

FCC CFR47 PART 22H, 24E, 27 CERTIFICATION TEST REPORT FCC ID:2BSSA-K11

Product: 4G Smart watch

Trade Mark: LAGENIO

Model No.: K11

Family Model: L57Q

Report No.: N26041408206E

Issue Date: Jul. 02, 2026

Prepared for

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TEST RESULT CERTIFICATION

Applicant's name: HK LAGENIO TECHNOLOGY CO.,LIMITED

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Manufacturer's Name: SHENZHEN LAGENIO TECHNOLOGY CO.,LIMITED

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Product name.....: 4G Smart watch

Model and/or type reference ...: K11

Trade Mark.....: LAGENIO

Family Model.....: L57Q

Test Sample Number..... S2604170081-1#

Standards.....: FCC CFR 47 Part 22H, Part 24E, Part 27

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 Apr. 14, 2026 ~ Jul. 02, 2026

Date of Issue Jul. 02, 2026

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

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Designation:	4G Smart watch
Trade Mark	LAGENIO
Model Name	K11
Family Model	L57Q
Model Difference	All models have the same circuit and RF module, except for model names.
FCC ID:	2BSSA-K11
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2, 4, 5, 7, 12, 13, 17, 38, 41, 66
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 13 Uplink: 777MHz-787MHz, Downlink: 746MHz-756MHz; LTE FDD Band 17 Uplink: 704MHz-716MHz, Downlink: 734MHz-746MHz; LTE TDD Band 38: Uplink & Downlink: 2570 MHz to 2620 MHz 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
Antenna:	LDS Antenna
Antenna gain:	Band 2: -6.08 dBi, Band 4: -7.22 dBi, Band 5: -10.36 dBi, Band 7: -5.29 dBi, Band 12: -11.19 dBi, Band 13: -11.19 dBi, Band 17: -11.19 dBi, Band 38: -5.18dBi; Band 41: -5.29 dBi, Band 66: -7.22 dBi,
Adapter	N/A
Battery	DC 3.89V, 800mAh, 3.11Wh
Power supply	DC 3.89V from battery or DC 5V from USB Port
Extreme Vol. Limits:	DC 3.31V to DC 4.47V (Nominal DC 3.89V) (Note 1)
HW Version	ZT13-MB-V1.0
SW Version	L57Q-C_DG-ZT13M10-H90-T
** Note1: The High Voltage DC 4.47V and Low Voltage 3.31V 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:2BSSA-K11** filing to comply with the FCC Part 22H&24E&27

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, 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.

No. 24 Xinfa East Road, Xiangshan Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong, People's Republic of 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 2/4/5/7/12/13/17/38/41/66

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

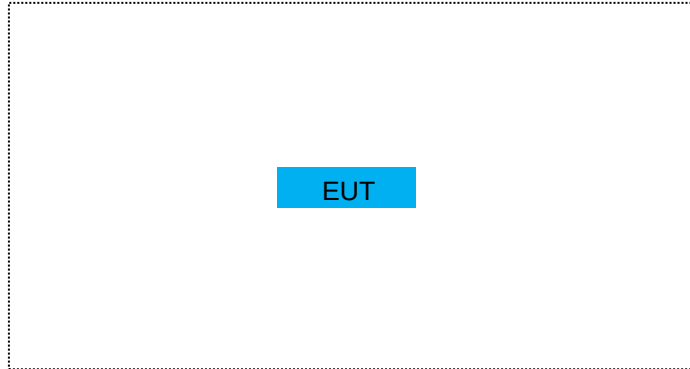
Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	4G Smart watch	K11	FCC ID: 2BSSA-K11	EUT

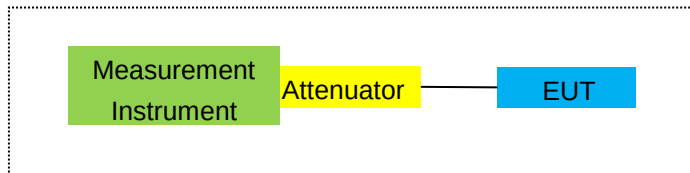
*Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.*

2.4 TEST SETUP

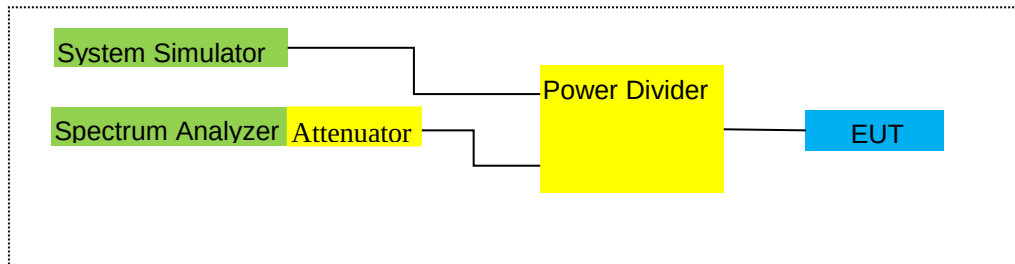
For Radiated Test Cases



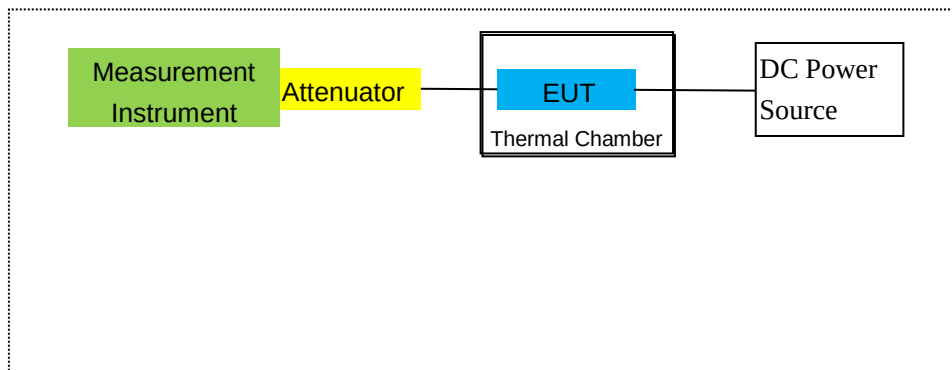
For Conducted Output Power



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	2026.04.08	2027.04.07	1 year
2	Test Receiver	R&S	ESPI3	101417	2025/7/23	2026/7/22	1 year
3	Bilog Antenna	ETS	3142E	00214344	2024/6/1	2027/5/30	3 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	2026.04.08	2027.04.07	1 year
8	Loop Antenna	ARA	PLA-1030/B	1029	2026.04.08	2027.04.07	1 year
9	Power Meter	R&S	NRVS	100696	2026.04.08	2027.04.07	1 year
10	Power Sensor	R&S	URV5-Z4	0395.1619.05	2026.04.08	2027.04.07	1 year
11	Test Cable	N/A	R-01	N/A	2023.06.16	2026.06.15	3 year
12	Test Cable	N/A	R-02	N/A	2023.06.16	2026.06.15	3 year
13	Test Cable	N/A	R-03	N/A	2023.06.16	2026.06.15	3 year
14	Test Receiver	R&S	ESCI	101160	2026.04.08	2027.04.07	1 year
15	LISN	R&S	ENV216	101313	2026.04.08	2027.04.07	1 year
16	LISN	EMCO	3816/2	00042990	2026.04.08	2027.04.07	1 year
17	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2026.04.08	2027.04.07	1 year
18	Passive Voltage Probe	R&S	ESH2-Z3	100196	2026.04.08	2027.04.07	1 year
19	Test Cable	N/A	C01	N/A	2024.05.06	2027.05.05	3 year
20	Test Cable	N/A	C02	N/A	2024.05.06	2027.05.05	3 year
21	Test Cable	N/A	C03	N/A	2024.05.06	2027.05.05	3 year
22	Attenuator	MCE	24-10-34	BN9258	2026.04.08	2027.04.07	1 year
23	Spectrum Analyzer	agilent	e4440a	us44300399	2026.04.08	2027.04.07	1 year
24	test receiver	R&S	ESCI	a0304218	2026.04.08	2027.04.07	1 year
25	Communication Tester	R&S	CMU200	A0304247	2026.04.08	2027.04.07	1 year
26	Thermal Chamber	Ten Billion	TTC-B3C	TBN-960502	2026.04.08	2027.04.07	1 year

27	DC Power Source	N/A	PS-6005D	20170402923	2024.05.06	2027.05.05	3 year
28	MXG Vector Signal Generator	Agilent	N5182A	MY47070317	2026.04.08	2027.04.07	1 year
29	Communication Tester	R&S	CMW500	148500	2025.05.06 2026.04.27	2026.05.05 2027.04.26	1 year
30	Log-Periodic Antenna	SCHWARZBECK	VULB 9168	1742	2025/11/1	2026/10/31	1 year
31	Horn Antenna	SCHWARZBECK	BBHA 9120D	2816	2024.05.18	2027.05.17	3 year
32	PSG Analog Signal Generator	Agilent	E8257D	MY51110112	2025/5/23 2026/4/27	2026/5/22 2027/4/26	1 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	MWRFTtest	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
64 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".

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 2/4/5/7/12/13/17/38/41/66

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,
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 than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. 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;

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 2/4/5/7/12/13/17/38/41/66

RESULTS

Test data reference attachment.

7. OUT OF BAND EMISSIONS

RULE PART(S)

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

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 2/4/5/7/12/13/17/38/41/66

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

LIMITS:

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232 (c) Mobile and portable stations are limited to 2 watts EIRP.

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.

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 2/4/5/7/12/13/17/38/41/66

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		
									Limit	
1.4MHz Band QPSK	1/#Mid	1850.7	-4.22	3.76	28.24	20.26	106.170	Horizontal	2	Pass
		1880	-4.03	3.91	28.22	20.28	106.660	Horizontal	2	Pass
		1909.3	-3.94	3.93	28.20	20.33	107.895	Horizontal	2	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-4.28	3.77	28.23	20.18	104.232	Horizontal	2	Pass
		1880	-4.13	3.91	28.24	20.20	104.713	Horizontal	2	Pass
		1908.5	-4.00	3.94	28.25	20.31	107.399	Horizontal	2	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-4.17	3.77	28.31	20.37	108.893	Horizontal	2	Pass
		1880	-3.79	3.91	28.22	20.52	112.720	Horizontal	2	Pass
		1907.5	-3.72	3.94	28.20	20.54	113.240	Horizontal	2	Pass
10.0MHz Band QPSK	1/#Mid	1855	-4.03	3.79	28.33	20.51	112.460	Horizontal	2	Pass
		1880	-3.73	3.95	28.22	20.54	113.240	Horizontal	2	Pass
		1905	-3.62	3.97	28.19	20.60	114.815	Horizontal	2	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-3.99	3.79	28.34	20.56	113.763	Horizontal	2	Pass
		1880	-3.78	3.95	28.22	20.49	111.944	Horizontal	2	Pass
		1902.5	-3.64	3.97	28.18	20.57	114.025	Horizontal	2	Pass
20.0MHz Band QPSK	1/#Mid	1860	-3.98	3.81	28.35	20.56	113.763	Horizontal	2	Pass
		1880	-3.65	3.96	28.22	20.61	115.080	Horizontal	2	Pass
		1900	-3.59	4.00	28.16	20.57	114.025	Horizontal	2	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-5.39	3.76	28.24	19.09	81.096	Vertical	2	Pass
		1880	-4.85	3.91	28.22	19.46	88.308	Vertical	2	Pass
		1909.3	-5.05	3.93	28.20	19.22	83.560	Vertical	2	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-4.57	3.77	28.23	19.89	97.499	Vertical	2	Pass
		1880	-4.63	3.91	28.24	19.70	93.325	Vertical	2	Pass
		1908.5	-5.11	3.94	28.25	19.20	83.176	Vertical	2	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-5.35	3.77	28.31	19.19	82.985	Vertical	2	Pass
		1880	-4.81	3.91	28.22	19.50	89.125	Vertical	2	Pass
		1907.5	-4.76	3.94	28.20	19.50	89.125	Vertical	2	Pass
10.0MHz Band QPSK	1/#Mid	1855	-5.51	3.79	28.33	19.03	79.983	Vertical	2	Pass
		1880	-4.55	3.95	28.22	19.72	93.756	Vertical	2	Pass
		1905	-4.39	3.97	28.19	19.83	96.161	Vertical	2	Pass
15.0MHz	1/#Mid	1857.5	-5.25	3.79	28.34	19.30	85.114	Vertical	2	Pass

