

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 2

1 RF Power Output

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1850.7	18607	1.4	1	0	23.61
				1	5	23.58
				3	2	22.55
				6	0	22.61
	1880	18900		1	0	23.51
				1	5	23.55
				3	2	22.49
				6	0	22.46
	1909.3	19193		1	0	23.37
				1	5	23.36
				3	2	22.53
				6	0	22.36
16QAM	1850.7	18607	1.4	1	0	22.96
				1	5	23.00
				3	2	21.62
				6	0	21.62
	1880	18900		1	0	22.43
				1	5	22.49
				3	2	21.53
				6	0	21.59
	1909.3	19193		1	0	23.00
				1	5	23.03
				3	2	21.56
				6	0	21.60

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1851.5	18615	3	1	0	23.60
				1	14	23.62
				8	4	22.55
				15	0	22.57
	1880	18900		1	0	23.57
				1	14	23.56
				8	4	22.49
				15	0	22.42
	1908.5	19185		1	0	23.39
				1	14	23.40
				8	4	22.53
				15	0	22.39
16QAM	1851.5	18615	3	1	0	22.95
				1	14	22.97
				8	4	21.67
				15	0	21.63
	1880	18900		1	0	22.48
				1	14	22.42
				8	4	21.59
				15	0	21.62
	1908.5	19185		1	0	22.99
				1	14	23.02
				8	4	21.53
				15	0	21.64

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1852.5	18625	5	1	0	23.55
				1	24	23.61
				12	6	22.59
				25	0	22.62
	1880	18900		1	0	23.53
				1	24	23.54
				12	6	22.44
				25	0	22.44
	1907.5	19175		1	0	23.36
				1	24	23.37
				12	6	22.56
				25	0	22.37
16QAM	1852.5	18625	5	1	0	22.97
				1	24	22.97
				12	6	21.62
				25	0	21.66
	1880	18900		1	0	22.47
				1	24	22.49
				12	6	21.59
				25	0	21.62
	1907.5	19175		1	0	23.02
				1	24	23.03
				12	6	21.57
				25	0	21.66

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1855	18650	10	1	0	23.62
				1	49	23.62
				24	12	22.61
				50	0	22.56
	1880	18900		1	0	23.54
				1	49	23.57
				24	12	22.40
				50	0	22.46
	1905	19150		1	0	23.38
				1	49	23.41
				24	12	22.54
				50	0	22.43
16QAM	1855	18650	10	1	0	23.03
				1	49	23.00
				24	12	21.62
				50	0	21.58
	1880	18900		1	0	22.49
				1	49	22.47
				24	12	21.58
				50	0	21.57
	1905	19150		1	0	23.00
				1	49	23.04
				24	12	21.51
				50	0	21.66

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1857.5	18675	15	1	0	23.63
				1	74	23.55
				40	18	22.56
				75	0	22.58
	1880	18900		1	0	23.52
				1	74	23.54
				40	18	22.41
				75	0	22.45
	1902.5	19125		1	0	23.34
				1	74	23.42
				40	18	22.53
				75	0	22.41
16QAM	1857.5	18675	15	1	0	23.00
				1	74	22.99
				40	18	21.65
				75	0	21.58
	1880	18900		1	0	22.47
				1	74	22.41
				40	18	21.53
				75	0	21.64
	1902.5	19125		1	0	23.03
				1	74	23.02
				40	18	21.53
				75	0	21.66

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1860	18700	20	1	0	23.66
				1	99	23.66
				50	25	22.65
				100	0	22.67
	1880	18900		1	0	23.62
				1	99	23.62
				50	25	22.53
				100	0	22.51
	1900	19100		1	0	23.46
				1	99	23.46
				50	25	22.64
				100	0	22.49
16QAM	1860	18700	20	1	0	23.07
				1	99	23.07
				50	25	21.73
				100	0	21.70
	1880	18900		1	0	22.53
				1	99	22.53
				50	25	21.63
				100	0	21.70
	1900	19100		1	0	23.08
				1	99	23.08
				50	25	21.63
				100	0	21.71

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	1.0784	Fig.1	1.0793	Fig.2
	1880.0	18900		6	0	1.0791	Fig.3	1.0797	Fig.4
	1909.3	19193		6	0	1.0800	Fig.5	1.0810	Fig.6
	1851.5	18615	3	15	0	2.6989	Fig.7	2.6904	Fig.8
	1880.0	18900		15	0	2.6966	Fig.9	2.7006	Fig.10
	1908.5	19185		15	0	2.7001	Fig.11	2.6964	Fig.12
	1852.5	18625	5	25	0	4.4697	Fig.13	4.4523	Fig.14
	1880.0	18900		25	0	4.4683	Fig.15	4.4765	Fig.16
	1907.5	19175		25	0	4.4744	Fig.17	4.4709	Fig.18
	1855	18650	10	50	0	8.9671	Fig.19	8.9536	Fig.20
	1880	18900		50	0	8.9738	Fig.21	8.9573	Fig.22
	1905	19150		50	0	8.9561	Fig.23	8.9688	Fig.24
	1857.5	18675	15	75	0	13.369	Fig.25	13.408	Fig.26
	1880.0	18900		75	0	13.406	Fig.27	13.467	Fig.28
	1902.5	19125		75	0	13.421	Fig.29	13.408	Fig.30
	1860	18700	20	100	0	17.887	Fig.31	17.836	Fig.32
	1880	18900		100	0	17.891	Fig.33	17.908	Fig.34
	1900	19100		100	0	17.886	Fig.35	17.900	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	1.205	Fig.1	1.221	Fig.2
	1880.0	18900		6	0	1.219	Fig.3	1.216	Fig.4
	1909.3	19193		6	0	1.233	Fig.5	1.218	Fig.6
	1851.5	18615	3	15	0	2.993	Fig.7	3.008	Fig.8
	1880.0	18900		15	0	2.994	Fig.9	3.024	Fig.10
	1908.5	19185		15	0	3.029	Fig.11	3.007	Fig.12
	1852.5	18625	5	25	0	4.891	Fig.13	4.636	Fig.14
	1880.0	18900		25	0	4.846	Fig.15	4.905	Fig.16
	1907.5	19175		25	0	4.883	Fig.17	4.859	Fig.18
	1855	18650	10	50	0	9.677	Fig.19	9.701	Fig.20
	1880	18900		50	0	9.822	Fig.21	9.663	Fig.22
	1905	19150		50	0	9.691	Fig.23	9.708	Fig.24
	1857.5	18675	15	75	0	14.48	Fig.25	14.63	Fig.26
	1880.0	18900		75	0	14.32	Fig.27	14.51	Fig.28
	1902.5	19125		75	0	14.58	Fig.29	14.52	Fig.30
	1860	18700	20	100	0	19.45	Fig.31	19.14	Fig.32
	1880	18900		100	0	19.45	Fig.33	19.41	Fig.34
	1900	19100		100	0	19.35	Fig.35	19.37	Fig.36

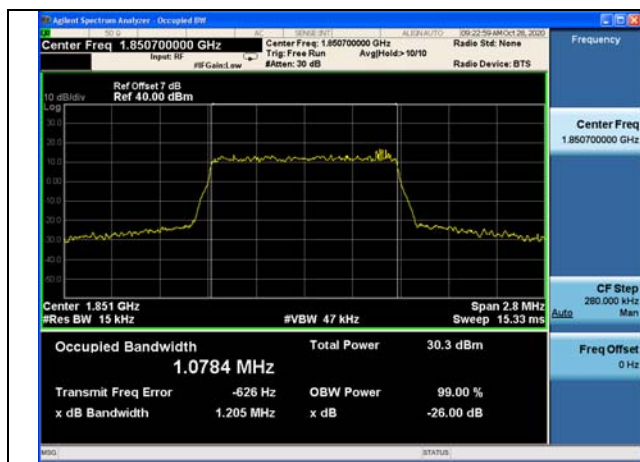


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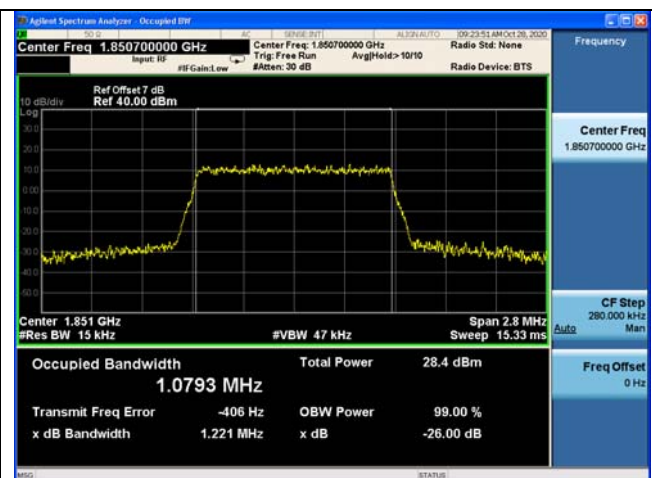


