FCC TEST REPORT

Product Name:	NuStar 65 Portable Data Collector
Trade Mark:	3nStar
Model No.:	Nustar65
Report Number:	24081713266RFM-2
Test Standards:	FCC 47 CFR Part 22 FCC 47 CFR Part 24 FCC 47 CFR Part 27 FCC 47 CFR Part 90
FCC ID:	2ATAN-NUSTAR65
Test Result:	PASS
Date of Issue:	October 23, 2024

Prepared for:

3nStar, Inc.
10813 NW 30th, Street, STE#110, Doral FL, 33172, USA

Prepared by:

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UnionTrust Test Laboratories UnionTrust *Certified*

Version

Version No.	Date	Description
V1.0	October 23, 2024	Original

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 6
   1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD 7
   1.4 DESCRIPTION OF SUPPORT UNITS 10
   1.5 TEST LOCATION 10
   1.6 TEST FACILITY 10
   1.7 DEVIATION FROM STANDARDS 10
   1.8 ABNORMALITIES FROM STANDARD CONDITIONS 10
   1.9 OTHER INFORMATION REQUESTED BY THE CUSTOMER 11
   1.10 MEASUREMENT UNCERTAINTY 11
2. TEST SUMMARY 12
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 26 30
      5.2.6 LTE BAND 26 (PART 90S) 31
      5.2.7 LTE BAND 38 32
      5.2.8 LTE BAND 41 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 26 39
      5.3.1 LTE BAND 26(PART 90S) 39
      5.3.2 LTE BAND 38 40
      5.3.3 LTE BAND 41 40
   5.4 PEAK-TO-AVERAGE RATIO 41
   5.5 99%&26DB BANDWIDTH 42
   5.6 BAND EDGE AT ANTENNA TERMINALS 43
   5.7 SPURIOUS EMISSIONS AT ANTENNA TERMINALS 44
   5.8 FIELD STRENGTH OF SPURIOUS RADIATION 45
      5.8.1 LTE BAND 2 46
      5.8.2 LTE BAND 4 47
      5.8.3 LTE BAND 5 48
      5.8.4 LTE BAND 7 49
      5.8.5 LTE BAND 26 50

5.8.6 LTE BAND 26 (PART 90S) 51
5.8.7 LTE BAND 38 52
5.8.8 LTE BAND 41 53
5.9 FREQUENCY STABILITY 54
APPENDIX 1 PHOTOS OF TEST SETUP 55
APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS 55

1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	3nStar, Inc.
Address of Applicant:	10813 NW 30th, Street, STE#110, Doral FL, 33172, USA
Manufacturer:	3nStar, Inc.
Address of Manufacturer:	10813 NW 30th, Street, STE#110, Doral FL, 33172, USA

1.2 EUT INFORMATION

1.2.1 General Description of EUT

Product Name:	NuStar 65 Portable Data Collector		
Model No.:	Nustar65		
Trade Mark:	3nStar		
DUT Stage:	Identical Prototype		
EUT Supports Function: (Provided by the customer)	GSM Bands:	GSM850/PCS 1900	
	UTRA Bands:	WCDMA Band II/ Band V	
	E-UTRA Bands:	FDD Band 2/ 4/ 5/ 7/ 26	
		TDD Band 38/ 41	
	2.4 GHz ISM Band:	IEEE 802.11b/g/n	
		Bluetooth 5.1	
	5 GHz U-NII Bands:	5 150 - 5 250 MHz	IEEE 802.11a/n/ac
		5 250 - 5 350 MHz	IEEE 802.11a/n/ac
		5 470 - 5 730 MHz	IEEE 802.11a/n/ac
		5 725 - 5 850 MHz	IEEE 802.11a/n/ac
	RNSS Band:	1559 - 1610 MHz	BDS/ GPS/ GLONASS/ Galileo
	NFC:	13.553 - 13.567 MHz	
Software Version:	S651-G1-SC6101-NU419-V3.01.240830 (Provided by the customer)		
Hardware Version:	S651_MA_B08D_V1.0 (Provided by the customer)		
Sample Received Date:	August 16, 2024		
Sample Tested Date:	August 21, 2024 to September 25, 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.:	BI12T-050200-BdVU
Input:	100-240 V~50/60 Hz 0.5A
Output:	5.0 V ⎓ 2.0A

Battery	
Model No.:	BAT-655001
Battery Type:	Rechargeable Li-ion Battery
Rated Voltage:	3.87 Vdc
Limited Charge Voltage:	4.45 Vdc
Rated Capacity:	5050 mAh

Cable	
Description:	USB Type-C to USB 3.0 Type A Cable
Connector:	USB Type-C / USB 3.0 Type A
Cable Type:	Shielded without ferrite
Length:	1 Meter

Adapter (Desktop Cradle)	
Model No.:	BI24G-120200-AdU
Input:	100-240 V~50/60 Hz 0.8A
Output:	12 V ⎓ 2.0A

Desktop Cradle	
Model No.:	S65-HB
Input:	Input: 12.0 V ⎓ 2.0A
Output:	Output: 5.0 V ⎓ 3.0A and 4.4 V ⎓ 1.7A

1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Support Networks:	Single Carrier: LTE Band 2/4/5/7/26/38/41(2555-2655MHz)	
Type of Modulation:	QPSK, 16QAM, 64QAM	
Antenna Type: (Provided by the customer)	LDS Antenna	
Antenna Gain: (Provided by the customer)	LTE Band 2:	1.58 dBi
	LTE Band 4:	1.44 dBi
	LTE Band 5:	-1.71 dBi
	LTE Band 7:	1.44 dBi
	LTE Band 26:	-1.71 dBi
	LTE Band 38:	1.44 dBi
	LTE Band 41:	1.44 dBi
Sample No.:	Radiated: S202408164150-ZJA01/7	
	Conducted: S202408164150-ZJA04/7	
Normal Test Voltage:	3.85 Vdc	
Extreme Test Voltage:	3.6 to 4.3Vdc	
Extreme Test Temperature:	-20 °C to +50 °C	

Summary of Results:

Bands	BW (MHz)	Modulation	Frequency Range (MHz)	Max RF Output Power (dBm) Conducted (Average)	Max RF Output Power (dBm) ERP/EIRP (Average)	EIRP (W)	99% BW (MHz)	Emission Designator
2	1.4	QPSK	1850.7-1909.3	24.18	25.76	0.3767	1.0967	1M10G7D
		16QAM		23.24	24.82	0.3034	1.0999	1M10W7D
		64QAM		22.56	24.14	0.2594	1.0914	1M09W7D
	3	QPSK	1851.5-1908.5	24.32	25.90	0.3890	2.6924	2M69G7D
		16QAM		23.27	24.85	0.3055	2.6894	2M69W7D
		64QAM		22.09	23.67	0.2328	2.6922	2M69W7D
	5	QPSK	1852.5-1907.5	24.30	25.88	0.3873	4.5039	4M50G7D
		16QAM		23.19	24.77	0.2999	4.5146	4M51W7D
		64QAM		22.09	23.67	0.2328	4.5032	4M50W7D
	10	QPSK	1855.0-1905.0	24.33	25.91	0.3899	8.9923	8M99G7D
		16QAM		23.33	24.91	0.3097	8.9892	8M99W7D
		64QAM		22.14	23.72	0.2355	8.9885	8M99W7D
	15	QPSK	1857.5-1902.5	24.21	25.79	0.3793	13.5120	13M5G7D
		16QAM		23.30	24.88	0.3076	13.4950	13M5W7D
		64QAM		23.29	24.87	0.3069	13.4900	13M5W7D
	20	QPSK	1860.0-1900.0	24.51	26.09	0.4064	17.9780	18M0G7D
		16QAM		22.97	24.55	0.2851	18.0030	18M0W7D
		64QAM		22.38	23.96	0.2489	17.9660	18M0W7D
4	1.4	QPSK	1710.7-1754.3	24.30	25.74	0.3750	1.0951	1M10G7D
		16QAM		23.14	24.58	0.2871	1.1000	1M10W7D
		64QAM		22.45	23.89	0.2449	1.0999	1M10W7D
	3	QPSK	1711.5-1753.5	24.25	25.69	0.3707	2.6988	2M70G7D
		16QAM		23.16	24.60	0.2884	2.6873	2M69W7D
		64QAM		22.22	23.66	0.2323	2.6888	2M69W7D
	5	QPSK	1712.5-1752.5	24.26	25.70	0.3715	4.5001	4M50G7D
		16QAM		23.26	24.70	0.2951	4.5099	4M51W7D
		64QAM		22.64	24.08	0.2559	4.4944	4M49W7D
	10	QPSK	1715-1750	24.36	25.80	0.3802	8.9838	8M98G7D
		16QAM		23.25	24.69	0.2944	8.9789	8M98W7D
		64QAM		22.33	23.77	0.2382	8.9791	8M98W7D
	15	QPSK	1717.5-1747.5	24.21	25.65	0.3673	13.4860	13M5G7D
		16QAM		23.25	24.69	0.2944	13.4980	13M5W7D
		64QAM		23.27	24.71	0.2958	13.4630	13M5W7D
	20	QPSK	1720-1745	24.40	25.84	0.3837	17.9840	18M0G7D
		16QAM		23.44	24.88	0.3076	18.0480	18M0W7D
		64QAM		22.42	23.86	0.2432	17.9750	18M0W7D
5	1.4	QPSK	824.7-848.3	23.42	19.56	0.0904	1.0944	1M09G7D
		16QAM		22.29	18.43	0.0697	1.0978	1M10W7D
		64QAM		21.23	17.37	0.0546	1.0949	1M09W7D
	3	QPSK	825.5-847.5	23.27	19.41	0.0873	2.6915	2M69G7D
		16QAM		22.24	18.38	0.0689	2.6897	2M69W7D
		64QAM		21.04	17.18	0.0522	2.6911	2M69W7D
	5	QPSK	826.5-846.5	23.27	19.41	0.0873	4.5024	4M50G7D
		16QAM		22.14	18.28	0.0673	4.5025	4M50W7D
		64QAM		21.38	17.52	0.0565	4.4997	4M50W7D
	10	QPSK	829-844	23.49	19.63	0.0918	8.9988	9M00G7D
		16QAM		22.23	18.37	0.0687	8.9927	8M99W7D
		64QAM		21.15	17.29	0.0536	8.9852	8M99W7D
7	5	QPSK	2502.5-2567.5	21.43	22.87	0.1936	4.5046	4M50G7D
		16QAM		20.61	22.05	0.1603	4.5143	4M51W7D
		64QAM		19.47	20.91	0.1233	4.5064	4M51W7D
	10	QPSK	2505-2565	21.24	22.68	0.1854	8.9989	9M00G7D
		16QAM		20.19	21.63	0.1455	8.9850	8M99W7D
		64QAM		19.04	20.48	0.1117	8.9882	8M99W7D
	15	QPSK	2507.5-2562.5	21.18	22.62	0.1828	13.4930	13M5G7D
		16QAM		20.26	21.70	0.1479	13.4890	13M5W7D
		64QAM		20.27	21.71	0.1483	13.5020	13M5W7D
	20	QPSK	2510-2560	21.82	23.26	0.2118	17.9980	18M0G7D
		16QAM		20.22	21.66	0.1466	17.9730	18M0W7D
		64QAM		19.39	20.83	0.1211	17.9760	18M0W7D

Summary of Results:

Bands	BW (MHz)	Modulation	Frequency Range (MHz)	Max RF Output Power (dBm) Conducted (Average)	Max RF Output Power (dBm) ERP/EIRP (Average)	EIRP (W)	99% BW (MHz)	Emission Designator
26	1.4	QPSK	824.7-848.3	23.66	19.80	0.0955	1.1025	1M10G7W
		16QAM		22.39	18.53	0.0713	1.1009	1M10D7W
		64QAM		21.84	17.98	0.0628	1.1010	1M10D7W
	3	QPSK	825.5-847.5	23.62	19.76	0.0946	2.6958	2M70G7W
		16QAM		22.53	18.67	0.0736	2.6902	2M69D7W
		64QAM		21.41	17.55	0.0569	2.6980	2M70D7W
	5	QPSK	826.5-846.5	23.54	19.68	0.0929	4.5027	4M50G7W
		16QAM		22.43	18.57	0.0719	4.5167	4M52D7W
		64QAM		21.72	17.86	0.0611	4.5011	4M50D7W
	10	QPSK	829-844	23.57	19.71	0.0935	9.0079	9M00G7W
		16QAM		22.57	18.71	0.0743	8.9985	9M00D7W
		64QAM		21.48	17.62	0.0578	8.9866	8M99D7W
	15	QPSK	831.5-841.5	23.49	19.63	0.0918	13.5050	13M5G7W
		16QAM		22.52	18.66	0.0735	13.5170	13M5D7W
		64QAM		22.54	18.68	0.0738	13.4610	13M5D7W
26 (Part 90S)	1.4	QPSK	814.7-823.3	23.99	20.13	0.1030	1.0996	1M10G7W
		16QAM		22.86	19.00	0.0794	1.0987	1M10D7W
		64QAM		22.13	18.27	0.0671	1.0997	1M10D7W
	3	QPSK	815.5-822.5	23.83	19.97	0.0993	2.6955	2M70G7W
		16QAM		22.89	19.03	0.0800	2.6946	2M69D7W
		64QAM		21.71	17.85	0.0610	2.6915	2M69D7W
	5	QPSK	816.5-821.5	23.86	20.00	0.1000	4.5044	4M50G7W
		16QAM		22.76	18.90	0.0776	4.5089	4M51D7W
		64QAM		22.06	18.20	0.0661	4.4973	4M50D7W
	10	QPSK	819	23.79	19.93	0.0984	8.9776	8M98G7W
		16QAM		22.82	18.96	0.0787	8.9847	8M98D7W
		64QAM		21.71	17.85	0.0610	8.9692	8M97D7W
38	5	QPSK	2572.5-2617.5	21.15	22.59	0.1816	4.5043	4M50G7W
		16QAM		20.13	21.57	0.1435	4.4896	4M49D7W
		64QAM		19.08	20.52	0.1127	4.4971	4M50D7W
	10	QPSK	2575-2615	21.30	22.74	0.1879	9.0089	9M00G7W
		16QAM		20.42	21.86	0.1535	8.9916	8M99D7W
		64QAM		19.56	21.00	0.1259	8.9858	8M99D7W
	15	QPSK	2577.5-2612.5	21.07	22.51	0.1782	13.4960	13M5G7W
		16QAM		20.18	21.62	0.1452	13.5140	13M5D7W
		64QAM		20.11	21.55	0.1429	13.4760	13M5D7W
	20	QPSK	2580-2610	21.31	22.75	0.1884	17.9740	18M0G7W
		16QAM		20.15	21.59	0.1442	17.9530	18M0D7W
		64QAM		19.04	20.48	0.1117	17.9470	17M9D7W
41	5	QPSK	2557.5-2562.5	21.50	22.94	0.1968	4.4921	4M49G7W
		16QAM		20.89	22.33	0.1710	4.4920	4M49D7W
		64QAM		19.71	21.15	0.1303	4.5006	4M50D7W
	10	QPSK	2560-2650	21.55	22.99	0.1991	8.9757	8M98G7W
		16QAM		20.88	22.32	0.1706	8.9822	8M98D7W
		64QAM		19.94	21.38	0.1374	8.9881	8M98D7W
	15	QPSK	2562.5-2647.5	21.45	22.89	0.1945	13.4870	13M5G7W
		16QAM		20.65	22.09	0.1618	13.4980	13M5D7W
		64QAM		20.47	21.91	0.1552	13.4790	13M5D7W
	20	QPSK	2565-2645	21.57	23.01	0.2000	17.9700	18M0G7W
		16QAM		20.64	22.08	0.1614	17.9550	18M0D7W
		64QAM		19.50	20.94	0.1242	17.9480	17M9D7W

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
Dummy battery	N/A	N/A	N/A	UnionTek

2) Support Cable

Cable No.	Description	Connector	Length	Supplied by
1	Antenna Cable	SMA	0.3 Meter	UnionTek

1.5 TEST LOCATION

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: 16/F, Block A, Building 6th, Baoneng Science and Technology Park, Longhua Street, Longhua District, Shenzhen, China
Telephone: +86 (0) 755 2823 0888
Fax: +86 (0) 755 2823 0886

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

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	$\pm 6.5 \times 10^{-8}$
7	Humidity	±3.9 %
8	Temperature	±0.62 ℃
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)			
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 & Band 26)			
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 & Band 38 & Band 41)			
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 90 Test Cases (LTE Band 26)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046 & FCC 47 CFR Part 90.635	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 90.635	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	N/A	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Emission Mask	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 90.691	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 90.691	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 90.691	ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 90.213	ANSI/TIA-603-E-2016 & 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
☑	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	01-Apr-2024	31-Mar-2025
☑	Pre-amplifier	ETS-LINDGREN	00118385	00201874	31-Oct-2023	30-Oct-2024
☑	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	19-July-2024	18-July-2025
☑	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

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	-20	3.6	20 to 75
TH/VL	+50	3.6	20 to 75
TL/VH	-20	4.3	20 to 75
TH/VH	+50	4.3	20 to 75

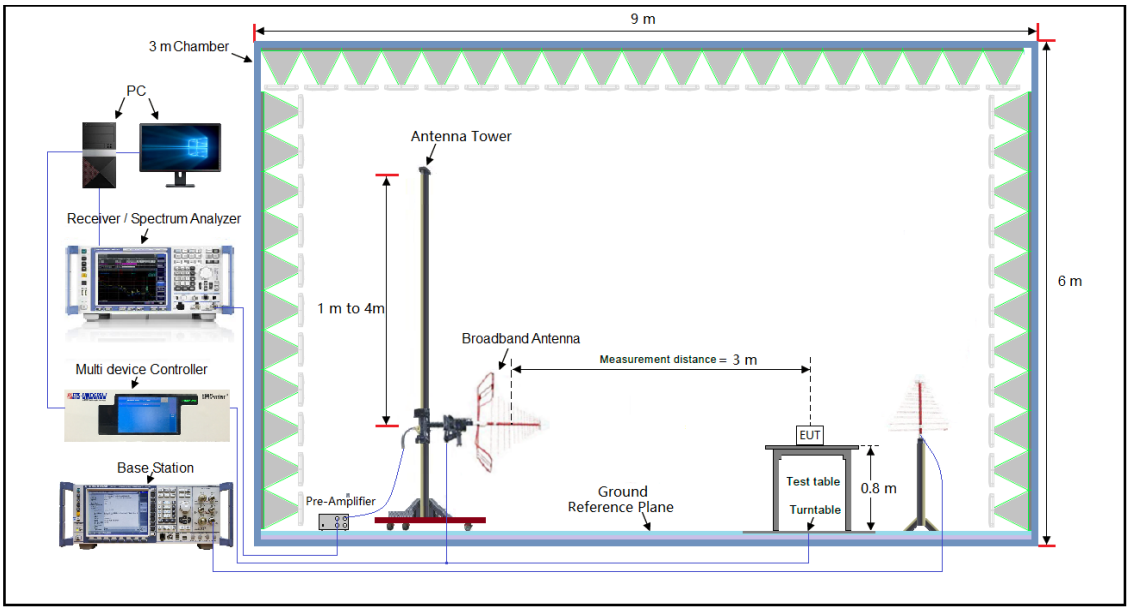
Remark:

1) The EUT just work in such extreme temperature of -20 °C to +50 °C and the extreme voltage of 3.6 V to 4.3 V, so here the EUT is tested in the temperature of -20 °C to +50 °C and the voltage of 3.6 V to 4.3 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.

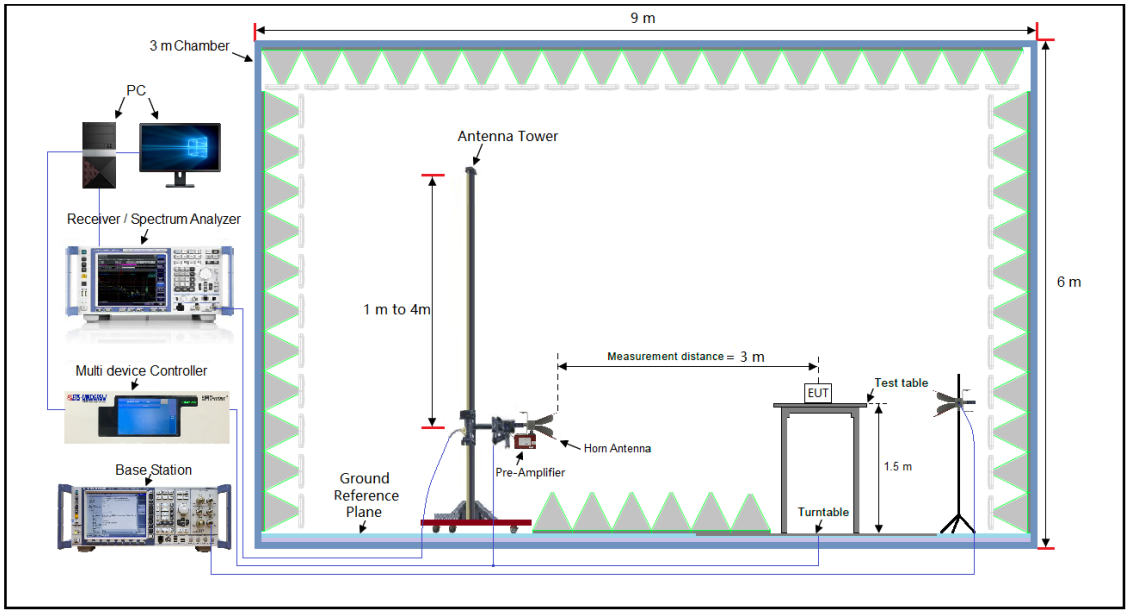
4.2 TEST SETUP

4.2.1 For Radiated Emissions test setup

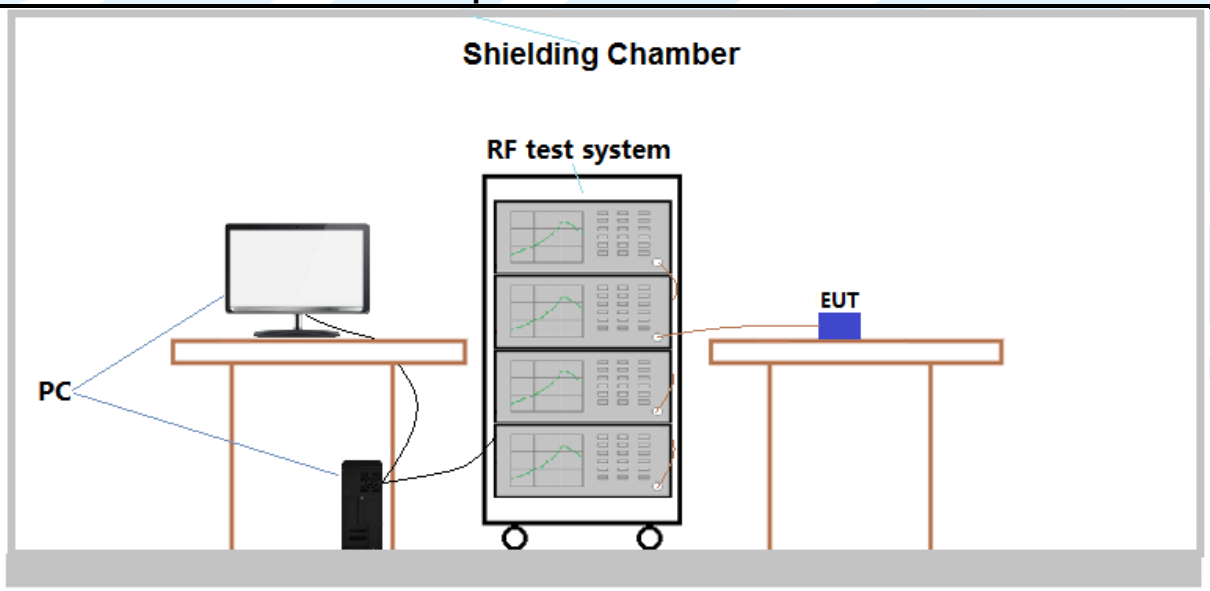
Radiated Emissions 30MHz to 1GHz Test setup



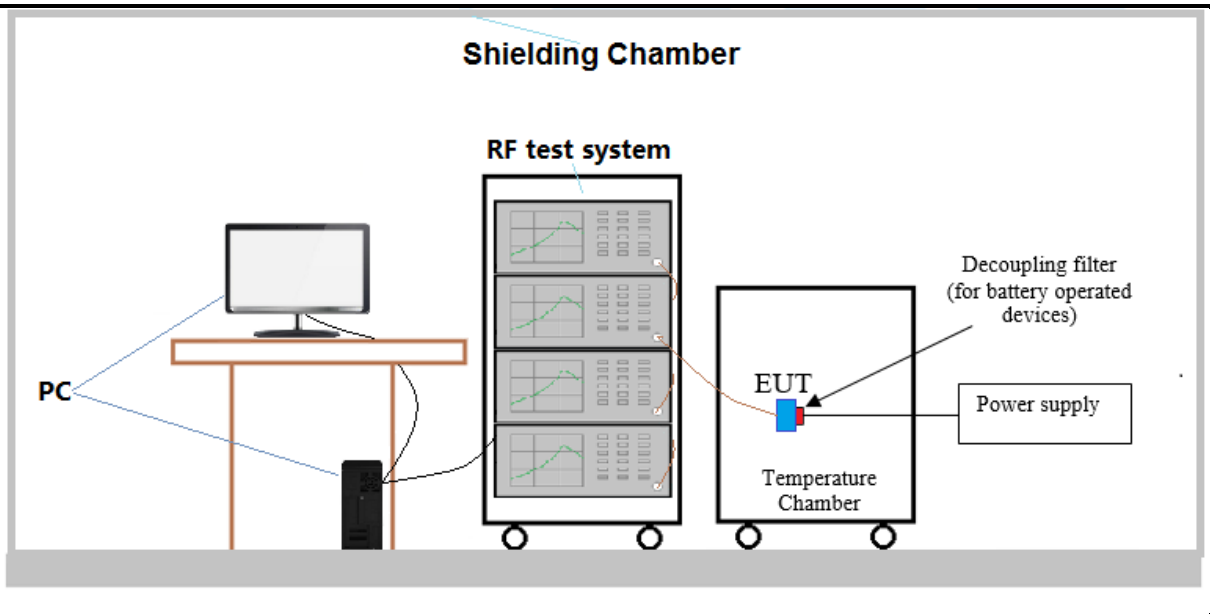
Radiated Emissions Above 1GHz Test setup



