

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 5

1 RF Power Output

BW	RB Size	RB Offset	Carrier frequency (MHz)	UL Channel	Conducted power (dBm)		
					QPSK	16QAM	64QAM
1.4	1	5	848.3	20643	23.96	22.53	22.80
			836.5	20525	23.74	22.45	22.52
			824.7	20407	23.88	22.57	22.56
	1	3	848.3	20643	24.06	22.63	22.70
			836.5	20525	23.88	22.65	22.60
			824.7	20407	23.88	22.63	22.41
	1	0	848.3	20643	24.00	22.56	22.92
			836.5	20525	23.80	22.53	22.50
			824.7	20407	23.79	22.41	22.40
	3	3	848.3	20643	24.18	23.34	23.10
			836.5	20525	23.91	22.85	22.94
			824.7	20407	23.89	22.95	22.94
	3	1	848.3	20643	24.26	22.92	23.32
			836.5	20525	23.87	22.83	22.83
			824.7	20407	23.87	22.79	22.78
	3	0	848.3	20643	24.21	22.87	23.09
			836.5	20525	23.91	22.86	22.98
			824.7	20407	23.84	22.75	22.74
	6	0	848.3	20643	22.95	21.75	21.89
			836.5	20525	22.85	21.62	21.77
			824.7	20407	22.97	21.86	21.87

BW	RB Size	RB Offset	Carrier frequency (MHz)	UL Channel	Conducted power (dBm)		
					QPSK	16QAM	64QAM
3	1	14	847.5	20635	24.00	22.55	22.73
			836.5	20525	23.84	22.37	22.46
			825.5	20415	23.77	22.23	22.36
	1	7	847.5	20635	24.03	23.08	22.73
			836.5	20525	23.88	22.60	22.55
			825.5	20415	23.84	22.62	22.63
	1	0	847.5	20635	24.15	23.21	22.61
			836.5	20525	23.79	22.36	22.28
			825.5	20415	23.82	22.34	22.39
	8	7	847.5	20635	23.03	22.13	22.08
			836.5	20525	22.96	21.92	21.79
			825.5	20415	23.04	22.10	21.91
	8	4	847.5	20635	23.09	22.10	21.94
			836.5	20525	22.89	21.97	21.75
			825.5	20415	22.99	22.06	21.92
	8	0	847.5	20635	23.09	22.00	21.95
			836.5	20525	22.84	21.81	21.78
			825.5	20415	22.97	21.96	21.91
	15	0	847.5	20635	22.99	22.02	21.83
			836.5	20525	22.84	21.78	21.87
			825.5	20415	22.97	21.91	21.79

BW	RB Size	RB Offset	Carrier frequency (MHz)	UL Channel	Conducted power (dBm)		
					QPSK	16QAM	64QAM
5	1	24	846.5	20625	23.80	22.26	22.67
			836.5	20525	23.86	22.17	22.69
			826.5	20425	23.92	22.73	22.72
	1	12	846.5	20625	24.13	22.69	23.03
			836.5	20525	23.83	22.43	22.67
			826.5	20425	23.82	22.66	22.59
	1	0	846.5	20625	23.89	22.35	22.29
			836.5	20525	23.67	22.28	22.40
			826.5	20425	23.60	22.32	22.31
	12	13	846.5	20625	22.94	21.84	21.72
			836.5	20525	22.87	21.59	21.85
			826.5	20425	23.00	21.90	21.70
	12	6	846.5	20625	23.03	21.82	21.81
			836.5	20525	22.95	21.67	21.85
			826.5	20425	22.94	21.75	21.71
	12	0	846.5	20625	22.99	21.98	21.83
			836.5	20525	22.83	21.64	21.73
			826.5	20425	22.90	21.90	21.65
	25	0	846.5	20625	22.97	22.01	22.03
			836.5	20525	22.86	21.86	21.76
			826.5	20425	22.96	21.86	21.89

BW	RB Size	RB Offset	Carrier frequency (MHz)	UL Channel	Conducted power (dBm)		
					QPSK	16QAM	64QAM
10	1	49	844	20600	23.86	22.54	22.79
			836.5	20525	23.91	23.12	23.13
			829	20450	24.00	22.27	22.25
	1	24	844	20600	23.97	23.07	22.79
			836.5	20525	23.95	22.38	22.37
			829	20450	23.96	22.43	22.64
	1	0	844	20600	23.89	22.54	22.58
			836.5	20525	23.84	22.04	22.02
			829	20450	23.75	22.32	22.33
	25	25	844	20600	23.00	22.03	22.02
			836.5	20525	22.92	21.90	21.80
			829	20450	23.03	21.93	21.84
	25	12	844	20600	22.96	21.90	21.85
			836.5	20525	22.87	21.87	21.92
			829	20450	23.01	21.92	21.89
	25	0	844	20600	22.87	21.91	21.91
			836.5	20525	22.94	21.78	21.86
			829	20450	22.94	21.83	21.88
	50	0	844	20600	22.97	21.85	21.91
			836.5	20525	22.96	21.86	21.92
			829	20450	23.02	21.92	21.95

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	1.0779	Fig.1	1.0774	Fig.2	1.0773	Fig.3
	836.5	20525		6	0	1.0789	Fig.4	1.0776	Fig.5	1.0790	Fig.6
	848.3	20643		6	0	1.0771	Fig.7	1.0822	Fig.8	1.0740	Fig.9
	825.5	20415	3	15	0	2.7066	Fig.10	2.6851	Fig.11	2.6941	Fig.12
	836.5	20525		15	0	2.6934	Fig.13	2.6844	Fig.14	2.6954	Fig.15
	847.5	20635		15	0	2.6917	Fig.16	2.6953	Fig.17	2.6897	Fig.18
	826.5	20425	5	25	0	4.4699	Fig.19	4.4930	Fig.20	4.4859	Fig.21
	836.5	20525		25	0	4.4617	Fig.22	4.4836	Fig.23	4.4724	Fig.24
	846.5	20625		25	0	4.4817	Fig.25	4.4588	Fig.26	4.4705	Fig.27
	829	20450	10	50	0	8.9333	Fig.28	8.9045	Fig.29	8.9460	Fig.30
	836.5	20525		50	0	8.9158	Fig.31	8.9183	Fig.32	8.9156	Fig.33
	844	20600		50	0	8.9157	Fig.34	8.9375	Fig.35	8.9290	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	1.246	Fig.1	1.258	Fig.2	1.234	Fig.3
	836.5	20525		6	0	1.234	Fig.4	1.232	Fig.5	1.250	Fig.6
	848.3	20643		6	0	1.207	Fig.7	1.236	Fig.8	1.221	Fig.9
	825.5	20415	3	15	0	2.970	Fig.10	2.952	Fig.11	2.915	Fig.12
	836.5	20525		15	0	2.964	Fig.13	2.885	Fig.14	3.000	Fig.15
	847.5	20635		15	0	2.925	Fig.16	2.903	Fig.17	2.944	Fig.18
	826.5	20425	5	25	0	4.879	Fig.19	4.818	Fig.20	4.845	Fig.21
	836.5	20525		25	0	4.899	Fig.22	4.875	Fig.23	4.860	Fig.24
	846.5	20625		25	0	4.865	Fig.25	4.835	Fig.26	4.941	Fig.27
	829	20450	10	50	0	9.538	Fig.28	9.583	Fig.29	9.654	Fig.30
	836.5	20525		50	0	9.492	Fig.31	9.537	Fig.32	9.453	Fig.33
	844	20600		50	0	9.601	Fig.34	9.581	Fig.35	9.707	Fig.36

