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	23.04
				1	5	22.97
				3	2	22.10
				6	0	22.03
	1732.5	20175		1	0	23.35
				1	5	23.31
				3	2	22.27
				6	0	22.25
	1754.3	20393		1	0	23.24
				1	5	23.14
				3	2	22.25
				6	0	22.12
16QAM	1710.7	19957	1.4	1	0	21.83
				1	5	21.71
				3	2	20.81
				6	0	20.87
	1732.5	20175		1	0	22.10
				1	5	22.06
				3	2	21.04
				6	0	20.98
	1754.3	20393		1	0	21.96
				1	5	21.85
				3	2	20.91
				6	0	20.87
64QAM	1710.7	19957	1.4	1	0	21.79
				1	5	21.75
				3	2	20.83
				6	0	20.80
	1732.5	20175		1	0	22.17
				1	5	22.10
				3	2	21.09
				6	0	21.01
	1754.3	20393		1	0	22.02
				1	5	21.87
				3	2	20.98
				6	0	20.88

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1711.5	19965	3	1	0	23.11
				1	14	22.99
				8	4	22.10
				15	0	22.08
	1732.5	20175		1	0	23.39
				1	14	23.26
				8	4	22.27
				15	0	22.24
	1753.5	20385		1	0	23.28
				1	14	23.19
				8	4	22.23
				15	0	22.14
16QAM	1711.5	19965	3	1	0	21.79
				1	14	21.75
				8	4	20.85
				15	0	20.80
	1732.5	20175		1	0	22.14
				1	14	22.02
				8	4	21.01
				15	0	21.02
	1753.5	20385		1	0	22.00
				1	14	21.94
				8	4	20.93
				15	0	20.91
64QAM	1711.5	19965	3	1	0	21.81
				1	14	21.74
				8	4	20.85
				15	0	20.86
	1732.5	20175		1	0	22.10
				1	14	22.02
				8	4	21.03
				15	0	21.00
	1753.5	20385		1	0	21.96
				1	14	21.92
				8	4	20.96
				15	0	20.90

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1712.5	19975	5	1	0	23.14
				1	24	23.08
				12	6	22.22
				25	0	22.10
	1732.5	20175		1	0	23.36
				1	24	23.31
				12	6	22.36
				25	0	22.27
	1752.5	20375		1	0	23.35
				1	24	23.18
				12	6	22.33
				25	0	22.22
16QAM	1712.5	19975	5	1	0	21.81
				1	24	21.82
				12	6	20.90
				25	0	20.85
	1732.5	20175		1	0	22.17
				1	24	22.10
				12	6	21.04
				25	0	21.02
	1752.5	20375		1	0	22.04
				1	24	21.98
				12	6	20.91
				25	0	20.93
64QAM	1712.5	19975	5	1	0	21.89
				1	24	21.80
				12	6	20.82
				25	0	20.86
	1732.5	20175		1	0	22.17
				1	24	22.14
				12	6	21.06
				25	0	20.97
	1752.5	20375		1	0	21.99
				1	24	21.95
				12	6	21.05
				25	0	20.92

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1715	20000	10	1	0	23.19
				1	49	23.09
				24	12	22.27
				50	0	22.20
	1732.5	20175		1	0	23.45
				1	49	23.41
				24	12	22.45
				50	0	22.39
	1750	20350		1	0	23.42
				1	49	23.35
				24	12	22.38
				50	0	22.27
16QAM	1715	20000	10	1	0	21.91
				1	49	21.82
				24	12	20.91
				50	0	20.99
	1732.5	20175		1	0	22.29
				1	49	22.17
				24	12	21.18
				50	0	21.16
	1750	20350		1	0	22.08
				1	49	21.99
				24	12	21.04
				50	0	21.00
64QAM	1715	20000	10	1	0	21.91
				1	49	21.84
				24	12	20.96
				50	0	20.97
	1732.5	20175		1	0	22.24
				1	49	22.15
				24	12	21.19
				50	0	21.16
	1750	20350		1	0	22.09
				1	49	22.07
				24	12	21.10
				50	0	20.97

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1717.5	20025	15	1	0	23.22
				1	74	23.20
				40	18	22.26
				75	0	22.20
	1732.5	20175		1	0	23.52
				1	74	23.40
				40	18	22.46
				75	0	22.43
	1747.5	20325		1	0	23.40
				1	74	23.33
				40	18	22.35
				75	0	22.28
16QAM	1717.5	20025	15	1	0	21.95
				1	74	21.87
				40	18	21.01
				75	0	21.04
	1732.5	20175		1	0	22.29
				1	74	22.18
				40	18	21.16
				75	0	21.15
	1747.5	20325		1	0	22.18
				1	74	22.09
				40	18	21.03
				75	0	21.09
64QAM	1717.5	20025	15	1	0	21.93
				1	74	21.85
				40	18	21.01
				75	0	20.95
	1732.5	20175		1	0	22.31
				1	74	22.25
				40	18	21.23
				75	0	21.16
	1747.5	20325		1	0	22.14
				1	74	22.08
				40	18	21.05
				75	0	21.03

