

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 41

1 RF Power Output

2-KHz Power Output						
Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)
QPSK	2537.5	40065	5	1	0	23.81
				1	24	23.59
				12	6	22.44
				25	0	22.59
	2593	40620		1	0	23.84
				1	24	23.71
				12	6	22.38
				25	0	22.61
	2652.5	41215		1	0	23.74
				1	24	23.73
				12	6	22.41
				25	0	22.54
16QAM	2537.5	40065	5	1	0	21.94
				1	24	21.91
				12	6	21.35
				25	0	21.09
	2593	40620		1	0	22.09
				1	24	22.13
				12	6	21.33
				25	0	21.37
	2652.5	41215		1	0	22.10
				1	24	21.98
				12	6	21.28
				25	0	21.21
64QAM	2537.5	40065	5	1	0	22.04
				1	24	21.89
				12	6	21.35
				25	0	21.24
	2593	40620		1	0	22.01
				1	24	22.20
				12	6	21.27
				25	0	21.34
	2652.5	41215		1	0	22.13
				1	24	21.93
				12	6	21.30
				25	0	21.20

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)
QPSK	2540	40090	10	1	0	23.61
				1	49	23.66
				24	12	22.40
				50	0	22.40
	2593	40620		1	0	23.86
				1	49	23.90
				24	12	22.61
				50	0	22.54
	2650	41190		1	0	23.66
				1	49	23.55
				24	12	22.46
				50	0	22.38
16QAM	2540	40090	10	1	0	22.01
				1	49	22.19
				24	12	21.45
				50	0	21.25
	2593	40620		1	0	22.28
				1	49	22.07
				24	12	21.23
				50	0	21.22
	2650	41190		1	0	22.12
				1	49	22.14
				24	12	21.47
				50	0	21.15
64QAM	2540	40090	10	1	0	21.94
				1	49	22.14
				24	12	21.24
				50	0	21.30
	2593	40620		1	0	22.05
				1	49	22.22
				24	12	21.26
				50	0	21.19
	2650	41190		1	0	21.90
				1	49	21.93
				24	12	21.39
				50	0	21.14

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)
QPSK	2542.5	40115	15	1	0	23.84
				1	74	23.63
				40	18	22.37
				75	0	22.35
	2593	40620		1	0	23.81
				1	74	23.68
				40	18	22.53
				75	0	22.47
	2647.5	41165		1	0	23.68
				1	74	23.69
				40	18	22.54
				75	0	22.31
16QAM	2542.5	40115	15	1	0	22.15
				1	74	22.23
				40	18	21.29
				75	0	21.33
	2593	40620		1	0	22.26
				1	74	22.29
				40	18	21.32
				75	0	21.35
	2647.5	41165		1	0	22.05
				1	74	22.17
				40	18	21.36
				75	0	21.15
64QAM	2542.5	40115	15	1	0	22.02
				1	74	21.92
				40	18	21.40
				75	0	21.37
	2593	40620		1	0	22.05
				1	74	21.99
				40	18	21.29
				75	0	21.37
	2647.5	41165		1	0	21.98
				1	74	22.09
				40	18	21.37
				75	0	21.31

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)
QPSK	2545	40140	20	1	0	23.87
				1	99	23.87
				50	25	22.62
				100	0	22.61
	2593	40620		1	0	23.92
				1	99	23.92
				50	25	22.67
				100	0	22.66
	2645	41140		1	0	23.85
				1	99	23.85
				50	25	22.66
				100	0	22.56
16QAM	2545	40140	20	1	0	22.20
				1	99	22.25
				50	25	21.45
				100	0	21.41
	2593	40620		1	0	22.29
				1	99	22.29
				50	25	21.53
				100	0	21.43
	2645	41140		1	0	22.24
				1	99	22.25
				50	25	21.44
				100	0	21.37
64QAM	2545	40140	20	1	0	22.26
				1	99	22.18
				50	25	21.42
				100	0	21.39
	2593	40620		1	0	22.29
				1	99	22.23
				50	25	21.51
				100	0	21.41
	2645	41140		1	0	22.27
				1	99	22.18
				50	25	21.42
				100	0	21.38

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	
41	2537.5	40065	5	25	0	4.5	Fig.1	4.5	Fig.2	4.5	Fig.3
	2593	40620		25	0	4.5	Fig.4	4.5	Fig.5	4.4	Fig.6
	2652.5	41215		25	0	4.5	Fig.7	4.5	Fig.8	4.5	Fig.9
	2540	40090	10	50	0	9.0	Fig.10	9.0	Fig.11	9.0	Fig.12
	2593	40620		50	0	9.0	Fig.13	9.0	Fig.14	9.0	Fig.15
	2650	41190		50	0	9.0	Fig.16	9.0	Fig.17	9.0	Fig.18
	2542.5	40115	15	75	0	13.4	Fig.19	13.4	Fig.20	13.4	Fig.21
	2593	40620		75	0	13.4	Fig.22	13.3	Fig.23	13.4	Fig.24
	2647.5	41165		75	0	13.3	Fig.25	13.3	Fig.26	13.3	Fig.27
	2545	40140	20	100	0	17.8	Fig.28	17.8	Fig.29	17.8	Fig.30
	2593	40620		100	0	17.7	Fig.31	17.7	Fig.32	17.8	Fig.33
	2645	41140		100	0	17.7	Fig.34	17.8	Fig.35	17.7	Fig.36

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
41	2537.5	40065	5	25	0	5.0	Fig.1	4.9	Fig.2	4.8	Fig.3
	2593	40620		25	0	4.9	Fig.4	4.8	Fig.5	4.8	Fig.6
	2652.5	41215		25	0	4.9	Fig.7	4.9	Fig.8	4.8	Fig.9
	2540	40090	10	50	0	10.1	Fig.10	10.2	Fig.11	9.9	Fig.12
	2593	40620		50	0	9.9	Fig.13	9.8	Fig.14	9.7	Fig.15
	2650	41190		50	0	9.8	Fig.16	9.8	Fig.17	9.6	Fig.18
	2542.5	40115	15	75	0	14.4	Fig.19	14.3	Fig.20	14.3	Fig.21
	2593	40620		75	0	14.5	Fig.22	14.0	Fig.23	14.1	Fig.24
	2647.5	41165		75	0	14.2	Fig.25	14.2	Fig.26	14.2	Fig.27
	2545	40140	20	100	0	19.1	Fig.28	19.0	Fig.29	19.0	Fig.30
	2593	40620		100	0	18.9	Fig.31	19.0	Fig.32	18.7	Fig.33
	2645	41140		100	0	18.6	Fig.34	18.6	Fig.35	18.4	Fig.36

