

FCC TEST REPORT

Product Name: COSMO
Trade Mark: Planet
Model No.: COSMO COMMUNICATOR
Add. Model No.: N/A
Report Number: 190725019RFM-2
Test Standards: FCC 47 CFR Part 22
FCC 47 CFR Part 24
FCC 47 CFR Part 27
FCC ID: 2A07Q-COSMO
Test Result: PASS
Date of Issue: September 18, 2019

Prepared for:

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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		
Add. Model No.:	N/A		
Trade Mark:	Planet		
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/ Band 17/ Band 25/ Band 66/ Band 71	
		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/GLONASS
	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		

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 $\equiv$ 2 A / 7.0 V $\equiv$ 1.67 A / 9.0 V $\equiv$ 1.67A / 12 V $\equiv$ 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 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
	LTE Band 71:	663-698MHz	617-652MHz
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)	N/A	
	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:	Class 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 17:	-5.6 dBi	
	LTE Band 25:	2.1 dBi	
	LTE Band 41:	-1.5 dBi	
	LTE Band 66:	0.9 dBi	
	LTE Band 71:	-5.6 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	Modulation	Frequency Range	Max RF Output Power (dBm)		EIRP	99% BW	Emission Designator
	(MHz)		(MHz)	Conducted (Average)	ERP/EIRP (Average)	(W)	(MHz)	
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	Modulation	Frequency Range	Max RF Output Power (dBm)		EIRP	99% BW	Emission Designator
	(MHz)		(MHz)	Conducted (Average)	ERP/EIRP (Average)	(W)	(MHz)	
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	1M10G7D
		64QAM		21.30	14.05	0.02541	1.0995	1M10W7D
	3	QPSK	825.5-847.5	22.72	15.47	0.03524	2.7043	2M70W7D
		16QAM		22.36	15.11	0.03243	2.6959	2M70G7D
		64QAM		21.32	14.07	0.02553	2.6967	2M70W7D
	5	QPSK	826.5-846.5	22.73	15.48	0.03532	4.5259	4M53W7D
		16QAM		22.37	15.12	0.03251	4.5447	4M54G7D
		64QAM		21.23	13.98	0.02500	4.5358	4M54W7D
	10	QPSK	829-844	22.82	15.57	0.03606	9.0316	9M03W7D
		16QAM		22.42	15.17	0.03289	9.0190	9M02G7D
		64QAM		21.37	14.12	0.02582	9.0144	9M01W7D

Summary of Results:								
Bands	BW	Modulation	Frequency Range	Max RF Output Power (dBm)		EIRP	99% BW	Emission Designator
	(MHz)		(MHz)	Conducted (Average)	ERP/EIRP (Average)	(W)	(MHz)	
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	1M10G7D
		64QAM		20.88	13.13	0.02056	1.0985	1M10W7D
	3	QPSK	700.5-714.5	22.42	14.67	0.02931	2.6970	2M70W7D
		16QAM		21.90	14.15	0.02600	2.6892	2M70G7D
		64QAM		20.81	13.06	0.02023	2.6897	2M70W7D
	5	QPSK	701.5-713.5	22.49	14.74	0.02979	4.5332	4M53W7D
		16QAM		21.77	14.02	0.02523	4.5392	4M54G7D
		64QAM		20.87	13.12	0.02051	4.5375	4M54W7D
	10	QPSK	704-711	22.52	14.77	0.02999	9.0244	9M02W7D
		16QAM		21.93	14.18	0.02618	9.0028	9M00G7D
		64QAM		20.91	13.16	0.02070	9.0064	9M01W7D

Summary of Results:								
Bands	BW	Modulation	Frequency Range	Max RF Output Power (dBm)		EIRP (W)	99% BW (MHz)	Emission Designator
	(MHz)		(MHz)	Conducted (Average)	ERP/EIRP (Average)			
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		22.39	20.89	0.12274	17.991	18M0W7D
		64QAM		21.19	19.69	0.09311	18.005	18M0W7D

Summary of Results:								
Bands	BW	Modulation	Frequency Range	Max RF Output Power (dBm)		EIRP	99% BW	Emission Designator
	(MHz)		(MHz)	Conducted (Average)	ERP/EIRP (Average)	(W)	(MHz)	
41CA	20+20	QPSK	2565-2645	22.41	20.91	0.1233	37.526	37M5G7D
		16QAM		22.16	20.66	0.1164	37.505	37M5W7D
		64QAM		20.39	18.89	0.0775	37.547	37M5W7D
	5+20	QPSK	2557.5-2652.5	22.54	21.04	0.1271	23.262	23M3G7D
		16QAM		22.05	20.55	0.1135	23.158	23M2W7D
		64QAM		20.61	19.11	0.0815	23.150	23M2W7D
	10+15	QPSK	2560-2650	22.60	21.1	0.1288	23.361	23M4G7D
		16QAM		21.62	20.12	0.1028	23.260	23M3W7D
		64QAM		20.66	19.16	0.0824	23.281	23M3W7D
	10+20	QPSK	2605-2650	22.51	21.01	0.1262	27.932	27M9G7D
		16QAM		21.63	20.13	0.1034	27.807	27M8W7D
		64QAM		20.64	19.14	0.0820	27.833	27M8W7D
	15+10	QPSK	2562.5-2647.5	22.48	20.98	0.1253	23.425	23M4G7D
		16QAM		21.63	20.13	0.1030	23.362	23M4W7D
		64QAM		20.61	19.11	0.0815	23.350	23M4W7D
	15+15	QPSK	2562.5-2647.5	22.46	20.96	0.1247	28.382	28M4G7D
		16QAM		21.64	20.14	0.1033	28.474	28M5W7D
		64QAM		20.69	19.19	0.0830	28.418	28M4W7D
	15+20	QPSK	2562.5-2647.5	22.45	20.95	0.1245	32.634	32M6G7D
		16QAM		21.73	20.23	0.1054	32.588	32M6W7D
		64QAM		20.78	19.28	0.0847	32.584	32M6W7D
	20+5	QPSK	2565-2645	22.48	20.98	0.1253	23.165	23M2G7D
		16QAM		21.85	20.35	0.1084	23.119	23M1W7D
		64QAM		20.69	19.19	0.0830	23.039	23M0W7D
	20+10	QPSK	2565-2645	22.43	20.93	0.1239	27.916	27M9G7D
		16QAM		21.84	20.34	0.1081	28.474	28M5W7D
		64QAM		20.73	19.23	0.0838	28.418	28M4W7D
	20+15	QPSK	2565-2645	22.51	21.01	0.1262	32.641	32M6G7D
		16QAM		21.75	20.25	0.1059	32.646	32M6W7D
		64QAM		20.77	19.27	0.0845	32.616	32M6W7D

Summary of Results:								
Bands	BW	Modulation	Frequency Range	Max RF Output Power (dBm)		EIRP	99% BW	Emission Designator
	(MHz)		(MHz)	Conducted (Average)	ERP/EIRP (Average)	(W)	(MHz)	
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
71	5	QPSK	665.5-695.5	21.99	14.24	0.02655	4.5452	4M55G7D
		16QAM		21.38	13.63	0.02307	4.5486	4M55W7D
		64QAM		20.35	12.60	0.01820	4.5470	4M55W7D
	10	QPSK	668-693	22.01	14.26	0.02667	9.0333	9M03G7D
		16QAM		21.40	13.65	0.02317	9.0200	9M02W7D
		64QAM		20.41	12.66	0.01845	9.0062	9M01W7D
	15	QPSK	670.5-690.5	21.94	14.19	0.02624	13.526	13M5G7D
		16QAM		21.47	13.72	0.02355	13.524	13M5W7D
		64QAM		20.43	12.68	0.01854	13.520	13M5W7D
	20	QPSK	673-688	22.05	14.30	0.02692	18.034	18M0G7D
		16QAM		21.49	13.74	0.02366	18.057	18M1W7D
		64QAM		20.47	12.72	0.01871	18.056	18M1W7D

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
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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	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 24.232(c)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 24.232(d)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) & FCC 47 CFR Part 24.238(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 24.238(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 24.235	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

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

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

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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	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(h)(2)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(m)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(m)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(m)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 27 Test Cases (LTE Band 12 & 17 & 71)			
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	PASS
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	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) FCC 47 CFR Part 27.53(g)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(g)	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(g)	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(g)	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

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	58566133290020	Jun. 05, 2018	Jun. 05, 2020

4. TEST CONFIGURATION

4.1 ENVIRONMENTAL CONDITIONS FOR TESTING

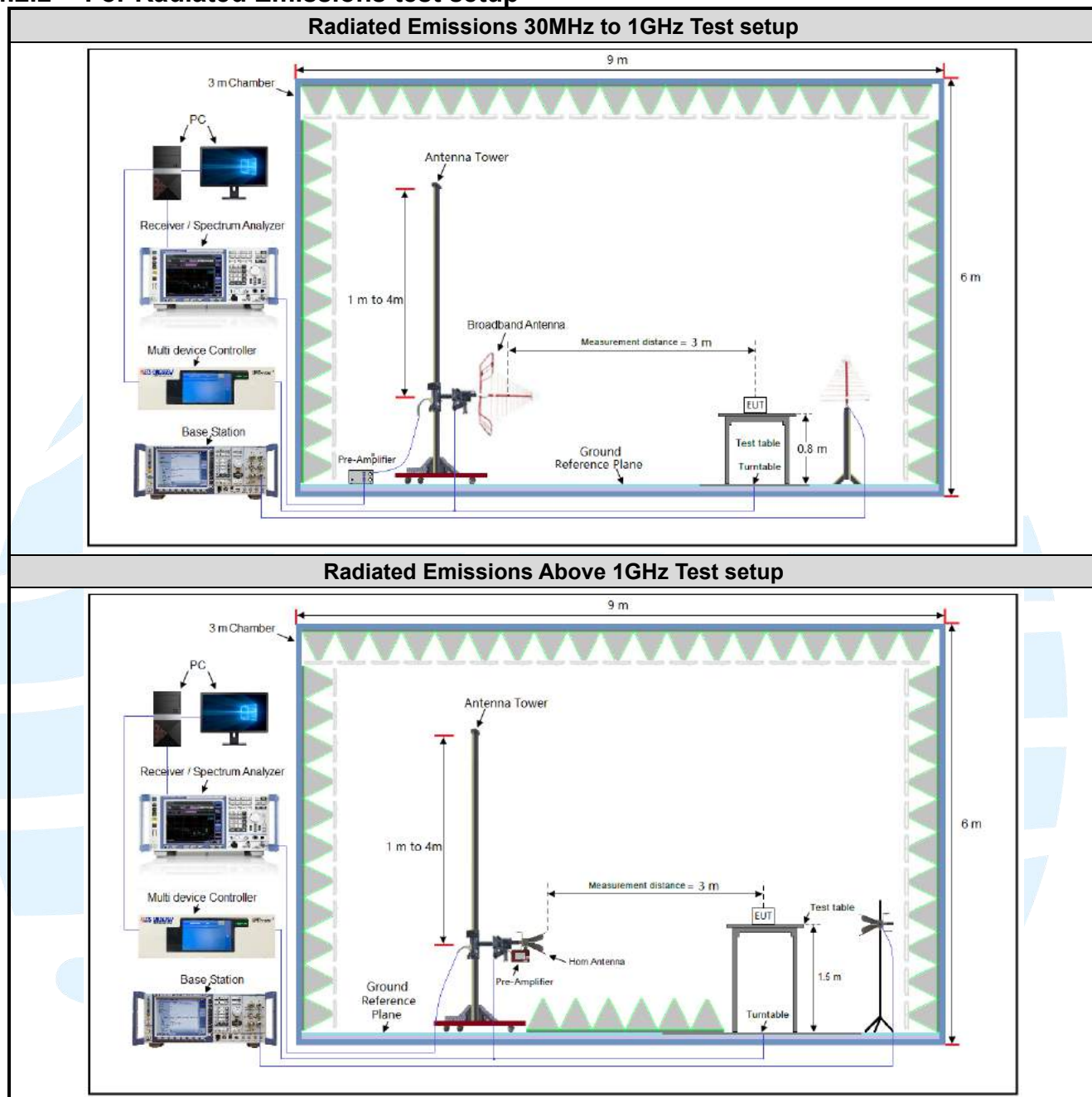
Test Environment	Selected Values During Tests		
Test Condition	Ambient		
	Temperature (°C)	Voltage (V)	Relative Humidity (%)
TN/VN	+15 to +35	3.85	20 to 75
TL/VL	-30	3.5	20 to 75
TH/VL	+50	3.5	20 to 75
TL/VH	-30	4.35	20 to 75
TH/VH	+50	4.35	20 to 75

Remark:

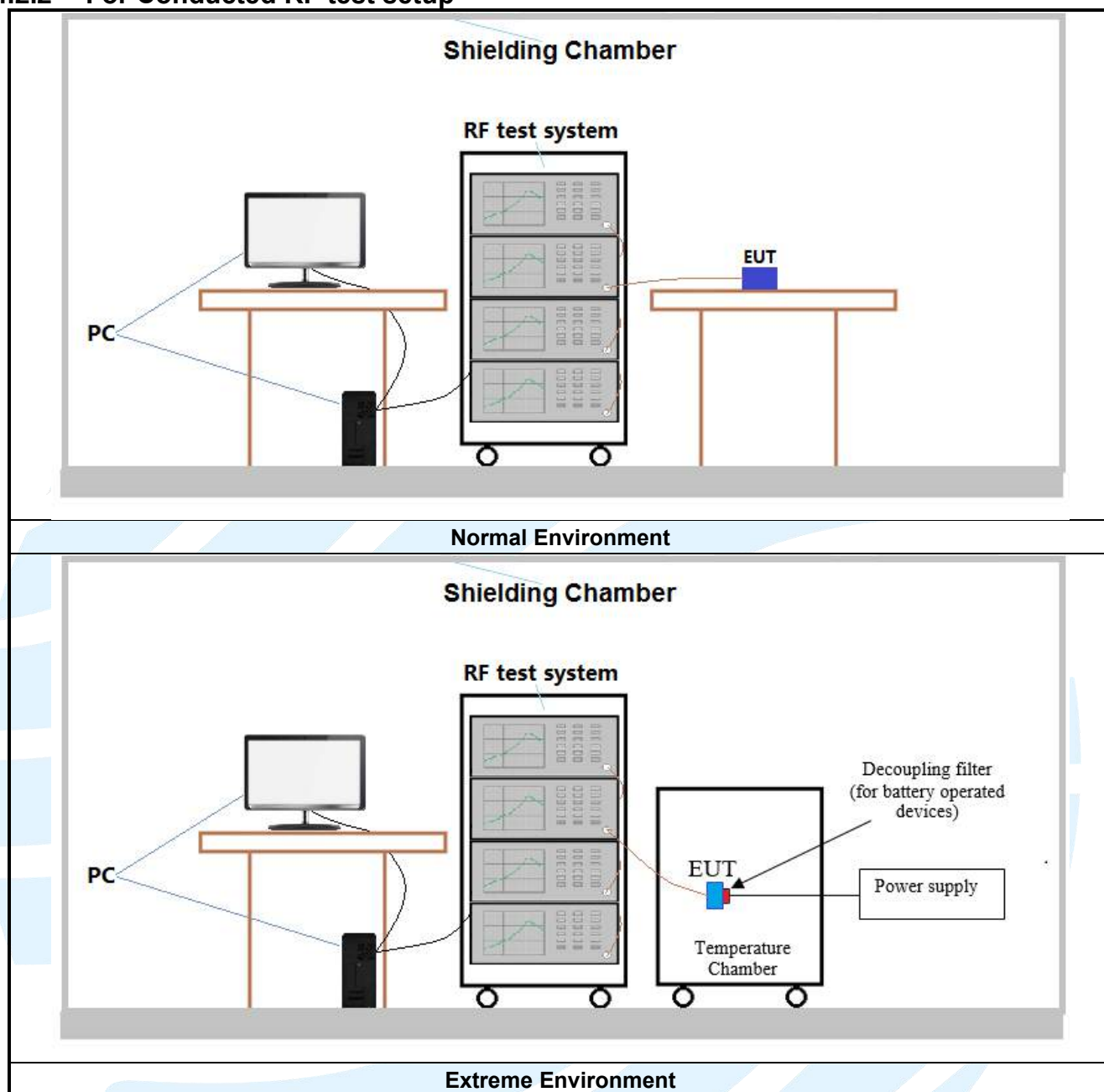
- 1) The EUT just work in such extreme temperature of -30°C to 50°C and the extreme voltage of 3.5 V to 4.35 V, so here the EUT is tested in the temperature of -30°C to 50°C and the voltage of 3.5 V to 4.35 V.
- 2) VN: Normal Voltage; TN: Normal Temperature;
TL: Low Extreme Test Temperature; TH: High 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



4.2.2 For Conducted RF test setup



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

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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 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

LTE Band 71 TX: 663–698MHz		10	132622	1775
		15	132597	1772.5
		20	132572	1770
	Low Range	5	133147	665.5
		10	133172	668
		15	133197	670.5
		20	133222	673
	Middle Range	5/10/15	133297	680.5
		20	133322	683
	High Range	5	133447	695.5
		10	133422	693
		15	133397	690.5
		20	133372	688

		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 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
LTE Band 71	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

4.5.2 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

4.5.3 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	13.35	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

4.5.4 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
16QAM	6	0	21.75	21.70	21.73	15	0	21.70	21.71	21.67
	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
64QAM	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
	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
Channel Bandwidth: 5 MHz	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
	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
QPSK	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
	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
16QAM	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
	1	0	21.02	20.81	20.60	1	0	21.16	20.82	20.73
64QAM	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