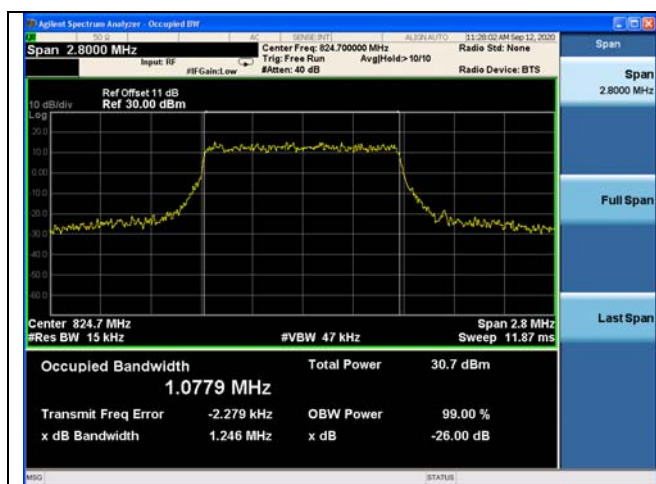


Fig.1

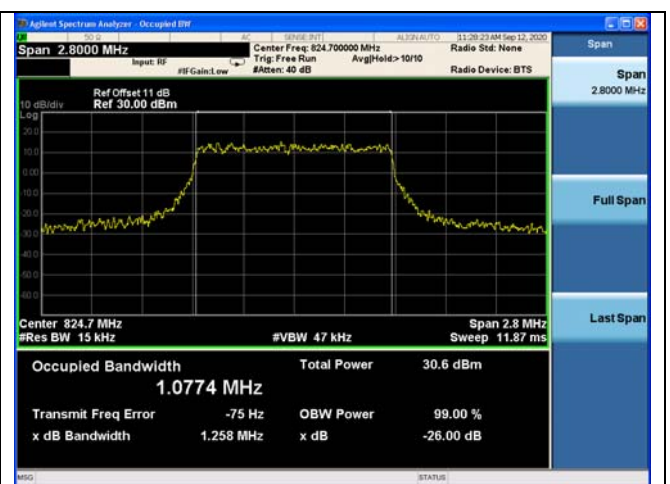


Fig.2

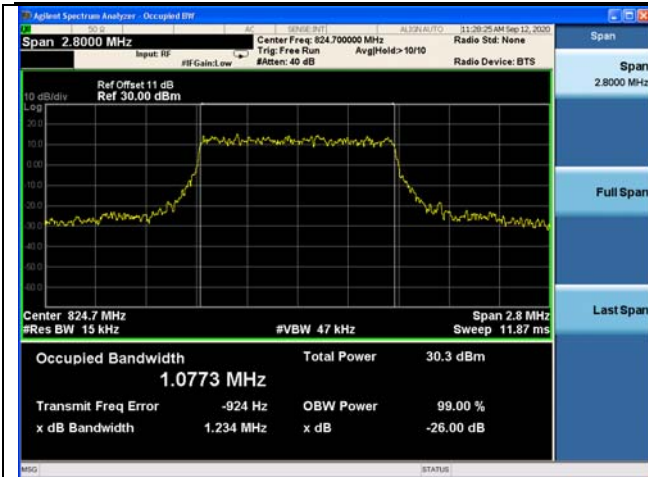


Fig.3



Fig.4

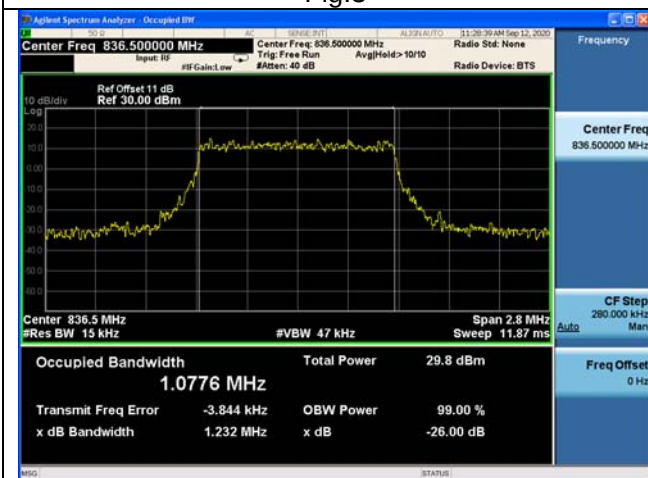


Fig.5



Fig.6

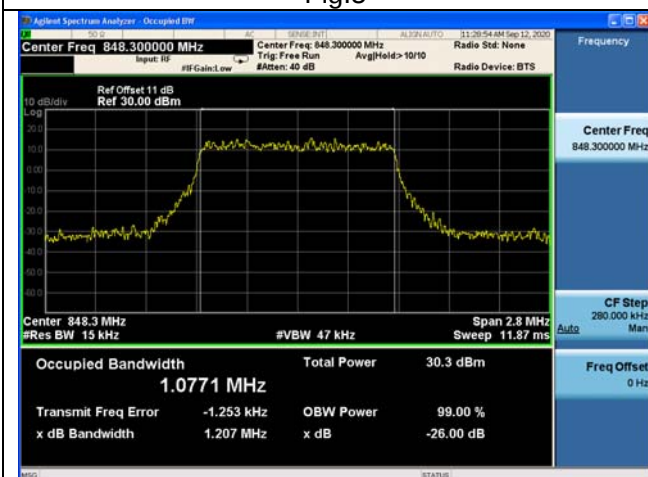


Fig.7

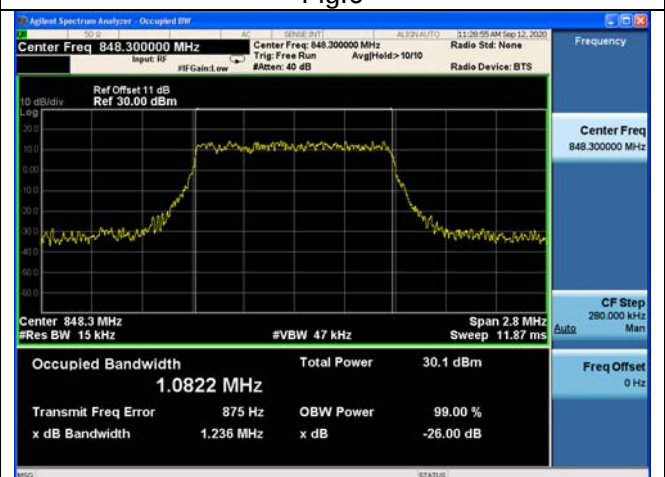


Fig.8

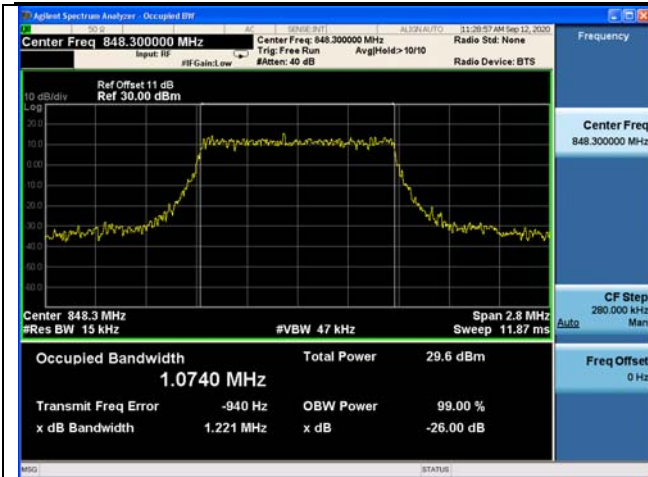


Fig.9



Fig.10

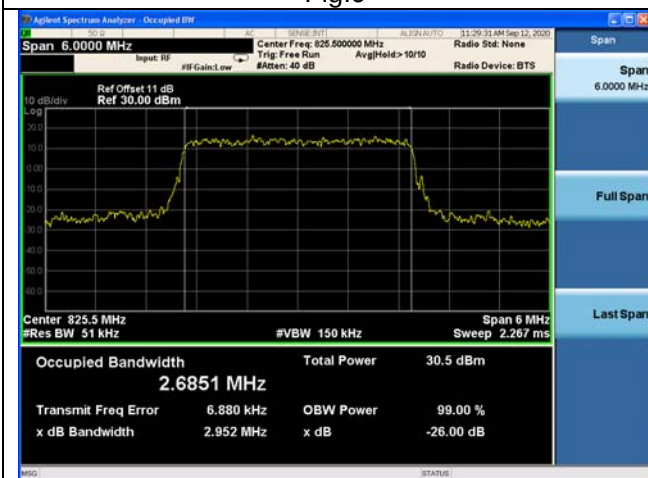


Fig.11

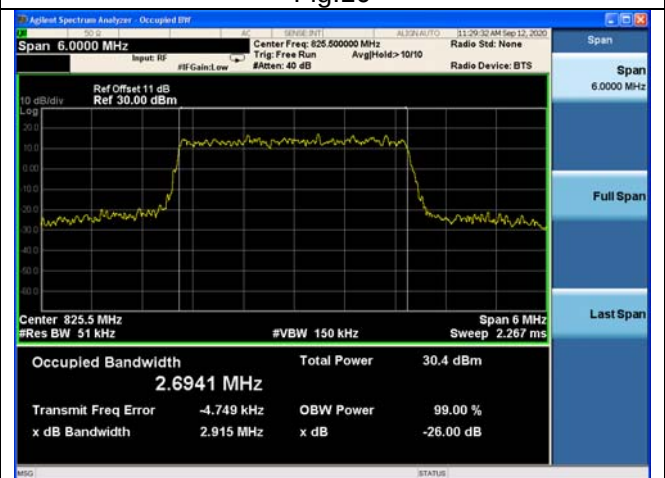


