Distance | G <sub>a</sub> Antenna Gain(dB) | Peak EIRP (dBm) | Limit (dBm) | Margin (dB) | Polarization |
|-----------------|------------------------|----------------------|----------|---------------------------------|-----------------|-------------|-------------|--------------|
| 659.40          | -53.54                 | 0.95                 | 3        | 8.61                            | -45.88          | -13         | 32.88       | H            |
| 659.65          | -52.71                 | 0.95                 | 3        | 8.61                            | -45.05          | -13         | 32.05       | V            |
| 3555            | -54.36                 | 1.22                 | 3        | 11.9                            | -43.68          | -13         | 30.68       | H            |
| 3555            | -54.82                 | 1.22                 | 3        | 11.9                            | -44.14          | -13         | 31.14       | V            |
| 5332.5          | -45.82                 | 1.63                 | 3        | 12.43                           | -35.02          | -13         | 22.02       | H            |
| 5332.5          | -58.05                 | 1.63                 | 3        | 12.43                           | -47.25          | -13         | 34.25       | V            |

*Note: All modes were tested. The QPSK 5 MHz bandwidth was identified as the worst case and is therefore recorded in this report. Other observed spurious emissions were considered to be at the noise-floor level and were therefore not recorded.*



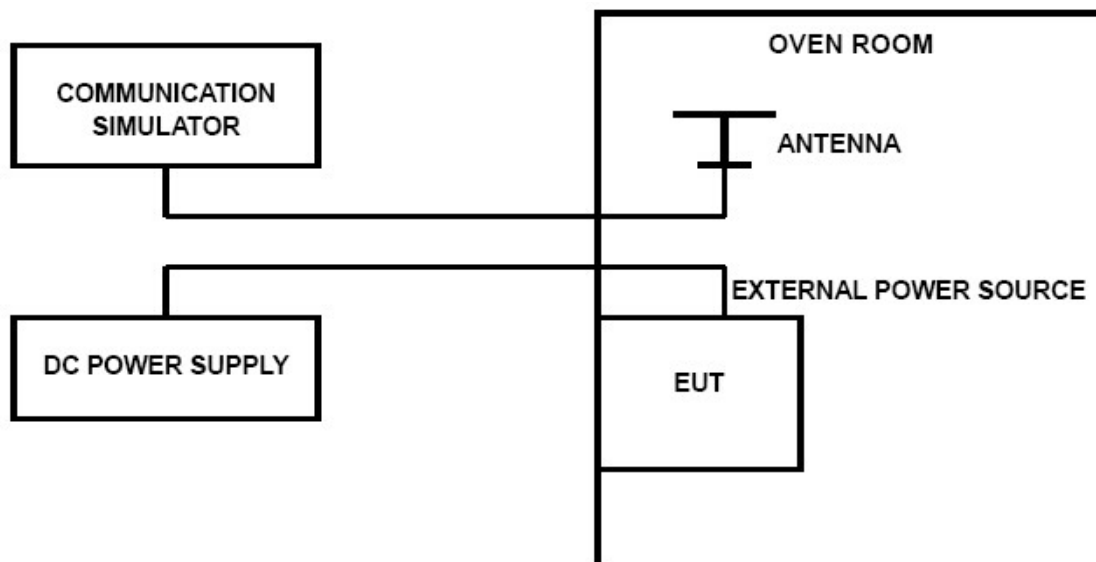


## 5.6. Frequency Stability under Temperature & Voltage Variations

### 5.6.1. LIMIT

According to FCC §2.1055, §22.355, §24.235 and §27.54 and §90.213 requirement, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation and should not exceed 2.5ppm.

### 5.6.2. TEST CONFIGURATION



### 5.6.3. TEST PROCEDURE

The EUT was setup according to ANSI C63.26.

### 5.6.4. Frequency Stability Under Temperature Variations:

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a "call mode". This is accomplished with the use of R&S CMW500 DIGITAL RADIO COMMUNICATION TESTER.

1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at -30°C.
3. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on middle channel for Specific band, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
4. Repeat the above measurements at 10°C increments from -30°C to +50°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
5. Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1.5 hours unpowered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50°C.
7. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the centre channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10 °C increments from +50°C to -30°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements
9. At all temperature levels hold the temperature to +/- 0.5°C during the measurement procedure.

### 5.6.5. Frequency Stability Under Voltage Variations:





Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ( $\pm 15\%$ ) and endpoint, record the maximum frequency change.

#### 5.6.6. TEST RESULTS

##### Pass

##### Remark:

1. We tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth as list in section 3.3 of this report, and record the worst case in this report.
2. please refer to Frequency Stability in Appendix Test data for LTE Band2.
3. please refer to Frequency Stability in Appendix Test data for LTE Band4.
4. please refer to Frequency Stability in Appendix Test data for LTE Band5.
5. please refer to Frequency Stability in Appendix Test data for LTE Band7.
6. please refer to Frequency Stability in Appendix Test data for LTE Band66.





## **6. TEST SETUP PHOTOS OF THE EUT**

Please refer to separated files for Test Setup Photos of the EUT.

## **7. EXTERNAL PHOTOS OF THE EUT**

Please refer to separated files for External Photos of the EUT.

## **8. INTERNAL PHOTOS OF THE EUT**

Please refer to separated files for Internal Photos of the EUT.

-----THE END OF REPORT-----

