



TEST REPORT

Application No.: SZEM2010010640CR
Applicant: Dspread Technology (Beijing) Inc
Address of Applicant: Rm.407, B12C, #10(Universal Business Park), Jiuxianqiao Road, Chaoyang District, Beijing, 100027 China
Manufacturer: Dspread Technology (Beijing) Inc
Address of Manufacturer: Rm.407, B12C, #10(Universal Business Park), Jiuxianqiao Road, Chaoyang District, Beijing, 100027 China
Factory: Sichuan DOOV PTY Co., Ltd.
Address of factory: Duo Wei Yun Gu Industrial Demonstration Park, No.35, west section of Gangyuan Road, Guoxing Avenue, Lingang Economic Development Zone, Yibin City, Sichuan Province

Equipment Under Test (EUT):

EUT Name: Smart PoS
Model No.: D20
Trade Mark: Dspread
FCC ID: 2AGQ6-D20
Standard(s) : 47 CFR Part 2
 47 CFR Part 22 subpart H
 47 CFR Part 24 subpart E
 47 CFR Part 27 subpart C
 47 CFR Part 90 subpart S

Date of Receipt: 2020-10-26
Date of Test: 2020-10-27 to 2020-12-16
Date of Issue: 2020-12-18

Test Result:	Pass
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* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu
EMC Laboratory Manager



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<i>Revision Record</i>				
Version	Chapter	Date	Modifier	Remark
01		2020-12-18		Original

Authorized for issue by:				
				
		<hr/>		
		Calvin Weng /Project Engineer		
				
		<hr/>		
		Eric Fu /Reviewer		



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2 Test Summary

Test Item	FCC Rule No.	Requirements	Verdict
Effective (Isotropic) Radiated Power Output Data	§2.1046	ERP≤ 7W(LTE Band 5,26(824-849MHz)) EIRP≤ 2W(LTE Band 2,25) ERP≤ 3W(LTE Band 12,17) EIRP≤ 1W(LTE Band 4, 66) EIRP≤ 2W(LTE Band 7,38,41) ERP≤ 100W(LTE Band 26(814-824MHz))	PASS
	§22.913		
	§24.232		
	§27.50(c)		
	§27.50(d)		
	§27.50(h)		
Peak-Average Ratio	§22.913	≤13dB	PASS
	§24.232		
	§27.50(d)		
Modulation Characteristics	§2.1047	Digital modulation	PASS
Bandwidth	§2.1049(h)	OBW: No limit EBW: No limit	PASS
Band Edge Compliance	§2.1051	≤ -13dBm (LTE Band5, 26(824-849MHz)) ≤ -13dBm (LTE Band2,25) ≤ -13dBm (LTE Band12,17) ≤ -13dBm (LTE Band4,66) Refer to clause 6.4 for LTE Band7,38, 41 Refer to clause 6.4 for LTE Band26(814-824MHz)	PASS
	§22.917		
	§24.238		
	§27.53(g)		
	§27.53(h)		
	§27.53(m)		
Spurious emissions at antenna terminals	§2.1051	≤ -13dBm(LTE Band5,26(824-849MHz)) ≤ -13dBm(LTE Band2,25) ≤ -13dBm(LTE Band12,17) ≤ -13dBm(LTE Band4,66) ≤ -25dBm(LTE Band7,38,41) ≤ -13dBm(LTE Band26(814-824MHz))	PASS
	§22.917		
	§24.238		
	§27.53(g)		
	§27.53(h)		
	§27.53(m)		
Field strength of spurious radiation	§2.1051	≤ -13dBm(LTE Band5,26(824-849MHz)) ≤ -13dBm(LTE Band2,25) ≤ -13dBm(LTE Band12,17) ≤ -13dBm(LTE Band4,66) ≤ -25dBm(LTE Band7,38,41) ≤ -13dBm(LTE Band26(814-824MHz))	PASS
	§22.917		
	§24.238		
	§27.53(g)		
	§27.53(h)		
	§27.53(m)		





Frequency stability	§2.1055	≤ ±2.5ppm.	PASS
	§22.355		
	§24.235		
	§27.54		
	§90.213		



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4 General Information

4.1 Details of E.U.T.

Rated voltage:	DC3.8V
Power adapter:	Adapter M/N: TPA-46B050100UU Adapter input: AC100-240V, 50/60Hz, 0.2A Adapter output: DC5V/1A
LTE Operation Frequency Band:	LTE FDD Band 2, 4, 5, 7, 12, 17, 25, 26, 38, 41, 66
Modulation Type:	QPSK, 16QAM
LTE Power Class:	Level 3
Antenna Type:	PIFA Antenna
Antenna Gain:	LTE band 2: 2dBi; band 4: 4.03dBi; band 5: 0.9dBi; band 7: 4dBi; band 12: 0.9dBi; band 17: 0.9dBi; band 25: 2dBi; band 26: 0.9dBi; band 38: 4.65dBi; band 41: 4.71dBi; band 66: 4.03dBi;
SIM Card:	This device has dual SIM Card sockets. Both the SIM sockets have been tested. SIM1 was worst case, only record SIM1.
Extreme temp. Tolerance:	-30°C to +50°C
Extreme vol. Limits:	3.4VDC to 4.35VDC (nominal: 3.8VDC)



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	2535.0	2567.5
	10	2505.0	2535.0	2565.0
	15	2507.5	2535.0	2562.5
	20	2510.0	2535.0	2560.0



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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	704.0	707.5	711.0
Test mode:	Nominal Bandwidth (MHz)	RF Channel		
		Low (L)	Middle (M)	High (H)
		MHz	MHz	MHz
LTE FDD Band 17	5	706.5	710.0	713.5
	10	709.0	710.0	711.0
Test Mode	Nominal Bandwidth (MHz)	RF Channel		
		Low (L)	Middle (M)	High (H)
		MHz	MHz	MHz
LTE FDD Band 25	1.4	1850.7	1882.5	1914.3
	3	1851.5	1882.5	1913.5
	5	1852.5	1882.5	1912.5
	10	1855.0	1882.5	1910.0
	15	1857.5	1882.5	1907.5
	20	1860.0	1882.5	1905.0
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	829.0	836.5	844.0



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Test mode:	Nominal Bandwidth (MHz)	RF Channel		
		Low (L)	Middle (M)	High (H)
		MHz	MHz	MHz
LTE FDD Band 26 (cross rule)	15	821.5	831.5	841.5
Test Mode	Nominal Bandwidth (MHz)	RF Channel		
		Low (L)	Middle (M)	High (H)
		MHz	MHz	MHz
LTE FDD Band 38	5	2572.5	2595.0	2617.5
	10	2575.0	2595.0	2615.0
	15	2577.5	2595.0	2612.5
	20	2580.0	2595.0	2610.0
Test Mode	Nominal Bandwidth (MHz)	RF Channel		
		Low (L)	Middle (M)	High (H)
		MHz	MHz	MHz
LTE FDD Band 41	5	2537.5	2595.0	2652.5
	10	2540.0	2595.0	2650.0
	15	2542.5	2595.0	2647.5
	20	2545.0	2595.0	2645.0
Test Mode	Nominal Bandwidth (MHz)	RF Channel		
		Low (L)	Middle (M)	High (H)
		MHz	MHz	MHz
LTE FDD Band 66	1.4	1710.7	1745.0	1779.3
	3	1711.5	1745.0	1778.5
	5	1712.5	1745.0	1777.5
	10	1715.0	1745.0	1775.0
	15	1717.5	1745.0	1772.5
	20	1720.0	1745.0	1770.0



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4.3 Test Environment

Environment Parameter	Selected Values During Tests	
Relative Humidity	52%	
Atmospheric Pressure:	1015Pa	
Temperature:	TN	20 °C
Voltage:	VL	3.4 V
	VN	3.8 V
	VH	4.35 V

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

4.4 Description of Support Units

The EUT has been tested independent unit.

