

# TEST REPORT

**Application No.:** FYCR2212000509AT  
**Applicant:** SIMCom Wireless Solutions Limited  
**Address of Applicant:** Building 3, No.289 Linhong Road Shanghai 200335 China  
**Manufacturer:** SIMCom Wireless Solutions Limited  
**Address of Manufacturer:** Building 3, No.289 Linhong Road Shanghai 200335 China  
**Factory:** SIMCom Wireless Solutions Limited  
**Address of Factory:** Building 3, No.289 Linhong Road Shanghai 200335 China  
**Equipment Under Test (EUT):**  
**EUT Name:** Module  
**Model No.:** SIM8262A-M2  
**Trade Mark:** SIMCom  
**FCC ID:** 2AJYU-8XN0003  
**Standard(s) :** 47 CFR Part 2  
47 CFR Part 96 subpart E  
**Date of Receipt:** 2022-12-13  
**Date of Test:** 2022-12-16 to 2023-01-19  
**Date of Issue:** 2023-02-07

<b>Test Result:</b>	<b>Pass</b>
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\* In the configuration tested, the EUT complied with the standards specified above.



Winkey Wang  
EMC Technical Manager



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## Compliance Certification Services (Kunshan) Inc. Shenzhen Branch

SZCCS-TRF-01 Rev. A/0 Aug01,2022

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2023-02-07		Original

<b>Authorized for issue by:</b>			
		<i>Tree Zhan</i>	
		<b>Tree Zhan/Project Engineer</b>	
		<i>Winkey Wang</i>	
		<b>Winkey Wang/Reviewer</b>	



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## 2 Test Summary

Test Item	Requirements	Verdict
Effective (Isotropic) Radiated Output Power	FCC PART 2.1046; FCC PART 96.41	PASS
Peak-Average Ratio	FCC PART 2.1051; FCC PART 96.41	PASS
Modulation Characteristics	FCC PART 2.1051; FCC PART 96.41	PASS
Bandwidth	FCC PART 2.1049	PASS
Band Edge Compliance	FCC PART 2.1051; FCC PART 96.41	PASS
Spurious emissions at antenna terminals	FCC PART 2.1051; FCC PART 96.41	PASS
Field strength of spurious radiation	FCC PART 2.1051; FCC PART 96.41	PASS
Frequency stability	FCC PART 2.1055	PASS

**Note:**

EUT: In this whole report EUT means Equipment Under Test.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

All modes have been tested and only record the worst test result.



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## 4 General Information

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

Power supply:	Adapter Model No.:P-050B-050200 Input: AC 100-240V; 50/60Hz; Output: DC 5V 2A
Cable(s):	Cable of Adapter: unshielded 100cm
EUT Type:	End User Device
LTE Operation Frequency Band:	LTE/NR Band 48
Frequency range:	3550-3700 MHz
Channel Bandwidth:	LTE: 5MHz/10MHz/15MHz/20MHz 5G NR: 10MHz/20MHz/40MHz
LTE CA Band:	Contiguous: 5+20 MHz; 10+20 MHz; 15+20MHz; 20+5 MHz; 20+10 MHz; 20+15MHz; 20+20MHz
Modulation Type:	BPSK/QPSK/QAM/16QAM/64QAM/256QAM
Antenna Type:	External Antenna
Antenna Gain:	1.13dBi

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**4.2 Test Environment**

Environment Parameter	Selected Values During Tests	
Relative Humidity	52%	
Atmospheric Pressure:	1015Pa	
Temperature:	TL	-30°C
	TN	+25°C
	TH	+70°C
Voltage:	VL	DC 3.135 V
	VN	DC 3.8 V
	VH	DC 4.4 V

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

**4.3 Description of Support Units**

Description	Manufacturer	Model No.	Serial No.
Adapter	Something High Electric (Xiamen) Company Inc.	P-050B-050200 EU	N/A
Data Cable	Dongguan Guanlijie Precision Electronics Co., Ltd.	SR-R061-RS	N/A
Auxiliary Board	SIMCom	S2-10B5L	N/A
Antenna	SUNNYWAY	SW19073EB56	N/A

**4.4 Measurement Uncertainty**

No.	Item	Measurement Uncertainty
1	Radio Frequency	$\pm 5.4 \times 10^{-8}$
2	Duty cycle	$\pm 0.3\%$
3	Occupied Bandwidth	$\pm 3\%$
4	RF conducted power	$\pm 0.8\text{dB}$
5	RF power density	$\pm 0.4\text{dB}$
6	Conducted Spurious emissions	$\pm 2.7\text{dB}$
7	Radiated Spurious emission test	$\pm 3.1\text{dB}$ (Below 1GHz)



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		± 4.4dB (Above 1GHz)
8	Temperature test	± 1°C
9	Humidity test	± 3%
10	Supply voltages	± 1.5%
11	Time	± 3%

## 4.5 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc. Shenzhen branch.

Fuyong lab. Xinlong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China

Tel: +86 755 8866 3988 Fax: +86 755 2671 0594

No tests were sub-contracted.

## 4.6 Test Facility

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

- **A2LA (Certificate No. 6606.01)**

Compliance Certification Services (Kunshan) Inc. Shenzhen branch is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6606.01.

- **FCC –Designation Number: CN1322**

Compliance Certification Services (Kunshan) Inc. Shenzhen branch has been recognized as an accredited testing laboratory.

Designation Number: CN1322. Test Firm Registration Number: 718073

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

Compliance Certification Services (Kunshan) Inc. Shenzhen branch has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0129.

IC#: 28189.

