

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 5

1 RF Power Output

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	824.7	20407	1.4	1	0	21.96
				1	5	21.96
				3	2	21.32
				6	0	21.27
	836.5	20525		1	0	22.17
				1	5	22.04
				3	2	21.40
				6	0	21.46
	848.3	20643		1	0	22.10
				1	5	22.08
				3	2	21.40
				6	0	21.54
16QAM	824.7	20407	1.4	1	0	21.50
				1	5	21.43
				3	2	20.42
				6	0	20.44
	836.5	20525		1	0	21.56
				1	5	21.54
				3	2	20.61
				6	0	20.57
	848.3	20643		1	0	21.45
				1	5	21.43
				3	2	20.51
				6	0	20.68
64QAM	824.7	20407	1.4	1	0	21.46
				1	5	21.35
				3	2	20.45
				6	0	20.28
	836.5	20525		1	0	21.44
				1	5	21.53
				3	2	20.45
				6	0	20.48
	848.3	20643		1	0	21.35
				1	5	21.43
				3	2	20.45
				6	0	20.32

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	825.5	20415	3	1	0	22.04
				1	14	22.03
				8	4	21.28
				15	0	21.27
	836.5	20525		1	0	22.18
				1	14	22.12
				8	4	21.49
				15	0	21.41
	847.5	20635		1	0	22.08
				1	14	22.06
				8	4	21.51
				15	0	21.43
16QAM	825.5	20415	3	1	0	21.41
				1	14	21.38
				8	4	20.49
				15	0	20.43
	836.5	20525		1	0	21.57
				1	14	21.55
				8	4	20.62
				15	0	20.51
	847.5	20635		1	0	21.42
				1	14	21.45
				8	4	20.55
				15	0	20.54
64QAM	825.5	20415	3	1	0	21.32
				1	14	21.41
				8	4	20.45
				15	0	20.30
	836.5	20525		1	0	21.45
				1	14	21.48
				8	4	20.47
				15	0	20.47
	847.5	20635		1	0	21.42
				1	14	21.43
				8	4	20.45
				15	0	20.38

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	826.5	20425	5	1	0	22.00
				1	24	21.99
				12	6	21.38
				25	0	21.35
	836.5	20525		1	0	22.11
				1	24	22.10
				12	6	21.46
				25	0	21.40
	846.5	20625		1	0	22.00
				1	24	22.05
				12	6	21.48
				25	0	21.56
16QAM	826.5	20425	5	1	0	21.48
				1	24	21.41
				12	6	20.47
				25	0	20.41
	836.5	20525		1	0	21.61
				1	24	21.55
				12	6	20.55
				25	0	20.49
	846.5	20625		1	0	21.39
				1	24	21.39
				12	6	20.53
				25	0	20.60
64QAM	826.5	20425	5	1	0	21.36
				1	24	21.37
				12	6	20.33
				25	0	20.37
	836.5	20525		1	0	21.55
				1	24	21.41
				12	6	20.51
				25	0	20.36
	846.5	20625		1	0	21.35
				1	24	21.37
				12	6	20.53
				25	0	20.44

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	829	20450	10	1	0	22.07
				1	49	22.06
				24	12	21.41
				50	0	21.42
	836.5	20525		1	0	22.21
				1	49	22.19
				24	12	21.54
				50	0	21.51
	844	20600		1	0	22.15
				1	49	22.14
				24	12	21.51
				50	0	21.58
16QAM	829	20450	10	1	0	21.50
				1	49	21.48
				24	12	20.51
				50	0	20.51
	836.5	20525		1	0	21.64
				1	49	21.58
				24	12	20.63
				50	0	20.57
	844	20600		1	0	21.52
				1	49	21.48
				24	12	20.62
				50	0	20.69
64QAM	829	20450	10	1	0	21.47
				1	49	21.43
				24	12	20.47
				50	0	20.38
	836.5	20525		1	0	21.59
				1	49	21.54
				24	12	20.58
				50	0	20.49
	844	20600		1	0	21.48
				1	49	21.47
				24	12	20.58
				50	0	20.46

2 Occupied Bandwidth

Test result

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of 99% Power (MHz)					
						QPSK		16-QAM		64-QAM	
5	824.7	20407	1.4	6	0	1.0896	Fig.1	1.0874	Fig.2	1.0889	Fig.3
	836.5	20525		6	0	1.0886	Fig.4	1.0887	Fig.5	1.0887	Fig.6
	848.3	20643		6	0	1.0866	Fig.7	1.0866	Fig.8	1.0879	Fig.9
	825.5	20415	3	15	0	2.7132	Fig.10	2.7157	Fig.11	2.7201	Fig.12
	836.5	20525		15	0	2.7165	Fig.13	2.7227	Fig.14	2.7134	Fig.15
	847.5	20635		15	0	2.7177	Fig.16	2.7173	Fig.17	2.7160	Fig.18
	826.5	20425	5	25	0	4.4965	Fig.19	4.4939	Fig.20	4.4907	Fig.21
	836.5	20525		25	0	4.4855	Fig.22	4.4855	Fig.23	4.4866	Fig.24
	846.5	20625		25	0	4.4858	Fig.25	4.4836	Fig.26	4.4924	Fig.27
	829	20450	10	50	0	8.9985	Fig.28	8.9930	Fig.29	8.9857	Fig.30
	836.5	20525		50	0	8.9675	Fig.31	8.9482	Fig.32	8.9680	Fig.33
	844	20600		50	0	8.9889	Fig.34	8.9948	Fig.35	9.0033	Fig.36

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
5	824.7	20407	1.4	6	0	1.423	Fig.1	1.480	Fig.2	1.464	Fig.3
	836.5	20525		6	0	1.464	Fig.4	1.456	Fig.5	1.428	Fig.6
	848.3	20643		6	0	1.425	Fig.7	1.442	Fig.8	1.443	Fig.9
	825.5	20415	3	15	0	3.344	Fig.10	3.512	Fig.11	3.314	Fig.12
	836.5	20525		15	0	3.415	Fig.13	3.409	Fig.14	3.304	Fig.15
	847.5	20635		15	0	3.350	Fig.16	3.481	Fig.17	3.458	Fig.18
	826.5	20425	5	25	0	5.394	Fig.19	5.225	Fig.20	5.123	Fig.21
	836.5	20525		25	0	5.327	Fig.22	5.281	Fig.23	5.380	Fig.24
	846.5	20625		25	0	5.281	Fig.25	5.253	Fig.26	5.283	Fig.27
	829	20450	10	50	0	10.49	Fig.28	10.49	Fig.29	10.55	Fig.30
	836.5	20525		50	0	10.30	Fig.31	10.28	Fig.32	10.32	Fig.33
	844	20600		50	0	10.55	Fig.34	10.48	Fig.35	10.67	Fig.36

