



REPORT No.: SZ21110116W02

TEST REPORT

APPLICANT : Anker Innovations Limited

PRODUCT NAME : eufy SECURITY 4G Starlight Camera

MODEL NAME : T8150

BRAND NAME : eufy SECURITY

FCC ID : 2AOKB-T8150

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

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Edited by:

Zeng Xiaoying
Zeng Xiaoying (Rapporteur)

Approved by:

Shen Junsheng
Shen Junsheng (Supervisor)

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MORLAB

Shenzhen Morlab Communications Technology Co., Ltd.
FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China

Tel: 86-755-36698555

Http://www.morlab.cn

Fax: 86-755-36698525

E-mail: service@morlab.cn





DIRECTORY

1. Technical Information	3
1.1. Applicant and Manufacturer Information	3
1.2. Equipment Under Test (EUT) Description	3
1.3. Maximum E.R.P./E.I.R.P.	5
1.4. Test Standards and Results	7
1.5. Environmental Conditions	8
2. 47 CFR Part 2, Part 22H, Part 24E, Part 27 F&H&L&N Requirements	9
2.1. E.R.P./E.I.R.P.	9
2.2. Radiated Spurious Emissions	42
Annex A Test Uncertainty	67
Annex B Testing Laboratory Information	68

Change History		
Version	Date	Reason for change
1.0	2022-01-28	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Anker Innovations Limited
Applicant Address:	Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, Hong Kong
Manufacturer:	Anker Innovations Limited
Manufacturer Address:	Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, Hong Kong

1.2. Equipment Under Test (EUT) Description

Product Name:	eufy SECURITY 4G Starlight Camera	
Sample No.:	10#	
Hardware Version:	V0.4	
Software Version:	V1.0	
Modulation Type:	QPSK, 16QAM	
Carrier Aggregation:	Not Support	
Operation Band:	Band 2 / 4 / 5 / 12 / 13 / 66 / 71	
Frequency Range:	LTE Band 2	Tx: 1850MHz–1910MHz
		Rx: 1930MHz–1990MHz
	LTE Band 4	Tx: 1710MHz–1755MHz
		Rx: 2110MHz–2155MHz
Frequency Range:	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
	LTE Band 71	Tx: 663MHz –698MHz
		Rx: 617MHz –652MHz



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
	LTE Band 71	5MHz, 10MHz, 15MHz, 20MHz
Antenna Type:	Fixed Internal Antenna	
Antenna Gain:	LTE Band 2	1.59dBi
	LTE Band 4	1.71dBi
	LTE Band 5	5.03dBi
	LTE Band 12	3.22dBi
	LTE Band 13	4.80dBi
	LTE Band 66	1.84dBi
	LTE Band 71	1.39dBi
Accessory Information:	Battery	
	Brand Name:	N/A
	Model No.:	INR18650F1L(1INR19/66-4)
	Serial No.:	N/A
	Capacity:	13000mAh
	Rated Voltage:	3.63V
	Charge Limit:	4.25V
	Manufacturer:	Anker Innovations Limited

Note 1: According to the certificate holder, they declared that for model number: T8150 (FCC ID: 2AOKB-T8150), apply to use the conducted data of the RF module (FCC ID: XMR202008EC25AFXD, model: EC25-AFXD). Their RF modules are the same. Only the antenna used by the radio frequency module and the antenna gain are different.

Note 2: The test results of all conducted test items please refer to the module FCC test report (FCC ID: XMR202008EC25AFXD, Report No.: R2007A0434-R1/R2/R3), which issued on Aug 07, 2020 by TA Technology (Shanghai) Co.,Ltd. We only recorded the radiated test result in this report.

Note 3: 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.

LTE Band 2	Maximum E.R.P./E.I.R.P. (W)	
BW(MHz)	QPSK	16QAM
20	0.346	0.287
15	0.349	0.289
10	0.350	0.2
5	0.346	0.288
3	0.504	0.420
1.4	0.345	0.289
LTE Band 4	Maximum E.R.P./E.I.R.P. (W)	
BW(MHz)	QPSK	16QAM
20	0.343	0.320
15	0.345	0.321
10	0.348	0.324
5	0.346	0.321
3	0.349	0.324
1.4	0.346	0.322
LTE Band 5	Maximum E.R.P./E.I.R.P. (W)	
BW(MHz)	QPSK	16QAM
10	0.446	0.400
5	0.437	0.394
3	0.431	0.393
1.4	0.429	0.390
LTE Band 12	Maximum E.R.P./E.I.R.P. (W)	
BW(MHz)	QPSK	16QAM
10	0.299	0.266
5	0.301	0.369
3	0.303	0.270
1.4	0.300	0.267
LTE Band 13	Maximum E.R.P./E.I.R.P. (W)	
BW(MHz)	QPSK	16QAM
10	0.447	0.404
5	0.441	0.379



REPORT No.: SZ21110116W02

LTE Band 66	Maximum E.R.P./E.I.R.P. (W)	
BW(MHz)	QPSK	16QAM
20	0.364	0.290
15	0.367	0.292
10	0.368	0.295
5	0.364	0.294
3	0.367	0.296
1.4	0.363	0.294
LTE Band 71	Maximum E.R.P./E.I.R.P. (W)	
BW(MHz)	QPSK	16QAM
20	0.185	0.163
15	0.186	0.164
10	0.187	0.165
5	0.185	0.164



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)	Transmitter Conducted Output Power	N/A	N/A	N/A _{Note1}	N/A
2.1046 22.913(a)(2) 24.232(c) 27.50(b)(10) 27.50(c)(10) 27.50(d)(4)	Transmitter Radiated Power (EIPR/E.R.P.)	Jan 26, 2022	Li Huaijie	PASS	No deviation
2.1049	Occupied Bandwidth	N/A	N/A	N/A _{Note1}	N/A
2.1055 22.355 24.235 27.54	Frequency Stability	N/A	N/A	N/A _{Note1}	N/A
24.232(d), 27.50(d)(5)	Peak to Average Radio	N/A	N/A	N/A _{Note1}	N/A
2.1051 22.917(a) 24.238(a) 27.53(c)(2)	Conducted Spurious Emissions	N/A	N/A	N/A _{Note1}	N/A



27.53(g) 27.53(h)					
2.1051 22.917(a) 24.238(a) 27.53(c)(2) 27.53(g) 27.53(h)	Band Edge	N/A	N/A	N/A _{Note1}	N/A
2.1051 22.917(a) 24.238(a) 27.53(c)(2) 27.53(g) 27.53(h)	Radiated Spurious Emissions	Jan 18&19, 2022	Gao Jianrou	PASS	No deviation

Note 1: The test results of all conducted test items please refer to the module FCC test report (FCC ID: XMR202008EC25AFXD, Report No.: R2007A0434-R1/R2/R3), which issued on Aug 07, 2020 by TA Technology (Shanghai) Co.,Ltd. We only recorded the radiated test result in this report.

Note 2: 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 3: 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&N Requirements

2.1.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.

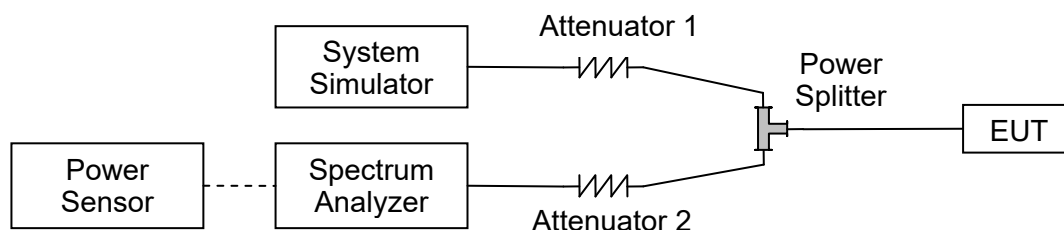
According to FCC section 27.50 (d)(4) for LTE Band 4/66, Fixed, mobile and portable (hand-held) stations in the 1710-1755MHz band are limited to 1wat E.I.R.P.

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 12/71, 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

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	24.93	0.311	24.95	0.313	24.55	0.285
20	QPSK	1	49	25.01	0.317	25.39	0.346	24.58	0.287
20	QPSK	1	99	24.89	0.308	24.83	0.304	24.46	0.279
20	QPSK	50	0	23.99	0.251	23.91	0.246	23.77	0.238
20	QPSK	50	24	23.85	0.243	23.70	0.234	23.84	0.242
20	QPSK	50	50	24.00	0.251	23.90	0.245	23.52	0.225
20	QPSK	100	0	23.86	0.243	24.04	0.254	23.62	0.230
20	16QAM	1	0	23.90	0.245	24.45	0.279	24.22	0.264
20	16QAM	1	49	23.97	0.249	24.55	0.285	24.57	0.286
20	16QAM	1	99	23.76	0.238	24.51	0.282	24.58	0.287
20	16QAM	50	0	22.98	0.199	22.86	0.193	22.82	0.191
20	16QAM	50	24	23.05	0.202	22.80	0.191	22.70	0.186
20	16QAM	50	50	22.95	0.197	22.91	0.195	22.71	0.187
20	16QAM	100	0	22.94	0.197	22.84	0.192	22.84	0.192



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	24.96	0.313	24.99	0.316	24.58	0.287
15	QPSK	1	37	25.02	0.318	25.43	0.349	24.60	0.288
15	QPSK	1	74	24.91	0.310	24.84	0.305	24.49	0.281
15	QPSK	36	0	24.02	0.252	23.96	0.249	23.81	0.240
15	QPSK	36	20	23.87	0.244	23.74	0.237	23.87	0.244
15	QPSK	36	39	24.03	0.253	23.95	0.248	23.56	0.227
15	QPSK	75	0	23.89	0.245	24.09	0.256	23.66	0.232
15	16QAM	1	0	23.92	0.247	24.49	0.281	24.27	0.267
15	16QAM	1	37	24.01	0.252	24.57	0.286	24.61	0.289
15	16QAM	1	74	23.78	0.239	24.54	0.284	24.60	0.288
15	16QAM	36	0	23.01	0.200	22.90	0.195	22.85	0.193
15	16QAM	36	20	23.08	0.203	22.82	0.191	22.73	0.187
15	16QAM	36	39	22.98	0.199	22.96	0.198	22.75	0.188
15	16QAM	75	0	22.96	0.198	22.88	0.194	22.87	0.194



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	24.97	0.314	25.03	0.318	24.60	0.288
10	QPSK	1	25	25.04	0.319	25.44	0.350	24.63	0.290
10	QPSK	1	49	24.94	0.312	24.89	0.308	24.53	0.284
10	QPSK	25	0	24.04	0.254	24.00	0.251	23.84	0.242
10	QPSK	25	12	23.90	0.245	23.79	0.239	23.91	0.246
10	QPSK	25	25	24.06	0.255	23.98	0.250	23.60	0.229
10	QPSK	50	0	23.91	0.246	24.13	0.259	23.71	0.235
10	16QAM	1	0	23.97	0.249	24.51	0.282	24.29	0.269
10	16QAM	1	25	24.03	0.253	24.60	0.288	24.63	0.290
10	16QAM	1	49	23.81	0.240	24.58	0.287	24.63	0.290
10	16QAM	25	0	23.04	0.201	22.92	0.196	22.88	0.194
10	16QAM	25	12	23.11	0.205	22.87	0.194	22.77	0.189
10	16QAM	25	25	23.00	0.200	23.00	0.200	22.78	0.190
10	16QAM	50	0	22.99	0.199	22.93	0.196	22.91	0.195



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	24.95	0.313	25.02	0.318	24.57	0.286
5	QPSK	1	12	25.01	0.317	25.39	0.346	24.59	0.288
5	QPSK	1	24	24.92	0.310	24.85	0.305	24.50	0.282
5	QPSK	12	0	24.01	0.252	23.95	0.248	23.80	0.240
5	QPSK	12	7	23.87	0.244	23.74	0.237	23.87	0.244
5	QPSK	12	13	24.04	0.254	23.94	0.248	23.55	0.226
5	QPSK	25	0	23.83	0.242	24.11	0.258	23.67	0.233
5	16QAM	1	0	23.95	0.248	24.48	0.281	24.27	0.267
5	16QAM	1	12	24.00	0.251	24.56	0.286	24.60	0.288
5	16QAM	1	24	23.78	0.239	24.56	0.286	24.60	0.288
5	16QAM	12	0	23.01	0.200	22.87	0.194	22.84	0.192
5	16QAM	12	7	23.09	0.204	22.83	0.192	22.74	0.188
5	16QAM	12	13	22.97	0.198	22.95	0.197	22.74	0.188
5	16QAM	25	0	22.96	0.198	22.88	0.194	22.87	0.194



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	26.57	0.454	26.63	0.460	26.20	0.417
3	QPSK	1	8	26.62	0.459	27.02	0.504	26.21	0.418
3	QPSK	1	14	26.54	0.451	26.49	0.446	26.13	0.410
3	QPSK	8	0	25.63	0.366	25.59	0.362	25.43	0.349
3	QPSK	8	4	25.48	0.353	25.37	0.344	25.51	0.356
3	QPSK	8	7	25.65	0.367	25.55	0.359	25.18	0.330
3	QPSK	15	0	25.44	0.350	25.71	0.372	25.28	0.337
3	16QAM	1	0	25.57	0.361	26.11	0.408	25.89	0.388
3	16QAM	1	8	25.62	0.365	26.17	0.414	26.22	0.419
3	16QAM	1	14	25.40	0.347	26.17	0.414	26.23	0.420
3	16QAM	8	0	24.62	0.290	24.50	0.282	24.46	0.279
3	16QAM	8	4	24.71	0.296	24.47	0.280	24.37	0.274
3	16QAM	8	7	24.59	0.288	24.59	0.288	24.37	0.274
3	16QAM	15	0	24.57	0.286	24.51	0.282	24.51	0.282



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	24.96	0.313	25.00	0.316	24.58	0.287
1.4	QPSK	1	3	25.00	0.316	25.38	0.345	24.58	0.287
1.4	QPSK	1	5	24.92	0.310	24.85	0.305	24.50	0.282
1.4	QPSK	3	0	24.94	0.312	24.88	0.308	24.71	0.296
1.4	QPSK	3	1	24.77	0.300	24.68	0.294	24.80	0.302
1.4	QPSK	3	3	24.96	0.313	24.85	0.305	24.49	0.281
1.4	QPSK	6	0	23.82	0.241	24.08	0.256	23.66	0.232
1.4	16QAM	1	0	23.95	0.248	24.50	0.282	24.27	0.267
1.4	16QAM	1	3	24.00	0.251	24.53	0.284	24.59	0.288
1.4	16QAM	1	5	23.79	0.239	24.54	0.284	24.61	0.289
1.4	16QAM	3	0	23.92	0.247	23.78	0.239	23.75	0.237
1.4	16QAM	3	1	24.01	0.252	23.75	0.237	23.66	0.232
1.4	16QAM	3	3	23.90	0.245	23.88	0.244	23.65	0.232
1.4	16QAM	6	0	22.95	0.197	22.88	0.194	22.89	0.195