## 4.7 Deviation from Standards

None

## 4.8 Abnormalities from Standard Conditions

None



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## 5 Equipment List

RF Conducted					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2022/7/12	2023/7/11
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-25	2022/5/30	2023/5/29
Signal Generator	Agilent	N5173B	SEM006-05	2022/7/12	2023/7/11
ESG Vector Signal Generator	Agilent	E4438C	SEM006-15	2022/7/12	2023/7/11
Power Sensor	Erika Fiedler	U2021XA	SEM009-15	2022/7/12	2023/7/11
Power Sensor	Erika Fiedler	U2021XA	SEM009-16	2022/7/12	2023/7/11
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-08	2022/7/12	2023/7/11
Programmable DC Source	Chroma	62024P-80-60	SEM011-09	2022/7/12	2023/7/11
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2022/7/12	2023/7/11

Radiated Emissions					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date
Trilog-Broadband Antenna	Schwarzbeck	VULB9168	SEM003-33	2021/9/25	2024/9/24
MXE EMI receiver	Agilent	N9038A	SEM004-05	2022/07/12	2023/07/11
Pre-amplifier	HP	8447D	SEM005-02	2022/07/12	2023/07/11
Spectrum Analyzer	Rohde & Schwarz	101288	SEM004-08	2022/07/12	2023/07/11
Low Noise Amplifier	CLAVIIO	BDLNA-0118-352810	SEM005-05	2022/07/12	2023/07/11
Substitution Antenna	Schwarzbeck	VULB9168	SEM003-18	2022/08/07	2025/08/06
Signal Generator(9kHz-40GHz)	N5173B	MY53270267	Agilent	2022/07/12	2023/07/11
Pre-amplifier	HP	8447D	SEM005-02	2022/07/12	2023/07/11
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	SEM003-15	2021/7/11	2024/7/10
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120D	SEM003-32	2021/9/26	2024/9/25
Double-ridged waveguide horn	ETS-LINDGREN	3117	SEM003-34	2021/9/25	2024/9/24
Spectrum Analyzer	Rohde & Schwarz	101288	SEM004-08	2022/07/12	2023/07/11



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Low Noise Amplifier	CLAVIIO	BDLNA-0118-352810	SEM005-05	2022/07/12	2023/07/11
Pre-amplifier	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2022/07/12	2023/07/11
Pre-amplifier	Rohde & Schwarz	CH14-H052	SEM005-17	2022/07/12	2023/07/11
Substitution Antenna	ETS-Lindgren	3142C	SEM003-01	2020/06/26	2023/06/25
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2022/03/29	2023/03/28

General used equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Mingle	TH607	SEM002-22	2022/7/12	2023/7/11
Humidity/ Temperature Indicator	Mingle	TH607	SEM002-23	2022/7/12	2023/7/11
Barometer	DUMAI	DYM3	SEM002-24	2022/7/12	2023/7/11



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## 6 Radio Spectrum Matter Test Results

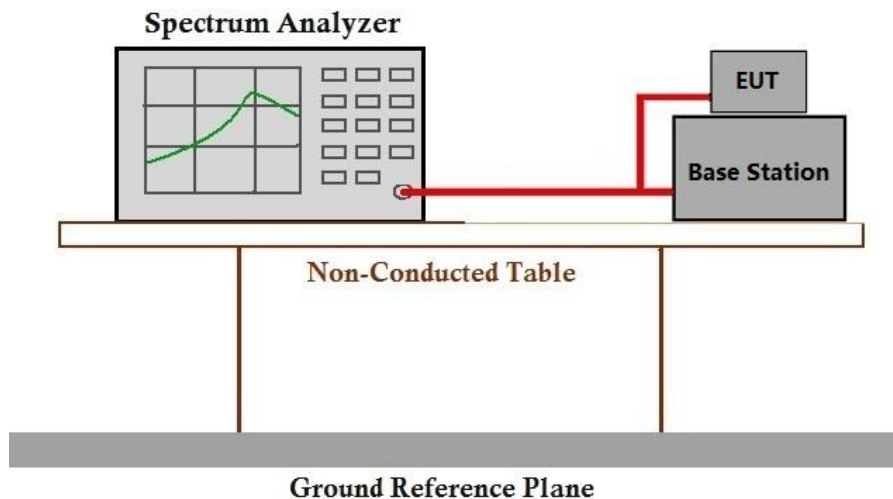
### 6.1 Effective (Isotropic) Radiated Output Power

Test Requirement: §2.1046, §96.41(b)  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: EIRP≤23dBm/10MHz

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

Operating Environment:  
 Temperature: 24.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar  
 Test mode 01: Tx mode, Keep the EUT in transmitting mode.

#### 6.1.2 Test Setup Diagram



#### 6.1.3 Measurement Data

Please refer to Appendix for Effective (Isotropic) Radiated Output Power Data



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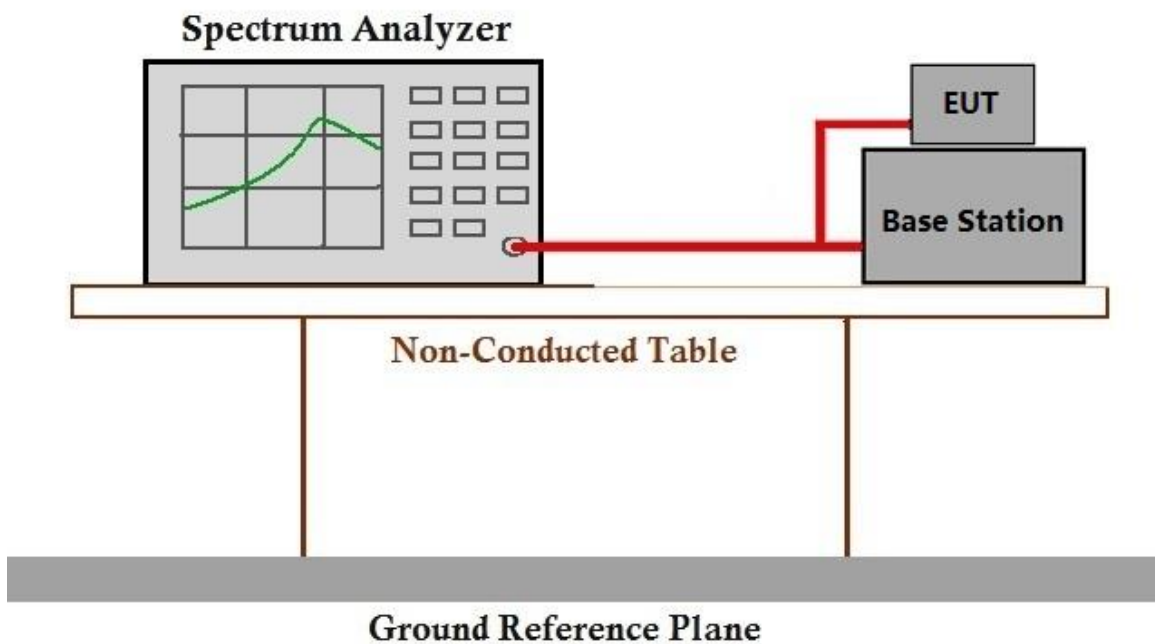
### 6.2 Peak-Average Ratio

