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	23.88
				1	5	23.80
				3	2	22.40
				6	0	22.50
	1732.5	20175		1	0	23.76
				1	5	23.78
				3	2	22.66
				6	0	22.48
	1754.3	20393		1	0	23.70
				1	5	23.69
				3	2	22.71
				6	0	22.49
16QAM	1710.7	19957	1.4	1	0	22.43
				1	5	22.37
				3	2	21.53
				6	0	21.69
	1732.5	20175		1	0	22.67
				1	5	22.63
				3	2	21.67
				6	0	21.73
	1754.3	20393		1	0	22.59
				1	5	22.64
				3	2	21.55
				6	0	21.50
64QAM	1710.7	19957	1.4	1	0	22.19
				1	5	22.39
				3	2	21.65
				6	0	21.68
	1732.5	20175		1	0	22.33
				1	5	22.33
				3	2	21.70
				6	0	21.43
	1754.3	20393		1	0	22.50
				1	5	22.45
				3	2	21.54
				6	0	21.40

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1711.5	19965	3	1	0	23.78
				1	14	23.66
				8	4	22.51
				15	0	22.56
	1732.5	20175		1	0	23.94
				1	14	23.97
				8	4	22.51
				15	0	22.63
	1753.5	20385		1	0	23.87
				1	14	23.86
				8	4	22.53
				15	0	22.62
16QAM	1711.5	19965	3	1	0	22.33
				1	14	22.54
				8	4	21.61
				15	0	21.63
	1732.5	20175		1	0	22.41
				1	14	22.49
				8	4	21.67
				15	0	21.51
	1753.5	20385		1	0	22.47
				1	14	22.51
				8	4	21.81
				15	0	21.39
64QAM	1711.5	19965	3	1	0	22.20
				1	14	22.39
				8	4	21.54
				15	0	21.51
	1732.5	20175		1	0	22.30
				1	14	22.46
				8	4	21.59
				15	0	21.52
	1753.5	20385		1	0	22.35
				1	14	22.42
				8	4	21.50
				15	0	21.59

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1712.5	19975	5	1	0	23.90
				1	24	23.70
				12	6	22.43
				25	0	22.68
	1732.5	20175		1	0	23.78
				1	24	23.80
				12	6	22.60
				25	0	22.50
	1752.5	20375		1	0	23.72
				1	24	23.79
				12	6	22.64
				25	0	22.71
16QAM	1712.5	19975	5	1	0	22.56
				1	24	22.62
				12	6	21.76
				25	0	21.62
	1732.5	20175		1	0	22.52
				1	24	22.55
				12	6	21.78
				25	0	21.51
	1752.5	20375		1	0	22.42
				1	24	22.54
				12	6	21.61
				25	0	21.69
64QAM	1712.5	19975	5	1	0	22.47
				1	24	22.49
				12	6	21.66
				25	0	21.58
	1732.5	20175		1	0	22.57
				1	24	22.65
				12	6	21.52
				25	0	21.58
	1752.5	20375		1	0	22.25
				1	24	22.39
				12	6	21.44
				25	0	21.59

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1715	20000	10	1	0	23.70
				1	49	23.75
				24	12	22.52
				50	0	22.56
	1732.5	20175		1	0	24.00
				1	49	23.79
				24	12	22.67
				50	0	22.49
	1750	20350		1	0	23.67
				1	49	23.68
				24	12	22.57
				50	0	22.68
16QAM	1715	20000	10	1	0	22.64
				1	49	22.43
				24	12	21.65
				50	0	21.50
	1732.5	20175		1	0	22.53
				1	49	22.58
				24	12	21.60
				50	0	21.53
	1750	20350		1	0	22.39
				1	49	22.30
				24	12	21.52
				50	0	21.51
64QAM	1715	20000	10	1	0	22.60
				1	49	22.42
				24	12	21.55
				50	0	21.53
	1732.5	20175		1	0	22.39
				1	49	22.61
				24	12	21.71
				50	0	21.49
	1750	20350		1	0	22.50
				1	49	22.44
				24	12	21.68
				50	0	21.46

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1717.5	20025	15	1	0	23.68
				1	74	23.69
				40	18	22.62
				75	0	22.71
	1732.5	20175		1	0	23.72
				1	74	23.94
				40	18	22.74
				75	0	22.72
	1747.5	20325		1	0	23.74
				1	74	23.80
				40	18	22.73
				75	0	22.54
16QAM	1717.5	20025	15	1	0	22.64
				1	74	22.30
				40	18	21.51
				75	0	21.57
	1732.5	20175		1	0	22.41
				1	74	22.57
				40	18	21.75
				75	0	21.51
	1747.5	20325		1	0	22.40
				1	74	22.58
				40	18	21.56
				75	0	21.58
64QAM	1717.5	20025	15	1	0	22.46
				1	74	22.30
				40	18	21.61
				75	0	21.50
	1732.5	20175		1	0	22.62
				1	74	22.39
				40	18	21.72
				75	0	21.46
	1747.5	20325		1	0	22.51
				1	74	22.24
				40	18	21.66
				75	0	21.56

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1720	20050	20	1	0	**23.98**
				1	99	**23.98**
				50	25	22.75
				100	0	22.67
	1732.5	20175		1	0	**23.99**
				1	99	**23.99**
				50	25	22.78
				100	0	22.77
	1745	20300		1	0	**23.96**
				1	99	**23.96**
				50	25	22.70
				100	0	22.70
16QAM	1720	20050	20	1	0	22.67
				1	99	22.59
				50	25	21.78
				100	0	21.73
	1732.5	20175		1	0	22.67
				1	99	22.67
				50	25	21.84
				100	0	21.74
	1745	20300		1	0	22.58
				1	99	22.67
				50	25	21.82
				100	0	21.69
64QAM	1720	20050	20	1	0	22.55
				1	99	22.55
				50	25	21.73
				100	0	21.68
	1732.5	20175		1	0	22.61
				1	99	22.61
				50	25	21.77
				100	0	21.70
	1745	20300		1	0	22.59
				1	99	22.60
				50	25	21.69
				100	0	21.70

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	1.1	Fig.1	1.1	Fig.2	1.1	Fig.3
	1732.5	20175		6	0	1.1	Fig.4	1.1	Fig.5	1.1	Fig.6
	1754.3	20393		6	0	1.1	Fig.7	1.1	Fig.8	1.1	Fig.9
	1711.5	19965	3	15	0	2.7	Fig.10	2.7	Fig.11	2.7	Fig.12
	1732.5	20175		15	0	2.7	Fig.13	2.7	Fig.14	2.7	Fig.15
	1753.5	20385		15	0	2.7	Fig.16	2.7	Fig.17	2.7	Fig.18
	1712.5	19975	5	25	0	4.5	Fig.19	4.5	Fig.20	4.5	Fig.21
	1732.5	20175		25	0	4.5	Fig.22	4.5	Fig.23	4.5	Fig.24
	1752.5	20375		25	0	4.5	Fig.25	4.5	Fig.26	4.5	Fig.27
	1715	20000	10	50	0	9.0	Fig.28	9.0	Fig.29	9.0	Fig.30
	1732.5	20175		50	0	9.0	Fig.31	9.0	Fig.32	9.0	Fig.33
	1750	20350		50	0	9.0	Fig.34	9.0	Fig.35	9.0	Fig.36
	1717.5	20025	15	75	0	13.4	Fig.37	13.4	Fig.38	13.4	Fig.39
	1732.5	20175		75	0	13.4	Fig.40	13.4	Fig.41	13.4	Fig.42
	1747.5	20325		75	0	13.4	Fig.43	13.4	Fig.44	13.3	Fig.45
	1720	20050	20	100	0	17.8	Fig.46	17.8	Fig.47	17.8	Fig.48
	1732.5	20175		100	0	17.8	Fig.49	17.9	Fig.50	17.9	Fig.51
	1745	20300		100	0	17.8	Fig.52	17.8	Fig.53	17.8	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	1.3	Fig.1	1.3	Fig.2	1.2	Fig.3
	1732.5	20175		6	0	1.3	Fig.4	1.2	Fig.5	1.2	Fig.6
	1754.3	20393		6	0	1.3	Fig.7	1.2	Fig.8	1.2	Fig.9
	1711.5	19965	3	15	0	3.0	Fig.10	2.9	Fig.11	3.0	Fig.12
	1732.5	20175		15	0	2.9	Fig.13	3.0	Fig.14	2.9	Fig.15
	1753.5	20385		15	0	2.9	Fig.16	3.0	Fig.17	3.0	Fig.18
	1712.5	19975	5	25	0	4.9	Fig.19	4.9	Fig.20	4.9	Fig.21
	1732.5	20175		25	0	4.9	Fig.22	4.9	Fig.23	4.9	Fig.24
	1752.5	20375		25	0	4.9	Fig.25	4.9	Fig.26	4.9	Fig.27
	1715	20000	10	50	0	9.9	Fig.28	9.6	Fig.29	9.8	Fig.30
	1732.5	20175		50	0	9.9	Fig.31	9.9	Fig.32	9.8	Fig.33
	1750	20350		50	0	9.9	Fig.34	9.8	Fig.35	9.9	Fig.36
	1717.5	20025	15	75	0	14.1	Fig.37	14.0	Fig.38	14.2	Fig.39
	1732.5	20175		75	0	14.3	Fig.40	14.1	Fig.41	14.2	Fig.42
	1747.5	20325		75	0	14.4	Fig.43	14.0	Fig.44	14.0	Fig.45
	1720	20050	20	100	0	18.8	Fig.46	18.8	Fig.47	19.0	Fig.48
	1732.5	20175		100	0	18.9	Fig.49	18.6	Fig.50	18.5	Fig.51
	1745	20300		100	0	18.9	Fig.52	19.1	Fig.53	18.8	Fig.54