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	25.23	0.333	24.86	0.306	25.10	0.324
20	QPSK	1	49	25.16	0.328	25.25	0.335	25.17	0.329
20	QPSK	1	99	24.88	0.308	25.23	0.333	25.35	0.343
20	QPSK	50	0	24.08	0.256	23.96	0.249	24.32	0.270
20	QPSK	50	24	24.07	0.255	24.06	0.255	24.15	0.260
20	QPSK	50	50	24.06	0.255	24.18	0.262	24.13	0.259
20	QPSK	100	0	24.05	0.254	24.07	0.255	24.31	0.270
20	16QAM	1	0	24.11	0.258	23.91	0.246	24.93	0.311
20	16QAM	1	49	24.20	0.263	24.52	0.283	24.84	0.305
20	16QAM	1	99	24.06	0.255	24.66	0.292	25.05	0.320
20	16QAM	50	0	23.00	0.200	23.11	0.205	23.21	0.209
20	16QAM	50	24	23.07	0.203	23.15	0.207	23.01	0.200
20	16QAM	50	50	23.15	0.207	23.21	0.209	23.24	0.211
20	16QAM	100	0	23.04	0.201	23.15	0.207	23.34	0.216



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	25.26	0.336	24.90	0.309	25.13	0.326
15	QPSK	1	37	25.17	0.329	25.29	0.338	25.19	0.330
15	QPSK	1	74	24.90	0.309	25.24	0.334	25.38	0.345
15	QPSK	36	0	24.11	0.258	24.01	0.252	24.36	0.273
15	QPSK	36	20	24.09	0.256	24.10	0.257	24.18	0.262
15	QPSK	36	39	24.09	0.256	24.23	0.265	24.17	0.261
15	QPSK	75	0	24.08	0.256	24.12	0.258	24.35	0.272
15	16QAM	1	0	24.13	0.259	23.95	0.248	24.98	0.315
15	16QAM	1	37	24.24	0.265	24.54	0.284	24.88	0.308
15	16QAM	1	74	24.08	0.256	24.69	0.294	25.07	0.321
15	16QAM	36	0	23.03	0.201	23.15	0.207	23.24	0.211
15	16QAM	36	20	23.10	0.204	23.17	0.207	23.04	0.201
15	16QAM	36	39	23.18	0.208	23.26	0.212	23.28	0.213
15	16QAM	75	0	23.06	0.202	23.19	0.208	23.37	0.217



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	25.27	0.337	24.94	0.312	25.15	0.327
10	QPSK	1	25	25.19	0.330	25.30	0.339	25.22	0.333
10	QPSK	1	49	24.93	0.311	25.29	0.338	25.42	0.348
10	QPSK	25	0	24.13	0.259	24.05	0.254	24.39	0.275
10	QPSK	25	12	24.12	0.258	24.15	0.260	24.22	0.264
10	QPSK	25	25	24.12	0.258	24.26	0.267	24.21	0.264
10	QPSK	50	0	24.10	0.257	24.16	0.261	24.40	0.275
10	16QAM	1	0	24.18	0.262	23.97	0.249	25.00	0.316
10	16QAM	1	25	24.26	0.267	24.57	0.286	24.90	0.309
10	16QAM	1	49	24.11	0.258	24.73	0.297	25.10	0.324
10	16QAM	25	0	23.06	0.202	23.17	0.207	23.27	0.212
10	16QAM	25	12	23.13	0.206	23.22	0.210	23.08	0.203
10	16QAM	25	25	23.20	0.209	23.30	0.214	23.31	0.214
10	16QAM	50	0	23.09	0.204	23.24	0.211	23.41	0.219



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	25.25	0.335	24.93	0.311	25.12	0.325
5	QPSK	1	12	25.16	0.328	25.25	0.335	25.18	0.330
5	QPSK	1	24	24.91	0.310	25.25	0.335	25.39	0.346
5	QPSK	12	0	24.10	0.257	24.00	0.251	24.35	0.272
5	QPSK	12	7	24.09	0.256	24.10	0.257	24.18	0.262
5	QPSK	12	13	24.10	0.257	24.22	0.264	24.16	0.261
5	QPSK	25	0	24.02	0.252	24.14	0.259	24.36	0.273
5	16QAM	1	0	24.16	0.261	23.94	0.248	24.98	0.315
5	16QAM	1	12	24.23	0.265	24.53	0.284	24.87	0.307
5	16QAM	1	24	24.08	0.256	24.71	0.296	25.07	0.321
5	16QAM	12	0	23.03	0.201	23.12	0.205	23.23	0.210
5	16QAM	12	7	23.11	0.205	23.18	0.208	23.05	0.202
5	16QAM	12	13	23.17	0.207	23.25	0.211	23.27	0.212
5	16QAM	25	0	23.06	0.202	23.19	0.208	23.37	0.217



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	25.28	0.337	24.95	0.313	25.16	0.328
3	QPSK	1	8	25.18	0.330	25.29	0.338	25.21	0.332
3	QPSK	1	14	24.94	0.312	25.30	0.339	25.43	0.349
3	QPSK	8	0	24.13	0.259	24.05	0.254	24.39	0.275
3	QPSK	8	4	24.11	0.258	24.14	0.259	24.23	0.265
3	QPSK	8	7	24.12	0.258	24.24	0.265	24.20	0.263
3	QPSK	15	0	24.04	0.254	24.15	0.260	24.38	0.274
3	16QAM	1	0	24.19	0.262	23.98	0.250	25.01	0.317
3	16QAM	1	8	24.26	0.267	24.55	0.285	24.90	0.309
3	16QAM	1	14	24.11	0.258	24.73	0.297	25.11	0.324
3	16QAM	8	0	23.05	0.202	23.16	0.207	23.26	0.212
3	16QAM	8	4	23.14	0.206	23.23	0.210	23.09	0.204
3	16QAM	8	7	23.20	0.209	23.30	0.214	23.31	0.214
3	16QAM	15	0	23.08	0.203	23.23	0.210	23.42	0.220



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	25.26	0.336	24.91	0.310	25.13	0.326
1.4	QPSK	1	3	25.15	0.327	25.24	0.334	25.17	0.329
1.4	QPSK	1	5	24.91	0.310	25.25	0.335	25.39	0.346
1.4	QPSK	3	0	25.03	0.318	24.93	0.311	25.26	0.336
1.4	QPSK	3	1	24.99	0.316	25.04	0.319	25.11	0.324
1.4	QPSK	3	3	25.02	0.318	25.13	0.326	25.10	0.324
1.4	QPSK	6	0	24.01	0.252	24.11	0.258	24.35	0.272
1.4	16QAM	1	0	24.16	0.261	23.96	0.249	24.98	0.315
1.4	16QAM	1	3	24.23	0.265	24.50	0.282	24.86	0.306
1.4	16QAM	1	5	24.09	0.256	24.69	0.294	25.08	0.322
1.4	16QAM	3	0	23.94	0.248	24.03	0.253	24.14	0.259
1.4	16QAM	3	1	24.03	0.253	24.10	0.257	23.97	0.249
1.4	16QAM	3	3	24.10	0.257	24.18	0.262	24.18	0.262
1.4	16QAM	6	0	23.05	0.202	23.19	0.208	23.39	0.218



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	26.01	0.399	26.04	0.402	26.20	0.417
10	QPSK	1	25	25.97	0.395	26.49	0.446	26.23	0.420
10	QPSK	1	49	26.08	0.406	26.11	0.408	26.16	0.413
10	QPSK	25	0	25.05	0.320	25.19	0.330	25.11	0.324
10	QPSK	25	12	24.95	0.313	25.21	0.332	25.02	0.318
10	QPSK	25	25	25.06	0.321	25.10	0.324	25.10	0.324
10	QPSK	50	0	25.04	0.319	25.15	0.327	25.09	0.323
10	16QAM	1	0	24.89	0.308	24.73	0.297	24.82	0.303
10	16QAM	1	25	24.73	0.297	24.82	0.303	24.76	0.299
10	16QAM	1	49	24.80	0.302	24.70	0.295	24.71	0.296
10	16QAM	25	0	24.01	0.252	24.25	0.266	24.09	0.256
10	16QAM	25	12	23.96	0.249	24.08	0.256	23.95	0.248
10	16QAM	25	25	24.15	0.260	24.16	0.261	23.89	0.245
10	16QAM	50	0	23.88	0.244	26.02	0.400	23.90	0.245



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	25.83	0.383	25.89	0.388	26.20	0.417
5	QPSK	1	12	25.89	0.388	26.40	0.437	26.13	0.410
5	QPSK	1	24	26.04	0.402	26.06	0.404	26.11	0.408
5	QPSK	12	0	25.02	0.318	25.14	0.327	24.94	0.312
5	QPSK	12	7	24.79	0.301	25.17	0.329	24.86	0.306
5	QPSK	12	13	25.00	0.316	25.02	0.318	24.96	0.313
5	QPSK	25	0	24.84	0.305	25.03	0.318	25.07	0.321
5	16QAM	1	0	24.82	0.303	24.59	0.288	24.63	0.290
5	16QAM	1	12	24.68	0.294	24.65	0.292	24.74	0.298
5	16QAM	1	24	24.77	0.300	24.64	0.291	24.64	0.291
5	16QAM	12	0	23.91	0.246	24.17	0.261	24.00	0.251
5	16QAM	12	7	23.91	0.246	23.89	0.245	23.86	0.243
5	16QAM	12	13	24.11	0.258	24.05	0.254	23.81	0.240
5	16QAM	25	0	23.69	0.234	25.95	0.394	23.87	0.244
5	64QAM	1	0	25.83	0.383	25.89	0.388	26.20	0.417



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	25.93	0.392	26.01	0.399	26.12	0.409
3	QPSK	1	8	25.82	0.382	26.34	0.431	26.03	0.401
3	QPSK	1	14	26.06	0.404	26.01	0.399	26.03	0.401
3	QPSK	8	0	24.96	0.313	25.05	0.320	25.01	0.317
3	QPSK	8	4	24.86	0.306	25.03	0.318	24.92	0.310
3	QPSK	8	7	24.94	0.312	24.94	0.312	24.94	0.312
3	QPSK	15	0	24.94	0.312	25.02	0.318	24.96	0.313
3	16QAM	1	0	24.72	0.296	24.53	0.284	24.66	0.292
3	16QAM	1	8	24.67	0.293	24.79	0.301	24.75	0.299
3	16QAM	1	14	24.79	0.301	24.61	0.289	24.56	0.286
3	16QAM	8	0	23.83	0.242	24.16	0.261	24.03	0.253
3	16QAM	8	4	23.81	0.240	23.95	0.248	23.75	0.237
3	16QAM	8	7	24.05	0.254	24.15	0.260	23.76	0.238
3	16QAM	15	0	23.86	0.243	25.94	0.393	23.86	0.243



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	25.86	0.385	25.99	0.397	26.03	0.401
1.4	QPSK	1	3	25.95	0.394	26.32	0.429	26.13	0.410
1.4	QPSK	1	5	25.97	0.395	26.07	0.405	26.05	0.403
1.4	QPSK	3	0	25.88	0.387	26.19	0.416	26.03	0.401
1.4	QPSK	3	1	25.89	0.388	26.14	0.411	25.82	0.382
1.4	QPSK	3	3	26.02	0.400	25.93	0.392	26.10	0.407
1.4	QPSK	6	0	24.99	0.316	25.01	0.317	25.02	0.318
1.4	16QAM	1	0	24.88	0.308	24.65	0.292	24.70	0.295
1.4	16QAM	1	3	24.57	0.286	24.62	0.290	24.57	0.286
1.4	16QAM	1	5	24.76	0.299	24.60	0.288	24.53	0.284
1.4	16QAM	3	0	24.95	0.313	25.19	0.330	24.94	0.312
1.4	16QAM	3	1	24.88	0.308	24.96	0.313	24.80	0.302
1.4	16QAM	3	3	25.08	0.322	25.10	0.324	24.74	0.298
1.4	16QAM	6	0	23.79	0.239	25.91	0.390	23.74	0.237



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	24.67	0.293	24.66	0.292	24.65	0.292
10	QPSK	1	25	24.75	0.299	24.65	0.292	24.76	0.299
10	QPSK	1	49	24.65	0.292	24.55	0.285	24.73	0.297
10	QPSK	25	0	23.62	0.230	23.64	0.231	23.76	0.238
10	QPSK	25	12	23.60	0.229	23.59	0.229	23.65	0.232
10	QPSK	25	25	23.77	0.238	23.74	0.237	23.73	0.236
10	QPSK	50	0	23.72	0.236	23.60	0.229	23.68	0.233
10	16QAM	1	0	23.97	0.249	23.20	0.209	23.98	0.250
10	16QAM	1	25	23.98	0.250	23.64	0.231	24.25	0.266
10	16QAM	1	49	23.80	0.240	23.40	0.219	23.90	0.245
10	16QAM	25	0	22.71	0.187	22.75	0.188	22.88	0.194
10	16QAM	25	12	22.63	0.183	22.62	0.183	22.62	0.183
10	16QAM	25	25	22.64	0.184	22.68	0.185	22.59	0.182
10	16QAM	50	0	22.77	0.189	22.66	0.185	22.86	0.193



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	24.70	0.295	24.70	0.295	24.68	0.294
5	QPSK	1	12	24.76	0.299	24.69	0.294	24.78	0.301
5	QPSK	1	24	24.67	0.293	24.56	0.286	24.76	0.299
5	QPSK	12	0	23.65	0.232	23.69	0.234	23.80	0.240
5	QPSK	12	7	23.62	0.230	23.63	0.231	23.68	0.233
5	QPSK	12	13	23.80	0.240	23.79	0.239	23.77	0.238
5	QPSK	25	0	23.75	0.237	23.65	0.232	23.72	0.236
5	16QAM	1	0	23.99	0.251	23.24	0.211	24.03	0.253
5	16QAM	1	12	24.02	0.252	23.66	0.232	24.29	0.269
5	16QAM	1	24	23.82	0.241	23.43	0.220	23.92	0.247
5	16QAM	12	0	22.74	0.188	22.79	0.190	22.91	0.195
5	16QAM	12	7	22.66	0.185	22.64	0.184	22.65	0.184
5	16QAM	12	13	22.67	0.185	22.73	0.187	22.63	0.183
5	16QAM	25	0	22.79	0.190	22.70	0.186	22.89	0.195



