TEST REPORT

Application No.:	KSCR2404000747AT
FCC ID:	2APJ4-MA922
Applicant:	MeiG Smart Technology Co., Ltd
Address of Applicant:	2nd Floor,Office Building,No.5 Lingxia Road,Fenghuang,FuyongStreet, Bao'an District,Shenzhen
Manufacturer:	MeiG Smart Technology Co., Ltd
Address of Manufacturer:	2nd Floor,Office Building,No.5 Lingxia Road,Fenghuang,FuyongStreet, Bao'an District,Shenzhen
Equipment Under Test (EUT):	
EUT Name:	Wireless communication module
Model No.:	MA922
Trade Mark:	MEIGLink
Standard(s) :	47 CFR Part 2 47 CFR Part 22 47 CFR Part 24 47 CFR Part 27 47 CFR Part 90
Date of Receipt:	2024-04-28
Date of Test:	2024-04-29 to 2024-06-29
Date of Issue:	2024-07-01
Test Result:	**Pass***

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

Revision Record			
Version	**Description**	***Date***	***Remark***
00	Original	2024-07-01	/

Authorized for issue by:				
Tested By		Maker Qi **Maker_Qi/Project Engineer**		
Approved By		Terry Hou **Terry Hou /Reviewer**		

2 Test Summary

Test Item	FCC Rule No.	Requirements	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046, §22.913, §24.232, §27.50(b), §27.50(c), §27.50(d), §27.50(h), §90.541, §90.635, §90.637	ERP≤7W(LTE Band 5,26) EIRP≤ 3W(LTE Band 12,13,14,17,71) EIRP≤ 2W(LTE Band 2,7,25,41) EIRP≤ 1W(LTE Band 4,66)	PASS
Peak-Average Ratio	§22.913(d), §24.232(d), §27.50(b), §27.50(c), §27.50(d), §27.50(h), §90.541, §90.635	≤13dB	PASS
Bandwidth	§2.1049(h)	OBW:No limit EBW: No limit	PASS
Band Edge Compliance	§2.1051, §22.917, §24.238, §27.53(c), §27.53(h), §27.53(g), §27.53(m), §90.543, §90.691	≤ -13dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block. ≤ -13dBm/Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed. ≤ -13dBm(LTE Band7, 41<5.5MHz) -25dBm(LTE Band7, 41⩾5.5MHz)	PASS
Spurious emissions at antenna terminals	§2.1051, §22.917, §24.238, §27.53(c), §27.53(h), §27.53(g), §27.53(m), §90.543, §90.691	≤ -13dBm(LTE Band2,4,5,12,13,14,17,25,26,66,71) ≤ -25dBm(LTE Band7,41) ≤ -40dBm(LTE Band 13,14(1559-1610MHz))	PASS
Radiated spurious emission	§2.1051, §22.917, §24.238, §27.53(c), §27.53(h), §27.53(g), §27.53(m), §90.543, §90.691	≤ -13dBm(LTE Band2,4,5,12,13,14,17,25,26,66,71) ≤ -25dBm(LTE Band7,41) ≤ -40dBm(LTE Band 13,14(1559-1610MHz))	PASS

Frequency stability	§2.1055, §22.355, §24.235 §27.54	≤ ±2.5ppm.	PASS
Emission Mask	§2.1055, §90.210, §90.691	LTE Band14: (1)On any frequency removed from the assigned frequency by more than 50 percent, but not more than 100 percent of the authorized bandwidth: At least 25 dB. (2) On any frequency removed from the assigned frequency by more than 100 percent, but not more than 250 percent of the authorized bandwidth: At least 35 dB. (3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + 10 log (P) dB. LTE Band26: (1)up to and including 37.5 kHz, at least 116 Log10(f/6.1) dB or 50 + 10 Log10(P) dB or 80 dB (2) greater than 37.5 kHz, at least 43 + 10Log10(P) dB or 80 dB	PASS

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4 General Information

4.1 Details of E.U.T.

Power supply:	3.3 V～ 4.3 V
Serial Number:	3.8V
Firmware version:	MA9228ACHE013000009
LTE Operation Frequency Band:	LTE Band 2,4,5,7,12,13,14,17,25,26, 41,66,71
Modulation Type:	QPSK, 16QAM, 64QAM
Antenna Type:	External antenna
Antenna Gain:	Band 2: 2.3dBi(Provided by the manufacturer) Band 4: 3.05dBi(Provided by the manufacturer) Band 5: 2.69dBi(Provided by the manufacturer) Band 7: 3.07dBi(Provided by the manufacturer) Band 12: 5.29dBi(Provided by the manufacturer) Band 13: 3.52dBi(Provided by the manufacturer) Band 14:3.52dBi(Provided by the manufacturer) Band 17: 5.29dBi(Provided by the manufacturer) Band 25: 2.3dBi(Provided by the manufacturer) Band 26: 2.69dBi(Provided by the manufacturer) Band 41: 3.7dBi(Provided by the manufacturer) Band 66: 3.05dBi(Provided by the manufacturer) Band 71:5.29dBi(Provided by the manufacturer)
Extreme vol. Limits:	3.3V DC to 4.3 V DC (nominal: 3.8V DC)
Extreme temp. Tolerance:	-30°C to +55°C

