# TEST REPORT

| | |
|---|---|
| **Application No.:** | SZCR2404001345MO |
| **Applicant:** | Shenzhen Jimi IoT Co., Ltd. |
| **Address of Applicant:** | 3-4/F,Block A,Building#7,Shenzhen International Innovation Valley, Dashi 1st Road,Nanshan District, ShenZhen, China |
| **Manufacturer:** | Shenzhen Jimi IoT Co., Ltd. |
| **Address of Manufacturer:** | 3-4/F, Block A, Building #7, Shenzhen International Innovation Valley, Dashi 1st Road, Nanshan District, Shenzhen, Guangdong, China |
| **Factory:** | Huizhou Newthinking Electronics Co., Ltd. |
| **Address of Factory:** | The third&sixth floor, 1&2 Factory Buildings, Jimi Industrial Park, No.101 Jinfu Road, Xiaojinkou street, Huicheng District, Huizhou |
| **Equipment Under Test (EUT):** | |
| **EUT Name:** | Module |
| **Model No.:** | XQ800S, XQ800S_LA ♣ |
| ♣ | Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical. |
| **FCC ID:** | 2AMLF-XQ800S |
| **Standard(s) :** | 47 CFR Part 2<br>47 CFR Part 22 subpart H<br>47 CFR Part 24 subpart E<br>47 CFR Part 27 subpart C |
| **Date of Receipt:** | 2024-04-16 |
| **Date of Test:** | 2024-04-22 to 2024-05-08 |
| **Date of Issue:** | 2024-05-10 |
| **Test Result:** | **Pass** |

* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu
EMC Laboratory Manager



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| Revision Record | | | | |
|---|---|---|---|---|
| **Version** | **Chapter** | **Date** | **Modifier** | **Remark** |
| 01 | | 2024-05-10 | | Original |
| | | | | |
| | | | | |

| | | | | |
|---|---|---|---|---|
| **Authorized for issue by:** | | | | |
| | | Darren Yuan<br>**Darren Yuan/Project Engineer** | | |
| | | Eric Fu<br>**Eric Fu/Reviewer** | | |


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# 2 Test Summary

| Test Item | FCC Rule No. | Requirements | Verdict |
|---|---|---|---|
| Effective (Isotropic) Radiated Output Power Data | §2.1046<br>§22.913<br>§24.232<br>§27.50(d)<br>§27.50(h) | ERP≤ 7W(LTE Band 5)<br>EIRP≤ 2W(LTE Band 2)<br>EIRP≤ 1W(LTE Band 4,66)<br>EIRP≤ 2W(LTE Band 7) | PASS |
| Peak-Average Ratio | §22.913<br>§24.232<br>§27.50(d) | ≤13dB | PASS |
| Bandwidth | §2.1049(h) | OBW: No limit<br>EBW: No limit | PASS |
| Band Edge Compliance | §2.1051<br>§22.917<br>§24.238<br>§27.50(h)<br>§27.50(m) | ≤ -13dBm (LTE Band5)<br>≤ -13dBm (LTE Band2)<br>≤ -13dBm (LTE Band4,66)<br>Refer to clause 6.4 for LTE Band7 | PASS |
| Spurious emissions at antenna terminals | §2.1051<br>§22.917<br>§24.238<br>§27.50(h)<br>§27.50(m) | ≤ -13dBm (LTE Band5)<br>≤ -13dBm (LTE Band2)<br>≤ -13dBm (LTE Band4,66)<br>Refer to clause 6.5 for LTE Band7 | PASS |
| Field strength of spurious radiation | §2.1051<br>§22.917<br>§24.238<br>§27.50(h)<br>§27.50(m) | ≤ -13dBm (LTE Band5)<br>≤ -13dBm (LTE Band2)<br>≤ -13dBm (LTE Band4,66)<br>Refer to clause 6.6 for LTE Band7 | PASS |
| Frequency stability | §2.1055<br>§22.355<br>§24.235<br>§27.54 | ≤ ±2.5ppm. | PASS |

**Declaration of EUT Family Grouping:**

Model No.: XQ800S, XQ800S_LA

Only the model XQ800S_LA was tested, since according to the declaration from the applicant, the electrical circuit design, PCB layout, components used, internal wiring and functions were identical for all the above models, with only difference on model name.

# 3 Contents




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# 4 General Information

## 4.1 Details of E.U.T.

| | |
|---|---|
| Power supply: | Input: 4VDC |
| LTE Operation Frequency Band: | LTE Band 2,4,5,7,66 |
| Category: | Support category 1bis |
| Modulation Type: | QPSK, 16QAM |
| LTE Power Class: | Level 3 |
| Antenna Type: | Dipole Antenna<br>PIFA Antenna |
| Antenna Gain for Dipole Antenna: | LTE B2: 6dBi; B4: 6dBi; B5: 6dBi; B7: 6dBi, B66: 6.0dBi. |
| Antenna Gain for PIFA Antenna: | LTE B2: 6dBi; B4: 6dBi; B5: 6dBi; B7: 6dBi, B66: 6.0dBi. |
| Cable Loss (for RF conducted test): | B2: 1.5dB; B4: 1.4dB; B5: 0.8dB; B7: 2.2dB; B66: 1.4dB |

Remark1: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

Remark2: There are two kinds of antenna were selected to test, dipole antenna is the worst-case, only the worst-case test data were recorded in this report.

