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

FCC ID: 2APQU-M2303

Product: Moxee m2303

Trade Mark: Moxee

Model No.: m2303

Family Model: N/A

Report No.: STR230302001006E

Issue Date: Apr 04, 2023

Prepared for

KonnectONE,Inc.

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Prepared by

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TEST RESULT CERTIFICATION

Applicant's name	:	KonnectONE,Inc.
Address	:	40 Lake Bellevue Drive, Suite 340, Bellevue, Washington 98005, U.S.A.
Manufacturer's Name	:	Shenzhen Tianruixiang Communication Equipment Co.,LTD
Address	:	12 / F, Building B, Longhua Digital Innovation Center, Longhua District, Shenzhen, China
Product name	:	Moxee m2303
Model and/or type reference	:	m2303
Trade Mark	:	Moxee
Family Model	:	N/A
Test Sample Number		T230302001R002
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..... Mar 02, 2023 ~ Apr 04, 2023

Date of Issue..... Apr 04, 2023

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

Testing Engineer : Mukzi Lee

(Mukzi Lee)

Authorized Signatory : Alex

(Alex Li)

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Designation:	Moxee m2303
Trade Mark	Moxee
Model Name	m2303
Family Model	N/A
Model Difference	N/A
FCC ID:	2APQU-M2303
Frequency Bands:	U.S. Bands: ☒LTE FDD Band 2,4,5,7,12,13,17, 25, 26, TDD Band 41,66,71
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 25 Uplink: 1850MHz-1915MHz, Downlink: 1930MHz-1995MHz; LTE FDD Band 26A Uplink: 814MHz-824MHz, Downlink: 859MHz-869MHz; LTE FDD Band 26B Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE TDD Band 41 Uplink: 2496MHz-2690MHz, LTE TDD Band 66 Uplink: 1710MHz-1780MHz, Downlink: 2110MHz-2200MHz; LTE TDD Band 71 Uplink: 663MHz-698MHz, Downlink: 617MHz-652MHz;
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:	PIFA Antenna
Antenna gain:	Band 2: 3 dBi, Band 4: 0.7 dBi, Band 5: -1.1 dBi, Band 7: 2.1 dBi, Band 12: -3.6 dBi, Band 13: -1.8 dBi, Band 17: -2.6 dBi, Band 25: 3 dBi, Band 26: -1.1 dBi, Band 41: 2.6 dBi, Band 66: 0.7dBi, Band 71: -3.6 dBi
Adapter	Model: ZFX-03U-0510-09 Input: AC 100-240V~50/60Hz 0.2A Output: DC 5.0V⎓1000mA

Battery	DC 3.7V, 3000mAh
Power Rating	DC 3.7V from battery or DC 5V from adapter
Extreme Vol. Limits:	DC 3.15V to DC 4.26V (Nominal DC 3.7V)（Note 1）
HW Version	M896_39WD3EFMA2_G20T
SW Version	m2303_V01.02
** Note1: The High Voltage DC 4.26V and Low Voltage 3.15V 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: 2APQU-M2303** filing to comply with the FCC Part 22H&24E&27&90S.

1.3 TEST METHODOLOGY

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

1.4 TEST FACILITY

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

ShenZhen NTEK Testing Technology Co., Ltd.

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

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

FCC Registration No.:463705

IC Registration No.:9270A-1,

CNAS Registration No.:L5516

MEASUREMENT UNCERTAINTY

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

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

1.5 SPECIAL ACCESSORIES

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

1.6 WORST-CASE CONFIGURATION AND MODE

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

The device has LTE Bands of: Band 2,4,5,7,12,13,17, 25, 26,41,66,71

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

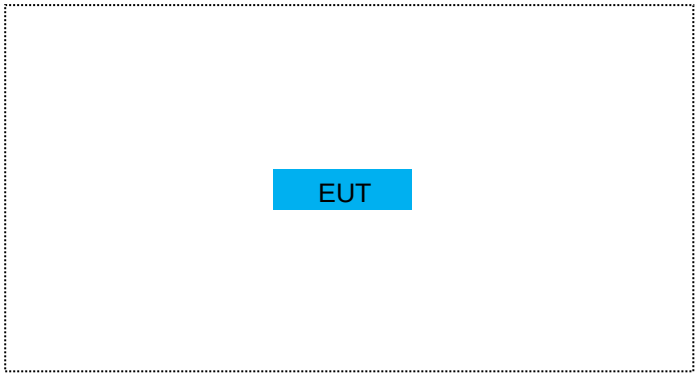
Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	Moxee m2303	m2303	FCC ID: 2APQU-M2303	EUT

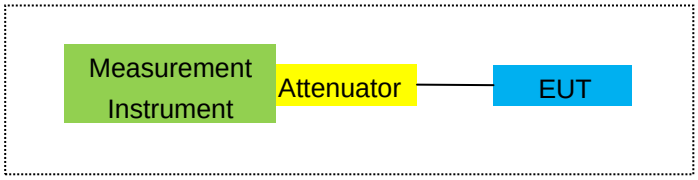
Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.

2.4 TEST SETUP

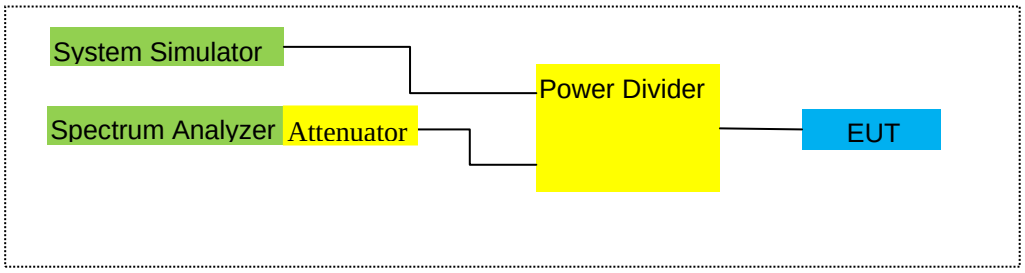
For Radiated Test Cases



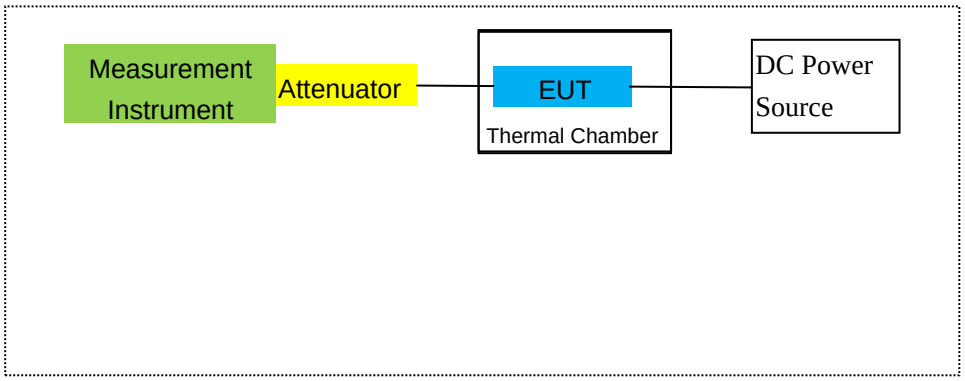
For Conducted Output Power



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	2022.06.16	2023.06.15	1 year
2	Test Receiver	R&S	ESPI	101318	2022.04.06	2023.04.05	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2022.03.30 2023.03.16	2023.03.29 2024.03.15	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2020.05.11	2023.05.10	3 year
5	Horn Antenna	EM	EM-AH-10180	2011071402	2022.03.31	2025.03.30	3 year
6	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2022.11.07	2023.11.06	1 year
7	Amplifier	EM	EM-30180	060538	2022.06.17	2023.06.16	1 year
8	Loop Antenna	ARA	PLA-1030/B	1029	2022.04.06	2023.04.05	1 year
9	Power Meter	R&S	NRVS	100696	2022.06.17	2023.06.16	1 year
10	Power Sensor	R&S	URV5-Z4	0395.1619.05	2022.04.06	2023.04.05	1 year
11	Test Cable	N/A	R-01	N/A	2022.06.17	2025.06.16	3 year
12	Test Cable	N/A	R-02	N/A	2022.06.17	2025.06.16	3 year
13	Test Cable	N/A	R-03	N/A	2022.06.17	2025.06.16	3 year
14	Test Receiver	R&S	ESCI	101160	2022.04.06	2023.04.05	1 year
15	LISN	R&S	ENV216	101313	2022.04.06	2023.04.05	1 year
16	LISN	EMCO	3816/2	00042990	2022.04.06	2023.04.05	1 year
17	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2022.04.06	2023.04.05	1 year
18	Passive Voltage Probe	R&S	ESH2-Z3	100196	2022.04.06	2023.04.05	1 year
19	Test Cable	N/A	C01	N/A	2020.05.11	2023.05.10	3 year
20	Test Cable	N/A	C02	N/A	2020.05.11	2023.05.10	3 year
21	Test Cable	N/A	C03	N/A	2020.05.11	2023.05.10	3 year
22	Attenuator	MCE	24-10-34	BN9258	2022.04.01 2023.03.27	2023.03.31 2024.03.27	1 year
23	Spectrum Analyzer	agilent	e4440a	us44300399	2022.04.01 2023.03.27	2023.03.31 2024.03.27	1 year
24	test receiver	R&S	ESCI	a0304218	2022.04.06	2023.04.05	1 year

25	Communication Tester	R&S	CMU200	A0304247	2022.06.16	2023.06.15	1 year
26	Thermal Chamber	Ten Billion	TTC-B3C	TBN-960502	2022.04.06	2023.04.05	1 year
27	DC Power Source	N/A	PS-6005D	2017040292 3	2020.05.11	2023.05.10	3 year
28	MXG Vector Signal Generator	Agilent	N5182A	MY47070317	2022.06.16	2023.06.15	1 year
29	Communication Tester	R&S	CMW500	148500	2022.06.16	2023.06.15	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.

4. OUTPUT POWER

4.1 OUTPUT POWER MEASUREMENT

LTE Measurement Procedure:

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

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

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

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

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

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

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

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

Test data reference attachment.

5. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only

TEST PROCEDURE

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

MODES TESTED

Band 2,4,5,7,12,13,17, 25, 26,41,66,71

RESULTS

PASS

Test data reference attachment.

6. BANDEDGE AND EMISSION MASK

RULE PART(S)

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

LIMITS

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

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

FCC: §90.691 Emission mask requirements for EA-based systems.
(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

TEST PROCEDURE

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

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency

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

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

MODES TESTED

Band 2,4,5,7,12,13,17, 25, 26,41,66,71

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, 25, 26,41,66,71

□

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, 25, 26,41,66,71

RESULTS

Pass

8.2 LTE BAND 2

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1850.7	-1.91	3.76	28.24	22.57	180.717	Horizontal	Pass
		1880	-1.81	3.91	28.22	22.50	177.828	Horizontal	Pass
		1909.3	-1.78	3.93	28.20	22.49	177.419	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-1.93	3.77	28.23	22.53	179.061	Horizontal	Pass
		1880	-1.89	3.91	28.24	22.44	175.388	Horizontal	Pass
		1908.5	-1.79	3.94	28.25	22.52	178.649	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-2.01	3.77	28.31	22.53	179.061	Horizontal	Pass
		1880	-1.88	3.91	28.22	22.43	174.985	Horizontal	Pass
		1907.5	-1.68	3.94	28.20	22.58	181.134	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-2.04	3.79	28.33	22.50	177.828	Horizontal	Pass
		1880	-1.70	3.95	28.22	22.57	180.717	Horizontal	Pass
		1905	-1.70	3.97	28.19	22.52	178.649	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-1.95	3.79	28.34	22.60	181.970	Horizontal	Pass
		1880	-1.76	3.95	28.22	22.51	178.238	Horizontal	Pass
		1902.5	-1.67	3.97	28.18	22.54	179.473	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-2.00	3.81	28.35	22.54	179.473	Horizontal	Pass
		1880	-1.74	3.96	28.22	22.52	178.649	Horizontal	Pass
		1900	-1.66	4.00	28.16	22.50	177.828	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-1.97	3.76	28.24	22.51	178.238	Vertical	Pass
		1880	-1.75	3.91	28.22	22.56	180.302	Vertical	Pass
		1909.3	-1.76	3.93	28.20	22.51	178.238	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-1.94	3.77	28.23	22.52	178.649	Vertical	Pass
		1880	-1.73	3.91	28.24	22.60	181.970	Vertical	Pass
		1908.5	-1.86	3.94	28.25	22.45	175.792	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-1.97	3.77	28.31	22.57	180.717	Vertical	Pass
		1880	-1.80	3.91	28.22	22.51	178.238	Vertical	Pass
		1907.5	-1.71	3.94	28.20	22.55	179.887	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1855	-2.02	3.79	28.33	22.52	178.649	Vertical	Pass
		1880	-1.69	3.95	28.22	22.58	181.134	Vertical	Pass
		1905	-1.67	3.97	28.19	22.55	179.887	Vertical	Pass

15.0MHz Band QPSK	1/#Mid	1857.5	-2.09	3.79	28.34	22.46	176.198	Vertical	Pass
		1880	-1.71	3.95	28.22	22.56	180.302	Vertical	Pass
		1902.5	-1.76	3.97	28.18	22.45	175.792	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	1860	-1.92	3.81	28.35	22.62	182.810	Vertical	Pass
		1880	-1.64	3.96	28.22	22.62	182.810	Vertical	Pass
		1900	-1.52	4.00	28.16	22.64	183.654	Vertical	Pass

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1850.7	-2.87	3.76	28.24	21.61	144.877	Horizontal	Pass
		1880	-2.76	3.91	28.22	21.55	142.889	Horizontal	Pass
		1909.3	-2.62	3.93	28.20	21.65	146.218	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-2.82	3.77	28.23	21.64	145.881	Horizontal	Pass
		1880	-2.72	3.91	28.24	21.61	144.877	Horizontal	Pass
		1908.5	-2.70	3.94	28.25	21.61	144.877	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-2.91	3.77	28.31	21.63	145.546	Horizontal	Pass
		1880	-2.62	3.91	28.22	21.69	147.571	Horizontal	Pass
		1907.5	-2.70	3.94	28.20	21.56	143.219	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-2.95	3.79	28.33	21.59	144.212	Horizontal	Pass
		1880	-2.64	3.95	28.22	21.63	145.546	Horizontal	Pass
		1905	-2.58	3.97	28.19	21.64	145.881	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-2.88	3.79	28.34	21.67	146.893	Horizontal	Pass
		1880	-2.70	3.95	28.22	21.57	143.549	Horizontal	Pass
		1902.5	-2.62	3.97	28.18	21.59	144.212	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-2.95	3.81	28.35	21.59	144.212	Horizontal	Pass
		1880	-2.69	3.96	28.22	21.57	143.549	Horizontal	Pass
		1900	-2.60	4.00	28.16	21.56	143.219	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1850.7	-2.78	3.76	28.24	21.70	147.911	Vertical	Pass
		1880	-2.66	3.91	28.22	21.65	146.218	Vertical	Pass
		1909.3	-2.69	3.93	28.20	21.58	143.880	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-2.76	3.77	28.23	21.70	147.911	Vertical	Pass
		1880	-2.72	3.91	28.24	21.61	144.877	Vertical	Pass
		1908.5	-2.66	3.94	28.25	21.65	146.218	Vertical	Pass
5.0MHz	1/#Mid	1852.5	-2.89	3.77	28.31	21.65	146.218	Vertical	Pass

Band 16 QAM		1880	-2.69	3.91	28.22	21.62	145.211	Vertical	Pass
		1907.5	-2.67	3.94	28.20	21.59	144.212	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-2.91	3.79	28.33	21.63	145.546	Vertical	Pass
		1880	-2.57	3.95	28.22	21.70	147.911	Vertical	Pass
		1905	-2.65	3.97	28.19	21.57	143.549	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-2.86	3.79	28.34	21.69	147.571	Vertical	Pass
		1880	-2.60	3.95	28.22	21.67	146.893	Vertical	Pass
		1902.5	-2.62	3.97	28.18	21.59	144.212	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-2.81	3.81	28.35	21.73	148.936	Vertical	Pass
		1880	-2.51	3.96	28.22	21.75	149.624	Vertical	Pass
		1900	-2.42	4.00	28.16	21.74	149.279	Vertical	Pass