Note:
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:	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	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560

Test mode:	Nominal Bandwidth (MHz)	RF Channel		
		Low (L)	Middle (M)	High (H)
		MHz	MHz	MHz
LTE FDD Band 12	1.4	699.7	707.5	715.3
	3	700.5	707.5	714.5
	5	701.5	707.5	713.5
	10	704	707.5	711
Test mode:	**Nominal Bandwidth (MHz)**	**RF Channel**		
		Low (L)	**Middle (M)**	**High (H)**
		MHz	**MHz**	**MHz**
LTE FDD Band 13	5	779.5	782	784.5
	10	/	782	/
Test mode:	**Nominal Bandwidth (MHz)**	**RF Channel**		
		Low (L)	**Middle (M)**	**High (H)**
		MHz	**MHz**	**MHz**
LTE FDD Band 14	5	790.5	793	795.5
	10	/	793	/
Test mode:	**Nominal Bandwidth (MHz)**	**RF Channel**		
		Low (L)	**Middle (M)**	**High (H)**
		MHz	**MHz**	**MHz**
LTE FDD Band 17	5	706.5	710	713.5
	10	709	710	711
Test mode:	**Nominal Bandwidth (MHz)**	**RF Channel**		
		Low (L)	**Middle (M)**	**High (H)**
		MHz	**MHz**	**MHz**
LTE FDD Band 25	1.4	1850.7	1880	1914.3
	3	1851.5	1880	1913.5
	5	1852.5	1880	1912.5
	10	1855.0	1880	1910
	15	1857.5	1880	1907.5
	20	1860.0	1880	1905
Test mode:	**Nominal Bandwidth (MHz)**	**RF Channel**		
		Low (L)	**Middle (M)**	**High (H)**
		MHz	**MHz**	**MHz**
LTE FDD Band 26 (814-824MHz)	1.4	814.7	819	823.3
	3	815.5	819	822.5
	5	816.5	819	821.5
	10	/	819	/

Test mode:	Nominal Bandwidth (MHz)	RF Channel		
		Low (L)	Middle (M)	High (H)
		MHz	MHz	MHz
LTE FDD Band 26 (824-849MHz)	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
	15	831.5	836.5	841.5
Test mode:	**Nominal Bandwidth (MHz)**	**RF Channel**		
		Low (L)	**Middle (M)**	**High (H)**
		MHz	**MHz**	**MHz**
LTE TDD Band 41	5	2498.5	2593.0	2687.5
	10	2501.0	2593.0	2685.0
	15	2503.5	2593.0	2682.5
	20	2506.0	2593.0	2680.0
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	1779.3
	3	1711.5	1745	1778.5
	5	1712.5	1745	1777.5
	10	1715	1745	1775
	15	1717.5	1745	1772.5
	20	1720	1745	1770
Test mode:	**Nominal Bandwidth (MHz)**	**RF Channel**		
		Low (L)	**Middle (M)**	**High (H)**
		MHz	**MHz**	**MHz**
LTE FDD Band 71	5	665.5	680.5	695.5
	10	668	680.5	693
	15	670.5	680.5	690.5
	20	673	683	688

2.1 Test Environment

Environment Parameter	Selected Values During Tests	
Relative Humidity	48%	
Atmospheric Pressure:	1015Pa	
Temperature:	TN	25 °C
Voltage:	VL	3.3V
	VN	3.8V
	VH	4.3V

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

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%
Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

4.4 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).

2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).

