



**CFR 47 FCC PART 02
CFR 47 FCC PART 22 H
CFR 47 FCC PART 24 E
CFR 47 FCC PART 27
CFR 47 FCC PART 90S
RSS-130, RSS-132, RSS-133
RSS-139, RSS-195, RSS-199**

TEST REPORT

For

Shopify POS Go

MODEL NUMBER: S2001

FCC ID: 2AB7X-S2001

IC: 24244-S2001

REPORT NUMBER: 47900096770-1

ISSUE DATE: March 02, 2022

Prepared for

**BBPOS International Limited(FCC)
Suite 1903-04, Tower 2, Nina Tower, 8 Yeung Uk Road, Tsuen Wan, NT, Hong
Kong**

**Shopify Inc(ISED)
150 Elgin Street Ottawa ON K2P1L4 Canada**

Prepared by

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

**Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-
Tech Development Zone Dongguan, 523808, People's Republic of China**

Tel: +86 769 22038881

Fax: +86 769 33244054

Website: www.ul.com

The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products.



Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V0	01/26/2022	Initial Issue	
V1	02/21/2022	Updated TCB comments	Denny Huang
V2	03/02/2022	Updated TCB comments	Denny Huang

Note:

- 1.This test report is only published to and used by the applicant, and it is not for evidence purpose in China.
2. The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 22 H >< CFR 47 FCC PART 24 E>< CFR 47 FCC PART 27 > <CFR 47 FCC PART 90> < RSS-130, RSS-132, RSS-133, RSS-139, RSS-195, RSS-199>when <Accuracy Method> decision rule is applied.



TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	4
2. TEST METHODOLOGY	4
3. FACILITIES AND ACCREDITATION	6
4. CALIBRATION AND UNCERTAINTY	7
4.1. <i>MEASURING INSTRUMENT CALIBRATION</i>	<i>7</i>
4.2. <i>MEASUREMENT UNCERTAINTY.....</i>	<i>7</i>
5. EQUIPMENT UNDER TEST	8
5.1. <i>DESCRIPTION OF EUT</i>	<i>8</i>
5.2. <i>TEST CHANNEL CONFIGURATION.....</i>	<i>8</i>
5.3. <i>MAXIMUM AVERAGE OUTPUT POWER</i>	<i>13</i>
5.4. <i>WORST-CASE CONFIGURATION AND MODE.....</i>	<i>20</i>
5.5. <i>DESCRIPTION OF AVAILABLE ANTENNAS</i>	<i>21</i>
5.6. <i>DESCRIPTION OF TEST SETUP.....</i>	<i>23</i>
6. MEASURING INSTRUMENT AND SOFTWARE USED	24
7. ANTENNA TERMINAL TEST RESULTS.....	25
7.1. <i>EFFECTIVE (ISOTROPIC) RADIATED POWER OF TRANSMITTER</i>	<i>25</i>
7.2. <i>PEAK TO AVERAGE RADIO</i>	<i>50</i>
7.3. <i>OCCUPIED BANDWIDTH</i>	<i>51</i>
7.4. <i>BAND EDGE EMISSIONS.....</i>	<i>52</i>
7.5. <i>SPURIOUS EMISSION AT ANTENNA TERMINAL.....</i>	<i>54</i>
7.6. <i>FREQUENCY STABILITY.....</i>	<i>56</i>
8. RADIATED SPURIOUS EMISSIONS	57



1. ATTESTATION OF TEST RESULTS

Applicant Information(FCC)

Company Name: BBPOS International Limited
Address: Suite 1903-04, Tower 2, Nina Tower, 8 Yeung Uk Road, Tsuen Wan, NT, Hong Kong

Manufacturer Information(FCC)

Company Name: BBPOS International Limited
Address: Suite 1903-04, Tower 2, Nina Tower, 8 Yeung Uk Road, Tsuen Wan, NT, Hong Kong

Applicant Information(ISED)

Company Name: Shopify Inc
Address: 150 Elgin Street Ottawa ON K2P1L4 Canada

Manufacturer Information(ISED)

Company Name: BBPOS International Limited
Address: Suite 1903-04, Tower 2, Nina Tower, 8 Yeung Uk Road, Tsuen Wan, NT, Hong Kong

Sample Status: Normal
Sample ID: 4378334
Date of Tested: Aug 23, 2021 ~ Feb 20, 2022

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 FCC PART 22 H	PASS
CFR 47 FCC PART 24 E	PASS
CFR 47 FCC PART 27	PASS
CFR 47 FCC PART 90S	PASS
RSS-130, RSS-132, RSS-133, RSS-139, RSS-195, RSS-199	PASS

Prepared By:

Checked By:

Denny Huang
Project Engineer

Shawn Wen
Laboratory Leader

Approved By:



A handwritten signature in black ink that reads "Stephen Guo".

Stephen Guo
Laboratory Manager



2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.26-2015, 971168 D01 Power Meas License Digital Systems v03r01, 971168 D02 Misc Rev Approv License Devices v02r01, 412172 D01 v01r01 Determining ERP and EIRP, CFR 47 FCC Part 2, Part 22 H, Part 24 E, Part 27, Part 90, RSS-130, RSS-132, RSS-133, RSS-139, RSS-195, RSS-199

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p>A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p>FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Delcaration of Conformity (DoC) and Certification rules</p> <p>ISED (Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.</p> <p>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011</p>
---------------------------	---

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.



4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognize national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Conduction emission	3.62 dB
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB
Radiated Emission (Included Fundamental Emission) (1 GHz to 40 GHz)	5.78 dB (1 GHz-18 GHz)
	5.23dB (18 GHz-26 GHz)
	5.64 dB (26 GHz-40 GHz)
Bandwidth	1.1 %

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.



5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name		POS Equipment		
EUT Description		The Equipment Under Test (EUT) is a POS device which supports BT/WLAN and Cellular function.		
Model		S2001		
Series Model		N/A		
Model Difference		N/A		
Ratings		DC 5V 1.5A & DC 9V 1.5A		
Power Supply		Power Adapter	Input	N/A
			Output	N/A
		Battery		3960mAh/3.85V
Item	Accessory	Brand Name	Model Name	Description
1	Type-C Cable	N/A	N/A	Length: 1.0 m No Ferrite Core shield

5.2. TEST CHANNEL CONFIGURATION

Mode	TX	Low	Middle	High
LTE Band 2	TX (1.4 MHz)	18607	18900	19193
		1850.7 MHz	1880 MHz	1909.3 MHz
	TX (3 MHz)	18615	18900	19185
		1851.5 MHz	1880 MHz	1908.5 MHz
	TX (5 MHz)	18625	18900	19175
		1852.5 MHz	1880 MHz	1907.5 MHz
	TX (10 MHz)	18650	18900	19150
		1855 MHz	1880 MHz	1905 MHz
	TX (15 MHz)	18675	18900	19125
		1857.5 MHz	1880 MHz	1902.5 MHz
	TX (20 MHz)	18700	18900	19100
		1860 MHz	1880 MHz	1900 MHz

Mode	TX/RX	Low	Middle	High
LTE Band 4	TX (1.4 MHz)	19957	20175	20393
		1710.7 MHz	1732.5 MHz	1754.3 MHz
	TX (3 MHz)	19965	20175	20385
		1711.5 MHz	1732.5 MHz	1753.5 MHz



	TX (5 MHz)	19975	20175	20375
		1712.5 MHz	1732.5 MHz	1752.5 MHz
	TX (10 MHz)	20000	20175	20350
		1715 MHz	1732.5 MHz	1750 MHz
	TX (15 MHz)	20025	20175	20325
		1717.5 MHz	1732.5 MHz	1747.5 MHz
TX (20 MHz)	20050	20175	20300	
	1720 MHz	1732.5 MHz	1745 MHz	

Mode	TX/RX	Low	Middle	High
LTE Band 5	TX (1.4 MHz)	20407	20525	20643
		824.7 MHz	836.5 MHz	848.3 MHz
	TX (3 MHz)	20415	20525	20635
		825.5 MHz	836.5 MHz	847.5 MHz
	TX (5 MHz)	20425	20525	20625
		826.5 MHz	836.5 MHz	846.5 MHz
TX (10 MHz)	20450	20525	20600	
	829.0 MHz	836.5 MHz	844.0 MHz	

Mode	TX/RX	Low	Middle	High
LTE Band 7	TX (5 MHz)	20775	21100	21425
		2502.5 MHz	2535.0 MHz	2567.5 MHz
	TX (10 MHz)	20800	21100	21400
		2505.0 MHz	2535.0 MHz	2565.0 MHz
	TX (15 MHz)	20825	21100	21400
		2507.5 MHz	2535.0 MHz	2562.5 MHz
TX (20 MHz)	20850	21100	21350	
	2510.0 MHz	2535.0 MHz	2560.0 MHz	

Mode	TX/RX	Low	Middle	High
LTE Band 12	TX (1.4 MHz)	23017	23095	23173
		699.7 MHz	707.5 MHz	715.3 MHz
	TX (3 MHz)	23025	23095	23165
		700.5 MHz	707.5 MHz	714.5 MHz
	TX (5 MHz)	23035	23095	23155
		701.5 MHz	707.5 MHz	713.5 MHz
TX (10 MHz)	23060	23095	23130	
	704.0 MHz	707.5 MHz	711.0 MHz	

Mode	TX/RX	Low	Middle	High
LTE Band 13	TX (5 MHz)	23205	23230	23255
		779.5 MHz	782.0 MHz	784.5 MHz



	TX (10 MHz)	23230	23230	23230
		782.0 MHz	782.0 MHz	782.0 MHz

Mode	TX/RX	Low	Middle	High
LTE Band 17	TX (5 MHz)	23755	23790	23825
		706.5 MHz	710.0 MHz	713.5 MHz
	TX (10 MHz)	23780	23790	23800
		709.0 MHz	710.0 MHz	711.0 MHz

Mode	TX/RX	Low	Middle	High
LTE Band 25	TX (1.4 MHz)	26047	26365	26683
		1850.7 MHz	1882.5 MHz	1914.3 MHz
	TX (3 MHz)	26055	26365	26675
		1851.5 MHz	1882.5 MHz	1913.5 MHz
	TX (5 MHz)	26065	26365	26665
		1852.5 MHz	1882.5 MHz	1912.5 MHz
	TX (10 MHz)	26090	26365	26640
		1855.0 MHz	1882.5 MHz	1910.0 MHz
	TX (15 MHz)	26115	26365	26615
		1857.5 MHz	1882.5 MHz	1907.5 MHz
	TX (20 MHz)	26140	26365	26590
		1860.0 MHz	1882.5 MHz	1905.0 MHz

Mode	TX/RX	Low	Middle	High
LTE Band 26 814-824 MHz	TX (1.4 MHz)	26697	26740	26783
		814.7 MHz	819.0 MHz	823.3 MHz
	TX (3 MHz)	26705	26740	26775
		815.5 MHz	819.0 MHz	822.5 MHz
	TX (5 MHz)	26715	26740	26765
		816.5 MHz	819.0 MHz	821.5 MHz
	TX (10 MHz)	/	26740	/
		/	819.0 MHz	/

Mode	TX/RX	Low	Middle	High
LTE Band 26 824-849 MHz	TX (1.4 MHz)	26797	26915	27033
		824.7 MHz	836.5 MHz	848.3 MHz
	TX (3 MHz)	26805	26915	27025
		825.5 MHz	836.5 MHz	847.5 MHz
	TX (5 MHz)	26815	26915	27015
		826.5 MHz	836.5 MHz	846.5 MHz



	TX (10 MHz)	26840	26915	26990
		829.0 MHz	836.5 MHz	844.0 MHz
	TX (15 MHz)	26865	26915	26965
		831.5 MHz	836.5 MHz	841.5 MHz

Mode	TX/RX	Low	Middle	High
LTE Band 38	TX (5 MHz)	37775	38000	38225
		2572.5 MHz	2595.0 MHz	2617.5 MHz
	TX (10 MHz)	37800	38000	38200
		2575.0MHz	2595.0 MHz	2615.0 MHz
	TX (15 MHz)	37825	38000	38175
		2577.5 MHz	2595.0 MHz	2612.5 MHz
	TX (20 MHz)	37850	38000	38150
		2580.0 MHz	2595.0 MHz	2610.0 MHz

Mode	TX/RX	Low	Middle	High
LTE Band 40 2305-2315 MHz	TX (5 MHz)	38725	38750	38775
		2307.5 MHz	2310.0 MHz	2312.5 MHz
	TX (10 MHz)	/	38750	/
		/	2310.0 MHz	/

Mode	TX/RX	Low	Middle	High
LTE Band 40 2350-2360 MHz	TX (5 MHz)	39175	39200	39225
		2352.5 MHz	2355.0 MHz	2357.5 MHz
	TX (10 MHz)	/	39200	/
		/	2355.0 MHz	/

Mode	TX/RX	Low	Middle	High
LTE Band 41	TX (5 MHz)	39675	40620	41564
		2498.5 MHz	2593.0 MHz	2687.5 MHz
	TX (10 MHz)	39700	40620	41539
		2501.0 MHz	2593.0 MHz	2685.0 MHz
	TX (15 MHz)	39725	40620	41514
		2503.5 MHz	2593.0 MHz	2682.5 MHz
	TX (20 MHz)	39750	40620	41489
		2506.0 MHz	2593.0 MHz	2680.0 MHz

Mode	TX/RX	Low	Middle	High
LTE Band 66	TX (1.4 MHz)	131979	132322	132665
		1710.7 MHz	1745.0 MHz	1779.3 MHz



	TX (3 MHz)	131987	132322	132657
		1711.5 MHz	1745.0 MHz	1778.5 MHz
	TX (5 MHz)	131997	132322	132647
		1712.5 MHz	1745.0 MHz	1777.5 MHz
	TX (10 MHz)	132022	132322	132622
		1715.0 MHz	1745.0 MHz	1775.0 MHz
	TX (15 MHz)	132047	132322	132597
		1717.5 MHz	1745.0 MHz	1772.5 MHz
	TX (20 MHz)	132072	132322	132572
		1720.0 MHz	1745.0 MHz	1770.0 MHz

5.3. MAXIMUM AVERAGE OUTPUT POWER

LTE Band 2

Part 24/RSS-133								
EIRP Limit(W)		2						
Antenna Gain (dBi)		-0.03						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% OBW (MHz)	Emission Designator
1.4	QPSK	1850.7	1909.3	21.82	21.79	0.15	1.094	1M09G7W
	16QAM			20.79	20.76	0.12	1.101	1M09D7W
3	QPSK	1851.5	1908.5	21.84	21.81	0.15	2.700	2M70G7W
	16QAM			20.72	20.69	0.12	2.704	2M70D7W
5	QPSK	1852.5	1907.5	21.92	21.89	0.15	4.515	4M52G7W
	16QAM			21.13	21.1	0.13	4.519	4M52D7W
10	QPSK	1855.0	1905.0	22.12	22.09	0.16	9.036	9M04G7W
	16QAM			21.33	21.3	0.13	9.000	9M00D7W
15	QPSK	1857.5	1902.5	21.92	21.89	0.15	13.501	13M50G7W
	16QAM			21.19	21.16	0.13	13.506	13M51D7W
20	QPSK	1860.0	1900.0	22.28	22.25	0.17	18.011	18M01G7W
	16QAM			21.29	21.26	0.13	18.035	18M04D7W

LTE Band 4

Part 27/RSS-139								
EIRP Limit(W)		1.00						
Antenna Gain (dBi)		-0.18						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% OBW (MHz)	Emission Designator
1.4	QPSK	1710.7	1754.3	21.97	21.79	0.15	1.092	1M09G7W
	16QAM			21.57	21.39	0.14	1.096	1M10D7W
3	QPSK	1711.5	1753.5	21.98	21.8	0.15	2.708	2M71G7W
	16QAM			21.11	20.93	0.12	2.699	2M70D7W
5	QPSK	1712.5	1752.5	22.05	21.87	0.15	4.509	4M51G7W
	16QAM			21.18	21	0.13	4.525	4M53D7W
10	QPSK	1715.0	1750.0	22.11	21.93	0.16	8.997	9M00G7W
	16QAM			21.01	20.83	0.12	8.997	9M00D7W
15	QPSK	1717.5	1747.5	22.03	21.85	0.15	13.504	13M5G7W
	16QAM			21.26	21.08	0.13	13.496	13M5D7W
20	QPSK	1720.0	1745.0	22.08	21.9	0.15	18.028	18M0G7W
	16QAM			21.32	21.14	0.13	18.045	18M0D7W

