

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 5

1 RF Power Output

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	848.3 (20643)	19.94	19.36	19.06
		836.5 (20525)	19.97	19.42	19.06
		824.7 (20407)	20.01	19.37	19.20
	1RB-Middle (3)	848.3 (20643)	19.95	19.35	19.07
		836.5 (20525)	19.96	19.41	19.10
		824.7 (20407)	20.01	19.37	19.19
	1RB-Low (0)	848.3 (20643)	19.95	19.35	19.07
		836.5 (20525)	19.94	19.43	19.06
		824.7 (20407)	20.01	19.40	19.21
	3RB-High (3)	848.3 (20643)	20.39	19.31	19.23
		836.5 (20525)	20.33	19.35	19.24
		824.7 (20407)	20.34	19.33	19.28
	3RB-Middle (1)	848.3 (20643)	20.42	19.30	19.26
		836.5 (20525)	20.32	19.37	19.27
		824.7 (20407)	20.37	19.36	19.29
	3RB-Low (0)	848.3 (20643)	20.39	19.31	19.27
		836.5 (20525)	20.33	19.35	19.26
		824.7 (20407)	20.35	19.35	19.30
	6RB (0)	848.3 (20643)	19.28	18.33	18.46
		836.5 (20525)	19.29	18.40	18.48
		824.7 (20407)	19.34	18.40	18.49
3MHz	1RB-High (14)	847.5 (20635)	19.95	19.33	19.08
		836.5 (20525)	19.95	19.33	19.08
		825.5 (20415)	19.93	19.40	19.08
	1RB-Middle (7)	847.5 (20635)	19.98	19.35	19.13
		836.5 (20525)	19.95	19.34	19.12
		825.5 (20415)	19.97	19.40	19.09
	1RB-Low (0)	847.5 (20635)	20.00	19.35	19.13
		836.5 (20525)	19.91	19.30	19.08
		825.5 (20415)	19.96	19.43	19.12
	8RB-High (7)	847.5 (20635)	19.30	18.40	18.32
		836.5 (20525)	19.23	18.40	18.35
		825.5 (20415)	19.29	18.44	18.37
	8RB-Middle (4)	847.5 (20635)	19.27	18.44	18.34
		836.5 (20525)	19.25	18.42	18.33
		825.5 (20415)	19.30	18.46	18.38
	8RB-Low (0)	847.5 (20635)	19.29	18.42	18.34
		836.5 (20525)	19.22	18.40	18.32
		825.5 (20415)	19.32	18.47	18.40
15RB (0)	847.5 (20635)	19.31	18.46	18.44	

		836.5 (20525)	19.26	18.42	18.47
		825.5 (20415)	19.33	18.48	18.46
5MHz	1RB-High (24)	846.5 (20625)	19.95	19.31	19.07
		836.5 (20525)	19.96	19.40	19.10
		826.5 (20425)	19.96	19.27	19.08
	1RB-Middle (12)	846.5 (20625)	20.00	19.37	19.12
		836.5 (20525)	19.97	19.40	19.11
		826.5 (20425)	19.96	19.33	19.10
	1RB-Low (0)	846.5 (20625)	20.02	19.40	19.10
		836.5 (20525)	19.94	19.33	19.06
		826.5 (20425)	19.99	19.38	19.14
	12RB-High (13)	846.5 (20625)	19.27	18.39	18.36
		836.5 (20525)	19.22	18.41	18.37
		826.5 (20425)	19.26	18.43	18.38
	12RB-Middle (6)	846.5 (20625)	19.28	18.42	18.38
		836.5 (20525)	19.22	18.42	18.38
		826.5 (20425)	19.26	18.43	18.39
	12RB-Low (0)	846.5 (20625)	19.30	18.44	18.39
		836.5 (20525)	19.23	18.39	18.37
		826.5 (20425)	19.30	18.44	18.42
	25RB (0)	846.5 (20625)	19.25	18.46	18.42
		836.5 (20525)	19.20	18.46	18.42
		826.5 (20425)	19.27	18.47	18.44
10MHz	1RB-High (49)	844 (20600)	19.98	19.41	19.12
		836.5 (20525)	19.95	19.33	19.08
		829 (20450)	19.91	19.32	19.09
	1RB-Middle (24)	844 (20600)	20.06	19.46	19.16
		836.5 (20525)	19.97	19.39	19.13
		829 (20450)	19.94	19.37	19.07
	1RB-Low (0)	844 (20600)	20.05	19.45	19.21
		836.5 (20525)	19.96	19.35	19.10
		829 (20450)	19.99	19.43	19.12
	25RB-High (25)	844 (20600)	19.28	18.49	18.44
		836.5 (20525)	19.19	18.43	18.42
		829 (20450)	19.24	18.40	18.40
	25RB-Middle (12)	844 (20600)	19.32	18.50	18.49
		836.5 (20525)	19.22	18.45	18.44
		829 (20450)	19.24	18.46	18.43
	25RB-Low (0)	844 (20600)	19.29	18.50	18.49
		836.5 (20525)	19.25	18.44	18.43
		829 (20450)	19.27	18.44	18.44
	50RB (0)	844 (20600)	19.33	18.45	18.48
		836.5 (20525)	19.25	18.40	18.41
		829 (20450)	19.22	18.39	18.42

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	1.0906	Fig.1	1.0906	Fig.2	1.0904	Fig.3
	836.5	20525		6	0	1.0908	Fig.4	1.0895	Fig.5	1.0914	Fig.6
	848.3	20643		6	0	1.0911	Fig.7	1.0916	Fig.8	1.0896	Fig.9
	825.5	20415	3	15	0	2.7227	Fig.10	2.7158	Fig.11	2.7257	Fig.12
	836.5	20525		15	0	2.7217	Fig.13	2.7219	Fig.14	2.7123	Fig.15
	847.5	20635		15	0	2.7249	Fig.16	2.7248	Fig.17	2.7197	Fig.18
	826.5	20425	5	25	0	4.4874	Fig.19	4.4905	Fig.20	4.4834	Fig.21
	836.5	20525		25	0	4.4860	Fig.22	4.4911	Fig.23	4.4773	Fig.24
	846.5	20625		25	0	4.4860	Fig.25	4.4816	Fig.26	4.4785	Fig.27
	829	20450	10	50	0	8.9716	Fig.28	8.9668	Fig.29	8.9461	Fig.30
	836.5	20525		50	0	8.9582	Fig.31	8.9523	Fig.32	8.9526	Fig.33
	844	20600		50	0	8.9586	Fig.34	8.9339	Fig.35	8.9719	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	1.462	Fig.1	1.463	Fig.2	1.427	Fig.3
	836.5	20525		6	0	1.526	Fig.4	1.428	Fig.5	1.420	Fig.6
	848.3	20643		6	0	1.522	Fig.7	1.471	Fig.8	1.455	Fig.9
	825.5	20415	3	15	0	3.417	Fig.10	3.441	Fig.11	3.387	Fig.12
	836.5	20525		15	0	3.362	Fig.13	3.416	Fig.14	3.378	Fig.15
	847.5	20635		15	0	3.409	Fig.16	3.386	Fig.17	3.385	Fig.18
	826.5	20425	5	25	0	5.140	Fig.19	5.126	Fig.20	5.100	Fig.21
	836.5	20525		25	0	5.167	Fig.22	5.133	Fig.23	5.105	Fig.24
	846.5	20625		25	0	5.145	Fig.25	5.129	Fig.26	5.068	Fig.27
	829	20450	10	50	0	10.02	Fig.28	10.14	Fig.29	10.01	Fig.30
	836.5	20525		50	0	9.944	Fig.31	9.884	Fig.32	9.844	Fig.33
	844	20600		50	0	9.958	Fig.34	9.955	Fig.35	9.979	Fig.36

