

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

FCC ID: 2AWBA-GP30

Product: Wireless Locator Device

Trade Mark: WANWAYTECH

Model No.: GP30

Family Model: N/A

Report No.: S24091805602002

Issue Date: Sept. 30, 2024

Prepared for

SHANGHAI WANWAY DIGITAL TECHNOLOGY CO., LTD
FLOOR 23 NO. 1999 WENCHUAN ROAD BAOSHAN DISTRICT
SHANGHAI, China

Prepared by

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

TEST RESULT CERTIFICATION

Applicant's name : SHANGHAI WANWAY DIGITAL TECHNOLOGY CO., LTD
Address..... : FLOOR 23 NO. 1999 WENCHUAN ROAD BAOSHAN DISTRICT
SHANGHAI, China
Manufacturer's Name..... : SHANGHAI WANWAY DIGITAL TECHNOLOGY CO., LTD
Address..... : FLOOR 23 NO. 1999 WENCHUAN ROAD BAOSHAN DISTRICT
SHANGHAI, China
Product name..... : Wireless Locator Device
Model and/or type reference .. : GP30
Trade Mark..... : WANWAYTECH
Family Model..... : N/A
Test Sample Number..... : S240918056002
Standards..... : FCC CFR 47 Part 22H, Part 24E, Part 27
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.

This report shall not be reproduced except in full, without the written approval of NTEK, this document may be altered or revised by NTEK, personal only, and shall be noted in the revision of the document.

Date of Test

Date (s) of performance of tests..... Sept. 18, 2024 ~ Sept. 30, 2024

Date of Issue Sept. 30, 2024

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

Prepared By : 
Allen Liu
(Project Engineer)

Reviewed By : 
Aaron Cheng
(Supervisor)

Approved By : 
Alex Li
(Manager)

TABLE OF CONTENTS

1. GENERAL INFORMATION.....	5
1. GENERAL INFORMATION.....	5
1.1 PRODUCT DESCRIPTION	5
1.3 TEST METHODOLOGY	6
1.4 TEST FACILITY.....	6
MEASUREMENT UNCERTAINTY	6
1.5 SPECIAL ACCESSORIES.....	6
1.6 WORST-CASE CONFIGURATION AND MODE.....	6
2. SYSTEM TEST CONFIGURATION	7
2.1 EUT CONFIGURATION.....	7
2.2 EUT EXERCISE	7
2.3 CONFIGURATION OF EUT SYSTEM.....	7
2.4 TEST SETUP	8
3.TEST AND MEASUREMENT EQUIPMENT	9
4. OUTPUT POWER.....	11
4.1 OUTPUT POWER MEASUREMENT	11
6. BANDEDGE AND EMISSION MASK.....	14
7. OUT OF BAND EMISSIONS	16
7.1 MEASUREMENT METHOD	16
8. RADIATED MEASUREMENT	17
8.1. RADIATED POWER (ERP & EIRP).....	17
8.2 LTE BAND 2.....	18
8.3 LTE BAND 4.....	20

8.4 LTE BAND 5.....	22
8.5 LTE BAND 7.....	24
8.6 LTE BAND 41	26
8.7 LTE BAND 66	28
9. SPURIOUS RADIATION EMISSION	30
9.1 LTE BAND 2.....	32
9.2 LTE BAND 4.....	34
9.3 LTE BAND 5.....	36
9.4 LTE BAND 7.....	38
9.5 LTE BAND 41	40
9.6 LTE BAND 66	42
10. FREQUENCY STABILITY	44
10.1 LTE BAND 2	45
10.2 LTE BAND 4	47
10.3 LTE BAND 5	49
10.4 LTE BAND 7	51
10.5 LTE BAND 41	53
10.6 LTE BAND 66	55
11. PEAK-TO-AVERAGE RATIO.....	57
11.1 Description of the PAR Measurement.....	57
11.2 Measuring Instruments	57
11.3 Test Procedures.....	57
11.4 Test Setup.....	58

1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Designation:	Wireless Locator Device
Trade Mark	WANWAYTECH
Model Name	GP30
Family Model	N/A
Model Difference	N/A
FCC ID:	2AWBA-GP30
Frequency Bands:	U.S. Bands: ☒ LTE FDD Band 2,4,5,7,66 LTE TDD Band 41
Frequency Range:	LTE FDD Band 2 Uplink: 1850MHz-1910MHz, Downlink: 1930MHz-1990MHz; LTE FDD Band 4 Uplink: 1710MHz-1755MHz, Downlink: 2110MHz-2155MHz; LTE FDD Band 5 Uplink: 824MHz-849MHz, Downlink: 869MHz-894MHz; LTE-FDD Band 7 Uplink: 2500MHz-2570MHz, Downlink: 2620MHz-2690MHz; LTE TDD Band 41 Uplink& Downlink: 2496MHz-2690MHz, LTE FDD Band 66 Uplink: 1710MHz-1780MHz, Downlink: 2110MHz-2200MHz;
Type of Modulation:	QPSK/16QAM
Power Class	Class 3
Antenna:	PIFA Antenna
Adapter	N/A
Battery	DC 3.8V, 800mAh, 3.04Wh
Power supply	DC 3.8V from battery or DC 5V from adapter
Extreme Vol. Limits:	DC 3.23V to DC 4.37V (Nominal DC 3.8V) (Note 1)
HW Version	2404002-V1.1/20240410
FW Version	SDK:GP30_PET_V1.02_240611
SW Version	APP:GP30_Sep 24 2024_16:49:28
** Note1: The High Voltage DC 4.37V and Low Voltage DC 3.23V 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: 2AWBA-GP30** filing to comply with the FCC Part 22H&24E&27.

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, ANSI C63.26:2015.

1.4 TEST FACILITY

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

ShenZhen NTEK Testing Technology Co., Ltd.

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

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

FCC Registration No.:463705

IC Registration No.:9270A,

CNAS Registration No.:L5516

MEASUREMENT UNCERTAINTY

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

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

1.5 SPECIAL ACCESSORIES

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

1.6 WORST-CASE CONFIGURATION AND MODE

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

The device has LTE Bands of: Band 2/4/5/7/41/66

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	Wireless Bluetooth pet locator Device	GP30	FCC ID: 2AWBA-GP30	EUT

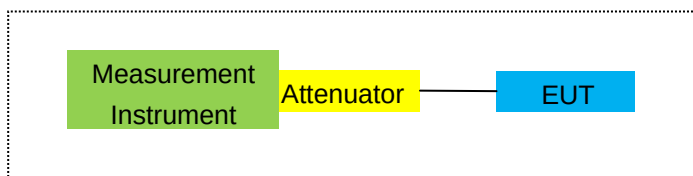
*Note: All the accessories have been used during the test.
the following "EUT" in setup diagram means EUT system.*