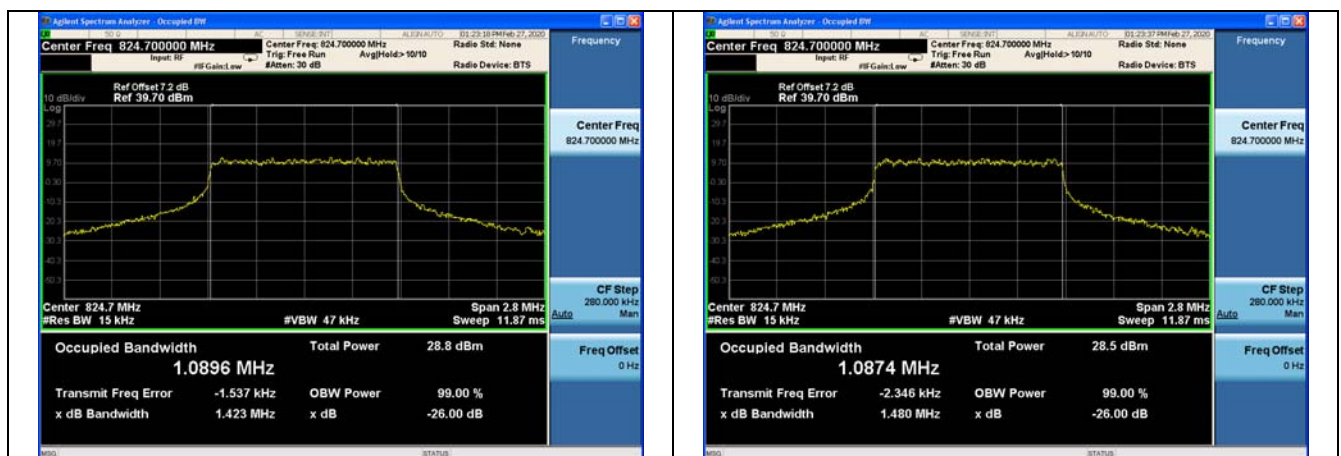


Fig.1

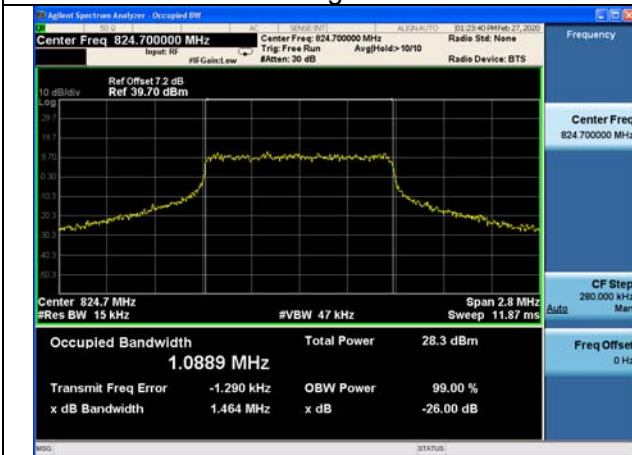


Fig.2

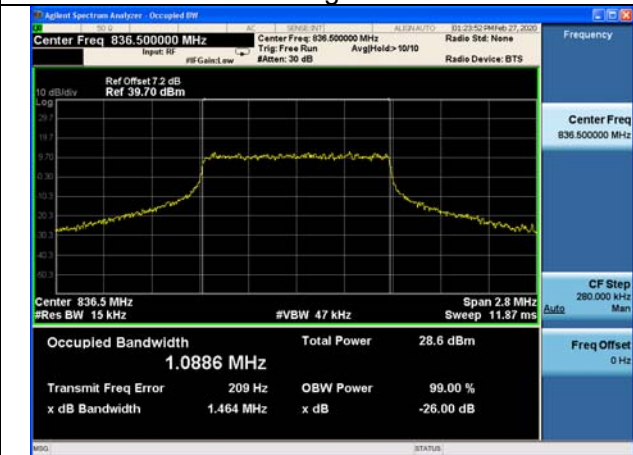


Fig.3

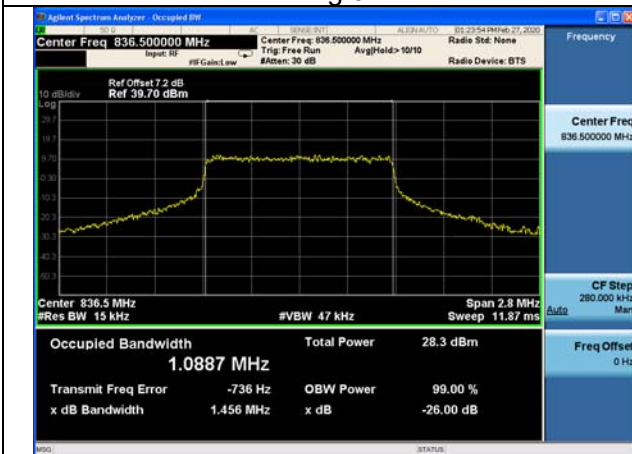


Fig.4

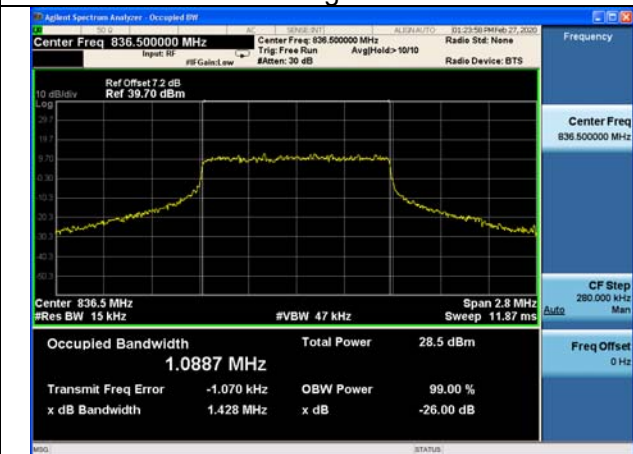


Fig.5

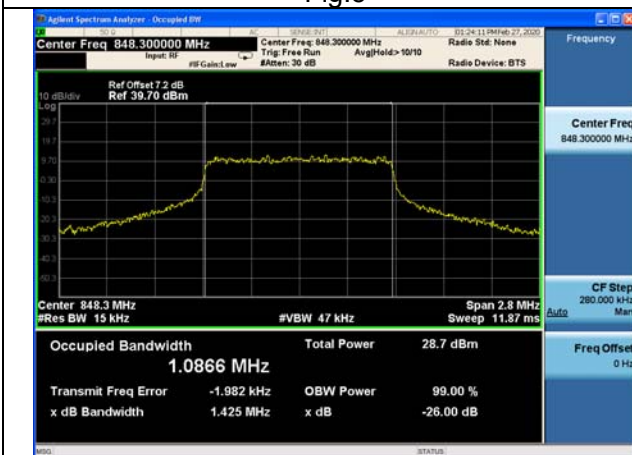


Fig.6

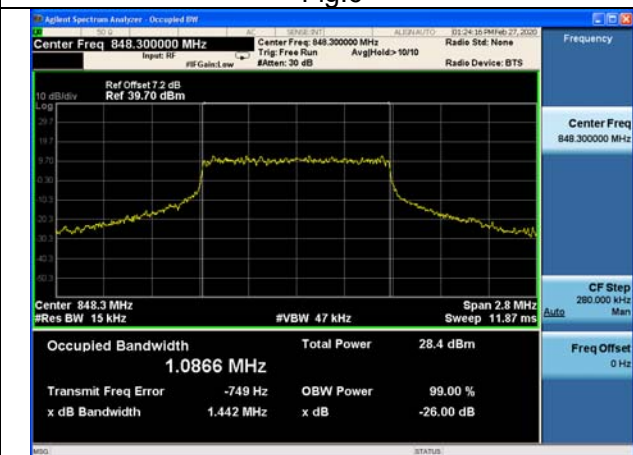


Fig.7

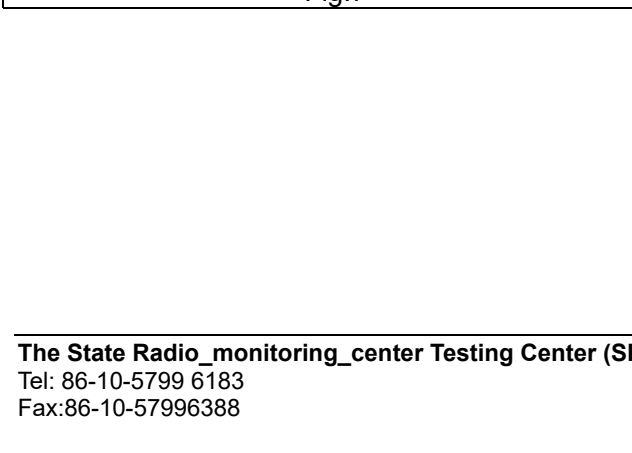
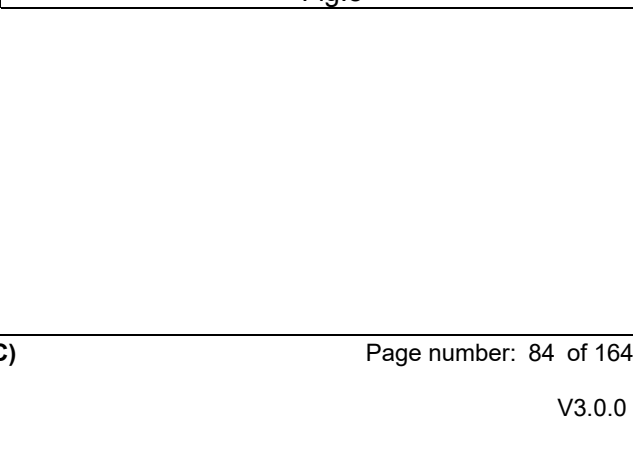