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1720	20050	20	1	0	23.34
				1	99	23.27
				50	25	22.37
				100	0	22.33
	1732.5	20175		1	0	23.62
				1	99	23.55
				50	25	22.57
				100	0	22.51
	1745	20300		1	0	23.53
				1	99	23.44
				50	25	22.47
				100	0	22.42
16QAM	1720	20050	20	1	0	22.08
				1	99	22.00
				50	25	21.09
				100	0	21.10
	1732.5	20175		1	0	22.37
				1	99	22.28
				50	25	21.27
				100	0	21.24
	1745	20300		1	0	22.25
				1	99	22.15
				50	25	21.17
				100	0	21.15
64QAM	1720	20050	20	1	0	22.06
				1	99	21.99
				50	25	21.08
				100	0	21.09
	1732.5	20175		1	0	22.40
				1	99	22.33
				50	25	21.33
				100	0	21.24
	1745	20300		1	0	22.25
				1	99	22.18
				50	25	21.20
				100	0	21.14

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	1.0830	Fig.1	1.0838	Fig.2	1.0839	Fig.3
	1732.5	20175		6	0	1.0835	Fig.4	1.0801	Fig.5	1.0813	Fig.6
	1754.3	20393		6	0	1.0830	Fig.7	1.0828	Fig.8	1.0822	Fig.9
	1711.5	19965	3	15	0	2.6798	Fig.10	2.6852	Fig.11	2.6774	Fig.12
	1732.5	20175		15	0	2.6789	Fig.13	2.6810	Fig.14	2.6796	Fig.15
	1753.5	20385		15	0	2.6803	Fig.16	2.6809	Fig.17	2.6772	Fig.18
	1712.5	19975	5	25	0	4.4747	Fig.19	4.4725	Fig.20	4.4841	Fig.21
	1732.5	20175		25	0	4.4737	Fig.22	4.4795	Fig.23	4.4722	Fig.24
	1752.5	20375		25	0	4.4760	Fig.25	4.4716	Fig.26	4.4695	Fig.27
	1715	20000	10	50	0	8.9377	Fig.28	8.9464	Fig.29	8.9401	Fig.30
	1732.5	20175		50	0	8.9394	Fig.31	8.9307	Fig.32	8.9198	Fig.33
	1750	20350		50	0	8.9375	Fig.34	8.9317	Fig.35	8.9373	Fig.36
	1717.5	20025	15	75	0	13.417	Fig.37	13.418	Fig.38	13.373	Fig.39
	1732.5	20175		75	0	13.412	Fig.40	13.415	Fig.41	13.377	Fig.42
	1747.5	20325		75	0	13.411	Fig.43	13.398	Fig.44	13.410	Fig.45
	1720	20050	20	100	0	17.836	Fig.46	17.824	Fig.47	17.821	Fig.48
	1732.5	20175		100	0	17.809	Fig.49	17.798	Fig.50	17.768	Fig.51
	1745	20300		100	0	17.837	Fig.52	17.809	Fig.53	17.821	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	1.260	Fig.1	1.253	Fig.2	1.254	Fig.3
	1732.5	20175		6	0	1.273	Fig.4	1.271	Fig.5	1.266	Fig.6
	1754.3	20393		6	0	1.258	Fig.7	1.261	Fig.8	1.242	Fig.9
	1711.5	19965	3	15	0	2.930	Fig.10	2.930	Fig.11	2.905	Fig.12
	1732.5	20175		15	0	2.936	Fig.13	2.945	Fig.14	2.931	Fig.15
	1753.5	20385		15	0	2.935	Fig.16	2.920	Fig.17	2.943	Fig.18
	1712.5	19975	5	25	0	4.957	Fig.19	4.928	Fig.20	4.940	Fig.21
	1732.5	20175		25	0	4.983	Fig.22	4.954	Fig.23	4.950	Fig.24
	1752.5	20375		25	0	4.954	Fig.25	4.902	Fig.26	4.973	Fig.27
	1715	20000	10	50	0	9.742	Fig.28	9.731	Fig.29	9.613	Fig.30
	1732.5	20175		50	0	9.729	Fig.31	9.653	Fig.32	9.770	Fig.33
	1750	20350		50	0	9.703	Fig.34	9.640	Fig.35	9.642	Fig.36
	1717.5	20025	15	75	0	14.45	Fig.37	14.35	Fig.38	14.39	Fig.39
	1732.5	20175		75	0	14.44	Fig.40	14.44	Fig.41	14.30	Fig.42
	1747.5	20325		75	0	14.49	Fig.43	14.37	Fig.44	14.37	Fig.45
	1720	20050	20	100	0	19.07	Fig.46	18.93	Fig.47	18.97	Fig.48
	1732.5	20175		100	0	19.21	Fig.49	18.74	Fig.50	19.19	Fig.51
	1745	20300		100	0	19.13	Fig.52	19.06	Fig.53	19.08	Fig.54

