

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 7

1 RF Power Output

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2502.5	20775	5	1	0	23.78
				1	24	23.71
				12	6	22.82
				25	0	22.68
	2535	21100		1	0	23.75
				1	24	23.63
				12	6	22.85
				25	0	23.02
	2567.5	21425		1	0	23.64
				1	24	23.47
				12	6	23.06
				25	0	22.93
16QAM	2502.5	20775	5	1	0	23.58
				1	24	23.16
				12	6	21.97
				25	0	21.91
	2535	21100		1	0	23.11
				1	24	23.08
				12	6	21.70
				25	0	21.76
	2567.5	21425		1	0	23.54
				1	24	23.24
				12	6	22.14
				25	0	21.85
64QAM	2502.5	20775	5	1	0	22.83
				1	24	22.58
				12	6	22.01
				25	0	21.90
	2535	21100		1	0	22.52
				1	24	22.93
				12	6	21.83
				25	0	22.07
	2567.5	21425		1	0	22.50
				1	24	22.70
				12	6	22.03
				25	0	22.07

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2505	20800	10	1	0	23.75
				1	49	23.73
				24	12	22.94
				50	0	22.86
	2535	21100		1	0	23.76
				1	49	23.57
				24	12	22.62
				50	0	22.92
	2565	21400		1	0	23.47
				1	49	23.69
				24	12	22.72
				50	0	22.99
16QAM	2505	20800	10	1	0	23.53
				1	49	23.33
				24	12	21.76
				50	0	21.72
	2535	21100		1	0	22.94
				1	49	23.10
				24	12	21.87
				50	0	22.16
	2565	21400		1	0	23.63
				1	49	23.68
				24	12	21.72
				50	0	22.04
64QAM	2505	20800	10	1	0	22.54
				1	49	22.99
				24	12	22.02
				50	0	21.99
	2535	21100		1	0	22.94
				1	49	22.67
				24	12	21.89
				50	0	21.75
	2565	21400		1	0	22.57
				1	49	22.64
				24	12	21.82
				50	0	21.90

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2507.5	20825	15	1	0	23.93
				1	74	23.77
				40	18	22.62
				75	0	22.85
	2535	21100		1	0	23.69
				1	74	23.45
				40	18	22.76
				75	0	22.96
	2562.5	21375		1	0	23.46
				1	74	23.64
				40	18	22.97
				75	0	22.92
16QAM	2507.5	20825	15	1	0	23.18
				1	74	23.41
				40	18	21.92
				75	0	22.12
	2535	21100		1	0	22.84
				1	74	22.96
				40	18	21.91
				75	0	22.06
	2562.5	21375		1	0	23.63
				1	74	23.70
				40	18	21.95
				75	0	22.12
64QAM	2507.5	20825	15	1	0	22.65
				1	74	22.55
				40	18	21.84
				75	0	22.07
	2535	21100		1	0	22.89
				1	74	22.66
				40	18	22.24
				75	0	21.76
	2562.5	21375		1	0	22.83
				1	74	22.56
				40	18	22.04
				75	0	21.74

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2510	20850	20	1	0	23.94
				1	99	23.94
				50	25	23.04
				100	0	22.99
	2535	21100		1	0	23.83
				1	99	23.83
				50	25	23.06
				100	0	23.15
	2560	21350		1	0	23.90
				1	99	23.90
				50	25	23.11
				100	0	23.00
16QAM	2510	20850	20	1	0	23.61
				1	99	23.61
				50	25	22.14
				100	0	22.15
	2535	21100		1	0	23.13
				1	99	23.13
				50	25	22.18
				100	0	22.18
	2560	21350		1	0	23.71
				1	99	23.71
				50	25	22.21
				100	0	22.22
64QAM	2510	20850	20	1	0	23.01
				1	99	23.01
				50	25	22.12
				100	0	22.14
	2535	21100		1	0	22.97
				1	99	22.97
				50	25	22.29
				100	0	22.20
	2560	21350		1	0	22.91
				1	99	22.91
				50	25	22.28
				100	0	22.22

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	
7	2502.5	20775	5	25	0	4.4755	Fig.1	4.4642	Fig.2	4.4625	Fig.3
	2535	21100		25	0	4.4725	Fig.4	4.4726	Fig.5	4.4730	Fig.6
	2567.5	21425		25	0	4.4808	Fig.7	4.4723	Fig.8	4.4748	Fig.9
	2505	20800	10	50	0	8.9487	Fig.10	8.9472	Fig.11	8.9558	Fig.12
	2535	21100		50	0	8.9512	Fig.13	8.9644	Fig.14	8.9559	Fig.15
	2565	21400		50	0	8.9513	Fig.16	8.9263	Fig.17	8.9511	Fig.18
	2507.5	20825	15	75	0	13.385	Fig.19	13.425	Fig.20	13.397	Fig.21
	2535	21100		75	0	13.412	Fig.22	13.389	Fig.23	13.410	Fig.24
	2562.5	21375		75	0	13.396	Fig.25	13.410	Fig.26	13.395	Fig.27
	2510	20850	20	100	0	17.887	Fig.28	17.876	Fig.29	17.905	Fig.30
	2535	21100		100	0	17.880	Fig.31	17.906	Fig.32	17.864	Fig.33
	2560	21350		100	0	17.903	Fig.34	17.884	Fig.35	17.845	Fig.36

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
7	2502.5	20775	5	25	0	5.172	Fig.1	4.999	Fig.2	4.751	Fig.3
	2535	21100		25	0	4.978	Fig.4	5.012	Fig.5	4.906	Fig.6
	2567.5	21425		25	0	5.196	Fig.7	4.928	Fig.8	5.070	Fig.9
	2505	20800	10	50	0	9.789	Fig.10	9.785	Fig.11	9.558	Fig.12
	2535	21100		50	0	9.849	Fig.13	9.913	Fig.14	9.692	Fig.15
	2565	21400		50	0	9.807	Fig.16	9.898	Fig.17	9.640	Fig.18
	2507.5	20825	15	75	0	14.64	Fig.19	14.62	Fig.20	14.52	Fig.21
	2535	21100		75	0	14.44	Fig.22	14.56	Fig.23	14.68	Fig.24
	2562.5	21375		75	0	14.65	Fig.25	14.68	Fig.26	14.66	Fig.27
	2510	20850	20	100	0	19.36	Fig.28	19.26	Fig.29	19.61	Fig.30
	2535	21100		100	0	19.62	Fig.31	19.20	Fig.32	19.41	Fig.33
	2560	21350		100	0	19.38	Fig.34	19.21	Fig.35	19.38	Fig.36

