

2 Occupied Bandwidth

Band	Carrier frequency (MHz)	Channel	BW (MHz)	Modulation	RB Size	RB Offset	Bandwidth of 99% Power (MHz)	Bandwidth of -26dB transmitter power (MHz)	Plot
12	707.5	23095	1.4	QPSK	6	0	1.0987	1.267	Fig.1
				16QAM	5	1	927.29	1.128	Fig.2
			3	QPSK	6	0	1.1119	1.459	Fig.3
				16QAM	5	1	943.02	1.372	Fig.4
			5	QPSK	6	0	1.1138	1.379	Fig.5
				16QAM	5	1	939.37	1.260	Fig.6
			10	QPSK	6	0	1.1175	1.950	Fig.7
				16QAM	5	1	941.87	1.460	Fig.8

Fig.1



Fig.2

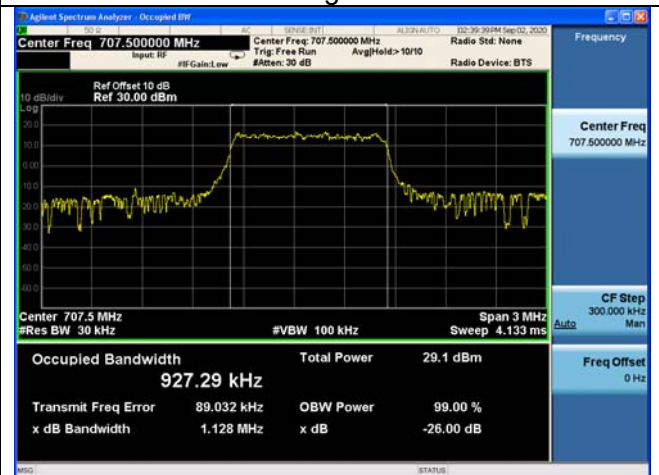


Fig.3

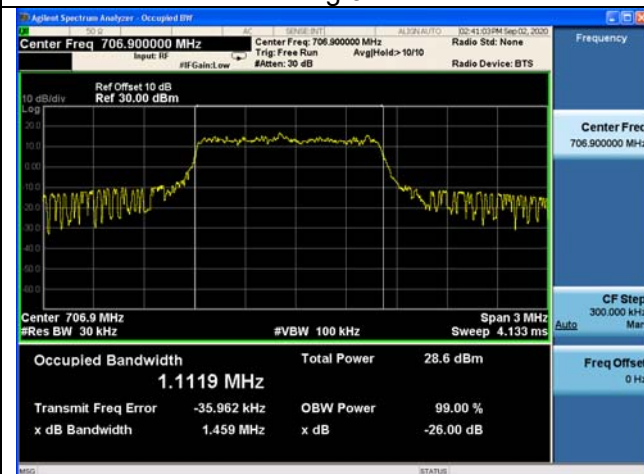


Fig.4

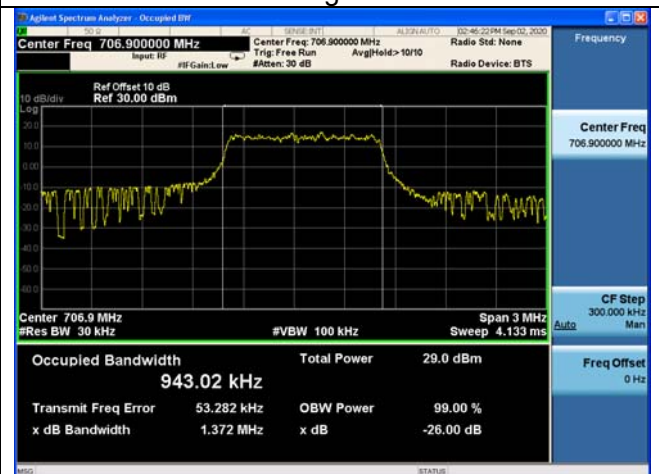


Fig.5

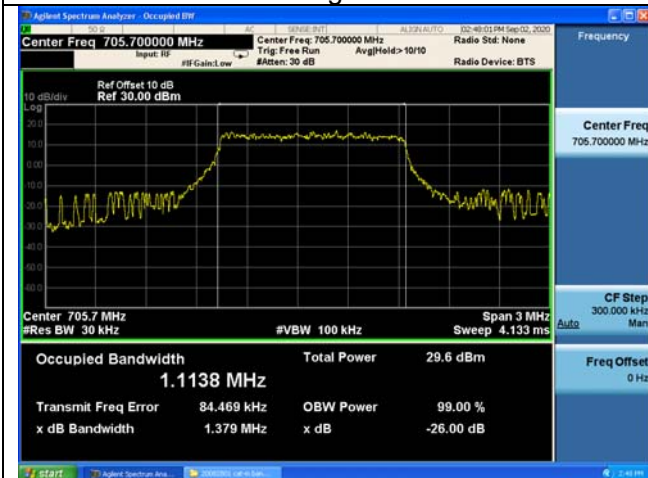


Fig.6

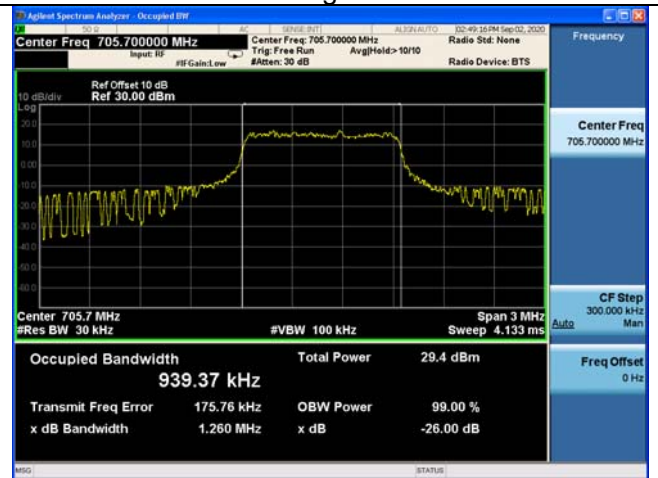


Fig.7

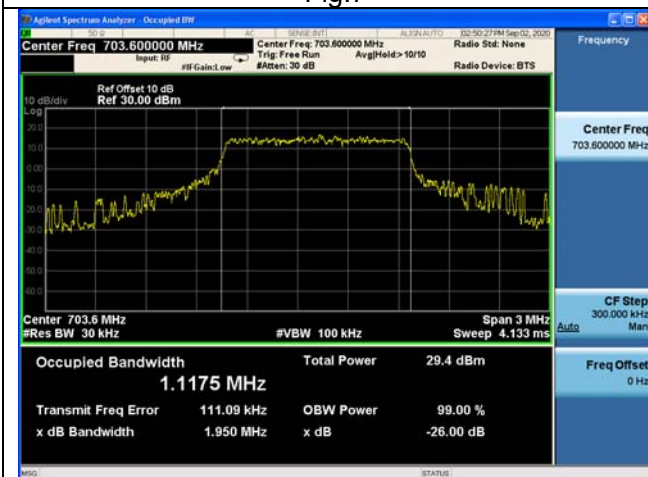
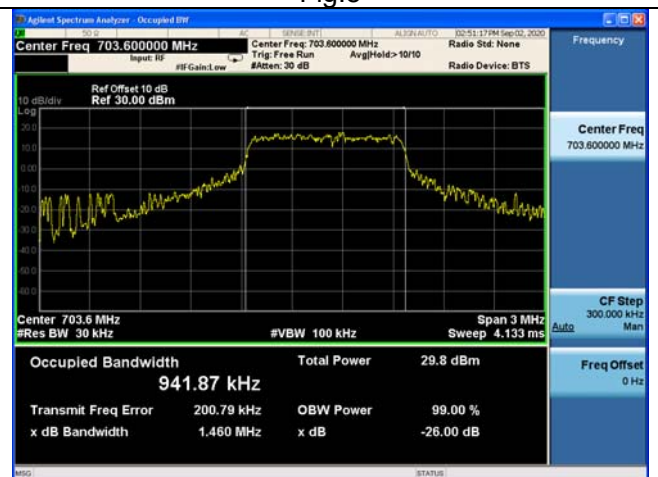
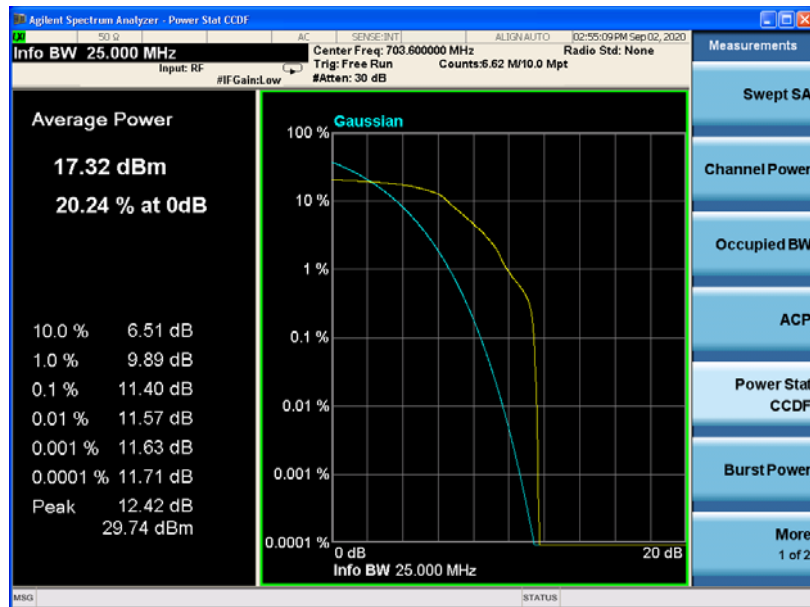


Fig.8

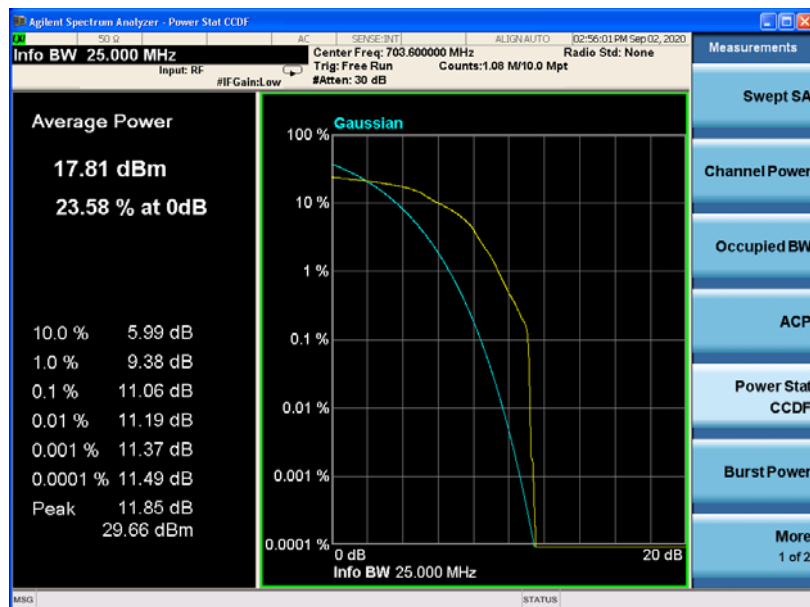


4 Peak-Average Ratio

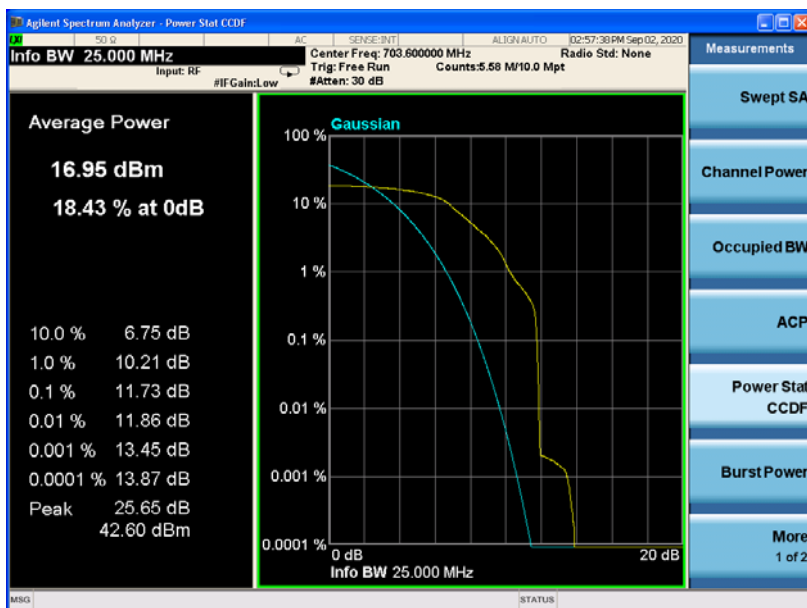
Test result:



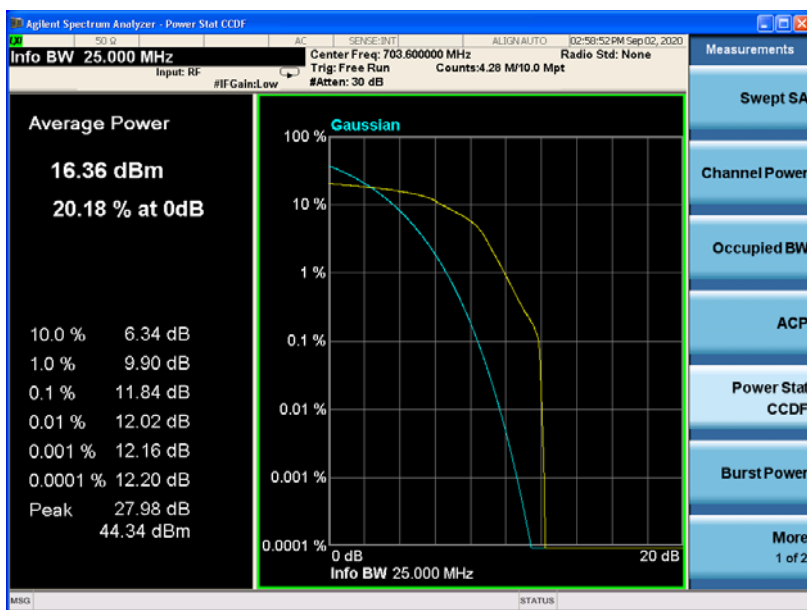
Peak-Average Ratio Plot(1.4MHz BW,QPSK,Band 12-mid Channel)



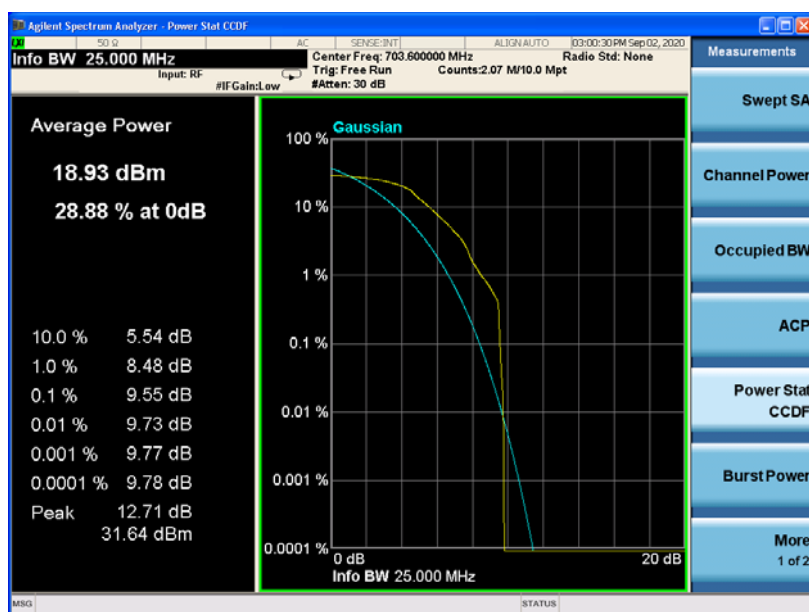
Peak-Average Ratio Plot(1.4MHz BW,16QAM,Band 12-mid Channel)



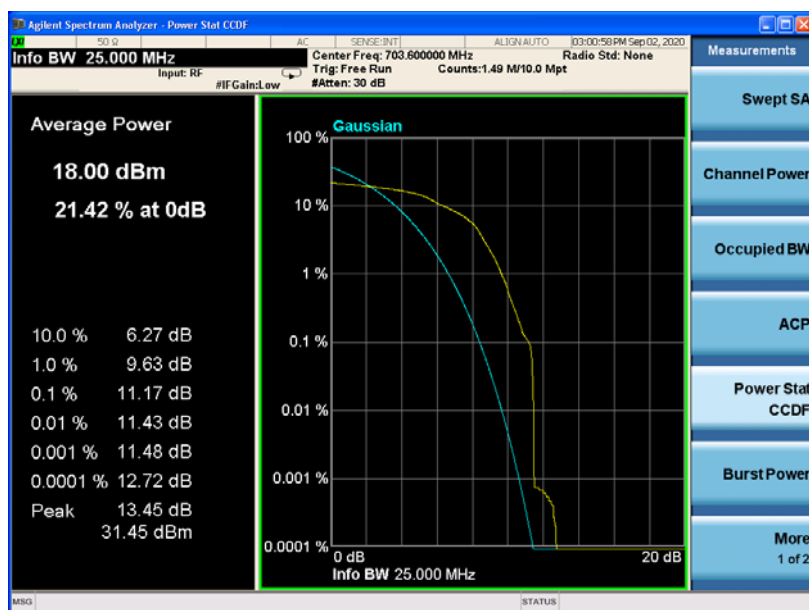
Peak-Average Ratio Plot(3MHz BW,QPSK,Band 12-mid Channel)



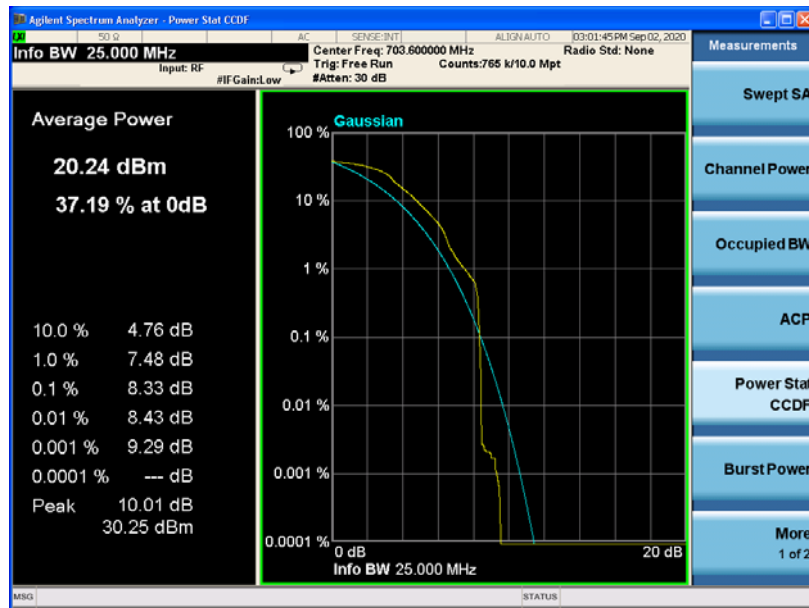
Peak-Average Ratio Plot(3MHz BW,16QAM,Band 12-mid Channel)



