

Fig.7



Fig.8

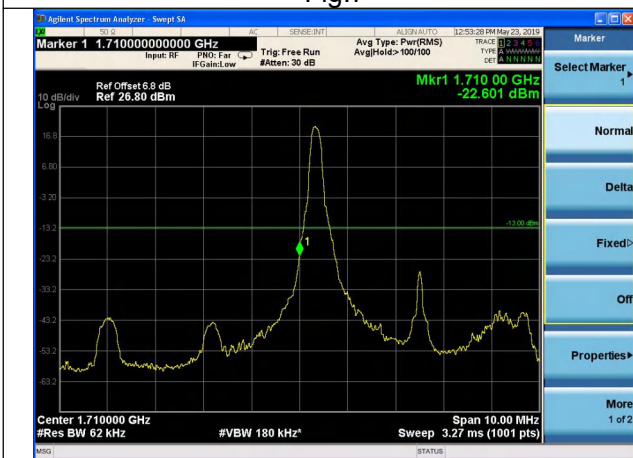


Fig.9



Fig.10

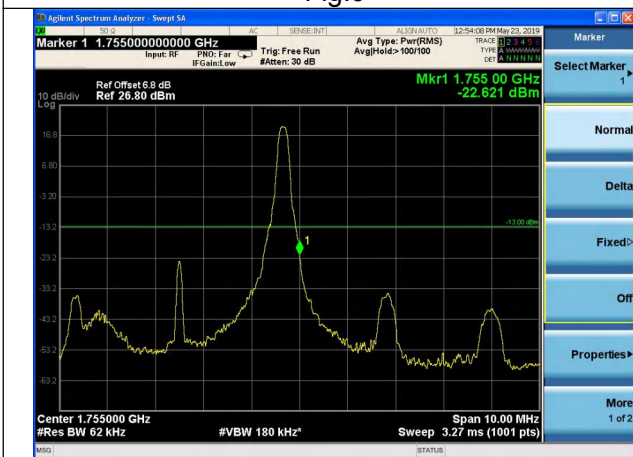


Fig.11



Fig.12

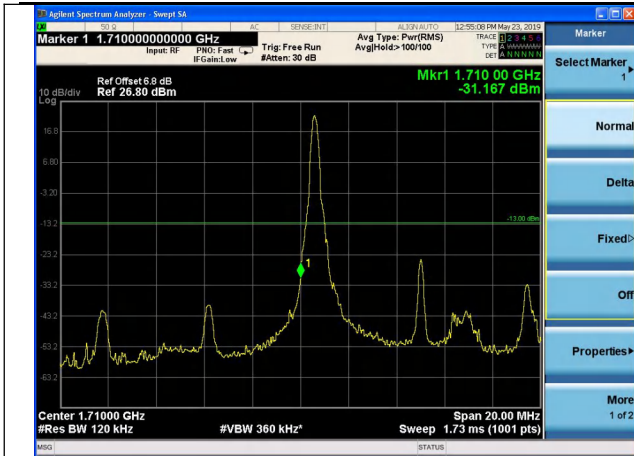


Fig.13

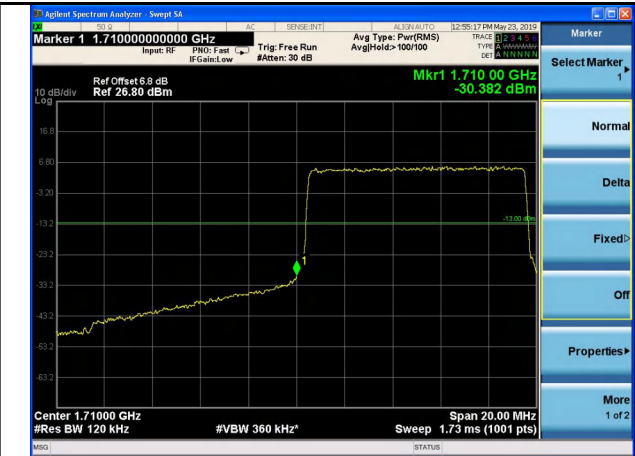


Fig.14

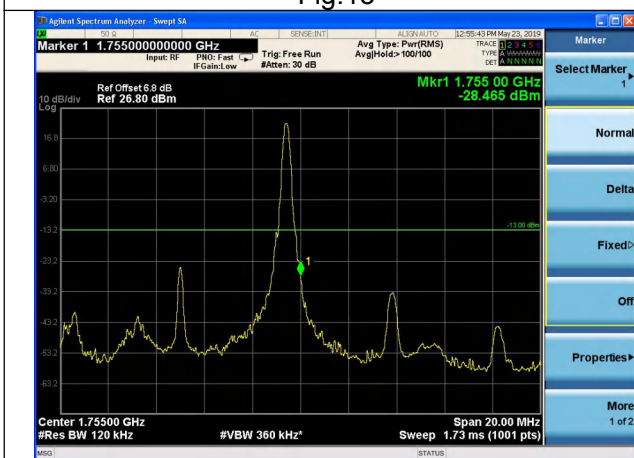


Fig.15



Fig.16

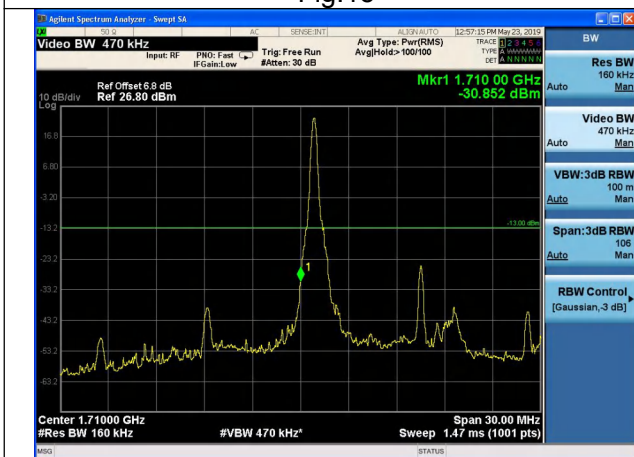


Fig.17

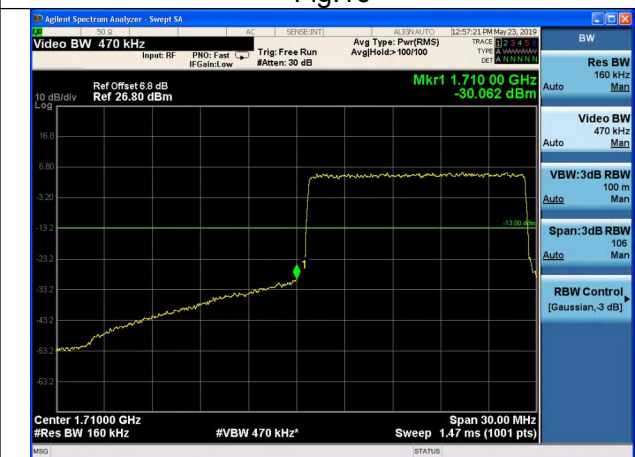


Fig.18

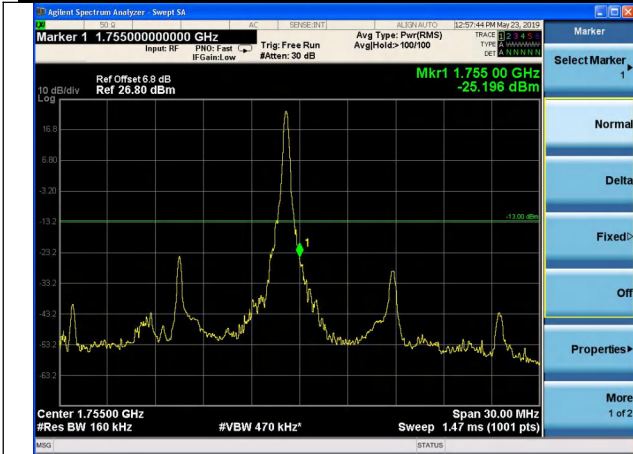


Fig.19



Fig.20

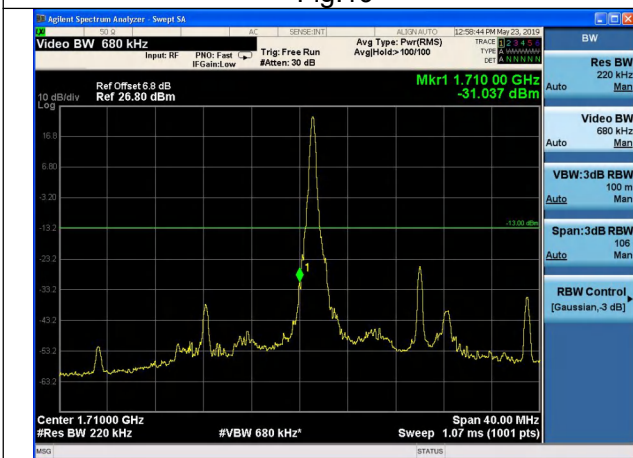


Fig.21



Fig.22

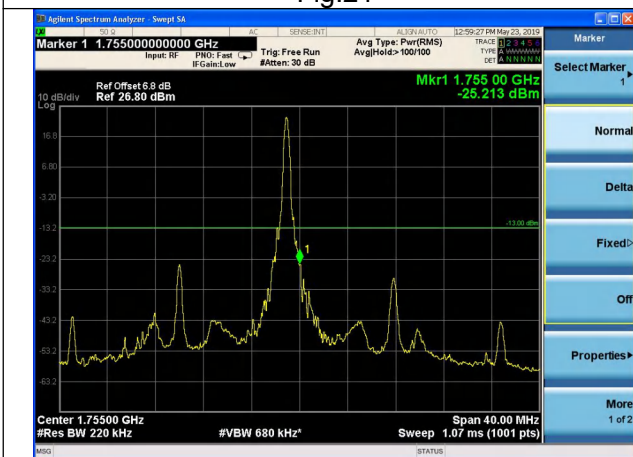


Fig.23



Fig.24

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band4 Low Channel					
		1.4M	3M	5M	10M	15M	20M
-10	NV	0.076	0.052	0.031	0.016	0.028	0.095
0	NV	0.067	0.034	0.080	0.076	0.023	0.055
+10	NV	0.042	0.072	0.060	0.047	0.068	0.060
+20	NV	0.073	0.046	0.040	0.017	0.051	0.085
+30	NV	0.007	0.084	0.050	0.050	0.002	0.055
+40	NV	0.064	0.042	0.067	0.030	0.001	0.029
+50	NV	0.063	0.100	0.069	0.016	0.021	0.042
+55	NV	0.085	0.089	0.043	0.048	0.006	0.046
+20	LV	0.013	0.046	0.024	0.043	0.025	0.086
+20	HV	0.065	0.084	0.093	0.019	0.047	0.090

Temperature(°C)	Voltage	Test Result (ppm) Band4 High Channel					
		1.4M	3M	5M	10M	15M	20M
-10	NV	0.009	0.085	0.038	0.051	0.071	0.065
0	NV	0.031	0.033	0.010	0.079	0.067	0.078
+10	NV	0.071	0.027	0.019	0.046	0.061	0.011
+20	NV	0.064	0.001	0.054	0.075	0.049	0.016
+30	NV	0.079	0.043	0.062	0.058	0.019	0.011
+40	NV	0.023	0.060	0.035	0.018	0.004	0.097
+50	NV	0.001	0.091	0.054	0.035	0.064	0.084
+55	NV	0.088	0.052	0.015	0.031	0.064	0.041
+20	LV	0.076	0.016	0.096	0.073	0.088	0.074
+20	HV	0.019	0.068	0.057	0.030	0.030	0.067

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 5

1 RF Power Output up Ant

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	824.7	20407	1.4	1	0	22.21
				1	5	22.21
				3	2	21.46
				6	0	21.42
	836.5	20525		1	0	22.27
				1	5	22.27
