

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 2

1 RF Power Output

PRF Power Output						
Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1850.7	18607	1.4	1	0	21.97
				1	5	22.04
				3	2	21.19
				6	0	21.17
	1880	18900		1	0	22.13
				1	5	22.03
				3	2	21.32
				6	0	21.25
	1909.3	19193		1	0	21.87
				1	5	21.92
				3	2	21.27
				6	0	21.16
16QAM	1850.7	18607	1.4	1	0	21.26
				1	5	21.21
				3	2	20.25
				6	0	20.25
	1880	18900		1	0	21.33
				1	5	21.32
				3	2	20.48
				6	0	20.41
	1909.3	19193		1	0	21.29
				1	5	21.20
				3	2	20.40
				6	0	20.43
64QAM	1850.7	18607	1.4	1	0	21.15
				1	5	21.19
				3	2	20.29
				6	0	20.27
	1880	18900		1	0	21.36
				1	5	21.29
				3	2	20.47
				6	0	20.25
	1909.3	19193		1	0	21.27
				1	5	21.15
				3	2	20.37
				6	0	20.27

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1851.5	18615	3	1	0	22.12
				1	14	22.08
				8	4	21.16
				15	0	21.23
	1880	18900		1	0	22.07
				1	14	22.00
				8	4	21.35
				15	0	21.26
	1908.5	19185		1	0	21.99
				1	14	21.92
				8	4	21.21
				15	0	21.23
16QAM	1851.5	18615	3	1	0	21.20
				1	14	21.22
				8	4	20.35
				15	0	20.27
	1880	18900		1	0	21.36
				1	14	21.44
				8	4	20.49
				15	0	20.48
	1908.5	19185		1	0	21.28
				1	14	21.25
				8	4	20.37
				15	0	20.38
64QAM	1851.5	18615	3	1	0	21.21
				1	14	21.20
				8	4	20.33
				15	0	20.31
	1880	18900		1	0	21.37
				1	14	21.32
				8	4	20.44
				15	0	20.24
	1908.5	19185		1	0	21.20
				1	14	21.26
				8	4	20.36
				15	0	20.34

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1852.5	18625	5	1	0	22.12
				1	24	22.05
				12	6	21.16
				25	0	21.19
	1880	18900		1	0	22.03
				1	24	21.97
				12	6	21.22
				25	0	21.28
	1907.5	19175		1	0	21.91
				1	24	21.90
				12	6	21.14
				25	0	21.27
16QAM	1852.5	18625	5	1	0	21.17
				1	24	21.21
				12	6	20.30
				25	0	20.26
	1880	18900		1	0	21.36
				1	24	21.41
				12	6	20.48
				25	0	20.38
	1907.5	19175		1	0	21.27
				1	24	21.22
				12	6	20.33
				25	0	20.35
64QAM	1852.5	18625	5	1	0	21.13
				1	24	21.10
				12	6	20.23
				25	0	20.24
	1880	18900		1	0	21.40
				1	24	21.39
				12	6	20.46
				25	0	20.28
	1907.5	19175		1	0	21.22
				1	24	21.11
				12	6	20.33
				25	0	20.34

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1855	18650	10	1	0	22.05
				1	49	22.08
				24	12	21.26
				50	0	21.23
	1880	18900		1	0	22.09
				1	49	22.05
				24	12	21.33
				50	0	21.27
	1905	19150		1	0	21.99
				1	49	21.97
				24	12	21.26
				50	0	21.24
16QAM	1855	18650	10	1	0	21.18
				1	49	21.21
				24	12	20.33
				50	0	20.29
	1880	18900		1	0	21.34
				1	49	21.35
				24	12	20.41
				50	0	20.47
	1905	19150		1	0	21.31
				1	49	21.19
				24	12	20.37
				50	0	20.41
64QAM	1855	18650	10	1	0	21.21
				1	49	21.13
				24	12	20.25
				50	0	20.17
	1880	18900		1	0	21.38
				1	49	21.29
				24	12	20.44
				50	0	20.23
	1905	19150		1	0	21.26
				1	49	21.21
				24	12	20.39
				50	0	20.33

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1857.5	18675	15	1	0	22.06
				1	74	22.07
				40	18	21.16
				75	0	21.15
	1880	18900		1	0	22.12
				1	74	21.98
				40	18	21.29
				75	0	21.28
	1902.5	19125		1	0	22.01
				1	74	21.92
				40	18	21.14
				75	0	21.28
16QAM	1857.5	18675	15	1	0	21.15
				1	74	21.19
				40	18	20.33
				75	0	20.30
	1880	18900		1	0	21.41
				1	74	21.32
				40	18	20.42
				75	0	20.38
	1902.5	19125		1	0	21.27
				1	74	21.20
				40	18	20.40
				75	0	20.32
64QAM	1857.5	18675	15	1	0	21.15
				1	74	21.22
				40	18	20.30
				75	0	20.20
	1880	18900		1	0	21.41
				1	74	21.33
				40	18	20.38
				75	0	20.32
	1902.5	19125		1	0	21.23
				1	74	21.21
				40	18	20.36
				75	0	20.38

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1860	18700	20	1	0	22.12
				1	99	22.10
				50	25	21.30
				100	0	21.25
	1880	18900		1	0	22.13
				1	99	22.12
				50	25	21.36
				100	0	21.32
	1900	19100		1	0	22.01
				1	99	21.98
				50	25	21.27
				100	0	21.29
16QAM	1860	18700	20	1	0	21.29
				1	99	21.24
				50	25	20.39
				100	0	20.38
	1880	18900		1	0	21.48
				1	99	21.45
				50	25	20.52
				100	0	20.48
	1900	19100		1	0	21.36
				1	99	21.34
				50	25	20.48
				100	0	20.46
64QAM	1860	18700	20	1	0	21.24
				1	99	21.22
				50	25	20.36
				100	0	20.32
	1880	18900		1	0	21.46
				1	99	21.43
				50	25	20.48
				100	0	20.37
	1900	19100		1	0	21.29
				1	99	21.26
				50	25	20.43
				100	0	20.41

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	
2	1850.7	18607	1.4	6	0	1.0887	Fig.1	1.0922	Fig.2	1.0899	Fig.3
	1880.0	18900		6	0	1.0912	Fig.4	1.0928	Fig.5	1.0886	Fig.6
	1909.3	19193		6	0	1.0873	Fig.7	1.0867	Fig.8	1.0878	Fig.9
	1851.5	18615	3	15	0	2.7223	Fig.10	2.7246	Fig.11	2.7246	Fig.12
	1880.0	18900		15	0	2.7243	Fig.13	2.7266	Fig.14	2.7197	Fig.15
	1908.5	19185		15	0	2.7208	Fig.16	2.7168	Fig.17	2.7238	Fig.18
	1852.5	18625	5	25	0	4.4894	Fig.19	4.4862	Fig.20	4.4974	Fig.21
	1880.0	18900		25	0	4.4996	Fig.22	4.4869	Fig.23	4.4922	Fig.24
	1907.5	19175		25	0	4.4995	Fig.25	4.4985	Fig.26	4.4912	Fig.27
	1855	18650	10	50	0	8.9813	Fig.28	8.9520	Fig.29	8.9620	Fig.30
	1880	18900		50	0	8.9680	Fig.31	8.9662	Fig.32	8.9745	Fig.33
	1905	19150		50	0	8.9587	Fig.34	8.9512	Fig.35	8.9587	Fig.36
	1857.5	18675	15	75	0	13.467	Fig.37	13.456	Fig.38	13.444	Fig.39
	1880.0	18900		75	0	13.392	Fig.40	13.412	Fig.41	13.412	Fig.42
	1902.5	19125		75	0	13.431	Fig.43	13.461	Fig.44	13.407	Fig.45
	1860	18700	20	100	0	17.889	Fig.46	17.900	Fig.47	17.907	Fig.48
	1880	18900		100	0	17.877	Fig.49	17.885	Fig.50	17.855	Fig.51
	1900	19100		100	0	17.905	Fig.52	17.865	Fig.53	17.860	Fig.54

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
2	1850.7	18607	1.4	6	0	1.415	Fig.1	1.413	Fig.2	1.425	Fig.3
	1880.0	18900		6	0	1.403	Fig.4	1.420	Fig.5	1.460	Fig.6
	1909.3	19193		6	0	1.481	Fig.7	1.479	Fig.8	1.445	Fig.9
	1851.5	18615	3	15	0	3.486	Fig.10	3.439	Fig.11	3.468	Fig.12
	1880.0	18900		15	0	3.518	Fig.13	3.563	Fig.14	3.417	Fig.15
	1908.5	19185		15	0	3.442	Fig.16	3.464	Fig.17	3.449	Fig.18
	1852.5	18625	5	25	0	5.295	Fig.19	5.350	Fig.20	5.044	Fig.21
	1880.0	18900		25	0	5.351	Fig.22	5.297	Fig.23	5.192	Fig.24
	1907.5	19175		25	0	5.139	Fig.25	5.369	Fig.26	5.342	Fig.27
	1855	18650	10	50	0	10.41	Fig.28	10.45	Fig.29	10.36	Fig.30
	1880	18900		50	0	10.40	Fig.31	10.31	Fig.32	10.41	Fig.33
	1905	19150		50	0	10.45	Fig.34	10.29	Fig.35	10.20	Fig.36
	1857.5	18675	15	75	0	14.08	Fig.37	14.44	Fig.38	14.16	Fig.39
	1880.0	18900		75	0	14.11	Fig.40	14.31	Fig.41	14.06	Fig.42
	1902.5	19125		75	0	14.71	Fig.43	15.00	Fig.44	15.10	Fig.45
	1860	18700	20	100	0	20.38	Fig.46	20.15	Fig.47	20.17	Fig.48
	1880	18900		100	0	20.27	Fig.49	20.21	Fig.50	20.17	Fig.51
	1900	19100		100	0	20.48	Fig.52	20.57	Fig.53	20.39	Fig.54



