

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

FCC ID: 2A9FT-Z400H

Product: Smart LTE Module
Trade Mark: ZelusTek
Model No.: Z400H
Family Model: Z500H
Report No.: N25081503838E
Issue Date: Oct. 11, 2025

Prepared for

Zelus (Shenzhen) Technology Ltd.
503, Building No.4, Block No.1, Shenzhen Bay ECO-Technology Park, No.22, Gaoxin
Nanhuan Road, Nanshan District, Shenzhen, China

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.
No. 24 Xinfa East Road, Xiangshan Community, Xinqiao Street,
Baoan District, Shenzhen, Guangdong, People's Republic of China
Tel. 0755-23200050 Website: <http://www.ntek.org.cn>

TEST RESULT CERTIFICATION

Applicant's name : Zelus (Shenzhen) Technology Ltd.

Address..... : 503, Building No.4, Block No.1, Shenzhen Bay ECO-Technology Park,
No.22, Gaoxin Nanhuan Road, Nanshan District, Shenzhen, China

Manufacturer's Name..... : Zelus (Shenzhen) Technology Ltd.

Address..... : 503, Building No.4, Block No.1, Shenzhen Bay ECO-Technology Park,
No.22, Gaoxin Nanhuan Road, Nanshan District, Shenzhen, China

Product name..... : Smart LTE Module

Model and/or type reference .. : Z400H

Trade Mark..... : ZelusTek

Family Model..... : Z500H

Test Sample Number..... S2508190150-1#

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

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

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

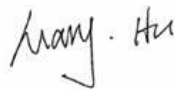
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Date of Test

Date (s) of performance of tests..... Aug. 15, 2025 ~ Oct. 11, 2025

Date of Issue Oct. 11, 2025

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

Prepared : 
By : _____
Mary Hu
(Project Engineer)

Reviewed : 
By : _____
Aaron Cheng
(Supervisor)

Approved : 
By : _____
Alex Li
(Manager)

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Designation:	Smart LTE Module
Trade Mark	ZelusTek
Model Name	Z400H
Family Model	Z500H
Model Difference	All models have the same circuit and RF module, except for the CPU chip ^{Note2}
FCC ID:	2A9FT-Z400H
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 66, 71 ☒ LTE TDD Band 41,
Frequency Range:	LTE FDD Band 2 Uplink: 1850MHz-1910MHz, Downlink: 1930MHz-1990MHz; LTE FDD Band 4 Uplink: 1710MHz-1755MHz, Downlink: 2110MHz-2155MHz; LTE FDD Band 5 Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE-FDD Band 7 Uplink: 2500MHz-2570MHz, Downlink: 2620MHz-2690MHz; LTE FDD Band 12 Uplink: 699MHz-716MHz, Downlink: 729MHz-746MHz; LTE FDD Band 13 Uplink: 777MHz-787MHz, Downlink: 746MHz-756MHz; LTE FDD Band 14 Uplink: 788MHz-798MHz, Downlink: 758MHz-768MHz; LTE FDD Band 17 Uplink: 704MHz-716MHz, Downlink: 734MHz-746MHz; LTE FDD Band 25 Uplink: 1850MHz-1915MHz, Downlink: 1930MHz-1995MHz; LTE FDD Band 26A Uplink: 814MHz-824MHz, Downlink: 859MHz-869MHz; LTE FDD Band 26B Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE TDD Band 41 Uplink& Downlink: 2496MHz-2690MHz LTE FDD Band 66 Uplink: 1710MHz-1780MHz, Downlink: 2110MHz-2200MHz; LTE FDD Band 71 Uplink: 663MHz-698MHz, Downlink: 617MHz-652MHz
Type of Modulation:	QPSK/16QAM/64QAM(Only Downlink)
Power Class	Class 3
SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test.
Antenna:	External Antenna
Antenna gain:	1dBi

Adapter	N/A
Battery	N/A
Power supply	DC 3.45-4.35V or DC 12V from Charging Port
Extreme Vol. Limits:	DC 3.42V to DC 4.18V (Nominal DC 3.8V) (Note 1)
HW Version	N/A
FW Version	N/A
SW Version	N/A
** Note1: The High Voltage DC 4.18V and Low Voltage 3.42V was declared by manufacturer, The EUT couldn't be operate normally with higher or lower voltage. Note 2: Both models Z400H and Z500H have been evaluated; Model Z400H's test data was worse than Model Z500H's, so only the worst data was recorded.	

1.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2A9FT-Z400H** filing to comply with the FCC Part 22H&24E&27&90S

1.3 TEST METHODOLOGY

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

1.4 TEST FACILITY

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

ShenZhen NTEK Testing Technology Co., Ltd.

No. 24 Xinfu East Road, Xiangshan Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong, People's Republic of China.

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

FCC Registration No.:463705

IC Registration No.:9270A,

CNAS Registration No.:L5516

MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement, where 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% ($U = 2U_c(y)$)	2.5dB

1.5 SPECIAL ACCESSORIES

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

1.6 WORST-CASE CONFIGURATION AND MODE

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

The device has LTE Bands of: Band 2/4/5/7/12/13/14/17/25/26/41/66/71

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

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

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

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

2.2 EUT EXERCISE

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

2.3 CONFIGURATION OF EUT SYSTEM

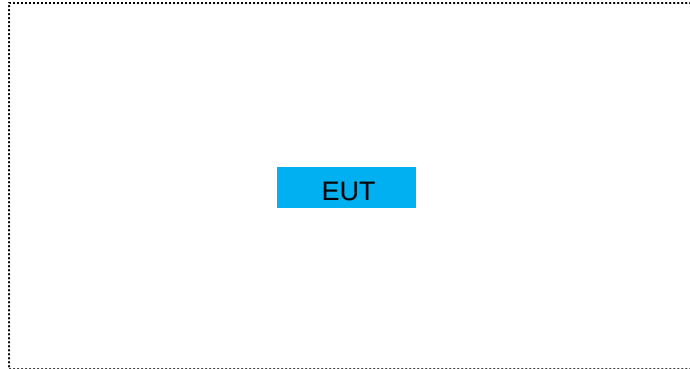
Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	Smart LTE Module	Z400H	FCC ID: 2A9FT-Z400H	EUT

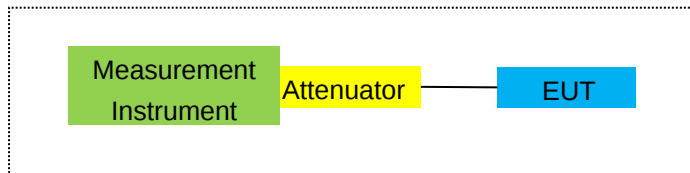
*Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.*

2.4 TEST SETUP

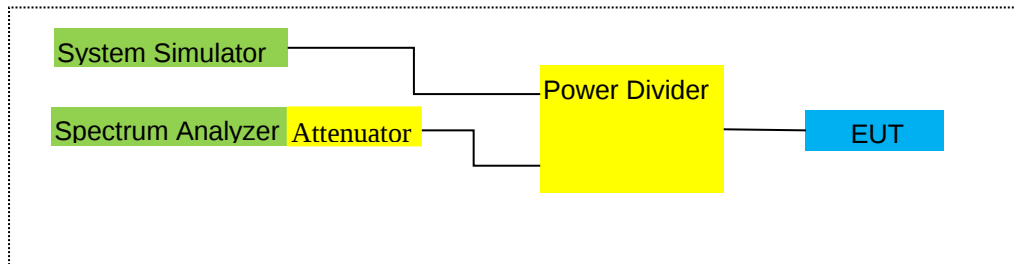
For Radiated Test Cases



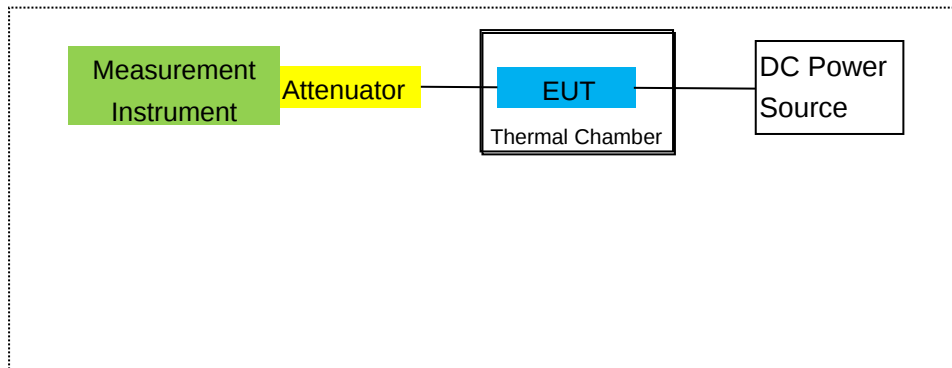
For Conducted Output Power



For Peak-to Average Ratio, Occupied Bandwidth, Conducted Band edge and Conducted Spurious Emission



For Frequency Stability



Note: EUT built-in battery-powered, the battery is fully-charged.

3.TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	MXA Signal Analyzer	Agilent	N9020A	MY49100060	2025.04.17	2026.04.16	1 year
2	Test Receiver	R&S	ESPI	101318	2025.04.17	2026.04.16	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2025.05.11	2026.05.10	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
5	Broadband Horn Antenna	SCHWARZBECK	BBHA 9120 D	2816	2024.5.18	2027.5.17	3 year
6	Broadband Horn Antenna	SCHWARZBECK	BBHA 9120 D	2817	2024.5.18	2027.5.17	3 year
7	Amplifier	EM	EM-30180	060538	2025.04.17	2026.04.16	1 year
8	Active Loop Antenna	SCHWARZBECK	FMZB 1519 B	055	2024.05.17	2027.05.16	3 year
9	Power Meter	R&S	NRVS	100696	2025.04.17	2026.04.16	1 year
10	Power Sensor	R&S	URV5-Z4	0395.1619.05	2025.04.17	2026.04.16	1 year
11	Test Cable	N/A	R-01	N/A	2023.06.17	2026.06.16	3 year
12	Test Cable	N/A	R-02	N/A	2023.06.17	2026.06.16	3 year
13	Test Cable	N/A	R-03	N/A	2023.06.17	2026.06.16	3 year
14	Test Receiver	R&S	ESCI	101160	2025.04.17	2026.04.16	1 year
15	LISN	R&S	ENV216	101313	2025.04.17	2026.04.16	1 year
16	LISN	EMCO	3816/2	00042990	2025.04.17	2026.04.16	1 year
17	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
18	Field strength probe	narda	EP601	711WX81278	2025.04.17	2026.04.16	1 year
19	Test Cable	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
20	Test Cable	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
21	Test Cable	N/A	C03	N/A	2023.05.06	2026.05.05	3 year
22	Spectrum Analyzer	Agilent	E4440A	MY41000130	2025.04.17	2026.04.16	1 year
23	EMI Test Receiver	R&S	ESCI	101160	2025.04.17	2026.04.16	1 year
24	Universal Radio Communication Tester	R&S	CMU200	105747	2025.04.17	2026.04.16	1 year

25	High and Low Temperature Box	WEISS	WT 20/40 EMC Simpac	58226119460030	2024.05.30	2027.05.29	3 year
26	DC Power Source	N/A	PS-6005D	20170402923	2024.04.25	2027.04.24	3 year
27	MXG Vector Signal Generator	Agilent	N5183B	MY57280984	2025.04.17	2026.04.16	1 year
28	Log-Periodic Antenna	SCHWARZBECK	VULB 9162	584	2025.04.17	2026.04.16	1 year
29	Log-Periodic Antenna	SCHWARZBECK	VULB 9162	586	2025.04.17	2026.04.16	1 year

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

Measurement Software

Item	Manufacturer	Software Name	Software Version	Description
1	MWRFTtest	MTS 8200	2.0	RF Conducted Test
2	Farad	EZ-EMC_RE	AIT-03A	RadiatedTest
3	raditeq	RadiMation	2023.1.3	RadiatedTest

4. OUTPUT POWER

4.1 OUTPUT POWER MEASUREMENT

LTE Measurement Procedure:

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

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

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

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

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

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

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

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

Test data reference attachment.

5. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only

TEST PROCEDURE

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

MODES TESTED

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

RESULTS

PASS

Test data reference attachment.

6. BANDEDGE AND EMISSION MASK

RULE PART(S)

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

FCC: §22.359

LIMITS

FCC: §22.917, §24.238, §27.53

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

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

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

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

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

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

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

TEST PROCEDURE

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

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency

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

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

MODES TESTED

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

RESULTS

Test data reference attachment.

7. OUT OF BAND EMISSIONS

RULE PART(S)

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

LIMITS

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

TEST PROCEDURE

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

For each out of band emissions measurement:

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

MODES TESTED

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

7.1 MEASUREMENT METHOD

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

Test data reference attachment.

8. RADIATED MEASUREMENT

8.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

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

LIMITS:

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

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

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

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

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

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

TEST PROCEDURE

ANSI/TIA-603-E Clause 2.2.17

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

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

MODES TESTED

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

RESULTS

Pass

8.2 LTE BAND 2

Radiated Power (EIRP) for Band 2										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Max. EIRP	Max. EIRP Average (mW)	Polarization Of Max. ERP		
						Average				
						(dBm)				
1.4MHz Band QPSK	6/0	1850.7	17.38	3.76	8.90	22.52	178.649	Horizontal	2	Pass
1880		14.97	3.91	8.90	19.96	99.083	Horizontal	2	Pass	
1909.3		15.45	3.93	8.90	20.42	110.154	Horizontal	2	Pass	
3.0MHz Band QPSK	15/0	1851.5	13.92	3.77	8.90	19.05	80.353	Horizontal	2	Pass
1880		14.82	3.91	8.90	19.81	95.719	Horizontal	2	Pass	
1908.5		16.50	3.94	8.90	21.46	139.959	Horizontal	2	Pass	
5.0MHz Band QPSK	25/0	1852.5	16.41	3.77	8.90	21.54	142.561	Horizontal	2	Pass
1880		17.49	3.91	8.90	22.48	177.011	Horizontal	2	Pass	
1907.5		16.74	3.94	8.90	21.7	147.911	Horizontal	2	Pass	
10.0MHz Band QPSK	50/0	1855	16.52	3.79	8.90	21.63	145.546	Horizontal	2	Pass
1880		17.18	3.95	8.90	22.13	163.305	Horizontal	2	Pass	
1905		16.28	3.97	8.90	21.21	132.130	Horizontal	2	Pass	
15.0MHz Band QPSK	75/0	1857.5	15.92	3.79	8.90	21.03	126.765	Horizontal	2	Pass
1880		16.93	3.95	8.90	21.88	154.170	Horizontal	2	Pass	
1902.5		15.93	3.97	8.90	20.86	121.899	Horizontal	2	Pass	
20.0MHz Band QPSK	100/0	1860	16.04	3.81	8.90	21.13	129.718	Horizontal	2	Pass
1880		14.82	3.96	8.90	19.76	94.624	Horizontal	2	Pass	
1900		16.92	4.00	8.90	21.82	152.055	Horizontal	2	Pass	
1.4MHz Band QPSK	6/0	1850.7	15.70	3.76	8.90	20.84	121.339	Vertical	2	Pass
1880		15.26	3.91	8.90	20.25	105.925	Vertical	2	Pass	
1909.3		16.16	3.93	8.90	21.13	129.718	Vertical	2	Pass	
3.0MHz Band QPSK	15/0	1851.5	15.90	3.77	8.90	21.03	126.765	Vertical	2	Pass
1880		16.85	3.91	8.90	21.84	152.757	Vertical	2	Pass	
1908.5		14.93	3.94	8.90	19.89	97.499	Vertical	2	Pass	
5.0MHz Band QPSK	25/0	1852.5	16.08	3.77	8.90	21.21	132.130	Vertical	2	Pass
1880		15.22	3.91	8.90	20.21	104.954	Vertical	2	Pass	
1907.5		16.86	3.94	8.90	21.82	152.055	Vertical	2	Pass	
10.0MHz Band QPSK	50/0	1855	15.08	3.79	8.90	20.19	104.472	Vertical	2	Pass
1880		13.28	3.95	8.90	18.23	66.527	Vertical	2	Pass	
1905		14.19	3.97	8.90	19.12	81.658	Vertical	2	Pass	

15.0MHz		1857.5	14.90	3.79	8.90	20.01	100.231	Vertical	2	Pass
Band	75/0	1880	16.28	3.95	8.90	21.23	132.739	Vertical	2	Pass
QPSK		1902.5	17.04	3.97	8.90	21.97	157.398	Vertical	2	Pass
20.0MHz		1860	17.72	3.81	8.90	22.81	190.985	Vertical	2	Pass
Band	100/0	1880	16.75	3.96	8.90	21.69	147.571	Vertical	2	Pass
QPSK		1900	16.29	4.00	8.90	21.19	131.522	Vertical	2	Pass

