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

FCC ID: 2A9ZK-TSERIES

Product:	Tablet Smartphone
Trade Mark:	TRIPLTEK
Model Number:	T9
Family Model:	T mini , T10, T11, T12
Report No.:	STR230109002006E

Prepared for

TRIPLTEK LLC

12555 Biscayne Blvd. Miami , FL 33181 , United States

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name ..... :	TRIPLTEK LLC
Address..... :	12555 Biscayne Blvd. Miami , FL 33181 , United States
Manufacturer's Name..... :	TRIPLTEK LLC
Address..... :	12555 Biscayne Blvd. Miami , FL 33181 , United States
Product name..... :	Tablet Smartphone
Model and/or type reference .. :	T9
Family Model：	T mini , T10, T11, T12
Sample number	T230109002R002
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..... Jan 12, 2023 ~ Mar 01, 2023

Date of Issue..... Mar 02, 2023

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

Testing Engineer : 

(Allen Li)

Authorized Signatory : 

(Alex Li)

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Designation:	Tablet Smartphone
Trade Mark	TRIPLTEK
Model Name	T9
Family Model	T mini , T10, T11, T12
Model Difference	All models are the same circuit and RF module, except the model name.
FCC ID:	2A9ZK-TSERIES
Frequency Bands:	U.S. Bands: ☒LTE FDD Band 2,4,5,7,12,13,14,17,25,26,41,66
Frequency Range:	LTE FDD Band 2 Uplink: 1850MHz-1910MHz, Downlink: 1930MHz-1990MHz; LTE FDD Band 4 Uplink: 1710MHz-1755MHz, Downlink: 2110MHz-2155MHz; LTE FDD Band 5 Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE-FDD Band 7 Uplink: 2500MHz-2570MHz, Downlink: 2620MHz-2690MHz; LTE FDD Band 12 Uplink: 699MHz-716MHz, Downlink: 729MHz-746MHz; LTE FDD Band 13 Uplink: 777MHz-787MHz, Downlink: 746MHz-756MHz; LTE FDD Band 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 26 Uplink: 814MHz-849MHz, Downlink: 859MHz-894MHz; LTE FDD Band 41 Uplink: 2496MHz-2690MHz, LTE FDD Band 66 Uplink: 1710MHz-1780MHz, Downlink: 2110MHz-2200MHz;
Type of Modulation:	QPSK/16QAM
Antenna:	PIFA Antenna
Antenna gain:	0.7 dBi;
Power Supply:	DC 3.85V from battery or DC 5V from Adapter.

Adapter:	☒Adapter supply: Model: HF-PD33W0001 Input: 100-240V~50/60Hz 0.8A Max Output: Type-C:5V⎓3.0A / 9V⎓3.0A / 11V⎓3.0A / 12V⎓2.5A/ 20V⎓1.5A
Battery	DC 3.85V, 11600mAh
Extreme Vol. Limits:	DC 3.4V to DC 4.2V (Nominal DC 25.41V)（Note 1）
Hardware version:	V1.1
Firmware version:	V1.0
Software version:	TRIPLTEK_T93_20230115
** Note1: The High Voltage DC 4.2V and Low Voltage DC 3.4V 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: 2A9ZK-TSERIES** 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, Band 4, Band 5, Band 7, Band 12, Band 13, Band 14,Band 17, Band 25, Band 26, Band 41, Band 66.

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

For the fundamental investigation of radiated emissions, the EUT is investigated for vertical and horizontal antenna orientations and X Y and Z orientations of the EUT alone. After the investigations

the worst case was determined to be at X orientation for all LTE bands.

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

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

2.2 EUT EXERCISE

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

2.3 CONFIGURATION OF EUT SYSTEM

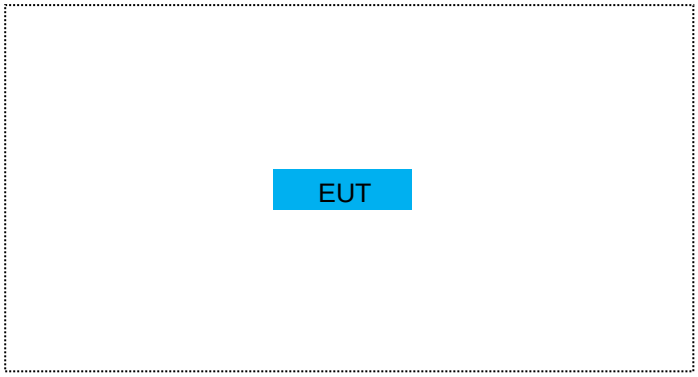
Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	Tablet Smartphone	T9	FCC ID: 2A9ZK-TSERIES	EUT

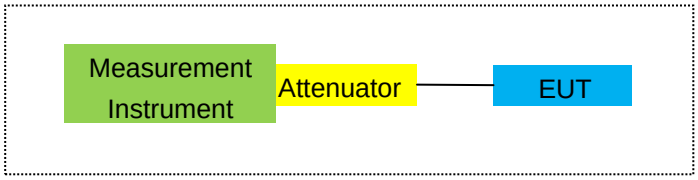
Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.

2.4 TEST SETUP

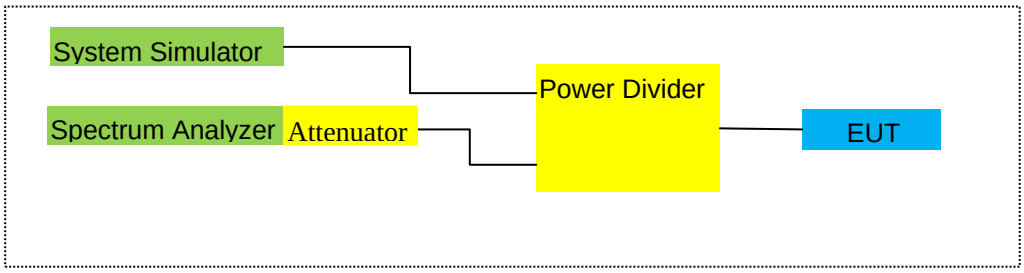
For Radiated Test Cases



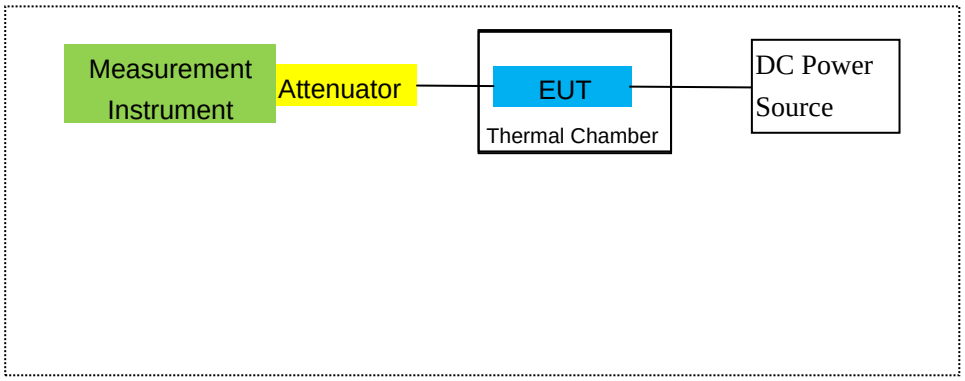
For Conducted Output Power



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	2022.11.07	2023.11.06	1 year
7	Amplifier	EM	EM-30180	060538	2022.06.17	2023.06.16	1 year
8	Loop Antenna	ARA	PLA-1030/B	1029	2022.04.06	2023.04.05	1 year
9	Power Meter	R&S	NRVS	100696	2022.06.17	2023.06.16	1 year
10	Power Sensor	R&S	URV5-Z4	0395.1619.05	2022.04.06	2023.04.05	1 year
11	Test Cable	N/A	R-01	N/A	2022.06.17	2025.06.16	3 year
12	Test Cable	N/A	R-02	N/A	2022.06.17	2025.06.16	3 year
13	Test Cable	N/A	R-03	N/A	2022.06.17	2025.06.16	3 year
14	Test Receiver	R&S	ESCI	101160	2022.04.06	2023.04.05	1 year
15	LISN	R&S	ENV216	101313	2022.04.06	2023.04.05	1 year
16	LISN	EMCO	3816/2	00042990	2022.04.06	2023.04.05	1 year
17	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2022.04.06	2023.04.05	1 year
18	Passive Voltage Probe	R&S	ESH2-Z3	100196	2022.04.06	2023.04.05	1 year
19	Test Cable	N/A	C01	N/A	2020.05.11	2023.05.10	3 year
20	Test Cable	N/A	C02	N/A	2020.05.11	2023.05.10	3 year
21	Test Cable	N/A	C03	N/A	2020.05.11	2023.05.10	3 year
22	Attenuator	MCE	24-10-34	BN9258	2022.04.01	2023.03.31	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	2017040292 3	2020.05.11	2023.05.10	3 year
28	MXG Vector Signal Generator	Agilent	N5182A	MY47070317	2022.06.16	2023.06.15	1 year
29	Communication Tester	R&S	CMW500	148500	2022.06.16	2023.06.15	1 year

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

4. OUTPUT POWER

4.1 OUTPUT POWER MEASUREMENT

LTE Measurement Procedure:

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

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

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

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

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

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

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

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

Test data reference attachment.

5. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only

TEST PROCEDURE

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

MODES TESTED

- □ LTE Band 2
- LTE Band 4
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 14
- LTE Band 17
- LTE Band 25,
- LTE Band 26,
- LTE Band 41
- LTE Band 66

RESULTS

PASS

Test data reference attachment.

6. BANDEDGE AND EMISSION MASK

RULE PART(S)

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

LIMITS

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

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

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

TEST PROCEDURE

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

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency

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

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

MODES TESTED

□ □ LTE Band 2

LTE Band 4

LTE Band 5

LTE Band 7

LTE Band 12

LTE Band 13

LTE Band 14

LTE Band 17

LTE Band 25,

LTE Band 26,

LTE Band 41

LTE Band 66

RESULTS

Test data reference attachment.

7. OUT OF BAND EMISSIONS

RULE PART(S)

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

LIMITS

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

TEST PROCEDURE

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

For each out of band emissions measurement:

□

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

MODES TESTED

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

□

7.1 MEASUREMENT METHOD

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

Test data reference attachment.

8. RADIATED MEASUREMENT

8.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

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

LIMITS:

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

TEST PROCEDURE

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

MODES TESTED

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

RESULTS

Pass

8.2 LTE BAND 2

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1850.7	-3.43	3.76	28.24	21.05	127.350	Horizontal	Pass
		1880	-3.24	3.91	28.22	21.07	127.938	Horizontal	Pass
		1909.3	-3.15	3.93	28.20	21.12	129.420	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-3.49	3.77	28.23	20.97	125.026	Horizontal	Pass
		1880	-3.34	3.91	28.24	20.99	125.603	Horizontal	Pass
		1908.5	-3.21	3.94	28.25	21.10	128.825	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-3.38	3.77	28.31	21.16	130.617	Horizontal	Pass
		1880	-3.00	3.91	28.22	21.31	135.207	Horizontal	Pass
		1907.5	-2.93	3.94	28.20	21.33	135.831	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-3.24	3.79	28.33	21.30	134.896	Horizontal	Pass
		1880	-2.94	3.95	28.22	21.33	135.831	Horizontal	Pass
		1905	-2.83	3.97	28.19	21.39	137.721	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-3.20	3.79	28.34	21.35	136.458	Horizontal	Pass
		1880	-2.99	3.95	28.22	21.28	134.276	Horizontal	Pass
		1902.5	-2.85	3.97	28.18	21.36	136.773	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-3.19	3.81	28.35	21.35	136.458	Horizontal	Pass
		1880	-2.86	3.96	28.22	**21.40**	138.038	Horizontal	Pass
		1900	-2.80	4.00	28.16	21.36	136.773	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-3.99	3.76	28.24	20.49	111.944	Vertical	Pass
		1880	-3.79	3.91	28.22	20.52	112.720	Vertical	Pass
		1909.3	-3.56	3.93	28.20	20.71	117.761	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-3.92	3.77	28.23	20.54	113.240	Vertical	Pass
		1880	-4.28	3.91	28.24	20.05	101.158	Vertical	Pass
		1908.5	-4.43	3.94	28.25	19.88	97.275	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-3.85	3.77	28.31	20.69	117.220	Vertical	Pass
		1880	-3.92	3.91	28.22	20.39	109.396	Vertical	Pass
		1907.5	-4.01	3.94	28.20	20.25	105.925	Vertical	Pass
10.0MHz Band	1/#Mid	1855	-3.92	3.79	28.33	20.62	115.345	Vertical	Pass
		1880	-4.43	3.95	28.22	19.84	96.383	Vertical	Pass

QPSK		1905	-3.67	3.97	28.19	20.55	113.501	Vertical	Pass
15.0MHz	1/#Mid	1857.5	-3.90	3.79	28.34	20.65	116.145	Vertical	Pass
Band		1880	-3.91	3.95	28.22	20.36	108.643	Vertical	Pass
QPSK		1902.5	-4.27	3.97	28.18	19.94	98.628	Vertical	Pass
20.0MHz	1/#Mid	1860	-4.19	3.81	28.35	20.35	108.393	Vertical	Pass
Band		1880	-4.46	3.96	28.22	19.80	95.499	Vertical	Pass
QPSK		1900	-4.34	4.00	28.16	19.82	95.940	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)

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz		1850.7	-4.25	3.76	28.24	20.23	105.439	Horizontal	Pass
Band 16	1/#Mid	1880	-3.72	3.91	28.22	20.59	114.551	Horizontal	Pass
QAM		1909.3	-3.65	3.93	28.20	20.62	115.345	Horizontal	Pass
3.0MHz		1851.5	-3.75	3.77	28.23	20.71	117.761	Horizontal	Pass
Band 16	1/#Mid	1880	-3.83	3.91	28.24	20.50	112.202	Horizontal	Pass
QAM		1908.5	-4.04	3.94	28.25	20.27	106.414	Horizontal	Pass
5.0MHz		1852.5	-3.69	3.77	28.31	20.85	121.619	Horizontal	Pass
Band 16	1/#Mid	1880	-3.60	3.91	28.22	20.71	117.761	Horizontal	Pass
QAM		1907.5	-3.28	3.94	28.20	20.98	125.314	Horizontal	Pass
10.0MHz		1855	-3.74	3.79	28.33	20.80	120.226	Horizontal	Pass
Band 16	1/#Mid	1880	-3.73	3.95	28.22	20.54	113.240	Horizontal	Pass
QAM		1905	-3.20	3.97	28.19	21.02	126.474	Horizontal	Pass
15.0MHz		1857.5	-3.72	3.79	28.34	20.83	121.060	Horizontal	Pass
Band 16	1/#Mid	1880	-3.51	3.95	28.22	20.76	119.124	Horizontal	Pass
QAM		1902.5	-3.47	3.97	28.18	20.74	118.577	Horizontal	Pass
20.0MHz		1860	-3.61	3.81	28.35	20.93	123.880	Horizontal	Pass
Band 16	1/#Mid	1880	-3.31	3.96	28.22	20.95	124.451	Horizontal	Pass
QAM		1900	-3.13	4.00	28.16	**21.03**	126.765	Horizontal	Pass
1.4MHz		1850.7	-4.79	3.76	28.24	19.69	93.111	Vertical	Pass
Band 16	1/#Mid	1880	-4.68	3.91	28.22	19.63	91.833	Vertical	Pass
QAM		1909.3	-4.34	3.93	28.20	19.93	98.401	Vertical	Pass
3.0MHz		1851.5	-4.67	3.77	28.23	19.79	95.280	Vertical	Pass
Band 16	1/#Mid	1880	-4.88	3.91	28.24	19.45	88.105	Vertical	Pass
QAM		1908.5	-4.36	3.94	28.25	19.95	98.855	Vertical	Pass
5.0MHz		1852.5	-4.68	3.77	28.31	19.86	96.828	Vertical	Pass
Band 16	1/#Mid	1880	-4.50	3.91	28.22	19.81	95.719	Vertical	Pass
QAM		1907.5	-4.66	3.94	28.20	19.60	91.201	Vertical	Pass
10.0MHz		1855	-4.56	3.79	28.33	19.98	99.541	Vertical	Pass
Band 16	1/#Mid	1880	-4.53	3.95	28.22	19.74	94.189	Vertical	Pass
QAM		1905	-4.16	3.97	28.19	20.06	101.391	Vertical	Pass
15.0MHz		1857.5	-5.10	3.79	28.34	19.45	88.105	Vertical	Pass
Band 16	1/#Mid	1880	-4.78	3.95	28.22	19.49	88.920	Vertical	Pass
QAM		1902.5	-5.08	3.97	28.18	19.13	81.846	Vertical	Pass

