

# TEST REPORT

**Application No.:** SZCR2603000938MO  
**Applicant:** XinSheng Tech Co., Ltd.  
**Address of Applicant:** 9F /10F, Tower A, Lize Ping'an Financial Center, Lize Business District, Fengtai District, Beijing, China  
**Manufacturer:** XinSheng Tech Co., Ltd.  
**Address of Manufacturer:** 9F /10F, Tower A, Lize Ping'an Financial Center, Lize Business District, Fengtai District, Beijing, China  
**Equipment Under Test (EUT):**  
**EUT Description:** Module  
**Model No.:** XS6620N-LS  
**Trade Mark:** XinSheng Tech  
**FCC ID:** 2BVGXXS6620N-LS  
**Standard(s) :** 47 CFR Part 2  
 47 CFR Part 25  
**Date of Receipt:** 2026-03-13  
**Date of Test:** 2026-03-16 to 2026-03-23  
**Date of Issue:** 2026-03-24

|                     |             |
|---------------------|-------------|
| <b>Test Result:</b> | <b>Pass</b> |
|---------------------|-------------|

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

Keny. Xu

Keny Xu

EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.  
 Shenzhen Branch (Fengtai District, Beijing) EMC Laboratory.

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SZEMC-TRF-01 Rev. A/2

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| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2026-03-24 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                          |  |                            |  |  |
|--------------------------|--|----------------------------|--|--|
| Authorized for issue by: |  |                            |  |  |
|                          |  | Kevin Lan                  |  |  |
|                          |  | Kevin Lan/Project Engineer |  |  |
|                          |  | Eric Fu                    |  |  |
|                          |  | 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>§25.204           | ERP≤ 40dBW                                      | PASS    |
| Bandwidth                                        | §2.1049(h)                   | OBW: No limit<br>EBW: No limit                  | PASS    |
| Emission limitations.                            | §2.1051<br>§25.202 (f)(1)(2) | Refer to clause 6.3                             | PASS    |
| Conducted Spurious emissions                     | §2.1051<br>§25.202 (f)(3)    | Refer to clause 6.4                             | PASS    |
| Field strength of spurious radiation             | §2.1053<br>§25.202 (f)(3)    | Refer to clause 6.5                             | PASS    |
| Frequency stability                              | §2.1055<br>§25.202 (d)       | within 0.001 percent of the reference frequency | PASS    |
| Additional unwanted emission limits for MESSs    | §25.216(c)(e)(h)(i)          | Refer to clause 6.7                             | PASS    |



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## 4 General Information

### 4.1 Details of E.U.T.

|                           |                                                                                   |                                   |
|---------------------------|-----------------------------------------------------------------------------------|-----------------------------------|
| EUT Description:          | Module                                                                            |                                   |
| Model No.:                | XS6620N-LS                                                                        |                                   |
| Trade Mark:               | XinSheng Tech                                                                     |                                   |
| Hardware Version:         | CM6620N-SKYLO-r12592_20250910_151438                                              |                                   |
| Software Version:         | V1.0                                                                              |                                   |
| Power Supply:             | DC 3.6V from Motherboard by AC/DC adapter                                         |                                   |
| SN:                       | 8319ND0029654B000218                                                              |                                   |
| Antenna Type:             | <input checked="" type="checkbox"/> External, <input type="checkbox"/> Integrated |                                   |
| Operation Frequency Band: | Tx Frequency                                                                      | Band 23: 2000 MHz ~ 2020 MHz      |
|                           |                                                                                   | Band 255: 1626.5 MHz ~ 1660.5 MHz |
|                           | Rx Frequency                                                                      | Band 23: 2180 MHz ~ 2200 MHz      |
|                           |                                                                                   | Band 255: 1525 MHz ~ 1559 MHz     |
| Modulation Type:          | BPSK, QPSK                                                                        |                                   |
| SCS:                      | 3.75kHz, 15kHz                                                                    |                                   |
| Bandwidth                 | 200kHz                                                                            |                                   |
| Antenna Gain:             | Band 23: 3dBi                                                                     |                                   |
|                           | Band 255: 4dBi                                                                    |                                   |

Remark: 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.

Note:

- (1) The antenna gain value is provided by the customer. The test lab will not be responsible for wrong test result due to incorrect information about antenna gain values.

## 4.2 Test Frequency

| Test mode 1: | SCS<br>(KHz) | RF Channel |            |          |
|--------------|--------------|------------|------------|----------|
|              |              | Low (L)    | Middle (M) | High (H) |
|              |              | MHz        | MHz        | MHz      |
| Band 23      | 3.75         | 2000.1     | 2010       | 2019.9   |
|              | 15           |            |            |          |
| Test mode 2: | SCS<br>(KHz) | RF Channel |            |          |
|              |              | Low (L)    | Middle (M) | High (H) |
|              |              | MHz        | MHz        | MHz      |
| Band 255     | 3.75         | 1626.6     | 1643.5     | 1660.4   |
|              | 15           |            |            |          |

Remark: The test mode(s) are selected according to relevant radio technology specifications.

## 4.3 Test Environment

| Environment Parameter  | 101 kPa Selected Values During Tests |                                   |
|------------------------|--------------------------------------|-----------------------------------|
| Relative Humidity      | 44~60 % RH Ambient                   |                                   |
| Value                  | Temperature(°C)                      | Voltage(V)                        |
| NTNV                   | 22~25                                | 3.6                               |
| LTLV                   | -30                                  | 3.3                               |
| LTHV                   | -30                                  | 4.2                               |
| HTLV                   | 50                                   | 3.3                               |
| HTHV                   | 50                                   | 4.2                               |
| Remark:                |                                      |                                   |
| NV: Normal Voltage     | LV: Low Extreme Test Voltage         | HV: High Extreme Test Voltage     |
| NT: Normal Temperature | LT: Low Extreme Test Temperature     | HT: High Extreme Test Temperature |