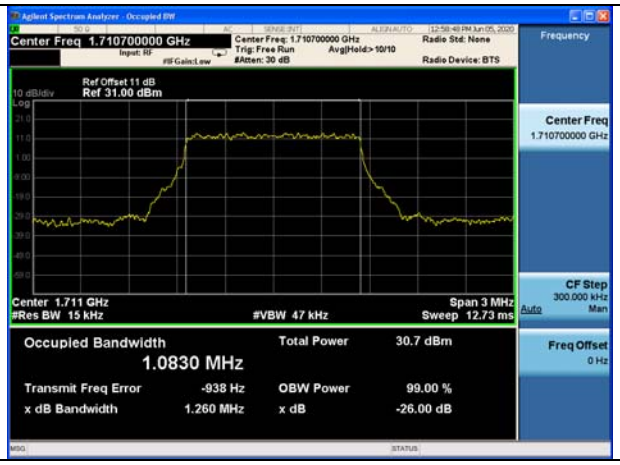

Fig.1

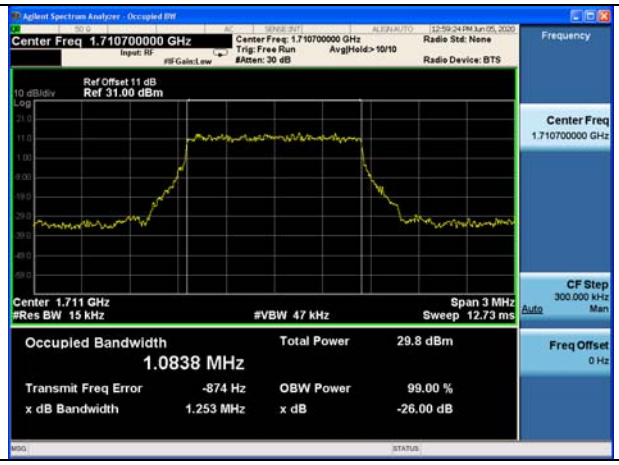

Fig.2

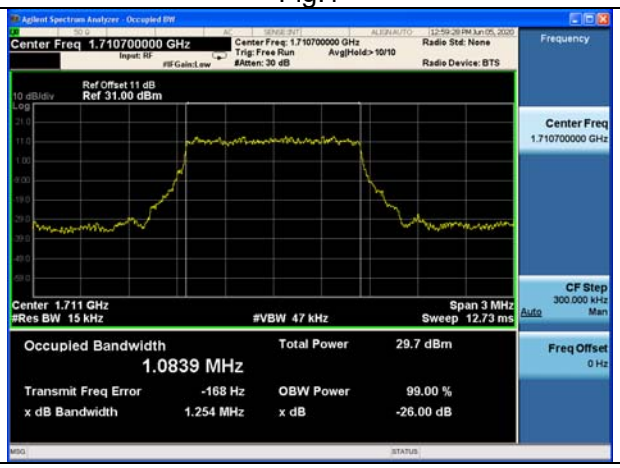

Fig.3

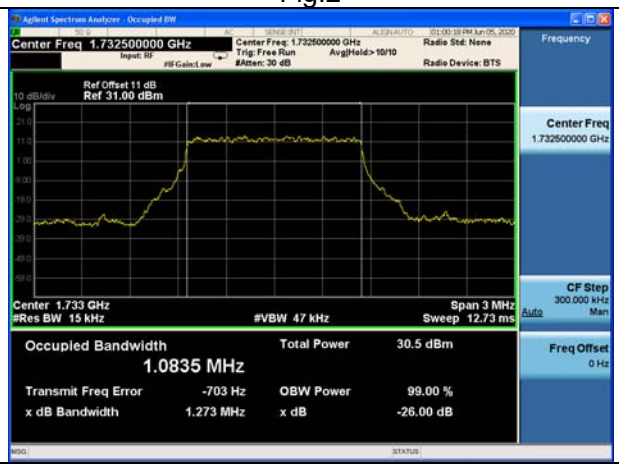

Fig.4

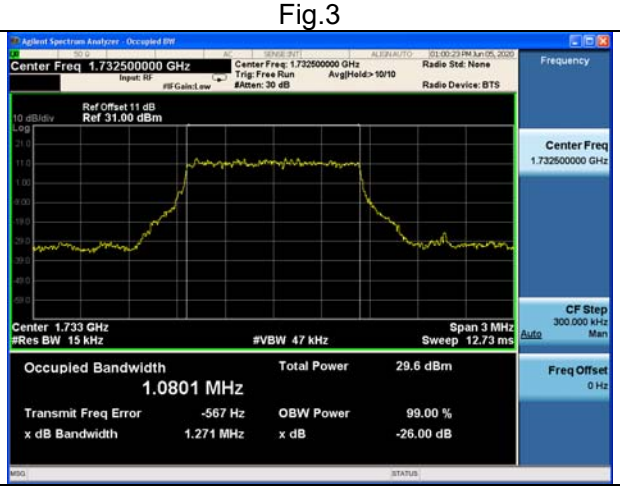

Fig.5

