

FCC CFR47 PART 22H, 24E, 27,90S CERTIFICATION TEST REPORT FCC ID: 2ANMU-G5

Product: Smart Phone
Trade Mark: OUKITEL
Model No.: G5
Family Model: G5 Pro, G5 E, G5 S, G5 Ultra, G5 TITAN, G5 Plus
Report No.: S25050603906006
Issue Date: Jun. 04, 2025

Prepared for

SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE,
GUANLAN, LONGHUA SHENZHEN, 518XXX China

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name : SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
Address..... : A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU
INDUSTRIAL ZONE, GUANLAN,LONGHUA SHENZHEN, 518XXX
China
Manufacturer's Name..... : SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD
Address..... : A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU
INDUSTRIAL ZONE, GUANLAN,LONGHUA SHENZHEN, 518XXX
China
Product name..... : Smart Phone
Model and/or type reference .. : G5
Trade Mark..... : OUKITEL
Family Model..... : G5 Pro, G5 E, G5 S, G5 Ultra, G5 TITAN, G5 Plus
Test Sample Number..... S250506039007
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..... May. 06, 2025 ~ Jun. 04, 2025

Date of Issue Jun. 04, 2025

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

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1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Designation:	Smart Phone
Trade Mark	OUKITEL
Model Name	G5
Family Model	G5 Pro, G5 E, G5 S, G5 Ultra, G5 TITAN, G5 Plus
Model Difference	All models are the same circuit and RF module, except for the color.
FCC ID:	2ANMU-G5
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2, 4, 5, 7, 12, 17, 19, 25, 26, 66 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 17 Uplink: 704MHz-716MHz, Downlink: 734MHz-746MHz; LTE FDD Band 19 Uplink: 830MHz-845MHz, Downlink: 875MHz-890MHz; 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: 2535MHz-2655MHz, LTE FDD Band 66 Uplink: 1710MHz-1780MHz, Downlink: 2110MHz-2200MHz;
Type of Modulation:	QPSK/16QAM/64QAM(Only Downlink)
Power Class	Class 3
SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test.
Antenna:	PIFA Antenna
Antenna gain:	Band 2: 0.16 dBi, Band 4: 0.22 dBi, Band 5: -2.26 dBi, Band 7: 0.35 dBi, Band 12: -2.47 dBi, Band 17: -2.46 dBi, Band 19: -2.26 dBi, Band 25: 0.15 dBi, Band 26: -2.26 dBi, Band 41: 0.33 dBi, Band 66: 0.23 dBi;
Adapter	Model: PS10UA050K2000UU Input: 100-240V~50/60Hz 0.35A Max Output: 5.0V---2.0A 10.0W
Battery	DC 3.87V, 6300mAh, 24.381Wh
Power supply	DC 3.87V from battery or DC 5V from adapter
Extreme Vol. Limits:	DC 3.29V to DC 4.45V (Nominal DC 3.87V) (Note 1)

HW Version	J575
FW Version	N/A
SW Version	V04
** Note1: The High Voltage DC 4.45V and Low Voltage 3.29V was declared by manufacturer, The EUT couldn't be operate normally with higher or lower voltage.	

1.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2ANMU-G5** 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% ($U = 2Uc(y)$)	2.5dB

1.5 SPECIAL ACCESSORIES

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

1.6 WORST-CASE CONFIGURATION AND MODE

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

The device has LTE Bands of: Band 2/4/5/7/12/17/19/25/26/41/66

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

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

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

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

2.2 EUT EXERCISE

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

2.3 CONFIGURATION OF EUT SYSTEM

Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	Smart Phone	G5	FCC ID: 2ANMU-G5	EUT

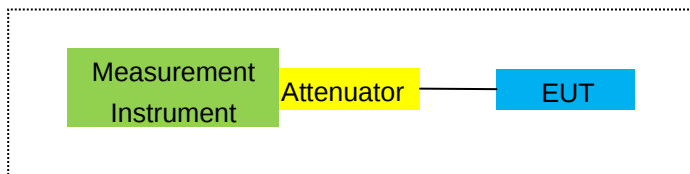
*Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.*

2.4 TEST SETUP

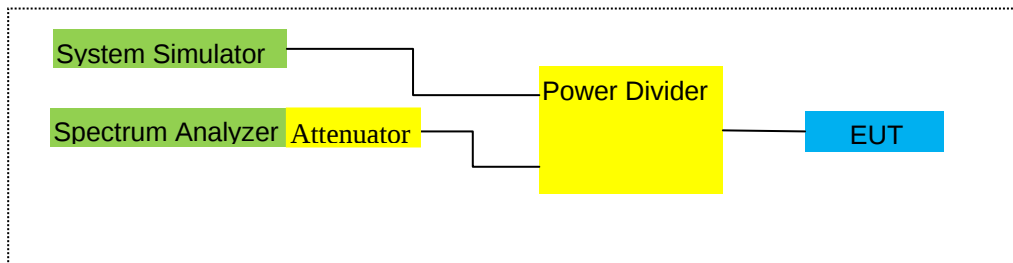
For Radiated Test Cases



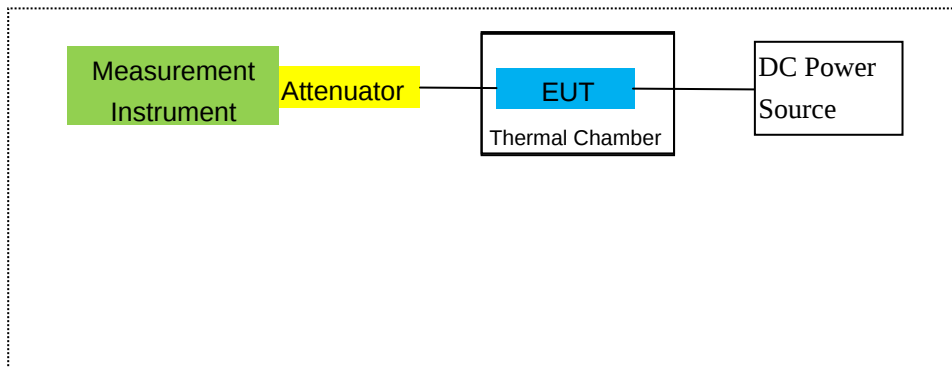
For Conducted Output Power



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	ESPI7	101318	2025.04.17	2026.04.16	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2025.04.17	2026.04.16	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
5	Horn Antenna	EM	EM-AH-10180	2011071402	2024.05.12	2027.05.11	3 year
6	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2024.05.12	2027.05.11	3 year
7	Amplifier	EM	EM-30180	060538	2025.04.17	2026.04.16	1 year
8	Loop Antenna	ARA	PLA-1030/B	1029	2025.04.17	2026.04.16	1 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	2022.06.17	2025.06.16	3 year
12	Test Cable	N/A	R-02	N/A	2022.06.17	2025.06.16	3 year
13	Test Cable	N/A	R-03	N/A	2022.06.17	2025.06.16	3 year
14	Test Receiver	R&S	ESCI	101160	2024.04.26	2025.04.25	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	6200264417	2025.04.17	2026.04.16	1 year
18	Passive Voltage Probe	R&S	ESH2-Z3	100196	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	Attenuator	MCE	24-10-34	BN9258	2025.04.17	2026.04.16	1 year
23	Spectrum Analyzer	agilent	e4440a	us44300399	2025.04.17	2026.04.16	1 year
24	test receiver	R&S	ESCI	a0304218	2025.04.17	2026.04.16	1 year
25	Communication Tester	R&S	CMU200	A0304247	2025.04.17	2026.04.16	1 year
26	Thermal Chamber	Ten Billion	TTC-B3C	TBN-960502	2025.04.17	2026.04.16	1 year

27	DC Power Source	N/A	PS-6005D	2017040292 3	2023.05.06	2026.05.05	3 year
28	MXG Vector Signal Generator	Agilent	N5182A	MY47070317	2025.04.17	2026.04.16	1 year
29	Communication Tester	R&S	CMW500	148500	2025.05.06	2026.05.05	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	MWRTest	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 2/4/5/7/12/17/19/25/26/41/66

RESULTS

PASS

Test data reference attachment.

6. BANDEDGE AND EMISSION MASK

RULE PART(S)

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

FCC: §22.359

LIMITS

FCC: §22.917, §24.238, §27.53

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

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

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

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

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

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

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

TEST PROCEDURE

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

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency

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

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

MODES TESTED

Band 2/4/5/7/12/17/19/25/26/41/66

RESULTS

Test data reference attachment.

7. OUT OF BAND EMISSIONS

RULE PART(S)

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

LIMITS

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

TEST PROCEDURE

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

For each out of band emissions measurement:

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

MODES TESTED

- ☐ Band 2/4/5/7/12/17/19/25/26/41/66
- ☐

7.1 MEASUREMENT METHOD

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

Test data reference attachment.

8. RADIATED MEASUREMENT

8.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

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

LIMITS:

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

24.232 (c) Mobile and portable stations are limited to 2 watts EIRP.

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 2/4/5/7/12/17/19/25/26/41/66

RESULTS

Pass

8.2 LTE BAND 2

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							Average		
							(mW)		
1.4MHz Band QPSK	1/#Mid	1850.7	-1.20	3.76	28.24	23.28	212.814	Horizontal	Pass
		1880	-0.64	3.91	28.22	23.67	232.809	Horizontal	Pass
		1909.3	-0.83	3.93	28.20	23.44	220.800	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-1.06	3.77	28.23	23.40	218.776	Horizontal	Pass
		1880	-0.74	3.91	28.24	23.59	228.560	Horizontal	Pass
		1908.5	-1.03	3.94	28.25	23.28	212.814	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-0.80	3.77	28.31	23.74	236.592	Horizontal	Pass
		1880	-0.47	3.91	28.22	23.84	242.103	Horizontal	Pass
		1907.5	-0.71	3.94	28.20	23.55	226.464	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-1.02	3.79	28.33	23.52	224.905	Horizontal	Pass
		1880	-0.58	3.95	28.22	23.69	233.884	Horizontal	Pass
		1905	-0.77	3.97	28.19	23.45	221.309	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-0.88	3.79	28.34	23.67	232.809	Horizontal	Pass
		1880	-0.62	3.95	28.22	23.65	231.739	Horizontal	Pass
		1902.5	-0.57	3.97	28.18	23.64	231.206	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-0.64	3.81	28.35	23.90	245.471	Horizontal	Pass
		1880	-0.41	3.96	28.22	23.85	242.661	Horizontal	Pass
		1900	-0.16	4.00	28.16	24.00	251.189	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-2.18	3.76	28.24	22.30	169.824	Vertical	Pass
		1880	-1.44	3.91	28.22	22.87	193.642	Vertical	Pass
		1909.3	-1.39	3.93	28.20	22.88	194.089	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-1.59	3.77	28.23	22.87	193.642	Vertical	Pass
		1880	-1.79	3.91	28.24	22.54	179.473	Vertical	Pass
		1908.5	-1.28	3.94	28.25	23.03	200.909	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-2.29	3.77	28.31	22.25	167.880	Vertical	Pass
		1880	-1.25	3.91	28.22	23.06	202.302	Vertical	Pass
		1907.5	-2.02	3.94	28.20	22.24	167.494	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1855	-1.53	3.79	28.33	23.01	199.986	Vertical	Pass
		1880	-1.61	3.95	28.22	22.66	184.502	Vertical	Pass
		1905	-1.55	3.97	28.19	22.67	184.927	Vertical	Pass
15.0MHz Band	1/#Mid	1857.5	-2.13	3.79	28.34	22.42	174.582	Vertical	Pass
		1880	-1.15	3.95	28.22	23.12	205.116	Vertical	Pass

QPSK		1902.5	-1.30	3.97	28.18	22.91	195.434	Vertical	Pass
20.0MHz	1/#Mid	1860	-1.93	3.81	28.35	22.61	182.390	Vertical	Pass
Band		1880	-1.82	3.96	28.22	22.44	175.388	Vertical	Pass
QPSK		1900	-1.34	4.00	28.16	22.82	191.426	Vertical	Pass

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							Average		
							(mW)		
1.4MHz Band 16 QAM	1/#Mid	1850.7	-1.53	3.76	28.24	22.95	197.242	Horizontal	Pass
		1880	-1.85	3.91	28.22	22.46	176.198	Horizontal	Pass
		1909.3	-1.40	3.93	28.20	22.87	193.642	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-0.89	3.77	28.23	23.57	227.510	Horizontal	Pass
		1880	-1.18	3.91	28.24	23.15	206.538	Horizontal	Pass
		1908.5	-0.87	3.94	28.25	23.44	220.800	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-1.55	3.77	28.31	22.99	199.067	Horizontal	Pass
		1880	-1.17	3.91	28.22	23.14	206.063	Horizontal	Pass
		1907.5	-1.36	3.94	28.20	22.90	194.984	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-1.05	3.79	28.33	23.49	223.357	Horizontal	Pass
		1880	-0.51	3.95	28.22	23.76	237.684	Horizontal	Pass
		1905	-0.50	3.97	28.19	23.72	235.505	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-0.92	3.79	28.34	23.63	230.675	Horizontal	Pass
		1880	-0.58	3.95	28.22	23.69	233.884	Horizontal	Pass
		1902.5	-0.44	3.97	28.18	23.77	238.232	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1860	-1.26	3.81	28.35	23.28	212.814	Horizontal	Pass
		1880	-1.64	3.96	28.22	22.62	182.810	Horizontal	Pass
		1900	-0.96	4.00	28.16	23.20	208.930	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1850.7	-3.20	3.76	28.24	21.28	134.276	Vertical	Pass
		1880	-2.28	3.91	28.22	22.03	159.588	Vertical	Pass
		1909.3	-2.79	3.93	28.20	21.48	140.605	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-2.99	3.77	28.23	21.47	140.281	Vertical	Pass
		1880	-2.62	3.91	28.24	21.71	148.252	Vertical	Pass
		1908.5	-2.50	3.94	28.25	21.81	151.705	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-2.50	3.77	28.31	22.04	159.956	Vertical	Pass
		1880	-2.23	3.91	28.22	22.08	161.436	Vertical	Pass
		1907.5	-3.00	3.94	28.20	21.26	133.660	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1855	-2.83	3.79	28.33	21.71	148.252	Vertical	Pass
		1880	-2.14	3.95	28.22	22.13	163.305	Vertical	Pass
		1905	-2.34	3.97	28.19	21.88	154.170	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1857.5	-3.03	3.79	28.34	21.52	141.906	Vertical	Pass
		1880	-2.88	3.95	28.22	21.39	137.721	Vertical	Pass
		1902.5	-2.81	3.97	28.18	21.40	138.038	Vertical	Pass
20.0MHz	1/#Mid	1860	-2.68	3.81	28.35	21.86	153.462	Vertical	Pass

Band 16 QAM	1880	-3.08	3.96	28.22	21.18	131.220	Vertical	Pass
	1900	-2.50	4.00	28.16	21.66	146.555	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