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	24.72	0.296	24.75	0.299	24.71	0.296
3	QPSK	1	8	24.77	0.300	24.69	0.294	24.80	0.302
3	QPSK	1	14	24.71	0.296	24.62	0.290	24.81	0.303
3	QPSK	8	0	23.67	0.233	23.73	0.236	23.83	0.242
3	QPSK	8	4	23.64	0.231	23.67	0.233	23.73	0.236
3	QPSK	8	7	23.83	0.242	23.80	0.240	23.80	0.240
3	QPSK	15	0	23.71	0.235	23.68	0.233	23.75	0.237
3	16QAM	1	0	24.05	0.254	23.27	0.212	24.06	0.255
3	16QAM	1	8	24.04	0.254	23.67	0.233	24.31	0.270
3	16QAM	1	14	23.85	0.243	23.47	0.222	23.96	0.249
3	16QAM	8	0	22.76	0.189	22.80	0.191	22.93	0.196
3	16QAM	8	4	22.70	0.186	22.70	0.186	22.70	0.186
3	16QAM	8	7	22.69	0.186	22.77	0.189	22.66	0.185
3	16QAM	15	0	22.81	0.191	22.74	0.188	22.94	0.197



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	24.70	0.295	24.71	0.296	24.68	0.294
1.4	QPSK	1	3	24.74	0.298	24.64	0.291	24.76	0.299
1.4	QPSK	1	5	24.68	0.294	24.57	0.286	24.77	0.300
1.4	QPSK	3	0	24.57	0.286	24.61	0.289	24.70	0.295
1.4	QPSK	3	1	24.52	0.283	24.57	0.286	24.61	0.289
1.4	QPSK	3	3	24.73	0.297	24.69	0.294	24.70	0.295
1.4	QPSK	6	0	23.68	0.233	23.64	0.231	23.72	0.236
1.4	16QAM	1	0	24.02	0.252	23.25	0.211	24.03	0.253
1.4	16QAM	1	3	24.01	0.252	23.62	0.230	24.27	0.267
1.4	16QAM	1	5	23.83	0.242	23.43	0.220	23.93	0.247
1.4	16QAM	3	0	23.65	0.232	23.67	0.233	23.81	0.240
1.4	16QAM	3	1	23.59	0.229	23.57	0.228	23.58	0.228
1.4	16QAM	3	3	23.59	0.229	23.65	0.232	23.53	0.225
1.4	16QAM	6	0	22.78	0.190	22.70	0.186	22.91	0.195



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	/	/	26.41	0.438	/	/
10	QPSK	1	25	/	/	26.50	0.447	/	/
10	QPSK	1	49	/	/	26.36	0.433	/	/
10	QPSK	25	0	/	/	25.52	0.356	/	/
10	QPSK	25	12	/	/	25.44	0.350	/	/
10	QPSK	25	25	/	/	25.53	0.357	/	/
10	QPSK	50	0	/	/	25.39	0.346	/	/
10	16QAM	1	0	/	/	25.76	0.377	/	/
10	16QAM	1	25	/	/	26.06	0.404	/	/
10	16QAM	1	49	/	/	25.59	0.362	/	/
10	16QAM	25	0	/	/	24.43	0.277	/	/
10	16QAM	25	12	/	/	24.48	0.281	/	/
10	16QAM	25	25	/	/	24.53	0.284	/	/
10	16QAM	50	0	/	/	24.47	0.280	/	/



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	26.37	0.434	26.28	0.425	26.43	0.440
5	QPSK	1	12	26.44	0.441	26.33	0.430	26.42	0.439
5	QPSK	1	24	26.23	0.420	26.34	0.431	26.30	0.427
5	QPSK	12	0	25.52	0.356	25.42	0.348	25.47	0.352
5	QPSK	12	7	25.50	0.355	25.45	0.351	25.51	0.356
5	QPSK	12	13	25.40	0.347	25.47	0.352	25.48	0.353
5	QPSK	25	0	25.46	0.352	25.39	0.346	25.45	0.351
5	16QAM	1	0	25.71	0.372	25.06	0.321	25.25	0.335
5	16QAM	1	12	25.79	0.379	25.10	0.324	25.00	0.316
5	16QAM	1	24	25.68	0.370	24.81	0.303	25.08	0.322
5	16QAM	12	0	24.15	0.260	24.17	0.261	24.33	0.271
5	16QAM	12	7	24.28	0.268	24.40	0.275	24.30	0.269
5	16QAM	12	13	24.41	0.276	24.25	0.266	24.22	0.264
5	16QAM	25	0	24.39	0.275	24.61	0.289	24.27	0.267



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	25.23	0.333	25.36	0.344	25.37	0.344
20	QPSK	1	49	25.15	0.327	25.61	0.364	25.41	0.348
20	QPSK	1	99	25.18	0.330	25.46	0.352	25.25	0.335
20	QPSK	50	0	24.36	0.273	24.45	0.279	24.16	0.261
20	QPSK	50	24	24.27	0.267	24.61	0.289	24.21	0.264
20	QPSK	50	50	24.47	0.280	24.44	0.278	24.23	0.265
20	QPSK	100	0	24.39	0.275	24.53	0.284	24.14	0.259
20	16QAM	1	0	24.63	0.290	24.17	0.261	23.99	0.251
20	16QAM	1	49	24.24	0.265	24.62	0.290	24.39	0.275
20	16QAM	1	99	24.38	0.274	24.23	0.265	24.03	0.253
20	16QAM	50	0	23.43	0.220	23.49	0.223	23.18	0.208
20	16QAM	50	24	23.20	0.209	23.65	0.232	23.31	0.214
20	16QAM	50	50	23.58	0.228	23.49	0.223	23.35	0.216
20	16QAM	100	0	23.48	0.223	23.64	0.231	23.24	0.211



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	25.26	0.336	25.40	0.347	25.40	0.347
15	QPSK	1	37	25.16	0.328	25.65	0.367	25.43	0.349
15	QPSK	1	74	25.20	0.331	25.47	0.352	25.28	0.337
15	QPSK	36	0	24.39	0.275	24.50	0.282	24.20	0.263
15	QPSK	36	20	24.29	0.269	24.65	0.292	24.24	0.265
15	QPSK	36	39	24.50	0.282	24.49	0.281	24.27	0.267
15	QPSK	75	0	24.42	0.277	24.58	0.287	24.18	0.262
15	16QAM	1	0	24.65	0.292	24.21	0.264	24.04	0.254
15	16QAM	1	37	24.28	0.268	24.64	0.291	24.43	0.277
15	16QAM	1	74	24.40	0.275	24.26	0.267	24.05	0.254
15	16QAM	36	0	23.46	0.222	23.53	0.225	23.21	0.209
15	16QAM	36	20	23.23	0.210	23.67	0.233	23.34	0.216
15	16QAM	36	39	23.61	0.230	23.54	0.226	23.39	0.218
15	16QAM	75	0	23.50	0.224	23.68	0.233	23.27	0.212



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	25.27	0.337	25.44	0.350	25.42	0.348
10	QPSK	1	25	25.18	0.330	25.66	0.368	25.46	0.352
10	QPSK	1	49	25.23	0.333	25.52	0.356	25.32	0.340
10	QPSK	25	0	24.41	0.276	24.54	0.284	24.23	0.265
10	QPSK	25	12	24.32	0.270	24.70	0.295	24.28	0.268
10	QPSK	25	25	24.53	0.284	24.52	0.283	24.31	0.270
10	QPSK	50	0	24.44	0.278	24.62	0.290	24.23	0.265
10	16QAM	1	0	24.70	0.295	24.23	0.265	24.06	0.255
10	16QAM	1	25	24.30	0.269	24.67	0.293	24.45	0.279
10	16QAM	1	49	24.43	0.277	24.30	0.269	24.08	0.256
10	16QAM	25	0	23.49	0.223	23.55	0.226	23.24	0.211
10	16QAM	25	12	23.26	0.212	23.72	0.236	23.38	0.218
10	16QAM	25	25	23.63	0.231	23.58	0.228	23.42	0.220
10	16QAM	50	0	23.53	0.225	23.73	0.236	23.31	0.214



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	25.25	0.335	25.43	0.349	25.39	0.346
5	QPSK	1	12	25.15	0.327	25.61	0.364	25.42	0.348
5	QPSK	1	24	25.21	0.332	25.48	0.353	25.29	0.338
5	QPSK	12	0	24.38	0.274	24.49	0.281	24.19	0.262
5	QPSK	12	7	24.29	0.269	24.65	0.292	24.24	0.265
5	QPSK	12	13	24.51	0.282	24.48	0.281	24.26	0.267
5	QPSK	25	0	24.36	0.273	24.60	0.288	24.19	0.262
5	16QAM	1	0	24.68	0.294	24.20	0.263	24.04	0.254
5	16QAM	1	12	24.27	0.267	24.63	0.290	24.42	0.277
5	16QAM	1	24	24.40	0.275	24.28	0.268	24.05	0.254
5	16QAM	12	0	23.46	0.222	23.50	0.224	23.20	0.209
5	16QAM	12	7	23.24	0.211	23.68	0.233	23.35	0.216
5	16QAM	12	13	23.60	0.229	23.53	0.225	23.38	0.218
5	16QAM	25	0	23.50	0.224	23.68	0.233	23.27	0.212



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	25.28	0.337	25.45	0.351	25.43	0.349
3	QPSK	1	8	25.17	0.329	25.65	0.367	25.45	0.351
3	QPSK	1	14	25.24	0.334	25.53	0.357	25.33	0.341
3	QPSK	8	0	24.41	0.276	24.54	0.284	24.23	0.265
3	QPSK	8	4	24.31	0.270	24.69	0.294	24.29	0.269
3	QPSK	8	7	24.53	0.284	24.50	0.282	24.30	0.269
3	QPSK	15	0	24.38	0.274	24.61	0.289	24.21	0.264
3	16QAM	1	0	24.71	0.296	24.24	0.265	24.07	0.255
3	16QAM	1	8	24.30	0.269	24.65	0.292	24.45	0.279
3	16QAM	1	14	24.43	0.277	24.30	0.269	24.09	0.256
3	16QAM	8	0	23.48	0.223	23.54	0.226	23.23	0.210
3	16QAM	8	4	23.27	0.212	23.73	0.236	23.39	0.218
3	16QAM	8	7	23.63	0.231	23.58	0.228	23.42	0.220
3	16QAM	15	0	23.52	0.225	23.72	0.236	23.32	0.215



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	25.26	0.336	25.41	0.348	25.40	0.347
1.4	QPSK	1	3	25.14	0.327	25.60	0.363	25.41	0.348
1.4	QPSK	1	5	25.21	0.332	25.48	0.353	25.29	0.338
1.4	QPSK	3	0	25.31	0.340	25.42	0.348	25.10	0.324
1.4	QPSK	3	1	25.19	0.330	25.59	0.362	25.17	0.329
1.4	QPSK	3	3	25.43	0.349	25.39	0.346	25.20	0.331
1.4	QPSK	6	0	24.35	0.272	24.57	0.286	24.18	0.262
1.4	16QAM	1	0	24.68	0.294	24.22	0.264	24.04	0.254
1.4	16QAM	1	3	24.27	0.267	24.60	0.288	24.41	0.276
1.4	16QAM	1	5	24.41	0.276	24.26	0.267	24.06	0.255
1.4	16QAM	3	0	24.37	0.274	24.41	0.276	24.11	0.258
1.4	16QAM	3	1	24.16	0.261	24.60	0.288	24.27	0.267
1.4	16QAM	3	3	24.53	0.284	24.46	0.279	24.29	0.269
1.4	16QAM	6	0	23.49	0.223	23.68	0.233	23.29	0.213



LTE Band 71				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				133222		133322		133372	
Frequency (MHz)				673		683		688	
				dBm	W	dBm	W	dBm	W
20	QPSK	1	0	22.37	0.173	22.40	0.174	22.18	0.165
20	QPSK	1	49	22.68	0.185	22.47	0.177	22.31	0.170
20	QPSK	1	99	22.46	0.176	22.28	0.169	22.27	0.169
20	QPSK	50	0	21.37	0.137	21.53	0.142	21.50	0.141
20	QPSK	50	24	21.42	0.139	21.39	0.138	21.42	0.139
20	QPSK	50	50	21.58	0.144	21.56	0.143	21.54	0.143
20	QPSK	100	0	21.44	0.139	21.57	0.144	21.39	0.138
20	16QAM	1	0	21.27	0.134	21.85	0.153	22.09	0.162
20	16QAM	1	49	21.41	0.138	22.08	0.161	22.12	0.163
20	16QAM	1	99	21.44	0.139	21.62	0.145	22.00	0.158
20	16QAM	50	0	20.50	0.112	20.46	0.111	20.29	0.107
20	16QAM	50	24	20.45	0.111	20.49	0.112	20.46	0.111
20	16QAM	50	50	20.60	0.115	20.43	0.110	20.34	0.108
20	16QAM	100	0	20.54	0.113	20.70	0.117	20.52	0.113



LTE Band 71				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				133197		133297		133397	
Frequency (MHz)				670.5		680.5		690.5	
				dBm	W	dBm	W	dBm	W
15	QPSK	1	0	22.40	0.174	22.25	0.168	22.21	0.166
15	QPSK	1	37	22.69	0.186	22.35	0.172	22.33	0.171
15	QPSK	1	74	22.48	0.177	22.33	0.171	22.30	0.170
15	QPSK	36	0	21.40	0.138	21.49	0.141	21.54	0.143
15	QPSK	36	20	21.44	0.139	21.45	0.140	21.45	0.140
15	QPSK	36	39	21.61	0.145	21.37	0.137	21.58	0.144
15	QPSK	75	0	21.47	0.140	21.35	0.136	21.43	0.139
15	16QAM	1	0	21.29	0.135	21.31	0.135	22.14	0.164
15	16QAM	1	37	21.45	0.140	21.33	0.136	22.16	0.164
15	16QAM	1	74	21.46	0.140	21.46	0.140	22.02	0.159
15	16QAM	36	0	20.53	0.113	20.49	0.112	20.32	0.108
15	16QAM	36	20	20.48	0.112	20.44	0.111	20.49	0.112
15	16QAM	36	39	20.63	0.116	20.36	0.109	20.38	0.109
15	16QAM	75	0	20.56	0.114	20.35	0.108	20.55	0.114



LTE Band 71				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				133172		133297		133422	
Frequency (MHz)				668		680.5		693	
				dBm	W	dBm	W	dBm	W
10	QPSK	1	0	22.41	0.174	22.48	0.177	22.23	0.167
10	QPSK	1	25	22.71	0.187	22.52	0.179	22.36	0.172
10	QPSK	1	49	22.51	0.178	22.34	0.171	22.34	0.171
10	QPSK	25	0	21.42	0.139	21.62	0.145	21.57	0.144
10	QPSK	25	12	21.47	0.140	21.48	0.141	21.49	0.141
10	QPSK	25	25	21.64	0.146	21.64	0.146	21.62	0.145
10	QPSK	50	0	21.49	0.141	21.66	0.147	21.48	0.141
10	16QAM	1	0	21.34	0.136	21.91	0.155	22.16	0.164
10	16QAM	1	25	21.47	0.140	22.13	0.163	22.18	0.165
10	16QAM	1	49	21.49	0.141	21.69	0.148	22.05	0.160
10	16QAM	25	0	20.56	0.114	20.52	0.113	20.35	0.108
10	16QAM	25	12	20.51	0.112	20.56	0.114	20.53	0.113
10	16QAM	25	25	20.65	0.116	20.52	0.113	20.41	0.110
10	16QAM	50	0	20.59	0.115	20.79	0.120	20.59	0.115



LTE Band 71				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				133147		133297		133447	
Frequency (MHz)				665.5		680.5		695.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	22.39	0.173	22.47	0.177	22.20	0.166
5	QPSK	1	12	22.68	0.185	22.47	0.177	22.32	0.171
5	QPSK	1	24	22.49	0.177	22.30	0.170	22.31	0.170
5	QPSK	12	0	21.39	0.138	21.57	0.144	21.53	0.142
5	QPSK	12	7	21.44	0.139	21.43	0.139	21.45	0.140
5	QPSK	12	13	21.62	0.145	21.60	0.145	21.57	0.144
5	QPSK	25	0	21.41	0.138	21.64	0.146	21.44	0.139
5	16QAM	1	0	21.32	0.136	21.88	0.154	22.14	0.164
5	16QAM	1	12	21.44	0.139	22.09	0.162	22.15	0.164
5	16QAM	1	24	21.46	0.140	21.67	0.147	22.02	0.159
5	16QAM	12	0	20.53	0.113	20.47	0.111	20.31	0.107
5	16QAM	12	7	20.49	0.112	20.52	0.113	20.50	0.112
5	16QAM	12	13	20.62	0.115	20.47	0.111	20.37	0.109
5	16QAM	25	0	20.56	0.114	20.74	0.119	20.55	0.114

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.

