



REPORT No. : SZ21070331W07

TEST REPORT

APPLICANT : Reliance Communications LLC

PRODUCT NAME : Orbic AirSurf 5G UW

MODEL NAME : R141TL5

BRAND NAME : Orbic

FCC ID : 2ABGH-R141TL5

STANDARD(S) : 47 CFR Part 22, Subpart H
47 CFR Part 24, Subpart E
47 CFR Part 27, Subpart F&H&L&M&N

RECEIPT DATE : 2021-07-29

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Change History		
Version	Date	Reason for change
1.0	2021-12-01	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Reliance Communications LLC
Applicant Address:	91 Colin Drive, Unit 1, HOLBROOK, New York 11741, United States
Manufacturer:	Unimaxcomm
Manufacturer Address:	35F,HBC HuiLong Center Building-II Minzhi Street,Longhua, Shenzhen, P.R. China 518110

1.2. Equipment Under Test (EUT) Description

Product Name:	Orbic AirSurf 5G UW	
Sample No.:	26#	
Hardware Version:	R141-REV12	
Software Version:	ORB141TL5_V1.1.9_SVZ	
Modulation Type:	QPSK, 16QAM, 64QAM	
Carrier Aggregation:	Support	
Operation Band:	Band 2 / 4 / 5 / 12 / 13 / 66	
Frequency Range:	LTE Band 2	Tx: 1850MHz–1910MHz
		Rx: 1930MHz–1990MHz
	LTE Band 4	Tx: 1710MHz–1755MHz
		Rx: 2110MHz–2155MHz
	LTE Band 5	Tx: 824MHz–849MHz
		Rx: 869MHz–894MHz
	LTE Band 12	Tx: 699MHz–716MHz
		Rx: 729MHz–746MHz
	LTE Band 13	Tx: 777MHz–787MHz
		Rx: 746MHz–756MHz
	LTE Band 66	Tx: 1710MHz –1780MHz
		Rx: 2110MHz –2200MHz



Channel Bandwidth:	LTE Band 2	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
	LTE Band 4	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
	LTE Band 5	1.4MHz, 3MHz, 5MHz, 10MHz
	LTE Band 12	1.4MHz, 3 MHz, 5 MHz, 10MHz
	LTE Band 13	5 MHz, 10MHz
	LTE Band 66	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
Antenna Type:	PIFA Antenna	
Antenna Gain:	LTE Band 2	4.54dBi
	LTE Band 4	4.37dBi
	LTE Band 5	2.15dBi
	LTE Band 12	1.33dBi
	LTE Band 13	-0.03dBi
	LTE Band 66	4.37dBi

Note 1: The test results of all conducted test items please refer to the module FCC test report (Report No.: SZ21010262W02), which issued on Jul 02, 2021 by Shenzhen Morlab Communications Technology Co., Ltd. We only recorded the radiated test result in this report.

Note 2: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

1.3. Maximum E.R.P./E.I.R.P. and Emission Designator

LTE Band 2	Maximum E.R.P./E.I.R.P. (W)		
BW(MHz)	QPSK	16QAM	64QAM
20	0.220	0.183	0.143
15	0.206	0.187	0.140
10	0.207	0.183	0.147
5	0.207	0.181	0.146
3	0.196	0.175	0.150
1.4	0.209	0.175	0.152
LTE Band 4	Maximum E.R.P./E.I.R.P. (W)		
BW(MHz)	QPSK	16QAM	64QAM
20	0.216	0.183	0.146
15	0.214	0.202	0.158
10	0.213	0.191	0.151
5	0.215	0.192	0.154
3	0.215	0.181	0.163
1.4	0.215	0.182	0.158
LTE Band 5	Maximum E.R.P./E.I.R.P. (W)		
BW(MHz)	QPSK	16QAM	64QAM
10	0.181	0.148	0.115
5	0.175	0.147	0.110
3	0.174	0.149	0.111
1.4	0.176	0.142	0.110
LTE Band 12	Maximum E.R.P./E.I.R.P. (W)		
BW(MHz)	QPSK	16QAM	64QAM
10	0.183	0.153	0.113
5	0.188	0.146	0.111
3	0.187	0.155	0.115
1.4	0.179	0.143	0.119
LTE Band 13	Maximum E.R.P./E.I.R.P. (W)		
BW(MHz)	QPSK	16QAM	64QAM
10	0.226	0.177	0.142
5	0.220	0.206	0.149



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LTE Band 66	Maximum E.R.P./E.I.R.P. (W)		
BW(MHz)	QPSK	16QAM	64QAM
20	0.221	0.191	0.148
15	0.218	0.195	0.148
10	0.216	0.181	0.152
5	0.219	0.184	0.153
3	0.215	0.190	0.143
1.4	0.218	0.191	0.151



1.4. Test Standards and Results

The objective of the report is to perform testing according to Part 2, Part 22, Part 24 and Part 27 for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22	Public Mobile Services
3	47 CFR Part 24	Personal Communications Services
4	47 CFR Part 27	Miscellaneous Wireless Communications Services

Test detailed items/section required by FCC rules and results are as below:

Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
2.1046 22.913(a)(2) 24.232(c) 27.50(b)(10) 27.50(c)(10) 27.50(d)(4) 27.50(h)(2)	Transmitter Conducted Output Power and E.R.P./E.I.R.P.	Nov 30, 2021	Chen Hao Yin Xiaogang	PASS	No deviation
2.1049	Occupied Bandwidth	N/A	N/A ^{Note1}	N/A	N/A
2.1055 22.355 24.235 27.54	Frequency Stability	N/A	N/A ^{Note1}	N/A	N/A
24.232(d), 27.50(d)(5)	Peak to Average Radio	N/A	N/A ^{Note1}	N/A	N/A
2.1051 22.917(a) 24.238(a) 27.53(c)(2) 27.53(g) 27.53(h) 27.53(m)(4)	Conducted Spurious Emissions	N/A	N/A ^{Note1}	N/A	N/A
2.1051 22.917(a)	Band Edge	N/A	N/A ^{Note1}	N/A	N/A



24.238(a) 27.53(c)(2) 27.53(g) 27.53(h) 27.53(m)(4)					
2.1051 22.917(a) 24.238(a) 27.53(c)(2) 27.53(g) 27.53(h) 27.53(m)(4)	Radiated Spurious Emissions	Oct 26, 2021	Gao Jianrou	PASS	No deviation

Note 1: These items except ERP/EIRP&RSE please refer to the 5G module report SZ21010262W02 which the FCC ID is 2ABGH-R100ML5 and the 5G module has been certified by Shenzhen Morlab Communications Technology Co., Ltd. on 07/02/2021.

Note 2: The tests were performed according to the method of measurements prescribed in KDB971168 D01 v03 and ANSI/TIA-603-E-2016.

Note 3: The path loss during the RF test is calibrated to correct the results by the offset setting in the test equipments. The ref offset 24.5dB contains two parts that cable loss 14.5dB and Attenuator 10dB.

Note 4: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.

Note 5: When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.

1.5. Environmental Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15-35
Relative Humidity (%):	30-60
Atmospheric Pressure (kPa):	86-106



2.47 CFR Part 2, Part 22H, Part 24E, Part 27 F&H&L&M&N Requirements

2.1. Transmitter Conducted Output Power and E.R.P./E.I.R.P.

2.1.1. Requirement

According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

According to FCC section 24.232 (c) for LTE Band 2, Mobile and portable stations are limited to 2 watts E.I.R.P. and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

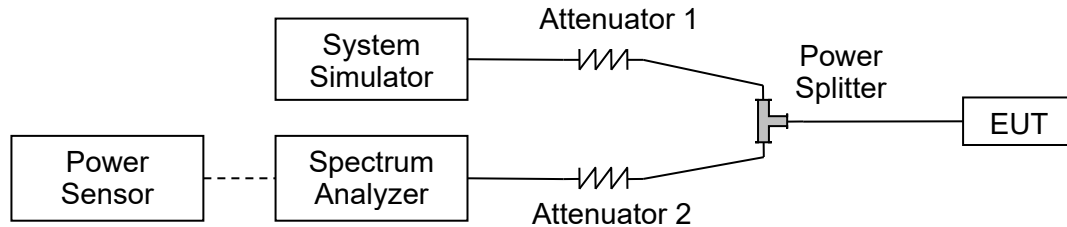
According to FCC section 27.50 (d)(4) for LTE Band 4/66, Fixed, mobile and portable (hand-held) stations in the 1710-1755MHz band are limited to 1wat E.I.R.P.

According to FCC section 22.913 (a)(2) for LTE Band 5, the E.R.P. of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 27.50 (b)(10) for LTE Band 13, Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts E.R.P.

According to FCC section 27.50 (c)(10) for LTE Band 12, Portable stations (hand-held devices) operating in the 704-716MHz band are limited to 3watts E.R.P.

2.1.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.1.3. Test Procedure

KDB 971168 D01v03 Section 5.2 and ANSI/TIA-603-E-2016.

$E.I.R.P. (dBm) = \text{Conducted Output Power (dBm)} + \text{Antenna Gain (dBi)}$

$E.R.P. (dBm) = E.I.R.P. (dBm) - 2.15$

**2.1.4. Result****Conducted Output Power**

LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	23.34	23.43	23.43
20	QPSK	1	49	23.28	23.29	23.26
20	QPSK	1	99	23.24	23.42	23.36
20	QPSK	50	0	22.33	22.39	22.38
20	QPSK	50	24	22.41	22.37	22.41
20	QPSK	50	50	22.4	22.42	22.37
20	QPSK	100	0	22.45	22.42	22.28
20	16QAM	1	0	22.66	22.27	22.66
20	16QAM	1	49	22.33	22.85	22.62
20	16QAM	1	99	22.54	22.92	22.11
20	16QAM	50	0	21.32	21.44	21.37
20	16QAM	50	24	21.52	21.39	21.41
20	16QAM	50	50	21.53	21.41	21.47
20	16QAM	100	0	21.48	21.41	21.28
20	64QAM	1	0	20.58	20.33	20.66
20	64QAM	1	49	20.34	20.39	20.48
20	64QAM	1	99	20.38	20.72	20.78
20	64QAM	50	0	20.38	20.45	20.39
20	64QAM	50	24	20.48	20.34	20.49
20	64QAM	50	50	20.49	20.54	20.47
20	64QAM	100	0	20.55	20.46	20.41



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	23.35	23.38	23.36
15	QPSK	1	37	23.37	23.37	23.37
15	QPSK	1	74	23.31	23.36	23.37
15	QPSK	36	0	22.47	22.46	22.39
15	QPSK	36	20	22.51	22.45	22.51
15	QPSK	36	39	22.47	22.57	22.42
15	QPSK	75	0	22.54	22.36	22.45
15	16QAM	1	0	22.62	22.82	22.96
15	16QAM	1	37	22.75	22.67	22.50
15	16QAM	1	74	22.56	22.87	22.82
15	16QAM	36	0	21.48	21.46	21.37
15	16QAM	36	20	21.58	21.48	21.51
15	16QAM	36	39	21.50	21.46	21.52
15	16QAM	75	0	21.34	21.46	21.46
15	64QAM	1	0	20.09	20.47	20.34
15	64QAM	1	37	20.64	20.49	20.49
15	64QAM	1	74	20.64	20.57	20.58
15	64QAM	36	0	20.42	20.47	20.38
15	64QAM	36	20	20.50	20.46	20.53
15	64QAM	36	39	20.57	20.40	20.51
15	64QAM	75	0	20.41	20.45	20.49



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	23.50	23.50	23.46
10	QPSK	1	25	23.26	23.31	23.30
10	QPSK	1	49	23.14	23.29	23.38
10	QPSK	25	0	22.43	22.30	22.21
10	QPSK	25	12	22.44	22.42	22.36
10	QPSK	25	25	22.38	22.41	22.42
10	QPSK	50	0	22.42	22.41	22.26
10	16QAM	1	0	22.60	22.36	22.67
10	16QAM	1	25	22.69	22.86	22.71
10	16QAM	1	49	22.86	22.54	22.63
10	16QAM	25	0	21.43	21.36	21.28
10	16QAM	25	12	21.35	21.41	21.42
10	16QAM	25	25	21.38	21.42	21.39
10	16QAM	50	0	21.38	21.45	21.39
10	64QAM	1	0	20.23	20.49	20.84
10	64QAM	1	25	20.35	20.72	20.47
10	64QAM	1	49	20.63	20.61	20.83
10	64QAM	25	0	20.57	20.29	20.41
10	64QAM	25	12	20.42	20.45	20.36
10	64QAM	25	25	20.55	20.41	20.46
10	64QAM	50	0	20.51	20.37	20.43



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	23.21	23.41	23.27
5	QPSK	1	12	23.40	23.38	23.26
5	QPSK	1	24	23.37	23.26	23.26
5	QPSK	12	0	22.36	22.37	22.36
5	QPSK	12	7	22.38	22.42	22.44
5	QPSK	12	13	22.39	22.41	22.35
5	QPSK	25	0	22.31	22.30	22.32
5	16QAM	1	0	22.31	22.17	22.34
5	16QAM	1	12	22.28	22.40	22.31
5	16QAM	1	24	22.26	22.81	22.28
5	16QAM	12	0	21.45	21.36	21.40
5	16QAM	12	7	21.41	21.48	21.40
5	16QAM	12	13	21.36	21.48	21.45
5	16QAM	25	0	21.32	21.35	21.38
5	64QAM	1	0	21.01	20.25	20.41
5	64QAM	1	12	20.48	20.63	20.67
5	64QAM	1	24	20.21	20.69	20.42
5	64QAM	12	0	20.48	20.41	20.54
5	64QAM	12	7	20.45	20.34	20.42
5	64QAM	12	13	20.29	20.46	20.45
5	64QAM	25	0	20.44	20.34	20.37



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	23.09	22.95	23.00
3	QPSK	1	8	23.05	23.15	23.16
3	QPSK	1	14	23.00	22.94	23.08
3	QPSK	8	0	22.12	22.08	22.08
3	QPSK	8	4	22.09	22.11	22.14
3	QPSK	8	7	22.06	22.09	22.07
3	QPSK	15	0	22.11	22.03	22.09
3	16QAM	1	0	22.14	22.45	22.62
3	16QAM	1	8	22.44	22.47	22.46
3	16QAM	1	14	22.14	22.15	22.43
3	16QAM	8	0	21.24	21.16	21.12
3	16QAM	8	4	21.15	21.22	21.21
3	16QAM	8	7	21.17	21.26	21.26
3	16QAM	15	0	21.25	21.07	20.98
3	64QAM	1	0	20.19	20.23	20.56
3	64QAM	1	8	20.50	20.51	20.59
3	64QAM	1	14	20.30	20.09	20.52
3	64QAM	8	0	20.15	20.06	20.07
3	64QAM	8	4	20.06	20.30	20.21
3	64QAM	8	7	20.19	20.31	20.08
3	64QAM	15	0	20.12	20.18	20.07



LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	22.99	23.05	23.01
1.4	QPSK	1	3	22.98	23.02	22.99
1.4	QPSK	1	5	22.95	22.99	22.95
1.4	QPSK	3	0	22.99	22.96	22.93
1.4	QPSK	3	1	23.03	23.05	22.95
1.4	QPSK	3	3	22.95	22.97	22.94
1.4	QPSK	6	0	21.98	22.14	21.99
1.4	16QAM	1	0	21.97	22.17	22.43
1.4	16QAM	1	3	22.23	22.41	22.09
1.4	16QAM	1	5	22.20	22.26	22.03
1.4	16QAM	3	0	22.02	22.09	22.21
1.4	16QAM	3	1	22.14	22.13	22.15
1.4	16QAM	3	3	22.05	22.01	22.13
1.4	16QAM	6	0	21.07	21.27	21.09
1.4	64QAM	1	0	20.13	20.81	20.14
1.4	64QAM	1	3	20.14	20.21	20.41
1.4	64QAM	1	5	20.74	20.01	20.63
1.4	64QAM	3	0	20.34	20.18	20.12
1.4	64QAM	3	1	20.02	20.05	20.13
1.4	64QAM	3	3	20.24	20.28	19.96
1.4	64QAM	6	0	20.21	20.22	20.02



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	23.05	23.35	23.34
20	QPSK	1	49	22.97	23.31	23.32
20	QPSK	1	99	23.05	23.30	23.33
20	QPSK	50	0	22.04	22.34	22.32
20	QPSK	50	24	22.26	22.25	22.26
20	QPSK	50	50	22.15	22.31	22.27
20	QPSK	100	0	22.22	22.35	22.29
20	16QAM	1	0	22.39	22.42	22.78
20	16QAM	1	49	21.95	22.44	22.67
20	16QAM	1	99	22.57	22.15	22.13
20	16QAM	50	0	21.25	21.33	21.47
20	16QAM	50	24	21.18	21.31	21.31
20	16QAM	50	50	21.12	21.32	21.33
20	16QAM	100	0	21.14	21.30	21.42
20	64QAM	1	0	20.16	20.49	20.62
20	64QAM	1	49	20.37	20.79	20.32
20	64QAM	1	99	20.59	20.49	20.37
20	64QAM	50	0	20.08	20.40	20.35
20	64QAM	50	24	20.29	20.39	20.38
20	64QAM	50	50	20.29	20.25	20.20
20	64QAM	100	0	20.30	20.25	20.38



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	23.17	23.55	23.51
15	QPSK	1	37	23.02	23.42	23.51
15	QPSK	1	74	23.27	23.39	23.50
15	QPSK	36	0	22.19	22.44	22.42
15	QPSK	36	20	22.28	22.38	22.35
15	QPSK	36	39	22.27	22.44	22.43
15	QPSK	75	0	22.28	22.46	22.48
15	16QAM	1	0	22.78	22.48	23.06
15	16QAM	1	37	22.28	22.40	22.99
15	16QAM	1	74	22.76	22.55	22.90
15	16QAM	36	0	21.32	21.46	21.44
15	16QAM	36	20	21.34	21.47	21.34
15	16QAM	36	39	21.24	21.46	21.40
15	16QAM	75	0	21.31	21.34	21.55
15	64QAM	1	0	20.44	20.63	20.24
15	64QAM	1	37	20.42	20.33	20.66
15	64QAM	1	74	20.26	20.25	20.99
15	64QAM	36	0	20.29	20.43	20.51
15	64QAM	36	20	20.34	20.43	20.35
15	64QAM	36	39	20.25	20.51	20.38
15	64QAM	75	0	20.38	20.41	20.39



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	23.12	23.39	23.38
10	QPSK	1	25	22.98	23.28	23.37
10	QPSK	1	49	23.09	23.27	23.37
10	QPSK	25	0	22.14	22.24	22.39
10	QPSK	25	12	22.09	22.36	22.44
10	QPSK	25	25	22.21	22.42	22.42
10	QPSK	50	0	22.19	22.36	22.27
10	16QAM	1	0	22.60	22.82	22.61
10	16QAM	1	25	22.42	22.81	22.65
10	16QAM	1	49	22.44	22.97	22.42
10	16QAM	25	0	21.04	21.30	21.33
10	16QAM	25	12	21.16	21.43	21.48
10	16QAM	25	25	21.20	21.54	21.44
10	16QAM	50	0	21.13	21.35	21.45
10	64QAM	1	0	20.32	20.41	20.76
10	64QAM	1	25	20.54	20.57	20.46
10	64QAM	1	49	19.92	20.54	20.79
10	64QAM	25	0	20.11	20.31	20.48
10	64QAM	25	12	20.13	20.29	20.42
10	64QAM	25	25	20.36	20.51	20.40
10	64QAM	50	0	20.28	20.40	20.24



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	22.99	23.36	23.35
5	QPSK	1	12	23.27	23.35	23.34
5	QPSK	1	24	23.09	23.32	23.33
5	QPSK	12	0	22.24	22.35	22.47
5	QPSK	12	7	22.27	22.38	22.46
5	QPSK	12	13	22.22	22.46	22.45
5	QPSK	25	0	22.24	22.35	22.42
5	16QAM	1	0	22.42	22.52	23.00
5	16QAM	1	12	22.50	22.63	22.72
5	16QAM	1	24	22.49	22.98	22.71
5	16QAM	12	0	21.27	21.44	21.44
5	16QAM	12	7	21.31	21.51	21.51
5	16QAM	12	13	21.41	21.50	21.51
5	16QAM	25	0	21.21	21.44	21.44
5	64QAM	1	0	20.80	20.43	20.75
5	64QAM	1	12	20.90	20.50	20.44
5	64QAM	1	24	20.64	20.79	20.96
5	64QAM	12	0	20.24	20.56	20.62
5	64QAM	12	7	20.23	20.51	20.44
5	64QAM	12	13	20.20	20.57	20.56
5	64QAM	25	0	20.20	20.36	20.48