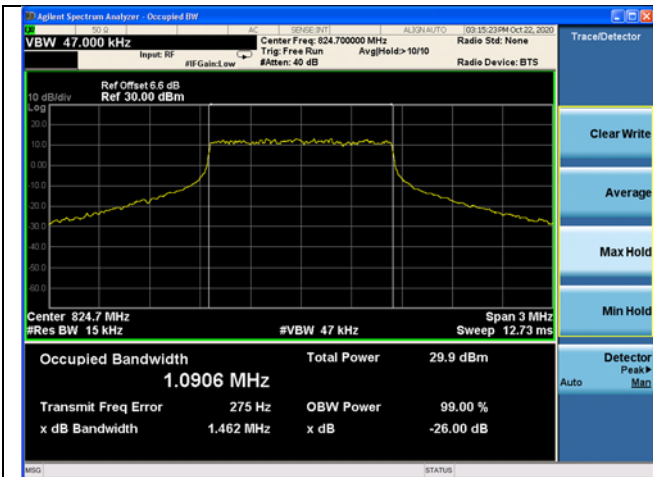


Fig.1

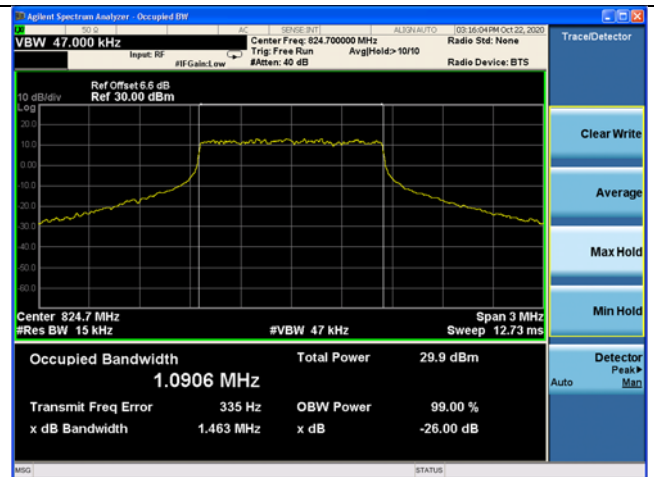


Fig.2

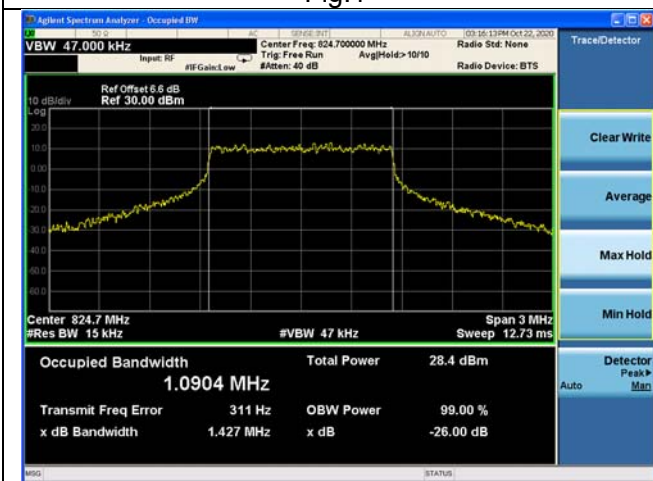


Fig.3

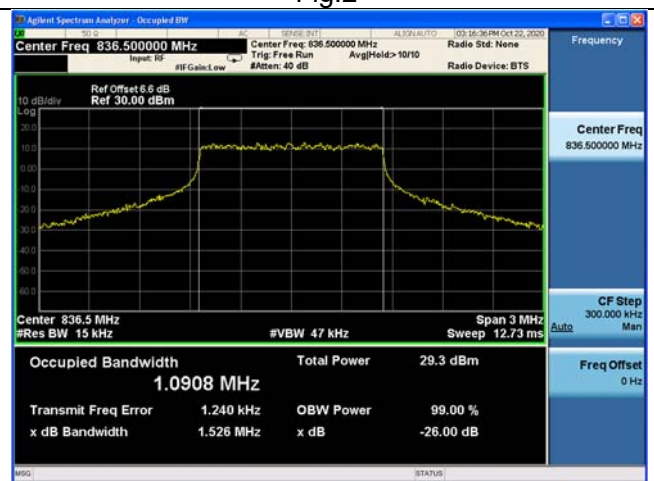


Fig.4

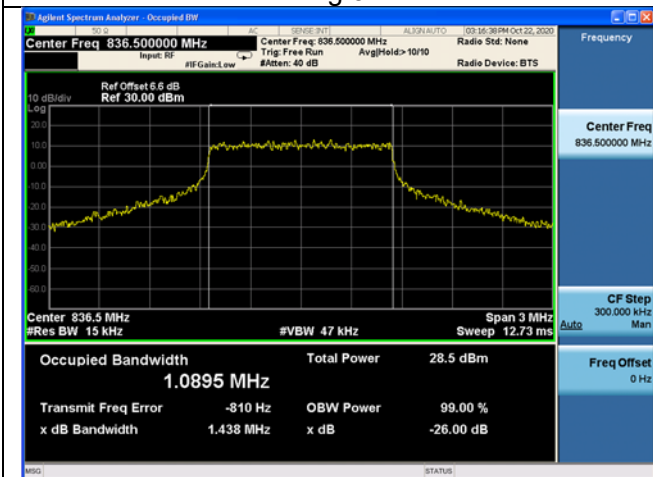


Fig.5

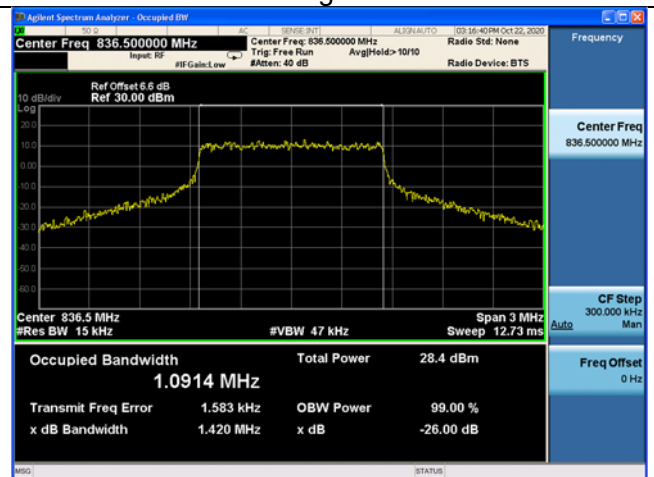


Fig.6

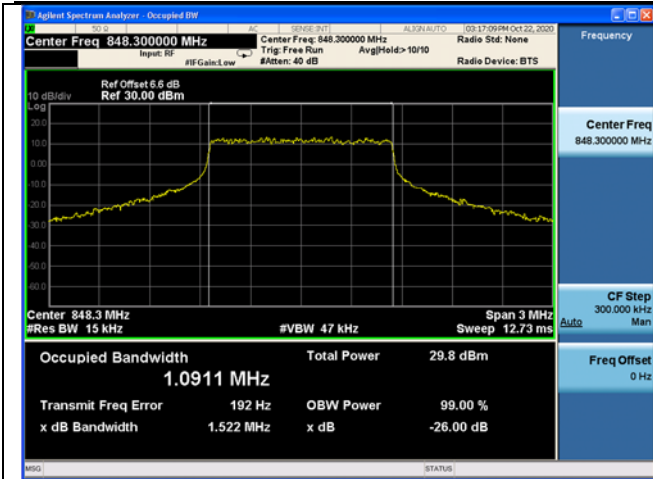


Fig.7



Fig.8

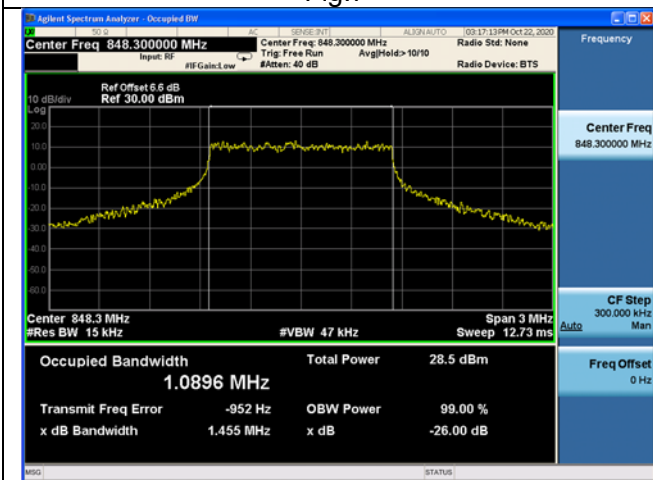


Fig.9

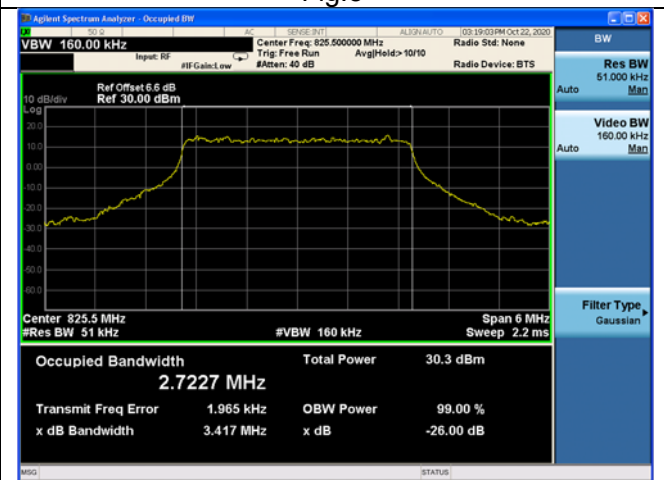


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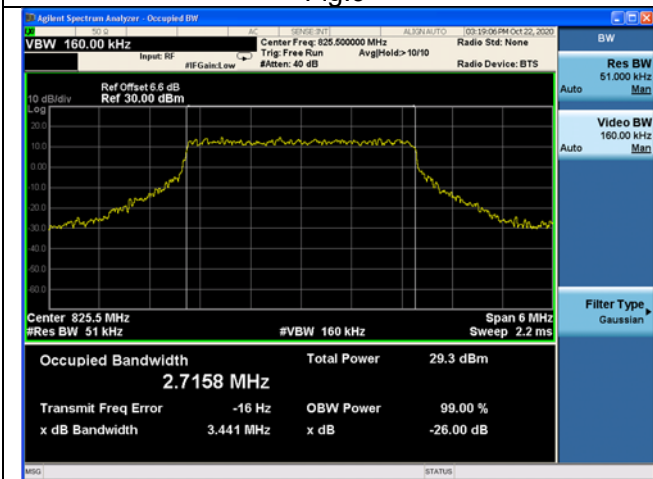


Fig.11

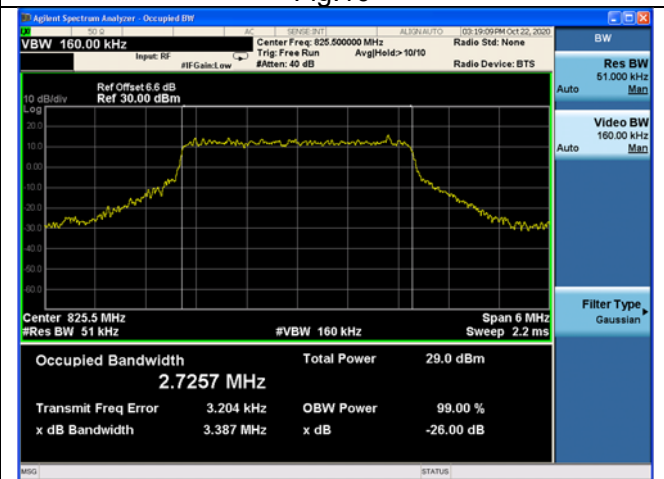


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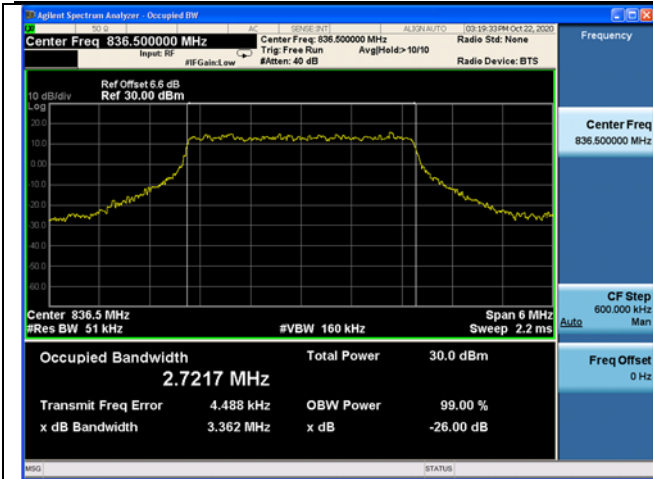


