

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 4

1 RF Power Output

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1710.7	19957	1.4	1	0	23.81
				1	5	23.76
				3	2	22.68
				6	0	22.69
	1732.5	20175		1	0	23.84
				1	5	23.86
				3	2	22.74
				6	0	22.74
	1754.3	20393		1	0	23.72
				1	5	23.65
				3	2	22.58
				6	0	22.56
16QAM	1710.7	19957	1.4	1	0	22.71
				1	5	22.62
				3	2	21.71
				6	0	21.62
	1732.5	20175		1	0	22.76
				1	5	22.67
				3	2	21.79
				6	0	21.74
	1754.3	20393		1	0	22.51
				1	5	22.53
				3	2	21.57
				6	0	21.58
64QAM	1710.7	19957	1.4	1	0	22.68
				1	5	22.63
				3	2	21.61
				6	0	21.60
	1732.5	20175		1	0	22.66
				1	5	22.59
				3	2	21.73
				6	0	21.70
	1754.3	20393		1	0	22.48
				1	5	22.47
				3	2	21.59
				6	0	21.52

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1711.5	19965	3	1	0	23.81
				1	14	23.74
				8	4	22.63
				15	0	22.65
	1732.5	20175		1	0	23.86
				1	14	23.79
				8	4	22.71
				15	0	22.67
	1753.5	20385		1	0	23.64
				1	14	23.58
				8	4	22.50
				15	0	22.48
16QAM	1711.5	19965	3	1	0	22.64
				1	14	22.60
				8	4	21.67
				15	0	21.61
	1732.5	20175		1	0	22.72
				1	14	22.64
				8	4	21.76
				15	0	21.72
	1753.5	20385		1	0	22.51
				1	14	22.47
				8	4	21.57
				15	0	21.50
64QAM	1711.5	19965	3	1	0	22.64
				1	14	22.59
				8	4	21.61
				15	0	21.57
	1732.5	20175		1	0	22.64
				1	14	22.58
				8	4	21.68
				15	0	21.68
	1753.5	20385		1	0	22.45
				1	14	22.42
				8	4	21.55
				15	0	21.49

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1712.5	19975	5	1	0	23.80
				1	24	23.83
				12	6	22.67
				25	0	22.69
	1732.5	20175		1	0	23.86
				1	24	23.88
				12	6	22.76
				25	0	22.73
	1752.5	20375		1	0	23.73
				1	24	23.62
				12	6	22.60
				25	0	22.54
16QAM	1712.5	19975	5	1	0	22.73
				1	24	22.65
				12	6	21.71
				25	0	21.64
	1732.5	20175		1	0	22.72
				1	24	22.71
				12	6	21.82
				25	0	21.77
	1752.5	20375		1	0	22.51
				1	24	22.54
				12	6	21.61
				25	0	21.57
64QAM	1712.5	19975	5	1	0	22.66
				1	24	22.61
				12	6	21.63
				25	0	21.64
	1732.5	20175		1	0	22.68
				1	24	22.63
				12	6	21.77
				25	0	21.69
	1752.5	20375		1	0	22.53
				1	24	22.46
				12	6	21.58
				25	0	21.39

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1715	20000	10	1	0	23.83
				1	49	23.77
				24	12	22.64
				50	0	22.59
	1732.5	20175		1	0	23.82
				1	49	23.79
				24	12	22.68
				50	0	22.64
	1750	20350		1	0	23.65
				1	49	23.65
				24	12	22.52
				50	0	22.46
16QAM	1715	20000	10	1	0	22.64
				1	49	22.56
				24	12	21.61
				50	0	21.65
	1732.5	20175		1	0	22.71
				1	49	22.64
				24	12	21.80
				50	0	21.71
	1750	20350		1	0	22.44
				1	49	22.46
				24	12	21.59
				50	0	21.55
64QAM	1715	20000	10	1	0	22.66
				1	49	22.57
				24	12	21.63
				50	0	21.63
	1732.5	20175		1	0	22.67
				1	49	22.62
				24	12	21.74
				50	0	21.71
	1750	20350		1	0	22.51
				1	49	22.42
				24	12	21.54
				50	0	21.54

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1717.5	20025	15	1	0	23.82
				1	74	23.80
				40	18	22.68
				75	0	22.68
	1732.5	20175		1	0	23.88
				1	74	23.83
				40	18	22.75
				75	0	22.71
	1747.5	20325		1	0	23.71
				1	74	23.62
				40	18	22.58
				75	0	22.55
16QAM	1717.5	20025	15	1	0	22.67
				1	74	22.64
				40	18	21.68
				75	0	21.64
	1732.5	20175		1	0	22.75
				1	74	22.64
				40	18	21.82
				75	0	21.80
	1747.5	20325		1	0	22.53
				1	74	22.49
				40	18	21.59
				75	0	21.60
64QAM	1717.5	20025	15	1	0	22.63
				1	74	22.61
				40	18	21.63
				75	0	21.66
	1732.5	20175		1	0	22.64
				1	74	22.66
				40	18	21.71
				75	0	21.75
	1747.5	20325		1	0	22.44
				1	74	22.42
				40	18	21.51
				75	0	21.49

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1720	20050	20	1	0	23.91
				1	99	23.88
				50	25	22.78
				100	0	22.76
	1732.5	20175		1	0	23.96
				1	99	23.93
				50	25	22.84
				100	0	22.80
	1745	20300		1	0	23.78
				1	99	23.73
				50	25	22.66
				100	0	22.64
16QAM	1720	20050	20	1	0	22.78
				1	99	22.74
				50	25	21.77
				100	0	21.73
	1732.5	20175		1	0	22.82
				1	99	22.77
				50	25	21.88
				100	0	21.85
	1745	20300		1	0	22.61
				1	99	22.59
				50	25	21.69
				100	0	21.66
64QAM	1720	20050	20	1	0	22.74
				1	99	22.72
				50	25	21.73
				100	0	21.71
	1732.5	20175		1	0	22.78
				1	99	22.71
				50	25	21.83
				100	0	21.80
	1745	20300		1	0	22.59
				1	99	22.56
				50	25	21.65
				100	0	21.64

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	
4	1710.7	19957	1.4	6	0	1.0840	Fig.1	1.0828	Fig.2	1.0813	Fig.3
	1732.5	20175		6	0	1.0837	Fig.4	1.0845	Fig.5	1.0816	Fig.6
	1754.3	20393		6	0	1.0831	Fig.7	1.0828	Fig.8	1.0817	Fig.9
	1711.5	19965	3	15	0	2.6837	Fig.10	2.6807	Fig.11	2.6870	Fig.12
	1732.5	20175		15	0	2.6871	Fig.13	2.6835	Fig.14	2.6845	Fig.15
	1753.5	20385		15	0	2.6860	Fig.16	2.6805	Fig.17	2.6787	Fig.18
	1712.5	19975	5	25	0	4.4820	Fig.19	4.4810	Fig.20	4.4817	Fig.21
	1732.5	20175		25	0	4.4787	Fig.22	4.4778	Fig.23	4.4701	Fig.24
	1752.5	20375		25	0	4.4824	Fig.25	4.4728	Fig.26	4.4764	Fig.27
	1715	20000	10	50	0	8.9487	Fig.28	8.9679	Fig.29	8.9497	Fig.30
	1732.5	20175		50	0	8.9384	Fig.31	8.9193	Fig.32	8.9373	Fig.33
	1750	20350		50	0	8.9589	Fig.34	8.9490	Fig.35	8.9662	Fig.36
	1717.5	20025	15	75	0	13.422	Fig.37	13.459	Fig.38	13.431	Fig.39
	1732.5	20175		75	0	13.403	Fig.40	13.432	Fig.41	13.400	Fig.42
	1747.5	20325		75	0	13.417	Fig.43	13.450	Fig.44	13.437	Fig.45
	1720	20050	20	100	0	17.874	Fig.46	17.873	Fig.47	17.904	Fig.48
	1732.5	20175		100	0	17.863	Fig.49	17.876	Fig.50	17.844	Fig.51
	1745	20300		100	0	17.951	Fig.52	17.921	Fig.53	17.891	Fig.54

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
4	1710.7	19957	1.4	6	0	1.269	Fig.1	1.261	Fig.2	1.264	Fig.3
	1732.5	20175		6	0	1.273	Fig.4	1.262	Fig.5	1.245	Fig.6
	1754.3	20393		6	0	1.274	Fig.7	1.272	Fig.8	1.244	Fig.9
	1711.5	19965	3	15	0	2.990	Fig.10	2.987	Fig.11	2.969	Fig.12
	1732.5	20175		15	0	2.997	Fig.13	2.975	Fig.14	3.016	Fig.15
	1753.5	20385		15	0	2.993	Fig.16	2.981	Fig.17	2.980	Fig.18
	1712.5	19975	5	25	0	5.165	Fig.19	5.086	Fig.20	5.027	Fig.21
	1732.5	20175		25	0	5.117	Fig.22	5.151	Fig.23	5.133	Fig.24
	1752.5	20375		25	0	5.145	Fig.25	5.082	Fig.26	5.120	Fig.27
	1715	20000	10	50	0	9.874	Fig.28	9.925	Fig.29	9.786	Fig.30
	1732.5	20175		50	0	9.907	Fig.31	9.817	Fig.32	9.911	Fig.33
	1750	20350		50	0	9.968	Fig.34	9.902	Fig.35	9.698	Fig.36
	1717.5	20025	15	75	0	14.62	Fig.37	14.62	Fig.38	14.78	Fig.39
	1732.5	20175		75	0	14.67	Fig.40	14.58	Fig.41	14.62	Fig.42
	1747.5	20325		75	0	14.67	Fig.43	14.79	Fig.44	14.73	Fig.45
	1720	20050	20	100	0	19.47	Fig.46	19.36	Fig.47	19.35	Fig.48
	1732.5	20175		100	0	19.39	Fig.49	19.48	Fig.50	19.40	Fig.51
	1745	20300		100	0	19.72	Fig.52	19.56	Fig.53	19.58	Fig.54