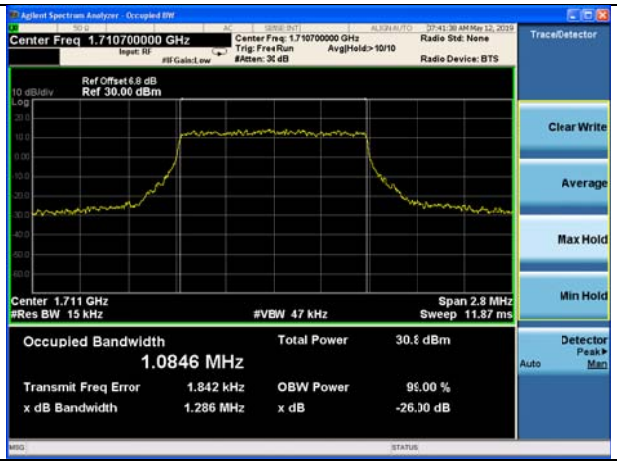


Fig.1

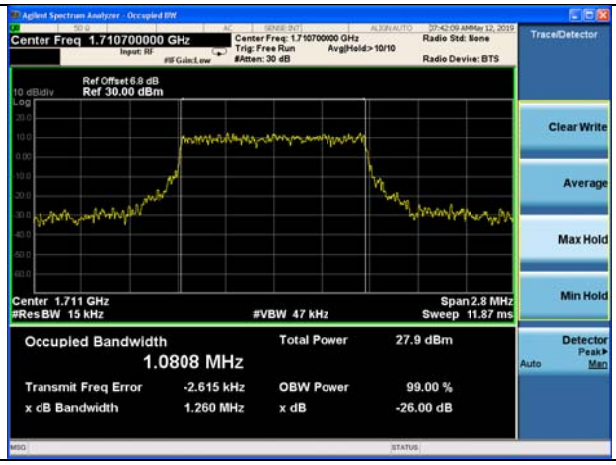


Fig.2

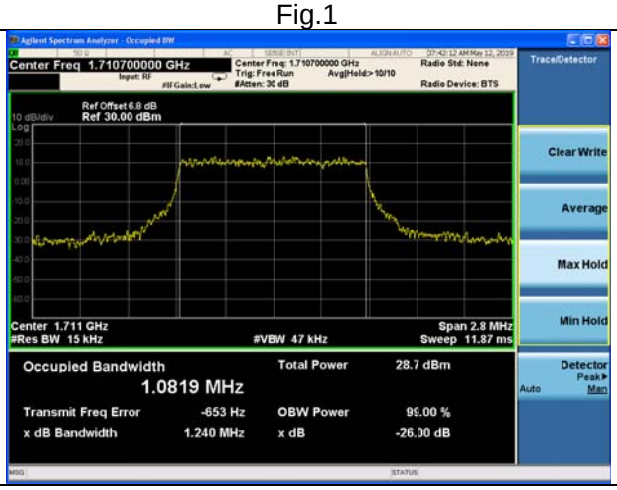


Fig.3

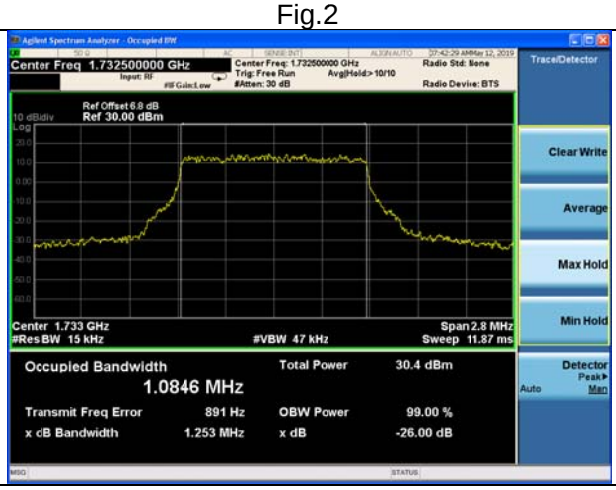


Fig.4

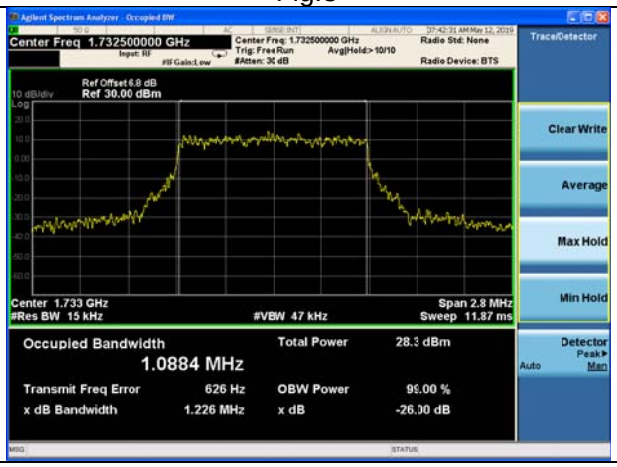


Fig.5

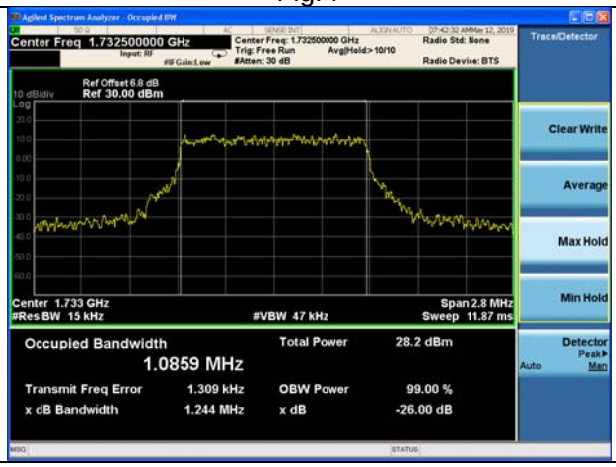


Fig.6

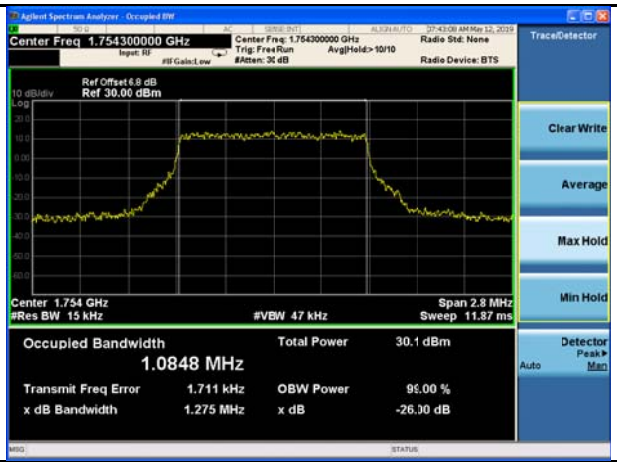


Fig.7

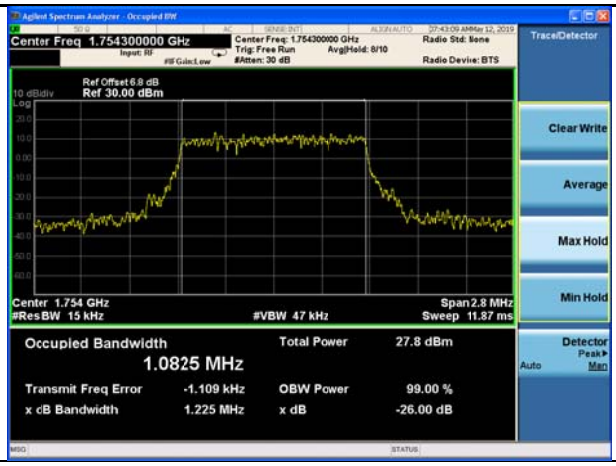


Fig.8

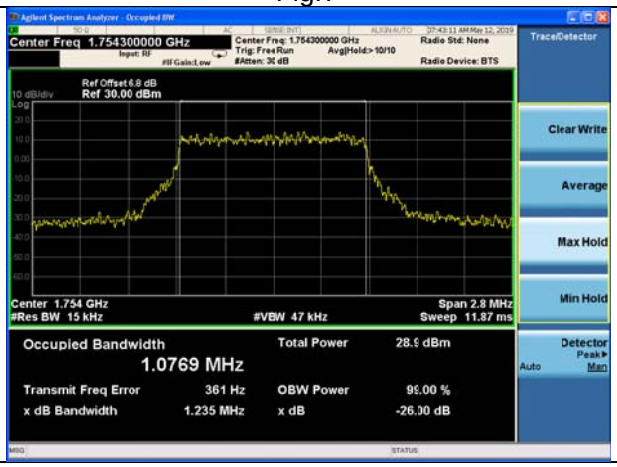


Fig.9

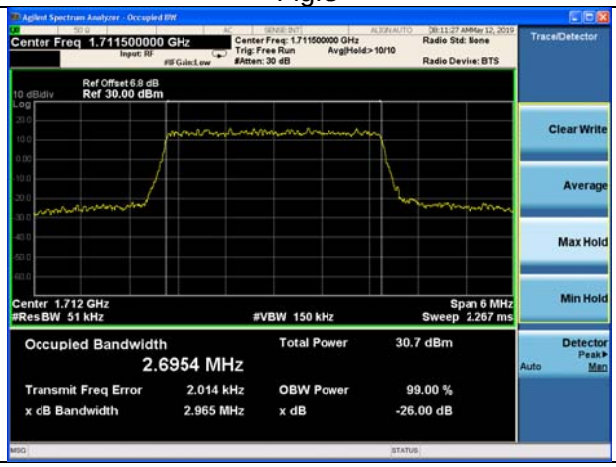


Fig.10

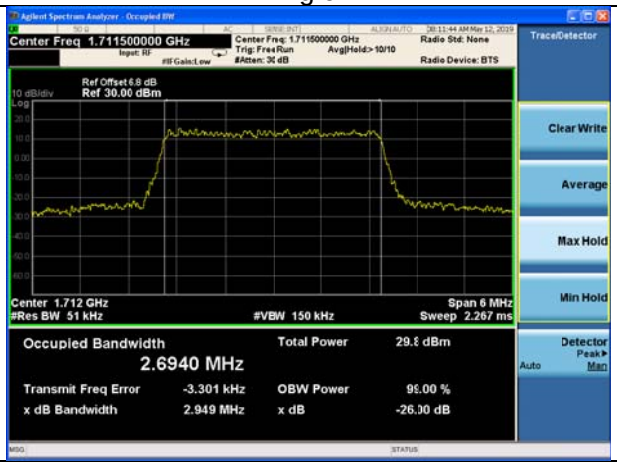


Fig.11

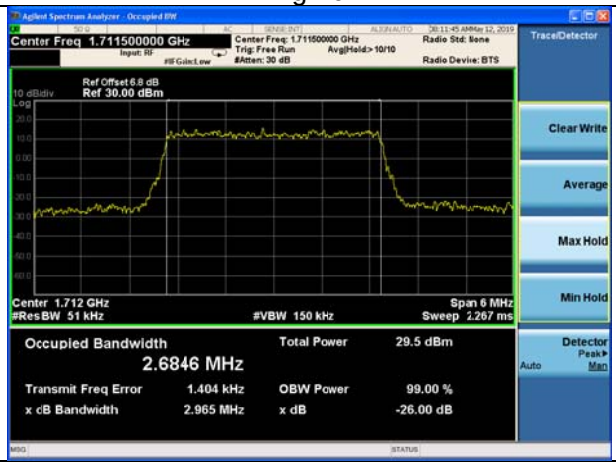


