

FCC CFR47 PART 22H, 24E, 27,90S CERTIFICATION TEST REPORT FCC ID: 2BSSA-K3

Product: 4G Smart watch
Trade Mark: LAGENIO
Model No.: K3
Family Model: L36E
Report No.: N25101101503E
Issue Date: Nov. 03, 2025

Prepared for

HK LAGENIO TECHNOLOGY CO.,LIMITED
RM1710 17/F THE CLOUD 111 TUNG CHAU STREET TAI KOK TSUI HK

Prepared by

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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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Community,Minzhi Street, Longhua District, Shenzhen,China

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

Model and/or type reference ...: K3

Trade Mark.....: LAGENIO

Family Model.....: L36E

Test Sample Number..... S2510130143-1#

Standards.....: FCC CFR 47 Part 22H, Part 24E, Part 27, Part 90S

Test procedure: ANSI C63.26:2015
ANSI/TIA-603-E-2016

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

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Date of Test

Date (s) of performance of tests Oct. 13, 2025 ~ Nov. 03, 2025

Date of Issue Nov. 03, 2025

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	K3
Family Model	L36E
Model Difference	All models have the same circuit and RF module, except for model name.
FCC ID:	2BSSA-K3
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2, 4, 5, 7, 12, 13, 17, 26, 66 ☒ LTE TDD Band 41,
Frequency Range:	LTE FDD Band 2 Uplink: 1850MHz-1910MHz, Downlink: 1930MHz-1990MHz; LTE FDD Band 4 Uplink: 1710MHz-1755MHz, Downlink: 2110MHz-2155MHz; LTE FDD Band 5 Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE-FDD Band 7 Uplink: 2500MHz-2570MHz, Downlink: 2620MHz-2690MHz; LTE FDD Band 12 Uplink: 699MHz-716MHz, Downlink: 729MHz-746MHz; LTE FDD Band 13 Uplink: 777MHz-787MHz, Downlink: 746MHz-756MHz; LTE FDD Band 17 Uplink: 704MHz-716MHz, Downlink: 734MHz-746MHz; LTE FDD Band 26A Uplink: 814MHz-824MHz, Downlink: 859MHz-869MHz; LTE FDD Band 26B Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE TDD Band 41 Uplink& Downlink: 2535MHz-2655MHz LTE FDD Band 66 Uplink: 1710MHz-1780MHz, Downlink: 2110MHz-2200MHz;
Type of Modulation:	QPSK/16QAM/64QAM(Only Downlink)
Power Class	Class 3
SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test.
Antenna:	LDS Antenna
Antenna gain:	Band 2: -2.21 dBi, Band 4: -1.79 dBi, Band 5: -4.92 dBi, Band 7: -2.29 dBi, Band 12: -11.16 dBi, Band 13: -9.52 dBi, Band 17: -11.16 dBi, Band 26: -4.92 dBi, Band 41: -1.17 dBi, Band 66: -1.79 dBi

Adapter	N/A
Battery	DC 3.85V, 770mAh, 2.9645Wh
Power supply	DC 3.85V from battery or DC 5V from magnetic charging port
Extreme Vol. Limits:	DC 3.6V to DC 4.4V (Nominal DC 3.85V) (Note 1)
HW Version	ZT02-MB-V3.0
FW Version	N/A
SW Version	L36E_M_F91_WC_V004_251016
** Note1: The High Voltage DC 4.4V and Low Voltage 3.6V 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-K3** filing to comply with the FCC Part 22H&24E&27&90S

1.3 TEST METHODOLOGY

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

1.4 TEST FACILITY

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

ShenZhen NTEK Testing Technology Co., Ltd.

No. 24 Xinfu 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 expanded 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% ($U = 2U_c(y)$)	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 2/4/5/7/12/13/17/26/41/66

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

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

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

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

2.2 EUT EXERCISE

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

2.3 CONFIGURATION OF EUT SYSTEM

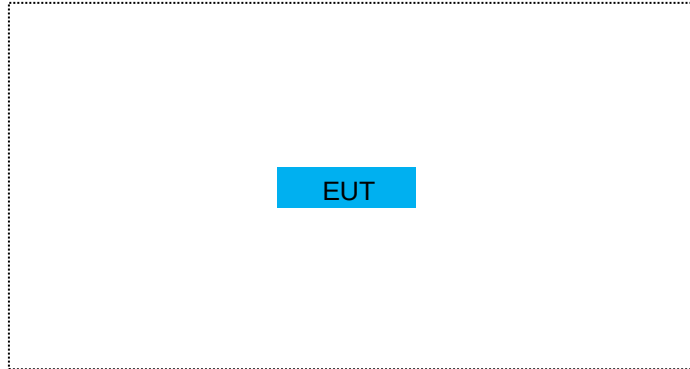
Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	4G Smart watch	K3	FCC ID: 2BSSA-K3	EUT

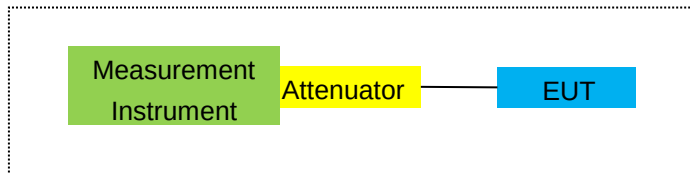
*Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.*

2.4 TEST SETUP

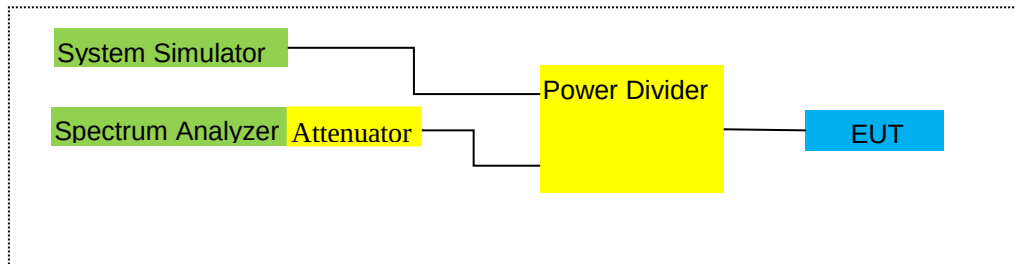
For Radiated Test Cases



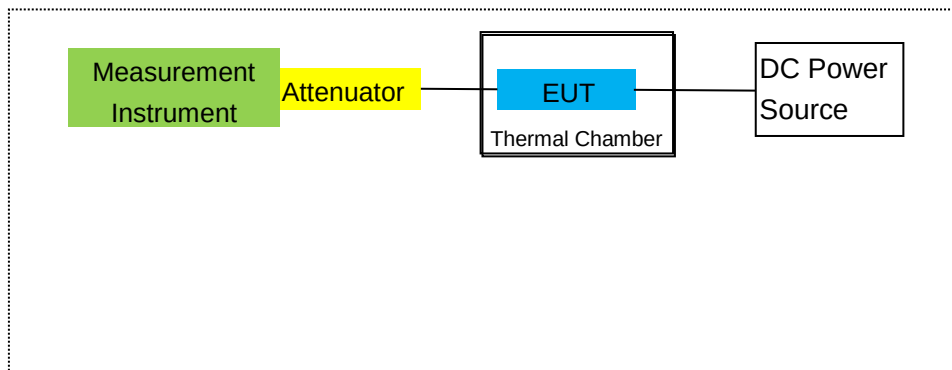
For Conducted Output Power



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	2025.04.17	2026.04.16	1 year
2	Test Receiver	R&S	ESPI	101318	2025.04.17	2026.04.16	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2025.04.17	2026.04.16	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
5	Broadband Horn Antenna	SCHWARZBECK	BBHA 9120 D	2816	2024.05.18	2027.05.17	3 year
6	Broadband Horn Antenna	SCHWARZBECK	BBHA 9120 D	2817	2024.05.18	2027.05.17	3 year
7	Amplifier	EM	EM-30180	060538	2025.04.17	2026.04.16	1 year
8	Active Loop Antenna	SCHWARZBECK	FMZB 1519 B	055	2024.05.17	2027.05.16	3 year
9	Power Meter	R&S	NRVS	100696	2025.04.17	2026.04.16	1 year
10	Power Sensor	R&S	URV5-Z4	0395.1619.05	2025.04.17	2026.04.16	1 year
11	Test Cable	N/A	R-01	N/A	2023.06.17	2026.06.16	3 year
12	Test Cable	N/A	R-02	N/A	2023.06.17	2026.06.16	3 year
13	Test Cable	N/A	R-03	N/A	2023.06.17	2026.06.16	3 year
14	Test Receiver	R&S	ESCI	101160	2025.04.17	2026.04.16	1 year
15	LISN	R&S	ENV216	101313	2025.04.17	2026.04.16	1 year
16	LISN	EMCO	3816/2	00042990	2025.04.17	2026.04.16	1 year
17	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
18	Field strength probe	narda	EP601	711WX81278	2025.04.17	2026.04.16	1 year
19	Test Cable	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
20	Test Cable	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
21	Test Cable	N/A	C03	N/A	2023.05.06	2026.05.05	3 year
22	Spectrum Analyzer	Agilent	E4440A	MY41000130	2025.04.17	2026.04.16	1 year
23	EMI Test Receiver	R&S	ESCI	101160	2025.04.17	2026.04.16	1 year
24	Universal Radio Communication Tester	R&S	CMU200	105747	2025.04.17	2026.04.16	1 year

25	High and Low Temperature Box	WEISS	WT 20/40 EMC Simpac	58226119460030	2024.05.30	2027.05.29	3 year
26	DC Power Source	N/A	PS-6005D	20170402923	2024.04.25	2027.04.24	3 year
27	MXG Vector Signal Generator	Agilent	N5183B	MY57280984	2025.04.17	2026.04.16	1 year
28	Log-Periodic Antenna	SCHWARZBECK	VULB 9162	584	2025.04.17	2026.04.16	1 year
29	Log-Periodic Antenna	SCHWARZBECK	VULB 9162	586	2025.04.17	2026.04.16	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	MWRFTest	MTS 8200	2.0	RF Conducted Test
2	Farad	EZ-EMC_RE	AIT-03A	RadiatedTest
3	raditeq	RadiMation	2023.1.3	RadiatedTest

4. OUTPUT POWER

4.1 OUTPUT POWER MEASUREMENT

LTE Measurement Procedure:

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

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

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

Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
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 2/4/5/7/12/13/17/26/41/66

RESULTS

PASS

Test data reference attachment.

6. BANDEDGE AND EMISSION MASK

RULE PART(S)

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

FCC: §22.359

LIMITS

FCC: §22.917, §24.238, §27.53

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

(m)(4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less 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;

FCC: §90.691 Emission mask requirements for EA-based systems.

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

TEST PROCEDURE

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

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency

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

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

MODES TESTED

Band 2/4/5/7/12/13/17/26/41/66

RESULTS

Test data reference attachment.

7. OUT OF BAND EMISSIONS

RULE PART(S)

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

LIMITS

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

TEST PROCEDURE

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

For each out of band emissions measurement:

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

MODES TESTED

Band 2/4/5/7/12/13/17/26/41/66

7.1 MEASUREMENT METHOD

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

Test data reference attachment.

8. RADIATED MEASUREMENT

8.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

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

LIMITS:

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

27.50 (c) (10) the following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band, the portable stations (hand-held devices) are limited to 3 watts ERP.

27.50 (b)(10) Portable stations (hand-held devices) transmitting in the 746–757 MHz, 758–763 MHz, 776–793 MHz, and 805–806 MHz bands are limited to 3 watts ERP.

27.50 (d)(4) The following power and antenna height requirements apply to stations transmitting in the 1710–1755 MHz and 2110–2155 MHz bands: Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.

27.50 (h)(2) Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

90.635(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

TEST PROCEDURE

ANSI/TIA-603-E Clause 2.2.17

KDB 971168 v02r01 RF power output using broadband peak and average power meter method.

KDB 971168 D01 Power Meas License Digital Systems v02r01, "Measurement Guidance for Certification of Licensed Digital Transmitters"

MODES TESTED

Band 2/4/5/7/12/13/17/26/41/66

RESULTS

Pass

8.2 LTE BAND 2

Radiated Power (EIRP) for Band 2										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Max. EIRP	Max. EIRP Average (mW)	Polarization Of Max. ERP		
						Average (dBm)				
1.4MHz Band QPSK	6/0	1850.7	-3.12	3.76	28.24	21.36	136.773	Horizontal	2	Pass
		1880	-2.93	3.91	28.22	21.38	137.404	Horizontal	2	Pass
		1909.3	-2.84	3.93	28.20	21.43	138.995	Horizontal	2	Pass
3.0MHz Band QPSK	15/0	1851.5	-3.18	3.77	28.23	21.28	134.276	Horizontal	2	Pass
		1880	-3.03	3.91	28.24	21.30	134.896	Horizontal	2	Pass
		1908.5	-2.90	3.94	28.25	21.41	138.357	Horizontal	2	Pass
5.0MHz Band QPSK	25/0	1852.5	-3.07	3.77	28.31	21.47	140.281	Horizontal	2	Pass
		1880	-2.69	3.91	28.22	21.62	145.211	Horizontal	2	Pass
		1907.5	-2.62	3.94	28.20	21.64	145.881	Horizontal	2	Pass
10.0MHz Band QPSK	50/0	1855	-2.93	3.79	28.33	21.61	144.877	Horizontal	2	Pass
		1880	-2.63	3.95	28.22	21.64	145.881	Horizontal	2	Pass
		1905	-2.52	3.97	28.19	21.70	147.911	Horizontal	2	Pass
15.0MHz Band QPSK	75/0	1857.5	-2.89	3.79	28.34	21.66	146.555	Horizontal	2	Pass
		1880	-2.68	3.95	28.22	21.59	144.212	Horizontal	2	Pass
		1902.5	-2.54	3.97	28.18	21.67	146.893	Horizontal	2	Pass
20.0MHz Band QPSK	100/0	1860	-2.88	3.81	28.35	21.66	146.555	Horizontal	2	Pass
		1880	-2.55	3.96	28.22	21.71	148.252	Horizontal	2	Pass
		1900	-2.49	4.00	28.16	21.67	146.893	Horizontal	2	Pass
1.4MHz Band QPSK	6/0	1850.7	-4.29	3.76	28.24	20.19	104.472	Vertical	2	Pass
		1880	-3.75	3.91	28.22	20.56	113.763	Vertical	2	Pass
		1909.3	-3.95	3.93	28.20	20.32	107.647	Vertical	2	Pass
3.0MHz Band QPSK	15/0	1851.5	-3.47	3.77	28.23	20.99	125.603	Vertical	2	Pass
		1880	-3.53	3.91	28.24	20.80	120.226	Vertical	2	Pass
		1908.5	-4.01	3.94	28.25	20.30	107.152	Vertical	2	Pass
5.0MHz Band QPSK	25/0	1852.5	-4.25	3.77	28.31	20.29	106.905	Vertical	2	Pass
		1880	-3.71	3.91	28.22	20.60	114.815	Vertical	2	Pass
		1907.5	-3.66	3.94	28.20	20.60	114.815	Vertical	2	Pass
10.0MHz Band QPSK	50/0	1855	-4.41	3.79	28.33	20.13	103.039	Vertical	2	Pass
		1880	-3.45	3.95	28.22	20.82	120.781	Vertical	2	Pass
		1905	-3.29	3.97	28.19	20.93	123.880	Vertical	2	Pass