Fig.2

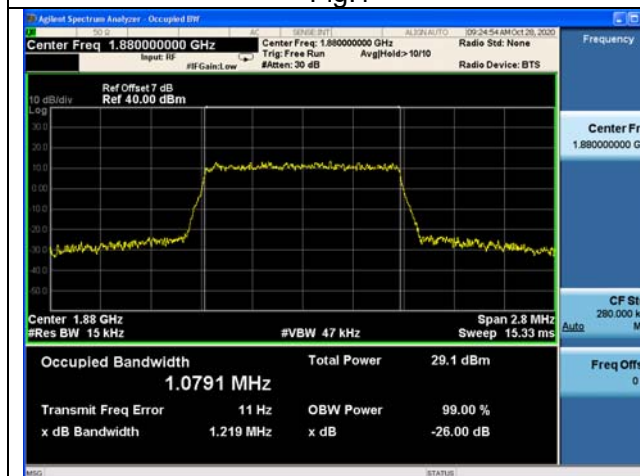


Fig.3

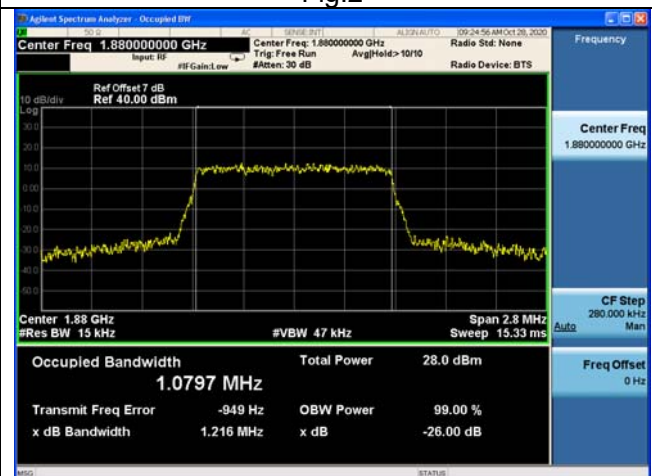


Fig.4

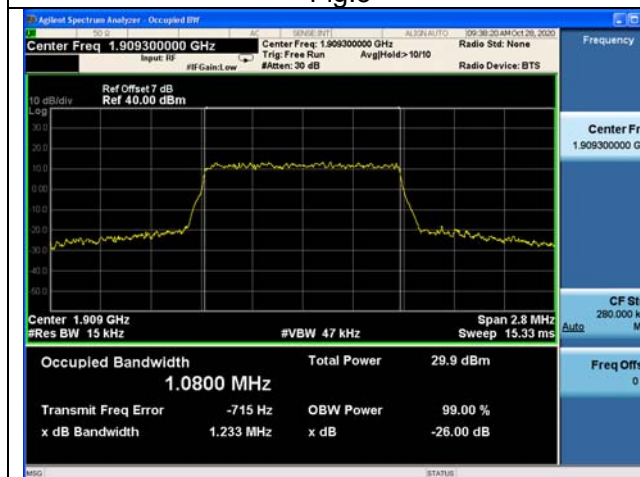


Fig.5

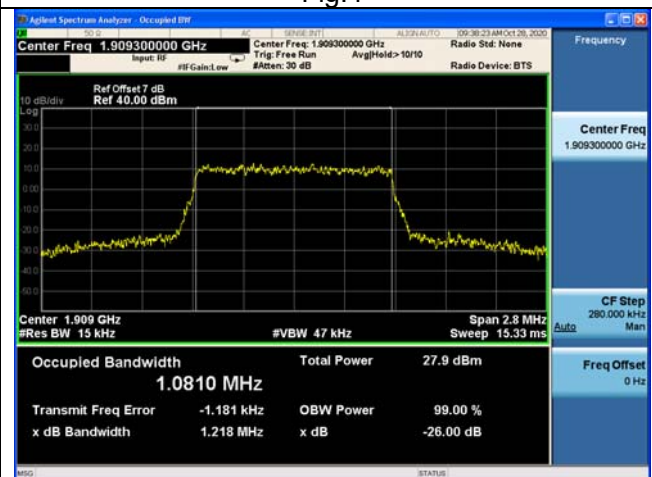


Fig.6

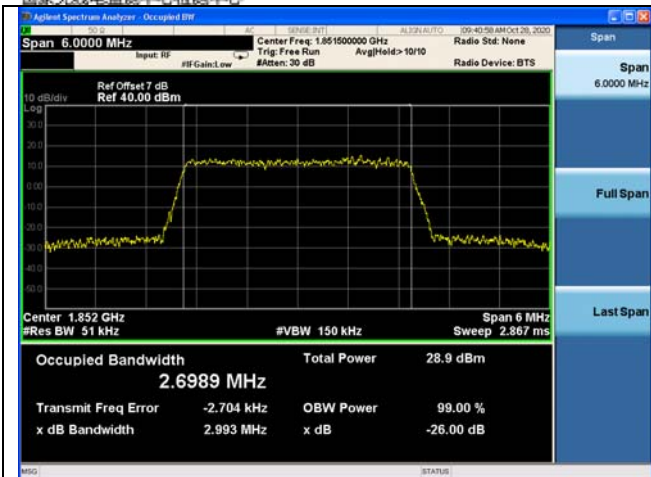


Fig.7

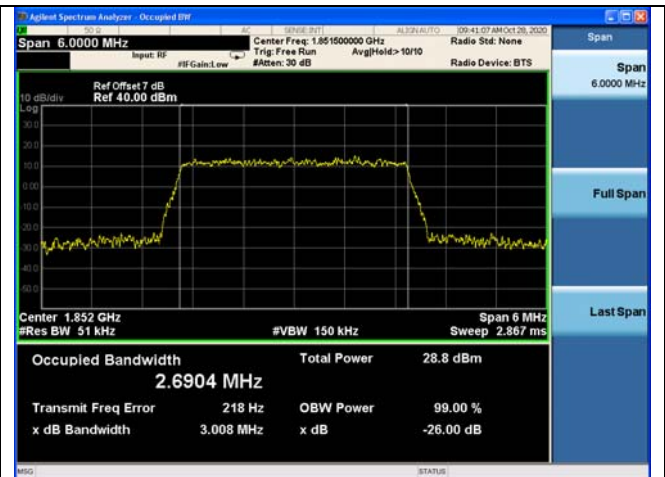


Fig.8

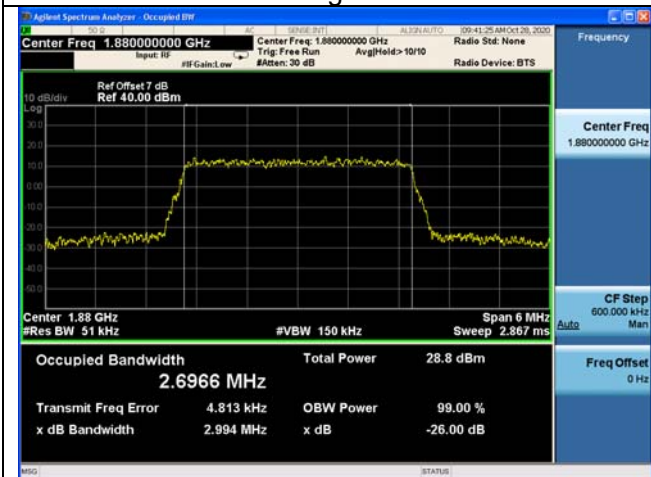


Fig.9

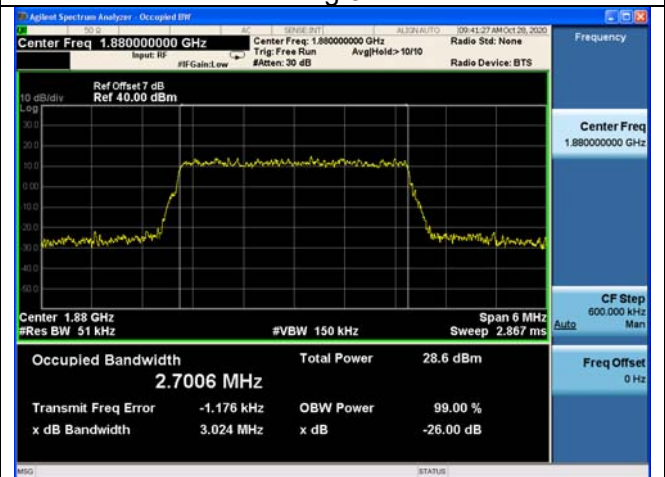


Fig.10

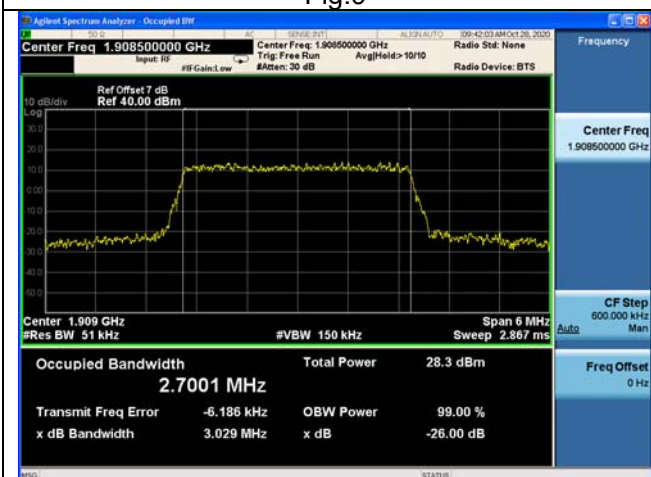


Fig.11