Test Requirement: §96.41(g)  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: ≤13dB

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

Operating Environment:  
 Temperature: 24.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar  
 Test mode 01: Tx mode, Keep the EUT in transmitting mode.

#### 6.2.2 Test Setup Diagram



#### 6.2.3 Measurement Data

Please refer to Appendix for Peak-Average Ratio.



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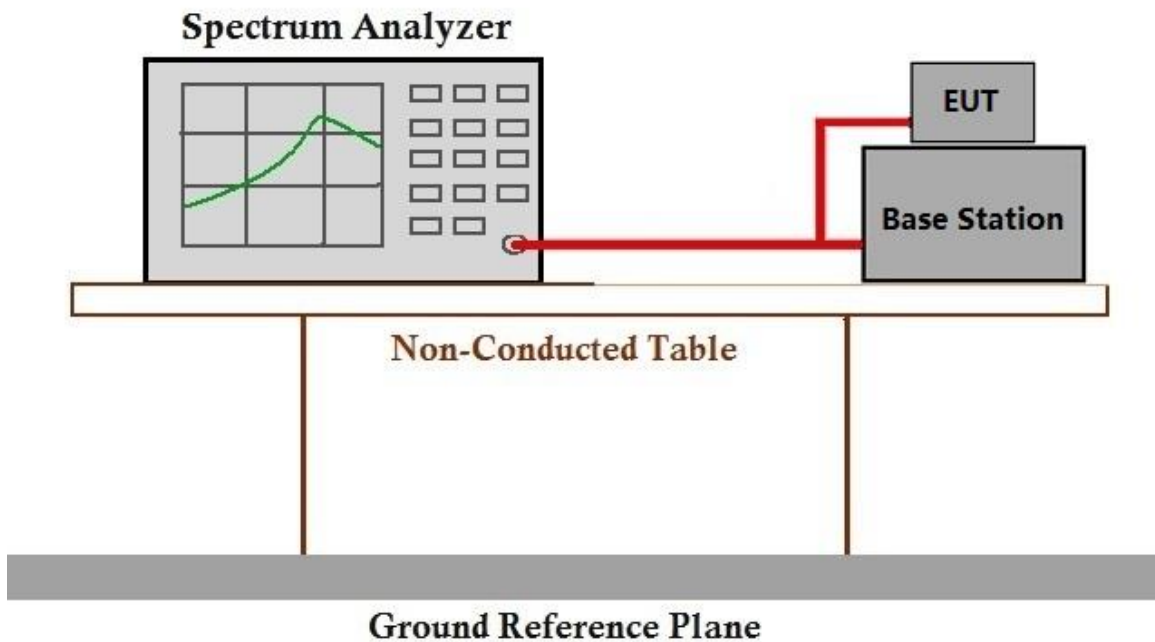
### 6.3 Bandwidth

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: 24.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar  
 Test mode 01: Tx mode, Keep the EUT in transmitting mode.

#### 6.3.2 Test Setup Diagram



#### 6.3.3 Measurement Data

Please refer to Appendix for Bandwidth.



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### 6.4 Band Edge Compliance

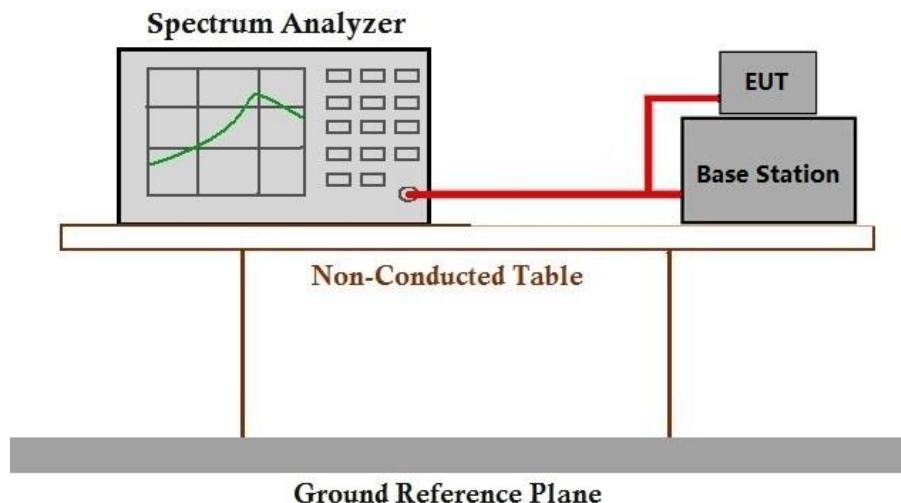
Test Requirement: §2.1051, §96.41(e),  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: For **Band48**:

- 1) The conducted power of any CBSD emission outside the fundamental emission bandwidth (whether the emission is inside or outside of the authorized band) shall not exceed  $-13$  dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any CBSD emission shall not exceed  $-25$  dBm/MHz.
- 2) The conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed  $-25$  dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed  $-40$ dBm/MHz.