4.5 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.25 x 10 ⁻⁸
2	Duty cycle	0.37%
3	Occupied Bandwidth	3%
4	RF conducted power	0.75dB
5	RF power density	2.84dB
6	Conducted Spurious emissions	0.75dB
7	RF Radiated power	4.5dB (below 1GHz)
		4.8dB (above 1GHz)
8	Radiated Spurious emission test	4.5dB (Below 1GHz)
		4.8dB (Above 1GHz)
9	Temperature test	1 °C
10	Humidity test	3%
11	Supply voltages	1.5%
12	Time	3%



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4.6 Test Location

All tests were performed at:

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

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China.
518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.7 Test Facility

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

- **A2LA (Certificate No. 3816.01)**

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

- **VCCI**

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. 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: CN1178**

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

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **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



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5 Equipment List

RF conducted test					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date
DC Power Supply	ZhaoXin	PS-3005D	SEM011-05	2020-09-23	2021-09-22
Spectrum Analyzer (20Hz-43GHz)	Rohde & Schwarz	FSU43	SEM004-08	2020-04-11	2021-04-10
Signal Analyzer (10Hz-40GHz)	Rohde & Schwarz	FSV40	SEM008-04	2020-03-31	2021-03-30
Measurement Software	JS Tonscend	JS1120-2 BT/WIFI V2.6	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2020-07-10	2021-07-09
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2020-03-31	2021-03-30
Power Sensor	KEYSIGHT	U2021XA	SEM009-13	2020-04-11	2021-04-10

RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018-03-13	2021-03-12
EXA Signal Analyzer (10Hz-44GHz)	Agilent Technologies Inc	N9010A	SEM004-12	2020-04-11	2021-04-10
Horn Antenna (800MHz-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12
Horn Antenna (15-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2020-10-16	2023-10-15
Amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2020-09-23	2021-09-22
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2019-11-11	2020-11-10
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2020-11-10	2021-11-09
Pre-amplifier (26-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2020-03-31	2021-03-30
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2020-03-31	2021-03-30
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2020-07-10	2021-07-09



Substitution Antenna	ETS-Lindgren	3142C	SEM003-01	2020-06-26	2023-06-25
Signal Generator	R&S	SMA100A	102174	2020-07-10	2021-07-09

RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2020-08-04	2023-08-03
MXE EMI Receiver (20Hz-8.4GHz)	Agilent Technologies	N9038A	SEM004-05	2020-09-23	2021-09-22
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2020-06-26	2023-06-25
Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2020-03-31	2021-03-30
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2020-07-10	2021-07-09
Universal Radio Communication Tester	Rohde & Schwarz	CMW 500	SEM010-03	2020-03-31	2021-03-30

General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2020-09-15	2021-09-14
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2020-09-15	2021-09-14
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2020-04-07	2021-04-06



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6 Radio Spectrum Matter Test Results

6.1 Effective (Isotropic) Radiated Power Output Data

Test Requirement:	§2.1046, §22.913, §24.232, §27.50(c), §27.50(d), §27.50(h), §90.635
Test Method:	ANSI C63.26, KDB 971168 D01 v03
Limit:	ERP ≤ 7W(LTE Band 5,26(824-849MHz))
	EIRP ≤ 2W(LTE Band 2,25)
	ERP ≤ 3W(LTE Band 12,17)
	EIRP ≤ 1W(LTE Band 4, 66)
	EIRP ≤ 2W(LTE Band 7,38,41)
	ERP ≤ 100W(LTE Band 26(814-824MHz))

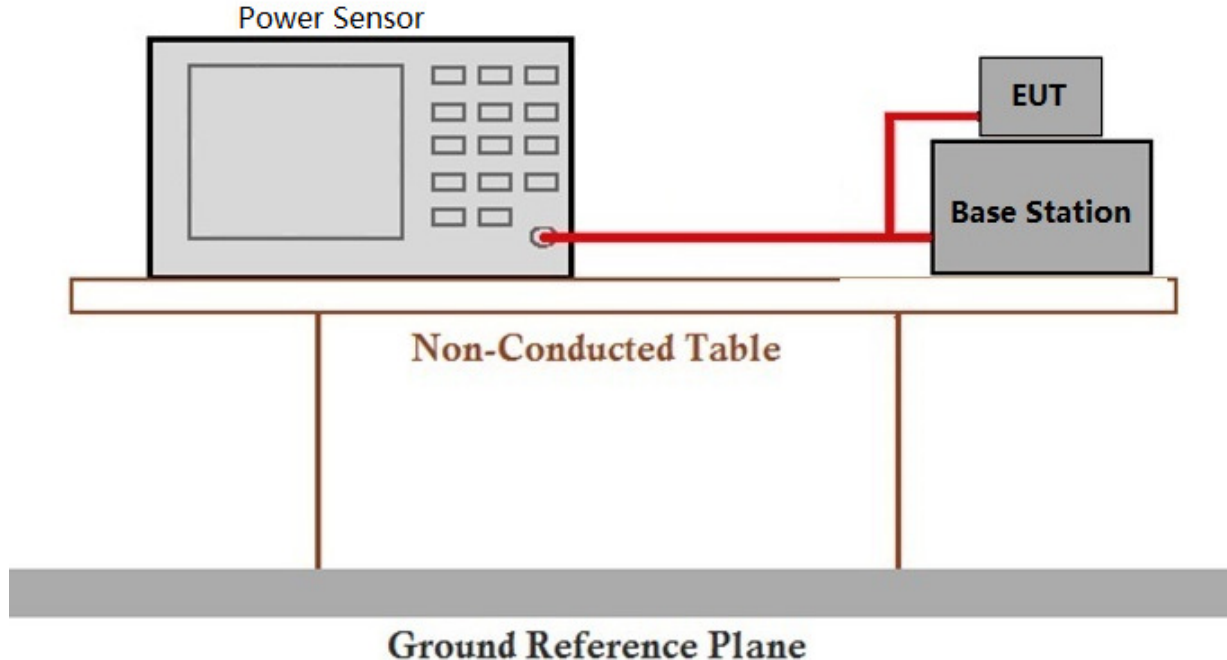
6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 18.6 °C Humidity: 29.1 % RH Atmospheric Pressure: 1025 mbar