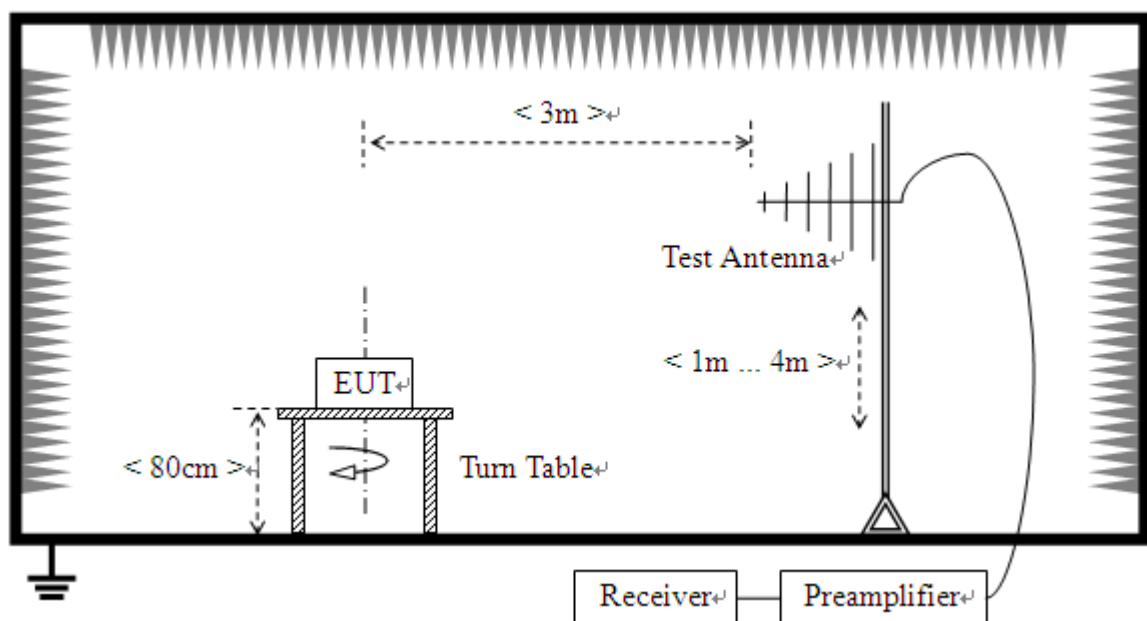
Additional requirement for LTE Band 7

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $55 + 10 \log(P)$ dB. This calculated to be -25dBm.

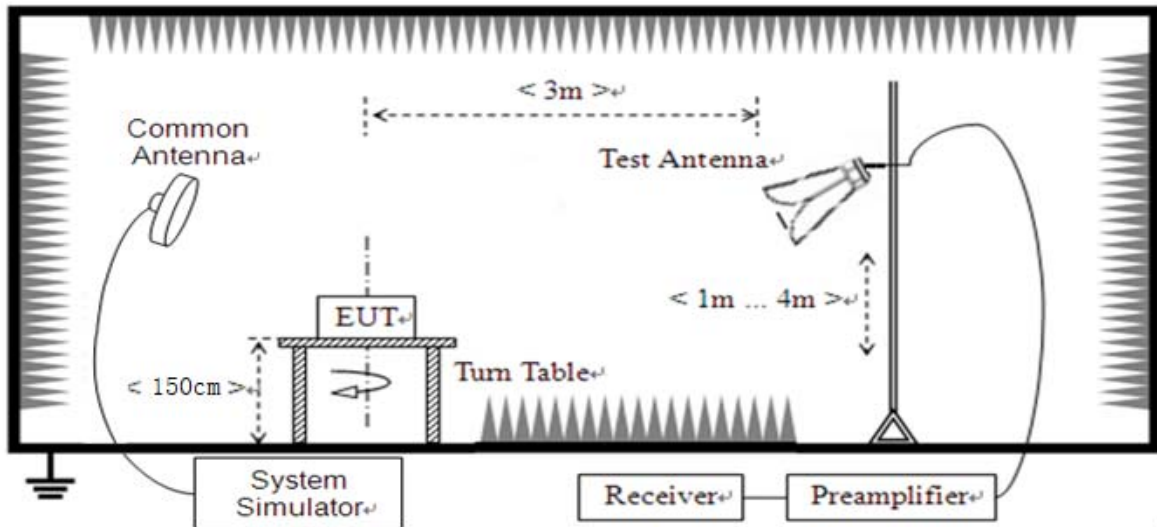
Additional requirement for Band 13

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} .

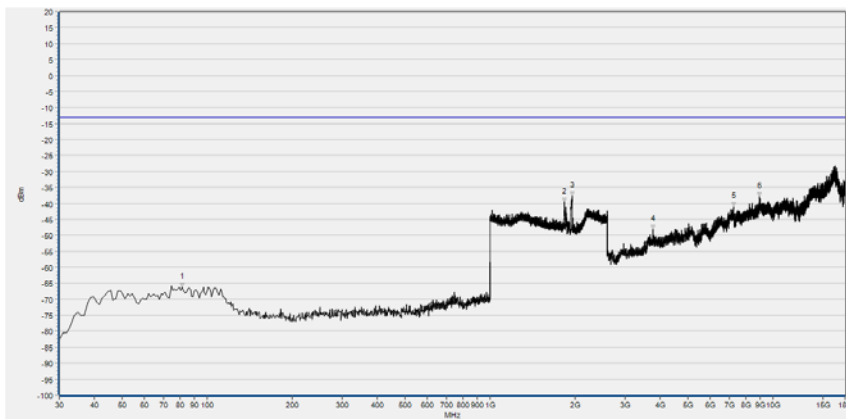
Note1: The power of the EUT transmitting frequency should be ignored.

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.

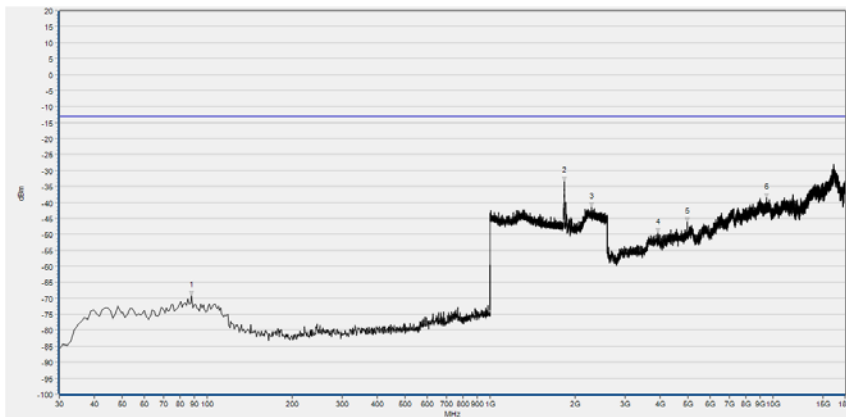
Note3: All bandwidth and modulation were considered and evaluated respectively by performing full test for each band, only the worst cases (Max Bandwidth and QPSK mode) were recorded in this test report.

Note 4: 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

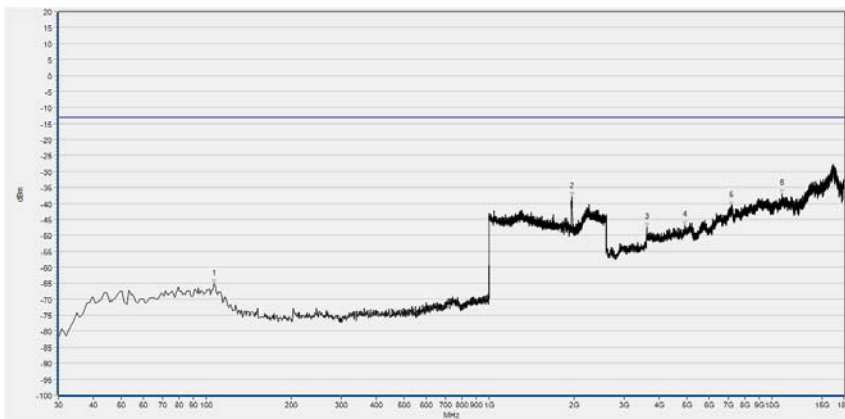


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	81.410	-66.35	-13.00	Horizontal	PASS
2	1832.973	-39.67	-13.00	Horizontal	N/A
3	1948.219	-37.64	-13.00	Horizontal	N/A
4	3765.012	-48.17	-13.00	Horizontal	PASS
5	7246.045	-40.91	-13.00	Horizontal	PASS
6	8954.355	-37.96	-13.00	Horizontal	PASS

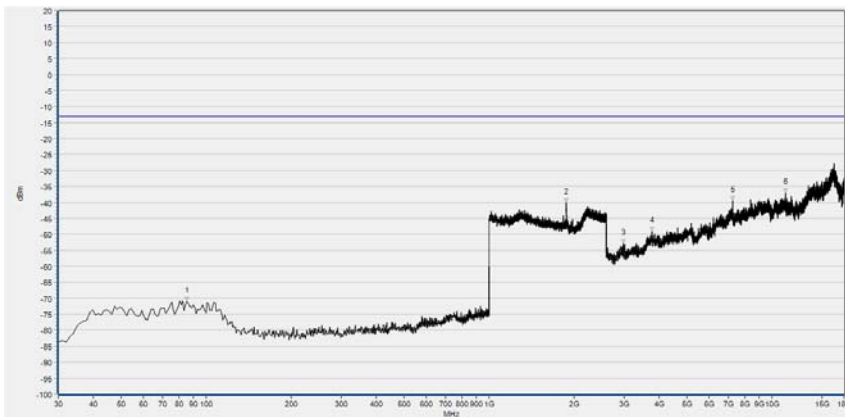


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	88.200	-69.27	-13.00	Vertical	PASS
2	1832.973	-33.46	-13.00	Vertical	N/A
3	2288.836	-41.55	-13.00	Vertical	PASS
4	3921.840	-49.44	-13.00	Vertical	PASS
5	4972.031	-46.04	-13.00	Vertical	PASS
6	9483.652	-38.60	-13.00	Vertical	PASS

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

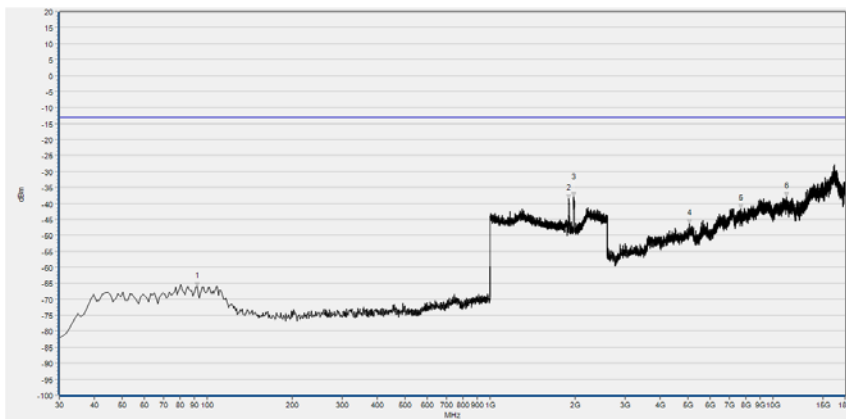


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	106.630	-65.24	-13.00	Horizontal	PASS
2	1959.104	-37.86	-13.00	Horizontal	N/A
3	3605.383	-47.53	-13.00	Horizontal	PASS
4	4921.622	-46.88	-13.00	Horizontal	PASS
5	7192.835	-40.69	-13.00	Horizontal	PASS
6	10861.502	-36.96	-13.00	Horizontal	PASS

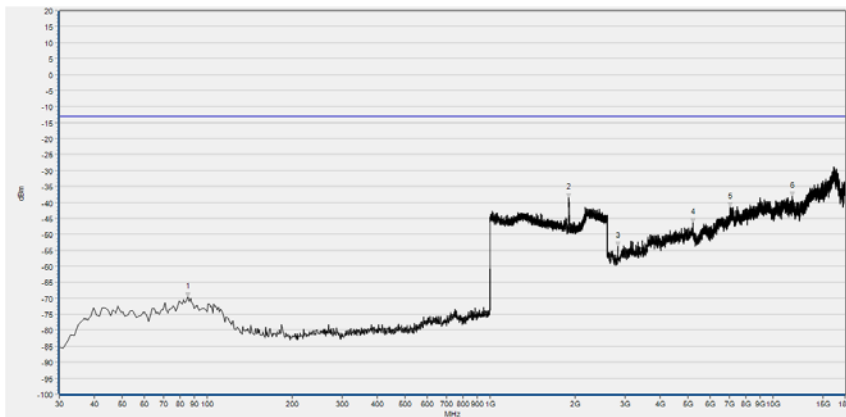


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	85.290	-70.97	-13.00	Vertical	PASS
2	1875.870	-40.06	-13.00	Vertical	N/A
3	2983.670	-52.81	-13.00	Vertical	PASS
4	3759.411	-48.98	-13.00	Vertical	PASS
5	7254.446	-39.43	-13.00	Vertical	PASS
6	11200.364	-36.94	-13.00	Vertical	PASS