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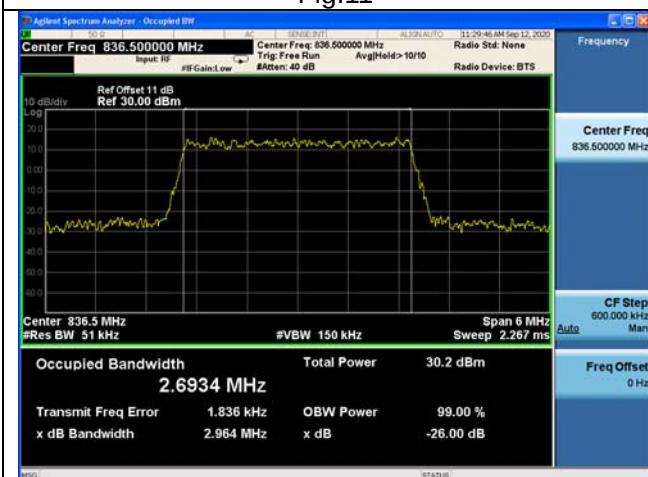


Fig.13

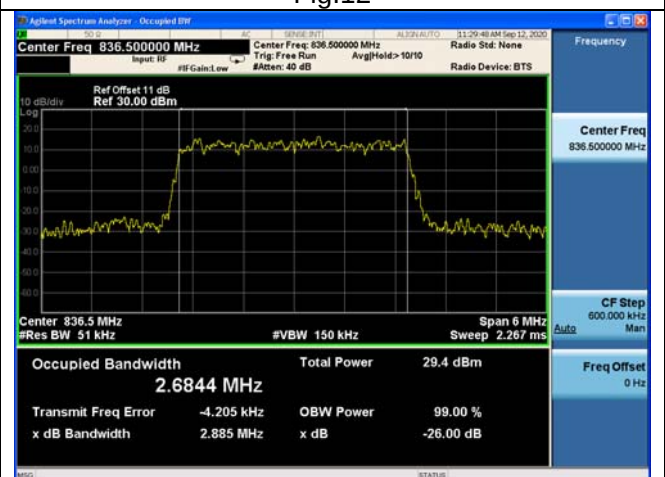


Fig.14

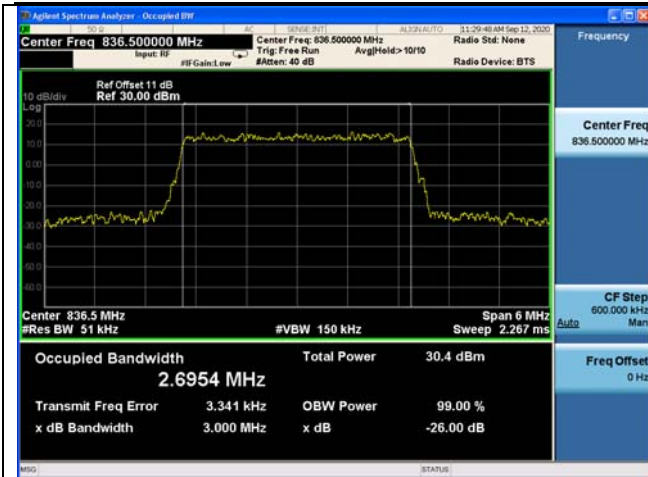


Fig.15

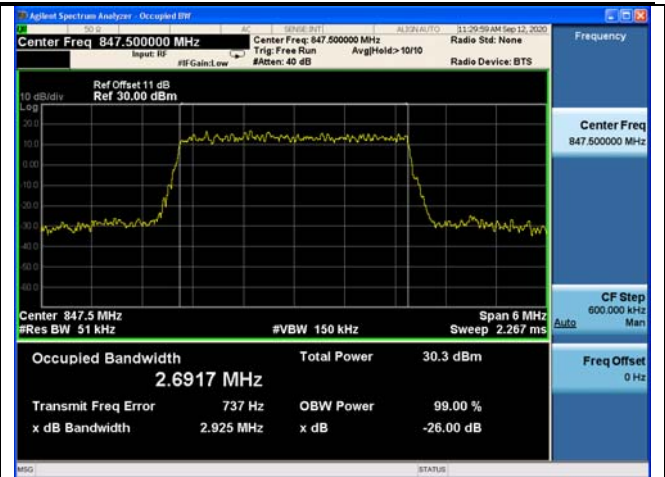


Fig.16

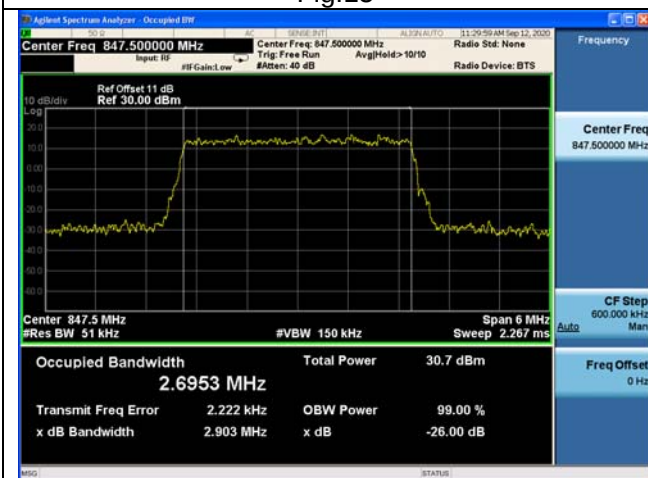


Fig.17



Fig.18

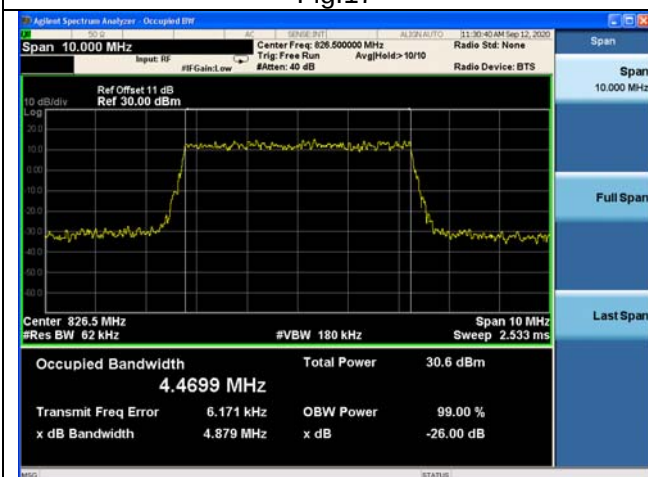


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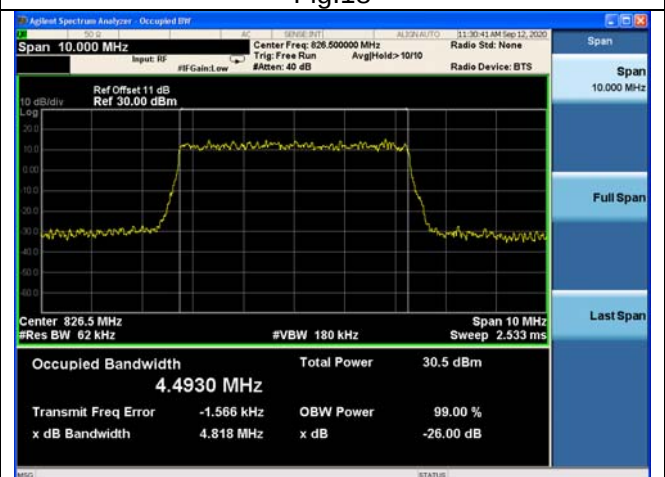