Fig.12

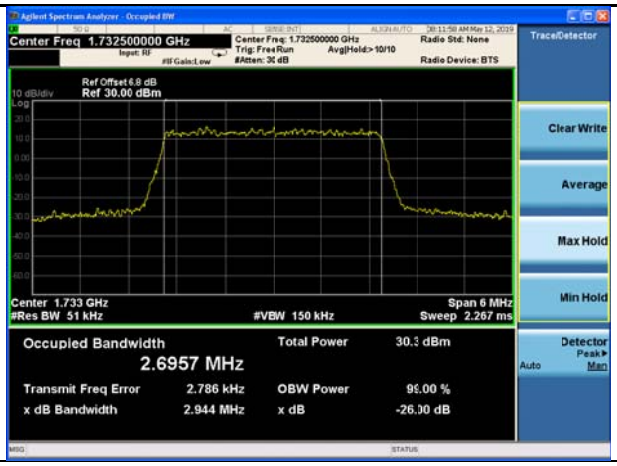


Fig.13

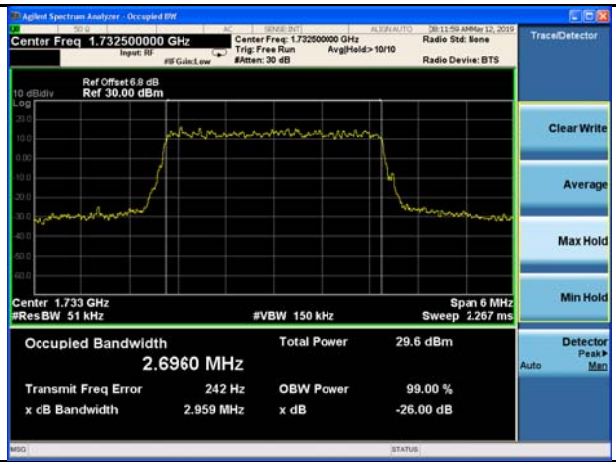


Fig.14

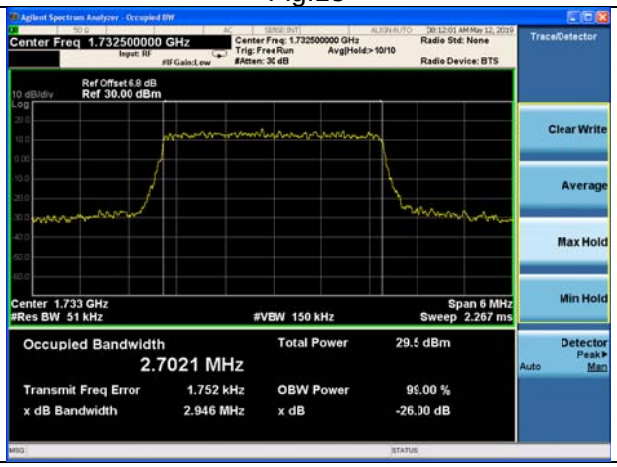


Fig.15

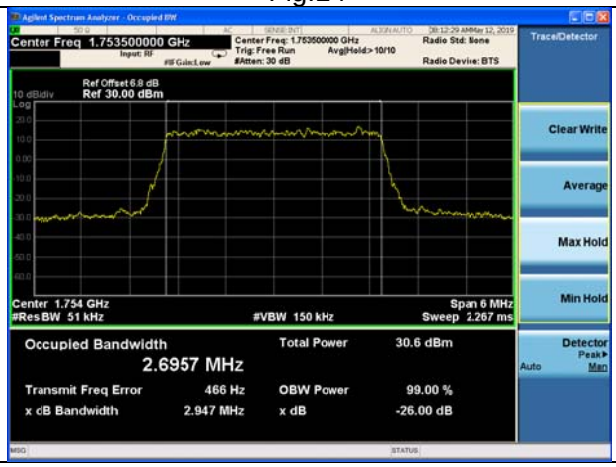


Fig.16

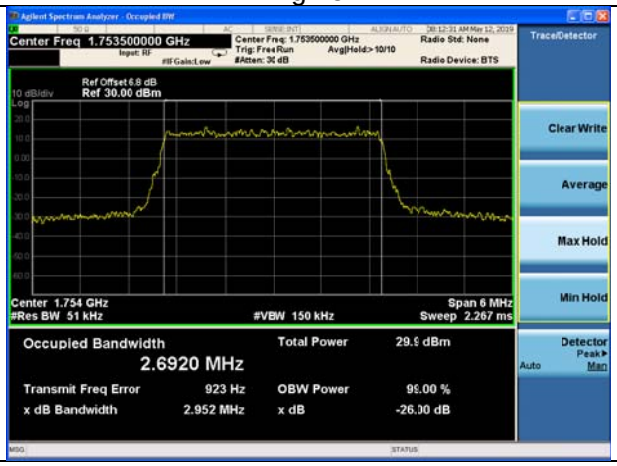


Fig.17

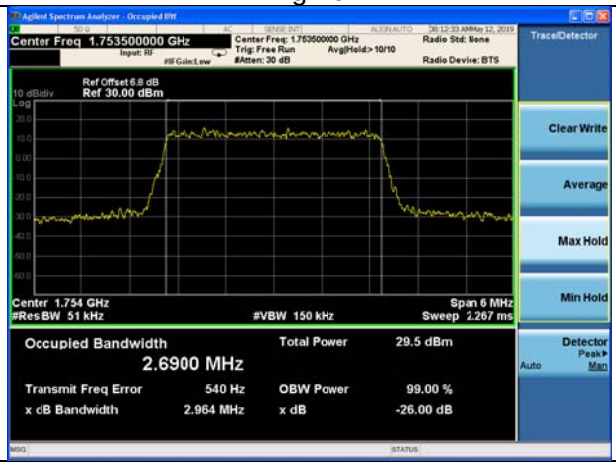


Fig.18

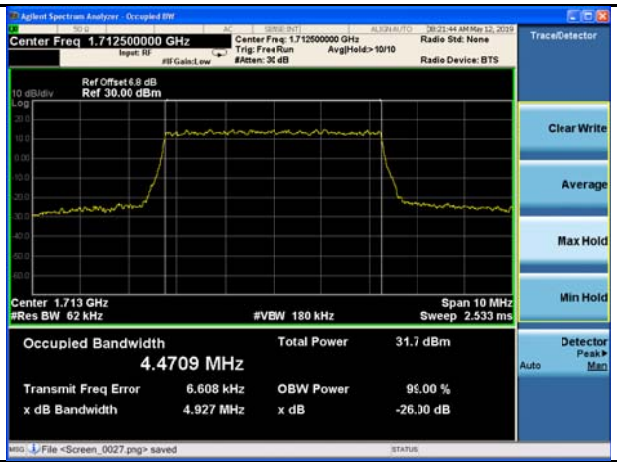


Fig.19

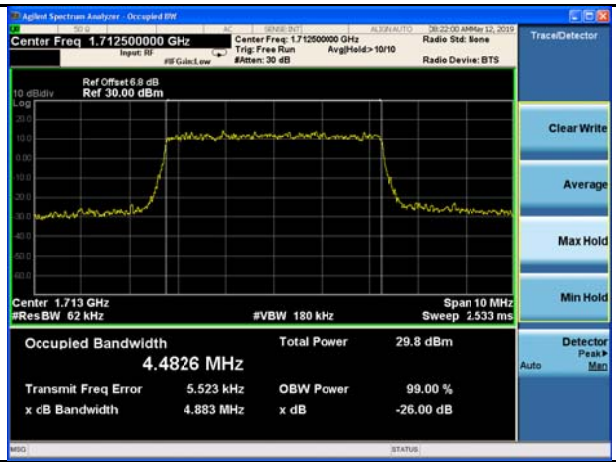


Fig.20

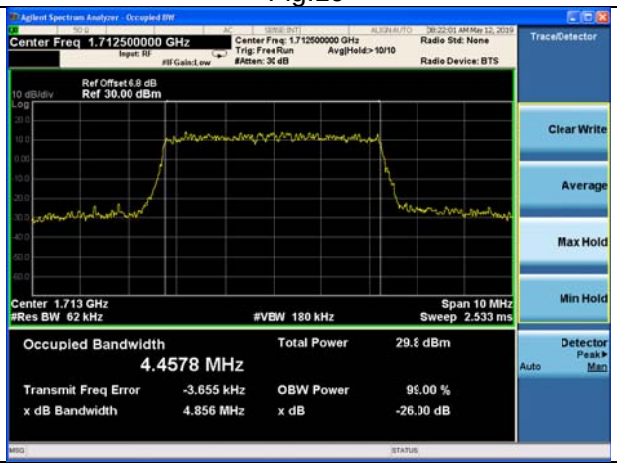


Fig.21

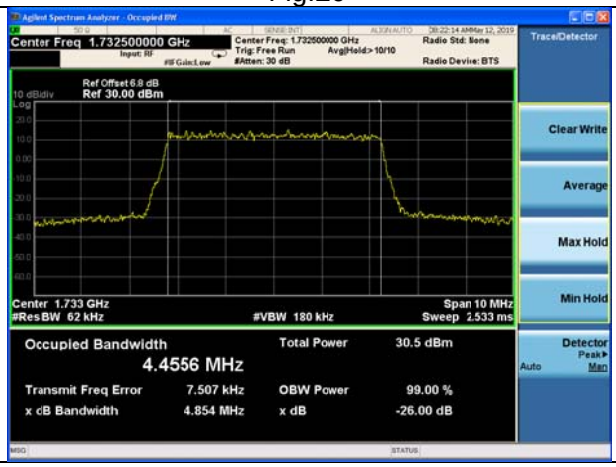


Fig.22

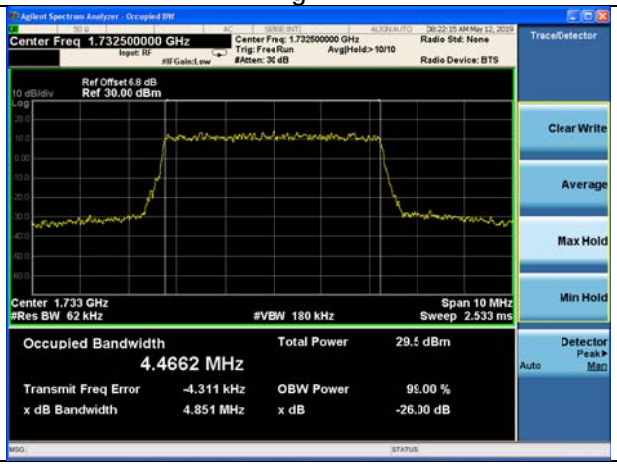


Fig.23