4.2.2 For Conducted RF test setup



Normal Environment



Extreme Environment

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
		20	21350	2560

Band	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink (MHz)
LTE band 26 TX:824–849MHz	Low Range	1.4	26797	824.7
		3	26805	825.5
		5	26815	826.5
		10	26840	829
		15	26865	831.5
	Middle Range	1.4/3/5/10/15	26915	836.5
	High Range	1.4	27033	848.3
		3	27025	847.5
		5	27015	846.5
		10	26990	844
		15	26965	841.5
LTE band 26 TX: 814-824MHz	Low Range	1.4	26697	814.7
		3	26705	815.5
		5	26715	816.5
		10	/	/
		15	26765	821.5
	Middle Range	1.4/3/5/10	26740	819
	High Range	1.4	26783	823.3
		3	26775	822.5
		5	26765	821.5
		10	/	/
		15	/	/
LTE Band 38 TX: 2570-2620MHz	Low Range	5	37775	2572.5
		10	37800	2575
		15	37825	2577.5
		20	37850	2580
	Middle Range	5/10/ 15/20	38000	2595
	High Range	5	38225	2617.5
		10	38200	2615
		15	38175	2612.5
		20	38150	2610
LTE Band 41 TX: 2496-2690MHz	Low Range	5	40265	2557.5
		10	40290	2560
		15	40315	2562.5
		20	40340	2565
	Middle Range	5/10/15/20	40690	2600
	High Range	5	41215	2652.5
		10	41190	2650
		15	41165	2647.5
		20	41140	2645

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	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	26	☒	☒	☒	☒	☒	--	☒	☒	☒	☒	☒	☒	☒	☒	☒
	38	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	41	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
99%&26dB Bandwidth	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☐	☐	☒	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	26	☒	☒	☒	☒	☒	--	☒	☒	☒	☐	☐	☒	☒	☒	☒
	38	-	-	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	41	-	-	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒

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	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☒	☒
	26	☐	☐	☐	☐	☒	--	☒	☒	☒	☒	☐	☒	☒	☐	☒
	38	-	-	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	41	-	-	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
Band Edge at antenna terminals	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☒	☐	☒	☒	☐	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	26	☒	☒	☒	☒	☒	--	☒	☒	☒	☒	☐	☒	☒	☐	☒
	38	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	41	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
Spurious emissions at antenna terminals	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☒	☐	☐	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	26	☒	☒	☒	☒	☒	--	☒	☒	☒	☒	☐	☐	☒	☒	☒
	38	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	41	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒

Item	Band	Bandwidth(MHz)						Modulation			RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Field strength of spurious radiation	2	☐	☐	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	4	☐	☐	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	5	☐	☐	☐	☒	--	--	☒	☐	☐	☒	☐	☐	☒	☒	☒
	7	-	-	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	26	☐	☐	☐	☐	☒	--	☒	☐	☐	☒	☐	☐	☒	☒	☒
	38	-	-	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	41	-	-	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
Frequency stability	2	☐	☐	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	4	☐	☐	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	5	☐	☐	☐	☒	--	--	☒	☐	☐	☐	☐	☒	☐	☒	☐
	7	-	-	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	26	☐	☐	☐	☐	☒	--	☒	☐	☐	☐	☐	☒	☐	☒	☐
	38	-	-	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	41	-	-	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐

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: FCC 47 CFR Part 27.50(d)(4)
LTE Band 5& LTE Band 26: FCC 47 CFR Part 22.913(a)
LTE Band 7& Band 38 & Band 41: FCC 47 CFR Part 27.50(h)(2)
LTE Band 26: FCC 47 CFR Part 90.635

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(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.

FCC 47 CFR Part 90.635:
(a) The effective radiated power and antenna height for base stations may not exceed 1 kilowatt (30 dBw) and 304 m. (1,000 ft.) above average terrain (AAT), respectively, or the equivalent thereof as determined from the Table. These are maximum values, and applicants will be required to justify power levels and antenna heights requested.
(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).
Table—Equivalent Power and Antenna Heights for Base Stations in the 851–869 MHz and 935–940 MHz Bands Which Have a Requirement for a 32 km (20 mi) Service Area Radius

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

5.2.1 LTE Band 2

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	18607 1850.7 MHz	18900 1880 MHz	19193 1909.3 MHz	18607 1850.7 MHz	18900 1880 MHz	19193 1909.3 MHz	18607 1850.7 MHz	18900 1880 MHz	19193 1909.3 MHz
2	1.4	1RB#0	24.01	23.38	23.28	23.00	22.22	22.07	22.35	21.51	20.96
		1RB#2	24.12	23.55	23.43	23.18	22.39	22.24	22.50	21.67	21.18
		1RB#5	23.54	23.34	23.31	22.97	22.17	22.02	22.32	21.53	20.94
		3RB#0	23.01	23.41	23.29	23.00	22.18	22.11	22.16	21.32	21.10
		3RB#1	23.04	23.43	23.27	23.00	22.18	22.11	22.17	21.32	21.10
		3RB#3	22.98	23.37	23.26	22.98	22.13	22.11	22.17	21.29	21.09
		6RB#0	23.04	22.48	22.37	22.26	21.42	21.17	21.08	20.23	20.16
Band	Bandwidth (MHz)	RB	18615 1851.5 MHz	18900 1880 MHz	19185 1908.5 MHz	18615 1851.5 MHz	18900 1880 MHz	19185 1908.5 MHz	18615 1851.5 MHz	18900 1880 MHz	19185 1908.5 MHz
2	3	1RB#0	24.26	23.52	23.21	23.21	22.24	22.01	22.03	21.18	21.33
		1RB#8	24.14	23.48	23.22	23.11	22.20	21.99	22.01	21.14	21.35
		1RB#14	24.15	23.40	23.22	23.12	22.12	22.07	21.98	21.11	21.33
		8RB#0	23.28	22.48	22.31	22.26	21.37	21.24	21.19	20.40	20.21
		8RB#4	23.29	22.50	22.31	22.23	21.39	21.23	21.19	20.40	20.22
		8RB#7	23.23	22.34	22.28	22.20	21.28	21.21	21.10	20.29	20.16
		15RB#0	23.20	22.36	22.24	22.17	21.26	21.13	21.21	20.31	20.13
Band	Bandwidth (MHz)	RB	18625 1852.5 MHz	18900 1880 MHz	19175 1907.5 MHz	18625 1852.5 MHz	18900 1880 MHz	19175 1907.5 MHz	18625 1852.5 MHz	18900 1880 MHz	19175 1907.5 MHz
2	5	1RB#0	24.24	23.38	23.16	23.11	22.37	22.04	21.97	21.67	21.22
		1RB#12	24.24	23.44	23.27	23.13	22.44	22.15	22.03	21.83	21.32
		1RB#24	24.09	23.27	23.20	22.97	22.31	22.09	21.94	21.57	21.22
		12RB#0	23.21	22.43	22.28	22.13	21.44	21.25	21.17	20.40	20.27
		12RB#6	23.18	22.44	22.28	22.15	21.45	21.26	21.17	20.36	20.28
		12RB#13	23.21	22.32	22.21	22.14	21.32	21.17	21.17	20.21	20.22
		25RB#0	23.18	22.38	22.25	22.20	21.34	21.26	21.19	20.30	20.26
Band	Bandwidth (MHz)	RB	18650 1855 MHz	18900 1880 MHz	19150 1905 MHz	18650 1855 MHz	18900 1880 MHz	19150 1905 MHz	18650 1855 MHz	18900 1880 MHz	19150 1905 MHz
2	10	1RB#0	24.20	23.57	23.16	23.17	22.24	21.86	22.08	21.17	21.18
		1RB#24	24.27	23.52	23.29	23.27	22.25	22.03	22.07	21.19	21.41
		1RB#49	24.01	23.30	23.23	23.02	22.11	21.99	21.87	21.05	21.32
		25RB#0	23.24	22.55	22.36	22.17	21.52	21.31	21.23	20.47	20.27
		25RB#12	23.16	22.53	22.35	22.17	21.51	21.31	21.26	20.50	20.23
		25RB#25	23.21	22.34	22.19	22.15	21.28	21.16	21.18	20.18	20.08
		50RB#0	23.16	22.41	22.26	22.16	21.38	21.20	21.12	20.31	20.14
Band	Bandwidth (MHz)	RB	18675 1857.5 MHz	18900 1880 MHz	19125 1902.5 MHz	18675 1857.5 MHz	18900 1880 MHz	19125 1902.5 MHz	18675 1857.5 MHz	18900 1880 MHz	19125 1902.5 MHz
2	15	1RB#0	24.15	23.44	23.05	23.08	22.52	21.77	21.96	21.52	21.07
		1RB#38	24.09	23.34	23.21	23.05	22.43	21.92	21.94	21.47	21.29
		1RB#74	23.75	23.06	23.15	22.81	22.21	21.96	21.59	21.20	21.27
		38RB#0	23.20	22.54	22.31	23.23	22.53	22.29	23.23	22.54	22.25
		38RB#18	23.23	22.56	22.28	23.22	22.52	22.29	23.21	22.57	22.28
		38RB#37	23.24	22.52	22.29	23.24	22.51	22.29	23.22	22.52	22.29
		75RB#0	23.23	22.54	22.25	22.13	21.45	21.21	21.13	20.39	20.13
Band	Bandwidth (MHz)	RB	18700 1860 MHz	18900 1880 MHz	19100 1900 MHz	18700 1860 MHz	18900 1880 MHz	19100 1900 MHz	18700 1860 MHz	18900 1880 MHz	19100 1900 MHz
2	20	1RB#0	24.26	23.48	22.89	22.86	22.51	21.73	22.12	21.53	20.67
		1RB#49	24.45	23.62	23.26	22.91	22.63	22.08	22.32	21.73	20.93
		1RB#99	24.21	22.95	23.02	22.36	22.04	21.85	21.50	21.16	20.80
		50RB#0	24.25	22.54	21.99	21.98	21.53	20.99	21.01	20.55	20.00
		50RB#25	24.27	22.58	21.99	21.95	21.51	21.01	21.02	20.59	20.04
		50RB#50	24.28	22.20	21.93	21.95	21.18	20.93	21.01	20.17	19.86
		100RB#0	23.33	22.37	21.96	21.97	21.32	20.94	20.96	20.37	19.96

5.2.2 LTE Band 4

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	19957 1710.7 MHz	20175 1732.5 MHz	20393 1754.3 MHz	19957 1710.7 MHz	20175 1732.5 MHz	20393 1754.3 MHz	19957 1710.7 MHz	20175 1732.5 MHz	20393 1754.3 MHz
4	1.4	1RB#0	24.16	24.18	24.09	22.94	22.89	22.93	21.86	22.26	22.26
		1RB#2	24.26	24.30	24.30	23.09	23.08	23.14	22.00	22.38	22.45
		1RB#5	24.21	24.19	24.10	22.91	22.94	22.91	21.86	22.24	22.27
		3RB#0	24.18	24.25	24.17	22.97	22.97	22.92	21.99	22.25	22.05
		3RB#1	24.19	24.25	24.18	22.99	23.00	22.89	22.02	22.25	22.07
		3RB#3	24.21	24.29	24.12	22.97	22.96	22.89	21.98	22.24	22.11
		6RB#0	23.25	23.29	23.21	22.05	22.19	22.11	21.03	21.14	21.00
Band	Bandwidth (MHz)	RB	19965 1711.5 MHz	20175 1732.5 MHz	20385 1753.5 MHz	19965 1711.5 MHz	20175 1732.5 MHz	20385 1753.5 MHz	19965 1711.5 MHz	20175 1732.5 MHz	20385 1753.5 MHz
4	3	1RB#0	24.15	24.25	24.07	23.16	23.04	22.81	21.93	21.97	22.14
		1RB#8	24.07	24.24	24.09	23.12	23.02	22.84	21.93	21.86	22.17
		1RB#14	24.12	24.22	24.10	23.15	23.03	22.88	21.97	21.94	22.22
		8RB#0	23.17	23.20	23.16	22.19	22.17	22.10	21.17	21.20	21.12
		8RB#4	23.17	23.18	23.17	22.16	22.16	22.12	21.16	21.23	21.11
		8RB#7	23.17	23.18	23.20	22.17	22.14	22.06	21.15	21.18	21.11
		15RB#0	23.10	23.15	23.09	22.11	22.03	21.95	21.21	21.11	21.02
Band	Bandwidth (MHz)	RB	19975 1712.5 MHz	20175 1732.5 MHz	20375 1752.5 MHz	19975 1712.5 MHz	20175 1732.5 MHz	20375 1752.5 MHz	19975 1712.5 MHz	20175 1732.5 MHz	20375 1752.5 MHz
4	5	1RB#0	24.09	24.17	24.07	22.99	23.11	22.90	21.87	22.50	22.10
		1RB#12	24.23	24.26	24.20	23.12	23.26	23.05	22.00	22.64	22.24
		1RB#24	24.15	24.12	24.09	23.10	23.10	22.96	21.91	22.43	22.09
		12RB#0	23.16	23.11	23.09	22.10	22.10	22.00	21.17	21.17	21.13
		12RB#6	23.17	23.09	23.07	22.06	22.13	22.08	21.15	21.13	21.10
		12RB#13	23.08	23.17	23.07	21.97	22.15	21.97	21.07	21.14	21.10
		25RB#0	23.09	23.17	23.10	22.07	22.10	22.11	21.17	21.15	21.12
Band	Bandwidth (MHz)	RB	20000 1715 MHz	20175 1732.5 MHz	20350 1750 MHz	20000 1715 MHz	20175 1732.5 MHz	20350 1750 MHz	20000 1715 MHz	20175 1732.5 MHz	20350 1750 MHz
4	10	1RB#0	24.05	24.24	24.02	23.11	23.02	22.82	21.89	21.96	22.15
		1RB#24	24.23	24.36	24.22	23.25	23.11	22.85	22.08	22.12	22.33
		1RB#49	24.24	24.13	24.12	23.17	23.00	22.82	21.96	21.89	22.19
		25RB#0	23.21	23.12	23.16	22.13	22.16	22.14	21.23	21.16	21.14
		25RB#12	23.17	23.13	23.13	22.13	22.11	22.11	21.23	21.18	21.14
		25RB#25	23.18	23.20	23.03	22.11	22.21	22.01	21.17	21.15	21.06
		50RB#0	23.11	23.15	23.01	22.08	22.14	22.03	21.14	21.22	21.02
Band	Bandwidth (MHz)	RB	20025 1717.5 MHz	20175 1732.5 MHz	20325 1747.5 MHz	20025 1717.5 MHz	20175 1732.5 MHz	20325 1747.5 MHz	20025 1717.5 MHz	20175 1732.5 MHz	20325 1747.5 MHz
4	15	1RB#0	24.06	24.12	24.06	23.05	23.22	22.79	21.89	22.19	22.15
		1RB#38	24.21	24.19	24.12	23.18	23.25	22.90	22.01	22.22	22.25
		1RB#74	24.18	24.05	24.06	23.15	23.14	22.88	21.99	22.12	22.14
		38RB#0	23.26	23.23	23.18	23.25	23.22	23.16	23.24	23.20	23.16
		38RB#18	23.23	23.23	23.18	23.24	23.21	23.18	23.27	23.24	23.17
		38RB#37	23.26	23.22	23.16	23.24	23.20	23.17	23.24	23.22	23.17
		75RB#0	23.24	23.20	23.17	22.21	22.20	22.11	21.27	21.27	21.17
Band	Bandwidth (MHz)	RB	20050 1720 MHz	20175 1732.5 MHz	20300 1745 MHz	20050 1720 MHz	20175 1732.5 MHz	20300 1745 MHz	20050 1720 MHz	20175 1732.5 MHz	20300 1745 MHz
4	20	1RB#0	23.99	24.08	23.95	22.85	23.17	22.75	22.06	22.20	21.67
		1RB#49	24.40	24.35	24.20	23.25	23.44	22.99	22.42	22.41	21.98
		1RB#99	24.10	24.01	23.90	22.97	23.09	22.70	22.20	22.11	21.67
		50RB#0	23.15	23.10	23.04	22.18	22.12	22.09	21.21	21.17	21.08
		50RB#25	23.21	23.11	23.05	22.16	22.11	22.13	21.29	21.17	21.06
		50RB#50	23.24	23.17	22.96	22.24	22.20	22.04	21.32	21.27	21.03
		100RB#0	23.26	23.12	23.06	22.23	22.13	21.98	21.24	21.21	21.07