8.3 LTE BAND 4

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	1710.7	-1.62	3.12	27.58	22.84	192.309	Horizontal	Pass
		1732.5	-0.68	3.27	27.61	23.66	232.274	Horizontal	Pass
		1754.3	-0.62	3.29	27.63	23.72	235.505	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-1.67	3.13	27.61	22.81	190.985	Horizontal	Pass
		1732.5	-0.90	3.27	27.61	23.44	220.800	Horizontal	Pass
		1753.5	-0.59	3.30	27.62	23.73	236.048	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-1.65	3.13	27.63	22.85	192.752	Horizontal	Pass
		1732.5	-0.69	3.27	27.61	23.65	231.739	Horizontal	Pass
		1752.5	-0.37	3.30	27.60	23.93	247.172	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-1.32	3.15	27.64	23.17	207.491	Horizontal	Pass
		1732.5	-0.89	3.31	27.61	23.41	219.280	Horizontal	Pass
		1750	-0.74	3.33	27.59	23.52	224.905	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-1.24	3.15	27.65	23.26	211.836	Horizontal	Pass
		1732.5	-0.79	3.31	27.61	23.51	224.388	Horizontal	Pass
		1747.5	-0.75	3.33	27.57	23.49	223.357	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-1.11	3.17	27.66	23.38	217.771	Horizontal	Pass
		1732.5	-0.57	3.32	27.61	23.72	235.505	Horizontal	Pass
		1745	-0.65	3.36	27.56	23.55	226.464	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-1.70	3.12	27.58	22.76	188.799	Vertical	Pass
		1732.5	-1.60	3.27	27.61	22.74	187.932	Vertical	Pass
		1754.3	-1.52	3.29	27.63	22.82	191.426	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-2.08	3.13	27.61	22.40	173.780	Vertical	Pass
		1732.5	-1.13	3.27	27.61	23.21	209.411	Vertical	Pass
		1753.5	-1.91	3.30	27.62	22.41	174.181	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-2.08	3.13	27.63	22.42	174.582	Vertical	Pass
		1732.5	-1.91	3.27	27.61	22.43	174.985	Vertical	Pass
		1752.5	-1.57	3.30	27.60	22.73	187.499	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1715	-1.34	3.15	27.64	23.15	206.538	Vertical	Pass
		1732.5	-1.35	3.31	27.61	22.95	197.242	Vertical	Pass
		1750	-1.37	3.33	27.59	22.89	194.536	Vertical	Pass

15.0MHz	Band QPSK	1/#Mid	1717.5	-2.02	3.15	27.65	22.48	177.011	Vertical	Pass
			1732.5	-1.67	3.31	27.61	22.63	183.231	Vertical	Pass
			1747.5	-1.36	3.33	27.57	22.88	194.089	Vertical	Pass
20.0MHz	Band QPSK	1/#Mid	1720	-1.29	3.17	27.66	23.20	208.930	Vertical	Pass
			1732.5	-1.51	3.32	27.61	22.78	189.671	Vertical	Pass
			1745	-1.05	3.36	27.56	23.15	206.538	Vertical	Pass

Radiated Power (EIRP) for Band 4									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	1/#Mid	1710.7	-2.17	3.12	27.58	22.29	169.434	Horizontal	Pass
		1732.5	-1.30	3.27	27.61	23.04	201.372	Horizontal	Pass
		1754.3	-0.91	3.29	27.63	23.43	220.293	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-1.55	3.13	27.61	22.93	196.336	Horizontal	Pass
		1732.5	-0.93	3.27	27.61	23.41	219.280	Horizontal	Pass
		1753.5	-0.55	3.30	27.62	23.77	238.232	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-1.65	3.13	27.63	22.85	192.752	Horizontal	Pass
		1732.5	-1.24	3.27	27.61	23.10	204.174	Horizontal	Pass
		1752.5	-1.10	3.30	27.60	23.20	208.930	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-2.00	3.15	27.64	22.49	177.419	Horizontal	Pass
		1732.5	-0.81	3.31	27.61	23.49	223.357	Horizontal	Pass
		1750	-0.35	3.33	27.59	23.91	246.037	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-1.92	3.15	27.65	22.58	181.134	Horizontal	Pass
		1732.5	-0.79	3.31	27.61	23.51	224.388	Horizontal	Pass
		1747.5	-0.49	3.33	27.57	23.75	237.137	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-1.89	3.17	27.66	22.60	181.970	Horizontal	Pass
		1732.5	-1.40	3.32	27.61	22.89	194.536	Horizontal	Pass
		1745	-0.93	3.36	27.56	23.27	212.324	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-2.77	3.12	27.58	21.69	147.571	Vertical	Pass
		1732.5	-2.23	3.27	27.61	22.11	162.555	Vertical	Pass
		1754.3	-2.65	3.29	27.63	21.69	147.571	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-3.11	3.13	27.61	21.37	137.088	Vertical	Pass
		1732.5	-2.36	3.27	27.61	21.98	157.761	Vertical	Pass
		1753.5	-2.14	3.30	27.62	22.18	165.196	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-2.80	3.13	27.63	21.70	147.911	Vertical	Pass
		1732.5	-2.49	3.27	27.61	21.85	153.109	Vertical	Pass
		1752.5	-2.39	3.30	27.60	21.91	155.239	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-3.15	3.15	27.64	21.34	136.144	Vertical	Pass
		1732.5	-2.20	3.31	27.61	22.10	162.181	Vertical	Pass
		1750	-2.21	3.33	27.59	22.05	160.325	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-2.84	3.15	27.65	21.66	146.555	Vertical	Pass
		1732.5	-2.76	3.31	27.61	21.54	142.561	Vertical	Pass
		1747.5	-2.90	3.33	27.57	21.34	136.144	Vertical	Pass

20.0MHz		1720	-2.27	3.17	27.66	22.22	166.725	Vertical	Pass
Band 16	1/#Mid	1732.5	-2.93	3.32	27.61	21.36	136.773	Vertical	Pass
QAM		1745	-2.67	3.36	27.56	21.53	142.233	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

8.4 LTE BAND 5

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	3/#Mid	824.7	4.67	2.01	19.68	2.15	20.19	104.472	Horizontal	Pass
		836.5	5.07	2.01	19.77	2.15	20.68	116.950	Horizontal	Pass
		848.3	4.93	2.02	19.82	2.15	20.58	114.288	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	825.5	4.82	2.01	19.70	2.15	20.36	108.643	Horizontal	Pass
		836.5	5.11	2.01	19.77	2.15	20.72	118.032	Horizontal	Pass
		847.5	4.79	2.02	19.81	2.15	20.43	110.408	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	826.5	5.13	2.01	19.71	2.15	20.68	116.950	Horizontal	Pass
		836.5	5.32	2.01	19.77	2.15	20.93	123.880	Horizontal	Pass
		846.5	5.23	2.02	19.79	2.15	20.85	121.619	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	829	5.04	2.01	19.73	2.15	20.61	115.080	Horizontal	Pass
		836.5	5.15	2.01	19.77	2.15	20.76	119.124	Horizontal	Pass
		844	5.02	2.02	19.78	2.15	20.63	115.611	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	824.7	5.21	2.01	19.68	2.15	20.73	118.304	Vertical	Pass
		836.5	4.72	2.01	19.77	2.15	20.33	107.895	Vertical	Pass
		848.3	5.01	2.02	19.82	2.15	20.66	116.413	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	825.5	5.01	2.01	19.70	2.15	20.55	113.501	Vertical	Pass
		836.5	4.58	2.01	19.77	2.15	20.19	104.472	Vertical	Pass
		847.5	4.34	2.02	19.81	2.15	19.98	99.541	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	826.5	5.17	2.01	19.71	2.15	20.72	118.032	Vertical	Pass
		836.5	5.07	2.01	19.77	2.15	20.68	116.950	Vertical	Pass
		846.5	4.12	2.02	19.79	2.15	19.74	94.189	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	829	4.79	2.01	19.73	2.15	20.36	108.643	Vertical	Pass
		836.5	4.48	2.01	19.77	2.15	20.09	102.094	Vertical	Pass
		844	4.42	2.02	19.78	2.15	20.03	100.693	Vertical	Pass

Radiated Power (ERP) for Band 5										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	3/#Mid	824.7	4.69	2.01	19.68	2.15	20.21	104.954	Horizontal	Pass
		836.5	4.96	2.01	19.77	2.15	20.57	114.025	Horizontal	Pass
		848.3	4.71	2.02	19.82	2.15	20.36	108.643	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	4.91	2.01	19.70	2.15	20.45	110.917	Horizontal	Pass
		836.5	5.00	2.01	19.77	2.15	20.61	115.080	Horizontal	Pass
		847.5	4.83	2.02	19.81	2.15	20.47	111.429	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	4.39	2.01	19.71	2.15	19.94	98.628	Horizontal	Pass
		836.5	4.52	2.01	19.77	2.15	20.13	103.039	Horizontal	Pass
		846.5	4.47	2.02	19.79	2.15	20.09	102.094	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	4.36	2.01	19.73	2.15	19.93	98.401	Horizontal	Pass
		836.5	5.07	2.01	19.77	2.15	20.68	116.950	Horizontal	Pass
		844	5.10	2.02	19.78	2.15	20.71	117.761	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	3.91	2.01	19.68	2.15	19.43	87.700	Vertical	Pass
		836.5	3.36	2.01	19.77	2.15	18.97	78.886	Vertical	Pass
		848.3	4.65	2.02	19.82	2.15	20.30	107.152	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	4.47	2.01	19.70	2.15	20.01	100.231	Vertical	Pass
		836.5	5.08	2.01	19.77	2.15	20.69	117.220	Vertical	Pass
		847.5	4.24	2.02	19.81	2.15	19.88	97.275	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	3.51	2.01	19.71	2.15	19.06	80.538	Vertical	Pass
		836.5	3.55	2.01	19.77	2.15	19.16	82.414	Vertical	Pass
		846.5	3.64	2.02	19.79	2.15	19.26	84.333	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	3.45	2.01	19.73	2.15	19.02	79.799	Vertical	Pass
		836.5	3.84	2.01	19.77	2.15	19.45	88.105	Vertical	Pass
		844	4.27	2.02	19.78	2.15	19.88	97.275	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.5 LTE BAND 7

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	2502.5	0.66	4.54	27.75	23.87	243.781	Horizontal	Pass
		2535	1.90	4.69	27.72	24.93	311.172	Horizontal	Pass
		2567.5	1.99	4.71	27.71	24.99	315.500	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2505	0.85	4.55	27.76	24.06	254.683	Horizontal	Pass
		2535	1.74	4.69	27.72	24.77	299.916	Horizontal	Pass
		2565	1.99	4.72	27.70	24.97	314.051	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	0.87	4.55	27.77	24.09	256.448	Horizontal	Pass
		2535	1.76	4.69	27.72	24.79	301.301	Horizontal	Pass
		2562.5	1.94	4.72	27.69	24.91	309.742	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2510	1.00	4.57	27.78	24.21	263.633	Horizontal	Pass
		2535	1.61	4.73	27.72	24.60	288.403	Horizontal	Pass
		2560	1.79	4.75	27.68	24.72	296.483	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2502.5	-0.05	4.54	27.75	23.16	207.014	Vertical	Pass
		2535	-0.40	4.69	27.72	22.63	183.231	Vertical	Pass
		2567.5	-0.37	4.71	27.71	22.63	183.231	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2505	-0.20	4.55	27.76	23.01	199.986	Vertical	Pass
		2535	-0.63	4.69	27.72	22.40	173.780	Vertical	Pass
		2565	0.19	4.72	27.70	23.17	207.491	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-0.59	4.55	27.77	22.63	183.231	Vertical	Pass
		2535	-0.04	4.69	27.72	22.99	199.067	Vertical	Pass
		2562.5	-0.27	4.72	27.69	22.70	186.209	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2510	-0.25	4.57	27.78	22.96	197.697	Vertical	Pass
		2535	-0.40	4.73	27.72	22.59	181.552	Vertical	Pass
		2560	-0.57	4.75	27.68	22.36	172.187	Vertical	Pass

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	2502.5	0.29	4.54	27.75	23.50	223.872	Horizontal	Pass
		2535	1.35	4.69	27.72	24.38	274.157	Horizontal	Pass
		2567.5	1.37	4.71	27.71	24.37	273.527	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	0.93	4.55	27.76	24.14	259.418	Horizontal	Pass
		2535	1.86	4.69	27.72	24.89	308.319	Horizontal	Pass
		2565	2.07	4.72	27.70	25.05	319.890	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	1.12	4.55	27.77	24.34	271.644	Horizontal	Pass
		2535	1.91	4.69	27.72	24.94	311.889	Horizontal	Pass
		2562.5	1.95	4.72	27.69	24.92	310.456	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	0.32	4.57	27.78	23.53	225.424	Horizontal	Pass
		2535	1.72	4.73	27.72	24.71	295.801	Horizontal	Pass
		2560	1.46	4.75	27.68	24.39	274.789	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2502.5	-1.28	4.54	27.75	21.93	155.955	Vertical	Pass
		2535	-1.01	4.69	27.72	22.02	159.221	Vertical	Pass
		2567.5	0.28	4.71	27.71	23.28	212.814	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	2505	-1.22	4.55	27.76	21.99	158.125	Vertical	Pass
		2535	-1.07	4.69	27.72	21.96	157.036	Vertical	Pass
		2565	-0.30	4.72	27.70	22.68	185.353	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	2507.5	-1.81	4.55	27.77	21.41	138.357	Vertical	Pass
		2535	-1.12	4.69	27.72	21.91	155.239	Vertical	Pass
		2562.5	-0.38	4.72	27.69	22.59	181.552	Vertical	Pass
20.0MHz Band 16 QAM	1/#Mid	2510	-0.08	4.57	27.78	23.13	205.589	Vertical	Pass
		2535	-1.40	4.73	27.72	21.59	144.212	Vertical	Pass
		2560	-0.42	4.75	27.68	22.51	178.238	Vertical	Pass

Note:

SG Level= Signal generator output

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

8.6 LTE BAND 12

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	1/#Mid	699.7	4.89	1.91	19.21	2.15	20.04	100.925	Horizontal	Pass
		707.5	4.94	1.91	19.26	2.15	20.14	103.276	Horizontal	Pass
		715.3	4.63	1.93	19.34	2.15	19.89	97.499	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	700.5	5.07	1.91	19.21	2.15	20.22	105.196	Horizontal	Pass
		707.5	4.75	1.91	19.26	2.15	19.95	98.855	Horizontal	Pass
		714.5	4.44	1.93	19.34	2.15	19.70	93.325	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	701.5	5.29	1.91	19.23	2.15	20.46	111.173	Horizontal	Pass
		707.5	5.02	1.91	19.26	2.15	20.22	105.196	Horizontal	Pass
		713.5	4.75	1.92	19.33	2.15	20.01	100.231	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	704	4.94	1.91	19.25	2.15	20.13	103.039	Horizontal	Pass
		707.5	4.85	1.91	19.26	2.15	20.05	101.158	Horizontal	Pass
		711	4.53	1.92	19.32	2.15	19.78	95.060	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	699.7	3.4	1.91	19.21	2.15	18.55	71.614	Vertical	Pass
		707.5	3.65	1.91	19.26	2.15	18.85	76.736	Vertical	Pass
		715.3	4.17	1.93	19.34	2.15	19.43	87.700	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	700.5	3.94	1.91	19.21	2.15	19.09	81.096	Vertical	Pass
		707.5	3.64	1.91	19.26	2.15	18.84	76.560	Vertical	Pass
		714.5	3.49	1.93	19.34	2.15	18.75	74.989	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	701.5	3.85	1.91	19.23	2.15	19.02	79.799	Vertical	Pass
		707.5	4.27	1.91	19.26	2.15	19.47	88.512	Vertical	Pass
		713.5	3.61	1.92	19.33	2.15	18.87	77.090	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	704	3.57	1.91	19.25	2.15	18.76	75.162	Vertical	Pass
		707.5	3.39	1.91	19.26	2.15	18.59	72.277	Vertical	Pass
		711	3.6	1.92	19.32	2.15	18.85	76.736	Vertical	Pass