2.4 TEST SETUP

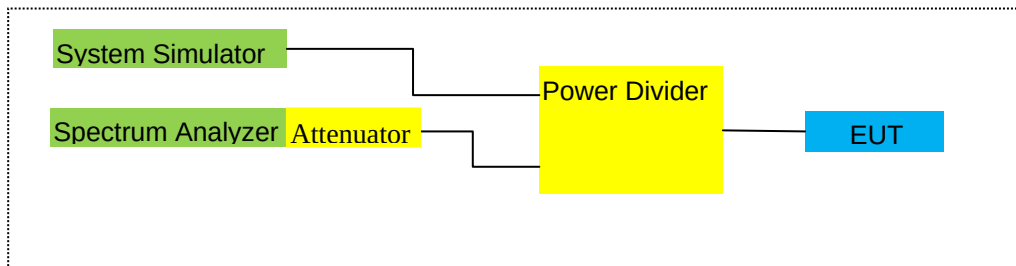
For Radiated Test Cases



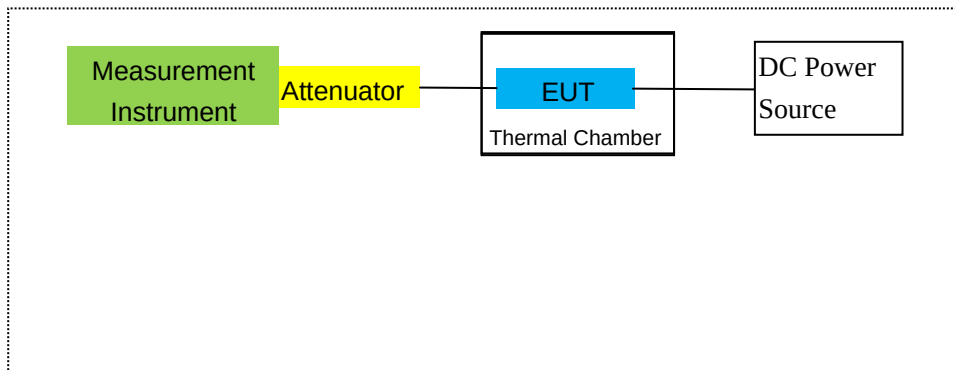
For Conducted Output Power



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	2024.04.25	2025.04.24	1 year
2	Test Receiver	R&S	ESPI	101318	2024.04.26	2025.04.25	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2024.05.12	2025.05.11	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	2024.04.26	2025.04.25	1 year
8	Loop Antenna	ARA	PLA-1030/B	1029	2024.03.12	2025.03.11	1 year
9	Power Meter	R&S	NRVS	100696	2024.04.26	2025.04.25	1 year
10	Power Sensor	R&S	URV5-Z4	0395.1619.05	2024.04.26	2025.04.25	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	2024.04.25	2025.04.24	1 year
16	LISN	EMCO	3816/2	00042990	2024.04.25	2025.04.24	1 year
17	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2024.03.12	2025.03.11	1 year
18	Passive Voltage Probe	R&S	ESH2-Z3	100196	2024.03.12	2025.03.11	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	2024.03.12	2025.03.11	1 year
23	Spectrum Analyzer	agilent	e4440a	us44300399	2024.03.12	2025.03.11	1 year
24	test receiver	R&S	ESCI	a0304218	2024.03.12	2025.03.11	1 year
25	Communication Tester	R&S	CMU200	A0304247	2024.03.12	2025.03.11	1 year

26	Thermal Chamber	Ten Billion	TTC-B3C	TBN-960502	2024.03.12	2025.03.11	1 year
27	DC Power Source	N/A	PS-6005D	20170402923	2024.04.25	2027.04.24	3 year
28	MXG Vector Signal Generator	Agilent	N5182A	MY47070317	2024.04.25	2025.04.24	1 year
29	Communication Tester	R&S	CMW500	148500	2024.05.30	2025.05.29	1 year

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

Measurement Software

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

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 2/4/5/7/41/66

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

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;

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 2/4/5/7/41/66

RESULTS

Test data reference attachment.

7. OUT OF BAND EMISSIONS

RULE PART(S)

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

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 2/4/5/7/41/66
- ☐

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

LIMITS:

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

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

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

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

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

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 2/4/5/7/41/66

RESULTS

Pass

8.2 LTE BAND 2

Radiated Power (EIRP) for Band 2									
Mode	RB/RB SIZE	Frequency	Result					Polarization Of Max. ERP	Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP		
							Average		
							(mW)		
1.4MHz Band QPSK	1/#Mid	1850.7	-4.89	3.76	28.24	19.59	90.991	Horizontal	Pass
		1880	-4.70	3.91	28.22	19.61	91.411	Horizontal	Pass
		1909.3	-4.61	3.93	28.20	19.66	92.470	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-4.95	3.77	28.23	19.51	89.331	Horizontal	Pass
		1880	-4.80	3.91	28.24	19.53	89.743	Horizontal	Pass
		1908.5	-4.67	3.94	28.25	19.64	92.045	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-4.84	3.77	28.31	19.70	93.325	Horizontal	Pass
		1880	-4.46	3.91	28.22	19.85	96.605	Horizontal	Pass
		1907.5	-4.39	3.94	28.20	19.87	97.051	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1855	-4.70	3.79	28.33	19.84	96.383	Horizontal	Pass
		1880	-4.40	3.95	28.22	19.87	97.051	Horizontal	Pass
		1905	-4.29	3.97	28.19	19.93	98.401	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1857.5	-4.66	3.79	28.34	19.89	97.499	Horizontal	Pass
		1880	-4.45	3.95	28.22	19.82	95.940	Horizontal	Pass
		1902.5	-4.31	3.97	28.18	19.90	97.724	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1860	-4.65	3.81	28.35	19.89	97.499	Horizontal	Pass
		1880	-4.32	3.96	28.22	19.94	98.628	Horizontal	Pass
		1900	-4.26	4.00	28.16	19.90	97.724	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1850.7	-5.47	3.76	28.24	19.01	79.616	Vertical	Pass
		1880	-5.69	3.91	28.22	18.62	72.778	Vertical	Pass
		1909.3	-5.05	3.93	28.20	19.22	83.560	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1851.5	-5.36	3.77	28.23	19.10	81.283	Vertical	Pass
		1880	-5.99	3.91	28.24	18.34	68.234	Vertical	Pass
		1908.5	-5.74	3.94	28.25	18.57	71.945	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1852.5	-5.54	3.77	28.31	19.00	79.433	Vertical	Pass
		1880	-5.40	3.91	28.22	18.91	77.804	Vertical	Pass
		1907.5	-5.35	3.94	28.20	18.91	77.804	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	1855	-5.81	3.79	28.33	18.73	74.645	Vertical	Pass
		1880	-5.36	3.95	28.22	18.91	77.804	Vertical	Pass
		1905	-5.40	3.97	28.19	18.82	76.208	Vertical	Pass

15.0MHz	1/#Mid	1857.5	-5.98	3.79	28.34	18.57	71.945	Vertical	Pass
Band		1880	-5.11	3.95	28.22	19.16	82.414	Vertical	Pass
QPSK		1902.5	-4.93	3.97	28.18	19.28	84.723	Vertical	Pass
20.0MHz	1/#Mid	1860	-5.68	3.81	28.35	18.86	76.913	Vertical	Pass
Band		1880	-5.18	3.96	28.22	19.08	80.910	Vertical	Pass
QPSK		1900	-5.49	4.00	28.16	18.67	73.621	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	-6.01	3.76	28.24	18.47	70.307	Horizontal	Pass
		1880	-5.48	3.91	28.22	18.83	76.384	Horizontal	Pass
		1909.3	-5.41	3.93	28.20	18.86	76.913	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-5.51	3.77	28.23	18.95	78.524	Horizontal	Pass
		1880	-5.59	3.91	28.24	18.74	74.817	Horizontal	Pass
		1908.5	-5.80	3.94	28.25	18.51	70.958	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-5.45	3.77	28.31	19.09	81.096	Horizontal	Pass
		1880	-5.36	3.91	28.22	18.95	78.524	Horizontal	Pass
		1907.5	-5.04	3.94	28.20	19.27	84.528	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1850.7	-6.30	3.76	28.24	18.18	65.766	Vertical	Pass
		1880	-6.75	3.91	28.22	17.56	57.016	Vertical	Pass
		1909.3	-6.19	3.93	28.20	18.08	64.269	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1851.5	-6.77	3.77	28.23	17.69	58.749	Vertical	Pass
		1880	-6.48	3.91	28.24	17.85	60.954	Vertical	Pass
		1908.5	-6.79	3.94	28.25	17.52	56.494	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1852.5	-6.35	3.77	28.31	18.19	65.917	Vertical	Pass
		1880	-6.88	3.91	28.22	17.43	55.335	Vertical	Pass
		1907.5	-6.29	3.94	28.20	17.97	62.661	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