## 4.4 Description of Support Units

| Description                                                        | Manufacturer | Model No.              |
|--------------------------------------------------------------------|--------------|------------------------|
| Motherboard                                                        | XinSheng     | ZN3_BASE_V4.3_20240607 |
| Adapter                                                            | SALOM        | SC-41                  |
| Remark: all above the information of table are provided by client. |              |                        |



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## 4.5 Measurement Uncertainty

| No. | Item                                | Measurement Uncertainty           |
|-----|-------------------------------------|-----------------------------------|
| 1   | Total RF power, conducted           | $\pm 0.41\text{dB}$               |
| 2   | Spurious emissions, conducted       | $\pm 0.41\text{dB}$               |
| 3   | Radio Frequency                     | $\pm 7.10 \times 10^{-8}$         |
| 4   | Duty Cycle                          | $\pm 0.49\%$                      |
| 5   | Occupied Bandwidth                  | $\pm 0.2\%$                       |
| 6   | Radiated Spurious emission test(UE) | $\pm 4.8\text{dB}$ (30MHz-1GHz)   |
|     |                                     | $\pm 4.68\text{dB}$ (1GHz-6GHz)   |
|     |                                     | $\pm 4.52\text{dB}$ (6GHz-18GHz)  |
|     |                                     | $\pm 5.26\text{dB}$ (18GHz-40GHz) |

### Remark:

The  $U_{\text{lab}}$  (lab Uncertainty) is less than  $U_{\text{CISPR/ETSI}}$  (CISPR/ETSI Uncertainty), so the test results

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.



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### 4.6 Test Location

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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

### 4.10 Test Engineer

Mike Xiao, Xing Guo



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## 5 Equipment List

| RF Test                                     |                              |                |               |                           |                              |
|---------------------------------------------|------------------------------|----------------|---------------|---------------------------|------------------------------|
| Test Equipment                              | Manufacturer                 | Model No.      | Inventory No. | Cal. date<br>(yyyy/mm/dd) | Cal.Due date<br>(yyyy/mm/dd) |
| MXA Signal Analyzer<br>(10Hz-50GHz)         | Keysight Technologies        | N9020B         | SEM004-24     | 2026/02/02                | 2027/02/01                   |
| UXM Wireless Test Platform                  | Keysight                     | E7515B         | SZ-WRG-M-021  | 2025/05/22                | 2026/05/21                   |
| 2-WAY SMA POWER DIVIDER                     | PULSAR                       | PS2-20-450/10S | SEM021-18     | 2025/07/23                | 2026/07/22                   |
| Programmable Temperature & Humidity Chamber | Votsch Industrietechnik GmbH | VT 4002        | SZ-WRG-M-017  | 2025/12/15                | 2026/12/14                   |
| DC power supply                             | HYELEC                       | HY3005B        | SZ-WRG-M-044  | 2025/7/24                 | 2026/7/24                    |

| Radiated spurious emissions             |                 |                 |               |                           |                              |
|-----------------------------------------|-----------------|-----------------|---------------|---------------------------|------------------------------|
| Test Equipment                          | Manufacturer    | Model No.       | Inventory No. | Cal. date<br>(yyyy/mm/dd) | Cal.Due date<br>(yyyy/mm/dd) |
| MXE EMI receiver<br>(3Hz-3.6GHz)        | KEYSIGHT        | N9038B          | SEM004-29     | 2025/07/25                | 2026/07/24                   |
| Signal & Spectrum Analyzer              | Rohde & Schwarz | FSV             | SZ-WRG-M-048  | 2025/12/16                | 2026/12/15                   |
| Pre-amplifier<br>(30MHz-1GHz)           | SGS             | AMP30M1G30      | SEM005-33     | 2026/02/03                | 2027/02/02                   |
| Low Noise Amplifier 1G-18GHz            | Tonscend        | TAP01018050     | SZ-WRG-M-051  | 2025/12/16                | 2026/12/15                   |
| TRILOG Breitband Antenne<br>30MHz-1GHz  | SCHWARZBECK     | VULB 9168       | SZ-WRG-M-054  | 2025/12/23                | 2027/12/22                   |
| Double Ridge Horn Antenna<br>1GHz-18GHz | SCHWARZBECK     | BBHA 9120 D     | SZ-WRG-M-055  | 2025/12/13                | 2027/12/12                   |
| Measurement Software                    | AUDIX           | e3 V8.2014-6-27 | NCR           | NCR                       | NCR                          |
| Chamber                                 | CRTSGSSAC966    | N/A             | SZ-WRG-C-063  | 2025/01/06                | 2028/01/05                   |



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|                                       |          |        |              |            |            |
|---------------------------------------|----------|--------|--------------|------------|------------|
| Humidity/<br>Temperature<br>Indicator | Deli     | 8838   | SEM002-46    | 2025/08/05 | 2026/08/04 |
| Radio<br>Communication<br>Tester      | KEYSIGHT | E7515B | SZ-WRG-M-021 | 2025/05/22 | 2026/05/21 |

Remark: NCR=No Calibration Requirement.



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## 6 Radio Spectrum Matter Test Results