**LTE Band 5**

Part 22H								
ERP Limit(W)		7.00						
Antenna Gain (dBi)		-0.64						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% OBW (MHz)	Emission Designator
1.4	QPSK	824.7	848.3	22.81	20.02	0.10	1.096	1M10G7W
	16QAM			22.41				19.62
3	QPSK	825.5	847.5	22.88	20.09	0.10	2.707	2M71G7W
	16QAM			21.68				18.89
5	QPSK	826.5	846.5	22.99	20.2	0.10	4.515	4M52G7W
	16QAM			22.02				19.23
10	QPSK	829.0	844.0	22.87	20.08	0.10	8.987	8M99G7W
	16QAM			21.89				19.1

RSS-132								
EIRP Limit(W)		11.5						
Antenna Gain (dBi)		-0.64						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% OBW (MHz)	Emission Designator
1.4	QPSK	824.7	848.3	22.81	22.17	0.16	1.096	1M10G7W
	16QAM			22.41				21.77
3	QPSK	825.5	847.5	22.88	22.24	0.17	2.707	2M71G7W
	16QAM			21.68				21.04
5	QPSK	826.5	846.5	22.99	22.35	0.17	4.515	4M52G7W
	16QAM			22.02				21.38
10	QPSK	829.0	844.0	22.87	22.23	0.17	8.987	8M99G7W
	16QAM			21.89				21.25

LTE Band7

Part 27/RSS-199								
ERP Limit(W)		2.00						
Antenna Gain (dBi)		-0.06						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% OBW (MHz)	Emission Designator
5	QPSK	2502.5	2567.5	21.54	21.48	0.14	4.509	4M50G7W
	16QAM			20.56				20.5
10	QPSK	2505.0	2565.0	21.53	21.47	0.14	8.988	8M99G7W



	16QAM			20.60	20.54	0.11	8.984	8M98D7W
15	QPSK	2507.5	2562.5	21.49	21.43	0.14	13.481	13M5G7W
	16QAM			20.67	20.61	0.12	13.486	13M5D7W
20	QPSK	2510.0	2560.0	21.59	21.53	0.14	18.021	18M0G7W
	16QAM			20.75	20.69	0.12	18.077	18M1D7W

LTE Band12

Part 27/RSS-130								
ERP Limit(W)		3.00						
Antenna Gain (dBi)		-2.34						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% OBW (MHz)	Emission Designator
1.4	QPSK	699.7	715.3	23.59	21.25	0.13	1.092	1M09G7W
	16QAM			22.96	20.62	0.12	1.097	1M10D7W
3	QPSK	700.5	714.5	22.72	20.38	0.11	2.708	2M71G7W
	16QAM			21.57	19.23	0.08	2.702	2M70D7W
5	QPSK	701.5	713.5	22.78	20.44	0.11	4.518	4M52G7W
	16QAM			21.77	19.43	0.09	4.526	4M53D7W
10	QPSK	704.0	711.0	22.69	20.35	0.11	8.992	8M99G7W
	16QAM			21.69	19.35	0.09	9.013	9M01D7W

LTE Band 13

Part 27/RSS-130								
ERP Limit(W)		3.00						
Antenna Gain (dBi)		-2.28						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% OBW (MHz)	Emission Designator
5	QPSK	779.5	784.5	22.83	20.55	0.11	4.509	4M51G7W
	16QAM			22.21	19.93	0.10	4.515	4M52D7W
10	QPSK	782	782	22.08	19.8	0.10	8.982	8M98G7W
	16QAM			21.22	18.94	0.08	8.982	8M98G7W

LTE Band 17

Part 27/RSS-130								
ERP Limit(W)		3.00						
Antenna Gain (dBi)		-0.96						



Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% OBW (MHz)	Emission Designator
5	QPSK	706.5	713.5	22.69	21.73	0.15	4.519	4M52G7W
	16QAM			21.84	20.88	0.12	4.514	4M51D7W
10	QPSK	709.0	711.0	22.71	21.75	0.15	9.008	9M01G7W
	16QAM			21.78	20.82	0.12	9.007	9M00D7W

LTE Band 25

Part 24/RSS-133									
EIRP Limit(W)		2.00							
Antenna Gain (dBi)		-0.03							
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% OBW (MHz)	Emission Designator	
1.4	QPSK	1850.7	1914.3	22.27	22.24	0.17	1.100	1M10G7W	
	16QAM			21.36	21.33	0.14	1.097	1M10D7W	
3	QPSK	1851.5	1913.5	22.21	22.18	0.17	2.703	2M70G7W	
	16QAM			21.30	21.27	0.13	2.704	2M70D7W	
5	QPSK	1852.5	1912.5	22.19	22.16	0.16	4.510	4M51G7W	
	16QAM			21.28	21.25	0.13	4.516	4M52D7W	
10	QPSK	1855.0	1910.0	22.33	22.3	0.17	9.029	9M03G7W	
	16QAM			21.37	21.34	0.14	9.019	9M02D7W	
15	QPSK	1857.5	1907.5	22.26	22.23	0.17	13.586	13M6G7W	
	16QAM			21.34	21.31	0.14	13.564	13M6D7W	
20	QPSK	1860.0	1905.0	22.21	22.18	0.17	18.146	18M1G7W	
	16QAM			21.36	21.33	0.14	18.065	18M1D7W	

LTE Band 26

Part 90S									
ERP Limit(W)		7.00							
Antenna Gain (dBi)		-0.88							
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% OBW (MHz)	Emission Designator	
1.4	QPSK	814.7	823.3	22.4	21.52	0.14	1.09	1M09G7W	
	16QAM			21.84	20.96	0.12	1.091	1M09D7W	
3	QPSK	815.5	822.5	22.33	21.45	0.14	2.70	2M70G7W	
	16QAM			21.76	20.88	0.12	2.699	2M70D7W	
5	QPSK	816.5	821.5	22.38	21.5	0.14	4.505	4M51G7W	
	16QAM			21.77	20.89	0.12	4.509	4M51D7W	



10	QPSK	819	819	22.32	21.44	0.14	8.982	8M98G7W
	16QAM			21.67	20.79	0.12	8.979	8M98D7W
Part 22								
Conducted Limit(W)		100.00						
Antenna Gain (dBi)		-0.88						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	ERP Average (dBm)	ERP Average (W)	99% OBW (MHz)	Emission Designator
1.4	QPSK	824.7	848.3	22.84	/	/	1.089	1M09G7W
	16QAM			22.29	/	/	1.092	1M09D7W
3	QPSK	825.5	847.5	22.90	/	/	2.698	2M70G7W
	16QAM			22.27	/	/	2.695	2M70D7W
5	QPSK	826.5	846.5	22.84	/	/	4.502	4M50G7W
	16QAM			22.23	/	/	4.507	4M51D7W
10	QPSK	829	844	22.8	/	/	8.975	8M98G7W
	16QAM			22.33	/	/	8.975	8M98D7W
15	QPSK	831.5	841.5	22.98	/	/	13.438	13M4G7W
	16QAM			22.3	/	/	13.442	13M4D7W

LTE Band 38

Part 27/RSS-199								
EIRP Limit(W)		2.00						
Antenna Gain (dBi)		-1.4						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% OBW (MHz)	Emission Designator
5	QPSK	2572.5	2617.5	22.31	20.91	0.12	4.511	4M51G7W
	16QAM			21.49	20.09	0.10	4.492	4M49D7W
10	QPSK	2575.0	2615.0	22.38	20.98	0.13	8.973	8M97G7W
	16QAM			21.38	19.98	0.10	8.944	8M94D7W
15	QPSK	2577.5	2612.5	22.37	20.97	0.13	13.467	13M5G7W
	16QAM			21.39	19.99	0.10	13.449	13M4D7W
20	QPSK	2580.0	2610.0	22.33	20.93	0.12	17.978	18M0G7W
	16QAM			21.39	19.99	0.10	17.981	18M0D7W

**LTE Band 40-
2305-2315 MHz**

Part 27/RSS-195	
EIRP Limit(W)	0.25W
Antenna Gain (dBi)	-0.06



Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% OBW (MHz)	Emission Designator
5	QPSK	2307.5	2312.5	20.31	20.25	0.11	4.50	4M50G7W
	16QAM			19.99	19.93	0.10	4.503	4M50D7W
10	QPSK	2310.0	2310.0	20.31	20.25	0.11	8.957	8M96G7W
	16QAM			19.47	19.41	0.09	8.96	8M96D7W

**LTE Band 40-
2350-2360 MHz**

Part 27/RSS-195								
EIRP Limit(W)		0.25W						
Antenna Gain (dBi)		-0.06						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% OBW (MHz)	Emission Designator
5	QPSK	2352.5	2357.5	20.43	20.37	0.11	4.503	4M50G7W
	16QAM			20.07	20.01	0.10	4.50	4M50D7W
10	QPSK	2355.0	2355.0	20.35	20.29	0.11	8.962	8M96G7W
	16QAM			20.14	20.08	0.10	8.953	8M95D7W

LTE Band 41

Part 27/RSS-199								
EIRP Limit(W)		2.00						
Antenna Gain (dBi)		-0.23						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% OBW (MHz)	Emission Designator
5	QPSK	2498.5	2687.5	21.71	21.48	0.14	4.516	4M52G7W
	16QAM			21.22	20.99	0.13	4.493	4M49D7W
10	QPSK	2501.0	2685.0	22.29	22.06	0.16	8.982	8M98G7W
	16QAM			21.43	21.2	0.13	8.952	8M95D7W
15	QPSK	2503.5	2682.5	21.81	21.58	0.14	13.607	13M6G7W
	16QAM			20.94	20.71	0.12	13.589	13M6D7W
20	QPSK	2506.0	2680.0	21.83	21.6	0.14	18.133	18M1G7W
	16QAM			21.74	21.51	0.14	18.126	18M1D7W

LTE Band 66

Part 27/RSS-139								
EIRP Limit(W)		1.00						



Antenna Gain (dBi)		-0.22						
Bandwidth (MHz)	Modulation	Low Frequency (MHz)	Upper Frequency (MHz)	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Average (W)	99% OBW (MHz)	Emission Designator
1.4	QPSK	1710.7	1779.3	21.47	21.25	0.13	1.093	1M09G7W
	16QAM			21.51	21.29	0.13	1.103	1M10D7W
3	QPSK	1711.5	1778.5	21.38	21.16	0.13	2.708	2M71G7W
	16QAM			21.47	21.25	0.13	2.699	2M70D7W
5	QPSK	1712.5	1777.5	21.61	21.39	0.14	4.513	4M51G7W
	16QAM			21.60	21.38	0.14	4.519	4M52D7W
10	QPSK	1715.0	1775.0	21.48	21.26	0.13	8.999	9M00G7W
	16QAM			21.61	21.39	0.14	9.008	9M01D7W
15	QPSK	1717.5	1772.5	21.63	21.41	0.14	13.509	13M5G7W
	16QAM			21.63	21.41	0.14	13.497	13M5D7W
20	QPSK	1720.0	1770.0	21.46	21.24	0.13	18.044	18M0G7W
	16QAM			21.65	21.43	0.14	18.057	18M1D7W

5.4. WORST-CASE CONFIGURATION AND MODE

During all testing, EUT is in link mode with base station emulator at maximum power level. The worst-case scenario for all measurements is based on the average conducted output power measurement investigation results. Output power measurements were measured on QPSK, 16QAM. All testing was performed using QPSK and 16QAM modulations to represent the worst case.

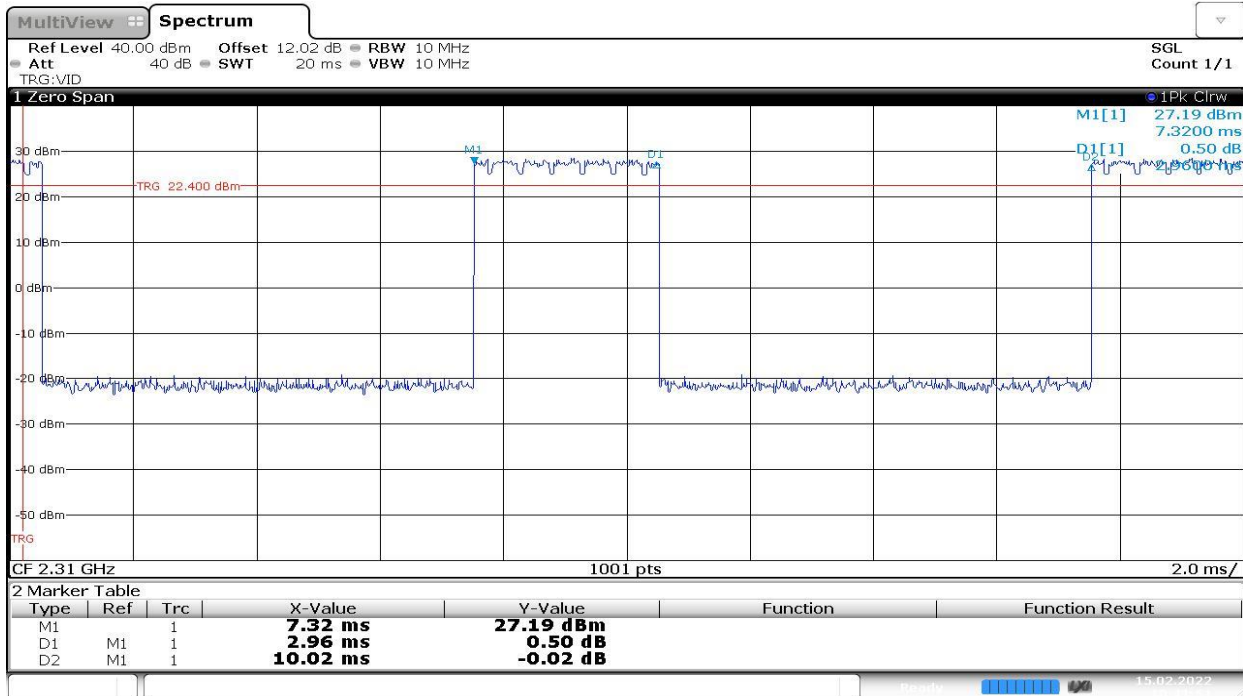
The radiated spurious emissions measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT was investigated in three orthogonal orientations X,Y and Z. It was determined that X orientation was the worst-case.

Radiated spurious emissions were investigated below 30 MHz, 30 MHz - 1 GHz and above 1 GHz. There were no emissions found on below 1GHz and above 18 GHz, the emissions between 1 GHz – 18 GHz were tested the highest transmitting power channel and the worse configuration.

Test Items	Worst case test configuration			
Description	Modulation	Channel	Bandwidth (MHz)	RB Configuration
Radiated Spurious Emissions	QPSK	L, M, H	Maximum BW	RB size=1, RB Location=Low

LTE Band 40 Duty Cycle Confirmation:

$DC=D1/D2=29.6\%$



10:41:52 15.02.2022

5.5. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Band	Antenna Type	MAX Antenna Gain (dBi)
1	LTE Band 2	PIFA	-0.03
1	LTE Band 4	PIFA	-0.18
1	LTE Band 5	PIFA	-0.64
1	LTE Band 7	PIFA	-0.06
1	LTE Band 12	PIFA	-2.34
1	LTE Band 13	PIFA	-2.28
1	LTE Band 17	PIFA	-0.96
1	LTE Band 25	PIFA	-0.03
1	LTE Band 26	PIFA	-0.88
1	LTE Band 38	PIFA	-1.63
1	LTE Band 40	PIFA	-0.11
1	LTE Band 41	PIFA	-0.20
1	LTE Band 66	PIFA	-0.16
Band	Transmit and Receive Mode	Description	
LTE Band 2	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 4	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 5	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 7	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 12	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 13	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 17	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 25	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 26	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 38	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 40	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 41	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	
LTE Band 66	<input checked="" type="checkbox"/> 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.	