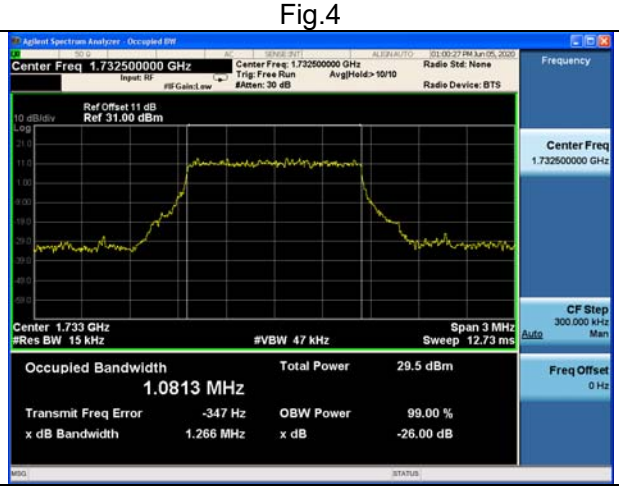

Fig.6

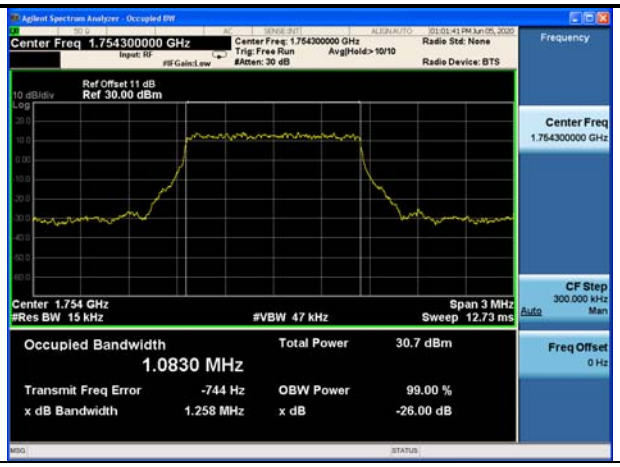

Fig.7

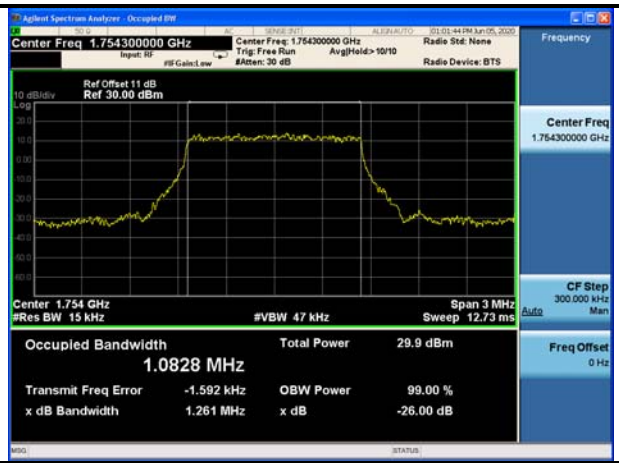

Fig.8

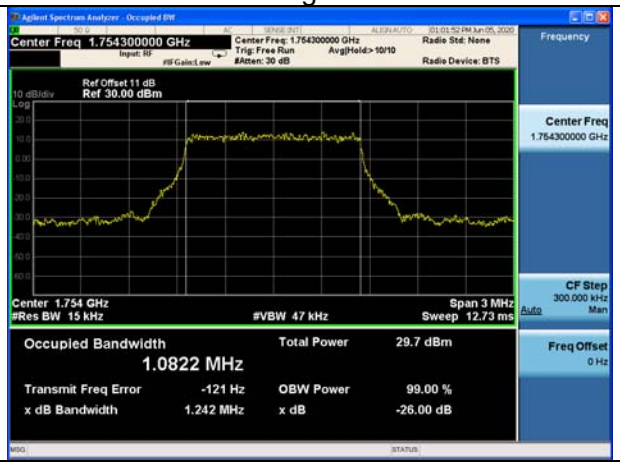

Fig.9

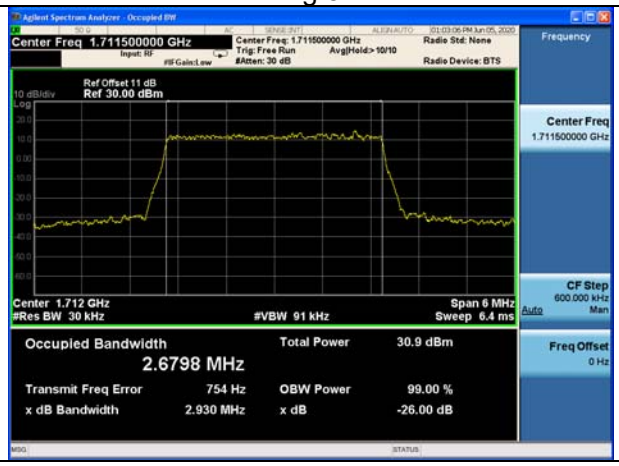

Fig.10

