

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

FCC ID: 2A9FT-Z500-H

Product: Smart LTE Module

Trade Mark: ZelusTek

Model No.: Z500-H

Family Model: Z500-H(A), Z500-H(EU)

Report No.: S22122800607006

Issue Date: Mar 16, 2023

Prepared for

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TEST RESULT CERTIFICATION**Applicant's name** : Zelus (Shenzhen) Technology Ltd.Address..... : 503, Building No.4, Block No.1, Shenzhen Bay ECO-Technology Park,
No.22, Gaoxin Nanhuan Road, Nanshan District, Shenzhen, China**Manufacturer's Name**..... : Zelus (Shenzhen) Technology Ltd.Address..... : 503, Building No.4, Block No.1, Shenzhen Bay ECO-Technology Park,
No.22, Gaoxin Nanhuan Road, Nanshan District, Shenzhen, China

Product name..... : Smart LTE Module

Trade Mark..... : ZelusTek

Model and/or type reference .. : Z500-H

Family Model..... : Z500-H(A), Z500-H(EU)

Test Sample Number : S221228006001

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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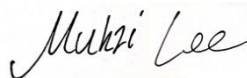
Date of Test

Date (s) of performance of tests..... Feb 28, 2023 ~ Mar 16, 2023

Date of Issue Mar 16, 2023

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

Testing Engineer : _____



(Mukzi Lee)

Authorized Signatory : _____



(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:	Smart LTE Module
Trade Mark	ZelusTek
Model Name	Z500-H
Family Model	Z500-H(A), Z500-H(EU)
Model Difference	All the model are the same circuit and RF module,except the model name.
FCC ID:	2A9FT-Z500-H
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2,4,5,7,12,13,14,17,25,26,41,66,71
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 14 Uplink: 788MHz-798MHz, Downlink: 758MHz-768MHz; 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 FDD Band 41 Uplink: 2535MHz-2655MHz, LTE FDD Band 66 Uplink: 1710MHz-1780MHz, Downlink: 2110MHz-2200MHz; LTE FDD Band 71 Uplink: 663MHz-698MHz, Downlink: 617MHz-652MHz;
Type of Modulation:	QPSK/16QAM/64QAM(Only Downlink)
Antenna:	External Antenna

Antenna gain:	1 dBi;
Adapter	N/A
Battery	N/A
Power Rating	DC 4V
Extreme Vol. Limits:	DC 3.45V to DC 4.2V (Nominal DC 4.0V) (Note 1)
HW Version	Z500-H_V3.0
SW Version	N/A
** Note1: The High Voltage DC 4.20V and Low Voltage 3.45V 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: 2A9FT-Z500-H** 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 2/4/5/7/12/13/14/17/25/26/41/66/71

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	Smart LTE Module	Z500-H	FCC ID: 2A9FT-Z500-H	EUT

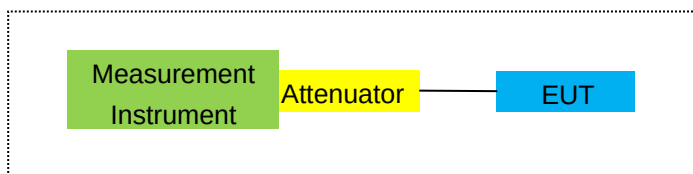
*Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.*

2.4 TEST SETUP

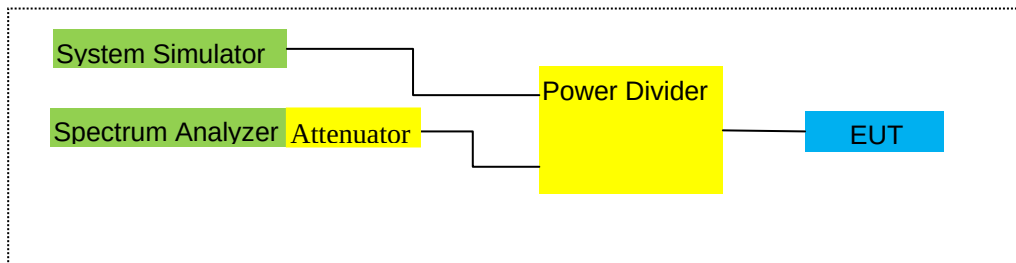
For Radiated Test Cases



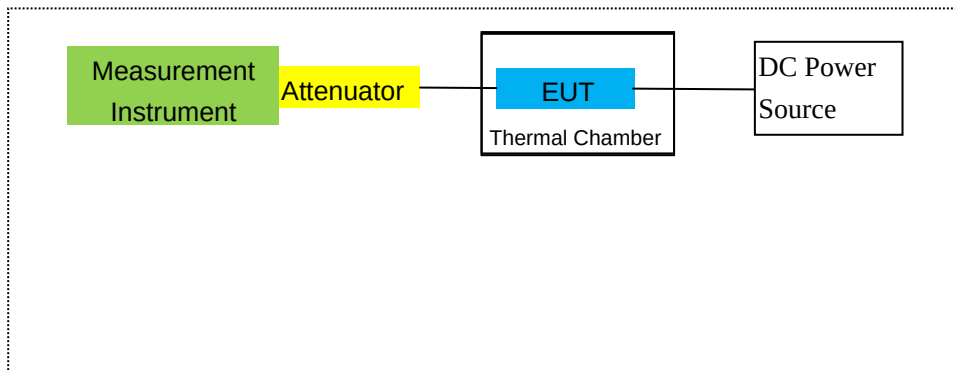
For Conducted Output Power



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	2023.06.17	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	2023.03.29	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	2023.03.30	1 year
6	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2021.11.07 2022.11.01	2022.11.06 2023.10.31	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	2023.03.31	1 year
23	Spectrum Analyzer	agilent	e4440a	us44300399	2022.04.01	2023.03.31	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	20170402923	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

☐

LTE Band 2/4/5/7/12/13/14/17/25/26/41/66/71

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

(c)(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

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

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

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

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

TEST PROCEDURE

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

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency

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

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

MODES TESTED

LTE Band 2/4/5/7/12/13/14/17/25/26/41/66/71

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

- ☐ LTE Band 2/4/5/7/12/13/14/17/25/26/41/66/71
- ☐

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

LTE Band 2/4/5/7/12/13/14/17/25/26/41/66/71

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	Polarization Of Max. ERP	
							Average		
							(mW)		
1.4MHz Band QPSK	1/#Mid	1850.7	-2.07	3.76	28.24	22.41	174.181	Horizontal	Pass
		1880	-1.84	3.91	28.22	22.47	176.604	Horizontal	Pass
		1909.3	-1.91	3.93	28.20	22.36	172.187	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-2.10	3.77	28.23	22.36	172.187	Horizontal	Pass
		1880	-1.85	3.91	28.24	22.48	177.011	Horizontal	Pass
		1908.5	-1.95	3.94	28.25	22.36	172.187	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-2.05	3.77	28.31	22.49	177.419	Horizontal	Pass
		1880	-1.89	3.91	28.22	22.42	174.582	Horizontal	Pass
		1907.5	-1.77	3.94	28.20	22.49	177.419	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-2.10	3.79	28.33	22.44	175.388	Horizontal	Pass
		1880	-1.91	3.95	28.22	22.36	172.187	Horizontal	Pass
		1905	-1.85	3.97	28.19	22.37	172.584	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-2.09	3.79	28.34	22.46	176.198	Horizontal	Pass
		1880	-1.81	3.95	28.22	22.46	176.198	Horizontal	Pass
		1902.5	-1.76	3.97	28.18	22.45	175.792	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-2.17	3.81	28.35	22.37	172.584	Horizontal	Pass
		1880	-1.91	3.96	28.22	22.35	171.791	Horizontal	Pass
		1900	-1.71	4.00	28.16	22.45	175.792	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-2.02	3.76	28.24	22.46	176.198	Vertical	Pass
		1880	-1.83	3.91	28.22	22.48	177.011	Vertical	Pass
		1909.3	-1.90	3.93	28.20	22.37	172.584	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-2.06	3.77	28.23	22.40	173.780	Vertical	Pass
		1880	-1.87	3.91	28.24	22.46	176.198	Vertical	Pass
		1908.5	-1.89	3.94	28.25	22.42	174.582	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-2.19	3.77	28.31	22.35	171.791	Vertical	Pass
		1880	-1.84	3.91	28.22	22.47	176.604	Vertical	Pass
		1907.5	-1.77	3.94	28.20	22.49	177.419	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1855	-2.14	3.79	28.33	22.40	173.780	Vertical	Pass
		1880	-1.82	3.95	28.22	22.45	175.792	Vertical	Pass
		1905	-1.73	3.97	28.19	22.49	177.419	Vertical	Pass

15.0MHz	1/#Mid	1857.5	-2.17	3.79	28.34	22.38	172.982	Vertical	Pass
Band		1880	-1.80	3.95	28.22	22.47	176.604	Vertical	Pass
QPSK		1902.5	-1.78	3.97	28.18	22.43	174.985	Vertical	Pass
20.0MHz	1/#Mid	1860	-2.00	3.81	28.35	22.54	179.473	Vertical	Pass
Band		1880	-1.74	3.96	28.22	22.52	178.649	Vertical	Pass
QPSK		1900	-1.62	4.00	28.16	22.54	179.473	Vertical	Pass

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result					Polarization Of Max. ERP	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP		
							Average (mW)		
1.4MHz	1/#Mid	1850.7	-3.16	3.76	28.24	21.32	135.519	Horizontal	Pass
Band 16		1880	-2.87	3.91	28.22	21.44	139.316	Horizontal	Pass
QAM		1909.3	-2.85	3.93	28.20	21.42	138.676	Horizontal	Pass
3.0MHz	1/#Mid	1851.5	-3.00	3.77	28.23	21.46	139.959	Horizontal	Pass
Band 16		1880	-2.99	3.91	28.24	21.34	136.144	Horizontal	Pass
QAM		1908.5	-2.94	3.94	28.25	21.37	137.088	Horizontal	Pass
5.0MHz	1/#Mid	1852.5	-3.15	3.77	28.31	21.39	137.721	Horizontal	Pass
Band 16		1880	-2.94	3.91	28.22	21.37	137.088	Horizontal	Pass
QAM		1907.5	-2.82	3.94	28.20	21.44	139.316	Horizontal	Pass
10.0MHz	1/#Mid	1855	-3.12	3.79	28.33	21.42	138.676	Horizontal	Pass
Band 16		1880	-2.96	3.95	28.22	21.31	135.207	Horizontal	Pass
QAM		1905	-2.84	3.97	28.19	21.38	137.404	Horizontal	Pass
15.0MHz	1/#Mid	1857.5	-3.16	3.79	28.34	21.39	137.721	Horizontal	Pass
Band 16		1880	-2.88	3.95	28.22	21.39	137.721	Horizontal	Pass
QAM		1902.5	-2.87	3.97	28.18	21.34	136.144	Horizontal	Pass
20.0MHz	1/#Mid	1860	-3.13	3.81	28.35	21.41	138.357	Horizontal	Pass
Band 16		1880	-2.84	3.96	28.22	21.42	138.676	Horizontal	Pass
QAM		1900	-2.84	4.00	28.16	21.32	135.519	Horizontal	Pass
1.4MHz	1/#Mid	1850.7	-3.08	3.76	28.24	21.40	138.038	Vertical	Pass
Band 16		1880	-2.86	3.91	28.22	21.45	139.637	Vertical	Pass
QAM		1909.3	-2.89	3.93	28.20	21.38	137.404	Vertical	Pass
3.0MHz	1/#Mid	1851.5	-3.11	3.77	28.23	21.35	136.458	Vertical	Pass
Band 16		1880	-2.97	3.91	28.24	21.36	136.773	Vertical	Pass
QAM		1908.5	-3.00	3.94	28.25	21.31	135.207	Vertical	Pass
5.0MHz	1/#Mid	1852.5	-3.08	3.77	28.31	21.46	139.959	Vertical	Pass

Band 16 QAM		1880	-2.99	3.91	28.22	21.32	135.519	Vertical	Pass
		1907.5	-2.89	3.94	28.20	21.37	137.088	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-3.17	3.79	28.33	21.37	137.088	Vertical	Pass
		1880	-2.86	3.95	28.22	21.41	138.357	Vertical	Pass
		1905	-2.78	3.97	28.19	21.44	139.316	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-3.12	3.79	28.34	21.43	138.995	Vertical	Pass
		1880	-2.93	3.95	28.22	21.34	136.144	Vertical	Pass
		1902.5	-2.87	3.97	28.18	21.34	136.144	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-3.05	3.81	28.35	21.49	140.929	Vertical	Pass
		1880	-2.76	3.96	28.22	21.50	141.254	Vertical	Pass
		1900	-2.65	4.00	28.16	21.51	141.579	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	Cable Loss (dBm)	Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
						Average	Average		
						(dBm)	(mW)		
1.4MHz Band QPSK	1/#Mid	1710.7	-2.28	3.12	27.58	22.18	165.196	Horizontal	Pass
		1732.5	-2.18	3.27	27.61	22.16	164.437	Horizontal	Pass
		1754.3	-2.09	3.29	27.63	22.25	167.880	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.32	3.13	27.61	22.16	164.437	Horizontal	Pass
		1732.5	-2.20	3.27	27.61	22.14	163.682	Horizontal	Pass
		1753.5	-2.05	3.30	27.62	22.27	168.655	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.21	3.13	27.63	22.29	169.434	Horizontal	Pass
		1732.5	-2.08	3.27	27.61	22.26	168.267	Horizontal	Pass
		1752.5	-2.06	3.30	27.60	22.24	167.494	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-2.21	3.15	27.64	22.28	169.044	Horizontal	Pass
		1732.5	-2.05	3.31	27.61	22.25	167.880	Horizontal	Pass
		1750	-2.02	3.33	27.59	22.24	167.494	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-2.26	3.15	27.65	22.24	167.494	Horizontal	Pass
		1732.5	-2.12	3.31	27.61	22.18	165.196	Horizontal	Pass
		1747.5	-2.00	3.33	27.57	22.24	167.494	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-2.25	3.17	27.66	22.24	167.494	Horizontal	Pass
		1732.5	-2.02	3.32	27.61	22.27	168.655	Horizontal	Pass
		1745	-1.96	3.36	27.56	22.24	167.494	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-2.19	3.12	27.58	22.27	168.655	Vertical	Pass
		1732.5	-2.17	3.27	27.61	22.17	164.816	Vertical	Pass
		1754.3	-2.15	3.29	27.63	22.19	165.577	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.33	3.13	27.61	22.15	164.059	Vertical	Pass
		1732.5	-2.09	3.27	27.61	22.25	167.880	Vertical	Pass
		1753.5	-2.12	3.30	27.62	22.20	165.959	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.32	3.13	27.63	22.18	165.196	Vertical	Pass
		1732.5	-2.18	3.27	27.61	22.16	164.437	Vertical	Pass
		1752.5	-2.11	3.30	27.60	22.19	165.577	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1715	-2.33	3.15	27.64	22.16	164.437	Vertical	Pass
		1732.5	-2.02	3.31	27.61	22.28	169.044	Vertical	Pass
		1750	-2.11	3.33	27.59	22.15	164.059	Vertical	Pass

15.0MHz Band QPSK	1/#Mid	1717.5	-2.24	3.15	27.65	22.26	168.267	Vertical	Pass
		1732.5	-2.11	3.31	27.61	22.19	165.577	Vertical	Pass
		1747.5	-2.03	3.33	27.57	22.21	166.341	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	1720	-2.16	3.17	27.66	22.33	171.002	Vertical	Pass
		1732.5	-1.98	3.32	27.61	22.31	170.216	Vertical	Pass
		1745	-1.87	3.36	27.56	22.33	171.002	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	Max. EIRP	Polarization Of Max. ERP	
						Average	Average		
						(dBm)	(mW)		
1.4MHz Band 16 QAM	1/#Mid	1710.7	-3.26	3.12	27.58	21.20	131.826	Horizontal	Pass
		1732.5	-3.16	3.27	27.61	21.18	131.220	Horizontal	Pass
		1754.3	-3.18	3.29	27.63	21.16	130.617	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-3.28	3.13	27.61	21.20	131.826	Horizontal	Pass
		1732.5	-3.17	3.27	27.61	21.17	130.918	Horizontal	Pass
		1753.5	-3.11	3.30	27.62	21.21	132.130	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-3.22	3.13	27.63	21.28	134.276	Horizontal	Pass
		1732.5	-3.12	3.27	27.61	21.22	132.434	Horizontal	Pass
		1752.5	-3.06	3.30	27.60	21.24	133.045	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-3.20	3.15	27.64	21.29	134.586	Horizontal	Pass
		1732.5	-3.01	3.31	27.61	21.29	134.586	Horizontal	Pass
		1750	-3.10	3.33	27.59	21.16	130.617	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-3.30	3.15	27.65	21.20	131.826	Horizontal	Pass
		1732.5	-3.02	3.31	27.61	21.28	134.276	Horizontal	Pass
		1747.5	-2.95	3.33	27.57	21.29	134.586	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-3.25	3.17	27.66	21.24	133.045	Horizontal	Pass
		1732.5	-3.08	3.32	27.61	21.21	132.130	Horizontal	Pass
		1745	-2.96	3.36	27.56	21.24	133.045	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-3.16	3.12	27.58	21.30	134.896	Vertical	Pass
		1732.5	-3.06	3.27	27.61	21.28	134.276	Vertical	Pass
		1754.3	-3.13	3.29	27.63	21.21	132.130	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-3.33	3.13	27.61	21.15	130.317	Vertical	Pass
		1732.5	-3.14	3.27	27.61	21.20	131.826	Vertical	Pass
		1753.5	-3.06	3.30	27.62	21.26	133.660	Vertical	Pass
5.0MHz	1/#Mid	1712.5	-3.31	3.13	27.63	21.19	131.522	Vertical	Pass

