

FCC TEST REPORT

Product Name: Smart Phone

Trade Mark: BLU

Model No.: J12

Report Number: 24051811556RFM-2

Test Standards: FCC 47 CFR Part 22
FCC 47 CFR Part 24
FCC 47 CFR Part 27

FCC ID: YHLBLU12H

Test Result: PASS

Date of Issue: July 11, 2024

Prepared for:

BLU Products, Inc.

8600 NW 36th Street, Suite #300 | Miami, FL 33166

Prepared by:

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UTTR-RF-FCC4G-V1.1

Version

Version No.	Date	Description
V1.0	July 11, 2024	Original



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UTTR-RF-FCC4G-V1.1

CONTENTS

1. GENERAL INFORMATION	5
1.1 CLIENT INFORMATION	5
1.2 EUT INFORMATION	5
1.2.1 GENERAL DESCRIPTION OF EUT	5
1.2.2 DESCRIPTION OF ACCESSORIES.....	5
1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD	6
1.4 DESCRIPTION OF SUPPORT UNITS	9
1.5 TEST LOCATION.....	9
1.6 TEST FACILITY.....	9
1.7 DEVIATION FROM STANDARDS	10
1.8 ABNORMALITIES FROM STANDARD CONDITIONS.....	10
1.9 OTHER INFORMATION REQUESTED BY THE CUSTOMER	10
1.10 MEASUREMENT UNCERTAINTY	10
2. TEST SUMMARY	11
3. EQUIPMENT LIST	15
4. TEST CONFIGURATION	16
4.1 ENVIRONMENTAL CONDITIONS FOR TESTING	16
4.2 TEST SETUP	16
4.2.1 FOR RADIATED EMISSIONS TEST SETUP	16
4.2.2 FOR CONDUCTED RF TEST SETUP	17
4.3 TEST CHANNELS	19
4.4 SYSTEM TEST CONFIGURATION	21
4.5 PRE-SCAN	22
5. RADIO TECHNICAL REQUIREMENTS SPECIFICATION	25
5.1 REFERENCE DOCUMENTS FOR TESTING	25
5.2 CONDUCTED OUTPUT POWER	25
5.2.1 LTE BAND 2	26
5.2.2 LTE BAND 4	27
5.2.3 LTE BAND 5	28
5.2.4 LTE BAND 7	29
5.2.5 LTE BAND 12	30
5.2.6 LTE BAND 17	31
5.2.7 LTE BAND 66	32
5.2.8 LTE BAND 71	33
5.3 ERP OR EIRP	34
5.3.1 LTE BAND 2	35
5.3.2 LTE BAND 4	36
5.3.3 LTE BAND 5	37
5.3.4 LTE BAND 7	38
5.3.5 LTE BAND 12	39
5.3.6 LTE BAND 17	40
5.3.7 LTE BAND 66	40
5.3.8 LTE BAND 71	41
5.4 PEAK-TO-AVERAGE RATIO	42
5.5 99%&26dB BANDWIDTH.....	43
5.6 BAND EDGE AT ANTENNA TERMINALS	44
5.7 SPURIOUS EMISSIONS AT ANTENNA TERMINALS	45
5.8 FIELD STRENGTH OF SPURIOUS RADIATION.....	46
5.8.1 LTE BAND 2	47
5.8.2 LTE BAND 4	48
5.8.3 LTE BAND 5	49
5.8.4 LTE BAND 7	50
5.8.5 LTE BAND 12	51

5.8.6 LTE BAND 1752

5.8.7 LTE BAND 6653

5.8.8 LTE BAND 7154

5.9 FREQUENCY STABILITY55

APPENDIX 1 PHOTOS OF TEST SETUP56

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS56



1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	BLU Products, Inc.
Address of Applicant:	8600 NW 36th Street, Suite #300 Miami, FL 33166
Manufacturer:	BLU Products, Inc.
Address of Manufacturer:	8600 NW 36th Street, Suite #300 Miami, FL 33166

1.2 EUT INFORMATION

1.2.1 General Description of EUT

Product Name:	Smart Phone		
Model No.:	J12		
Trade Mark:	BLU		
DUT Stage:	Identical Prototype		
EUT Supports Function: (Provided by the customer)	GSM Bands:	GSM850/PCS 1900	
	UTRA Bands:	WCDMA Band II/ Band IV/ Band V	
	E-UTRA Bands:	FDD Band 2/ Band 4/ Band 5/ Band 7/ Band 12/ Band 17/ Band 66/ Band 71	
	2.4 GHz ISM Band:	IEEE 802.11b/g/n Bluetooth 4.2	
	RNSS Band:	1559 MHz to 1610 MHz	BDS/ GPS/ GLONASS/ SBAS
	BSR:	VHF Band II	FM
Software Version:	BLU_J0230_V14.0.G.02.00_GENERIC_13-05-2024_20-17 (Provided by the customer)		
Hardware Version:	J518E_63AD3EFM20_G10U (Provided by the customer)		
Sample Received Date:	May 18, 2024		
Sample Tested Date:	May 23, 2024 to July 3, 2024		

Remark:

The above EUT's information was provided by customer. Please refer to the specifications or user's manual for more detailed description.

1.2.2 Description of Accessories

Adapter	
Model No.:	US-AR-1002
Input:	100-240 V~50/60 Hz 0.2 A
Output:	5.0 V $\equiv$ 1000 mA

Cable	
Connector:	USB Cable
Cable Type:	Unshielded without ferrite
Length:	1.0 Meter

Battery	
Model No.:	C906648400L
Battery Type:	Lithium-ion Battery
Rated Voltage:	3.85 Vdc
Typical Capacity:	4000 mAh
Rated Capacity:	3850 mAh

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1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Support Networks:	Single Carrier: LTE Band 2/4/5/7/12/17/66/71	
Type of Modulation:	QPSK, 16QAM, 64QAM	
Antenna Type: (Provided by the customer)	FPCB Antenna	
Antenna Gain: (Provided by the customer)	LTE Band 2:	-0.31 dBi
	LTE Band 4:	1.06 dBi
	LTE Band 5:	-2.75 dBi
	LTE Band 7:	-0.66 dBi
	LTE Band 12:	-2.32 dBi
	LTE Band 17:	-2.32 dBi
	LTE Band 66:	1.06 dBi
	LTE Band 71:	-2.89 dBi
Sample No.:	Radiated: S202405183455-ZJA02/9	
	Conducted: S202405183455-ZJA04/9	
Normal Test Voltage:	3.85 Vdc	
Extreme Test Voltage:	3.4 to 4.4Vdc	
Extreme Test Temperature:	-10 °C to +60 °C	

Summary of Results:								
Bands	BW	Modulation	Frequency Range	Max RF Output Power (dBm)		ERP/EIRP	99% BW	Emission Designator
	(MHz)		(MHz)	Conducted (Average)	ERP/EIRP (Average)	(W)	(MHz)	
2	1.4	QPSK	1850.7-1909.3	23.65	23.34	0.2158	1.0981	1M10G7D
		16QAM		22.40	22.09	0.1618	1.1061	1M11W7D
		64QAM		22.01	21.70	0.1479	1.0949	1M09W7D
	3	QPSK	1851.5-1908.5	23.71	23.40	0.2188	2.7201	2M72G7D
		16QAM		22.23	21.92	0.1556	2.7090	2M71W7D
		64QAM		21.98	21.67	0.1469	2.7079	2M71W7D
	5	QPSK	1852.5-1907.5	23.65	23.34	0.2158	4.5151	4M52G7D
		16QAM		22.11	21.80	0.1514	4.5326	4M53W7D
		64QAM		21.32	21.01	0.1262	4.5091	4M51W7D
	10	QPSK	1855.0-1905.0	23.50	23.19	0.2084	8.9964	9M00G7D
		16QAM		22.44	22.13	0.1633	9.0044	9M00W7D
		64QAM		22.18	21.87	0.1538	9.0112	9M01W7D
	15	QPSK	1857.5-1902.5	23.50	23.19	0.2084	13.502	13M4G7D
		16QAM		22.52	22.21	0.1663	13.520	13M5W7D
		64QAM		22.23	21.92	0.1556	13.512	13M5W7D
	20	QPSK	1860.0-1900.0	23.78	23.47	0.2223	18.084	18M1G7D
		16QAM		22.80	22.49	0.1774	18.027	18M0W7D
		64QAM		22.13	21.82	0.1521	18.030	18M0W7D
4	1.4	QPSK	1710.7-1754.3	23.09	24.15	0.2600	1.0981	1M09G7D
		16QAM		22.18	23.24	0.2109	1.1036	1M10W7D
		64QAM		21.15	22.21	0.1663	1.0939	1M09W7D

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	3	QPSK	1711.5-1753.5	23.15	24.21	0.2636	2.7166	2M72G7D
		16QAM		21.93	22.99	0.1991	2.7075	2M71W7D
		64QAM		21.31	22.37	0.1726	2.7127	2M71W7D
	5	QPSK	1712.5-1752.5	23.19	24.25	0.2661	4.5113	4M51G7D
		16QAM		21.77	22.83	0.1919	4.5309	4M53W7D
		64QAM		21.06	22.12	0.1629	4.5097	4M51W7D
	10	QPSK	1715-1750	23.19	24.25	0.2661	9.0166	9M02G7D
		16QAM		22.36	23.42	0.2198	9.0029	9M00W7D
		64QAM		21.88	22.94	0.1968	8.9936	8M99W7D
	15	QPSK	1717.5-1747.5	23.21	24.27	0.2673	13.509	13M5G7D
		16QAM		22.24	23.30	0.2138	13.510	13M5W7D
		64QAM		21.91	22.97	0.1982	13.516	13M5W7D
	20	QPSK	1720-1745	23.31	24.37	0.2735	18.034	18M0G7D
		16QAM		22.14	23.20	0.2089	18.031	18M0W7D
		64QAM		21.81	22.87	0.1936	18.016	18M0W7D
Bands	BW	Modulation	Frequency Range	Max RF Output Power (dBm)		ERP/EIRP	99% BW	Emission Designator
	(MHz)			Conducted (Average)	ERP/EIRP (Average)			
5	1.4	QPSK	824.7-848.3	22.90	18.00	0.0631	1.0960	1M10G7D
		16QAM		21.90	17.00	0.0501	1.1039	1M10W7D
		64QAM		21.13	16.23	0.0420	1.0963	1M10W7D
	3	QPSK	825.5-847.5	23.00	18.10	0.0646	2.7159	2M72G7D
		16QAM		21.70	16.80	0.0479	2.7107	2M71W7D
		64QAM		21.28	16.38	0.0435	2.7119	2M71W7D
	5	QPSK	826.5-846.5	23.02	18.12	0.0649	4.5156	4M52G7D
		16QAM		21.66	16.76	0.0474	4.5293	4M53W7D
		64QAM		20.82	15.92	0.0391	4.5058	4M51W7D
	10	QPSK	829-844	23.04	18.14	0.0652	9.0115	9M01G7D
		16QAM		22.03	17.13	0.0516	9.0064	9M01W7D
		64QAM		21.55	16.65	0.0462	8.9974	9M00W7D
7	5	QPSK	2502.5-2567.5	21.82	21.16	0.1306	4.5092	4M51G7D
		16QAM		19.60	18.94	0.0783	4.5059	4M51W7D
		64QAM		20.02	19.36	0.0863	4.5061	4M51W7D
	10	QPSK	2505-2565	21.90	21.24	0.1330	8.9998	9M00G7D
		16QAM		19.69	19.03	0.0800	9.0071	9M01W7D
		64QAM		19.77	19.11	0.0815	8.9944	8M99W7D
	15	QPSK	2507.5-2562.5	21.83	21.17	0.1309	13.528	13M5G7D
		16QAM		21.31	20.65	0.1161	13.510	13M5W7D
		64QAM		21.29	20.63	0.1156	13.523	13M5W7D
	20	QPSK	2510-2560	21.94	21.28	0.1343	18.023	18M0G7D
		16QAM		20.44	19.78	0.0951	18.020	18M0W7D
		64QAM		20.08	19.42	0.0875	18.034	18M0W7D

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12	1.4	QPSK	699.7-715.3	23.15	18.68	0.0738	1.0988	1M10G7D
		16QAM		22.23	17.76	0.0597	1.1013	1M10W7D
		64QAM		21.26	16.79	0.0478	1.0958	1M10W7D
	3	QPSK	700.5-714.5	23.08	18.61	0.0726	2.7150	2M72G7D
		16QAM		22.12	17.65	0.0582	2.7043	2M70W7D
		64QAM		21.41	16.94	0.0494	2.7098	2M71W7D
	5	QPSK	701.5-713.5	23.07	18.60	0.0724	4.5151	4M52G7D
		16QAM		21.66	17.19	0.0524	4.5347	4M53W7D
		64QAM		21.16	16.69	0.0467	4.5129	4M51W7D
	10	QPSK	704-711	23.16	18.69	0.0740	9.0005	9M00G7D
		16QAM		22.14	17.67	0.0585	8.9946	8M99W7D
		64QAM		21.64	17.17	0.0521	9.0018	9M00W7D
17	5	QPSK	706.5-713.5	22.90	18.43	0.0697	4.5081	4M51G7D
		16QAM		21.59	17.12	0.0515	4.5235	4M52W7D
		64QAM		21.12	16.65	0.0462	4.5078	4M51W7D
	10	QPSK	709-711	22.91	18.44	0.0698	8.9915	8M99G7D
		16QAM		21.67	17.20	0.0525	8.9904	8M99W7D
		64QAM		21.73	17.26	0.0532	8.9937	8M99W7D
66	1.4	QPSK	1710.7-1779.3	23.35	24.41	0.2761	1.0986	1M10G7D
		16QAM		22.29	23.35	0.2163	1.1034	1M10W7D
		64QAM		21.21	22.27	0.1687	1.0960	1M10W7D
	3	QPSK	1711.5-1778.5	23.40	24.46	0.2793	2.7167	2M72G7D
		16QAM		21.77	22.83	0.1919	2.7063	2M71W7D
		64QAM		21.38	22.44	0.1754	2.7124	2M71W7D
	5	QPSK	1712.5-1777.5	23.21	24.27	0.2673	4.5103	4M51G7D
		16QAM		21.95	23.01	0.2000	4.5316	4M53W7D
		64QAM		21.03	22.09	0.1618	4.5070	4M51W7D
	10	QPSK	1715-1775	23.38	24.44	0.2780	9.0092	9M01G7D
		16QAM		22.42	23.48	0.2228	9.0094	9M01W7D
		64QAM		21.95	23.01	0.2000	9.0143	9M01W7D
	15	QPSK	1717.5-1772.5	23.36	24.42	0.2767	13.492	13M5G7D
		16QAM		22.31	23.37	0.2173	13.513	13M5W7D
		64QAM		21.89	22.95	0.1972	13.503	13M5W7D
	20	QPSK	1720-1770	23.49	24.55	0.2851	18.037	18M0G7D
		16QAM		22.07	23.13	0.2056	18.032	18M0W7D
		64QAM		21.71	22.77	0.1892	17.989	18M0W7D
71	5	QPSK	665.5-695.5	22.88	17.84	0.0608	4.5114	4M51G7D
		16QAM		21.69	16.65	0.0462	4.5271	4M53W7D
		64QAM		21.23	16.19	0.0416	4.5107	4M51W7D
	10	QPSK	668-693	22.78	17.74	0.0594	8.9938	8M99G7D
		16QAM		21.94	16.90	0.0490	8.9916	8M99W7D
		64QAM		21.55	16.51	0.0448	8.9792	8M98W7D

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	15	QPSK	670.5-690.5	22.89	17.85	0.0610	13.512	13M5G7D
		16QAM		21.73	16.69	0.0467	13.503	13M5W7D
		64QAM		21.54	16.50	0.0447	13.505	13M5W7D
	20	QPSK	673-688	22.95	17.91	0.0618	18.030	18M0G7D
		16QAM		22.33	17.29	0.0536	18.002	18M0W7D
		64QAM		21.96	16.92	0.0492	18.009	18M0W7D

1.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested with associated equipment below.