				3	2	21.20
				6	0	21.13
	848.3	20643		1	0	22.17
				1	5	22.17
				3	2	21.51
				6	0	21.23
16QAM	824.7	20407	1.4	1	0	21.80
				1	5	21.80
				3	2	20.56
				6	0	20.47
	836.5	20525		1	0	21.45
				1	5	21.45
				3	2	20.51
				6	0	20.45
	848.3	20643		1	0	21.46
				1	5	21.46
				3	2	20.57
				6	0	20.47
64QAM	824.7	20407	1.4	1	0	21.76
				1	5	21.76
				3	2	20.53
				6	0	20.46
	836.5	20525		1	0	21.60
				1	5	21.60
				3	2	20.56
				6	0	20.41
	848.3	20643		1	0	21.50
				1	5	21.50
				3	2	20.53
				6	0	20.45

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	825.5	20415	3	1	0	22.26
				1	14	22.26
				8	4	21.51
				15	0	21.47
	836.5	20525		1	0	22.32
				1	14	22.32
				8	4	21.25
				15	0	21.18
	847.5	20635		1	0	22.22
				1	14	22.22
				8	4	21.56
				15	0	21.28
16QAM	825.5	20415	3	1	0	21.85
				1	14	21.85
				8	4	20.61
				15	0	20.52
	836.5	20525		1	0	21.50
				1	14	21.50
				8	4	20.56
				15	0	20.50
	847.5	20635		1	0	21.51
				1	14	21.51
				8	4	20.62
				15	0	20.52
64QAM	825.5	20415	3	1	0	21.81
				1	14	21.81
				8	4	20.58
				15	0	20.51
	836.5	20525		1	0	21.65
				1	14	21.65
				8	4	20.61
				15	0	20.46
	847.5	20635		1	0	21.55
				1	14	21.55
				8	4	20.58
				15	0	20.50

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	826.5	20425	5	1	0	22.28
				1	24	22.28
				12	6	21.53
				25	0	21.49
	836.5	20525		1	0	22.34
				1	24	22.34
				12	6	21.27
				25	0	21.20
	846.5	20625		1	0	22.24
				1	24	22.24
				12	6	21.58
				25	0	21.30
16QAM	826.5	20425	5	1	0	21.87
				1	24	21.87
				12	6	20.63
				25	0	20.54
	836.5	20525		1	0	21.52
				1	24	21.52
				12	6	20.58
				25	0	20.52
	846.5	20625		1	0	21.53
				1	24	21.53
				12	6	20.64
				25	0	20.54
64QAM	826.5	20425	5	1	0	21.83
				1	24	21.83
				12	6	20.60
				25	0	20.53
	836.5	20525		1	0	21.67
				1	24	21.67
				12	6	20.63
				25	0	20.48
	846.5	20625		1	0	21.57
				1	24	21.57
				12	6	20.60
				25	0	20.52