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

8.3 LTE BAND 4

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1710.7	-2.77	3.12	27.58	21.69	147.571	Horizontal	Pass
		1732.5	-2.67	3.27	27.61	21.67	146.893	Horizontal	Pass
		1754.3	-2.67	3.29	27.63	21.67	146.893	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.79	3.13	27.61	21.69	147.571	Horizontal	Pass
		1732.5	-2.65	3.27	27.61	21.69	147.571	Horizontal	Pass
		1753.5	-2.65	3.30	27.62	21.67	146.893	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.86	3.13	27.63	21.64	145.881	Horizontal	Pass
		1732.5	-2.76	3.27	27.61	21.58	143.880	Horizontal	Pass
		1752.5	-2.68	3.30	27.60	21.62	145.211	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-2.86	3.15	27.64	21.63	145.546	Horizontal	Pass
		1732.5	-2.65	3.31	27.61	21.65	146.218	Horizontal	Pass
		1750	-2.66	3.33	27.59	21.60	144.544	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-2.96	3.15	27.65	21.54	142.561	Horizontal	Pass
		1732.5	-2.70	3.31	27.61	21.60	144.544	Horizontal	Pass
		1747.5	-2.64	3.33	27.57	21.60	144.544	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-2.89	3.17	27.66	21.60	144.544	Horizontal	Pass
		1732.5	-2.60	3.32	27.61	21.69	147.571	Horizontal	Pass
		1745	-2.66	3.36	27.56	21.54	142.561	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-2.88	3.12	27.58	21.58	143.880	Vertical	Pass
		1732.5	-2.69	3.27	27.61	21.65	146.218	Vertical	Pass
		1754.3	-2.68	3.29	27.63	21.66	146.555	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.92	3.13	27.61	21.56	143.219	Vertical	Pass
		1732.5	-2.79	3.27	27.61	21.55	142.889	Vertical	Pass
		1753.5	-2.72	3.30	27.62	21.60	144.544	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.88	3.13	27.63	21.62	145.211	Vertical	Pass
		1732.5	-2.67	3.27	27.61	21.67	146.893	Vertical	Pass
		1752.5	-2.76	3.30	27.60	21.54	142.561	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1715	-2.88	3.15	27.64	21.61	144.877	Vertical	Pass
		1732.5	-2.70	3.31	27.61	21.60	144.544	Vertical	Pass
		1750	-2.64	3.33	27.59	21.62	145.211	Vertical	Pass

15.0MHz Band QPSK	1/#Mid	1717.5	-2.95	3.15	27.65	21.55	142.889	Vertical	Pass
		1732.5	-2.66	3.31	27.61	21.64	145.881	Vertical	Pass
		1747.5	-2.58	3.33	27.57	21.66	146.555	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	1720	-2.75	3.17	27.66	21.74	149.279	Vertical	Pass
		1732.5	-2.59	3.32	27.61	21.70	147.911	Vertical	Pass
		1745	-2.47	3.36	27.56	21.73	148.936	Vertical	Pass

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-3.57	3.12	27.58	20.89	122.744	Horizontal	Pass
		1732.5	-3.55	3.27	27.61	20.79	119.950	Horizontal	Pass
		1754.3	-3.50	3.29	27.63	20.84	121.339	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-3.71	3.13	27.61	20.77	119.399	Horizontal	Pass
		1732.5	-3.49	3.27	27.61	20.85	121.619	Horizontal	Pass
		1753.5	-3.58	3.30	27.62	20.74	118.577	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-3.67	3.13	27.63	20.83	121.060	Horizontal	Pass
		1732.5	-3.44	3.27	27.61	20.90	123.027	Horizontal	Pass
		1752.5	-3.46	3.30	27.60	20.84	121.339	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-3.64	3.15	27.64	20.85	121.619	Horizontal	Pass
		1732.5	-3.42	3.31	27.61	20.88	122.462	Horizontal	Pass
		1750	-3.43	3.33	27.59	20.83	121.060	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-3.71	3.15	27.65	20.79	119.950	Horizontal	Pass
		1732.5	-3.44	3.31	27.61	20.86	121.899	Horizontal	Pass
		1747.5	-3.35	3.33	27.57	20.89	122.744	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-3.67	3.17	27.66	20.82	120.781	Horizontal	Pass
		1732.5	-3.52	3.32	27.61	20.77	119.399	Horizontal	Pass
		1745	-3.37	3.36	27.56	20.83	121.060	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-3.60	3.12	27.58	20.86	121.899	Vertical	Pass
		1732.5	-3.45	3.27	27.61	20.89	122.744	Vertical	Pass
		1754.3	-3.46	3.29	27.63	20.88	122.462	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-3.64	3.13	27.61	20.84	121.339	Vertical	Pass
		1732.5	-3.57	3.27	27.61	20.77	119.399	Vertical	Pass
		1753.5	-3.52	3.30	27.62	20.80	120.226	Vertical	Pass
5.0MHz	1/#Mid	1712.5	-3.64	3.13	27.63	20.86	121.899	Vertical	Pass

Band 16 QAM		1732.5	-3.45	3.27	27.61	20.89	122.744	Vertical	Pass
		1752.5	-3.46	3.30	27.60	20.84	121.339	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-3.61	3.15	27.64	20.88	122.462	Vertical	Pass
		1732.5	-3.53	3.31	27.61	20.77	119.399	Vertical	Pass
		1750	-3.37	3.33	27.59	20.89	122.744	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-3.72	3.15	27.65	20.78	119.674	Vertical	Pass
		1732.5	-3.49	3.31	27.61	20.81	120.504	Vertical	Pass
		1747.5	-3.35	3.33	27.57	20.89	122.744	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-3.56	3.17	27.66	20.93	123.880	Vertical	Pass
		1732.5	-3.36	3.32	27.61	20.93	123.880	Vertical	Pass
		1745	-3.26	3.36	27.56	20.94	124.165	Vertical	Pass

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

8.4 LTE BAND 5

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	824.7	4.54	2.01	19.68	2.15	20.06	101.391	Horizontal	Pass
		836.5	4.59	2.01	19.77	2.15	20.20	104.713	Horizontal	Pass
		848.3	4.46	2.02	19.82	2.15	20.11	102.565	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	4.52	2.01	19.70	2.15	20.06	101.391	Horizontal	Pass
		836.5	4.50	2.01	19.77	2.15	20.11	102.565	Horizontal	Pass
		847.5	4.44	2.02	19.81	2.15	20.08	101.859	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	4.62	2.01	19.71	2.15	20.17	103.992	Horizontal	Pass
		836.5	4.52	2.01	19.77	2.15	20.13	103.039	Horizontal	Pass
		846.5	4.50	2.02	19.79	2.15	20.12	102.802	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	4.50	2.01	19.73	2.15	20.07	101.625	Horizontal	Pass
		836.5	4.51	2.01	19.77	2.15	20.12	102.802	Horizontal	Pass
		844	4.41	2.02	19.78	2.15	20.02	100.462	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	824.7	4.65	2.01	19.68	2.15	20.17	103.992	Vertical	Pass
		836.5	4.46	2.01	19.77	2.15	20.07	101.625	Vertical	Pass
		848.3	4.53	2.02	19.82	2.15	20.18	104.232	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	4.62	2.01	19.70	2.15	20.16	103.753	Vertical	Pass
		836.5	4.51	2.01	19.77	2.15	20.12	102.802	Vertical	Pass
		847.5	4.48	2.02	19.81	2.15	20.12	102.802	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	4.60	2.01	19.71	2.15	20.15	103.514	Vertical	Pass
		836.5	4.46	2.01	19.77	2.15	20.07	101.625	Vertical	Pass
		846.5	4.46	2.02	19.79	2.15	20.08	101.859	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	4.67	2.01	19.73	2.15	20.24	105.682	Vertical	Pass
		836.5	4.59	2.01	19.77	2.15	20.20	104.713	Vertical	Pass
		844	4.63	2.02	19.78	2.15	20.24	105.682	Vertical	Pass

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	824.7	3.74	2.01	19.68	2.15	19.26	84.333	Horizontal	824.7
		836.5	3.56	2.01	19.77	2.15	19.17	82.604	Horizontal	836.5
		848.3	3.56	2.02	19.82	2.15	19.21	83.368	Horizontal	848.3
3.0MHz Band 16 QAM	1/#Mid	825.5	3.65	2.01	19.70	2.15	19.19	82.985	Horizontal	825.5
		836.5	3.64	2.01	19.77	2.15	19.25	84.140	Horizontal	836.5
		847.5	3.62	2.02	19.81	2.15	19.26	84.333	Horizontal	847.5
5.0MHz Band 16 QAM	1/#Mid	826.5	3.74	2.01	19.71	2.15	19.29	84.918	Horizontal	826.5
		836.5	3.55	2.01	19.77	2.15	19.16	82.414	Horizontal	836.5
		846.5	3.61	2.02	19.79	2.15	19.23	83.753	Horizontal	846.5
10.0MHz Band 16 QAM	1/#Mid	829	3.56	2.01	19.73	2.15	19.13	81.846	Horizontal	829
		836.5	3.49	2.01	19.77	2.15	19.10	81.283	Horizontal	836.5
		844	3.66	2.02	19.78	2.15	19.27	84.528	Horizontal	844
1.4MHz Band 16 QAM	1/#Mid	824.7	3.76	2.01	19.68	2.15	19.28	84.723	Vertical	824.7
		836.5	3.64	2.01	19.77	2.15	19.25	84.140	Vertical	836.5
		848.3	3.57	2.02	19.82	2.15	19.22	83.560	Vertical	848.3
3.0MHz Band 16 QAM	1/#Mid	825.5	3.64	2.01	19.70	2.15	19.18	82.794	Vertical	825.5
		836.5	3.56	2.01	19.77	2.15	19.17	82.604	Vertical	836.5
		847.5	3.53	2.02	19.81	2.15	19.17	82.604	Vertical	847.5
5.0MHz Band 16 QAM	1/#Mid	826.5	3.58	2.01	19.71	2.15	19.13	81.846	Vertical	826.5
		836.5	3.57	2.01	19.77	2.15	19.18	82.794	Vertical	836.5
		846.5	3.67	2.02	19.79	2.15	19.29	84.918	Vertical	846.5
10.0MHz Band 16 QAM	1/#Mid	829	3.76	2.01	19.73	2.15	19.33	85.704	Vertical	829
		836.5	3.72	2.01	19.77	2.15	19.33	85.704	Vertical	836.5
		844	3.70	2.02	19.78	2.15	19.31	85.310	Vertical	844

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)

8.5 LTE BAND 7

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	2502.5	0.27	4.54	27.75	23.48	222.844	Horizontal	Pass
		2535	0.47	4.69	27.72	23.50	223.872	Horizontal	Pass
		2567.5	0.43	4.71	27.71	23.43	220.293	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2505	0.20	4.55	27.76	23.41	219.280	Horizontal	Pass
		2535	0.34	4.69	27.72	23.37	217.270	Horizontal	Pass
		2565	0.41	4.72	27.70	23.39	218.273	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	0.15	4.55	27.77	23.37	217.270	Horizontal	Pass
		2535	0.37	4.69	27.72	23.40	218.776	Horizontal	Pass
		2562.5	0.48	4.72	27.69	23.45	221.309	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2510	0.24	4.57	27.78	23.45	221.309	Horizontal	Pass
		2535	0.49	4.73	27.72	23.48	222.844	Horizontal	Pass
		2560	0.43	4.75	27.68	23.36	216.770	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2502.5	0.22	4.54	27.75	23.43	220.293	Vertical	Pass
		2535	0.46	4.69	27.72	23.49	223.357	Vertical	Pass
		2567.5	0.39	4.71	27.71	23.39	218.273	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2505	0.16	4.55	27.76	23.37	217.270	Vertical	Pass
		2535	0.33	4.69	27.72	23.36	216.770	Vertical	Pass
		2565	0.40	4.72	27.70	23.38	217.771	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	0.19	4.55	27.77	23.41	219.280	Vertical	Pass
		2535	0.33	4.69	27.72	23.36	216.770	Vertical	Pass
		2562.5	0.52	4.72	27.69	23.49	223.357	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2510	0.32	4.57	27.78	23.53	225.424	Vertical	Pass
		2535	0.53	4.73	27.72	23.52	224.905	Vertical	Pass
		2560	0.58	4.75	27.68	23.51	224.388	Vertical	Pass

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	2502.5	-0.38	4.54	27.75	22.83	191.867	Horizontal	Pass
		2535	-0.23	4.69	27.72	22.80	190.546	Horizontal	Pass
		2567.5	-0.14	4.71	27.71	22.86	193.197	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-0.43	4.55	27.76	22.78	189.671	Horizontal	Pass
		2535	-0.20	4.69	27.72	22.83	191.867	Horizontal	Pass
		2565	-0.12	4.72	27.70	22.86	193.197	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-0.36	4.55	27.77	22.86	193.197	Horizontal	Pass
		2535	-0.28	4.69	27.72	22.75	188.365	Horizontal	Pass
		2562.5	-0.13	4.72	27.69	22.84	192.309	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-0.35	4.57	27.78	22.86	193.197	Horizontal	Pass
		2535	-0.24	4.73	27.72	22.75	188.365	Horizontal	Pass
		2560	-0.12	4.75	27.68	22.81	190.985	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2502.5	-0.38	4.54	27.75	22.83	191.867	Vertical	Pass
		2535	-0.21	4.69	27.72	22.82	191.426	Vertical	Pass
		2567.5	-0.21	4.71	27.71	22.79	190.108	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-0.38	4.55	27.76	22.83	191.867	Vertical	Pass
		2535	-0.13	4.69	27.72	22.90	194.984	Vertical	Pass
		2565	-0.22	4.72	27.70	22.76	188.799	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-0.36	4.55	27.77	22.86	193.197	Vertical	Pass
		2535	-0.29	4.69	27.72	22.74	187.932	Vertical	Pass
		2562.5	-0.18	4.72	27.69	22.79	190.108	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-0.29	4.57	27.78	22.92	195.884	Vertical	Pass
		2535	-0.06	4.73	27.72	22.93	196.336	Vertical	Pass
		2560	0.02	4.75	27.68	22.95	197.242	Vertical	Pass

Note:

SG Level= Signal generator output

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

8.6 LTE BAND 12

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	699.7	3.22	1.91	19.21	2.15	18.37	68.707	Vertical	Pass
		707.5	3.14	1.91	19.26	2.15	18.34	68.234	Vertical	Pass
		715.3	3.09	1.93	19.34	2.15	18.35	68.391	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	700.5	3.22	1.91	19.21	2.15	18.37	68.707	Vertical	Pass
		707.5	3.13	1.91	19.26	2.15	18.33	68.077	Vertical	Pass
		714.5	3.11	1.93	19.34	2.15	18.37	68.707	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	701.5	3.20	1.91	19.23	2.15	18.37	68.707	Vertical	Pass
		707.5	3.15	1.91	19.26	2.15	18.35	68.391	Vertical	Pass
		713.5	3.10	1.92	19.33	2.15	18.36	68.549	Vertical	Pass
10.0Hz Band QPSK	1/#Mid	704	3.15	1.91	19.25	2.15	18.34	68.234	Vertical	Pass
		707.5	3.20	1.91	19.26	2.15	18.40	69.183	Vertical	Pass
		711	3.08	1.92	19.32	2.15	18.33	68.077	Vertical	Pass
1.4MHz Band QPSK	1/#Mid	699.7	3.10	1.91	19.21	2.15	18.25	66.834	Horizontal	Pass
		707.5	3.08	1.91	19.26	2.15	18.28	67.298	Horizontal	Pass
		715.3	3.09	1.93	19.34	2.15	18.35	68.391	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	700.5	3.18	1.91	19.21	2.15	18.33	68.077	Horizontal	Pass
		707.5	3.09	1.91	19.26	2.15	18.29	67.453	Horizontal	Pass
		714.5	3.05	1.93	19.34	2.15	18.31	67.764	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	701.5	3.21	1.91	19.23	2.15	18.38	68.865	Horizontal	Pass
		707.5	3.19	1.91	19.26	2.15	18.39	69.024	Horizontal	Pass
		713.5	3.12	1.92	19.33	2.15	18.38	68.865	Horizontal	Pass
10.0Hz Band QPSK	1/#Mid	704	3.26	1.91	19.25	2.15	18.45	69.984	Horizontal	Pass
		707.5	3.22	1.91	19.26	2.15	18.42	69.502	Horizontal	Pass
		711	3.19	1.92	19.32	2.15	18.44	69.823	Horizontal	Pass

