FCC CFR47 PART 22H, 24E, 27,90S CERTIFICATION TEST REPORT

FCC ID: 2ANMU-C58

Product:	Smart Phone
Trade Mark:	OUKITEL
Model No.:	C58
Family Model:	C58 E, C58 S, C58 Pro, C58 Ultra
Report No.:	S24082703605006
Issue Date:	Oct. 09, 2024

Prepared for

SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD

A2 2F BUILDING ENET NEW INDUSTRIAL PARK,DAFU INDUSTRIAL ZONE, GUANLAN, LONGHUA SHENZHEN, 518XXX China

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name ..... :	SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
Address..... :	A2 2F BUILDING ENET NEW INDUSTRIAL PARK,DAFU INDUSTRIAL ZONE, GUANLAN, LONGHUA SHENZHEN, 518XXX China
Manufacturer's Name..... :	SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
Address..... :	A2 2F BUILDING ENET NEW INDUSTRIAL PARK,DAFU INDUSTRIAL ZONE, GUANLAN, LONGHUA SHENZHEN, 518XXX China
Product name..... :	Smart Phone
Model and/or type reference .. :	C58
Trade Mark..... :	OUKITEL
Family Model..... :	C58 E, C58 S, C58 Pro, C58 Ultra
Test Sample Number.....	S240827036006
Standards..... :	FCC CFR 47 Part 22H, Part 24E, Part 27, Part 90S
Test procedure ..... :	ANSI C63.26:2015 ANSI/TIA-603-E-2016

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test .....

Date (s) of performance of tests..... Aug. 28, 2024 ~ Oct. 09, 2024

Date of Issue..... Oct. 09, 2024

Test Result..... **Pass**

Prepared By :	Reviewed By :	Approved By :
Allen Liu	Aaron Cheng	Alex Li
(Project Engineer)	(Supervisor)	(Manager)

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Designation:	Smart Phone
Trade Mark	OUKITEL
Model Name	C58
Family Model	C58 E, C58 S, C58 Pro, C58 Ultra
Model Difference	All models are the same circuit and RF module, except for model names.
FCC ID:	2ANMU-C58
Frequency Bands:	U.S. Bands: ☒LTE FDD Band 2,4,5,7,12,17, 25, 26, 66 TDD Band 41
Frequency Range:	LTE FDD Band 2 Uplink: 1850MHz-1910MHz, Downlink: 1930MHz-1990MHz; LTE FDD Band 4 Uplink: 1710MHz-1755MHz, Downlink: 2110MHz-2155MHz; LTE FDD Band 5 Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE-FDD Band 7 Uplink: 2500MHz-2570MHz, Downlink: 2620MHz-2690MHz; LTE FDD Band 12 Uplink: 699MHz-716MHz, Downlink: 729MHz-746MHz; LTE FDD Band 17 Uplink: 704MHz-716MHz, Downlink: 734MHz-746MHz; LTE FDD Band 25 Uplink: 1850MHz-1915MHz, Downlink: 1930MHz-1995MHz; LTE FDD Band 26A Uplink: 814MHz-824MHz, Downlink: 859MHz-869MHz; LTE FDD Band 26B Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE TDD Band 41 Uplink& Downlink: 2535MHz-2655MHz, LTE FDD Band 66 Uplink: 1710MHz-1780MHz, Downlink: 2110MHz-2200MHz;
Type of Modulation:	QPSK/16QAM/64QAM(Only Downlink)
Power Class	Class 3
SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test.
Antenna:	FPC Antenna
Antenna gain:	Band 2: 1.37 dBi, Band 4:2.10dBi, Band 5: -1.34 dBi, Band 7: 2.15dBi, Band 12: -1.47dBi, Band 17: -1.47 dBi, Band25:1.37dBi, Band 26: -1.34 dBi, Band 41:2.15 dBi, Band66:2.10 dBi;
Adapter	Model: HJ-0502000N2-US Input: 100-240V~50/60Hz 0.3A Output: 5.0V⎓2.0A 10.0W
Battery	DC 3.87V, 5150mAh, 19.93Wh
Power supply	DC 3.87V from battery or DC 5V from Adapter.

Extreme Vol. Limits:	DC 3.29V to DC 4.45V (Nominal DC 3.87V)（Note 1）
HW Version	SC6019U_MB_V1.0.0
FW Version	N/A
SW Version	V02
** Note1: The High Voltage DC 4.45V and Low Voltage 3.29V was declared by manufacturer, The EUT couldn't be operate normally with higher or lower voltage.	

1.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2ANMU-C58** filing to comply with the FCC Part 22H&24E&27&90S

1.3 TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI/TIA-603-E-2016, FCC CFR 47 Part 2, Part 22, Part 24, Part 27, Part 90S,ANSI C63.26:2015.

1.4 TEST FACILITY

The test site used to collect the radiated data is located at:

ShenZhen NTEK Testing Technology Co., Ltd.

1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R.China.

The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.26:2015& ANSI C63.4: 2014.

FCC Registration No.:463705

IC Registration No.:9270A,

CNAS Registration No.:L5516

MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.5dB

1.5 SPECIAL ACCESSORIES

The battery and the charger, earphone supplied by the applicant were used as accessories and being tested with EUT intended for FCC grant together.

1.6 WORST-CASE CONFIGURATION AND MODE

The worst-case scenario for all measurements is based on the investigation results.

The device has LTE Bands of: Band 2/4/5/7/12/17/25/26/41/66

The RB Size was selected to measure for peak or average ERP and EIRP, which was based on the conducted power verification baseline data.

For the fundamental investigation of radiated emissions, the EUT is investigated for vertical and horizontal antenna orientations and X Y and Z orientations of the EUT alone. After the investigations the worst case was determined to be at X orientation for all LTE bands.

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT EXERCISE

The Transmitter was operated in the maximum output power mode through Communication Tester. The TX frequency was fixed which was for the purpose of the measurements.

2.3 CONFIGURATION OF EUT SYSTEM

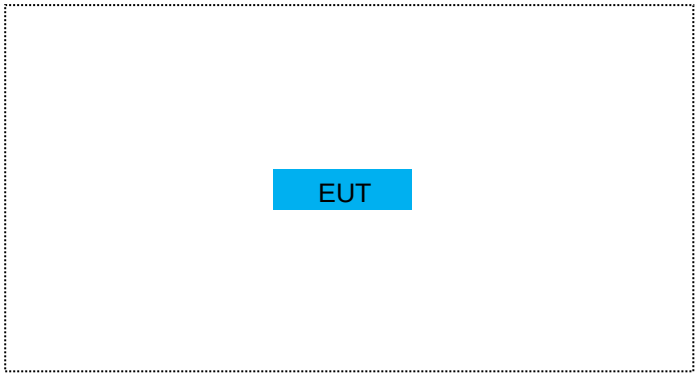
Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	Smart Phone	C58	FCC ID: 2ANMU-C58	EUT

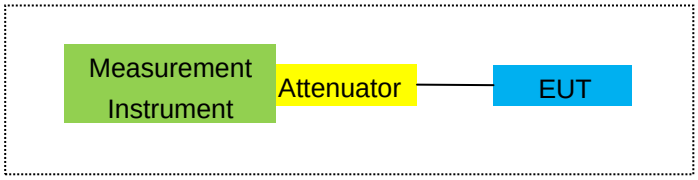
Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.

2.4 TEST SETUP

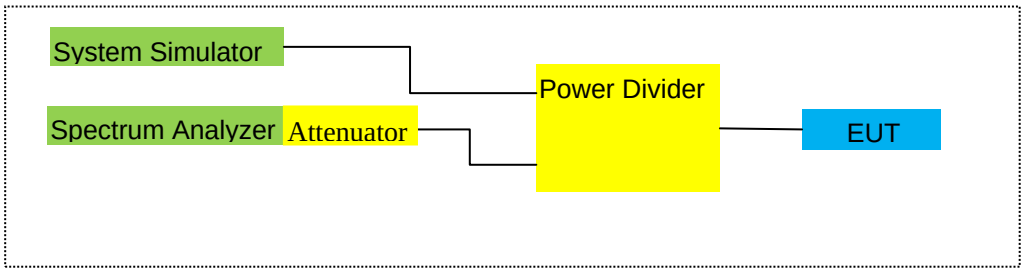
For Radiated Test Cases



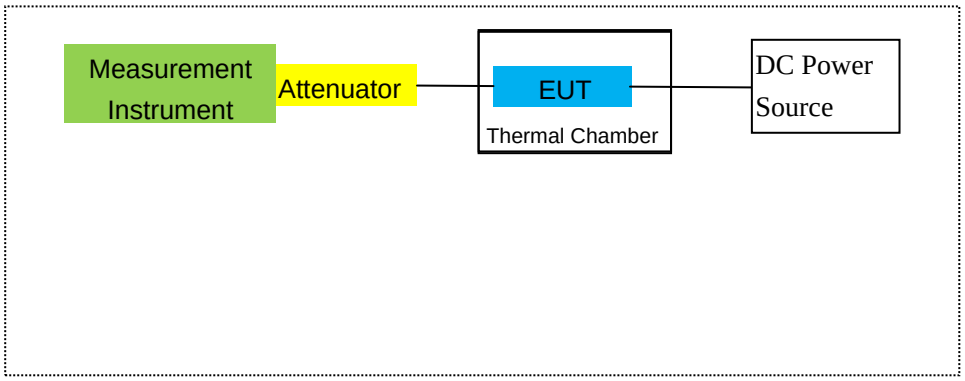
For Conducted Output Power



For Peak-to Average Ratio, Occupied Bandwidth, Conducted Band edge and Conducted Spurious Emission



For Frequency Stability



Note: EUT built-in battery-powered, the battery is fully-charged.

3.TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	MXA Signal Analyzer	Agilent	N9020A	MY49100060	2024.04.25	2025.04.24	1 year
2	Test Receiver	R&S	ESPI	101318	2024.04.26	2025.04.25	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2024.05.12	2025.05.11	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
5	Horn Antenna	EM	EM-AH-10180	2011071402	2024.05.12	2027.05.11	3 year
6	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2024.05.12	2027.05.11	3 year
7	Amplifier	EM	EM-30180	060538	2024.04.26	2025.04.25	1 year
8	Loop Antenna	ARA	PLA-1030/B	1029	2024.03.12	2025.03.11	1 year
9	Power Meter	R&S	NRVS	100696	2024.04.26	2025.04.25	1 year
10	Power Sensor	R&S	URV5-Z4	0395.1619.05	2024.04.26	2025.04.25	1 year
11	Test Cable	N/A	R-01	N/A	2022.06.17	2025.06.16	3 year
12	Test Cable	N/A	R-02	N/A	2022.06.17	2025.06.16	3 year
13	Test Cable	N/A	R-03	N/A	2022.06.17	2025.06.16	3 year
14	Test Receiver	R&S	ESCI	101160	2024.04.26	2025.04.25	1 year
15	LISN	R&S	ENV216	101313	2024.04.25	2025.04.24	1 year
16	LISN	EMCO	3816/2	00042990	2024.04.25	2025.04.24	1 year
17	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2024.03.12	2025.03.11	1 year
18	Passive Voltage Probe	R&S	ESH2-Z3	100196	2024.03.12	2025.03.11	1 year
19	Test Cable	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
20	Test Cable	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
21	Test Cable	N/A	C03	N/A	2023.05.06	2026.05.05	3 year
22	Spectrum Analyzer	agilent	e4440a	us44300399	2024.03.12	2025.03.11	1 year
23	test receiver	R&S	ESCI	a0304218	2024.03.12	2025.03.11	1 year
24	Communication Tester	R&S	CMU200	A0304247	2024.03.12	2025.03.11	1 year
25	Thermal Chamber	Ten Billion	TTC-B3C	TBN-960502	2024.03.12	2025.03.11	1 year

26	DC Power Source	N/A	PS-6005D	20170402923	2024.04.25	2027.04.24	3 year

Note: Each piece of equipment is scheduled for calibration once a year except the Test Cable& DC Power Source which is scheduled for calibration every 3 years

Measurement Software

Item	Manufacturer	Software Name	Software Version	Description
1	MWRFtest	MTS 8200	2.0	RF Conducted Test
2	Farad	EZ-EMC_RE	AIT-03A	RadiatedTest
3	raditeq	RadiMation	2023.1.3	RadiatedTest

4. OUTPUT POWER

4.1 OUTPUT POWER MEASUREMENT

LTE Measurement Procedure:

All LTE bands conducted power peak and average are obtained from the CMW500 telecommunication test set. The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

The allowed A-MPR values specified below in Table 6.2.4.-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of “NS_01”.3

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	NA
NS_03	6.6.2.2.1	2, 4,10, 23, 25, 35, 36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2	41	5	>6	≤ 1
			10, 15, 20	See Table 6.2.4-4	
NS_05	6.6.3.3.1	1	10,15,20	≥ 50	≤ 1
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	n/a
NS_07	6.6.2.2.3 6.6.3.3.2	13	10	Table 6.2.4-2	Table 6.2.4-2
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4-3	Table 6.2.4-3
NS_11	6.6.2.2.1	23[1]	1.4, 3, 5, 10	Table 6.2.4-5	Table 6.2.4-5
--					
NS_32	-	-	-	-	-

Note 1: Applies to the lower block of Band 23, i.e. a carrier placed in the 2000-2010 MHz region.

Test data reference attachment.

5. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

MODES TESTED

Band 2/4/5/7/12/17/25/26/41/66

RESULTS

PASS

Test data reference attachment.

6. BANDEDGE AND EMISSION MASK

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53, and §90.691
FCC: §22.359

LIMITS

FCC: §22.917, §24.238, §27.53
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

(m)(4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.Show citation box.
(c)(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;

FCC: §90.691 Emission mask requirements for EA-based systems.
(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
(1) 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, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

TEST PROCEDURE

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency

Set a marker to point the corresponding band edge frequency in each test case.

Set resolution bandwidth to at least 1% of emission bandwidth.

MODES TESTED

Band 2/4/5/7/12/17/25/26/41/66

RESULTS

Test data reference attachment.

7. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53 and §90.691

LIMITS

1. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.
2. The Band 7/41 emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 55 + 10 log (P) dB.

TEST PROCEDURE

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

□

□ Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

MODES TESTED

□ Band 2/4/5/7/12/17/25/26/41/66

□

7.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

Test data reference attachment.