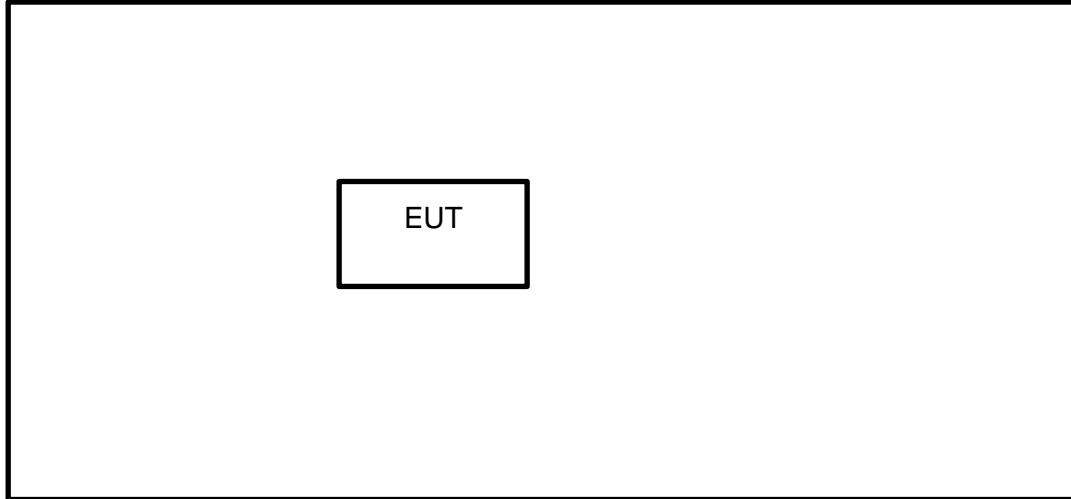
Note: The value of the antenna gain was declared by customer.



5.6. DESCRIPTION OF TEST SETUP

Item	Equipment	Mfr/Brand	Model/Type No.	Specification	Series No.
1	N/A	N/A	N/A	N/A	N/A

SETUP DIAGRAM FOR RADIATED TESTS



**6. MEASURING INSTRUMENT AND SOFTWARE USED**

Antenna Terminal Test						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
<input checked="" type="checkbox"/>	Spectrum Analyzer	R&S	FSW40	S421035420	Oct.30, 2021	Oct.29, 2022
<input checked="" type="checkbox"/>	Wideband Radio Communication Tester	R&S	CMW500	155523	Oct.30, 2021	Oct.29, 2022
<input checked="" type="checkbox"/>	DC Power Supply	Array	3662A	A1512015	Oct.30, 2021	Oct.29, 2022
Software						
Used	Description	Manufacturer	Name	Version		
<input checked="" type="checkbox"/>	Tonsend Cellular Test System	Tonsend	JS1120 RF Auto Test System	2.6.9.0826		
Radiated Test						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
<input checked="" type="checkbox"/>	MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Oct.30, 2021	Oct.29, 2022
<input checked="" type="checkbox"/>	Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Aug.02, 2021	Aug.01, 2024
<input checked="" type="checkbox"/>	Preamplifier	HP	8447D	2944A09099	Oct.30, 2021	Oct.29, 2022
<input checked="" type="checkbox"/>	EMI Measurement Receiver	R&S	ESR26	101377	Oct.30, 2021	Oct.29, 2022
<input checked="" type="checkbox"/>	Horn Antenna	TDK	HRN-0118	130939	July 20, 2021	July 19, 2024
<input checked="" type="checkbox"/>	High Gain Horn Antenna	Schwarzbeck	BBHA-9170	691	July 20, 2021	July 19, 2024
<input checked="" type="checkbox"/>	Preamplifier	TDK	PA-02-0118	TRS-305-00066	Oct.31, 2021	Oct.30, 2022
<input checked="" type="checkbox"/>	Preamplifier	TDK	PA-02-2	TRS-307-00003	Oct.31, 2021	Oct.30, 2022
<input checked="" type="checkbox"/>	Loop antenna	Schwarzbeck	1519B	00008	Jan.17,2022	Jan.17,2025
<input checked="" type="checkbox"/>	High Pass Filter	Wi	WHKX10-2700-3000-18000-40SS	23	Oct.31, 2021	Oct.30, 2022
Software						
Used	Description	Manufacturer	Name	Version		
<input checked="" type="checkbox"/>	Test Software for Radiated disturbance	Farad	EZ-EMC	Ver. UL-3A1		



7. ANTENNA TERMINAL TEST RESULTS

7.1. EFFECTIVE (ISOTROPIC) RADIATED POWER OF TRANSMITTER

RULE PART(S)

FCC: §2.1046, §22.913, §24.232, §27.50, §90
RSS-130, RSS-132, RSS-133, RSS-139, RSS-195, RSS-199

LIMITS

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

24.232(c) Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

27.50(c) 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.

27.50(d) 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 watts EIRP.

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

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

RSS-130

The transmitter output power shall be measured in terms of average power. In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

Frequency bands 617-652 MHz and 663-698 MHz

The e.r.p. shall not exceed 3 watts for mobile equipment, fixed subscriber equipment and portable equipment.

Frequency bands 698-756 MHz and 777-787 MHz

The e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment.

RSS-132

The transmitter output power shall be measured in terms of average power. The equivalent isotropically radiated power (e.i.r.p.) for mobile equipment shall not exceed 11.5 watts.

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

RSS-133

The equivalent isotropically radiated power (e.i.r.p.) for transmitters shall not exceed the limits 2W.

In addition, the transmitter's peak-to-average power ratio (PAPR) shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

RSS-139

The equivalent isotropically radiated power (e.i.r.p.) for mobile and portable transmitters shall not exceed one watt.

In addition, the peak to average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal that corresponds to the highest PAPR during periods of continuous transmission.

RSS-195

The e.i.r.p. of mobile or portable equipment transmitting in the band 2305-2315 MHz or the band 2350-2360 MHz, employing 3GPP LTE (Third Generation Partnership Project Long Term Evolution) standards, shall not exceed 250 mW within any 5 MHz bandwidth. For other technologies, the e.i.r.p. shall not exceed 50 mW within any 1 MHz bandwidth.

RSS-199

For mobile subscriber equipment, the e.i.r.p. shall not exceed 2 W. For fixed subscriber equipment, the transmitter output power shall not exceed 2 W and the e.i.r.p. shall be limited to 40 W.

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

TEST PROCEDURE

Refer to ANSI C63.26:2015 and KDB 971168 D01 Section 5.6

$ERP/ EIRP = P_{Meas} + GT - LC$

where:

ERP or EIRP = effective or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas} , typically dBW or dBm);

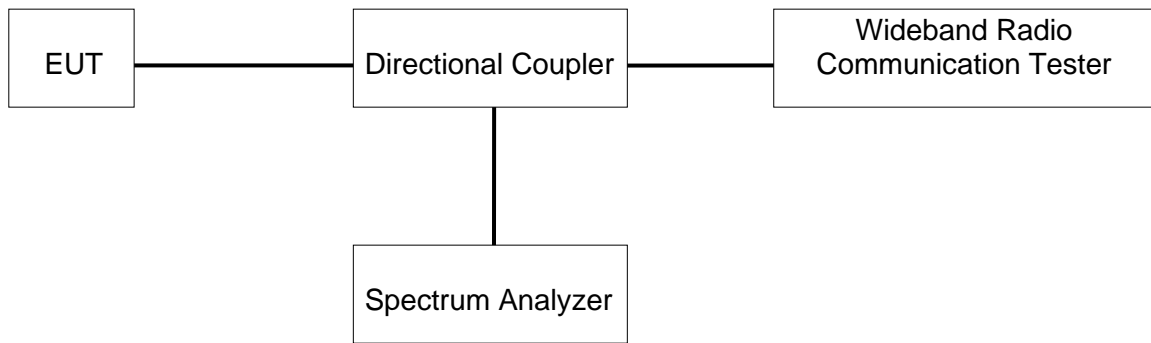
P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB

The transmitter has a maximum radiated ERP / EIRP output powers as follows:

TEST SETUP



**TEST ENVIRONMENT**

Temperature	22.8°C	Relative Humidity	58.3%
Atmosphere Pressure	101kPa	Test Voltage	/

RESULTS

LTE FDD B2			Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18607	18900	19193
1.4MHz	QPSK	1	0	21.51	21.66	21.36
		1	2	21.58	21.67	21.39
		1	5	21.59	21.71	21.4
		3	0	21.62	21.79	21.52
		3	1	21.64	21.82	21.46
		3	3	21.55	21.8	21.36
	16QAM	6	0	20.58	20.74	20.41
		1	0	20.64	20.8	20.45
		1	2	20.44	20.79	20.3
		1	5	20.59	20.58	20.38
		3	0	20.56	20.75	20.43
		3	1	20.52	20.69	20.36
		3	3	20.45	20.62	20.28
		6	0	19.66	19.84	19.35
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
3MHz	QPSK	1	0	21.81	21.84	21.46
		1	8	21.86	21.79	21.46
		1	14	21.86	21.78	21.45
		8	0	20.76	20.86	20.53
		8	4	20.76	20.84	20.55
		8	7	20.79	20.83	20.46
	16QAM	15	0	20.82	20.84	20.54
		1	0	20.71	20.69	20.64
		1	8	20.72	20.69	20.62
		1	14	20.71	20.66	20.56
		8	0	19.88	19.94	19.69
		8	4	19.89	19.94	19.7
		8	7	19.87	19.9	19.59
		15	0	19.85	19.84	19.66
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
5MHz	QPSK	1	0	21.83	21.91	21.66
		1	12	21.9	21.89	21.63
		1	24	21.92	21.84	21.57
		12	0	20.83	20.87	20.67
		12	6	20.85	20.91	20.66
		12	13	20.83	20.85	20.52
		25	0	20.83	20.87	20.64



	16QAM	1	0	20.84	21.08	20.7
		1	12	20.93	21.13	20.65
		1	24	20.9	21.05	20.54
		12	0	19.97	20.08	19.75
		12	6	19.96	20.08	19.81
		12	13	19.94	20.04	19.66
		25	0	19.95	19.98	19.72
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18650	18900	19150
10MHz	QPSK	1	0	21.95	22.12	21.86
		1	24	21.81	21.78	21.66
		1	49	22.06	22.07	21.55
		25	0	20.93	20.99	20.83
		25	12	20.9	20.97	20.81
		25	25	20.92	20.95	20.63
		50	0	20.87	20.96	20.7
	16QAM	1	0	21.16	21.33	20.77
		1	24	20.92	21.01	20.58
		1	49	21.16	21.19	20.48
		25	0	20	20.02	19.91
		25	12	19.98	20.04	19.87
		25	25	19.93	20.07	19.78
		50	0	20.01	20.1	19.85
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18675	18900	19125
15MHz	QPSK	1	0	21.84	21.9	21.88
		1	38	21.84	21.72	21.69
		1	74	21.92	21.75	21.57
		38	0	21.03	21.19	20.79
		38	18	20.96	21.05	20.51
		38	37	20.97	21.05	20.44
		75	0	20.9	20.9	20.74
	16QAM	1	0	21.01	21.19	20.73
		1	38	20.96	21.02	20.56
		1	74	21.02	21.09	20.41
		38	0	21.03	21.2	20.73
		38	18	20.97	21.04	20.54
		38	37	21	21.09	20.43
		75	0	19.98	20.03	19.83
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18700	18900	19100
20MHz	QPSK	1	0	22.06	22.28	21.95
		1	49	21.9	21.88	21.8
		1	99	22.03	22.12	21.58
		50	0	20.99	21.04	20.88
		50	25	20.98	21.08	20.91
		50	50	20.94	20.97	20.75
		100	0	20.94	21	20.86



	16QAM	1	0	21.14	21.29	21.17
		1	49	20.88	20.92	20.97
		1	99	21.03	21.15	20.86
		50	0	20.02	20.18	19.95
		50	25	20.07	20.14	19.96
		50	50	19.99	20.18	19.86
		100	0	20.01	20.1	19.89

LTE FDD B4			Conducted Power(dBm)					
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel		
				19957	20175	20393		
1.4MHz	QPSK	1	0	21.58	21.89	21.78		
		1	2	21.55	21.97	21.82		
		1	5	21.52	21.97	21.75		
		3	0	21.64	21.88	21.8		
		3	1	21.74	21.88	21.81		
		3	3	21.67	21.86	21.79		
		6	0	20.62	20.86	20.8		
	16QAM	1	0	20.64	20.81	20.82		
		1	2	20.68	20.92	20.85		
		1	5	20.61	20.82	20.79		
		3	0	21.57	20.82	20.71		
		3	1	20.55	20.81	20.76		
		3	3	20.5	20.81	20.75		
		6	0	19.72	19.82	19.89		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel		
3MHz	QPSK	1	0	21.67	21.96	21.9		
		1	8	21.69	21.98	21.92		
		1	14	21.68	21.98	21.94		
		8	0	20.73	20.97	20.85		
		8	4	20.72	20.98	20.85		
		8	7	20.71	20.96	20.83		
		15	0	20.76	20.98	20.88		
	16QAM	1	0	20.83	21.09	20.88		
		1	8	20.86	21.08	20.83		
		1	14	20.84	21.11	20.82		
		8	0	19.82	20.05	19.91		
		8	4	19.82	20.04	19.93		
		8	7	19.82	20.05	19.91		
		15	0	19.83	20.06	19.88		
		Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
		5MHz	QPSK	1	0	21.76	21.99	21.99
1	12			21.8	22.04	21.98		
1	24			21.69	22.05	21.92		
12	0			20.76	20.94	20.94		
12	6			20.77	20.94	20.94		



	16QAM	12	13	20.71	20.99	20.89
		25	0	20.78	20.97	20.93
		1	0	20.85	21.18	20.98
		1	12	20.85	21.2	21.01
		1	24	20.84	21.16	20.96
		12	0	19.81	20.1	20.02
		12	6	19.81	20.04	20.02
		12	13	19.75	20.09	19.98
		25	0	19.84	19.99	20
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20000	20175	20350
10MHz	QPSK	1	0	21.74	21.97	22
		1	24	21.63	22.00	21.86
		1	49	21.66	22.11	21.88
		25	0	20.78	21.04	21.00
		25	12	20.79	20.97	21.02
		25	25	20.79	21.04	20.97
		50	0	20.73	20.99	20.97
	16QAM	1	0	20.91	20.97	20.85
		1	24	20.82	20.91	20.79
		1	49	20.91	21.01	20.79
		25	0	19.82	20.05	20.1
		25	12	19.82	20.01	20.11
		25	25	19.81	20.11	20.05
		50	0	19.87	20.06	20.02
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20025	20175	20325
15MHz	QPSK	1	0	21.77	21.9	22.1
		1	38	21.63	21.91	22.03
		1	74	21.99	22.00	22.02
		38	0	20.92	21.14	21.03
		38	18	20.85	21.17	20.89
		38	37	21.11	21.25	20.93
		75	0	20.85	20.96	20.93
	16QAM	1	0	20.93	21.12	20.99
		1	38	20.81	21.17	20.87
		1	74	21.08	21.24	20.9
		38	0	20.99	21.14	21.00
		38	18	20.86	21.15	20.87
		38	37	21.13	21.26	20.91
		75	0	19.93	20.11	20.05
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20050	20175	20300
20MHz	QPSK	1	0	21.69	21.98	22.07



		1	49	21.69	22.01	22.04
		1	99	22.04	22.08	21.97
		50	0	20.72	21.02	21.06
		50	25	20.75	21.03	21.06
		50	50	20.88	21.07	21.06
		100	0	20.86	21.06	21.05
	16QAM	1	0	20.78	21.15	21.02
		1	49	20.7	21.19	20.99
		1	99	21.04	21.32	20.93
		50	0	19.8	20.07	20.16
		50	25	19.8	20.07	20.18
		50	50	19.97	20.14	20.16
		100	0	19.96	20.1	20.13