Band QPSK		1880	-5.19	3.95	28.22	19.08	80.910	Vertical	2	Pass
		1902.5	-5.15	3.97	28.18	19.06	80.538	Vertical	2	Pass
20.0MHz	1/#Mid	1860	-4.59	3.81	28.35	19.95	98.855	Vertical	2	Pass
Band		1880	-5.11	3.96	28.22	19.15	82.224	Vertical	2	Pass
QPSK		1900	-5.00	4.00	28.16	19.16	82.414	Vertical	2	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	Polarization Of Max. ERP		
							Average		Limit	
							(mW)		(W)	
1.4MHz Band 16 QAM	1/##Mid	1850.7	-5.34	3.76	28.24	19.14	82.035	Horizontal	2	Pass
		1880	-4.81	3.91	28.22	19.50	89.125	Horizontal	2	Pass
		1909.3	-4.74	3.93	28.20	19.53	89.743	Horizontal	2	Pass
3.0MHz Band 16 QAM	1/##Mid	1851.5	-4.84	3.77	28.23	19.62	91.622	Horizontal	2	Pass
		1880	-4.92	3.91	28.24	19.41	87.297	Horizontal	2	Pass
		1908.5	-5.13	3.94	28.25	19.18	82.794	Horizontal	2	Pass
5.0MHz Band 16 QAM	1/##Mid	1852.5	-4.78	3.77	28.31	19.76	94.624	Horizontal	2	Pass
		1880	-4.69	3.91	28.22	19.62	91.622	Horizontal	2	Pass
		1907.5	-4.37	3.94	28.20	19.89	97.499	Horizontal	2	Pass
10.0MHz Band 16 QAM	1/##Mid	1855	-4.83	3.79	28.33	19.71	93.541	Horizontal	2	Pass
		1880	-4.82	3.95	28.22	19.45	88.105	Horizontal	2	Pass
		1905	-4.29	3.97	28.19	19.93	98.401	Horizontal	2	Pass
15.0MHz Band 16 QAM	1/##Mid	1857.5	-4.81	3.79	28.34	19.74	94.189	Horizontal	2	Pass
		1880	-4.60	3.95	28.22	19.67	92.683	Horizontal	2	Pass
		1902.5	-4.56	3.97	28.18	19.65	92.257	Horizontal	2	Pass
20.0MHz Band 16 QAM	1/##Mid	1860	-4.70	3.81	28.35	19.84	96.383	Horizontal	2	Pass
		1880	-4.40	3.96	28.22	19.86	96.828	Horizontal	2	Pass
		1900	-4.22	4.00	28.16	19.94	98.628	Horizontal	2	Pass
1.4MHz Band 16 QAM	1/##Mid	1850.7	-5.91	3.76	28.24	18.57	71.945	Vertical	2	Pass
		1880	-5.83	3.91	28.22	18.48	70.469	Vertical	2	Pass
		1909.3	-5.62	3.93	28.20	18.65	73.282	Vertical	2	Pass
3.0MHz Band 16 QAM	1/##Mid	1851.5	-5.75	3.77	28.23	18.71	74.302	Vertical	2	Pass
		1880	-5.46	3.91	28.24	18.87	77.090	Vertical	2	Pass
		1908.5	-6.08	3.94	28.25	18.23	66.527	Vertical	2	Pass
5.0MHz Band 16 QAM	1/##Mid	1852.5	-5.69	3.77	28.31	18.85	76.736	Vertical	2	Pass
		1880	-5.51	3.91	28.22	18.80	75.858	Vertical	2	Pass
		1907.5	-6.06	3.94	28.20	18.20	66.069	Vertical	2	Pass
10.0MHz Band 16 QAM	1/##Mid	1855	-6.09	3.79	28.33	18.45	69.984	Vertical	2	Pass
		1880	-5.96	3.95	28.22	18.31	67.764	Vertical	2	Pass
		1905	-5.96	3.97	28.19	18.26	66.988	Vertical	2	Pass
15.0MHz Band 16 QAM	1/##Mid	1857.5	-6.45	3.79	28.34	18.10	64.565	Vertical	2	Pass
		1880	-6.08	3.95	28.22	18.19	65.917	Vertical	2	Pass
		1902.5	-6.03	3.97	28.18	18.18	65.766	Vertical	2	Pass

20.0MHz		1860	-6.00	3.81	28.35	18.54	71.450	Vertical	2	Pass
Band 16	1/#Mid	1880	-5.95	3.96	28.22	18.31	67.764	Vertical	2	Pass
QAM		1900	-5.63	4.00	28.16	18.53	71.285	Vertical	2	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		
									Limit	
1.4MHz Band QPSK	1/#Mid	1710.7	-4.13	3.12	27.58	20.33	107.895	Horizontal	1	Pass
		1732.5	-4.12	3.27	27.61	20.22	105.196	Horizontal	1	Pass
		1754.3	-4.10	3.29	27.63	20.24	105.682	Horizontal	1	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-4.30	3.13	27.61	20.18	104.232	Horizontal	1	Pass
		1732.5	-4.22	3.27	27.61	20.12	102.802	Horizontal	1	Pass
		1753.5	-4.14	3.30	27.62	20.18	104.232	Horizontal	1	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-4.07	3.13	27.63	20.43	110.408	Horizontal	1	Pass
		1732.5	-3.97	3.27	27.61	20.37	108.893	Horizontal	1	Pass
		1752.5	-3.85	3.30	27.60	20.45	110.917	Horizontal	1	Pass
10.0MHz Band QPSK	1/#Mid	1715	-4.01	3.15	27.64	20.48	111.686	Horizontal	1	Pass
		1732.5	-3.78	3.31	27.61	20.52	112.720	Horizontal	1	Pass
		1750	-3.80	3.33	27.59	20.46	111.173	Horizontal	1	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-4.02	3.15	27.65	20.48	111.686	Horizontal	1	Pass
		1732.5	-3.86	3.31	27.61	20.44	110.662	Horizontal	1	Pass
		1747.5	-3.80	3.33	27.57	20.44	110.662	Horizontal	1	Pass
20.0MHz Band QPSK	1/#Mid	1720	-3.96	3.17	27.66	20.53	112.980	Horizontal	1	Pass
		1732.5	-3.79	3.32	27.61	20.50	112.202	Horizontal	1	Pass
		1745	-3.73	3.36	27.56	20.47	111.429	Horizontal	1	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-4.93	3.12	27.58	19.53	89.743	Vertical	1	Pass
		1732.5	-5.31	3.27	27.61	19.03	79.983	Vertical	1	Pass
		1754.3	-4.91	3.29	27.63	19.43	87.700	Vertical	1	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-4.83	3.13	27.61	19.65	92.257	Vertical	1	Pass
		1732.5	-4.36	3.27	27.61	19.98	99.541	Vertical	1	Pass
		1753.5	-5.20	3.30	27.62	19.12	81.658	Vertical	1	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-4.69	3.13	27.63	19.81	95.719	Vertical	1	Pass
		1732.5	-4.53	3.27	27.61	19.81	95.719	Vertical	1	Pass
		1752.5	-4.76	3.30	27.60	19.54	89.950	Vertical	1	Pass
10.0MHz Band QPSK	1/#Mid	1715	-5.26	3.15	27.64	19.23	83.753	Vertical	1	Pass
		1732.5	-4.75	3.31	27.61	19.55	90.157	Vertical	1	Pass
		1750	-4.93	3.33	27.59	19.33	85.704	Vertical	1	Pass

15.0MHz	1/#Mid	1717.5	-5.46	3.15	27.65	19.04	80.168	Vertical	1	Pass
Band		1732.5	-5.03	3.31	27.61	19.27	84.528	Vertical	1	Pass
QPSK		1747.5	-5.19	3.33	27.57	19.05	80.353	Vertical	1	Pass
20.0MHz	1/#Mid	1720	-5.42	3.17	27.66	19.07	80.724	Vertical	1	Pass
Band		1732.5	-4.37	3.32	27.61	19.92	98.175	Vertical	1	Pass
QPSK		1745	-4.98	3.36	27.56	19.22	83.560	Vertical	1	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		
									Limit	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-4.94	3.12	27.58	19.52	89.536	Horizontal	1	Pass
		1732.5	-4.79	3.27	27.61	19.55	90.157	Horizontal	1	Pass
		1754.3	-4.79	3.29	27.63	19.55	90.157	Horizontal	1	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-4.88	3.13	27.61	19.60	91.201	Horizontal	1	Pass
		1732.5	-5.01	3.27	27.61	19.33	85.704	Horizontal	1	Pass
		1753.5	-5.23	3.30	27.62	19.09	81.096	Horizontal	1	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-4.71	3.13	27.63	19.79	95.280	Horizontal	1	Pass
		1732.5	-4.67	3.27	27.61	19.67	92.683	Horizontal	1	Pass
		1752.5	-4.36	3.30	27.60	19.94	98.628	Horizontal	1	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-4.78	3.15	27.64	19.71	93.541	Horizontal	1	Pass
		1732.5	-4.97	3.31	27.61	19.33	85.704	Horizontal	1	Pass
		1750	-4.35	3.33	27.59	19.91	97.949	Horizontal	1	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-4.58	3.15	27.65	19.92	98.175	Horizontal	1	Pass
		1732.5	-4.64	3.31	27.61	19.66	92.470	Horizontal	1	Pass
		1747.5	-4.66	3.33	27.57	19.58	90.782	Horizontal	1	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-4.53	3.17	27.66	19.96	99.083	Horizontal	1	Pass
		1732.5	-4.54	3.32	27.61	19.75	94.406	Horizontal	1	Pass
		1745	-4.35	3.36	27.56	19.85	96.605	Horizontal	1	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-5.58	3.12	27.58	18.88	77.268	Vertical	1	Pass
		1732.5	-5.84	3.27	27.61	18.50	70.795	Vertical	1	Pass
		1754.3	-6.08	3.29	27.63	18.26	66.988	Vertical	1	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-5.77	3.13	27.61	18.71	74.302	Vertical	1	Pass
		1732.5	-5.67	3.27	27.61	18.67	73.621	Vertical	1	Pass
		1753.5	-5.71	3.30	27.62	18.61	72.611	Vertical	1	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-6.33	3.13	27.63	18.17	65.615	Vertical	1	Pass
		1732.5	-6.04	3.27	27.61	18.30	67.608	Vertical	1	Pass
		1752.5	-5.65	3.30	27.60	18.65	73.282	Vertical	1	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-6.46	3.15	27.64	18.03	63.533	Vertical	1	Pass
		1732.5	-5.80	3.31	27.61	18.50	70.795	Vertical	1	Pass
		1750	-5.93	3.33	27.59	18.33	68.077	Vertical	1	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-6.36	3.15	27.65	18.14	65.163	Vertical	1	Pass
		1732.5	-6.28	3.31	27.61	18.02	63.387	Vertical	1	Pass
		1747.5	-6.25	3.33	27.57	17.99	62.951	Vertical	1	Pass