20.0MHz	1/#Mid	1860	-5.25	3.81	28.35	19.29	84.918	Vertical	Pass
Band 16		1880	-4.97	3.96	28.22	19.29	84.918	Vertical	Pass
QAM		1900	-5.05	4.00	28.16	19.11	81.470	Vertical	Pass

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

8.3 LTE BAND 4

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1710.7	-3.04	3.12	27.58	21.42	138.676	Horizontal	Pass
		1732.5	-3.03	3.27	27.61	21.31	135.207	Horizontal	Pass
		1754.3	-3.01	3.29	27.63	21.33	135.831	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-3.21	3.13	27.61	21.27	133.968	Horizontal	Pass
		1732.5	-3.13	3.27	27.61	21.21	132.130	Horizontal	Pass
		1753.5	-3.05	3.30	27.62	21.27	133.968	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.98	3.13	27.63	21.52	141.906	Horizontal	Pass
		1732.5	-2.88	3.27	27.61	21.46	139.959	Horizontal	Pass
		1752.5	-2.76	3.30	27.60	21.54	142.561	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-2.92	3.15	27.64	21.57	143.549	Horizontal	Pass
		1732.5	-2.69	3.31	27.61	21.61	144.877	Horizontal	Pass
		1750	-2.71	3.33	27.59	21.55	142.889	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-2.93	3.15	27.65	21.57	143.549	Horizontal	Pass
		1732.5	-2.77	3.31	27.61	21.53	142.233	Horizontal	Pass
		1747.5	-2.71	3.33	27.57	21.53	142.233	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-2.87	3.17	27.66	**21.62**	145.211	Horizontal	Pass
		1732.5	-2.70	3.32	27.61	21.59	144.212	Horizontal	Pass
		1745	-2.64	3.36	27.56	21.56	143.219	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-3.73	3.12	27.58	20.73	118.304	Vertical	Pass
		1732.5	-3.28	3.27	27.61	21.06	127.644	Vertical	Pass
		1754.3	-3.92	3.29	27.63	20.42	110.154	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-4.16	3.13	27.61	20.32	107.647	Vertical	Pass
		1732.5	-3.91	3.27	27.61	20.43	110.408	Vertical	Pass
		1753.5	-4.15	3.30	27.62	20.17	103.992	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-3.78	3.13	27.63	20.72	118.032	Vertical	Pass
		1732.5	-3.62	3.27	27.61	20.72	118.032	Vertical	Pass
		1752.5	-3.88	3.30	27.60	20.42	110.154	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1715	-4.34	3.15	27.64	20.15	103.514	Vertical	Pass
		1732.5	-4.07	3.31	27.61	20.23	105.439	Vertical	Pass
		1750	-3.77	3.33	27.59	20.49	111.944	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-4.19	3.15	27.65	20.31	107.399	Vertical	Pass

Band		1732.5	-3.23	3.31	27.61	21.07	127.938	Vertical	Pass
QPSK		1747.5	-3.97	3.33	27.57	20.27	106.414	Vertical	Pass
20.0MHz		1720	-3.75	3.17	27.66	20.74	118.577	Vertical	Pass
Band	1/#Mid	1732.5	-4.14	3.32	27.61	20.15	103.514	Vertical	Pass
QPSK		1745	-3.66	3.36	27.56	20.54	113.240	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)

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-3.85	3.12	27.58	20.61	115.080	Horizontal	Pass
		1732.5	-3.70	3.27	27.61	20.64	115.878	Horizontal	Pass
		1754.3	-3.70	3.29	27.63	20.64	115.878	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-3.79	3.13	27.61	20.69	117.220	Horizontal	Pass
		1732.5	-3.92	3.27	27.61	20.42	110.154	Horizontal	Pass
		1753.5	-4.14	3.30	27.62	20.18	104.232	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-3.62	3.13	27.63	20.88	122.462	Horizontal	Pass
		1732.5	-3.58	3.27	27.61	20.76	119.124	Horizontal	Pass
		1752.5	-3.27	3.30	27.60	21.03	126.765	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-3.69	3.15	27.64	20.80	120.226	Horizontal	Pass
		1732.5	-3.88	3.31	27.61	20.42	110.154	Horizontal	Pass
		1750	-3.26	3.33	27.59	21.00	125.893	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-3.49	3.15	27.65	21.01	126.183	Horizontal	Pass
		1732.5	-3.55	3.31	27.61	20.75	118.850	Horizontal	Pass
		1747.5	-3.57	3.33	27.57	20.67	116.681	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-3.44	3.17	27.66	**21.05**	127.350	Horizontal	Pass
		1732.5	-3.45	3.32	27.61	20.84	121.339	Horizontal	Pass
		1745	-3.26	3.36	27.56	20.94	124.165	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-5.26	3.12	27.58	19.20	83.176	Vertical	Pass
		1732.5	-4.87	3.27	27.61	19.47	88.512	Vertical	Pass
		1754.3	-4.44	3.29	27.63	19.90	97.724	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-4.79	3.13	27.61	19.69	93.111	Vertical	Pass
		1732.5	-4.30	3.27	27.61	20.04	100.925	Vertical	Pass
		1753.5	-4.35	3.30	27.62	19.97	99.312	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-4.84	3.13	27.63	19.66	92.470	Vertical	Pass
		1732.5	-5.07	3.27	27.61	19.27	84.528	Vertical	Pass
		1752.5	-4.49	3.30	27.60	19.81	95.719	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-5.22	3.15	27.64	19.27	84.528	Vertical	Pass
		1732.5	-5.06	3.31	27.61	19.24	83.946	Vertical	Pass
		1750	-4.98	3.33	27.59	19.28	84.723	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-4.93	3.15	27.65	19.57	90.573	Vertical	Pass
		1732.5	-4.26	3.31	27.61	20.04	100.925	Vertical	Pass
		1747.5	-4.77	3.33	27.57	19.47	88.512	Vertical	Pass

20.0MHz	1/#Mid	1720	-5.33	3.17	27.66	19.16	82.414	Vertical	Pass
Band 16		1732.5	-4.90	3.32	27.61	19.39	86.896	Vertical	Pass
QAM		1745	-4.25	3.36	27.56	19.95	98.855	Vertical	Pass

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

8.4 LTE BAND 5

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	3/#Mid	824.7	6.26	2.01	19.68	2.15	21.78	150.661	Horizontal	Pass
		836.5	6.14	2.01	19.77	2.15	21.75	149.624	Horizontal	Pass
		848.3	5.94	2.02	19.82	2.15	21.59	144.212	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	6.03	2.01	19.70	2.15	21.57	143.549	Horizontal	Pass
		836.5	5.93	2.01	19.77	2.15	21.54	142.561	Horizontal	Pass
		847.5	5.80	2.02	19.81	2.15	21.44	139.316	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	6.31	2.01	19.71	2.15	21.86	153.462	Horizontal	Pass
		836.5	6.19	2.01	19.77	2.15	21.80	151.356	Horizontal	Pass
		846.5	6.03	2.02	19.79	2.15	21.65	146.218	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	6.33	2.01	19.73	2.15	**21.90**	154.882	Horizontal	Pass
		836.5	6.28	2.01	19.77	2.15	21.89	154.525	Horizontal	Pass
		844	6.18	2.02	19.78	2.15	21.79	151.008	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	824.7	4.63	2.01	19.68	2.15	20.15	103.514	Vertical	Pass
		836.5	4.93	2.01	19.77	2.15	20.54	113.240	Vertical	Pass
		848.3	5.26	2.02	19.82	2.15	20.91	123.310	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	5.21	2.01	19.70	2.15	20.75	118.850	Vertical	Pass
		836.5	4.86	2.01	19.77	2.15	20.47	111.429	Vertical	Pass
		847.5	4.43	2.02	19.81	2.15	20.07	101.625	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	5.40	2.01	19.71	2.15	20.95	124.451	Vertical	Pass
		836.5	4.56	2.01	19.77	2.15	20.17	103.992	Vertical	Pass
		846.5	4.97	2.02	19.79	2.15	20.59	114.551	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	5.22	2.01	19.73	2.15	20.79	119.950	Vertical	Pass
		836.5	5.29	2.01	19.77	2.15	20.90	123.027	Vertical	Pass
		844	4.77	2.02	19.78	2.15	20.38	109.144	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)

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	3/#Mid	824.7	5.41	2.01	19.68	2.15	20.93	123.880	Horizontal	Pass
		836.5	5.34	2.01	19.77	2.15	20.95	124.451	Horizontal	Pass
		848.3	5.18	2.02	19.82	2.15	20.83	121.060	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	5.49	2.01	19.70	2.15	21.03	126.765	Horizontal	Pass
		836.5	5.20	2.01	19.77	2.15	20.81	120.504	Horizontal	Pass
		847.5	4.68	2.02	19.81	2.15	20.32	107.647	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	5.81	2.01	19.71	2.15	21.36	136.773	Horizontal	Pass
		836.5	5.58	2.01	19.77	2.15	21.19	131.522	Horizontal	Pass
		846.5	5.33	2.02	19.79	2.15	20.95	124.451	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	5.81	2.01	19.73	2.15	**21.38**	137.404	Horizontal	Pass
		836.5	5.53	2.01	19.77	2.15	21.14	130.017	Horizontal	Pass
		844	5.07	2.02	19.78	2.15	20.68	116.950	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	3.94	2.01	19.68	2.15	19.46	88.308	Vertical	Pass
		836.5	4.63	2.01	19.77	2.15	20.24	105.682	Vertical	Pass
		848.3	3.77	2.02	19.82	2.15	19.42	87.498	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	4.28	2.01	19.70	2.15	19.82	95.940	Vertical	Pass
		836.5	3.59	2.01	19.77	2.15	19.20	83.176	Vertical	Pass
		847.5	5.25	2.02	19.81	2.15	20.89	122.744	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	3.75	2.01	19.71	2.15	19.30	85.114	Vertical	Pass
		836.5	4.56	2.01	19.77	2.15	20.17	103.992	Vertical	Pass
		846.5	4.23	2.02	19.79	2.15	19.85	96.605	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	4.48	2.01	19.73	2.15	20.05	101.158	Vertical	Pass
		836.5	4.58	2.01	19.77	2.15	20.19	104.472	Vertical	Pass
		844	4.70	2.02	19.78	2.15	20.31	107.399	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 (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz	1/#Mid	2502.5	-1.32	4.54	27.75	21.89	154.525	Horizontal	Pass
Band		2535	-1.15	4.69	27.72	21.88	154.170	Horizontal	Pass
QPSK		2567.5	-1.08	4.71	27.71	21.92	155.597	Horizontal	Pass
10.0MHz	1/#Mid	2505	-1.25	4.55	27.76	21.96	157.036	Horizontal	Pass
Band		2535	-1.06	4.69	27.72	21.97	157.398	Horizontal	Pass
QPSK		2565	-0.98	4.72	27.70	22.00	158.489	Horizontal	Pass
15.0MHz	1/#Mid	2507.5	-1.26	4.55	27.77	21.96	157.036	Horizontal	Pass
Band		2535	-1.12	4.69	27.72	21.91	155.239	Horizontal	Pass
QPSK		2562.5	-1.02	4.72	27.69	21.95	156.675	Horizontal	Pass
20.0MHz	1/#Mid	2510	-1.20	4.57	27.78	**22.01**	158.855	Horizontal	Pass
Band		2535	-1.02	4.73	27.72	21.97	157.398	Horizontal	Pass
QPSK		2560	-0.98	4.75	27.68	21.95	156.675	Horizontal	Pass
5.0MHz	1/#Mid	2502.5	-2.19	4.54	27.75	21.02	126.474	Vertical	Pass
Band		2535	-2.40	4.69	27.72	20.63	115.611	Vertical	Pass
QPSK		2567.5	-2.46	4.71	27.71	20.54	113.240	Vertical	Pass
10.0MHz	1/#Mid	2505	-2.98	4.55	27.76	20.23	105.439	Vertical	Pass
Band		2535	-2.02	4.69	27.72	21.01	126.183	Vertical	Pass
QPSK		2565	-2.87	4.72	27.70	20.11	102.565	Vertical	Pass
15.0MHz	1/#Mid	2507.5	-2.84	4.55	27.77	20.38	109.144	Vertical	Pass
Band		2535	-2.30	4.69	27.72	20.73	118.304	Vertical	Pass
QPSK		2562.5	-2.05	4.72	27.69	20.92	123.595	Vertical	Pass
20.0MHz	1/#Mid	2510	-2.37	4.57	27.78	20.84	121.339	Vertical	Pass
Band		2535	-2.54	4.73	27.72	20.45	110.917	Vertical	Pass
QPSK		2560	-2.06	4.75	27.68	20.87	122.180	Vertical	Pass

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	2502.5	-2.01	4.54	27.75	21.20	131.826	Horizontal	Pass
		2535	-1.70	4.69	27.72	21.33	135.831	Horizontal	Pass
		2567.5	-1.78	4.71	27.71	21.22	132.434	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-1.90	4.55	27.76	21.31	135.207	Horizontal	Pass
		2535	-1.91	4.69	27.72	21.12	129.420	Horizontal	Pass
		2565	-2.18	4.72	27.70	20.80	120.226	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-2.08	4.55	27.77	21.14	130.017	Horizontal	Pass
		2535	-2.05	4.69	27.72	20.98	125.314	Horizontal	Pass
		2562.5	-1.66	4.72	27.69	21.31	135.207	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-1.96	4.57	27.78	21.25	133.352	Horizontal	Pass
		2535	-1.63	4.73	27.72	**21.36**	136.773	Horizontal	Pass
		2560	-1.73	4.75	27.68	21.20	131.826	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2502.5	-3.44	4.54	27.75	19.77	94.842	Vertical	Pass
		2535	-2.25	4.69	27.72	20.78	119.674	Vertical	Pass
		2567.5	-3.08	4.71	27.71	19.92	98.175	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-4.03	4.55	27.76	19.18	82.794	Vertical	Pass
		2535	-2.21	4.69	27.72	20.82	120.781	Vertical	Pass
		2565	-2.95	4.72	27.70	20.03	100.693	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-3.80	4.55	27.77	19.42	87.498	Vertical	Pass
		2535	-3.16	4.69	27.72	19.87	97.051	Vertical	Pass
		2562.5	-2.25	4.72	27.69	20.72	118.032	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-2.20	4.57	27.78	21.01	126.183	Vertical	Pass
		2535	-3.75	4.73	27.72	19.24	83.946	Vertical	Pass
		2560	-2.05	4.75	27.68	20.88	122.462	Vertical	Pass

Note:

SG Level= Signal generator output

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

8.6 LTE BAND 12

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	699.7	6.63	1.91	19.21	2.15	21.78	150.661	Vertical	Pass
		707.5	6.55	1.91	19.26	2.15	21.75	149.624	Vertical	Pass
		715.3	6.33	1.93	19.34	2.15	21.59	144.212	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	700.5	6.42	1.91	19.21	2.15	21.57	143.549	Vertical	Pass
		707.5	6.34	1.91	19.26	2.15	21.54	142.561	Vertical	Pass
		714.5	6.18	1.93	19.34	2.15	21.44	139.316	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	701.5	6.69	1.91	19.23	2.15	21.86	153.462	Vertical	Pass
		707.5	6.60	1.91	19.26	2.15	21.80	151.356	Vertical	Pass
		713.5	6.39	1.92	19.33	2.15	21.65	146.218	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	704	6.71	1.91	19.25	2.15	**21.90**	154.882	Vertical	Pass
		707.5	6.69	1.91	19.26	2.15	21.89	154.525	Vertical	Pass
		711	6.54	1.92	19.32	2.15	21.79	151.008	Vertical	Pass
1.4MHz Band QPSK	1/#Mid	699.7	5.31	1.91	19.21	2.15	20.46	111.173	Horizontal	Pass
		707.5	5.78	1.91	19.26	2.15	20.98	125.314	Horizontal	Pass
		715.3	4.87	1.93	19.34	2.15	20.13	103.039	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	700.5	5.54	1.91	19.21	2.15	20.69	117.220	Horizontal	Pass
		707.5	5.85	1.91	19.26	2.15	21.05	127.350	Horizontal	Pass
		714.5	5.32	1.93	19.34	2.15	20.58	114.288	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	701.5	5.21	1.91	19.23	2.15	20.38	109.144	Horizontal	Pass
		707.5	5.81	1.91	19.26	2.15	21.01	126.183	Horizontal	Pass
		713.5	5.46	1.92	19.33	2.15	20.72	118.032	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	704	5.76	1.91	19.25	2.15	20.95	124.451	Horizontal	Pass
		707.5	4.87	1.91	19.26	2.15	20.07	101.625	Horizontal	Pass
		711	5.21	1.92	19.32	2.15	20.46	111.173	Horizontal	Pass