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	-4.80	3.12	27.58	19.66	92.470	Horizontal	Pass
		1732.5	-4.79	3.27	27.61	19.55	90.157	Horizontal	Pass
		1754.3	-4.77	3.29	27.63	19.57	90.573	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-4.97	3.13	27.61	19.51	89.331	Horizontal	Pass
		1732.5	-4.89	3.27	27.61	19.45	88.105	Horizontal	Pass
		1753.5	-4.81	3.30	27.62	19.51	89.331	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-4.74	3.13	27.63	19.76	94.624	Horizontal	Pass
		1732.5	-4.64	3.27	27.61	19.70	93.325	Horizontal	Pass
		1752.5	-4.52	3.30	27.60	19.78	95.060	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-4.68	3.15	27.64	19.81	95.719	Horizontal	Pass
		1732.5	-4.45	3.31	27.61	19.85	96.605	Horizontal	Pass
		1750	-4.47	3.33	27.59	19.79	95.280	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-4.69	3.15	27.65	19.81	95.719	Horizontal	Pass
		1732.5	-4.53	3.31	27.61	19.77	94.842	Horizontal	Pass
		1747.5	-4.47	3.33	27.57	19.77	94.842	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-4.63	3.17	27.66	19.86	96.828	Horizontal	Pass
		1732.5	-4.46	3.32	27.61	19.83	96.161	Horizontal	Pass
		1745	-4.40	3.36	27.56	19.80	95.499	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-6.10	3.12	27.58	18.36	68.549	Vertical	Pass
		1732.5	-5.74	3.27	27.61	18.60	72.444	Vertical	Pass
		1754.3	-5.70	3.29	27.63	18.64	73.114	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-5.34	3.13	27.61	19.14	82.035	Vertical	Pass
		1732.5	-5.67	3.27	27.61	18.67	73.621	Vertical	Pass
		1753.5	-5.33	3.30	27.62	18.99	79.250	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-5.45	3.13	27.63	19.05	80.353	Vertical	Pass
		1732.5	-5.39	3.27	27.61	18.95	78.524	Vertical	Pass
		1752.5	-5.41	3.30	27.60	18.89	77.446	Vertical	Pass
10.0MHz Band	1/#Mid	1715	-5.20	3.15	27.64	19.29	84.918	Vertical	Pass
		1732.5	-5.12	3.31	27.61	19.18	82.794	Vertical	Pass

QPSK		1750	-5.20	3.33	27.59	19.06	80.538	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-5.23	3.15	27.65	19.27	84.528	Vertical	Pass
Band		1732.5	-5.54	3.31	27.61	18.76	75.162	Vertical	Pass
QPSK		1747.5	-5.20	3.33	27.57	19.04	80.168	Vertical	Pass
20.0MHz	1/#Mid	1720	-5.35	3.17	27.66	19.14	82.035	Vertical	Pass
Band		1732.5	-5.04	3.32	27.61	19.25	84.140	Vertical	Pass
QPSK		1745	-5.79	3.36	27.56	18.41	69.343	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	-5.61	3.12	27.58	18.85	76.736	Horizontal	Pass
		1732.5	-5.46	3.27	27.61	18.88	77.268	Horizontal	Pass
		1754.3	-5.46	3.29	27.63	18.88	77.268	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-5.55	3.13	27.61	18.93	78.163	Horizontal	Pass
		1732.5	-5.68	3.27	27.61	18.66	73.451	Horizontal	Pass
		1753.5	-5.90	3.30	27.62	18.42	69.502	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-5.38	3.13	27.63	19.12	81.658	Horizontal	Pass
		1732.5	-5.34	3.27	27.61	19.00	79.433	Horizontal	Pass
		1752.5	-5.03	3.30	27.60	19.29	84.918	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-6.71	3.12	27.58	17.75	59.566	Vertical	Pass
		1732.5	-6.11	3.27	27.61	18.23	66.527	Vertical	Pass
		1754.3	-6.54	3.29	27.63	17.80	60.256	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-6.19	3.13	27.61	18.29	67.453	Vertical	Pass
		1732.5	-6.28	3.27	27.61	18.06	63.973	Vertical	Pass
		1753.5	-6.86	3.30	27.62	17.46	55.719	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-6.90	3.13	27.63	17.60	57.544	Vertical	Pass
		1732.5	-6.34	3.27	27.61	18.00	63.096	Vertical	Pass
		1752.5	-6.91	3.30	27.60	17.39	54.828	Vertical	Pass
		1745	-6.02	3.36	27.56	18.18	65.766	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. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band QPSK	3#Mid	824.7	4.50	2.01	19.68	2.15	20.02	100.462	Horizontal	Pass
		836.5	4.38	2.01	19.77	2.15	19.99	99.770	Horizontal	Pass
		848.3	4.18	2.02	19.82	2.15	19.83	96.161	Horizontal	Pass
3.0MHz Band QPSK	1#Mid	825.5	4.27	2.01	19.70	2.15	19.81	95.719	Horizontal	Pass
		836.5	4.17	2.01	19.77	2.15	19.78	95.060	Horizontal	Pass
		847.5	4.04	2.02	19.81	2.15	19.68	92.897	Horizontal	Pass
5.0MHz Band QPSK	1#Mid	826.5	4.55	2.01	19.71	2.15	20.10	102.329	Horizontal	Pass
		836.5	4.43	2.01	19.77	2.15	20.04	100.925	Horizontal	Pass
		846.5	4.27	2.02	19.79	2.15	19.89	97.499	Horizontal	Pass
10.0MHz Band QPSK	1#Mid	829	4.57	2.01	19.73	2.15	20.14	103.276	Horizontal	Pass
		836.5	4.52	2.01	19.77	2.15	20.13	103.039	Horizontal	Pass
		844	4.42	2.02	19.78	2.15	20.03	100.693	Horizontal	Pass
1.4MHz Band QPSK	1#Mid	824.7	3.01	2.01	19.68	2.15	18.53	71.285	Vertical	Pass
		836.5	2.80	2.01	19.77	2.15	18.41	69.343	Vertical	Pass
		848.3	3.49	2.02	19.82	2.15	19.14	82.035	Vertical	Pass
3.0MHz Band QPSK	1#Mid	825.5	3.75	2.01	19.70	2.15	19.29	84.918	Vertical	Pass
		836.5	3.14	2.01	19.77	2.15	18.75	74.989	Vertical	Pass
		847.5	3.36	2.02	19.81	2.15	19.00	79.433	Vertical	Pass
5.0MHz Band QPSK	1#Mid	826.5	2.86	2.01	19.71	2.15	18.41	69.343	Vertical	Pass
		836.5	2.93	2.01	19.77	2.15	18.54	71.450	Vertical	Pass
		846.5	2.73	2.02	19.79	2.15	18.35	68.391	Vertical	Pass
10.0MHz Band QPSK	1#Mid	829	3.44	2.01	19.73	2.15	19.01	79.616	Vertical	Pass
		836.5	2.86	2.01	19.77	2.15	18.47	70.307	Vertical	Pass
		844	3.12	2.02	19.78	2.15	18.73	74.645	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. ERP Average (dBm)	Max. ERP Average (mW)	Polarization Of Max. ERP	
1.4MHz Band 16 QAM	3/#Mid	824.7	3.65	2.01	19.68	2.15	19.17	82.604	Horizontal	Pass
		836.5	3.58	2.01	19.77	2.15	19.19	82.985	Horizontal	Pass
		848.3	3.42	2.02	19.82	2.15	19.07	80.724	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	3.73	2.01	19.70	2.15	19.27	84.528	Horizontal	Pass
		836.5	3.44	2.01	19.77	2.15	19.05	80.353	Horizontal	Pass
		847.5	2.92	2.02	19.81	2.15	18.56	71.779	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	4.05	2.01	19.71	2.15	19.60	91.201	Horizontal	Pass
		836.5	3.82	2.01	19.77	2.15	19.43	87.700	Horizontal	Pass
		846.5	3.57	2.02	19.79	2.15	19.19	82.985	Horizontal	Pass
10.0MHz Band 16 QAM	1/#Mid	829	4.05	2.01	19.73	2.15	19.62	91.622	Horizontal	Pass
		836.5	3.77	2.01	19.77	2.15	19.38	86.696	Horizontal	Pass
		844	3.31	2.02	19.78	2.15	18.92	77.983	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	824.7	3.06	2.01	19.68	2.15	18.58	72.111	Vertical	Pass
		836.5	3.60	2.01	19.77	2.15	19.21	83.368	Vertical	Pass
		848.3	2.37	2.02	19.82	2.15	18.02	63.387	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	825.5	2.38	2.01	19.70	2.15	17.92	61.944	Vertical	Pass
		836.5	2.97	2.01	19.77	2.15	18.58	72.111	Vertical	Pass
		847.5	3.11	2.02	19.81	2.15	18.75	74.989	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	826.5	1.79	2.01	19.71	2.15	17.34	54.200	Vertical	Pass
		836.5	3.66	2.01	19.77	2.15	19.27	84.528	Vertical	Pass
		846.5	2.90	2.02	19.79	2.15	18.52	71.121	Vertical	Pass
10.0MHz Band 16 QAM	1/#Mid	829	2.90	2.01	19.73	2.15	18.47	70.307	Vertical	Pass
		836.5	2.39	2.01	19.77	2.15	18.00	63.096	Vertical	Pass
		844	1.85	2.02	19.78	2.15	17.46	55.719	Vertical	Pass