4.5.5 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

4.5.6 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
16QAM	6	0	21.26	21.31	21.25	15	0	21.33	21.36	21.35
	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
64QAM	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
	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
Channel Bandwidth: 5 MHz	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
	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
QPSK	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
	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
16QAM	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
	1	0	20.37	20.16	20.87	1	0	20.41	20.17	20.91
64QAM	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

4.5.7 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
16QAM	6	0	21.28	21.38	21.41	15	0	21.45	21.45	21.44
	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
64QAM	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
	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
16QAM	6	0	16.97	17.08	17.17	15	0	16.92	17.03	17.13
	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
64QAM	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
	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
Channel Bandwidth: 5 MHz	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
	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
16QAM	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
	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
64QAM	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
	1	0	16.08	16.11	16.24	1	0	16.13	16.26	16.33
Channel Bandwidth: 10 MHz	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

	High	64QAM	15	40740	2605	1	74	20	40911	2622.1	1	0	22.0	20.72	2	2
		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	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
		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
		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

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: 15 MHz						Channel Bandwidth: 20 MHz				
QPSK	1	0	16.46	16.47	16.48	1	0	16.41	16.44	16.46
	1	37	16.75	16.76	16.72	1	50	16.69	16.67	16.67
	1	74	16.43	16.49	16.46	1	99	16.38	16.44	16.39
	37	0	15.65	15.56	15.66	50	0	16.73	15.45	15.69
	37	19	15.64	15.62	15.64	50	25	15.62	15.61	15.63
	37	39	16.57	15.68	15.55	50	50	15.49	15.71	15.45
	75	0	15.64	15.59	15.61	100	0	15.61	15.61	15.59
16QAM	1	0	15.77	15.83	15.83	1	0	15.67	15.81	15.87
	1	37	16.05	16.14	16.15	1	50	15.97	16.02	16.03
	1	74	15.86	15.88	15.80	1	99	15.75	15.77	15.74
	37	0	14.58	14.55	14.63	50	0	14.69	14.43	14.65
	37	19	14.58	14.57	14.58	50	25	14.58	14.56	14.58
	37	39	14.52	14.63	14.50	50	50	14.44	14.65	14.43
	75	0	14.58	14.58	14.56	100	0	14.59	14.56	14.57
64QAM	1	0	14.71	14.69	14.67	1	0	14.61	14.58	14.63
	1	37	14.95	14.99	14.97	1	50	14.85	14.85	14.89
	1	74	14.60	14.68	14.67	1	99	14.63	14.62	14.64
	37	0	13.59	13.49	13.63	50	0	13.70	13.43	13.66
	37	19	13.57	13.57	13.59	50	25	13.58	13.58	13.58
	37	39	13.55	13.61	13.48	50	50	13.44	13.67	13.41
	75	0	13.57	13.58	13.56	100	0	13.56	13.56	13.52

4.5.12 LTE Band 71

LTE Band 71 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	21.73	21.59	21.51	1	0	21.67	21.61	21.56
	1	12	21.96	21.74	21.99	1	24	22.01	21.77	21.95
	1	24	21.63	21.57	21.64	1	49	21.59	21.73	21.62
	12	0	20.56	20.72	20.82	25	0	20.71	20.69	20.74
	12	6	20.87	20.80	20.83	25	12	20.81	20.80	20.86
	12	13	20.94	20.79	20.81	25	25	20.83	20.76	20.86
	25	0	20.77	20.75	20.81	50	0	20.72	20.84	20.87
16QAM	1	0	21.04	21.04	21.04	1	0	20.99	21.13	21.21
	1	12	21.30	21.38	21.37	1	24	21.31	21.23	21.40
	1	24	21.03	21.03	21.24	1	49	21.01	21.02	21.21
	12	0	19.66	19.87	19.70	25	0	19.54	19.88	19.86
	12	6	19.83	19.89	19.99	25	12	19.92	19.93	19.83
	12	13	19.97	19.74	19.98	25	25	19.90	19.87	19.87
	25	0	19.89	19.83	19.91	50	0	19.75	19.85	19.91
64QAM	1	0	19.89	20.14	20.01	1	0	19.82	20.11	20.00
	1	12	20.16	20.12	20.35	1	24	20.23	20.15	20.41
	1	24	19.96	19.95	20.05	1	49	19.89	20.00	19.94
	12	0	18.43	18.69	18.77	25	0	18.50	18.71	18.79
	12	6	18.89	18.87	18.81	25	12	18.85	18.96	18.69
	12	13	18.81	18.87	18.88	25	25	18.67	18.82	18.91
	25	0	18.85	18.73	18.69	50	0	18.74	18.77	18.72
Channel Bandwidth: 15 MHz						Channel Bandwidth: 20 MHz				
QPSK	1	0	21.66	21.66	21.51	1	0	21.74	21.72	21.63
	1	37	21.83	21.88	21.94	1	50	22.03	21.92	22.05
	1	74	21.70	21.73	21.61	1	99	21.71	21.75	21.74
	37	0	20.68	20.84	20.71	50	0	20.76	20.88	20.87
	37	19	20.79	20.82	20.93	50	25	20.90	20.89	20.98
	37	39	20.82	20.84	20.83	50	50	20.97	20.91	20.95
	75	0	20.64	20.83	20.76	100	0	20.83	20.87	20.88
16QAM	1	0	20.97	21.12	21.16	1	0	21.12	21.23	21.21
	1	37	21.47	21.30	21.40	1	50	21.49	21.41	21.44
	1	74	21.15	21.07	21.16	1	99	21.20	21.20	21.28
	37	0	19.62	19.85	19.84	50	0	19.72	19.92	19.90
	37	19	19.79	19.91	19.87	50	25	19.98	19.97	20.00
	37	39	19.96	19.91	19.96	50	50	19.99	19.94	20.02
	75	0	19.74	19.77	19.89	100	0	19.94	19.96	19.96
64QAM	1	0	19.91	20.15	20.14	1	0	19.99	20.15	20.20
	1	37	20.26	20.18	20.43	1	50	20.35	20.21	20.47
	1	74	19.90	20.02	20.08	1	99	20.05	20.07	20.13
	37	0	18.43	18.72	18.83	50	0	18.56	18.73	18.86
	37	19	18.88	18.88	18.72	50	25	18.92	18.96	18.82
	37	39	18.77	18.87	18.95	50	50	18.87	18.91	19.00
	75	0	18.83	18.76	18.78	100	0	18.87	18.85	18.82

Pre-scan all bandwidth and RB, find worse case mode are chosen to the report, the LTE worse case mode applicability and tested channel detail as below:

Item	Band	Bandwidth (MHz)						Modulation			RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
ERP/EIRP	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☒	☐	☐	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
	25	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	41	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	66	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
Conducted output power	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☒	☒	☒	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒
	25	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	41	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	66	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

Item	Band	Bandwidth(MHz)						Modulation			RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
99%&26dB Bandwidth	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☐	☐	☒	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☐	☐	☒	☒	☒	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☐	☐	☒	☒	☒	☒
	25	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	41	-	-	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	66	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒
peak-to- average ratio	2	☐	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	4	☐	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	5	☐	☐	☐	☒	--	--	☒	☒	☒	☒	☐	☒	☒	☐	☒
	7	-	-	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	12	☐	☐	☐	☒	-	-	☒	☒	☒	☒	☐	☒	☒	☐	☒
	17	-	-	☐	☒	-	-	☒	☒	☒	☒	☐	☒	☒	☐	☒
	25	☐	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	41	-	-	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	66	☐	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	71	-	-	☐	☐	☐	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒

Item	Band	Bandwidth(MHz)						Modulation			RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Band Edge at antenna terminals	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☒	☐	☒	☒	☐	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☐	☒	☒	☐	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☒	☐	☒	☒	☐	☒
	25	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	41	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	66	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒	☐	☒
Spurious emissions at antenna terminals	2	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	4	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	5	☒	☒	☒	☒	--	--	☒	☒	☒	☒	☐	☐	☒	☒	☒
	7	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	12	☒	☒	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
	17	-	-	☒	☒	-	-	☒	☒	☒	☒	☐	☐	☒	☒	☒
	25	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	41	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	66	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒
	71	-	-	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒	☒	☒

Item	Band	Bandwidth(MHz)						Modulation			RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Field strength of spurious radiation	2	☐	☐	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	4	☐	☐	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	5	☐	☐	☐	☒	--	--	☒	☐	☐	☒	☐	☐	☒	☒	☒
	7	-	-	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	12	☐	☐	☐	☒	-	-	☒	☐	☐	☒	☐	☐	☒	☒	☒
	17	-	-	☐	☒	-	-	☒	☐	☐	☒	☐	☐	☒	☒	☒
	25	☐	☐	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	41	-	-	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	66	☐	☐	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
	71	-	-	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐	☒	☒	☒
Frequency stability	2	☐	☐	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	4	☐	☐	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	5	☐	☐	☐	☒	--	--	☒	☐	☐	☐	☐	☒	☐	☒	☐
	7	-	-	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	12	☐	☐	☐	☒	-	-	☒	☐	☐	☐	☐	☒	☐	☒	☐
	17	-	-	☐	☒	-	-	☒	☐	☐	☐	☐	☒	☐	☒	☐
	25	☐	☐	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	41	-	-	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	66	☐	☐	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
	71	-	-	☐	☐	☐	☒	☒	☐	☐	☐	☐	☒	☐	☒	☐
Remark: The mark "☒" means is chosen for testing; The mark "☐" means is not chosen for testing; The mark "-" means is not supported bandwidth																

5. RADIO TECHNICAL REQUIREMENTS SPECIFICATION

5.1 REFERENCE DOCUMENTS FOR TESTING

No.	Identity	Document Title
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC 47 CFR Part 22	Public Mobile Services
3	FCC 47 CFR Part 27	Miscellaneous Wireless Communications Services
4	FCC 47 CFR Part 24	Personal Communications Services
5	FCC 47 CFR Part 90	Private Land Mobile Radio Services
6	ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
7	KDB 971168 D01	KDB 971168 D01 Power Meas License Digital Systems v03r01

5.2 ERP OR EIRP

Test Requirement: FCC 47 CFR Part 2.1046(a)
LTE Band 2 & LTE Band 25: FCC 47 CFR Part 24.232(c)
LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.50(d)(4)
LTE Band 5: FCC 47 CFR Part 22.913(a)
LTE Band 7 & Band 41: FCC 47 CFR Part 27.50(h)(2)
LTE Band 12 & Band 17 & Band 71: FCC 47 CFR Part 27.50(c)(10)

Test Method: KDB 971168 D01v03r01 Section 5.6 & ANSI C63.26-2015

Limit:

Test Procedure:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T - L_C$$

where:

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

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

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

1) L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

Test Setup: Refer to section 4.2.1 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

Test Data: See table below

5.2.1 LTE Band 2

LTE Band 2 Maximum EIRP (dBm)					
Channel	QPSK; RB:1	16QAM; RB:1	64QAM; RB:1	Limit (dBm)	Result
Channel Bandwidth: 1.4MHz					
Lowest	20.97	20.10	19.43	33.01	Pass
Middle	20.99	20.35	19.53	33.01	Pass
Highest	21.12	20.55	19.68	33.01	Pass
Channel Bandwidth: 3MHz					
Lowest	21.05	20.41	19.52	33.01	Pass
Middle	21.07	20.54	19.65	33.01	Pass
Highest	21.11	20.68	19.76	33.01	Pass
Channel Bandwidth: 5MHz					
Lowest	21.05	21.19	19.56	33.01	Pass
Middle	21.14	20.23	19.70	33.01	Pass
Highest	20.96	20.37	19.79	33.01	Pass
Channel Bandwidth: 10MHz					
Lowest	21.00	20.48	19.44	33.01	Pass
Middle	21.06	20.56	19.64	33.01	Pass
Highest	20.97	20.59	19.87	33.01	Pass
Channel Bandwidth: 15MHz					
Lowest	21.04	20.49	19.55	33.01	Pass
Middle	21.08	20.55	20.52	33.01	Pass
Highest	20.99	20.52	19.68	33.01	Pass
Channel Bandwidth: 20MHz					
Lowest	20.97	20.29	19.52	33.01	Pass
Middle	21.05	20.45	19.61	33.01	Pass
Highest	21.31	20.41	19.64	33.01	Pass

5.2.2 LTE Band 4

LTE Band 4 Maximum EIRP (dBm)					
Channel	QPSK; RB:1	16QAM; RB:1	64QAM; RB:1	Limit (dBm)	Result
Channel Bandwidth: 1.4MHz					
Lowest	17.27	16.61	15.43	30.00	Pass
Middle	17.31	16.54	15.47	30.00	Pass
Highest	17.29	16.66	15.52	30.00	Pass
Channel Bandwidth: 3MHz					
Lowest	17.40	16.74	15.57	30.00	Pass
Middle	17.37	16.62	15.47	30.00	Pass
Highest	17.43	16.63	15.58	30.00	Pass
Channel Bandwidth: 5MHz					
Lowest	17.40	16.78	15.59	30.00	Pass
Middle	17.16	16.70	15.51	30.00	Pass
Highest	17.15	16.80	15.62	30.00	Pass
Channel Bandwidth: 10MHz					
Lowest	17.33	16.69	15.51	30.00	Pass
Middle	17.29	16.65	15.46	30.00	Pass
Highest	17.36	16.72	15.48	30.00	Pass
Channel Bandwidth: 15MHz					
Lowest	17.39	16.72	15.59	30.00	Pass
Middle	17.37	16.75	16.68	30.00	Pass
Highest	17.39	16.68	15.62	30.00	Pass
Channel Bandwidth: 20MHz					
Lowest	17.27	16.69	16.28	30.00	Pass
Middle	17.57	16.66	14.13	30.00	Pass
Highest	17.36	16.67	14.30	30.00	Pass

5.2.3 LTE Band 5

LTE Band 5 Maximum ERP (dBm)					
Channel	QPSK; RB:1	16QAM; RB:1	64QAM; RB:1	Limit (dBm)	Result
Channel Bandwidth: 1.4MHz					
Lowest	15.37	15.07	14.05	38.45	Pass
Middle	15.58	14.57	13.65	38.45	Pass
Highest	15.45	14.44	13.33	38.45	Pass
Channel Bandwidth: 3MHz					
Lowest	15.36	15.11	14.07	38.45	Pass
Middle	15.47	14.67	13.60	38.45	Pass
Highest	15.39	14.64	13.40	38.45	Pass
Channel Bandwidth: 5MHz					
Lowest	15.47	15.12	13.98	38.45	Pass
Middle	15.48	14.53	13.63	38.45	Pass
Highest	15.46	14.63	13.42	38.45	Pass
Channel Bandwidth: 10MHz					
Lowest	15.55	15.17	14.12	38.45	Pass
Middle	15.57	14.70	13.70	38.45	Pass
Highest	15.56	14.65	13.48	38.45	Pass

5.2.4 LTE Band 7

LTE Band 7 Maximum EIRP (dBm)					
Channel	QPSK; RB:1	16QAM; RB:1	64QAM; RB:1	Limit (dBm)	Result
Channel Bandwidth: 5MHz					
Lowest	20.07	19.51	18.35	33.01	Pass
Middle	19.99	19.38	18.36	33.01	Pass
Highest	19.85	19.32	18.17	33.01	Pass
Channel Bandwidth: 10MHz					
Lowest	20.18	19.40	18.45	33.01	Pass
Middle	19.98	19.38	18.34	33.01	Pass
Highest	19.89	19.20	18.10	33.01	Pass
Channel Bandwidth: 15MHz					
Lowest	20.07	19.50	18.34	33.01	Pass
Middle	20.09	19.54	18.38	33.01	Pass
Highest	19.96	19.37	18.08	33.01	Pass
Channel Bandwidth: 20MHz					
Lowest	20.25	19.54	18.48	33.01	Pass
Middle	20.10	19.55	18.43	33.01	Pass
Highest	20.05	19.38	18.26	33.01	Pass

5.2.5 LTE Band 12

LTE Band 12 Maximum ERP (dBm)					
Channel	QPSK; RB:1	16QAM; RB:1	64QAM; RB:1	Limit (dBm)	Result
Channel Bandwidth: 1.4MHz					
Lowest	14.68	13.76	12.56	34.77	Pass
Middle	14.73	13.61	12.48	34.77	Pass
Highest	14.50	14.14	13.13	34.77	Pass
Channel Bandwidth: 3MHz					
Lowest	14.56	13.67	12.61	34.77	Pass
Middle	14.67	13.55	12.62	34.77	Pass
Highest	14.54	14.15	13.06	34.77	Pass
Channel Bandwidth: 5MHz					
Lowest	14.55	13.77	12.62	34.77	Pass
Middle	14.74	13.68	12.41	34.77	Pass
Highest	14.68	14.02	13.12	34.77	Pass
Channel Bandwidth: 10MHz					
Lowest	14.74	13.89	12.66	34.77	Pass
Middle	14.77	13.70	12.42	34.77	Pass
Highest	14.72	14.18	13.16	34.77	Pass

5.2.6 LTE Band 17

LTE Band 17 Maximum ERP (dBm)					
Channel	QPSK; RB:1	16QAM; RB:1	64QAM; RB:1	Limit (dBm)	Result
Channel Bandwidth: 5MHz					
Lowest	14.79	13.76	12.79	33.01	Pass
Middle	14.67	13.49	12.55	33.01	Pass
Highest	14.72	14.09	13.10	33.01	Pass
Channel Bandwidth: 10MHz					
Lowest	14.82	13.80	12.83	33.01	Pass
Middle	14.83	13.66	12.66	33.01	Pass
Highest	14.80	14.23	13.24	33.01	Pass