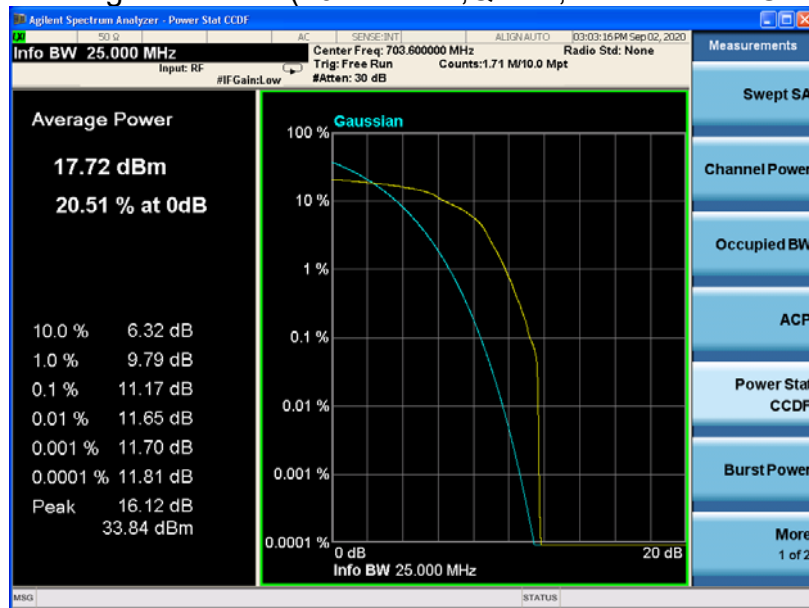
Peak-Average Ratio Plot(5MHz BW,QPSK,Band 12-mid Channel)



Peak-Average Ratio Plot(5MHz BW,16QAM,Band 12-mid Channel)



Peak-Average Ratio Plot(10MHz BW,QPSK,Band 12-mid Channel)



Peak-Average Ratio Plot(10MHz BW,16QAM,Band 12-mid Channel)

5 Spurious Emissions at antenna terminal

Test result

Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
12	704	23060	10	1	0	Fig.1

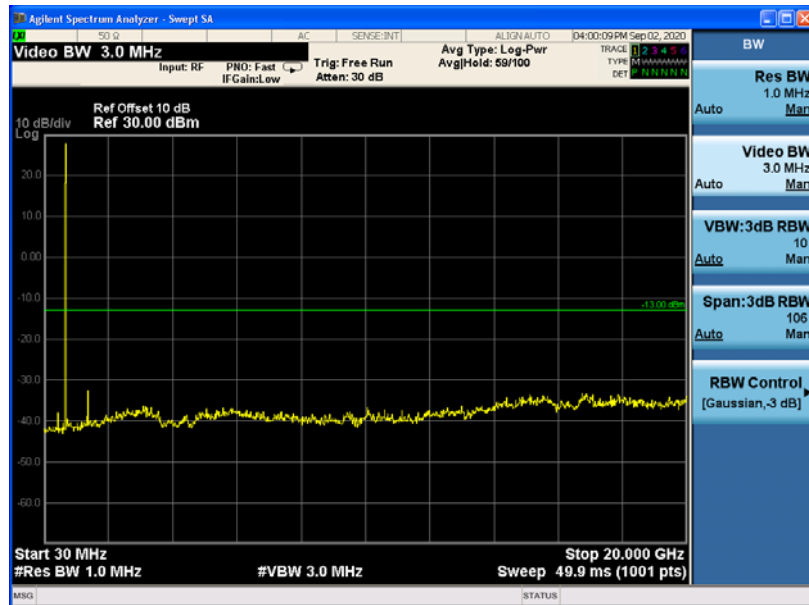


Fig.1

Band	Carrier frequency (MHz)	Channel(Mid)	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
12	707.5	23095	10	1	0	Fig.1

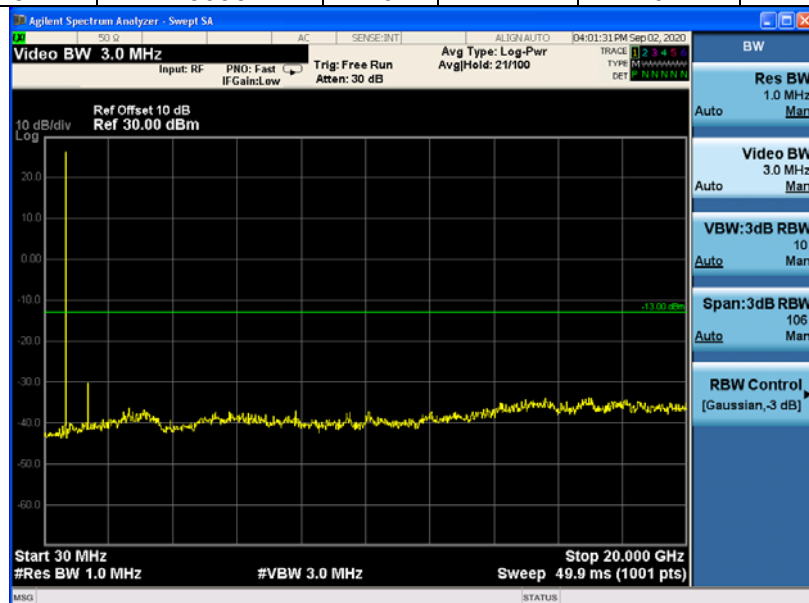


Fig.1

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Conducted Spurious Plot	
						QPSK	16-QAM
12	711	23130	10	1	0	Fig.1	Fig.8

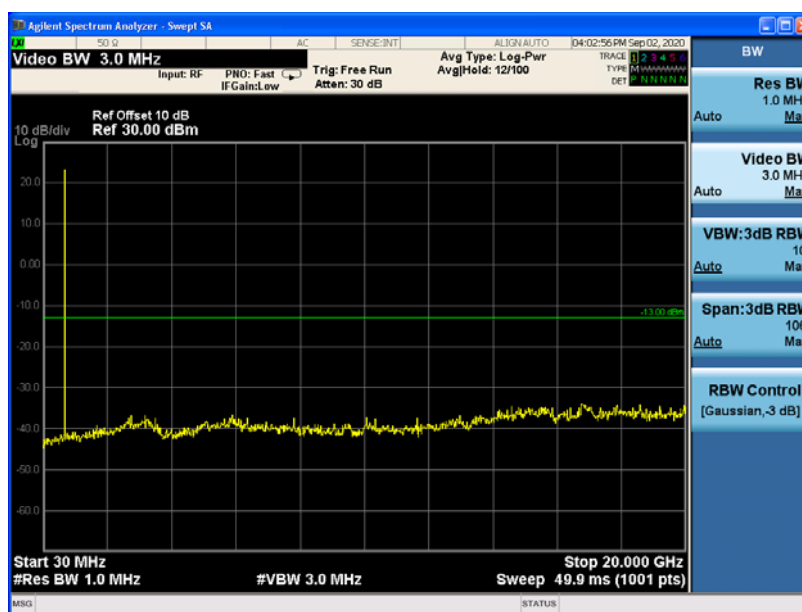


Fig.1

6 Band Edges Compliance

Test result

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
12	699.7	23017	1.4	1	0	Fig.1
				6	0	Fig.2
	715.3	23173		1	5	Fig.3
				6	0	Fig.4
	700.5	23025	3	1	0	Fig.5
				6	0	Fig.6
	714.5	23165		1	5	Fig.7
				6	0	Fig.8
	701.5	23035	5	1	0	Fig.9
				6	0	Fig.10
	713.5	23155		1	5	Fig.11
				6	0	Fig.12
	704	23060	10	1	0	Fig.13
				6	0	Fig.14
	711	23130		1	5	Fig.15
				6	0	Fig.16