3. Sample source: sent by customer.

4.5 Test Facility

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

• A2LA

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• FCC

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

• ISED

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

• VCCI

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
Conducted Emission at Mains Terminals						
1	EMI Test Receive	R&S	ESCI	KS301101	01/15/2024	01/14/2025
2	LISN	R&S	ENV216	KS301197	01/15/2024	01/14/2025
3	LISN	Schwarzbeck	NNLK 8129	KS301091	01/15/2024	01/14/2025
4	Pulse Limiter	R&S	ESH3-Z2	KUS1902E001	01/15/2024	01/14/2025
5	CE test Cable	Thermax	/	CZ301102	01/15/2024	01/14/2025
6	Test Software	Farad	EZ-EMC	/	N.C.R	N.C.R
RF Conducted Test						
1	Spectrum Analyzer	Keysight	N9020A	KUS1911E004-2	08/24/2023	08/23/2024
2	Spectrum Analyzer	Keysight	N9020A	KUS2001M001-2	08/24/2023	08/23/2024
3	Spectrum Analyzer	Keysight	N9030B	KSEM021-1	01/15/2024	01/14/2025
4	Signal Generator	R&S	SMBV100B	KSEM032	03/19/2024	03/18/2025
5	Signal Generator	R&S	SMW200A	KSEM020-1	08/24/2023	08/23/2024
6	Signal Generator	Agilent	N5182A	KUS2001M001-1	08/24/2023	08/23/2024
7	Radio Communication Test Station	Anritsu	MT8000A	KSEM001-1	08/24/2023	08/23/2024
8	Radio Communication Analyzer	Anritsu	MT8821C	KSEM002-1	03/19/2024	03/18/2025
9	Universal Radio Communication Tester	R&S	CMW500	KUS1911E004-1	08/24/2023	08/23/2024
10	Switcher	TST	FY562	KUS2001M001-4	01/15/2024	01/14/2025
11	AC Power Source	EXTECH	6605	KS301178	N.C.R	N.C.R
12	DC Power Supply	Aglient	E3632A	KS301180	N.C.R	N.C.R
13	Conducted Test Cable	Thermax	RF01-RF04	CZ301111-CZ301120	01/15/2024	01/14/2025
14	Temp. / Humidity Chamber	TERCHY	MHK-120AK	KS301190	08/24/2023	08/23/2024
15	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-5	03/19/2024	03/18/2025
16	Software	BST	TST-PASS	/	NCR	NCR
RF Radiated Test						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/24/2023	08/23/2024
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	03/19/2024	03/18/2025
3	Signal Generator	Agilent	E8257C	KS301066	08/24/2023	08/23/2024
4	Loop Antenna	COM-POWER	AL-130R	KUS1806E001	03/18/2023	03/17/2025
5	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E005	06/29/2023	06/28/2025
6	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E006	03/19/2024	03/18/2025
7	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	08/24/2023	08/23/2024
8	Horn-antenna(1-18GHz)	ETS-LINDGREN	3117	KS301186	04/07/2023	04/06/2025
9	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	01/07/2024	01/06/2026
10	Amplifier(30MHz~18GHz)	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-1	01/15/2024	01/14/2025
11	Amplifier(18~40GHz)	PANSHAN TECHNOLOGY	LNA180400G40	KSEM038	08/24/2023	08/23/2024
12	RE Test Cable	REBES MICROWAVE	/	CZ301097	08/24/2023	08/23/2024
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	03/19/2024	03/18/2025
14	Software	Faratronic	EZ_EMC-v 3A1	/	NCR	NCR
15	Software	ESE	E3_V 6.111221a	/	NCR	NCR

6 Radio Spectrum Matter Test Results

6.1 Effective (Isotropic) Radiated Power Output Data

Test Requirement: §2.1046,§22.913,§24.232,§27.50(b),§27.50(c),§27.50(d),§27.50(h),§90.541, §90.635,§90.637

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ERP≤7W(LTE Band 5,26)

EIRP≤ 3W(LTE Band 12,13,14,17,71)

EIRP≤ 2W(LTE Band 2,7,25,41)

EIRP≤ 1W(LTE Band 4,66)

6.1.1 E.U.T. Operation

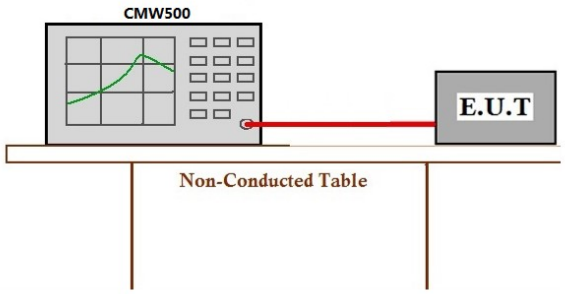
Operating Environment:

Temperature: 23.2 °C Humidity: 50.3 % RH Atmospheric Pressure: 1010 mbar

6.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	12	TX mode_Keep the EUT in transmitting mode

6.1.3 Test Setup Diagram



6.1.4 Measurement Procedure and Data

Please Refer to Appendix for Details

6.2 Peak-Average Ratio

Test Requirement: §22.913(d),§24.232(d),§27.50(b),§27.50(c),§27.50(d),§27.50(h),§90.541,§90.635

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ≤13dB

6.2.1 E.U.T. Operation

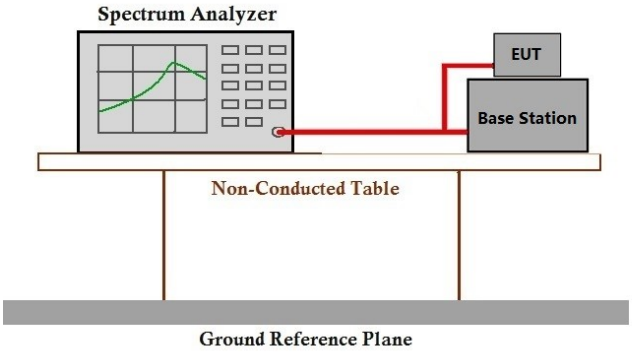
Operating Environment:

Temperature: 23.2 °C Humidity: 52.9 % RH Atmospheric Pressure: 1010 mbar

6.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	12	TX mode_Keep the EUT in transmitting mode

6.2.3 Test Setup Diagram



6.2.4 Measurement Procedure and Data

Please Refer to Appendix for Details

6.3 Bandwidth

Test Requirement: §2.1049(h)
Test Method: ANSI C63.26, KDB 971168 D01 v03
Limit: OBW: No limit
EBW: No limit