15.0MHz	75/0	1857.5	-4.15	3.79	28.34	20.40	109.648	Vertical	2	Pass
Band		1880	-4.09	3.95	28.22	20.18	104.232	Vertical	2	Pass
QPSK		1902.5	-4.05	3.97	28.18	20.16	103.753	Vertical	2	Pass
20.0MHz	100/0	1860	-3.49	3.81	28.35	21.05	127.350	Vertical	2	Pass
Band		1880	-4.01	3.96	28.22	20.25	105.925	Vertical	2	Pass
QPSK		1900	-3.90	4.00	28.16	20.26	106.170	Vertical	2	Pass

Radiated Power (EIRP) for Band 2										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	1850.7	-4.24	3.76	28.24	20.24	105.682	Horizontal	2	Pass
		1880	-3.71	3.91	28.22	20.60	114.815	Horizontal	2	Pass
		1909.3	-3.64	3.93	28.20	20.63	115.611	Horizontal	2	Pass
3.0MHz Band 16 QAM	15/0	1851.5	-3.74	3.77	28.23	20.72	118.032	Horizontal	2	Pass
		1880	-3.82	3.91	28.24	20.51	112.460	Horizontal	2	Pass
		1908.5	-4.03	3.94	28.25	20.28	106.660	Horizontal	2	Pass
5.0MHz Band 16 QAM	25/0	1852.5	-3.68	3.77	28.31	20.86	121.899	Horizontal	2	Pass
		1880	-3.59	3.91	28.22	20.72	118.032	Horizontal	2	Pass
		1907.5	-3.27	3.94	28.20	20.99	125.603	Horizontal	2	Pass
10.0MHz Band 16 QAM	50/0	1855	-3.73	3.79	28.33	20.81	120.504	Horizontal	2	Pass
		1880	-3.72	3.95	28.22	20.55	113.501	Horizontal	2	Pass
		1905	-3.19	3.97	28.19	21.03	126.765	Horizontal	2	Pass
15.0MHz Band 16 QAM	75/0	1857.5	-3.71	3.79	28.34	20.84	121.339	Horizontal	2	Pass
		1880	-3.50	3.95	28.22	20.77	119.399	Horizontal	2	Pass
		1902.5	-3.46	3.97	28.18	20.75	118.850	Horizontal	2	Pass
20.0MHz Band 16 QAM	100/0	1860	-3.60	3.81	28.35	20.94	124.165	Horizontal	2	Pass
		1880	-3.30	3.96	28.22	20.96	124.738	Horizontal	2	Pass
		1900	-3.12	4.00	28.16	21.04	127.057	Horizontal	2	Pass
1.4MHz Band 16 QAM	6/0	1850.7	-4.81	3.76	28.24	19.67	92.683	Vertical	2	Pass
		1880	-4.73	3.91	28.22	19.58	90.782	Vertical	2	Pass
		1909.3	-4.52	3.93	28.20	19.75	94.406	Vertical	2	Pass
3.0MHz Band 16 QAM	15/0	1851.5	-4.65	3.77	28.23	19.81	95.719	Vertical	2	Pass
		1880	-4.36	3.91	28.24	19.97	99.312	Vertical	2	Pass
		1908.5	-4.98	3.94	28.25	19.33	85.704	Vertical	2	Pass
5.0MHz Band 16 QAM	25/0	1852.5	-4.59	3.77	28.31	19.95	98.855	Vertical	2	Pass
		1880	-4.41	3.91	28.22	19.90	97.724	Vertical	2	Pass
		1907.5	-4.96	3.94	28.20	19.30	85.114	Vertical	2	Pass
10.0MHz Band 16 QAM	50/0	1855	-4.99	3.79	28.33	19.55	90.157	Vertical	2	Pass
		1880	-4.86	3.95	28.22	19.41	87.297	Vertical	2	Pass
		1905	-4.86	3.97	28.19	19.36	86.298	Vertical	2	Pass
15.0MHz Band 16	75/0	1857.5	-5.35	3.79	28.34	19.20	83.176	Vertical	2	Pass
		1880	-4.98	3.95	28.22	19.29	84.918	Vertical	2	Pass

QAM		1902.5	-4.93	3.97	28.18	19.28	84.723	Vertical	2	Pass
20.0MHz	100/0	1860	-4.90	3.81	28.35	19.64	92.045	Vertical	2	Pass
Band 16		1880	-4.85	3.96	28.22	19.41	87.297	Vertical	2	Pass
QAM		1900	-4.53	4.00	28.16	19.63	91.833	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 (dBi)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
									Limit	
1.4MHz Band QPSK	6/0	1710.7	-3.03	3.12	27.58	21.43	138.995	Horizontal	1	Pass
		1732.5	-3.02	3.27	27.61	21.32	135.519	Horizontal	1	Pass
		1754.3	-3.00	3.29	27.63	21.34	136.144	Horizontal	1	Pass
3.0MHz Band QPSK	15/0	1711.5	-3.20	3.13	27.61	21.28	134.276	Horizontal	1	Pass
		1732.5	-3.12	3.27	27.61	21.22	132.434	Horizontal	1	Pass
		1753.5	-3.04	3.30	27.62	21.28	134.276	Horizontal	1	Pass
5.0MHz Band QPSK	25/0	1712.5	-2.97	3.13	27.63	21.53	142.233	Horizontal	1	Pass
		1732.5	-2.87	3.27	27.61	21.47	140.281	Horizontal	1	Pass
		1752.5	-2.75	3.30	27.60	21.55	142.889	Horizontal	1	Pass
10.0MHz Band QPSK	50/0	1715	-2.91	3.15	27.64	21.58	143.880	Horizontal	1	Pass
		1732.5	-2.68	3.31	27.61	21.62	145.211	Horizontal	1	Pass
		1750	-2.70	3.33	27.59	21.56	143.219	Horizontal	1	Pass
15.0MHz Band QPSK	75/0	1717.5	-2.92	3.15	27.65	21.58	143.880	Horizontal	1	Pass
		1732.5	-2.76	3.31	27.61	21.54	142.561	Horizontal	1	Pass
		1747.5	-2.70	3.33	27.57	21.54	142.561	Horizontal	1	Pass
20.0MHz Band QPSK	100/0	1720	-2.86	3.17	27.66	21.63	145.546	Horizontal	1	Pass
		1732.5	-2.69	3.32	27.61	21.60	144.544	Horizontal	1	Pass
		1745	-2.63	3.36	27.56	21.57	143.549	Horizontal	1	Pass
1.4MHz Band QPSK	6/0	1710.7	-3.83	3.12	27.58	20.63	115.611	Vertical	1	Pass
		1732.5	-4.21	3.27	27.61	20.13	103.039	Vertical	1	Pass
		1754.3	-3.81	3.29	27.63	20.53	112.980	Vertical	1	Pass
3.0MHz Band QPSK	15/0	1711.5	-3.73	3.13	27.61	20.75	118.850	Vertical	1	Pass
		1732.5	-3.26	3.27	27.61	21.08	128.233	Vertical	1	Pass
		1753.5	-4.10	3.30	27.62	20.22	105.196	Vertical	1	Pass
5.0MHz Band QPSK	25/0	1712.5	-3.59	3.13	27.63	20.91	123.310	Vertical	1	Pass
		1732.5	-3.43	3.27	27.61	20.91	123.310	Vertical	1	Pass
		1752.5	-3.66	3.30	27.60	20.64	115.878	Vertical	1	Pass
10.0MHz	50/0	1715	-4.16	3.15	27.64	20.33	107.895	Vertical	1	Pass

Band QPSK		1732.5	-3.65	3.31	27.61	20.65	116.145	Vertical	1	Pass
		1750	-3.83	3.33	27.59	20.43	110.408	Vertical	1	Pass
15.0MHz Band QPSK	75/0	1717.5	-4.36	3.15	27.65	20.14	103.276	Vertical	1	Pass
		1732.5	-3.93	3.31	27.61	20.37	108.893	Vertical	1	Pass
		1747.5	-4.09	3.33	27.57	20.15	103.514	Vertical	1	Pass
20.0MHz Band QPSK	100/0	1720	-4.32	3.17	27.66	20.17	103.992	Vertical	1	Pass
		1732.5	-3.27	3.32	27.61	21.02	126.474	Vertical	1	Pass
		1745	-3.88	3.36	27.56	20.32	107.647	Vertical	1	Pass

Radiated Power (EIRP) for Band 4										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	1710.7	-3.84	3.12	27.58	20.62	115.345	Horizontal	1	Pass
		1732.5	-3.69	3.27	27.61	20.65	116.145	Horizontal	1	Pass
		1754.3	-3.69	3.29	27.63	20.65	116.145	Horizontal	1	Pass
3.0MHz Band 16 QAM	15/0	1711.5	-3.78	3.13	27.61	20.70	117.490	Horizontal	1	Pass
		1732.5	-3.91	3.27	27.61	20.43	110.408	Horizontal	1	Pass
		1753.5	-4.13	3.30	27.62	20.19	104.472	Horizontal	1	Pass
5.0MHz Band 16 QAM	25/0	1712.5	-3.61	3.13	27.63	20.89	122.744	Horizontal	1	Pass
		1732.5	-3.57	3.27	27.61	20.77	119.399	Horizontal	1	Pass
		1752.5	-3.26	3.30	27.60	21.04	127.057	Horizontal	1	Pass
10.0MHz Band 16 QAM	50/0	1715	-3.68	3.15	27.64	20.81	120.504	Horizontal	1	Pass
		1732.5	-3.87	3.31	27.61	20.43	110.408	Horizontal	1	Pass
		1750	-3.25	3.33	27.59	21.01	126.183	Horizontal	1	Pass
15.0MHz Band 16 QAM	75/0	1717.5	-3.48	3.15	27.65	21.02	126.474	Horizontal	1	Pass
		1732.5	-3.54	3.31	27.61	20.76	119.124	Horizontal	1	Pass
		1747.5	-3.56	3.33	27.57	20.68	116.950	Horizontal	1	Pass
20.0MHz Band 16 QAM	100/0	1720	-3.43	3.17	27.66	21.06	127.644	Horizontal	1	Pass
		1732.5	-3.44	3.32	27.61	20.85	121.619	Horizontal	1	Pass
		1745	-3.25	3.36	27.56	20.95	124.451	Horizontal	1	Pass
1.4MHz Band 16 QAM	6/0	1710.7	-4.48	3.12	27.58	19.98	99.541	Vertical	1	Pass
		1732.5	-4.74	3.27	27.61	19.60	91.201	Vertical	1	Pass
		1754.3	-4.98	3.29	27.63	19.36	86.298	Vertical	1	Pass
3.0MHz Band 16 QAM	15/0	1711.5	-4.67	3.13	27.61	19.81	95.719	Vertical	1	Pass
		1732.5	-4.57	3.27	27.61	19.77	94.842	Vertical	1	Pass
		1753.5	-4.61	3.30	27.62	19.71	93.541	Vertical	1	Pass
5.0MHz Band 16 QAM	25/0	1712.5	-5.23	3.13	27.63	19.27	84.528	Vertical	1	Pass
		1732.5	-4.94	3.27	27.61	19.40	87.096	Vertical	1	Pass
		1752.5	-4.55	3.30	27.60	19.75	94.406	Vertical	1	Pass
10.0MHz Band 16 QAM	50/0	1715	-5.36	3.15	27.64	19.13	81.846	Vertical	1	Pass
		1732.5	-4.70	3.31	27.61	19.60	91.201	Vertical	1	Pass
		1750	-4.83	3.33	27.59	19.43	87.700	Vertical	1	Pass

15.0MHz	75/0	1717.5	-5.26	3.15	27.65	19.24	83.946	Vertical	1	Pass
Band 16		1732.5	-5.18	3.31	27.61	19.12	81.658	Vertical	1	Pass
QAM		1747.5	-5.15	3.33	27.57	19.09	81.096	Vertical	1	Pass
20.0MHz	100/0	1720	-4.72	3.17	27.66	19.77	94.842	Vertical	1	Pass
Band 16		1732.5	-4.90	3.32	27.61	19.39	86.896	Vertical	1	Pass
QAM		1745	-4.56	3.36	27.56	19.64	92.045	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							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band QPSK	6/0	824.7	6.27	2.01	19.68	2.15	21.79	151.008	Horizontal	7	Pass
		836.5	6.15	2.01	19.77	2.15	21.76	149.968	Horizontal	7	Pass
		848.3	5.95	2.02	19.82	2.15	21.60	144.544	Horizontal	7	Pass
3.0MHz Band QPSK	15/0	825.5	6.04	2.01	19.70	2.15	21.58	143.880	Horizontal	7	Pass
		836.5	5.94	2.01	19.77	2.15	21.55	142.889	Horizontal	7	Pass
		847.5	5.81	2.02	19.81	2.15	21.45	139.637	Horizontal	7	Pass
5.0MHz Band QPSK	25/0	826.5	6.32	2.01	19.71	2.15	21.87	153.815	Horizontal	7	Pass
		836.5	6.20	2.01	19.77	2.15	21.81	151.705	Horizontal	7	Pass
		846.5	6.04	2.02	19.79	2.15	21.66	146.555	Horizontal	7	Pass
10.0MHz Band QPSK	50/0	829	6.34	2.01	19.73	2.15	21.91	155.239	Horizontal	7	Pass
		836.5	6.29	2.01	19.77	2.15	21.90	154.882	Horizontal	7	Pass
		844	6.19	2.02	19.78	2.15	21.80	151.356	Horizontal	7	Pass
1.4MHz Band QPSK	6/0	824.7	4.86	2.01	19.68	2.15	20.38	109.144	Vertical	7	Pass
		836.5	4.90	2.01	19.77	2.15	20.51	112.460	Vertical	7	Pass
		848.3	5.23	2.02	19.82	2.15	20.88	122.462	Vertical	7	Pass
3.0MHz Band QPSK	15/0	825.5	5.54	2.01	19.70	2.15	21.08	128.233	Vertical	7	Pass
		836.5	5.03	2.01	19.77	2.15	20.64	115.878	Vertical	7	Pass
		847.5	5.05	2.02	19.81	2.15	20.69	117.220	Vertical	7	Pass
5.0MHz Band QPSK	25/0	826.5	4.78	2.01	19.71	2.15	20.33	107.895	Vertical	7	Pass
		836.5	4.98	2.01	19.77	2.15	20.59	114.551	Vertical	7	Pass
		846.5	5.05	2.02	19.79	2.15	20.67	116.681	Vertical	7	Pass
10.0MHz Band QPSK	50/0	829	4.64	2.01	19.73	2.15	20.21	104.954	Vertical	7	Pass
		836.5	5.22	2.01	19.77	2.15	20.83	121.060	Vertical	7	Pass
		844	5.45	2.02	19.78	2.15	21.06	127.644	Vertical	7	Pass