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	23.37	23.72	23.70
3	QPSK	1	8	23.50	23.71	23.69
3	QPSK	1	14	23.46	23.65	23.64
3	QPSK	8	0	22.45	22.81	22.80
3	QPSK	8	4	22.42	22.78	22.79
3	QPSK	8	7	22.42	22.76	22.78
3	QPSK	15	0	22.47	22.70	22.76
3	16QAM	1	0	22.75	22.87	22.88
3	16QAM	1	8	22.70	22.80	22.81
3	16QAM	1	14	22.80	22.60	22.54
3	16QAM	8	0	21.47	21.85	21.86
3	16QAM	8	4	21.38	21.84	21.85
3	16QAM	8	7	21.51	21.83	21.83
3	16QAM	15	0	21.51	21.82	21.81
3	64QAM	1	0	20.47	21.08	21.03
3	64QAM	1	8	20.80	20.93	20.95
3	64QAM	1	14	20.65	20.65	20.66
3	64QAM	8	0	20.43	20.51	20.53
3	64QAM	8	4	20.49	20.50	20.49
3	64QAM	8	7	20.52	20.51	20.50
3	64QAM	15	0	20.53	20.67	20.61



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	23.17	23.56	23.52
1.4	QPSK	1	3	23.30	23.45	23.41
1.4	QPSK	1	5	23.25	23.29	23.27
1.4	QPSK	3	0	23.19	23.27	23.26
1.4	QPSK	3	1	23.22	23.24	23.23
1.4	QPSK	3	3	23.17	23.15	23.14
1.4	QPSK	6	0	22.25	22.67	22.62
1.4	16QAM	1	0	22.74	22.64	22.60
1.4	16QAM	1	3	22.48	22.62	22.59
1.4	16QAM	1	5	22.65	22.61	22.54
1.4	16QAM	3	0	22.16	22.51	22.48
1.4	16QAM	3	1	22.40	22.45	22.41
1.4	16QAM	3	3	22.34	22.35	22.34
1.4	16QAM	6	0	21.32	21.67	21.69
1.4	64QAM	1	0	20.98	20.87	20.97
1.4	64QAM	1	3	20.59	20.81	20.85
1.4	64QAM	1	5	20.37	20.77	20.81
1.4	64QAM	3	0	20.50	20.69	20.80
1.4	64QAM	3	1	20.31	20.65	20.77
1.4	64QAM	3	3	20.27	20.63	20.74
1.4	64QAM	6	0	20.37	20.63	20.73



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	22.88	22.89	22.87
10	QPSK	1	25	22.80	22.84	22.79
10	QPSK	1	49	22.88	22.81	22.69
10	QPSK	25	0	21.81	21.74	21.89
10	QPSK	25	12	21.89	21.90	21.85
10	QPSK	25	25	21.80	21.76	21.78
10	QPSK	50	0	21.87	21.88	21.93
10	16QAM	1	0	21.90	21.97	22.23
10	16QAM	1	25	21.82	22.20	22.24
10	16QAM	1	49	21.94	22.22	21.85
10	16QAM	25	0	20.85	20.70	20.83
10	16QAM	25	12	20.81	20.91	20.85
10	16QAM	25	25	20.87	20.85	20.89
10	16QAM	50	0	20.94	20.88	20.85
10	64QAM	1	0	20.42	20.07	20.30
10	64QAM	1	25	19.79	20.06	20.00
10	64QAM	1	49	19.93	20.28	19.49
10	64QAM	25	0	19.85	19.92	19.87
10	64QAM	25	12	19.91	19.95	19.89
10	64QAM	25	25	20.10	19.78	19.80
10	64QAM	50	0	19.85	19.84	19.71



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	22.52	22.74	22.70
5	QPSK	1	12	22.42	22.66	22.69
5	QPSK	1	24	22.50	22.59	22.69
5	QPSK	12	0	21.66	21.67	21.76
5	QPSK	12	7	21.62	21.70	21.71
5	QPSK	12	13	21.49	21.62	21.65
5	QPSK	25	0	21.56	21.68	21.67
5	16QAM	1	0	22.18	21.88	21.69
5	16QAM	1	12	21.90	21.95	22.20
5	16QAM	1	24	21.83	21.94	22.08
5	16QAM	12	0	20.73	20.58	20.84
5	16QAM	12	7	20.53	20.62	20.68
5	16QAM	12	13	20.54	20.56	20.76
5	16QAM	25	0	20.59	20.60	20.70
5	64QAM	1	0	19.66	19.61	19.90
5	64QAM	1	12	19.61	19.59	19.90
5	64QAM	1	24	19.57	19.56	19.90
5	64QAM	12	0	19.53	19.60	19.84
5	64QAM	12	7	19.71	19.47	19.82
5	64QAM	12	13	19.57	19.50	19.61
5	64QAM	25	0	19.71	19.50	19.75



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	22.71	22.73	22.69
3	QPSK	1	8	22.60	22.62	22.67
3	QPSK	1	14	22.59	22.59	22.60
3	QPSK	8	0	21.81	21.67	21.85
3	QPSK	8	4	21.85	21.70	21.88
3	QPSK	8	7	21.79	21.62	21.86
3	QPSK	15	0	21.78	21.68	21.85
3	16QAM	1	0	22.26	21.88	22.04
3	16QAM	1	8	21.97	21.95	22.01
3	16QAM	1	14	21.80	21.77	21.89
3	16QAM	8	0	20.90	20.58	20.89
3	16QAM	8	4	20.81	20.62	20.90
3	16QAM	8	7	20.86	20.56	20.91
3	16QAM	15	0	20.83	20.60	20.86
3	64QAM	1	0	20.26	19.61	20.09
3	64QAM	1	8	20.31	19.47	20.33
3	64QAM	1	14	20.00	19.30	20.03
3	64QAM	8	0	19.92	19.60	19.92
3	64QAM	8	4	19.77	19.47	19.93
3	64QAM	8	7	20.02	19.50	19.92
3	64QAM	15	0	19.78	19.50	19.92



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	22.64	22.77	22.67
1.4	QPSK	1	3	22.76	22.65	22.66
1.4	QPSK	1	5	22.59	22.61	22.58
1.4	QPSK	3	0	22.69	22.59	22.61
1.4	QPSK	3	1	22.75	22.56	22.73
1.4	QPSK	3	3	22.70	22.51	22.69
1.4	QPSK	6	0	21.78	21.69	21.71
1.4	16QAM	1	0	21.98	22.02	22.16
1.4	16QAM	1	3	22.00	22.01	22.00
1.4	16QAM	1	5	21.92	21.93	21.93
1.4	16QAM	3	0	21.75	21.83	21.81
1.4	16QAM	3	1	21.79	21.80	21.78
1.4	16QAM	3	3	21.91	21.92	21.90
1.4	16QAM	6	0	20.93	20.76	20.92
1.4	64QAM	1	0	20.11	19.86	20.03
1.4	64QAM	1	3	19.88	19.84	19.85
1.4	64QAM	1	5	20.18	19.83	19.88
1.4	64QAM	3	0	19.87	19.79	19.83
1.4	64QAM	3	1	19.96	19.80	19.90
1.4	64QAM	3	3	19.90	19.81	19.88
1.4	64QAM	6	0	19.98	19.81	19.87



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	22.77	22.79	22.76
10	QPSK	1	25	22.50	22.61	22.57
10	QPSK	1	49	22.48	22.49	22.48
10	QPSK	25	0	21.60	21.69	21.62
10	QPSK	25	12	21.77	21.57	21.51
10	QPSK	25	25	21.72	21.52	21.60
10	QPSK	50	0	21.61	21.63	21.64
10	16QAM	1	0	21.80	21.38	21.83
10	16QAM	1	25	21.94	22.00	21.90
10	16QAM	1	49	22.05	21.69	21.94
10	16QAM	25	0	20.68	20.67	20.68
10	16QAM	25	12	20.82	20.56	20.61
10	16QAM	25	25	20.86	20.58	20.72
10	16QAM	50	0	20.67	20.62	20.67
10	64QAM	1	0	20.25	19.65	19.81
10	64QAM	1	25	20.16	19.54	19.87
10	64QAM	1	49	19.80	19.90	19.65
10	64QAM	25	0	19.72	19.70	19.64
10	64QAM	25	12	19.67	19.59	19.63
10	64QAM	25	25	19.67	19.73	19.50
10	64QAM	50	0	19.67	19.67	19.54



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	22.51	22.74	22.61
5	QPSK	1	12	22.63	22.67	22.54
5	QPSK	1	24	22.72	22.51	22.48
5	QPSK	12	0	21.71	21.58	21.54
5	QPSK	12	7	21.65	21.58	21.50
5	QPSK	12	13	21.69	21.52	21.56
5	QPSK	25	0	21.71	21.63	21.49
5	16QAM	1	0	21.97	21.30	21.61
5	16QAM	1	12	21.80	22.27	21.61
5	16QAM	1	24	21.88	22.12	21.28
5	16QAM	12	0	20.72	20.67	20.66
5	16QAM	12	7	20.86	20.68	20.64
5	16QAM	12	13	20.67	20.66	20.52
5	16QAM	25	0	20.61	20.55	20.50
5	64QAM	1	0	20.05	19.60	19.93
5	64QAM	1	12	19.84	19.50	19.83
5	64QAM	1	24	20.02	19.64	19.85
5	64QAM	12	0	19.69	19.70	19.75
5	64QAM	12	7	19.84	19.62	19.50
5	64QAM	12	13	19.62	19.68	19.48
5	64QAM	25	0	19.74	19.62	19.60



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	22.56	22.73	22.63
3	QPSK	1	8	22.68	22.69	22.64
3	QPSK	1	14	22.67	22.64	22.65
3	QPSK	8	0	21.65	21.80	21.78
3	QPSK	8	4	21.69	21.79	21.73
3	QPSK	8	7	21.62	21.78	21.67
3	QPSK	15	0	21.67	21.76	21.65
3	16QAM	1	0	21.89	22.32	22.22
3	16QAM	1	8	21.94	21.95	21.93
3	16QAM	1	14	22.35	22.34	22.36
3	16QAM	8	0	20.84	20.87	20.85
3	16QAM	8	4	20.74	20.76	20.73
3	16QAM	8	7	20.60	20.63	20.61
3	16QAM	15	0	20.74	20.84	20.64
3	64QAM	1	0	20.00	20.14	20.11
3	64QAM	1	8	19.90	19.91	19.93
3	64QAM	1	14	19.67	19.68	19.69
3	64QAM	8	0	19.59	19.62	19.63
3	64QAM	8	4	19.78	19.97	19.81
3	64QAM	8	7	19.74	19.96	19.80
3	64QAM	15	0	19.67	19.95	19.78



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	22.09	22.53	22.43
1.4	QPSK	1	3	22.21	22.23	22.24
1.4	QPSK	1	5	22.07	22.09	22.08
1.4	QPSK	3	0	22.14	22.16	22.15
1.4	QPSK	3	1	22.21	22.23	22.21
1.4	QPSK	3	3	22.17	22.18	22.19
1.4	QPSK	6	0	21.22	21.68	21.62
1.4	16QAM	1	0	21.34	21.67	21.66
1.4	16QAM	1	3	21.53	21.54	21.56
1.4	16QAM	1	5	21.20	21.23	21.24
1.4	16QAM	3	0	21.29	21.30	21.30
1.4	16QAM	3	1	21.30	21.34	21.32
1.4	16QAM	3	3	21.43	21.42	21.40
1.4	16QAM	6	0	20.27	20.70	20.65
1.4	64QAM	1	0	19.35	19.90	19.89
1.4	64QAM	1	3	19.49	19.51	19.50
1.4	64QAM	1	5	19.37	19.42	19.49
1.4	64QAM	3	0	19.46	19.45	19.47
1.4	64QAM	3	1	19.47	19.78	19.61
1.4	64QAM	3	3	19.56	19.75	19.59
1.4	64QAM	6	0	19.38	19.72	19.58



LTE Band 13						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				/	23230	/
Frequency (MHz)				/	782	/
10	QPSK	1	0	/	23.26	/
10	QPSK	1	25	/	23.55	/
10	QPSK	1	49	/	23.52	/
10	QPSK	25	0	/	22.58	/
10	QPSK	25	12	/	22.62	/
10	QPSK	25	25	/	22.72	/
10	QPSK	50	0	/	22.69	/
10	16QAM	1	0	/	22.79	/
10	16QAM	1	25	/	22.77	/
10	16QAM	1	49	/	23.19	/
10	16QAM	25	0	/	21.65	/
10	16QAM	25	12	/	21.68	/
10	16QAM	25	25	/	21.67	/
10	16QAM	50	0	/	21.74	/
10	64QAM	1	0	/	22.95	/
10	64QAM	1	25	/	22.70	/
10	64QAM	1	49	/	22.52	/
10	64QAM	25	0	/	21.48	/
10	64QAM	25	12	/	21.73	/
10	64QAM	25	25	/	21.69	/
10	64QAM	50	0	/	21.72	/



LTE Band 13						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				23205	23230	23255
Frequency (MHz)				779.5	782	784.5
5	QPSK	1	0	23.38	23.46	23.44
5	QPSK	1	12	23.54	23.52	23.57
5	QPSK	1	24	23.69	23.62	23.73
5	QPSK	12	0	22.55	22.56	22.68
5	QPSK	12	7	22.66	22.68	22.73
5	QPSK	12	13	22.70	22.74	22.80
5	QPSK	25	0	22.50	22.62	22.72
5	16QAM	1	0	22.58	22.88	22.72
5	16QAM	1	12	22.74	22.76	22.88
5	16QAM	1	24	23.23	22.78	23.22
5	16QAM	12	0	21.65	21.66	21.79
5	16QAM	12	7	21.65	21.73	21.81
5	16QAM	12	13	21.68	21.67	21.91
5	16QAM	25	0	21.67	21.54	21.78
5	64QAM	1	0	22.74	22.76	22.83
5	64QAM	1	12	22.35	22.63	22.93
5	64QAM	1	24	22.64	22.77	22.60
5	64QAM	12	0	21.51	21.55	21.63
5	64QAM	12	7	21.59	21.66	21.78
5	64QAM	12	13	21.70	21.83	21.85
5	64QAM	25	0	21.72	21.63	21.76



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				132072	132322	132572
Frequency (MHz)				1720	1745	1770
20	QPSK	1	0	23.21	23.45	23.37
20	QPSK	1	49	23.19	23.43	23.18
20	QPSK	1	99	23.13	23.42	23.09
20	QPSK	50	0	22.19	22.48	22.30
20	QPSK	50	24	22.38	22.33	22.28
20	QPSK	50	50	22.29	22.43	22.12
20	QPSK	100	0	22.35	22.31	22.35
20	16QAM	1	0	22.27	22.81	22.77
20	16QAM	1	49	22.08	22.25	22.51
20	16QAM	1	99	22.62	22.59	22.40
20	16QAM	50	0	21.16	21.43	21.32
20	16QAM	50	24	21.39	21.38	21.40
20	16QAM	50	50	21.41	21.40	21.21
20	16QAM	100	0	21.31	21.37	21.33
20	64QAM	1	0	20.27	20.70	20.40
20	64QAM	1	49	20.78	20.48	20.37
20	64QAM	1	99	20.75	20.49	19.98
20	64QAM	50	0	20.17	20.50	20.30
20	64QAM	50	24	20.34	20.48	20.33
20	64QAM	50	50	20.35	20.33	20.28
20	64QAM	100	0	20.29	20.38	20.25



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				132047	132322	132597
Frequency (MHz)				1717.5	1745	1772.5
15	QPSK	1	0	23.03	23.39	23.21
15	QPSK	1	37	23.09	23.38	23.19
15	QPSK	1	74	23.12	23.38	23.14
15	QPSK	36	0	22.15	22.44	22.28
15	QPSK	36	20	22.28	22.34	22.31
15	QPSK	36	39	22.29	22.44	22.13
15	QPSK	75	0	22.17	22.39	22.30
15	16QAM	1	0	22.46	22.96	22.77
15	16QAM	1	37	22.60	22.29	22.36
15	16QAM	1	74	22.52	22.90	22.48
15	16QAM	36	0	21.11	21.36	21.34
15	16QAM	36	20	21.27	21.49	21.30
15	16QAM	36	39	21.29	21.39	21.11
15	16QAM	75	0	21.29	21.43	21.26
15	64QAM	1	0	20.10	20.32	20.40
15	64QAM	1	37	20.68	20.78	20.63
15	64QAM	1	74	20.49	20.63	20.32
15	64QAM	36	0	20.29	20.38	20.38
15	64QAM	36	20	20.34	20.41	20.31
15	64QAM	36	39	20.24	20.42	20.26
15	64QAM	75	0	20.25	20.46	20.24



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				132022	132322	132622
Frequency (MHz)				1715	1745	1775
10	QPSK	1	0	23.12	23.53	23.42
10	QPSK	1	25	23.14	23.54	23.24
10	QPSK	1	49	23.03	23.28	23.35
10	QPSK	25	0	22.38	22.44	22.43
10	QPSK	25	12	22.33	22.51	22.32
10	QPSK	25	25	22.31	22.46	22.38
10	QPSK	50	0	22.40	22.52	22.38
10	16QAM	1	0	22.60	22.67	22.74
10	16QAM	1	25	22.55	22.99	22.57
10	16QAM	1	49	22.29	22.64	22.50
10	16QAM	25	0	21.28	21.45	21.31
10	16QAM	25	12	21.50	21.56	21.44
10	16QAM	25	25	21.35	21.48	21.32
10	16QAM	50	0	21.27	21.50	21.29
10	64QAM	1	0	20.38	20.51	20.44
10	64QAM	1	25	20.32	20.67	20.27
10	64QAM	1	49	20.69	20.55	20.41
10	64QAM	25	0	20.44	20.52	20.35
10	64QAM	25	12	20.41	20.59	20.41
10	64QAM	25	25	20.33	20.38	20.39
10	64QAM	50	0	20.28	20.56	20.22



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				131997	132322	132647
Frequency (MHz)				1712.5	1745	1777.5
5	QPSK	1	0	23.18	23.41	23.26
5	QPSK	1	12	23.19	23.40	23.25
5	QPSK	1	24	23.22	23.40	23.24
5	QPSK	12	0	22.26	22.51	22.34
5	QPSK	12	7	22.34	22.51	22.35
5	QPSK	12	13	22.29	22.51	22.35
5	QPSK	25	0	22.33	22.48	22.35
5	16QAM	1	0	22.14	22.68	22.65
5	16QAM	1	12	22.33	22.94	22.74
5	16QAM	1	24	22.47	22.60	23.28
5	16QAM	12	0	21.37	21.64	21.33
5	16QAM	12	7	21.42	21.47	21.52
5	16QAM	12	13	21.44	21.51	21.30
5	16QAM	25	0	21.37	21.54	21.46
5	64QAM	1	0	20.33	20.91	20.40
5	64QAM	1	12	20.11	20.98	20.66
5	64QAM	1	24	20.61	21.05	20.53
5	64QAM	12	0	20.34	20.58	20.31
5	64QAM	12	7	20.41	20.58	20.40
5	64QAM	12	13	20.32	20.41	20.43
5	64QAM	25	0	20.34	20.52	20.40



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				131987	132322	132657
Frequency (MHz)				1711.5	1745	1778.5
3	QPSK	1	0	23.53	23.53	23.51
3	QPSK	1	8	23.46	23.47	23.45
3	QPSK	1	14	23.31	23.34	23.32
3	QPSK	8	0	22.55	22.56	22.51
3	QPSK	8	4	22.54	22.57	22.53
3	QPSK	8	7	22.56	22.55	22.54
3	QPSK	15	0	22.50	22.51	22.50
3	16QAM	1	0	22.71	22.70	22.71
3	16QAM	1	8	22.41	22.78	22.77
3	16QAM	1	14	22.99	22.98	22.97
3	16QAM	8	0	21.66	21.67	21.66
3	16QAM	8	4	21.55	21.57	21.58
3	16QAM	8	7	21.63	21.62	21.61
3	16QAM	15	0	21.51	21.54	21.50
3	64QAM	1	0	20.41	21.51	21.49
3	64QAM	1	8	20.29	21.45	21.41
3	64QAM	1	14	20.38	21.37	21.38
3	64QAM	8	0	20.57	20.54	20.54
3	64QAM	8	4	20.63	20.62	20.61
3	64QAM	8	7	20.58	20.57	20.59
3	64QAM	15	0	20.49	20.50	20.51