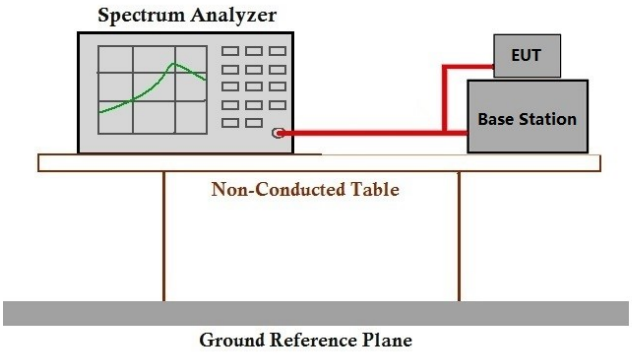
6.3.1 E.U.T. Operation

Operating Environment:
Temperature: 23.2 °C Humidity: 50.9 % RH Atmospheric Pressure: 1010 mbar

6.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	12	TX mode_Keep the EUT in transmitting mode

6.3.3 Test Setup Diagram



6.3.4 Measurement Procedure and Data

Please Refer to Appendix for Details

6.4 Band Edge Compliance

Test Requirement: §2.1051,§22.917,§24.238,§27.53(c),§27.53(h),§27.53(g),§27.53(m),§90.543 ,§90.691

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ≤ -13dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.

≤ -13dBm/ Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

⩽ -13dBm(LTE Band7, 41<5.5MHz)

-25dBm(LTE Band7, 41⩾5.5MHz)

6.4.1 E.U.T. Operation

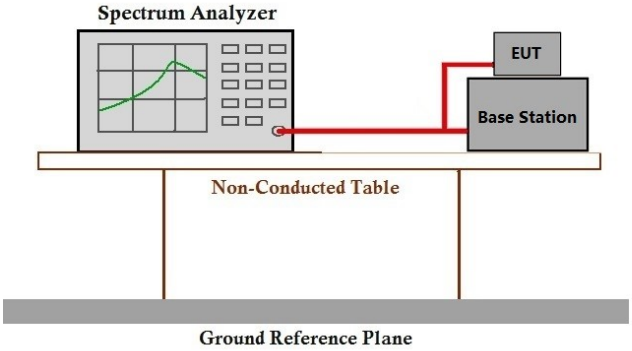
Operating Environment:

Temperature: 23.2 °C Humidity: 52.3 % RH Atmospheric Pressure: 1010 mbar

6.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	12	TX mode_Keep the EUT in transmitting mode

6.4.3 Test Setup Diagram



6.4.4 Measurement Procedure and Data

Please Refer to Appendix for Details

6.5 Spurious emissions at antenna terminals

Test Requirement: §2.1051,§22.917,§24.238,§27.53(c),§27.53(h),§27.53(g),§27.53(m),§90.543 ,§90.691

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ≤ -13dBm(LTE Band2,4,5,12,13,14,17,25,26,66,71)

≤ -25dBm(LTE Band7,41)

For operations in the 775-788MHz, emissions in the 1559-1610MHz shall be limited to -70dBW/MHz, The limit of emissions is equal to -40dBm.

6.5.1 E.U.T. Operation

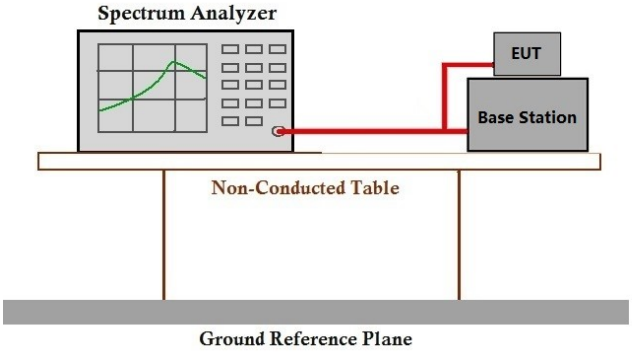
Operating Environment:

Temperature: 23.2 °C Humidity: 53.8 % RH Atmospheric Pressure: 1010 mbar

6.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	12	TX mode_Keep the EUT in transmitting mode

6.5.3 Test Setup Diagram



6.5.4 Measurement Procedure and Data

Please Refer to Appendix for Details

6.6 Field strength of spurious radiation

Test Requirement: §2.1051,§22.917,§24.238,§27.53(c),§27.53(h),§27.53(g),§27.53(m),§90.543 ,§90.691

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: ≤ -13dBm(LTE Band2,4,5,12,13,14,17,25,26,66,71)
≤ -25dBm(LTE Band7,41)
≤-40dBm(LTE Band 13,14(1559-1610MHz))