Fig.1

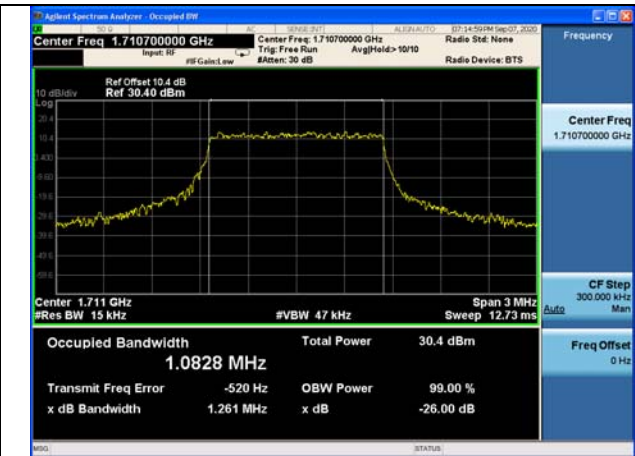


Fig.2

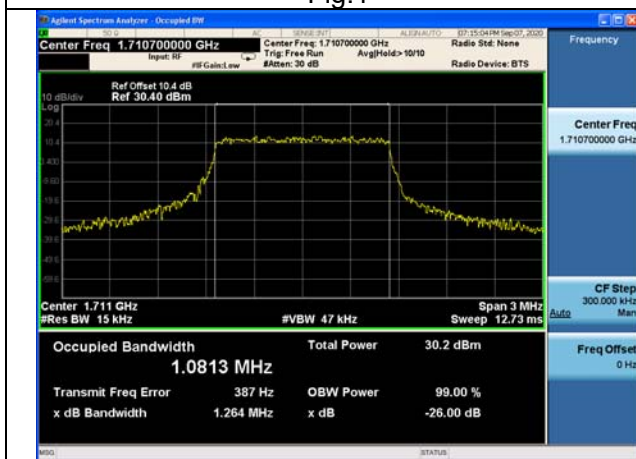


Fig.3

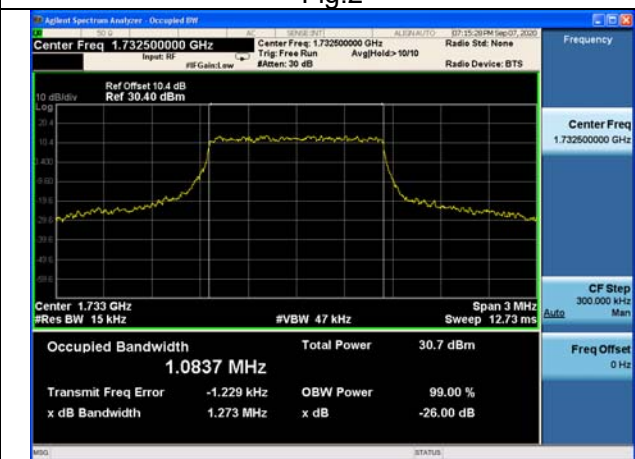


Fig.4

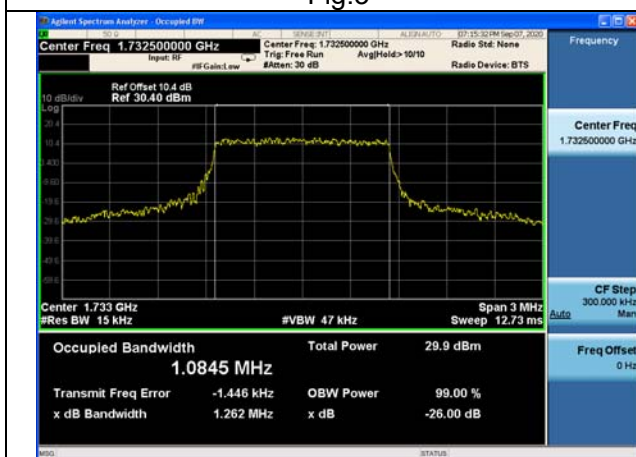


Fig.5

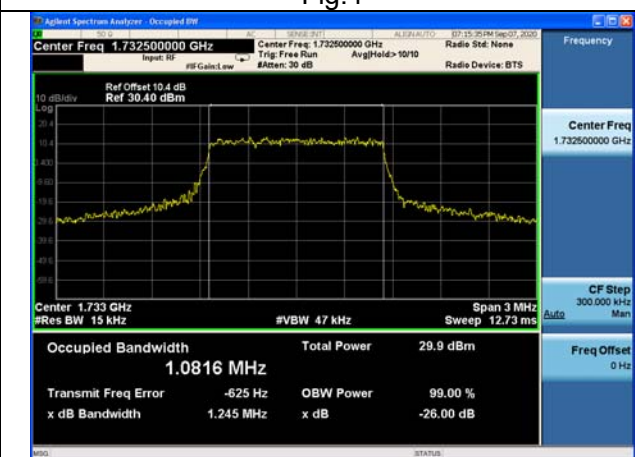


Fig.6

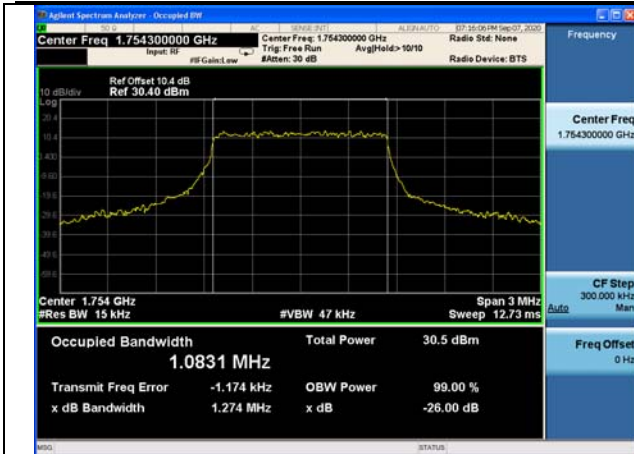


Fig.7

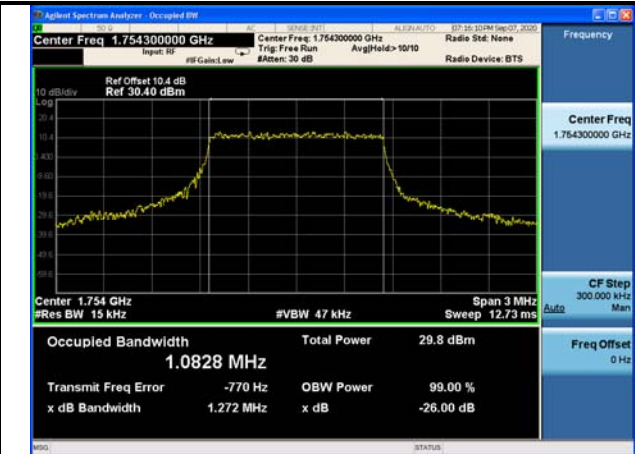


Fig.8

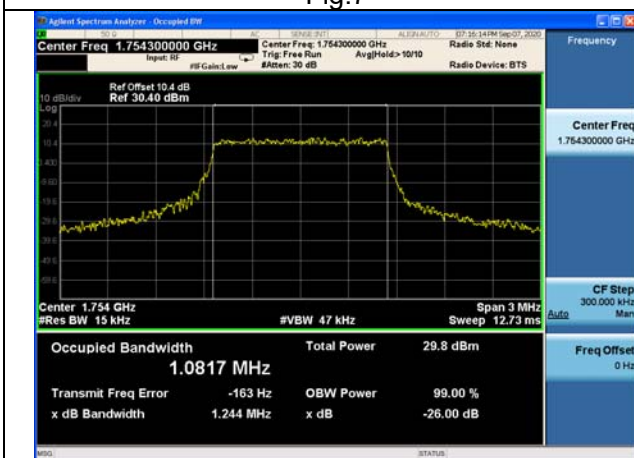


Fig.9

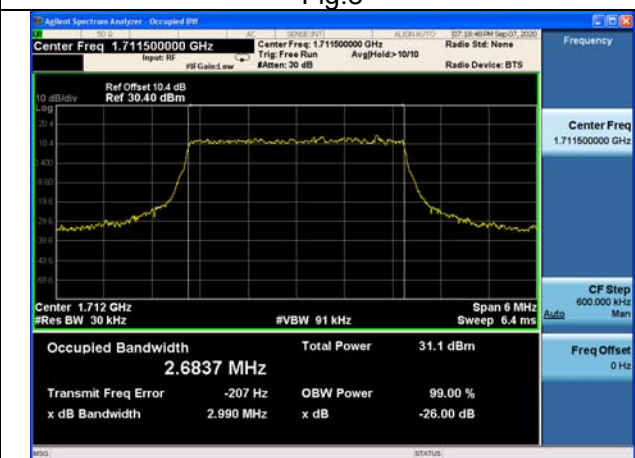


Fig.10

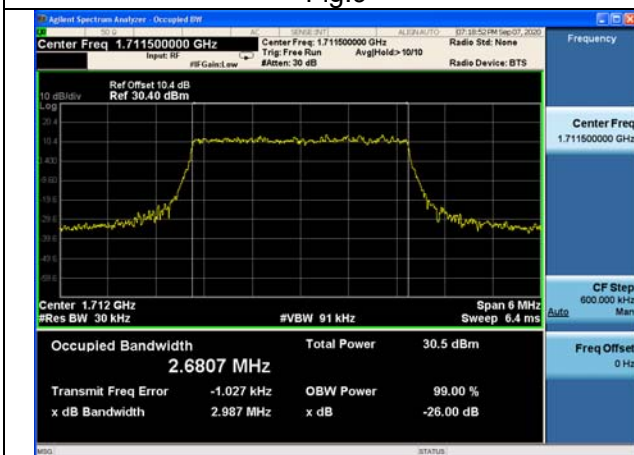


Fig.11

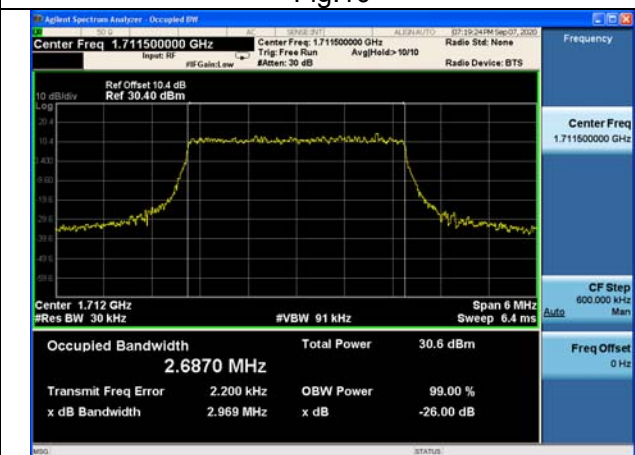


Fig.12

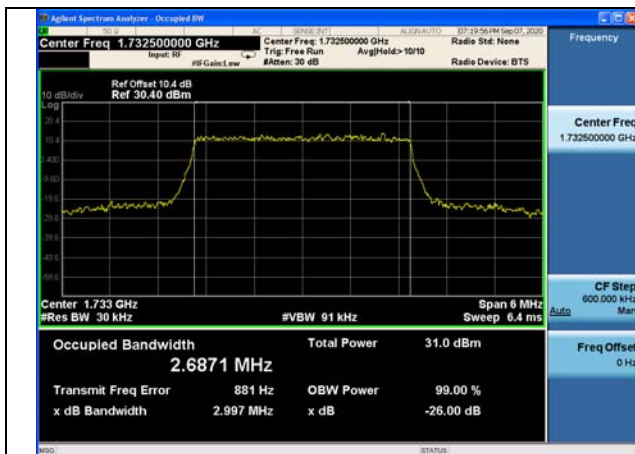


Fig.13

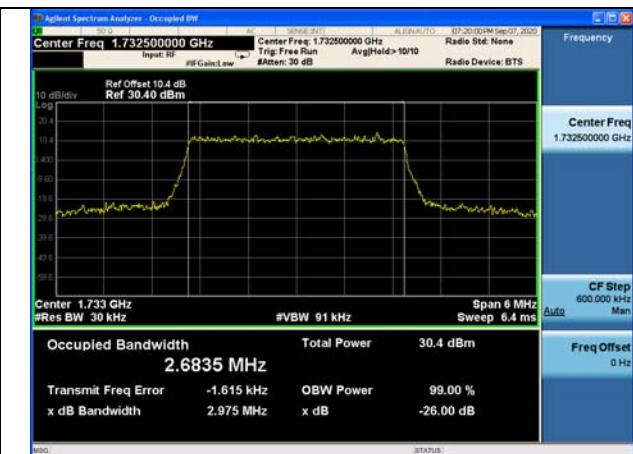