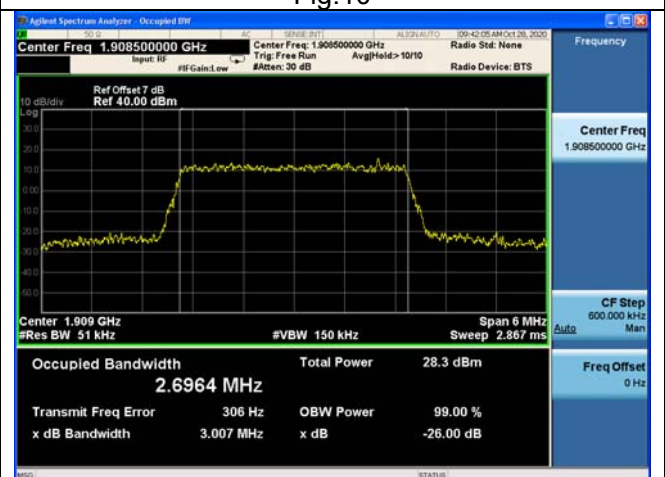


Fig.12

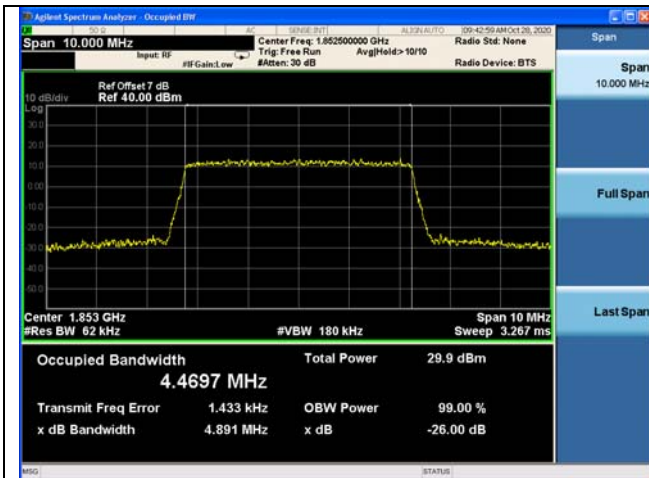


Fig.13

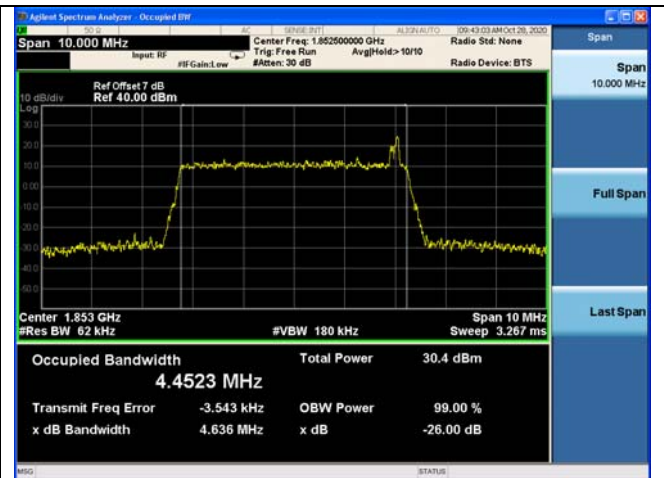


Fig.14

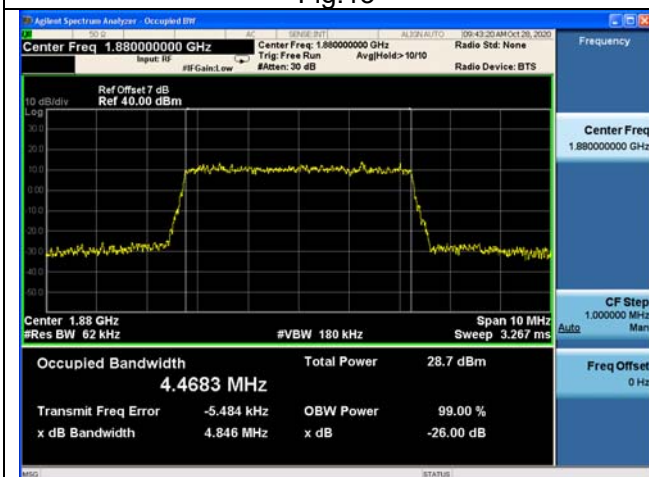


Fig.15

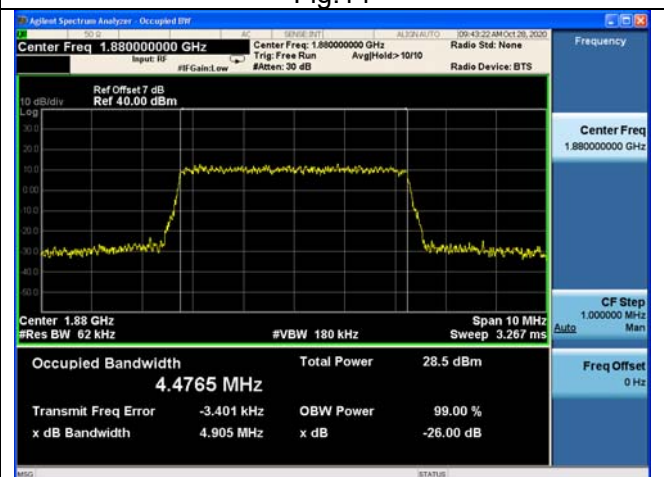


Fig.16

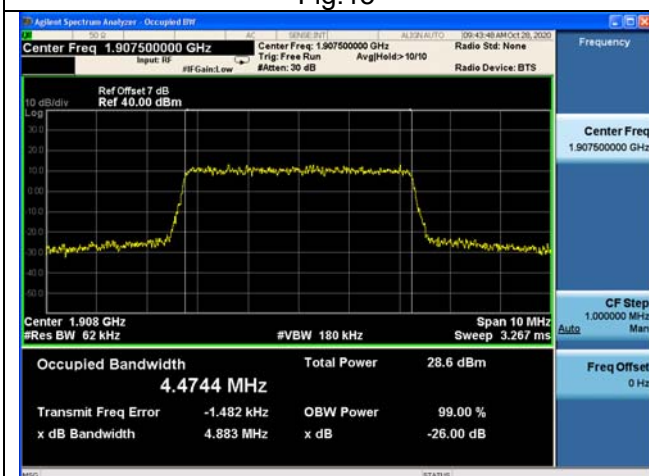


Fig.17

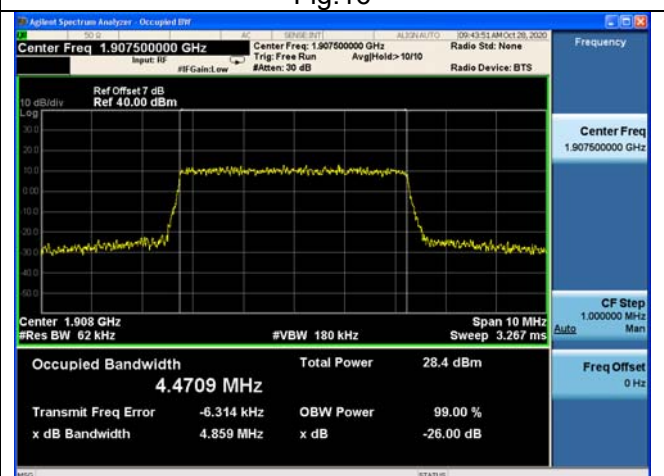


Fig.18

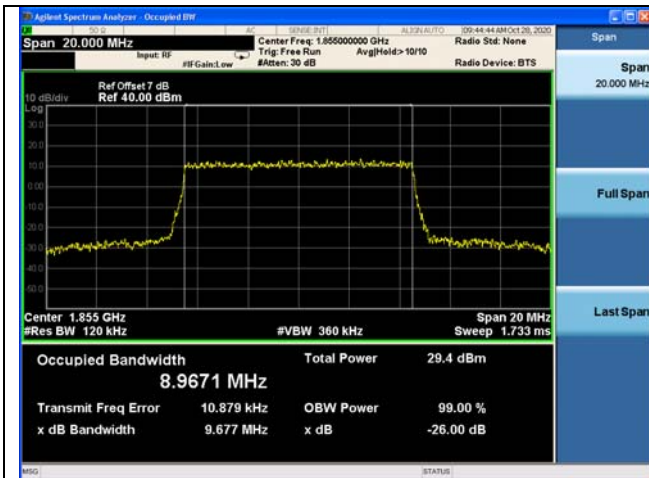


Fig.19

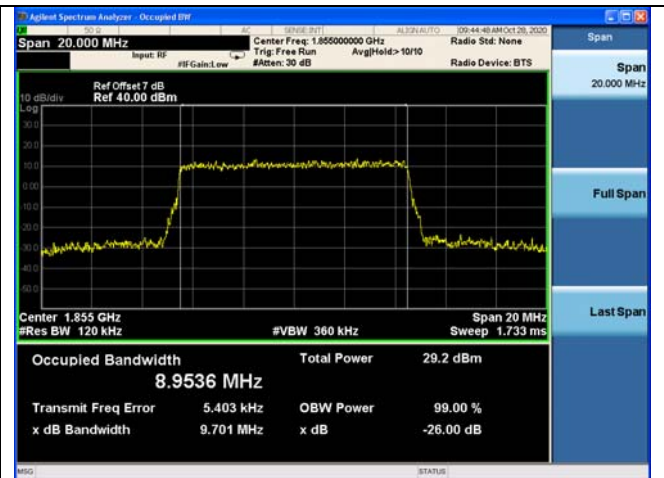


Fig.20