8. RADIATED MEASUREMENT

8.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232, §27.50 and §90.635

LIMITS:

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.
27.50 (c) (10) the following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band, the portable stations (hand-held devices) are limited to 3 watts ERP.
27.50 (b)(10) Portable stations (hand-held devices) transmitting in the 746–757 MHz, 758–763 MHz, 776–793 MHz, and 805–806 MHz bands are limited to 3 watts ERP.
27.50 (d)(4) The following power and antenna height requirements apply to stations transmitting in the 1710–1755 MHz and 2110–2155 MHz bands: Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.
27.50 (h)(2) Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.
90.635(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

TEST PROCEDURE

ANSI/TIA-603-E Clause 2.2.17
KDB 971168 v02r01 RF power output using broadband peak and average power meter method.
KDB 971168 D01 Power Meas License Digital Systems v02r01, “Measurement Guidance for Certification of Licensed Digital Transmitters”

MODES TESTED

- Band 2/4/5/7/12/17/25/26/41/66

RESULTS

Pass

8.2 LTE BAND 2

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1850.7	-5.08	3.76	28.24	19.40	87.096	Horizontal	Pass
		1880	-4.89	3.91	28.22	19.42	87.498	Horizontal	Pass
		1909.3	-4.80	3.93	28.20	19.47	88.512	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-5.14	3.77	28.23	19.32	85.507	Horizontal	Pass
		1880	-4.99	3.91	28.24	19.34	85.901	Horizontal	Pass
		1908.5	-4.86	3.94	28.25	19.45	88.105	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-5.03	3.77	28.31	19.51	89.331	Horizontal	Pass
		1880	-4.65	3.91	28.22	19.66	92.470	Horizontal	Pass
		1907.5	-4.58	3.94	28.20	19.68	92.897	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-4.89	3.79	28.33	19.65	92.257	Horizontal	Pass
		1880	-4.59	3.95	28.22	19.68	92.897	Horizontal	Pass
		1905	-4.48	3.97	28.19	19.74	94.189	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-4.85	3.79	28.34	19.70	93.325	Horizontal	Pass
		1880	-4.64	3.95	28.22	19.63	91.833	Horizontal	Pass
		1902.5	-4.50	3.97	28.18	19.71	93.541	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-4.84	3.81	28.35	19.70	93.325	Horizontal	Pass
		1880	-4.51	3.96	28.22	**19.75**	94.406	Horizontal	Pass
		1900	-4.45	4.00	28.16	19.71	93.541	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-6.25	3.76	28.24	18.23	66.527	Vertical	Pass
		1880	-5.71	3.91	28.22	18.60	72.444	Vertical	Pass
		1909.3	-5.91	3.93	28.20	18.36	68.549	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-5.43	3.77	28.23	19.03	79.983	Vertical	Pass
		1880	-5.49	3.91	28.24	18.84	76.560	Vertical	Pass
		1908.5	-5.97	3.94	28.25	18.34	68.234	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-6.21	3.77	28.31	18.33	68.077	Vertical	Pass
		1880	-5.67	3.91	28.22	18.64	73.114	Vertical	Pass
		1907.5	-5.62	3.94	28.20	18.64	73.114	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1855	-6.37	3.79	28.33	18.17	65.615	Vertical	Pass
		1880	-5.41	3.95	28.22	18.86	76.913	Vertical	Pass
		1905	-5.25	3.97	28.19	18.97	78.886	Vertical	Pass
15.0MHz Band	1/#Mid	1857.5	-6.11	3.79	28.34	18.44	69.823	Vertical	Pass
		1880	-6.05	3.95	28.22	18.22	66.374	Vertical	Pass

QPSK		1902.5	-6.01	3.97	28.18	18.20	66.069	Vertical	Pass
20.0MHz	1/#Mid	1860	-5.45	3.81	28.35	19.09	81.096	Vertical	Pass
Band		1880	-5.97	3.96	28.22	18.29	67.453	Vertical	Pass
QPSK		1900	-5.86	4.00	28.16	18.30	67.608	Vertical	Pass

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1850.7	-6.20	3.76	28.24	18.28	67.298	Horizontal	Pass
		1880	-5.67	3.91	28.22	18.64	73.114	Horizontal	Pass
		1909.3	-5.60	3.93	28.20	18.67	73.621	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-5.70	3.77	28.23	18.76	75.162	Horizontal	Pass
		1880	-5.78	3.91	28.24	18.55	71.614	Horizontal	Pass
		1908.5	-5.99	3.94	28.25	18.32	67.920	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-5.64	3.77	28.31	18.90	77.625	Horizontal	Pass
		1880	-5.55	3.91	28.22	18.76	75.162	Horizontal	Pass
		1907.5	-5.23	3.94	28.20	19.03	79.983	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-5.69	3.79	28.33	18.85	76.736	Horizontal	Pass
		1880	-5.68	3.95	28.22	18.59	72.277	Horizontal	Pass
		1905	-5.15	3.97	28.19	19.07	80.724	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-5.67	3.79	28.34	18.88	77.268	Horizontal	Pass
		1880	-5.46	3.95	28.22	18.81	76.033	Horizontal	Pass
		1902.5	-5.42	3.97	28.18	18.79	75.683	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-5.56	3.81	28.35	18.98	79.068	Horizontal	Pass
		1880	-5.26	3.96	28.22	19.00	79.433	Horizontal	Pass
		1900	-5.08	4.00	28.16	**19.08**	80.910	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1850.7	-6.77	3.76	28.24	17.71	59.020	Vertical	Pass
		1880	-6.69	3.91	28.22	17.62	57.810	Vertical	Pass
		1909.3	-6.48	3.93	28.20	17.79	60.117	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-6.61	3.77	28.23	17.85	60.954	Vertical	Pass
		1880	-6.32	3.91	28.24	18.01	63.241	Vertical	Pass
		1908.5	-6.94	3.94	28.25	17.37	54.576	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-6.55	3.77	28.31	17.99	62.951	Vertical	Pass
		1880	-6.37	3.91	28.22	17.94	62.230	Vertical	Pass
		1907.5	-6.92	3.94	28.20	17.34	54.200	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-6.95	3.79	28.33	17.59	57.412	Vertical	Pass
		1880	-6.82	3.95	28.22	17.45	55.590	Vertical	Pass
		1905	-6.82	3.97	28.19	17.40	54.954	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-7.31	3.79	28.34	17.24	52.966	Vertical	Pass
		1880	-6.94	3.95	28.22	17.33	54.075	Vertical	Pass
		1902.5	-6.89	3.97	28.18	17.32	53.951	Vertical	Pass
20.0MHz	1/#Mid	1860	-6.86	3.81	28.35	17.68	58.614	Vertical	Pass

Band 16		1880	-6.81	3.96	28.22	17.45	55.590	Vertical	Pass
QAM		1900	-6.49	4.00	28.16	17.67	58.479	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

8.3 LTE BAND 4

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1710.7	-4.99	3.12	27.58	19.47	88.512	Horizontal	Pass
		1732.5	-4.98	3.27	27.61	19.36	86.298	Horizontal	Pass
		1754.3	-4.96	3.29	27.63	19.38	86.696	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-5.16	3.13	27.61	19.32	85.507	Horizontal	Pass
		1732.5	-5.08	3.27	27.61	19.26	84.333	Horizontal	Pass
		1753.5	-5.00	3.30	27.62	19.32	85.507	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-4.93	3.13	27.63	19.57	90.573	Horizontal	Pass
		1732.5	-4.83	3.27	27.61	19.51	89.331	Horizontal	Pass
		1752.5	-4.71	3.30	27.60	19.59	90.991	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-4.87	3.15	27.64	19.62	91.622	Horizontal	Pass
		1732.5	-4.64	3.31	27.61	19.66	92.470	Horizontal	Pass
		1750	-4.66	3.33	27.59	19.60	91.201	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-4.88	3.15	27.65	19.62	91.622	Horizontal	Pass
		1732.5	-4.72	3.31	27.61	19.58	90.782	Horizontal	Pass
		1747.5	-4.66	3.33	27.57	19.58	90.782	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-4.82	3.17	27.66	**19.67**	92.683	Horizontal	Pass
		1732.5	-4.65	3.32	27.61	19.64	92.045	Horizontal	Pass
		1745	-4.59	3.36	27.56	19.61	91.411	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-5.79	3.12	27.58	18.67	73.621	Vertical	Pass
		1732.5	-6.17	3.27	27.61	18.17	65.615	Vertical	Pass
		1754.3	-5.77	3.29	27.63	18.57	71.945	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-5.69	3.13	27.61	18.79	75.683	Vertical	Pass
		1732.5	-5.22	3.27	27.61	19.12	81.658	Vertical	Pass
		1753.5	-6.06	3.30	27.62	18.26	66.988	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-5.55	3.13	27.63	18.95	78.524	Vertical	Pass
		1732.5	-5.39	3.27	27.61	18.95	78.524	Vertical	Pass
		1752.5	-5.62	3.30	27.60	18.68	73.790	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1715	-6.12	3.15	27.64	18.37	68.707	Vertical	Pass
		1732.5	-5.61	3.31	27.61	18.69	73.961	Vertical	Pass
		1750	-5.79	3.33	27.59	18.47	70.307	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-6.32	3.15	27.65	18.18	65.766	Vertical	Pass

Band		1732.5	-5.89	3.31	27.61	18.41	69.343	Vertical	Pass
QPSK		1747.5	-6.05	3.33	27.57	18.19	65.917	Vertical	Pass
20.0MHz	1/#Mid	1720	-6.28	3.17	27.66	18.21	66.222	Vertical	Pass
Band		1732.5	-5.23	3.32	27.61	19.06	80.538	Vertical	Pass
QPSK		1745	-5.84	3.36	27.56	18.36	68.549	Vertical	Pass

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-5.80	3.12	27.58	18.66	73.451	Horizontal	Pass
		1732.5	-5.65	3.27	27.61	18.69	73.961	Horizontal	Pass
		1754.3	-5.65	3.29	27.63	18.69	73.961	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-5.74	3.13	27.61	18.74	74.817	Horizontal	Pass
		1732.5	-5.87	3.27	27.61	18.47	70.307	Horizontal	Pass
		1753.5	-6.09	3.30	27.62	18.23	66.527	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-5.57	3.13	27.63	18.93	78.163	Horizontal	Pass
		1732.5	-5.53	3.27	27.61	18.81	76.033	Horizontal	Pass
		1752.5	-5.22	3.30	27.60	19.08	80.910	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-5.64	3.15	27.64	18.85	76.736	Horizontal	Pass
		1732.5	-5.83	3.31	27.61	18.47	70.307	Horizontal	Pass
		1750	-5.21	3.33	27.59	19.05	80.353	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-5.44	3.15	27.65	19.06	80.538	Horizontal	Pass
		1732.5	-5.50	3.31	27.61	18.80	75.858	Horizontal	Pass
		1747.5	-5.52	3.33	27.57	18.72	74.473	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-5.39	3.17	27.66	**19.10**	81.283	Horizontal	Pass
		1732.5	-5.40	3.32	27.61	18.89	77.446	Horizontal	Pass
		1745	-5.21	3.36	27.56	18.99	79.250	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-6.44	3.12	27.58	18.02	63.387	Vertical	Pass
		1732.5	-6.70	3.27	27.61	17.64	58.076	Vertical	Pass
		1754.3	-6.94	3.29	27.63	17.40	54.954	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-6.63	3.13	27.61	17.85	60.954	Vertical	Pass
		1732.5	-6.53	3.27	27.61	17.81	60.395	Vertical	Pass
		1753.5	-6.57	3.30	27.62	17.75	59.566	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-7.19	3.13	27.63	17.31	53.827	Vertical	Pass
		1732.5	-6.90	3.27	27.61	17.44	55.463	Vertical	Pass
		1752.5	-6.51	3.30	27.60	17.79	60.117	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-7.32	3.15	27.64	17.17	52.119	Vertical	Pass
		1732.5	-6.66	3.31	27.61	17.64	58.076	Vertical	Pass
		1750	-6.79	3.33	27.59	17.47	55.847	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-7.22	3.15	27.65	17.28	53.456	Vertical	Pass
		1732.5	-7.14	3.31	27.61	17.16	52.000	Vertical	Pass
		1747.5	-7.11	3.33	27.57	17.13	51.642	Vertical	Pass

20.0MHz	1/#Mid	1720	-6.68	3.17	27.66	17.81	60.395	Vertical	Pass
Band 16		1732.5	-6.86	3.32	27.61	17.43	55.335	Vertical	Pass
QAM		1745	-6.52	3.36	27.56	17.68	58.614	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

8.4 LTE BAND 5

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	3/#Mid	824.7	4.31	2.01	19.68	2.15	19.83	96.161	Horizontal	Pass
		836.5	4.19	2.01	19.77	2.15	19.80	95.499	Horizontal	Pass
		848.3	3.99	2.02	19.82	2.15	19.64	92.045	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	4.08	2.01	19.70	2.15	19.62	91.622	Horizontal	Pass
		836.5	3.98	2.01	19.77	2.15	19.59	90.991	Horizontal	Pass
		847.5	3.85	2.02	19.81	2.15	19.49	88.920	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	4.36	2.01	19.71	2.15	19.91	97.949	Horizontal	Pass
		836.5	4.24	2.01	19.77	2.15	19.85	96.605	Horizontal	Pass
		846.5	4.08	2.02	19.79	2.15	19.70	93.325	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	4.38	2.01	19.73	2.15	**19.95**	98.855	Horizontal	Pass
		836.5	4.33	2.01	19.77	2.15	19.94	98.628	Horizontal	Pass
		844	4.23	2.02	19.78	2.15	19.84	96.383	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	824.7	2.90	2.01	19.68	2.15	18.42	69.502	Vertical	Pass
		836.5	2.94	2.01	19.77	2.15	18.55	71.614	Vertical	Pass
		848.3	3.27	2.02	19.82	2.15	18.92	77.983	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	3.58	2.01	19.70	2.15	19.12	81.658	Vertical	Pass
		836.5	3.07	2.01	19.77	2.15	18.68	73.790	Vertical	Pass
		847.5	3.09	2.02	19.81	2.15	18.73	74.645	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	2.82	2.01	19.71	2.15	18.37	68.707	Vertical	Pass
		836.5	3.02	2.01	19.77	2.15	18.63	72.946	Vertical	Pass
		846.5	3.09	2.02	19.79	2.15	18.71	74.302	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	2.68	2.01	19.73	2.15	18.25	66.834	Vertical	Pass
		836.5	3.26	2.01	19.77	2.15	18.87	77.090	Vertical	Pass
		844	3.49	2.02	19.78	2.15	19.10	81.283	Vertical	Pass

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	3/#Mid	824.7	3.46	2.01	19.68	2.15	18.98	79.068	Horizontal	Pass
		836.5	3.39	2.01	19.77	2.15	19.00	79.433	Horizontal	Pass
		848.3	3.23	2.02	19.82	2.15	18.88	77.268	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	3.54	2.01	19.70	2.15	19.08	80.910	Horizontal	Pass
		836.5	3.25	2.01	19.77	2.15	18.86	76.913	Horizontal	Pass
		847.5	2.73	2.02	19.81	2.15	18.37	68.707	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	3.86	2.01	19.71	2.15	19.41	87.297	Horizontal	Pass
		836.5	3.63	2.01	19.77	2.15	19.24	83.946	Horizontal	Pass
		846.5	3.38	2.02	19.79	2.15	19.00	79.433	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	3.86	2.01	19.73	2.15	**19.43**	87.700	Horizontal	Pass
		836.5	3.58	2.01	19.77	2.15	19.19	82.985	Horizontal	Pass
		844	3.12	2.02	19.78	2.15	18.73	74.645	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	2.60	2.01	19.68	2.15	18.12	64.863	Vertical	Pass
		836.5	3.51	2.01	19.77	2.15	19.12	81.658	Vertical	Pass
		848.3	3.03	2.02	19.82	2.15	18.68	73.790	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	2.91	2.01	19.70	2.15	18.45	69.984	Vertical	Pass
		836.5	1.85	2.01	19.77	2.15	17.46	55.719	Vertical	Pass
		847.5	2.52	2.02	19.81	2.15	18.16	65.464	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	2.56	2.01	19.71	2.15	18.11	64.714	Vertical	Pass
		836.5	2.10	2.01	19.77	2.15	17.71	59.020	Vertical	Pass
		846.5	1.52	2.02	19.79	2.15	17.14	51.761	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	2.07	2.01	19.73	2.15	17.64	58.076	Vertical	Pass
		836.5	1.94	2.01	19.77	2.15	17.55	56.885	Vertical	Pass
		844	2.34	2.02	19.78	2.15	17.95	62.373	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