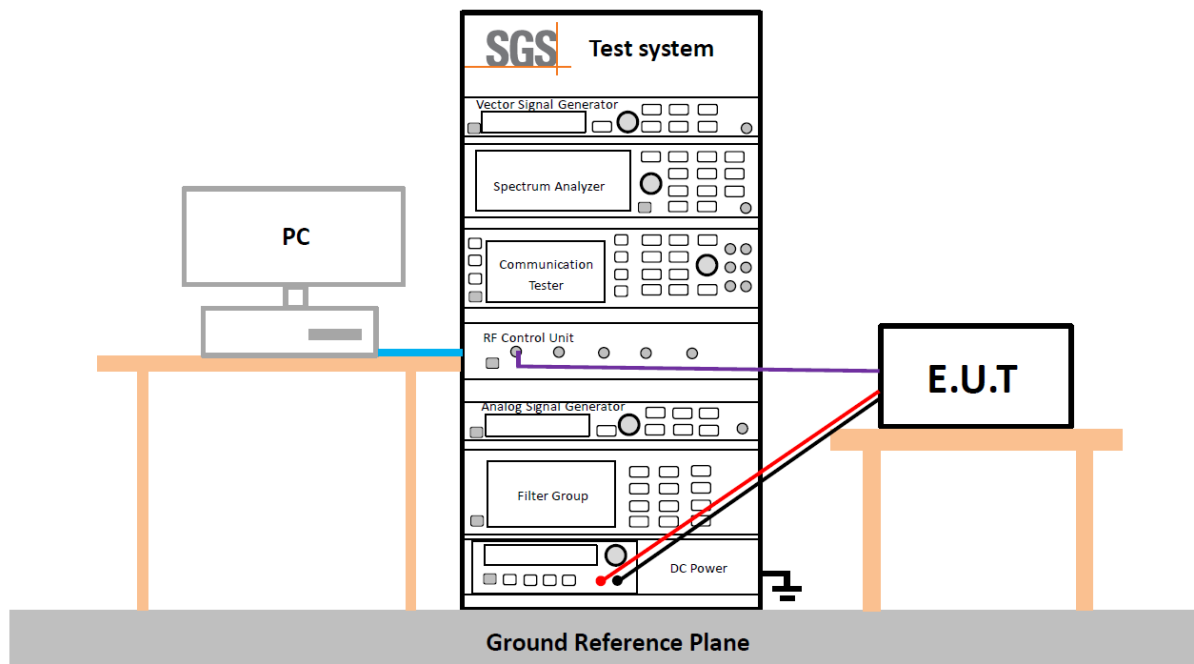
### 6.1 Effective (Isotropic) Radiated Output Power Data

Test Requirement: §2.1046; §25.204  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: 40dBW

#### 6.1.1 E.U.T. Operation

Operating Environment:  
 Temperature: 22~25 °C Humidity: 50~60 % RH Atmospheric Pressure: 101 kPa  
 Test mode : Test mode 1 and Test mode 2

#### 6.1.2 Test Setup Diagram



#### 6.1.3 Measurement Data

Please refer to Appendix for NTN test data(Band 23) and NTN test data(Band 255)

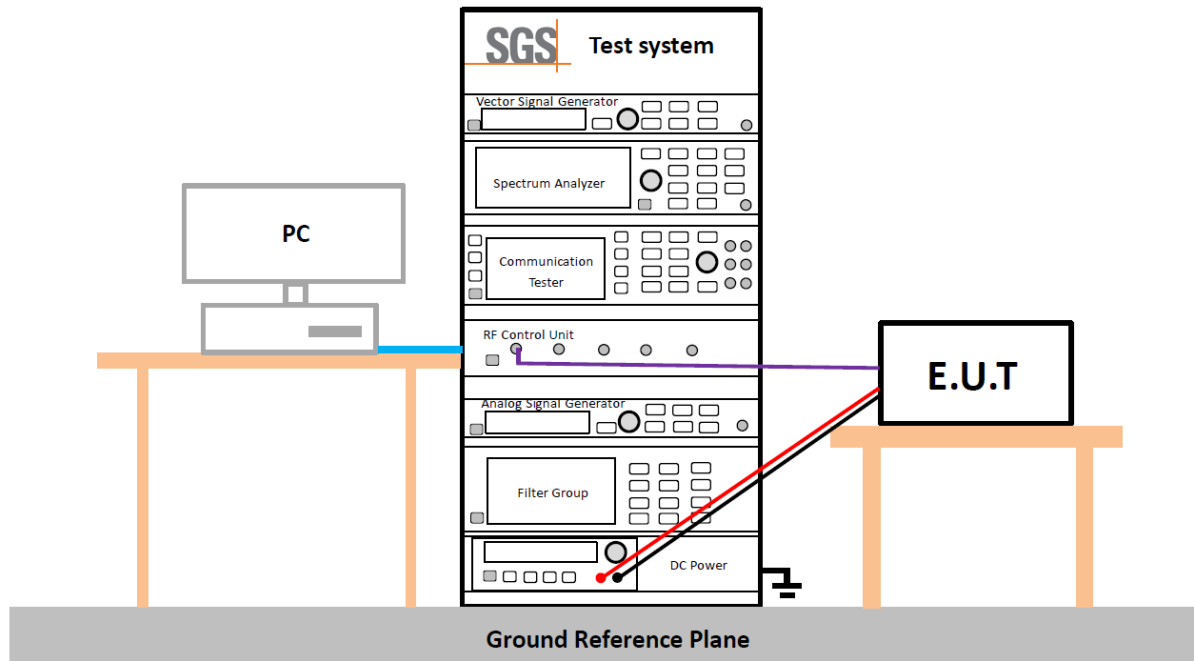
### 6.2 Bandwidth

Test Requirement: §2.1049(h)  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: OBW: No limit  
 EBW: No limit

#### 6.2.1 E.U.T. Operation

Operating Environment:  
 Temperature: 22~25 °C Humidity: 50~60 % RH Atmospheric Pressure: 101 kPa  
 Test mode : Test mode 1 and Test mode 2

#### 6.2.2 Test Setup Diagram



#### 6.2.3 Measurement Data

Please refer to Appendix for NTN test data(Band 23) and NTN test data(Band 255)