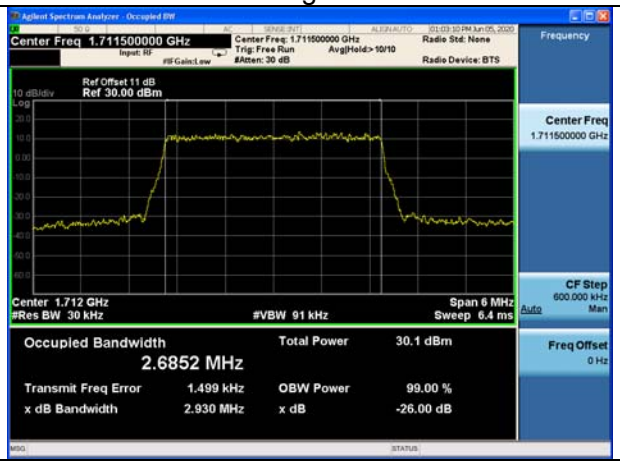

Fig.11

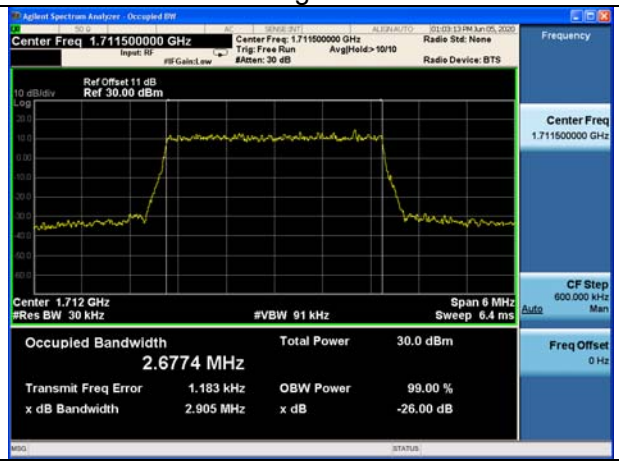

Fig.12

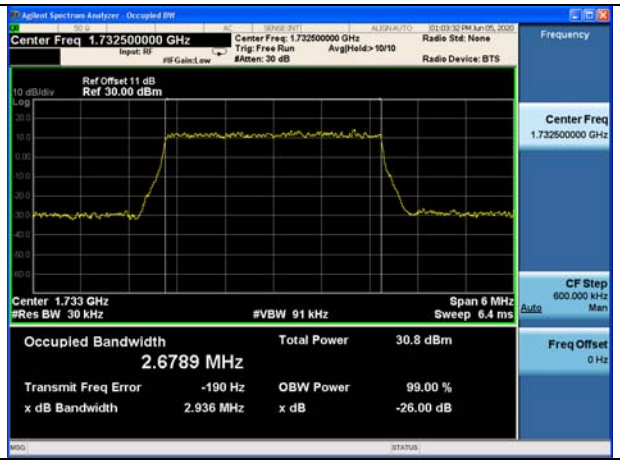

Fig.13

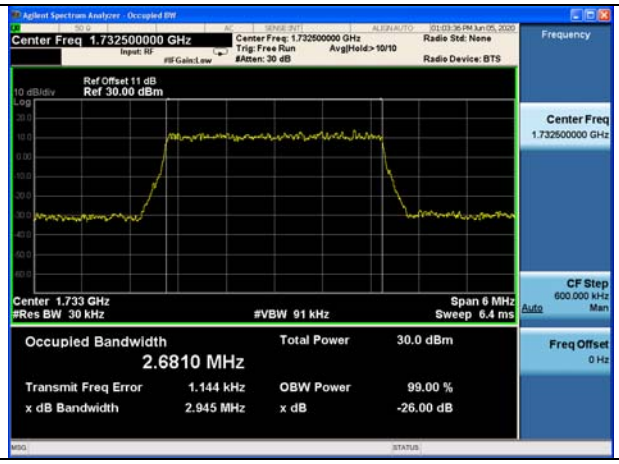

Fig.14

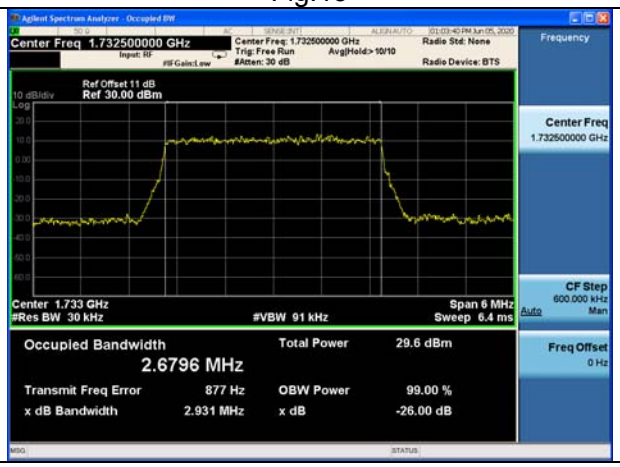

Fig.15