Band 16		1732.5	-3.16	3.27	27.61	21.18	131.220	Vertical	Pass
QAM		1752.5	-3.17	3.30	27.60	21.13	129.718	Vertical	Pass
10.0MHz	1/#Mid	1715	-3.28	3.15	27.64	21.21	132.130	Vertical	Pass
Band 16		1732.5	-3.06	3.31	27.61	21.24	133.045	Vertical	Pass
QAM		1750	-2.97	3.33	27.59	21.29	134.586	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-3.36	3.15	27.65	21.14	130.017	Vertical	Pass
Band 16		1732.5	-3.06	3.31	27.61	21.24	133.045	Vertical	Pass
QAM		1747.5	-3.07	3.33	27.57	21.17	130.918	Vertical	Pass
20.0MHz	1/#Mid	1720	-3.19	3.17	27.66	21.30	134.896	Vertical	Pass
Band 16		1732.5	-2.95	3.32	27.61	21.34	136.144	Vertical	Pass
QAM		1745	-2.87	3.36	27.56	21.33	135.831	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/R B SIZE	Frequenc y	Result							Conclu sion
			SG Level	Cable Loss (dBm)	Facto r (dB)	Correctio n	Max. ERP	Max. ERP	Polarizatio n Of Max. ERP	
			(dBm)			(dB)	Averag e	Averag e		
							(dBm)	(mW)		
1.4MHz Band QPSK	1/#Mid	824.7	6.78	2.01	19.68	2.15	22.30	169.824	Horizontal	Pass
		836.5	6.54	2.01	19.77	2.15	22.15	164.059	Horizontal	Pass
		848.3	6.51	2.02	19.82	2.15	22.16	164.437	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	6.65	2.01	19.70	2.15	22.19	165.577	Horizontal	Pass
		836.5	6.56	2.01	19.77	2.15	22.17	164.816	Horizontal	Pass
		847.5	6.52	2.02	19.81	2.15	22.16	164.437	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	6.66	2.01	19.71	2.15	22.21	166.341	Horizontal	Pass
		836.5	6.59	2.01	19.77	2.15	22.20	165.959	Horizontal	Pass
		846.5	6.64	2.02	19.79	2.15	22.26	168.267	Horizontal	Pass
10.0MH z Band QPSK	1/#Mid	829	6.57	2.01	19.73	2.15	22.14	163.682	Horizontal	Pass
		836.5	6.60	2.01	19.77	2.15	22.21	166.341	Horizontal	Pass
		844	6.62	2.02	19.78	2.15	22.23	167.109	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	824.7	6.65	2.01	19.68	2.15	22.17	164.816	Vertical	Pass
		836.5	6.62	2.01	19.77	2.15	22.23	167.109	Vertical	Pass
		848.3	6.56	2.02	19.82	2.15	22.21	166.341	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	6.65	2.01	19.70	2.15	22.19	165.577	Vertical	Pass
		836.5	6.56	2.01	19.77	2.15	22.17	164.816	Vertical	Pass
		847.5	6.64	2.02	19.81	2.15	22.28	169.044	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	6.66	2.01	19.71	2.15	22.21	166.341	Vertical	Pass
		836.5	6.65	2.01	19.77	2.15	22.26	168.267	Vertical	Pass
		846.5	6.67	2.02	19.79	2.15	22.29	169.434	Vertical	Pass
10.0MH z Band QPSK	1/#Mid	829	6.75	2.01	19.73	2.15	22.32	170.608	Vertical	Pass
		836.5	6.73	2.01	19.77	2.15	22.34	171.396	Vertical	Pass
		844	6.73	2.02	19.78	2.15	22.34	171.396	Vertical	Pass

Radiated Power (ERP) for Band 5										
Mode	RB/R B SIZE	Frequenc y	Result							Concl usion
			SG Level	Cable Loss (dBm)	Facto r (dB)	Correctio n	Max. ERP	Max. ERP	Polarizatio n Of Max. ERP	
			(dBm)			(dB)	Averag e	Averag e		
							(dBm)	(mW)		
1.4MHz Band 16 QAM	1/#Mid	824.7	5.43	2.01	19.68	2.15	20.95	124.451	Horizontal	Pass
		836.5	5.34	2.01	19.77	2.15	20.95	124.451	Horizontal	Pass
		848.3	5.35	2.02	19.82	2.15	21.00	125.893	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	5.34	2.01	19.70	2.15	20.88	122.462	Horizontal	Pass
		836.5	5.32	2.01	19.77	2.15	20.93	123.880	Horizontal	Pass
		847.5	5.25	2.02	19.81	2.15	20.89	122.744	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	5.30	2.01	19.71	2.15	20.85	121.619	Horizontal	Pass
		836.5	5.31	2.01	19.77	2.15	20.92	123.595	Horizontal	Pass
		846.5	5.25	2.02	19.79	2.15	20.87	122.180	Horizontal	Pass
10.0MH z Band 16 QAM	1/#Mid	829	5.40	2.01	19.73	2.15	20.97	125.026	Horizontal	Pass
		836.5	5.31	2.01	19.77	2.15	20.92	123.595	Horizontal	Pass
		844	5.37	2.02	19.78	2.15	20.98	125.314	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	5.41	2.01	19.68	2.15	20.93	123.880	Vertical	Pass
		836.5	5.33	2.01	19.77	2.15	20.94	124.165	Vertical	Pass
		848.3	5.24	2.02	19.82	2.15	20.89	122.744	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	5.47	2.01	19.70	2.15	21.01	126.183	Vertical	Pass
		836.5	5.30	2.01	19.77	2.15	20.91	123.310	Vertical	Pass
		847.5	5.29	2.02	19.81	2.15	20.93	123.880	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	5.42	2.01	19.71	2.15	20.97	125.026	Vertical	Pass
		836.5	5.33	2.01	19.77	2.15	20.94	124.165	Vertical	Pass
		846.5	5.29	2.02	19.79	2.15	20.91	123.310	Vertical	Pass
10.0MH z Band 16 QAM	1/#Mid	829	5.49	2.01	19.73	2.15	21.06	127.644	Vertical	Pass
		836.5	5.45	2.01	19.77	2.15	21.06	127.644	Vertical	Pass
		844	5.43	2.02	19.78	2.15	21.04	127.057	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)

8.5 LTE BAND 7

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level	Cable Loss	Antenna Factor	Max. EIRP	Max. EIRP	Polarization	
			(dBm)	(dBm)	(dB)	Average	Average	Of Max. ERP	
						(dBm)	(mW)		
5.0MHz Band QPSK	1/#Mid	2502.5	-1.21	4.54	27.75	22.00	158.489	Horizontal	Pass
		2535	-0.96	4.69	27.72	22.07	161.065	Horizontal	Pass
		2567.5	-1.03	4.71	27.71	21.97	157.398	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2505	-1.24	4.55	27.76	21.97	157.398	Horizontal	Pass
		2535	-0.99	4.69	27.72	22.04	159.956	Horizontal	Pass
		2565	-0.98	4.72	27.70	22.00	158.489	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-1.25	4.55	27.77	21.97	157.398	Horizontal	Pass
		2535	-0.96	4.69	27.72	22.07	161.065	Horizontal	Pass
		2562.5	-0.98	4.72	27.69	21.99	158.125	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2510	-1.21	4.57	27.78	22.00	158.489	Horizontal	Pass
		2535	-0.90	4.73	27.72	22.09	161.808	Horizontal	Pass
		2560	-0.93	4.75	27.68	22.00	158.489	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2502.5	-1.16	4.54	27.75	22.05	160.325	Vertical	Pass
		2535	-1.05	4.69	27.72	21.98	157.761	Vertical	Pass
		2567.5	-0.93	4.71	27.71	22.07	161.065	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2505	-1.11	4.55	27.76	22.10	162.181	Vertical	Pass
		2535	-0.97	4.69	27.72	22.06	160.694	Vertical	Pass
		2565	-0.92	4.72	27.70	22.06	160.694	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-1.22	4.55	27.77	22.00	158.489	Vertical	Pass
		2535	-1.06	4.69	27.72	21.97	157.398	Vertical	Pass
		2562.5	-1.05	4.72	27.69	21.92	155.597	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2510	-1.07	4.57	27.78	22.14	163.682	Vertical	Pass
		2535	-0.87	4.73	27.72	22.12	162.930	Vertical	Pass
		2560	-0.82	4.75	27.68	22.11	162.555	Vertical	Pass

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level	Cable Loss	Antenna Factor	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)	(dBm)	(dB)	Average (dBm)	Average (mW)		
5.0MHz Band 16 QAM	1/#Midd	2502.5	-1.89	4.54	27.75	21.32	135.519	Horizontal	Pass
		2535	-1.77	4.69	27.72	21.26	133.660	Horizontal	Pass
		2567.5	-1.64	4.71	27.71	21.36	136.773	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Midd	2505	-1.93	4.55	27.76	21.28	134.276	Horizontal	Pass
		2535	-1.72	4.69	27.72	21.31	135.207	Horizontal	Pass
		2565	-1.65	4.72	27.70	21.33	135.831	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Midd	2507.5	-1.90	4.55	27.77	21.32	135.519	Horizontal	Pass
		2535	-1.68	4.69	27.72	21.35	136.458	Horizontal	Pass
		2562.5	-1.68	4.72	27.69	21.29	134.586	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Midd	2510	-1.85	4.57	27.78	21.36	136.773	Horizontal	Pass
		2535	-1.69	4.73	27.72	21.30	134.896	Horizontal	Pass
		2560	-1.56	4.75	27.68	21.37	137.088	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Midd	2502.5	-1.95	4.54	27.75	21.26	133.660	Vertical	Pass
		2535	-1.63	4.69	27.72	21.40	138.038	Vertical	Pass
		2567.5	-1.60	4.71	27.71	21.40	138.038	Vertical	Pass
10.0MHz Band 16 QAM	1/#Midd	2505	-1.81	4.55	27.76	21.40	138.038	Vertical	Pass
		2535	-1.73	4.69	27.72	21.30	134.896	Vertical	Pass
		2565	-1.59	4.72	27.70	21.39	137.721	Vertical	Pass
15.0MHz Band 16 QAM	1/#Midd	2507.5	-1.97	4.55	27.77	21.25	133.352	Vertical	Pass
		2535	-1.78	4.69	27.72	21.25	133.352	Vertical	Pass
		2562.5	-1.72	4.72	27.69	21.25	133.352	Vertical	Pass
20.0MHz Band 16 QAM	1/#Midd	2510	-1.77	4.57	27.78	21.44	139.316	Vertical	Pass
		2535	-1.57	4.73	27.72	21.42	138.676	Vertical	Pass
		2560	-1.49	4.75	27.68	21.44	139.316	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	Cable Loss	Antenna Gain	Correction	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)	(dBm)	(dB)	(dB)	Average	Average		
							(dBm)	(mW)		
1.4MHz Band QPSK	1/#Mid	699.7	6.75	1.91	19.21	2.15	21.90	154.882	Vertical	Pass
		707.5	6.73	1.91	19.26	2.15	21.93	155.955	Vertical	Pass
		715.3	6.67	1.93	19.34	2.15	21.93	155.955	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	700.5	6.72	1.91	19.21	2.15	21.87	153.815	Vertical	Pass
		707.5	6.68	1.91	19.26	2.15	21.88	154.170	Vertical	Pass
		714.5	6.63	1.93	19.34	2.15	21.89	154.525	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	701.5	6.71	1.91	19.23	2.15	21.88	154.170	Vertical	Pass
		707.5	6.77	1.91	19.26	2.15	21.97	157.398	Vertical	Pass
		713.5	6.64	1.92	19.33	2.15	21.90	154.882	Vertical	Pass
10.0Hz Band QPSK	1/#Mid	704	6.76	1.91	19.25	2.15	21.95	156.675	Vertical	Pass
		707.5	6.74	1.91	19.26	2.15	21.94	156.315	Vertical	Pass
		711	6.65	1.92	19.32	2.15	21.90	154.882	Vertical	Pass
1.4MHz Band QPSK	1/#Mid	699.7	6.82	1.91	19.21	2.15	21.97	157.398	Horizontal	Pass
		707.5	6.78	1.91	19.26	2.15	21.98	157.761	Horizontal	Pass
		715.3	6.67	1.93	19.34	2.15	21.93	155.955	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	700.5	6.73	1.91	19.21	2.15	21.88	154.170	Horizontal	Pass
		707.5	6.71	1.91	19.26	2.15	21.91	155.239	Horizontal	Pass
		714.5	6.69	1.93	19.34	2.15	21.95	156.675	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	701.5	6.73	1.91	19.23	2.15	21.90	154.882	Horizontal	Pass
		707.5	6.71	1.91	19.26	2.15	21.91	155.239	Horizontal	Pass
		713.5	6.60	1.92	19.33	2.15	21.86	153.462	Horizontal	Pass
10.0Hz Band QPSK	1/#Mid	704	6.83	1.91	19.25	2.15	22.02	159.221	Horizontal	Pass
		707.5	6.83	1.91	19.26	2.15	22.03	159.588	Horizontal	Pass
		711	6.78	1.92	19.32	2.15	22.03	159.588	Horizontal	Pass

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss	Antenna Gain	Correction	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)	(dBm)	(dB)	(dB)	Average	Average		
							(dBm)	(mW)		
1.4MHz Band 16 QAM	1/#Mid	699.7	6.02	1.91	19.21	2.15	21.17	130.918	Vertical	Pass
		707.5	5.87	1.91	19.26	2.15	21.07	127.938	Vertical	Pass
		715.3	5.89	1.93	19.34	2.15	21.15	130.317	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	6.03	1.91	19.21	2.15	21.18	131.220	Vertical	Pass
		707.5	5.94	1.91	19.26	2.15	21.14	130.017	Vertical	Pass
		714.5	5.85	1.93	19.34	2.15	21.11	129.122	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	5.96	1.91	19.23	2.15	21.13	129.718	Vertical	Pass
		707.5	5.93	1.91	19.26	2.15	21.13	129.718	Vertical	Pass
		713.5	5.82	1.92	19.33	2.15	21.08	128.233	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	704	5.88	1.91	19.25	2.15	21.07	127.938	Vertical	Pass
		707.5	5.98	1.91	19.26	2.15	21.18	131.220	Vertical	Pass
		711	5.88	1.92	19.32	2.15	21.13	129.718	Vertical	Pass
1.4MHz Band 16 QAM	1/#Mid	699.7	5.99	1.91	19.21	2.15	21.14	130.017	Horizontal	Pass
		707.5	5.86	1.91	19.26	2.15	21.06	127.644	Horizontal	Pass
		715.3	5.83	1.93	19.34	2.15	21.09	128.529	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	6.00	1.91	19.21	2.15	21.15	130.317	Horizontal	Pass
		707.5	5.91	1.91	19.26	2.15	21.11	129.122	Horizontal	Pass
		714.5	5.87	1.93	19.34	2.15	21.13	129.718	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	5.94	1.91	19.23	2.15	21.11	129.122	Horizontal	Pass
		707.5	5.92	1.91	19.26	2.15	21.12	129.420	Horizontal	Pass
		713.5	5.88	1.92	19.33	2.15	21.14	130.017	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	704	6.04	1.91	19.25	2.15	21.23	132.739	Horizontal	Pass
		707.5	6.02	1.91	19.26	2.15	21.22	132.434	Horizontal	Pass
		711	5.97	1.92	19.32	2.15	21.22	132.434	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	Cable Loss (dBm)	Factor (dB)	Correction	Max. EPR	Max. EPR	Polarization Of Max. ERP	
			(dBm)				Average	Average		
							(dBm)	(mW)		
5.0MHz Band QPSK	1/#Mid	779.5	6.88	1.95	19.23	2.15	22.01	158.855	Vertical	Pass
		782	6.79	1.95	19.26	2.15	21.95	156.675	Vertical	Pass
		784.5	6.77	1.96	19.33	2.15	21.99	158.125	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	782	6.87	1.95	19.25	2.15	22.02	159.221	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	779.5	6.92	1.95	19.23	2.15	22.05	160.325	Horizontal	Pass
		782	6.88	1.95	19.26	2.15	22.04	159.956	Horizontal	Pass
		784.5	6.78	1.96	19.33	2.15	22.00	158.489	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	782	6.97	1.95	19.25	2.15	22.12	162.930	Horizontal	Pass