## 4.2 Description of Support Units

| Description | Manufacturer | Model No. | Serial No. |
|---|---|---|---|
| Motherboard | Jimi IOT | V1462_MB_V1.0 | N/A |
| DC power supply | ZHAOXIN | KXN-6020D | REF. No.SEA27B00 |

## 4.3 Test Frequency

| Test mode: | Nominal Bandwidth (MHz) | RF Channel | | |
|---|---|---|---|---|
| | | Low (L) | Middle (M) | High (H) |
| | | MHz | MHz | MHz |
| LTE FDD Band 2 | 1.4 | 1850.7 | 1880 | 1909.3 |
| | 3 | 1851.5 | 1880 | 1908.5 |
| | 5 | 1852.5 | 1880 | 1907.5 |
| | 10 | 1855.0 | 1880 | 1905.0 |
| | 15 | 1857.5 | 1880 | 1902.5 |
| | 20 | 1860.0 | 1880 | 1900.0 |
| **Test mode:** | **Nominal Bandwidth (MHz)** | **RF Channel** | | |
| | | **Low (L)** | **Middle (M)** | **High (H)** |
| | | **MHz** | **MHz** | **MHz** |
| LTE FDD Band 4 | 1.4 | 1710.7 | 1732.5 | 1754.3 |
| | 3 | 1711.5 | 1732.5 | 1753.5 |
| | 5 | 1712.5 | 1732.5 | 1752.5 |
| | 10 | 1715.0 | 1732.5 | 1750.0 |
| | 15 | 1717.5 | 1732.5 | 1747.5 |
| | 20 | 1720.0 | 1732.5 | 1745.0 |
| **Test mode:** | **Nominal Bandwidth (MHz)** | **RF Channel** | | |
| | | **Low (L)** | **Middle (M)** | **High (H)** |
| | | **MHz** | **MHz** | **MHz** |
| LTE FDD Band 5 | 1.4 | 824.7 | 836.5 | 848.3 |
| | 3 | 825.5 | 836.5 | 847.5 |
| | 5 | 826.5 | 836.5 | 846.5 |
| | 10 | 829.0 | 836.5 | 844.0 |
| **Test mode:** | **Nominal Bandwidth (MHz)** | **RF Channel** | | |
| | | **Low (L)** | **Middle (M)** | **High (H)** |
| | | **MHz** | **MHz** | **MHz** |
| LTE FDD Band 7 | 5 | 2502.5 | 2535.0 | 2567.5 |
| | 10 | 2505.0 | 2535.0 | 2565.0 |
| | 15 | 2507.5 | 2535.0 | 2562.5 |
| | 20 | 2510.0 | 2535.0 | 2560.0 |

| Test mode: | Nominal Bandwidth (MHz) | RF Channel | | |
|---|---|---|---|---|
| | | Low (L) | Middle (M) | High (H) |
| | | MHz | MHz | MHz |
| LTE FDD Band 66 | 1.4 | 1710.7 | 1745.0 | 1779.3 |
| | 3 | 1711.5 | 1745.0 | 1778.5 |
| | 5 | 1712.5 | 1745.0 | 1777.5 |
| | 10 | 1715.0 | 1745.0 | 1775.0 |
| | 15 | 1717.5 | 1745.0 | 1772.5 |
| | 20 | 1720.0 | 1745.0 | 1770.0 |

## 4.4 Test Environment

| Environment Parameter | Selected Values During Tests | |
|---|---|---|
| Temperature: | TL | -20°C |
| | TN | +20°C |
| | TH | +70°C |
| Voltage: | VL | 3.4Vdc |
| | VN | 4.0Vdc |
| | VH | 4.6Vdc |

NOTE: VL= lower extreme test voltage
VN= nominal voltage
VH= upper extreme test voltage
TL= lower extreme test temperature
TN= normal temperature
TH= upper extreme test temperature

## 4.5 Measurement Uncertainty

| No. | Item | Measurement Uncertainty |
|---|---|---|
| 1 | Radio Frequency | ± 5.4 x $10^{-8}$ |
| 2 | Duty cycle | ± 0.3% |
| 3 | Occupied Bandwidth | ± 3% |
| 4 | RF conducted power | ± 0.8dB |
| 5 | RF power density | ± 0.4dB |
| 6 | Conducted Spurious emissions | ± 2.7dB |
| 7 | Radiated Spurious emission test | ± 3.1dB (Below 1GHz) |
| | | ± 4.4dB (Above 1GHz) |
| 8 | Temperature test | ± 1°C |
| 9 | Humidity test | ± 3% |
| 10 | Supply voltages | ± 1.5% |
| 11 | Time | ± 3% |


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## 4.6 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch
No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.
Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

## 4.7 Test Facility

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

**• A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

**• VCCI (Member No. 1937)**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

**• FCC –Designation Number: CN1336**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

**• Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

## 4.8 Deviation from Standards

None

## 4.9 Abnormalities from Standard Conditions

None

# 5 Equipment List

| RF conducted test | | | | | |
|---|---|---|---|---|---|
| **Test Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal. Date** | **Cal. Due date** |
| Programmable DC Source | Chroma | 62024P-80-60 | SEM011-09 | 2023-07-11 | 2024-07-10 |
| Programmable Temperature & Humidity Chamber | Votsch Industrietechnik GmbH | VT 4002 | SEM002-15 | 2024-03-19 | 2025-03-18 |
| Spectrum Analyzer | Rohde & Schwarz | FSV40 | SEM008-04 | 2024-03-15 | 2025-03-14 |
| Measurement Software | TST | TST PASS V2.0 | N-A | N-A | N-A |
| Attenuator | Huber+Suhner | 6620_SMA-50-1 | SEM021-09 | 2023-07-11 | 2024-07-10 |
| Universal Radio Communication Tester | Rohde & Schwarz | CMW 500 | SEM010-03 | 2024-03-14 | 2025-03-13 |
| Power Sensor | KEYSIGHT | U2021XA | SEM009-15 | 2024-03-15 | 2025-03-14 |