Radiated Power (ERP) for Band 5											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	824.7	5.42	2.01	19.68	2.15	20.94	124.165	Horizontal	7	Pass
		836.5	5.35	2.01	19.77	2.15	20.96	124.738	Horizontal	7	Pass
		848.3	5.19	2.02	19.82	2.15	20.84	121.339	Horizontal	7	Pass
3.0MHz Band 16 QAM	15/0	825.5	5.50	2.01	19.70	2.15	21.04	127.057	Horizontal	7	Pass
		836.5	5.21	2.01	19.77	2.15	20.82	120.781	Horizontal	7	Pass
		847.5	4.69	2.02	19.81	2.15	20.33	107.895	Horizontal	7	Pass
5.0MHz Band 16 QAM	25/0	826.5	5.82	2.01	19.71	2.15	21.37	137.088	Horizontal	7	Pass
		836.5	5.59	2.01	19.77	2.15	21.20	131.826	Horizontal	7	Pass
		846.5	5.34	2.02	19.79	2.15	20.96	124.738	Horizontal	7	Pass
10.0MHz Band 16 QAM	50/0	829	5.82	2.01	19.73	2.15	21.39	137.721	Horizontal	7	Pass
		836.5	5.54	2.01	19.77	2.15	21.15	130.317	Horizontal	7	Pass
		844	5.08	2.02	19.78	2.15	20.69	117.220	Horizontal	7	Pass
1.4MHz Band 16 QAM	6/0	824.7	4.56	2.01	19.68	2.15	20.08	101.859	Vertical	7	Pass
		836.5	5.47	2.01	19.77	2.15	21.08	128.233	Vertical	7	Pass
		848.3	4.99	2.02	19.82	2.15	20.64	115.878	Vertical	7	Pass
3.0MHz Band 16 QAM	15/0	825.5	4.87	2.01	19.70	2.15	20.41	109.901	Vertical	7	Pass
		836.5	3.81	2.01	19.77	2.15	19.42	87.498	Vertical	7	Pass
		847.5	4.48	2.02	19.81	2.15	20.12	102.802	Vertical	7	Pass
5.0MHz Band 16 QAM	25/0	826.5	4.52	2.01	19.71	2.15	20.07	101.625	Vertical	7	Pass
		836.5	4.06	2.01	19.77	2.15	19.67	92.683	Vertical	7	Pass
		846.5	3.48	2.02	19.79	2.15	19.10	81.283	Vertical	7	Pass
10.0MHz Band 16 QAM	50/0	829	4.03	2.01	19.73	2.15	19.60	91.201	Vertical	7	Pass
		836.5	3.90	2.01	19.77	2.15	19.51	89.331	Vertical	7	Pass
		844	4.30	2.02	19.78	2.15	19.91	97.949	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						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Max. EIRP	Max. EIRP Average (mW)	Polarization Of Max. ERP		
						Average				
						(dBm)				
5.0MHz Band QPSK	25/0	2502.5	-1.31	4.54	27.75	21.90	154.882	Horizontal	2	Pass
		2535	-1.14	4.69	27.72	21.89	154.525	Horizontal	2	Pass
		2567.5	-1.07	4.71	27.71	21.93	155.955	Horizontal	2	Pass
10.0MHz Band QPSK	50/0	2505	-1.24	4.55	27.76	21.97	157.398	Horizontal	2	Pass
		2535	-1.05	4.69	27.72	21.98	157.761	Horizontal	2	Pass
		2565	-0.97	4.72	27.70	22.01	158.855	Horizontal	2	Pass
15.0MHz Band QPSK	75/0	2507.5	-1.25	4.55	27.77	21.97	157.398	Horizontal	2	Pass
		2535	-1.11	4.69	27.72	21.92	155.597	Horizontal	2	Pass
		2562.5	-1.01	4.72	27.69	21.96	157.036	Horizontal	2	Pass
20.0MHz Band QPSK	100/0	2510	-1.19	4.57	27.78	22.02	159.221	Horizontal	2	Pass
		2535	-1.01	4.73	27.72	21.98	157.761	Horizontal	2	Pass
		2560	-0.97	4.75	27.68	21.96	157.036	Horizontal	2	Pass
5.0MHz Band QPSK	25/0	2502.5	-3.11	4.54	27.75	20.10	102.329	Vertical	2	Pass
		2535	-2.88	4.69	27.72	20.15	103.514	Vertical	2	Pass
		2567.5	-2.23	4.71	27.71	20.77	119.399	Vertical	2	Pass
10.0MHz Band QPSK	50/0	2505	-2.51	4.55	27.76	20.70	117.490	Vertical	2	Pass
		2535	-2.17	4.69	27.72	20.86	121.899	Vertical	2	Pass
		2565	-2.78	4.72	27.70	20.20	104.713	Vertical	2	Pass
15.0MHz Band QPSK	75/0	2507.5	-2.41	4.55	27.77	20.81	120.504	Vertical	2	Pass
		2535	-2.11	4.69	27.72	20.92	123.595	Vertical	2	Pass
		2562.5	-2.89	4.72	27.69	20.08	101.859	Vertical	2	Pass
20.0MHz Band QPSK	100/0	2510	-2.20	4.57	27.78	21.01	126.183	Vertical	2	Pass
		2535	-2.66	4.73	27.72	20.33	107.895	Vertical	2	Pass
		2560	-2.84	4.75	27.68	20.09	102.094	Vertical	2	Pass

Radiated Power (EIRP) for Band 7										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP		
							Average (mW)			
5.0MHz Band 16 QAM	25/0	2502.5	-2.00	4.54	27.75	21.21	132.130	Horizontal	2	Pass
		2535	-1.69	4.69	27.72	21.34	136.144	Horizontal	2	Pass
		2567.5	-1.77	4.71	27.71	21.23	132.739	Horizontal	2	Pass
10.0MHz Band 16 QAM	50/0	2505	-1.89	4.55	27.76	21.32	135.519	Horizontal	2	Pass
		2535	-1.90	4.69	27.72	21.13	129.718	Horizontal	2	Pass
		2565	-2.17	4.72	27.70	20.81	120.504	Horizontal	2	Pass
15.0MHz Band 16 QAM	75/0	2507.5	-2.07	4.55	27.77	21.15	130.317	Horizontal	2	Pass
		2535	-2.04	4.69	27.72	20.99	125.603	Horizontal	2	Pass
		2562.5	-1.65	4.72	27.69	21.32	135.519	Horizontal	2	Pass
20.0MHz Band 16 QAM	100/0	2510	-1.95	4.57	27.78	21.26	133.660	Horizontal	2	Pass
		2535	-1.62	4.73	27.72	21.37	137.088	Horizontal	2	Pass
		2560	-1.72	4.75	27.68	21.21	132.130	Horizontal	2	Pass
5.0MHz Band 16 QAM	25/0	2502.5	-3.37	4.54	27.75	19.84	96.383	Vertical	2	Pass
		2535	-3.45	4.69	27.72	19.58	90.782	Vertical	2	Pass
		2567.5	-2.15	4.71	27.71	20.85	121.619	Vertical	2	Pass
10.0MHz Band 16 QAM	50/0	2505	-2.26	4.55	27.76	20.95	124.451	Vertical	2	Pass
		2535	-2.70	4.69	27.72	20.33	107.895	Vertical	2	Pass
		2565	-2.74	4.72	27.70	20.24	105.682	Vertical	2	Pass
15.0MHz Band 16 QAM	75/0	2507.5	-2.64	4.55	27.77	20.58	114.288	Vertical	2	Pass
		2535	-2.90	4.69	27.72	20.13	103.039	Vertical	2	Pass
		2562.5	-3.08	4.72	27.69	19.89	97.499	Vertical	2	Pass
20.0MHz Band 16 QAM	100/0	2510	-3.63	4.57	27.78	19.58	90.782	Vertical	2	Pass
		2535	-3.38	4.73	27.72	19.61	91.411	Vertical	2	Pass
		2560	-2.49	4.75	27.68	20.44	110.662	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							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band QPSK	6/0	699.7	6.64	1.91	19.21	2.15	21.79	151.008	Vertical	3	Pass
		707.5	6.56	1.91	19.26	2.15	21.76	149.968	Vertical	3	Pass
		715.3	6.34	1.93	19.34	2.15	21.60	144.544	Vertical	3	Pass
3.0MHz Band QPSK	15/0	700.5	6.43	1.91	19.21	2.15	21.58	143.880	Vertical	3	Pass
		707.5	6.35	1.91	19.26	2.15	21.55	142.889	Vertical	3	Pass
		714.5	6.19	1.93	19.34	2.15	21.45	139.637	Vertical	3	Pass
5.0MHz Band QPSK	25/0	701.5	6.70	1.91	19.23	2.15	21.87	153.815	Vertical	3	Pass
		707.5	6.61	1.91	19.26	2.15	21.81	151.705	Vertical	3	Pass
		713.5	6.40	1.92	19.33	2.15	21.66	146.555	Vertical	3	Pass
10.0MHz Band QPSK	50/0	704	6.72	1.91	19.25	2.15	21.91	155.239	Vertical	3	Pass
		707.5	6.70	1.91	19.26	2.15	21.90	154.882	Vertical	3	Pass
		711	6.55	1.92	19.32	2.15	21.80	151.356	Vertical	3	Pass
1.4MHz Band QPSK	6/0	699.7	5.56	1.91	19.21	2.15	20.71	117.761	Horizontal	3	Pass
		707.5	5.87	1.91	19.26	2.15	21.07	127.938	Horizontal	3	Pass
		715.3	5.71	1.93	19.34	2.15	20.97	125.026	Horizontal	3	Pass
3.0MHz Band QPSK	15/0	700.5	4.94	1.91	19.21	2.15	20.09	102.094	Horizontal	3	Pass
		707.5	4.98	1.91	19.26	2.15	20.18	104.232	Horizontal	3	Pass
		714.5	5.12	1.93	19.34	2.15	20.38	109.144	Horizontal	3	Pass
5.0MHz Band QPSK	25/0	701.5	5.49	1.91	19.23	2.15	20.66	116.413	Horizontal	3	Pass
		707.5	5.17	1.91	19.26	2.15	20.37	108.893	Horizontal	3	Pass
		713.5	5.50	1.92	19.33	2.15	20.76	119.124	Horizontal	3	Pass
10.0MHz Band QPSK	50/0	704	5.72	1.91	19.25	2.15	20.91	123.310	Horizontal	3	Pass
		707.5	5.39	1.91	19.26	2.15	20.59	114.551	Horizontal	3	Pass
		711	5.58	1.92	19.32	2.15	20.83	121.060	Horizontal	3	Pass

Radiated Power (ERP) for Band 12											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	699.7	6.31	1.91	19.21	2.15	21.46	139.959	Vertical	3	Pass
		707.5	6.23	1.91	19.26	2.15	21.43	138.995	Vertical	3	Pass
		715.3	6.01	1.93	19.34	2.15	21.27	133.968	Vertical	3	Pass
3.0MHz Band 16 QAM	15/0	700.5	6.10	1.91	19.21	2.15	21.25	133.352	Vertical	3	Pass
		707.5	6.02	1.91	19.26	2.15	21.22	132.434	Vertical	3	Pass
		714.5	5.86	1.93	19.34	2.15	21.12	129.420	Vertical	3	Pass
5.0MHz Band 16 QAM	25/0	701.5	6.37	1.91	19.23	2.15	21.54	142.561	Vertical	3	Pass
		707.5	6.28	1.91	19.26	2.15	21.48	140.605	Vertical	3	Pass
		713.5	6.07	1.92	19.33	2.15	21.33	135.831	Vertical	3	Pass
10.0MHz Band 16 QAM	50/0	704	6.39	1.91	19.25	2.15	21.58	143.880	Vertical	3	Pass
		707.5	6.37	1.91	19.26	2.15	21.57	143.549	Vertical	3	Pass
		711	6.22	1.92	19.32	2.15	21.47	140.281	Vertical	3	Pass
1.4MHz Band 16 QAM	6/0	699.7	4.95	1.91	19.21	2.15	20.10	102.329	Horizontal	3	Pass
		707.5	4.97	1.91	19.26	2.15	20.17	103.992	Horizontal	3	Pass
		715.3	5.02	1.93	19.34	2.15	20.28	106.660	Horizontal	3	Pass
3.0MHz Band 16 QAM	15/0	700.5	5.01	1.91	19.21	2.15	20.16	103.753	Horizontal	3	Pass
		707.5	5.12	1.91	19.26	2.15	20.32	107.647	Horizontal	3	Pass
		714.5	4.85	1.93	19.34	2.15	20.11	102.565	Horizontal	3	Pass
5.0MHz Band 16 QAM	25/0	701.5	5.35	1.91	19.23	2.15	20.52	112.720	Horizontal	3	Pass
		707.5	5.19	1.91	19.26	2.15	20.39	109.396	Horizontal	3	Pass
		713.5	5.35	1.92	19.33	2.15	20.61	115.080	Horizontal	3	Pass
10.0MHz Band 16 QAM	50/0	704	4.83	1.91	19.25	2.15	20.02	100.462	Horizontal	3	Pass
		707.5	4.60	1.91	19.26	2.15	19.80	95.499	Horizontal	3	Pass
		711	4.76	1.92	19.32	2.15	20.01	100.231	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							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	5.52	1.91	19.23	2.15	20.69	117.22	Horizontal	3	Pass
		782	5.37	1.91	19.26	2.15	20.57	114.02	Horizontal	3	Pass
		784.5	3.88	1.92	19.33	2.15	19.14	82.04	Horizontal	3	Pass
10.0MHz Band QPSK	50/0	782	4.49	1.91	19.25	2.15	19.68	92.90	Horizontal	3	Pass
			5.67	1.91	19.26	2.15	20.87	122.18	Horizontal	3	Pass
			3.91	1.92	19.32	2.15	19.16	82.41	Horizontal	3	Pass
5.0MHz Band QPSK	25/0	779.5	4.70	1.91	19.23	2.15	19.87	97.05	Vertical	3	Pass
		782	4.26	1.91	19.26	2.15	19.46	88.31	Vertical	3	Pass
		784.5	3.82	1.92	19.33	2.15	19.08	80.91	Vertical	3	Pass
10.0MHz Band QPSK	50/0	782	4.15	1.91	19.25	2.15	19.34	85.90	Vertical	3	Pass
			3.99	1.91	19.26	2.15	19.19	82.99	Vertical	3	Pass
			4.69	1.92	19.32	2.15	19.94	98.63	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		
5.0MHz Band QPSK	25/0	779.5	5.71	1.91	19.23	2.15	20.88	122.46	Horizontal	3	Pass
		782	4.48	1.91	19.26	2.15	19.68	92.90	Horizontal	3	Pass
		784.5	4.67	1.92	19.33	2.15	19.93	98.40	Horizontal	3	Pass
10.0MHz Band QPSK	50/0	782	4.05	1.91	19.25	2.15	19.24	83.95	Horizontal	3	Pass
			5.70	1.91	19.26	2.15	20.90	123.03	Horizontal	3	Pass
			4.18	1.92	19.32	2.15	19.43	87.70	Horizontal	3	Pass
5.0MHz Band QPSK	25/0	779.5	4.85	1.91	19.23	2.15	20.02	100.46	Vertical	3	Pass
		782	4.00	1.91	19.26	2.15	19.20	83.18	Vertical	3	Pass
		784.5	4.45	1.92	19.33	2.15	19.71	93.54	Vertical	3	Pass
10.0MHz Band QPSK	50/0	782	4.11	1.91	19.25	2.15	19.30	85.11	Vertical	3	Pass
			4.34	1.91	19.26	2.15	19.54	89.95	Vertical	3	Pass
			3.92	1.92	19.32	2.15	19.17	82.60	Vertical	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

