FCC TEST REPORT

Product Name:	COSMO
Trade Mark:	N/A
Model No.:	COSMO COMMUNICATOR VE
Add. Model No.:	N/A
Report Number:	19070205RFM-2
Test Standards:	FCC 47 CFR Part 22 FCC 47 CFR Part 24 FCC 47 CFR Part 27 FCC 47 CFR Part 90
FCC ID:	2AO7Q-COSMOVE
Test Result:	PASS
Date of Issue:	September 18, 2019

Prepared for:

Planet Computers Limited
Suite #9, 56 Sloane Square, London, SW1W 8AX, United Kingdom

Prepared by:

Shenzhen UnionTrust Quality and Technology Co., Ltd.
16/F, Block A, Building 6, Baoneng Science and Technology Park,
Qingxiang Road No.1, Longhua New District, Shenzhen, China
TEL: +86-755-2823 0888
FAX: +86-755-2823 0886

Prepared by: Henry Lu, Team Leader

Reviewed by: Kevin Liang, Assistant Manager

Approved by: Billy Li, Technical Director

Date: September 18, 2019

UnionTrust Laboratories * Certified *

Version

Version No.	Date	Description
V1.0	September 18, 2019	Original

CONTENTS

1. GENERAL INFORMATION 6
   1.1 CLIENT INFORMATION 6
   1.2 EUT INFORMATION 6
      1.2.1 GENERAL DESCRIPTION OF EUT 6
      1.2.2 DESCRIPTION OF ACCESSORIES 7
   1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD 8
   1.4 DESCRIPTION OF SUPPORT UNITS 15
   1.5 TEST LOCATION 15
   1.6 TEST FACILITY 15
   1.7 DEVIATION FROM STANDARDS 16
   1.8 ABNORMALITIES FROM STANDARD CONDITIONS 16
   1.9 OTHER INFORMATION REQUESTED BY THE CUSTOMER 16
   1.10 MEASUREMENT UNCERTAINTY 16
2. TEST SUMMARY 17
3. EQUIPMENT LIST 20
4. TEST CONFIGURATION 21
   4.1 ENVIRONMENTAL CONDITIONS FOR TESTING 21
   4.2 TEST SETUP 22
      4.2.1 FOR RADIATED EMISSIONS TEST SETUP 22
      4.2.2 FOR CONDUCTED RF TEST SETUP 23
   4.3 TEST CHANNELS 24
   4.4 SYSTEM TEST CONFIGURATION 27
   4.5 PRE-SCAN 28
      4.5.1 LTE BAND 2 28
      4.5.2 LTE BAND 4 29
      4.5.3 LTE BAND 5 31
      4.5.4 LTE BAND 7 32
      4.5.5 LTE BAND 12 33
      4.5.6 LTE BAND 13 34
      4.5.7 LTE BAND 17 35
      4.5.8 LTE BAND 25 36
      4.5.9 LTE BAND 41 38
      4.5.10 LTE BAND 41 CA 39
      4.5.11 LTE BAND 66 42
5. RADIO TECHNICAL REQUIREMENTS SPECIFICATION 48
   5.1 REFERENCE DOCUMENTS FOR TESTING 48
   5.2 ERP OR EIRP 48
      5.2.1 LTE BAND 2 50
      5.2.2 LTE BAND 4 51
      5.2.3 LTE BAND 5 52
      5.2.4 LTE BAND 7 52
      5.2.5 LTE BAND 12 53
      5.2.6 LTE BAND 13 53
      5.2.7 LTE BAND 17 53
      5.2.8 LTE BAND 25 54
      5.2.9 LTE BAND 41 55
      5.2.10 LTE BAND 41 CA 56
      5.2.11 LTE BAND 66 57
   5.3 CONDUCTED OUTPUT POWER 58
   5.4 PEAK-TO-AVERAGE RATIO 60
      5.4.1 LTE BAND 2 60
      5.4.2 LTE BAND 4 64
      5.4.3 LTE BAND 5 68
      5.4.4 LTE BAND 7 71

5.4.5 LTE BAND 12 74
5.4.6 LTE BAND 13 77
5.4.7 LTE BAND 17 79
5.4.8 LTE BAND 25 81
5.4.9 LTE BAND 41 85
5.4.10 LTE BAND 66 88
5.5 99%&26DB BANDWIDTH 92
5.5.1 LTE BAND 2 92
5.5.2 LTE BAND 4 102
5.5.3 LTE BAND 5 112
5.5.4 LTE BAND 7 119
5.5.5 LTE BAND 12 126
5.5.6 LTE BAND 13 133
5.5.7 LTE BAND 17 136
5.5.8 LTE BAND 25 140
5.5.9 LTE BAND 41 150
5.5.10 LTE BAND 41 CA 157
5.5.11 LTE BAND 66 173
5.6 BAND EDGE AT ANTENNA TERMINALS 183
5.6.1 LTE BAND 2 184
5.6.2 LTE BAND 4 197
5.6.3 LTE BAND 5 210
5.6.4 LTE BAND 7 219
5.6.5 LTE BAND 12 228
5.6.6 LTE BAND 13 237
5.6.7 LTE BAND 17 242
5.6.8 LTE BAND 25 247
5.6.9 LTE BAND 41 264
5.6.10 LTE BAND 41 CA 273
5.6.11 LTE BAND 66 294
5.7 SPURIOUS EMISSIONS AT ANTENNA TERMINALS 307
5.7.1 LTE BAND 2 308
5.7.2 LTE BAND 4 317
5.7.3 LTE BAND 5 326
5.7.4 LTE BAND 7 332
5.7.5 LTE BAND 12 338
5.7.6 LTE BAND 13 344
5.7.7 LTE BAND 17 347
5.7.8 LTE BAND 25 350
5.7.9 LTE BAND 41 359
5.7.10 LTE BAND 41 CA 365
5.7.11 LTE BAND 66 380
5.8 FIELD STRENGTH OF SPURIOUS RADIATION 389
5.8.1 LTE BAND 2 390
5.8.2 LTE BAND 4 391
5.8.3 LTE BAND 5 392
5.8.4 LTE BAND 7 393
5.8.5 LTE BAND 12 394
5.8.6 LTE BAND 13 395
5.8.7 LTE BAND 17 396
5.8.8 LTE BAND 25 397
5.8.9 LTE BAND 41 398
5.8.10 LTE BAND 41 CA 399
5.8.11 LTE BAND 66 400
5.9 FREQUENCY STABILITY 402
5.9.1 LTE BAND 2 402
5.9.2 LTE BAND 4 403
5.9.3 LTE BAND 5 403
5.9.4 LTE BAND 7 404
5.9.5 LTE BAND 12 404
5.9.6 LTE BAND 13 405

5.9.7 LTE BAND 25 406
5.9.8 LTE BAND 41 406
5.9.9 LTE BAND 41 CA 407
5.9.10 LTE BAND 66 407

APPENDIX 1 PHOTOS OF TEST SETUP 407
APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS 407

1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	Planet Computers Limited
Address of Applicant:	Suite #9, 56 Sloane Square, London, SW1W 8AX, United Kingdom
Manufacturer:	Planet Computers Limited
Address of Manufacturer:	Suite #9, 56 Sloane Square, London, SW1W 8AX, United Kingdom

1.2 EUT INFORMATION

1.2.1 General Description of EUT

Product Name:	COSMO		
Model No.:	COSMO COMMUNICATOR VE		
Add. Model No.:	N/A		
Trade Mark:	N/A		
DUT Stage:	Production Unit		
EUT Supports Function:	GSM Bands:	GSM850/ PCS 1900	
	UTRA Bands:	Band II/ Band V	
	E-UTRA Bands:	FDD Band 2/ Band 4/ Band 5/ Band 7/ Band 12/Band13/ Band 17/ Band 25/ Band 66	
		TDD Band 41	
	2.4 GHz ISM Band:	IEEE 802.11b/g/n	
		Bluetooth V4.0	
	5 GHz U-NII Bands:	5 150 MHz to 5 250 MHz	IEEE 802.11a/n/ac
		5 250 MHz to 5 350 MHz	IEEE 802.11a/n/ac
		5 470 MHz to 5 725 MHz	IEEE 802.11a/n/ac
		5 725 MHz to 5 850 MHz	IEEE 802.11a/n/ac
		1559 MHz to 1610 MHz	GPS
	BSR:	VHF Band II	FM
	NFC:	13.553 MHz to 13.567 MHz	
Sample Received Date:	July 12, 2019		
Sample Tested Date:	July 16, 2019 to September 16, 2019		

Remark:

The model number COSMO COMMUNICATOR has finished testing，the report number is “190725019RFM-2” this device model number is COSMO COMMUNICATOR VE，COSMO COMMUNICATOR and COSMO COMMUNICATOR VE only different in LTE frequency bands that change by software, other are same, for detailed differences please refer to the difference declaration.

1.2.2 Description of Accessories

Adapter	
Model No.:	TPA-10120125UU-MTK
Input:	100-240 V~50/60 Hz 0.6A
Output:	5.0 V ⎓ 2 A/ 7.0 V ⎓ 1.67 A/ 9.0 V ⎓ 1.67A/ 12 V ⎓ 1.25 A
AC Cable:	NA
DC Cable:	NA

Battery	
Model No.:	Gemini Standard Battery
Battery Type:	Lithium-ion Rechargeable Battery
Rated Voltage:	3.85 Vdc
Limited Charge Voltage:	4.4 Vdc
Rated Capacity:	4220 mAh

Cable	
Model No.:	N/A
Description:	USB Type-C Plug Cable
Cable Type:	Shielded without ferrite
Length:	0.8 Meter

1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

E-UTRA Bands	Bands	Transmit operating bands	Receive operating bands
	LTE Band 2:	1850-1910MHz	1930-1990MHz
	LTE Band 4:	1710-1755MHz	2110-2155MHz
	LTE Band 5:	824-849MHz	869-894MHz
	LTE Band 7:	2500-2570MHz	2620-2690MHz
	LTE Band 12:	699-716MHz	729-746MHz
	LTE Band 13:	777-787MHz	746-756MHz
	LTE Band 17:	704-716MHz	734-746MHz
	LTE Band 25:	1850-1915MHz	1930-1995MHz
	LTE Band 41:	2555-2655MHz	2555-2655MHz
	LTE Band 66:	1710-1780MHz	1710-1780MHz
E-UTRA UL CA Bands:	Intra-band contiguous	CA_41	
	non-contiguous (with two sub-blocks)	N/A	
	Inter-band (two bands)	N/A	
	Inter-band (three bands)	N/A	
E-UTRA DL CA Bands:	Intra-band contiguous	N/A	
	non-contiguous (with two sub-blocks)	N/A	
	Inter-band (two bands)	CA_1-3	
	Inter-band (three bands)	N/A	
E-UTRA Release:	Release 11		
E-UTRA Category:	Category 7		
Type of Modulation:	UP Link Modulation:	QPSK, 16-QAM, 64-QAM	
	Down Link Modulation:	QPSK, 16-QAM, 64-QAM	
Power Class:	Classs 3		
Antenna Type:	MONOPOLE Antenna		
Antenna Gain:	LTE Band 2:	2.1 dBi	
	LTE Band 4:	0.9 dBi	
	LTE Band 5:	-5.1 dBi	
	LTE Band 7:	-2.7 dBi	
	LTE Band 12:	-5.6 dBi	
	LTE Band 13:	-6.3 dBi	
	LTE Band 17:	-5.6 dBi	
	LTE Band 25:	2.1 dBi	
	LTE Band 41:	-1.5 dBi	
	LTE Band 66:	0.9 dBi	
Normal Test Voltage:	3.85 Vdc		
Extreme Test voltage:	3.5 to 4.35Vdc		
Extreme Test Temperature:	-30 °C to +50 °C		

Summary of Results:

Bands	BW (MHz)	Modulation	Frequency Range (MHz)	Max RF Output Power (dBm) Conducted (Average)	Max RF Output Power (dBm) ERP/EIRP (Average)	EIRP (W)	99% BW (MHz)	Emission Designator
2	1.4	QPSK	1850.7-1909.3	19.02	21.12	0.12942	1.1060	1M11G7D
		16QAM		18.45	20.55	0.11350	1.1009	1M10W7D
		64QAM		17.58	19.68	0.09290	1.1008	1M10W7D
	3	QPSK	1851.5-1908.5	19.01	21.11	0.12912	2.7024	2M70G7D
		16QAM		18.58	20.68	0.11695	2.6952	2M70W7D
		64QAM		17.66	19.76	0.09462	2.6971	2M70W7D
	5	QPSK	1852.5-1907.5	19.04	21.14	0.13002	4.5269	4M53G7D
		16QAM		19.09	21.19	0.13152	4.5607	4M56W7D
		64QAM		17.69	19.79	0.09528	4.5578	4M56W7D
	10	QPSK	1855.0-1905.0	18.96	21.06	0.12764	9.0384	9M04G7D
		16QAM		18.49	20.59	0.11455	9.0324	9M03W7D
		64QAM		17.77	19.87	0.09705	9.0315	9M03W7D
	15	QPSK	1857.5-1902.5	18.98	21.08	0.12823	13.593	13M6G7D
		16QAM		18.45	20.55	0.11350	13.539	13M5W7D
		64QAM		17.58	19.68	0.09290	13.570	13M6W7D
	20	QPSK	1860.0-1900.0	19.21	21.31	0.13521	18.118	18M1G7D
		16QAM		18.35	20.45	0.11092	18.106	18M1W7D
		64QAM		17.54	19.64	0.09204	18.084	18M1W7D

Summary of Results:

Bands	BW (MHz)	Modulation	Frequency Range (MHz)	Max RF Output Power (dBm) Conducted (Average)	Max RF Output Power (dBm) ERP/EIRP (Average)	EIRP (W)	99% BW (MHz)	Emission Designator
4	1.4	QPSK	1710.7-1754.3	16.41	17.31	0.05383	1.1024	1M10G7D
		16QAM		15.76	16.66	0.04634	1.0989	1M010W7D
		64QAM		14.62	15.52	0.03565	1.0980	1M10W7D
	3	QPSK	1711.5-1753.5	16.53	17.43	0.05534	2.6963	2M70G7D
		16QAM		15.84	16.74	0.04721	2.6913	2M70W7D
		64QAM		14.68	15.58	0.03614	2.6887	2M70W7D
	5	QPSK	1712.5-1752.5	16.50	17.40	0.05495	4.5350	4M54G7D
		16QAM		15.90	16.80	0.04786	4.5351	4M54W7D
		64QAM		14.72	15.62	0.03648	4.5269	4M53W7D
	10	QPSK	1715-1750	16.46	17.36	0.05445	9.0264	9M03G7D
		16QAM		15.82	16.72	0.04699	9.0150	9M02W7D
		64QAM		14.61	15.51	0.03556	9.0039	9M00W7D
	15	QPSK	1717.5-1747.5	16.49	17.39	0.05483	13.517	13M5G7D
		16QAM		15.85	16.75	0.04732	13.514	13M5W7D
		64QAM		114.72	15.62	0.03648	13.508	13M5W7D
	20	QPSK	1720-1745	16.67	17.57	0.05715	17.989	18M0G7D
		16QAM		15.79	16.69	0.04667	18.044	18M0W7D
		64QAM		15.38	16.28	0.04246	18.035	18M0W7D
5	1.4	QPSK	824.7-848.3	22.83	15.58	0.03614	1.1042	1M10G7D
		16QAM		22.32	15.07	0.03214	1.1014	1M10W7D
		64QAM		21.30	14.05	0.02541	1.0995	1M10W7D
	3	QPSK	825.5-847.5	22.72	15.47	0.03524	2.7043	2M70G7D
		16QAM		22.36	15.11	0.03243	2.6959	2M70W7D
		64QAM		21.32	14.07	0.02553	2.6967	2M70W7D
	5	QPSK	826.5-846.5	22.73	15.48	0.03532	4.5259	4M53G7D
		16QAM		22.37	15.12	0.03251	4.5447	4M54W7D
		64QAM		21.23	13.98	0.02500	4.5358	4M54W7D
	10	QPSK	829-844	22.82	15.57	0.03606	9.0316	9M03G7D
		16QAM		22.42	15.17	0.03289	9.0190	9M02W7D
		64QAM		21.37	14.12	0.02582	9.0144	9M01W7D

Summary of Results:

Bands	BW (MHz)	Modulation	Frequency Range (MHz)	Max RF Output Power (dBm) Conducted (Average)	Max RF Output Power (dBm) ERP/EIRP (Average)	EIRP (W)	99% BW (MHz)	Emission Designator
7	5	QPSK	2502.5-2567.5	22.77	20.07	0.10162	4.5295	4M53G7D
		16QAM		22.21	19.51	0.08933	4.5434	4M54W7D
		64QAM		21.06	18.36	0.06855	4.5379	4M54W7D
	10	QPSK	2505-2565	22.88	20.18	0.10423	9.0101	9M01G7D
		16QAM		22.10	19.40	0.08710	9.0046	9M00W7D
		64QAM		21.15	18.45	0.06998	9.0121	9M01W7D
	15	QPSK	2507.5-2562.5	22.79	20.09	0.10209	13.533	13M5G7D
		16QAM		22.24	19.54	0.08995	13.507	13M5W7D
		64QAM		21.08	18.38	0.06887	13.514	13M5W7D
	20	QPSK	2510-2560	22.95	20.25	0.10593	18.005	18M0G7D
		16QAM		22.25	19.55	0.09016	18.019	18M0W7D
		64QAM		21.18	18.48	0.07047	18.013	18M0W7D
12	1.4	QPSK	699.7-715.3	22.48	14.73	0.02972	1.0994	1M10G7D
		16QAM		21.89	14.14	0.02594	1.0996	1M10W7D
		64QAM		20.88	13.13	0.02056	1.0985	1M10W7D
	3	QPSK	700.5-714.5	22.42	14.67	0.02931	2.6970	2M70G7D
		16QAM		21.90	14.15	0.02600	2.6892	2M70W7D
		64QAM		20.81	13.06	0.02023	2.6897	2M70W7D
	5	QPSK	701.5-713.5	22.49	14.74	0.02979	4.5332	4M53G7D
		16QAM		21.77	14.02	0.02523	4.5392	4M54W7D
		64QAM		20.87	13.12	0.02051	4.5375	4M54W7D
	10	QPSK	704-711	22.52	14.77	0.02999	9.0244	9M02G7D
		16QAM		21.93	14.18	0.02618	9.0028	9M00W7D
		64QAM		20.91	13.16	0.02070	9.0064	9M01W7D
13	5	QPSK	779.5-784.5	22.54	14.09	0.02564	4.5389	4M54G7D
		16QAM		21.82	13.37	0.02173	4.5341	4M53W7D
		64QAM		20.68	12.23	0.01671	4.5316	4M53W7D
	10	QPSK	782-782	22.65	14.20	0.02630	8.9900	8M99G7D
		16QAM		21.80	13.35	0.02163	8.9799	8M98W7D
		64QAM		20.76	12.31	0.01702	8.9844	8M98W7D

Summary of Results:

Bands	BW (MHz)	Modulation	Frequency Range (MHz)	Max RF Output Power (dBm) Conducted (Average)	Max RF Output Power (dBm) ERP/EIRP (Average)	EIRP (W)	99% BW (MHz)	Emission Designator
17	5	QPSK	706.5-713.5	22.54	14.79	0.03013	4.5345	4M53G7D
		16QAM		21.84	14.09	0.02564	4.5358	4M54W7D
		64QAM		20.85	13.10	0.02042	4.5389	4M54W7D
	10	QPSK	709-711	22.58	14.83	0.03041	9.0123	9M01G7D
		16QAM		21.98	14.23	0.02649	9.0045	9M00W7D
		64QAM		20.99	13.24	0.02109	9.0068	9M01W7D
25	1.4	QPSK	1850.7-1914.3	18.26	20.36	0.10864	1.105	1M11G7D
		16QAM		16.83	18.93	0.07816	1.102	1M10W7D
		64QAM		16.46	18.56	0.07178	1.101	1M10W7D
	3	QPSK	1851.5-1913.5	18.28	20.38	0.10914	2.702	2M70G7D
		16QAM		16.89	18.99	0.07925	2.696	2M70W7D
		64QAM		16.58	18.68	0.07379	2.690	2M70W7D
	5	QPSK	1852.5-1912.5	18.28	20.38	0.10914	4.544	4M54G7D
		16QAM		16.73	18.93	0.07816	4.553	4M55W7D
		64QAM		16.54	18.64	0.07311	4.551	4M55W7D
	10	QPSK	1855.0-1910.0	18.21	20.31	0.10740	9.029	9M03G7D
		16QAM		16.86	18.96	0.07870	9.034	9M03W7D
		64QAM		16.48	18.58	0.07211	9.028	9M03W7D
	15	QPSK	1857.5-1907.5	18.29	20.39	0.10940	13.533	13M5G7D
		16QAM		16.92	19.02	0.07980	13.536	13M5W7D
		64QAM		16.52	18.62	0.07278	13.533	13M5W7D
	20	QPSK	1860.0-1905.0	18.32	20.42	0.11015	18.050	18M1G7D
		16QAM		16.83	18.93	0.07816	18.079	18M1W7D
		64QAM		16.43	18.53	0.07129	18.050	18M1W7D
41	5	QPSK	2557.5-2562.5	23.20	21.70	0.14791	4.5134	4M51G7D
		16QAM		22.33	20.83	0.12106	4.4978	4M50W7D
		64QAM		21.11	19.61	0.09141	4.4973	4M50W7D
	10	QPSK	2560-2650	23.23	21.73	0.14894	9.0031	9M00G7D
		16QAM		22.34	20.84	0.12134	8.9921	8M99W7D
		64QAM		21.01	19.51	0.08933	8.9935	8M99W7D
	15	QPSK	2562.5-2647.5	23.17	21.67	0.14689	13.477	13M5G7D
		16QAM		22.24	20.74	0.11858	13.511	13M5W7D
		64QAM		21.01	19.51	0.08933	13.496	13M5W7D
	20	QPSK	2565-2645	23.27	21.77	0.15031	18.028	18M0G7D
		16QAM		22.37	20.89	0.12274	17.991	18M0W7D
		64QAM		21.19	19.69	0.09311	18.005	18M0W7D
66	1.4	QPSK	1710.7-1779.3	16.72	17.62	0.05781	1.1025	1M10G7D
		16QAM		16.09	16.99	0.05000	1.0980	1M10W7D
		64QAM		14.92	15.82	0.03819	1.0968	1M10W7D

	3	QPSK	1711.5-1778.5	16.73	17.63	0.05794	2.6946	2M69G7D
		16QAM		16.17	17.07	0.05093	2.6894	2M69W7D
		64QAM		14.96	15.89	0.03882	2.6880	2M69W7D
	5	QPSK	1712.5-1777.5	16.74	17.64	0.05808	4.5295	4M53G7D
		16QAM		16.16	17.06	0.05082	4.5404	4M54W7D
		64QAM		15.00	15.90	0.03890	4.5334	4M53W7D
	10	QPSK	1715-1775	16.70	17.60	0.05754	9.0222	9M02G7D
		16QAM		16.13	17.03	0.05047	9.0129	9M01W7D
		64QAM		14.89	15.79	0.03793	9.0047	9M00W7D
	15	QPSK	1717.5-1772.5	16.76	17.66	0.05834	13.527	13M5G7D
		16QAM		16.15	17.05	0.05070	13.515	13M5W7D
		64QAM		14.99	15.89	0.03882	13.506	13M5W7D
	20	QPSK	1720-1770	16.69	17.59	0.05741	18.045	18M0G7D
		16QAM		16.06	16.93	0.04932	18.053	18M1W7D
		64QAM		14.89	15.79	0.03793	18.060	18M1W7D

Summary of Results:

Bands	BW (MHz)	Modulation	Frequency Range (MHz)	Max RF Output Power (dBm) Conducted (Average)	Max RF Output Power (dBm) ERP/EIRP (Average)	EIRP (W)	99% BW (MHz)	Emission Designator
41CA	20+20	QPSK	2565-2645	22.41	20.91	0.12331	37.526	37M5G7D
		16QAM		22.16	20.66	0.11641	37.505	37M5W7D
		64QAM		20.39	18.89	0.07745	37.547	37M5W7D
	5+20	QPSK	2557.5-2652.5	22.54	21.04	0.12706	23.262	23M3G7D
		16QAM		22.05	20.55	0.11350	23.158	23M2W7D
		64QAM		20.61	19.11	0.08147	23.150	23M2W7D
	10+15	QPSK	2560-2650	22.60	21.1	0.12882	23.361	23M4G7D
		16QAM		21.62	20.12	0.10280	23.260	23M3W7D
		64QAM		20.66	19.16	0.08241	23.281	23M3W7D
	10+20	QPSK	2605-2650	22.51	21.01	0.12618	27.932	27M9G7D
		16QAM		21.63	20.13	0.10304	27.807	27M8W7D
		64QAM		20.64	19.14	0.08204	27.833	27M8W7D
	15+10	QPSK	2562.5-2647.5	22.48	20.98	0.12531	23.425	23M4G7D
		16QAM		21.63	20.13	0.10304	23.362	23M4W7D
		64QAM		20.61	19.11	0.08147	23.350	23M4W7D
	15+15	QPSK	2562.5-2647.5	22.46	20.96	0.12474	28.382	28M4G7D
		16QAM		21.64	20.14	0.10328	28.474	28M5W7D
		64QAM		20.69	19.19	0.08299	28.418	28M4W7D
	15+20	QPSK	2562.5-2647.5	22.45	20.95	0.12445	32.634	32M6G7D
		16QAM		21.73	20.23	0.10544	32.588	32M6W7D
		64QAM		20.78	19.28	0.08472	32.584	32M6W7D
	20+5	QPSK	2565-2645	22.48	20.98	0.12531	23.165	23M2G7D
		16QAM		21.85	20.35	0.10839	23.119	23M1W7D

		64QAM		20.69	19.19	0.08299	23.039	23M0W7D
	20+10	QPSK	2565-2645	22.43	20.93	0.12388	27.916	27M9G7D
		16QAM		21.84	20.34	0.10814	28.474	28M5W7D
		64QAM		20.73	19.23	0.08375	28.418	28M4W7D
	20+15	QPSK	2565-2645	22.51	21.01	0.12618	32.641	32M6G7D
		16QAM		21.75	20.25	0.10593	32.646	32M6W7D
		64QAM		20.77	19.27	0.08453	32.616	32M6W7D

1.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested with associated equipment below.

1) Support Equipment

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

2) Support Cable

Cable No.	Description	Connector	Length	Supplied by
1	Antenna Cable	SMA	0.30 Meter	UnionTrust

1.5 TEST LOCATION

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: 16/F, Block A, Building 6, Baoneng Science and Technology Park, Qingxiang Road No.1, Longhua New District, Shenzhen, China 518109
Telephone: +86 (0) 755 2823 0888
Fax: +86 (0) 755 2823 0886

1.6 TEST FACILITY

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

CNAS-Lab Code: L9069
The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC/EN 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

A2LA-Lab Certificate No.: 4312.01
Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

ISED Wireless Device Testing Laboratories
CAB identifier: CN0032

FCC Accredited Lab.
Designation Number: CN1194
Test Firm Registration Number: 259480

1.7 DEVIATION FROM STANDARDS

None.

1.8 ABNORMALITIES FROM STANDARD CONDITIONS

None.

1.9 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

1.10 MEASUREMENT UNCERTAINTY

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

No.	Item	Measurement Uncertainty
1	Conducted emission 9KHz-150KHz	±3.8 dB
2	Conducted emission 150KHz-30MHz	±3.4 dB
3	Radiated emission 9KHz-30MHz	±4.9 dB
4	Radiated emission 30MHz-1GHz	±4.7 dB
5	Radiated emission 1GHz-18GHz	±5.1 dB
6	Radiated emission 18GHz-26GHz	±5.2 dB
7	Radiated emission 26GHz-40GHz	±5.2 dB

2. TEST SUMMARY

FCC 47 CFR Part 24 Test Cases (Band 2& 25)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 24.232(c)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 24.232(c)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Peak-to-average ratio	FCC 47 CFR Part 24.232(d)	KDB 971168 D01v03r01	Note1
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) & FCC 47 CFR Part 24.238(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Band Edge at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 24.238(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 24.235	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1

FCC 47 CFR Part 27 Test Cases (LTE Band 4 & Band 66)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(d)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(d)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	Note1
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) FCC 47 CFR Part 27.53(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(h)(1)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1

FCC 47 CFR Part 22 Test Cases (Band 5)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 22.913(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 22.913(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Peak-to-average ratio	FCC 47 CFR Part 22.913(a)	KDB 971168 D01v03r01	Note1
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Band Edge at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 22.917(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 22.917(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 22.917(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 22.355	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1

FCC 47 CFR Part 27 Test Cases (LTE Band 7 & Band 41)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(h)(2)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(h)(2)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	Note1
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(m)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(m)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(m)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1

FCC 47 CFR Part 27 Test Cases (LTE Band 12&17)			
Test Item	**Test Requirement**	**Test Method**	**Result**
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(c)(10)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(c)(10)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	Note1
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI C63.26-2015 & KDB 971168 D01v03r01	Note1

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

Note1：These results copy from the report number of ”190725019RFM-2”, for detailed differences please refer to the difference declaration.

3. EQUIPMENT LIST

Radiated Emission Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm dd, yyyy)**	**Cal. Due date (mm dd, yyyy)**
☒	3M Chamber & Accessory Equipment	ETS-LINDGREN	3M	N/A	Dec. 03, 2018	Dec. 03, 2021
☒	Receiver	R&S	ESIB26	100114	Nov. 24, 2018	Nov. 24, 2019
☐	Loop Antenna	ETS-LINDGREN	6502	00202525	Dec. 03, 2018	Dec. 03, 2019
☒	Broadband Antenna	ETS-LINDGREN	3142E	00201566	Dec. 08, 2018	Dec. 08, 2019
☒	6dB Attenuator	Talent	RA6A5-N-18	18103001	Dec. 08, 2018	Dec. 08, 2019
☒	Preamplifier	HP	8447F	2805A02960	Nov. 24, 2018	Nov. 24, 2019
☐	Broadband Antenna (Pre-amplifier)	ETS-LINDGREN	3142E-PA	00201891	May 18, 2019	May 18, 2020
☐	6dB Attenuator	Talent	RA6A5-N-18	18103002	Nov. 24, 2018	Nov. 24, 2019
☐	Horn Antenna	ETS-LINDGREN	3117	00164202	Dec. 08, 2018	Dec. 08, 2019
☒	Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3117-PA	00201874	May 18, 2019	May 18, 2020
☐	Horn Antenna	ETS-LINDGREN	3116C	00200180	Jun. 23, 2019	Jun. 23, 2020
☒	Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3116C-PA	00202652	Jan. 05, 2019	Jan. 05, 2020
☒	Multi device Controller	ETS-LINDGREN	7006-001	00160105	N/A	N/A
☒	Test Software	Audix	e3	Software Version: 9.160333		

RF Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm dd, yyyy)**	**Cal. Due date (mm dd, yyyy)**
☒	Receiver	R&S	ESR7	1316.3003K07 -101181-K3	Nov. 24, 2018	Nov. 24, 2019
☒	EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY51440197	Nov. 24, 2018	Nov. 24, 2019
☒	Wideband Radio Communication Tester	R&S	CMW500	119583	Jun. 07, 2019	Jun. 07, 2020
☐	Wideband Radio Communication Tester	R&S	CMW500	120932	Jun. 07, 2018	Jun. 07, 2019
☐	Universal Radio Communication Tester	R&S	CMU200	114713	Nov. 24, 2018	Nov. 24, 2019
☒	DC Source	KIKUSUI	PWR400L	LK003024	Sep. 18, 2018	Sep. 18, 2019
☐	Temp & Humidity chamber	Espec	GL(U)04K A(W)	16921H201P3	Sep. 20, 2018	Sep. 20, 2019
☒	Temp & Humidity chamber	Votisch	VT4002	58566133290 020	Jun. 05, 2018	Jun. 05, 2020

4. TEST CONFIGURATION

4.1 ENVIRONMENTAL CONDITIONS FOR TESTING

Test Environment	Selected Values During Tests		
Test Condition	Ambient		
	Temperature (°C)	Voltage (V)	Relative Humidity (%)
TN/VN	+15 to +35	3.85	20 to 75
TL/VL	-30	3.6	20 to 75
TH/VL	+50	3.6	20 to 75
TL/VH	-30	4.4	20 to 75
TH/VH	+50	4.4	20 to 75

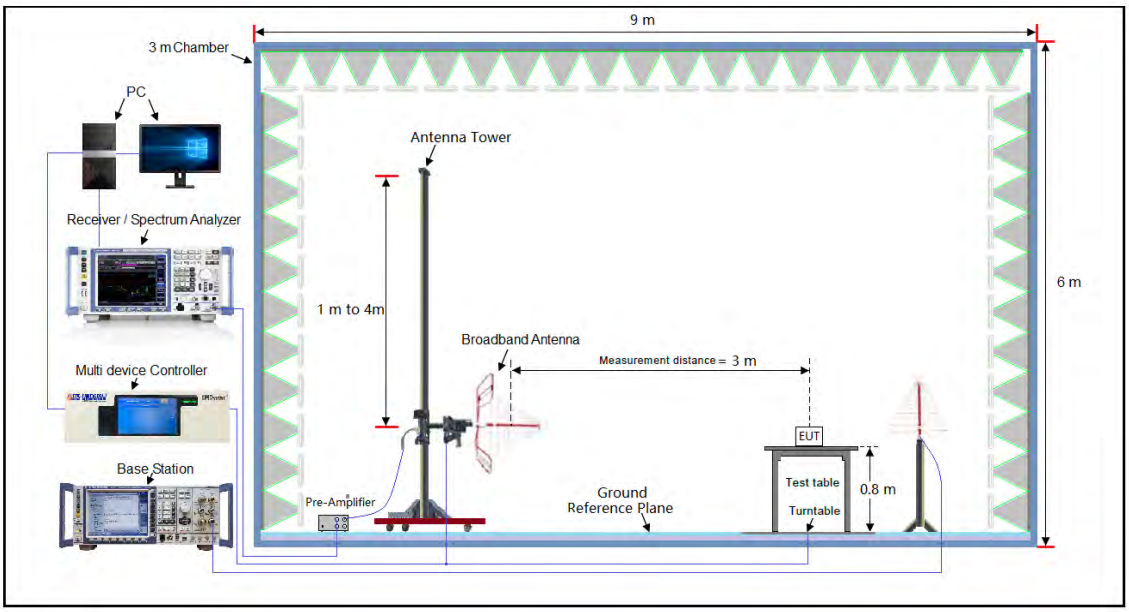
Remark:

1) The EUT just work in such extreme temperature of -30°C to 50°C and the extreme voltage of 3.6 V to 4.4 V, so here the EUT is tested in the temperature of -30°C to 50°C and the voltage of 3.6 V to 4.4 V.
2) VN: Normal Voltage; TN: Normal Temperature;
   TL: Low Extreme Test Temperature; TH: High Extreme Test Temperature;
   VL: Low Extreme Test Voltage; VH: High Extreme Test Voltage.