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

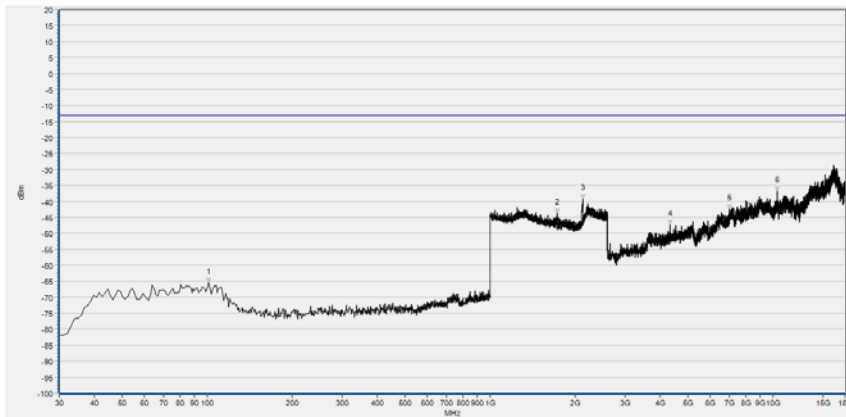


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	92.080	-66.12	-13.00	Horizontal	PASS
2	1901.481	-38.49	-13.00	Horizontal	N/A
3	1977.671	-37.88	-13.00	Horizontal	N/A
4	5070.049	-46.47	-13.00	Horizontal	PASS
5	7696.927	-41.73	-13.00	Horizontal	PASS
6	11175.159	-37.96	-13.00	Horizontal	PASS

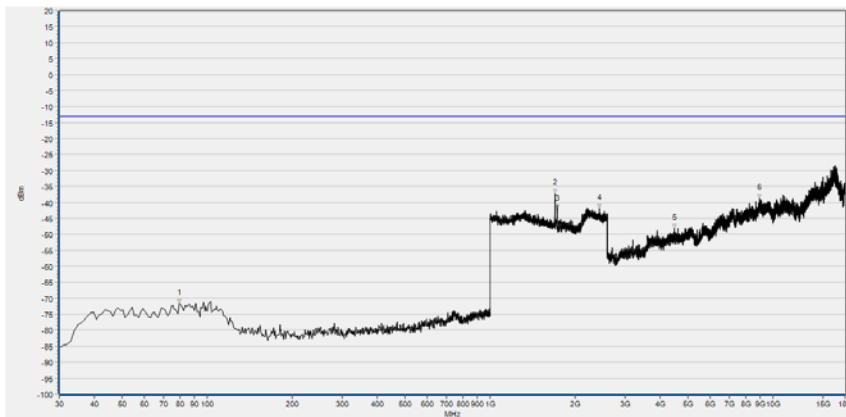


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	85.290	-69.56	-13.00	Vertical	PASS
2	1900.200	-38.60	-13.00	Vertical	N/A
3	2826.841	-53.76	-13.00	Vertical	PASS
4	5212.875	-46.48	-13.00	Vertical	PASS
5	7069.613	-41.54	-13.00	Vertical	PASS
6	11715.657	-38.20	-13.00	Vertical	PASS

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

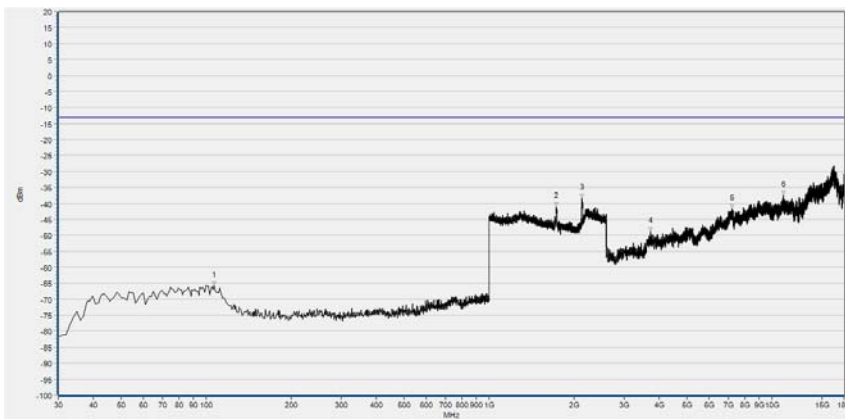


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	100.881	-65.35	-13.00	Horizontal	PASS
2	1725.963	-43.61	-13.00	Horizontal	N/A
3	2126.963	-39.16	-13.00	Horizontal	N/A
4	4322.520	-47.28	-13.00	Horizontal	PASS
5	7007.701	-42.32	-13.00	Horizontal	PASS
6	10378.296	-36.69	-13.00	Horizontal	PASS

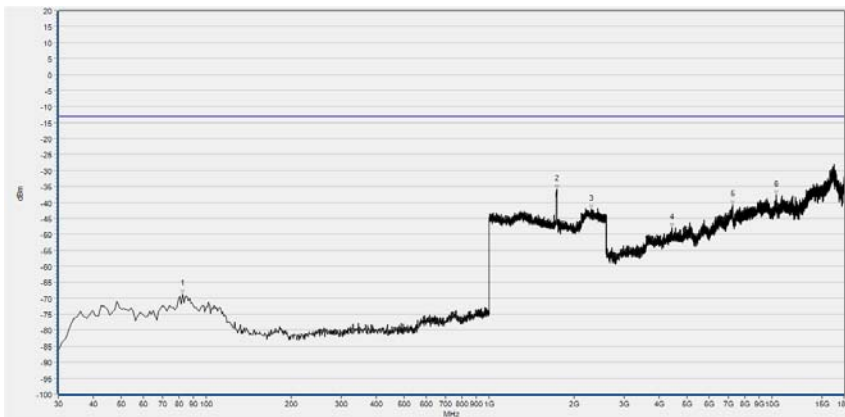


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	79.520	-71.59	-13.00	Vertical	PASS
2	1694.747	-37.18	-13.00	Vertical	N/A
3	1725.163	-42.17	-13.00	Vertical	N/A
4	2437.519	-41.95	-13.00	Vertical	PASS
5	4484.247	-48.25	-13.00	Vertical	PASS
6	8981.797	-38.78	-13.00	Vertical	PASS

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

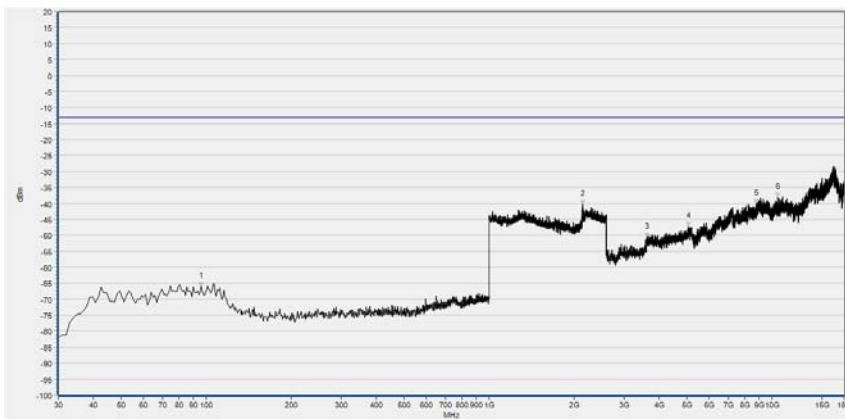


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	106.707	-65.73	-13.00	Horizontal	PASS
2	1730.765	-41.02	-13.00	Horizontal	PASS
3	2134.167	-38.33	-13.00	Horizontal	PASS
4	3724.387	-48.85	-13.00	Horizontal	PASS
5	7225.904	-41.59	-13.00	Horizontal	PASS
6	10958.460	-37.53	-13.00	Horizontal	PASS

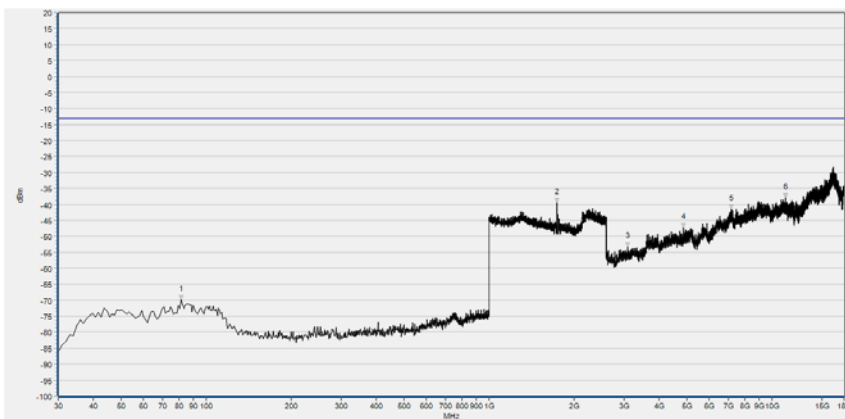


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	82.432	-68.80	-13.00	Vertical	PASS
2	1734.767	-35.91	-13.00	Vertical	PASS
3	2301.451	-42.17	-13.00	Vertical	PASS
4	4427.771	-47.97	-13.00	Vertical	PASS
5	7251.575	-40.84	-13.00	Vertical	PASS
6	10375.729	-37.71	-13.00	Vertical	PASS

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

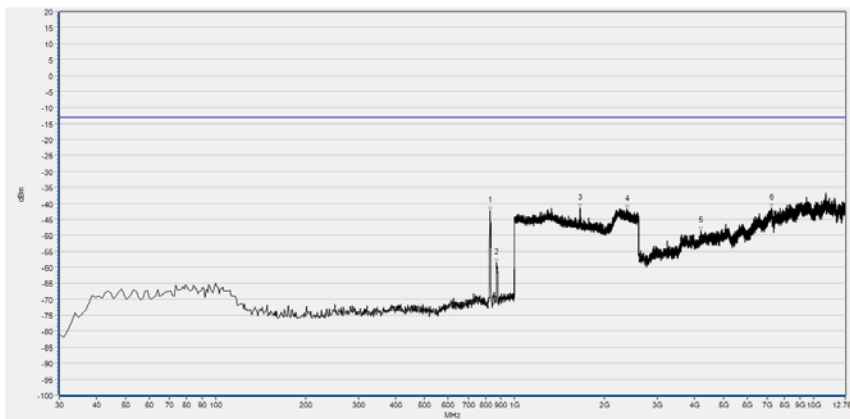


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	96.026	-65.93	-13.00	Horizontal	PASS
2	2136.568	-40.42	-13.00	Horizontal	PASS
3	3611.435	-50.72	-13.00	Horizontal	PASS
4	5054.142	-47.27	-13.00	Horizontal	PASS
5	8789.265	-40.18	-13.00	Horizontal	PASS
6	10506.651	-38.08	-13.00	Horizontal	PASS

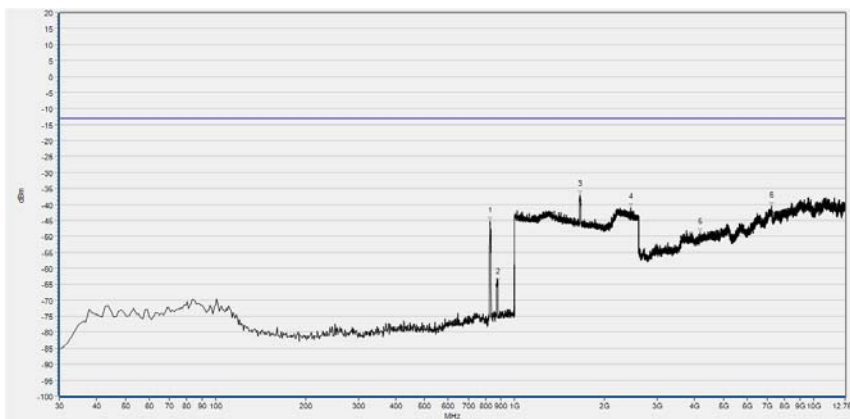


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	81.461	-69.78	-13.00	Vertical	PASS
2	1737.169	-39.51	-13.00	Vertical	N/A
3	3098.016	-53.22	-13.00	Vertical	PASS
4	4871.879	-47.22	-13.00	Vertical	PASS
5	7164.294	-41.48	-13.00	Vertical	PASS
6	11168.961	-37.90	-13.00	Vertical	PASS

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

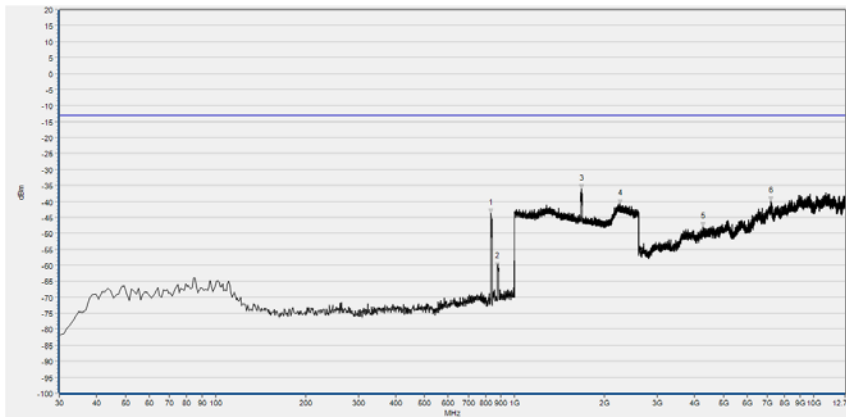


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	828.310	-42.30	-13.00	Horizontal	N/A
2	870.990	-58.69	-13.00	Horizontal	N/A
3	1658.183	-41.56	-13.00	Horizontal	PASS
4	2377.191	-41.84	-13.00	Horizontal	PASS
5	4202.146	-48.58	-13.00	Horizontal	PASS
6	7242.162	-41.56	-13.00	Horizontal	PASS

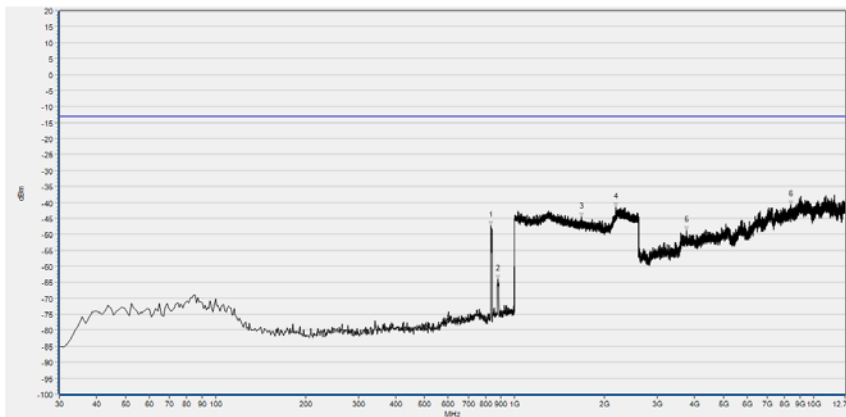


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	827.340	-45.17	-13.00	Vertical	N/A
2	877.780	-64.37	-13.00	Vertical	N/A
3	1655.622	-36.92	-13.00	Vertical	PASS
4	2448.900	-40.98	-13.00	Vertical	PASS
5	4172.613	-48.82	-13.00	Vertical	PASS
6	7249.545	-40.48	-13.00	Vertical	PASS