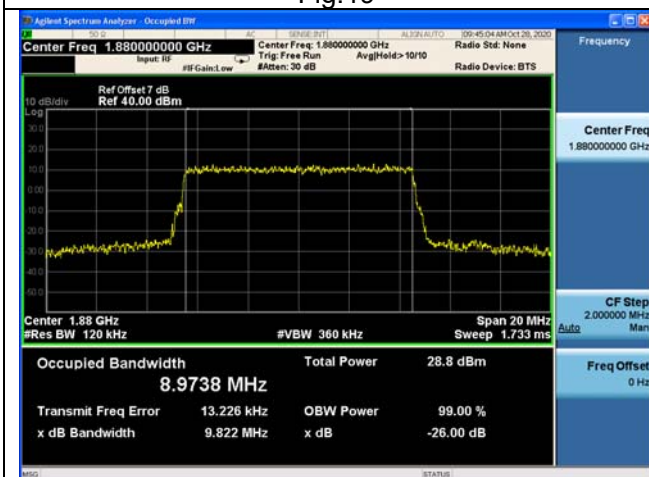


Fig.21

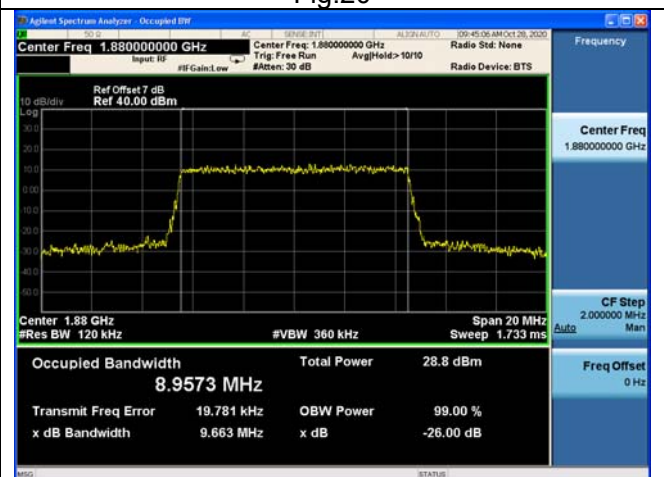


Fig.22

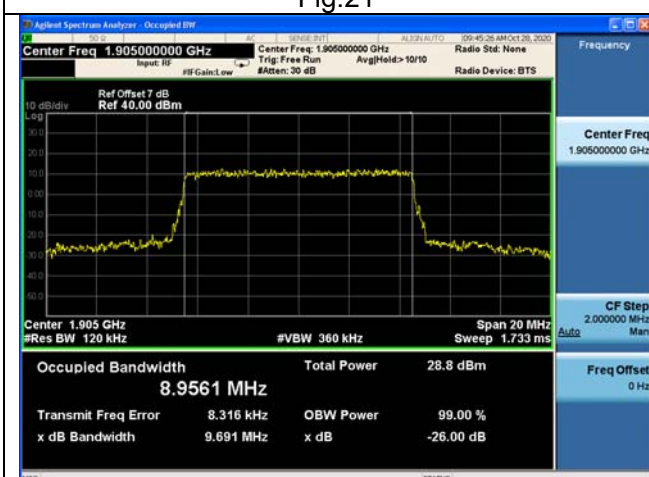


Fig.23

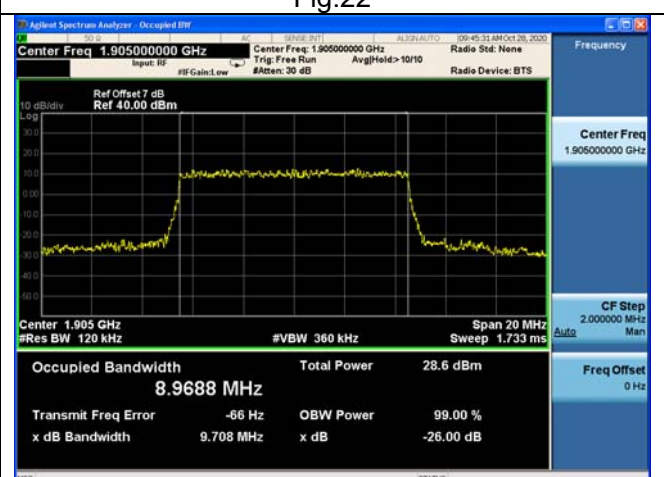


Fig.24

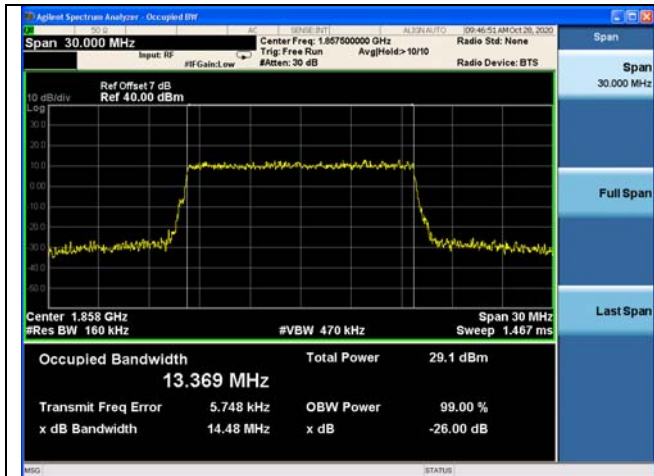


Fig.25

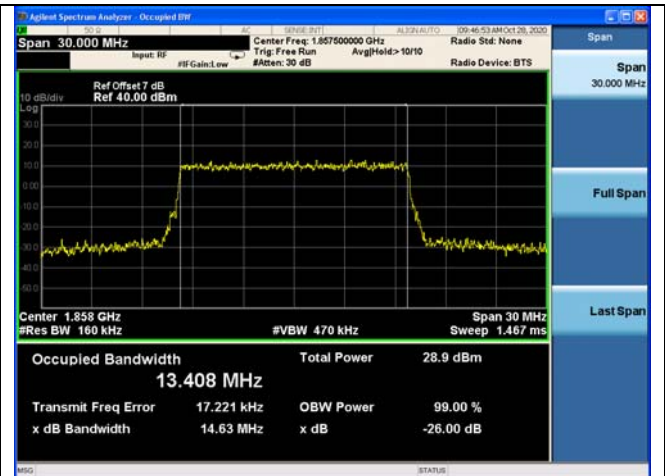


Fig.26

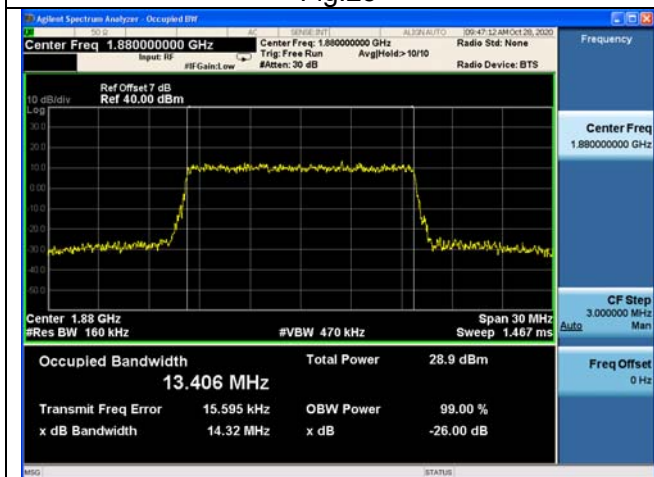


Fig.27

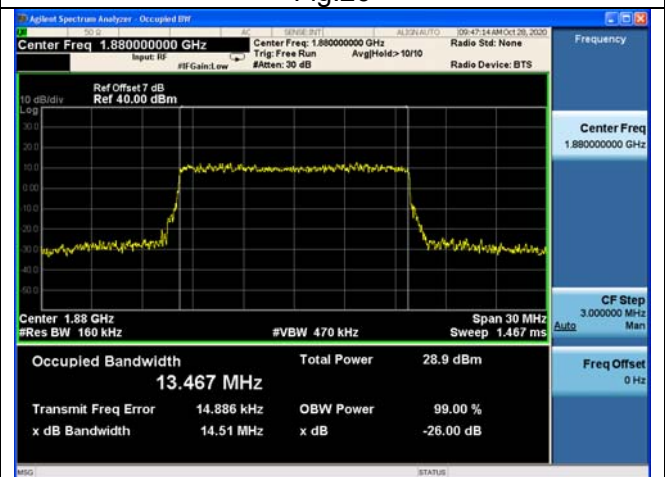


Fig.28

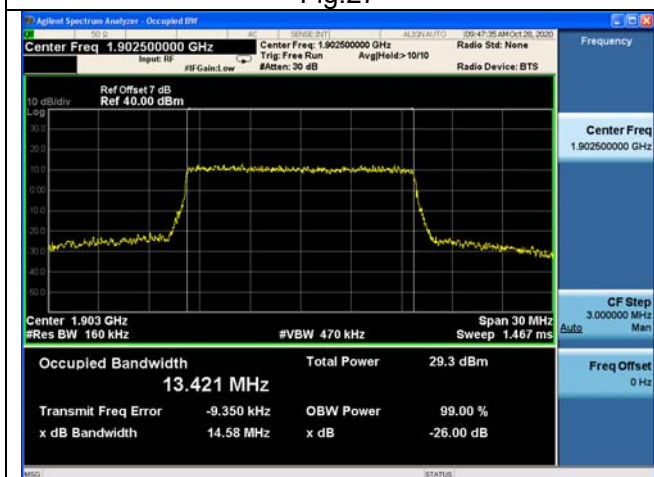


Fig.29