Radiated Power (ERP) for Band 13											
Mode	RB/RB SIZE	Frequency	Result							Conclusion	
			SG Level	Cable Loss (dBm)	Factor (dB)	Correction	Max. EPR	Max. EPR	Polarization Of Max. ERP		
							(dBm)	Average			Average
								(dB)			(dBm)
5.0MHz Band 16 QAM	1/#Mid	779.5	6.01	1.95	19.23	2.15	21.14	130.017	Vertical	Pass	
		782	5.97	1.95	19.26	2.15	21.13	129.718	Vertical	Pass	
		784.5	5.98	1.96	19.33	2.15	21.20	131.826	Vertical	Pass	
10.0MHz Band 16 QAM	1/#Mid	782	6.02	1.95	19.25	2.15	21.17	130.918	Vertical	Pass	
5.0MHz Band 16 QAM	1/#Mid	779.5	5.96	1.95	19.23	2.15	21.09	128.529	Horizontal	Pass	
		782	5.98	1.95	19.26	2.15	21.14	130.017	Horizontal	Pass	
		784.5	5.84	1.96	19.33	2.15	21.06	127.644	Horizontal	Pass	
10.0MHz Band 16 QAM	1/#Mid	782	6.06	1.95	19.25	2.15	21.21	132.130	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 14

Radiated Power (ERP) for Band 14											
Mode	RB/RB SIZE	Frequency	Result							Conclusion	
			SG Level	Cable Loss (dBm)	Factor (dB)	Correction	Max. EPR	Max. EPR	Polarization Of Max. ERP		
							(dBm)	Average			Average
								(dB)			(dBm)
5.0MHz Band QPSK	1/#Mid	790.5	6.92	1.91	19.23	2.15	22.09	161.808	Vertical	Pass	
		793	6.93	1.91	19.26	2.15	22.13	163.305	Vertical	Pass	
		795.5	6.82	1.92	19.33	2.15	22.08	161.436	Vertical	Pass	
10.0MHz Band QPSK	1/#Mid	793	6.91	1.91	19.25	2.15	22.1	162.181	Vertical	Pass	
5.0MHz Band QPSK	1/#Mid	790.5	6.88	1.91	19.23	2.15	22.05	160.325	Horizontal	Pass	
		793	6.89	1.91	19.26	2.15	22.09	161.808	Horizontal	Pass	
		795.5	6.85	1.92	19.33	2.15	22.11	162.555	Horizontal	Pass	
10.0MHz Band QPSK	1/#Mid	793	7.04	1.91	19.25	2.15	22.23	167.109	Horizontal	Pass	

Radiated Power (ERP) for Band 14											
Mode	RB/RB SIZE	Frequency	Result							Conclusion	
			SG Level	Cable Loss (dBm)	Factor (dB)	Correction	Max. EPR	Max. EPR	Polarization Of Max. ERP		
							(dBm)	Average			Average
								(dB)			(dBm)
5.0MHz Band 16 QAM	1/#Mid	790.5	6.03	1.91	19.23	2.15	21.20	131.826	Vertical	Pass	
		793	6.02	1.91	19.26	2.15	21.22	132.434	Vertical	Pass	
		795.5	5.98	1.92	19.33	2.15	21.24	133.045	Vertical	Pass	
10.0MHz Band 16 QAM	1/#Mid	793	6.02	1.91	19.25	2.15	21.21	132.130	Vertical	Pass	
5.0MHz Band 16 QAM	1/#Mid	790.5	5.98	1.91	19.23	2.15	21.15	130.317	Horizontal	Pass	
		793	5.96	1.91	19.26	2.15	21.16	130.617	Horizontal	Pass	
		795.5	5.94	1.92	19.33	2.15	21.20	131.826	Horizontal	Pass	
10.0MHz Band 16 QAM	1/#Mid	793	6.12	1.91	19.25	2.15	21.31	135.207	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)

8.8 LTE BAND 17

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG	Cable	Antenna	Correction	Max.	Max.	Polarization	
			Level	Loss	Factor		EIRP	EIRP	Of Max.	
			(dBm)	(dBm)	(dB)		Average	Average	ERP	
						(dB)	(dBm)	(mW)		
5.0MHz Band QPSK	1/#Mid	706.5	7.19	1.91	19.23	2.15	22.36	172.187	Vertical	Pass
		710	7.14	1.91	19.26	2.15	22.34	171.396	Vertical	Pass
		713.5	7.11	1.92	19.33	2.15	22.37	172.584	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	709	7.13	1.91	19.25	2.15	22.32	170.608	Vertical	Pass
		710	7.09	1.91	19.26	2.15	22.29	169.434	Vertical	Pass
		711	7.02	1.92	19.32	2.15	22.27	168.655	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	706.5	7.10	1.91	19.23	2.15	22.27	168.655	Horizontal	Pass
		710	7.15	1.91	19.26	2.15	22.35	171.791	Horizontal	Pass
		713.5	7.12	1.92	19.33	2.15	22.38	172.982	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	709	7.22	1.91	19.25	2.15	22.41	174.181	Horizontal	Pass
		710	7.24	1.91	19.26	2.15	22.44	175.388	Horizontal	Pass
		711	7.16	1.92	19.32	2.15	22.41	174.181	Horizontal	Pass

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss	Antenna Factor	Correction	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)	(dBm)	(dB)	(dB)	Average	Average		
5.0MHz Band 16 QAM	1/#Mid	706.5	6.10	1.91	19.23	2.15	21.27	133.968	Vertical	Pass
		710	6.17	1.91	19.26	2.15	21.37	137.088	Vertical	Pass
		713.5	6.11	1.92	19.33	2.15	21.37	137.088	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	709	6.11	1.91	19.25	2.15	21.30	134.896	Vertical	Pass
		710	6.17	1.91	19.26	2.15	21.37	137.088	Vertical	Pass
		711	6.06	1.92	19.32	2.15	21.31	135.207	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	706.5	6.09	1.91	19.23	2.15	21.26	133.660	Horizontal	Pass
		710	6.13	1.91	19.26	2.15	21.33	135.831	Horizontal	Pass
		713.5	6.06	1.92	19.33	2.15	21.32	135.519	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	709	6.24	1.91	19.25	2.15	21.43	138.995	Horizontal	Pass
		710	6.22	1.91	19.26	2.15	21.42	138.676	Horizontal	Pass
		711	6.15	1.92	19.32	2.15	21.40	138.038	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)

8.9 LTE BAND 25

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level	Cable Loss (dBm)	Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)			Average	Average		
						(dBm)	(mW)		
1.4MHz Band QPSK	1/#Mid	1850.7	-1.95	3.12	27.58	22.51	178.238	Horizontal	Pass
		1882.5	-1.86	3.27	27.61	22.48	177.011	Horizontal	Pass
		1914.3	-1.75	3.29	27.63	22.59	181.552	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-2.00	3.13	27.61	22.48	177.011	Horizontal	Pass
		1882.5	-1.83	3.27	27.61	22.51	178.238	Horizontal	Pass
		1753.5	-1.78	3.30	27.62	22.54	179.473	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-2.06	3.13	27.63	22.44	175.388	Horizontal	Pass
		1882.5	-1.84	3.27	27.61	22.50	177.828	Horizontal	Pass
		1912.5	-1.80	3.30	27.60	22.50	177.828	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-1.93	3.15	27.64	22.56	180.302	Horizontal	Pass
		1882.5	-1.84	3.31	27.61	22.46	176.198	Horizontal	Pass
		1910	-1.74	3.33	27.59	22.52	178.649	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-1.99	3.15	27.65	22.51	178.238	Horizontal	Pass
		1882.5	-1.75	3.31	27.61	22.55	179.887	Horizontal	Pass
		1907.5	-1.65	3.33	27.57	22.59	181.552	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-1.91	3.17	27.66	22.58	181.134	Horizontal	Pass
		1882.5	-1.74	3.32	27.61	22.55	179.887	Horizontal	Pass
		1905	-1.63	3.36	27.56	22.57	180.717	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-1.90	3.12	27.58	22.56	180.302	Vertical	Pass
		1882.5	-1.78	3.27	27.61	22.56	180.302	Vertical	Pass
		1914.3	-1.79	3.29	27.63	22.55	179.887	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-2.01	3.13	27.61	22.47	176.604	Vertical	Pass
		1882.5	-1.90	3.27	27.61	22.44	175.388	Vertical	Pass
		1753.5	-1.84	3.30	27.62	22.48	177.011	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-2.05	3.13	27.63	22.45	175.792	Vertical	Pass
		1882.5	-1.86	3.27	27.61	22.48	177.011	Vertical	Pass
		1912.5	-1.87	3.30	27.60	22.43	174.985	Vertical	Pass
10.0MHz Band	1/#Mid	1855	-1.91	3.15	27.64	22.58	181.134	Vertical	Pass
		1882.5	-1.85	3.31	27.61	22.45	175.792	Vertical	Pass

QPSK		1910	-1.68	3.33	27.59	22.58	181.134	Vertical	Pass
15.0MHz	1/#Mid	1857.5	-1.96	3.15	27.65	22.54	179.473	Vertical	Pass
Band		1882.5	-1.71	3.31	27.61	22.59	181.552	Vertical	Pass
QPSK		1907.5	-1.80	3.33	27.57	22.44	175.388	Vertical	Pass
20.0MHz	1/#Mid	1860	-1.85	3.17	27.66	22.64	183.654	Vertical	Pass
Band		1882.5	-1.67	3.32	27.61	22.62	182.810	Vertical	Pass
QPSK		1905	-1.60	3.36	27.56	22.60	181.970	Vertical	Pass

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level	Cable Loss (dBm)	Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)			Average	Average		
						(dBm)	(mW)		
1.4MHz	1/#Mid	1850.7	-3.16	3.12	27.58	21.30	134.896	Horizontal	Pass
Band 16		1882.5	-3.05	3.27	27.61	21.29	134.586	Horizontal	Pass
QAM		1914.3	-2.96	3.29	27.63	21.38	137.404	Horizontal	Pass
3.0MHz	1/#Mid	1851.5	-3.11	3.13	27.61	21.37	137.088	Horizontal	Pass
Band 16		1882.5	-3.08	3.27	27.61	21.26	133.660	Horizontal	Pass
QAM		1753.5	-2.96	3.30	27.62	21.36	136.773	Horizontal	Pass
5.0MHz	1/#Mid	1852.5	-3.27	3.13	27.63	21.23	132.739	Horizontal	Pass
Band 16		1882.5	-3.09	3.27	27.61	21.25	133.352	Horizontal	Pass
QAM		1912.5	-2.91	3.30	27.60	21.39	137.721	Horizontal	Pass
10.0MHz	1/#Mid	1855	-3.11	3.15	27.64	21.38	137.404	Horizontal	Pass
Band 16		1882.5	-3.01	3.31	27.61	21.29	134.586	Horizontal	Pass
QAM		1910	-2.98	3.33	27.59	21.28	134.276	Horizontal	Pass
15.0MHz	1/#Mid	1857.5	-3.11	3.15	27.65	21.39	137.721	Horizontal	Pass
Band 16		1882.5	-3.02	3.31	27.61	21.28	134.276	Horizontal	Pass
QAM		1907.5	-2.99	3.33	27.57	21.25	133.352	Horizontal	Pass
20.0MHz	1/#Mid	1860	-3.23	3.17	27.66	21.26	133.660	Horizontal	Pass
Band 16		1882.5	-3.06	3.32	27.61	21.23	132.739	Horizontal	Pass
QAM		1905	-2.85	3.36	27.56	21.35	136.458	Horizontal	Pass
1.4MHz	1/#Mid	1850.7	-3.19	3.12	27.58	21.27	133.968	Vertical	Pass
Band 16		1882.5	-2.96	3.27	27.61	21.38	137.404	Vertical	Pass
QAM		1914.3	-2.95	3.29	27.63	21.39	137.721	Vertical	Pass
3.0MHz	1/#Mid	1851.5	-3.16	3.13	27.61	21.32	135.519	Vertical	Pass
Band 16		1882.5	-2.96	3.27	27.61	21.38	137.404	Vertical	Pass
QAM		1753.5	-3.01	3.30	27.62	21.31	135.207	Vertical	Pass

5.0MHz	1/#Mid	1852.5	-3.23	3.13	27.63	21.27	133.968	Vertical	Pass
Band 16		1882.5	-3.05	3.27	27.61	21.29	134.586	Vertical	Pass
QAM		1912.5	-2.92	3.30	27.60	21.38	137.404	Vertical	Pass
10.0MHz	1/#Mid	1855	-3.17	3.15	27.64	21.32	135.519	Vertical	Pass
Band 16		1882.5	-2.97	3.31	27.61	21.33	135.831	Vertical	Pass
QAM		1910	-2.98	3.33	27.59	21.28	134.276	Vertical	Pass
15.0MHz	1/#Mid	1857.5	-3.22	3.15	27.65	21.28	134.276	Vertical	Pass
Band 16		1882.5	-3.02	3.31	27.61	21.28	134.276	Vertical	Pass
QAM		1907.5	-2.89	3.33	27.57	21.35	136.458	Vertical	Pass
20.0MHz	1/#Mid	1860	-3.04	3.17	27.66	21.45	139.637	Vertical	Pass
Band 16		1882.5	-2.85	3.32	27.61	21.44	139.316	Vertical	Pass
QAM		1905	-2.77	3.36	27.56	21.43	138.995	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

8.10 LTE BAND 26 A

Radiated Power (ERP) for Band 26a										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss (dBm)	Factor (dB)	Correction	Max. EPR	Max. EPR	Polarization Of Max. ERP	
			(dBm)			(dB)	Average	Average		
							(dBm)	(mW)		
1.4MHz Band QPSK	1/#Mid	814.7	2.92	1.91	19.21	2.15	18.07	64.121	Vertical	Pass
		819	2.93	1.91	19.26	2.15	18.13	65.013	Vertical	Pass
		823.3	2.83	1.93	19.34	2.15	18.09	64.417	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	815.5	2.94	1.91	19.21	2.15	18.09	64.417	Vertical	Pass
		819	2.90	1.91	19.26	2.15	18.10	64.565	Vertical	Pass
		822.5	2.83	1.93	19.34	2.15	18.09	64.417	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	816.5	2.97	1.91	19.23	2.15	18.14	65.163	Vertical	Pass
		819	2.93	1.91	19.26	2.15	18.13	65.013	Vertical	Pass
		821.5	2.85	1.92	19.33	2.15	18.11	64.714	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	819	3.03	1.93	19.25	2.15	18.2	66.069	Vertical	Pass
1.4MHz Band QPSK	1/#Mid	814.7	3.04	1.91	19.21	2.15	18.19	65.917	Horizontal	Pass
		819	2.99	1.91	19.26	2.15	18.19	65.917	Horizontal	Pass
		823.3	2.80	1.93	19.34	2.15	18.06	63.973	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	815.5	3.01	1.91	19.21	2.15	18.16	65.464	Horizontal	Pass
		819	2.93	1.91	19.26	2.15	18.13	65.013	Horizontal	Pass
		822.5	2.84	1.93	19.34	2.15	18.10	64.565	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	816.5	2.94	1.91	19.23	2.15	18.11	64.714	Horizontal	Pass
		819	2.90	1.91	19.26	2.15	18.10	64.565	Horizontal	Pass
		821.5	2.79	1.92	19.33	2.15	18.05	63.826	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	819	3.07	1.93	19.25	2.15	18.24	66.681	Horizontal	Pass

Radiated Power (ERP) for Band 26a										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss (dBm)	Factor (dB)	Correction	Max. EPR	Max. EPR	Polarization Of Max. ERP	
			(dBm)			(dB)	Average	Average		
							(dBm)	(mW)		
1.4MHz Band 16 QAM	1/#Mid	814.7	1.87	1.91	19.21	2.15	17.02	50.350	Vertical	Pass
		819	1.79	1.91	19.26	2.15	16.99	50.003	Vertical	Pass
		823.3	1.83	1.93	19.34	2.15	17.09	51.168	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	815.5	1.91	1.91	19.21	2.15	17.06	50.816	Vertical	Pass
		819	1.86	1.91	19.26	2.15	17.06	50.816	Vertical	Pass
		822.5	1.77	1.93	19.34	2.15	17.03	50.466	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	816.5	1.92	1.91	19.23	2.15	17.09	51.168	Vertical	Pass
		819	1.85	1.91	19.26	2.15	17.05	50.699	Vertical	Pass
		821.5	1.81	1.92	19.33	2.15	17.07	50.933	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	819	1.93	1.93	19.25	2.15	17.1	51.286	Vertical	Pass
1.4MHz Band 16 QAM	1/#Mid	814.7	1.96	1.91	19.21	2.15	17.11	51.404	Horizontal	Pass
		819	1.90	1.91	19.26	2.15	17.10	51.286	Horizontal	Pass
		823.3	1.75	1.93	19.34	2.15	17.01	50.234	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	815.5	1.88	1.91	19.21	2.15	17.03	50.466	Horizontal	Pass
		819	1.89	1.91	19.26	2.15	17.09	51.168	Horizontal	Pass
		822.5	1.84	1.93	19.34	2.15	17.10	51.286	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	816.5	1.78	1.91	19.23	2.15	16.95	49.545	Horizontal	Pass
		819	1.91	1.91	19.26	2.15	17.11	51.404	Horizontal	Pass
		821.5	1.77	1.92	19.33	2.15	17.03	50.466	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	819	1.98	1.93	19.25	2.15	17.15	51.880	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 26B