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	829	20450	10	1	0	22.33
				1	49	22.33
				24	12	21.58
				50	0	21.54
	836.5	20525		1	0	22.39
				1	49	22.39
				24	12	21.32
				50	0	21.25
	844	20600		1	0	22.29
				1	49	22.29
				24	12	21.63
				50	0	21.35
16QAM	829	20450	10	1	0	21.92
				1	49	21.92
				24	12	20.68
				50	0	20.59
	836.5	20525		1	0	21.57
				1	49	21.57
				24	12	20.63
				50	0	20.57
	844	20600		1	0	21.58
				1	49	21.58
				24	12	20.69
				50	0	20.59
64QAM	829	20450	10	1	0	21.88
				1	49	21.88
				24	12	20.65
				50	0	20.58
	836.5	20525		1	0	21.72
				1	49	21.72
				24	12	20.68
				50	0	20.53
	844	20600		1	0	21.62
				1	49	21.62
				24	12	20.65
				50	0	20.57

1 RF Power Output down Ant

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	824.7	20407	1.4	1	0	24.73
				1	5	24.73
				3	2	23.98
				6	0	23.94
	836.5	20525		1	0	24.79
				1	5	24.79
				3	2	23.72
				6	0	23.65
	848.3	20643		1	0	24.69
				1	5	24.69
				3	2	24.03
				6	0	23.75
16QAM	824.7	20407	1.4	1	0	24.32
				1	5	24.32
				3	2	23.08
				6	0	22.99
	836.5	20525		1	0	23.97
				1	5	23.97
				3	2	23.03
				6	0	22.97
	848.3	20643		1	0	23.98
				1	5	23.98
				3	2	23.09
				6	0	22.99
64QAM	824.7	20407	1.4	1	0	24.28
				1	5	24.28
				3	2	23.05
				6	0	22.98
	836.5	20525		1	0	24.12
				1	5	24.12
				3	2	23.08
				6	0	22.93
	848.3	20643		1	0	24.02
				1	5	24.02
				3	2	23.05
				6	0	22.97

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	825.5	20415	3	1	0	24.69
				1	14	24.69
				8	4	23.94
				15	0	23.90
	836.5	20525		1	0	24.75
				1	14	24.75
				8	4	23.68
				15	0	23.61
	847.5	20635		1	0	24.65
				1	14	24.65
				8	4	23.99
				15	0	23.71
16QAM	825.5	20415	3	1	0	24.28
				1	14	24.28
				8	4	23.04
				15	0	22.95
	836.5	20525		1	0	23.93
				1	14	23.93
				8	4	22.99
				15	0	22.93
	847.5	20635		1	0	23.94
				1	14	23.94
				8	4	23.05
				15	0	22.95
64QAM	825.5	20415	3	1	0	24.24
				1	14	24.24
				8	4	23.01
				15	0	22.94
	836.5	20525		1	0	24.08
				1	14	24.08
				8	4	23.04
				15	0	22.89
	847.5	20635		1	0	23.98
				1	14	23.98
				8	4	23.01
				15	0	22.93

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	826.5	20425	5	1	0	24.76
				1	24	24.76
				12	6	24.01
				25	0	23.97
	836.5	20525		1	0	24.82
				1	24	24.82
				12	6	23.75
				25	0	23.68
	846.5	20625		1	0	24.72
				1	24	24.72
				12	6	24.06
				25	0	23.78
16QAM	826.5	20425	5	1	0	24.35
				1	24	24.35
				12	6	23.11
				25	0	23.02
	836.5	20525		1	0	24.00
				1	24	24.00
				12	6	23.06
				25	0	23.00
	846.5	20625		1	0	24.01
				1	24	24.01
				12	6	23.12
				25	0	23.02
64QAM	826.5	20425	5	1	0	24.31
				1	24	24.31
				12	6	23.08
				25	0	23.01
	836.5	20525		1	0	24.15
				1	24	24.15
				12	6	23.11
				25	0	22.96
	846.5	20625		1	0	24.05
				1	24	24.05
				12	6	23.08
				25	0	23.00

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	829	20450	10	1	0	24.82
				1	49	24.82
				24	12	24.07
				50	0	24.03
	836.5	20525		1	0	24.88
				1	49	24.88
				24	12	23.81
				50	0	23.74
	844	20600		1	0	24.78
				1	49	24.78
				24	12	24.12
				50	0	23.84
16QAM	829	20450	10	1	0	24.41
				1	49	24.41
				24	12	23.17
				50	0	23.08
	836.5	20525		1	0	24.06
				1	49	24.06
				24	12	23.12
				50	0	23.06
	844	20600		1	0	24.07
				1	49	24.07
				24	12	23.18
				50	0	23.08
64QAM	829	20450	10	1	0	24.37
				1	49	24.37
				24	12	23.14
				50	0	23.07
	836.5	20525		1	0	24.21
				1	49	24.21
				24	12	23.17
				50	0	23.02
	844	20600		1	0	24.11
				1	49	24.11
				24	12	23.14
				50	0	23.06

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	
5	824.7	20407	1.4	6	0	1.08	Fig.1	1.08	Fig.2	1.08	Fig.3
	836.5	20525		6	0	1.08	Fig.4	1.08	Fig.5	1.08	Fig.6
	848.3	20643		6	0	1.08	Fig.7	1.08	Fig.8	1.08	Fig.9
	825.5	20415	3	15	0	2.70	Fig.10	2.69	Fig.11	2.70	Fig.12
	836.5	20525		15	0	2.70	Fig.13	2.69	Fig.14	2.70	Fig.15
	847.5	20635		15	0	2.69	Fig.16	2.70	Fig.17	2.70	Fig.18
	826.5	20425	5	25	0	4.47	Fig.19	4.47	Fig.20	4.47	Fig.21
	836.5	20525		25	0	4.48	Fig.22	4.47	Fig.23	4.48	Fig.24
	846.5	20625		25	0	4.47	Fig.25	4.47	Fig.26	4.48	Fig.27
	829	20450	10	50	0	8.93	Fig.28	8.92	Fig.29	8.96	Fig.30
	836.5	20525		50	0	8.96	Fig.31	8.95	Fig.32	8.93	Fig.33
844	20600	50		0	8.95	Fig.34	8.93	Fig.35	8.91	Fig.36	

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
5	824.7	20407	1.4	6	0	1.22	Fig.1	1.20	Fig.2	1.20	Fig.3
	836.5	20525		6	0	1.20	Fig.4	1.21	Fig.5	1.20	Fig.6
	848.3	20643		6	0	1.20	Fig.7	1.22	Fig.8	1.21	Fig.9
	825.5	20415	3	15	0	2.97	Fig.10	2.97	Fig.11	2.98	Fig.12
	836.5	20525		15	0	2.99	Fig.13	2.98	Fig.14	3.02	Fig.15
	847.5	20635		15	0	2.97	Fig.16	2.99	Fig.17	2.99	Fig.18
	826.5	20425	5	25	0	4.89	Fig.19	4.88	Fig.20	4.88	Fig.21
	836.5	20525		25	0	4.91	Fig.22	4.85	Fig.23	4.88	Fig.24
	846.5	20625		25	0	4.88	Fig.25	4.85	Fig.26	4.86	Fig.27
	829	20450	10	50	0	9.57	Fig.28	9.65	Fig.29	9.64	Fig.30
	836.5	20525		50	0	9.63	Fig.31	9.52	Fig.32	9.67	Fig.33
844	20600	50		0	9.52	Fig.34	9.61	Fig.35	9.60	Fig.36	