5.2.7 LTE Band 25

LTE Band 25 Maximum EIRP (dBm)					
Channel	QPSK; RB:1	16QAM; RB:1	64QAM; RB:1	Limit (dBm)	Result
Channel Bandwidth: 1.4MHz					
Lowest	20.14	18.75	18.38	33.01	Pass
Middle	20.27	18.86	18.52	33.01	Pass
Highest	20.36	18.93	18.56	33.01	Pass
Channel Bandwidth: 3MHz					
Lowest	20.17	18.76	18.35	33.01	Pass
Middle	20.29	18.94	18.53	33.01	Pass
Highest	20.38	18.99	18.68	33.01	Pass
Channel Bandwidth: 5MHz					
Lowest	20.19	18.85	18.37	33.01	Pass
Middle	20.26	18.93	18.55	33.01	Pass
Highest	20.38	18.90	18.64	33.01	Pass
Channel Bandwidth: 10MHz					
Lowest	20.16	18.75	18.40	33.01	Pass
Middle	20.26	18.86	18.51	33.01	Pass
Highest	20.31	18.96	18.58	33.01	Pass
Channel Bandwidth: 15MHz					
Lowest	20.21	18.84	18.45	33.01	Pass
Middle	20.28	18.88	19.02	33.01	Pass
Highest	20.39	19.02	18.62	33.01	Pass
Channel Bandwidth: 20MHz					
Lowest	20.42	18.75	18.42	33.01	Pass
Middle	20.24	18.92	18.48	33.01	Pass
Highest	20.35	18.93	18.53	33.01	Pass

5.2.8 LTE Band 41

LTE Band 41 Maximum EIRP (dBm)					
Channel	QPSK; RB:1	16QAM; RB:1	64QAM; RB:1	Limit (dBm)	Result
Channel Bandwidth: 5MHz					
Lowest	21.70	20.83	19.61	33.01	Pass
Middle	21.55	20.46	19.28	33.01	Pass
Highest	21.48	20.52	19.30	33.01	Pass
Channel Bandwidth: 10MHz					
Lowest	21.73	20.84	19.51	33.01	Pass
Middle	21.58	20.47	19.30	33.01	Pass
Highest	21.56	20.63	19.47	33.01	Pass
Channel Bandwidth: 15MHz					
Lowest	21.67	20.74	19.51	33.01	Pass
Middle	21.54	20.41	19.32	33.01	Pass
Highest	21.54	20.62	19.40	33.01	Pass
Channel Bandwidth: 20MHz					
Lowest	21.77	20.89	19.69	33.01	Pass
Middle	21.61	20.59	19.46	33.01	Pass
Highest	21.67	20.67	19.48	33.01	Pass

5.2.9 LTE Band 41 CA

LTE Band 41 CA Maximum EIRP (dBm)					
Channel	QPSK; RB:1	16QAM; RB:1	64QAM; RB:1	Limit (dBm)	Result
Channel Bandwidth: 5+20MHz					
Lowest	21.04	20.55	19.08	33.01	Pass
Middle	20.83	20.45	19.11	33.01	Pass
Highest	20.86	20.46	19.05	33.01	Pass
Channel Bandwidth: 20+5MHz					
Lowest	20.93	20.22	19.19	33.01	Pass
Middle	20.85	20.09	19.15	33.01	Pass
Highest	20.98	20.35	19.13	33.01	Pass
Channel Bandwidth: 10+20MHz					
Lowest	21.01	20.13	19.03	33.01	Pass
Middle	20.97	20.03	19.07	33.01	Pass
Highest	20.89	20.06	19.14	33.01	Pass
Channel Bandwidth: 20+10MHz					
Lowest	20.93	20.34	19.13	33.01	Pass
Middle	20.92	20.06	19.19	33.01	Pass
Highest	20.86	19.87	19.23	33.01	Pass
Channel Bandwidth: 15+15MHz					
Lowest	20.94	20.14	19.17	33.01	Pass
Middle	20.83	19.70	19.13	33.01	Pass
Highest	20.96	20.09	19.19	33.01	Pass
Channel Bandwidth: 15+20MHz					
Lowest	20.95	20.23	19.21	33.01	Pass
Middle	20.87	19.99	19.22	33.01	Pass
Highest	19.22	20.13	19.28	33.01	Pass
Channel Bandwidth: 20+15MHz					
Lowest	21.01	20.25	19.22	33.01	Pass
Middle	20.87	19.88	19.25	33.01	Pass
Highest	20.86	19.27	19.27	33.01	Pass
Channel Bandwidth: 20+20MHz					
Lowest	20.91	20.66	18.83	33.01	Pass
Middle	20.88	20.34	18.89	33.01	Pass
Highest	20.87	20.56	18.85	33.01	Pass

5.2.10 LTE Band 66

LTE Band 66 Maximum EIRP (dBm)					
Channel	QPSK; RB:1	16QAM; RB:1	64QAM; RB:1	Limit (dBm)	Result
Channel Bandwidth: 1.4MHz					
Lowest	17.61	16.91	15.76	30.00	Pass
Middle	17.62	16.99	15.82	30.00	Pass
Highest	17.60	16.98	15.80	30.00	Pass
Channel Bandwidth: 3MHz					
Lowest	17.63	17.01	15.77	30.00	Pass
Middle	17.39	17.02	15.89	30.00	Pass
Highest	17.61	17.07	15.84	30.00	Pass
Channel Bandwidth: 5MHz					
Lowest	17.64	16.92	15.80	30.00	Pass
Middle	17.61	17.06	15.86	30.00	Pass
Highest	17.48	16.99	15.90	30.00	Pass
Channel Bandwidth: 10MHz					
Lowest	17.59	16.85	15.77	30.00	Pass
Middle	17.60	16.94	15.79	30.00	Pass
Highest	17.60	17.03	15.77	30.00	Pass
Channel Bandwidth: 15MHz					
Lowest	17.65	16.95	15.85	30.00	Pass
Middle	17.66	17.04	17.05	30.00	Pass
Highest	17.62	17.05	15.87	30.00	Pass
Channel Bandwidth: 20MHz					
Lowest	17.59	16.87	15.75	30.00	Pass
Middle	17.57	16.92	15.75	30.00	Pass
Highest	17.57	16.93	15.79	30.00	Pass

5.2.11 LTE 71

LTE Band 71 Maximum ERP (dBm)					
Channel	QPSK; RB:1	16QAM; RB:1	64QAM; RB:1	Limit (dBm)	Result
Channel Bandwidth: 5MHz					
Lowest	14.21	13.55	12.41	33.01	Pass
Middle	13.99	13.63	12.37	33.01	Pass
Highest	14.24	13.62	12.60	33.01	Pass
Channel Bandwidth: 10MHz					
Lowest	14.26	13.56	12.48	33.01	Pass
Middle	14.02	13.48	12.40	33.01	Pass
Highest	14.20	13.65	12.66	33.01	Pass
Channel Bandwidth: 15MHz					
Lowest	14.08	13.72	12.51	33.01	Pass
Middle	14.13	13.55	12.43	33.01	Pass
Highest	14.19	13.65	12.68	33.01	Pass
Channel Bandwidth: 20MHz					
Lowest	14.28	13.74	12.60	33.01	Pass
Middle	14.17	13.66	12.46	33.01	Pass
Highest	14.30	13.69	12.72	33.01	Pass

5.3 CONDUCTED OUTPUT POWER

Test Requirement: FCC 47 CFR Part 2.1046(a)
LTE Band 2 & LTE Band 25: FCC 47 CFR Part 24.232(c)
LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.50(d)(4)
LTE Band 5: FCC 47 CFR Part 22.913(a)
LTE Band 7 & Band 41: FCC 47 CFR Part 27.50(h)(2)
LTE Band 12 & Band 17 & Band 71: FCC 47 CFR Part 27.50(c)(10)
Test Method: KDB 971168 D01v03r01 & ANSI C63.26-2015

Limit:

FCC 47 CFR Part 22.913(a):

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

FCC 47 CFR Part 24.232(c):

Mobile and portable stations are limited to 2 watts EIRP.

FCC 47 CFR Part 27.50(d)(4):

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

FCC 47 CFR Part 27.50(c)(10):

Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

FCC 47 CFR Part 27.50(h)(2):

Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

FCC 47 CFR Part 27.50(b)(10):

Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

FCC 47 CFR Part 90.635:

(a) The effective radiated power and antenna height for base stations may not exceed 1 kilowatt (30 dBw) and 304 m. (1,000 ft.) above average terrain (AAT), respectively, or the equivalent thereof as determined from the Table. These are maximum values, and applicants will be required to justify power levels and antenna heights requested.

(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

Table—Equivalent Power and Antenna Heights for Base Stations in the 851–869 MHz and 935–940 MHz Bands Which Have a Requirement for a 32 km (20 mi) Service Area Radius

Antenna height (ATT) meters (feet)	Effective radiated power (watts) ^{1 2 4}
Above 1,372 (4,500)	65
Above 1,220 (4,000) to 1,372 (4,500)	70
Above 1,067 (3,500) to 1,220 (4,000)	75
Above 915 (3,000) to 1,067 (3,500)	100
Above 763 (2,500) to 915 (3,000)	140
Above 610 (2,000) to 763 (2,500)	200
Above 458 (1,500) to 610 (2,000)	350
Above 305 (1,000) to 458 (1,500)	600
Up to 305 (1,000)	³ 1,000

- Power is given in terms of effective radiated power (ERP).
- Applicants in the Los Angeles, CA, area who demonstrate a need to serve both the downtown and fringe areas will be permitted to utilize an ERP of 1 kw at the following mountaintop sites: Santiago Park, Sierra Peak, Mount Lukens, and Mount Wilson.

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

Tel: +86-755-28230888

Fax: +86-755-28230886

E-mail: info@uttlab.com

[Http://www.uttlab.com](http://www.uttlab.com)

3. Stations with antennas below 305 m (1,000 ft) (AAT) will be restricted to a maximum power of 1 kw (ERP).
4. Licensees in San Diego, CA, will be permitted to utilize an ERP of 500 watts at the following mountaintop sites: Palomar, Otay, Woodson and Miguel.

Test Procedure:

The EUT was set up for the maximum power with LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.2.2 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

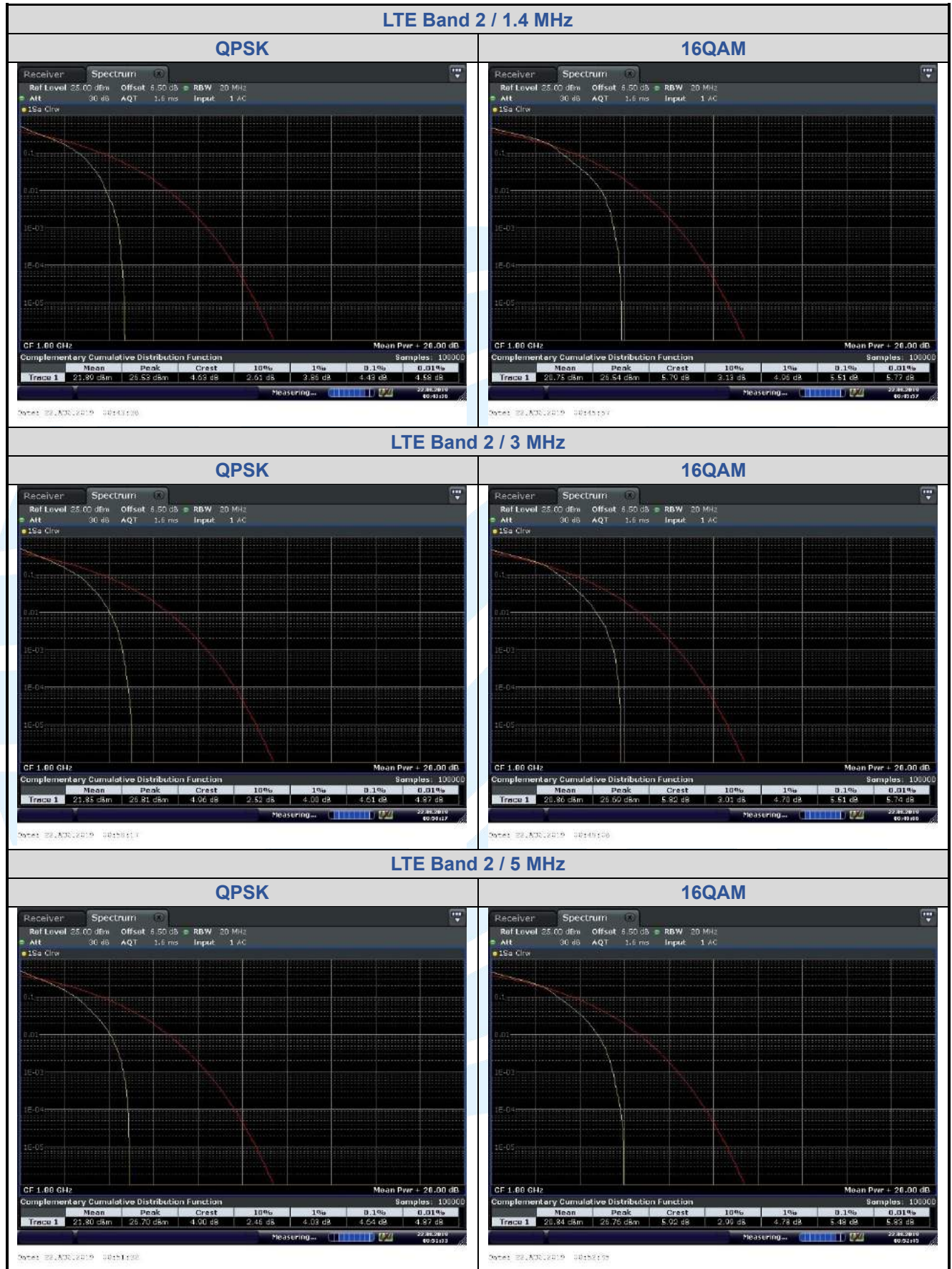
Test Data: [The full result refer to section 4.5 for details.](#)