| RE in Chamber | | | | | |
|---|---|---|---|---|---|
| **Test Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal. Date** | **Cal. Due date** |
| Trilog-Broadband Antenna | Schwarzbeck | VULB9168 | SEM003-33 | 2021-09-25 | 2024-09-24 |
| MXE EMI receiver | Agilent | N9038A | SEM004-05 | 2023-07-11 | 2024-07-10 |
| Pre-amplifier | HP | 8447D | SEM005-02 | 2023-07-11 | 2024-07-10 |
| Spectrum Analyzer | Rohde & Schwarz | 101288 | SEM004-08 | 2023-07-11 | 2024-07-10 |
| Low Noise Amplifier | CLAVIIO | BDLNA-0118-352810 | SEM005-05 | 2023-07-11 | 2024-07-10 |
| Substitution Antenna | Schwarzbeck | VULB9168 | SEM003-18 | 2022-08-07 | 2025-08-06 |
| Signal Generator(9kHz-40GHz) | N5173B | MY53270267 | Agilent | 2023-07-11 | 2024-07-10 |
| Pre-amplifier | HP | 8447D | SEM005-02 | 2023-07-11 | 2024-07-10 |
| Broad-Band Horn Antenna | Schwarzbeck | BBHA 9170 | SEM003-15 | 2021-07-11 | 2024-07-10 |
| Broad-Band Horn Antenna | Schwarzbeck | BBHA 9120D | SEM003-32 | 2021-09-26 | 2024-09-25 |
| Double-ridged waveguide horn | ETS-LINDGREN | 3117 | SEM003-34 | 2021-09-25 | 2024-09-24 |
| Spectrum Analyzer | Rohde & Schwarz | 101288 | SEM004-08 | 2023-07-11 | 2024-07-10 |
| Low Noise Amplifier | CLAVIIO | BDLNA-0118-352810 | SEM005-05 | 2023-07-11 | 2024-07-10 |


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| | | | | | |
|---|---|---|---|---|---|
| Pre-amplifier | Compliance Directions Systems Inc. | PAP-2640-50 | SEM005-08 | 2023-07-11 | 2024-07-10 |
| Pre-amplifier | Rohde & Schwarz | CH14-H052 | SEM005-17 | 2023-07-11 | 2024-07-10 |
| Substitution Antenna | ETS-Lindgren | 3142C | SEM003-01 | 2023-06-25 | 2026-06-24 |
| Universal Radio Communication Tester | Rohde & Schwarz | CMW 500 | SEM010-03 | 2024-03-14 | 2025-03-13 |

| **General used equipment** | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| Humidity/ Temperature Indicator | deli | 8838 | SEM002-32 | 2023-07-28 | 2024-07-27 |
| Humidity/ Temperature Indicator | deli | 8838 | SEM002-33 | 2023-07-28 | 2024-07-27 |
| Barometer | Changchun Meteorological Industry Factory | DYM3 | SEM002-01 | 2024/03/18 | 2025/03/17 |


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# 6 Radio Spectrum Matter Test Results

## 6.1 Effective (Isotropic) Radiated Output Power Data

Test Requirement: §2.1046,§22.913,§24.232,§27.50(d),§27.50(h)

Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01

Limit: ERP≤ 7W(LTE Band 5)
EIRP≤ 2W(LTE Band 2)
EIRP≤ 1W(LTE Band 4,66)
EIRP≤ 2W(LTE Band 7)

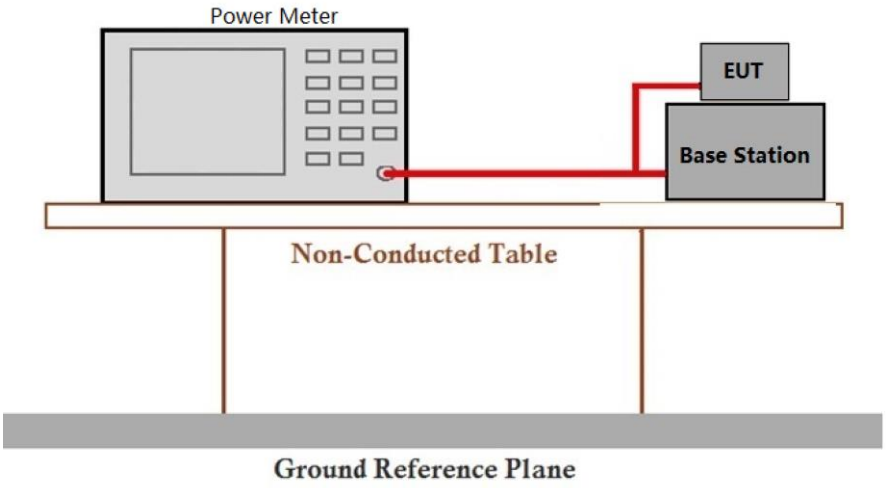
### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 21.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar

Test mode 32: TX mode_Keep the EUT in transmitting mode

### 6.1.2 Test Setup Diagram




### 6.1.3 Measurement Data

Please refer to Appendix for LTE test data.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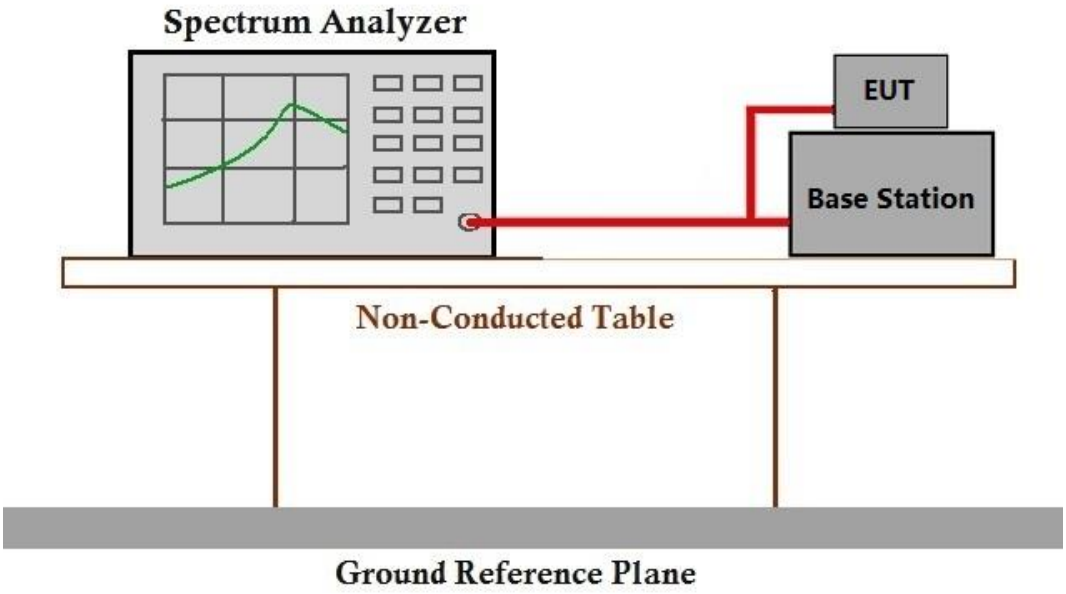
## 6.2 Peak-Average Ratio