Fig.8



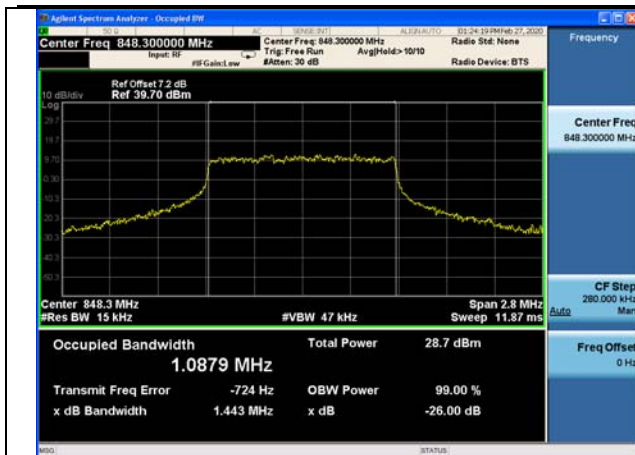


Fig.9



Fig.10

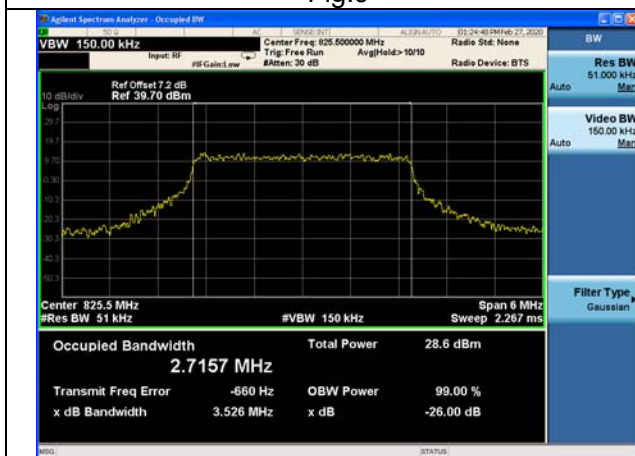


Fig.11

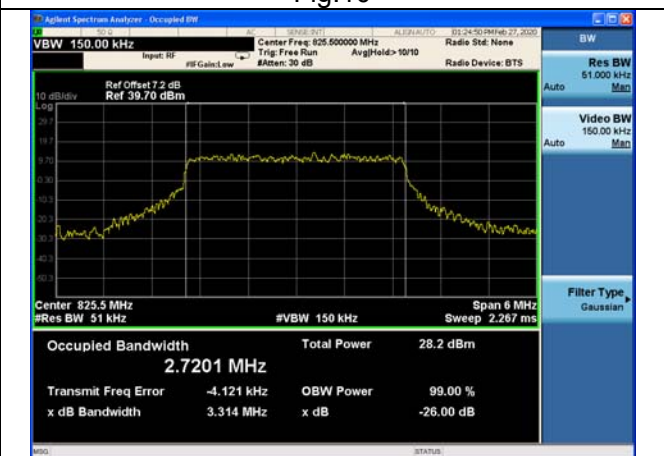


Fig.12



Fig.13



Fig.14

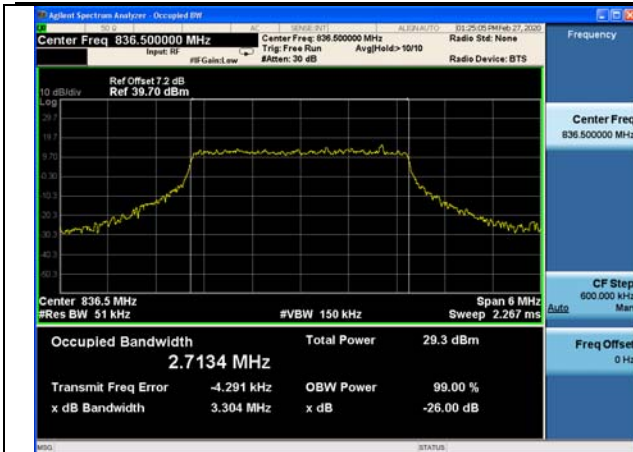


Fig.15

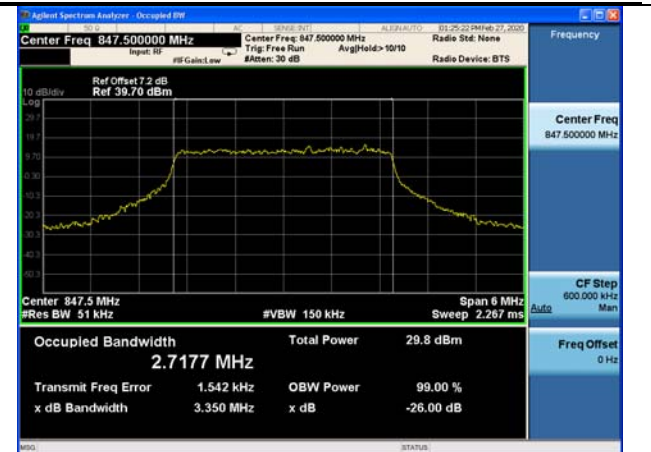


Fig.16

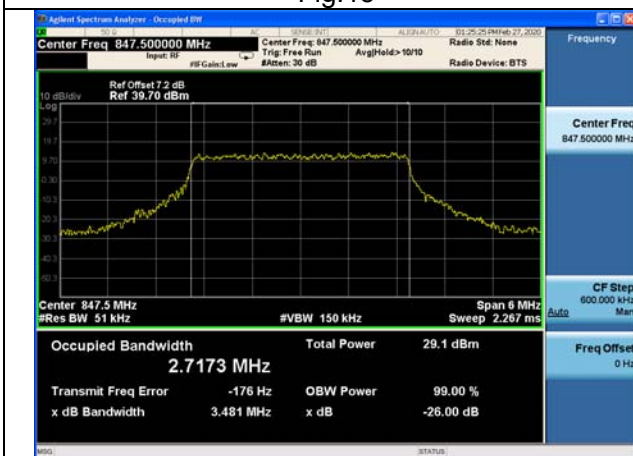


Fig.17

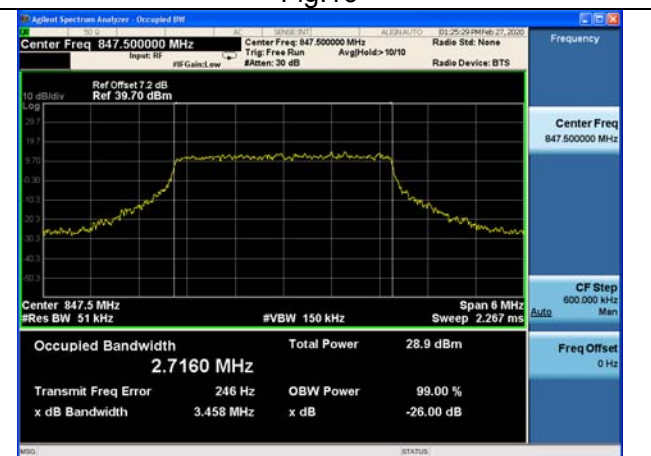


Fig.18

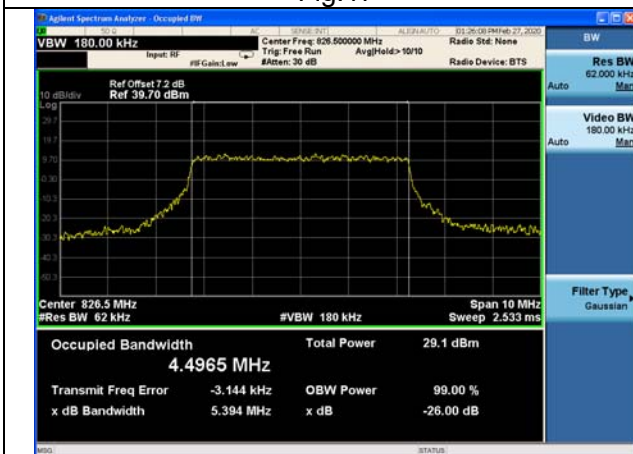


Fig.19

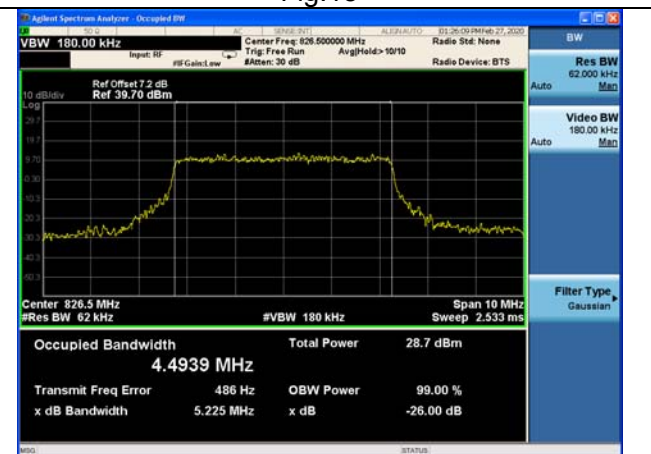


Fig.20