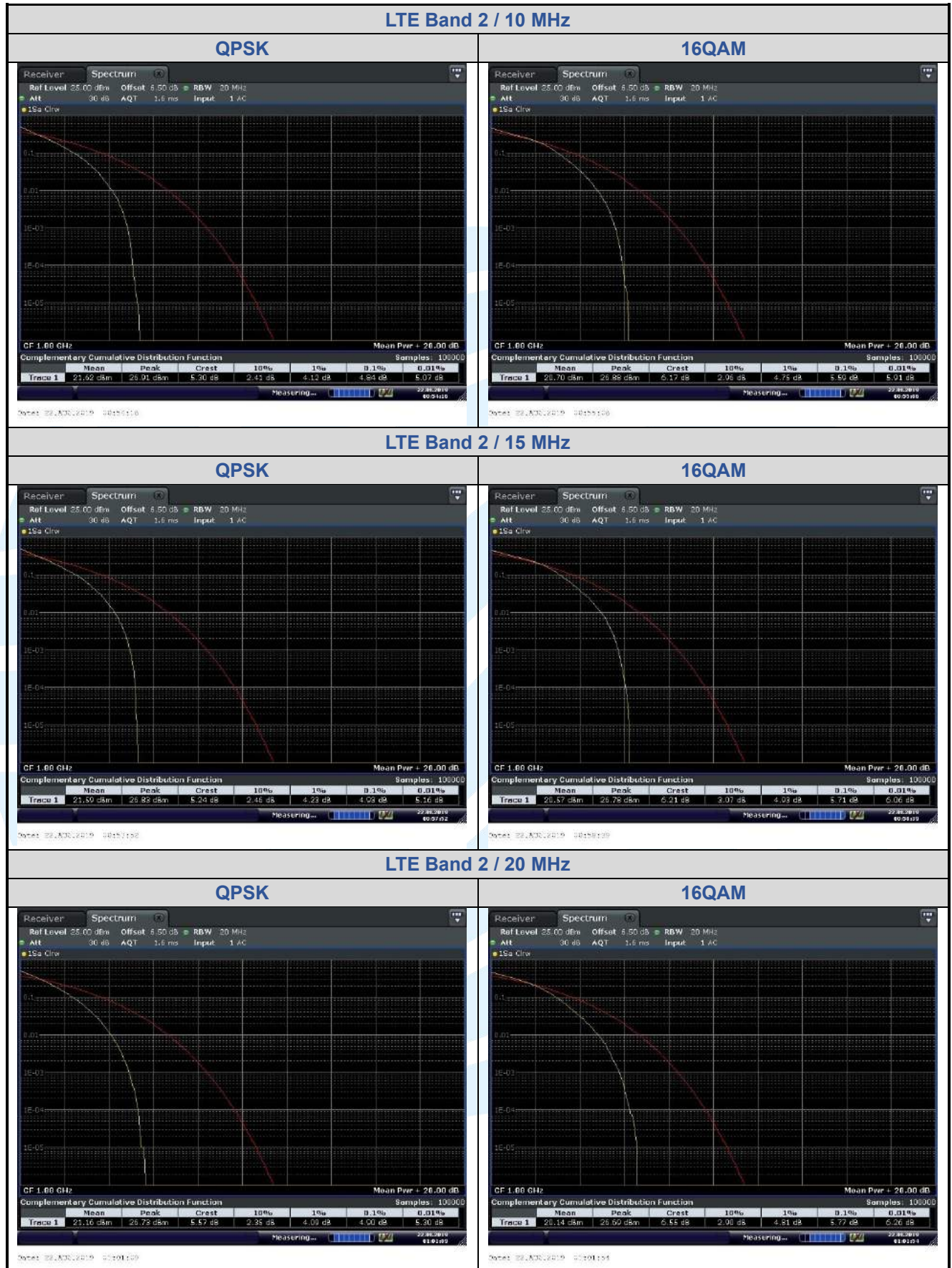
5.4 PEAK-TO-AVERAGE RATIO

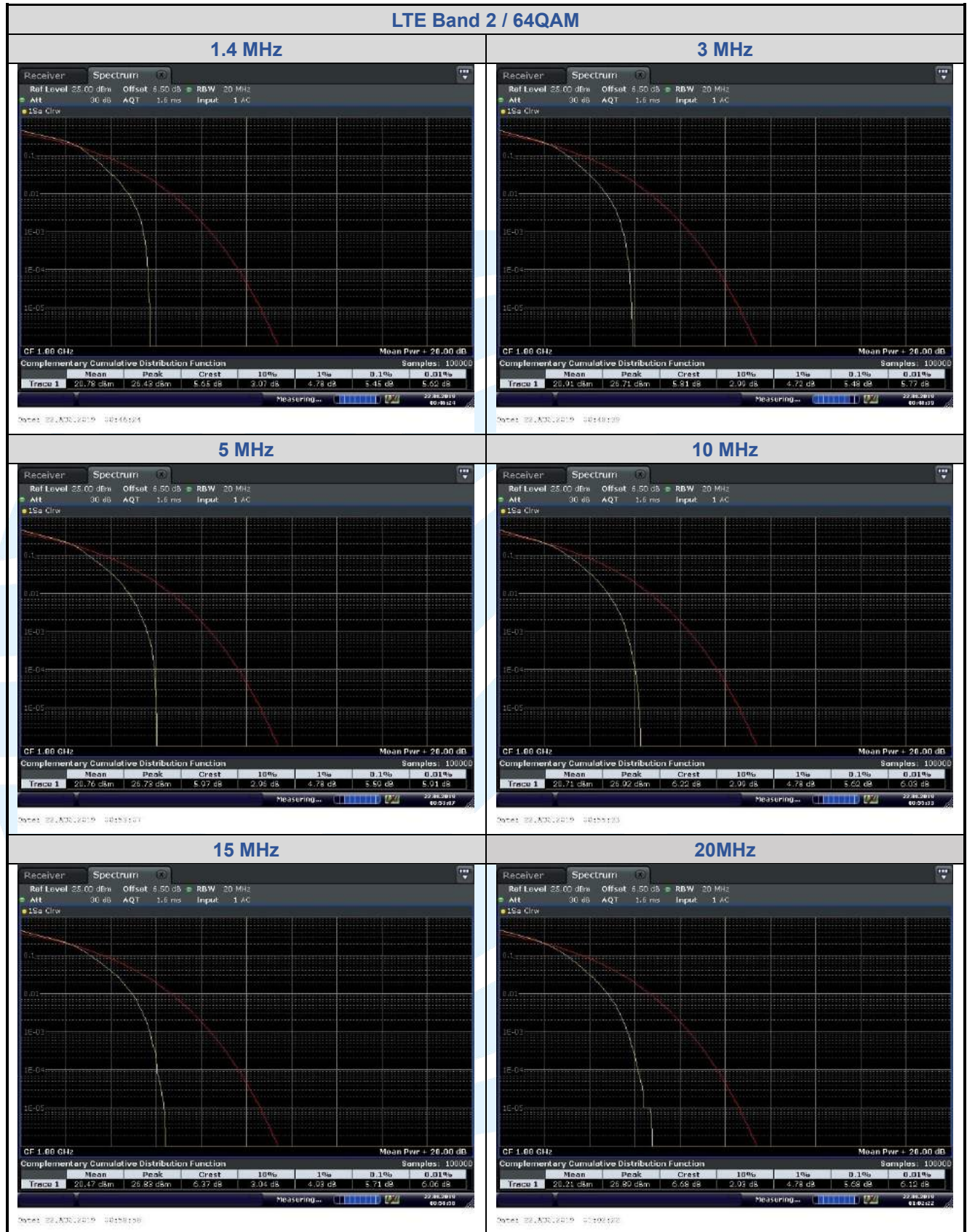
Test Requirement:	LTE Band 2 & LTE Band 25: FCC 47 CFR Part 24.232(d)
	LTE Band 4 & LTE Band 66: FCC 47 CFR Part 27.50(d)(5)
	LTE Band 5 : FCC 47 CFR Part 22.913(a)
	LTE Band 7 & Band 41: FCC 47 CFR Part 27.50(d)(5)
	LTE Band 12 & Band 17 & Band 71: FCC 47 CFR Part 27.50(d)(5)
Test Method:	KDB 971168 D01v03r01 Section 5.7
Limit:	In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB
Test Procedure:	The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer.
	a) Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth
	b) Set the number of counts to a value that stabilizes the measured CCDF curve
	c) Record the maximum PAPR level associated with a probability of 0.1 %
Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.	
Test Setup:	Refer to section 4.2.2 for details.
Instruments Used:	Refer to section 3 for details
Test Mode:	Link mode
Test Results:	Pass
Test Data:	See table below

5.4.1 LTE Band 2

LTE Band 2 Peak-to-average ratio (dB)						
Channel Bandwidth(MHz)	RB Configuration	QPSK	16QAM	64QAM	Limit (dB)	Result
1.4	Full RB	4.43	5.51	5.45	13	Pass
3	Full RB	4.61	5.51	5.48	13	Pass
5	Full RB	4.64	5.48	5.59	13	Pass
10	Full RB	4.84	5.59	5.62	13	Pass
15	Full RB	4.93	5.71	5.71	13	Pass
20	Full RB	4.49	5.77	5.68	13	Pass

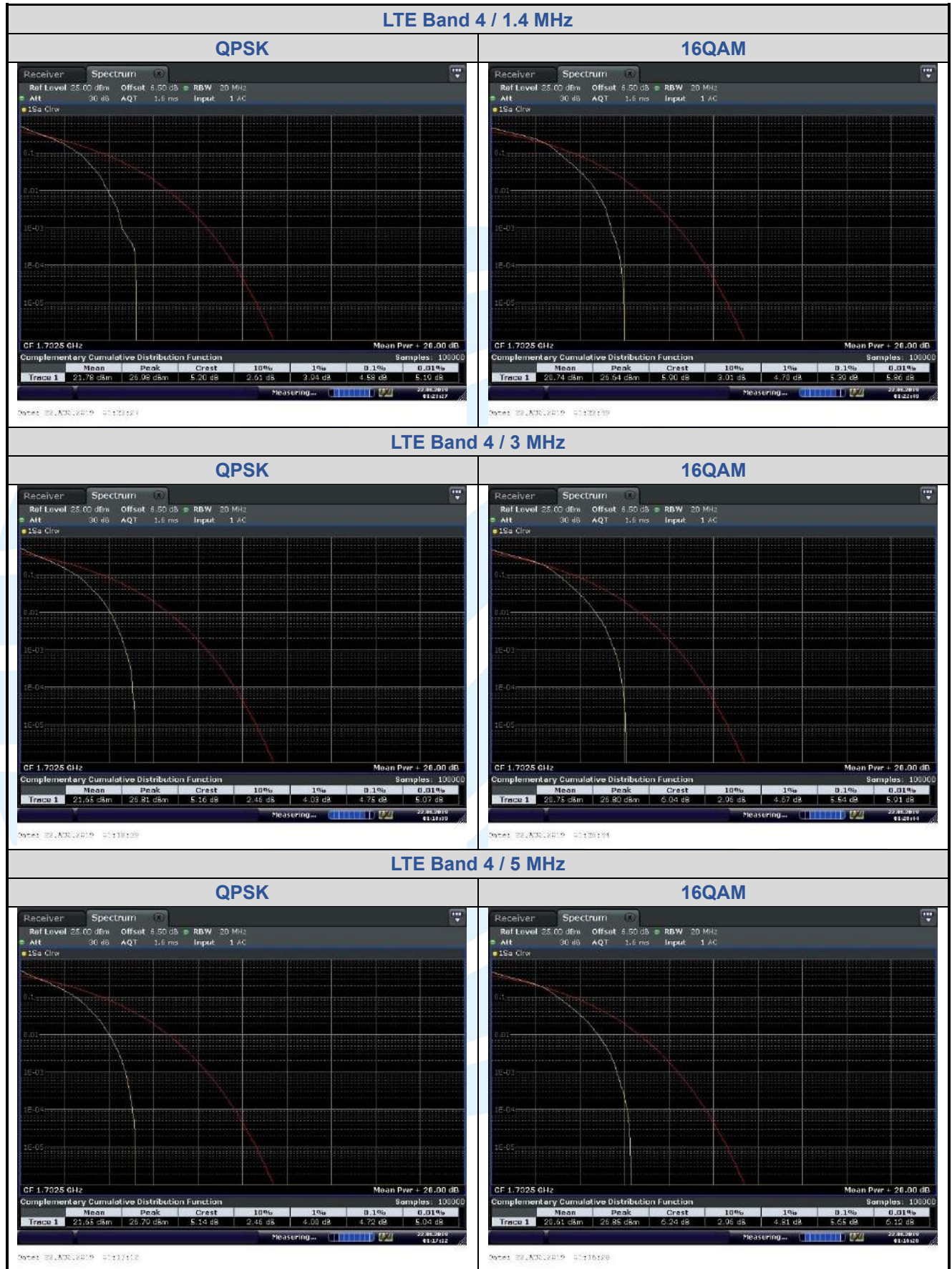


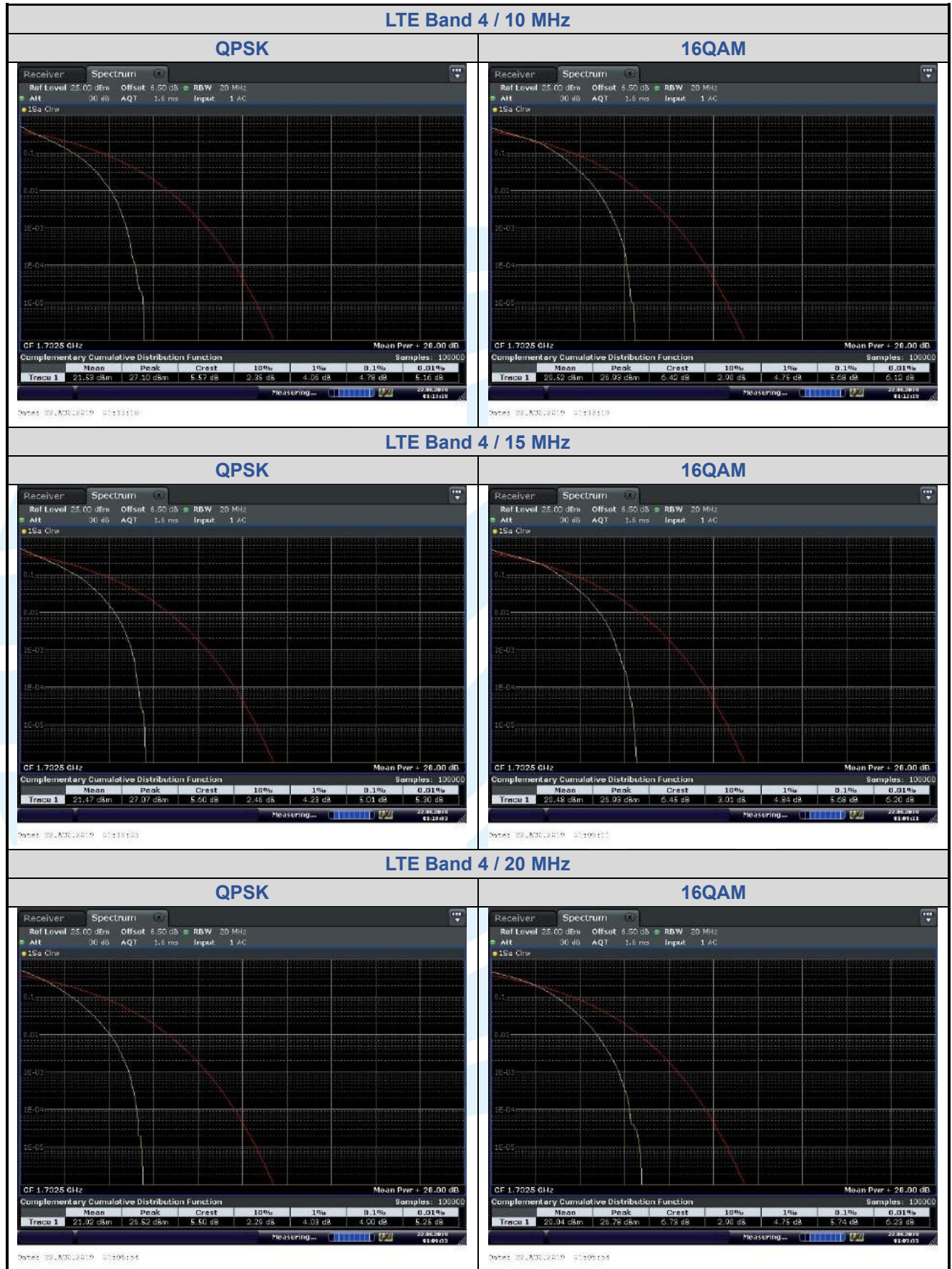


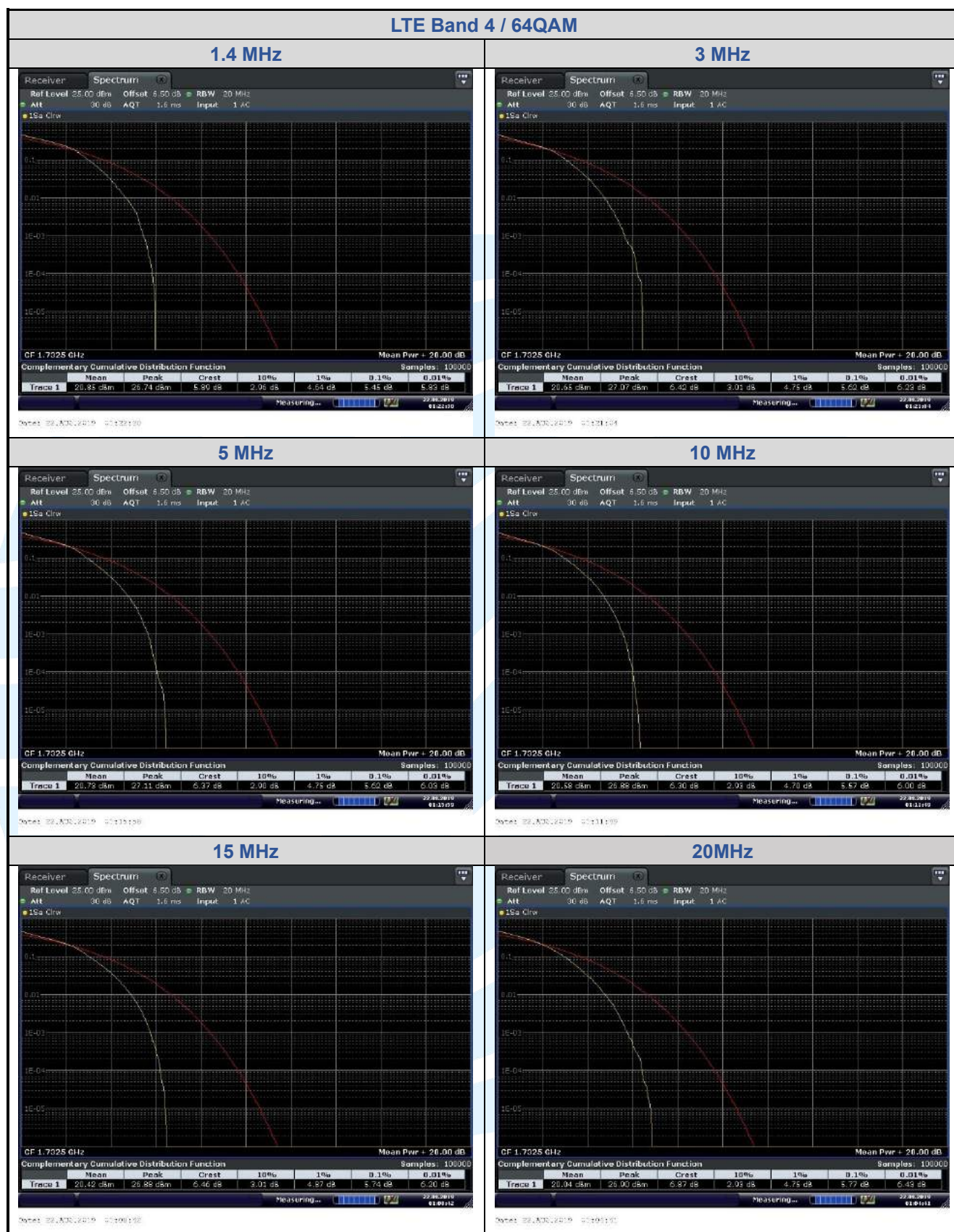


5.4.2 LTE Band 4

LTE Band 4 Peak-to-average ratio (dB)						
Channel Bandwidth(MHz)	RB Configuration	QPSK	16QAM	64QAM	Limit (dB)	Result
1.4	Full RB	4.58	5.39	5.45	13	Pass
3	Full RB	4.75	5.54	5.62	13	Pass
5	Full RB	4.72	5.65	5.62	13	Pass
10	Full RB	4.78	5.68	5.57	13	Pass
15	Full RB	5.01	5.68	5.74	13	Pass
20	Full RB	4.90	5.74	5.77	13	Pass