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

Operating Environment:  
 Temperature: 24.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar  
 Test mode 01: Tx mode, Keep the EUT in transmitting mode.

#### 6.4.2 Test Setup Diagram



#### 6.4.3 Measurement Data

Please refer to Appendix for Spurious emissions at antenna terminals & Band Edge.



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### 6.5 Spurious emissions at antenna terminals

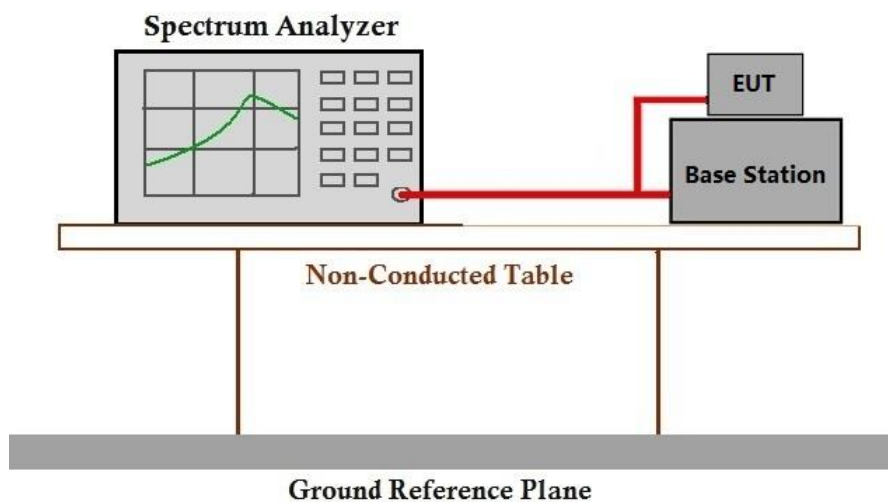
Test Requirement: §2.1051 ,§96.41(e)  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: For **Band48**:

- 1) The conducted power of any CBSD emission outside the fundamental emission bandwidth (whether the emission is inside or outside of the authorized band) shall not exceed  $-13$  dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any CBSD emission shall not exceed  $-25$  dBm/MHz.
- 2) The conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed  $-25$  dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed  $-40$ dBm/MHz.

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

Operating Environment:  
 Temperature: 24.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar  
 Test mode 01: Tx mode, Keep the EUT in transmitting mode.

#### 6.5.2 Test Setup Diagram



#### 6.5.3 Measurement Data

Please refer to Appendix for Spurious emissions at antenna terminals & Band Edge.



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### 6.6 Field strength of spurious radiation

Test Requirement: §2.1051, §96.41(e)

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

Limit: For **Band48**:

- 1) Emission outside the fundamental emission bandwidth (whether the emission is inside or outside of the authorized band) shall not exceed -13 dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the emission shall not exceed -25 dBm/MHz.
- 2) Emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

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

Operating Environment:

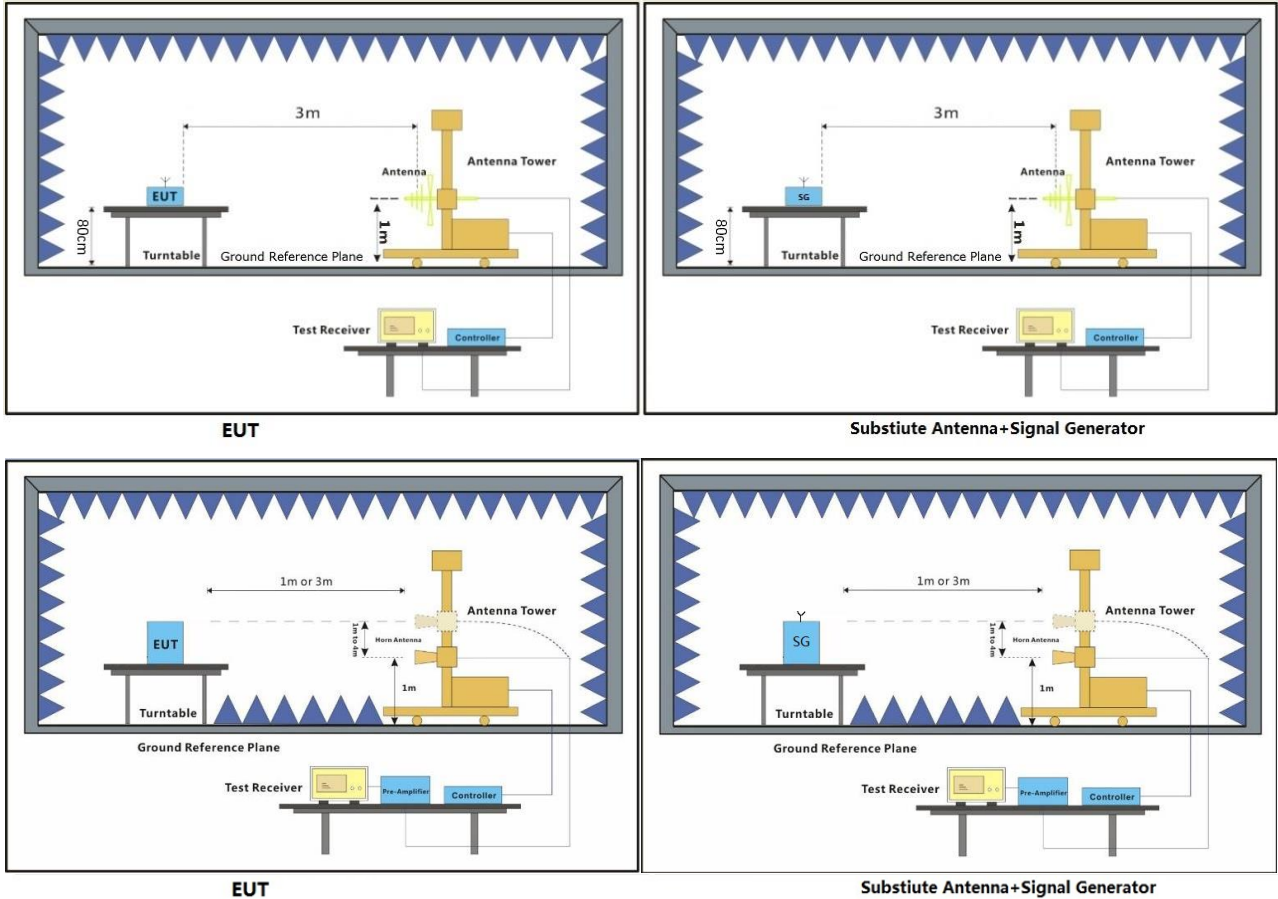
Temperature: 18.5 °C Humidity: 39.5 % RH Atmospheric Pressure: 1020 mbar