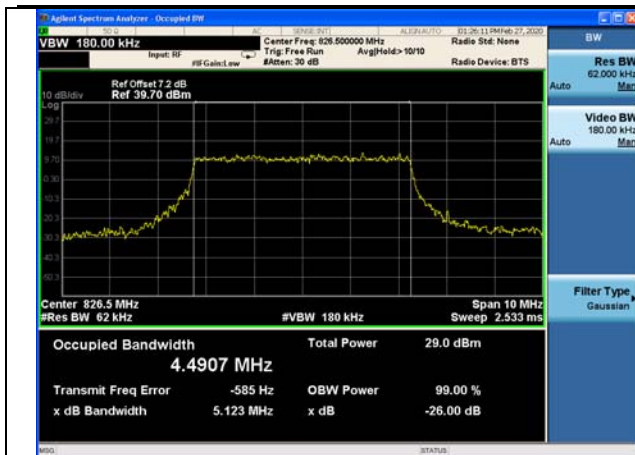


Fig.21

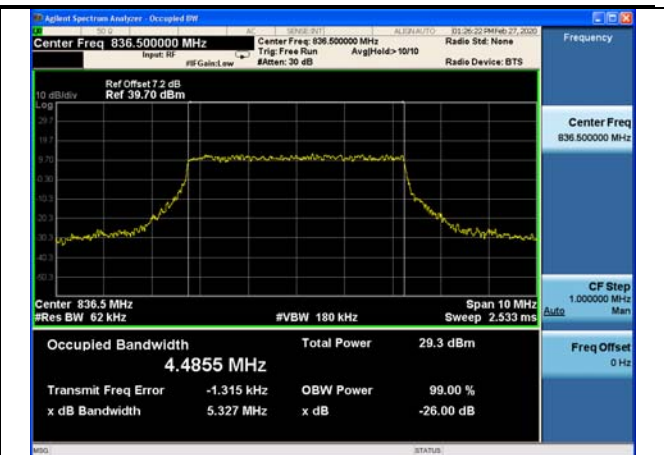


Fig.22

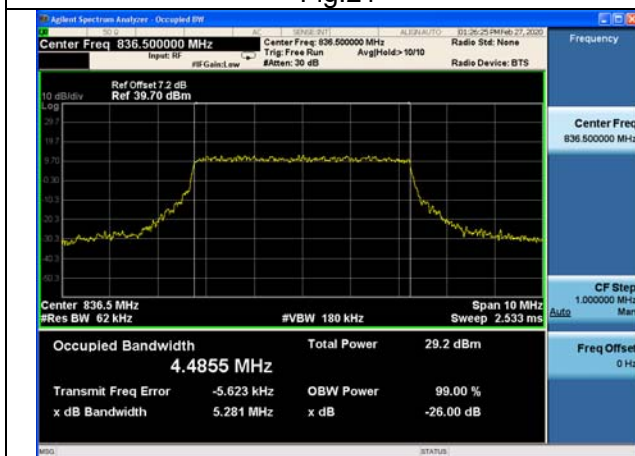


Fig.23

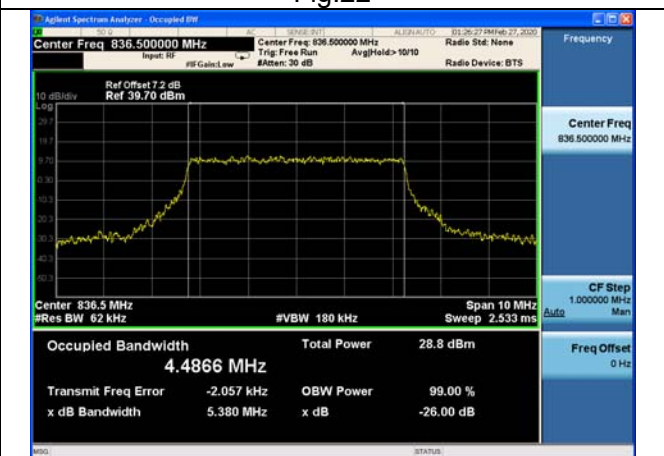


Fig.24

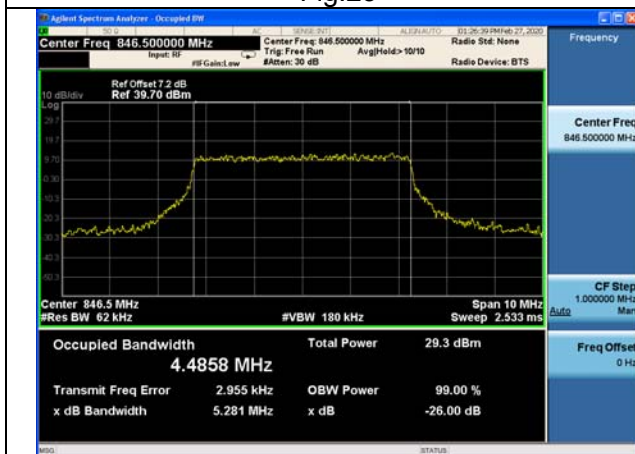


Fig.25

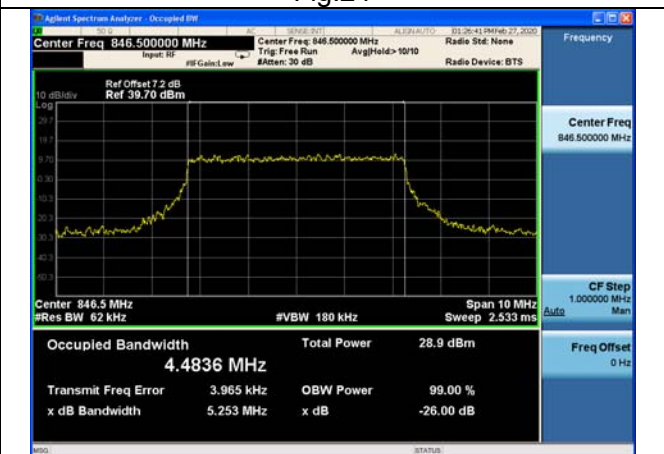


Fig.26

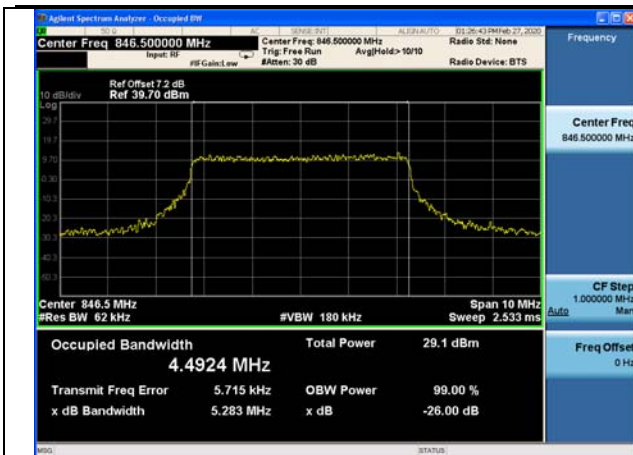


Fig.27

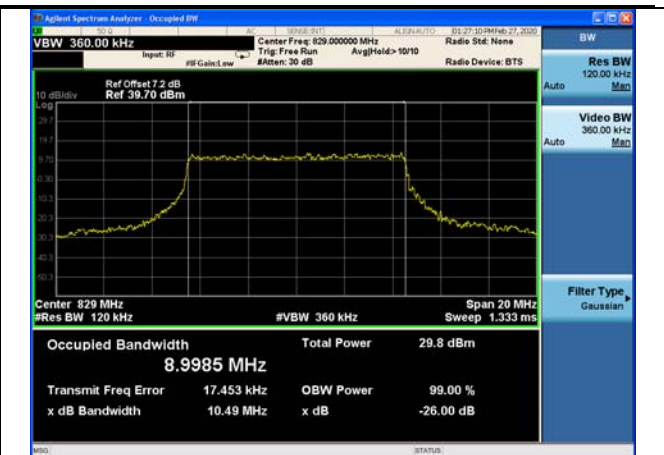


Fig.28

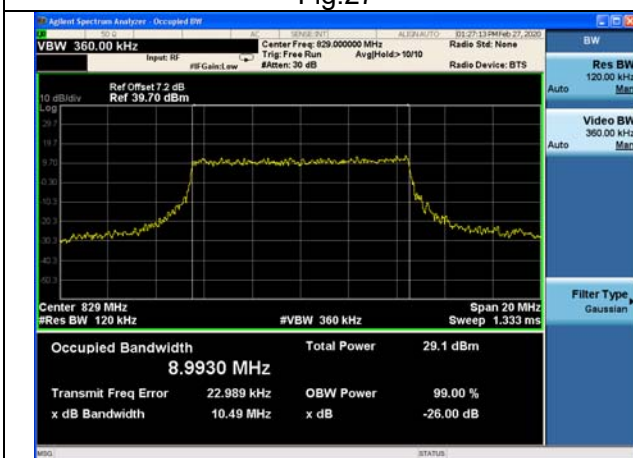


Fig.29

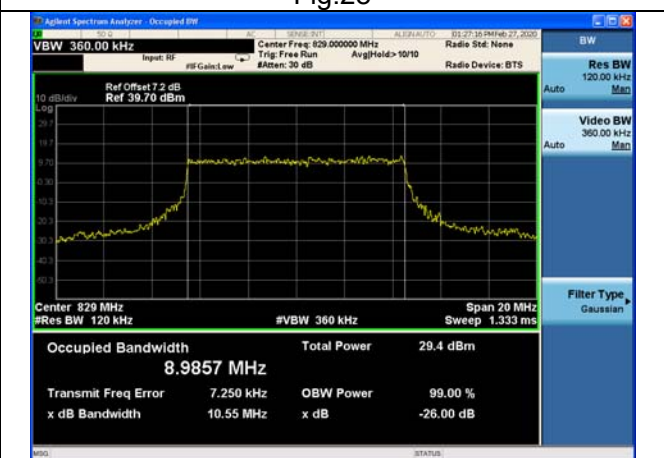