Fig.13

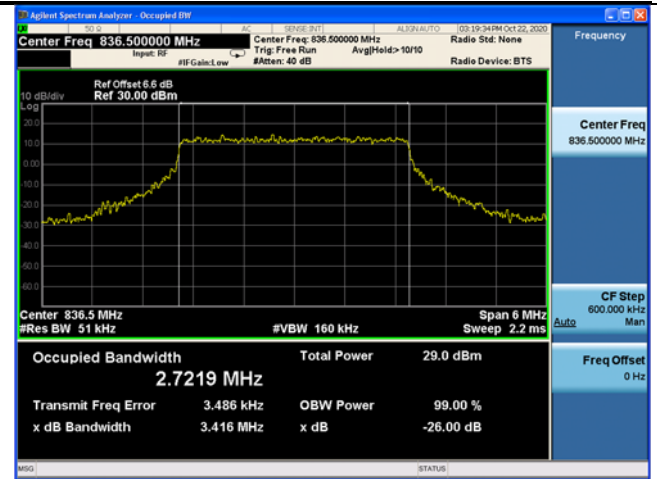


Fig.14

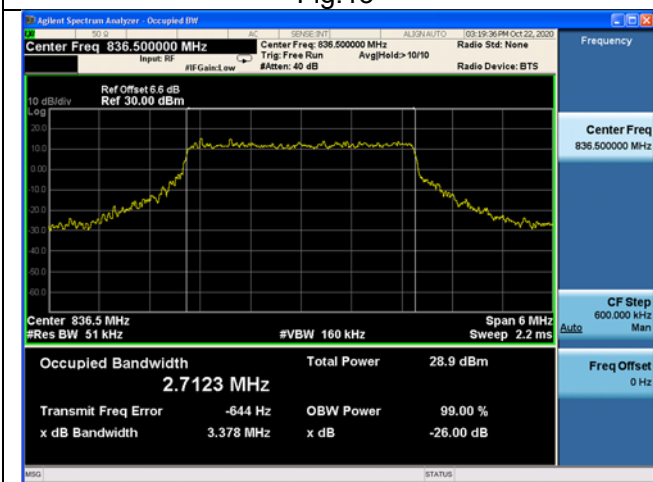


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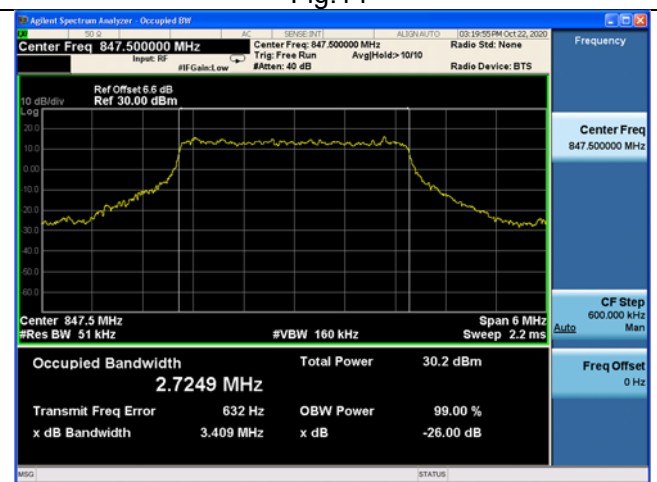