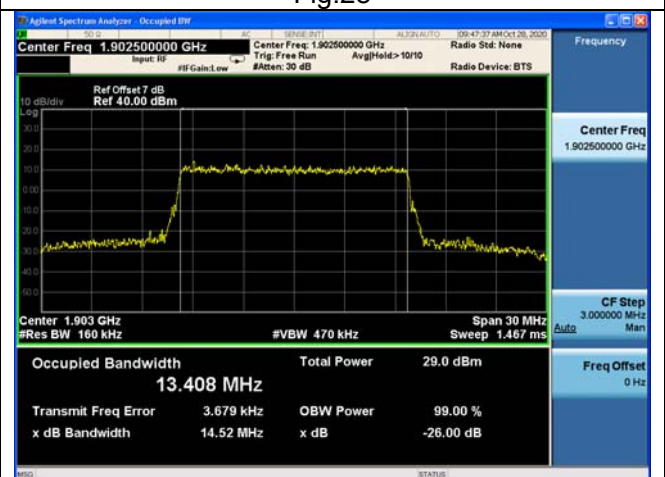


Fig.30

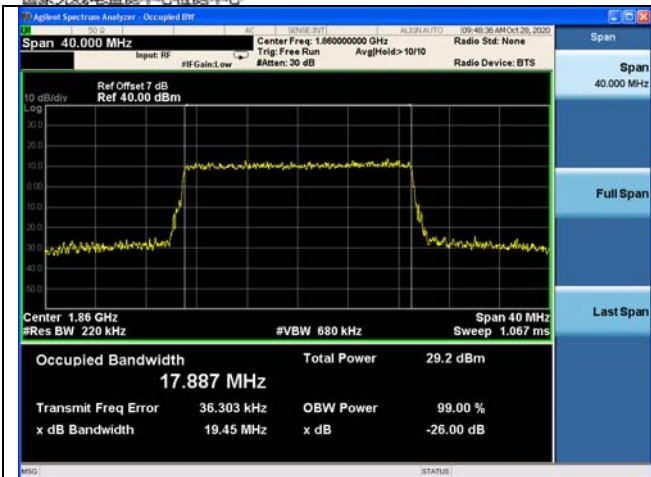


Fig.31

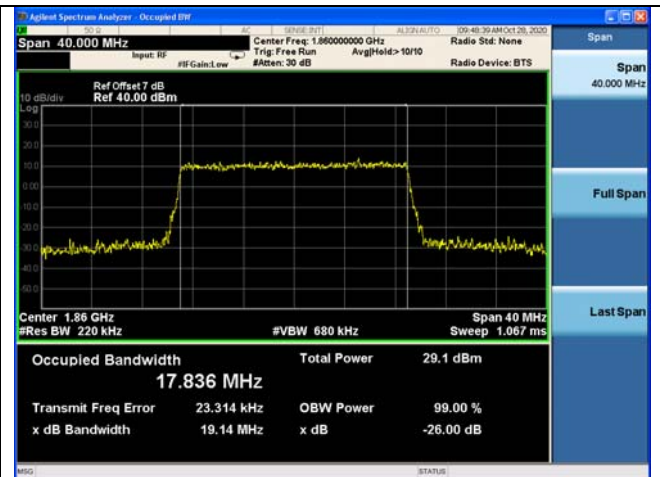


Fig.32

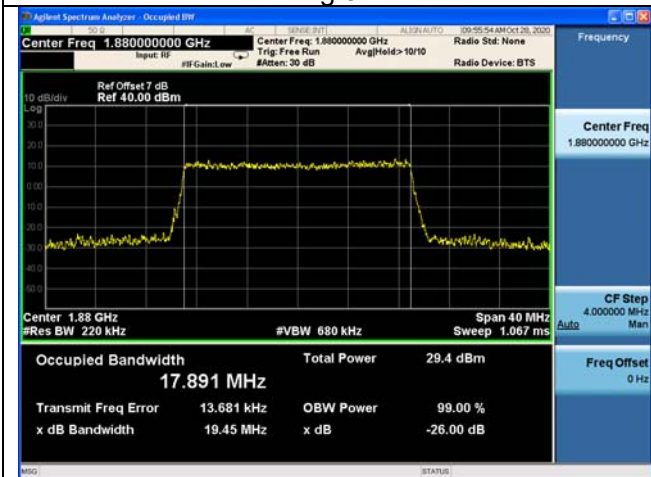


Fig.33

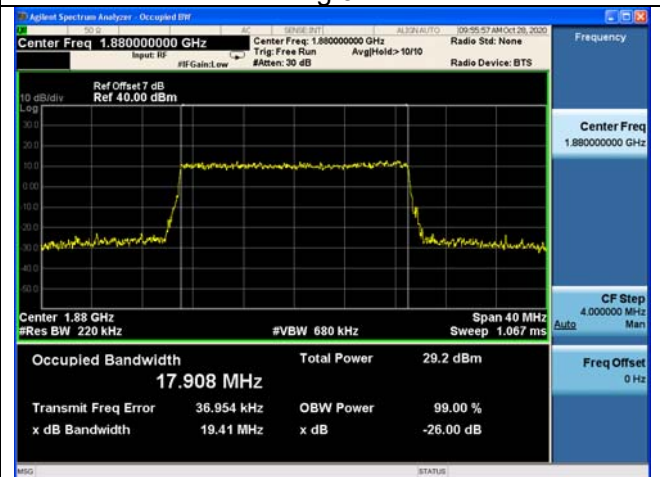


Fig.34

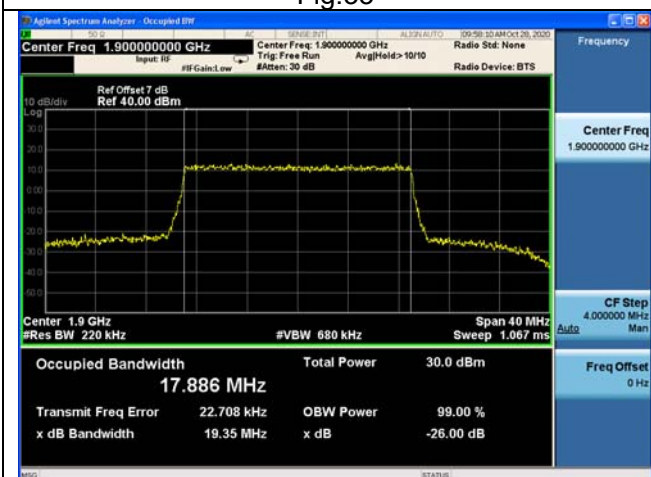


Fig.35

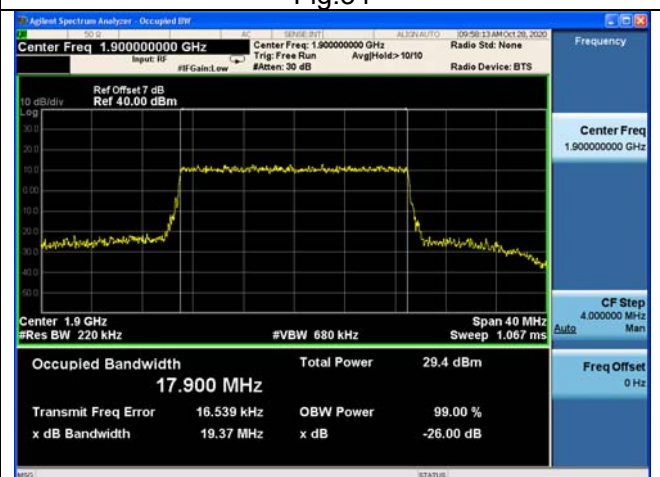


Fig.36

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM
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