Radiated Power (EIRP) for Band 2										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	1850.7	14.60	3.76	8.90	22.47	176.604	Horizontal	2	Pass
		1880	15.75	3.91	8.90	21.29	134.586	Horizontal	2	Pass
		1909.3	15.45	3.93	8.90	22.32	170.608	Horizontal	2	Pass
3.0MHz Band 16 QAM	15/0	1851.5	15.29	3.77	8.90	20.12	102.802	Horizontal	2	Pass
		1880	14.95	3.91	8.90	21.29	134.586	Horizontal	2	Pass
		1908.5	14.55	3.94	8.90	20.86	121.899	Horizontal	2	Pass
5.0MHz Band 16 QAM	25/0	1852.5	15.14	3.77	8.90	22.3	169.824	Horizontal	2	Pass
		1880	15.50	3.91	8.90	21.2	131.826	Horizontal	2	Pass
		1907.5	14.00	3.94	8.90	20.21	104.954	Horizontal	2	Pass
10.0MHz Band 16 QAM	50/0	1855	15.35	3.79	8.90	22.53	179.061	Horizontal	2	Pass
		1880	14.05	3.95	8.90	20.85	121.619	Horizontal	2	Pass
		1905	15.36	3.97	8.90	22.05	160.325	Horizontal	2	Pass
15.0MHz Band 16 QAM	75/0	1857.5	13.68	3.79	8.90	21.46	139.959	Horizontal	2	Pass
		1880	15.77	3.95	8.90	20.53	112.980	Horizontal	2	Pass
		1902.5	15.65	3.97	8.90	22.75	188.365	Horizontal	2	Pass
20.0MHz Band 16 QAM	100/0	1860	13.84	3.81	8.90	20.61	115.080	Horizontal	2	Pass
		1880	16.17	3.96	8.90	21.44	139.316	Horizontal	2	Pass
		1900	14.55	4.00	8.90	19.83	96.161	Horizontal	2	Pass
1.4MHz Band 16 QAM	6/0	1850.7	14.61	3.76	8.90	21.92	155.597	Vertical	2	Pass
		1880	15.84	3.91	8.90	20.54	113.240	Vertical	2	Pass
		1909.3	15.13	3.93	8.90	21.1	128.825	Vertical	2	Pass
3.0MHz Band 16 QAM	15/0	1851.5	13.77	3.77	8.90	20.35	108.393	Vertical	2	Pass
		1880	14.83	3.91	8.90	22.14	163.682	Vertical	2	Pass
		1908.5	14.56	3.94	8.90	20.61	115.080	Vertical	2	Pass
5.0MHz Band 16 QAM	25/0	1852.5	13.76	3.77	8.90	22.88	194.089	Vertical	2	Pass
		1880	15.05	3.91	8.90	22.49	177.419	Vertical	2	Pass
		1907.5	15.69	3.94	8.90	21.24	133.045	Vertical	2	Pass
10.0MHz Band 16 QAM	50/0	1855	13.98	3.79	8.90	22.07	161.065	Vertical	2	Pass
		1880	15.57	3.95	8.90	21.23	132.739	Vertical	2	Pass
		1905	15.12	3.97	8.90	21.35	136.458	Vertical	2	Pass
15.0MHz Band 16	75/0	1857.5	13.85	3.79	8.90	20.42	110.154	Vertical	2	Pass
		1880	14.87	3.95	8.90	22.73	187.499	Vertical	2	Pass

QAM		1902.5	13.66	3.97	8.90	21.37	137.088	Vertical	2	Pass
20.0MHz	100/0	1860	14.29	3.81	8.90	22.15	164.059	Vertical	2	Pass
Band 16		1880	14.90	3.96	8.90	23.72	235.505	Vertical	2	Pass
QAM		1900	13.78	4.00	8.90	20.81	120.504	Vertical	2	Pass

Note:

SG Level= Signal generator output

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

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

8.3 LTE BAND 4

Radiated Power (EIRP) for Band 4										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	Limit	
						Average	Average			
						(dBm)	(mW)			
1.4MHz Band QPSK	6/0	1710.7	16.36	3.12	8.90	22.14	163.682	Horizontal	1	Pass
		1732.5	16.43	3.27	8.90	22.06	160.694	Horizontal	1	Pass
		1754.3	17.87	3.29	8.90	23.48	222.844	Horizontal	1	Pass
3.0MHz Band QPSK	15/0	1711.5	16.63	3.13	8.90	22.4	173.780	Horizontal	1	Pass
		1732.5	16.03	3.27	8.90	21.66	146.555	Horizontal	1	Pass
		1753.5	16.75	3.30	8.90	22.35	171.791	Horizontal	1	Pass
5.0MHz Band QPSK	25/0	1712.5	17.39	3.13	8.90	23.16	207.014	Horizontal	1	Pass
		1732.5	17.26	3.27	8.90	22.89	194.536	Horizontal	1	Pass
		1752.5	15.80	3.30	8.90	21.4	138.038	Horizontal	1	Pass
10.0MHz Band QPSK	50/0	1715	17.63	3.15	8.90	23.38	217.771	Horizontal	1	Pass
		1732.5	17.48	3.31	8.90	23.07	202.768	Horizontal	1	Pass
		1750	17.54	3.33	8.90	23.11	204.644	Horizontal	1	Pass
15.0MHz Band QPSK	75/0	1717.5	17.35	3.15	8.90	23.1	204.174	Horizontal	1	Pass
		1732.5	17.56	3.31	8.90	23.15	206.538	Horizontal	1	Pass
		1747.5	17.65	3.33	8.90	23.22	209.894	Horizontal	1	Pass
20.0MHz Band QPSK	100/0	1720	15.30	3.17	8.90	21.03	126.765	Horizontal	1	Pass
		1732.5	16.43	3.32	8.90	22.01	158.855	Horizontal	1	Pass
		1745	15.93	3.36	8.90	21.47	140.281	Horizontal	1	Pass
1.4MHz Band QPSK	6/0	1710.7	16.23	3.12	8.90	22.01	158.855	Vertical	1	Pass
		1732.5	17.51	3.27	8.90	23.14	206.063	Vertical	1	Pass
		1754.3	16.62	3.29	8.90	22.23	167.109	Vertical	1	Pass
3.0MHz Band QPSK	15/0	1711.5	17.11	3.13	8.90	22.88	194.089	Vertical	1	Pass
		1732.5	17.74	3.27	8.90	23.37	217.270	Vertical	1	Pass
		1753.5	17.54	3.30	8.90	23.14	206.063	Vertical	1	Pass
5.0MHz Band QPSK	25/0	1712.5	15.99	3.13	8.90	21.76	149.968	Vertical	1	Pass
		1732.5	17.40	3.27	8.90	23.03	200.909	Vertical	1	Pass
		1752.5	16.28	3.30	8.90	21.88	154.170	Vertical	1	Pass
10.0MHz	50/0	1715	15.17	3.15	8.90	20.92	123.595	Vertical	1	Pass

Band QPSK		1732.5	16.87	3.31	8.90	22.46	176.198	Vertical	1	Pass
		1750	16.77	3.33	8.90	22.34	171.396	Vertical	1	Pass
15.0MHz Band QPSK	75/0	1717.5	17.36	3.15	8.90	23.11	204.644	Vertical	1	Pass
		1732.5	17.86	3.31	8.90	23.45	221.309	Vertical	1	Pass
		1747.5	15.97	3.33	8.90	21.54	142.561	Vertical	1	Pass
20.0MHz Band QPSK	100/0	1720	17.92	3.17	8.90	23.65	231.739	Vertical	1	Pass
		1732.5	17.58	3.32	8.90	23.16	207.014	Vertical	1	Pass
		1745	16.00	3.36	8.90	21.54	142.561	Vertical	1	Pass

Radiated Power (EIRP) for Band 4										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	1710.7	17.29	3.12	8.90	23.07	202.768	Horizontal	1	Pass
		1732.5	16.72	3.27	8.90	22.35	171.791	Horizontal	1	Pass
		1754.3	17.05	3.29	8.90	22.66	184.502	Horizontal	1	Pass
3.0MHz Band 16 QAM	15/0	1711.5	16.95	3.13	8.90	22.72	187.068	Horizontal	1	Pass
		1732.5	17.68	3.27	8.90	23.31	214.289	Horizontal	1	Pass
		1753.5	17.30	3.30	8.90	22.9	194.984	Horizontal	1	Pass
5.0MHz Band 16 QAM	25/0	1712.5	17.31	3.13	8.90	23.08	203.236	Horizontal	1	Pass
		1732.5	16.15	3.27	8.90	21.78	150.661	Horizontal	1	Pass
		1752.5	17.53	3.30	8.90	23.13	205.589	Horizontal	1	Pass
10.0MHz Band 16 QAM	50/0	1715	16.39	3.15	8.90	22.14	163.682	Horizontal	1	Pass
		1732.5	16.65	3.31	8.90	22.24	167.494	Horizontal	1	Pass
		1750	16.41	3.33	8.90	21.98	157.761	Horizontal	1	Pass
15.0MHz Band 16 QAM	75/0	1717.5	17.60	3.15	8.90	23.35	216.272	Horizontal	1	Pass
		1732.5	17.44	3.31	8.90	23.03	200.909	Horizontal	1	Pass
		1747.5	17.49	3.33	8.90	23.06	202.302	Horizontal	1	Pass
20.0MHz Band 16 QAM	100/0	1720	16.72	3.17	8.90	22.45	175.792	Horizontal	1	Pass
		1732.5	17.58	3.32	8.90	23.16	207.014	Horizontal	1	Pass
		1745	17.57	3.36	8.90	23.11	204.644	Horizontal	1	Pass
1.4MHz Band 16 QAM	6/0	1710.7	17.85	3.12	8.90	23.63	230.675	Vertical	1	Pass
		1732.5	17.08	3.27	8.90	22.71	186.638	Vertical	1	Pass
		1754.3	17.11	3.29	8.90	22.72	187.068	Vertical	1	Pass
3.0MHz Band 16 QAM	15/0	1711.5	16.66	3.13	8.90	22.43	174.985	Vertical	1	Pass
		1732.5	15.72	3.27	8.90	21.35	136.458	Vertical	1	Pass
		1753.5	17.44	3.30	8.90	23.04	201.372	Vertical	1	Pass
5.0MHz Band 16 QAM	25/0	1712.5	17.35	3.13	8.90	23.12	205.116	Vertical	1	Pass
		1732.5	17.78	3.27	8.90	23.41	219.280	Vertical	1	Pass
		1752.5	16.70	3.30	8.90	22.3	169.824	Vertical	1	Pass
10.0MHz Band 16 QAM	50/0	1715	17.03	3.15	8.90	22.78	189.671	Vertical	1	Pass
		1732.5	15.77	3.31	8.90	21.36	136.773	Vertical	1	Pass
		1750	18.04	3.33	8.90	23.61	229.615	Vertical	1	Pass

15.0MHz	75/0	1717.5	16.48	3.15	8.90	22.23	167.109	Vertical	1	Pass
Band 16		1732.5	16.66	3.31	8.90	22.25	167.880	Vertical	1	Pass
QAM		1747.5	18.15	3.33	8.90	23.72	235.505	Vertical	1	Pass
20.0MHz	100/0	1720	17.33	3.17	8.90	23.06	202.302	Vertical	1	Pass
Band 16		1732.5	17.54	3.32	8.90	23.12	205.116	Vertical	1	Pass
QAM		1745	18.25	3.36	8.90	23.79	239.332	Vertical	1	Pass

Note:

SG Level= Signal generator output

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

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

8.4 LTE BAND 5

Radiated Power (ERP) for Band 5											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band QPSK	6/0	824.7	20.34	2.01	5.30	2.15	21.48	140.605	Horizontal	7	Pass
		836.5	21.15	2.01	5.30	2.15	22.29	169.434	Horizontal	7	Pass
		848.3	19.99	2.02	5.70	2.15	21.52	141.906	Horizontal	7	Pass
3.0MHz Band QPSK	15/0	825.5	21.45	2.01	5.30	2.15	22.59	181.552	Horizontal	7	Pass
		836.5	21.41	2.01	5.30	2.15	22.55	179.887	Horizontal	7	Pass
		847.5	20.57	2.02	5.70	2.15	22.1	162.181	Horizontal	7	Pass
5.0MHz Band QPSK	25/0	826.5	20.10	2.01	5.30	2.15	21.24	133.045	Horizontal	7	Pass
		836.5	21.17	2.01	5.30	2.15	22.31	170.216	Horizontal	7	Pass
		846.5	21.21	2.02	5.70	2.15	22.74	187.932	Horizontal	7	Pass
10.0MHz Band QPSK	50/0	829	20.32	2.01	5.30	2.15	21.46	139.959	Horizontal	7	Pass
		836.5	21.47	2.01	5.30	2.15	22.61	182.390	Horizontal	7	Pass
		844	19.92	2.02	5.70	2.15	21.45	139.637	Horizontal	7	Pass
1.4MHz Band QPSK	6/0	824.7	22.20	2.01	5.30	2.15	23.34	215.774	Vertical	7	Pass
		836.5	21.91	2.01	5.30	2.15	23.05	201.837	Vertical	7	Pass
		848.3	20.36	2.02	5.70	2.15	21.89	154.525	Vertical	7	Pass
3.0MHz Band QPSK	15/0	825.5	21.52	2.01	5.30	2.15	22.66	184.502	Vertical	7	Pass
		836.5	21.10	2.01	5.30	2.15	22.24	167.494	Vertical	7	Pass
		847.5	19.27	2.02	5.70	2.15	20.8	120.226	Vertical	7	Pass
5.0MHz Band QPSK	25/0	826.5	19.30	2.01	5.30	2.15	20.44	110.662	Vertical	7	Pass
		836.5	21.41	2.01	5.30	2.15	22.55	179.887	Vertical	7	Pass
		846.5	20.25	2.02	5.70	2.15	21.78	150.661	Vertical	7	Pass
10.0MHz Band QPSK	50/0	829	19.21	2.01	5.30	2.15	20.35	108.393	Vertical	7	Pass
		836.5	22.69	2.01	5.30	2.15	23.83	241.546	Vertical	7	Pass
		844	19.94	2.02	5.70	2.15	21.47	140.281	Vertical	7	Pass

Radiated Power (ERP) for Band 5											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	824.7	20.18	2.01	5.30	2.15	21.32	135.519	Horizontal	7	Pass
		836.5	20.77	2.01	5.30	2.15	21.91	155.239	Horizontal	7	Pass
		848.3	19.65	2.02	5.70	2.15	21.18	131.220	Horizontal	7	Pass
3.0MHz Band 16 QAM	15/0	825.5	20.18	2.01	5.30	2.15	21.32	135.519	Horizontal	7	Pass
		836.5	19.18	2.01	5.30	2.15	20.32	107.647	Horizontal	7	Pass
		847.5	19.82	2.02	5.70	2.15	21.35	136.458	Horizontal	7	Pass
5.0MHz Band 16 QAM	25/0	826.5	20.22	2.01	5.30	2.15	21.36	136.773	Horizontal	7	Pass
		836.5	19.09	2.01	5.30	2.15	20.23	105.439	Horizontal	7	Pass
		846.5	19.75	2.02	5.70	2.15	21.28	134.276	Horizontal	7	Pass
10.0MHz Band 16 QAM	50/0	829	19.22	2.01	5.30	2.15	20.36	108.643	Horizontal	7	Pass
		836.5	19.21	2.01	5.30	2.15	20.35	108.393	Horizontal	7	Pass
		844	19.34	2.02	5.70	2.15	20.87	122.180	Horizontal	7	Pass
1.4MHz Band 16 QAM	6/0	824.7	20.95	2.01	5.30	2.15	22.09	161.808	Vertical	7	Pass
		836.5	20.50	2.01	5.30	2.15	21.64	145.881	Vertical	7	Pass
		848.3	20.10	2.02	5.70	2.15	21.63	145.546	Vertical	7	Pass
3.0MHz Band 16 QAM	15/0	825.5	18.48	2.01	5.30	2.15	19.62	91.622	Vertical	7	Pass
		836.5	20.03	2.01	5.30	2.15	21.17	130.918	Vertical	7	Pass
		847.5	18.82	2.02	5.70	2.15	20.35	108.393	Vertical	7	Pass
5.0MHz Band 16 QAM	25/0	826.5	19.68	2.01	5.30	2.15	20.82	120.781	Vertical	7	Pass
		836.5	17.61	2.01	5.30	2.15	18.75	74.989	Vertical	7	Pass
		846.5	19.76	2.02	5.70	2.15	21.29	134.586	Vertical	7	Pass
10.0MHz Band 16 QAM	50/0	829	18.92	2.01	5.30	2.15	20.06	101.391	Vertical	7	Pass
		836.5	21.55	2.01	5.30	2.15	22.69	185.780	Vertical	7	Pass
		844	21.12	2.02	5.70	2.15	22.65	184.077	Vertical	7	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.5 LTE BAND 7