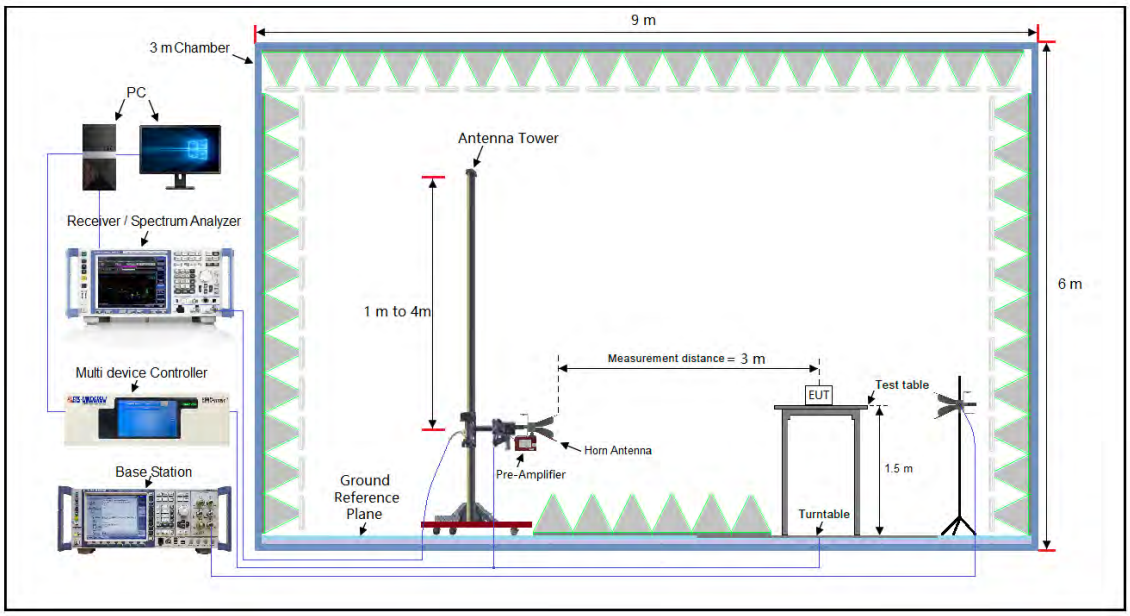
4.2 TEST SETUP

4.2.1 For Radiated Emissions test setup

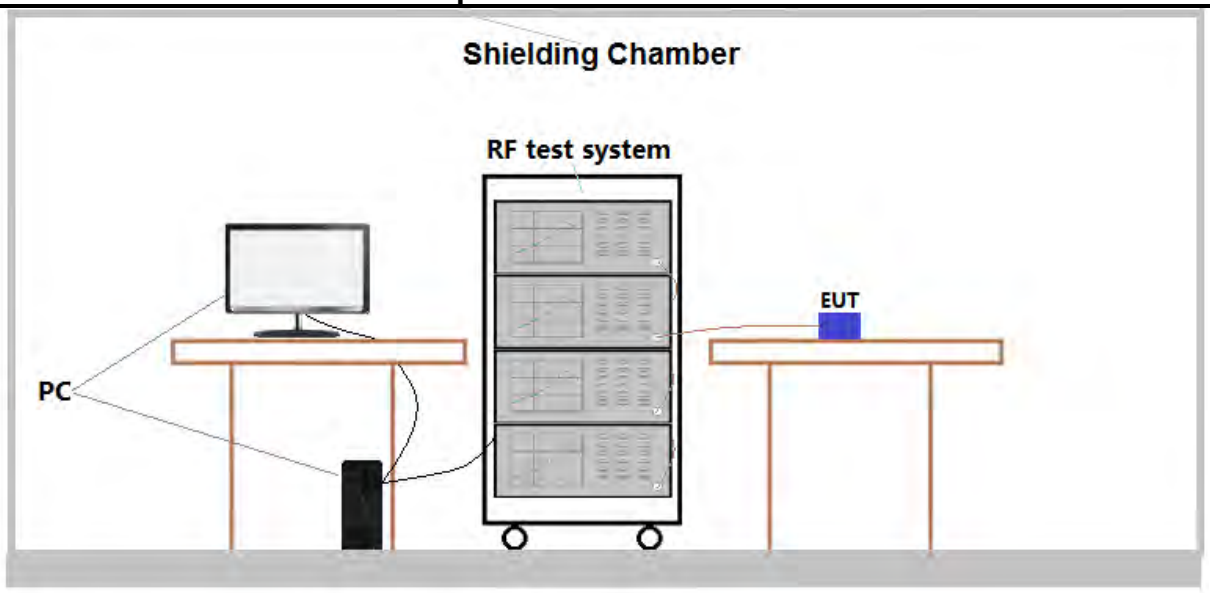
Radiated Emissions 30MHz to 1GHz Test setup



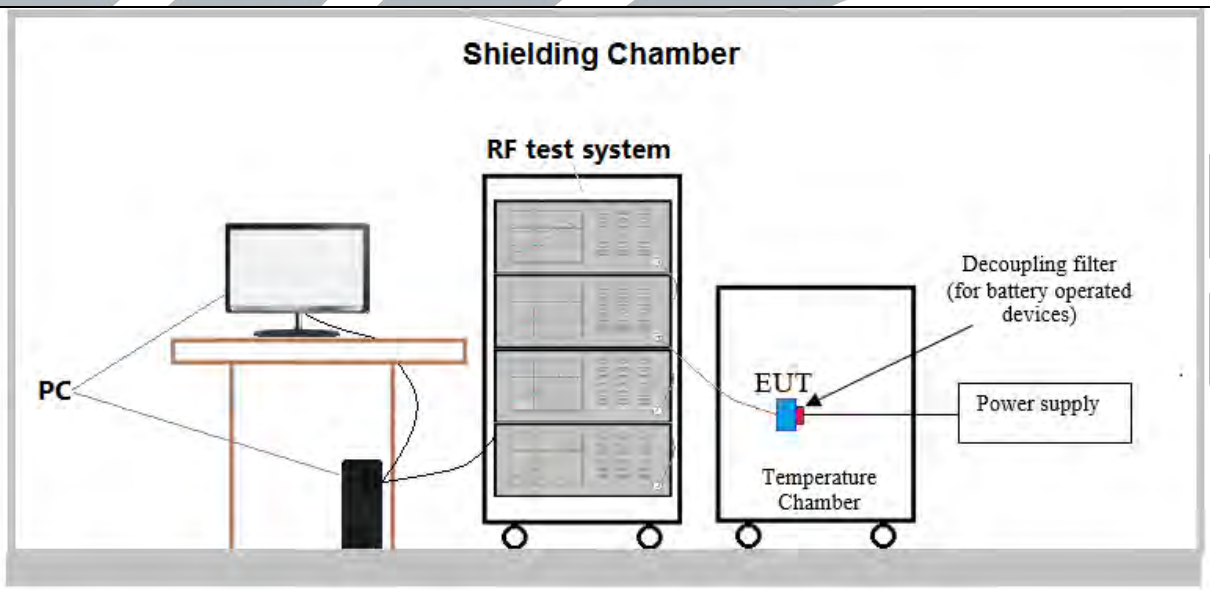
Radiated Emissions Above 1GHz Test setup



4.2.2 For Conducted RF test setup



Normal Environment



Extreme Environment

4.3 TEST CHANNELS

Band	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink (MHz)
LTE Band 2 TX: 1850-1910MHz	Low Range	1.4	18607	1850.7
		3	18615	1851.5
		5	18625	1852.5
		10	18650	1855
		15	18675	1857.5
		20	18700	1860
	Middle Range	1.4/3/5/10/15/20	18900	1880
	High Range	1.4	19193	1909.3
		3	19185	1908.5
		5	19175	1907.5
		10	19150	1905
		15	19125	1902.5
		20	19100	1900
LTE Band 4 TX: 1710-1755MHz	Low Range	1.4	19957	1710.7
		3	19965	1711.5
		5	19975	1712.5
		10	20000	1715
		15	20025	1717.5
		20	20050	1720
	Middle Range	1.4/3/5/10/ 15/20	20175	1732.5
	High Range	1.4	20393	1754.3
		3	20385	1753.5
		5	20375	1752.5
		10	20350	1750
		15	20325	1747.5
		20	20300	1745
LTE band 5 TX: 824–849MHz	Low Range	1.4	20407	824.7
		3	20415	825.5
		5	20425	826.5
		10	20450	829
	Middle Range	1.4/3/5/10	20525	836.5
	High Range	1.4	20643	848.3
		3	20635	847.5
		5	20625	846.5
		10	20600	844
LTE Band 7 TX: 2500-2570MHz	Low Range	5	20775	2502.5
		10	20800	2505
		15	20825	2507.5
		20	20850	2510
	Middle Range	5/10/15/20	21100	2535
	High Range	5	21425	2567.5
		10	21400	2565
		15	21375	2562.5
		20	21350	2560

LTE Band 12 TX: 699-716MHz	Low Range	1.4	23017	699.7
		3	23025	700.5
		5	23035	701.5
		10	23060	704
	Middle Range	1.4/3/5/10	23095	707.5
	High Range	1.4	23173	715.3
		3	23165	714.5
		5	23155	713.5
		10	23130	711
LTE Band 13 TX: 777-787MHz	Low Range	5	23205	779.5
		10	23230	782
	Middle Range	5/10	23230	782
	High Range	5	23255	784.5
		10	23230	782
LTE Band 17 TX:704-716MHz	Low Range	5	23755	706.5
		10	23780	709
	Middle Range	5/10	23790	710
	High Range	5	23825	713.5
		10	23800	711
LTE Band 25 TX:1850-1915MHz	Low Range	1.4	26047	1850.7
		3	26055	1851.5
		5	26065	1852.5
		10	26090	1855
		15	26115	1857.5
		20	26140	1860
	Middle Range	1.4/3/5/10/15/20	26340	1880
	High Range	1.4	26683	1914.3
		3	26675	1913.5
		5	26665	1912.5
		10	26640	1910
		15	26615	1907.5
		20	26590	1905
LTE Band 41 TX: 2496-2690MHz	Low Range	5	40265	2557.5
		10	40290	2560
		15	40315	2562.5
		20	40340	2565
	Middle Range	5/10/ 15/20	40740	2605
	High Range	5	41215	2652.5
		10	41190	2650
		15	41165	2647.5
		20	41140	2645
LTE Band 66 TX: 1710-1780MHz	Low Range	1.4	131979	1710.7
		3	131987	1711.5
		5	131997	1712.5
		10	132022	1715
		15	132047	1717.5

		20	132072	1720
	Middle Range	1.4/3/5/10/ 15/20	132322	1745
	High Range	1.4	132665	1779.3
		3	132657	1778.5
		5	132647	1777.5
		10	132622	1775
		15	132597	1772.5
		20	132572	1770

		CC-COMBO	PCC		SCC	
			CH	FC	CH	FC
LTE Band 41 CA TX:2555-2655 MHz	Low Range	5+20	41140	2645	40382	2569.2
		20+5	40340	2565	40357	2576.7
		10+20	40290	2560	40434	2574.4
		20+10	40340	2565	40484	2579.4
		10+15	40290	2560	40410	2572
		15+10	40315	2562.5	40435	2574.5
		15+15	40315	2562.5	40465	2577.5
		15+20	40315	2562.5	40486	2579.6
		20+15	40340	2565	40511	2582.1
		20+20	40340	2565	40538	2584.8
	Middle Range	5+20, 20+5, 10+20, 20+10, 10+15, 15+10, 15+15, 15+20, 20+15, 20+20	40740	2605	40857	2616.7
	High Range	5+20	41215	2652.5	41098	2640.8
		20+5	41140	2645	41023	2633.3
		10+20	41190	2650	41046	2635.6
		20+10	41140	2645	40996	2630.6
		10+15	41190	2650	41070	2638
		15+10	41165	2647.5	41285	2659.5
		15+15	41165	2647.5	41015	2632.5
		15+20	41165	2647.5	40994	2630.4
		20+15	41140	2645	40969	2627.9
		20+20	41140	2645	40942	2625.2

4.4 SYSTEM TEST CONFIGURATION

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, radiated emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario. It was powered by a 3.85V battery. Only the worst case data were recorded in this test report.

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, X/Y/Z axis, and antenna ports.
The worst case was found when positioned as the table below.

Band	Mode	Antenna Port	Worst-case axis positioning
LTE Band 2	1TX	Chain 0	Y axis
LTE Band 4	1TX	Chain 0	Y axis
LTE Band 5	1TX	Chain 0	Y axis
LTE Band 7	1TX	Chain 0	Y axis
LTE Band 12	1TX	Chain 0	Y axis
LTE Band 13	1TX	Chain 0	Y axis
LTE Band 17	1TX	Chain 0	Y axis
LTE Band 25	1TX	Chain 0	Y axis
LTE Band 41	1TX	Chain 0	Y axis
LTE Band 66	1TX	Chain 0	Y axis

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

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

4.5 PRE-SCAN

Pre-scan under all rate at lowest middle and highest channel, find the transmitter power as below.

