

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 2

1 RF Power Output

Air Power Output						
Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1850.7	18607	1.4	1	0	19.25
				1	5	19.23
				3	2	19.21
				6	0	18.30
	1880	18900		1	0	19.28
				1	5	19.21
				3	2	19.17
				6	0	18.32
	1909.3	19193		1	0	19.24
				1	5	19.27
				3	2	19.24
				6	0	18.29
16QAM	1850.7	18607	1.4	1	0	18.30
				1	5	18.27
				3	2	18.24
				6	0	17.27
	1880	18900		1	0	18.21
				1	5	18.24
				3	2	18.23
				6	0	17.32
	1909.3	19193		1	0	18.23
				1	5	18.20
				3	2	18.23
				6	0	17.33

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1851.5	18615	3	1	0	19.24
				1	14	19.22
				8	4	18.20
				15	0	18.21
	1880	18900		1	0	19.27
				1	14	19.19
				8	4	18.21
				15	0	18.20
	1908.5	19185		1	0	19.21
				1	14	19.20
				8	4	18.21
				15	0	18.26
16QAM	1851.5	18615	3	1	0	18.24
				1	14	18.22
				8	4	17.16
				15	0	17.26
	1880	18900		1	0	18.27
				1	14	18.27
				8	4	17.25
				15	0	17.20
	1908.5	19185		1	0	18.21
				1	14	18.25
				8	4	17.22
				15	0	17.25

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1852.5	18625	5	1	0	19.20
				1	24	19.18
				12	6	18.25
				25	0	18.17
	1880	18900		1	0	19.28
				1	24	19.23
				12	6	18.23
				25	0	18.20
	1907.5	19175		1	0	19.21
				1	24	19.15
				12	6	18.17
				25	0	18.22
16QAM	1852.5	18625	5	1	0	18.25
				1	24	18.24
				12	6	17.16
				25	0	17.27
	1880	18900		1	0	18.29
				1	24	18.23
				12	6	17.26
				25	0	17.21
	1907.5	19175		1	0	18.22
				1	24	18.22
				12	6	17.19
				25	0	17.21

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1855	18650	10	1	0	19.27
				1	49	19.21
				24	12	18.18
				50	0	18.19
	1880	18900		1	0	19.29
				1	49	19.23
				24	12	18.23
				50	0	18.19
	1905	19150		1	0	19.24
				1	49	19.21
				24	12	18.22
				50	0	18.30
16QAM	1855	18650	10	1	0	18.23
				1	49	18.20
				24	12	17.11
				50	0	17.31
	1880	18900		1	0	18.23
				1	49	18.31
				24	12	17.24
				50	0	17.19
	1905	19150		1	0	18.19
				1	49	18.22
				24	12	17.19
				50	0	17.24

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1857.5	18675	15	1	0	19.20
				1	74	19.27
				40	18	18.20
				75	0	18.25
	1880	18900		1	0	19.29
				1	74	19.18
				40	18	18.23
				75	0	18.19
	1902.5	19125		1	0	19.24
				1	74	19.18
				40	18	18.16
				75	0	18.28
16QAM	1857.5	18675	15	1	0	18.27
				1	74	18.23
				40	18	17.17
				75	0	17.25
	1880	18900		1	0	18.24
				1	74	18.27
				40	18	17.22
				75	0	17.17
	1902.5	19125		1	0	18.17
				1	74	18.20
				40	18	17.26
				75	0	17.24

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1860	18700	20	1	0	19.19
				1	99	19.23
				50	25	18.21
				100	0	18.17
	1880	18900		1	0	19.31
				1	99	19.17
				50	25	18.24
				100	0	18.18
	1900	19100		1	0	19.19
				1	99	19.21
				50	25	18.19
				100	0	18.29
16QAM	1860	18700	20	1	0	18.28
				1	99	18.27
				50	25	17.21
				100	0	17.27
	1880	18900		1	0	18.27
				1	99	18.24
				50	25	17.26
				100	0	17.17
	1900	19100		1	0	18.23
				1	99	18.25
				50	25	17.19
				100	0	17.26

2 Occupied Bandwidth

Test result

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of 99% Power (MHz)			
						QPSK		16-QAM	
2	1850.7	18607	1.4	6	0	1.0737	Fig.1	1.0762	Fig.2
	1880.0	18900		6	0	1.0744	Fig.3	1.0719	Fig.4
	1909.3	19193		6	0	1.0743	Fig.5	1.0750	Fig.6
	1851.5	18615	3	15	0	2.6816	Fig.7	2.6846	Fig.8
	1880.0	18900		15	0	2.6885	Fig.9	2.6894	Fig.10
	1908.5	19185		15	0	2.6856	Fig.11	2.6879	Fig.12
	1852.5	18625	5	25	0	4.4655	Fig.13	4.4642	Fig.14
	1880.0	18900		25	0	4.4660	Fig.15	4.4670	Fig.16
	1907.5	19175		25	0	4.4537	Fig.17	4.4614	Fig.18
	1855	18650	10	50	0	8.9311	Fig.19	8.9312	Fig.20
	1880	18900		50	0	8.9394	Fig.21	8.9070	Fig.22
	1905	19150		50	0	8.9244	Fig.23	8.8955	Fig.24
	1857.5	18675	15	75	0	13.389	Fig.25	13.395	Fig.26
	1880.0	18900		75	0	13.359	Fig.27	13.416	Fig.28
	1902.5	19125		75	0	13.390	Fig.29	13.366	Fig.30
	1860	18700	20	100	0	17.824	Fig.31	17.914	Fig.32
	1880	18900		100	0	17.809	Fig.33	17.759	Fig.34
	1900	19100		100	0	17.853	Fig.35	17.806	Fig.36

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)			
						QPSK		16-QAM	
2	1850.7	18607	1.4	6	0	1.230	Fig.1	1.219	Fig.2
	1880.0	18900		6	0	1.220	Fig.3	1.208	Fig.4
	1909.3	19193		6	0	1.230	Fig.5	1.212	Fig.6
	1851.5	18615	3	15	0	2.844	Fig.7	2.844	Fig.8
	1880.0	18900		15	0	2.821	Fig.9	2.847	Fig.10
	1908.5	19185		15	0	2.834	Fig.11	2.826	Fig.12
	1852.5	18625	5	25	0	4.698	Fig.13	4.680	Fig.14
	1880.0	18900		25	0	4.729	Fig.15	4.765	Fig.16
	1907.5	19175		25	0	4.784	Fig.17	4.682	Fig.18
	1855	18650	10	50	0	9.353	Fig.19	9.321	Fig.20
	1880	18900		50	0	9.282	Fig.21	9.303	Fig.22
	1905	19150		50	0	9.334	Fig.23	9.305	Fig.24
	1857.5	18675	15	75	0	14.02	Fig.25	14.06	Fig.26
	1880.0	18900		75	0	13.92	Fig.27	13.96	Fig.28
	1902.5	19125		75	0	13.97	Fig.29	13.95	Fig.30
	1860	18700	20	100	0	18.58	Fig.31	18.66	Fig.32
	1880	18900		100	0	18.50	Fig.33	18.52	Fig.34
	1900	19100		100	0	18.78	Fig.35	18.53	Fig.36