Radiated Power (ERP) for Band 12										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Correction	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)			(dB)	Average	Average		
							(dBm)	(mW)		
1.4MHz Band 16 QAM	1/#Mid	699.7	4.39	1.91	19.21	2.15	19.54	89.950	Horizontal	699.7
		707.5	4.11	1.91	19.26	2.15	19.31	85.310	Horizontal	707.5
		715.3	3.83	1.93	19.34	2.15	19.09	81.096	Horizontal	715.3
3.0MHz Band 16 QAM	1/#Mid	700.5	4.99	1.91	19.21	2.15	20.14	103.276	Horizontal	700.5
		707.5	4.66	1.91	19.26	2.15	19.86	96.828	Horizontal	707.5
		714.5	4.63	1.93	19.34	2.15	19.89	97.499	Horizontal	714.5
5.0MHz Band 16 QAM	1/#Mid	701.5	4.55	1.91	19.23	2.15	19.72	93.756	Horizontal	701.5
		707.5	4.18	1.91	19.26	2.15	19.38	86.696	Horizontal	707.5
		713.5	4.09	1.92	19.33	2.15	19.35	86.099	Horizontal	713.5
10.0MHz Band 16 QAM	1/#Mid	704	4.88	1.91	19.25	2.15	20.07	101.625	Horizontal	704
		707.5	4.72	1.91	19.26	2.15	19.92	98.175	Horizontal	707.5
		711	4.36	1.92	19.32	2.15	19.61	91.411	Horizontal	711
1.4MHz Band 16 QAM	1/#Mid	699.7	3.86	1.91	19.21	2.15	19.01	79.616	Vertical	699.7
		707.5	3.91	1.91	19.26	2.15	19.11	81.470	Vertical	707.5
		715.3	3.84	1.93	19.34	2.15	19.10	81.283	Vertical	715.3
3.0MHz Band 16 QAM	1/#Mid	700.5	4.33	1.91	19.21	2.15	19.48	88.716	Vertical	700.5
		707.5	3.49	1.91	19.26	2.15	18.69	73.961	Vertical	707.5
		714.5	3.8	1.93	19.34	2.15	19.06	80.538	Vertical	714.5
5.0MHz Band 16 QAM	1/#Mid	701.5	4.14	1.91	19.23	2.15	19.31	85.310	Vertical	701.5
		707.5	3.65	1.91	19.26	2.15	18.85	76.736	Vertical	707.5
		713.5	3.71	1.92	19.33	2.15	18.97	78.886	Vertical	713.5
10.0MHz Band 16 QAM	1/#Mid	704	4.27	1.91	19.25	2.15	19.46	88.308	Vertical	704
		707.5	3.47	1.91	19.26	2.15	18.67	73.621	Vertical	707.5
		711	3.42	1.92	19.32	2.15	18.67	73.621	Vertical	711

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 17

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	706.5	4.90	1.91	19.23	2.15	20.07	101.625	Vertical	Pass
		710	4.89	1.91	19.26	2.15	20.09	102.094	Vertical	Pass
		713.5	4.85	1.92	19.33	2.15	20.11	102.565	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	709	4.69	1.91	19.25	2.15	19.88	97.275	Vertical	Pass
		710	4.72	1.91	19.26	2.15	19.92	98.175	Vertical	Pass
		711	4.63	1.92	19.32	2.15	19.88	97.275	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	706.5	4.25	1.91	19.23	2.15	19.42	87.498	Horizontal	Pass
		710	3.55	1.91	19.26	2.15	18.75	74.989	Horizontal	Pass
		713.5	3.95	1.92	19.33	2.15	19.21	83.368	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	709	3.74	1.91	19.25	2.15	18.93	78.163	Horizontal	Pass
		710	4.09	1.91	19.26	2.15	19.29	84.918	Horizontal	Pass
		711	3.47	1.92	19.32	2.15	18.72	74.473	Horizontal	Pass

Radiated Power (ERP) for Band 17										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	706.5	4.27	1.91	19.23	2.15	19.44	87.902	Vertical	706.5
		710	4.07	1.91	19.26	2.15	19.27	84.528	Vertical	710
		713.5	4.05	1.92	19.33	2.15	19.31	85.310	Vertical	713.5
10.0MHz Band 16 QAM	1/#Mid	709	4.54	1.91	19.25	2.15	19.73	93.972	Vertical	709
		710	4.63	1.91	19.26	2.15	19.83	96.161	Vertical	710
		711	4.50	1.92	19.32	2.15	19.75	94.406	Vertical	711
5.0MHz Band 16 QAM	1/#Mid	706.5	3.53	1.91	19.23	2.15	18.70	74.131	Horizontal	706.5
		710	4.30	1.91	19.26	2.15	19.50	89.125	Horizontal	710
		713.5	4.06	1.92	19.33	2.15	19.32	85.507	Horizontal	713.5
10.0MHz Band 16 QAM	1/#Mid	709	3.60	1.91	19.25	2.15	18.79	75.683	Horizontal	709
		710	3.62	1.91	19.26	2.15	18.82	76.208	Horizontal	710
		711	4.18	1.92	19.32	2.15	19.43	87.700	Horizontal	711

Note:

ERP=EIRP-2.15

SG Level= Signal generator output

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

8.8 LTE BAND 19

Radiated Power (ERP) for Band 19										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	832.5	4.76	2.02	19.78	2.15	20.37	108.893	Horizontal	Pass
		837.5	5.34	2.02	19.85	2.15	21.02	126.474	Horizontal	Pass
		842.5	5.19	2.03	19.99	2.15	21.00	125.893	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	835	4.92	2.02	19.84	2.15	20.59	114.551	Horizontal	Pass
		837.5	5.08	2.02	19.85	2.15	20.76	119.124	Horizontal	Pass
		840	5.04	2.03	19.96	2.15	20.82	120.781	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	837.5	5.08	2.02	19.85	2.15	20.76	119.124	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	832.5	3.73	2.02	19.78	2.15	19.34	85.901	Vertical	Pass
		837.5	3.58	2.02	19.85	2.15	19.26	84.333	Vertical	Pass
		842.5	3.80	2.03	19.99	2.15	19.61	91.411	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	835	3.25	2.02	19.84	2.15	18.92	77.983	Vertical	Pass
		837.5	3.82	2.02	19.85	2.15	19.50	89.125	Vertical	Pass
		840	2.97	2.03	19.96	2.15	18.75	74.989	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	837.5	3.24	2.02	19.85	2.15	18.92	77.983	Horizontal	Pass

Radiated Power (ERP) for Band 19										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Factor (dB)	Correction (dB)	Max. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band 16 QAM	1/#Mid	832.5	4.96	2.02	19.78	2.15	20.57	114.025	Horizontal	Pass
		837.5	4.57	2.02	19.85	2.15	20.25	105.925	Horizontal	Pass
		842.5	4.47	2.03	19.99	2.15	20.28	106.660	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	835	4.94	2.02	19.84	2.15	20.61	115.080	Horizontal	Pass
		837.5	5.06	2.02	19.85	2.15	20.74	118.577	Horizontal	Pass
		840	5.10	2.03	19.96	2.15	20.88	122.462	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	837.5	5.16	2.02	19.85	2.15	20.84	121.339	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	832.5	3.17	2.02	19.78			75.509	Vertical	Pass
		837.5	3.83	2.02	19.85	2.15	19.51	89.331	Vertical	Pass
		842.5	3.48	2.03	19.99	2.15	19.29	84.918	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	835	3.45	2.02	19.84	2.15	19.12	81.658	Vertical	Pass
		837.5	3.74	2.02	19.85	2.15	19.42	87.498	Vertical	Pass
		840	3.51	2.03	19.96	2.15	19.29	84.918	Vertical	Pass
15.0MHz Band 16 QAM	1/#Mid	837.5	4.03	2.02	19.85	2.15	19.71	93.541	Horizontal	Pass

Note:

ERP=EIRP-2.15

SG Level= Signal generator output

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

8.9 LTE BAND 25

Radiated Power (EIRP) for Band 25										
Mode	RB/RB SIZE	Frequency	Result						Conclusion	
			SG	Cable Loss	Antenna	Max. EIRP	Max. EIRP	Polarization		
			Level							Factor
			(dBm)							(dB)
								ERP		
1.4MHz	1/#Mid	1850.7	-1.06	3.12	27.58	23.40	218.776	Horizontal	Pass	
Band		1882.5	-0.55	3.27	27.61	23.79	239.332	Horizontal	Pass	
QPSK		1914.3	-0.94	3.29	27.63	23.40	218.776	Horizontal	Pass	
3.0MHz	1/#Mid	1851.5	-0.95	3.13	27.61	23.53	225.424	Horizontal	Pass	
Band		1882.5	-0.66	3.27	27.61	23.68	233.346	Horizontal	Pass	
QPSK		1753.5	-1.16	3.30	27.62	23.16	207.014	Horizontal	Pass	
5.0MHz	1/#Mid	1852.5	-0.74	3.13	27.63	23.76	237.684	Horizontal	Pass	
Band		1882.5	-0.47	3.27	27.61	23.87	243.781	Horizontal	Pass	
QPSK		1912.5	-0.87	3.30	27.60	23.43	220.293	Horizontal	Pass	
10.0MHz	1/#Mid	1855	-0.70	3.15	27.64	23.79	239.332	Horizontal	Pass	
Band		1882.5	-0.68	3.31	27.61	23.62	230.144	Horizontal	Pass	
QPSK		1910	-1.00	3.33	27.59	23.26	211.836	Horizontal	Pass	
15.0MHz	1/#Mid	1857.5	-0.60	3.15	27.65	23.90	245.471	Horizontal	Pass	
Band		1882.5	-0.66	3.31	27.61	23.64	231.206	Horizontal	Pass	
QPSK		1907.5	-0.86	3.33	27.57	23.38	217.771	Horizontal	Pass	
20.0MHz	1/#Mid	1860	-0.70	3.17	27.66	23.79	239.332	Horizontal	Pass	
Band		1882.5	-0.46	3.32	27.61	23.83	241.546	Horizontal	Pass	
QPSK		1905	-0.45	3.36	27.56	23.75	237.137	Horizontal	Pass	
1.4MHz	1/#Mid	1850.7	-2.06	3.12	27.58	22.40	173.780	Vertical	Pass	
Band		1882.5	-2.03	3.27	27.61	22.31	170.216	Vertical	Pass	
QPSK		1914.3	-1.25	3.29	27.63	23.09	203.704	Vertical	Pass	
3.0MHz	1/#Mid	1851.5	-1.82	3.13	27.61	22.66	184.502	Vertical	Pass	
Band		1882.5	-1.98	3.27	27.61	22.36	172.187	Vertical	Pass	
QPSK		1753.5	-1.87	3.30	27.62	22.45	175.792	Vertical	Pass	
5.0MHz	1/#Mid	1852.5	-1.64	3.13	27.63	22.86	193.197	Vertical	Pass	
Band		1882.5	-2.17	3.27	27.61	22.17	164.816	Vertical	Pass	
QPSK		1912.5	-1.66	3.30	27.60	22.64	183.654	Vertical	Pass	
10.0MHz	1/#Mid	1855	-1.51	3.15	27.64	22.98	198.609	Vertical	Pass	
Band		1882.5	-1.80	3.31	27.61	22.50	177.828	Vertical	Pass	

QPSK		1910	-1.14	3.33	27.59	23.12	205.116	Vertical	Pass
15.0MHz	1/#Mid	1857.5	-1.78	3.15	27.65	22.72	187.068	Vertical	Pass
Band		1882.5	-1.31	3.31	27.61	22.99	199.067	Vertical	Pass
QPSK		1907.5	-1.27	3.33	27.57	22.97	198.153	Vertical	Pass
20.0MHz	1/#Mid	1860	-2.23	3.17	27.66	22.26	168.267	Vertical	Pass
Band		1882.5	-1.89	3.32	27.61	22.40	173.780	Vertical	Pass
QPSK		1905	-1.63	3.36	27.56	22.57	180.717	Vertical	Pass

Radiated Power (EIRP) for Band 25										
Mode	RB/RB SIZE	Frequency	Result						Conclusion	
			SG	Cable Loss	Antenna	Max. EIRP	Max. EIRP	Polarization		
			Level							Factor
			(dBm)							(dB)
						(dBm)	(mW)	Of Max. ERP		
1.4MHz Band 16 QAM	1/##Mid	1850.7	-1.33	3.12	27.58	23.13	205.589	Horizontal	Pass	
		1882.5	-1.72	3.27	27.61	22.62	182.810	Horizontal	Pass	
		1914.3	-1.63	3.29	27.63	22.71	186.638	Horizontal	Pass	
3.0MHz Band 16 QAM	1/##Mid	1851.5	-0.81	3.13	27.61	23.67	232.809	Horizontal	Pass	
		1882.5	-1.23	3.27	27.61	23.11	204.644	Horizontal	Pass	
		1753.5	-1.08	3.30	27.62	23.24	210.863	Horizontal	Pass	
5.0MHz Band 16 QAM	1/##Mid	1852.5	-1.46	3.13	27.63	23.04	201.372	Horizontal	Pass	
		1882.5	-1.22	3.27	27.61	23.12	205.116	Horizontal	Pass	
		1912.5	-1.47	3.30	27.60	22.83	191.867	Horizontal	Pass	
10.0MHz Band 16 QAM	1/##Mid	1855	-1.35	3.15	27.64	23.14	206.063	Horizontal	Pass	
		1882.5	-0.58	3.31	27.61	23.72	235.505	Horizontal	Pass	
		1910	-0.93	3.33	27.59	23.33	215.278	Horizontal	Pass	
15.0MHz Band 16 QAM	1/##Mid	1857.5	-1.18	3.15	27.65	23.32	214.783	Horizontal	Pass	
		1882.5	-0.52	3.31	27.61	23.78	238.781	Horizontal	Pass	
		1907.5	-0.74	3.33	27.57	23.50	223.872	Horizontal	Pass	
20.0MHz Band 16 QAM	1/##Mid	1860	-0.63	3.17	27.66	23.86	243.220	Horizontal	Pass	
		1882.5	-1.57	3.32	27.61	22.72	187.068	Horizontal	Pass	
		1905	-1.15	3.36	27.56	23.05	201.837	Horizontal	Pass	
1.4MHz Band 16 QAM	1/##Mid	1850.7	-2.17	3.12	27.58	22.29	169.434	Vertical	Pass	
		1882.5	-1.93	3.27	27.61	22.41	174.181	Vertical	Pass	
		1914.3	-1.49	3.29	27.63	22.85	192.752	Vertical	Pass	
3.0MHz Band 16 QAM	1/##Mid	1851.5	-1.59	3.13	27.61	22.89	194.536	Vertical	Pass	
		1882.5	-1.56	3.27	27.61	22.78	189.671	Vertical	Pass	
		1753.5	-1.83	3.30	27.62	22.49	177.419	Vertical	Pass	
5.0MHz Band 16 QAM	1/##Mid	1852.5	-1.93	3.13	27.63	22.57	180.717	Vertical	Pass	
		1882.5	-1.50	3.27	27.61	22.84	192.309	Vertical	Pass	
		1912.5	-1.77	3.30	27.60	22.53	179.061	Vertical	Pass	
10.0MHz Band 16 QAM	1/##Mid	1855	-1.35	3.15	27.64	23.14	206.063	Vertical	Pass	
		1882.5	-1.62	3.31	27.61	22.68	185.353	Vertical	Pass	
		1910	-1.70	3.33	27.59	22.56	180.302	Vertical	Pass	
15.0MHz Band 16 QAM	1/##Mid	1857.5	-1.48	3.15	27.65	23.02	200.447	Vertical	Pass	
		1882.5	-1.49	3.31	27.61	22.81	190.985	Vertical	Pass	
		1907.5	-1.13	3.33	27.57	23.11	204.644	Vertical	Pass	