Fig.1

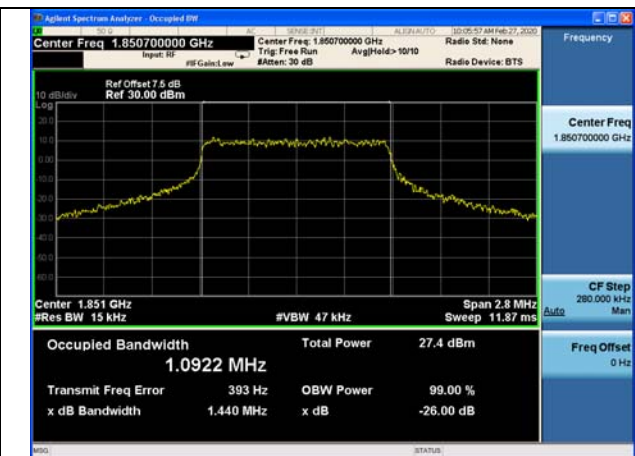


Fig.2

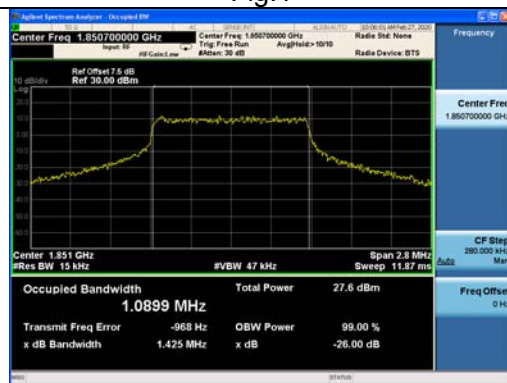


Fig.3



Fig.4



Fig.5

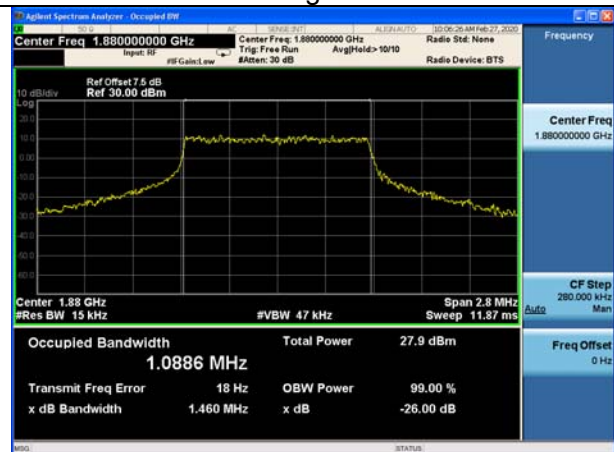


Fig.6

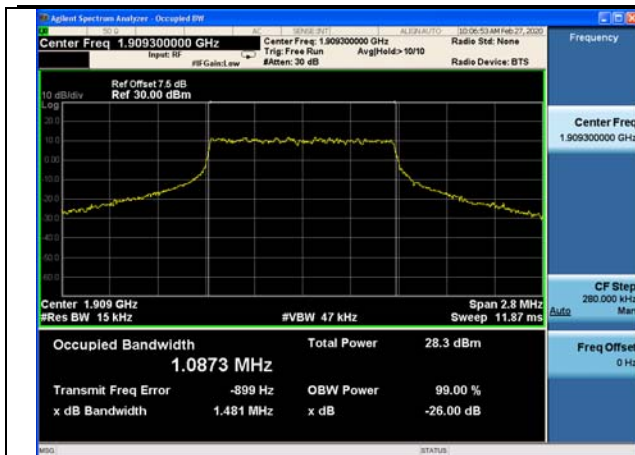


Fig.7

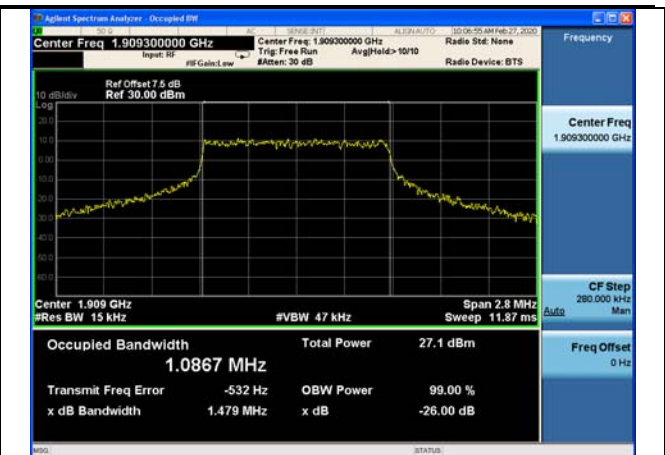


Fig.8

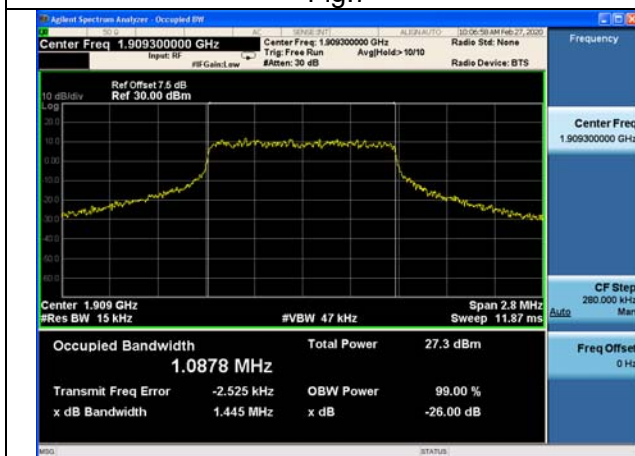


Fig.9



Fig.10

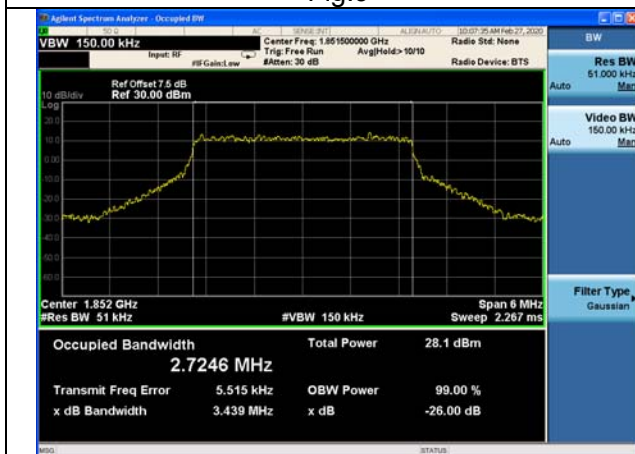


Fig.11



Fig.12



Fig.13

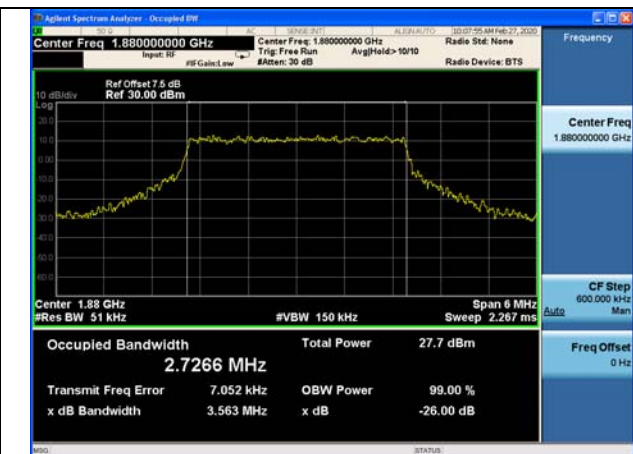


Fig.14

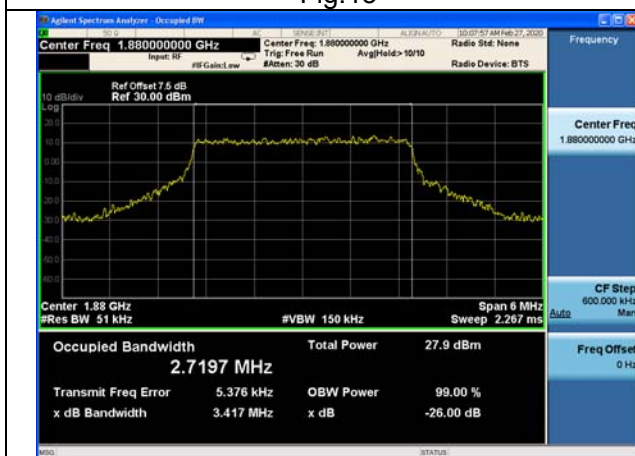


Fig.15