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	699.7	6.51	1.91	19.21	2.15	21.66	146.555	Vertical	Pass
		707.5	6.43	1.91	19.26	2.15	21.63	145.546	Vertical	Pass
		715.3	6.21	1.93	19.34	2.15	21.47	140.281	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	6.30	1.91	19.21	2.15	21.45	139.637	Vertical	Pass
		707.5	6.22	1.91	19.26	2.15	21.42	138.676	Vertical	Pass
		714.5	6.06	1.93	19.34	2.15	21.32	135.519	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	6.57	1.91	19.23	2.15	21.74	149.279	Vertical	Pass
		707.5	6.48	1.91	19.26	2.15	21.68	147.231	Vertical	Pass
		713.5	6.27	1.92	19.33	2.15	21.53	142.233	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	704	6.59	1.91	19.25	2.15	**21.78**	150.661	Vertical	Pass
		707.5	6.57	1.91	19.26	2.15	21.77	150.314	Vertical	Pass
		711	6.42	1.92	19.32	2.15	21.67	146.893	Vertical	Pass
1.4MHz Band 16 QAM	1/#Mid	699.7	4.87	1.91	19.21	2.15	20.02	100.462	Horizontal	Pass
		707.5	5.61	1.91	19.26	2.15	20.81	120.504	Horizontal	Pass
		715.3	5.20	1.93	19.34	2.15	20.46	111.173	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	700.5	4.88	1.91	19.21	2.15	20.03	100.693	Horizontal	Pass
		707.5	4.87	1.91	19.26	2.15	20.07	101.625	Horizontal	Pass
		714.5	4.83	1.93	19.34	2.15	20.09	102.094	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	701.5	5.44	1.91	19.23	2.15	20.61	115.080	Horizontal	Pass
		707.5	5.70	1.91	19.26	2.15	20.90	123.027	Horizontal	Pass
		713.5	4.88	1.92	19.33	2.15	20.14	103.276	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	704	4.91	1.91	19.25	2.15	20.10	102.329	Horizontal	Pass
		707.5	5.73	1.91	19.26	2.15	20.93	123.880	Horizontal	Pass
		711	5.11	1.92	19.32	2.15	20.36	108.643	Horizontal	Pass

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

8.7 LTE BAND 13

Radiated Power (ERP) for Band 13										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	25/0	779.5	4.91	1.91	19.23	2.15	20.08	101.86	Horizontal	Pass
		782	5.29	1.91	19.26	2.15	20.49	111.94	Horizontal	Pass
		784.5	5.18	1.92	19.33	2.15	20.44	110.66	Horizontal	Pass
10.0MHz Band QPSK	50/0	782	5.12	1.91	19.25	2.15	20.31	107.40	Horizontal	Pass
			5.69	1.91	19.26	2.15	**20.89**	122.74	Horizontal	Pass
			5.53	1.92	19.32	2.15	20.78	119.67	Horizontal	Pass
5.0MHz Band QPSK	25/0	779.5	5.04	1.91	19.23	2.15	20.21	104.95	Vertical	Pass
		782	4.91	1.91	19.26	2.15	20.11	102.57	Vertical	Pass
		784.5	4.99	1.92	19.33	2.15	20.25	105.93	Vertical	Pass
10.0MHz Band QPSK	50/0	782	4.92	1.91	19.25	2.15	20.11	102.57	Vertical	Pass
			5.42	1.91	19.26	2.15	20.62	115.35	Vertical	Pass
			4.94	1.92	19.32	2.15	20.19	104.47	Vertical	Pass

Radiated Power (ERP) for Band 13										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	25/0	779.5	5.32	1.91	19.23	2.15	20.49	111.94	Horizontal	Pass
		782	5.56	1.91	19.26	2.15	20.76	119.12	Horizontal	Pass
		784.5	5.61	1.92	19.33	2.15	20.87	122.18	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	782	5.41	1.91	19.25	2.15	20.60	114.82	Horizontal	Pass
			5.16	1.91	19.26	2.15	20.36	108.64	Horizontal	Pass
			5.47	1.92	19.32	2.15	20.72	118.03	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	779.5	5.37	1.91	19.23	2.15	20.54	113.24	Vertical	Pass
		782	5.43	1.91	19.26	2.15	20.63	115.61	Vertical	Pass
		784.5	4.96	1.92	19.33	2.15	20.22	105.20	Vertical	Pass
10.0MHz Band 16 QAM	50/0	782	5.70	1.91	19.25	2.15	**20.95**	124.451	Vertical	Pass
			5.10	1.91	19.26	2.15	20.30	107.15	Vertical	Pass
			5.34	1.92	19.32	2.15	20.59	114.55	Vertical	Pass

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

8.8 LTE BAND 14

Radiated Power (ERP) for Band 14									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	790.5	-2.90	3.77	28.31	21.64	145.881	Horizontal	Pass
		793	-2.58	3.91	28.22	21.73	148.936	Horizontal	Pass
		795.5	-2.64	3.94	28.2	21.62	145.211	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	793	-2.79	3.79	28.33	**21.75**	149.624	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	790.5	-4.49	3.77	28.31	20.05	101.158	Vertical	Pass
		793	-3.47	3.91	28.22	20.84	121.339	Vertical	Pass
		795.5	-3.57	3.94	28.2	20.69	117.220	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	793	-3.53	3.79	28.18	20.86	121.899	Vertical	Pass

Radiated Power (ERP) for Band 14									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	790.5	-3.58	3.77	28.31	20.96	124.738	Horizontal	Pass
		793	-3.64	3.91	28.22	20.67	116.681	Horizontal	Pass
		795.5	-3.31	3.94	28.2	20.95	124.451	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	793	-3.35	3.79	28.33	**21.19**	131.522	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	790.5	-4.73	3.77	28.31	19.81	95.719	Vertical	Pass
		793	-4.06	3.91	28.22	20.25	105.925	Vertical	Pass
		795.5	-4.13	3.94	28.2	20.13	103.039	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	793	-4.53	3.79	28.18	19.86	96.828	Vertical	Pass

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

8.9 LTE BAND 17

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	706.5	6.74	1.91	19.23	2.15	21.91	155.239	Vertical	Pass
		710	6.60	1.91	19.26	2.15	21.80	151.356	Vertical	Pass
		713.5	6.50	1.92	19.33	2.15	21.76	149.968	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	709	6.75	1.91	19.25	2.15	**21.94**	156.315	Vertical	Pass
		710	6.70	1.91	19.26	2.15	21.90	154.882	Vertical	Pass
		711	6.66	1.92	19.32	2.15	21.91	155.239	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	706.5	5.29	1.91	19.23	2.15	20.46	111.173	Horizontal	Pass
		710	5.53	1.91	19.26	2.15	20.73	118.304	Horizontal	Pass
		713.5	5.49	1.92	19.33	2.15	20.75	118.850	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	709	5.08	1.91	19.25	2.15	20.27	106.414	Horizontal	Pass
		710	6.22	1.91	19.26	2.15	21.42	138.676	Horizontal	Pass
		711	5.79	1.92	19.32	2.15	21.04	127.057	Horizontal	Pass

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	706.5	6.09	1.91	19.23	2.15	21.26	133.660	Vertical	Pass
		710	6.00	1.91	19.26	2.15	21.20	131.826	Vertical	Pass
		713.5	5.80	1.92	19.33	2.15	21.06	127.644	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	709	5.63	1.91	19.25	2.15	20.82	120.781	Vertical	Pass
		710	6.16	1.91	19.26	2.15	**21.36**	136.773	Vertical	Pass
		711	5.89	1.92	19.32	2.15	21.14	130.017	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	706.5	5.09	1.91	19.23	2.15	20.26	106.170	Horizontal	Pass
		710	4.75	1.91	19.26	2.15	19.95	98.855	Horizontal	Pass
		713.5	4.50	1.92	19.33	2.15	19.76	94.624	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	709	5.08	1.91	19.25	2.15	20.27	106.414	Horizontal	Pass
		710	5.38	1.91	19.26	2.15	20.58	114.288	Horizontal	Pass
		711	4.94	1.92	19.32	2.15	20.19	104.472	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)

8.10 LTE BAND 25

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	1850.7	-3.21	3.12	28.24	21.91	155.24	Horizontal	Pass
		1882.5	-3.15	3.27	28.22	21.80	151.36	Horizontal	Pass
		1914.3	-3.15	3.29	28.2	21.76	149.97	Horizontal	Pass
3.0MHz Band QPSK	15/0	1851.5	-4.35	3.13	28.23	20.75	118.85	Horizontal	Pass
		1882.5	-3.07	3.27	28.24	21.90	154.88	Horizontal	Pass
		1913.5	-3.04	3.30	28.25	21.91	155.24	Horizontal	Pass
5.0MHz Band QPSK	25/0	1852.5	-3.49	3.13	28.31	21.69	147.57	Horizontal	Pass
		1882.5	-3.44	3.27	28.22	21.51	141.58	Horizontal	Pass
		1912.5	-4.05	3.30	28.2	20.85	121.62	Horizontal	Pass
10.0MHz Band QPSK	50/0	1855	-3.60	3.15	28.33	21.58	143.88	Horizontal	Pass
		1882.5	-4.82	3.31	28.22	20.09	102.09	Horizontal	Pass
		1910	-4.82	3.33	28.19	20.04	100.93	Horizontal	Pass
15.0MHz Band QPSK	75/0	1857.5	-3.28	3.15	28.34	21.91	155.24	Horizontal	Pass
		1882.5	-3.11	3.31	28.22	21.80	151.36	Horizontal	Pass
		1907.5	-3.09	3.33	28.18	21.76	149.97	Horizontal	Pass
20.0MHz Band QPSK	100/0	1860	-3.24	3.17	28.35	**21.94**	156.31	Horizontal	Pass
		1882.5	-3.00	3.32	28.22	21.90	154.88	Horizontal	Pass
		1905	-2.89	3.36	28.16	21.91	155.24	Horizontal	Pass
1.4MHz Band QPSK	6/0	1850.7	-4.78	3.12	28.24	20.34	108.14	Vertical	Pass
		1882.5	-4.58	3.27	28.22	20.37	108.89	Vertical	Pass
		1914.3	-3.21	3.29	28.2	21.70	147.91	Vertical	Pass
3.0MHz Band QPSK	15/0	1851.5	-4.68	3.13	28.23	20.42	110.15	Vertical	Pass
		1882.5	-4.65	3.27	28.24	20.32	107.65	Vertical	Pass
		1913.5	-3.78	3.30	28.25	21.17	130.92	Vertical	Pass
5.0MHz Band QPSK	25/0	1852.5	-3.27	3.13	28.31	21.91	155.24	Vertical	Pass
		1882.5	-3.15	3.27	28.22	21.80	151.36	Vertical	Pass
		1912.5	-3.14	3.30	28.2	21.76	149.97	Vertical	Pass
10.0MHz Band QPSK	50/0	1855	-4.26	3.15	28.33	20.92	123.59	Vertical	Pass
		1882.5	-3.01	3.31	28.22	21.90	154.88	Vertical	Pass
		1910	-2.95	3.33	28.19	21.91	155.24	Vertical	Pass
15.0MHz	75/0	1857.5	-5.42	3.15	28.34	19.77	94.84	Vertical	Pass

Band		1882.5	-4.04	3.31	28.22	20.87	122.18	Vertical	Pass
QPSK		1907.5	-4.53	3.33	28.18	20.32	107.65	Vertical	Pass
20.0MHz		1860	-4.89	3.17	28.35	20.29	106.91	Vertical	Pass
Band	100/0	1882.5	-5.05	3.32	28.22	19.85	96.61	Vertical	Pass
QPSK		1905	-3.38	3.36	28.16	21.42	138.68	Vertical	Pass

Radiated Power (EIRP) for Band 25									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	6/0	1850.7	-3.24	3.12	28.24	21.88	154.17	Horizontal	Pass
		1882.5	-3.18	3.27	28.22	21.77	150.31	Horizontal	Pass
		1914.3	-3.18	3.29	28.2	21.73	148.94	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	1851.5	-4.36	3.13	28.23	20.74	118.58	Horizontal	Pass
		1882.5	-3.10	3.27	28.24	21.87	153.82	Horizontal	Pass
		1913.5	-3.07	3.30	28.25	21.88	154.17	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	1852.5	-4.75	3.13	28.31	20.43	110.41	Horizontal	Pass
		1882.5	-4.61	3.27	28.22	20.34	108.14	Horizontal	Pass
		1912.5	-4.94	3.30	28.2	19.96	99.08	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	1855	-4.60	3.15	28.33	20.58	114.29	Horizontal	Pass
		1882.5	-3.57	3.31	28.22	21.34	136.14	Horizontal	Pass
		1910	-4.30	3.33	28.19	20.56	113.76	Horizontal	Pass
15.0MHz Band 16 QAM	75/0	1857.5	-3.31	3.15	28.34	21.88	154.17	Horizontal	Pass
		1882.5	-3.14	3.31	28.22	21.77	150.31	Horizontal	Pass
		1907.5	-3.12	3.33	28.18	21.73	148.94	Horizontal	Pass
20.0MHz Band 16 QAM	100/0	1860	-3.27	3.17	28.35	**21.91**	155.24	Horizontal	Pass
		1882.5	-3.03	3.32	28.22	21.87	153.82	Horizontal	Pass
		1905	-2.92	3.36	28.16	21.88	154.17	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	1850.7	-4.45	3.12	28.24	20.67	116.68	Vertical	Pass
		1882.5	-5.19	3.27	28.22	19.76	94.62	Vertical	Pass
		1914.3	-3.97	3.29	28.2	20.94	124.17	Vertical	Pass
3.0MHz Band 16 QAM	15/0	1851.5	-5.19	3.13	28.23	19.91	97.95	Vertical	Pass
		1882.5	-3.30	3.27	28.24	21.67	146.89	Vertical	Pass
		1913.5	-4.82	3.30	28.25	20.13	103.04	Vertical	Pass
5.0MHz Band 16 QAM	25/0	1852.5	-3.30	3.13	28.31	21.88	154.17	Vertical	Pass
		1882.5	-3.18	3.27	28.22	21.77	150.31	Vertical	Pass
		1912.5	-3.17	3.30	28.2	21.73	148.94	Vertical	Pass
10.0MHz Band 16 QAM	50/0	1855	-3.99	3.15	28.33	21.19	131.52	Vertical	Pass
		1882.5	-3.04	3.31	28.22	21.87	153.82	Vertical	Pass
		1910	-2.98	3.33	28.19	21.88	154.17	Vertical	Pass
15.0MHz Band 16 QAM	75/0	1857.5	-4.56	3.15	28.34	20.63	115.61	Vertical	Pass
		1882.5	-4.89	3.31	28.22	20.02	100.46	Vertical	Pass
		1907.5	-4.95	3.33	28.18	19.90	97.72	Vertical	Pass

20.0MHz	100/0	1860	-4.42	3.17	28.35	20.76	119.12	Vertical	Pass
Band 16		1882.5	-4.95	3.32	28.22	19.95	98.86	Vertical	Pass
QAM		1905	-4.01	3.36	28.16	20.79	119.95	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)