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

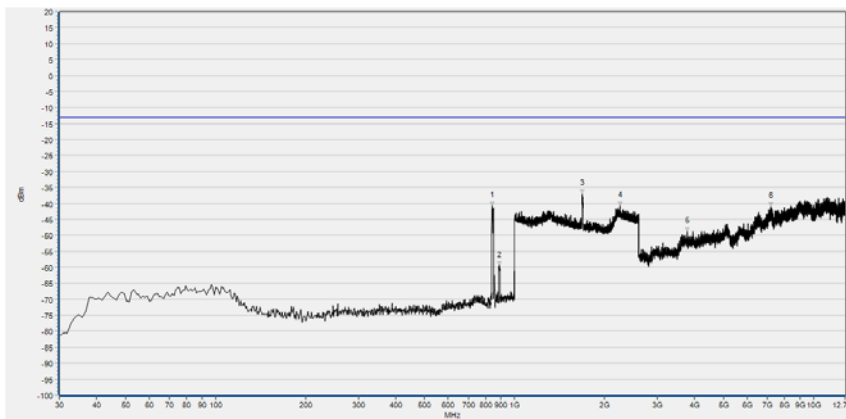


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	834.130	-43.68	-13.00	Horizontal	N/A
2	876.810	-60.50	-13.00	Horizontal	N/A
3	1675.470	-36.05	-13.00	Horizontal	PASS
4	2256.823	-40.84	-13.00	Horizontal	PASS
5	4268.594	-47.83	-13.00	Horizontal	PASS
6	7177.560	-39.97	-13.00	Horizontal	PASS

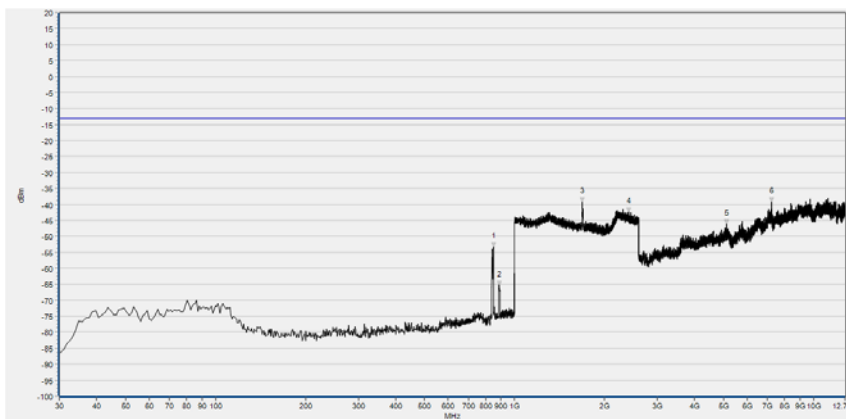


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	834.130	-47.24	-13.00	Vertical	N/A
2	879.720	-64.10	-13.00	Vertical	N/A
3	1672.269	-44.49	-13.00	Vertical	PASS
4	2185.114	-41.43	-13.00	Vertical	PASS
5	3753.619	-48.92	-13.00	Vertical	PASS
6	8373.632	-40.78	-13.00	Vertical	PASS

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

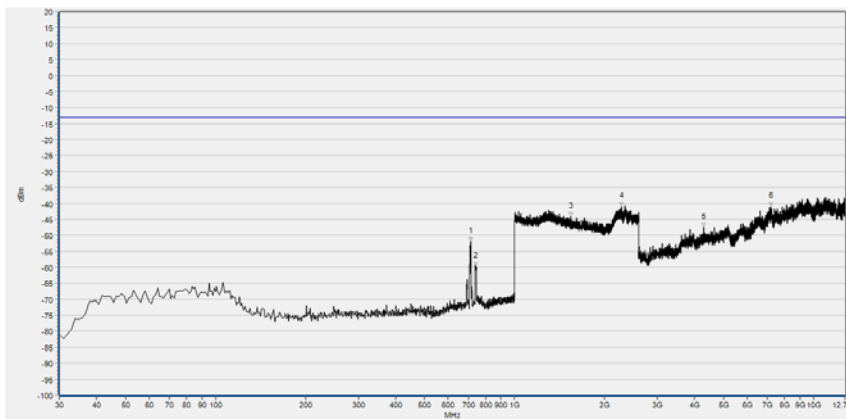


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	842.860	-40.80	-13.00	Horizontal	N/A
2	887.480	-59.57	-13.00	Horizontal	N/A
3	1683.794	-36.89	-13.00	Horizontal	PASS
4	2257.463	-40.87	-13.00	Horizontal	PASS
5	3773.923	-48.72	-13.00	Horizontal	PASS
6	7175.714	-40.96	-13.00	Horizontal	PASS

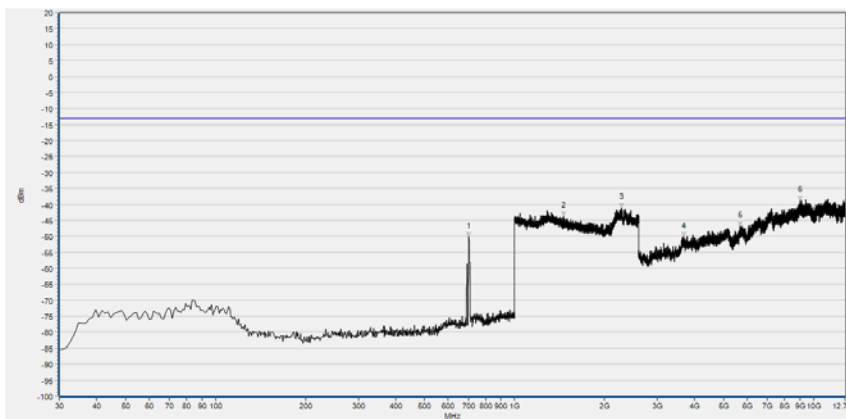


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	848.680	-53.38	-13.00	Vertical	N/A
2	887.480	-65.47	-13.00	Vertical	N/A
3	1686.995	-39.33	-13.00	Vertical	PASS
4	2407.923	-42.30	-13.00	Vertical	PASS
5	5117.658	-46.09	-13.00	Vertical	PASS
6	7238.471	-39.32	-13.00	Vertical	PASS

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

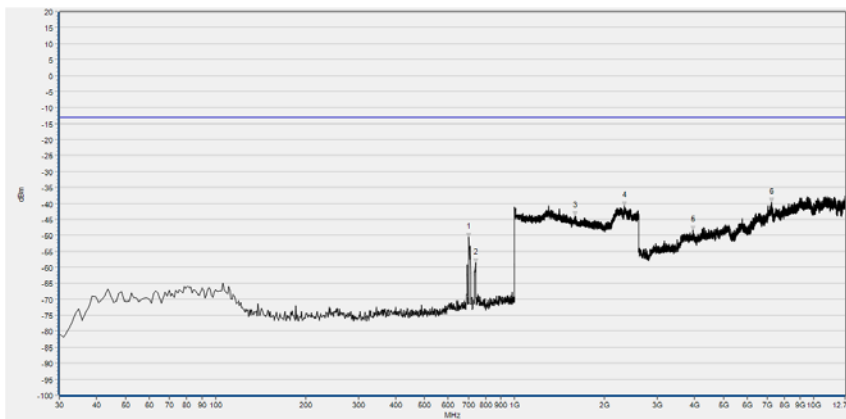


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	704.556	-52.02	-13.00	Horizontal	N/A
2	734.625	-59.80	-13.00	Horizontal	N/A
3	1537.779	-44.16	-13.00	Horizontal	PASS
4	2275.092	-41.12	-13.00	Horizontal	PASS
5	4299.450	-47.46	-13.00	Horizontal	PASS
6	7188.718	-40.93	-13.00	Horizontal	PASS

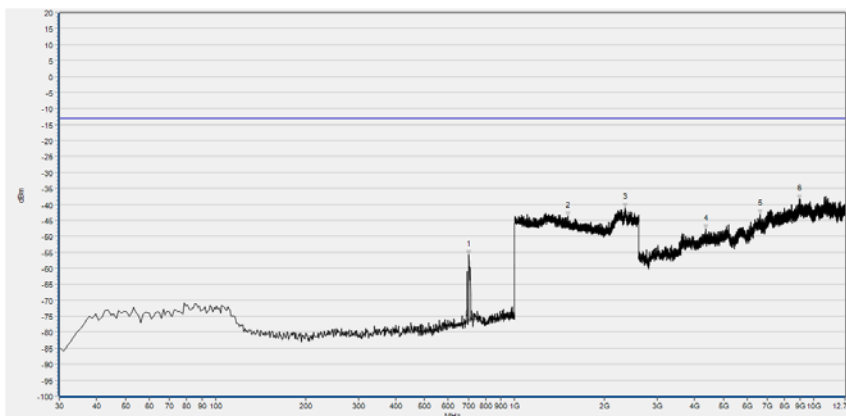


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	702.883	-50.12	-13.00	Vertical	N/A
2	1462.021	-43.79	-13.00	Vertical	N/A
3	2275.092	-41.07	-13.00	Vertical	PASS
4	3667.994	-50.06	-13.00	Vertical	PASS
5	5682.156	-46.74	-13.00	Vertical	PASS
6	9024.205	-38.68	-13.00	Vertical	PASS

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

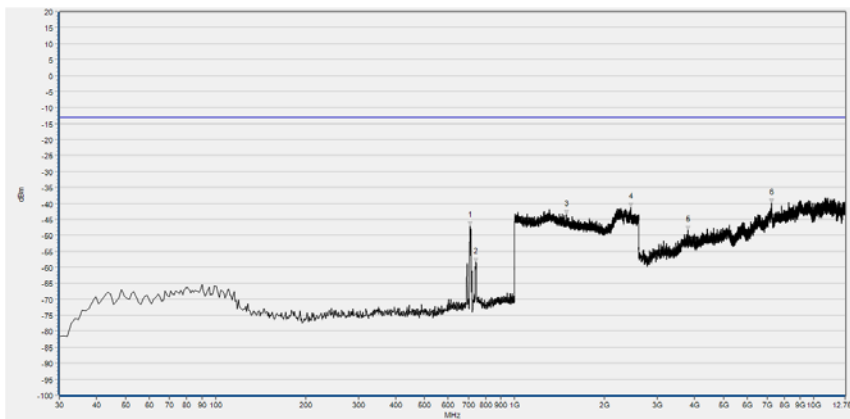


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	702.883	-50.66	-13.00	Horizontal	N/A
2	740.751	-58.74	-13.00	Horizontal	N/A
3	1596.465	-43.92	-13.00	Horizontal	PASS
4	2325.775	-40.84	-13.00	Horizontal	PASS
5	3944.129	-48.47	-13.00	Horizontal	PASS
6	7237.447	-39.72	-13.00	Horizontal	PASS

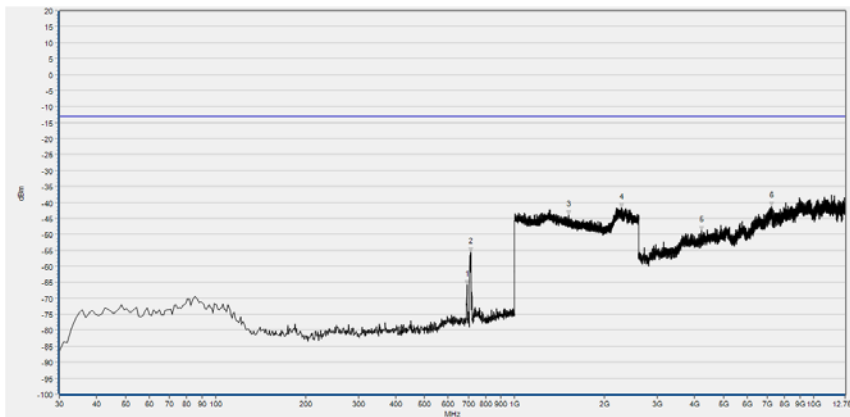


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	702.883	-55.83	-13.00	Vertical	N/A
2	1510.570	-43.73	-13.00	Vertical	PASS
3	2336.979	-40.97	-13.00	Vertical	PASS
4	4364.423	-47.70	-13.00	Vertical	PASS
5	6618.174	-43.13	-13.00	Vertical	PASS
6	8947.049	-38.28	-13.00	Vertical	PASS

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

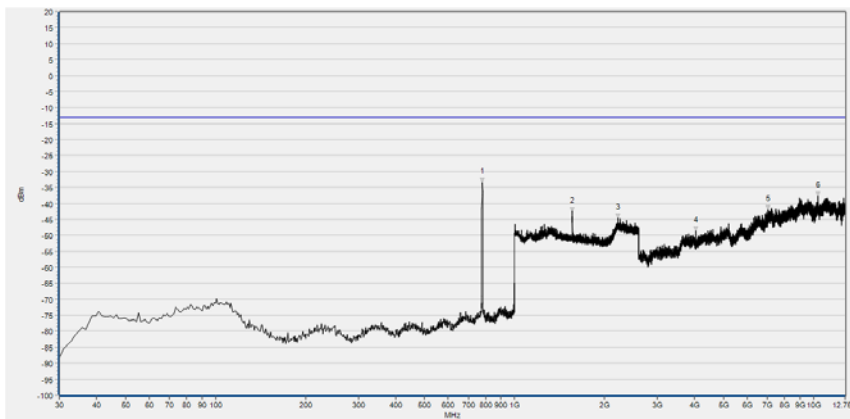


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	708.709	-47.09	-13.00	Horizontal	N/A
2	742.693	-58.53	-13.00	Horizontal	N/A
3	1491.897	-43.57	-13.00	Horizontal	PASS
4	2447.416	-41.20	-13.00	Horizontal	PASS
5	3795.909	-48.37	-13.00	Horizontal	PASS
6	7247.600	-39.97	-13.00	Horizontal	PASS