Test Requirement: §22.913,§24.232,§27.50(d)
Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01
Limit: ≤13dB

### 6.2.1 E.U.T. Operation

Operating Environment:
Temperature: 21.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar
Test mode 32: TX mode_Keep the EUT in transmitting mode

### 6.2.2 Test Setup Diagram




### 6.2.3 Measurement Data

Please refer to Appendix for LTE test data.

## 6.3 Bandwidth

Test Requirement: §2.1049(h)

Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01

Limit: OBW: No limit
EBW: No limit

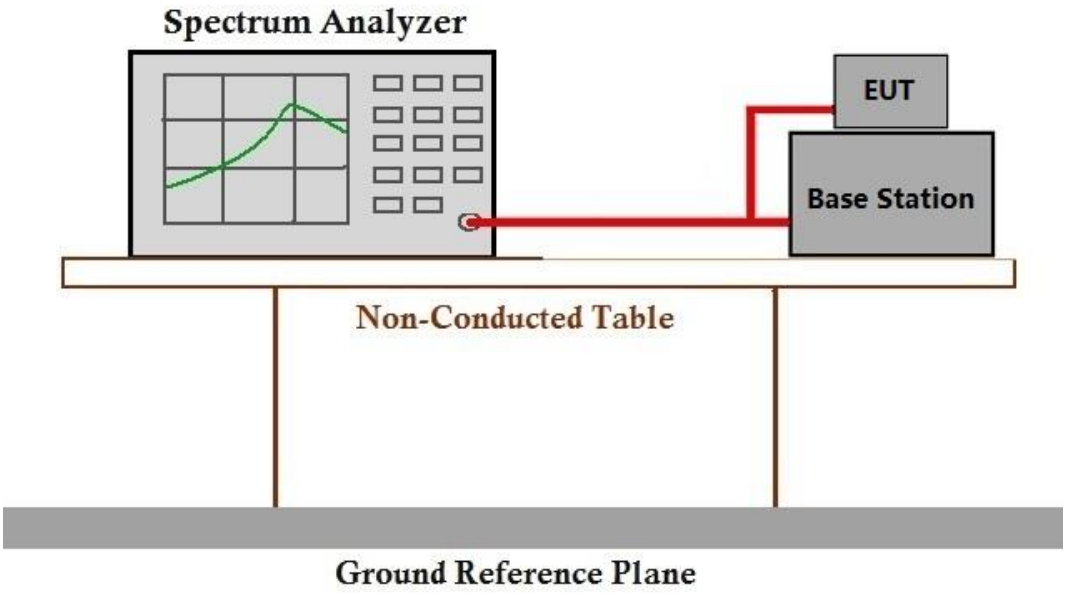
### 6.3.1 E.U.T. Operation

Operating Environment:

Temperature: 21.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar

Test mode 32: TX mode_Keep the EUT in transmitting mode

### 6.3.2 Test Setup Diagram




### 6.3.3 Measurement Data

Please refer to Appendix for LTE test data.

## 6.4 Band Edge Compliance

Test Requirement: §2.1051,§22.917,§24.238,§27.50(h),§27.50(m), §27.53(a)

Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01

Limit: ≤ -13dBm (**LTE Band2,4,5,66**)

For **Band7**:

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 that 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.

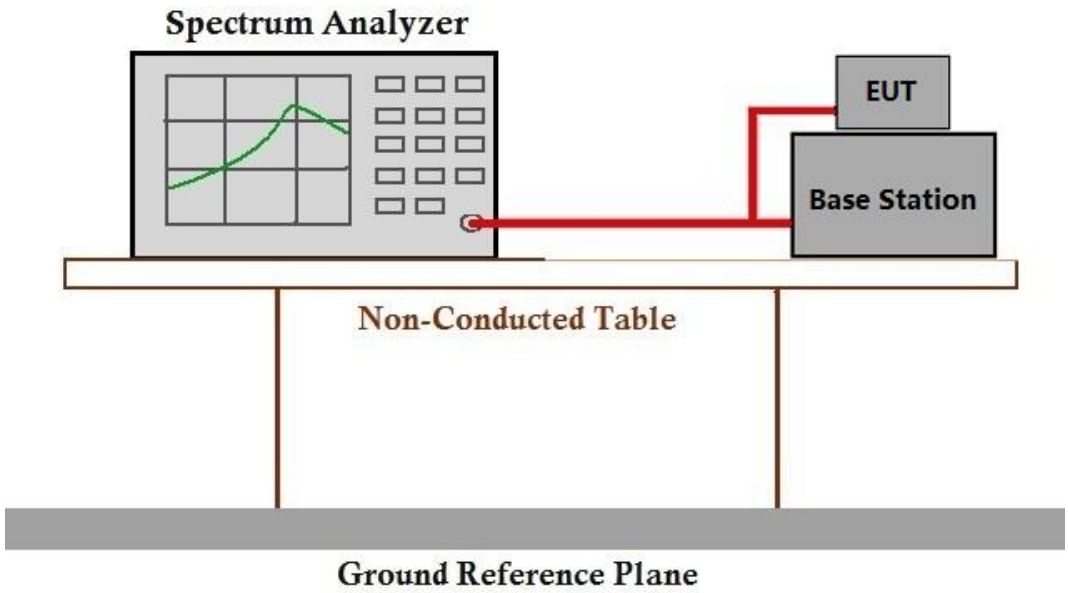
### 6.4.1 E.U.T. Operation

Operating Environment:

Temperature: 21.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar

Test mode 32: TX mode_Keep the EUT in transmitting mode

### 6.4.2 Test Setup Diagram




### 6.4.3 Measurement Data

Please refer to Appendix for LTE test data.

## 6.5 Spurious emissions at antenna terminals

Test Requirement: §2.1051,§22.917,§24.238,§27.50(h),§27.50(m), §27.53(a)

Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01

Limit: ≤ -13dBm (**LTE Band2,4,5,66**)

For **Band7**:

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 that 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.

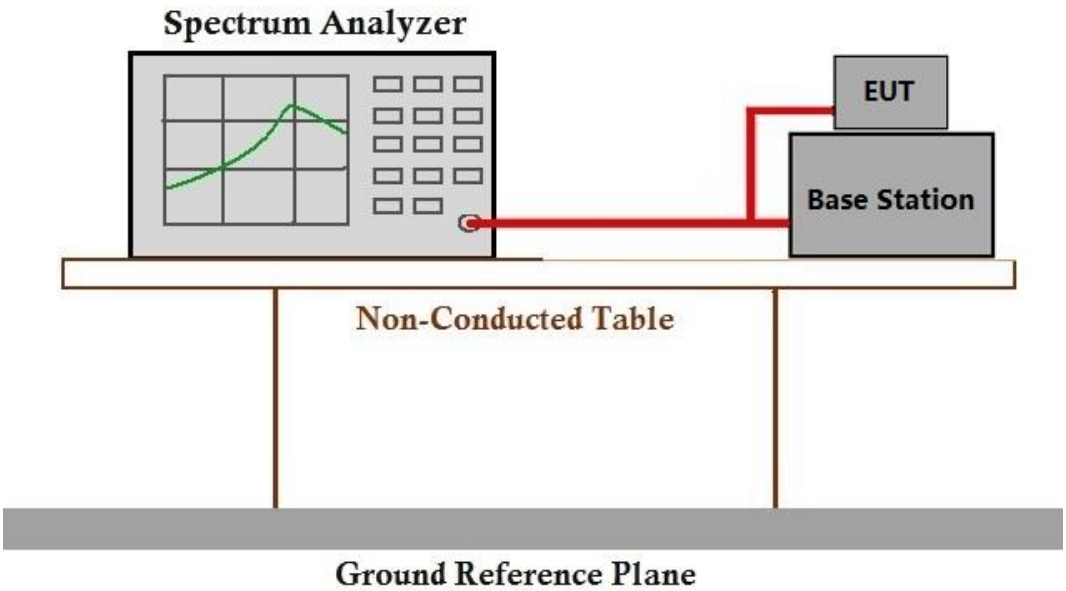
### 6.5.1 E.U.T. Operation

Operating Environment:

Temperature: 21.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar

Test mode 32: TX mode_Keep the EUT in transmitting mode

### 6.5.2 Test Setup Diagram




### 6.5.3 Measurement Data

Please refer to Appendix for LTE test data.

## 6.6 Field strength of spurious radiation

Test Requirement: §2.1051,§22.917,§24.238,§27.50(h),§27.50(m), §27.53(a)

Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01

Limit: ≤ -13dBm (**LTE Band2,4,5,66**)

For **Band7**:

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 that 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.

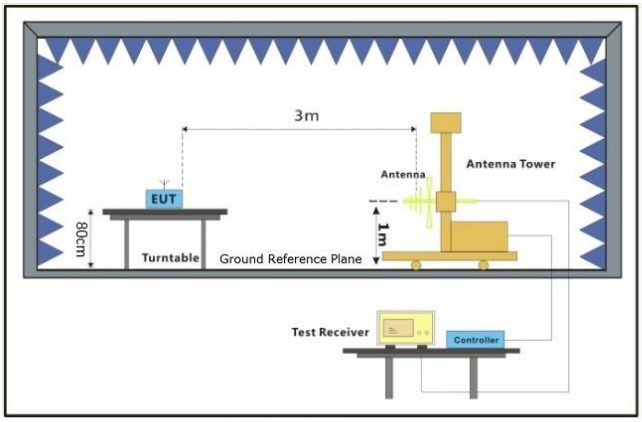
### 6.6.1 E.U.T. Operation

Operating Environment:

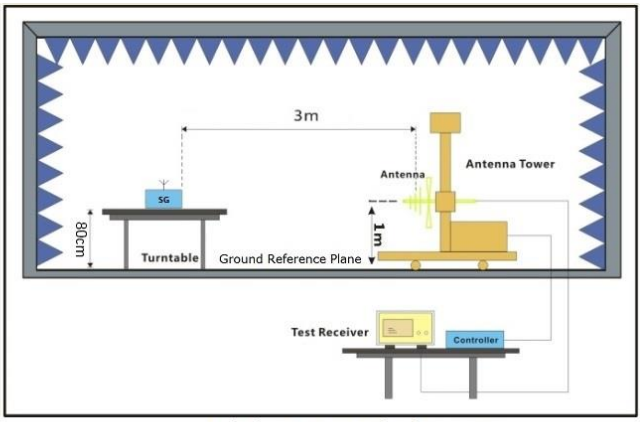
Temperature: 22.5 °C Humidity: 47.5 % RH Atmospheric Pressure: 1020 mbar