5.2.3 LTE Band 5

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	20407 824.7 MHz	20525 836.5 MHz	20643 848.3 MHz	20407 824.7 MHz	20525 836.5 MHz	20643 848.3 MHz	20407 824.7 MHz	20525 836.5 MHz	20643 848.3 MHz
5	1.4	1RB#0	23.32	22.95	22.90	22.06	21.70	21.75	21.00	21.06	21.12
		1RB#2	23.42	23.05	23.07	22.29	21.90	22.03	21.01	21.14	21.23
		1RB#5	23.23	22.91	22.92	22.03	21.67	21.75	20.91	20.99	21.04
		3RB#0	23.34	23.02	23.00	22.11	21.78	21.78	21.12	20.99	20.92
		3RB#1	23.32	23.05	22.99	22.11	21.78	21.77	21.12	20.94	20.93
		3RB#3	23.31	23.05	23.01	22.06	21.77	21.71	21.07	20.99	20.93
		6RB#0	22.31	21.99	21.95	21.12	20.95	20.98	20.14	19.94	19.86
Band	Bandwidth (MHz)	RB	20415 825.5 MHz	20525 836.5 MHz	20635 847.5 MHz	20415 825.5 MHz	20525 836.5 MHz	20635 847.5 MHz	20415 825.5 MHz	20525 836.5 MHz	20635 847.5 MHz
5	3	1RB#0	23.27	23.01	22.95	22.24	21.88	21.70	21.04	20.76	21.02
		1RB#8	23.19	23.01	22.96	22.18	21.79	21.74	21.02	20.75	21.04
		1RB#14	23.16	23.00	22.95	22.12	21.76	21.69	21.01	20.76	21.03
		8RB#0	22.28	21.97	21.94	21.25	20.94	20.96	20.30	19.98	19.95
		8RB#4	22.24	21.99	21.94	21.23	20.97	20.96	20.29	19.99	19.97
		8RB#7	22.19	21.95	22.01	21.20	20.90	20.97	20.18	19.96	19.93
		15RB#0	22.22	21.97	21.93	21.21	20.88	20.85	20.27	19.97	19.94
Band	Bandwidth (MHz)	RB	20425 826.5 MHz	20525 836.5 MHz	20625 846.5 MHz	20425 826.5 MHz	20525 836.5 MHz	20625 846.5 MHz	20425 826.5 MHz	20525 836.5 MHz	20625 846.5 MHz
5	5	1RB#0	23.24	22.91	22.89	22.11	21.99	21.76	21.01	21.33	21.01
		1RB#12	23.27	22.97	23.04	22.14	22.03	21.98	21.00	21.38	21.11
		1RB#24	23.14	22.86	22.92	22.00	21.94	21.70	20.87	21.26	20.92
		12RB#0	22.24	21.99	21.91	21.17	20.96	20.86	20.31	19.99	19.96
		12RB#6	22.21	21.95	21.92	21.16	20.95	20.83	20.31	20.01	19.98
		12RB#13	22.12	21.97	21.94	21.08	20.94	20.94	20.24	19.98	20.02
		25RB#0	22.16	21.96	21.91	21.15	20.93	20.93	20.20	20.00	19.98
Band	Bandwidth (MHz)	RB	20450 829 MHz	20525 836.5 MHz	20600 844 MHz	20450 829 MHz	20525 836.5 MHz	20600 844 MHz	20450 829 MHz	20525 836.5 MHz	20600 844 MHz
5	10	1RB#0	23.22	23.02	22.83	22.23	21.91	21.65	21.10	20.82	20.98
		1RB#24	23.49	23.11	22.97	22.18	21.94	21.82	21.02	20.80	21.15
		1RB#49	23.02	22.92	22.91	22.01	21.77	21.73	20.81	20.68	21.05
		25RB#0	22.23	22.01	22.08	21.20	21.01	21.06	20.25	19.97	20.14
		25RB#12	22.23	22.00	22.06	21.17	21.00	21.10	20.32	20.00	20.11
		25RB#25	22.11	21.87	22.01	21.11	20.88	21.07	20.15	19.89	20.04
		50RB#0	22.17	21.90	22.06	21.10	20.93	21.05	20.20	19.95	20.07

5.2.4 LTE Band 7

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	20775 2502.5 MHz	21100 2535 MHz	21425 2567.5 MHz	20775 2502.5 MHz	21100 2535 MHz	21425 2567.5 MHz	20775 2502.5 MHz	21100 2535 MHz	21425 2567.5 MHz
7	5	1RB#0	21.06	21.43	20.76	20.51	19.97	19.59	19.35	19.30	18.77
		1RB#12	21.40	21.06	20.83	20.61	20.13	19.67	19.47	19.44	18.92
		1RB#24	20.96	20.90	20.71	20.47	19.98	19.54	19.32	19.27	18.73
		12RB#0	20.62	20.02	19.76	19.56	18.97	18.74	18.60	17.98	17.83
		12RB#6	20.59	20.01	19.77	19.59	19.03	18.76	18.61	17.99	17.82
		12RB#13	20.66	20.00	19.69	19.62	19.07	18.68	18.68	18.04	17.72
		25RB#0	20.65	20.06	19.75	19.66	19.02	18.77	18.69	18.01	17.76
Band	Bandwidth (MHz)	RB	20800 2505 MHz	21100 2535 MHz	21400 2565 MHz	20800 2505 MHz	21100 2535 MHz	21400 2565 MHz	20800 2505 MHz	21100 2535 MHz	21400 2565 MHz
7	10	1RB#0	21.13	21.07	20.79	20.11	19.84	19.59	18.96	18.77	18.92
		1RB#24	21.24	21.07	20.88	20.19	19.96	19.71	19.01	18.78	19.04
		1RB#49	21.13	21.07	20.72	20.05	19.85	19.52	19.03	18.80	18.84
		25RB#0	20.10	19.99	19.92	19.05	19.08	18.93	18.59	18.02	17.94
		25RB#12	20.20	20.07	19.95	19.16	19.10	18.92	18.55	18.05	17.89
		25RB#25	20.48	20.06	19.68	19.69	19.09	18.71	18.70	18.09	17.72
		50RB#0	20.47	20.07	19.79	19.58	19.06	18.77	18.56	18.07	17.80
Band	Bandwidth (MHz)	RB	20825 2507.5 MHz	21100 2535 MHz	21375 2562.5 MHz	20825 2507.5 MHz	21100 2535 MHz	21375 2562.5 MHz	20825 2507.5 MHz	21100 2535 MHz	21375 2562.5 MHz
7	15	1RB#0	21.10	20.87	20.82	20.06	20.06	19.53	18.90	19.02	18.86
		1RB#38	21.18	20.97	20.87	20.08	20.09	19.60	18.92	19.14	18.98
		1RB#74	21.00	20.91	20.63	19.94	19.87	19.42	18.89	18.96	18.76
		38RB#0	20.27	20.11	19.93	20.26	20.14	19.96	20.25	20.14	19.97
		38RB#18	20.25	20.15	19.96	20.25	20.14	19.93	20.24	20.12	19.93
		38RB#37	20.24	20.11	19.94	20.24	20.13	19.93	20.27	20.10	19.93
		75RB#0	20.27	20.14	19.93	19.17	19.13	18.84	18.48	18.08	17.88
Band	Bandwidth (MHz)	RB	20850 2510 MHz	21100 2535 MHz	21350 2560 MHz	20850 2510 MHz	21100 2535 MHz	21350 2560 MHz	20850 2510 MHz	21100 2535 MHz	21350 2560 MHz
7	20	1RB#0	21.61	21.09	20.94	19.88	20.00	19.48	19.11	19.06	18.44
		1RB#49	21.82	21.56	21.40	20.22	20.19	19.74	19.39	19.30	18.69
		1RB#99	21.63	21.03	20.73	19.80	19.88	19.35	18.97	18.94	18.31
		50RB#0	19.99	19.98	19.80	18.99	19.00	18.85	18.03	18.07	17.82
		50RB#25	19.96	20.02	19.80	19.01	19.04	18.84	17.98	18.07	17.86
		50RB#50	20.13	20.09	19.61	19.04	19.11	18.64	18.03	18.13	17.69
		100RB#0	19.99	20.02	19.68	19.00	19.07	18.70	18.05	18.08	17.77