20.0MHz	1/#Mid	1720	-5.82	3.17	27.66	18.67	73.621	Vertical	1	Pass
Band 16		1732.5	-6.00	3.32	27.61	18.29	67.453	Vertical	1	Pass
QAM		1745	-5.66	3.36	27.56	18.54	71.450	Vertical	1	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		
										Limit	
1.4MHz Band QPSK	3/#Mid	824.7	5.17	2.01	19.68	2.15	20.69	117.220	Horizontal	7	Pass
		836.5	5.05	2.01	19.77	2.15	20.66	116.413	Horizontal	7	Pass
		848.3	4.85	2.02	19.82	2.15	20.50	112.202	Horizontal	7	Pass
3.0MHz Band QPSK	1/#Mid	825.5	4.94	2.01	19.70	2.15	20.48	111.686	Horizontal	7	Pass
		836.5	4.84	2.01	19.77	2.15	20.45	110.917	Horizontal	7	Pass
		847.5	4.71	2.02	19.81	2.15	20.35	108.393	Horizontal	7	Pass
5.0MHz Band QPSK	1/#Mid	826.5	5.22	2.01	19.71	2.15	20.77	119.399	Horizontal	7	Pass
		836.5	5.10	2.01	19.77	2.15	20.71	117.761	Horizontal	7	Pass
		846.5	4.94	2.02	19.79	2.15	20.56	113.763	Horizontal	7	Pass
10.0MHz Band QPSK	1/#Mid	829	5.24	2.01	19.73	2.15	20.81	120.504	Horizontal	7	Pass
		836.5	5.19	2.01	19.77	2.15	20.80	120.226	Horizontal	7	Pass
		844	5.09	2.02	19.78	2.15	20.70	117.490	Horizontal	7	Pass
1.4MHz Band QPSK	1/#Mid	824.7	3.76	2.01	19.68	2.15	19.28	84.723	Vertical	7	Pass
		836.5	3.80	2.01	19.77	2.15	19.41	87.297	Vertical	7	Pass
		848.3	4.13	2.02	19.82	2.15	19.78	95.060	Vertical	7	Pass
3.0MHz Band QPSK	1/#Mid	825.5	4.44	2.01	19.70	2.15	19.98	99.541	Vertical	7	Pass
		836.5	3.93	2.01	19.77	2.15	19.54	89.950	Vertical	7	Pass
		847.5	3.95	2.02	19.81	2.15	19.59	90.991	Vertical	7	Pass
5.0MHz Band QPSK	1/#Mid	826.5	3.68	2.01	19.71	2.15	19.23	83.753	Vertical	7	Pass
		836.5	3.88	2.01	19.77	2.15	19.49	88.920	Vertical	7	Pass
		846.5	3.95	2.02	19.79	2.15	19.57	90.573	Vertical	7	Pass
10.0MHz Band QPSK	1/#Mid	829	3.54	2.01	19.73	2.15	19.11	81.470	Vertical	7	Pass
		836.5	4.12	2.01	19.77	2.15	19.73	93.972	Vertical	7	Pass
		844	4.35	2.02	19.78	2.15	19.96	99.083	Vertical	7	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		
										Limit	
1.4MHz Band 16 QAM	3/#Mid	824.7	4.32	2.01	19.68	2.15	19.84	96.383	Horizontal	7	Pass
		836.5	4.25	2.01	19.77	2.15	19.86	96.828	Horizontal	7	Pass
		848.3	4.09	2.02	19.82	2.15	19.74	94.189	Horizontal	7	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	4.40	2.01	19.70	2.15	19.94	98.628	Horizontal	7	Pass
		836.5	4.11	2.01	19.77	2.15	19.72	93.756	Horizontal	7	Pass
		847.5	3.59	2.02	19.81	2.15	19.23	83.753	Horizontal	7	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	4.72	2.01	19.71	2.15	20.27	106.414	Horizontal	7	Pass
		836.5	4.49	2.01	19.77	2.15	20.10	102.329	Horizontal	7	Pass
		846.5	4.24	2.02	19.79	2.15	19.86	96.828	Horizontal	7	Pass
10.0MHz Band 16 QAM	1/#Mid	829	4.72	2.01	19.73	2.15	20.29	106.905	Horizontal	7	Pass
		836.5	4.44	2.01	19.77	2.15	20.05	101.158	Horizontal	7	Pass
		844	3.98	2.02	19.78	2.15	19.59	90.991	Horizontal	7	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	3.46	2.01	19.68	2.15	18.98	79.068	Vertical	7	Pass
		836.5	4.37	2.01	19.77	2.15	19.98	99.541	Vertical	7	Pass
		848.3	3.89	2.02	19.82	2.15	19.54	89.950	Vertical	7	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	3.77	2.01	19.70	2.15	19.31	85.310	Vertical	7	Pass
		836.5	2.71	2.01	19.77	2.15	18.32	67.920	Vertical	7	Pass
		847.5	3.38	2.02	19.81	2.15	19.02	79.799	Vertical	7	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	3.42	2.01	19.71	2.15	18.97	78.886	Vertical	7	Pass
		836.5	2.96	2.01	19.77	2.15	18.57	71.945	Vertical	7	Pass
		846.5	2.38	2.02	19.79	2.15	18.00	63.096	Vertical	7	Pass
10.0MHz Band 16 QAM	1/#Mid	829	2.93	2.01	19.73	2.15	18.50	70.795	Vertical	7	Pass
		836.5	2.80	2.01	19.77	2.15	18.41	69.343	Vertical	7	Pass
		844	3.20	2.02	19.78	2.15	18.81	76.033	Vertical	7	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		
									Limit	
5.0MHz Band QPSK	1/#Mid	2502.5	-2.41	4.54	27.75	20.80	120.226	Horizontal	2	Pass
		2535	-2.24	4.69	27.72	20.79	119.950	Horizontal	2	Pass
		2567.5	-2.17	4.71	27.71	20.83	121.060	Horizontal	2	Pass
10.0MHz Band QPSK	1/#Mid	2505	-2.34	4.55	27.76	20.87	122.180	Horizontal	2	Pass
		2535	-2.15	4.69	27.72	20.88	122.462	Horizontal	2	Pass
		2565	-2.07	4.72	27.70	20.91	123.310	Horizontal	2	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-2.35	4.55	27.77	20.87	122.180	Horizontal	2	Pass
		2535	-2.21	4.69	27.72	20.82	120.781	Horizontal	2	Pass
		2562.5	-2.11	4.72	27.69	20.86	121.899	Horizontal	2	Pass
20.0MHz Band QPSK	1/#Mid	2510	-2.29	4.57	27.78	20.92	123.595	Horizontal	2	Pass
		2535	-2.11	4.73	27.72	20.88	122.462	Horizontal	2	Pass
		2560	-2.07	4.75	27.68	20.86	121.899	Horizontal	2	Pass
5.0MHz Band QPSK	1/#Mid	2502.5	-4.21	4.54	27.75	19.00	79.433	Vertical	2	Pass
		2535	-3.98	4.69	27.72	19.05	80.353	Vertical	2	Pass
		2567.5	-3.33	4.71	27.71	19.67	92.683	Vertical	2	Pass
10.0MHz Band QPSK	1/#Mid	2505	-3.61	4.55	27.76	19.60	91.201	Vertical	2	Pass
		2535	-3.27	4.69	27.72	19.76	94.624	Vertical	2	Pass
		2565	-3.88	4.72	27.70	19.10	81.283	Vertical	2	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-3.51	4.55	27.77	19.71	93.541	Vertical	2	Pass
		2535	-3.21	4.69	27.72	19.82	95.940	Vertical	2	Pass
		2562.5	-3.99	4.72	27.69	18.98	79.068	Vertical	2	Pass
20.0MHz Band QPSK	1/#Mid	2510	-3.30	4.57	27.78	19.91	97.949	Vertical	2	Pass
		2535	-3.76	4.73	27.72	19.23	83.753	Vertical	2	Pass
		2560	-3.94	4.75	27.68	18.99	79.250	Vertical	2	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		
									Limit	
5.0MHz Band 16 QAM	1/#Mid	2502.5	-3.10	4.54	27.75	20.11	102.565	Horizontal	2	Pass
		2535	-2.79	4.69	27.72	20.24	105.682	Horizontal	2	Pass
		2567.5	-2.87	4.71	27.71	20.13	103.039	Horizontal	2	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-2.99	4.55	27.76	20.22	105.196	Horizontal	2	Pass
		2535	-3.00	4.69	27.72	20.03	100.693	Horizontal	2	Pass
		2565	-3.27	4.72	27.70	19.71	93.541	Horizontal	2	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-3.17	4.55	27.77	20.05	101.158	Horizontal	2	Pass
		2535	-3.14	4.69	27.72	19.89	97.499	Horizontal	2	Pass
		2562.5	-2.75	4.72	27.69	20.22	105.196	Horizontal	2	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-3.05	4.57	27.78	20.16	103.753	Horizontal	2	Pass
		2535	-2.72	4.73	27.72	20.27	106.414	Horizontal	2	Pass
		2560	-2.82	4.75	27.68	20.11	102.565	Horizontal	2	Pass
5.0MHz Band 16 QAM	1/#Mid	2502.5	-4.47	4.54	27.75	18.74	74.817	Vertical	2	Pass
		2535	-4.55	4.69	27.72	18.48	70.469	Vertical	2	Pass
		2567.5	-3.25	4.71	27.71	19.75	94.406	Vertical	2	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-3.36	4.55	27.76	19.85	96.605	Vertical	2	Pass
		2535	-3.80	4.69	27.72	19.23	83.753	Vertical	2	Pass
		2565	-3.84	4.72	27.70	19.14	82.035	Vertical	2	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-3.74	4.55	27.77	19.48	88.716	Vertical	2	Pass
		2535	-4.00	4.69	27.72	19.03	79.983	Vertical	2	Pass
		2562.5	-4.18	4.72	27.69	18.79	75.683	Vertical	2	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-4.73	4.57	27.78	18.48	70.469	Vertical	2	Pass
		2535	-4.48	4.73	27.72	18.51	70.958	Vertical	2	Pass
		2560	-3.59	4.75	27.68	19.34	85.901	Vertical	2	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								Conclusio n
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
										Limit	
1.4MHz	1/#Mid	699.7	5.54	1.91	19.21	2.15	20.69	117.220	Vertical	3	Pass
Band		707.5	5.46	1.91	19.26	2.15	20.66	116.413	Vertical	3	Pass
QPSK		715.3	5.24	1.93	19.34	2.15	20.50	112.202	Vertical	3	Pass
3.0MHz	1/#Mid	700.5	5.33	1.91	19.21	2.15	20.48	111.686	Vertical	3	Pass
Band		707.5	5.25	1.91	19.26	2.15	20.45	110.917	Vertical	3	Pass
QPSK		714.5	5.09	1.93	19.34	2.15	20.35	108.393	Vertical	3	Pass
5.0MHz	1/#Mid	701.5	5.60	1.91	19.23	2.15	20.77	119.399	Vertical	3	Pass
Band		707.5	5.51	1.91	19.26	2.15	20.71	117.761	Vertical	3	Pass
QPSK		713.5	5.30	1.92	19.33	2.15	20.56	113.763	Vertical	3	Pass
10.0MHz	1/#Mid	704	5.62	1.91	19.25	2.15	20.81	120.504	Vertical	3	Pass
Band		707.5	5.60	1.91	19.26	2.15	20.80	120.226	Vertical	3	Pass
QPSK		711	5.45	1.92	19.32	2.15	20.70	117.490	Vertical	3	Pass
1.4MHz	1/#Mid	699.7	4.46	1.91	19.21	2.15	19.61	91.411	Horizontal	3	Pass
Band		707.5	4.77	1.91	19.26	2.15	19.97	99.312	Horizontal	3	Pass
QPSK		715.3	4.61	1.93	19.34	2.15	19.87	97.051	Horizontal	3	Pass
3.0MHz	1/#Mid	700.5	3.84	1.91	19.21	2.15	18.99	79.250	Horizontal	3	Pass
Band		707.5	3.88	1.91	19.26	2.15	19.08	80.910	Horizontal	3	Pass
QPSK		714.5	4.02	1.93	19.34	2.15	19.28	84.723	Horizontal	3	Pass
5.0MHz	1/#Mid	701.5	4.39	1.91	19.23	2.15	19.56	90.365	Horizontal	3	Pass
Band		707.5	4.07	1.91	19.26	2.15	19.27	84.528	Horizontal	3	Pass
QPSK		713.5	4.40	1.92	19.33	2.15	19.66	92.470	Horizontal	3	Pass
10.0MHz	1/#Mid	704	4.62	1.91	19.25	2.15	19.81	95.719	Horizontal	3	Pass
Band		707.5	4.29	1.91	19.26	2.15	19.49	88.920	Horizontal	3	Pass
QPSK		711	4.48	1.92	19.32	2.15	19.73	93.972	Horizontal	3	Pass

		Radiated Power (ERP) for Band 12									
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Correction	Max. EIRP	Max. EIRP	Polarization Of Max. ERP		
						(dB)	Average	Average		Limit	
							(dBm)	(mW)		(W)	
1.4MHz Band 16 QAM	1/##Mid	699.7	5.34	1.91	19.21	2.15	20.49	111.944	Vertical	3	Pass
		707.5	5.26	1.91	19.26	2.15	20.46	111.173	Vertical	3	Pass
		715.3	5.04	1.93	19.34	2.15	20.30	107.152	Vertical	3	Pass
3.0MHz Band 16 QAM	1/##Mid	700.5	5.13	1.91	19.21	2.15	20.28	106.660	Vertical	3	Pass
		707.5	5.05	1.91	19.26	2.15	20.25	105.925	Vertical	3	Pass
		714.5	4.89	1.93	19.34	2.15	20.15	103.514	Vertical	3	Pass
5.0MHz Band 16 QAM	1/##Mid	701.5	5.40	1.91	19.23	2.15	20.57	114.025	Vertical	3	Pass
		707.5	5.31	1.91	19.26	2.15	20.51	112.460	Vertical	3	Pass
		713.5	5.10	1.92	19.33	2.15	20.36	108.643	Vertical	3	Pass
10.0MHz Band 16 QAM	1/##Mid	704	5.42	1.91	19.25	2.15	20.61	115.080	Vertical	3	Pass
		707.5	5.40	1.91	19.26	2.15	20.60	114.815	Vertical	3	Pass
		711	5.25	1.92	19.32	2.15	20.50	112.202	Vertical	3	Pass
1.4MHz Band 16 QAM	1/##Mid	699.7	3.98	1.91	19.21	2.15	19.13	81.846	Horizontal	3	Pass
		707.5	4.00	1.91	19.26	2.15	19.20	83.176	Horizontal	3	Pass
		715.3	4.05	1.93	19.34	2.15	19.31	85.310	Horizontal	3	Pass
3.0MHz Band 16 QAM	1/##Mid	700.5	4.04	1.91	19.21	2.15	19.19	82.985	Horizontal	3	Pass
		707.5	4.15	1.91	19.26	2.15	19.35	86.099	Horizontal	3	Pass
		714.5	3.88	1.93	19.34	2.15	19.14	82.035	Horizontal	3	Pass
5.0MHz Band 16 QAM	1/##Mid	701.5	4.38	1.91	19.23	2.15	19.55	90.157	Horizontal	3	Pass
		707.5	4.22	1.91	19.26	2.15	19.42	87.498	Horizontal	3	Pass
		713.5	4.38	1.92	19.33	2.15	19.64	92.045	Horizontal	3	Pass
10.0MHz Band 16 QAM	1/##Mid	704	3.86	1.91	19.25	2.15	19.05	80.353	Horizontal	3	Pass
		707.5	3.63	1.91	19.26	2.15	18.83	76.384	Horizontal	3	Pass
		711	3.79	1.92	19.32	2.15	19.04	80.168	Horizontal	3	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 13

Radiated Power (ERP) for Band 13											
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Correction	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	Limit	
						(dB)	Average	Average			
							(dBm)	(mW)			
5.0MHz Band QPSK	25/0	779.5	5.04	1.91	19.23	2.15	20.21	104.95	Horizontal	3	Pass
		782	4.89	1.91	19.26	2.15	20.09	102.09	Horizontal	3	Pass
		784.5	3.81	1.92	19.33	2.15	19.07	80.72	Horizontal	3	Pass
10.0MHz Band QPSK	50/0	782	4.11	1.91	19.25	2.15	19.30	85.11	Horizontal	3	Pass
			5.19	1.91	19.26	2.15	20.39	109.40	Horizontal	3	Pass
			3.29	1.92	19.32	2.15	18.54	71.45	Horizontal	3	Pass
5.0MHz Band QPSK	25/0	779.5	3.72	1.91	19.23	2.15	18.89	77.45	Vertical	3	Pass
		782	3.91	1.91	19.26	2.15	19.11	81.47	Vertical	3	Pass
		784.5	3.26	1.92	19.33	2.15	18.52	71.12	Vertical	3	Pass
10.0MHz Band QPSK	50/0	782	3.39	1.91	19.25	2.15	18.58	72.11	Vertical	3	Pass
			3.71	1.91	19.26	2.15	18.91	77.80	Vertical	3	Pass
			3.65	1.92	19.32	2.15	18.90	77.62	Vertical	3	Pass