1) Support Equipment

Description	Manufacturer	Model No.	Serial Number	Supplied by
--	--	--	--	--

2) Support Cable

Cable No.	Description	Connector	Length	Supplied by
1	Antenna Cable	SMA	0.1 Meter	UnionTrust

1.5 TEST LOCATION

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1.6 TEST FACILITY

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L9069

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

A2LA-Lab Certificate No.: 4312.01

Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

ISED Wireless Device Testing Laboratories

CAB identifier: CN0032

FCC Accredited Lab.

Designation Number: CN1194

Test Firm Registration Number: 259480

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1.7 DEVIATION FROM STANDARDS

None.

1.8 ABNORMALITIES FROM STANDARD CONDITIONS

None.

1.9 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

1.10 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Measurement Uncertainty
1	Conducted Output Power	±0.7 dB
2	99%&26dB Bandwidth	±1.86 %
3	Emission Mask	±2.7 dBm
4	Spurious emissions at antenna terminals	±2.7 dBm
5	Field strength of spurious radiation	30 MHz-1 GHz: ±4.9 dB 1 GHz-18 GHz: ±4.8 dB 18 GHz-40 GHz: ±5.1 dB
6	Frequency stability	±6.5 x 10 ⁻⁸
7	Humidity	±3.9 %
8	Temperature	±0.62 °C
9	DC Voltages	±0.68 %

2. TEST SUMMARY

FCC 47 CFR Part 24 Test Cases (Band 2)			
Test Item	Test Requirement	Test Method	Result
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 24.232(c)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 24.232(c)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 24.232(d)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) & FCC 47 CFR Part 24.238(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 24.238(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 24.235	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 27 Test Cases (LTE Band 4 & Band 66)			
Test Item	Test Requirement	Test Method	Result
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(d)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(d)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) & FCC 47 CFR Part 27.53(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(h)(1)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 22 Test Cases (Band 5)			
Test Item	Test Requirement	Test Method	Result
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 22.913(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 22.913(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 22.913(a)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 22.917(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 22.917(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 22.917(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 22.355	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 27 Test Cases (LTE Band 7)			
Test Item	Test Requirement	Test Method	Result
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(h)(2)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(h)(2)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(m)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(m)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(m)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 27 Test Cases (LTE Band 12& 17)			
Test Item	Test Requirement	Test Method	Result
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(c)(10)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(c)(10)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 27 Test Cases (LTE Band 13)			
Test Item	Test Requirement	Test Method	Result
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(b)(10)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(b)(10)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 27 Test Cases (LTE Band 71)			
Test Item	Test Requirement	Test Method	Result
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(c)(10)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(c)(10)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) & FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

Disclaimer and Explanations:

The declared of product specification and data (e.g. antenna gain, RF specification, etc) for EUT presented in the report are provided by the customer, and the customer takes all the responsibilities for the accuracy of product specification.

3. EQUIPMENT LIST

Radiated Emission Test Equipment List						
Used	Equipment	Manufacturer	Model No.	Serial Number	Cal. date	Cal. Due date
☒	3m SAC	ETS-LINDGREN	3M	Euroshiedpn-CT001270-1317	11-Nov-2023	10-Nov-2026
☒	Receiver	R&S	ESIB26	100114	27-Oct-2023	26-Oct-2024
☒	EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY51440197	29-Mar-2024	28-Mar-2025
☒	Broadband Antenna	ETS-LINDGREN	3142E	00201566	30-Oct-2023	29-Oct-2024
☒	6dB Attenuator	Talent	RA6A5-N-18	18103001	30-Oct-2023	29-Oct-2024
☒	Preamplifier	HP	8447F	2805A02960	31-Oct-2023	30-Oct-2024
☒	Double-Ridged Waveguide Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3117-PA	00201541	1-Apr-2024	31-Mar-2025
☒	Pre-amplifier	ETS-Lindgren	00118385	00201874	1-Apr-2024	31-Mar-2025
☒	Double-Ridged Waveguide Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3116C-PA	00202652	30-Oct-2023	29-Oct-2024
☒	Pre-amplifier	ETS-Lindgren	00118384	00202652	30-Oct-2023	29-Oct-2024
☒	Multi device Controller	ETS-LINDGREN	7006-001	00160105	N/A	N/A
☒	Test Software	Audix	e3	Software Version: 9.160323		

RF Conducted Test Equipment List						
Used	Equipment	Manufacturer	Model No.	Serial Number	Cal. date	Cal. Due date
☒	EXA Signal Analyzer	KEYSIGHT	N9010B	MY62060155	29-Mar-2024	28-Mar-2025
☒	DC Source	KIKUSUI	PWR400L	LK003024	N/A	N/A
☒	Digital multimeter	FLUKE	15B+	30701460WS15	31-Oct-2023	30-Oct-2024
☒	Temp & Humidity chamber	Votisch	VT4002	58566133290020	29-Mar-2024	28-Mar-2025
☒	Wideband Radio Communication Tester	R&S	CMW500	119583	29-Mar-2024	28-Mar-2025
☒	Wideband Radio Communication Tester	R&S	CMW500	120932	29-Mar-2024	28-Mar-2025

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UTTR-RF-FCC4G-V1.1

4. TEST CONFIGURATION

4.1 ENVIRONMENTAL CONDITIONS FOR TESTING

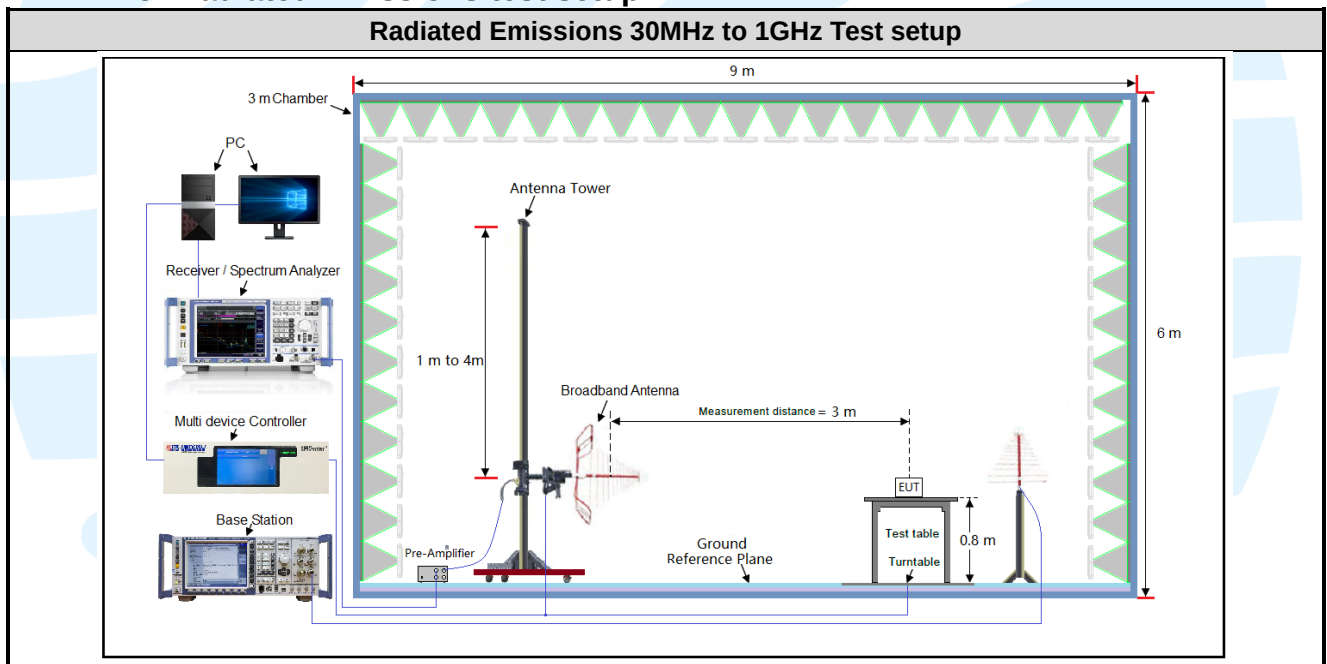
Test Environment	Selected Values During Tests		
Test Condition	Ambient		
	Temperature (°C)	Voltage (V)	Relative Humidity (%)
TN/VN	+15 to +35	3.85	20 to 75
TL/VL	-10	3.4	20 to 75
TH/VL	+60	3.4	20 to 75
TL/VH	-10	4.4	20 to 75
TH/VH	+60	4.4	20 to 75

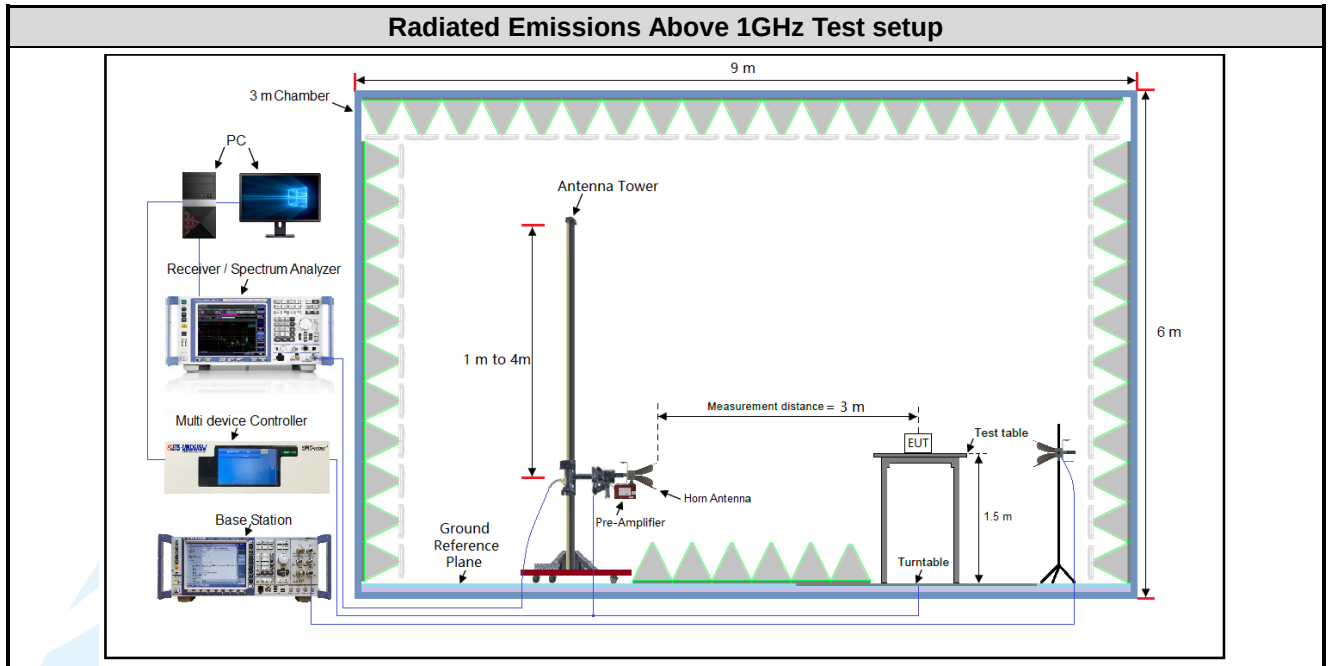
Remark:

- 1) The EUT just work in such extreme temperature of -10 °C to +60 °C and the extreme voltage of 3.4 V to 4.4 V, so here the EUT is tested in the temperature of -10 °C to +60 °C and the voltage of 3.4 V to 4.4 V.
- 2) VN: Normal Voltage; TN: Normal Temperature;
TL: Low Extreme Test Temperature; TH: High Extreme Test Temperature;
VL: Low Extreme Test Voltage; VH: High Extreme Test Voltage.