4.5.1 LTE Band 2

LTE Band 2 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 1.4 MHz						Channel Bandwidth: 3 MHz				
QPSK	1	0	18.72	18.75	18.86	1	0	18.80	18.82	18.93
	1	2	18.83	18.88	19.00	1	7	18.95	18.97	19.01
	1	5	18.72	18.74	18.88	1	14	18.78	18.80	18.93
	3	0	18.81	18.83	18.97	8	0	17.83	17.83	17.95
	3	1	18.87	18.89	19.02	8	3	17.87	17.86	17.99
	3	3	18.81	18.83	18.97	8	7	17.82	17.84	17.98
	6	0	17,79	17.80	17,93	15	0	17.83	17.81	17.95
16QAM	1	0	17.87	18.13	18.30	1	0	18.09	18.19	18.34
	1	2	18.00	18.25	18.45	1	7	18.31	18.44	18.58
	1	5	17.87	18.19	18.31	1	14	18.16	18.19	18.32
	3	0	17.81	17.97	18.14	8	0	16.93	17.05	17.17
	3	1	17.88	18.07	18.20	8	3	16.97	17.04	17.21
	3	3	17.81	18.03	18.15	8	7	16.96	17.03	17.19
	6	0	16.78	17.00	17.11	15	0	16.83	16.93	17.07
64QAM	1	0	17.23	17.31	17.47	1	0	17.27	17.32	17.49
	1	2	17.33	17.43	17.58	1	7	17.42	17.55	17.66
	1	5	17.17	17.33	17.46	1	14	17.30	17.42	17.50
	3	0	17.09	17.20	17.33	8	0	16.09	16.20	16.28
	3	1	17.17	17.25	17.39	8	3	16.12	16.24	16.34
	3	3	17.13	17.22	17.35	8	7	16.09	16.19	16.30
	6	0	16.10	16.21	16.32	15	0	16.08	16.18	16.29
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	18.64	18.70	18.81	1	0	18.73	18.76	18.83
	1	12	18.95	19.04	18.86	1	24	18.90	18.96	18.87
	1	24	18.61	18.70	18.83	1	49	18.74	18.81	18.93
	12	0	17.73	17.85	17.95	25	0	17.73	17.92	18.10
	12	6	17.83	17.91	18.03	25	12	17.82	17.88	18.02
	12	13	17.81	17.85	17.99	25	25	17.94	17.94	18.05
	25	0	17.77	17.86	17.97	50	0	17.85	17.92	18.08
16QAM	1	0	18.15	18.16	18.26	1	0	18.14	18.22	18.26
	1	12	18.41	18.48	18.58	1	24	18.38	18.46	18.49
	1	24	19.09	18.13	18.27	1	49	18.21	18.32	18.33
	12	0	16.95	17.06	17.13	25	0	16.89	17.09	17.19
	12	6	17.07	17.12	17.21	25	12	16.97	17.04	17.10
	12	13	17.01	17.07	17.14	25	25	17.08	17.10	17.09
	25	0	16.96	17.03	17.09	50	0	16.98	17.07	17.14
64QAM	1	0	17.13	17.29	17.37	1	0	17.25	17.31	17.41
	1	12	17.46	17.60	17.69	1	24	17.34	17.54	17.77
	1	24	17.15	17.23	17.38	1	49	17.22	17.08	17.25
	12	0	16.04	16.18	16.26	25	0	16.16	16.21	16.13
	12	6	16.14	16.25	16.35	25	12	16.11	16.34	16.24
	12	13	16.13	16.18	16.28	25	25	16.27	16.22	16.30
	25	0	16.08	16.18	16.27	50	0	16.04	16.09	16.12

LTE Band 2 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 15 MHz					Channel Bandwidth: 20 MHz				
QPSK	1	0	18.69	18.73	18.78	1	0	18.63	18,69	18.71
	1	37	18.94	18.98	18.89	1	50	18.87	18.95	19.21
	1	74	18.66	18.77	18.89	1	99	18.61	18.72	18.81
	37	0	17.69	17.89	18.01	50	0	17.52	17.95	17.94
	37	19	17.82	17.86	17.98	50	25	17.77	17.86	17.91
	37	39	17.83	17.91	17.97	50	50	17.68	17.98	17.82
	75	0	17.79	17.92	18.01	100	0	17.61	17.98	17.87
16QAM	1	0	18.14	18.15	18.16	1	0	17.95	18.04	18.09
	1	37	18.39	18.45	18.42	1	50	18.19	18.35	18.31
	1	74	18.09	18.17	18.30	1	99	17.98	18.10	18.17
	37	0	16.79	16.98	17.04	50	0	16.56	16.99	16.97
	37	19	16.87	16.94	17.02	50	25	16.81	16.88	16.94
	37	39	16.90	16.99	17.00	50	50	16.73	17.01	16.86
	75	0	16.88	17.00	17.06	100	0	16.66	17.03	16.92
64QAM	1	0	17.22	17,27	12.34	1	0	17.15	17.28	17.28
	1	37	17.45	17,55	17.58	1	50	17.42	17.51	17.54
	1	74	17.21	17.34	17.42	1	99	17.21	17.29	17.36
	37	0	16.01	16.19	16.29	50	0	15.89	16.29	16.25
	37	19	16.07	16.16	16.27	50	25	16.09	16.18	16.23
	37	39	16.12	16.21	16.24	50	50	16.04	16.28	16.14
	75	0	16.10	16.24	16.31	100	0	15.94	16.27	16.18

4.5.2 LTE Band 4

LTE Band 4 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 1.4 MHz					Channel Bandwidth: 3 MHz				
QPSK	1	0	16.25	16.24	16.27	1	0	16.26	16.29	16.33
	1	2	16.37	16.41	16.39	1	7	16.50	16.47	16.53
	1	5	16.23	16.24	16.24	1	14	16.30	16.28	16.29
	3	0	16.33	16.24	16.33	8	0	15.29	15.29	15.28
	3	1	16.37	16.39	16.38	8	3	15.32	15.34	15.33
	3	3	16.32	16.35	16.32	8	7	15.28	15.28	15.28
	6	0	15.25	15.30	15.28	15	0	15.26	15.26	15.27
16QAM	1	0	15.59	15.53	15.59	1	0	15.57	15.66	15.68
	1	2	15.71	15.64	15.76	1	7	15.84	15.72	15.73
	1	5	15.62	15.59	15.52	1	14	15,67	15.57	15.67
	3	0	15.42	15.43	15.47	8	0	14.38	14.38	14.40
	3	1	15.45	15.44	15.48	8	3	14.43	14.41	14.45
	3	3	15.39	15.38	15.46	8	7	14.38	14.37	14.39
	6	0	14.31	14.32	14.37	15	0	14.30	14.28	14.31
64QAM	1	0	14.37	14.40	14.46	1	0	14.42	14.37	14.50
	1	2	14.53	14.57	14.62	1	7	14.67	14.57	14.68
	1	5	14.35	14.36	14.45	1	14	14.44	14.45	14.46
	3	0	14.28	14.27	14.36	8	0	13.35	13.30	13.32
	3	1	14.32	14.33	14.35	8	3	13.38	13.36	13,38
	3	3	14.28	14.32	14.32	8	7	13.32	13.29	13.34
	6	0	13.35	13.34	14.37	15	0	13.33	13.28	13.33

LTE Band 4 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	16.19	16.18	16.24	1	0	16.26	16.27	16.31
	1	12	16.50	16.26	16.25	1	24	16.43	16.39	16.46
	1	24	16.23	16.19	16.23	1	49	16.28	16.27	16.28
	12	0	15.29	15.33	15.35	25	0	15.33	15.34	15.34
	12	6	15.35	15.32	15.34	25	12	15.31	15.33	15.35
	12	13	15.30	15.28	15.32	25	25	15.34	15.30	15.33
	25	0	15.28	15.29	15.33	50	0	15.34	15.32	15.37
16QAM	1	0	15.49	15.54	15.63	1	0	15.64	15.60	15.69
	1	12	15.88	15.80	15.90	1	24	15.79	15.75	15.82
	1	24	15.56	15.52	15.55	1	49	15.58	15.57	15.64
	12	0	14.32	14.37	14.39	25	0	14.35	14.33	14.36
	12	6	14.38	14.35	14.38	25	12	14.31	14.30	14.36
	12	13	14.34	14.28	14.35	25	25	14.36	14.27	14.33
	25	0	14,28	14,28	14.31	50	0	14.34	14.30	14.35
64QAM	1	0	14.33	14.34	14.45	1	0	14.42	14.43	14.50
	1	12	14.69	14.61	14.72	1	24	14.61	14.56	14.58
	1	24	14.38	14.34	14.36	1	49	14.45	14.44	14.43
	12	0	13.32	13.33	13.38	25	0	13.39	13.36	13.39
	12	6	13.38	11.35	13.37	25	12	13.37	13.34	13.39
	12	13	13.33	13.30	13.38	25	25	13.36	13.29	13.37
	25	0	13.32	13.31	13.35	50	0	13.38	13.35	13.41
Channel Bandwidth: 15 MHz						Channel Bandwidth: 20 MHz				
QPSK	1	0	16.24	16.23	16.24	1	0	16.17	16.18	16.19
	1	37	16.49	16.47	16.49	1	50	16.37	16.67	16.46
	1	74	16.20	16.22	16.21	1	99	16.13	16.16	16.15
	37	0	15.31	15.32	15.38	50	0	15.26	15.27	15,40
	37	19	15.34	15.33	15.35	50	25	15.33	15.31	15.34
	37	39	15.36	15.28	15.36	50	50	15.35	15.17	15.30
	75	0	15.32	15.27	15.35	100	0	15.31	15.22	15.36
16QAM	1	0	15.59	15.55	15.59	1	0	15.51	15.47	15.45
	1	37	15.82	15.85	15.78	1	50	15.79	15.76	15.77
	1	74	15.53	15.54	15.56	1	99	15.43	15.52	15.49
	37	0	14.28	14.27	14.34	50	0	14.24	14.23	14.39
	37	19	14,33	14.29	14.32	50	25	14.32	14.28	14.34
	37	39	14.33	14.22	14.31	50	50	14.32	14.15	14.28
	75	0	14.31	14,26	14.32	100	0	14.31	14.21	14.34
64QAM	1	0	14.37	14.37	14.37	1	0	14.32	14.32	14.31
	1	37	14.69	14.63	14.72	1	50	14.57	14.57	14.63
	1	74	14.25	14.38	14.40	1	99	14.25	14.33	14.35
	37	0	13.32	13.32	13.39	50	0	13.30	13.30	13.45
	37	19	13.35	13.35	13.38	50	25	13.37	13.34	13.37
	37	39	13.37	13.28	13.37	50	50	13.40	13.21	13.35
	75	0	13.38	13.32	13.38	100	0	15.38	13.23	13.40

4.5.3 LTE Band 5

LTE Band 5 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 1.4 MHz						Channel Bandwidth: 3 MHz				
QPSK	1	0	22.54	22.70	22.55	1	0	22.61	22.72	22.64
	1	2	22.78	22.65	22.71	1	7	22.65	22.67	22.61
	1	5	22.60	22.72	22.62	1	14	22.69	22.66	22.60
	3	0	22.62	22.83	22.70	8	0	21.70	21.69	21.68
	3	1	22.74	22.77	22.55	8	3	21.71	21.66	21.65
	3	3	22.79	22.69	22.69	8	7	21.71	21.70	21.53
	6	0	21.75	21.70	21.73	15	0	21.70	21.71	21.67
16QAM	1	0	22.32	21.82	21.69	1	0	22.16	21.70	21.65
	1	2	22.26	21.75	21.71	1	7	22.36	21.92	21.89
	1	5	22.30	21.79	21.50	1	14	22.33	21.80	21.53
	3	0	21.82	21.83	21.80	8	0	20.70	20.80	20.89
	3	1	21.84	21.78	21.79	8	3	20.77	20.77	20.74
	3	3	21.87	21.86	21.65	8	7	20.84	20.91	20.67
	6	0	20.80	20.79	20.67	15	0	20.87	20.82	20.79
64QAM	1	0	21.07	20.74	20.61	1	0	21.09	20.70	20.65
	1	2	21.30	20.90	20.58	1	7	21.32	20.85	20.65
	1	5	21.13	20.65	20.48	1	14	21.21	20.74	20.47
	3	0	20.65	20.74	20.66	8	0	19.65	19.56	19.81
	3	1	20.69	20.62	20.78	8	3	19.76	19.60	19.69
	3	3	20.70	20.79	20.57	8	7	19.63	19.73	19.57
	6	0	19.84	19.69	19.48	15	0	19.81	19.66	19.65
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	22.51	22.60	22.72	1	0	22.69	22.75	22.72
	1	12	22.72	22.73	22.71	1	24	22.80	22.82	22.81
	1	24	22.67	22.71	22.68	1	49	22.71	22.76	22.73
	12	0	21.76	21.78	21.61	25	0	21.79	21.83	21.78
	12	6	21.64	21.80	21.59	25	12	21.80	21.84	21.75
	12	13	21.77	21.78	21.55	25	25	21.83	21.86	21.69
	25	0	21.60	21.72	21.78	50	0	21.80	21.84	21.80
16QAM	1	0	22.26	21.76	21.62	1	0	22.33	21.90	21.81
	1	12	22.37	21.78	21.88	1	24	22.42	21.95	21.90
	1	24	22.31	21.83	21.61	1	49	22.34	21.89	21.68
	12	0	20.78	20.81	20.86	25	0	20.88	20.89	20.95
	12	6	20.87	20.71	20.85	25	12	20.92	20.90	20.94
	12	13	20.90	20.81	20.72	25	25	20.94	20.92	20.80
	25	0	20.70	20.83	20.80	50	0	20.89	20.90	20.83
64QAM	1	0	21.02	20.81	20.60	1	0	21.16	20.82	20.73
	1	12	21.23	20.88	20.67	1	24	21.37	20.95	20.73
	1	24	21.22	20.67	20.36	1	49	21.27	20.83	20.55
	12	0	19.72	19.65	19.80	25	0	19.75	19.75	19.81
	12	6	19.71	19.60	19.60	25	12	19.77	19.72	19.79
	12	13	19.72	19.86	19.46	25	25	19.78	19.91	19.62
	25	0	19.87	19.74	19.50	50	0	19.88	19.81	19.67