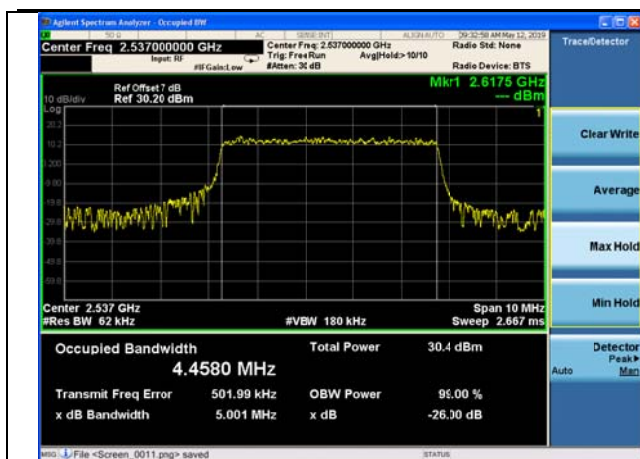


Fig.1

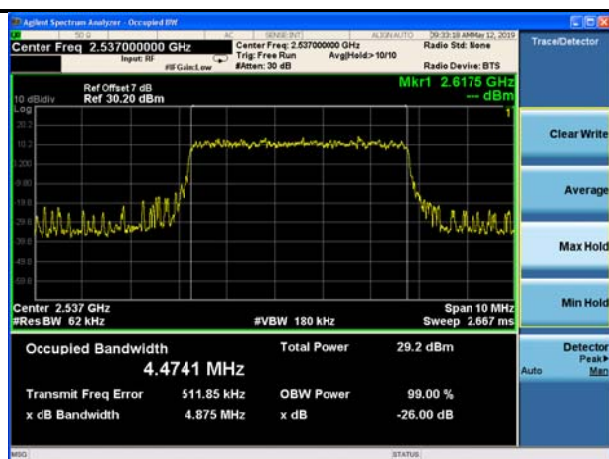


Fig.2

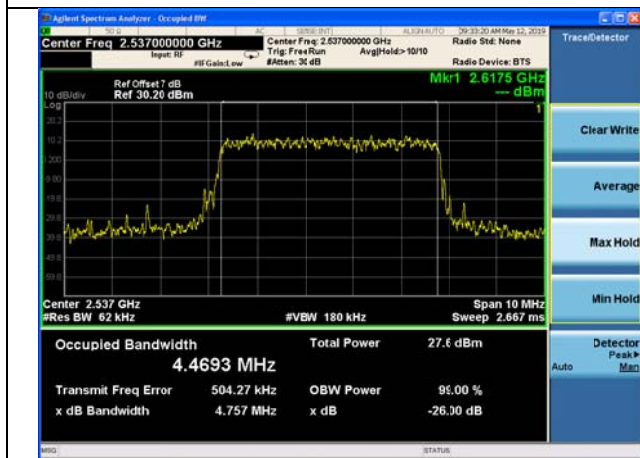


Fig.3

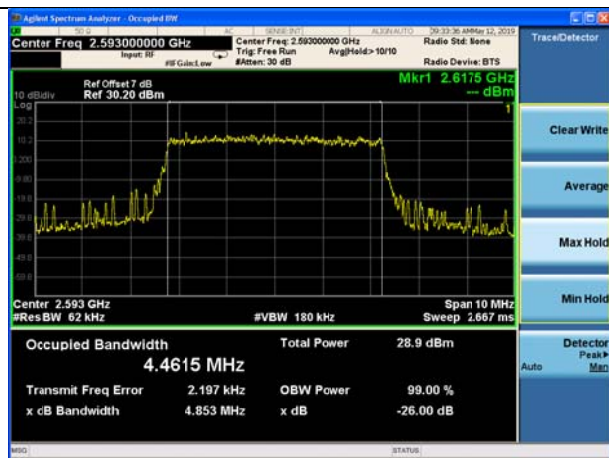


Fig.4

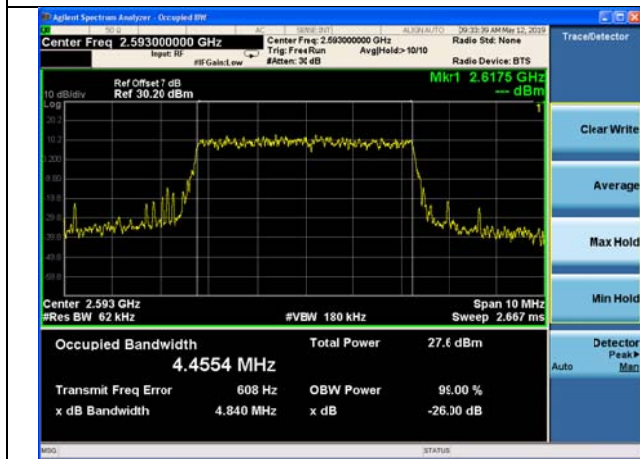


Fig.5

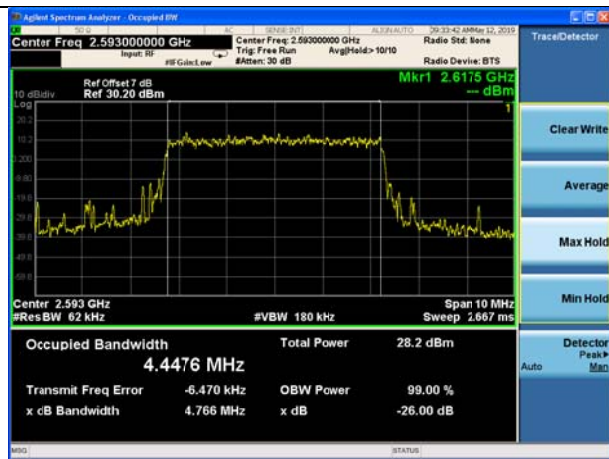


Fig.6

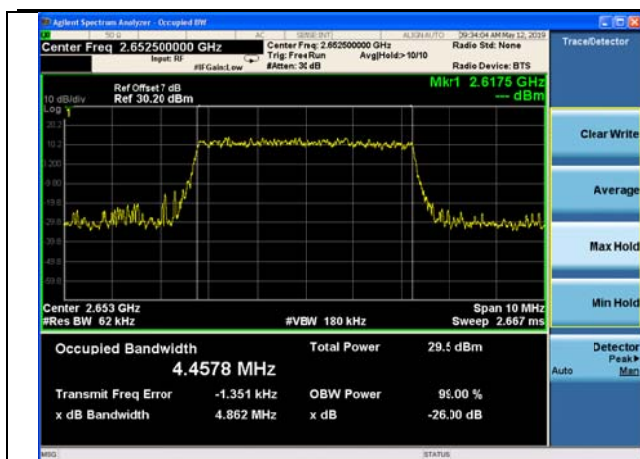


Fig.7

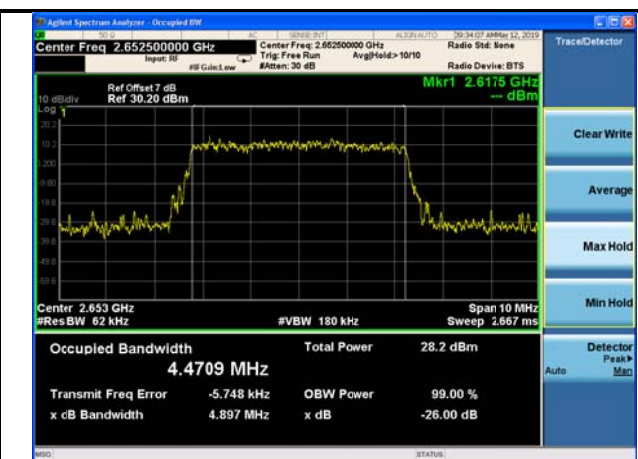


Fig.8

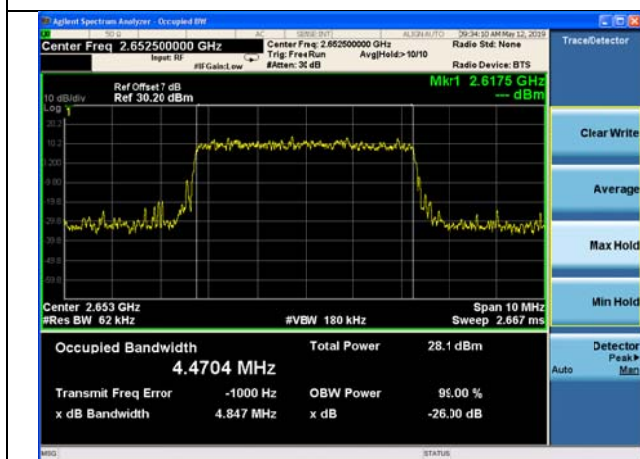


Fig.9

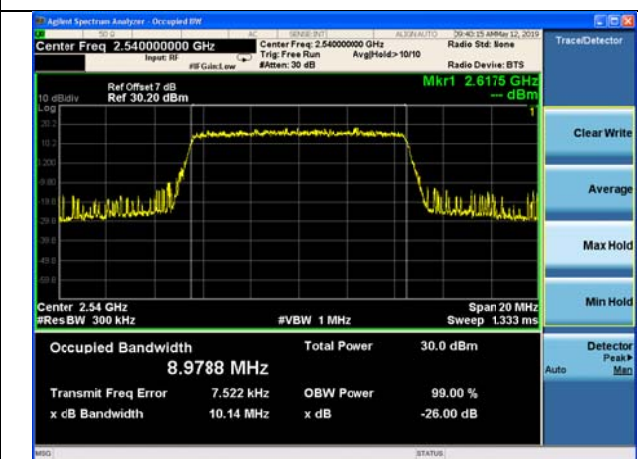


Fig.10

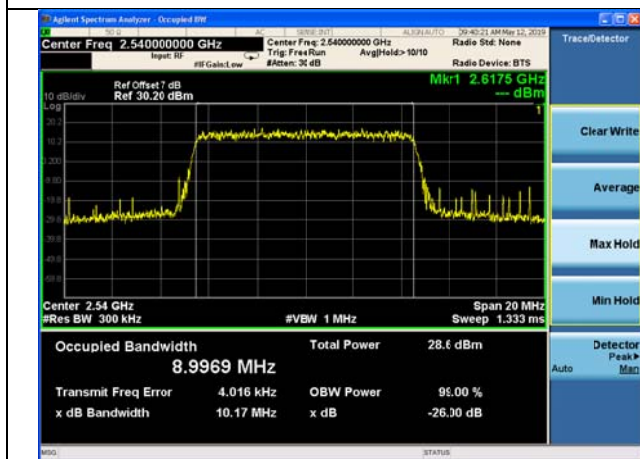


Fig.11

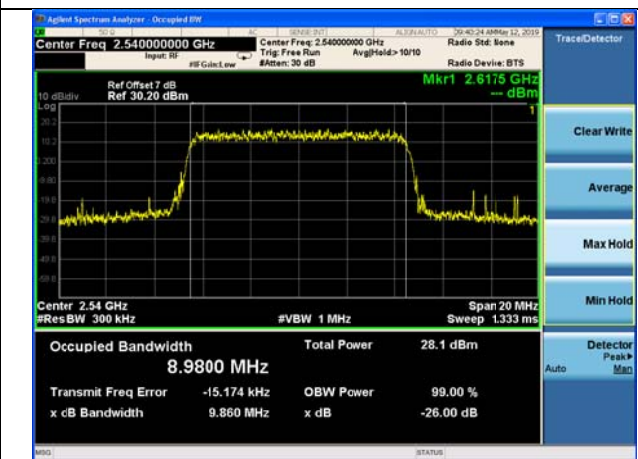


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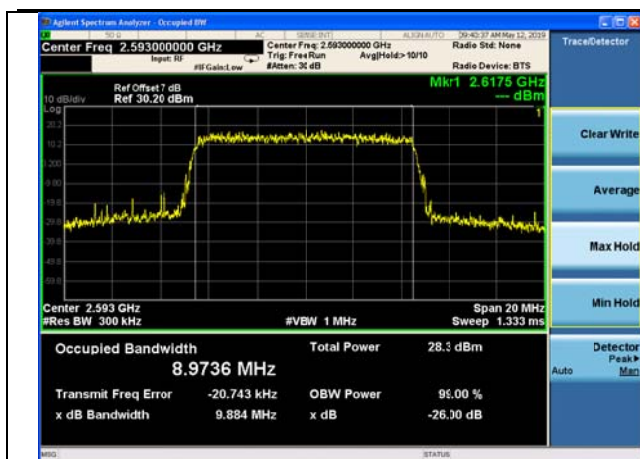