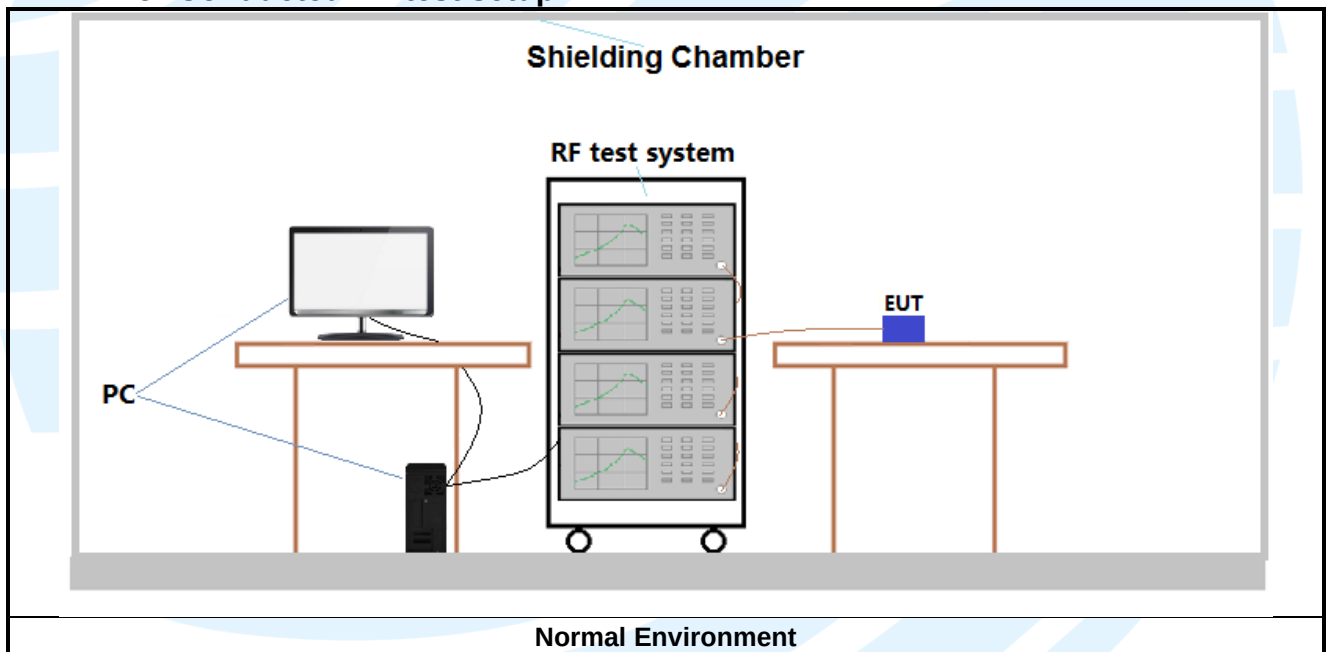
4.2 TEST SETUP

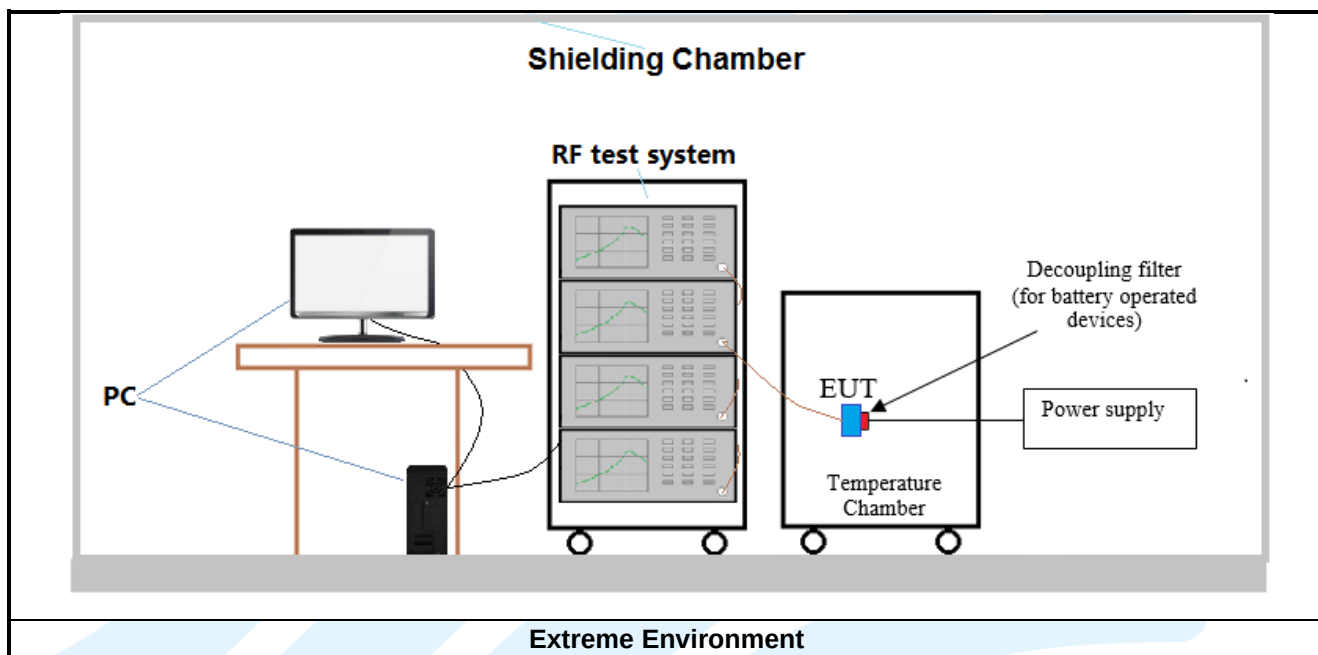
4.2.1 For Radiated Emissions test setup





4.2.2 For Conducted RF test setup





4.3 TEST CHANNELS

Band	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink (MHz)
LTE Band 2 TX: 1850-1910MHz	Low Range	1.4	18607	1850.7
		3	18615	1851.5
		5	18625	1852.5
		10	18650	1855
		15	18675	1857.5
		20	18700	1860
	Middle Range	1.4/3/5/10/15/20	18900	1880
	High Range	1.4	19193	1909.3
		3	19185	1908.5
		5	19175	1907.5
		10	19150	1905
		15	19125	1902.5
		20	19100	1900
LTE Band 4 TX: 1710-1755MHz	Low Range	1.4	19957	1710.7
		3	19965	1711.5
		5	19975	1712.5
		10	20000	1715
		15	20025	1717.5
		20	20050	1720
	Middle Range	1.4/3/5/10/ 15/20	20175	1732.5
	High Range	1.4	20393	1754.3
		3	20385	1753.5
		5	20375	1752.5
		10	20350	1750
		15	20325	1747.5
		20	20300	1745
LTE band 5 TX: 824–849MHz	Low Range	1.4	20407	824.7
		3	20415	825.5
		5	20425	826.5
		10	20450	829
	Middle Range	1.4/3/5/10	20525	836.5
	High Range	1.4	20643	848.3
		3	20635	847.5
		5	20625	846.5
		10	20600	844
LTE Band 7 TX: 2500-2570MHz	Low Range	5	20775	2502.5
		10	20800	2505
		15	20825	2507.5
		20	20850	2510
	Middle Range	5/10/15/20	21100	2535
	High Range	5	21425	2567.5
		10	21400	2565
		15	21375	2562.5

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UTTR-RF-FCC4G-V1.1

		20	21350	2560
LTE Band 12 TX: 699-716MHz	Low Range	1.4	23017	699.7
		3	23025	700.5
		5	23035	701.5
		10	23060	704
	Middle Range	1.4/3/5/10	23095	707.5
	High Range	1.4	23173	715.3
		3	23165	714.5
		5	23155	713.5
		10	23130	711
LTE Band 17 TX: 704-716MHz	Low Range	5	23755	706.5
		10	23780	709
	Middle Range	5/10	23790	710
	High Range	5	23825	713.5
		10	23800	711
LTE Band 66 TX: 1710-1780MHz	Low Range	1.4	131979	1710.7
		3	131987	1711.5
		5	131997	1712.5
		10	132022	1715
		15	132047	1717.5
		20	132072	1720
	Middle Range	1.4/3/5/10/ 15/20	132322	1745
	High Range	1.4	132665	1779.3
		3	132657	1778.5
		5	132647	1777.5
		10	132622	1775
		15	132597	1772.5
		20	132572	1770
LTE Band 71 TX: 663-698MHz	Low Range	5	133147	665.5
		10	133172	668
		15	133197	670.5
		20	133222	673
	Middle Range	5/10/15	133297	680.5
		20	133322	683
	High Range	5	133447	695.5
		10	133422	693
		15	133397	690.5
		20	133372	688

4.4 SYSTEM TEST CONFIGURATION

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, radiated emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario. Only the worst case data were recorded in this test report.

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, X/Y/Z axis, and antenna ports.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000MHz. The resolution is 1 MHz or greater for frequencies above 1000MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

4.5 PRE-SCAN

Pre-scan all bandwidth and RB, find worse case mode are chosen to the report, the LTE worse case mode applicability and tested channel detail as below:

Item	Band	Bandwidth(MHz)						Modulation			RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Conducted output power	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☒	☒	☒	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒
	66	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
99%&26dB Bandwidth	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☐	☐	☒	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☐	☐	☒	☒	☒	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☐	☐	☒	☒	☒	☒
	66	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒

Item	Band	Bandwidth(MHz)						Modulation			RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
peak-to-average ratio	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☐	☒	☐
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☐	☒	☐
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☐	☐	☒	☐	☒	☐
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☐	☒	☐
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☐	☐	☒	☐	☒	☐
	17	-	-	☒	☒	-	-	☒	☒	☒	☐	☐	☒	☐	☒	☐
	66	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☐	☒	☐
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☐	☒	☐
Band Edge at antenna terminals	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☒	☐	☒	☒	☐	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☐	☒	☒	☐	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☒	☐	☒	☒	☐	☒
	66	☒	☒	☒	☒	☒	--	☒	☒	☒	☒	☐	☒	☒	☐	☒
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
Item	Band	Bandwidth(MHz)						Modulation			RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Spurious emissions at antenna terminals	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☒	☐	☐	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
	66	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
Field strength of spurious radiation	2	☐	☐	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	4	☐	☐	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	5	☐	☐	☐	☒	--	--	☒	☐	☐	☒	☐	☐	☒	☒	☒

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	66	☐	☐	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	71	-	-	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
Frequency stability	2	☐	☐	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
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	5	☐	☐	☐	☒	--	--	☒	☐	☐	☐	☐	☒	☐	☒	☐
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	12	☐	☐	☐	☒	-	-	☒	☐	☐	☐	☐	☒	☐	☒	☐
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	66	☐	☐	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	71	-	-	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐

Remark:

The mark "☒" means is chosen for testing; The mark "☐" means is not chosen for testing;

The mark "-" means is not supported bandwidth

5. RADIO TECHNICAL REQUIREMENTS SPECIFICATION

5.1 REFERENCE DOCUMENTS FOR TESTING

No.	Identity	Document Title
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC 47 CFR Part 22	Public Mobile Services
3	FCC 47 CFR Part 27	Miscellaneous Wireless Communications Services
4	FCC 47 CFR Part 24	Personal Communications Services
5	ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
6	KDB 971168 D01	KDB 971168 D01 Power Meas License Digital Systems v03r01

5.2 CONDUCTED OUTPUT POWER

Test Requirement: FCC 47 CFR Part 2.1046(a)
LTE Band 2: FCC 47 CFR Part 24.232(c)
LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.50(d)(4)
LTE Band 5: FCC 47 CFR Part 22.913(a)
LTE Band 7: FCC 47 CFR Part 27.50(h)(2)
LTE Band 12 & Band 17 & Band 71: FCC 47 CFR Part 27.50(c)(10)
Test Method: KDB 971168 D01v03r01 & ANSI C63.26-2015

Limit:

FCC 47 CFR Part 22.913(a):

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

FCC 47 CFR Part 24.232(c):

Mobile and portable stations are limited to 2 watts EIRP.

FCC 47 CFR Part 27.50(d)(4):

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

FCC 47 CFR Part 27.50(c)(10):

Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

FCC 47 CFR Part 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:

The EUT was set up for the maximum power with CMW500, and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.2.2 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

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UTTR-RF-FCC4G-V1.1

5.2.1 LTE Band 2

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	18607	18900	19193	18607	18900	19193	18607	18900	19193
			1850.7	1880	1909.3	1850.7	1880	1909.3	1850.7	1880	1909.3
2	1.4	1RB#0	23.61	23.42	23.65	22.40	22.10	22.01	21.33	21.87	20.64
		1RB#2	23.63	23.36	23.64	22.39	22.09	22.00	21.37	21.84	20.63
		1RB#5	23.65	23.47	23.65	22.34	22.19	22.05	21.32	22.01	20.65
		3RB#0	22.26	22.14	22.21	21.40	21.77	21.71	20.78	20.91	20.88
		3RB#1	22.31	21.98	22.19	21.31	21.40	21.69	21.04	20.65	20.87
		3RB#3	22.28	22.01	22.15	21.33	21.42	21.35	20.78	21.04	20.76
		6RB#0	22.74	22.50	22.61	18.96	19.01	18.58	17.96	18.47	17.78
Band	Bandwidth (MHz)	RB	18615	18900	19185	18615	18900	19185	18615	18900	19185
			1851.5	1880	1908.5	1851.5	1880	1908.5	1851.5	1880	1908.5
2	3	1RB#0	23.71	23.34	23.60	22.23	22.06	21.98	21.66	21.98	20.63
		1RB#8	23.68	23.34	23.56	21.93	22.07	21.84	21.63	21.95	20.64
		1RB#14	23.58	23.36	23.60	21.93	22.08	21.94	21.54	21.91	20.66
		8RB#0	21.17	21.01	20.96	18.88	19.20	18.80	18.05	18.40	18.17
		8RB#4	21.21	21.06	20.91	18.91	19.21	18.73	18.10	18.55	18.15
		8RB#7	21.27	21.14	21.09	18.94	19.19	18.56	18.15	18.43	18.06
		15RB#0	22.65	22.46	22.43	18.92	19.15	18.56	18.04	18.41	18.17
Band	Bandwidth (MHz)	RB	18625	18900	19175	18625	18900	19175	18625	18900	19175
			1852.5	1880	1907.5	1852.5	1880	1907.5	1852.5	1880	1907.5
2	5	1RB#0	23.57	23.65	23.38	21.57	21.80	21.67	20.66	21.20	21.27
		1RB#12	23.58	23.43	23.37	21.57	22.11	21.71	20.65	21.30	21.30
		1RB#24	23.50	23.43	23.36	21.47	22.09	21.69	20.59	21.27	21.32
		12RB#0	21.16	20.94	21.00	18.58	19.07	18.82	17.86	18.41	18.24
		12RB#6	21.06	20.98	20.96	18.59	19.08	18.85	18.13	18.66	18.32
		12RB#13	21.04	21.04	20.96	18.58	19.03	18.54	17.96	18.39	17.99
		25RB#0	22.46	22.42	22.40	18.61	19.02	18.72	17.99	18.40	18.21
Band	Bandwidth (MHz)	RB	18650	18900	19150	18650	18900	19150	18650	18900	19150
			1855	1880	1905	1855	1880	1905	1855	1880	1905
2	10	1RB#0	23.48	23.45	23.42	22.15	21.88	22.44	21.65	22.18	21.11
		1RB#24	23.50	23.40	23.47	21.78	21.25	21.73	21.61	21.39	20.59
		1RB#49	23.49	23.46	23.49	21.74	21.27	21.79	21.59	21.43	20.66
		25RB#0	22.49	22.56	22.39	18.62	19.15	19.33	17.97	18.55	18.99
		25RB#12	22.52	22.47	22.34	18.64	19.16	19.36	18.11	18.61	18.77
		25RB#25	22.44	22.38	22.30	19.07	19.27	18.92	18.46	18.69	18.63
		50RB#0	22.45	22.44	22.31	18.80	19.22	19.13	18.17	18.66	18.80
Band	Bandwidth (MHz)	RB	18675	18900	19125	18675	18900	19125	18675	18900	19125
			1857.5	1880	1902.5	1857.5	1880	1902.5	1857.5	1880	1902.5
2	15	1RB#0	23.50	23.08	23.41	22.05	22.19	22.52	21.87	22.23	21.21
		1RB#38	23.41	23.49	23.45	21.78	22.24	21.82	21.59	21.60	21.57
		1RB#74	23.41	23.38	23.42	21.69	22.22	21.82	21.59	21.52	21.44
		38RB#0	22.53	22.33	22.37	22.52	22.33	22.37	18.07	18.67	18.60
		38RB#18	22.51	22.32	22.37	22.51	22.32	22.37	18.19	18.58	18.20
		38RB#37	22.50	22.31	22.36	22.49	22.31	22.36	18.42	18.60	17.75
		75RB#0	22.50	22.31	22.36	18.72	19.05	18.57	18.26	18.65	18.25
Band	Bandwidth (MHz)	RB	18700	18900	19100	18700	18900	19100	18700	18900	19100
			1860	1880	1900	1860	1880	1900	1860	1880	1900
2	20	1RB#0	23.78	23.59	23.40	21.98	22.46	21.58	22.13	21.58	21.22
		1RB#49	23.73	23.44	23.42	21.83	22.80	21.54	22.10	21.56	21.64
		1RB#99	23.40	23.38	23.16	21.64	22.80	21.86	22.11	21.55	21.67
		50RB#0	22.42	22.53	22.45	18.63	19.20	19.25	18.13	18.76	18.76
		50RB#25	22.48	22.40	22.36	18.66	19.23	19.29	18.43	18.66	18.60
		50RB#50	22.46	22.38	22.37	19.14	19.42	18.65	18.79	18.98	18.26
		100RB#0	22.48	22.30	22.39	18.91	19.31	18.95	18.53	18.89	18.53