6.6.1 E.U.T. Operation

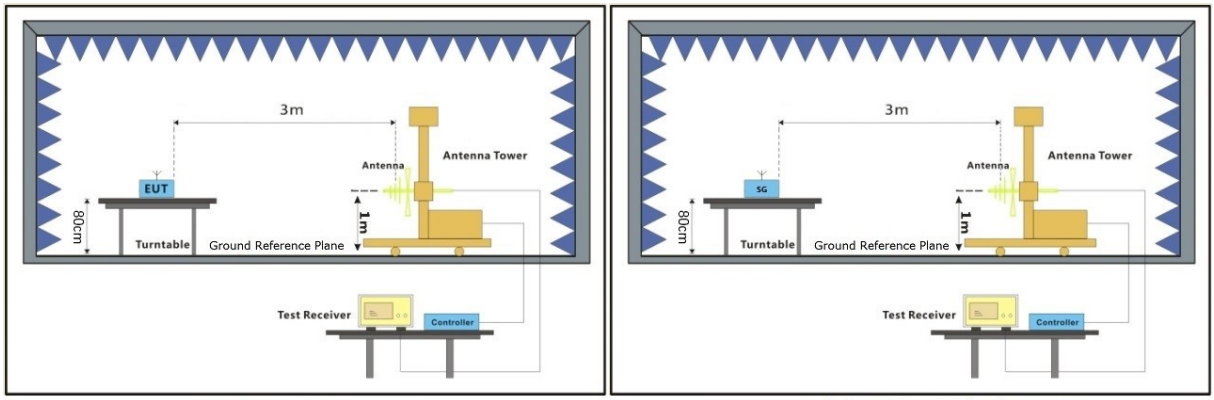
Operating Environment:

Temperature: 24.3 °C Humidity: 50.2 % RH Atmospheric Pressure: 1010 mbar

6.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	12	TX mode_Keep the EUT in transmitting mode

6.6.3 Test Setup Diagram



EUT Substiute Antenna+Signal Generator

6.6.4 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.

LTE BAND 2-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3720.000	-53.13	-13	-40.13	Horizontal
5580.000	-56.77	-13	-43.77	Horizontal
7440.000	-53.95	-13	-40.95	Horizontal
3720.000	-55.92	-13	-42.92	Vertical
5580.000	-58.17	-13	-45.17	Vertical
7440.000	-56.71	-13	-43.71	Vertical

LTE BAND 2-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3760.000	-58.24	-13	-45.24	Horizontal
5640.000	-59.90	-13	-46.90	Horizontal
7520.000	-59.23	-13	-46.23	Horizontal
3760.000	-51.71	-13	-38.71	Vertical
5640.000	-58.32	-13	-45.32	Vertical
7520.000	-55.25	-13	-42.25	Vertical

LTE BAND 2-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3800.000	-57.68	-13	-44.68	Horizontal
5700.000	-61.58	-13	-48.58	Horizontal
7600.000	-54.92	-13	-41.92	Horizontal
3800.000	-56.33	-13	-43.33	Vertical
5700.000	-62.65	-13	-49.65	Vertical
7600.000	-53.16	-13	-40.16	Vertical

LTE BAND 4-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3440.000	-59.54	-13	-46.54	Horizontal
5160.000	-58.04	-13	-45.04	Horizontal
6880.000	-57.07	-13	-44.07	Horizontal
3440.000	-59.42	-13	-46.42	Vertical
5160.000	-56.95	-13	-43.95	Vertical
6880.000	-56.37	-13	-43.37	Vertical

LTE BAND 4-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3465.000	-55.96	-13	-42.96	Horizontal
5197.500	-60.81	-13	-47.81	Horizontal
6930.000	-57.42	-13	-44.42	Horizontal
3465.000	-53.80	-13	-40.80	Vertical
5197.500	-61.86	-13	-48.86	Vertical
6930.000	-56.65	-13	-43.65	Vertical

LTE BAND 4-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3490.000	-59.22	-13	-46.22	Horizontal
5235.000	-60.99	-13	-47.99	Horizontal
6980.000	-54.01	-13	-41.01	Horizontal
3490.000	-57.97	-13	-44.97	Vertical
5235.000	-61.68	-13	-48.68	Vertical
6980.000	-57.20	-13	-44.20	Vertical

LTE BAND 5-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1658.000	-55.67	-13	-42.67	Horizontal
2487.000	-55.89	-13	-42.89	Horizontal
3316.000	-57.38	-13	-44.38	Horizontal
1658.000	-56.34	-13	-43.34	Vertical
2487.000	-57.87	-13	-44.87	Vertical
3316.000	-56.13	-13	-43.13	Vertical

LTE BAND 5-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1673.000	-59.54	-13	-46.54	Horizontal
2509.500	-61.69	-13	-48.69	Horizontal
3346.000	-55.01	-13	-42.01	Horizontal
1673.000	-50.73	-13	-37.73	Vertical
2509.500	-59.41	-13	-46.41	Vertical
3346.000	-57.27	-13	-44.27	Vertical

LTE BAND 5-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1688.000	-53.84	-13	-40.84	Horizontal
2532.000	-61.96	-13	-48.96	Horizontal
3376.000	-52.50	-13	-39.50	Horizontal
1688.000	-55.10	-13	-42.10	Vertical
2532.000	-60.63	-13	-47.63	Vertical
3376.000	-54.23	-13	-41.23	Vertical

LTE BAND 7-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
5020.000	-59.14	-25	-34.14	Horizontal
7530.000	-57.69	-25	-32.69	Horizontal
10040.000	-56.25	-25	-31.25	Horizontal
5020.000	-52.23	-25	-27.23	Vertical
7530.000	-59.11	-25	-34.11	Vertical
10040.000	-54.41	-25	-29.41	Vertical