Test mode 32: TX mode_Keep the EUT in transmitting mode

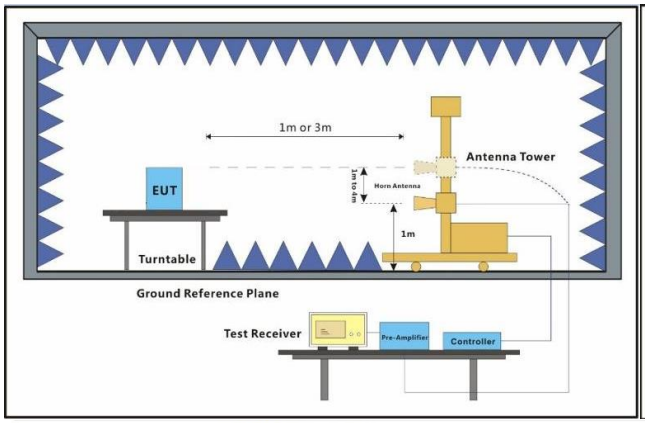
### 6.6.2 Test Setup Diagram



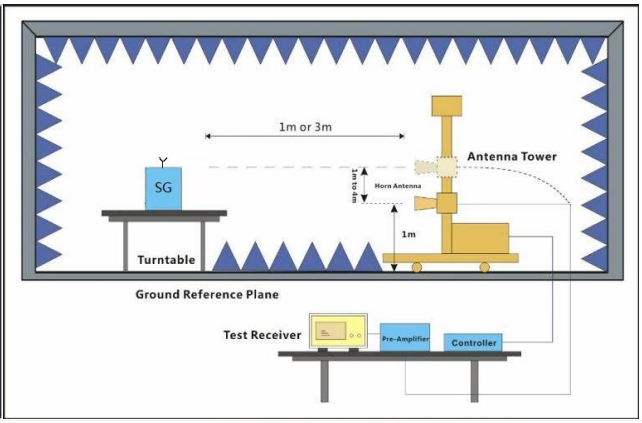

EUT




Substiute Antenna+Signal Generator




EUT




Substiute Antenna+Signal Generator

### 6.6.3 Measurement Procedure and Data

**Test Procedure:**

(1)On a test site, the EUT shall be placed on a turntable and in the position closest to the normal use as declared by the user.
(2)The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the transmitter.
(3)The output of the antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
(4)The transmitter shall be switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
(5)The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.
(6)The transmitter shall than be rotated through 360°in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
(7)The test antenna shall be raised and lowered again through the specified range of height until the measuring receiver detects a maximum signal level.
(8)The maximum signal level detected by the measuring receiver shall be noted.
(9)The measurement shall be repeated with the test antenna set to horizontal polarization.
(10) Replace the antenna with a proper Antenna (substitution antenna).
(11)The substitution antenna shall be oriented for vertical polarization and, if necessary, the length of the substitution antenna shall be adjusted to correspond to the frequency of transmitting.
(12)The substitution antenna shall be connected to a calibrated signal generator.
(13)If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
(14)The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
(15)The input signal to substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
(16)The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
(17)The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.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| LTE Band 2-Low channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3702 | -50.13 | -13 | -37.13 | -55.01 | 3.29 | 8.17 | Horizontal | Pass |
| 5553 | -52.58 | -13 | -39.58 | -58.79 | 4.24 | 10.45 | Horizontal | Pass |
| 7404 | -49.15 | -13 | -36.15 | -56.09 | 4.19 | 11.13 | Horizontal | Pass |
| 3702 | -50.87 | -13 | -37.87 | -55.75 | 3.29 | 8.17 | Vertical | Pass |
| 5553 | -52.15 | -13 | -39.15 | -58.36 | 4.24 | 10.45 | Vertical | Pass |
| 7404 | -48.36 | -13 | -35.36 | -55.3 | 4.19 | 11.13 | Vertical | Pass |

| LTE Band 2-Middle channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3742 | -51.19 | -13 | -38.19 | -56.07 | 3.29 | 8.17 | Horizontal | Pass |
| 5613 | -52.04 | -13 | -39.04 | -58.25 | 4.24 | 10.45 | Horizontal | Pass |
| 7484 | -48.77 | -13 | -35.77 | -55.71 | 4.19 | 11.13 | Horizontal | Pass |
| 3742 | -51.18 | -13 | -38.18 | -56.06 | 3.29 | 8.17 | Vertical | Pass |
| 5613 | -53.7 | -13 | -40.7 | -59.91 | 4.24 | 10.45 | Vertical | Pass |
| 7484 | -48.99 | -13 | -35.99 | -55.93 | 4.19 | 11.13 | Vertical | Pass |

| LTE Band 2-High channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3782 | -49.36 | -13 | -36.36 | -54.24 | 3.29 | 8.17 | Horizontal | Pass |
| 5673 | -53.5 | -13 | -40.5 | -59.71 | 4.24 | 10.45 | Horizontal | Pass |
| 7564 | -48.76 | -13 | -35.76 | -56.285 | 4.22 | 11.74 | Horizontal | Pass |
| 3782 | -49.35 | -13 | -36.35 | -54.23 | 3.29 | 8.17 | Vertical | Pass |
| 5673 | -53.86 | -13 | -40.86 | -60.07 | 4.24 | 10.45 | Vertical | Pass |
| 7564 | -48.54 | -13 | -35.54 | -56.065 | 4.22 | 11.74 | Vertical | Pass |