LTE FDD B5		Conducted Power(dBm)				
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20407	20525	20643
1.4MHz	QPSK	1	0	22.42	22.79	22.71
		1	2	22.44	22.82	22.8
		1	5	22.39	22.81	22.71
		3	0	22.41	22.72	22.79
		3	1	22.45	22.69	22.81
		3	3	22.38	22.7	22.75
	16QAM	1	0	21.24	21.61	21.6
		1	2	21.36	21.71	21.68
		1	5	22.41	21.67	21.55
		3	0	21.37	21.70	21.67
		3	1	21.40	21.68	21.66
		3	3	21.33	21.70	21.58
		6	0	20.48	20.62	20.87
		Bandwidth	Modulation	RB size	RB offset	Channel
20415	20525					20635
3MHz	QPSK	1	0	22.45	22.81	22.88
		1	8	22.46	22.82	22.80
		1	14	22.45	22.88	22.80
		8	0	21.47	21.79	21.91
		8	4	21.47	21.82	21.87
		8	7	21.47	21.79	21.89
		15	0	21.54	21.85	21.91
	16QAM	1	0	21.54	21.76	21.71
		1	8	21.59	21.74	21.68
		1	14	21.58	21.72	21.71
		8	0	20.56	20.81	20.94
		8	4	20.58	20.84	20.94
		8	7	20.62	20.86	20.9
		15	0	20.61	20.82	20.86
Bandwidth	Modulation		RB offset	Channel	Channel	Channel



		RB size		20425	20525	20625
5MHz	QPSK	1	0	22.57	22.82	22.99
		1	12	22.65	22.90	22.99
		1	24	22.61	22.82	22.85
		12	0	21.56	21.84	21.91
		12	6	21.56	21.84	21.93
		12	13	21.59	21.85	21.88
		25	0	21.58	21.82	21.91
	16QAM	1	0	21.55	21.93	21.96
		1	12	21.65	22.02	21.94
		1	24	21.65	22.01	21.87
		12	0	20.6	20.98	20.99
		12	6	20.6	20.94	21
		12	13	20.69	20.95	20.94
		25	0	20.69	20.87	20.99
Bandwidth	Modulation	RB size	RB offset	Channel 20450	Channel 20525	Channel 20600
10MHz	QPSK	1	0	22.57	22.77	22.81
		1	24	22.58	22.87	22.86
		1	49	22.77	22.84	22.84
		25	0	21.59	21.85	21.88
		25	12	21.65	21.85	21.9
		25	25	21.78	21.89	21.95
		50	0	21.74	21.83	21.86
	16QAM	1	0	21.68	21.69	21.7
		1	24	21.71	21.74	21.76
		1	49	21.89	21.79	21.68
		25	0	20.69	20.92	20.95
		25	12	20.67	20.93	20.96
		25	25	20.84	20.97	21.04
		50	0	20.84	20.95	20.92

LTE FDD B7			Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20775	21100	21425
5MHz	QPSK	1	0	21.50	21.48	21.3
		1	12	21.54	21.53	21.4
		1	24	21.52	21.5	21.29
		12	0	20.45	20.45	21.35
		12	6	20.48	20.42	20.35
		12	13	20.46	20.47	20.34
		25	0	20.47	20.46	20.37
	16QAM	1	0	20.45	20.45	20.34



		1	12	20.56	20.51	20.41
		1	24	20.53	20.46	20.38
		12	0	19.51	19.47	19.54
		12	6	19.52	19.47	19.47
		12	13	19.56	19.47	19.41
		25	0	19.57	19.5	19.49
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20800	21100	21400
10MHz	QPSK	1	0	21.38	21.53	21.38
		1	24	21.45	21.53	21.40
		1	49	21.45	21.52	21.40
		25	0	20.56	20.51	20.5
		25	12	20.52	20.5	20.52
		25	25	20.58	20.54	20.48
		50	0	20.56	20.48	20.47
	16QAM	1	0	20.53	20.39	20.48
		1	24	20.60	20.39	20.53
		1	49	20.60	20.36	20.53
		25	0	19.62	19.59	19.56
		25	12	19.62	19.59	19.56
		25	25	19.61	19.61	19.55
		50	0	19.64	19.61	19.57
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20825	21100	21375
15MHz	QPSK	1	0	21.35	21.44	21.28
		1	38	21.49	21.42	21.41
		1	74	21.39	21.35	21.36
		38	0	20.50	20.59	20.17
		38	18	20.64	20.65	20.2
		38	37	20.53	20.64	20.22
		75	0	20.47	20.52	20.36
	16QAM	1	0	20.48	20.58	20.15
		1	38	20.60	20.63	20.22
		1	74	20.55	20.65	20.19
		38	0	20.54	20.59	20.18
		38	18	20.59	20.67	20.23
		38	37	20.51	20.64	20.19
		75	0			
				19.55	19.6	19.44
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20850	21100	21350
20MHz	QPSK	1	0	21.38	21.53	21.38
		1	49	21.52	21.55	21.53
		1	99	21.59	21.49	21.46
		50	0	20.50	20.49	20.44



		50	25	20.53	20.53	20.45
		50	50	20.62	20.53	20.51
		100	0	20.59	20.48	20.5
	16QAM	1	0	20.41	20.63	20.4
		1	49	20.51	20.73	20.48
		1	99	20.59	20.75	20.48
		50	0	19.59	19.6	19.57
		50	25	19.59	19.56	19.56
		50	50	19.74	19.6	19.55
		100	0	19.69	19.59	19.62

LTE FDD B12			Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				23017	23095	23173
1.4MHz	QPSK	1	0	23.03	23.26	23.51
		1	2	23.05	23.33	23.52
		1	5	23.04	23.28	23.5
		3	0	22.96	23.34	23.54
		3	1	23.06	23.42	23.59
		3	3	22.98	23.3	23.49
		6	0	21.93	22.3	22.49
	16QAM	1	0	22.22	22.49	22.86
		1	2	22.31	22.58	22.96
		1	5	22.25	22.55	22.84
		3	0	22.19	22.49	22.52
		3	1	22.22	22.52	22.66
		3	3	22.15	22.46	22.57
		6	0	20.98	21.35	21.46
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
3MHz	QPSK	1	0	22.40	22.56	22.70
		1	8	22.36	22.61	22.66
		1	14	22.39	22.66	22.72
		8	0	21.41	21.52	21.73
		8	4	21.42	21.55	21.78
		8	7	21.35	21.58	21.77
		15	0	21.43	21.61	21.71
	16QAM	1	0	21.49	21.45	21.54
		1	8	21.49	21.48	21.57
		1	14	21.50	21.52	21.55
		8	0	20.54	20.59	20.82
		8	4	20.51	20.66	20.82
		8	7	20.49	20.65	20.75
		15	0	20.54	20.6	20.74
		Bandwidth	Modulation	RB size	RB offset	Channel
5MHz	QPSK	1	0	22.44	22.53	22.6
		1	12	22.42	22.57	22.78



		1	24	22.56	22.56	22.77	
		12	0	21.42	21.58	21.65	
		12	6	21.40	21.57	21.64	
		12	13	21.53	21.59	21.73	
		25	0	21.49	21.52	21.63	
	16QAM	1	0	21.46	21.63	21.58	
		1	12	21.53	21.73	21.77	
		1	24	21.63	21.70	21.69	
		12	0	20.49	20.68	20.76	
		12	6	20.47	20.67	20.75	
		12	13	20.57	20.69	20.88	
		25	0	20.64	20.63	20.75	
	Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
					23060	23095	23130
10MHz	QPSK	1	0	22.38	22.39	22.48	
		1	24	22.49	22.58	22.57	
		1	49	22.54	22.61	22.69	
		25	0	21.56	21.53	21.61	
		25	12	21.57	21.57	21.63	
		25	25	21.60	21.60	21.63	
		50	0	21.61	21.62	21.65	
	16QAM	1	0	21.49	21.38	21.33	
		1	24	21.60	21.50	21.41	
		1	49	21.69	21.54	21.55	
		25	0	20.65	20.66	20.74	
		25	12	20.64	20.68	20.73	
		25	25	20.69	20.74	20.78	
		50	0	20.71	20.73	20.76	

LTE FDD B13			Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				23205	23230	23255
5MHz	QPSK	1	0	22.61	22.7	22.69
		1	12	22.73	22.83	22.69
		1	24	22.83	22.83	22.66
		12	0	21.77	21.89	21.77
		12	6	21.78	21.88	21.8
		12	13	21.86	21.9	21.78
		25	0	21.78	21.86	21.8
	16QAM	1	0	21.92	21.92	21.96
		1	12	21.93	22.11	22.03
		1	24	22.15	22.21	22.04
		12	0	20.88	20.99	20.9
		12	6	20.82	21.06	20.86



Bandwidth	Modulation	12	13	20.93	21.08	20.85
		25	0	20.82	20.98	20.86
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				23230		
10MHz	QPSK	1	0	22.02		
		1	24	22.07		
		1	49	22.08		
		25	0	21.21		
		25	12	21.22		
		25	25	21.15		
		50	0	21.19		
	16QAM	1	0	21.15		
		1	24	21.22		
		1	49	21.17		
		25	0	20.26		
		25	12	20.25		
		25	25	20.22		
		50	0	20.26		

LTE FDD B17				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				23755	23790	23825
5MHz	QPSK	1	0	22.49	22.51	22.53
		1	12	22.56	22.59	22.69
		1	24	22.52	22.64	22.62
		12	0	21.47	21.48	21.54
		12	6	21.52	21.53	21.54
		12	13	21.52	21.51	21.66
		25	0	21.51	21.52	21.57
	16QAM	1	0	22.47	21.52	21.66
		1	12	21.57	21.58	21.84
		1	24	21.54	21.65	21.73
		12	0	20.6	20.56	20.7
		12	6	20.63	20.52	20.69
		12	13	20.61	20.61	20.77
		25	0	20.63	20.62	20.6
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				23780	23790	23800
10MHz	QPSK	1	0	22.48	22.48	22.43
		1	24	22.47	22.55	22.48
		1	49	22.67	22.71	22.66
		25	0	21.55	21.56	21.54
		25	12	21.57	21.53	21.54
		25	25	21.58	21.59	21.59
		50	0	21.55	21.55	21.53



	16QAM	1	0	21.54	21.4	21.31
		1	24	21.57	21.37	21.33
		1	49	21.78	21.53	21.47
		25	0	20.59	20.62	20.65
		25	12	20.59	20.61	20.67
		25	25	20.67	20.69	20.72
		50	0	20.62	20.63	20.65

LTE FDD B25			Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26047	26365	26683
1.4MHz	QPSK	1	0	22.04	22.05	21.94
		1	2	22.11	22.23	22.07
		1	5	22.04	22.14	21.94
		3	0	22.11	22.13	21.89
		3	1	22.25	22.27	22.01
		3	3	22.16	22.13	21.89
		6	0	21.03	21.17	21.02
	16QAM	1	0	21.11	21.25	20.92
		1	2	21.25	21.28	21.04
		1	5	21.22	21.24	20.88
		3	0	21.18	21.28	20.88
		3	1	21.36	21.35	20.97
		3	3	21.13	21.25	20.91
		6	0	20.15	20.16	19.89
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
3MHz	QPSK	1	0	22.01	22.18	22.03
		1	8	22.06	22.21	21.99
		1	14	22.03	22.17	22.00
		8	0	21.13	21.24	20.98
		8	4	21.13	21.29	21.02
		8	7	21.12	21.19	20.96
		15	0	21.13	21.25	20.98
	16QAM	1	0	21.19	21.26	20.98
		1	8	21.20	21.30	20.99
		1	14	21.12	21.29	20.95
		8	0	20.25	20.34	20.02
		8	4	20.29	20.37	20.07
		8	7	20.23	20.36	19.98
		15	0	20.24	20.36	19.99
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
5MHz	QPSK	1	0	21.97	22.1	21.9
		1	12	22.03	22.19	21.89
		1	24	22.05	22.18	21.92
		12	0	21.16	21.26	21.00
		12	6	21.18	21.31	20.97



	16QAM	12	13	21.16	21.27	20.97
		25	0	21.18	21.31	20.97
		1	0	21.09	21.21	20.99
		1	12	21.10	21.28	20.94
		1	24	21.06	21.19	20.87
		12	0	20.32	20.42	20.11
		12	6	20.31	20.47	20.02
		12	13	20.29	20.43	19.98
		25	0	20.26	20.43	20.02
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26090	26365	26640
10MHz	QPSK	1	0	22.17	22.32	22.03
		1	24	22.16	22.25	21.98
		1	49	22.19	22.33	21.97
		25	0	21.19	21.31	21.10
		25	12	21.21	21.33	21.07
		25	25	21.13	21.31	21.00
		50	0	21.20	21.28	20.98
	16QAM	1	0	21.28	21.37	21.12
		1	24	21.20	21.37	21.00
		1	49	21.22	21.36	20.91
		25	0	20.29	20.39	20.22
		25	12	20.32	20.44	20.12
		25	25	20.19	20.4	20.03
		50	0	20.27	20.43	20.12
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26115	26365	26615
15MHz	QPSK	1	0	22.05	22.2	22.17
		1	38	22.1	22.26	22.03
		1	74	22.09	22.26	21.98
		38	0	21.1	21.24	21.11
		38	18	21.17	21.26	21.04
		38	37	21.09	21.23	21
		75	0	21.12	21.29	21.1
	16QAM	1	0	21.13	21.25	21.2
		1	38	21.18	21.34	21.08
		1	74	21.05	21.27	20.92
		38	0	20.23	20.35	20.18
		38	18	20.28	20.41	20.19
		38	37	20.19	20.37	20.07
		75	0	20.26	20.37	20.18
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26140	26365	26590
20MHz	QPSK	1	0	21.99	22.11	22.15



		1	49	22.02	22.17	21.99
		1	99	22.00	22.21	21.92
		50	0	21.12	21.25	21.16
		50	25	21.16	21.34	21.17
		50	50	21.07	21.29	21.01
		100	0	21.10	21.27	21.11
	16QAM	1	0	21.14	21.21	21.2
		1	49	21.13	21.34	21.12
		1	99	21.06	21.36	20.98
		50	0	20.22	20.35	20.22
		50	25	20.22	20.47	20.25
		50	50	20.11	20.41	20.12
		100	0	20.20	20.38	20.16

LTE FDD B26 Lower				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26697	26740	26783
1.4MHz	QPSK	1	0	22.16	22.26	22.26
		1	2	22.19	22.28	22.32
		1	5	22.22	22.23	22.29
		3	0	22.27	22.31	22.31
		3	1	22.29	22.33	22.4
		3	3	22.15	22.26	22.31
	16QAM	1	0	21.47	21.52	21.74
		1	2	21.59	21.62	21.84
		1	5	21.45	21.54	21.75
		3	0	21.41	21.46	21.39
		3	1	21.46	21.49	21.49
		3	3	21.37	21.43	21.45
		6	0	20.21	20.28	20.36
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26705	26865	27025
3MHz	QPSK	1	0	22.21	22.19	22.31
		1	8	22.19	22.23	22.31
		1	14	22.14	22.23	22.33
		8	0	21.19	21.31	21.38
		8	4	21.27	21.28	21.39
		8	7	21.17	21.28	21.37
		15	0	21.23	21.31	21.4
	16QAM	1	0	21.55	21.63	21.76
		1	8	21.59	21.72	21.7
		1	14	21.51	21.72	21.7
		8	0	20.43	20.37	20.44
		8	4	20.42	20.42	20.48
		8	7	20.4	20.39	20.4
		15	0	20.35	20.39	20.49
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26715	26740	26765



5MHz	QPSK	1	0	22.26	22.15	22.38
		1	12	22.17	22.2	22.3
		1	24	22.25	22.22	22.33
		12	0	21.37	21.34	21.41
		12	6	21.28	21.38	21.44
		12	13	21.36	21.35	21.45
	16QAM	25	0	21.4	21.37	21.45
		1	0	21.64	21.66	21.73
		1	12	21.61	21.71	21.76
		1	24	21.71	21.71	21.77
		12	0	20.46	20.56	20.58
		12	6	20.44	20.56	20.57
		12	13	20.52	20.55	20.55
		25	0	20.52	20.44	20.49
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
10MHz	QPSK	1	0	22.27		
		1	24	22.27		
		1	49	22.32		
		25	0	21.42		
		25	12	21.39		
		25	25	21.37		
	16QAM	50	0	21.39		
		1	0	21.64		
		1	24	21.67		
		1	49	21.64		
		25	0	20.49		
		25	12	20.53		
		25	25	20.47		
		50	0	20.47		