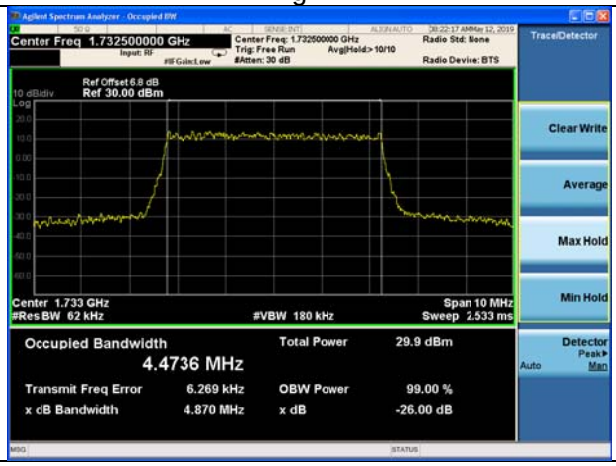


Fig.24

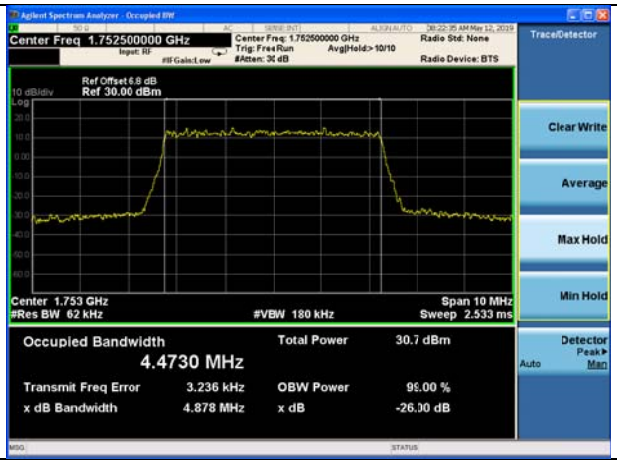


Fig.25

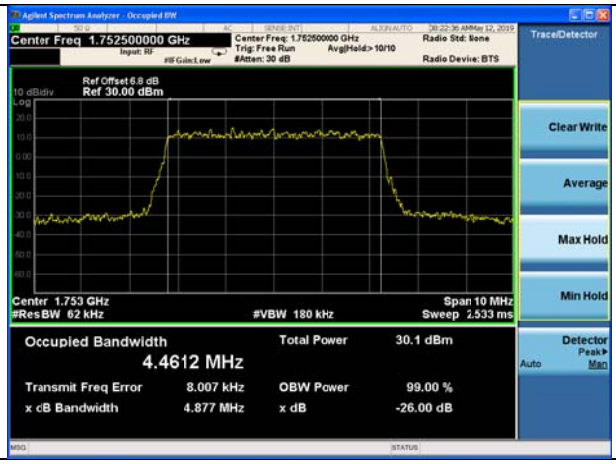


Fig.26

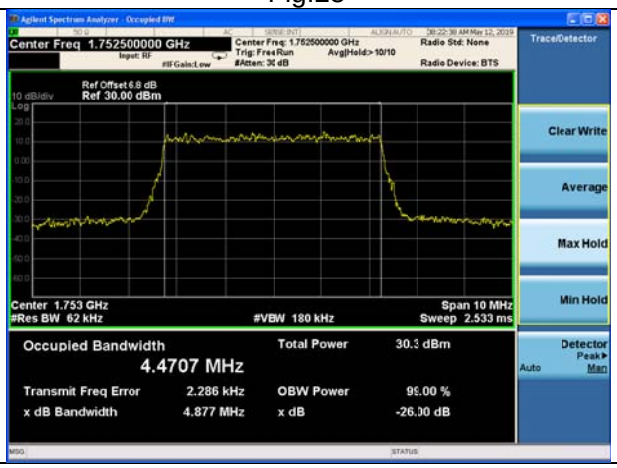


Fig.27

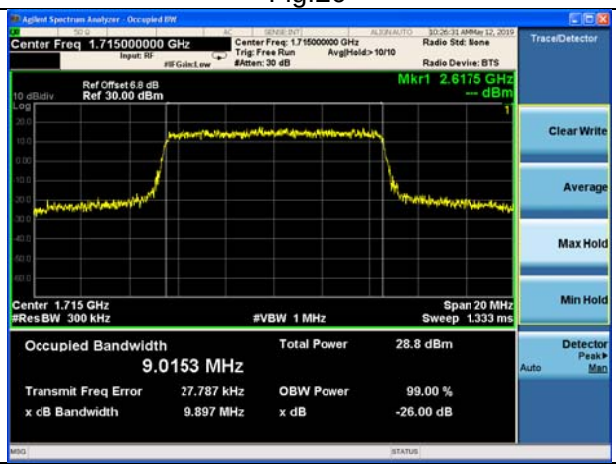


Fig.28

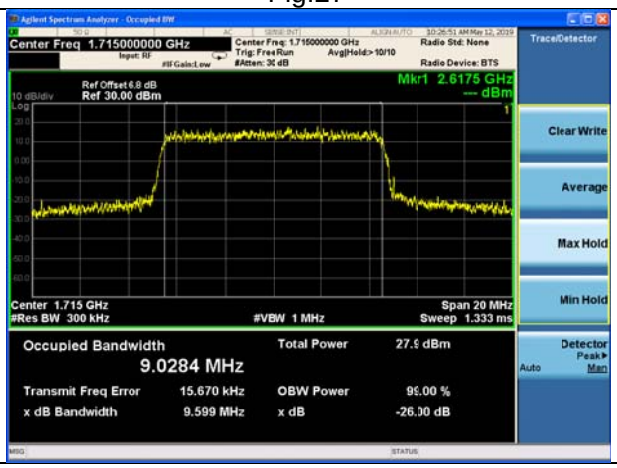


Fig.29

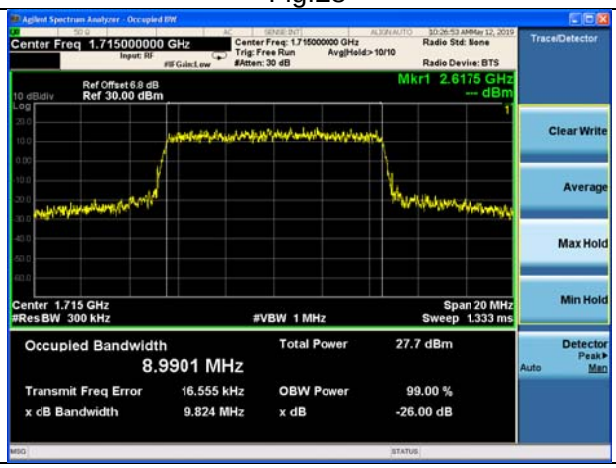


Fig.30

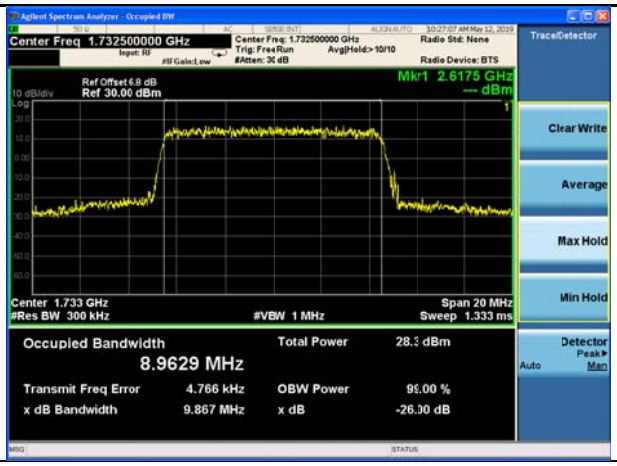


Fig.31

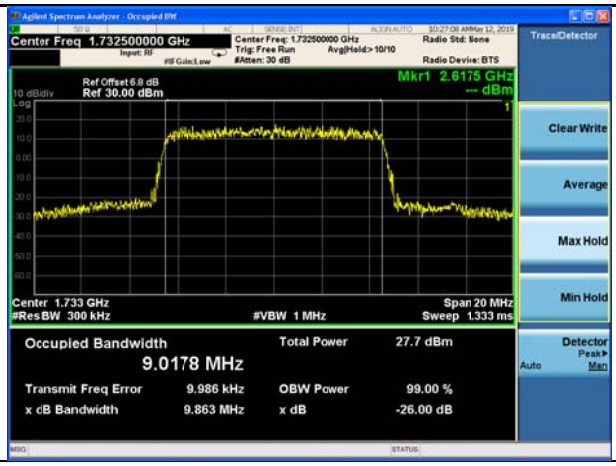


Fig.32

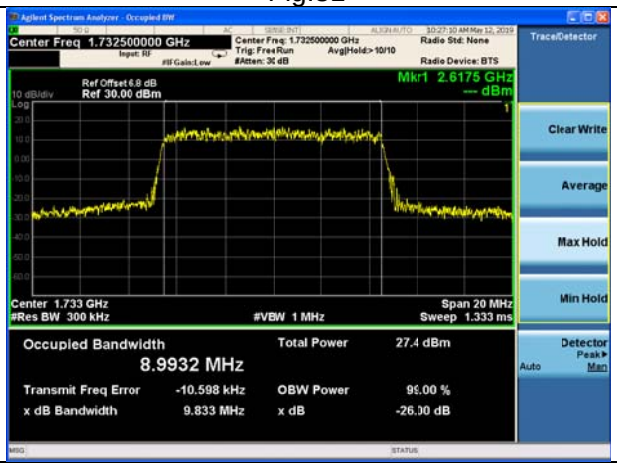


Fig.33

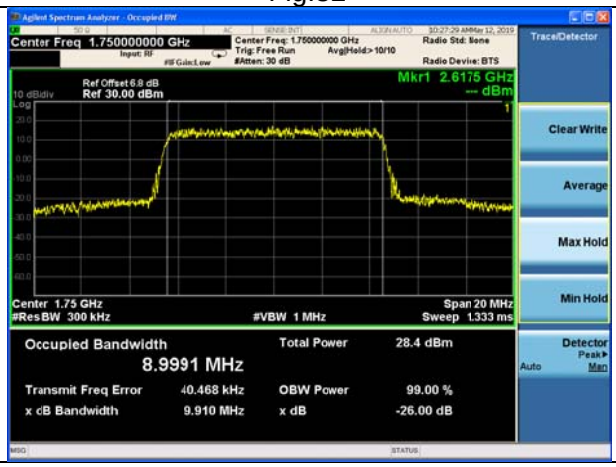
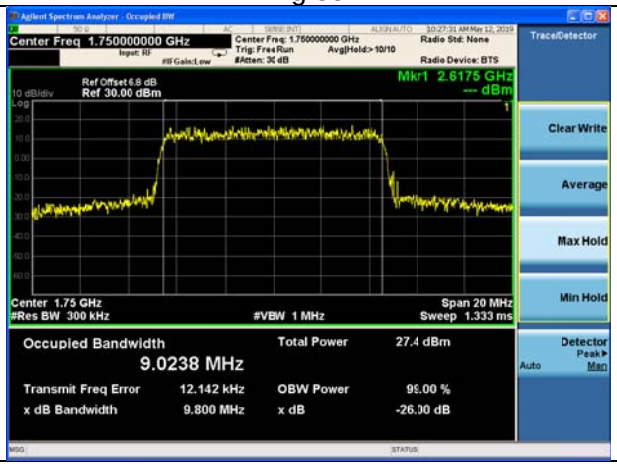