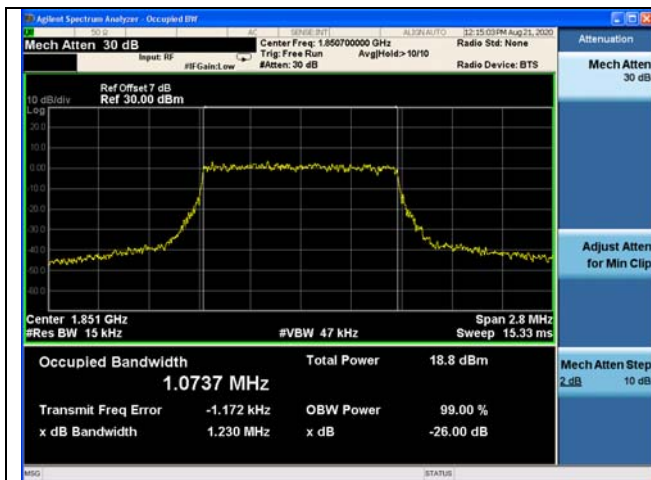


Fig.1

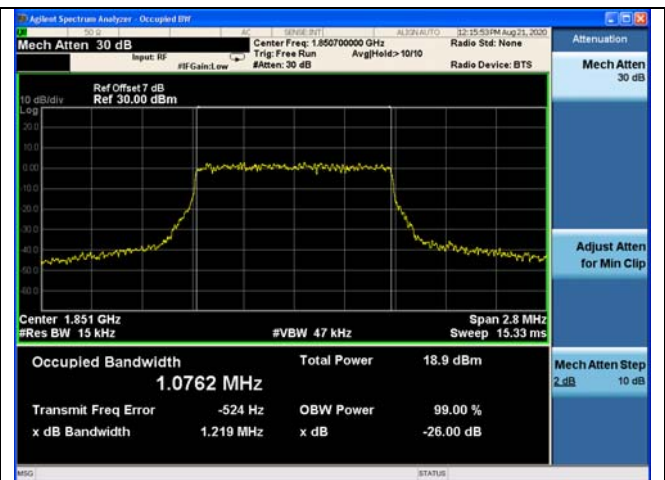


Fig.2

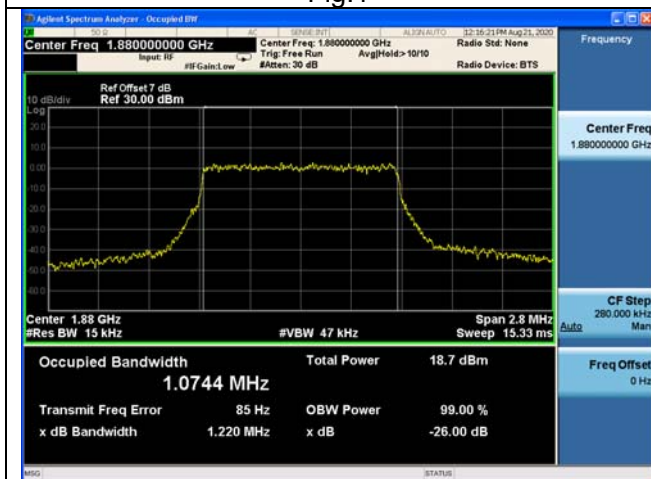


Fig.3

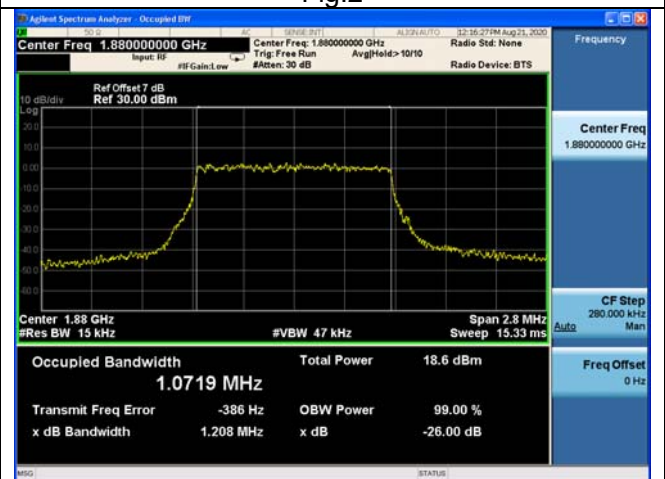


Fig.4

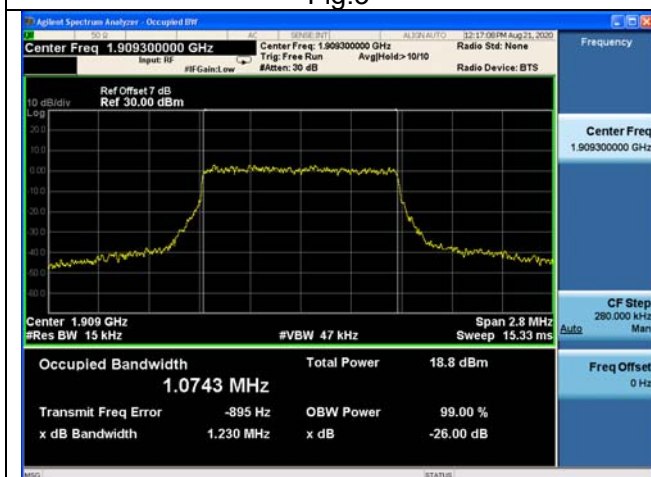


Fig.5

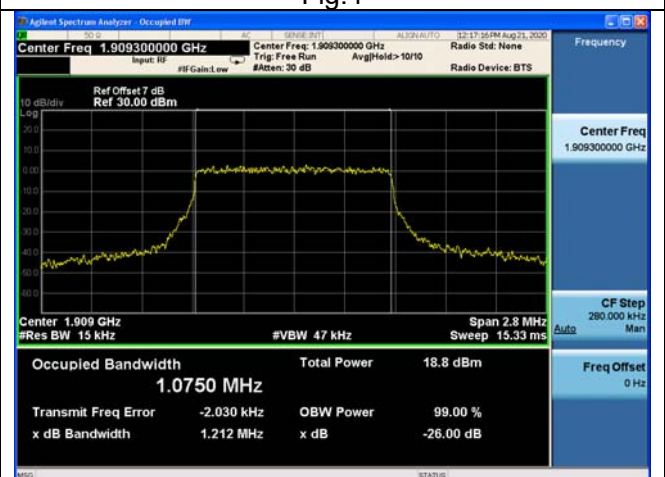


Fig.6

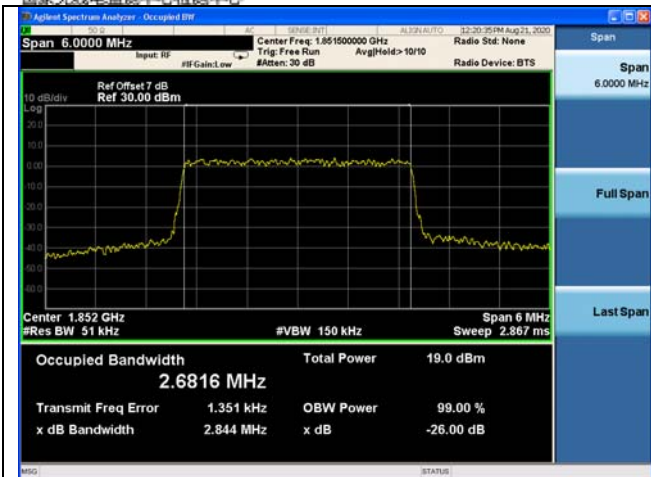


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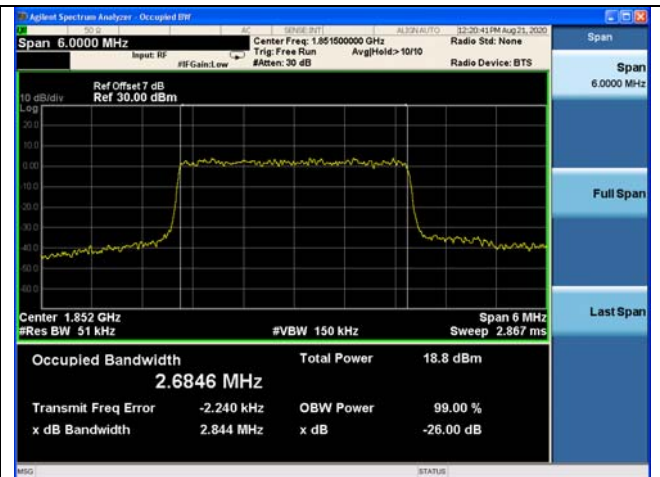