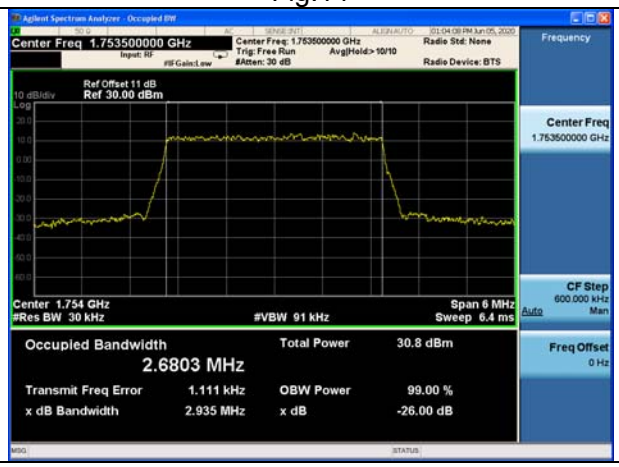

Fig.16

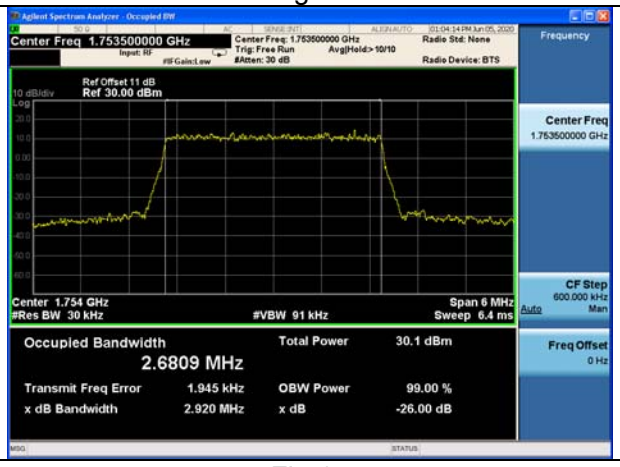

Fig.17

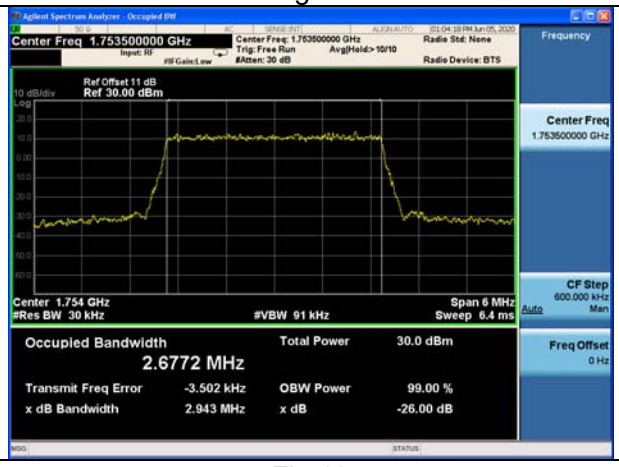

Fig.18

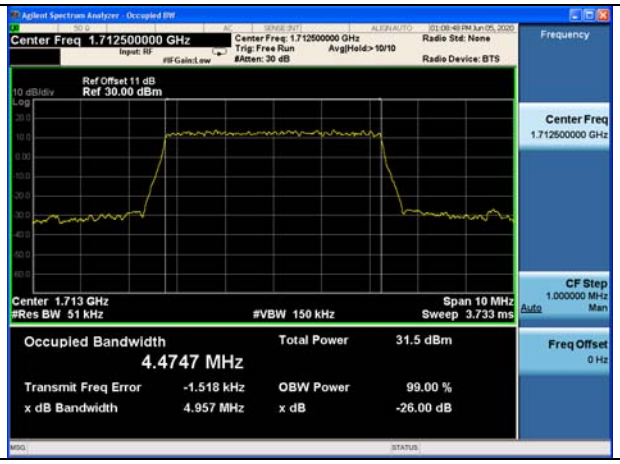

Fig.19

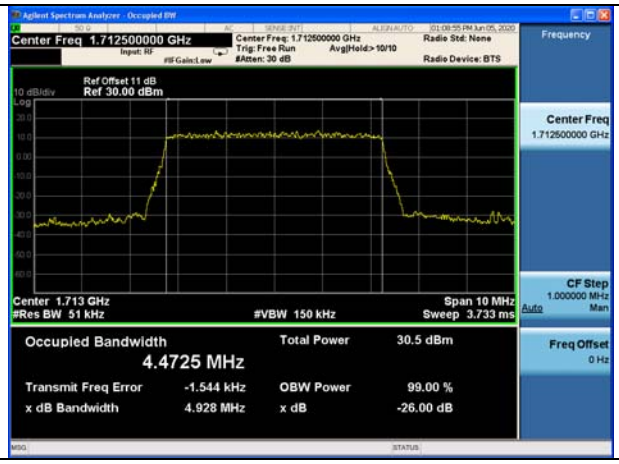

Fig.20