Fig.34



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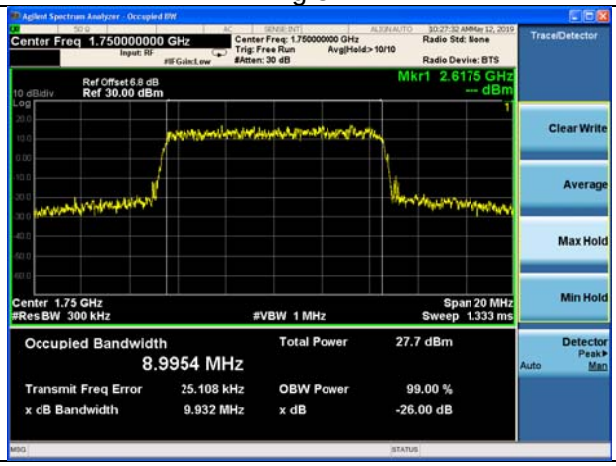

Fig.36

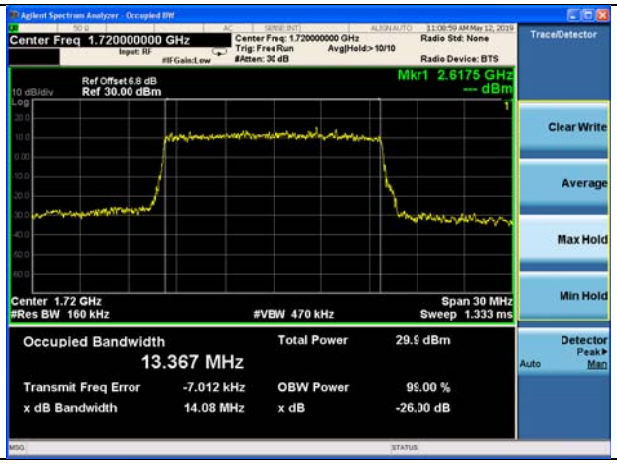

Fig.37

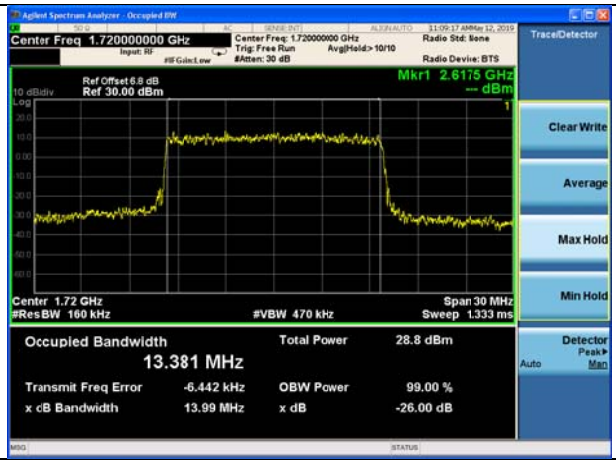

Fig.38

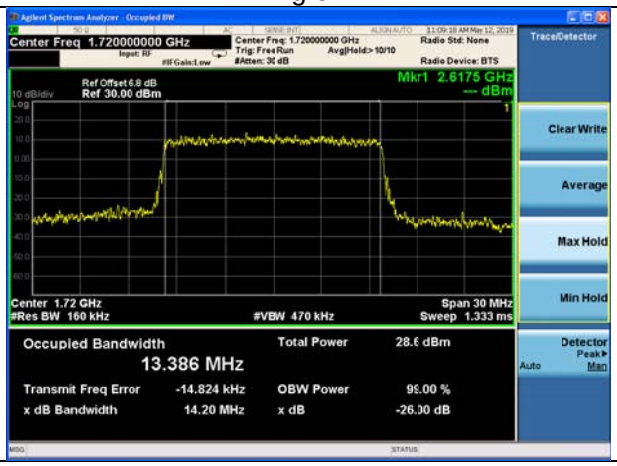

Fig.39

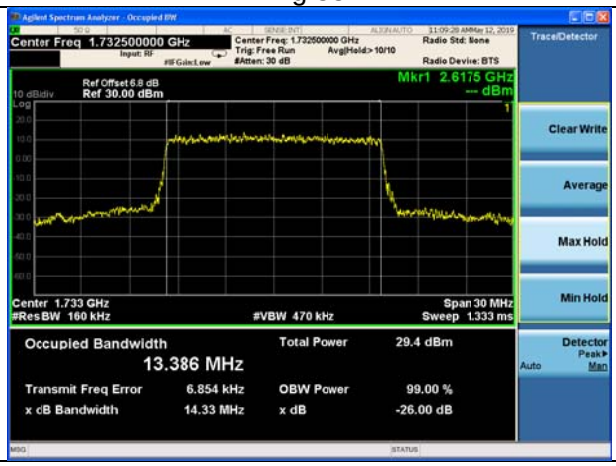

Fig.40

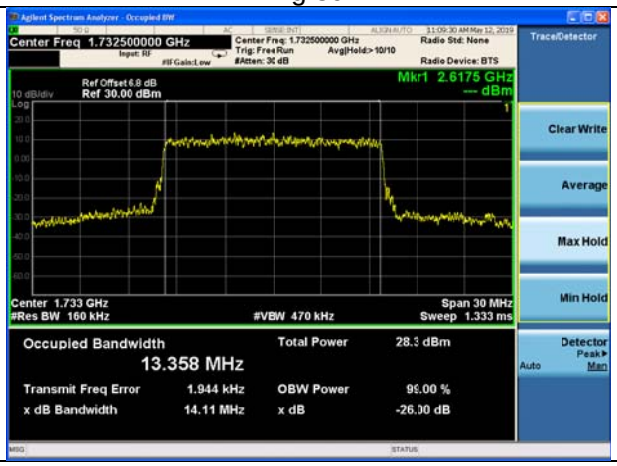

Fig.41

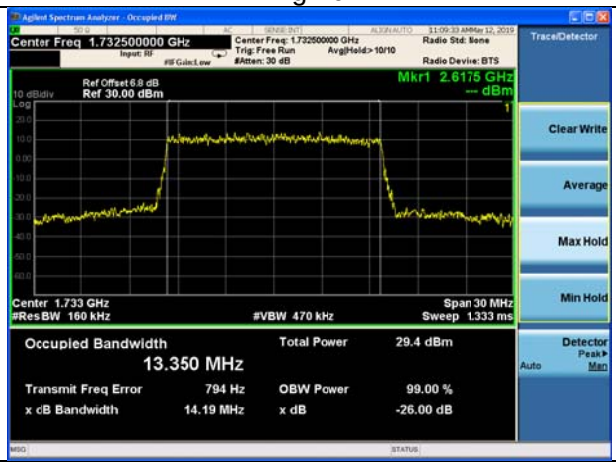

Fig.42

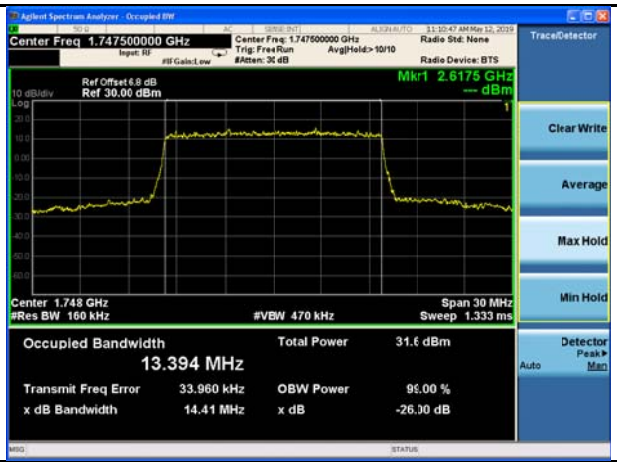

Fig.43

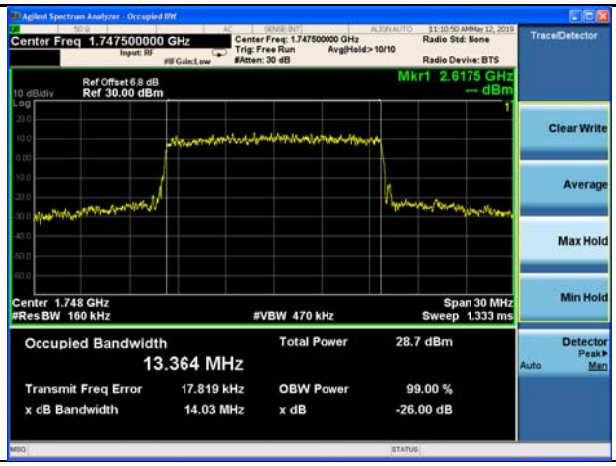

Fig.44

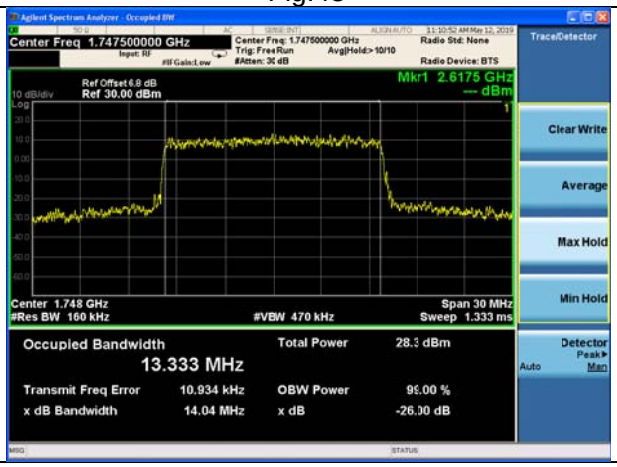

Fig.45

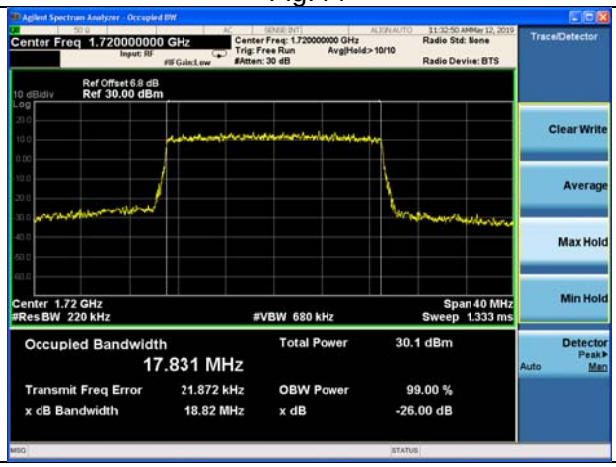

Fig.46

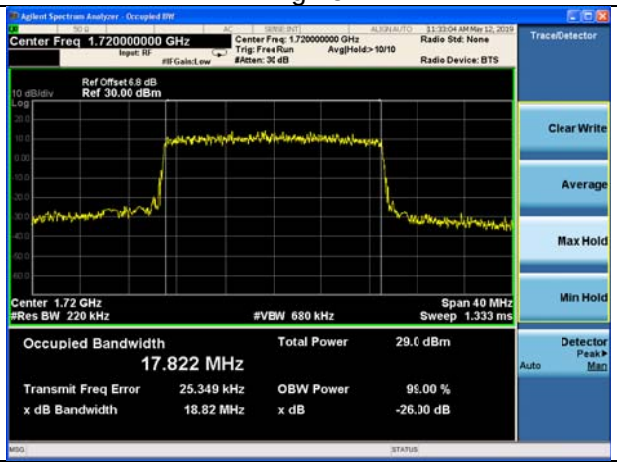

Fig.47

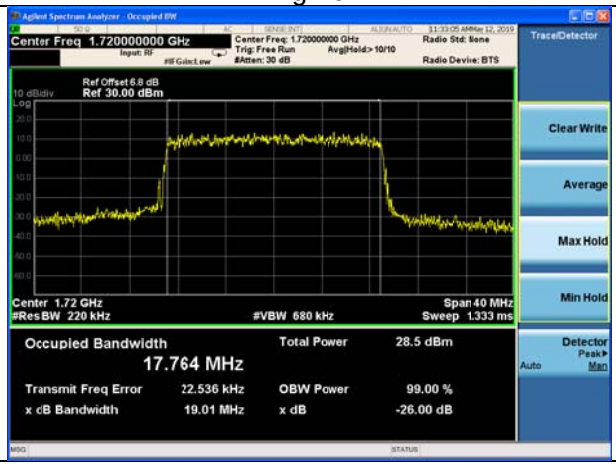

Fig.48

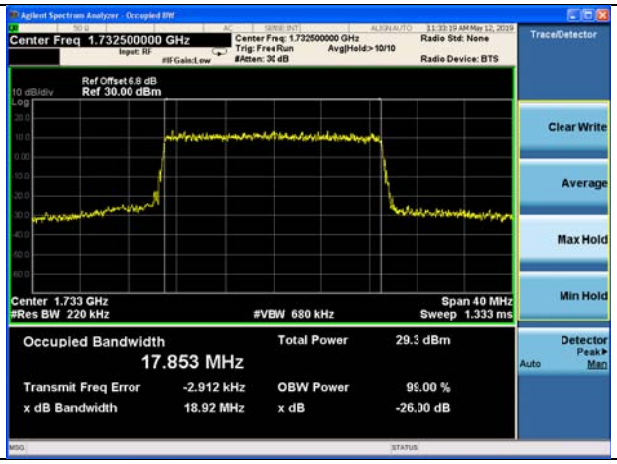

Fig.49

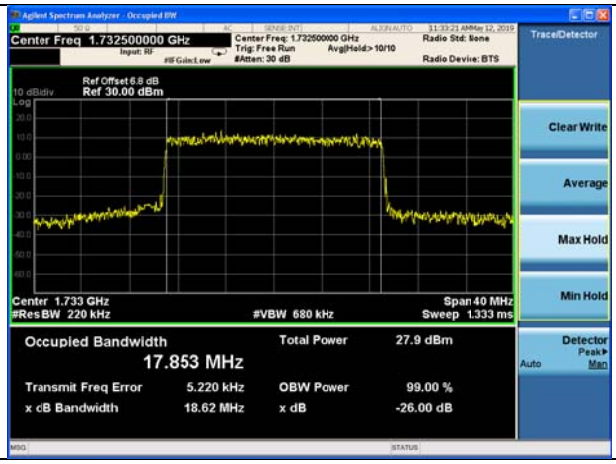

Fig.50

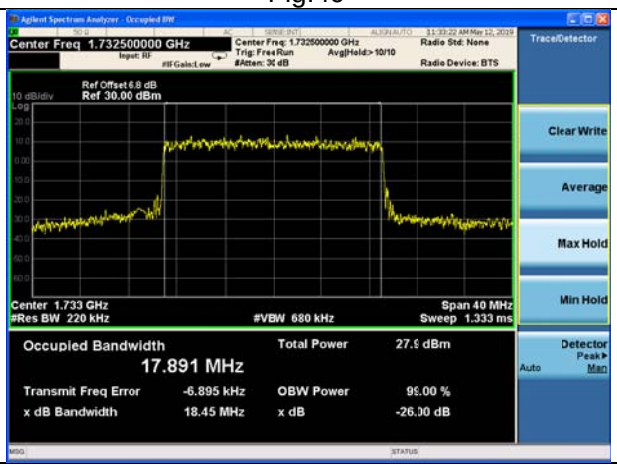