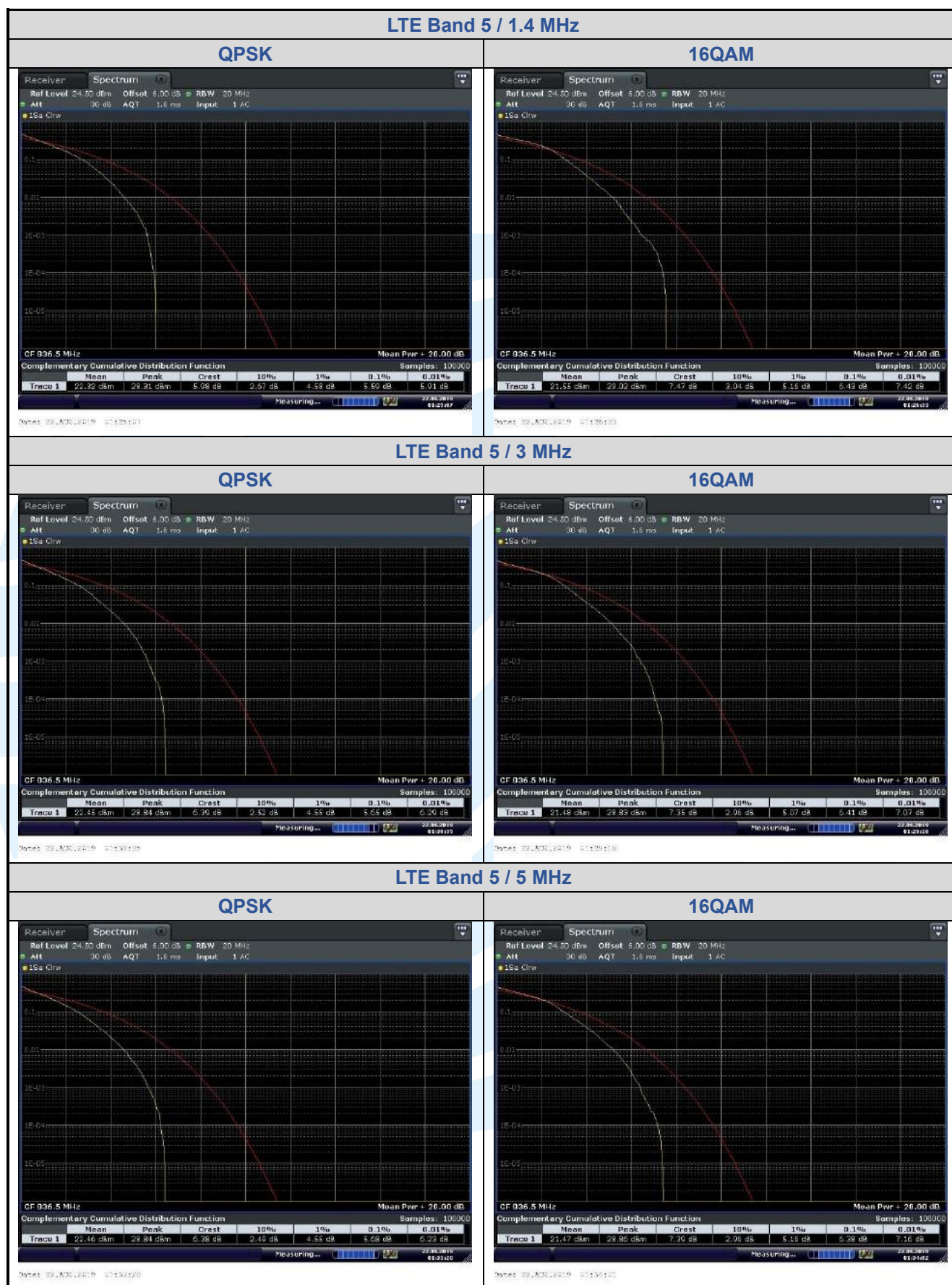


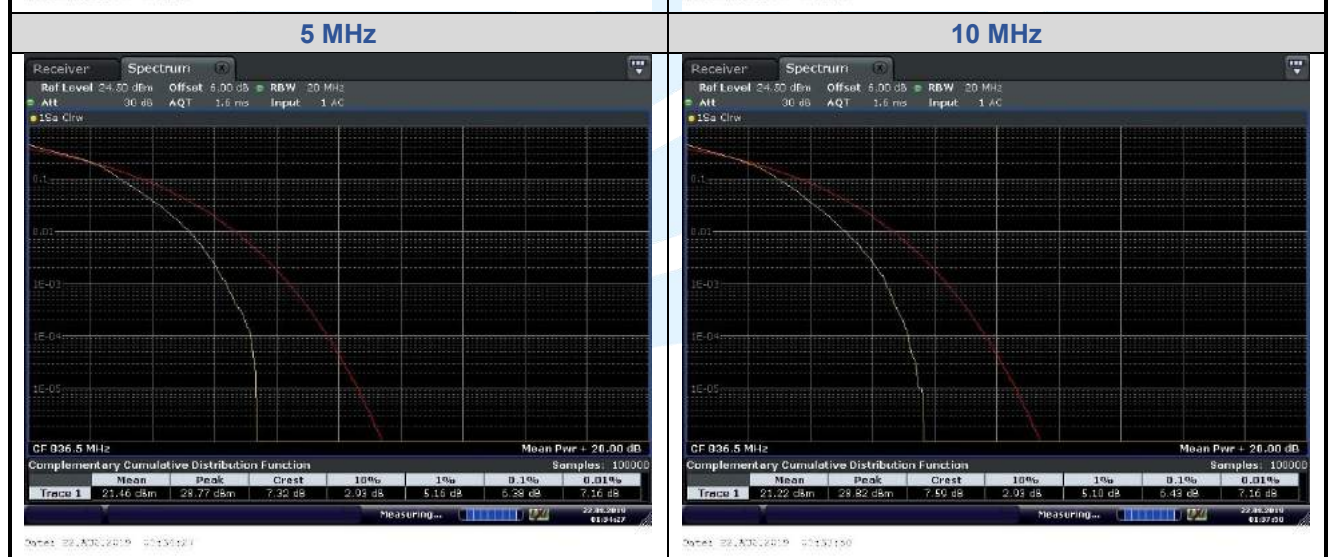
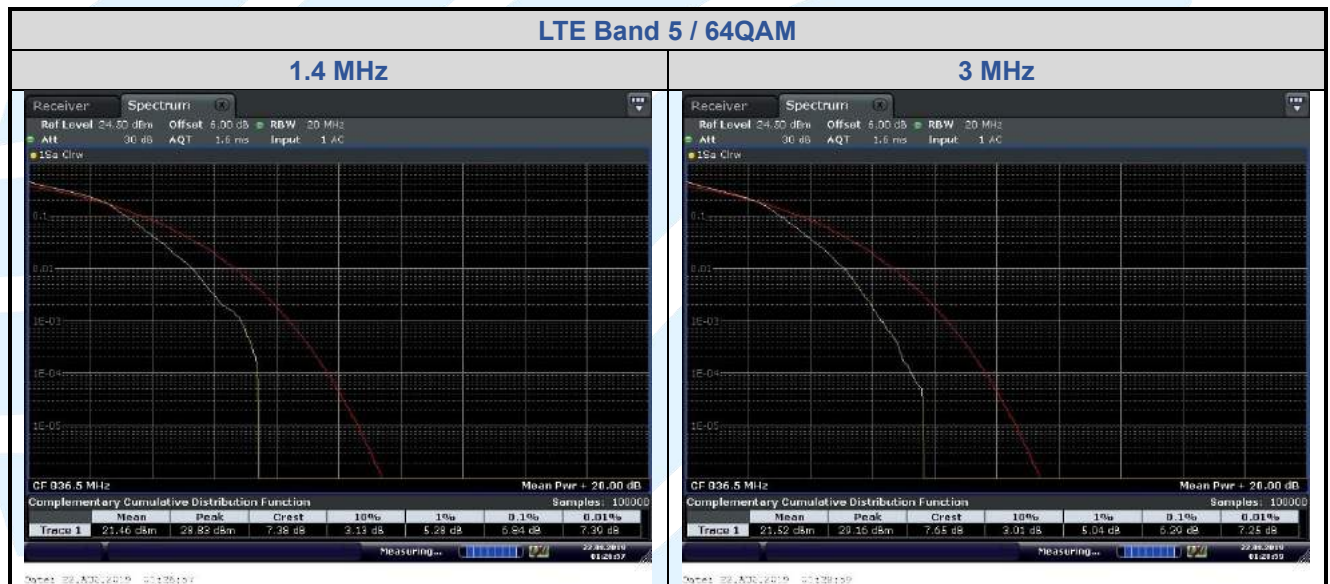
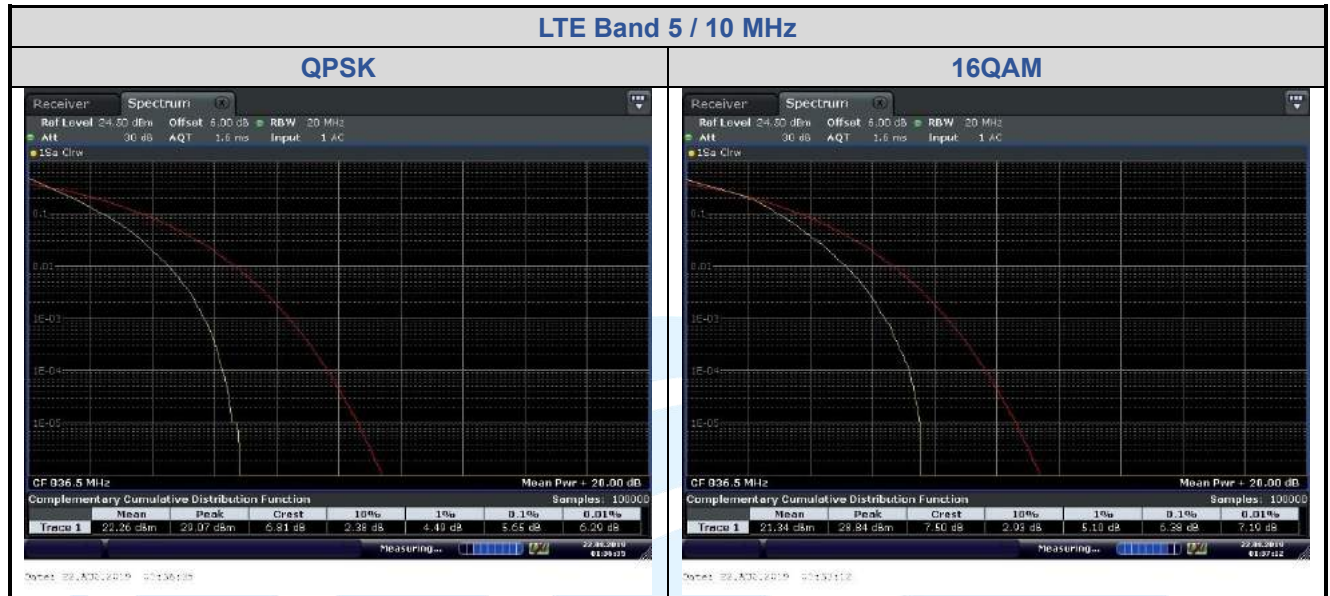


5.4.3 LTE Band 5

LTE Band 5 Peak-to-average ratio (dB)						
Channel Bandwidth(MHz)	RB Configuration	QPSK	16QAM	64QAM	Limit (dB)	Result
1.4	Full RB	5.59	6.43	6.84	13	Pass
3	Full RB	5.65	6.41	6.29	13	Pass
5	Full RB	5.68	6.38	6.38	13	Pass
10	Full RB	5.65	6.38	6.43	13	Pass