Radiated Power (ERP) for Band 13											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level	Cable Loss	Antenna Factor	Correction	Max. EIRP	Max. EIRP	Polarization		
			(dBm)	(dBm)	(dB)	(dB)	Average	Average	Of Max. ERP		
							(dBm)	(mW)			
5.0MHz Band QPSK	25/0	779.5	4.96	1.91	19.23	2.15	20.13	103.04	Horizontal	3	Pass
		782	3.41	1.91	19.26	2.15	18.61	72.61	Horizontal	3	Pass
		784.5	3.62	1.92	19.33	2.15	18.88	77.27	Horizontal	3	Pass
10.0MHz Band QPSK	50/0	782	3.44	1.91	19.25	2.15	18.63	72.95	Horizontal	3	Pass
			4.95	1.91	19.26	2.15	20.15	103.51	Horizontal	3	Pass
			3.54	1.92	19.32	2.15	18.79	75.68	Horizontal	3	Pass
5.0MHz Band QPSK	25/0	779.5	4.09	1.91	19.23	2.15	19.26	84.33	Vertical	3	Pass
		782	3.72	1.91	19.26	2.15	18.92	77.98	Vertical	3	Pass
		784.5	3.52	1.92	19.33	2.15	18.78	75.51	Vertical	3	Pass
10.0MHz Band QPSK	50/0	782	3.43	1.91	19.25	2.15	18.62	72.78	Vertical	3	Pass
			3.58	1.91	19.26	2.15	18.78	75.51	Vertical	3	Pass
			3.43	1.92	19.32	2.15	18.68	73.79	Vertical	3	Pass

Note:

ERP=EIRP-2.15

SG Level= Signal generator output

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

8.8 LTE BAND 17

		Radiated Power (ERP) for Band 17									
Mode	RB/RB SIZE	Frequency	Result								Conclusio n
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
										Limit	
										(W)	
5.0MHz Band QPSK	1/#Mid	706.5	5.80	1.91	19.23	2.15	20.97	125.026	Vertical	3	Pass
		710	5.66	1.91	19.26	2.15	20.86	121.899	Vertical	3	Pass
		713.5	5.56	1.92	19.33	2.15	20.82	120.781	Vertical	3	Pass
10.0MHz Band QPSK	1/#Mid	709	5.81	1.91	19.25	2.15	21.00	125.893	Vertical	3	Pass
		710	5.76	1.91	19.26	2.15	20.96	124.738	Vertical	3	Pass
		711	5.72	1.92	19.32	2.15	20.97	125.026	Vertical	3	Pass
5.0MHz Band QPSK	1/#Mid	706.5	4.37	1.91	19.23	2.15	19.54	89.950	Horizontal	3	Pass
		710	4.19	1.91	19.26	2.15	19.39	86.896	Horizontal	3	Pass
		713.5	4.60	1.92	19.33	2.15	19.86	96.828	Horizontal	3	Pass
10.0MHz Band QPSK	1/#Mid	709	5.41	1.91	19.25	2.15	20.60	114.815	Horizontal	3	Pass
		710	5.07	1.91	19.26	2.15	20.27	106.414	Horizontal	3	Pass
		711	4.16	1.92	19.32	2.15	19.41	87.297	Horizontal	3	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		
										Limit	
										(W)	
5.0MHz Band 16 QAM	1/#Mid	706.5	5.09	1.91	19.23	2.15	20.26	106.170	Vertical	3	Pass
		710	5.00	1.91	19.26	2.15	20.20	104.713	Vertical	3	Pass
		713.5	4.80	1.92	19.33	2.15	20.06	101.391	Vertical	3	Pass
10.0MHz Band 16 QAM	1/#Mid	709	4.63	1.91	19.25	2.15	19.82	95.940	Vertical	3	Pass
		710	5.16	1.91	19.26	2.15	20.36	108.643	Vertical	3	Pass
		711	4.89	1.92	19.32	2.15	20.14	103.276	Vertical	3	Pass
5.0MHz Band 16 QAM	1/#Mid	706.5	4.18	1.91	19.23	2.15	19.35	86.099	Horizontal	3	Pass
		710	4.04	1.91	19.26	2.15	19.24	83.946	Horizontal	3	Pass
		713.5	3.63	1.92	19.33	2.15	18.89	77.446	Horizontal	3	Pass
10.0MHz Band 16 QAM	1/#Mid	709	3.73	1.91	19.25	2.15	18.92	77.983	Horizontal	3	Pass
		710	3.53	1.91	19.26	2.15	18.73	74.645	Horizontal	3	Pass
		711	3.77	1.92	19.32	2.15	19.02	79.799	Horizontal	3	Pass

Note:

ERP=EIRP-2.15

SG Level= Signal generator output

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

8.9 LTE BAND 38

		Radiated Power (EIRP) for Band 38								
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP		
						Average	Average		Limit	
						(dBm)	(mW)		(W)	
5.0MHz Band QPSK	25/0	2572.5	-2.12	4.95	27.79	18.65	73.282	Vertical	2	Pass
		2595	-2.64	4.88	27.71	19.02	79.799	Vertical	2	Pass
		2617.5	-2.58	4.93	27.95	18.66	73.451	Vertical	2	Pass
5.0MHz Band 16 QAM	25/0	2572.5	-2.37	4.81	27.73	19.50	89.125	Vertical	2	Pass
		2595	-2.47	4.95	27.81	19.20	83.176	Vertical	2	Pass
		2617.5	-2.59	5.03	27.69	18.91	77.804	Vertical	2	Pass
10.0MHz Band QPSK	50/0	2575	-2.98	5.01	27.86	18.81	76.033	Vertical	2	Pass
		2595	-2.6	5	27.65	19.34	85.901	Vertical	2	Pass
		2615	-2.67	4.87	27.89	18.73	74.645	Vertical	2	Pass
10.0MHz Band 16 QAM	50/0	2575	-2.71	4.77	27.78	19.52	89.536	Vertical	2	Pass
		2595	-2.38	4.87	27.87	18.90	77.625	Vertical	2	Pass
		2615	-2.56	4.94	27.77	19.00	79.433	Vertical	2	Pass
15.0MHz Band QPSK	75/0	2577.5	-2.9	4.89	27.88	18.96	78.705	Vertical	2	Pass
		2595	-2.32	4.87	27.84	19.32	85.507	Vertical	2	Pass
		2612.5	-2.52	4.92	27.93	19.50	89.125	Vertical	2	Pass
15.0MHz Band 16 QAM	75/0	2577.5	-2.53	4.75	27.78	18.91	77.804	Vertical	2	Pass
		2595	-2.53	4.98	27.82	19.26	84.333	Vertical	2	Pass
		2612.5	-2.6	4.95	27.83	19.04	80.168	Vertical	2	Pass
20.0MHz Band QPSK	100/0	2580	-2.53	4.86	27.8	19.48	88.716	Vertical	2	Pass
		2595	-2.37	4.79	27.83	20.23	105.439	Vertical	2	Pass
		2610	-2.68	4.89	27.87	19.16	82.414	Vertical	2	Pass
20.0MHz Band 16 QAM	100/0	2580	-2.87	4.95	27.73	19.22	83.560	Vertical	2	Pass
		2595	-2.88	4.91	27.71	19.17	82.604	Vertical	2	Pass
		2610	-2.81	4.96	27.92	18.95	78.524	Vertical	2	Pass

		Radiated Power (EIRP) for Band 38								
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP		
						Average	Average		Limit	
						(dBm)	(mW)		(W)	
5.0MHz Band QPSK	25/0	2572.5	-2.12	4.95	27.79	19.00	79.433	Horizontal	2	Pass
		2595	-2.64	4.88	27.71	18.63	72.946	Horizontal	2	Pass
		2617.5	-2.58	4.93	27.95	18.80	75.858	Horizontal	2	Pass
5.0MHz Band 16 QAM	25/0	2572.5	-2.37	4.81	27.73	19.43	87.700	Horizontal	2	Pass
		2595	-2.47	4.95	27.81	19.49	88.920	Horizontal	2	Pass
		2617.5	-2.59	5.03	27.69	18.90	77.625	Horizontal	2	Pass
10.0MHz Band QPSK	50/0	2575	-2.98	5.01	27.86	19.12	81.658	Horizontal	2	Pass
		2595	-2.6	5	27.65	19.00	79.433	Horizontal	2	Pass
		2615	-2.67	4.87	27.89	19.50	89.125	Horizontal	2	Pass
10.0MHz Band 16 QAM	50/0	2575	-2.71	4.77	27.78	19.46	88.308	Horizontal	2	Pass
		2595	-2.38	4.87	27.87	19.02	79.799	Horizontal	2	Pass
		2615	-2.56	4.94	27.77	19.45	88.105	Horizontal	2	Pass
15.0MHz Band QPSK	75/0	2577.5	-2.9	4.89	27.88	18.87	77.090	Horizontal	2	Pass
		2595	-2.32	4.87	27.84	19.25	84.140	Horizontal	2	Pass
		2612.5	-2.52	4.92	27.93	19.29	84.918	Horizontal	2	Pass
15.0MHz Band 16 QAM	75/0	2577.5	-2.53	4.75	27.78	18.95	78.524	Horizontal	2	Pass
		2595	-2.53	4.98	27.82	18.75	74.989	Horizontal	2	Pass
		2612.5	-2.6	4.95	27.83	18.88	77.268	Horizontal	2	Pass
20.0MHz Band QPSK	100/0	2580	-2.53	4.86	27.8	18.90	77.625	Horizontal	2	Pass
		2595	-2.37	4.79	27.83	20.15	103.514	Horizontal	2	Pass
		2610	-2.68	4.89	27.87	18.77	75.336	Horizontal	2	Pass
20.0MHz Band 16 QAM	100/0	2580	-2.87	4.95	27.73	19.02	79.799	Horizontal	2	Pass
		2595	-2.88	4.91	27.71	19.20	83.176	Horizontal	2	Pass
		2610	-2.81	4.96	27.92	19.49	88.920	Horizontal	2	Pass

Note:

ERP=EIRP-2.15

SG Level= Signal generator output

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

8.10 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	Max. EIRP	Polarization Of Max. ERP		
						Average	Average		Limit	
						(dBm)	(mW)		(W)	
5.0MHz Band QPSK	1/#Mid	2537.5	-2.97	4.54	27.75	20.24	105.682	Horizontal	2	Pass
		2595	-2.82	4.69	27.72	20.21	104.954	Horizontal	2	Pass
		2652.5	-2.70	4.71	27.71	20.30	107.152	Horizontal	2	Pass
10.0MHz Band QPSK	1/#Mid	2540	-3.05	4.55	27.76	20.16	103.753	Horizontal	2	Pass
		2595	-2.91	4.69	27.72	20.12	102.802	Horizontal	2	Pass
		2650	-2.90	4.72	27.70	20.08	101.859	Horizontal	2	Pass
15.0MHz Band QPSK	1/#Mid	2542.5	-2.88	4.55	27.77	20.34	108.143	Horizontal	2	Pass
		2595	-2.60	4.69	27.72	20.43	110.408	Horizontal	2	Pass
		2647.5	-2.65	4.72	27.69	20.32	107.647	Horizontal	2	Pass
20.0MHz Band QPSK	1/#Mid	2545	-2.49	4.57	27.78	20.72	118.032	Horizontal	2	Pass
		2595	-2.54	4.73	27.72	20.45	110.917	Horizontal	2	Pass
		2645	-2.54	4.75	27.68	20.39	109.396	Horizontal	2	Pass
5.0MHz Band QPSK	1/#Mid	2537.5	-2.77	4.54	27.75	20.44	110.662	Vertical	2	Pass
		2595	-2.68	4.69	27.72	20.35	108.393	Vertical	2	Pass
		2652.5	-2.66	4.71	27.71	20.34	108.143	Vertical	2	Pass
10.0MHz Band QPSK	1/#Mid	2540	-2.75	4.55	27.76	20.46	111.173	Vertical	2	Pass
		2595	-2.59	4.69	27.72	20.44	110.662	Vertical	2	Pass
		2650	-2.66	4.72	27.70	20.32	107.647	Vertical	2	Pass
15.0MHz Band QPSK	1/#Mid	2542.5	-4.45	4.55	27.77	18.77	75.336	Vertical	2	Pass
		2595	-4.00	4.69	27.72	19.03	79.983	Vertical	2	Pass
		2647.5	-4.09	4.72	27.69	18.88	77.268	Vertical	2	Pass
20.0MHz Band QPSK	1/#Mid	2545	-3.90	4.57	27.78	19.31	85.310	Vertical	2	Pass
		2595	-3.34	4.73	27.72	19.65	92.257	Vertical	2	Pass
		2645	-3.48	4.75	27.68	19.45	88.105	Vertical	2	Pass