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				131979	132322	132665
Frequency (MHz)				1710.7	1745	1779.3
1.4	QPSK	1	0	23.15	23.59	23.27
1.4	QPSK	1	3	23.35	23.58	23.30
1.4	QPSK	1	5	23.29	23.57	23.28
1.4	QPSK	3	0	23.24	23.52	23.26
1.4	QPSK	3	1	23.29	23.53	23.25
1.4	QPSK	3	3	23.27	23.50	23.26
1.4	QPSK	6	0	22.33	22.65	22.35
1.4	16QAM	1	0	22.31	22.67	22.61
1.4	16QAM	1	3	22.55	22.56	22.54
1.4	16QAM	1	5	22.25	22.51	22.27
1.4	16QAM	3	0	22.25	22.48	22.26
1.4	16QAM	3	1	22.40	22.39	22.21
1.4	16QAM	3	3	22.42	22.51	22.20
1.4	16QAM	6	0	21.53	21.68	21.52
1.4	64QAM	1	0	20.00	21.67	21.57
1.4	64QAM	1	3	20.59	21.57	21.51
1.4	64QAM	1	5	20.87	21.51	21.47
1.4	64QAM	3	0	20.54	21.19	21.26
1.4	64QAM	3	1	20.63	21.14	21.18
1.4	64QAM	3	3	20.74	21.04	21.05
1.4	64QAM	6	0	20.45	20.71	20.38

**Effective Radiated Power and Effective Isotropic Radiated Power**

LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18700		18900		19100	
Frequency (MHz)				1860		1880		1900	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	23.34	0.216	23.43	0.220	23.39	0.218
20	QPSK	1	49	23.28	0.213	23.29	0.213	23.26	0.212
20	QPSK	1	99	23.24	0.211	23.42	0.220	23.36	0.217
20	QPSK	50	0	22.63	0.183	22.68	0.185	22.60	0.182
20	QPSK	50	24	22.43	0.175	22.39	0.173	22.43	0.175
20	QPSK	50	50	22.42	0.175	22.44	0.175	22.39	0.173
20	QPSK	100	0	22.47	0.177	22.44	0.175	22.30	0.170
20	16QAM	1	0	22.63	0.183	22.24	0.167	22.63	0.183
20	16QAM	1	49	22.10	0.162	22.44	0.175	22.39	0.173
20	16QAM	1	99	22.13	0.163	22.51	0.178	21.70	0.148
20	16QAM	50	0	22.14	0.164	22.26	0.168	22.19	0.166
20	16QAM	50	24	22.34	0.171	22.21	0.166	22.23	0.167
20	16QAM	50	50	22.35	0.172	22.23	0.167	22.29	0.169
20	16QAM	100	0	22.30	0.170	22.23	0.167	22.10	0.162
20	64QAM	1	0	21.40	0.138	21.15	0.130	21.48	0.141
20	64QAM	1	49	21.16	0.131	21.21	0.132	21.30	0.135
20	64QAM	1	99	21.20	0.132	21.54	0.143	21.60	0.145
20	64QAM	50	0	21.20	0.132	21.27	0.134	21.21	0.132
20	64QAM	50	24	21.30	0.135	21.16	0.131	21.31	0.135
20	64QAM	50	50	21.31	0.135	21.36	0.137	21.29	0.135
20	64QAM	100	0	21.37	0.137	21.28	0.134	21.23	0.133



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18675		18900		19125	
Frequency (MHz)				1857.5		1880		1902.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	23.12	0.205	23.14	0.206	23.13	0.206
15	QPSK	1	37	23.14	0.206	23.14	0.206	23.14	0.206
15	QPSK	1	74	23.08	0.203	23.13	0.206	23.14	0.206
15	QPSK	36	0	22.24	0.167	22.23	0.167	22.16	0.164
15	QPSK	36	20	22.28	0.169	22.22	0.167	22.28	0.169
15	QPSK	36	39	22.24	0.167	22.34	0.171	22.19	0.166
15	QPSK	75	0	22.31	0.170	22.13	0.163	22.22	0.167
15	16QAM	1	0	22.39	0.173	22.59	0.182	22.73	0.187
15	16QAM	1	37	22.52	0.179	22.44	0.175	22.27	0.169
15	16QAM	1	74	22.33	0.171	22.64	0.184	22.59	0.182
15	16QAM	36	0	22.30	0.170	22.28	0.169	22.19	0.166
15	16QAM	36	20	22.40	0.174	22.30	0.170	22.33	0.171
15	16QAM	36	39	22.32	0.171	22.28	0.169	22.34	0.171
15	16QAM	75	0	22.16	0.164	22.28	0.169	22.28	0.169
15	64QAM	1	0	21.27	0.134	21.47	0.140	21.34	0.136
15	64QAM	1	37	21.46	0.140	21.31	0.135	21.31	0.135
15	64QAM	1	74	21.46	0.140	21.39	0.138	21.40	0.138
15	64QAM	36	0	21.24	0.133	21.29	0.135	21.20	0.132
15	64QAM	36	20	21.32	0.136	21.28	0.134	21.35	0.136
15	64QAM	36	39	21.39	0.138	21.22	0.132	21.33	0.136
15	64QAM	75	0	21.23	0.133	21.27	0.134	21.31	0.135



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18650		18900		19150	
Frequency (MHz)				1855		1880		1905	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	22.98	0.199	22.99	0.199	22.99	0.199
10	QPSK	1	25	23.03	0.201	23.08	0.203	23.07	0.203
10	QPSK	1	49	22.91	0.195	23.06	0.202	23.15	0.207
10	QPSK	25	0	22.20	0.166	22.07	0.161	21.98	0.158
10	QPSK	25	12	22.21	0.166	22.19	0.166	22.13	0.163
10	QPSK	25	25	22.15	0.164	22.18	0.165	22.19	0.166
10	QPSK	50	0	22.19	0.166	22.18	0.165	22.03	0.160
10	16QAM	1	0	22.37	0.173	22.13	0.163	22.44	0.175
10	16QAM	1	25	22.46	0.176	22.63	0.183	22.48	0.177
10	16QAM	1	49	22.63	0.183	22.31	0.170	22.40	0.174
10	16QAM	25	0	22.43	0.175	22.36	0.172	22.28	0.169
10	16QAM	25	12	22.35	0.172	22.41	0.174	22.42	0.175
10	16QAM	25	25	22.38	0.173	22.42	0.175	22.39	0.173
10	16QAM	50	0	22.38	0.173	22.45	0.176	22.39	0.173
10	64QAM	1	0	21.05	0.127	21.31	0.135	21.66	0.147
10	64QAM	1	25	21.17	0.131	21.54	0.143	21.29	0.135
10	64QAM	1	49	21.45	0.140	21.43	0.139	21.65	0.146
10	64QAM	25	0	21.39	0.138	21.11	0.129	21.23	0.133
10	64QAM	25	12	21.24	0.133	21.27	0.134	21.18	0.131
10	64QAM	25	25	21.37	0.137	21.23	0.133	21.28	0.134
10	64QAM	50	0	21.33	0.136	21.19	0.132	21.25	0.133



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18625		18900		19175	
Frequency (MHz)				1852.5		1880		1907.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	22.98	0.199	23.15	0.207	23.04	0.201
5	QPSK	1	12	22.99	0.199	23.15	0.207	23.03	0.201
5	QPSK	1	24	23.14	0.206	23.03	0.201	23.03	0.201
5	QPSK	12	0	22.13	0.163	22.14	0.164	22.13	0.163
5	QPSK	12	7	22.33	0.171	22.37	0.173	22.39	0.173
5	QPSK	12	13	22.34	0.171	22.36	0.172	22.30	0.170
5	QPSK	25	0	22.26	0.168	22.25	0.168	22.27	0.169
5	16QAM	1	0	22.26	0.168	22.12	0.163	22.29	0.169
5	16QAM	1	12	22.23	0.167	22.35	0.172	22.26	0.168
5	16QAM	1	24	22.03	0.160	22.58	0.181	22.05	0.160
5	16QAM	12	0	22.45	0.176	22.36	0.172	22.40	0.174
5	16QAM	12	7	22.41	0.174	22.48	0.177	22.40	0.174
5	16QAM	12	13	22.36	0.172	22.48	0.177	22.45	0.176
5	16QAM	25	0	22.32	0.171	22.35	0.172	22.38	0.173
5	64QAM	1	0	21.65	0.146	21.07	0.128	21.23	0.133
5	64QAM	1	12	21.30	0.135	21.45	0.140	21.49	0.141
5	64QAM	1	24	21.03	0.127	21.51	0.142	21.24	0.133
5	64QAM	12	0	21.30	0.135	21.23	0.133	21.36	0.137
5	64QAM	12	7	21.27	0.134	21.16	0.131	21.24	0.133
5	64QAM	12	13	21.11	0.129	21.28	0.134	21.27	0.134
5	64QAM	25	0	21.26	0.134	21.16	0.131	21.19	0.132



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18615		18900		19185	
Frequency (MHz)				1851.5		1880		1908.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	22.86	0.193	22.72	0.187	22.77	0.189
3	QPSK	1	8	22.82	0.191	22.92	0.196	22.85	0.193
3	QPSK	1	14	22.77	0.189	22.71	0.187	22.85	0.193
3	QPSK	8	0	22.25	0.168	22.21	0.166	22.21	0.166
3	QPSK	8	4	22.22	0.167	22.24	0.167	22.27	0.169
3	QPSK	8	7	22.19	0.166	22.22	0.167	22.2	0.166
3	QPSK	15	0	22.24	0.167	22.16	0.164	22.22	0.167
3	16QAM	1	0	21.91	0.155	22.22	0.167	22.39	0.173
3	16QAM	1	8	22.39	0.173	22.42	0.175	22.41	0.174
3	16QAM	1	14	22.09	0.162	22.10	0.162	22.38	0.173
3	16QAM	8	0	22.42	0.175	22.34	0.171	22.3	0.170
3	16QAM	8	4	22.33	0.171	22.40	0.174	22.39	0.173
3	16QAM	8	7	22.35	0.172	22.44	0.175	22.44	0.175
3	16QAM	15	0	22.43	0.175	22.25	0.168	22.16	0.164
3	64QAM	1	0	21.19	0.132	21.23	0.133	21.56	0.143
3	64QAM	1	8	21.68	0.147	21.69	0.148	21.77	0.150
3	64QAM	1	14	21.48	0.141	21.27	0.134	21.7	0.148
3	64QAM	8	0	21.33	0.136	21.24	0.133	21.25	0.133
3	64QAM	8	4	21.24	0.133	21.48	0.141	21.39	0.138
3	64QAM	8	7	21.37	0.137	21.49	0.141	21.26	0.134
3	64QAM	15	0	21.30	0.135	21.36	0.137	21.25	0.133



LTE Band 2				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				18607		18900		19193	
Frequency (MHz)				1850.7		1880		1909.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	23.17	0.207	23.2	0.209	23.19	0.208
1.4	QPSK	1	3	23.16	0.207	23.2	0.209	23.17	0.207
1.4	QPSK	1	5	23.13	0.206	23.17	0.207	23.13	0.206
1.4	QPSK	3	0	23.17	0.207	23.14	0.206	23.11	0.205
1.4	QPSK	3	1	23.21	0.209	22.7	0.186	23.13	0.206
1.4	QPSK	3	3	23.13	0.206	23.15	0.207	23.12	0.205
1.4	QPSK	6	0	22.16	0.164	22.14	0.164	21.99	0.158
1.4	16QAM	1	0	21.97	0.157	22.17	0.165	22.43	0.175
1.4	16QAM	1	3	22.23	0.167	22.41	0.174	22.09	0.162
1.4	16QAM	1	5	22.2	0.166	22.26	0.168	22.03	0.160
1.4	16QAM	3	0	22.02	0.159	22.09	0.162	22.21	0.166
1.4	16QAM	3	1	22.14	0.164	22.13	0.163	22.15	0.164
1.4	16QAM	3	3	22.05	0.160	22.01	0.159	22.13	0.163
1.4	16QAM	6	0	22.07	0.161	22.27	0.169	22.09	0.162
1.4	64QAM	1	0	21.13	0.130	21.81	0.152	21.14	0.130
1.4	64QAM	1	3	21.14	0.130	21.21	0.132	21.41	0.138
1.4	64QAM	1	5	21.74	0.149	21.01	0.126	21.63	0.146
1.4	64QAM	3	0	21.34	0.136	21.18	0.131	21.12	0.129
1.4	64QAM	3	1	21.02	0.126	21.05	0.127	21.13	0.130
1.4	64QAM	3	3	21.24	0.133	21.28	0.134	21.14	0.130
1.4	64QAM	6	0	21.21	0.132	21.22	0.132	21.02	0.126



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20050		20175		20300	
Frequency (MHz)				1720		1732.5		1745	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	23.26	0.212	23.35	0.216	23.34	0.216
20	QPSK	1	49	22.97	0.198	23.31	0.214	23.32	0.215
20	QPSK	1	99	23.05	0.202	23.30	0.214	23.33	0.215
20	QPSK	50	0	22.26	0.168	22.34	0.171	22.32	0.171
20	QPSK	50	24	22.26	0.168	22.25	0.168	22.26	0.168
20	QPSK	50	50	22.15	0.164	22.31	0.170	22.27	0.169
20	QPSK	100	0	22.22	0.167	22.35	0.172	22.29	0.169
20	16QAM	1	0	22.39	0.173	22.42	0.175	22.63	0.183
20	16QAM	1	49	22.10	0.162	22.44	0.175	22.52	0.179
20	16QAM	1	99	22.57	0.181	22.15	0.164	22.13	0.163
20	16QAM	50	0	22.25	0.168	22.33	0.171	22.47	0.177
20	16QAM	50	24	22.18	0.165	22.31	0.170	22.31	0.170
20	16QAM	50	50	22.12	0.163	22.32	0.171	22.33	0.171
20	16QAM	100	0	22.14	0.164	22.30	0.170	22.42	0.175
20	64QAM	1	0	21.16	0.131	21.49	0.141	21.62	0.145
20	64QAM	1	49	21.22	0.132	21.64	0.146	21.17	0.131
20	64QAM	1	99	21.44	0.139	21.34	0.136	21.22	0.132
20	64QAM	50	0	21.08	0.128	21.40	0.138	21.35	0.136
20	64QAM	50	24	21.29	0.135	21.39	0.138	21.38	0.137
20	64QAM	50	50	21.29	0.135	21.25	0.133	21.20	0.132
20	64QAM	100	0	21.30	0.135	21.25	0.133	21.38	0.137



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20025		20175		20325	
Frequency (MHz)				1717.5		1732.5		1747.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	23.17	0.207	23.22	0.210	23.31	0.214
15	QPSK	1	37	23.02	0.200	23.22	0.210	23.31	0.214
15	QPSK	1	74	23.27	0.212	23.19	0.208	23.30	0.214
15	QPSK	36	0	22.19	0.166	22.44	0.175	22.42	0.175
15	QPSK	36	20	22.28	0.169	22.38	0.173	22.35	0.172
15	QPSK	36	39	22.27	0.169	22.44	0.175	22.43	0.175
15	QPSK	75	0	22.28	0.169	22.46	0.176	22.48	0.177
15	16QAM	1	0	22.78	0.190	22.48	0.177	23.06	0.202
15	16QAM	1	37	22.28	0.169	22.40	0.174	22.99	0.199
15	16QAM	1	74	22.61	0.182	22.40	0.174	22.60	0.182
15	16QAM	36	0	22.17	0.165	22.31	0.170	22.14	0.164
15	16QAM	36	20	22.19	0.166	22.32	0.171	22.04	0.160
15	16QAM	36	39	22.09	0.162	22.31	0.170	22.10	0.162
15	16QAM	75	0	22.16	0.164	22.19	0.166	22.25	0.168
15	64QAM	1	0	21.44	0.139	21.63	0.146	21.24	0.133
15	64QAM	1	37	21.42	0.139	21.33	0.136	21.66	0.147
15	64QAM	1	74	21.26	0.134	21.25	0.133	21.99	0.158
15	64QAM	36	0	21.29	0.135	21.43	0.139	21.51	0.142
15	64QAM	36	20	21.34	0.136	21.43	0.139	21.35	0.136
15	64QAM	36	39	21.25	0.133	21.51	0.142	21.38	0.137
15	64QAM	75	0	21.38	0.137	21.41	0.138	21.39	0.138



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20000		20175		20350	
Frequency (MHz)				1715		1732.5		1750	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	23.12	0.205	23.16	0.207	23.22	0.210
10	QPSK	1	25	22.98	0.199	23.28	0.213	23.21	0.209
10	QPSK	1	49	23.09	0.204	23.27	0.212	23.11	0.205
10	QPSK	25	0	22.14	0.164	22.24	0.167	22.39	0.173
10	QPSK	25	12	22.09	0.162	22.36	0.172	22.44	0.175
10	QPSK	25	25	22.21	0.166	22.42	0.175	22.42	0.175
10	QPSK	50	0	22.19	0.166	22.36	0.172	22.27	0.169
10	16QAM	1	0	22.60	0.182	22.67	0.185	22.46	0.176
10	16QAM	1	25	22.42	0.175	22.66	0.185	22.50	0.178
10	16QAM	1	49	22.44	0.175	22.82	0.191	22.27	0.169
10	16QAM	25	0	22.04	0.160	22.15	0.164	22.18	0.165
10	16QAM	25	12	22.16	0.164	22.28	0.169	22.33	0.171
10	16QAM	25	25	22.20	0.166	22.39	0.173	22.29	0.169
10	16QAM	50	0	22.13	0.163	22.35	0.172	22.45	0.176
10	64QAM	1	0	21.32	0.136	21.41	0.138	21.76	0.150
10	64QAM	1	25	21.54	0.143	21.57	0.144	21.46	0.140
10	64QAM	1	49	20.92	0.124	21.54	0.143	21.79	0.151
10	64QAM	25	0	21.11	0.129	21.31	0.135	21.48	0.141
10	64QAM	25	12	21.13	0.130	21.29	0.135	21.42	0.139
10	64QAM	25	25	21.36	0.137	21.51	0.142	21.40	0.138
10	64QAM	50	0	21.28	0.134	21.40	0.138	21.24	0.133



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19975		20175		20375	
Frequency (MHz)				1712.5		1732.5		1752.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	23.15	0.207	23.22	0.210	23.21	0.209
5	QPSK	1	12	23.27	0.212	23.22	0.210	23.24	0.211
5	QPSK	1	24	23.09	0.204	23.32	0.215	23.33	0.215
5	QPSK	12	0	22.09	0.162	22.20	0.166	22.32	0.171
5	QPSK	12	7	22.12	0.163	22.23	0.167	22.31	0.170
5	QPSK	12	13	22.07	0.161	22.31	0.170	22.15	0.164
5	QPSK	25	0	22.09	0.162	22.20	0.166	22.12	0.163
5	16QAM	1	0	22.27	0.169	22.37	0.173	22.55	0.180
5	16QAM	1	12	22.35	0.172	22.48	0.177	22.42	0.175
5	16QAM	1	24	22.34	0.171	22.83	0.192	22.41	0.174
5	16QAM	12	0	22.12	0.163	22.29	0.169	22.14	0.164
5	16QAM	12	7	22.31	0.170	22.51	0.178	22.36	0.172
5	16QAM	12	13	22.41	0.174	22.50	0.178	22.36	0.172
5	16QAM	25	0	22.21	0.166	22.44	0.175	22.44	0.175
5	64QAM	1	0	21.80	0.151	21.43	0.139	21.75	0.150
5	64QAM	1	12	21.90	0.155	21.50	0.141	21.44	0.139
5	64QAM	1	24	21.64	0.146	21.79	0.151	21.96	0.157
5	64QAM	12	0	21.24	0.133	21.56	0.143	21.62	0.145
5	64QAM	12	7	21.23	0.133	21.51	0.142	21.44	0.139
5	64QAM	12	13	21.20	0.132	21.57	0.144	21.56	0.143
5	64QAM	25	0	21.20	0.132	21.36	0.137	21.48	0.141