Fig.16

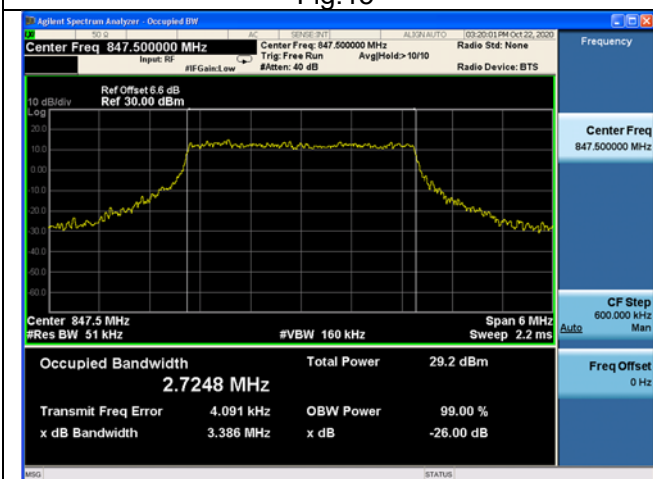


Fig.17

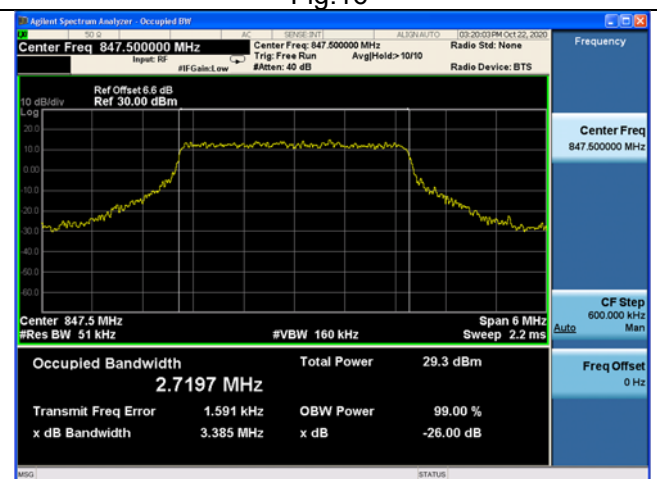


Fig.18

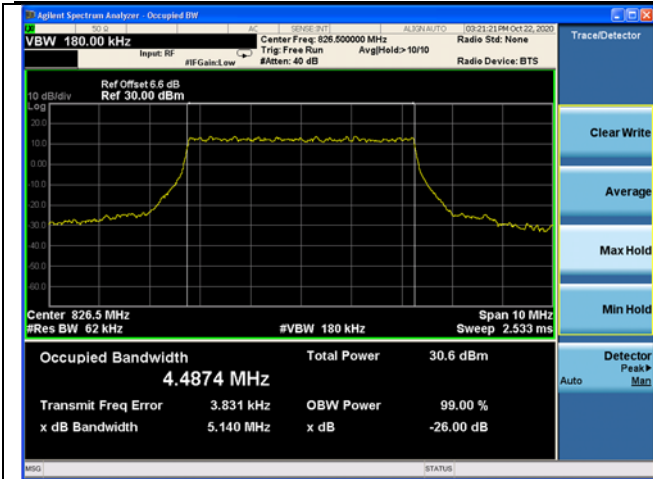


Fig.19

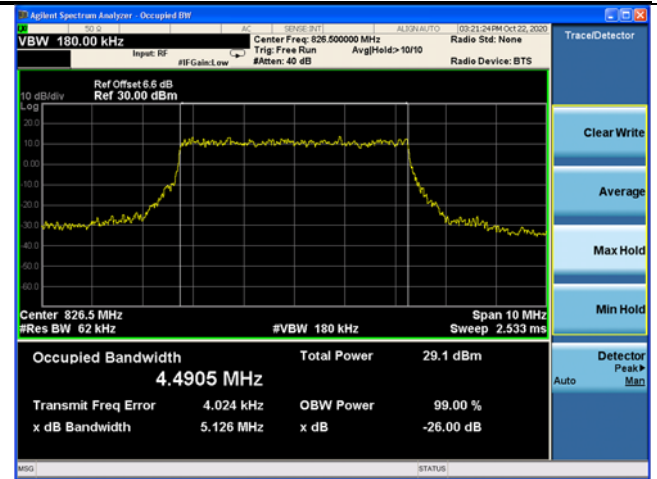


Fig.20

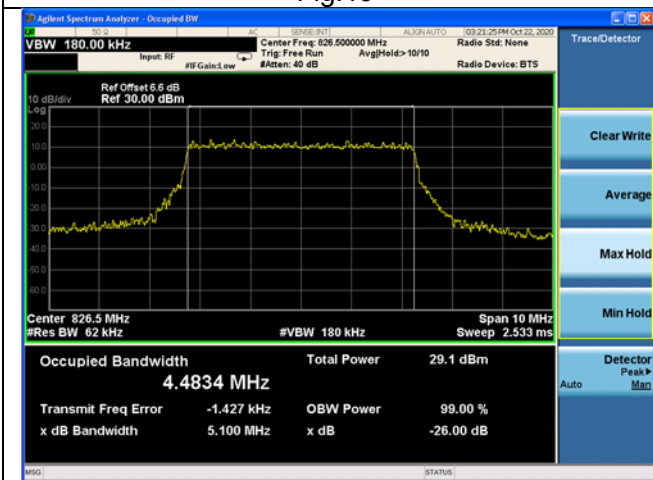


Fig.21

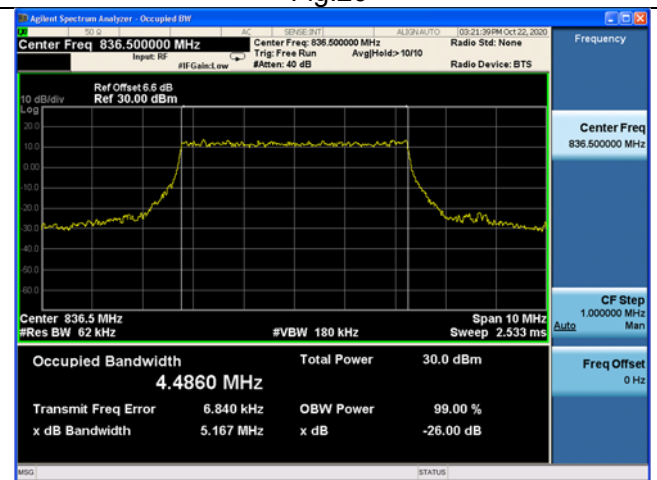


Fig.22

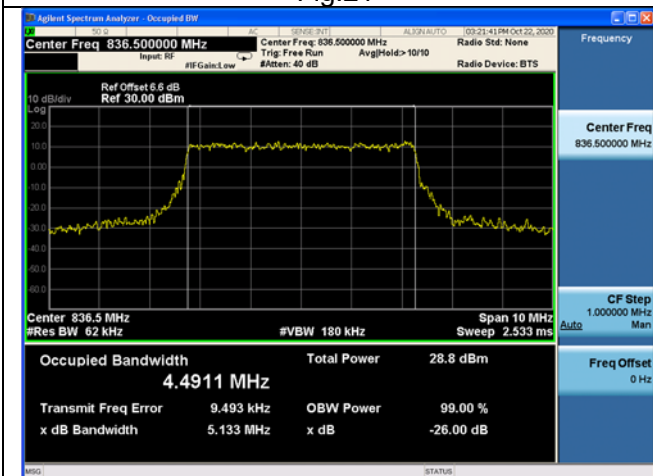


Fig.23

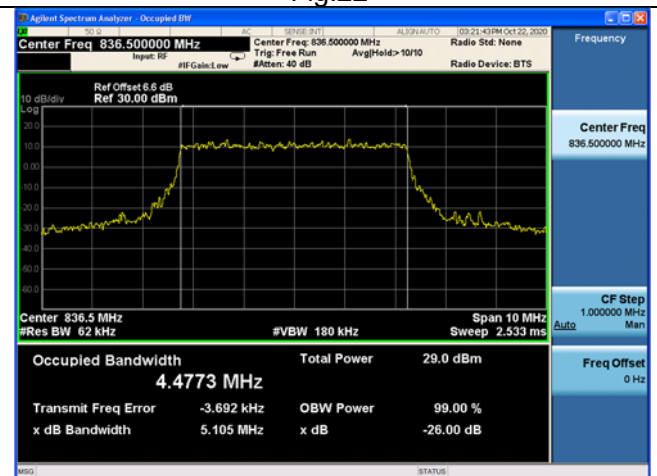


Fig.24

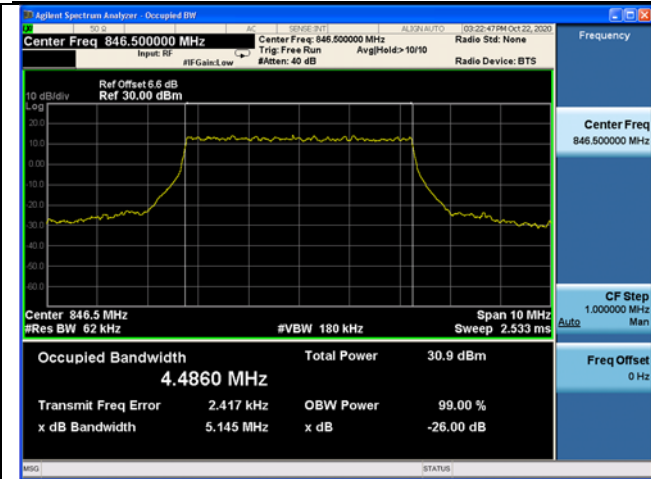


Fig.25

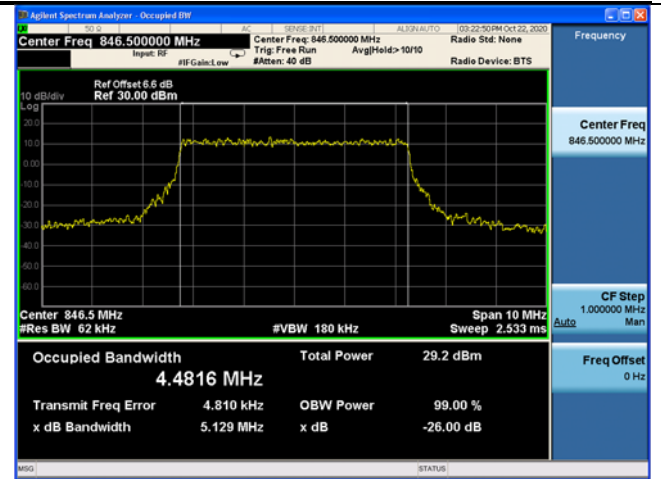


Fig.26

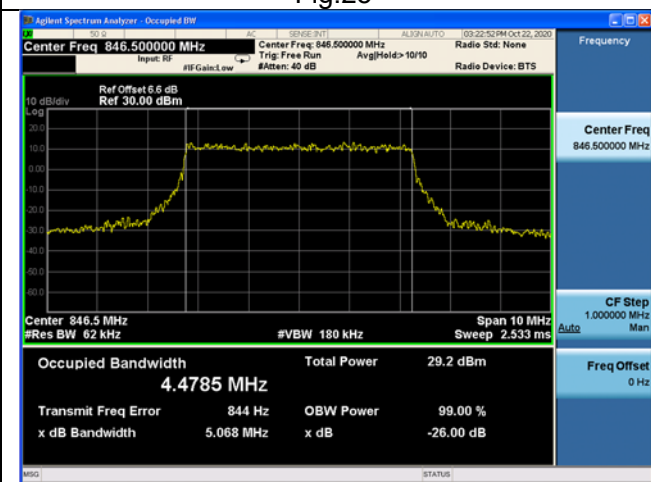


Fig.27

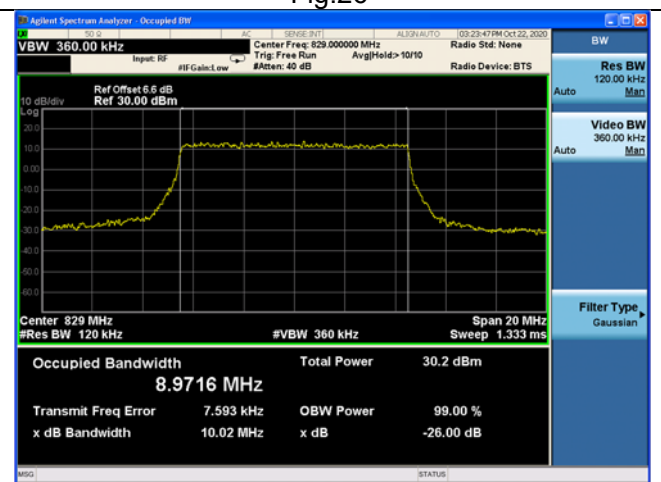


Fig.28

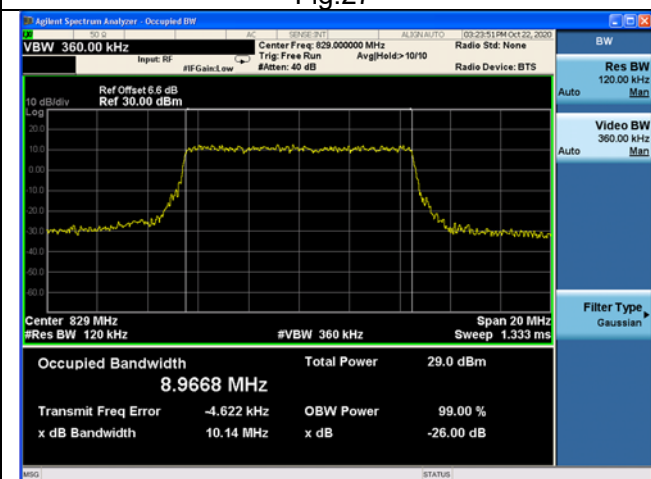


Fig.29

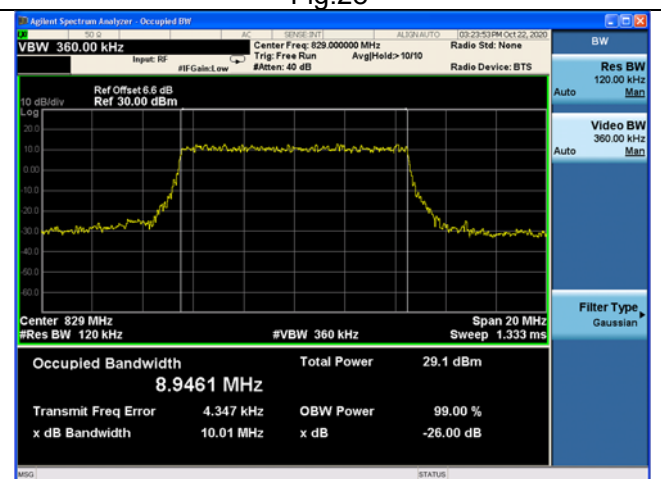


Fig.30

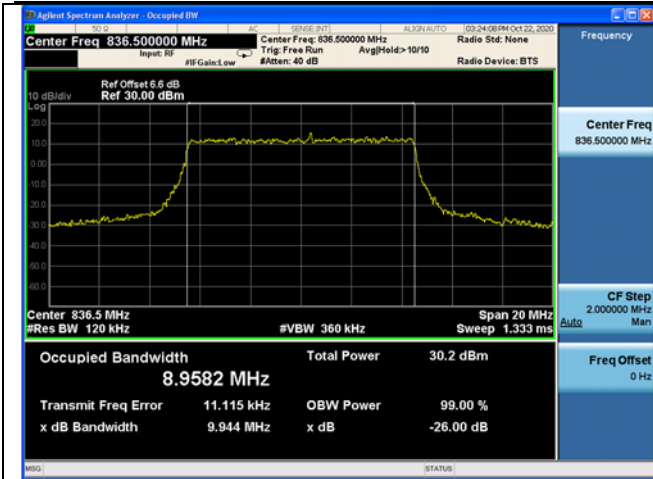


Fig.31

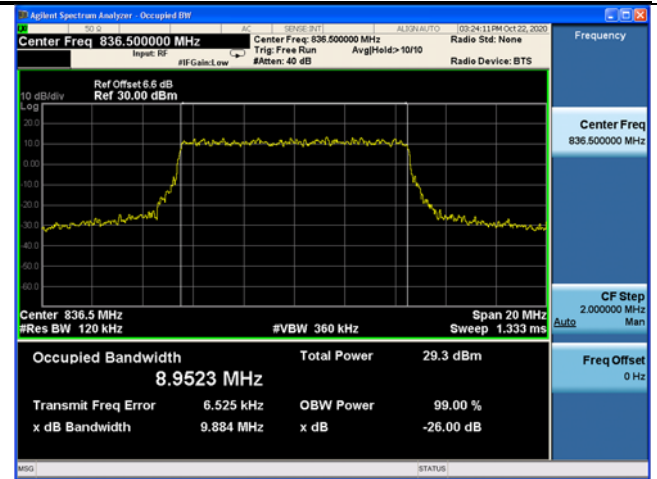


Fig.32

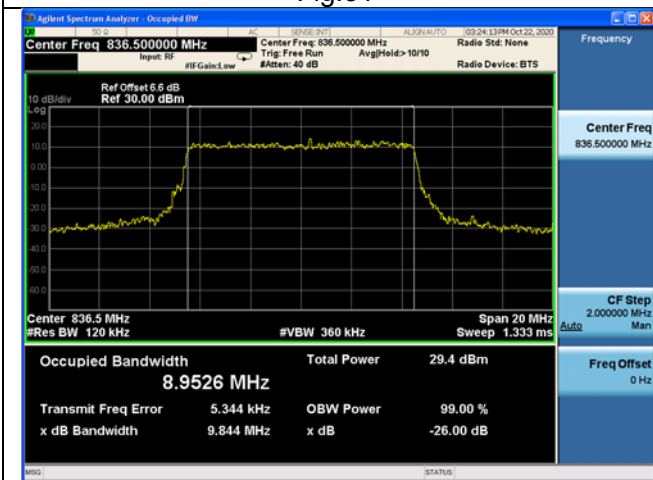


Fig.33

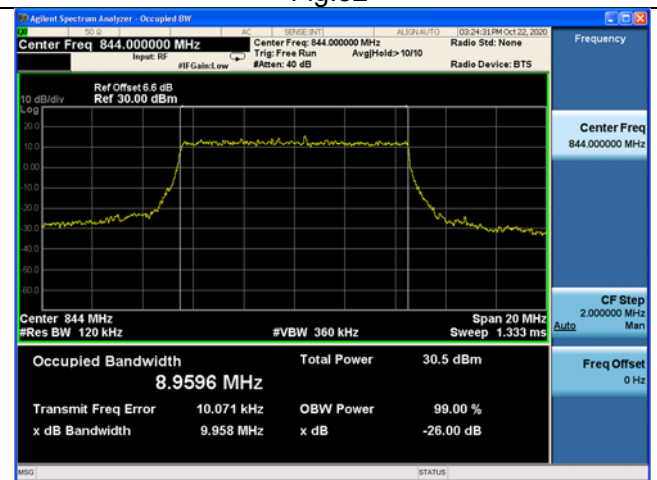


Fig.34

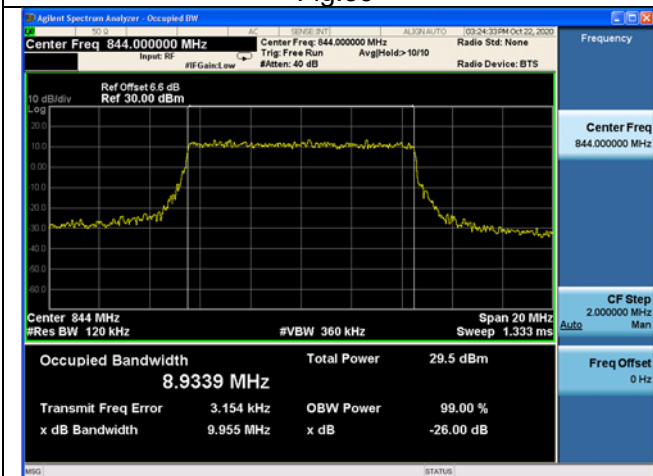


Fig.35

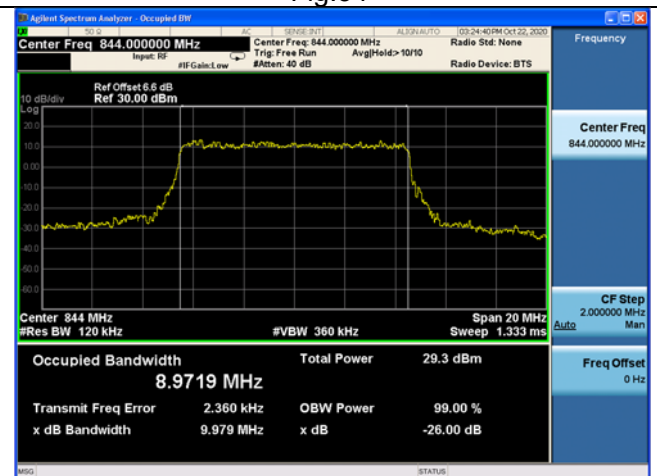


Fig.36

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

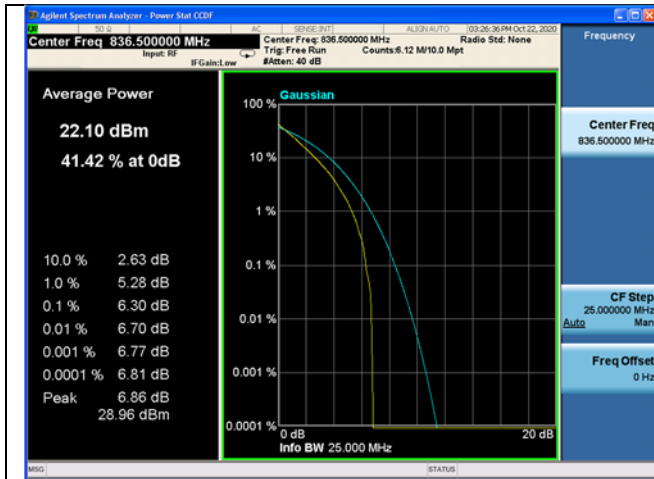


Fig.1

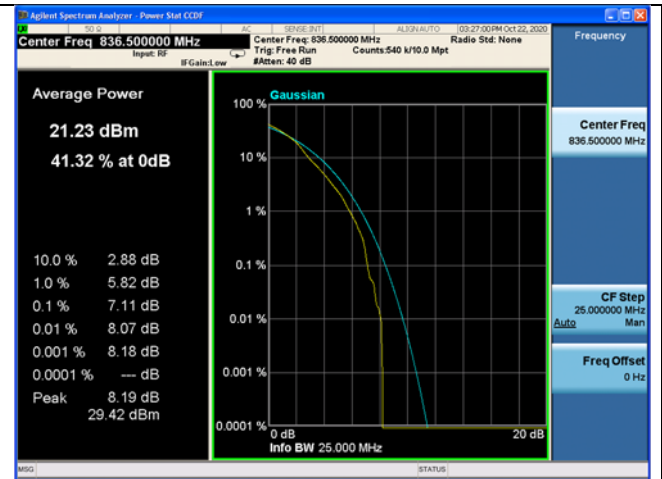


Fig.2

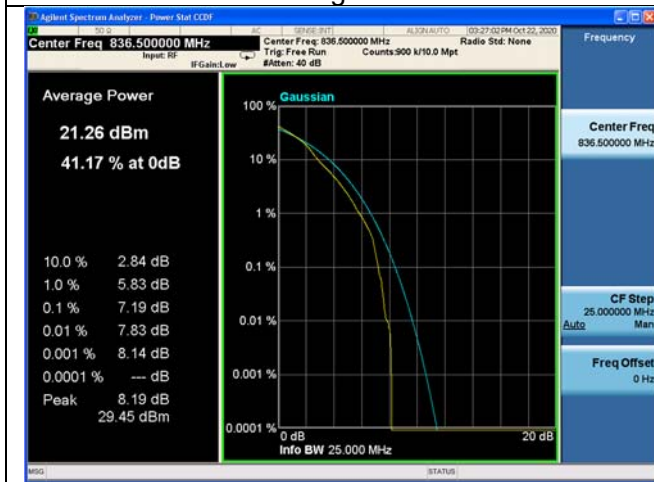


Fig.3



Fig.4

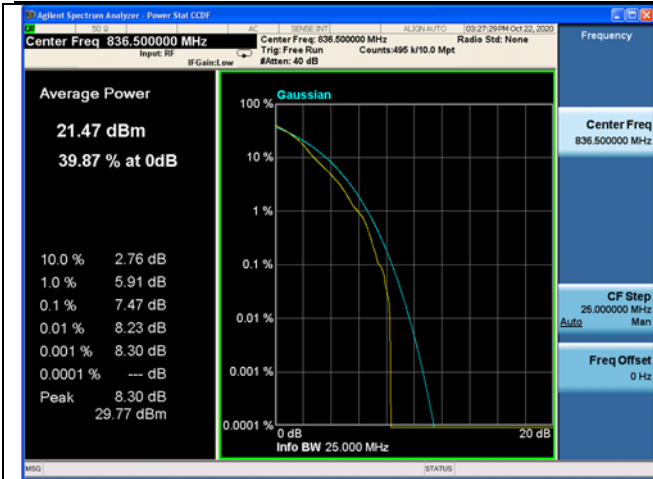


Fig.5

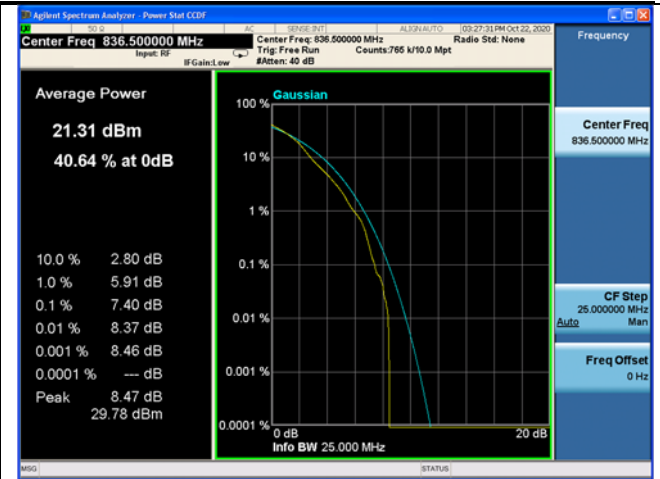