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| LTE Band 4-Low channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3422 | -49.94 | -13 | -36.94 | -53.9 | 2.96 | 6.92 | Horizontal | Pass |
| 5133 | -52.87 | -13 | -39.87 | -58.75 | 4.26 | 10.14 | Horizontal | Pass |
| 6844 | -51.09 | -13 | -38.09 | -57.375 | 4.21 | 10.49 | Horizontal | Pass |
| 3422 | -50 | -13 | -37 | -53.96 | 2.96 | 6.92 | Vertical | Pass |
| 5133 | -52.31 | -13 | -39.31 | -58.19 | 4.26 | 10.14 | Vertical | Pass |
| 6844 | -51.16 | -13 | -38.16 | -57.445 | 4.21 | 10.49 | Vertical | Pass |

| LTE Band 4-Middle channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3447 | -50.06 | -13 | -37.06 | -54.02 | 2.96 | 6.92 | Horizontal | Pass |
| 5170.5 | -52.77 | -13 | -39.77 | -58.65 | 4.26 | 10.14 | Horizontal | Pass |
| 6894 | -52.28 | -13 | -39.28 | -58.565 | 4.21 | 10.49 | Horizontal | Pass |
| 3447 | -49.63 | -13 | -36.63 | -53.59 | 2.96 | 6.92 | Vertical | Pass |
| 5170.5 | -53.64 | -13 | -40.64 | -59.52 | 4.26 | 10.14 | Vertical | Pass |
| 6894 | -51.72 | -13 | -38.72 | -58.005 | 4.21 | 10.49 | Vertical | Pass |

| LTE Band 4-High channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3472 | -50.7 | -13 | -37.7 | -54.66 | 2.96 | 6.92 | Horizontal | Pass |
| 5208 | -53.03 | -13 | -40.03 | -58.91 | 4.26 | 10.14 | Horizontal | Pass |
| 6944 | -50.58 | -13 | -37.58 | -56.865 | 4.21 | 10.49 | Horizontal | Pass |
| 3472 | -49.69 | -13 | -36.69 | -53.65 | 2.96 | 6.92 | Vertical | Pass |
| 5208 | -53.95 | -13 | -40.95 | -59.83 | 4.26 | 10.14 | Vertical | Pass |
| 6944 | -50.72 | -13 | -37.72 | -57.005 | 4.21 | 10.49 | Vertical | Pass |


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| LTE Band 5-Low channel, Modulation: QPSK, Bandwidth:10MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1649 | -61.69 | -13 | -48.69 | -65.575 | 2 | 5.88 | Horizontal | Pass |
| 2473.5 | -46.25 | -13 | -33.25 | -46.37 | 2.35 | 4.62 | Horizontal | Pass |
| 3298 | -55.91 | -13 | -42.91 | -57.72 | 2.96 | 6.92 | Horizontal | Pass |
| 1649 | -60.19 | -13 | -47.19 | -61.925 | 2 | 5.88 | Vertical | Pass |
| 2473.5 | -47.16 | -13 | -34.16 | -47.28 | 2.35 | 4.62 | Vertical | Pass |
| 3298 | -56.45 | -13 | -43.45 | -58.26 | 2.96 | 6.92 | Vertical | Pass |

| LTE Band 5-Middle channel, Modulation: QPSK, Bandwidth:10MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1664 | -60.54 | -13 | -47.54 | -64.425 | 2 | 5.88 | Horizontal | Pass |
| 2496 | -60.82 | -13 | -47.82 | -60.94 | 2.35 | 4.62 | Horizontal | Pass |
| 3328 | -57.51 | -13 | -44.51 | -59.32 | 2.96 | 6.92 | Horizontal | Pass |
| 1664 | -60.58 | -13 | -47.58 | -62.315 | 2 | 5.88 | Vertical | Pass |
| 2496 | -61.57 | -13 | -48.57 | -61.69 | 2.35 | 4.62 | Vertical | Pass |
| 3328 | -57.04 | -13 | -44.04 | -58.85 | 2.96 | 6.92 | Vertical | Pass |

| LTE Band 5-High channel, Modulation: QPSK, Bandwidth:10MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1679 | -59.59 | -13 | -46.59 | -63.475 | 2 | 5.88 | Horizontal | Pass |
| 2518.5 | -61.65 | -13 | -48.65 | -62.665 | 2.66 | 5.82 | Horizontal | Pass |
| 3358 | -56.45 | -13 | -43.45 | -58.26 | 2.96 | 6.92 | Horizontal | Pass |
| 1679 | -59.99 | -13 | -46.99 | -61.725 | 2 | 5.88 | Vertical | Pass |
| 2518.5 | -61.85 | -13 | -48.85 | -62.865 | 2.66 | 5.82 | Vertical | Pass |
| 3358 | -55.92 | -13 | -42.92 | -57.73 | 2.96 | 6.92 | Vertical | Pass |

| LTE Band 7-Low channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 5002 | -47.7 | -25 | -22.7 | -53.58 | 4.26 | 10.14 | Horizontal | Pass |
| 7503 | -49.55 | -25 | -24.55 | -57.075 | 4.22 | 11.74 | Horizontal | Pass |
| 10004 | -47.93 | -25 | -22.93 | -55.88 | 5.08 | 13.03 | Horizontal | Pass |
| 5002 | -47.84 | -25 | -22.84 | -53.72 | 4.26 | 10.14 | Vertical | Pass |
| 7503 | -48.28 | -25 | -23.28 | -55.805 | 4.22 | 11.74 | Vertical | Pass |
| 10004 | -48.16 | -25 | -23.16 | -56.11 | 5.08 | 13.03 | Vertical | Pass |

| LTE Band 7-Middle channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 5052 | -47.64 | -25 | -22.64 | -53.52 | 4.26 | 10.14 | Horizontal | Pass |
| 7578 | -49.18 | -25 | -24.18 | -56.705 | 4.22 | 11.74 | Horizontal | Pass |
| 10104 | -46.74 | -25 | -21.74 | -54.69 | 5.08 | 13.03 | Horizontal | Pass |
| 5052 | -46.94 | -25 | -21.94 | -52.82 | 4.26 | 10.14 | Vertical | Pass |
| 7578 | -48.59 | -25 | -23.59 | -56.115 | 4.22 | 11.74 | Vertical | Pass |
| 10104 | -46.85 | -25 | -21.85 | -54.8 | 5.08 | 13.03 | Vertical | Pass |