5.2.5 LTE Band 26

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	26797 824.7 MHz	26915 836.5 MHz	27033 848.3 MHz	26797 824.7 MHz	26915 836.5 MHz	27033 848.3 MHz	26797 824.7 MHz	26915 836.5 MHz	27033 848.3 MHz
26	1.4	1RB#0	23.56	23.19	23.24	22.39	22.07	21.99	21.69	21.42	21.01
		1RB#2	23.66	23.31	23.44	22.38	22.28	22.09	21.84	21.51	21.13
		1RB#5	23.49	23.17	23.37	22.31	22.05	21.95	21.64	21.40	20.95
		3RB#0	23.55	23.27	23.26	22.32	22.07	22.11	21.47	21.19	21.12
		3RB#1	23.54	23.29	23.26	22.35	22.05	22.06	21.49	21.18	21.08
		3RB#3	23.57	23.26	23.26	22.30	22.07	22.04	21.51	21.21	21.11
		6RB#0	22.63	22.25	22.33	21.54	21.26	21.12	20.38	20.09	20.10
Band	Bandwidth (MHz)	RB	26805 825.5 MHz	26915 836.5 MHz	27025 847.5 MHz	26805 825.5 MHz	26915 836.5 MHz	27025 847.5 MHz	26805 825.5 MHz	26915 836.5 MHz	27025 847.5 MHz
26	3	1RB#0	23.62	23.31	23.24	22.53	22.18	22.02	21.35	21.13	21.35
		1RB#8	23.50	23.33	23.25	22.49	22.13	22.06	21.33	21.10	21.41
		1RB#14	23.42	23.32	23.32	22.45	22.02	22.03	21.34	21.03	21.38
		8RB#0	22.63	22.27	22.31	21.60	21.25	21.24	20.53	20.32	20.24
		8RB#4	22.64	22.34	22.25	21.59	21.28	21.28	20.57	20.30	20.27
		8RB#7	22.57	22.27	22.30	21.50	21.17	21.27	20.50	20.28	20.22
		15RB#0	22.52	22.21	22.25	21.53	21.15	21.19	20.61	20.30	20.22
Band	Bandwidth (MHz)	RB	26815 826.5 MHz	26915 836.5 MHz	27015 846.5 MHz	26815 826.5 MHz	26915 836.5 MHz	27015 846.5 MHz	26815 826.5 MHz	26915 836.5 MHz	27015 846.5 MHz
26	5	1RB#0	23.53	23.25	23.12	22.42	22.31	22.04	21.28	21.58	21.26
		1RB#12	23.54	23.33	23.30	22.43	22.34	22.20	21.35	21.72	21.44
		1RB#24	23.36	23.14	23.26	22.35	22.15	22.05	21.16	21.54	21.24
		12RB#0	22.58	22.32	22.21	21.50	21.38	21.23	20.54	20.36	20.33
		12RB#6	22.58	22.29	22.20	21.49	21.32	21.24	20.52	20.36	20.31
		12RB#13	22.45	22.19	22.26	21.43	21.21	21.26	20.47	20.25	20.39
		25RB#0	22.54	22.25	22.27	21.56	21.25	21.33	20.56	20.31	20.32
Band	Bandwidth (MHz)	RB	26840 829 MHz	26915 836.5 MHz	26990 844 MHz	26840 829 MHz	26915 836.5 MHz	26990 844 MHz	26840 829 MHz	26915 836.5 MHz	26990 844 MHz
26	10	1RB#0	23.57	23.40	23.20	22.54	22.29	21.94	21.38	21.11	21.33
		1RB#24	23.49	23.40	23.26	22.57	22.28	22.15	21.41	21.23	21.48
		1RB#49	23.34	23.25	23.28	22.36	22.07	22.02	21.14	21.06	21.40
		25RB#0	22.57	22.34	22.47	21.57	21.34	21.52	20.59	20.38	20.45
		25RB#12	22.52	22.36	22.47	21.57	21.39	21.52	20.60	20.39	20.47
		25RB#25	22.47	22.15	22.39	21.45	21.21	21.40	20.52	20.20	20.36
		50RB#0	22.53	22.20	22.39	21.54	21.29	21.38	20.48	20.30	20.40
Band	Bandwidth (MHz)	RB	26865 831.5 MHz	26915 836.5 MHz	26965 841.5 MHz	26865 831.5 MHz	26915 836.5 MHz	26965 841.5 MHz	26865 831.5 MHz	26915 836.5 MHz	26965 841.5 MHz
26	15	1RB#0	23.49	23.32	23.29	22.45	22.46	22.08	21.28	21.54	21.40
		1RB#38	23.42	23.24	23.29	22.44	22.39	22.05	21.28	21.37	21.44
		1RB#74	23.18	23.10	23.24	22.18	22.32	22.00	21.02	21.34	21.34
		38RB#0	22.54	22.36	22.46	22.51	22.41	22.45	22.54	22.39	22.43
		38RB#18	22.54	22.35	22.44	22.52	22.34	22.38	22.54	22.40	22.45
		38RB#37	22.52	22.35	22.42	22.51	22.37	22.37	22.51	22.37	22.42
		75RB#0	22.54	22.35	22.43	21.40	21.33	21.35	20.52	20.31	20.31

5.2.6 LTE Band 26 (Part 90S)

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth	RB	26697	26740	26783	26697	26740	26783	26697	26740	26783
	(MHz)		814.7 MHz	819 MHz	823.3 MHz	814.7 MHz	819 MHz	823.3 MHz	814.7 MHz	819 MHz	823.3 MHz
26	1.4	1RB#0	23.74	23.70	23.50	22.69	22.45	22.26	22.01	21.35	21.63
		1RB#2	23.99	23.86	23.63	22.86	22.55	22.42	22.13	21.50	21.77
		1RB#5	23.74	23.70	23.48	22.68	22.41	22.24	22.02	21.40	21.59
		3RB#0	23.84	23.69	23.57	22.64	22.49	22.32	21.77	21.53	21.58
		3RB#1	23.84	23.72	23.57	22.62	22.49	22.31	21.76	21.52	21.58
		3RB#3	23.83	23.72	23.58	22.60	22.49	22.28	21.74	21.49	21.58
		6RB#0	22.85	22.71	22.67	21.82	21.56	21.56	20.64	20.49	20.51
Band	Bandwidth	RB	26705	26740	26775	26705	26740	26775	26705	26740	26775
	(MHz)		815.5 MHz	819 MHz	822.5 MHz	815.5 MHz	819 MHz	822.5 MHz	815.5 MHz	819 MHz	822.5 MHz
26	3	1RB#0	23.83	23.77	23.66	22.89	22.58	22.34	21.68	21.48	21.71
		1RB#8	23.75	23.78	23.54	22.78	22.47	22.35	21.68	21.42	21.68
		1RB#14	23.74	23.70	23.57	22.74	22.44	22.33	21.63	21.40	21.68
		8RB#0	22.82	22.74	22.68	21.84	21.69	21.64	20.81	20.73	20.61
		8RB#4	22.84	22.73	22.73	21.87	21.69	21.63	20.77	20.70	20.60
		8RB#7	22.80	22.71	22.67	21.80	21.65	21.59	20.75	20.68	20.54
		15RB#0	22.83	22.71	22.60	21.86	21.58	21.46	20.85	20.66	20.53
Band	Bandwidth	RB	26715	26740	26765	26715	26740	26765	26715	26740	26765
	(MHz)		816.5 MHz	819 MHz	821.5 MHz	816.5 MHz	819 MHz	821.5 MHz	816.5 MHz	819 MHz	821.5 MHz
26	5	1RB#0	23.77	23.67	23.69	22.71	22.76	22.47	21.59	22.02	21.68
		1RB#12	23.86	23.75	23.74	22.76	22.75	22.53	21.66	22.06	21.71
		1RB#24	23.66	23.55	23.55	22.54	22.54	22.38	21.43	21.87	21.57
		12RB#0	22.73	22.71	22.72	21.74	21.74	21.69	20.81	20.74	20.68
		12RB#6	22.81	22.74	22.66	21.75	21.72	21.61	20.78	20.75	20.68
		12RB#13	22.80	22.63	22.57	21.74	21.70	21.52	20.82	20.65	20.59
		25RB#0	22.78	22.70	22.63	21.82	21.66	21.63	20.79	20.68	20.64
Band	Bandwidth	RB	--	26740	--	--	26740	--	--	26740	--
	(MHz)		--	819 MHz	--	--	819 MHz	--	--	819 MHz	--
26	10	1RB#0	--	23.79	--	--	22.82	--	--	21.71	--
		1RB#24	--	23.77	--	--	22.80	--	--	21.55	--
		1RB#49	--	23.62	--	--	22.55	--	--	21.39	--
		25RB#0	--	22.78	--	--	21.75	--	--	20.77	--
		25RB#12	--	22.74	--	--	21.72	--	--	20.77	--
		25RB#25	--	22.63	--	--	21.57	--	--	20.67	--
		50RB#0	--	22.69	--	--	21.64	--	--	20.68	--

5.2.7 LTE Band 38

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	37775 2572.5 MHz	38000 2595 MHz	38225 2617.5 MHz	37775 2572.5 MHz	38000 2595 MHz	38225 2617.5 MHz	37775 2572.5 MHz	38000 2595 MHz	38225 2617.5 MHz
38	5	1RB#0	21.05	20.85	20.57	20.00	19.96	19.69	18.96	18.91	18.97
		1RB#12	21.15	20.97	20.68	20.12	20.13	19.82	19.05	19.03	19.08
		1RB#24	21.01	20.76	20.56	20.02	19.80	19.69	18.76	18.89	18.97
		12RB#0	20.05	19.84	19.68	18.96	18.70	18.72	18.02	17.76	17.78
		12RB#6	20.09	19.82	19.76	18.99	18.71	18.73	17.91	17.76	17.81
		12RB#13	20.09	19.78	19.69	19.00	18.76	18.73	17.99	17.76	17.75
		25RB#0	19.98	19.82	19.76	18.87	18.79	18.74	18.07	17.79	17.68
Band	Bandwidth (MHz)	RB	37800 2575 MHz	38000 2595 MHz	38200 2615 MHz	37800 2575 MHz	38000 2595 MHz	38200 2615 MHz	37800 2575 MHz	38000 2595 MHz	38200 2615 MHz
38	10	1RB#0	21.08	20.98	20.76	20.28	19.53	19.67	19.34	18.44	19.05
		1RB#24	21.30	21.20	20.99	20.42	19.72	19.87	19.56	18.75	19.24
		1RB#49	21.04	20.89	20.70	20.14	19.44	19.63	19.15	18.47	19.02
		25RB#0	20.07	19.83	19.78	19.18	18.77	18.78	18.02	17.73	17.81
		25RB#12	20.09	19.83	19.78	19.19	18.78	18.80	18.03	17.72	17.80
		25RB#25	20.11	19.80	19.72	19.09	18.77	18.72	18.06	17.71	17.73
		50RB#0	20.07	19.78	19.78	19.00	18.77	18.74	18.11	17.76	17.71
Band	Bandwidth (MHz)	RB	37825 2577.5 MHz	38000 2595 MHz	38175 2612.5 MHz	37825 2577.5 MHz	38000 2595 MHz	38175 2612.5 MHz	37825 2577.5 MHz	38000 2595 MHz	38175 2612.5 MHz
38	15	1RB#0	21.00	21.00	20.71	20.18	19.61	19.60	19.23	18.88	18.94
		1RB#38	21.06	21.07	20.73	20.16	19.68	19.60	19.28	18.90	19.06
		1RB#74	20.93	20.88	20.67	19.98	19.53	19.55	19.08	18.76	18.94
		38RB#0	20.09	19.98	19.90	20.08	19.97	19.92	20.11	19.97	19.92
		38RB#18	20.09	19.97	19.94	20.10	19.96	19.92	20.10	19.96	19.91
		38RB#37	20.11	19.96	19.95	20.08	19.96	19.93	20.06	19.96	19.93
		75RB#0	20.10	19.96	19.88	19.05	18.84	18.81	18.07	17.84	17.82
Band	Bandwidth (MHz)	RB	37850 2580 MHz	38000 2595 MHz	38150 2610 MHz	37850 2580 MHz	38000 2595 MHz	38150 2610 MHz	37850 2580 MHz	38000 2595 MHz	38150 2610 MHz
38	20	1RB#0	20.89	20.67	20.74	19.90	19.20	19.24	18.80	18.71	18.60
		1RB#49	21.31	20.98	21.05	20.15	19.47	19.56	19.04	18.96	18.92
		1RB#99	20.77	20.61	20.58	19.64	19.11	19.22	18.57	18.58	18.62
		50RB#0	19.94	19.78	19.76	18.96	18.77	18.73	17.90	17.88	17.79
		50RB#25	19.96	19.75	19.77	18.94	18.74	18.72	17.91	17.86	17.80
		50RB#50	20.00	19.78	19.69	18.94	18.77	18.60	17.97	17.86	17.66
		100RB#0	19.95	19.74	19.70	18.95	18.74	18.69	17.99	17.82	17.71

5.2.8 LTE Band 41

Conducted Power(dBm)											
Modulation			QPSK			16QAM			64QAM		
Band	Bandwidth (MHz)	RB	40265 2557.5 MHz	40690 2600 MHz	41215 2652.5 MHz	40265 2557.5 MHz	40690 2600 MHz	41215 2652.5 MHz	40265 2557.5 MHz	40690 2600 MHz	41215 2652.5 MHz
41	5	1RB#0	21.40	20.85	20.93	20.78	20.04	19.94	19.63	19.29	18.84
		1RB#12	21.50	21.00	21.06	20.89	20.17	20.04	19.71	19.46	19.01
		1RB#24	21.31	20.84	20.90	20.68	20.02	19.86	19.56	19.29	18.77
		12RB#0	20.43	20.03	19.96	19.40	19.04	18.89	18.45	18.11	17.81
		12RB#6	20.40	19.99	19.91	19.42	19.01	18.84	18.45	18.07	17.83
		12RB#13	20.37	20.01	19.95	19.34	19.05	18.86	18.38	18.06	17.87
		25RB#0	20.47	20.01	19.97	19.48	19.04	18.90	18.50	18.02	17.89
Band	Bandwidth (MHz)	RB	40290 2560 MHz	40690 2600 MHz	41190 2650 MHz	40290 2560 MHz	40690 2600 MHz	41190 2650 MHz	40290 2560 MHz	40690 2600 MHz	41190 2650 MHz
41	10	1RB#0	21.55	21.13	21.02	20.77	19.74	20.05	19.79	18.75	19.35
		1RB#24	21.53	21.31	21.21	20.88	19.98	20.19	19.94	19.00	19.58
		1RB#49	21.39	21.05	20.99	20.60	19.71	19.90	19.65	18.72	19.30
		25RB#0	20.44	20.09	19.98	19.56	19.04	18.99	18.47	18.01	17.97
		25RB#12	20.55	20.07	19.98	19.55	19.08	18.96	18.50	17.97	17.98
		25RB#25	20.45	20.01	20.02	19.53	19.00	18.99	18.45	17.96	18.03
		50RB#0	20.46	20.05	19.99	19.45	19.07	18.95	18.46	18.08	17.94
Band	Bandwidth (MHz)	RB	40315 2562.5 MHz	40690 2600 MHz	41165 2647.5 MHz	40315 2562.5 MHz	40690 2600 MHz	41165 2647.5 MHz	40315 2562.5 MHz	40690 2600 MHz	41165 2647.5 MHz
41	15	1RB#0	21.44	21.12	20.93	20.64	19.85	19.92	19.73	19.20	19.29
		1RB#38	21.45	21.18	21.00	20.65	19.93	19.98	19.71	19.26	19.40
		1RB#74	21.31	21.05	20.89	20.53	19.82	19.80	19.57	19.11	19.24
		38RB#0	20.46	20.07	20.03	20.46	20.06	20.04	20.47	20.04	20.05
		38RB#18	20.48	20.07	20.05	20.47	20.08	20.06	20.45	20.07	20.05
		38RB#37	20.43	20.09	20.04	20.46	20.08	20.02	20.44	20.06	20.05
		75RB#0	20.44	20.07	20.03	19.46	19.07	19.02	18.46	18.03	18.05
Band	Bandwidth (MHz)	RB	40340 2565 MHz	40690 2600 MHz	41140 2645 MHz	40340 2565 MHz	40690 2600 MHz	41140 2645 MHz	40340 2565 MHz	40690 2600 MHz	41140 2645 MHz
41	20	1RB#0	21.30	20.92	20.83	20.37	19.53	19.46	19.25	18.97	18.86
		1RB#49	21.57	21.20	21.23	20.64	19.78	19.87	19.50	19.27	19.26
		1RB#99	21.14	20.71	20.85	20.15	19.35	19.45	19.00	18.86	18.86
		50RB#0	20.39	20.10	19.96	19.41	19.11	18.90	18.41	18.15	17.95
		50RB#25	20.36	20.09	19.96	19.40	19.15	18.92	18.38	18.18	17.92
		50RB#50	20.41	20.01	20.07	19.44	19.04	19.01	18.47	18.11	18.08
		100RB#0	20.37	20.08	20.04	19.41	19.05	19.04	18.49	18.11	17.98

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: FCC 47 CFR Part 27.50(d)(4)
LTE Band 5& LTE Band 26: FCC 47 CFR Part 22.913(a)
LTE Band 7& Band 38 & Band 41: FCC 47 CFR Part 27.50(h)(2)
LTE Band 26: FCC 47 CFR Part 90.635

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(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.