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

6.1.2 Test Setup Diagram



6.1.3 Measurement Data

Please refer to Appendix_LTE_4G_RF power



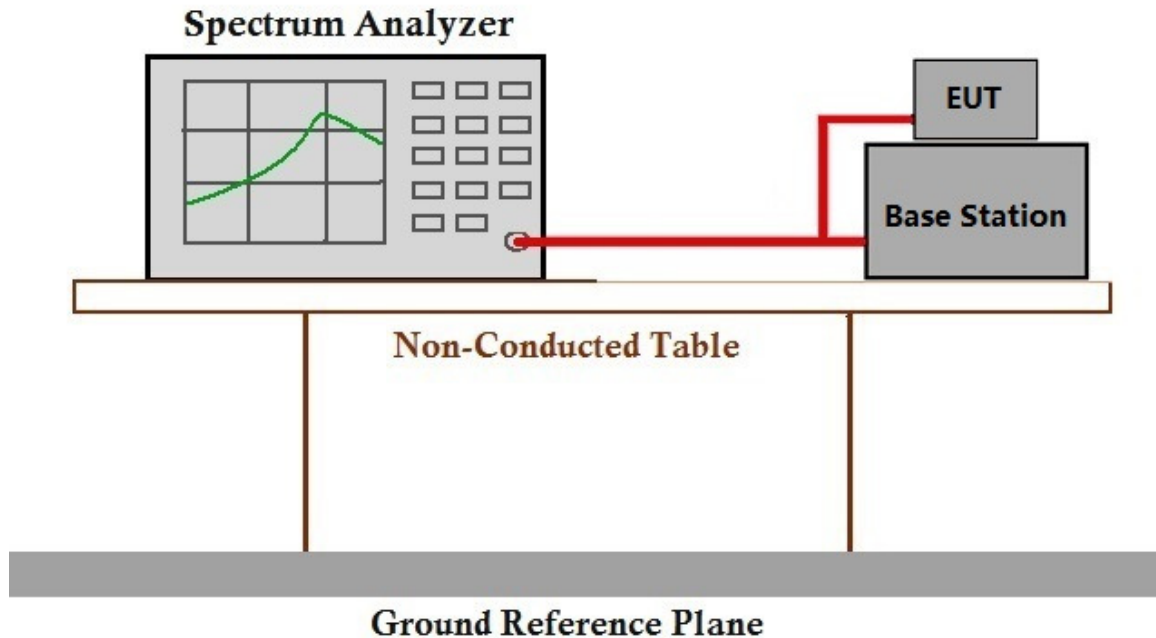
6.2 Peak-Average Ratio

Test Requirement: §22.913, §24.232, §27.50(d)
 Test Method: ANSI C63.26, KDB 971168 D01 v03
 Limit: ≤13dB

6.2.1 E.U.T. Operation

Operating Environment:
 Temperature: 18.6 °C Humidity: 29.1 % RH Atmospheric Pressure: 1025 mbar
 Test mode j: Tx mode, Keep the EUT in transmitting mode.

6.2.2 Test Setup Diagram



6.2.3 Measurement Data

Please refer to Appendix_LTE_4G_Peak-Average Ratio



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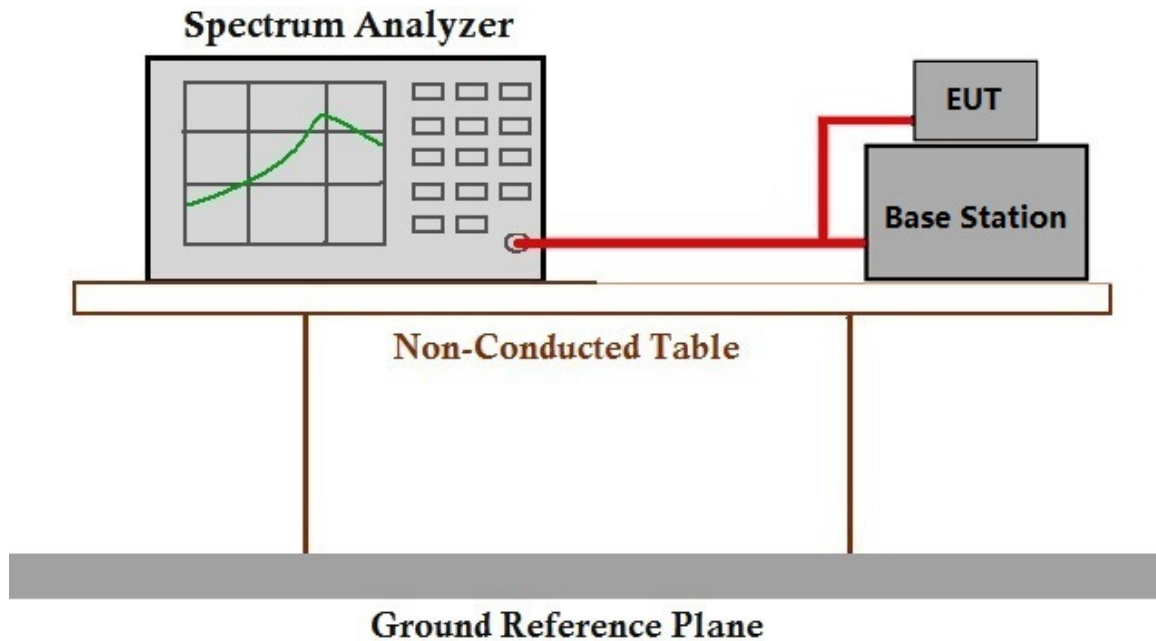
6.3 Bandwidth

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: 18.6 °C Humidity: 29.1 % RH Atmospheric Pressure: 1025 mbar
 Test mode j: Tx mode, Keep the EUT in transmitting mode.

6.3.2 Test Setup Diagram



6.3.3 Measurement Data

Please refer to Appendix_LTE_4G_99% & 26dB Bandwidth



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6.4 Band Edge Compliance

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

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

Limit: ≤ -13dBm (LTE Band2,4,5,12,17,25,26(824-849MHz))

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. (LTE Band7,38,41)

For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation; frequency greater than 37.5KHz, ≤ -13dBm(LTE band 26(814-824MHz))

6.4.1 E.U.T. Operation

Operating Environment:

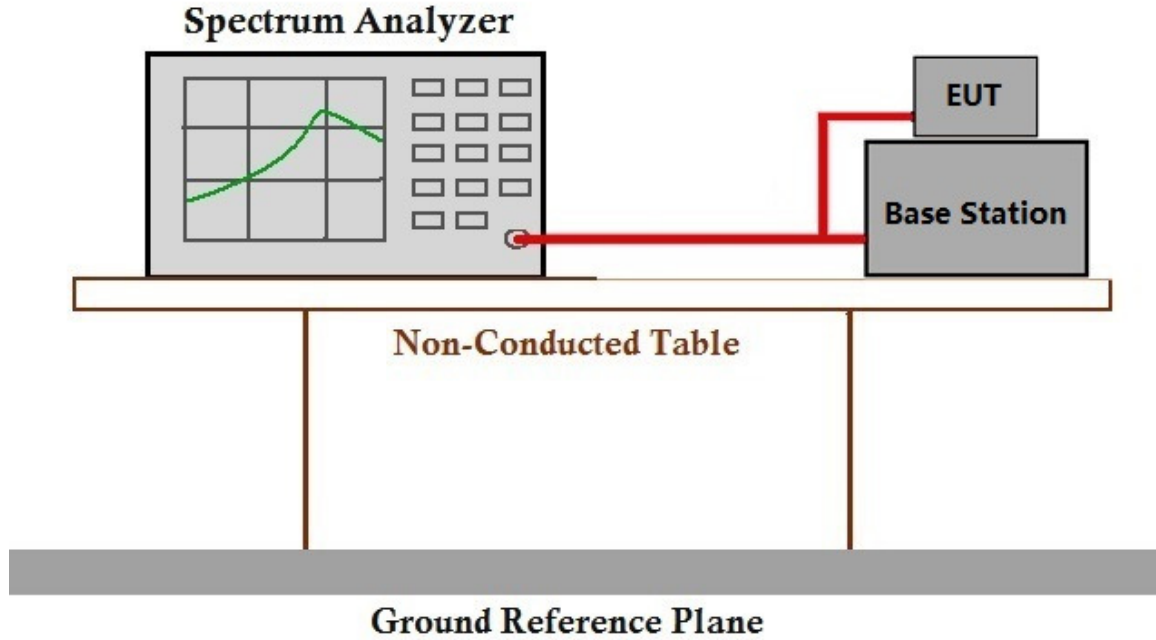
Temperature: 18.6 °C Humidity: 29.1 % RH Atmospheric Pressure: 1025 mbar

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



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6.4.2 Test Setup Diagram



6.4.3 Measurement Data

Please refer to Appendix_LTE_4G_Spurious Emission at antenna port



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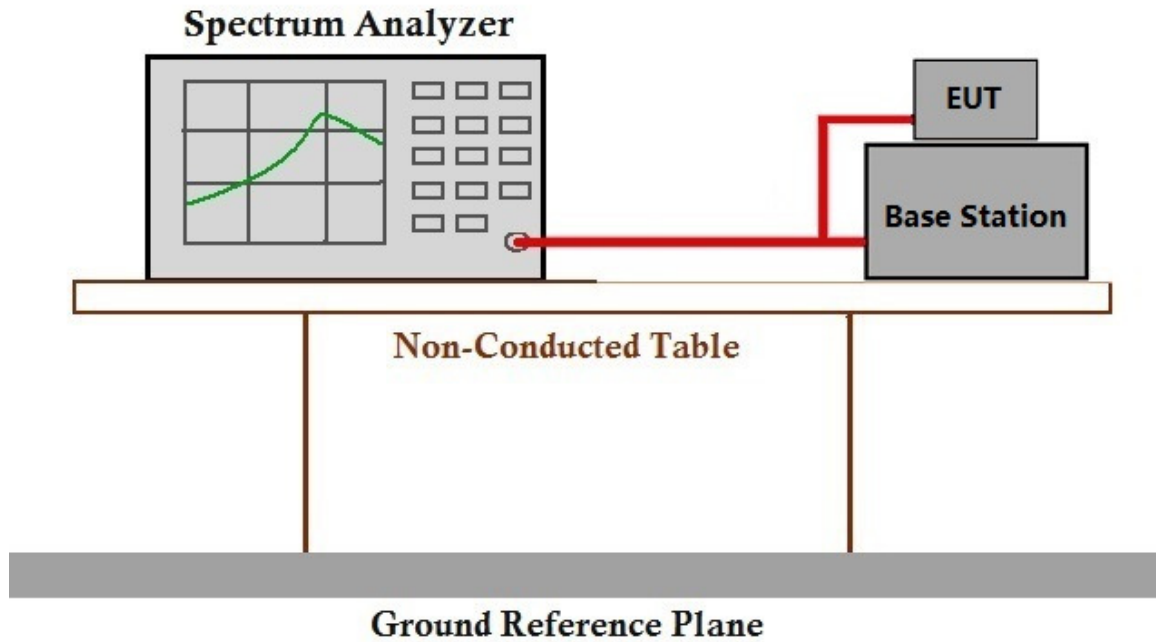
6.5 Spurious emissions at antenna terminals

Test Requirement: §2.1051, §22.917, §24.238, §27.53(g), §27.53(h), §27.53(m), §90.691
 Test Method: ANSI C63.26, KDB 971168 D01 v03
 Limit:
 ≤ -13dBm(LTE Band5,26b)
 ≤ -13dBm(LTE Band2,25)
 ≤ -13dBm(LTE Band12,17)
 ≤ -13dBm(LTE Band4,66)
 ≤ -25dBm(LTE Band7,38,41)
 ≤ -13dBm(LTE Band26a)

6.5.1 E.U.T. Operation

Operating Environment:
 Temperature: 18.6 °C Humidity: 29.1 % RH Atmospheric Pressure: 1025 mbar
 Test mode j: Tx mode, Keep the EUT in transmitting mode.

6.5.2 Test Setup Diagram



6.5.3 Measurement Data

Please refer to Appendix_LTE_4G_Spurious Emission at antenna port



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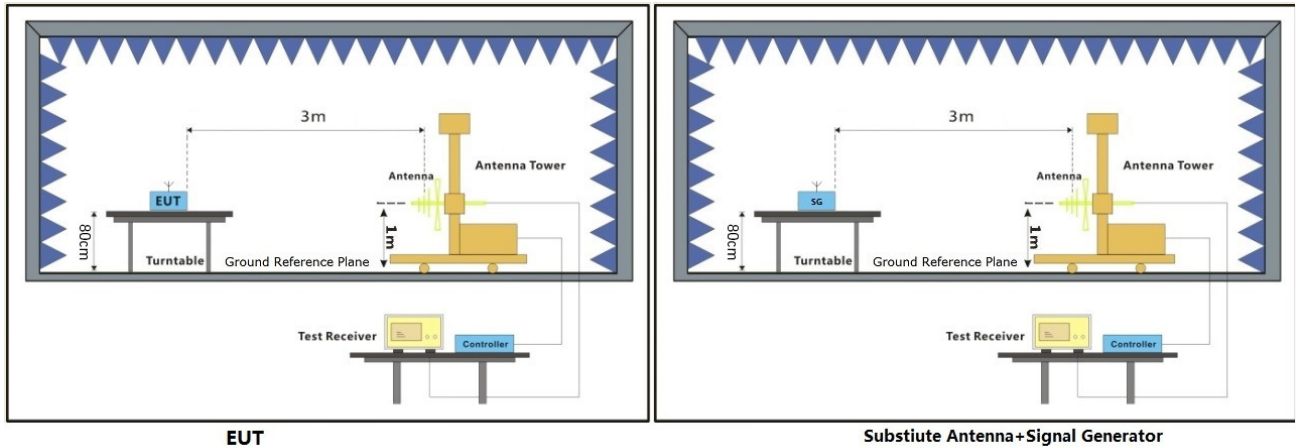
6.6 Field strength of spurious radiation

Test Requirement: §2.1051, §22.917, §24.238, §27.53(g), §27.53(h), §27.53(m), §90.691
 Test Method: ANSI C63.26, KDB 971168 D01 v03
 Limit:
 ≤ -13dBm(LTE Band5,26b)
 ≤ -13dBm(LTE Band2,25)
 ≤ -13dBm(LTE Band12,17)
 ≤ -13dBm(LTE Band4,66)
 ≤ -25dBm(LTE Band7,38,41)
 ≤ -13dBm(LTE Band26a)

6.6.1 E.U.T. Operation

Operating Environment:
 Temperature: 18.6 °C Humidity: 29.1 % RH Atmospheric Pressure: 1025 mbar
 Test mode j: Tx mode, Keep the EUT in transmitting mode.