Fig.6

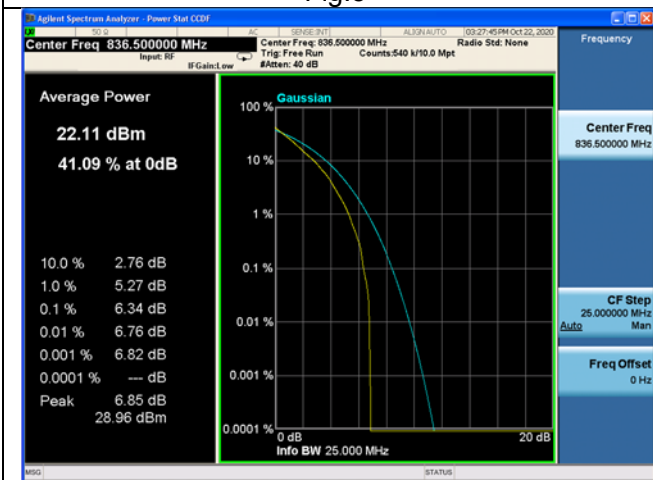


Fig.7

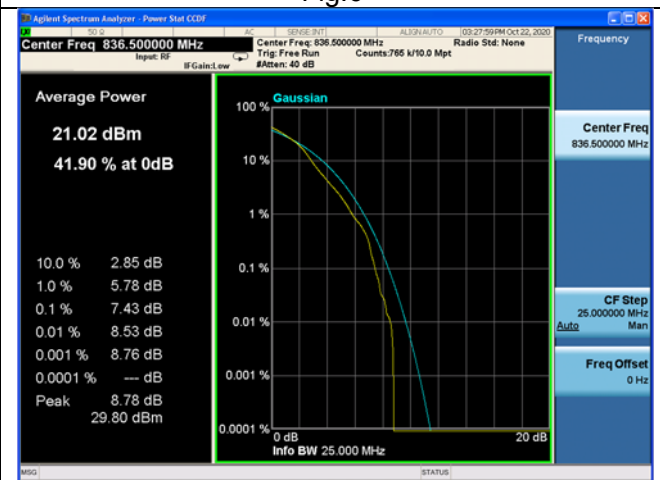


Fig.8

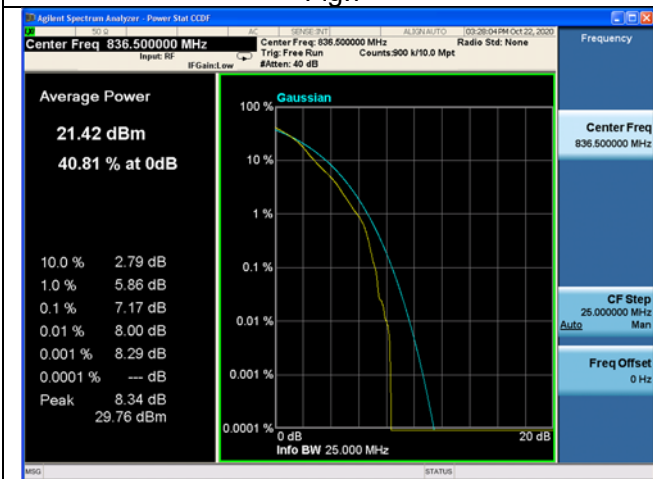


Fig.9

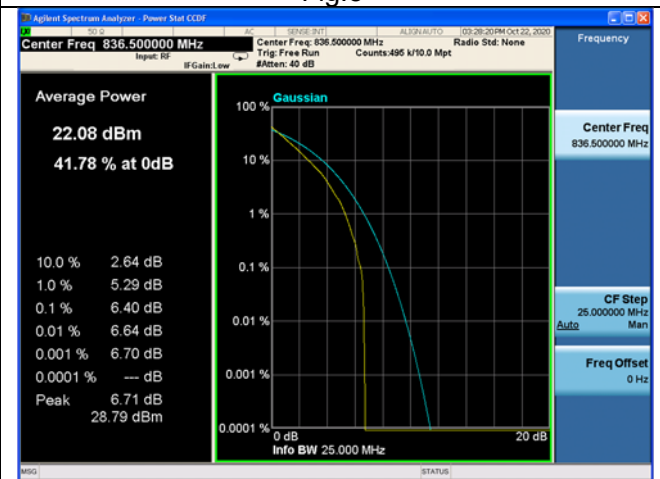


Fig.10

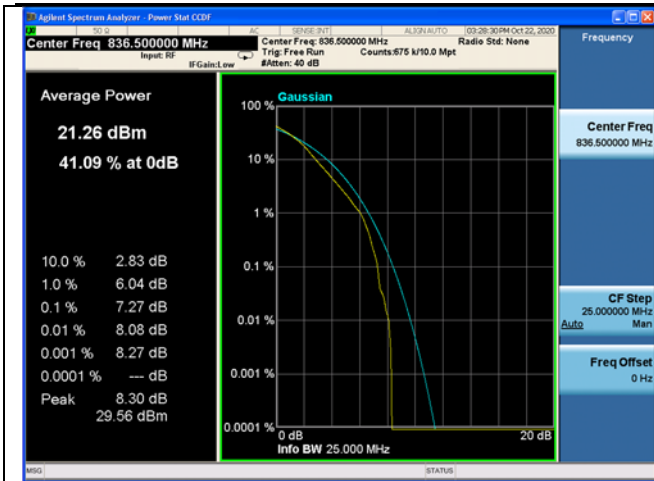


Fig.11

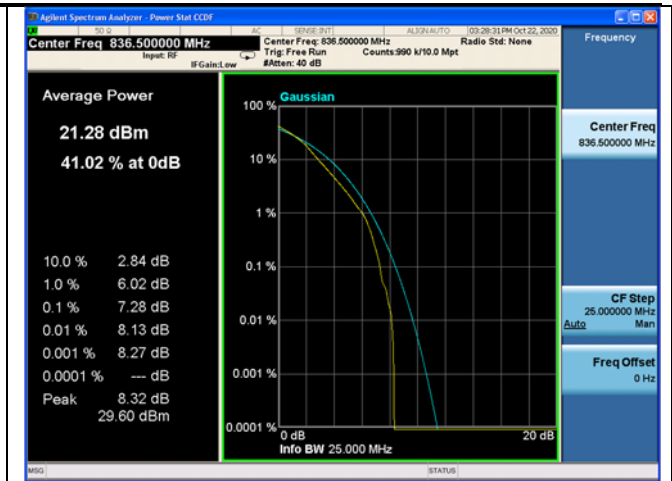


Fig.12

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

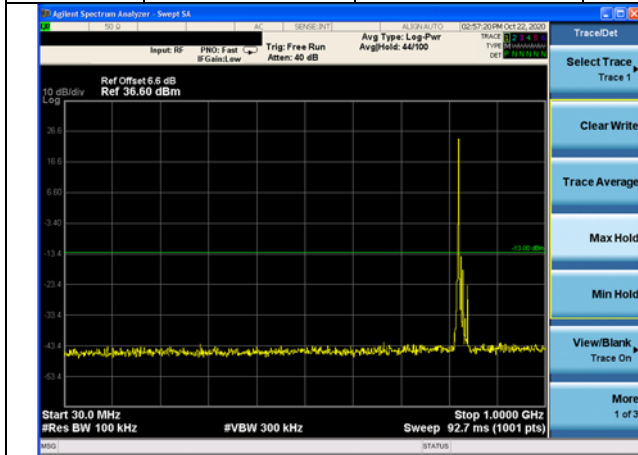


Fig.1

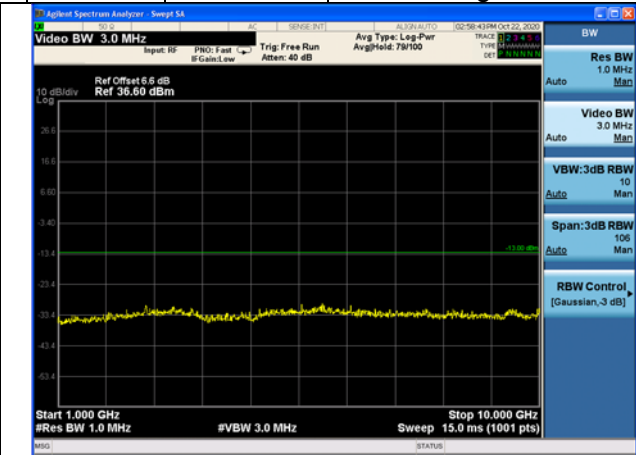


Fig.2

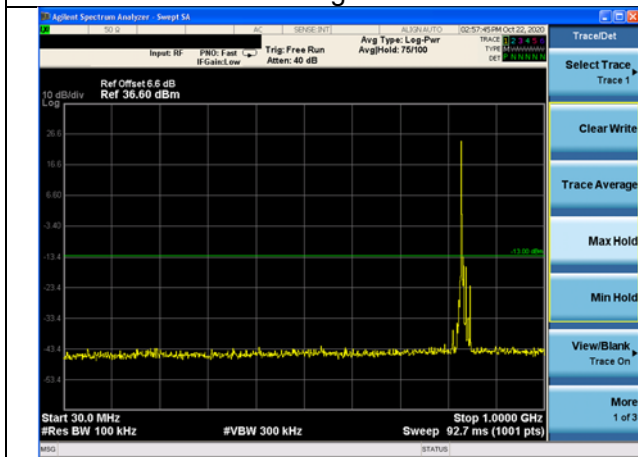


Fig3

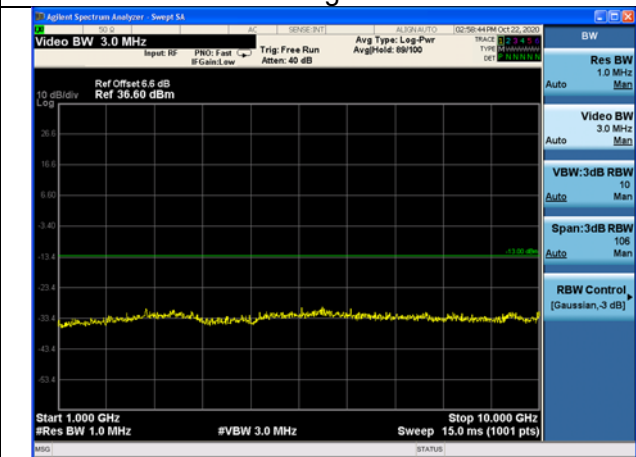


Fig4

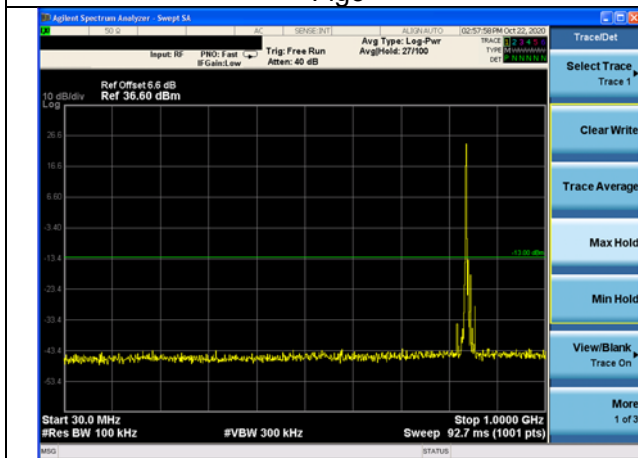


Fig5

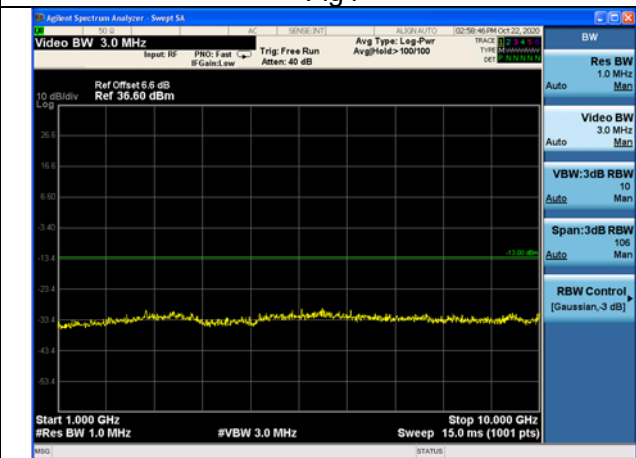


Fig6

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

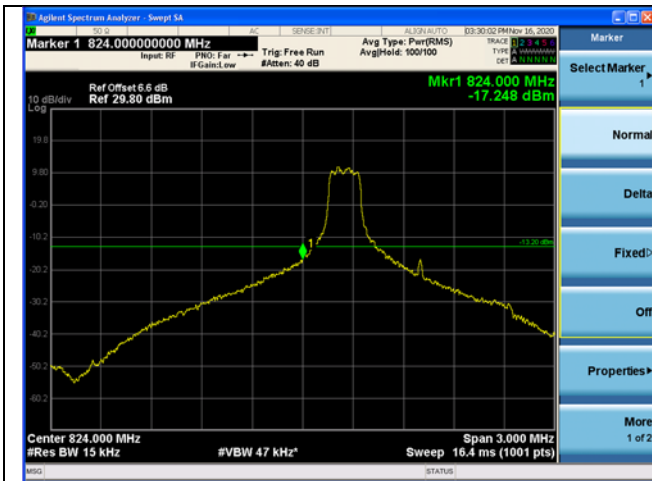


Fig.1

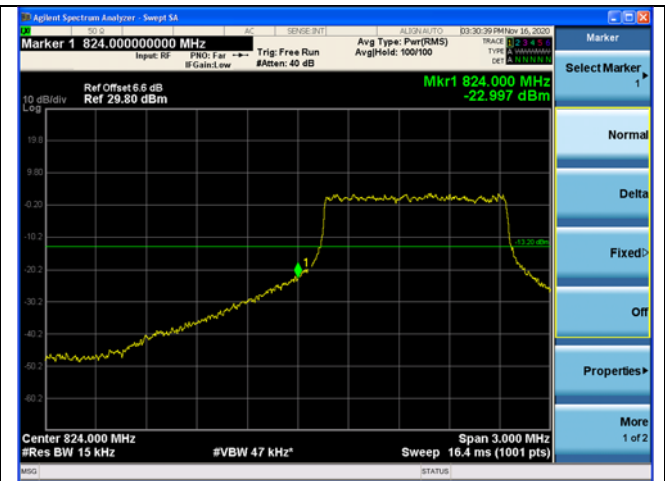


Fig.2

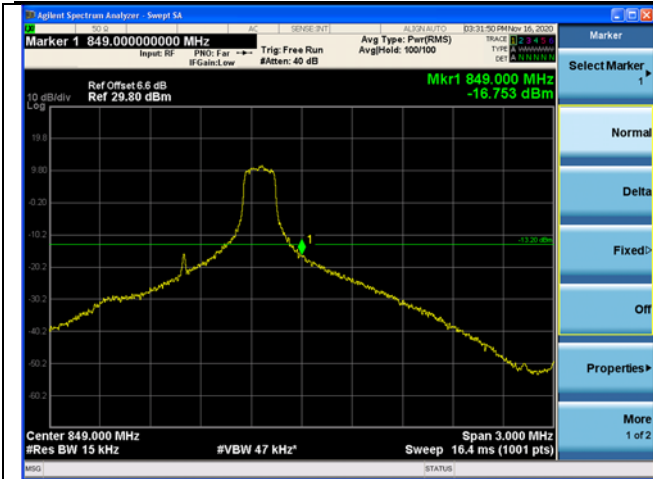


Fig.3

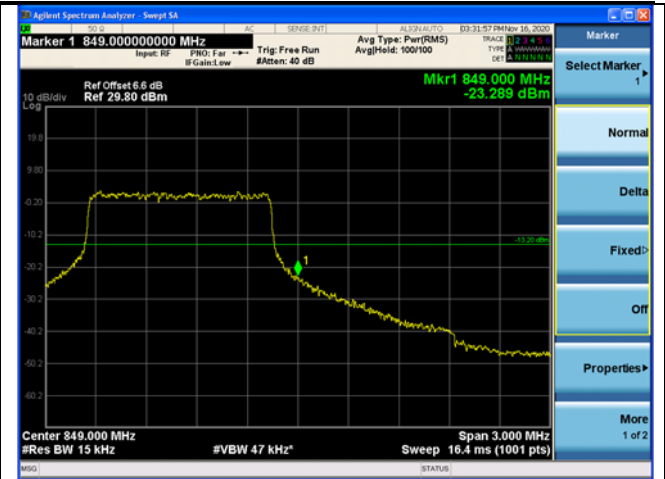


Fig.4

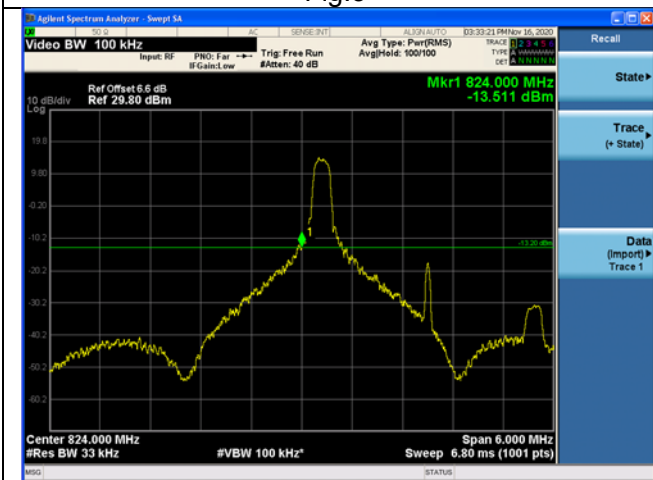


Fig.5

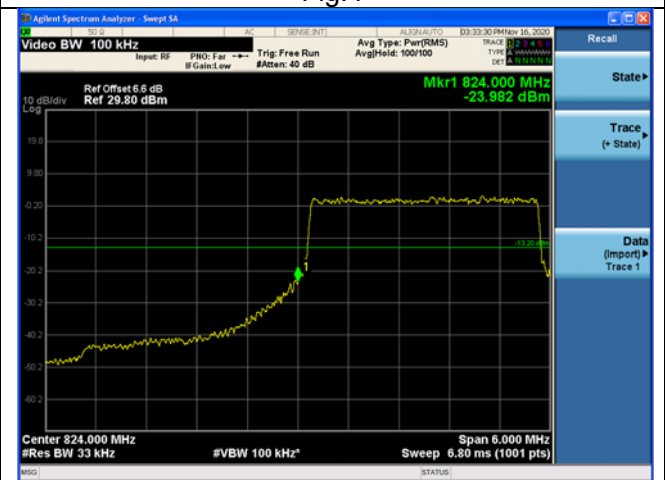


Fig.6

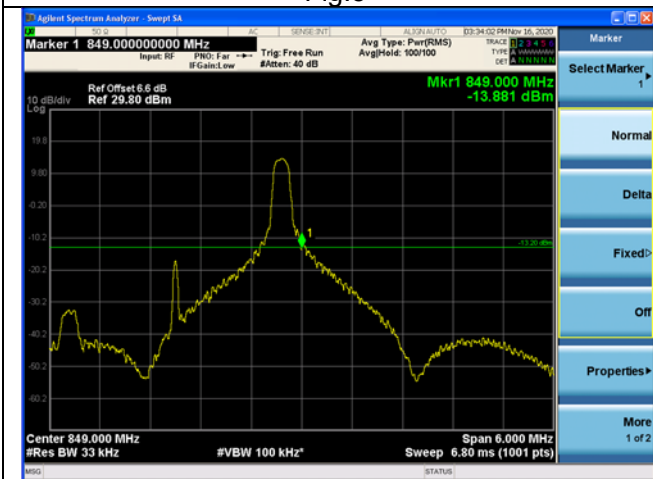


Fig.7



Fig.8

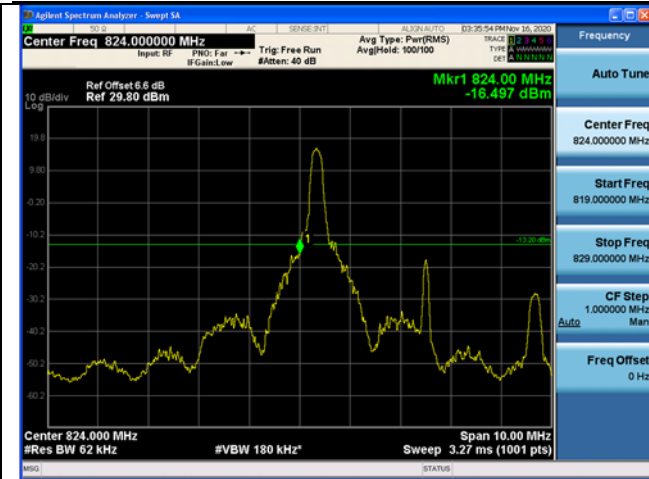


Fig.9

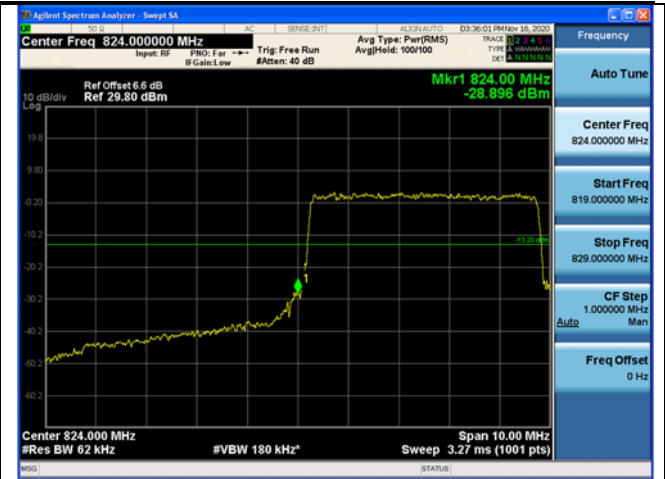


Fig.10



Fig.11

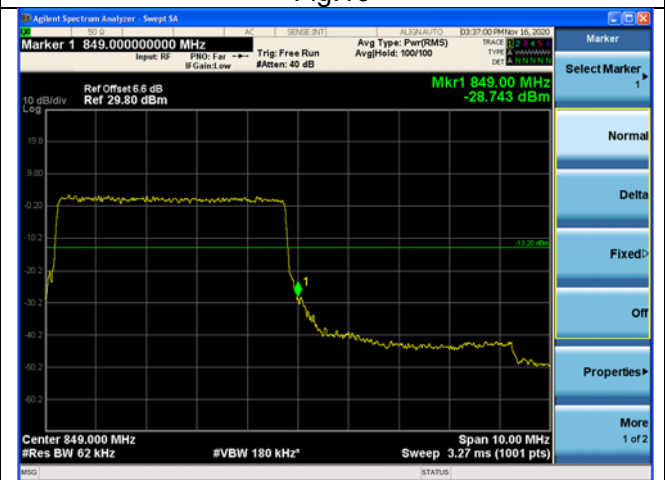


Fig.12

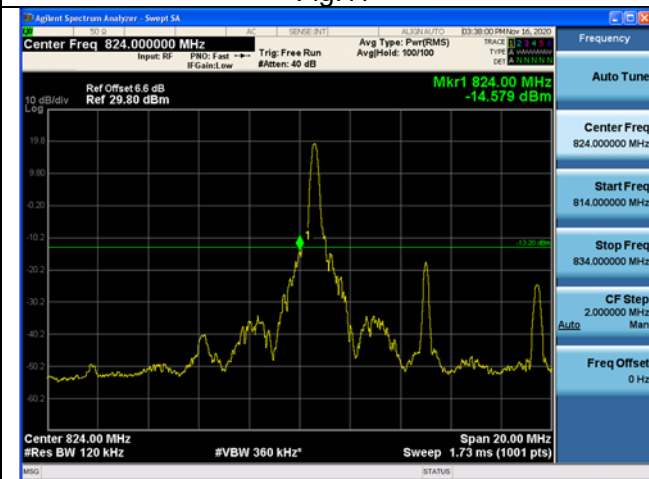


Fig.13

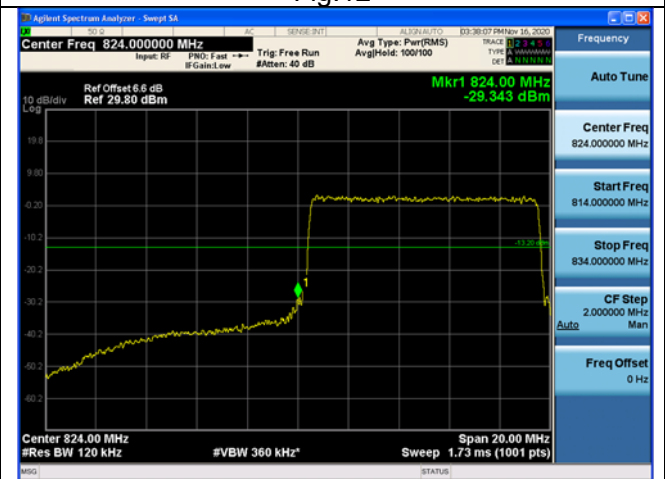