Radiated Power (ERP) for Band 26B										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	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	3.85	2.02	19.72	2.15	19.40	87.096	Horizontal	Pass
		836.5	3.73	2.02	19.83	2.15	19.39	86.896	Horizontal	Pass
		848.3	3.55	2.03	19.95	2.15	19.32	85.507	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	3.72	2.02	19.84	2.15	19.39	86.896	Horizontal	Pass
		836.5	3.60	2.02	19.94	2.15	19.37	86.497	Horizontal	Pass
		847.5	3.53	2.03	19.98	2.15	19.33	85.704	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	3.80	2.02	19.75	2.15	19.38	86.696	Horizontal	Pass
		836.5	3.74	2.02	19.83	2.15	19.40	87.096	Horizontal	Pass
		846.5	3.53	2.03	19.92	2.15	19.27	84.528	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	3.57	2.02	19.84	2.15	19.24	83.946	Horizontal	Pass
		836.5	3.48	2.02	19.90	2.15	19.21	83.368	Horizontal	Pass
		844	3.56	2.03	19.96	2.15	19.34	85.901	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	831.5	4.21	2.02	19.33	2.15	19.37	86.497	Vertical	Pass
		836.5	4.18	2.02	19.37	2.15	19.38	86.696	Vertical	Pass
		841.5	3.88	2.03	19.52	2.15	19.22	83.560	Vertical	Pass
1.4MHz Band QPSK	1/#Mid	824.7	3.78	2.02	19.76	2.15	19.37	86.497	Vertical	Pass
		836.5	3.78	2.02	19.78	2.15	19.39	86.896	Vertical	Pass
		848.3	3.63	2.03	19.94	2.15	19.39	86.896	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	3.73	2.02	19.83	2.15	19.39	86.896	Vertical	Pass
		836.5	3.57	2.02	19.96	2.15	19.36	86.298	Vertical	Pass
		847.5	3.69	2.03	19.87	2.15	19.38	86.696	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	3.55	2.02	19.86	2.15	19.24	83.946	Vertical	Pass
		836.5	3.70	2.02	19.81	2.15	19.34	85.901	Vertical	Pass
		846.5	3.63	2.03	19.83	2.15	19.28	84.723	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	3.83	2.02	19.75	2.15	19.41	87.297	Vertical	Pass
		836.5	3.77	2.02	19.85	2.15	19.45	88.105	Vertical	Pass
		844	3.82	2.03	19.80	2.15	19.44	87.902	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	831.5	4.30	2.02	19.31	2.15	19.44	87.902	Horizontal	Pass
		836.5	4.28	2.02	19.33	2.15	19.44	87.902	Horizontal	Pass
		841.5	4.20	2.03	19.38	2.15	19.40	87.096	Horizontal	Pass

Radiated Power (ERP) for Band 26B										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss	Factor	Correction	Max. EPR	Max. EPR	Polarization	
			(dBm)	(dBm)	(dB)	(dB)	Average (dBm)	Average (mW)	Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	824.7	2.59	2.02	19.72	2.15	18.14	65.163	Horizontal	Pass
		836.5	2.47	2.02	19.83	2.15	18.13	65.013	Horizontal	Pass
		848.3	2.29	2.03	19.95	2.15	18.06	63.973	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	2.44	2.02	19.84	2.15	18.11	64.714	Horizontal	Pass
		836.5	2.39	2.02	19.94	2.15	18.16	65.464	Horizontal	Pass
		847.5	2.27	2.03	19.98	2.15	18.07	64.121	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	2.47	2.02	19.75	2.15	18.05	63.826	Horizontal	Pass
		836.5	2.46	2.02	19.83	2.15	18.12	64.863	Horizontal	Pass
		846.5	2.44	2.03	19.92	2.15	18.18	65.766	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	2.36	2.02	19.84	2.15	18.03	63.533	Horizontal	Pass
		836.5	2.28	2.02	19.90	2.15	18.01	63.241	Horizontal	Pass
		844	2.30	2.03	19.96	2.15	18.08	64.269	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	831.5	2.89	2.02	19.33	2.15	18.05	63.826	Vertical	Pass
		836.5	2.89	2.02	19.37	2.15	18.09	64.417	Vertical	Pass
		841.5	2.67	2.03	19.52	2.15	18.01	63.241	Vertical	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	2.47	2.02	19.76	2.15	18.06	63.973	Vertical	Pass
		836.5	2.58	2.02	19.78	2.15	18.19	65.917	Vertical	Pass
		848.3	2.30	2.03	19.94	2.15	18.06	63.973	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	2.46	2.02	19.83	2.15	18.12	64.863	Vertical	Pass
		836.5	2.35	2.02	19.96	2.15	18.14	65.163	Vertical	Pass
		847.5	2.39	2.03	19.87	2.15	18.08	64.269	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	2.49	2.02	19.86	2.15	18.18	65.766	Vertical	Pass
		836.5	2.42	2.02	19.81	2.15	18.06	63.973	Vertical	Pass
		846.5	2.51	2.03	19.83	2.15	18.16	65.464	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	2.64	2.02	19.75	2.15	18.22	66.374	Vertical	Pass
		836.5	2.52	2.02	19.85	2.15	18.20	66.069	Vertical	Pass
		844	2.60	2.03	19.80	2.15	18.22	66.374	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	831.5	3.08	2.02	19.31	2.15	18.22	66.374	Horizontal	Pass
		836.5	3.10	2.02	19.33	2.15	18.26	66.988	Horizontal	Pass
		841.5	3.01	2.03	19.38	2.15	18.21	66.222	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)

8.12 LTE BAND 41

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result					Polarization Of Max. ERP	Conclusion
			SG Level	Cable Loss	Factor	Max. EIRP	Max. EIRP		
			(dBm)	(dBm)	(dB)	Average (dBm)	Average (mW)		
5.0MHz Band QPSK	1/#Mid	2537.5	-0.98	4.54	27.75	22.23	167.109	Horizontal	Pass
		2595	-0.85	4.69	27.72	22.18	165.196	Horizontal	Pass
		2652.5	-0.74	4.71	27.71	22.26	168.267	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2540	-0.92	4.55	27.76	22.29	169.434	Horizontal	Pass
		2595	-0.79	4.69	27.72	22.24	167.494	Horizontal	Pass
		2650	-0.81	4.72	27.70	22.17	164.816	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2542.5	-0.93	4.55	27.77	22.29	169.434	Horizontal	Pass
		2595	-0.74	4.69	27.72	22.29	169.434	Horizontal	Pass
		2647.5	-0.68	4.72	27.69	22.29	169.434	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2545	-0.94	4.57	27.78	22.27	168.655	Horizontal	Pass
		2595	-0.80	4.73	27.72	22.19	165.577	Horizontal	Pass
		2645	-0.73	4.75	27.68	22.20	165.959	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2537.5	-0.96	4.54	27.75	22.25	167.880	Vertical	Pass
		2595	-0.86	4.69	27.72	22.17	164.816	Vertical	Pass
		2652.5	-0.80	4.71	27.71	22.20	165.959	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2540	-0.94	4.55	27.76	22.27	168.655	Vertical	Pass
		2595	-0.78	4.69	27.72	22.25	167.880	Vertical	Pass
		2650	-0.74	4.72	27.70	22.24	167.494	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2542.5	-1.03	4.55	27.77	22.19	165.577	Vertical	Pass
		2595	-0.81	4.69	27.72	22.22	166.725	Vertical	Pass
		2647.5	-0.75	4.72	27.69	22.22	166.725	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2545	-0.89	4.57	27.78	22.32	170.608	Vertical	Pass
		2595	-0.68	4.73	27.72	22.31	170.216	Vertical	Pass
		2645	-0.59	4.75	27.68	22.34	171.396	Vertical	Pass

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level	Cable Loss (dBm)	Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)			Average	Average		
						(dBm)	(mW)		
5.0MHz Band 16 QAM	1/#Mid	2537.5	-1.84	4.54	27.75	21.37	137.088	Horizontal	Pass
		2595	-1.58	4.69	27.72	21.45	139.637	Horizontal	Pass
		2652.5	-1.57	4.71	27.71	21.43	138.995	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2540	-1.71	4.55	27.76	21.50	141.254	Horizontal	Pass
		2595	-1.55	4.69	27.72	21.48	140.605	Horizontal	Pass
		2650	-1.50	4.72	27.70	21.48	140.605	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2542.5	-1.83	4.55	27.77	21.39	137.721	Horizontal	Pass
		2595	-1.57	4.69	27.72	21.46	139.959	Horizontal	Pass
		2647.5	-1.53	4.72	27.69	21.44	139.316	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2545	-1.83	4.57	27.78	21.38	137.404	Horizontal	Pass
		2595	-1.61	4.73	27.72	21.38	137.404	Horizontal	Pass
		2645	-1.54	4.75	27.68	21.39	137.721	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2537.5	-1.82	4.54	27.75	21.39	137.721	Vertical	Pass
		2595	-1.68	4.69	27.72	21.35	136.458	Vertical	Pass
		2652.5	-1.55	4.71	27.71	21.45	139.637	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2540	-1.80	4.55	27.76	21.41	138.357	Vertical	Pass
		2595	-1.65	4.69	27.72	21.38	137.404	Vertical	Pass
		2650	-1.59	4.72	27.70	21.39	137.721	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2542.5	-1.87	4.55	27.77	21.35	136.458	Vertical	Pass
		2595	-1.71	4.69	27.72	21.32	135.519	Vertical	Pass
		2647.5	-1.59	4.72	27.69	21.38	137.404	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2545	-1.68	4.57	27.78	21.53	142.233	Vertical	Pass
		2595	-1.45	4.73	27.72	21.54	142.561	Vertical	Pass
		2645	-1.39	4.75	27.68	21.54	142.561	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 66

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							(mW)		
1.4MHz Band QPSK	1/#Mid	1710.7	-2.07	3.76	28.24	22.41	174.181	Horizontal	Pass
		1745	-2.00	3.91	28.22	22.31	170.216	Horizontal	Pass
		1779.3	-1.90	3.93	28.2	22.37	172.584	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.05	3.77	28.23	22.41	174.181	Horizontal	Pass
		1745	-2.04	3.91	28.24	22.29	169.434	Horizontal	Pass
		1778.5	-1.95	3.94	28.25	22.36	172.187	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.26	3.77	28.31	22.28	169.044	Horizontal	Pass
		1745	-2.06	3.91	28.22	22.25	167.880	Horizontal	Pass
		1777.5	-1.88	3.94	28.2	22.38	172.982	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-2.14	3.79	28.33	22.40	173.780	Horizontal	Pass
		1745	-1.88	3.95	28.22	22.39	173.380	Horizontal	Pass
		1775	-1.82	3.97	28.19	22.40	173.780	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-2.25	3.79	28.34	22.30	169.824	Horizontal	Pass
		1745	-1.85	3.95	28.22	22.42	174.582	Horizontal	Pass
		1772.5	-1.86	3.97	28.18	22.35	171.791	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-2.20	3.81	28.35	22.34	171.396	Horizontal	Pass
		1745	-1.99	3.96	28.22	22.27	168.655	Horizontal	Pass
		1770	-1.84	4	28.16	22.32	170.608	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-2.18	3.76	28.24	22.30	169.824	Vertical	Pass
		1745	-1.95	3.91	28.22	22.36	172.187	Vertical	Pass
		1779.3	-1.85	3.93	28.2	22.42	174.582	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.09	3.77	28.23	22.37	172.584	Vertical	Pass
		1745	-1.97	3.91	28.24	22.36	172.187	Vertical	Pass
		1778.5	-1.99	3.94	28.25	22.32	170.608	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.14	3.77	28.31	22.40	173.780	Vertical	Pass
		1745	-1.95	3.91	28.22	22.36	172.187	Vertical	Pass
		1777.5	-1.85	3.94	28.2	22.41	174.181	Vertical	Pass
10.0MHz	1/#Mid	1715	-2.24	3.79	28.34	22.31	170.216	Vertical	Pass

Band		1745	-1.93	3.95	28.22	22.34	171.396	Vertical	Pass
QPSK		1775	-1.84	3.97	28.18	22.37	172.584	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-2.14	3.81	28.35	22.40	173.780	Vertical	Pass
Band		1745	-1.88	3.96	28.22	22.38	172.982	Vertical	Pass
QPSK		1772.5	-1.75	4	28.16	22.41	174.181	Vertical	Pass
20.0MHz	1/#Mid	1720	-2.09	3.79	28.34	22.46	176.198	Vertical	Pass
Band		1745	-1.81	3.95	28.22	22.46	176.198	Vertical	Pass
QPSK		1770	-1.77	3.97	28.18	22.44	175.388	Vertical	Pass

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss	Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							(mW)		
1.4MHz Band 16 QAM	1/#Mid	1710.7	-3.03	3.76	28.24	21.45	139.637	Horizontal	Pass
		1745	-2.91	3.91	28.22	21.40	138.038	Horizontal	Pass
		1779.3	-2.90	3.93	28.2	21.37	137.088	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-2.97	3.77	28.23	21.49	140.929	Horizontal	Pass
		1745	-2.91	3.91	28.24	21.42	138.676	Horizontal	Pass
		1778.5	-2.84	3.94	28.25	21.47	140.281	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-3.13	3.77	28.31	21.41	138.357	Horizontal	Pass
		1745	-2.86	3.91	28.22	21.45	139.637	Horizontal	Pass
		1777.5	-2.78	3.94	28.2	21.48	140.605	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-3.06	3.79	28.33	21.48	140.605	Horizontal	Pass
		1745	-2.80	3.95	28.22	21.47	140.281	Horizontal	Pass
		1775	-2.83	3.97	28.19	21.39	137.721	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-3.15	3.79	28.34	21.40	138.038	Horizontal	Pass
		1745	-2.86	3.95	28.22	21.41	138.357	Horizontal	Pass
		1772.5	-2.72	3.97	28.18	21.49	140.929	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-3.08	3.81	28.35	21.46	139.959	Horizontal	Pass
		1745	-2.86	3.96	28.22	21.40	138.038	Horizontal	Pass
		1770	-2.72	4	28.16	21.44	139.316	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-3.02	3.76	28.24	21.46	139.959	Vertical	Pass
		1745	-2.92	3.91	28.22	21.39	137.721	Vertical	Pass
		1779.3	-2.77	3.93	28.2	21.50	141.254	Vertical	Pass
3.0MHz Band 16	1/#Mid	1711.5	-2.98	3.77	28.23	21.48	140.605	Vertical	Pass
		1745	-2.90	3.91	28.24	21.43	138.995	Vertical	Pass

QAM		1778.5	-2.90	3.94	28.25	21.41	138.357	Vertical	Pass
5.0MHz	1/#Mid	1712.5	-3.05	3.77	28.31	21.49	140.929	Vertical	Pass
Band 16		1745	-2.97	3.91	28.22	21.34	136.144	Vertical	Pass
QAM		1777.5	-2.92	3.94	28.2	21.34	136.144	Vertical	Pass
10.0MHz		1715	-3.20	3.79	28.34	21.35	136.458	Vertical	Pass
Band 16	1/#Mid	1745	-2.92	3.95	28.22	21.35	136.458	Vertical	Pass
QAM		1775	-2.84	3.97	28.18	21.37	137.088	Vertical	Pass
15.0MHz		1717.5	-3.13	3.81	28.35	21.41	138.357	Vertical	Pass
Band 16	1/#Mid	1745	-2.90	3.96	28.22	21.36	136.773	Vertical	Pass
QAM		1772.5	-2.80	4	28.16	21.36	136.773	Vertical	Pass
20.0MHz		1720	-3.04	3.79	28.34	21.51	141.579	Vertical	Pass
Band 16	1/#Mid	1745	-2.73	3.95	28.22	21.54	142.561	Vertical	Pass
QAM		1770	-2.69	3.97	28.18	21.52	141.906	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)