8.5 LTE BAND 7

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	2502.5	-3.27	4.54	27.75	19.94	98.628	Horizontal	Pass
		2535	-3.10	4.69	27.72	19.93	98.401	Horizontal	Pass
		2567.5	-3.03	4.71	27.71	19.97	99.312	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2505	-3.20	4.55	27.76	20.01	100.231	Horizontal	Pass
		2535	-3.01	4.69	27.72	20.02	100.462	Horizontal	Pass
		2565	-2.93	4.72	27.70	20.05	101.158	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-3.21	4.55	27.77	20.01	100.231	Horizontal	Pass
		2535	-3.07	4.69	27.72	19.96	99.083	Horizontal	Pass
		2562.5	-2.97	4.72	27.69	20.00	100.000	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2510	-3.15	4.57	27.78	**20.06**	101.391	Horizontal	Pass
		2535	-2.97	4.73	27.72	20.02	100.462	Horizontal	Pass
		2560	-2.93	4.75	27.68	20.00	100.000	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2502.5	-5.07	4.54	27.75	18.14	65.163	Vertical	Pass
		2535	-4.84	4.69	27.72	18.19	65.917	Vertical	Pass
		2567.5	-4.19	4.71	27.71	18.81	76.033	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2505	-4.47	4.55	27.76	18.74	74.817	Vertical	Pass
		2535	-4.13	4.69	27.72	18.90	77.625	Vertical	Pass
		2565	-4.74	4.72	27.70	18.24	66.681	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-4.37	4.55	27.77	18.85	76.736	Vertical	Pass
		2535	-4.07	4.69	27.72	18.96	78.705	Vertical	Pass
		2562.5	-4.85	4.72	27.69	18.12	64.863	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2510	-4.16	4.57	27.78	19.05	80.353	Vertical	Pass
		2535	-4.62	4.73	27.72	18.37	68.707	Vertical	Pass
		2560	-4.80	4.75	27.68	18.13	65.013	Vertical	Pass

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	2502.5	-3.96	4.54	27.75	19.25	84.140	Horizontal	Pass
		2535	-3.65	4.69	27.72	19.38	86.696	Horizontal	Pass
		2567.5	-3.73	4.71	27.71	19.27	84.528	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-3.85	4.55	27.76	19.36	86.298	Horizontal	Pass
		2535	-3.86	4.69	27.72	19.17	82.604	Horizontal	Pass
		2565	-4.13	4.72	27.70	18.85	76.736	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-4.03	4.55	27.77	19.19	82.985	Horizontal	Pass
		2535	-4.00	4.69	27.72	19.03	79.983	Horizontal	Pass
		2562.5	-3.61	4.72	27.69	19.36	86.298	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-3.91	4.57	27.78	19.30	85.114	Horizontal	Pass
		2535	-3.58	4.73	27.72	**19.41**	87.297	Horizontal	Pass
		2560	-3.68	4.75	27.68	19.25	84.140	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2502.5	-5.33	4.54	27.75	17.88	61.376	Vertical	Pass
		2535	-5.41	4.69	27.72	17.62	57.810	Vertical	Pass
		2567.5	-4.11	4.71	27.71	18.89	77.446	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-4.22	4.55	27.76	18.99	79.250	Vertical	Pass
		2535	-4.66	4.69	27.72	18.37	68.707	Vertical	Pass
		2565	-4.70	4.72	27.70	18.28	67.298	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-4.60	4.55	27.77	18.62	72.778	Vertical	Pass
		2535	-4.86	4.69	27.72	18.17	65.615	Vertical	Pass
		2562.5	-5.04	4.72	27.69	17.93	62.087	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-5.59	4.57	27.78	17.62	57.810	Vertical	Pass
		2535	-5.34	4.73	27.72	17.65	58.210	Vertical	Pass
		2560	-4.45	4.75	27.68	18.48	70.469	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Factor (dB)+ SG Level (dBm)- Cable Loss(dBm)

8.6 LTE BAND 12

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	699.7	4.68	1.91	19.21	2.15	19.83	96.161	Vertical	Pass
		707.5	4.60	1.91	19.26	2.15	19.80	95.499	Vertical	Pass
		715.3	4.38	1.93	19.34	2.15	19.64	92.045	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	700.5	4.47	1.91	19.21	2.15	19.62	91.622	Vertical	Pass
		707.5	4.39	1.91	19.26	2.15	19.59	90.991	Vertical	Pass
		714.5	4.23	1.93	19.34	2.15	19.49	88.920	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	701.5	4.74	1.91	19.23	2.15	19.91	97.949	Vertical	Pass
		707.5	4.65	1.91	19.26	2.15	19.85	96.605	Vertical	Pass
		713.5	4.44	1.92	19.33	2.15	19.70	93.325	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	704	4.76	1.91	19.25	2.15	**19.95**	98.855	Vertical	Pass
		707.5	4.74	1.91	19.26	2.15	19.94	98.628	Vertical	Pass
		711	4.59	1.92	19.32	2.15	19.84	96.383	Vertical	Pass
1.4MHz Band QPSK	1/#Mid	699.7	3.60	1.91	19.21	2.15	18.75	74.989	Horizontal	Pass
		707.5	3.91	1.91	19.26	2.15	19.11	81.470	Horizontal	Pass
		715.3	3.75	1.93	19.34	2.15	19.01	79.616	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	700.5	2.98	1.91	19.21	2.15	18.13	65.013	Horizontal	Pass
		707.5	3.02	1.91	19.26	2.15	18.22	66.374	Horizontal	Pass
		714.5	3.16	1.93	19.34	2.15	18.42	69.502	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	701.5	3.53	1.91	19.23	2.15	18.70	74.131	Horizontal	Pass
		707.5	3.21	1.91	19.26	2.15	18.41	69.343	Horizontal	Pass
		713.5	3.54	1.92	19.33	2.15	18.80	75.858	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	704	3.76	1.91	19.25	2.15	18.95	78.524	Horizontal	Pass
		707.5	3.43	1.91	19.26	2.15	18.63	72.946	Horizontal	Pass
		711	3.62	1.92	19.32	2.15	18.87	77.090	Horizontal	Pass

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	699.7	4.59	1.91	19.21	2.15	19.74	94.189	Vertical	Pass
		707.5	4.51	1.91	19.26	2.15	19.71	93.541	Vertical	Pass
		715.3	4.29	1.93	19.34	2.15	19.55	90.157	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	4.38	1.91	19.21	2.15	19.53	89.743	Vertical	Pass
		707.5	4.30	1.91	19.26	2.15	19.50	89.125	Vertical	Pass
		714.5	4.14	1.93	19.34	2.15	19.40	87.096	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	4.65	1.91	19.23	2.15	19.82	95.940	Vertical	Pass
		707.5	4.56	1.91	19.26	2.15	19.76	94.624	Vertical	Pass
		713.5	4.35	1.92	19.33	2.15	19.61	91.411	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	704	4.67	1.91	19.25	2.15	**19.86**	96.828	Vertical	Pass
		707.5	4.65	1.91	19.26	2.15	19.85	96.605	Vertical	Pass
		711	4.50	1.92	19.32	2.15	19.75	94.406	Vertical	Pass
1.4MHz Band 16 QAM	1/#Mid	699.7	3.23	1.91	19.21	2.15	18.38	68.865	Horizontal	Pass
		707.5	3.25	1.91	19.26	2.15	18.45	69.984	Horizontal	Pass
		715.3	3.30	1.93	19.34	2.15	18.56	71.779	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	3.29	1.91	19.21	2.15	18.44	69.823	Horizontal	Pass
		707.5	3.40	1.91	19.26	2.15	18.60	72.444	Horizontal	Pass
		714.5	3.13	1.93	19.34	2.15	18.39	69.024	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	3.63	1.91	19.23	2.15	18.80	75.858	Horizontal	Pass
		707.5	3.47	1.91	19.26	2.15	18.67	73.621	Horizontal	Pass
		713.5	3.63	1.92	19.33	2.15	18.89	77.446	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	704	3.11	1.91	19.25	2.15	18.30	67.608	Horizontal	Pass
		707.5	2.88	1.91	19.26	2.15	18.08	64.269	Horizontal	Pass
		711	3.04	1.92	19.32	2.15	18.29	67.453	Horizontal	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

8.7 LTE BAND 17

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	706.5	5.05	1.91	19.23	2.15	20.22	105.196	Vertical	Pass
		710	4.91	1.91	19.26	2.15	20.11	102.565	Vertical	Pass
		713.5	4.81	1.92	19.33	2.15	20.07	101.625	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	709	5.06	1.91	19.25	2.15	**20.25**	105.925	Vertical	Pass
		710	5.01	1.91	19.26	2.15	20.21	104.954	Vertical	Pass
		711	4.97	1.92	19.32	2.15	20.22	105.196	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	706.5	3.62	1.91	19.23	2.15	18.79	75.683	Horizontal	Pass
		710	3.44	1.91	19.26	2.15	18.64	73.114	Horizontal	Pass
		713.5	3.85	1.92	19.33	2.15	19.11	81.470	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	709	4.66	1.91	19.25	2.15	19.85	96.605	Horizontal	Pass
		710	4.32	1.91	19.26	2.15	19.52	89.536	Horizontal	Pass
		711	3.41	1.92	19.32	2.15	18.66	73.451	Horizontal	Pass

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	706.5	4.40	1.91	19.23	2.15	19.57	90.573	Vertical	Pass
		710	4.31	1.91	19.26	2.15	19.51	89.331	Vertical	Pass
		713.5	4.11	1.92	19.33	2.15	19.37	86.497	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	709	3.94	1.91	19.25	2.15	19.13	81.846	Vertical	Pass
		710	4.47	1.91	19.26	2.15	**19.67**	92.683	Vertical	Pass
		711	4.20	1.92	19.32	2.15	19.45	88.105	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	706.5	3.49	1.91	19.23	2.15	18.66	73.451	Horizontal	Pass
		710	3.35	1.91	19.26	2.15	18.55	71.614	Horizontal	Pass
		713.5	2.94	1.92	19.33	2.15	18.20	66.069	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	709	3.04	1.91	19.25	2.15	18.23	66.527	Horizontal	Pass
		710	2.84	1.91	19.26	2.15	18.04	63.680	Horizontal	Pass
		711	3.08	1.92	19.32	2.15	18.33	68.077	Horizontal	Pass

Note:

ERP=EIRP-2.15

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Factor (dB)+ SG Level (dBm)- Cable Loss(dBm)

8.6 LTE BAND 25

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	1850.7	-4.86	3.12	27.58	19.60	91.201	Horizontal	Pass
		1882,5	-4.77	3.27	27.61	19.57	90.573	Horizontal	Pass
		1914.3	-4.93	3.29	27.63	19.41	87.297	Horizontal	Pass
3.0MHz Band QPSK	15/0	1851.5	-5.09	3.13	27.61	19.39	86.896	Horizontal	Pass
		1882,5	-4.98	3.27	27.61	19.36	86.298	Horizontal	Pass
		1913.5	-5.06	3.30	27.62	19.26	84.333	Horizontal	Pass
5.0MHz Band QPSK	25/0	1852.5	-4.82	3.13	27.63	19.68	92.897	Horizontal	Pass
		1882,5	-4.72	3.27	27.61	19.62	91.622	Horizontal	Pass
		1912.5	-4.83	3.30	27.60	19.47	88.512	Horizontal	Pass
10.0MHz Band QPSK	50/0	1855	-4.77	3.15	27.64	19.72	93.756	Horizontal	Pass
		1882,5	-4.59	3.31	27.61	19.71	93.541	Horizontal	Pass
		1910	-4.65	3.33	27.59	19.61	91.411	Horizontal	Pass
15.0MHz Band QPSK	75/0	1857.5	-6.14	3.15	27.65	18.36	68.549	Horizontal	Pass
		1882,5	-5.97	3.31	27.61	18.33	68.077	Horizontal	Pass
		1907.5	-6.11	3.33	27.57	18.13	65.013	Horizontal	Pass
20.0MHz Band QPSK	100/0	1860	-6.32	3.17	27.66	18.17	65.615	Horizontal	Pass
		1882,5	-4.56	3.32	27.61	19.73	93.972	Horizontal	Pass
		1905	-4.37	3.36	27.56	**19.83**	96.161	Horizontal	Pass
1.4MHz Band QPSK	6/0	1850.7	-5.89	3.12	27.58	18.57	71.945	Vertical	Pass
		1882,5	-5.63	3.27	27.61	18.71	74.302	Vertical	Pass
		1914.3	-5.77	3.29	27.63	18.57	71.945	Vertical	Pass
3.0MHz Band QPSK	15/0	1851.5	-5.67	3.13	27.61	18.81	76.033	Vertical	Pass
		1882,5	-5.91	3.27	27.61	18.43	69.663	Vertical	Pass
		1913.5	-5.90	3.30	27.62	18.42	69.502	Vertical	Pass
5.0MHz Band QPSK	25/0	1852.5	-5.68	3.13	27.63	18.82	76.208	Vertical	Pass
		1882,5	-6.23	3.27	27.61	18.11	64.714	Vertical	Pass
		1912.5	-5.54	3.30	27.60	18.76	75.162	Vertical	Pass
10.0MHz Band	50/0	1855	-6.23	3.15	27.64	18.26	66.988	Vertical	Pass
		1882,5	-5.69	3.31	27.61	18.61	72.611	Vertical	Pass

QPSK		1910	-5.95	3.33	27.59	18.31	67.764	Vertical	Pass
15.0MHz		1857.5	-6.46	3.15	27.65	18.04	63.680	Vertical	Pass
Band	75/0	1882,5	-5.77	3.31	27.61	18.53	71.285	Vertical	Pass
QPSK		1907.5	-5.51	3.33	27.57	18.73	74.645	Vertical	Pass
20.0MHz		1860	-6.25	3.17	27.66	18.24	66.681	Vertical	Pass
Band	100/0	1882,5	-5.59	3.32	27.61	18.70	74.131	Vertical	Pass
QPSK		1905	-6.17	3.36	27.56	18.03	63.533	Vertical	Pass

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	6/0	1850.7	-4.70	3.12	27.58	19.76	94.624	Horizontal	Pass
		1882,5	-4.61	3.27	27.61	19.73	93.972	Horizontal	Pass
		1914.3	-4.77	3.29	27.63	19.57	90.573	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	1851.5	-4.93	3.13	27.61	19.55	90.157	Horizontal	Pass
		1882,5	-4.82	3.27	27.61	19.52	89.536	Horizontal	Pass
		1913.5	-4.90	3.30	27.62	19.42	87.498	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	1852.5	-4.66	3.13	27.63	19.84	96.383	Horizontal	Pass
		1882,5	-4.56	3.27	27.61	19.78	95.060	Horizontal	Pass
		1912.5	-4.67	3.30	27.60	19.63	91.833	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	1855	-4.61	3.15	27.64	19.88	97.275	Horizontal	Pass
		1882,5	-4.43	3.31	27.61	19.87	97.051	Horizontal	Pass
		1910	-4.30	3.33	27.59	18.17	65.615	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	1857.5	-5.66	3.15	27.65	18.84	76.560	Horizontal	Pass
		1882,5	-5.90	3.31	27.61	18.40	69.183	Horizontal	Pass
		1907.5	-5.86	3.33	27.57	18.38	68.865	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	1860	-6.32	3.17	27.66	**19.96**	99.083	Horizontal	Pass
		1882,5	-5.37	3.32	27.61	18.92	77.983	Horizontal	Pass
		1905	-6.04	3.36	27.56	18.16	65.464	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	1850.7	-6.03	3.12	27.58	18.43	69.663	Vertical	Pass
		1882,5	-5.58	3.27	27.61	18.76	75.162	Vertical	Pass
		1914.3	-6.24	3.29	27.63	18.10	64.565	Vertical	Pass
3.0MHz Band 16 QAM	15/0	1851.5	-6.05	3.13	27.61	18.43	69.663	Vertical	Pass
		1882,5	-5.93	3.27	27.61	18.41	69.343	Vertical	Pass
		1913.5	-5.89	3.30	27.62	18.43	69.663	Vertical	Pass
5.0MHz Band 16 QAM	25/0	1852.5	-5.87	3.13	27.63	18.63	72.946	Vertical	Pass
		1882,5	-6.18	3.27	27.61	18.16	65.464	Vertical	Pass
		1912.5	-5.42	3.30	27.60	18.88	77.268	Vertical	Pass
10.0MHz Band 16 QAM	50/0	1855	-6.17	3.15	27.64	18.32	67.920	Vertical	Pass
		1882,5	-5.49	3.31	27.61	18.81	76.033	Vertical	Pass
		1910	-5.30	3.33	27.59	18.96	78.705	Vertical	Pass
15.0MHz Band 16	75/0	1857.5	-5.65	3.15	27.65	18.85	76.736	Vertical	Pass
		1882,5	-5.44	3.31	27.61	18.86	76.913	Vertical	Pass