20.0MHz	1/#Mid	1860	-2.20	3.17	27.66	22.29	169.434	Vertical	Pass
Band 16		1882.5	-1.72	3.32	27.61	22.57	180.717	Vertical	Pass
QAM		1905	-1.20	3.36	27.56	23.00	199.526	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

8.10 LTE BAND 26 A

Radiated Power (ERP) for Band 26(814-824)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz BW QPSK	6/0	814.7	5.60	1.91	19.21	2.15	20.75	118.850	Horizontal	Pass
		819	5.36	1.91	19.26	2.15	20.56	113.763	Horizontal	Pass
		823.3	5.12	1.93	19.34	2.15	20.38	109.144	Horizontal	Pass
3.0MHz BW QPSK	15/0	815.5	5.51	1.91	19.21	2.15	20.66	116.413	Horizontal	Pass
		819	5.36	1.91	19.26	2.15	20.56	113.763	Horizontal	Pass
		822.5	5.13	1.93	19.34	2.15	20.39	109.396	Horizontal	Pass
5.0MHz BW QPSK	25/0	816.5	5.86	1.91	19.23	2.15	21.03	126.765	Horizontal	Pass
		819	5.65	1.91	19.26	2.15	20.85	121.619	Horizontal	Pass
		821.5	5.48	1.92	19.33	2.15	20.74	118.577	Horizontal	Pass
10.0MHz BW QPSK	50/0	819	5.39	1.93	19.25	2.15	20.56	113.763	Horizontal	Pass
1.4MHz BW QPSK	6/0		0.00							
			0.00							
		814.7	4.38	1.91	19.21	2.15	19.53	89.743	Vertical	Pass
3.0MHz BW QPSK	15/0	819	3.98	1.91	19.26	2.15	19.18	82.794	Vertical	Pass
		823.3	4.05	1.93	19.34	2.15	19.31	85.310	Vertical	Pass
		815.5	3.87	1.91	19.21	2.15	19.02	79.799	Vertical	Pass
5.0MHz BW QPSK	25/0	819	4.27	1.91	19.26	2.15	19.47	88.512	Vertical	Pass
		822.5	3.68	1.93	19.34	2.15	18.94	78.343	Vertical	Pass
		816.5	3.89	1.91	19.23	2.15	19.06	80.538	Vertical	Pass
10.0MHz BW QPSK	50/0	819	3.75	1.91	19.26	2.15	18.95	78.524	Vertical	Pass

Radiated Power (ERP) for Band 26(814-824)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz BW 16 QAM	6/0	814.7	5.62	1.91	19.21	2.15	20.77	119.399	Horizontal	Pass
		819	5.52	1.91	19.26	2.15	20.72	118.032	Horizontal	Pass
		823.3	5.05	1.93	19.34	2.15	20.31	107.399	Horizontal	Pass
3.0MHz BW 16 QAM	15/0	815.5	5.77	1.91	19.21	2.15	20.92	123.595	Horizontal	Pass
		819	5.6	1.91	19.26	2.15	20.80	120.226	Horizontal	Pass
		822.5	5.11	1.93	19.34	2.15	20.37	108.893	Horizontal	Pass
5.0MHz BW 16 QAM	25/0	816.5	5.11	1.91	19.23	2.15	20.28	106.660	Horizontal	Pass
		819	5.01	1.91	19.26	2.15	20.21	104.954	Horizontal	Pass
		821.5	4.82	1.92	19.33	2.15	20.08	101.859	Horizontal	Pass
10.0MHz BW 16 QAM	50/0	819	3.72	1.93	19.25	2.15	20.67	116.681	Horizontal	Pass
1.4MHz BW 16 QAM	6/0									
		814.7	3.66	1.91	19.21	2.15	18.81	76.033	Vertical	Pass
3.0MHz BW 16 QAM	15/0	819	3.96	1.91	19.26	2.15	19.16	82.414	Vertical	Pass
		823.3	4.05	1.93	19.34	2.15	19.31	85.310	Vertical	Pass
		815.5	4	1.91	19.21	2.15	19.15	82.224	Vertical	Pass
5.0MHz BW 16 QAM	25/0	819	4.25	1.91	19.26	2.15	19.45	88.105	Vertical	Pass
		822.5	3.82	1.93	19.34	2.15	19.08	80.910	Vertical	Pass
		816.5	3.8	1.91	19.23	2.15	18.97	78.886	Vertical	Pass
10.0MHz BW 16 QAM	50/0	819	4.5	1.91	19.26	2.15	19.70	93.325	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.11 LTE BAND 26 B

Radiated Power (ERP) for Band 26(824-849)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	6/0	824.7	4.69	2.02	19.72	2.15	20.24	105.682	Horizontal	Pass
		836.5	5.23	2.02	19.83	2.15	20.89	122.744	Horizontal	Pass
		848.3	4.65	2.03	19.95	2.15	20.42	110.154	Horizontal	Pass
3.0MHz Band QPSK	15/0	825.5	4.79	2.02	19.84	2.15	20.46	111.173	Horizontal	Pass
		836.5	4.91	2.02	19.94	2.15	20.68	116.950	Horizontal	Pass
		847.5	4.67	2.03	19.98	2.15	20.47	111.429	Horizontal	Pass
5.0MHz Band QPSK	25/0	826.5	5.06	2.02	19.75	2.15	20.64	115.878	Horizontal	Pass
		836.5	5.26	2.02	19.83	2.15	20.92	123.595	Horizontal	Pass
		846.5	5.10	2.03	19.92	2.15	20.84	121.339	Horizontal	Pass
10.0MHz Band QPSK	50/0	829	4.75	2.02	19.84	2.15	20.42	110.154	Horizontal	Pass
		836.5	4.99	2.02	19.90	2.15	20.72	118.032	Horizontal	Pass
		844	4.99	2.03	19.96	2.15	20.77	119.399	Horizontal	Pass
15.0MHz Band QPSK	75/0	831.5	5.32	2.02	19.33	2.15	20.48	111.686	Horizontal	Pass
		836.5	5.54	2.02	19.37	2.15	20.74	118.577	Horizontal	Pass
		841.5	5.67	2.03	19.52	2.15	21.01	126.183	Horizontal	Pass
1.4MHz Band QPSK	6/0	824.7	3.87	2.02	19.76	2.15	19.46	88.308	Vertical	Pass
		836.5	3.45	2.02	19.78	2.15	19.06	80.538	Vertical	Pass
		848.3	3.12	2.03	19.94	2.15	18.88	77.268	Vertical	Pass
3.0MHz Band QPSK	15/0	825.5	3.30	2.02	19.83	2.15	18.96	78.705	Vertical	Pass
		836.5	3.47	2.02	19.96	2.15	19.26	84.333	Vertical	Pass
		847.5	3.95	2.03	19.87	2.15	19.64	92.045	Vertical	Pass
5.0MHz Band QPSK	25/0	826.5	3.87	2.02	19.86	2.15	19.56	90.365	Vertical	Pass
		836.5	3.15	2.02	19.81	2.15	18.79	75.683	Vertical	Pass
		846.5	3.47	2.03	19.83	2.15	19.12	81.658	Vertical	Pass
10.0MHz Band QPSK	50/0	829	3.70	2.02	19.75	2.15	19.28	84.723	Vertical	Pass
		836.5	3.35	2.02	19.85	2.15	19.03	79.983	Vertical	Pass
		844	3.30	2.03	19.80	2.15	18.92	77.983	Vertical	Pass
15.0MHz Band QPSK	75/0	831.5	4.24	2.02	19.31	2.15	19.38	86.696	Vertical	Pass
		836.5	4.13	2.02	19.33	2.15	19.29	84.918	Vertical	Pass
		841.5	3.57	2.03	19.38	2.15	18.77	75.336	Vertical	Pass

Radiated Power (ERP) for Band 26(824-849)										
Mode	RB/RB SIZE	Frequency	Result							Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Correction (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	6/0	824.7	4.68	2.02	19.72	2.15	20.23	105.439	Horizontal	Pass
		836.5	4.51	2.02	19.83	2.15	20.17	103.992	Horizontal	Pass
		848.3	4.61	2.03	19.95	2.15	20.38	109.144	Horizontal	Pass
3.0MHz Band 16 QAM	15/0	825.5	4.78	2.02	19.84	2.15	20.45	110.917	Horizontal	Pass
		836.5	4.91	2.02	19.94	2.15	20.68	116.950	Horizontal	Pass
		847.5	4.84	2.03	19.98	2.15	20.64	115.878	Horizontal	Pass
5.0MHz Band 16 QAM	25/0	826.5	4.27	2.02	19.75	2.15	19.85	96.605	Horizontal	Pass
		836.5	4.36	2.02	19.83	2.15	20.02	100.462	Horizontal	Pass
		846.5	4.37	2.03	19.92	2.15	20.11	102.565	Horizontal	Pass
10.0MHz Band 16 QAM	50/0	829	4.76	2.02	19.84	2.15	20.43	110.408	Horizontal	Pass
		836.5	5.05	2.02	19.90	2.15	20.78	119.674	Horizontal	Pass
		844	4.83	2.03	19.96	2.15	20.61	115.080	Horizontal	Pass
15.0MHz Band QPSK	75/0	831.5	5.40	2.02	19.33	2.15	20.56	113.763	Horizontal	Pass
		836.5	5.51	2.02	19.37	2.15	20.71	117.761	Horizontal	Pass
		841.5	4.81	2.03	19.52	2.15	20.15	103.514	Horizontal	Pass
1.4MHz Band 16 QAM	6/0	824.7	4.04	2.02	19.76	2.15	19.63	91.833	Vertical	Pass
		836.5	3.38	2.02	19.78	2.15	18.99	79.250	Vertical	Pass
		848.3	3.04	2.03	19.94	2.15	18.80	75.858	Vertical	Pass
3.0MHz Band 16 QAM	15/0	825.5	3.14	2.02	19.83	2.15	18.80	75.858	Vertical	Pass
		836.5	3.11	2.02	19.96	2.15	18.90	77.625	Vertical	Pass
		847.5	3.81	2.03	19.87	2.15	19.50	89.125	Vertical	Pass
5.0MHz Band 16 QAM	25/0	826.5	3.49	2.02	19.86	2.15	19.18	82.794	Vertical	Pass
		836.5	3.46	2.02	19.81	2.15	19.10	81.283	Vertical	Pass
		846.5	3.73	2.03	19.83	2.15	19.38	86.696	Vertical	Pass
10.0MHz Band 16 QAM	50/0	829	3.50	2.02	19.75	2.15	19.08	80.910	Vertical	Pass
		836.5	4.03	2.02	19.85	2.15	19.71	93.541	Vertical	Pass
		844	3.54	2.03	19.80	2.15	19.16	82.414	Vertical	Pass

15.0MHz		831.5	3.60	2.02	19.31	2.15	18.74	74.817	Vertical	Pass
Band	75/0	836.5	3.66	2.02	19.33	2.15	18.82	76.208	Vertical	Pass
QPSK		841.5	4.23	2.03	19.38	2.15	19.43	87.700	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

ERP(dBm)=EIRP-2.15

8.12 LTE BAND 41

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)			Average	Average		
						(dBm)	(mW)		
5.0MHz Band QPSK	1/#Mid	2537.5	1.45	4.54	27.75	24.66	292.415	Horizontal	Pass
		2595	1.28	4.69	27.72	24.31	269.774	Horizontal	Pass
		2652.5	0.12	4.71	27.71	23.12	205.116	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2540	1.62	4.55	27.76	24.83	304.089	Horizontal	Pass
		2595	2.16	4.69	27.72	25.19	330.370	Horizontal	Pass
		2650	0.32	4.72	27.70	23.30	213.796	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2542.5	1.39	4.55	27.77	24.61	289.068	Horizontal	Pass
		2595	1.90	4.69	27.72	24.93	311.172	Horizontal	Pass
		2647.5	0.10	4.72	27.69	23.07	202.768	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2545	0.52	4.57	27.78	23.73	236.048	Horizontal	Pass
		2595	1.43	4.73	27.72	24.42	276.694	Horizontal	Pass
		2645	0.22	4.75	27.68	23.15	206.538	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2537.5	-0.77	4.54	27.75	22.44	175.388	Vertical	Pass
		2595	-0.54	4.69	27.72	22.49	177.419	Vertical	Pass
		2652.5	-0.40	4.71	27.71	22.60	181.970	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2540	-0.24	4.55	27.76	22.97	198.153	Vertical	Pass
		2595	-0.47	4.69	27.72	22.56	180.302	Vertical	Pass
		2650	0.08	4.72	27.70	23.06	202.302	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2542.5	-0.34	4.55	27.77	22.88	194.089	Vertical	Pass
		2595	-0.47	4.69	27.72	22.56	180.302	Vertical	Pass
		2647.5	-0.20	4.72	27.69	22.77	189.234	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2545	-0.79	4.57	27.78	22.42	174.582	Vertical	Pass
		2595	-0.15	4.73	27.72	22.84	192.309	Vertical	Pass
		2645	0.10	4.75	27.68	23.03	200.909	Vertical	Pass

Radiated Power (EIRP) for Band 41									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP	Max. EIRP	Polarization Of Max. ERP	
			(dBm)			Average	Average		
						(dBm)	(mW)		
5.0MHz Band 16 QAM	1/#Mid	2537.5	0.72	4.54	27.75	23.93	247.172	Horizontal	2537.5
		2595	-0.07	4.69	27.72	22.96	197.697	Horizontal	2595
		2652.5	-1.21	4.71	27.71	21.79	151.008	Horizontal	2652.5
10.0MHz Band 16 QAM	1/#Mid	2540	0.58	4.55	27.76	23.79	239.332	Horizontal	2540
		2595	0.95	4.69	27.72	23.98	250.035	Horizontal	2595
		2650	-0.22	4.72	27.70	22.76	188.799	Horizontal	2650
15.0MHz Band 16 QAM	1/#Mid	2542.5	0.41	4.55	27.77	23.63	230.675	Horizontal	2542.5
		2595	1.04	4.69	27.72	24.07	255.270	Horizontal	2595
		2647.5	-0.34	4.72	27.69	22.63	183.231	Horizontal	2647.5
20.0MHz Band 16 QAM	1/#Mid	2545	-0.72	4.57	27.78	22.49	177.419	Horizontal	2545
		2595	0.06	4.73	27.72	23.05	201.837	Horizontal	2595
		2645	-0.93	4.75	27.68	22.00	158.489	Horizontal	2645
5.0MHz Band 16 QAM	1/#Mid	2537.5	-2.27	4.54	27.75	20.94	124.165	Vertical	2537.5
		2595	-2.13	4.69	27.72	20.90	123.027	Vertical	2595
		2652.5	-2.06	4.71	27.71	20.94	124.165	Vertical	2652.5
10.0MHz Band 16 QAM	1/#Mid	2540	-2.80	4.55	27.76	20.41	109.901	Vertical	2540
		2595	-2.33	4.69	27.72	20.70	117.490	Vertical	2595
		2650	-1.79	4.72	27.70	21.19	131.522	Vertical	2650
15.0MHz Band 16 QAM	1/#Mid	2542.5	-1.96	4.55	27.77	21.26	133.660	Vertical	2542.5
		2595	-1.78	4.69	27.72	21.25	133.352	Vertical	2595
		2647.5	-2.34	4.72	27.69	20.63	115.611	Vertical	2647.5
20.0MHz Band 16 QAM	1/#Mid	2545	-1.91	4.57	27.78	21.30	134.896	Vertical	2545
		2595	-1.69	4.73	27.72	21.30	134.896	Vertical	2595
		2645	-2.37	4.75	27.68	20.56	113.763	Vertical	2645

Note:

SG Level= Signal generator output

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

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

8.13 LTE BAND 66

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							Average		
							(mW)		
1.4MHz Band QPSK	1/#Mid	1710.7	-1.70	3.76	28.24	22.78	189.671	Horizontal	Pass
		1745	-0.76	3.91	28.22	23.55	226.464	Horizontal	Pass
		1779.3	-0.74	3.93	28.2	23.53	225.424	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-1.57	3.77	28.23	22.89	194.536	Horizontal	Pass
		1745	-0.76	3.91	28.24	23.57	227.510	Horizontal	Pass
		1778.5	-0.93	3.94	28.25	23.38	217.771	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-1.48	3.77	28.31	23.06	202.302	Horizontal	Pass
		1745	-0.49	3.91	28.22	23.82	240.991	Horizontal	Pass
		1777.5	-0.56	3.94	28.2	23.70	234.423	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-1.41	3.79	28.33	23.13	205.589	Horizontal	Pass
		1745	-0.80	3.95	28.22	23.47	222.331	Horizontal	Pass
		1775	-0.58	3.97	28.19	23.64	231.206	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-1.43	3.79	28.34	23.12	205.116	Horizontal	Pass
		1745	-0.77	3.95	28.22	23.50	223.872	Horizontal	Pass
		1772.5	-0.57	3.97	28.18	23.64	231.206	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-1.15	3.81	28.35	23.39	218.273	Horizontal	Pass
		1745	-0.71	3.96	28.22	23.55	226.464	Horizontal	Pass
		1770	-0.24	4	28.16	23.92	246.604	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-1.60	3.76	28.24	22.88	194.089	Vertical	Pass
		1745	-2.04	3.91	28.22	22.27	168.655	Vertical	Pass
		1779.3	-1.47	3.93	28.2	22.80	190.546	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-1.55	3.77	28.23	22.91	195.434	Vertical	Pass
		1745	-1.18	3.91	28.24	23.15	206.538	Vertical	Pass
		1778.5	-1.51	3.94	28.25	22.80	190.546	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-1.71	3.77	28.31	22.83	191.867	Vertical	Pass
		1745	-1.80	3.91	28.22	22.51	178.238	Vertical	Pass
		1777.5	-1.41	3.94	28.2	22.85	192.752	Vertical	Pass

10.0MHz	Band QPSK	1/#Mid	1715	-1.71	3.79	28.34	22.84	192.309	Vertical	Pass
			1745	-1.72	3.95	28.22	22.55	179.887	Vertical	Pass
			1775	-0.98	3.97	28.18	23.23	210.378	Vertical	Pass
15.0MHz	Band QPSK	1/#Mid	1717.5	-1.65	3.81	28.35	22.89	194.536	Vertical	Pass
			1745	-1.26	3.96	28.22	23.00	199.526	Vertical	Pass
			1772.5	-1.47	4	28.16	22.69	185.780	Vertical	Pass
20.0MHz	Band QPSK	1/#Mid	1720	-1.81	3.79	28.34	22.74	187.932	Vertical	Pass
			1745	-1.89	3.95	28.22	22.38	172.982	Vertical	Pass
			1770	-1.41	3.97	28.18	22.80	190.546	Vertical	Pass

Radiated Power (EIRP) for Band 66									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP	Polarization Of Max. ERP	
							Average		
							(mW)		
1.4MHz Band 16 QAM	1/#Mid	1710.7	-2.11	3.76	28.24	22.37	172.584	Horizontal	Pass
		1745	-1.17	3.91	28.22	23.14	206.063	Horizontal	Pass
		1779.3	-1.40	3.93	28.2	22.87	193.642	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-1.45	3.77	28.23	23.01	199.986	Horizontal	Pass
		1745	-0.77	3.91	28.24	23.56	226.986	Horizontal	Pass
		1778.5	-0.89	3.94	28.25	23.42	219.786	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-2.14	3.77	28.31	22.40	173.780	Horizontal	Pass
		1745	-1.15	3.91	28.22	23.16	207.014	Horizontal	Pass
		1777.5	-1.31	3.94	28.2	22.95	197.242	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-2.12	3.79	28.33	22.42	174.582	Horizontal	Pass
		1745	-0.42	3.95	28.22	23.85	242.661	Horizontal	Pass
		1775	-0.44	3.97	28.19	23.78	238.781	Horizontal	Pass
15.0MHz Band 16 QAM	1/#Mid	1717.5	-1.50	3.79	28.34	23.05	201.837	Horizontal	Pass
		1745	-0.34	3.95	28.22	23.93	247.172	Horizontal	Pass
		1772.5	-0.55	3.97	28.18	23.66	232.274	Horizontal	Pass
20.0MHz Band 16 QAM	1/#Mid	1720	-1.85	3.81	28.35	22.69	185.780	Horizontal	Pass
		1745	-0.94	3.96	28.22	23.32	214.783	Horizontal	Pass
		1770	-0.82	4	28.16	23.34	215.774	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-1.59	3.76	28.24	22.89	194.536	Vertical	Pass
		1745	-1.61	3.91	28.22	22.70	186.209	Vertical	Pass
		1779.3	-2.08	3.93	28.2	22.19	165.577	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-1.79	3.77	28.23	22.67	184.927	Vertical	Pass
		1745	-1.24	3.91	28.24	23.09	203.704	Vertical	Pass
		1778.5	-2.96	3.94	28.25	21.35	136.458	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-2.00	3.77	28.31	22.54	179.473	Vertical	Pass
		1745	-2.60	3.91	28.22	21.71	148.252	Vertical	Pass
		1777.5	-2.50	3.94	28.2	21.76	149.968	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	1715	-2.53	3.79	28.34	22.02	159.221	Vertical	Pass
		1745	-1.20	3.95	28.22	23.07	202.768	Vertical	Pass
		1775	-2.60	3.97	28.18	21.61	144.877	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-2.24	3.81	28.35	22.30	169.824	Vertical	Pass

Band 16		1745	-1.43	3.96	28.22	22.83	191.867	Vertical	Pass
QAM		1772.5	-1.84	4	28.16	22.32	170.608	Vertical	Pass
20.0MHz	1/#Mid	1720	-2.59	3.79	28.34	21.96	157.036	Vertical	Pass
Band 16		1745	-2.72	3.95	28.22	21.55	142.889	Vertical	Pass
QAM		1770	-2.09	3.97	28.18	22.12	162.930	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

9. SPURIOUS RADIATION EMISSION

RULE PART(S)

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

LIMIT

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

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

§27.53 (h) For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10}(P)$ 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 2/4/5/7/12/17/19/25/26/41/66

RESULTS

PASS

9.1 LTE BAND 2

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

Test Results for Low Channel 1850.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-50.52	4.04	33.51	-21.05	-13	-8.05	Horizontal
3701.4	-53.02	4.04	33.51	-23.55	-13	-10.55	Vertical
5552.1	-47.16	5.24	35.84	-16.56	-13	-3.56	Vertical
5552.1	-49.81	5.24	35.84	-19.21	-13	-6.21	Horizontal
196.5	-36.68	1.43	16.02	-22.09	-13	-9.09	Vertical
242.3	-44.29	1.30	17.99	-27.60	-13	-14.60	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-47.03	4.04	33.56	-17.51	-13	-4.51	Horizontal
3760.0	-48.22	4.04	33.56	-18.70	-13	-5.70	Vertical
5640.0	-44.02	5.24	35.91	-13.35	-13	-0.35	Vertical
5640.0	-53.88	5.24	35.91	-23.21	-13	-10.21	Horizontal
181.7	-41.40	1.62	16.97	-26.05	-13	-13.05	Vertical
372.2	-38.66	1.74	15.98	-24.43	-13	-11.43	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-53.53	4.04	34.00	-23.57	-13	-10.57	Horizontal
3818.6	-47.09	4.04	34.00	-17.13	-13	-4.13	Vertical
5727.9	-47.27	5.24	36.04	-16.47	-13	-3.47	Vertical
5727.9	-53.03	5.24	36.04	-22.23	-13	-9.23	Horizontal
192.8	-42.54	1.42	17.29	-26.67	-13	-13.67	Vertical
242.1	-43.16	1.50	17.90	-26.75	-13	-13.75	Horizontal

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

Test Results for Low Channel 1860MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3720.0	-44.22	4.07	33.54	-14.75	-13	-1.75	Horizontal
3720.0	-53.00	4.07	33.54	-23.53	-13	-10.53	Vertical
5580.0	-47.98	5.28	35.86	-17.40	-13	-4.40	Vertical
5580.0	-53.10	5.28	35.86	-22.52	-13	-9.52	Horizontal
206.3	-38.08	1.58	16.89	-22.76	-13	-9.76	Vertical
323.5	-44.71	1.76	17.26	-29.21	-13	-16.21	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-45.43	4.04	33.56	-15.91	-13	-2.91	Horizontal
3760.0	-53.03	4.04	33.56	-23.51	-13	-10.51	Vertical
5640.0	-52.63	5.24	35.91	-21.96	-13	-8.96	Vertical
5640.0	-51.30	5.24	35.91	-20.63	-13	-7.63	Horizontal
206.5	-36.65	1.46	16.27	-21.84	-13	-8.84	Vertical
240.5	-34.16	1.59	15.15	-20.60	-13	-7.60	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-51.54	4.04	34.00	-21.58	-13	-8.58	Horizontal
3800.0	-45.18	4.04	34.00	-15.22	-13	-2.22	Vertical
5700.0	-53.78	5.24	36.04	-22.98	-13	-9.98	Vertical
5700.0	-49.72	5.24	36.04	-18.92	-13	-5.92	Horizontal
205.5	-43.26	1.36	17.39	-27.22	-13	-14.22	Vertical
306.8	-44.56	1.66	15.39	-30.83	-13	-17.83	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	-48.77	4.02	29.80	-22.99	-13	-9.99	Horizontal
3421.4	-45.50	4.02	29.80	-19.72	-13	-6.72	Vertical
5132.1	-49.22	5.24	35.84	-18.62	-13	-5.62	Vertical
5132.1	-52.88	5.24	35.84	-22.28	-13	-9.28	Horizontal
197.9	-42.88	1.68	16.04	-28.52	-13	-15.52	Vertical
276.1	-43.05	1.78	17.74	-27.09	-13	-14.09	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-48.35	4.03	30.00	-22.38	-13	-9.38	Horizontal
3465.0	-51.76	4.03	30.00	-25.79	-13	-12.79	Vertical
5197.5	-45.10	5.25	35.86	-14.49	-13	-1.49	Vertical
5197.5	-51.26	5.25	35.86	-20.65	-13	-7.65	Horizontal
195.1	-34.54	1.72	17.69	-18.57	-13	-5.57	Vertical
394.2	-42.87	1.62	16.02	-28.46	-13	-15.46	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-53.92	4.05	30.01	-27.96	-13	-14.96	Horizontal
3508.6	-45.09	4.05	30.01	-19.13	-13	-6.13	Vertical
5262.9	-44.91	5.26	35.86	-14.31	-13	-1.31	Vertical
5262.9	-50.54	5.26	35.86	-19.94	-13	-6.94	Horizontal
205.0	-40.98	1.80	16.69	-26.09	-13	-13.09	Vertical
431.0	-34.52	1.75	16.66	-19.62	-13	-6.62	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440.0	-47.42	4.02	29.80	-21.64	-13	-8.64	Horizontal
3440.0	-47.18	4.02	29.80	-21.40	-13	-8.40	Vertical
5160.0	-53.95	5.24	35.84	-23.35	-13	-10.35	Vertical
5160.0	-50.59	5.24	35.84	-19.99	-13	-6.99	Horizontal
194.5	-39.75	1.57	17.26	-24.06	-13	-11.06	Vertical
289.4	-38.54	1.78	16.35	-23.97	-13	-10.97	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-52.93	4.03	30.00	-26.96	-13	-13.96	Horizontal
3465.0	-49.46	4.03	30.00	-23.49	-13	-10.49	Vertical
5197.5	-47.89	5.25	35.86	-17.28	-13	-4.28	Vertical
5197.5	-49.16	5.25	35.86	-18.55	-13	-5.55	Horizontal
202.9	-44.18	1.44	17.95	-27.67	-13	-14.67	Vertical
253.1	-44.38	1.65	16.09	-29.94	-13	-16.94	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-50.37	2.91	27.68	-25.60	-13	-12.60	Horizontal
3490.0	-48.40	2.91	27.68	-23.63	-13	-10.63	Vertical
5235.0	-44.59	5.26	35.86	-13.99	-13	-0.99	Vertical
5235.0	-51.48	5.26	35.86	-20.88	-13	-7.88	Horizontal
212.6	-39.49	1.61	16.85	-24.25	-13	-11.25	Vertical
294.4	-36.81	1.61	15.19	-23.23	-13	-10.23	Horizontal

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

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

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

9.3 LTE BAND 5

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

Test Results for Low Channel 824.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-47.75	2.78	27.50	-23.03	-13	-10.03	Horizontal
1649.4	-53.09	2.78	27.50	-28.37	-13	-15.37	Vertical
2474.1	-48.45	2.90	27.80	-23.55	-13	-10.55	Vertical
2474.1	-50.13	2.90	27.80	-25.23	-13	-12.23	Horizontal
188.5	-37.49	1.76	17.59	-21.66	-13	-8.66	Vertical
433.0	-41.17	1.63	15.87	-26.93	-13	-13.93	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-46.03	2.80	27.48	-21.35	-13	-8.35	Horizontal
1673.0	-45.01	2.80	27.48	-20.33	-13	-7.33	Vertical
2509.5	-48.53	2.91	27.70	-23.74	-13	-10.74	Vertical
2509.5	-51.91	2.91	27.70	-27.12	-13	-14.12	Horizontal
190.8	-42.61	1.61	15.68	-28.54	-13	-15.54	Vertical
397.4	-40.24	1.59	17.52	-24.32	-13	-11.32	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-49.88	2.82	27.43	-25.27	-13	-12.27	Horizontal
1696.6	-47.13	2.82	27.43	-22.52	-13	-9.52	Vertical
2544.9	-48.07	2.92	27.74	-23.25	-13	-10.25	Vertical
2544.9	-50.71	2.92	27.74	-25.89	-13	-12.89	Horizontal
195.2	-39.42	1.69	16.67	-24.43	-13	-11.43	Vertical
308.8	-39.29	1.70	17.18	-23.81	-13	-10.81	Horizontal

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

Test Results for Low Channel 829MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1658.0	-47.91	2.78	27.50	-23.19	-13	-10.19	Horizontal
1658.0	-51.13	2.78	27.50	-26.41	-13	-13.41	Vertical
2487.0	-50.74	2.90	27.80	-25.84	-13	-12.84	Vertical
2487.0	-53.28	2.90	27.80	-28.38	-13	-15.38	Horizontal
196.7	-38.89	1.71	15.57	-25.03	-13	-12.03	Vertical
351.3	-40.20	1.34	16.40	-25.14	-13	-12.14	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-51.37	2.80	27.48	-26.69	-13	-13.69	Horizontal
1673.0	-53.33	2.80	27.48	-28.65	-13	-15.65	Vertical
2509.5	-46.19	2.91	27.70	-21.40	-13	-8.40	Vertical
2509.5	-53.16	2.91	27.70	-28.37	-13	-15.37	Horizontal
199.3	-35.92	1.44	17.04	-20.32	-13	-7.32	Vertical
417.8	-36.77	1.76	17.62	-20.91	-13	-7.91	Horizontal
Test Results for High Channel 844MHz							
1688.0	-47.25	2.82	27.43	-22.64	-13	-9.64	Horizontal
1688.0	-45.46	2.82	27.43	-20.85	-13	-7.85	Vertical
2532.0	-44.14	2.92	27.74	-19.32	-13	-6.32	Vertical
2532.0	-49.15	2.92	27.74	-24.33	-13	-11.33	Horizontal
204.4	-35.36	1.74	17.70	-19.40	-13	-6.40	Vertical
415.7	-38.25	1.41	17.46	-22.19	-13	-9.19	Horizontal