Note:

SG Level= Signal generator output

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

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

8.5 LTE BAND 7

Radiated Power (EIRP) for Band 7									
Mode	RB/RB SIZE	Frequency	Result						Conclusion
			SG Level (dBm)	Cable Loss (dBm)	Antenna Factor (dB)	Max. EIRP Average (dBm)	Max. EIRP Average (mW)	Polarization Of Max. ERP	
5.0MHz Band QPSK	1/#Mid	2502.5	-3.08	4.54	27.75	20.13	103.039	Horizontal	Pass
		2535	-2.91	4.69	27.72	20.12	102.802	Horizontal	Pass
		2567.5	-2.84	4.71	27.71	20.16	103.753	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	2505	-3.01	4.55	27.76	20.20	104.713	Horizontal	Pass
		2535	-2.82	4.69	27.72	20.21	104.954	Horizontal	Pass
		2565	-2.74	4.72	27.70	20.24	105.682	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-3.02	4.55	27.77	20.20	104.713	Horizontal	Pass
		2535	-2.88	4.69	27.72	20.15	103.514	Horizontal	Pass
		2562.5	-2.78	4.72	27.69	20.19	104.472	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	2510	-2.96	4.57	27.78	20.25	105.925	Horizontal	Pass
		2535	-2.78	4.73	27.72	20.21	104.954	Horizontal	Pass
		2560	-2.74	4.75	27.68	20.19	104.472	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	2502.5	-4.75	4.54	27.75	18.46	70.146	Vertical	Pass
		2535	-4.01	4.69	27.72	19.02	79.799	Vertical	Pass
		2567.5	-3.82	4.71	27.71	19.18	82.794	Vertical	Pass
10.0MHz Band QPSK	1/#Mid	2505	-4.18	4.55	27.76	19.03	79.983	Vertical	Pass
		2535	-3.95	4.69	27.72	19.08	80.910	Vertical	Pass
		2565	-3.84	4.72	27.70	19.14	82.035	Vertical	Pass
15.0MHz Band QPSK	1/#Mid	2507.5	-4.35	4.55	27.77	18.87	77.090	Vertical	Pass
		2535	-4.19	4.69	27.72	18.84	76.560	Vertical	Pass
		2562.5	-4.31	4.72	27.69	18.66	73.451	Vertical	Pass
20.0MHz Band QPSK	1/#Mid	2510	-4.00	4.57	27.78	19.21	83.368	Vertical	Pass
		2535	-3.87	4.73	27.72	19.12	81.658	Vertical	Pass
		2560	-4.58	4.75	27.68	18.35	68.391	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	-3.77	4.54	27.75	19.44	87.902	Horizontal	Pass
		2535	-3.46	4.69	27.72	19.57	90.573	Horizontal	Pass
		2567.5	-3.54	4.71	27.71	19.60	91.201	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2502.5	-4.99	4.54	27.75	18.22	66.374	Vertical	Pass
		2535	-5.13	4.69	27.72	17.90	61.660	Vertical	Pass
		2567.5	-5.66	4.71	27.71	17.34	54.200	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 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	2498.5	-3.38	4.54	27.75	19.83	96.161	Horizontal	Pass
		2593	-3.23	4.69	27.72	19.80	95.499	Horizontal	Pass
		2687.5	-3.11	4.71	27.71	19.89	97.499	Horizontal	Pass
10.0MHz Band QPSK	1/##Mid	2501	-3.46	4.55	27.76	19.75	94.406	Horizontal	Pass
		2593	-3.32	4.69	27.72	19.71	93.541	Horizontal	Pass
		2685	-3.31	4.72	27.70	19.67	92.683	Horizontal	Pass
15.0MHz Band QPSK	1/##Mid	2503.5	-3.29	4.55	27.77	19.93	98.401	Horizontal	Pass
		2593	-3.01	4.69	27.72	20.02	100.462	Horizontal	Pass
		2682.5	-3.06	4.72	27.69	19.91	97.949	Horizontal	Pass
20.0MHz Band QPSK	1/##Mid	2506	-2.90	4.57	27.78	20.31	107.399	Horizontal	Pass
		2593	-2.95	4.73	27.72	20.04	100.925	Horizontal	Pass
		2680	-2.95	4.75	27.68	19.98	99.541	Horizontal	Pass
5.0MHz Band QPSK	1/##Mid	2498.5	-3.18	4.54	27.75	20.03	100.693	Vertical	Pass
		2593	-3.09	4.69	27.72	19.94	98.628	Vertical	Pass
		2687.5	-3.07	4.71	27.71	19.93	98.401	Vertical	Pass
10.0MHz Band QPSK	1/##Mid	2501	-3.16	4.55	27.76	20.05	101.158	Vertical	Pass
		2593	-3.00	4.69	27.72	20.03	100.693	Vertical	Pass
		2685	-3.07	4.72	27.70	19.91	97.949	Vertical	Pass
15.0MHz Band QPSK	1/##Mid	2503.5	-4.88	4.55	27.77	18.34	68.234	Vertical	Pass
		2593	-4.26	4.69	27.72	18.77	75.336	Vertical	Pass
		2682.5	-3.91	4.72	27.69	19.06	80.538	Vertical	Pass
20.0MHz Band QPSK	1/##Mid	2506	-4.85	4.57	27.78	18.36	68.549	Vertical	Pass
		2593	-4.40	4.73	27.72	18.59	72.277	Vertical	Pass
		2680	-4.52	4.75	27.68	18.41	69.343	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	2498.5	-3.43	4.54	27.75	19.78	95.060	Horizontal	Pass
		2593	-3.28	4.69	27.72	19.75	94.406	Horizontal	Pass
		2687.5	-3.16	4.71	27.71	20.15	103.514	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	2498.5	-3.23	4.54	27.75	19.98	99.541	Vertical	Pass
		2593	-3.14	4.69	27.72	19.89	97.499	Vertical	Pass
		2687.5	-3.12	4.71	27.71	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)

8.7 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	-4.98	3.76	28.24	19.50	89.125	Horizontal	Pass
		1745	-4.84	3.91	28.22	19.47	88.512	Horizontal	Pass
		1779.3	-4.71	3.93	28.2	19.56	90.365	Horizontal	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-5.04	3.77	28.23	19.42	87.498	Horizontal	Pass
		1745	-4.95	3.91	28.24	19.38	86.696	Horizontal	Pass
		1778.5	-4.97	3.94	28.25	19.34	85.901	Horizontal	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-4.94	3.77	28.31	19.60	91.201	Horizontal	Pass
		1745	-4.62	3.91	28.22	19.69	93.111	Horizontal	Pass
		1777.5	-4.68	3.94	28.2	19.58	90.782	Horizontal	Pass
10.0MHz Band QPSK	1/#Mid	1715	-4.83	3.79	28.33	19.71	93.541	Horizontal	Pass
		1745	-4.56	3.95	28.22	19.71	93.541	Horizontal	Pass
		1775	-4.57	3.97	28.19	19.65	92.257	Horizontal	Pass
15.0MHz Band QPSK	1/#Mid	1717.5	-4.85	3.79	28.34	19.70	93.325	Horizontal	Pass
		1745	-4.66	3.95	28.22	19.61	91.411	Horizontal	Pass
		1772.5	-4.61	3.97	28.18	19.60	91.201	Horizontal	Pass
20.0MHz Band QPSK	1/#Mid	1720	-4.82	3.81	28.35	19.72	93.756	Horizontal	Pass
		1745	-4.56	3.96	28.22	19.70	93.325	Horizontal	Pass
		1770	-4.58	4	28.16	19.58	90.782	Horizontal	Pass
1.4MHz Band QPSK	1/#Mid	1710.7	-6.15	3.76	28.24	18.33	68.077	Vertical	Pass
		1745	-5.90	3.91	28.22	18.41	69.343	Vertical	Pass
		1779.3	-6.01	3.93	28.2	18.26	66.988	Vertical	Pass
3.0MHz Band QPSK	1/#Mid	1711.5	-5.72	3.77	28.23	18.74	74.817	Vertical	Pass
		1745	-6.18	3.91	28.24	18.15	65.313	Vertical	Pass
		1778.5	-5.82	3.94	28.25	18.49	70.632	Vertical	Pass
5.0MHz Band QPSK	1/#Mid	1712.5	-5.88	3.77	28.31	18.66	73.451	Vertical	Pass
		1745	-5.55	3.91	28.22	18.76	75.162	Vertical	Pass
		1777.5	-5.44	3.94	28.2	18.82	76.208	Vertical	Pass
10.0MHz Band	1/#Mid	1715	-6.41	3.79	28.34	18.14	65.163	Vertical	Pass
		1745	-5.67	3.95	28.22	18.60	72.444	Vertical	Pass