Fig.14

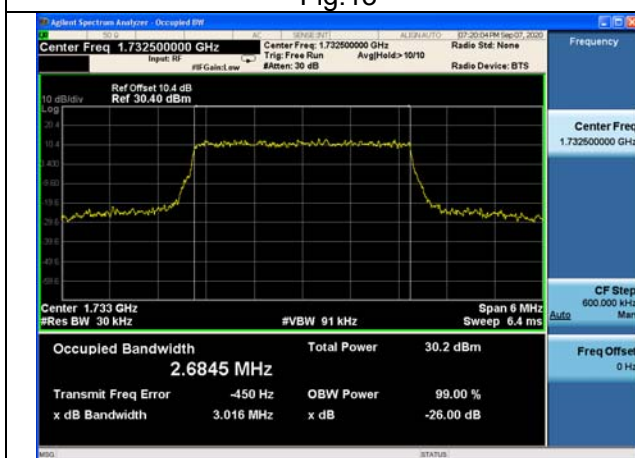


Fig.15

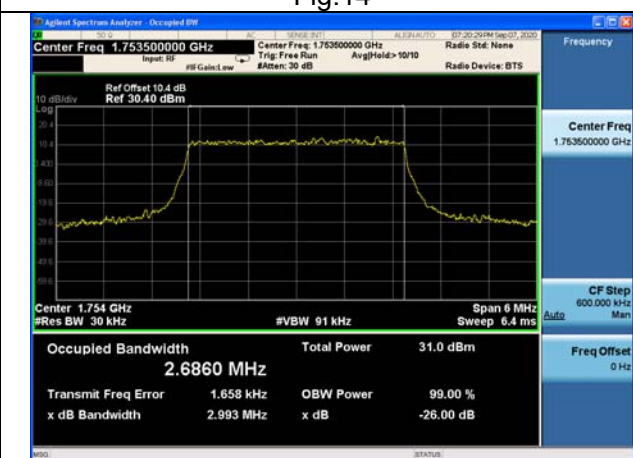


Fig.16

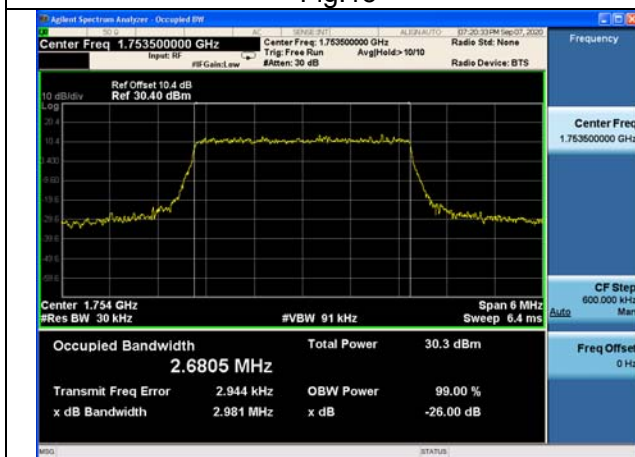


Fig.17

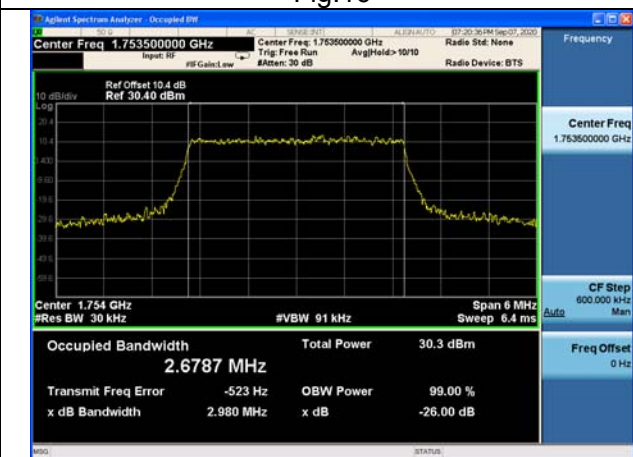


Fig.18

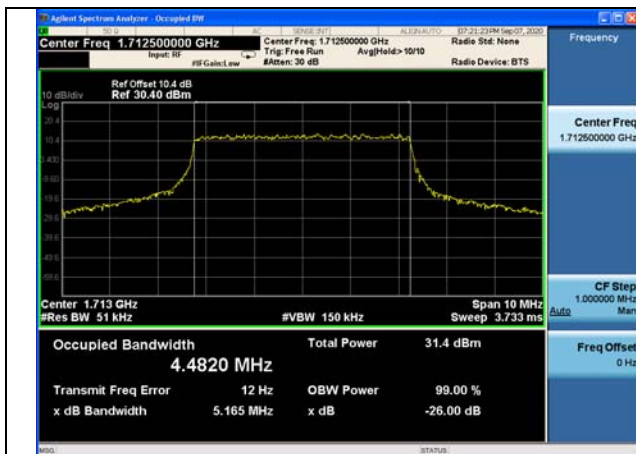


Fig.19



Fig.20

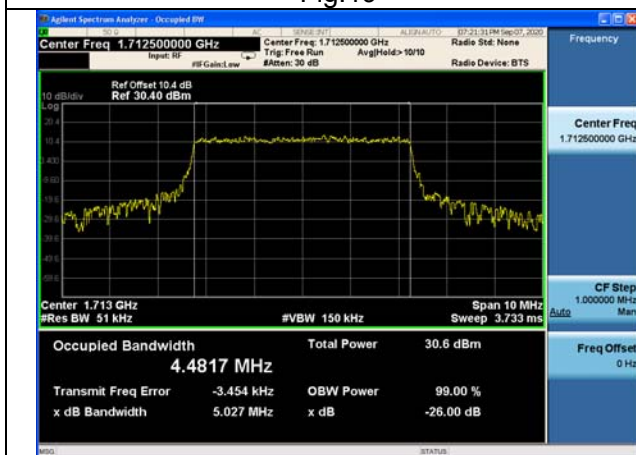


Fig.21



Fig.22

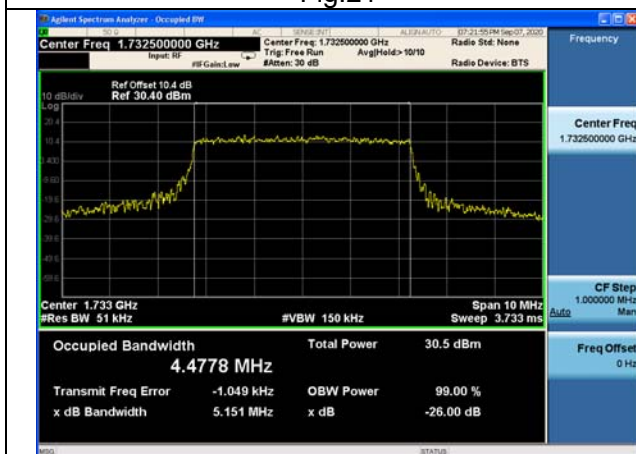


Fig.23

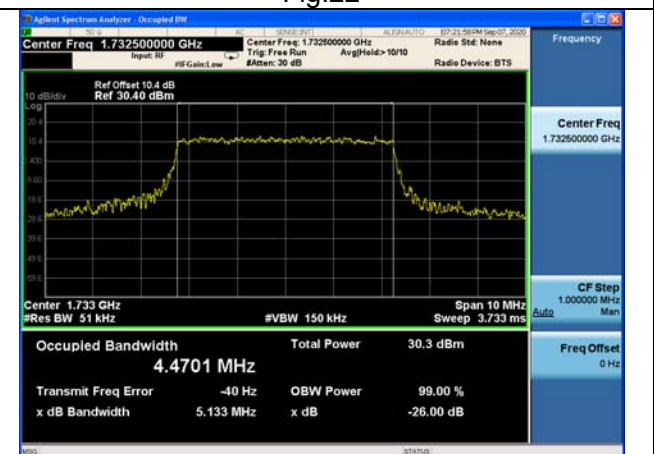


Fig.24



Fig.25



Fig.26

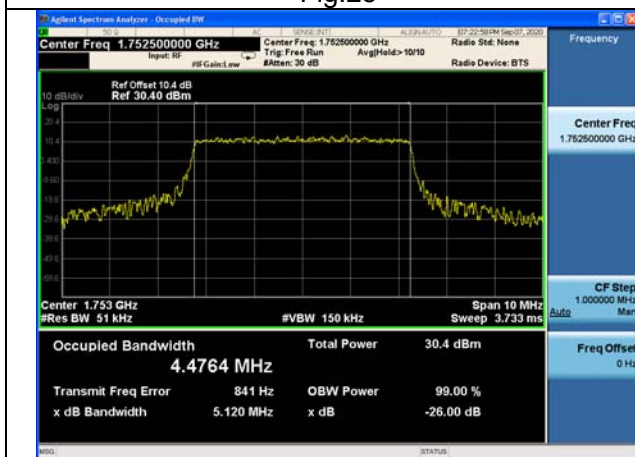


Fig.27

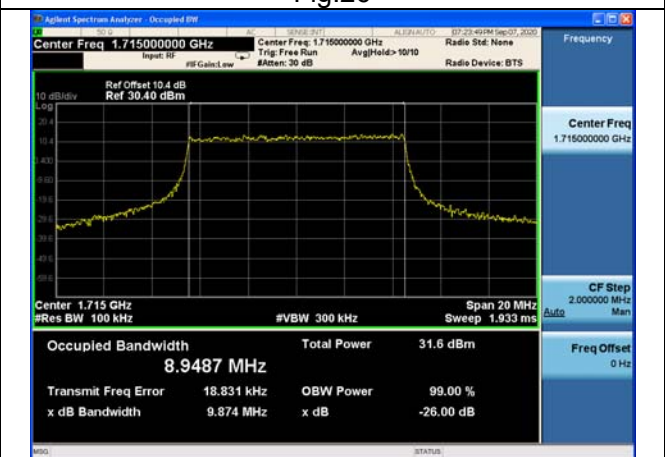


Fig.28

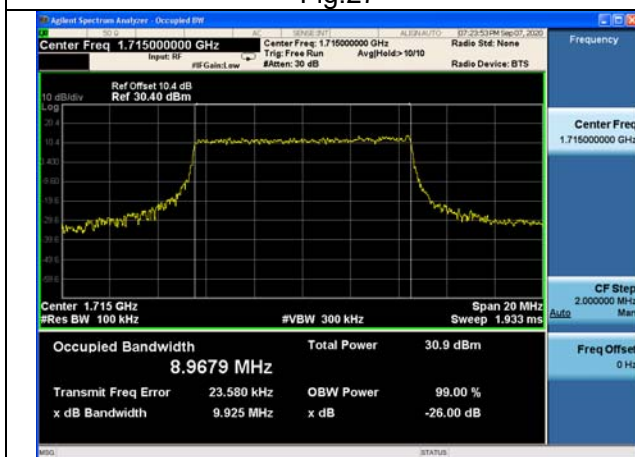


Fig.29

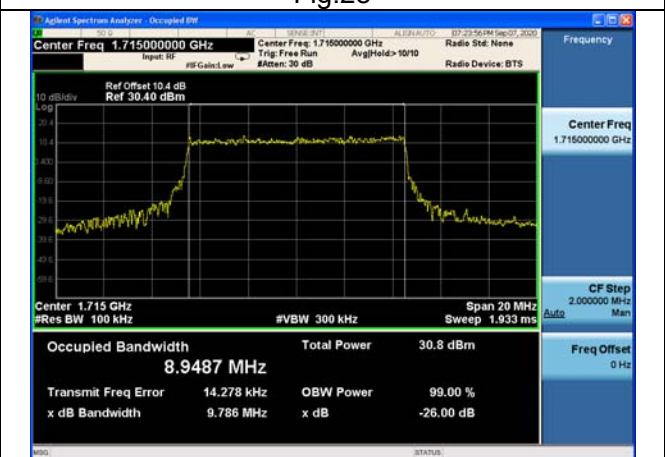