4.5.4 LTE Band 7

LTE Band 7 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	22.52	22.46	22.49	1	0	22.54	22.36	22.55
	1	12	22.77	22.69	22.55	1	24	22.88	22.68	22.59
	1	24	22.66	22.49	22.44	1	49	22.65	22.56	22.57
	12	0	21.62	21.62	21.60	25	0	21.70	21.64	21.54
	12	6	21.65	21.74	21.62	25	12	21.66	21.65	21.55
	12	13	21.77	21.45	21.60	25	25	21.76	21.44	21.64
	25	0	21.75	21.58	21.51	50	0	21.79	21.44	21.64
16QAM	1	0	21.85	22.00	21.82	1	0	21.89	21.90	21.87
	1	12	22.21	22.08	22.02	1	24	22.10	22.08	21.90
	1	24	22.04	21.99	21.94	1	49	22.01	22.00	21.78
	12	0	20.71	20.76	20.57	25	0	20.69	20.67	20.67
	12	6	20.66	20.73	20.69	25	12	20.76	20.69	20.53
	12	13	20.89	20.61	20.72	25	25	20.88	20.69	20.72
	25	0	20.82	20.66	20.64	50	0	20.76	20.79	20.58
64QAM	1	0	20.80	20.80	20.89	1	0	20.77	20.81	20.77
	1	12	21.05	21.06	20.87	1	24	21.15	21.04	20.80
	1	24	20.91	20.82	20.65	1	49	20.89	20.96	20.70
	12	0	19.72	19.54	19.43	25	0	19.70	19.61	19.54
	12	6	19.53	19.48	19.55	25	12	19.59	19.51	19.56
	12	13	19.78	19.74	19.45	25	25	19.81	19.65	19.39
	25	0	19.72	19.59	19.56	50	0	19.71	19.62	19.49
Channel Bandwidth: 15 MHz						Channel Bandwidth: 20 MHz				
QPSK	1	0	22.48	22.40	22.53	1	0	22.67	22.52	22.56
	1	37	22.77	22.79	22.66	1	50	22.95	22.80	22.75
	1	74	22.70	22.43	22.54	1	99	22.70	22.57	22.63
	37	0	21.69	21.56	21.66	50	0	21.80	21.64	21.68
	37	19	21.78	21.68	21.55	50	25	21.79	21.74	21.67
	37	39	21.91	21.46	21.67	50	50	21.94	21.63	21.67
	75	0	21.69	21.46	21.48	100	0	21.80	21.64	21.66
16QAM	1	0	22.00	21.94	21.86	1	0	22.01	22.04	21.97
	1	37	22.20	22.24	22.07	1	50	22.24	22.25	22.08
	1	74	21.97	22.04	21.83	1	99	22.08	22.10	21.96
	37	0	20.68	20.76	20.72	50	0	20.84	20.80	20.76
	37	19	20.80	20.69	20.64	50	25	20.80	20.75	20.72
	37	39	20.91	20.63	20.54	50	50	20.94	20.79	20.73
	75	0	20.75	20.66	20.61	100	0	20.83	20.81	20.69
64QAM	1	0	20.90	20.84	20.86	1	0	20.96	20.93	20.90
	1	37	21.04	21.08	20.78	1	50	21.18	21.13	20.96
	1	74	20.92	20.86	20.65	1	99	20.95	21.02	20.85
	37	0	19.69	19.46	19.62	50	0	19.75	19.63	19.62
	37	19	19.54	19.56	19.56	50	25	19.70	19.58	19.59
	37	39	19.80	19.59	19.39	50	50	19.92	19.76	19.54
	75	0	19.78	19.56	19.42	100	0	19.80	19.65	19.60

4.5.5 LTE Band 12

LTE Band 12 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 1.4 MHz						Channel Bandwidth: 3 MHz				
QPSK	1	0	22.30	22.23	22.08	1	0	22.22	22.28	22.22
	1	2	22.39	22.43	22.34	1	7	22.31	22.42	22.29
	1	5	22.20	22.36	22.40	1	14	22.36	22.30	22.26
	3	0	22.24	22.27	22.36	8	0	21.36	21.29	21.27
	3	1	22.40	22.40	22.29	8	3	21.39	21.24	21.37
	3	3	22.43	22.48	22.25	8	7	21.36	21.48	21.24
	6	0	21.26	21.31	21.25	15	0	21.33	21.36	21.35
16QAM	1	0	21.35	21.17	21.88	1	0	21.42	21.30	21.90
	1	2	21.51	21.36	21.89	1	7	21.51	21.40	21.88
	1	5	21.51	21.29	21.78	1	14	21.48	21.23	21.88
	3	0	21.37	21.39	21.48	8	0	20.40	20.46	20.40
	3	1	21.59	21.61	21.45	8	3	20.50	20.75	20.38
	3	3	21.50	21.59	21.41	8	7	20.50	20.61	20.55
	6	0	20.49	20.55	20.40	15	0	20.50	20.42	20.41
64QAM	1	0	20.38	20.01	20.83	1	0	20.29	20.10	20.79
	1	2	20.31	20.23	20.88	1	7	20.36	20.37	20.81
	1	5	20.44	20.19	20.72	1	14	20.45	20.33	20.62
	3	0	20.34	20.26	20.31	8	0	19.29	19.27	19.27
	3	1	20.50	20.62	20.33	8	3	19.48	19.62	19.34
	3	3	20.66	20.34	20.40	8	7	19.55	19.40	19.28
	6	0	19.32	19.23	19.41	15	0	19.47	19.35	19.27
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	22.23	22.10	22.06	1	0	22.31	22.29	22.26
	1	12	22.30	22.49	22.43	1	24	22.49	22.52	22.47
	1	24	22.39	22.23	22.24	1	49	22.40	22.38	22.41
	12	0	21.42	21.36	21.23	25	0	21.43	21.37	21.40
	12	6	21.38	21.33	21.29	25	12	21.46	21.41	21.38
	12	13	21.33	21.50	21.37	25	25	21.49	21.50	21.41
	25	0	21.34	21.30	21.31	50	0	21.43	21.41	21.39
16QAM	1	0	21.32	21.27	21.76	1	0	21.45	21.35	21.91
	1	12	21.52	21.43	21.77	1	24	21.64	21.45	21.93
	1	24	21.42	21.28	21.70	1	49	21.56	21.38	21.90
	12	0	20.46	20.48	20.55	25	0	20.53	20.55	20.57
	12	6	20.48	20.72	20.55	25	12	20.61	20.77	20.56
	12	13	20.57	20.54	20.40	25	25	20.68	20.62	20.57
	25	0	20.47	20.47	20.36	50	0	20.52	20.56	20.52
64QAM	1	0	20.37	20.16	20.87	1	0	20.41	20.17	20.91
	1	12	20.41	20.39	20.72	1	24	20.49	20.40	20.90
	1	24	20.39	20.16	20.74	1	49	20.54	20.33	20.82
	12	0	19.28	19.32	19.38	25	0	19.38	19.40	19.38
	12	6	19.52	19.62	19.35	25	12	19.60	19.76	19.40
	12	13	19.65	19.37	19.42	25	25	19.67	19.43	19.43
	25	0	19.41	19.32	19.34	50	0	19.51	19.41	19.42

4.5.6 LTE Band 13

LTE Band 13 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
QPSK	1	0	22.39	22.36	22.35	1	0	/	22.47	/
	1	12	22.54	22.45	22.50	1	24	/	22.65	/
	1	24	22.46	22.41	22.43	1	49	/	22.52	/
	12	0	21.51	21.37	21.46	25	0	/	21.52	/
	12	6	21.47	21.50	21.48	25	12	/	21.53	/
	12	13	21.53	21.50	21.51	25	25	/	21.54	/
	25	0	21.47	21.45	21.48	50	0	/	21.51	/
16QAM	1	0	21.69	21.54	21.46	1	0	/	21.60	/
	1	12	21.82	21.74	21.60	1	24	/	21.80	/
	1	24	21.74	21.54	21.54	1	49	/	21.64	/
	12	0	20.52	20.49	20.45	25	0	/	20.58	/
	12	6	20.51	20.51	20.48	25	12	/	20.62	/
	12	13	20.54	20.58	20.43	25	25	/	20.65	/
	25	0	20.53	20.43	20.55	50	0	/	20.57	/
64QAM	1	0	20.55	20.41	20.44	1	0	/	20.51	/
	1	12	20.68	20.66	20.52	1	24	/	20.76	/
	1	24	20.62	20.40	20.45	1	49	/	20.60	/
	12	0	19.33	19.37	19.35	25	0	/	19.41	/
	12	6	19.41	19.43	19.34	25	12	/	19.48	/
	12	13	19.46	19.61	19.32	25	25	/	19.64	/
	25	0	19.51	19.35	19.47	50	0	/	19.52	/

4.5.7 LTE Band 17

LTE Band 17 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
	Channel Bandwidth: 5 MHz					Channel Bandwidth: 10 MHz				
QPSK	1	0	22.27	22.39	22.20	1	0	22.43	22.42	22.36
	1	2	22.54	22.42	22.47	1	7	22.57	22.58	22.55
	1	5	22.29	22.26	22.34	1	14	22.45	22.42	22.45
	3	0	21.26	21.31	21.41	8	0	21.46	21.45	21.43
	3	1	21.43	21.37	21.27	8	3	21.49	21.43	21.41
	3	3	21.48	21.30	21.27	8	7	21.50	21.46	21.44
	6	0	21.28	21.38	21.41	15	0	21.45	21.45	21.44
16QAM	1	0	21.51	21.24	21.84	1	0	21.55	21.41	21.98
	1	2	21.65	21.56	21.83	1	7	21.72	21.60	21.93
	1	5	21.37	21.29	21.72	1	14	21.56	21.47	21.92
	3	0	20.44	20.53	20.55	8	0	20.56	20.63	20.57
	3	1	20.48	20.59	20.55	8	3	20.53	20.61	20.59
	3	3	20.50	20.57	20.48	8	7	20.57	20.62	20.61
	6	0	20.51	20.46	20.56	15	0	20.57	20.61	20.57
64QAM	1	0	20.38	20.07	20.73	1	0	20.54	20.23	20.78
	1	2	20.54	20.30	20.85	1	7	20.58	20.41	20.99
	1	5	20.43	20.39	20.83	1	14	20.54	20.40	20.87
	3	0	19.30	19.35	19.43	8	0	19.44	19.46	19.48
	3	1	19.27	19.57	19.38	8	3	19.34	19.58	19.41
	3	3	19.33	19.25	19.41	8	7	19.52	19.43	19.46
	6	0	19.38	19.49	19.43	15	0	19.42	19.60	19.57