8.11 LTE BAND 26 A

Radiated Power (ERP) for Band 26(814-824)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz BW QPSK	6/0	814.7	-0.39	3.76	28.24	2.15	21.94	156.31	Horizontal	Pass
		819	-0.26	3.91	28.22	2.15	21.90	154.88	Horizontal	Pass
		823.3	-0.21	3.93	28.20	2.15	21.91	155.24	Horizontal	Pass
3.0MHz BW QPSK	15/0	815.5	-1.96	3.77	28.23	2.15	20.35	108.39	Horizontal	Pass
		819	-1.02	3.91	28.24	2.15	21.16	130.62	Horizontal	Pass
		822.5	-1.51	3.94	28.25	2.15	20.65	116.14	Horizontal	Pass
5.0MHz BW QPSK	25/0	816.5	-0.77	3.77	28.31	2.15	21.62	145.21	Horizontal	Pass
		819	-1.27	3.91	28.22	2.15	20.89	122.74	Horizontal	Pass
		821.5	-1.66	3.94	28.20	2.15	20.45	110.92	Horizontal	Pass
10.0MHz BW QPSK	50/0	819	-0.09	3.91	28.22	2.15	**22.07**	161.06	Horizontal	Pass
1.4MHz BW QPSK	6/0	814.7	-0.60	3.79	28.34	2.15	21.80	151.36	Vertical	Pass
		819	-0.36	3.95	28.22	2.15	21.76	149.97	Vertical	Pass
		823.3	-1.14	3.97	28.18	2.15	20.92	123.59	Vertical	Pass
3.0MHz BW QPSK	15/0	815.5	-0.41	3.77	28.23	2.15	21.90	154.88	Vertical	Pass
		819	-0.27	3.91	28.24	2.15	21.91	155.24	Vertical	Pass
		822.5	-1.22	3.94	28.25	2.15	20.94	124.17	Vertical	Pass
5.0MHz BW QPSK	25/0	816.5	-1.76	3.77	28.31	2.15	20.63	115.61	Vertical	Pass
		819	-1.95	3.91	28.22	2.15	20.21	104.95	Vertical	Pass
		821.5	-1.43	3.94	28.20	2.15	20.68	116.95	Vertical	Pass
10.0MHz BW QPSK	50/0	819	-0.97	3.91	28.22	2.15	21.19	131.52	Vertical	Pass

Radiated Power (ERP) for Band 26(814-824)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz BW 16 QAM	6/0	814.7	-0.42	3.76	28.24	2.15	21.91	155.24	Horizontal	Pass
		819	-0.29	3.91	28.22	2.15	21.87	153.82	Horizontal	Pass
		823.3	-0.24	3.93	28.20	2.15	21.88	154.17	Horizontal	Pass
3.0MHz BW 16 QAM	15/0	815.5	-2.40	3.77	28.23	2.15	19.91	97.95	Horizontal	Pass
		819	-2.41	3.91	28.24	2.15	19.77	94.84	Horizontal	Pass
		822.5	-1.56	3.94	28.25	2.15	20.60	114.82	Horizontal	Pass
5.0MHz BW 16 QAM	25/0	816.5	-0.91	3.77	28.31	2.15	21.48	140.60	Horizontal	Pass
		819	-0.72	3.91	28.22	2.15	21.44	139.32	Horizontal	Pass
		821.5	-1.62	3.94	28.20	2.15	20.49	111.94	Horizontal	Pass
10.0MHz BW 16 QAM	50/0	819	-0.18	3.91	28.24	2.15	**22.00**	158.49	Horizontal	Pass
1.4MHz BW 16 QAM	6/0	814.7	-0.63	3.79	28.34	2.15	21.77	150.31	Vertical	Pass
		819	-0.39	3.95	28.22	2.15	21.73	148.94	Vertical	Pass
		823.3	-1.17	3.97	28.18	2.15	20.89	122.74	Vertical	Pass
3.0MHz BW 16 QAM	15/0	815.5	-0.44	3.77	28.23	2.15	21.87	153.82	Vertical	Pass
		819	-0.30	3.91	28.24	2.15	21.88	154.17	Vertical	Pass
		822.5	-1.46	3.94	28.25	2.15	20.70	117.49	Vertical	Pass
5.0MHz BW 16 QAM	25/0	816.5	-0.79	3.77	28.31	2.15	21.60	144.54	Vertical	Pass
		819	-1.83	3.91	28.22	2.15	20.33	107.89	Vertical	Pass
		821.5	-1.17	3.94	28.20	2.15	20.94	124.17	Vertical	Pass
10.0MHz BW 16 QAM	50/0	819	-2.36	3.91	28.24	2.15	19.82	95.94	Vertical	Pass

8.12 LTE BAND 26B

Radiated Power (ERP) for Band 26(824-849)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	824.7	6.65	2.01	19.68	2.15	22.17	164.82	Horizontal	Pass
		836.5	6.52	2.01	19.77	2.15	22.13	163.31	Horizontal	Pass
		848.3	6.49	2.02	19.82	2.15	22.14	163.68	Horizontal	Pass
3.0MHz Band QPSK	15/0	825.5	6.27	2.01	19.70	2.15	21.81	151.71	Horizontal	Pass
		836.5	5.76	2.01	19.77	2.15	21.37	137.09	Horizontal	Pass
		847.5	4.55	2.02	19.81	2.15	20.19	104.47	Horizontal	Pass
5.0MHz Band QPSK	25/0	826.5	5.65	2.01	19.71	2.15	21.20	131.83	Horizontal	Pass
		836.5	5.42	2.01	19.77	2.15	21.03	126.77	Horizontal	Pass
		846.5	5.22	2.02	19.79	2.15	20.84	121.34	Horizontal	Pass
10.0MHz Band QPSK	50/0	829	6.73	2.01	19.73	2.15	22.30	169.82	Horizontal	Pass
		836.5	6.42	2.01	19.77	2.15	22.03	159.59	Horizontal	Pass
		844	6.38	2.02	19.78	2.15	21.99	158.12	Horizontal	Pass
15.0MHz Band QPSK	75/0	831.5	6.60	2.01	19.73	2.15	22.17	164.82	Horizontal	Pass
		836.5	6.90	2.01	19.77	2.15	**22.51**	178.24	Horizontal	Pass
		841.5	6.53	2.02	19.78	2.15	22.14	163.68	Horizontal	Pass
1.4MHz Band QPSK	6/0	824.7	5.74	2.01	19.68	2.15	21.26	133.66	Vertical	Pass
		836.5	6.25	2.01	19.77	2.15	21.86	153.46	Vertical	Pass
		848.3	6.26	2.02	19.82	2.15	21.91	155.24	Vertical	Pass
3.0MHz Band QPSK	15/0	825.5	5.41	2.01	19.70	2.15	20.95	124.45	Vertical	Pass
		836.5	4.45	2.01	19.77	2.15	20.06	101.39	Vertical	Pass
		847.5	6.50	2.02	19.81	2.15	22.14	163.68	Vertical	Pass
5.0MHz Band QPSK	25/0	826.5	5.99	2.01	19.71	2.15	21.54	142.56	Vertical	Pass
		836.5	5.88	2.01	19.77	2.15	21.49	140.93	Vertical	Pass
		846.5	4.83	2.02	19.79	2.15	20.45	110.92	Vertical	Pass
10.0MHz Band QPSK	50/0	829	5.70	2.01	19.73	2.15	21.27	133.97	Vertical	Pass
		836.5	5.86	2.01	19.77	2.15	21.47	140.28	Vertical	Pass
		844	6.53	2.02	19.78	2.15	22.14	163.68	Vertical	Pass
15.0MHz Band QPSK	75/0	831.5	4.51	2.01	19.73	2.15	20.08	101.86	Vertical	Pass
		836.5	4.83	2.01	19.77	2.15	20.44	110.66	Vertical	Pass
		841.5	4.47	2.02	19.78	2.15	20.08	101.86	Vertical	Pass

Radiated Power (ERP) for Band 26(824-849)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	6/0	824.7	6.59	2.01	19.68	2.15	22.11	162.55	Horizontal	Pass
		836.5	6.46	2.01	19.77	2.15	22.07	161.06	Horizontal	Pass
		848.3	6.43	2.02	19.82	2.15	22.08	161.44	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	825.5	4.53	2.01	19.70	2.15	20.07	101.62	Horizontal	Pass
		836.5	4.94	2.01	19.77	2.15	20.55	113.50	Horizontal	Pass
		847.5	4.77	2.02	19.81	2.15	20.41	109.90	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	826.5	4.50	2.01	19.71	2.15	20.05	101.16	Horizontal	Pass
		836.5	5.77	2.01	19.77	2.15	21.38	137.40	Horizontal	Pass
		846.5	5.90	2.02	19.79	2.15	21.52	141.91	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	829	6.67	2.01	19.73	2.15	22.24	167.49	Horizontal	Pass
		836.5	6.36	2.01	19.77	2.15	21.97	157.40	Horizontal	Pass
		844	6.32	2.02	19.78	2.15	21.93	155.96	Horizontal	Pass
15.0MHz Band QPSK	75/0	831.5	5.52	2.01	19.73	2.15	21.09	128.53	Horizontal	Pass
		836.5	6.79	2.01	19.77	2.15	**22.40**	173.78	Horizontal	Pass
		841.5	6.47	2.02	19.78	2.15	22.08	161.44	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	824.7	5.05	2.01	19.68	2.15	20.57	114.02	Vertical	Pass
		836.5	5.99	2.01	19.77	2.15	21.60	144.54	Vertical	Pass
		848.3	6.02	2.02	19.82	2.15	21.67	146.89	Vertical	Pass
3.0MHz Band 16 QAM	15/0	825.5	5.98	2.01	19.70	2.15	21.52	141.91	Vertical	Pass
		836.5	5.53	2.01	19.77	2.15	21.14	130.02	Vertical	Pass
		847.5	6.44	2.02	19.81	2.15	22.08	161.44	Vertical	Pass
5.0MHz Band 16 QAM	25/0	826.5	5.29	2.01	19.71	2.15	20.84	121.34	Vertical	Pass
		836.5	4.47	2.01	19.77	2.15	20.08	101.86	Vertical	Pass
		846.5	4.80	2.02	19.79	2.15	20.42	110.15	Vertical	Pass
10.0MHz Band 16 QAM	50/0	829	5.36	2.01	19.73	2.15	20.93	123.88	Vertical	Pass
		836.5	5.81	2.01	19.77	2.15	21.42	138.68	Vertical	Pass
		844	6.47	2.02	19.78	2.15	22.08	161.44	Vertical	Pass

15.0MHz	75/0	831.5	5.37	2.01	19.73	2.15	20.94	124.17	Vertical	Pass
Band		836.5	4.50	2.01	19.77	2.15	20.11	102.57	Vertical	Pass
QPSK		841.5	4.90	2.02	19.78	2.15	20.51	112.46	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 41

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	2572.5	-1.62	4.54	27.75	21.59	144.212	Horizontal	Pass
		2595	-1.47	4.69	27.72	21.56	143.219	Horizontal	Pass
		2617.5	-1.35	4.71	27.71	21.65	146.218	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2575	-1.70	4.55	27.76	21.51	141.579	Horizontal	Pass
		2595	-1.56	4.69	27.72	21.47	140.281	Horizontal	Pass
		2615	-1.55	4.72	27.70	21.43	138.995	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2577.5	-1.53	4.55	27.77	21.69	147.571	Horizontal	Pass
		2595	-1.25	4.69	27.72	21.78	150.661	Horizontal	Pass
		2612.5	-1.30	4.72	27.69	21.67	146.893	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2580	-1.39	4.57	27.78	**21.82**	152.055	Horizontal	Pass
		2595	-1.19	4.73	27.72	21.80	151.356	Horizontal	Pass
		2610	-1.19	4.75	27.68	21.74	149.279	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2572.5	-1.42	4.54	27.75	21.79	151.008	Vertical	Pass
		2595	-1.33	4.69	27.72	21.70	147.911	Vertical	Pass
		2617.5	-1.31	4.71	27.71	21.69	147.571	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2575	-1.40	4.55	27.76	21.81	151.705	Vertical	Pass
		2595	-1.24	4.69	27.72	21.79	151.008	Vertical	Pass
		2615	-1.31	4.72	27.70	21.67	146.893	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2577.5	-3.00	4.55	27.77	20.22	105.196	Vertical	Pass
		2595	-2.18	4.69	27.72	20.85	121.619	Vertical	Pass
		2612.5	-2.89	4.72	27.69	20.08	101.859	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2580	-2.95	4.57	27.78	20.26	106.170	Vertical	Pass
		2595	-2.37	4.73	27.72	20.62	115.345	Vertical	Pass
		2610	-2.65	4.75	27.68	20.28	106.660	Vertical	Pass

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	2572.5	-1.55	4.54	27.75	21.66	146.555	Horizontal	Pass
		2595	-1.40	4.69	27.72	21.63	145.546	Horizontal	Pass
		2617.5	-1.28	4.71	27.71	21.72	148.594	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2575	-1.63	4.55	27.76	21.58	143.880	Horizontal	Pass
		2595	-1.49	4.69	27.72	21.54	142.561	Horizontal	Pass
		2615	-1.48	4.72	27.70	21.50	141.254	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2577.5	-1.46	4.55	27.77	21.76	149.968	Horizontal	Pass
		2595	-1.18	4.69	27.72	21.85	153.109	Horizontal	Pass
		2612.5	-1.23	4.72	27.69	21.74	149.279	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2580	-1.26	4.57	27.78	**21.95**	156.675	Horizontal	Pass
		2595	-1.12	4.73	27.72	21.87	153.815	Horizontal	Pass
		2610	-1.12	4.75	27.68	21.81	151.705	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2572.5	-1.35	4.54	27.75	21.86	153.462	Vertical	Pass
		2595	-1.26	4.69	27.72	21.77	150.314	Vertical	Pass
		2617.5	-1.24	4.71	27.71	21.76	149.968	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2575	-1.33	4.55	27.76	21.88	154.170	Vertical	Pass
		2595	-1.17	4.69	27.72	21.86	153.462	Vertical	Pass
		2615	-1.24	4.72	27.70	21.74	149.279	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2577.5	-2.33	4.55	27.77	20.89	122.744	Vertical	Pass
		2595	-2.29	4.69	27.72	20.74	118.577	Vertical	Pass
		2612.5	-2.44	4.72	27.69	20.53	112.980	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2580	-2.45	4.57	27.78	20.76	119.124	Vertical	Pass
		2595	-2.61	4.73	27.72	20.38	109.144	Vertical	Pass
		2610	-2.71	4.75	27.68	20.22	105.196	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 66

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1710.7	-2.99	3.76	28.24	21.49	140.929	Horizontal	Pass
		1745	-2.85	3.91	28.22	21.46	139.959	Horizontal	Pass
		1779.3	-2.72	3.93	28.2	21.55	142.889	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-3.05	3.77	28.23	21.41	138.357	Horizontal	Pass
		1745	-2.96	3.91	28.24	21.37	137.088	Horizontal	Pass
		1778.5	-2.98	3.94	28.25	21.33	135.831	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.95	3.77	28.31	21.59	144.212	Horizontal	Pass
		1745	-2.63	3.91	28.22	21.68	147.231	Horizontal	Pass
		1777.5	-2.69	3.94	28.2	21.57	143.549	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-2.84	3.79	28.33	21.70	147.911	Horizontal	Pass
		1745	-2.57	3.95	28.22	21.70	147.911	Horizontal	Pass
		1775	-2.58	3.97	28.19	21.64	145.881	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-2.86	3.79	28.34	21.69	147.571	Horizontal	Pass
		1745	-2.67	3.95	28.22	21.60	144.544	Horizontal	Pass
		1772.5	-2.62	3.97	28.18	21.59	144.212	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-2.83	3.81	28.35	**21.71**	148.252	Horizontal	Pass
		1745	-2.57	3.96	28.22	21.69	147.571	Horizontal	Pass
		1770	-2.59	4	28.16	21.57	143.549	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-3.96	3.76	28.24	20.52	112.720	Vertical	Pass
		1745	-3.57	3.91	28.22	20.74	118.577	Vertical	Pass
		1779.3	-4.28	3.93	28.2	19.99	99.770	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-4.27	3.77	28.23	20.19	104.472	Vertical	Pass
		1745	-4.17	3.91	28.24	20.16	103.753	Vertical	Pass
		1778.5	-3.76	3.94	28.25	20.55	113.501	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-4.55	3.77	28.31	19.99	99.770	Vertical	Pass
		1745	-3.75	3.91	28.22	20.56	113.763	Vertical	Pass
		1777.5	-3.64	3.94	28.2	20.62	115.345	Vertical	Pass
10.0MHz Band	1/#Mid	1715	-3.95	3.79	28.34	20.60	114.815	Vertical	Pass
		1745	-4.06	3.95	28.22	20.21	104.954	Vertical	Pass