Test mode 01: Tx mode, Keep the EUT in transmitting mode.



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### 6.6.2 Test Setup Diagram



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### 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 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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SZCCS-TRF-01 Rev. A/0 Aug01,2022

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B48

LTE Band 48_QPSK_5MHz_Low Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7105	-60.66	-40	-20.66	-62.05	8.19	11.73	Horizontal	Pass
10657.5	-57.04	-40	-17.04	-57.31	11.06	13.48	Horizontal	Pass
14210	-53.48	-40	-13.48	-54.34	11.48	14.49	Horizontal	Pass
7105	-60.52	-40	-20.52	-61.91	8.19	11.73	Vertical	Pass
10657.5	-57.18	-40	-17.18	-57.45	11.06	13.48	Vertical	Pass
14210	-54.3	-40	-14.3	-55.16	11.48	14.49	Vertical	Pass

LTE Band 48_QPSK_5MHz_Middle Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7245.5	-61.23	-40	-21.23	-62.62	8.19	11.73	Horizontal	Pass
10868.25	-56.55	-40	-16.55	-56.82	11.06	13.48	Horizontal	Pass
14491	-54.07	-40	-14.07	-54.93	11.48	14.49	Horizontal	Pass
7245.5	-61.09	-40	-21.09	-62.48	8.19	11.73	Vertical	Pass
10868.25	-56.66	-40	-16.66	-56.93	11.06	13.48	Vertical	Pass
14491	-53.22	-40	-13.22	-54.08	11.48	14.49	Vertical	Pass

LTE Band 48_QPSK_5MHz_High Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7395	-59.3	-40	-19.3	-60.69	8.19	11.73	Horizontal	Pass
11092.5	-54.66	-40	-14.66	-54.8	11.36	13.65	Horizontal	Pass
14790	-50.18	-40	-10.18	-50.93	11.4	14.3	Horizontal	Pass
7395	-59.81	-40	-19.81	-61.2	8.19	11.73	Vertical	Pass
11092.5	-54.78	-40	-14.78	-54.92	11.36	13.65	Vertical	Pass
14790	-50.22	-40	-10.22	-50.97	11.4	14.3	Vertical	Pass



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LTE Band 48_QPSK_10MHz_Low Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7110	-59.76	-40	-19.76	-61.15	8.19	11.73	Horizontal	Pass
10665	-56.56	-40	-16.56	-56.83	11.06	13.48	Horizontal	Pass
14220	-53.53	-40	-13.53	-54.39	11.48	14.49	Horizontal	Pass
7110	-60.5	-40	-20.5	-61.89	8.19	11.73	Vertical	Pass
10665	-56.07	-40	-16.07	-56.34	11.06	13.48	Vertical	Pass
14220	-53.43	-40	-13.43	-54.29	11.48	14.49	Vertical	Pass

LTE Band 48_QPSK_10MHz_Middle Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7241	-61.6	-40	-21.6	-62.99	8.19	11.73	Horizontal	Pass
10861.5	-57.08	-40	-17.08	-57.35	11.06	13.48	Horizontal	Pass
14482	-53.4	-40	-13.4	-54.26	11.48	14.49	Horizontal	Pass
7241	-61.49	-40	-21.49	-62.88	8.19	11.73	Vertical	Pass
10861.5	-55.55	-40	-15.55	-55.82	11.06	13.48	Vertical	Pass
14482	-53.77	-40	-13.77	-54.63	11.48	14.49	Vertical	Pass

LTE Band 48_QPSK_10MHz_High Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7390	-59.94	-40	-19.94	-61.33	8.19	11.73	Horizontal	Pass
11085	-55.07	-40	-15.07	-55.21	11.36	13.65	Horizontal	Pass
14780	-50.67	-40	-10.67	-51.42	11.4	14.3	Horizontal	Pass
7390	-60.35	-40	-20.35	-61.74	8.19	11.73	Vertical	Pass
11085	-54.9	-40	-14.9	-55.04	11.36	13.65	Vertical	Pass
14780	-50.72	-40	-10.72	-51.47	11.4	14.3	Vertical	Pass



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LTE Band 48_QPSK_15MHz_Low Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7115	-60.2	-40	-20.2	-61.59	8.19	11.73	Horizontal	Pass
10672.5	-56.35	-40	-16.35	-56.62	11.06	13.48	Horizontal	Pass
14230	-53.12	-40	-13.12	-53.98	11.48	14.49	Horizontal	Pass
7115	-60.35	-40	-20.35	-61.74	8.19	11.73	Vertical	Pass
10672.5	-57	-40	-17	-57.27	11.06	13.48	Vertical	Pass
14230	-53.15	-40	-13.15	-54.01	11.48	14.49	Vertical	Pass