8.8 LTE BAND 17

Radiated Power (ERP) for Band 17											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
5.0MHz Band QPSK	25/0	706.5	6.77	1.91	19.23	2.15	21.94	156.315	Vertical	3	Pass
		710	6.63	1.91	19.26	2.15	21.83	152.405	Vertical	3	Pass
		713.5	6.53	1.92	19.33	2.15	21.79	151.008	Vertical	3	Pass
10.0MHz Band QPSK	50/0	709	6.78	1.91	19.25	2.15	21.97	157.398	Vertical	3	Pass
		710	6.73	1.91	19.26	2.15	21.93	155.955	Vertical	3	Pass
		711	6.69	1.92	19.32	2.15	21.94	156.315	Vertical	3	Pass
5.0MHz Band QPSK	25/0	706.5	5.34	1.91	19.23	2.15	20.51	112.460	Horizontal	3	Pass
		710	5.16	1.91	19.26	2.15	20.36	108.643	Horizontal	3	Pass
		713.5	5.57	1.92	19.33	2.15	20.83	121.060	Horizontal	3	Pass
10.0MHz Band QPSK	50/0	709	6.38	1.91	19.25	2.15	21.57	143.549	Horizontal	3	Pass
		710	6.04	1.91	19.26	2.15	21.24	133.045	Horizontal	3	Pass
		711	5.13	1.92	19.32	2.15	20.38	109.144	Horizontal	3	Pass

Radiated Power (ERP) for Band 17											
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	Limit	
5.0MHz Band 16 QAM	25/0	706.5	5.64	1.91	19.23	2.15	20.81	120.504	Vertical	3	Pass
		710	5.55	1.91	19.26	2.15	20.75	118.850	Vertical	3	Pass
		713.5	5.35	1.92	19.33	2.15	20.61	115.080	Vertical	3	Pass
10.0MHz Band 16 QAM	50/0	709	5.18	1.91	19.25	2.15	20.37	108.893	Vertical	3	Pass
		710	5.71	1.91	19.26	2.15	20.91	123.310	Vertical	3	Pass
		711	5.44	1.92	19.32	2.15	20.69	117.220	Vertical	3	Pass
5.0MHz Band 16 QAM	25/0	706.5	4.73	1.91	19.23	2.15	19.90	97.724	Horizontal	3	Pass
		710	4.59	1.91	19.26	2.15	19.79	95.280	Horizontal	3	Pass
		713.5	4.18	1.92	19.33	2.15	19.44	87.902	Horizontal	3	Pass
10.0MHz Band 16 QAM	50/0	709	4.28	1.91	19.25	2.15	19.47	88.512	Horizontal	3	Pass
		710	4.08	1.91	19.26	2.15	19.28	84.723	Horizontal	3	Pass
		711	4.32	1.92	19.32	2.15	19.57	90.573	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 26 A

Radiated Power (ERP) for Band 26(814-824)											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Correction	Max. EIRP	Max. EIRP	Polarization Of Max. ERP		
			(dBm)			(dB)	Average	Average			
							(dBm)	(mW)			
1.4MHz BW QPSK	6/0	814.7	-0.94	3.76	28.24	2.15	21.39	137.72	Horizontal	100	Pass
		819	-0.80	3.91	28.22	2.15	21.36	136.77	Horizontal	100	Pass
		823.3	-0.92	3.93	28.20	2.15	21.20	131.83	Horizontal	100	Pass
3.0MHz BW QPSK	15/0	815.5	-1.13	3.77	28.23	2.15	21.18	131.22	Horizontal	100	Pass
		819	-1.03	3.91	28.24	2.15	21.15	130.32	Horizontal	100	Pass
		822.5	-1.11	3.94	28.25	2.15	21.05	127.35	Horizontal	100	Pass
5.0MHz BW QPSK	25/0	816.5	-0.92	3.77	28.31	2.15	21.47	140.28	Horizontal	100	Pass
		819	-0.75	3.91	28.22	2.15	21.41	138.36	Horizontal	100	Pass
		821.5	-0.85	3.94	28.20	2.15	21.26	133.66	Horizontal	100	Pass
10.0MHz BW QPSK	50/0	819	-0.65	3.91	28.22	2.15	21.51	141.58	Horizontal	100	Pass
1.4MHz BW QPSK	6/0	814.7	-0.90	3.79	28.34	2.15	21.50	141.25	Vertical	100	Pass
		819	-0.72	3.95	28.22	2.15	21.40	138.04	Vertical	100	Pass
		823.3	-1.47	3.97	28.18	2.15	20.59	114.55	Vertical	100	Pass
3.0MHz BW QPSK	15/0	815.5	-2.47	3.77	28.23	2.15	19.84	96.38	Vertical	100	Pass
		819	-2.11	3.91	28.24	2.15	20.07	101.62	Vertical	100	Pass
		822.5	-2.11	3.94	28.25	2.15	20.05	101.16	Vertical	100	Pass
5.0MHz BW QPSK	25/0	816.5	-1.73	3.77	28.31	2.15	20.66	116.41	Vertical	100	Pass
		819	-1.89	3.91	28.22	2.15	20.27	106.41	Vertical	100	Pass
		821.5	-1.74	3.94	28.20	2.15	20.37	108.89	Vertical	100	Pass
10.0MHz BW QPSK	50/0	819	-2.10	3.91	28.22	2.15	20.06	101.39	Vertical	100	Pass

Radiated Power (ERP) for Band 26(814-824)											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level	Cable Loss	Antenna Factor	Correction	Max. EIRP	Max. EIRP	Polarization Of Max. ERP		
			(dBm)	(dBm)	(dB)	(dB)	Average (dBm)	Average (mW)			
1.4MHz BW 16 QAM	6/0	814.7	-1.35	3.76	28.24	2.15	20.98	125.31	Horizontal	100	Pass
		819	-1.21	3.91	28.22	2.15	20.95	124.45	Horizontal	100	Pass
		823.3	-1.33	3.93	28.20	2.15	20.79	119.95	Horizontal	100	Pass
3.0MHz BW 16 QAM	15/0	815.5	-1.54	3.77	28.23	2.15	20.77	119.40	Horizontal	100	Pass
		819	-1.44	3.91	28.24	2.15	20.74	118.58	Horizontal	100	Pass
		822.5	-1.52	3.94	28.25	2.15	20.64	115.88	Horizontal	100	Pass
5.0MHz BW 16 QAM	25/0	816.5	-1.33	3.77	28.31	2.15	21.06	127.64	Horizontal	100	Pass
		819	-1.16	3.91	28.22	2.15	21.00	125.89	Horizontal	100	Pass
		821.5	-1.26	3.94	28.20	2.15	20.85	121.62	Horizontal	100	Pass
10.0MHz BW 16 QAM	50/0	819	-1.08	3.91	28.24	2.15	21.10	128.82	Horizontal	100	Pass
1.4MHz BW 16 QAM	6/0	814.7	-1.31	3.79	28.34	2.15	21.09	128.53	Vertical	100	Pass
		819	-1.13	3.95	28.22	2.15	20.99	125.60	Vertical	100	Pass
		823.3	-2.71	3.97	28.18	2.15	19.35	86.10	Vertical	100	Pass
3.0MHz BW 16 QAM	15/0	815.5	-2.82	3.77	28.23	2.15	19.49	88.92	Vertical	100	Pass
		819	-2.07	3.91	28.24	2.15	20.11	102.57	Vertical	100	Pass
		822.5	-2.09	3.94	28.25	2.15	20.07	101.62	Vertical	100	Pass
5.0MHz BW 16 QAM	25/0	816.5	-2.30	3.77	28.31	2.15	20.09	102.09	Vertical	100	Pass
		819	-2.18	3.91	28.22	2.15	19.98	99.54	Vertical	100	Pass
		821.5	-2.69	3.94	28.20	2.15	19.42	87.50	Vertical	100	Pass
10.0MHz BW 16 QAM	50/0	819	-2.10	3.91	28.24	2.15	20.08	101.86	Vertical	100	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.10 LTE BAND 26 B

Radiated Power (ERP) for Band 26(824-849)											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band QPSK	6/0	824.7	4.55	2.01	19.68	2.15	20.07	101.62	Horizontal	7	Pass
		836.5	4.49	2.01	19.77	2.15	20.10	102.33	Horizontal	7	Pass
		848.3	4.43	2.02	19.82	2.15	20.08	101.86	Horizontal	7	Pass
3.0MHz Band QPSK	15/0	825.5	4.59	2.01	19.70	2.15	20.13	103.04	Horizontal	7	Pass
		836.5	4.22	2.01	19.77	2.15	19.83	96.16	Horizontal	7	Pass
		847.5	4.67	2.02	19.81	2.15	20.31	107.40	Horizontal	7	Pass
5.0MHz Band QPSK	25/0	826.5	4.85	2.01	19.71	2.15	20.40	109.65	Horizontal	7	Pass
		836.5	4.67	2.01	19.77	2.15	20.28	106.66	Horizontal	7	Pass
		846.5	4.04	2.02	19.79	2.15	19.66	92.47	Horizontal	7	Pass
10.0MHz Band QPSK	50/0	829	4.06	2.01	19.73	2.15	19.63	91.83	Horizontal	7	Pass
		836.5	4.18	2.01	19.77	2.15	19.79	95.28	Horizontal	7	Pass
		844	4.78	2.02	19.78	2.15	20.39	109.40	Horizontal	7	Pass
15.0MHz Band QPSK	75/0	831.5	3.87	2.01	19.73	2.15	19.44	87.90	Horizontal	7	Pass
		836.5	4.80	2.01	19.77	2.15	20.41	109.90	Horizontal	7	Pass
		841.5	4.53	2.02	19.78	2.15	20.14	103.28	Horizontal	7	Pass
1.4MHz Band QPSK	6/0	824.7	4.13	2.01	19.68	2.15	19.65	92.26	Vertical	7	Pass
		836.5	4.07	2.01	19.77	2.15	19.68	92.90	Vertical	7	Pass
		848.3	4.33	2.02	19.82	2.15	19.98	99.54	Vertical	7	Pass
3.0MHz Band QPSK	15/0	825.5	4.27	2.01	19.70	2.15	19.81	95.72	Vertical	7	Pass
		836.5	3.89	2.01	19.77	2.15	19.50	89.13	Vertical	7	Pass
		847.5	4.14	2.02	19.81	2.15	19.78	95.06	Vertical	7	Pass
5.0MHz Band QPSK	25/0	826.5	4.29	2.01	19.71	2.15	19.84	96.38	Vertical	7	Pass
		836.5	4.04	2.01	19.77	2.15	19.65	92.26	Vertical	7	Pass
		846.5	4.16	2.02	19.79	2.15	19.78	95.06	Vertical	7	Pass
10.0MHz Band QPSK	50/0	829	3.93	2.01	19.73	2.15	19.50	89.13	Vertical	7	Pass
		836.5	4.27	2.01	19.77	2.15	19.88	97.27	Vertical	7	Pass
		844	4.11	2.02	19.78	2.15	19.72	93.76	Vertical	7	Pass
15.0MHz Band QPSK	75/0	831.5	3.94	2.01	19.73	2.15	19.51	89.33	Vertical	7	Pass
		836.5	4.69	2.01	19.77	2.15	20.30	107.15	Vertical	7	Pass
		841.5	4.29	2.02	19.78	2.15	19.90	97.72	Vertical	7	Pass

Radiated Power (ERP) for Band 26(824-849)											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	824.7	4.92	2.01	19.68	2.15	20.44	110.66	Horizontal	7	Pass
		836.5	4.15	2.01	19.77	2.15	19.76	94.62	Horizontal	7	Pass
		848.3	4.09	2.02	19.82	2.15	19.74	94.19	Horizontal	7	Pass
3.0MHz Band 16 QAM	15/0	825.5	4.18	2.01	19.70	2.15	19.72	93.76	Horizontal	7	Pass
		836.5	4.48	2.01	19.77	2.15	20.09	102.09	Horizontal	7	Pass
		847.5	4.18	2.02	19.81	2.15	19.82	95.94	Horizontal	7	Pass
5.0MHz Band 16 QAM	25/0	826.5	4.34	2.01	19.71	2.15	19.89	97.50	Horizontal	7	Pass
		836.5	4.31	2.01	19.77	2.15	19.92	98.17	Horizontal	7	Pass
		846.5	4.15	2.02	19.79	2.15	19.77	94.84	Horizontal	7	Pass
10.0MHz Band 16 QAM	50/0	829	4.55	2.01	19.73	2.15	20.12	102.80	Horizontal	7	Pass
		836.5	4.87	2.01	19.77	2.15	20.48	111.69	Horizontal	7	Pass
		844	4.11	2.02	19.78	2.15	19.72	93.76	Horizontal	7	Pass
15.0MHz Band QPSK	75/0	831.5	4.93	2.01	19.73	2.15	20.50	112.20	Horizontal	7	Pass
		836.5	4.11	2.01	19.77	2.15	19.72	93.76	Horizontal	7	Pass
		841.5	3.91	2.02	19.78	2.15	19.52	89.54	Horizontal	7	Pass
1.4MHz Band 16 QAM	6/0	824.7	4.43	2.01	19.68	2.15	19.95	98.86	Vertical	7	Pass
		836.5	4.82	2.01	19.77	2.15	20.43	110.41	Vertical	7	Pass
		848.3	4.57	2.02	19.82	2.15	20.22	105.20	Vertical	7	Pass
3.0MHz Band 16 QAM	15/0	825.5	4.37	2.01	19.70	2.15	19.91	97.95	Vertical	7	Pass
		836.5	4.19	2.01	19.77	2.15	19.80	95.50	Vertical	7	Pass
		847.5	4.79	2.02	19.81	2.15	20.43	110.41	Vertical	7	Pass
5.0MHz Band 16 QAM	25/0	826.5	4.06	2.01	19.71	2.15	19.61	91.41	Vertical	7	Pass
		836.5	4.50	2.01	19.77	2.15	20.11	102.57	Vertical	7	Pass
		846.5	4.12	2.02	19.79	2.15	19.74	94.19	Vertical	7	Pass
10.0MHz Band 16 QAM	50/0	829	4.53	2.01	19.73	2.15	20.10	102.33	Vertical	7	Pass
		836.5	4.75	2.01	19.77	2.15	20.36	108.64	Vertical	7	Pass
		844	4.13	2.02	19.78	2.15	19.74	94.19	Vertical	7	Pass
15.0MHz Band QPSK	75/0	831.5	4.07	2.01	19.73	2.15	19.64	92.04	Vertical	7	Pass
		836.5	4.00	2.01	19.77	2.15	19.61	91.41	Vertical	7	Pass
		841.5	4.26	2.02	19.78	2.15	19.87	97.05	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