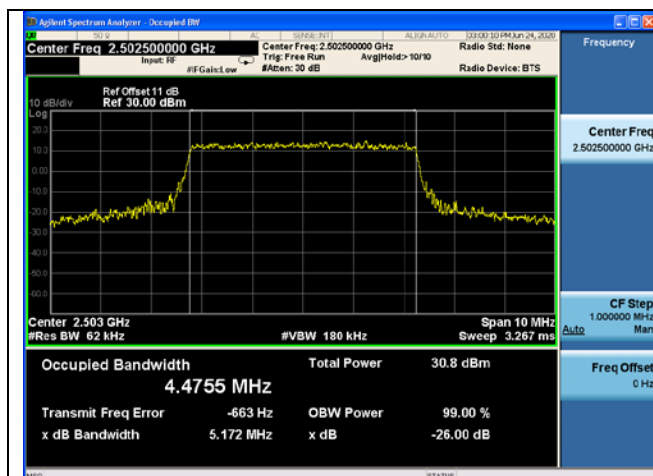


Fig.1

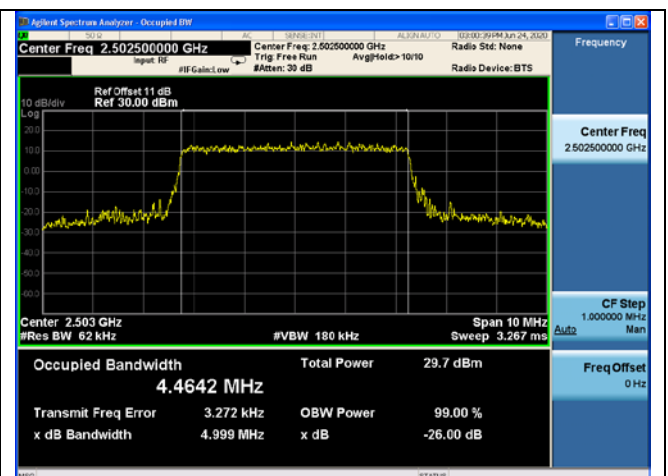


Fig.2

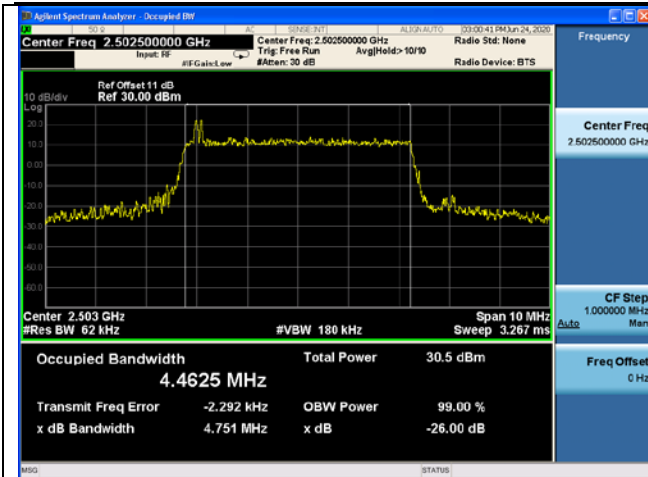


Fig.3

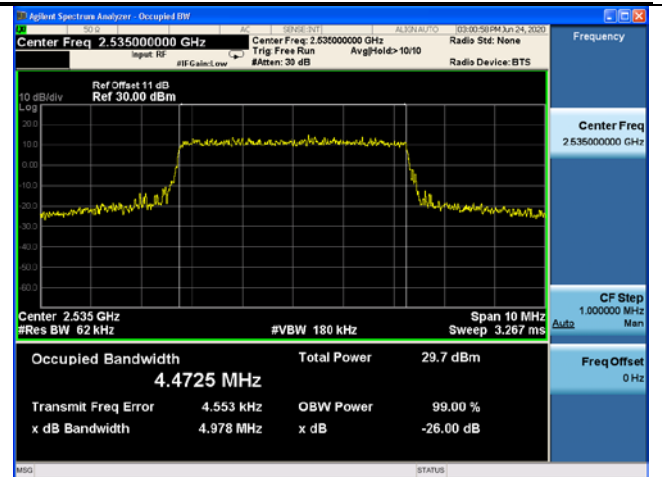


Fig.4

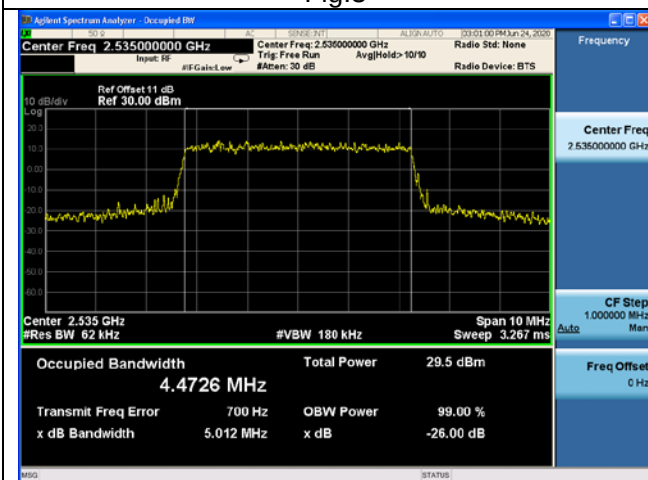


Fig.5

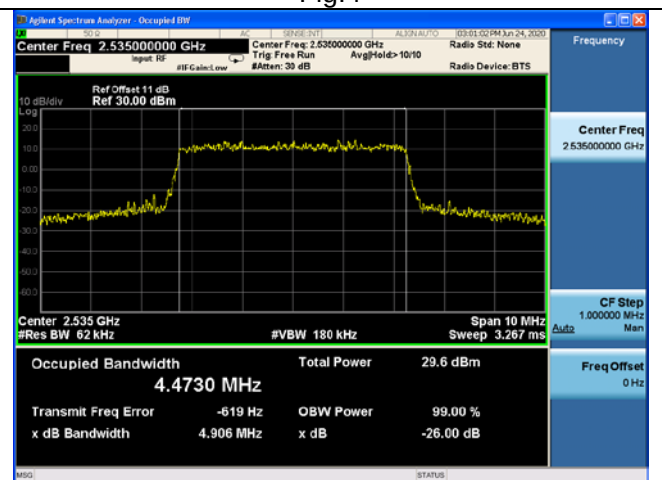


Fig.6

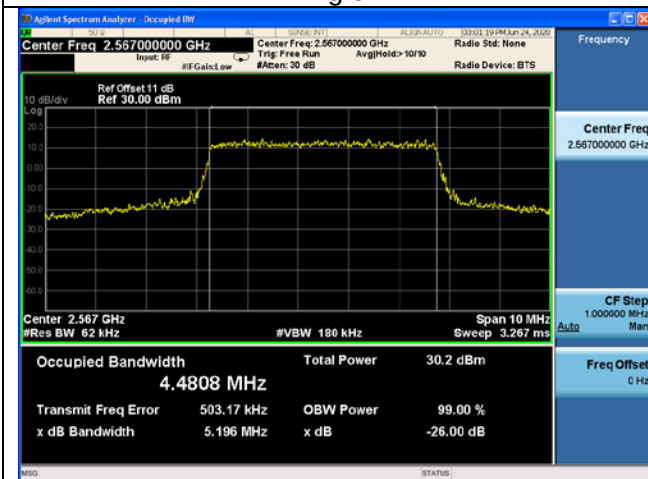


Fig.7

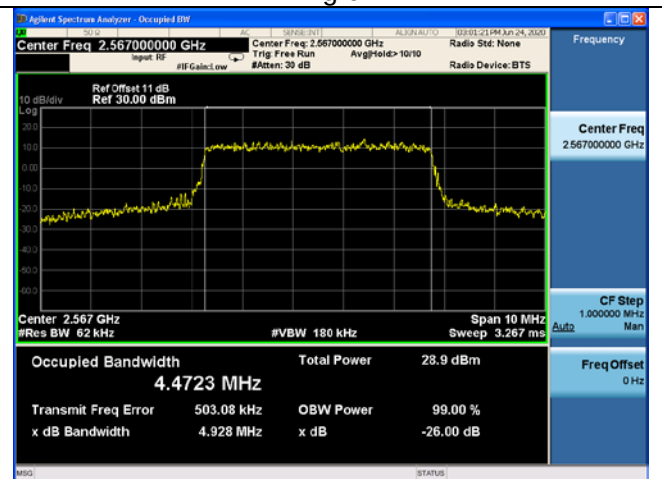


Fig.8

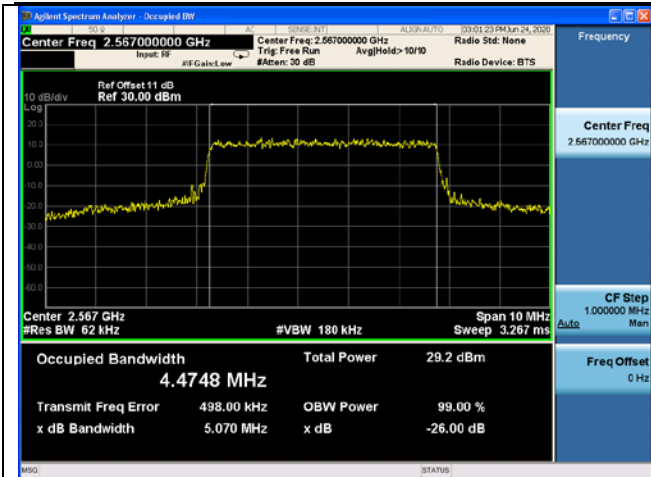


Fig.9

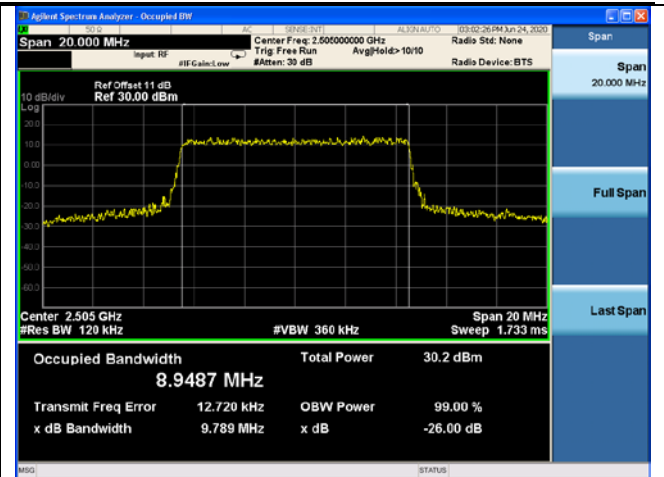


Fig.10

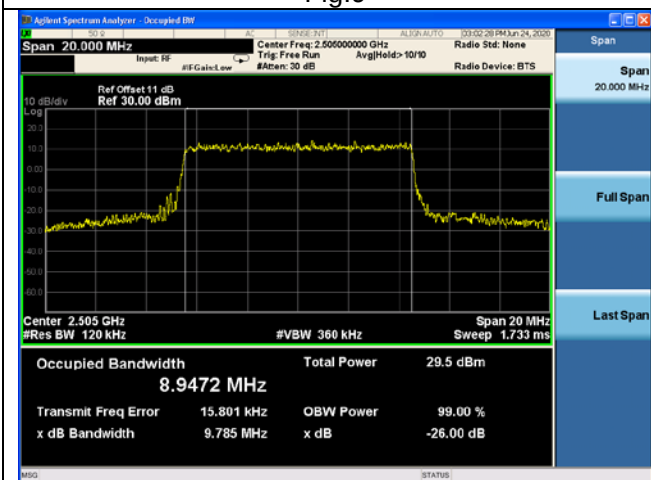


Fig.11

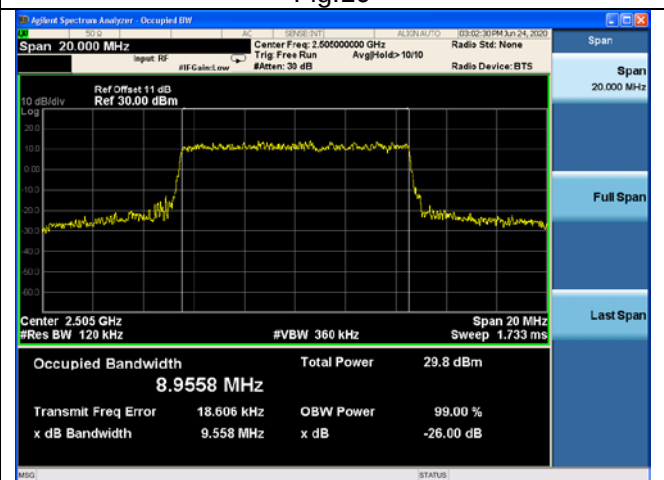


Fig.12

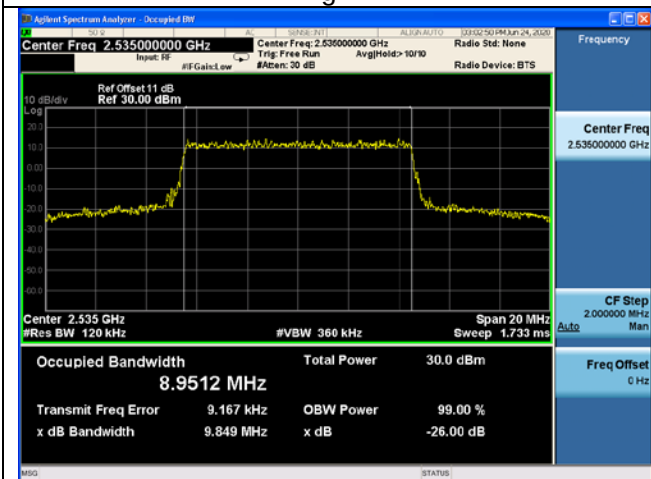


Fig.13