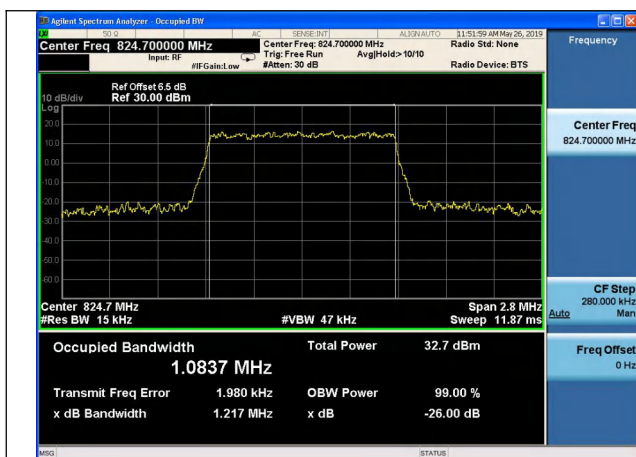


Fig.1

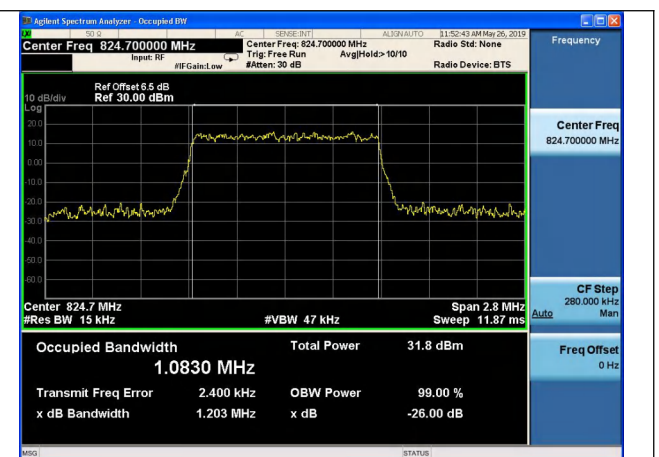


Fig.2

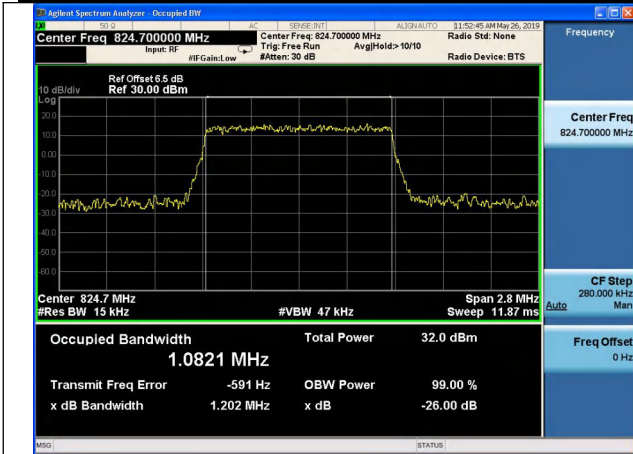


Fig.3



Fig.4

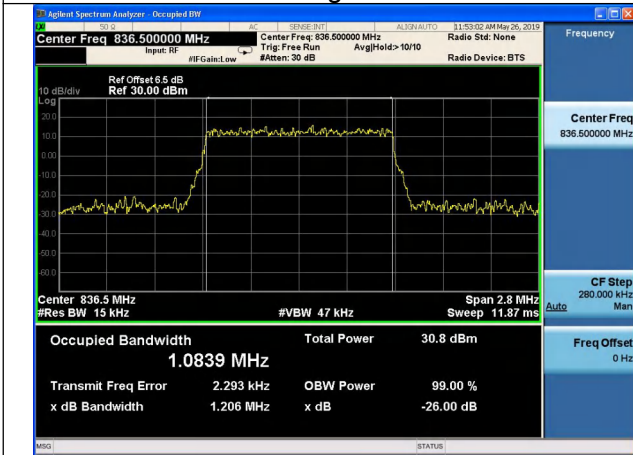


Fig.5



Fig.6

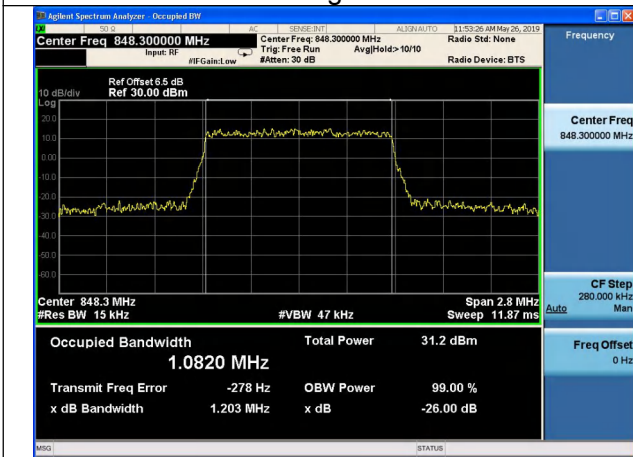


Fig.7



Fig.8

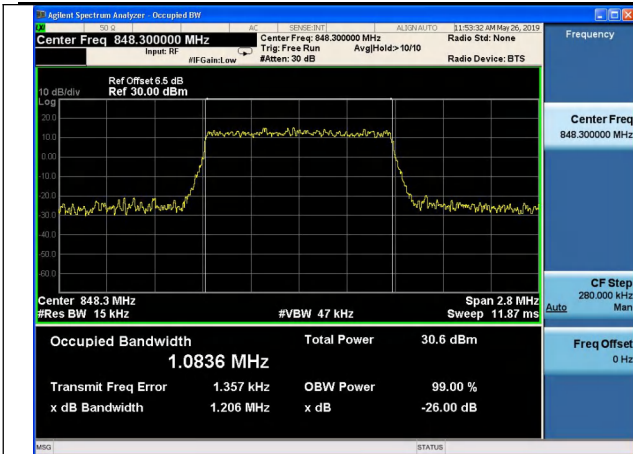


Fig.9



Fig.10

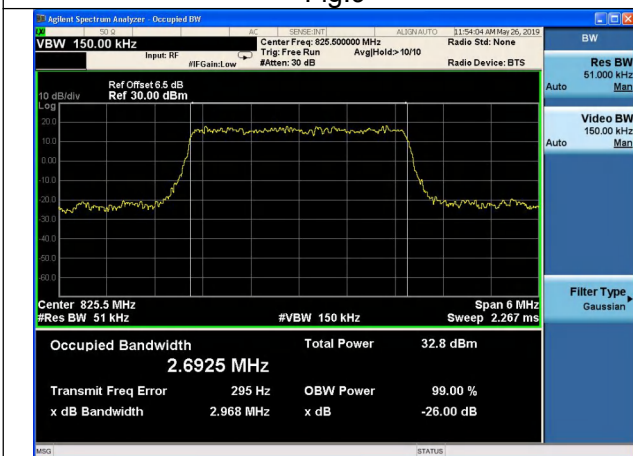


Fig.11



Fig.12