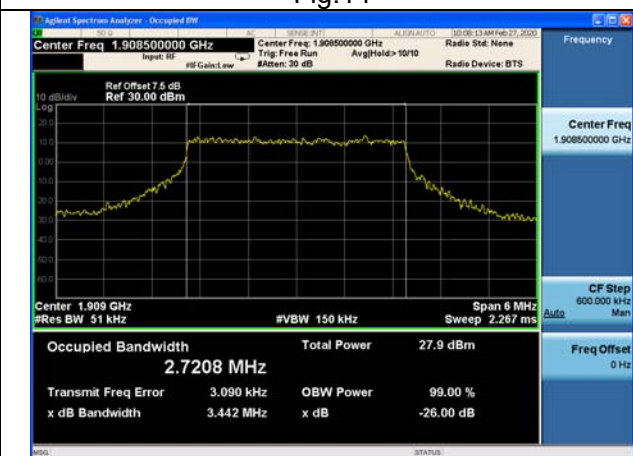


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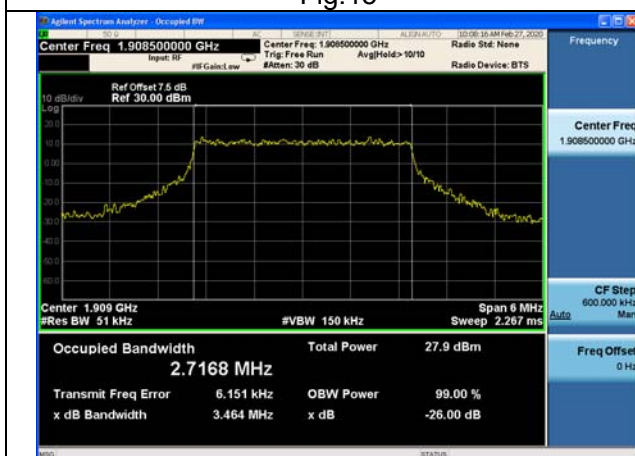


Fig.17

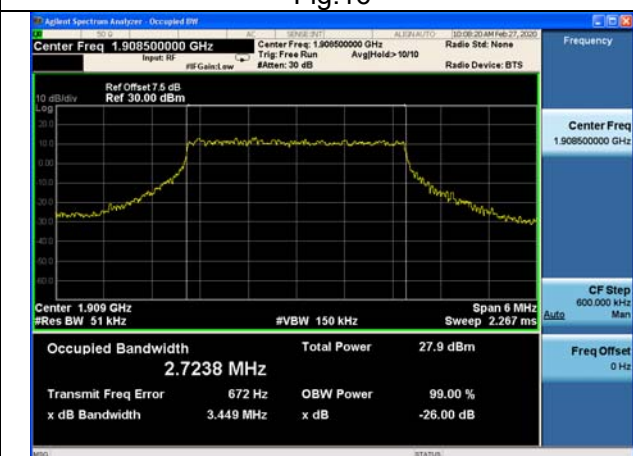


Fig.18

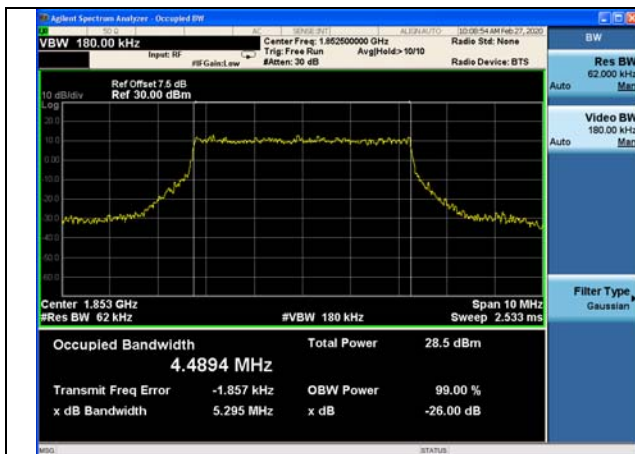


Fig.19

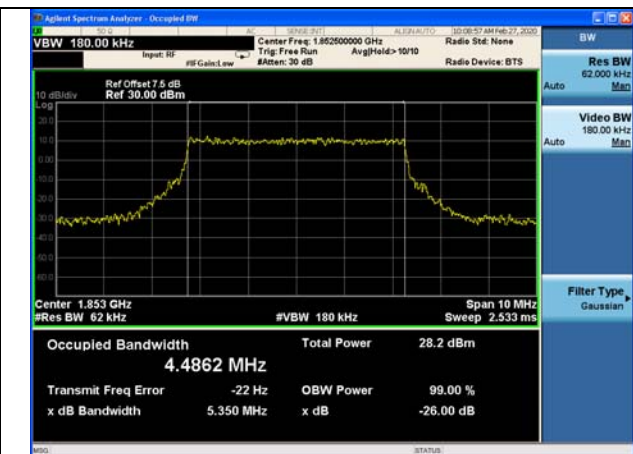


Fig.20

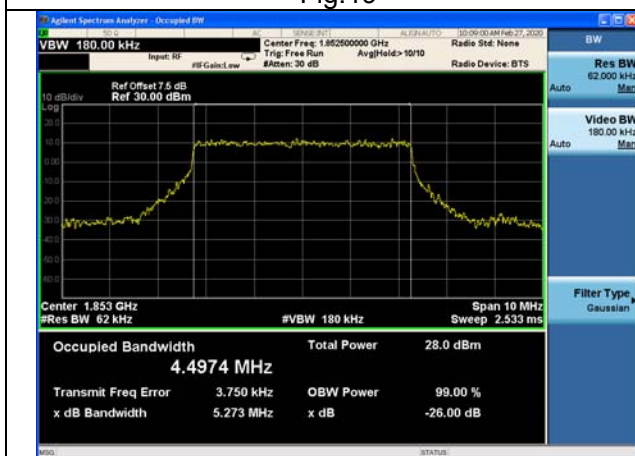


Fig.21

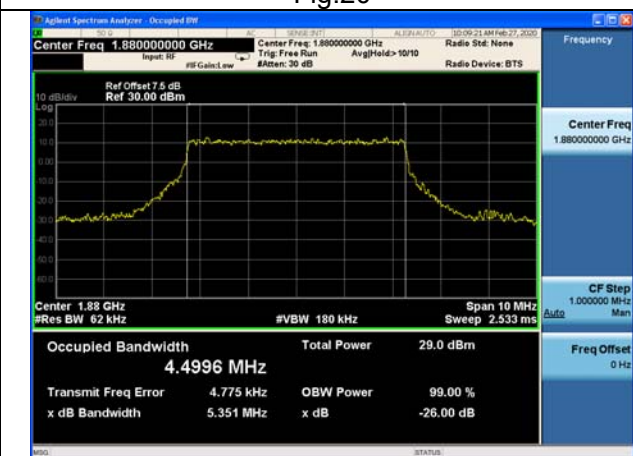


Fig.22

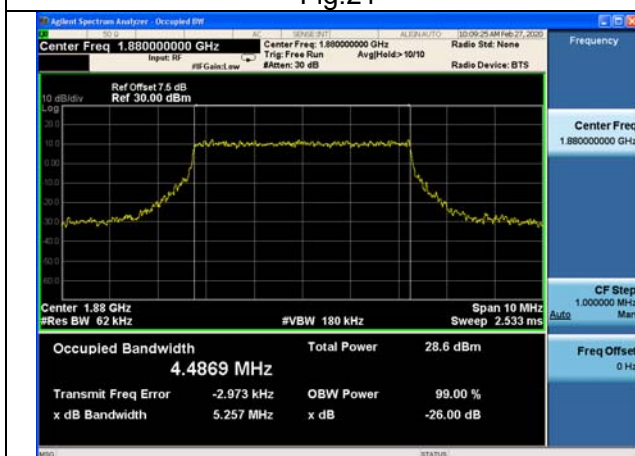


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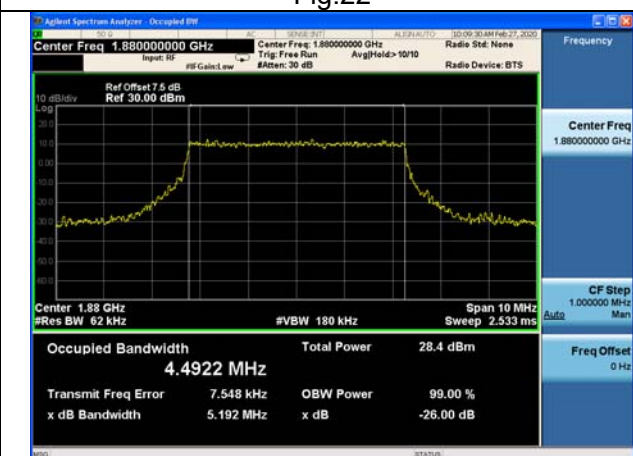