Fig.14

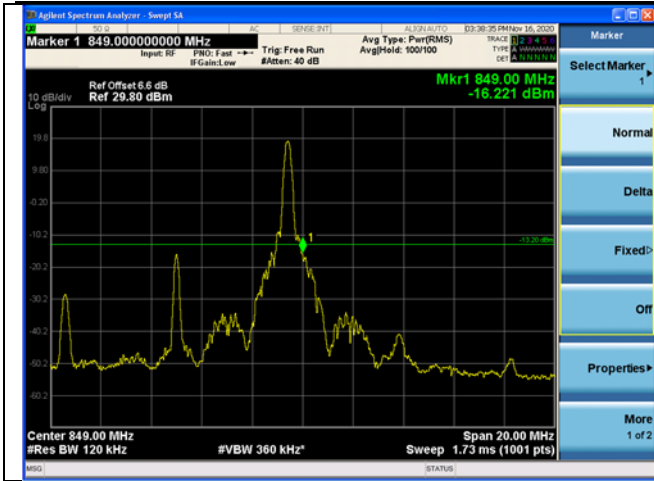


Fig.15



Fig.16

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band5Low Channel			
		1.4M	3M	5M	10M
-10	NV	-0.082	-0.096	-0.033	0.067
0	NV	0.069	0.065	-0.047	0.093
+10	NV	0.039	0.029	-0.088	-0.033
+20	NV	0.000	0.000	0.000	0.000
+35	NV	-0.052	-0.026	0.055	-0.064
+20	LV	-0.047	-0.032	0.086	0.070
+20	HV	0.038	-0.091	-0.093	-0.072

Temperature(°C)	Voltage	Test Result (ppm) Band5High annel			
		1.4M	3M	5M	10M
-10	NV	0.057	0.037	-0.025	-0.045
0	NV	0.002	-0.009	0.021	-0.085
+10	NV	0.001	-0.061	0.008	0.008
+20	NV	0.000	0.000	0.000	0.000
+35	NV	0.071	-0.048	0.087	0.023
+20	LV	0.000	-0.088	-0.095	0.024
+20	HV	0.050	-0.023	0.096	-0.003

Effective Radiated Power and Effective Isotropic Radiated Power

BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	848.3 (20643)	0.067	0.059	0.055
		836.5 (20525)	0.068	0.060	0.055
		824.7 (20407)	0.069	0.059	0.057
	1RB-Middle (3)	848.3 (20643)	0.068	0.059	0.055
		836.5 (20525)	0.068	0.060	0.056
		824.7 (20407)	0.069	0.059	0.057
	1RB-Low (0)	848.3 (20643)	0.068	0.059	0.055
		836.5 (20525)	0.067	0.060	0.055
		824.7 (20407)	0.069	0.060	0.057
	3RB-High (3)	848.3 (20643)	0.075	0.058	0.057
		836.5 (20525)	0.074	0.059	0.057
		824.7 (20407)	0.074	0.059	0.058
	3RB-Middle (1)	848.3 (20643)	0.075	0.058	0.058
		836.5 (20525)	0.074	0.059	0.058