8.11 LTE BAND 41

Radiated Power (EIRP) for Band 41										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
5.0MHz Band QPSK	25/0	2537.5	-2.53	4.54	27.75	20.68	116.950	Horizontal	2	Pass
		2595	-2.38	4.69	27.72	20.65	116.145	Horizontal	2	Pass
		2652.5	-2.26	4.71	27.71	20.74	118.577	Horizontal	2	Pass
10.0MHz Band QPSK	50/0	2540	-2.61	4.55	27.76	20.60	114.815	Horizontal	2	Pass
		2595	-2.47	4.69	27.72	20.56	113.763	Horizontal	2	Pass
		2650	-2.46	4.72	27.70	20.52	112.720	Horizontal	2	Pass
15.0MHz Band QPSK	75/0	2542.5	-2.44	4.55	27.77	20.78	119.674	Horizontal	2	Pass
		2595	-2.16	4.69	27.72	20.87	122.180	Horizontal	2	Pass
		2647.5	-2.21	4.72	27.69	20.76	119.124	Horizontal	2	Pass
20.0MHz Band QPSK	100/0	2545	-2.05	4.57	27.78	21.16	130.617	Horizontal	2	Pass
		2595	-2.10	4.73	27.72	20.89	122.744	Horizontal	2	Pass
		2645	-2.10	4.75	27.68	20.83	121.060	Horizontal	2	Pass
5.0MHz Band QPSK	25/0	2537.5	-2.33	4.54	27.75	20.88	122.462	Vertical	2	Pass
		2595	-2.24	4.69	27.72	20.79	119.950	Vertical	2	Pass
		2652.5	-2.22	4.71	27.71	20.78	119.674	Vertical	2	Pass
10.0MHz Band QPSK	50/0	2540	-2.31	4.55	27.76	20.90	123.027	Vertical	2	Pass
		2595	-2.15	4.69	27.72	20.88	122.462	Vertical	2	Pass
		2650	-2.22	4.72	27.70	20.76	119.124	Vertical	2	Pass
15.0MHz Band QPSK	75/0	2542.5	-3.81	4.55	27.77	19.41	87.297	Vertical	2	Pass
		2595	-3.73	4.69	27.72	19.30	85.114	Vertical	2	Pass
		2647.5	-3.52	4.72	27.69	19.45	88.105	Vertical	2	Pass
20.0MHz Band QPSK	100/0	2545	-3.76	4.57	27.78	19.45	88.105	Vertical	2	Pass
		2595	-3.60	4.73	27.72	19.39	86.896	Vertical	2	Pass
		2645	-2.95	4.75	27.68	19.98	99.541	Vertical	2	Pass

Radiated Power (EIRP) for Band 41										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
5.0MHz Band 16 QAM	25/0	2537.5	-2.65	4.54	27.75	20.56	113.763	Horizontal	2	Pass
		2595	-2.50	4.69	27.72	20.53	112.980	Horizontal	2	Pass
		2652.5	-2.38	4.71	27.71	20.62	115.345	Horizontal	2	Pass
10.0MHz Band 16 QAM	50/0	2540	-2.73	4.55	27.76	20.48	111.686	Horizontal	2	Pass
		2595	-2.59	4.69	27.72	20.44	110.662	Horizontal	2	Pass
		2650	-2.58	4.72	27.70	20.40	109.648	Horizontal	2	Pass
15.0MHz Band 16 QAM	75/0	2542.5	-2.56	4.55	27.77	20.66	116.413	Horizontal	2	Pass
		2595	-2.28	4.69	27.72	20.75	118.850	Horizontal	2	Pass
		2647.5	-2.33	4.72	27.69	20.64	115.878	Horizontal	2	Pass
20.0MHz Band 16 QAM	100/0	2545	-2.28	4.57	27.78	20.93	123.880	Horizontal	2	Pass
		2595	-2.22	4.73	27.72	20.77	119.399	Horizontal	2	Pass
		2645	-2.22	4.75	27.68	20.71	117.761	Horizontal	2	Pass
5.0MHz Band 16 QAM	25/0	2537.5	-2.45	4.54	27.75	20.76	119.124	Vertical	2	Pass
		2595	-2.36	4.69	27.72	20.67	116.681	Vertical	2	Pass
		2652.5	-2.34	4.71	27.71	20.66	116.413	Vertical	2	Pass
10.0MHz Band 16 QAM	50/0	2540	-2.43	4.55	27.76	20.78	119.674	Vertical	2	Pass
		2595	-2.27	4.69	27.72	20.76	119.124	Vertical	2	Pass
		2650	-2.34	4.72	27.70	20.64	115.878	Vertical	2	Pass
15.0MHz Band 16 QAM	75/0	2542.5	-3.23	4.55	27.77	19.99	99.770	Vertical	2	Pass
		2595	-3.04	4.69	27.72	19.99	99.770	Vertical	2	Pass
		2647.5	-3.35	4.72	27.69	19.62	91.622	Vertical	2	Pass
20.0MHz Band 16 QAM	100/0	2545	-3.35	4.57	27.78	19.86	96.828	Vertical	2	Pass
		2595	-3.28	4.73	27.72	19.71	93.541	Vertical	2	Pass
		2645	-3.88	4.75	27.68	19.05	80.353	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)

8.12 LTE BAND 66

Radiated Power (EIRP) for Band 66										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band QPSK	6/0	1710.7	-3.92	3.76	28.24	20.56	113.763	Horizontal	1	Pass
		1745	-3.78	3.91	28.22	20.53	112.980	Horizontal	1	Pass
		1779.3	-3.65	3.93	28.2	20.62	115.345	Horizontal	1	Pass
3.0MHz Band QPSK	15/0	1711.5	-3.98	3.77	28.23	20.48	111.686	Horizontal	1	Pass
		1745	-3.89	3.91	28.24	20.44	110.662	Horizontal	1	Pass
		1778.5	-3.91	3.94	28.25	20.40	109.648	Horizontal	1	Pass
5.0MHz Band QPSK	25/0	1712.5	-3.88	3.77	28.31	20.66	116.413	Horizontal	1	Pass
		1745	-3.56	3.91	28.22	20.75	118.850	Horizontal	1	Pass
		1777.5	-3.62	3.94	28.2	20.64	115.878	Horizontal	1	Pass
10.0MHz Band QPSK	50/0	1715	-3.77	3.79	28.33	20.77	119.399	Horizontal	1	Pass
		1745	-3.50	3.95	28.22	20.77	119.399	Horizontal	1	Pass
		1775	-3.51	3.97	28.19	20.71	117.761	Horizontal	1	Pass
15.0MHz Band QPSK	75/0	1717.5	-3.79	3.79	28.34	20.76	119.124	Horizontal	1	Pass
		1745	-3.60	3.95	28.22	20.67	116.681	Horizontal	1	Pass
		1772.5	-3.55	3.97	28.18	20.66	116.413	Horizontal	1	Pass
20.0MHz Band QPSK	100/0	1720	-3.76	3.81	28.35	20.78	119.674	Horizontal	1	Pass
		1745	-3.50	3.96	28.22	20.76	119.124	Horizontal	1	Pass
		1770	-3.52	4	28.16	20.64	115.878	Horizontal	1	Pass
1.4MHz Band QPSK	6/0	1710.7	-5.18	3.76	28.24	19.30	85.114	Vertical	1	Pass
		1745	-4.93	3.91	28.22	19.38	86.696	Vertical	1	Pass
		1779.3	-4.89	3.93	28.2	19.38	86.696	Vertical	1	Pass
3.0MHz Band QPSK	15/0	1711.5	-4.99	3.77	28.23	19.47	88.512	Vertical	1	Pass
		1745	-4.29	3.91	28.24	20.04	100.925	Vertical	1	Pass
		1778.5	-4.66	3.94	28.25	19.65	92.257	Vertical	1	Pass
5.0MHz Band QPSK	25/0	1712.5	-5.10	3.77	28.31	19.44	87.902	Vertical	1	Pass
		1745	-4.51	3.91	28.22	19.80	95.499	Vertical	1	Pass
		1777.5	-4.57	3.94	28.2	19.69	93.111	Vertical	1	Pass
10.0MHz Band	50/0	1715	-4.92	3.79	28.34	19.63	91.833	Vertical	1	Pass
		1745	-4.52	3.95	28.22	19.75	94.406	Vertical	1	Pass

QPSK		1775	-4.21	3.97	28.18	20.00	100.000	Vertical	1	Pass
15.0MHz	75/0	1717.5	-4.68	3.81	28.35	19.86	96.828	Vertical	1	Pass
Band		1745	-5.15	3.96	28.22	19.11	81.470	Vertical	1	Pass
QPSK		1772.5	-4.88	4	28.16	19.28	84.723	Vertical	1	Pass
20.0MHz	100/0	1720	-5.17	3.79	28.34	19.38	86.696	Vertical	1	Pass
Band		1745	-4.38	3.95	28.22	19.89	97.499	Vertical	1	Pass
QPSK		1770	-5.12	3.97	28.18	19.09	81.096	Vertical	1	Pass

Radiated Power (EIRP) for Band 66										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	1710.7	-4.13	3.76	28.24	20.35	108.393	Horizontal	1	Pass
		1745	-3.74	3.91	28.22	20.57	114.025	Horizontal	1	Pass
		1779.3	-3.92	3.93	28.2	20.35	108.393	Horizontal	1	Pass
3.0MHz Band 16 QAM	15/0	1711.5	-4.52	3.77	28.23	19.94	98.628	Horizontal	1	Pass
		1745	-3.77	3.91	28.24	20.56	113.763	Horizontal	1	Pass
		1778.5	-4.06	3.94	28.25	20.25	105.925	Horizontal	1	Pass
5.0MHz Band 16 QAM	25/0	1712.5	-3.94	3.77	28.31	20.60	114.815	Horizontal	1	Pass
		1745	-4.00	3.91	28.22	20.31	107.399	Horizontal	1	Pass
		1777.5	-3.67	3.94	28.2	20.59	114.551	Horizontal	1	Pass
10.0MHz Band 16 QAM	50/0	1715	-3.99	3.79	28.33	20.55	113.501	Horizontal	1	Pass
		1745	-3.65	3.95	28.22	20.62	115.345	Horizontal	1	Pass
		1775	-3.97	3.97	28.19	20.25	105.925	Horizontal	1	Pass
15.0MHz Band 16 QAM	75/0	1717.5	-3.98	3.79	28.34	20.57	114.025	Horizontal	1	Pass
		1745	-3.80	3.95	28.22	20.47	111.429	Horizontal	1	Pass
		1772.5	-3.59	3.97	28.18	20.62	115.345	Horizontal	1	Pass
20.0MHz Band 16 QAM	100/0	1720	-3.81	3.81	28.35	20.73	118.304	Horizontal	1	Pass
		1745	-3.59	3.96	28.22	20.67	116.681	Horizontal	1	Pass
		1770	-3.53	4	28.16	20.63	115.611	Horizontal	1	Pass
1.4MHz Band 16 QAM	6/0	1710.7	-4.21	3.76	28.24	20.27	106.414	Vertical	1	Pass
		1745	-5.56	3.91	28.22	18.75	74.989	Vertical	1	Pass
		1779.3	-3.96	3.93	28.2	20.31	107.399	Vertical	1	Pass
3.0MHz Band 16 QAM	15/0	1711.5	-5.60	3.77	28.23	18.86	76.913	Vertical	1	Pass
		1745	-4.05	3.91	28.24	20.28	106.660	Vertical	1	Pass
		1778.5	-5.65	3.94	28.25	18.66	73.451	Vertical	1	Pass
5.0MHz Band 16 QAM	25/0	1712.5	-5.34	3.77	28.31	19.20	83.176	Vertical	1	Pass
		1745	-5.52	3.91	28.22	18.79	75.683	Vertical	1	Pass
		1777.5	-5.21	3.94	28.2	19.05	80.353	Vertical	1	Pass
10.0MHz Band 16 QAM	50/0	1715	-4.00	3.79	28.34	20.55	113.501	Vertical	1	Pass
		1745	-4.46	3.95	28.22	19.81	95.719	Vertical	1	Pass
		1775	-5.51	3.97	28.18	18.70	74.131	Vertical	1	Pass
15.0MHz Band 16	75/0	1717.5	-5.85	3.81	28.35	18.69	73.961	Vertical	1	Pass
		1745	-3.84	3.96	28.22	20.42	110.154	Vertical	1	Pass

QAM		1772.5	-4.13	4	28.16	20.03	100.693	Vertical	1	Pass
20.0MHz	100/0	1720	-5.54	3.79	28.34	19.01	79.616	Vertical	1	Pass
Band 16		1745	-4.91	3.95	28.22	19.36	86.298	Vertical	1	Pass
QAM		1770	-3.82	3.97	28.18	20.39	109.396	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 and §90.691