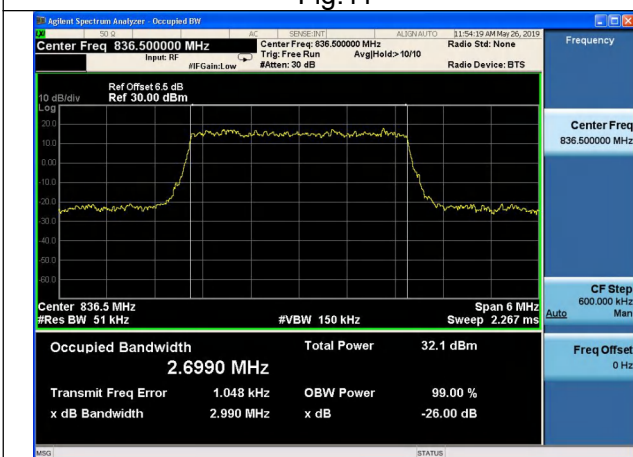


Fig.13



Fig.14

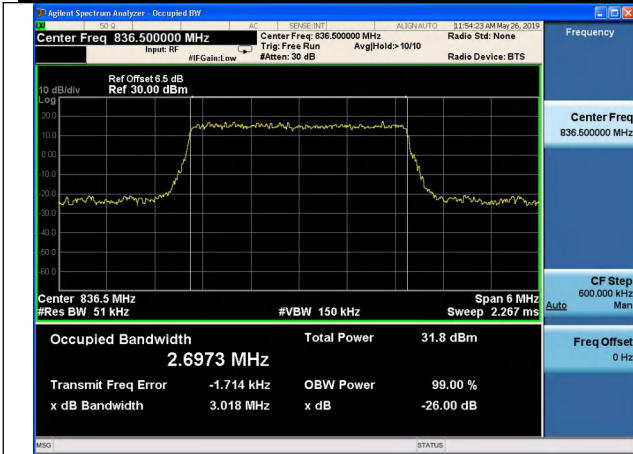


Fig.15

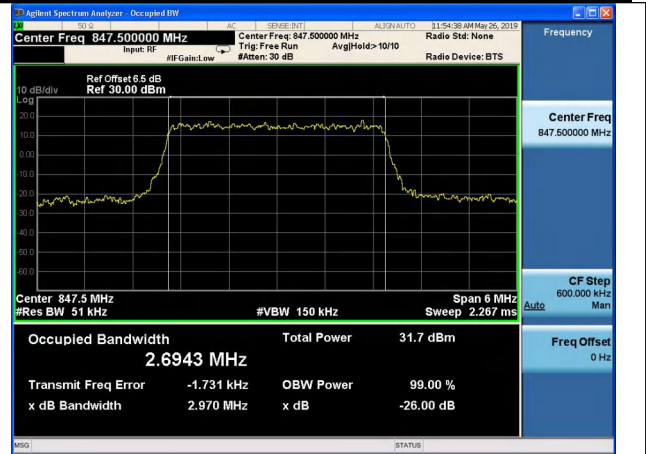


Fig.16

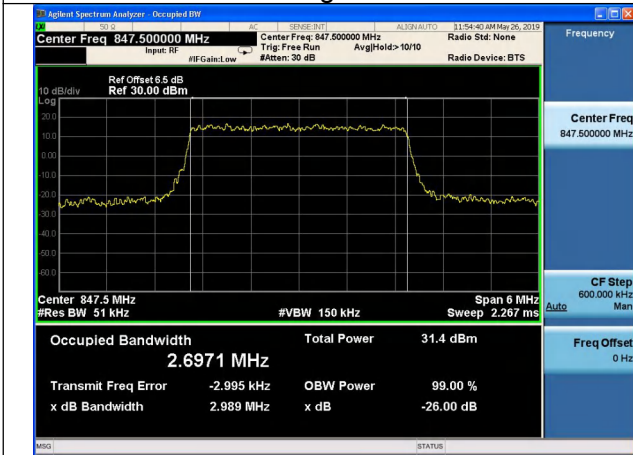


Fig.17



Fig.18

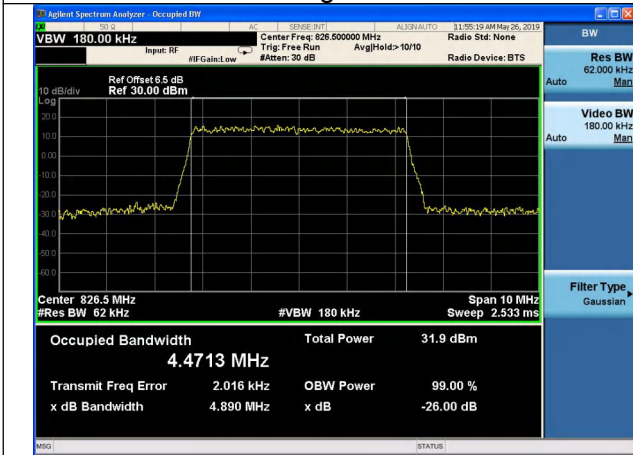


Fig.19



Fig.20

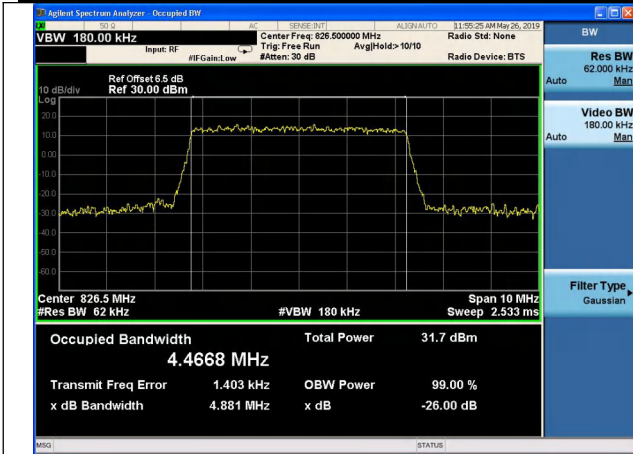


Fig.21



Fig.22

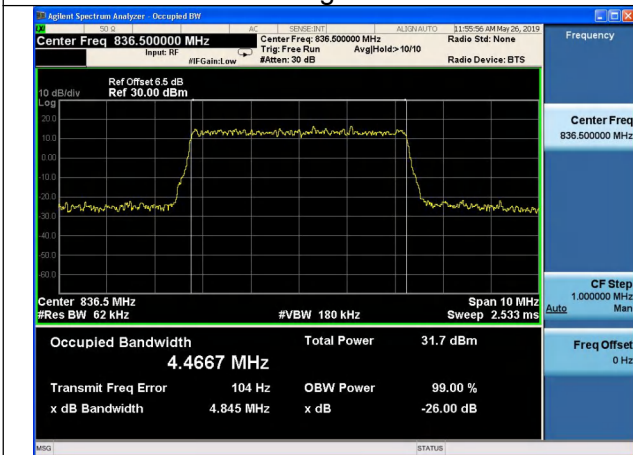


Fig.23

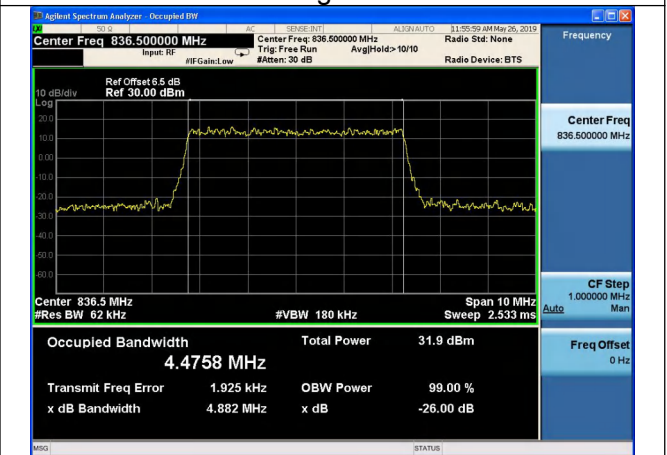