8.14 LTE BAND 71

Radiated Power (ERP) for Band 71										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG	Cable Loss (dBm)	Factor (dB)	Correction	Max. EPR	Max. EPR	Polarization Of Max. ERP	
			(dBm)			(dB)	Average	Average		
							(dBm)	(mW)		
5.0MHz Band QPSK	1/#Mid	665.5	6.74	1.91	19.21	2.15	21.89	154.525	Vertical	Pass
		680.5	6.58	1.91	19.26	2.15	21.78	150.661	Vertical	Pass
		695.5	6.58	1.93	19.34	2.15	21.84	152.757	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	668	6.72	1.91	19.21	2.15	21.87	153.815	Vertical	Pass
		680.5	6.56	1.91	19.26	2.15	21.76	149.968	Vertical	Pass
		693	6.59	1.93	19.34	2.15	21.85	153.109	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	670.5	6.57	1.91	19.23	2.15	21.74	149.279	Vertical	Pass
		680.5	6.55	1.91	19.26	2.15	21.75	149.624	Vertical	Pass
		690.5	6.48	1.92	19.33	2.15	21.74	149.279	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	673	6.55	1.91	19.25	2.15	21.74	149.279	Vertical	Pass
		683	6.59	1.91	19.26	2.15	21.79	151.008	Vertical	Pass
		688	6.54	1.92	19.32	2.15	21.79	151.008	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	665.5	6.71	1.91	19.21	2.15	21.86	153.462	Horizontal	Pass
		680.5	6.56	1.91	19.26	2.15	21.76	149.968	Horizontal	Pass
		695.5	6.57	1.93	19.34	2.15	21.83	152.405	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	668	6.70	1.91	19.21	2.15	21.85	153.109	Horizontal	Pass
		680.5	6.69	1.91	19.26	2.15	21.89	154.525	Horizontal	Pass
		693	6.55	1.93	19.34	2.15	21.81	151.705	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	670.5	6.62	1.91	19.23	2.15	21.79	151.008	Horizontal	Pass
		680.5	6.60	1.91	19.26	2.15	21.80	151.356	Horizontal	Pass
		690.5	6.49	1.92	19.33	2.15	21.75	149.624	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	673	6.74	1.91	19.25	2.15	21.93	155.955	Horizontal	Pass
		683	6.74	1.91	19.26	2.15	21.94	156.315	Horizontal	Pass
		688	6.69	1.92	19.32	2.15	21.94	156.315	Horizontal	Pass

Radiated Power (ERP) for Band 71										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG	Cable Loss (dBm)	Factor (dB)	Correction	Max. EPR	Max. EPR	Polarization Of Max. ERP	
			(dBm)			(dB)	Average	Average		
							(dBm)	(mW)		
5.0MHz Band 16 QAM	1/#Mid	665.5	6.08	1.91	19.21	2.15	21.23	132.739	Vertical	Pass
		680.5	6.01	1.91	19.26	2.15	21.21	132.130	Vertical	Pass
		695.5	5.93	1.93	19.34	2.15	21.19	131.522	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	668	6.07	1.91	19.21	2.15	21.22	132.434	Vertical	Pass
		680.5	6.03	1.91	19.26	2.15	21.23	132.739	Vertical	Pass
		693	5.96	1.93	19.34	2.15	21.22	132.434	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	670.5	6.00	1.91	19.23	2.15	21.17	130.918	Vertical	Pass
		680.5	5.97	1.91	19.26	2.15	21.17	130.918	Vertical	Pass
		690.5	6.02	1.92	19.33	2.15	21.28	134.276	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	673	6.10	1.91	19.25	2.15	21.29	134.586	Vertical	Pass
		683	5.98	1.91	19.26	2.15	21.18	131.220	Vertical	Pass
		688	6.05	1.92	19.32	2.15	21.30	134.896	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	665.5	6.14	1.91	19.21	2.15	21.29	134.586	Horizontal	Pass
		680.5	6.01	1.91	19.26	2.15	21.21	132.130	Horizontal	Pass
		695.5	5.95	1.93	19.34	2.15	21.21	132.130	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	668	6.12	1.91	19.21	2.15	21.27	133.968	Horizontal	Pass
		680.5	5.98	1.91	19.26	2.15	21.18	131.220	Horizontal	Pass
		693	5.91	1.93	19.34	2.15	21.17	130.918	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	670.5	6.04	1.91	19.23	2.15	21.21	132.130	Horizontal	Pass
		680.5	6.03	1.91	19.26	2.15	21.23	132.739	Horizontal	Pass
		690.5	5.97	1.92	19.33	2.15	21.23	132.739	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	673	6.14	1.91	19.25	2.15	21.33	135.831	Horizontal	Pass
		683	6.11	1.91	19.26	2.15	21.31	135.207	Horizontal	Pass
		688	6.08	1.92	19.32	2.15	21.33	135.831	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)

9. SPURIOUS RADIATION EMISSION

RULE PART(S)

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

LIMIT

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

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

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

TEST PROCEDURE

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

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

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

The power of any unwanted emissions measured from the channel edge of the equipment shall be attenuated below the transmitter power, P (dBW), as follows:

- a. for base station and subscriber equipment, other than mobile subscriber equipment, the attenuation shall not be less than $43 + 10 \log_{10}(p)$, dB; and
- b. for mobile subscriber equipment, the attenuation shall not be less than $43 + 10 \log_{10}(p)$, dB at the channel edges and $55 + 10 \log_{10}(p)$ at 5.5 MHz away and beyond the channel edges where p in (a) and (b) is the transmitter power measured in watts.

MODES TESTED

LTE Band 2/4/5/7/12/13/14/17/25/26/41/66/71

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	-53.38	4.04	33.51	-23.91	-13	-10.91	Horizontal
3701.4	-50.81	4.04	33.51	-21.34	-13	-8.34	Vertical
5552.1	-47.18	5.24	35.84	-16.58	-13	-3.58	Vertical
5552.1	-52.33	5.24	35.84	-21.73	-13	-8.73	Horizontal
176.2	-35.72	1.43	16.02	-21.13	-13	-8.13	Vertical
321.8	-38.22	1.30	17.99	-21.53	-13	-8.53	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-44.16	4.04	33.56	-14.64	-13	-1.64	Horizontal
3760.0	-50.59	4.04	33.56	-21.07	-13	-8.07	Vertical
5640.0	-52.99	5.24	35.91	-22.32	-13	-9.32	Vertical
5640.0	-51.72	5.24	35.91	-21.05	-13	-8.05	Horizontal
206.9	-44.24	1.62	16.97	-28.89	-13	-15.89	Vertical
368.9	-40.93	1.74	15.98	-26.70	-13	-13.70	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-47.10	4.04	34.00	-17.14	-13	-4.14	Horizontal
3818.6	-52.24	4.04	34.00	-22.28	-13	-9.28	Vertical
5727.9	-46.85	5.24	36.04	-16.05	-13	-3.05	Vertical
5727.9	-53.90	5.24	36.04	-23.10	-13	-10.10	Horizontal
210.9	-44.17	1.42	17.29	-28.30	-13	-15.30	Vertical
388.5	-36.42	1.50	17.90	-20.01	-13	-7.01	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	-47.58	4.07	33.54	-18.11	-13	-5.11	Horizontal
3720.0	-53.85	4.07	33.54	-24.38	-13	-11.38	Vertical
5580.0	-51.92	5.28	35.86	-21.34	-13	-8.34	Vertical
5580.0	-52.44	5.28	35.86	-21.86	-13	-8.86	Horizontal
196.6	-43.64	1.58	16.89	-28.32	-13	-15.32	Vertical
360.7	-34.92	1.76	17.26	-19.42	-13	-6.42	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-52.23	4.04	33.56	-22.71	-13	-9.71	Horizontal
3760.0	-47.84	4.04	33.56	-18.32	-13	-5.32	Vertical
5640.0	-48.70	5.24	35.91	-18.03	-13	-5.03	Vertical
5640.0	-50.54	5.24	35.91	-19.87	-13	-6.87	Horizontal
190.9	-34.04	1.46	16.27	-19.23	-13	-6.23	Vertical
448.2	-38.80	1.59	15.15	-25.24	-13	-12.24	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-46.55	4.04	34.00	-16.59	-13	-3.59	Horizontal
3800.0	-51.26	4.04	34.00	-21.30	-13	-8.30	Vertical
5700.0	-44.64	5.24	36.04	-13.84	-13	-0.84	Vertical
5700.0	-53.67	5.24	36.04	-22.87	-13	-9.87	Horizontal
197.1	-38.02	1.36	17.39	-21.98	-13	-8.98	Vertical
272.8	-39.68	1.66	15.39	-25.95	-13	-12.95	Horizontal

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

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

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

9.2 LTE BAND 4

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-45.65	4.02	29.80	-19.87	-13	-6.87	Horizontal
3421.4	-49.63	4.02	29.80	-23.85	-13	-10.85	Vertical
5132.1	-49.60	5.24	35.84	-19.00	-13	-6.00	Vertical
5132.1	-49.69	5.24	35.84	-19.09	-13	-6.09	Horizontal
180.6	-36.07	1.68	16.04	-21.71	-13	-8.71	Vertical
460.8	-39.35	1.78	17.74	-23.39	-13	-10.39	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-48.37	4.03	30.00	-22.40	-13	-9.40	Horizontal
3465.0	-51.65	4.03	30.00	-25.68	-13	-12.68	Vertical
5197.5	-46.97	5.25	35.86	-16.36	-13	-3.36	Vertical
5197.5	-51.88	5.25	35.86	-21.27	-13	-8.27	Horizontal
187.3	-39.24	1.72	17.69	-23.27	-13	-10.27	Vertical
321.8	-43.15	1.62	16.02	-28.74	-13	-15.74	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-49.33	4.05	30.01	-23.37	-13	-10.37	Horizontal
3508.6	-51.33	4.05	30.01	-25.37	-13	-12.37	Vertical
5262.9	-52.85	5.26	35.86	-22.25	-13	-9.25	Vertical
5262.9	-51.74	5.26	35.86	-21.14	-13	-8.14	Horizontal
194.8	-41.15	1.80	16.69	-26.26	-13	-13.26	Vertical
401.3	-34.01	1.75	16.66	-19.11	-13	-6.11	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	-51.18	4.02	29.80	-25.40	-13	-12.40	Horizontal
3440.0	-53.04	4.02	29.80	-27.26	-13	-14.26	Vertical
5160.0	-44.62	5.24	35.84	-14.02	-13	-1.02	Vertical
5160.0	-52.46	5.24	35.84	-21.86	-13	-8.86	Horizontal
191.8	-34.42	1.57	17.26	-18.73	-13	-5.73	Vertical
350.8	-34.96	1.78	16.35	-20.39	-13	-7.39	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-53.37	4.03	30.00	-27.40	-13	-14.40	Horizontal
3465.0	-45.72	4.03	30.00	-19.75	-13	-6.75	Vertical
5197.5	-50.34	5.25	35.86	-19.73	-13	-6.73	Vertical
5197.5	-50.28	5.25	35.86	-19.67	-13	-6.67	Horizontal
206.6	-36.43	1.44	17.95	-19.92	-13	-6.92	Vertical
323.1	-41.95	1.65	16.09	-27.51	-13	-14.51	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-51.88	4.05	27.68	-28.25	-13	-15.25	Horizontal
3490.0	-49.50	4.05	27.68	-25.87	-13	-12.87	Vertical
5235.0	-52.91	5.26	35.86	-22.31	-13	-9.31	Vertical
5235.0	-52.02	5.26	35.86	-21.42	-13	-8.42	Horizontal
176.7	-36.38	1.61	16.85	-21.14	-13	-8.14	Vertical
464.8	-41.38	1.61	15.19	-27.80	-13	-14.80	Horizontal

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

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

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

9.3 LTE BAND 5

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

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-52.65	2.78	27.50	-27.93	-13	-14.93	Horizontal
1649.4	-50.52	2.78	27.50	-25.80	-13	-12.80	Vertical
2474.1	-48.88	2.90	27.80	-23.98	-13	-10.98	Vertical
2474.1	-49.73	2.90	27.80	-24.83	-13	-11.83	Horizontal
195.3	-34.63	1.76	17.59	-18.80	-13	-5.80	Vertical
236.5	-36.03	1.63	15.87	-21.79	-13	-8.79	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-47.78	2.80	27.48	-23.10	-13	-10.10	Horizontal
1673.0	-49.18	2.80	27.48	-24.50	-13	-11.50	Vertical
2509.5	-46.25	2.91	27.70	-21.46	-13	-8.46	Vertical
2509.5	-50.87	2.91	27.70	-26.08	-13	-13.08	Horizontal
179.5	-39.56	1.61	15.68	-25.49	-13	-12.49	Vertical
357.4	-35.06	1.59	17.52	-19.14	-13	-6.14	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-53.64	2.82	27.43	-29.03	-13	-16.03	Horizontal
1696.6	-52.77	2.82	27.43	-28.16	-13	-15.16	Vertical
2544.9	-52.70	2.92	27.74	-27.88	-13	-14.88	Vertical
2544.9	-52.71	2.92	27.74	-27.89	-13	-14.89	Horizontal
189.7	-34.61	1.69	16.67	-19.62	-13	-6.62	Vertical
282.0	-37.19	1.70	17.18	-21.71	-13	-8.71	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	-45.05	2.78	27.50	-20.33	-13	-7.33	Horizontal
1658.0	-49.30	2.78	27.50	-24.58	-13	-11.58	Vertical
2487.0	-52.42	2.90	27.80	-27.52	-13	-14.52	Vertical
2487.0	-53.10	2.90	27.80	-28.20	-13	-15.20	Horizontal
175.1	-35.26	1.71	15.57	-21.40	-13	-8.40	Vertical
309.9	-36.35	1.34	16.40	-21.29	-13	-8.29	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-44.87	2.80	27.48	-20.19	-13	-7.19	Horizontal
1673.0	-52.85	2.80	27.48	-28.17	-13	-15.17	Vertical
2509.5	-53.86	2.91	27.70	-29.07	-13	-16.07	Vertical
2509.5	-53.26	2.91	27.70	-28.47	-13	-15.47	Horizontal
198.5	-38.00	1.44	17.04	-22.40	-13	-9.40	Vertical
348.7	-44.31	1.76	17.62	-28.45	-13	-15.45	Horizontal
Test Results for High Channel 844MHz							
1688.0	-48.84	2.82	27.43	-24.23	-13	-11.23	Horizontal
1688.0	-53.75	2.82	27.43	-29.14	-13	-16.14	Vertical
2532.0	-52.91	2.92	27.74	-28.09	-13	-15.09	Vertical
2532.0	-53.24	2.92	27.74	-28.42	-13	-15.42	Horizontal
184.8	-40.62	1.74	17.70	-24.66	-13	-11.66	Vertical
355.9	-37.28	1.41	17.46	-21.22	-13	-8.22	Horizontal