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

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

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

9.4 LTE BAND 7

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

Test Results for Low Channel 2502.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5005.0	-62.97	5.23	35.81	-32.39	-25	-7.39	Horizontal
5005.0	-60.43	5.23	35.81	-29.85	-25	-4.85	Vertical
7507.5	-61.85	5.67	36.85	-30.67	-25	-5.67	Vertical
7507.5	-63.08	5.67	36.85	-31.90	-25	-6.90	Horizontal
209.9	-44.90	1.73	17.97	-28.66	-25	-3.66	Vertical
368.5	-50.53	1.38	15.11	-36.80	-25	-11.80	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-61.16	5.23	35.82	-30.57	-25	-5.57	Horizontal
5070.0	-61.91	5.23	35.82	-31.32	-25	-6.32	Vertical
7605.0	-64.80	5.67	36.85	-33.62	-25	-8.62	Vertical
7605.0	-62.07	5.67	36.85	-30.89	-25	-5.89	Horizontal
188.7	-50.16	1.77	16.17	-35.75	-25	-10.75	Vertical
339.7	-45.19	1.63	15.21	-31.61	-25	-6.61	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-64.11	5.24	35.83	-33.52	-25	-8.52	Horizontal
5135.0	-62.76	5.24	35.83	-32.17	-25	-7.17	Vertical
7702.5	-63.56	5.68	36.87	-32.37	-25	-7.37	Vertical
7702.5	-62.07	5.68	36.87	-30.88	-25	-5.88	Horizontal
211.5	-47.91	1.58	17.56	-31.93	-25	-6.93	Vertical
314.8	-52.62	1.45	16.58	-37.49	-25	-12.49	Horizontal

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

Test Results for Low Channel 2510MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5020.0	-61.01	5.23	35.82	-30.42	-25	-5.42	Horizontal
5020.0	-62.22	5.23	35.82	-31.63	-25	-6.63	Vertical
7530.0	-59.45	5.67	36.86	-28.26	-25	-3.26	Vertical
7530.0	-60.17	5.67	36.86	-28.98	-25	-3.98	Horizontal
203.2	-48.27	1.63	15.76	-34.14	-25	-9.14	Vertical
428.1	-46.71	1.71	15.44	-32.98	-25	-7.98	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-60.38	5.23	35.82	-29.79	-25	-4.79	Horizontal
5070.0	-59.53	5.23	35.82	-28.94	-25	-3.94	Vertical
7605.0	-60.80	5.67	36.85	-29.62	-25	-4.62	Vertical
7605.0	-60.80	5.67	36.85	-29.62	-25	-4.62	Horizontal
178.6	-54.81	1.79	16.84	-39.75	-25	-14.75	Vertical
323.4	-48.35	1.71	17.64	-32.42	-25	-7.42	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-61.13	5.24	35.83	-30.54	-25	-5.54	Horizontal
5120.0	-62.28	5.24	35.83	-31.69	-25	-6.69	Vertical
7680.0	-63.39	5.70	36.88	-32.21	-25	-7.21	Vertical
7680.0	-62.47	5.70	36.88	-31.29	-25	-6.29	Horizontal
187.1	-44.51	1.79	16.84	-29.45	-25	-4.45	Vertical
312.5	-47.04	1.71	17.64	-31.11	-25	-6.11	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	-44.95	2.60	27.20	-20.35	-13	-7.35	Horizontal
1399.4	-51.33	2.60	27.20	-26.73	-13	-13.73	Vertical
2099.1	-46.02	2.85	27.54	-21.33	-13	-8.33	Vertical
2099.1	-51.56	2.85	27.54	-26.87	-13	-13.87	Horizontal
207.6	-44.50	1.49	17.78	-28.21	-13	-15.21	Vertical
419.4	-35.99	1.36	17.33	-20.02	-13	-7.02	Horizontal
Test Results For Mid Channel 707.5MHz							
1415.0	-53.31	2.61	27.28	-28.64	-13	-15.64	Horizontal
1415.0	-48.28	2.61	27.28	-23.61	-13	-10.61	Vertical
2122.5	-49.24	2.87	27.59	-24.52	-13	-11.52	Vertical
2122.5	-51.97	2.87	27.59	-27.25	-13	-14.25	Horizontal
193.2	-44.15	1.73	15.74	-30.14	-13	-17.14	Vertical
296.9	-34.06	1.62	15.79	-19.89	-13	-6.89	Horizontal
Test Results for High Channel 715.3MHz							
1430.6	-50.39	2.63	27.28	-25.74	-13	-12.74	Horizontal
1430.6	-48.16	2.63	27.28	-23.51	-13	-10.51	Vertical
2145.9	-50.61	2.88	27.60	-25.89	-13	-12.89	Vertical
2145.9	-53.85	2.88	27.60	-29.13	-13	-16.13	Horizontal
189.0	-34.05	1.61	18.00	-17.66	-13	-4.66	Vertical
289.5	-42.59	1.45	15.49	-28.56	-13	-15.56	Horizontal

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

Test Results for Low Channel 704MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1408.0	-46.28	2.61	27.26	-21.63	-13	-8.63	Horizontal
1408.0	-47.99	2.61	27.26	-23.34	-13	-10.34	Vertical
2112.0	-48.45	2.87	27.58	-23.74	-13	-10.74	Vertical
2112.0	-51.68	2.87	27.58	-26.97	-13	-13.97	Horizontal
176.6	-43.35	1.31	16.97	-27.69	-13	-14.69	Vertical
441.1	-38.59	1.65	16.70	-23.54	-13	-10.54	Horizontal
Test Results for Mid Channel 707.5MHz							
1415.0	-45.13	2.61	27.28	-20.46	-13	-7.46	Horizontal
1415.0	-52.96	2.61	27.28	-28.29	-13	-15.29	Vertical
2122.5	-50.57	2.87	27.59	-25.85	-13	-12.85	Vertical
2122.5	-51.75	2.87	27.59	-27.03	-13	-14.03	Horizontal
182.4	-42.57	1.72	17.99	-26.30	-13	-13.30	Vertical
335.3	-35.13	1.73	17.94	-18.92	-13	-5.92	Horizontal
Test Results for High Channel 711MHz							
1422.0	-52.32	2.62	27.28	-27.66	-13	-14.66	Horizontal
1422.0	-45.21	2.62	27.28	-20.55	-13	-7.55	Vertical
2133.0	-49.20	2.87	27.60	-24.47	-13	-11.47	Vertical
2133.0	-50.33	2.87	27.60	-25.60	-13	-12.60	Horizontal
184.0	-42.96	1.58	15.93	-28.61	-13	-15.61	Vertical
453.2	-43.45	1.36	15.59	-29.22	-13	-16.22	Horizontal

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

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

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

9.6 LTE BAND 17

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

Test Results for Low Channel 706.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1413.0	-50.19	2.61	27.28	-25.52	-13	-12.52	Horizontal
1413.0	-49.77	2.61	27.28	-25.10	-13	-12.10	Vertical
2119.5	-45.19	2.87	27.59	-20.47	-13	-7.47	Vertical
2119.5	-50.55	2.87	27.59	-25.83	-13	-12.83	Horizontal
203.6	-39.94	1.71	16.15	-25.50	-13	-12.50	Vertical
464.0	-42.77	1.41	17.32	-26.86	-13	-13.86	Horizontal
Test Results For Mid Channel 710MHz							
1420.0	-44.08	2.62	27.30	-19.40	-13	-6.40	Horizontal
1420.0	-50.90	2.62	27.30	-26.22	-13	-13.22	Vertical
2130.0	-45.33	2.87	27.62	-20.58	-13	-7.58	Vertical
2130.0	-52.47	2.87	27.62	-27.72	-13	-14.72	Horizontal
204.3	-36.57	1.42	15.25	-22.75	-13	-9.75	Vertical
404.1	-38.72	1.36	17.19	-22.89	-13	-9.89	Horizontal
Test Results for High Channel 713.5MHz							
1427.0	-51.10	2.66	27.28	-26.48	-13	-13.48	Horizontal
1427.0	-45.40	2.66	27.28	-20.78	-13	-7.78	Vertical
2140.5	-44.50	2.88	27.60	-19.78	-13	-6.78	Vertical
2140.5	-53.87	2.88	27.60	-29.15	-13	-16.15	Horizontal
184.0	-34.47	1.32	17.29	-18.50	-13	-5.50	Vertical
262.4	-34.84	1.72	16.89	-19.67	-13	-6.67	Horizontal

QPSK EIRP POWER FOR LTE BAND 17 (10MHZ BANDWIDTH)

Test Results for Low Channel 709MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1418.0	-52.43	2.62	27.30	-27.75	-13	-14.75	Horizontal
1418.0	-45.57	2.62	27.30	-20.89	-13	-7.89	Vertical
2127.0	-46.90	2.87	27.62	-22.15	-13	-9.15	Vertical
2127.0	-52.56	2.87	27.62	-27.81	-13	-14.81	Horizontal
176.5	-42.70	1.35	16.91	-27.14	-13	-14.14	Vertical
265.1	-41.99	1.62	16.31	-27.30	-13	-14.30	Horizontal
Test Results for Mid Channel 710MHz							
1420.0	-47.07	2.62	27.30	-22.39	-13	-9.39	Horizontal
1420.0	-47.50	2.62	27.30	-22.82	-13	-9.82	Vertical
2130.0	-44.04	2.87	27.62	-19.29	-13	-6.29	Vertical
2130.0	-50.16	2.87	27.62	-25.41	-13	-12.41	Horizontal
190.3	-38.04	1.51	17.14	-22.41	-13	-9.41	Vertical
359.6	-39.80	1.77	16.88	-24.69	-13	-11.69	Horizontal
Test Results for High Channel 711MHz							
1422.0	-48.72	2.62	27.30	-24.04	-13	-11.04	Horizontal
1422.0	-49.98	2.62	27.30	-25.30	-13	-12.30	Vertical
2133.0	-49.46	2.87	27.62	-24.71	-13	-11.71	Vertical
2133.0	-52.41	2.87	27.62	-27.66	-13	-14.66	Horizontal
208.8	-44.03	1.78	15.95	-29.86	-13	-16.86	Vertical
370.2	-35.15	1.34	17.95	-18.55	-13	-5.55	Horizontal

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

. Margin = Spurious Emission Level - Limit

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

9.7 LTE BAND 19

QPSK EIRP POWER FOR LTE BAND 19 (5MHZ BANDWIDTH)

Test Results for Low Channel 832.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1665	-53.64	2.61	27.28	-28.97	-13	-15.97	Horizontal
1665	-50.35	2.61	27.28	-25.68	-13	-12.68	Vertical
2497.5	-52.15	2.87	27.59	-27.43	-13	-14.43	Vertical
2497.5	-51.39	2.87	27.59	-26.67	-13	-13.67	Horizontal
188.5	-35.68	1.71	16.15	-21.24	-13	-8.24	Vertical
451.0	-39.70	1.41	17.32	-23.79	-13	-10.79	Horizontal
Test Results For Mid Channel 837.5MHz							
1675	-52.14	2.62	27.30	-27.46	-13	-14.46	Horizontal
1675	-53.71	2.62	27.30	-29.03	-13	-16.03	Vertical
2512.5	-49.56	2.87	27.62	-24.81	-13	-11.81	Vertical
2512.5	-50.09	2.87	27.62	-25.34	-13	-12.34	Horizontal
192.5	-41.96	1.42	15.25	-28.14	-13	-15.14	Vertical
296.4	-38.59	1.36	17.19	-22.76	-13	-9.76	Horizontal
Test Results for High Channel 842.5MHz							
1685.0	-51.42	2.66	27.28	-26.80	-13	-13.80	Horizontal
1685.0	-53.42	2.66	27.28	-28.80	-13	-15.80	Vertical
2527.5	-52.85	2.88	27.60	-28.13	-13	-15.13	Vertical
2527.5	-49.51	2.88	27.60	-24.79	-13	-11.79	Horizontal
199.7	-34.20	1.32	17.29	-18.23	-13	-5.23	Vertical
407.1	-35.11	1.72	16.89	-19.94	-13	-6.94	Horizontal

QPSK EIRP POWER FOR LTE BAND 19 (15MHZ BANDWIDTH)

Test Results for Low Channel 837.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Gain(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1675	-50.67	2.62	27.30	-25.99	-13	-12.99	Horizontal
1675	-49.85	2.62	27.30	-25.17	-13	-12.17	Vertical
2512.5	-53.99	2.87	27.62	-29.24	-13	-16.24	Vertical
2512.5	-53.41	2.87	27.62	-28.66	-13	-15.66	Horizontal
205.8	-39.47	1.35	16.91	-23.91	-13	-10.91	Vertical
384.8	-35.30	1.62	16.31	-20.61	-13	-7.61	Horizontal

Note: Spurious Emission Level = Spectrum Analyzer Read Value + Cable Loss+ Antenna Factor + 11.74
 . Margin = Spurious Emission Level - Limit
 . Both QPSK and 16QAM has been tested, the worst case is QPSK mode, the report just reported the worst case.

9.8 LTE BAND 25

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3701.4	-49.85	4.26	29.80	-24.31	-13	-11.31	Horizontal
3701.4	-52.78	4.26	29.80	-27.24	-13	-14.24	Vertical
5552.1	-53.72	5.36	35.84	-23.24	-13	-10.24	Vertical
5552.1	-50.37	5.36	35.84	-19.89	-13	-6.89	Horizontal
188.2	-39.51	1.68	16.04	-25.15	-13	-12.15	Vertical
246.9	-35.29	1.78	17.74	-19.33	-13	-6.33	Horizontal
Test Results for Mid Channel 1732.5MHz							
3765.0	-51.45	4.28	30.00	-25.73	-13	-12.73	Horizontal
3765.0	-49.18	4.28	30.00	-23.46	-13	-10.46	Vertical
5647.5	-53.87	5.41	35.86	-23.42	-13	-10.42	Vertical
5647.5	-51.08	5.41	35.86	-20.63	-13	-7.63	Horizontal
206.6	-38.33	1.72	17.69	-22.36	-13	-9.36	Vertical
340.6	-42.85	1.62	16.02	-28.44	-13	-15.44	Horizontal
Test Results for High Channel 1754.3MHz							
3828.6	-49.84	4.31	30.01	-24.14	-13	-11.14	Horizontal
3828.6	-49.20	4.31	30.01	-23.50	-13	-10.50	Vertical
5742.9	-51.70	5.43	35.86	-21.27	-13	-8.27	Vertical
5742.9	-49.60	5.43	35.86	-19.17	-13	-6.17	Horizontal
178.1	-41.30	1.80	16.69	-26.41	-13	-13.41	Vertical
315.0	-40.64	1.75	16.66	-25.74	-13	-12.74	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3720.0	-49.34	4.29	29.80	-23.83	-13	-10.83	Horizontal
3720.0	-51.94	4.29	29.80	-26.43	-13	-13.43	Vertical
5580.0	-50.89	5.38	35.84	-20.43	-13	-7.43	Vertical
5580.0	-51.79	5.38	35.84	-21.33	-13	-8.33	Horizontal
201.2	-41.08	1.57	17.26	-25.39	-13	-12.39	Vertical
416.5	-43.33	1.78	16.35	-28.76	-13	-15.76	Horizontal
Test Results for Mid Channel 1732.5MHz							
3765.0	-50.45	4.28	30.00	-24.73	-13	-11.73	Horizontal
3765.0	-52.34	4.28	30.00	-26.62	-13	-13.62	Vertical
5647.5	-52.34	5.41	35.86	-21.89	-13	-8.89	Vertical
5647.5	-51.65	5.41	35.86	-21.20	-13	-8.20	Horizontal
191.5	-34.86	1.44	17.95	-18.35	-13	-5.35	Vertical
350.0	-37.74	1.65	16.09	-23.30	-13	-10.30	Horizontal
Test Results for High Channel 1745MHz							
3810.0	-51.80	4.35	27.68	-28.47	-13	-15.47	Horizontal
3810.0	-52.05	4.35	27.68	-28.72	-13	-15.72	Vertical
5715.0	-49.45	5.42	35.86	-19.01	-13	-6.01	Vertical
5715.0	-52.43	5.42	35.86	-21.99	-13	-8.99	Horizontal
210.3	-39.61	1.61	16.85	-24.37	-13	-11.37	Vertical
440.3	-36.74	1.61	15.19	-23.16	-13	-10.16	Horizontal