QAM		1907.5	-5.94	3.33	27.57	18.30	67.608	Vertical	Pass
20.0MHz		1860	-5.98	3.17	27.66	18.51	70.958	Vertical	Pass
Band 16	100/0	1882,5	-5.56	3.32	27.61	18.73	74.645	Vertical	Pass
QAM		1905	-5.55	3.36	27.56	18.65	73.282	Vertical	Pass

Note:
SG Level= Signal generator output
Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)
Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

8.8 LTE BAND 26 A

Radiated Power (ERP) for Band 26(814-824)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz BW QPSK	6/0	814.7	-2.57	3.76	28.24	2.15	19.76	94.624	Horizontal	Pass
		819	-2.43	3.91	28.22	2.15	19.73	93.972	Horizontal	Pass
		823.3	-2.55	3.93	28.20	2.15	19.57	90.573	Horizontal	Pass
3.0MHz BW QPSK	15/0	815.5	-2.76	3.77	28.23	2.15	19.55	90.157	Horizontal	Pass
		819	-2.66	3.91	28.24	2.15	19.52	89.536	Horizontal	Pass
		822.5	-2.74	3.94	28.25	2.15	19.42	87.498	Horizontal	Pass
5.0MHz BW QPSK	25/0	816.5	-2.55	3.77	28.31	2.15	19.84	96.383	Horizontal	Pass
		819	-2.38	3.91	28.22	2.15	19.78	95.060	Horizontal	Pass
		821.5	-2.48	3.94	28.20	2.15	19.63	91.833	Horizontal	Pass
10.0MHz BW QPSK	50/0	819	-2.28	3.91	28.22	2.15	**19.88**	97.275	Horizontal	Pass
1.4MHz BW QPSK	6/0	814.7	-2.53	3.79	28.34	2.15	19.87	97.051	Vertical	Pass
		819	-2.35	3.95	28.22	2.15	19.77	94.842	Vertical	Pass
		823.3	-3.10	3.97	28.18	2.15	18.96	78.705	Vertical	Pass
3.0MHz BW QPSK	15/0	815.5	-4.10	3.77	28.23	2.15	18.21	66.222	Vertical	Pass
		819	-3.74	3.91	28.24	2.15	18.44	69.823	Vertical	Pass
		822.5	-3.74	3.94	28.25	2.15	18.42	69.502	Vertical	Pass
5.0MHz BW QPSK	25/0	816.5	-3.36	3.77	28.31	2.15	19.03	79.983	Vertical	Pass
		819	-3.52	3.91	28.22	2.15	18.64	73.114	Vertical	Pass
		821.5	-3.37	3.94	28.20	2.15	18.74	74.817	Vertical	Pass
10.0MHz BW QPSK	50/0	819	-3.73	3.91	28.22	2.15	18.43	69.663	Vertical	Pass

Radiated Power (ERP) for Band 26(814-824)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz BW 16 QAM	6/0	814.7	-2.71	3.76	28.24	2.15	19.62	91.622	Horizontal	Pass
		819	-2.57	3.91	28.22	2.15	19.59	90.991	Horizontal	Pass
		823.3	-2.69	3.93	28.20	2.15	19.43	87.700	Horizontal	Pass
3.0MHz BW 16 QAM	15/0	815.5	-2.90	3.77	28.23	2.15	19.41	87.297	Horizontal	Pass
		819	-2.80	3.91	28.24	2.15	19.38	86.696	Horizontal	Pass
		822.5	-2.88	3.94	28.25	2.15	19.28	84.723	Horizontal	Pass
5.0MHz BW 16 QAM	25/0	816.5	-2.69	3.77	28.31	2.15	19.70	93.325	Horizontal	Pass
		819	-2.52	3.91	28.22	2.15	19.64	92.045	Horizontal	Pass
		821.5	-2.62	3.94	28.20	2.15	19.49	88.920	Horizontal	Pass
10.0MHz BW 16 QAM	50/0	819	-2.44	3.91	28.24	2.15	**19.74**	94.189	Horizontal	Pass
1.4MHz BW 16 QAM	6/0	814.7	-2.67	3.79	28.34	2.15	19.73	93.972	Vertical	Pass
		819	-2.49	3.95	28.22	2.15	19.63	91.833	Vertical	Pass
		823.3	-4.07	3.97	28.18	2.15	17.99	62.951	Vertical	Pass
3.0MHz BW 16 QAM	15/0	815.5	-4.18	3.77	28.23	2.15	18.13	65.013	Vertical	Pass
		819	-3.43	3.91	28.24	2.15	18.75	74.989	Vertical	Pass
		822.5	-3.45	3.94	28.25	2.15	18.71	74.302	Vertical	Pass
5.0MHz BW 16 QAM	25/0	816.5	-3.66	3.77	28.31	2.15	18.73	74.645	Vertical	Pass
		819	-3.54	3.91	28.22	2.15	18.62	72.778	Vertical	Pass
		821.5	-4.05	3.94	28.20	2.15	18.06	63.973	Vertical	Pass
10.0MHz BW 16 QAM	50/0	819	-3.46	3.91	28.24	2.15	18.72	74.473	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

8.9 LTE BAND 26 B

Radiated Power (ERP) for Band 26(824-849)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	824.7	3.06	2.01	19.68	2.15	18.58	72.111	Horizontal	Pass
		836.5	3.00	2.01	19.77	2.15	18.61	72.611	Horizontal	Pass
		848.3	2.94	2.02	19.82	2.15	18.59	72.277	Horizontal	Pass
3.0MHz Band QPSK	15/0	825.5	3.10	2.01	19.70	2.15	18.64	73.114	Horizontal	Pass
		836.5	2.73	2.01	19.77	2.15	18.34	68.234	Horizontal	Pass
		847.5	3.18	2.02	19.81	2.15	18.82	76.208	Horizontal	Pass
5.0MHz Band QPSK	25/0	826.5	3.36	2.01	19.71	2.15	18.91	77.804	Horizontal	Pass
		836.5	3.18	2.01	19.77	2.15	18.79	75.683	Horizontal	Pass
		846.5	2.55	2.02	19.79	2.15	18.17	65.615	Horizontal	Pass
10.0MHz Band QPSK	50/0	829	2.57	2.01	19.73	2.15	18.14	65.163	Horizontal	Pass
		836.5	2.69	2.01	19.77	2.15	18.30	67.608	Horizontal	Pass
		844	3.29	2.02	19.78	2.15	18.90	77.625	Horizontal	Pass
15.0MHz Band QPSK	75/0	831.5	2.38	2.01	19.73	2.15	17.95	62.373	Horizontal	Pass
		836.5	3.31	2.01	19.77	2.15	**18.92**	77.983	Horizontal	Pass
		841.5	3.04	2.02	19.78	2.15	18.65	73.282	Horizontal	Pass
1.4MHz Band QPSK	6/0	824.7	2.64	2.01	19.68	2.15	18.16	65.464	Vertical	Pass
		836.5	2.58	2.01	19.77	2.15	18.19	65.917	Vertical	Pass
		848.3	2.84	2.02	19.82	2.15	18.49	70.632	Vertical	Pass
3.0MHz Band QPSK	15/0	825.5	2.78	2.01	19.70	2.15	18.32	67.920	Vertical	Pass
		836.5	2.40	2.01	19.77	2.15	18.01	63.241	Vertical	Pass
		847.5	2.65	2.02	19.81	2.15	18.29	67.453	Vertical	Pass
5.0MHz Band QPSK	25/0	826.5	2.80	2.01	19.71	2.15	18.35	68.391	Vertical	Pass
		836.5	2.55	2.01	19.77	2.15	18.16	65.464	Vertical	Pass
		846.5	2.67	2.02	19.79	2.15	18.29	67.453	Vertical	Pass
10.0MHz Band QPSK	50/0	829	2.44	2.01	19.73	2.15	18.01	63.241	Vertical	Pass
		836.5	2.78	2.01	19.77	2.15	18.39	69.024	Vertical	Pass
		844	2.62	2.02	19.78	2.15	18.23	66.527	Vertical	Pass
15.0MHz Band QPSK	75/0	831.5	2.45	2.01	19.73	2.15	18.02	63.387	Vertical	Pass
		836.5	3.20	2.01	19.77	2.15	18.81	76.033	Vertical	Pass
		841.5	2.80	2.02	19.78	2.15	18.41	69.343	Vertical	Pass

Radiated Power (ERP) for Band 26(824-849)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	6/0	824.7	3.25	2.01	19.68	2.15	18.77	75.336	Horizontal	Pass
		836.5	2.48	2.01	19.77	2.15	18.09	64.417	Horizontal	Pass
		848.3	2.42	2.02	19.82	2.15	18.07	64.121	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	825.5	2.51	2.01	19.70	2.15	18.05	63.826	Horizontal	Pass
		836.5	2.81	2.01	19.77	2.15	18.42	69.502	Horizontal	Pass
		847.5	2.51	2.02	19.81	2.15	18.15	65.313	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	826.5	2.67	2.01	19.71	2.15	18.22	66.374	Horizontal	Pass
		836.5	2.64	2.01	19.77	2.15	18.25	66.834	Horizontal	Pass
		846.5	2.48	2.02	19.79	2.15	18.10	64.565	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	829	2.88	2.01	19.73	2.15	18.45	69.984	Horizontal	Pass
		836.5	3.20	2.01	19.77	2.15	18.81	76.033	Horizontal	Pass
		844	2.44	2.02	19.78	2.15	18.05	63.826	Horizontal	Pass
15.0MHz Band QPSK	75/0	831.5	3.26	2.01	19.73	2.15	**18.83**	76.384	Horizontal	Pass
		836.5	2.44	2.01	19.77	2.15	18.05	63.826	Horizontal	Pass
		841.5	2.24	2.02	19.78	2.15	17.85	60.954	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	824.7	2.76	2.01	19.68	2.15	18.28	67.298	Vertical	Pass
		836.5	3.15	2.01	19.77	2.15	18.76	75.162	Vertical	Pass
		848.3	2.90	2.02	19.82	2.15	18.55	71.614	Vertical	Pass
3.0MHz Band 16 QAM	15/0	825.5	2.70	2.01	19.70	2.15	18.24	66.681	Vertical	Pass
		836.5	2.52	2.01	19.77	2.15	18.13	65.013	Vertical	Pass
		847.5	3.12	2.02	19.81	2.15	18.76	75.162	Vertical	Pass
5.0MHz Band 16 QAM	25/0	826.5	2.39	2.01	19.71	2.15	17.94	62.230	Vertical	Pass
		836.5	2.83	2.01	19.77	2.15	18.44	69.823	Vertical	Pass
		846.5	2.45	2.02	19.79	2.15	18.07	64.121	Vertical	Pass
10.0MHz Band 16 QAM	50/0	829	2.86	2.01	19.73	2.15	18.43	69.663	Vertical	Pass
		836.5	3.08	2.01	19.77	2.15	18.69	73.961	Vertical	Pass
		844	2.46	2.02	19.78	2.15	18.07	64.121	Vertical	Pass
15.0MHz Band QPSK	75/0	831.5	2.40	2.01	19.73	2.15	17.97	62.661	Vertical	Pass
		836.5	2.33	2.01	19.77	2.15	17.94	62.230	Vertical	Pass
		841.5	2.59	2.02	19.78	2.15	18.20	66.069	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

ERP(dBm)=EIRP-2.15

8.10 LTE BAND 41

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	2537.5	-3.66	4.54	27.75	19.55	90.157	Horizontal	Pass
		2595	-3.51	4.69	27.72	19.52	89.536	Horizontal	Pass
		2652.5	-3.39	4.71	27.71	19.61	91.411	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2540	-3.74	4.55	27.76	19.47	88.512	Horizontal	Pass
		2595	-3.60	4.69	27.72	19.43	87.700	Horizontal	Pass
		2650	-3.59	4.72	27.70	19.39	86.896	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2542.5	-3.57	4.55	27.77	19.65	92.257	Horizontal	Pass
		2595	-3.29	4.69	27.72	19.74	94.189	Horizontal	Pass
		2647.5	-3.34	4.72	27.69	19.63	91.833	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2545	-3.18	4.57	27.78	**20.03**	100.693	Horizontal	Pass
		2595	-3.23	4.73	27.72	19.76	94.624	Horizontal	Pass
		2645	-3.23	4.75	27.68	19.70	93.325	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2537.5	-3.46	4.54	27.75	19.75	94.406	Vertical	Pass
		2595	-3.37	4.69	27.72	19.66	92.470	Vertical	Pass
		2652.5	-3.35	4.71	27.71	19.65	92.257	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2540	-3.44	4.55	27.76	19.77	94.842	Vertical	Pass
		2595	-3.28	4.69	27.72	19.75	94.406	Vertical	Pass
		2650	-3.35	4.72	27.70	19.63	91.833	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2542.5	-4.87	4.55	27.77	18.35	68.391	Vertical	Pass
		2595	-4.06	4.69	27.72	18.97	78.886	Vertical	Pass
		2647.5	-4.49	4.72	27.69	18.48	70.469	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2545	-4.68	4.57	27.78	18.53	71.285	Vertical	Pass
		2595	-4.66	4.73	27.72	18.33	68.077	Vertical	Pass
		2645	-4.52	4.75	27.68	18.41	69.343	Vertical	Pass

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	2537.5	-3.71	4.54	27.75	19.50	89.125	Horizontal	Pass
		2595	-3.56	4.69	27.72	19.47	88.512	Horizontal	Pass
		2652.5	-3.44	4.71	27.71	19.56	90.365	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2540	-3.79	4.55	27.76	19.42	87.498	Horizontal	Pass
		2595	-3.65	4.69	27.72	19.38	86.696	Horizontal	Pass
		2650	-3.64	4.72	27.70	19.34	85.901	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2542.5	-3.62	4.55	27.77	19.60	91.201	Horizontal	Pass
		2595	-3.34	4.69	27.72	19.69	93.111	Horizontal	Pass
		2647.5	-3.39	4.72	27.69	19.58	90.782	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2545	-3.34	4.57	27.78	**19.87**	97.051	Horizontal	Pass
		2595	-3.28	4.73	27.72	19.71	93.541	Horizontal	Pass
		2645	-3.28	4.75	27.68	19.65	92.257	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2537.5	-3.51	4.54	27.75	19.70	93.325	Vertical	Pass
		2595	-3.42	4.69	27.72	19.61	91.411	Vertical	Pass
		2652.5	-3.40	4.71	27.71	19.60	91.201	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2540	-3.49	4.55	27.76	19.72	93.756	Vertical	Pass
		2595	-3.33	4.69	27.72	19.70	93.325	Vertical	Pass
		2650	-3.40	4.72	27.70	19.58	90.782	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2542.5	-4.97	4.55	27.77	18.25	66.834	Vertical	Pass
		2595	-5.05	4.69	27.72	17.98	62.806	Vertical	Pass
		2647.5	-4.70	4.72	27.69	18.27	67.143	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2545	-4.48	4.57	27.78	18.73	74.645	Vertical	Pass
		2595	-4.36	4.73	27.72	18.63	72.946	Vertical	Pass
		2645	-4.94	4.75	27.68	17.99	62.951	Vertical	Pass