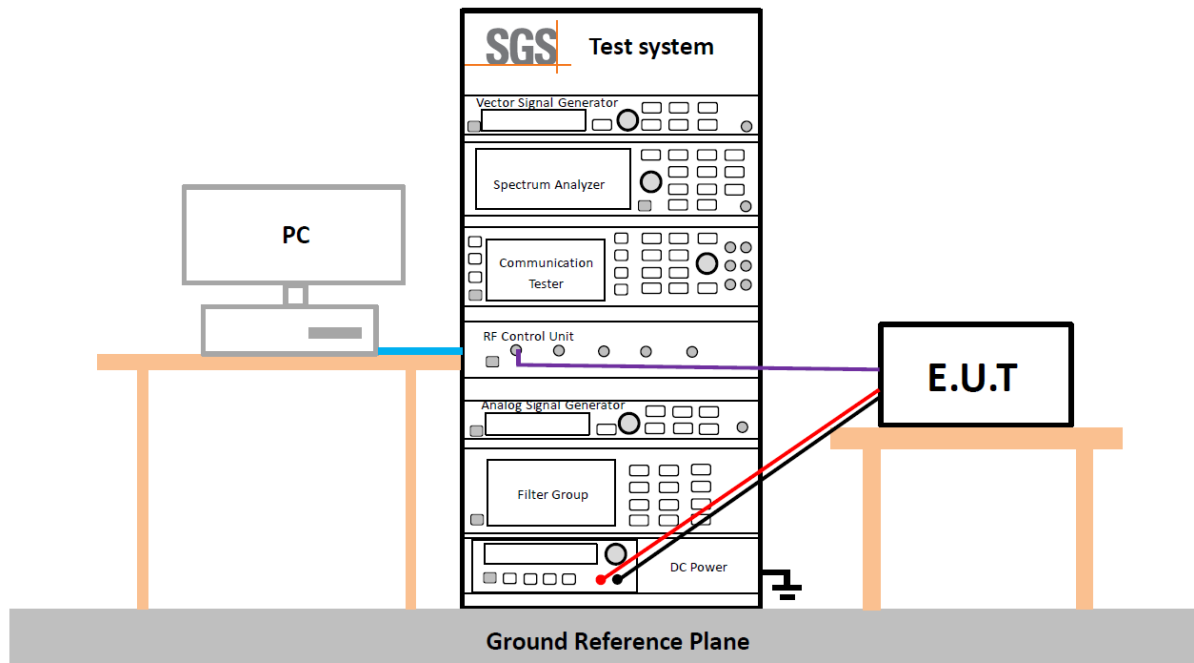
### 6.3 Emission limitations

Test Requirement: §2.1051; §25.202 (f)(1)(2)  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: 25 dB;  
 In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: 35 dB;

#### 6.3.1 E.U.T. Operation

Operating Environment:  
 Temperature: 22~25 °C Humidity: 50~60 % RH Atmospheric Pressure: 101 kPa  
 Test mode : Test mode 1 and Test mode 2

#### 6.3.2 Test Setup Diagram



#### 6.3.3 Measurement Data

Please refer to Appendix for NTN test data(Band 23) and NTN test data(Band 255)

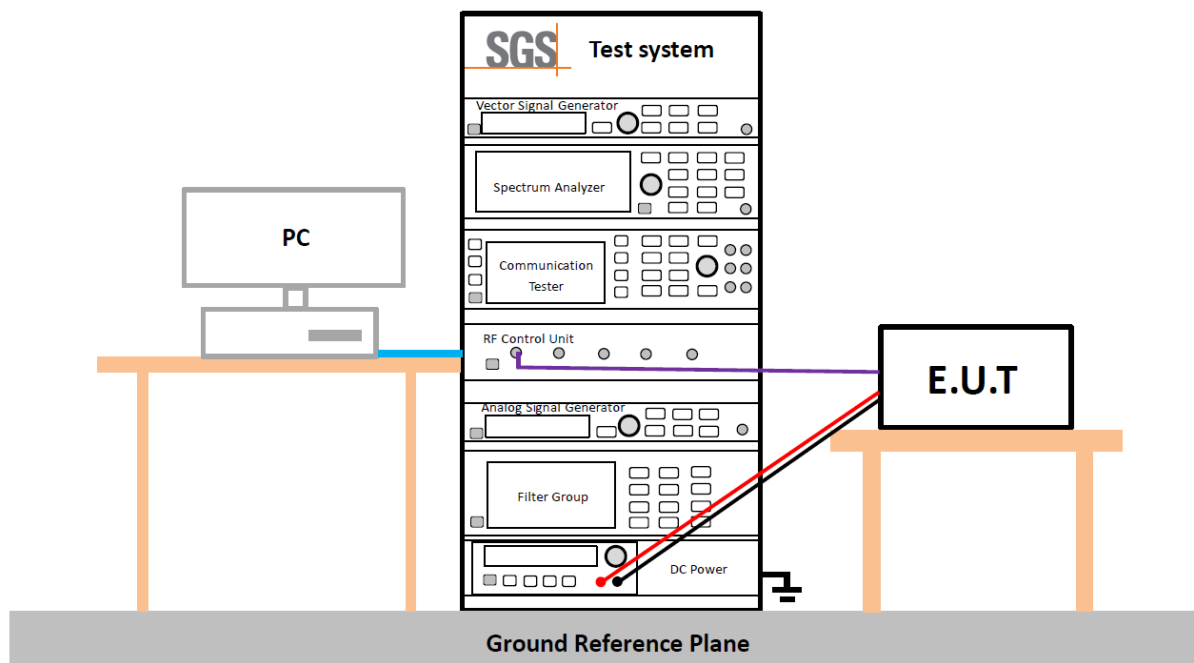
### 6.4 Conducted Spurious emissions

Test Requirement: §2.1051; §25.202 (f)(3)  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts

#### 6.4.1 E.U.T. Operation

Operating Environment:  
 Temperature: 22~25 °C Humidity: 50~60 % RH Atmospheric Pressure: 101 kPa  
 Test mode : Test mode 1 and Test mode 2

#### 6.4.2 Test Setup Diagram



#### 6.4.3 Measurement Data

Please refer to Appendix for NTN test data(Band 23) and NTN test data(Band 255)

### 6.5 Field strength of spurious radiation

Test Requirement: §2.1051; §25.202 (f)(3)  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts

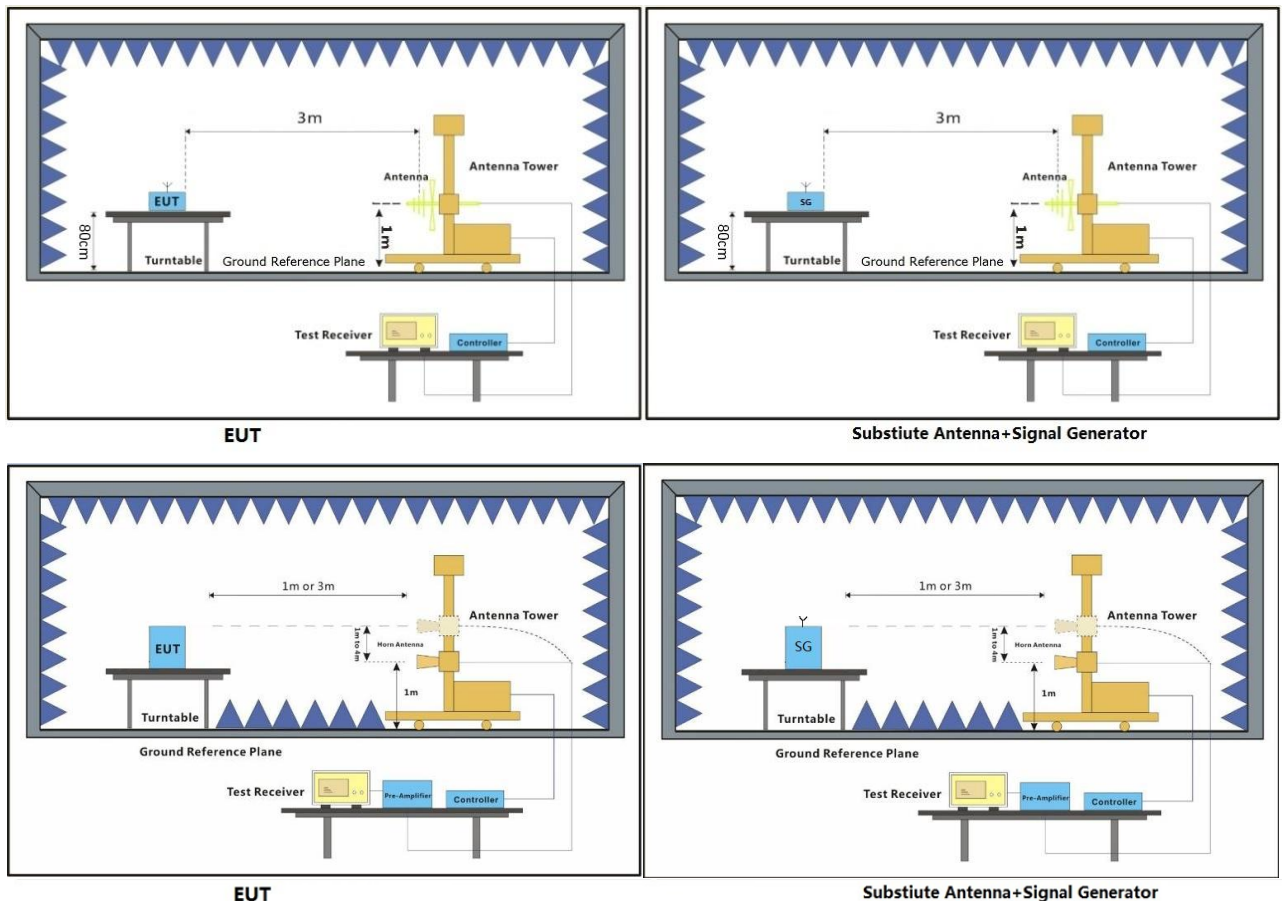
#### 6.5.1 E.U.T. Operation

Operating Environment:

Temperature: 22~23°C Humidity: 44~46% RH Atmospheric Pressure: 101 kPa

Test mode : Test mode 1 and Test mode 2

#### 6.5.2 Test Setup Diagram



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### 6.5.3 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 then 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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中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

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| NTN Band 23-Low channel, Modulation: QPSK, Bandwidth:15KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|-----------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                 | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 4000.2                                                          | -64.40     | -13.00      | -51.40          | -69.12           | 4.12            | 8.84               | Horizontal         | Pass   |
| 6000.3                                                          | -59.40     | -13.00      | -46.40          | -64.64           | 5.21            | 10.45              | Horizontal         | Pass   |
| 8000.4                                                          | -59.41     | -13.00      | -46.41          | -66.11           | 5.63            | 12.33              | Horizontal         | Pass   |
| 4000.2                                                          | -64.38     | -13.00      | -51.38          | -69.10           | 4.12            | 8.84               | Vertical           | Pass   |
| 6000.3                                                          | -58.01     | -13.00      | -45.01          | -63.25           | 5.21            | 10.45              | Vertical           | Pass   |
| 8000.4                                                          | -58.88     | -13.00      | -45.88          | -65.58           | 5.63            | 12.33              | Vertical           | Pass   |

| NTN Band 23-Middle channel, Modulation: QPSK, Bandwidth:15KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|--------------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                    | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 4020.0                                                             | -64.09     | -13.00      | -51.09          | -68.79           | 4.16            | 8.86               | Horizontal         | Pass   |
| 6030.0                                                             | -62.68     | -13.00      | -49.68          | -67.90           | 5.23            | 10.45              | Horizontal         | Pass   |
| 8040.0                                                             | -59.60     | -13.00      | -46.60          | -66.35           | 5.63            | 12.38              | Horizontal         | Pass   |
| 4020.0                                                             | -61.93     | -13.00      | -48.93          | -66.63           | 4.16            | 8.86               | Vertical           | Pass   |
| 6030.0                                                             | -62.51     | -13.00      | -49.51          | -67.73           | 5.23            | 10.45              | Vertical           | Pass   |
| 8040.0                                                             | -59.17     | -13.00      | -46.17          | -65.92           | 5.63            | 12.38              | Vertical           | Pass   |

| NTN Band 23-High channel, Modulation: QPSK, Bandwidth:15KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|------------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                  | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 4039.8                                                           | -64.47     | -13.00      | -51.47          | -69.15           | 4.20            | 8.88               | Horizontal         | Pass   |
| 6059.7                                                           | -56.81     | -13.00      | -43.81          | -62.02           | 5.24            | 10.45              | Horizontal         | Pass   |
| 8079.6                                                           | -59.62     | -13.00      | -46.62          | -66.41           | 5.63            | 12.42              | Horizontal         | Pass   |
| 4039.8                                                           | -58.92     | -13.00      | -45.92          | -63.60           | 4.20            | 8.88               | Vertical           | Pass   |
| 6059.7                                                           | -62.48     | -13.00      | -49.48          | -67.69           | 5.24            | 10.45              | Vertical           | Pass   |
| 8079.6                                                           | -59.93     | -13.00      | -46.93          | -66.72           | 5.63            | 12.42              | Vertical           | Pass   |