5.2.2 LTE Band 4

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	19957	20175	20393	19957	20175	20393	19957	20175	20393
			1710.7	1732.5	1754.3	1710.7	1732.5	1754.3	1710.7	1732.5	1754.3
4	1.4	1RB#0	22.97	23.05	22.99	22.18	20.93	21.70	20.96	21.13	20.65
		1RB#2	22.91	23.09	23.03	21.66	20.96	21.89	20.93	21.06	20.73
		1RB#5	22.89	23.06	23.05	21.60	20.94	21.70	20.97	21.15	20.76
		3RB#0	21.61	21.57	21.72	20.61	20.86	20.81	20.45	20.70	20.50
		3RB#1	21.60	21.58	21.74	20.86	20.86	20.82	20.71	20.54	20.53
		3RB#3	21.64	21.61	21.59	20.87	20.91	20.82	20.43	20.71	20.40
		6RB#0	22.02	22.07	22.10	18.37	18.63	18.56	17.73	18.23	17.79
Band	Bandwidth (MHz)	RB	19965	20175	20385	19965	20175	20385	19965	20175	20385
			1711.5	1732.5	1753.5	1711.5	1732.5	1753.5	1711.5	1732.5	1753.5
4	3	1RB#0	23.05	23.07	23.05	21.37	20.97	21.74	21.28	21.03	20.68
		1RB#8	23.04	23.12	23.02	21.36	20.89	21.67	21.24	21.05	20.63
		1RB#14	23.03	23.15	23.04	21.41	20.91	21.93	21.31	21.10	20.74
		8RB#0	20.71	20.72	20.61	18.42	18.78	18.62	17.94	18.22	17.96
		8RB#4	20.57	20.63	20.65	18.43	18.80	18.64	18.04	18.44	18.04
		8RB#7	20.72	20.61	20.59	18.56	18.87	18.58	18.10	18.33	18.01
		15RB#0	22.02	22.05	22.14	18.51	18.78	18.46	17.96	18.27	18.04
Band	Bandwidth (MHz)	RB	19975	20175	20375	19975	20175	20375	19975	20175	20375
			1712.5	1732.5	1752.5	1712.5	1732.5	1752.5	1712.5	1732.5	1752.5
4	5	1RB#0	23.19	23.07	23.10	21.06	21.77	21.27	20.28	20.89	21.04
		1RB#12	23.11	23.06	23.13	21.08	21.76	21.20	20.23	20.86	21.02
		1RB#24	23.16	23.10	23.16	21.03	21.76	21.29	20.22	20.97	21.06
		12RB#0	20.61	20.62	20.71	18.35	18.75	18.51	17.77	18.18	17.76
		12RB#6	20.72	20.66	20.64	18.37	18.77	18.51	18.13	18.51	18.04
		12RB#13	20.70	20.55	20.77	18.57	18.88	18.47	18.02	18.30	17.85
		25RB#0	22.03	22.10	22.10	18.52	18.77	18.48	17.96	18.23	17.89
Band	Bandwidth (MHz)	RB	20000	20175	20350	20000	20175	20350	20000	20175	20350
			1715	1732.5	1750	1715	1732.5	1750	1715	1732.5	1750
4	10	1RB#0	23.02	22.95	23.11	21.61	21.51	22.36	21.27	21.88	20.75
		1RB#24	23.06	23.12	23.16	21.37	20.91	21.98	21.24	21.08	20.71
		1RB#49	23.04	23.11	23.19	21.61	20.89	22.03	21.27	21.10	20.48
		25RB#0	22.12	22.16	22.27	18.24	18.75	18.49	17.73	18.20	17.84
		25RB#12	22.16	22.07	22.18	18.26	18.76	18.51	17.99	18.44	18.05
		25RB#25	22.08	22.12	22.17	18.81	19.21	18.85	18.31	18.70	18.23
		50RB#0	22.09	22.03	22.18	18.57	19.00	18.62	18.01	18.47	18.08
Band	Bandwidth (MHz)	RB	20025	20175	20325	20025	20175	20325	20025	20175	20325
			1717.5	1732.5	1747.5	1717.5	1732.5	1747.5	1717.5	1732.5	1747.5
4	15	1RB#0	23.04	22.62	23.17	21.57	21.33	22.24	21.50	21.91	21.04
		1RB#38	23.03	23.21	23.17	21.30	21.74	21.99	21.20	21.07	21.39
		1RB#74	22.98	23.20	23.16	21.33	21.74	22.09	21.26	21.83	21.39
		38RB#0	22.05	22.01	22.12	22.05	22.02	22.12	17.91	18.30	17.88
		38RB#18	22.13	22.15	22.12	22.13	22.14	22.12	18.04	18.45	17.98
		38RB#37	22.12	22.14	22.12	22.12	22.14	22.12	18.23	18.66	18.21
		75RB#0	22.12	22.14	22.12	18.54	18.90	18.65	18.08	18.50	18.06
Band	Bandwidth (MHz)	RB	20050	20175	20300	20050	20175	20300	20050	20175	20300
			1720	1732.5	1745	1720	1732.5	1745	1720	1732.5	1745
4	20	1RB#0	23.30	23.06	23.09	21.41	22.02	21.19	20.96	21.80	20.57
		1RB#49	23.02	23.31	23.08	21.26	22.14	21.56	21.27	21.78	20.33
		1RB#99	22.97	23.20	23.12	21.21	22.11	21.71	21.22	21.81	20.39
		50RB#0	22.05	22.15	22.11	18.25	18.65	18.36	17.77	18.16	17.64
		50RB#25	22.11	22.11	22.05	18.28	18.67	18.38	18.04	18.40	17.94
		50RB#50	22.11	22.15	22.04	18.92	19.39	19.11	18.41	18.91	18.43
		100RB#0	22.08	22.06	22.04	18.61	19.02	18.72	18.08	18.57	18.09

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UTTR-RF-FCC4G-V1.1

5.2.3 LTE Band 5

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	20407	20525	20643	20407	20525	20643	20407	20525	20643
			824.7	836.5	848.3	824.7	836.5	848.3	824.7	836.5	848.3
5	1.4	1RB#0	22.73	22.87	22.86	21.74	20.74	21.84	21.13	20.86	20.15
		1RB#2	22.67	22.90	22.83	21.76	20.74	21.90	21.09	20.85	20.16
		1RB#5	22.76	22.86	22.87	21.70	20.69	21.86	21.05	20.80	20.19
		3RB#0	21.35	21.42	21.41	20.87	20.49	20.58	20.47	20.22	20.14
		3RB#1	21.40	21.42	21.43	21.07	20.52	20.59	20.70	20.27	20.27
		3RB#3	21.29	21.45	21.37	21.03	20.40	20.62	20.89	20.11	20.53
		6RB#0	21.72	21.84	21.88	18.07	18.19	17.45	17.55	17.77	16.90
Band	Bandwidth (MHz)	RB	20415	20525	20635	20415	20525	20635	20415	20525	20635
			825.5	836.5	847.5	825.5	836.5	847.5	825.5	836.5	847.5
5	3	1RB#0	22.79	22.92	23.00	21.70	20.75	21.60	21.28	20.91	20.18
		1RB#8	22.76	22.87	22.96	21.23	20.72	21.50	21.20	20.76	20.16
		1RB#14	22.79	22.85	22.88	20.98	20.70	21.57	20.92	20.76	20.21
		8RB#0	20.35	20.38	20.33	18.11	18.38	17.97	17.67	17.88	17.55
		8RB#4	20.38	20.42	20.34	18.12	18.40	18.00	17.77	18.01	17.44
		8RB#7	20.53	20.26	20.30	18.23	18.40	17.64	17.82	17.89	17.24
		15RB#0	21.70	21.80	21.83	18.19	18.35	17.75	17.68	17.89	17.45
Band	Bandwidth (MHz)	RB	20425	20525	20625	20425	20525	20625	20425	20525	20625
			826.5	836.5	846.5	826.5	836.5	846.5	826.5	836.5	846.5
5	5	1RB#0	22.84	22.83	23.02	21.10	21.41	21.13	20.37	20.62	20.74
		1RB#12	22.82	22.90	22.80	20.82	21.41	21.09	20.16	20.65	20.65
		1RB#24	22.87	22.97	22.76	20.82	21.66	21.02	20.10	20.82	20.79
		12RB#0	20.29	20.37	20.47	18.03	18.43	18.24	17.53	17.88	17.71
		12RB#6	20.34	20.41	20.42	18.05	18.45	18.27	17.86	18.08	17.74
		12RB#13	20.40	20.34	20.38	18.11	18.37	17.72	17.64	17.82	17.20
		25RB#0	21.76	21.76	21.93	18.14	18.36	18.04	17.66	17.84	17.45
Band	Bandwidth (MHz)	RB	20450	20525	20600	20450	20525	20600	20450	20525	20600
			829	836.5	844	829	836.5	844	829	836.5	844
5	10	1RB#0	22.79	22.86	23.04	21.72	21.16	22.03	21.28	21.55	20.78
		1RB#24	22.80	22.86	22.87	21.15	20.67	21.17	20.98	20.83	20.04
		1RB#49	22.72	22.86	22.90	21.41	20.79	21.17	21.32	20.94	20.15
		25RB#0	21.90	21.92	21.78	18.23	18.55	18.71	17.85	18.14	18.28
		25RB#12	21.79	21.80	21.72	18.25	18.57	18.73	17.89	18.14	18.17
		25RB#25	21.72	22.01	21.96	18.47	18.61	18.28	18.07	18.22	17.91
		50RB#0	21.91	21.83	21.78	18.39	18.60	18.52	17.92	18.18	18.07

5.2.4 LTE Band 7

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	20775	21100	21425	20775	21100	21425	20775	21100	21425
			2502.5	2535	2567.5	2502.5	2535	2567.5	2502.5	2535	2567.5
7	5	1RB#0	21.82	21.63	21.75	18.66	19.11	18.96	19.28	19.53	19.53
		1RB#12	21.67	21.70	21.65	19.43	19.60	19.43	19.96	20.02	19.86
		1RB#24	21.63	21.64	21.65	19.03	19.14	18.96	19.18	19.42	19.54
		12RB#0	21.13	21.15	21.13	18.64	19.01	18.78	18.72	19.03	18.80
		12RB#6	21.14	21.15	21.16	18.64	19.02	18.78	18.73	19.01	18.80
		12RB#13	21.15	21.03	21.19	18.85	19.01	18.80	18.92	18.93	18.70
		25RB#0	21.06	21.15	21.18	18.80	19.01	18.74	18.82	18.95	18.71
Band	Bandwidth (MHz)	RB	20800	21100	21400	20800	21100	21400	20800	21100	21400
			2505	2535	2565	2505	2535	2565	2505	2535	2565
7	10	1RB#0	21.63	21.65	21.63	18.62	19.01	18.89	19.06	19.25	19.38
		1RB#24	21.52	21.60	21.77	19.29	19.40	19.00	19.72	19.54	19.50
		1RB#49	21.54	21.66	21.90	19.69	19.64	19.38	19.00	19.15	19.77
		25RB#0	21.08	21.17	21.31	18.58	18.98	18.91	18.48	18.99	18.75
		25RB#12	21.17	21.16	21.28	18.58	18.98	18.83	18.48	18.98	18.76
		25RB#25	21.07	21.15	21.15	19.13	19.27	19.12	19.03	19.28	18.98
		50RB#0	21.12	21.19	21.34	18.86	19.14	18.89	18.76	19.16	18.89
Band	Bandwidth (MHz)	RB	20825	21100	21375	20825	21100	21375	20825	21100	21375
			2507.5	2535	2562.5	2507.5	2535	2562.5	2507.5	2535	2562.5
7	15	1RB#0	21.57	21.38	21.63	18.77	19.52	19.53	18.96	19.81	19.34
		1RB#38	21.55	21.69	21.70	19.28	19.55	19.11	19.43	19.84	19.06
		1RB#74	21.51	21.64	21.83	19.36	19.71	19.23	19.11	19.61	19.35
		38RB#0	21.14	21.16	21.33	21.19	21.19	21.31	21.21	21.22	21.19
		38RB#18	21.20	21.19	21.17	21.19	21.19	21.22	21.18	21.18	21.29
		38RB#37	21.18	21.17	21.28	21.17	21.17	21.27	21.17	21.16	21.27
		75RB#0	21.16	21.16	21.26	18.87	19.19	18.96	18.94	19.26	18.95
Band	Bandwidth (MHz)	RB	20850	21100	21350	20850	21100	21350	20850	21100	21350
			2510	2535	2560	2510	2535	2560	2510	2535	2560
7	20	1RB#0	21.78	21.61	21.92	18.76	19.78	19.95	19.34	19.86	19.14
		1RB#49	21.57	21.83	21.65	19.17	19.59	19.14	19.83	19.68	18.50
		1RB#99	21.83	21.94	21.71	19.70	20.44	19.60	19.41	20.08	18.97
		50RB#0	21.07	21.13	21.14	18.60	19.01	19.14	18.53	19.05	19.12
		50RB#25	21.11	21.20	21.17	18.52	19.01	19.14	18.53	19.05	19.13
		50RB#50	21.17	21.27	21.14	19.00	19.47	19.11	19.04	19.51	19.09
		100RB#0	21.07	21.17	21.16	18.76	19.23	19.06	18.77	19.27	19.09