Fig.30

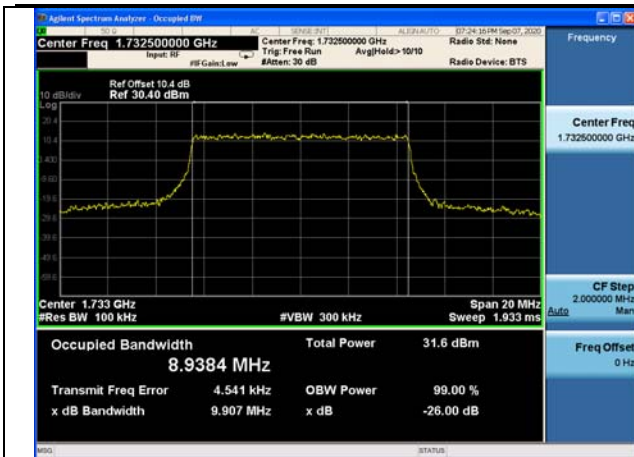


Fig.31

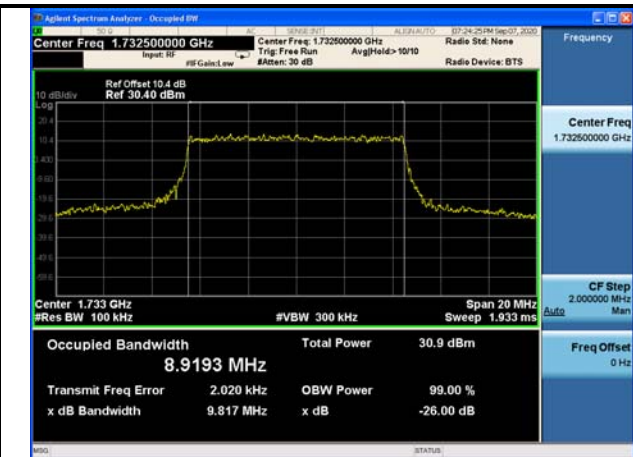


Fig.32

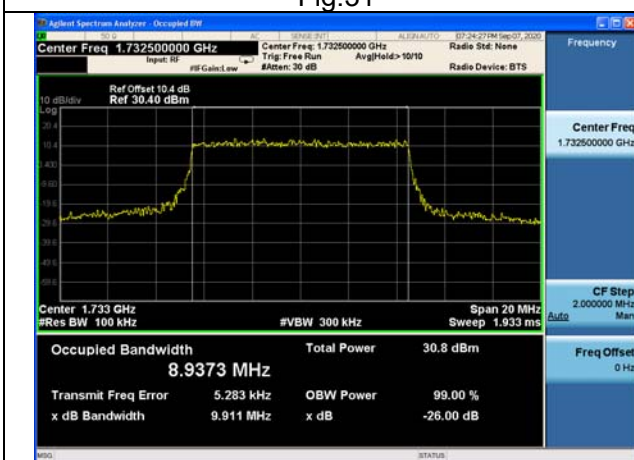


Fig.33



Fig.34

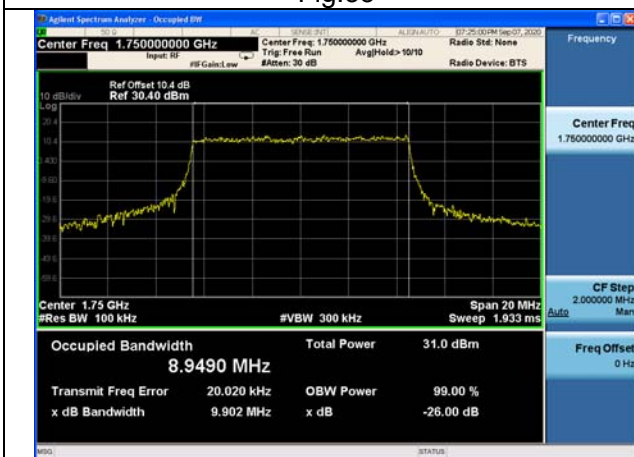


Fig.35

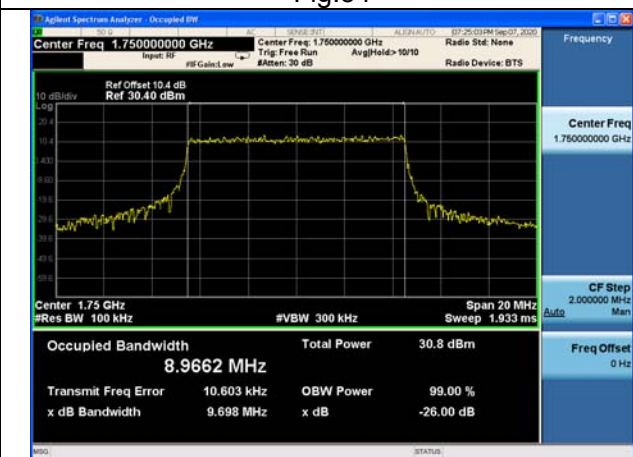


Fig.36

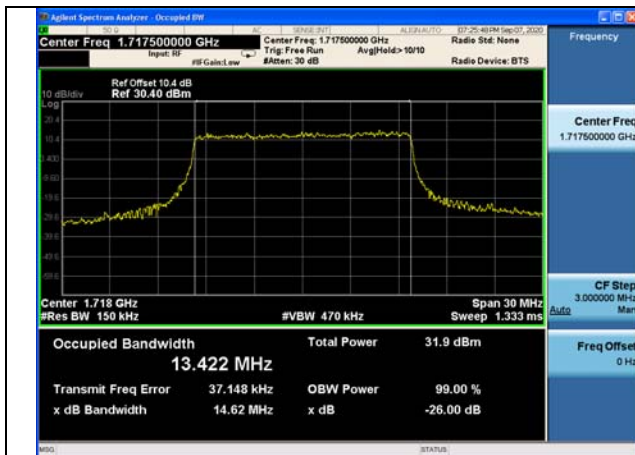


Fig.37

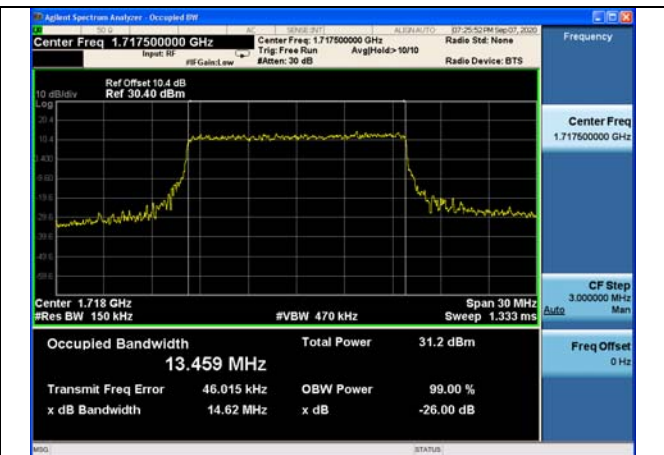


Fig.38

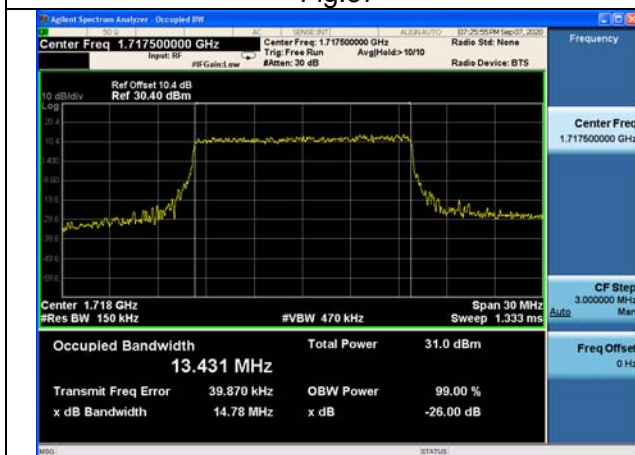


Fig.39

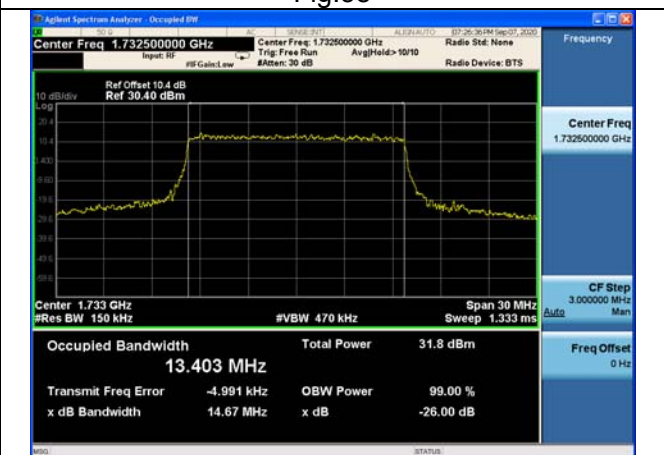


Fig.40

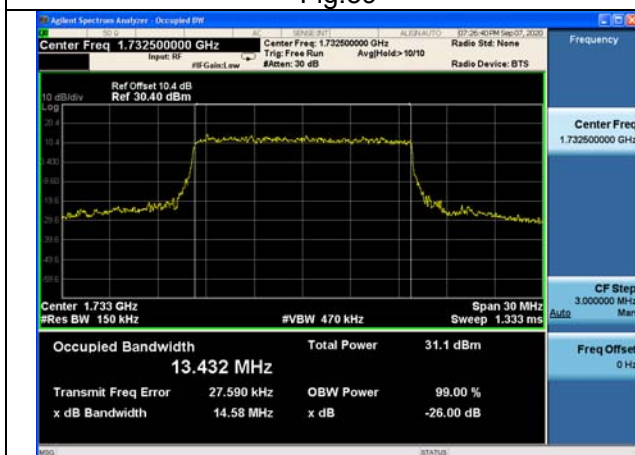


Fig.41

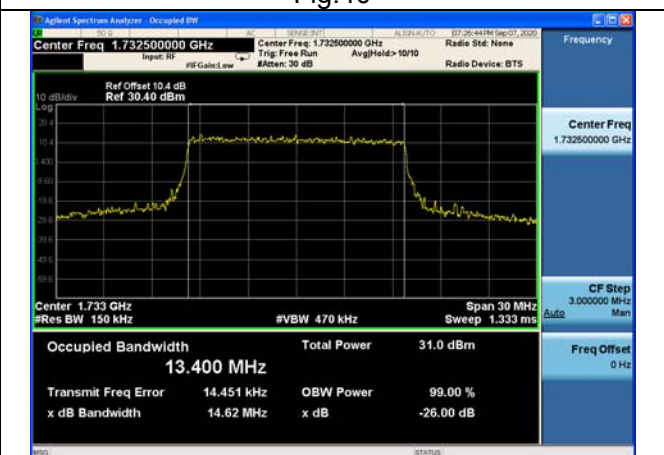


Fig.42

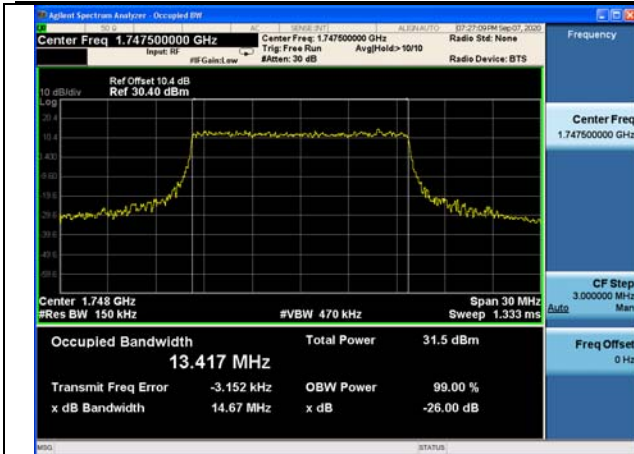


Fig.43