Radiated Power (EIRP) for Band 7										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Max. EIRP	Max. EIRP Average (mW)	Polarization Of Max. ERP		
						Average				
						(dBm)				
5.0MHz Band QPSK	25/0	2502.5	18.85	4.54	9.00	23.31	214.289	Horizontal	2	Pass
		2535	18.91	4.69	9.00	23.22	209.894	Horizontal	2	Pass
		2567.5	16.14	4.71	9.00	20.43	110.408	Horizontal	2	Pass
10.0MHz Band QPSK	50/0	2505	15.89	4.55	9.00	20.34	108.143	Horizontal	2	Pass
		2535	19.13	4.69	9.00	23.44	220.800	Horizontal	2	Pass
		2565	17.99	4.72	9.00	22.27	168.655	Horizontal	2	Pass
15.0MHz Band QPSK	75/0	2507.5	19.11	4.55	9.00	23.56	226.986	Horizontal	2	Pass
		2535	17.68	4.69	9.00	21.99	158.125	Horizontal	2	Pass
		2562.5	18.59	4.72	9.00	22.87	193.642	Horizontal	2	Pass
20.0MHz Band QPSK	100/0	2510	16.84	4.57	9.00	21.27	133.968	Horizontal	2	Pass
		2535	18.46	4.73	9.00	22.73	187.499	Horizontal	2	Pass
		2560	18.79	4.75	9.00	23.04	201.372	Horizontal	2	Pass
5.0MHz Band QPSK	25/0	2502.5	17.57	4.54	9.00	22.03	159.588	Vertical	2	Pass
		2535	18.68	4.69	9.00	22.99	199.067	Vertical	2	Pass
		2567.5	18.84	4.71	9.00	23.13	205.589	Vertical	2	Pass
10.0MHz Band QPSK	50/0	2505	17.77	4.55	9.00	22.22	166.725	Vertical	2	Pass
		2535	19.42	4.69	9.00	23.73	236.048	Vertical	2	Pass
		2565	18.87	4.72	9.00	23.15	206.538	Vertical	2	Pass
15.0MHz Band QPSK	75/0	2507.5	18.92	4.55	9.00	23.37	217.270	Vertical	2	Pass
		2535	19.38	4.69	9.00	23.69	233.884	Vertical	2	Pass
		2562.5	17.73	4.72	9.00	22.01	158.855	Vertical	2	Pass
20.0MHz Band QPSK	100/0	2510	19.10	4.57	9.00	23.53	225.424	Vertical	2	Pass
		2535	19.11	4.73	9.00	23.38	217.771	Vertical	2	Pass
		2560	19.71	4.75	9.00	23.96	248.886	Vertical	2	Pass

Radiated Power (EIRP) for Band 7										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP		
							Average (mW)			
5.0MHz Band 16 QAM	25/0	2502.5	17.80	4.54	9.00	22.26	168.267	Horizontal	2	Pass
		2535	18.75	4.69	9.00	23.06	202.302	Horizontal	2	Pass
		2567.5	17.97	4.71	9.00	22.26	168.267	Horizontal	2	Pass
10.0MHz Band 16 QAM	50/0	2505	18.07	4.55	9.00	22.52	178.649	Horizontal	2	Pass
		2535	18.96	4.69	9.00	23.27	212.324	Horizontal	2	Pass
		2565	18.49	4.72	9.00	22.77	189.234	Horizontal	2	Pass
15.0MHz Band 16 QAM	75/0	2507.5	18.57	4.55	9.00	23.02	200.447	Horizontal	2	Pass
		2535	19.21	4.69	9.00	23.52	224.905	Horizontal	2	Pass
		2562.5	16.95	4.72	9.00	21.23	132.739	Horizontal	2	Pass
20.0MHz Band 16 QAM	100/0	2510	17.58	4.57	9.00	22.01	158.855	Horizontal	2	Pass
		2535	17.02	4.73	9.00	21.29	134.586	Horizontal	2	Pass
		2560	19.11	4.75	9.00	23.36	216.770	Horizontal	2	Pass
5.0MHz Band 16 QAM	25/0	2502.5	18.89	4.54	9.00	23.35	216.272	Vertical	2	Pass
		2535	19.07	4.69	9.00	23.38	217.771	Vertical	2	Pass
		2567.5	19.18	4.71	9.00	23.47	222.331	Vertical	2	Pass
10.0MHz Band 16 QAM	50/0	2505	18.83	4.55	9.00	23.28	212.814	Vertical	2	Pass
		2535	18.70	4.69	9.00	23.01	199.986	Vertical	2	Pass
		2565	17.74	4.72	9.00	22.02	159.221	Vertical	2	Pass
15.0MHz Band 16 QAM	75/0	2507.5	18.58	4.55	9.00	23.03	200.909	Vertical	2	Pass
		2535	18.06	4.69	9.00	22.37	172.584	Vertical	2	Pass
		2562.5	16.33	4.72	9.00	20.61	115.080	Vertical	2	Pass
20.0MHz Band 16 QAM	100/0	2510	19.02	4.57	9.00	23.45	221.309	Vertical	2	Pass
		2535	19.39	4.73	9.00	23.66	232.274	Vertical	2	Pass
		2560	18.78	4.75	9.00	23.03	200.909	Vertical	2	Pass

Note:

SG Level= Signal generator output

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

8.6 LTE BAND 12

Radiated Power (ERP) for Band 12											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band QPSK	6/0	699.7	20.01	1.91	5.60	2.15	21.55	142.889	Horizontal	3	Pass
		707.5	20.68	1.91	5.70	2.15	22.32	170.608	Horizontal	3	Pass
		715.3	18.39	1.93	5.80	2.15	20.11	102.565	Horizontal	3	Pass
3.0MHz Band QPSK	15/0	700.5	18.75	1.91	5.60	2.15	20.29	106.905	Horizontal	3	Pass
		707.5	19.50	1.91	5.70	2.15	21.14	130.017	Horizontal	3	Pass
		714.5	19.60	1.93	5.80	2.15	21.32	135.519	Horizontal	3	Pass
5.0MHz Band QPSK	25/0	701.5	19.78	1.91	5.60	2.15	21.32	135.519	Horizontal	3	Pass
		707.5	20.25	1.91	5.70	2.15	21.89	154.525	Horizontal	3	Pass
		713.5	20.14	1.92	5.80	2.15	21.87	153.815	Horizontal	3	Pass
10.0MHz Band QPSK	50/0	704	19.64	1.91	5.60	2.15	21.18	131.220	Horizontal	3	Pass
		707.5	18.74	1.91	5.70	2.15	20.38	109.144	Horizontal	3	Pass
		711	18.29	1.92	5.80	2.15	20.02	100.462	Horizontal	3	Pass
1.4MHz Band QPSK	6/0	699.7	18.73	1.91	5.60	2.15	20.27	106.414	Vertical	3	Pass
		707.5	19.57	1.91	5.70	2.15	21.21	132.130	Vertical	3	Pass
		715.3	18.34	1.93	5.80	2.15	20.06	101.391	Vertical	3	Pass
3.0MHz Band QPSK	15/0	700.5	19.61	1.91	5.60	2.15	21.15	130.317	Vertical	3	Pass
		707.5	18.45	1.91	5.70	2.15	20.09	102.094	Vertical	3	Pass
		714.5	20.55	1.93	5.80	2.15	22.27	168.655	Vertical	3	Pass
5.0MHz Band QPSK	25/0	701.5	18.86	1.91	5.60	2.15	20.40	109.648	Vertical	3	Pass
		707.5	19.50	1.91	5.70	2.15	21.14	130.017	Vertical	3	Pass
		713.5	19.52	1.92	5.80	2.15	21.25	133.352	Vertical	3	Pass
10.0MHz Band QPSK	50/0	704	18.67	1.91	5.60	2.15	20.21	104.954	Vertical	3	Pass
		707.5	18.89	1.91	5.70	2.15	20.53	112.980	Vertical	3	Pass
		711	20.64	1.92	5.80	2.15	22.37	172.584	Vertical	3	Pass

Radiated Power (ERP) for Band 12											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	699.7	19.50	1.91	5.60	2.15	21.04	127.057	Horizontal	3	Pass
		707.5	19.81	1.91	5.70	2.15	21.45	139.637	Horizontal	3	Pass
		715.3	19.57	1.93	5.80	2.15	21.29	134.586	Horizontal	3	Pass
3.0MHz Band 16 QAM	15/0	700.5	20.49	1.91	5.60	2.15	22.03	159.588	Horizontal	3	Pass
		707.5	18.15	1.91	5.70	2.15	19.79	95.280	Horizontal	3	Pass
		714.5	18.67	1.93	5.80	2.15	20.39	109.396	Horizontal	3	Pass
5.0MHz Band 16 QAM	25/0	701.5	18.58	1.91	5.60	2.15	20.12	102.802	Horizontal	3	Pass
		707.5	20.76	1.91	5.70	2.15	22.4	173.780	Horizontal	3	Pass
		713.5	20.45	1.92	5.80	2.15	22.18	165.196	Horizontal	3	Pass
10.0MHz Band 16 QAM	50/0	704	19.98	1.91	5.60	2.15	21.52	141.906	Horizontal	3	Pass
		707.5	18.59	1.91	5.70	2.15	20.23	105.439	Horizontal	3	Pass
		711	20.21	1.92	5.80	2.15	21.94	156.315	Horizontal	3	Pass
1.4MHz Band 16 QAM	6/0	699.7	17.93	1.91	5.60	2.15	19.47	88.512	Vertical	3	Pass
		707.5	20.18	1.91	5.70	2.15	21.82	152.055	Vertical	3	Pass
		715.3	19.63	1.93	5.80	2.15	21.35	136.458	Vertical	3	Pass
3.0MHz Band 16 QAM	15/0	700.5	20.81	1.91	5.60	2.15	22.35	171.791	Vertical	3	Pass
		707.5	19.93	1.91	5.70	2.15	21.57	143.549	Vertical	3	Pass
		714.5	20.89	1.93	5.80	2.15	22.61	182.390	Vertical	3	Pass
5.0MHz Band 16 QAM	25/0	701.5	19.59	1.91	5.60	2.15	21.13	129.718	Vertical	3	Pass
		707.5	20.73	1.91	5.70	2.15	22.37	172.584	Vertical	3	Pass
		713.5	18.65	1.92	5.80	2.15	20.38	109.144	Vertical	3	Pass
10.0MHz Band 16 QAM	50/0	704	20.29	1.91	5.60	2.15	21.83	152.405	Vertical	3	Pass
		707.5	21.08	1.91	5.70	2.15	22.72	187.068	Vertical	3	Pass
		711	19.85	1.92	5.80	2.15	21.58	143.880	Vertical	3	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.7 LTE BAND 13

Radiated Power (ERP) for Band 13											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level	Cable Loss	Antenna Factor	Correction	Max. EIRP	Max. EIRP	Polarization		
			(dBm)	(dBm)	(dB)	(dB)	Average	Average	Of Max. ERP		
5.0MHz Band QPSK	25/0	779.5	18.98	1.91	5.80	2.15	20.72	117.933	Horizontal	3	Pass
		782	20.78	1.91	5.60	2.15	22.32	170.608	Horizontal	3	Pass
		784.5	20.75	1.92	5.70	2.15	22.38	173.059	Horizontal	3	Pass
10.0MHz Band QPSK	50/0	782	20.32	1.91	5.8	2.15	22.06	160.694	Horizontal	3	Pass
5.0MHz Band QPSK	25/0	779.5	19.69	1.91	5.80	2.15	21.43	139.037	Vertical	3	Pass
		782	20.47	1.91	5.60	2.15	22.01	158.855	Vertical	3	Pass
		784.5	20.01	1.92	5.70	2.15	21.64	145.924	Vertical	3	Pass
10.0MHz Band QPSK	50/0	782	21.5	1.91	5.8	2.15	23.24	210.863	Vertical	3	Pass

Radiated Power (ERP) for Band 13											
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Correction	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	Limit	
			(dBm)			(dB)	Average	Average			
							(dBm)	(mW)			
5.0MHz Band 16 QAM	25/0	779.5	19.88	1.91	5.80	2.15	21.62	145.211	Horizontal	3	Pass
		782	20.42	1.91	5.60	2.15	21.96	157.036	Horizontal	3	Pass
		784.5	19.59	1.92	5.70	2.15	21.22	132.434	Horizontal	3	Pass
10.0MHz Band 16 QAM	50/0	782	20.39	1.91	5.8	2.15	22.13	163.305	Horizontal	3	Pass
5.0MHz Band 16 QAM	25/0	779.5	19.77	1.91	5.80	2.15	21.51	141.579	Vertical	3	Pass
		782	20.48	1.91	5.60	2.15	22.02	159.221	Vertical	3	Pass
		784.5	20.35	1.92	5.70	2.15	21.98	157.761	Vertical	3	Pass
10.0MHz Band 16 QAM	50/0	782	19.79	1.91	5.8	2.15	21.53	142.233	Vertical	3	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.8 LTE BAND 14

Radiated Power (ERP) for Band 14											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
5.0MHz Band QPSK	25/0	705.5	20.71	1.91	5.80	2.15	22.45	175.792	Horizontal	3	Pass
		720.5	21.10	1.93	5.60	2.15	22.62	182.810	Horizontal	3	Pass
		745.5	20.63	1.96	5.70	2.15	22.22	166.725	Horizontal	3	Pass
10.0MHz Band QPSK	50/0	793	20.51	1.92	5.8	2.15	22.24	167.494	Horizontal	3	Pass
5.0MHz Band QPSK	25/0	790.5	20.47	1.91	5.80	2.15	22.21	166.341	Vertical	3	Pass
		793	20.80	1.93	5.60	2.15	22.32	170.608	Vertical	3	Pass
		795.5	20.68	1.96	5.70	2.15	22.27	168.655	Vertical	3	Pass
10.0MHz Band QPSK	50/0	793	21.01	1.92	5.8	2.15	22.74	187.932	Vertical	3	Pass

Radiated Power (ERP) for Band 14											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level	Cable Loss	Antenna Factor	Correction	Max. EIRP	Max. EIRP	Polarization		
			(dBm)	(dBm)	(dB)	(dB)	Average	Average	Of Max. ERP		
5.0MHz Band 16 QAM	25/0	705.5	6.19	1.91	19.21	2.15	21.34	136.144	Horizontal	3	Pass
		720.5	6.15	1.93	19.34	2.15	21.41	138.357	Horizontal	3	Pass
		745.5	5.78	1.96	19.52	2.15	21.19	131.522	Horizontal	3	Pass
10.0MHz Band 16 QAM	50/0	793	6.23	1.92	19.25	2.15	21.41	138.357	Horizontal	3	Pass
5.0MHz Band 16 QAM	25/0	790.5	5.79	1.91	19.21	2.15	20.94	124.055	Vertical	3	Pass
		793	6.25	1.93	19.34	2.15	21.51	141.447	Vertical	3	Pass
		795.5	5.56	1.96	19.52	2.15	20.97	124.920	Vertical	3	Pass
10.0MHz Band 16 QAM	50/0	793	6.66	1.92	19.25	2.15	21.84	152.757	Vertical	3	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.9 LTE BAND 17

Radiated Power (ERP) for Band 17											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
5.0MHz Band QPSK	25/0	706.5	18.32	1.91	5.60	2.15	19.86	96.828	Vertical	3	Pass
		710	19.78	1.91	5.70	2.15	21.42	138.676	Vertical	3	Pass
		713.5	20.02	1.92	5.80	2.15	21.75	149.624	Vertical	3	Pass
10.0MHz Band QPSK	50/0	709	17.99	1.91	5.60	2.15	19.53	89.743	Vertical	3	Pass
		710	19.07	1.91	5.70	2.15	20.71	117.761	Vertical	3	Pass
		711	16.79	1.92	5.80	2.15	18.52	71.121	Vertical	3	Pass
5.0MHz Band QPSK	25/0	706.5	17.86	1.91	5.60	2.15	19.40	87.096	Horizontal	3	Pass
		710	17.51	1.91	5.70	2.15	19.15	82.224	Horizontal	3	Pass
		713.5	18.48	1.92	5.80	2.15	20.21	104.954	Horizontal	3	Pass
10.0MHz Band QPSK	50/0	709	19.65	1.91	5.60	2.15	21.19	131.522	Horizontal	3	Pass
		710	20.26	1.91	5.70	2.15	21.90	154.882	Horizontal	3	Pass
		711	19.21	1.92	5.80	2.15	20.94	124.165	Horizontal	3	Pass

Radiated Power (ERP) for Band 17											
Mode	RB/RB SIZE	Frequency	Result								Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dBi)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	Limit	
5.0MHz Band 16 QAM	25/0	706.5	16.81	1.91	5.6	2.15	21.22	132.434	Vertical	3	Pass
		710	16.39	1.91	5.7	2.15	20.62	115.345	Vertical	3	Pass
		713.5	17.43	1.92	5.8	2.15	21.23	132.739	Vertical	3	Pass
10.0MHz Band 16 QAM	50/0	709	15.91	1.91	5.6	2.15	20.9	123.027	Vertical	3	Pass
		710	15.84	1.91	5.7	2.15	21.57	143.549	Vertical	3	Pass
		711	15.59	1.92	5.8	2.15	21.44	139.316	Vertical	3	Pass
5.0MHz Band 16 QAM	25/0	706.5	17.52	1.91	5.6	2.15	21.22	132.434	Horizontal	3	Pass
		710	17.46	1.91	5.7	2.15	21.32	135.519	Horizontal	3	Pass
		713.5	16.25	1.92	5.8	2.15	20.95	124.451	Horizontal	3	Pass
10.0MHz Band 16 QAM	50/0	709	17.30	1.91	5.6	2.15	21.34	136.144	Horizontal	3	Pass
		710	17.57	1.91	5.7	2.15	21.84	152.757	Horizontal	3	Pass
		711	16.65	1.92	5.8	2.15	22.04	159.956	Horizontal	3	Pass

Note:

ERP=EIRP-2.15

SG Level= Signal generator output

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

8.10 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	Polarization Of Max. ERP	Limit	
							Average			
							(mW)			
1.4MHz Band QPSK	6/0	1850.7	17.16	3.12	8.90	22.94	196.789	Horizontal	2	Pass
1882.5		16.26	3.27	8.90	21.89	154.525	Horizontal	2	Pass	
1914.3		17.11	3.29	8.90	22.72	187.068	Horizontal	2	Pass	
3.0MHz Band QPSK	15/0	1851.5	16.69	3.13	8.90	22.46	176.198	Horizontal	2	Pass
1882.5		17.38	3.27	8.90	23.01	199.986	Horizontal	2	Pass	
1913.5		16.27	3.30	8.90	21.87	153.815	Horizontal	2	Pass	
5.0MHz Band QPSK	25/0	1852.5	16.01	3.13	8.90	21.78	150.661	Horizontal	2	Pass
1882.5		16.87	3.27	8.90	22.5	177.828	Horizontal	2	Pass	
1912.5		16.15	3.30	8.90	21.75	149.624	Horizontal	2	Pass	
10.0MHz Band QPSK	50/0	1855	16.86	3.15	8.90	22.61	182.390	Horizontal	2	Pass
1882.5		17.07	3.31	8.90	22.66	184.502	Horizontal	2	Pass	
1910		16.36	3.33	8.90	21.93	155.955	Horizontal	2	Pass	
15.0MHz Band QPSK	75/0	1857.5	16.81	3.15	8.90	22.56	180.302	Horizontal	2	Pass
1882.5		17.22	3.31	8.90	22.81	190.985	Horizontal	2	Pass	
1907.5		17.48	3.33	8.90	23.05	201.837	Horizontal	2	Pass	
20.0MHz Band QPSK	100/0	1860	15.33	3.17	8.90	21.06	127.644	Horizontal	2	Pass
1882.5		16.82	3.32	8.90	22.4	173.780	Horizontal	2	Pass	
1905		16.70	3.36	8.90	22.24	167.494	Horizontal	2	Pass	
1.4MHz Band QPSK	6/0	1850.7	17.16	3.12	8.90	22.94	196.789	Vertical	2	Pass
1882.5		16.41	3.27	8.90	22.04	159.956	Vertical	2	Pass	
1914.3		16.33	3.29	8.90	21.94	156.315	Vertical	2	Pass	
3.0MHz Band QPSK	15/0	1851.5	17.11	3.13	8.90	22.88	194.089	Vertical	2	Pass
1882.5		17.19	3.27	8.90	22.82	191.426	Vertical	2	Pass	
1913.5		16.69	3.30	8.90	22.29	169.434	Vertical	2	Pass	
5.0MHz Band QPSK	25/0	1852.5	17.38	3.13	8.90	23.15	206.538	Vertical	2	Pass
1882.5		16.36	3.27	8.90	21.99	158.125	Vertical	2	Pass	
1912.5		16.34	3.30	8.90	21.94	156.315	Vertical	2	Pass	
10.0MHz Band	50/0	1855	16.00	3.15	8.90	21.75	149.624	Vertical	2	Pass
		1882.5	17.68	3.31	8.90	23.27	212.324	Vertical	2	Pass

QPSK		1910	15.92	3.33	8.90	21.49	140.929	Vertical	2	Pass
15.0MHz	75/0	1857.5	16.33	3.15	8.90	22.08	161.436	Vertical	2	Pass
Band		1882.5	17.25	3.31	8.90	22.84	192.309	Vertical	2	Pass
QPSK		1907.5	15.93	3.33	8.90	21.5	141.254	Vertical	2	Pass
20.0MHz	100/0	1860	14.92	3.17	8.90	20.65	116.145	Vertical	2	Pass
Band		1882.5	17.23	3.32	8.90	22.81	190.985	Vertical	2	Pass
QPSK		1905	17.91	3.36	8.90	23.45	221.309	Vertical	2	Pass

Radiated Power (EIRP) for Band 25										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	1850.7	16.25	3.12	8.90	22.03	159.588	Horizontal	2	Pass
		1882.5	15.25	3.27	8.90	20.88	122.462	Horizontal	2	Pass
		1914.3	16.13	3.29	8.90	21.74	149.279	Horizontal	2	Pass
3.0MHz Band 16 QAM	15/0	1851.5	15.33	3.13	8.90	21.1	128.825	Horizontal	2	Pass
		1882.5	16.23	3.27	8.90	21.86	153.462	Horizontal	2	Pass
		1913.5	16.50	3.30	8.90	22.1	162.181	Horizontal	2	Pass
5.0MHz Band 16 QAM	25/0	1852.5	16.83	3.13	8.90	22.6	181.970	Horizontal	2	Pass
		1882.5	16.02	3.27	8.90	21.65	146.218	Horizontal	2	Pass
		1912.5	16.46	3.30	8.90	22.06	160.694	Horizontal	2	Pass
10.0MHz Band 16 QAM	50/0	1855	16.18	3.15	8.90	21.93	155.955	Horizontal	2	Pass
		1882.5	15.71	3.31	8.90	21.3	134.896	Horizontal	2	Pass
		1910	15.57	3.33	8.90	21.14	130.017	Horizontal	2	Pass
15.0MHz Band 16 QAM	75/0	1857.5	16.89	3.15	8.90	22.64	183.654	Horizontal	2	Pass
		1882.5	16.01	3.31	8.90	21.6	144.544	Horizontal	2	Pass
		1907.5	15.01	3.33	8.90	20.58	114.288	Horizontal	2	Pass
20.0MHz Band 16 QAM	100/0	1860	15.12	3.17	8.90	20.85	121.619	Horizontal	2	Pass
		1882.5	16.53	3.32	8.90	22.11	162.555	Horizontal	2	Pass
		1905	15.42	3.36	8.90	20.96	124.738	Horizontal	2	Pass
1.4MHz Band 16 QAM	6/0	1850.7	17.00	3.12	8.90	22.78	189.671	Vertical	2	Pass
		1882.5	15.91	3.27	8.90	21.54	142.561	Vertical	2	Pass
		1914.3	16.06	3.29	8.90	21.67	146.893	Vertical	2	Pass
3.0MHz Band 16 QAM	15/0	1851.5	15.74	3.13	8.90	21.51	141.579	Vertical	2	Pass
		1882.5	16.57	3.27	8.90	22.2	165.959	Vertical	2	Pass
		1913.5	16.54	3.30	8.90	22.14	163.682	Vertical	2	Pass
5.0MHz Band 16 QAM	25/0	1852.5	16.71	3.13	8.90	22.48	177.011	Vertical	2	Pass
		1882.5	15.89	3.27	8.90	21.52	141.906	Vertical	2	Pass
		1912.5	16.39	3.30	8.90	21.99	158.125	Vertical	2	Pass
10.0MHz Band 16 QAM	50/0	1855	15.59	3.15	8.90	21.34	136.144	Vertical	2	Pass
		1882.5	16.52	3.31	8.90	22.11	162.555	Vertical	2	Pass
		1910	16.48	3.33	8.90	22.05	160.325	Vertical	2	Pass
15.0MHz Band 16	75/0	1857.5	15.65	3.15	8.90	21.4	138.038	Vertical	2	Pass
		1882.5	16.28	3.31	8.90	21.87	153.815	Vertical	2	Pass

QAM		1907.5	16.09	3.33	8.90	21.66	146.555	Vertical	2	Pass
20.0MHz	100/0	1860	16.48	3.17	8.90	22.21	166.341	Vertical	2	Pass
Band 16		1882.5	17.33	3.32	8.90	22.91	195.434	Vertical	2	Pass
QAM		1905	15.40	3.36	8.90	20.94	124.165	Vertical	2	Pass

Note:

SG Level= Signal generator output

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

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

8.11 LTE BAND 26 A

Radiated Power (ERP) for Band 26(814-824)											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level	Cable Loss	Antenna Factor	Correction	Max. EIRP	Max. EIRP	Polarization		
			(dBm)	(dBm)	(dB)	(dB)	Average (dBm)	Average (mW)	Of Max. ERP		
1.4MHz BW QPSK	6/0	814.7	22.65	3.76	5.30	2.15	22.04	159.956	Horizontal	100	Pass
		819	23.02	3.91	5.30	2.15	22.26	168.267	Horizontal	100	Pass
		823.3	22.45	3.93	5.70	2.15	22.07	161.065	Horizontal	100	Pass
3.0MHz BW QPSK	15/0	815.5	22.82	3.77	5.30	2.15	22.2	165.959	Horizontal	100	Pass
		819	22.94	3.91	5.30	2.15	22.18	165.196	Horizontal	100	Pass
		822.5	22.60	3.94	5.70	2.15	22.21	166.341	Horizontal	100	Pass
5.0MHz BW QPSK	25/0	816.5	22.20	3.77	5.30	2.15	21.58	143.880	Horizontal	100	Pass
		819	22.55	3.91	5.30	2.15	21.79	151.008	Horizontal	100	Pass
		821.5	22.55	3.94	5.70	2.15	22.16	164.437	Horizontal	100	Pass
10.0MHz BW QPSK	50/0	819	22.99	3.91	5.30	2.15	22.23	167.109	Horizontal	100	Pass
1.4MHz BW QPSK	6/0	814.7	22.85	3.79	5.30	2.15	22.21	166.341	Vertical	100	Pass
		819	22.39	3.95	5.70	2.15	21.99	158.125	Vertical	100	Pass
		823.3	22.80	3.97	5.30	2.15	21.98	157.761	Vertical	100	Pass
3.0MHz BW QPSK	15/0	815.5	22.42	3.77	5.30	2.15	21.8	151.356	Vertical	100	Pass
		819	22.59	3.91	5.70	2.15	22.23	167.109	Vertical	100	Pass
		822.5	23.05	3.94	5.30	2.15	22.26	168.267	Vertical	100	Pass
5.0MHz BW QPSK	25/0	816.5	22.86	3.77	5.30	2.15	22.24	167.494	Vertical	100	Pass
		819	22.63	3.91	5.70	2.15	22.27	168.655	Vertical	100	Pass
		821.5	22.95	3.94	5.30	2.15	22.16	164.437	Vertical	100	Pass
10.0MHz BW QPSK	50/0	819	23.12	3.91	5.30	2.15	22.36	172.187	Vertical	100	Pass

Radiated Power (ERP) for Band 26(814-824)											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level	Cable Loss	Antenna Factor	Correction	Max. EIRP	Max. EIRP	Polarization Of Max. ERP		
			(dBm)	(dBm)	(dB)	(dB)	Average (dBm)	Average (mW)			
1.4MHz BW 16 QAM	6/0	814.7	22.83	3.76	5.30	2.15	22.22	166.725	Horizontal	100	Pass
		819	23.08	3.91	5.30	2.15	22.32	170.608	Horizontal	100	Pass
		823.3	22.75	3.93	5.70	2.15	22.37	172.584	Horizontal	100	Pass
3.0MHz BW 16 QAM	15/0	815.5	22.85	3.77	5.30	2.15	22.23	167.109	Horizontal	100	Pass
		819	23.07	3.91	5.30	2.15	22.31	170.216	Horizontal	100	Pass
		822.5	22.43	3.94	5.70	2.15	22.04	159.956	Horizontal	100	Pass
5.0MHz BW 16 QAM	25/0	816.5	22.84	3.77	5.30	2.15	22.22	166.725	Horizontal	100	Pass
		819	22.51	3.91	5.30	2.15	21.75	149.624	Horizontal	100	Pass
		821.5	22.48	3.94	5.70	2.15	22.09	161.808	Horizontal	100	Pass
10.0MHz BW 16 QAM	50/0	819	23.03	3.91	5.30	2.15	22.27	168.655	Horizontal	100	Pass
1.4MHz BW 16 QAM	6/0	814.7	22.95	3.79	5.30	2.15	22.31	170.216	Vertical	100	Pass
		819	22.61	3.95	5.70	2.15	22.21	166.341	Vertical	100	Pass
		823.3	22.93	3.97	5.30	2.15	22.11	162.555	Vertical	100	Pass
3.0MHz BW 16 QAM	15/0	815.5	22.94	3.77	5.30	2.15	22.32	170.608	Vertical	100	Pass
		819	22.68	3.91	5.70	2.15	22.32	170.608	Vertical	100	Pass
		822.5	22.64	3.94	5.30	2.15	21.85	153.109	Vertical	100	Pass
5.0MHz BW 16 QAM	25/0	816.5	22.44	3.77	5.30	2.15	21.82	152.055	Vertical	100	Pass
		819	22.01	3.91	5.70	2.15	21.65	146.218	Vertical	100	Pass
		821.5	23.14	3.94	5.30	2.15	22.35	171.791	Vertical	100	Pass
10.0MHz BW 16 QAM	50/0	819	23.15	3.91	5.30	2.15	22.39	173.380	Vertical	100	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.12 LTE BAND 26 B

Radiated Power (ERP) for Band 26(824-849)											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band QPSK	6/0	824.7	21.37	2.01	5.30	2.15	22.51	178.24	Horizontal	7	Pass
		836.5	20.07	2.01	5.30	2.15	21.21	132.13	Horizontal	7	Pass
		848.3	20.51	2.02	5.70	2.15	22.04	159.96	Horizontal	7	Pass
3.0MHz Band QPSK	15/0	825.5	19.79	2.01	5.30	2.15	20.93	123.88	Horizontal	7	Pass
		836.5	20.60	2.01	5.30	2.15	21.74	149.28	Horizontal	7	Pass
		847.5	19.61	2.02	5.70	2.15	21.14	130.02	Horizontal	7	Pass
5.0MHz Band QPSK	25/0	826.5	19.20	2.01	5.30	2.15	20.34	108.14	Horizontal	7	Pass
		836.5	19.13	2.01	5.30	2.15	20.27	106.41	Horizontal	7	Pass
		846.5	20.33	2.02	5.70	2.15	21.86	153.46	Horizontal	7	Pass
10.0MHz Band QPSK	50/0	829	19.07	2.01	5.30	2.15	20.21	104.95	Horizontal	7	Pass
		836.5	19.24	2.01	5.30	2.15	20.38	109.14	Horizontal	7	Pass
		844	18.98	2.02	5.70	2.15	20.51	112.46	Horizontal	7	Pass
15.0MHz Band QPSK	75/0	831.5	20.93	2.01	5.30	2.15	22.07	161.06	Vertical	7	Pass
		836.5	20.32	2.01	5.30	2.15	21.46	139.96	Vertical	7	Pass
		841.5	19.93	2.02	5.70	2.15	21.46	139.96	Vertical	7	Pass
1.4MHz Band QPSK	6/0	824.7	20.98	2.01	5.30	2.15	22.12	162.93	Vertical	7	Pass
		836.5	20.54	2.01	5.30	2.15	21.68	147.23	Vertical	7	Pass
		848.3	20.69	2.02	5.70	2.15	22.22	166.72	Vertical	7	Pass
3.0MHz Band QPSK	15/0	825.5	19.49	2.01	5.30	2.15	20.63	115.61	Vertical	7	Pass
		836.5	20.45	2.01	5.30	2.15	21.59	144.21	Vertical	7	Pass
		847.5	19.96	2.02	5.70	2.15	21.49	140.93	Vertical	7	Pass
5.0MHz Band QPSK	25/0	826.5	20.01	2.01	5.30	2.15	21.15	130.32	Vertical	7	Pass
		836.5	21.16	2.01	5.30	2.15	22.3	169.82	Vertical	7	Pass
		846.5	19.85	2.02	5.70	2.15	21.38	137.40	Vertical	7	Pass
10.0MHz Band QPSK	50/0	829	20.52	2.01	5.30	2.15	21.66	146.55	Vertical	7	Pass
		836.5	21.99	2.01	5.30	2.15	23.13	205.59	Vertical	7	Pass
		844	21.00	2.02	5.70	2.15	22.53	179.06	Vertical	7	Pass
15.0MHz Band	75/0	831.5	20.55	2.01	5.30	2.15	21.69	147.57	Vertical	7	Pass
		836.5	22.01	2.01	5.30	2.15	23.15	206.54	Vertical	7	Pass

QPSK		841.5	19.94	2.02	5.70	2.15	21.47	140.28	Vertical	7	Pass
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Radiated Power (ERP) for Band 26(824-849)											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	824.7	20.98	2.01	5.30	2.15	22.12	162.93	Horizontal	7	Pass
		836.5	19.65	2.01	5.30	2.15	20.79	119.95	Horizontal	7	Pass
		848.3	18.96	2.02	5.70	2.15	20.49	111.94	Horizontal	7	Pass
3.0MHz Band 16 QAM	15/0	825.5	18.51	2.01	5.30	2.15	19.65	92.26	Horizontal	7	Pass
		836.5	20.24	2.01	5.30	2.15	21.38	137.40	Horizontal	7	Pass
		847.5	19.97	2.02	5.70	2.15	21.5	141.25	Horizontal	7	Pass
5.0MHz Band 16 QAM	25/0	826.5	19.18	2.01	5.30	2.15	20.32	107.65	Horizontal	7	Pass
		836.5	19.29	2.01	5.30	2.15	20.43	110.41	Horizontal	7	Pass
		846.5	18.51	2.02	5.70	2.15	20.04	100.93	Horizontal	7	Pass
10.0MHz Band 16 QAM	50/0	829	18.82	2.01	5.30	2.15	19.96	99.08	Horizontal	7	Pass
		836.5	20.81	2.01	5.30	2.15	21.95	156.68	Horizontal	7	Pass
		844	19.55	2.02	5.70	2.15	21.08	128.23	Horizontal	7	Pass
15.0MHz Band QPSK	75/0	831.5	19.51	2.01	5.30	2.15	20.65	116.14	Horizontal	7	Pass
		836.5	19.43	2.01	5.30	2.15	20.57	114.02	Horizontal	7	Pass
		841.5	19.68	2.02	5.70	2.15	21.21	132.13	Horizontal	7	Pass
1.4MHz Band 16 QAM	6/0	824.7	19.58	2.01	5.30	2.15	20.72	118.03	Vertical	7	Pass
		836.5	20.43	2.01	5.30	2.15	21.57	143.55	Vertical	7	Pass
		848.3	19.96	2.02	5.70	2.15	21.49	140.93	Vertical	7	Pass
3.0MHz Band 16 QAM	15/0	825.5	18.67	2.01	5.30	2.15	19.81	95.72	Vertical	7	Pass
		836.5	18.84	2.01	5.30	2.15	19.98	99.54	Vertical	7	Pass
		847.5	19.24	2.02	5.70	2.15	20.77	119.40	Vertical	7	Pass
5.0MHz Band 16 QAM	25/0	826.5	20.08	2.01	5.30	2.15	21.22	132.43	Vertical	7	Pass
		836.5	19.15	2.01	5.30	2.15	20.29	106.91	Vertical	7	Pass
		846.5	20.98	2.02	5.70	2.15	22.51	178.24	Vertical	7	Pass
10.0MHz Band 16 QAM	50/0	829	21.57	2.01	5.30	2.15	22.71	186.64	Vertical	7	Pass
		836.5	20.80	2.01	5.30	2.15	21.94	156.31	Vertical	7	Pass
		844	18.95	2.02	5.70	2.15	20.48	111.69	Vertical	7	Pass
15.0MHz Band QPSK	75/0	831.5	19.98	2.01	5.30	2.15	21.12	129.42	Vertical	7	Pass
		836.5	20.27	2.01	5.30	2.15	21.41	138.36	Vertical	7	Pass
		841.5	21.93	2.02	5.70	2.15	23.46	221.82	Vertical	7	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.13 LTE BAND 41