Fig.20

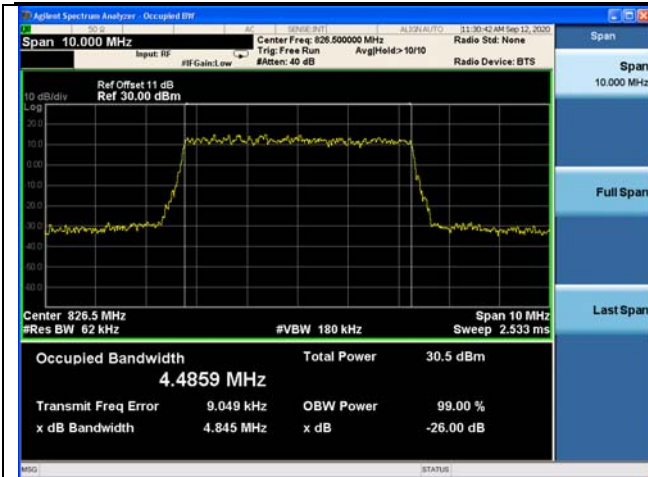


Fig.21



Fig.22

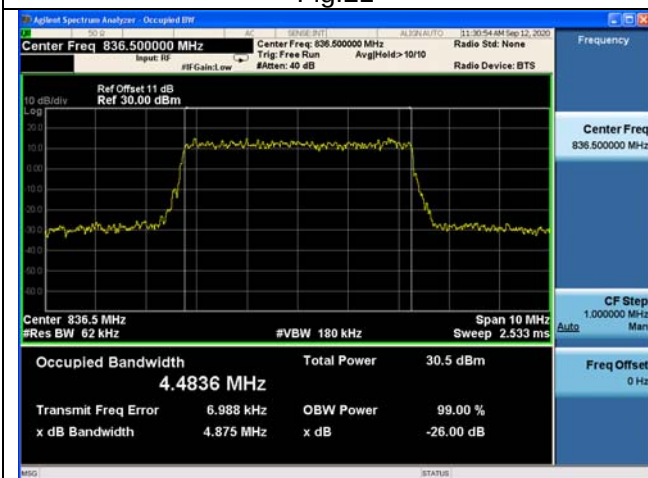


Fig.23

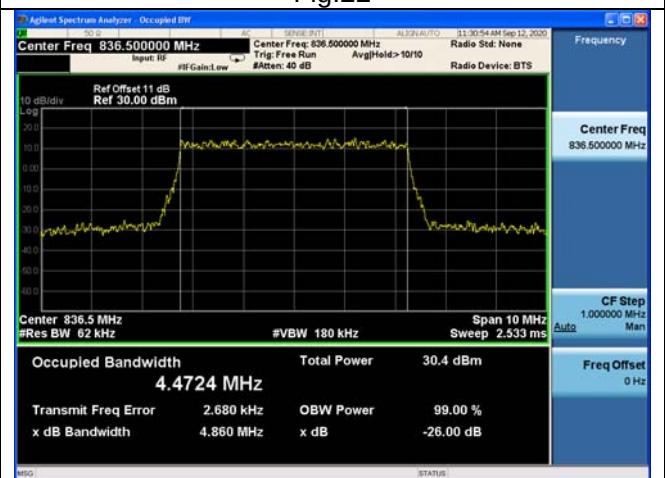


Fig.24

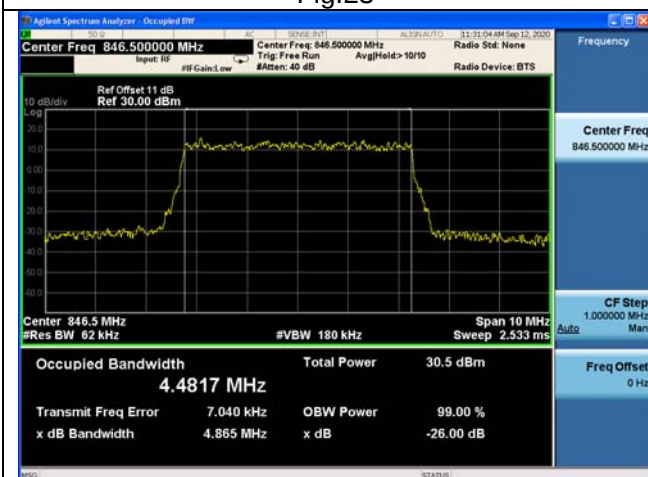


Fig.25

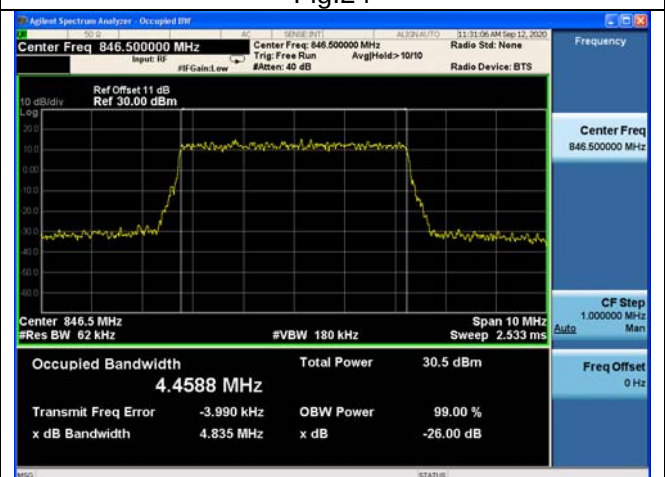


Fig.26

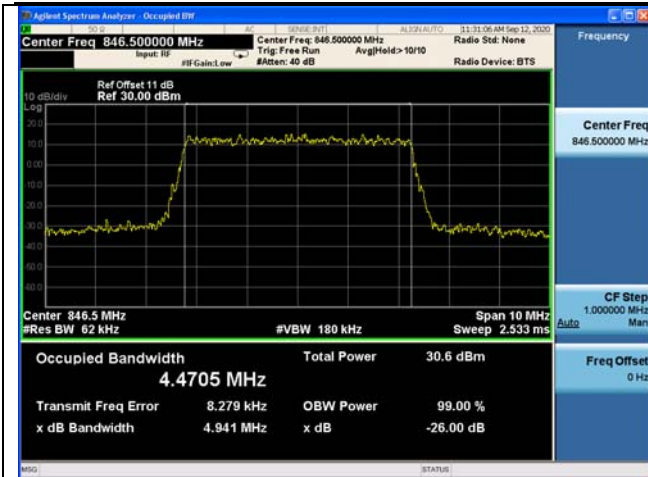


Fig.27

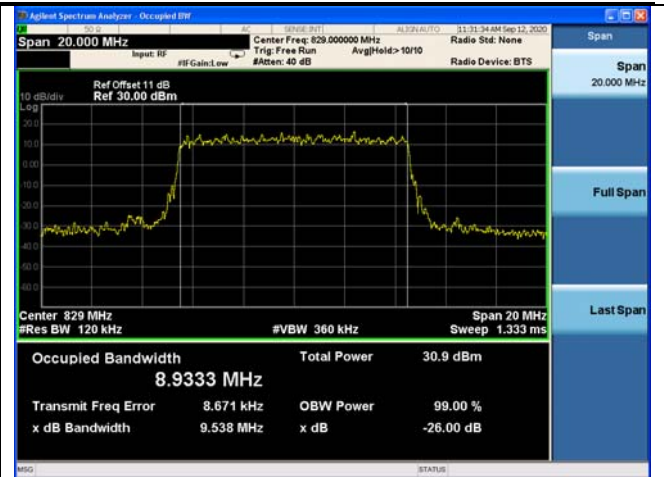


Fig.28

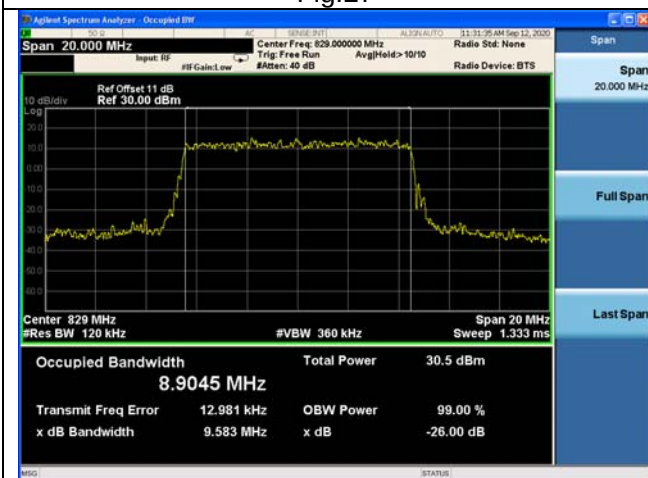


Fig.29

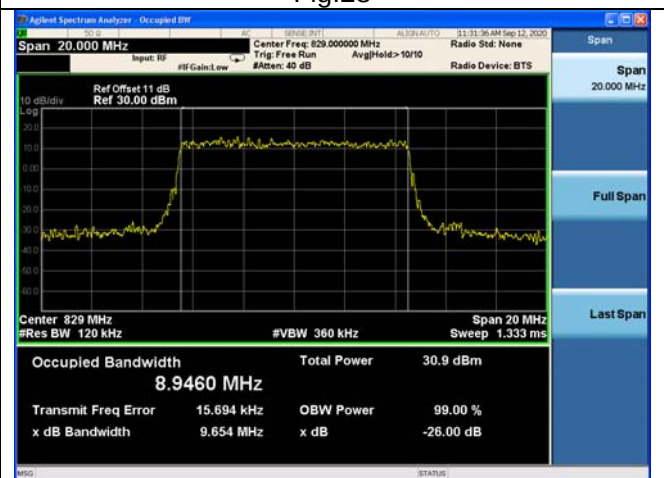


Fig.30

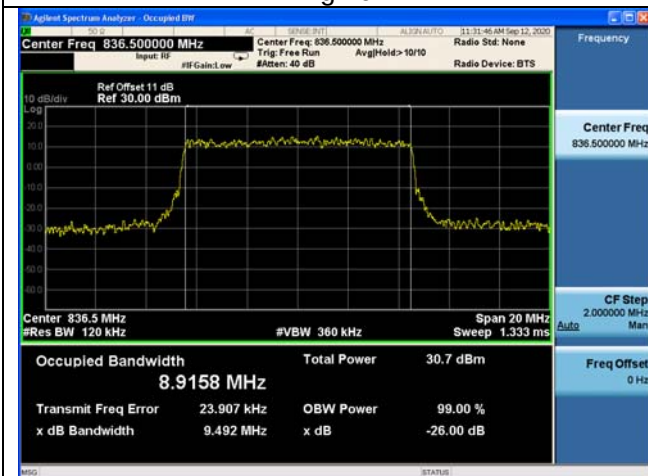


Fig.31

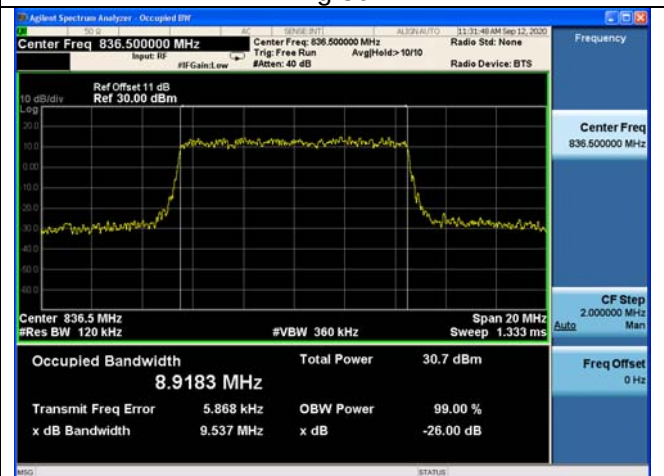


Fig.32