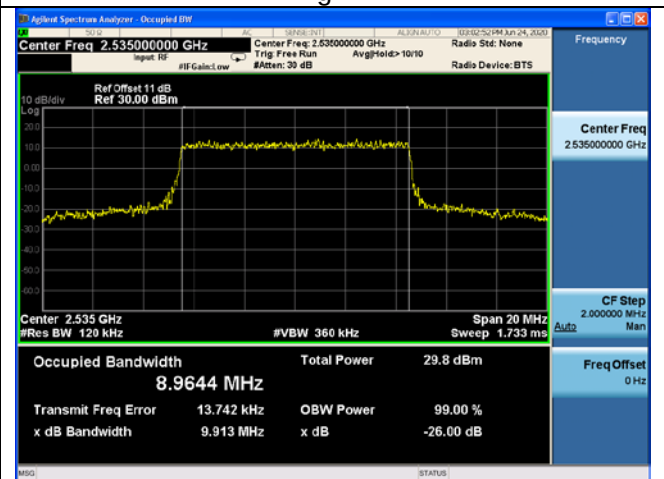


Fig.14

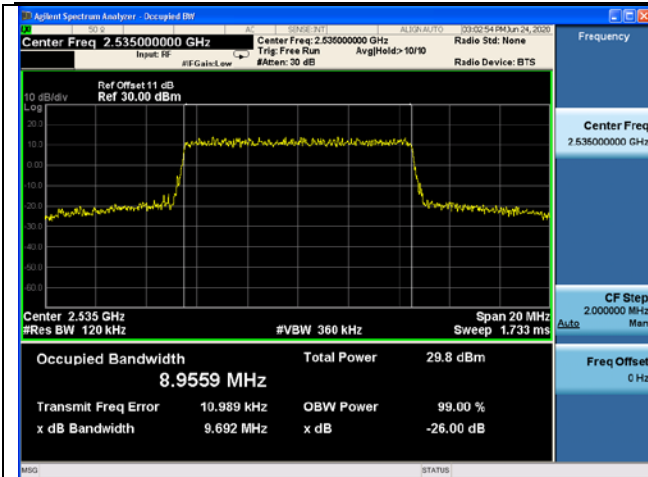


Fig.15



Fig.16

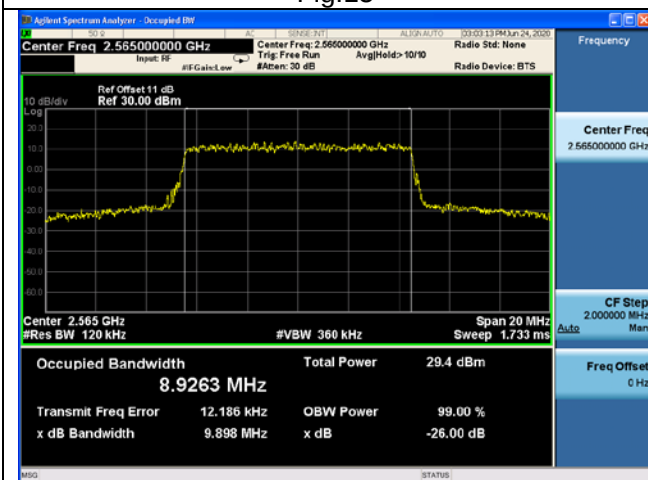


Fig.17

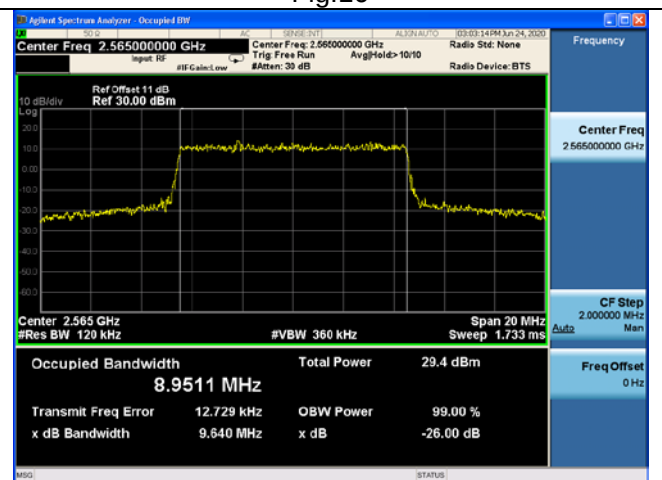


Fig.18

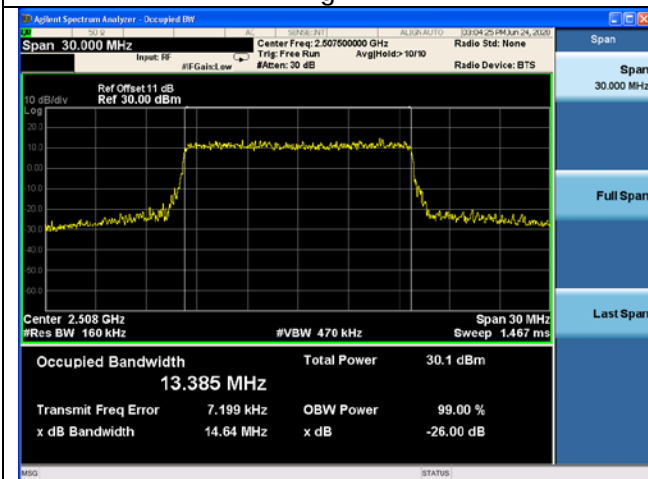


Fig.19

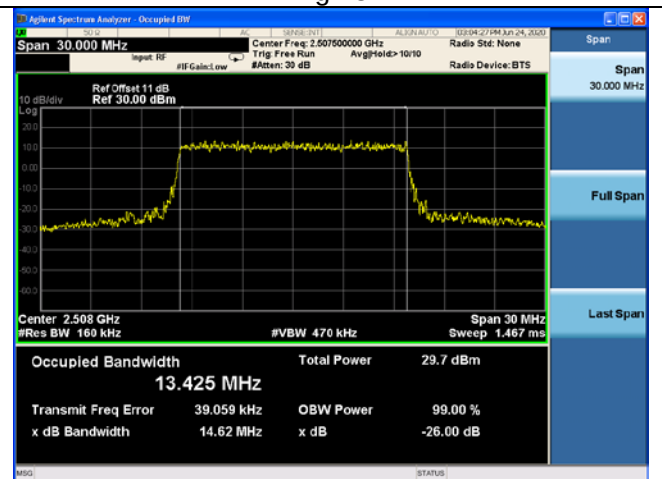


Fig.20

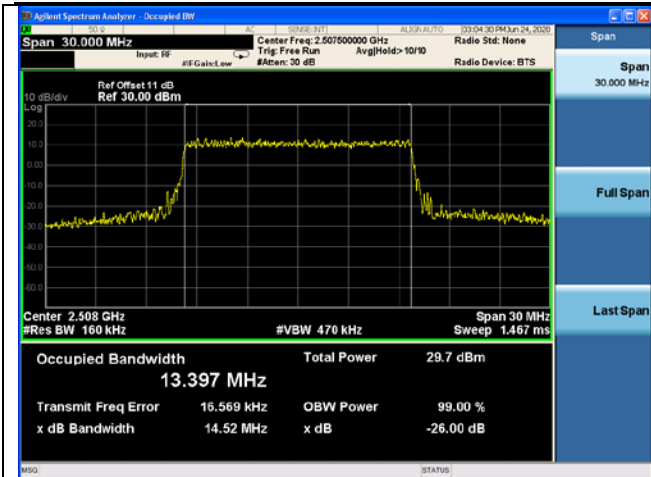


Fig.21

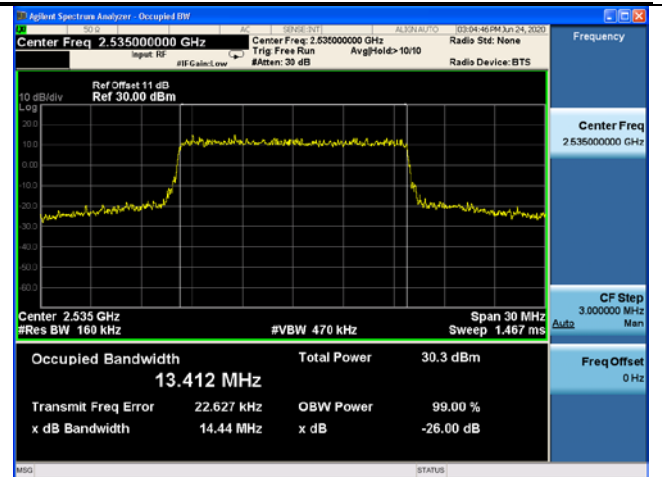


Fig.22

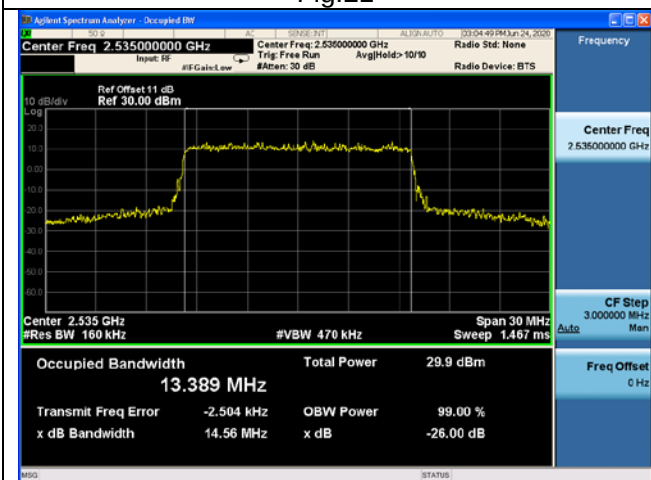


Fig.23

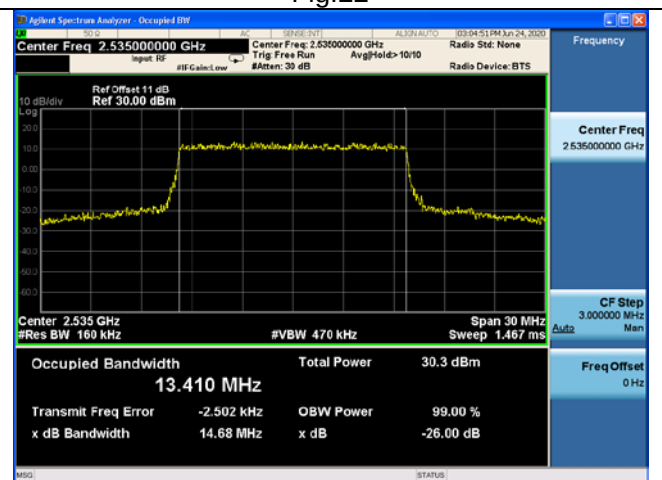


Fig.24

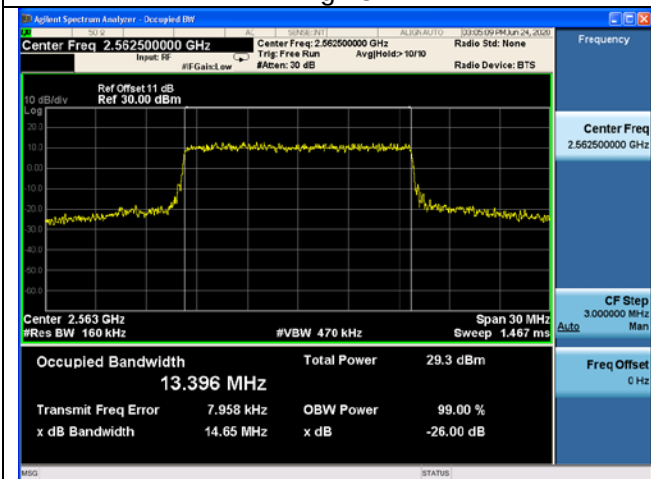


Fig.25

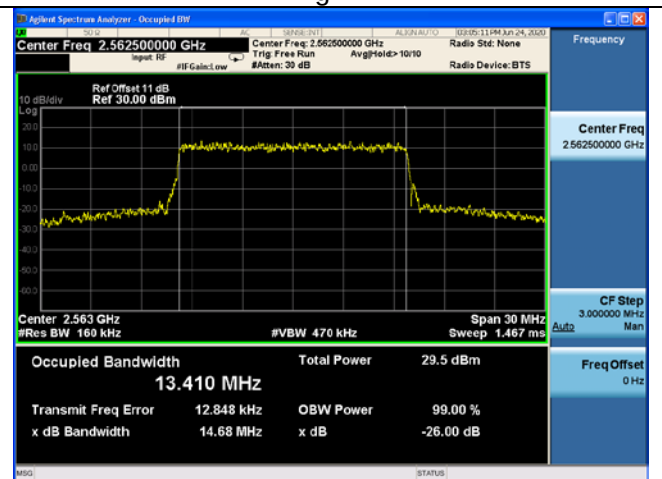


Fig.26

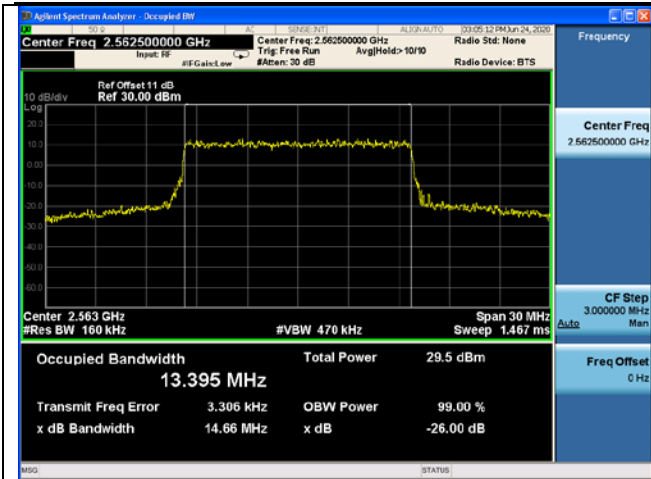