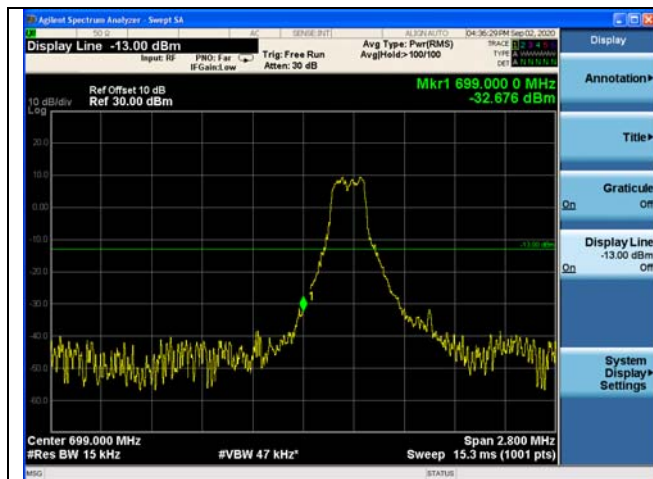


Fig.1

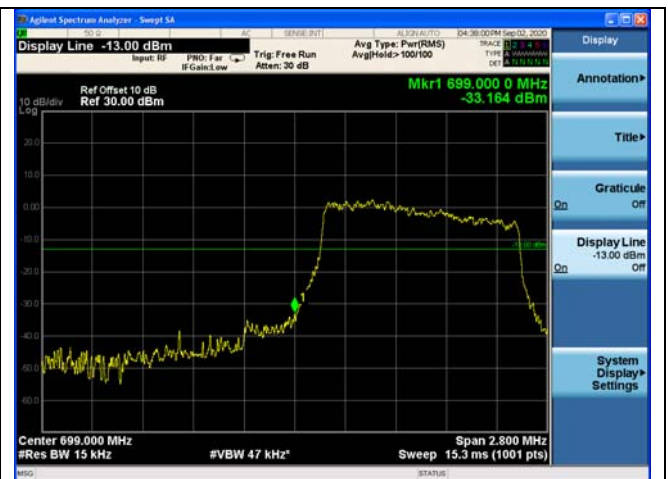


Fig.2

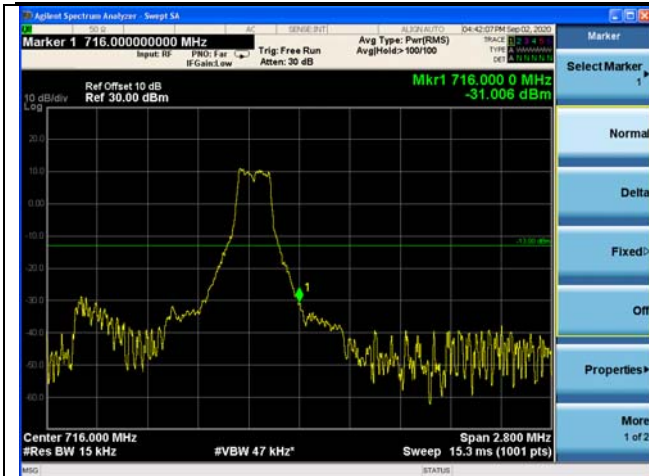


Fig.3



Fig.4

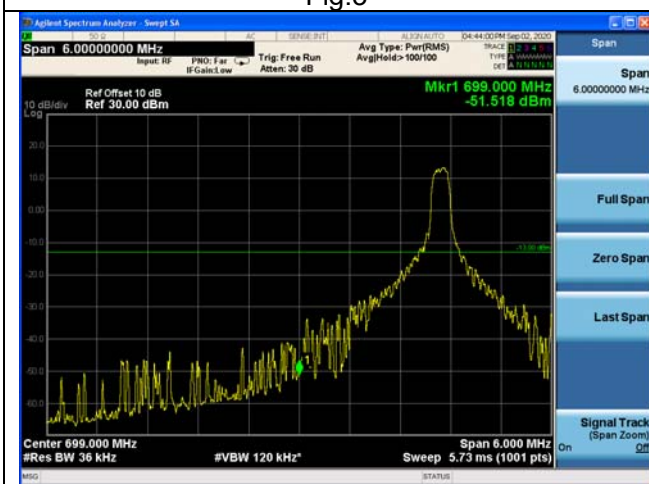


Fig.5

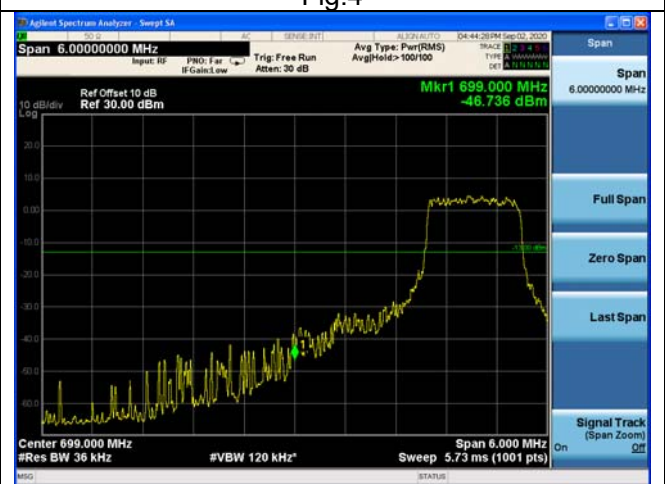


Fig.6

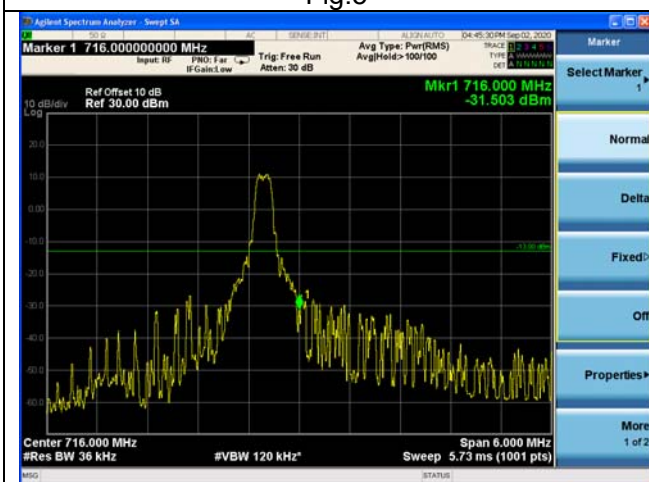


Fig.7

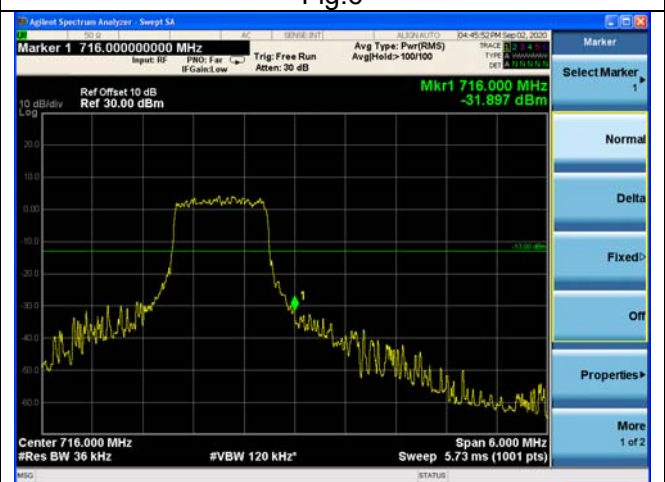


Fig.8

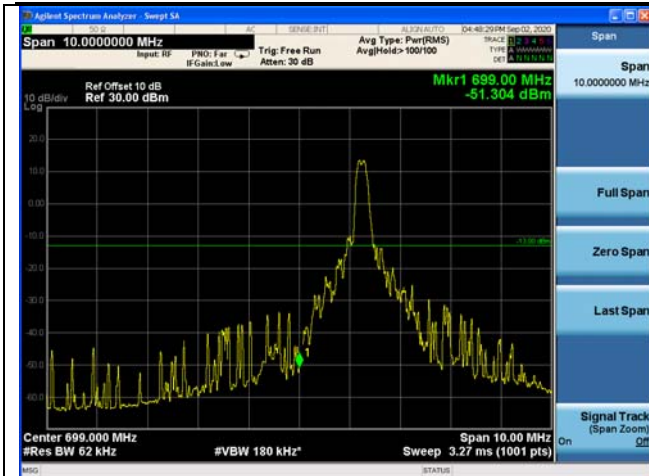


Fig.9

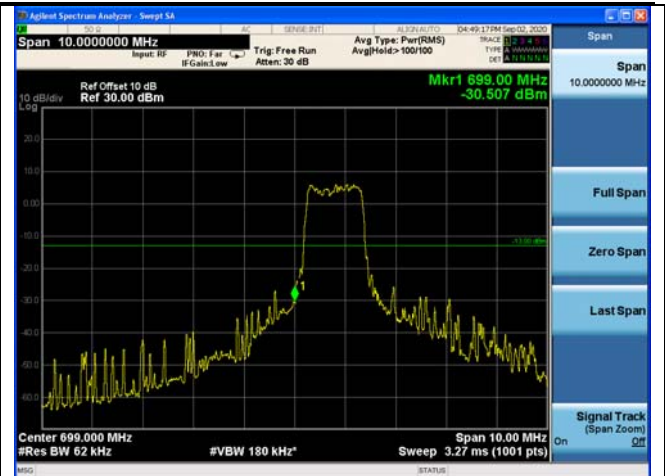


Fig.10



Fig.11

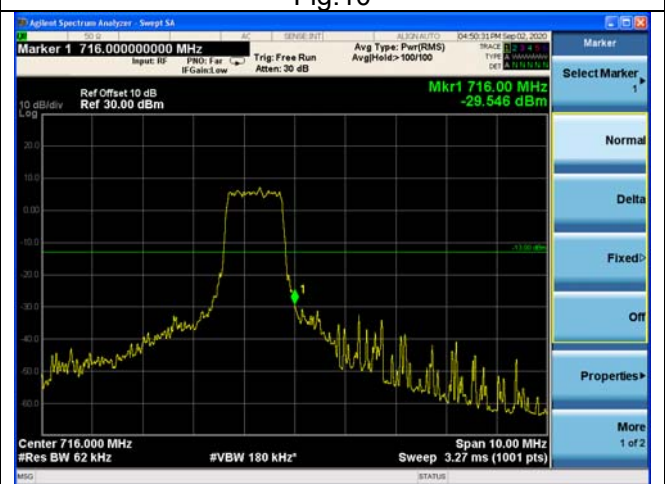


Fig.12

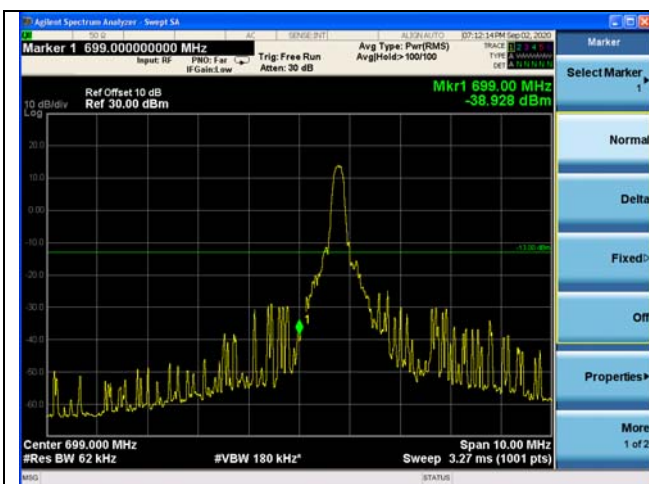


Fig.13

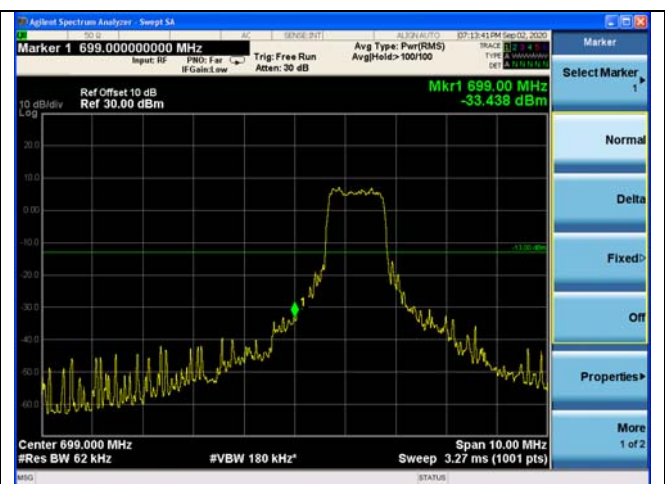


Fig.14

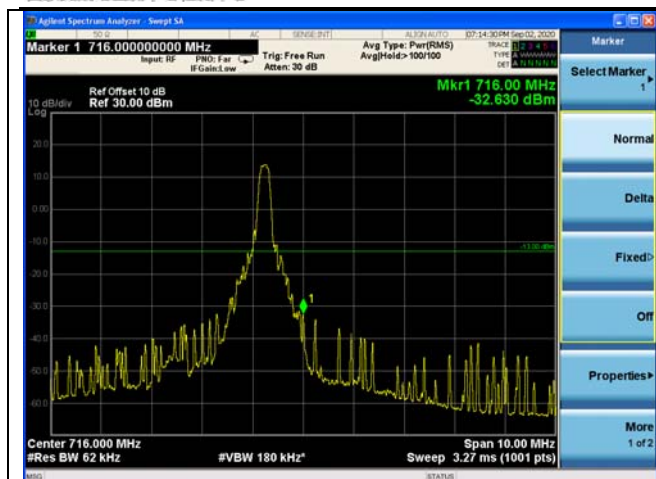


Fig.15

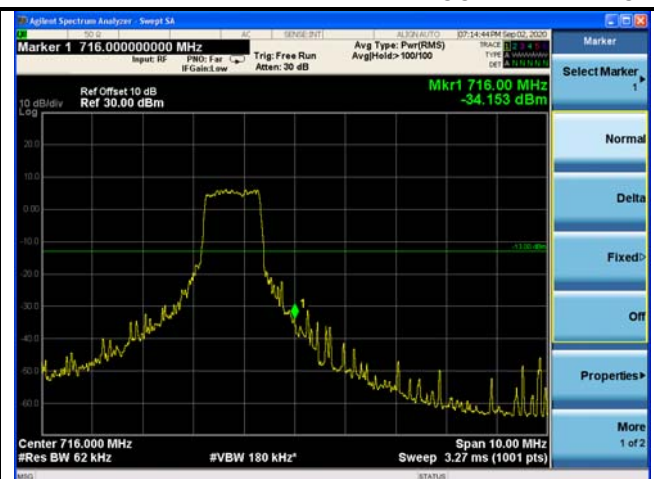


Fig.16

7 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band12 Low Channel			
		1.4M	3M	5M	10M
-20	NV	0.034	0.051	-0.053	-0.065
-10	NV	-0.061	-0.065	-0.013	-0.030
0	NV	-0.056	-0.050	-0.005	0.000
+10	NV	0.004	-0.053	-0.038	-0.077
+20	NV	0.000	0.000	0.000	0.000
+30	NV	0.059	-0.016	0.057	0.043