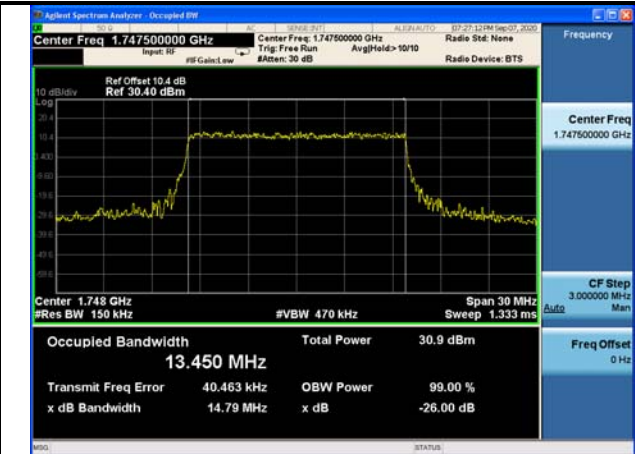


Fig.44

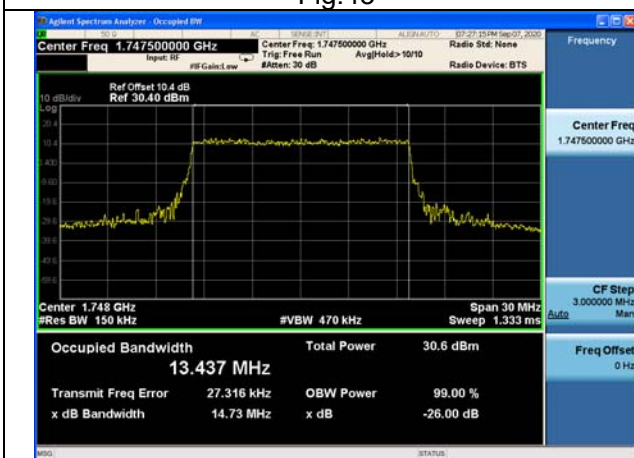


Fig.45

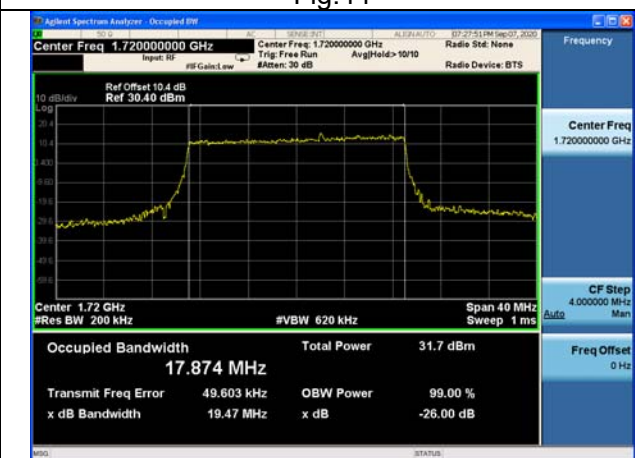


Fig.46

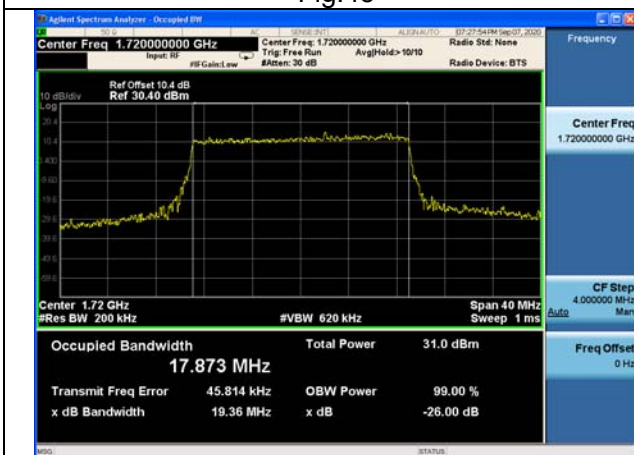


Fig.47

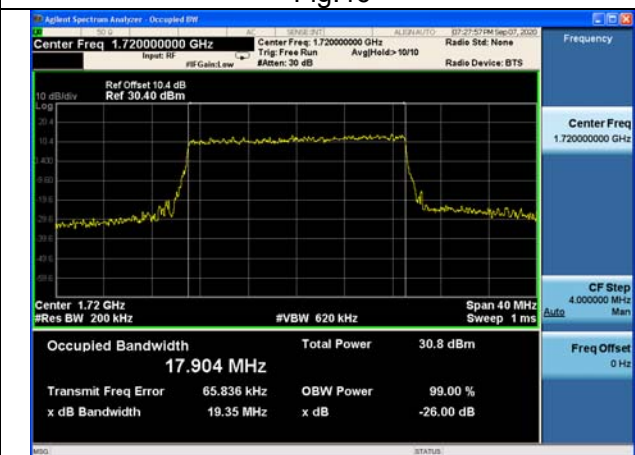


Fig.48



Fig.49

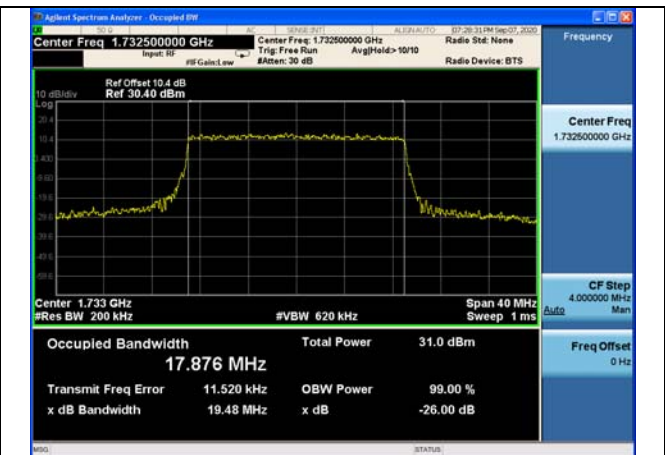


Fig.50

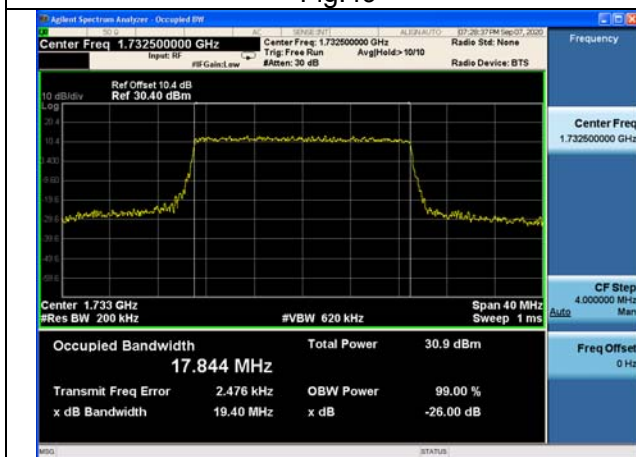


Fig.51

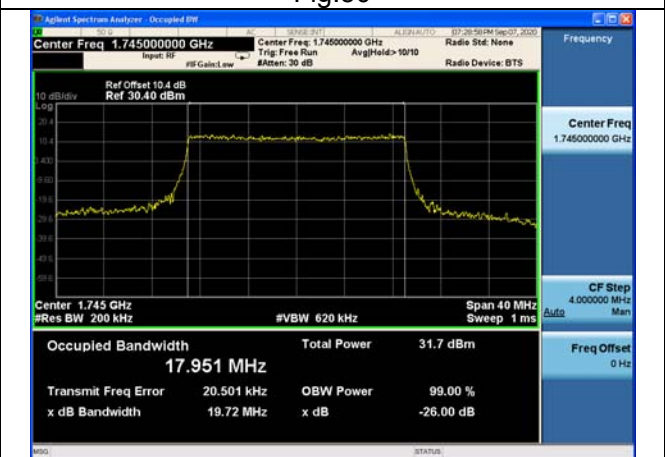


Fig.52

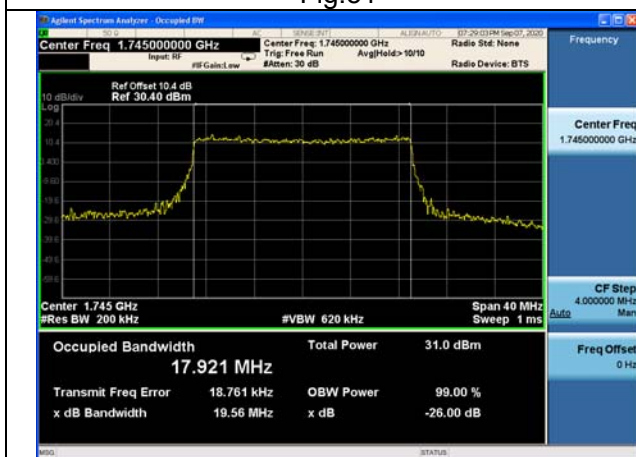


Fig.53

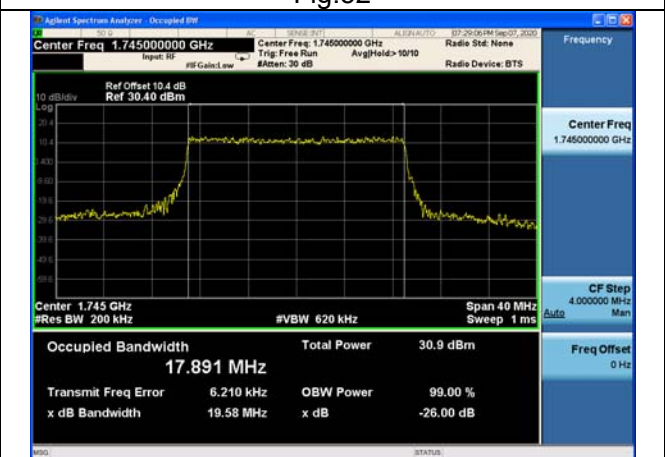


Fig.54

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
4	1732.5	20175	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