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| NTN Band 255-Low channel, Modulation: QPSK, Bandwidth:15KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|------------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                  | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3253.2                                                           | -62.86     | -13.00      | -49.86          | -66.57           | 3.84            | 7.55               | Horizontal         | Pass   |
| 4879.8                                                           | -62.99     | -13.00      | -49.99          | -67.78           | 5.17            | 9.96               | Horizontal         | Pass   |
| 6506.4                                                           | -62.04     | -13.00      | -49.04          | -67.06           | 5.48            | 10.50              | Horizontal         | Pass   |
| 3253.2                                                           | -64.06     | -13.00      | -51.06          | -67.77           | 3.84            | 7.55               | Vertical           | Pass   |
| 4879.8                                                           | -63.05     | -13.00      | -50.05          | -67.84           | 5.17            | 9.96               | Vertical           | Pass   |
| 6506.4                                                           | -62.23     | -13.00      | -49.23          | -67.25           | 5.48            | 10.50              | Vertical           | Pass   |

| NTN Band 255-Middle channel, Modulation: QPSK, Bandwidth:15KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|---------------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                     | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3287.0                                                              | -62.94     | -13.00      | -49.94          | -66.68           | 3.90            | 7.64               | Horizontal         | Pass   |
| 4930.5                                                              | -62.26     | -13.00      | -49.26          | -67.13           | 5.17            | 10.04              | Horizontal         | Pass   |
| 6574.0                                                              | -61.66     | -13.00      | -48.66          | -66.75           | 5.49            | 10.58              | Horizontal         | Pass   |
| 3287.0                                                              | -62.67     | -13.00      | -49.67          | -66.41           | 3.90            | 7.64               | Vertical           | Pass   |
| 4930.5                                                              | -62.71     | -13.00      | -49.71          | -67.58           | 5.17            | 10.04              | Vertical           | Pass   |
| 6574.0                                                              | -61.53     | -13.00      | -48.53          | -66.62           | 5.49            | 10.58              | Vertical           | Pass   |

| NTN Band 255-High channel, Modulation: QPSK, Bandwidth:15KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|-------------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                   | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3321.2                                                            | -62.13     | -13.00      | -49.13          | -65.90           | 3.95            | 7.72               | Horizontal         | Pass   |
| 4981.8                                                            | -61.79     | -13.00      | -48.79          | -66.73           | 5.17            | 10.11              | Horizontal         | Pass   |
| 6642.4                                                            | -60.85     | -13.00      | -47.85          | -66.01           | 5.51            | 10.67              | Horizontal         | Pass   |
| 3321.2                                                            | -64.01     | -13.00      | -51.01          | -67.78           | 3.95            | 7.72               | Vertical           | Pass   |
| 4981.8                                                            | -59.70     | -13.00      | -46.70          | -64.64           | 5.17            | 10.11              | Vertical           | Pass   |
| 6642.4                                                            | -60.56     | -13.00      | -47.56          | -65.72           | 5.51            | 10.67              | Vertical           | Pass   |



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Shenzhen Branch

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| NTN Band 23-Low channel, Modulation: QPSK, Bandwidth:3.75KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|-------------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                   | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 4000.2                                                            | -64.04     | -13.00      | -51.04          | -68.76           | 4.12            | 8.84               | Horizontal         | Pass   |
| 6000.3                                                            | -57.57     | -13.00      | -44.57          | -62.81           | 5.21            | 10.45              | Horizontal         | Pass   |
| 8000.4                                                            | -55.29     | -13.00      | -42.29          | -61.99           | 5.63            | 12.33              | Horizontal         | Pass   |
| 4000.2                                                            | -64.30     | -13.00      | -51.30          | -69.02           | 4.12            | 8.84               | Vertical           | Pass   |
| 6000.3                                                            | -56.95     | -13.00      | -43.95          | -62.19           | 5.21            | 10.45              | Vertical           | Pass   |
| 8000.4                                                            | -57.15     | -13.00      | -44.15          | -63.85           | 5.63            | 12.33              | Vertical           | Pass   |

| NTN Band 23-Middle channel, Modulation: QPSK, Bandwidth:3.75KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|----------------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                      | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 4020.0                                                               | -63.52     | -13.00      | -50.52          | -68.22           | 4.16            | 8.86               | Horizontal         | Pass   |
| 6030.0                                                               | -57.78     | -13.00      | -44.78          | -63.00           | 5.23            | 10.45              | Horizontal         | Pass   |
| 8040.0                                                               | -56.07     | -13.00      | -43.07          | -62.82           | 5.63            | 12.38              | Horizontal         | Pass   |
| 4020.0                                                               | -61.36     | -13.00      | -48.36          | -66.06           | 4.16            | 8.86               | Vertical           | Pass   |
| 6030.0                                                               | -52.20     | -13.00      | -39.20          | -57.42           | 5.23            | 10.45              | Vertical           | Pass   |
| 8040.0                                                               | -57.19     | -13.00      | -44.19          | -63.94           | 5.63            | 12.38              | Vertical           | Pass   |

| NTN Band 23-High channel, Modulation: QPSK, Bandwidth:3.75KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|--------------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                    | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 4039.8                                                             | -63.52     | -13.00      | -50.52          | -68.20           | 4.20            | 8.88               | Horizontal         | Pass   |
| 6059.7                                                             | -56.85     | -13.00      | -43.85          | -62.06           | 5.24            | 10.45              | Horizontal         | Pass   |
| 8079.6                                                             | -58.98     | -13.00      | -45.98          | -65.77           | 5.63            | 12.42              | Horizontal         | Pass   |
| 4039.8                                                             | -59.76     | -13.00      | -46.76          | -64.44           | 4.20            | 8.88               | Vertical           | Pass   |
| 6059.7                                                             | -52.88     | -13.00      | -39.88          | -58.09           | 5.24            | 10.45              | Vertical           | Pass   |
| 8079.6                                                             | -53.10     | -13.00      | -40.10          | -59.89           | 5.63            | 12.42              | Vertical           | Pass   |