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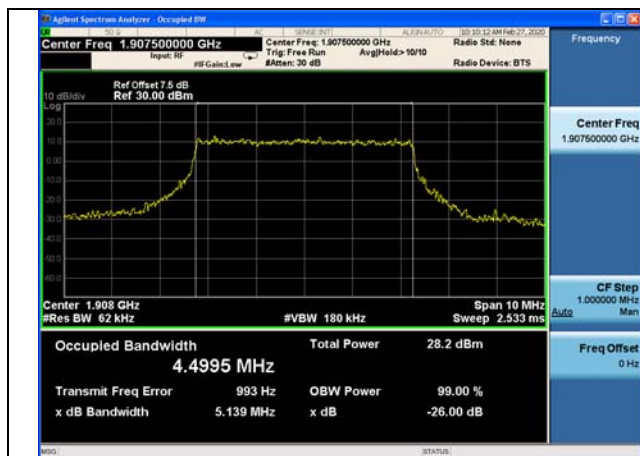


Fig.25



Fig.26

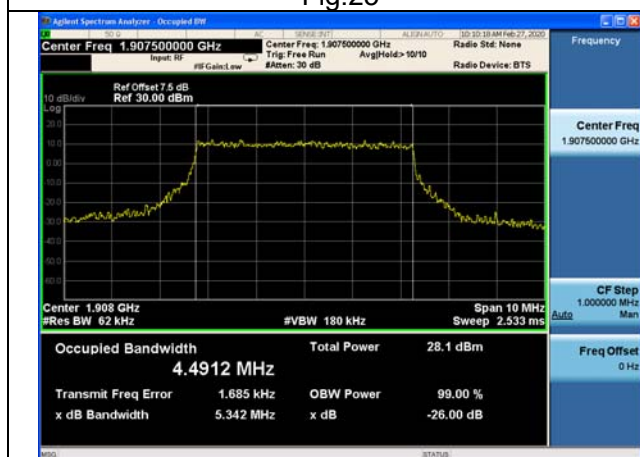


Fig.27

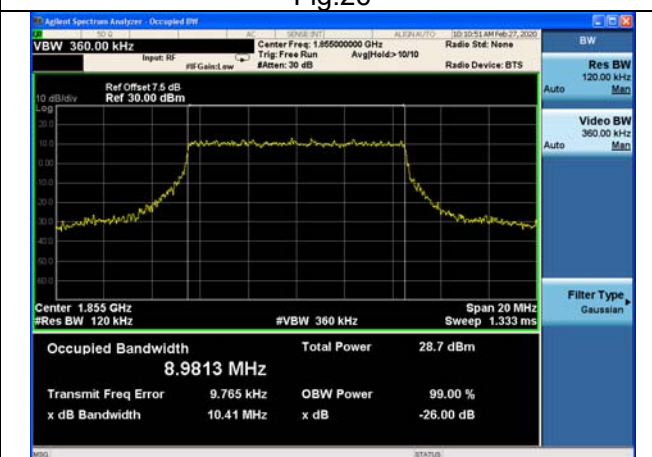


Fig.28

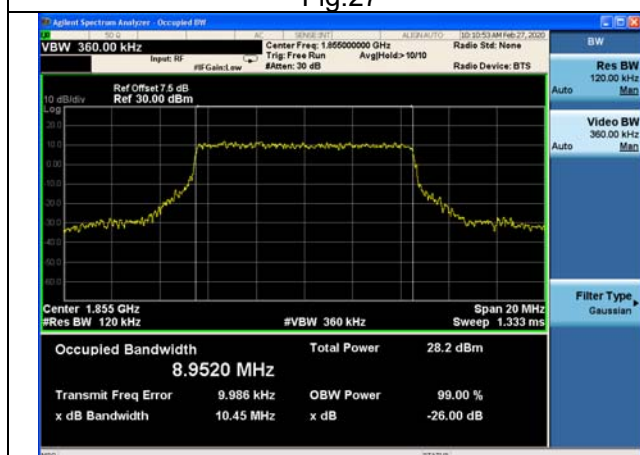


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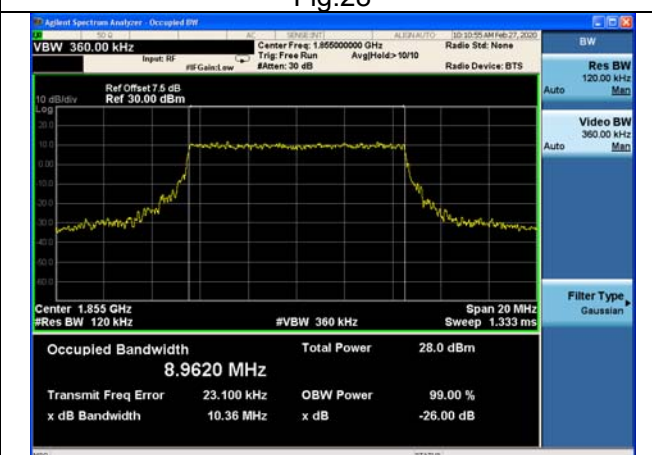


Fig.30

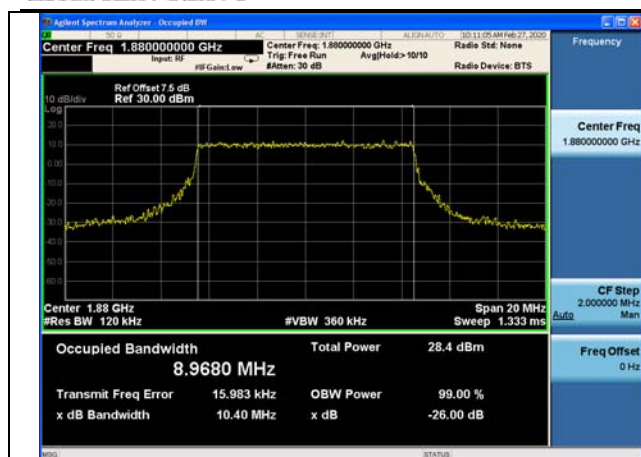


Fig.31

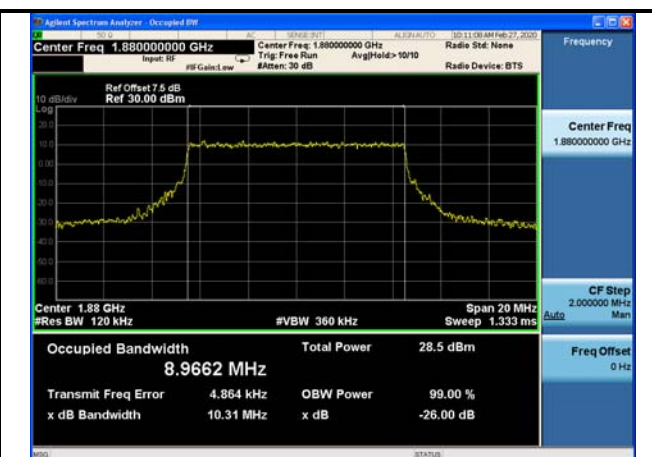


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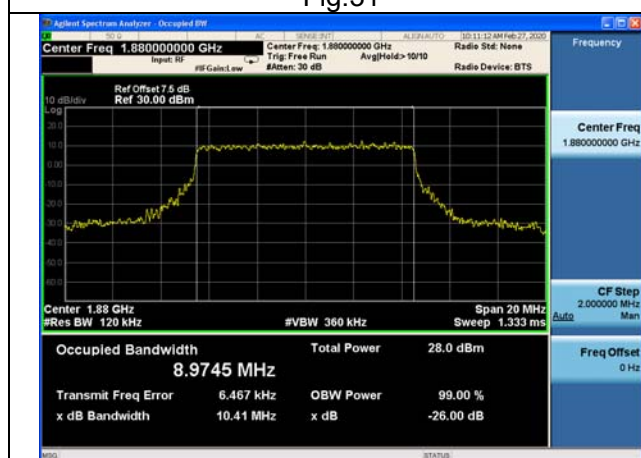