Fig.30

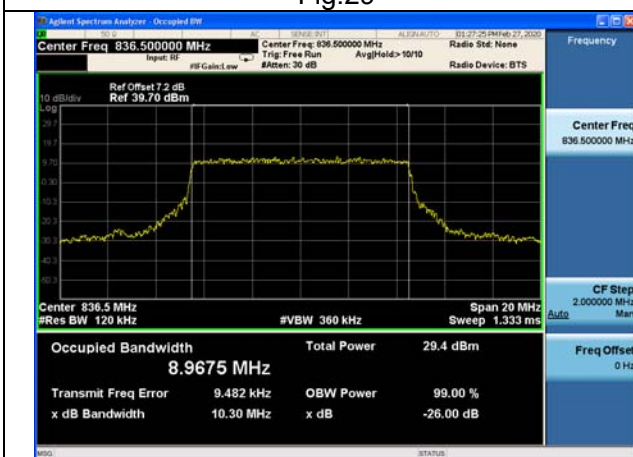


Fig.31

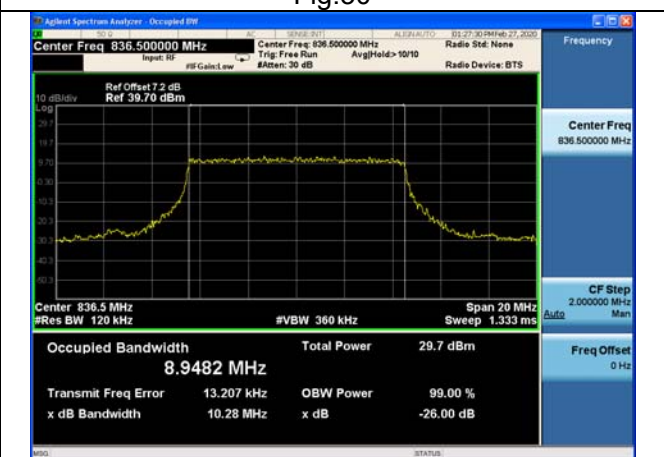


Fig.32

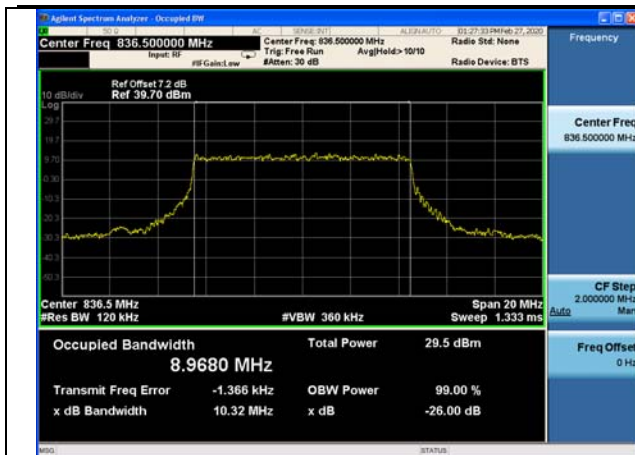


Fig.33

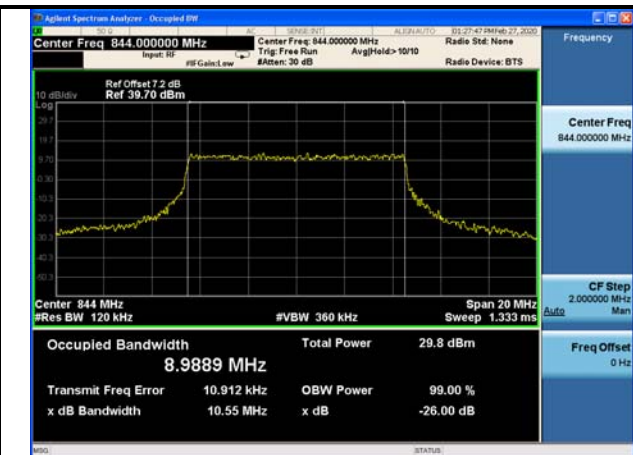


Fig.34

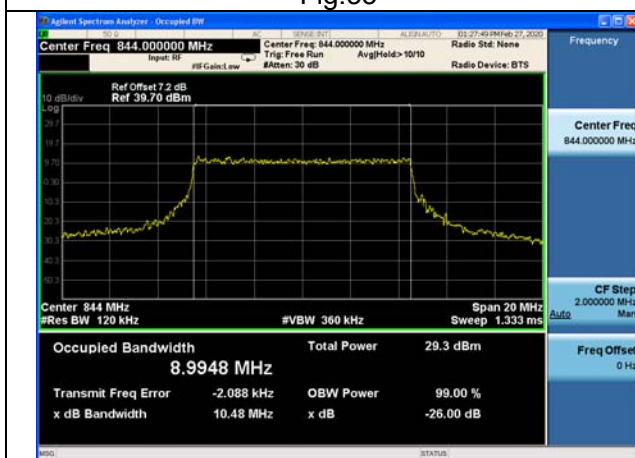


Fig.35

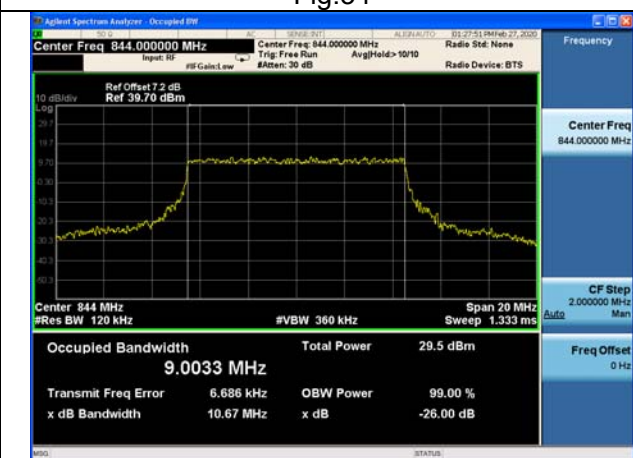


Fig.36

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
5	836.5	20525	1.4	1	0	Fig.1	Fig.2	Fig.3
			3	1	0	Fig.4	Fig.5	Fig.6
			5	1	0	Fig.7	Fig.8	Fig.9
			10	1	0	Fig.10	Fig.11	Fig.12