QPSK		1775	-3.90	3.97	28.18	20.31	107.399	Vertical	Pass
15.0MHz		1717.5	-4.25	3.81	28.35	20.29	106.905	Vertical	Pass
Band	1/#Mid	1745	-4.18	3.96	28.22	20.08	101.859	Vertical	Pass
QPSK		1772.5	-3.27	4	28.16	20.89	122.744	Vertical	Pass
20.0MHz		1720	-4.30	3.79	28.34	20.25	105.925	Vertical	Pass
Band	1/#Mid	1745	-3.51	3.95	28.22	20.76	119.124	Vertical	Pass
QPSK		1770	-4.11	3.97	28.18	20.10	102.329	Vertical	Pass

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-3.96	3.76	28.24	20.52	112.720	Horizontal	Pass
		1745	-3.57	3.91	28.22	20.74	118.577	Horizontal	Pass
		1779.3	-3.75	3.93	28.2	20.52	112.720	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-4.35	3.77	28.23	20.11	102.565	Horizontal	Pass
		1745	-3.60	3.91	28.24	20.73	118.304	Horizontal	Pass
		1778.5	-3.89	3.94	28.25	20.42	110.154	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-3.77	3.77	28.31	20.77	119.399	Horizontal	Pass
		1745	-3.83	3.91	28.22	20.48	111.686	Horizontal	Pass
		1777.5	-3.50	3.94	28.2	20.76	119.124	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-3.82	3.79	28.33	20.72	118.032	Horizontal	Pass
		1745	-3.48	3.95	28.22	20.79	119.950	Horizontal	Pass
		1775	-3.80	3.97	28.19	20.42	110.154	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-3.81	3.79	28.34	20.74	118.577	Horizontal	Pass
		1745	-3.63	3.95	28.22	20.64	115.878	Horizontal	Pass
		1772.5	-3.42	3.97	28.18	20.79	119.950	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-3.64	3.81	28.35	**20.90**	123.027	Horizontal	Pass
		1745	-3.42	3.96	28.22	20.84	121.339	Horizontal	Pass
		1770	-3.36	4	28.16	20.80	120.226	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-4.30	3.76	28.24	20.18	104.232	Vertical	Pass
		1745	-4.28	3.91	28.22	20.03	100.693	Vertical	Pass
		1779.3	-5.39	3.93	28.2	18.88	77.268	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-5.10	3.77	28.23	19.36	86.298	Vertical	Pass
		1745	-3.62	3.91	28.24	20.71	117.761	Vertical	Pass
		1778.5	-4.13	3.94	28.25	20.18	104.232	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-5.64	3.77	28.31	18.90	77.625	Vertical	Pass
		1745	-5.04	3.91	28.22	19.27	84.528	Vertical	Pass
		1777.5	-4.00	3.94	28.2	20.26	106.170	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-3.90	3.79	28.34	20.65	116.145	Vertical	Pass
		1745	-3.99	3.95	28.22	20.28	106.660	Vertical	Pass
		1775	-5.06	3.97	28.18	19.15	82.224	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-3.79	3.81	28.35	20.75	118.850	Vertical	Pass
		1745	-4.66	3.96	28.22	19.60	91.201	Vertical	Pass
		1772.5	-5.33	4	28.16	18.83	76.384	Vertical	Pass

20.0MHz	1/#Mid	1720	-4.65	3.79	28.34	19.90	97.724	Vertical	Pass
Band 16		1745	-3.70	3.95	28.22	20.57	114.025	Vertical	Pass
QAM		1770	-5.26	3.97	28.18	18.95	78.524	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

9. SPURIOUS RADIATION EMISSION

RULE PART(S)

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

LIMIT

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

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

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

TEST PROCEDURE

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

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

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

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

MODES TESTED

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

RESULTS

PASS

9.1 LTE BAND 2

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

Test Results for Low Channel 1850.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3701.4	-50.08	4.04	33.51	-20.61	-13	-7.61	Horizontal
3701.4	-53.66	4.04	33.51	-24.19	-13	-11.19	Vertical
5552.1	-47.64	5.24	35.84	-17.04	-13	-4.04	Vertical
5552.1	-53.25	5.24	35.84	-22.65	-13	-9.65	Horizontal
189.8	-42.72	1.43	16.02	-28.13	-13	-15.13	Vertical
383.5	-34.52	1.30	17.99	-17.83	-13	-4.83	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-44.29	4.04	33.56	-14.77	-13	-1.77	Horizontal
3760.0	-50.57	4.04	33.56	-21.05	-13	-8.05	Vertical
5640.0	-52.52	5.24	35.91	-21.85	-13	-8.85	Vertical
5640.0	-49.79	5.24	35.91	-19.12	-13	-6.12	Horizontal
199.1	-37.74	1.62	16.97	-22.39	-13	-9.39	Vertical
406.9	-35.19	1.74	15.98	-20.96	-13	-7.96	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-52.90	4.04	34.00	-22.94	-13	-9.94	Horizontal
3818.6	-53.68	4.04	34.00	-23.72	-13	-10.72	Vertical
5727.9	-50.85	5.24	36.04	-20.05	-13	-7.05	Vertical
5727.9	-52.43	5.24	36.04	-21.63	-13	-8.63	Horizontal
177.5	-41.71	1.42	17.29	-25.84	-13	-12.84	Vertical
231.5	-34.85	1.50	17.90	-18.44	-13	-5.44	Horizontal

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

Test Results for Low Channel 1860MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3720.0	-50.15	4.07	33.54	-20.68	-13	-7.68	Horizontal
3720.0	-50.17	4.07	33.54	-20.70	-13	-7.70	Vertical
5580.0	-50.59	5.28	35.86	-20.01	-13	-7.01	Vertical
5580.0	-51.58	5.28	35.86	-21.00	-13	-8.00	Horizontal
181.8	-41.40	1.58	16.89	-26.08	-13	-13.08	Vertical
239.7	-34.77	1.76	17.26	-19.27	-13	-6.27	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-49.98	4.04	33.56	-20.46	-13	-7.46	Horizontal
3760.0	-52.39	4.04	33.56	-22.87	-13	-9.87	Vertical
5640.0	-50.00	5.24	35.91	-19.33	-13	-6.33	Vertical
5640.0	-50.14	5.24	35.91	-19.47	-13	-6.47	Horizontal
196.6	-44.66	1.46	16.27	-29.85	-13	-16.85	Vertical
465.8	-37.81	1.59	15.15	-24.25	-13	-11.25	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-48.16	4.04	34.00	-18.20	-13	-5.20	Horizontal
3800.0	-51.21	4.04	34.00	-21.25	-13	-8.25	Vertical
5700.0	-52.90	5.24	36.04	-22.10	-13	-9.10	Vertical
5700.0	-52.48	5.24	36.04	-21.68	-13	-8.68	Horizontal
178.0	-40.37	1.36	17.39	-24.33	-13	-11.33	Vertical
333.1	-39.61	1.66	15.39	-25.88	-13	-12.88	Horizontal

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

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

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

9.2 LTE BAND 4

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3421.4	-51.53	4.02	29.80	-25.75	-13	-12.75	Horizontal
3421.4	-50.35	4.02	29.80	-24.57	-13	-11.57	Vertical
5132.1	-50.38	5.24	35.84	-19.78	-13	-6.78	Vertical
5132.1	-53.68	5.24	35.84	-23.08	-13	-10.08	Horizontal
206.0	-43.15	1.68	16.04	-28.79	-13	-15.79	Vertical
352.9	-36.64	1.78	17.74	-20.68	-13	-7.68	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-53.75	4.03	30.00	-27.78	-13	-14.78	Horizontal
3465.0	-50.50	4.03	30.00	-24.53	-13	-11.53	Vertical
5197.5	-50.62	5.25	35.86	-20.01	-13	-7.01	Vertical
5197.5	-51.28	5.25	35.86	-20.67	-13	-7.67	Horizontal
199.2	-39.86	1.72	17.69	-23.89	-13	-10.89	Vertical
425.8	-43.21	1.62	16.02	-28.80	-13	-15.80	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-48.54	4.05	30.01	-22.58	-13	-9.58	Horizontal
3508.6	-51.35	4.05	30.01	-25.39	-13	-12.39	Vertical
5262.9	-52.07	5.26	35.86	-21.47	-13	-8.47	Vertical
5262.9	-52.38	5.26	35.86	-21.78	-13	-8.78	Horizontal
199.5	-40.28	1.80	16.69	-25.39	-13	-12.39	Vertical
415.5	-43.37	1.75	16.66	-28.47	-13	-15.47	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3440.0	-46.94	4.02	29.80	-21.16	-13	-8.16	Horizontal
3440.0	-47.27	4.02	29.80	-21.49	-13	-8.49	Vertical
5160.0	-49.92	5.24	35.84	-19.32	-13	-6.32	Vertical
5160.0	-49.40	5.24	35.84	-18.80	-13	-5.80	Horizontal
210.6	-34.61	1.57	17.26	-18.92	-13	-5.92	Vertical
460.3	-43.54	1.78	16.35	-28.97	-13	-15.97	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-44.13	4.03	30.00	-18.16	-13	-5.16	Horizontal
3465.0	-51.57	4.03	30.00	-25.60	-13	-12.60	Vertical
5197.5	-49.64	5.25	35.86	-19.03	-13	-6.03	Vertical
5197.5	-50.87	5.25	35.86	-20.26	-13	-7.26	Horizontal
176.7	-34.77	1.44	17.95	-18.26	-13	-5.26	Vertical
292.9	-43.28	1.65	16.09	-28.84	-13	-15.84	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-49.63	2.91	27.68	-24.86	-13	-11.86	Horizontal
3490.0	-51.41	2.91	27.68	-26.64	-13	-13.64	Vertical
5235.0	-47.79	5.26	35.86	-17.19	-13	-4.19	Vertical
5235.0	-51.23	5.26	35.86	-20.63	-13	-7.63	Horizontal
186.1	-39.94	1.61	16.85	-24.70	-13	-11.70	Vertical
370.1	-37.09	1.61	15.19	-23.51	-13	-10.51	Horizontal

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

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

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

9.3 LTE BAND 5

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

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1649.4	-50.22	2.78	27.50	-25.50	-13	-12.50	Horizontal
1649.4	-44.40	2.78	27.50	-19.68	-13	-6.68	Vertical
2474.1	-51.34	2.90	27.80	-26.44	-13	-13.44	Vertical
2474.1	-52.56	2.90	27.80	-27.66	-13	-14.66	Horizontal
201.5	-40.09	1.76	17.59	-24.26	-13	-11.26	Vertical
416.2	-42.60	1.63	15.87	-28.36	-13	-15.36	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-48.33	2.80	27.48	-23.65	-13	-10.65	Horizontal
1673.0	-53.86	2.80	27.48	-29.18	-13	-16.18	Vertical
2509.5	-49.02	2.91	27.70	-24.23	-13	-11.23	Vertical
2509.5	-53.32	2.91	27.70	-28.53	-13	-15.53	Horizontal
199.6	-42.04	1.61	15.68	-27.97	-13	-14.97	Vertical
408.1	-38.39	1.59	17.52	-22.47	-13	-9.47	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-52.35	2.82	27.43	-27.74	-13	-14.74	Horizontal
1696.6	-53.25	2.82	27.43	-28.64	-13	-15.64	Vertical
2544.9	-49.76	2.92	27.74	-24.94	-13	-11.94	Vertical
2544.9	-53.47	2.92	27.74	-28.65	-13	-15.65	Horizontal
189.5	-37.97	1.69	16.67	-22.98	-13	-9.98	Vertical
412.6	-44.80	1.70	17.18	-29.32	-13	-16.32	Horizontal

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

Test Results for Low Channel 829MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1658.0	-48.64	2.78	27.50	-23.92	-13	-10.92	Horizontal
1658.0	-50.64	2.78	27.50	-25.92	-13	-12.92	Vertical
2487.0	-48.03	2.90	27.80	-23.13	-13	-10.13	Vertical
2487.0	-50.18	2.90	27.80	-25.28	-13	-12.28	Horizontal
178.9	-35.47	1.71	15.57	-21.61	-13	-8.61	Vertical
286.6	-43.68	1.34	16.40	-28.62	-13	-15.62	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-51.22	2.80	27.48	-26.54	-13	-13.54	Horizontal
1673.0	-52.45	2.80	27.48	-27.77	-13	-14.77	Vertical
2509.5	-46.71	2.91	27.70	-21.92	-13	-8.92	Vertical
2509.5	-49.70	2.91	27.70	-24.91	-13	-11.91	Horizontal
176.2	-36.18	1.44	17.04	-20.58	-13	-7.58	Vertical
306.1	-34.03	1.76	17.62	-18.17	-13	-5.17	Horizontal
Test Results for High Channel 844MHz							
1688.0	-53.68	2.82	27.43	-29.07	-13	-16.07	Horizontal
1688.0	-49.53	2.82	27.43	-24.92	-13	-11.92	Vertical
2532.0	-45.82	2.92	27.74	-21.00	-13	-8.00	Vertical
2532.0	-51.11	2.92	27.74	-26.29	-13	-13.29	Horizontal
187.6	-34.67	1.74	17.70	-18.71	-13	-5.71	Vertical
242.6	-39.69	1.41	17.46	-23.63	-13	-10.63	Horizontal

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

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

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

9.4 LTE BAND 7

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

Test Results for Low Channel 2502.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
5005.0	-63.65	5.23	35.81	-33.07	-25	-8.07	Horizontal
5005.0	-59.63	5.23	35.81	-29.05	-25	-4.05	Vertical
7507.5	-60.33	5.67	36.85	-29.15	-25	-4.15	Vertical
7507.5	-61.55	5.67	36.85	-30.37	-25	-5.37	Horizontal
193.9	-44.24	1.73	17.97	-28.00	-25	-3.00	Vertical
429.0	-48.05	1.38	15.11	-34.32	-25	-9.32	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-61.15	5.23	35.82	-30.56	-25	-5.56	Horizontal
5070.0	-61.79	5.23	35.82	-31.20	-25	-6.20	Vertical
7605.0	-64.15	5.67	36.85	-32.97	-25	-7.97	Vertical
7605.0	-63.91	5.67	36.85	-32.73	-25	-7.73	Horizontal
189.2	-48.90	1.77	16.17	-34.49	-25	-9.49	Vertical
420.9	-46.83	1.63	15.21	-33.25	-25	-8.25	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-61.99	5.24	35.83	-31.40	-25	-6.40	Horizontal
5135.0	-63.52	5.24	35.83	-32.93	-25	-7.93	Vertical
7702.5	-59.69	5.68	36.87	-28.50	-25	-3.50	Vertical
7702.5	-60.40	5.68	36.87	-29.21	-25	-4.21	Horizontal
209.2	-45.31	1.58	17.56	-29.33	-25	-4.33	Vertical
403.3	-54.91	1.45	16.58	-39.78	-25	-14.78	Horizontal

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

Test Results for Low Channel 2510MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
5020.0	-59.98	5.23	35.82	-29.39	-25	-4.39	Horizontal
5020.0	-63.71	5.23	35.82	-33.12	-25	-8.12	Vertical
7530.0	-60.45	5.67	36.86	-29.26	-25	-4.26	Vertical
7530.0	-60.93	5.67	36.86	-29.74	-25	-4.74	Horizontal
211.2	-54.16	1.63	15.76	-40.03	-25	-15.03	Vertical
367.9	-45.45	1.71	15.44	-31.72	-25	-6.72	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-63.17	5.23	35.82	-32.58	-25	-7.58	Horizontal
5070.0	-60.57	5.23	35.82	-29.98	-25	-4.98	Vertical
7605.0	-62.53	5.67	36.85	-31.35	-25	-6.35	Vertical
7605.0	-62.89	5.67	36.85	-31.71	-25	-6.71	Horizontal
182.1	-45.67	1.79	16.84	-30.61	-25	-5.61	Vertical
319.9	-46.64	1.71	17.64	-30.71	-25	-5.71	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-61.11	5.24	35.83	-30.52	-25	-5.52	Horizontal
5120.0	-59.63	5.24	35.83	-29.04	-25	-4.04	Vertical
7680.0	-61.32	5.70	36.88	-30.14	-25	-5.14	Vertical
7680.0	-59.41	5.70	36.88	-28.23	-25	-3.23	Horizontal
209.4	-46.93	1.79	16.84	-31.87	-25	-6.87	Vertical
385.1	-44.56	1.71	17.64	-28.63	-25	-3.63	Horizontal