9.9 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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1629.4	-52.80	4.26	29.80	-27.26	-13	-14.26	Horizontal
1629.4	-49.52	4.26	29.80	-23.98	-13	-10.98	Vertical
2444.1	-53.89	5.36	35.84	-23.41	-13	-10.41	Vertical
2444.1	-51.58	5.36	35.84	-21.10	-13	-8.10	Horizontal
185.1	-39.61	1.68	16.04	-25.25	-13	-12.25	Vertical
277.5	-34.04	1.78	17.74	-18.08	-13	-5.08	Horizontal
Test Results For Mid Channel 819MHz							
1638.0	-50.22	4.28	30.00	-24.50	-13	-11.50	Horizontal
1638.0	-49.96	4.28	30.00	-24.24	-13	-11.24	Vertical
2457.0	-51.45	5.41	35.86	-21.00	-13	-8.00	Vertical
2457.0	-51.10	5.41	35.86	-20.65	-13	-7.65	Horizontal
187.0	-43.10	1.72	17.69	-27.13	-13	-14.13	Vertical
332.0	-35.13	1.62	16.02	-20.72	-13	-7.72	Horizontal
Test Results for High Channel 823.3MHz							
1646.6	-52.01	4.31	30.01	-26.31	-13	-13.31	Horizontal
1646.6	-51.00	4.31	30.01	-25.30	-13	-12.30	Vertical
2469.9	-52.29	5.43	35.86	-21.86	-13	-8.86	Vertical
2469.9	-49.24	5.43	35.86	-18.81	-13	-5.81	Horizontal
179.8	-37.01	1.80	16.69	-22.12	-13	-9.12	Vertical
346.7	-44.80	1.75	16.66	-29.90	-13	-16.90	Horizontal

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

Test Results for Channel 819MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1638.0	-49.97	4.28	30.00	-24.25	-13	-11.25	Horizontal
1638.0	-49.34	4.28	30.00	-23.62	-13	-10.62	Vertical
2457.0	-53.50	5.41	35.86	-23.05	-13	-10.05	Vertical
2457.0	-49.88	5.41	35.86	-19.43	-13	-6.43	Horizontal
182.2	-38.30	1.44	17.95	-21.79	-13	-8.79	Vertical
399.2	-38.95	1.65	16.09	-24.51	-13	-11.51	Horizontal

9.10 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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1649.4	-53.69	4.26	29.80	-28.15	-13	-15.15	Horizontal
1649.4	-50.85	4.26	29.80	-25.31	-13	-12.31	Vertical
2474.1	-50.67	5.36	35.84	-20.19	-13	-7.19	Vertical
2474.1	-49.16	5.36	35.84	-18.68	-13	-5.68	Horizontal
202.4	-34.26	1.68	16.04	-19.90	-13	-6.90	Vertical
455.2	-43.42	1.78	17.74	-27.46	-13	-14.46	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-51.90	4.28	30.00	-26.18	-13	-13.18	Horizontal
1673.0	-50.08	4.28	30.00	-24.36	-13	-11.36	Vertical
2509.5	-53.53	5.41	35.86	-23.08	-13	-10.08	Vertical
2509.5	-51.24	5.41	35.86	-20.79	-13	-7.79	Horizontal
199.3	-37.97	1.72	17.69	-22.00	-13	-9.00	Vertical
373.7	-36.94	1.62	16.02	-22.53	-13	-9.53	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-50.77	4.31	30.01	-25.07	-13	-12.07	Horizontal
1696.6	-52.05	4.31	30.01	-26.35	-13	-13.35	Vertical
2544.9	-49.38	5.43	35.86	-18.95	-13	-5.95	Vertical
2544.9	-53.98	5.43	35.86	-23.55	-13	-10.55	Horizontal
211.8	-44.71	1.80	16.69	-29.82	-13	-16.82	Vertical
456.0	-36.60	1.75	16.66	-21.70	-13	-8.70	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 Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
1663.0	-53.78	4.29	29.80	-28.27	-13	-15.27	Horizontal
1663.0	-51.23	4.29	29.80	-25.72	-13	-12.72	Vertical
2494.5	-50.03	5.38	35.84	-19.57	-13	-6.57	Vertical
2494.5	-52.44	5.38	35.84	-21.98	-13	-8.98	Horizontal
190.1	-36.14	1.57	17.26	-20.45	-13	-7.45	Vertical
436.5	-36.13	1.78	16.35	-21.56	-13	-8.56	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-49.98	4.28	30.00	-24.26	-13	-11.26	Horizontal
1673.0	-49.91	4.28	30.00	-24.19	-13	-11.19	Vertical
2509.5	-49.84	5.41	35.86	-19.39	-13	-6.39	Vertical
2509.5	-49.37	5.41	35.86	-18.92	-13	-5.92	Horizontal
204.0	-38.55	1.44	17.95	-22.04	-13	-9.04	Vertical
458.5	-40.93	1.65	16.09	-26.49	-13	-13.49	Horizontal
Test Results for High Channel 841.5MHz							
1683.0	-50.85	4.35	27.68	-27.52	-13	-14.52	Horizontal
1683.0	-53.30	4.35	27.68	-29.97	-13	-16.97	Vertical
2524.5	-52.26	5.42	35.86	-21.82	-13	-8.82	Vertical
2524.5	-51.34	5.42	35.86	-20.90	-13	-7.90	Horizontal
209.5	-41.44	1.61	16.85	-26.20	-13	-13.20	Vertical
345.4	-43.39	1.61	15.19	-29.81	-13	-16.81	Horizontal

9.11 LTE BAND 41

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

Test Results for Low Channel 2498.5MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5145.0	-63.11	5.23	35.81	-32.53	-25	-7.53	Horizontal
5145.0	-62.42	5.23	35.81	-31.84	-25	-6.84	Vertical
7717.5	-59.01	5.67	36.85	-27.83	-25	-2.83	Vertical
7717.5	-61.98	5.67	36.85	-30.80	-25	-5.80	Horizontal
181.7	-53.75	1.38	15.98	-39.15	-25	-14.15	Vertical
350.9	-50.95	1.62	15.66	-36.91	-25	-11.91	Horizontal
Test Results for Mid Channel 2593MHz							
5190.0	-62.11	5.23	35.82	-31.52	-25	-6.52	Horizontal
5190.0	-61.88	5.23	35.82	-31.29	-25	-6.29	Vertical
7785.0	-63.88	5.67	36.85	-32.70	-25	-7.70	Vertical
7785.0	-60.72	5.67	36.85	-29.54	-25	-4.54	Horizontal
212.9	-47.84	1.62	16.17	-33.29	-25	-8.29	Vertical
233.9	-48.01	1.74	17.63	-32.12	-25	-7.12	Horizontal
Test Results for High Channel 2617.5MHz							
5235.0	-63.14	5.24	35.83	-32.55	-25	-7.55	Horizontal
5235.0	-64.25	5.24	35.83	-33.66	-25	-8.66	Vertical
7852.5	-61.70	5.68	36.87	-30.51	-25	-5.51	Vertical
7852.5	-62.31	5.68	36.87	-31.12	-25	-6.12	Horizontal
198.9	-50.97	1.55	15.84	-36.68	-25	-11.68	Vertical
308.7	-46.78	1.51	17.06	-31.23	-25	-6.23	Horizontal

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

Test Results for Low Channel 2506MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
5160.0	-64.51	5.23	35.82	-33.92	-25	-8.92	Horizontal
5160.0	-64.89	5.23	35.82	-34.30	-25	-9.30	Vertical
7740.0	-59.81	5.67	36.86	-28.62	-25	-3.62	Vertical
7740.0	-64.37	5.67	36.86	-33.18	-25	-8.18	Horizontal
182.4	-51.56	1.43	15.51	-37.48	-25	-12.48	Vertical
373.9	-52.96	1.40	16.97	-37.39	-25	-12.39	Horizontal
Test Results for Mid Channel 2593MHz							
5190.0	-60.67	5.23	35.82	-30.08	-25	-5.08	Horizontal
5190.0	-63.76	5.23	35.82	-33.17	-25	-8.17	Vertical
7785.0	-64.86	5.67	36.85	-33.68	-25	-8.68	Vertical
7785.0	-61.59	5.67	36.85	-30.41	-25	-5.41	Horizontal
184.1	-49.63	1.77	16.72	-34.68	-25	-9.68	Vertical
346.0	-44.62	1.31	16.99	-28.94	-25	-3.94	Horizontal
Test Results for High Channel 2680MHz							
5220.0	-59.20	5.24	35.83	-28.61	-25	-3.61	Horizontal
5220.0	-64.72	5.24	35.83	-34.13	-25	-9.13	Vertical
7830.0	-62.02	5.70	36.88	-30.84	-25	-5.84	Vertical
7830.0	-64.92	5.70	36.88	-33.74	-25	-8.74	Horizontal
202.9	-45.05	1.70	15.73	-31.02	-25	-6.02	Vertical
268.0	-54.08	1.75	17.33	-38.50	-25	-13.50	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.

9.12 LTE BAND 66

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

Test Results for Low Channel 1710.7MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3421.4	-51.31	3.84	35.81	-19.34	-13	-6.34	Horizontal
3421.4	-51.92	3.84	35.81	-19.95	-13	-6.95	Vertical
5132.1	-49.31	5.18	36.85	-17.64	-13	-4.64	Vertical
5132.1	-50.72	5.18	36.85	-19.05	-13	-6.05	Horizontal
202.7	-43.65	1.56	17.97	-27.24	-13	-14.24	Vertical
253.6	-39.73	1.33	15.11	-25.95	-13	-12.95	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-49.29	3.85	35.82	-17.32	-13	-4.32	Horizontal
3490.0	-50.34	3.85	35.82	-18.37	-13	-5.37	Vertical
5235.0	-49.68	5.21	36.85	-18.04	-13	-5.04	Vertical
5235.0	-53.65	5.21	36.85	-22.01	-13	-9.01	Horizontal
196.7	-34.38	1.77	16.17	-19.97	-13	-6.97	Vertical
387.5	-35.08	1.63	15.21	-21.50	-13	-8.50	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-51.32	3.86	35.83	-19.35	-13	-6.35	Horizontal
3558.6	-49.25	3.86	35.83	-17.28	-13	-4.28	Vertical
5337.9	-50.46	5.24	36.87	-18.83	-13	-5.83	Vertical
5337.9	-50.74	5.24	36.87	-19.11	-13	-6.11	Horizontal
211.8	-37.60	1.58	17.56	-21.62	-13	-8.62	Vertical
256.9	-44.70	1.45	16.58	-29.57	-13	-16.57	Horizontal

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

Test Results for Low Channel 1720MHz							
Frequency(MHz)	SG Level(dBm)	Cable Loss(dB)	Antenna Factor(dB)	Absolute Level(dBm)	Limit (dBm)	Margin(dBm)	Polarity
3440.0	-51.78	3.84	35.82	-19.80	-13	-6.80	Horizontal
3440.0	-53.85	3.84	35.82	-21.87	-13	-8.87	Vertical
5160.0	-52.59	5.18	36.86	-20.91	-13	-7.91	Vertical
5160.0	-51.25	5.18	36.86	-19.57	-13	-6.57	Horizontal
177.9	-41.97	1.56	15.76	-27.77	-13	-14.77	Vertical
451.0	-41.36	1.33	15.44	-27.25	-13	-14.25	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-53.88	3.85	35.82	-21.91	-13	-8.91	Horizontal
3490.0	-51.32	3.85	35.82	-19.35	-13	-6.35	Vertical
5235.0	-51.22	5.21	36.85	-19.58	-13	-6.58	Vertical
5235.0	-51.66	5.21	36.85	-20.02	-13	-7.02	Horizontal
191.2	-39.08	1.77	16.84	-24.00	-13	-11.00	Vertical
455.8	-34.18	1.63	17.64	-18.17	-13	-5.17	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-53.31	3.86	35.83	-21.34	-13	-8.34	Horizontal
3540.0	-49.91	3.86	35.83	-17.94	-13	-4.94	Vertical
5310.0	-50.42	5.24	36.88	-18.78	-13	-5.78	Vertical
5310.0	-51.46	5.24	36.88	-19.82	-13	-6.82	Horizontal
178.5	-34.37	1.58	16.84	-19.10	-13	-6.10	Vertical
277.3	-39.91	1.45	17.64	-23.72	-13	-10.72	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 3.29V, Normal, DC 3.87V and High voltage, DC 4.45V.

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 2/4/5/7/12/17/19/25/26/41/66

RESULTS

See the following pages.