5.2.5 LTE Band 12

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	23017	23095	23173	23017	23095	23173	23017	23095	23173
			699.7	707.5	715.3	699.7	707.5	715.3	699.7	707.5	715.3
12	1.4	1RB#0	23.01	23.04	23.00	21.98	21.00	21.75	21.23	21.13	20.42
		1RB#2	22.97	23.04	23.11	22.03	20.91	22.23	21.26	20.93	20.47
		1RB#5	22.98	23.09	23.15	22.03	20.97	22.16	21.24	21.03	20.47
		3RB#0	21.52	21.60	21.47	21.04	20.73	20.80	20.67	20.34	20.27
		3RB#1	21.50	21.60	21.48	21.19	20.72	20.80	20.93	20.38	20.51
		3RB#3	21.57	21.59	21.62	21.20	20.58	20.94	20.87	20.19	20.67
		6RB#0	21.87	22.09	22.08	17.17	17.41	16.87	16.66	16.91	16.35
Band	Bandwidth (MHz)	RB	23025	23095	23165	23025	23095	23165	23025	23095	23165
			700.5	707.5	714.5	700.5	707.5	714.5	700.5	707.5	714.5
12	3	1RB#0	22.98	23.08	23.08	21.50	20.92	22.04	21.41	21.13	20.33
		1RB#8	22.98	23.02	23.01	21.41	20.88	21.68	21.35	21.00	20.28
		1RB#14	22.88	23.05	23.06	21.21	20.96	22.12	21.06	20.92	20.56
		8RB#0	20.44	20.57	20.51	17.23	17.59	17.16	16.87	16.96	16.70
		8RB#4	20.49	20.43	20.56	17.25	17.62	17.19	17.04	17.11	16.74
		8RB#7	20.51	20.67	20.63	17.43	17.53	17.06	17.11	16.91	16.62
		15RB#0	21.87	21.97	21.93	17.35	17.53	17.05	16.93	16.93	16.70
Band	Bandwidth (MHz)	RB	23035	23095	23155	23035	23095	23155	23035	23095	23155
			701.5	707.5	713.5	701.5	707.5	713.5	701.5	707.5	713.5
12	5	1RB#0	23.03	22.95	22.94	21.41	21.66	21.51	20.46	20.63	21.16
		1RB#12	23.01	23.05	22.89	20.95	21.59	21.19	20.22	20.59	20.74
		1RB#24	23.07	22.96	22.98	20.93	21.58	21.33	20.21	20.49	20.99
		12RB#0	20.42	20.46	20.57	17.20	17.56	17.40	16.75	16.92	16.70
		12RB#6	20.47	20.52	20.51	17.23	17.59	17.42	17.16	17.19	16.95
		12RB#13	20.56	20.53	20.35	17.47	17.43	17.31	16.92	16.80	16.67
		25RB#0	22.05	22.01	22.07	17.40	17.46	17.40	16.88	16.87	16.78
Band	Bandwidth (MHz)	RB	23060	23095	23130	23060	23095	23130	23060	23095	23130
			704	707.5	711	704	707.5	711	704	707.5	711
12	10	1RB#0	23.04	22.91	23.00	21.89	21.33	22.14	20.54	21.39	21.64
		1RB#24	22.90	23.02	23.05	21.57	20.89	21.36	20.29	20.97	20.94
		1RB#49	22.99	23.08	23.16	21.05	21.20	21.62	20.24	21.32	21.23
		25RB#0	22.09	22.00	21.88	17.15	17.51	17.93	16.63	16.87	17.36
		25RB#12	21.97	22.02	21.92	17.17	17.53	17.95	17.00	17.00	17.21
		25RB#25	22.03	22.08	21.98	17.80	17.53	17.74	17.31	16.93	17.20
		50RB#0	22.05	21.90	22.11	17.53	17.55	17.85	16.93	16.89	17.27

5.2.6 LTE Band 17

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	23755	23790	23825	23755	23790	23825	23755	23790	23825
			706.5	710	713.5	706.5	710	713.5	706.5	710	713.5
17	5	1@0	22.81	22.81	22.88	20.64	21.01	21.59	20.20	20.46	21.12
		1@12	22.86	22.74	22.76	20.63	20.96	21.24	20.26	20.53	20.89
		1@24	22.81	22.82	22.90	20.63	21.30	21.35	20.10	20.90	20.97
		12@0	22.35	22.40	22.24	19.44	19.65	19.44	16.86	17.20	16.69
		12@7	22.28	22.41	22.35	19.58	19.71	19.49	17.16	17.32	16.94
		12@13	22.37	22.37	22.23	19.48	19.30	19.38	16.92	16.94	16.65
		25@0	22.37	22.41	22.31	19.41	19.45	19.50	16.97	17.07	16.78
Band	Bandwidth (MHz)	RB	23780	23790	23800	23780	23790	23800	23780	23790	23800
			709	710	711	709	710	711	709	710	711
17	10	1@0	22.78	22.77	22.89	21.00	21.42	21.55	20.18	21.42	21.73
		1@25	22.72	22.62	22.74	20.68	21.42	21.43	20.24	20.91	21.07
		1@49	22.73	22.67	22.91	20.78	21.41	21.67	20.38	21.11	21.20
		25@0	22.34	22.50	22.27	19.55	19.72	19.35	17.52	17.42	17.32
		25@12	22.24	22.38	22.40	19.52	19.56	19.60	17.46	17.30	17.20
		25@25	22.45	22.39	22.37	19.31	19.11	19.14	17.32	17.23	17.18
		50@0	22.27	22.37	22.46	19.38	19.40	19.62	17.38	17.26	17.27

5.2.7 LTE Band 66

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	131979	132322	132665	131979	132322	132665	131979	132322	132665
			1710.7	1745	1779.3	1710.7	1745	1779.3	1710.7	1745	1779.3
66	1.4	1RB#0	23.04	23.26	23.29	22.28	21.33	21.60	21.03	21.21	20.37
		1RB#2	22.99	23.27	23.31	22.29	21.33	21.61	21.13	21.12	20.34
		1RB#5	22.98	23.26	23.35	21.67	21.31	21.68	21.01	21.14	20.33
		3RB#0	21.57	21.71	21.73	20.77	21.03	21.29	20.43	20.27	20.49
		3RB#1	21.57	21.71	21.75	20.77	21.03	21.31	20.59	20.29	20.57
		3RB#3	21.61	21.63	21.73	20.79	20.85	21.25	20.44	20.30	20.50
		6RB#0	22.12	22.18	22.24	18.34	18.41	18.31	17.81	17.98	17.63
Band	Bandwidth (MHz)	RB	131987	132322	132657	131987	132322	132657	131987	132322	132657
			1711.5	1745	1778.5	1711.5	1745	1778.5	1711.5	1745	1778.5
66	3	1RB#0	23.07	23.24	23.28	21.40	21.28	21.61	21.29	21.21	20.28
		1RB#8	23.07	23.40	23.35	21.43	21.61	21.59	21.26	21.12	20.32
		1RB#14	23.02	23.34	23.31	21.33	21.77	21.69	21.23	21.38	20.32
		8RB#0	20.72	20.58	20.73	18.41	18.54	18.52	17.91	17.82	17.93
		8RB#4	20.57	20.62	20.78	18.43	18.56	18.55	18.01	18.04	17.86
		8RB#7	20.65	20.59	20.70	18.56	18.65	18.47	18.08	17.95	17.77
		15RB#0	22.01	22.17	22.20	18.49	18.56	18.43	17.94	17.88	17.84
Band	Bandwidth (MHz)	RB	131997	132322	132647	131997	132322	132647	131997	132322	132647
			1712.5	1745	1777.5	1712.5	1745	1777.5	1712.5	1745	1777.5
66	5	1RB#0	23.14	23.07	23.11	21.09	21.44	21.50	20.39	20.91	20.97
		1RB#12	23.11	23.12	23.16	21.10	21.44	21.46	20.19	20.94	20.95
		1RB#24	23.02	23.21	23.18	21.08	21.95	21.51	20.27	21.02	21.03
		12RB#0	20.68	20.69	20.83	18.38	18.50	18.54	17.73	17.76	17.80
		12RB#6	20.57	20.73	20.77	18.39	18.52	18.57	18.10	18.13	17.94
		12RB#13	20.61	20.90	20.79	18.60	18.67	18.46	17.98	17.95	17.67
		25RB#0	22.04	22.09	22.20	18.54	18.55	18.55	17.94	17.85	17.79
Band	Bandwidth (MHz)	RB	132022	132322	132622	132022	132322	132622	132022	132322	132622
			1715	1745	1775	1715	1745	1775	1715	1745	1775
66	10	1RB#0	23.04	23.22	23.13	21.62	21.56	22.42	21.25	21.95	20.82
		1RB#24	23.06	23.17	23.38	21.37	21.18	21.67	21.29	21.47	20.34
		1RB#49	23.02	23.08	23.33	21.37	21.14	21.68	21.28	21.57	20.34
		25RB#0	22.12	22.16	22.29	18.29	18.56	18.76	17.73	17.79	18.06
		25RB#12	22.08	22.19	22.33	18.27	18.58	18.79	17.96	18.05	18.11
		25RB#25	22.10	22.29	22.20	18.87	19.06	18.86	18.32	18.37	18.21
		50RB#0	22.03	22.22	22.22	18.63	18.84	18.83	18.02	18.08	18.12
Band	Bandwidth (MHz)	RB	132047	132322	132597	132047	132322	132597	132047	132322	132597
			1717.5	1745	1772.5	1717.5	1745	1772.5	1717.5	1745	1772.5
66	15	1RB#0	23.11	22.98	23.18	21.67	21.66	22.30	21.53	21.89	20.86
		1RB#38	23.04	23.29	23.34	21.38	21.94	21.67	21.25	21.46	21.33
		1RB#74	23.03	23.28	23.36	21.39	22.01	21.66	21.26	21.60	21.22
		38RB#0	22.08	22.10	22.32	22.16	22.09	22.31	17.86	17.92	18.05
		38RB#18	22.16	22.10	22.31	22.15	22.09	22.31	18.00	18.04	17.89
		38RB#37	22.15	22.12	22.31	22.15	22.14	22.31	18.19	18.30	17.90
		75RB#0	22.14	22.16	22.31	18.57	18.72	18.69	18.04	18.13	17.99
Band	Bandwidth (MHz)	RB	132072	132322	132572	132072	132322	132572	132072	132322	132572
			1720	1745	1770	1720	1745	1770	1720	1745	1770
66	20	1RB#0	23.36	23.21	23.23	21.58	22.07	21.36	21.01	21.71	20.97
		1RB#49	23.22	23.49	23.36	21.24	22.01	21.71	21.00	21.58	20.94
		1RB#99	23.03	23.28	23.12	21.26	22.00	21.73	21.34	21.62	20.98
		50RB#0	22.17	22.23	22.21	18.40	18.55	18.84	17.85	17.87	18.01
		50RB#25	22.00	22.18	22.12	18.42	18.58	18.87	18.12	18.02	18.04
		50RB#50	22.10	22.18	22.39	19.06	19.31	18.99	18.50	18.63	18.21
		100RB#0	22.06	22.11	22.21	18.75	18.95	18.88	18.16	18.29	18.15

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UTTR-RF-FCC4G-V1.1

5.2.8 LTE Band 71

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	133147	133297	133447	133147	133297	133447	133147	133297	133447
			665.5	680.5	695.5	665.5	680.5	695.5	665.5	680.5	695.5
71	5	1@0	22.48	22.51	22.82	20.70	20.96	21.69	20.20	20.54	21.23
		1@12	22.48	22.46	22.88	20.61	21.32	21.19	20.22	20.88	20.89
		1@24	22.55	22.62	22.78	20.24	20.99	21.25	19.86	20.54	20.84
		12@0	21.96	22.23	22.44	18.85	19.35	19.44	17.24	17.60	17.70
		12@7	21.98	22.20	22.40	19.24	19.27	19.36	17.62	17.97	17.81
		12@13	21.97	22.08	22.40	19.02	19.41	18.96	17.45	17.71	17.45
		25@0	22.07	22.18	22.34	19.01	19.10	19.55	17.44	17.66	17.68
Band	Bandwidth (MHz)	RB	133172	133297	133422	133172	133297	133422	133172	133297	133422
			668	680.5	693	668	680.5	693	668	680.5	693
71	10	1@0	22.42	22.53	22.64	21.52	21.94	20.56	21.12	21.55	20.52
		1@25	22.45	22.64	22.78	21.06	21.64	20.56	21.14	21.24	20.14
		1@49	22.41	22.75	22.78	21.58	21.25	20.64	21.24	20.86	20.29
		25@0	22.05	22.09	22.21	19.03	19.19	19.41	17.47	17.47	18.18
		25@12	22.06	22.18	22.38	19.16	19.30	19.56	17.63	17.84	18.19
		25@25	21.88	22.05	22.38	19.33	19.67	19.24	17.76	17.94	18.09
		50@0	22.06	22.24	22.47	19.10	19.16	19.48	17.62	17.75	18.13
Band	Bandwidth (MHz)	RB	133197	133297	133397	133197	133297	133397	133197	133297	133397
			670.5	680.5	690.5	670.5	680.5	690.5	670.5	680.5	690.5
71	15	1@0	22.39	22.51	22.35	21.43	21.72	20.84	21.54	21.40	20.45
		1@37	22.35	22.58	22.89	21.46	21.73	21.42	21.13	21.34	21.07
		1@74	22.45	22.70	22.42	21.20	21.56	21.43	20.87	21.12	21.04
		36@0	22.02	22.06	22.32	19.21	19.14	19.29	17.62	17.40	18.02
		36@20	21.99	22.07	22.22	18.93	19.20	19.29	17.59	17.80	17.78
		36@39	22.12	22.21	22.44	19.38	19.62	18.80	18.04	17.73	17.58
		75@0	22.05	22.16	22.26	18.99	19.02	19.51	17.84	17.63	17.84
Band	Bandwidth (MHz)	RB	133222	133322	133372	133222	133322	133372	133222	133322	133372
			673	683	688	673	683	688	673	683	688
71	20	1@0	22.30	22.48	22.61	22.09	20.82	21.12	21.90	20.45	20.69
		1@49	22.49	22.53	22.66	22.33	20.93	21.60	21.96	20.44	21.25
		1@99	22.44	22.85	22.95	22.08	20.90	21.63	21.77	20.53	21.55
		50@0	21.93	22.17	22.31	19.19	19.10	19.39	16.99	17.89	18.25
		50@24	21.92	22.05	22.22	19.05	19.20	19.24	17.31	18.14	18.09
		50@50	22.09	22.26	22.28	20.40	19.33	18.85	18.29	18.06	17.98
		100@0	22.04	22.15	22.26	18.92	19.03	19.36	17.69	18.02	18.14

5.3 ERP OR EIRP

Test Requirement: FCC 47 CFR Part 2.1046(a)
LTE Band 2: FCC 47 CFR Part 24.232(c)
LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.50(d)(4)
LTE Band 5: FCC 47 CFR Part 22.913(a)
LTE Band 7: FCC 47 CFR Part 27.50(h)(2)
LTE Band 12 & Band 17 & LTE Band 71: FCC 47 CFR Part 27.50(c)(10)

Test Method: KDB 971168 D01v03r01 Section 5.6 & ANSI C63.26-2015

Limit:

FCC 47 CFR Part 22.913(a):

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

FCC 47 CFR Part 24.232(c):

Mobile and portable stations are limited to 2 watts EIRP.