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

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

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

9.4 LTE BAND 7

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

Test Results for Low Channel 2502.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5005.0	-64.20	5.23	35.81	-33.62	-25	-8.62	Horizontal
5005.0	-64.47	5.23	35.81	-33.89	-25	-8.89	Vertical
7507.5	-59.30	5.67	36.85	-28.12	-25	-3.12	Vertical
7507.5	-61.72	5.67	36.85	-30.54	-25	-5.54	Horizontal
188.2	-50.45	1.73	17.97	-34.21	-25	-9.21	Vertical
406.5	-50.91	1.38	15.11	-37.18	-25	-12.18	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-60.44	5.23	35.82	-29.85	-25	-4.85	Horizontal
5070.0	-59.21	5.23	35.82	-28.62	-25	-3.62	Vertical
7605.0	-60.09	5.67	36.85	-28.91	-25	-3.91	Vertical
7605.0	-61.48	5.67	36.85	-30.30	-25	-5.30	Horizontal
203.6	-51.20	1.77	16.17	-36.79	-25	-11.79	Vertical
404.6	-46.86	1.63	15.21	-33.28	-25	-8.28	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-64.64	5.24	35.83	-34.05	-25	-9.05	Horizontal
5135.0	-64.00	5.24	35.83	-33.41	-25	-8.41	Vertical
7702.5	-60.10	5.68	36.87	-28.91	-25	-3.91	Vertical
7702.5	-59.98	5.68	36.87	-28.79	-25	-3.79	Horizontal
201.1	-46.49	1.58	17.56	-30.51	-25	-5.51	Vertical
435.0	-46.14	1.45	16.58	-31.01	-25	-6.01	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	-64.84	5.23	35.82	-34.25	-25	-9.25	Horizontal
5020.0	-63.45	5.23	35.82	-32.86	-25	-7.86	Vertical
7530.0	-63.01	5.67	36.86	-31.82	-25	-6.82	Vertical
7530.0	-61.89	5.67	36.86	-30.70	-25	-5.70	Horizontal
184.8	-49.59	1.63	15.76	-35.46	-25	-10.46	Vertical
370.6	-46.90	1.71	15.44	-33.17	-25	-8.17	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-59.47	5.23	35.82	-28.88	-25	-3.88	Horizontal
5070.0	-60.94	5.23	35.82	-30.35	-25	-5.35	Vertical
7605.0	-61.16	5.67	36.85	-29.98	-25	-4.98	Vertical
7605.0	-62.06	5.67	36.85	-30.88	-25	-5.88	Horizontal
199.7	-53.05	1.79	16.84	-37.99	-25	-12.99	Vertical
267.5	-48.60	1.71	17.64	-32.67	-25	-7.67	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-61.43	5.24	35.83	-30.84	-25	-5.84	Horizontal
5120.0	-63.03	5.24	35.83	-32.44	-25	-7.44	Vertical
7680.0	-60.18	5.70	36.88	-29.00	-25	-4.00	Vertical
7680.0	-62.51	5.70	36.88	-31.33	-25	-6.33	Horizontal
206.4	-48.28	1.79	16.84	-33.22	-25	-8.22	Vertical
316.0	-46.17	1.71	17.64	-30.24	-25	-5.24	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	-48.08	2.60	27.20	-23.48	-13	-10.48	Horizontal
1399.4	-46.04	2.60	27.20	-21.44	-13	-8.44	Vertical
2099.1	-51.98	2.85	27.54	-27.29	-13	-14.29	Vertical
2099.1	-53.15	2.85	27.54	-28.46	-13	-15.46	Horizontal
203.6	-36.94	1.49	17.78	-20.65	-13	-7.65	Vertical
395.1	-36.98	1.36	17.33	-21.01	-13	-8.01	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.0	-48.00	2.61	27.28	-23.33	-13	-10.33	Horizontal
1415.0	-46.46	2.61	27.28	-21.79	-13	-8.79	Vertical
2122.5	-51.70	2.87	27.59	-26.98	-13	-13.98	Vertical
2122.5	-53.47	2.87	27.59	-28.75	-13	-15.75	Horizontal
179.5	-38.76	1.73	15.74	-24.75	-13	-11.75	Vertical
337.2	-44.26	1.62	15.79	-30.09	-13	-17.09	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-44.34	2.63	27.28	-19.69	-13	-6.69	Horizontal
1430.6	-49.69	2.63	27.28	-25.04	-13	-12.04	Vertical
2145.9	-49.80	2.88	27.60	-25.08	-13	-12.08	Vertical
2145.9	-49.02	2.88	27.60	-24.30	-13	-11.30	Horizontal
177.1	-43.13	1.61	18.00	-26.74	-13	-13.74	Vertical
462.8	-38.73	1.45	15.49	-24.70	-13	-11.70	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	-49.06	2.61	27.26	-24.41	-13	-11.41	Horizontal
1408.0	-48.75	2.61	27.26	-24.10	-13	-11.10	Vertical
2112.0	-44.58	2.87	27.58	-19.87	-13	-6.87	Vertical
2112.0	-52.44	2.87	27.58	-27.73	-13	-14.73	Horizontal
183.6	-37.92	1.31	16.97	-22.26	-13	-9.26	Vertical
282.7	-35.71	1.65	16.70	-20.66	-13	-7.66	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.0	-48.64	2.61	27.28	-23.97	-13	-10.97	Horizontal
1415.0	-46.55	2.61	27.28	-21.88	-13	-8.88	Vertical
2122.5	-52.58	2.87	27.59	-27.86	-13	-14.86	Vertical
2122.5	-52.67	2.87	27.59	-27.95	-13	-14.95	Horizontal
207.2	-35.31	1.72	17.99	-19.04	-13	-6.04	Vertical
232.2	-41.80	1.73	17.94	-25.59	-13	-12.59	Horizontal
Test Results for High Channel 711MHz							
1422.0	-49.86	2.62	27.28	-25.20	-13	-12.20	Horizontal
1422.0	-51.56	2.62	27.28	-26.90	-13	-13.90	Vertical
2133.0	-44.51	2.87	27.60	-19.78	-13	-6.78	Vertical
2133.0	-50.89	2.87	27.60	-26.16	-13	-13.16	Horizontal
190.3	-37.36	1.58	15.93	-23.01	-13	-10.01	Vertical
346.7	-39.09	1.36	15.59	-24.86	-13	-11.86	Horizontal

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

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

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

9.6 LTE BAND 13

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 Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1559.0	-72.59	2.61	27.28	-47.92	-40	-7.92	Horizontal
1559.0	-70.80	2.61	27.28	-46.13	-40	-6.13	Vertical
2338.5	-70.63	2.87	27.59	-45.91	-13	-32.91	Vertical
2338.5	-69.54	2.87	27.59	-44.82	-13	-31.82	Horizontal
176.6	-73.21	1.71	16.15	-58.77	-13	-45.77	Vertical
320.7	-72.04	1.41	17.32	-56.13	-13	-43.13	Horizontal
Test Results For Mid Channel 782MHz							
1564.0	-67.15	2.62	27.30	-42.47	-40	-2.47	Horizontal
1564.0	-71.19	2.62	27.30	-46.51	-40	-6.51	Vertical
2346.0	-72.32	2.87	27.62	-47.57	-13	-34.57	Vertical
2346.0	-70.55	2.87	27.62	-45.80	-13	-32.80	Horizontal
210.2	-72.33	1.42	15.25	-58.51	-13	-45.51	Vertical
292.2	-71.80	1.36	17.19	-55.97	-13	-42.97	Horizontal
Test Results for High Channel 784.5MHz							
1569.0	-68.11	2.66	27.28	-43.49	-40	-3.49	Horizontal
1569.0	-77.80	2.66	27.28	-53.18	-40	-13.18	Vertical
2353.5	-72.72	2.88	27.60	-48.00	-13	-35.00	Vertical
2353.5	-72.79	2.88	27.60	-48.07	-13	-35.07	Horizontal
201.4	-69.73	1.32	17.29	-53.76	-13	-40.76	Vertical
328.4	-73.06	1.72	16.89	-57.89	-13	-44.89	Horizontal

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

Test Results for Channel 782MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1564.0	-76.92	2.62	27.30	-52.24	-40	-12.24	Horizontal
1564.0	-70.37	2.62	27.30	-45.69	-40	-5.69	Vertical
2346.0	-73.39	2.87	27.62	-48.64	-13	-35.64	Vertical
2346.0	-69.49	2.87	27.62	-44.74	-13	-31.74	Horizontal
179.8	-70.60	1.35	16.91	-55.04	-13	-42.04	Vertical
271.6	-71.31	1.62	16.31	-56.62	-13	-43.62	Horizontal

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

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

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

9.7 LTE BAND 14

QPSK EIRP POWER FOR LTE BAND 14 (5MHZ BANDWIDTH)

Test Results for Low Channel 790.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1581.0	-69.48	2.63	27.28	-44.83	-40	-4.83	Horizontal
1581.0	-74.16	2.63	27.28	-49.51	-40	-9.51	Vertical
2371.5	-68.48	2.89	27.59	-43.78	-13	-30.78	Vertical
2371.5	-71.41	2.89	27.59	-46.71	-13	-33.71	Horizontal
180.4	-71.97	1.71	16.15	-57.53	-13	-44.53	Vertical
421.1	-71.48	1.41	17.32	-55.57	-13	-42.57	Horizontal
Test Results For Mid Channel 793MHz							
1586.0	-71.72	2.63	27.30	-47.05	-40	-7.05	Horizontal
1586.0	-73.18	2.63	27.30	-48.51	-40	-8.51	Vertical
2379.0	-72.26	2.91	27.62	-47.55	-13	-34.55	Vertical
2379.0	-67.23	2.91	27.62	-42.52	-13	-29.52	Horizontal
178.6	-67.63	1.42	15.25	-53.81	-13	-40.81	Vertical
369.1	-74.45	1.36	17.19	-58.62	-13	-45.62	Horizontal
Test Results for High Channel 795.5MHz							
1591.0	-70.43	2.66	27.28	-45.81	-40	-5.81	Horizontal
1591.0	-71.45	2.66	27.28	-46.83	-40	-6.83	Vertical
2386.5	-73.66	2.91	27.60	-48.97	-13	-35.97	Vertical
2386.5	-73.80	2.91	27.60	-49.11	-13	-36.11	Horizontal
202.6	-70.39	1.32	17.29	-54.42	-13	-41.42	Vertical
412.6	-69.81	1.72	16.89	-54.64	-13	-41.64	Horizontal

QPSK EIRP POWER FOR LTE BAND 14 (10MHZ BANDWIDTH)

Test Results for Channel 793MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1586.0	-76.52	2.63	27.30	-51.85	-40	-11.85	Horizontal
1586.0	-75.15	2.63	27.30	-50.48	-40	-10.48	Vertical
2379.0	-70.52	2.91	27.62	-45.81	-13	-32.81	Vertical
2379.0	-71.21	2.91	27.62	-46.50	-13	-33.50	Horizontal
175.3	-69.57	1.35	16.91	-54.01	-13	-41.01	Vertical
423.8	-72.58	1.62	16.31	-57.89	-13	-44.89	Horizontal

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

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

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

9.8 LTE BAND 17

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

Test Results for Low Channel 706.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1413.0	-44.85	2.61	27.28	-20.18	-13	-7.18	Horizontal
1413.0	-51.44	2.61	27.28	-26.77	-13	-13.77	Vertical
2119.5	-44.35	2.87	27.59	-19.63	-13	-6.63	Vertical
2119.5	-50.12	2.87	27.59	-25.40	-13	-12.40	Horizontal
203.7	-35.52	1.71	16.15	-21.08	-13	-8.08	Vertical
265.9	-43.72	1.41	17.32	-27.81	-13	-14.81	Horizontal
Test Results For Mid Channel 710MHz							
1420.0	-44.68	2.62	27.30	-20.00	-13	-7.00	Horizontal
1420.0	-50.31	2.62	27.30	-25.63	-13	-12.63	Vertical
2130.0	-51.96	2.87	27.62	-27.21	-13	-14.21	Vertical
2130.0	-50.49	2.87	27.62	-25.74	-13	-12.74	Horizontal
193.6	-34.60	1.42	15.25	-20.78	-13	-7.78	Vertical
338.3	-36.95	1.36	17.19	-21.12	-13	-8.12	Horizontal
Test Results for High Channel 713.5MHz							
1427.0	-48.04	2.66	27.28	-23.42	-13	-10.42	Horizontal
1427.0	-51.45	2.66	27.28	-26.83	-13	-13.83	Vertical
2140.5	-49.19	2.88	27.60	-24.47	-13	-11.47	Vertical
2140.5	-49.10	2.88	27.60	-24.38	-13	-11.38	Horizontal
208.6	-40.12	1.32	17.29	-24.15	-13	-11.15	Vertical
287.0	-38.89	1.72	16.89	-23.72	-13	-10.72	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	-51.14	2.62	27.30	-26.46	-13	-13.46	Horizontal
1418.0	-51.31	2.62	27.30	-26.63	-13	-13.63	Vertical
2127.0	-45.16	2.87	27.62	-20.41	-13	-7.41	Vertical
2127.0	-49.76	2.87	27.62	-25.01	-13	-12.01	Horizontal
187.7	-43.17	1.35	16.91	-27.61	-13	-14.61	Vertical
363.2	-38.87	1.62	16.31	-24.18	-13	-11.18	Horizontal
Test Results for Mid Channel 710MHz							
1420.0	-48.08	2.62	27.30	-23.40	-13	-10.40	Horizontal
1420.0	-50.94	2.62	27.30	-26.26	-13	-13.26	Vertical
2130.0	-49.67	2.87	27.62	-24.92	-13	-11.92	Vertical
2130.0	-51.34	2.87	27.62	-26.59	-13	-13.59	Horizontal
201.7	-40.19	1.51	17.14	-24.56	-13	-11.56	Vertical
306.0	-36.53	1.77	16.88	-21.42	-13	-8.42	Horizontal
Test Results for High Channel 711MHz							
1422.0	-53.60	2.62	27.30	-28.92	-13	-15.92	Horizontal
1422.0	-53.03	2.62	27.30	-28.35	-13	-15.35	Vertical
2133.0	-53.84	2.87	27.62	-29.09	-13	-16.09	Vertical
2133.0	-53.11	2.87	27.62	-28.36	-13	-15.36	Horizontal
183.8	-39.33	1.78	15.95	-25.16	-13	-12.16	Vertical
366.4	-44.84	1.34	17.95	-28.24	-13	-15.24	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 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 Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-51.04	4.26	29.80	-25.50	-13	-12.50	Horizontal
3701.4	-46.72	4.26	29.80	-21.18	-13	-8.18	Vertical
5552.1	-45.14	5.36	35.84	-14.66	-13	-1.66	Vertical
5552.1	-49.33	5.36	35.84	-18.85	-13	-5.85	Horizontal
181.8	-41.73	1.68	16.04	-27.37	-13	-14.37	Vertical
287.0	-35.27	1.78	17.74	-19.31	-13	-6.31	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765.0	-45.01	4.28	30.00	-19.29	-13	-6.29	Horizontal
3765.0	-44.77	4.28	30.00	-19.05	-13	-6.05	Vertical
5647.5	-47.82	5.41	35.86	-17.37	-13	-4.37	Vertical
5647.5	-50.08	5.41	35.86	-19.63	-13	-6.63	Horizontal
210.3	-42.63	1.72	17.69	-26.66	-13	-13.66	Vertical
401.4	-38.18	1.62	16.02	-23.77	-13	-10.77	Horizontal
Test Results for High Channel 1914.3MHz							
3828.6	-47.53	4.31	30.01	-21.83	-13	-8.83	Horizontal
3828.6	-51.79	4.31	30.01	-26.09	-13	-13.09	Vertical
5742.9	-46.26	5.43	35.86	-15.83	-13	-2.83	Vertical
5742.9	-52.03	5.43	35.86	-21.60	-13	-8.60	Horizontal
184.9	-40.51	1.80	16.69	-25.62	-13	-12.62	Vertical
242.2	-35.93	1.75	16.66	-21.03	-13	-8.03	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 Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3720.0	-44.96	4.29	29.80	-19.45	-13	-6.45	Horizontal
3720.0	-50.30	4.29	29.80	-24.79	-13	-11.79	Vertical
5580.0	-44.89	5.38	35.84	-14.43	-13	-1.43	Vertical
5580.0	-49.54	5.38	35.84	-19.08	-13	-6.08	Horizontal
190.5	-40.90	1.57	17.26	-25.21	-13	-12.21	Vertical
380.5	-43.82	1.78	16.35	-29.25	-13	-16.25	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765.0	-48.18	4.28	30.00	-22.46	-13	-9.46	Horizontal
3765.0	-49.93	4.28	30.00	-24.21	-13	-11.21	Vertical
5647.5	-48.29	5.41	35.86	-17.84	-13	-4.84	Vertical
5647.5	-51.91	5.41	35.86	-21.46	-13	-8.46	Horizontal
183.1	-44.96	1.44	17.95	-28.45	-13	-15.45	Vertical
395.6	-44.71	1.65	16.09	-30.27	-13	-17.27	Horizontal
Test Results for High Channel 1905MHz							
3810.0	-44.69	4.35	27.68	-21.36	-13	-8.36	Horizontal
3810.0	-50.90	4.35	27.68	-27.57	-13	-14.57	Vertical
5715.0	-45.31	5.42	35.86	-14.87	-13	-1.87	Vertical
5715.0	-52.04	5.42	35.86	-21.60	-13	-8.60	Horizontal
196.2	-42.02	1.61	16.85	-26.78	-13	-13.78	Vertical
451.4	-35.30	1.61	15.19	-21.72	-13	-8.72	Horizontal

9.10 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	-47.59	4.26	29.80	-22.05	-13	-9.05	Horizontal
1629.4	-53.38	4.26	29.80	-27.84	-13	-14.84	Vertical
2444.1	-50.97	5.36	35.84	-20.49	-13	-7.49	Vertical
2444.1	-52.48	5.36	35.84	-22.00	-13	-9.00	Horizontal
207.3	-41.93	1.68	16.04	-27.57	-13	-14.57	Vertical
242.1	-40.90	1.78	17.74	-24.94	-13	-11.94	Horizontal
Test Results For Mid Channel 819MHz							
1638.0	-52.27	4.28	30.00	-26.55	-13	-13.55	Horizontal
1638.0	-50.49	4.28	30.00	-24.77	-13	-11.77	Vertical
2457.0	-48.90	5.41	35.86	-18.45	-13	-5.45	Vertical
2457.0	-50.29	5.41	35.86	-19.84	-13	-6.84	Horizontal
185.6	-39.19	1.72	17.69	-23.22	-13	-10.22	Vertical
466.6	-43.36	1.62	16.02	-28.95	-13	-15.95	Horizontal
Test Results for High Channel 823.3MHz							
1646.6	-51.10	4.31	30.01	-25.40	-13	-12.40	Horizontal
1646.6	-51.89	4.31	30.01	-26.19	-13	-13.19	Vertical
2469.9	-51.93	5.43	35.86	-21.50	-13	-8.50	Vertical
2469.9	-51.06	5.43	35.86	-20.63	-13	-7.63	Horizontal
207.7	-42.13	1.80	16.69	-27.24	-13	-14.24	Vertical
372.2	-43.07	1.75	16.66	-28.17	-13	-15.17	Horizontal

QPSK EIRP POWER FOR LTE BAND 26A(814MHz~824MHz) (1.4MHZ 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	-48.52	4.28	30.00	-22.80	-13	-9.80	Horizontal
1638.0	-50.99	4.28	30.00	-25.27	-13	-12.27	Vertical
2457.0	-46.03	5.41	35.86	-15.58	-13	-2.58	Vertical
2457.0	-51.24	5.41	35.86	-20.79	-13	-7.79	Horizontal
200.3	-34.24	1.44	17.95	-17.73	-13	-4.73	Vertical
413.0	-42.24	1.65	16.09	-27.80	-13	-14.80	Horizontal