		824.7 (20407)	0.074	0.059	0.058
	3RB-Low (0)	848.3 (20643)	0.075	0.058	0.058
		836.5 (20525)	0.074	0.059	0.058
		824.7 (20407)	0.074	0.059	0.058
	6RB (0)	848.3 (20643)	0.058	0.047	0.048
		836.5 (20525)	0.058	0.047	0.048
		824.7 (20407)	0.059	0.047	0.048
3MHz	1RB-High (14)	847.5 (20635)	0.068	0.059	0.055
		836.5 (20525)	0.068	0.059	0.055
		825.5 (20415)	0.067	0.060	0.055
	1RB-Middle (7)	847.5 (20635)	0.068	0.059	0.056
		836.5 (20525)	0.068	0.059	0.056
		825.5 (20415)	0.068	0.060	0.055
	1RB-Low (0)	847.5 (20635)	0.068	0.059	0.056
		836.5 (20525)	0.067	0.058	0.055
		825.5 (20415)	0.068	0.060	0.056
	8RB-High (7)	847.5 (20635)	0.058	0.047	0.046
		836.5 (20525)	0.057	0.047	0.047
		825.5 (20415)	0.058	0.048	0.047
	8RB-Middle (4)	847.5 (20635)	0.058	0.048	0.047
		836.5 (20525)	0.058	0.048	0.047
		825.5 (20415)	0.058	0.048	0.047
	8RB-Low (0)	847.5 (20635)	0.058	0.048	0.047
		836.5 (20525)	0.057	0.047	0.046
		825.5 (20415)	0.058	0.048	0.047
	15RB (0)	847.5 (20635)	0.058	0.048	0.048
		836.5 (20525)	0.058	0.048	0.048
		825.5 (20415)	0.059	0.048	0.048
5MHz	1RB-High (24)	846.5 (20625)	0.068	0.058	0.055

		836.5 (20525)	0.068	0.060	0.056
		826.5 (20425)	0.068	0.058	0.055
	1RB-Middle (12)	846.5 (20625)	0.068	0.059	0.056
		836.5 (20525)	0.068	0.060	0.056
		826.5 (20425)	0.068	0.059	0.056