QPSK		1775	-5.60	3.97	28.18	18.61	72.611	Vertical	Pass
15.0MHz	1/#Mid	1717.5	-6.08	3.81	28.35	18.46	70.146	Vertical	Pass
Band		1745	-5.74	3.96	28.22	18.52	71.121	Vertical	Pass
QPSK		1772.5	-5.53	4	28.16	18.63	72.946	Vertical	Pass
20.0MHz	1/#Mid	1720	-6.30	3.79	28.34	18.25	66.834	Vertical	Pass
Band		1745	-5.83	3.95	28.22	18.44	69.823	Vertical	Pass
QPSK		1770	-6.09	3.97	28.18	18.12	64.863	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	-5.78	3.76	28.24	18.70	74.131	Horizontal	Pass
		1745	-5.39	3.91	28.22	18.92	77.983	Horizontal	Pass
		1779.3	-5.57	3.93	28.2	18.70	74.131	Horizontal	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-6.17	3.77	28.23	18.29	67.453	Horizontal	Pass
		1745	-5.42	3.91	28.24	18.91	77.804	Horizontal	Pass
		1778.5	-5.71	3.94	28.25	18.60	72.444	Horizontal	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-5.59	3.77	28.31	18.95	78.524	Horizontal	Pass
		1745	-5.65	3.91	28.22	18.66	73.451	Horizontal	Pass
		1777.5	-5.32	3.94	28.2	19.08	80.910	Horizontal	Pass
1.4MHz Band 16 QAM	1/#Mid	1710.7	-6.00	3.76	28.24	18.48	70.469	Vertical	Pass
		1745	-6.92	3.91	28.22	17.39	54.828	Vertical	Pass
		1779.3	-6.59	3.93	28.2	17.68	58.614	Vertical	Pass
3.0MHz Band 16 QAM	1/#Mid	1711.5	-5.62	3.77	28.23	18.84	76.560	Vertical	Pass
		1745	-6.57	3.91	28.24	17.76	59.704	Vertical	Pass
		1778.5	-6.27	3.94	28.25	18.04	63.680	Vertical	Pass
5.0MHz Band 16 QAM	1/#Mid	1712.5	-5.57	3.77	28.31	18.97	78.886	Vertical	Pass
		1745	-5.75	3.91	28.22	18.56	71.779	Vertical	Pass
		1777.5	-5.70	3.94	28.2	18.56	71.779	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