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19965		20175		20385	
Frequency (MHz)				1711.5		1732.5		1753.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	23.17	0.207	23.32	0.215	23.3	0.214
3	QPSK	1	8	23.3	0.214	23.31	0.214	23.29	0.213
3	QPSK	1	14	23.26	0.212	23.25	0.211	23.24	0.211
3	QPSK	8	0	22.15	0.164	22.51	0.178	22.5	0.178
3	QPSK	8	4	22.12	0.163	22.48	0.177	22.49	0.177
3	QPSK	8	7	22.12	0.163	22.46	0.176	22.48	0.177
3	QPSK	15	0	22.17	0.165	22.4	0.174	22.46	0.176
3	16QAM	1	0	22.45	0.176	22.57	0.181	22.58	0.181
3	16QAM	1	8	22.4	0.174	22.5	0.178	22.51	0.178
3	16QAM	1	14	22.5	0.178	22.3	0.170	22.24	0.167
3	16QAM	8	0	22.17	0.165	22.55	0.180	22.56	0.180
3	16QAM	8	4	22.08	0.161	22.54	0.179	22.55	0.180
3	16QAM	8	7	22.21	0.166	22.53	0.179	22.53	0.179
3	16QAM	15	0	22.21	0.166	22.52	0.179	22.51	0.178
3	64QAM	1	0	22.12	0.163	22.08	0.161	22.03	0.160
3	64QAM	1	8	21.8	0.151	21.93	0.156	21.95	0.157
3	64QAM	1	14	21.65	0.146	21.65	0.146	21.66	0.147
3	64QAM	8	0	21.43	0.139	21.51	0.142	21.53	0.142
3	64QAM	8	4	21.49	0.141	21.5	0.141	21.49	0.141
3	64QAM	8	7	21.52	0.142	21.51	0.142	21.5	0.141
3	64QAM	15	0	21.53	0.142	21.67	0.147	21.61	0.145



LTE Band 4				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				19957		20175		20393	
Frequency (MHz)				1710.7		1732.5		1754.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	23.11	0.205	23.22	0.210	23.32	0.215
1.4	QPSK	1	3	23.1	0.204	23.25	0.211	23.21	0.209
1.4	QPSK	1	5	23.05	0.202	23.09	0.204	23.07	0.203
1.4	QPSK	3	0	23.2	0.209	23.07	0.203	23.06	0.202
1.4	QPSK	3	1	23.02	0.200	23.04	0.201	23.03	0.201
1.4	QPSK	3	3	23.2	0.209	23.2	0.209	23.12	0.205
1.4	QPSK	6	0	22.25	0.168	22.67	0.185	22.62	0.183
1.4	16QAM	1	0	22.59	0.182	22.49	0.177	22.45	0.176
1.4	16QAM	1	3	22.33	0.171	22.47	0.177	22.44	0.175
1.4	16QAM	1	5	22.5	0.178	22.46	0.176	22.39	0.173
1.4	16QAM	3	0	22.01	0.159	22.36	0.172	22.33	0.171
1.4	16QAM	3	1	22.25	0.168	22.3	0.170	22.26	0.168
1.4	16QAM	3	3	22.19	0.166	22.2	0.166	22.19	0.166
1.4	16QAM	6	0	22.17	0.165	22.52	0.179	22.54	0.179
1.4	64QAM	1	0	21.98	0.158	21.87	0.154	21.97	0.157
1.4	64QAM	1	3	21.59	0.144	21.81	0.152	21.85	0.153
1.4	64QAM	1	5	21.37	0.137	21.77	0.150	21.81	0.152
1.4	64QAM	3	0	21.5	0.141	21.69	0.148	21.8	0.151
1.4	64QAM	3	1	21.31	0.135	21.65	0.146	21.77	0.150
1.4	64QAM	3	3	21.27	0.134	21.63	0.146	21.74	0.149
1.4	64QAM	6	0	21.37	0.137	21.63	0.146	21.73	0.149



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20450		20525		20600	
Frequency (MHz)				829		836.5		844	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	22.56	0.180	22.57	0.181	22.55	0.180
10	QPSK	1	25	22.48	0.177	22.52	0.179	22.47	0.177
10	QPSK	1	49	22.56	0.180	22.49	0.177	22.37	0.173
10	QPSK	25	0	21.49	0.141	21.60	0.145	21.57	0.144
10	QPSK	25	12	21.57	0.144	21.58	0.144	21.53	0.142
10	QPSK	25	25	21.48	0.141	21.44	0.139	21.46	0.140
10	QPSK	50	0	21.34	0.136	21.35	0.136	21.40	0.138
10	16QAM	1	0	21.37	0.137	21.23	0.133	21.49	0.141
10	16QAM	1	25	21.29	0.135	21.46	0.140	21.50	0.141
10	16QAM	1	49	21.41	0.138	21.69	0.148	21.32	0.136
10	16QAM	25	0	20.43	0.110	20.28	0.107	20.41	0.110
10	16QAM	25	12	20.39	0.109	20.49	0.112	20.43	0.110
10	16QAM	25	25	20.45	0.111	20.43	0.110	20.47	0.111
10	16QAM	50	0	20.52	0.113	20.46	0.111	20.43	0.110
10	64QAM	1	0	20.53	0.113	20.18	0.104	20.41	0.110
10	64QAM	1	25	20.11	0.103	20.38	0.109	20.32	0.108
10	64QAM	1	49	20.25	0.106	20.60	0.115	19.81	0.096
10	64QAM	25	0	20.17	0.104	20.24	0.106	20.19	0.104
10	64QAM	25	12	20.23	0.105	20.27	0.106	20.21	0.105
10	64QAM	25	25	20.42	0.110	20.10	0.102	20.12	0.103
10	64QAM	50	0	20.17	0.104	20.16	0.104	20.03	0.101



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20425		20525		20625	
Frequency (MHz)				826.5		836.5		846.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	22.20	0.166	22.42	0.175	22.38	0.173
5	QPSK	1	12	22.10	0.162	22.34	0.171	22.37	0.173
5	QPSK	1	24	22.18	0.165	22.27	0.169	22.37	0.173
5	QPSK	12	0	21.34	0.136	21.35	0.136	21.44	0.139
5	QPSK	12	7	21.30	0.135	21.38	0.137	21.39	0.138
5	QPSK	12	13	21.17	0.131	21.30	0.135	21.33	0.136
5	QPSK	25	0	21.03	0.127	21.15	0.130	21.14	0.130
5	16QAM	1	0	21.65	0.146	21.35	0.136	21.16	0.131
5	16QAM	1	12	21.37	0.137	21.42	0.139	21.67	0.147
5	16QAM	1	24	21.30	0.135	21.41	0.138	21.55	0.143
5	16QAM	12	0	20.52	0.113	20.37	0.109	20.63	0.116
5	16QAM	12	7	20.32	0.108	20.41	0.110	20.47	0.111
5	16QAM	12	13	20.33	0.108	20.35	0.108	20.55	0.114
5	16QAM	25	0	20.38	0.109	20.39	0.109	20.49	0.112
5	64QAM	1	0	20.19	0.104	20.14	0.103	20.43	0.110
5	64QAM	1	12	20.14	0.103	20.12	0.103	20.43	0.110
5	64QAM	1	24	20.10	0.102	20.09	0.102	20.43	0.110
5	64QAM	12	0	20.06	0.101	20.13	0.103	20.37	0.109
5	64QAM	12	7	20.24	0.106	20.00	0.100	20.35	0.108
5	64QAM	12	13	20.10	0.102	20.03	0.101	20.14	0.103
5	64QAM	25	0	20.24	0.106	20.03	0.101	20.28	0.107



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20415		20525		20635	
Frequency (MHz)				825.5		836.5		847.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	22.39	0.173	22.41	0.174	22.37	0.173
3	QPSK	1	8	22.28	0.169	22.30	0.170	22.35	0.172
3	QPSK	1	14	22.27	0.169	22.27	0.169	22.28	0.169
3	QPSK	8	0	21.49	0.141	21.35	0.136	21.53	0.142
3	QPSK	8	4	21.53	0.142	21.38	0.137	21.56	0.143
3	QPSK	8	7	21.47	0.140	21.30	0.135	21.54	0.143
3	QPSK	15	0	21.46	0.140	21.36	0.137	21.53	0.142
3	16QAM	1	0	21.55	0.143	21.56	0.143	21.72	0.149
3	16QAM	1	8	21.22	0.132	21.63	0.146	21.69	0.148
3	16QAM	1	14	21.48	0.141	21.45	0.140	21.57	0.144
3	16QAM	8	0	20.48	0.112	20.16	0.104	20.47	0.111
3	16QAM	8	4	20.39	0.109	20.41	0.110	20.48	0.112
3	16QAM	8	7	20.44	0.111	20.35	0.108	20.49	0.112
3	16QAM	15	0	20.62	0.115	20.60	0.115	20.65	0.116
3	64QAM	1	0	20.37	0.109	20.35	0.108	20.20	0.105
3	64QAM	1	8	20.42	0.110	20.21	0.105	20.44	0.111
3	64QAM	1	14	20.32	0.108	20.04	0.101	20.35	0.108
3	64QAM	8	0	20.24	0.106	20.34	0.108	20.24	0.106
3	64QAM	8	4	20.09	0.102	20.21	0.105	20.25	0.106
3	64QAM	8	7	20.34	0.108	20.24	0.106	20.24	0.106
3	64QAM	15	0	20.10	0.102	20.24	0.106	20.24	0.106



LTE Band 5				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20407		20525		20643	
Frequency (MHz)				824.7		836.5		848.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	22.32	0.171	22.45	0.176	22.35	0.172
1.4	QPSK	1	3	22.44	0.175	22.33	0.171	22.34	0.171
1.4	QPSK	1	5	22.27	0.169	22.29	0.169	22.26	0.168
1.4	QPSK	3	0	22.37	0.173	22.27	0.169	22.29	0.169
1.4	QPSK	3	1	22.43	0.175	22.24	0.167	22.41	0.174
1.4	QPSK	3	3	22.38	0.173	22.19	0.166	22.37	0.173
1.4	QPSK	6	0	21.46	0.140	21.37	0.137	21.39	0.138
1.4	16QAM	1	0	21.24	0.133	21.28	0.134	21.42	0.139
1.4	16QAM	1	3	21.26	0.134	21.27	0.134	21.26	0.134
1.4	16QAM	1	5	21.50	0.141	21.51	0.142	21.51	0.142
1.4	16QAM	3	0	21.33	0.136	21.41	0.138	21.39	0.138
1.4	16QAM	3	1	21.37	0.137	21.38	0.137	21.36	0.137
1.4	16QAM	3	3	21.49	0.141	21.50	0.141	21.48	0.141
1.4	16QAM	6	0	20.22	0.105	20.22	0.105	20.26	0.106
1.4	64QAM	1	0	20.43	0.110	20.18	0.104	20.35	0.108
1.4	64QAM	1	3	20.20	0.105	20.16	0.104	20.17	0.104
1.4	64QAM	1	5	20.50	0.112	20.15	0.104	20.20	0.105
1.4	64QAM	3	0	20.19	0.104	20.11	0.103	20.15	0.104
1.4	64QAM	3	1	20.28	0.107	20.12	0.103	20.22	0.105
1.4	64QAM	3	3	20.22	0.105	20.13	0.103	20.20	0.105
1.4	64QAM	6	0	20.30	0.107	20.13	0.103	20.19	0.104



LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23060		23095		23130	
Frequency (MHz)				704		707.5		711	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	22.56	0.180	22.63	0.183	22.55	0.180
10	QPSK	1	25	22.29	0.169	22.40	0.174	22.36	0.172
10	QPSK	1	49	22.27	0.169	22.28	0.169	22.27	0.169
10	QPSK	25	0	21.59	0.144	21.66	0.147	21.48	0.141
10	QPSK	25	12	21.56	0.143	21.36	0.137	21.30	0.135
10	QPSK	25	25	21.51	0.142	21.31	0.135	21.39	0.138
10	QPSK	50	0	21.40	0.138	21.42	0.139	21.43	0.139
10	16QAM	1	0	21.59	0.144	21.17	0.131	21.62	0.145
10	16QAM	1	25	21.73	0.149	21.79	0.151	21.69	0.148
10	16QAM	1	49	21.84	0.153	21.48	0.141	21.73	0.149
10	16QAM	25	0	20.48	0.112	20.47	0.111	20.48	0.112
10	16QAM	25	12	20.62	0.115	20.36	0.109	20.41	0.110
10	16QAM	25	25	20.66	0.116	20.38	0.109	20.52	0.113
10	16QAM	50	0	20.47	0.111	20.42	0.110	20.47	0.111
10	64QAM	1	0	20.05	0.101	20.08	0.102	20.03	0.101
10	64QAM	1	25	20.16	0.104	20.17	0.104	20.29	0.107
10	64QAM	1	49	20.43	0.110	20.53	0.113	20.28	0.107
10	64QAM	25	0	20.35	0.108	20.33	0.108	20.27	0.106
10	64QAM	25	12	20.30	0.107	20.22	0.105	20.26	0.106
10	64QAM	25	25	20.30	0.107	20.36	0.109	20.13	0.103
10	64QAM	50	0	20.30	0.107	20.30	0.107	20.17	0.104



LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23035		23095		23155	
Frequency (MHz)				701.5		707.5		713.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	22.51	0.178	22.74	0.188	22.61	0.182
5	QPSK	1	12	22.63	0.183	22.67	0.185	22.54	0.179
5	QPSK	1	24	22.72	0.187	22.51	0.178	22.48	0.177
5	QPSK	12	0	21.50	0.141	21.37	0.137	21.33	0.136
5	QPSK	12	7	21.23	0.133	21.37	0.137	21.29	0.135
5	QPSK	12	13	21.27	0.134	21.31	0.135	21.35	0.136
5	QPSK	25	0	21.29	0.135	21.42	0.139	21.28	0.134
5	16QAM	1	0	21.55	0.143	21.09	0.129	21.40	0.138
5	16QAM	1	12	21.38	0.137	21.64	0.146	21.40	0.138
5	16QAM	1	24	21.46	0.140	21.49	0.141	21.07	0.128
5	16QAM	12	0	20.51	0.112	20.46	0.111	20.45	0.111
5	16QAM	12	7	20.65	0.116	20.47	0.111	20.43	0.110
5	16QAM	12	13	20.46	0.111	20.45	0.111	20.31	0.107
5	16QAM	25	0	20.40	0.110	20.34	0.108	20.29	0.107
5	64QAM	1	0	20.47	0.111	20.02	0.100	20.35	0.108
5	64QAM	1	12	20.26	0.106	20.13	0.103	20.25	0.106
5	64QAM	1	24	20.44	0.111	20.06	0.101	20.48	0.112
5	64QAM	12	0	20.11	0.103	20.12	0.103	20.38	0.109
5	64QAM	12	7	20.26	0.106	20.04	0.101	20.13	0.103
5	64QAM	12	13	20.04	0.101	20.10	0.102	20.11	0.103
5	64QAM	25	0	20.16	0.104	20.04	0.101	20.23	0.105



LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23025		23095		23165	
Frequency (MHz)				700.5		707.5		714.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	22.56	0.180	22.73	0.187	22.63	0.183
3	QPSK	1	8	22.68	0.185	22.69	0.186	22.64	0.184
3	QPSK	1	14	22.67	0.185	22.64	0.184	22.65	0.184
3	QPSK	8	0	21.23	0.133	21.38	0.137	21.36	0.137
3	QPSK	8	4	21.27	0.134	21.37	0.137	21.31	0.135
3	QPSK	8	7	21.20	0.132	21.36	0.137	21.25	0.133
3	QPSK	15	0	21.25	0.133	21.34	0.136	21.23	0.133
3	16QAM	1	0	21.47	0.140	21.90	0.155	21.80	0.151
3	16QAM	1	8	21.52	0.142	21.53	0.142	21.51	0.142
3	16QAM	1	14	21.51	0.142	21.50	0.141	21.52	0.142
3	16QAM	8	0	20.42	0.110	20.45	0.111	20.43	0.110
3	16QAM	8	4	20.32	0.108	20.34	0.108	20.31	0.107
3	16QAM	8	7	20.18	0.104	20.21	0.105	20.19	0.104
3	16QAM	15	0	20.32	0.108	20.42	0.110	20.22	0.105
3	64QAM	1	0	20.00	0.100	20.14	0.103	20.11	0.103
3	64QAM	1	8	20.53	0.113	20.54	0.113	20.56	0.114
3	64QAM	1	14	20.30	0.107	20.31	0.107	20.32	0.108
3	64QAM	8	0	20.22	0.105	20.25	0.106	20.26	0.106
3	64QAM	8	4	20.41	0.110	20.60	0.115	20.44	0.111
3	64QAM	8	7	20.37	0.109	20.59	0.115	20.43	0.110
3	64QAM	15	0	20.30	0.107	20.58	0.114	20.41	0.110



LTE Band 12				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23017		23095		23173	
Frequency (MHz)				699.7		707.5		715.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	22.09	0.162	22.53	0.179	22.43	0.175
1.4	QPSK	1	3	22.21	0.166	22.23	0.167	22.24	0.167
1.4	QPSK	1	5	22.07	0.161	22.09	0.162	22.08	0.161
1.4	QPSK	3	0	22.14	0.164	22.16	0.164	22.15	0.164
1.4	QPSK	3	1	22.21	0.166	22.23	0.167	22.21	0.166
1.4	QPSK	3	3	22.17	0.165	22.18	0.165	22.19	0.166
1.4	QPSK	6	0	21.01	0.126	21.47	0.140	21.41	0.138
1.4	16QAM	1	0	21.34	0.136	21.46	0.140	21.45	0.140
1.4	16QAM	1	3	21.53	0.142	21.54	0.143	21.56	0.143
1.4	16QAM	1	5	21.20	0.132	21.23	0.133	21.24	0.133
1.4	16QAM	3	0	21.29	0.135	21.30	0.135	21.30	0.135
1.4	16QAM	3	1	21.30	0.135	21.34	0.136	21.32	0.136
1.4	16QAM	3	3	21.43	0.139	21.42	0.139	21.40	0.138
1.4	16QAM	6	0	20.27	0.106	20.70	0.117	20.65	0.116
1.4	64QAM	1	0	20.19	0.104	20.74	0.119	20.73	0.118
1.4	64QAM	1	3	20.33	0.108	20.35	0.108	20.34	0.108
1.4	64QAM	1	5	20.21	0.105	20.26	0.106	20.33	0.108
1.4	64QAM	3	0	20.30	0.107	20.29	0.107	20.31	0.107
1.4	64QAM	3	1	20.31	0.107	20.41	0.110	20.45	0.111
1.4	64QAM	3	3	20.40	0.110	20.38	0.109	20.43	0.110
1.4	64QAM	6	0	20.22	0.105	20.35	0.108	20.42	0.110



LTE Band 13				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				/		23230		/	
Frequency (MHz)				/		782		/	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	/	/	23.55	0.226	/	/
10	QPSK	1	25	/	/	23.42	0.220	/	/
10	QPSK	1	49	/	/	23.48	0.223	/	/
10	QPSK	25	0	/	/	22.77	0.189	/	/
10	QPSK	25	12	/	/	22.52	0.179	/	/
10	QPSK	25	25	/	/	22.62	0.183	/	/
10	QPSK	50	0	/	/	22.59	0.182	/	/
10	16QAM	1	0	/	/	22.49	0.177	/	/
10	16QAM	1	25	/	/	22.47	0.177	/	/
10	16QAM	1	49	/	/	22.36	0.172	/	/
10	16QAM	25	0	/	/	21.35	0.136	/	/
10	16QAM	25	12	/	/	21.38	0.137	/	/
10	16QAM	25	25	/	/	21.37	0.137	/	/
10	16QAM	50	0	/	/	21.44	0.139	/	/
10	64QAM	1	0	/	/	21.46	0.140	/	/
10	64QAM	1	25	/	/	21.53	0.142	/	/
10	64QAM	1	49	/	/	21.22	0.132	/	/
10	64QAM	25	0	/	/	21.22	0.132	/	/
10	64QAM	25	12	/	/	21.43	0.139	/	/
10	64QAM	25	25	/	/	21.42	0.139	/	/
10	64QAM	50	0	/	/	21.22	0.132	/	/