LTE FDD B26 Upper				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26697	26865	27033
1.4MHz	QPSK	1	0	22.34	22.74	22.79
		1	2	22.37	22.81	22.81
		1	5	22.31	22.78	22.74
		3	0	22.34	22.78	22.76
		3	1	22.4	22.84	22.83
		3	3	22.33	22.77	22.78
	16QAM	6	0	21.31	21.71	21.84
		1	0	21.68	22.02	21.99
		1	2	21.75	22.02	22.02
		1	5	21.7	22.02	21.89
		3	0	21.51	21.93	21.87
		3	1	21.59	22.02	21.92
		3	3	21.51	21.91	21.88
		6	0	20.54	20.76	20.78
Bandwidth	Modulation			Channel	Channel	Channel



		RB size	RB offset	26705	26865	27025
3MHz	QPSK	1	0	22.35	22.77	22.9
		1	8	22.35	22.73	22.86
		1	14	22.39	22.8	22.83
		8	0	21.37	21.78	21.87
		8	4	21.41	21.81	21.86
		8	7	21.36	21.73	21.82
		15	0	21.44	21.8	21.84
	16QAM	1	0	21.69	22.24	22.2
		1	8	21.71	22.27	22.19
		1	14	21.69	22.25	22.19
		8	0	20.54	20.83	20.83
		8	4	20.61	20.92	20.87
		8	7	20.57	20.87	20.82
		15	0	20.51	20.86	20.95
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26815	26915	27015
5MHz	QPSK	1	0	22.35	22.6	22.84
		1	12	22.32	22.72	22.82
		1	24	22.52	22.74	22.8
		12	0	21.48	21.74	21.91
		12	6	21.54	21.82	21.88
		12	13	21.56	21.84	21.85
		25	0	21.6	21.72	21.93
	16QAM	1	0	21.76	22.05	22.23
		1	12	21.76	22.16	22.18
		1	24	21.92	22.23	22.19
		12	0	20.58	20.88	20.98
		12	6	20.74	21.01	20.94
		12	13	20.73	20.98	20.93
		25	0	20.65	20.77	21.02
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26840	26915	26990
10MHz	QPSK	1	0	22.37	22.59	22.59
		1	24	22.51	22.74	22.74
		1	49	22.58	22.8	22.8
		25	0	21.61	21.74	21.74
		25	12	21.63	21.74	21.74
		25	25	21.65	21.9	21.9
		50	0	21.58	21.72	21.72
	16QAM	1	0	21.78	22.06	22.23
		1	24	21.88	22.29	22.19
		1	49	22	22.33	22.14
		25	0	20.66	20.84	20.9



Bandwidth	Modulation	25	12	20.74	20.83	20.88
		25	25	20.73	20.97	20.95
		50	0	20.72	20.83	20.9
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26865	26915	26965
15MHz	QPSK	1	0	22.41	22.66	22.68
		1	38	22.59	22.9	22.9
		1	74	22.81	22.98	22.88
		38	0	21.57	21.61	21.68
		38	18	21.68	21.74	21.85
		38	37	21.71	21.82	21.82
		75	0	21.62	21.66	21.82
	16QAM	1	0	21.77	21.94	22
		1	38	21.96	22.17	22.18
		1	74	22.13	22.3	22.21
		38	0	20.66	20.77	20.78
		38	18	20.76	20.85	20.95
		38	37	20.77	20.91	20.89
		75	0	20.71	20.81	20.93

LTE FDD B38				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				37775	38000	38225
5MHz	QPSK	1	0	22.29	22.28	22.26
		1	12	22.30	22.31	22.30
		1	24	22.30	22.30	22.23
		12	0	21.33	21.35	21.32
		12	6	21.41	21.41	21.36
		12	13	21.38	21.34	21.26
		25	0	21.36	21.41	21.37
	16QAM	1	0	21.46	21.32	21.28
		1	12	21.49	21.34	21.25
		1	24	21.49	21.32	21.28
		12	0	20.46	20.44	20.43
		12	6	20.47	20.43	20.48
		12	13	20.52	20.45	20.42
		25	0	20.42	20.48	20.4
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
10MHz	QPSK	1	0	22.27	22.35	22.28
		1	24	22.35	22.36	22.29
		1	49	22.29	22.38	22.30
		25	0	21.35	21.43	21.36
		25	12	21.36	21.47	21.4
		25	12	21.36	21.47	21.4



	16QAM	25	25	21.37	21.42	21.34
		50	0	21.32	21.42	21.35
		1	0	21.29	21.36	21.31
		1	24	21.30	21.38	21.32
		1	49	21.32	21.37	21.34
		25	0	20.40	20.49	20.45
		25	12	20.43	20.54	20.48
		25	25	20.45	20.50	20.43
		50	0	20.40	20.51	20.44
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				37825	38000	38175
15MHz	QPSK	1	0	22.23	22.28	22.32
		1	38	22.30	22.37	22.34
		1	74	22.26	22.32	22.32
		38	0	21.23	21.32	21.3
		38	18	21.29	21.36	21.31
		38	37	21.26	21.34	21.3
		75	0	21.27	21.32	21.29
	16QAM	1	0	21.29	21.32	21.31
		1	38	21.32	21.39	21.38
		1	74	21.28	21.35	21.30
		38	0	20.31	20.38	20.34
		38	18	20.36	20.45	20.44
		38	37	20.36	20.42	20.41
		75	0	20.39	20.43	20.42
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				37850	38000	38150
20MHz	QPSK	1	0	22.05	22.20	22.15
		1	49	22.19	22.33	22.24
		1	99	22.14	22.27	22.27
		50	0	21.19	21.35	21.27
		50	25	21.24	21.39	21.37
		50	50	21.24	21.36	21.33
		100	0	21.21	21.36	21.3
	16QAM	1	0	21.16	21.30	21.26
		1	49	21.22	21.39	21.34
		1	99	21.25	21.38	21.36
		50	0	20.25	20.42	20.35
		50	25	20.31	20.44	20.44
		50	50	20.31	20.42	20.40
		100	0	20.28	20.39	20.38



LTE FDD B40 lower				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				38725	38750	38775
5MHz	QPSK	1	0	20.22	19.96	19.24
		1	12	20.18	20.12	20.21
		1	24	20	19.59	19.22
		12	0	20.31	19.12	19.76
		12	6	20.22	19.53	19.21
		12	13	19.62	19.54	19.97
		25	0	19.89	18.82	19.92
	16QAM	1	0	19.07	19.33	18.53
		1	12	19.57	19.24	19.99
		1	24	19.3	19.02	19.41
		12	0	18.63	18.97	18.36
		12	6	18.6	19.44	19.44
		12	13	18.05	18.46	18.93
		25	0	18.21	18.26	18.39
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
10MHz	QPSK	1	0		20.22	
		1	24		20.15	
		1	49		20.31	
		25	0		19.2	
		25	12		18.89	
		25	25		19.64	
		50	0		19.49	
	16QAM	1	0		18.88	
		1	24		18.97	
		1	49		19.23	
		25	0		19.47	
		25	12		18.89	
		25	25		19.18	
		50	0		18.88	
				38750		

Note: LTE band 40 power is measured by total channel power method and met the 250mW per 5MHz.

LTE FDD B40 Upper				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				39175	39200	39225
5MHz	QPSK	1	0	19.82	19.97	19.8
		1	12	20.07	20.21	20.43
		1	24	19.55	19.84	19.75
		12	0	20.03	20.02	19.66
		12	6	20.29	20.14	19.99
		12	13	19.41	20.08	19.62
		25	0	19.97	19.52	19.87



	16QAM	1	0	19.12	18.77	19.54
		1	12	19.54	19.98	20.07
		1	24	19.22	19.25	19.49
		12	0	19.22	18.94	19.03
		12	6	18.78	19.28	18.68
		12	13	18.82	19.43	18.81
		25	0	19.11	19.26	18.79
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
10MHz	QPSK	1	0		20.47	
		1	24		20.35	
		1	49		19.61	
		25	0		20.28	
		25	12		19.76	
		25	25		19.79	
		50	0		19.72	
	16QAM	1	0		19.75	
		1	24		20.14	
		1	49		19.5	
		25	0		18.66	
		25	12		19.06	
		25	25		18.71	
		50	0		18.66	

Note: LTE band 40 power is measured by total channel power method and met the 250mW per 5MHz.

LTE FDD B41				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				39675	40620	41565
5MHz	QPSK	1	0	21.39	21.66	21.55
		1	12	21.42	21.71	21.66
		1	24	21.32	21.65	21.62
		12	0	20.30	20.68	20.61
		12	6	20.34	20.70	20.62
		12	13	20.35	20.67	20.62
		25	0	20.32	20.64	20.6
	16QAM	1	0	21.22	20.65	20.57
		1	12	20.38	20.73	20.66
		1	24	20.36	20.68	20.62
		12	0	19.34	19.70	19.64
		12	6	19.40	19.69	19.64
		12	13	19.44	19.71	19.64
		25	0	19.41	19.72	19.67
Bandwidth	Modulation			Channel	Channel	Channel



		RB size	RB offset	39700	40620	41540
10MHz	QPSK	1	0	21.47	21.72	22.29
		1	24	21.52	21.75	21.74
		1	49	21.55	21.80	22.32
		25	0	20.60	20.80	21.02
		25	12	20.60	20.79	21.03
		25	25	20.59	20.79	21.01
		50	0	20.60	20.76	21.05
	16QAM	1	0	20.56	20.68	21.43
		1	24	20.57	20.68	20.76
		1	49	20.62	20.71	21.43
		25	0	19.59	19.90	20.06
		25	12	19.57	19.90	20.02
		25	25	19.64	19.91	20.01
		50	0	19.65	19.87	20.1
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				39725	40620	41515
15MHz	QPSK	1	0	21.44	21.77	21.48
		1	38	21.52	21.80	21.65
		1	74	21.51	21.81	21.51
		38	0	20.53	20.89	20.69
		38	18	20.64	20.94	20.91
		38	37	20.62	20.95	20.81
		75	0	20.51	20.86	20.74
	16QAM	1	0	20.54	20.87	20.71
		1	38	20.59	20.96	20.91
		1	74	20.63	20.94	20.78
		38	0	20.53	20.87	20.72
		38	18	20.63	20.92	20.84
		38	37	20.62	20.93	20.78
		75	0	19.59	19.93	19.83
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				39750	40620	41490
20MHz	QPSK	1	0	21.42	21.56	22.74
		1	49	21.56	21.72	21.76
		1	99	21.56	21.71	21.83
		50	0	20.48	20.73	20.85
		50	25	20.51	20.74	20.81
		50	50	20.57	20.81	20.76
		100	0	20.52	20.75	20.83
	16QAM	1	0	20.38	20.79	21.74
		1	49	20.53	20.92	20.79



	1	99	20.52	20.92	20.81
	50	0	19.56	19.83	19.90
	50	25	19.56	19.83	19.91
	50	50	19.65	19.84	19.91
	100	0	19.60	19.82	19.91

LTE FDD B66				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				131979	132322	132665
1.4MHz	QPSK	1	0	21.21	21.40	21.23
		1	2	21.30	21.47	21.31
		1	5	21.22	21.38	21.28
		3	0	21.12	21.42	21.38
		3	1	21.25	21.43	21.35
		3	3	21.24	21.34	21.25
	16QAM	6	0	21.18	21.47	21.23
		1	0	21.26	21.41	21.19
		1	2	21.30	21.48	21.24
		1	5	21.07	21.38	21.14
		3	0	21.18	21.32	21.27
		3	1	21.24	21.32	21.23
		3	3	21.16	21.29	21.25
		6	0	21.30	21.51	21.38
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				131987	132322	132657
3MHz	QPSK	1	0	21.04	21.25	21.32
		1	8	21.17	21.38	21.27
		1	14	21.05	21.20	21.18
		8	0	21.18	21.34	21.2
		8	4	21.17	21.34	21.23
		8	7	21.17	21.26	21.17
		15	0	21.19	21.31	21.24
	16QAM	1	0	21.24	21.36	21.19
		1	8	21.34	21.47	21.25
		1	14	21.19	21.30	21.07
		8	0	21.28	21.40	21.34
		8	4	21.29	21.40	21.34
		8	7	21.26	21.42	21.28
		15	0	21.37	21.41	21.28
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				131997	132322	132647
5MHz	QPSK	1	0	21.12	21.39	21.23
		1	12	21.31	21.61	21.43
		1	24	21.11	21.31	21.18
		12	0	21.15	21.41	21.35
		12	6	21.15	21.46	21.35
		12	13	21.11	21.37	21.30
		25	0	21.13	21.44	21.35



	16QAM	1	0	21.17	21.43	21.48
		1	12	21.33	21.60	21.64
		1	24	21.13	21.37	21.40
		12	0	21.30	21.51	21.56
		12	6	21.31	21.48	21.54
		12	13	21.28	21.45	21.48
		25	0	21.28	21.47	21.40
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				132022	132322	132622
10MHz	QPSK	1	0	21.17	21.48	21.43
		1	24	21.11	21.45	21.42
		1	49	21.16	21.37	21.31
		25	0	21.19	21.46	21.40
		25	12	21.17	21.47	21.41
		25	25	21.19	21.42	21.34
		50	0	21.17	21.43	21.37
	16QAM	1	0	21.36	21.61	21.46
		1	24	21.34	21.59	21.40
		1	49	21.36	21.52	21.32
		25	0	21.34	21.54	21.54
		25	12	21.32	21.55	21.54
		25	25	21.32	21.50	21.51
		50	0	21.29	21.52	21.53
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				132047	132322	132597
15MHz	QPSK	1	0	21.17	21.29	21.32
		1	38	21.24	21.35	21.48
		1	74	21.28	21.17	21.25
		38	0	21.33	21.57	21.23
		38	18	21.47	21.63	21.37
		38	37	21.49	21.47	21.12
		75	0	21.09	21.27	21.23
	16QAM	1	0	21.31	21.57	21.26
		1	38	21.44	21.63	21.33
		1	74	21.44	21.45	21.11
		38	0	21.33	21.56	21.23
		38	18	21.45	21.62	21.37
		38	37	21.49	21.45	21.17
		75	0	21.21	21.39	21.38
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				132072	132322	132572
20MHz	QPSK	1	0	21.09	21.46	21.11
		1	49	21.30	21.45	21.41
		1	99	21.52	21.25	21.24



		50	0	21.09	21.32	21.16	
		50	25	21.10	21.35	21.18	
		50	50	21.35	21.25	21.30	
		100	0	21.27	21.34	21.15	
	16QAM	1	0	21.20	21.65	21.12	
		1	49	21.34	21.73	21.32	
		1	99	21.51	21.55	21.14	
		50	0	21.22	21.46	21.37	
		50	25	21.19	21.47	21.37	
		50	50	21.47	21.44	21.48	
		100	0	21.40	21.40	21.28	

7.2. PEAK TO AVERAGE RADIO

LIMITS

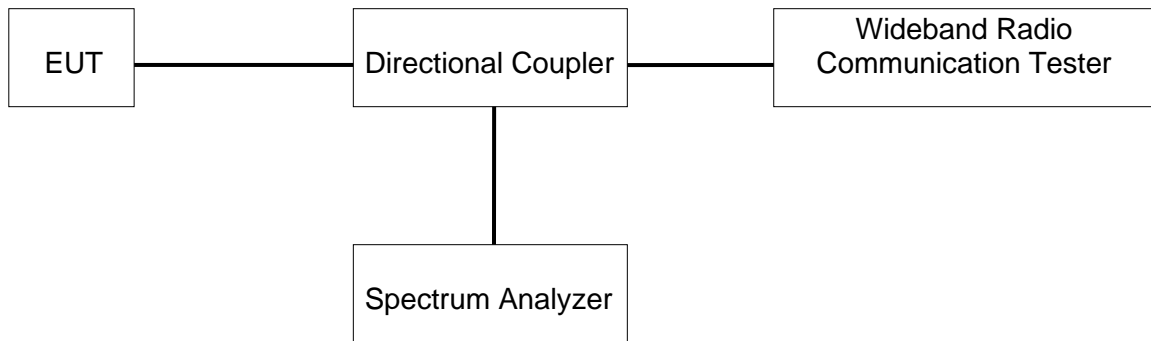
In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

TEST PROCEDURE

Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01;

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The PAR was measured on the Spectrum Analyzer.