Note:

SG Level= Signal generator output

Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)

Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

8.10 LTE BAND 66

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1710.7	-4.98	3.76	28.24	19.50	89.125	Horizontal	Pass
		1745	-4.84	3.91	28.22	19.47	88.512	Horizontal	Pass
		1779.3	-4.71	3.93	28.2	19.56	90.365	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-5.04	3.77	28.23	19.42	87.498	Horizontal	Pass
		1745	-4.95	3.91	28.24	19.38	86.696	Horizontal	Pass
		1778.5	-4.97	3.94	28.25	19.34	85.901	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-4.94	3.77	28.31	19.60	91.201	Horizontal	Pass
		1745	-4.62	3.91	28.22	19.69	93.111	Horizontal	Pass
		1777.5	-4.68	3.94	28.2	19.58	90.782	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-4.83	3.79	28.33	19.71	93.541	Horizontal	Pass
		1745	-4.56	3.95	28.22	19.71	93.541	Horizontal	Pass
		1775	-4.57	3.97	28.19	19.65	92.257	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-4.85	3.79	28.34	19.70	93.325	Horizontal	Pass
		1745	-4.66	3.95	28.22	19.61	91.411	Horizontal	Pass
		1772.5	-4.61	3.97	28.18	19.60	91.201	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-4.82	3.81	28.35	**19.72**	93.756	Horizontal	Pass
		1745	-4.56	3.96	28.22	19.70	93.325	Horizontal	Pass
		1770	-4.58	4	28.16	19.58	90.782	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-6.24	3.76	28.24	18.24	66.681	Vertical	Pass
		1745	-5.99	3.91	28.22	18.32	67.920	Vertical	Pass
		1779.3	-5.95	3.93	28.2	18.32	67.920	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-6.05	3.77	28.23	18.41	69.343	Vertical	Pass
		1745	-5.35	3.91	28.24	18.98	79.068	Vertical	Pass
		1778.5	-5.72	3.94	28.25	18.59	72.277	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-6.16	3.77	28.31	18.38	68.865	Vertical	Pass
		1745	-5.57	3.91	28.22	18.74	74.817	Vertical	Pass
		1777.5	-5.63	3.94	28.2	18.63	72.946	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1715	-5.98	3.79	28.34	18.57	71.945	Vertical	Pass
		1745	-5.58	3.95	28.22	18.69	73.961	Vertical	Pass
		1775	-5.27	3.97	28.18	18.94	78.343	Vertical	Pass

15.0MHz	1/#Mid	1717.5	-5.74	3.81	28.35	18.80	75.858	Vertical	Pass
Band		1745	-6.21	3.96	28.22	18.05	63.826	Vertical	Pass
QPSK		1772.5	-5.94	4	28.16	18.22	66.374	Vertical	Pass
20.0MHz	1/#Mid	1720	-6.23	3.79	28.34	18.32	67.920	Vertical	Pass
Band		1745	-5.44	3.95	28.22	18.83	76.384	Vertical	Pass
QPSK		1770	-6.18	3.97	28.18	18.03	63.533	Vertical	Pass

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-5.90	3.76	28.24	18.58	72.111	Horizontal	Pass
		1745	-5.51	3.91	28.22	18.80	75.858	Horizontal	Pass
		1779.3	-5.69	3.93	28.2	18.58	72.111	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-6.29	3.77	28.23	18.17	65.615	Horizontal	Pass
		1745	-5.54	3.91	28.24	18.79	75.683	Horizontal	Pass
		1778.5	-5.83	3.94	28.25	18.48	70.469	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-5.71	3.77	28.31	18.83	76.384	Horizontal	Pass
		1745	-5.77	3.91	28.22	18.54	71.450	Horizontal	Pass
		1777.5	-5.44	3.94	28.2	18.82	76.208	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-5.76	3.79	28.33	18.78	75.509	Horizontal	Pass
		1745	-5.42	3.95	28.22	18.85	76.736	Horizontal	Pass
		1775	-5.74	3.97	28.19	18.48	70.469	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-5.75	3.79	28.34	18.80	75.858	Horizontal	Pass
		1745	-5.57	3.95	28.22	18.70	74.131	Horizontal	Pass
		1772.5	-5.36	3.97	28.18	18.85	76.736	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-5.58	3.81	28.35	**18.96**	78.705	Horizontal	Pass
		1745	-5.36	3.96	28.22	18.90	77.625	Horizontal	Pass
		1770	-5.30	4	28.16	18.86	76.913	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-5.98	3.76	28.24	18.50	70.795	Vertical	Pass
		1745	-7.33	3.91	28.22	16.98	49.888	Vertical	Pass
		1779.3	-5.73	3.93	28.2	18.54	71.450	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-7.37	3.77	28.23	17.09	51.168	Vertical	Pass
		1745	-5.82	3.91	28.24	18.51	70.958	Vertical	Pass
		1778.5	-7.42	3.94	28.25	16.89	48.865	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-7.11	3.77	28.31	17.43	55.335	Vertical	Pass
		1745	-7.29	3.91	28.22	17.02	50.350	Vertical	Pass
		1777.5	-6.98	3.94	28.2	17.28	53.456	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-5.77	3.79	28.34	18.78	75.509	Vertical	Pass
		1745	-6.23	3.95	28.22	18.04	63.680	Vertical	Pass
		1775	-7.28	3.97	28.18	16.93	49.317	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-7.62	3.81	28.35	16.92	49.204	Vertical	Pass
		1745	-5.61	3.96	28.22	18.65	73.282	Vertical	Pass
		1772.5	-5.90	4	28.16	18.26	66.988	Vertical	Pass

20.0MHz	1/#Mid	1720	-7.31	3.79	28.34	17.24	52.966	Vertical	Pass
Band 16		1745	-6.68	3.95	28.22	17.59	57.412	Vertical	Pass
QAM		1770	-5.59	3.97	28.18	18.62	72.778	Vertical	Pass

Note:
SG Level= Signal generator output
Max. EIRP Average (dBm)= Antenna Gain(dB)+ SG Level (dBm)- Cable Loss(dBm)
Factor Gain(dB)=Antenna Gain(dB) + Amplifier Factor (dB)

9. SPURIOUS RADIATION EMISSION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53 and §90.691

LIMIT

§22.917 (e) and §24.238 and §90.691 (a): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

§27.53 (g) For operations in the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB.

§27.53 (h) For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log10(P) dB.

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

The unwanted emission power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth in the 1 MHz band immediately outside and adjacent to the channel edge of the equipment. Beyond the 1 MHz band immediately outside the channel edge of the equipment, a resolution bandwidth of 1 MHz shall be employed. A narrower resolution bandwidth is allowed to be used provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz or 1% of the occupied bandwidth as applicable.

The power of any unwanted emissions measured from the channel edge of the equipment shall be attenuated below the transmitter power, P (dBW), as follows:
a. for base station and subscriber equipment, other than mobile subscriber equipment, the attenuation shall not be less than 43 + 10 Log10 (p), dB; and
b. for mobile subscriber equipment, the attenuation shall not be less than 43 + 10 Log10 (p), dB at the channel edges and 55 + 10 Log10 (p) at 5.5 MHz away and beyond the channel edges where p in (a) and (b) is the transmitter power measured in watts.

MODES TESTED

LTE Band 2/4/5/7/12/17/25/26/41/66

RESULTS

PASS

9.1 LTE BAND 2

QPSK EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 1850.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3701.4	-44.87	4.04	33.51	-15.40	-13	-2.40	Horizontal
3701.4	-50.27	4.04	33.51	-20.80	-13	-7.80	Vertical
5552.1	-50.73	5.24	35.84	-20.13	-13	-7.13	Vertical
5552.1	-50.40	5.24	35.84	-19.80	-13	-6.80	Horizontal
202.3	-41.60	1.43	16.02	-27.01	-13	-14.01	Vertical
317.9	-40.48	1.30	17.99	-23.79	-13	-10.79	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-48.98	4.04	33.56	-19.46	-13	-6.46	Horizontal
3760.0	-51.94	4.04	33.56	-22.42	-13	-9.42	Vertical
5640.0	-48.56	5.24	35.91	-17.89	-13	-4.89	Vertical
5640.0	-49.94	5.24	35.91	-19.27	-13	-6.27	Horizontal
202.9	-42.32	1.62	16.97	-26.97	-13	-13.97	Vertical
258.6	-41.18	1.74	15.98	-26.95	-13	-13.95	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-51.57	4.04	34.00	-21.61	-13	-8.61	Horizontal
3818.6	-46.05	4.04	34.00	-16.09	-13	-3.09	Vertical
5727.9	-49.19	5.24	36.04	-18.39	-13	-5.39	Vertical
5727.9	-51.28	5.24	36.04	-20.48	-13	-7.48	Horizontal
199.9	-39.76	1.42	17.29	-23.89	-13	-10.89	Vertical
295.0	-43.58	1.50	17.90	-27.17	-13	-14.17	Horizontal

QPSK EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

Test Results for Low Channel 1860MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3720.0	-53.37	4.07	33.54	-23.90	-13	-10.90	Horizontal
3720.0	-50.06	4.07	33.54	-20.59	-13	-7.59	Vertical
5580.0	-47.21	5.28	35.86	-16.63	-13	-3.63	Vertical
5580.0	-50.72	5.28	35.86	-20.14	-13	-7.14	Horizontal
191.2	-44.24	1.58	16.89	-28.92	-13	-15.92	Vertical
331.3	-39.67	1.76	17.26	-24.17	-13	-11.17	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-50.58	4.04	33.56	-21.06	-13	-8.06	Horizontal
3760.0	-51.01	4.04	33.56	-21.49	-13	-8.49	Vertical
5640.0	-47.69	5.24	35.91	-17.02	-13	-4.02	Vertical
5640.0	-52.14	5.24	35.91	-21.47	-13	-8.47	Horizontal
202.9	-39.94	1.46	16.27	-25.13	-13	-12.13	Vertical
406.1	-43.54	1.59	15.15	-29.98	-13	-16.98	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-45.51	4.04	34.00	-15.55	-13	-2.55	Horizontal
3800.0	-44.88	4.04	34.00	-14.92	-13	-1.92	Vertical
5700.0	-52.23	5.24	36.04	-21.43	-13	-8.43	Vertical
5700.0	-49.47	5.24	36.04	-18.67	-13	-5.67	Horizontal
199.1	-34.82	1.36	17.39	-18.78	-13	-5.78	Vertical
396.5	-39.84	1.66	15.39	-26.11	-13	-13.11	Horizontal

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.2 LTE BAND 4

QPSK EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3421.4	-48.82	4.02	29.80	-23.04	-13	-10.04	Horizontal
3421.4	-45.91	4.02	29.80	-20.13	-13	-7.13	Vertical
5132.1	-52.43	5.24	35.84	-21.83	-13	-8.83	Vertical
5132.1	-51.19	5.24	35.84	-20.59	-13	-7.59	Horizontal
177.8	-40.38	1.68	16.04	-26.02	-13	-13.02	Vertical
378.4	-37.21	1.78	17.74	-21.25	-13	-8.25	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-46.47	4.03	30.00	-20.50	-13	-7.50	Horizontal
3465.0	-53.41	4.03	30.00	-27.44	-13	-14.44	Vertical
5197.5	-50.74	5.25	35.86	-20.13	-13	-7.13	Vertical
5197.5	-52.43	5.25	35.86	-21.82	-13	-8.82	Horizontal
185.9	-40.27	1.72	17.69	-24.30	-13	-11.30	Vertical
352.0	-41.09	1.62	16.02	-26.68	-13	-13.68	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-50.96	4.05	30.01	-25.00	-13	-12.00	Horizontal
3508.6	-44.55	4.05	30.01	-18.59	-13	-5.59	Vertical
5262.9	-50.55	5.26	35.86	-19.95	-13	-6.95	Vertical
5262.9	-53.41	5.26	35.86	-22.81	-13	-9.81	Horizontal
210.6	-41.60	1.80	16.69	-26.71	-13	-13.71	Vertical
461.7	-40.62	1.75	16.66	-25.72	-13	-12.72	Horizontal

QPSK EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3440.0	-44.42	4.02	29.80	-18.64	-13	-5.64	Horizontal
3440.0	-47.20	4.02	29.80	-21.42	-13	-8.42	Vertical
5160.0	-52.47	5.24	35.84	-21.87	-13	-8.87	Vertical
5160.0	-51.63	5.24	35.84	-21.03	-13	-8.03	Horizontal
208.0	-40.25	1.57	17.26	-24.56	-13	-11.56	Vertical
396.4	-36.92	1.78	16.35	-22.35	-13	-9.35	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-48.31	4.03	30.00	-22.34	-13	-9.34	Horizontal
3465.0	-46.75	4.03	30.00	-20.78	-13	-7.78	Vertical
5197.5	-47.74	5.25	35.86	-17.13	-13	-4.13	Vertical
5197.5	-49.41	5.25	35.86	-18.80	-13	-5.80	Horizontal
200.9	-43.78	1.44	17.95	-27.27	-13	-14.27	Vertical
303.5	-40.94	1.65	16.09	-26.50	-13	-13.50	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-50.61	2.91	27.68	-25.84	-13	-12.84	Horizontal
3490.0	-48.68	2.91	27.68	-23.91	-13	-10.91	Vertical
5235.0	-51.32	5.26	35.86	-20.72	-13	-7.72	Vertical
5235.0	-51.93	5.26	35.86	-21.33	-13	-8.33	Horizontal
182.7	-44.55	1.61	16.85	-29.31	-13	-16.31	Vertical
325.6	-39.07	1.61	15.19	-25.49	-13	-12.49	Horizontal

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.3 LTE BAND 5

QPSK EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1649.4	-44.45	2.78	27.50	-19.73	-13	-6.73	Horizontal
1649.4	-53.09	2.78	27.50	-28.37	-13	-15.37	Vertical
2474.1	-49.41	2.90	27.80	-24.51	-13	-11.51	Vertical
2474.1	-49.39	2.90	27.80	-24.49	-13	-11.49	Horizontal
197.9	-34.98	1.76	17.59	-19.15	-13	-6.15	Vertical
468.4	-43.62	1.63	15.87	-29.38	-13	-16.38	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-45.66	2.80	27.48	-20.98	-13	-7.98	Horizontal
1673.0	-47.33	2.80	27.48	-22.65	-13	-9.65	Vertical
2509.5	-47.55	2.91	27.70	-22.76	-13	-9.76	Vertical
2509.5	-53.44	2.91	27.70	-28.65	-13	-15.65	Horizontal
195.4	-39.57	1.61	15.68	-25.50	-13	-12.50	Vertical
256.9	-43.39	1.59	17.52	-27.47	-13	-14.47	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-51.63	2.82	27.43	-27.02	-13	-14.02	Horizontal
1696.6	-52.12	2.82	27.43	-27.51	-13	-14.51	Vertical
2544.9	-46.03	2.92	27.74	-21.21	-13	-8.21	Vertical
2544.9	-53.56	2.92	27.74	-28.74	-13	-15.74	Horizontal
186.5	-35.19	1.69	16.67	-20.20	-13	-7.20	Vertical
466.3	-36.90	1.70	17.18	-21.42	-13	-8.42	Horizontal