Fig.33

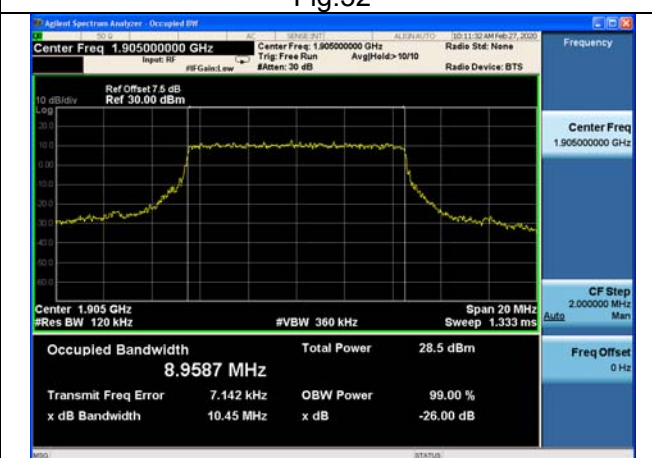


Fig.34



Fig.35

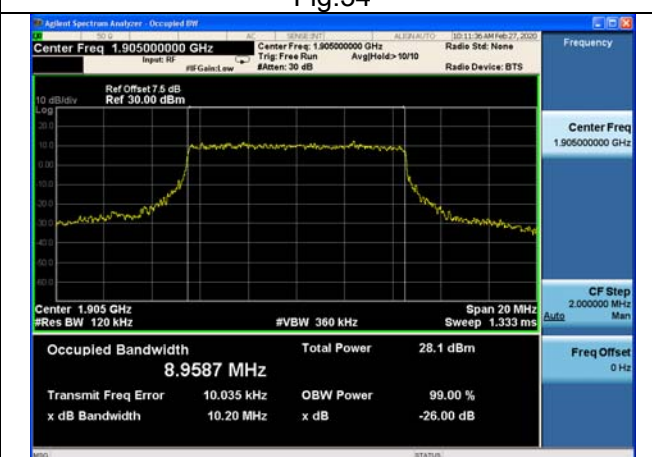


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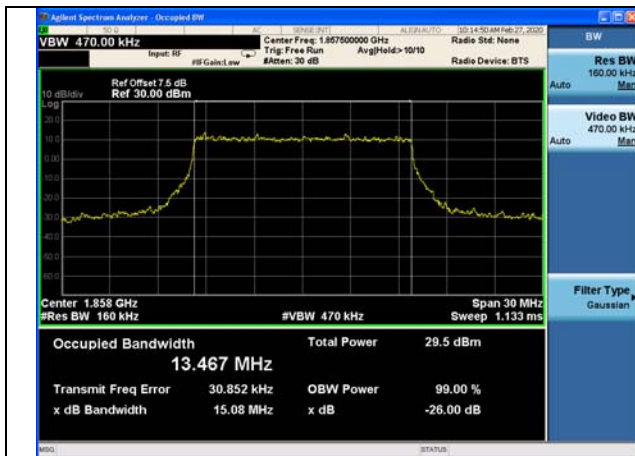


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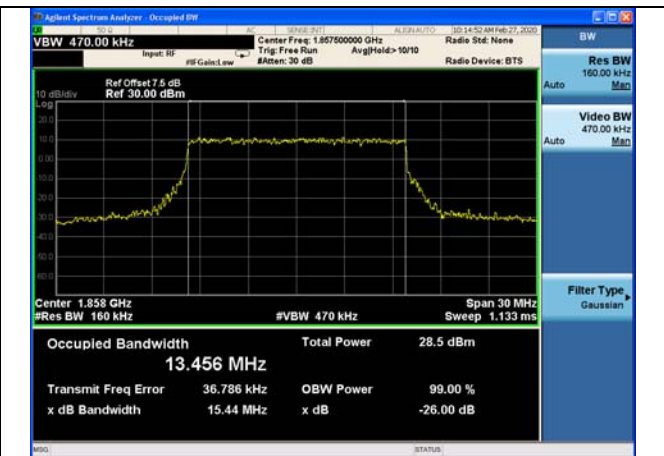


Fig.38

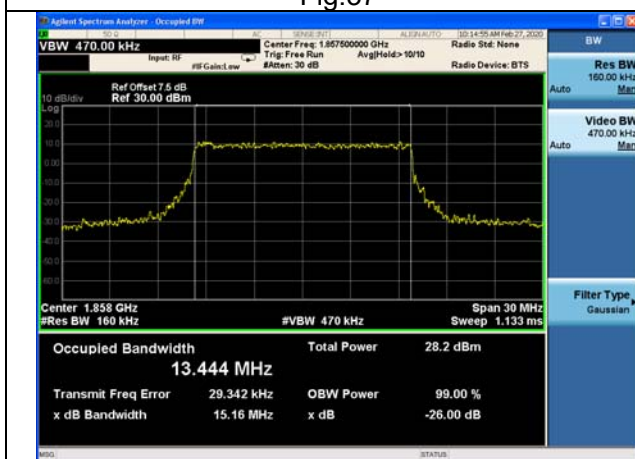


Fig.39

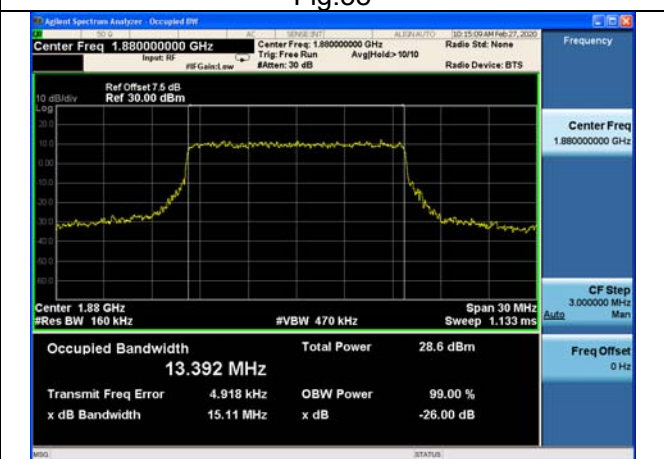


Fig.40

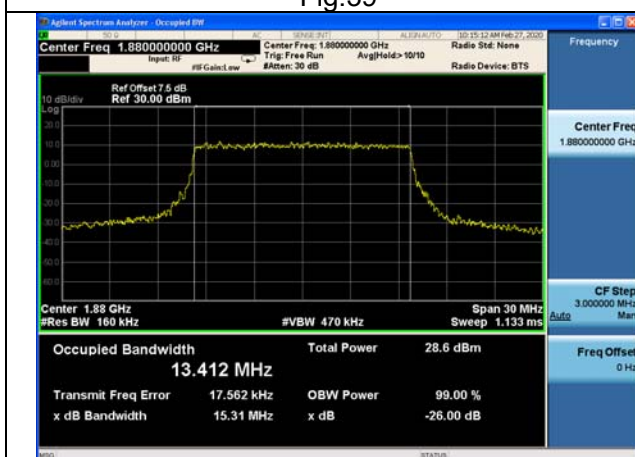


Fig.41

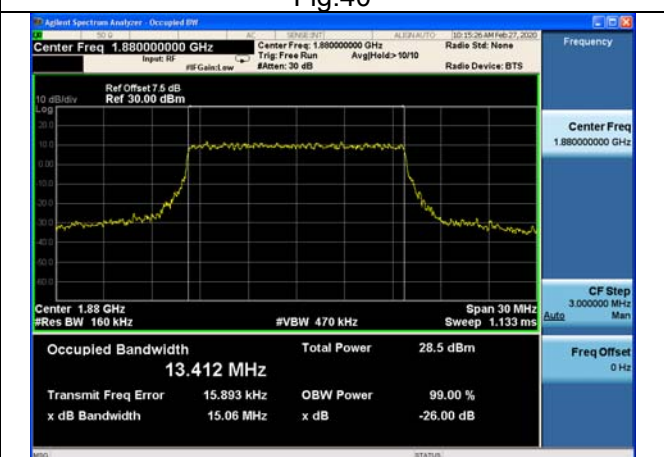


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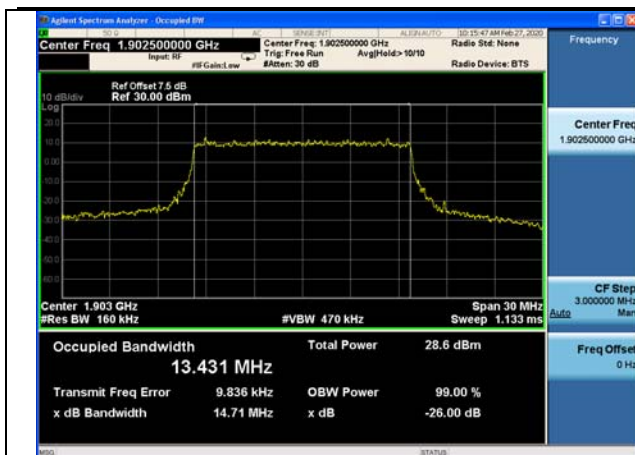