Radiated Power (EIRP) for Band 41										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
5.0MHz Band QPSK	25/0	2498.50	17.07	4.54	9.00	21.53	142.233	Horizontal	2	Pass
		2593.00	16.10	4.69	9.00	20.41	109.901	Horizontal	2	Pass
		2687.50	15.06	4.71	9.00	19.35	86.099	Horizontal	2	Pass
10.0MHz Band QPSK	50/0	2501.00	17.41	4.55	9.00	21.86	153.462	Horizontal	2	Pass
		2593.00	15.96	4.69	9.00	20.27	106.414	Horizontal	2	Pass
		2685.00	15.33	4.72	9.00	19.61	91.411	Horizontal	2	Pass
15.0MHz Band QPSK	75/0	2503.50	14.02	4.55	9.00	18.47	70.307	Horizontal	2	Pass
		2593.00	16.26	4.69	9.00	20.57	114.025	Horizontal	2	Pass
		2682.50	16.82	4.72	9.00	21.1	128.825	Horizontal	2	Pass
20.0MHz Band QPSK	100/0	2506.00	15.50	4.57	9.00	19.93	98.401	Horizontal	2	Pass
		2593.00	15.85	4.73	9.00	20.12	102.802	Horizontal	2	Pass
		2680.00	16.71	4.75	9.00	20.96	124.738	Horizontal	2	Pass
5.0MHz Band QPSK	25/0	2498.50	16.75	4.54	9.00	21.21	132.130	Vertical	2	Pass
		2593.00	15.35	4.69	9.00	19.66	92.470	Vertical	2	Pass
		2687.50	14.94	4.71	9.00	19.23	83.753	Vertical	2	Pass
10.0MHz Band QPSK	50/0	2501.00	14.15	4.55	9.00	18.6	72.444	Vertical	2	Pass
		2593.00	15.25	4.69	9.00	19.56	90.365	Vertical	2	Pass
		2685.00	15.98	4.72	9.00	20.26	106.170	Vertical	2	Pass
15.0MHz Band QPSK	75/0	2503.50	14.74	4.55	9.00	19.19	82.985	Vertical	2	Pass
		2593.00	16.77	4.69	9.00	21.08	128.233	Vertical	2	Pass
		2682.50	16.50	4.72	9.00	20.78	119.674	Vertical	2	Pass
20.0MHz Band QPSK	100/0	2506.00	17.04	4.57	9.00	21.47	140.281	Vertical	2	Pass
		2593.00	17.69	4.73	9.00	21.96	157.036	Vertical	2	Pass
		2680.00	16.42	4.75	9.00	20.67	116.681	Vertical	2	Pass

Radiated Power (EIRP) for Band 41										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
5.0MHz Band 16 QAM	25/0	2498.50	17.29	4.54	9.00	21.75	149.624	Horizontal	2	Pass
		2593.00	18.98	4.69	9.00	23.29	213.304	Horizontal	2	Pass
		2687.50	19.24	4.71	9.00	23.53	225.424	Horizontal	2	Pass
10.0MHz Band 16 QAM	50/0	2501.00	18.15	4.55	9.00	22.6	181.970	Horizontal	2	Pass
		2593.00	18.52	4.69	9.00	22.83	191.867	Horizontal	2	Pass
		2685.00	19.45	4.72	9.00	23.73	236.048	Horizontal	2	Pass
15.0MHz Band 16 QAM	75/0	2503.50	17.98	4.55	9.00	22.43	174.985	Horizontal	2	Pass
		2593.00	19.66	4.69	9.00	23.97	249.459	Horizontal	2	Pass
		2682.50	19.68	4.72	9.00	23.96	248.886	Horizontal	2	Pass
20.0MHz Band 16 QAM	100/0	2506.00	18.23	4.57	9.00	22.66	184.502	Horizontal	2	Pass
		2593.00	19.87	4.73	9.00	24.14	259.418	Horizontal	2	Pass
		2680.00	18.08	4.75	9.00	22.33	171.002	Horizontal	2	Pass
5.0MHz Band 16 QAM	25/0	2498.50	19.37	4.54	9.00	23.83	241.546	Vertical	2	Pass
		2593.00	18.11	4.69	9.00	22.42	174.582	Vertical	2	Pass
		2687.50	19.30	4.71	9.00	23.59	228.560	Vertical	2	Pass
10.0MHz Band 16 QAM	50/0	2501.00	18.47	4.55	9.00	22.92	195.884	Vertical	2	Pass
		2593.00	18.19	4.69	9.00	22.5	177.828	Vertical	2	Pass
		2685.00	16.84	4.72	9.00	21.12	129.420	Vertical	2	Pass
15.0MHz Band 16 QAM	75/0	2503.50	18.20	4.55	9.00	22.65	184.077	Vertical	2	Pass
		2593.00	18.55	4.69	9.00	22.86	193.197	Vertical	2	Pass
		2682.50	18.27	4.72	9.00	22.55	179.887	Vertical	2	Pass
20.0MHz Band 16 QAM	100/0	2506.00	19.45	4.57	9.00	23.88	244.343	Vertical	2	Pass
		2593.00	19.15	4.73	9.00	23.42	219.786	Vertical	2	Pass
		2680.00	19.90	4.75	9.00	24.15	260.016	Vertical	2	Pass

Note:

SG Level= Signal generator output

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

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

8.14 LTE BAND 66

Radiated Power (EIRP) for Band 66										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band QPSK	6/0	1710.7	15.09	3.12	8.90	20.71	117.761	Horizontal	1	Pass
		1745	13.86	3.27	8.90	19.08	80.910	Horizontal	1	Pass
		1779.3	16.28	3.29	8.90	21.69	147.571	Horizontal	1	Pass
3.0MHz Band QPSK	15/0	1711.5	14.20	3.13	8.90	19.45	88.105	Horizontal	1	Pass
		1745	14.87	3.27	8.90	20.71	117.761	Horizontal	1	Pass
		1778.5	15.56	3.30	8.90	19.85	96.605	Horizontal	1	Pass
5.0MHz Band QPSK	25/0	1712.5	16.05	3.13	8.90	21	125.893	Horizontal	1	Pass
		1745	16.21	3.27	8.90	21.38	137.404	Horizontal	1	Pass
		1777.5	14.87	3.30	8.90	19.64	92.045	Horizontal	1	Pass
10.0MHz Band QPSK	50/0	1715	15.19	3.15	8.90	20.44	110.662	Horizontal	1	Pass
		1745	15.29	3.31	8.90	21.14	130.017	Horizontal	1	Pass
		1775	16.10	3.33	8.90	21.11	129.122	Horizontal	1	Pass
15.0MHz Band QPSK	75/0	1717.5	15.36	3.15	8.90	21.24	133.045	Horizontal	1	Pass
		1745	15.89	3.31	8.90	21.35	136.458	Horizontal	1	Pass
		1772.5	16.64	3.33	8.90	21.58	143.880	Horizontal	1	Pass
20.0MHz Band QPSK	100/0	1720	13.97	3.17	8.90	20.27	106.414	Horizontal	1	Pass
		1745	15.42	3.32	8.90	21.53	142.233	Horizontal	1	Pass
		1770	15.22	3.36	8.90	20.99	125.603	Horizontal	1	Pass
1.4MHz Band QPSK	6/0	1710.7	15.71	3.12	8.90	20.21	104.954	Vertical	1	Pass
		1745	16.21	3.27	8.90	22.21	166.341	Vertical	1	Pass
		1779.3	15.56	3.29	8.90	21.08	128.233	Vertical	1	Pass
3.0MHz Band QPSK	15/0	1711.5	16.08	3.13	8.90	21.37	137.088	Vertical	1	Pass
		1745	16.14	3.27	8.90	21.87	153.815	Vertical	1	Pass
		1778.5	16.41	3.30	8.90	21.34	136.144	Vertical	1	Pass
5.0MHz Band QPSK	25/0	1712.5	15.17	3.13	8.90	20.6	114.815	Vertical	1	Pass
		1745	15.65	3.27	8.90	19.75	94.406	Vertical	1	Pass
		1777.5	14.24	3.30	8.90	20.01	100.231	Vertical	1	Pass
10.0MHz Band	50/0	1715	12.72	3.15	8.90	18.06	63.973	Vertical	1	Pass
		1745	16.63	3.31	8.90	21.77	150.314	Vertical	1	Pass

QPSK		1775	15.66	3.33	8.90	19.85	96.605	Vertical	1	Pass
15.0MHz	75/0	1717.5	16.69	3.15	8.90	21.48	140.605	Vertical	1	Pass
Band		1745	16.08	3.31	8.90	21.41	138.357	Vertical	1	Pass
QPSK		1772.5	15.30	3.33	8.90	21.23	132.739	Vertical	1	Pass
20.0MHz	100/0	1720	17.39	3.17	8.90	22.25	167.880	Vertical	1	Pass
Band		1745	17.54	3.32	8.90	22.26	168.267	Vertical	1	Pass
QPSK		1770	14.41	3.36	8.90	20.13	103.039	Vertical	1	Pass

Radiated Power (EIRP) for Band 66										
Mode	RB/RB SIZE	Frequency	Result						Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
1.4MHz Band 16 QAM	6/0	1710.7	16.28	3.12	8.9	22.06	160.694	Horizontal	1	Pass
		1745	15.66	3.27	8.9	21.29	134.586	Horizontal	1	Pass
		1779.3	15.90	3.29	8.9	21.51	141.579	Horizontal	1	Pass
3.0MHz Band 16 QAM	15/0	1711.5	16.11	3.13	8.9	21.88	154.170	Horizontal	1	Pass
		1745	15.17	3.27	8.9	20.8	120.226	Horizontal	1	Pass
		1778.5	15.91	3.3	8.9	21.51	141.579	Horizontal	1	Pass
5.0MHz Band 16 QAM	25/0	1712.5	15.49	3.13	8.9	21.26	133.660	Horizontal	1	Pass
		1745	13.96	3.27	8.9	19.59	90.991	Horizontal	1	Pass
		1777.5	14.98	3.3	8.9	20.58	114.288	Horizontal	1	Pass
10.0MHz Band 16 QAM	50/0	1715	16.45	3.15	8.9	22.2	165.959	Horizontal	1	Pass
		1745	14.20	3.31	8.9	19.79	95.280	Horizontal	1	Pass
		1775	14.35	3.33	8.9	19.92	98.175	Horizontal	1	Pass
15.0MHz Band 16 QAM	75/0	1717.5	14.25	3.15	8.9	20	100.000	Horizontal	1	Pass
		1745	16.04	3.31	8.9	21.63	145.546	Horizontal	1	Pass
		1772.5	15.75	3.33	8.9	21.32	135.519	Horizontal	1	Pass
20.0MHz Band 16 QAM	100/0	1720	15.59	3.17	8.9	21.32	135.519	Horizontal	1	Pass
		1745	15.93	3.32	8.9	21.51	141.579	Horizontal	1	Pass
		1770	16.04	3.36	8.9	21.58	143.880	Horizontal	1	Pass
1.4MHz Band 16 QAM	6/0	1710.7	15.65	3.12	8.9	21.43	138.995	Vertical	1	Pass
		1745	16.05	3.27	8.9	21.68	147.231	Vertical	1	Pass
		1779.3	15.43	3.29	8.9	21.04	127.057	Vertical	1	Pass
3.0MHz Band 16 QAM	15/0	1711.5	14.15	3.13	8.9	19.92	98.175	Vertical	1	Pass
		1745	14.54	3.27	8.9	20.17	103.992	Vertical	1	Pass
		1778.5	15.39	3.3	8.9	20.99	125.603	Vertical	1	Pass
5.0MHz Band 16 QAM	25/0	1712.5	16.34	3.13	8.9	22.11	162.555	Vertical	1	Pass
		1745	16.05	3.27	8.9	21.68	147.231	Vertical	1	Pass
		1777.5	14.72	3.3	8.9	20.32	107.647	Vertical	1	Pass
10.0MHz Band 16 QAM	50/0	1715	13.98	3.15	8.9	19.73	93.972	Vertical	1	Pass
		1745	16.30	3.31	8.9	21.89	154.525	Vertical	1	Pass
		1775	16.37	3.33	8.9	21.94	156.315	Vertical	1	Pass
15.0MHz Band 16	75/0	1717.5	15.00	3.15	8.9	20.75	118.850	Vertical	1	Pass
		1745	15.73	3.31	8.9	21.32	135.519	Vertical	1	Pass

QAM		1772.5	15.70	3.33	8.9	21.27	133.968	Vertical	1	Pass
20.0MHz	100/0	1720	16.14	3.17	8.9	21.87	153.815	Vertical	1	Pass
Band 16		1745	17.01	3.32	8.9	22.59	181.552	Vertical	1	Pass
QAM		1770	16.38	3.36	8.9	21.92	155.597	Vertical	1	Pass

Note:

SG Level= Signal generator output

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

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

8.15 LTE BAND 71

Radiated Power (ERP) for Band 71											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
5.0MHz Band QPSK	25/0	665.5	20.34	1.91	5.80	2.15	22.08	161.436	Horizontal	3	Pass
		680.5	20.60	1.91	5.60	2.15	22.14	163.682	Horizontal	3	Pass
		695.5	20.61	1.93	5.70	2.15	22.23	167.109	Horizontal	3	Pass
10.0MHz Band QPSK	50/0	668	19.69	1.91	5.80	2.15	21.43	138.995	Horizontal	3	Pass
		680.5	19.66	1.91	5.60	2.15	21.2	131.826	Horizontal	3	Pass
		693	19.77	1.93	5.70	2.15	21.39	137.721	Horizontal	3	Pass
15.0MHz Band QPSK	75/0	670.5	19.40	1.91	5.80	2.15	21.14	130.017	Horizontal	3	Pass
		680.5	20.71	1.91	5.60	2.15	22.25	167.880	Horizontal	3	Pass
		690.5	20.67	1.92	5.70	2.15	22.3	169.824	Horizontal	3	Pass
20.0MHz Band QPSK	100/0	673	19.21	1.91	5.80	2.15	20.95	124.451	Horizontal	3	Pass
		683	20.66	1.91	5.60	2.15	22.2	165.959	Horizontal	3	Pass
		688	19.59	1.92	5.70	2.15	21.22	132.434	Horizontal	3	Pass
5.0MHz Band QPSK	25/0	665.5	20.32	1.91	5.80	2.15	22.06	160.694	Vertical	3	Pass
		680.5	20.11	1.91	5.60	2.15	21.65	146.218	Vertical	3	Pass
		695.5	20.19	1.93	5.70	2.15	21.81	151.705	Vertical	3	Pass
15.0MHz Band QPSK	50/0	668	20.12	1.91	5.80	2.15	21.86	153.462	Vertical	3	Pass
		680.5	20.71	1.91	5.60	2.15	22.25	167.880	Vertical	3	Pass
		693	20.51	1.93	5.70	2.15	22.13	163.305	Vertical	3	Pass
15.0MHz Band QPSK	75/0	670.5	20.47	1.91	5.80	2.15	22.21	166.341	Vertical	3	Pass
		680.5	19.93	1.91	5.60	2.15	21.47	140.281	Vertical	3	Pass
		690.5	20.35	1.92	5.70	2.15	21.98	157.761	Vertical	3	Pass
20MHz Band QPSK	100/0	673	20.45	1.91	5.80	2.15	22.19	165.577	Vertical	3	Pass
		683	20.18	1.91	5.60	2.15	21.72	148.594	Vertical	3	Pass
		688	20.73	1.92	5.70	2.15	22.36	172.187	Vertical	3	Pass