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

. Margin = Spurious Emission Level - Limit

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

9.5 LTE BAND 12

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

Test Results for Low Channel 699.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1399.4	-52.14	2.60	27.20	-27.54	-13	-14.54	Horizontal
1399.4	-44.46	2.60	27.20	-19.86	-13	-6.86	Vertical
2099.1	-48.76	2.85	27.54	-24.07	-13	-11.07	Vertical
2099.1	-49.29	2.85	27.54	-24.60	-13	-11.60	Horizontal
181.5	-37.73	1.49	17.78	-21.44	-13	-8.44	Vertical
428.6	-38.51	1.36	17.33	-22.54	-13	-9.54	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.0	-53.50	2.61	27.28	-28.83	-13	-15.83	Horizontal
1415.0	-45.59	2.61	27.28	-20.92	-13	-7.92	Vertical
2122.5	-46.90	2.87	27.59	-22.18	-13	-9.18	Vertical
2122.5	-52.17	2.87	27.59	-27.45	-13	-14.45	Horizontal
210.2	-36.85	1.73	15.74	-22.84	-13	-9.84	Vertical
405.3	-37.92	1.62	15.79	-23.75	-13	-10.75	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-49.26	2.63	27.28	-24.61	-13	-11.61	Horizontal
1430.6	-45.84	2.63	27.28	-21.19	-13	-8.19	Vertical
2145.9	-44.02	2.88	27.60	-19.30	-13	-6.30	Vertical
2145.9	-51.67	2.88	27.60	-26.95	-13	-13.95	Horizontal
181.0	-44.98	1.61	18.00	-28.59	-13	-15.59	Vertical
361.1	-35.01	1.45	15.49	-20.98	-13	-7.98	Horizontal

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

Test Results for Low Channel 704MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1408.0	-53.38	2.61	27.26	-28.73	-13	-15.73	Horizontal
1408.0	-46.95	2.61	27.26	-22.30	-13	-9.30	Vertical
2112.0	-51.03	2.87	27.58	-26.32	-13	-13.32	Vertical
2112.0	-50.31	2.87	27.58	-25.60	-13	-12.60	Horizontal
190.9	-43.00	1.31	16.97	-27.34	-13	-14.34	Vertical
351.4	-42.92	1.65	16.70	-27.87	-13	-14.87	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.0	-51.42	2.61	27.28	-26.75	-13	-13.75	Horizontal
1415.0	-52.00	2.61	27.28	-27.33	-13	-14.33	Vertical
2122.5	-49.51	2.87	27.59	-24.79	-13	-11.79	Vertical
2122.5	-53.64	2.87	27.59	-28.92	-13	-15.92	Horizontal
195.4	-39.86	1.72	17.99	-23.59	-13	-10.59	Vertical
254.6	-39.93	1.73	17.94	-23.72	-13	-10.72	Horizontal
Test Results for High Channel 711MHz							
1422.0	-50.18	2.62	27.28	-25.52	-13	-12.52	Horizontal
1422.0	-45.68	2.62	27.28	-21.02	-13	-8.02	Vertical
2133.0	-46.68	2.87	27.60	-21.95	-13	-8.95	Vertical
2133.0	-53.81	2.87	27.60	-29.08	-13	-16.08	Horizontal
193.0	-40.41	1.58	15.93	-26.06	-13	-13.06	Vertical
247.9	-37.21	1.36	15.59	-22.98	-13	-9.98	Horizontal

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

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

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

9.6 LTE BAND 13

QPSK EIRP POWER FOR LTE BAND 13 (5MHZ BANDWIDTH)

Test Results for Low Channel 779.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1559.0	-74.49	2.61	27.28	-49.82	-40	-9.82	Horizontal
1559.0	-73.61	2.61	27.28	-48.94	-40	-8.94	Vertical
2338.5	-42.15	2.87	27.59	-17.43	-13	-4.43	Vertical
2338.5	-44.59	2.87	27.59	-19.87	-13	-6.87	Horizontal
120.1	-38.23	1.54	15.61	-24.16	-13	-11.16	Vertical
197.8	-37.02	1.51	15.21	-23.32	-13	-10.32	Horizontal
Test Results For Mid Channel 782MHz							
1564.0	-69.52	2.62	27.30	-44.84	-40	-4.84	Horizontal
1564.0	-69.32	2.62	27.30	-44.64	-40	-4.64	Vertical
2346.0	-42.14	2.87	27.62	-17.39	-13	-4.39	Vertical
2346.0	-40.84	2.87	27.62	-16.09	-13	-3.09	Horizontal
131.2	-37.64	1.65	16.17	-23.12	-13	-10.12	Vertical
267.5	-39.87	1.48	16.88	-24.47	-13	-11.47	Horizontal
Test Results for High Channel 784.5MHz							
1569.0	-70.19	2.66	27.28	-45.57	-40	-5.57	Horizontal
1569.0	-70.03	2.66	27.28	-45.41	-40	-5.41	Vertical
2353.5	-41.01	2.88	27.60	-16.29	-13	-3.29	Vertical
2353.5	-43.30	2.88	27.60	-18.58	-13	-5.58	Horizontal
80.8	-39.94	1.54	16.40	-25.08	-13	-12.08	Vertical
155.6	-35.40	1.43	15.77	-21.06	-13	-8.06	Horizontal

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

Test Results for Channel 782MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1564.0	-74.86	2.62	27.30	-50.18	-40	-10.18	Horizontal
1564.0	-72.47	2.62	27.30	-47.79	-40	-7.79	Vertical
2346.0	-42.75	2.87	27.62	-18.00	-13	-5.00	Vertical
2346.0	-43.96	2.87	27.62	-19.21	-13	-6.21	Horizontal
129.1	-37.15	1.43	17.03	-21.55	-13	-8.55	Vertical
86.9	-36.43	1.62	16.63	-21.42	-13	-8.42	Horizontal

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

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

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

9.7 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 Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1581.0	-73.69	2.61	27.28	-49.02	-40	-9.02	Horizontal
1581.0	-72.81	2.61	27.28	-48.14	-40	-8.14	Vertical
2371.5	-41.35	2.87	27.59	-16.63	-13	-3.63	Vertical
2371.5	-43.79	2.87	27.59	-19.07	-13	-6.07	Horizontal
126.3	-37.43	1.54	15.61	-23.36	-13	-10.36	Vertical
198.2	-36.22	1.51	15.21	-22.52	-13	-9.52	Horizontal
Test Results For Mid Channel 793MHz							
1586.0	-68.72	2.62	27.30	-44.04	-40	-4.04	Horizontal
1586.0	-68.52	2.62	27.30	-43.84	-40	-3.84	Vertical
2379.0	-41.34	2.87	27.62	-16.59	-13	-3.59	Vertical
2379.0	-40.04	2.87	27.62	-15.29	-13	-2.29	Horizontal
154.0	-36.84	1.65	16.17	-22.32	-13	-9.32	Vertical
299.4	-39.07	1.48	16.88	-23.67	-13	-10.67	Horizontal
Test Results for High Channel 795.5MHz							
1591.0	-69.39	2.66	27.28	-44.77	-40	-4.77	Horizontal
1591.0	-69.23	2.66	27.28	-44.61	-40	-4.61	Vertical
2386.5	-40.21	2.88	27.60	-15.49	-13	-2.49	Vertical
2386.5	-42.50	2.88	27.60	-17.78	-13	-4.78	Horizontal
95.9	-39.14	1.54	16.40	-24.28	-13	-11.28	Vertical
174.3	-34.60	1.43	15.77	-20.26	-13	-7.26	Horizontal

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

Test Results for Channel 793MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1586.0	-75.96	2.62	27.30	-51.28	-40	-11.28	Horizontal
1586.0	-73.02	2.62	27.30	-48.34	-40	-8.34	Vertical
2379.0	-42.15	2.87	27.62	-17.40	-13	-4.40	Vertical
2379.0	-43.36	2.87	27.62	-18.61	-13	-5.61	Horizontal
131.3	-37.25	1.43	17.03	-21.65	-13	-8.65	Vertical
93.0	-36.58	1.62	16.63	-21.57	-13	-8.57	Horizontal

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

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

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

9.8 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	-46.58	2.61	27.28	-21.91	-13	-8.91	Horizontal
1413.0	-53.95	2.61	27.28	-29.28	-13	-16.28	Vertical
2119.5	-52.98	2.87	27.59	-28.26	-13	-15.26	Vertical
2119.5	-53.61	2.87	27.59	-28.89	-13	-15.89	Horizontal
208.4	-37.74	1.71	16.15	-23.30	-13	-10.30	Vertical
426.5	-40.70	1.41	17.32	-24.79	-13	-11.79	Horizontal
Test Results For Mid Channel 710MHz							
1420.0	-51.76	2.62	27.30	-27.08	-13	-14.08	Horizontal
1420.0	-50.26	2.62	27.30	-25.58	-13	-12.58	Vertical
2130.0	-51.51	2.87	27.62	-26.76	-13	-13.76	Vertical
2130.0	-52.47	2.87	27.62	-27.72	-13	-14.72	Horizontal
182.6	-39.56	1.42	15.25	-25.74	-13	-12.74	Vertical
346.8	-36.09	1.36	17.19	-20.26	-13	-7.26	Horizontal
Test Results for High Channel 713.5MHz							
1427.0	-50.19	2.66	27.28	-25.57	-13	-12.57	Horizontal
1427.0	-48.82	2.66	27.28	-24.20	-13	-11.20	Vertical
2140.5	-47.80	2.88	27.60	-23.08	-13	-10.08	Vertical
2140.5	-49.23	2.88	27.60	-24.51	-13	-11.51	Horizontal
178.0	-42.05	1.32	17.29	-26.08	-13	-13.08	Vertical
237.6	-41.51	1.72	16.89	-26.34	-13	-13.34	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	-46.55	2.62	27.30	-21.87	-13	-8.87	Horizontal
1418.0	-49.27	2.62	27.30	-24.59	-13	-11.59	Vertical
2127.0	-53.95	2.87	27.62	-29.20	-13	-16.20	Vertical
2127.0	-51.27	2.87	27.62	-26.52	-13	-13.52	Horizontal
200.3	-38.82	1.35	16.91	-23.26	-13	-10.26	Vertical
235.2	-40.74	1.62	16.31	-26.05	-13	-13.05	Horizontal
Test Results for Mid Channel 710MHz							
1420.0	-53.89	2.62	27.30	-29.21	-13	-16.21	Horizontal
1420.0	-44.92	2.62	27.30	-20.24	-13	-7.24	Vertical
2130.0	-49.61	2.87	27.62	-24.86	-13	-11.86	Vertical
2130.0	-51.27	2.87	27.62	-26.52	-13	-13.52	Horizontal
203.2	-34.08	1.51	17.14	-18.45	-13	-5.45	Vertical
305.5	-36.17	1.77	16.88	-21.06	-13	-8.06	Horizontal
Test Results for High Channel 711MHz							
1422.0	-51.75	2.62	27.30	-27.07	-13	-14.07	Horizontal
1422.0	-50.77	2.62	27.30	-26.09	-13	-13.09	Vertical
2133.0	-52.62	2.87	27.62	-27.87	-13	-14.87	Vertical
2133.0	-53.94	2.87	27.62	-29.19	-13	-16.19	Horizontal
176.6	-37.35	1.78	15.95	-23.18	-13	-10.18	Vertical
389.6	-37.38	1.34	17.95	-20.78	-13	-7.78	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 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3701.4	-46.85	4.02	29.80	-21.07	-13	-8.07	Horizontal
3701.4	-47.87	4.02	29.80	-22.09	-13	-9.09	Vertical
5552.1	-49.81	5.24	35.84	-19.21	-13	-6.21	Vertical
5552.1	-49.57	5.24	35.84	-18.97	-13	-5.97	Horizontal
93.9	-32.21	1.59	15.11	-18.69	-13	-5.69	Vertical
119.7	-33.77	1.80	15.61	-19.96	-13	-6.96	Horizontal
Test Results for Mid Channel 1732.5MHz							
3765.0	-49.38	4.03	30.00	-23.41	-13	-10.41	Horizontal
3765.0	-48.45	4.03	30.00	-22.48	-13	-9.48	Vertical
5647.5	-48.98	5.25	35.86	-18.37	-13	-5.37	Vertical
5647.5	-46.46	5.25	35.86	-15.85	-13	-2.85	Horizontal
166.1	-34.97	1.37	15.62	-20.72	-13	-7.72	Vertical
274.4	-34.93	1.55	17.51	-18.97	-13	-5.97	Horizontal
Test Results for High Channel 1754.3MHz							
3828.6	-47.83	4.05	30.01	-21.87	-13	-8.87	Horizontal
3828.6	-42.66	4.05	30.01	-16.70	-13	-3.70	Vertical
5742.9	-49.38	5.26	35.86	-18.78	-13	-5.78	Vertical
5742.9	-48.01	5.26	35.86	-17.41	-13	-4.41	Horizontal
108.6	-34.59	1.66	17.19	-19.06	-13	-6.06	Vertical
138.7	-33.60	1.35	17.94	-17.01	-13	-4.01	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3720.0	-46.91	4.02	29.80	-21.13	-13	-8.13	Horizontal
3720.0	-44.79	4.02	29.80	-19.01	-13	-6.01	Vertical
5580.0	-46.75	5.24	35.84	-16.15	-13	-3.15	Vertical
5580.0	-48.07	5.24	35.84	-17.47	-13	-4.47	Horizontal
146.2	-32.05	1.70	15.24	-18.51	-13	-5.51	Vertical
215.4	-34.88	1.42	16.58	-19.72	-13	-6.72	Horizontal
Test Results for Mid Channel 1732.5MHz							
3765.0	-48.12	4.03	30.00	-22.15	-13	-9.15	Horizontal
3765.0	-45.50	4.03	30.00	-19.53	-13	-6.53	Vertical
5647.5	-47.90	5.25	35.86	-17.29	-13	-4.29	Vertical
5647.5	-47.06	5.25	35.86	-16.45	-13	-3.45	Horizontal
132.2	-33.01	1.64	16.16	-18.49	-13	-5.49	Vertical
133.3	-32.46	1.62	17.37	-16.71	-13	-3.71	Horizontal
Test Results for High Channel 1745MHz							
3810.0	-49.17	2.91	27.68	-24.40	-13	-11.40	Horizontal
3810.0	-47.89	2.91	27.68	-23.12	-13	-10.12	Vertical
5715.0	-49.51	5.26	35.86	-18.91	-13	-5.91	Vertical
5715.0	-48.59	5.26	35.86	-17.99	-13	-4.99	Horizontal
212.6	-33.81	1.49	15.29	-20.01	-13	-7.01	Vertical
275.8	-33.89	1.79	16.42	-19.26	-13	-6.26	Horizontal

9.10 LTE BAND 26

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

Test Results for Low Channel 814.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1629.4	-48.96	2.78	27.50	-24.24	-13	-11.24	Horizontal
1629.4	-44.83	2.78	27.50	-20.11	-13	-7.11	Vertical
2444.1	-47.42	2.90	27.80	-22.52	-13	-9.52	Vertical
2444.1	-49.96	2.90	27.80	-25.06	-13	-12.06	Horizontal
229.6	-34.76	1.54	16.98	-19.32	-13	-6.32	Vertical
83.3	-32.51	1.47	15.82	-18.16	-13	-5.16	Horizontal
Test Results For Mid Channel 819MHz							
1638.0	-49.14	2.80	27.48	-24.46	-13	-11.46	Horizontal
1638.0	-44.31	2.80	27.48	-19.63	-13	-6.63	Vertical
2457.0	-46.98	2.91	27.70	-22.19	-13	-9.19	Vertical
2457.0	-49.89	2.91	27.70	-25.10	-13	-12.10	Horizontal
168.2	-34.58	1.74	16.19	-20.13	-13	-7.13	Vertical
92.9	-32.34	1.46	15.43	-18.37	-13	-5.37	Horizontal
Test Results for High Channel 823.3MHz							
1646.6	-47.90	2.82	27.43	-23.29	-13	-10.29	Horizontal
1646.6	-42.78	2.82	27.43	-18.17	-13	-5.17	Vertical
2469.9	-47.66	2.92	27.74	-22.84	-13	-9.84	Vertical
2469.9	-48.85	2.92	27.74	-24.03	-13	-11.03	Horizontal
213.1	-33.64	1.67	17.05	-18.26	-13	-5.26	Vertical
121.7	-33.79	1.42	16.12	-19.09	-13	-6.09	Horizontal