Fig.27

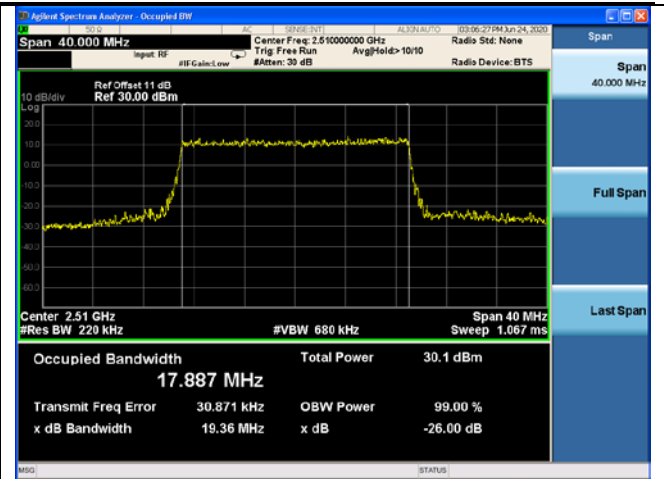


Fig.28

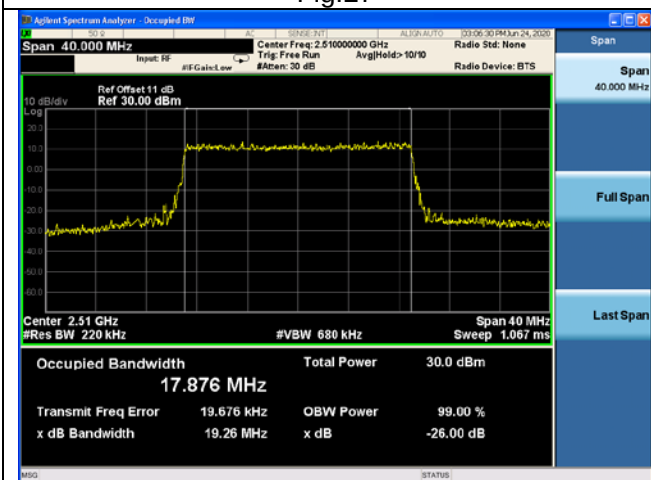


Fig.29

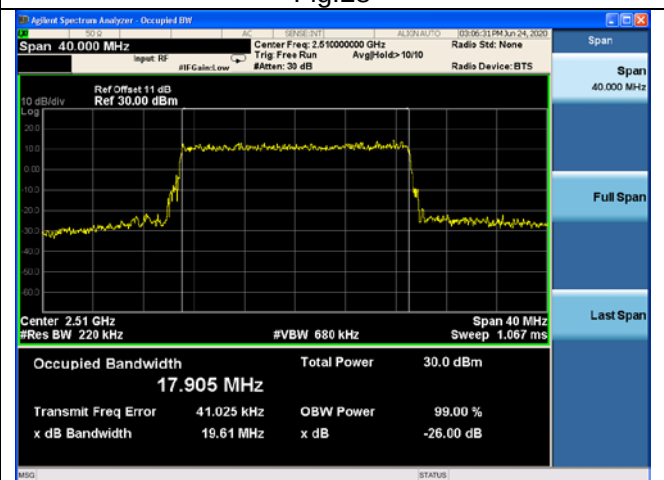


Fig.30

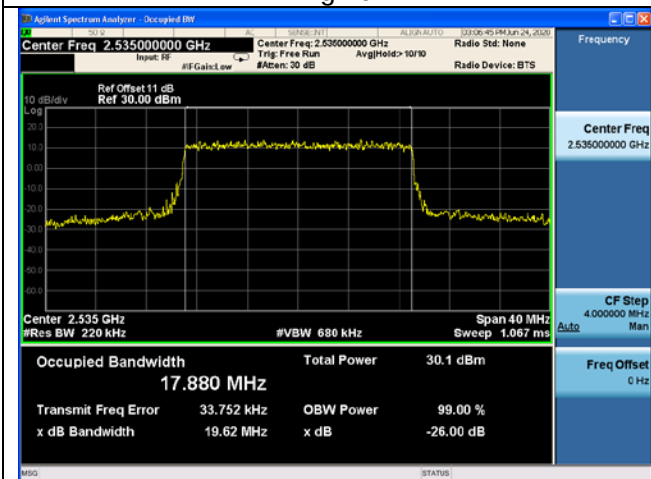


Fig.31

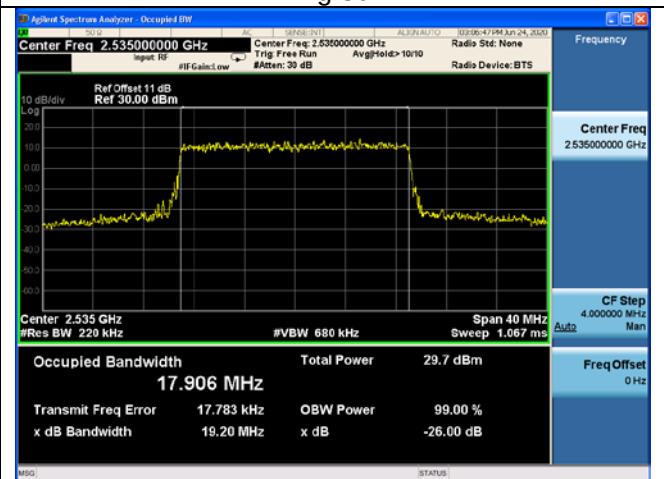


Fig.32

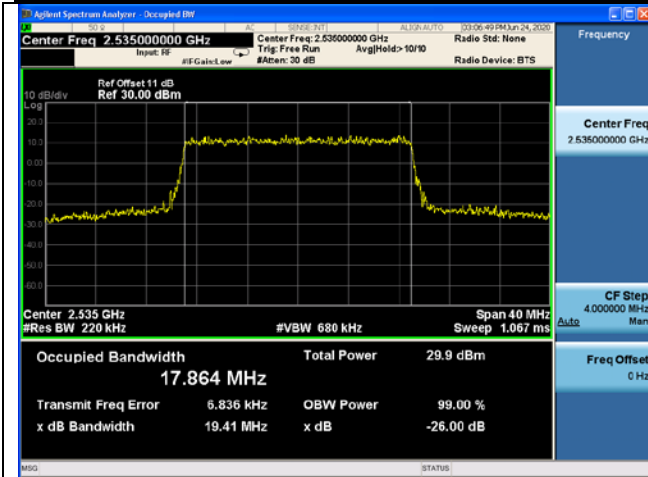


Fig.33

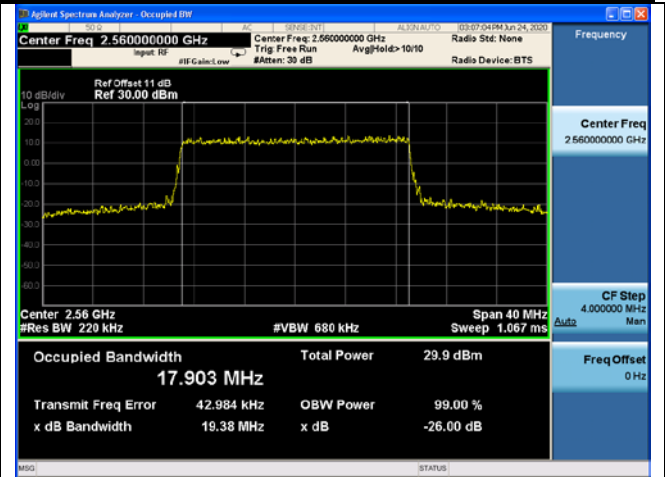


Fig.34

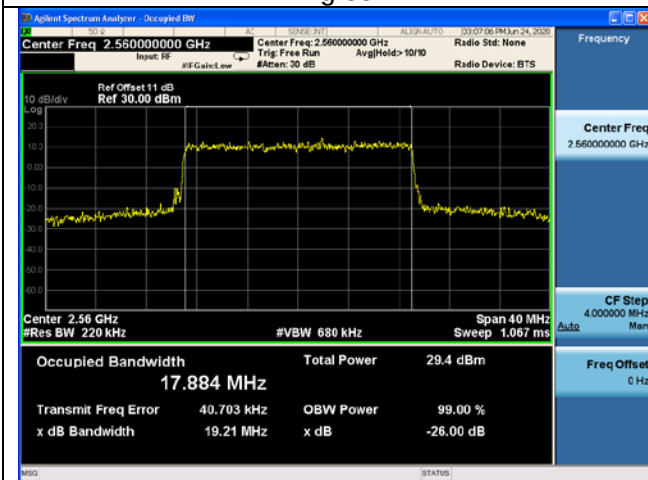


Fig.35

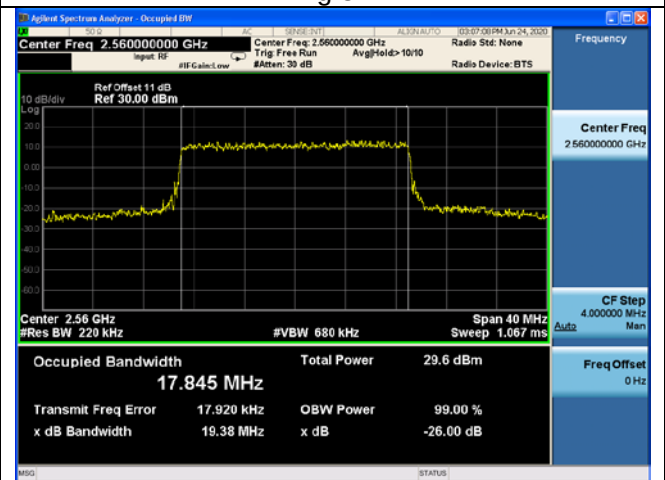


Fig.36

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
7	2535	21100	5	1	0	Fig.1	Fig.2	Fig.3
			10	1	0	Fig.4	Fig.5	Fig.6
			15	1	0	Fig.7	Fig.8	Fig.9
			20	1	0	Fig.10	Fig.11	Fig.12