+40	NV	0.029	0.054	-0.004	0.010
+50	NV	-0.075	0.055	-0.052	-0.068
+60	NV	-0.024	-0.064	0.055	-0.012
+20	LV	-0.023	-0.031	0.046	-0.022
+20	HV	-0.015	0.008	-0.037	0.017

Temperature(°C)	Voltage	Test Result (ppm) Band12 High Channel			
		1.4M	3M	5M	10M
-20	NV	0.035	-0.003	-0.060	0.029
-10	NV	-0.044	-0.065	0.006	0.021
0	NV	-0.066	-0.060	-0.003	0.007
+10	NV	0.015	-0.043	-0.018	-0.030
+20	NV	0.000	0.000	0.000	0.000
+30	NV	-0.037	-0.006	-0.009	-0.056
+40	NV	0.052	0.059	0.005	-0.025
+50	NV	0.045	0.060	-0.067	0.009
+60	NV	0.024	0.043	-0.077	0.022
+20	LV	0.010	-0.040	-0.032	0.048
+20	HV	-0.036	0.032	0.047	-0.055

APPENDIX B – TEST DATA OF RADIATED EMISSION

LTE_CAT.M1_ band 2

Test result:

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band2	QPSK	1.4	18607	1#0	24.20	0.263
Band2	QPSK	1.4	18900	1#0	24.10	0.257
Band2	QPSK	1.4	19193	1#0	24.74	0.298
Band2	16QAM	1.4	18607	1#0	22.79	0.190
Band2	16QAM	1.4	18900	1#0	22.99	0.199
Band2	16QAM	1.4	19193	1#0	23.17	0.207
Band2	QPSK	3	18615	1#0	24.12	0.258
Band2	QPSK	3	18900	1#0	23.94	0.248