LTE Band 13				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				23205		23230		23255	
Frequency (MHz)				779.5		782		784.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	23.37	0.217	23.34	0.216	23.35	0.216
5	QPSK	1	12	23.24	0.211	23.22	0.210	23.27	0.212
5	QPSK	1	24	23.39	0.218	23.32	0.215	23.43	0.220
5	QPSK	12	0	22.45	0.176	22.46	0.176	22.58	0.181
5	QPSK	12	7	22.56	0.180	22.58	0.181	22.63	0.183
5	QPSK	12	13	22.60	0.182	22.64	0.184	22.70	0.186
5	QPSK	25	0	22.40	0.174	22.52	0.179	22.62	0.183
5	16QAM	1	0	22.48	0.177	22.78	0.190	22.62	0.183
5	16QAM	1	12	22.64	0.184	22.66	0.185	22.78	0.190
5	16QAM	1	24	23.13	0.206	22.68	0.185	23.12	0.205
5	16QAM	12	0	21.33	0.136	21.34	0.136	21.47	0.140
5	16QAM	12	7	21.33	0.136	21.41	0.138	21.49	0.141
5	16QAM	12	13	21.36	0.137	21.35	0.136	21.59	0.144
5	16QAM	25	0	21.35	0.136	21.22	0.132	21.46	0.140
5	64QAM	1	0	21.54	0.143	21.56	0.143	21.63	0.146
5	64QAM	1	12	21.15	0.130	21.43	0.139	21.73	0.149
5	64QAM	1	24	21.44	0.139	21.57	0.144	21.40	0.138
5	64QAM	12	0	21.19	0.132	21.23	0.133	21.31	0.135
5	64QAM	12	7	21.27	0.134	21.34	0.136	21.46	0.140
5	64QAM	12	13	21.38	0.137	21.51	0.142	21.53	0.142
5	64QAM	25	0	21.40	0.138	21.31	0.135	21.44	0.139



LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				132072		132322		132572	
Frequency (MHz)				1720		1745		1770	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	23.21	0.209	23.45	0.221	23.37	0.217
20	QPSK	1	49	23.19	0.208	23.43	0.220	23.18	0.208
20	QPSK	1	99	23.13	0.206	23.42	0.220	23.09	0.204
20	QPSK	50	0	22.40	0.174	22.69	0.186	22.51	0.178
20	QPSK	50	24	22.59	0.182	22.54	0.179	22.49	0.177
20	QPSK	50	50	22.50	0.178	22.64	0.184	22.33	0.171
20	QPSK	100	0	22.56	0.180	22.52	0.179	22.56	0.180
20	16QAM	1	0	22.48	0.177	22.81	0.191	22.77	0.189
20	16QAM	1	49	22.29	0.169	22.25	0.168	22.51	0.178
20	16QAM	1	99	22.62	0.183	22.59	0.182	22.40	0.174
20	16QAM	50	0	22.30	0.170	22.57	0.181	22.46	0.176
20	16QAM	50	24	22.53	0.179	22.52	0.179	22.54	0.179
20	16QAM	50	50	22.55	0.180	22.54	0.179	22.35	0.172
20	16QAM	100	0	22.66	0.185	22.72	0.187	22.68	0.185
20	64QAM	1	0	21.20	0.132	21.63	0.146	21.33	0.136
20	64QAM	1	49	21.71	0.148	21.41	0.138	21.30	0.135
20	64QAM	1	99	21.68	0.147	21.42	0.139	21.33	0.136
20	64QAM	50	0	21.31	0.135	21.43	0.139	21.23	0.133
20	64QAM	50	24	21.27	0.134	21.41	0.138	21.26	0.134
20	64QAM	50	50	21.28	0.134	21.26	0.134	21.21	0.132
20	64QAM	100	0	21.22	0.132	21.31	0.135	21.18	0.131



LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				132047		132322		132597	
Frequency (MHz)				1717.5		1745		1772.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	23.24	0.211	23.39	0.218	23.21	0.209
15	QPSK	1	37	23.30	0.214	23.38	0.218	23.19	0.208
15	QPSK	1	74	23.33	0.215	23.38	0.218	23.14	0.206
15	QPSK	36	0	22.15	0.164	22.44	0.175	22.28	0.169
15	QPSK	36	20	22.28	0.169	22.34	0.171	22.31	0.170
15	QPSK	36	39	22.29	0.169	22.44	0.175	22.13	0.163
15	QPSK	75	0	22.17	0.165	22.39	0.173	22.30	0.170
15	16QAM	1	0	22.46	0.176	22.54	0.179	22.35	0.172
15	16QAM	1	37	22.60	0.182	22.29	0.169	22.36	0.172
15	16QAM	1	74	22.52	0.179	22.90	0.195	22.48	0.177
15	16QAM	36	0	22.25	0.168	22.50	0.178	22.48	0.177
15	16QAM	36	20	22.41	0.174	22.63	0.183	22.44	0.175
15	16QAM	36	39	22.43	0.175	22.53	0.179	22.25	0.168
15	16QAM	75	0	22.43	0.175	22.57	0.181	22.40	0.174
15	64QAM	1	0	21.03	0.127	21.25	0.133	21.33	0.136
15	64QAM	1	37	21.61	0.145	21.71	0.148	21.56	0.143
15	64QAM	1	74	21.42	0.139	21.56	0.143	21.25	0.133
15	64QAM	36	0	21.22	0.132	21.31	0.135	21.31	0.135
15	64QAM	36	20	21.27	0.134	21.34	0.136	21.24	0.133
15	64QAM	36	39	21.17	0.131	21.35	0.136	21.19	0.132
15	64QAM	75	0	21.18	0.131	21.39	0.138	21.17	0.131



LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				132022		132322		132622	
Frequency (MHz)				1715		1745		1775	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	23.33	0.215	23.33	0.215	23.22	0.210
10	QPSK	1	25	23.15	0.207	23.34	0.216	23.04	0.201
10	QPSK	1	49	23.04	0.201	23.08	0.203	23.15	0.207
10	QPSK	25	0	22.17	0.165	22.23	0.167	22.22	0.167
10	QPSK	25	12	22.12	0.163	22.30	0.170	22.11	0.163
10	QPSK	25	25	22.10	0.162	22.25	0.168	22.17	0.165
10	QPSK	50	0	22.19	0.166	22.31	0.170	22.17	0.165
10	16QAM	1	0	22.39	0.173	22.46	0.176	22.53	0.179
10	16QAM	1	25	22.34	0.171	22.57	0.181	22.36	0.172
10	16QAM	1	49	22.29	0.169	22.43	0.175	22.29	0.169
10	16QAM	25	0	22.21	0.166	22.38	0.173	22.24	0.167
10	16QAM	25	12	22.43	0.175	22.49	0.177	22.37	0.173
10	16QAM	25	25	22.28	0.169	22.41	0.174	22.25	0.168
10	16QAM	50	0	22.20	0.166	22.43	0.175	22.22	0.167
10	64QAM	1	0	21.52	0.142	21.65	0.146	21.58	0.144
10	64QAM	1	25	21.46	0.140	21.81	0.152	21.41	0.138
10	64QAM	1	49	21.83	0.152	21.69	0.148	21.55	0.143
10	64QAM	25	0	21.58	0.144	21.66	0.147	21.49	0.141
10	64QAM	25	12	21.55	0.143	21.73	0.149	21.55	0.143
10	64QAM	25	25	21.47	0.140	21.52	0.142	21.53	0.142
10	64QAM	50	0	21.42	0.139	21.70	0.148	21.36	0.137



LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				131997		132322		132647	
Frequency (MHz)				1712.5		1745		1777.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	23.18	0.208	23.41	0.219	23.26	0.212
5	QPSK	1	12	23.19	0.208	23.40	0.219	23.25	0.211
5	QPSK	1	24	23.22	0.210	23.40	0.219	23.24	0.211
5	QPSK	12	0	22.47	0.177	22.51	0.178	22.34	0.171
5	QPSK	12	7	22.55	0.180	22.51	0.178	22.35	0.172
5	QPSK	12	13	22.50	0.178	22.51	0.178	22.35	0.172
5	QPSK	25	0	22.54	0.179	22.48	0.177	22.35	0.172
5	16QAM	1	0	22.35	0.172	22.47	0.177	22.44	0.175
5	16QAM	1	12	22.33	0.171	22.52	0.179	22.32	0.171
5	16QAM	1	24	22.47	0.177	22.18	0.165	22.65	0.184
5	16QAM	12	0	22.51	0.178	22.57	0.181	22.26	0.168
5	16QAM	12	7	22.56	0.180	22.40	0.174	22.45	0.176
5	16QAM	12	13	22.58	0.181	22.44	0.175	22.23	0.167
5	16QAM	25	0	22.51	0.178	22.47	0.177	22.39	0.173
5	64QAM	1	0	21.47	0.140	21.84	0.153	21.54	0.143
5	64QAM	1	12	21.25	0.133	21.49	0.141	21.59	0.144
5	64QAM	1	24	21.54	0.143	21.56	0.143	21.46	0.140
5	64QAM	12	0	21.27	0.134	21.30	0.135	21.24	0.133
5	64QAM	12	7	21.34	0.136	21.30	0.135	21.33	0.136
5	64QAM	12	13	21.25	0.133	21.13	0.130	21.36	0.137
5	64QAM	25	0	21.27	0.134	21.24	0.133	21.33	0.136



LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				131987		132322		132657	
Frequency (MHz)				1711.5		1745		1778.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	23.33	0.215	23.33	0.215	23.31	0.214
3	QPSK	1	8	23.26	0.212	23.27	0.212	23.25	0.211
3	QPSK	1	14	23.11	0.205	23.14	0.206	23.12	0.205
3	QPSK	8	0	22.55	0.180	22.56	0.180	22.51	0.178
3	QPSK	8	4	22.54	0.179	22.57	0.181	22.53	0.179
3	QPSK	8	7	22.56	0.180	22.55	0.180	22.54	0.179
3	QPSK	15	0	22.5	0.178	22.51	0.178	22.5	0.178
3	16QAM	1	0	22.5	0.178	22.49	0.177	22.5	0.178
3	16QAM	1	8	22.2	0.166	22.57	0.181	22.56	0.180
3	16QAM	1	14	22.78	0.190	22.56	0.180	22.55	0.180
3	16QAM	8	0	22.59	0.182	22.39	0.173	22.38	0.173
3	16QAM	8	4	22.48	0.177	22.29	0.169	22.3	0.170
3	16QAM	8	7	22.56	0.180	22.34	0.171	22.33	0.171
3	16QAM	15	0	22.44	0.175	22.26	0.168	22.22	0.167
3	64QAM	1	0	21.34	0.136	21.44	0.139	21.42	0.139
3	64QAM	1	8	21.22	0.132	21.38	0.137	21.34	0.136
3	64QAM	1	14	21.31	0.135	21.3	0.135	21.31	0.135
3	64QAM	8	0	21.5	0.141	21.47	0.140	21.47	0.140
3	64QAM	8	4	21.56	0.143	21.55	0.143	21.54	0.143
3	64QAM	8	7	21.51	0.142	21.5	0.141	21.52	0.142
3	64QAM	15	0	21.42	0.139	21.43	0.139	21.44	0.139



LTE Band 66				Measured E.I.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				131979		132322		132665	
Frequency (MHz)				1710.7		1745		1779.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	22.95	0.197	23.39	0.218	23.27	0.212
1.4	QPSK	1	3	23.15	0.207	23.38	0.218	23.3	0.214
1.4	QPSK	1	5	23.09	0.204	23.37	0.217	23.28	0.213
1.4	QPSK	3	0	23.04	0.201	23.32	0.215	23.26	0.212
1.4	QPSK	3	1	23.09	0.204	23.33	0.215	23.25	0.211
1.4	QPSK	3	3	23.07	0.203	23.3	0.214	23.26	0.212
1.4	QPSK	6	0	22.33	0.171	22.65	0.184	22.35	0.172
1.4	16QAM	1	0	22.31	0.170	22.67	0.185	22.61	0.182
1.4	16QAM	1	3	22.55	0.180	22.56	0.180	22.54	0.179
1.4	16QAM	1	5	22.25	0.168	22.51	0.178	22.27	0.169
1.4	16QAM	3	0	22.25	0.168	22.48	0.177	22.26	0.168
1.4	16QAM	3	1	22.4	0.174	22.39	0.173	22.21	0.166
1.4	16QAM	3	3	22.42	0.175	22.51	0.178	22.2	0.166
1.4	16QAM	6	0	22.67	0.185	22.82	0.191	22.66	0.185
1.4	64QAM	1	0	21.35	0.136	21.55	0.143	21.66	0.147
1.4	64QAM	1	3	21.52	0.142	21.45	0.140	21.6	0.145
1.4	64QAM	1	5	21.8	0.151	21.6	0.145	21.56	0.143
1.4	64QAM	3	0	21.47	0.140	21.28	0.134	21.35	0.136
1.4	64QAM	3	1	21.56	0.143	21.23	0.133	21.27	0.134
1.4	64QAM	3	3	21.67	0.147	21.55	0.143	21.56	0.143
1.4	64QAM	6	0	21.38	0.137	21.22	0.132	20.89	0.123

2.2. Radiated Spurious Emissions

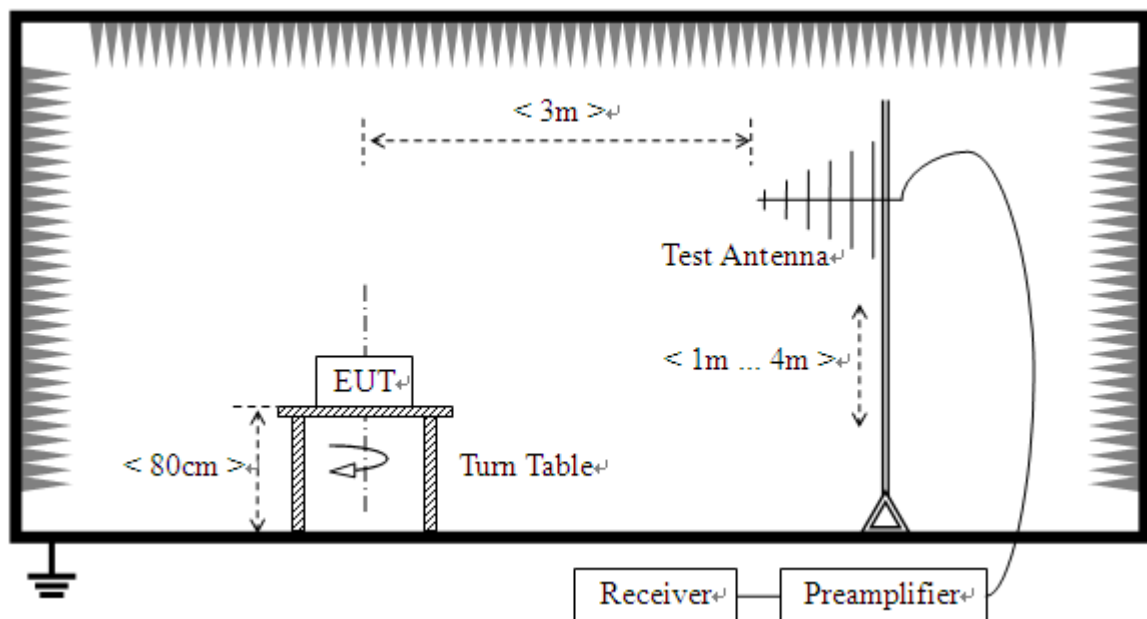
2.2.1. Requirement

According to FCC section 2.1051, 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. This calculated to be -13dBm.

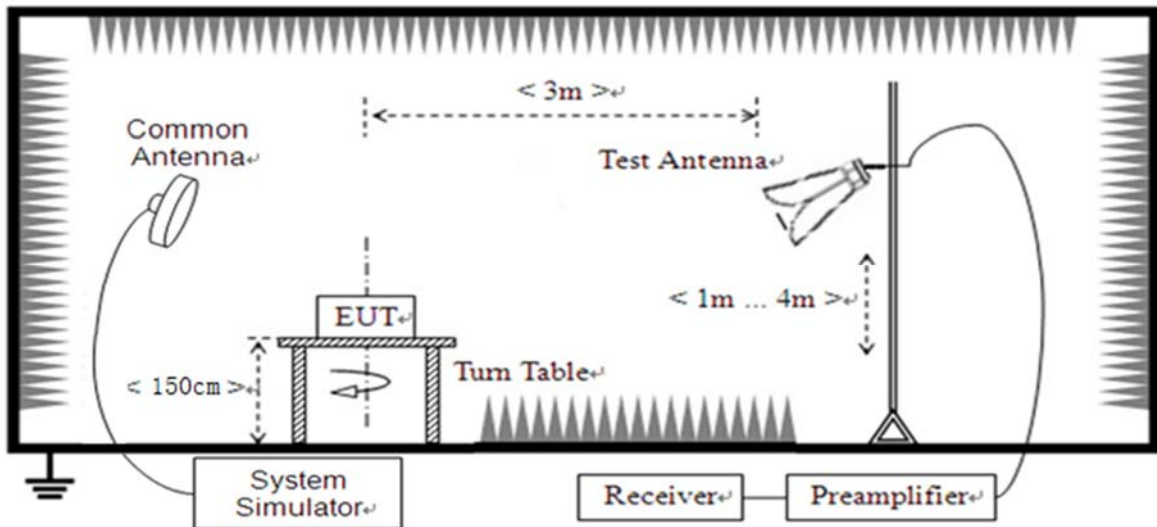
Additional requirement for Band 13

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (E.I.R.P.) for wideband signals, and -80 dBW E.I.R.P. for discrete emissions of less than 700 Hz bandwidth. This calculated to be -40dBm.

2.2.2. Test Description



(For the test frequency from 30MHz to 1GHz)



(For the test frequency above 1GHz)

The EUT is located in a 3m Full-Anechoic Chamber, the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading. A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power, and only the test result of the maximum output power was recorded.

In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground and the Turn Table is actuated to turn from 0° to 360° to determine the maximum value of the radiated power. The emission levels at both horizontal and vertical polarizations should be tested. The Filters consists of Notch Filters and High Pass Filter.

Note: When doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.2.3. Test Procedure

KDB 971168 D01v03 Section 5.8 and ANSI/TIA-603-E-2016.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements.

For measurements above 1GHz (exclude 1559-1610 MHz) the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements.



2.2.4. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested to verify the out of band emissions.

The substitution corrections are obtained as described below:

$$A_{\text{SUBST}} = P_{\text{SUBST_TX}} - P_{\text{SUBST_RX}} - L_{\text{SUBST_CABLES}} + G_{\text{SUBST_TX_ANT}}$$

$$A_{\text{TOT}} = L_{\text{CABLES}} + A_{\text{SUBST}}$$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

$P_{\text{SUBST_TX}}$ is signal generator level,

$P_{\text{SUBST_RX}}$ is receiver level,

$L_{\text{SUBST_CABLES}}$ is cable losses including TX cable,

$G_{\text{SUBST_TX_ANT}}$ is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the test spectrum analyze, so spectrum analyze reading is the final values which contain the data of A_{TOT} .

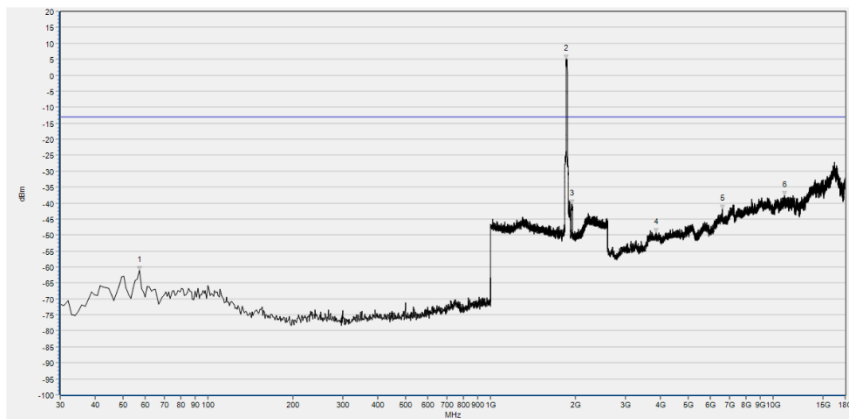
Note1: The power of the EUT transmitting frequency should be ignored.

Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

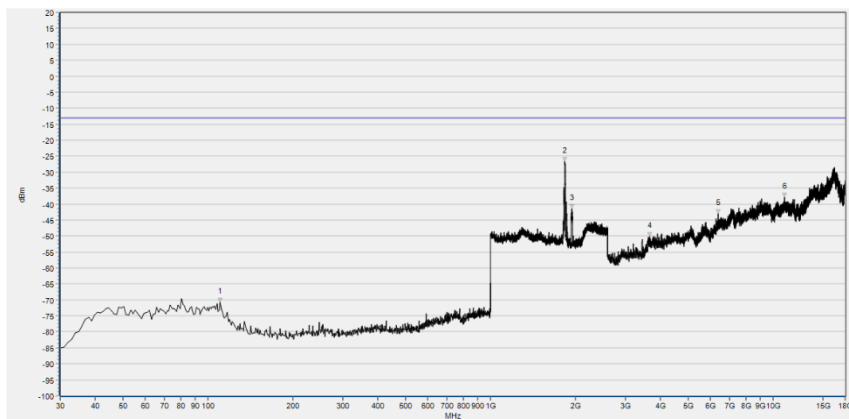
Note3: All bandwidth and modulation were considered and evaluated respectively by performing full test for each band, only the worst cases (Max Bandwidth and QPSK mode) were recorded in this test report.

Note4: N/A means the frequency is the basic frequency or the base station frequency, they are no need to verdict.

LTE Band 2, 20MHz BW, Low Channel, QPSK

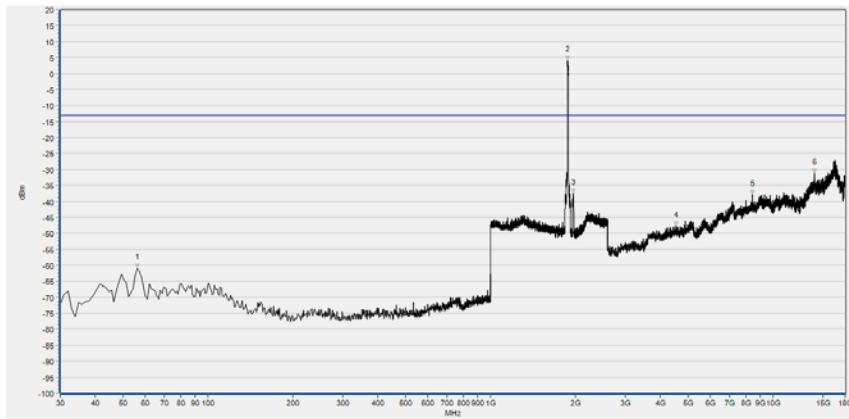


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	57.160	-61.04	-13.00	Horizontal	PASS
2	1854.742	5.01	-13.00	Horizontal	N/A
3	1936.054	-40.42	-13.00	Horizontal	N/A
4	3865.830	-49.21	-13.00	Horizontal	PASS
5	6627.132	-41.93	-13.00	Horizontal	PASS
6	10959.520	-37.60	-13.00	Horizontal	PASS

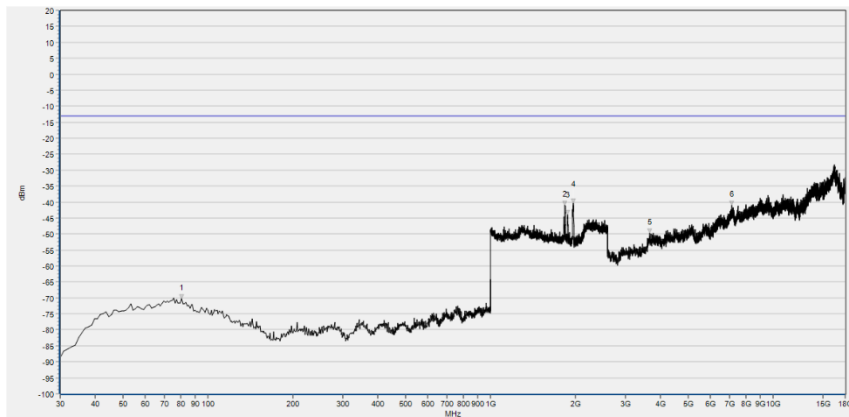


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	110.510	-70.81	-13.00	Vertical	PASS
2	1834.894	-26.78	-13.00	Vertical	N/A
3	1936.054	-41.44	-13.00	Vertical	N/A
4	3652.991	-50.06	-13.00	Vertical	PASS
5	6386.288	-42.96	-13.00	Vertical	PASS
6	10967.921	-37.85	-13.00	Vertical	PASS

LTE Band 2, 20MHz BW, Mid Channel, QPSK

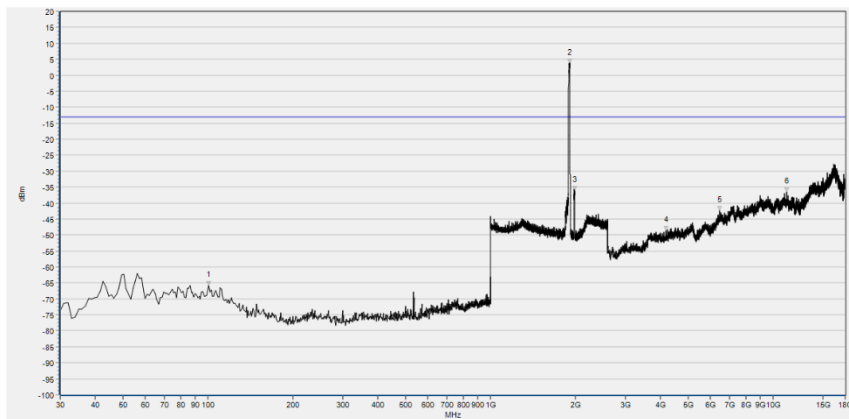


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	56.190	-60.84	-13.00	Horizontal	PASS
2	1872.029	4.08	-13.00	Horizontal	N/A
3	1966.787	-37.46	-13.00	Horizontal	N/A
4	4540.753	-47.61	-13.00	Horizontal	PASS
5	8447.463	-37.90	-13.00	Horizontal	PASS
6	14014.875	-31.27	-13.00	Horizontal	PASS

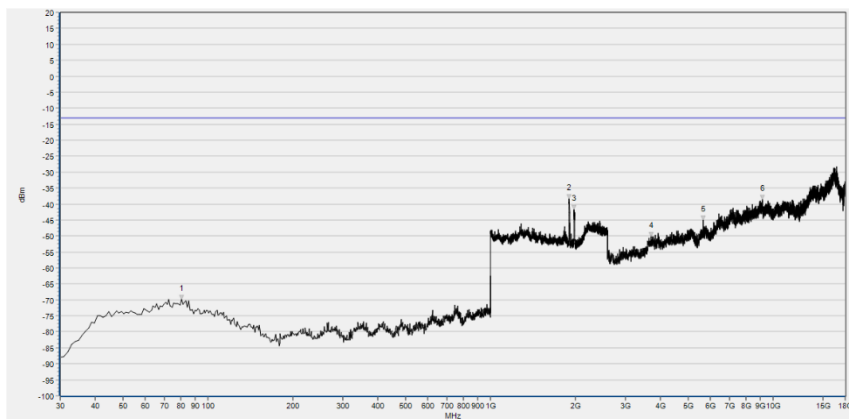


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	80.440	-70.26	-13.00	Vertical	PASS
2	1836.174	-41.11	-13.00	Vertical	PASS
3	1876.511	-43.94	-13.00	Vertical	N/A
4	1966.146	-40.28	-13.00	Vertical	N/A
5	3661.393	-49.79	-13.00	Vertical	PASS
6	7120.022	-40.92	-13.00	Vertical	PASS

LTE Band 2, 20MHz BW, High Channel, QPSK

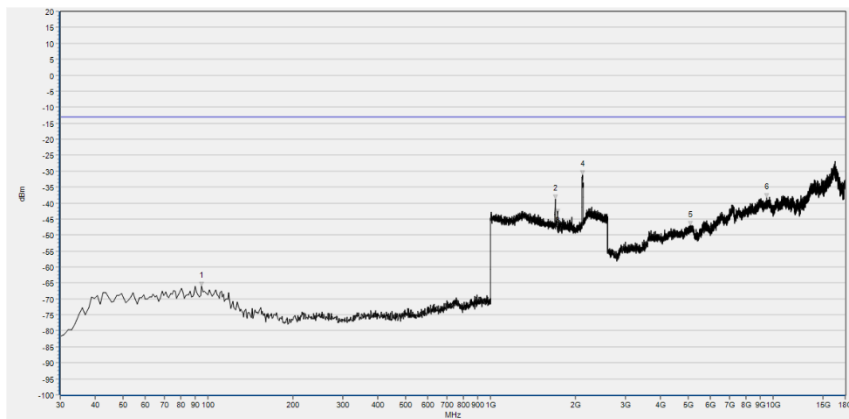


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	100.810	-65.73	-13.00	Horizontal	PASS
2	1902.121	3.65	-13.00	Horizontal	N/A
3	1984.714	-36.03	-13.00	Horizontal	N/A
4	4179.487	-48.70	-13.00	Horizontal	PASS
5	6461.902	-42.45	-13.00	Horizontal	PASS
6	11172.359	-36.58	-13.00	Horizontal	PASS

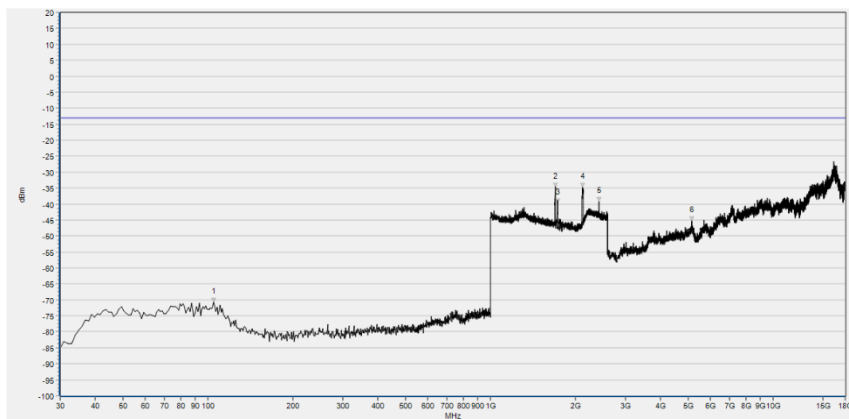


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	80.440	-69.86	-13.00	Vertical	PASS
2	1900.840	-38.32	-13.00	Vertical	N/A
3	1975.110	-41.78	-13.00	Vertical	N/A
4	3692.199	-50.27	-13.00	Vertical	PASS
5	5666.558	-45.12	-13.00	Vertical	PASS
6	9147.590	-38.66	-13.00	Vertical	PASS

LTE Band 4, 20MHz BW, Low Channel, QPSK

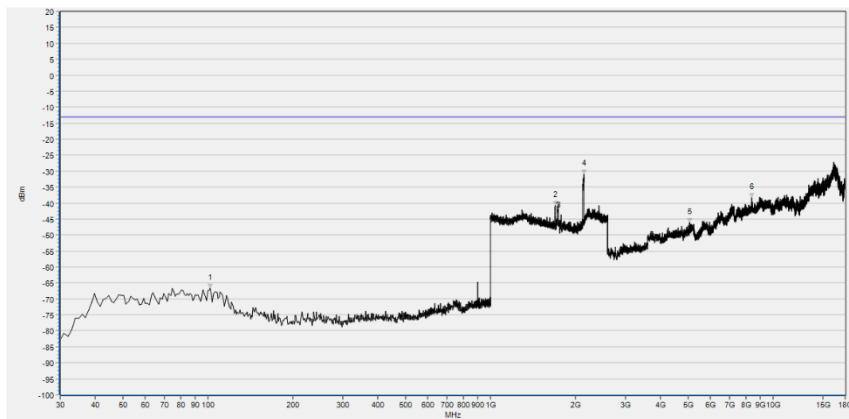


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	95.055	-66.01	-13.00	Horizontal	PASS
2	1693.947	-38.78	-13.00	Horizontal	N/A
3	1725.963	-43.32	-13.00	Horizontal	N/A
4	2114.957	-31.16	-13.00	Horizontal	N/A
5	5090.082	-47.09	-13.00	Horizontal	PASS
6	9502.917	-38.35	-13.00	Horizontal	PASS

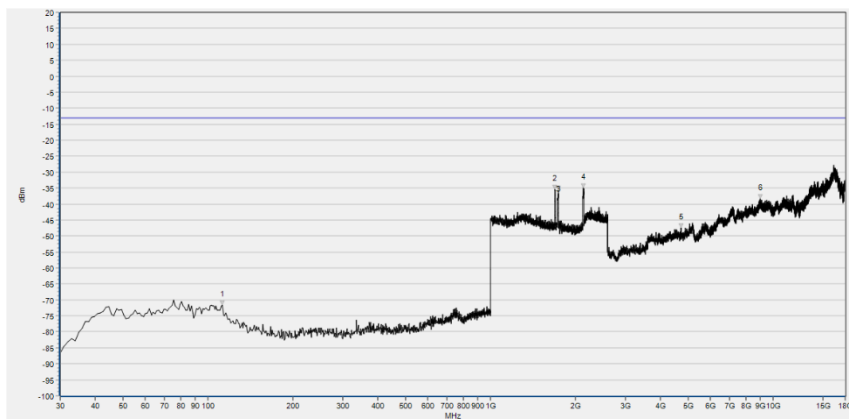


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	104.765	-70.75	-13.00	Vertical	PASS
2	1693.147	-34.65	-13.00	Vertical	PASS
3	1725.963	-39.72	-13.00	Vertical	N/A
4	2122.161	-34.80	-13.00	Vertical	N/A
5	2425.513	-39.22	-13.00	Vertical	PASS
6	5146.558	-45.34	-13.00	Vertical	PASS

LTE Band 4, 20MHz BW, Mid Channel, QPSK

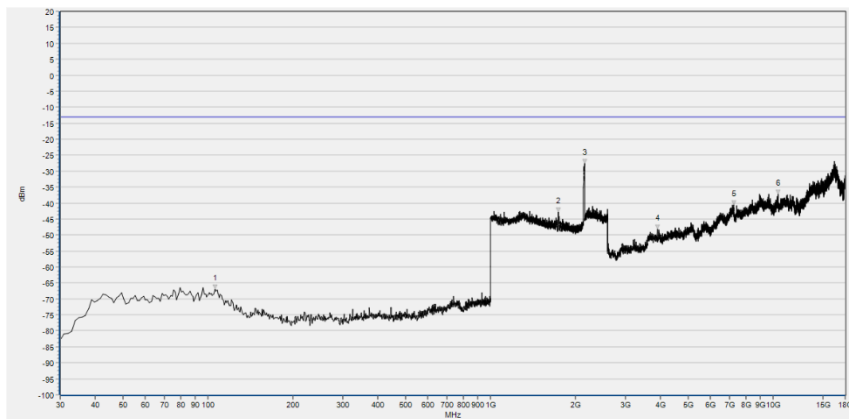


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	101.852	-66.74	-13.00	Horizontal	PASS
2	1693.147	-40.67	-13.00	Horizontal	N/A
3	1733.167	-40.93	-13.00	Horizontal	N/A
4	2139.770	-30.87	-13.00	Horizontal	N/A
5	5072.112	-46.06	-13.00	Horizontal	PASS
6	8386.231	-38.37	-13.00	Horizontal	PASS

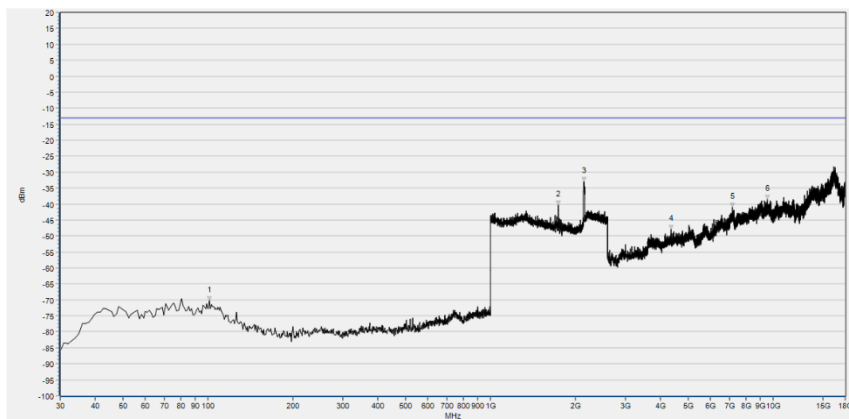


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	112.533	-71.70	-13.00	Vertical	PASS
2	1692.346	-35.47	-13.00	Vertical	PASS
3	1736.368	-35.68	-13.00	Vertical	N/A
4	2131.766	-35.07	-13.00	Vertical	N/A
5	4717.853	-47.38	-13.00	Vertical	PASS
6	8989.498	-38.27	-13.00	Vertical	PASS

LTE Band 4, 20MHz BW, High Channel, QPSK

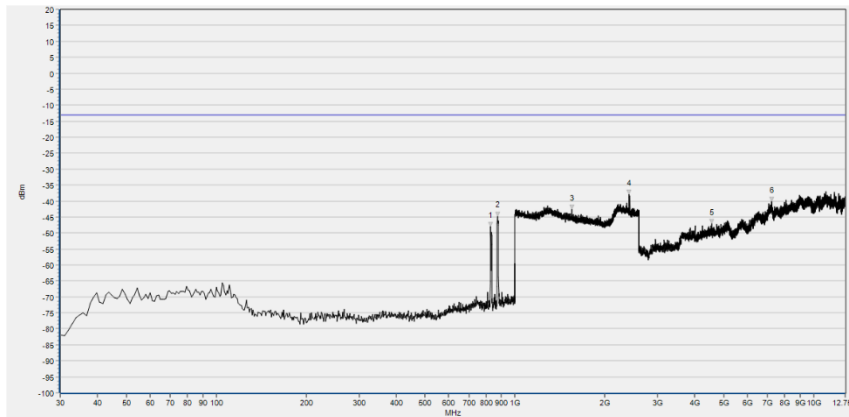


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	105.736	-66.94	-13.00	Horizontal	PASS
2	1736.368	-42.79	-13.00	Horizontal	N/A
3	2149.375	-27.64	-13.00	Horizontal	N/A
4	3888.681	-48.18	-13.00	Horizontal	PASS
5	7246.441	-40.63	-13.00	Horizontal	PASS
6	10439.907	-37.31	-13.00	Horizontal	PASS

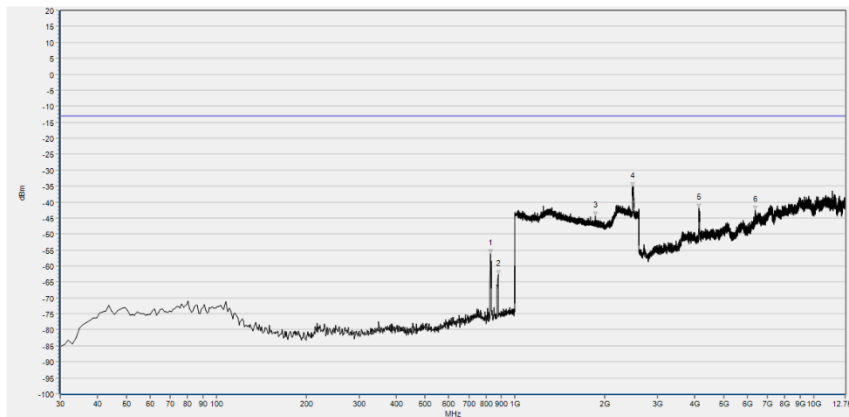


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	100.881	-70.32	-13.00	Vertical	PASS
2	1736.368	-40.32	-13.00	Vertical	N/A
3	2146.973	-32.90	-13.00	Vertical	N/A
4	4350.758	-47.85	-13.00	Vertical	PASS
5	7169.428	-41.02	-13.00	Vertical	PASS
6	9559.393	-38.45	-13.00	Vertical	PASS