| LTE Band 7-High channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 5102 | -48.1 | -25 | -23.1 | -53.98 | 4.26 | 10.14 | Horizontal | Pass |
| 7653 | -50.02 | -25 | -25.02 | -57.545 | 4.22 | 11.74 | Horizontal | Pass |
| 10204 | -49.35 | -25 | -24.35 | -57.3 | 5.08 | 13.03 | Horizontal | Pass |
| 5102 | -48.36 | -25 | -23.36 | -54.24 | 4.26 | 10.14 | Vertical | Pass |
| 7653 | -49.4 | -25 | -24.4 | -56.925 | 4.22 | 11.74 | Vertical | Pass |
| 10204 | -48.74 | -25 | -23.74 | -56.69 | 5.08 | 13.03 | Vertical | Pass |


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| LTE Band 66-Low channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3422 | -50.67 | -13 | -37.67 | -54.63 | 2.96 | 6.92 | Horizontal | Pass |
| 5133 | -53.13 | -13 | -40.13 | -59.01 | 4.26 | 10.14 | Horizontal | Pass |
| 6844 | -50.89 | -13 | -37.89 | -57.175 | 4.21 | 10.49 | Horizontal | Pass |
| 3422 | -51.11 | -13 | -38.11 | -55.07 | 2.96 | 6.92 | Vertical | Pass |
| 5133 | -53.09 | -13 | -40.09 | -58.97 | 4.26 | 10.14 | Vertical | Pass |
| 6844 | -50.95 | -13 | -37.95 | -57.235 | 4.21 | 10.49 | Vertical | Pass |

| LTE Band 66-Middle channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3472 | -50.52 | -13 | -37.52 | -54.48 | 2.96 | 6.92 | Horizontal | Pass |
| 5208 | -52.68 | -13 | -39.68 | -58.56 | 4.26 | 10.14 | Horizontal | Pass |
| 6944 | -49.9 | -13 | -36.9 | -56.185 | 4.21 | 10.49 | Horizontal | Pass |
| 3472 | -49.91 | -13 | -36.91 | -53.87 | 2.96 | 6.92 | Vertical | Pass |
| 5208 | -52.01 | -13 | -39.01 | -57.89 | 4.26 | 10.14 | Vertical | Pass |
| 6944 | -50.77 | -13 | -37.77 | -57.055 | 4.21 | 10.49 | Vertical | Pass |

| LTE Band 66-High channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3522 | -51.35 | -13 | -38.35 | -56.23 | 3.29 | 8.17 | Horizontal | Pass |
| 5283 | -52.58 | -13 | -39.58 | -58.46 | 4.26 | 10.14 | Horizontal | Pass |
| 7044 | -49.76 | -13 | -36.76 | -56.7 | 4.19 | 11.13 | Horizontal | Pass |
| 3522 | -50.46 | -13 | -37.46 | -55.34 | 3.29 | 8.17 | Vertical | Pass |
| 5283 | -52.9 | -13 | -39.9 | -58.78 | 4.26 | 10.14 | Vertical | Pass |
| 7044 | -49.29 | -13 | -36.29 | -56.23 | 4.19 | 11.13 | Vertical | Pass |

Note: All modes have been tested and we found QPSK test mode has the worst test result. Only record the worst test result.

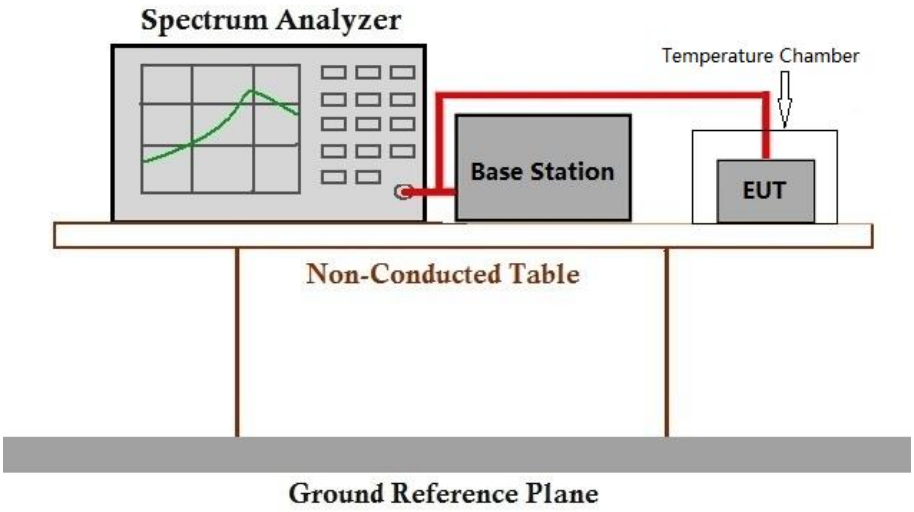
## 6.7 Frequency stability

Test Requirement: §2.1055,§22.355,§24.235,§27.54
Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01
Limit: ≤ ±2.5ppm.

### 6.7.1 E.U.T. Operation

Operating Environment:
Temperature: 21.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar
Test mode 32: TX mode_Keep the EUT in transmitting mode

### 6.7.2 Test Setup Diagram




### 6.7.3 Measurement Data

Please refer to Appendix for LTE test data.

# 7 Test Setup Photo

Refer to Appendix - Test Setup Photo for SZCR2404001345MO

# 8 EUT Constructional Details (EUT Photos)

Refer to Appendix – External and Internal Photos for SZCR2404001345MO

- End of the Report -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