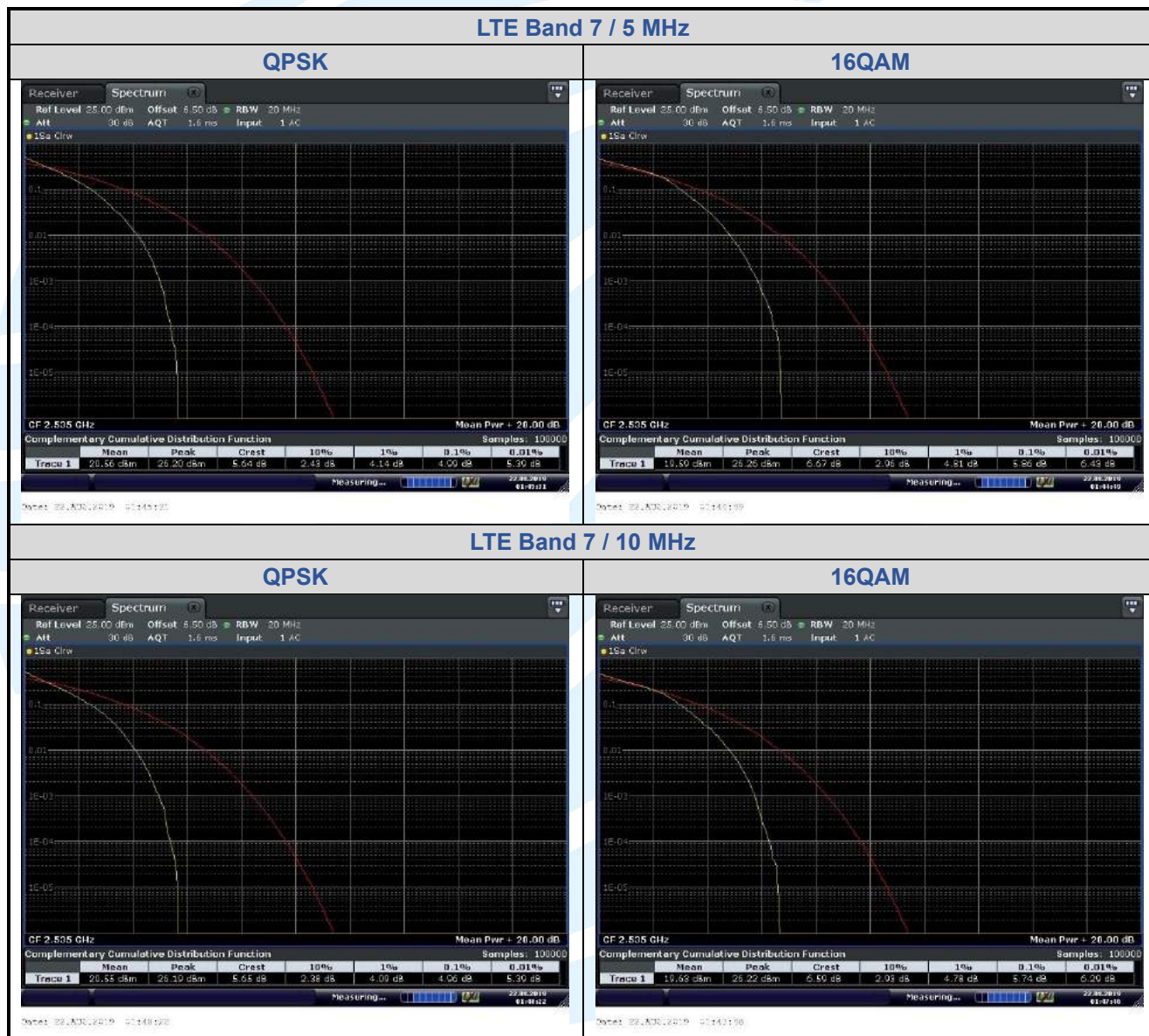


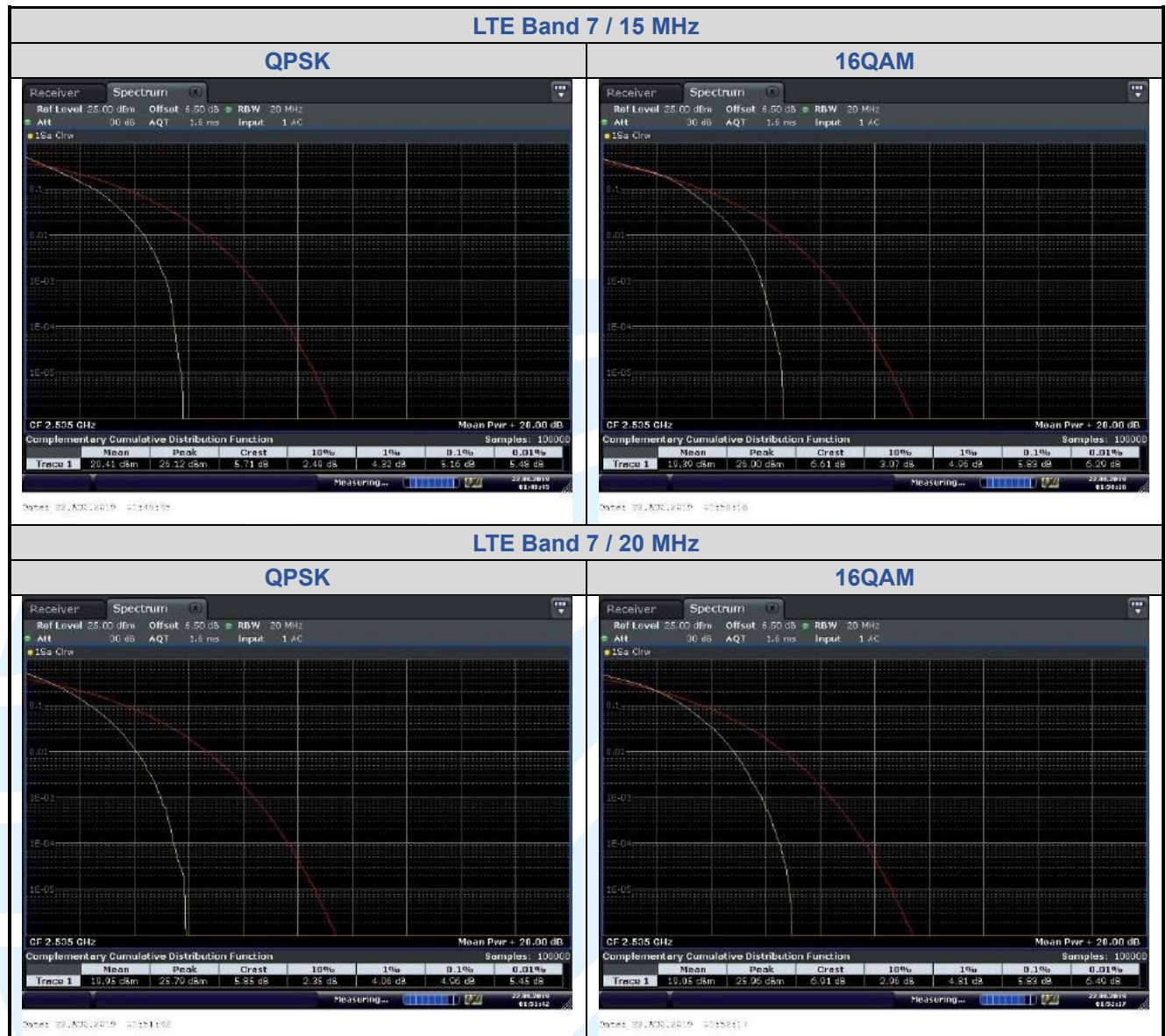


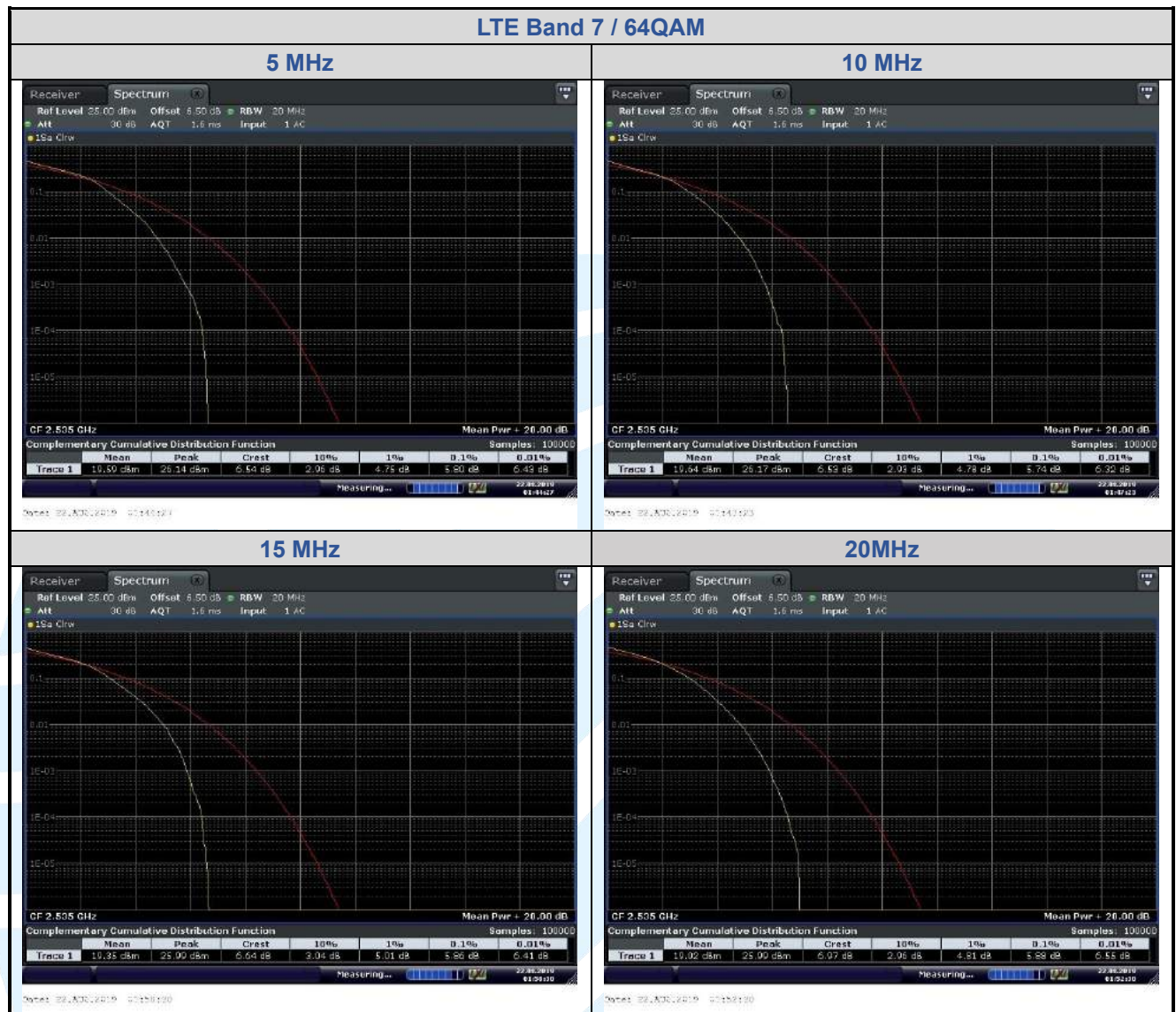


5.4.4 LTE Band 7

LTE Band 2 Peak-to-average ratio (dB)						
Channel Bandwidth(MHz)	RB Configuration	QPSK	16QAM	64QAM	Limit (dB)	Result
5	Full RB	4.99	5.86	5.80	13	Pass
10	Full RB	4.96	5.74	5.74	13	Pass
15	Full RB	5.16	5.83	5.86	13	Pass
20	Full RB	4.96	5.83	5.88	13	Pass

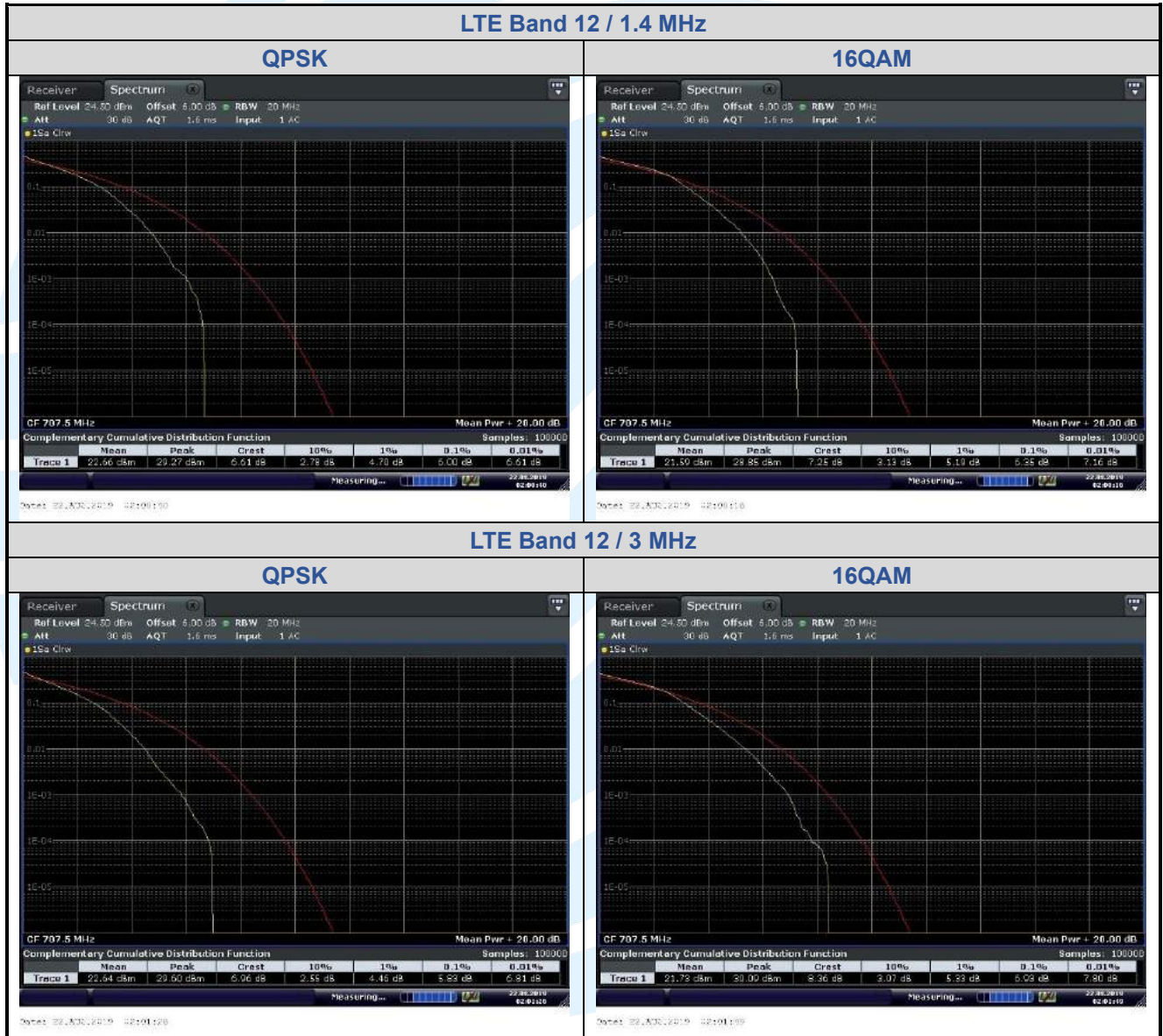


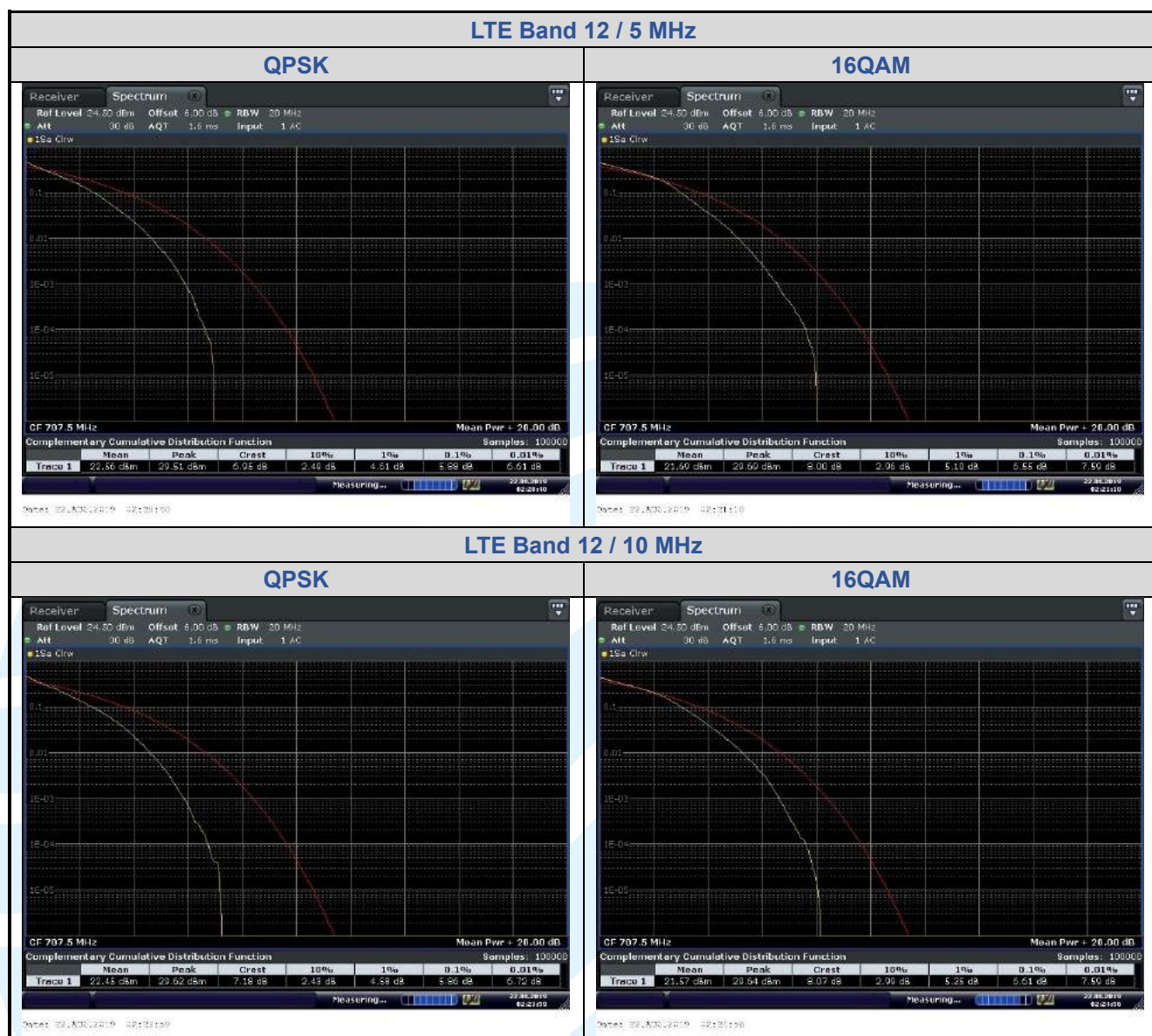


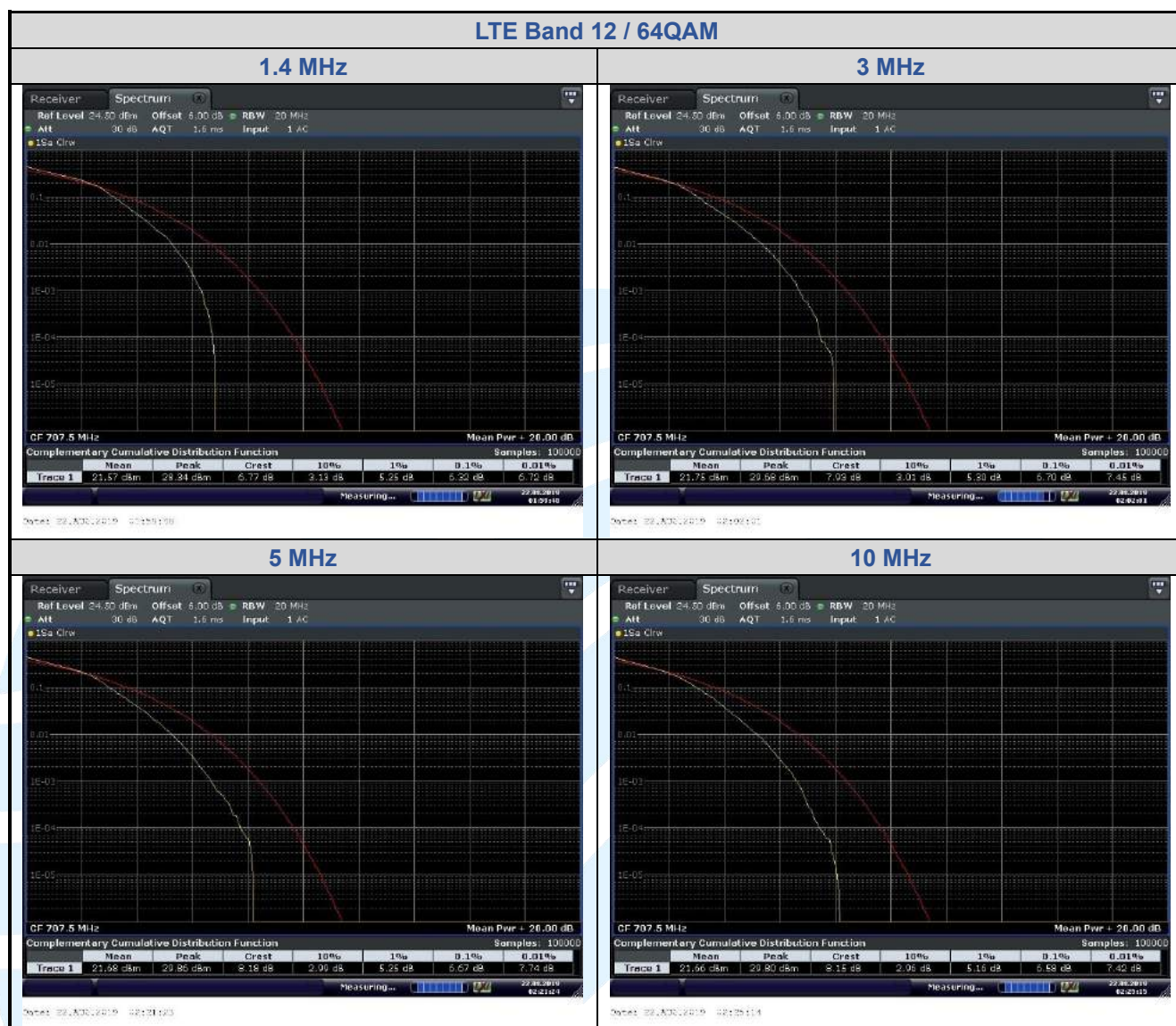


5.4.5 LTE Band 12

LTE Band 2 Peak-to-average ratio (dB)						
Channel Bandwidth(MHz)	RB Configuration	QPSK	16QAM	64QAM	Limit (dB)	Result
1.4	Full RB	6.00	6.35	6.32	13	Pass
3	Full RB	5.83	6.93	6.70	13	Pass
5	Full RB	5.88	6.55	6.67	13	Pass
10	Full RB	5.86	6.61	6.58	13	Pass