Radiated Power (ERP) for Band 71											
Mode	RB/RB SIZE	Frequency	Result							Limit	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP		
5.0MHz Band 16 QAM	25/0	665.5	20.42	1.91	5.80	2.15	22.16	164.437	Horizontal	3	Pass
		680.5	20.93	1.91	5.60	2.15	22.47	176.604	Horizontal	3	Pass
		695.5	20.58	1.93	5.70	2.15	22.20	165.959	Horizontal	3	Pass
10.0MHz Band 16 QAM	50/0	668	19.23	1.91	5.80	2.15	20.97	125.026	Horizontal	3	Pass
		680.5	20.46	1.91	5.60	2.15	22.00	158.489	Horizontal	3	Pass
		693	20.42	1.93	5.70	2.15	22.04	159.956	Horizontal	3	Pass
15.0MHz Band 16 QAM	75/0	670.5	19.23	1.91	5.80	2.15	20.97	125.026	Horizontal	3	Pass
		680.5	20.30	1.91	5.60	2.15	21.84	152.757	Horizontal	3	Pass
		690.5	20.28	1.92	5.70	2.15	21.91	155.239	Horizontal	3	Pass
20.0MHz Band 16 QAM	100/0	673	19.86	1.91	5.80	2.15	21.60	144.544	Horizontal	3	Pass
		683	20.59	1.91	5.60	2.15	22.13	163.305	Horizontal	3	Pass
		688	19.96	1.92	5.70	2.15	21.59	144.212	Horizontal	3	Pass
5.0MHz Band 16 QAM	25/0	665.5	20.07	1.91	5.80	2.15	21.81	151.705	Vertical	3	Pass
		680.5	20.49	1.91	5.60	2.15	22.03	159.588	Vertical	3	Pass
		695.5	20.52	1.93	5.70	2.15	22.14	163.682	Vertical	3	Pass
10.0MHz Band 16 QAM	50/0	668	19.94	1.91	5.80	2.15	21.68	147.231	Vertical	3	Pass
		680.5	19.81	1.91	5.60	2.15	21.35	136.458	Vertical	3	Pass
		693	19.26	1.93	5.70	2.15	20.88	122.462	Vertical	3	Pass
15.0MHz Band 16 QAM	75/0	670.5	19.92	1.91	5.80	2.15	21.66	146.555	Vertical	3	Pass
		680.5	18.41	1.91	5.60	2.15	19.95	98.855	Vertical	3	Pass
		690.5	19.69	1.92	5.70	2.15	21.32	135.519	Vertical	3	Pass
20.0MHz Band 16 QAM	100/0	673	19.43	1.91	5.80	2.15	21.17	130.918	Vertical	3	Pass
		683	20.31	1.91	5.60	2.15	21.85	153.109	Vertical	3	Pass
		688	21.27	1.92	5.70	2.15	22.90	194.984	Vertical	3	Pass

Note:

SG Level= Signal generator output

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

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

ERP=EIRP-2.15

9. SPURIOUS RADIATION EMISSION

RULE PART(S)

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

LIMIT

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

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

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

TEST PROCEDURE

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

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

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

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

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

MODES TESTED

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

RESULTS

PASS

9.1 LTE BAND 2

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

Test Results for Low Channel 1850.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-51.08	4.04	33.51	-21.61	-13	-8.61	Horizontal
3701.4	-48.78	4.04	33.51	-19.31	-13	-6.31	Vertical
5552.1	-54.63	5.24	35.84	-24.03	-13	-11.03	Vertical
5552.1	-49.60	5.24	35.84	-19.00	-13	-6.00	Horizontal
Test Results for Mid Channel 1880MHz							
3760	-51.83	4.04	33.56	-22.31	-13	-9.31	Horizontal
3760	-51.87	4.04	33.56	-22.35	-13	-9.35	Vertical
5640	-51.53	5.24	35.91	-20.86	-13	-7.86	Vertical
5640	-51.97	5.24	35.91	-21.30	-13	-8.30	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-50.71	4.04	34.00	-20.75	-13	-7.75	Horizontal
3818.6	-54.44	4.04	34.00	-24.48	-13	-11.48	Vertical
5727.9	-54.74	5.24	36.04	-23.94	-13	-10.94	Vertical
5727.9	-52.70	5.24	36.04	-21.90	-13	-8.90	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	-54.51	4.07	33.54	-25.04	-13	-12.04	Horizontal
3720	-47.99	4.07	33.54	-18.52	-13	-5.52	Vertical
5580	-50.77	5.28	35.86	-20.19	-13	-7.19	Vertical
5580	-55.40	5.28	35.86	-24.82	-13	-11.82	Horizontal
Test Results for Mid Channel 1880MHz							
3760	-47.71	4.04	33.56	-18.19	-13	-5.19	Horizontal
3760	-53.06	4.04	33.56	-23.54	-13	-10.54	Vertical
5640	-54.39	5.24	35.91	-23.72	-13	-10.72	Vertical
5640	-55.47	5.24	35.91	-24.80	-13	-11.80	Horizontal
Test Results for High Channel 1900MHz							
3800	-51.45	4.04	34.00	-21.49	-13	-8.49	Horizontal
3800	-54.53	4.04	34.00	-24.57	-13	-11.57	Vertical
5700	-54.85	5.24	36.04	-24.05	-13	-11.05	Vertical
5700	-57.47	5.24	36.04	-26.67	-13	-13.67	Horizontal

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

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

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

9.2 LTE BAND 4

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-54.00	4.02	29.80	-28.22	-13	-15.22	Horizontal
3421.4	-47.87	4.02	29.80	-22.09	-13	-9.09	Vertical
5132.1	-56.03	5.24	35.84	-25.43	-13	-12.43	Vertical
5132.1	-55.14	5.24	35.84	-24.54	-13	-11.54	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465	-54.20	4.03	30.00	-28.23	-13	-15.23	Horizontal
3465	-50.05	4.03	30.00	-24.08	-13	-11.08	Vertical
5197.5	-53.29	5.25	35.86	-22.68	-13	-9.68	Vertical
5197.5	-51.54	5.25	35.86	-20.93	-13	-7.93	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-50.04	4.05	30.01	-24.08	-13	-11.08	Horizontal
3508.6	-50.33	4.05	30.01	-24.37	-13	-11.37	Vertical
5262.9	-50.97	5.26	35.86	-20.37	-13	-7.37	Vertical
5262.9	-49.08	5.26	35.86	-18.48	-13	-5.48	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	-48.93	4.02	29.80	-23.15	-13	-10.15	Horizontal
3440	-50.07	4.02	29.80	-24.29	-13	-11.29	Vertical
5160	-51.50	5.24	35.84	-20.90	-13	-7.90	Vertical
5160	-52.10	5.24	35.84	-21.50	-13	-8.50	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465	-47.32	4.03	30.00	-21.35	-13	-8.35	Horizontal
3465	-50.79	4.03	30.00	-24.82	-13	-11.82	Vertical
5197.5	-57.08	5.25	35.86	-26.47	-13	-13.47	Vertical
5197.5	-53.48	5.25	35.86	-22.87	-13	-9.87	Horizontal
Test Results for High Channel 1745MHz							
2490	-47.04	2.91	27.68	-22.27	-13	-9.27	Horizontal
3490	-50.81	2.91	27.68	-26.04	-13	-13.04	Vertical
5235	-51.27	5.26	35.86	-20.67	-13	-7.67	Vertical
5235	-50.70	5.26	35.86	-20.10	-13	-7.10	Horizontal

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

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

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

9.3 LTE BAND 5

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

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-51.40	2.78	27.50	-26.68	-13	-13.68	Horizontal
1649.4	-51.64	2.78	27.50	-26.92	-13	-13.92	Vertical
2474.1	-49.08	2.90	27.80	-24.18	-13	-11.18	Vertical
2474.1	-52.16	2.90	27.80	-27.26	-13	-14.26	Horizontal
Test Results For Mid Channel 836.5MHz							
1673	-52.69	2.78	27.48	-27.99	-13	-14.99	Horizontal
1673	-54.28	2.78	27.48	-29.58	-13	-16.58	Vertical
2509.5	-54.46	2.91	27.70	-29.67	-13	-16.67	Vertical
2509.5	-52.53	2.91	27.70	-27.74	-13	-14.74	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-51.85	2.78	27.43	-27.20	-13	-14.20	Horizontal
1696.6	-49.83	2.78	27.43	-25.18	-13	-12.18	Vertical
2544.9	-57.21	2.92	27.74	-32.39	-13	-19.39	Vertical
2544.9	-51.97	2.92	27.74	-27.15	-13	-14.15	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	-49.17	2.78	27.50	-24.45	-13	-11.45	Horizontal
1658	-50.33	2.78	27.50	-25.61	-13	-12.61	Vertical
2487	-52.86	2.90	27.80	-27.96	-13	-14.96	Vertical
2487	-54.17	2.90	27.80	-29.27	-13	-16.27	Horizontal
Test Results for Mid Channel 836.5MHz							
1673	-49.52	2.78	27.48	-24.82	-13	-11.82	Horizontal
1673	-48.15	2.78	27.48	-23.45	-13	-10.45	Vertical
2509.5	-53.61	2.91	27.70	-28.82	-13	-15.82	Vertical
2509.5	-56.03	2.91	27.70	-31.24	-13	-18.24	Horizontal
Test Results for High Channel 844MHz							
1688	-49.55	2.78	27.43	-24.90	-13	-11.90	Horizontal
1688	-49.86	2.78	27.43	-25.21	-13	-12.21	Vertical
2532	-54.86	2.92	27.74	-30.04	-13	-17.04	Vertical
2532	-55.47	2.92	27.74	-30.65	-13	-17.65	Horizontal

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

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

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

9.4 LTE BAND 7

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

Test Results for Low Channel 2502.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5005	-61.84	5.23	35.81	-31.26	-25	-6.26	Horizontal
5005	-61.13	5.23	35.81	-30.55	-25	-5.55	Vertical
7507.5	-60.85	5.67	36.85	-29.67	-25	-4.67	Vertical
7507.5	-63.56	5.67	36.85	-32.38	-25	-7.38	Horizontal
Test Results for Mid Channel 2535MHz							
5070	-58.40	5.23	35.82	-27.81	-25	-2.81	Horizontal
5070	-57.80	5.23	35.82	-27.21	-25	-2.21	Vertical
7605	-63.81	5.67	36.85	-32.63	-25	-7.63	Vertical
7605	-64.69	5.67	36.85	-33.51	-25	-8.51	Horizontal
Test Results for High Channel 2567.5MHz							
5135	-61.05	5.24	35.83	-30.46	-25	-5.46	Horizontal
5135	-61.72	5.24	35.83	-31.13	-25	-6.13	Vertical
7702.5	-63.79	5.68	36.87	-32.60	-25	-7.60	Vertical
7702.5	-61.20	5.68	36.87	-30.01	-25	-5.01	Horizontal

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

Test Results for Low Channel 2510MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5020	-57.50	5.23	35.82	-26.91	-25	-1.91	Horizontal
5020	-57.21	5.23	35.82	-26.62	-25	-1.62	Vertical
7530	-59.54	5.67	36.86	-28.35	-25	-3.35	Vertical
7530	-59.13	5.67	36.86	-27.94	-25	-2.94	Horizontal
Test Results for Mid Channel 2535MHz							
5070	-59.32	5.23	35.82	-28.73	-25	-3.73	Horizontal
5070	-57.18	5.23	35.82	-26.59	-25	-1.59	Vertical
7605	-64.37	5.67	36.85	-33.19	-25	-8.19	Vertical
7605	-61.46	5.67	36.85	-30.28	-25	-5.28	Horizontal
Test Results for High Channel 2560MHz							
5120	-57.23	5.24	35.83	-26.64	-25	-1.64	Horizontal
5120	-58.02	5.24	35.83	-27.43	-25	-2.43	Vertical
7680	-61.89	5.70	36.88	-30.71	-25	-5.71	Vertical
7680	-64.10	5.70	36.88	-32.92	-25	-7.92	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	-51.99	2.60	27.2	-27.39	-13	-14.39	Horizontal
1399.4	-50.50	2.60	27.2	-25.90	-13	-12.90	Vertical
2099.1	-50.27	2.85	27.54	-25.58	-13	-12.58	Vertical
2099.1	-52.94	2.85	27.54	-28.25	-13	-15.25	Horizontal
Test Results For Mid Channel 707.5MHz							
1415	-51.59	2.61	27.28	-26.92	-13	-13.92	Horizontal
1415	-52.09	2.61	27.28	-27.42	-13	-14.42	Vertical
2122.5	-56.72	2.87	27.59	-32.00	-13	-19.00	Vertical
2122.5	-57.51	2.87	27.59	-32.79	-13	-19.79	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-52.65	2.63	27.28	-28.00	-13	-15.00	Horizontal
1430.6	-53.97	2.63	27.28	-29.32	-13	-16.32	Vertical
2145.9	-55.80	2.88	27.60	-31.08	-13	-18.08	Vertical
2145.9	-51.81	2.88	27.60	-27.09	-13	-14.09	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	-49.65	2.61	27.26	-25.00	-13	-12.00	Horizontal
1408	-49.97	2.61	27.26	-25.32	-13	-12.32	Vertical
2112	-53.58	2.87	27.58	-28.87	-13	-15.87	Vertical
2112	-55.60	2.87	27.58	-30.89	-13	-17.89	Horizontal
Test Results for Mid Channel 707.5MHz							
1415	-54.79	2.61	27.28	-30.12	-13	-17.12	Horizontal
1415	-51.98	2.61	27.28	-27.31	-13	-14.31	Vertical
2122.5	-51.33	2.87	27.59	-26.61	-13	-13.61	Vertical
2122.5	-49.06	2.87	27.59	-24.34	-13	-11.34	Horizontal
Test Results for High Channel 711MHz							
1422	-50.63	2.62	27.28	-25.97	-13	-12.97	Horizontal
1422	-48.77	2.62	27.28	-24.11	-13	-11.11	Vertical
2133	-54.99	2.87	27.60	-30.26	-13	-17.26	Vertical
2133	-55.98	2.87	27.60	-31.25	-13	-18.25	Horizontal

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

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

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

9.6 LTE BAND 13

LTE BAND 13 (5MHZ BANDWIDTH)

Test Results for Low Channel 779.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1559	-69.79	2.61	27.28	-45.12	-40	-5.12	Horizontal
1559	-66.24	2.61	27.28	-41.57	-40	-1.57	Vertical
2338.5	-57.26	2.87	27.59	-32.54	-13	-19.54	Vertical
2338.5	-50.81	2.87	27.59	-26.09	-13	-13.09	Horizontal
Test Results For Mid Channel 782MHz							
1564	-68.42	2.62	27.30	-43.74	-40	-3.74	Horizontal
1564	-69.05	2.62	27.30	-44.37	-40	-4.37	Vertical
2346	-57.01	2.87	27.62	-32.26	-13	-19.26	Vertical
2346	-54.13	2.87	27.62	-29.38	-13	-16.38	Horizontal
Test Results for High Channel 784.5MHz							
1569	-68.67	2.66	27.28	-44.05	-40	-4.05	Horizontal
1569	-68.61	2.66	27.28	-43.99	-40	-3.99	Vertical
2353.5	-57.40	2.88	27.60	-32.68	-13	-19.68	Vertical
2353.5	-53.48	2.88	27.60	-28.76	-13	-15.76	Horizontal

LTE BAND 13 (10MHZ BANDWIDTH)

Test Results for Channel 782MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1564	-69.72	2.62	27.30	-45.04	-40	-5.04	Horizontal
1564	-68.16	2.62	27.30	-43.48	-40	-3.48	Vertical
2346	-50.57	2.87	27.62	-25.82	-13	-12.82	Vertical
2346	-50.48	2.87	27.62	-25.73	-13	-12.73	Horizontal

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

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

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

9.7 LTE BAND 14

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	-54.45	2.61	27.28	-29.78	-13	-16.78	Horizontal
1581	-54.81	2.61	27.28	-30.14	-13	-17.14	Vertical
2371.5	-56.63	2.87	27.59	-31.91	-13	-18.91	Vertical
2371.5	-57.14	2.87	27.59	-32.42	-13	-19.42	Horizontal
Test Results For Mid Channel 793MHz							
1586	-47.48	2.62	27.30	-22.80	-13	-9.80	Horizontal
1586	-51.00	2.62	27.30	-26.32	-13	-13.32	Vertical
2379	-55.33	2.87	27.62	-30.58	-13	-17.58	Vertical
2379	-51.02	2.87	27.62	-26.27	-13	-13.27	Horizontal
Test Results for High Channel 795.5MHz							
1591	-51.65	2.66	27.28	-27.03	-13	-14.03	Horizontal
1591	-47.84	2.66	27.28	-23.22	-13	-10.22	Vertical
2386.5	-54.95	2.88	27.60	-30.23	-13	-17.23	Vertical
2386.5	-51.81	2.88	27.60	-27.09	-13	-14.09	Horizontal

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	-50.87	2.62	27.30	-26.19	-13	-13.19	Horizontal
1586	-49.05	2.62	27.30	-24.37	-13	-11.37	Vertical
2379	-56.85	2.87	27.62	-32.10	-13	-19.10	Vertical
2379	-53.21	2.87	27.62	-28.46	-13	-15.46	Horizontal