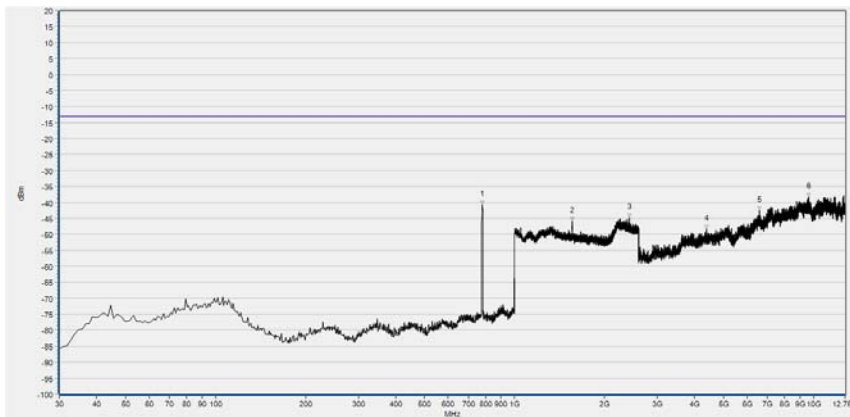


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	694.144	-65.75	-13.00	Vertical	N/A
2	712.593	-55.54	-13.00	Vertical	N/A
3	1518.039	-43.89	-13.00	Vertical	PASS
4	2278.293	-41.58	-13.00	Vertical	PASS
5	4212.142	-48.85	-13.00	Vertical	PASS
6	7251.660	-41.20	-13.00	Vertical	PASS

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

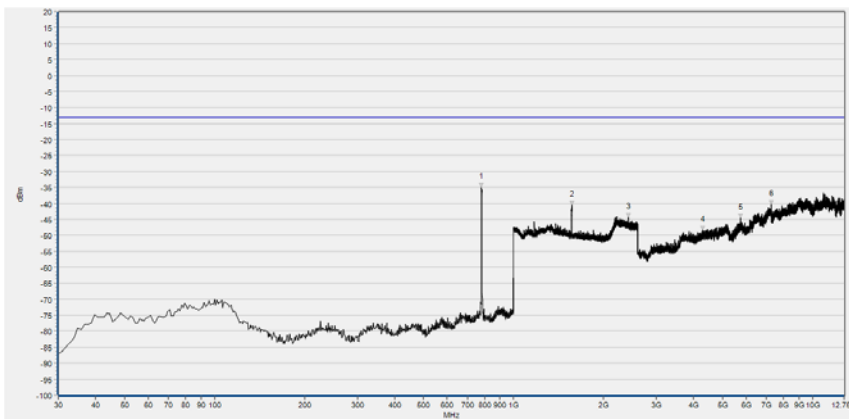


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	779.810	-33.34	-13.00	Horizontal	N/A
2	1561.505	-42.65	-13.00	Horizontal	PASS
3	2217.127	-44.66	-13.00	Horizontal	PASS
4	4034.179	-48.57	-13.00	Horizontal	PASS
5	7050.200	-41.79	-13.00	Horizontal	PASS
6	10343.090	-37.71	-13.00	Horizontal	PASS

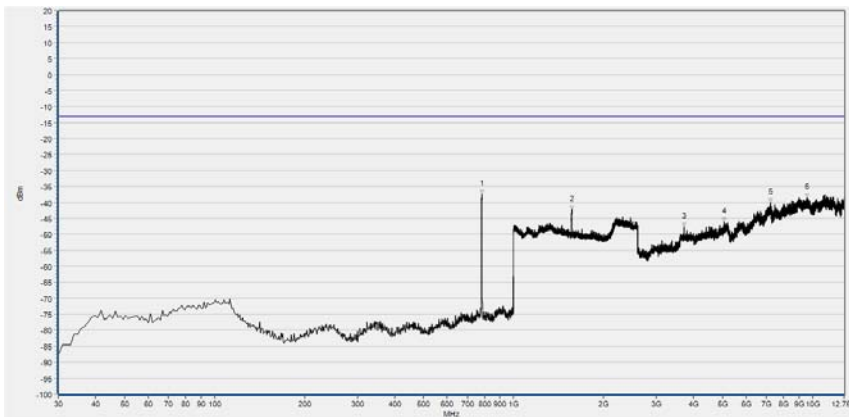


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	779.810	-40.70	-13.00	Vertical	N/A
2	1558.303	-45.93	-13.00	Vertical	PASS
3	2425.850	-44.72	-13.00	Vertical	PASS
4	4377.496	-48.30	-13.00	Vertical	PASS
5	6594.290	-42.56	-13.00	Vertical	PASS
6	9652.764	-38.34	-13.00	Vertical	PASS

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

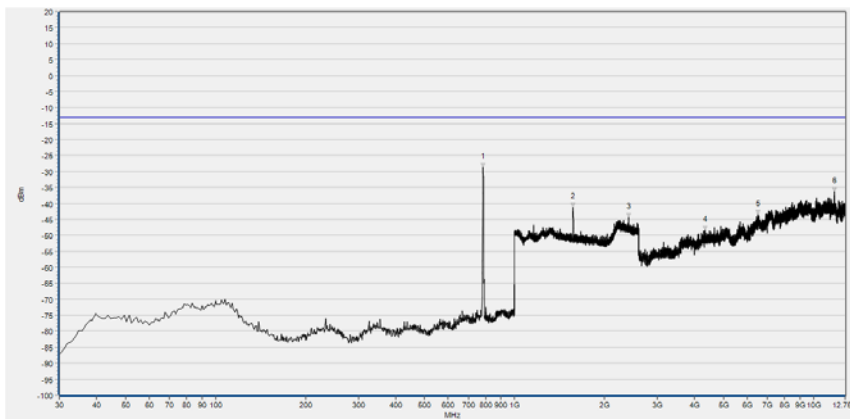


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	780.780	-34.98	-13.00	Horizontal	N/A
2	1564.066	-40.56	-13.00	Horizontal	PASS
3	2425.850	-44.33	-13.00	Horizontal	PASS
4	4279.669	-48.34	-13.00	Horizontal	PASS
5	5754.455	-44.61	-13.00	Horizontal	PASS
6	7264.312	-40.41	-13.00	Horizontal	PASS

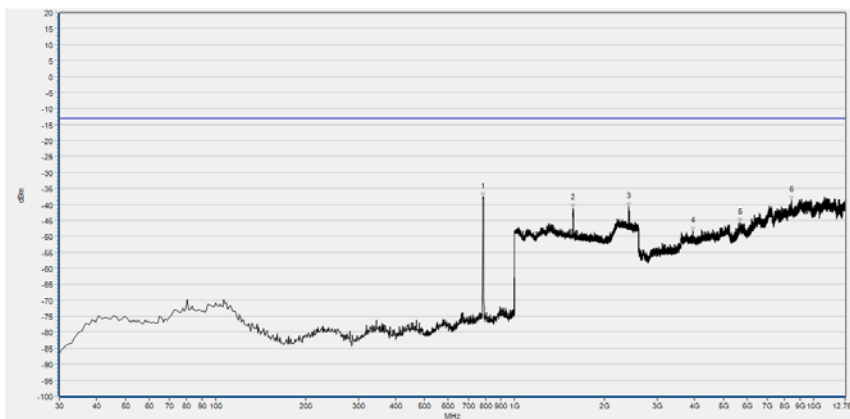


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	783.690	-37.34	-13.00	Vertical	N/A
2	1564.066	-42.34	-13.00	Vertical	PASS
3	3711.166	-47.81	-13.00	Vertical	PASS
4	5067.821	-46.21	-13.00	Vertical	PASS
5	7218.167	-40.17	-13.00	Vertical	PASS
6	9575.241	-38.49	-13.00	Vertical	PASS

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

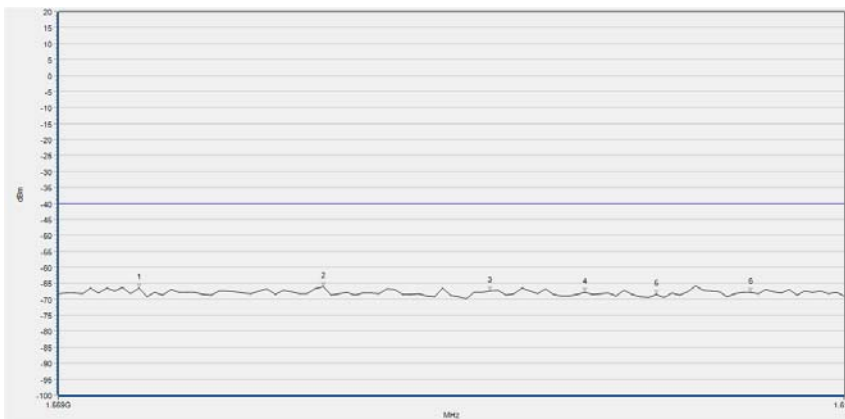


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	1564.152	-66.43	-40.00	Horizontal	N/A
2	1576.000	-65.97	-40.00	Horizontal	PASS
3	1586.818	-67.33	-40.00	Horizontal	PASS
4	1593.000	-67.84	-40.00	Horizontal	PASS
5	1597.636	-68.49	-40.00	Horizontal	PASS
6	1603.818	-67.81	-40.00	Horizontal	PASS

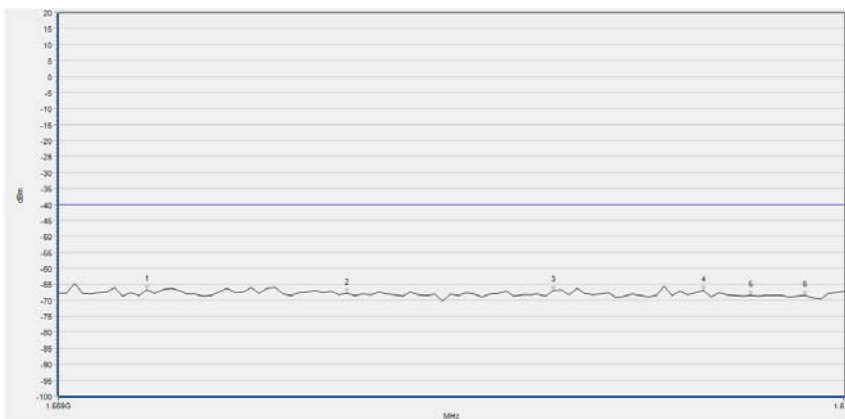


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	785.630	-37.55	-13.00	Vertical	N/A
2	1571.108	-41.33	-13.00	Vertical	PASS
3	2401.521	-40.70	-13.00	Vertical	PASS
4	3949.273	-48.27	-13.00	Vertical	PASS
5	5693.544	-45.62	-13.00	Vertical	PASS
6	8449.309	-38.87	-13.00	Vertical	PASS

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

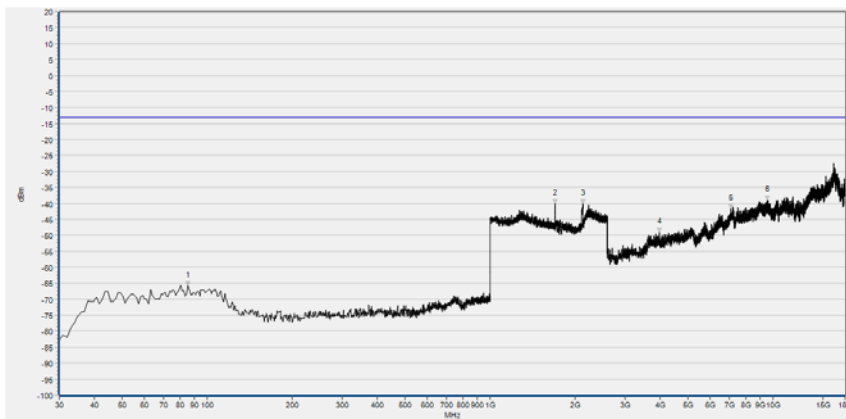


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	1564.152	-66.43	-40.00	Horizontal	PASS
2	1576.000	-65.97	-40.00	Horizontal	PASS
3	1586.818	-67.33	-40.00	Horizontal	PASS
4	1593.000	-67.84	-40.00	Horizontal	PASS
5	1597.636	-68.49	-40.00	Horizontal	PASS
6	1603.818	-67.81	-40.00	Horizontal	PASS

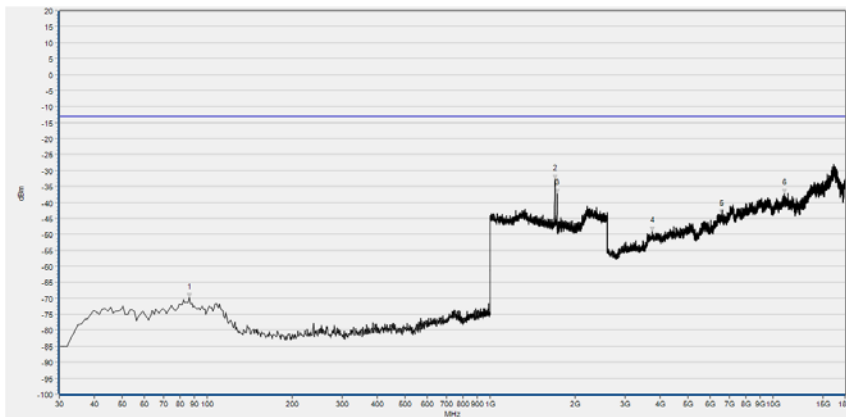


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	1564.667	-66.77	-40.00	Vertical	PASS
2	1577.545	-67.82	-40.00	Vertical	PASS
3	1590.939	-66.90	-40.00	Vertical	PASS
4	1600.727	-67.02	-40.00	Vertical	PASS
5	1603.818	-68.51	-40.00	Vertical	PASS
6	1607.424	-68.38	-40.00	Vertical	PASS

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

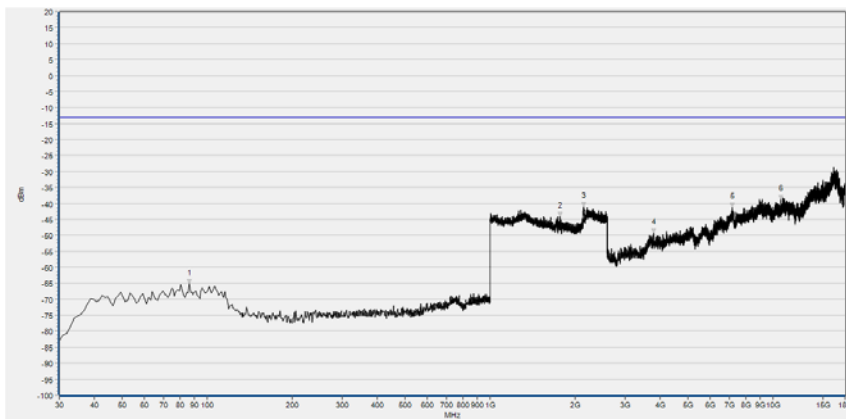


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	85.345	-65.76	-13.00	Horizontal	PASS
2	1695.548	-40.02	-13.00	Horizontal	N/A
3	2126.163	-40.21	-13.00	Horizontal	N/A
4	3960.560	-49.15	-13.00	Horizontal	PASS
5	7115.519	-41.73	-13.00	Horizontal	PASS
6	9546.558	-38.96	-13.00	Horizontal	PASS