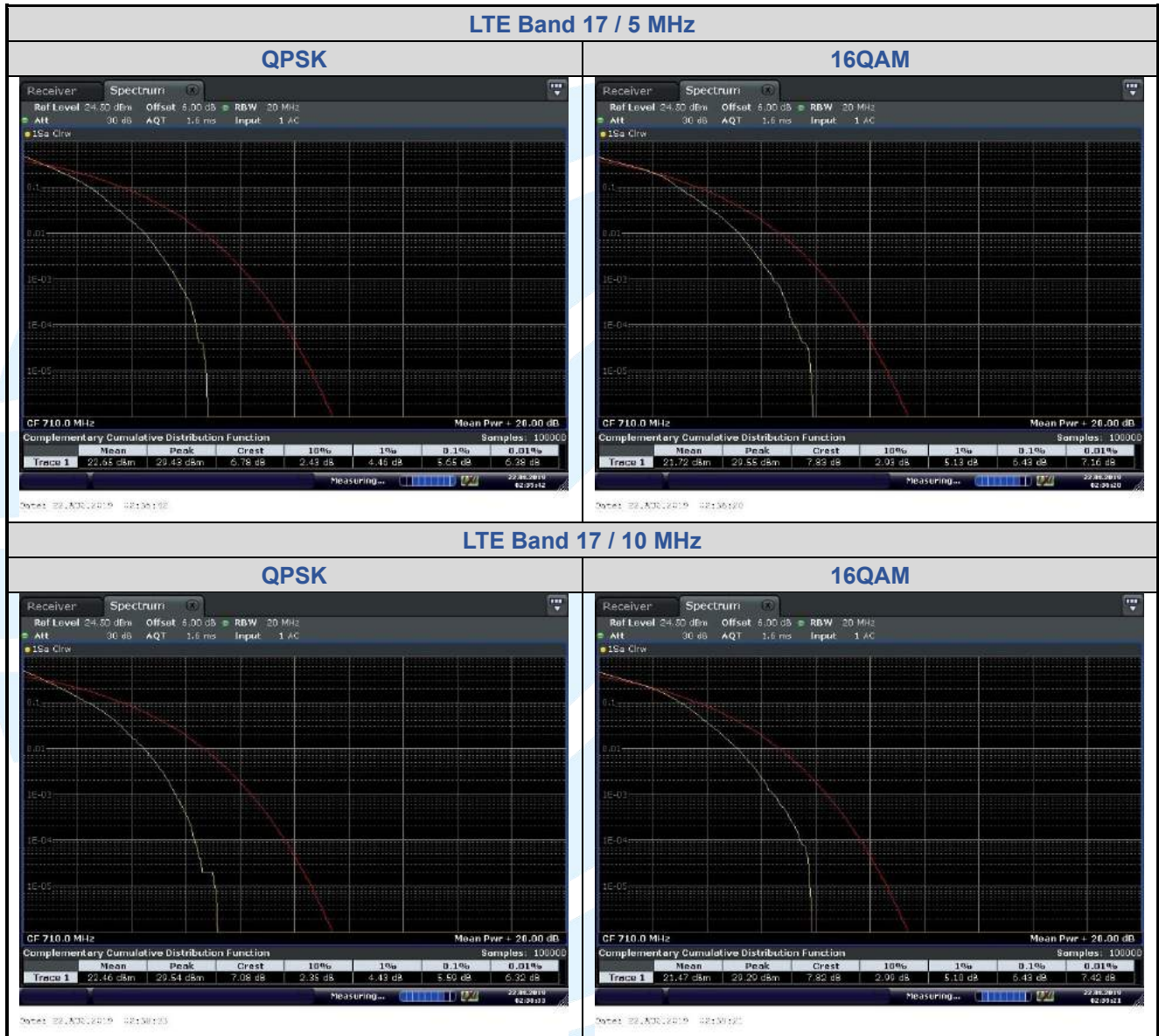


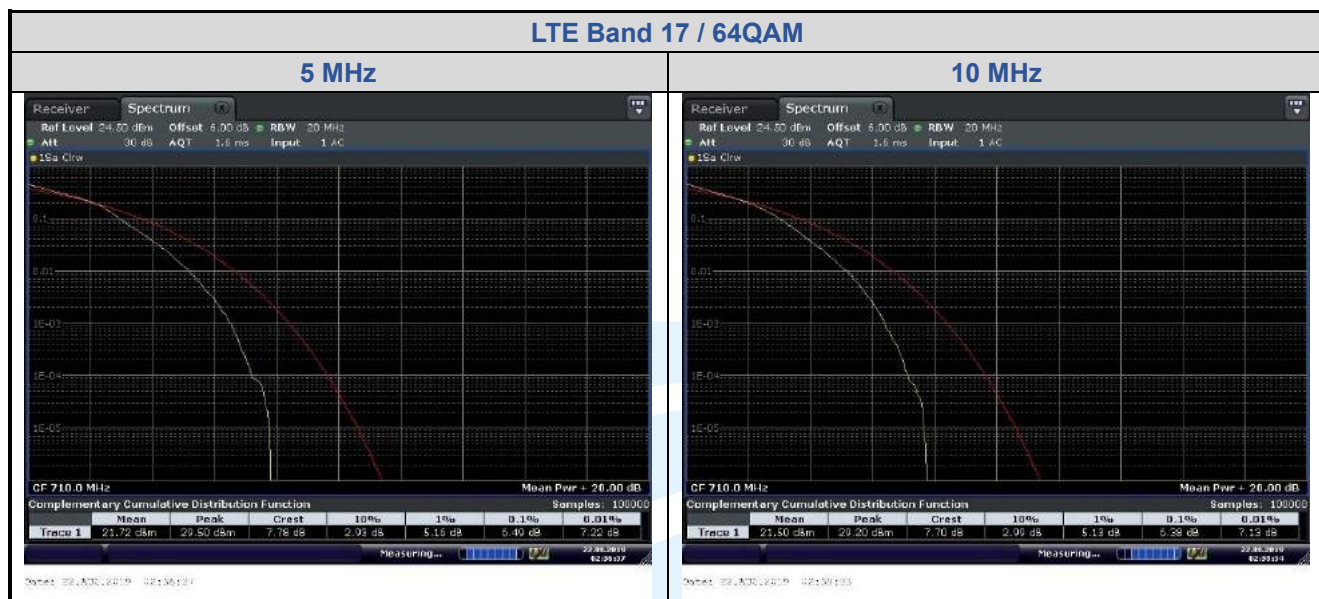




5.4.6 LTE Band 17

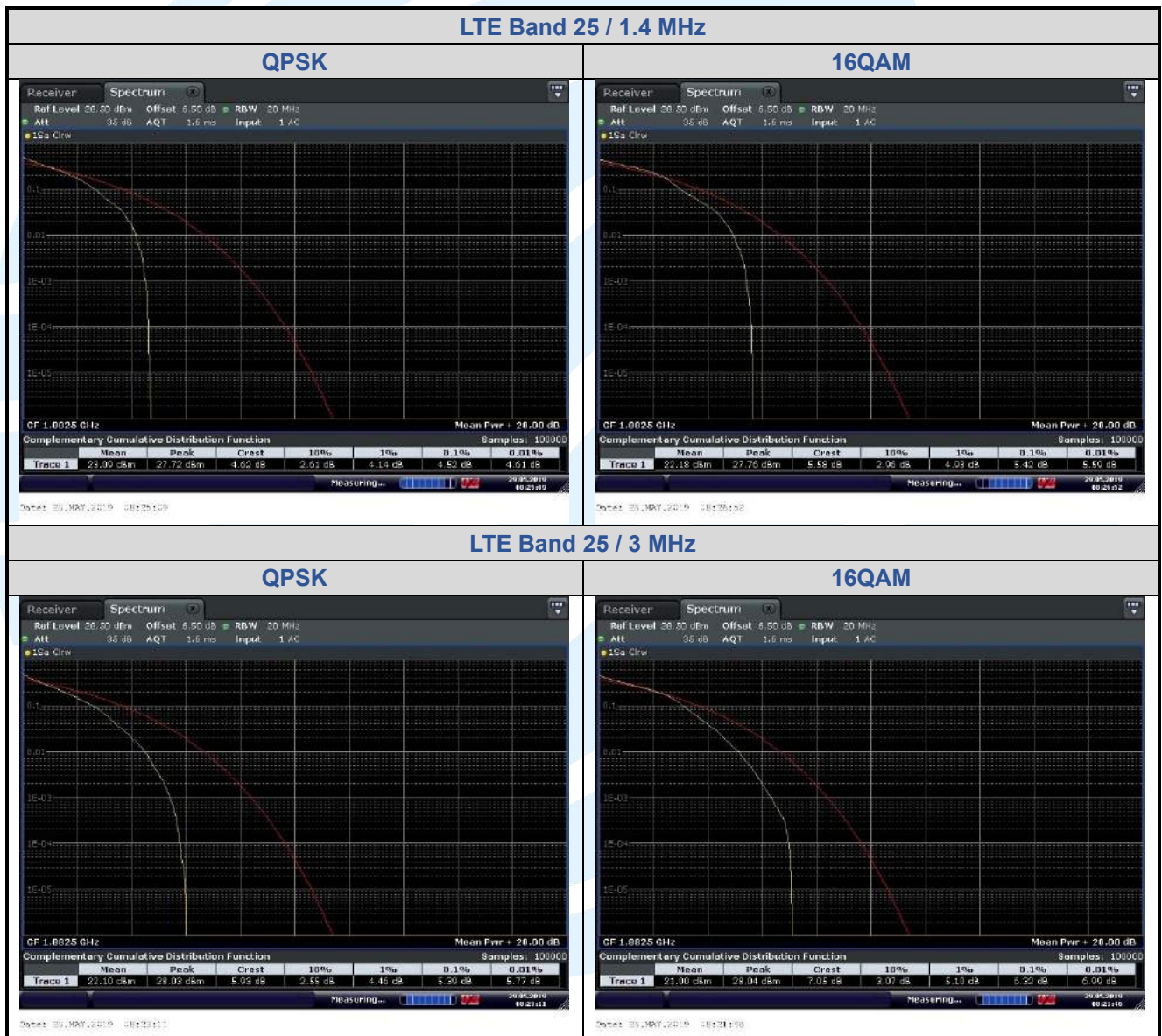
LTE Band 2 Peak-to-average ratio (dB)						
Channel Bandwidth(MHz)	RB Configuration	QPSK	16QAM	64QAM	Limit (dB)	Result
5	Full RB	5.65	6.43	6.49	13	Pass
10	Full RB	5.59	6.43	6.38	13	Pass

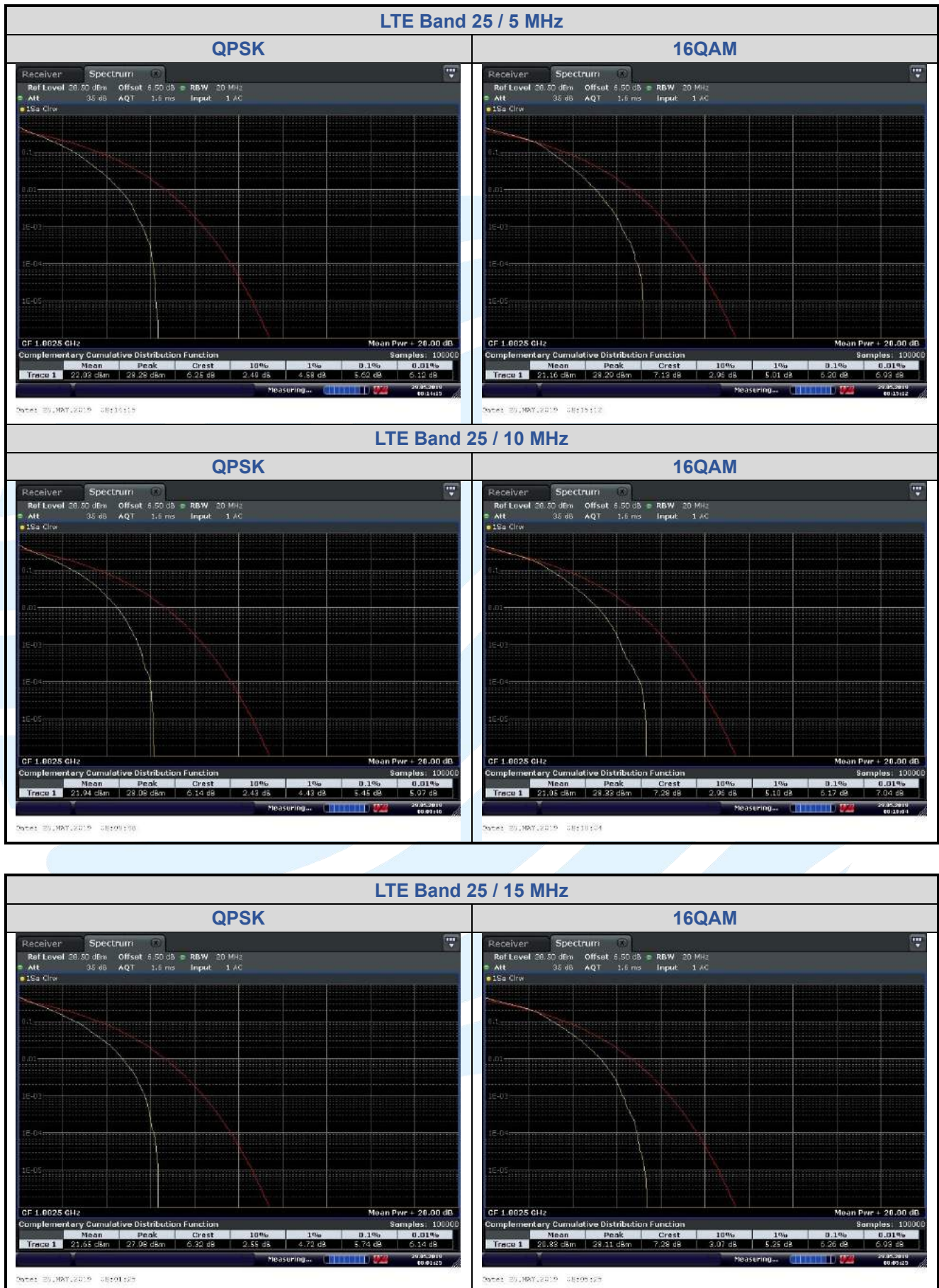


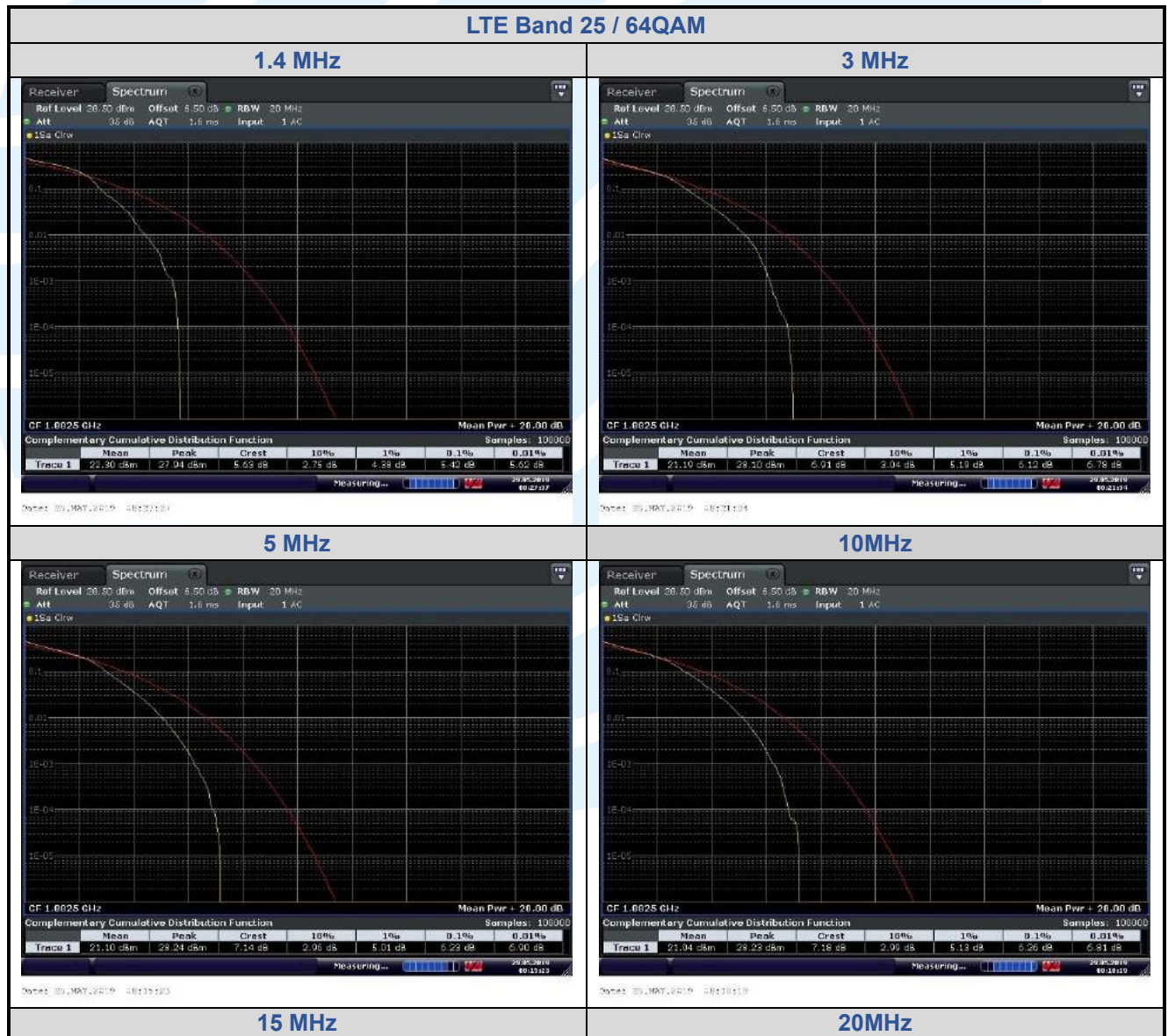
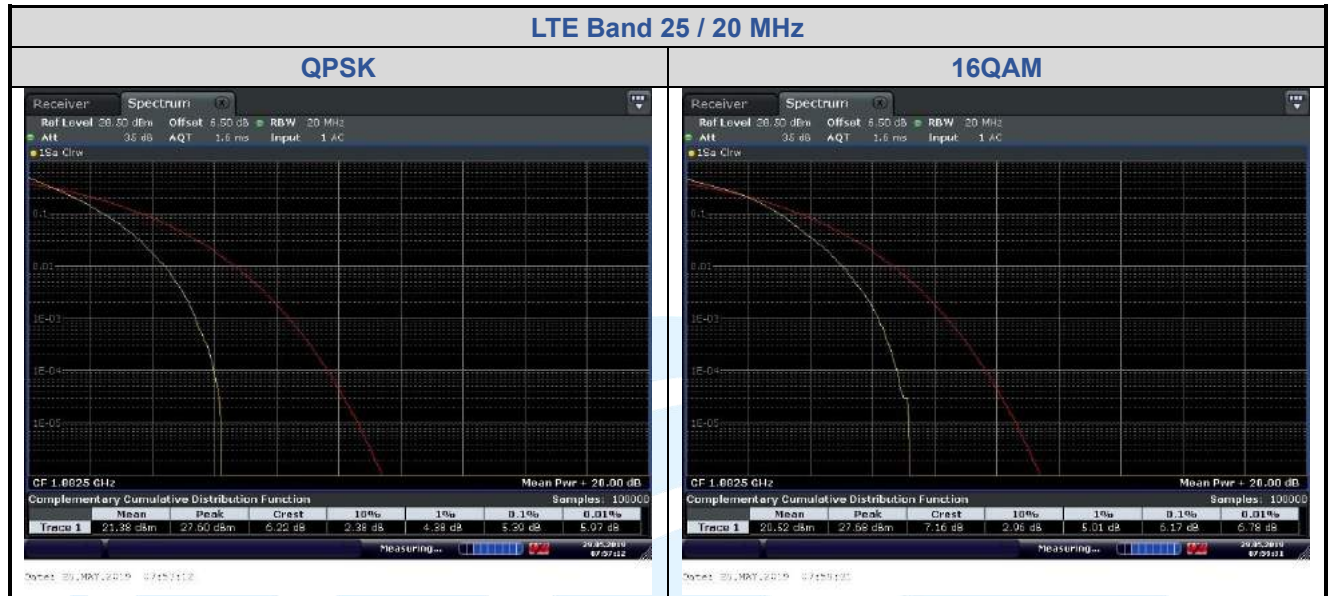