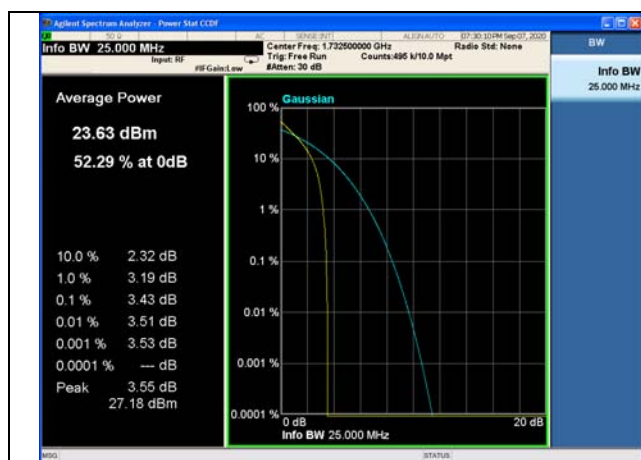


Fig.1

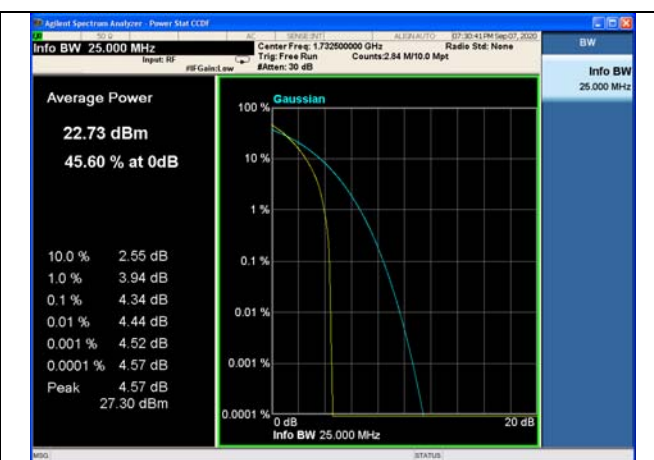


Fig.2

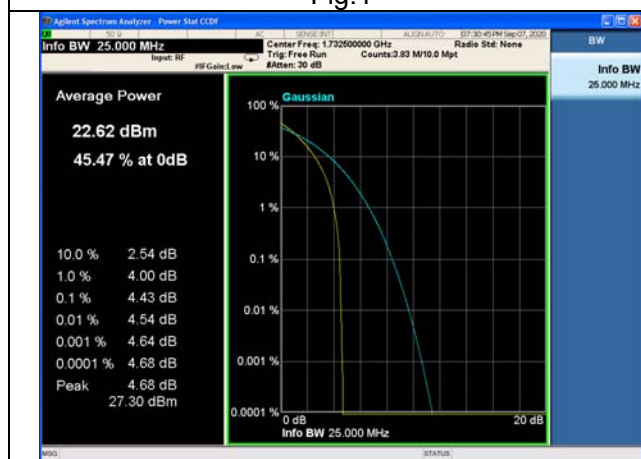


Fig.3



Fig.4



Fig.5

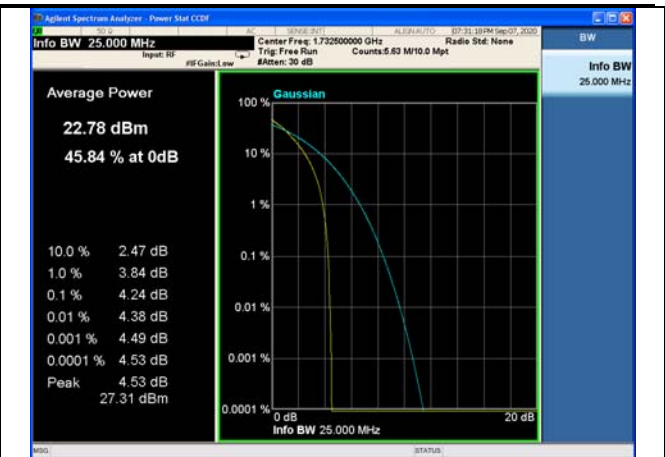


Fig.6



Fig.7



Fig.8



Fig.9

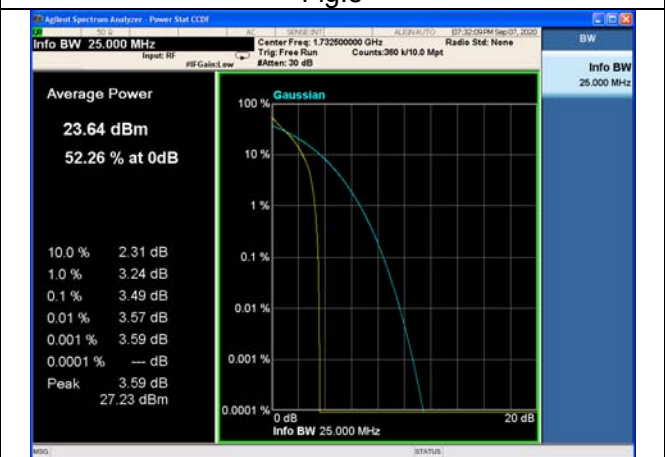


Fig.10



Fig.11

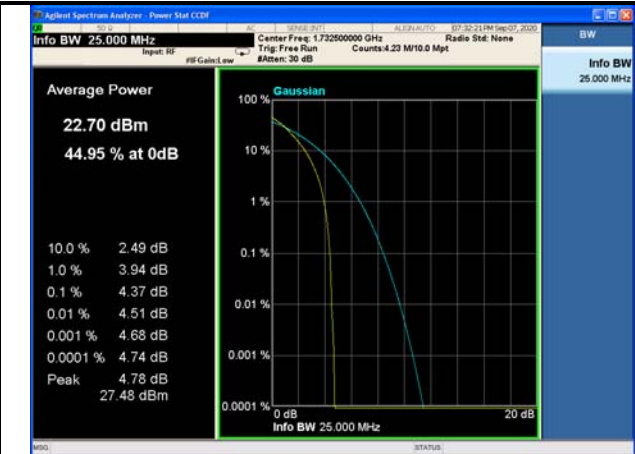


Fig.12



Fig.13



Fig.14

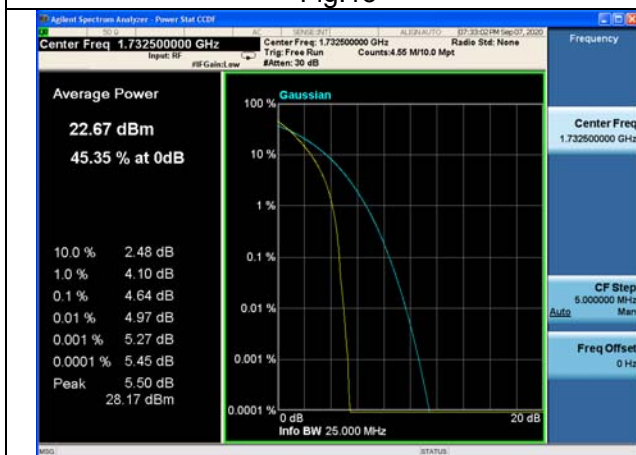


Fig.15



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
4	1720	20050	20	1	0	Fig.1-2
	1732.5	20175	20	1	0	Fig.3-4
	1745	20300	20	1	0	Fig.5-6