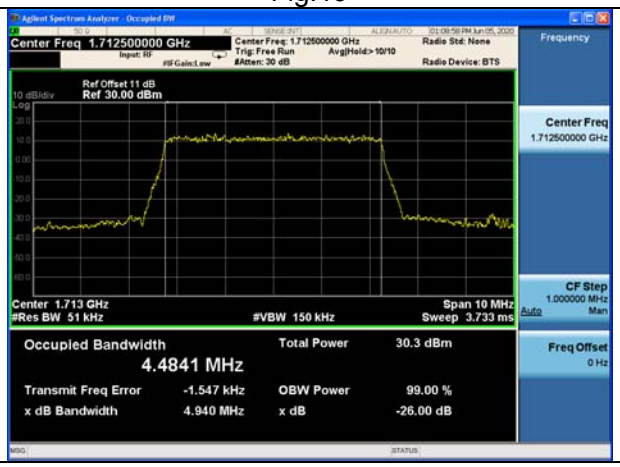

Fig.21

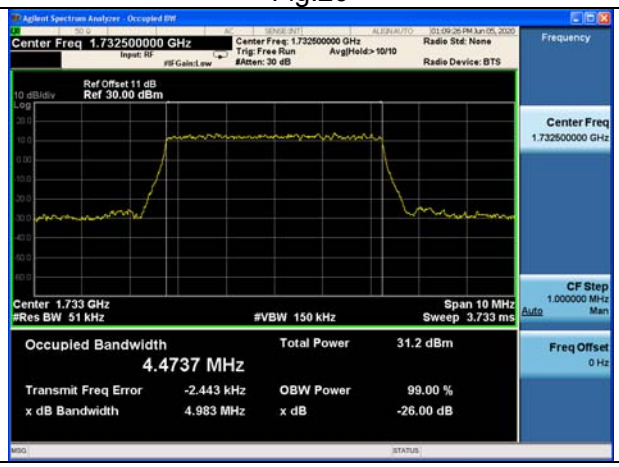

Fig.22

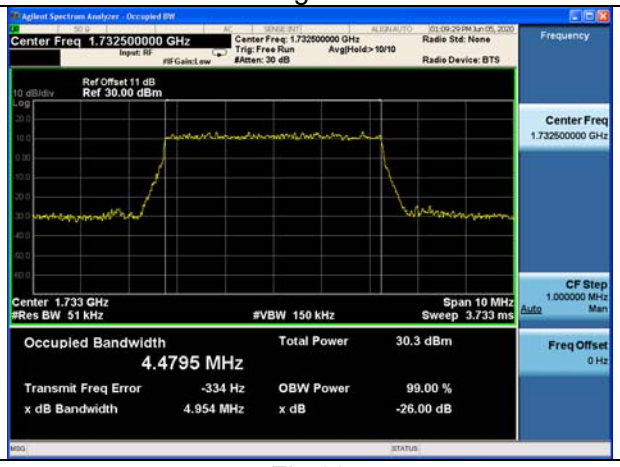

Fig.23

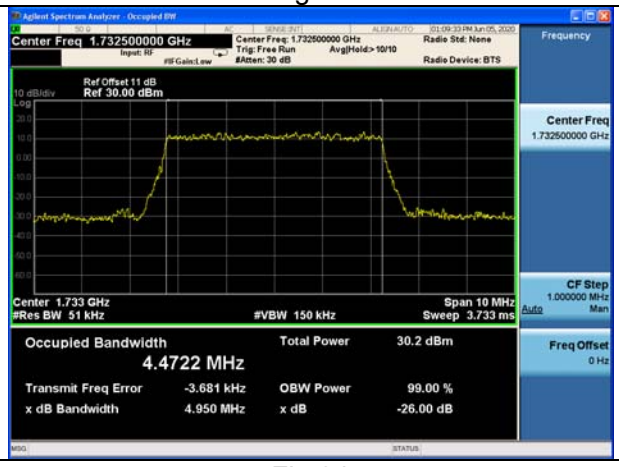

Fig.24

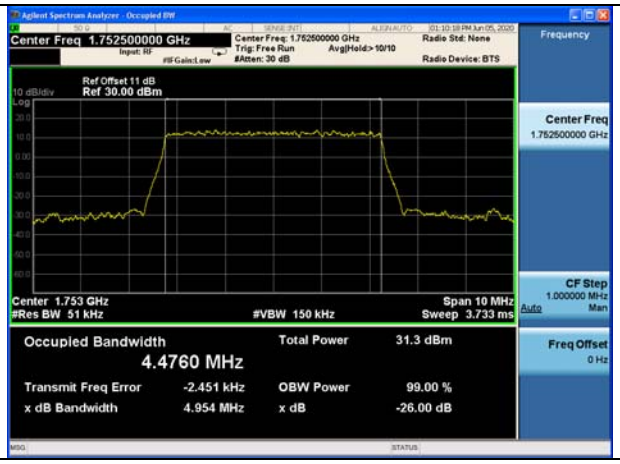

Fig.25