FCC 47 CFR Part 27.50(d)(4):

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

FCC 47 CFR Part 27.50(c)(10):

Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

FCC 47 CFR Part 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:

According to KDB 412172 D01 Power Approach,

- **ERP or EIRP = $P_T + G_T - L_C$**
- **ERP = EIRP - 2.15**

where

- **P_T** = transmitter output power, expressed in dBW, dBm, or PSD;
- **G_T** = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);
- **L_C** = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

Test Setup: Refer to section 4.2.1 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

Test Data: See table below

Note: The maximum ERP/EIRP is calculated from max output power and antenna gain, the antenna gain provided by the customer, and the customer takes all the responsibilities for the accuracy of antenna gain.

5.3.1 LTE Band 2

Channel	Maximum EIRP (dBm)				Maximum EIRP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 1.4MHz									
Lowest	23.34	22.09	21.06	33.01	0.2158	0.1618	0.1276	2	Pass
Middle	23.16	21.88	21.70	33.01	0.2070	0.1542	0.1479	2	Pass
Highest	23.34	21.74	20.57	33.01	0.2158	0.1493	0.1140	2	Pass
Channel Bandwidth: 3MHz									
Lowest	23.40	21.92	21.35	33.01	0.2188	0.1556	0.1365	2	Pass
Middle	23.05	21.77	21.67	33.01	0.2018	0.1503	0.1469	2	Pass
Highest	23.29	21.67	20.35	33.01	0.2133	0.1469	0.1084	2	Pass
Channel Bandwidth: 5MHz									
Lowest	23.27	21.26	20.35	33.01	0.2123	0.1337	0.1084	2	Pass
Middle	23.34	21.80	20.99	33.01	0.2158	0.1514	0.1256	2	Pass
Highest	23.07	21.40	21.01	33.01	0.2028	0.1380	0.1262	2	Pass
Channel Bandwidth: 10MHz									
Lowest	23.19	21.84	21.34	33.01	0.2084	0.1528	0.1361	2	Pass
Middle	23.15	21.57	21.87	33.01	0.2065	0.1435	0.1538	2	Pass
Highest	23.18	22.13	20.80	33.01	0.2080	0.1633	0.1202	2	Pass
Channel Bandwidth: 15MHz									
Lowest	23.19	22.21	21.56	33.01	0.2084	0.1663	0.1432	2	Pass
Middle	23.18	22.02	21.92	33.01	0.2080	0.1592	0.1556	2	Pass
Highest	23.14	22.21	21.26	33.01	0.2061	0.1663	0.1337	2	Pass
Channel Bandwidth: 20MHz									
Lowest	23.47	21.67	21.82	33.01	0.2223	0.1469	0.1521	2	Pass
Middle	23.28	22.49	21.27	33.01	0.2128	0.1774	0.1340	2	Pass
Highest	23.11	21.55	21.36	33.01	0.2046	0.1429	0.1368	2	Pass

5.3.2 LTE Band 4

Channel	Maximum EIRP (dBm)				Maximum EIRP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 1.4MHz									
Lowest	24.03	23.24	22.03	30.00	0.2529	0.2109	0.1596	1	Pass
Middle	24.15	22.02	22.21	30.00	0.2600	0.1592	0.1663	1	Pass
Highest	24.11	22.95	21.82	30.00	0.2576	0.1972	0.1521	1	Pass
Channel Bandwidth: 3MHz									
Lowest	24.11	22.47	22.37	30.00	0.2576	0.1766	0.1726	1	Pass
Middle	24.21	22.03	22.16	30.00	0.2636	0.1596	0.1644	1	Pass
Highest	24.11	22.99	21.80	30.00	0.2576	0.1991	0.1514	1	Pass
Channel Bandwidth: 5MHz									
Lowest	24.25	22.14	21.34	30.00	0.2661	0.1637	0.1361	1	Pass
Middle	24.16	22.83	22.03	30.00	0.2606	0.1919	0.1596	1	Pass
Highest	24.22	22.35	22.12	30.00	0.2642	0.1718	0.1629	1	Pass
Channel Bandwidth: 10MHz									
Lowest	24.12	22.67	22.33	30.00	0.2582	0.1849	0.1710	1	Pass
Middle	24.18	22.57	22.94	30.00	0.2618	0.1807	0.1968	1	Pass
Highest	24.25	23.42	21.81	30.00	0.2661	0.2198	0.1517	1	Pass
Channel Bandwidth: 15MHz									
Lowest	24.10	23.19	22.56	30.00	0.2570	0.2084	0.1803	1	Pass
Middle	24.27	23.20	22.97	30.00	0.2673	0.2089	0.1982	1	Pass
Highest	24.23	23.30	22.45	30.00	0.2649	0.2138	0.1758	1	Pass
Channel Bandwidth: 20MHz									
Lowest	24.36	22.47	22.33	30.00	0.2729	0.1766	0.1710	1	Pass
Middle	24.37	23.20	22.87	30.00	0.2735	0.2089	0.1936	1	Pass
Highest	24.18	22.77	21.63	30.00	0.2618	0.1892	0.1455	1	Pass

5.3.3 LTE Band 5

Channel	Maximum ERP (dBm)				Maximum ERP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 1.4MHz									
Lowest	17.86	16.86	16.23	38.45	0.0611	0.0485	0.0420	7	Pass
Middle	18.00	15.84	15.96	38.45	0.0631	0.0384	0.0394	7	Pass
Highest	17.97	17.00	15.63	38.45	0.0627	0.0501	0.0366	7	Pass
Channel Bandwidth: 3MHz									
Lowest	17.89	16.80	16.38	38.45	0.0615	0.0479	0.0435	7	Pass
Middle	18.02	15.85	16.01	38.45	0.0634	0.0385	0.0399	7	Pass
Highest	18.10	16.70	15.31	38.45	0.0646	0.0468	0.0340	7	Pass
Channel Bandwidth: 5MHz									
Lowest	17.97	16.20	15.47	38.45	0.0627	0.0417	0.0352	7	Pass
Middle	18.07	16.76	15.92	38.45	0.0641	0.0474	0.0391	7	Pass
Highest	18.12	16.23	15.89	38.45	0.0649	0.0420	0.0388	7	Pass
Channel Bandwidth: 10MHz									
Lowest	17.90	16.82	16.42	38.45	0.0617	0.0481	0.0439	7	Pass
Middle	17.96	16.26	16.65	38.45	0.0625	0.0423	0.0462	7	Pass
Highest	18.14	17.13	15.88	38.45	0.0652	0.0516	0.0387	7	Pass

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UTTR-RF-FCC4G-V1.1

5.3.4 LTE Band 7

Channel	Maximum EIRP (dBm)				Maximum EIRP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 5MHz									
Lowest	21.16	18.77	19.30	33.01	0.1306	0.0753	0.0851	2	Pass
Middle	21.04	18.94	19.36	33.01	0.1271	0.0783	0.0863	2	Pass
Highest	21.09	18.77	19.20	33.01	0.1285	0.0753	0.0832	2	Pass
Channel Bandwidth: 10MHz									
Lowest	20.97	19.03	19.06	33.01	0.1250	0.0800	0.0805	2	Pass
Middle	21.00	18.98	18.88	33.01	0.1259	0.0791	0.0773	2	Pass
Highest	21.24	18.72	19.11	33.01	0.1330	0.0745	0.0815	2	Pass
Channel Bandwidth: 15MHz									
Lowest	20.91	20.53	20.55	33.01	0.1233	0.1130	0.1135	2	Pass
Middle	21.03	20.53	20.56	33.01	0.1268	0.1130	0.1138	2	Pass
Highest	21.17	20.65	20.63	33.01	0.1309	0.1161	0.1156	2	Pass
Channel Bandwidth: 20MHz									
Lowest	21.17	19.04	19.17	33.01	0.1309	0.0802	0.0826	2	Pass
Middle	21.28	19.78	19.42	33.01	0.1343	0.0951	0.0875	2	Pass
Highest	21.26	19.29	18.48	33.01	0.1337	0.0849	0.0705	2	Pass

5.3.5 LTE Band 12

Channel	Maximum ERP (dBm)				Maximum ERP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 1.4MHz									
Lowest	18.54	17.56	16.79	33.01	0.0714	0.0570	0.0478	3	Pass
Middle	18.62	16.53	16.66	33.01	0.0728	0.0450	0.0463	3	Pass
Highest	18.68	17.76	16.20	33.01	0.0738	0.0597	0.0417	3	Pass
Channel Bandwidth: 3MHz									
Lowest	18.51	17.03	16.94	33.01	0.0710	0.0505	0.0494	3	Pass
Middle	18.61	16.49	16.66	33.01	0.0726	0.0446	0.0463	3	Pass
Highest	18.61	17.65	16.09	33.01	0.0726	0.0582	0.0406	3	Pass
Channel Bandwidth: 5MHz									
Lowest	18.60	16.94	15.99	33.01	0.0724	0.0494	0.0397	3	Pass
Middle	18.58	17.19	16.16	33.01	0.0721	0.0524	0.0413	3	Pass
Highest	18.51	17.04	16.69	33.01	0.0710	0.0506	0.0467	3	Pass
Channel Bandwidth: 10MHz									
Lowest	18.57	17.42	16.07	33.01	0.0719	0.0552	0.0405	3	Pass
Middle	18.61	16.86	16.92	33.01	0.0726	0.0485	0.0492	3	Pass
Highest	18.69	17.67	17.17	33.01	0.0740	0.0585	0.0521	3	Pass

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UTTR-RF-FCC4G-V1.1

5.3.6 LTE Band 17

Channel	Maximum ERP (dBm)				Maximum ERP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 5MHz									
Lowest	18.39	16.17	15.79	34.77	0.0690	0.0414	0.0379	3	Pass
Middle	18.35	16.83	16.43	34.77	0.0684	0.0482	0.0440	3	Pass
Highest	18.43	17.12	16.65	34.77	0.0697	0.0515	0.0462	3	Pass
Channel Bandwidth: 10MHz									
Lowest	18.31	16.53	15.91	34.77	0.0678	0.0450	0.0390	3	Pass
Middle	18.30	16.95	16.95	34.77	0.0676	0.0495	0.0495	3	Pass
Highest	18.44	17.20	17.26	34.77	0.0698	0.0525	0.0532	3	Pass

5.3.7 LTE Band 66

Channel	Maximum EIRP (dBm)				Maximum EIRP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 1.4MHz									
Lowest	24.10	23.35	22.19	30.00	0.2570	0.2163	0.1656	1	Pass
Middle	24.33	22.39	22.27	30.00	0.2710	0.1734	0.1687	1	Pass
Highest	24.41	22.74	21.63	30.00	0.2761	0.1879	0.1455	1	Pass
Channel Bandwidth: 3MHz									
Lowest	24.13	22.49	22.35	30.00	0.2588	0.1774	0.1718	1	Pass
Middle	24.46	22.83	22.44	30.00	0.2793	0.1919	0.1754	1	Pass
Highest	24.41	22.75	21.38	30.00	0.2761	0.1884	0.1374	1	Pass
Channel Bandwidth: 5MHz									
Lowest	24.20	22.16	21.45	30.00	0.2630	0.1644	0.1396	1	Pass
Middle	24.27	23.01	22.08	30.00	0.2673	0.2000	0.1614	1	Pass
Highest	24.24	22.57	22.09	30.00	0.2655	0.1807	0.1618	1	Pass
Channel Bandwidth: 10MHz									
Lowest	24.12	22.68	22.35	30.00	0.2582	0.1854	0.1718	1	Pass
Middle	24.28	22.62	23.01	30.00	0.2679	0.1828	0.2000	1	Pass
Highest	24.44	23.48	21.88	30.00	0.2780	0.2228	0.1542	1	Pass
Channel Bandwidth: 15MHz									
Lowest	24.17	23.22	22.59	30.00	0.2612	0.2099	0.1816	1	Pass
Middle	24.35	23.20	22.95	30.00	0.2723	0.2089	0.1972	1	Pass
Highest	24.42	23.37	22.39	30.00	0.2767	0.2173	0.1734	1	Pass
Channel Bandwidth: 20MHz									
Lowest	24.42	22.64	22.40	30.00	0.2767	0.1837	0.1738	1	Pass
Middle	24.55	23.13	22.77	30.00	0.2851	0.2056	0.1892	1	Pass
Highest	24.42	22.79	22.04	30.00	0.2767	0.1901	0.1600	1	Pass