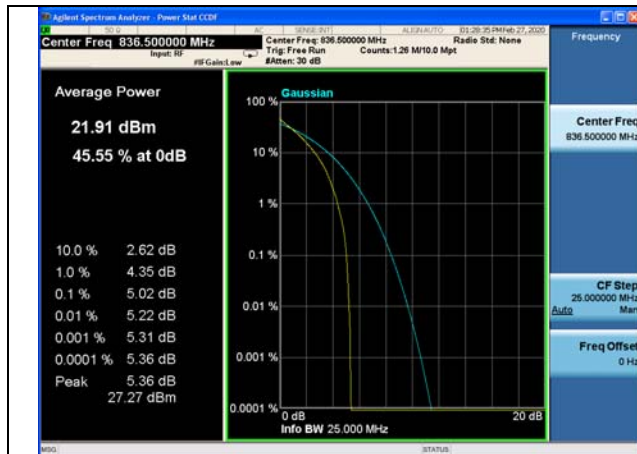


Fig.1

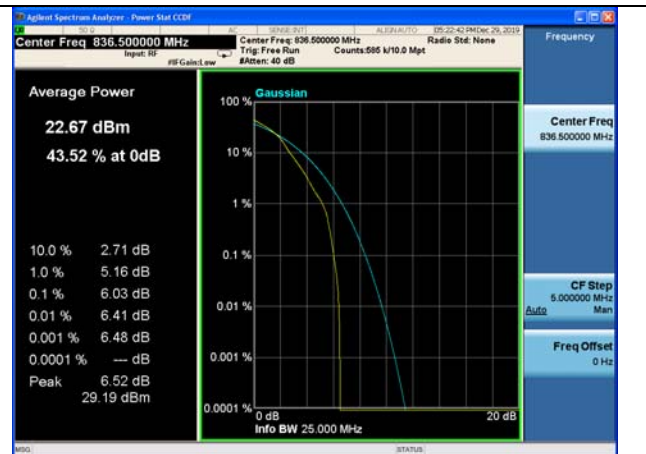


Fig.2

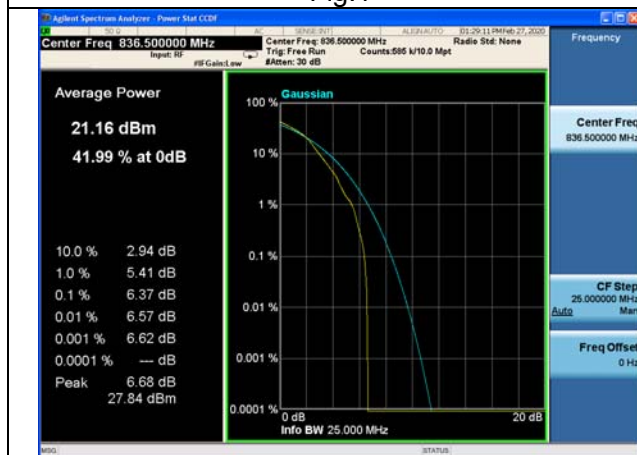


Fig.3

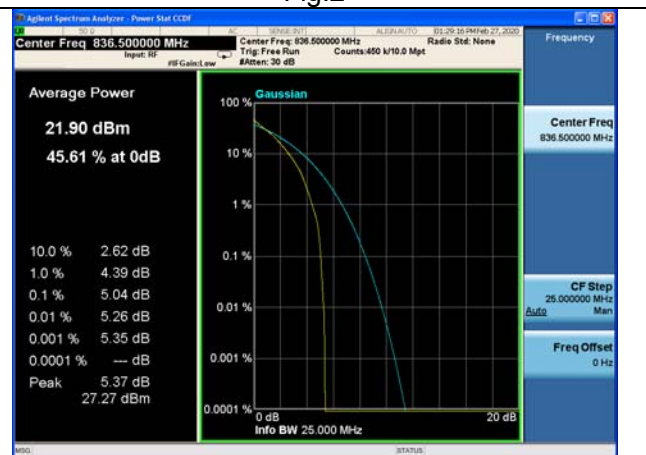


Fig.4



Fig.5

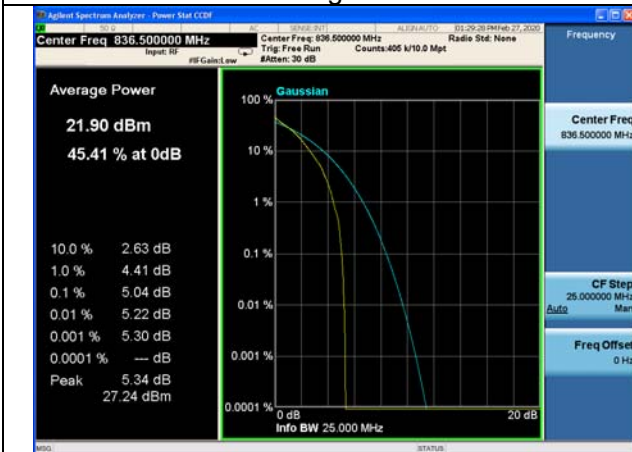


Fig.6



Fig.7



Fig.8



Fig.9



Fig.10



Fig.11

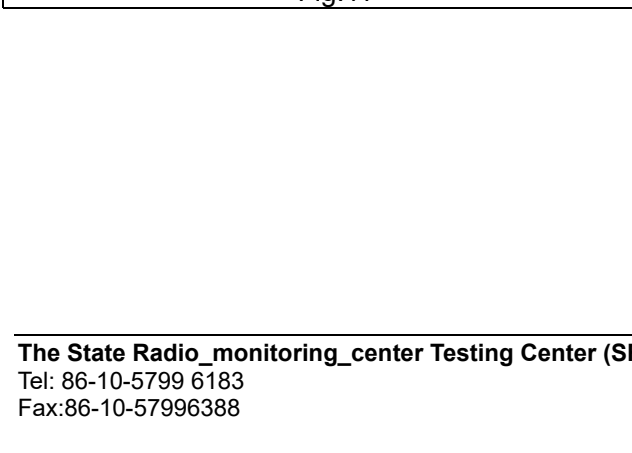
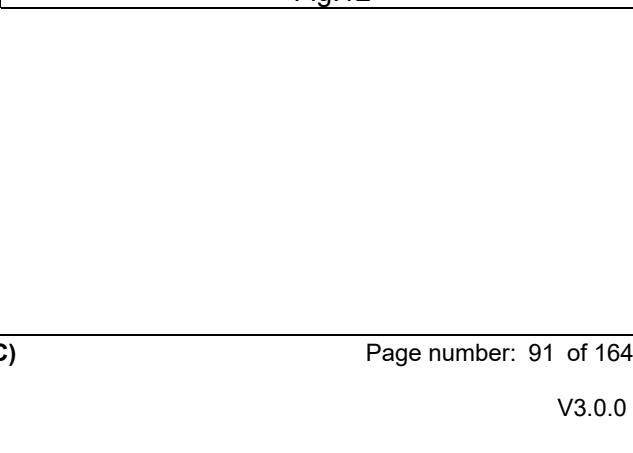


Fig.12



4 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
5	829	20450	10	1	0	Fig.1-2
	836.5	20525	10	1	0	Fig.3-4
	844	20600	10	1	0	Fig.4-5