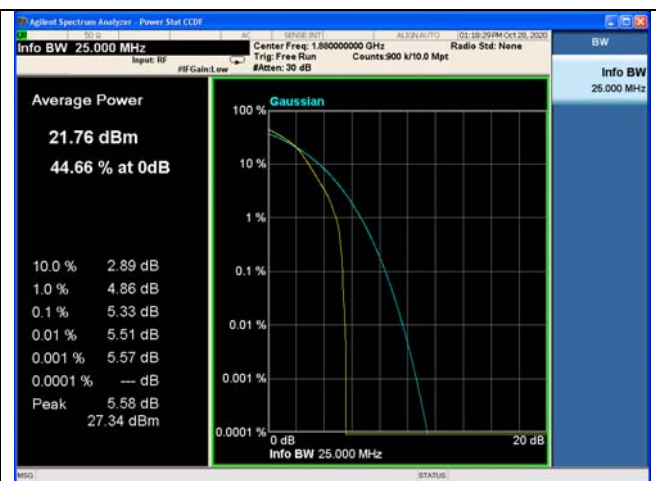


Fig.2



Fig.3



Fig.4



Fig.5



Fig.6



Fig.7



Fig.8

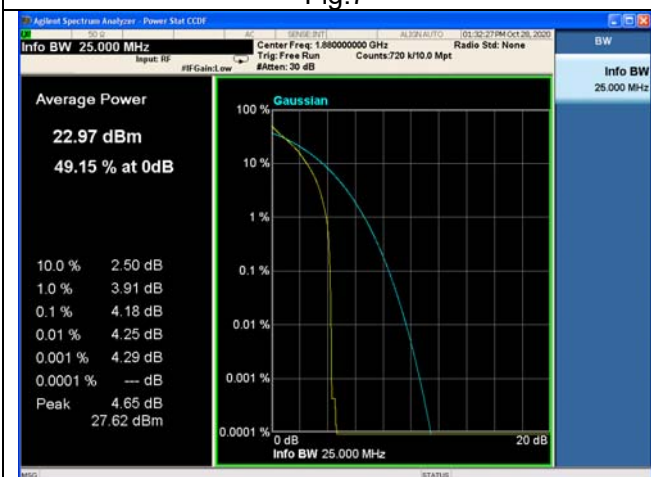


Fig.9

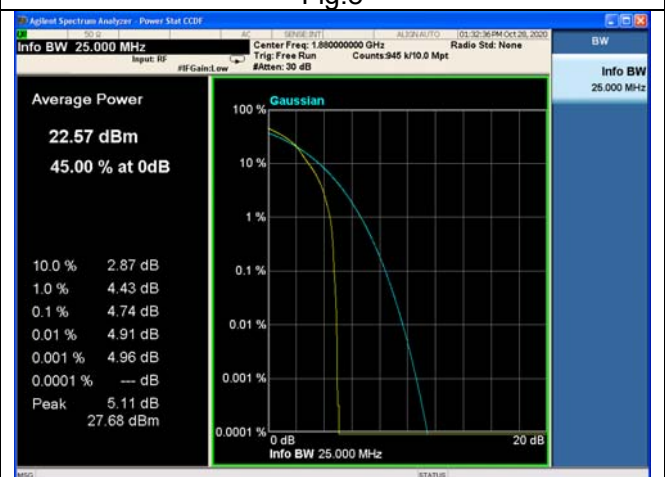


Fig.10



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

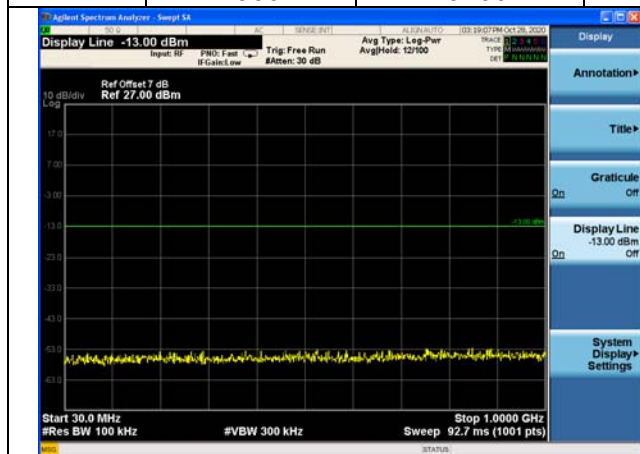


Fig.1



Fig.2

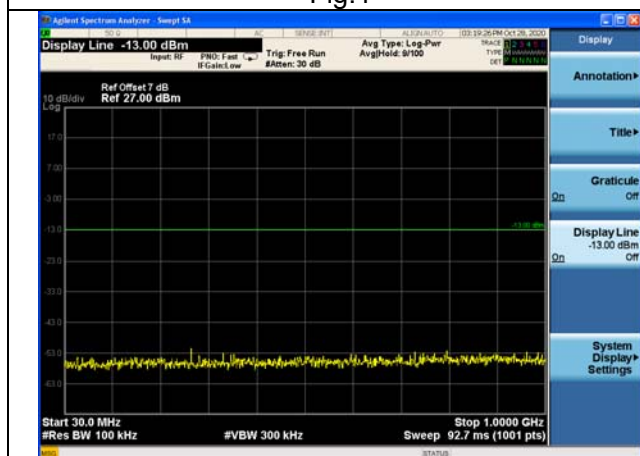


Fig3



Fig4

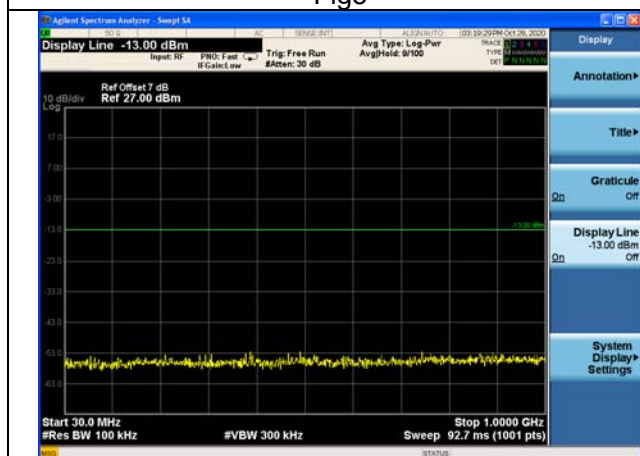


Fig5



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

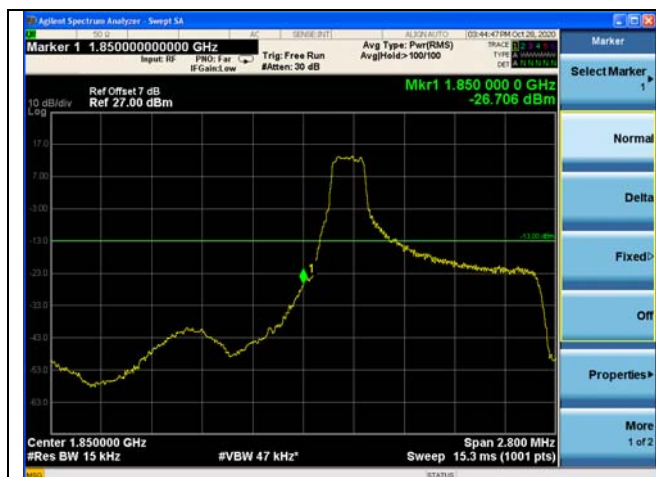


Fig.1



Fig.2



Fig.3



Fig.4

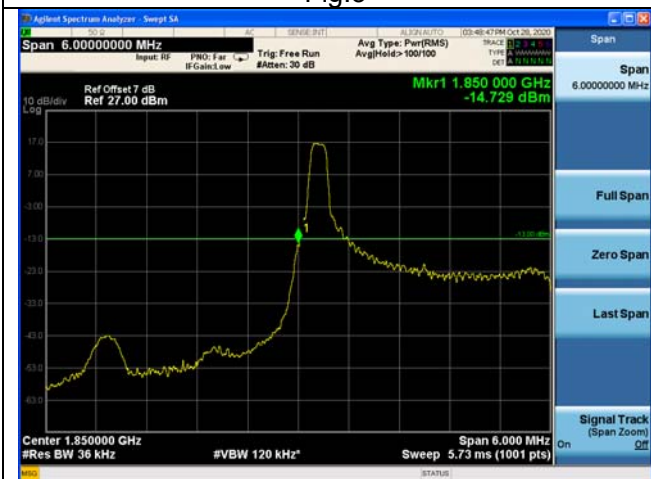


Fig.5

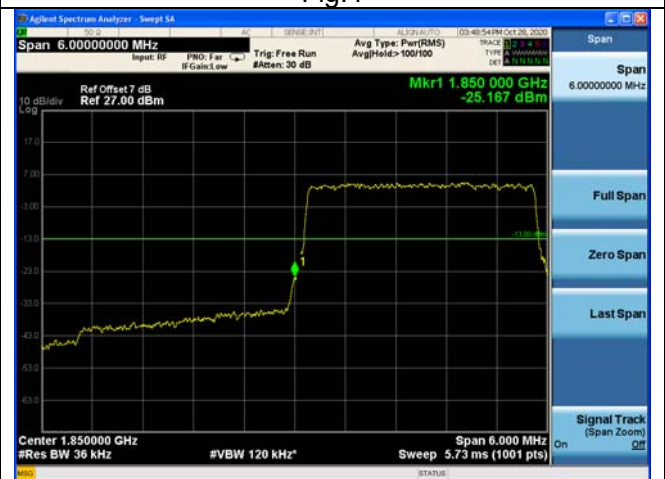


Fig.6

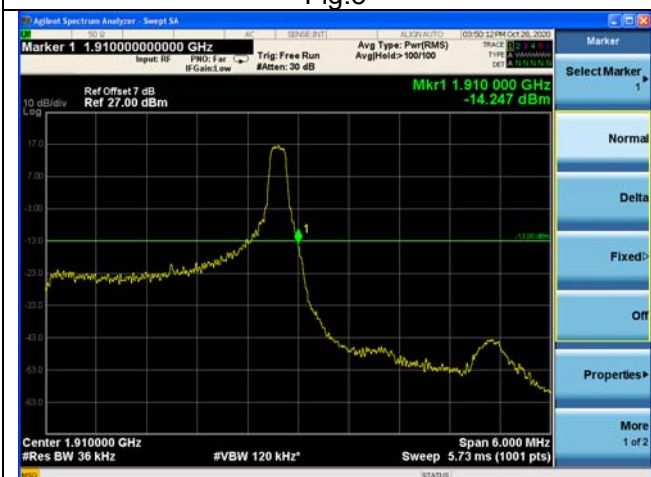


Fig.7



Fig.8

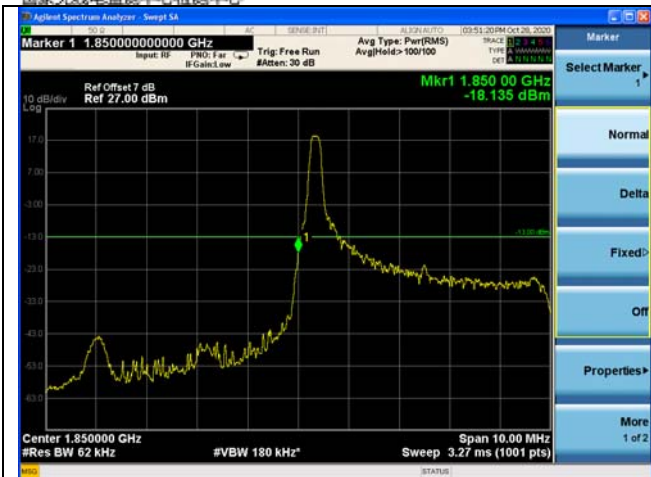


Fig.9

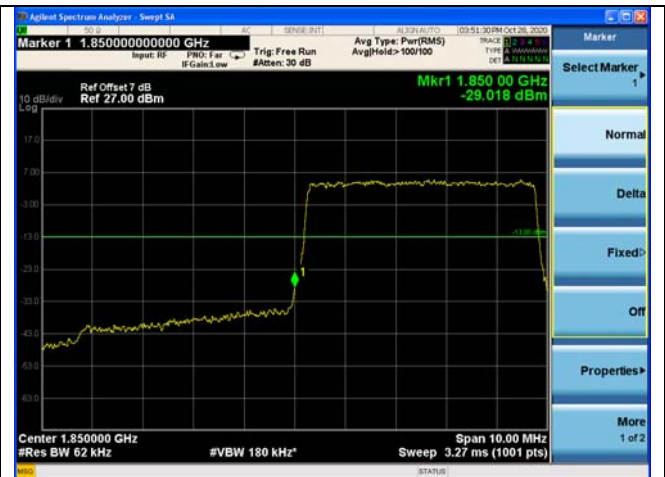