		Radiated Power (EIRP) for Band 41								
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP		
						Average	Average		Limit	
						(dBm)	(mW)		(W)	
5.0MHz Band 16 QAM	1/#Mid	2537.5	-3.01	4.54	27.75	20.20	104.713	Horizontal	2	Pass
		2595	-2.86	4.69	27.72	20.17	103.992	Horizontal	2	Pass
		2652.5	-2.74	4.71	27.71	20.26	106.170	Horizontal	2	Pass
10.0MHz Band 16 QAM	1/#Mid	2540	-3.09	4.55	27.76	20.12	102.802	Horizontal	2	Pass
		2595	-2.95	4.69	27.72	20.08	101.859	Horizontal	2	Pass
		2650	-2.94	4.72	27.70	20.04	100.925	Horizontal	2	Pass
15.0MHz Band 16 QAM	1/#Mid	2542.5	-2.92	4.55	27.77	20.30	107.152	Horizontal	2	Pass
		2595	-2.64	4.69	27.72	20.39	109.396	Horizontal	2	Pass
		2647.5	-2.69	4.72	27.69	20.28	106.660	Horizontal	2	Pass
20.0MHz Band 16 QAM	1/#Mid	2545	-2.64	4.57	27.78	20.57	114.025	Horizontal	2	Pass
		2595	-2.58	4.73	27.72	20.41	109.901	Horizontal	2	Pass
		2645	-2.58	4.75	27.68	20.35	108.393	Horizontal	2	Pass
5.0MHz Band 16 QAM	1/#Mid	2537.5	-2.81	4.54	27.75	20.40	109.648	Vertical	2	Pass
		2595	-2.72	4.69	27.72	20.31	107.399	Vertical	2	Pass
		2652.5	-2.70	4.71	27.71	20.30	107.152	Vertical	2	Pass
10.0MHz Band 16 QAM	1/#Mid	2540	-2.79	4.55	27.76	20.42	110.154	Vertical	2	Pass
		2595	-2.63	4.69	27.72	20.40	109.648	Vertical	2	Pass
		2650	-2.70	4.72	27.70	20.28	106.660	Vertical	2	Pass
15.0MHz Band 16 QAM	1/#Mid	2542.5	-4.11	4.55	27.77	19.11	81.470	Vertical	2	Pass
		2595	-4.12	4.69	27.72	18.91	77.804	Vertical	2	Pass
		2647.5	-3.65	4.72	27.69	19.32	85.507	Vertical	2	Pass
20.0MHz Band 16 QAM	1/#Mid	2545	-4.21	4.57	27.78	19.00	79.433	Vertical	2	Pass
		2595	-3.83	4.73	27.72	19.16	82.414	Vertical	2	Pass
		2645	-3.50	4.75	27.68	19.43	87.700	Vertical	2	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)

8.11 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	Polarization Of Max. ERP		
							Average		Limit	
							(mW)		(W)	
1.4MHz Band QPSK	1/#Mid	1710.7	-4.28	3.76	28.24	20.20	104.713	Horizontal	1	Pass
		1745	-4.14	3.91	28.22	20.17	103.992	Horizontal	1	Pass
		1779.3	-4.01	3.93	28.2	20.26	106.170	Horizontal	1	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-4.34	3.77	28.23	20.12	102.802	Horizontal	1	Pass
		1745	-4.25	3.91	28.24	20.08	101.859	Horizontal	1	Pass
		1778.5	-4.27	3.94	28.25	20.04	100.925	Horizontal	1	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-4.24	3.77	28.31	20.30	107.152	Horizontal	1	Pass
		1745	-3.92	3.91	28.22	20.39	109.396	Horizontal	1	Pass
		1777.5	-3.98	3.94	28.2	20.28	106.660	Horizontal	1	Pass
10.0MHz Band QPSK	1/#Mid	1715	-4.13	3.79	28.33	20.41	109.901	Horizontal	1	Pass
		1745	-3.86	3.95	28.22	20.41	109.901	Horizontal	1	Pass
		1775	-3.87	3.97	28.19	20.35	108.393	Horizontal	1	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-4.15	3.79	28.34	20.40	109.648	Horizontal	1	Pass
		1745	-3.96	3.95	28.22	20.31	107.399	Horizontal	1	Pass
		1772.5	-3.91	3.97	28.18	20.30	107.152	Horizontal	1	Pass
20.0MHz Band QPSK	1/#Mid	1720	-4.12	3.81	28.35	20.42	110.154	Horizontal	1	Pass
		1745	-3.86	3.96	28.22	20.40	109.648	Horizontal	1	Pass
		1770	-3.88	4	28.16	20.28	106.660	Horizontal	1	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-5.54	3.76	28.24	18.94	78.343	Vertical	1	Pass
		1745	-5.29	3.91	28.22	19.02	79.799	Vertical	1	Pass
		1779.3	-5.25	3.93	28.2	19.02	79.799	Vertical	1	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-5.35	3.77	28.23	19.11	81.470	Vertical	1	Pass
		1745	-4.65	3.91	28.24	19.68	92.897	Vertical	1	Pass
		1778.5	-5.02	3.94	28.25	19.29	84.918	Vertical	1	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-5.46	3.77	28.31	19.08	80.910	Vertical	1	Pass
		1745	-4.87	3.91	28.22	19.44	87.902	Vertical	1	Pass
		1777.5	-4.93	3.94	28.2	19.33	85.704	Vertical	1	Pass
10.0MHz	1/#Mid	1715	-5.28	3.79	28.34	19.27	84.528	Vertical	1	Pass

Band		1745	-4.88	3.95	28.22	19.39	86.896	Vertical	1	Pass
QPSK		1775	-4.57	3.97	28.18	19.64	92.045	Vertical	1	Pass
15.0MHz	1/#Mid	1717.5	-5.04	3.81	28.35	19.50	89.125	Vertical	1	Pass
Band		1745	-5.51	3.96	28.22	18.75	74.989	Vertical	1	Pass
QPSK		1772.5	-5.24	4	28.16	18.92	77.983	Vertical	1	Pass
20.0MHz	1/#Mid	1720	-5.53	3.79	28.34	19.02	79.799	Vertical	1	Pass
Band		1745	-4.74	3.95	28.22	19.53	89.743	Vertical	1	Pass
QPSK		1770	-5.48	3.97	28.18	18.73	74.645	Vertical	1	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	Polarization Of Max. ERP		
							Average		Limit	
							(mW)		(W)	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-5.16	3.76	28.24	19.32	85.507	Horizontal	1	Pass
		1745	-4.77	3.91	28.22	19.54	89.950	Horizontal	1	Pass
		1779.3	-4.95	3.93	28.2	19.32	85.507	Horizontal	1	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-5.55	3.77	28.23	18.91	77.804	Horizontal	1	Pass
		1745	-4.80	3.91	28.24	19.53	89.743	Horizontal	1	Pass
		1778.5	-5.09	3.94	28.25	19.22	83.560	Horizontal	1	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-4.97	3.77	28.31	19.57	90.573	Horizontal	1	Pass
		1745	-5.03	3.91	28.22	19.28	84.723	Horizontal	1	Pass
		1777.5	-4.70	3.94	28.2	19.56	90.365	Horizontal	1	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-5.02	3.79	28.33	19.52	89.536	Horizontal	1	Pass
		1745	-4.68	3.95	28.22	19.59	90.991	Horizontal	1	Pass
		1775	-5.00	3.97	28.19	19.22	83.560	Horizontal	1	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-5.01	3.79	28.34	19.54	89.950	Horizontal	1	Pass
		1745	-4.83	3.95	28.22	19.44	87.902	Horizontal	1	Pass
		1772.5	-4.62	3.97	28.18	19.59	90.991	Horizontal	1	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-4.84	3.81	28.35	19.70	93.325	Horizontal	1	Pass
		1745	-4.62	3.96	28.22	19.64	92.045	Horizontal	1	Pass
		1770	-4.56	4	28.16	19.60	91.201	Horizontal	1	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-5.24	3.76	28.24	19.24	83.946	Vertical	1	Pass
		1745	-6.59	3.91	28.22	17.72	59.156	Vertical	1	Pass
		1779.3	-4.99	3.93	28.2	19.28	84.723	Vertical	1	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-6.63	3.77	28.23	17.83	60.674	Vertical	1	Pass
		1745	-5.08	3.91	28.24	19.25	84.140	Vertical	1	Pass
		1778.5	-6.68	3.94	28.25	17.63	57.943	Vertical	1	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-6.37	3.77	28.31	18.17	65.615	Vertical	1	Pass
		1745	-6.55	3.91	28.22	17.76	59.704	Vertical	1	Pass
		1777.5	-6.24	3.94	28.2	18.02	63.387	Vertical	1	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-5.03	3.79	28.34	19.52	89.536	Vertical	1	Pass
		1745	-5.49	3.95	28.22	18.78	75.509	Vertical	1	Pass
		1775	-6.54	3.97	28.18	17.67	58.479	Vertical	1	Pass
15.0MHz	1/#Mid	1717.5	-6.88	3.81	28.35	17.66	58.345	Vertical	1	Pass

Band 16 QAM		1745	-4.87	3.96	28.22	19.39	86.896	Vertical	1	Pass
		1772.5	-5.16	4	28.16	19.00	79.433	Vertical	1	Pass
20.0MHz	1/#Mid	1720	-6.57	3.79	28.34	17.98	62.806	Vertical	1	Pass
Band 16		1745	-5.94	3.95	28.22	18.33	68.077	Vertical	1	Pass
QAM		1770	-4.85	3.97	28.18	19.36	86.298	Vertical	1	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

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 $43 + 10 \log_{10}(P)$ 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 $43 + 10 \log_{10}(p)$, dB; and
- b. for mobile subscriber equipment, the attenuation shall not be less than $43 + 10 \log_{10}(p)$, dB at the channel edges and $55 + 10 \log_{10}(p)$ 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 2/4/5/7/12/13/17/38/41/66

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	-45.89	4.04	33.51	-16.42	-13	-3.42	Horizontal
3701.4	-48.22	4.04	33.51	-18.75	-13	-5.75	Vertical
5552.1	-49.19	5.24	35.84	-18.59	-13	-5.59	Vertical
5552.1	-53.04	5.24	35.84	-22.44	-13	-9.44	Horizontal
179.8	-43.42	1.43	16.02	-28.83	-13	-15.83	Vertical
298.8	-40.84	1.30	17.99	-24.15	-13	-11.15	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-52.48	4.04	33.56	-22.96	-13	-9.96	Horizontal
3760.0	-52.81	4.04	33.56	-23.29	-13	-10.29	Vertical
5640.0	-47.93	5.24	35.91	-17.26	-13	-4.26	Vertical
5640.0	-53.93	5.24	35.91	-23.26	-13	-10.26	Horizontal
194.7	-36.12	1.62	16.97	-20.77	-13	-7.77	Vertical
440.9	-34.19	1.74	15.98	-19.96	-13	-6.96	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-46.57	4.04	34.00	-16.61	-13	-3.61	Horizontal
3818.6	-52.12	4.04	34.00	-22.16	-13	-9.16	Vertical
5727.9	-45.63	5.24	36.04	-14.83	-13	-1.83	Vertical
5727.9	-53.76	5.24	36.04	-22.96	-13	-9.96	Horizontal
183.5	-35.76	1.42	17.29	-19.89	-13	-6.89	Vertical
386.8	-41.45	1.50	17.90	-25.04	-13	-12.04	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	-48.25	4.07	33.54	-18.78	-13	-5.78	Horizontal
3720.0	-49.83	4.07	33.54	-20.36	-13	-7.36	Vertical
5580.0	-46.56	5.28	35.86	-15.98	-13	-2.98	Vertical
5580.0	-53.11	5.28	35.86	-22.53	-13	-9.53	Horizontal
197.2	-37.42	1.58	16.89	-22.10	-13	-9.10	Vertical
301.8	-43.46	1.76	17.26	-27.96	-13	-14.96	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-53.38	4.04	33.56	-23.86	-13	-10.86	Horizontal
3760.0	-45.98	4.04	33.56	-16.46	-13	-3.46	Vertical
5640.0	-45.35	5.24	35.91	-14.68	-13	-1.68	Vertical
5640.0	-49.45	5.24	35.91	-18.78	-13	-5.78	Horizontal
197.6	-35.73	1.46	16.27	-20.92	-13	-7.92	Vertical
390.7	-41.24	1.59	15.15	-27.68	-13	-14.68	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-47.77	4.04	34.00	-17.81	-13	-4.81	Horizontal
3800.0	-47.41	4.04	34.00	-17.45	-13	-4.45	Vertical
5700.0	-51.23	5.24	36.04	-20.43	-13	-7.43	Vertical
5700.0	-53.97	5.24	36.04	-23.17	-13	-10.17	Horizontal
209.4	-34.54	1.36	17.39	-18.50	-13	-5.50	Vertical
413.2	-40.05	1.66	15.39	-26.32	-13	-13.32	Horizontal

Note: $P_{Mea}(dBm) = Power(dBm) + AR_{pl} (dBm)$

Over Limit = : $P_{Mea}(dBm) - Limit(dBm)$

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	-50.74	4.02	29.80	-24.96	-13	-11.96	Horizontal
3421.4	-44.97	4.02	29.80	-19.19	-13	-6.19	Vertical
5132.1	-48.86	5.24	35.84	-18.26	-13	-5.26	Vertical
5132.1	-53.32	5.24	35.84	-22.72	-13	-9.72	Horizontal
208.6	-44.58	1.68	16.04	-30.22	-13	-17.22	Vertical
458.4	-35.66	1.78	17.74	-19.70	-13	-6.70	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-50.76	4.03	30.00	-24.79	-13	-11.79	Horizontal
3465.0	-53.32	4.03	30.00	-27.35	-13	-14.35	Vertical
5197.5	-47.08	5.25	35.86	-16.47	-13	-3.47	Vertical
5197.5	-50.69	5.25	35.86	-20.08	-13	-7.08	Horizontal
211.8	-38.20	1.72	17.69	-22.23	-13	-9.23	Vertical
299.3	-42.26	1.62	16.02	-27.85	-13	-14.85	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-44.32	4.05	30.01	-18.36	-13	-5.36	Horizontal
3508.6	-47.14	4.05	30.01	-21.18	-13	-8.18	Vertical
5262.9	-49.20	5.26	35.86	-18.60	-13	-5.60	Vertical
5262.9	-51.83	5.26	35.86	-21.23	-13	-8.23	Horizontal
208.4	-42.55	1.80	16.69	-27.66	-13	-14.66	Vertical
311.9	-40.13	1.75	16.66	-25.23	-13	-12.23	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	-51.59	4.02	29.80	-25.81	-13	-12.81	Horizontal
3440.0	-47.90	4.02	29.80	-22.12	-13	-9.12	Vertical
5160.0	-46.51	5.24	35.84	-15.91	-13	-2.91	Vertical
5160.0	-53.27	5.24	35.84	-22.67	-13	-9.67	Horizontal
181.1	-40.13	1.57	17.26	-24.44	-13	-11.44	Vertical
391.6	-42.31	1.78	16.35	-27.74	-13	-14.74	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-46.22	4.03	30.00	-20.25	-13	-7.25	Horizontal
3465.0	-49.73	4.03	30.00	-23.76	-13	-10.76	Vertical
5197.5	-48.58	5.25	35.86	-17.97	-13	-4.97	Vertical
5197.5	-53.11	5.25	35.86	-22.50	-13	-9.50	Horizontal
182.5	-34.70	1.44	17.95	-18.19	-13	-5.19	Vertical
412.9	-41.13	1.65	16.09	-26.69	-13	-13.69	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-52.12	2.91	27.68	-27.35	-13	-14.35	Horizontal
3490.0	-45.11	2.91	27.68	-20.34	-13	-7.34	Vertical
5235.0	-51.61	5.26	35.86	-21.01	-13	-8.01	Vertical
5235.0	-49.46	5.26	35.86	-18.86	-13	-5.86	Horizontal
175.4	-41.89	1.61	16.85	-26.65	-13	-13.65	Vertical
413.4	-35.79	1.61	15.19	-22.21	-13	-9.21	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ AR_{pl} (dBm)