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

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

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

9.8 LTE BAND 17

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

Test Results for Low Channel 706.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1413	-47.07	2.61	27.28	-22.40	-13	-9.40	Horizontal
1413	-47.07	2.61	27.28	-22.40	-13	-9.40	Vertical
2119.5	-50.80	2.87	27.59	-26.08	-13	-13.08	Vertical
2119.5	-52.49	2.87	27.59	-27.77	-13	-14.77	Horizontal
Test Results For Mid Channel 710MHz							
1420	-51.85	2.62	27.30	-27.17	-13	-14.17	Horizontal
1420	-54.64	2.62	27.30	-29.96	-13	-16.96	Vertical
2130	-49.40	2.87	27.62	-24.65	-13	-11.65	Vertical
2130	-52.88	2.87	27.62	-28.13	-13	-15.13	Horizontal
Test Results for High Channel 713.5MHz							
1427	-48.56	2.66	27.28	-23.94	-13	-10.94	Horizontal
1427	-50.96	2.66	27.28	-26.34	-13	-13.34	Vertical
2140.5	-56.41	2.88	27.60	-31.69	-13	-18.69	Vertical
2140.5	-49.63	2.88	27.60	-24.91	-13	-11.91	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	-47.20	2.62	27.30	-22.52	-13	-9.52	Horizontal
1418	-54.26	2.62	27.30	-29.58	-13	-16.58	Vertical
2127	-56.73	2.87	27.62	-31.98	-13	-18.98	Vertical
2127	-56.65	2.87	27.62	-31.90	-13	-18.90	Horizontal
Test Results for Mid Channel 710MHz							
1420	-48.73	2.62	27.30	-24.05	-13	-11.05	Horizontal
1420	-54.84	2.62	27.30	-30.16	-13	-17.16	Vertical
2130	-56.20	2.87	27.62	-31.45	-13	-18.45	Vertical
2130	-52.96	2.87	27.62	-28.21	-13	-15.21	Horizontal
Test Results for High Channel 711MHz							
1422	-53.78	2.62	27.30	-29.10	-13	-16.10	Horizontal
1422	-57.31	2.62	27.30	-32.63	-13	-19.63	Vertical
2133	-56.72	2.87	27.62	-31.97	-13	-18.97	Vertical
2133	-54.67	2.87	27.62	-29.92	-13	-16.92	Horizontal

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

. Margin = Spurious Emission Level - Limit

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

9.9 LTE BAND 25

QPSK EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)

Test Results for Low Channel 1850.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-51.05	2.61	27.26	-26.40	-13	-13.40	Horizontal
3701.4	-54.52	2.61	27.26	-29.87	-13	-16.87	Vertical
5552.1	-49.43	2.87	27.58	-24.72	-13	-11.72	Vertical
5552.1	-49.59	2.87	27.58	-24.88	-13	-11.88	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765	-49.95	2.63	27.28	-25.30	-13	-12.30	Horizontal
3765	-49.71	2.63	27.28	-25.06	-13	-12.06	Vertical
5647.5	-50.85	2.88	27.62	-26.11	-13	-13.11	Vertical
5647.5	-54.73	2.88	27.62	-29.99	-13	-16.99	Horizontal
Test Results for High Channel 1914.3MHz							
3828.6	-54.12	2.65	27.28	-29.49	-13	-16.49	Horizontal
3828.6	-50.92	2.65	27.28	-26.29	-13	-13.29	Vertical
5742.9	-56.55	2.88	27.70	-31.73	-13	-18.73	Vertical
5742.9	-57.04	2.88	27.70	-32.22	-13	-19.22	Horizontal

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

Test Results for Low Channel 1860MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3720	-49.35	2.62	27.30	-24.67	-13	-11.67	Horizontal
3720	-54.19	2.62	27.30	-29.51	-13	-16.51	Vertical
5580	-51.73	2.87	27.62	-26.98	-13	-13.98	Vertical
5580	-53.19	2.87	27.62	-28.44	-13	-15.44	Horizontal
Test Results for Mid Channel 1882.5MHz							
3765	-51.17	2.64	27.33	-26.48	-13	-13.48	Horizontal
3765	-50.16	2.64	27.33	-25.47	-13	-12.47	Vertical
5647.5	-56.46	2.88	27.67	-31.67	-13	-18.67	Vertical
5647.5	-54.56	2.88	27.67	-29.77	-13	-16.77	Horizontal
Test Results for High Channel 1905MHz							
3810	-50.07	2.64	27.33	-25.38	-13	-12.38	Horizontal
3810	-51.58	2.64	27.33	-26.89	-13	-13.89	Vertical
5715	-51.30	2.88	27.67	-26.51	-13	-13.51	Vertical
5715	-57.35	2.88	27.67	-32.56	-13	-19.56	Horizontal

9.10 LTE BAND 26 A

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

Test Results for Low Channel 814.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1629.4	-47.61	2.78	27.5	-22.89	-13	-9.89	Horizontal
1629.4	-47.02	2.78	27.5	-22.30	-13	-9.30	Vertical
2444.1	-50.27	2.9	27.8	-25.37	-13	-12.37	Vertical
2444.1	-57.74	2.9	27.8	-32.84	-13	-19.84	Horizontal
Test Results for Mid Channel 819MHz							
1638	-51.73	2.8	27.48	-27.05	-13	-14.05	Horizontal
1638	-54.86	2.8	27.48	-30.18	-13	-17.18	Vertical
2457.5	-49.28	2.91	27.7	-24.49	-13	-11.49	Vertical
2457.5	-57.61	2.91	27.7	-32.82	-13	-19.82	Horizontal
Test Results for High Channel 823.3MHz							
1646.6	-48.13	2.82	27.43	-23.52	-13	-10.52	Horizontal
1646.6	-51.92	2.82	27.43	-27.31	-13	-14.31	Vertical
2469.9	-54.24	2.92	27.74	-29.42	-13	-16.42	Vertical
2469.9	-57.33	2.92	27.74	-32.51	-13	-19.51	Horizontal

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

Test Results for Mid Channel 819MHz							
1638	-52.27	2.82	27.43	-27.66	-13	-14.66	Horizontal
1638	-54.01	2.82	27.43	-29.40	-13	-16.40	Vertical
2457.5	-54.91	2.91	27.74	-30.08	-13	-17.08	Vertical
2457.5	-53.19	2.91	27.74	-28.36	-13	-15.36	Horizontal

9.11 LTE BAND 26 B

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

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-49.46	2.78	27.28	-24.96	-13	-11.96	Horizontal
1649.4	-52.63	2.78	27.28	-28.13	-13	-15.13	Vertical
2474.1	-52.10	2.9	27.59	-27.41	-13	-14.41	Vertical
2474.1	-49.88	2.9	27.59	-25.19	-13	-12.19	Horizontal
Test Results for Mid Channel 836.5MHz							
1673	-49.66	2.78	27.3	-25.14	-13	-12.14	Horizontal
1673	-50.43	2.78	27.3	-25.91	-13	-12.91	Vertical
2509.4	-56.40	2.91	27.62	-31.69	-13	-18.69	Vertical
2509.4	-52.41	2.91	27.62	-27.70	-13	-14.70	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-54.30	2.78	27.28	-29.80	-13	-16.80	Horizontal
1696.6	-49.05	2.78	27.28	-24.55	-13	-11.55	Vertical
2544.9	-56.89	2.92	27.6	-32.21	-13	-19.21	Vertical
2544.9	-55.48	2.92	27.6	-30.80	-13	-17.80	Horizontal

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

Test Results for Low Channel 831.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1663	-47.24	2.78	27.3	-22.72	-13	-9.72	Horizontal
1663	-53.47	2.78	27.3	-28.95	-13	-15.95	Vertical
2494.5	-51.70	2.9	27.62	-26.98	-13	-13.98	Vertical
2494.5	-51.07	2.9	27.62	-26.35	-13	-13.35	Horizontal
Test Results for Mid Channel 836.5MHz							
1673	-48.06	2.78	27.3	-23.54	-13	-10.54	Horizontal
1673	-49.35	2.78	27.3	-24.83	-13	-11.83	Vertical
2509.5	-56.93	2.91	27.62	-32.22	-13	-19.22	Vertical
2509.5	-49.90	2.91	27.62	-25.19	-13	-12.19	Horizontal
Test Results for High Channel 841.5MHz							
1683	-54.95	2.78	27.3	-30.43	-13	-17.43	Horizontal
1683	-54.32	2.78	27.3	-29.80	-13	-16.80	Vertical
2524.5	-49.15	2.92	27.62	-24.45	-13	-11.45	Vertical
2524.5	-54.93	2.92	27.62	-30.23	-13	-17.23	Horizontal

9.12 LTE BAND 41

LTE BAND 41 (5MHZ BANDWIDTH)

Test Results for Low Channel 2498.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5205	-54.92	2.63	27.26	-30.29	-25	-5.29	Horizontal
5205	-48.13	2.63	27.26	-23.50	-25	1.50	Vertical
7807.5	-55.79	2.67	27.58	-30.88	-25	-5.88	Vertical
7807.5	-51.83	2.67	27.58	-26.92	-25	-1.92	Horizontal
Test Results for Mid Channel 2593MHz							
5210	-59.35	2.62	27.28	-34.69	-25	-9.69	Horizontal
5210	-56.35	2.62	27.28	-31.69	-25	-6.69	Vertical
7815	-56.59	2.85	27.62	-31.82	-25	-6.82	Vertical
7815	-54.58	2.85	27.62	-29.81	-25	-4.81	Horizontal
Test Results for High Channel 2687..5MHz							
5375	-51.78	2.64	27.28	-27.14	-25	-2.14	Horizontal
5375	-48.24	2.64	27.28	-33.06	-25	-8.06	Vertical
8062.5	-55.57	2.85	27.7	-32.75	-25	-7.75	Vertical
8062.5	-54.83	2.85	27.7	-30.99	-25	-5.99	Horizontal

LTE BAND 41 (20MHZ BANDWIDTH)

Test Results for Low Channel 2506MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5012	-49.55	2.63	27.3	-24.88	-25	0.12	Horizontal
5012	-48.14	2.63	27.3	-28.61	-25	-3.61	Vertical
7518	-49.06	2.67	27.62	-34.8	-25	-9.80	Vertical
7518	-55.81	2.67	27.62	-37.74	-25	-12.74	Horizontal
Test Results for Mid Channel 2593MHz							
5186	-56.82	2.62	27.33	-32.11	-25	-7.11	Horizontal
5186	-55.13	2.62	27.33	-30.91	-25	-5.91	Vertical
7779	-57.92	2.85	27.67	-35.26	-25	-10.26	Vertical
7779	-58.71	2.85	27.67	-35.16	-25	-10.16	Horizontal
Test Results for High Channel 2680MHz							
5360	-54.44	2.64	27.33	-29.75	-25	-4.75	Horizontal
5360	-57.12	2.64	27.33	-34.16	-25	-9.16	Vertical
8040	-58.08	2.85	27.67	-35.41	-25	-10.41	Vertical
8040	-55.00	2.85	27.67	-32.08	-25	-7.08	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.

9.13 LTE BAND 66

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-53.77	2.61	27.28	-29.10	-13	-16.10	Horizontal
3421.4	-52.81	2.61	27.28	-28.14	-13	-15.14	Vertical
5132.1	-52.45	2.87	27.59	-27.73	-13	-14.73	Vertical
5132.1	-57.97	2.87	27.59	-33.25	-13	-20.25	Horizontal
Test Results for Mid Channel 1745MHz							
3490	-49.27	2.62	27.3	-24.59	-13	-11.59	Horizontal
3490	-49.25	2.62	27.3	-24.57	-13	-11.57	Vertical
5337.9	-49.35	2.87	27.62	-24.60	-13	-11.60	Vertical
5337.9	-50.11	2.87	27.62	-25.36	-13	-12.36	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-47.36	2.66	27.28	-22.74	-13	-9.74	Horizontal
3558.6	-50.84	2.66	27.28	-26.22	-13	-13.22	Vertical
5337.9	-49.17	2.88	27.6	-24.45	-13	-11.45	Vertical
5337.9	-57.26	2.88	27.6	-32.54	-13	-19.54	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440	-53.53	2.62	27.3	-28.85	-13	-15.85	Horizontal
3440	-49.96	2.62	27.3	-25.28	-13	-12.28	Vertical
5160	-54.36	2.87	27.62	-29.61	-13	-16.61	Vertical
5160	-54.91	2.87	27.62	-30.16	-13	-17.16	Horizontal
Test Results for Mid Channel 1745MHz							
3490	-49.18	2.62	27.3	-24.50	-13	-11.50	Horizontal
3490	-52.45	2.62	27.3	-27.77	-13	-14.77	Vertical
5337.9	-52.80	2.87	27.62	-28.05	-13	-15.05	Vertical
5337.9	-55.06	2.87	27.62	-30.31	-13	-17.31	Horizontal
Test Results for High Channel 1770MHz							
3540	-51.81	2.62	27.3	-27.13	-13	-14.13	Horizontal
3540	-53.72	2.62	27.3	-29.04	-13	-16.04	Vertical
5310	-55.63	2.87	27.62	-30.88	-13	-17.88	Vertical
5310	-55.03	2.87	27.62	-30.28	-13	-17.28	Horizontal

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

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

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

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

9.14 LTE BAND 71

QPSK EIRP POWER FOR LTE BAND 71 (5MHZ BANDWIDTH)

Test Results for Low Channel 665.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1331	-49.31	2.61	27.28	-24.64	-13	-11.64	Horizontal
1331	-54.84	2.61	27.28	-30.17	-13	-17.17	Vertical
1996.5	-56.52	2.87	27.59	-31.80	-13	-18.80	Vertical
1996.5	-53.29	2.87	27.59	-28.57	-13	-15.57	Horizontal
Test Results for Mid Channel 680.5MHz							
1361	-54.14	2.62	27.30	-29.46	-13	-16.46	Horizontal
1361	-47.46	2.62	27.30	-22.78	-13	-9.78	Vertical
2041.5	-51.31	2.87	27.62	-26.56	-13	-13.56	Vertical
2041.5	-50.32	2.87	27.62	-25.57	-13	-12.57	Horizontal
Test Results for High Channel 695.5MHz							
1391	-51.15	2.66	27.28	-26.53	-13	-13.53	Horizontal
1391	-51.00	2.66	27.28	-26.38	-13	-13.38	Vertical
2086.5	-52.70	2.88	27.60	-27.98	-13	-14.98	Vertical
2086.5	-57.90	2.88	27.60	-33.18	-13	-20.18	Horizontal

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

Test Results for Low Channel 673MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1346	-53.03	2.62	27.30	-28.35	-13	-15.35	Horizontal
1346	-50.84	2.62	27.30	-26.16	-13	-13.16	Vertical
2019	-57.69	2.87	27.62	-32.94	-13	-19.94	Vertical
2019	-56.19	2.87	27.62	-31.44	-13	-18.44	Horizontal
Test Results for Mid Channel 683MHz							
1366	-47.57	2.62	27.30	-22.89	-13	-9.89	Horizontal
1366	-50.93	2.62	27.30	-26.25	-13	-13.25	Vertical
2049	-54.54	2.87	27.62	-29.79	-13	-16.79	Vertical
2049	-54.45	2.87	27.62	-29.70	-13	-16.70	Horizontal
Test Results for High Channel 688MHz							
1376	-52.54	2.62	27.30	-27.86	-13	-14.86	Horizontal
1376	-47.62	2.62	27.30	-22.94	-13	-9.94	Vertical
2064	-50.36	2.87	27.62	-25.61	-13	-12.61	Vertical
2064	-51.45	2.87	27.62	-26.70	-13	-13.70	Horizontal

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

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

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

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

10. FREQUENCY STABILITY

RULE PART(S)

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

LIMITS

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

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

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

Temp. = -30° to $+50^{\circ}\text{C}$

Voltage = low voltage, DC 3.42V, Normal, DC 3.8V and High voltage, DC 4.18V.

Frequency Stability vs Temperature:

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

Frequency Stability vs Voltage:

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

MODES TESTED

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

RESULTS

See the following pages.