Fig.8

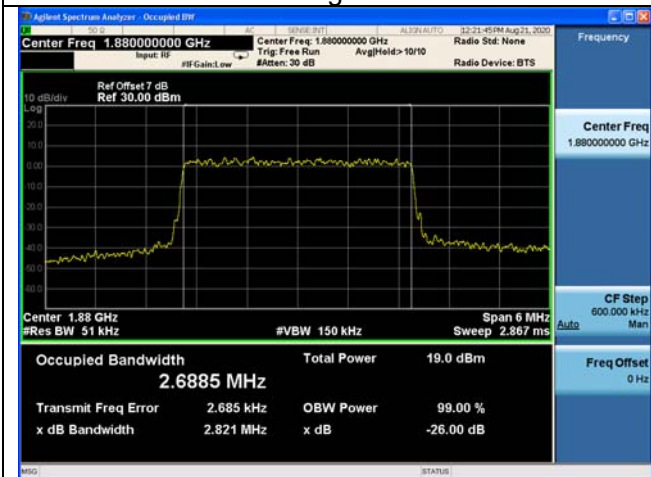


Fig.9

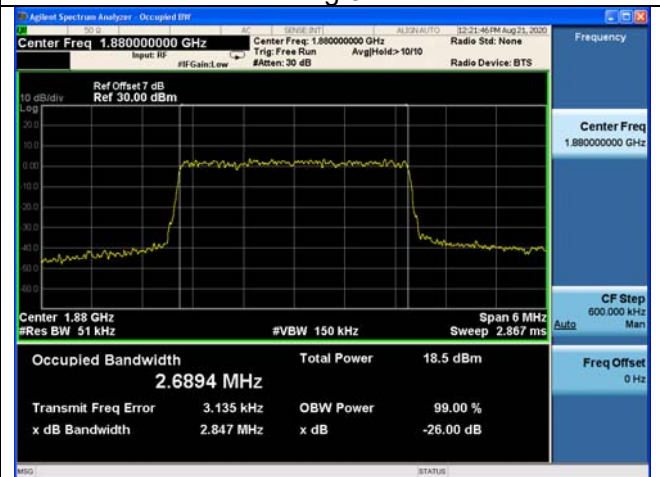


Fig.10

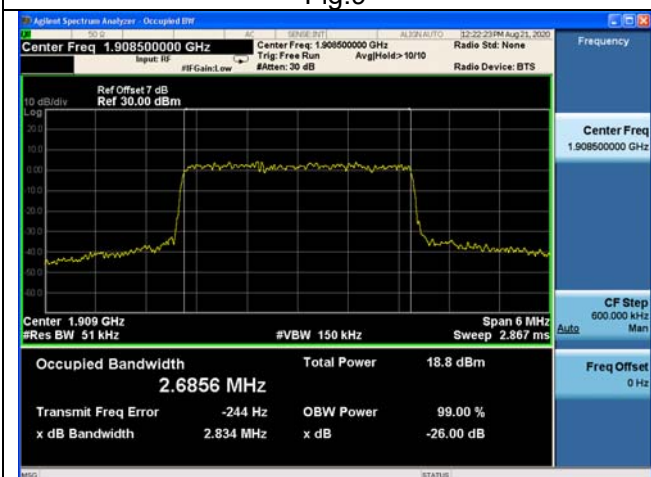


Fig.11

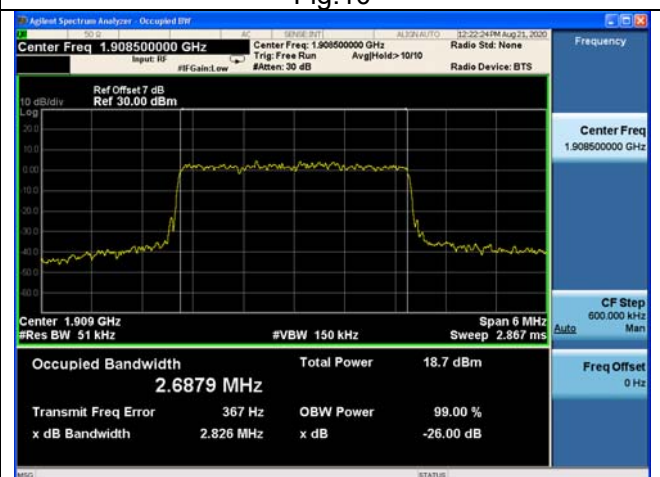


Fig.12

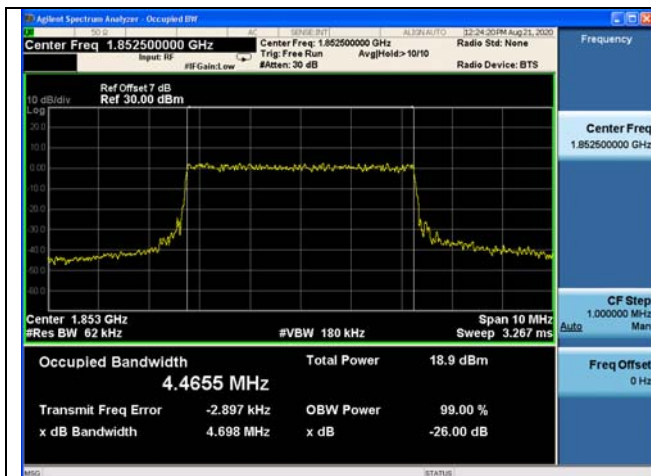


Fig.13

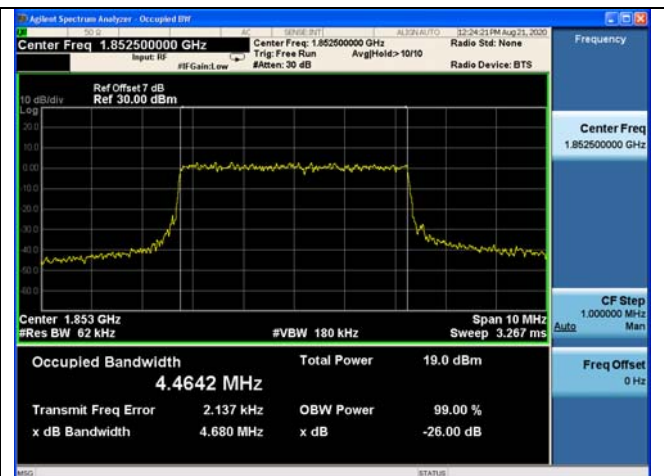


Fig.14

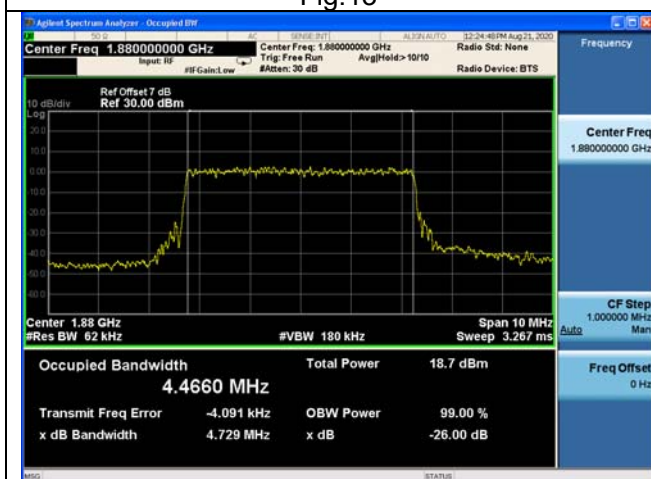


Fig.15

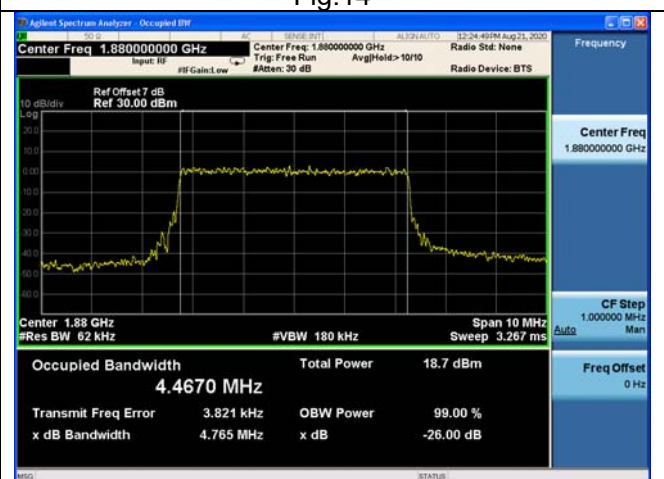


Fig.16

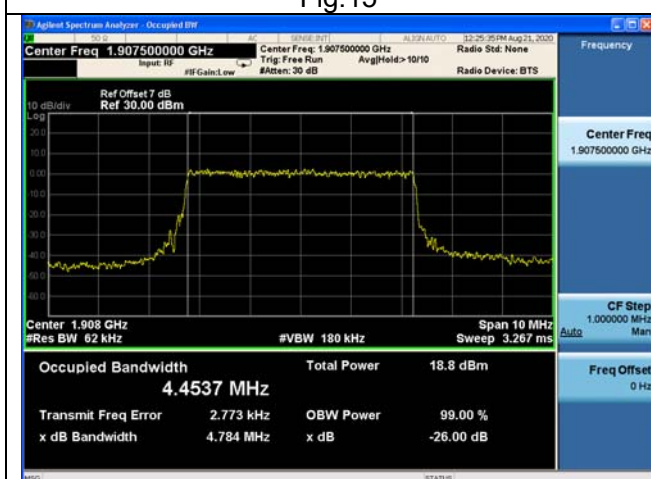


Fig.17

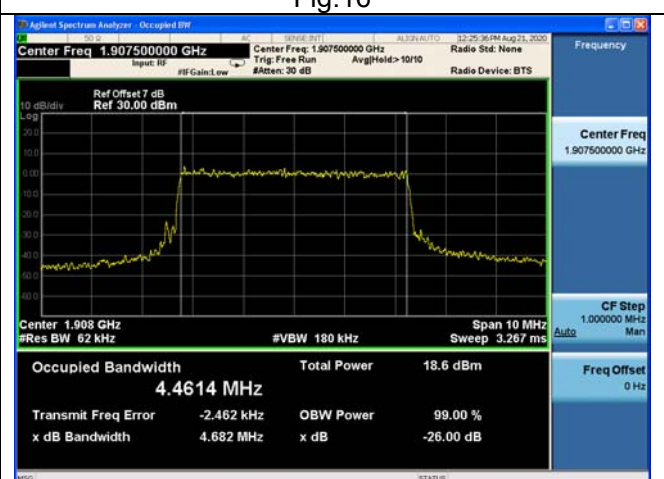


Fig.18

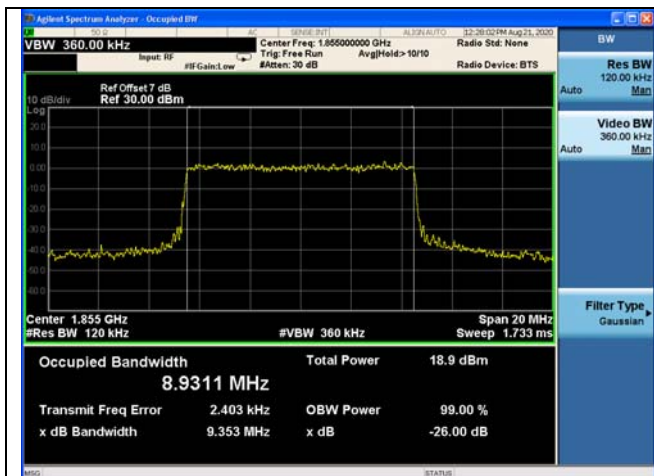


Fig.19

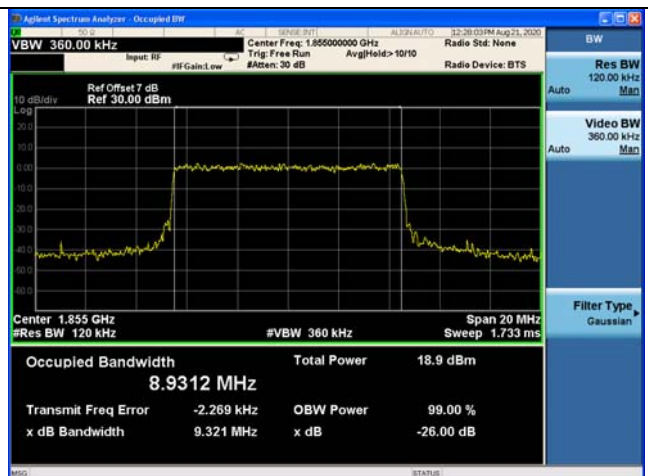


Fig.20

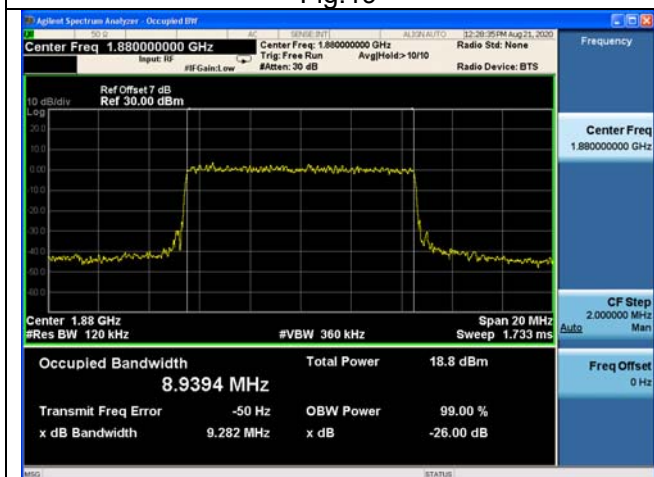


Fig.21