Over Limit= : P_{Mea}(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	-48.12	2.78	27.50	-23.40	-13	-10.40	Horizontal
1649.4	-52.32	2.78	27.50	-27.60	-13	-14.60	Vertical
2474.1	-53.82	2.90	27.80	-28.92	-13	-15.92	Vertical
2474.1	-52.16	2.90	27.80	-27.26	-13	-14.26	Horizontal
194.8	-38.47	1.76	17.59	-22.64	-13	-9.64	Vertical
290.6	-41.07	1.63	15.87	-26.83	-13	-13.83	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-52.00	2.80	27.48	-27.32	-13	-14.32	Horizontal
1673.0	-50.44	2.80	27.48	-25.76	-13	-12.76	Vertical
2509.5	-48.23	2.91	27.70	-23.44	-13	-10.44	Vertical
2509.5	-51.31	2.91	27.70	-26.52	-13	-13.52	Horizontal
199.4	-37.37	1.61	15.68	-23.30	-13	-10.30	Vertical
470.0	-41.51	1.59	17.52	-25.59	-13	-12.59	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-44.22	2.82	27.43	-19.61	-13	-6.61	Horizontal
1696.6	-50.77	2.82	27.43	-26.16	-13	-13.16	Vertical
2544.9	-47.86	2.92	27.74	-23.04	-13	-10.04	Vertical
2544.9	-51.82	2.92	27.74	-27.00	-13	-14.00	Horizontal
206.6	-37.29	1.69	16.67	-22.30	-13	-9.30	Vertical
378.5	-37.35	1.70	17.18	-21.87	-13	-8.87	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	-50.43	2.78	27.50	-25.71	-13	-12.71	Horizontal
1658.0	-46.87	2.78	27.50	-22.15	-13	-9.15	Vertical
2487.0	-53.94	2.90	27.80	-29.04	-13	-16.04	Vertical
2487.0	-51.64	2.90	27.80	-26.74	-13	-13.74	Horizontal
201.1	-37.86	1.71	15.57	-24.00	-13	-11.00	Vertical
239.7	-35.38	1.34	16.40	-20.32	-13	-7.32	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-44.89	2.80	27.48	-20.21	-13	-7.21	Horizontal
1673.0	-46.32	2.80	27.48	-21.64	-13	-8.64	Vertical
2509.5	-52.00	2.91	27.70	-27.21	-13	-14.21	Vertical
2509.5	-49.73	2.91	27.70	-24.94	-13	-11.94	Horizontal
209.4	-35.72	1.44	17.04	-20.12	-13	-7.12	Vertical
246.7	-42.17	1.76	17.62	-26.31	-13	-13.31	Horizontal
Test Results for High Channel 844MHz							
1688.0	-44.47	2.82	27.43	-19.86	-13	-6.86	Horizontal
1688.0	-47.05	2.82	27.43	-22.44	-13	-9.44	Vertical
2532.0	-45.26	2.92	27.74	-20.44	-13	-7.44	Vertical
2532.0	-53.73	2.92	27.74	-28.91	-13	-15.91	Horizontal
211.5	-43.06	1.74	17.70	-27.10	-13	-14.10	Vertical
452.4	-35.04	1.41	17.46	-18.98	-13	-5.98	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ AR_{pl} (dBm)

. Over Limit= : P_{Mea}(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	-64.91	5.23	35.81	-34.33	-25	-9.33	Horizontal
5005.0	-62.00	5.23	35.81	-31.42	-25	-6.42	Vertical
7507.5	-64.11	5.67	36.85	-32.93	-25	-7.93	Vertical
7507.5	-62.47	5.67	36.85	-31.29	-25	-6.29	Horizontal
202.2	-54.93	1.73	17.97	-38.69	-25	-13.69	Vertical
341.3	-47.49	1.38	15.11	-33.76	-25	-8.76	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-59.65	5.23	35.82	-29.06	-25	-4.06	Horizontal
5070.0	-61.26	5.23	35.82	-30.67	-25	-5.67	Vertical
7605.0	-64.92	5.67	36.85	-33.74	-25	-8.74	Vertical
7605.0	-60.81	5.67	36.85	-29.63	-25	-4.63	Horizontal
190.1	-49.30	1.77	16.17	-34.89	-25	-9.89	Vertical
254.0	-49.16	1.63	15.21	-35.58	-25	-10.58	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-62.11	5.24	35.83	-31.52	-25	-6.52	Horizontal
5135.0	-59.54	5.24	35.83	-28.95	-25	-3.95	Vertical
7702.5	-62.27	5.68	36.87	-31.08	-25	-6.08	Vertical
7702.5	-61.45	5.68	36.87	-30.26	-25	-5.26	Horizontal
212.2	-54.18	1.58	17.56	-38.20	-25	-13.20	Vertical
267.5	-54.18	1.45	16.58	-39.05	-25	-14.05	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	-61.87	5.23	35.82	-31.28	-25	-6.28	Horizontal
5020.0	-59.86	5.23	35.82	-29.27	-25	-4.27	Vertical
7530.0	-64.33	5.67	36.86	-33.14	-25	-8.14	Vertical
7530.0	-62.63	5.67	36.86	-31.44	-25	-6.44	Horizontal
194.1	-54.74	1.63	15.76	-40.61	-25	-15.61	Vertical
251.1	-51.71	1.71	15.44	-37.98	-25	-12.98	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-61.53	5.23	35.82	-30.94	-25	-5.94	Horizontal
5070.0	-60.24	5.23	35.82	-29.65	-25	-4.65	Vertical
7605.0	-60.76	5.67	36.85	-29.58	-25	-4.58	Vertical
7605.0	-64.82	5.67	36.85	-33.64	-25	-8.64	Horizontal
182.3	-52.02	1.79	16.84	-36.96	-25	-11.96	Vertical
380.7	-52.28	1.71	17.64	-36.35	-25	-11.35	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-61.64	5.24	35.83	-31.05	-25	-6.05	Horizontal
5120.0	-61.96	5.24	35.83	-31.37	-25	-6.37	Vertical
7680.0	-60.05	5.70	36.88	-28.87	-25	-3.87	Vertical
7680.0	-64.84	5.70	36.88	-33.66	-25	-8.66	Horizontal
203.8	-45.06	1.79	16.84	-30.00	-25	-5.00	Vertical
274.4	-45.13	1.71	17.64	-29.20	-25	-4.20	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	-45.70	2.60	27.20	-21.10	-13	-8.10	Horizontal
1399.4	-49.27	2.60	27.20	-24.67	-13	-11.67	Vertical
2099.1	-48.30	2.85	27.54	-23.61	-13	-10.61	Vertical
2099.1	-50.39	2.85	27.54	-25.70	-13	-12.70	Horizontal
199.4	-43.86	1.49	17.78	-27.57	-13	-14.57	Vertical
463.9	-34.60	1.36	17.33	-18.63	-13	-5.63	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.0	-45.21	2.61	27.28	-20.54	-13	-7.54	Horizontal
1415.0	-51.65	2.61	27.28	-26.98	-13	-13.98	Vertical
2122.5	-50.88	2.87	27.59	-26.16	-13	-13.16	Vertical
2122.5	-50.94	2.87	27.59	-26.22	-13	-13.22	Horizontal
175.5	-39.54	1.73	15.74	-25.53	-13	-12.53	Vertical
369.0	-42.33	1.62	15.79	-28.16	-13	-15.16	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-52.37	2.63	27.28	-27.72	-13	-14.72	Horizontal
1430.6	-49.82	2.63	27.28	-25.17	-13	-12.17	Vertical
2145.9	-49.54	2.88	27.60	-24.82	-13	-11.82	Vertical
2145.9	-52.22	2.88	27.60	-27.50	-13	-14.50	Horizontal
191.5	-35.27	1.61	18.00	-18.88	-13	-5.88	Vertical
271.7	-39.21	1.45	15.49	-25.18	-13	-12.18	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	-49.40	2.61	27.26	-24.75	-13	-11.75	Horizontal
1408.0	-46.81	2.61	27.26	-22.16	-13	-9.16	Vertical
2112.0	-48.99	2.87	27.58	-24.28	-13	-11.28	Vertical
2112.0	-51.50	2.87	27.58	-26.79	-13	-13.79	Horizontal
203.8	-44.37	1.31	16.97	-28.71	-13	-15.71	Vertical
239.9	-40.65	1.65	16.70	-25.60	-13	-12.60	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.0	-52.80	2.61	27.28	-28.13	-13	-15.13	Horizontal
1415.0	-53.54	2.61	27.28	-28.87	-13	-15.87	Vertical
2122.5	-48.40	2.87	27.59	-23.68	-13	-10.68	Vertical
2122.5	-51.62	2.87	27.59	-26.90	-13	-13.90	Horizontal
209.8	-39.93	1.72	17.99	-23.66	-13	-10.66	Vertical
246.7	-36.96	1.73	17.94	-20.75	-13	-7.75	Horizontal
Test Results for High Channel 711MHz							
1422.0	-45.00	2.62	27.28	-20.34	-13	-7.34	Horizontal
1422.0	-45.26	2.62	27.28	-20.60	-13	-7.60	Vertical
2133.0	-48.99	2.87	27.60	-24.26	-13	-11.26	Vertical
2133.0	-49.19	2.87	27.60	-24.46	-13	-11.46	Horizontal
201.1	-35.62	1.58	15.93	-21.27	-13	-8.27	Vertical
236.3	-43.84	1.36	15.59	-29.61	-13	-16.61	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ AR_{pl} (dBm)

. Over Limit= : P_{Mea}(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 13

LTE BAND 13 (5MHZ BANDWIDTH)

Test Results for Low Channel 779.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1559.0	-73.90	2.61	27.28	-49.23	-40	-9.23	Horizontal
1559.0	-73.80	2.61	27.28	-49.13	-40	-9.13	Vertical
2338.5	-39.69	2.87	27.59	-14.97	-13	-1.97	Vertical
2338.5	-39.32	2.87	27.59	-14.60	-13	-1.60	Horizontal
120.1	-37.89	1.54	15.61	-23.82	-13	-10.82	Vertical
197.8	-37.48	1.51	15.21	-23.78	-13	-10.78	Horizontal
Test Results For Mid Channel 782MHz							
1564.0	-70.37	2.62	27.30	-45.69	-40	-5.69	Horizontal
1564.0	-72.12	2.62	27.30	-47.44	-40	-7.44	Vertical
2346.0	-41.66	2.87	27.62	-16.91	-13	-3.91	Vertical
2346.0	-41.08	2.87	27.62	-16.33	-13	-3.33	Horizontal
131.2	-36.86	1.65	16.17	-22.34	-13	-9.34	Vertical
267.5	-38.46	1.48	16.88	-23.06	-13	-10.06	Horizontal
Test Results for High Channel 784.5MHz							
1569.0	-69.48	2.66	27.28	-44.86	-40	-4.86	Horizontal
1569.0	-69.48	2.66	27.28	-44.86	-40	-4.86	Vertical
2353.5	-39.39	2.88	27.60	-14.67	-13	-1.67	Vertical
2353.5	-42.32	2.88	27.60	-17.60	-13	-4.60	Horizontal
80.8	-34.62	1.54	16.40	-19.76	-13	-6.76	Vertical
155.6	-34.16	1.43	15.77	-19.82	-13	-6.82	Horizontal

LTE BAND 13 (10MHZ BANDWIDTH)

Test Results for Low Channel 782MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1564.0	-73.63	2.62	27.30	-48.95	-40	-8.95	Horizontal
1564.0	-70.84	2.62	27.30	-46.16	-40	-6.16	Vertical
2346.0	-43.83	2.87	27.62	-19.08	-13	-6.08	Vertical
2346.0	-39.40	2.87	27.62	-14.65	-13	-1.65	Horizontal
129.1	-35.87	1.43	17.03	-20.27	-13	-7.27	Vertical
86.9	-35.51	1.62	16.63	-20.50	-13	-7.50	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ AR_{pl} (dBm)

. Over Limit= : P_{Mea}(dBm)-Limit(dBm)