TEST SETUP



TEST ENVIRONMENT

Temperature	22.8°C	Relative Humidity	58.3%
Atmosphere Pressure	101kPa	Test Voltage	/

RESULTS

Refer to Appendix A-LTE Conducted Test Results

7.3. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049, RSS-130, RSS-132, RSS-133, RSS-139, RSS-195, RSS-199

LIMITS

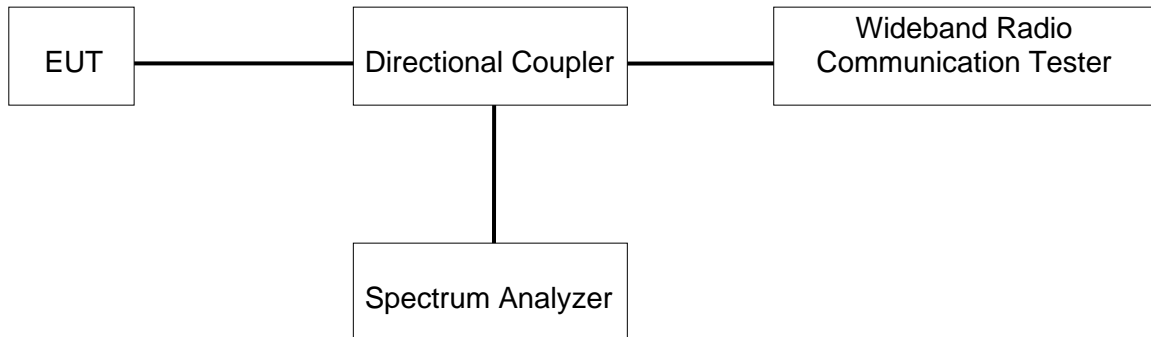
For reporting purposes only.

TEST PROCEDURE

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

(Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01)

TEST SETUP



TEST ENVIRONMENT

Temperature	22.9°C	Relative Humidity	68.3%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

RESULTS

Refer to Appendix A-LTE Conducted Test Results

7.4. BAND EDGE EMISSIONS

RULE PART(S)

FCC §2.1051, §22.917, §24.238, §27.53, §90,
RSS-130, RSS-132, RSS-133, RSS-139, RSS-195, RSS-199

LIMITS

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.

TEST PROCEDURE

Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01

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

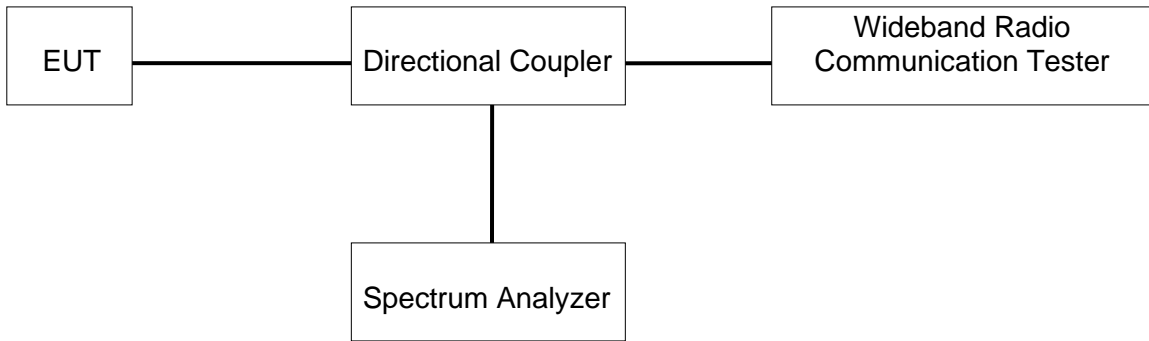
- a) Set the RBW = 1 ~ 1.5 % of OBW (Typically limited to a minimum RBW of 1% of the OBW)
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = Auto;
- e) Detector = RMS;
- f) Ensure that the number of measurement points $\geq 2 \times$ Span/RBW;
- g) Trace mode = Average (100);

Test procedure for LTE Band 41

Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.



TEST SETUP



TEST ENVIRONMENT

Temperature	22.9°C	Relative Humidity	68.3%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

RESULTS

Refer to Appendix A-LTE Conducted Test Results

7.5. SPURIOUS EMISSION AT ANTENNA TERMINAL

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53, §90,
RSS-130, RSS-132, RSS-133, RSS-139, RSS-195, RSS-199

LIMITS

FCC: §22.901, §22.917, §24.238

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.

FCC: §27.53(m)(Band 41)

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.

TEST PROCEDURE

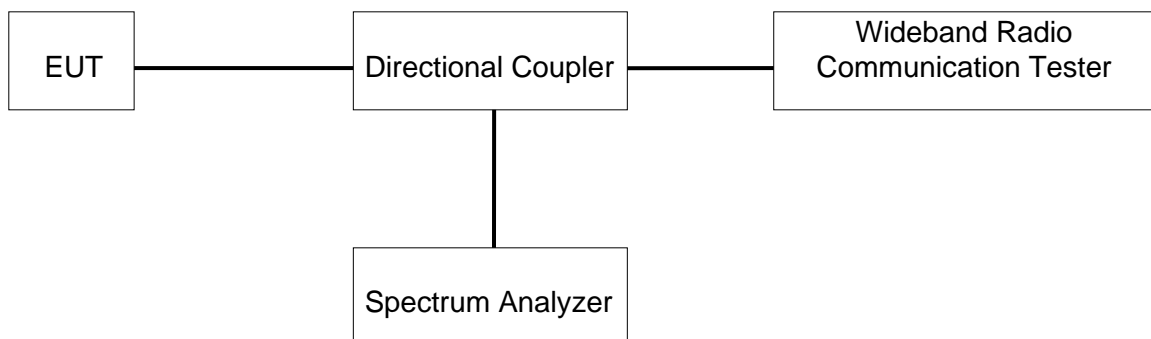
Per KDB 971168 D01 Power Meas License Digital Systems v03r01

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

- a) Set the RBW = 100 kHz for emission below 1GHz and 1MHz for emissions above 1GHz (Tests were performed 1 MHz [Worst case], to sweep 1 time for all frequency range)
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = auto couple;
- e) Detector = rms;
- f) Ensure that the number of measurement points = Max (40001);
- g) Trace mode = average (LTE 5), Maxhold (LTE Band7);

Note: Please refer to section 5.4 for bandwidth and RB setting about LTE bands.

TEST SETUP





TEST ENVIRONMENT

Temperature	22.9°C	Relative Humidity	68.3%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

RESULTS

Refer to Appendix A-LTE Conducted Test Results

7.6. FREQUENCY STABILITY

Rule Part:

FCC: §2.1055, §22.355, §24.235, §27.54, §90,
RSS-130, RSS-132, RSS-133, RSS-139, RSS-195, RSS-199

LIMITS

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

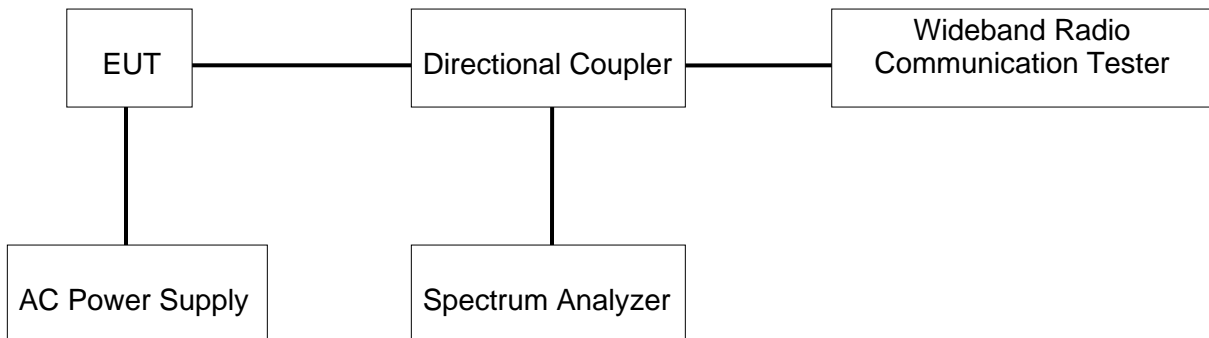
§24.235 and §27.54 - The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

TEST PROCEDURE

Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01.

	Normal Test Conditions	Extreme Test Conditions
Relative Humidity	45 % - 75 %	/
Atmospheric Pressure	100 kPa ~102 kPa	/
Temperature	T _N (Normal Temperature): 25.1 °C	T _L (Low Temperature): -10 °C T _H (High Temperature): 50 °C
Supply Voltage	V _N (Normal Voltage): DC 3.85 V	V _L (Low Voltage): DC 3.465 V V _H (High Voltage): DC 4.235 V

TEST SETUP



RESULTS

Refer to Appendix A-LTE Conducted Test Results



8. RADIATED SPURIOUS EMISSIONS

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53, §90,
RSS-130, RSS-132, RSS-133, RSS-139, RSS-195, RSS-199

LIMIT

Part §22.917(a), §24.238(a), §27.53(h)

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.

Part §27.53(m)

At least $55 + 10 \log (P)$ 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.

For Band 13, 1559-1610 MHz shall be limited to -70 dBW/MHz EIRP for wideband signals and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

TEST PROCEDURE

KDB 971168 D01 Section 7, ANSI C63.26 section 5.5.4.1.

1. The EUT was placed on a rotatable non-conductive support 0.8 meter above the ground (1.5m for above 1GHz).
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Taking the record of maximum spurious emission as field strength (dBuV/m) using the formula:
 $E(\text{dBuV/m}) = V(\text{dBuV/m}) + \text{cable loss (dB)} + \text{antenna factor (dB/m)} - \text{gain (dB)}$
6. Field strength is compared to the power limit converted to a field strength using the equations in ANSI C63.26: $E = \sqrt{(30 P G)/d}$ where E = field strength at distance d, PG = EIRP. Example a limit of $43 + 10 \log (P)$ dB is an EIRP of -13dBm and has an equivalent field strength of 82.25 dBuV/m at 3m.

NOTE 1: Radiated spurious emissions were investigated below 30 MHz, 30 MHz – 1 GHz and above 1 GHz. There were no emissions found on below 30 MHz and 30 MHz – 1 GHz.

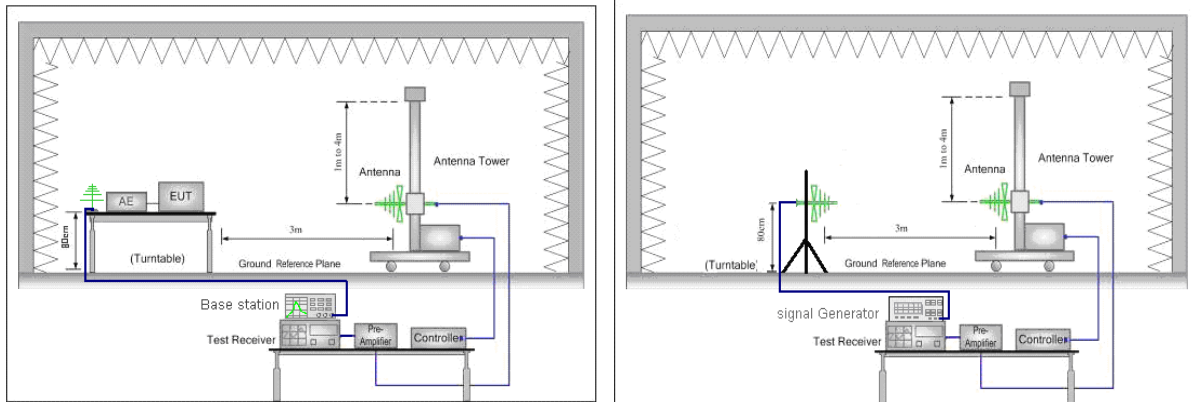
Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site.

Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field based on KDB 414788.

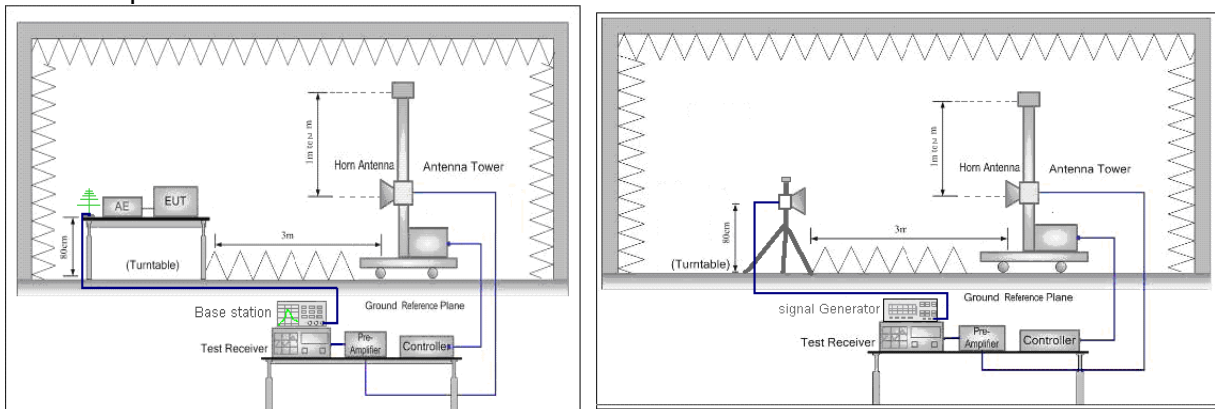
NOTE 2: Please refer to section 5 for bandwidth and RB setting about LTE bands.

TEST SETUP

Test Setup for Below 1 GHz



Test Setup for Above 1 GHz



TEST ENVIRONMENT

Temperature	22.9°C	Relative Humidity	68.3%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

RESULTS

LTE 2

QPSK-20 MHz-Low Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	46.42	2.31	48.73	82.25	-33.52	peak
7395.000	42.01	7.16	49.17	82.25	-33.08	peak
9255.000	40.13	9.88	50.01	82.25	-32.24	peak
11745.000	35.72	17.06	52.78	82.25	-29.47	peak
14820.000	35.98	17.38	53.36	82.25	-28.89	peak
17775.000	30.33	23.98	54.31	82.25	-27.94	peak



QPSK-20 MHz-Low Channel-Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.72	2.31	50.03	82.25	-32.22	peak
7395.000	43.39	7.16	50.55	82.25	-31.70	peak
9000.000	38.91	10.77	49.68	82.25	-32.57	peak
12690.000	36.17	17.02	53.19	82.25	-29.06	peak
14820.000	36.85	17.38	54.23	82.25	-28.02	peak
17730.000	31.10	23.58	54.68	82.25	-27.57	peak

QPSK-20 MHz-Mid Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	45.95	2.31	48.26	82.25	-33.99	peak
7485.000	42.52	7.61	50.13	82.25	-32.12	peak
10575.000	35.27	13.15	48.42	82.25	-33.83	peak
11835.000	36.68	17.07	53.75	82.25	-28.50	peak
13605.000	34.43	19.06	53.49	82.25	-28.76	peak
17700.000	31.34	23.33	54.67	82.25	-27.58	peak

QPSK-20 MHz- Mid Channel-Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.68	2.31	49.99	82.25	-32.26	peak
6000.000	46.72	2.90	49.62	82.25	-32.63	peak
7485.000	43.39	7.61	51.00	82.25	-31.25	peak
11805.000	35.93	17.00	52.93	82.25	-29.32	peak
14970.000	36.14	16.67	52.81	82.25	-29.44	peak
17775.000	30.42	23.98	54.40	82.25	-27.85	peak

QPSK-20 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	45.62	2.31	47.93	82.25	-34.32	peak
7560.000	46.74	7.44	54.18	82.25	-28.07	peak
9450.000	39.09	10.61	49.70	82.25	-32.55	peak
11340.000	40.05	15.72	55.77	82.25	-26.48	peak
14820.000	34.27	17.38	51.65	82.25	-30.60	peak
17910.000	30.85	24.38	55.23	82.25	-27.02	peak

QPSK-20 MHz- High Channel-Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4995.000	46.36	0.70	47.06	82.25	-35.19	peak
5670.000	48.85	2.03	50.88	82.25	-31.37	peak
7560.000	47.63	7.44	55.07	82.25	-27.18	peak
10830.000	34.73	13.86	48.59	82.25	-33.66	peak
15135.000	37.55	15.94	53.49	82.25	-28.76	peak
17775.000	31.19	23.98	55.17	82.25	-27.08	peak