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	699.7	2.32	1.91	19.21	2.15	17.47	55.847	Vertical	Pass
		707.5	2.36	1.91	19.26	2.15	17.56	57.016	Vertical	Pass
		715.3	2.32	1.93	19.34	2.15	17.58	57.280	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	2.37	1.91	19.21	2.15	17.52	56.494	Vertical	Pass
		707.5	2.39	1.91	19.26	2.15	17.59	57.412	Vertical	Pass
		714.5	2.22	1.93	19.34	2.15	17.48	55.976	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	2.34	1.91	19.23	2.15	17.51	56.364	Vertical	Pass
		707.5	2.24	1.91	19.26	2.15	17.44	55.463	Vertical	Pass
		713.5	2.17	1.92	19.33	2.15	17.43	55.335	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	704	2.34	1.91	19.25	2.15	17.53	56.624	Vertical	Pass
		707.5	2.30	1.91	19.26	2.15	17.50	56.234	Vertical	Pass
		711	2.16	1.92	19.32	2.15	17.41	55.081	Vertical	Pass
1.4MHz Band 16 QAM	1/#Mid	699.7	2.45	1.91	19.21	2.15	17.60	57.544	Horizontal	Pass
		707.5	2.25	1.91	19.26	2.15	17.45	55.590	Horizontal	Pass
		715.3	2.29	1.93	19.34	2.15	17.55	56.885	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	2.40	1.91	19.21	2.15	17.55	56.885	Horizontal	Pass
		707.5	2.29	1.91	19.26	2.15	17.49	56.105	Horizontal	Pass
		714.5	2.30	1.93	19.34	2.15	17.56	57.016	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	2.31	1.91	19.23	2.15	17.48	55.976	Horizontal	Pass
		707.5	2.35	1.91	19.26	2.15	17.55	56.885	Horizontal	Pass
		713.5	2.18	1.92	19.33	2.15	17.44	55.463	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	704	2.42	1.91	19.25	2.15	17.61	57.677	Horizontal	Pass
		707.5	2.44	1.91	19.26	2.15	17.64	58.076	Horizontal	Pass
		711	2.39	1.92	19.32	2.15	17.64	58.076	Horizontal	Pass

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

8.7 LTE BAND 13

Radiated Power (ERP) for Band 13										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	779.5	4.54	1.95	19.23	2.15	19.67	92.683	Vertical	Pass
		782	4.52	1.95	19.26	2.15	19.68	92.897	Vertical	Pass
		784.5	4.48	1.96	19.33	2.15	19.70	93.325	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	782	4.61	1.95	19.25	2.15	19.76	94.624	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	779.5	4.66	1.95	19.23	2.15	19.79	95.280	Horizontal	Pass
		782	4.50	1.95	19.26	2.15	19.66	92.470	Horizontal	Pass
		784.5	4.43	1.96	19.33	2.15	19.65	92.257	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	782	4.66	1.95	19.25	2.15	19.81	95.719	Horizontal	Pass

Radiated Power (ERP) for Band 13										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. EPR	Max. EPR	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	779.5	3.61	1.95	19.23	2.15	18.74	74.817	Vertical	Pass
		782	3.58	1.95	19.26	2.15	18.74	74.817	Vertical	Pass
		784.5	3.55	1.96	19.33	2.15	18.77	75.336	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	782	3.62	1.95	19.25	2.15	18.77	75.336	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	779.5	3.55	1.95	19.23	2.15	18.68	73.790	Horizontal	Pass
		782	3.53	1.95	19.26	2.15	18.69	73.961	Horizontal	Pass
		784.5	3.57	1.96	19.33	2.15	18.79	75.683	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	782	3.67	1.95	19.25	2.15	18.82	76.208	Horizontal	Pass

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

8.7 LTE BAND 17

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	706.5	4.23	1.91	19.23	2.15	19.40	87.096	Vertical	Pass
		710	4.19	1.91	19.26	2.15	19.39	86.896	Vertical	Pass
		713.5	4.14	1.92	19.33	2.15	19.40	87.096	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	709	4.18	1.91	19.25	2.15	19.37	86.497	Vertical	Pass
		710	4.26	1.91	19.26	2.15	19.46	88.308	Vertical	Pass
		711	4.19	1.92	19.32	2.15	19.44	87.902	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	706.5	4.29	1.91	19.23	2.15	19.46	88.308	Horizontal	Pass
		710	4.19	1.91	19.26	2.15	19.39	86.896	Horizontal	Pass
		713.5	4.13	1.92	19.33	2.15	19.39	86.896	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	709	4.34	1.91	19.25	2.15	19.53	89.743	Horizontal	Pass
		710	4.31	1.91	19.26	2.15	19.51	89.331	Horizontal	Pass
		711	4.25	1.92	19.32	2.15	19.50	89.125	Horizontal	Pass

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	706.5	3.43	1.91	19.23	2.15	18.60	72.444	Vertical	Pass
		710	3.36	1.91	19.26	2.15	18.56	71.779	Vertical	Pass
		713.5	3.21	1.92	19.33	2.15	18.47	70.307	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	709	3.29	1.91	19.25	2.15	18.48	70.469	Vertical	Pass
		710	3.29	1.91	19.26	2.15	18.49	70.632	Vertical	Pass
		711	3.18	1.92	19.32	2.15	18.43	69.663	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	706.5	3.37	1.91	19.23	2.15	18.54	71.450	Horizontal	Pass
		710	3.31	1.91	19.26	2.15	18.51	70.958	Horizontal	Pass
		713.5	3.29	1.92	19.33	2.15	18.55	71.614	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	709	3.43	1.91	19.25	2.15	18.62	72.778	Horizontal	Pass
		710	3.44	1.91	19.26	2.15	18.64	73.114	Horizontal	Pass
		711	3.35	1.92	19.32	2.15	18.60	72.444	Horizontal	Pass

Note:

ERP=EIRP-2.15

SG Level= Signal generator output

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

8.8 LTE BAND 25

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1850.7	-1.82	3.12	27.58	22.64	183.654	Horizontal	Pass
		1882.5	-1.72	3.27	27.61	22.62	182.810	Horizontal	Pass
		1914.3	-1.73	3.29	27.63	22.61	182.390	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-1.83	3.13	27.61	22.65	184.077	Horizontal	Pass
		1882.5	-1.77	3.27	27.61	22.57	180.717	Horizontal	Pass
		1753.5	-1.65	3.30	27.62	22.67	184.927	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-1.95	3.13	27.63	22.55	179.887	Horizontal	Pass
		1882.5	-1.64	3.27	27.61	22.70	186.209	Horizontal	Pass
		1912.5	-1.61	3.30	27.60	22.69	185.780	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-1.92	3.15	27.64	22.57	180.717	Horizontal	Pass
		1882.5	-1.66	3.31	27.61	22.64	183.654	Horizontal	Pass
		1910	-1.68	3.33	27.59	22.58	181.134	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-1.86	3.15	27.65	22.64	183.654	Horizontal	Pass
		1882.5	-1.68	3.31	27.61	22.62	182.810	Horizontal	Pass
		1907.5	-1.59	3.33	27.57	22.65	184.077	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-1.83	3.17	27.66	22.66	184.502	Horizontal	Pass
		1882.5	-1.72	3.32	27.61	22.57	180.717	Horizontal	Pass
		1905	-1.58	3.36	27.56	22.62	182.810	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-1.76	3.12	27.58	22.70	186.209	Vertical	Pass
		1882.5	-1.78	3.27	27.61	22.56	180.302	Vertical	Pass
		1914.3	-1.69	3.29	27.63	22.65	184.077	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-1.86	3.13	27.61	22.62	182.810	Vertical	Pass
		1882.5	-1.78	3.27	27.61	22.56	180.302	Vertical	Pass
		1753.5	-1.69	3.30	27.62	22.63	183.231	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-1.91	3.13	27.63	22.59	181.552	Vertical	Pass
		1882.5	-1.73	3.27	27.61	22.61	182.390	Vertical	Pass
		1912.5	-1.68	3.30	27.60	22.62	182.810	Vertical	Pass
10.0MHz	1/#Mid	1855	-1.81	3.15	27.64	22.68	185.353	Vertical	Pass

Band		1882.5	-1.62	3.31	27.61	22.68	185.353	Vertical	Pass
QPSK		1910	-1.58	3.33	27.59	22.68	185.353	Vertical	Pass
15.0MHz		1857.5	-1.90	3.15	27.65	22.60	181.970	Vertical	Pass
Band	1/#Mid	1882.5	-1.67	3.31	27.61	22.63	183.231	Vertical	Pass
QPSK		1907.5	-1.56	3.33	27.57	22.68	185.353	Vertical	Pass
20.0MHz		1860	-1.76	3.17	27.66	22.73	187.499	Vertical	Pass
Band	1/#Mid	1882.5	-1.55	3.32	27.61	22.74	187.932	Vertical	Pass
QPSK		1905	-1.46	3.36	27.56	22.74	187.932	Vertical	Pass

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz		1850.7	-2.69	3.12	27.58	21.77	150.314	Horizontal	Pass
Band	1/#Mid	1882.5	-2.67	3.27	27.61	21.67	146.893	Horizontal	Pass
QPSK		1914.3	-2.68	3.29	27.63	21.66	146.555	Horizontal	Pass
3.0MHz		1851.5	-2.76	3.13	27.61	21.72	148.594	Horizontal	Pass
Band	1/#Mid	1882.5	-2.65	3.27	27.61	21.69	147.571	Horizontal	Pass
QPSK		1753.5	-2.58	3.30	27.62	21.74	149.279	Horizontal	Pass
5.0MHz		1852.5	-2.77	3.13	27.63	21.73	148.936	Horizontal	Pass
Band	1/#Mid	1882.5	-2.58	3.27	27.61	21.76	149.968	Horizontal	Pass
QPSK		1912.5	-2.52	3.30	27.60	21.78	150.661	Horizontal	Pass
10.0MHz		1855	-2.79	3.15	27.64	21.70	147.911	Horizontal	Pass
Band	1/#Mid	1882.5	-2.52	3.31	27.61	21.78	150.661	Horizontal	Pass
QPSK		1910	-2.56	3.33	27.59	21.70	147.911	Horizontal	Pass
15.0MHz		1857.5	-2.79	3.15	27.65	21.71	148.252	Horizontal	Pass
Band	1/#Mid	1882.5	-2.62	3.31	27.61	21.68	147.231	Horizontal	Pass
QPSK		1907.5	-2.58	3.33	27.57	21.66	146.555	Horizontal	Pass
20.0MHz		1860	-2.80	3.17	27.66	21.69	147.571	Horizontal	Pass
Band	1/#Mid	1882.5	-2.54	3.32	27.61	21.75	149.624	Horizontal	Pass
QPSK		1905	-2.47	3.36	27.56	21.73	148.936	Horizontal	Pass
1.4MHz		1850.7	-2.73	3.12	27.58	21.73	148.936	Vertical	Pass
Band	1/#Mid	1882.5	-2.59	3.27	27.61	21.75	149.624	Vertical	Pass
QPSK		1914.3	-2.59	3.29	27.63	21.75	149.624	Vertical	Pass
3.0MHz	1/#Mid	1851.5	-2.74	3.13	27.61	21.74	149.279	Vertical	Pass
Band		1882.5	-2.58	3.27	27.61	21.76	149.968	Vertical	Pass

QPSK		1753.5	-2.61	3.30	27.62	21.71	148.252	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-2.73	3.13	27.63	21.77	150.314	Vertical	Pass
		1882.5	-2.57	3.27	27.61	21.77	150.314	Vertical	Pass
		1912.5	-2.67	3.30	27.60	21.63	145.546	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1855	-2.70	3.15	27.64	21.79	151.008	Vertical	Pass
		1882.5	-2.51	3.31	27.61	21.79	151.008	Vertical	Pass
		1910	-2.50	3.33	27.59	21.76	149.968	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-2.81	3.15	27.65	21.69	147.571	Vertical	Pass
		1882.5	-2.51	3.31	27.61	21.79	151.008	Vertical	Pass
		1907.5	-2.47	3.33	27.57	21.77	150.314	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	1860	-2.69	3.17	27.66	21.80	151.356	Vertical	Pass
		1882.5	-2.44	3.32	27.61	21.85	153.109	Vertical	Pass
		1905	-2.38	3.36	27.56	21.82	152.055	Vertical	Pass

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

8.9 LTE BAND 26A

Radiated Power (ERP) for Band 26A										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. EPR Average (dBm)	Max. EPR Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	814.7	5.10	1.91	19.21	2.15	20.25	105.925	Vertical	Pass
		819	4.96	1.91	19.26	2.15	20.16	103.753	Vertical	Pass
		823.3	4.90	1.93	19.34	2.15	20.16	103.753	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	815.5	5.05	1.91	19.21	2.15	20.20	104.713	Vertical	Pass
		819	4.98	1.91	19.26	2.15	20.18	104.232	Vertical	Pass
		822.5	4.96	1.93	19.34	2.15	20.22	105.196	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	816.5	4.98	1.91	19.23	2.15	20.15	103.514	Vertical	Pass
		819	4.99	1.91	19.26	2.15	20.19	104.472	Vertical	Pass
		821.5	5.01	1.92	19.33	2.15	20.27	106.414	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	819	5.12	1.93	19.25	2.15	20.29	106.905	Vertical	Pass
1.4MHz Band QPSK	1/#Mid	814.7	5.01	1.91	19.21	2.15	20.16	103.753	Horizontal	Pass
		819	4.97	1.91	19.26	2.15	20.17	103.992	Horizontal	Pass
		823.3	4.98	1.93	19.34	2.15	20.24	105.682	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	815.5	5.15	1.91	19.21	2.15	20.30	107.152	Horizontal	Pass
		819	5.09	1.91	19.26	2.15	20.29	106.905	Horizontal	Pass
		822.5	5.02	1.93	19.34	2.15	20.28	106.660	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	816.5	5.09	1.91	19.23	2.15	20.26	106.170	Horizontal	Pass
		819	5.02	1.91	19.26	2.15	20.22	105.196	Horizontal	Pass
		821.5	4.90	1.92	19.33	2.15	20.16	103.753	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	819	5.13	1.93	19.25	2.15	20.3	107.152	Horizontal	Pass

Radiated Power (ERP) for Band 26A										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. EPR Average (dBm)	Max. EPR Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	814.7	4.23	1.91	19.21	2.15	19.38	86.696	Vertical	Pass
		819	4.16	1.91	19.26	2.15	19.36	86.298	Vertical	Pass
		823.3	4.22	1.93	19.34	2.15	19.48	88.716	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	815.5	4.31	1.91	19.21	2.15	19.46	88.308	Vertical	Pass
		819	4.29	1.91	19.26	2.15	19.49	88.920	Vertical	Pass
		822.5	4.12	1.93	19.34	2.15	19.38	86.696	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	816.5	4.24	1.91	19.23	2.15	19.41	87.297	Vertical	Pass
		819	4.26	1.91	19.26	2.15	19.46	88.308	Vertical	Pass
		821.5	4.08	1.92	19.33	2.15	19.34	85.901	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	819	4.32	1.93	19.25	2.15	19.49	88.920	Vertical	Pass
1.4MHz Band 16 QAM	1/#Mid	814.7	4.30	1.91	19.21	2.15	19.45	88.105	Horizontal	Pass
		819	4.28	1.91	19.26	2.15	19.48	88.716	Horizontal	Pass
		823.3	4.23	1.93	19.34	2.15	19.49	88.920	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	815.5	4.24	1.91	19.21	2.15	19.39	86.896	Horizontal	Pass
		819	4.19	1.91	19.26	2.15	19.39	86.896	Horizontal	Pass
		822.5	4.14	1.93	19.34	2.15	19.40	87.096	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	816.5	4.19	1.91	19.23	2.15	19.36	86.298	Horizontal	Pass
		819	4.20	1.91	19.26	2.15	19.40	87.096	Horizontal	Pass
		821.5	4.11	1.92	19.33	2.15	19.37	86.497	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	819	4.33	1.93	19.25	2.15	19.5	89.125	Horizontal	Pass