Fig.13

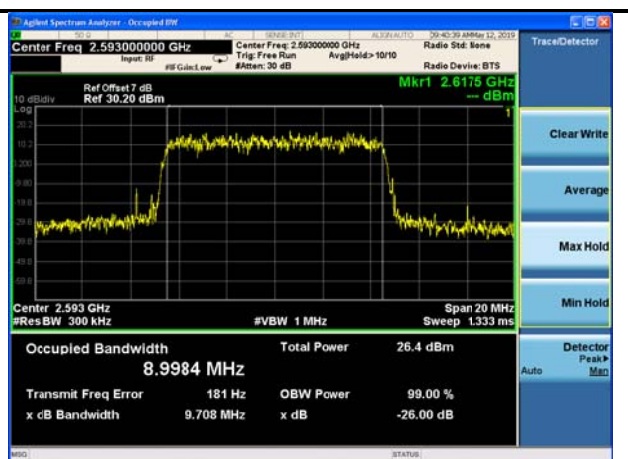


Fig.14

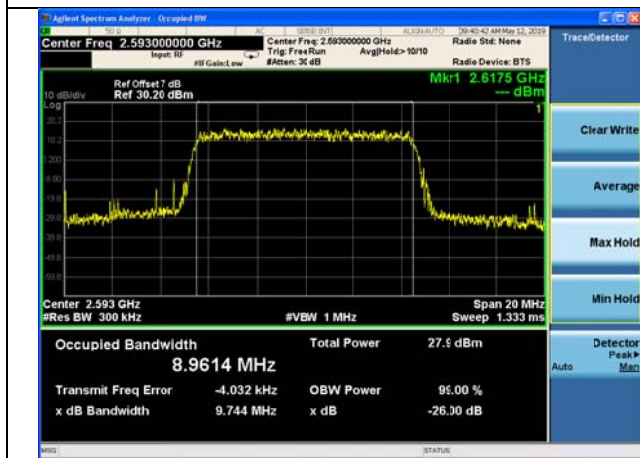


Fig.15

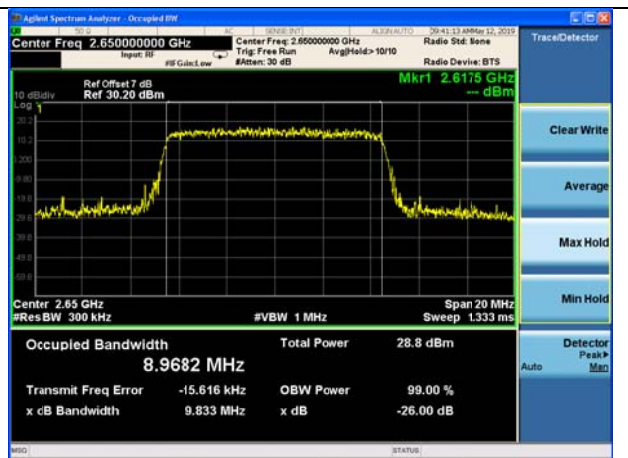


Fig.16

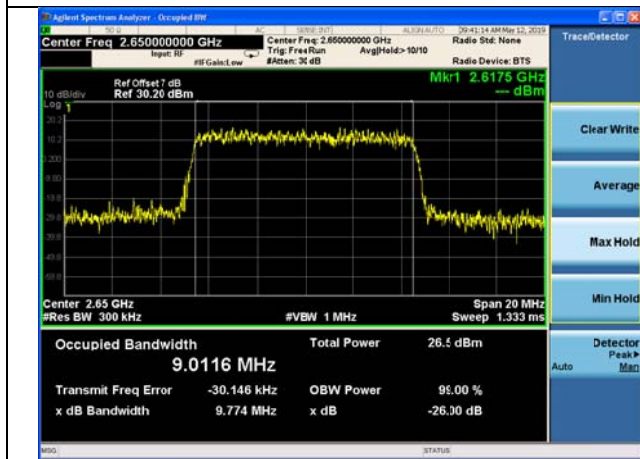


Fig.17

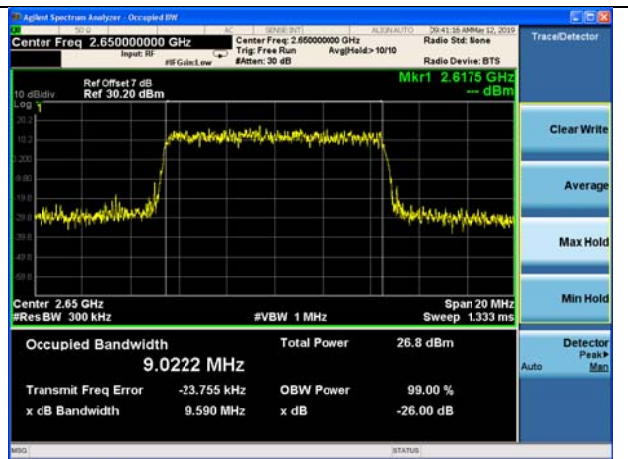


Fig.18

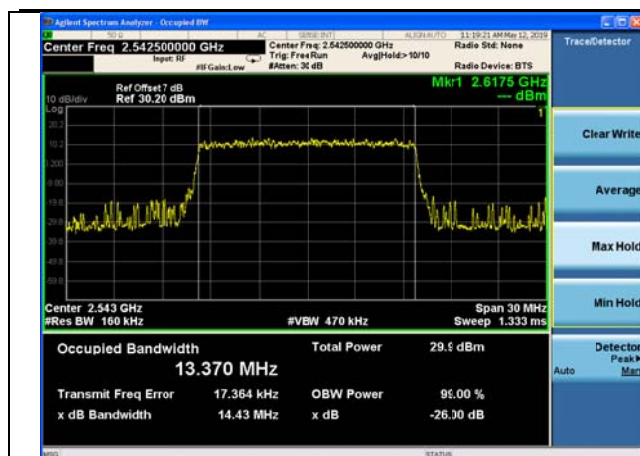


Fig.19

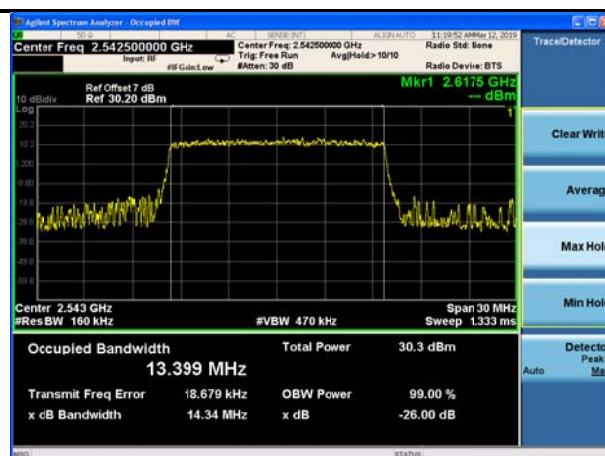


Fig.20

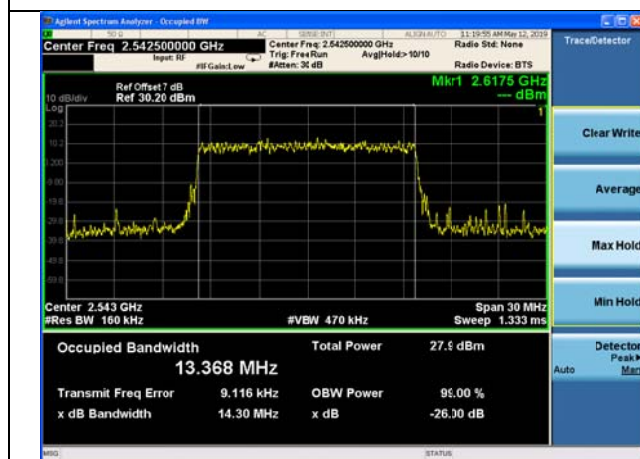


Fig.21