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

Test Results for Channel 819MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1638.0	-46.27	2.78	27.50	-21.55	-13	-8.55	Horizontal
1638.0	-43.91	2.78	27.50	-19.19	-13	-6.19	Vertical
2457.0	-49.08	2.90	27.80	-24.18	-13	-11.18	Vertical
2457.0	-46.59	2.90	27.80	-21.69	-13	-8.69	Horizontal
253.7	-33.65	1.43	17.34	-17.74	-13	-4.74	Vertical
256.8	-32.46	1.56	15.71	-18.31	-13	-5.31	Horizontal

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

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1649.4	-48.30	2.78	27.50	-23.58	-13	-10.58	Horizontal
1649.4	-48.29	2.78	27.50	-23.57	-13	-10.57	Vertical
2474.1	-47.87	2.90	27.80	-22.97	-13	-9.97	Vertical
2474.1	-46.95	2.90	27.80	-22.05	-13	-9.05	Horizontal
237.0	-32.62	1.33	17.34	-16.61	-13	-3.61	Vertical
180.5	-32.69	1.47	16.80	-17.36	-13	-4.36	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-49.81	2.80	27.48	-25.13	-13	-12.13	Horizontal
1673.0	-49.91	2.80	27.48	-25.23	-13	-12.23	Vertical
2509.5	-49.57	2.91	27.70	-24.78	-13	-11.78	Vertical
2509.5	-48.88	2.91	27.70	-24.09	-13	-11.09	Horizontal
140.8	-34.51	1.75	15.46	-20.80	-13	-7.80	Vertical
90.6	-32.18	1.52	16.14	-17.56	-13	-4.56	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-48.76	2.82	27.43	-24.15	-13	-11.15	Horizontal
1696.6	-48.34	2.82	27.43	-23.73	-13	-10.73	Vertical
2544.9	-49.91	2.92	27.74	-25.09	-13	-12.09	Vertical
2544.9	-46.91	2.92	27.74	-22.09	-13	-9.09	Horizontal
171.4	-34.60	1.67	16.09	-20.18	-13	-7.18	Vertical
247.2	-33.53	1.80	17.55	-17.78	-13	-4.78	Horizontal

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

Test Results for Low Channel 831.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
1663.0	-48.88	2.78	27.50	-24.16	-13	-11.16	Horizontal
1663.0	-43.02	2.78	27.50	-18.30	-13	-5.30	Vertical
2494.5	-47.68	2.90	27.80	-22.78	-13	-9.78	Vertical
2494.5	-49.43	2.90	27.80	-24.53	-13	-11.53	Horizontal
255.4	-33.83	1.52	15.72	-19.63	-13	-6.63	Vertical
163.1	-33.47	1.40	17.03	-17.84	-13	-4.84	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-46.29	2.80	27.48	-21.61	-13	-8.61	Horizontal
1673.0	-44.00	2.80	27.48	-19.32	-13	-6.32	Vertical
2509.5	-49.66	2.91	27.70	-24.87	-13	-11.87	Vertical
2509.5	-49.82	2.91	27.70	-25.03	-13	-12.03	Horizontal
227.1	-32.68	1.74	16.38	-18.04	-13	-5.04	Vertical
101.3	-34.90	1.79	15.20	-21.49	-13	-8.49	Horizontal
Test Results for High Channel841.5MHz							
1683.0	-49.26	2.82	27.43	-24.65	-13	-11.65	Horizontal
1683.0	-41.66	2.82	27.43	-17.05	-13	-4.05	Vertical
2524.5	-47.16	2.92	27.74	-22.34	-13	-9.34	Vertical
2524.5	-46.15	2.92	27.74	-21.33	-13	-8.33	Horizontal
261.1	-34.06	1.78	17.44	-18.40	-13	-5.40	Vertical
120.1	-34.81	1.70	15.93	-20.58	-13	-7.58	Horizontal

9.11 LTE BAND 41

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

Test Results for Low Channel 2572.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
5145.0	-62.02	5.23	35.81	-31.44	-25	-6.44	Horizontal
5145.0	-63.02	5.23	35.81	-32.44	-25	-7.44	Vertical
7717.5	-61.72	5.67	36.85	-30.54	-25	-5.54	Vertical
7717.5	-62.62	5.67	36.85	-31.44	-25	-6.44	Horizontal
435.3	-48.74	1.38	15.98	-34.14	-25	-9.14	Vertical
465.8	-45.93	1.62	15.66	-31.89	-25	-6.89	Horizontal
Test Results for Mid Channel 2595MHz							
5190.0	-63.12	5.23	35.82	-32.53	-25	-7.53	Horizontal
5190.0	-64.53	5.23	35.82	-33.94	-25	-8.94	Vertical
7785.0	-63.25	5.67	36.85	-32.07	-25	-7.07	Vertical
7785.0	-60.24	5.67	36.85	-29.06	-25	-4.06	Horizontal
510.4	-48.01	1.62	16.17	-33.46	-25	-8.46	Vertical
562.9	-49.86	1.74	17.63	-33.97	-25	-8.97	Horizontal
Test Results for High Channel 2617.5MHz							
5235.0	-63.71	5.24	35.83	-33.12	-25	-8.12	Horizontal
5235.0	-64.87	5.24	35.83	-34.28	-25	-9.28	Vertical
7852.5	-60.48	5.68	36.87	-29.29	-25	-4.29	Vertical
7852.5	-63.20	5.68	36.87	-32.01	-25	-7.01	Horizontal
197.6	-47.51	1.55	15.84	-33.22	-25	-8.22	Vertical
353.1	-49.02	1.51	17.06	-33.47	-25	-8.47	Horizontal

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

Test Results for Low Channel 2580MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
5160.0	-64.74	5.23	35.82	-34.15	-25	-9.15	Horizontal
5160.0	-59.71	5.23	35.82	-29.12	-25	-4.12	Vertical
7740.0	-60.25	5.67	36.86	-29.06	-25	-4.06	Vertical
7740.0	-59.02	5.67	36.86	-27.83	-25	-2.83	Horizontal
128.9	-48.12	1.43	15.51	-34.04	-25	-9.04	Vertical
344.8	-46.46	1.40	16.97	-30.89	-25	-5.89	Horizontal
Test Results for Mid Channel 2595MHz							
5190.0	-61.21	5.23	35.82	-30.62	-25	-5.62	Horizontal
5190.0	-63.96	5.23	35.82	-33.37	-25	-8.37	Vertical
7785.0	-61.26	5.67	36.85	-30.08	-25	-5.08	Vertical
7785.0	-59.24	5.67	36.85	-28.06	-25	-3.06	Horizontal
100.8	-49.40	1.77	16.72	-34.45	-25	-9.45	Vertical
263.5	-45.53	1.31	16.99	-29.85	-25	-4.85	Horizontal
Test Results for High Channel 2610MHz							
5220.0	-62.17	5.24	35.83	-31.58	-25	-6.58	Horizontal
5220.0	-63.28	5.24	35.83	-32.69	-25	-7.69	Vertical
7830.0	-60.62	5.70	36.88	-29.44	-25	-4.44	Vertical
7830.0	-63.45	5.70	36.88	-32.27	-25	-7.27	Horizontal
349.9	-49.11	1.70	15.73	-35.08	-25	-10.08	Vertical
110.3	-49.65	1.75	17.33	-34.07	-25	-9.07	Horizontal

9.12 LTE BAND 66

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3421.4	-45.03	4.02	29.80	-19.25	-13	-6.25	Horizontal
3421.4	-50.12	4.02	29.80	-24.34	-13	-11.34	Vertical
5132.1	-51.76	5.24	35.84	-21.16	-13	-8.16	Vertical
5132.1	-54.55	5.24	35.84	-23.95	-13	-10.95	Horizontal
112.6	-53.81	1.52	15.57	-39.76	-13	-26.76	Vertical
220.5	-53.51	1.33	17.14	-37.70	-13	-24.70	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-44.07	4.03	30.00	-18.10	-13	-5.10	Horizontal
3490.0	-54.46	4.03	30.00	-28.49	-13	-15.49	Vertical
5235.0	-54.43	5.25	35.86	-23.82	-13	-10.82	Vertical
5235.0	-47.99	5.25	35.86	-17.38	-13	-4.38	Horizontal
157.3	-48.44	1.53	17.13	-32.84	-13	-19.84	Vertical
213.1	-47.16	1.41	15.95	-32.62	-13	-19.62	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-46.65	4.05	30.01	-20.69	-13	-7.69	Horizontal
3558.6	-47.06	4.05	30.01	-21.10	-13	-8.10	Vertical
5337.9	-52.35	5.26	35.86	-21.75	-13	-8.75	Vertical
5337.9	-47.72	5.26	35.86	-17.12	-13	-4.12	Horizontal
170.6	-52.17	1.44	15.51	-38.10	-13	-25.10	Vertical
169.0	-48.62	1.78	15.76	-34.64	-13	-21.64	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit （dBm）	Margin(dBm)	Polarity
3440.0	-49.84	4.02	29.80	-24.06	-13	-11.06	Horizontal
3440.0	-45.54	4.02	29.80	-19.76	-13	-6.76	Vertical
5160.0	-50.88	5.24	35.84	-20.28	-13	-7.28	Vertical
5160.0	-50.41	5.24	35.84	-19.81	-13	-6.81	Horizontal
268.8	-47.50	1.62	17.02	-32.10	-13	-19.10	Vertical
161.4	-54.04	1.32	17.31	-38.05	-13	-25.05	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-44.89	4.03	30.00	-18.92	-13	-5.92	Horizontal
3490.0	-46.63	4.03	30.00	-20.66	-13	-7.66	Vertical
5235.0	-51.49	5.25	35.86	-20.88	-13	-7.88	Vertical
5235.0	-52.93	5.25	35.86	-22.32	-13	-9.32	Horizontal
159.9	-44.14	1.45	15.17	-30.42	-13	-17.42	Vertical
172.1	-47.42	1.48	17.82	-31.08	-13	-18.08	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-44.91	2.91	27.68	-20.14	-13	-7.14	Horizontal
3540.0	-54.48	2.91	27.68	-29.71	-13	-16.71	Vertical
5310.0	-51.41	5.26	35.86	-20.81	-13	-7.81	Vertical
5310.0	-54.12	5.26	35.86	-23.52	-13	-10.52	Horizontal
197.3	-49.05	1.76	16.38	-34.43	-13	-21.43	Vertical
158.5	-44.53	1.43	17.13	-28.83	-13	-15.83	Horizontal

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

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

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

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

10. FREQUENCY STABILITY

RULE PART(S)

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

LIMITS

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

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

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = −30° to +50°C
- Voltage =low voltage,DC 3.4V, Normal, DC 3.85V and High voltage, DC 4.2V.

Frequency Stability vs Temperature:

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

Frequency Stability vs Voltage:

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

MODES TESTED

- LTE Band 2

LTE Band 4
LTE Band 5
LTE Band 7
LTE Band 12
LTE Band 13
LTE Band 14
LTE Band 17
LTE Band 25,
LTE Band 26,
LTE Band 41
LTE Band 66

RESULTS

See the following pages.

10.1 LTE BAND 2

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 2 QPSK, (CH 18900 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1880	13.0	0.006893	2.5
3.85	1880	13.8	0.007347	2.5
4.2	1880	13.1	0.006986	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 2 QPSK, (CH 18900 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1880	12.3	0.006552	2.5
Extreme (50C)	1880	11.1	0.005905	2.5
Extreme (40C)	1880	14.0	0.007465	2.5
Extreme (30C)	1880	13.3	0.007089	2.5
Extreme (10C)	1880	14.2	0.007556	2.5
Extreme (0C)	1880	12.0	0.006394	2.5
Extreme (-10C)	1880	13.4	0.007132	2.5
Extreme (-20C)	1880	13.7	0.007290	2.5
Extreme (-30C)	1880	15.1	0.008046	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 2 16QAM, (CH 18900 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1880	9.4	0.004990	2.5
3.85	1880	9.1	0.004827	2.5
4.2	1880	7.8	0.004140	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 2 16QAM, (CH 18900 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1880	9.4	0.004983	2.5
Extreme (50C)	1880	8.7	0.004634	2.5
Extreme (40C)	1880	8.0	0.004275	2.5
Extreme (30C)	1880	8.9	0.004754	2.5
Extreme (10C)	1880	9.2	0.004892	2.5
Extreme (0C)	1880	7.7	0.004095	2.5
Extreme (-10C)	1880	8.8	0.004706	2.5
Extreme (-20C)	1880	9.2	0.004908	2.5
Extreme (-30C)	1880	8.1	0.004285	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

QPSK, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 4 QPSK, (CH 20175 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1732.5	9.2	0.005324	2.5
3.85	1732.5	9.3	0.005395	2.5
4.2	1732.5	8.3	0.004790	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 4 QPSK, (CH 20175 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1732.5	8.7	0.005015	2.5
Extreme (50C)	1732.5	9.1	0.005234	2.5
Extreme (40C)	1732.5	7.7	0.004440	2.5
Extreme (30C)	1732.5	6.3	0.003658	2.5
Extreme (10C)	1732.5	7.6	0.004366	2.5
Extreme (0C)	1732.5	9.1	0.005250	2.5
Extreme (-10C)	1732.5	8.4	0.004829	2.5
Extreme (-20C)	1732.5	6.5	0.003773	2.5
Extreme (-30C)	1732.5	8.5	0.004890	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 4 16QAM, (CH 20175 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1732.5	9.4	0.005447	2.5
3.85	1732.5	9.0	0.005210	2.5
4.2	1732.5	7.7	0.004422	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 4 16QAM, (CH 20175 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1732.5	10.1	0.005828	2.5
Extreme (50C)	1732.5	8.9	0.005152	2.5
Extreme (40C)	1732.5	8.2	0.004746	2.5
Extreme (30C)	1732.5	8.6	0.004946	2.5
Extreme (10C)	1732.5	9.2	0.005330	2.5
Extreme (0C)	1732.5	7.6	0.004406	2.5
Extreme (-10C)	1732.5	9.0	0.005168	2.5
Extreme (-20C)	1732.5	8.9	0.005112	2.5
Extreme (-30C)	1732.5	8.4	0.004836	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

QPSK, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 5 QPSK, (CH 20525 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
3.4	836.5	6.2	0.007407	2.5
3.85	836.5	6.6	0.007919	2.5
4.2	836.5	4.7	0.005574	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 5 QPSK, (CH 20525 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	836.5	5.7	0.006871	2.5
Extreme (50C)	836.5	6.3	0.007500	2.5
Extreme (40C)	836.5	6.3	0.007524	2.5
Extreme (30C)	836.5	6.7	0.007960	2.5
Extreme (10C)	836.5	5.2	0.006200	2.5
Extreme (0C)	836.5	5.6	0.006672	2.5
Extreme (-10C)	836.5	5.6	0.006724	2.5
Extreme (-20C)	836.5	5.9	0.007062	2.5
Extreme (-30C)	836.5	6.4	0.007642	2.5

16QAM, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 5 16QAM, (CH 20525 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
3.4	836.5	5.5	0.006597	2.5
3.85	836.5	6.2	0.007434	2.5
4.2	836.5	4.8	0.005706	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 5 16QAM, (CH 20525 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	836.5	6.0	0.007161	2.5
Extreme (50C)	836.5	5.7	0.006763	2.5
Extreme (40C)	836.5	6.1	0.007337	2.5
Extreme (30C)	836.5	6.3	0.007523	2.5
Extreme (10C)	836.5	5.4	0.006410	2.5
Extreme (0C)	836.5	4.8	0.005759	2.5
Extreme (-10C)	836.5	5.6	0.006679	2.5
Extreme (-20C)	836.5	6.2	0.007385	2.5
Extreme (-30C)	836.5	6.0	0.007228	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]
3.4	2535	10.1	0.003992	2.5
3.85	2535	9.2	0.003621	2.5
4.2	2535	8.3	0.003258	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.5	0.003757	2.5
Extreme (50C)	2535	8.8	0.003454	2.5
Extreme (40C)	2535	8.3	0.003257	2.5
Extreme (30C)	2535	9.1	0.003594	2.5
Extreme (10C)	2535	8.0	0.003159	2.5
Extreme (0C)	2535	8.2	0.003236	2.5
Extreme (-10C)	2535	9.9	0.003891	2.5
Extreme (-20C)	2535	9.0	0.003545	2.5
Extreme (-30C)	2535	8.7	0.003415	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]
3.4	2535	6.9	0.002722	2.5
3.85	2535	6.1	0.002412	2.5
4.2	2535	5.6	0.002201	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	5.7	0.002257	2.5
Extreme (40C)	2535	5.2	0.002032	2.5
Extreme (30C)	2535	6.7	0.002659	2.5
Extreme (10C)	2535	6.2	0.002436	2.5
Extreme (0C)	2535	5.2	0.002065	2.5
Extreme (-10C)	2535	4.9	0.001936	2.5
Extreme (-20C)	2535	6.1	0.002422	2.5
Extreme (-30C)	2535	6.0	0.002366	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