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

8.10 LTE BAND 26B

Radiated Power (ERP) for Band 26B										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	824.7	4.54	2.02	19.72	2.15	20.09	102.094	Horizontal	Pass
		836.5	4.51	2.02	19.83	2.15	20.17	103.992	Horizontal	Pass
		848.3	4.32	2.03	19.95	2.15	20.09	102.094	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	4.53	2.02	19.84	2.15	20.20	104.713	Horizontal	Pass
		836.5	4.41	2.02	19.94	2.15	20.18	104.232	Horizontal	Pass
		847.5	4.38	2.03	19.98	2.15	20.18	104.232	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	4.55	2.02	19.75	2.15	20.13	103.039	Horizontal	Pass
		836.5	4.39	2.02	19.83	2.15	20.05	101.158	Horizontal	Pass
		846.5	4.40	2.03	19.92	2.15	20.14	103.276	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	4.46	2.02	19.84	2.15	20.13	103.039	Horizontal	Pass
		836.5	4.30	2.02	19.90	2.15	20.03	100.693	Horizontal	Pass
		844	4.39	2.03	19.96	2.15	20.17	103.992	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	831.5	5.01	2.02	19.33	2.15	20.17	103.992	Vertical	Pass
		836.5	4.93	2.02	19.37	2.15	20.13	103.039	Vertical	Pass
		841.5	4.71	2.03	19.52	2.15	20.05	101.158	Vertical	Pass
1.4MHz Band QPSK	1/#Mid	824.7	4.52	2.02	19.76	2.15	20.11	102.565	Vertical	Pass
		836.5	4.45	2.02	19.78	2.15	20.06	101.391	Vertical	Pass
		848.3	4.35	2.03	19.94	2.15	20.11	102.565	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	4.53	2.02	19.83	2.15	20.19	104.472	Vertical	Pass
		836.5	4.31	2.02	19.96	2.15	20.10	102.329	Vertical	Pass
		847.5	4.45	2.03	19.87	2.15	20.14	103.276	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	4.48	2.02	19.86	2.15	20.17	103.992	Vertical	Pass
		836.5	4.38	2.02	19.81	2.15	20.02	100.462	Vertical	Pass
		846.5	4.39	2.03	19.83	2.15	20.04	100.925	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	4.64	2.02	19.75	2.15	20.22	105.196	Vertical	Pass
		836.5	4.56	2.02	19.85	2.15	20.24	105.682	Vertical	Pass
		844	4.61	2.03	19.80	2.15	20.23	105.439	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	831.5	5.13	2.02	19.31	2.15	20.27	106.414	Horizontal	Pass
		836.5	5.09	2.02	19.33	2.15	20.25	105.925	Horizontal	Pass
		841.5	5.03	2.03	19.38	2.15	20.23	105.439	Horizontal	Pass

Radiated Power (ERP) for Band 26B										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. EPR Average (dBm)	Max. EPR Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	824.7	3.72	2.02	19.72	2.15	19.27	84.528	Horizontal	Pass
		836.5	3.55	2.02	19.83	2.15	19.21	83.368	Horizontal	Pass
		848.3	3.44	2.03	19.95	2.15	19.21	83.368	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	3.54	2.02	19.84	2.15	19.21	83.368	Horizontal	Pass
		836.5	3.49	2.02	19.94	2.15	19.26	84.333	Horizontal	Pass
		847.5	3.36	2.03	19.98	2.15	19.16	82.414	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	3.65	2.02	19.75	2.15	19.23	83.753	Horizontal	Pass
		836.5	3.55	2.02	19.83	2.15	19.21	83.368	Horizontal	Pass
		846.5	3.47	2.03	19.92	2.15	19.21	83.368	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	3.58	2.02	19.84	2.15	19.25	84.140	Horizontal	Pass
		836.5	3.46	2.02	19.90	2.15	19.19	82.985	Horizontal	Pass
		844	3.33	2.03	19.96	2.15	19.11	81.470	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	831.5	4.03	2.02	19.33	2.15	19.19	82.985	Vertical	Pass
		836.5	4.10	2.02	19.37	2.15	19.30	85.114	Vertical	Pass
		841.5	3.94	2.03	19.52	2.15	19.28	84.723	Vertical	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	3.60	2.02	19.76	2.15	19.19	82.985	Vertical	Pass
		836.5	3.60	2.02	19.78	2.15	19.21	83.368	Vertical	Pass
		848.3	3.54	2.03	19.94	2.15	19.30	85.114	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	3.62	2.02	19.83	2.15	19.28	84.723	Vertical	Pass
		836.5	3.51	2.02	19.96	2.15	19.30	85.114	Vertical	Pass
		847.5	3.46	2.03	19.87	2.15	19.15	82.224	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	3.55	2.02	19.86	2.15	19.24	83.946	Vertical	Pass
		836.5	3.60	2.02	19.81	2.15	19.24	83.946	Vertical	Pass
		846.5	3.51	2.03	19.83	2.15	19.16	82.414	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	3.77	2.02	19.75	2.15	19.35	86.099	Vertical	Pass
		836.5	3.64	2.02	19.85	2.15	19.32	85.507	Vertical	Pass
		844	3.72	2.03	19.80	2.15	19.34	85.901	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	831.5	4.22	2.02	19.31	2.15	19.36	86.298	Horizontal	Pass
		836.5	4.16	2.02	19.33	2.15	19.32	85.507	Horizontal	Pass
		841.5	4.16	2.03	19.38	2.15	19.36	86.298	Horizontal	Pass

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

8.11 LTE BAND 41

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	2498.5	-0.14	4.54	27.75	23.07	202.768	Horizontal	Pass
		2593	-0.04	4.69	27.72	22.99	199.067	Horizontal	Pass
		2687.5	0.03	4.71	27.71	23.03	200.909	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2501	-0.12	4.55	27.76	23.09	203.704	Horizontal	Pass
		2593	-0.05	4.69	27.72	22.98	198.609	Horizontal	Pass
		2685	-0.01	4.72	27.70	22.97	198.153	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2503.5	-0.24	4.55	27.77	22.98	198.609	Horizontal	Pass
		2593	0.04	4.69	27.72	23.07	202.768	Horizontal	Pass
		2682.5	-0.02	4.72	27.69	22.95	197.242	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2506	-0.20	4.57	27.78	23.01	199.986	Horizontal	Pass
		2593	0.04	4.73	27.72	23.03	200.909	Horizontal	Pass
		2680	0.11	4.75	27.68	23.04	201.372	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2498.5	-0.21	4.54	27.75	23.00	199.526	Vertical	Pass
		2593	0.07	4.69	27.72	23.10	204.174	Vertical	Pass
		2687.5	0.10	4.71	27.71	23.10	204.174	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2501	-0.16	4.55	27.76	23.05	201.837	Vertical	Pass
		2593	0.06	4.69	27.72	23.09	203.704	Vertical	Pass
		2685	0.10	4.72	27.70	23.08	203.236	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2503.5	-0.13	4.55	27.77	23.09	203.704	Vertical	Pass
		2593	0.01	4.69	27.72	23.04	201.372	Vertical	Pass
		2682.5	0.05	4.72	27.69	23.02	200.447	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2506	-0.10	4.57	27.78	23.11	204.644	Vertical	Pass
		2593	0.14	4.73	27.72	23.13	205.589	Vertical	Pass
		2680	0.20	4.75	27.68	23.13	205.589	Vertical	Pass

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	2502.5	-1.35	4.54	27.75	21.86	153.462	Horizontal	Pass
		2535	-1.14	4.69	27.72	21.89	154.525	Horizontal	Pass
		2567.5	-1.17	4.71	27.71	21.83	152.405	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-1.47	4.55	27.76	21.74	149.279	Horizontal	Pass
		2535	-1.16	4.69	27.72	21.87	153.815	Horizontal	Pass
		2565	-1.21	4.72	27.70	21.77	150.314	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-1.45	4.55	27.77	21.77	150.314	Horizontal	Pass
		2535	-1.17	4.69	27.72	21.86	153.462	Horizontal	Pass
		2562.5	-1.24	4.72	27.69	21.73	148.936	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-1.32	4.57	27.78	21.89	154.525	Horizontal	Pass
		2535	-1.14	4.73	27.72	21.85	153.109	Horizontal	Pass
		2560	-1.03	4.75	27.68	21.90	154.882	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2502.5	-1.38	4.54	27.75	21.83	152.405	Vertical	Pass
		2535	-1.18	4.69	27.72	21.85	153.109	Vertical	Pass
		2567.5	-1.10	4.71	27.71	21.90	154.882	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-1.44	4.55	27.76	21.77	150.314	Vertical	Pass
		2535	-1.18	4.69	27.72	21.85	153.109	Vertical	Pass
		2565	-1.14	4.72	27.70	21.84	152.757	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-1.42	4.55	27.77	21.80	151.356	Vertical	Pass
		2535	-1.22	4.69	27.72	21.81	151.705	Vertical	Pass
		2562.5	-1.25	4.72	27.69	21.72	148.594	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-1.30	4.57	27.78	21.91	155.239	Vertical	Pass
		2535	-1.07	4.73	27.72	21.92	155.597	Vertical	Pass
		2560	-0.99	4.75	27.68	21.94	156.315	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

8.12 LTE BAND 66

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	1710.7	-2.78	3.76	28.24	21.70	147.911	Horizontal	Pass
		1745	-2.54	3.91	28.22	21.77	150.314	Horizontal	Pass
		1779.3	-2.49	3.93	28.2	21.78	150.661	Horizontal	Pass
3.0MHz Band QPSK	15/0	1711.5	-2.71	3.77	28.23	21.75	149.624	Horizontal	Pass
		1745	-2.58	3.91	28.24	21.75	149.624	Horizontal	Pass
		1778.5	-2.56	3.94	28.25	21.75	149.624	Horizontal	Pass
5.0MHz Band QPSK	25/0	1712.5	-2.76	3.77	28.31	21.78	150.661	Horizontal	Pass
		1745	-2.63	3.91	28.22	21.68	147.231	Horizontal	Pass
		1777.5	-2.60	3.94	28.2	21.66	146.555	Horizontal	Pass
10.0MHz Band QPSK	50/0	1715	-2.80	3.79	28.33	21.74	149.279	Horizontal	Pass
		1745	-2.48	3.95	28.22	21.79	151.008	Horizontal	Pass
		1775	-2.44	3.97	28.19	21.78	150.661	Horizontal	Pass
15.0MHz Band QPSK	75/0	1717.5	-2.77	3.79	28.34	21.78	150.661	Horizontal	Pass
		1745	-2.51	3.95	28.22	21.76	149.968	Horizontal	Pass
		1772.5	-2.53	3.97	28.18	21.68	147.231	Horizontal	Pass
20.0MHz Band QPSK	100/0	1720	-2.92	3.81	28.35	21.62	145.211	Horizontal	Pass
		1745	-2.63	3.96	28.22	21.63	145.546	Horizontal	Pass
		1770	-2.48	4	28.16	21.68	147.231	Horizontal	Pass
1.4MHz Band QPSK	6/0	1710.7	-2.72	3.76	28.24	21.76	149.968	Vertical	Pass
		1745	-2.61	3.91	28.22	21.70	147.911	Vertical	Pass
		1779.3	-2.58	3.93	28.2	21.69	147.571	Vertical	Pass
3.0MHz Band QPSK	15/0	1711.5	-2.68	3.77	28.23	21.78	150.661	Vertical	Pass
		1745	-2.55	3.91	28.24	21.78	150.661	Vertical	Pass
		1778.5	-2.60	3.94	28.25	21.71	148.252	Vertical	Pass
5.0MHz Band QPSK	25/0	1712.5	-2.81	3.77	28.31	21.73	148.936	Vertical	Pass
		1745	-2.65	3.91	28.22	21.66	146.555	Vertical	Pass
		1777.5	-2.54	3.94	28.2	21.72	148.594	Vertical	Pass
10.0MHz	50/0	1715	-2.85	3.79	28.34	21.70	147.911	Vertical	Pass

Band		1745	-2.47	3.95	28.22	21.80	151.356	Vertical	Pass
QPSK		1775	-2.55	3.97	28.18	21.66	146.555	Vertical	Pass
15.0MHz		1717.5	-2.76	3.81	28.35	21.78	150.661	Vertical	Pass
Band	75/0	1745	-2.60	3.96	28.22	21.66	146.555	Vertical	Pass
QPSK		1772.5	-2.45	4	28.16	21.71	148.252	Vertical	Pass
20.0MHz		1720	-2.71	3.79	28.34	21.84	152.757	Vertical	Pass
Band	100/0	1745	-2.44	3.95	28.22	21.83	152.405	Vertical	Pass
QPSK		1770	-2.37	3.97	28.18	21.84	152.757	Vertical	Pass

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Gain (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz		1710.7	-3.53	3.76	28.24	20.95	124.451	Horizontal	Pass
Band 16	6/0	1745	-3.42	3.91	28.22	20.89	122.744	Horizontal	Pass
QAM		1779.3	-3.40	3.93	28.2	20.87	122.180	Horizontal	Pass
3.0MHz		1711.5	-3.61	3.77	28.23	20.85	121.619	Horizontal	Pass
Band 16	15/0	1745	-3.46	3.91	28.24	20.87	122.180	Horizontal	Pass
QAM		1778.5	-3.36	3.94	28.25	20.95	124.451	Horizontal	Pass
5.0MHz		1712.5	-3.61	3.77	28.31	20.93	123.880	Horizontal	Pass
Band 16	25/0	1745	-3.36	3.91	28.22	20.95	124.451	Horizontal	Pass
QAM		1777.5	-3.30	3.94	28.2	20.96	124.738	Horizontal	Pass
10.0MHz		1715	-3.56	3.79	28.33	20.98	125.314	Horizontal	Pass
Band 16	50/0	1745	-3.37	3.95	28.22	20.90	123.027	Horizontal	Pass
QAM		1775	-3.30	3.97	28.19	20.92	123.595	Horizontal	Pass
15.0MHz		1717.5	-3.56	3.79	28.34	20.99	125.603	Horizontal	Pass
Band 16	75/0	1745	-3.37	3.95	28.22	20.90	123.027	Horizontal	Pass
QAM		1772.5	-3.29	3.97	28.18	20.92	123.595	Horizontal	Pass
20.0MHz		1720	-3.60	3.81	28.35	20.94	124.165	Horizontal	Pass
Band 16	100/0	1745	-3.40	3.96	28.22	20.86	121.899	Horizontal	Pass
QAM		1770	-3.23	4	28.16	20.93	123.880	Horizontal	Pass
1.4MHz		1710.7	-3.49	3.76	28.24	20.99	125.603	Vertical	Pass
Band 16	6/0	1745	-3.38	3.91	28.22	20.93	123.880	Vertical	Pass
QAM		1779.3	-3.28	3.93	28.2	20.99	125.603	Vertical	Pass
3.0MHz		1711.5	-3.54	3.77	28.23	20.92	123.595	Vertical	Pass
Band 16	15/0	1745	-3.35	3.91	28.24	20.98	125.314	Vertical	Pass
QAM		1778.5	-3.43	3.94	28.25	20.88	122.462	Vertical	Pass

5.0MHz	25/0	1712.5	-3.70	3.77	28.31	20.84	121.339	Vertical	Pass
Band 16		1745	-3.38	3.91	28.22	20.93	123.880	Vertical	Pass
QAM		1777.5	-3.33	3.94	28.2	20.93	123.880	Vertical	Pass
10.0MHz	50/0	1715	-3.67	3.79	28.34	20.88	122.462	Vertical	Pass
Band 16		1745	-3.29	3.95	28.22	20.98	125.314	Vertical	Pass
QAM		1775	-3.32	3.97	28.18	20.89	122.744	Vertical	Pass
15.0MHz	75/0	1717.5	-3.62	3.81	28.35	20.92	123.595	Vertical	Pass
Band 16		1745	-3.40	3.96	28.22	20.86	121.899	Vertical	Pass
QAM		1772.5	-3.22	4	28.16	20.94	124.165	Vertical	Pass
20.0MHz	100/0	1720	-3.52	3.79	28.34	21.03	126.765	Vertical	Pass
Band 16		1745	-3.24	3.95	28.22	21.03	126.765	Vertical	Pass
QAM		1770	-3.20	3.97	28.18	21.01	126.183	Vertical	Pass