LIMIT

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

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

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

Band 2/4/5/7/12/13/17/26/41/66

RESULTS

PASS

9.1 LTE BAND 2

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

Test Results for Low Channel 1850.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-53.23	4.04	33.51	-23.76	-13	-10.76	Horizontal
3701.4	-50.84	4.04	33.51	-21.37	-13	-8.37	Vertical
5552.1	-52.98	5.24	35.84	-22.38	-13	-9.38	Vertical
5552.1	-50.88	5.24	35.84	-20.28	-13	-7.28	Horizontal
211.1	-36.42	1.43	16.02	-21.83	-13	-8.83	Vertical
444.0	-34.17	1.30	17.99	-17.48	-13	-4.48	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-48.87	4.04	33.56	-19.35	-13	-6.35	Horizontal
3760.0	-48.00	4.04	33.56	-18.48	-13	-5.48	Vertical
5640.0	-51.17	5.24	35.91	-20.50	-13	-7.50	Vertical
5640.0	-53.65	5.24	35.91	-22.98	-13	-9.98	Horizontal
190.6	-38.47	1.62	16.97	-23.12	-13	-10.12	Vertical
343.1	-41.33	1.74	15.98	-27.10	-13	-14.10	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-49.47	4.04	34.00	-19.51	-13	-6.51	Horizontal
3818.6	-46.58	4.04	34.00	-16.62	-13	-3.62	Vertical
5727.9	-53.80	5.24	36.04	-23.00	-13	-10.00	Vertical
5727.9	-49.52	5.24	36.04	-18.72	-13	-5.72	Horizontal
201.0	-34.51	1.42	17.29	-18.64	-13	-5.64	Vertical
448.4	-36.18	1.50	17.90	-19.77	-13	-6.77	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	-52.91	4.07	33.54	-23.44	-13	-10.44	Horizontal
3720.0	-46.28	4.07	33.54	-16.81	-13	-3.81	Vertical
5580.0	-48.67	5.28	35.86	-18.09	-13	-5.09	Vertical
5580.0	-51.52	5.28	35.86	-20.94	-13	-7.94	Horizontal
206.6	-44.01	1.58	16.89	-28.69	-13	-15.69	Vertical
257.7	-43.86	1.76	17.26	-28.36	-13	-15.36	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-47.19	4.04	33.56	-17.67	-13	-4.67	Horizontal
3760.0	-46.69	4.04	33.56	-17.17	-13	-4.17	Vertical
5640.0	-50.12	5.24	35.91	-19.45	-13	-6.45	Vertical
5640.0	-51.58	5.24	35.91	-20.91	-13	-7.91	Horizontal
193.8	-41.42	1.46	16.27	-26.61	-13	-13.61	Vertical
331.1	-35.97	1.59	15.15	-22.41	-13	-9.41	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-47.76	4.04	34.00	-17.80	-13	-4.80	Horizontal
3800.0	-53.22	4.04	34.00	-23.26	-13	-10.26	Vertical
5700.0	-53.66	5.24	36.04	-22.86	-13	-9.86	Vertical
5700.0	-52.78	5.24	36.04	-21.98	-13	-8.98	Horizontal
186.0	-41.63	1.36	17.39	-25.59	-13	-12.59	Vertical
414.7	-44.74	1.66	15.39	-31.01	-13	-18.01	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	-46.01	4.02	29.80	-20.23	-13	-7.23	Horizontal
3421.4	-46.79	4.02	29.80	-21.01	-13	-8.01	Vertical
5132.1	-48.44	5.24	35.84	-17.84	-13	-4.84	Vertical
5132.1	-53.52	5.24	35.84	-22.92	-13	-9.92	Horizontal
210.9	-36.40	1.68	16.04	-22.04	-13	-9.04	Vertical
395.0	-44.55	1.78	17.74	-28.59	-13	-15.59	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-46.48	4.03	30.00	-20.51	-13	-7.51	Horizontal
3465.0	-46.16	4.03	30.00	-20.19	-13	-7.19	Vertical
5197.5	-50.36	5.25	35.86	-19.75	-13	-6.75	Vertical
5197.5	-52.06	5.25	35.86	-21.45	-13	-8.45	Horizontal
193.6	-42.93	1.72	17.69	-26.96	-13	-13.96	Vertical
367.8	-41.34	1.62	16.02	-26.93	-13	-13.93	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-46.71	4.05	30.01	-20.75	-13	-7.75	Horizontal
3508.6	-48.88	4.05	30.01	-22.92	-13	-9.92	Vertical
5262.9	-46.55	5.26	35.86	-15.95	-13	-2.95	Vertical
5262.9	-49.08	5.26	35.86	-18.48	-13	-5.48	Horizontal
188.4	-44.93	1.80	16.69	-30.04	-13	-17.04	Vertical
392.6	-42.75	1.75	16.66	-27.85	-13	-14.85	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	-53.02	4.02	29.80	-27.24	-13	-14.24	Horizontal
3440.0	-52.51	4.02	29.80	-26.73	-13	-13.73	Vertical
5160.0	-51.59	5.24	35.84	-20.99	-13	-7.99	Vertical
5160.0	-50.19	5.24	35.84	-19.59	-13	-6.59	Horizontal
179.2	-35.49	1.57	17.26	-19.80	-13	-6.80	Vertical
378.2	-38.14	1.78	16.35	-23.57	-13	-10.57	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-47.15	4.03	30.00	-21.18	-13	-8.18	Horizontal
3465.0	-51.60	4.03	30.00	-25.63	-13	-12.63	Vertical
5197.5	-46.97	5.25	35.86	-16.36	-13	-3.36	Vertical
5197.5	-52.14	5.25	35.86	-21.53	-13	-8.53	Horizontal
200.2	-41.33	1.44	17.95	-24.82	-13	-11.82	Vertical
390.2	-42.84	1.65	16.09	-28.40	-13	-15.40	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-49.50	2.91	27.68	-24.73	-13	-11.73	Horizontal
3490.0	-53.82	2.91	27.68	-29.05	-13	-16.05	Vertical
5235.0	-51.79	5.26	35.86	-21.19	-13	-8.19	Vertical
5235.0	-49.16	5.26	35.86	-18.56	-13	-5.56	Horizontal
192.4	-40.19	1.61	16.85	-24.95	-13	-11.95	Vertical
460.6	-38.61	1.61	15.19	-25.03	-13	-12.03	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	-47.77	2.78	27.50	-23.05	-13	-10.05	Horizontal
1649.4	-48.48	2.78	27.50	-23.76	-13	-10.76	Vertical
2474.1	-50.46	2.90	27.80	-25.56	-13	-12.56	Vertical
2474.1	-52.97	2.90	27.80	-28.07	-13	-15.07	Horizontal
180.5	-36.43	1.76	17.59	-20.60	-13	-7.60	Vertical
261.6	-38.65	1.63	15.87	-24.41	-13	-11.41	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-44.93	2.80	27.48	-20.25	-13	-7.25	Horizontal
1673.0	-44.53	2.80	27.48	-19.85	-13	-6.85	Vertical
2509.5	-45.16	2.91	27.70	-20.37	-13	-7.37	Vertical
2509.5	-49.03	2.91	27.70	-24.24	-13	-11.24	Horizontal
198.5	-39.63	1.61	15.68	-25.56	-13	-12.56	Vertical
246.6	-35.98	1.59	17.52	-20.06	-13	-7.06	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-49.65	2.82	27.43	-25.04	-13	-12.04	Horizontal
1696.6	-45.29	2.82	27.43	-20.68	-13	-7.68	Vertical
2544.9	-48.65	2.92	27.74	-23.83	-13	-10.83	Vertical
2544.9	-49.72	2.92	27.74	-24.90	-13	-11.90	Horizontal
178.0	-44.79	1.69	16.67	-29.80	-13	-16.80	Vertical
334.2	-37.67	1.70	17.18	-22.19	-13	-9.19	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	-44.94	2.78	27.50	-20.22	-13	-7.22	Horizontal
1658.0	-48.97	2.78	27.50	-24.25	-13	-11.25	Vertical
2487.0	-51.04	2.90	27.80	-26.14	-13	-13.14	Vertical
2487.0	-49.61	2.90	27.80	-24.71	-13	-11.71	Horizontal
187.9	-34.92	1.71	15.57	-21.06	-13	-8.06	Vertical
402.0	-38.43	1.34	16.40	-23.37	-13	-10.37	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-48.92	2.80	27.48	-24.24	-13	-11.24	Horizontal
1673.0	-51.80	2.80	27.48	-27.12	-13	-14.12	Vertical
2509.5	-48.64	2.91	27.70	-23.85	-13	-10.85	Vertical
2509.5	-52.58	2.91	27.70	-27.79	-13	-14.79	Horizontal
179.6	-39.67	1.44	17.04	-24.07	-13	-11.07	Vertical
314.3	-37.80	1.76	17.62	-21.94	-13	-8.94	Horizontal
Test Results for High Channel 844MHz							
1688.0	-46.88	2.82	27.43	-22.27	-13	-9.27	Horizontal
1688.0	-45.31	2.82	27.43	-20.70	-13	-7.70	Vertical
2532.0	-48.36	2.92	27.74	-23.54	-13	-10.54	Vertical
2532.0	-51.71	2.92	27.74	-26.89	-13	-13.89	Horizontal
208.8	-37.46	1.74	17.70	-21.50	-13	-8.50	Vertical
376.2	-40.78	1.41	17.46	-24.72	-13	-11.72	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	-64.94	5.23	35.81	-34.36	-25	-9.36	Horizontal
5005.0	-60.05	5.23	35.81	-29.47	-25	-4.47	Vertical
7507.5	-59.90	5.67	36.85	-28.72	-25	-3.72	Vertical
7507.5	-59.33	5.67	36.85	-28.15	-25	-3.15	Horizontal
180.1	-49.97	1.73	17.97	-33.73	-25	-8.73	Vertical
260.9	-51.40	1.38	15.11	-37.67	-25	-12.67	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-59.69	5.23	35.82	-29.10	-25	-4.10	Horizontal
5070.0	-64.23	5.23	35.82	-33.64	-25	-8.64	Vertical
7605.0	-59.43	5.67	36.85	-28.25	-25	-3.25	Vertical
7605.0	-62.31	5.67	36.85	-31.13	-25	-6.13	Horizontal
175.3	-45.54	1.77	16.17	-31.13	-25	-6.13	Vertical
292.2	-53.86	1.63	15.21	-40.28	-25	-15.28	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-59.98	5.24	35.83	-29.39	-25	-4.39	Horizontal
5135.0	-62.55	5.24	35.83	-31.96	-25	-6.96	Vertical
7702.5	-60.72	5.68	36.87	-29.53	-25	-4.53	Vertical
7702.5	-62.56	5.68	36.87	-31.37	-25	-6.37	Horizontal
175.7	-48.61	1.58	17.56	-32.63	-25	-7.63	Vertical
354.4	-50.66	1.45	16.58	-35.53	-25	-10.53	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	-59.92	5.23	35.82	-29.33	-25	-4.33	Horizontal
5020.0	-61.53	5.23	35.82	-30.94	-25	-5.94	Vertical
7530.0	-61.70	5.67	36.86	-30.51	-25	-5.51	Vertical
7530.0	-61.19	5.67	36.86	-30.00	-25	-5.00	Horizontal
185.3	-50.49	1.63	15.76	-36.36	-25	-11.36	Vertical
450.0	-45.28	1.71	15.44	-31.55	-25	-6.55	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-62.67	5.23	35.82	-32.08	-25	-7.08	Horizontal
5070.0	-64.84	5.23	35.82	-34.25	-25	-9.25	Vertical
7605.0	-61.17	5.67	36.85	-29.99	-25	-4.99	Vertical
7605.0	-62.39	5.67	36.85	-31.21	-25	-6.21	Horizontal
190.8	-54.31	1.79	16.84	-39.25	-25	-14.25	Vertical
379.8	-47.23	1.71	17.64	-31.30	-25	-6.30	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-64.15	5.24	35.83	-33.56	-25	-8.56	Horizontal
5120.0	-63.11	5.24	35.83	-32.52	-25	-7.52	Vertical
7680.0	-63.91	5.70	36.88	-32.73	-25	-7.73	Vertical
7680.0	-61.94	5.70	36.88	-30.76	-25	-5.76	Horizontal
183.6	-48.58	1.79	16.84	-33.52	-25	-8.52	Vertical
386.1	-47.67	1.71	17.64	-31.74	-25	-6.74	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	-45.37	2.60	27.20	-20.77	-13	-7.77	Horizontal
1399.4	-48.05	2.60	27.20	-23.45	-13	-10.45	Vertical
2099.1	-50.06	2.85	27.54	-25.37	-13	-12.37	Vertical
2099.1	-52.55	2.85	27.54	-27.86	-13	-14.86	Horizontal
200.8	-40.51	1.49	17.78	-24.22	-13	-11.22	Vertical
343.4	-40.33	1.36	17.33	-24.36	-13	-11.36	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.0	-49.05	2.61	27.28	-24.38	-13	-11.38	Horizontal
1415.0	-51.24	2.61	27.28	-26.57	-13	-13.57	Vertical
2122.5	-45.54	2.87	27.59	-20.82	-13	-7.82	Vertical
2122.5	-49.04	2.87	27.59	-24.32	-13	-11.32	Horizontal
179.2	-41.21	1.73	15.74	-27.20	-13	-14.20	Vertical
250.8	-36.41	1.62	15.79	-22.24	-13	-9.24	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-53.86	2.63	27.28	-29.21	-13	-16.21	Horizontal
1430.6	-47.45	2.63	27.28	-22.80	-13	-9.80	Vertical
2145.9	-52.70	2.88	27.60	-27.98	-13	-14.98	Vertical
2145.9	-53.51	2.88	27.60	-28.79	-13	-15.79	Horizontal
181.0	-41.53	1.61	18.00	-25.14	-13	-12.14	Vertical
327.8	-41.47	1.45	15.49	-27.44	-13	-14.44	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	-45.58	2.61	27.26	-20.93	-13	-7.93	Horizontal
1408.0	-47.14	2.61	27.26	-22.49	-13	-9.49	Vertical
2112.0	-52.93	2.87	27.58	-28.22	-13	-15.22	Vertical
2112.0	-51.29	2.87	27.58	-26.58	-13	-13.58	Horizontal
176.4	-34.18	1.31	16.97	-18.52	-13	-5.52	Vertical
424.9	-34.62	1.65	16.70	-19.57	-13	-6.57	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.0	-49.38	2.61	27.28	-24.71	-13	-11.71	Horizontal
1415.0	-49.38	2.61	27.28	-24.71	-13	-11.71	Vertical
2122.5	-52.85	2.87	27.59	-28.13	-13	-15.13	Vertical
2122.5	-51.16	2.87	27.59	-26.44	-13	-13.44	Horizontal
202.9	-34.33	1.72	17.99	-18.06	-13	-5.06	Vertical
412.8	-37.70	1.73	17.94	-21.49	-13	-8.49	Horizontal
Test Results for High Channel 711MHz							
1422.0	-49.97	2.62	27.28	-25.31	-13	-12.31	Horizontal
1422.0	-47.91	2.62	27.28	-23.25	-13	-10.25	Vertical
2133.0	-46.52	2.87	27.60	-21.79	-13	-8.79	Vertical
2133.0	-50.06	2.87	27.60	-25.33	-13	-12.33	Horizontal
181.0	-44.85	1.58	15.93	-30.50	-13	-17.50	Vertical
396.6	-43.44	1.36	15.59	-29.21	-13	-16.21	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.

9.6 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	-71.78	2.61	27.28	-47.11	-40	-7.11	Horizontal
1559.0	-72.34	2.61	27.28	-47.67	-40	-7.67	Vertical
2338.5	-39.60	2.87	27.59	-14.88	-13	-1.88	Vertical
2338.5	-39.99	2.87	27.59	-15.27	-13	-2.27	Horizontal
120.1	-36.73	1.54	15.61	-22.66	-13	-9.66	Vertical
197.8	-37.19	1.51	15.21	-23.49	-13	-10.49	Horizontal
Test Results For Mid Channel 782MHz							
1564.0	-70.56	2.62	27.30	-45.88	-40	-5.88	Horizontal
1564.0	-74.15	2.62	27.30	-49.47	-40	-9.47	Vertical
2346.0	-39.28	2.87	27.62	-14.53	-13	-1.53	Vertical
2346.0	-42.69	2.87	27.62	-17.94	-13	-4.94	Horizontal
131.2	-34.10	1.65	16.17	-19.58	-13	-6.58	Vertical
267.5	-39.78	1.48	16.88	-24.38	-13	-11.38	Horizontal
Test Results for High Channel 784.5MHz							
1569.0	-71.24	2.66	27.28	-46.62	-40	-6.62	Horizontal
1569.0	-73.02	2.66	27.28	-48.40	-40	-8.40	Vertical
2353.5	-43.48	2.88	27.60	-18.76	-13	-5.76	Vertical
2353.5	-43.16	2.88	27.60	-18.44	-13	-5.44	Horizontal
80.8	-38.11	1.54	16.40	-23.25	-13	-10.25	Vertical
155.6	-35.30	1.43	15.77	-20.96	-13	-7.96	Horizontal

LTE BAND 13 (10MHZ BANDWIDTH)