Fig.51

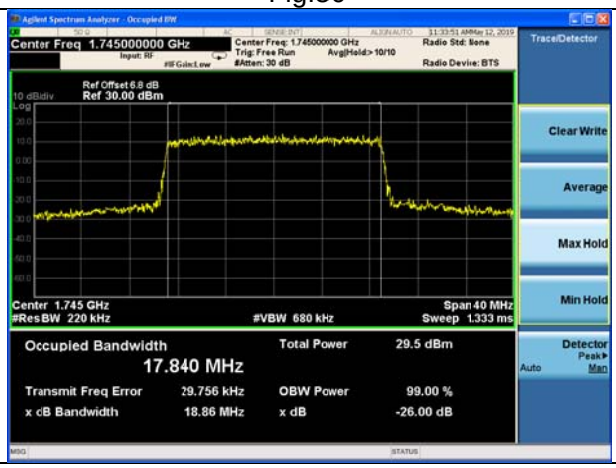

Fig.52

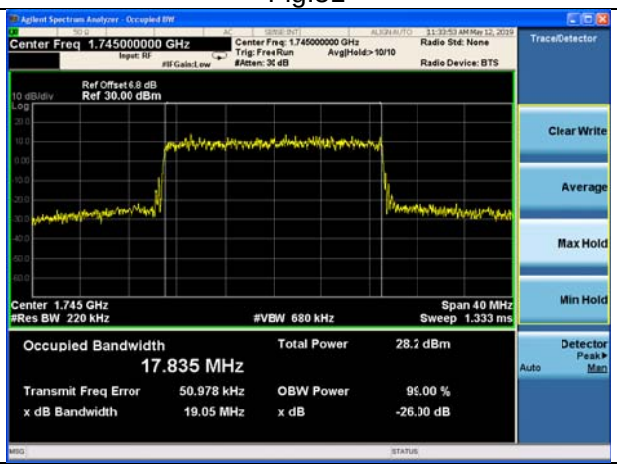

Fig.53

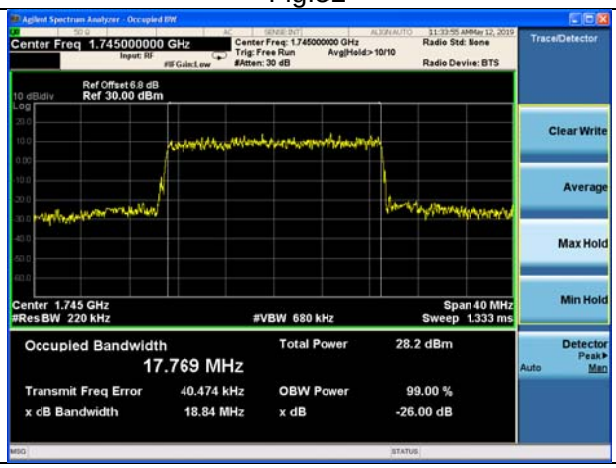

Fig.54

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

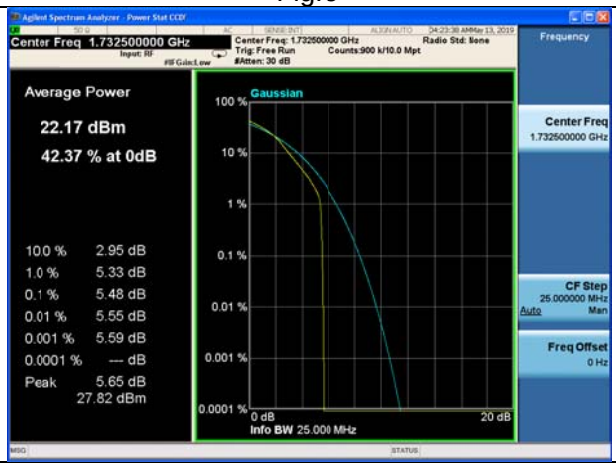

Fig.8

Fig.9

Fig.10

Fig.11

Fig.12

Fig.13

Fig.14

Fig.15

Fig.16


Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 1.732500000 GHz
Center Freq: 1.732500000 GHz
Trig: Free Run
#Atten: 30 dB
Counts:315 k/10.0 Mpt
Radio Std: None
Frequency
Average Power
22.38 dBm
43.86 % at 0dB
10.0 % 2.86 dB
1.0 % 4.88 dB
0.1 % 5.03 dB
0.01 % 5.08 dB
0.001 % 5.11 dB
0.0001 % --- dB
Peak 5.23 dB
27.61 dBm
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0 dB
20 dB
Info BW 25.000 MHz
Center Freq
1.732500000 GHz
CF Step
25.000000 MHz
Auto Man
Freq Offset
0 Hz
MSG
STATUS