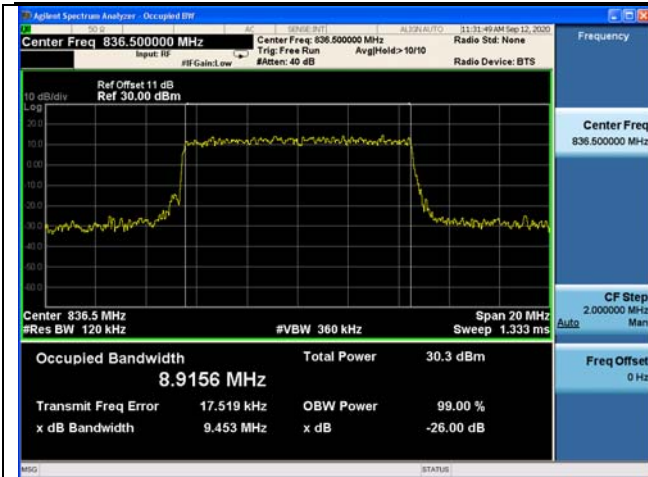


Fig.33



Fig.34

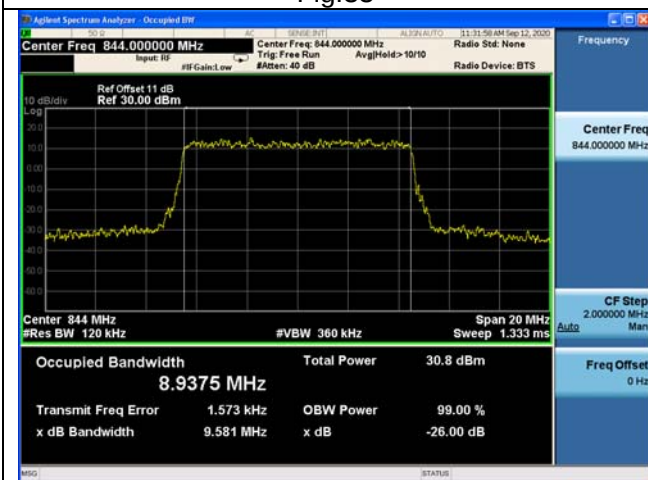


Fig.35

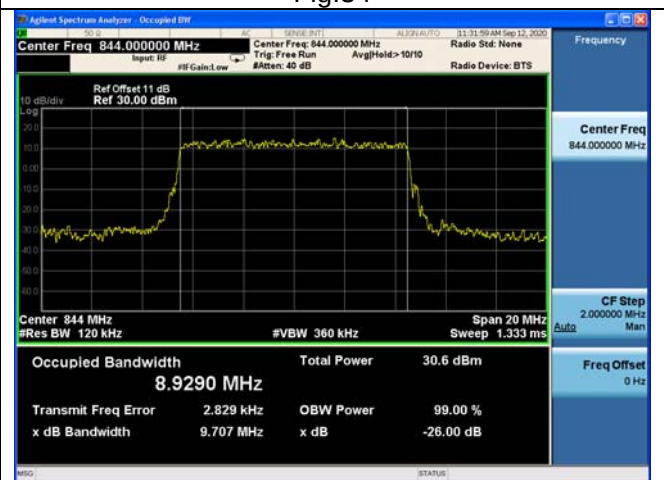


Fig.36

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

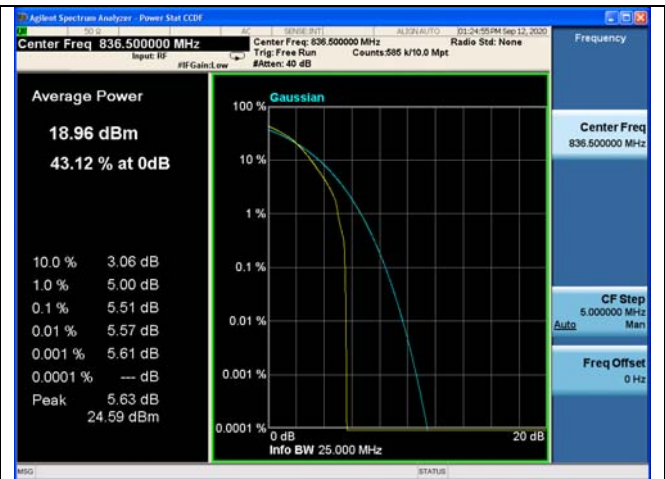


Fig.2



Fig.3

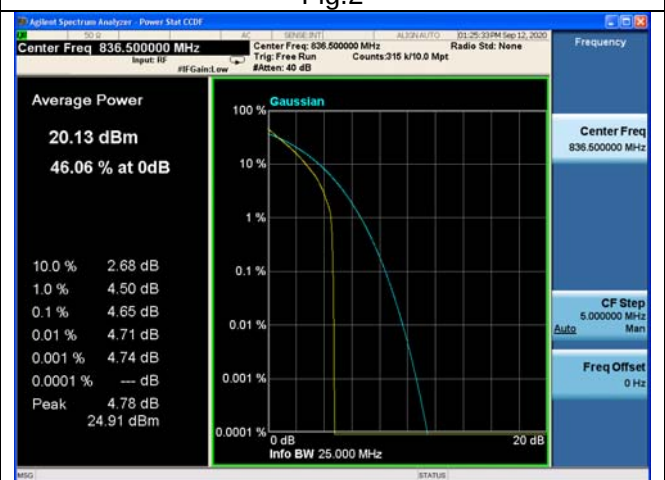


Fig.4

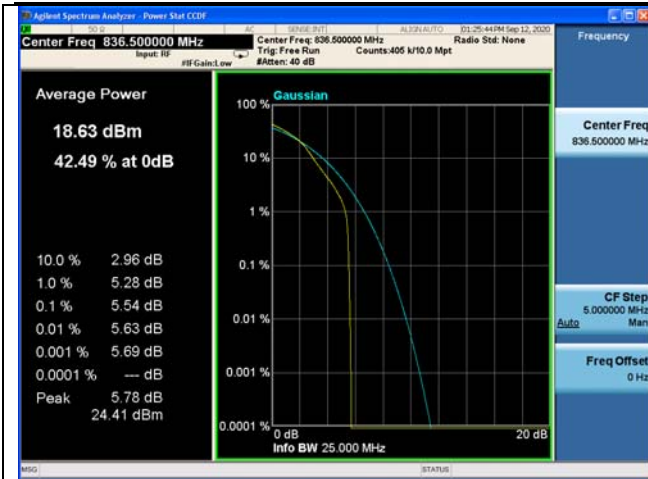


Fig.5

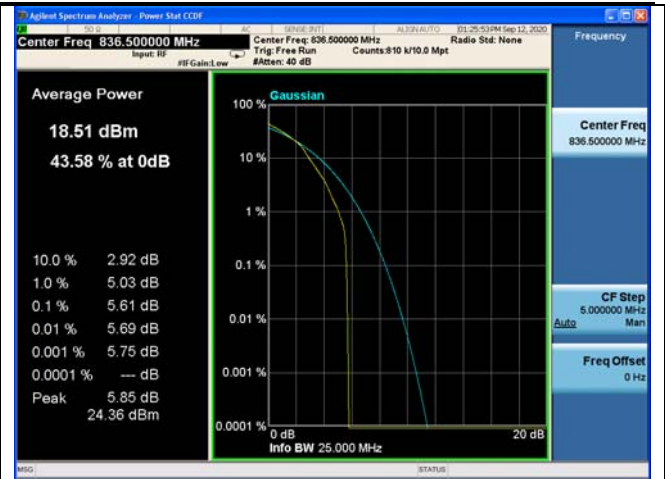


Fig.6



Fig.7

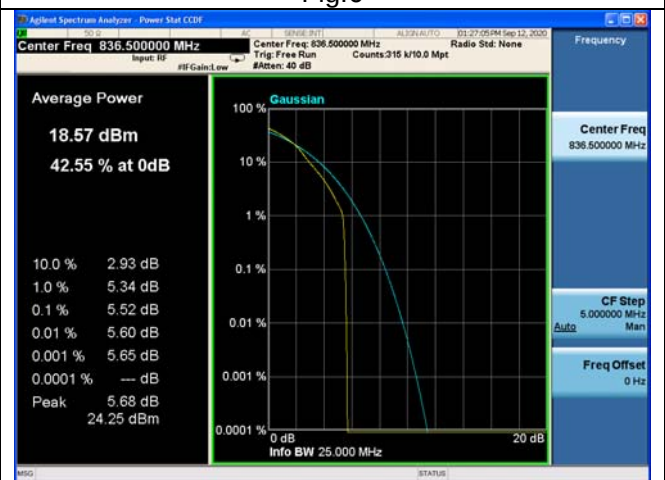


Fig.8



Fig.9

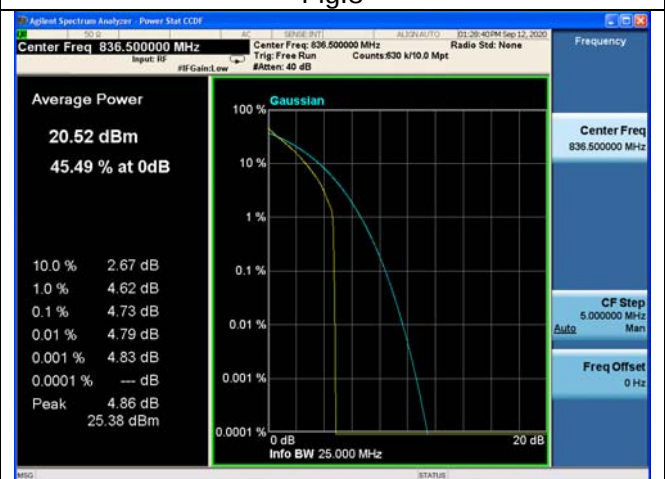


Fig.10



Fig.11

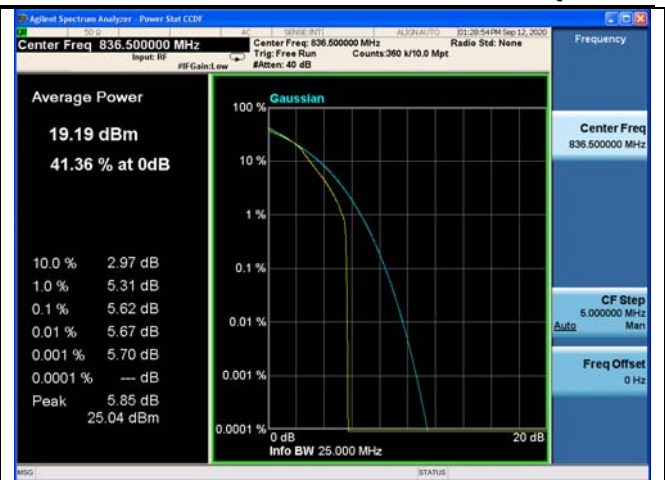