Test Results for Channel 782MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1564.0	-70.72	2.62	27.30	-46.04	-40	-6.04	Horizontal
1564.0	-73.06	2.62	27.30	-48.38	-40	-8.38	Vertical
2346.0	-40.66	2.87	27.62	-15.91	-13	-2.91	Vertical
2346.0	-42.03	2.87	27.62	-17.28	-13	-4.28	Horizontal
129.1	-39.95	1.43	17.03	-24.35	-13	-11.35	Vertical
86.9	-34.40	1.62	16.63	-19.39	-13	-6.39	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	-45.84	2.61	27.28	-21.17	-13	-8.17	Horizontal
1413.0	-50.06	2.61	27.28	-25.39	-13	-12.39	Vertical
2119.5	-52.46	2.87	27.59	-27.74	-13	-14.74	Vertical
2119.5	-50.77	2.87	27.59	-26.05	-13	-13.05	Horizontal
176.4	-35.50	1.71	16.15	-21.06	-13	-8.06	Vertical
433.0	-35.31	1.41	17.32	-19.40	-13	-6.40	Horizontal
Test Results For Mid Channel 710MHz							
1420.0	-52.44	2.62	27.30	-27.76	-13	-14.76	Horizontal
1420.0	-47.86	2.62	27.30	-23.18	-13	-10.18	Vertical
2130.0	-49.50	2.87	27.62	-24.75	-13	-11.75	Vertical
2130.0	-52.81	2.87	27.62	-28.06	-13	-15.06	Horizontal
196.8	-34.38	1.42	15.25	-20.56	-13	-7.56	Vertical
345.5	-41.37	1.36	17.19	-25.54	-13	-12.54	Horizontal
Test Results for High Channel 713.5MHz							
1427.0	-46.02	2.66	27.28	-21.40	-13	-8.40	Horizontal
1427.0	-45.48	2.66	27.28	-20.86	-13	-7.86	Vertical
2140.5	-48.14	2.88	27.60	-23.42	-13	-10.42	Vertical
2140.5	-49.92	2.88	27.60	-25.20	-13	-12.20	Horizontal
198.3	-43.74	1.32	17.29	-27.77	-13	-14.77	Vertical
297.1	-39.01	1.72	16.89	-23.84	-13	-10.84	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	-45.48	2.62	27.30	-20.80	-13	-7.80	Horizontal
1418.0	-48.79	2.62	27.30	-24.11	-13	-11.11	Vertical
2127.0	-53.59	2.87	27.62	-28.84	-13	-15.84	Vertical
2127.0	-52.70	2.87	27.62	-27.95	-13	-14.95	Horizontal
209.9	-38.88	1.35	16.91	-23.32	-13	-10.32	Vertical
268.0	-36.32	1.62	16.31	-21.63	-13	-8.63	Horizontal
Test Results for Mid Channel 710MHz							
1420.0	-53.14	2.62	27.30	-28.46	-13	-15.46	Horizontal
1420.0	-52.20	2.62	27.30	-27.52	-13	-14.52	Vertical
2130.0	-51.72	2.87	27.62	-26.97	-13	-13.97	Vertical
2130.0	-51.42	2.87	27.62	-26.67	-13	-13.67	Horizontal
198.4	-41.75	1.51	17.14	-26.12	-13	-13.12	Vertical
332.0	-38.26	1.77	16.88	-23.15	-13	-10.15	Horizontal
Test Results for High Channel 711MHz							
1422.0	-44.91	2.62	27.30	-20.23	-13	-7.23	Horizontal
1422.0	-53.04	2.62	27.30	-28.36	-13	-15.36	Vertical
2133.0	-50.58	2.87	27.62	-25.83	-13	-12.83	Vertical
2133.0	-52.34	2.87	27.62	-27.59	-13	-14.59	Horizontal
208.7	-36.74	1.78	15.95	-22.57	-13	-9.57	Vertical
257.5	-40.02	1.34	17.95	-23.42	-13	-10.42	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 26 A

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

Test Results for Low Channel 814.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1629.4	-46.99	2.78	27.50	-22.27	-13	-9.27	Horizontal
1629.4	-44.87	2.78	27.50	-20.15	-13	-7.15	Vertical
2444.1	-46.62	2.90	27.80	-21.72	-13	-8.72	Vertical
2444.1	-49.64	2.90	27.80	-24.74	-13	-11.74	Horizontal
229.6	-33.32	1.54	16.98	-17.88	-13	-4.88	Vertical
83.3	-32.09	1.47	15.82	-17.74	-13	-4.74	Horizontal
Test Results for Mid Channel 819MHz							
1638.0	-49.07	2.80	27.48	-24.39	-13	-11.39	Horizontal
1638.0	-49.25	2.80	27.48	-24.57	-13	-11.57	Vertical
2457.0	-49.30	2.91	27.70	-24.51	-13	-11.51	Vertical
2457.0	-49.44	2.91	27.70	-24.65	-13	-11.65	Horizontal
168.2	-32.25	1.74	16.19	-17.80	-13	-4.80	Vertical
92.9	-32.45	1.46	15.43	-18.48	-13	-5.48	Horizontal
Test Results for High Channel 823.3MHz							
1646.6	-49.59	2.82	27.43	-24.98	-13	-11.98	Horizontal
1646.6	-44.92	2.82	27.43	-20.31	-13	-7.31	Vertical
2469.9	-46.84	2.92	27.74	-22.02	-13	-9.02	Vertical
2469.9	-48.79	2.92	27.74	-23.97	-13	-10.97	Horizontal
213.1	-33.69	1.67	17.05	-18.31	-13	-5.31	Vertical
121.7	-34.68	1.42	16.12	-19.98	-13	-6.98	Horizontal

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

Test Results for Mid Channel 819MHz							
1638.0	-47.31	2.78	27.50	-22.59	-13	-9.59	Horizontal
1638.0	-49.96	2.78	27.50	-25.24	-13	-12.24	Vertical
2457.0	-49.01	2.90	27.80	-24.11	-13	-11.11	Vertical
2457.0	-48.70	2.90	27.80	-23.80	-13	-10.80	Horizontal
253.7	-33.10	1.43	17.34	-17.19	-13	-4.19	Vertical
256.8	-34.67	1.56	15.71	-20.52	-13	-7.52	Horizontal

9.9 LTE BAND 26 B

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

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-47.33	2.78	27.50	-22.61	-13	-9.61	Horizontal
1649.4	-47.50	2.78	27.50	-22.78	-13	-9.78	Vertical
2474.1	-46.50	2.90	27.80	-21.60	-13	-8.60	Vertical
2474.1	-48.95	2.90	27.80	-24.05	-13	-11.05	Horizontal
237.0	-32.27	1.33	17.34	-16.26	-13	-3.26	Vertical
180.5	-33.73	1.47	16.80	-18.40	-13	-5.40	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-48.49	2.80	27.48	-23.81	-13	-10.81	Horizontal
1673.0	-45.95	2.80	27.48	-21.27	-13	-8.27	Vertical
2509.5	-46.96	2.91	27.70	-22.17	-13	-9.17	Vertical
2509.5	-46.71	2.91	27.70	-21.92	-13	-8.92	Horizontal
140.8	-32.25	1.75	15.46	-18.54	-13	-5.54	Vertical
90.6	-33.72	1.52	16.14	-19.10	-13	-6.10	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-47.32	2.82	27.43	-22.71	-13	-9.71	Horizontal
1696.6	-48.44	2.82	27.43	-23.83	-13	-10.83	Vertical
2544.9	-48.25	2.92	27.74	-23.43	-13	-10.43	Vertical
2544.9	-47.23	2.92	27.74	-22.41	-13	-9.41	Horizontal
171.4	-34.67	1.67	16.09	-20.25	-13	-7.25	Vertical
247.2	-34.16	1.80	17.55	-18.41	-13	-5.41	Horizontal

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

Test Results for Low Channel 831.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1663.0	-46.11	2.78	27.50	-21.39	-13	-8.39	Horizontal
1663.0	-48.16	2.78	27.50	-23.44	-13	-10.44	Vertical
2494.5	-49.98	2.90	27.80	-25.08	-13	-12.08	Vertical
2494.5	-47.94	2.90	27.80	-23.04	-13	-10.04	Horizontal
255.4	-32.00	1.52	15.72	-17.80	-13	-4.80	Vertical
163.1	-33.81	1.40	17.03	-18.18	-13	-5.18	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-49.98	2.80	27.48	-25.30	-13	-12.30	Horizontal
1673.0	-47.54	2.80	27.48	-22.86	-13	-9.86	Vertical
2509.5	-47.22	2.91	27.70	-22.43	-13	-9.43	Vertical
2509.5	-46.34	2.91	27.70	-21.55	-13	-8.55	Horizontal
227.1	-34.90	1.74	16.38	-20.26	-13	-7.26	Vertical
101.3	-32.54	1.79	15.20	-19.13	-13	-6.13	Horizontal
Test Results for High Channel 841.5MHz							
1683.0	-46.73	2.82	27.43	-22.12	-13	-9.12	Horizontal
1683.0	-46.33	2.82	27.43	-21.72	-13	-8.72	Vertical
2524.5	-48.35	2.92	27.74	-23.53	-13	-10.53	Vertical
2524.5	-46.44	2.92	27.74	-21.62	-13	-8.62	Horizontal
261.1	-33.18	1.78	17.44	-17.52	-13	-4.52	Vertical
120.1	-33.90	1.70	15.93	-19.67	-13	-6.67	Horizontal

9.10 LTE BAND 41

LTE BAND 41 (5MHZ BANDWIDTH)

Test Results for Low Channel 2537.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5075.0	-59.50	5.23	35.81	-28.92	-25	-3.92	Horizontal
5075.0	-61.22	5.23	35.81	-30.64	-25	-5.64	Vertical
7612.5	-61.46	5.67	36.85	-30.28	-25	-5.28	Vertical
7612.5	-61.88	5.67	36.85	-30.70	-25	-5.70	Horizontal
435.3	-45.75	1.38	15.98	-31.15	-25	-6.15	Vertical
465.8	-44.95	1.62	15.66	-30.91	-25	-5.91	Horizontal
Test Results for Mid Channel 2595MHz							
5190.0	-60.88	5.23	35.82	-30.29	-25	-5.29	Horizontal
5190.0	-62.58	5.23	35.82	-31.99	-25	-6.99	Vertical
7785.0	-61.69	5.67	36.85	-30.51	-25	-5.51	Vertical
7785.0	-64.36	5.67	36.85	-33.18	-25	-8.18	Horizontal
510.4	-45.90	1.62	16.17	-31.35	-25	-6.35	Vertical
562.9	-46.36	1.74	17.63	-30.47	-25	-5.47	Horizontal
Test Results for High Channel 2652.5MHz							
5305.0	-60.67	5.24	35.83	-30.08	-25	-5.08	Horizontal
5305.0	-59.19	5.24	35.83	-28.60	-25	-3.60	Vertical
7957.5	-63.55	5.68	36.87	-32.36	-25	-7.36	Vertical
7957.5	-64.01	5.68	36.87	-32.82	-25	-7.82	Horizontal
197.6	-49.29	1.55	15.84	-35.00	-25	-10.00	Vertical
353.1	-49.03	1.51	17.06	-33.48	-25	-8.48	Horizontal

LTE BAND 41 (20MHZ BANDWIDTH)

Test Results for Low Channel 2545MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5090.0	-63.71	5.23	35.82	-33.12	-25	-8.12	Horizontal
5090.0	-60.33	5.23	35.82	-29.74	-25	-4.74	Vertical
7635.0	-60.02	5.67	36.86	-28.83	-25	-3.83	Vertical
7635.0	-64.89	5.67	36.86	-33.70	-25	-8.70	Horizontal
128.9	-47.90	1.43	15.51	-33.82	-25	-8.82	Vertical
344.8	-49.57	1.40	16.97	-34.00	-25	-9.00	Horizontal
Test Results for Mid Channel 2595MHz							
5190.0	-61.10	5.23	35.82	-30.51	-25	-5.51	Horizontal
5190.0	-59.52	5.23	35.82	-28.93	-25	-3.93	Vertical
7785.0	-63.94	5.67	36.85	-32.76	-25	-7.76	Vertical
7785.0	-60.15	5.67	36.85	-28.97	-25	-3.97	Horizontal
100.8	-44.61	1.77	16.72	-29.66	-25	-4.66	Vertical
263.5	-44.20	1.31	16.99	-28.52	-25	-3.52	Horizontal
Test Results for High Channel 2645MHz							
5290.0	-62.00	5.24	35.83	-31.41	-25	-6.41	Horizontal
5290.0	-61.82	5.24	35.83	-31.23	-25	-6.23	Vertical
7935.0	-60.26	5.70	36.88	-29.08	-25	-4.08	Vertical
7935.0	-59.88	5.70	36.88	-28.70	-25	-3.70	Horizontal
349.9	-49.92	1.70	15.73	-35.89	-25	-10.89	Vertical
110.3	-45.61	1.75	17.33	-30.03	-25	-5.03	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.

9.11 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 Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-44.33	4.02	29.80	-18.55	-13	-5.55	Horizontal
3421.4	-51.93	4.02	29.80	-26.15	-13	-13.15	Vertical
5132.1	-53.87	5.24	35.84	-23.27	-13	-10.27	Vertical
5132.1	-50.78	5.24	35.84	-20.18	-13	-7.18	Horizontal
112.6	-52.22	1.52	15.57	-38.17	-13	-25.17	Vertical
220.5	-53.37	1.33	17.14	-37.56	-13	-24.56	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-48.77	4.03	30.00	-22.80	-13	-9.80	Horizontal
3490.0	-44.24	4.03	30.00	-18.27	-13	-5.27	Vertical
5235.0	-53.48	5.25	35.86	-22.87	-13	-9.87	Vertical
5235.0	-52.81	5.25	35.86	-22.20	-13	-9.20	Horizontal
157.3	-51.50	1.53	17.13	-35.90	-13	-22.90	Vertical
213.1	-46.06	1.41	15.95	-31.52	-13	-18.52	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-53.85	4.05	30.01	-27.89	-13	-14.89	Horizontal
3558.6	-54.33	4.05	30.01	-28.37	-13	-15.37	Vertical
5337.9	-49.17	5.26	35.86	-18.57	-13	-5.57	Vertical
5337.9	-52.04	5.26	35.86	-21.44	-13	-8.44	Horizontal
170.6	-50.22	1.44	15.51	-36.15	-13	-23.15	Vertical
169.0	-45.29	1.78	15.76	-31.31	-13	-18.31	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 Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440.0	-54.61	4.02	29.80	-28.83	-13	-15.83	Horizontal
3440.0	-54.50	4.02	29.80	-28.72	-13	-15.72	Vertical
5160.0	-52.46	5.24	35.84	-21.86	-13	-8.86	Vertical
5160.0	-51.95	5.24	35.84	-21.35	-13	-8.35	Horizontal
268.8	-52.57	1.62	17.02	-37.17	-13	-24.17	Vertical
161.4	-50.44	1.32	17.31	-34.45	-13	-21.45	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-50.67	4.03	30.00	-24.70	-13	-11.70	Horizontal
3490.0	-48.22	4.03	30.00	-22.25	-13	-9.25	Vertical
5235.0	-53.92	5.25	35.86	-23.31	-13	-10.31	Vertical
5235.0	-48.62	5.25	35.86	-18.01	-13	-5.01	Horizontal
159.9	-51.86	1.45	15.17	-38.14	-13	-25.14	Vertical
172.1	-53.31	1.48	17.82	-36.97	-13	-23.97	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-49.20	2.91	27.68	-24.43	-13	-11.43	Horizontal
3540.0	-48.21	2.91	27.68	-23.44	-13	-10.44	Vertical
5310.0	-53.99	5.26	35.86	-23.39	-13	-10.39	Vertical
5310.0	-52.86	5.26	35.86	-22.26	-13	-9.26	Horizontal
197.3	-54.74	1.76	16.38	-40.12	-13	-27.12	Vertical
158.5	-45.61	1.43	17.13	-29.91	-13	-16.91	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, §90.213

LIMITS

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

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

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

Temp. = -30° to $+50^{\circ}\text{C}$

Voltage = low voltage, DC 3.6V, Normal, DC 3.85V and High voltage, DC 4.4V.

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 2/4/5/7/12/13/17/26/41/66

RESULTS

See the following pages.