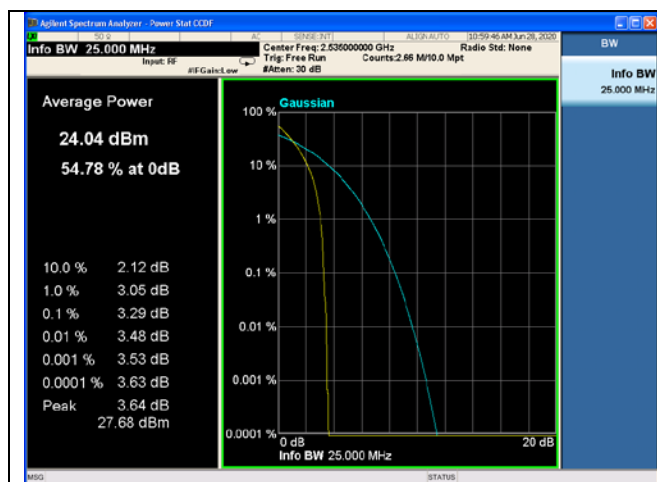


Fig.1

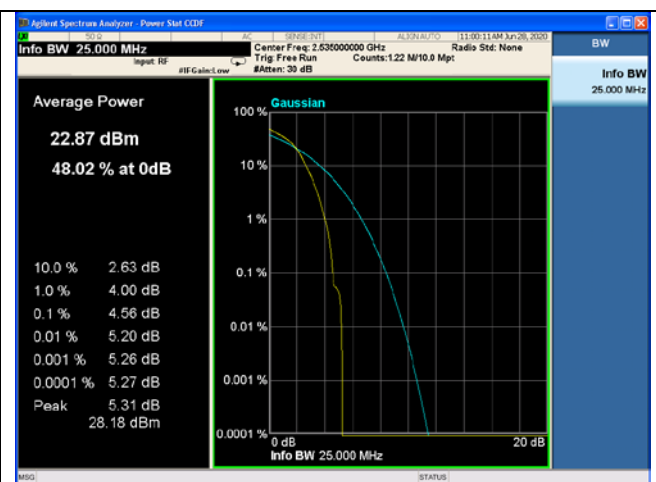


Fig.2

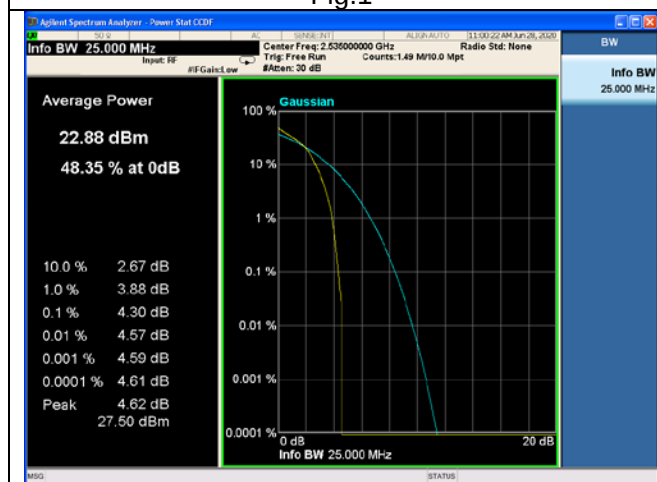


Fig.3

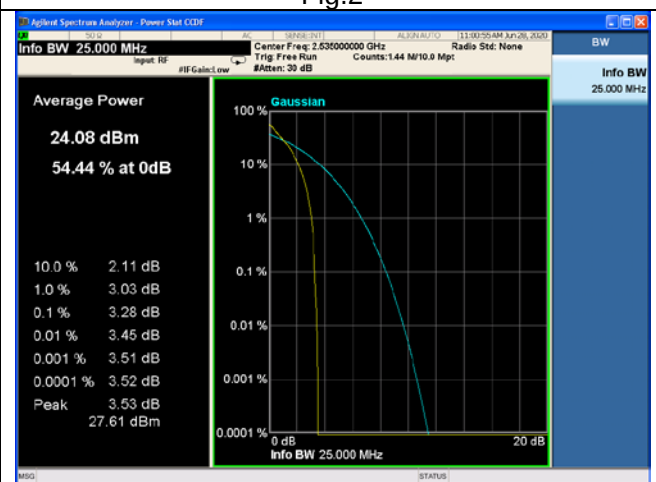


Fig.4

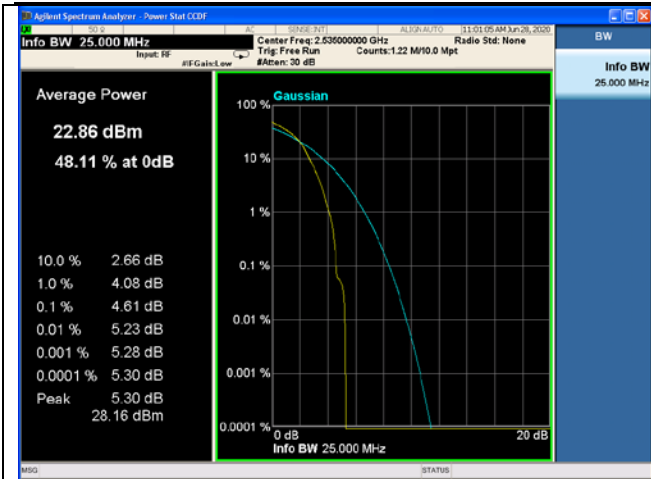


Fig.5

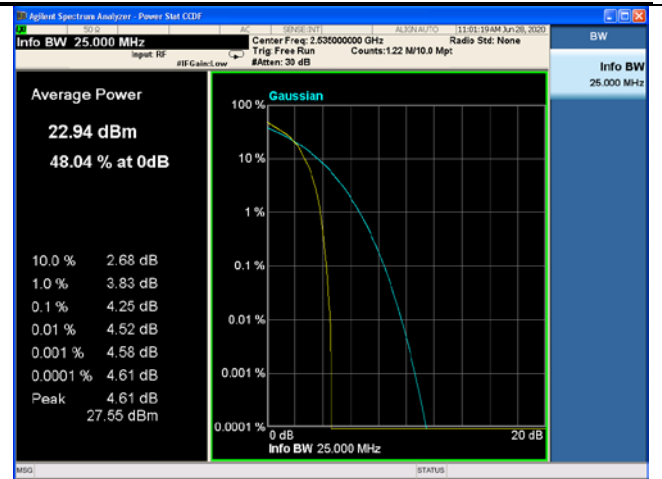


Fig.6

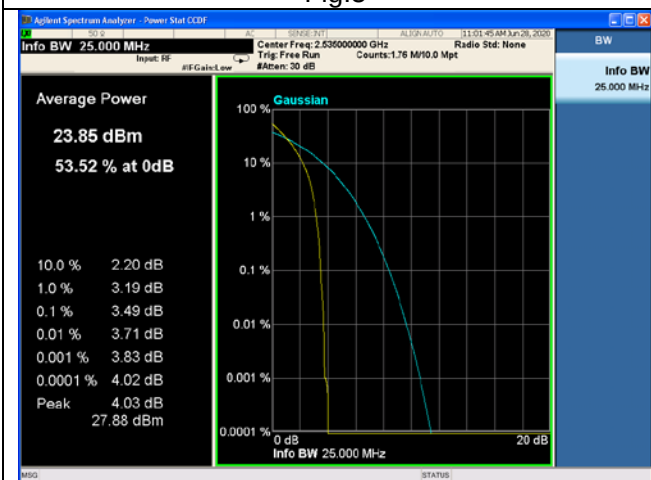


Fig.7

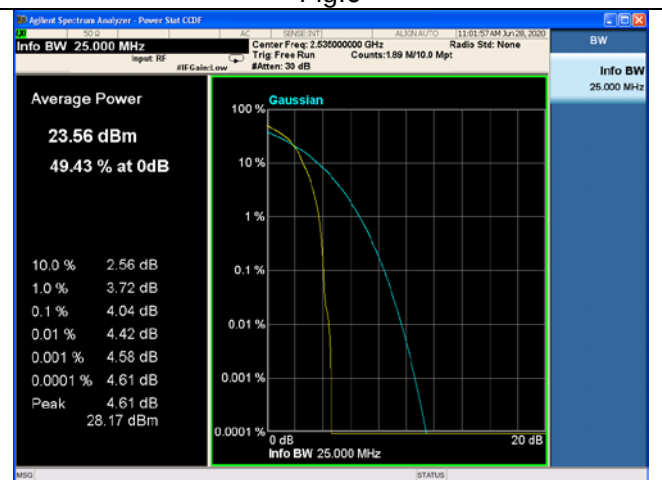


Fig.8

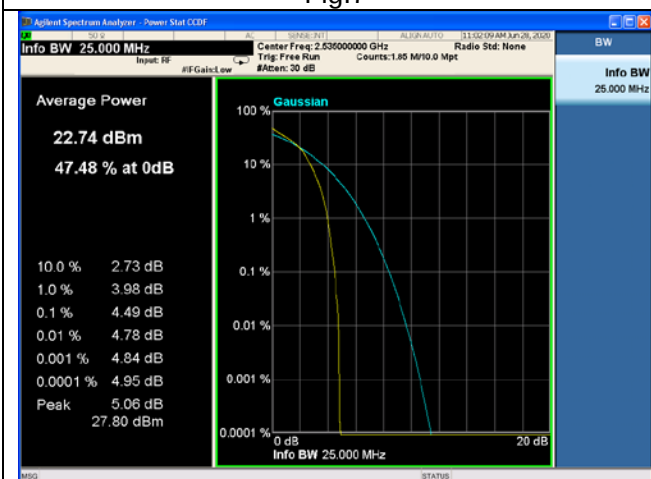


Fig.9

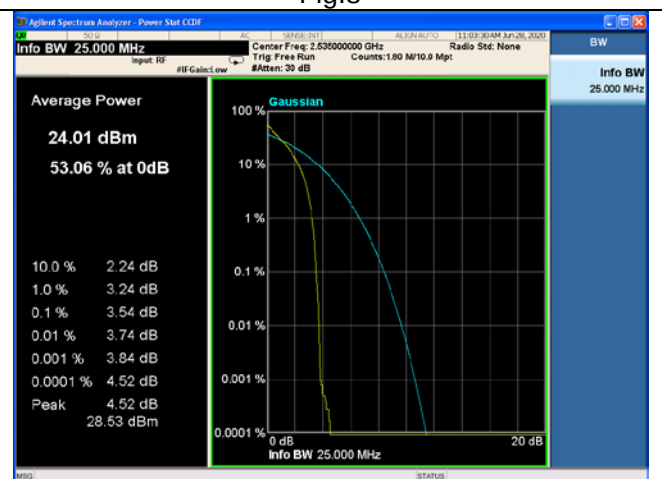


Fig.10

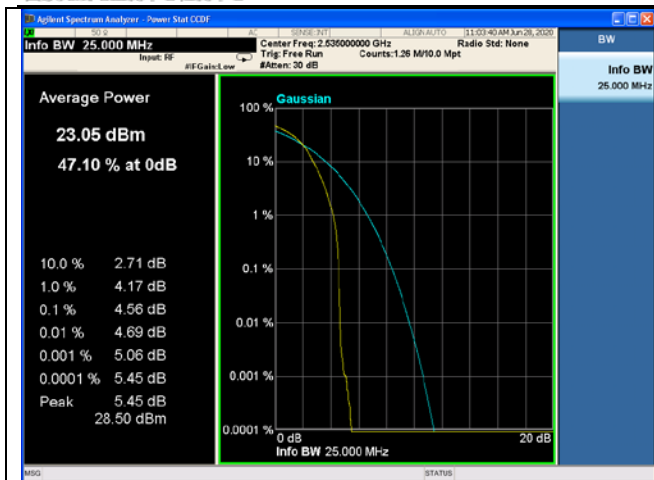


Fig.11

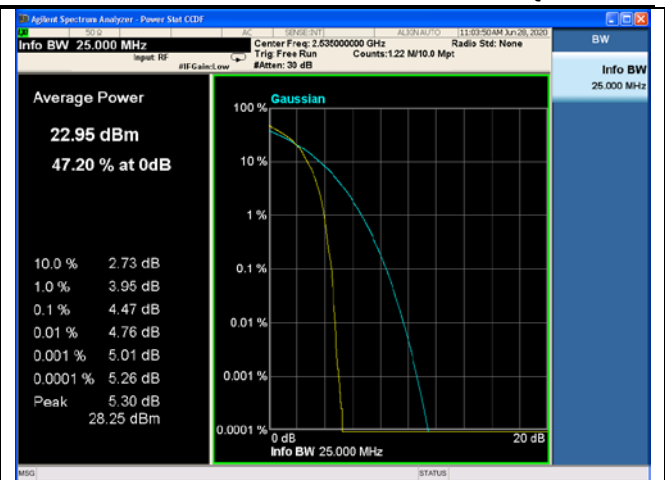


Fig.12

4 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
7	2510	20850	20	1	0	Fig.1-2
	2535	21100	20	1	0	Fig.3-4
	2560	21350	20	1	0	Fig.5-6