Fig.12

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

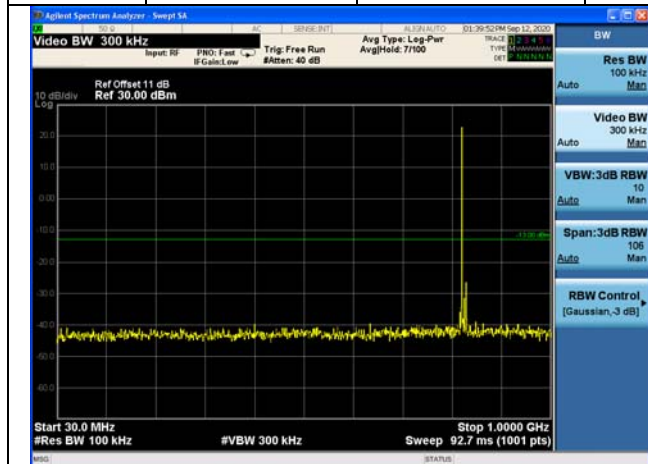


Fig.1

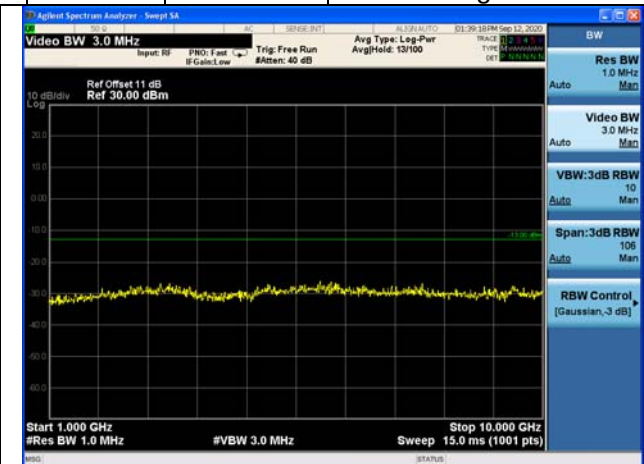


Fig.2

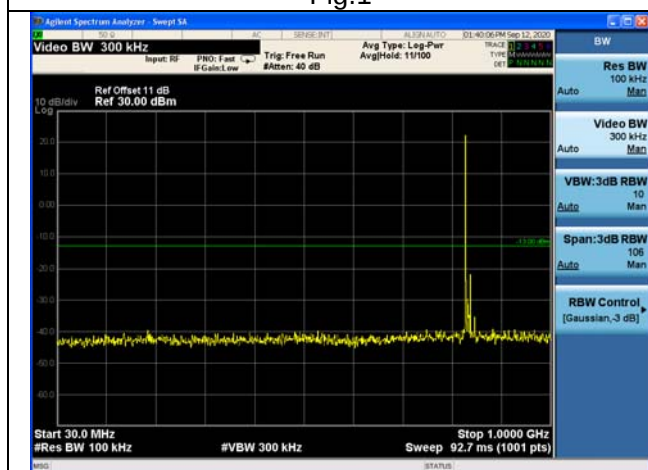


Fig3

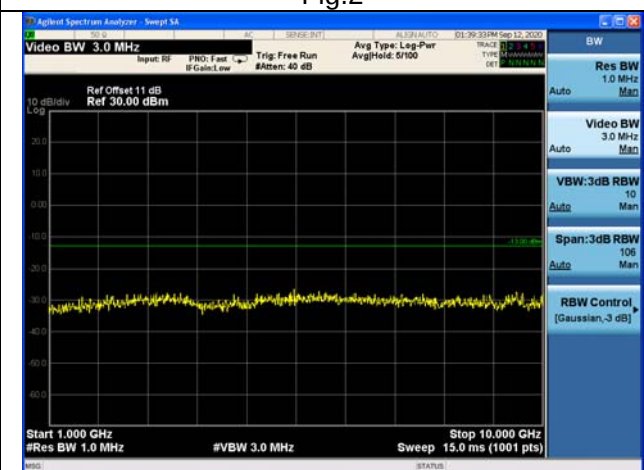


Fig4

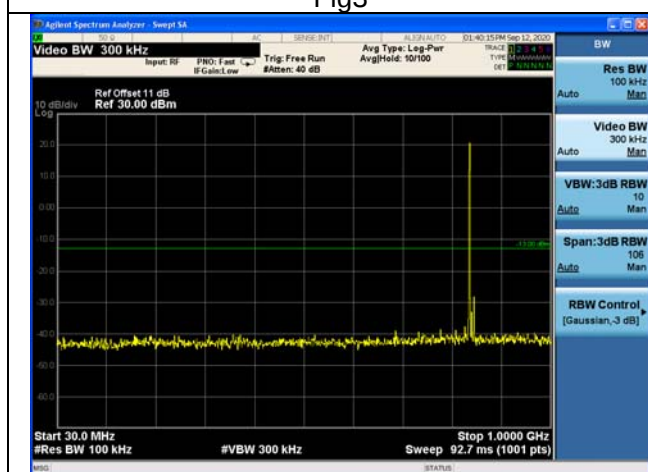


Fig5

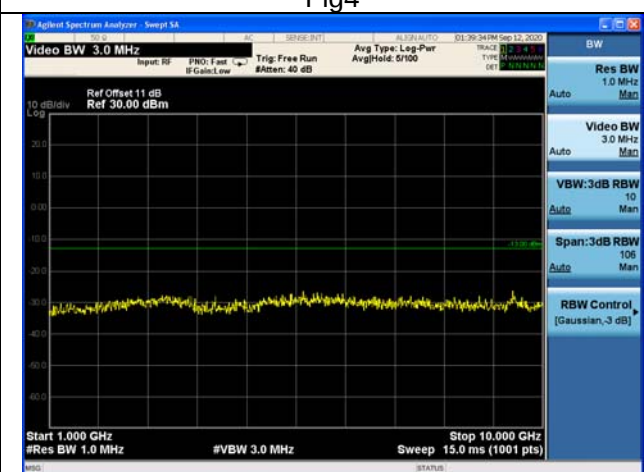


Fig6

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

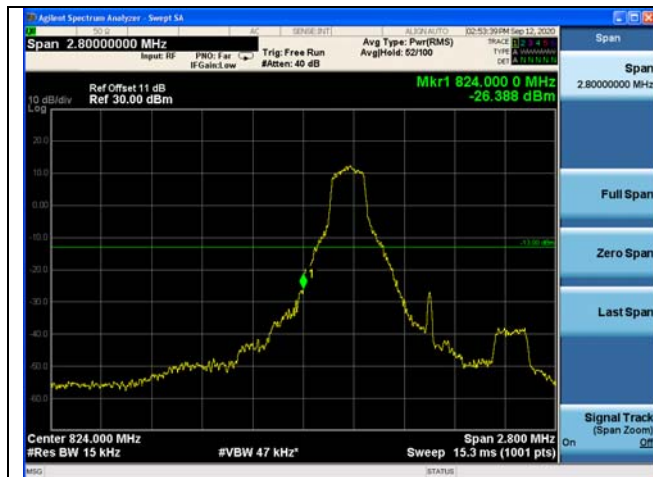


Fig.1



Fig.2

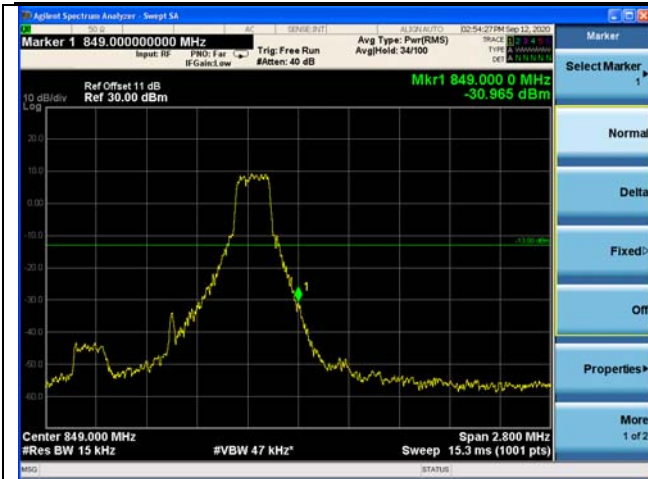


Fig.3

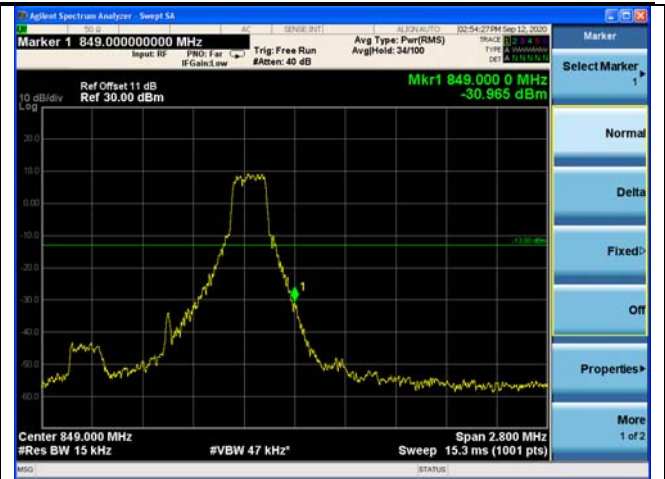


Fig.4