QPSK, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 12 QPSK, (CH 23095 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
3.4	707.5	8.5	0.012055	2.5
3.85	707.5	10.4	0.014651	2.5
4.2	707.5	8.9	0.012559	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 12 QPSK, (CH 23095 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	707.5	9.1	0.012804	2.5
Extreme (50C)	707.5	7.1	0.010063	2.5
Extreme (40C)	707.5	7.5	0.010621	2.5
Extreme (30C)	707.5	7.8	0.011037	2.5
Extreme (10C)	707.5	7.3	0.010324	2.5
Extreme (0C)	707.5	9.2	0.012967	2.5
Extreme (-10C)	707.5	8.5	0.011975	2.5
Extreme (-20C)	707.5	8.7	0.012336	2.5
Extreme (-30C)	707.5	7.9	0.011125	2.5

16QAM, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 12 16QAM, (CH 23095 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
3.4	707.5	7.5	0.010610	2.5
3.85	707.5	8.4	0.011874	2.5
4.2	707.5	7.3	0.010291	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 12 QPSK, (CH 23095 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	707.5	6.5	0.009175	2.5
Extreme (50C)	707.5	5.5	0.007765	2.5
Extreme (40C)	707.5	6.4	0.009110	2.5
Extreme (30C)	707.5	-7.7	-0.010912	2.5
Extreme (10C)	707.5	-8.2	-0.011590	2.5
Extreme (0C)	707.5	2.9	0.004100	2.5
Extreme (-10C)	707.5	-5.2	-0.007292	2.5
Extreme (-20C)	707.5	-8.7	-0.012302	2.5
Extreme (-30C)	707.5	-10.2	-0.014350	2.5

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

10.6 LTE BAND 13

QPSK, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 13 QPSK, (CH 23230 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
3.4	782	12.9	0.018141	2.5
3.85	782	14.0	0.019783	2.5
4.2	782	13.6	0.019116	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 13 QPSK, (CH 23230 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	782	14.0	0.019788	2.5
Extreme (50C)	782	13.7	0.019319	2.5
Extreme (40C)	782	15.1	0.021303	2.5
Extreme (30C)	782	13.7	0.019262	2.5
Extreme (10C)	782	14.3	0.020162	2.5
Extreme (0C)	782	13.9	0.019562	2.5
Extreme (-10C)	782	14.0	0.019768	2.5
Extreme (-20C)	782	14.5	0.020377	2.5
Extreme (-30C)	782	13.5	0.018994	2.5

16QAM, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 13 16QAM, (CH 23230 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
3.4	782	12.7	0.017949	2.5
3.85	782	13.9	0.019607	2.5
4.2	782	12.9	0.018102	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 13 QPSK, (CH 23230 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	782	13.1	0.018492	2.5
Extreme (50C)	782	11.6	0.016281	2.5
Extreme (40C)	782	13.8	0.019464	2.5
Extreme (30C)	782	13.7	0.019258	2.5
Extreme (10C)	782	14.2	0.019962	2.5
Extreme (0C)	782	11.7	0.016545	2.5
Extreme (-10C)	782	12.8	0.018057	2.5
Extreme (-20C)	782	14.5	0.020457	2.5
Extreme (-30C)	782	14.6	0.020624	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

QPSK, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 14 QPSK, (CH 23330 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
3.4	793.0	12.7	0.016030	2.5
3.85	793.0	13.8	0.017444	2.5
4.2	793.0	13.1	0.016492	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 14 QPSK, (CH 23330 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	793.0	14.3	0.017987	2.5
Extreme (50C)	793.0	13.4	0.016864	2.5
Extreme (40C)	793.0	15.3	0.019299	2.5
Extreme (30C)	793.0	14.0	0.017594	2.5
Extreme (10C)	793.0	13.7	0.017234	2.5
Extreme (0C)	793.0	13.9	0.017517	2.5
Extreme (-10C)	793.0	13.5	0.017047	2.5
Extreme (-20C)	793.0	14.3	0.018071	2.5
Extreme (-30C)	793.0	13.3	0.016772	2.5

16QAM, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 14 16QAM, (CH 23330 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
3.4	793.0	13.0	0.016376	2.5
3.85	793.0	13.3	0.016826	2.5
4.2	793.0	12.9	0.016271	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 14 QPSK, (CH 23330 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	793.0	12.5	0.015801	2.5
Extreme (50C)	793.0	11.9	0.015068	2.5
Extreme (40C)	793.0	13.7	0.017311	2.5
Extreme (30C)	793.0	13.7	0.017321	2.5
Extreme (10C)	793.0	14.1	0.017756	2.5
Extreme (0C)	793.0	12.3	0.015449	2.5
Extreme (-10C)	793.0	13.4	0.016867	2.5
Extreme (-20C)	793.0	13.6	0.017212	2.5
Extreme (-30C)	793.0	14.6	0.018385	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]
3.4	710	10.3	0.014476	2.5
3.85	710	9.3	0.013085	2.5
4.2	710	8.4	0.011866	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710	9.4	0.013237	2.5
Extreme (50C)	710	9.2	0.013022	2.5
Extreme (40C)	710	7.9	0.011064	2.5
Extreme (30C)	710	8.9	0.012477	2.5
Extreme (10C)	710	8.8	0.012449	2.5
Extreme (0C)	710	8.4	0.011764	2.5
Extreme (-10C)	710	9.1	0.012815	2.5
Extreme (-20C)	710	8.5	0.012004	2.5
Extreme (-30C)	710	7.8	0.011003	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]
3.4	710	10.3	0.014507	2.5
3.85	710	8.6	0.012171	2.5
4.2	710	8.5	0.012028	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710	9.5	0.013345	2.5
Extreme (50C)	710	8.8	0.012333	2.5
Extreme (40C)	710	8.6	0.012081	2.5
Extreme (30C)	710	8.9	0.012599	2.5
Extreme (10C)	710	8.0	0.011247	2.5
Extreme (0C)	710	8.8	0.012353	2.5
Extreme (-10C)	710	9.0	0.012716	2.5
Extreme (-20C)	710	9.0	0.012699	2.5
Extreme (-30C)	710	7.9	0.011133	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

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 QPSK, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1882.5	6.9	0.00369	2.5
3.85	1882.5	4.9	0.00261	2.5
4.2	1882.5	6.2	0.00330	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 QPSK, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1882.5	4.9	0.00262	2.5
Extreme (50C)	1882.5	3.3	0.00174	2.5
Extreme (40C)	1882.5	5.8	0.00306	2.5
Extreme (30C)	1882.5	2.9	0.00155	2.5
Extreme (10C)	1882.5	4.2	0.00225	2.5
Extreme (0C)	1882.5	6.7	0.00356	2.5
Extreme (-10C)	1882.5	6.3	0.00335	2.5
Extreme (-20C)	1882.5	5.6	0.00296	2.5
Extreme (-30C)	1882.5	6.1	0.00324	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 16QAM, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1882.5	9.2	0.00487	2.5
3.85	1882.5	6.9	0.00367	2.5
4.2	1882.5	6.3	0.00335	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 25 16QAM, (CH 26365 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1882.5	7.1	0.00377	2.5
Extreme (50C)	1882.5	4.8	0.00257	2.5
Extreme (40C)	1882.5	5.7	0.00305	2.5
Extreme (30C)	1882.5	4.5	0.00239	2.5
Extreme (10C)	1882.5	6.4	0.00338	2.5
Extreme (0C)	1882.5	5.3	0.00282	2.5
Extreme (-10C)	1882.5	9.1	0.00484	2.5
Extreme (-20C)	1882.5	6.4	0.00341	2.5
Extreme (-30C)	1882.5	6.0	0.00318	2.5

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

10.10 LTE BAND 26

Band 26 A (814MHz~824MHz) QPSK,10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26A QPSK, (CH 26740 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
3.4	819	12.8	0.01566	2.5
3.85	819	13.4	0.01641	2.5
4.2	819	13.7	0.01678	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26A QPSK, (CH 26740RB size 50 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	819	7.4	0.00905	2.5
Extreme (50C)	819	-4.0	-0.00490	2.5
Extreme (40C)	819	5.5	0.00677	2.5
Extreme (30C)	819	-3.7	-0.00450	2.5
Extreme (10C)	819	6.0	0.00732	2.5
Extreme (0C)	819	4.9	0.00601	2.5
Extreme (-10C)	819	9.3	0.01131	2.5
Extreme (-20C)	819	11.2	0.01365	2.5
Extreme (-30C)	819	6.6	0.00811	2.5

Band 26A (814MHz~824MHz) 16QAM, (10MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26A 16QAM, (CH 26740 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
3.4	819	9.0	0.01094	2.5
3.85	819	6.8	0.00833	2.5
4.2	819	5.3	0.00649	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26A 16QAM, (CH 26740 RB size 50 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	819	7.8	0.00951	2.5
Extreme (50C)	819	5.0	0.00607	2.5
Extreme (40C)	819	5.1	0.00617	2.5
Extreme (30C)	819	5.0	0.00609	2.5
Extreme (10C)	819	6.6	0.00809	2.5
Extreme (0C)	819	5.1	0.00623	2.5
Extreme (-10C)	819	9.5	0.01164	2.5
Extreme (-20C)	819	11.0	0.01346	2.5
Extreme (-30C)	819	6.4	0.00783	2.5

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

Band 26B ((824MHz~849MHz) QPSK,15MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26B QPSK, (CH 26915 RB size 75 RB Offset 0 15MHz BANDWIDTH)				
3.4	836.5	13.1	0.01570	2.5
3.85	836.5	14.1	0.01680	2.5
4.2	836.5	13.5	0.01612	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26B QPSK, (CH 26915 RB size 75 RB Offset 0 15MHz BANDWIDTH)				
Normal (25C)	836.5	7.0	0.00842	2.5
Extreme (50C)	836.5	5.2	0.00625	2.5
Extreme (40C)	836.5	5.0	0.00597	2.5
Extreme (30C)	836.5	4.7	0.00560	2.5
Extreme (10C)	836.5	6.9	0.00829	2.5
Extreme (0C)	836.5	5.0	0.00603	2.5
Extreme (-10C)	836.5	9.6	0.01146	2.5
Extreme (-20C)	836.5	10.8	0.01294	2.5
Extreme (-30C)	836.5	6.4	0.00760	2.5

Band 26B (824MHz~849MHz) 16QAM, (15MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26B 16QAM, (CH 26915 RB size 75 RB Offset 0 15MHz BANDWIDTH)				
3.4	836.5	12.9	0.01543	2.5
3.85	836.5	13.5	0.01609	2.5
4.2	836.5	13.0	0.01560	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26B 16QAM, (CH 26915 RB size 75 RB Offset 0 15MHz BANDWIDTH)				
Normal (25C)	836.5	7.0	0.00841	2.5
Extreme (50C)	836.5	5.1	0.00604	2.5
Extreme (40C)	836.5	5.6	0.00672	2.5
Extreme (30C)	836.5	4.5	0.00540	2.5
Extreme (10C)	836.5	6.2	0.00736	2.5
Extreme (0C)	836.5	4.8	0.00575	2.5
Extreme (-10C)	836.5	9.5	0.01134	2.5
Extreme (-20C)	836.5	10.9	0.01297	2.5
Extreme (-30C)	836.5	6.1	0.00728	2.5

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

10.11 LTE BAND 41

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 41 QPSK, (CH 40640 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	2595	8.8	0.00339	2.5
3.85	2595	6.1	0.00236	2.5
4.2	2595	7.1	0.00275	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 41 QPSK, (CH 40640 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	2595	7.3	0.00283	2.5
Extreme (50C)	2595	4.9	0.00188	2.5
Extreme (40C)	2595	5.4	0.00207	2.5
Extreme (30C)	2595	4.7	0.00181	2.5
Extreme (10C)	2595	6.9	0.00264	2.5
Extreme (0C)	2595	4.6	0.00179	2.5
Extreme (-10C)	2595	9.1	0.00350	2.5
Extreme (-20C)	2595	10.9	0.00421	2.5
Extreme (-30C)	2595	6.3	0.00242	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 41 16QAM, (CH 40640 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	2595	8.4	0.00323	2.5
3.85	2595	6.8	0.00262	2.5
4.2	2595	6.9	0.00266	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 41 16QAM, (CH 40640 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	2595	7.8	0.00300	2.5
Extreme (50C)	2595	4.5	0.00173	2.5
Extreme (40C)	2595	5.1	0.00195	2.5
Extreme (30C)	2595	5.2	0.00201	2.5
Extreme (10C)	2595	6.3	0.00242	2.5
Extreme (0C)	2595	4.4	0.00170	2.5
Extreme (-10C)	2595	9.4	0.00361	2.5
Extreme (-20C)	2595	10.5	0.00404	2.5
Extreme (-30C)	2595	5.9	0.00226	2.5

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

10.12 LTE BAND 66

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1745	12.9	0.00737	2.5
3.85	1745	14.1	0.00805	2.5
4.2	1745	13.5	0.00775	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1745	7.6	0.00438	2.5
Extreme (50C)	1745	4.7	0.00267	2.5
Extreme (40C)	1745	5.6	0.00322	2.5
Extreme (30C)	1745	4.7	0.00267	2.5
Extreme (10C)	1745	6.0	0.00347	2.5
Extreme (0C)	1745	4.7	0.00268	2.5
Extreme (-10C)	1745	9.8	0.00564	2.5
Extreme (-20C)	1745	11.2	0.00645	2.5
Extreme (-30C)	1745	5.9	0.00339	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.4	1745	12.2	0.00700	2.5
3.85	1745	13.3	0.00764	2.5
4.2	1745	12.9	0.00737	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
Normal (25C)	1745	7.9	0.00451	2.5
Extreme (50C)	1745	4.8	0.00272	2.5
Extreme (40C)	1745	5.9	0.00336	2.5
Extreme (30C)	1745	4.6	0.00261	2.5
Extreme (10C)	1745	6.6	0.00376	2.5
Extreme (0C)	1745	4.9	0.00284	2.5
Extreme (-10C)	1745	9.5	0.00545	2.5
Extreme (-20C)	1745	11.0	0.00633	2.5
Extreme (-30C)	1745	6.1	0.00348	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.

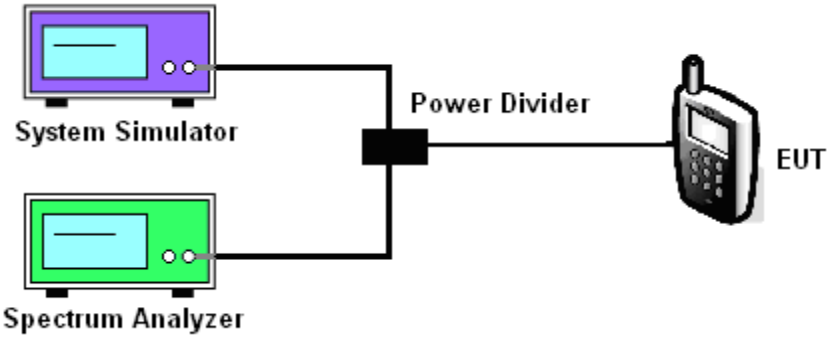
11.2 Measuring Instruments

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
- LTE Band 4
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 14
- LTE Band 17
- LTE Band 25,
- LTE Band 26,
- LTE Band 41
- LTE Band 66

Test data reference attachment.

----END OF REPORT----