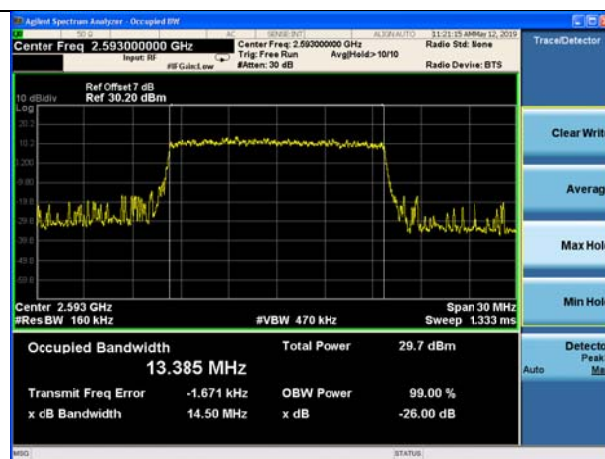


Fig.22

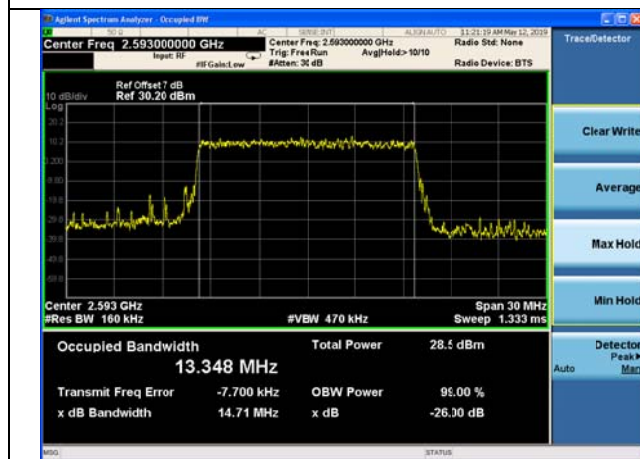


Fig.23

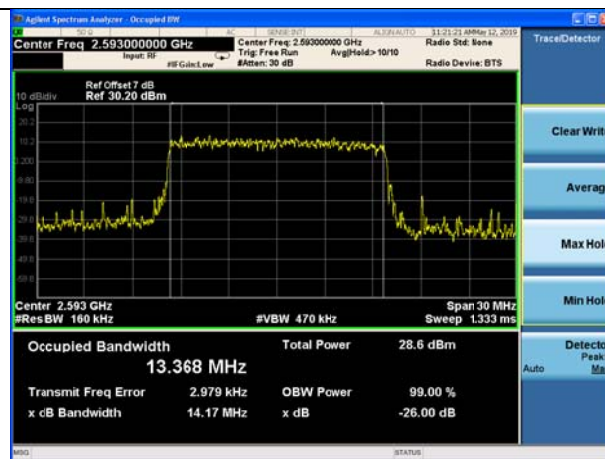


Fig.24

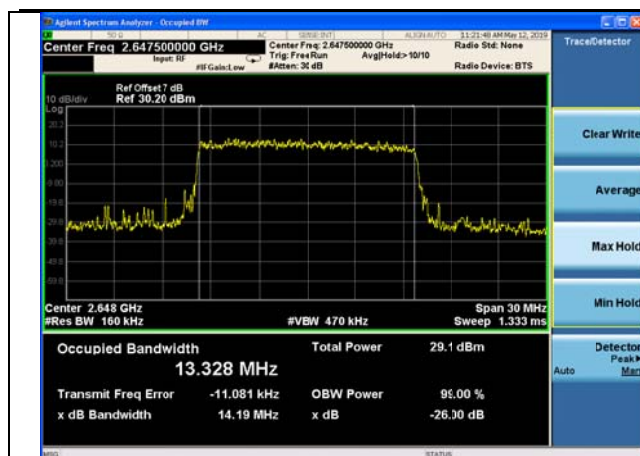


Fig.25

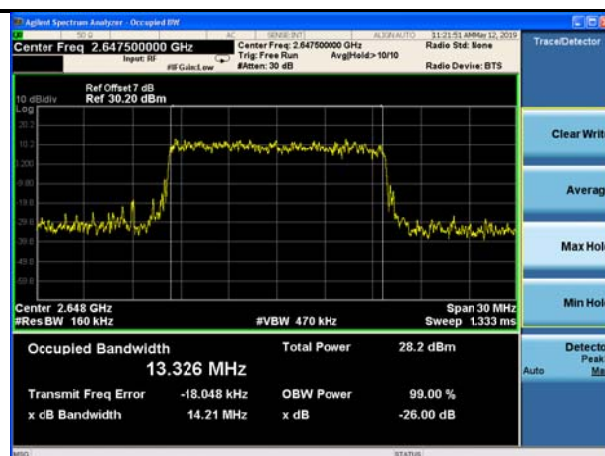


Fig.26

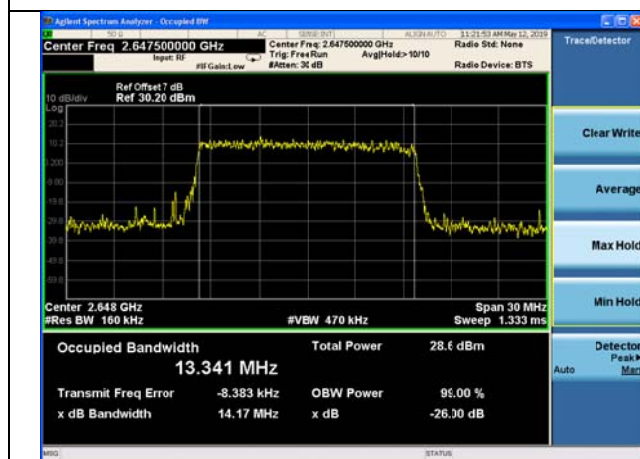


Fig.27

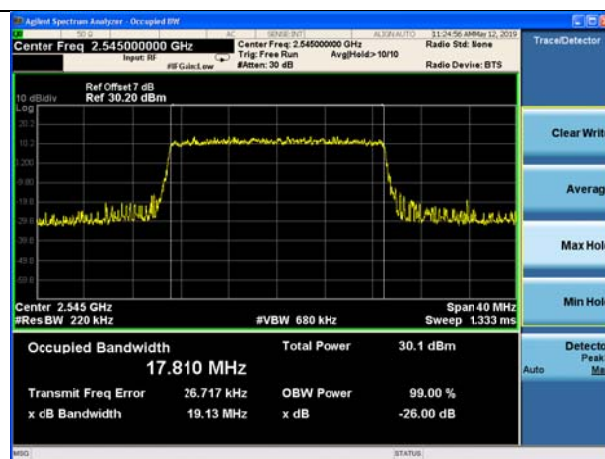


Fig.28

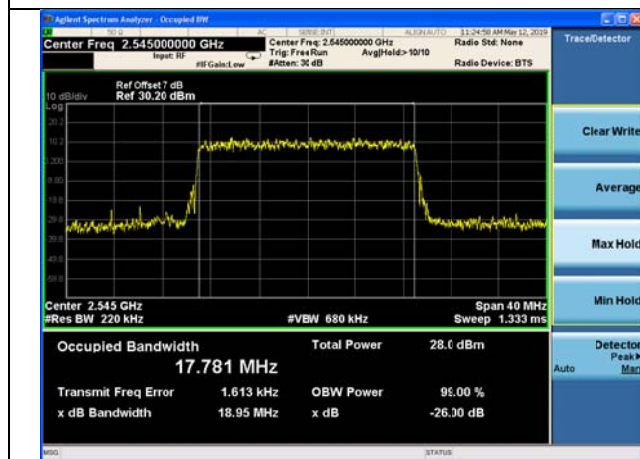


Fig.29

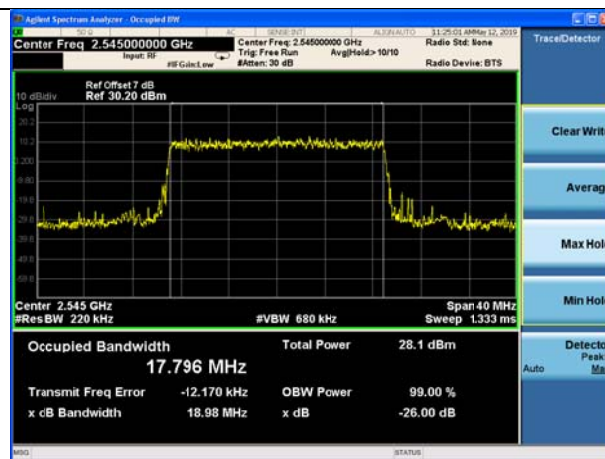