Fig.43

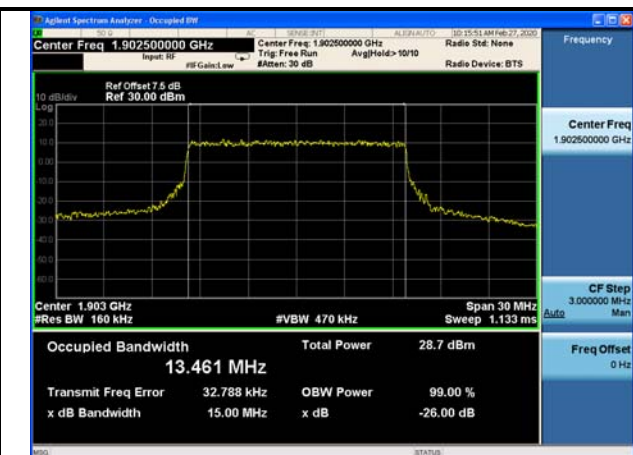


Fig.44



Fig.45

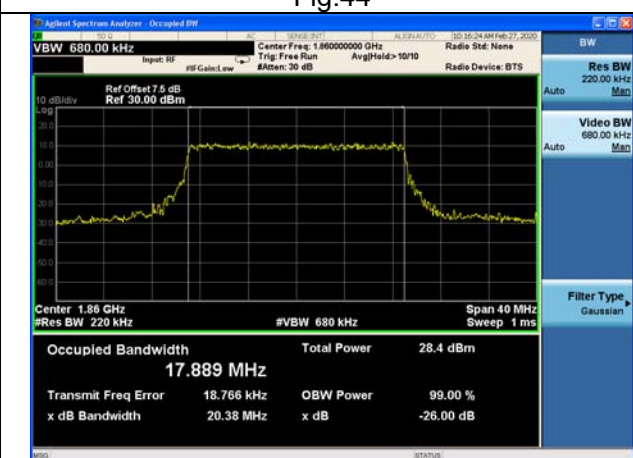


Fig.46



Fig.47



Fig.48

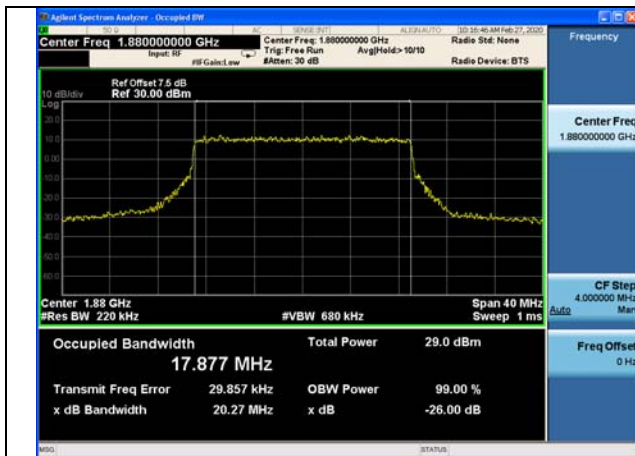


Fig.49

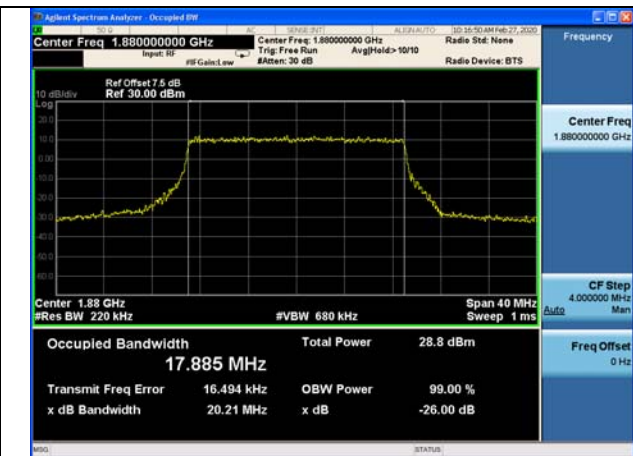


Fig.50

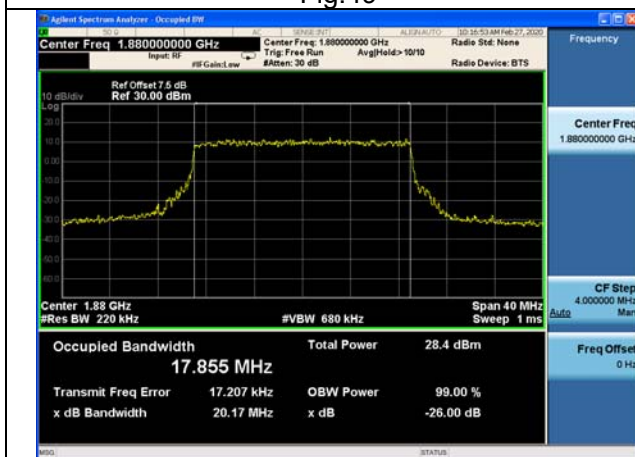


Fig.51

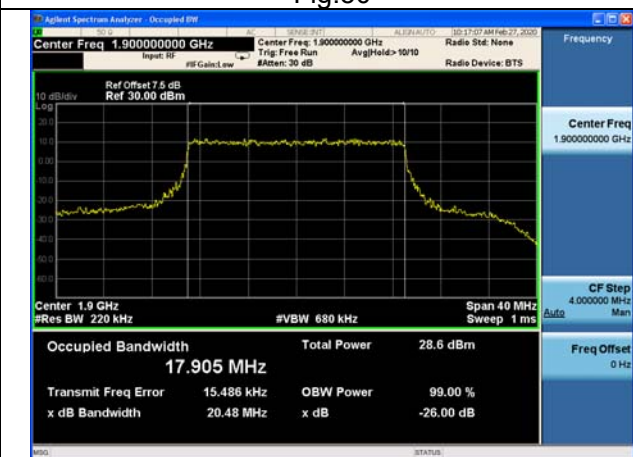


Fig.52

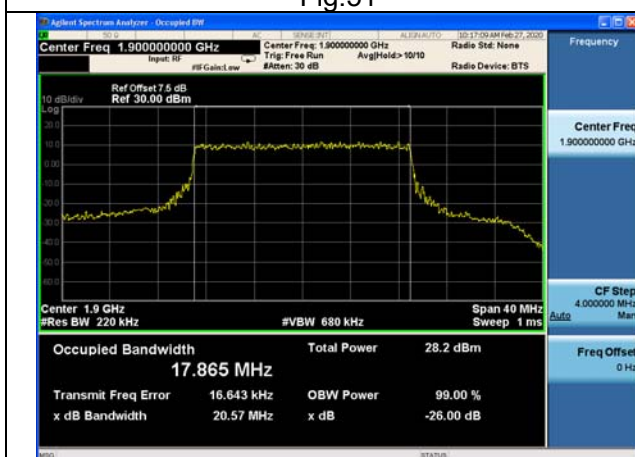


Fig.53

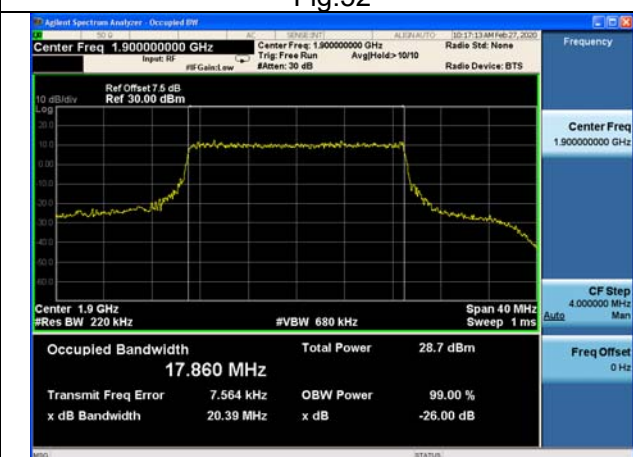


Fig.54

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
2	1880.0	18900	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
			15	1	0	Fig.13	Fig.14	Fig.15
			20	1	0	Fig.16	Fig.17	Fig.18