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 2/4/5/7/41/66

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	-46.15	4.04	33.51	-16.68	-13	-3.68	Horizontal
3701.4	-52.01	4.04	33.51	-22.54	-13	-9.54	Vertical
5552.1	-51.79	5.24	35.84	-21.19	-13	-8.19	Vertical
5552.1	-53.63	5.24	35.84	-23.03	-13	-10.03	Horizontal
188.7	-38.29	1.43	16.02	-23.70	-13	-10.70	Vertical
267.0	-41.57	1.30	17.99	-24.88	-13	-11.88	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-52.21	4.04	33.56	-22.69	-13	-9.69	Horizontal
3760.0	-45.13	4.04	33.56	-15.61	-13	-2.61	Vertical
5640.0	-50.08	5.24	35.91	-19.41	-13	-6.41	Vertical
5640.0	-52.50	5.24	35.91	-21.83	-13	-8.83	Horizontal
180.8	-40.92	1.62	16.97	-25.57	-13	-12.57	Vertical
287.3	-44.41	1.74	15.98	-30.18	-13	-17.18	Horizontal
Test Results for High Channel 1909.3MHz							
3818.6	-45.28	4.04	34.00	-15.32	-13	-2.32	Horizontal
3818.6	-52.00	4.04	34.00	-22.04	-13	-9.04	Vertical
5727.9	-45.34	5.24	36.04	-14.54	-13	-1.54	Vertical
5727.9	-52.02	5.24	36.04	-21.22	-13	-8.22	Horizontal
195.6	-38.00	1.42	17.29	-22.13	-13	-9.13	Vertical
388.5	-42.90	1.50	17.90	-26.49	-13	-13.49	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	-47.20	4.07	33.54	-17.73	-13	-4.73	Horizontal
3720.0	-49.70	4.07	33.54	-20.23	-13	-7.23	Vertical
5580.0	-46.54	5.28	35.86	-15.96	-13	-2.96	Vertical
5580.0	-51.32	5.28	35.86	-20.74	-13	-7.74	Horizontal
204.2	-44.10	1.58	16.89	-28.78	-13	-15.78	Vertical
420.6	-43.75	1.76	17.26	-28.25	-13	-15.25	Horizontal
Test Results for Mid Channel 1880MHz							
3760.0	-50.91	4.04	33.56	-21.39	-13	-8.39	Horizontal
3760.0	-47.44	4.04	33.56	-17.92	-13	-4.92	Vertical
5640.0	-47.47	5.24	35.91	-16.80	-13	-3.80	Vertical
5640.0	-53.75	5.24	35.91	-23.08	-13	-10.08	Horizontal
196.4	-45.00	1.46	16.27	-30.19	-13	-17.19	Vertical
340.9	-41.75	1.59	15.15	-28.19	-13	-15.19	Horizontal
Test Results for High Channel 1900MHz							
3800.0	-47.87	4.04	34.00	-17.91	-13	-4.91	Horizontal
3800.0	-51.64	4.04	34.00	-21.68	-13	-8.68	Vertical
5700.0	-46.12	5.24	36.04	-15.32	-13	-2.32	Vertical
5700.0	-51.70	5.24	36.04	-20.90	-13	-7.90	Horizontal
205.6	-38.97	1.36	17.39	-22.93	-13	-9.93	Vertical
379.3	-36.47	1.66	15.39	-22.74	-13	-9.74	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	-50.22	4.02	29.80	-24.44	-13	-11.44	Horizontal
3421.4	-49.37	4.02	29.80	-23.59	-13	-10.59	Vertical
5132.1	-52.09	5.24	35.84	-21.49	-13	-8.49	Vertical
5132.1	-52.93	5.24	35.84	-22.33	-13	-9.33	Horizontal
195.5	-35.46	1.68	16.04	-21.10	-13	-8.10	Vertical
293.8	-42.63	1.78	17.74	-26.67	-13	-13.67	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-52.78	4.03	30.00	-26.81	-13	-13.81	Horizontal
3465.0	-45.88	4.03	30.00	-19.91	-13	-6.91	Vertical
5197.5	-48.85	5.25	35.86	-18.24	-13	-5.24	Vertical
5197.5	-51.10	5.25	35.86	-20.49	-13	-7.49	Horizontal
204.8	-41.78	1.72	17.69	-25.81	-13	-12.81	Vertical
428.4	-35.90	1.62	16.02	-21.49	-13	-8.49	Horizontal
Test Results for High Channel 1754.3MHz							
3508.6	-47.60	4.05	30.01	-21.64	-13	-8.64	Horizontal
3508.6	-50.51	4.05	30.01	-24.55	-13	-11.55	Vertical
5262.9	-51.90	5.26	35.86	-21.30	-13	-8.30	Vertical
5262.9	-53.44	5.26	35.86	-22.84	-13	-9.84	Horizontal
206.1	-39.79	1.80	16.69	-24.90	-13	-11.90	Vertical
367.8	-43.74	1.75	16.66	-28.84	-13	-15.84	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	-48.03	4.02	29.80	-22.25	-13	-9.25	Horizontal
3440.0	-53.48	4.02	29.80	-27.70	-13	-14.70	Vertical
5160.0	-47.51	5.24	35.84	-16.91	-13	-3.91	Vertical
5160.0	-53.08	5.24	35.84	-22.48	-13	-9.48	Horizontal
208.3	-39.24	1.57	17.26	-23.55	-13	-10.55	Vertical
347.7	-41.20	1.78	16.35	-26.63	-13	-13.63	Horizontal
Test Results for Mid Channel 1732.5MHz							
3465.0	-46.59	4.03	30.00	-20.62	-13	-7.62	Horizontal
3465.0	-50.56	4.03	30.00	-24.59	-13	-11.59	Vertical
5197.5	-48.16	5.25	35.86	-17.55	-13	-4.55	Vertical
5197.5	-51.62	5.25	35.86	-21.01	-13	-8.01	Horizontal
199.8	-42.18	1.44	17.95	-25.67	-13	-12.67	Vertical
339.9	-42.51	1.65	16.09	-28.07	-13	-15.07	Horizontal
Test Results for High Channel 1745MHz							
3490.0	-50.66	2.91	27.68	-25.89	-13	-12.89	Horizontal
3490.0	-49.67	2.91	27.68	-24.90	-13	-11.90	Vertical
5235.0	-50.04	5.26	35.86	-19.44	-13	-6.44	Vertical
5235.0	-52.97	5.26	35.86	-22.37	-13	-9.37	Horizontal
194.7	-39.62	1.61	16.85	-24.38	-13	-11.38	Vertical
325.4	-39.22	1.61	15.19	-25.64	-13	-12.64	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	-47.21	2.78	27.50	-22.49	-13	-9.49	Horizontal
1649.4	-46.57	2.78	27.50	-21.85	-13	-8.85	Vertical
2474.1	-52.53	2.90	27.80	-27.63	-13	-14.63	Vertical
2474.1	-51.05	2.90	27.80	-26.15	-13	-13.15	Horizontal
197.5	-40.30	1.76	17.59	-24.47	-13	-11.47	Vertical
462.6	-43.74	1.63	15.87	-29.50	-13	-16.50	Horizontal
Test Results For Mid Channel 836.5MHz							
1673.0	-53.67	2.80	27.48	-28.99	-13	-15.99	Horizontal
1673.0	-45.32	2.80	27.48	-20.64	-13	-7.64	Vertical
2509.5	-51.34	2.91	27.70	-26.55	-13	-13.55	Vertical
2509.5	-53.86	2.91	27.70	-29.07	-13	-16.07	Horizontal
190.0	-36.37	1.61	15.68	-22.30	-13	-9.30	Vertical
254.7	-35.22	1.59	17.52	-19.30	-13	-6.30	Horizontal
Test Results for High Channel 848.3MHz							
1696.6	-51.44	2.82	27.43	-26.83	-13	-13.83	Horizontal
1696.6	-53.29	2.82	27.43	-28.68	-13	-15.68	Vertical
2544.9	-45.02	2.92	27.74	-20.20	-13	-7.20	Vertical
2544.9	-53.82	2.92	27.74	-29.00	-13	-16.00	Horizontal
198.6	-44.55	1.69	16.67	-29.56	-13	-16.56	Vertical
298.8	-41.72	1.70	17.18	-26.24	-13	-13.24	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	-46.83	2.78	27.50	-22.11	-13	-9.11	Horizontal
1658.0	-46.45	2.78	27.50	-21.73	-13	-8.73	Vertical
2487.0	-44.14	2.90	27.80	-19.24	-13	-6.24	Vertical
2487.0	-51.77	2.90	27.80	-26.87	-13	-13.87	Horizontal
180.2	-43.41	1.71	15.57	-29.55	-13	-16.55	Vertical
282.9	-42.73	1.34	16.40	-27.67	-13	-14.67	Horizontal
Test Results for Mid Channel 836.5MHz							
1673.0	-47.52	2.80	27.48	-22.84	-13	-9.84	Horizontal
1673.0	-47.65	2.80	27.48	-22.97	-13	-9.97	Vertical
2509.5	-51.48	2.91	27.70	-26.69	-13	-13.69	Vertical
2509.5	-53.79	2.91	27.70	-29.00	-13	-16.00	Horizontal
191.4	-44.51	1.44	17.04	-28.91	-13	-15.91	Vertical
371.8	-38.13	1.76	17.62	-22.27	-13	-9.27	Horizontal
Test Results for High Channel 844MHz							
1688.0	-49.07	2.82	27.43	-24.46	-13	-11.46	Horizontal
1688.0	-45.16	2.82	27.43	-20.55	-13	-7.55	Vertical
2532.0	-44.86	2.92	27.74	-20.04	-13	-7.04	Vertical
2532.0	-53.75	2.92	27.74	-28.93	-13	-15.93	Horizontal
189.7	-42.48	1.74	17.70	-26.52	-13	-13.52	Vertical
268.1	-44.20	1.41	17.46	-28.14	-13	-15.14	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	-63.25	5.23	35.81	-32.67	-25	-7.67	Horizontal
5005.0	-61.18	5.23	35.81	-30.60	-25	-5.60	Vertical
7507.5	-60.56	5.67	36.85	-29.38	-25	-4.38	Vertical
7507.5	-64.79	5.67	36.85	-33.61	-25	-8.61	Horizontal
196.7	-47.45	1.73	17.97	-31.21	-25	-6.21	Vertical
293.4	-51.31	1.38	15.11	-37.58	-25	-12.58	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-60.08	5.23	35.82	-29.49	-25	-4.49	Horizontal
5070.0	-60.49	5.23	35.82	-29.90	-25	-4.90	Vertical
7605.0	-62.91	5.67	36.85	-31.73	-25	-6.73	Vertical
7605.0	-63.26	5.67	36.85	-32.08	-25	-7.08	Horizontal
188.1	-54.65	1.77	16.17	-40.24	-25	-15.24	Vertical
328.1	-54.79	1.63	15.21	-41.21	-25	-16.21	Horizontal
Test Results for High Channel 2567.5MHz							
5135.0	-63.57	5.24	35.83	-32.98	-25	-7.98	Horizontal
5135.0	-62.49	5.24	35.83	-31.90	-25	-6.90	Vertical
7702.5	-59.89	5.68	36.87	-28.70	-25	-3.70	Vertical
7702.5	-63.13	5.68	36.87	-31.94	-25	-6.94	Horizontal
177.3	-47.08	1.58	17.56	-31.10	-25	-6.10	Vertical
373.3	-47.19	1.45	16.58	-32.06	-25	-7.06	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	-60.02	5.23	35.82	-29.43	-25	-4.43	Horizontal
5020.0	-64.52	5.23	35.82	-33.93	-25	-8.93	Vertical
7530.0	-61.72	5.67	36.86	-30.53	-25	-5.53	Vertical
7530.0	-60.94	5.67	36.86	-29.75	-25	-4.75	Horizontal
183.2	-48.78	1.63	15.76	-34.65	-25	-9.65	Vertical
313.4	-45.19	1.71	15.44	-31.46	-25	-6.46	Horizontal
Test Results for Mid Channel 2535MHz							
5070.0	-60.48	5.23	35.82	-29.89	-25	-4.89	Horizontal
5070.0	-62.83	5.23	35.82	-32.24	-25	-7.24	Vertical
7605.0	-60.98	5.67	36.85	-29.80	-25	-4.80	Vertical
7605.0	-61.02	5.67	36.85	-29.84	-25	-4.84	Horizontal
210.0	-47.15	1.79	16.84	-32.09	-25	-7.09	Vertical
416.0	-47.92	1.71	17.64	-31.99	-25	-6.99	Horizontal
Test Results for High Channel 2560MHz							
5120.0	-63.81	5.24	35.83	-33.22	-25	-8.22	Horizontal
5120.0	-62.49	5.24	35.83	-31.90	-25	-6.90	Vertical
7680.0	-64.87	5.70	36.88	-33.69	-25	-8.69	Vertical
7680.0	-59.17	5.70	36.88	-27.99	-25	-2.99	Horizontal
181.1	-48.81	1.79	16.84	-33.75	-25	-8.75	Vertical
354.7	-47.84	1.71	17.64	-31.91	-25	-6.91	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 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
4997.0	-62.25	5.23	35.81	-31.67	-25	-6.67	Horizontal
4997.0	-59.97	5.23	35.81	-29.39	-25	-4.39	Vertical
7495.5	-62.61	5.67	36.85	-31.43	-25	-6.43	Vertical
7495.5	-60.11	5.67	36.85	-28.93	-25	-3.93	Horizontal
435.3	-47.66	1.38	15.98	-33.06	-25	-8.06	Vertical
465.8	-46.71	1.62	15.66	-32.67	-25	-7.67	Horizontal
Test Results for Mid Channel 2593MHz							
5186.0	-61.73	5.23	35.82	-31.14	-25	-6.14	Horizontal
5186.0	-61.79	5.23	35.82	-31.20	-25	-6.20	Vertical
7779.0	-62.74	5.67	36.85	-31.56	-25	-6.56	Vertical
7779.0	-64.87	5.67	36.85	-33.69	-25	-8.69	Horizontal
510.4	-47.75	1.62	16.17	-33.20	-25	-8.20	Vertical
562.9	-44.72	1.74	17.63	-28.83	-25	-3.83	Horizontal
Test Results for High Channel 2687.5MHz							
5375.0	-63.47	5.24	35.83	-32.88	-25	-7.88	Horizontal
5375.0	-61.68	5.24	35.83	-31.09	-25	-6.09	Vertical
8062.5	-59.22	5.68	36.87	-28.03	-25	-3.03	Vertical
8062.5	-64.81	5.68	36.87	-33.62	-25	-8.62	Horizontal
197.6	-45.35	1.55	15.84	-31.06	-25	-6.06	Vertical
353.1	-46.45	1.51	17.06	-30.90	-25	-5.90	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
5012.0	-63.81	5.23	35.82	-33.22	-25	-8.22	Horizontal
5012.0	-60.35	5.23	35.82	-29.76	-25	-4.76	Vertical
7518.0	-61.21	5.67	36.86	-30.02	-25	-5.02	Vertical
7518.0	-60.74	5.67	36.86	-29.55	-25	-4.55	Horizontal
128.9	-44.82	1.43	15.51	-30.74	-25	-5.74	Vertical
344.8	-49.09	1.40	16.97	-33.52	-25	-8.52	Horizontal
Test Results for Mid Channel 2593MHz							
5186.0	-59.55	5.23	35.82	-28.96	-25	-3.96	Horizontal
5186.0	-61.94	5.23	35.82	-31.35	-25	-6.35	Vertical
7779.0	-61.50	5.67	36.85	-30.32	-25	-5.32	Vertical
7779.0	-60.43	5.67	36.85	-29.25	-25	-4.25	Horizontal
100.8	-44.05	1.77	16.72	-29.10	-25	-4.10	Vertical
263.5	-45.05	1.31	16.99	-29.37	-25	-4.37	Horizontal
Test Results for High Channel 2680MHz							
5360.0	-62.33	5.24	35.83	-31.74	-25	-6.74	Horizontal
5360.0	-60.86	5.24	35.83	-30.27	-25	-5.27	Vertical
8040.0	-63.84	5.70	36.88	-32.66	-25	-7.66	Vertical
8040.0	-63.41	5.70	36.88	-32.23	-25	-7.23	Horizontal
349.9	-49.98	1.70	15.73	-35.95	-25	-10.95	Vertical
110.3	-49.98	1.75	17.33	-34.40	-25	-9.40	Horizontal