10.1 LTE BAND 2

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	1880	2	0.00106	2.5
3.8	1880	3	0.00160	2.5
4.18	1880	7	0.00372	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	17	0.00904	2.5
Extreme (50C)	1880	16	0.00851	2.5
Extreme (40C)	1880	20	0.01064	2.5
Extreme (30C)	1880	14	0.00745	2.5
Extreme (10C)	1880	5	0.00266	2.5
Extreme (0C)	1880	10	0.00532	2.5
Extreme (-10C)	1880	6	0.00319	2.5
Extreme (-20C)	1880	7	0.00372	2.5
Extreme (-30C)	1880	4	0.00213	2.5

Band 2 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	1880	14	0.00745	2.5
3.8	1880	4	0.00213	2.5
4.18	1880	21	0.01117	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	6	0.00319	2.5
Extreme (50C)	1880	22	0.01170	2.5
Extreme (40C)	1880	12	0.00638	2.5
Extreme (30C)	1880	4	0.00213	2.5
Extreme (10C)	1880	7	0.00372	2.5
Extreme (0C)	1880	13	0.00691	2.5
Extreme (-10C)	1880	11	0.00585	2.5
Extreme (-20C)	1880	8	0.00426	2.5
Extreme (-30C)	1880	15	0.00798	2.5

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

10.2 LTE BAND 4

Band 4 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	1732.5	12	0.00693	2.5
3.8	1732.5	3	0.00173	2.5
4.18	1732.5	9	0.00519	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	1	0.00058	2.5
Extreme (50C)	1732.5	3	0.00173	2.5
Extreme (40C)	1732.5	27	0.01558	2.5
Extreme (30C)	1732.5	25	0.01443	2.5
Extreme (10C)	1732.5	7	0.00404	2.5
Extreme (0C)	1732.5	6	0.00346	2.5
Extreme (-10C)	1732.5	17	0.00981	2.5
Extreme (-20C)	1732.5	22	0.01270	2.5
Extreme (-30C)	1732.5	24	0.01385	2.5

Band 4 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	1732.5	26	0.01501	2.5
3.8	1732.5	11	0.00635	2.5
4.18	1732.5	17	0.00981	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	27	0.01558	2.5
Extreme (50C)	1732.5	4	0.00231	2.5
Extreme (40C)	1732.5	5	0.00289	2.5
Extreme (30C)	1732.5	19	0.01097	2.5
Extreme (10C)	1732.5	8	0.00462	2.5
Extreme (0C)	1732.5	8	0.00462	2.5
Extreme (-10C)	1732.5	27	0.01558	2.5
Extreme (-20C)	1732.5	2	0.00115	2.5
Extreme (-30C)	1732.5	13	0.00750	2.5

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

10.3 LTE BAND 5

Band 5 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	836.5	14	0.01674	2.5
3.8	836.5	25	0.02989	2.5
4.18	836.5	6	0.00717	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	19	0.02271	2.5
Extreme (50C)	836.5	12	0.01435	2.5
Extreme (40C)	836.5	6	0.00717	2.5
Extreme (30C)	836.5	24	0.02869	2.5
Extreme (10C)	836.5	9	0.01076	2.5
Extreme (0C)	836.5	9	0.01076	2.5
Extreme (-10C)	836.5	12	0.01435	2.5
Extreme (-20C)	836.5	10	0.01195	2.5
Extreme (-30C)	836.5	13	0.01554	2.5

Band 5 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	836.5	12	0.01435	2.5
3.8	836.5	7	0.00837	2.5
4.18	836.5	17	0.02032	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	2	0.00239	2.5
Extreme (50C)	836.5	4	0.00478	2.5
Extreme (40C)	836.5	16	0.01913	2.5
Extreme (30C)	836.5	15	0.01793	2.5
Extreme (10C)	836.5	13	0.01554	2.5
Extreme (0C)	836.5	12	0.01435	2.5
Extreme (-10C)	836.5	22	0.02630	2.5
Extreme (-20C)	836.5	8	0.00956	2.5
Extreme (-30C)	836.5	4	0.00478	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]
3.42	2535	15	0.00592	2.5
3.8	2535	1	0.00039	2.5
4.18	2535	20	0.00789	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	12	0.00473	2.5
Extreme (50C)	2535	17	0.00671	2.5
Extreme (40C)	2535	20	0.00789	2.5
Extreme (30C)	2535	16	0.00631	2.5
Extreme (10C)	2535	13	0.00513	2.5
Extreme (0C)	2535	9	0.00355	2.5
Extreme (-10C)	2535	9	0.00355	2.5
Extreme (-20C)	2535	16	0.00631	2.5
Extreme (-30C)	2535	25	0.00986	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]
3.42	2535	4	0.00158	2.5
3.8	2535	9	0.00355	2.5
4.18	2535	3	0.00118	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	26	0.01026	2.5
Extreme (50C)	2535	9	0.00355	2.5
Extreme (40C)	2535	6	0.00237	2.5
Extreme (30C)	2535	15	0.00592	2.5
Extreme (10C)	2535	9	0.00355	2.5
Extreme (0C)	2535	14	0.00552	2.5
Extreme (-10C)	2535	1	0.00039	2.5
Extreme (-20C)	2535	15	0.00592	2.5
Extreme (-30C)	2535	11	0.00434	2.5

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

10.5 LTE BAND 12

Band 12 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	707.5	9	0.01272	2.5
3.8	707.5	24	0.03392	2.5
4.18	707.5	8	0.01131	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	15	0.02120	2.5
Extreme (50C)	707.5	22	0.03110	2.5
Extreme (40C)	707.5	9	0.01272	2.5
Extreme (30C)	707.5	11	0.01555	2.5
Extreme (10C)	707.5	10	0.01413	2.5
Extreme (0C)	707.5	18	0.02544	2.5
Extreme (-10C)	707.5	18	0.02544	2.5
Extreme (-20C)	707.5	15	0.02120	2.5
Extreme (-30C)	707.5	6	0.00848	2.5

Band 12 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	707.5	4	0.00565	2.5
3.8	707.5	7	0.00989	2.5
4.18	707.5	14	0.01979	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	12	0.01696	2.5
Extreme (50C)	707.5	6	0.00848	2.5
Extreme (40C)	707.5	25	0.03534	2.5
Extreme (30C)	707.5	1	0.00141	2.5
Extreme (10C)	707.5	17	0.02403	2.5
Extreme (0C)	707.5	17	0.02403	2.5
Extreme (-10C)	707.5	1	0.00141	2.5
Extreme (-20C)	707.5	21	0.02968	2.5
Extreme (-30C)	707.5	13	0.01837	2.5

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

10.6 LTE BAND 13

Band 13 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	782.0	23	0.02941	2.5
3.8	782.0	21	0.02685	2.5
4.18	782.0	25	0.03197	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	782.0	19	0.02430	2.5
Extreme (50C)	782.0	21	0.02685	2.5
Extreme (40C)	782.0	7	0.00895	2.5
Extreme (30C)	782.0	22	0.02813	2.5
Extreme (10C)	782.0	16	0.02046	2.5
Extreme (0C)	782.0	9	0.01151	2.5
Extreme (-10C)	782.0	15	0.01918	2.5
Extreme (-20C)	782.0	9	0.01151	2.5
Extreme (-30C)	782.0	19	0.02430	2.5

Band 13 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	782.0	24	0.03069	2.5
3.8	782.0	21	0.02685	2.5
4.18	782.0	1	0.00128	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	782.0	4	0.00512	2.5
Extreme (50C)	782.0	3	0.00384	2.5
Extreme (40C)	782.0	13	0.01662	2.5
Extreme (30C)	782.0	27	0.03453	2.5
Extreme (10C)	782.0	7	0.00895	2.5
Extreme (0C)	782.0	2	0.00256	2.5
Extreme (-10C)	782.0	15	0.01918	2.5
Extreme (-20C)	782.0	22	0.02813	2.5
Extreme (-30C)	782.0	20	0.02558	2.5

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

10.7 LTE BAND 14

Band 14 QPSK, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	728	1	0.00137	2.5
3.8	728	11	0.01511	2.5
4.18	728	11	0.01511	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	728	3	0.00412	2.5
Extreme (50C)	728	24	0.03297	2.5
Extreme (40C)	728	14	0.01923	2.5
Extreme (30C)	728	5	0.00687	2.5
Extreme (10C)	728	11	0.01511	2.5
Extreme (0C)	728	6	0.00824	2.5
Extreme (-10C)	728	23	0.03159	2.5
Extreme (-20C)	728	18	0.02473	2.5
Extreme (-30C)	728	15	0.02060	2.5

Band 14 16QAM, (10MHz BANDWIDTH RB size 50 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	728	5	0.00687	2.5
3.8	728	12	0.01648	2.5
4.18	728	22	0.03022	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	728	19	0.02610	2.5
Extreme (50C)	728	24	0.03297	2.5
Extreme (40C)	728	11	0.01511	2.5
Extreme (30C)	728	21	0.02885	2.5
Extreme (10C)	728	17	0.02335	2.5
Extreme (0C)	728	2	0.00275	2.5
Extreme (-10C)	728	9	0.01236	2.5
Extreme (-20C)	728	20	0.02747	2.5
Extreme (-30C)	728	15	0.02060	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]
3.42	710	4	0.00563	2.5
3.8	710	18	0.02535	2.5
4.18	710	6	0.00845	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710	19	0.02676	2.5
Extreme (50C)	710	27	0.03803	2.5
Extreme (40C)	710	12	0.01690	2.5
Extreme (30C)	710	13	0.01831	2.5
Extreme (10C)	710	24	0.03380	2.5
Extreme (0C)	710	17	0.02394	2.5
Extreme (-10C)	710	12	0.01690	2.5
Extreme (-20C)	710	25	0.03521	2.5
Extreme (-30C)	710	13	0.01831	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]
3.42	710	24	0.03380	2.5
3.8	710	26	0.03662	2.5
4.18	710	17	0.02394	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710	27	0.03803	2.5
Extreme (50C)	710	16	0.02254	2.5
Extreme (40C)	710	2	0.00282	2.5
Extreme (30C)	710	26	0.03662	2.5
Extreme (10C)	710	2	0.00282	2.5
Extreme (0C)	710	22	0.03099	2.5
Extreme (-10C)	710	4	0.00563	2.5
Extreme (-20C)	710	13	0.01831	2.5
Extreme (-30C)	710	11	0.01549	2.5

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

10.9 LTE BAND 25

Band 25 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	1882.5	21	0.01116	2.5
3.8	1882.5	26	0.01381	2.5
4.18	1882.5	1	0.00053	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	4	0.00212	2.5
Extreme (50C)	1882.5	14	0.00744	2.5
Extreme (40C)	1882.5	9	0.00478	2.5
Extreme (30C)	1882.5	11	0.00584	2.5
Extreme (10C)	1882.5	22	0.01169	2.5
Extreme (0C)	1882.5	16	0.00850	2.5
Extreme (-10C)	1882.5	18	0.00956	2.5
Extreme (-20C)	1882.5	18	0.00956	2.5
Extreme (-30C)	1882.5	21	0.01116	2.5

Band 25 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	1882.5	23	0.01222	2.5
3.8	1882.5	19	0.01009	2.5
4.18	1882.5	17	0.00903	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	19	0.01009	2.5
Extreme (50C)	1882.5	18	0.00956	2.5
Extreme (40C)	1882.5	2	0.00106	2.5
Extreme (30C)	1882.5	10	0.00531	2.5
Extreme (10C)	1882.5	25	0.01328	2.5
Extreme (0C)	1882.5	2	0.00106	2.5
Extreme (-10C)	1882.5	17	0.00903	2.5
Extreme (-20C)	1882.5	23	0.01222	2.5
Extreme (-30C)	1882.5	19	0.01009	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 A

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26915 RB size 75 RB Offset 0 10MHz)				
3.42	819	17	0.02076	2.5
3.8	819	12	0.01465	2.5
4.18	819	18	0.02198	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26915 RB size 75 RB Offset 0 10MHz)				
Normal (25C)	819	6	0.00733	2.5
Extreme (50C)	819	2	0.00244	2.5
Extreme (40C)	819	7	0.00855	2.5
Extreme (30C)	819	14	0.01709	2.5
Extreme (10C)	819	15	0.01832	2.5
Extreme (0C)	819	12	0.01465	2.5
Extreme (-10C)	819	10	0.01221	2.5
Extreme (-20C)	819	15	0.01832	2.5
Extreme (-30C)	819	24	0.02930	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26915 RB size 75 RB Offset 0 10MHz)				
3.42	819	16	0.01954	2.5
3.8	819	21	0.02564	2.5
4.18	819	6	0.00733	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26915 RB size 75 RB Offset 0 10MHz BANDWIDTH)				
Normal (25C)	819	17	0.02076	2.5
Extreme (50C)	819	8	0.00977	2.5
Extreme (40C)	819	10	0.01221	2.5
Extreme (30C)	819	2	0.00244	2.5
Extreme (10C)	819	13	0.01587	2.5
Extreme (0C)	819	3	0.00366	2.5
Extreme (-10C)	819	20	0.02442	2.5
Extreme (-20C)	819	5	0.00611	2.5
Extreme (-30C)	819	10	0.01221	2.5

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

10.11 LTE BAND 26 B

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 15MHz)				
3.42	836.5	21	0.02510	2.5
3.8	836.5	5	0.00598	2.5
4.18	836.5	9	0.01076	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 QPSK, (CH 26740 RB size 75 RB Offset 0 15MHz)				
Normal (25C)	836.5	1	0.00120	2.5
Extreme (50C)	836.5	6	0.00717	2.5
Extreme (40C)	836.5	16	0.01913	2.5
Extreme (30C)	836.5	4	0.00478	2.5
Extreme (10C)	836.5	20	0.02391	2.5
Extreme (0C)	836.5	8	0.00956	2.5
Extreme (-10C)	836.5	15	0.01793	2.5
Extreme (-20C)	836.5	12	0.01435	2.5
Extreme (-30C)	836.5	26	0.03108	2.5

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26740 RB size 75 RB Offset 0 15MHz)				
3.42	836.5	14	0.01674	2.5
3.8	836.5	11	0.01315	2.5
4.18	836.5	17	0.02032	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 26 16QAM, (CH 26740 RB size 75 RB Offset 0 15MHz)				
Normal (25C)	836.5	26	0.03108	2.5
Extreme (50C)	836.5	5	0.00598	2.5
Extreme (40C)	836.5	10	0.01195	2.5
Extreme (30C)	836.5	5	0.00598	2.5
Extreme (10C)	836.5	8	0.00956	2.5
Extreme (0C)	836.5	11	0.01315	2.5
Extreme (-10C)	836.5	24	0.02869	2.5
Extreme (-20C)	836.5	10	0.01124	2.5
Extreme (-30C)	836.5	7	0.00729	2.5

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

10.12 LTE BAND 41

Band 41 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	2593	20	0.00771	2.5
3.8	2593	19	0.00733	2.5
4.18	2593	14	0.00540	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2593	17	0.00656	2.5
Extreme (50C)	2593	18	0.00694	2.5
Extreme (40C)	2593	9	0.00347	2.5
Extreme (30C)	2593	14	0.00540	2.5
Extreme (10C)	2593	11	0.00424	2.5
Extreme (0C)	2593	0	0.00000	2.5
Extreme (-10C)	2593	1	0.00039	2.5
Extreme (-20C)	2593	22	0.00848	2.5
Extreme (-30C)	2593	8	0.00309	2.5

Band 41 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	2593	26	0.01003	2.5
3.8	2593	6	0.00231	2.5
4.18	2593	18	0.00694	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2593	1	0.00039	2.5
Extreme (50C)	2593	1	0.00039	2.5
Extreme (40C)	2593	10	0.00386	2.5
Extreme (30C)	2593	25	0.00964	2.5
Extreme (10C)	2593	3	0.00116	2.5
Extreme (0C)	2593	15	0.00578	2.5
Extreme (-10C)	2593	19	0.00733	2.5
Extreme (-20C)	2593	8	0.00309	2.5
Extreme (-30C)	2593	2	0.00077	2.5

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

10.13 LTE BAND 66

Band 66 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.42	1745	0	0.00000	2.5
3.8	1745	14	0.00802	2.5
4.18	1745	18	0.01032	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	20	0.01146	2.5
Extreme (50C)	1745	3	0.00172	2.5
Extreme (40C)	1745	18	0.01032	2.5
Extreme (30C)	1745	0	0.00000	2.5
Extreme (10C)	1745	21	0.01203	2.5
Extreme (0C)	1745	13	0.00745	2.5
Extreme (-10C)	1745	18	0.01032	2.5
Extreme (-20C)	1745	15	0.00860	2.5
Extreme (-30C)	1745	25	0.01433	2.5

Band 66 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.42	1745	0	0.00000	2.5
3.8	1745	27	0.01547	2.5
4.18	1745	19	0.01089	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	0.00401	2.5
Extreme (50C)	1745	16	0.00917	2.5
Extreme (40C)	1745	14	0.00802	2.5
Extreme (30C)	1745	20	0.01146	2.5
Extreme (10C)	1745	23	0.01318	2.5
Extreme (0C)	1745	4	0.00229	2.5
Extreme (-10C)	1745	14	0.00802	2.5
Extreme (-20C)	1745	20	0.01146	2.5
Extreme (-30C)	1745	8	0.00458	2.5

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

10.14 LTE BAND 71

Band 71 QPSK, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	683	26	0.03807	2.5
3.8	683	12	0.01757	2.5
4.18	683	16	0.02343	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	683	21	0.03075	2.5
Extreme (50C)	683	20	0.02928	2.5
Extreme (40C)	683	7	0.01025	2.5
Extreme (30C)	683	1	0.00146	2.5
Extreme (10C)	683	4	0.00586	2.5
Extreme (0C)	683	21	0.03075	2.5
Extreme (-10C)	683	22	0.03221	2.5
Extreme (-20C)	683	10	0.01464	2.5
Extreme (-30C)	683	11	0.01611	2.5

Band 71 16QAM, (20MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.42	683	14	0.02050	2.5
3.8	683	14	0.02050	2.5
4.18	683	2	0.00293	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	683	7	0.01025	2.5
Extreme (50C)	683	13	0.01903	2.5
Extreme (40C)	683	25	0.03660	2.5
Extreme (30C)	683	13	0.01903	2.5
Extreme (10C)	683	1	0.00146	2.5
Extreme (0C)	683	10	0.01464	2.5
Extreme (-10C)	683	16	0.02343	2.5
Extreme (-20C)	683	26	0.03807	2.5
Extreme (-30C)	683	17	0.02489	2.5

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

11. Peak-to-Average Ratio

11.1 Description of the PAR Measurement

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

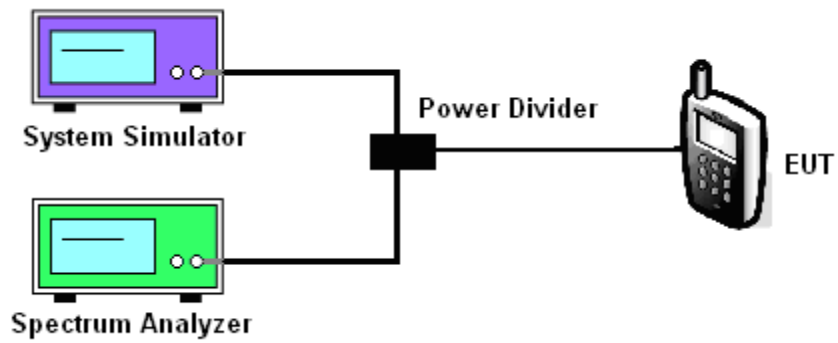
11.2 Measuring Instruments

See list of measuring instruments of this test report.

11.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. For LTE operating modes:
 - a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
 - b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.

11.4 Test Setup



MODES TESTED

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

Test data reference attachment.

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