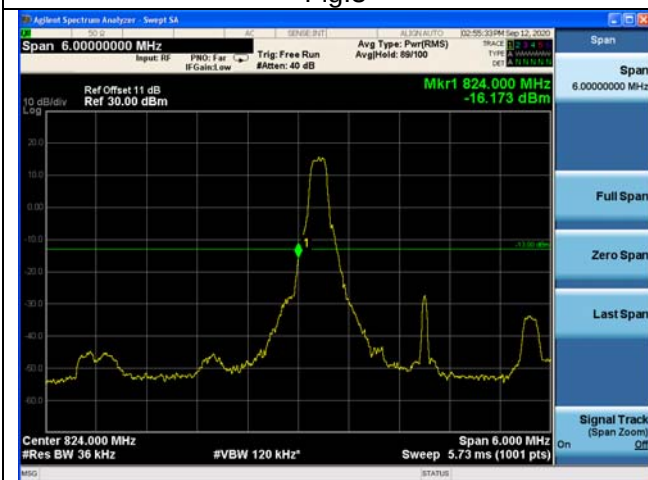


Fig.5



Fig.6

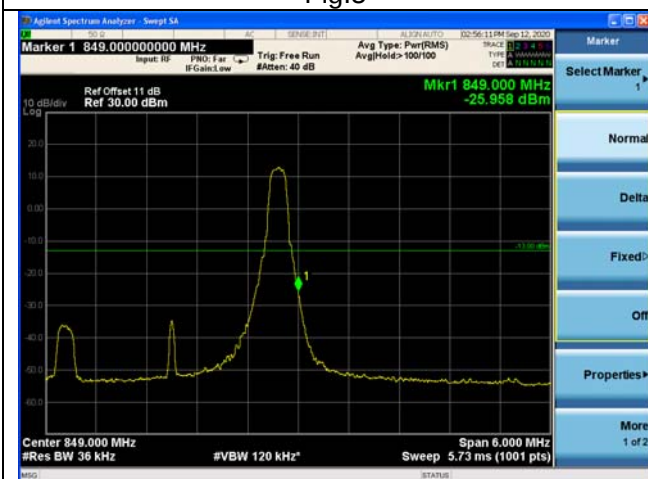


Fig.7



Fig.8

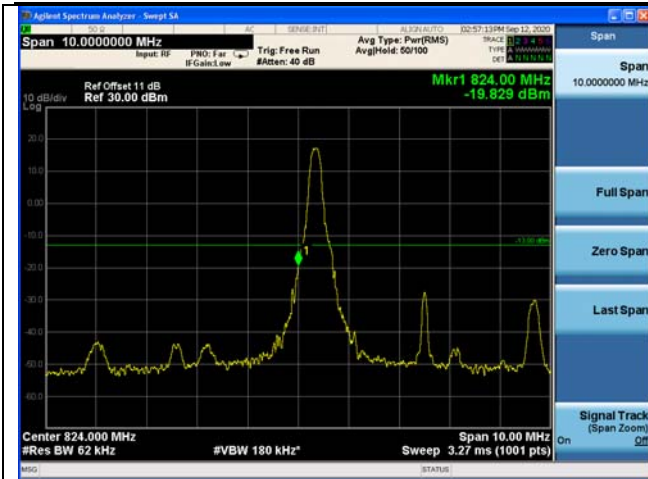


Fig.9



Fig.10

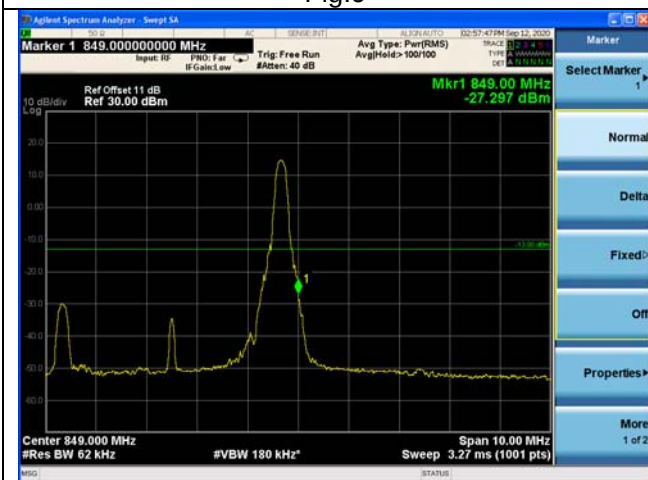


Fig.11



Fig.12

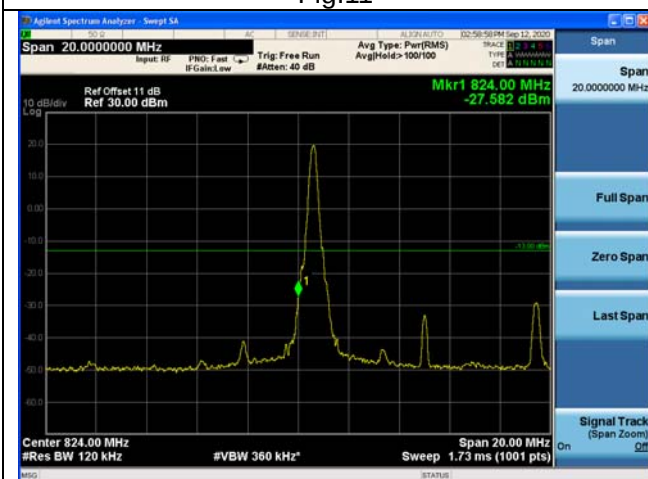


Fig.13



Fig.14

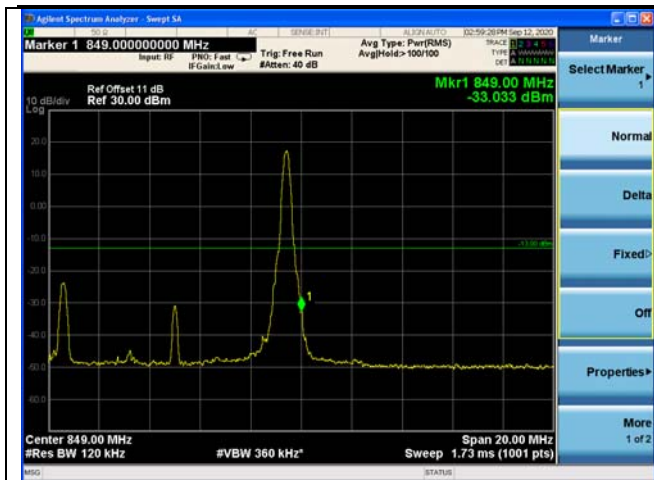


Fig.15



Fig.16

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band5Low Channel			
		1.4M	3M	5M	10M
-10	NV	0.027	0.014	0.011	-0.028
0	NV	-0.001	-0.002	0.046	-0.023
+10	NV	0.026	-0.010	0.043	-0.026
+20	NV	0.000	0.000	0.000	0.000
+30	NV	0.013	0.041	0.017	0.040
+40	NV	0.020	-0.036	-0.033	0.050
+50	NV	0.036	0.005	-0.037	-0.021
+55	NV	0.047	0.005	0.006	-0.009
+20	LV	-0.034	0.034	-0.023	-0.013
+20	HV	0.008	-0.034	0.009	0.006

Temperature(°C)	Voltage	Test Result (ppm) Band5High annel			
		1.4M	3M	5M	10M
-10	NV	-0.035	-0.010	0.040	-0.020
0	NV	-0.011	-0.008	-0.012	0.001
+10	NV	-0.026	0.014	0.050	0.007
+20	NV	0.000	0.000	0.000	0.000
+30	NV	0.042	0.022	0.025	-0.008
+40	NV	-0.005	0.004	-0.029	-0.009
+50	NV	0.022	0.015	-0.030	0.025
+55	NV	-0.002	0.026	0.011	-0.020
+20	LV	-0.002	0.009	0.023	0.031
+20	HV	0.010	-0.013	0.038	0.030