LTE Band 48_QPSK_15MHz_Middle Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7236.5	-61.45	-40	-21.45	-62.84	8.19	11.73	Horizontal	Pass
10854.75	-57.79	-40	-17.79	-58.06	11.06	13.48	Horizontal	Pass
14473	-53.99	-40	-13.99	-54.85	11.48	14.49	Horizontal	Pass
7236.5	-61.52	-40	-21.52	-62.91	8.19	11.73	Vertical	Pass
10854.75	-57.8	-40	-17.8	-58.07	11.06	13.48	Vertical	Pass
14473	-54.36	-40	-14.36	-55.22	11.48	14.49	Vertical	Pass

LTE Band 48_QPSK_15MHz_High Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7236.5	-61.45	-40	-21.45	-62.84	8.19	11.73	Horizontal	Pass
10854.75	-57.79	-40	-17.79	-58.06	11.06	13.48	Horizontal	Pass
14473	-53.99	-40	-13.99	-54.85	11.48	14.49	Horizontal	Pass
7236.5	-61.52	-40	-21.52	-62.91	8.19	11.73	Vertical	Pass
10854.75	-57.8	-40	-17.8	-58.07	11.06	13.48	Vertical	Pass
14473	-54.36	-40	-14.36	-55.22	11.48	14.49	Vertical	Pass



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LTE Band 48_QPSK_20MHz_Low Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7120	-59.42	-40	-19.42	-60.81	8.19	11.73	Horizontal	Pass
10680	-57.2	-40	-17.2	-57.47	11.06	13.48	Horizontal	Pass
14240	-52.77	-40	-12.77	-53.63	11.48	14.49	Horizontal	Pass
7120	-61.33	-40	-21.33	-62.72	8.19	11.73	Vertical	Pass
10680	-57.1	-40	-17.1	-57.37	11.06	13.48	Vertical	Pass
14240	-53.88	-40	-13.88	-54.74	11.48	14.49	Vertical	Pass

LTE Band 48_QPSK_20MHz_Middle Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7232	-61.24	-40	-21.24	-62.63	8.19	11.73	Horizontal	Pass
10848	-57.98	-40	-17.98	-58.25	11.06	13.48	Horizontal	Pass
14464	-52.98	-40	-12.98	-53.84	11.48	14.49	Horizontal	Pass
7232	-62.37	-40	-22.37	-63.76	8.19	11.73	Vertical	Pass
10848	-58	-40	-18	-58.27	11.06	13.48	Vertical	Pass
14464	-53.68	-40	-13.68	-54.54	11.48	14.49	Vertical	Pass

LTE Band 48_QPSK_20MHz_High Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7380	-59.76	-40	-19.76	-61.15	8.19	11.73	Horizontal	Pass
11070	-54.81	-40	-14.81	-54.95	11.36	13.65	Horizontal	Pass
14760	-51.15	-40	-11.15	-51.9	11.4	14.3	Horizontal	Pass
7380	-60.33	-40	-20.33	-61.72	8.19	11.73	Vertical	Pass
11070	-55.28	-40	-15.28	-55.42	11.36	13.65	Vertical	Pass
14760	-51.01	-40	-11.01	-51.76	11.4	14.3	Vertical	Pass



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NR Band 48_QPSK_10MHz_Low Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7100.5	-58.31	-40	-18.31	-59.7	8.19	11.73	Horizontal	Pass
10650.75	-57.09	-40	-17.09	-57.36	11.06	13.48	Horizontal	Pass
14201	-55.23	-40	-15.23	-56.09	11.48	14.49	Horizontal	Pass
7100.5	-57.51	-40	-17.51	-58.9	8.19	11.73	Vertical	Pass
10650.75	-56.25	-40	-16.25	-56.52	11.06	13.48	Vertical	Pass
14201	-55.52	-40	-15.52	-56.38	11.48	14.49	Vertical	Pass

NR Band 48_QPSK_10MHz_Middle Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7249.98	-60.35	-40	-20.35	-61.74	8.19	11.73	Horizontal	Pass
10874.97	-55.68	-40	-15.68	-55.95	11.06	13.48	Horizontal	Pass
14499.96	-54.23	-40	-14.23	-55.09	11.48	14.49	Horizontal	Pass
7249.98	-60.32	-40	-20.32	-61.71	8.19	11.73	Vertical	Pass
10874.97	-56.65	-40	-16.65	-56.92	11.06	13.48	Vertical	Pass
14499.96	-54.84	-40	-14.84	-55.7	11.48	14.49	Vertical	Pass

NR Band 48_QPSK_10MHz_High Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7389.96	-56.56	-40	-16.56	-57.95	8.19	11.73	Horizontal	Pass
11084.94	-56.02	-40	-16.02	-56.16	11.36	13.65	Horizontal	Pass
14779.92	-53.02	-40	-13.02	-53.77	11.4	14.3	Horizontal	Pass
7389.96	-55.85	-40	-15.85	-57.24	8.19	11.73	Vertical	Pass
11084.94	-55.47	-40	-15.47	-55.61	11.36	13.65	Vertical	Pass
14779.92	-51.93	-40	-11.93	-52.68	11.4	14.3	Vertical	Pass



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NR Band 48_QPSK_20MHz_Low Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7120.02	-61.04	-40	-21.04	-62.43	8.19	11.73	Horizontal	Pass
10680.03	-57.25	-40	-17.25	-57.52	11.06	13.48	Horizontal	Pass
14240.04	-56.29	-40	-16.29	-57.15	11.48	14.49	Horizontal	Pass
7120.02	-60.52	-40	-20.52	-61.91	8.19	11.73	Vertical	Pass
10680.03	-54.23	-40	-14.23	-54.5	11.06	13.48	Vertical	Pass
14240.04	-56.48	-40	-16.48	-57.34	11.48	14.49	Vertical	Pass