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

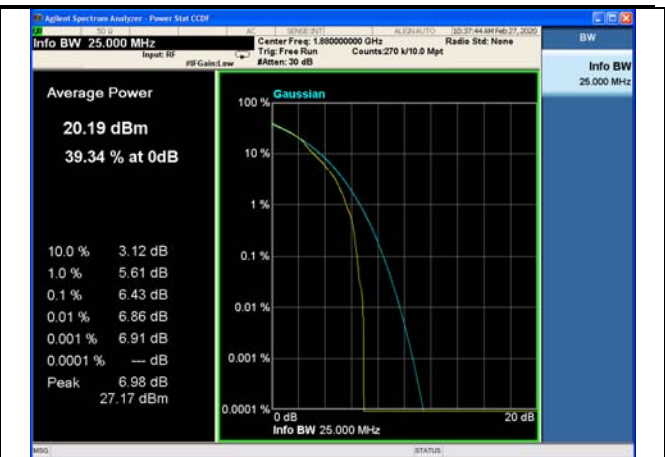


Fig.18

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

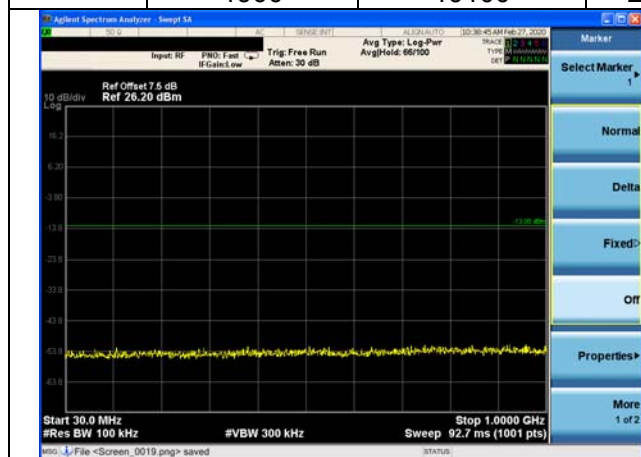


Fig.1

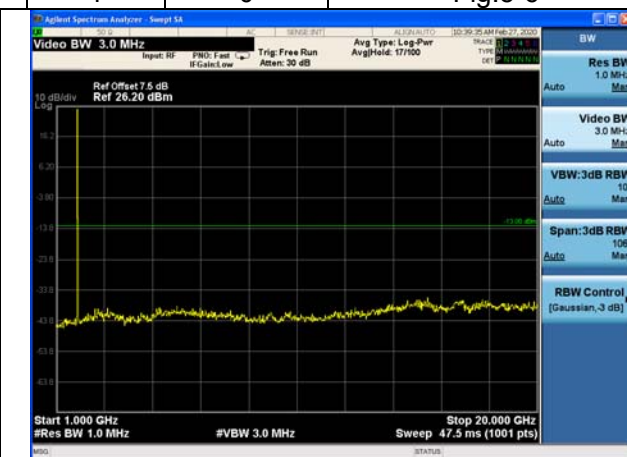


Fig.2

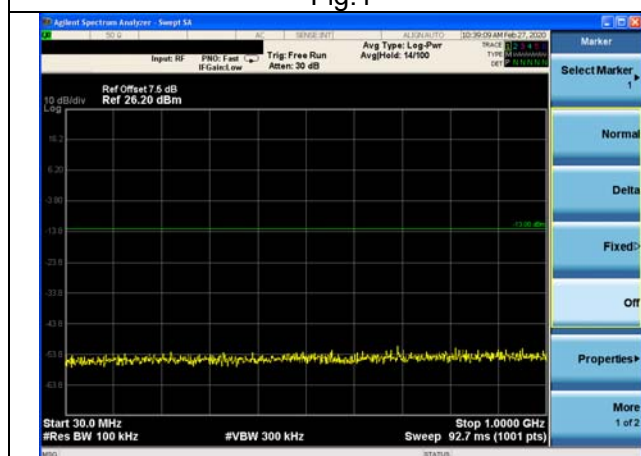


Fig3

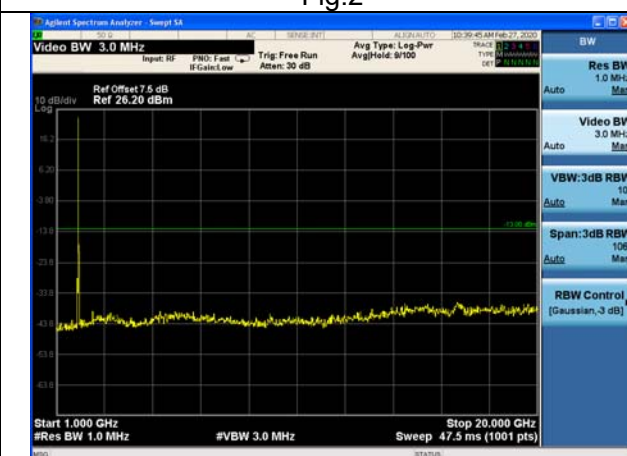


Fig4

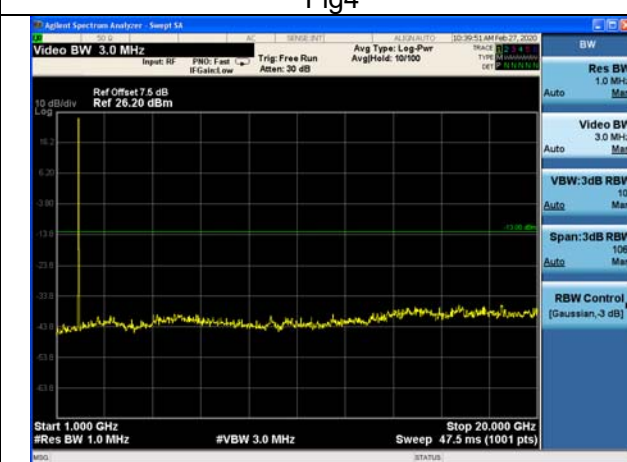
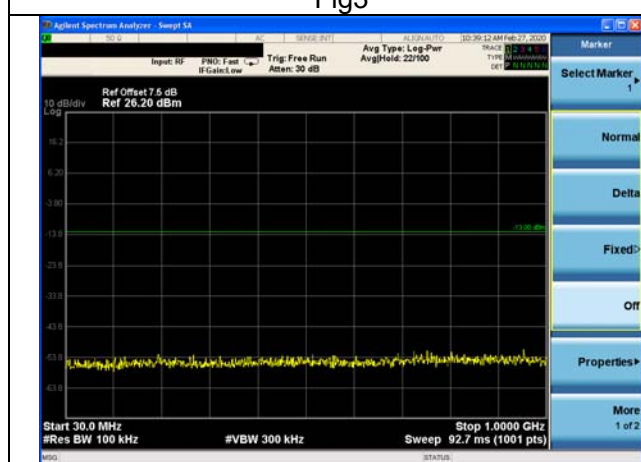