Fig.10

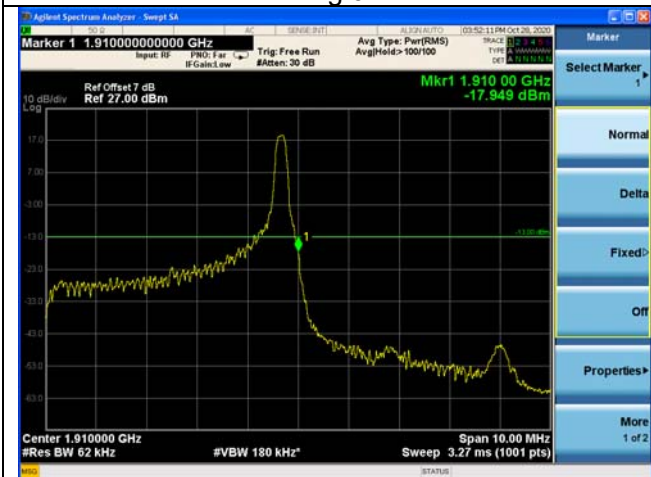


Fig.11



Fig.12

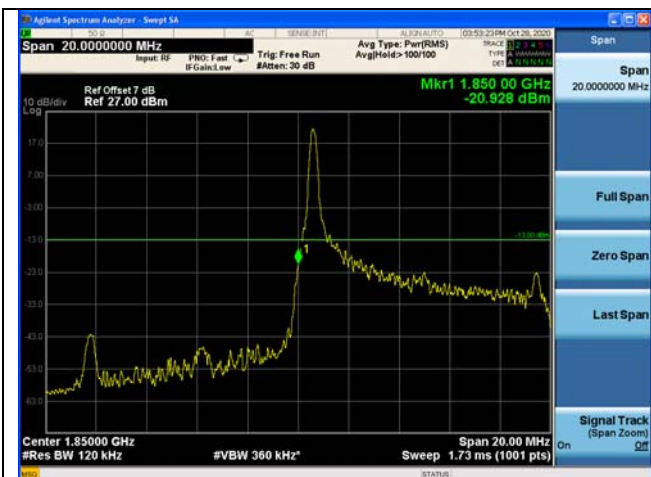


Fig.13



Fig.14

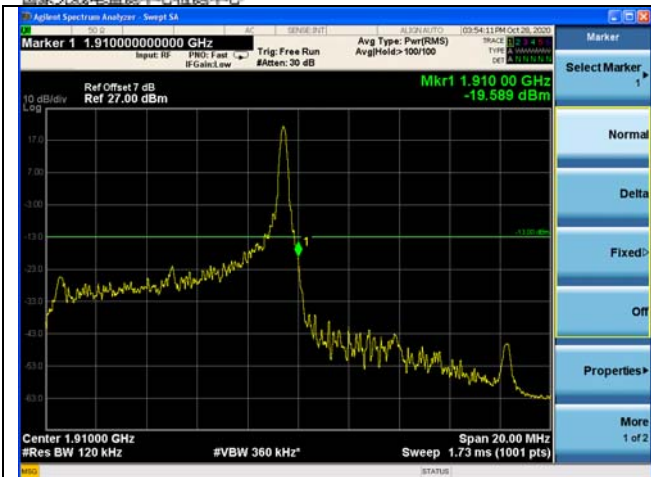


Fig.15



Fig.16

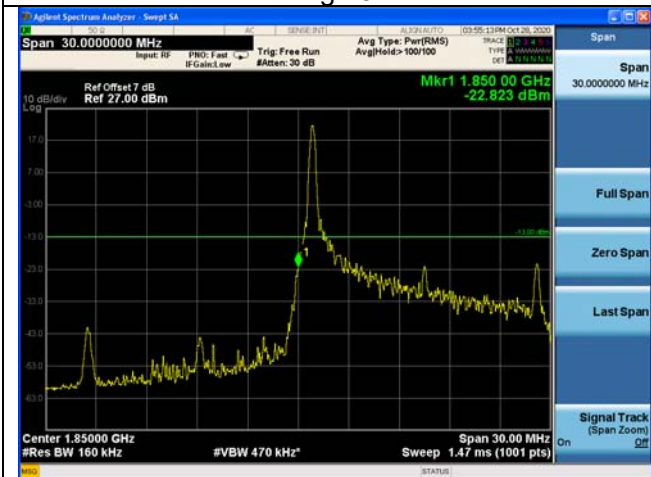


Fig.17

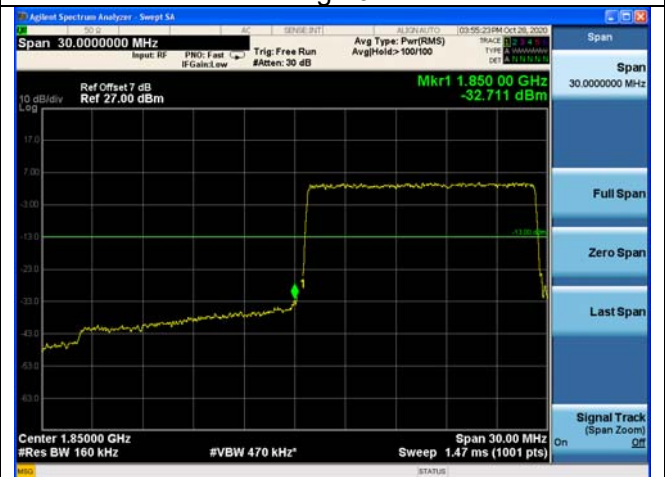


Fig.18

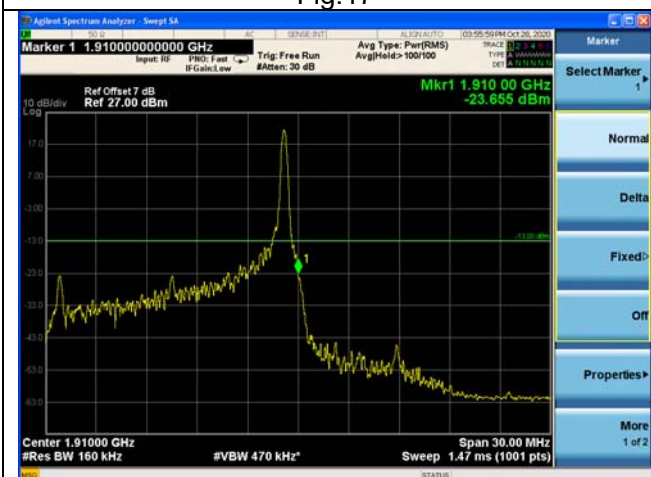


Fig.19



Fig.20

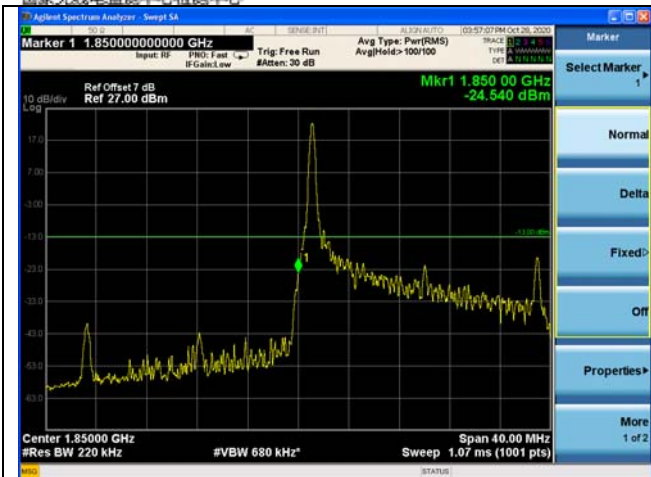


Fig.21

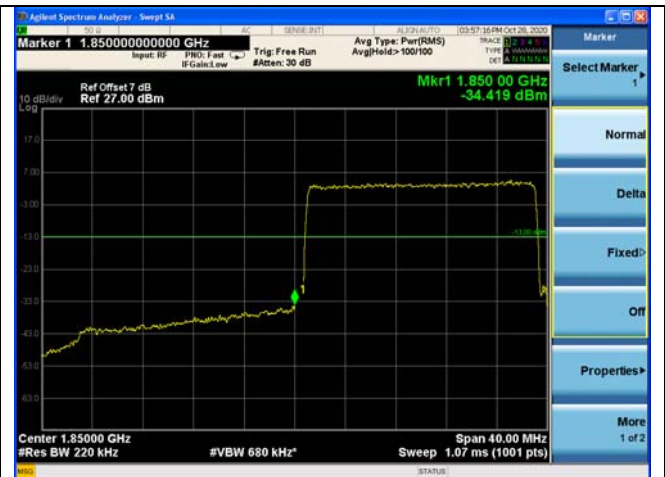


Fig.22



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	-0.017	0.019	-0.001	-0.011	-0.013	0.039
-10	NV	0.022	0.034	0.031	-0.026	0.036	0.026
0	NV	-0.009	-0.004	-0.009	0.039	-0.033	-0.016
+10	NV	-0.034	-0.028	-0.010	-0.008	-0.034	0.004
+20	NV	0.000	0.000	0.000	0.000	0.000	0.000
+30	NV	-0.001	-0.017	0.018	-0.024	-0.018	0.024