Band2	QPSK	3	19185	1#0	24.59	0.288
Band2	16QAM	3	18615	1#0	22.76	0.189
Band2	16QAM	3	18900	1#0	22.93	0.196
Band2	16QAM	3	19185	1#0	23.12	0.205
Band2	QPSK	5	18625	1#0	24.53	0.284
Band2	QPSK	5	18900	1#0	24.64	0.291
Band2	QPSK	5	19175	1#0	24.68	0.294
Band2	16QAM	5	18625	1#0	23.93	0.247
Band2	16QAM	5	18900	1#0	23.93	0.247
Band2	16QAM	5	19175	1#0	23.91	0.246
Band2	QPSK	10	18650	1#0	24.59	0.288
Band2	QPSK	10	18900	1#0	24.69	0.294
Band2	QPSK	10	19150	1#0	24.86	0.306
Band2	16QAM	10	18650	1#0	23.95	0.248
Band2	16QAM	10	18900	1#0	23.94	0.248
Band2	16QAM	10	19150	1#0	24.00	0.251
Band2	QPSK	15	18675	1#0	24.23	0.265
Band2	QPSK	15	18900	1#0	24.46	0.279
Band2	QPSK	15	19125	1#0	24.55	0.285
Band2	16QAM	15	18675	1#0	24.14	0.259
Band2	16QAM	15	18900	1#0	24.27	0.267
Band2	16QAM	15	19125	1#0	24.43	0.277
Band2	QPSK	20	18700	1#0	24.78	0.301
Band2	QPSK	20	18900	1#0	24.34	0.272
Band2	QPSK	20	19100	1#0	24.52	0.283
Band2	16QAM	20	18700	1#0	23.86	0.243
Band2	16QAM	20	18900	1#0	24.30	0.269
Band2	16QAM	20	19100	1#0	24.86	0.306

Test result:

Channel 19100

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2459.04	-48.78	-13	Vertical
2778.86	-47.21	-13	Vertical
3726.06	-41.34	-13	Vertical
6677.97	-39.44	-13	Vertical
9960.76	-37.24	-13	Vertical
17820.98	-33.95	-13	Vertical

Channel 18900

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.63	-49.48	-13	Vertical
2780.49	-47.38	-13	Vertical
3727.77	-40.40	-13	Vertical
6678.51	-39.98	-13	Vertical
9960.12	-37.10	-13	Vertical
17821.14	-34.11	-13	Vertical

Channel 19100

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2461.26	-49.34	-13	Vertical
2781.74	-47.41	-13	Vertical
3727.74	-40.73	-13	Vertical
6675.98	-39.30	-13	Vertical
9960.77	-37.07	-13	Vertical
17819.07	-33.51	-13	Vertical

LTE _CAT.M1_ band 4
Test result:

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band4	QPSK	1.4	19957	1#0	23.27	0.212
Band4	QPSK	1.4	20175	1#0	23.06	0.202
Band4	QPSK	1.4	20393	1#0	22.80	0.191
Band4	16QAM	1.4	19957	1#0	21.68	0.147
Band4	16QAM	1.4	20175	1#0	21.52	0.142
Band4	16QAM	1.4	20393	1#0	21.31	0.135
Band4	QPSK	3	19965	1#0	23.24	0.211
Band4	QPSK	3	20175	1#0	23.02	0.200
Band4	QPSK	3	20385	1#0	22.76	0.189
Band4	16QAM	3	19965	1#0	21.63	0.146
Band4	16QAM	3	20175	1#0	21.59	0.144
Band4	16QAM	3	20385	1#0	21.24	0.133
Band4	QPSK	5	19975	1#0	23.25	0.211
Band4	QPSK	5	20175	1#0	23.13	0.206
Band4	QPSK	5	20375	1#0	22.84	0.192
Band4	16QAM	5	19975	1#0	22.91	0.195
Band4	16QAM	5	20175	1#0	23.29	0.213
Band4	16QAM	5	20375	1#0	22.59	0.182
Band4	QPSK	10	20000	1#0	23.22	0.210
Band4	QPSK	10	20175	1#0	23.20	0.209
Band4	QPSK	10	20350	1#0	22.87	0.194
Band4	16QAM	10	20000	1#0	22.85	0.193
Band4	16QAM	10	20175	1#0	23.37	0.217
Band4	16QAM	10	20350	1#0	22.56	0.180
Band4	QPSK	15	20025	1#0	23.19	0.208
Band4	QPSK	15	20175	1#0	23.14	0.206
Band4	QPSK	15	20325	1#0	22.82	0.191
Band4	16QAM	15	20025	1#0	22.97	0.198
Band4	16QAM	15	20175	1#0	23.42	0.220
Band4	16QAM	15	20325	1#0	22.61	0.182
Band4	QPSK	20	20050	1#0	23.31	0.214
Band4	QPSK	20	20175	1#0	23.22	0.210
Band4	QPSK	20	20300	1#0	22.88	0.194
Band4	16QAM	20	20050	1#0	22.92	0.196
Band4	16QAM	20	20175	1#0	23.38	0.218
Band4	16QAM	20	20300	1#0	22.62	0.183

Test result:
Channel 20050

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.75	-49.33	-13	Vertical
2781.42	-47.00	-13	Vertical
3726.08	-40.91	-13	Vertical
6675.95	-39.22	-13	Vertical
9962.16	-36.87	-13	Vertical
17818.73	-34.41	-13	Vertical

Channel 20175

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2460.88	-49.40	-13	Vertical
2778.45	-46.99	-13	Vertical
3726.86	-41.01	-13	Vertical
6676.60	-40.02	-13	Vertical
9961.04	-36.94	-13	Vertical
17818.47	-34.30	-13	Vertical

Channel 20300

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2458.98	-49.36	-13	Vertical
2779.34	-47.76	-13	Vertical
3725.21	-40.36	-13	Vertical
6678.21	-40.12	-13	Vertical
9959.77	-37.66	-13	Vertical
17819.88	-34.44	-13	Vertical

LTE_CAT.M1_ band 12

Test result:

band	Modulation	BW (MHz)	Channel	RB/ RB offset	EIRP/ERP (dBm)	EIRP/ERP (W)
Band12	QPSK	1.4	23017	1#0	23.24	0.211
Band12	QPSK	1.4	23095	1#0	22.82	0.191
Band12	QPSK	1.4	23173	1#0	23.11	0.205
Band12	16QAM	1.4	23017	1#0	21.63	0.146
Band12	16QAM	1.4	23095	1#0	21.68	0.147
Band12	16QAM	1.4	23173	1#0	21.63	0.146
Band12	QPSK	3	23025	1#0	23.21	0.209
Band12	QPSK	3	23095	1#0	22.81	0.191
Band12	QPSK	3	23165	1#0	23.06	0.202
Band12	16QAM	3	23025	1#0	21.62	0.145
Band12	16QAM	3	23095	1#0	21.61	0.145
Band12	16QAM	3	23165	1#0	21.57	0.144
Band12	QPSK	5	23035	1#0	22.97	0.198
Band12	QPSK	5	23095	1#0	23.05	0.202
Band12	QPSK	5	23155	1#0	23.04	0.201
Band12	16QAM	5	23035	1#0	22.70	0.186
Band12	16QAM	5	23095	1#0	22.83	0.192
Band12	16QAM	5	23155	1#0	22.76	0.189
Band12	QPSK	10	23060	1#0	23.06	0.202
Band12	QPSK	10	23095	1#0	23.07	0.203
Band12	QPSK	10	23130	1#0	23.12	0.205
Band12	16QAM	10	23060	1#0	22.75	0.188
Band12	16QAM	10	23095	1#0	22.84	0.192
Band12	16QAM	10	23130	1#0	22.83	0.192

Test result:

Channel 23060

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1649.80	-52.90	-13	Vertical
1665.16	-51.01	-13	Vertical
2535.47	-44.69	-13	Vertical
2575.95	-43.79	-13	Vertical
8961.85	-39.03	-13	Vertical
9970.29	-36.23	-13	Vertical

Channel 23095

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1646.79	-52.99	-13	Vertical
1668.25	-51.15	-13	Vertical
2533.35	-44.23	-13	Vertical
2577.83	-44.25	-13	Vertical
8963.34	-39.17	-13	Vertical
9970.91	-35.95	-13	Vertical

Channel 23130

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1647.99	-52.62	-13	Vertical
1666.48	-51.50	-13	Vertical
2534.66	-44.33	-13	Vertical
2578.64	-43.87	-13	Vertical
8962.06	-39.85	-13	Vertical
9971.99	-36.49	-13	Vertical

---End of Test Report---