Fig.17


Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 1.732500000 GHz
Center Freq: 1.732500000 GHz
Trig: Free Run
#Atten: 30 dB
Counts:225 k/10.0 Mpt
Radio Std: None
Frequency
Average Power
22.29 dBm
42.98 % at 0dB
10.0 % 2.89 dB
1.0 % 4.88 dB
0.1 % 5.11 dB
0.01 % 5.17 dB
0.001 % 5.19 dB
0.0001 % --- dB
Peak 5.29 dB
27.58 dBm
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0 dB
20 dB
Info BW 25.000 MHz
Center Freq
1.732500000 GHz
CF Step
25.000000 MHz
Auto Man
Freq Offset
0 Hz
MSG
STATUS

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
	1732.5	20175	20	1	0	Fig.2
	1745	20300	20	1	0	Fig.3

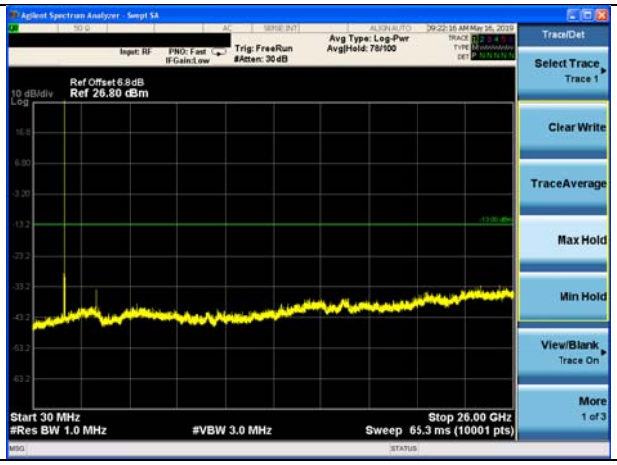

Fig.1

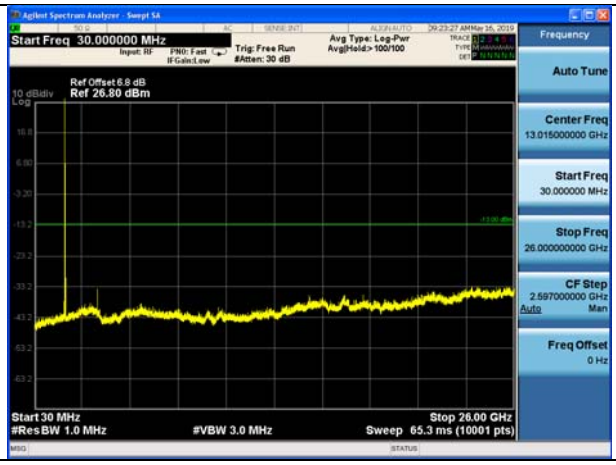

Fig.2

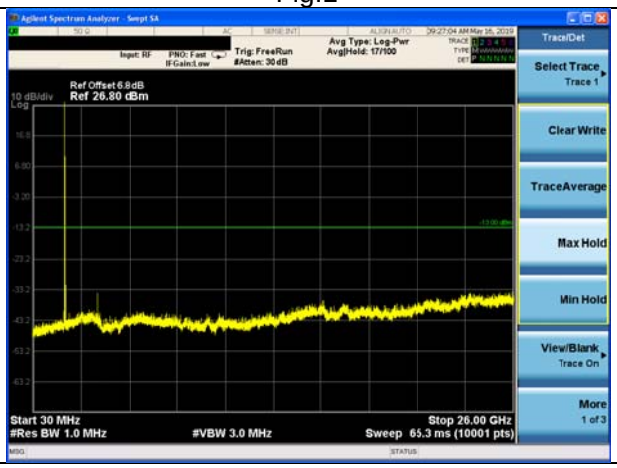

Fig3

5 Band Edges Compliance

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

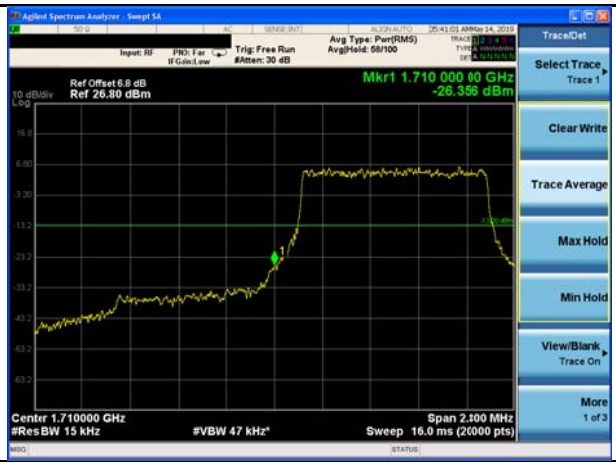

Fig.2

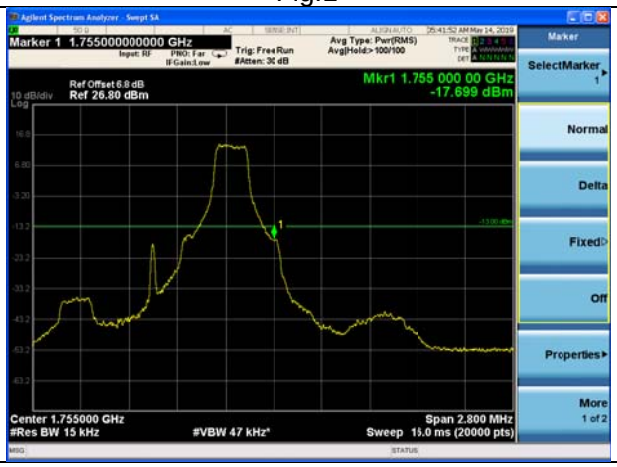

Fig.3

Fig.4

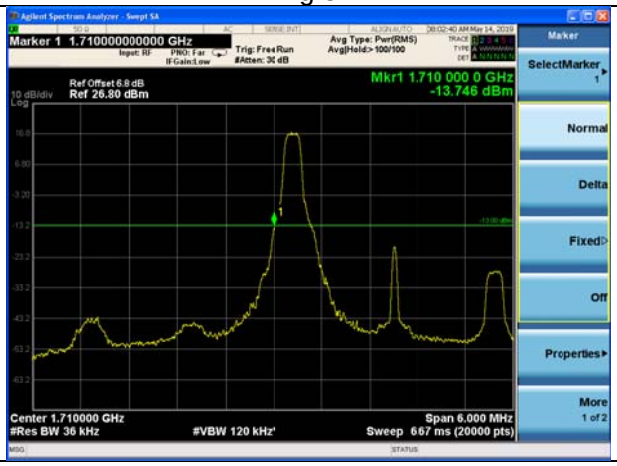

Fig.5

Fig.6

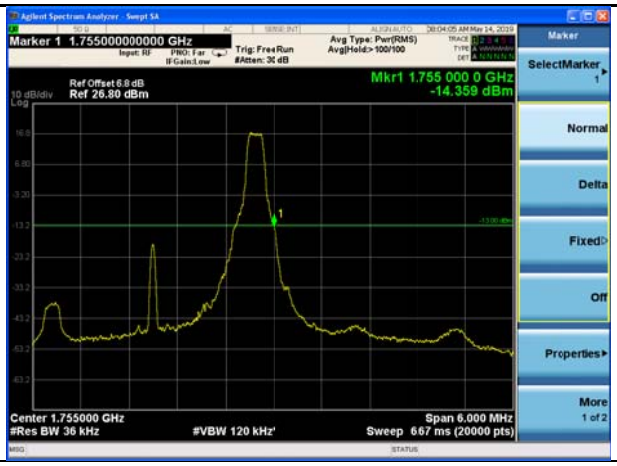

Fig.7

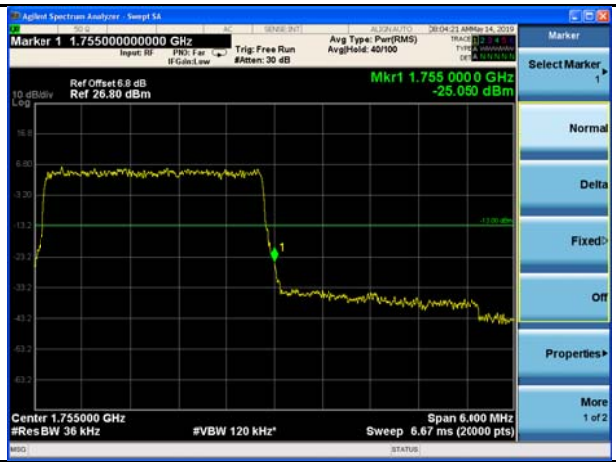

Fig.8

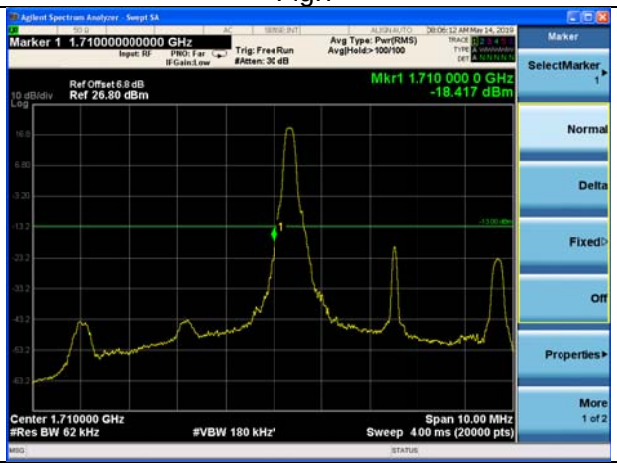

Fig.9

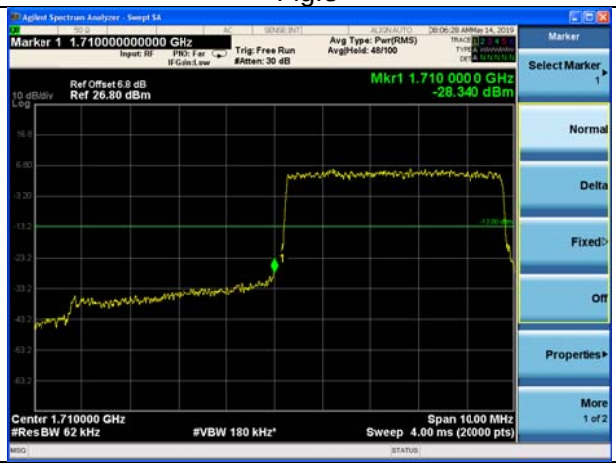

Fig.10

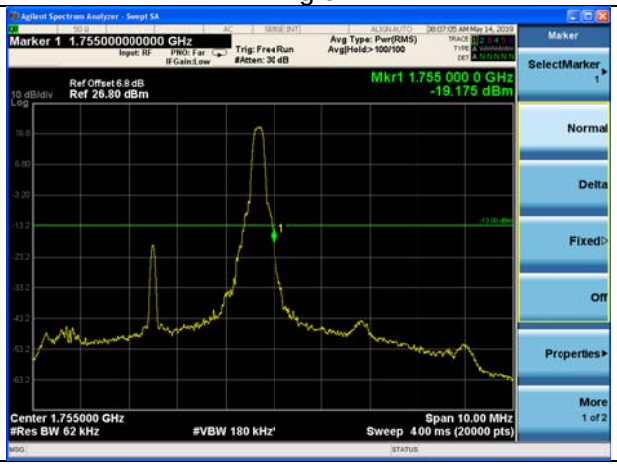

Fig.11

Fig.12

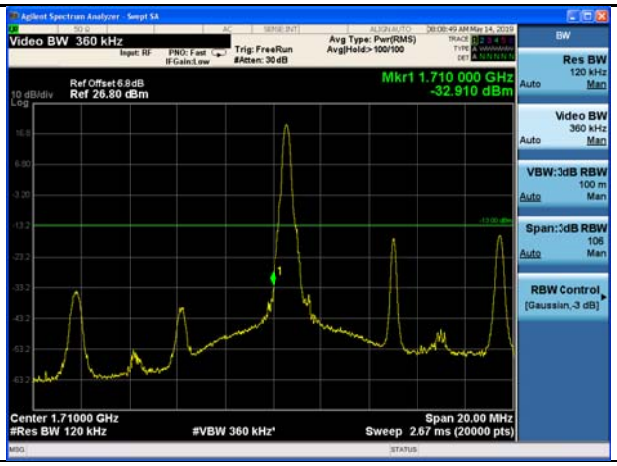

Fig.13

Fig.14