+40	NV	0.010	0.009	0.010	-0.032	-0.037	-0.012
+50	NV	-0.029	0.029	0.027	-0.034	-0.025	-0.003
+55	NV	-0.029	0.020	0.038	-0.001	0.017	-0.026
+20	LV	-0.010	0.012	-0.018	0.027	-0.004	0.031
+20	HV	0.035	-0.005	0.019	-0.015	-0.001	0.039

Temperature(°C)	Voltage	Test Result (ppm) Band2 High Channel					
		1.4M	3M	5M	10M	15M	20M
-20	NV	-0.009	-0.026	-0.030	0.001	-0.024	0.036
-10	NV	-0.011	0.032	-0.008	-0.020	-0.004	0.035
0	NV	-0.010	0.012	-0.022	0.003	-0.016	-0.033
+10	NV	0.033	0.016	0.013	-0.030	-0.027	0.029
+20	NV	0.000	0.000	0.000	0.000	0.000	0.000
+30	NV	0.028	-0.005	-0.015	0.005	0.024	-0.013
+40	NV	0.035	0.023	-0.028	-0.034	-0.024	0.035
+50	NV	-0.006	0.025	0.016	0.013	-0.024	-0.019
+55	NV	-0.018	-0.036	-0.016	-0.001	-0.021	0.012
+20	LV	0.023	-0.023	-0.011	-0.021	0.040	0.017
+20	HV	0.039	-0.028	0.006	-0.012	0.009	0.031