4.5.8 LTE Band 25

LTE Band 25 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 1.4 MHz						Channel Bandwidth: 3 MHz				
QPSK	1	0	17.88	18.00	18.11	1	0	17.93	18.02	18.08
	1	2	18.02	18.15	18.25	1	7	18.07	18.19	18.28
	1	5	17.88	18.02	18.10	1	14	17.92	18.01	18.12
	3	0	17.97	18.11	18.19	8	0	16.94	17.06	17.18
	3	1	18.04	18.17	18.26	8	3	16.99	17.08	17.21
	3	3	17.97	18.07	18.21	8	7	16.95	17.05	17.14
	6	0	16.97	17.08	17.17	15	0	16.92	17.03	17.13
16QAM	1	0	16.48	16.57	16.73	1	0	16.51	16.69	16.68
	1	2	16.65	16.76	16.83	1	7	16.66	16.84	16.89
	1	5	16.48	16.56	16.69	1	14	16.49	16.59	16.74
	3	0	16,33	16.43	16.53	8	0	15.26	15.37	15.47
	3	1	16.38	16.54	16.64	8	3	15.28	15.45	15.53
	3	3	16.33	16.44	16.59	8	7	15.25	15.42	15.46
	6	0	15.25	15.38	15.47	15	0	15.15	15.28	15.40
64QAM	1	0	16.13	16.24	16.32	1	0	16.16	16.24	16.37
	1	2	16.28	16.42	16.46	1	7	16.25	16.43	16.58
	1	5	16.09	16.24	16.35	1	14	16.15	16.27	16.37
	3	0	16.01	16.14	16.22	8	0	14.92	15.02	15.16
	3	1	16.05	16.18	16.25	8	3	14.94	15.08	15.19
	3	3	16.03	16.14	16.21	8	7	14.92	15.04	15.14
	6	0	15.02	15.09	15.20	15	0	14.91	15.03	15.12
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	17.84	17.92	17.99	1	0	17.88	18.01	18.07
	1	12	18.09	18.16	18.28	1	24	18.06	18.16	18.21
	1	24	17.81	17.94	18.03	1	49	17.91	18.01	18.07
	12	0	16.92	17.05	17.06	25	0	16.96	17.10	17.15
	12	6	17.00	17.10	17.21	25	12	17.01	17.11	17.19
	12	13	16.99	17.09	17.07	25	25	17.12	17.18	17.15
	25	0	16,94	17.06	17.09	50	0	17.03	17.13	17.18
16QAM	1	0	16.47	16.55	16.63	1	0	16.54	16.60	16.67
	1	12	16,75	16.83	16.80	1	24	16.65	16.76	16.86
	1	24	16.45	16.61	16.69	1	49	16.53	16.63	16.75
	12	0	15.20	15.32	15.36	25	0	15.16	15.35	15.40
	12	6	15.26	15.39	15.50	25	12	15.24	15.34	15.45
	12	13	15.25	15.35	15.35	25	25	15.35	15.42	15.39
	25	0	15.24	15.38	15.33	50	0	15.24	15.37	15.38
64QAM	1	0	16.08	16.11	16.24	1	0	16.13	16.26	16.33
	1	12	16.27	16.45	16.54	1	24	16.30	16.41	16.48
	1	24	16.07	16.14	16.28	1	49	16.15	16.28	16.36
	12	0	14.88	15.02	15.07	25	0	14.93	15.09	15,16
	12	6	14.97	15.12	15.18	25	12	14.98	15.09	15.19
	12	13	14.99	15.05	15.05	25	25	15.13	15.14	15.15
	25	0	14.93	15.04	15.07	50	0	15.04	15.13	15.17

LTE Band 25 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 15 MHz						Channel Bandwidth: 20 MHz				
QPSK	1	0	17.83	17.95	18.03	1	0	17.78	17.89	17.95
	1	37	18.11	18.18	18.29	1	50	18.32	18.14	18.25
	1	74	17.83	17.95	18.06	1	99	17.78	17.91	18.01
	37	0	16.89	17.09	17.21	50	0	16.78	17.15	17.35
	37	19	17.00	17.10	17.18	50	25	16.97	17.11	17.18
	37	39	17.02	17.16	17.20	50	50	16.91	17.22	17.21
	75	0	16.98	17.12	17.22	100	0	16.82	17.18	16.00
16QAM	1	0	16.57	16.57	16.70	1	0	16.41	16.46	16.52
	1	37	16.74	16.78	16.92	1	50	16.65	16.82	16.83
	1	74	16.48	16.59	16.67	1	99	16.47	16.48	16.57
	37	0	15.13	15.31	15.42	50	0	14.97	15.34	15.57
	37	19	15.21	15.32	15.40	50	25	15.18	15.32	15.39
	37	39	15.22	15.37	15.41	50	50	15.11	15.43	15.42
	75	0	15.21	15.34	15.42	100	0	15.04	15.40	15.50
64QAM	1	0	16.16	16.22	16.27	1	0	16.07	16.15	16.15
	1	37	16.35	16.52	16.52	1	50	16.32	16.38	16.43
	1	74	16,07	16.24	16.30	1	99	16.02	16.15	16.25
	37	0	14.84	15.08	15.18	50	0	14.78	15.14	15.37
	37	19	14.97	15.07	15.17	50	25	14.97	15.13	15.22
	37	39	14.98	15.11	15.16	50	50	14.91	15.21	15.25
	75	0	14.97	15.13	15.20	100	0	14.81	15.17	15.29

4.5.9 LTE Band 41

LTE Band 41 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	22.76	22.68	22.65	1	0	22.78	22.59	22.66
	1	12	23.20	23.05	22.98	1	24	23.23	23.08	23.06
	1	24	22.86	22.78	22.79	1	49	22.88	22.69	22.62
	12	0	21.79	21.80	21.93	25	0	21.82	21.79	21.83
	12	6	21.85	21.76	21.84	25	12	21.72	21.66	21.84
	12	13	21.88	21.78	21.93	25	25	21.91	21.69	21.86
	25	0	21.78	21.95	21.93	50	0	21.65	21.85	21.92
16QAM	1	0	22.00	21.70	21.68	1	0	21.96	21.72	21.68
	1	12	22.33	21.96	22.02	1	24	22.34	21.97	22.13
	1	24	21.85	21.73	21.78	1	49	21.99	21.71	21.63
	12	0	20.80	20.71	20.87	25	0	20.68	20.78	20.97
	12	6	20.81	20.60	20.87	25	12	20.70	20.58	20.79
	12	13	20.68	20.67	21.01	25	25	20.69	20.80	20.89
	25	0	20.73	20.93	20.96	50	0	20.82	20.91	20.98
64QAM	1	0	20.77	20.55	20.55	1	0	20.75	20.65	20.62
	1	12	21.11	20.78	20.80	1	24	21.01	20.80	20.97
	1	24	20.77	20.62	20.68	1	49	20.67	20.73	20.67
	12	0	19.74	19.74	19.85	25	0	19.65	19.82	19.97
	12	6	19.45	19.49	19.85	25	12	19.46	19.46	19.86
	12	13	19.75	19.70	19.93	25	25	19.75	19.72	19.81
	25	0	19.66	19.74	19.95	50	0	19.76	19.80	19.92
Channel Bandwidth: 15 MHz						Channel Bandwidth: 20 MHz				
QPSK	1	0	22.83	22.60	22.70	1	0	22.91	22.76	22.79
	1	37	23.17	23.04	23.04	1	50	23.27	23.11	23.17
	1	74	22.86	22.76	22.70	1	99	22.98	22.87	22.81
	37	0	21.76	21.83	21.96	50	0	21.83	21.85	22.00
	37	19	21.69	21.70	21.83	50	25	21.86	21.83	21.98
	37	39	21.76	21.76	21.98	50	50	21.93	21.85	22.00
	75	0	21.79	21.84	21.85	100	0	21.83	21.98	22.04
16QAM	1	0	21.91	21.74	21.64	1	0	22.06	21.78	21.80
	1	37	22.24	21.91	22.12	1	50	22.39	22.09	22.17
	1	74	22.00	21.65	21.73	1	99	22.03	21.82	21.79
	37	0	20.66	20.71	21.00	50	0	20.83	20.87	21.06
	37	19	20.71	20.70	20.89	50	25	20.81	20.78	20.95
	37	39	20.76	20.76	21.06	50	50	20.87	20.86	21.07
	75	0	20.85	20.92	20.98	100	0	20.91	20.96	21.08
64QAM	1	0	20.78	20.53	20.68	1	0	20.94	20.67	20.69
	1	37	21.01	20.82	20.90	1	50	21.19	20.96	20.98
	1	74	20.70	20.75	20.70	1	99	20.84	20.75	20.76
	37	0	19.78	19.70	20.00	50	0	19.78	19.84	20.02
	37	19	19.43	19.47	19.74	50	25	19.61	19.64	19.86
	37	39	19.76	19.80	19.91	50	50	19.79	19.81	19.93
	75	0	19.78	19.84	19.93	100	0	19.86	19.87	20.00

4.5.10 LTE Band 41 CA

E-UTRA CA Config	Channel	Mod.	PCC					SCC					Tune Up	UL CA Power	N_{RB_alloc}	3GPP MPR (dB)
			BW	Ch.	Fre.	RB Size	RB Offset	BW	Ch.	Fre.	RB Size	RB Offset				
20+20	Low	QPSK	20	40340	2565	1	99	20	40538	2584.8	1	0	24.0	22.41	2	0
		QPSK	20	40340	2565	100	0	20	40538	2584.8	0	0	23.0	21.42	100	1
		QPSK	20	40340	2565	100	0	20	40538	2584.8	100	0	22.0	20.37	200	2
		16QAM	20	40340	2565	1	99	20	40538	2584.8	1	0	23.0	22.16	2	1
		16QAM	20	40340	2565	100	0	20	40538	2584.8	0	0	22.0	20.37	100	2
		16QAM	20	40340	2565	100	0	20	40538	2584.8	100	0	21.0	19.51	200	3
		64QAM	20	40340	2565	1	99	20	40538	2584.8	1	0	22.0	20.33	2	2
		64QAM	20	40340	2565	100	0	20	40538	2584.8	0	0	21.0	19.39	100	3
		64QAM	20	40340	2565	100	0	20	40538	2584.8	100	0	21.0	19.41	200	3
		QPSK	20	40340	2565	1	0	20	40538	2584.8	1	99	15.5	14.05	2	8.5
	Mid	QPSK	20	40740	2605	1	99	20	40938	2624.8	1	0	24.0	22.38	2	0
		QPSK	20	40740	2605	100	0	20	40938	2624.8	0	0	23.0	21.41	100	1
		QPSK	20	40740	2605	100	0	20	40938	2624.8	100	0	22.0	20.52	200	2
		16QAM	20	40740	2605	1	99	20	40938	2624.8	1	0	23.0	21.84	2	1
		16QAM	20	40740	2605	100	0	20	40938	2624.8	0	0	22.0	20.47	100	2
		16QAM	20	40740	2605	100	0	20	40938	2624.8	100	0	21.0	19.59	200	3
		64QAM	20	40740	2605	1	99	20	40938	2624.8	1	0	22.0	20.39	2	2
		64QAM	20	40740	2605	100	0	20	40938	2624.8	0	0	21.0	19.44	100	3
		64QAM	20	40740	2605	100	0	20	40938	2624.8	100	0	21.0	19.48	200	3
		QPSK	20	40740	2605	1	0	20	40938	2624.8	1	99	15.5	14.03	2	8.5
	High	QPSK	20	41140	2645	1	0	20	40942	2625.2	1	99	24.0	22.37	2	0
		QPSK	20	41140	2645	100	0	20	40942	2625.2	0	0	23.0	21.44	100	1
		QPSK	20	41140	2645	100	0	20	40942	2625.2	100	0	22.0	20.39	200	2
		16QAM	20	41140	2645	1	0	20	40942	2625.2	1	99	23.0	22.06	2	1
		16QAM	20	41140	2645	100	0	20	40942	2625.2	0	0	22.0	20.48	100	2
		16QAM	20	41140	2645	100	0	20	40942	2625.2	100	0	21.0	19.47	200	3
		64QAM	20	41140	2645	1	99	20	40942	2625.2	1	0	22.0	20.35	2	2
		64QAM	20	41140	2645	100	0	20	40942	2625.2	0	0	21.0	19.47	100	3
		64QAM	20	41140	2645	100	0	20	40942	2625.2	100	0	21.0	19.44	200	3
		QPSK	20	41140	2645	1	99	20	40942	2625.2	1	0	15.5	13.67	2	8.5
5+20	Low	QPSK	5	40265	2557.5	1	24	20	40382	2569.2	1	0	24.0	22.54	2	0
		16QAM	5	40265	2557.5	1	24	20	40382	2569.2	1	0	23.0	22.05	2	1
		64QAM	5	40265	2557.5	1	24	20	40382	2569.2	1	0	22.0	20.58	2	2
	Mid	QPSK	5	40740	2605	1	24	20	40857	2616.7	1	0	24.0	22.33	2	0
		16QAM	5	40740	2605	1	24	20	40857	2616.7	1	0	23.0	21.95	2	1
		64QAM	5	40740	2605	1	24	20	40857	2616.7	1	0	22.0	20.61	2	2
	High	QPSK	5	41215	2652.5	1	0	20	41098	2640.8	1	99	24.0	22.36	2	0
		16QAM	5	41215	2652.5	1	0	20	41098	2640.8	1	99	23.0	21.96	2	1