10.1 LTE BAND 2

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.6	1880	12.3	0.006543	2.5
3.85	1880	13.7	0.007264	2.5
4.4	1880	13.5	0.007164	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	12.3	0.006567	2.5
Extreme (50C)	1880	12.1	0.006436	2.5
Extreme (40C)	1880	13.5	0.007194	2.5
Extreme (30C)	1880	13.5	0.007186	2.5
Extreme (10C)	1880	13.8	0.007323	2.5
Extreme (0C)	1880	12.1	0.006444	2.5
Extreme (-10C)	1880	13.2	0.007004	2.5
Extreme (-20C)	1880	14.6	0.007749	2.5
Extreme (-30C)	1880	14.3	0.007625	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]
3.6	1880	10.0	0.005338	2.5
3.85	1880	9.3	0.004972	2.5
4.4	1880	7.6	0.004047	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	9.5	0.005047	2.5
Extreme (50C)	1880	8.4	0.004495	2.5
Extreme (40C)	1880	7.8	0.004171	2.5
Extreme (30C)	1880	8.7	0.004642	2.5
Extreme (10C)	1880	9.2	0.004880	2.5
Extreme (0C)	1880	7.9	0.004196	2.5
Extreme (-10C)	1880	8.6	0.004583	2.5
Extreme (-20C)	1880	9.3	0.004933	2.5
Extreme (-30C)	1880	8.1	0.004313	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]
3.6	1732.5	8.6	0.004969	2.5
3.85	1732.5	8.7	0.005002	2.5
4.4	1732.5	8.6	0.004978	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	8.9	0.005131	2.5
Extreme (50C)	1732.5	8.8	0.005074	2.5
Extreme (40C)	1732.5	7.1	0.004079	2.5
Extreme (30C)	1732.5	6.0	0.003464	2.5
Extreme (10C)	1732.5	7.0	0.004034	2.5
Extreme (0C)	1732.5	9.0	0.005221	2.5
Extreme (-10C)	1732.5	8.3	0.004808	2.5
Extreme (-20C)	1732.5	6.7	0.003892	2.5
Extreme (-30C)	1732.5	8.9	0.005116	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]
3.6	1732.5	10.2	0.005899	2.5
3.85	1732.5	8.7	0.005047	2.5
4.4	1732.5	8.4	0.004826	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	9.5	0.005495	2.5
Extreme (50C)	1732.5	8.6	0.004981	2.5
Extreme (40C)	1732.5	8.5	0.004906	2.5
Extreme (30C)	1732.5	8.8	0.005056	2.5
Extreme (10C)	1732.5	9.2	0.005282	2.5
Extreme (0C)	1732.5	7.8	0.004502	2.5
Extreme (-10C)	1732.5	9.2	0.005285	2.5
Extreme (-20C)	1732.5	9.3	0.005345	2.5
Extreme (-30C)	1732.5	8.4	0.004877	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]
3.6	836.5	6.1	0.007332	2.5
3.85	836.5	6.4	0.007593	2.5
4.4	836.5	4.5	0.005333	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	5.8	0.006881	2.5
Extreme (50C)	836.5	6.0	0.007191	2.5
Extreme (40C)	836.5	5.8	0.006960	2.5
Extreme (30C)	836.5	6.7	0.008018	2.5
Extreme (10C)	836.5	5.7	0.006855	2.5
Extreme (0C)	836.5	4.8	0.005786	2.5
Extreme (-10C)	836.5	5.6	0.006663	2.5
Extreme (-20C)	836.5	6.5	0.007795	2.5
Extreme (-30C)	836.5	5.9	0.007066	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]
3.6	836.5	5.6	0.006642	2.5
3.85	836.5	6.4	0.007703	2.5
4.4	836.5	5.1	0.006095	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.5	0.007790	2.5
Extreme (50C)	836.5	5.8	0.006934	2.5
Extreme (40C)	836.5	6.0	0.007133	2.5
Extreme (30C)	836.5	6.3	0.007590	2.5
Extreme (10C)	836.5	5.2	0.006276	2.5
Extreme (0C)	836.5	5.4	0.006434	2.5
Extreme (-10C)	836.5	5.5	0.006551	2.5
Extreme (-20C)	836.5	6.3	0.007509	2.5
Extreme (-30C)	836.5	6.7	0.008035	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]
3.6	2535	9.9	0.003913	2.5
3.85	2535	8.6	0.003382	2.5
4.4	2535	8.2	0.003221	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.2	0.003630	2.5
Extreme (50C)	2535	8.4	0.003325	2.5
Extreme (40C)	2535	8.6	0.003374	2.5
Extreme (30C)	2535	9.3	0.003654	2.5
Extreme (10C)	2535	8.0	0.003163	2.5
Extreme (0C)	2535	8.4	0.003312	2.5
Extreme (-10C)	2535	9.0	0.003531	2.5
Extreme (-20C)	2535	8.4	0.003314	2.5
Extreme (-30C)	2535	8.2	0.003237	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]
3.6	2535	6.6	0.002598	2.5
3.85	2535	6.3	0.002492	2.5
4.4	2535	5.3	0.002098	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	6.6	0.002588	2.5
Extreme (50C)	2535	5.7	0.002238	2.5
Extreme (40C)	2535	5.9	0.002312	2.5
Extreme (30C)	2535	6.4	0.002530	2.5
Extreme (10C)	2535	5.5	0.002161	2.5
Extreme (0C)	2535	4.8	0.001876	2.5
Extreme (-10C)	2535	5.1	0.002028	2.5
Extreme (-20C)	2535	6.2	0.002439	2.5
Extreme (-30C)	2535	5.2	0.002054	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]
3.6	707.5	8.4	0.011886	2.5
3.85	707.5	10.0	0.014096	2.5
4.4	707.5	8.3	0.011679	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	8.4	0.011934	2.5
Extreme (50C)	707.5	7.5	0.010659	2.5
Extreme (40C)	707.5	7.4	0.010509	2.5
Extreme (30C)	707.5	8.3	0.011770	2.5
Extreme (10C)	707.5	7.2	0.010174	2.5
Extreme (0C)	707.5	8.7	0.012234	2.5
Extreme (-10C)	707.5	8.6	0.012152	2.5
Extreme (-20C)	707.5	8.4	0.011923	2.5
Extreme (-30C)	707.5	8.0	0.011320	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]
3.6	707.5	6.9	0.009798	2.5
3.85	707.5	8.3	0.011779	2.5
4.4	707.5	7.7	0.010860	2.5

Frequency error vs. Temperature

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

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

10.6 LTE BAND 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]
3.6	782.0	13.1	0.018480	2.5
3.85	782.0	13.9	0.019624	2.5
4.4	782.0	13.7	0.019313	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	782.0	14.8	0.020787	2.5
Extreme (50C)	782.0	14.0	0.019748	2.5
Extreme (40C)	782.0	15.5	0.021801	2.5
Extreme (30C)	782.0	14.2	0.020036	2.5
Extreme (10C)	782.0	13.5	0.018958	2.5
Extreme (0C)	782.0	14.5	0.020404	2.5
Extreme (-10C)	782.0	14.2	0.019953	2.5
Extreme (-20C)	782.0	14.3	0.020086	2.5
Extreme (-30C)	782.0	13.2	0.018606	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]
3.6	782.0	12.9	0.018131	2.5
3.85	782.0	13.9	0.019550	2.5
4.4	782.0	13.1	0.018392	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	782.0	12.4	0.017433	2.5
Extreme (50C)	782.0	11.6	0.016330	2.5
Extreme (40C)	782.0	14.0	0.019759	2.5
Extreme (30C)	782.0	13.2	0.018648	2.5
Extreme (10C)	782.0	13.5	0.018997	2.5
Extreme (0C)	782.0	12.0	0.016832	2.5
Extreme (-10C)	782.0	12.7	0.017859	2.5
Extreme (-20C)	782.0	13.9	0.019594	2.5
Extreme (-30C)	782.0	14.8	0.020893	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]
3.6	710	10.0	0.014128	2.5
3.85	710	8.7	0.012301	2.5
4.4	710	7.8	0.010945	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710	10.0	0.014022	2.5
Extreme (50C)	710	8.9	0.012483	2.5
Extreme (40C)	710	8.1	0.011375	2.5
Extreme (30C)	710	8.5	0.011988	2.5
Extreme (10C)	710	8.9	0.012541	2.5
Extreme (0C)	710	7.7	0.010778	2.5
Extreme (-10C)	710	8.5	0.011981	2.5
Extreme (-20C)	710	8.4	0.011854	2.5
Extreme (-30C)	710	8.6	0.012076	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]
3.6	710	10.1	0.014247	2.5
3.85	710	8.8	0.012393	2.5
4.4	710	8.4	0.011813	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710	9.0	0.012731	2.5
Extreme (50C)	710	8.5	0.011924	2.5
Extreme (40C)	710	8.2	0.011576	2.5
Extreme (30C)	710	9.3	0.013067	2.5
Extreme (10C)	710	7.8	0.010979	2.5
Extreme (0C)	710	8.3	0.011687	2.5
Extreme (-10C)	710	9.3	0.013167	2.5
Extreme (-20C)	710	9.3	0.013156	2.5
Extreme (-30C)	710	8.4	0.011771	2.5

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

10.8 LTE BAND 26 A

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26915 RB size 75 RB Offset 0 10MHz)				
3.6	819	8.4	0.010297	2.5
3.85	819	5.9	0.007259	2.5
4.4	819	6.0	0.007362	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26915 RB size 75 RB Offset 0 10MHz)				
Normal (25C)	819	8.4	0.010283	2.5
Extreme (50C)	819	1.7	0.002061	2.5
Extreme (40C)	819	2.8	0.003384	2.5
Extreme (30C)	819	6.8	0.008293	2.5
Extreme (10C)	819	5.6	0.006847	2.5
Extreme (0C)	819	6.6	0.008002	2.5
Extreme (-10C)	819	8.4	0.010212	2.5
Extreme (-20C)	819	6.2	0.007521	2.5
Extreme (-30C)	819	4.3	0.005310	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26915 RB size 75 RB Offset 0 10MHz)				
3.6	819	2.8	0.003370	2.5
3.85	819	6.7	0.008239	2.5
4.4	819	5.2	0.006325	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	819	6.3	0.007686	2.5
Extreme (50C)	819	8.8	0.010700	2.5
Extreme (40C)	819	6.7	0.008211	2.5
Extreme (30C)	819	4.8	0.005822	2.5
Extreme (10C)	819	6.1	0.007508	2.5
Extreme (0C)	819	5.5	0.006661	2.5
Extreme (-10C)	819	8.5	0.010391	2.5
Extreme (-20C)	819	6.8	0.008329	2.5
Extreme (-30C)	819	7.1	0.008657	2.5

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

10.9 LTE BAND 26 B

Band 26A QPSK, (15MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 15MHz)				
3.6	836.5	8.5	0.010160	2.5
3.85	836.5	6.7	0.007987	2.5
4.4	836.5	8.3	0.009909	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 15MHz)				
Normal (25C)	836.5	10.7	0.012770	2.5
Extreme (50C)	836.5	9.8	0.011661	2.5
Extreme (40C)	836.5	6.4	0.007618	2.5
Extreme (30C)	836.5	8.3	0.009919	2.5
Extreme (10C)	836.5	7.0	0.008376	2.5
Extreme (0C)	836.5	9.3	0.011092	2.5
Extreme (-10C)	836.5	1.1	0.001348	2.5
Extreme (-20C)	836.5	8.2	0.009792	2.5
Extreme (-30C)	836.5	7.3	0.008758	2.5

Band 26b 16QAM, (15MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26740 RB size 75 RB Offset 0 15MHz)				
3.6	836.5	9.8	0.011718	2.5
3.85	836.5	11.9	0.014208	2.5
4.4	836.5	10.0	0.012010	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26740 RB size 75 RB Offset 0 15MHz)				
Normal (25C)	836.5	6.7	0.008002	2.5
Extreme (50C)	836.5	8.7	0.010397	2.5
Extreme (40C)	836.5	7.2	0.008639	2.5
Extreme (30C)	836.5	7.1	0.008445	2.5
Extreme (10C)	836.5	6.4	0.007701	2.5
Extreme (0C)	836.5	5.5	0.006536	2.5
Extreme (-10C)	836.5	5.9	0.007106	2.5
Extreme (-20C)	836.5	3.3	0.011237	2.5
Extreme (-30C)	836.5	8.1	0.007292	2.5

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

10.10 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]
3.6	2595	8.4	0.003228	2.5
3.85	2595	6.8	0.002609	2.5
4.4	2595	7.6	0.002939	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	7.4	0.002854	2.5
Extreme (50C)	2595	4.7	0.001817	2.5
Extreme (40C)	2595	5.6	0.002153	2.5
Extreme (30C)	2595	4.4	0.001690	2.5
Extreme (10C)	2595	6.2	0.002379	2.5
Extreme (0C)	2595	5.3	0.002036	2.5
Extreme (-10C)	2595	9.2	0.003563	2.5
Extreme (-20C)	2595	11.0	0.004255	2.5
Extreme (-30C)	2595	6.2	0.002388	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]
3.6	2595	8.4	0.003229	2.5
3.85	2595	6.9	0.002657	2.5
4.4	2595	6.5	0.002490	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	7.5	0.002896	2.5
Extreme (50C)	2595	4.9	0.001879	2.5
Extreme (40C)	2595	5.5	0.002106	2.5
Extreme (30C)	2595	5.2	0.001992	2.5
Extreme (10C)	2595	6.0	0.002327	2.5
Extreme (0C)	2595	4.6	0.001756	2.5
Extreme (-10C)	2595	9.7	0.003735	2.5
Extreme (-20C)	2595	10.8	0.004178	2.5
Extreme (-30C)	2595	6.4	0.002460	2.5

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

10.11 LTE BAND 66

Band 66 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]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.6	1745	12.8	0.00734	2.5
3.85	1745	13.7	0.00784	2.5
4.4	1745	13.2	0.00754	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	7.1	0.004084	2.5
Extreme (50C)	1745	5.2	0.002958	2.5
Extreme (40C)	1745	5.7	0.003283	2.5
Extreme (30C)	1745	4.8	0.002769	2.5
Extreme (10C)	1745	6.9	0.003951	2.5
Extreme (0C)	1745	5.2	0.002978	2.5
Extreme (-10C)	1745	9.5	0.005452	2.5
Extreme (-20C)	1745	10.8	0.006204	2.5
Extreme (-30C)	1745	6.3	0.003608	2.5

Band 66 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]
BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.6	1745	12.5	0.007152	2.5
3.85	1745	13.4	0.007659	2.5
4.4	1745	13.4	0.007686	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	0.004163	2.5
Extreme (50C)	1745	5.0	0.002837	2.5
Extreme (40C)	1745	5.1	0.002918	2.5
Extreme (30C)	1745	4.5	0.002598	2.5
Extreme (10C)	1745	6.2	0.003563	2.5
Extreme (0C)	1745	5.2	0.003004	2.5
Extreme (-10C)	1745	9.5	0.005444	2.5
Extreme (-20C)	1745	11.2	0.006429	2.5
Extreme (-30C)	1745	6.3	0.003596	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.

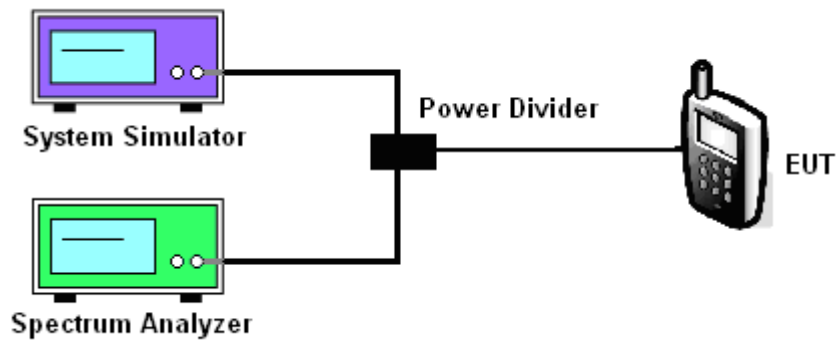
11.2 Measuring Instruments

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 2/4/5/7/12/13/17/26/41/66

Test data reference attachment.

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