Fig.24

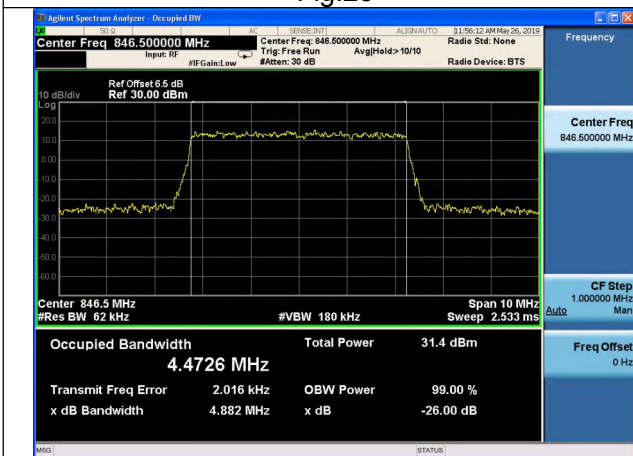


Fig.25

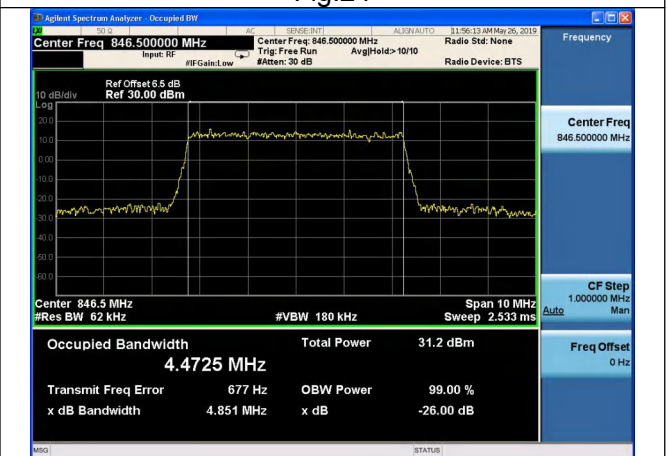


Fig.26

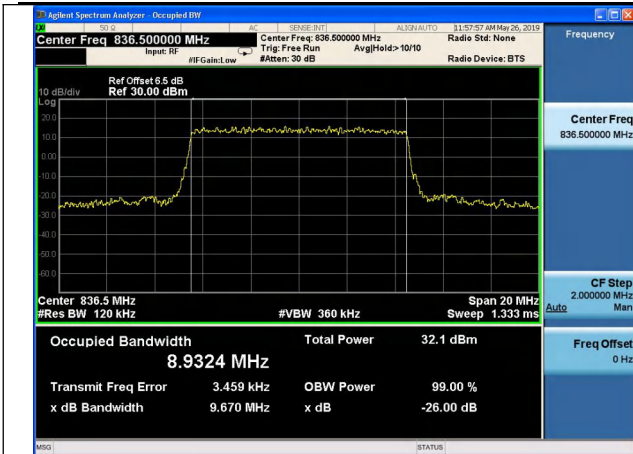


Fig.33



Fig.34

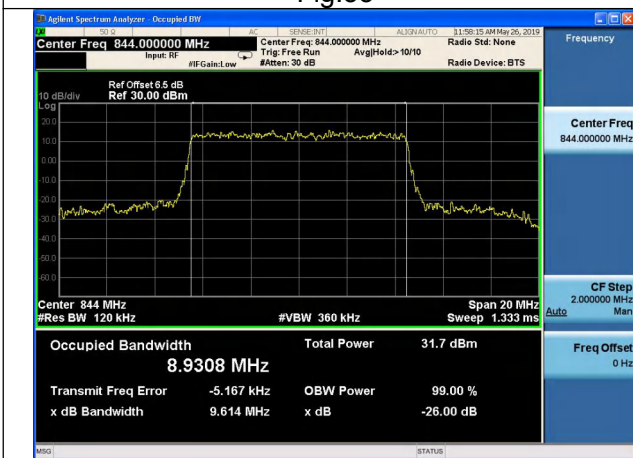


Fig.35

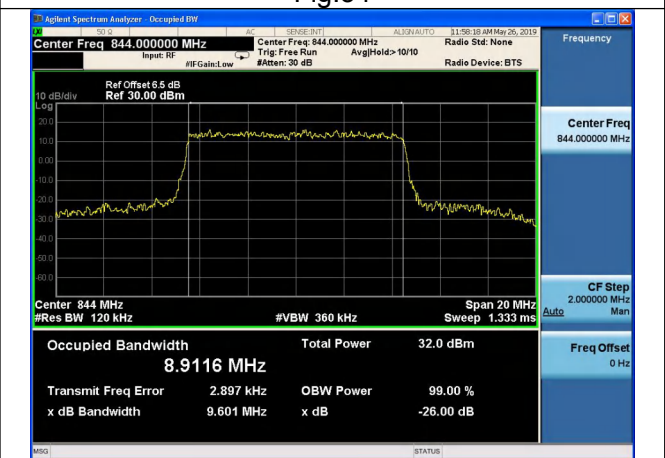


Fig.36

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
5	836.5	20525	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