NR Band 48_QPSK_20MHz_Middle Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7249.98	-60.96	-40	-20.96	-62.35	8.19	11.73	Horizontal	Pass
10874.97	-56.47	-40	-16.47	-56.74	11.06	13.48	Horizontal	Pass
14499.96	-55.2	-40	-15.2	-56.06	11.48	14.49	Horizontal	Pass
7249.98	-60.71	-40	-20.71	-62.1	8.19	11.73	Vertical	Pass
10874.97	-57.06	-40	-17.06	-57.33	11.06	13.48	Vertical	Pass
14499.96	-54.93	-40	-14.93	-55.79	11.48	14.49	Vertical	Pass

NR Band 48_QPSK_20MHz_High Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7380	-57.41	-40	-17.41	-58.8	8.19	11.73	Horizontal	Pass
11070	-56.39	-40	-16.39	-56.53	11.36	13.65	Horizontal	Pass
14760	-53.12	-40	-13.12	-53.87	11.4	14.3	Horizontal	Pass
7380	-58.36	-40	-18.36	-59.75	8.19	11.73	Vertical	Pass
11070	-56.53	-40	-16.53	-56.67	11.36	13.65	Vertical	Pass
14760	-52.46	-40	-12.46	-53.21	11.4	14.3	Vertical	Pass



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NR Band 48_QPSK_40MHz_Low Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7140	-56.02	-40	-16.02	-57.41	8.19	11.73	Horizontal	Pass
10710	-56.64	-40	-16.64	-56.91	11.06	13.48	Horizontal	Pass
14280	-55.09	-40	-15.09	-55.95	11.48	14.49	Horizontal	Pass
7140	-53.97	-40	-13.97	-55.36	8.19	11.73	Vertical	Pass
10710	-56.85	-40	-16.85	-57.12	11.06	13.48	Vertical	Pass
14280	-56.56	-40	-16.56	-57.42	11.48	14.49	Vertical	Pass

NR Band 48_QPSK_40MHz_Middle Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7249.98	-61.06	-40	-21.06	-62.45	8.19	11.73	Horizontal	Pass
10874.97	-56.13	-40	-16.13	-56.4	11.06	13.48	Horizontal	Pass
14499.96	-54.84	-40	-14.84	-55.7	11.48	14.49	Horizontal	Pass
7249.98	-60.92	-40	-20.92	-62.31	8.19	11.73	Vertical	Pass
10874.97	-56.47	-40	-16.47	-56.74	11.06	13.48	Vertical	Pass
14499.96	-54.52	-40	-14.52	-55.38	11.48	14.49	Vertical	Pass

NR Band 48_QPSK_40MHz_High Channel, 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7359.96	-60.33	-40	-20.33	-61.72	8.19	11.73	Horizontal	Pass
11039.94	-56.23	-40	-16.23	-56.37	11.36	13.65	Horizontal	Pass
14719.92	-53.28	-40	-13.28	-54.03	11.4	14.3	Horizontal	Pass
7359.96	-60.24	-40	-20.24	-61.63	8.19	11.73	Vertical	Pass
11039.94	-56.27	-40	-16.27	-56.41	11.36	13.65	Vertical	Pass
14719.92	-53.09	-40	-13.09	-53.84	11.4	14.3	Vertical	Pass



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# Compliance Certification Services (Kunshan) Inc. Shenzhen Branch

SZCCS-TRF-01 Rev. A/0 Aug01,2022

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CA

LTE Band 48_QPSK_20+20MHz_Low Channel, PCC 1 RB50+ SCC 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7232	-48.83	-40	-8.83	-50.22	8.19	11.73	Horizontal	Pass
10848	-46.58	-40	-6.58	-46.85	11.06	13.48	Horizontal	Pass
14464	-43.01	-40	-3.01	-43.87	11.48	14.49	Horizontal	Pass
7232	-44.28	-40	-4.28	-45.67	8.19	11.73	Vertical	Pass
10848	-47.22	-40	-7.22	-47.49	11.06	13.48	Vertical	Pass
14464	-43.39	-40	-3.39	-44.25	11.48	14.49	Vertical	Pass

LTE Band 48_QPSK_20+20MHz_Middle Channel, PCC 1 RB50+ SCC 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7362	-50.64	-40	-10.64	-52.03	8.19	11.73	Horizontal	Pass
11043	-46.79	-40	-6.79	-46.93	11.36	13.65	Horizontal	Pass
14724	-42.82	-40	-2.82	-43.57	11.4	14.3	Horizontal	Pass
7362	-49.74	-40	-9.74	-51.13	8.19	11.73	Vertical	Pass
11043	-46.98	-40	-6.98	-47.12	11.36	13.65	Vertical	Pass
14724	-42.47	-40	-2.47	-43.22	11.4	14.3	Vertical	Pass

LTE Band 48_QPSK_20+20MHz_High Channel, PCC 1 RB50+ SCC 1 RB0								
Frequency (MHz)	EIRP (dBm)	Limit(dBm)	Over Limit (dB)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	Polarization (H/V)	Result
7231	-51.21	-40	-11.21	-52.6	8.19	11.73	Horizontal	Pass
10842	-52.31	-40	-12.31	-52.58	11.06	13.48	Horizontal	Pass
14433	-43.75	-40	-3.75	-44.61	11.48	14.49	Horizontal	Pass
7321	-51.75	-40	-11.75	-53.14	8.19	11.73	Vertical	Pass
10843	-44.31	-40	-4.31	-44.58	11.06	13.48	Vertical	Pass
14431	-43.22	-40	-3.22	-44.08	11.48	14.49	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.