Fig.30

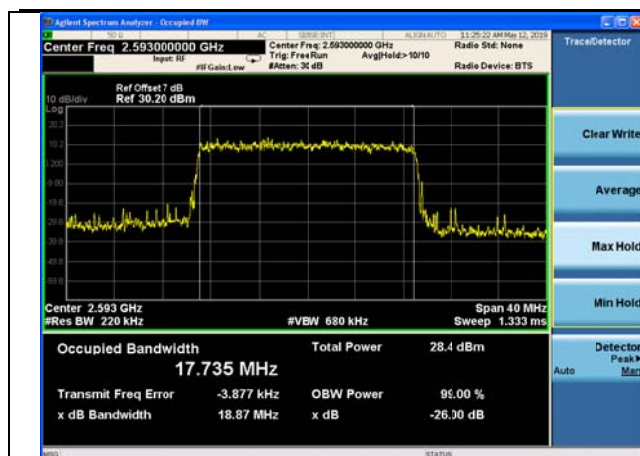


Fig.31

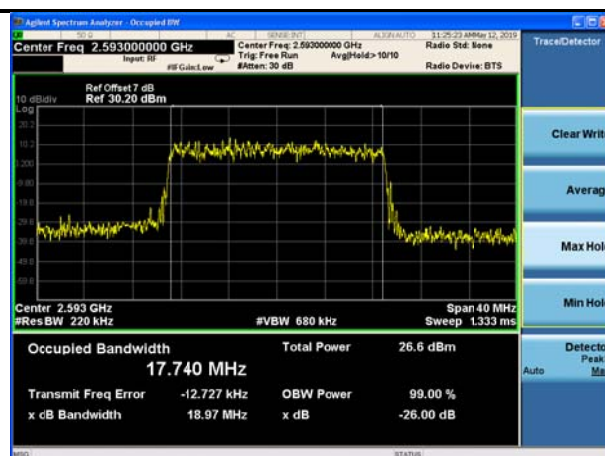


Fig.32

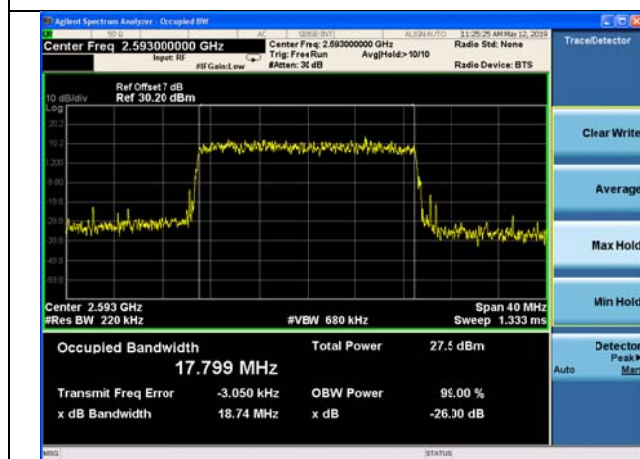


Fig.33

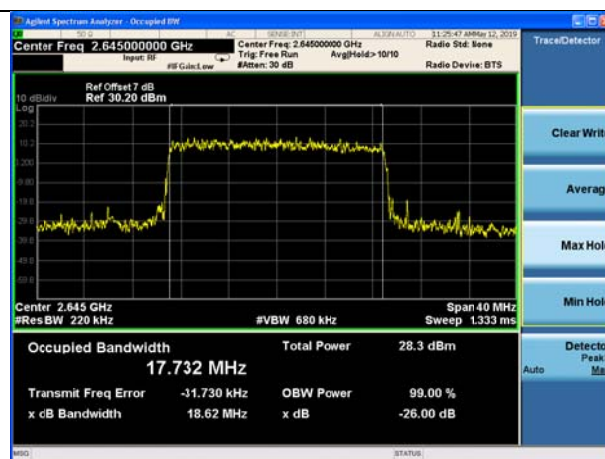


Fig.34

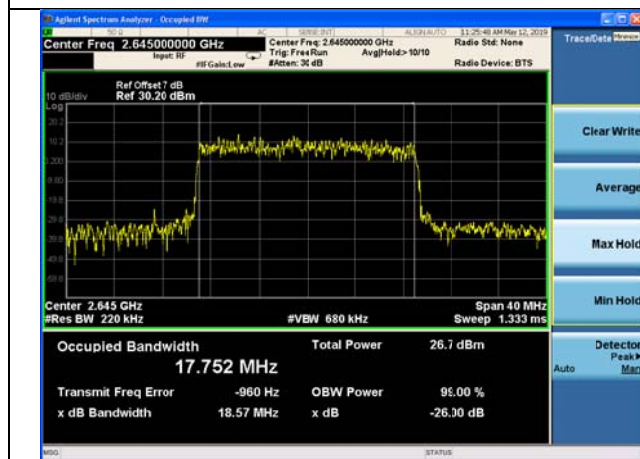


Fig.35

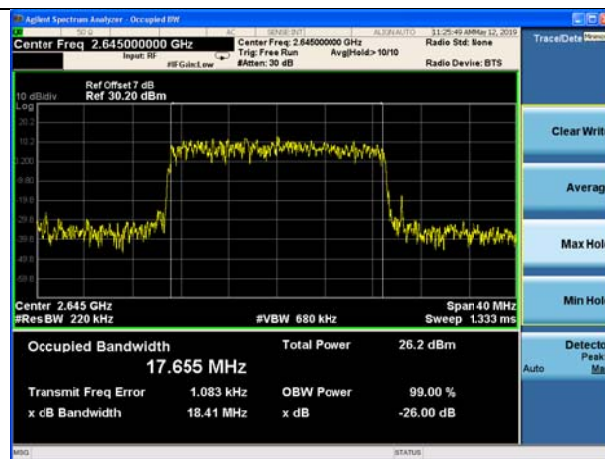


Fig.36

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
41	2593	40620	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