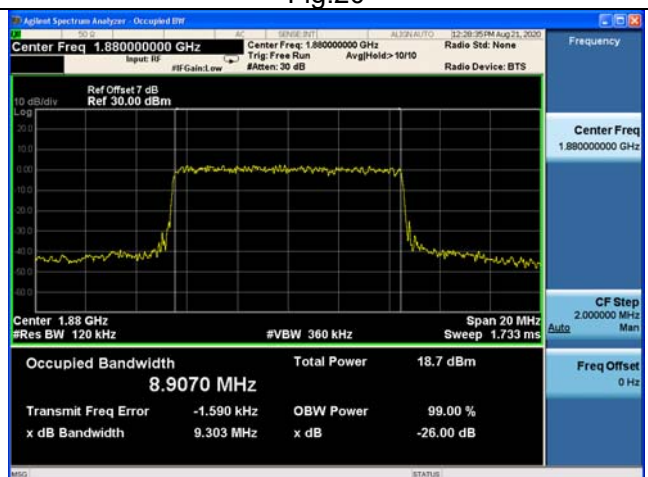


Fig.22

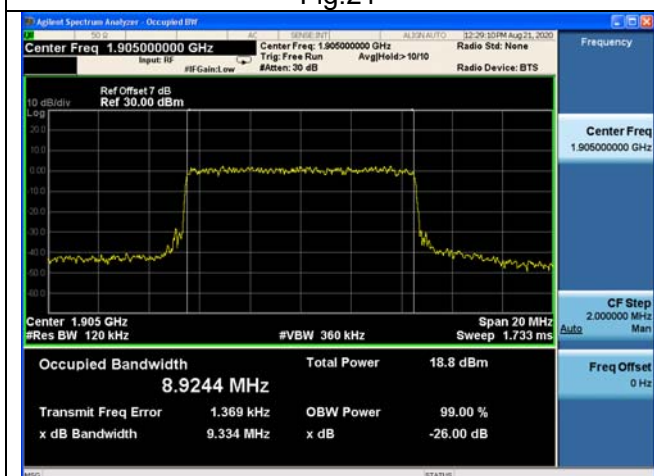


Fig.23

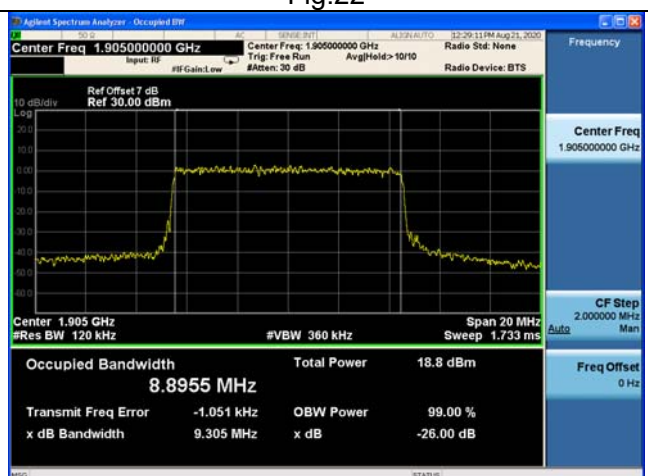


Fig.24

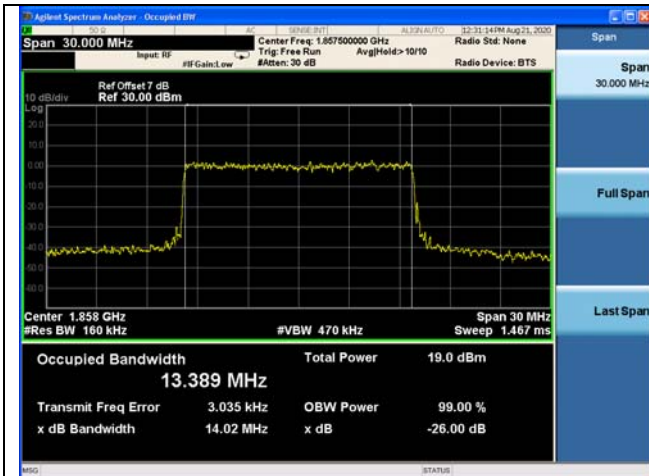


Fig.25

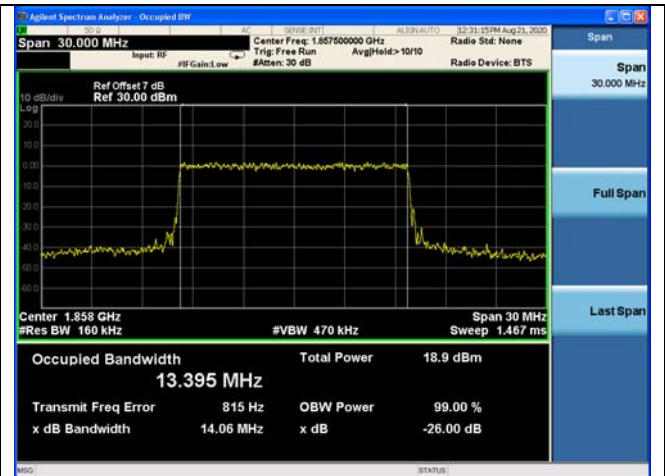


Fig.26

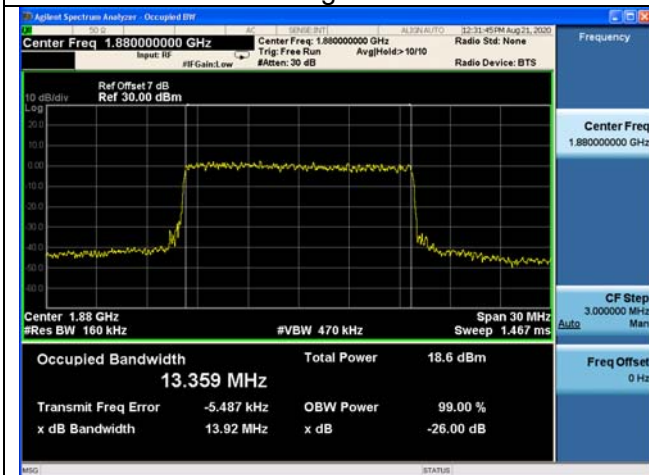


Fig.27

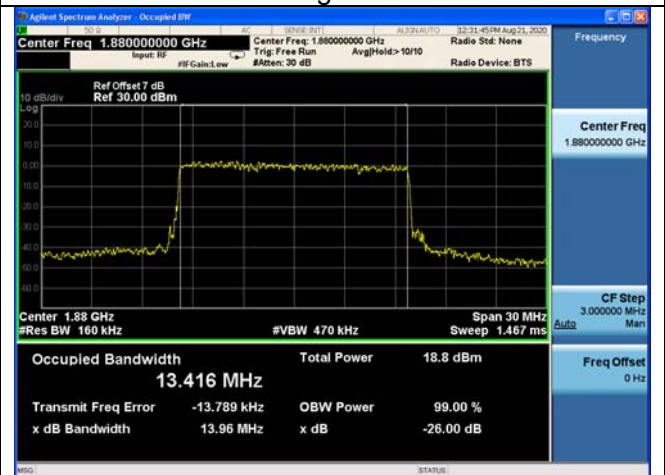


Fig.28

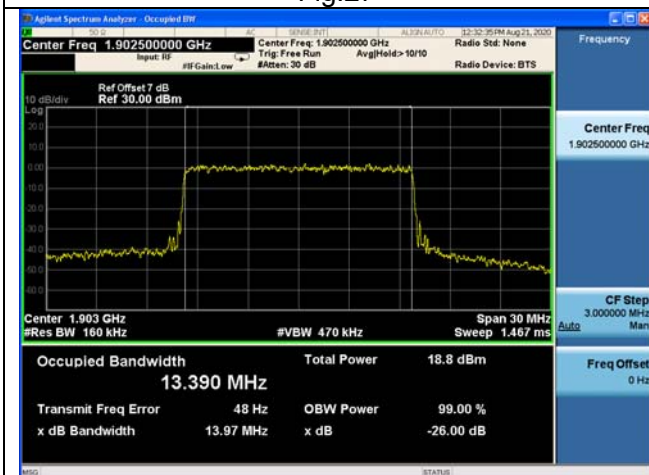


Fig.29

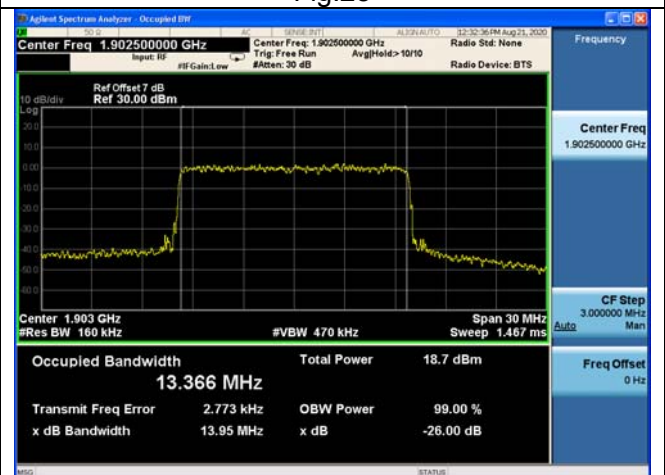


Fig.30

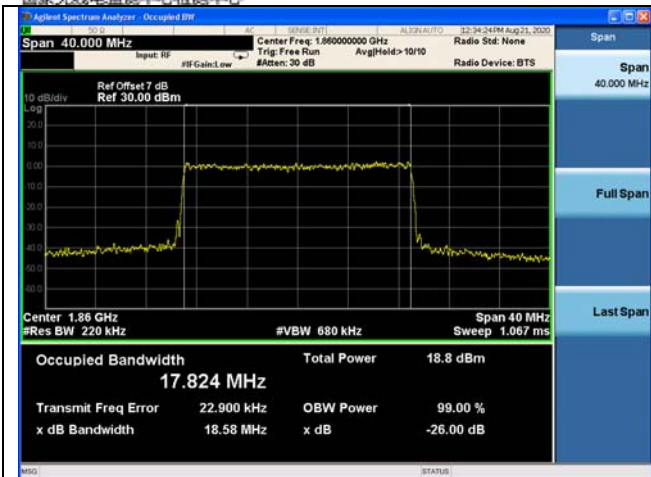


Fig.31

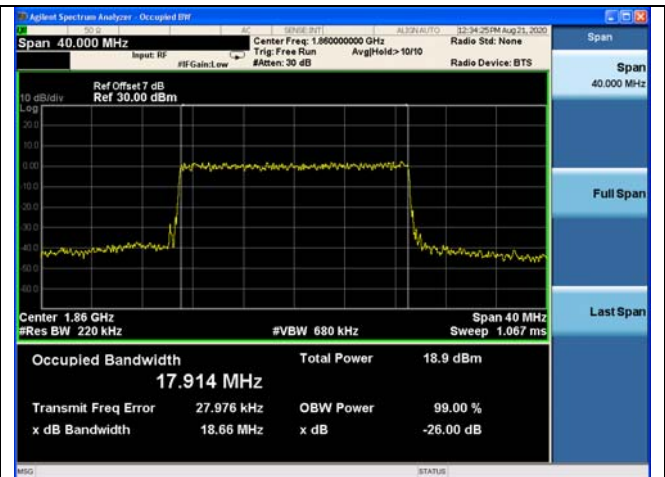


Fig.32

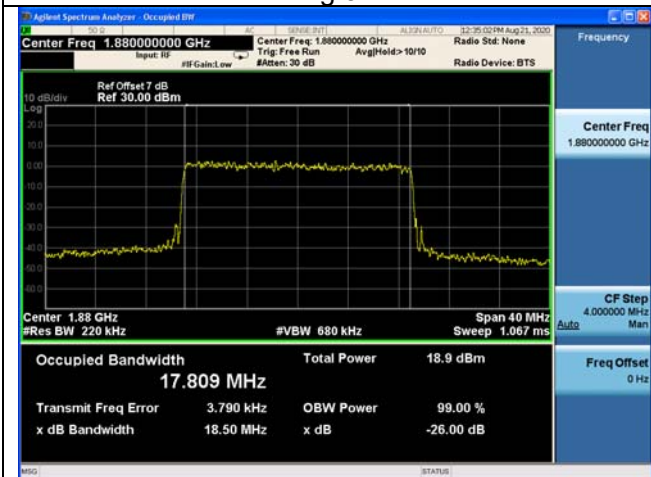


Fig.33

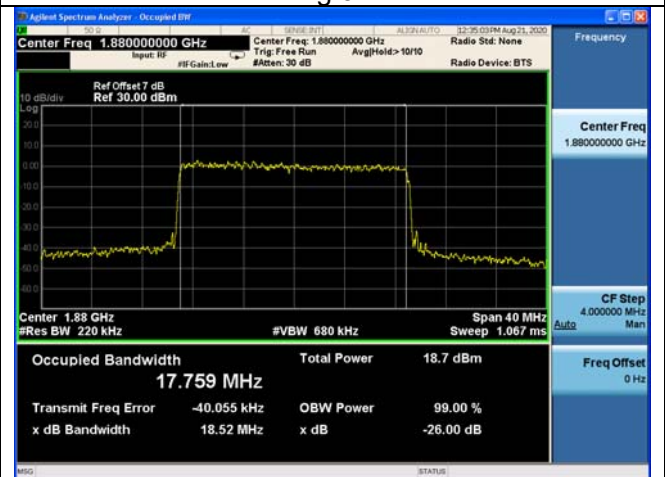


Fig.34

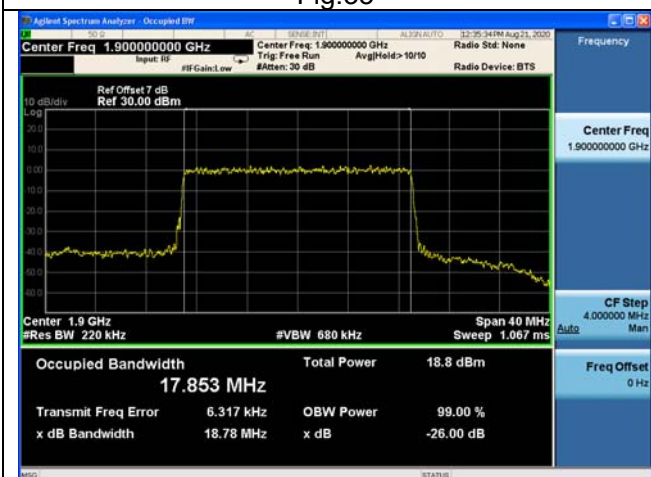