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

9.7 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	-44.80	2.61	27.28	-20.13	-13	-7.13	Horizontal
1413.0	-53.34	2.61	27.28	-28.67	-13	-15.67	Vertical
2119.5	-46.02	2.87	27.59	-21.30	-13	-8.30	Vertical
2119.5	-52.85	2.87	27.59	-28.13	-13	-15.13	Horizontal
196.7	-41.42	1.71	16.15	-26.98	-13	-13.98	Vertical
308.3	-37.89	1.41	17.32	-21.98	-13	-8.98	Horizontal
Test Results For Mid Channel 710MHz							
1420.0	-50.47	2.62	27.30	-25.79	-13	-12.79	Horizontal
1420.0	-51.73	2.62	27.30	-27.05	-13	-14.05	Vertical
2130.0	-50.55	2.87	27.62	-25.80	-13	-12.80	Vertical
2130.0	-50.44	2.87	27.62	-25.69	-13	-12.69	Horizontal
179.7	-35.94	1.42	15.25	-22.12	-13	-9.12	Vertical
421.6	-43.43	1.36	17.19	-27.60	-13	-14.60	Horizontal
Test Results for High Channel 713.5MHz							
1427.0	-44.56	2.66	27.28	-19.94	-13	-6.94	Horizontal
1427.0	-53.99	2.66	27.28	-29.37	-13	-16.37	Vertical
2140.5	-44.66	2.88	27.60	-19.94	-13	-6.94	Vertical
2140.5	-50.79	2.88	27.60	-26.07	-13	-13.07	Horizontal
180.4	-40.54	1.32	17.29	-24.57	-13	-11.57	Vertical
353.3	-35.62	1.72	16.89	-20.45	-13	-7.45	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	-49.23	2.62	27.30	-24.55	-13	-11.55	Horizontal
1418.0	-45.26	2.62	27.30	-20.58	-13	-7.58	Vertical
2127.0	-46.77	2.87	27.62	-22.02	-13	-9.02	Vertical
2127.0	-53.52	2.87	27.62	-28.77	-13	-15.77	Horizontal
212.8	-43.46	1.35	16.91	-27.90	-13	-14.90	Vertical
234.4	-37.48	1.62	16.31	-22.79	-13	-9.79	Horizontal
Test Results for Mid Channel 710MHz							
1420.0	-51.53	2.62	27.30	-26.85	-13	-13.85	Horizontal
1420.0	-46.31	2.62	27.30	-21.63	-13	-8.63	Vertical
2130.0	-44.58	2.87	27.62	-19.83	-13	-6.83	Vertical
2130.0	-49.71	2.87	27.62	-24.96	-13	-11.96	Horizontal
187.4	-34.16	1.51	17.14	-18.53	-13	-5.53	Vertical
416.5	-44.69	1.77	16.88	-29.58	-13	-16.58	Horizontal
Test Results for High Channel 711MHz							
1422.0	-51.19	2.62	27.30	-26.51	-13	-13.51	Horizontal
1422.0	-50.40	2.62	27.30	-25.72	-13	-12.72	Vertical
2133.0	-44.17	2.87	27.62	-19.42	-13	-6.42	Vertical
2133.0	-52.87	2.87	27.62	-28.12	-13	-15.12	Horizontal
178.6	-40.18	1.78	15.95	-26.01	-13	-13.01	Vertical
292.1	-34.98	1.34	17.95	-18.38	-13	-5.38	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.

9.8 LTE BAND 38

LTE BAND 38 (5MHZ BANDWIDTH)

Test Results for Low Channel 2575.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5145	-54.66	4.01	27.5	-31.17	-25	-6.17	Horizontal
5145	-51.66	4.01	27.5	-28.17	-25	-3.17	Vertical
7717.5	-50.13	5.09	27.8	-27.42	-25	-2.42	Vertical
7717.5	-50.65	5.09	27.8	-27.94	-25	-2.94	Horizontal
Test Results for Mid Channel 2595MHz							
5190	-49.84	4.1	27.48	-26.46	-25	-1.46	Horizontal
5190	-54.14	4.1	27.48	-30.76	-25	-5.76	Vertical
7785	-50.10	5.42	27.7	-27.82	-25	-2.82	Vertical
7785	-50.56	5.42	27.7	-28.28	-25	-3.28	Horizontal
Test Results for High Channel 2617.5MHz							
5234	-51.79	4.11	27.43	-28.47	-25	-3.47	Horizontal
5234	-50.94	4.11	27.43	-27.62	-25	-2.62	Vertical
7851	-54.02	5.31	27.74	-31.59	-25	-6.59	Vertical
7851	-52.80	5.31	27.74	-30.37	-25	-5.37	Horizontal

LTE BAND 38 (20MHZ BANDWIDTH)

Test Results for Low Channel 2580MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5160	-54.65	3.89	27.5	-31.04	-25	-6.04	Horizontal
5160	-54.60	3.89	27.5	-30.99	-25	-5.99	Vertical
7740	-52.93	5.33	27.8	-30.46	-25	-5.46	Vertical
7740	-53.88	5.33	27.8	-31.41	-25	-6.41	Horizontal
Test Results for Mid Channel 2595MHz							
5190	-50.18	4.1	27.48	-26.80	-25	-1.80	Horizontal
5190	-53.27	4.1	27.48	-29.89	-25	-4.89	Vertical
7785	-51.52	5.42	27.7	-29.24	-25	-4.24	Vertical
7785	-49.93	5.42	27.7	-27.65	-25	-2.65	Horizontal
Test Results for High Channel 2610MHz							
5220	-51.11	4.01	27.43	-27.69	-25	-2.69	Horizontal
5220	-53.41	4.01	27.43	-29.99	-25	-4.99	Vertical
7830	-53.00	5.34	27.74	-30.60	-25	-5.60	Vertical
7830	-54.44	5.34	27.74	-32.04	-25	-7.04	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.

9.9 LTE BAND 41

LTE BAND 41 (5MHZ BANDWIDTH)

Test Results for Low Channel 2572.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5145.0	-62.36	5.23	35.81	-31.78	-25	-6.78	Horizontal
5145.0	-64.54	5.23	35.81	-33.96	-25	-8.96	Vertical
7717.5	-64.13	5.67	36.85	-32.95	-25	-7.95	Vertical
7717.5	-63.94	5.67	36.85	-32.76	-25	-7.76	Horizontal
435.3	-47.67	1.38	15.98	-33.07	-25	-8.07	Vertical
465.8	-44.71	1.62	15.66	-30.67	-25	-5.67	Horizontal
Test Results For Mid Channel 2595MHz							
5190.0	-59.20	5.23	35.82	-28.61	-25	-3.61	Horizontal
5190.0	-60.01	5.23	35.82	-29.42	-25	-4.42	Vertical
7785.0	-61.88	5.67	36.85	-30.70	-25	-5.70	Vertical
7785.0	-60.49	5.67	36.85	-29.31	-25	-4.31	Horizontal
510.4	-47.27	1.62	16.17	-32.72	-25	-7.72	Vertical
562.9	-44.49	1.74	17.63	-28.60	-25	-3.60	Horizontal
Test Results for High Channel 2617.5MHz							
5235.0	-59.27	5.24	35.83	-28.68	-25	-3.68	Horizontal
5235.0	-62.60	5.24	35.83	-32.01	-25	-7.01	Vertical
7852.5	-60.52	5.68	36.87	-29.33	-25	-4.33	Vertical
7852.5	-64.84	5.68	36.87	-33.65	-25	-8.65	Horizontal
197.6	-45.25	1.55	15.84	-30.96	-25	-5.96	Vertical
353.1	-44.76	1.51	17.06	-29.21	-25	-4.21	Horizontal

LTE BAND 41 (20MHZ BANDWIDTH)

Test Results for Channel 2580MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5160.0	-63.42	5.23	35.82	-32.83	-25	-7.83	Horizontal
5160.0	-64.83	5.23	35.82	-34.24	-25	-9.24	Vertical
7740.0	-59.79	5.67	36.86	-28.60	-25	-3.60	Vertical
7740.0	-64.62	5.67	36.86	-33.43	-25	-8.43	Horizontal
128.9	-45.61	1.43	15.51	-31.53	-25	-6.53	Vertical
344.8	-44.94	1.40	16.97	-29.37	-25	-4.37	Horizontal
Test Results For Mid Channel 2595MHz							
5190.0	-62.37	5.23	35.82	-31.78	-25	-6.78	Horizontal
5190.0	-64.81	5.23	35.82	-34.22	-25	-9.22	Vertical
7785.0	-59.96	5.67	36.85	-28.78	-25	-3.78	Vertical
7785.0	-62.28	5.67	36.85	-31.10	-25	-6.10	Horizontal
100.8	-49.97	1.77	16.72	-35.02	-25	-10.02	Vertical
263.5	-49.80	1.31	16.99	-34.12	-25	-9.12	Horizontal
Test Results for High Channel 2610MHz							
5220.0	-64.51	5.24	35.83	-33.92	-25	-8.92	Horizontal
5220.0	-60.85	5.24	35.83	-30.26	-25	-5.26	Vertical
7830.0	-62.43	5.70	36.88	-31.25	-25	-6.25	Vertical
7830.0	-64.56	5.70	36.88	-33.38	-25	-8.38	Horizontal
349.9	-44.70	1.70	15.73	-30.67	-25	-5.67	Vertical
110.3	-44.80	1.75	17.33	-29.22	-25	-4.22	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.

9.10 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	-47.34	4.02	29.80	-21.56	-13	-8.56	Horizontal
3421.4	-54.22	4.02	29.80	-28.44	-13	-15.44	Vertical
5132.1	-50.07	5.24	35.84	-19.47	-13	-6.47	Vertical
5132.1	-51.03	5.24	35.84	-20.43	-13	-7.43	Horizontal
112.6	-54.67	1.52	15.57	-40.62	-13	-27.62	Vertical
220.5	-52.79	1.33	17.14	-36.98	-13	-23.98	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-53.32	4.03	30.00	-27.35	-13	-14.35	Horizontal
3490.0	-52.47	4.03	30.00	-26.50	-13	-13.50	Vertical
5235.0	-50.22	5.25	35.86	-19.61	-13	-6.61	Vertical
5235.0	-51.49	5.25	35.86	-20.88	-13	-7.88	Horizontal
157.3	-54.44	1.53	17.13	-38.84	-13	-25.84	Vertical
213.1	-45.76	1.41	15.95	-31.22	-13	-18.22	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-51.17	4.05	30.01	-25.21	-13	-12.21	Horizontal
3558.6	-54.88	4.05	30.01	-28.92	-13	-15.92	Vertical
5337.9	-51.26	5.26	35.86	-20.66	-13	-7.66	Vertical
5337.9	-48.82	5.26	35.86	-18.22	-13	-5.22	Horizontal
170.6	-54.66	1.44	15.51	-40.59	-13	-27.59	Vertical
169.0	-46.13	1.78	15.76	-32.15	-13	-19.15	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	-48.72	4.02	29.80	-22.94	-13	-9.94	Horizontal
3440.0	-53.21	4.02	29.80	-27.43	-13	-14.43	Vertical
5160.0	-49.51	5.24	35.84	-18.91	-13	-5.91	Vertical
5160.0	-51.60	5.24	35.84	-21.00	-13	-8.00	Horizontal
268.8	-49.11	1.62	17.02	-33.71	-13	-20.71	Vertical
161.4	-45.76	1.32	17.31	-29.77	-13	-16.77	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-51.91	4.03	30.00	-25.94	-13	-12.94	Horizontal
3490.0	-53.99	4.03	30.00	-28.02	-13	-15.02	Vertical
5235.0	-52.40	5.25	35.86	-21.79	-13	-8.79	Vertical
5235.0	-51.84	5.25	35.86	-21.23	-13	-8.23	Horizontal
159.9	-50.84	1.45	15.17	-37.12	-13	-24.12	Vertical
172.1	-46.05	1.48	17.82	-29.71	-13	-16.71	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-46.74	2.91	27.68	-21.97	-13	-8.97	Horizontal
3540.0	-45.83	2.91	27.68	-21.06	-13	-8.06	Vertical
5310.0	-52.64	5.26	35.86	-22.04	-13	-9.04	Vertical
5310.0	-54.24	5.26	35.86	-23.64	-13	-10.64	Horizontal
197.3	-52.76	1.76	16.38	-38.14	-13	-25.14	Vertical
158.5	-52.41	1.43	17.13	-36.71	-13	-23.71	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ AR_{pl} (dBm)

. Over Limit= : P_{Mea}(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,

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 $+50^{\circ}\text{C}$

Voltage = low voltage, DC 3.31V, Normal, DC 3.89V and High voltage, DC 4.47V.

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to -30°C 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 $+50^{\circ}\text{C}$ is reached.