FCC 47 CFR Part 90.635:
(a) The effective radiated power and antenna height for base stations may not exceed 1 kilowatt (30 dBw) and 304 m. (1,000 ft.) above average terrain (AAT), respectively, or the equivalent thereof as determined from the Table. These are maximum values, and applicants will be required to justify power levels and antenna heights requested.
(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).
Table—Equivalent Power and Antenna Heights for Base Stations in the 851–869 MHz and 935–940 MHz Bands Which Have a Requirement for a 32 km (20 mi) Service Area Radius

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	25.76	24.82	24.14	33.01	0.3767	0.3034	0.2594	2	Pass
Middle	25.19	24.03	23.31	33.01	0.3304	0.2529	0.2143	2	Pass
Highest	25.07	23.88	22.82	33.01	0.3214	0.2443	0.1914	2	Pass
Channel Bandwidth: 3MHz									
Lowest	25.90	24.85	23.67	33.01	0.3890	0.3055	0.2328	2	Pass
Middle	25.16	23.88	22.82	33.01	0.3281	0.2443	0.1914	2	Pass
Highest	24.86	23.71	22.99	33.01	0.3062	0.2350	0.1991	2	Pass
Channel Bandwidth: 5MHz									
Lowest	25.88	24.77	23.67	33.01	0.3873	0.2999	0.2328	2	Pass
Middle	25.08	24.08	23.47	33.01	0.3221	0.2559	0.2223	2	Pass
Highest	24.91	23.79	22.96	33.01	0.3097	0.2393	0.1977	2	Pass
Channel Bandwidth: 10MHz									
Lowest	25.91	24.91	23.72	33.01	0.3899	0.3097	0.2355	2	Pass
Middle	25.21	23.89	22.83	33.01	0.3319	0.2449	0.1919	2	Pass
Highest	24.93	23.67	23.05	33.01	0.3112	0.2328	0.2018	2	Pass
Channel Bandwidth: 15MHz									
Lowest	25.79	24.88	24.87	33.01	0.3793	0.3076	0.3069	2	Pass
Middle	25.08	24.17	24.21	33.01	0.3221	0.2612	0.2636	2	Pass
Highest	24.85	23.93	23.93	33.01	0.3055	0.2472	0.2472	2	Pass
Channel Bandwidth: 20MHz									
Lowest	26.09	24.55	23.96	33.01	0.4064	0.2851	0.2489	2	Pass
Middle	25.26	24.27	23.37	33.01	0.3357	0.2673	0.2173	2	Pass
Highest	24.90	23.72	22.57	33.01	0.3090	0.2355	0.1807	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	25.70	24.53	23.46	30.00	0.3715	0.2838	0.2218	1	Pass
Middle	25.74	24.52	23.82	30.00	0.3750	0.2831	0.2410	1	Pass
Highest	25.74	24.58	23.89	30.00	0.3750	0.2871	0.2449	1	Pass
Channel Bandwidth: 3MHz									
Lowest	25.59	24.60	23.41	30.00	0.3622	0.2884	0.2193	1	Pass
Middle	25.69	24.48	23.41	30.00	0.3707	0.2805	0.2193	1	Pass
Highest	25.54	24.32	23.66	30.00	0.3581	0.2704	0.2323	1	Pass
Channel Bandwidth: 5MHz									
Lowest	25.67	24.56	23.44	30.00	0.3690	0.2858	0.2208	1	Pass
Middle	25.70	24.70	24.08	30.00	0.3715	0.2951	0.2559	1	Pass
Highest	25.64	24.49	23.68	30.00	0.3664	0.2812	0.2333	1	Pass
Channel Bandwidth: 10MHz									
Lowest	25.68	24.69	23.52	30.00	0.3698	0.2944	0.2249	1	Pass
Middle	25.80	24.55	23.56	30.00	0.3802	0.2851	0.2270	1	Pass
Highest	25.66	24.29	23.77	30.00	0.3681	0.2685	0.2382	1	Pass
Channel Bandwidth: 15MHz									
Lowest	25.65	24.69	24.71	30.00	0.3673	0.2944	0.2958	1	Pass
Middle	25.63	24.69	24.68	30.00	0.3656	0.2944	0.2938	1	Pass
Highest	25.56	24.62	24.61	30.00	0.3597	0.2897	0.2891	1	Pass
Channel Bandwidth: 20MHz									
Lowest	25.84	24.69	23.86	30.00	0.3837	0.2944	0.2432	1	Pass
Middle	25.79	24.88	23.85	30.00	0.3793	0.3076	0.2427	1	Pass
Highest	25.64	24.43	23.42	30.00	0.3664	0.2773	0.2198	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	19.56	18.43	17.26	38.45	0.0904	0.0697	0.0532	7	Pass
Middle	19.19	18.04	17.28	38.45	0.0830	0.0637	0.0535	7	Pass
Highest	19.21	18.17	17.37	38.45	0.0834	0.0656	0.0546	7	Pass
Channel Bandwidth: 3MHz									
Lowest	19.41	18.38	17.18	38.45	0.0873	0.0689	0.0522	7	Pass
Middle	19.15	18.02	16.90	38.45	0.0822	0.0634	0.0490	7	Pass
Highest	19.10	17.88	17.18	38.45	0.0813	0.0614	0.0522	7	Pass
Channel Bandwidth: 5MHz									
Lowest	19.41	18.28	17.15	38.45	0.0873	0.0673	0.0519	7	Pass
Middle	19.11	18.17	17.52	38.45	0.0815	0.0656	0.0565	7	Pass
Highest	19.18	18.12	17.25	38.45	0.0828	0.0649	0.0531	7	Pass
Channel Bandwidth: 10MHz									
Lowest	19.63	18.37	17.24	38.45	0.0918	0.0687	0.0530	7	Pass
Middle	19.25	18.08	16.96	38.45	0.0841	0.0643	0.0497	7	Pass
Highest	19.11	17.96	17.29	38.45	0.0815	0.0625	0.0536	7	Pass

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	22.84	22.05	20.91	33.01	0.1923	0.1603	0.1233	2	Pass
Middle	22.87	21.57	20.88	33.01	0.1936	0.1435	0.1225	2	Pass
Highest	22.27	21.11	20.36	33.01	0.1687	0.1291	0.1086	2	Pass
Channel Bandwidth: 10MHz									
Lowest	22.68	21.63	20.47	33.01	0.1854	0.1455	0.1114	2	Pass
Middle	22.51	21.40	20.24	33.01	0.1782	0.1380	0.1057	2	Pass
Highest	22.32	21.15	20.48	33.01	0.1706	0.1303	0.1117	2	Pass
Channel Bandwidth: 15MHz									
Lowest	22.62	21.70	21.71	33.01	0.1828	0.1479	0.1483	2	Pass
Middle	22.41	21.58	21.58	33.01	0.1742	0.1439	0.1439	2	Pass
Highest	22.31	21.40	21.41	33.01	0.1702	0.1380	0.1384	2	Pass
Channel Bandwidth: 20MHz									
Lowest	23.26	21.66	20.83	33.01	0.2118	0.1466	0.1211	2	Pass
Middle	23.00	21.63	20.74	33.01	0.1995	0.1455	0.1186	2	Pass
Highest	22.84	21.18	20.13	33.01	0.1923	0.1312	0.1030	2	Pass

5.3.5 LTE Band 26

Channel	Maximum ERP (dBm)				Maximum ERP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 1.4MHz									
Lowest	19.80	18.53	17.98	38.45	0.0955	0.0713	0.0628	7	Pass
Middle	19.45	18.42	17.65	38.45	0.0881	0.0695	0.0582	7	Pass
Highest	19.58	18.25	17.27	38.45	0.0908	0.0668	0.0533	7	Pass
Channel Bandwidth: 3MHz									
Lowest	19.76	18.67	17.49	38.45	0.0946	0.0736	0.0561	7	Pass
Middle	19.47	18.32	17.27	38.45	0.0885	0.0679	0.0533	7	Pass
Highest	19.46	18.20	17.55	38.45	0.0883	0.0661	0.0569	7	Pass
Channel Bandwidth: 5MHz									
Lowest	19.68	18.57	17.49	38.45	0.0929	0.0719	0.0561	7	Pass
Middle	19.47	18.48	17.86	38.45	0.0885	0.0705	0.0611	7	Pass
Highest	19.44	18.34	17.58	38.45	0.0879	0.0682	0.0573	7	Pass
Channel Bandwidth: 10MHz									
Lowest	19.71	18.71	17.55	38.45	0.0935	0.0743	0.0569	7	Pass
Middle	19.54	18.43	17.37	38.45	0.0899	0.0697	0.0546	7	Pass
Highest	19.42	18.29	17.62	38.45	0.0875	0.0675	0.0578	7	Pass
Channel Bandwidth: 15MHz									
Lowest	19.63	18.66	18.68	38.45	0.0918	0.0735	0.0738	7	Pass
Middle	19.46	18.60	18.54	38.45	0.0883	0.0724	0.0714	7	Pass
Highest	19.43	18.59	18.59	38.45	0.0877	0.0723	0.0723	7	Pass

5.3.1 LTE Band 26(Part 90s)

Channel	Maximum ERP (dBm)				Maximum ERP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 1.4MHz									
Lowest	20.13	19.00	18.27	50.00	0.1030	0.0794	0.0671	100	Pass
Middle	20.00	18.69	17.67	50.00	0.1000	0.0740	0.0585	100	Pass
Highest	19.77	18.56	17.91	50.00	0.0948	0.0718	0.0618	100	Pass
Channel Bandwidth: 3MHz									
Lowest	19.97	19.03	17.82	50.00	0.0993	0.0800	0.0605	100	Pass
Middle	19.92	18.72	17.62	50.00	0.0982	0.0745	0.0578	100	Pass
Highest	19.80	18.49	17.85	50.00	0.0955	0.0706	0.0610	100	Pass
Channel Bandwidth: 5MHz									
Lowest	20.00	18.90	17.80	50.00	0.1000	0.0776	0.0603	100	Pass
Middle	19.89	18.90	18.20	50.00	0.0975	0.0776	0.0661	100	Pass
Highest	19.88	18.67	17.85	50.00	0.0973	0.0736	0.0610	100	Pass
Channel Bandwidth: 10MHz									
Middle	19.93	18.96	17.85	50.00	0.0984	0.0787	0.0610	100	Pass

5.3.2 LTE Band 38

Channel	Maximum EIRP (dBm)				Maximum EIRP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 5MHz									
Lowest	22.59	21.56	20.49	33.01	0.1816	0.1432	0.1119	2	Pass
Middle	22.41	21.57	20.47	33.01	0.1742	0.1435	0.1114	2	Pass
Highest	22.12	21.26	20.52	33.01	0.1629	0.1337	0.1127	2	Pass
Channel Bandwidth: 10MHz									
Lowest	22.74	21.86	21.00	33.01	0.1879	0.1535	0.1259	2	Pass
Middle	22.64	21.16	20.19	33.01	0.1837	0.1306	0.1045	2	Pass
Highest	22.43	21.31	20.68	33.01	0.1750	0.1352	0.1169	2	Pass
Channel Bandwidth: 15MHz									
Lowest	22.50	21.62	21.55	33.01	0.1778	0.1452	0.1429	2	Pass
Middle	22.51	21.41	21.41	33.01	0.1782	0.1384	0.1384	2	Pass
Highest	22.17	21.37	21.37	33.01	0.1648	0.1371	0.1371	2	Pass
Channel Bandwidth: 20MHz									
Lowest	22.75	21.59	20.48	33.01	0.1884	0.1442	0.1117	2	Pass
Middle	22.42	20.91	20.40	33.01	0.1746	0.1233	0.1096	2	Pass
Highest	22.49	21.00	20.36	33.01	0.1774	0.1259	0.1086	2	Pass