QPSK EIRP POWER FOR LTE BAND 5 (10MHZ BANDWIDTH)

Test Results for Low Channel 829MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1658.0	-47.98	2.78	27.50	-23.26	-13	-10.26	Horizontal
1658.0	-46.61	2.78	27.50	-21.89	-13	-8.89	Vertical
2487.0	-51.57	2.90	27.80	-26.67	-13	-13.67	Vertical
2487.0	-50.96	2.90	27.80	-26.06	-13	-13.06	Horizontal
189.7	-39.27	1.71	15.57	-25.41	-13	-12.41	Vertical
399.7	-42.30	1.34	16.40	-27.24	-13	-14.24	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-48.17	2.80	27.48	-23.49	-13	-10.49	Horizontal
1673.0	-45.77	2.80	27.48	-21.09	-13	-8.09	Vertical
2509.5	-46.64	2.91	27.70	-21.85	-13	-8.85	Vertical
2509.5	-51.39	2.91	27.70	-26.60	-13	-13.60	Horizontal
191.3	-35.46	1.44	17.04	-19.86	-13	-6.86	Vertical
266.8	-38.12	1.76	17.62	-22.26	-13	-9.26	Horizontal
Test Results for High Channel 844MHz							
1688.0	-44.48	2.82	27.43	-19.87	-13	-6.87	Horizontal
1688.0	-45.78	2.82	27.43	-21.17	-13	-8.17	Vertical
2532.0	-47.09	2.92	27.74	-22.27	-13	-9.27	Vertical
2532.0	-49.19	2.92	27.74	-24.37	-13	-11.37	Horizontal
210.9	-38.29	1.74	17.70	-22.33	-13	-9.33	Vertical
468.0	-36.42	1.41	17.46	-20.36	-13	-7.36	Horizontal

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.4 LTE BAND 7

QPSK EIRP POWER FOR LTE BAND 7 (5.0MHZ BANDWIDTH)

Test Results for Low Channel 2502.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
5005.0	-61.76	5.23	35.81	-31.18	-25	-6.18	Horizontal
5005.0	-64.21	5.23	35.81	-33.63	-25	-8.63	Vertical
7507.5	-59.56	5.67	36.85	-28.38	-25	-3.38	Vertical
7507.5	-62.17	5.67	36.85	-30.99	-25	-5.99	Horizontal
211.1	-53.53	1.73	17.97	-37.29	-25	-12.29	Vertical
442.8	-53.27	1.38	15.11	-39.54	-25	-14.54	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-60.96	5.23	35.82	-30.37	-25	-5.37	Horizontal
5070.0	-62.49	5.23	35.82	-31.90	-25	-6.90	Vertical
7605.0	-59.13	5.67	36.85	-27.95	-25	-2.95	Vertical
7605.0	-64.81	5.67	36.85	-33.63	-25	-8.63	Horizontal
211.3	-44.89	1.77	16.17	-30.48	-25	-5.48	Vertical
282.1	-53.28	1.63	15.21	-39.70	-25	-14.70	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-60.52	5.24	35.83	-29.93	-25	-4.93	Horizontal
5135.0	-62.10	5.24	35.83	-31.51	-25	-6.51	Vertical
7702.5	-62.68	5.68	36.87	-31.49	-25	-6.49	Vertical
7702.5	-64.28	5.68	36.87	-33.09	-25	-8.09	Horizontal
209.4	-44.11	1.58	17.56	-28.13	-25	-3.13	Vertical
421.1	-50.41	1.45	16.58	-35.28	-25	-10.28	Horizontal

QPSK EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

Test Results for Low Channel 2510MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
5020.0	-61.58	5.23	35.82	-30.99	-25	-5.99	Horizontal
5020.0	-64.92	5.23	35.82	-34.33	-25	-9.33	Vertical
7530.0	-60.68	5.67	36.86	-29.49	-25	-4.49	Vertical
7530.0	-62.11	5.67	36.86	-30.92	-25	-5.92	Horizontal
184.3	-48.37	1.63	15.76	-34.24	-25	-9.24	Vertical
404.5	-49.38	1.71	15.44	-35.65	-25	-10.65	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-61.69	5.23	35.82	-31.10	-25	-6.10	Horizontal
5070.0	-63.06	5.23	35.82	-32.47	-25	-7.47	Vertical
7605.0	-64.46	5.67	36.85	-33.28	-25	-8.28	Vertical
7605.0	-63.48	5.67	36.85	-32.30	-25	-7.30	Horizontal
206.4	-49.34	1.79	16.84	-34.28	-25	-9.28	Vertical
417.9	-52.13	1.71	17.64	-36.20	-25	-11.20	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-60.02	5.24	35.83	-29.43	-25	-4.43	Horizontal
5120.0	-59.86	5.24	35.83	-29.27	-25	-4.27	Vertical
7680.0	-59.76	5.70	36.88	-28.58	-25	-3.58	Vertical
7680.0	-64.86	5.70	36.88	-33.68	-25	-8.68	Horizontal
179.6	-47.76	1.79	16.84	-32.70	-25	-7.70	Vertical
434.8	-46.53	1.71	17.64	-30.60	-25	-5.60	Horizontal

Note: Spurious Emission Level = Spectrum Analyzer Read Value + Cable Loss+ Antenna Factor + 11.74

. Margin = Spurious Emission Level - Limit

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.5 LTE BAND 12

QPSK EIRP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 699.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1399.4	-46.73	2.60	27.20	-22.13	-13	-9.13	Horizontal
1399.4	-46.11	2.60	27.20	-21.51	-13	-8.51	Vertical
2099.1	-44.85	2.85	27.54	-20.16	-13	-7.16	Vertical
2099.1	-52.53	2.85	27.54	-27.84	-13	-14.84	Horizontal
197.8	-39.37	1.49	17.78	-23.08	-13	-10.08	Vertical
301.2	-37.51	1.36	17.33	-21.54	-13	-8.54	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.0	-50.85	2.61	27.28	-26.18	-13	-13.18	Horizontal
1415.0	-47.47	2.61	27.28	-22.80	-13	-9.80	Vertical
2122.5	-45.61	2.87	27.59	-20.89	-13	-7.89	Vertical
2122.5	-51.73	2.87	27.59	-27.01	-13	-14.01	Horizontal
181.6	-34.98	1.73	15.74	-20.97	-13	-7.97	Vertical
380.3	-34.02	1.62	15.79	-19.85	-13	-6.85	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-49.40	2.63	27.28	-24.75	-13	-11.75	Horizontal
1430.6	-45.33	2.63	27.28	-20.68	-13	-7.68	Vertical
2145.9	-49.06	2.88	27.60	-24.34	-13	-11.34	Vertical
2145.9	-51.91	2.88	27.60	-27.19	-13	-14.19	Horizontal
183.1	-39.16	1.61	18.00	-22.77	-13	-9.77	Vertical
452.6	-38.57	1.45	15.49	-24.54	-13	-11.54	Horizontal

QPSK EIRP POWER FOR LTE BAND 12 (10MHZ BANDWIDTH)

Test Results for Low Channel 704MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1408.0	-51.97	2.61	27.26	-27.32	-13	-14.32	Horizontal
1408.0	-48.90	2.61	27.26	-24.25	-13	-11.25	Vertical
2112.0	-53.21	2.87	27.58	-28.50	-13	-15.50	Vertical
2112.0	-51.14	2.87	27.58	-26.43	-13	-13.43	Horizontal
198.1	-34.85	1.31	16.97	-19.19	-13	-6.19	Vertical
455.5	-44.03	1.65	16.70	-28.98	-13	-15.98	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.0	-53.14	2.61	27.28	-28.47	-13	-15.47	Horizontal
1415.0	-52.27	2.61	27.28	-27.60	-13	-14.60	Vertical
2122.5	-47.92	2.87	27.59	-23.20	-13	-10.20	Vertical
2122.5	-50.72	2.87	27.59	-26.00	-13	-13.00	Horizontal
188.4	-43.82	1.72	17.99	-27.55	-13	-14.55	Vertical
301.9	-44.14	1.73	17.94	-27.93	-13	-14.93	Horizontal
Test Results for High Channel 711MHz							
1422.0	-51.24	2.62	27.28	-26.58	-13	-13.58	Horizontal
1422.0	-53.49	2.62	27.28	-28.83	-13	-15.83	Vertical
2133.0	-51.24	2.87	27.60	-26.51	-13	-13.51	Vertical
2133.0	-49.98	2.87	27.60	-25.25	-13	-12.25	Horizontal
176.6	-36.17	1.58	15.93	-21.82	-13	-8.82	Vertical
420.2	-41.31	1.36	15.59	-27.08	-13	-14.08	Horizontal

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.6 LTE BAND 17

QPSK EIRP POWER FOR LTE BAND 17 (5MHZ BANDWIDTH)

Test Results for Low Channel 706.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1413.0	-45.52	2.61	27.28	-20.85	-13	-7.85	Horizontal
1413.0	-47.68	2.61	27.28	-23.01	-13	-10.01	Vertical
2119.5	-53.59	2.87	27.59	-28.87	-13	-15.87	Vertical
2119.5	-50.97	2.87	27.59	-26.25	-13	-13.25	Horizontal
180.6	-40.46	1.71	16.15	-26.02	-13	-13.02	Vertical
320.1	-44.49	1.41	17.32	-28.58	-13	-15.58	Horizontal
Test Results For Mid Channel 710MHz							
1420.0	-46.15	2.62	27.30	-21.47	-13	-8.47	Horizontal
1420.0	-53.07	2.62	27.30	-28.39	-13	-15.39	Vertical
2130.0	-44.45	2.87	27.62	-19.70	-13	-6.70	Vertical
2130.0	-53.25	2.87	27.62	-28.50	-13	-15.50	Horizontal
181.5	-40.52	1.42	15.25	-26.70	-13	-13.70	Vertical
293.5	-35.50	1.36	17.19	-19.67	-13	-6.67	Horizontal
Test Results for High Channel 713.5MHz							
1427.0	-45.29	2.66	27.28	-20.67	-13	-7.67	Horizontal
1427.0	-46.98	2.66	27.28	-22.36	-13	-9.36	Vertical
2140.5	-45.39	2.88	27.60	-20.67	-13	-7.67	Vertical
2140.5	-52.96	2.88	27.60	-28.24	-13	-15.24	Horizontal
208.7	-39.49	1.32	17.29	-23.52	-13	-10.52	Vertical
269.4	-41.33	1.72	16.89	-26.16	-13	-13.16	Horizontal

QPSK EIRP POWER FOR LTE BAND 17 (10MHZ BANDWIDTH)

Test Results for Low Channel 709MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1418.0	-52.90	2.62	27.30	-28.22	-13	-15.22	Horizontal
1418.0	-44.47	2.62	27.30	-19.79	-13	-6.79	Vertical
2127.0	-45.29	2.87	27.62	-20.54	-13	-7.54	Vertical
2127.0	-53.76	2.87	27.62	-29.01	-13	-16.01	Horizontal
188.7	-37.93	1.35	16.91	-22.37	-13	-9.37	Vertical
275.3	-41.21	1.62	16.31	-26.52	-13	-13.52	Horizontal
Test Results for Mid Channel 710MHz							
1420.0	-50.26	2.62	27.30	-25.58	-13	-12.58	Horizontal
1420.0	-46.27	2.62	27.30	-21.59	-13	-8.59	Vertical
2130.0	-51.30	2.87	27.62	-26.55	-13	-13.55	Vertical
2130.0	-52.68	2.87	27.62	-27.93	-13	-14.93	Horizontal
182.5	-37.75	1.51	17.14	-22.12	-13	-9.12	Vertical
375.5	-40.59	1.77	16.88	-25.48	-13	-12.48	Horizontal
Test Results for High Channel 711MHz							
1422.0	-50.99	2.62	27.30	-26.31	-13	-13.31	Horizontal
1422.0	-46.14	2.62	27.30	-21.46	-13	-8.46	Vertical
2133.0	-44.23	2.87	27.62	-19.48	-13	-6.48	Vertical
2133.0	-53.27	2.87	27.62	-28.52	-13	-15.52	Horizontal
204.4	-40.77	1.78	15.95	-26.60	-13	-13.60	Vertical
445.8	-42.82	1.34	17.95	-26.22	-13	-13.22	Horizontal

Note: Spurious Emission Level = Spectrum Analyzer Read Value + Cable Loss+ Antenna Factor + 11.74

. Margin = Spurious Emission Level - Limit

. Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.5 LTE BAND 25

QPSK EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3701.4	-49.64	4.02	29.80	-23.86	-13	-10.86	Horizontal
3701.4	-41.11	4.02	29.80	-15.33	-13	-2.33	Vertical
5552.1	-46.22	5.24	35.84	-15.62	-13	-2.62	Vertical
5552.1	-47.39	5.24	35.84	-16.79	-13	-3.79	Horizontal
93.9	-34.80	1.59	15.11	-21.28	-13	-8.28	Vertical
119.7	-32.65	1.80	15.61	-18.84	-13	-5.84	Horizontal
Test Results for Mid Channel 1732.5MHz							
3765.0	-49.31	4.03	30.00	-23.34	-13	-10.34	Horizontal
3765.0	-48.93	4.03	30.00	-22.96	-13	-9.96	Vertical
5647.5	-47.37	5.25	35.86	-16.76	-13	-3.76	Vertical
5647.5	-46.40	5.25	35.86	-15.79	-13	-2.79	Horizontal
166.1	-33.94	1.37	15.62	-19.69	-13	-6.69	Vertical
274.4	-32.72	1.55	17.51	-16.76	-13	-3.76	Horizontal
Test Results for High Channel 1754.3MHz							
3828.6	-49.56	4.05	30.01	-23.60	-13	-10.60	Horizontal
3828.6	-46.51	4.05	30.01	-20.55	-13	-7.55	Vertical
5742.9	-46.40	5.26	35.86	-15.80	-13	-2.80	Vertical
5742.9	-46.35	5.26	35.86	-15.75	-13	-2.75	Horizontal
108.6	-34.27	1.66	17.19	-18.74	-13	-5.74	Vertical
138.7	-32.70	1.35	17.94	-16.11	-13	-3.11	Horizontal

QPSK EIRP POWER FOR LTE BAND 25 (20MHZ BANDWIDTH)

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3720.0	-49.78	4.02	29.80	-24.00	-13	-11.00	Horizontal
3720.0	-45.42	4.02	29.80	-19.64	-13	-6.64	Vertical
5580.0	-49.88	5.24	35.84	-19.28	-13	-6.28	Vertical
5580.0	-46.02	5.24	35.84	-15.42	-13	-2.42	Horizontal
146.2	-34.53	1.70	15.24	-20.99	-13	-7.99	Vertical
215.4	-34.67	1.42	16.58	-19.51	-13	-6.51	Horizontal
Test Results for Mid Channel 1732.5MHz							
3765.0	-49.94	4.03	30.00	-23.97	-13	-10.97	Horizontal
3765.0	-49.66	4.03	30.00	-23.69	-13	-10.69	Vertical
5647.5	-48.46	5.25	35.86	-17.85	-13	-4.85	Vertical
5647.5	-46.69	5.25	35.86	-16.08	-13	-3.08	Horizontal
132.2	-32.79	1.64	16.16	-18.27	-13	-5.27	Vertical
133.3	-33.21	1.62	17.37	-17.46	-13	-4.46	Horizontal
Test Results for High Channel 1745MHz							
3810.0	-49.96	2.91	27.68	-25.19	-13	-12.19	Horizontal
3810.0	-46.93	2.91	27.68	-22.16	-13	-9.16	Vertical
5715.0	-47.89	5.26	35.86	-17.29	-13	-4.29	Vertical
5715.0	-46.09	5.26	35.86	-15.49	-13	-2.49	Horizontal
212.6	-32.23	1.49	15.29	-18.43	-13	-5.43	Vertical
275.8	-33.39	1.79	16.42	-18.76	-13	-5.76	Horizontal