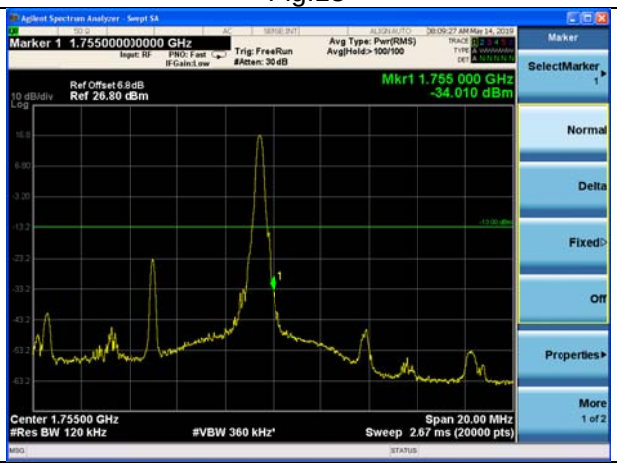

Fig.15

Fig.16

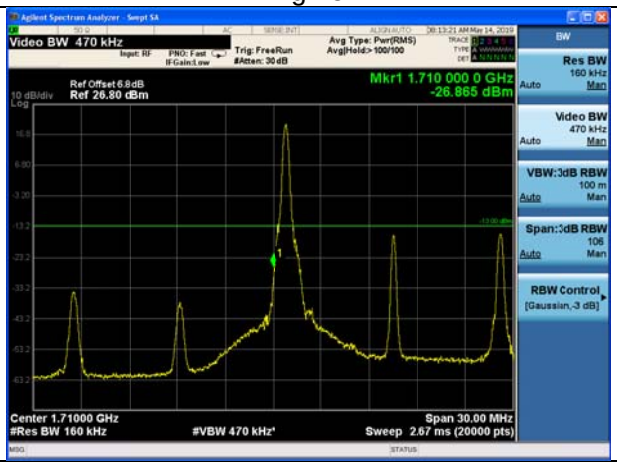

Fig.17

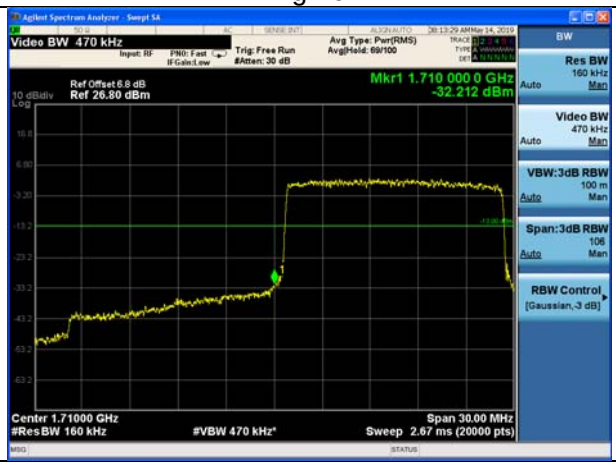

Fig.18

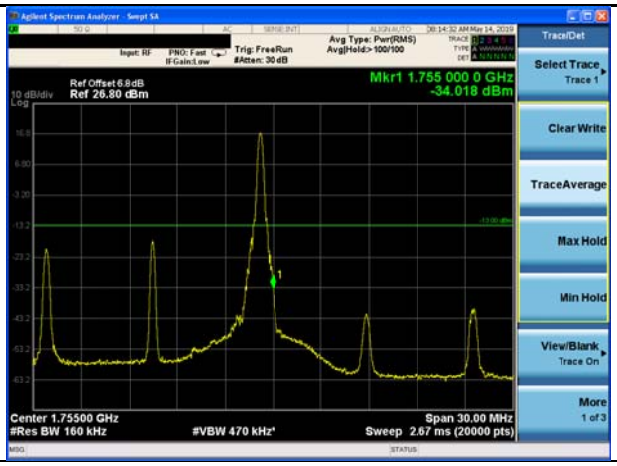

Fig.19

Fig.20

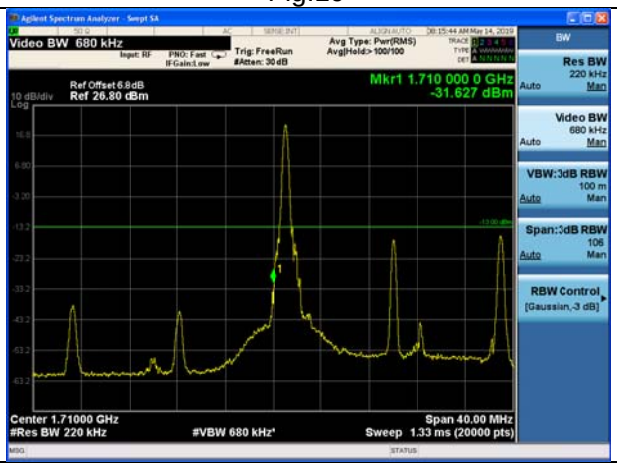

Fig.21

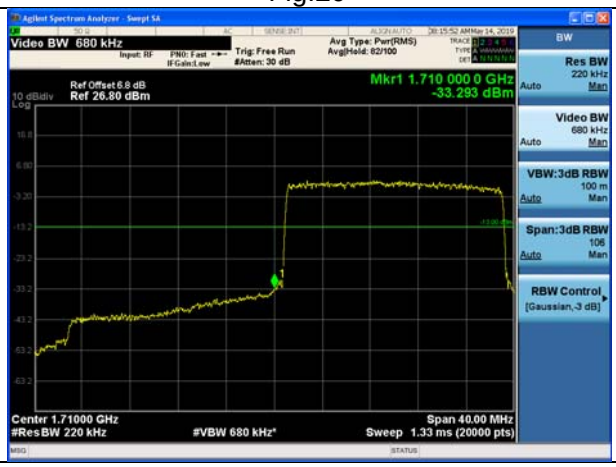

Fig.22

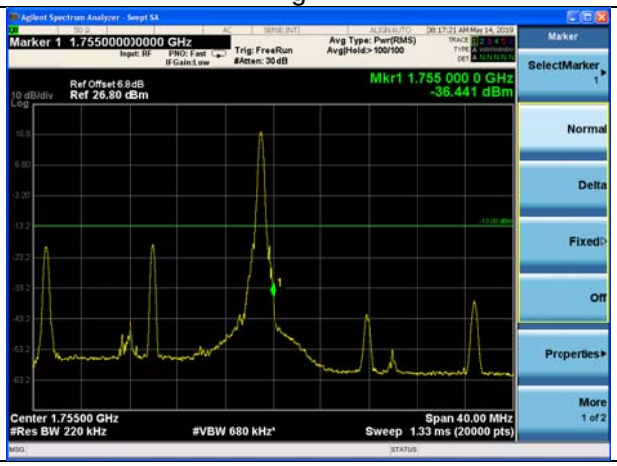

Fig.23

Fig.24

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band4 Low Channel					
		1.4M	3M	5M	10M	15M	20M
-10	NV	0.122	0.006	0.089	0.095	0.017	0.155
0	NV	0.143	0.094	0.005	0.036	0.102	0.101
+10	NV	0.087	0.042	0.072	0.078	0.085	0.074
+20	NV	0.043	0.016	0.140	0.053	0.075	0.085
+30	NV	0.034	0.024	0.117	0.033	0.007	0.017
+40	NV	0.125	0.053	0.065	0.107	0.067	0.094
+50	NV	0.066	0.075	0.042	0.053	0.089	0.075
+20	LV	0.046	0.044	0.030	0.012	0.007	0.055
+20	HV	0.060	0.085	0.052	0.062	0.035	0.103

Temperature(°C)	Voltage	Test Result (ppm) Band4 High Channel					
		1.4M	3M	5M	10M	15M	20M
-10	NV	0.137	0.080	0.006	0.073	0.023	0.151
0	NV	0.043	0.095	0.122	0.113	0.136	0.118
+10	NV	0.094	0.102	0.068	0.073	0.068	0.031
+20	NV	0.016	0.088	0.064	0.104	0.103	0.110
+30	NV	0.119	0.016	0.127	0.042	0.022	0.155
+40	NV	0.024	0.036	0.136	0.062	0.008	0.053
+50	NV	0.080	0.044	0.050	0.073	0.033	0.086
+20	LV	0.064	0.045	0.042	0.092	0.096	0.142
+20	HV	0.016	0.059	0.140	0.037	0.000	0.005