Fig5

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

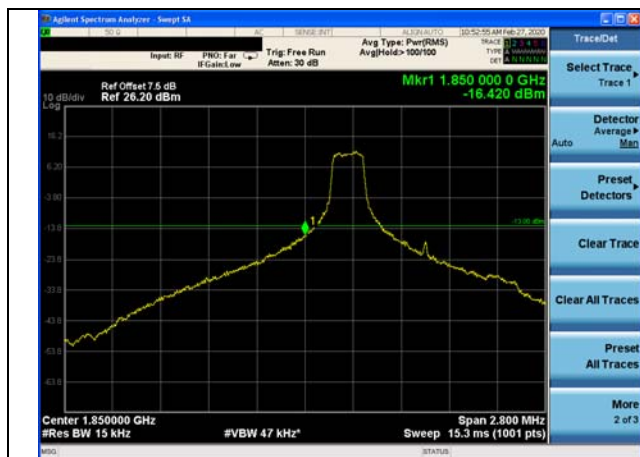


Fig.1



Fig.2

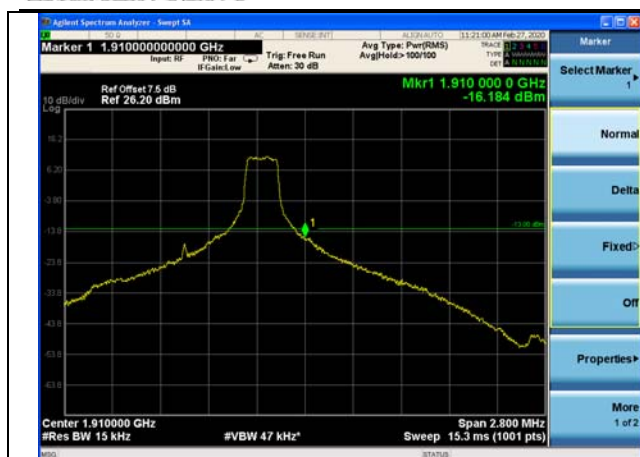


Fig.3



Fig.4

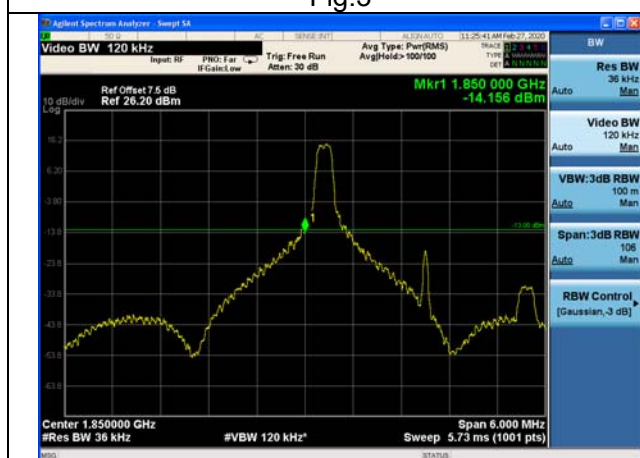


Fig.5



Fig.6

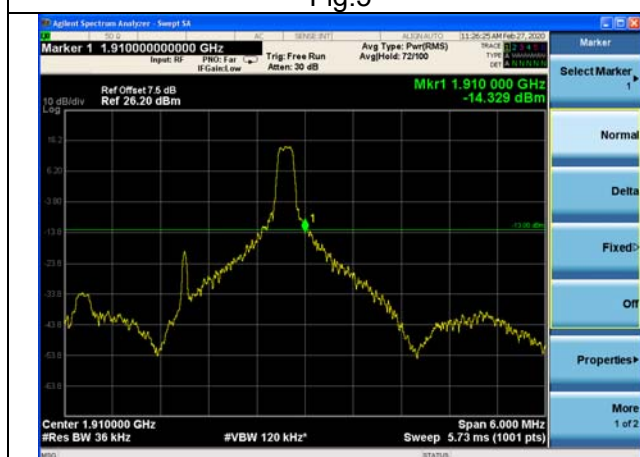


Fig.7



Fig.8

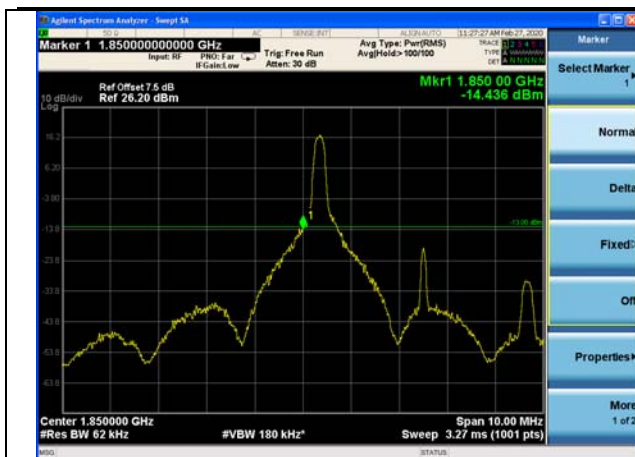


Fig.9

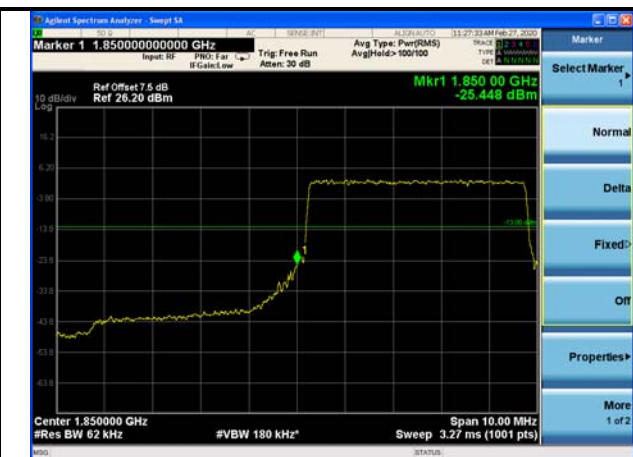


Fig.10



Fig.11

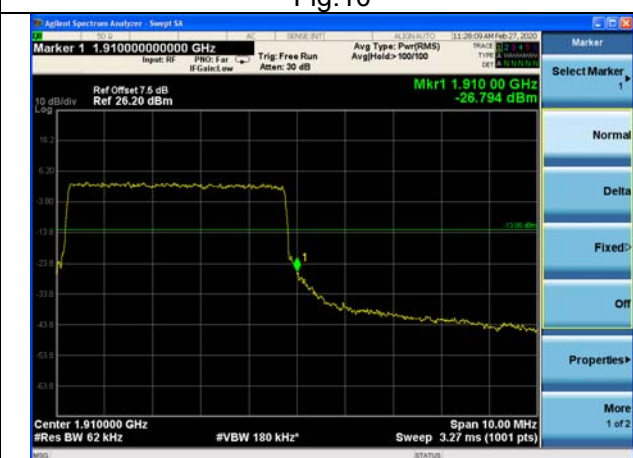


Fig.12

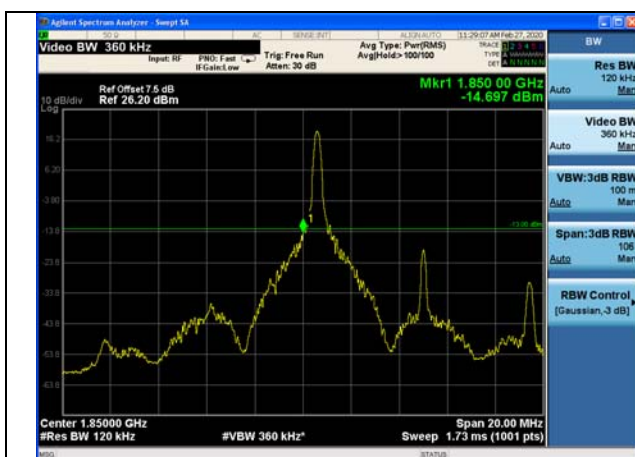


Fig.13

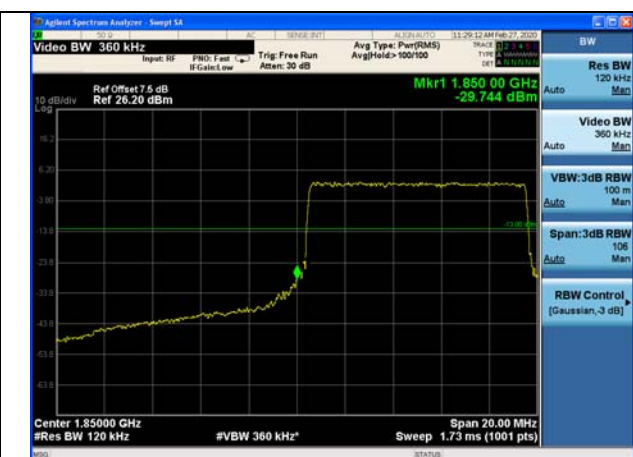


Fig.14



Fig.15



Fig.16



Fig.17

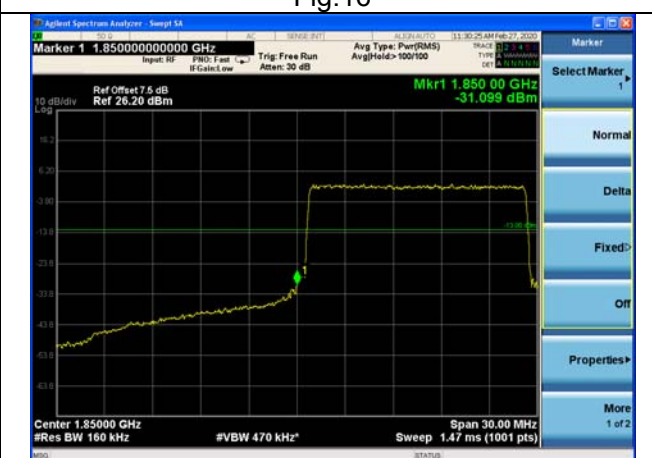


Fig.18



Fig.19



Fig.20

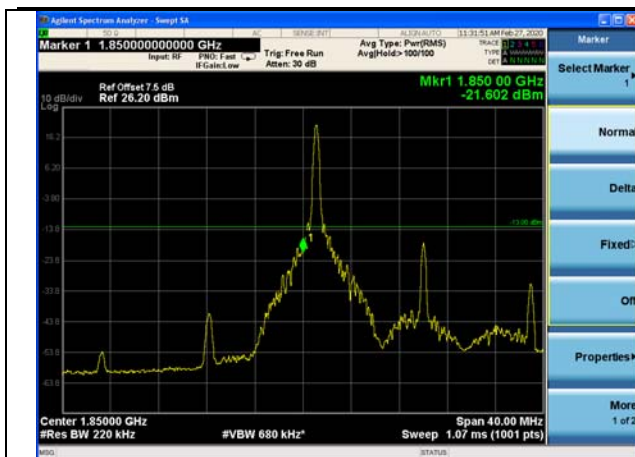


Fig.21



Fig.22

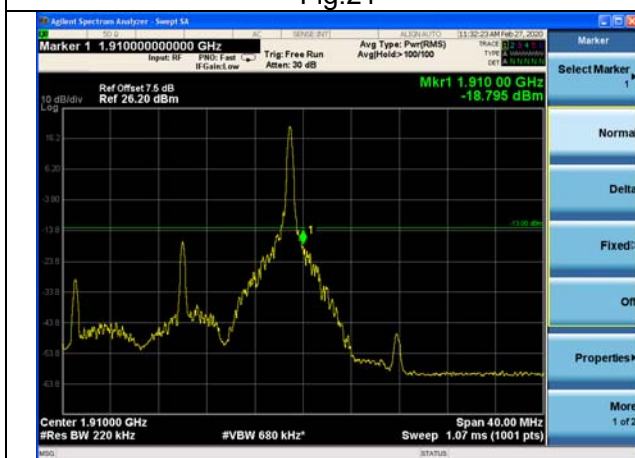


Fig.23



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	0.044	-0.037	-0.048	0.016	-0.035	-0.041
-10	NV	-0.016	0.040	0.034	-0.042	-0.030	0.065
0	NV	-0.032	-0.034	0.062	0.052	0.022	0.000
+10	NV	-0.048	-0.047	-0.012	-0.015	0.036	-0.042
+20	NV	0.000	0.000	0.000	0.000	0.000	0.000
+30	NV	-0.036	-0.002	-0.049	0.019	-0.029	0.029
+40	NV	-0.012	0.052	0.016	-0.020	0.025	0.018
+50	NV	0.020	0.016	-0.030	0.032	-0.045	0.051
+55	NV	0.065	-0.040	-0.012	0.057	0.013	-0.039
+20	LV	0.001	-0.019	-0.020	-0.018	0.042	0.023
+20	HV	0.064	0.022	0.065	0.001	-0.048	-0.021

Temperature(°C)	Voltage	Test Result (ppm) Band2 High Channel					
		1.4M	3M	5M	10M	15M	20M
-20	NV	0.051	-0.001	0.034	-0.040	0.049	0.064
-10	NV	-0.028	-0.017	0.001	-0.028	0.016	0.000
0	NV	-0.037	-0.002	0.052	0.029	-0.043	-0.046
+10	NV	-0.032	-0.015	0.065	-0.033	0.046	0.059
+20	NV	0.000	0.000	0.000	0.000	0.000	0.000
+30	NV	0.015	-0.046	0.008	0.012	-0.037	0.060
+40	NV	0.014	0.037	-0.025	-0.003	-0.037	-0.012
+50	NV	-0.035	-0.005	0.049	0.054	-0.044	-0.029
+55	NV	0.059	0.006	0.039	-0.008	-0.039	-0.029
+20	LV	-0.034	0.021	-0.038	-0.028	-0.018	0.054
+20	HV	-0.036	0.002	0.019	0.016	-0.015	-0.040