Fig.35

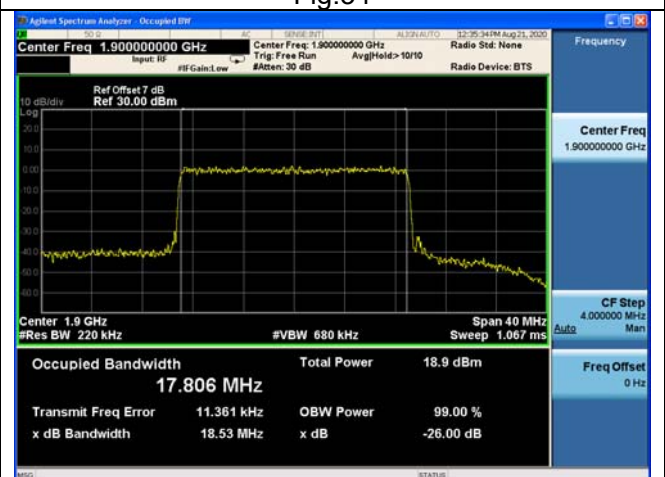


Fig.36

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM
2	1880.0	18900	1.4	1	0	Fig.1	Fig.2
			3	1	0	Fig.3	Fig.4
			5	1	0	Fig.5	Fig.6
			10	1	0	Fig.7	Fig.8
			15	1	0	Fig.9	Fig.10
			20	1	0	Fig.11	Fig.12



Fig.1

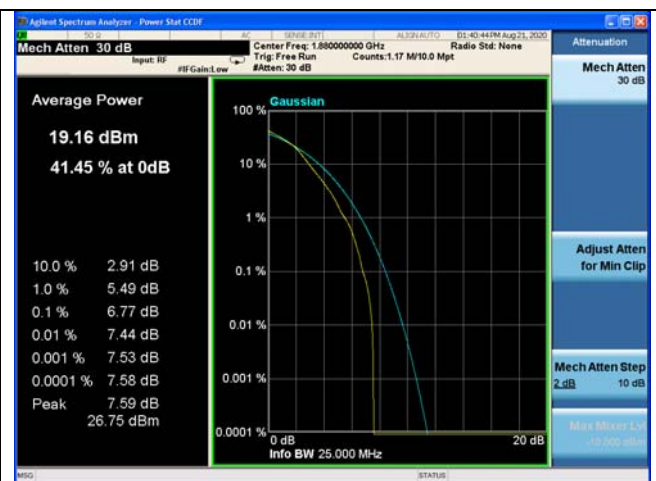


Fig.2



Fig.3



Fig.4



Fig.5



Fig.6



Fig.7



Fig.8



Fig.9

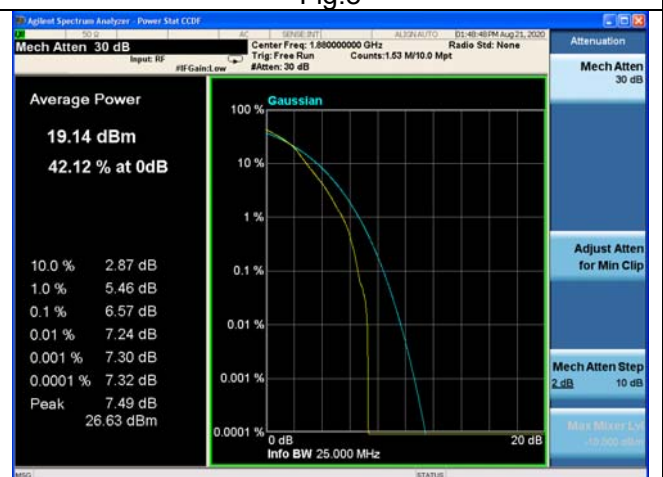


Fig.10



Fig.11



Fig.12

4 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
2	1860	18700	20	1	0	Fig.1-2
	1880	18900	20	1	0	Fig.3-4
	1900	19100	20	1	0	Fig.5-6

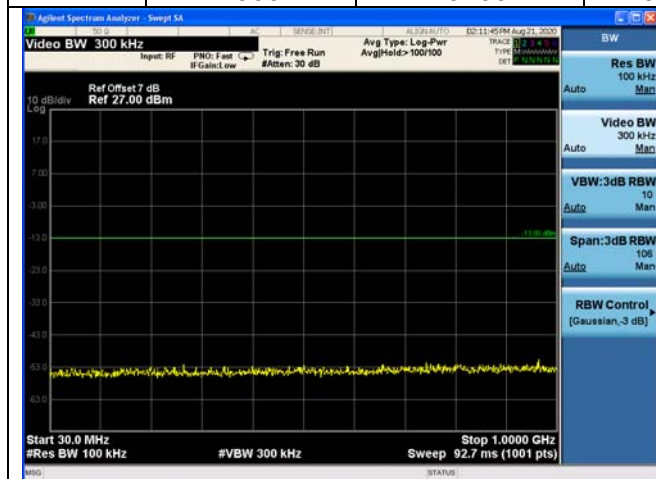


Fig.1



Fig.2

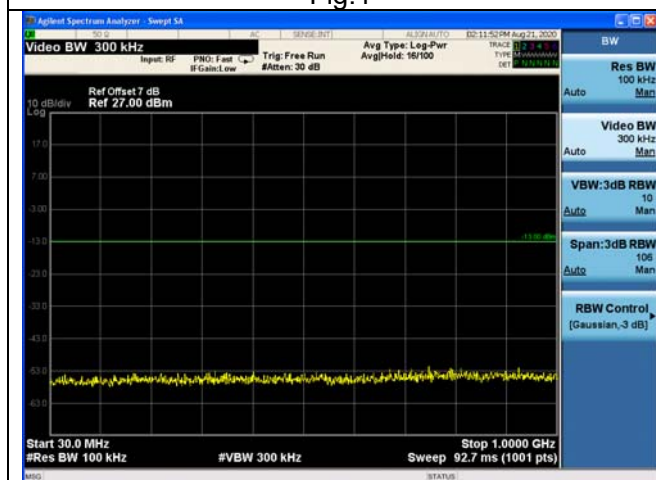