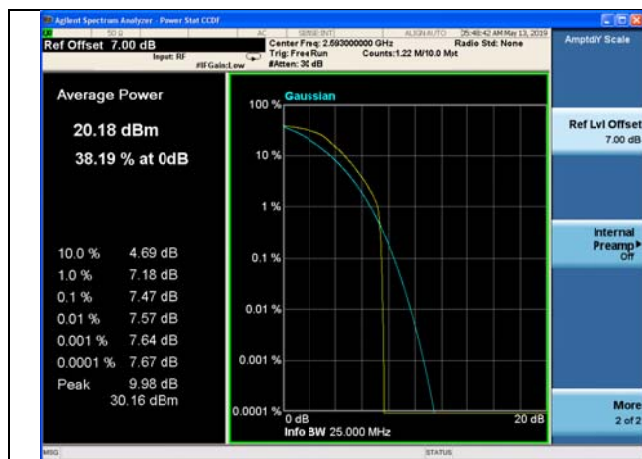


Fig.1

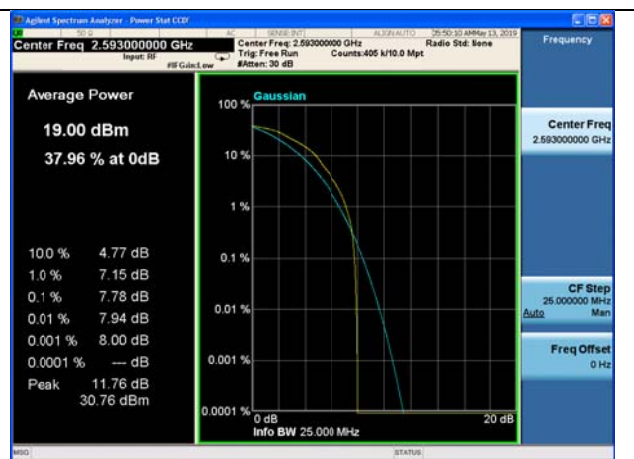


Fig.2



Fig.3

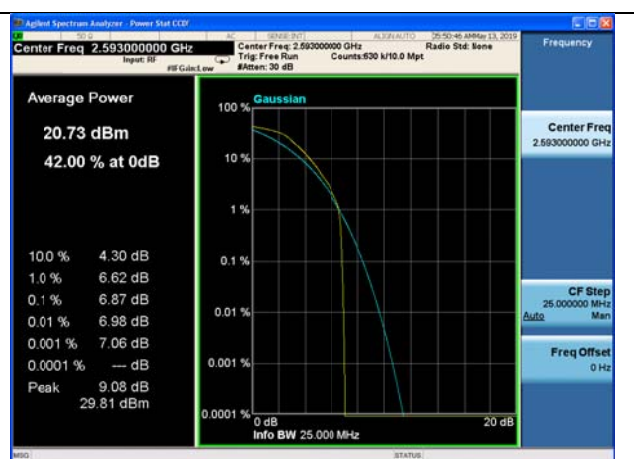


Fig.4

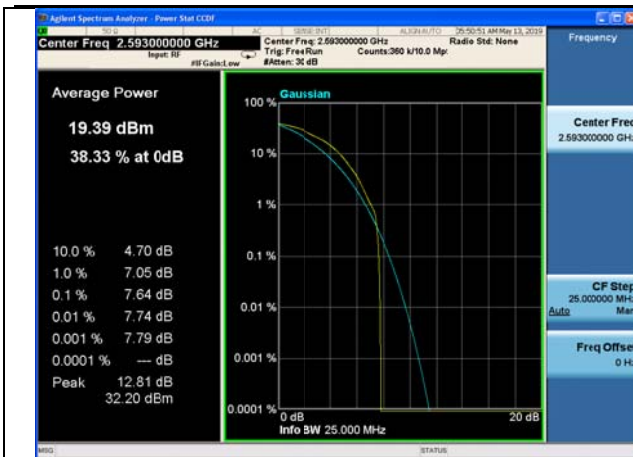


Fig.5



Fig.6

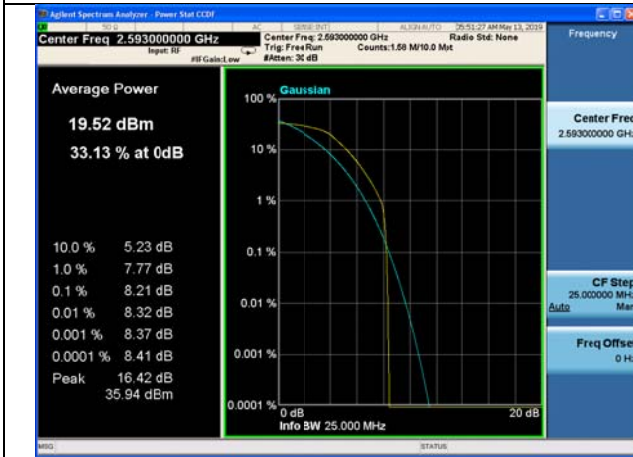


Fig.7

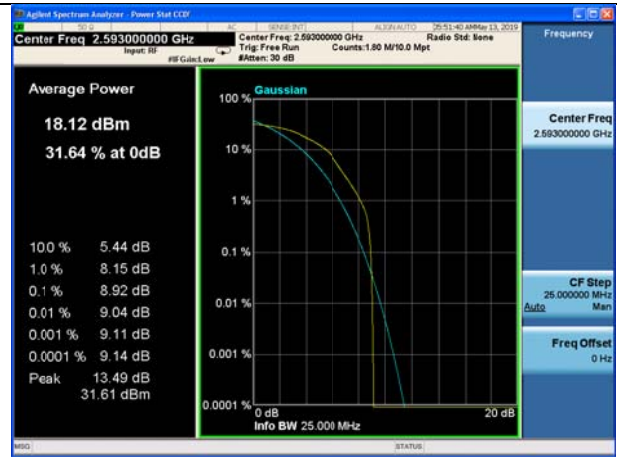


Fig.8

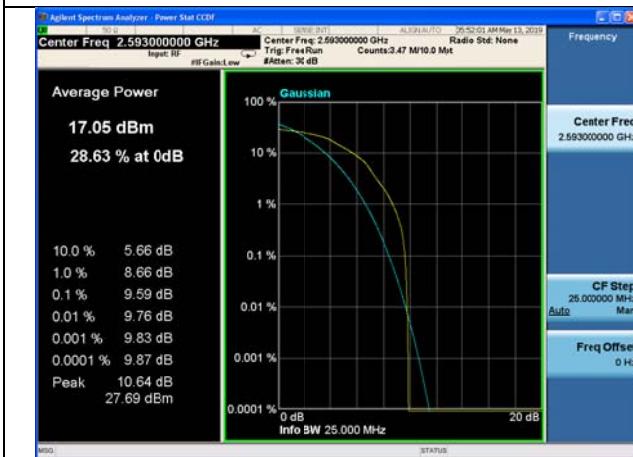


Fig.9



Fig.10

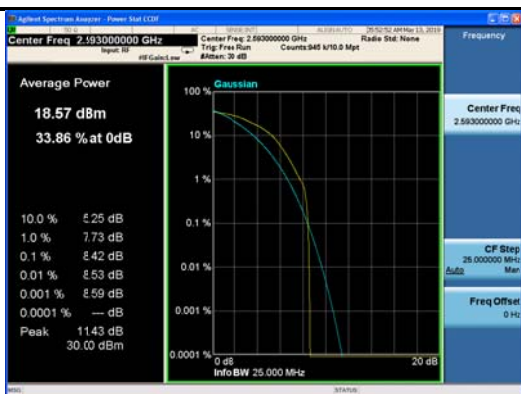


Fig.11

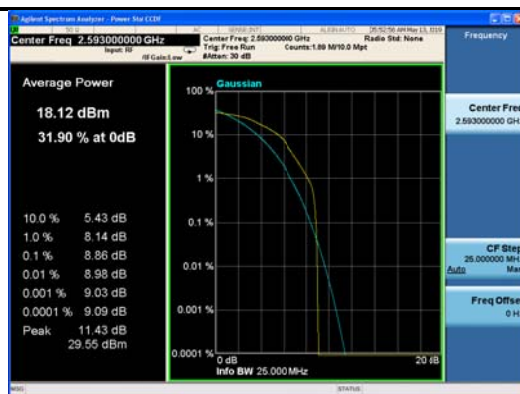


Fig.12

4 Spurious Emissions at antenna terminal

Band	Carrier frequency	Channel	BW	RB Size	RB Offset	Conducted QPSK
41	2537.5	40065	20	1	0	Fig.1
	2593	40620	20	1	0	Fig.2
	2645	41140	20	1	0	Fig.3