Note: P_{Mea}(dBm)= Power(dBm)+ A_{Rpl} (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.

9.6 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	-50.71	4.02	29.80	-24.93	-13	-11.93	Horizontal
3421.4	-49.70	4.02	29.80	-23.92	-13	-10.92	Vertical
5132.1	-51.30	5.24	35.84	-20.70	-13	-7.70	Vertical
5132.1	-52.49	5.24	35.84	-21.89	-13	-8.89	Horizontal
112.6	-48.99	1.52	15.57	-34.94	-13	-21.94	Vertical
220.5	-44.11	1.33	17.14	-28.30	-13	-15.30	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-45.55	4.03	30.00	-19.58	-13	-6.58	Horizontal
3490.0	-50.00	4.03	30.00	-24.03	-13	-11.03	Vertical
5235.0	-49.42	5.25	35.86	-18.81	-13	-5.81	Vertical
5235.0	-54.44	5.25	35.86	-23.83	-13	-10.83	Horizontal
157.3	-51.87	1.53	17.13	-36.27	-13	-23.27	Vertical
213.1	-47.64	1.41	15.95	-33.10	-13	-20.10	Horizontal
Test Results for High Channel 1779.3MHz							
3558.6	-54.09	4.05	30.01	-28.13	-13	-15.13	Horizontal
3558.6	-52.02	4.05	30.01	-26.06	-13	-13.06	Vertical
5337.9	-50.18	5.26	35.86	-19.58	-13	-6.58	Vertical
5337.9	-50.35	5.26	35.86	-19.75	-13	-6.75	Horizontal
170.6	-53.69	1.44	15.51	-39.62	-13	-26.62	Vertical
169.0	-52.88	1.78	15.76	-38.90	-13	-25.90	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	-50.99	4.02	29.80	-25.21	-13	-12.21	Horizontal
3440.0	-47.70	4.02	29.80	-21.92	-13	-8.92	Vertical
5160.0	-52.38	5.24	35.84	-21.78	-13	-8.78	Vertical
5160.0	-50.02	5.24	35.84	-19.42	-13	-6.42	Horizontal
268.8	-48.59	1.62	17.02	-33.19	-13	-20.19	Vertical
161.4	-51.69	1.32	17.31	-35.70	-13	-22.70	Horizontal
Test Results for Mid Channel 1745MHz							
3490.0	-45.20	4.03	30.00	-19.23	-13	-6.23	Horizontal
3490.0	-53.16	4.03	30.00	-27.19	-13	-14.19	Vertical
5235.0	-54.78	5.25	35.86	-24.17	-13	-11.17	Vertical
5235.0	-53.24	5.25	35.86	-22.63	-13	-9.63	Horizontal
159.9	-54.37	1.45	15.17	-40.65	-13	-27.65	Vertical
172.1	-54.57	1.48	17.82	-38.23	-13	-25.23	Horizontal
Test Results for High Channel 1770MHz							
3540.0	-46.58	2.91	27.68	-21.81	-13	-8.81	Horizontal
3540.0	-52.27	2.91	27.68	-27.50	-13	-14.50	Vertical
5310.0	-49.43	5.26	35.86	-18.83	-13	-5.83	Vertical
5310.0	-53.07	5.26	35.86	-22.47	-13	-9.47	Horizontal
197.3	-47.72	1.76	16.38	-33.10	-13	-20.10	Vertical
158.5	-54.91	1.43	17.13	-39.21	-13	-26.21	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

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 3.23V, Normal, DC 3.8V and High voltage, DC 4.37V.

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 2/4/5/7/41/66

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]
3.23	1880	12.4	0.006616	2.5
3.8	1880	14.1	0.007480	2.5
4.37	1880	13.6	0.007216	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	12.2	0.006504	2.5
Extreme (50C)	1880	11.9	0.006317	2.5
Extreme (40C)	1880	13.5	0.007187	2.5
Extreme (30C)	1880	13.0	0.006915	2.5
Extreme (10C)	1880	13.8	0.007342	2.5
Extreme (0C)	1880	11.8	0.006298	2.5
Extreme (-10C)	1880	12.6	0.006682	2.5
Extreme (-20C)	1880	14.5	0.007728	2.5
Extreme (-30C)	1880	15.0	0.007993	2.5

Band 2 16QAM, (5MHz BANDWIDTH RB size 25 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.23	1880	9.9	0.005292	2.5
3.8	1880	8.5	0.004524	2.5
4.37	1880	7.6	0.004049	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1880	9.7	0.005136	2.5
Extreme (50C)	1880	8.9	0.004752	2.5
Extreme (40C)	1880	7.8	0.004148	2.5
Extreme (30C)	1880	8.7	0.004647	2.5
Extreme (10C)	1880	9.1	0.004824	2.5
Extreme (0C)	1880	8.4	0.004480	2.5
Extreme (-10C)	1880	8.6	0.004585	2.5
Extreme (-20C)	1880	8.4	0.004487	2.5
Extreme (-30C)	1880	7.7	0.004087	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]
3.23	1732.5	8.6	0.004936	2.5
3.8	1732.5	8.8	0.005106	2.5
4.37	1732.5	8.1	0.004660	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	8.8	0.005106	2.5
Extreme (50C)	1732.5	8.5	0.004880	2.5
Extreme (40C)	1732.5	7.1	0.004099	2.5
Extreme (30C)	1732.5	6.2	0.003583	2.5
Extreme (10C)	1732.5	7.2	0.004137	2.5
Extreme (0C)	1732.5	9.6	0.005525	2.5
Extreme (-10C)	1732.5	8.1	0.004670	2.5
Extreme (-20C)	1732.5	7.2	0.004152	2.5
Extreme (-30C)	1732.5	8.7	0.005032	2.5