10.1 LTE BAND 2

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1880	12.7	0.006742	2.5
3.87	1880	13.5	0.007189	2.5
4.45	1880	13.0	0.006921	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	12.3	0.006563	2.5
Extreme (50C)	1880	11.2	0.005975	2.5
Extreme (40C)	1880	14.0	0.007430	2.5
Extreme (30C)	1880	13.1	0.006990	2.5
Extreme (10C)	1880	14.2	0.007533	2.5
Extreme (0C)	1880	12.4	0.006616	2.5
Extreme (-10C)	1880	13.4	0.007129	2.5
Extreme (-20C)	1880	13.8	0.007358	2.5
Extreme (-30C)	1880	14.8	0.007885	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]
3.29	1880	9.7	0.005150	2.5
3.87	1880	8.5	0.004500	2.5
4.45	1880	8.3	0.004428	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	10.0	0.005309	2.5
Extreme (50C)	1880	8.6	0.004571	2.5
Extreme (40C)	1880	7.8	0.004168166	2.5
Extreme (30C)	1880	9.1	0.004825	2.5
Extreme (10C)	1880	8.4	0.004483359	2.5
Extreme (0C)	1880	7.9	0.004223039	2.5
Extreme (-10C)	1880	8.7	0.004601797	2.5
Extreme (-20C)	1880	9.1	0.004815508	2.5
Extreme (-30C)	1880	7.8	0.004134497	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]
3.29	1732.5	9.2	0.005326	2.5
3.87	1732.5	9.2	0.005333	2.5
4.45	1732.5	8.2	0.004728	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	8.7	0.004997	2.5
Extreme (50C)	1732.5	8.7	0.005006	2.5
Extreme (40C)	1732.5	7.8	0.004519	2.5
Extreme (30C)	1732.5	5.8	0.003348	2.5
Extreme (10C)	1732.5	7.2	0.004184	2.5
Extreme (0C)	1732.5	9.4	0.005404	2.5
Extreme (-10C)	1732.5	8.3	0.004801	2.5
Extreme (-20C)	1732.5	6.7	0.003840	2.5
Extreme (-30C)	1732.5	8.3	0.004802	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]
3.29	1732.5	9.4	0.005407	2.5
3.87	1732.5	8.7	0.005002	2.5
4.45	1732.5	8.4	0.004854	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	10.0	0.005795	2.5
Extreme (50C)	1732.5	9.0	0.005190	2.5
Extreme (40C)	1732.5	8.2	0.004714	2.5
Extreme (30C)	1732.5	9.4	0.005429	2.5
Extreme (10C)	1732.5	9.2	0.005336	2.5
Extreme (0C)	1732.5	8.1	0.004699	2.5
Extreme (-10C)	1732.5	9.2	0.005293	2.5
Extreme (-20C)	1732.5	9.3	0.005349	2.5
Extreme (-30C)	1732.5	8.0	0.004644	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]
3.29	836.5	5.9	0.007104	2.5
3.87	836.5	7.1	0.008500	2.5
4.45	836.5	5.3	0.006278	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.3	0.007488	2.5
Extreme (50C)	836.5	5.6	0.006742	2.5
Extreme (40C)	836.5	5.9	0.007056	2.5
Extreme (30C)	836.5	6.6	0.007860	2.5
Extreme (10C)	836.5	5.5	0.006571	2.5
Extreme (0C)	836.5	4.9	0.005864	2.5
Extreme (-10C)	836.5	5.3	0.006306	2.5
Extreme (-20C)	836.5	6.2	0.007395	2.5
Extreme (-30C)	836.5	6.4	0.007708	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]
3.29	836.5	6.3	0.007519	2.5
3.87	836.5	6.5	0.007805	2.5
4.45	836.5	4.8	0.005695	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.6	0.007860	2.5
Extreme (50C)	836.5	6.3	0.007526	2.5
Extreme (40C)	836.5	5.7	0.006859	2.5
Extreme (30C)	836.5	6.4	0.007685	2.5
Extreme (10C)	836.5	5.0	0.006025	2.5
Extreme (0C)	836.5	5.0	0.005926	2.5
Extreme (-10C)	836.5	5.8	0.006934	2.5
Extreme (-20C)	836.5	5.8	0.006889	2.5
Extreme (-30C)	836.5	6.7	0.008034	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]
3.29	2535	9.5	0.003749	2.5
3.87	2535	9.2	0.003636	2.5
4.45	2535	8.2	0.003225	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.6	0.003783	2.5
Extreme (50C)	2535	8.7	0.003440	2.5
Extreme (40C)	2535	7.9	0.003120	2.5
Extreme (30C)	2535	9.4	0.003708	2.5
Extreme (10C)	2535	7.6	0.003012	2.5
Extreme (0C)	2535	8.7	0.003420	2.5
Extreme (-10C)	2535	9.8	0.003881	2.5
Extreme (-20C)	2535	8.8	0.003489	2.5
Extreme (-30C)	2535	8.0	0.003168	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]
3.29	2535	6.9	0.002722	2.5
3.87	2535	6.3	0.002496	2.5
4.45	2535	6.0	0.002382	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	6.9	0.002722	2.5
Extreme (50C)	2535	5.4	0.002144	2.5
Extreme (40C)	2535	5.7	0.002244	2.5
Extreme (30C)	2535	7.2	0.002836	2.5
Extreme (10C)	2535	6.1	0.002414	2.5
Extreme (0C)	2535	5.1	0.002025	2.5
Extreme (-10C)	2535	5.5	0.002172	2.5
Extreme (-20C)	2535	6.2	0.002427	2.5
Extreme (-30C)	2535	6.2	0.002435	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]
3.29	707.5	8.5	0.012076	2.5
3.87	707.5	9.8	0.013843	2.5
4.45	707.5	8.4	0.011865	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	707.5	8.7	0.012286	2.5
Extreme (50C)	707.5	7.0	0.009920	2.5
Extreme (40C)	707.5	7.0	0.009959	2.5
Extreme (30C)	707.5	8.2	0.011627	2.5
Extreme (10C)	707.5	7.6	0.010731	2.5
Extreme (0C)	707.5	8.5	0.012073	2.5
Extreme (-10C)	707.5	8.6	0.012125	2.5
Extreme (-20C)	707.5	9.4	0.013222	2.5
Extreme (-30C)	707.5	7.4	0.010465	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]
3.29	707.5	7.5	0.010600	2.5
3.87	707.5	8.5	0.012030	2.5
4.45	707.5	7.5	0.010555	2.5

Frequency error vs. Temperature

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

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

10.6 LTE BAND 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]
3.29	710.0	10.0	0.014135	2.5
3.87	710.0	8.7	0.012194	2.5
4.45	710.0	8.5	0.012030	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.7	0.013674	2.5
Extreme (50C)	710.0	8.8	0.012439	2.5
Extreme (40C)	710.0	7.7	0.010834	2.5
Extreme (30C)	710.0	9.1	0.012803	2.5
Extreme (10C)	710.0	8.9	0.012526	2.5
Extreme (0C)	710.0	7.7	0.010779	2.5
Extreme (-10C)	710.0	8.6	0.012061	2.5
Extreme (-20C)	710.0	9.2	0.012959	2.5
Extreme (-30C)	710.0	8.0	0.011327	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]
3.29	710.0	10.5	0.014755	2.5
3.87	710.0	9.0	0.012739	2.5
4.45	710.0	8.1	0.011412	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	710.0	9.1	0.012841	2.5
Extreme (50C)	710.0	9.0	0.012659	2.5
Extreme (40C)	710.0	8.8	0.012415	2.5
Extreme (30C)	710.0	8.6	0.012051	2.5
Extreme (10C)	710.0	8.4	0.011874	2.5
Extreme (0C)	710.0	8.0	0.011309	2.5
Extreme (-10C)	710.0	9.5	0.013429	2.5
Extreme (-20C)	710.0	8.9	0.012574	2.5
Extreme (-30C)	710.0	8.3	0.011636	2.5

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

10.7 LTE BAND 19

Band 19 QPSK, (15MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	837.5	8.6	0.010253	2.5
3.87	837.5	8.9	0.010622	2.5
4.45	837.5	8.4	0.010049	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	837.5	8.8	0.010469	2.5
Extreme (50C)	837.5	7.8	0.009319	2.5
Extreme (40C)	837.5	8.9	0.010671	2.5
Extreme (30C)	837.5	8.3	0.009892	2.5
Extreme (10C)	837.5	8.5	0.010116	2.5
Extreme (0C)	837.5	6.9	0.008288	2.5
Extreme (-10C)	837.5	8.1	0.009660	2.5
Extreme (-20C)	837.5	8.4	0.009988	2.5
Extreme (-30C)	837.5	5.5	0.006530	2.5

Band 19 16QAM, (15MHz BANDWIDTH RB size 100 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	837.5	9.1	0.010830	2.5
3.87	837.5	8.8	0.010561	2.5
4.45	837.5	7.9	0.009467	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	837.5	8.7	0.010410	2.5
Extreme (50C)	837.5	8.1	0.009679	2.5
Extreme (40C)	837.5	8.8	0.010510	2.5
Extreme (30C)	837.5	8.3	0.009905	2.5
Extreme (10C)	837.5	8.5	0.010198	2.5
Extreme (0C)	837.5	6.3	0.007475	2.5
Extreme (-10C)	837.5	8.0	0.009591	2.5
Extreme (-20C)	837.5	8.0	0.009589	2.5
Extreme (-30C)	837.5	5.2	0.006196	2.5

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

10.8 LTE BAND 25

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1882.5	9.6	0.005113	2.5
3.87	1882.5	8.8	0.004682	2.5
4.45	1882.5	8.1	0.004304	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	9.8	0.005203	2.5
Extreme (50C)	1882.5	9.2	0.004890	2.5
Extreme (40C)	1882.5	8.4	0.004438	2.5
Extreme (30C)	1882.5	9.4	0.004988	2.5
Extreme (10C)	1882.5	8.6	0.004568	2.5
Extreme (0C)	1882.5	7.6	0.004048	2.5
Extreme (-10C)	1882.5	9.5	0.005023	2.5
Extreme (-20C)	1882.5	8.8	0.004699	2.5
Extreme (-30C)	1882.5	8.3	0.004385	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	1882.5	9.7	0.005176	2.5
3.87	1882.5	8.9	0.004754	2.5
4.45	1882.5	8.5	0.004526	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1882.5	9.5	0.005034	2.5
Extreme (50C)	1882.5	9.1	0.004844	2.5
Extreme (40C)	1882.5	8.3	0.004416	2.5
Extreme (30C)	1882.5	9.1	0.004830	2.5
Extreme (10C)	1882.5	8.1	0.004309	2.5
Extreme (0C)	1882.5	8.4	0.004464	2.5
Extreme (-10C)	1882.5	9.1	0.004857	2.5
Extreme (-20C)	1882.5	9.0	0.004757	2.5
Extreme (-30C)	1882.5	8.7	0.004638	2.5

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

10.9 LTE BAND 26 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 BANDWIDTH)				
3.29	819.0	9.9	0.012097	2.5
3.87	819.0	8.9	0.010866	2.5
4.45	819.0	8.0	0.009792	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 BANDWIDTH)				
Normal (25C)	819.0	9.2	0.011253	2.5
Extreme (50C)	819.0	8.9	0.010909	2.5
Extreme (40C)	819.0	8.1	0.009862	2.5
Extreme (30C)	819.0	8.9	0.010826	2.5
Extreme (10C)	819.0	8.5	0.010395	2.5
Extreme (0C)	819.0	7.9	0.009647	2.5
Extreme (-10C)	819.0	8.7	0.010626	2.5
Extreme (-20C)	819.0	9.3	0.011296	2.5
Extreme (-30C)	819.0	7.7	0.009349	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 BANDWIDTH)				
3.29	819.0	10.4	0.012679	2.5
3.87	819.0	9.4	0.011425	2.5
4.45	819.0	8.8	0.010749	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)	819.0	8.9	0.010886	2.5
Extreme (50C)	819.0	9.0	0.011005	2.5
Extreme (40C)	819.0	8.6	0.010546	2.5
Extreme (30C)	819.0	8.7	0.010681	2.5
Extreme (10C)	819.0	8.1	0.009840	2.5
Extreme (0C)	819.0	8.0	0.009777	2.5
Extreme (-10C)	819.0	9.1	0.011067	2.5
Extreme (-20C)	819.0	9.4	0.011419	2.5
Extreme (-30C)	819.0	8.2	0.010065	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 B

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 26740 RB size 75 RB Offset 0 10MHz)				
3.29	836.5	10.0	0.011953	2.5
3.87	836.5	8.5	0.010143	2.5
4.45	836.5	8.0	0.009602	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 10MHz)				
Normal (25C)	836.5	9.3	0.011065	2.5
Extreme (50C)	836.5	9.1	0.010858	2.5
Extreme (40C)	836.5	8.1	0.009624	2.5
Extreme (30C)	836.5	9.4	0.011197	2.5
Extreme (10C)	836.5	8.9	0.010601	2.5
Extreme (0C)	836.5	8.0	0.009544	2.5
Extreme (-10C)	836.5	9.3	0.011111	2.5
Extreme (-20C)	836.5	9.1	0.010853	2.5
Extreme (-30C)	836.5	8.2	0.009852	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 26740 RB size 75 RB Offset 0 10MHz)				
3.29	836.5	9.9	0.011808	2.5
3.87	836.5	8.7	0.010452	2.5
4.45	836.5	8.5	0.010106	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 10MHz)				
Normal (25C)	836.5	9.4	0.011278	2.5
Extreme (50C)	836.5	9.2	0.011042	2.5
Extreme (40C)	836.5	8.7	0.010391	2.5
Extreme (30C)	836.5	8.8	0.010527	2.5
Extreme (10C)	836.5	8.1	0.009696	2.5
Extreme (0C)	836.5	8.5	0.010172	2.5
Extreme (-10C)	836.5	9.5	0.011352	2.5
Extreme (-20C)	836.5	9.1	0.010928	2.5
Extreme (-30C)	836.5	8.1	0.009704	2.5

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

10.11 LTE BAND 41

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.29	2595	8.7	0.003368	2.5
3.87	2595	9.0	0.003463	2.5
4.45	2595	8.6	0.003318	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	8.7	0.003357	2.5
Extreme (50C)	2595	8.0	0.003100	2.5
Extreme (40C)	2595	8.2	0.003145	2.5
Extreme (30C)	2595	8.1	0.003140	2.5
Extreme (10C)	2595	8.3	0.003190	2.5
Extreme (0C)	2595	6.3	0.002417	2.5
Extreme (-10C)	2595	8.1	0.003102	2.5
Extreme (-20C)	2595	8.6	0.003297	2.5
Extreme (-30C)	2595	5.9	0.002283	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]
3.29	2595	8.8	0.003407	2.5
3.87	2595	8.7	0.003353	2.5
4.45	2595	8.0	0.003095	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2595	9.0	0.003477	2.5
Extreme (50C)	2595	8.2	0.003178	2.5
Extreme (40C)	2595	8.6	0.003307	2.5
Extreme (30C)	2595	7.9	0.003042	2.5
Extreme (10C)	2595	8.7	0.003335	2.5
Extreme (0C)	2595	6.8	0.002610	2.5
Extreme (-10C)	2595	8.6	0.003308	2.5
Extreme (-20C)	2595	8.2	0.003160	2.5
Extreme (-30C)	2595	5.7	0.002206	2.5

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

10.12 LTE BAND 66

QPSK, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 QPSK, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1745	7.2	0.003915	2.5
3.87	1745	7.4	0.003812	2.5
4.45	1745	7.3	0.004172	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	5.9	0.002985	2.5
Extreme (50C)	1745	8.4	0.004317	2.5
Extreme (40C)	1745	6.7	0.003454	2.5
Extreme (30C)	1745	7.2	0.003974	2.5
Extreme (10C)	1745	8.4	0.004509	2.5
Extreme (0C)	1745	6.1	0.003463	2.5
Extreme (-10C)	1745	6.2	0.003313	2.5
Extreme (-20C)	1745	7.4	0.003852	2.5
Extreme (-30C)	1745	6.7	0.003423	2.5

16QAM, (20MHz BANDWIDTH)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
BAND 66 16QAM, (CH 132322 RB size 100 RB Offset 0 20MHz BANDWIDTH)				
3.29	1745	8.6	0.00462	2.5
3.87	1745	8.0	0.004436	2.5
4.45	1745	9.4	0.005194	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	9.6	0.005061	2.5
Extreme (50C)	1745	8.3	0.004447	2.5
Extreme (40C)	1745	8.5	0.004757	2.5
Extreme (30C)	1745	7.9	0.004539	2.5
Extreme (10C)	1745	8.2	0.004636	2.5
Extreme (0C)	1745	6.9	0.003824	2.5
Extreme (-10C)	1745	8.3	0.004745	2.5
Extreme (-20C)	1745	9.2	0.004918	2.5
Extreme (-30C)	1745	6.1	0.003037	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.

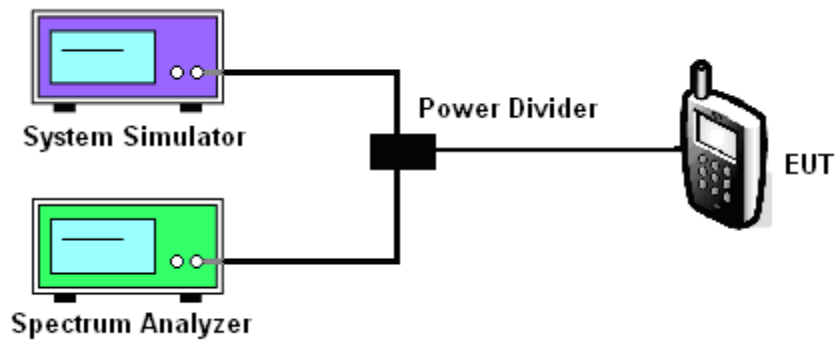
11.2 Measuring Instruments

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 2/4/5/7/12/17/19/25/26/41/66

Test data reference attachment.

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