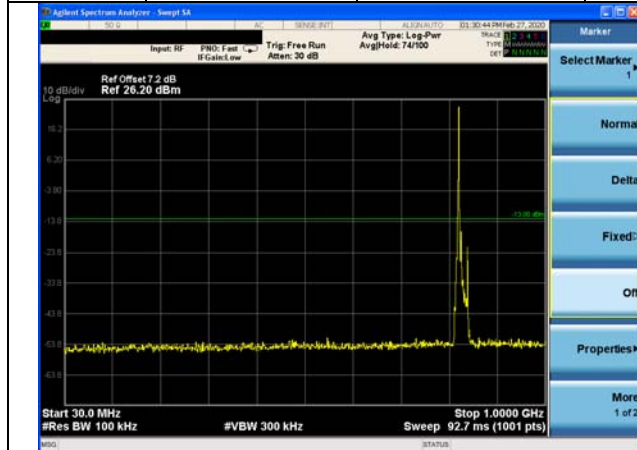


Fig.1

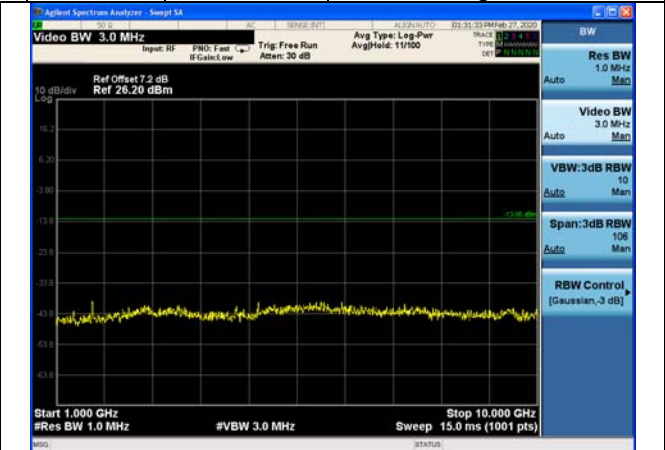


Fig.2

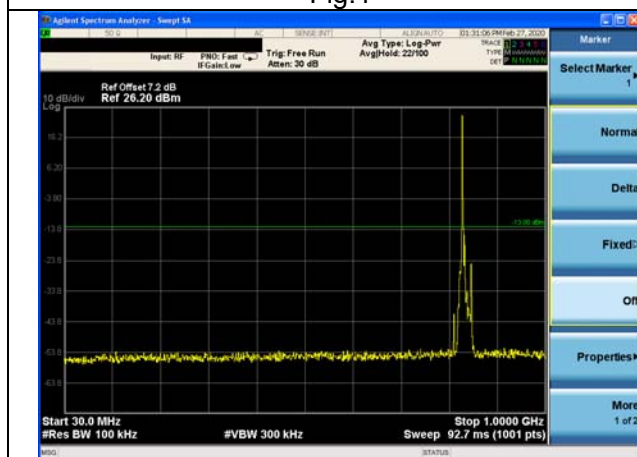


Fig3

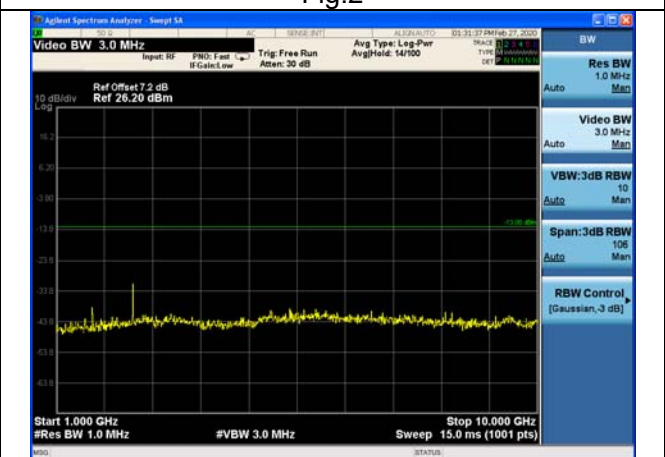


Fig4

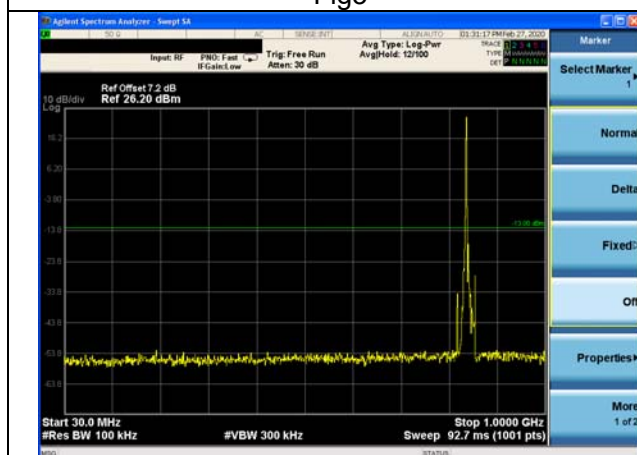


Fig5

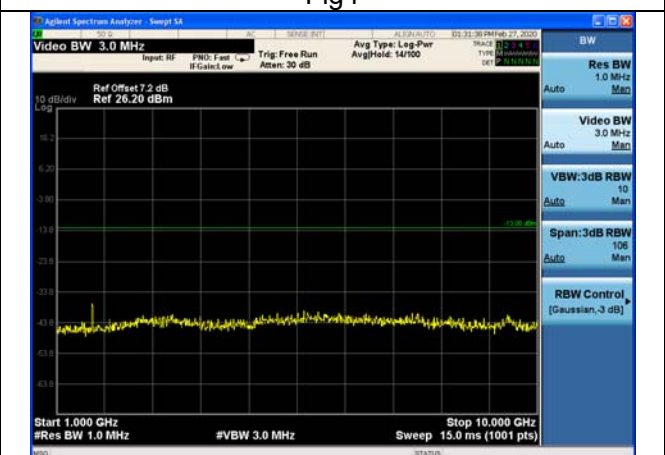


Fig6

5 Band Edges Compliance

Test result

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
5	824.7	20407	1.4	1	0	Fig.1
				6	0	Fig.2
	848.3	20643		1	5	Fig.3
				6	0	Fig.4
	825.5	20415	3	1	0	Fig.5
				15	0	Fig.6
	847.5	20635		1	14	Fig.7
				15	0	Fig.8
	826.5	20425	5	1	0	Fig.9
				25	0	Fig.10
	846.5	20625		1	24	Fig.11
				25	0	Fig.12
	829	20450	10	1	0	Fig.13
				50	0	Fig.14
	844	20600		1	49	Fig.15
				50	0	Fig.16