Note: Limit= -13dBm+95.2=82.25 dBuV/m

LTE4

QPSK-20 MHz-Low Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
3990.000	44.83	-3.61	41.22	82.25	-41.03	peak
5490.000	46.23	2.31	48.54	82.25	-33.71	peak
8040.000	38.61	8.64	47.25	82.25	-35.00	peak



11595.000	35.98	16.50	52.48	82.25	-29.77	peak
13935.000	34.04	19.32	53.36	82.25	-28.89	peak
17760.000	30.69	23.85	54.54	82.25	-27.71	peak

QPSK-20 MHz-Low Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.64	2.31	49.95	82.25	-32.30	peak
6000.000	47.08	2.90	49.98	82.25	-32.27	peak
8985.000	37.05	10.48	47.53	82.25	-34.72	peak
12615.000	35.53	17.10	52.63	82.25	-29.62	peak
13920.000	33.83	19.30	53.13	82.25	-29.12	peak
17775.000	30.35	23.98	54.33	82.25	-27.92	peak

QPSK-20 MHz-Mid Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	45.37	2.31	47.68	82.25	-34.57	peak
8280.000	38.51	9.06	47.57	82.25	-34.68	peak
10335.000	38.32	12.49	50.81	82.25	-31.44	peak
12705.000	35.80	17.03	52.83	82.25	-29.42	peak
13980.000	33.58	19.35	52.93	82.25	-29.32	peak
17895.000	29.82	24.30	54.12	82.25	-28.13	peak

QPSK-20 MHz-Mid Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4995.000	47.01	0.70	47.71	82.25	-34.54	peak
5490.000	49.32	2.31	51.63	82.25	-30.62	peak
8250.000	38.50	9.10	47.60	82.25	-34.65	peak
11820.000	36.40	17.03	53.43	82.25	-28.82	peak
13875.000	33.18	19.32	52.50	82.25	-29.75	peak
17970.000	29.88	24.77	54.65	82.25	-27.60	peak

QPSK-20 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	45.17	2.31	47.48	82.25	-34.77	peak
8970.000	38.36	10.18	48.54	82.25	-33.71	peak
11955.000	36.01	17.25	53.26	82.25	-28.99	peak
13455.000	34.12	19.09	53.21	82.25	-29.04	peak
14895.000	33.23	16.69	49.92	82.25	-32.33	peak
17925.000	29.65	24.47	54.12	82.25	-28.13	peak

QPSK-20 MHz-High Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4995.000	47.47	0.70	48.17	82.25	-34.08	peak
5490.000	47.57	2.31	49.88	82.25	-32.37	peak
6000.000	46.41	2.90	49.31	82.25	-32.94	peak
8490.000	38.79	8.44	47.23	82.25	-35.02	peak
11955.000	35.39	17.25	52.64	82.25	-29.61	peak
17835.000	29.62	24.23	53.85	82.25	-28.40	peak

Note: Limit= -13dBm+95.2=82.25 dBuV/m

LTE5

QPSK-10 MHz-Low Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1648.000	60.35	-11.70	48.65	82.25	-33.60	peak



2395.000	51.00	-9.09	41.91	82.25	-40.34	peak
3295.000	51.80	-6.45	45.35	82.25	-36.90	peak
5500.000	46.94	1.17	48.11	82.25	-34.14	peak
6004.000	42.29	2.20	44.49	82.25	-37.76	peak
9442.000	37.32	10.23	47.55	82.25	-34.70	peak

QPSK-20 MHz-Low Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1648.000	59.18	-11.70	47.48	82.25	-34.77	peak
3295.000	54.01	-6.45	47.56	82.25	-34.69	peak
4996.000	47.02	-0.51	46.51	82.25	-35.74	peak
5500.000	47.67	1.17	48.84	82.25	-33.41	peak
7498.000	40.68	6.92	47.60	82.25	-34.65	peak
9019.000	37.18	10.02	47.20	82.25	-35.05	peak

QPSK-10 MHz-Mid Channel- Horizontal

1657.000	62.09	-11.64	50.45	82.25	-31.80	peak
2395.000	51.25	-9.09	42.16	82.25	-40.09	peak
3322.000	48.79	-6.40	42.39	82.25	-39.86	peak
5500.000	45.99	1.17	47.16	82.25	-35.09	peak
6751.000	40.73	4.56	45.29	82.25	-36.96	peak
9379.000	37.60	10.01	47.61	82.25	-34.64	peak

QPSK-10 MHz-Mid Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1657.000	62.11	-11.64	50.47	82.25	-31.78	peak
3322.000	52.29	-6.40	45.89	82.25	-36.36	peak
4996.000	47.60	-0.51	47.09	82.25	-35.16	peak
5500.000	48.24	1.17	49.41	82.25	-32.84	peak
7498.000	40.68	6.92	47.60	82.25	-34.65	peak
9001.000	37.82	10.12	47.94	82.25	-34.31	peak

QPSK-10 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1675.000	61.47	-11.53	49.94	82.25	-32.31	peak
2395.000	51.19	-9.09	42.10	82.25	-40.15	peak
3358.000	49.30	-6.36	42.94	82.25	-39.31	peak
5500.000	46.40	1.17	47.57	82.25	-34.68	peak
7759.000	38.32	7.45	45.77	82.25	-36.48	peak
9352.000	37.71	9.84	47.55	82.25	-34.70	peak

QPSK-10 MHz-High Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1675.000	61.83	-11.53	50.30	82.25	-31.95	peak
3358.000	51.83	-6.36	45.47	82.25	-36.78	peak
5500.000	47.90	1.17	49.07	82.25	-33.18	peak
6004.000	45.26	2.20	47.46	82.25	-34.79	peak
7498.000	40.24	6.92	47.16	82.25	-35.09	peak
9433.000	37.18	10.20	47.38	82.25	-34.87	peak

Note: Limit= -13dBm+95.2=82.25 dBuV/m

LTE 7

QPSK-20 MHz-Low Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	45.39	2.31	47.70	70.25	-22.55	peak



7890.000	39.26	8.28	47.54	70.25	-22.71	peak
10005.000	38.53	11.56	50.09	70.25	-20.16	peak
11820.000	35.73	17.03	52.76	70.25	-17.49	peak
13635.000	34.00	19.20	53.20	70.25	-17.05	peak
17910.000	29.99	24.38	54.37	70.25	-15.88	peak

QPSK-20 MHz-Low Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	46.80	2.31	49.11	70.25	-21.14	peak
6000.000	46.13	2.90	49.03	70.25	-21.22	peak
9000.000	36.95	10.77	47.72	70.25	-22.53	peak
11865.000	35.84	17.14	52.98	70.25	-17.27	peak
13920.000	33.10	19.30	52.40	70.25	-17.85	peak
17760.000	30.19	23.85	54.04	70.25	-16.21	peak

QPSK-20 MHz-Mid Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.14	2.31	49.45	70.25	-20.8	peak
7155.000	37.71	6.59	44.30	70.25	-25.95	peak
10110.000	40.68	11.71	52.39	70.25	-17.86	peak
12630.000	36.30	17.08	53.38	70.25	-16.87	peak
15165.000	33.23	15.72	48.95	70.25	-21.3	peak
17910.000	30.24	24.38	54.62	70.25	-15.63	peak

QPSK-20 MHz-Mid Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4995.000	48.15	0.70	48.85	70.25	-21.4	peak
5490.000	47.51	2.31	49.82	70.25	-20.43	peak
7500.000	40.67	7.68	48.35	70.25	-21.9	peak
10110.000	39.74	11.71	51.45	70.25	-18.8	peak
13560.000	34.69	19.12	53.81	70.25	-16.44	peak
17790.000	30.16	24.10	54.26	70.25	-15.99	peak

QPSK-20 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
3990.000	44.25	-3.61	40.64	70.25	-29.61	peak
5490.000	47.69	2.31	50.00	70.25	-20.25	peak
10200.000	43.89	12.05	55.94	70.25	-14.31	peak
12765.000	36.34	17.28	53.62	70.25	-16.63	peak
14805.000	33.90	17.51	51.41	70.25	-18.84	peak
17775.000	29.90	23.98	53.88	70.25	-16.37	peak

QPSK-20 MHz-High Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4995.000	45.38	0.70	46.08	70.25	-24.17	peak
5490.000	47.51	2.31	49.82	70.25	-20.43	peak
6000.000	46.84	2.90	49.74	70.25	-20.51	peak
10200.000	40.99	12.05	53.04	70.25	-17.21	peak
12765.000	35.07	17.28	52.35	70.25	-17.9	peak
17775.000	30.41	23.98	54.39	70.25	-15.86	peak

Note: Limit= -25dBm+95.2=82.25 dBuV/m

LTE12

QPSK-10 MHz-Low Channel- Horizontal

Frequency	Reading	Correct	Result	Limit	Margin	Remark
-----------	---------	---------	--------	-------	--------	--------



(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1405.000	59.11	-13.13	45.98	82.25	-36.27	peak
2818.000	57.71	-7.64	50.07	82.25	-32.18	peak
3520.000	55.16	-5.71	49.45	82.25	-32.80	peak
5500.000	46.92	1.17	48.09	82.25	-34.16	peak
6004.000	42.37	2.20	44.57	82.25	-37.68	peak
9577.000	37.03	10.47	47.50	82.25	-34.75	peak

QPSK-10 MHz-Low Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1405.000	58.93	-13.13	45.80	82.25	-36.45	peak
2818.000	57.52	-7.64	49.88	82.25	-32.37	peak
3520.000	61.61	-5.71	55.90	82.25	-26.35	peak
6004.000	46.89	2.20	49.09	82.25	-33.16	peak
7498.000	40.35	6.92	47.27	82.25	-34.98	peak
9001.000	37.77	10.12	47.89	82.25	-34.36	peak

QPSK-10 MHz-Mid Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1414.000	52.54	-13.08	39.46	82.25	-42.79	peak
2827.000	53.06	-7.61	45.45	82.25	-36.80	peak
3538.000	50.67	-5.61	45.06	82.25	-37.19	peak
5500.000	45.95	1.17	47.12	82.25	-35.13	peak
6004.000	43.32	2.20	45.52	82.25	-36.73	peak
9010.000	37.04	10.08	47.12	82.25	-35.13	peak

QPSK-10 MHz-Mid Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1414.000	56.71	-13.08	43.63	82.25	-38.62	peak
2827.000	54.37	-7.61	46.76	82.25	-35.49	peak
3538.000	55.93	-5.61	50.32	82.25	-31.93	peak
5500.000	48.56	1.17	49.73	82.25	-32.52	peak
6004.000	46.62	2.20	48.82	82.25	-33.43	peak
9001.000	37.84	10.12	47.96	82.25	-34.29	peak

QPSK-10 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1414.000	56.27	-13.08	43.19	82.25	-39.06	peak
2845.000	60.23	-7.56	52.67	82.25	-29.58	peak
3556.000	53.32	-5.52	47.80	82.25	-34.45	peak
5500.000	47.30	1.17	48.47	82.25	-33.78	peak
7255.000	40.99	6.33	47.32	82.25	-34.93	peak
9370.000	37.35	9.95	47.30	82.25	-34.95	peak

QPSK-10 MHz-High Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1414.000	57.24	-13.08	44.16	82.25	-38.09	peak
2845.000	62.03	-7.56	54.47	82.25	-27.78	peak
3556.000	60.22	-5.52	54.70	82.25	-27.55	peak
5500.000	48.96	1.17	50.13	82.25	-32.12	peak
7498.000	39.86	6.92	46.78	82.25	-35.47	peak
9001.000	38.49	10.12	48.61	82.25	-33.64	peak

Note: Limit= -13dBm+95.2=82.25 dBuV/m

LTE13



In the 1559-1610 MHz frequency, the limit is -80 dBW EIRP for narrowband and all modulation are tested and met requirements.

QPSK-10 MHz- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1558.000	58.02	-12.22	45.80	82.25	-36.45	peak
2395.000	51.37	-9.09	42.28	82.25	-39.97	peak
3502.000	46.75	-5.81	40.94	82.25	-41.31	peak
5500.000	45.70	1.17	46.87	82.25	-35.38	peak
6004.000	43.24	2.20	45.44	82.25	-36.81	peak
8263.000	39.27	8.46	47.73	82.25	-34.52	peak

QPSK-10 MHz- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1495.000	55.99	-12.56	43.43	82.25	-38.82	peak
2395.000	49.22	-9.09	40.13	82.25	-42.12	peak
5500.000	49.32	1.17	50.49	82.25	-31.76	peak
5752.000	48.38	1.44	49.82	82.25	-32.43	peak
7255.000	41.51	6.33	47.84	82.25	-34.41	peak
9001.000	37.90	10.12	48.02	82.25	-34.23	peak

Note: Limit= -13dBm+95.2=82.25 dBuV/m

LTE17

QPSK-10 MHz-Low Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1423.000	53.96	-13.02	40.94	82.25	-41.31	peak
2854.000	60.69	-7.53	53.16	82.25	-29.09	peak
3565.000	53.00	-5.47	47.53	82.25	-34.72	peak
5500.000	46.18	1.17	47.35	82.25	-34.90	peak
6004.000	42.88	2.20	45.08	82.25	-37.17	peak
8938.000	37.81	9.46	47.27	82.25	-34.98	peak

QPSK-10 MHz-Low Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1423.000	56.45	-13.02	43.43	82.25	-38.82	peak
2854.000	62.38	-7.53	54.85	82.25	-27.40	peak
3565.000	59.17	-5.47	53.70	82.25	-28.55	peak
5500.000	48.06	1.17	49.23	82.25	-33.02	peak
6004.000	47.41	2.20	49.61	82.25	-32.64	peak
9001.000	38.02	10.12	48.14	82.25	-34.11	peak

QPSK-10 MHz-Mid Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1423.000	53.76	-13.02	40.74	82.25	-41.51	peak
2854.000	60.64	-7.53	53.11	82.25	-29.14	peak
3574.000	52.88	-5.42	47.46	82.25	-34.79	peak
5500.000	45.85	1.17	47.02	82.25	-35.23	peak
6004.000	42.91	2.20	45.11	82.25	-37.14	peak
9352.000	37.46	9.84	47.30	82.25	-34.95	peak

QPSK-10 MHz-Mid Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
-----------------	----------------	----------------	-----------------	----------------	-------------	--------



1423.000	58.89	-13.02	45.87	82.25	-36.38	peak
2854.000	62.01	-7.53	54.48	82.25	-27.77	peak
3574.000	58.32	-5.42	52.90	82.25	-29.35	peak
5500.000	48.69	1.17	49.86	82.25	-32.39	peak
6004.000	46.54	2.20	48.74	82.25	-33.51	peak
9001.000	37.78	10.12	47.90	82.25	-34.35	peak

QPSK-10 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1423.000	53.78	-13.02	40.76	82.25	-41.49	peak
2863.000	58.97	-7.50	51.47	82.25	-30.78	peak
3574.000	52.48	-5.42	47.06	82.25	-35.19	peak
5500.000	45.43	1.17	46.60	82.25	-35.65	peak
6004.000	44.25	2.20	46.45	82.25	-35.80	peak
7498.000	40.22	6.92	47.14	82.25	-35.11	peak

QPSK-10 MHz-High Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2863.000	60.92	-7.50	53.42	82.25	-28.83	peak
3574.000	57.83	-5.42	52.41	82.25	-29.84	peak
5500.000	49.74	1.17	50.91	82.25	-31.34	peak
6004.000	46.56	2.20	48.76	82.25	-33.49	peak
7498.000	40.16	6.92	47.08	82.25	-35.17	peak
9559.000	37.10	10.44	47.54	82.25	-34.71	peak

Note: Limit= -13dBm+95.2=82.25 dBuV/m

LTE25

QPSK-20 MHz-Low Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	46.06	2.31	48.37	82.25	-33.88	peak
7440.000	41.73	7.40	49.13	82.25	-33.12	peak
9300.000	38.18	10.14	48.32	82.25	-33.93	peak
11820.000	36.10	17.03	53.13	82.25	-29.12	peak
14880.000	36.39	16.82	53.21	82.25	-29.04	peak
17715.000	30.75	23.46	54.21	82.25	-28.04	peak