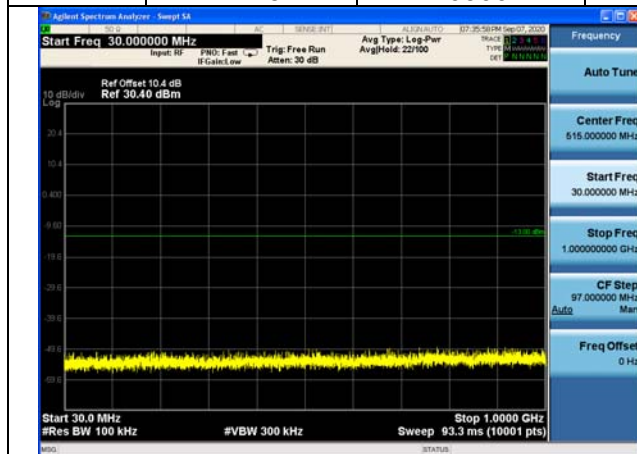


Fig.1

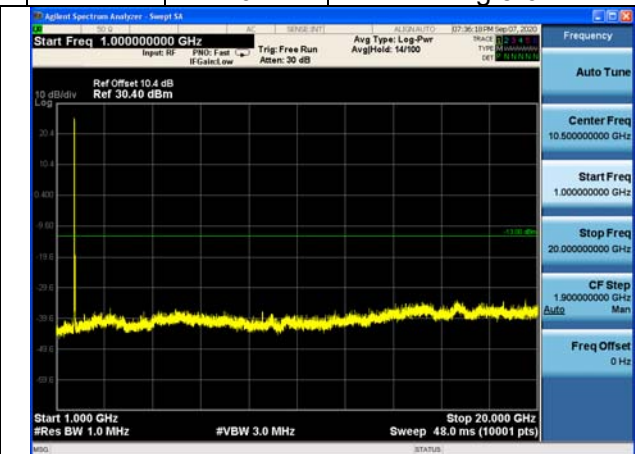


Fig.2

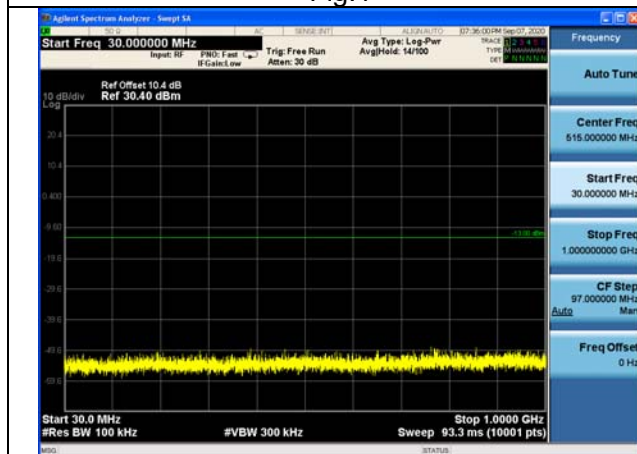


Fig3

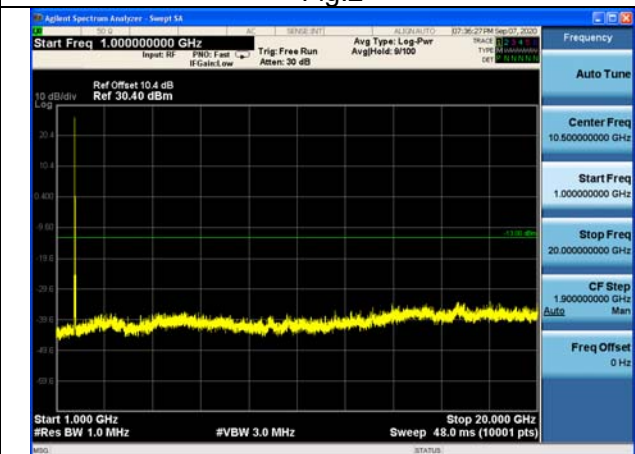


Fig4

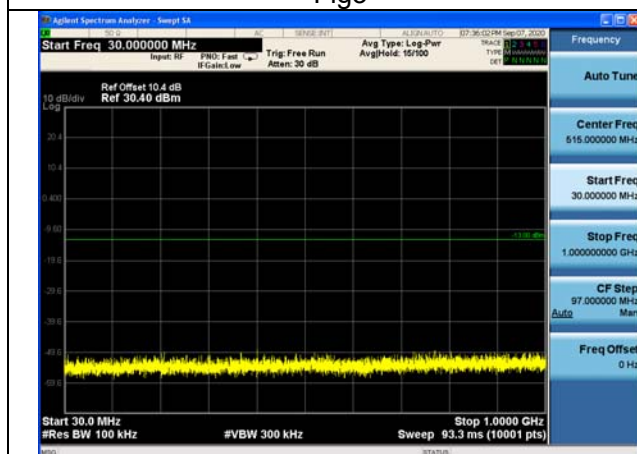


Fig5

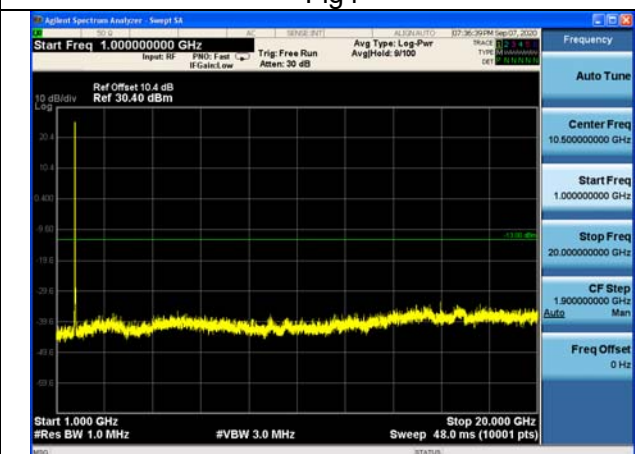


Fig6

5 Band Edges Compliance

Test result

Test Result						
Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
4	1710.7	19957	1.4	1	0	Fig.1
				6	0	Fig.2
	1754.3	20393		1	5	Fig.3
				6	0	Fig.4
	1711.5	19965	3	1	0	Fig.5
				15	0	Fig.6
	1753.5	20385		1	14	Fig.7
				15	0	Fig.8
	1712.5	19975	5	1	0	Fig.9
				25	0	Fig.10
	1752.5	20375		1	24	Fig.11
				25	0	Fig.12
	1715	20000	10	1	0	Fig.13
				50	0	Fig.14
	1750	20350		1	49	Fig.15
				50	0	Fig.16
	1717.5	20025	15	1	0	Fig.17
				75	0	Fig.18
	1747.5	20325		1	74	Fig.19
				75	0	Fig.20
	1720	20050	20	1	0	Fig.21
				100	0	Fig.22
	1745	20300		1	99	Fig.23
				100	0	Fig.24