		64QAM	5	41215	2652.5	1	0	20	41098	2640.8	1	99	22.0	20.55	2	2
10+15	Low	QPSK	10	40290	2560	1	49	15	40410	2572	1	0	24.0	22.60	2	0
		16QAM	10	40290	2560	1	49	15	40410	2572	1	0	23.0	21.62	2	1
		64QAM	10	40290	2560	1	49	15	40410	2572	1	0	22.0	20.57	2	2
	Mid	QPSK	10	40740	2605	1	49	15	40860	2617	1	0	24.0	22.42	2	0
		16QAM	10	40740	2605	1	49	15	40860	2617	1	0	23.0	21.60	2	1
		64QAM	10	40740	2605	1	49	15	40860	2617	1	0	22.0	20.66	2	2
	High	QPSK	10	41190	2650	1	49	15	41070	2638	1	0	24.0	22.57	2	0
		16QAM	10	41190	2650	1	49	15	41070	2638	1	0	23.0	21.45	2	1
		64QAM	10	41190	2650	1	49	15	41070	2638	1	0	22.0	20.61	2	2
10+20	Low	QPSK	10	40290	2560	1	49	20	40434	2574.4	1	0	24.0	22.51	2	0
		16QAM	10	40290	2560	1	49	20	40434	2574.4	1	0	23.0	21.63	2	1
		64QAM	10	40290	2560	1	49	20	40434	2574.4	1	0	22.0	20.53	2	2
	Mid	QPSK	10	40740	2605	1	49	20	40884	2619.4	1	0	24.0	22.47	2	0
		16QAM	10	40740	2605	1	49	20	40884	2619.4	1	0	23.0	21.53	2	1
		64QAM	10	40740	2605	1	49	20	40884	2619.4	1	0	22.0	20.57	2	2
	High	QPSK	10	41190	2650	1	0	20	41046	2635.6	1	99	24.0	22.39	2	0
		16QAM	10	41190	2650	1	0	20	41046	2635.6	1	99	23.0	21.56	2	1
		64QAM	10	41190	2650	1	0	20	41046	2635.6	1	99	22.0	20.64	2	2
15+10	Low	QPSK	15	40315	2562.5	1	74	10	40435	2574.5	1	0	24.0	22.45	2	0
		16QAM	15	40315	2562.5	1	74	10	40435	2574.5	1	0	23.0	21.63	2	1
		64QAM	15	40315	2562.5	1	74	10	40435	2574.5	1	0	22.0	20.61	2	2
	Mid	QPSK	15	40740	2605	1	74	10	40860	2617	1	0	24.0	22.32	2	0
		16QAM	15	40740	2605	1	74	10	40860	2617	1	0	23.0	21.47	2	1
		64QAM	15	40740	2605	1	74	10	40860	2617	1	0	22.0	20.57	2	2
	High	QPSK	15	41165	2647.5	1	74	10	41285	2659.5	1	0	24.0	22.48	2	0
		16QAM	15	41165	2647.5	1	74	10	41285	2659.5	1	0	23.0	21.41	2	1
		64QAM	15	41165	2647.5	1	74	10	41285	2659.5	1	0	22.0	20.54	2	2
15+15	Low	QPSK	15	40315	2562.5	1	74	15	40465	2577.5	1	0	24.0	22.44	2	0
		16QAM	15	40315	2562.5	1	74	15	40465	2577.5	1	0	23.0	21.64	2	1
		64QAM	15	40315	2562.5	1	74	15	40465	2577.5	1	0	22.0	20.67	2	2
	Mid	QPSK	15	40740	2605	1	74	15	40890	2620	1	0	24.0	22.33	2	0
		16QAM	15	40740	2605	1	74	15	40890	2620	1	0	23.0	21.20	2	1
		64QAM	15	40740	2605	1	74	15	40890	2620	1	0	22.0	20.63	2	2
	High	QPSK	15	41165	2647.5	1	74	15	41015	2632.5	1	0	24.0	22.46	2	0
		16QAM	15	41165	2647.5	1	74	15	41015	2632.5	1	0	23.0	21.59	2	1
		64QAM	15	41165	2647.5	1	74	15	41015	2632.5	1	0	22.0	20.69	2	2
15+20	Low	QPSK	15	40315	2562.5	1	74	20	40486	2579.6	1	0	24.0	22.40	2	0
		16QAM	15	40315	2562.5	1	74	20	40486	2579.6	1	0	23.0	21.73	2	1
		64QAM	15	40315	2562.5	1	74	20	40486	2579.6	1	0	22.0	20.71	2	2
	Mid	QPSK	15	40740	2605	1	74	20	40911	2622.1	1	0	24.0	22.37	2	0
		16QAM	15	40740	2605	1	74	20	40911	2622.1	1	0	23.0	21.49	2	1

		64QAM	15	40740	2605	1	74	20	40911	2622.1	1	0	22.0	20.72	2	2
	High	QPSK	15	41165	2647.5	1	74	20	40994	2630.4	1	0	24.0	22.45	2	0
		16QAM	15	41165	2647.5	1	74	20	40994	2630.4	1	0	23.0	21.63	2	1
		64QAM	15	41165	2647.5	1	74	20	40994	2630.4	1	0	22.0	20.78	2	2
20+5	Low	QPSK	20	40340	2565	1	99	5	40357	2576.7	1	0	24.0	22.43	2	0
		16QAM	20	40340	2565	1	99	5	40357	2576.7	1	0	23.0	21.72	2	1
		64QAM	20	40340	2565	1	99	5	40357	2576.7	1	0	22.0	20.69	2	2
	Mid	QPSK	20	40740	2605	1	99	5	40857	2616.7	1	0	24.0	22.35	2	0
		16QAM	20	40740	2605	1	99	5	40857	2616.7	1	0	23.0	21.59	2	1
		64QAM	20	40740	2605	1	99	5	40857	2616.7	1	0	22.0	20.65	2	2
	High	QPSK	20	41140	2645	1	0	5	41023	2633.3	1	24	24.0	22.48	2	0
		16QAM	20	41140	2645	1	0	5	41023	2633.3	1	24	23.0	21.85	2	1
		64QAM	20	41140	2645	1	0	5	41023	2633.3	1	24	22.0	20.63	2	2
20+10	Low	QPSK	20	40340	2565	1	99	10	40484	2579.4	1	0	24.0	22.43	2	0
		16QAM	20	40340	2565	1	99	10	40484	2579.4	1	0	23.0	21.84	2	1
		64QAM	20	40340	2565	1	99	10	40484	2579.4	1	0	22.0	20.63	2	2
	Mid	QPSK	20	40740	2605	1	99	10	40884	2619.4	1	0	24.0	22.42	2	0
		16QAM	20	40740	2605	1	99	10	40884	2619.4	1	0	23.0	21.56	2	1
		64QAM	20	40740	2605	1	99	10	40884	2619.4	1	0	22.0	20.69	2	2
	High	QPSK	20	41140	2645	1	99	10	40996	2630.6	1	0	24.0	22.36	2	0
		16QAM	20	41140	2645	1	99	10	40996	2630.6	1	0	23.0	21.37	2	1
		64QAM	20	41140	2645	1	99	10	40996	2630.6	1	0	22.0	20.73	2	2
20+15	Low	QPSK	20	40340	2565	1	99	15	40511	2582.1	1	0	24.0	22.51	2	0
		16QAM	20	40340	2565	1	99	15	40511	2582.1	1	0	23.0	21.75	2	1
		64QAM	20	40340	2565	1	99	15	40511	2582.1	1	0	22.0	20.72	2	2
	Mid	QPSK	20	40740	2605	1	99	15	40911	2622.1	1	0	24.0	22.37	2	0
		16QAM	20	40740	2605	1	99	15	40911	2622.1	1	0	23.0	21.38	2	1
		64QAM	20	40740	2605	1	99	15	40911	2622.1	1	0	22.0	20.75	2	2
	High	QPSK	20	41140	2645	1	99	15	40969	2627.9	1	0	24.0	22.36	2	0
		16QAM	20	41140	2645	1	99	15	40969	2627.9	1	0	23.0	21.38	2	1
		64QAM	20	41140	2645	1	99	15	40969	2627.9	1	0	22.0	20.77	2	2

4.5.11 LTE Band 66

LTE Band 66 Maximum Average Power (dBm)										
Modulation	RB		Test Channel			RB		Test Channel		
	Size	Offset	Low	Mid	High	Size	Offset	Low	Mid	High
Channel Bandwidth: 1.4 MHz						Channel Bandwidth: 3 MHz				
QPSK	1	0	16.54	16.56	16.56	1	0	16.59	16.59	16.54
	1	2	16.66	16.70	16.69	1	7	16.73	16.49	16.71
	1	5	16.51	16.54	16.54	1	14	16.56	16.58	16.56
	3	0	16.64	16.63	16.64	8	0	15.58	15.61	15.60
	3	1	16.71	16.72	16.70	8	3	15.62	15.66	15.64
	3	3	16.64	16.65	16.63	8	7	15.59	15.64	15.60
	6	0	15.63	15.65	15.63	15	0	15.56	15.59	15.57
16QAM	1	0	15.82	15.83	15.87	1	0	15.86	15.93	15.94
	1	2	16.01	16.09	16.08	1	7	16.11	16.12	16.17
	1	5	15.91	15.89	15.82	1	14	15.84	15.88	15.87
	3	0	15.73	15.76	15.65	8	0	14.62	14.68	14.65
	3	1	15.78	15.74	15.75	8	3	14.67	14.71	14.73
	3	3	15.72	15.75	15.73	8	7	14.65	14.65	14.68
	6	0	14.62	14.66	14.61	15	0	14.56	14.57	14.56
64QAM	1	0	14.70	14.73	14.74	1	0	14.73	14.72	14.75
	1	2	14.86	14.92	14.90	1	7	14.87	14.99	14.94
	1	5	14.68	14.72	14.71	1	14	14.73	14.77	14.71
	3	0	14.58	14.56	14.58	8	0	13.54	13.52	13.53
	3	1	14.62	14.65	14.66	8	3	13.58	13.58	13.60
	3	3	14.63	14.64	14.63	8	7	13.51	13.55	13.55
	6	0	13.57	13.56	13.61	15	0	13.50	13.53	13.52
Channel Bandwidth: 5 MHz						Channel Bandwidth: 10 MHz				
QPSK	1	0	16.40	16,46	16.46	1	0	16.51	16.52	16.54
	1	12	16.74	16.71	16.58	1	24	16.69	16.70	16.70
	1	24	16.45	16.43	16.43	1	49	16.53	16.51	16.49
	12	0	15.59	15.56	15.60	25	0	15.64	15.54	15.72
	12	6	15.65	15.65	15.65	25	12	15.62	15.61	15.66
	12	13	15.55	15.63	15.60	25	25	15.57	15.67	15.60
	25	0	15.54	15.61	15.59	50	0	15.58	15.62	15.65
16QAM	1	0	15.68	15.75	15.78	1	0	15.88	15.84	15.88
	1	12	16.02	16.16	16.09	1	24	15.95	16.04	16.13
	1	24	15.75	15.85	15.75	1	49	15.91	15.86	15.90
	12	0	14.57	14.58	14.61	25	0	14.62	14.52	14.71
	12	6	14.64	14.65	14.63	25	12	14.57	14.60	14.63
	12	13	14.53	14.66	14.58	25	25	14.53	14.69	14.56
	25	0	14.52	14.57	14.57	50	0	14.56	14.58	14.65
64QAM	1	0	14.57	14.65	14.65	1	0	14.72	14.69	14.75
	1	12	14.90	14.96	15.00	1	24	14.87	14.89	14.87
	1	24	14.64	14.67	14.63	1	49	14.66	14.77	14.74
	12	0	13.52	13.52	13.58	25	0	13.60	13.51	13.68
	12	6	13.59	13.62	13.62	25	12	13.57	13.57	13.63
	12	13	13.47	13.58	13.55	25	25	13.52	13.64	13.53
	25	0	13.51	13.55	13.57	50	0	13.56	13.60	13.66