LTE BAND 7-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
5070.000	-51.37	-25	-26.37	Horizontal
7605.000	-57.36	-25	-32.36	Horizontal
10140.000	-58.22	-25	-33.22	Horizontal
5070.000	-55.24	-25	-30.24	Vertical
7605.000	-61.49	-25	-36.49	Vertical
10140.000	-59.12	-25	-34.12	Vertical

LTE BAND 7-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
5120.000	-54.80	-25	-29.80	Horizontal
7680.000	-59.45	-25	-34.45	Horizontal
10240.000	-55.35	-25	-30.35	Horizontal
5120.000	-56.71	-25	-31.71	Vertical
7680.000	-59.79	-25	-34.79	Vertical
10240.000	-56.91	-25	-31.91	Vertical

LTE BAND 12-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1408.000	-59.63	-13	-46.63	Horizontal
2112.000	-60.50	-13	-47.50	Horizontal
2816.000	-53.59	-13	-40.59	Horizontal
1408.000	-53.11	-13	-40.11	Vertical
2112.000	-56.91	-13	-43.91	Vertical
2816.000	-54.95	-13	-41.95	Vertical

LTE BAND 12-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1415.000	-57.00	-13	-44.00	Horizontal
2122.500	-60.29	-13	-47.29	Horizontal
2830.000	-55.16	-13	-42.16	Horizontal
1415.000	-55.19	-13	-42.19	Vertical
2122.500	-57.95	-13	-44.95	Vertical
2830.000	-58.89	-13	-45.89	Vertical

LTE BAND 12-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1422.000	-56.38	-13	-43.38	Horizontal
2133.000	-60.30	-13	-47.30	Horizontal
2844.000	-56.89	-13	-43.89	Horizontal
1422.000	-53.97	-13	-40.97	Vertical
2133.000	-59.22	-13	-46.22	Vertical
2844.000	-52.90	-13	-39.90	Vertical

LTE BAND 13-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1559.000	-60.43	-40	-20.43	Horizontal
2338.500	-60.17	-13	-47.17	Horizontal
3118.000	-55.88	-13	-42.88	Horizontal
1559.000	-52.64	-40	-12.64	Vertical
2338.500	-59.58	-13	-46.58	Vertical
3118.000	-55.31	-13	-42.31	Vertical

LTE BAND 13-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1564.000	-55.23	-40	-15.23	Horizontal
2346.000	-57.71	-13	-44.71	Horizontal
3128.000	-58.57	-13	-45.57	Horizontal
1564.000	-58.26	-40	-18.26	Vertical
2346.000	-62.21	-13	-49.21	Vertical
3128.000	-57.78	-13	-44.78	Vertical

LTE BAND 13-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1569.000	-53.04	-40	-13.04	Horizontal
2353.500	-61.67	-13	-48.67	Horizontal
3138.000	-53.22	-13	-40.22	Horizontal
1569.000	-56.08	-40	-16.08	Vertical
2353.500	-61.99	-13	-48.99	Vertical
3138.000	-53.34	-13	-40.34	Vertical

LTE BAND 14-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1581.000	-60.38	-40	-20.38	Horizontal
2371.500	-59.97	-13	-46.97	Horizontal
3162.000	-56.15	-13	-43.15	Horizontal
1581.000	-60.73	-40	-20.73	Vertical
2371.500	-59.33	-13	-46.33	Vertical
3162.000	-56.69	-13	-43.69	Vertical

LTE BAND 14-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1586.000	-59.48	-40	-19.48	Horizontal
2379.000	-57.52	-13	-44.52	Horizontal
3172.000	-57.99	-13	-44.99	Horizontal
1586.000	-56.79	-40	-16.79	Vertical
2379.000	-62.11	-13	-49.11	Vertical
3172.000	-56.14	-13	-43.14	Vertical

LTE BAND 14-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1591.000	-61.17	-40	-21.17	Horizontal
2386.500	-60.19	-13	-47.19	Horizontal
3182.000	-55.83	-13	-42.83	Horizontal
1591.000	-52.03	-40	-12.03	Vertical
2386.500	-61.59	-13	-48.59	Vertical
3182.000	-56.01	-13	-43.01	Vertical

LTE BAND 17-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1418.000	-57.03	-13	-44.03	Horizontal
2127.000	-59.28	-13	-46.28	Horizontal
2836.000	-52.93	-13	-39.93	Horizontal
1418.000	-52.87	-13	-39.87	Vertical
2127.000	-57.95	-13	-44.95	Vertical
2836.000	-56.76	-13	-43.76	Vertical

LTE BAND 17-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1420.000	-51.50	-13	-38.50	Horizontal
2130.000	-61.92	-13	-48.92	Horizontal
2840.000	-57.46	-13	-44.46	Horizontal
1420.000	-53.72	-13	-40.72	Vertical
2130.000	-61.97	-13	-48.97	Vertical
2840.000	-55.86	-13	-42.86	Vertical

LTE BAND 17-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1422.000	-60.53	-13	-47.53	Horizontal
2133.000	-61.45	-13	-48.45	Horizontal
2844.000	-55.45	-13	-42.45	Horizontal
1422.000	-56.27	-13	-43.27	Vertical
2133.000	-61.19	-13	-48.19	Vertical
2844.000	-52.80	-13	-39.80	Vertical