9.7 LTE BAND 26 A

QPSK EIRP POWER FOR LTE BAND 26A(814MHz~824MHz) (1.4MHZ BANDWIDTH)

Test Results for Low Channel 814.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit（dBm）	Margin(dBm)	Polarity
1629.4	-49.84	2.78	27.50	-25.12	-13	-12.12	Horizontal
1629.4	-41.12	2.78	27.50	-16.40	-13	-3.40	Vertical
2444.1	-48.10	2.90	27.80	-23.20	-13	-10.20	Vertical
2444.1	-49.54	2.90	27.80	-24.64	-13	-11.64	Horizontal
229.6	-32.80	1.54	16.98	-17.36	-13	-4.36	Vertical
83.3	-32.82	1.47	15.82	-18.47	-13	-5.47	Horizontal
Test Results For Mid Channel 819MHz							
1638.0	-46.96	2.80	27.48	-22.28	-13	-9.28	Horizontal
1638.0	-49.93	2.80	27.48	-25.25	-13	-12.25	Vertical
2457.0	-48.35	2.91	27.70	-23.56	-13	-10.56	Vertical
2457.0	-47.41	2.91	27.70	-22.62	-13	-9.62	Horizontal
168.2	-33.66	1.74	16.19	-19.21	-13	-6.21	Vertical
92.9	-34.26	1.46	15.43	-20.29	-13	-7.29	Horizontal
Test Results for High Channel 823.3MHz							
1646.6	-49.36	2.82	27.43	-24.75	-13	-11.75	Horizontal
1646.6	-41.26	2.82	27.43	-16.65	-13	-3.65	Vertical
2469.9	-46.75	2.92	27.74	-21.93	-13	-8.93	Vertical
2469.9	-48.09	2.92	27.74	-23.27	-13	-10.27	Horizontal
213.1	-32.30	1.67	17.05	-16.92	-13	-3.92	Vertical
121.7	-33.42	1.42	16.12	-18.72	-13	-5.72	Horizontal

QPSK EIRP POWER FOR LTE BAND 26A(814MHz~824MHz) (10MHZ BANDWIDTH)

Test Results for Channel 819MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit（dBm）	Margin(dBm)	Polarity
1638.0	-47.84	2.78	27.50	-23.12	-13	-10.12	Horizontal
1638.0	-42.10	2.78	27.50	-17.38	-13	-4.38	Vertical
2457.0	-46.97	2.90	27.80	-22.07	-13	-9.07	Vertical
2457.0	-49.37	2.90	27.80	-24.47	-13	-11.47	Horizontal
253.7	-32.28	1.43	17.34	-16.37	-13	-3.37	Vertical
256.8	-34.50	1.56	15.71	-20.35	-13	-7.35	Horizontal

9.8 LTE BAND 26 B

QPSK EIRP POWER FOR LTE BAND 26B(824MHz~849MHz) (1.4MHZ BANDWIDTH)

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit（dBm）	Margin(dBm)	Polarity
1649.4	-48.43	2.78	27.50	-23.71	-13	-10.71	Horizontal
1649.4	-46.08	2.78	27.50	-21.36	-13	-8.36	Vertical
2474.1	-49.89	2.90	27.80	-24.99	-13	-11.99	Vertical
2474.1	-49.84	2.90	27.80	-24.94	-13	-11.94	Horizontal
237.0	-34.98	1.33	17.34	-18.97	-13	-5.97	Vertical
180.5	-34.54	1.47	16.80	-19.21	-13	-6.21	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-49.73	2.80	27.48	-25.05	-13	-12.05	Horizontal
1673.0	-43.94	2.80	27.48	-19.26	-13	-6.26	Vertical
2509.5	-48.17	2.91	27.70	-23.38	-13	-10.38	Vertical
2509.5	-47.86	2.91	27.70	-23.07	-13	-10.07	Horizontal
140.8	-34.85	1.75	15.46	-21.14	-13	-8.14	Vertical
90.6	-32.74	1.52	16.14	-18.12	-13	-5.12	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-46.92	2.82	27.43	-22.31	-13	-9.31	Horizontal
1696.6	-41.39	2.82	27.43	-16.78	-13	-3.78	Vertical
2544.9	-47.67	2.92	27.74	-22.85	-13	-9.85	Vertical
2544.9	-48.34	2.92	27.74	-23.52	-13	-10.52	Horizontal
171.4	-34.71	1.67	16.09	-20.29	-13	-7.29	Vertical
247.2	-32.26	1.80	17.55	-16.51	-13	-3.51	Horizontal

QPSK EIRP POWER FOR LTE BAND 26B(824MHz~849MHz) (15MHZ BANDWIDTH)

Test Results for Low Channel 831.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit（dBm）	Margin(dBm)	Polarity
1663.0	-47.12	2.78	27.50	-22.40	-13	-9.40	Horizontal
1663.0	-44.70	2.78	27.50	-19.98	-13	-6.98	Vertical
2494.5	-46.01	2.90	27.80	-21.11	-13	-8.11	Vertical
2494.5	-49.40	2.90	27.80	-24.50	-13	-11.50	Horizontal
255.4	-32.47	1.52	15.72	-18.27	-13	-5.27	Vertical
163.1	-34.09	1.40	17.03	-18.46	-13	-5.46	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-49.13	2.80	27.48	-24.45	-13	-11.45	Horizontal
1673.0	-46.14	2.80	27.48	-21.46	-13	-8.46	Vertical
2509.5	-47.59	2.91	27.70	-22.80	-13	-9.80	Vertical
2509.5	-46.08	2.91	27.70	-21.29	-13	-8.29	Horizontal
227.1	-32.41	1.74	16.38	-17.77	-13	-4.77	Vertical
101.3	-32.32	1.79	15.20	-18.91	-13	-5.91	Horizontal
Test Results for High Channel841.5MHz							
1683.0	-49.49	2.82	27.43	-24.88	-13	-11.88	Horizontal
1683.0	-46.30	2.82	27.43	-21.69	-13	-8.69	Vertical
2524.5	-46.84	2.92	27.74	-22.02	-13	-9.02	Vertical
2524.5	-49.78	2.92	27.74	-24.96	-13	-11.96	Horizontal
261.1	-32.65	1.78	17.44	-16.99	-13	-3.99	Vertical
120.1	-32.61	1.70	15.93	-18.38	-13	-5.38	Horizontal

9.9 LTE BAND 41

QPSK EIRP POWER FOR LTE BAND 41 (5MHZ BANDWIDTH)

Test Results for Low Channel 2537.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit（dBm）	Margin(dBm)	Polarity
5075.0	-59.24	5.23	35.81	-28.66	-25	-3.66	Horizontal
5075.0	-59.10	5.23	35.81	-28.52	-25	-3.52	Vertical
7612.5	-64.46	5.67	36.85	-33.28	-25	-8.28	Vertical
7612.5	-59.34	5.67	36.85	-28.16	-25	-3.16	Horizontal
435.3	-44.89	1.38	15.98	-30.29	-25	-5.29	Vertical
465.8	-45.49	1.62	15.66	-31.45	-25	-6.45	Horizontal
Test Results for Mid Channel 2595MHz							
5190.0	-60.71	5.23	35.82	-30.12	-25	-5.12	Horizontal
5190.0	-64.44	5.23	35.82	-33.85	-25	-8.85	Vertical
7785.0	-62.90	5.67	36.85	-31.72	-25	-6.72	Vertical
7785.0	-64.29	5.67	36.85	-33.11	-25	-8.11	Horizontal
510.4	-46.41	1.62	16.17	-31.86	-25	-6.86	Vertical
562.9	-45.40	1.74	17.63	-29.51	-25	-4.51	Horizontal
Test Results for High Channel 2652.5MHz							
5305.0	-64.26	5.24	35.83	-33.67	-25	-8.67	Horizontal
5305.0	-63.89	5.24	35.83	-33.30	-25	-8.30	Vertical
7957.5	-64.61	5.68	36.87	-33.42	-25	-8.42	Vertical
7957.5	-64.44	5.68	36.87	-33.25	-25	-8.25	Horizontal
197.6	-44.43	1.55	15.84	-30.14	-25	-5.14	Vertical
353.1	-48.01	1.51	17.06	-32.46	-25	-7.46	Horizontal

QPSK EIRP POWER FOR LTE BAND 41 (20MHZ BANDWIDTH)

Test Results for Low Channel 2545MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit（dBm）	Margin(dBm)	Polarity
5090.0	-60.43	5.23	35.82	-29.84	-25	-4.84	Horizontal
5090.0	-62.54	5.23	35.82	-31.95	-25	-6.95	Vertical
7635.0	-63.99	5.67	36.86	-32.80	-25	-7.80	Vertical
7635.0	-61.70	5.67	36.86	-30.51	-25	-5.51	Horizontal
128.9	-44.75	1.43	15.51	-30.67	-25	-5.67	Vertical
344.8	-45.34	1.40	16.97	-29.77	-25	-4.77	Horizontal
Test Results for Mid Channel 2595MHz							
5190.0	-59.88	5.23	35.82	-29.29	-25	-4.29	Horizontal
5190.0	-60.16	5.23	35.82	-29.57	-25	-4.57	Vertical
7785.0	-61.88	5.67	36.85	-30.70	-25	-5.70	Vertical
7785.0	-60.32	5.67	36.85	-29.14	-25	-4.14	Horizontal
100.8	-45.00	1.77	16.72	-30.05	-25	-5.05	Vertical
263.5	-47.68	1.31	16.99	-32.00	-25	-7.00	Horizontal
Test Results for High Channel 2645MHz							
5290.0	-59.91	5.24	35.83	-29.32	-25	-4.32	Horizontal
5290.0	-61.42	5.24	35.83	-30.83	-25	-5.83	Vertical
7935.0	-60.75	5.70	36.88	-29.57	-25	-4.57	Vertical
7935.0	-60.79	5.70	36.88	-29.61	-25	-4.61	Horizontal
349.9	-48.49	1.70	15.73	-34.46	-25	-9.46	Vertical
110.3	-46.98	1.75	17.33	-31.40	-25	-6.40	Horizontal

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. We test both H direction and V direction, recorded worst case direction.

Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.8 LTE BAND 66

QPSK EIRP POWER FOR LTE BAND 66 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3421.4	-53.02	4.02	29.80	-27.24	-13	-14.24	Horizontal
3421.4	-52.30	4.02	29.80	-26.52	-13	-13.52	Vertical
5132.1	-51.95	5.24	35.84	-21.35	-13	-8.35	Vertical
5132.1	-47.64	5.24	35.84	-17.04	-13	-4.04	Horizontal
112.6	-52.99	1.52	15.57	-38.94	-13	-25.94	Vertical
220.5	-53.93	1.33	17.14	-38.12	-13	-25.12	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-45.36	4.03	30.00	-19.39	-13	-6.39	Horizontal
3490.0	-53.37	4.03	30.00	-27.40	-13	-14.40	Vertical
5235.0	-50.70	5.25	35.86	-20.09	-13	-7.09	Vertical
5235.0	-50.13	5.25	35.86	-19.52	-13	-6.52	Horizontal
157.3	-50.51	1.53	17.13	-34.91	-13	-21.91	Vertical
213.1	-50.03	1.41	15.95	-35.49	-13	-22.49	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-51.71	4.05	30.01	-25.75	-13	-12.75	Horizontal
3558.6	-50.33	4.05	30.01	-24.37	-13	-11.37	Vertical
5337.9	-50.91	5.26	35.86	-20.31	-13	-7.31	Vertical
5337.9	-53.51	5.26	35.86	-22.91	-13	-9.91	Horizontal
170.6	-48.95	1.44	15.51	-34.88	-13	-21.88	Vertical
169.0	-48.70	1.78	15.76	-34.72	-13	-21.72	Horizontal

QPSK EIRP POWER FOR LTE BAND 66 (20MHZ BANDWIDTH)

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3440.0	-49.72	4.02	29.80	-23.94	-13	-10.94	Horizontal
3440.0	-54.50	4.02	29.80	-28.72	-13	-15.72	Vertical
5160.0	-52.42	5.24	35.84	-21.82	-13	-8.82	Vertical
5160.0	-51.69	5.24	35.84	-21.09	-13	-8.09	Horizontal
268.8	-45.42	1.62	17.02	-30.02	-13	-17.02	Vertical
161.4	-46.43	1.32	17.31	-30.44	-13	-17.44	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-46.32	4.03	30.00	-20.35	-13	-7.35	Horizontal
3490.0	-48.42	4.03	30.00	-22.45	-13	-9.45	Vertical
5235.0	-54.20	5.25	35.86	-23.59	-13	-10.59	Vertical
5235.0	-50.75	5.25	35.86	-20.14	-13	-7.14	Horizontal
159.9	-47.06	1.45	15.17	-33.34	-13	-20.34	Vertical
172.1	-48.83	1.48	17.82	-32.49	-13	-19.49	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-44.54	2.91	27.68	-19.77	-13	-6.77	Horizontal
3540.0	-45.51	2.91	27.68	-20.74	-13	-7.74	Vertical
5310.0	-52.91	5.26	35.86	-22.31	-13	-9.31	Vertical
5310.0	-50.87	5.26	35.86	-20.27	-13	-7.27	Horizontal
197.3	-49.06	1.76	16.38	-34.44	-13	-21.44	Vertical
158.5	-52.63	1.43	17.13	-36.93	-13	-23.93	Horizontal

Note: PMea(dBm)= Power(dBm)+ ARpl (dBm)

. Over Limit= : PMea(dBm)-Limit(dBm)

. We test both H direction and V direction, recorded worst case direction.

Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

10. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, §27.54, §90.213

LIMITS

§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

§24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = −30° to +50°C
- Voltage =low voltage, DC 3.23V, Normal, DC 3.87V and High voltage, DC 4.37V.

Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to -30ºC and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50ºC is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

MODES TESTED

LTE Band 2/4/5/7/12/17/25/26/41/66

RESULTS

See the following pages.