5.3.8 LTE Band 71

Channel	Maximum ERP (dBm)				Maximum ERP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 5MHz									
Lowest	17.51	15.66	15.18	33.01	0.0564	0.0368	0.0330	3	Pass
Middle	17.58	16.28	15.84	33.01	0.0573	0.0425	0.0384	3	Pass
Highest	17.84	16.65	16.19	33.01	0.0608	0.0462	0.0416	3	Pass
Channel Bandwidth: 10MHz									
Lowest	17.41	16.54	16.20	33.01	0.0551	0.0451	0.0417	3	Pass
Middle	17.71	16.90	16.51	33.01	0.0590	0.0490	0.0448	3	Pass
Highest	17.74	15.60	15.48	33.01	0.0594	0.0363	0.0353	3	Pass
Channel Bandwidth: 15MHz									
Lowest	17.41	16.42	16.50	33.01	0.0551	0.0439	0.0447	3	Pass
Middle	17.66	16.69	16.36	33.01	0.0583	0.0467	0.0433	3	Pass
Highest	17.85	16.39	16.03	33.01	0.0610	0.0436	0.0401	3	Pass
Channel Bandwidth: 20MHz									
Lowest	17.45	17.29	16.92	33.01	0.0556	0.0536	0.0492	3	Pass
Middle	17.81	15.89	15.49	33.01	0.0604	0.0388	0.0354	3	Pass
Highest	17.91	16.59	16.51	33.01	0.0618	0.0456	0.0448	3	Pass

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UTTR-RF-FCC4G-V1.1

5.4 PEAK-TO-AVERAGE RATIO

Test Requirement:	LTE Band 2: FCC 47 CFR Part 24.232(d)
	LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.50(d)(5)
	LTE Band 5: FCC 47 CFR Part 22.913(a)
	LTE Band 7: FCC 47 CFR Part 27.50(d)(5)
	LTE Band 12 & Band 17 & LTE Band 71: FCC 47 CFR Part 27.50(d)(5)
Test Method:	KDB 971168 D01v03r01 Section 5.7
Limit:	In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB
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. a) Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth b) Set the number of counts to a value that stabilizes the measured CCDF curve c) Record the maximum PAPR level associated with a probability of 0.1 %
Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.	
Test Setup:	Refer to section 4.2.2 for details.
Instruments Used:	Refer to section 3 for details
Test Mode:	Link mode
Test Results:	Pass
Test Data:	Please refer to Appendix

5.5 99%&26DB BANDWIDTH

Test Requirement: FCC 47 CFR Part 2.1049(h)

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01 Section 4

Limit: No Limit, 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 99% and -26dB bandwidths was also measured and recorded.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.2.2 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

Test Data: Please refer to Appendix

5.6 BAND EDGE AT ANTENNA TERMINALS

Test Requirement: LTE Band 2: FCC 47 CFR Part 24.238(a)
LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.53(h)(1)
LTE Band 5: FCC 47 CFR Part 22.917(a)
LTE Band 7: FCC 47 CFR Part 27.53(m)(4)
LTE Band 12 & Band 17 & LTE Band 71:: FCC 47 CFR Part 27.53(g)
Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Limit:

FCC 47 CFR Part 24.238(a), 27.53(h)(1), 22.917(a):

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. The emission limit equal to -13 dBm.

FCC 47 CFR Part 27.53(g):

For operations in the 600 MHz band and 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. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

FCC 47 CFR Part 27.53(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.

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.

For each band edge measurement:

- 1) Set the spectrum analyzer span to include the block edge frequency.
- 2) Set a marker to point the corresponding band edge frequency in each test case.
- 3) Set display line at -13 dBm
- 4) Set resolution bandwidth to at least 1% of emission bandwidth.
- 5) Set spectrum analyzer with RMS detector.
- 6) Record the max trace plot into the test report

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.2.2 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

Test Data: Please refer to Appendix

5.7 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Test Requirement: LTE Band 2: FCC 47 CFR Part 24.238(a)
LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.53(h)
LTE Band 5: FCC 47 CFR Part 22.917(a)
LTE Band 7: FCC 47 CFR Part 27.53(m)(4)
LTE Band 12 & Band 17 & LTE Band 71: FCC 47 CFR Part 27.53(g)

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Limit:

FCC 47 CFR Part 24.238(a), 27.53(h)(1), 22.917(a), 27.53(g), 27.53(c)(2):

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. The emission limit equal to -13 dBm.

FCC 47 CFR Part 27.53(m)(4):

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 $55 + 10 \log(P)$ dB. The emission limit equal to -25 dBm.

Test Procedure:

The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range. b. Measuring frequency range is from 30 MHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.2.2 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

Test Data: Please refer to Appendix

5.8 FIELD STRENGTH OF SPURIOUS RADIATION

Test Requirement: LTE Band 2: FCC 47 CFR Part 24.238(a)
LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.53(h)
LTE Band 5: FCC 47 CFR Part 22.917(a)
LTE Band 7: FCC 47 CFR Part 27.53(m)(4)
LTE Band 12 & Band 17 & LTE Band 71: FCC 47 CFR Part 27.53(g)

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009 MHz-30 MHz	Peak	10 kHz	30 KHz	Peak
30 MHz-1 GHz	Quasi-peak	100 kHz	300 KHz	Peak
Above 1 GHz	Peak	1 MHz	3 MHz	Peak

Limits:

FCC 47 CFR Part 24.238(a), 27.53(h)(1), 22.917(a), 27.53(g):

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. The emission limit equal to -13 dBm.

FCC 47 CFR Part 27.53(m)(4):

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 $55 + 10 \log(P)$ dB. The emission limit equal to -25 dBm.

Test Setup: Refer to section 4.2.1 for details.

Test Procedures: KDB 971168 D01v03r01 Section 7

Equipment Used: Refer to section 3 for details.

Test Result: Pass

The worst measurement data as follows:

5.8.1 LTE Band 2

LTE Band 2_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	739.214	-80.25	11.58	-68.67	-13.00	-55.67	Horizontal
2	821.387	-80.70	13.20	-67.50	-13.00	-54.50	Horizontal
3	945.334	-80.94	14.69	-66.25	-13.00	-53.25	Horizontal
4	5580.000	-51.82	11.04	-40.78	-13.00	-27.78	Horizontal
5	7440.000	-56.59	13.06	-43.53	-13.00	-30.53	Horizontal
6	850.760	-79.68	13.57	-66.11	-13.00	-53.11	Vertical
7	893.656	-80.39	14.20	-66.19	-13.00	-53.19	Vertical
8	1000.000	-80.26	15.60	-64.66	-13.00	-51.66	Vertical
9	5580.000	-56.15	11.04	-45.11	-13.00	-32.11	Vertical
10	7440.000	-55.00	13.06	-41.94	-13.00	-28.94	Vertical
Middle Channel							
1	698.804	-80.98	11.44	-69.54	-13.00	-56.54	Horizontal
2	809.924	-81.10	12.89	-68.21	-13.00	-55.21	Horizontal
3	958.714	-81.68	14.93	-66.75	-13.00	-53.75	Horizontal
4	5640.000	-54.02	11.18	-42.84	-13.00	-29.84	Horizontal
5	7520.000	-53.92	13.07	-40.85	-13.00	-27.85	Horizontal
6	669.952	-79.72	10.33	-69.39	-13.00	-56.39	Vertical
7	919.132	-81.28	14.53	-66.75	-13.00	-53.75	Vertical
8	965.474	-81.27	14.91	-66.36	-13.00	-53.36	Vertical
9	5640.000	-56.59	11.18	-45.41	-13.00	-32.41	Vertical
10	7520.000	-48.33	13.07	-35.26	-13.00	-22.26	Vertical
Highest Channel							
1	754.963	-79.39	11.60	-67.79	-13.00	-54.79	Horizontal
2	938.714	-80.40	14.52	-65.88	-13.00	-52.88	Horizontal
3	972.283	-80.62	15.04	-65.58	-13.00	-52.58	Horizontal
4	5700.000	-57.10	11.33	-45.77	-13.00	-32.77	Horizontal
5	7600.000	-57.55	13.04	-44.51	-13.00	-31.51	Horizontal
6	771.047	-80.18	11.94	-68.24	-13.00	-55.24	Vertical
7	809.924	-80.05	12.89	-67.16	-13.00	-54.16	Vertical
8	925.613	-80.31	14.46	-65.85	-13.00	-52.85	Vertical
9	5700.000	-57.42	11.33	-46.09	-13.00	-33.09	Vertical
10	7600.000	-55.76	13.04	-42.72	-13.00	-29.72	Vertical

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5.8.2 LTE Band 4

LTE Band 4_ 20 MHz_ QPSK							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
Lowest Channel							
1	881.184	-80.49	14.07	-66.42	-13.00	-53.42	Horizontal
2	906.304	-80.15	14.53	-65.62	-13.00	-52.62	Horizontal
3	925.613	-79.31	14.46	-64.85	-13.00	-51.85	Horizontal
4	3440.000	-60.42	6.41	-54.01	-13.00	-41.01	Horizontal
5	5160.000	-60.74	10.10	-50.64	-13.00	-37.64	Horizontal
6	787.475	-79.88	12.31	-67.57	-13.00	-54.57	Vertical
7	844.803	-79.26	13.42	-65.84	-13.00	-52.84	Vertical
8	986.044	-81.09	15.44	-65.65	-13.00	-52.65	Vertical
9	3440.000	-59.18	6.41	-52.77	-13.00	-39.77	Vertical
10	5160.000	-60.05	10.10	-49.95	-13.00	-36.95	Vertical
Middle Channel							
1	718.725	-79.32	11.51	-67.81	-13.00	-54.81	Horizontal
2	887.398	-79.92	14.17	-65.75	-13.00	-52.75	Horizontal
3	925.613	-80.26	14.46	-65.80	-13.00	-52.80	Horizontal
4	3465.000	-57.89	6.46	-51.43	-13.00	-38.43	Horizontal
5	5197.500	-57.73	10.18	-47.55	-13.00	-34.55	Horizontal
6	815.635	-79.31	13.04	-66.27	-13.00	-53.27	Vertical
7	938.714	-79.86	14.52	-65.34	-13.00	-52.34	Vertical
8	979.139	-80.23	15.25	-64.98	-13.00	-51.98	Vertical
9	3465.000	-60.32	6.46	-53.86	-13.00	-40.86	Vertical
10	5197.500	-60.35	10.18	-50.17	-13.00	-37.17	Vertical
Highest Channel							
1	856.760	-79.41	13.67	-65.74	-13.00	-52.74	Horizontal
2	945.334	-80.08	14.69	-65.39	-13.00	-52.39	Horizontal
3	1000.000	-80.55	15.60	-64.95	-13.00	-51.95	Horizontal
4	3490.000	-60.14	6.50	-53.64	-13.00	-40.64	Horizontal
5	5235.000	-59.73	10.26	-49.47	-13.00	-36.47	Horizontal
6	844.803	-79.53	13.42	-66.11	-13.00	-53.11	Vertical
7	945.334	-79.92	14.69	-65.23	-13.00	-52.23	Vertical
8	992.997	-80.42	15.56	-64.86	-13.00	-51.86	Vertical
9	3490.000	-60.62	6.50	-54.12	-13.00	-41.12	Vertical
10	5235.000	-56.73	10.26	-46.47	-13.00	-33.47	Vertical

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5.8.3 LTE Band 5

LTE Band 5_ 10 MHz_ QPSK							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
Lowest Channel							
1	655.977	-86.31	39.42	-46.89	-13.00	-33.89	Horizontal
2	698.804	-86.23	40.79	-45.44	-13.00	-32.44	Horizontal
3	893.656	-85.28	43.26	-42.02	-13.00	-29.02	Horizontal
4	1658.000	-59.27	-0.23	-59.50	-13.00	-46.50	Horizontal
5	2487.000	-55.73	3.50	-52.23	-13.00	-39.23	Horizontal
6	754.963	-85.23	40.87	-44.36	-13.00	-31.36	Vertical
7	787.475	-85.98	41.53	-44.45	-13.00	-31.45	Vertical
8	912.695	-85.51	43.52	-41.99	-13.00	-28.99	Vertical
9	1658.000	-58.56	-0.23	-58.79	-13.00	-45.79	Vertical
10	2487.000	-54.99	3.50	-51.49	-13.00	-38.49	Vertical
Middle Channel							
1	793.028	-86.43	41.65	-44.78	-13.00	-31.78	Horizontal
2	821.387	-85.89	42.37	-43.52	-13.00	-30.52	Horizontal
3	992.997	-85.28	44.47	-40.81	-13.00	-27.81	Horizontal
4	1673.000	-58.78	-0.12	-58.90	-13.00	-45.90	Horizontal
5	2509.500	-60.63	3.58	-57.05	-13.00	-44.05	Horizontal
6	771.047	-85.89	41.18	-44.71	-13.00	-31.71	Vertical
7	793.028	-85.77	41.65	-44.12	-13.00	-31.12	Vertical
8	952.000	-85.99	43.79	-42.20	-13.00	-29.20	Vertical
9	1673.000	-56.12	-0.12	-56.24	-13.00	-43.24	Vertical
10	2509.500	-55.75	3.58	-52.17	-13.00	-39.17	Vertical
Highest Channel							
1	821.387	-86.64	42.37	-44.27	-13.00	-31.27	Horizontal
2	906.304	-85.40	43.57	-41.83	-13.00	-28.83	Horizontal
3	986.044	-85.31	44.36	-40.95	-13.00	-27.95	Horizontal
4	1688.000	-58.72	-0.01	-58.73	-13.00	-45.73	Horizontal
5	2532.000	-53.50	3.68	-49.82	-13.00	-36.82	Horizontal
6	821.387	-85.86	42.37	-43.49	-13.00	-30.49	Vertical
7	919.132	-86.09	43.55	-42.54	-13.00	-29.54	Vertical
8	986.044	-85.91	44.36	-41.55	-13.00	-28.55	Vertical
9	1688.000	-58.54	-0.01	-58.55	-13.00	-45.55	Vertical
10	2532.000	-53.67	3.68	-49.99	-13.00	-36.99	Vertical