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

8.13 LTE BAND 71

Radiated Power (ERP) for Band 71										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	665.5	3.61	1.91	19.21	2.15	18.76	75.162	Vertical	Pass
		680.5	3.58	1.91	19.26	2.15	18.78	75.509	Vertical	Pass
		695.5	3.53	1.93	19.34	2.15	18.79	75.683	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	668	3.70	1.91	19.21	2.15	18.85	76.736	Vertical	Pass
		680.5	3.58	1.91	19.26	2.15	18.78	75.509	Vertical	Pass
		693	3.58	1.93	19.34	2.15	18.84	76.560	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	670.5	3.69	1.91	19.23	2.15	18.86	76.913	Vertical	Pass
		680.5	3.54	1.91	19.26	2.15	18.74	74.817	Vertical	Pass
		690.5	3.56	1.92	19.33	2.15	18.82	76.208	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	673	3.70	1.91	19.25	2.15	18.89	77.446	Vertical	Pass
		683	3.52	1.91	19.26	2.15	18.72	74.473	Vertical	Pass
		688	3.57	1.92	19.32	2.15	18.82	76.208	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	665.5	3.65	1.91	19.21	2.15	18.80	75.858	Horizontal	Pass
		680.5	3.62	1.91	19.26	2.15	18.82	76.208	Horizontal	Pass
		695.5	3.52	1.93	19.34	2.15	18.78	75.509	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	668	3.70	1.91	19.21	2.15	18.85	76.736	Horizontal	Pass
		680.5	3.66	1.91	19.26	2.15	18.86	76.913	Horizontal	Pass
		693	3.64	1.93	19.34	2.15	18.90	77.625	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	670.5	3.61	1.91	19.23	2.15	18.78	75.509	Horizontal	Pass
		680.5	3.56	1.91	19.26	2.15	18.76	75.162	Horizontal	Pass
		690.5	3.60	1.92	19.33	2.15	18.86	76.913	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	673	3.71	1.91	19.25	2.15	18.90	77.625	Horizontal	Pass
		683	3.74	1.91	19.26	2.15	18.94	78.343	Horizontal	Pass
		688	3.67	1.92	19.32	2.15	18.92	77.983	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	665.5	3.61	1.91	19.21	2.15	18.76	75.162	Vertical	Pass
		680.5	3.58	1.91	19.26	2.15	18.78	75.509	Vertical	Pass
		695.5	3.53	1.93	19.34	2.15	18.79	75.683	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	668	3.70	1.91	19.21	2.15	18.85	76.736	Vertical	Pass
		680.5	3.58	1.91	19.26	2.15	18.78	75.509	Vertical	Pass
		693	3.58	1.93	19.34	2.15	18.84	76.560	Vertical	Pass

Radiated Power (ERP) for Band 71										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	665.5	2.76	1.91	19.21	2.15	17.91	61.802	Vertical	Pass
		680.5	2.69	1.91	19.26	2.15	17.89	61.518	Vertical	Pass
		695.5	2.60	1.93	19.34	2.15	17.86	61.094	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	668	2.83	1.91	19.21	2.15	17.98	62.806	Vertical	Pass
		680.5	2.79	1.91	19.26	2.15	17.99	62.951	Vertical	Pass
		693	2.71	1.93	19.34	2.15	17.97	62.661	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	670.5	2.78	1.91	19.23	2.15	17.95	62.373	Vertical	Pass
		680.5	2.72	1.91	19.26	2.15	17.92	61.944	Vertical	Pass
		690.5	2.67	1.92	19.33	2.15	17.93	62.087	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	673	2.64	1.91	19.25	2.15	17.83	60.674	Vertical	Pass
		683	2.60	1.91	19.26	2.15	17.80	60.256	Vertical	Pass
		688	2.66	1.92	19.32	2.15	17.91	61.802	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	665.5	2.75	1.91	19.21	2.15	17.90	61.660	Horizontal	Pass
		680.5	2.78	1.91	19.26	2.15	17.98	62.806	Horizontal	Pass
		695.5	2.70	1.93	19.34	2.15	17.96	62.517	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	668	2.83	1.91	19.21	2.15	17.98	62.806	Horizontal	Pass
		680.5	2.73	1.91	19.26	2.15	17.93	62.087	Horizontal	Pass
		693	2.71	1.93	19.34	2.15	17.97	62.661	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	670.5	2.67	1.91	19.23	2.15	17.84	60.814	Horizontal	Pass
		680.5	2.73	1.91	19.26	2.15	17.93	62.087	Horizontal	Pass
		690.5	2.65	1.92	19.33	2.15	17.91	61.802	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	673	2.84	1.91	19.25	2.15	18.03	63.533	Horizontal	Pass
		683	2.84	1.91	19.26	2.15	18.04	63.680	Horizontal	Pass
		688	2.77	1.92	19.32	2.15	18.02	63.387	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	665.5	2.76	1.91	19.21	2.15	17.91	61.802	Vertical	Pass
		680.5	2.69	1.91	19.26	2.15	17.89	61.518	Vertical	Pass
		695.5	2.60	1.93	19.34	2.15	17.86	61.094	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	668	2.83	1.91	19.21	2.15	17.98	62.806	Vertical	Pass
		680.5	2.79	1.91	19.26	2.15	17.99	62.951	Vertical	Pass
		693	2.71	1.93	19.34	2.15	17.97	62.661	Vertical	Pass

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

9. SPURIOUS RADIATION EMISSION

RULE PART(S)

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

LIMIT

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

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

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

TEST PROCEDURE

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

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

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

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

MODES TESTED

LTE Band 2,4,5,7,12,13,17, 25, 26,41,66,71

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 Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3701.4	-46.87	4.04	33.51	-17.40	-13	-4.40	Horizontal
3701.4	-45.87	4.04	33.51	-16.40	-13	-3.40	Vertical
5552.1	-47.32	5.24	35.84	-16.72	-13	-3.72	Vertical
5552.1	-53.01	5.24	35.84	-22.41	-13	-9.41	Horizontal
199.8	-37.85	1.43	16.02	-23.26	-13	-10.26	Vertical
339.6	-34.32	1.30	17.99	-17.63	-13	-4.63	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-50.09	4.04	33.56	-20.57	-13	-7.57	Horizontal
3760.0	-53.89	4.04	33.56	-24.37	-13	-11.37	Vertical
5640.0	-52.69	5.24	35.91	-22.02	-13	-9.02	Vertical
5640.0	-50.56	5.24	35.91	-19.89	-13	-6.89	Horizontal
208.8	-34.80	1.62	16.97	-19.45	-13	-6.45	Vertical
454.4	-38.79	1.74	15.98	-24.56	-13	-11.56	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-53.23	4.04	34.00	-23.27	-13	-10.27	Horizontal
3818.6	-52.24	4.04	34.00	-22.28	-13	-9.28	Vertical
5727.9	-51.25	5.24	36.04	-20.45	-13	-7.45	Vertical
5727.9	-50.22	5.24	36.04	-19.42	-13	-6.42	Horizontal
186.5	-42.00	1.42	17.29	-26.13	-13	-13.13	Vertical
361.5	-40.86	1.50	17.90	-24.45	-13	-11.45	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 Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3720.0	-49.07	4.07	33.54	-19.60	-13	-6.60	Horizontal
3720.0	-47.37	4.07	33.54	-17.90	-13	-4.90	Vertical
5580.0	-52.76	5.28	35.86	-22.18	-13	-9.18	Vertical
5580.0	-51.39	5.28	35.86	-20.81	-13	-7.81	Horizontal
180.0	-37.08	1.58	16.89	-21.76	-13	-8.76	Vertical
236.9	-44.12	1.76	17.26	-28.62	-13	-15.62	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-48.58	4.04	33.56	-19.06	-13	-6.06	Horizontal
3760.0	-51.23	4.04	33.56	-21.71	-13	-8.71	Vertical
5640.0	-48.93	5.24	35.91	-18.26	-13	-5.26	Vertical
5640.0	-53.94	5.24	35.91	-23.27	-13	-10.27	Horizontal
196.6	-35.77	1.46	16.27	-20.96	-13	-7.96	Vertical
438.2	-40.40	1.59	15.15	-26.84	-13	-13.84	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-46.58	4.04	34.00	-16.62	-13	-3.62	Horizontal
3800.0	-46.27	4.04	34.00	-16.31	-13	-3.31	Vertical
5700.0	-50.36	5.24	36.04	-19.56	-13	-6.56	Vertical
5700.0	-50.97	5.24	36.04	-20.17	-13	-7.17	Horizontal
181.4	-42.98	1.36	17.39	-26.94	-13	-13.94	Vertical
438.4	-42.84	1.66	15.39	-29.11	-13	-16.11	Horizontal

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

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

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

9.2 LTE BAND 4

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3421.4	-46.96	4.02	29.80	-21.18	-13	-8.18	Horizontal
3421.4	-49.43	4.02	29.80	-23.65	-13	-10.65	Vertical
5132.1	-52.80	5.24	35.84	-22.20	-13	-9.20	Vertical
5132.1	-53.40	5.24	35.84	-22.80	-13	-9.80	Horizontal
180.0	-36.93	1.68	16.04	-22.57	-13	-9.57	Vertical
281.0	-36.35	1.78	17.74	-20.39	-13	-7.39	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-45.76	4.03	30.00	-19.79	-13	-6.79	Horizontal
3465.0	-45.52	4.03	30.00	-19.55	-13	-6.55	Vertical
5197.5	-46.89	5.25	35.86	-16.28	-13	-3.28	Vertical
5197.5	-52.36	5.25	35.86	-21.75	-13	-8.75	Horizontal
194.4	-41.10	1.72	17.69	-25.13	-13	-12.13	Vertical
306.8	-40.38	1.62	16.02	-25.97	-13	-12.97	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-49.92	4.05	30.01	-23.96	-13	-10.96	Horizontal
3508.6	-53.96	4.05	30.01	-28.00	-13	-15.00	Vertical
5262.9	-52.36	5.26	35.86	-21.76	-13	-8.76	Vertical
5262.9	-53.87	5.26	35.86	-23.27	-13	-10.27	Horizontal
192.2	-34.14	1.80	16.69	-19.25	-13	-6.25	Vertical
272.1	-40.90	1.75	16.66	-26.00	-13	-13.00	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 Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3440.0	-45.70	4.02	29.80	-19.92	-13	-6.92	Horizontal
3440.0	-52.01	4.02	29.80	-26.23	-13	-13.23	Vertical
5160.0	-47.79	5.24	35.84	-17.19	-13	-4.19	Vertical
5160.0	-51.30	5.24	35.84	-20.70	-13	-7.70	Horizontal
209.0	-39.88	1.57	17.26	-24.19	-13	-11.19	Vertical
327.6	-35.06	1.78	16.35	-20.49	-13	-7.49	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-47.03	4.03	30.00	-21.06	-13	-8.06	Horizontal
3465.0	-53.99	4.03	30.00	-28.02	-13	-15.02	Vertical
5197.5	-53.67	5.25	35.86	-23.06	-13	-10.06	Vertical
5197.5	-53.13	5.25	35.86	-22.52	-13	-9.52	Horizontal
176.0	-43.77	1.44	17.95	-27.26	-13	-14.26	Vertical
394.1	-39.34	1.65	16.09	-24.90	-13	-11.90	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-47.00	4.05	27.68	-23.37	-13	-10.37	Horizontal
3490.0	-45.62	4.05	27.68	-21.99	-13	-8.99	Vertical
5235.0	-49.70	5.26	35.86	-19.10	-13	-6.10	Vertical
5235.0	-53.08	5.26	35.86	-22.48	-13	-9.48	Horizontal
207.7	-39.25	1.61	16.85	-24.01	-13	-11.01	Vertical
362.2	-38.52	1.61	15.19	-24.94	-13	-11.94	Horizontal

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

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

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

9.3 LTE BAND 5

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

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1649.4	-44.99	2.78	27.50	-20.27	-13	-7.27	Horizontal
1649.4	-47.61	2.78	27.50	-22.89	-13	-9.89	Vertical
2474.1	-51.08	2.90	27.80	-26.18	-13	-13.18	Vertical
2474.1	-49.15	2.90	27.80	-24.25	-13	-11.25	Horizontal
181.9	-41.56	1.76	17.59	-25.73	-13	-12.73	Vertical
436.3	-40.92	1.63	15.87	-26.68	-13	-13.68	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-46.27	2.80	27.48	-21.59	-13	-8.59	Horizontal
1673.0	-52.05	2.80	27.48	-27.37	-13	-14.37	Vertical
2509.5	-46.00	2.91	27.70	-21.21	-13	-8.21	Vertical
2509.5	-53.13	2.91	27.70	-28.34	-13	-15.34	Horizontal
176.5	-38.42	1.61	15.68	-24.35	-13	-11.35	Vertical
293.8	-40.91	1.59	17.52	-24.99	-13	-11.99	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-44.83	2.82	27.43	-20.22	-13	-7.22	Horizontal
1696.6	-45.32	2.82	27.43	-20.71	-13	-7.71	Vertical
2544.9	-44.19	2.92	27.74	-19.37	-13	-6.37	Vertical
2544.9	-52.48	2.92	27.74	-27.66	-13	-14.66	Horizontal
196.3	-39.48	1.69	16.67	-24.49	-13	-11.49	Vertical
434.3	-35.07	1.70	17.18	-19.59	-13	-6.59	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 Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1658.0	-50.42	2.78	27.50	-25.70	-13	-12.70	Horizontal
1658.0	-46.98	2.78	27.50	-22.26	-13	-9.26	Vertical
2487.0	-49.68	2.90	27.80	-24.78	-13	-11.78	Vertical
2487.0	-49.86	2.90	27.80	-24.96	-13	-11.96	Horizontal
196.3	-43.66	1.71	15.57	-29.80	-13	-16.80	Vertical
265.8	-34.89	1.34	16.40	-19.83	-13	-6.83	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-47.08	2.80	27.48	-22.40	-13	-9.40	Horizontal
1673.0	-50.54	2.80	27.48	-25.86	-13	-12.86	Vertical
2509.5	-49.10	2.91	27.70	-24.31	-13	-11.31	Vertical
2509.5	-51.95	2.91	27.70	-27.16	-13	-14.16	Horizontal
210.6	-37.85	1.44	17.04	-22.25	-13	-9.25	Vertical
253.5	-41.75	1.76	17.62	-25.89	-13	-12.89	Horizontal
Test Results for High Channel 844MHz							
1688.0	-50.63	2.82	27.43	-26.02	-13	-13.02	Horizontal
1688.0	-50.40	2.82	27.43	-25.79	-13	-12.79	Vertical
2532.0	-53.06	2.92	27.74	-28.24	-13	-15.24	Vertical
2532.0	-49.33	2.92	27.74	-24.51	-13	-11.51	Horizontal
185.1	-35.70	1.74	17.70	-19.74	-13	-6.74	Vertical
288.5	-44.46	1.41	17.46	-28.40	-13	-15.40	Horizontal