Band 4 16QAM, (5MHz BANDWIDTH RB size 25 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.23	1732.5	10.0	0.005801	2.5
3.8	1732.5	9.0	0.005215	2.5
4.37	1732.5	8.4	0.004855	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1732.5	9.6	0.005549	2.5
Extreme (50C)	1732.5	8.9	0.005138	2.5
Extreme (40C)	1732.5	7.6	0.004398	2.5
Extreme (30C)	1732.5	8.6	0.004959	2.5
Extreme (10C)	1732.5	8.9	0.005151	2.5
Extreme (0C)	1732.5	8.4	0.004821	2.5
Extreme (-10C)	1732.5	9.3	0.005367	2.5
Extreme (-20C)	1732.5	9.0	0.005211	2.5
Extreme (-30C)	1732.5	7.8	0.004529	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]
3.23	836.5	5.8	0.006944	2.5
3.8	836.5	7.2	0.008559	2.5
4.37	836.5	5.1	0.006039	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	5.6	0.006729	2.5
Extreme (50C)	836.5	5.5	0.006635	2.5
Extreme (40C)	836.5	6.6	0.007866	2.5
Extreme (30C)	836.5	6.4	0.007601	2.5
Extreme (10C)	836.5	5.8	0.006895	2.5
Extreme (0C)	836.5	5.5	0.006616	2.5
Extreme (-10C)	836.5	5.7	0.006788	2.5
Extreme (-20C)	836.5	5.8	0.006974	2.5
Extreme (-30C)	836.5	6.1	0.007237	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]
3.23	836.5	5.6	0.006674	2.5
3.8	836.5	7.1	0.008459	2.5
4.37	836.5	4.9	0.005803	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	836.5	6.0	0.007151	2.5
Extreme (50C)	836.5	6.0	0.007218	2.5
Extreme (40C)	836.5	6.1	0.007236	2.5
Extreme (30C)	836.5	6.6	0.007895	2.5
Extreme (10C)	836.5	5.5	0.006585	2.5
Extreme (0C)	836.5	4.8	0.005778	2.5
Extreme (-10C)	836.5	5.8	0.006911	2.5
Extreme (-20C)	836.5	5.8	0.006885	2.5
Extreme (-30C)	836.5	6.8	0.008108	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]
3.23	2535	9.5	0.003759	2.5
3.8	2535	9.3	0.003662	2.5
4.37	2535	8.5	0.003351	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	9.0	0.003531	2.5
Extreme (50C)	2535	9.0	0.003546	2.5
Extreme (40C)	2535	8.1	0.003214	2.5
Extreme (30C)	2535	8.5	0.003340	2.5
Extreme (10C)	2535	8.2	0.003245	2.5
Extreme (0C)	2535	8.6	0.003392	2.5
Extreme (-10C)	2535	9.3	0.003664	2.5
Extreme (-20C)	2535	9.0	0.003556	2.5
Extreme (-30C)	2535	8.4	0.003294	2.5

Band 7 16QAM, (5MHz BANDWIDTH RB size 25 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.23	2535	7.0	0.002765	2.5
3.8	2535	6.5	0.002555	2.5
4.37	2535	5.2	0.002067	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2535	6.8	0.002692	2.5
Extreme (50C)	2535	5.1	0.002013	2.5
Extreme (40C)	2535	5.2	0.002051	2.5
Extreme (30C)	2535	6.6	0.002623	2.5
Extreme (10C)	2535	6.2	0.002434	2.5
Extreme (0C)	2535	5.1	0.002008	2.5
Extreme (-10C)	2535	5.4	0.002122	2.5
Extreme (-20C)	2535	5.5	0.002163	2.5
Extreme (-30C)	2535	5.3	0.002096	2.5

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

10.5 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]
3.23	2593	8.5	0.003286	2.5
3.8	2593	6.2	0.002380	2.5
4.37	2593	7.5	0.002894	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2593	7.5	0.002898	2.5
Extreme (50C)	2593	4.7	0.001817	2.5
Extreme (40C)	2593	5.8	0.002249	2.5
Extreme (30C)	2593	5.0	0.001916	2.5
Extreme (10C)	2593	6.0	0.002320	2.5
Extreme (0C)	2593	5.2	0.001996	2.5
Extreme (-10C)	2593	9.6	0.003713	2.5
Extreme (-20C)	2593	10.8	0.004150	2.5
Extreme (-30C)	2593	5.7	0.002192	2.5

Band 41 16QAM, (5MHz BANDWIDTH RB size 25 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.23	2593	8.2	0.003145	2.5
3.8	2593	6.5	0.002491	2.5
4.37	2593	6.5	0.002489	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	2593	7.7	0.002984	2.5
Extreme (50C)	2593	5.0	0.001910	2.5
Extreme (40C)	2593	5.3	0.002061	2.5
Extreme (30C)	2593	5.0	0.001914	2.5
Extreme (10C)	2593	6.4	0.002478	2.5
Extreme (0C)	2593	4.4	0.001695	2.5
Extreme (-10C)	2593	10.0	0.003847	2.5
Extreme (-20C)	2593	10.3	0.003988	2.5
Extreme (-30C)	2593	6.6	0.002557	2.5

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

10.6 LTE BAND 66

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

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.23	1745	12.7	0.00728	2.5
3.8	1745	13.9	0.00799	2.5
4.37	1745	13.6	0.00778	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1745	7.7	0.004423	2.5
Extreme (50C)	1745	4.4	0.002519	2.5
Extreme (40C)	1745	4.9	0.002822	2.5
Extreme (30C)	1745	4.9	0.002797	2.5
Extreme (10C)	1745	6.0	0.003432	2.5
Extreme (0C)	1745	5.0	0.002880	2.5
Extreme (-10C)	1745	9.3	0.005336	2.5
Extreme (-20C)	1745	11.0	0.006330	2.5
Extreme (-30C)	1745	6.0	0.003455	2.5

Band 66 16QAM, (5MHz BANDWIDTH RB size 25 RB Offset 0)

Frequency error vs. Voltage

Voltage [Vdc]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
3.23	1745	13.0	0.007424	2.5
3.8	1745	13.9	0.007963	2.5
4.37	1745	13.4	0.007682	2.5

Frequency error vs. Temperature

Temperature [°C]	Frequency [MHz]	Frequency* Error[Hz]	Frequency Error[ppm]	Limit [ppm]
Normal (25C)	1745	7.4	0.004232	2.5
Extreme (50C)	1745	4.3	0.002475	2.5
Extreme (40C)	1745	5.4	0.003085	2.5
Extreme (30C)	1745	4.6	0.002612	2.5
Extreme (10C)	1745	6.6	0.003784	2.5
Extreme (0C)	1745	5.0	0.002847	2.5
Extreme (-10C)	1745	9.1	0.005233	2.5
Extreme (-20C)	1745	10.9	0.006262	2.5
Extreme (-30C)	1745	6.2	0.003561	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.

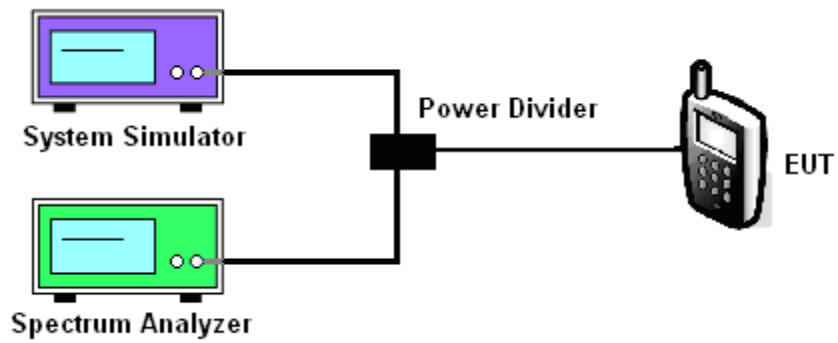
11.2 Measuring Instruments

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 2/4/5/7/41/66

Test data reference attachment.

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