Fig3



Fig4

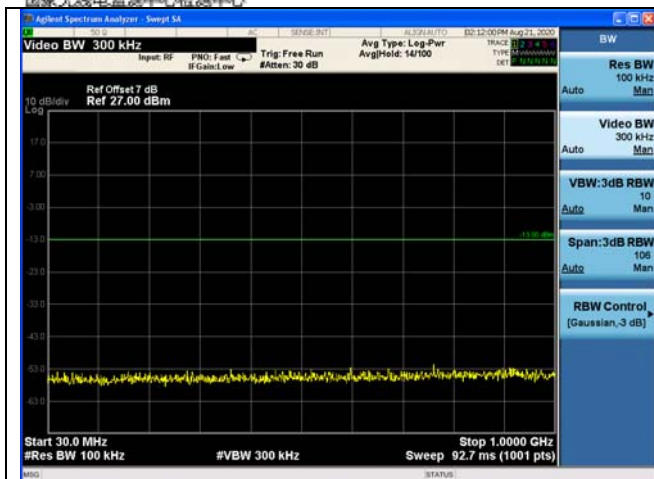


Fig5



Fig6

5 Band Edges Compliance

Test result

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
2	1850.7	18607	1.4	1	0	Fig.1
				6	0	Fig.2
	1909.3	19193		1	5	Fig.3
				6	0	Fig.4
	1851.5	18615	3	1	0	Fig.5
				15	0	Fig.6
	1908.5	19185		1	14	Fig.7
				15	0	Fig.8
	1852.5	18625	5	1	0	Fig.9
				25	0	Fig.10
	1907.5	19175		1	24	Fig.11
				25	0	Fig.12
	1855	18650	10	1	0	Fig.13
				50	0	Fig.14
	1905	19150		1	49	Fig.15
				50	0	Fig.16
	1857.5	18675	15	1	0	Fig.17
				75	0	Fig.18
	1902.5	19125		1	74	Fig.19
				75	0	Fig.20
	1860	18700	20	1	0	Fig.21
				100	0	Fig.22
	1900	19100		1	99	Fig.23
				100	0	Fig.24