QPSK-20 MHz-Low Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.17	2.31	49.48	82.25	-32.77	peak
6000.000	47.23	2.90	50.13	82.25	-32.12	peak
9300.000	38.96	10.14	49.10	82.25	-33.15	peak
12690.000	35.81	17.02	52.83	82.25	-29.42	peak
14880.000	36.09	16.82	52.91	82.25	-29.34	peak
17685.000	30.97	23.18	54.15	82.25	-28.10	peak

QPSK-20 MHz-Mid Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	46.59	2.31	48.90	82.25	-33.35	peak
5640.000	46.78	2.00	48.78	82.25	-33.47	peak
7530.000	47.82	7.55	55.37	82.25	-26.88	peak
11595.000	36.43	16.50	52.93	82.25	-29.32	peak
13980.000	33.35	19.35	52.70	82.25	-29.55	peak
16950.000	34.84	19.64	54.48	82.25	-27.77	peak



QPSK-20 MHz-Mid Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.02	2.31	49.33	82.25	-32.92	peak
7530.000	47.40	7.55	54.95	82.25	-27.30	peak
9405.000	38.39	10.78	49.17	82.25	-33.08	peak
11745.000	35.95	17.06	53.01	82.25	-29.24	peak
15060.000	34.92	16.38	51.30	82.25	-30.95	peak
17700.000	30.34	23.33	53.67	82.25	-28.58	peak

QPSK-20 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	44.95	2.31	47.26	82.25	-34.99	peak
7620.000	47.30	7.38	54.68	82.25	-27.57	peak
11865.000	36.43	17.14	53.57	82.25	-28.68	peak
13980.000	33.24	19.35	52.59	82.25	-29.66	peak
15240.000	35.89	15.49	51.38	82.25	-30.87	peak
17145.000	34.42	20.53	54.95	82.25	-27.30	peak

QPSK-20 MHz-High Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.46	2.31	49.77	82.25	-32.48	peak
6000.000	47.16	2.90	50.06	82.25	-32.19	peak
7620.000	47.96	7.38	55.34	82.25	-26.91	peak
11715.000	36.23	17.09	53.32	82.25	-28.93	peak
13545.000	33.92	19.13	53.05	82.25	-29.20	peak
17910.000	29.45	24.38	53.83	82.25	-28.42	peak

Note: Limit= -13dBm+95.2=82.25 dBuV/m

LTE26

QPSK-15 MHz-Low Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1639.000	62.46	-11.76	50.70	82.25	-31.55	peak
3286.000	50.23	-6.46	43.77	82.25	-38.48	peak
5500.000	47.78	1.17	48.95	82.25	-33.30	peak
6004.000	46.67	2.20	48.87	82.25	-33.38	peak
7498.000	43.50	6.92	50.42	82.25	-31.83	peak
8002.000	43.90	7.08	50.98	82.25	-31.27	peak

QPSK-15 MHz-Low Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1639.000	60.63	-11.76	48.87	82.25	-33.38	peak
3286.000	55.00	-6.46	48.54	82.25	-33.71	peak
5500.000	48.48	1.17	49.65	82.25	-32.60	peak
6004.000	46.13	2.20	48.33	82.25	-33.92	peak
7498.000	41.89	6.92	48.81	82.25	-33.44	peak
9379.000	37.76	10.01	47.77	82.25	-34.48	peak

QPSK-15 MHz-Mid Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1657.000	59.78	-11.64	48.14	82.25	-34.11	peak
3322.000	51.58	-6.40	45.18	82.25	-37.07	peak
5500.000	45.66	1.17	46.83	82.25	-35.42	peak
6004.000	42.06	2.20	44.26	82.25	-37.99	peak



7849.000	38.80	7.48	46.28	82.25	-35.97	peak
9586.000	36.46	10.49	46.95	82.25	-35.30	peak

QPSK-15 MHz-Mid Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1657.000	62.67	-11.64	51.03	82.25	-31.22	peak
3322.000	53.42	-6.40	47.02	82.25	-35.23	peak
4996.000	47.32	-0.51	46.81	82.25	-35.44	peak
5500.000	48.31	1.17	49.48	82.25	-32.77	peak
7255.000	40.68	6.33	47.01	82.25	-35.24	peak
9568.000	36.29	10.46	46.75	82.25	-35.50	peak

QPSK-15 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1684.000	58.27	-11.48	46.79	82.25	-35.46	peak
2395.000	50.93	-9.09	41.84	82.25	-40.41	peak
3367.000	50.76	-6.34	44.42	82.25	-37.83	peak
5500.000	44.82	1.17	45.99	82.25	-36.26	peak
7498.000	39.34	6.92	46.26	82.25	-35.99	peak
9343.000	36.98	9.80	46.78	82.25	-35.47	peak

QPSK-15 MHz-High Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1684.000	60.48	-11.48	49.00	82.25	-33.25	peak
3367.000	52.99	-6.34	46.65	82.25	-35.60	peak
5500.000	47.41	1.17	48.58	82.25	-33.67	peak
6004.000	45.34	2.20	47.54	82.25	-34.71	peak
7498.000	40.44	6.92	47.36	82.25	-34.89	peak
8983.000	37.69	9.94	47.63	82.25	-34.62	peak

Note: Limit= -13dBm+95.2=82.25 dBuV/m

LTE38

QPSK-20 MHz-Low Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
3990.000	46.34	-3.61	42.73	70.25	-27.52	peak
5490.000	45.79	2.31	48.10	70.25	-22.15	peak
10320.000	40.16	12.43	52.59	70.25	-17.66	peak
11730.000	36.16	17.07	53.23	70.25	-17.02	peak
14085.000	33.25	18.95	52.20	70.25	-18.05	peak
17895.000	30.74	24.30	55.04	70.25	-15.21	peak

QPSK-20 MHz-Low Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.72	2.31	50.03	70.25	-20.22	peak
6000.000	47.17	2.90	50.07	70.25	-20.18	peak
10320.000	38.39	12.43	50.82	70.25	-19.43	peak
12705.000	36.29	17.03	53.32	70.25	-16.93	peak
13965.000	33.94	19.34	53.28	70.25	-16.97	peak
17775.000	29.82	23.98	53.80	70.25	-16.45	peak

QPSK-20 MHz-Mid Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	45.53	2.31	47.84	70.25	-22.41	peak



7245.000	41.90	6.39	48.29	70.25	-21.96	peak
10380.000	41.26	12.67	53.93	70.25	-16.32	peak
11745.000	36.14	17.06	53.20	70.25	-17.05	peak
13800.000	33.46	19.43	52.89	70.25	-17.36	peak
17910.000	30.66	24.38	55.04	70.25	-15.21	peak

QPSK-20 MHz-Mid Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.75	2.31	50.06	70.25	-20.19	peak
6000.000	46.15	2.90	49.05	70.25	-21.2	peak
10380.000	37.68	12.67	50.35	70.25	-19.9	peak
11370.000	35.54	16.05	51.59	70.25	-18.66	peak
13440.000	34.37	19.04	53.41	70.25	-16.84	peak
17880.000	29.92	24.29	54.21	70.25	-16.04	peak

QPSK-20 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	46.48	2.31	48.79	70.25	-21.46	peak
7830.000	38.84	8.57	47.41	70.25	-22.84	peak
10440.000	41.88	12.80	54.68	70.25	-15.57	peak
13050.000	35.35	17.56	52.91	70.25	-17.34	peak
13635.000	33.28	19.20	52.48	70.25	-17.77	peak
17865.000	29.44	24.27	53.71	70.25	-16.54	peak

QPSK-20 MHz-High Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.02	2.31	49.33	70.25	-20.92	peak
9000.000	38.16	10.77	48.93	70.25	-21.32	peak
11865.000	36.49	17.14	53.63	70.25	-16.62	peak
13050.000	35.58	17.56	53.14	70.25	-17.11	peak
14235.000	32.24	18.95	51.19	70.25	-19.06	peak
17715.000	31.01	23.46	54.47	70.25	-15.78	peak

Note: Limit= -25dBm+95.2=70.25 dBuV/m

LTE40

QPSK-10 MHz-Low Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4995.000	42.03	0.70	42.73	55.25	-12.52	peak
5490.000	45.37	2.31	47.68	55.25	-7.57	peak
8160.000	38.46	9.33	47.79	55.25	-7.46	peak
8985.000	37.33	10.48	47.81	55.25	-7.44	peak
11520.000	41.93	16.46	52.45	55.25	2.80	peak
17835.000	30.05	24.23	54.28	55.25	-0.97	peak

QPSK-10 MHz-Low Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.75	2.31	50.06	55.25	-5.19	peak
9090.000	38.50	9.83	48.33	55.25	-6.92	peak
11520.000	36.64	16.46	53.10	55.25	-2.15	peak
13665.000	33.23	19.33	52.56	55.25	-2.69	peak
17070.000	33.24	20.15	53.39	55.25	-1.86	peak
17760.000	30.24	23.85	54.09	55.25	-1.16	peak

QPSK-10 MHz-Mid Channel- Horizontal



Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4995.000	44.85	0.70	45.55	55.25	-9.7	peak
5490.000	46.73	2.31	49.04	55.25	-6.21	peak
7500.000	40.47	7.68	48.15	55.25	-7.1	peak
11745.000	43.02	17.06	51.70	55.25	3.55	peak
13620.000	34.09	19.12	53.21	55.25	-2.04	peak
17700.000	30.92	23.33	54.25	55.25	-1.00	peak

QPSK-10 MHz-Mid Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	48.34	2.31	50.65	55.25	-4.6	peak
6000.000	46.58	2.90	49.48	55.25	-5.77	peak
10260.000	37.23	12.22	49.45	55.25	-5.8	peak
12495.000	37.67	16.99	54.66	55.25	-0.59	peak
13935.000	33.16	19.32	52.48	55.25	-2.77	peak
17910.000	29.45	24.38	53.83	55.25	-1.42	peak

QPSK-10 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	38.68	2.31	40.99	55.25	-14.26	peak
8175.000	37.22	9.27	46.49	55.25	-8.76	peak
11805.000	34.21	17.00	51.21	55.25	-4.04	peak
13515.000	31.66	19.18	50.84	55.25	-4.41	peak
14490.000	32.61	17.56	50.17	55.25	-5.08	peak
17760.000	28.81	23.85	52.66	55.25	-2.59	peak

QPSK-10 MHz-High Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	45.44	2.31	47.75	55.25	-7.5	peak
6000.000	45.16	2.90	48.06	55.25	-7.19	peak
7500.000	43.60	7.68	51.28	55.25	-3.97	peak
10005.000	39.20	11.56	50.76	55.25	-4.49	peak
12585.000	40.81	17.10	50.60	55.25	4.65	peak
17760.000	30.56	23.85	54.41	55.25	-0.84	peak

Note: Limit= -40dBm+95.25=55.25 dBuV/m

LTE41

QPSK-20 MHz-Low Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	45.85	2.31	48.16	70.25	-22.09	peak
7845.000	38.71	8.51	47.22	70.25	-23.03	peak
9990.000	39.97	11.55	51.52	70.25	-18.73	peak
12480.000	37.17	17.04	54.21	70.25	-16.04	peak
14070.000	32.60	19.02	51.62	70.25	-18.63	peak
17760.000	30.25	23.85	54.10	70.25	-16.15	peak

QPSK-20 MHz-Low Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.54	2.31	49.85	70.25	-20.4	peak
6000.000	45.81	2.90	48.71	70.25	-21.54	peak
9000.000	39.61	10.77	50.38	70.25	-19.87	peak
12480.000	37.51	17.04	54.55	70.25	-15.7	peak
13950.000	33.46	19.33	52.79	70.25	-17.46	peak
17775.000	29.94	23.98	53.92	70.25	-16.33	peak



QPSK-20 MHz-Mid Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	45.51	2.31	47.82	70.25	-22.43	peak
7755.000	39.41	8.29	47.70	70.25	-22.55	peak
8970.000	38.27	10.18	48.45	70.25	-21.8	peak
10335.000	40.15	12.49	52.64	70.25	-17.61	peak
13665.000	33.74	19.33	53.07	70.25	-17.18	peak
17715.000	30.54	23.46	54.00	70.25	-16.25	peak

QPSK-20 MHz-Mid Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4995.000	47.23	0.70	47.93	70.25	-22.32	peak
5490.000	49.29	2.31	51.60	70.25	-18.65	peak
9000.000	39.51	10.77	50.28	70.25	-19.97	peak
11370.000	35.78	16.05	51.83	70.25	-18.42	peak
13635.000	33.67	19.20	52.87	70.25	-17.38	peak
17820.000	30.32	24.21	54.53	70.25	-15.72	peak

QPSK-20 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4995.000	45.19	0.70	45.89	70.25	-24.36	peak
5490.000	45.82	2.31	48.13	70.25	-22.12	peak
8010.000	41.22	8.19	49.41	70.25	-20.84	peak
10680.000	41.10	13.51	54.61	70.25	-15.64	peak
13365.000	37.90	18.87	56.77	70.25	-13.48	peak
17760.000	30.10	23.85	53.95	70.25	-16.3	peak

QPSK-20 MHz-High Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	48.28	2.31	50.59	70.25	-19.66	peak
5745.000	46.03	2.23	48.26	70.25	-21.99	peak
7500.000	40.13	7.68	47.81	70.25	-22.44	peak
11820.000	35.52	17.03	52.55	70.25	-17.7	peak
13365.000	34.68	18.87	53.55	70.25	-16.7	peak
17910.000	29.89	24.38	54.27	70.25	-15.98	peak

Note: Limit= -25dBm+95.25=70.25 dBuV/m

LTE66

QPSK-20 MHz-Low Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
3990.000	44.69	-3.61	41.08	82.25	-41.17	peak
5490.000	45.10	2.31	47.41	82.25	-34.84	peak
7245.000	41.58	6.39	47.97	82.25	-34.28	peak
11805.000	36.58	17.00	53.58	82.25	-28.67	peak
13545.000	33.99	19.13	53.12	82.25	-29.13	peak
17760.000	31.33	23.85	55.18	82.25	-27.07	peak

QPSK-20 MHz-Low Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	46.79	2.31	49.10	82.25	-33.15	peak
6000.000	45.61	2.90	48.51	82.25	-33.74	peak
9000.000	38.00	10.77	48.77	82.25	-33.48	peak
11745.000	36.83	17.06	53.89	82.25	-28.36	peak



13545.000	34.03	19.13	53.16	82.25	-29.09	peak
17760.000	31.96	23.85	55.81	82.25	-26.44	peak

QPSK-20 MHz-Mid Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	45.52	2.31	47.83	82.25	-34.42	peak
7500.000	39.77	7.68	47.45	82.25	-34.80	peak
10410.000	38.26	12.76	51.02	82.25	-31.23	peak
11730.000	36.24	17.07	53.31	82.25	-28.94	peak
13980.000	33.82	19.35	53.17	82.25	-29.08	peak
17955.000	31.35	24.67	56.02	82.25	-26.23	peak

QPSK-20 MHz-Mid Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5490.000	47.49	2.31	49.80	82.25	-32.45	peak
8115.000	37.96	9.50	47.46	82.25	-34.79	peak
11715.000	35.90	17.09	52.99	82.25	-29.26	peak
13605.000	34.01	19.06	53.07	82.25	-29.18	peak
16965.000	34.60	19.61	54.21	82.25	-28.04	peak
17895.000	31.77	24.30	56.07	82.25	-26.18	peak

QPSK-20 MHz-High Channel- Horizontal

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
3990.000	45.90	-3.61	42.29	82.25	-39.96	peak
5490.000	46.26	2.31	48.57	82.25	-33.68	peak
6000.000	42.87	2.90	45.77	82.25	-36.48	peak
8040.000	38.66	8.64	47.30	82.25	-34.95	peak
10560.000	38.67	13.10	51.77	82.25	-30.48	peak
17760.000	31.75	23.85	55.60	82.25	-26.65	peak

QPSK-20 MHz- High Channel- Vertical

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4995.000	45.46	0.70	46.16	82.25	-36.09	peak
5490.000	48.23	2.31	50.54	82.25	-31.71	peak
6000.000	46.18	2.90	49.08	82.25	-33.17	peak
7500.000	40.19	7.68	47.87	82.25	-34.38	peak
11745.000	35.92	17.06	52.98	82.25	-29.27	peak
14010.000	34.28	19.32	53.60	82.25	-28.65	peak
17925.000	31.35	24.47	55.82	82.25	-26.43	peak

Note: Limit= -13dBm+95.25=82.25 dBuV/m

END OF REPORT