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

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

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

9.4 LTE BAND 7

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

Test Results for Low Channel 2502.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
5005.0	-59.36	5.23	35.81	-28.78	-25	-3.78	Horizontal
5005.0	-62.61	5.23	35.81	-32.03	-25	-7.03	Vertical
7507.5	-62.07	5.67	36.85	-30.89	-25	-5.89	Vertical
7507.5	-62.07	5.67	36.85	-30.89	-25	-5.89	Horizontal
175.7	-48.20	1.73	17.97	-31.96	-25	-6.96	Vertical
382.2	-49.53	1.38	15.11	-35.80	-25	-10.80	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-60.38	5.23	35.82	-29.79	-25	-4.79	Horizontal
5070.0	-62.89	5.23	35.82	-32.30	-25	-7.30	Vertical
7605.0	-62.56	5.67	36.85	-31.38	-25	-6.38	Vertical
7605.0	-61.64	5.67	36.85	-30.46	-25	-5.46	Horizontal
195.8	-44.26	1.77	16.17	-29.85	-25	-4.85	Vertical
365.2	-50.53	1.63	15.21	-36.95	-25	-11.95	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-64.68	5.24	35.83	-34.09	-25	-9.09	Horizontal
5135.0	-62.19	5.24	35.83	-31.60	-25	-6.60	Vertical
7702.5	-60.97	5.68	36.87	-29.78	-25	-4.78	Vertical
7702.5	-61.29	5.68	36.87	-30.10	-25	-5.10	Horizontal
199.4	-47.42	1.58	17.56	-31.44	-25	-6.44	Vertical
294.5	-48.89	1.45	16.58	-33.76	-25	-8.76	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	-63.70	5.23	35.82	-33.11	-25	-8.11	Horizontal
5020.0	-61.44	5.23	35.82	-30.85	-25	-5.85	Vertical
7530.0	-60.82	5.67	36.86	-29.63	-25	-4.63	Vertical
7530.0	-62.11	5.67	36.86	-30.92	-25	-5.92	Horizontal
200.7	-51.38	1.63	15.76	-37.25	-25	-12.25	Vertical
379.9	-52.00	1.71	15.44	-38.27	-25	-13.27	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-60.12	5.23	35.82	-29.53	-25	-4.53	Horizontal
5070.0	-59.66	5.23	35.82	-29.07	-25	-4.07	Vertical
7605.0	-63.52	5.67	36.85	-32.34	-25	-7.34	Vertical
7605.0	-64.84	5.67	36.85	-33.66	-25	-8.66	Horizontal
198.6	-51.97	1.79	16.84	-36.91	-25	-11.91	Vertical
454.1	-44.23	1.71	17.64	-28.30	-25	-3.30	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-64.41	5.24	35.83	-33.82	-25	-8.82	Horizontal
5120.0	-63.81	5.24	35.83	-33.22	-25	-8.22	Vertical
7680.0	-63.99	5.70	36.88	-32.81	-25	-7.81	Vertical
7680.0	-61.68	5.70	36.88	-30.50	-25	-5.50	Horizontal
188.1	-45.93	1.79	16.84	-30.87	-25	-5.87	Vertical
300.5	-48.05	1.71	17.64	-32.12	-25	-7.12	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 Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1399.4	-53.30	2.60	27.20	-28.70	-13	-15.70	Horizontal
1399.4	-47.89	2.60	27.20	-23.29	-13	-10.29	Vertical
2099.1	-49.22	2.85	27.54	-24.53	-13	-11.53	Vertical
2099.1	-50.81	2.85	27.54	-26.12	-13	-13.12	Horizontal
195.1	-41.66	1.49	17.78	-25.37	-13	-12.37	Vertical
240.5	-38.71	1.36	17.33	-22.74	-13	-9.74	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.0	-50.49	2.61	27.28	-25.82	-13	-12.82	Horizontal
1415.0	-50.21	2.61	27.28	-25.54	-13	-12.54	Vertical
2122.5	-46.69	2.87	27.59	-21.97	-13	-8.97	Vertical
2122.5	-52.81	2.87	27.59	-28.09	-13	-15.09	Horizontal
199.3	-40.81	1.73	15.74	-26.80	-13	-13.80	Vertical
262.8	-43.20	1.62	15.79	-29.03	-13	-16.03	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-48.32	2.63	27.28	-23.67	-13	-10.67	Horizontal
1430.6	-46.42	2.63	27.28	-21.77	-13	-8.77	Vertical
2145.9	-45.03	2.88	27.60	-20.31	-13	-7.31	Vertical
2145.9	-49.77	2.88	27.60	-25.05	-13	-12.05	Horizontal
190.0	-34.82	1.61	18.00	-18.43	-13	-5.43	Vertical
425.8	-37.09	1.45	15.49	-23.06	-13	-10.06	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 Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1408.0	-49.15	2.61	27.26	-24.50	-13	-11.50	Horizontal
1408.0	-46.52	2.61	27.26	-21.87	-13	-8.87	Vertical
2112.0	-51.40	2.87	27.58	-26.69	-13	-13.69	Vertical
2112.0	-51.47	2.87	27.58	-26.76	-13	-13.76	Horizontal
183.5	-38.53	1.31	16.97	-22.87	-13	-9.87	Vertical
469.4	-35.20	1.65	16.70	-20.15	-13	-7.15	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.0	-48.21	2.61	27.28	-23.54	-13	-10.54	Horizontal
1415.0	-48.89	2.61	27.28	-24.22	-13	-11.22	Vertical
2122.5	-47.62	2.87	27.59	-22.90	-13	-9.90	Vertical
2122.5	-51.68	2.87	27.59	-26.96	-13	-13.96	Horizontal
190.0	-36.09	1.72	17.99	-19.82	-13	-6.82	Vertical
448.2	-41.40	1.73	17.94	-25.19	-13	-12.19	Horizontal
Test Results for High Channel 711MHz							
1422.0	-48.49	2.62	27.28	-23.83	-13	-10.83	Horizontal
1422.0	-49.45	2.62	27.28	-24.79	-13	-11.79	Vertical
2133.0	-52.47	2.87	27.60	-27.74	-13	-14.74	Vertical
2133.0	-50.76	2.87	27.60	-26.03	-13	-13.03	Horizontal
175.6	-36.84	1.58	15.93	-22.49	-13	-9.49	Vertical
232.8	-39.56	1.36	15.59	-25.33	-13	-12.33	Horizontal

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

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

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

9.6 LTE BAND 13

QPSK EIRP POWER FOR 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	-71.22	2.61	27.28	-46.55	-40	-6.55	Horizontal
1559.0	-75.60	2.61	27.28	-50.93	-40	-10.93	Vertical
2338.5	-68.50	2.87	27.59	-43.78	-13	-30.78	Vertical
2338.5	-74.24	2.87	27.59	-49.52	-13	-36.52	Horizontal
181.0	-69.39	1.71	16.15	-54.95	-13	-41.95	Vertical
405.2	-72.67	1.41	17.32	-56.76	-13	-43.76	Horizontal
Test Results For Mid Channel 782MHz							
1564.0	-76.70	2.62	27.30	-52.02	-40	-12.02	Horizontal
1564.0	-76.88	2.62	27.30	-52.20	-40	-12.20	Vertical
2346.0	-73.85	2.87	27.62	-49.10	-13	-36.10	Vertical
2346.0	-69.84	2.87	27.62	-45.09	-13	-32.09	Horizontal
206.6	-71.34	1.42	15.25	-57.52	-13	-44.52	Vertical
443.4	-73.25	1.36	17.19	-57.42	-13	-44.42	Horizontal
Test Results for High Channel 784.5MHz							
1569.0	-72.11	2.66	27.28	-47.49	-40	-7.49	Horizontal
1569.0	-68.74	2.66	27.28	-44.12	-40	-4.12	Vertical
2353.5	-72.85	2.88	27.60	-48.13	-13	-35.13	Vertical
2353.5	-71.17	2.88	27.60	-46.45	-13	-33.45	Horizontal
199.2	-73.86	1.32	17.29	-57.89	-13	-44.89	Vertical
406.0	-69.31	1.72	16.89	-54.14	-13	-41.14	Horizontal

QPSK EIRP POWER FOR LTE BAND 13 (10MHZ BANDWIDTH)

Test Results for Low Channel 782MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1564.0	-68.93	2.62	27.30	-44.25	-40	-4.25	Horizontal
1564.0	-69.32	2.62	27.30	-44.64	-40	-4.64	Vertical
2346.0	-70.30	2.87	27.62	-45.55	-13	-32.55	Vertical
2346.0	-72.00	2.87	27.62	-47.25	-13	-34.25	Horizontal
197.2	-67.73	1.35	16.91	-52.17	-13	-39.17	Vertical
235.2	-72.65	1.62	16.31	-57.96	-13	-44.96	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.

9.7 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	-52.98	2.61	27.28	-28.31	-13	-15.31	Horizontal
1413.0	-45.09	2.61	27.28	-20.42	-13	-7.42	Vertical
2119.5	-45.45	2.87	27.59	-20.73	-13	-7.73	Vertical
2119.5	-50.72	2.87	27.59	-26.00	-13	-13.00	Horizontal
201.1	-36.22	1.71	16.15	-21.78	-13	-8.78	Vertical
300.5	-44.27	1.41	17.32	-28.36	-13	-15.36	Horizontal
Test Results For Mid Channel 710MHz							
1420.0	-51.15	2.62	27.30	-26.47	-13	-13.47	Horizontal
1420.0	-47.42	2.62	27.30	-22.74	-13	-9.74	Vertical
2130.0	-49.25	2.87	27.62	-24.50	-13	-11.50	Vertical
2130.0	-50.14	2.87	27.62	-25.39	-13	-12.39	Horizontal
203.0	-38.15	1.42	15.25	-24.33	-13	-11.33	Vertical
444.8	-38.93	1.36	17.19	-23.10	-13	-10.10	Horizontal
Test Results for High Channel 713.5MHz							
1427.0	-50.31	2.66	27.28	-25.69	-13	-12.69	Horizontal
1427.0	-44.96	2.66	27.28	-20.34	-13	-7.34	Vertical
2140.5	-45.01	2.88	27.60	-20.29	-13	-7.29	Vertical
2140.5	-51.09	2.88	27.60	-26.37	-13	-13.37	Horizontal
212.5	-42.93	1.32	17.29	-26.96	-13	-13.96	Vertical
285.5	-41.83	1.72	16.89	-26.66	-13	-13.66	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	-45.47	2.62	27.30	-20.79	-13	-7.79	Horizontal
1418.0	-45.52	2.62	27.30	-20.84	-13	-7.84	Vertical
2127.0	-50.91	2.87	27.62	-26.16	-13	-13.16	Vertical
2127.0	-51.42	2.87	27.62	-26.67	-13	-13.67	Horizontal
199.6	-42.26	1.35	16.91	-26.70	-13	-13.70	Vertical
312.7	-40.80	1.62	16.31	-26.11	-13	-13.11	Horizontal
Test Results for Mid Channel 710MHz							
1420.0	-48.97	2.62	27.30	-24.29	-13	-11.29	Horizontal
1420.0	-46.92	2.62	27.30	-22.24	-13	-9.24	Vertical
2130.0	-46.87	2.87	27.62	-22.12	-13	-9.12	Vertical
2130.0	-51.82	2.87	27.62	-27.07	-13	-14.07	Horizontal
205.3	-43.59	1.51	17.14	-27.96	-13	-14.96	Vertical
396.1	-36.85	1.77	16.88	-21.74	-13	-8.74	Horizontal
Test Results for High Channel 711MHz							
1422.0	-44.22	2.62	27.30	-19.54	-13	-6.54	Horizontal
1422.0	-46.80	2.62	27.30	-22.12	-13	-9.12	Vertical
2133.0	-51.42	2.87	27.62	-26.67	-13	-13.67	Vertical
2133.0	-51.64	2.87	27.62	-26.89	-13	-13.89	Horizontal
189.8	-35.29	1.78	15.95	-21.12	-13	-8.12	Vertical
235.8	-37.00	1.34	17.95	-20.40	-13	-7.40	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 25

QPSK EIRP POWER FOR LTE BAND 25 (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	-48.51	4.26	29.80	-22.97	-13	-9.97	Horizontal
3701.4	-52.23	4.26	29.80	-26.69	-13	-13.69	Vertical
5552.1	-49.79	5.36	35.84	-19.31	-13	-6.31	Vertical
5552.1	-50.87	5.36	35.84	-20.39	-13	-7.39	Horizontal
185.9	-43.40	1.68	16.04	-29.04	-13	-16.04	Vertical
373.2	-44.33	1.78	17.74	-28.37	-13	-15.37	Horizontal
Test Results For Mid Channel 1882.5MHz							
3765.0	-50.37	4.28	30.00	-24.65	-13	-11.65	Horizontal
3765.0	-51.08	4.28	30.00	-25.36	-13	-12.36	Vertical
5647.5	-47.62	5.41	35.86	-17.17	-13	-4.17	Vertical
5647.5	-53.32	5.41	35.86	-22.87	-13	-9.87	Horizontal
180.2	-41.17	1.72	17.69	-25.20	-13	-12.20	Vertical
432.7	-38.66	1.62	16.02	-24.25	-13	-11.25	Horizontal
Test Results for High Channel 1914.3MHz							
3828.6	-47.37	4.31	30.01	-21.67	-13	-8.67	Horizontal
3828.6	-44.10	4.31	30.01	-18.40	-13	-5.40	Vertical
5742.9	-47.69	5.43	35.86	-17.26	-13	-4.26	Vertical
5742.9	-50.19	5.43	35.86	-19.76	-13	-6.76	Horizontal
212.8	-35.79	1.80	16.69	-20.90	-13	-7.90	Vertical
397.2	-34.17	1.75	16.66	-19.27	-13	-6.27	Horizontal

QPSK EIRP POWER FOR LTE BAND 25 (20MHZ 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	-51.45	4.29	29.80	-25.94	-13	-12.94	Horizontal
3720.0	-49.98	4.29	29.80	-24.47	-13	-11.47	Vertical
5580.0	-48.01	5.38	35.84	-17.55	-13	-4.55	Vertical
5580.0	-53.70	5.38	35.84	-23.24	-13	-10.24	Horizontal
204.9	-39.29	1.57	17.26	-23.60	-13	-10.60	Vertical
400.5	-41.58	1.78	16.35	-27.01	-13	-14.01	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765.0	-44.84	4.28	30.00	-19.12	-13	-6.12	Horizontal
3765.0	-48.18	4.28	30.00	-22.46	-13	-9.46	Vertical
5647.5	-46.89	5.41	35.86	-16.44	-13	-3.44	Vertical
5647.5	-51.85	5.41	35.86	-21.40	-13	-8.40	Horizontal
178.4	-36.34	1.44	17.95	-19.83	-13	-6.83	Vertical
443.5	-38.42	1.65	16.09	-23.98	-13	-10.98	Horizontal
Test Results for High Channel 1905MHz							
3810.0	-45.30	4.35	27.68	-21.97	-13	-8.97	Horizontal
3810.0	-44.54	4.35	27.68	-21.21	-13	-8.21	Vertical
5715.0	-47.83	5.42	35.86	-17.39	-13	-4.39	Vertical
5715.0	-53.67	5.42	35.86	-23.23	-13	-10.23	Horizontal
198.6	-41.65	1.61	16.85	-26.41	-13	-13.41	Vertical
456.0	-42.81	1.61	15.19	-29.23	-13	-16.23	Horizontal

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

. Margin = Spurious Emission Level - Limit

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

9.9 LTE BAND 26A

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	-50.56	4.26	29.80	-25.02	-13	-12.02	Horizontal
1629.4	-52.43	4.26	29.80	-26.89	-13	-13.89	Vertical
2444.1	-52.92	5.36	35.84	-22.44	-13	-9.44	Vertical
2444.1	-53.90	5.36	35.84	-23.42	-13	-10.42	Horizontal
202.6	-34.45	1.68	16.04	-20.09	-13	-7.09	Vertical
398.3	-37.23	1.78	17.74	-21.27	-13	-8.27	Horizontal
Test Results For Mid Channel 819MHz							
1638.0	-53.20	4.28	30.00	-27.48	-13	-14.48	Horizontal
1638.0	-53.43	4.28	30.00	-27.71	-13	-14.71	Vertical
2457.0	-50.01	5.41	35.86	-19.56	-13	-6.56	Vertical
2457.0	-51.68	5.41	35.86	-21.23	-13	-8.23	Horizontal
175.0	-41.88	1.72	17.69	-25.91	-13	-12.91	Vertical
466.7	-34.13	1.62	16.02	-19.72	-13	-6.72	Horizontal
Test Results for High Channel 823.3MHz							
1646.6	-51.70	4.31	30.01	-26.00	-13	-13.00	Horizontal
1646.6	-47.56	4.31	30.01	-21.86	-13	-8.86	Vertical
2469.9	-53.79	5.43	35.86	-23.36	-13	-10.36	Vertical
2469.9	-51.51	5.43	35.86	-21.08	-13	-8.08	Horizontal
204.7	-44.04	1.80	16.69	-29.15	-13	-16.15	Vertical
269.7	-35.18	1.75	16.66	-20.28	-13	-7.28	Horizontal

QPSK EIRP POWER FOR LTE BAND 26A(814MHz~824MHz) (15MHZ BANDWIDTH)

Test Results for Channel 819MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1638.0	-51.40	4.28	30.00	-25.68	-13	-12.68	Horizontal
1638.0	-48.07	4.28	30.00	-22.35	-13	-9.35	Vertical
2457.0	-47.17	5.41	35.86	-16.72	-13	-3.72	Vertical
2457.0	-51.57	5.41	35.86	-21.12	-13	-8.12	Horizontal
192.3	-34.35	1.44	17.95	-17.84	-13	-4.84	Vertical
289.5	-42.53	1.65	16.09	-28.09	-13	-15.09	Horizontal