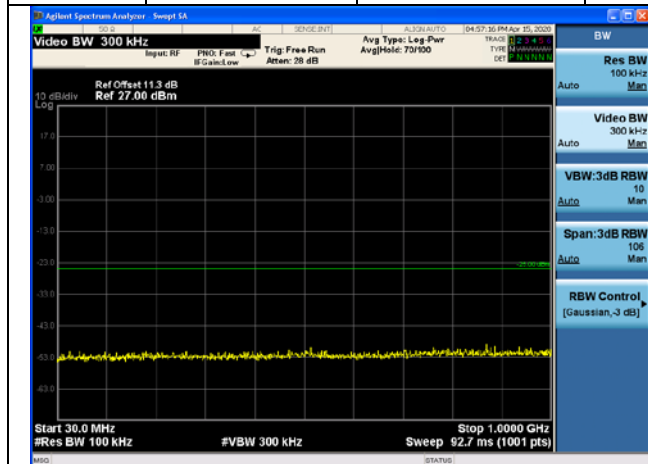


Fig.1

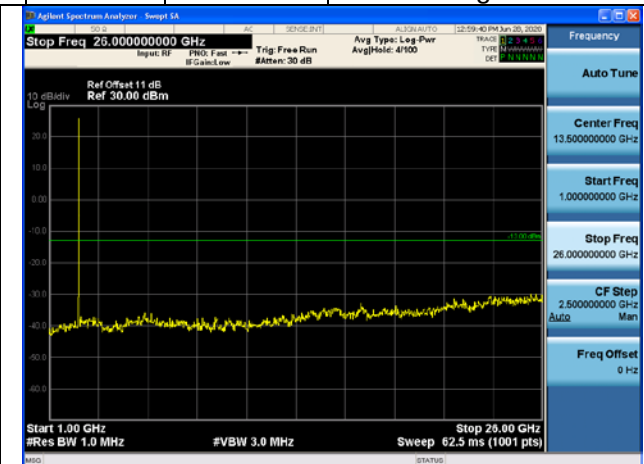


Fig.2

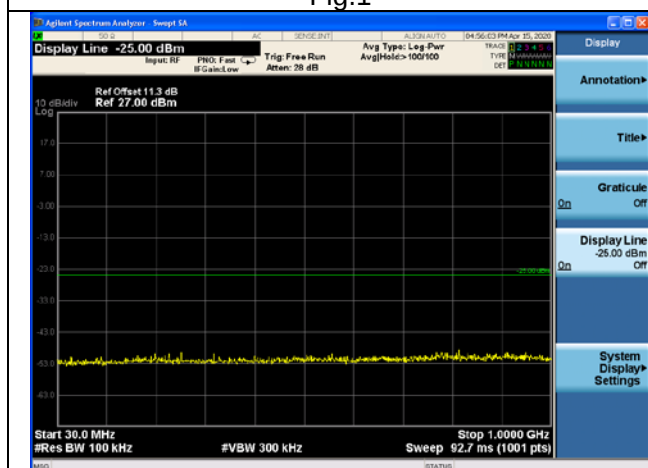


Fig3

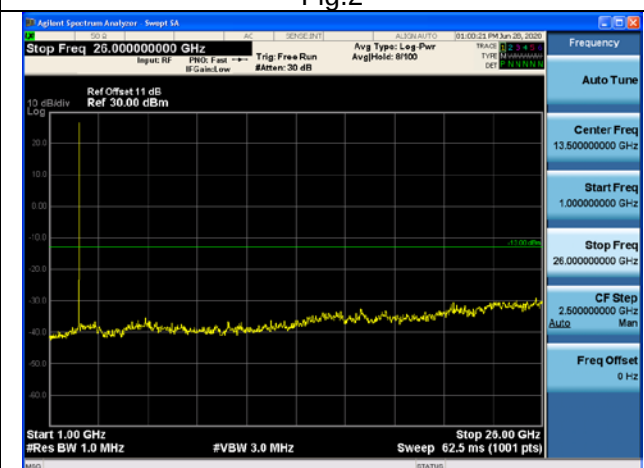


Fig4

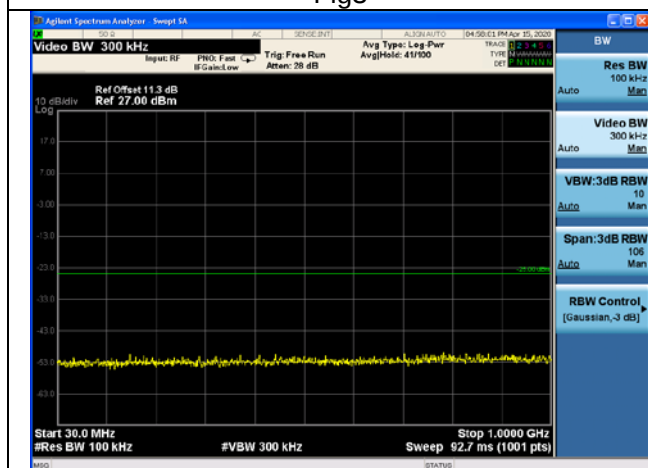


Fig5

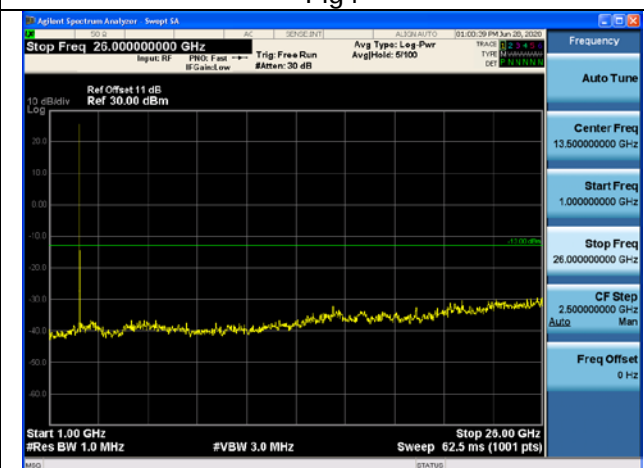


Fig6

5 Band Edges Compliance

Test result

Test Result

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
7	2502.5	20775	5	1	0	Fig.1
				25	0	Fig.2
	2567.5	21425		1	24	Fig.3
				25	0	Fig.4
	2505	20800	10	1	0	Fig.5
				50	0	Fig.6
	2565	21400		1	49	Fig.7
				50	0	Fig.8
	2507.5	20825	15	1	0	Fig.9
				75	0	Fig.10
	2562.5	21375		1	74	Fig.11
				75	0	Fig.12
	2510	20850	20	1	0	Fig.13
				100	0	Fig.14
	2560	21350		1	99	Fig.15
				100	0	Fig.16