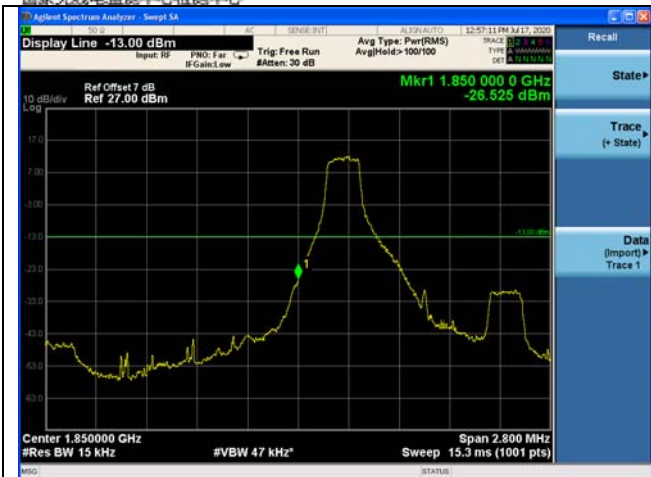


Fig.1

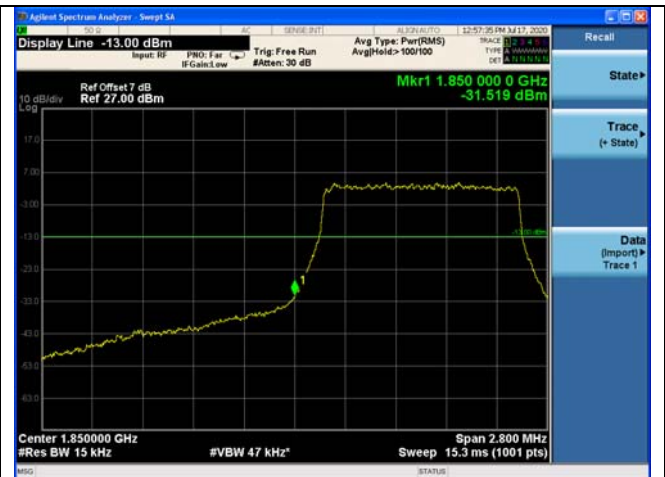


Fig.2



Fig.3



Fig.4

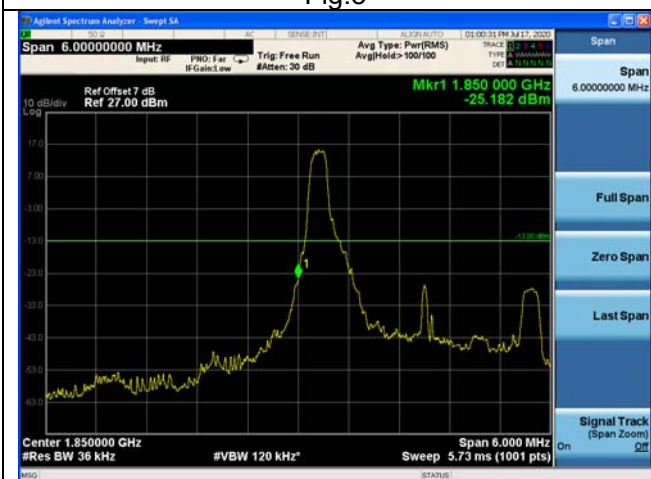


Fig.5

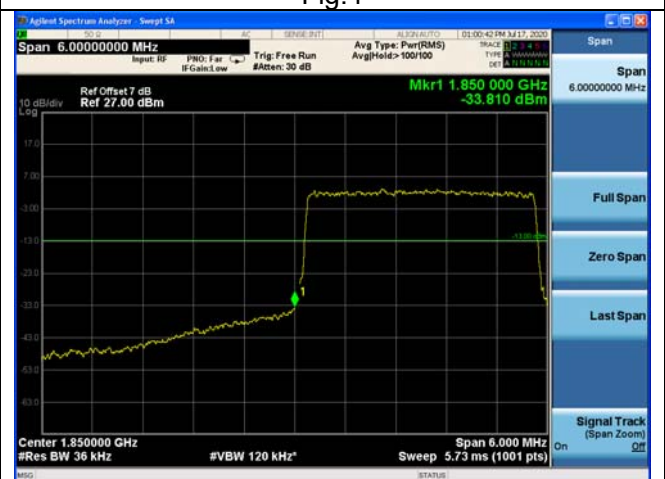


Fig.6

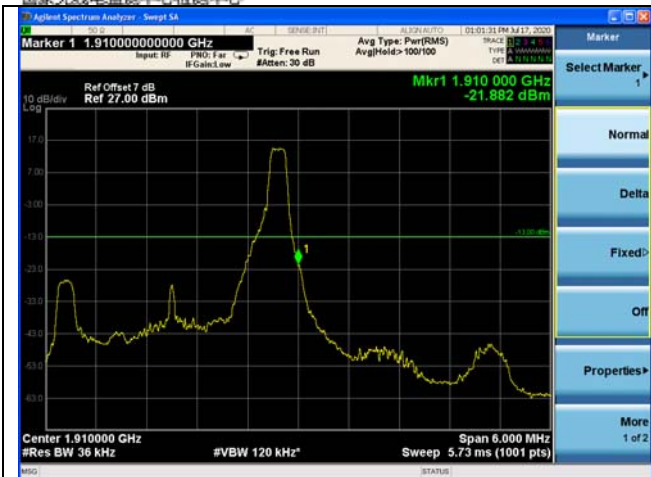


Fig.7



Fig.8



Fig.9

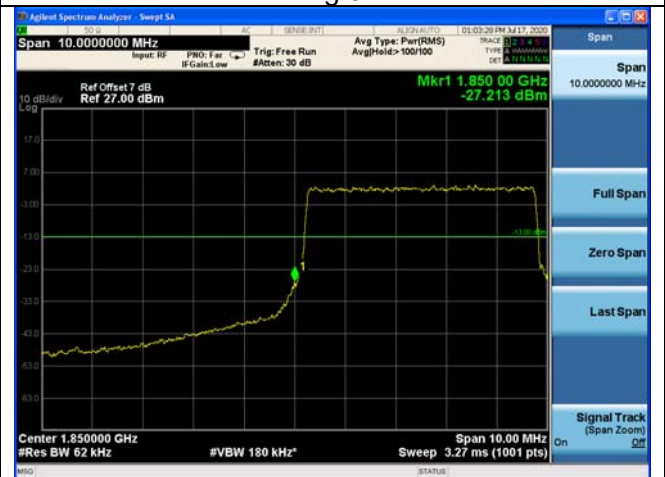


Fig.10



Fig.11



Fig.12

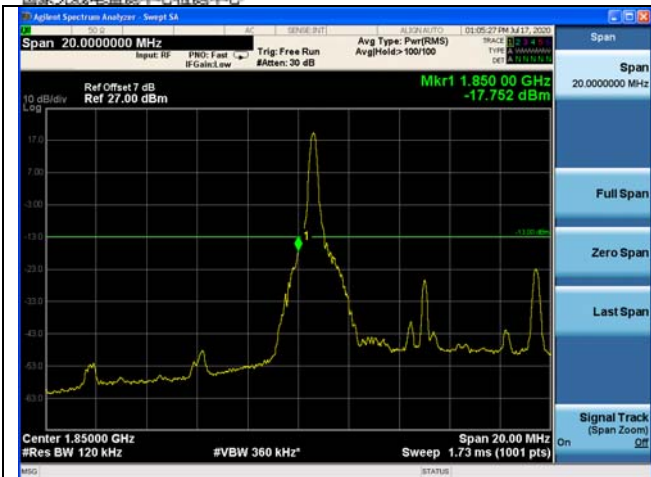


Fig.13



Fig.14

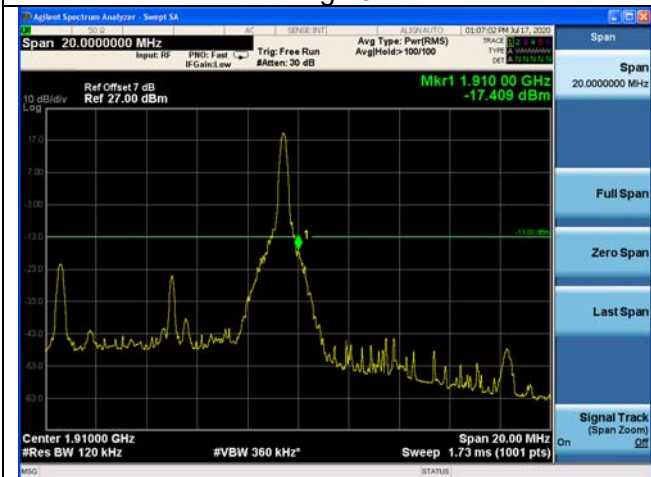


Fig.15



Fig.16

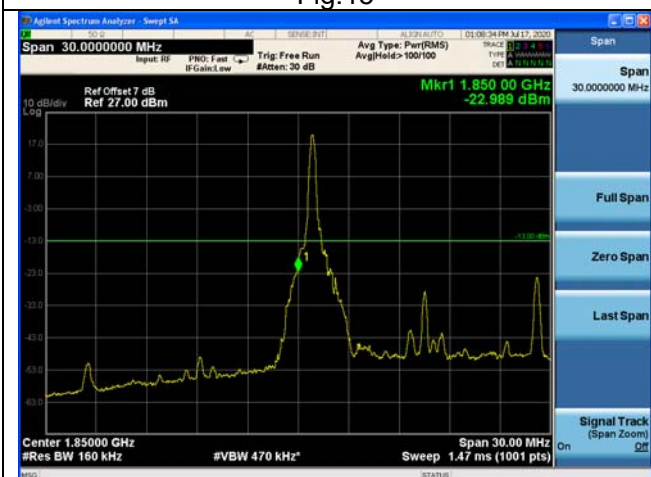


Fig.17

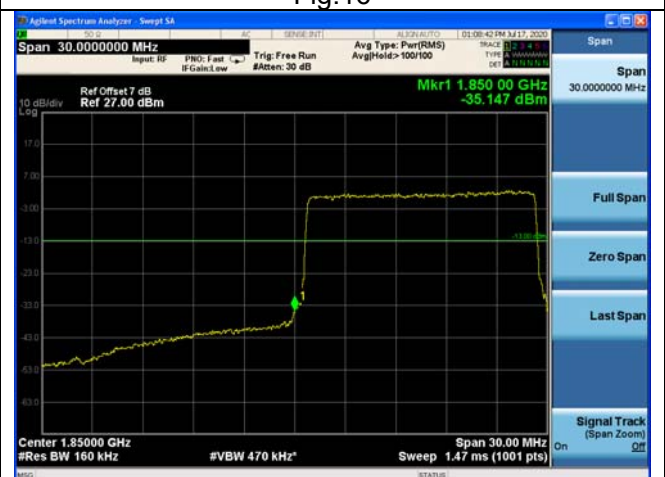


Fig.18

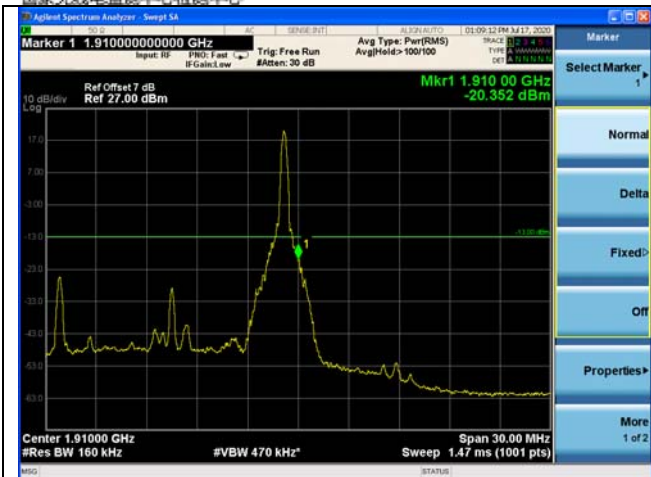


Fig.19



Fig.20

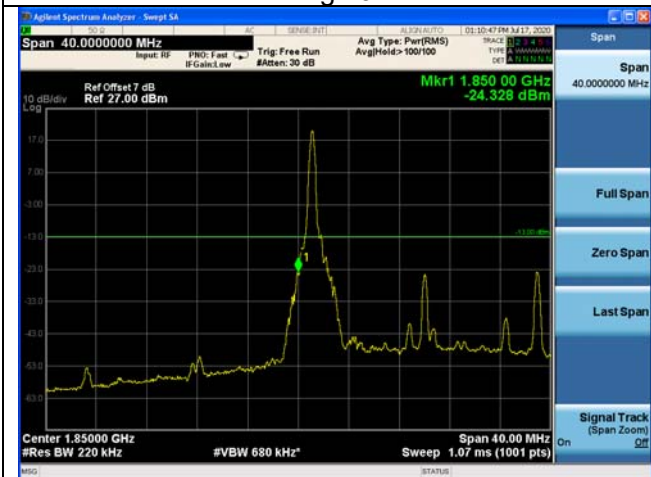


Fig.21



Fig.22

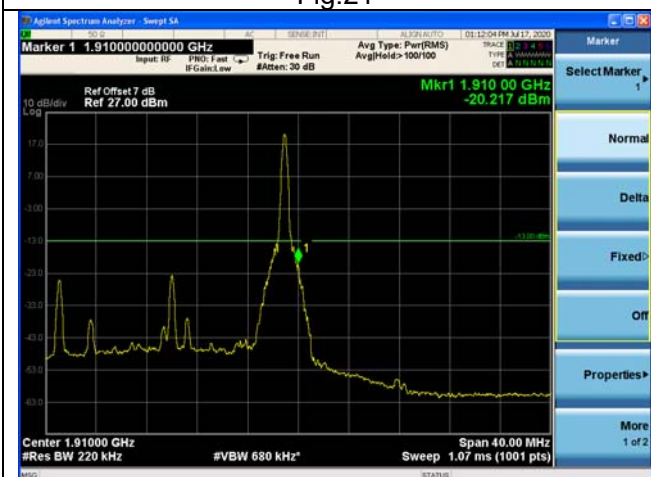


Fig.23



Fig.24

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band2 Low Channel					
		1.4M	3M	5M	10M	15M	20M
-20	NV	-0.050	0.079	-0.079	0.007	-0.010	-0.022
-10	NV	-0.037	0.047	0.020	-0.003	-0.026	0.010