5.3.3 LTE Band 41

Channel	Maximum EIRP (dBm)				Maximum EIRP (W)				Result
	QPSK	16QAM	64QAM	Limit (dBm)	QPSK	16QAM	64QAM	Limit (W)	
Channel Bandwidth: 5MHz									
Lowest	22.94	22.33	21.15	33.01	0.1968	0.1710	0.1303	2	Pass
Middle	22.44	21.61	20.90	33.01	0.1754	0.1449	0.1230	2	Pass
Highest	22.50	21.48	20.45	33.01	0.1778	0.1406	0.1109	2	Pass
Channel Bandwidth: 10MHz									
Lowest	22.99	22.32	21.38	33.01	0.1991	0.1706	0.1374	2	Pass
Middle	22.75	21.42	20.44	33.01	0.1884	0.1387	0.1107	2	Pass
Highest	22.65	21.63	21.02	33.01	0.1841	0.1455	0.1265	2	Pass
Channel Bandwidth: 15MHz									
Lowest	22.89	22.09	21.91	33.01	0.1945	0.1618	0.1552	2	Pass
Middle	22.62	21.52	21.51	33.01	0.1828	0.1419	0.1416	2	Pass
Highest	22.44	21.50	21.49	33.01	0.1754	0.1413	0.1409	2	Pass
Channel Bandwidth: 20MHz									
Lowest	23.01	22.08	20.94	33.01	0.2000	0.1614	0.1242	2	Pass
Middle	22.64	21.22	20.71	33.01	0.1837	0.1324	0.1178	2	Pass
Highest	22.67	21.31	20.70	33.01	0.1849	0.1352	0.1175	2	Pass

5.4 PEAK-TO-AVERAGE RATIO

Test Requirement:	**LTE Band 2:** FCC 47 CFR Part 24.232(d) **LTE Band 4:** FCC 47 CFR Part 27.50(d)(5) **LTE Band 5& LTE Band 26:** FCC 47 CFR Part 22.913(a) **LTE Band 7 & Band 38 & Band 41:** 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 ≥ 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 A1**

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 A2**

5.6 BAND EDGE AT ANTENNA TERMINALS

Test Requirement: **LTE Band 2:** FCC 47 CFR Part 24.238(a)
LTE Band 4: FCC 47 CFR Part 27.53(h)(1)
LTE Band 5& LTE Band 26: FCC 47 CFR Part 22.917(a)
LTE Band 7 & Band 38 & Band 41: FCC 47 CFR Part 27.53(m)(4)

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

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 A3**

5.7 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Test Requirement: **LTE Band 2:** FCC 47 CFR Part 24.238(a)
LTE Band 4: FCC 47 CFR Part 27.53(h)
LTE Band 5& LTE Band 26: FCC 47 CFR Part 22.917(a)
LTE Band 7 & Band 38 & Band 41: FCC 47 CFR Part 27.53(m)(4)
LTE Band 26: FCC 47 CFR Part 90.691

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(c)(2), 90.691:
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 A4**

5.8 FIELD STRENGTH OF SPURIOUS RADIATION

Test Requirement: **LTE Band 2:** FCC 47 CFR Part 24.238(a)
LTE Band 4: FCC 47 CFR Part 27.53(h)
LTE Band 5& LTE Band 26: FCC 47 CFR Part 22.917(a)
LTE Band 7 & Band 38 & Band 41: FCC 47 CFR Part 27.53(m)(4)
LTE Band 26: FCC 47 CFR Part 90.691

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), 90.691:
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	728.897	-75.52	11.61	-63.91	-13.00	-50.91	Horizontal
2	793.028	-75.09	12.44	-62.65	-13.00	-49.65	Horizontal
3	938.714	-74.44	14.52	-59.92	-13.00	-46.92	Horizontal
4	3760.000	-61.11	7.73	-53.38	-13.00	-40.38	Horizontal
5	5580.000	-58.50	11.04	-47.46	-13.00	-34.46	Horizontal
6	718.725	-74.33	11.51	-62.82	-13.00	-49.82	Vertical
7	912.695	-74.44	14.49	-59.95	-13.00	-46.95	Vertical
8	986.044	-73.74	15.44	-58.30	-13.00	-45.30	Vertical
9	3760.000	-61.26	7.73	-53.53	-13.00	-40.53	Vertical
10	5580.000	-59.13	11.04	-48.09	-13.00	-35.09	Vertical
Middle Channel							
1	760.287	-74.47	11.63	-62.84	-13.00	-49.84	Horizontal
2	856.760	-75.15	13.67	-61.48	-13.00	-48.48	Horizontal
3	938.714	-74.53	14.52	-60.01	-13.00	-47.01	Horizontal
4	3760.000	-60.22	7.73	-52.49	-13.00	-39.49	Horizontal
5	5640.000	-59.65	11.18	-48.47	-13.00	-35.47	Horizontal
6	787.475	-75.14	12.31	-62.83	-13.00	-49.83	Vertical
7	815.635	-75.32	13.04	-62.28	-13.00	-49.28	Vertical
8	958.714	-74.86	14.93	-59.93	-13.00	-46.93	Vertical
9	3760.000	-60.77	7.73	-53.04	-13.00	-40.04	Vertical
10	5640.000	-59.78	11.18	-48.60	-13.00	-35.60	Vertical
Highest Channel							
1	809.924	-74.82	12.89	-61.93	-13.00	-48.93	Horizontal
2	893.656	-74.88	14.20	-60.68	-13.00	-47.68	Horizontal
3	958.714	-75.14	14.93	-60.21	-13.00	-47.21	Horizontal
4	3800.000	-59.87	7.92	-51.95	-13.00	-38.95	Horizontal
5	5700.000	-58.37	11.33	-47.04	-13.00	-34.04	Horizontal
6	760.287	-75.77	11.63	-64.14	-13.00	-51.14	Vertical
7	875.013	-74.15	13.93	-60.22	-13.00	-47.22	Vertical
8	952.000	-75.05	14.82	-60.23	-13.00	-47.23	Vertical
9	3800.000	-59.72	7.92	-51.80	-13.00	-38.80	Vertical
10	5700.000	-58.85	11.33	-47.52	-13.00	-34.52	Vertical

5.8.2 LTE Band 4

LTE Band 4_ 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	856.760	-75.24	13.67	-61.57	-13.00	-48.57	Horizontal
2	919.132	-75.16	14.53	-60.63	-13.00	-47.63	Horizontal
3	992.997	-75.21	15.56	-59.65	-13.00	-46.65	Horizontal
4	3414.304	-55.91	6.38	-49.53	-13.00	-36.53	Horizontal
5	5160.000	-58.74	10.10	-48.64	-13.00	-35.64	Horizontal
6	809.924	-75.02	12.89	-62.13	-13.00	-49.13	Vertical
7	868.886	-75.21	13.80	-61.41	-13.00	-48.41	Vertical
8	979.139	-74.43	15.25	-59.18	-13.00	-46.18	Vertical
9	3414.304	-55.02	6.38	-48.64	-13.00	-35.64	Vertical
10	5160.000	-58.70	10.10	-48.60	-13.00	-35.60	Vertical
Middle Channel							
1	868.886	-74.33	13.80	-60.53	-13.00	-47.53	Horizontal
2	919.132	-74.32	14.53	-59.79	-13.00	-46.79	Horizontal
3	979.139	-74.20	15.25	-58.95	-13.00	-45.95	Horizontal
4	3465.000	-58.42	6.46	-51.96	-13.00	-38.96	Horizontal
5	5197.500	-58.81	10.18	-48.63	-13.00	-35.63	Horizontal
6	827.179	-75.17	13.16	-62.01	-13.00	-49.01	Vertical
7	899.958	-75.20	14.32	-60.88	-13.00	-47.88	Vertical
8	958.714	-74.63	14.93	-59.70	-13.00	-46.70	Vertical
9	3465.000	-59.15	6.46	-52.69	-13.00	-39.69	Vertical
10	5197.500	-59.58	10.18	-49.40	-13.00	-36.40	Vertical
Highest Channel							
1	713.692	-73.96	11.53	-62.43	-13.00	-49.43	Horizontal
2	945.334	-74.58	14.69	-59.89	-13.00	-46.89	Horizontal
3	986.044	-74.43	15.44	-58.99	-13.00	-45.99	Horizontal
4	3490.000	-59.13	6.50	-52.63	-13.00	-39.63	Horizontal
5	5235.000	-57.92	10.26	-47.66	-13.00	-34.66	Horizontal
6	809.924	-74.25	12.89	-61.36	-13.00	-48.36	Vertical
7	887.398	-75.29	14.17	-61.12	-13.00	-48.12	Vertical
8	992.997	-74.91	15.56	-59.35	-13.00	-46.35	Vertical
9	3490.000	-58.40	6.50	-51.90	-13.00	-38.90	Vertical
10	5235.000	-58.63	10.26	-48.37	-13.00	-35.37	Vertical

5.8.3 LTE Band 5

LTE Band 5_ 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	602.929	-80.36	38.42	-41.94	-13.00	-28.94	Horizontal
2	708.694	-79.93	40.78	-39.15	-13.00	-26.15	Horizontal
3	972.283	-80.97	43.98	-36.99	-13.00	-23.99	Horizontal
4	1645.658	-54.68	-0.32	-55.00	-13.00	-42.00	Horizontal
5	2487.000	-60.48	3.50	-56.98	-13.00	-43.98	Horizontal
6	646.822	-79.43	39.21	-40.22	-13.00	-27.22	Vertical
7	718.725	-78.26	40.83	-37.43	-13.00	-24.43	Vertical
8	938.714	-79.60	43.51	-36.09	-13.00	-23.09	Vertical
9	1645.658	-55.28	-0.32	-55.60	-13.00	-42.60	Vertical
10	2487.000	-60.51	3.50	-57.01	-13.00	-44.01	Vertical
Middle Channel							
1	633.328	-79.12	39.02	-40.10	-13.00	-27.10	Horizontal
2	708.694	-79.97	40.78	-39.19	-13.00	-26.19	Horizontal
3	992.997	-81.29	44.47	-36.82	-13.00	-23.82	Horizontal
4	1664.833	-53.48	-0.17	-53.65	-13.00	-40.65	Horizontal
5	2509.500	-60.36	3.58	-56.78	-13.00	-43.78	Horizontal
6	607.181	-79.32	38.51	-40.81	-13.00	-27.81	Vertical
7	723.793	-80.09	40.89	-39.20	-13.00	-26.20	Vertical
8	958.714	-80.67	43.89	-36.78	-13.00	-23.78	Vertical
9	1664.833	-58.11	-0.17	-58.28	-13.00	-45.28	Vertical
10	2509.500	-59.43	3.58	-55.85	-13.00	-42.85	Vertical
Highest Channel							
1	615.774	-79.76	38.70	-41.06	-13.00	-28.06	Horizontal
2	723.793	-79.89	40.89	-39.00	-13.00	-26.00	Horizontal
3	986.044	-81.27	44.36	-36.91	-13.00	-23.91	Horizontal
4	1674.504	-53.52	-0.11	-53.63	-13.00	-40.63	Horizontal
5	2532.000	-59.93	3.68	-56.25	-13.00	-43.25	Horizontal
6	624.490	-79.32	38.78	-40.54	-13.00	-27.54	Vertical
7	703.731	-79.87	40.80	-39.07	-13.00	-26.07	Vertical
8	1000.000	-81.08	44.50	-36.58	-13.00	-23.58	Vertical
9	1674.504	-56.05	-0.11	-56.16	-13.00	-43.16	Vertical
10	2532.000	-60.12	3.68	-56.44	-13.00	-43.44	Vertical

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	868.886	-74.77	13.80	-60.97	-25.00	-35.97	Horizontal
2	945.334	-75.00	14.69	-60.31	-25.00	-35.31	Horizontal
3	986.044	-75.35	15.44	-59.91	-25.00	-34.91	Horizontal
4	5020.000	-57.85	9.79	-48.06	-25.00	-23.06	Horizontal
5	7530.000	-58.62	13.06	-45.56	-25.00	-20.56	Horizontal
6	809.924	-74.41	12.89	-61.52	-25.00	-36.52	Vertical
7	958.714	-75.46	14.93	-60.53	-25.00	-35.53	Vertical
8	992.997	-74.54	15.56	-58.98	-25.00	-33.98	Vertical
9	5020.000	-58.04	9.79	-48.25	-25.00	-23.25	Vertical
10	7530.000	-58.48	13.06	-45.42	-25.00	-20.42	Vertical
Middle Channel							
1	793.028	-75.22	12.44	-62.78	-25.00	-37.78	Horizontal
2	899.958	-75.07	14.32	-60.75	-25.00	-35.75	Horizontal
3	972.283	-74.87	15.04	-59.83	-25.00	-34.83	Horizontal
4	5070.000	-58.39	9.90	-48.49	-25.00	-23.49	Horizontal
5	7605.000	-59.19	13.04	-46.15	-25.00	-21.15	Horizontal
6	821.387	-74.60	13.20	-61.40	-25.00	-36.40	Vertical
7	925.613	-75.13	14.46	-60.67	-25.00	-35.67	Vertical
8	992.997	-74.54	15.56	-58.98	-25.00	-33.98	Vertical
9	5070.000	-58.85	9.90	-48.95	-25.00	-23.95	Vertical
10	7605.000	-59.60	13.04	-46.56	-25.00	-21.56	Vertical
Highest Channel							
1	827.179	-75.45	13.16	-62.29	-25.00	-37.29	Horizontal
2	906.304	-75.09	14.53	-60.56	-25.00	-35.56	Horizontal
3	945.334	-74.32	14.69	-59.63	-25.00	-34.63	Horizontal
4	5120.000	-57.95	10.01	-47.94	-25.00	-22.94	Horizontal
5	7680.000	-59.21	13.02	-46.19	-25.00	-21.19	Horizontal
6	821.387	-76.04	13.20	-62.84	-25.00	-37.84	Vertical
7	912.695	-74.83	14.49	-60.34	-25.00	-35.34	Vertical
8	992.997	-75.39	15.56	-59.83	-25.00	-34.83	Vertical
9	5120.000	-58.68	10.01	-48.67	-25.00	-23.67	Vertical
10	7680.000	-58.83	13.02	-45.81	-25.00	-20.81	Vertical