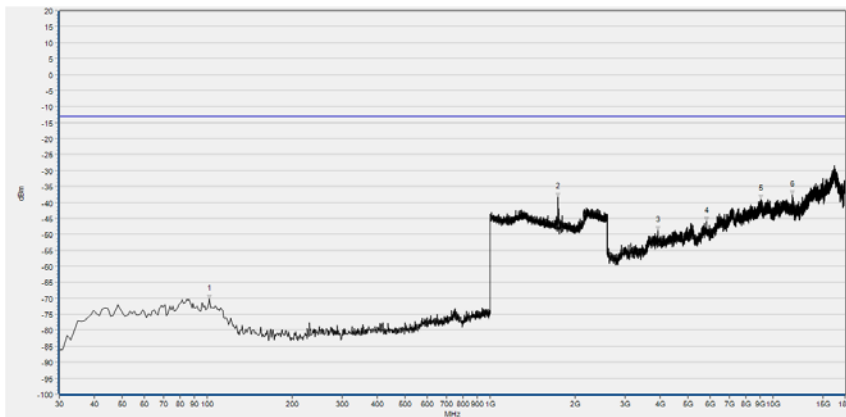


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	86.316	-69.93	-13.00	Vertical	PASS
2	1694.747	-32.80	-13.00	Vertical	N/A
3	1727.564	-37.24	-13.00	Vertical	N/A
4	3750.058	-49.10	-13.00	Vertical	PASS
5	6599.533	-43.75	-13.00	Vertical	PASS
6	10958.460	-37.16	-13.00	Vertical	PASS

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

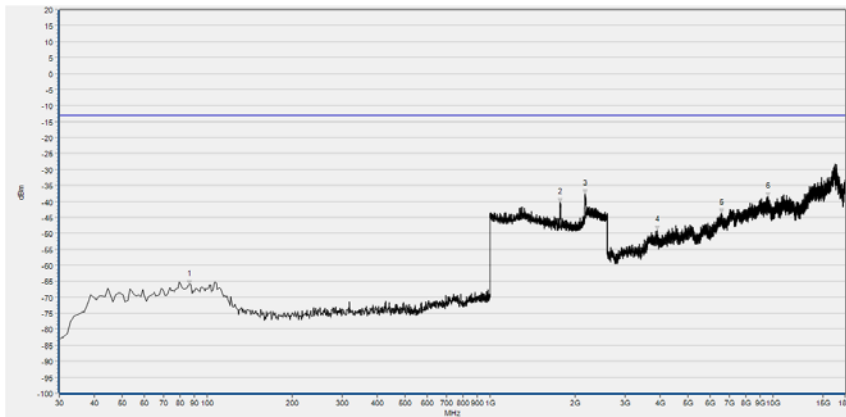


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	86.316	-65.25	-13.00	Horizontal	PASS
2	1770.785	-44.24	-13.00	Horizontal	PASS
3	2136.568	-41.05	-13.00	Horizontal	N/A
4	3783.431	-49.24	-13.00	Horizontal	PASS
5	7177.130	-41.25	-13.00	Horizontal	PASS
6	10681.214	-38.79	-13.00	Horizontal	PASS

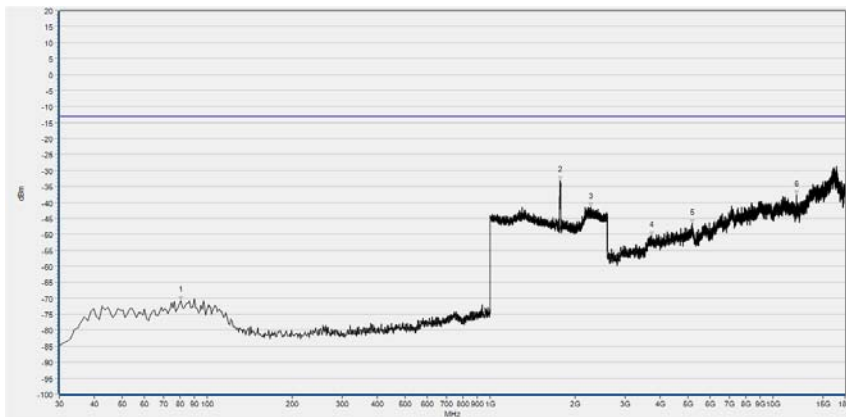


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	101.852	-70.39	-13.00	Horizontal	PASS
2	1737.169	-38.30	-13.00	Horizontal	N/A
3	3914.352	-48.76	-13.00	Horizontal	PASS
4	5837.106	-45.91	-13.00	Horizontal	PASS
5	9043.407	-39.08	-13.00	Horizontal	PASS
6	11738.856	-37.61	-13.00	Horizontal	PASS

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

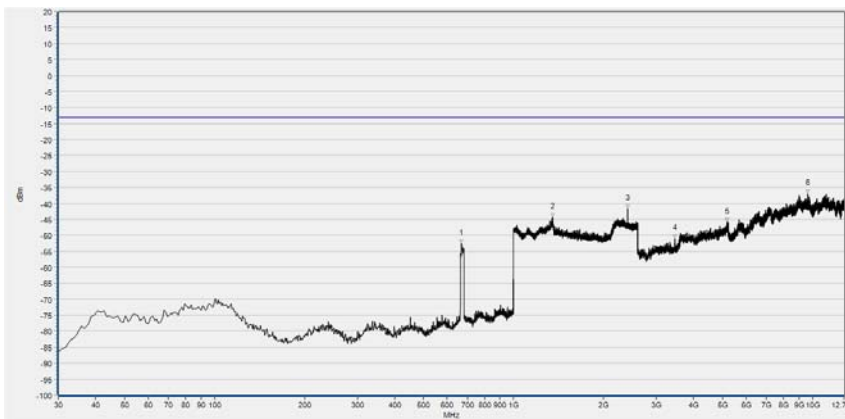


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	86.316	-66.09	-13.00	Horizontal	PASS
2	1767.584	-40.29	-13.00	Horizontal	N/A
3	2171.786	-37.74	-13.00	Horizontal	N/A
4	3893.816	-49.10	-13.00	Horizontal	PASS
5	6586.698	-43.77	-13.00	Horizontal	PASS
6	9605.601	-38.65	-13.00	Horizontal	PASS

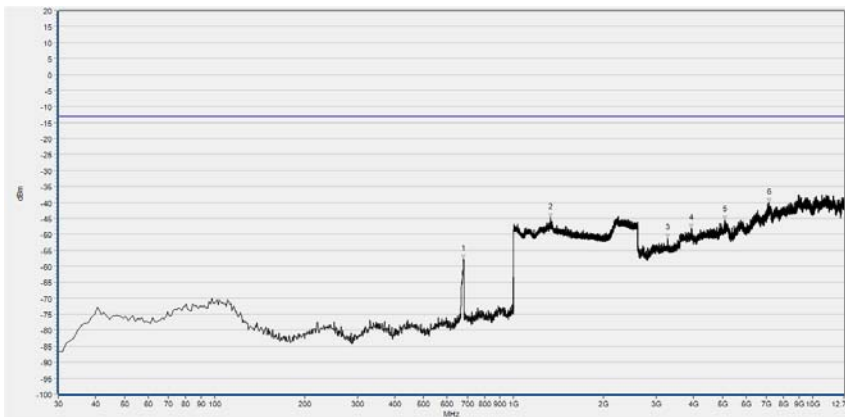


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	80.490	-70.69	-13.00	Vertical	PASS
2	1766.783	-33.21	-13.00	Vertical	N/A
3	2275.838	-41.49	-13.00	Vertical	PASS
4	3714.119	-50.45	-13.00	Vertical	PASS
5	5174.796	-46.65	-13.00	Vertical	PASS
6	12123.921	-37.60	-13.00	Vertical	PASS

LTE Band 71, 20MHz BW, Low Channel, QPSK

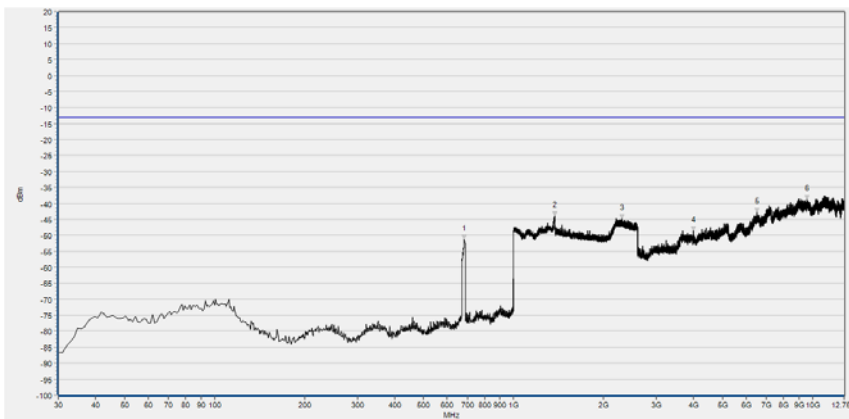


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	669.230	-52.64	-13.00	Horizontal	N/A
2	1348.940	-44.46	-13.00	Horizontal	PASS
3	2402.161	-41.62	-13.00	Horizontal	PASS
4	3469.367	-51.15	-13.00	Horizontal	PASS
5	5169.340	-46.00	-13.00	Horizontal	PASS
6	9630.615	-37.09	-13.00	Horizontal	PASS

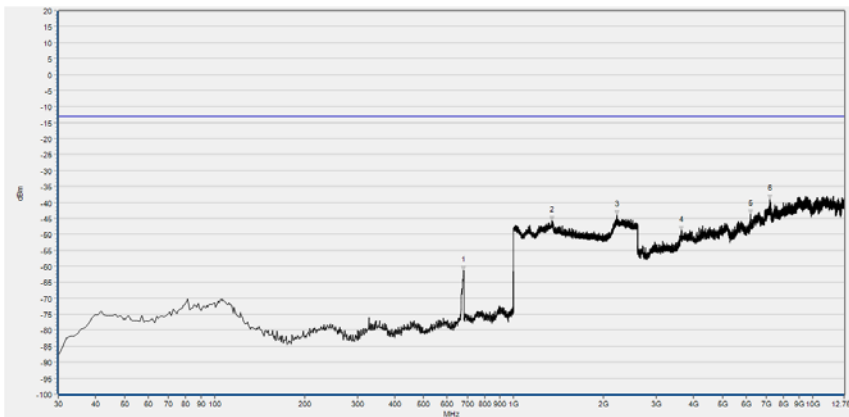


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	679.900	-57.88	-13.00	Vertical	N/A
2	1329.092	-44.78	-13.00	Vertical	PASS
3	3282.942	-51.38	-13.00	Vertical	PASS
4	3934.506	-48.07	-13.00	Vertical	PASS
5	5097.354	-45.54	-13.00	Vertical	PASS
6	7149.873	-40.11	-13.00	Vertical	PASS

LTE Band 71, 20MHz BW, Mid Channel, QPSK

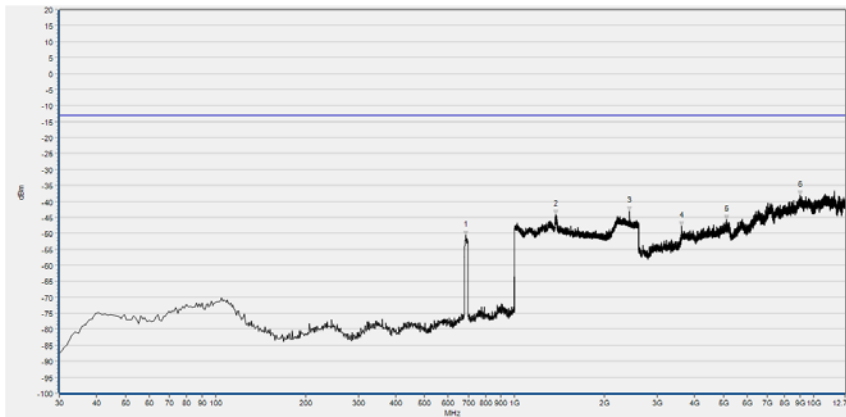


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	683.780	-51.25	-13.00	Horizontal	N/A
2	1371.989	-43.86	-13.00	Horizontal	PASS
3	2302.921	-44.79	-13.00	Horizontal	PASS
4	4000.955	-48.62	-13.00	Horizontal	PASS
5	6514.921	-42.81	-13.00	Horizontal	PASS
6	9556.783	-38.82	-13.00	Horizontal	PASS

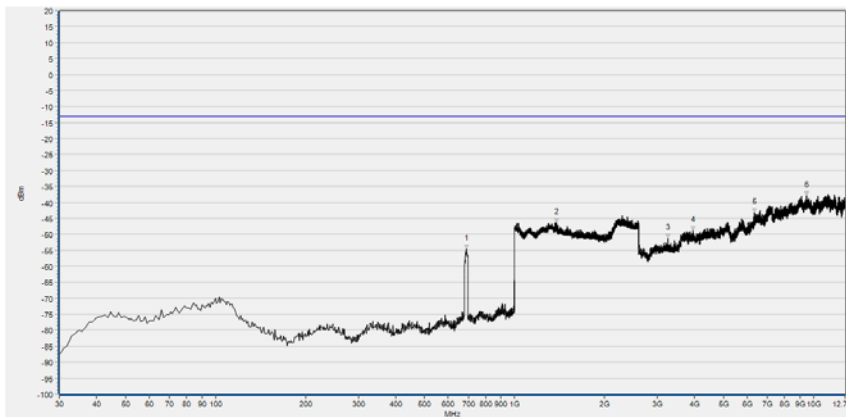


No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	680.870	-61.39	-13.00	Vertical	N/A
2	1346.379	-45.80	-13.00	Vertical	PASS
3	2219.688	-44.02	-13.00	Vertical	PASS
4	3633.642	-48.74	-13.00	Vertical	PASS
5	6206.674	-43.78	-13.00	Vertical	PASS
6	7203.401	-39.08	-13.00	Vertical	PASS

LTE Band 71, 20MHz BW, High Channel, QPSK



No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	685.720	-50.55	-13.00	Horizontal	N/A
2	1377.111	-44.14	-13.00	Horizontal	PASS
3	2425.850	-43.05	-13.00	Horizontal	PASS
4	3626.259	-47.79	-13.00	Horizontal	PASS
5	5113.966	-45.67	-13.00	Horizontal	PASS
6	8999.354	-38.19	-13.00	Horizontal	PASS



No.	Fre.(MHz)	PK (dBm)	Limit (dBm)	Antenna	Verdict
1	688.630	-54.65	-13.00	Vertical	N/A
2	1381.593	-46.40	-13.00	Vertical	PASS
3	3257.101	-51.30	-13.00	Vertical	PASS
4	3943.735	-48.90	-13.00	Vertical	PASS
5	6328.496	-43.17	-13.00	Vertical	PASS
6	9484.797	-37.87	-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
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 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	2021.10.21	2022.10.20
System Simulator	6200995016	MT8820C	Anritsu	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
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



REPORT No.: SZ21110116W02

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 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 _____