LTE Band 5, 10MHz BW, Low Channel, QPSK

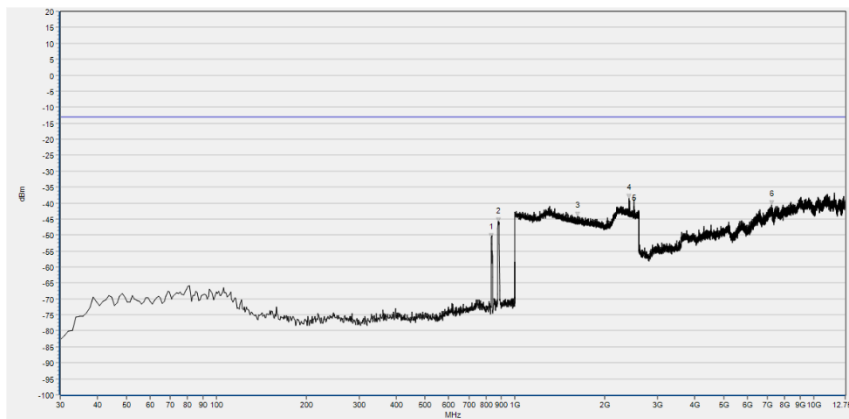


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	829.340	-47.95	-13.00	Horizontal	N/A
2	874.930	-44.84	-13.00	Horizontal	N/A
3	1552.541	-42.62	-13.00	Horizontal	PASS
4	2402.161	-37.91	-13.00	Horizontal	PASS
5	4549.154	-47.04	-13.00	Horizontal	PASS
6	7238.471	-40.17	-13.00	Horizontal	PASS

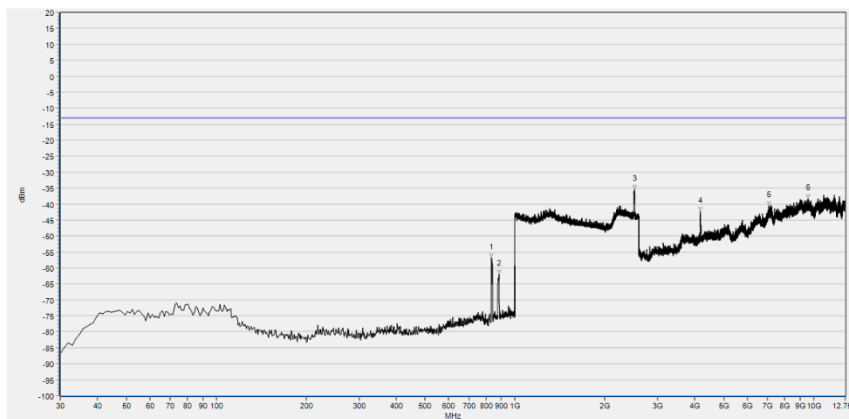


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	828.310	-56.18	-13.00	Vertical	N/A
2	877.780	-62.61	-13.00	Vertical	N/A
3	1857.943	-44.39	-13.00	Vertical	PASS
4	2479.632	-35.16	-13.00	Vertical	PASS
5	4132.006	-41.98	-13.00	Vertical	PASS
6	6389.407	-42.53	-13.00	Vertical	PASS

LTE Band 5, 10MHz BW, Mid Channel, QPSK

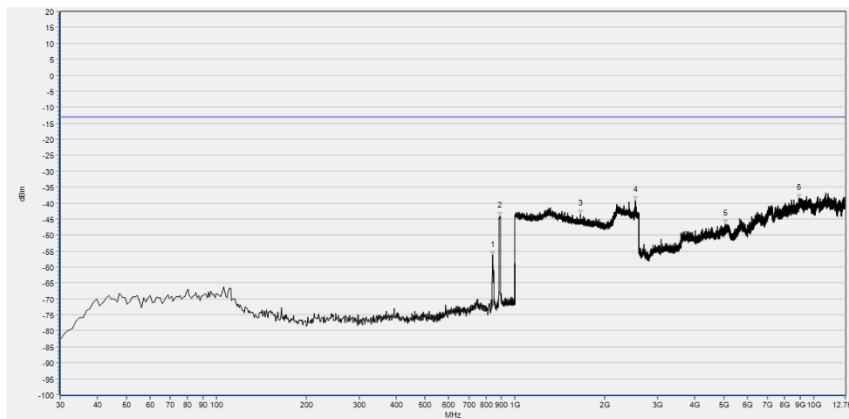


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	834.130	-50.83	-13.00	Horizontal	N/A
2	877.780	-45.95	-13.00	Horizontal	N/A
3	1616.567	-44.19	-13.00	Horizontal	PASS
4	2401.521	-38.58	-13.00	Horizontal	PASS
5	2502.681	-39.59	-13.00	Horizontal	PASS
6	7238.471	-40.64	-13.00	Horizontal	PASS

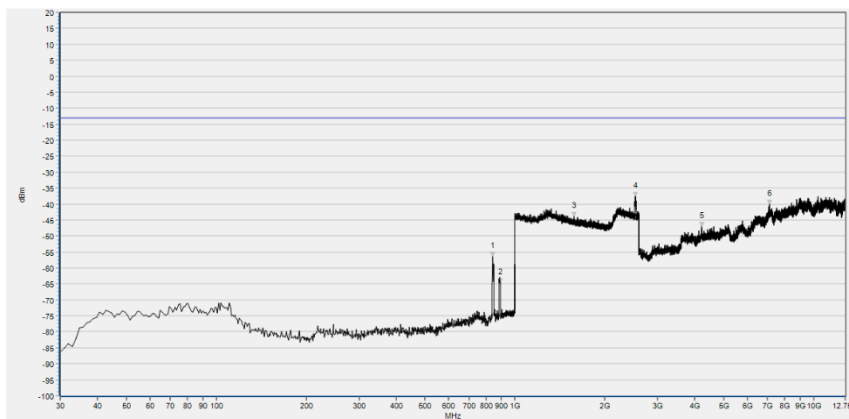


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	834.130	-56.96	-13.00	Vertical	N/A
2	883.600	-62.01	-13.00	Vertical	N/A
3	2509.084	-35.35	-13.00	Vertical	PASS
4	4168.922	-42.45	-13.00	Vertical	PASS
5	7094.499	-40.63	-13.00	Vertical	PASS
6	9569.704	-38.31	-13.00	Vertical	PASS

LTE Band 5, 10MHz BW, High Channel, QPSK

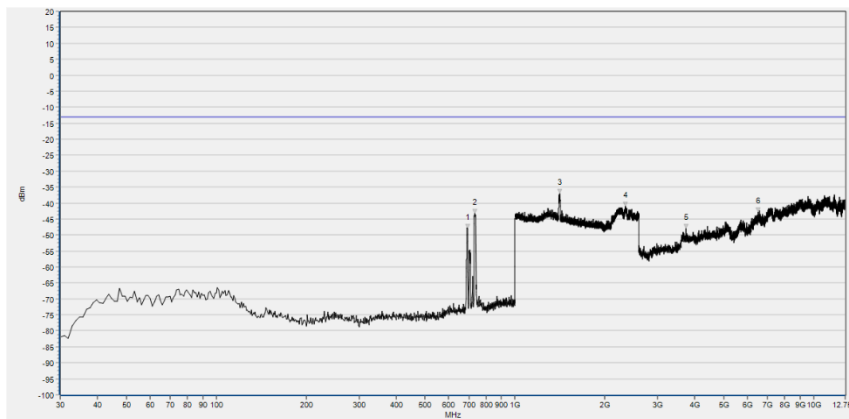


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	842.860	-56.44	-13.00	Horizontal	N/A
2	890.390	-44.17	-13.00	Horizontal	N/A
3	1653.061	-43.44	-13.00	Horizontal	PASS
4	2530.212	-39.11	-13.00	Horizontal	PASS
5	5056.747	-46.61	-13.00	Horizontal	PASS
6	8934.752	-38.60	-13.00	Horizontal	PASS

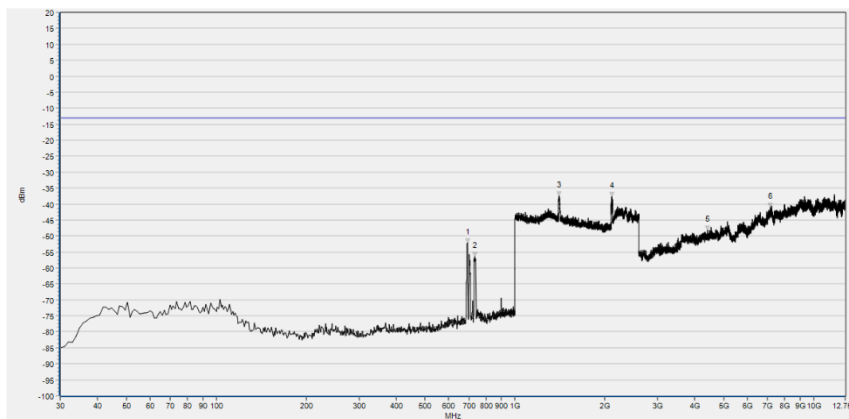


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	842.860	-56.38	-13.00	Vertical	N/A
2	892.330	-64.78	-13.00	Vertical	N/A
3	1572.389	-43.96	-13.00	Vertical	PASS
4	2522.529	-37.75	-13.00	Vertical	PASS
5	4218.758	-47.07	-13.00	Vertical	PASS
6	7107.420	-40.14	-13.00	Vertical	PASS

LTE Band 12, 10MHz BW, Low Channel, QPSK

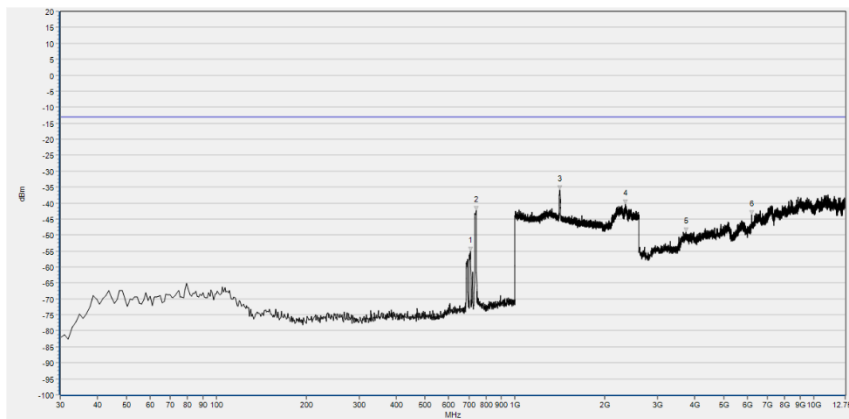


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	693.173	-47.92	-13.00	Horizontal	N/A
2	733.954	-43.33	-13.00	Horizontal	N/A
3	1412.404	-37.09	-13.00	Horizontal	PASS
4	2335.912	-41.09	-13.00	Horizontal	PASS
5	3739.058	-47.93	-13.00	Horizontal	PASS
6	6518.684	-42.90	-13.00	Horizontal	PASS

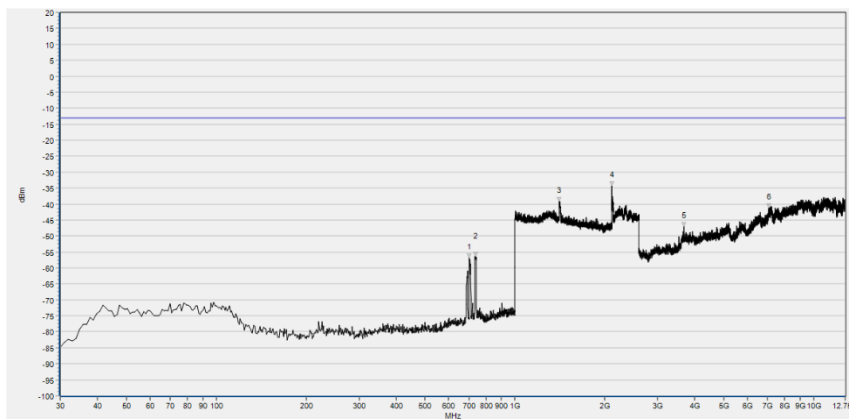


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	693.173	-52.08	-13.00	Vertical	N/A
2	732.012	-56.48	-13.00	Vertical	N/A
3	1403.334	-37.37	-13.00	Vertical	PASS
4	2107.036	-37.54	-13.00	Vertical	PASS
5	4413.153	-48.15	-13.00	Vertical	PASS
6	7174.505	-40.96	-13.00	Vertical	PASS

LTE Band 12, 10MHz BW, Mid Channel, QPSK

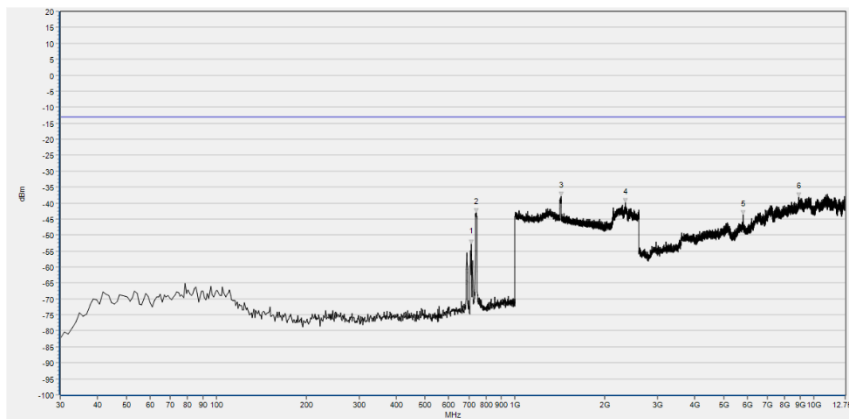


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	708.709	-55.17	-13.00	Horizontal	N/A
2	739.780	-42.38	-13.00	Horizontal	N/A
3	1409.203	-35.87	-13.00	Horizontal	PASS
4	2338.046	-40.40	-13.00	Horizontal	PASS
5	3743.119	-49.08	-13.00	Horizontal	PASS
6	6201.940	-43.70	-13.00	Horizontal	PASS

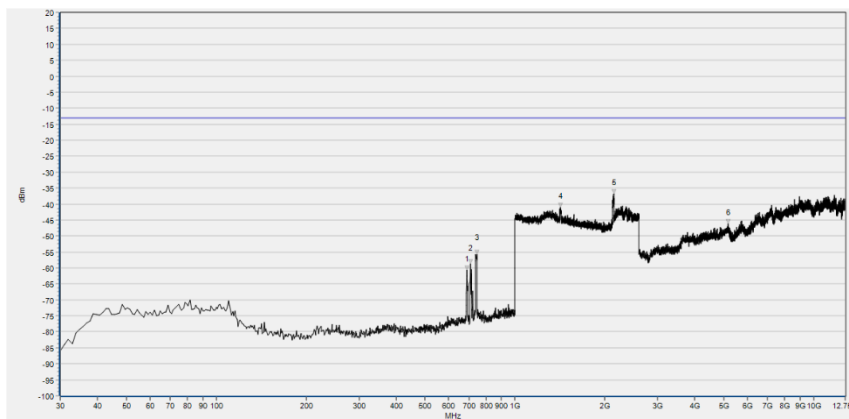


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	702.883	-56.82	-13.00	Vertical	N/A
2	736.867	-56.33	-13.00	Vertical	N/A
3	1407.603	-39.32	-13.00	Vertical	PASS
4	2110.237	-34.37	-13.00	Vertical	PASS
5	3676.115	-47.09	-13.00	Vertical	PASS
6	7075.015	-41.31	-13.00	Vertical	PASS

LTE Band 12, 10MHz BW, High Channel, QPSK

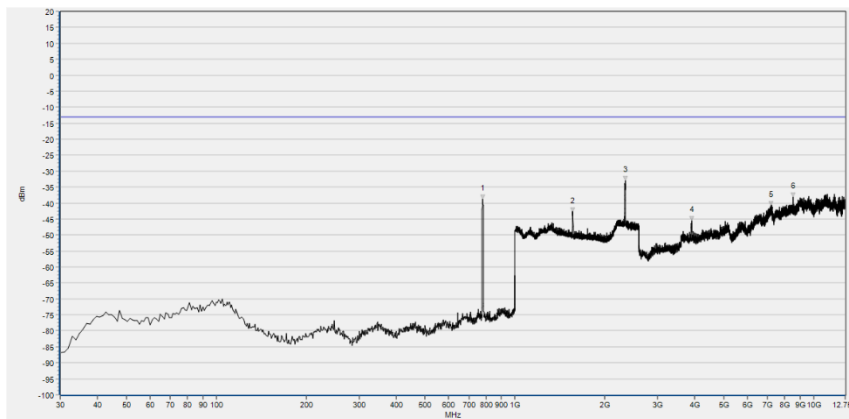


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	715.506	-52.90	-13.00	Horizontal	N/A
2	740.751	-42.95	-13.00	Horizontal	N/A
3	1426.275	-37.87	-13.00	Horizontal	PASS
4	2347.116	-39.81	-13.00	Horizontal	PASS
5	5795.859	-43.72	-13.00	Horizontal	PASS
6	8912.533	-38.02	-13.00	Horizontal	PASS

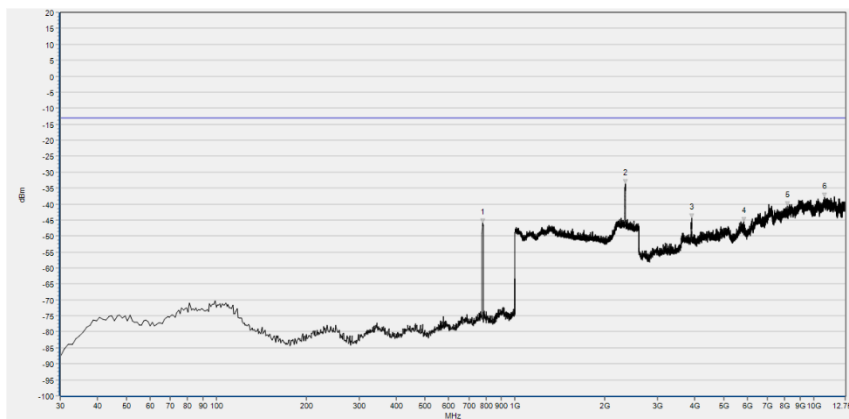


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	690.260	-60.64	-13.00	Vertical	PASS
2	708.709	-58.73	-13.00	Vertical	N/A
3	744.635	-55.83	-13.00	Vertical	N/A
4	1417.206	-40.97	-13.00	Vertical	PASS
5	2139.046	-36.83	-13.00	Vertical	PASS
6	5176.585	-46.11	-13.00	Vertical	PASS

LTE Band 13, 5MHz BW, Low Channel, QPSK

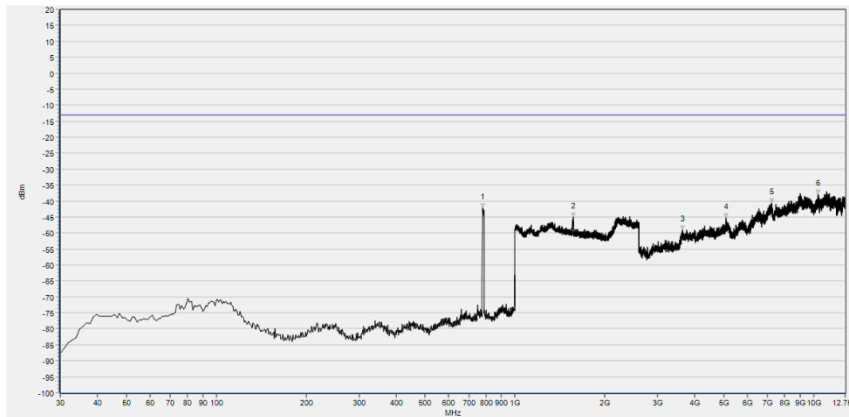


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	779.810	-38.85	-13.00	Horizontal	N/A
2	1557.023	-42.69	-13.00	Horizontal	PASS
3	2341.977	-33.03	-13.00	Horizontal	PASS
4	3897.590	-45.45	-13.00	Horizontal	PASS
5	7197.863	-40.87	-13.00	Horizontal	PASS
6	8543.444	-38.09	-13.00	Horizontal	PASS