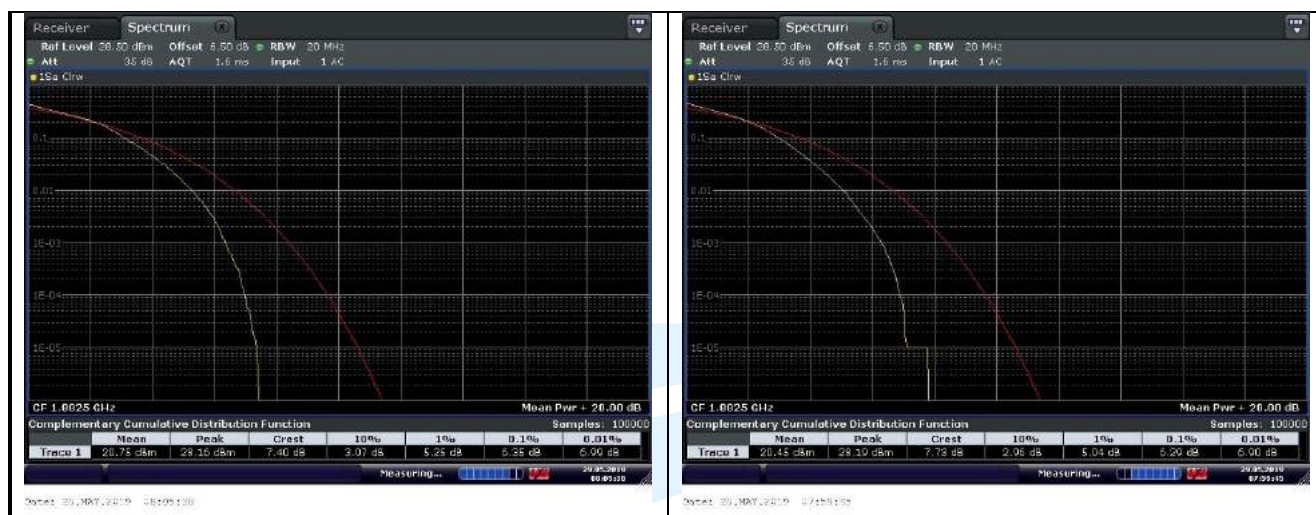
5.4.7 LTE Band 25

LTE Band 2 Peak-to-average ratio (dB)						
Channel Bandwidth(MHz)	RB Configuration	QPSK	16QAM	64QAM	Limit (dB)	Result
1.4	Full RB	4.52	5.42	5.42	13	Pass
3	Full RB	5.39	6.32	6.12	13	Pass
5	Full RB	5.62	6.20	6.23	13	Pass
10	Full RB	5.45	6.17	6.26	13	Pass
15	Full RB	5.74	6.26	6.35	13	Pass
20	Full RB	5.39	6.17	6.29	13	Pass



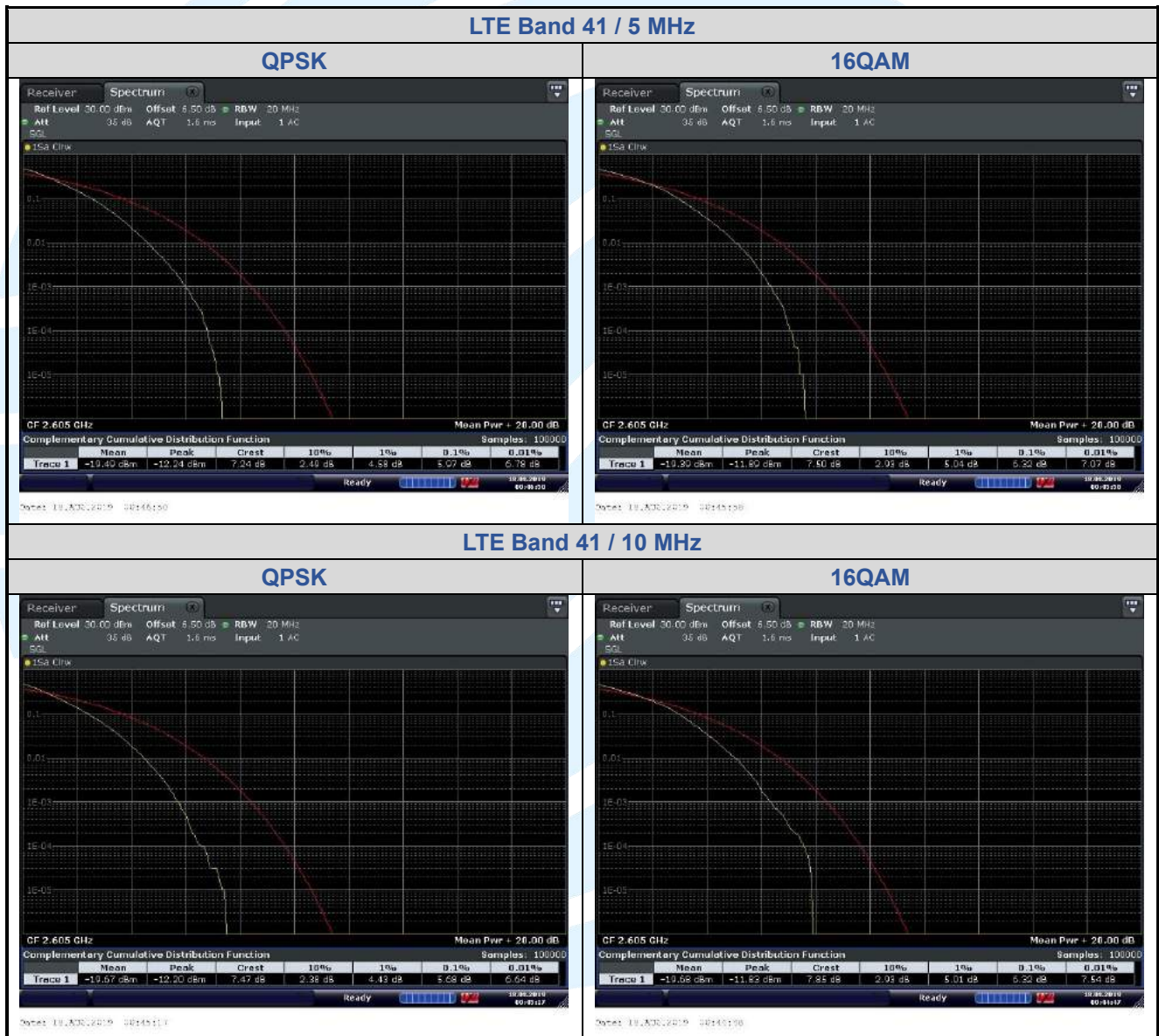


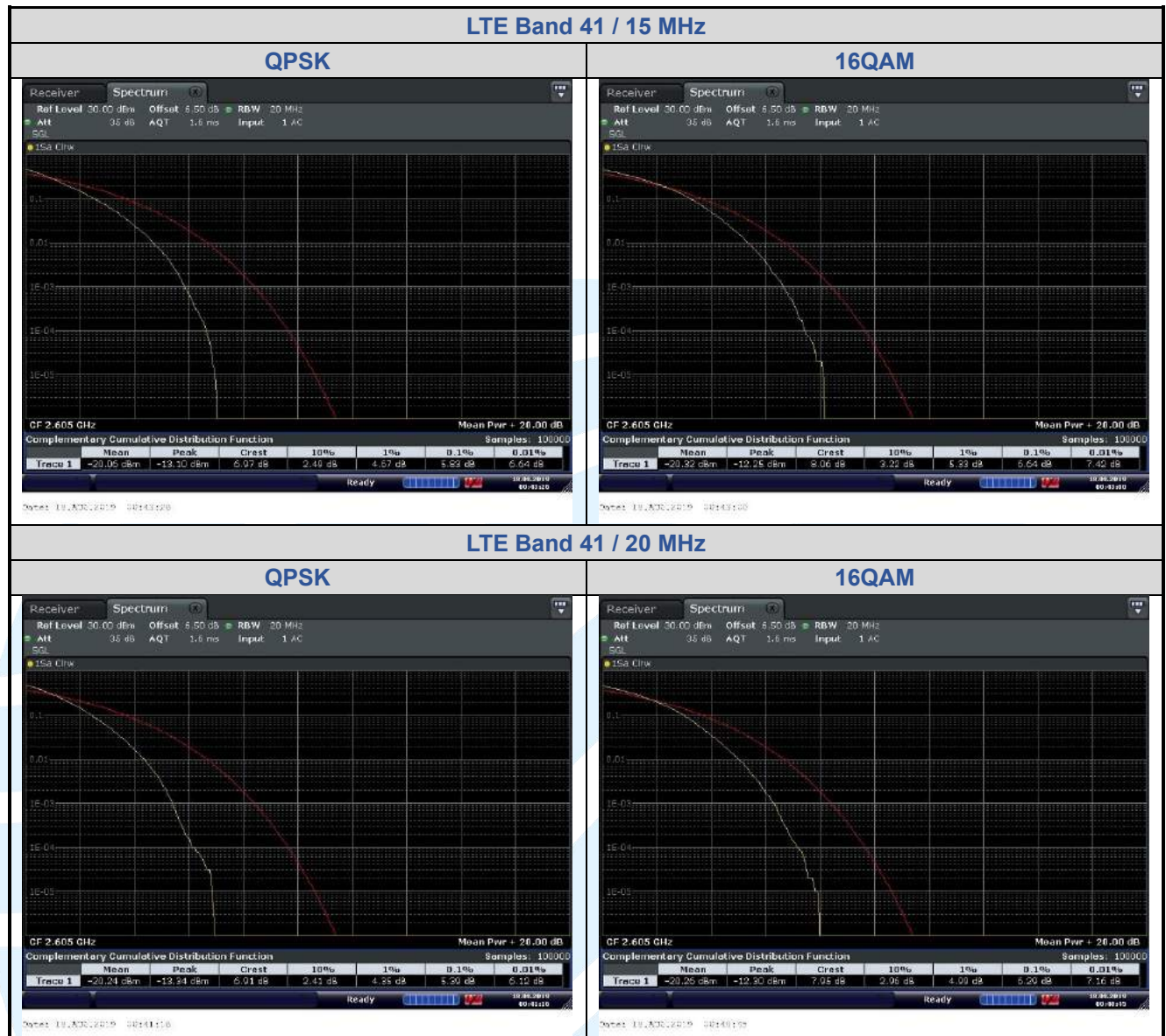


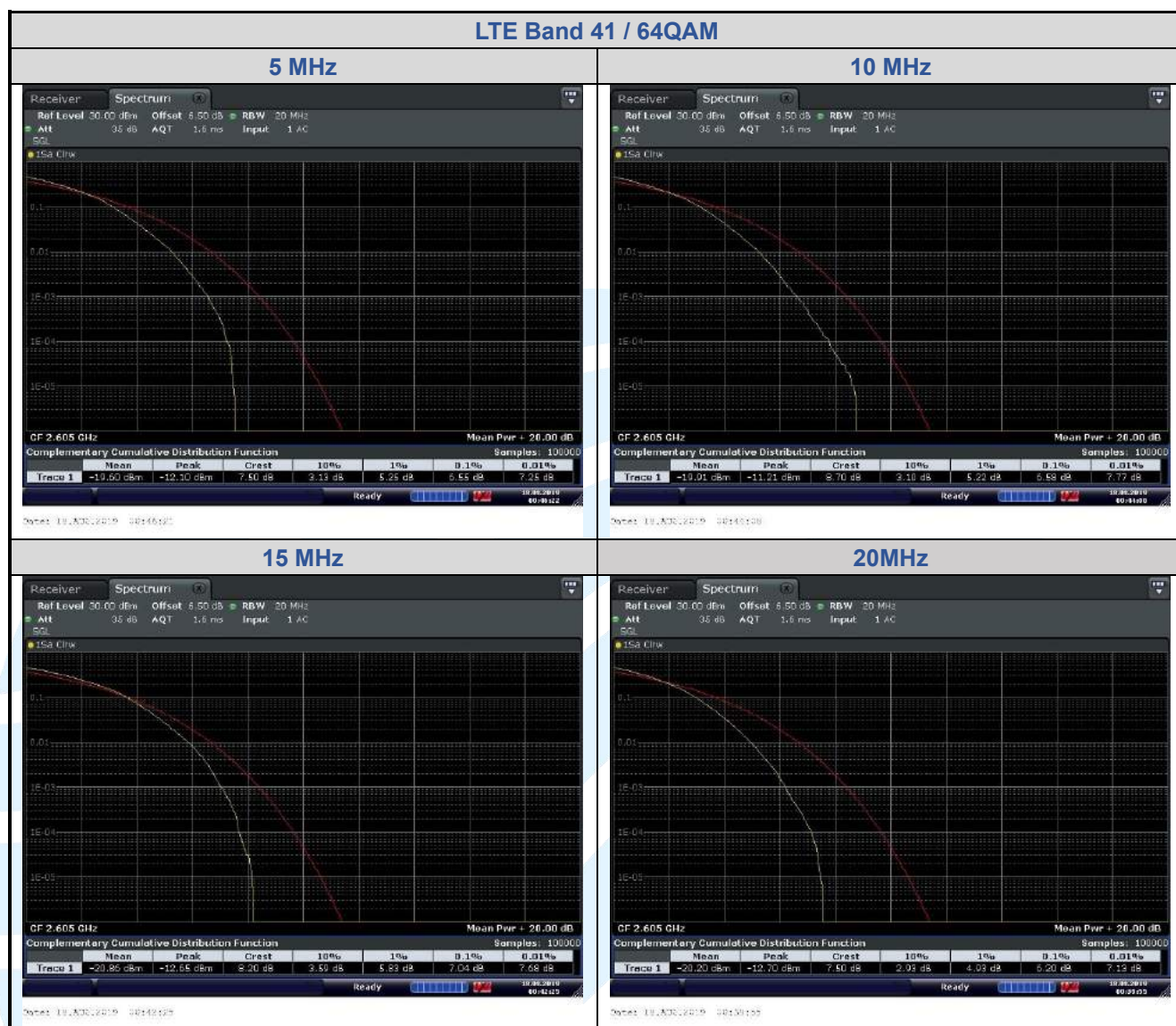


5.4.8 LTE Band 41

LTE Band 2 Peak-to-average ratio (dB)						
Channel Bandwidth(MHz)	RB Configuration	QPSK	16QAM	64QAM	Limit (dB)	Result
5	Full RB	5.97	6.32	6.55	13	Pass
10	Full RB	5.68	6.32	6.58	13	Pass
15	Full RB	5.83	6.64	7.04	13	Pass
20	Full RB	5.39	6.29	6.20	13	Pass







5.4.9 LTE Band 66

LTE Band 2 Peak-to-average ratio (dB)						
Channel Bandwidth(MHz)	RB Configuration	QPSK	16QAM	64QAM	Limit (dB)	Result
1.4	Full RB	5.65	6.23	6.23	13	Pass
3	Full RB	5.77	6.49	6.49	13	Pass
5	Full RB	5.77	6.23	6.35	13	Pass
10	Full RB	5.59	6.43	6.38	13	Pass
15	Full RB	5.77	6.35	6.41	13	Pass
20	Full RB	5.28	6.26	6.20	13	Pass