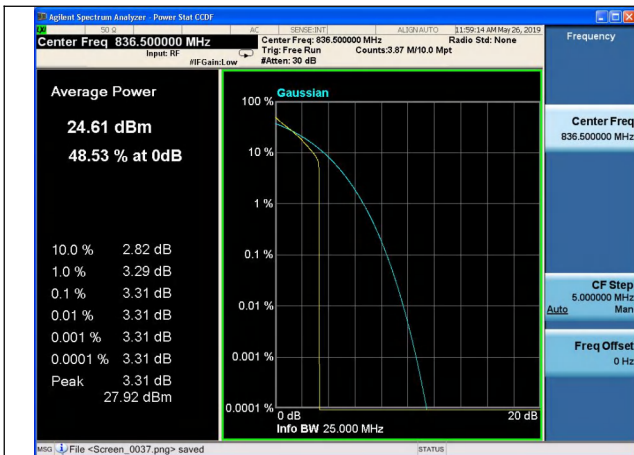


Fig.1

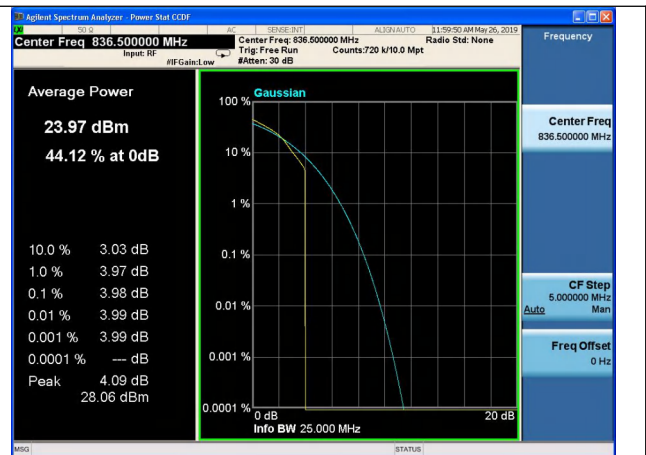


Fig.2

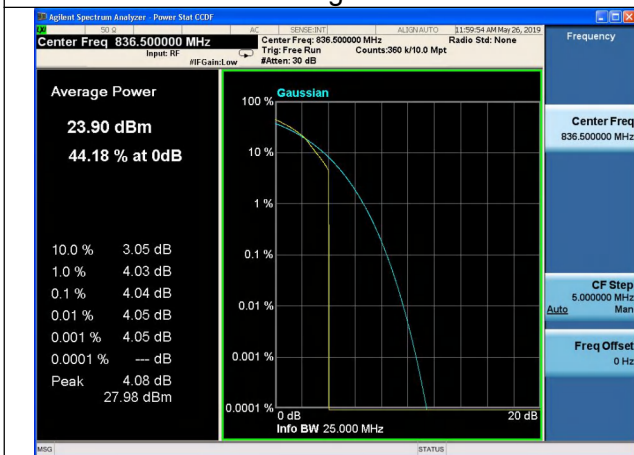


Fig.3

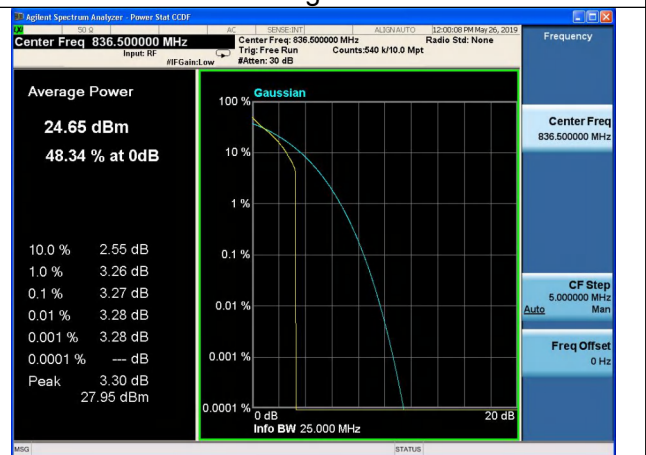


Fig.4

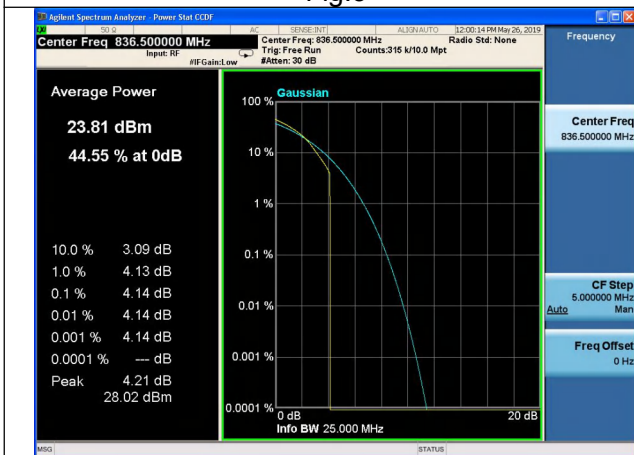


Fig.5

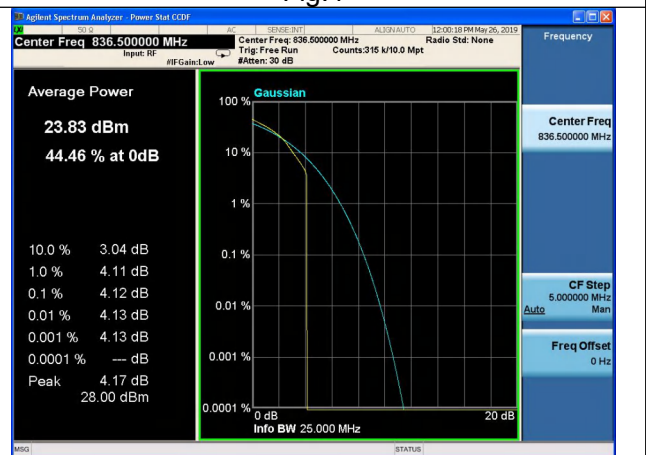


Fig.6

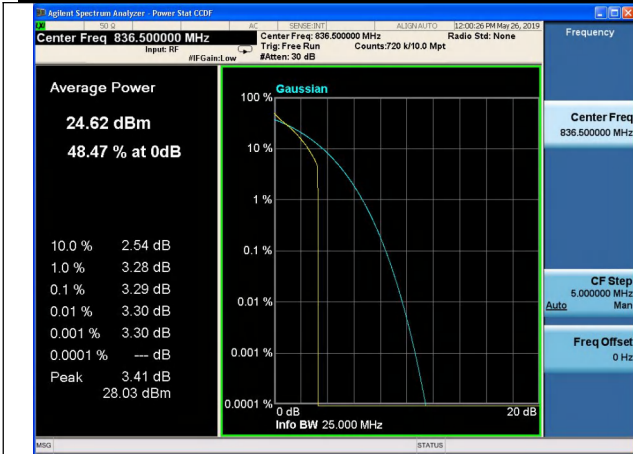


Fig.7

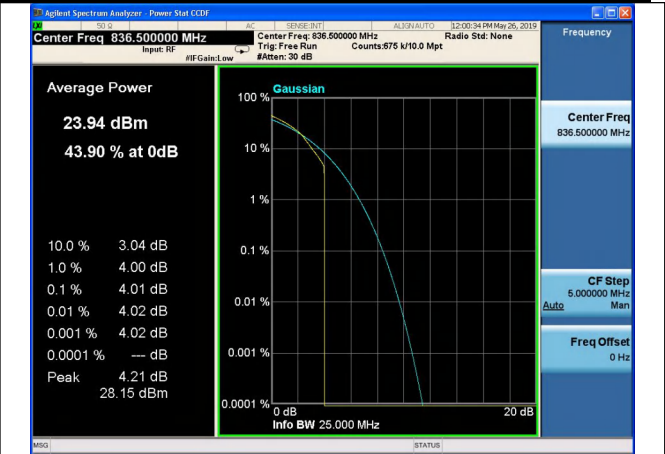


Fig.8

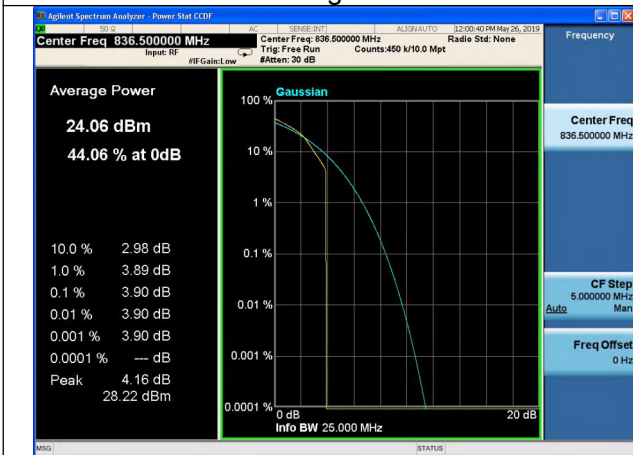