LTE BAND 25-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3720.000	-52.33	-13	-39.33	Horizontal
5580.000	-58.14	-13	-45.14	Horizontal
7440.000	-54.09	-13	-41.09	Horizontal
3720.000	-59.05	-13	-46.05	Vertical
5580.000	-58.30	-13	-45.30	Vertical
7440.000	-55.38	-13	-42.38	Vertical

LTE BAND 25-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3760.000	-57.77	-13	-44.77	Horizontal
5640.000	-60.39	-13	-47.39	Horizontal
7520.000	-56.10	-13	-43.10	Horizontal
3760.000	-55.06	-13	-42.06	Vertical
5640.000	-57.93	-13	-44.93	Vertical
7520.000	-55.75	-13	-42.75	Vertical

LTE BAND 25-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3810.000	-57.93	-13	-44.93	Horizontal
5715.000	-60.95	-13	-47.95	Horizontal
7620.000	-53.00	-13	-40.00	Horizontal
3810.000	-51.85	-13	-38.85	Vertical
5715.000	-61.83	-13	-48.83	Vertical
7620.000	-56.09	-13	-43.09	Vertical

LTE BAND 26-part22H-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1663.000	-56.01	-13	-43.01	Horizontal
2494.500	-56.66	-13	-43.66	Horizontal
3326.000	-55.07	-13	-42.07	Horizontal
1663.000	-58.48	-13	-45.48	Vertical
2494.500	-58.47	-13	-45.47	Vertical
3326.000	-57.53	-13	-44.53	Vertical

LTE BAND 26- part22H Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1673.000	-57.86	-13	-44.86	Horizontal
2509.500	-56.34	-13	-43.34	Horizontal
3346.000	-53.13	-13	-40.13	Horizontal
1673.000	-59.68	-13	-46.68	Vertical
2509.500	-59.35	-13	-46.35	Vertical
3346.000	-55.12	-13	-42.12	Vertical

LTE BAND 26- part22H High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1683.000	-53.13	-13	-40.13	Horizontal
2524.500	-59.13	-13	-46.13	Horizontal
3366.000	-53.73	-13	-40.73	Horizontal
1683.000	-52.23	-13	-39.23	Vertical
2524.500	-60.52	-13	-47.52	Vertical
3366.000	-55.75	-13	-42.75	Vertical

LTE BAND 26- Part90S -Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1633.000	-51.65	-13	-38.65	Horizontal
2449.500	-57.68	-13	-44.68	Horizontal
3266.000	-55.58	-13	-42.58	Horizontal
1633.000	-51.72	-13	-38.72	Vertical
2449.500	-55.79	-13	-42.79	Vertical
3266.000	-57.19	-13	-44.19	Vertical

LTE BAND 26- Part90S Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1638.000	-58.72	-13	-45.72	Horizontal
2457.000	-56.61	-13	-43.61	Horizontal
3276.000	-55.23	-13	-42.23	Horizontal
1638.000	-52.20	-13	-39.20	Vertical
2457.000	-58.79	-13	-45.79	Vertical
3276.000	-57.52	-13	-44.52	Vertical

LTE BAND 26- Part90S High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1643.000	-54.68	-13	-41.68	Horizontal
2464.500	-60.24	-13	-47.24	Horizontal
3286.000	-55.87	-13	-42.87	Horizontal
1643.000	-58.11	-13	-45.11	Vertical
2464.500	-57.33	-13	-44.33	Vertical
3286.000	-55.84	-13	-42.84	Vertical

LTE BAND 41-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
5012.000	-56.75	-25	-31.75	Horizontal
7518.000	-58.89	-25	-33.89	Horizontal
10024.000	-54.87	-25	-29.87	Horizontal
5012.000	-59.44	-25	-34.44	Vertical
7518.000	-57.00	-25	-32.00	Vertical
10024.000	-56.51	-25	-31.51	Vertical

LTE BAND 41-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
5186.000	-51.65	-25	-26.65	Horizontal
7779.000	-62.27	-25	-37.27	Horizontal
10372.000	-59.07	-25	-34.07	Horizontal
5186.000	-56.70	-25	-31.70	Vertical
7779.000	-60.55	-25	-35.55	Vertical
10372.000	-56.13	-25	-31.13	Vertical

LTE BAND 41-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
5360.000	-57.03	-25	-32.03	Horizontal
8040.000	-61.26	-25	-36.26	Horizontal
10720.000	-56.83	-25	-31.83	Horizontal
5360.000	-60.39	-25	-35.39	Vertical
8040.000	-60.58	-25	-35.58	Vertical
10720.000	-56.50	-25	-31.50	Vertical

LTE BAND 66-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3440.000	-60.75	-13	-47.75	Horizontal
5160.000	-58.77	-13	-45.77	Horizontal
6880.000	-56.81	-13	-43.81	Horizontal
3440.000	-60.01	-13	-47.01	Vertical
5160.000	-56.36	-13	-43.36	Vertical
6880.000	-54.86	-13	-41.86	Vertical