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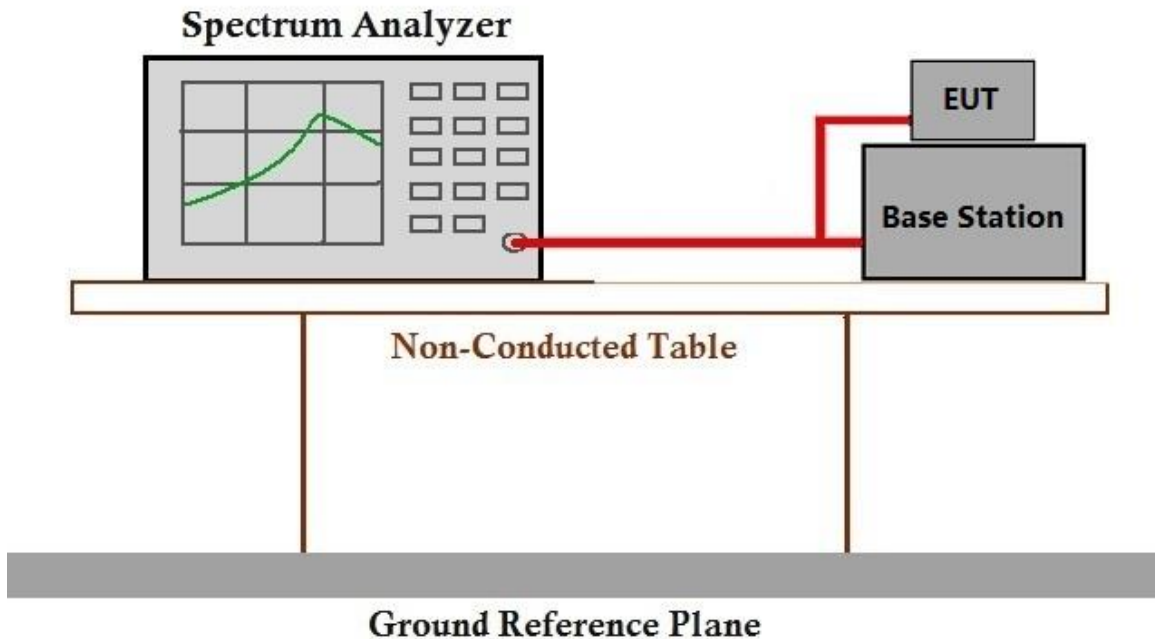
### 6.7 Frequency stability

Test Requirement: §2.1055  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit:  $\leq \pm 2.5\text{ppm}$ .

#### 6.7.1 E.U.T. Operation

Operating Environment:  
 Temperature: 24.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar  
 Test mode 01: Tx mode, Keep the EUT in transmitting mode.

#### 6.7.2 Test Setup Diagram



#### 6.7.3 Measurement Data

Please refer to Appendix for Frequency stability.



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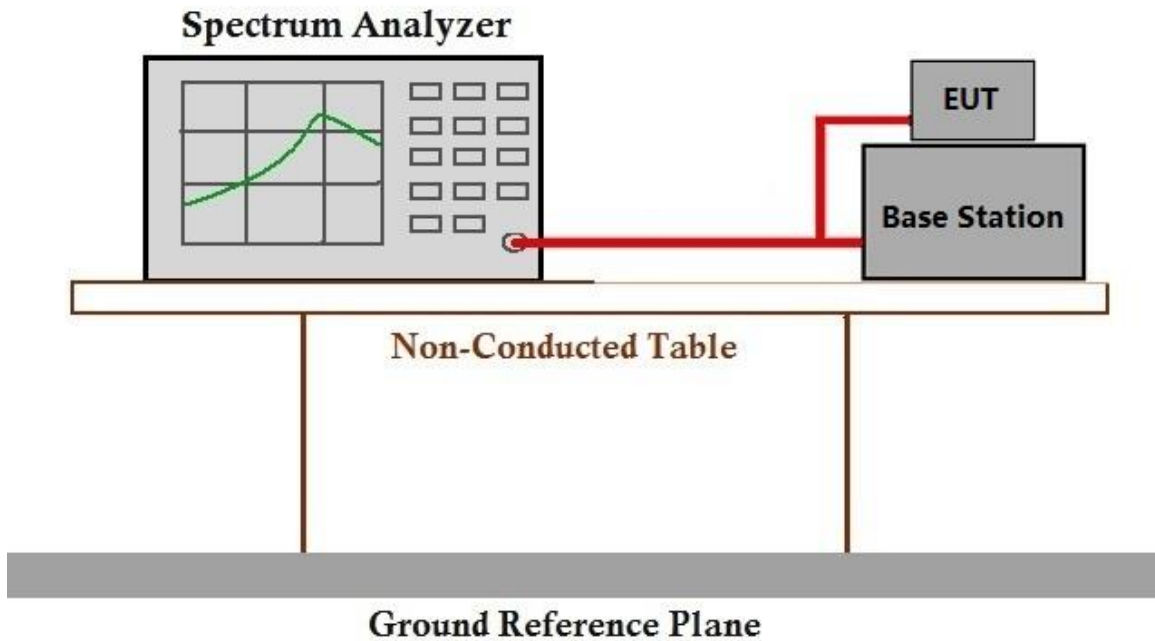
### 6.8 Modulation Characteristics

Test Requirement: §2.1047  
 Test Method: ANSI C63.26-2015, KDB 971168 D01 v03r01  
 Limit: Digital modulation

#### 6.8.1 E.U.T. Operation

Operating Environment:  
 Temperature: 24.5 °C Humidity: 53.5 % RH Atmospheric Pressure: 1020 mbar  
 Test mode 01: Tx mode, Keep the EUT in transmitting mode.

#### 6.8.2 Test Setup Diagram



#### 6.8.3 Measurement Data

Pass, it's a digital modulation device.



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## 7 Test Setup Photo

Refer to Appendix - Test Setup Photo for FYCR2212000509AT

## 8 EUT Constructional Details (EUT Photos)

Refer to Appendix – External and Internal Photos for FYCR2212000509AT

- End of the Report -



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