Fig.1

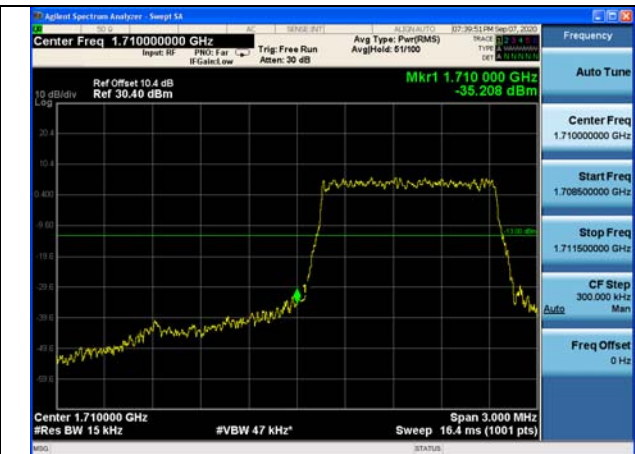


Fig.2



Fig.3

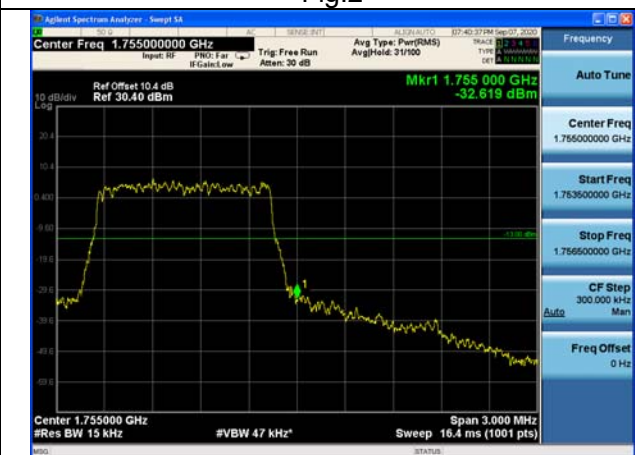


Fig.4

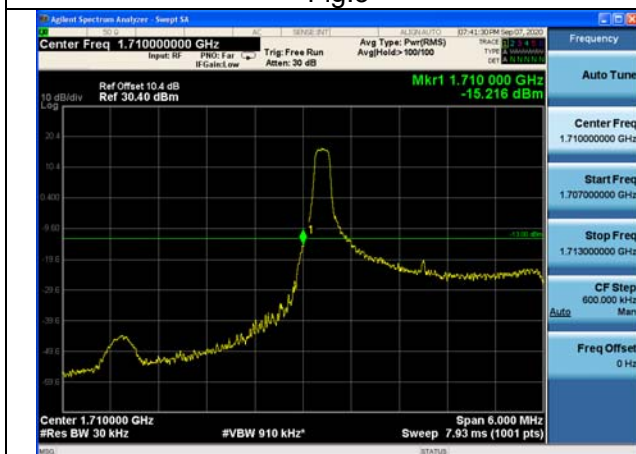


Fig.5



Fig.6

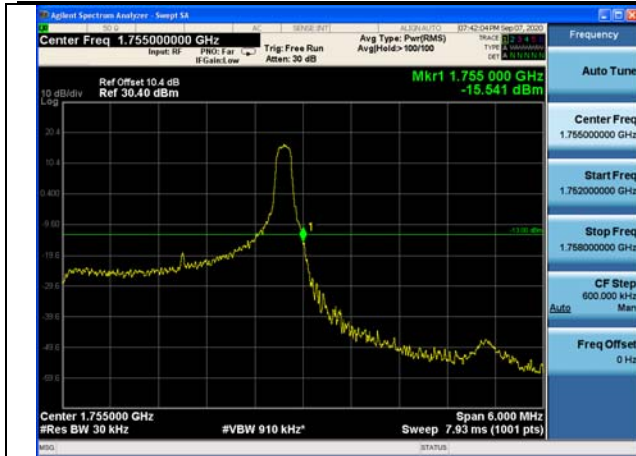


Fig.7



Fig.8

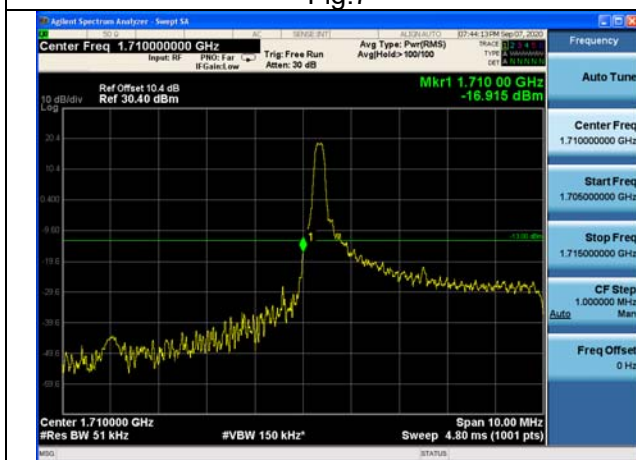


Fig.9

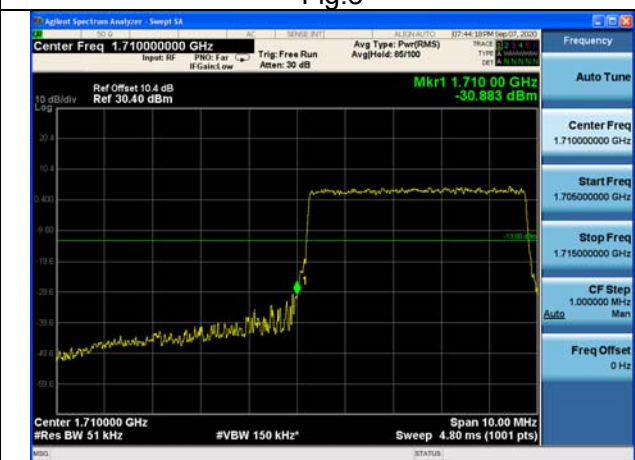


Fig.10

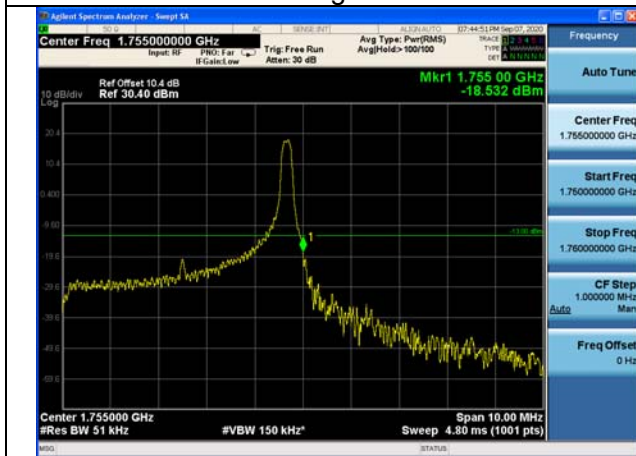


Fig.11



Fig.12

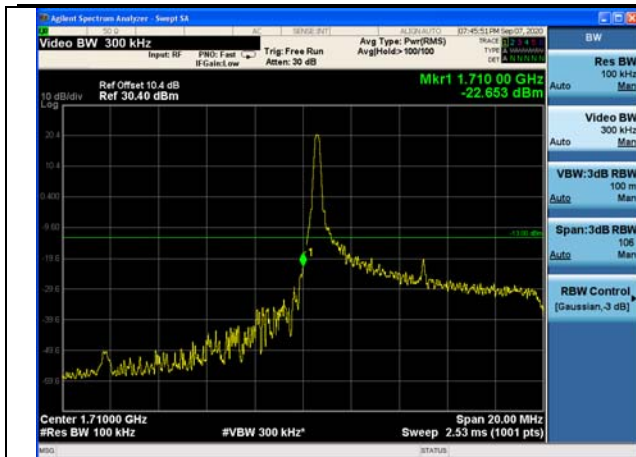


Fig.13

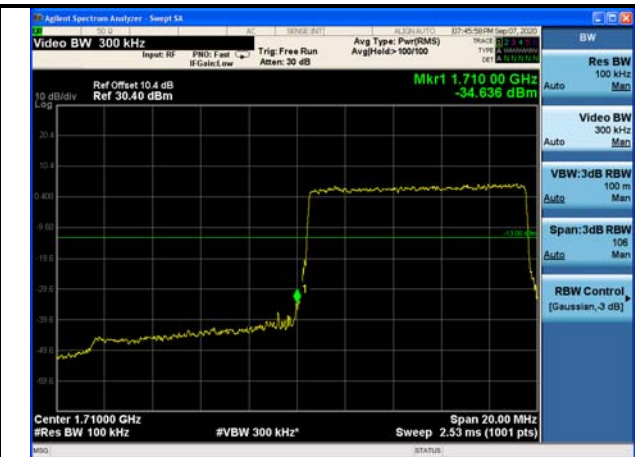


Fig.14

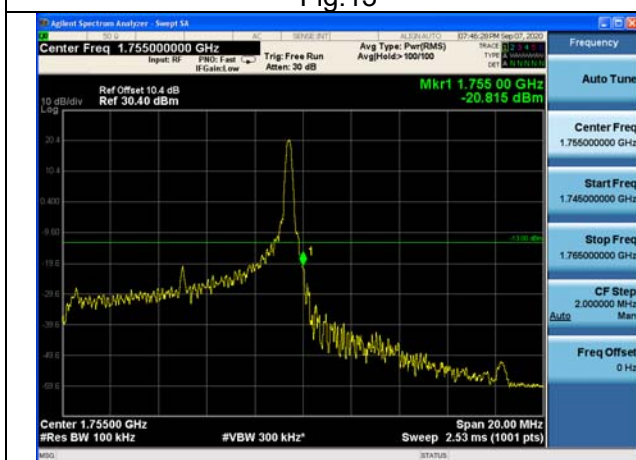


Fig.15

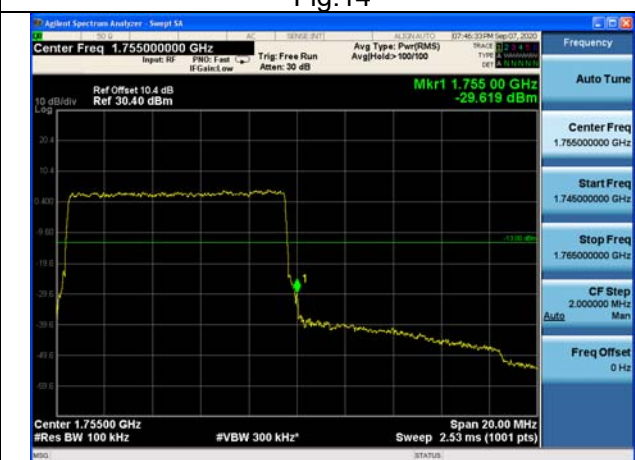


Fig.16

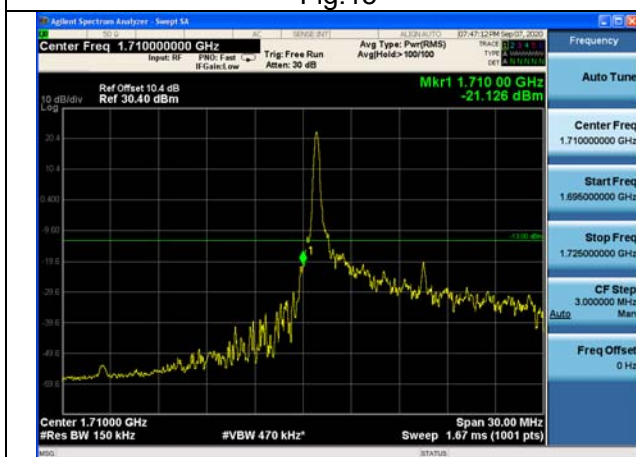


Fig.17

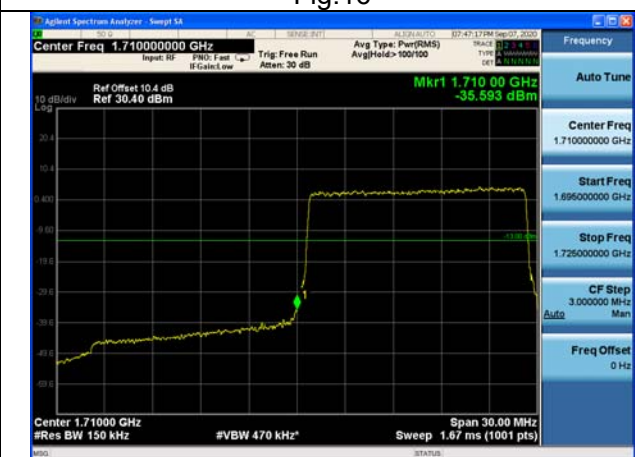


Fig.18



Fig.19



Fig.20

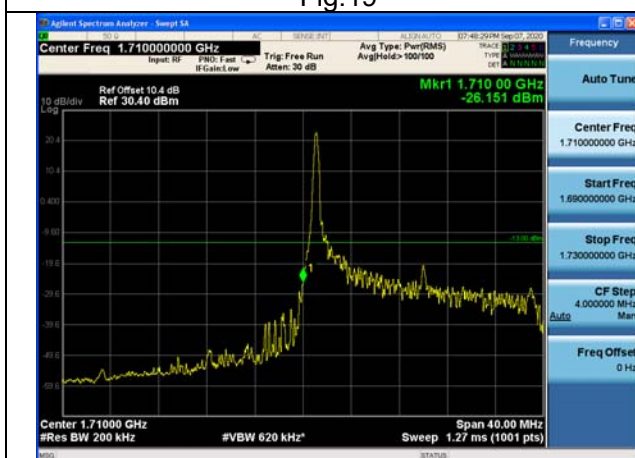


Fig.21

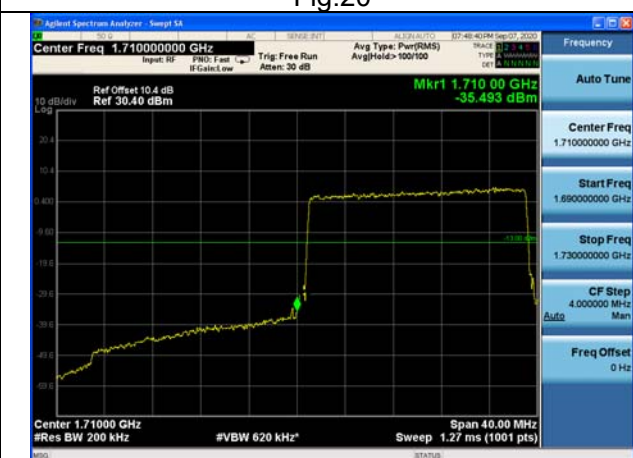


Fig.22

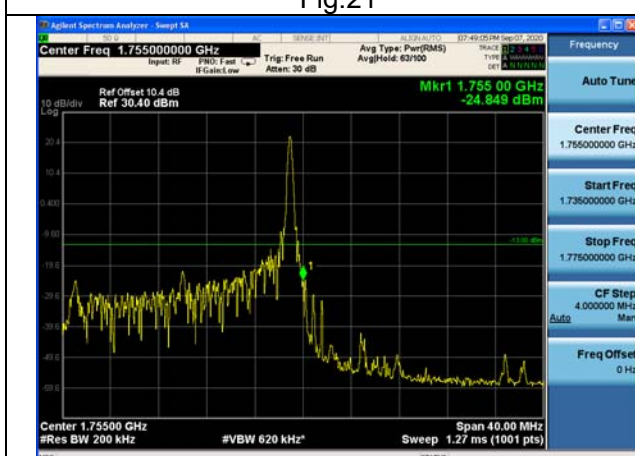


Fig.23



Fig.24

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band4 Low Channel					
		1.4M	3M	5M	10M	15M	20M
-25	NV	0.014	0.016	0.010	-0.016	0.011	-0.009
-20	NV	-0.010	0.019	-0.004	0.002	-0.013	0.004
-10	NV	-0.004	0.002	0.002	0.001	-0.008	0.017
0	NV	-0.013	0.014	-0.010	0.012	0.010	-0.001
+10	NV	0.019	-0.021	0.012	0.015	0.004	0.019
+20	NV	0.000	0.000	0.000	0.000	0.000	0.000
+30	NV	-0.016	0.010	-0.014	0.018	0.001	-0.005
+40	NV	0.020	0.019	-0.012	-0.018	-0.016	0.001
+50	NV	-0.008	-0.007	0.011	0.017	0.011	-0.007
+20	LV	0.002	-0.006	-0.013	0.020	-0.009	0.013
+20	HV	0.028	-0.016	-0.016	0.006	-0.011	0.012

Temperature(°C)	Voltage	Test Result (ppm) Band4 High Channel					
		1.4M	3M	5M	10M	15M	20M
-25	NV	-0.009	-0.020	-0.011	-0.010	0.013	-0.008
-20	NV	0.016	0.007	0.009	-0.016	0.021	0.005
-10	NV	0.019	-0.001	-0.006	-0.014	0.011	0.001
0	NV	-0.004	-0.003	-0.019	0.001	0.002	0.006
+10	NV	0.009	0.012	-0.011	-0.007	-0.008	0.010
+20	NV	0.017	0.000	0.000	0.000	0.000	0.000
+30	NV	0.003	-0.023	0.001	0.014	0.009	-0.013
+40	NV	-0.012	0.015	-0.007	0.008	-0.012	0.010
+50	NV	-0.017	0.014	0.016	0.015	0.003	0.012
+20	LV	-0.017	0.021	-0.011	0.012	-0.007	-0.003
+20	HV	0.017	-0.017	-0.011	-0.008	-0.009	-0.016