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 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 2-20M Low channel, Modulation: QPSK, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result
3702	-51.46	0.71	7.6	-44.57	-13	-31.57	Horizontal	Pass
5553	-51.63	0.85	10.3	-42.18	-13	-29.18	Horizontal	Pass
7404	-50.56	1	12.9	-38.66	-13	-25.66	Horizontal	Pass
3702	-49.07	0.71	7.6	-42.18	-13	-29.18	Vertical	Pass
5553	-49.95	0.85	10.3	-40.5	-13	-27.5	Vertical	Pass
7404	-54.03	1	12.9	-42.13	-13	-29.13	Vertical	Pass

LTE Band 2-20M Middle channel, Modulation: QPSK, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result
3742	-51.51	0.71	7.6	-44.62	-13	-31.62	Horizontal	Pass
5613	-52.54	0.85	10.3	-43.09	-13	-30.09	Horizontal	Pass
7484	-53.1	1	12.9	-41.2	-13	-28.2	Horizontal	Pass
3742	-50.58	0.71	7.6	-43.69	-13	-30.69	Vertical	Pass
5613	-54.13	0.85	10.3	-44.68	-13	-31.68	Vertical	Pass
7484	-53.75	1	12.9	-41.85	-13	-28.85	Vertical	Pass

LTE Band 2-20M High channel, Modulation: QPSK, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result
3782	-52.61	0.71	7.6	-45.72	-13	-32.72	Horizontal	Pass
5673	-53.44	0.85	10.3	-43.99	-13	-30.99	Horizontal	Pass
7564	-54.86	0.99	13.2	-42.65	-13	-29.65	Horizontal	Pass
3782	-53.02	0.71	7.6	-46.13	-13	-33.13	Vertical	Pass
5673	-51.49	0.85	10.3	-42.04	-13	-29.04	Vertical	Pass
7564	-53	0.99	13.2	-40.79	-13	-27.79	Vertical	Pass



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LTE Band 4-20M Low channel, Modulation: QPSK, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result
3422	-49.46	0.65	6.2	-43.91	-13	-30.91	Horizontal	Pass
5133	-49.84	0.82	9.6	-41.06	-13	-28.06	Horizontal	Pass
6844	-52.24	0.95	11.8	-41.39	-13	-28.39	Horizontal	Pass
3422	-50.32	0.65	6.2	-44.77	-13	-31.77	Vertical	Pass
5133	-50.56	0.82	9.6	-41.78	-13	-28.78	Vertical	Pass
6844	-49.59	0.95	11.8	-38.74	-13	-25.74	Vertical	Pass

LTE Band 4-20M Middle channel, Modulation: QPSK, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result
3447	-51.49	0.65	6.2	-45.94	-13	-32.94	Horizontal	Pass
5170.5	-51.57	0.82	9.6	-42.79	-13	-29.79	Horizontal	Pass
6894	-50.54	0.95	11.8	-39.69	-13	-26.69	Horizontal	Pass
3447	-52.03	0.65	6.2	-46.48	-13	-33.48	Vertical	Pass
5170.5	-52.75	0.82	9.6	-43.97	-13	-30.97	Vertical	Pass
6894	-52.95	0.95	11.8	-42.1	-13	-29.1	Vertical	Pass

LTE Band 4-20M High channel, Modulation: QPSK, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization (H/V)	Result
3472	-48.54	0.65	6.2	-42.99	-13	-29.99	Horizontal	Pass
5208	-53.98	0.82	9.6	-45.2	-13	-32.2	Horizontal	Pass
6944	-51.85	0.95	11.8	-41	-13	-28	Horizontal	Pass
3472	-46.54	0.65	6.2	-40.99	-13	-27.99	Vertical	Pass
5208	-50.42	0.82	9.6	-41.64	-13	-28.64	Vertical	Pass
6944	-48.61	0.95	11.8	-37.76	-13	-24.76	Vertical	Pass



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FDD LTE Band 5-Low channel, Modulation: QPSK, Bandwidth: 10MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1649	-54.47	0.52	6	-48.99	-13	-35.99	Horizontal	Pass
2473.5	-62.43	0.53	5.8	-57.16	-13	-44.16	Horizontal	Pass
3298	-59.56	0.65	6.2	-54.01	-13	-41.01	Horizontal	Pass
1649	-53.22	0.52	6	-47.74	-13	-34.74	Vertical	Pass
2473.5	-63.77	0.53	5.8	-58.5	-13	-45.5	Vertical	Pass
3298	-58.91	0.65	6.2	-53.36	-13	-40.36	Vertical	Pass

FDD LTE Band 5-Middle channel, Modulation: QPSK, Bandwidth: 10MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1664	-51.67	0.52	6	-46.19	-13	-33.19	Horizontal	Pass
2496	-63.17	0.53	5.8	-57.9	-13	-44.9	Horizontal	Pass
3328	-59.3	0.65	6.2	-53.75	-13	-40.75	Horizontal	Pass
1664	-51.85	0.52	6	-46.37	-13	-33.37	Vertical	Pass
2496	-63.8	0.53	5.8	-58.53	-13	-45.53	Vertical	Pass
3328	-60.22	0.65	6.2	-54.67	-13	-41.67	Vertical	Pass

FDD LTE Band 5-High channel, Modulation: QPSK, Bandwidth: 10MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1679	-54.81	0.52	6	-49.33	-13	-36.33	Horizontal	Pass
2518.5	-62.69	0.59	5.3	-57.98	-13	-44.98	Horizontal	Pass
3358	-59.23	0.65	6.2	-53.68	-13	-40.68	Horizontal	Pass
1679	-53.22	0.52	6	-47.74	-13	-34.74	Vertical	Pass
2518.5	-62.87	0.59	5.3	-58.16	-13	-45.16	Vertical	Pass
3358	-59.61	0.65	6.2	-54.06	-13	-41.06	Vertical	Pass



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FDD LTE Band 7-Low channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5002	-47.31	0.82	9.6	-38.53	-25	-13.53	Horizontal	Pass
7503	-47.92	0.99	13.2	-35.71	-25	-10.71	Horizontal	Pass
10004	-44.66	1.26	12.7	-33.22	-25	-8.22	Horizontal	Pass
5002	-47.32	0.82	9.6	-38.54	-25	-13.54	Vertical	Pass
7503	-48.97	0.99	13.2	-36.76	-25	-11.76	Vertical	Pass
10004	-44.05	1.26	12.7	-32.61	-25	-7.61	Vertical	Pass