9.10 LTE BAND 26B

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	-44.72	4.26	29.80	-19.18	-13	-6.18	Horizontal
1649.4	-51.88	4.26	29.80	-26.34	-13	-13.34	Vertical
2474.1	-51.48	5.36	35.84	-21.00	-13	-8.00	Vertical
2474.1	-51.48	5.36	35.84	-21.00	-13	-8.00	Horizontal
191.3	-34.04	1.68	16.04	-19.68	-13	-6.68	Vertical
265.2	-37.04	1.78	17.74	-21.08	-13	-8.08	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-46.31	4.28	30.00	-20.59	-13	-7.59	Horizontal
1673.0	-47.29	4.28	30.00	-21.57	-13	-8.57	Vertical
2509.5	-51.88	5.41	35.86	-21.43	-13	-8.43	Vertical
2509.5	-52.14	5.41	35.86	-21.69	-13	-8.69	Horizontal
181.0	-43.31	1.72	17.69	-27.34	-13	-14.34	Vertical
384.5	-35.12	1.62	16.02	-20.71	-13	-7.71	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-44.49	4.31	30.01	-18.79	-13	-5.79	Horizontal
1696.6	-52.25	4.31	30.01	-26.55	-13	-13.55	Vertical
2544.9	-53.73	5.43	35.86	-23.30	-13	-10.30	Vertical
2544.9	-49.98	5.43	35.86	-19.55	-13	-6.55	Horizontal
182.0	-39.21	1.80	16.69	-24.32	-13	-11.32	Vertical
415.3	-40.40	1.75	16.66	-25.50	-13	-12.50	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	-44.26	4.29	29.80	-18.75	-13	-5.75	Horizontal
1663.0	-46.00	4.29	29.80	-20.49	-13	-7.49	Vertical
2494.5	-53.98	5.38	35.84	-23.52	-13	-10.52	Vertical
2494.5	-50.07	5.38	35.84	-19.61	-13	-6.61	Horizontal
205.6	-42.30	1.57	17.26	-26.61	-13	-13.61	Vertical
449.8	-42.03	1.78	16.35	-27.46	-13	-14.46	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-45.49	4.28	30.00	-19.77	-13	-6.77	Horizontal
1673.0	-45.87	4.28	30.00	-20.15	-13	-7.15	Vertical
2509.5	-52.44	5.41	35.86	-21.99	-13	-8.99	Vertical
2509.5	-49.77	5.41	35.86	-19.32	-13	-6.32	Horizontal
178.9	-43.49	1.44	17.95	-26.98	-13	-13.98	Vertical
411.7	-41.45	1.65	16.09	-27.01	-13	-14.01	Horizontal
Test Results for High Channel 841.5MHz							
1683.0	-44.46	4.35	27.68	-21.13	-13	-8.13	Horizontal
1683.0	-51.14	4.35	27.68	-27.81	-13	-14.81	Vertical
2524.5	-51.51	5.42	35.86	-21.07	-13	-8.07	Vertical
2524.5	-52.07	5.42	35.86	-21.63	-13	-8.63	Horizontal
184.3	-43.50	1.61	16.85	-28.26	-13	-15.26	Vertical
298.1	-44.92	1.61	15.19	-31.34	-13	-18.34	Horizontal

9.11 LTE BAND 41

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

Test Results for Low Channel 2498.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
4997.0	-63.72	5.13	35.81	-33.04	-25	-8.04	Horizontal
4997.0	-61.19	5.13	35.81	-30.51	-25	-5.51	Vertical
7495.5	-63.03	5.42	36.85	-31.60	-25	-6.60	Vertical
7495.5	-59.49	5.42	36.85	-28.06	-25	-3.06	Horizontal
176.6	-46.61	1.56	17.97	-30.20	-25	-5.20	Vertical
244.0	-44.15	1.33	15.11	-30.37	-25	-5.37	Horizontal
Test Results for Mid Channel 2593MHz							
5186.0	-63.46	5.16	35.82	-32.80	-25	-7.80	Horizontal
5186.0	-63.82	5.16	35.82	-33.16	-25	-8.16	Vertical
7779.0	-60.38	5.53	36.85	-29.06	-25	-4.06	Vertical
7779.0	-59.55	5.53	36.85	-28.23	-25	-3.23	Horizontal
186.8	-45.36	1.77	16.17	-30.95	-25	-5.95	Vertical
382.8	-46.04	1.63	15.21	-32.46	-25	-7.46	Horizontal
Test Results for High Channel 2687.5MHz							
5375.0	-63.28	5.23	35.83	-32.68	-25	-7.68	Horizontal
5375.0	-62.61	5.23	35.83	-32.01	-25	-7.01	Vertical
8062.5	-61.64	5.62	36.87	-30.39	-25	-5.39	Vertical
8062.5	-60.29	5.62	36.87	-29.04	-25	-4.04	Horizontal
194.9	-51.16	1.58	17.56	-35.18	-25	-10.18	Vertical
337.8	-50.62	1.45	16.58	-35.49	-25	-10.49	Horizontal

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

Test Results for Low Channel 2506MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
5012.0	-59.08	5.23	35.82	-28.49	-25	-3.49	Horizontal
5012.0	-61.90	5.23	35.82	-31.31	-25	-6.31	Vertical
7518.0	-59.34	5.67	36.86	-28.15	-25	-3.15	Vertical
7518.0	-63.18	5.67	36.86	-31.99	-25	-6.99	Horizontal
199.2	-52.46	1.55	15.76	-38.25	-25	-13.25	Vertical
345.6	-53.34	1.62	15.44	-39.52	-25	-14.52	Horizontal
Test Results for Mid Channel 2593MHz							
5186.0	-61.83	5.16	35.82	-31.17	-25	-6.17	Horizontal
5186.0	-62.73	5.16	35.82	-32.07	-25	-7.07	Vertical
7779.0	-64.64	5.53	36.85	-33.32	-25	-8.32	Vertical
7779.0	-64.63	5.53	36.85	-33.31	-25	-8.31	Horizontal
185.7	-52.43	1.58	16.84	-37.17	-25	-12.17	Vertical
234.0	-51.94	1.61	17.64	-35.91	-25	-10.91	Horizontal
Test Results for High Channel 2680MHz							
5360.0	-63.32	5.24	35.83	-32.73	-25	-7.73	Horizontal
5360.0	-59.25	5.24	35.83	-28.66	-25	-3.66	Vertical
8040.0	-64.36	5.70	36.88	-33.18	-25	-8.18	Vertical
8040.0	-64.09	5.70	36.88	-32.91	-25	-7.91	Horizontal
196.2	-45.97	1.48	16.84	-30.61	-25	-5.61	Vertical
274.5	-44.80	1.59	17.64	-28.75	-25	-3.75	Horizontal

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

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

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

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

9.12 LTE BAND 66

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

Test Results for Low Channel 1710.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3421.4	-61.18	3.84	35.81	-29.21	-13	-16.21	Horizontal
3421.4	-64.25	3.84	35.81	-32.28	-13	-19.28	Vertical
5132.1	-62.00	5.18	36.85	-30.33	-13	-17.33	Vertical
5132.1	-64.32	5.18	36.85	-32.65	-13	-19.65	Horizontal
176.6	-47.68	1.56	17.97	-31.27	-13	-18.27	Vertical
248.6	-50.09	1.33	15.11	-36.31	-13	-23.31	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-63.36	3.85	35.82	-31.39	-13	-18.39	Horizontal
3490.0	-63.68	3.85	35.82	-31.71	-13	-18.71	Vertical
5235.0	-59.43	5.21	36.85	-27.79	-13	-14.79	Vertical
5235.0	-60.82	5.21	36.85	-29.18	-13	-16.18	Horizontal
182.6	-54.41	1.77	16.17	-40.00	-13	-27.00	Vertical
374.2	-49.80	1.63	15.21	-36.22	-13	-23.22	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-62.31	3.86	35.83	-30.34	-13	-17.34	Horizontal
3558.6	-59.74	3.86	35.83	-27.77	-13	-14.77	Vertical
5337.9	-60.26	5.24	36.87	-28.63	-13	-15.63	Vertical
5337.9	-61.25	5.24	36.87	-29.62	-13	-16.62	Horizontal
197.1	-44.01	1.58	17.56	-28.03	-13	-15.03	Vertical
272.0	-51.94	1.45	16.58	-36.81	-13	-23.81	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	-63.99	3.84	35.82	-32.01	-13	-19.01	Horizontal
3440.0	-64.05	3.84	35.82	-32.07	-13	-19.07	Vertical
5160.0	-62.64	5.18	36.86	-30.96	-13	-17.96	Vertical
5160.0	-59.09	5.18	36.86	-27.41	-13	-14.41	Horizontal
206.0	-50.13	1.56	15.76	-35.93	-13	-22.93	Vertical
328.6	-53.54	1.33	15.44	-39.43	-13	-26.43	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-62.06	3.85	35.82	-30.09	-13	-17.09	Horizontal
3490.0	-63.80	3.85	35.82	-31.83	-13	-18.83	Vertical
5235.0	-59.83	5.21	36.85	-28.19	-13	-15.19	Vertical
5235.0	-64.75	5.21	36.85	-33.11	-13	-20.11	Horizontal
176.8	-45.20	1.77	16.84	-30.12	-13	-17.12	Vertical
384.9	-51.16	1.63	17.64	-35.15	-13	-22.15	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-61.08	3.86	35.83	-29.11	-13	-16.11	Horizontal
3540.0	-63.42	3.86	35.83	-31.45	-13	-18.45	Vertical
5310.0	-61.79	5.24	36.88	-30.15	-13	-17.15	Vertical
5310.0	-63.15	5.24	36.88	-31.51	-13	-18.51	Horizontal
196.4	-46.70	1.58	16.84	-31.43	-13	-18.43	Vertical
343.4	-45.33	1.45	17.64	-29.14	-13	-16.14	Horizontal

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

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

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

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

9.13 LTE BAND 71

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

Test Results for Low Channel 665.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1331.0	-59.92	2.16	35.81	-26.27	-13	-13.27	Horizontal
1331.0	-62.55	2.16	35.81	-28.90	-13	-15.90	Vertical
1996.5	-64.55	2.89	36.85	-30.59	-13	-17.59	Vertical
1996.5	-61.44	2.89	36.85	-27.48	-13	-14.48	Horizontal
210.1	-45.37	1.56	17.97	-28.96	-13	-15.96	Vertical
255.9	-49.48	1.33	15.11	-35.70	-13	-22.70	Horizontal
Test Results for Mid Channel 680.5MHz							
1361.0	-59.12	2.17	35.82	-25.47	-13	-12.47	Horizontal
1361.0	-61.32	2.17	35.82	-27.67	-13	-14.67	Vertical
2041.5	-62.75	2.90	36.85	-28.80	-13	-15.80	Vertical
2041.5	-64.32	2.90	36.85	-30.37	-13	-17.37	Horizontal
175.9	-53.23	1.77	16.17	-38.82	-13	-25.82	Vertical
233.5	-48.15	1.63	15.21	-34.57	-13	-21.57	Horizontal
Test Results for High Channel 695.5MHz							
1391.0	-63.36	2.19	35.83	-29.72	-13	-16.72	Horizontal
1391.0	-61.73	2.19	35.83	-28.09	-13	-15.09	Vertical
2086.5	-60.21	2.95	36.87	-26.29	-13	-13.29	Vertical
2086.5	-64.90	2.95	36.87	-30.98	-13	-17.98	Horizontal
212.5	-47.99	1.58	17.56	-32.01	-13	-19.01	Vertical
415.2	-53.11	1.45	16.58	-37.98	-13	-24.98	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	-63.99	3.84	35.82	-32.01	-13	-19.01	Horizontal
3440.0	-64.05	3.84	35.82	-32.07	-13	-19.07	Vertical
5160.0	-62.64	5.18	36.86	-30.96	-13	-17.96	Vertical
5160.0	-59.09	5.18	36.86	-27.41	-13	-14.41	Horizontal
206.0	-50.13	1.56	15.76	-35.93	-13	-22.93	Vertical
328.6	-53.54	1.33	15.44	-39.43	-13	-26.43	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-62.06	3.85	35.82	-30.09	-13	-17.09	Horizontal
3490.0	-63.80	3.85	35.82	-31.83	-13	-18.83	Vertical
5235.0	-59.83	5.21	36.85	-28.19	-13	-15.19	Vertical
5235.0	-64.75	5.21	36.85	-33.11	-13	-20.11	Horizontal
176.8	-45.20	1.77	16.84	-30.12	-13	-17.12	Vertical
384.9	-51.16	1.63	17.64	-35.15	-13	-22.15	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-61.08	3.86	35.83	-29.11	-13	-16.11	Horizontal
3540.0	-63.42	3.86	35.83	-31.45	-13	-18.45	Vertical
5310.0	-61.79	5.24	36.88	-30.15	-13	-17.15	Vertical
5310.0	-63.15	5.24	36.88	-31.51	-13	-18.51	Horizontal
196.4	-46.70	1.58	16.84	-31.43	-13	-18.43	Vertical
343.4	-45.33	1.45	17.64	-29.14	-13	-16.14	Horizontal

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

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

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

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

10. FREQUENCY STABILITY

RULE PART(S)

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

LIMITS

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

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

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = −30° to +50°C
- Voltage =bw voltage, DC 3.15V, Normal, DC 3.7V and High voltage, DC 4.26V.

Frequency Stability vs Temperature:

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

Frequency Stability vs Voltage:

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

MODES TESTED

LTE Band 2,4,5,7,12,13,17, 25, 26,41,66,71

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]
3.15	1880	13.2	0.006999	2.5
3.7	1880	14.1	0.007500	2.5
4.26	1880	13.3	0.007098	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	13.2	0.007005	2.5
Extreme (50C)	1880	11.9	0.006348	2.5
Extreme (40C)	1880	13.6	0.007250	2.5
Extreme (30C)	1880	13.5	0.007192	2.5
Extreme (10C)	1880	14.1	0.007514	2.5
Extreme (0C)	1880	12.4	0.006603	2.5
Extreme (-10C)	1880	13.1	0.006957	2.5
Extreme (-20C)	1880	14.1	0.007499	2.5
Extreme (-30C)	1880	14.8	0.007868	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]
3.15	1880	10.0	0.005326	2.5
3.7	1880	9.3	0.004968	2.5
4.26	1880	8.3	0.004434	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	8.6	0.004586	2.5
Extreme (40C)	1880	7.8	0.004165696	2.5
Extreme (30C)	1880	8.6	0.004587713	2.5
Extreme (10C)	1880	9.0	0.004771431	2.5
Extreme (0C)	1880	7.9	0.004223587	2.5
Extreme (-10C)	1880	9.0	0.004792308	2.5
Extreme (-20C)	1880	8.5	0.004501931	2.5
Extreme (-30C)	1880	8.4	0.004444139	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]
3.15	1732.5	8.4	0.004870	2.5
3.7	1732.5	8.5	0.004905	2.5
4.26	1732.5	8.9	0.005137	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	8.1	0.004699	2.5
Extreme (50C)	1732.5	8.6	0.004946	2.5
Extreme (40C)	1732.5	7.1	0.004086	2.5
Extreme (30C)	1732.5	5.4	0.003139	2.5
Extreme (10C)	1732.5	7.6	0.004362	2.5
Extreme (0C)	1732.5	9.6	0.005545	2.5
Extreme (-10C)	1732.5	8.4	0.004831	2.5
Extreme (-20C)	1732.5	6.4	0.003717	2.5
Extreme (-30C)	1732.5	8.5	0.004920	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]
3.15	1732.5	10.2	0.005909	2.5
3.7	1732.5	9.2	0.005335	2.5
4.26	1732.5	8.4	0.004873	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	10.1	0.005823	2.5
Extreme (50C)	1732.5	8.6	0.004993	2.5
Extreme (40C)	1732.5	8.2	0.004707	2.5
Extreme (30C)	1732.5	8.9	0.005129	2.5
Extreme (10C)	1732.5	8.8	0.005053	2.5
Extreme (0C)	1732.5	8.4	0.004855	2.5
Extreme (-10C)	1732.5	8.9	0.005162	2.5
Extreme (-20C)	1732.5	9.0	0.005199	2.5
Extreme (-30C)	1732.5	8.2	0.004711	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]
3.15	836.5	6.1	0.007287	2.5
3.7	836.5	6.8	0.008076	2.5
4.26	836.5	5.2	0.006164	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.2	0.007378	2.5
Extreme (50C)	836.5	5.5	0.006601	2.5
Extreme (40C)	836.5	5.6	0.006712	2.5
Extreme (30C)	836.5	6.3	0.007478	2.5
Extreme (10C)	836.5	5.2	0.006164	2.5
Extreme (0C)	836.5	5.4	0.006418	2.5
Extreme (-10C)	836.5	5.3	0.006364	2.5
Extreme (-20C)	836.5	6.3	0.007540	2.5
Extreme (-30C)	836.5	5.8	0.006993	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]
3.15	836.5	5.7	0.006771	2.5
3.7	836.5	7.1	0.008450	2.5
4.26	836.5	4.3	0.005167	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	5.9	0.007025	2.5
Extreme (50C)	836.5	5.6	0.006656	2.5
Extreme (40C)	836.5	6.1	0.007286	2.5
Extreme (30C)	836.5	6.5	0.007815	2.5
Extreme (10C)	836.5	5.7	0.006775	2.5
Extreme (0C)	836.5	5.4	0.006474	2.5
Extreme (-10C)	836.5	5.8	0.006977	2.5
Extreme (-20C)	836.5	5.9	0.007061	2.5
Extreme (-30C)	836.5	6.1	0.007276	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]
3.15	2535	10.4	0.004085	2.5
3.7	2535	9.4	0.003705	2.5
4.26	2535	8.3	0.003259	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.7	0.003807	2.5
Extreme (50C)	2535	9.0	0.003564	2.5
Extreme (40C)	2535	8.2	0.003216	2.5
Extreme (30C)	2535	8.8	0.003483	2.5
Extreme (10C)	2535	8.2	0.003216	2.5
Extreme (0C)	2535	8.4	0.003318	2.5
Extreme (-10C)	2535	9.0	0.003551	2.5
Extreme (-20C)	2535	9.0	0.003545	2.5
Extreme (-30C)	2535	8.5	0.003338	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]
3.15	2535	6.9	0.002722	2.5
3.7	2535	6.1	0.002412	2.5
4.26	2535	5.3	0.002095	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	6.9	0.002722	2.5
Extreme (50C)	2535	6.1	0.002390	2.5
Extreme (40C)	2535	5.0	0.001968	2.5
Extreme (30C)	2535	6.3	0.002487	2.5
Extreme (10C)	2535	5.9	0.002345	2.5
Extreme (0C)	2535	5.5	0.002175	2.5
Extreme (-10C)	2535	5.4	0.002144	2.5
Extreme (-20C)	2535	6.1	0.002421	2.5
Extreme (-30C)	2535	6.1	0.002424	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]
3.15	707.5	9.0	0.012787	2.5
3.7	707.5	10.4	0.014647	2.5
4.26	707.5	8.7	0.012260	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	9.3	0.013092	2.5
Extreme (50C)	707.5	7.5	0.010552	2.5
Extreme (40C)	707.5	7.5	0.010544	2.5
Extreme (30C)	707.5	8.4	0.011911	2.5
Extreme (10C)	707.5	7.4	0.010491	2.5
Extreme (0C)	707.5	8.8	0.012447	2.5
Extreme (-10C)	707.5	8.3	0.011687	2.5
Extreme (-20C)	707.5	8.8	0.012495	2.5
Extreme (-30C)	707.5	7.7	0.010889	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]
3.15	707.5	7.3	0.010374	2.5
3.7	707.5	7.8	0.011087	2.5
4.26	707.5	7.6	0.010681	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	9.4	0.013276	2.5
Extreme (50C)	707.5	8.8	0.012426	2.5
Extreme (40C)	707.5	8.5	0.011989	2.5
Extreme (30C)	707.5	7.6	0.010721	2.5
Extreme (10C)	707.5	9.1	0.012837	2.5
Extreme (0C)	707.5	7.2	0.010108	2.5
Extreme (-10C)	707.5	7.2	0.010107	2.5
Extreme (-20C)	707.5	9.2	0.013058	2.5
Extreme (-30C)	707.5	8.6	0.012158	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]
3.15	782.0	13.2	0.016850	2.5
3.7	782.0	13.9	0.017828	2.5
4.26	782.0	13.0	0.016655	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	782.0	14.1	0.018072	2.5
Extreme (50C)	782.0	14.1	0.018083	2.5
Extreme (40C)	782.0	15.5	0.019877	2.5
Extreme (30C)	782.0	13.7	0.017532	2.5
Extreme (10C)	782.0	14.2	0.018099	2.5
Extreme (0C)	782.0	13.9	0.017796	2.5
Extreme (-10C)	782.0	14.4	0.018469	2.5
Extreme (-20C)	782.0	13.8	0.017589	2.5
Extreme (-30C)	782.0	13.9	0.017768	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]
3.15	782.0	12.2	0.015664	2.5
3.7	782.0	13.7	0.017496	2.5
4.26	782.0	12.9	0.016555	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	782.0	13.1	0.016787	2.5
Extreme (50C)	782.0	11.1	0.014217	2.5
Extreme (40C)	782.0	14.0	0.017949	2.5
Extreme (30C)	782.0	13.1	0.016707	2.5
Extreme (10C)	782.0	14.2	0.018159	2.5
Extreme (0C)	782.0	12.6	0.016112	2.5
Extreme (-10C)	782.0	13.1	0.016726	2.5
Extreme (-20C)	782.0	14.0	0.017871	2.5
Extreme (-30C)	782.0	15.2	0.019437	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]
3.15	710.0	10.0	0.014090	2.5
3.7	710.0	8.8	0.012454	2.5
4.26	710.0	7.9	0.011126	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	10.2	0.014302	2.5
Extreme (50C)	710.0	9.2	0.013005	2.5
Extreme (40C)	710.0	7.7	0.010897	2.5
Extreme (30C)	710.0	9.4	0.013242	2.5
Extreme (10C)	710.0	8.5	0.011978	2.5
Extreme (0C)	710.0	7.7	0.010909	2.5
Extreme (-10C)	710.0	9.2	0.012934	2.5
Extreme (-20C)	710.0	8.5	0.011972	2.5
Extreme (-30C)	710.0	8.5	0.012006	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]
3.15	710.0	10.4	0.014687	2.5
3.7	710.0	9.2	0.012997	2.5
4.26	710.0	8.2	0.011571	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.8	0.013783	2.5
Extreme (50C)	710.0	8.8	0.012457	2.5
Extreme (40C)	710.0	8.6	0.012091	2.5
Extreme (30C)	710.0	9.2	0.012957	2.5
Extreme (10C)	710.0	8.4	0.011836	2.5
Extreme (0C)	710.0	8.8	0.012328	2.5
Extreme (-10C)	710.0	9.4	0.013222	2.5
Extreme (-20C)	710.0	9.2	0.012991	2.5
Extreme (-30C)	710.0	8.4	0.011897	2.5

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

10.8 LTE BAND 25

Band 25 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]
3.15	1882.5	10.3	0.005462	2.5
3.7	1882.5	8.8	0.004649	2.5
4.26	1882.5	8.2	0.004338	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	9.9	0.005273	2.5
Extreme (50C)	1882.5	8.7	0.004610	2.5
Extreme (40C)	1882.5	7.8	0.004118	2.5
Extreme (30C)	1882.5	9.3	0.004959	2.5
Extreme (10C)	1882.5	8.9	0.004742	2.5
Extreme (0C)	1882.5	7.7	0.004114	2.5
Extreme (-10C)	1882.5	8.7	0.004609	2.5
Extreme (-20C)	1882.5	9.2	0.004904	2.5
Extreme (-30C)	1882.5	8.1	0.004282	2.5

Band 25 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]
3.15	1882.5	10.1	0.005383	2.5
3.7	1882.5	8.6	0.004559	2.5
4.26	1882.5	8.6	0.004556	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	8.9	0.004731	2.5
Extreme (50C)	1882.5	8.5	0.004502	2.5
Extreme (40C)	1882.5	8.5	0.004530	2.5
Extreme (30C)	1882.5	8.6	0.004591	2.5
Extreme (10C)	1882.5	8.0	0.004241	2.5
Extreme (0C)	1882.5	8.8	0.004693	2.5
Extreme (-10C)	1882.5	9.0	0.004804	2.5
Extreme (-20C)	1882.5	9.1	0.004831	2.5
Extreme (-30C)	1882.5	8.5	0.004500	2.5

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

10.9 LTE BAND 26A

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.15	819.0	9.4	0.011494	2.5
3.7	819.0	8.8	0.010714	2.5
4.26	819.0	8.5	0.010410	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	819.0	9.9	0.012050	2.5
Extreme (50C)	819.0	9.1	0.011077	2.5
Extreme (40C)	819.0	8.3	0.010146	2.5
Extreme (30C)	819.0	8.7	0.010661	2.5
Extreme (10C)	819.0	8.7	0.010569	2.5
Extreme (0C)	819.0	8.0	0.009764	2.5
Extreme (-10C)	819.0	9.0	0.010942	2.5
Extreme (-20C)	819.0	9.3	0.011361	2.5
Extreme (-30C)	819.0	8.0	0.009710	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.15	819.0	10.4	0.012733	2.5
3.7	819.0	8.7	0.010676	2.5
4.26	819.0	8.8	0.010728	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	819.0	9.1	0.011134	2.5
Extreme (50C)	819.0	9.3	0.011386	2.5
Extreme (40C)	819.0	8.6	0.010473	2.5
Extreme (30C)	819.0	8.8	0.010685	2.5
Extreme (10C)	819.0	7.8	0.009474	2.5
Extreme (0C)	819.0	8.5	0.010358	2.5
Extreme (-10C)	819.0	9.7	0.011801	2.5
Extreme (-20C)	819.0	9.2	0.011253	2.5
Extreme (-30C)	819.0	8.0	0.009819	2.5

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

10.10 LTE BAND 26B

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.15	836.5	9.4	0.011262	2.5
3.7	836.5	8.5	0.010170	2.5
4.26	836.5	8.0	0.009607	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	10.1	0.012073	2.5
Extreme (50C)	836.5	8.5	0.010158	2.5
Extreme (40C)	836.5	8.1	0.009626	2.5
Extreme (30C)	836.5	9.4	0.011195	2.5
Extreme (10C)	836.5	9.3	0.011074	2.5
Extreme (0C)	836.5	7.7	0.009250	2.5
Extreme (-10C)	836.5	8.7	0.010352	2.5
Extreme (-20C)	836.5	9.4	0.011228	2.5
Extreme (-30C)	836.5	8.3	0.009937	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.15	836.5	10.0	0.011949	2.5
3.7	836.5	8.6	0.010284	2.5
4.26	836.5	8.3	0.009870	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	9.1	0.010890	2.5
Extreme (50C)	836.5	9.0	0.010776	2.5
Extreme (40C)	836.5	8.0	0.009619	2.5
Extreme (30C)	836.5	8.7	0.010392	2.5
Extreme (10C)	836.5	8.0	0.009523	2.5
Extreme (0C)	836.5	8.7	0.010352	2.5
Extreme (-10C)	836.5	9.2	0.010991	2.5
Extreme (-20C)	836.5	9.1	0.010868	2.5
Extreme (-30C)	836.5	7.9	0.009450	2.5

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

10.11 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]
3.15	2593	10.4	0.003999	2.5
3.7	2593	8.7	0.003370	2.5
4.26	2593	8.2	0.003158	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2593	9.5	0.003680	2.5
Extreme (50C)	2593	9.2	0.003556	2.5
Extreme (40C)	2593	8.7	0.003341	2.5
Extreme (30C)	2593	8.9	0.003415	2.5
Extreme (10C)	2593	8.2	0.003177	2.5
Extreme (0C)	2593	8.7	0.003373	2.5
Extreme (-10C)	2593	9.0	0.003454	2.5
Extreme (-20C)	2593	8.9	0.003431	2.5
Extreme (-30C)	2593	8.2	0.003179	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]
3.15	2593	6.9	0.002661	2.5
3.7	2593	6.4	0.002460	2.5
4.26	2593	5.4	0.002089	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2593	6.9	0.002661	2.5
Extreme (50C)	2593	6.1	0.002352	2.5
Extreme (40C)	2593	5.5	0.002124	2.5
Extreme (30C)	2593	6.8	0.002612	2.5
Extreme (10C)	2593	5.7	0.002200	2.5
Extreme (0C)	2593	5.4	0.002093	2.5
Extreme (-10C)	2593	5.0	0.001920	2.5
Extreme (-20C)	2593	6.4	0.002449	2.5
Extreme (-30C)	2593	5.9	0.002293	2.5

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

10.12 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]
3.15	1745	6.0	0.003443	2.5
3.7	1745	7.3	0.004206	2.5
4.26	1745	7.9	0.004506	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1745	5.4	0.003118	2.5
Extreme (50C)	1745	7.6	0.004364	2.5
Extreme (40C)	1745	6.8	0.003913	2.5
Extreme (30C)	1745	7.3	0.004201	2.5
Extreme (10C)	1745	7.8	0.004489	2.5
Extreme (0C)	1745	6.4	0.003663	2.5
Extreme (-10C)	1745	5.0	0.002867	2.5
Extreme (-20C)	1745	6.6	0.003769	2.5
Extreme (-30C)	1745	5.4	0.003072	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]
3.15	1745	8.8	0.005054	2.5
3.7	1745	7.7	0.004431	2.5
4.26	1745	9.6	0.005501	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1745	8.9	0.005102	2.5
Extreme (50C)	1745	8.3	0.004731	2.5
Extreme (40C)	1745	8.7	0.004963	2.5
Extreme (30C)	1745	7.7	0.004405	2.5
Extreme (10C)	1745	8.1	0.004662	2.5
Extreme (0C)	1745	6.4	0.003690	2.5
Extreme (-10C)	1745	8.6	0.004947	2.5
Extreme (-20C)	1745	8.4	0.004839	2.5
Extreme (-30C)	1745	5.6	0.003232	2.5

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

10.13 LTE BAND 71

Band 71 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]
3.15	a1745	6.3	0.003618	2.5
3.7	1745	7.2	0.004123	2.5
4.26	1745	7.6	0.004348	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1745	5.5	0.003179	2.5
Extreme (50C)	1745	7.6	0.004330	2.5
Extreme (40C)	1745	6.9	0.003937	2.5
Extreme (30C)	1745	7.1	0.004051	2.5
Extreme (10C)	1745	7.7	0.004398	2.5
Extreme (0C)	1745	6.9	0.003948	2.5
Extreme (-10C)	1745	5.1	0.002920	2.5
Extreme (-20C)	1745	6.8	0.003895	2.5
Extreme (-30C)	1745	5.5	0.003166	2.5

Band 71 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]
3.15	1745	8.4	0.004824	2.5
3.7	1745	7.1	0.004064	2.5
4.26	1745	9.9	0.005693	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1745	8.8	0.005025	2.5
Extreme (50C)	1745	8.1	0.004663	2.5
Extreme (40C)	1745	8.1	0.004616	2.5
Extreme (30C)	1745	7.9	0.004521	2.5
Extreme (10C)	1745	8.2	0.004705	2.5
Extreme (0C)	1745	6.6	0.003770	2.5
Extreme (-10C)	1745	8.4	0.004831	2.5
Extreme (-20C)	1745	8.6	0.004920	2.5
Extreme (-30C)	1745	5.5	0.003132	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.

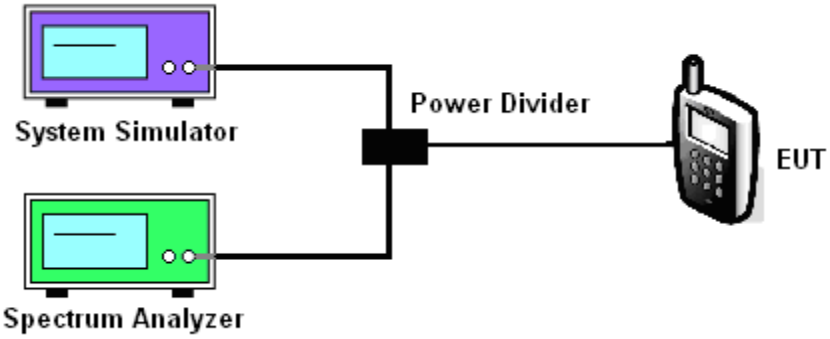
11.2 Measuring Instruments

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, 25, 26,41,66,71

Test data reference attachment.

----END OF REPORT----