Frequency Stability vs Voltage:

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

MODES TESTED

LTE Band 2/4/5/7/12/13/17/38/41/66

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]
3.31	1880	12.6	0.006713	2.5
3.89	1880	13.4	0.007139	2.5
4.47	1880	13.0	0.006928	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	12.4	0.006601	2.5
Extreme (50C)	1880	11.9	0.006305	2.5
Extreme (40C)	1880	13.3	0.007094	2.5
Extreme (30C)	1880	14.0	0.007423	2.5
Extreme (10C)	1880	13.6	0.007246	2.5
Extreme (0C)	1880	12.3	0.006521	2.5
Extreme (-10C)	1880	12.5	0.006650	2.5
Extreme (-20C)	1880	14.0	0.007461	2.5
Extreme (-30C)	1880	14.9	0.007904	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]
3.31	1880	9.9	0.005256	2.5
3.89	1880	9.4	0.004985	2.5
4.47	1880	8.1	0.004284	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	9.6	0.005093	2.5
Extreme (50C)	1880	9.3	0.004937	2.5
Extreme (40C)	1880	7.9	0.004189	2.5
Extreme (30C)	1880	9.4	0.004981	2.5
Extreme (10C)	1880	9.1	0.004842	2.5
Extreme (0C)	1880	8.4	0.004446	2.5
Extreme (-10C)	1880	8.7	0.004632	2.5
Extreme (-20C)	1880	8.4	0.004486	2.5
Extreme (-30C)	1880	8.0	0.004257	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]
3.31	1732.5	8.8	0.005080	2.5
3.89	1732.5	9.0	0.005196	2.5
4.47	1732.5	8.9	0.005134	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	8.8	0.005097	2.5
Extreme (50C)	1732.5	9.2	0.005318	2.5
Extreme (40C)	1732.5	7.0	0.004051	2.5
Extreme (30C)	1732.5	5.6	0.003244	2.5
Extreme (10C)	1732.5	6.9	0.003954	2.5
Extreme (0C)	1732.5	9.3	0.005359	2.5
Extreme (-10C)	1732.5	8.3	0.004801	2.5
Extreme (-20C)	1732.5	6.9	0.003998	2.5
Extreme (-30C)	1732.5	8.7	0.005008	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]
3.31	1732.5	9.4	0.005400	2.5
3.89	1732.5	8.6	0.004959	2.5
4.47	1732.5	8.0	0.004607	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	9.8	0.005665	2.5
Extreme (50C)	1732.5	9.2	0.005297	2.5
Extreme (40C)	1732.5	8.0	0.004594	2.5
Extreme (30C)	1732.5	8.5	0.004912	2.5
Extreme (10C)	1732.5	8.8	0.005102	2.5
Extreme (0C)	1732.5	7.8	0.004493	2.5
Extreme (-10C)	1732.5	9.3	0.005343	2.5
Extreme (-20C)	1732.5	8.9	0.005158	2.5
Extreme (-30C)	1732.5	7.7	0.004466	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]
3.31	836.5	6.3	0.007484	2.5
3.89	836.5	6.4	0.007591	2.5
4.47	836.5	4.8	0.005737	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.5	0.007714	2.5
Extreme (50C)	836.5	5.7	0.006872	2.5
Extreme (40C)	836.5	5.6	0.006732	2.5
Extreme (30C)	836.5	6.2	0.007460	2.5
Extreme (10C)	836.5	5.5	0.006542	2.5
Extreme (0C)	836.5	5.3	0.006286	2.5
Extreme (-10C)	836.5	5.8	0.006903	2.5
Extreme (-20C)	836.5	5.9	0.007112	2.5
Extreme (-30C)	836.5	6.2	0.007451	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]
3.31	836.5	6.0	0.007141	2.5
3.89	836.5	6.3	0.007480	2.5
4.47	836.5	5.3	0.006306	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.2	0.007356	2.5
Extreme (50C)	836.5	5.8	0.006880	2.5
Extreme (40C)	836.5	6.5	0.007823	2.5
Extreme (30C)	836.5	6.8	0.008157	2.5
Extreme (10C)	836.5	5.2	0.006203	2.5
Extreme (0C)	836.5	5.2	0.006221	2.5
Extreme (-10C)	836.5	5.3	0.006386	2.5
Extreme (-20C)	836.5	5.7	0.006871	2.5
Extreme (-30C)	836.5	6.6	0.007902	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]
3.31	2535	10.1	0.003995	2.5
3.89	2535	9.1	0.003579	2.5
4.47	2535	8.5	0.003345	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.7	0.003807	2.5
Extreme (50C)	2535	8.6	0.003375	2.5
Extreme (40C)	2535	8.4	0.003327	2.5
Extreme (30C)	2535	8.6	0.003390	2.5
Extreme (10C)	2535	8.2	0.003250	2.5
Extreme (0C)	2535	8.1	0.003176	2.5
Extreme (-10C)	2535	9.0	0.003555	2.5
Extreme (-20C)	2535	9.4	0.003693	2.5
Extreme (-30C)	2535	8.5	0.003345	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]
3.31	2535	7.2	0.002834	2.5
3.89	2535	6.5	0.002565	2.5
4.47	2535	6.1	0.002423	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	6.9	0.002735	2.5
Extreme (50C)	2535	5.1	0.002019	2.5
Extreme (40C)	2535	5.4	0.002142	2.5
Extreme (30C)	2535	6.8	0.002670	2.5
Extreme (10C)	2535	5.5	0.002181	2.5
Extreme (0C)	2535	5.3	0.002099	2.5
Extreme (-10C)	2535	5.0	0.001980	2.5
Extreme (-20C)	2535	6.1	0.002410	2.5
Extreme (-30C)	2535	5.6	0.002196	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]
3.31	707.5	8.7	0.012284	2.5
3.89	707.5	10.1	0.014345	2.5
4.47	707.5	8.3	0.011696	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	8.8	0.012498	2.5
Extreme (50C)	707.5	7.3	0.010314	2.5
Extreme (40C)	707.5	7.2	0.010208	2.5
Extreme (30C)	707.5	8.5	0.011983	2.5
Extreme (10C)	707.5	7.2	0.010139	2.5
Extreme (0C)	707.5	9.0	0.012700	2.5
Extreme (-10C)	707.5	8.7	0.012243	2.5
Extreme (-20C)	707.5	8.8	0.012504	2.5
Extreme (-30C)	707.5	7.9	0.011187	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]
3.31	707.5	7.7	0.010897	2.5
3.89	707.5	8.0	0.011264	2.5
4.47	707.5	7.2	0.010229	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	9.4	0.013347	2.5
Extreme (50C)	707.5	8.4	0.011898	2.5
Extreme (40C)	707.5	8.5	0.011979	2.5
Extreme (30C)	707.5	8.3	0.011699	2.5
Extreme (10C)	707.5	8.5	0.012032	2.5
Extreme (0C)	707.5	7.5	0.010560	2.5
Extreme (-10C)	707.5	7.2	0.010246	2.5
Extreme (-20C)	707.5	9.4	0.013338	2.5
Extreme (-30C)	707.5	8.6	0.012197	2.5

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

10.6 LTE BAND 13

Band 13 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]
3.31	710.0	12.4	0.017424	2.5
3.89	710.0	13.6	0.019198	2.5
4.47	710.0	13.0	0.018368	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	14.1	0.019830	2.5
Extreme (50C)	710.0	14.1	0.019799	2.5
Extreme (40C)	710.0	15.1	0.021262	2.5
Extreme (30C)	710.0	13.9	0.019616	2.5
Extreme (10C)	710.0	14.2	0.020012	2.5
Extreme (0C)	710.0	14.5	0.020453	2.5
Extreme (-10C)	710.0	13.7	0.019226	2.5
Extreme (-20C)	710.0	14.0	0.019731	2.5
Extreme (-30C)	710.0	13.7	0.019283	2.5

Band 13 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]
3.31	710.0	12.3	0.017284	2.5
3.89	710.0	13.6	0.019211	2.5
4.47	710.0	13.1	0.018509	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	13.1	0.018447	2.5
Extreme (50C)	710.0	11.3	0.015964	2.5
Extreme (40C)	710.0	13.7	0.019325	2.5
Extreme (30C)	710.0	13.3	0.018778	2.5
Extreme (10C)	710.0	13.8	0.019498	2.5
Extreme (0C)	710.0	11.8	0.016688	2.5
Extreme (-10C)	710.0	13.0	0.018333	2.5
Extreme (-20C)	710.0	14.4	0.020333	2.5
Extreme (-30C)	710.0	14.7	0.020668	2.5

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

10.7 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]
3.31	710.0	10.2	0.014319	2.5
3.89	710.0	8.7	0.012217	2.5
4.47	710.0	8.5	0.012027	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.5	0.013350	2.5
Extreme (50C)	710.0	9.2	0.012936	2.5
Extreme (40C)	710.0	8.5	0.011921	2.5
Extreme (30C)	710.0	8.6	0.012148	2.5
Extreme (10C)	710.0	9.3	0.013164	2.5
Extreme (0C)	710.0	7.8	0.011002	2.5
Extreme (-10C)	710.0	9.3	0.013140	2.5
Extreme (-20C)	710.0	9.4	0.013220	2.5
Extreme (-30C)	710.0	7.9	0.011093	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]
3.31	710.0	9.9	0.013935	2.5
3.89	710.0	9.2	0.012911	2.5
4.47	710.0	8.0	0.011231	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.3	0.013110	2.5
Extreme (50C)	710.0	8.5	0.011941	2.5
Extreme (40C)	710.0	8.5	0.012015	2.5
Extreme (30C)	710.0	9.2	0.012923	2.5
Extreme (10C)	710.0	8.5	0.011915	2.5
Extreme (0C)	710.0	8.6	0.012174	2.5
Extreme (-10C)	710.0	9.8	0.013753	2.5
Extreme (-20C)	710.0	9.2	0.013009	2.5
Extreme (-30C)	710.0	8.8	0.012325	2.5

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

10.8 LTE BAND 38

Band 38 QPSK, (20MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.31	2595	8.3	0.003197	2.5
3.89	2595	6.1	0.002366	2.5
4.47	2595	7.8	0.003012	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	7.3	0.002799	2.5
Extreme (50C)	2595	4.4	0.001703	2.5
Extreme (40C)	2595	5.5	0.002123	2.5
Extreme (30C)	2595	4.6	0.001786	2.5
Extreme (10C)	2595	6.8	0.002609	2.5
Extreme (0C)	2595	4.6	0.001761	2.5
Extreme (-10C)	2595	9.3	0.003579	2.5
Extreme (-20C)	2595	10.8	0.004151	2.5
Extreme (-30C)	2595	5.8	0.002241	2.5

Band 38 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]
3.31	2595	8.2	0.003178	2.5
3.89	2595	6.5	0.002522	2.5
4.47	2595	6.4	0.002478	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	7.8	0.003000	2.5
Extreme (50C)	2595	4.9	0.001899	2.5
Extreme (40C)	2595	5.5	0.002131	2.5
Extreme (30C)	2595	4.5	0.001724	2.5
Extreme (10C)	2595	6.6	0.002554	2.5
Extreme (0C)	2595	5.1	0.001975	2.5
Extreme (-10C)	2595	9.5	0.003656	2.5
Extreme (-20C)	2595	10.8	0.004181	2.5
Extreme (-30C)	2595	6.1	0.002362	2.5

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

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]
3.31	2595	8.8	0.003397	2.5
3.89	2595	6.3	0.002416	2.5
4.47	2595	7.8	0.002996	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	7.8	0.003011	2.5
Extreme (50C)	2595	4.9	0.001878	2.5
Extreme (40C)	2595	5.4	0.002097	2.5
Extreme (30C)	2595	4.8	0.001845	2.5
Extreme (10C)	2595	6.3	0.002436	2.5
Extreme (0C)	2595	4.7	0.001801	2.5
Extreme (-10C)	2595	9.3	0.003577	2.5
Extreme (-20C)	2595	10.7	0.004138	2.5
Extreme (-30C)	2595	6.3	0.002423	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]
3.31	2595	8.2	0.003171	2.5
3.89	2595	6.6	0.002548	2.5
4.47	2595	6.1	0.002348	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	7.8	0.003006	2.5
Extreme (50C)	2595	4.9	0.001890	2.5
Extreme (40C)	2595	5.6	0.002155	2.5
Extreme (30C)	2595	4.9	0.001877	2.5
Extreme (10C)	2595	6.3	0.002429	2.5
Extreme (0C)	2595	5.1	0.001983	2.5
Extreme (-10C)	2595	9.9	0.003826	2.5
Extreme (-20C)	2595	10.9	0.004192	2.5
Extreme (-30C)	2595	6.6	0.002539	2.5

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

10.10 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)				
3.31	1745	13.1	0.00748	2.5
3.89	1745	14.0	0.00801	2.5
4.47	1745	12.8	0.00735	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	7.3	0.004206	2.5
Extreme (50C)	1745	4.7	0.002701	2.5
Extreme (40C)	1745	5.0	0.002892	2.5
Extreme (30C)	1745	4.9	0.002795	2.5
Extreme (10C)	1745	6.0	0.003437	2.5
Extreme (0C)	1745	4.9	0.002809	2.5
Extreme (-10C)	1745	9.6	0.005525	2.5
Extreme (-20C)	1745	10.5	0.006045	2.5
Extreme (-30C)	1745	6.6	0.003772	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)				
3.31	1745	12.8	0.007348	2.5
3.89	1745	13.8	0.007899	2.5
4.47	1745	13.6	0.007790	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	7.3	0.004156	2.5
Extreme (50C)	1745	4.8	0.002751	2.5
Extreme (40C)	1745	5.8	0.003316	2.5
Extreme (30C)	1745	4.7	0.002709	2.5
Extreme (10C)	1745	6.5	0.003728	2.5
Extreme (0C)	1745	4.5	0.002594	2.5
Extreme (-10C)	1745	9.1	0.005225	2.5
Extreme (-20C)	1745	10.6	0.006051	2.5
Extreme (-30C)	1745	6.0	0.003446	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.

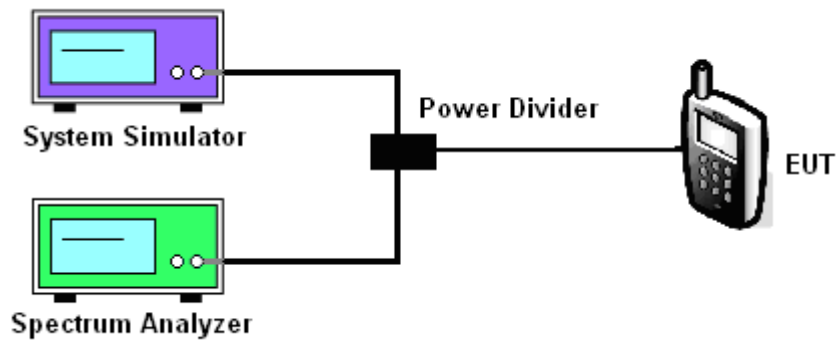
11.2 Measuring Instruments

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 2/4/5/7/12/13/17/38/41/66

Test data reference attachment.

-----END OF REPORT-----