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Shenzhen Branch (SZEMC) EMC Laboratory.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

# SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/2

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| NTN Band 255-Low channel, Modulation: QPSK, Bandwidth:3.75KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|--------------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                    | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3253.2                                                             | -62.82     | -13.00      | -49.82          | -66.53           | 3.84            | 7.55               | Horizontal         | Pass   |
| 4879.8                                                             | -57.18     | -13.00      | -44.18          | -61.97           | 5.17            | 9.96               | Horizontal         | Pass   |
| 6506.4                                                             | -62.26     | -13.00      | -49.26          | -67.28           | 5.48            | 10.50              | Horizontal         | Pass   |
| 3253.2                                                             | -64.16     | -13.00      | -51.16          | -67.87           | 3.84            | 7.55               | Vertical           | Pass   |
| 4879.8                                                             | -60.02     | -13.00      | -47.02          | -64.81           | 5.17            | 9.96               | Vertical           | Pass   |
| 6506.4                                                             | -59.31     | -13.00      | -46.31          | -64.33           | 5.48            | 10.50              | Vertical           | Pass   |

| NTN Band 255-Middle channel, Modulation: QPSK, Bandwidth:3.75KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|-----------------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                       | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3287.0                                                                | -62.93     | -13.00      | -49.93          | -66.67           | 3.90            | 7.64               | Horizontal         | Pass   |
| 4930.5                                                                | -59.90     | -13.00      | -46.90          | -64.77           | 5.17            | 10.04              | Horizontal         | Pass   |
| 6574.0                                                                | -61.18     | -13.00      | -48.18          | -66.27           | 5.49            | 10.58              | Horizontal         | Pass   |
| 3287.0                                                                | -63.38     | -13.00      | -50.38          | -67.12           | 3.90            | 7.64               | Vertical           | Pass   |
| 4930.5                                                                | -61.74     | -13.00      | -48.74          | -66.61           | 5.17            | 10.04              | Vertical           | Pass   |
| 6574.0                                                                | -61.61     | -13.00      | -48.61          | -66.70           | 5.49            | 10.58              | Vertical           | Pass   |

| NTN Band 255-High channel, Modulation: QPSK, Bandwidth:3.75KHz, 1@0 |            |             |                 |                  |                 |                    |                    |        |
|---------------------------------------------------------------------|------------|-------------|-----------------|------------------|-----------------|--------------------|--------------------|--------|
| Frequency (KHz)                                                     | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | Cable Loss (dB) | Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3321.2                                                              | -62.51     | -13.00      | -49.51          | -66.28           | 3.95            | 7.72               | Horizontal         | Pass   |
| 4981.8                                                              | -61.55     | -13.00      | -48.55          | -66.49           | 5.17            | 10.11              | Horizontal         | Pass   |
| 6642.4                                                              | -61.06     | -13.00      | -48.06          | -66.22           | 5.51            | 10.67              | Horizontal         | Pass   |
| 3321.2                                                              | -63.83     | -13.00      | -50.83          | -67.60           | 3.95            | 7.72               | Vertical           | Pass   |
| 4981.8                                                              | -59.46     | -13.00      | -46.46          | -64.40           | 5.17            | 10.11              | Vertical           | Pass   |
| 6642.4                                                              | -60.62     | -13.00      | -47.62          | -65.78           | 5.51            | 10.67              | Vertical           | Pass   |

Remark:

- 1, The test result of Below 1G which was very low and not reported.
- 2, Pre-scanned the modulation type for BPSK and QPSK testing, we choose the worst mode to test.



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 中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

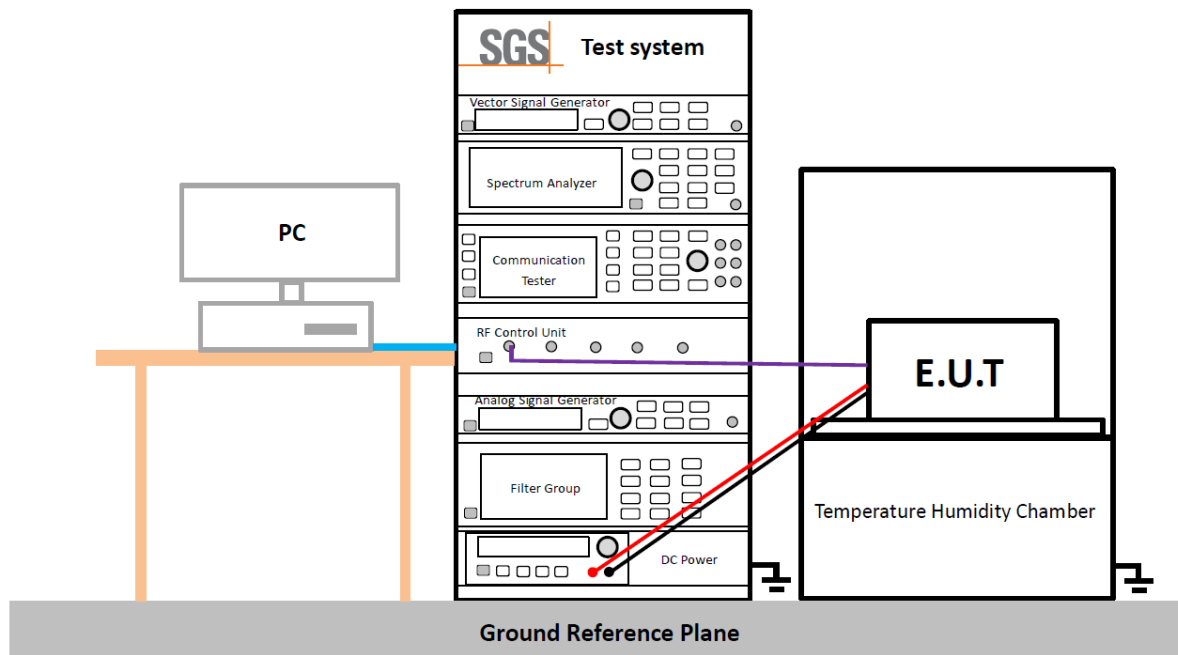
### 6.6 Frequency stability

Test Requirement: §2.1055, §25.202 (d)  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: Within 0.001 percent of the reference frequency