Fig.1



Fig.2

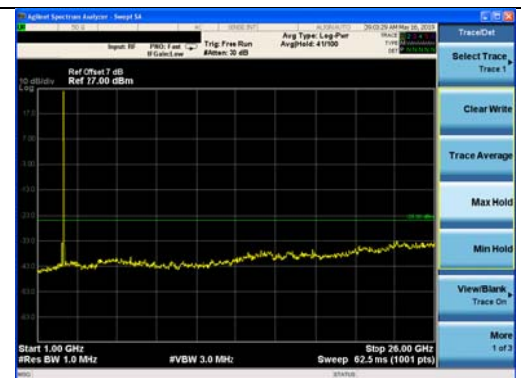


Fig3

5 Band Edges Compliance Test result

Band	Carrier frequency	Channel I	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
41	2537.5	40065	5	25	0	Fig.1
	2652.5	41215		25	0	Fig.5
	2540	40090	10	50	0	Fig.2
	2650	41190		50	0	Fig.6
	2542.5	40115	15	75	0	Fig.3
	2647.5	41165		75	0	Fig.7
	2545	40140	20	100	0	Fig.4
	2645	41140		100	0	Fig.8

Band	Carrier frequency	Channel I	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
41	2537.5	40065	5	1	0	Fig.9
	2652.5	41215		1	24	Fig.13
	2540	40090	10	1	0	Fig.11
	2650	41190		1	49	Fig.14
	2542.5	40115	15	1	0	Fig.11
	2647.5	41165		1	74	Fig.15
	2545	40140	20	1	0	Fig.12
	2645	41140		1	99	Fig.16