0	NV	0.047	-0.044	0.040	-0.033	-0.037	-0.044
+10	NV	-0.052	0.025	0.010	0.029	-0.022	0.058
+20	NV	0.000	0.000	0.000	0.000	0.000	0.000
+30	NV	-0.057	-0.014	-0.029	0.071	-0.067	-0.054
+40	NV	0.040	0.014	-0.012	-0.083	0.072	-0.033
+50	NV	-0.026	0.017	0.027	0.037	0.047	-0.013
+20	LV	0.064	-0.077	0.011	-0.012	-0.019	0.010
+20	HV	-0.045	-0.062	0.034	-0.070	-0.009	-0.045

Temperature(°C)	Voltage	Test Result (ppm) Band2 High Channel					
		1.4M	3M	5M	10M	15M	20M
-20	NV	0.074	-0.020	0.020	-0.059	-0.041	0.021
-10	NV	0.017	-0.007	-0.015	-0.032	0.022	-0.012
0	NV	0.046	0.009	0.042	0.039	0.032	0.021
+10	NV	-0.038	-0.074	-0.078	-0.051	0.063	0.066
+20	NV	0.000	0.000	0.000	0.000	0.000	0.000
+30	NV	-0.042	-0.020	0.040	-0.072	0.037	-0.027
+40	NV	-0.042	-0.020	-0.086	0.030	-0.060	0.073
+50	NV	0.052	0.008	0.024	-0.044	-0.031	-0.008
+20	LV	0.071	-0.033	-0.002	-0.066	-0.039	0.081
+20	HV	0.076	0.007	-0.054	-0.022	-0.027	-0.008