LTE BAND 66-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3490.000	-52.00	-13	-39.00	Horizontal
5235.000	-58.79	-13	-45.79	Horizontal
6980.000	-59.78	-13	-46.78	Horizontal
3490.000	-53.78	-13	-40.78	Vertical
5235.000	-58.59	-13	-45.59	Vertical
6980.000	-56.16	-13	-43.16	Vertical

LTE BAND 66-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
3540.000	-58.64	-13	-45.64	Horizontal
5310.000	-62.71	-13	-49.71	Horizontal
7080.000	-53.68	-13	-40.68	Horizontal
3540.000	-52.83	-13	-39.83	Vertical
5310.000	-61.36	-13	-48.36	Vertical
7080.000	-56.36	-13	-43.36	Vertical

LTE BAND 71-Low channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1346.000	-51.35	-13	-38.35	Horizontal
2019.000	-56.31	-13	-43.31	Horizontal
2692.000	-54.68	-13	-41.68	Horizontal
1346.000	-55.98	-13	-42.98	Vertical
2019.000	-58.29	-13	-45.29	Vertical
2692.000	-56.44	-13	-43.44	Vertical

LTE BAND 71-Middle channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1366.000	-52.67	-13	-39.67	Horizontal
2049.000	-60.12	-13	-47.12	Horizontal
2732.000	-57.21	-13	-44.21	Horizontal
1366.000	-50.17	-13	-37.17	Vertical
2049.000	-58.66	-13	-45.66	Vertical
2732.000	-55.40	-13	-42.40	Vertical

LTE BAND 71-High channel				
Frequency (MHz)	Level (dBm)	Limit (dBm)	Over Limit (dB)	Polarization
1376.000	-57.76	-13	-44.76	Horizontal
2064.000	-58.77	-13	-45.77	Horizontal
2752.000	-54.20	-13	-41.20	Horizontal
1376.000	-52.35	-13	-39.35	Vertical
2064.000	-60.19	-13	-47.19	Vertical
2752.000	-54.53	-13	-41.53	Vertical

6.7 Frequency stability

Test Requirement: §2.1055,§22.355,§24.235,§27.54
Test Method: ANSI C63.26, KDB 971168 D01 v03
Limit: ≤ ±2.5ppm.

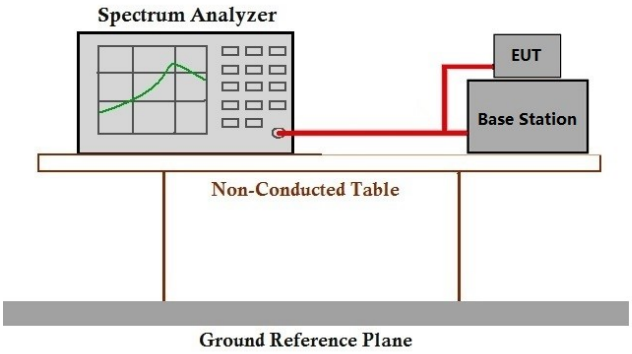
6.7.1 E.U.T. Operation

Operating Environment:
Temperature: 21.2 °C Humidity: 50.8 % RH Atmospheric Pressure: 1010 mbar

6.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	12	TX mode_Keep the EUT in transmitting mode

6.7.3 Test Setup Diagram



6.7.4 Measurement Procedure and Data

Please Refer to Appendix for Details

6.8 Emission Mask

Test Requirement: §2.1055, §90.210,§90.691

Test Method: ANSI C63.26, KDB 971168 D01 v03

Limit: LTE Band14:
(1)On any frequency removed from the assigned frequency by more than 50 percent, but not more than 100 percent of the authorized bandwidth: At least 25 dB.
(2) On any frequency removed from the assigned frequency by more than 100 percent, but not more than 250 percent of the authorized bandwidth: At least 35 dB.
(3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + 10 log (P) dB.

LTE Band26:
(1)up to and including 37.5 kHz, at least 116 Log10(f/6.1) dB or 50 + 10 Log10(P) dB or 80 dB
(2) greater than 37.5 kHz, at least 43 + 10Log10(P) dB or 80 dB

6.8.1 E.U.T. Operation

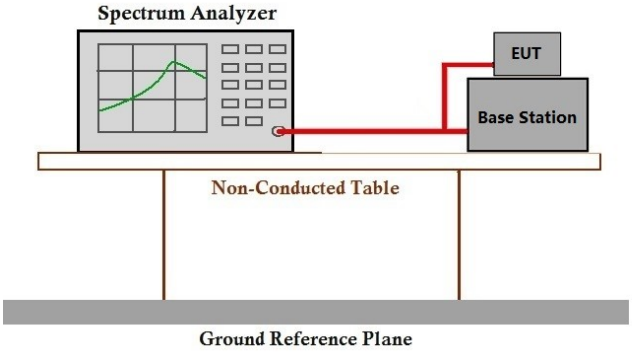
Operating Environment:

Temperature: 21.2 °C Humidity: 50.8 % RH Atmospheric Pressure: 1010 mbar

6.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	12	TX mode_Keep the EUT in transmitting mode

6.8.3 Test Setup Diagram



6.8.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2404000747AT

8 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2404000747AT

- End of the Report -