#### 6.6.1 E.U.T. Operation

Operating Environment:  
 Temperature: 22~25 °C Humidity: 50~60 % RH Atmospheric Pressure: 101 kPa  
 Test mode : Test mode 1 and Test mode 2

#### 6.6.2 Test Setup Diagram



#### 6.6.3 Measurement Data

Please refer to Appendix for NTN test data(Band 23) and NTN test data(Band 255)

## 6.7 Additional unwanted emission limits for MESS

Test Requirement: §25.216(c)(e)(h)(i)  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: The e.i.r.p. density of emissions from mobile earth stations placed in service after July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1660.5 MHz shall not exceed -70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in the band 1559-1605 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed -80 dBW, averaged over any 2 millisecond active transmission interval, in the 1559-1605 MHz band.

The e.i.r.p density of emissions from mobile earth stations with assigned uplink frequencies between 1990 MHz and 2025 MHz shall not exceed -70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in frequencies between 1559 MHz and 1610 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations between 1559 MHz and 1605 MHz shall not exceed -80 dBW, averaged over any 2 millisecond active transmission interval. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations between 1605 MHz and 1610 MHz manufactured more than six months after Federal Register publication of the rule changes adopted in FCC 03-283 shall not exceed -80 dBW, averaged over any 2 millisecond active transmission interval.

Mobile earth stations manufactured more than six months after Federal Register publication of the rule changes adopted in FCC 03-283 with assigned uplink frequencies in the 1626.5-1660.5 MHz band shall suppress the power density of emissions in the 1605-1610 MHz band-segment to an extent determined by linear interpolation from -70 dBW/MHz at 1605 MHz to -46 dBW/MHz at 1610 MHz, averaged over any 2 millisecond active transmission interval. The e.i.r.p of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed a level determined by linear interpolation from -80 dBW at 1605 MHz to -56 dBW at 1610 MHz, averaged over any 2 millisecond active transmission interval.

The e.i.r.p density of carrier-off state emissions from mobile earth stations manufactured more than six months after Federal Register publication of the rule changes adopted in FCC 03-283 with assigned uplink frequencies between 1 and 3 GHz shall not exceed -80 dBW/MHz in the 1559-1610 MHz band averaged over any two millisecond interval.

### 6.7.1 E.U.T. Operation

Operating Environment:  
 Temperature: 22~25 °C Humidity: 50~60 % RH Atmospheric Pressure: 101 kPa  
 Test mode : Test mode 1 and Test mode 2



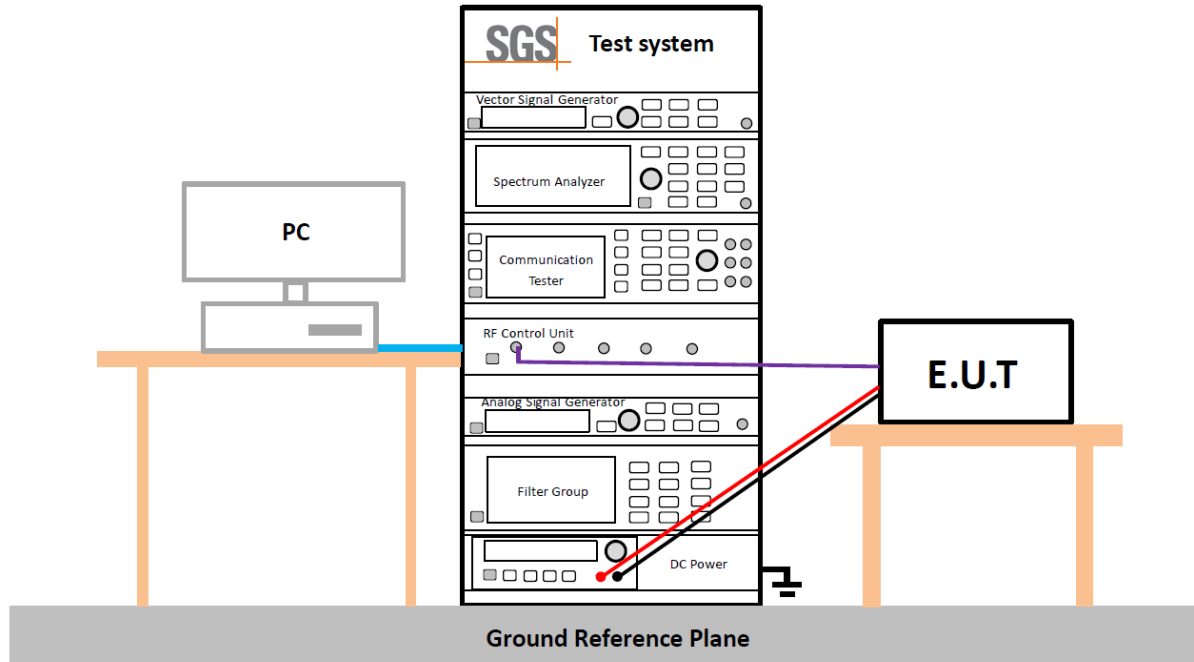
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### 6.7.2 Test Setup Diagram



### 6.7.3 Measurement Data

Please refer to Appendix for NTN test data(Band 23) and NTN test data(Band 255)

## 7 Test Setup Photo

Please refer to SZCR2603000938MO Appendix\_Setup Photo

## 8 EUT Constructional Details (EUT Photos)

Please refer to SZCR2603000938MO Appendix\_External & Internal Photo

- End of the Report -