FDD LTE Band 7-Middle channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5052	-46.68	0.82	9.6	-37.9	-25	-12.9	Horizontal	Pass
7578	-49.72	0.99	13.2	-37.51	-25	-12.51	Horizontal	Pass
10104	-45.42	1.26	12.7	-33.98	-25	-8.98	Horizontal	Pass
5052	-45.35	0.82	9.6	-36.57	-25	-11.57	Vertical	Pass
7578	-51.25	0.99	13.2	-39.04	-25	-14.04	Vertical	Pass
10104	-44.06	1.26	12.7	-32.62	-25	-7.62	Vertical	Pass

FDD LTE Band 7-High channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5102	-46.16	0.82	9.6	-37.38	-25	-12.38	Horizontal	Pass
7653	-49.68	0.99	13.2	-37.47	-25	-12.47	Horizontal	Pass
10204	-43.68	1.26	12.7	-32.24	-25	-7.24	Horizontal	Pass
5102	-49.2	0.82	9.6	-40.42	-25	-15.42	Vertical	Pass
7653	-48.23	0.99	13.2	-36.02	-25	-11.02	Vertical	Pass
10204	-44.24	1.26	12.7	-32.8	-25	-7.8	Vertical	Pass



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FDD LTE Band 12-Low channel, Modulation: QPSK, Bandwidth: 10MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1399	-46.05	0.43	1.9	-44.58	-13	-31.58	Horizontal	Pass
2098.5	-65.27	0.53	5.8	-60	-13	-47	Horizontal	Pass
2798	-60.66	0.59	5.3	-55.95	-13	-42.95	Horizontal	Pass
1399	-45	0.43	1.9	-43.53	-13	-30.53	Vertical	Pass
2098.5	-65.55	0.53	5.8	-60.28	-13	-47.28	Vertical	Pass
2798	-61.28	0.59	5.3	-56.57	-13	-43.57	Vertical	Pass

FDD LTE Band 12-Middle channel, Modulation: QPSK, Bandwidth: 10MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1406	-44.76	0.43	1.9	-43.29	-13	-30.29	Horizontal	Pass
2109	-66.02	0.53	5.8	-60.75	-13	-47.75	Horizontal	Pass
2812	-59.9	0.59	5.3	-55.19	-13	-42.19	Horizontal	Pass
1406	-44.1	0.43	1.9	-42.63	-13	-29.63	Vertical	Pass
2109	-65.28	0.53	5.8	-60.01	-13	-47.01	Vertical	Pass
2812	-58.64	0.59	5.3	-53.93	-13	-40.93	Vertical	Pass

FDD LTE Band 12-High channel, Modulation: QPSK, Bandwidth: 10MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1413	-45.78	0.43	1.9	-44.31	-13	-31.31	Horizontal	Pass
2119.5	-65.99	0.53	5.8	-60.72	-13	-47.72	Horizontal	Pass
2826	-59.6	0.59	5.3	-54.89	-13	-41.89	Horizontal	Pass
1413	-47.23	0.43	1.9	-45.76	-13	-32.76	Vertical	Pass
2119.5	-66.02	0.53	5.8	-60.75	-13	-47.75	Vertical	Pass
2826	-58.65	0.59	5.3	-53.94	-13	-40.94	Vertical	Pass



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FDD LTE Band 17-Low channel, Modulation: QPSK, Bandwidth: 10MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1409	-54.8	0.43	1.9	-53.33	-13	-40.33	Horizontal	Pass
2113.5	-56.96	0.53	5.8	-51.69	-13	-38.69	Horizontal	Pass
2818	-49.78	0.59	5.3	-45.07	-13	-32.07	Horizontal	Pass
1409	-52.47	0.43	1.9	-51	-13	-38	Vertical	Pass
2113.5	-57.75	0.53	5.8	-52.48	-13	-39.48	Vertical	Pass
2818	-53.4	0.59	5.3	-48.69	-13	-35.69	Vertical	Pass

FDD LTE Band 17-Middle channel, Modulation: QPSK, Bandwidth: 10MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1411	-51.69	0.43	1.9	-50.22	-13	-37.22	Horizontal	Pass
2116.5	-54.73	0.53	5.8	-49.46	-13	-36.46	Horizontal	Pass
2822	-52.45	0.59	5.3	-47.74	-13	-34.74	Horizontal	Pass
1411	-48.81	0.43	1.9	-47.34	-13	-34.34	Vertical	Pass
2116.5	-57.58	0.53	5.8	-52.31	-13	-39.31	Vertical	Pass
2822	-50.1	0.59	5.3	-45.39	-13	-32.39	Vertical	Pass

FDD LTE Band 17-High channel, Modulation: QPSK, Bandwidth: 10MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1413	-50.52	0.43	1.9	-49.05	-13	-36.05	Horizontal	Pass
2119.5	-57.49	0.53	5.8	-52.22	-13	-39.22	Horizontal	Pass
2826	-52.05	0.59	5.3	-47.34	-13	-34.34	Horizontal	Pass
1413	-55.41	0.43	1.9	-53.94	-13	-40.94	Vertical	Pass
2119.5	-58.13	0.53	5.8	-52.86	-13	-39.86	Vertical	Pass
2826	-49.94	0.59	5.3	-45.23	-13	-32.23	Vertical	Pass



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FDD LTE Band 25-Low channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3702	-46.71	0.71	7.6	-39.82	-13	-26.82	Horizontal	Pass
5553	-48.41	0.85	10.3	-38.96	-13	-25.96	Horizontal	Pass
7404	-60.47	1	12.9	-48.57	-13	-35.57	Horizontal	Pass
3702	-46.01	0.71	7.6	-39.12	-13	-26.12	Vertical	Pass
5553	-45.29	0.85	10.3	-35.84	-13	-22.84	Vertical	Pass
7404	-59.34	1	12.9	-47.44	-13	-34.44	Vertical	Pass

FDD LTE Band 25-Middle channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3765	-44.98	0.71	7.6	-38.09	-13	-25.09	Horizontal	Pass
5647	-47.9	0.85	10.3	-38.45	-13	-25.45	Horizontal	Pass
7530	-58.85	0.99	13.2	-46.64	-13	-33.64	Horizontal	Pass
3765	-46.1	0.71	7.6	-39.21	-13	-26.21	Vertical	Pass
5647	-47.52	0.85	10.3	-38.07	-13	-25.07	Vertical	Pass
7530	-58.74	0.99	13.2	-46.53	-13	-33.53	Vertical	Pass

FDD LTE Band 25-High channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3810	-46.88	0.71	7.6	-39.99	-13	-26.99	Horizontal	Pass
5715	-46.51	0.85	10.3	-37.06	-13	-24.06	Horizontal	Pass
7620	-58.56	0.99	13.2	-46.35	-13	-33.35	Horizontal	Pass
3810	-45.41	0.71	7.6	-38.52	-13	-25.52	Vertical	Pass
5715	-46.19	0.85	10.3	-36.74	-13	-23.74	Vertical	Pass
7620	-58.36	0.99	13.2	-46.15	-13	-33.15	Vertical	Pass