Fig.9

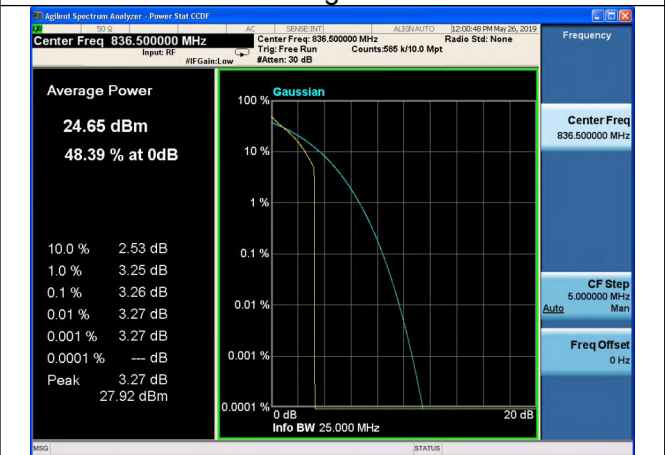


Fig.10

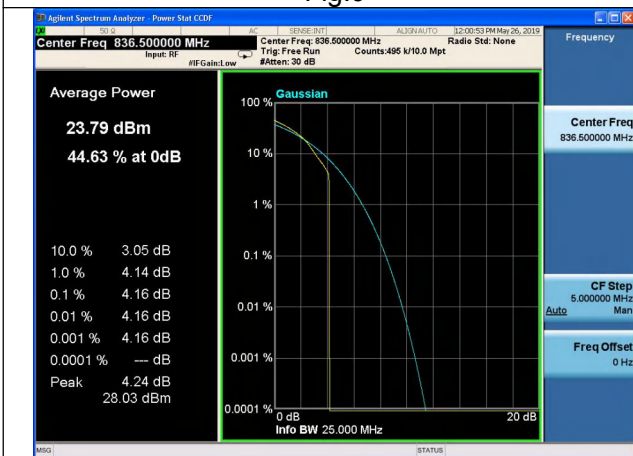


Fig.11

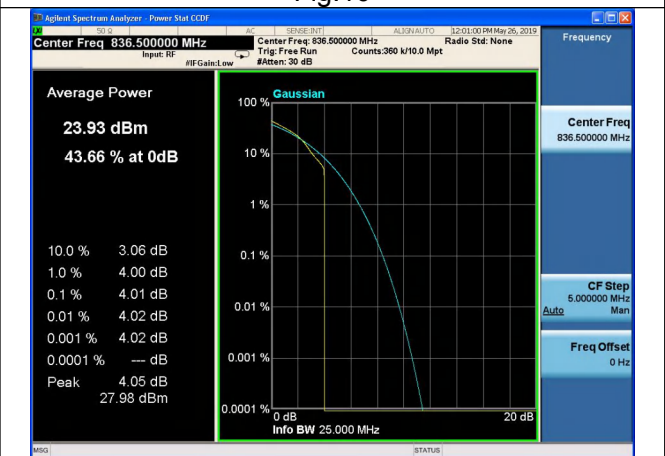


Fig.12

4 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
5	829	20450	10	1	0	Fig.1
	836.5	20525	10	1	0	Fig.2
	844	20600	10	1	0	Fig.3

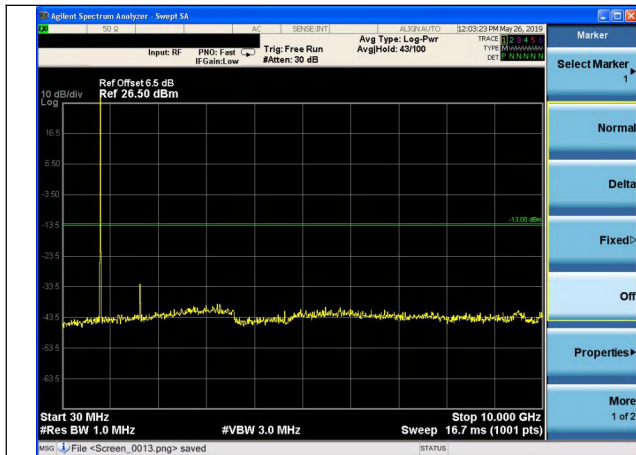


Fig.1

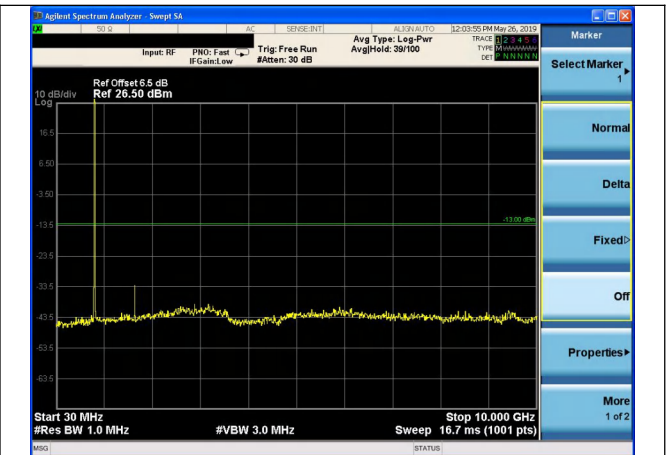


Fig.2

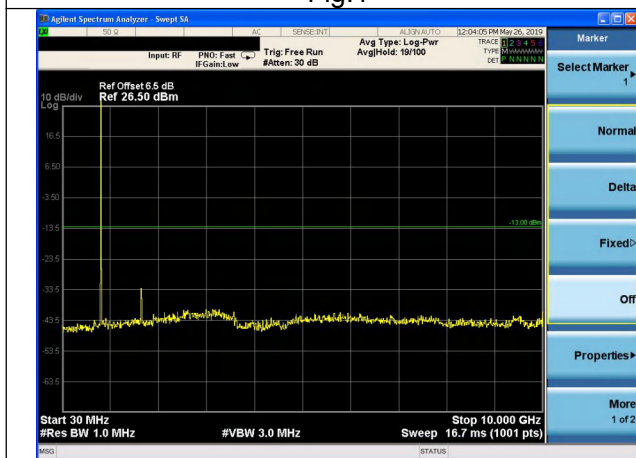


Fig.3