5.8.5 LTE Band 26

LTE Band 26_ 15 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	624.490	-80.27	38.78	-41.49	-13.00	-28.49	Horizontal
2	708.694	-79.68	40.78	-38.90	-13.00	-25.90	Horizontal
3	1000.000	-81.03	44.50	-36.53	-13.00	-23.53	Horizontal
4	1645.658	-53.79	-0.32	-54.11	-13.00	-41.11	Horizontal
5	2494.500	-59.86	3.52	-56.34	-13.00	-43.34	Horizontal
6	708.694	-79.64	40.78	-38.86	-13.00	-25.86	Vertical
7	744.427	-78.61	40.85	-37.76	-13.00	-24.76	Vertical
8	952.000	-80.58	43.79	-36.79	-13.00	-23.79	Vertical
9	1645.658	-54.14	-0.32	-54.46	-13.00	-41.46	Vertical
10	2494.500	-59.95	3.52	-56.43	-13.00	-43.43	Vertical
Middle Channel							
1	628.894	-79.41	38.87	-40.54	-13.00	-27.54	Horizontal
2	708.694	-80.43	40.78	-39.65	-13.00	-26.65	Horizontal
3	965.474	-80.98	43.86	-37.12	-13.00	-24.12	Horizontal
4	1655.218	-50.93	-0.25	-51.18	-13.00	-38.18	Horizontal
5	2509.500	-59.79	3.58	-56.21	-13.00	-43.21	Horizontal
6	693.910	-79.91	40.53	-39.38	-13.00	-26.38	Vertical
7	739.214	-80.22	40.87	-39.35	-13.00	-26.35	Vertical
8	992.997	-81.22	44.47	-36.75	-13.00	-23.75	Vertical
9	1655.218	-53.58	-0.25	-53.83	-13.00	-40.83	Vertical
10	2509.500	-60.04	3.58	-56.46	-13.00	-43.46	Vertical
Highest Channel							
1	598.707	-79.92	38.31	-41.61	-13.00	-28.61	Horizontal
2	684.226	-79.84	40.19	-39.65	-13.00	-26.65	Horizontal
3	986.044	-80.13	44.36	-35.77	-13.00	-22.77	Horizontal
4	1664.833	-51.83	-0.17	-52.00	-13.00	-39.00	Horizontal
5	2524.500	-60.50	3.64	-56.86	-13.00	-43.86	Horizontal
6	684.226	-79.24	40.19	-39.05	-13.00	-26.05	Vertical
7	723.793	-79.74	40.89	-38.85	-13.00	-25.85	Vertical
8	972.283	-80.86	43.98	-36.88	-13.00	-23.88	Vertical
9	1664.833	-55.78	-0.17	-55.95	-13.00	-42.95	Vertical
10	2524.500	-59.94	3.64	-56.30	-13.00	-43.30	Vertical

5.8.6 LTE Band 26 (Part 90S)

LTE Band 26_ 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	646.822	-79.95	39.21	-40.74	-13.00	-27.74	Horizontal
2	744.427	-80.34	40.85	-39.49	-13.00	-26.49	Horizontal
3	992.997	-80.80	44.47	-36.33	-13.00	-23.33	Horizontal
4	1617.308	-50.62	-0.52	-51.14	-13.00	-38.14	Horizontal
5	2449.500	-59.79	3.40	-56.39	-13.00	-43.39	Horizontal
6	698.804	-79.96	40.79	-39.17	-13.00	-26.17	Vertical
7	744.427	-79.24	40.85	-38.39	-13.00	-25.39	Vertical
8	992.997	-81.09	44.47	-36.62	-13.00	-23.62	Vertical
9	1626.703	-56.47	-0.46	-56.93	-13.00	-43.93	Vertical
10	2449.500	-60.03	3.40	-56.63	-13.00	-43.63	Vertical
Middle Channel							
1	689.051	-79.81	40.41	-39.40	-13.00	-26.40	Horizontal
2	723.793	-80.23	40.89	-39.34	-13.00	-26.34	Horizontal
3	986.044	-79.99	44.36	-35.63	-13.00	-22.63	Horizontal
4	1626.703	-54.16	-0.46	-54.62	-13.00	-41.62	Horizontal
5	2457.000	-60.65	3.42	-57.23	-13.00	-44.23	Horizontal
6	674.677	-80.31	39.82	-40.49	-13.00	-27.49	Vertical
7	744.427	-79.09	40.85	-38.24	-13.00	-25.24	Vertical
8	972.283	-80.89	43.98	-36.91	-13.00	-23.91	Vertical
9	1359.332	-38.45	-1.30	-39.75	-13.00	-26.75	Vertical
10	1626.703	-56.72	-0.46	-57.18	-13.00	-44.18	Vertical
11	2482.821	-49.03	3.49	-45.54	-13.00	-32.54	Vertical
Highest Channel							
1	655.977	-79.69	39.42	-40.27	-13.00	-27.27	Horizontal
2	718.725	-80.24	40.83	-39.41	-13.00	-26.41	Horizontal
3	1000.000	-81.31	44.50	-36.81	-13.00	-23.81	Horizontal
4	1636.153	-51.55	-0.38	-51.93	-13.00	-38.93	Horizontal
5	2464.500	-60.66	3.44	-57.22	-13.00	-44.22	Horizontal
6	620.117	-79.69	38.78	-40.91	-13.00	-27.91	Vertical
7	703.731	-78.61	40.80	-37.81	-13.00	-24.81	Vertical
8	952.000	-80.25	43.79	-36.46	-13.00	-23.46	Vertical
9	1636.153	-55.37	-0.38	-55.75	-13.00	-42.75	Vertical
10	2464.500	-60.25	3.44	-56.81	-13.00	-43.81	Vertical

LTE Band 26_ 10 MHz_ QPSK							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Middle Channel							
1	703.731	-78.86	40.80	-38.06	-13.00	-25.06	Horizontal
2	952.000	-80.35	43.79	-36.56	-13.00	-23.56	Horizontal
3	1000.000	-80.65	44.50	-36.15	-13.00	-23.15	Horizontal
4	1626.703	-52.99	-0.46	-53.45	-13.00	-40.45	Horizontal
5	2457.000	-61.10	3.42	-57.68	-13.00	-44.68	Horizontal
6	620.117	-79.43	38.78	-40.65	-13.00	-27.65	Vertical
7	718.725	-80.30	40.83	-39.47	-13.00	-26.47	Vertical
8	986.044	-81.12	44.36	-36.76	-13.00	-23.76	Vertical
9	1626.703	-55.49	-0.46	-55.95	-13.00	-42.95	Vertical
10	2457.000	-60.87	3.42	-57.45	-13.00	-44.45	Vertical

5.8.7 LTE Band 38

LTE Band 38_ 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	821.387	-75.76	13.20	-62.56	-25.00	-37.56	Horizontal
2	906.304	-74.64	14.53	-60.11	-25.00	-35.11	Horizontal
3	1000.000	-75.34	15.60	-59.74	-25.00	-34.74	Horizontal
4	5160.000	-58.51	10.10	-48.41	-25.00	-23.41	Horizontal
5	7740.000	-58.80	13.00	-45.80	-25.00	-20.80	Horizontal
6	833.013	-74.75	13.24	-61.51	-25.00	-36.51	Vertical
7	912.695	-75.18	14.49	-60.69	-25.00	-35.69	Vertical
8	938.714	-75.16	14.52	-60.64	-25.00	-35.64	Vertical
9	5160.000	-58.72	10.10	-48.62	-25.00	-23.62	Vertical
10	7740.000	-58.88	13.00	-45.88	-25.00	-20.88	Vertical
Middle Channel							
1	821.387	-75.56	13.20	-62.36	-25.00	-37.36	Horizontal
2	881.184	-75.07	14.07	-61.00	-25.00	-36.00	Horizontal
3	938.714	-74.29	14.52	-59.77	-25.00	-34.77	Horizontal
4	5190.000	-58.36	10.16	-48.20	-25.00	-23.20	Horizontal
5	7785.000	-58.86	12.99	-45.87	-25.00	-20.87	Horizontal
6	765.648	-75.32	11.85	-63.47	-25.00	-38.47	Vertical
7	844.803	-75.17	13.42	-61.75	-25.00	-36.75	Vertical
8	952.000	-75.60	14.82	-60.78	-25.00	-35.78	Vertical
9	5190.000	-58.76	10.16	-48.60	-25.00	-23.60	Vertical
10	7785.000	-58.65	12.99	-45.66	-25.00	-20.66	Vertical
Highest Channel							
1	868.886	-75.19	13.80	-61.39	-25.00	-36.39	Horizontal
2	925.613	-75.54	14.46	-61.08	-25.00	-36.08	Horizontal
3	992.997	-74.98	15.56	-59.42	-25.00	-34.42	Horizontal
4	5220.000	-59.30	10.23	-49.07	-25.00	-24.07	Horizontal
5	7830.000	-59.19	12.98	-46.21	-25.00	-21.21	Horizontal
6	713.692	-75.62	11.53	-64.09	-25.00	-39.09	Vertical
7	809.924	-74.12	12.89	-61.23	-25.00	-36.23	Vertical
8	986.044	-75.47	15.44	-60.03	-25.00	-35.03	Vertical
9	5220.000	-59.00	10.23	-48.77	-25.00	-23.77	Vertical
10	7830.000	-58.26	12.98	-45.28	-25.00	-20.28	Vertical

5.8.8 LTE Band 41

LTE Band 41_ 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	838.887	-74.31	13.30	-61.01	-25.00	-36.01	Horizontal
2	945.334	-75.17	14.69	-60.48	-25.00	-35.48	Horizontal
3	979.139	-74.60	15.25	-59.35	-25.00	-34.35	Horizontal
4	5130.000	-58.52	10.02	-48.50	-25.00	-23.50	Horizontal
5	7695.000	-59.22	13.01	-46.21	-25.00	-21.21	Horizontal
6	728.897	-75.15	11.61	-63.54	-25.00	-38.54	Vertical
7	906.304	-75.79	14.53	-61.26	-25.00	-36.26	Vertical
8	992.997	-75.88	15.56	-60.32	-25.00	-35.32	Vertical
9	5130.000	-57.89	10.02	-47.87	-25.00	-22.87	Vertical
10	7695.000	-58.71	13.01	-45.70	-25.00	-20.70	Vertical
Middle Channel							
1	693.910	-75.36	11.17	-64.19	-25.00	-39.19	Horizontal
2	804.252	-74.47	12.75	-61.72	-25.00	-36.72	Horizontal
3	925.613	-74.87	14.46	-60.41	-25.00	-35.41	Horizontal
4	5200.000	-59.53	10.18	-49.35	-25.00	-24.35	Horizontal
5	7800.000	-57.95	12.99	-44.96	-25.00	-19.96	Horizontal
6	771.047	-74.81	11.94	-62.87	-25.00	-37.87	Vertical
7	850.760	-74.88	13.57	-61.31	-25.00	-36.31	Vertical
8	932.141	-73.77	14.41	-59.36	-25.00	-34.36	Vertical
9	5200.000	-59.07	10.18	-48.89	-25.00	-23.89	Vertical
10	7800.000	-59.19	12.99	-46.20	-25.00	-21.20	Vertical
Highest Channel							
1	844.803	-75.41	13.42	-61.99	-25.00	-36.99	Horizontal
2	912.695	-75.34	14.49	-60.85	-25.00	-35.85	Horizontal
3	986.044	-75.23	15.44	-59.79	-25.00	-34.79	Horizontal
4	5290.000	-60.30	10.38	-49.92	-25.00	-24.92	Horizontal
5	7935.000	-58.75	12.95	-45.80	-25.00	-20.80	Horizontal
6	833.013	-74.75	13.24	-61.51	-25.00	-36.51	Vertical
7	925.613	-75.17	14.46	-60.71	-25.00	-35.71	Vertical
8	992.997	-75.33	15.56	-59.77	-25.00	-34.77	Vertical
9	5290.000	-59.59	10.38	-49.21	-25.00	-24.21	Vertical
10	7935.000	-58.85	12.95	-45.90	-25.00	-20.90	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
4. For Radiated Emission above 3GHz or 6GHz or 8GHz, there was not any unwanted emission detected, so only the results of second and third harmonics are recorded in the report.

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 Par 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°Ca
   b) Voltage =low voltage, 3.6 Vdc, Normal, 3.85 Vdc and High voltage, 4.3 Vdc.
2) Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to 20ºC and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50ºC is reached.

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 A5**

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 ***

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