	1RB-Low (0)	846.5 (20625)	0.069	0.060	0.056
		836.5 (20525)	0.067	0.059	0.055
		826.5 (20425)	0.068	0.059	0.056
	12RB-High (13)	846.5 (20625)	0.058	0.047	0.047
		836.5 (20525)	0.057	0.047	0.047
		826.5 (20425)	0.058	0.048	0.047
	12RB-Middle (6)	846.5 (20625)	0.058	0.048	0.047
		836.5 (20525)	0.057	0.048	0.047
		826.5 (20425)	0.058	0.048	0.047
	12RB-Low (0)	846.5 (20625)	0.058	0.048	0.047
		836.5 (20525)	0.057	0.047	0.047
		826.5 (20425)	0.058	0.048	0.048
	25RB (0)	846.5 (20625)	0.058	0.048	0.048
836.5 (20525)		0.057	0.048	0.048	
826.5 (20425)		0.058	0.048	0.048	
10MHz	1RB-High (49)	844 (20600)	0.068	0.060	0.056
		836.5 (20525)	0.068	0.059	0.055
		829 (20450)	0.067	0.058	0.055
	1RB-Middle (24)	844 (20600)	0.069	0.060	0.056
		836.5 (20525)	0.068	0.059	0.056
		829 (20450)	0.067	0.059	0.055
	1RB-Low (0)	844 (20600)	0.069	0.060	0.057
		836.5 (20525)	0.068	0.059	0.056
		829 (20450)	0.068	0.060	0.056
	25RB-High (25)	844 (20600)	0.058	0.048	0.048
		836.5 (20525)	0.057	0.048	0.048
		829 (20450)	0.057	0.047	0.047
	25RB-Middle (12)	844 (20600)	0.058	0.048	0.048
		836.5 (20525)	0.057	0.048	0.048
		829 (20450)	0.057	0.048	0.048
	25RB-Low (0)	844 (20600)	0.058	0.048	0.048
		836.5 (20525)	0.058	0.048	0.048
		829 (20450)	0.058	0.048	0.048
	50RB (0)	844 (20600)	0.059	0.048	0.048
		836.5 (20525)	0.058	0.047	0.047
		829 (20450)	0.057	0.047	0.048