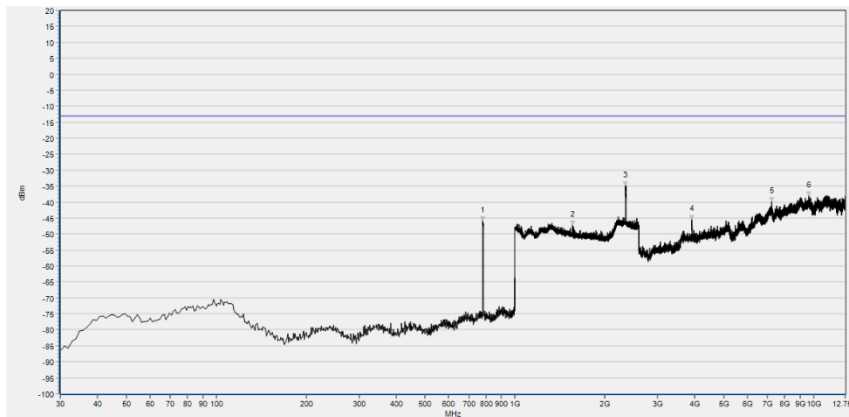


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	780.780	-45.98	-13.00	Vertical	N/A
2	2338.135	-33.72	-13.00	Vertical	PASS
3	3897.590	-44.41	-13.00	Vertical	PASS
4	5822.750	-45.51	-13.00	Vertical	PASS
5	8174.286	-40.62	-13.00	Vertical	PASS
6	10869.140	-37.86	-13.00	Vertical	PASS

LTE Band 13, 5MHz BW, Mid Channel, QPSK

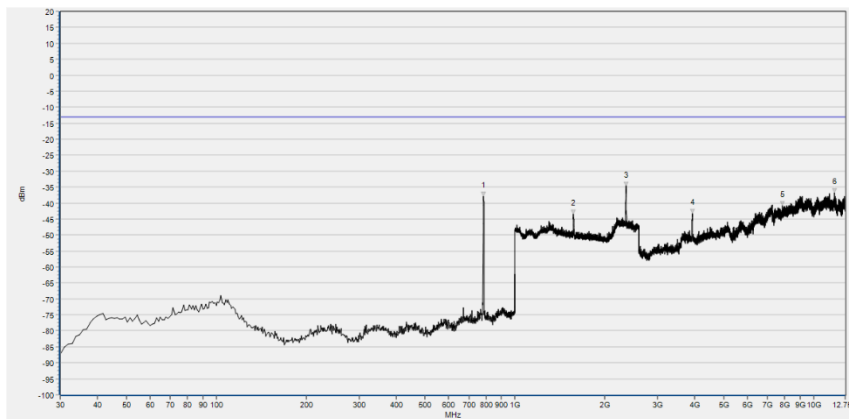


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	778.840	-42.18	-13.00	Horizontal	N/A
2	1564.066	-45.03	-13.00	Horizontal	PASS
3	3644.717	-49.10	-13.00	Horizontal	PASS
4	5099.200	-45.32	-13.00	Horizontal	PASS
5	7223.704	-40.48	-13.00	Horizontal	PASS
6	10361.548	-37.83	-13.00	Horizontal	PASS

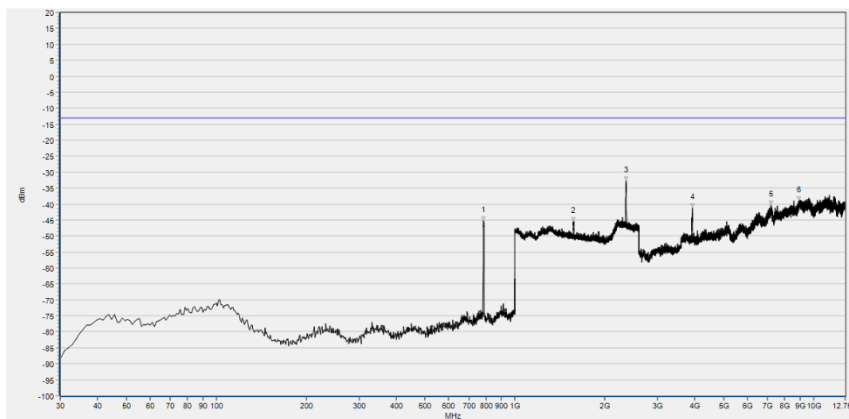


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	779.810	-45.84	-13.00	Vertical	N/A
2	1561.505	-47.23	-13.00	Vertical	PASS
3	2342.617	-34.93	-13.00	Vertical	PASS
4	3916.048	-45.56	-13.00	Vertical	PASS
5	7238.471	-39.91	-13.00	Vertical	PASS
6	9630.615	-38.11	-13.00	Vertical	PASS

LTE Band 13, 5MHz BW, High Channel, QPSK

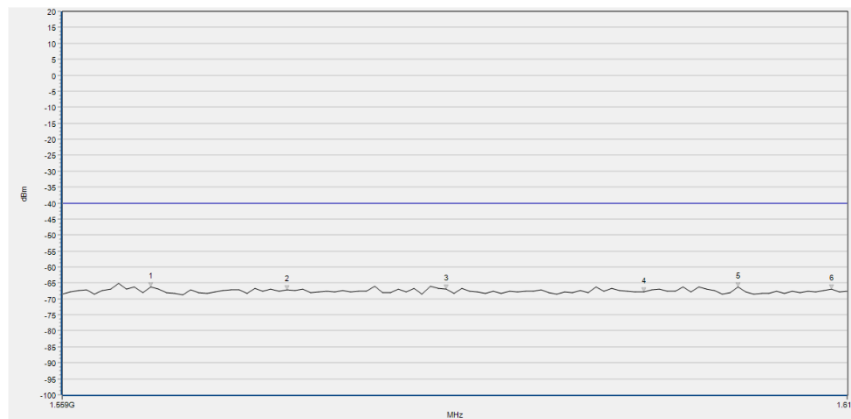


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	784.660	-37.96	-13.00	Horizontal	N/A
2	1569.188	-43.54	-13.00	Horizontal	PASS
3	2352.861	-34.72	-13.00	Horizontal	PASS
4	3928.969	-43.33	-13.00	Horizontal	PASS
5	7864.193	-40.78	-13.00	Horizontal	PASS
6	11740.353	-36.75	-13.00	Horizontal	PASS

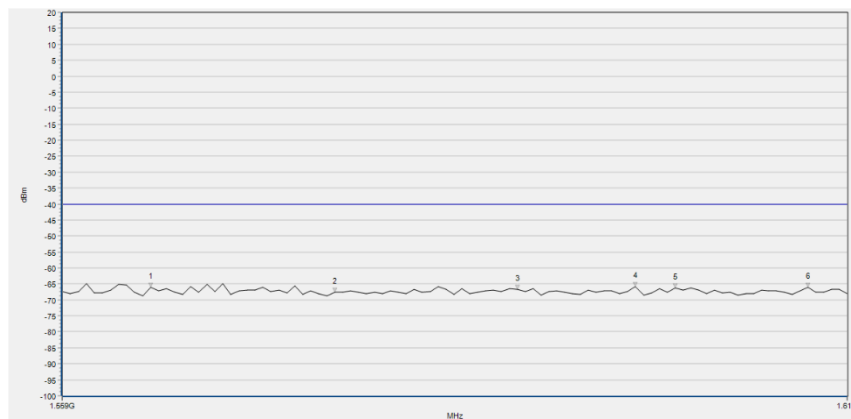


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	785.630	-45.35	-13.00	Vertical	N/A
2	1569.188	-45.47	-13.00	Vertical	PASS
3	2352.861	-32.84	-13.00	Vertical	PASS
4	3923.432	-41.23	-13.00	Vertical	PASS
5	7194.172	-40.41	-13.00	Vertical	PASS
6	8940.289	-39.05	-13.00	Vertical	PASS

LTE Band 13,1559MHz-1610MHz, 5MHz BW, Mid Channel, QPSK

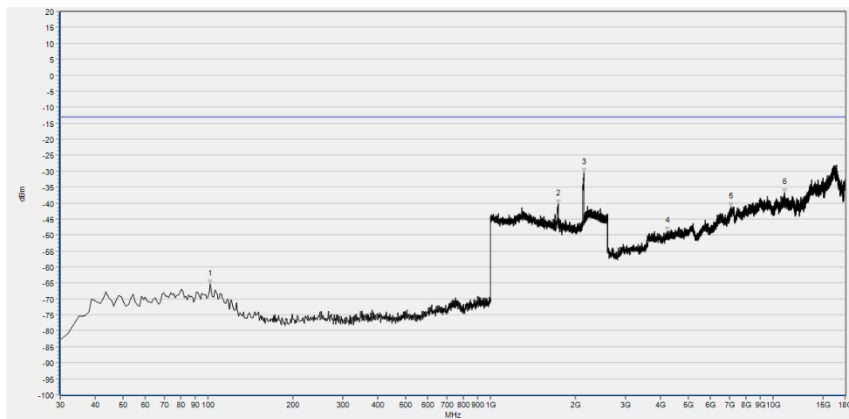


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	1564.667	-66.20	-40.00	Horizontal	PASS
2	1573.424	-67.22	-40.00	Horizontal	PASS
3	1583.727	-66.90	-40.00	Horizontal	PASS
4	1596.606	-67.87	-40.00	Horizontal	PASS
5	1602.788	-66.29	-40.00	Horizontal	PASS
6	1608.970	-66.91	-40.00	Horizontal	PASS

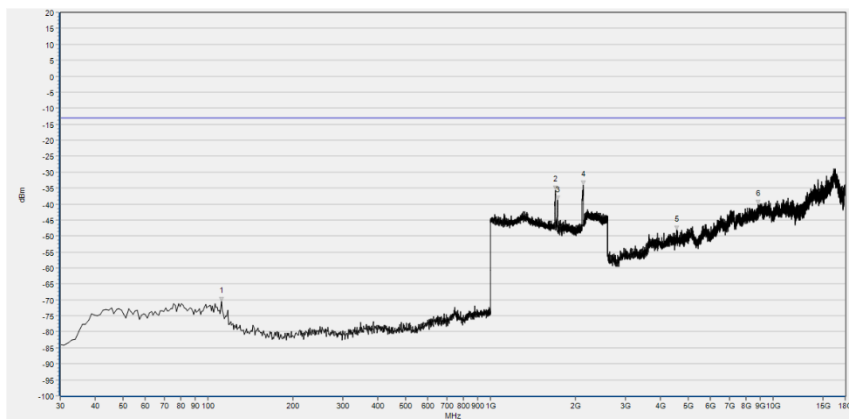


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	1564.667	-66.13	-40.00	Vertical	PASS
2	1576.515	-67.52	-40.00	Vertical	PASS
3	1588.364	-66.72	-40.00	Vertical	PASS
4	1596.091	-65.78	-40.00	Vertical	PASS
5	1598.667	-66.17	-40.00	Vertical	PASS
6	1607.424	-65.94	-40.00	Vertical	PASS

LTE Band 66, 20MHz BW, Low Channel, QPSK

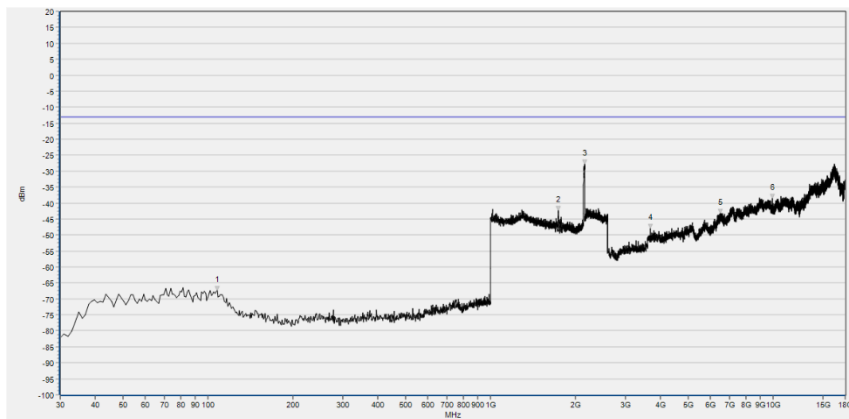


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	101.852	-65.30	-13.00	Horizontal	PASS
2	1733.967	-40.36	-13.00	Horizontal	N/A
3	2138.969	-30.48	-13.00	Horizontal	N/A
4	4222.404	-48.73	-13.00	Horizontal	PASS
5	7105.251	-41.34	-13.00	Horizontal	PASS
6	10981.564	-36.69	-13.00	Horizontal	PASS

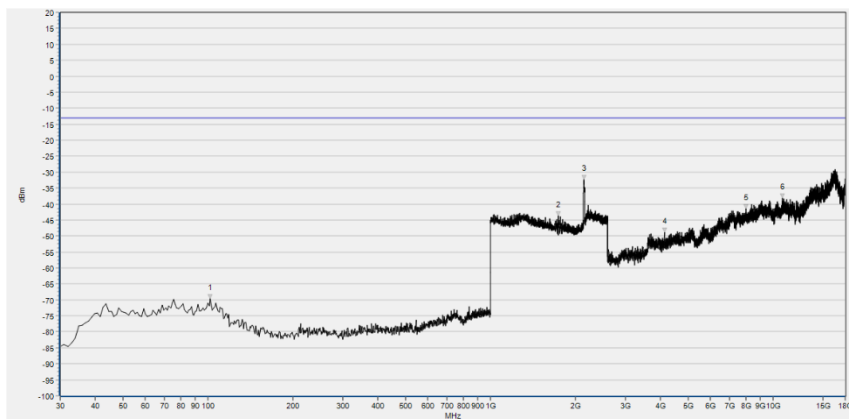


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	111.562	-70.52	-13.00	Vertical	PASS
2	1693.147	-35.66	-13.00	Vertical	N/A
3	1727.564	-38.87	-13.00	Vertical	N/A
4	2127.764	-34.03	-13.00	Vertical	N/A
5	4550.992	-48.08	-13.00	Vertical	PASS
6	8853.442	-40.16	-13.00	Vertical	PASS

LTE Band 66, 20MHz BW, Mid Channel, QPSK

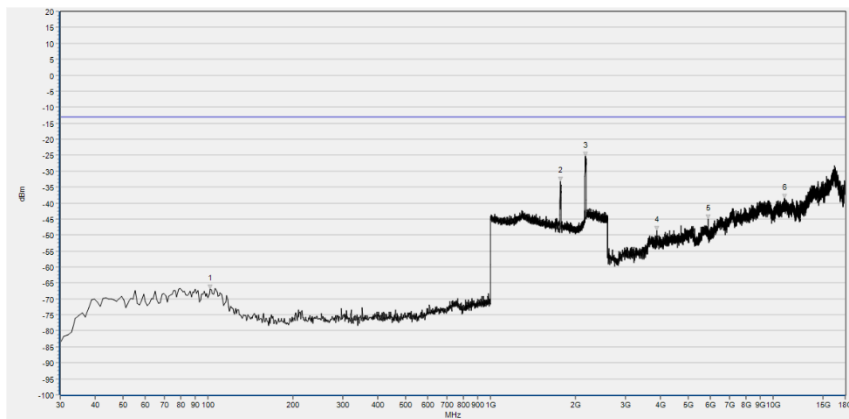


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	107.678	-67.35	-13.00	Horizontal	PASS
2	1736.368	-42.32	-13.00	Horizontal	N/A
3	2150.975	-27.84	-13.00	Horizontal	N/A
4	3678.180	-47.90	-13.00	Horizontal	PASS
5	6517.386	-43.31	-13.00	Horizontal	PASS
6	9934.189	-38.50	-13.00	Horizontal	PASS

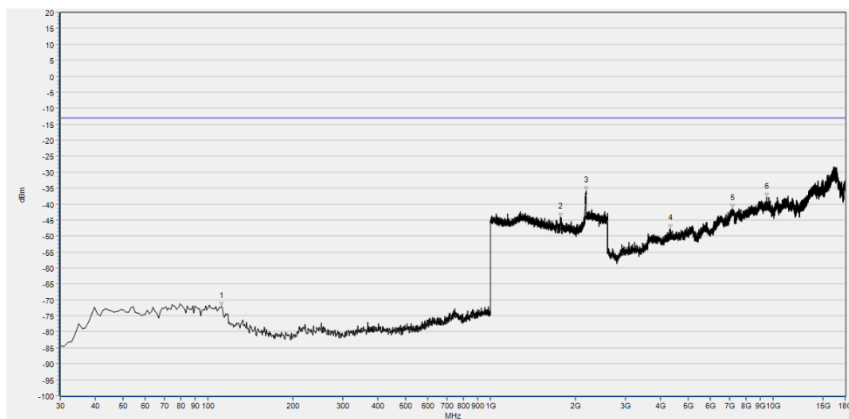


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	101.852	-69.57	-13.00	Vertical	PASS
2	1736.368	-43.68	-13.00	Vertical	N/A
3	2145.373	-32.34	-13.00	Vertical	N/A
4	4122.287	-48.73	-13.00	Vertical	PASS
5	8019.137	-41.42	-13.00	Vertical	PASS
6	10814.702	-38.04	-13.00	Vertical	PASS

LTE Band 66, 20MHz BW, High Channel, QPSK



No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	101.852	-66.99	-13.00	Horizontal	PASS
2	1766.783	-33.21	-13.00	Horizontal	N/A
3	2162.981	-25.44	-13.00	Horizontal	N/A
4	3880.980	-48.59	-13.00	Horizontal	PASS
5	5883.314	-45.09	-13.00	Horizontal	PASS
6	10961.027	-38.66	-13.00	Horizontal	PASS



No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	111.562	-72.02	-13.00	Vertical	PASS
2	1767.584	-44.03	-13.00	Vertical	N/A
3	2176.588	-35.89	-13.00	Vertical	N/A
4	4340.490	-47.79	-13.00	Vertical	PASS
5	7195.099	-41.52	-13.00	Vertical	PASS
6	9495.216	-37.81	-13.00	Vertical	PASS



Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test items	Uncertainty
Output Power	± 2.22 dB
Bandwidth	$\pm 5\%$
Conducted Spurious Emission	± 2.77 dB
Band Edge	± 2.77 dB
Equivalent Isotropic Radiated Power	± 2.22 dB
Radiated Spurious Emissions	± 6 dB

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



Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.

**4. Test Equipments Utilized****4.1 List of Software Used**

Description	Manufacturer	Software Version
Morlab FCC Test System	MORLAB	V2.8
MORLAB EMCR V1.2	MORLAB	V1.0

4.2 Radiated Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
System Simulator	152038	CMW500	R&S	2020.11.19	2021.11.18
				2021.10.20	2022.10.19
System Simulator	6200995016	MT8820C	Anritsu	2020.10.28	2021.10.27
				2021.10.21	2022.10.20
Receiver	MY54130016	N9038A	Agilent	2021.07.16	2022.07.15
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2019.05.24	2022.05.23
Test Antenna - Horn	9170C-531	BBHA9170	Schwarzbeck	2019.07.26	2022.07.25
Test Antenna - Horn	01774	BBHA 9120D	Schwarzbeck	2019.07.26	2022.07.25
Coaxial cable (N male) (9KHz-30MHz)	CB04	EMC04	Morlab	N/A	N/A
Coaxial cable (N male) (30MHz-26GHz)	CB02	EMC02	Morlab	N/A	N/A
Coaxial cable (N male) (30MHz-26GHz)	CB03	EMC03	Morlab	N/A	N/A
Coaxial cable (N male) (30MHz-40GHz)	CB05	EMC05	Morlab	N/A	N/A
1-18GHz pre-Amplifier	61171/61172	S020180L3203	Tonscend	2021.07.16	2022.07.15
18-26.5GHz pre-Amplifier	46732	S10M100L3802	Tonscend	2021.07.16	2022.07.15



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Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
26-40GHz pre-Amplifier	56774	S40M400L4002	Tonscend	2021.07.16	2022.07.15
Notch Filter	N/A	WRCGV-LTE B2	Wainwright	2021.07.16	2022.07.15
Notch Filter	N/A	WRCGV-LTE B4	Wainwright	2021.07.16	2022.07.15
Notch Filter	N/A	WRCGV-LTE B5	Wainwright	2021.07.16	2022.07.15
Notch Filter	N/A	WRCGV-LTE B12	Wainwright	2021.07.16	2022.07.15
Notch Filter	N/A	WRCGV-LTE B13	Wainwright	2021.07.16	2022.07.15
Notch Filter	N/A	WRCGV-LTE B41	Wainwright	2021.07.16	2022.07.15
Notch Filter	N/A	WRCGV-LTE B66	Wainwright	2021.07.16	2022.07.15
Notch Filter	N/A	WRCGV-LTE 71	Wainwright	2021.07.16	2022.07.15
Anechoic Chamber	N/A	9m*6m*6m	CRT	2019.07.13	2022.07.12

_____ END OF REPORT _____