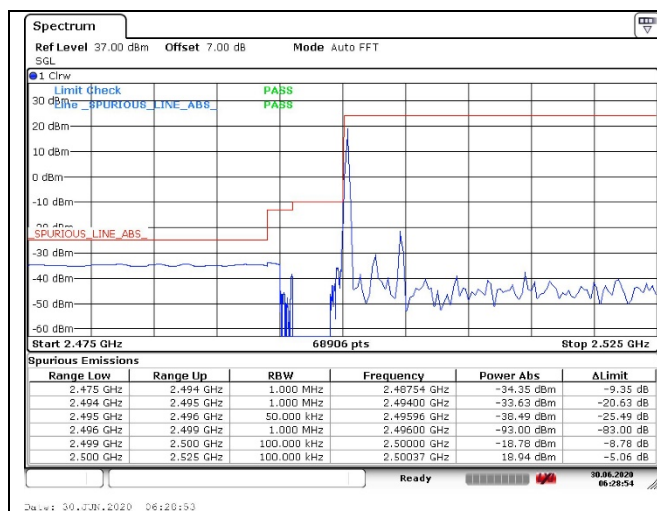


Fig.1

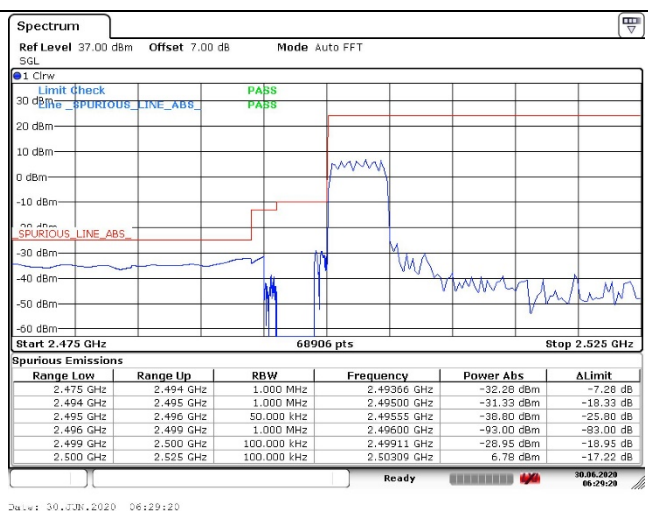


Fig.2

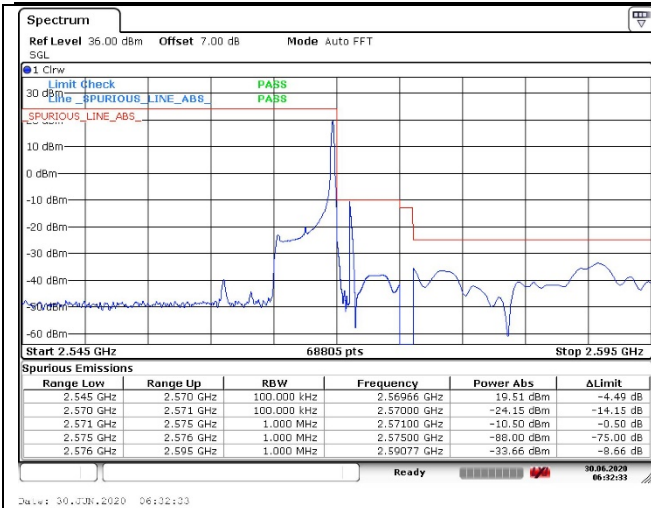


Fig.3

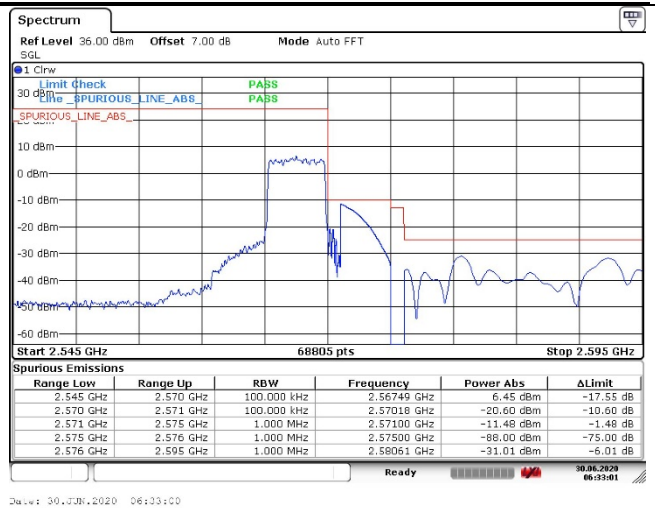


Fig.4

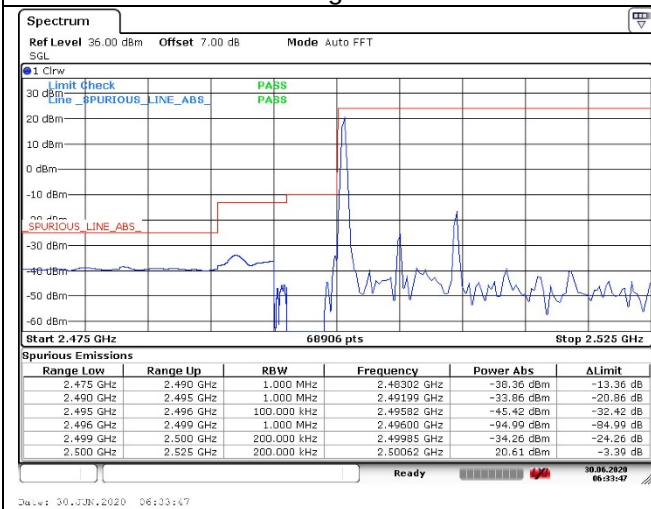


Fig.5

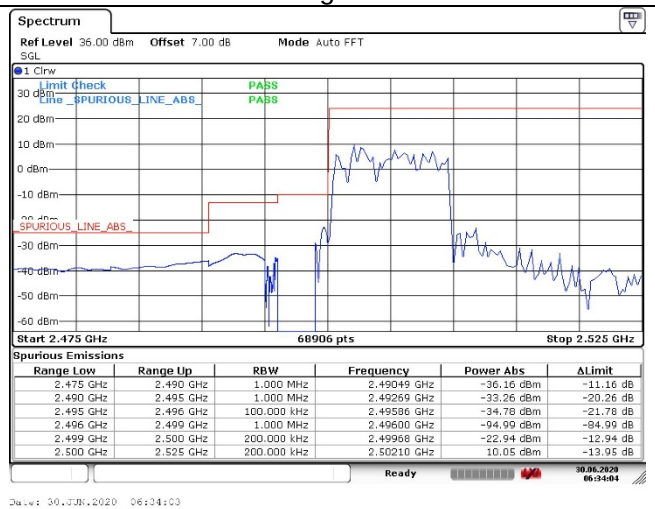


Fig.6

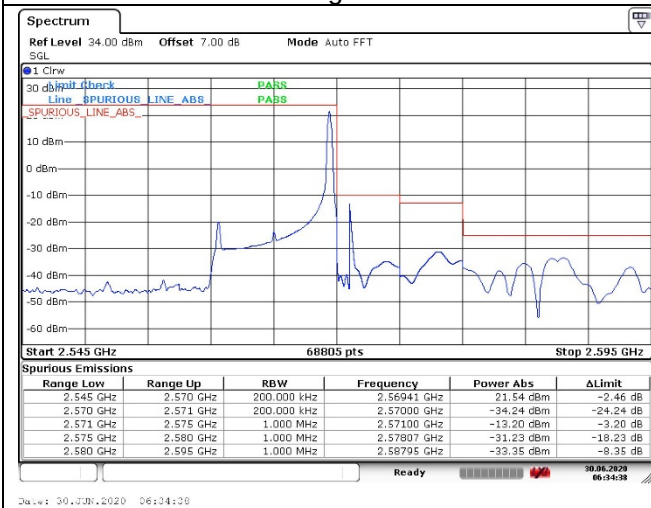


Fig.7

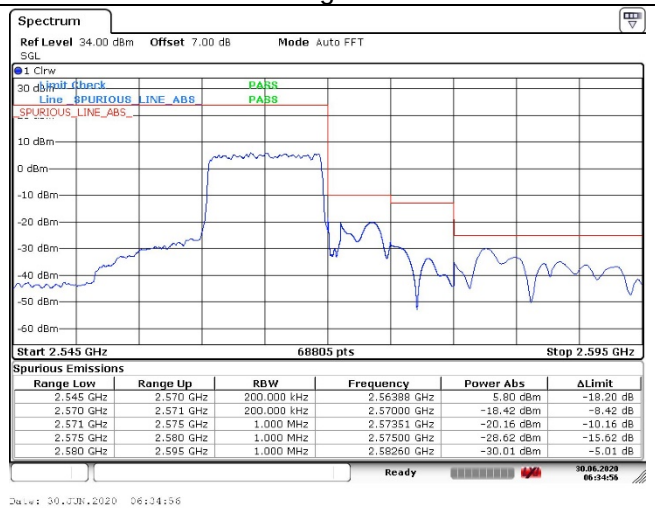
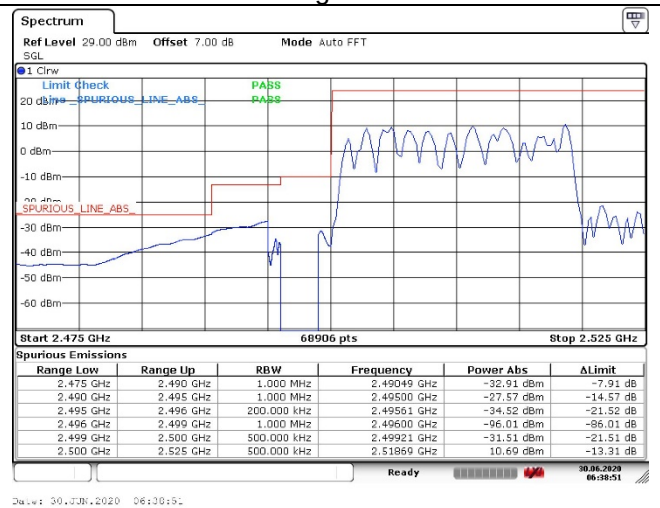
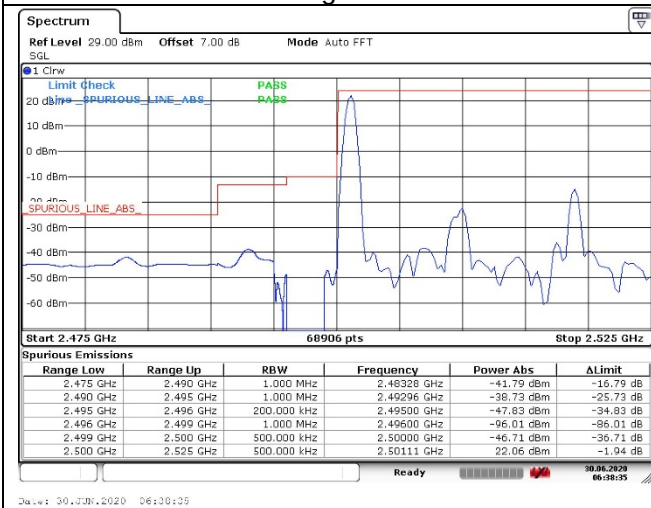
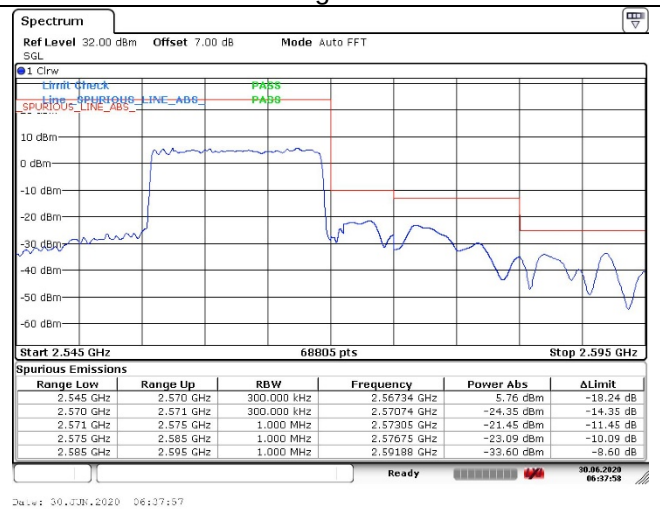
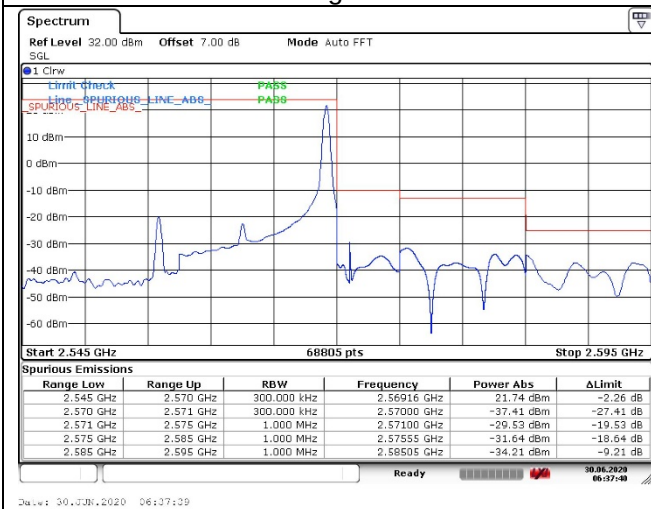
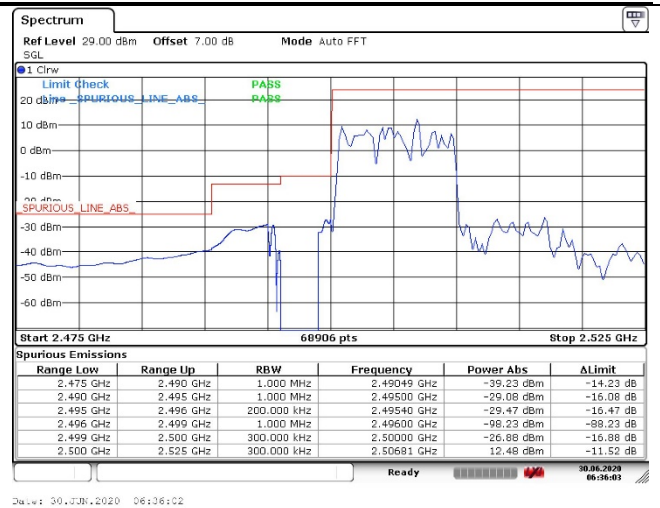
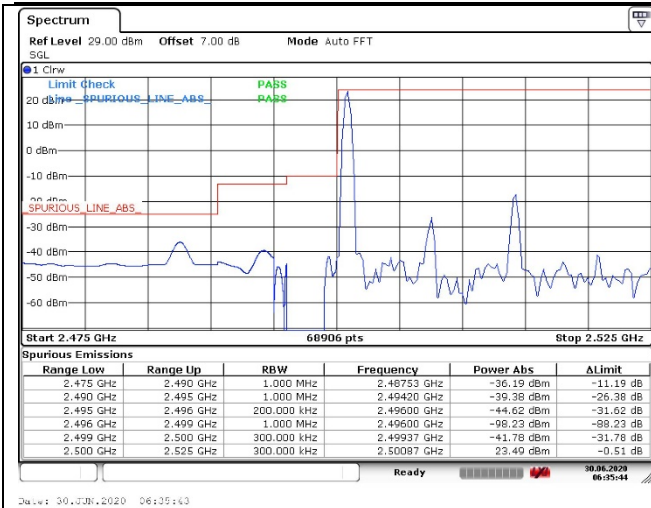
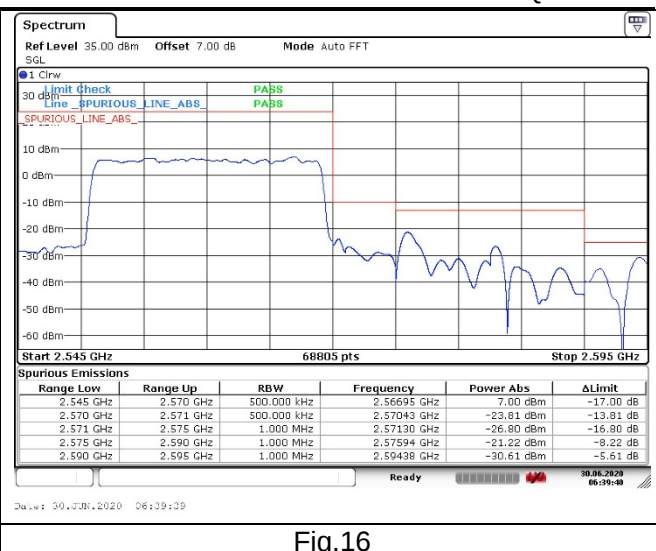
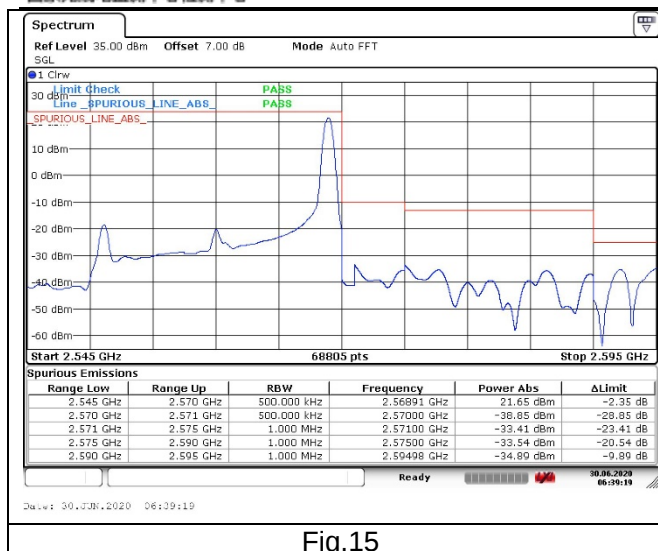


Fig.8





6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band7 Low Channel			