10.1 LTE BAND 2

Band 2 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1880	12.7	0.006760	2.5
3.87	1880	13.8	0.007317	2.5
4.45	1880	13.1	0.006945	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	12.8	0.006789	2.5
Extreme (50C)	1880	11.7	0.006241	2.5
Extreme (40C)	1880	14.0	0.007429	2.5
Extreme (30C)	1880	13.7	0.007289	2.5
Extreme (10C)	1880	14.4	0.007652	2.5
Extreme (0C)	1880	11.9	0.006350	2.5
Extreme (-10C)	1880	13.5	0.007162	2.5
Extreme (-20C)	1880	14.4	0.007657	2.5
Extreme (-30C)	1880	14.7	0.007807	2.5

Band 2 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1880	9.7	0.005155	2.5
3.87	1880	8.5	0.004502	2.5
4.45	1880	7.7	0.004122	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	9.7	0.005134	2.5
Extreme (50C)	1880	9.2	0.004919	2.5
Extreme (40C)	1880	7.6	0.004060	2.5
Extreme (30C)	1880	8.8	0.004662	2.5
Extreme (10C)	1880	8.6	0.004584	2.5
Extreme (0C)	1880	7.9	0.004182	2.5
Extreme (-10C)	1880	9.4	0.005019	2.5
Extreme (-20C)	1880	8.7	0.004614	2.5
Extreme (-30C)	1880	7.8	0.004123	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.2 LTE BAND 4

Band 4 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1732.5	9.0	0.005193	2.5
3.87	1732.5	9.4	0.005423	2.5
4.45	1732.5	8.7	0.005018	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	8.4	0.004830	2.5
Extreme (50C)	1732.5	8.4	0.004855	2.5
Extreme (40C)	1732.5	7.7	0.004464	2.5
Extreme (30C)	1732.5	5.8	0.003370	2.5
Extreme (10C)	1732.5	7.4	0.004262	2.5
Extreme (0C)	1732.5	9.7	0.005577	2.5
Extreme (-10C)	1732.5	8.0	0.004617	2.5
Extreme (-20C)	1732.5	6.6	0.003796	2.5
Extreme (-30C)	1732.5	8.9	0.005114	2.5

Band 4 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1732.5	9.5	0.005475	2.5
3.87	1732.5	8.7	0.005024	2.5
4.45	1732.5	7.7	0.004447	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	9.3	0.005361	2.5
Extreme (50C)	1732.5	9.1	0.005238	2.5
Extreme (40C)	1732.5	7.6	0.004411	2.5
Extreme (30C)	1732.5	9.3	0.005351	2.5
Extreme (10C)	1732.5	8.7	0.005007	2.5
Extreme (0C)	1732.5	8.4	0.004848	2.5
Extreme (-10C)	1732.5	9.0	0.005194	2.5
Extreme (-20C)	1732.5	8.7	0.005023	2.5
Extreme (-30C)	1732.5	8.6	0.004947	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.3 LTE BAND 5

Band 5 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	5.9	0.007028	2.5
3.87	836.5	7.1	0.008452	2.5
4.45	836.5	5.3	0.006281	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	5.8	0.006887	2.5
Extreme (50C)	836.5	5.5	0.006543	2.5
Extreme (40C)	836.5	5.6	0.006751	2.5
Extreme (30C)	836.5	6.0	0.007146	2.5
Extreme (10C)	836.5	5.2	0.006165	2.5
Extreme (0C)	836.5	4.9	0.005877	2.5
Extreme (-10C)	836.5	6.0	0.007159	2.5
Extreme (-20C)	836.5	6.5	0.007731	2.5
Extreme (-30C)	836.5	6.4	0.007618	2.5

Band 5 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	5.4	0.006442	2.5
3.87	836.5	6.4	0.007603	2.5
4.45	836.5	4.7	0.005606	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.4	0.007597	2.5
Extreme (50C)	836.5	6.2	0.007451	2.5
Extreme (40C)	836.5	6.1	0.007278	2.5
Extreme (30C)	836.5	6.4	0.007640	2.5
Extreme (10C)	836.5	5.5	0.006564	2.5
Extreme (0C)	836.5	5.8	0.006917	2.5
Extreme (-10C)	836.5	5.2	0.006201	2.5
Extreme (-20C)	836.5	6.0	0.007183	2.5
Extreme (-30C)	836.5	6.0	0.007154	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.4 LTE BAND 7

Band 7 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2535	9.7	0.003827	2.5
3.87	2535	9.0	0.003566	2.5
4.45	2535	8.8	0.003474	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.1	0.003597	2.5
Extreme (50C)	2535	8.8	0.003490	2.5
Extreme (40C)	2535	8.3	0.003266	2.5
Extreme (30C)	2535	9.3	0.003678	2.5
Extreme (10C)	2535	7.7	0.003049	2.5
Extreme (0C)	2535	7.9	0.003133	2.5
Extreme (-10C)	2535	9.4	0.003719	2.5
Extreme (-20C)	2535	9.2	0.003623	2.5
Extreme (-30C)	2535	8.1	0.003183	2.5

Band 7 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2535	6.7	0.002648	2.5
3.87	2535	6.8	0.002689	2.5
4.45	2535	5.5	0.002185	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	6.8	0.002690	2.5
Extreme (50C)	2535	5.6	0.002217	2.5
Extreme (40C)	2535	5.5	0.002163	2.5
Extreme (30C)	2535	6.9	0.002717	2.5
Extreme (10C)	2535	6.0	0.002378	2.5
Extreme (0C)	2535	5.3	0.002101	2.5
Extreme (-10C)	2535	4.9	0.001927	2.5
Extreme (-20C)	2535	6.3	0.002467	2.5
Extreme (-30C)	2535	6.1	0.002411	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.5 LTE BAND 12

Band 12 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	707.5	8.3	0.011740	2.5
3.87	707.5	9.6	0.013520	2.5
4.45	707.5	8.4	0.011841	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	9.1	0.012799	2.5
Extreme (50C)	707.5	7.6	0.010673	2.5
Extreme (40C)	707.5	7.1	0.009994	2.5
Extreme (30C)	707.5	8.2	0.011528	2.5
Extreme (10C)	707.5	7.3	0.010277	2.5
Extreme (0C)	707.5	9.3	0.013200	2.5
Extreme (-10C)	707.5	8.3	0.011770	2.5
Extreme (-20C)	707.5	8.4	0.011905	2.5
Extreme (-30C)	707.5	7.7	0.010954	2.5

Band 12 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	707.5	6.9	0.009804	2.5
3.87	707.5	8.0	0.011315	2.5
4.45	707.5	7.4	0.010398	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	6.5	0.009175	2.5
Extreme (50C)	707.5	5.5	0.007765	2.5
Extreme (40C)	707.5	6.4	0.009110	2.5
Extreme (30C)	707.5	-7.7	-0.010912	2.5
Extreme (10C)	707.5	-8.2	-0.011590	2.5
Extreme (0C)	707.5	2.9	0.004100	2.5
Extreme (-10C)	707.5	-5.2	-0.007292	2.5
Extreme (-20C)	707.5	-8.7	-0.012302	2.5
Extreme (-30C)	707.5	-10.2	-0.014350	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.6 LTE BAND 17

Band 17 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	710.0	9.5	0.013330	2.5
3.87	710.0	9.1	0.012793	2.5
4.45	710.0	7.7	0.010846	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.3	0.013107	2.5
Extreme (50C)	710.0	9.4	0.013205	2.5
Extreme (40C)	710.0	7.8	0.010989	2.5
Extreme (30C)	710.0	8.6	0.012078	2.5
Extreme (10C)	710.0	8.8	0.012336	2.5
Extreme (0C)	710.0	8.5	0.011973	2.5
Extreme (-10C)	710.0	9.3	0.013105	2.5
Extreme (-20C)	710.0	8.7	0.012207	2.5
Extreme (-30C)	710.0	8.0	0.011207	2.5

Band 17 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	710.0	9.9	0.013955	2.5
3.87	710.0	8.4	0.011898	2.5
4.45	710.0	8.7	0.012201	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.5	0.013442	2.5
Extreme (50C)	710.0	8.7	0.012283	2.5
Extreme (40C)	710.0	8.5	0.011949	2.5
Extreme (30C)	710.0	8.8	0.012419	2.5
Extreme (10C)	710.0	8.3	0.011669	2.5
Extreme (0C)	710.0	8.3	0.011639	2.5
Extreme (-10C)	710.0	8.9	0.012570	2.5
Extreme (-20C)	710.0	8.7	0.012193	2.5
Extreme (-30C)	710.0	8.3	0.011758	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.5 LTE BAND 25

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 QPSK, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1882.5	1	0.000531	2.5
3.87	1882.5	8	0.004250	2.5
4.45	1882.5	0	0.000000	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 QPSK, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1882.5	4.8	0.002572	2.5
Extreme (50C)	1882.5	9.4	0.005012	2.5
Extreme (40C)	1882.5	6.6	0.003526	2.5
Extreme (30C)	1882.5	6.3	0.003341	2.5
Extreme (10C)	1882.5	5.2	0.002746	2.5
Extreme (0C)	1882.5	8.5	0.004498	2.5
Extreme (-10C)	1882.5	1.0	0.000540	2.5
Extreme (-20C)	1882.5	2.1	0.001112	2.5
Extreme (-30C)	1882.5	7.0	0.003698	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 16QAM, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1882.5	9.3	0.004944	2.5
3.87	1882.5	7.2	0.003843	2.5
4.45	1882.5	5.8	0.003064	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 16QAM, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1882.5	7.1	0.003777	2.5
Extreme (50C)	1882.5	5.9	0.003133	2.5
Extreme (40C)	1882.5	8.2	0.004348	2.5
Extreme (30C)	1882.5	1.5	0.000785	2.5
Extreme (10C)	1882.5	2.5	0.001335	2.5
Extreme (0C)	1882.5	6.1	0.003262	2.5
Extreme (-10C)	1882.5	5.5	0.002899	2.5
Extreme (-20C)	1882.5	7.5	0.004007	2.5
Extreme (-30C)	1882.5	6.6	0.003495	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.7 LTE BAND 26 A

Band 26A QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	819	8.9	0.010806	2.5
3.87	819	5.7	0.006933	2.5
4.45	819	6.2	0.007614	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	819	8.1	0.009876	2.5
Extreme (50C)	819	1.8	0.002171	2.5
Extreme (40C)	819	2.1	0.002541	2.5
Extreme (30C)	819	6.9	0.008469	2.5
Extreme (10C)	819	5.6	0.006804	2.5
Extreme (0C)	819	6.6	0.008004	2.5
Extreme (-10C)	819	8.7	0.010602	2.5
Extreme (-20C)	819	7.0	0.008493	2.5
Extreme (-30C)	819	4.8	0.005867	2.5

Band 26A 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	819	2.0	0.002465	2.5
3.87	819	6.7	0.008223	2.5
4.45	819	6.0	0.007271	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	819	6.6	0.008004	2.5
Extreme (50C)	819	9.0	0.010967	2.5
Extreme (40C)	819	6.5	0.007924	2.5
Extreme (30C)	819	4.3	0.005192	2.5
Extreme (10C)	819	6.8	0.008349	2.5
Extreme (0C)	819	5.6	0.006893	2.5
Extreme (-10C)	819	8.2	0.010007	2.5
Extreme (-20C)	819	6.4	0.007837	2.5
Extreme (-30C)	819	7.5	0.009172	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.8 LTE BAND 26 B

Band 26B QPSK, (15MHz BANDWIDTH RB size 75 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	8.0	0.009581	2.5
3.87	836.5	6.7	0.007975	2.5
4.45	836.5	8.6	0.010271	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	10.8	0.012890	2.5
Extreme (50C)	836.5	9.4	0.011228	2.5
Extreme (40C)	836.5	6.5	0.007776	2.5
Extreme (30C)	836.5	8.1	0.009653	2.5
Extreme (10C)	836.5	7.5	0.008942	2.5
Extreme (0C)	836.5	9.9	0.011886	2.5
Extreme (-10C)	836.5	1.9	0.002255	2.5
Extreme (-20C)	836.5	8.8	0.010509	2.5
Extreme (-30C)	836.5	7.1	0.008542	2.5

Band 26B 16QAM, (15MHz BANDWIDTH RB size 75 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	836.5	9.6	0.011521	2.5
3.87	836.5	11.8	0.014145	2.5
4.45	836.5	10.7	0.012759	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.1	0.007347	2.5
Extreme (50C)	836.5	8.5	0.010171	2.5
Extreme (40C)	836.5	7.8	0.009289	2.5
Extreme (30C)	836.5	7.2	0.008567	2.5
Extreme (10C)	836.5	6.5	0.007762	2.5
Extreme (0C)	836.5	5.7	0.006810	2.5
Extreme (-10C)	836.5	5.2	0.006264	2.5
Extreme (-20C)	836.5	3.2	0.011237	2.5
Extreme (-30C)	836.5	8.0	0.007292	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication

10.9 LTE BAND 41

Band 41 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2595	8.7	0.003372	2.5
3.87	2595	6.7	0.002566	2.5
4.45	2595	7.5	0.002886	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	7.4	0.002866	2.5
Extreme (50C)	2595	5.0	0.001933	2.5
Extreme (40C)	2595	5.1	0.001954	2.5
Extreme (30C)	2595	4.7	0.001809	2.5
Extreme (10C)	2595	6.8	0.002623	2.5
Extreme (0C)	2595	4.8	0.001861	2.5
Extreme (-10C)	2595	9.1	0.003504	2.5
Extreme (-20C)	2595	10.7	0.004145	2.5
Extreme (-30C)	2595	5.8	0.002240	2.5

Band 41 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2595	8.1	0.003129	2.5
3.87	2595	6.9	0.002667	2.5
4.45	2595	6.1	0.002359	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	7.3	0.002822	2.5
Extreme (50C)	2595	4.4	0.001697	2.5
Extreme (40C)	2595	5.5	0.002127	2.5
Extreme (30C)	2595	4.3	0.001657	2.5
Extreme (10C)	2595	6.8	0.002623	2.5
Extreme (0C)	2595	4.9	0.001880	2.5
Extreme (-10C)	2595	9.5	0.003673	2.5
Extreme (-20C)	2595	11.2	0.004328	2.5
Extreme (-30C)	2595	6.6	0.002540	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

10.8 LTE BAND 66

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1745	12.7	0.00729	2.5
3.87	1745	13.8	0.00790	2.5
4.45	1745	13.5	0.00773	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1745	7.2	0.004101	2.5
Extreme (50C)	1745	4.6	0.002617	2.5
Extreme (40C)	1745	5.5	0.003145	2.5
Extreme (30C)	1745	5.2	0.002997	2.5
Extreme (10C)	1745	6.3	0.003620	2.5
Extreme (0C)	1745	4.7	0.002722	2.5
Extreme (-10C)	1745	9.6	0.005523	2.5
Extreme (-20C)	1745	10.5	0.006025	2.5
Extreme (-30C)	1745	5.8	0.003339	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1745	12.5	0.007160	2.5
3.87	1745	14.1	0.008052	2.5
4.45	1745	13.0	0.007458	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1745	7.5	0.004310	2.5
Extreme (50C)	1745	4.9	0.002823	2.5
Extreme (40C)	1745	4.9	0.002822	2.5
Extreme (30C)	1745	5.1	0.002920	2.5
Extreme (10C)	1745	6.5	0.003721	2.5
Extreme (0C)	1745	4.8	0.002738	2.5
Extreme (-10C)	1745	9.4	0.005367	2.5
Extreme (-20C)	1745	11.3	0.006473	2.5
Extreme (-30C)	1745	5.9	0.003402	2.5

***Note:** Frequency error measurements were made by using the build-in capability of the Wireless Communication Test Set.

11. Peak-to-Average Ratio

11.1 Description of the PAR Measurement

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

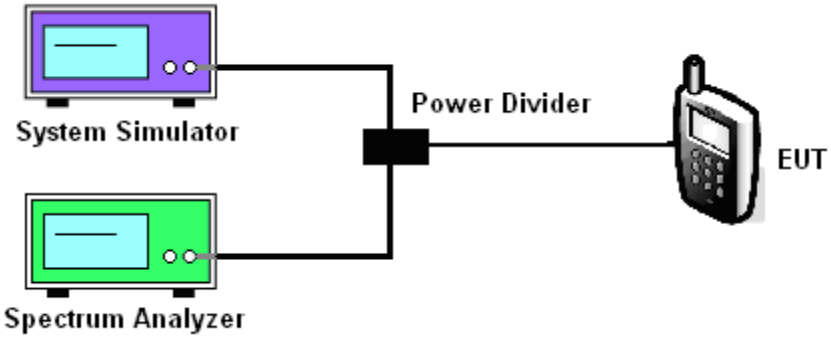
11.2 Measuring Instruments

See list of measuring instruments of this test report.

11.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. For LTE operating modes:
   a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
   b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.

11.4 Test Setup



MODES TESTED

LTE Band 2/4/5/7/12/17/25/26/41/66

Test data reference attachment.

----END OF REPORT----