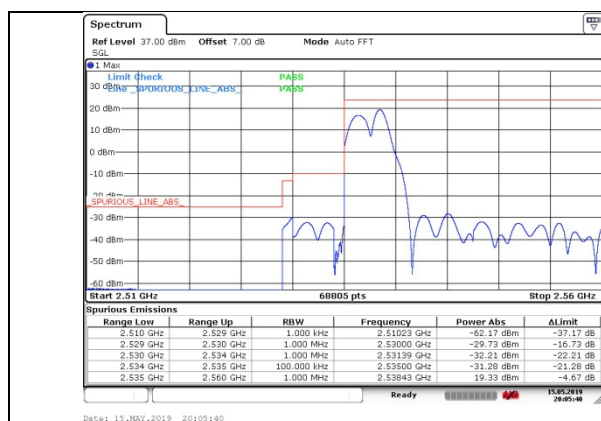


Fig.1

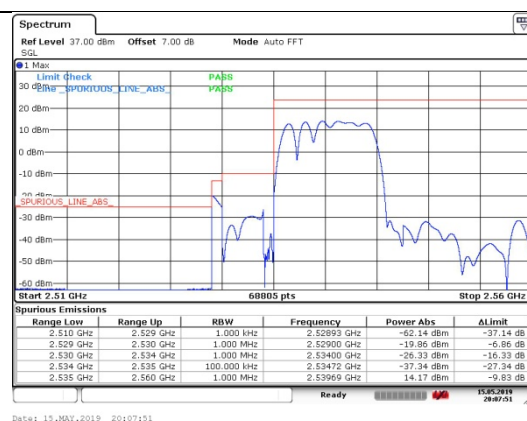


Fig.2

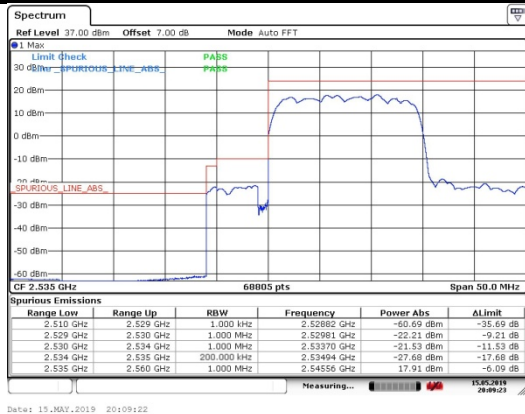


Fig.3

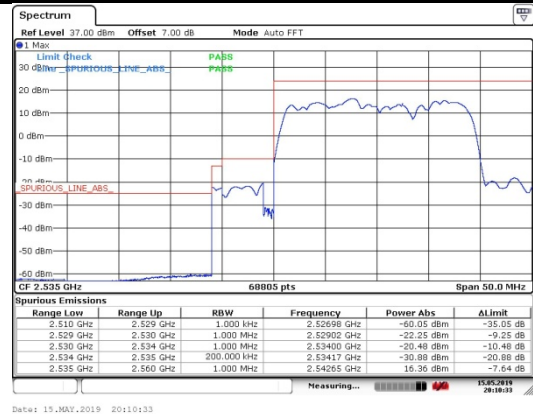


Fig.4

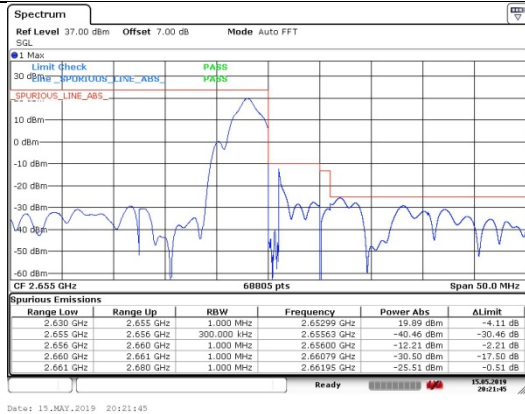


Fig.5

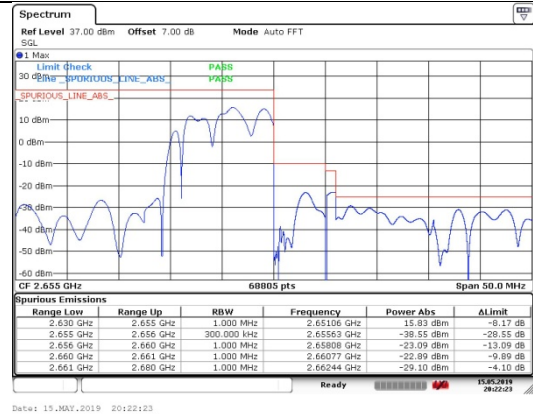


Fig.6

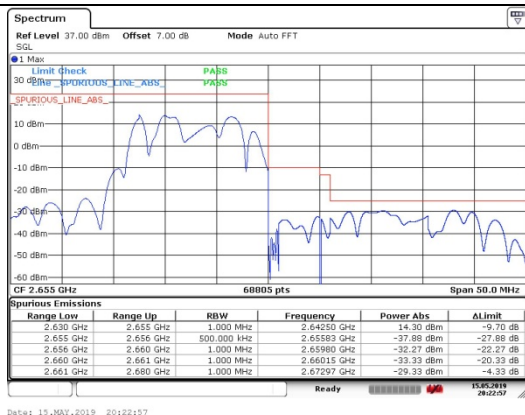


Fig.7

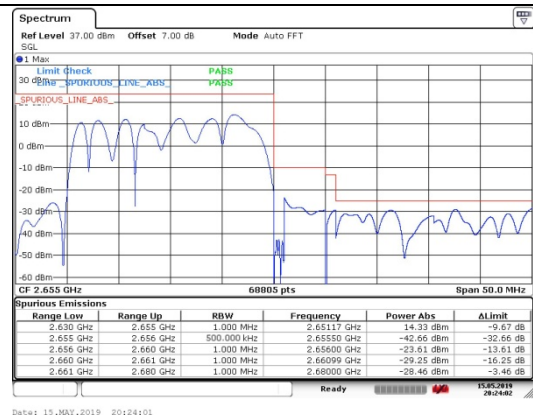


Fig.8

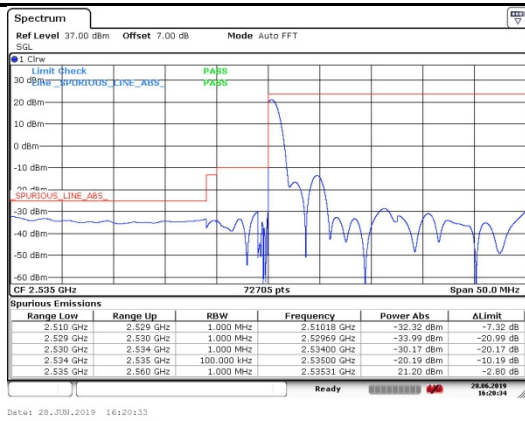


Fig.9

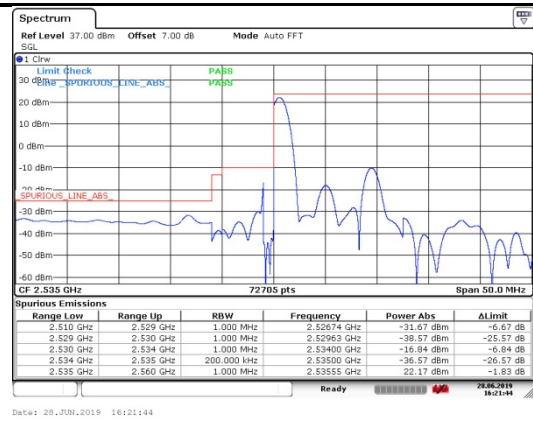


Fig.10

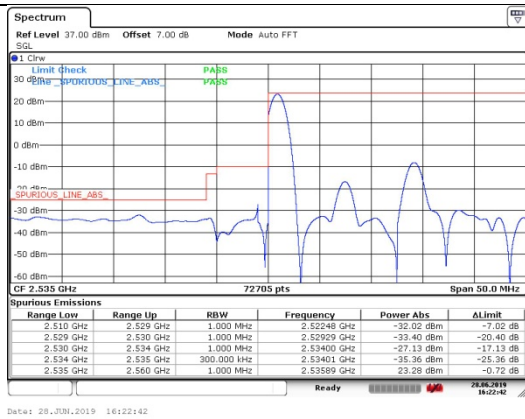


Fig.11

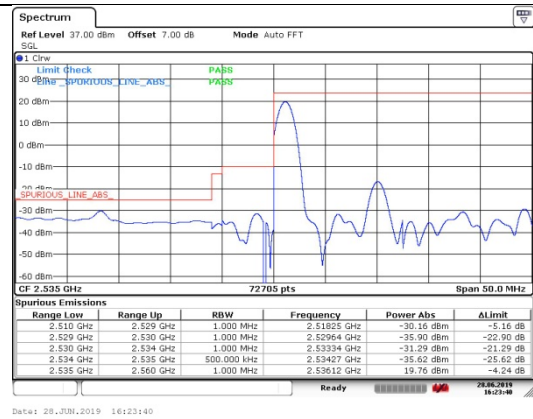


Fig.12

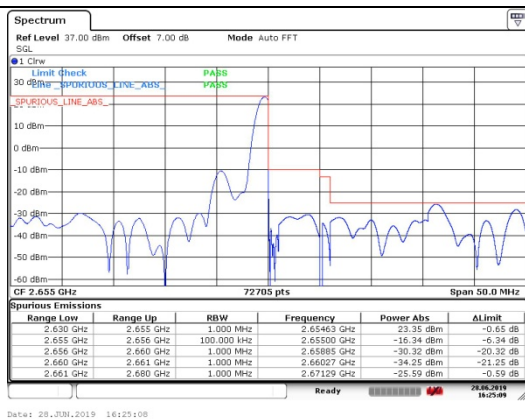


Fig.13

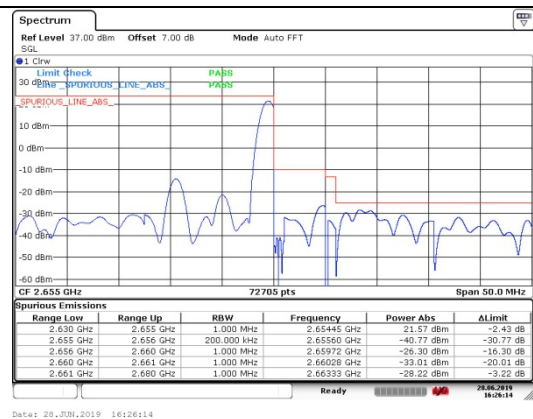


Fig.14

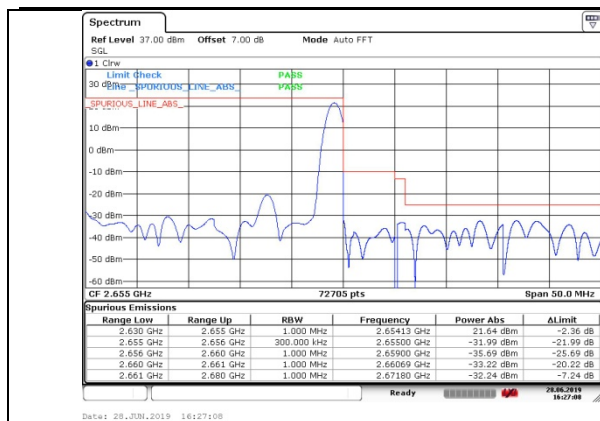


Fig.15

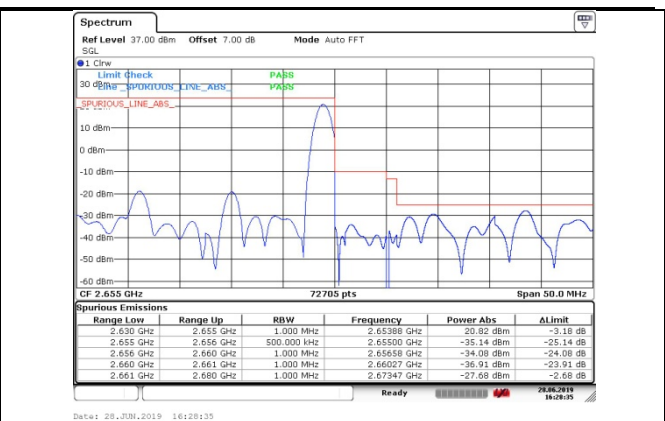


Fig.16

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band41 Low Channel			
		5M	10M	15M	20M
-10	NV	0.026	0.003	0.011	0.010
0	NV	0.025	0.014	0.017	0.020
+10	NV	0.016	0.024	0.011	0.017
+20	NV	0.012	0.008	0.010	0.008
+30	NV	0.015	0.026	0.008	0.013
+40	NV	0.011	0.009	0.017	0.022
+50	NV	0.009	0.010	0.010	0.012
+20	LV	0.027	0.011	0.017	0.019
+20	HV	0.014	0.016	0.003	0.018

Temperature(°C)	Voltage	Test Result (ppm) Ban41 High Channel			
		5M	10M	15M	20M
-10	NV	0.020	0.002	0.019	0.011
0	NV	0.024	0.027	0.011	0.017
+10	NV	0.025	0.001	0.011	0.003
+20	NV	0.021	0.019	0.018	0.018
+30	NV	-0.017	0.007	0.018	-0.001
+40	NV	0.017	0.020	-0.007	0.023
+50	NV	0.019	0.007	0.010	0.013
+20	LV	0.017	0.013	0.008	0.030
+20	HV	-0.005	0.020	0.011	0.014