		5M	10M	15M	20M
-10	NV	-0.014	-0.033	-0.023	-0.037
0	NV	0.016	-0.012	0.002	0.000
+10	NV	0.017	-0.019	-0.025	0.024
+20	NV	0.000	0.000	0.000	0.000
+30	NV	-0.010	0.038	-0.029	-0.004
+40	NV	-0.027	-0.028	-0.023	-0.050
+50	NV	0.028	-0.005	0.014	-0.011
+55	NV	0.043	0.007	0.019	-0.042
+20	LV	0.013	-0.048	-0.028	-0.047
+20	HV	-0.034	-0.039	-0.041	-0.029

Temperature(°C)	Voltage	Test Result (ppm) Band7 High Channel			
		5M	10M	15M	20M
-10	NV	0.013	-0.024	-0.042	-0.019
0	NV	-0.046	0.014	0.006	-0.049
+10	NV	-0.012	-0.015	-0.018	-0.045
+20	NV	0.000	0.000	0.000	0.000
+30	NV	-0.010	-0.039	-0.022	-0.029
+40	NV	-0.027	0.011	-0.037	-0.027
+50	NV	0.035	-0.001	-0.019	0.028
+55	NV	-0.002	-0.012	-0.004	-0.025
+20	LV	0.026	0.024	0.017	-0.049
+20	HV	-0.015	-0.005	-0.043	0.029