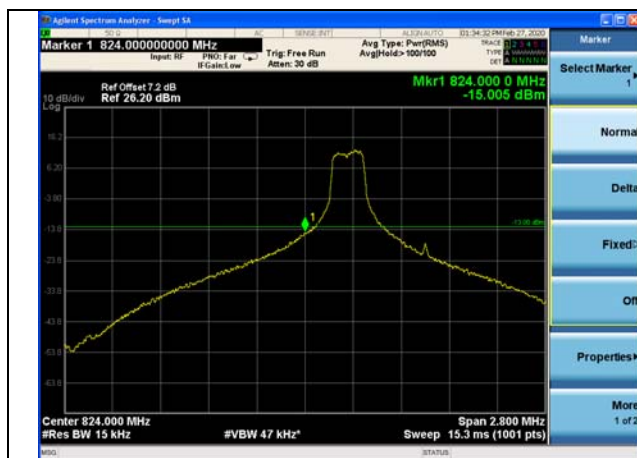


Fig.1

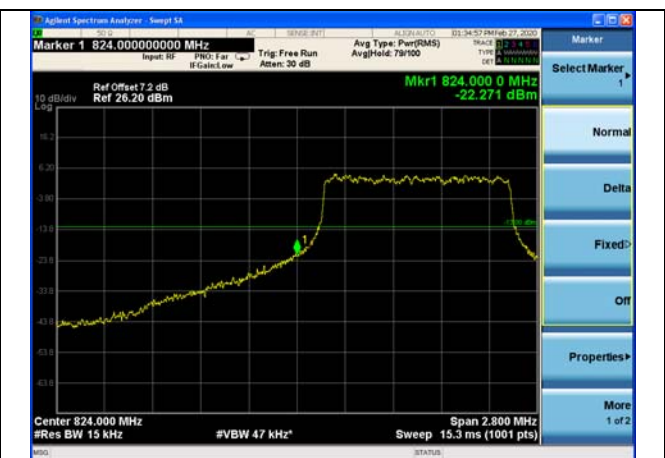


Fig.2



Fig.3

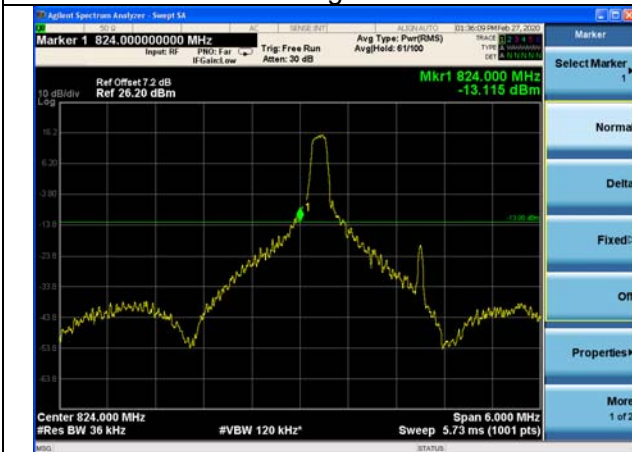


Fig.4

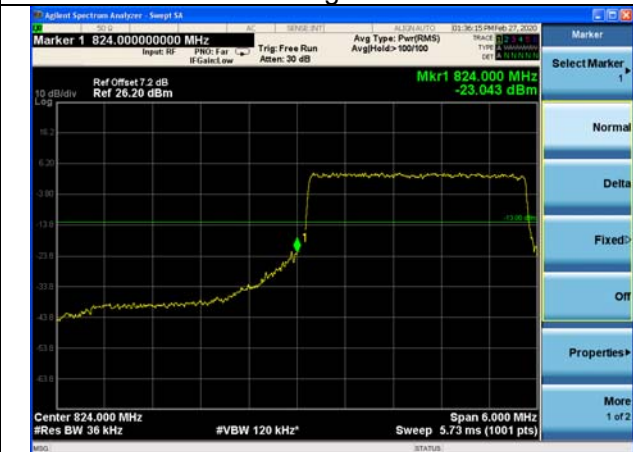


Fig.5

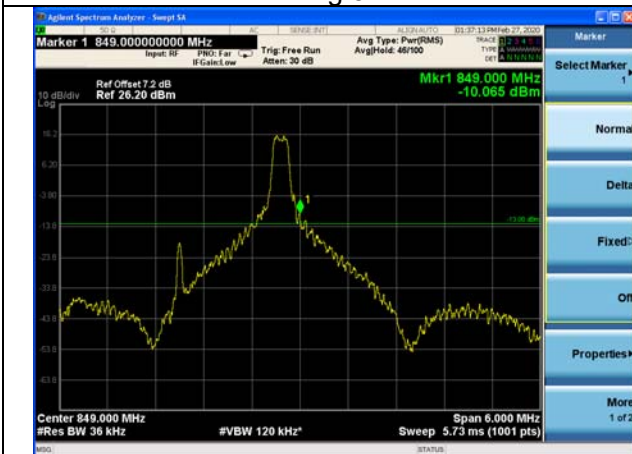


Fig.6



Fig.7

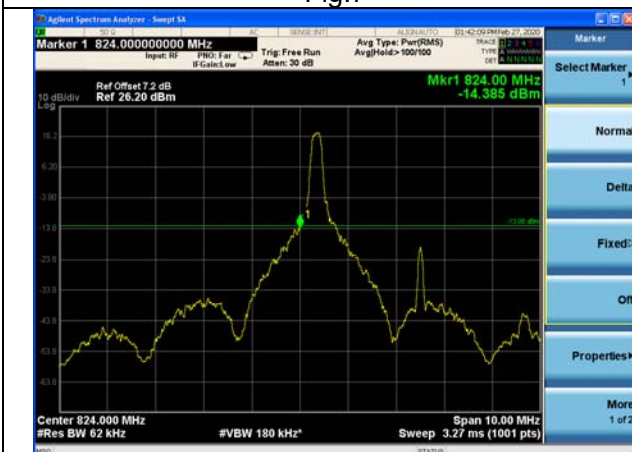


Fig.8

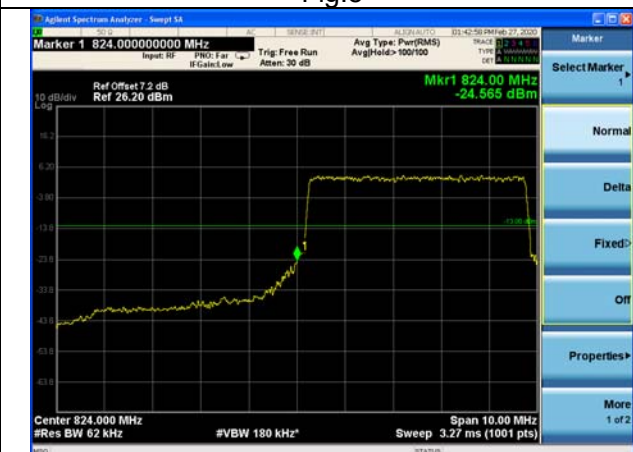


Fig.9

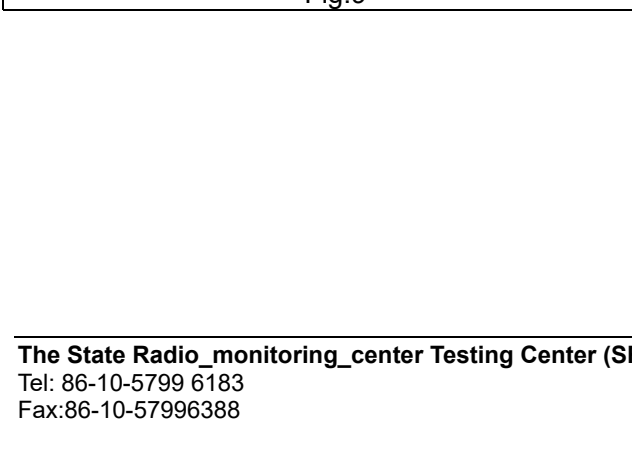
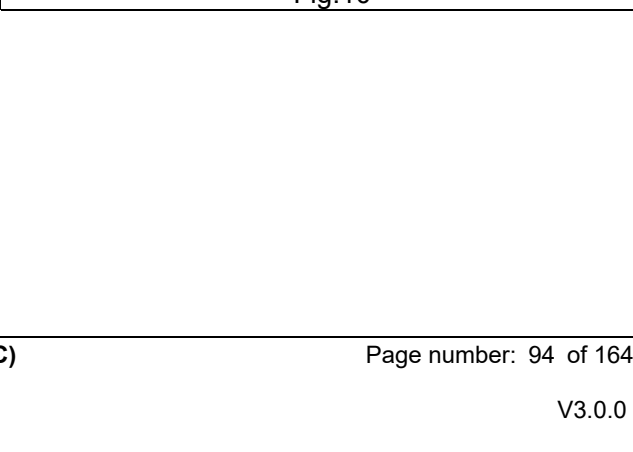


Fig.10



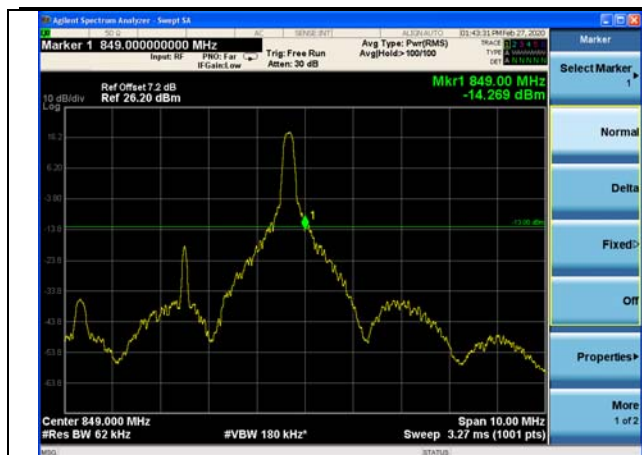


Fig.11



Fig.12

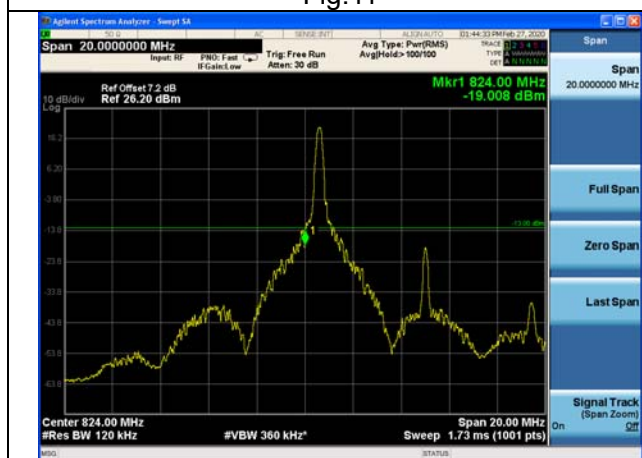


Fig.13

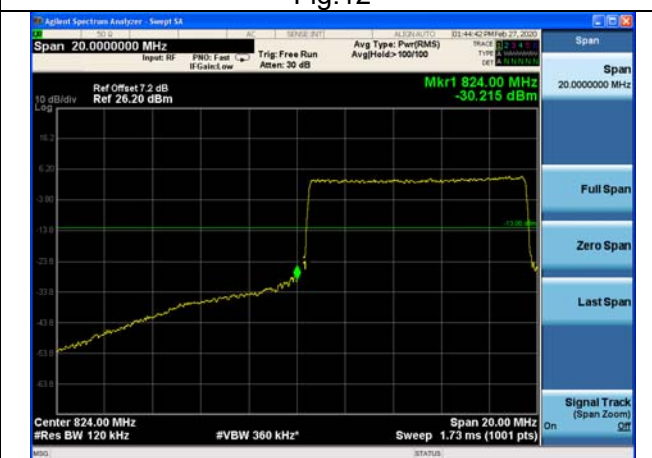


Fig.14



Fig.15



Fig.16

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band5Low Channel			
		1.4M	3M	5M	10M
-20	NV	0.049	-0.048	-0.014	0.038
-10	NV	0.016	0.059	-0.043	-0.031
0	NV	-0.039	0.043	-0.025	-0.020
+10	NV	-0.019	0.035	0.066	0.056
+20	NV	0.000	0.000	0.000	0.000
+30	NV	0.021	0.046	-0.024	-0.031
+40	NV	-0.001	-0.005	0.042	-0.008
+50	NV	-0.005	0.009	0.035	-0.004
+55	NV	0.015	-0.059	0.033	-0.016
+20	LV	0.064	0.055	0.012	-0.048
+20	HV	-0.045	0.041	0.060	0.079

Temperature(°C)	Voltage	Test Result (ppm) Band5High annel			
		1.4M	3M	5M	10M
-20	NV	0.004	0.024	0.022	-0.035
-10	NV	-0.006	0.013	-0.031	-0.012
0	NV	0.025	0.037	0.060	0.011
+10	NV	0.031	-0.016	0.048	-0.004
+20	NV	0.000	0.000	0.000	0.000
+30	NV	0.077	0.007	0.069	-0.002
+40	NV	-0.004	0.003	0.033	0.032
+50	NV	-0.030	-0.014	-0.015	0.037
+55	NV	0.051	-0.016	0.040	-0.018
+20	LV	-0.018	-0.005	0.034	-0.023
+20	HV	-0.019	-0.030	0.046	0.057