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814-824MHz

FDD LTE Band 26-Middle channel, Modulation: QPSK, Bandwidth: 10MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1629	-49.03	0.52	6	-43.55	-13	-30.55	Horizontal	Pass
2443.5	-64.81	0.53	5.8	-59.54	-13	-46.54	Horizontal	Pass
3258	-59.26	0.65	6.2	-53.71	-13	-40.71	Horizontal	Pass
1629	-53.35	0.52	6	-47.87	-13	-34.87	Vertical	Pass
2443.5	-64.39	0.53	5.8	-59.12	-13	-46.12	Vertical	Pass
3258	-59.55	0.65	6.2	-54	-13	-41	Vertical	Pass



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824-849MHz

FDD LTE Band 26-Low channel, Modulation: QPSK, Bandwidth: 15MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1649.5	-52.19	0.52	6	-46.71	-13	-33.71	Horizontal	Pass
2474.25	-63.31	0.53	5.8	-58.04	-13	-45.04	Horizontal	Pass
3299	-58.25	0.65	6.2	-52.7	-13	-39.7	Horizontal	Pass
1649.5	-53.01	0.52	6	-47.53	-13	-34.53	Vertical	Pass
2474.25	-63.74	0.53	5.8	-58.47	-13	-45.47	Vertical	Pass
3299	-60.05	0.65	6.2	-54.5	-13	-41.5	Vertical	Pass

FDD LTE Band 26-Middle channel, Modulation: QPSK, Bandwidth: 15MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1659.5	-50.67	0.52	6	-45.19	-13	-32.19	Horizontal	Pass
2489.25	-63.04	0.53	5.8	-57.77	-13	-44.77	Horizontal	Pass
3319	-59.11	0.65	6.2	-53.56	-13	-40.56	Horizontal	Pass
1659.5	-49.9	0.52	6	-44.42	-13	-31.42	Vertical	Pass
2489.25	-63.63	0.53	5.8	-58.36	-13	-45.36	Vertical	Pass
3319	-60.09	0.65	6.2	-54.54	-13	-41.54	Vertical	Pass

FDD LTE Band 26-High channel, Modulation: QPSK, Bandwidth: 15MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
1669.5	-50.37	0.52	6	-44.89	-13	-31.89	Horizontal	Pass
2504.25	-62.44	0.59	5.3	-57.73	-13	-44.73	Horizontal	Pass
3339	-58.65	0.65	6.2	-53.1	-13	-40.1	Horizontal	Pass
1669.5	-47.36	0.52	6	-41.88	-13	-28.88	Vertical	Pass
2504.25	-62.17	0.59	5.3	-57.46	-13	-44.46	Vertical	Pass
3339	-59.36	0.65	6.2	-53.81	-13	-40.81	Vertical	Pass



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FDD LTE Band 38-Low channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5142	-45.71	0.82	9.6	-36.93	-25	-11.93	Horizontal	Pass
7713	-52.57	0.99	13.2	-40.36	-25	-15.36	Horizontal	Pass
10284	-44.14	1.26	12.7	-32.7	-25	-7.7	Horizontal	Pass
5142	-47.82	0.82	9.6	-39.04	-25	-14.04	Vertical	Pass
7713	-50.16	0.99	13.2	-37.95	-25	-12.95	Vertical	Pass
10284	-43.18	1.26	12.7	-31.74	-25	-6.74	Vertical	Pass

FDD LTE Band 38-Middle channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5172	-43.78	0.82	9.6	-35	-25	-10	Horizontal	Pass
7758	-52.17	0.99	13.2	-39.96	-25	-14.96	Horizontal	Pass
10344	-42.2	1.26	12.7	-30.76	-25	-5.76	Horizontal	Pass
5172	-46.18	0.82	9.6	-37.4	-25	-12.4	Vertical	Pass
7758	-51.07	0.99	13.2	-38.86	-25	-13.86	Vertical	Pass
10344	-42.42	1.26	12.7	-30.98	-25	-5.98	Vertical	Pass

FDD LTE Band 38-High channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5202	-44.63	0.82	9.6	-35.85	-25	-10.85	Horizontal	Pass
7803	-50.99	0.99	13.2	-38.78	-25	-13.78	Horizontal	Pass
10404	-41.91	1.26	12.7	-30.47	-25	-5.47	Horizontal	Pass
5202	-46.04	0.82	9.6	-37.26	-25	-12.26	Vertical	Pass
7803	-48.63	0.99	13.2	-36.42	-25	-11.42	Vertical	Pass
10404	-43.08	1.26	12.7	-31.64	-25	-6.64	Vertical	Pass



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2535-2655MHz

FDD LTE Band 41-Low channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5072	-48.05	0.82	9.6	-39.27	-25	-26.27	Horizontal	Pass
7608	-48.81	0.99	13.2	-36.6	-25	-23.6	Horizontal	Pass
10144	-44.08	1.26	12.7	-32.64	-25	-19.64	Horizontal	Pass
5072	-44.02	0.82	9.6	-35.24	-25	-22.24	Vertical	Pass
7608	-47.43	0.99	13.2	-35.22	-25	-22.22	Vertical	Pass
10144	-43.25	1.26	12.7	-31.81	-25	-18.81	Vertical	Pass

FDD LTE Band 41-Middle channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5172	-48.07	0.82	9.6	-39.29	-25	-26.29	Horizontal	Pass
7758	-51.06	0.99	13.2	-38.85	-25	-25.85	Horizontal	Pass
10344	-43.42	1.26	12.7	-31.98	-25	-18.98	Horizontal	Pass
5172	-47.6	0.82	9.6	-38.82	-25	-25.82	Vertical	Pass
7758	-46.43	0.99	13.2	-34.22	-25	-21.22	Vertical	Pass
10344	-44.17	1.26	12.7	-32.73	-25	-19.73	Vertical	Pass

FDD LTE Band 41-High channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
5272	-51.07	0.82	9.6	-42.29	-25	-29.29	Horizontal	Pass
7908	-48.16	1.01	12.9	-36.27	-25	-23.27	Horizontal	Pass
10544	-44.95	1.49	13.5	-32.94	-25	-19.94	Horizontal	Pass
5272	-48.43	0.82	9.6	-39.65	-25	-26.65	Vertical	Pass
7908	-52.69	1.01	12.9	-40.8	-25	-27.8	Vertical	Pass
10544	-44	1.49	13.5	-31.99	-25	-18.99	Vertical	Pass



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FDD LTE Band66- Low channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3422	-52.97	0.65	6.2	-47.42	-13	-34.42	Horizontal	Pass
5133	-55.12	0.82	9.6	-46.34	-13	-33.34	Horizontal	Pass
6844	-57.14	0.95	11.8	-46.29	-13	-33.29	Horizontal	Pass
3422	-52	0.65	6.2	-46.45	-13	-33.45	Vertical	Pass
5133	-53.77	0.82	9.6	-44.99	-13	-31.99	Vertical	Pass
6844	-58.52	0.95	11.8	-47.67	-13	-34.67	Vertical	Pass

FDD LTE Band66-Middle channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3447	-47.76	0.65	6.2	-42.21	-13	-29.21	Horizontal	Pass
5170.5	-48.82	0.82	9.6	-40.04	-13	-27.04	Horizontal	Pass
6894	-57.43	0.95	11.8	-46.58	-13	-33.58	Horizontal	Pass
3447	-54.05	0.65	6.2	-48.5	-13	-35.5	Vertical	Pass
5170.5	-53.55	0.82	9.6	-44.77	-13	-31.77	Vertical	Pass
6894	-56.86	0.95	11.8	-46.01	-13	-33.01	Vertical	Pass