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5.8.4 LTE Band 7

LTE Band 7_ 20 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	713.692	-79.96	11.53	-68.43	-25.00	-43.43	Horizontal
2	887.398	-79.86	14.17	-65.69	-25.00	-40.69	Horizontal
3	965.474	-79.96	14.91	-65.05	-25.00	-40.05	Horizontal
4	7530.000	-46.40	13.06	-33.34	-25.00	-8.34	Horizontal
5	10040.000	-58.94	15.07	-43.87	-25.00	-18.87	Horizontal
6	684.226	-79.30	10.82	-68.48	-25.00	-43.48	Vertical
7	862.802	-80.06	13.74	-66.32	-25.00	-41.32	Vertical
8	912.695	-79.29	14.49	-64.80	-25.00	-39.80	Vertical
9	7530.000	-44.40	13.06	-31.34	-25.00	-6.34	Vertical
10	10040.000	-59.58	15.07	-44.51	-25.00	-19.51	Vertical
Middle Channel							
1	850.760	-80.44	13.57	-66.87	-25.00	-41.87	Horizontal
2	868.886	-80.19	13.80	-66.39	-25.00	-41.39	Horizontal
3	912.695	-80.09	14.49	-65.60	-25.00	-40.60	Horizontal
4	7605.000	-48.47	13.04	-35.43	-25.00	-10.43	Horizontal
5	10140.000	-58.39	15.08	-43.31	-25.00	-18.31	Horizontal
6	862.802	-79.99	13.74	-66.25	-25.00	-41.25	Vertical
7	912.695	-80.47	14.49	-65.98	-25.00	-40.98	Vertical
8	992.997	-81.01	15.56	-65.45	-25.00	-40.45	Vertical
9	7605.000	-49.60	13.04	-36.56	-25.00	-11.56	Vertical
10	10140.000	-58.76	15.08	-43.68	-25.00	-18.68	Vertical
Highest Channel							
1	793.028	-78.94	12.44	-66.50	-25.00	-41.50	Horizontal
2	868.886	-80.10	13.80	-66.30	-25.00	-41.30	Horizontal
3	986.044	-80.92	15.44	-65.48	-25.00	-40.48	Horizontal
4	5120.000	-52.72	10.01	-42.71	-25.00	-17.71	Horizontal
5	7680.000	-54.91	13.02	-41.89	-25.00	-16.89	Horizontal
6	881.184	-80.41	14.07	-66.34	-25.00	-41.34	Vertical
7	925.613	-80.62	14.46	-66.16	-25.00	-41.16	Vertical
8	979.139	-80.62	15.25	-65.37	-25.00	-40.37	Vertical
9	5120.000	-55.12	10.01	-45.11	-25.00	-20.11	Vertical
10	7680.000	-53.95	13.02	-40.93	-25.00	-15.93	Vertical

5.8.5 LTE Band 12

LTE Band 12_ 10 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	749.676	-86.25	40.95	-45.30	-13.00	-32.30	Horizontal
2	809.924	-86.05	42.08	-43.97	-13.00	-30.97	Horizontal
3	945.334	-86.05	43.67	-42.38	-13.00	-29.38	Horizontal
4	1408.000	-58.59	-1.31	-59.90	-13.00	-46.90	Horizontal
5	2112.000	-59.40	2.49	-56.91	-13.00	-43.91	Horizontal
6	815.635	-86.03	42.22	-43.81	-13.00	-30.81	Vertical
7	938.714	-85.89	43.51	-42.38	-13.00	-29.38	Vertical
8	958.714	-85.92	43.89	-42.03	-13.00	-29.03	Vertical
9	1408.000	-55.15	-1.31	-56.46	-13.00	-43.46	Vertical
10	2112.000	-56.51	2.49	-54.02	-13.00	-41.02	Vertical
Middle Channel							
1	856.760	-86.42	42.78	-43.64	-13.00	-30.64	Horizontal
2	938.714	-85.52	43.51	-42.01	-13.00	-29.01	Horizontal
3	972.283	-85.50	43.98	-41.52	-13.00	-28.52	Horizontal
4	1415.000	-58.36	-1.32	-59.68	-13.00	-46.68	Horizontal
5	2122.500	-58.93	2.52	-56.41	-13.00	-43.41	Horizontal
6	651.383	-86.78	39.27	-47.51	-13.00	-34.51	Vertical
7	893.656	-86.37	43.26	-43.11	-13.00	-30.11	Vertical
8	986.044	-86.28	44.36	-41.92	-13.00	-28.92	Vertical
9	1415.000	-57.69	-1.32	-59.01	-13.00	-46.01	Vertical
10	2122.500	-59.29	2.52	-56.77	-13.00	-43.77	Vertical
Highest Channel							
1	787.475	-86.41	41.53	-44.88	-13.00	-31.88	Horizontal
2	821.387	-86.70	42.37	-44.33	-13.00	-31.33	Horizontal
3	945.334	-85.60	43.67	-41.93	-13.00	-28.93	Horizontal
4	1422.000	-55.14	-1.32	-56.46	-13.00	-43.46	Horizontal
5	2133.000	-59.60	2.55	-57.05	-13.00	-44.05	Horizontal
6	815.635	-86.32	42.22	-44.10	-13.00	-31.10	Vertical
7	906.304	-85.52	43.57	-41.95	-13.00	-28.95	Vertical
8	986.044	-85.42	44.36	-41.06	-13.00	-28.06	Vertical
9	1422.000	-55.24	-1.32	-56.56	-13.00	-43.56	Vertical
10	2133.000	-59.22	2.55	-56.67	-13.00	-43.67	Vertical

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5.8.6 LTE Band 17

LTE Band 17_ 5 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	734.037	-87.07	41.01	-46.06	-13.00	-33.06	Horizontal
2	875.013	-85.19	43.02	-42.17	-13.00	-29.17	Horizontal
3	919.132	-85.88	43.55	-42.33	-13.00	-29.33	Horizontal
4	1418.000	-58.52	-1.31	-59.83	-13.00	-46.83	Horizontal
5	2127.000	-58.01	2.53	-55.48	-13.00	-42.48	Horizontal
6	749.676	-86.88	40.95	-45.93	-13.00	-32.93	Vertical
7	815.635	-86.06	42.22	-43.84	-13.00	-30.84	Vertical
8	945.334	-85.77	43.67	-42.10	-13.00	-29.10	Vertical
9	1418.000	-55.29	-1.31	-56.60	-13.00	-43.60	Vertical
10	2127.000	-57.85	2.53	-55.32	-13.00	-42.32	Vertical
Middle Channel							
1	749.676	-86.07	40.95	-45.12	-13.00	-32.12	Horizontal
2	787.475	-85.62	41.53	-44.09	-13.00	-31.09	Horizontal
3	906.304	-85.72	43.57	-42.15	-13.00	-29.15	Horizontal
4	1420.000	-56.13	-1.32	-57.45	-13.00	-44.45	Horizontal
5	2130.000	-55.04	2.54	-52.50	-13.00	-39.50	Horizontal
6	833.013	-86.28	42.39	-43.89	-13.00	-30.89	Vertical
7	862.802	-86.37	42.85	-43.52	-13.00	-30.52	Vertical
8	906.304	-86.30	43.57	-42.73	-13.00	-29.73	Vertical
9	1420.000	-54.68	-1.32	-56.00	-13.00	-43.00	Vertical
10	2130.000	-55.00	2.54	-52.46	-13.00	-39.46	Vertical
Highest Channel							
1	728.897	-85.98	40.92	-45.06	-13.00	-32.06	Horizontal
2	919.132	-86.34	43.55	-42.79	-13.00	-29.79	Horizontal
3	945.334	-85.90	43.67	-42.23	-13.00	-29.23	Horizontal
4	1422.000	-54.58	-1.32	-55.90	-13.00	-42.90	Horizontal
5	2133.000	-59.57	2.55	-57.02	-13.00	-44.02	Horizontal
6	838.887	-86.55	42.44	-44.11	-13.00	-31.11	Vertical
7	912.695	-85.57	43.52	-42.05	-13.00	-29.05	Vertical
8	992.997	-85.50	44.47	-41.03	-13.00	-28.03	Vertical
9	1422.000	-54.01	-1.32	-55.33	-13.00	-42.33	Vertical
10	2133.000	-53.62	2.55	-51.07	-13.00	-38.07	Vertical

5.8.7 LTE Band 66

LTE Band 66_ 20 MHz_ QPSK							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
Lowest Channel							
1	739.214	-79.57	11.58	-67.99	-13.00	-54.99	Horizontal
2	925.613	-80.14	14.46	-65.68	-13.00	-52.68	Horizontal
3	979.139	-80.95	15.25	-65.70	-13.00	-52.70	Horizontal
4	3440.000	-57.46	6.41	-51.05	-13.00	-38.05	Horizontal
5	5160.000	-57.08	10.10	-46.98	-13.00	-33.98	Horizontal
6	703.731	-80.18	11.46	-68.72	-13.00	-55.72	Vertical
7	868.886	-79.85	13.80	-66.05	-13.00	-53.05	Vertical
8	958.714	-80.73	14.93	-65.80	-13.00	-52.80	Vertical
9	3440.000	-57.60	6.41	-51.19	-13.00	-38.19	Vertical
10	5160.000	-57.31	10.10	-47.21	-13.00	-34.21	Vertical
Middle Channel							
1	718.725	-80.18	11.51	-68.67	-13.00	-55.67	Horizontal
2	734.037	-80.05	11.71	-68.34	-13.00	-55.34	Horizontal
3	906.304	-80.64	14.53	-66.11	-13.00	-53.11	Horizontal
4	3490.000	-60.02	6.50	-53.52	-13.00	-40.52	Horizontal
5	5235.000	-59.99	10.26	-49.73	-13.00	-36.73	Horizontal
6	723.793	-79.40	11.58	-67.82	-13.00	-54.82	Vertical
7	919.132	-80.21	14.53	-65.68	-13.00	-52.68	Vertical
8	986.044	-80.73	15.44	-65.29	-13.00	-52.29	Vertical
9	3490.000	-59.80	6.50	-53.30	-13.00	-40.30	Vertical
10	5235.000	-56.52	10.26	-46.26	-13.00	-33.26	Vertical
Highest Channel							
1	856.760	-80.11	13.67	-66.44	-13.00	-53.44	Horizontal
2	906.304	-80.32	14.53	-65.79	-13.00	-52.79	Horizontal
3	979.139	-80.05	15.25	-64.80	-13.00	-51.80	Horizontal
4	3540.000	-59.10	6.70	-52.40	-13.00	-39.40	Horizontal
5	5310.000	-57.55	10.43	-47.12	-13.00	-34.12	Horizontal
6	765.648	-79.91	11.85	-68.06	-13.00	-55.06	Vertical
7	850.760	-80.33	13.57	-66.76	-13.00	-53.76	Vertical
8	925.613	-80.29	14.46	-65.83	-13.00	-52.83	Vertical
9	3540.000	-60.18	6.70	-53.48	-13.00	-40.48	Vertical
10	5310.000	-58.65	10.43	-48.22	-13.00	-35.22	Vertical

5.8.8 LTE Band 71

LTE Band 71_ 20 MHz_ QPSK							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
Lowest Channel							
1	821.387	-86.48	42.37	-44.11	-13.00	-31.11	Horizontal
2	925.613	-85.76	43.47	-42.29	-13.00	-29.29	Horizontal
3	965.474	-85.89	43.86	-42.03	-13.00	-29.03	Horizontal
4	1346.000	-58.15	-1.30	-59.45	-13.00	-46.45	Horizontal
5	2019.000	-59.37	2.24	-57.13	-13.00	-44.13	Horizontal
6	754.963	-86.23	40.87	-45.36	-13.00	-32.36	Vertical
7	899.958	-86.41	43.37	-43.04	-13.00	-30.04	Vertical
8	972.283	-85.76	43.98	-41.78	-13.00	-28.78	Vertical
9	1346.000	-52.32	-1.30	-53.62	-13.00	-40.62	Vertical
10	2019.000	-54.29	2.24	-52.05	-13.00	-39.05	Vertical
Middle Channel							
1	516.565	-87.29	36.94	-50.35	-13.00	-37.35	Horizontal
2	815.635	-86.19	42.22	-43.97	-13.00	-30.97	Horizontal
3	899.958	-86.25	43.37	-42.88	-13.00	-29.88	Horizontal
4	1366.000	-55.34	-1.30	-56.64	-13.00	-43.64	Horizontal
5	2049.000	-55.90	2.32	-53.58	-13.00	-40.58	Horizontal
6	809.924	-86.72	42.08	-44.64	-13.00	-31.64	Vertical
7	899.958	-85.60	43.37	-42.23	-13.00	-29.23	Vertical
8	952.000	-85.06	43.79	-41.27	-13.00	-28.27	Vertical
9	1366.000	-53.29	-1.30	-54.59	-13.00	-41.59	Vertical
10	2049.000	-54.64	2.32	-52.32	-13.00	-39.32	Vertical
Highest Channel							
1	642.292	-86.41	39.15	-47.26	-13.00	-34.26	Horizontal
2	708.694	-86.35	40.78	-45.57	-13.00	-32.57	Horizontal
3	938.714	-86.15	43.51	-42.64	-13.00	-29.64	Horizontal
4	1376.000	-54.37	-1.31	-55.68	-13.00	-42.68	Horizontal
5	2064.000	-55.67	2.36	-53.31	-13.00	-40.31	Horizontal
6	674.677	-86.45	39.82	-46.63	-13.00	-33.63	Vertical
7	739.214	-86.42	40.87	-45.55	-13.00	-32.55	Vertical
8	881.184	-85.69	43.15	-42.54	-13.00	-29.54	Vertical
9	1376.000	-54.71	-1.31	-56.02	-13.00	-43.02	Vertical
10	2064.000	-54.24	2.36	-51.88	-13.00	-38.88	Vertical

Remark:

1. Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result – Limit

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UTTR-RF-FCC4G-V1.1

5.9 FREQUENCY STABILITY

Test Requirement: FCC 47 CFR Part 2.1055 &
FCC 47 CFR Part 22.355 &
FCC 47 CFR Part 24.235 &
FCC 47 CFR Part 27.54

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Limits:

FCC 47 CFR Part 22.355, FCC 47 CFR Part 90.213

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

FCC 47 CFR Part 24.235, FCC 47 CFR Part 27.54

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

Test Setup: Refer to section 4.2.2 for details.

Test Procedures:

- 1) Use CMW 500 with Frequency Error measurement capability.
 - a) Temp. = -30° to $+50^{\circ}\text{C}$
 - b) Voltage = low voltage, 3.4 Vdc, Normal, 3.85 Vdc and High voltage, 4.4 Vdc.

- 2) Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°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.

- 3) Frequency Stability vs Voltage:

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

Equipment Used: Refer to section 3 for details.

Test Results: Pass

Test Data: Please refer to Appendix

APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

*** End of Report ***

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of UnionTrust, this report can't be reproduced except in full.