9.11 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	-45.61	4.26	29.80	-20.07	-13	-7.07	Horizontal
1649.4	-48.51	4.26	29.80	-22.97	-13	-9.97	Vertical
2474.1	-47.88	5.36	35.84	-17.40	-13	-4.40	Vertical
2474.1	-50.61	5.36	35.84	-20.13	-13	-7.13	Horizontal
188.2	-43.97	1.68	16.04	-29.61	-13	-16.61	Vertical
427.1	-44.72	1.78	17.74	-28.76	-13	-15.76	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-50.83	4.28	30.00	-25.11	-13	-12.11	Horizontal
1673.0	-45.71	4.28	30.00	-19.99	-13	-6.99	Vertical
2509.5	-46.38	5.41	35.86	-15.93	-13	-2.93	Vertical
2509.5	-49.39	5.41	35.86	-18.94	-13	-5.94	Horizontal
196.8	-39.36	1.72	17.69	-23.39	-13	-10.39	Vertical
273.7	-43.93	1.62	16.02	-29.52	-13	-16.52	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-44.48	4.31	30.01	-18.78	-13	-5.78	Horizontal
1696.6	-51.92	4.31	30.01	-26.22	-13	-13.22	Vertical
2544.9	-47.92	5.43	35.86	-17.49	-13	-4.49	Vertical
2544.9	-53.85	5.43	35.86	-23.42	-13	-10.42	Horizontal
186.9	-34.69	1.80	16.69	-19.80	-13	-6.80	Vertical
283.3	-41.02	1.75	16.66	-26.12	-13	-13.12	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	-53.89	4.29	29.80	-28.38	-13	-15.38	Horizontal
1663.0	-48.95	4.29	29.80	-23.44	-13	-10.44	Vertical
2494.5	-53.91	5.38	35.84	-23.45	-13	-10.45	Vertical
2494.5	-50.27	5.38	35.84	-19.81	-13	-6.81	Horizontal
179.3	-37.39	1.57	17.26	-21.70	-13	-8.70	Vertical
455.7	-41.62	1.78	16.35	-27.05	-13	-14.05	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-50.99	4.28	30.00	-25.27	-13	-12.27	Horizontal
1673.0	-45.43	4.28	30.00	-19.71	-13	-6.71	Vertical
2509.5	-50.81	5.41	35.86	-20.36	-13	-7.36	Vertical
2509.5	-50.19	5.41	35.86	-19.74	-13	-6.74	Horizontal
200.5	-34.57	1.44	17.95	-18.06	-13	-5.06	Vertical
264.7	-38.35	1.65	16.09	-23.91	-13	-10.91	Horizontal
Test Results for High Channel 841.5MHz							
1683.0	-50.24	4.35	27.68	-26.91	-13	-13.91	Horizontal
1683.0	-47.55	4.35	27.68	-24.22	-13	-11.22	Vertical
2524.5	-47.37	5.42	35.86	-16.93	-13	-3.93	Vertical
2524.5	-49.76	5.42	35.86	-19.32	-13	-6.32	Horizontal
179.4	-39.87	1.61	16.85	-24.63	-13	-11.63	Vertical
464.6	-34.88	1.61	15.19	-21.30	-13	-8.30	Horizontal

9.12 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	-59.56	5.13	35.81	-28.88	-25	-3.88	Horizontal
4997.0	-59.79	5.13	35.81	-29.11	-25	-4.11	Vertical
7495.5	-59.73	5.42	36.85	-28.30	-25	-3.30	Vertical
7495.5	-63.83	5.42	36.85	-32.40	-25	-7.40	Horizontal
204.3	-47.91	1.56	17.97	-31.50	-25	-6.50	Vertical
366.2	-44.33	1.33	15.11	-30.55	-25	-5.55	Horizontal
Test Results for Mid Channel 2593MHz							
5186.0	-61.84	5.16	35.82	-31.18	-25	-6.18	Horizontal
5186.0	-60.71	5.16	35.82	-30.05	-25	-5.05	Vertical
7779.0	-60.46	5.53	36.85	-29.14	-25	-4.14	Vertical
7779.0	-61.47	5.53	36.85	-30.15	-25	-5.15	Horizontal
205.4	-49.74	1.77	16.17	-35.33	-25	-10.33	Vertical
243.6	-50.44	1.63	15.21	-36.86	-25	-11.86	Horizontal
Test Results for High Channel 2687.5MHz							
5375.0	-63.05	5.23	35.83	-32.45	-25	-7.45	Horizontal
5375.0	-59.57	5.23	35.83	-28.97	-25	-3.97	Vertical
8062.5	-64.48	5.62	36.87	-33.23	-25	-8.23	Vertical
8062.5	-60.32	5.62	36.87	-29.07	-25	-4.07	Horizontal
195.4	-45.94	1.58	17.56	-29.96	-25	-4.96	Vertical
273.8	-44.27	1.45	16.58	-29.14	-25	-4.14	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	-64.16	5.23	35.82	-33.57	-25	-8.57	Horizontal
5012.0	-64.84	5.23	35.82	-34.25	-25	-9.25	Vertical
7518.0	-64.75	5.67	36.86	-33.56	-25	-8.56	Vertical
7518.0	-61.02	5.67	36.86	-29.83	-25	-4.83	Horizontal
206.8	-50.78	1.55	15.76	-36.57	-25	-11.57	Vertical
337.0	-52.93	1.62	15.44	-39.11	-25	-14.11	Horizontal
Test Results for Mid Channel 2593MHz							
5186.0	-60.32	5.16	35.82	-29.66	-25	-4.66	Horizontal
5186.0	-62.07	5.16	35.82	-31.41	-25	-6.41	Vertical
7779.0	-59.49	5.53	36.85	-28.17	-25	-3.17	Vertical
7779.0	-60.97	5.53	36.85	-29.65	-25	-4.65	Horizontal
182.0	-49.41	1.58	16.84	-34.15	-25	-9.15	Vertical
423.2	-53.96	1.61	17.64	-37.93	-25	-12.93	Horizontal
Test Results for High Channel 2680MHz							
5360.0	-64.25	5.24	35.83	-33.66	-25	-8.66	Horizontal
5360.0	-60.58	5.24	35.83	-29.99	-25	-4.99	Vertical
8040.0	-61.59	5.70	36.88	-30.41	-25	-5.41	Vertical
8040.0	-63.73	5.70	36.88	-32.55	-25	-7.55	Horizontal
185.9	-44.79	1.48	16.84	-29.43	-25	-4.43	Vertical
467.0	-44.15	1.59	17.64	-28.10	-25	-3.10	Horizontal

9.13 LTE BAND 66

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-64.58	3.84	35.81	-32.61	-13	-19.61	Horizontal
3421.4	-62.15	3.84	35.81	-30.18	-13	-17.18	Vertical
5132.1	-59.96	5.18	36.85	-28.29	-13	-15.29	Vertical
5132.1	-59.32	5.18	36.85	-27.65	-13	-14.65	Horizontal
205.1	-51.92	1.56	17.97	-35.51	-13	-22.51	Vertical
446.5	-45.08	1.33	15.11	-31.30	-13	-18.30	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-64.03	3.85	35.82	-32.06	-13	-19.06	Horizontal
3490.0	-61.78	3.85	35.82	-29.81	-13	-16.81	Vertical
5235.0	-60.75	5.21	36.85	-29.11	-13	-16.11	Vertical
5235.0	-64.39	5.21	36.85	-32.75	-13	-19.75	Horizontal
208.2	-46.08	1.77	16.17	-31.67	-13	-18.67	Vertical
366.5	-47.80	1.63	15.21	-34.22	-13	-21.22	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-62.56	3.86	35.83	-30.59	-13	-17.59	Horizontal
3558.6	-62.80	3.86	35.83	-30.83	-13	-17.83	Vertical
5337.9	-64.14	5.24	36.87	-32.51	-13	-19.51	Vertical
5337.9	-64.56	5.24	36.87	-32.93	-13	-19.93	Horizontal
184.0	-49.45	1.58	17.56	-33.47	-13	-20.47	Vertical
238.9	-54.60	1.45	16.58	-39.47	-13	-26.47	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	-60.04	3.84	35.82	-28.06	-13	-15.06	Horizontal
3440.0	-59.06	3.84	35.82	-27.08	-13	-14.08	Vertical
5160.0	-64.46	5.18	36.86	-32.78	-13	-19.78	Vertical
5160.0	-61.91	5.18	36.86	-30.23	-13	-17.23	Horizontal
200.9	-46.57	1.56	15.76	-32.37	-13	-19.37	Vertical
318.0	-48.97	1.33	15.44	-34.86	-13	-21.86	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-61.32	3.85	35.82	-29.35	-13	-16.35	Horizontal
3490.0	-62.52	3.85	35.82	-30.55	-13	-17.55	Vertical
5235.0	-64.71	5.21	36.85	-33.07	-13	-20.07	Vertical
5235.0	-64.22	5.21	36.85	-32.58	-13	-19.58	Horizontal
204.6	-52.18	1.77	16.84	-37.10	-13	-24.10	Vertical
469.8	-46.28	1.63	17.64	-30.27	-13	-17.27	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-62.26	3.86	35.83	-30.29	-13	-17.29	Horizontal
3540.0	-63.04	3.86	35.83	-31.07	-13	-18.07	Vertical
5310.0	-64.66	5.24	36.88	-33.02	-13	-20.02	Vertical
5310.0	-64.68	5.24	36.88	-33.04	-13	-20.04	Horizontal
195.7	-44.30	1.58	16.84	-29.03	-13	-16.03	Vertical
345.7	-48.71	1.45	17.64	-32.52	-13	-19.52	Horizontal

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

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

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

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

9.14 LTE BAND 71

QPSK EIRP POWER FOR LTE BAND 71 (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	-59.25	2.16	35.81	-25.60	-13	-12.60	Horizontal
1331.0	-62.77	2.16	35.81	-29.12	-13	-16.12	Vertical
1996.5	-60.61	2.89	36.85	-26.65	-13	-13.65	Vertical
1996.5	-63.32	2.89	36.85	-29.36	-13	-16.36	Horizontal
175.0	-46.51	1.56	17.97	-30.10	-13	-17.10	Vertical
440.1	-49.65	1.33	15.11	-35.87	-13	-22.87	Horizontal
Test Results for Mid Channel 680.5MHz							
1361.0	-59.17	2.17	35.82	-25.52	-13	-12.52	Horizontal
1361.0	-64.74	2.17	35.82	-31.09	-13	-18.09	Vertical
2041.5	-59.21	2.90	36.85	-25.26	-13	-12.26	Vertical
2041.5	-64.50	2.90	36.85	-30.55	-13	-17.55	Horizontal
197.4	-51.73	1.77	16.17	-37.32	-13	-24.32	Vertical
351.2	-53.44	1.63	15.21	-39.86	-13	-26.86	Horizontal
Test Results for High Channel 695.5MHz							
1391.0	-61.43	2.19	35.83	-27.79	-13	-14.79	Horizontal
1391.0	-63.86	2.19	35.83	-30.22	-13	-17.22	Vertical
2086.5	-60.95	2.95	36.87	-27.03	-13	-14.03	Vertical
2086.5	-60.59	2.95	36.87	-26.67	-13	-13.67	Horizontal
206.6	-44.12	1.58	17.56	-28.14	-13	-15.14	Vertical
335.3	-45.26	1.45	16.58	-30.13	-13	-17.13	Horizontal

QPSK EIRP POWER FOR LTE BAND 71 (20MHZ BANDWIDTH)

Test Results for Low Channel 673MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1346.0	-59.68	2.16	35.82	-26.02	-13	-13.02	Horizontal
1346.0	-61.24	2.16	35.82	-27.58	-13	-14.58	Vertical
2019.0	-63.44	2.89	36.86	-29.47	-13	-16.47	Vertical
2019.0	-61.22	2.89	36.86	-27.25	-13	-14.25	Horizontal
180.5	-50.50	1.56	15.76	-36.30	-13	-23.30	Vertical
242.5	-50.43	1.33	15.44	-36.32	-13	-23.32	Horizontal
Test Results for Mid Channel 683MHz							
1366.0	-60.53	2.17	35.82	-26.88	-13	-13.88	Horizontal
1366.0	-61.81	2.17	35.82	-28.16	-13	-15.16	Vertical
2049.0	-59.21	2.90	36.85	-25.26	-13	-12.26	Vertical
2049.0	-62.18	2.90	36.85	-28.23	-13	-15.23	Horizontal
185.3	-51.39	1.77	16.84	-36.31	-13	-23.31	Vertical
233.3	-48.36	1.63	17.64	-32.35	-13	-19.35	Horizontal
Test Results for High Channel 688MHz							
1376.0	-60.16	2.19	35.83	-26.52	-13	-13.52	Horizontal
1376.0	-59.47	2.19	35.83	-25.83	-13	-12.83	Vertical
2064.0	-63.63	2.95	36.88	-29.70	-13	-16.70	Vertical
2064.0	-59.61	2.95	36.88	-25.68	-13	-12.68	Horizontal
183.5	-44.44	1.58	16.84	-29.17	-13	-16.17	Vertical
431.1	-45.18	1.45	17.64	-28.99	-13	-15.99	Horizontal

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

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

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

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

10. FREQUENCY STABILITY

RULE PART(S)

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

LIMITS

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

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

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- ☐ Temp. = -30° to $+50^{\circ}\text{C}$
- ☐ Voltage = low voltage, DC 3.45V, Normal, DC4V and High voltage, DC 4.2V.

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to -30°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until $+50^{\circ}\text{C}$ is reached.

Frequency Stability vs Voltage:

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

MODES TESTED

LTE Band 2/4/5/12/13/25/26/41/66/71

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]
3.45	1880	12.6	0.006689	2.5
4	1880	13.9	0.007379	2.5
4.20	1880	13.6	0.007239	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	12.2	0.006506	2.5
Extreme (50C)	1880	11.8	0.006297	2.5
Extreme (40C)	1880	13.8	0.007351	2.5
Extreme (30C)	1880	13.5	0.007171	2.5
Extreme (10C)	1880	13.7	0.007297	2.5
Extreme (0C)	1880	12.1	0.006459	2.5
Extreme (-10C)	1880	12.6	0.006715	2.5
Extreme (-20C)	1880	13.6	0.007247	2.5
Extreme (-30C)	1880	14.5	0.007714	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]
3.45	1880	9.6	0.005089	2.5
4	1880	8.5	0.004514	2.5
4.20	1880	7.7	0.004070	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	9.6	0.005104	2.5
Extreme (50C)	1880	9.4	0.004999	2.5
Extreme (40C)	1880	8.1	0.004313541	2.5
Extreme (30C)	1880	9.2	0.004911107	2.5
Extreme (10C)	1880	8.7	0.004629989	2.5
Extreme (0C)	1880	8.3	0.004418234	2.5
Extreme (-10C)	1880	9.4	0.005025909	2.5
Extreme (-20C)	1880	8.4	0.004480865	2.5
Extreme (-30C)	1880	7.8	0.004125532	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]
3.45	1732.5	8.6	0.004962	2.5
4	1732.5	8.5	0.004917	2.5
4.20	1732.5	8.0	0.004594	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	8.3	0.004811	2.5
Extreme (50C)	1732.5	9.4	0.005411	2.5
Extreme (40C)	1732.5	7.4	0.004268	2.5
Extreme (30C)	1732.5	5.6	0.003208	2.5
Extreme (10C)	1732.5	6.7	0.003883	2.5
Extreme (0C)	1732.5	9.7	0.005620	2.5
Extreme (-10C)	1732.5	8.0	0.004645	2.5
Extreme (-20C)	1732.5	7.1	0.004123	2.5
Extreme (-30C)	1732.5	8.2	0.004762	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]
3.45	1732.5	10.0	0.005768	2.5
4	1732.5	8.8	0.005086	2.5
4.20	1732.5	7.7	0.004427	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	9.7	0.005573	2.5
Extreme (50C)	1732.5	8.9	0.005140	2.5
Extreme (40C)	1732.5	8.6	0.004939	2.5
Extreme (30C)	1732.5	8.9	0.005126	2.5
Extreme (10C)	1732.5	8.8	0.005104	2.5
Extreme (0C)	1732.5	8.2	0.004723	2.5
Extreme (-10C)	1732.5	8.9	0.005141	2.5
Extreme (-20C)	1732.5	8.4	0.004865	2.5
Extreme (-30C)	1732.5	8.3	0.004793	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]
3.45	836.5	5.8	0.006893	2.5
4	836.5	6.9	0.008271	2.5
4.20	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	6.2	0.007368	2.5
Extreme (50C)	836.5	5.6	0.006747	2.5
Extreme (40C)	836.5	6.3	0.007515	2.5
Extreme (30C)	836.5	6.1	0.007276	2.5
Extreme (10C)	836.5	5.7	0.006859	2.5
Extreme (0C)	836.5	5.5	0.006617	2.5
Extreme (-10C)	836.5	5.7	0.006855	2.5
Extreme (-20C)	836.5	5.6	0.006735	2.5
Extreme (-30C)	836.5	6.1	0.007247	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]
3.45	836.5	5.5	0.006553	2.5
4	836.5	6.5	0.007771	2.5
4.20	836.5	4.4	0.005206	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.4	0.007679	2.5
Extreme (50C)	836.5	6.2	0.007383	2.5
Extreme (40C)	836.5	5.8	0.006954	2.5
Extreme (30C)	836.5	6.0	0.007179	2.5
Extreme (10C)	836.5	5.5	0.006553	2.5
Extreme (0C)	836.5	5.1	0.006150	2.5
Extreme (-10C)	836.5	5.1	0.006130	2.5
Extreme (-20C)	836.5	6.2	0.007407	2.5
Extreme (-30C)	836.5	6.5	0.007784	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]
3.45	2535	9.7	0.003810	2.5
4	2535	9.2	0.003623	2.5
4.20	2535	8.2	0.003227	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.0	0.003559	2.5
Extreme (50C)	2535	8.7	0.003439	2.5
Extreme (40C)	2535	7.9	0.003120	2.5
Extreme (30C)	2535	9.0	0.003556	2.5
Extreme (10C)	2535	8.5	0.003367	2.5
Extreme (0C)	2535	8.4	0.003331	2.5
Extreme (-10C)	2535	9.3	0.003687	2.5
Extreme (-20C)	2535	9.2	0.003617	2.5
Extreme (-30C)	2535	8.6	0.003411	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]
3.45	2535	6.9	0.002722	2.5
4	2535	6.1	0.002393	2.5
4.20	2535	5.2	0.002058	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	5.9	0.002340	2.5
Extreme (40C)	2535	5.2	0.002065	2.5
Extreme (30C)	2535	7.0	0.002753	2.5
Extreme (10C)	2535	5.6	0.002205	2.5
Extreme (0C)	2535	5.5	0.002178	2.5
Extreme (-10C)	2535	5.5	0.002161	2.5
Extreme (-20C)	2535	5.7	0.002255	2.5
Extreme (-30C)	2535	5.9	0.002335	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]
3.45	707.5	8.5	0.012032	2.5
4	707.5	10.5	0.014807	2.5
4.20	707.5	8.9	0.012509	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	8.6	0.012153	2.5
Extreme (50C)	707.5	7.8	0.011027	2.5
Extreme (40C)	707.5	6.9	0.009790	2.5
Extreme (30C)	707.5	8.5	0.012036	2.5
Extreme (10C)	707.5	7.8	0.011031	2.5
Extreme (0C)	707.5	9.3	0.013083	2.5
Extreme (-10C)	707.5	8.0	0.011365	2.5
Extreme (-20C)	707.5	8.7	0.012252	2.5
Extreme (-30C)	707.5	8.1	0.011460	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]
3.45	707.5	7.5	0.010585	2.5
4	707.5	8.6	0.012223	2.5
4.20	707.5	7.6	0.010797	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	9.4	0.013350	2.5
Extreme (50C)	707.5	8.8	0.012437	2.5
Extreme (40C)	707.5	8.9	0.012535	2.5
Extreme (30C)	707.5	8.1	0.011454	2.5
Extreme (10C)	707.5	8.9	0.012518	2.5
Extreme (0C)	707.5	7.9	0.011198	2.5
Extreme (-10C)	707.5	7.6	0.010762	2.5
Extreme (-20C)	707.5	8.9	0.012645	2.5
Extreme (-30C)	707.5	8.0	0.011341	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]
3.45	782.0	13.0	0.016596	2.5
4	782.0	14.0	0.017912	2.5
4.20	782.0	13.0	0.016620	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	782.0	14.3	0.018305	2.5
Extreme (50C)	782.0	14.1	0.018010	2.5
Extreme (40C)	782.0	15.0	0.019139	2.5
Extreme (30C)	782.0	14.3	0.018304	2.5
Extreme (10C)	782.0	14.1	0.018069	2.5
Extreme (0C)	782.0	14.4	0.018379	2.5
Extreme (-10C)	782.0	13.6	0.017410	2.5
Extreme (-20C)	782.0	14.6	0.018654	2.5
Extreme (-30C)	782.0	13.5	0.017327	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]
3.45	782.0	12.4	0.015810	2.5
4	782.0	14.0	0.017844	2.5
4.20	782.0	12.8	0.016397	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	782.0	12.3	0.015749	2.5
Extreme (50C)	782.0	11.6	0.014861	2.5
Extreme (40C)	782.0	13.3	0.016994	2.5
Extreme (30C)	782.0	13.9	0.017728	2.5
Extreme (10C)	782.0	13.4	0.017169	2.5
Extreme (0C)	782.0	12.3	0.015761	2.5
Extreme (-10C)	782.0	12.6	0.016064	2.5
Extreme (-20C)	782.0	14.6	0.018649	2.5
Extreme (-30C)	782.0	15.1	0.019290	2.5

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

10.7 LTE BAND 14

Band 14 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]
3.45	793.0	12.7	0.015991	2.5
4	793.0	13.9	0.017484	2.5
4.20	793.0	13.3	0.016790	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	793.0	14.5	0.018329	2.5
Extreme (50C)	793.0	13.7	0.017315	2.5
Extreme (40C)	793.0	15.5	0.019605	2.5
Extreme (30C)	793.0	14.2	0.017864	2.5
Extreme (10C)	793.0	13.5	0.017038	2.5
Extreme (0C)	793.0	13.9	0.017497	2.5
Extreme (-10C)	793.0	14.3	0.017994	2.5
Extreme (-20C)	793.0	14.4	0.018210	2.5
Extreme (-30C)	793.0	14.0	0.017700	2.5

Band 14 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]
3.45	793.0	13.2	0.016642	2.5
4	793.0	13.5	0.016996	2.5
4.20	793.0	13.2	0.016671	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	793.0	12.3	0.015466	2.5
Extreme (50C)	793.0	11.5	0.014471	2.5
Extreme (40C)	793.0	14.0	0.017697	2.5
Extreme (30C)	793.0	13.4	0.016952	2.5
Extreme (10C)	793.0	14.0	0.017711	2.5
Extreme (0C)	793.0	12.4	0.015685	2.5
Extreme (-10C)	793.0	13.5	0.016987	2.5
Extreme (-20C)	793.0	14.6	0.018411	2.5
Extreme (-30C)	793.0	14.6	0.018356	2.5

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

10.8 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]
3.45	710.0	10.1	0.014163	2.5
4	710.0	9.3	0.013059	2.5
4.20	710.0	7.8	0.011001	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	10.0	0.014114	2.5
Extreme (50C)	710.0	8.6	0.012113	2.5
Extreme (40C)	710.0	7.8	0.010956	2.5
Extreme (30C)	710.0	8.9	0.012567	2.5
Extreme (10C)	710.0	9.0	0.012683	2.5
Extreme (0C)	710.0	7.7	0.010854	2.5
Extreme (-10C)	710.0	9.1	0.012762	2.5
Extreme (-20C)	710.0	8.6	0.012161	2.5
Extreme (-30C)	710.0	8.4	0.011847	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]
3.45	710.0	10.0	0.014103	2.5
4	710.0	9.3	0.013132	2.5
4.20	710.0	8.2	0.011549	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.7	0.013670	2.5
Extreme (50C)	710.0	8.7	0.012323	2.5
Extreme (40C)	710.0	8.7	0.012262	2.5
Extreme (30C)	710.0	9.1	0.012815	2.5
Extreme (10C)	710.0	8.0	0.011288	2.5
Extreme (0C)	710.0	8.5	0.011996	2.5
Extreme (-10C)	710.0	8.9	0.012592	2.5
Extreme (-20C)	710.0	9.3	0.013097	2.5
Extreme (-30C)	710.0	8.3	0.011660	2.5

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

10.9 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]
3.45	1882.5	9.8	0.005201	2.5
4	1882.5	9.1	0.004844	2.5
4.20	1882.5	8.0	0.004238	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	9.9	0.005237	2.5
Extreme (50C)	1882.5	9.3	0.004953	2.5
Extreme (40C)	1882.5	8.5	0.004515	2.5
Extreme (30C)	1882.5	8.6	0.004575	2.5
Extreme (10C)	1882.5	8.5	0.004501	2.5
Extreme (0C)	1882.5	7.7	0.004103	2.5
Extreme (-10C)	1882.5	9.2	0.004868	2.5
Extreme (-20C)	1882.5	8.7	0.004630	2.5
Extreme (-30C)	1882.5	7.6	0.004046	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]
3.45	1882.5	9.9	0.005247	2.5
4	1882.5	8.5	0.004492	2.5
4.20	1882.5	8.2	0.004349	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	9.4	0.005017	2.5
Extreme (50C)	1882.5	8.9	0.004722	2.5
Extreme (40C)	1882.5	8.2	0.004358	2.5
Extreme (30C)	1882.5	9.0	0.004776	2.5
Extreme (10C)	1882.5	7.8	0.004126	2.5
Extreme (0C)	1882.5	8.7	0.004610	2.5
Extreme (-10C)	1882.5	9.5	0.005046	2.5
Extreme (-20C)	1882.5	9.4	0.004982	2.5
Extreme (-30C)	1882.5	8.9	0.004716	2.5

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

10.10 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]
3.45	819.0	10.2	0.012485	2.5
4	819.0	8.6	0.010554	2.5
4.20	819.0	8.1	0.009917	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	819.0	9.3	0.011368	2.5
Extreme (50C)	819.0	8.7	0.010632	2.5
Extreme (40C)	819.0	8.4	0.010284	2.5
Extreme (30C)	819.0	9.3	0.011304	2.5
Extreme (10C)	819.0	8.9	0.010868	2.5
Extreme (0C)	819.0	8.3	0.010108	2.5
Extreme (-10C)	819.0	8.8	0.010775	2.5
Extreme (-20C)	819.0	8.4	0.010312	2.5
Extreme (-30C)	819.0	8.0	0.009825	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]
3.45	819.0	10.3	0.012580	2.5
4	819.0	8.6	0.010538	2.5
4.20	819.0	8.5	0.010401	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	819.0	9.3	0.011327	2.5
Extreme (50C)	819.0	9.1	0.011151	2.5
Extreme (40C)	819.0	8.4	0.010253	2.5
Extreme (30C)	819.0	8.4	0.010263	2.5
Extreme (10C)	819.0	7.9	0.009627	2.5
Extreme (0C)	819.0	8.1	0.009892	2.5
Extreme (-10C)	819.0	8.9	0.010869	2.5
Extreme (-20C)	819.0	9.3	0.011330	2.5
Extreme (-30C)	819.0	8.3	0.010157	2.5

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

10.11 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]
3.45	836.5	10.0	0.011911	2.5
4	836.5	9.2	0.010985	2.5
4.20	836.5	8.4	0.009991	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	9.4	0.011261	2.5
Extreme (50C)	836.5	8.8	0.010477	2.5
Extreme (40C)	836.5	7.7	0.009184	2.5
Extreme (30C)	836.5	8.5	0.010175	2.5
Extreme (10C)	836.5	8.7	0.010354	2.5
Extreme (0C)	836.5	7.8	0.009292	2.5
Extreme (-10C)	836.5	9.4	0.011285	2.5
Extreme (-20C)	836.5	8.6	0.010262	2.5
Extreme (-30C)	836.5	8.2	0.009778	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]
3.45	836.5	10.1	0.012081	2.5
4	836.5	9.4	0.011221	2.5
4.20	836.5	8.0	0.009526	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	9.7	0.011634	2.5
Extreme (50C)	836.5	9.3	0.011147	2.5
Extreme (40C)	836.5	8.6	0.010269	2.5
Extreme (30C)	836.5	9.2	0.011013	2.5
Extreme (10C)	836.5	8.0	0.009592	2.5
Extreme (0C)	836.5	8.7	0.010452	2.5
Extreme (-10C)	836.5	9.7	0.011643	2.5
Extreme (-20C)	836.5	9.0	0.010741	2.5
Extreme (-30C)	836.5	8.0	0.009507	2.5

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

10.12 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]
3.45	2593	10.1	0.003907	2.5
4	2593	8.8	0.003405	2.5
4.20	2593	8.0	0.003096	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2593	9.0	0.003478	2.5
Extreme (50C)	2593	8.7	0.003348	2.5
Extreme (40C)	2593	8.3	0.003190	2.5
Extreme (30C)	2593	8.5	0.003267	2.5
Extreme (10C)	2593	8.4	0.003240	2.5
Extreme (0C)	2593	8.1	0.003128	2.5
Extreme (-10C)	2593	9.8	0.003776	2.5
Extreme (-20C)	2593	8.4	0.003248	2.5
Extreme (-30C)	2593	8.3	0.003209	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]
3.45	2593	6.9	0.002661	2.5
4	2593	6.8	0.002615	2.5
4.20	2593	5.3	0.002062	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	5.6	0.002156	2.5
Extreme (40C)	2593	5.8	0.002239	2.5
Extreme (30C)	2593	6.6	0.002539	2.5
Extreme (10C)	2593	5.7	0.002199	2.5
Extreme (0C)	2593	4.9	0.001881	2.5
Extreme (-10C)	2593	5.7	0.002188	2.5
Extreme (-20C)	2593	6.4	0.002462	2.5
Extreme (-30C)	2593	5.3	0.002044	2.5

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

10.13 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]
3.45	1745	6.1	0.003490	2.5
4	1745	7.1	0.004076	2.5
4.20	1745	7.8	0.004446	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1745	5.1	0.002898	2.5
Extreme (50C)	1745	7.4	0.004253	2.5
Extreme (40C)	1745	6.7	0.003826	2.5
Extreme (30C)	1745	6.8	0.003899	2.5
Extreme (10C)	1745	7.0	0.004013	2.5
Extreme (0C)	1745	6.2	0.003568	2.5
Extreme (-10C)	1745	5.1	0.002906	2.5
Extreme (-20C)	1745	6.8	0.003882	2.5
Extreme (-30C)	1745	5.5	0.003124	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]
3.45	1745	8.9	0.005128	2.5
4	1745	7.7	0.004413	2.5
4.20	1745	9.6	0.005487	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1745	9.2	0.005260	2.5
Extreme (50C)	1745	7.6	0.004374	2.5
Extreme (40C)	1745	8.8	0.005054	2.5
Extreme (30C)	1745	7.8	0.004472	2.5
Extreme (10C)	1745	8.5	0.004875	2.5
Extreme (0C)	1745	6.8	0.003918	2.5
Extreme (-10C)	1745	8.4	0.004788	2.5
Extreme (-20C)	1745	8.9	0.005098	2.5
Extreme (-30C)	1745	5.4	0.003087	2.5

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

10.14 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]
3.45	1745	6.7	0.003833	2.5
4	1745	6.6	0.003771	2.5
4.20	1745	7.8	0.004447	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1745	5.2	0.002989	2.5
Extreme (50C)	1745	7.2	0.004148	2.5
Extreme (40C)	1745	6.9	0.003966	2.5
Extreme (30C)	1745	7.5	0.004296	2.5
Extreme (10C)	1745	7.8	0.004448	2.5
Extreme (0C)	1745	6.2	0.003546	2.5
Extreme (-10C)	1745	5.9	0.003362	2.5
Extreme (-20C)	1745	6.5	0.003735	2.5
Extreme (-30C)	1745	5.9	0.003391	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]
3.45	1745	8.1	0.004624	2.5
4	1745	7.3	0.004206	2.5
4.20	1745	9.4	0.005409	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1745	8.2	0.004724	2.5
Extreme (50C)	1745	7.7	0.004426	2.5
Extreme (40C)	1745	8.2	0.004698	2.5
Extreme (30C)	1745	8.2	0.004707	2.5
Extreme (10C)	1745	8.6	0.004900	2.5
Extreme (0C)	1745	6.9	0.003947	2.5
Extreme (-10C)	1745	9.0	0.005132	2.5
Extreme (-20C)	1745	8.7	0.004986	2.5
Extreme (-30C)	1745	5.6	0.003202	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.

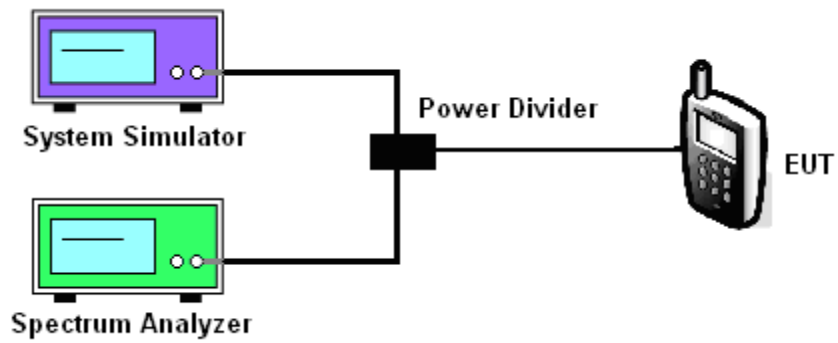
11.2 Measuring Instruments

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 2/4/5/7/12/13/14/17/25/26/41/66/71

Test data reference attachment.

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