FDD LTE Band66-Middle channel, Modulation: QPSK, Bandwidth: 20MHz, 1 RB								
Frequency (MHz)	S.G. Power (dBm)	Cable loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Polarization (H/V)	Result
3472	-46.76	0.65	6.2	-41.21	-13	-28.21	Horizontal	Pass
5208	-47.96	0.82	9.6	-39.18	-13	-26.18	Horizontal	Pass
6944	-57.58	0.95	11.8	-46.73	-13	-33.73	Horizontal	Pass
3472	-55.3	0.65	6.2	-49.75	-13	-36.75	Vertical	Pass
5208	-53.51	0.82	9.6	-44.73	-13	-31.73	Vertical	Pass
6944	-57.9	0.95	11.8	-47.05	-13	-34.05	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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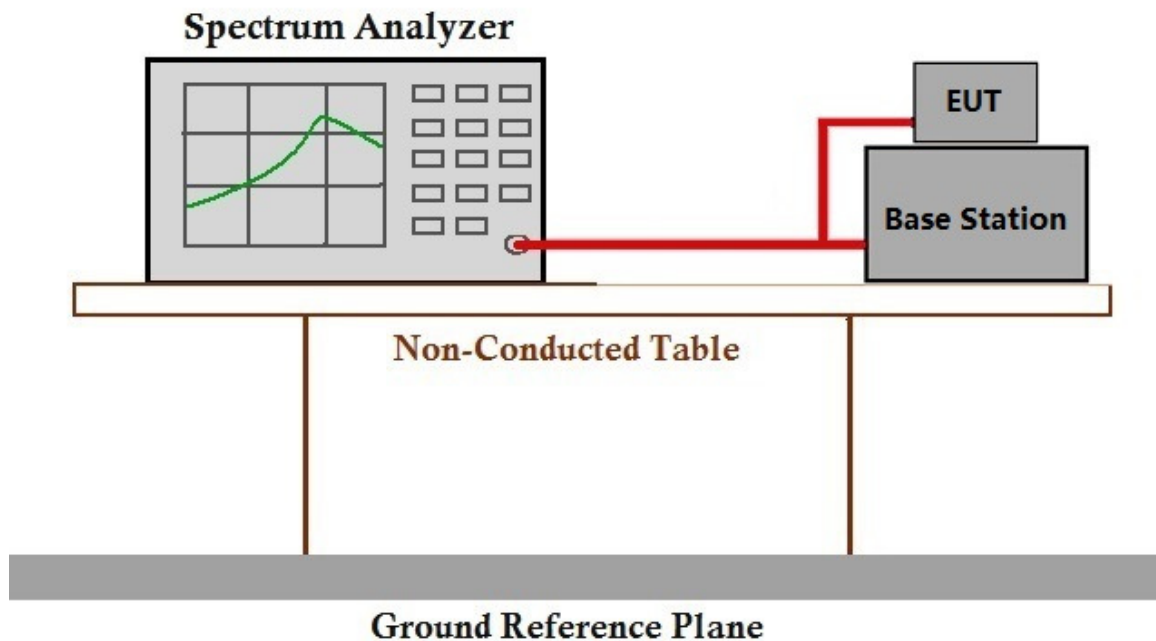
6.7 Frequency stability

Test Requirement: §2.1055, §22.355, §24.235, §27.54, §90.213
 Test Method: ANSI C63.26, KDB 971168 D01 v03
 Limit: $\leq \pm 2.5\text{ppm}$.

6.7.1 E.U.T. Operation

Operating Environment:
 Temperature: 18.6 °C Humidity: 29.1 % RH Atmospheric Pressure: 1025 mbar
 Test mode j: Tx mode, Keep the EUT in transmitting mode.

6.7.2 Test Setup Diagram



6.7.3 Measurement Data

Please refer to Appendix_LTE_4G_Frequency stability



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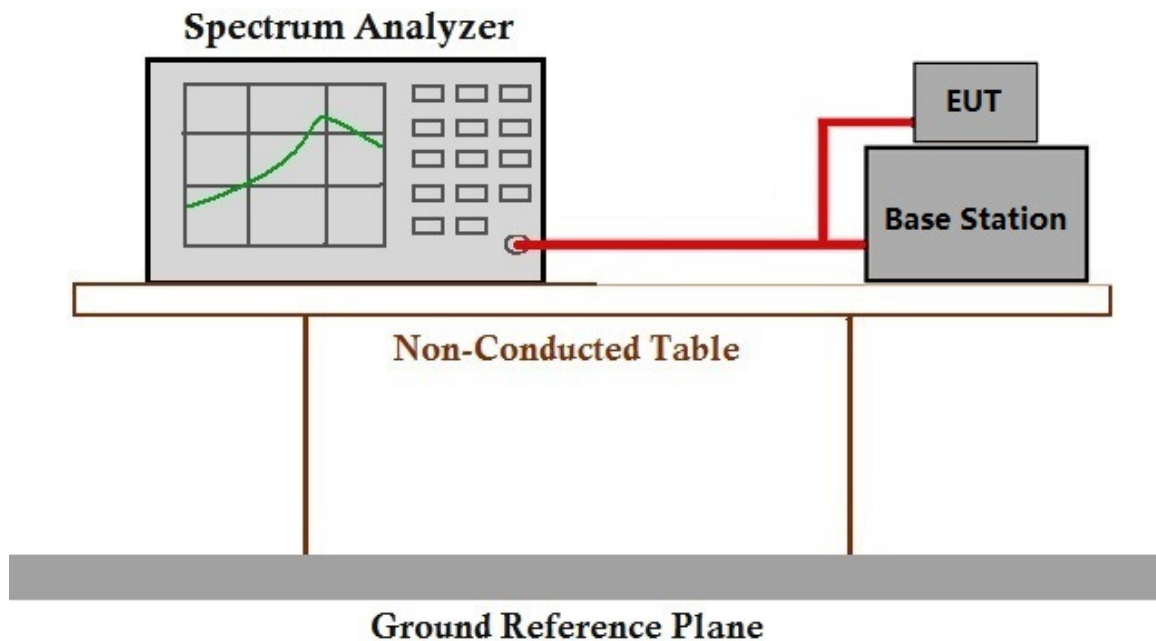
6.8 Modulation Characteristics

Test Requirement: §2.1047
 Test Method: ANSI C63.26, KDB 971168 D01 v03
 Limit: Digital modulation

6.8.1 E.U.T. Operation

Operating Environment:
 Temperature: 18.6 °C Humidity: 29.1 % RH Atmospheric Pressure: 1025 mbar
 Test mode j: Tx mode, Keep the EUT in transmitting mode.

6.8.2 Test Setup Diagram



6.8.3 Measurement Data

Please refer to Appendix_LTE_4G_Modulation Characteristics



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7 Photographs

7.1 Test Setup

Please refer to setup photos.

7.2 EUT Constructional Details (EUT Photos)

Please Refer to external and internal photos for details.

- End of the Report -



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