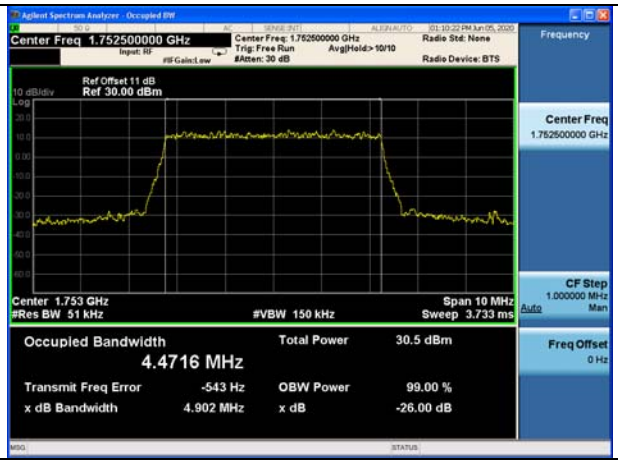

Fig.26

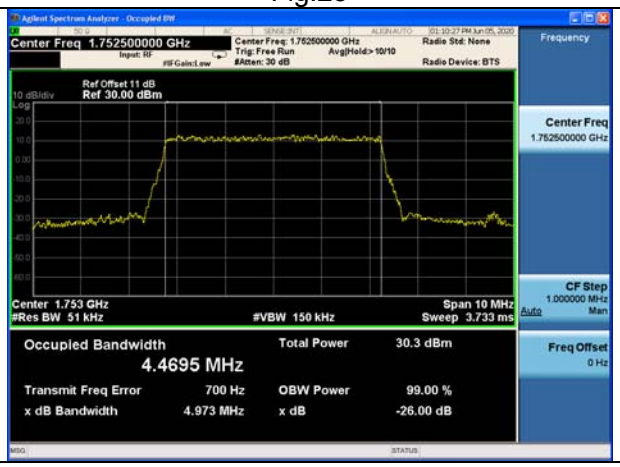

Fig.27

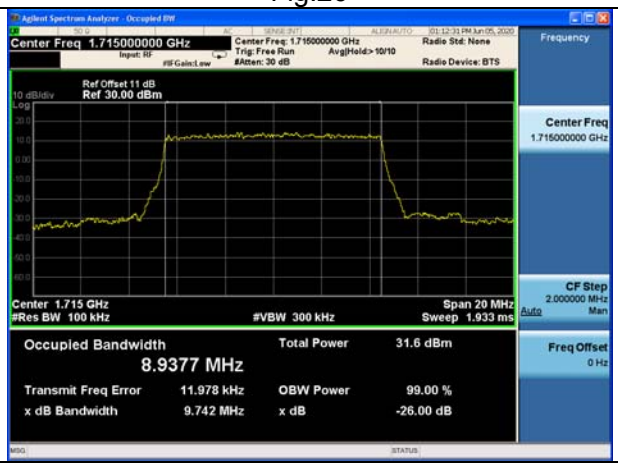

Fig.28

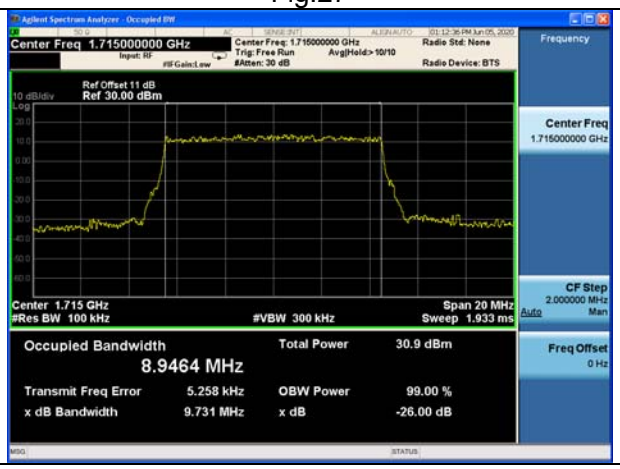

Fig.29

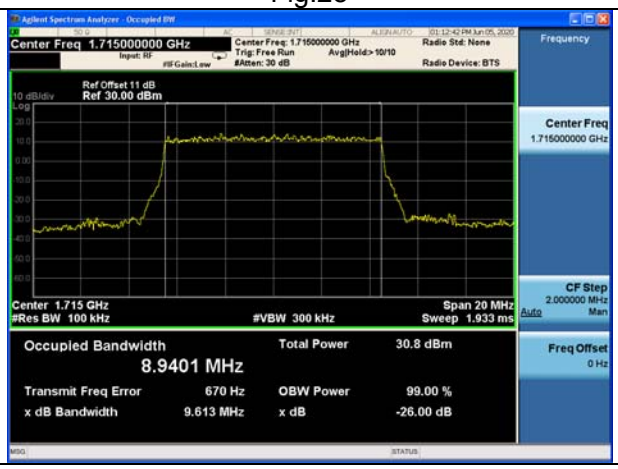

Fig.30

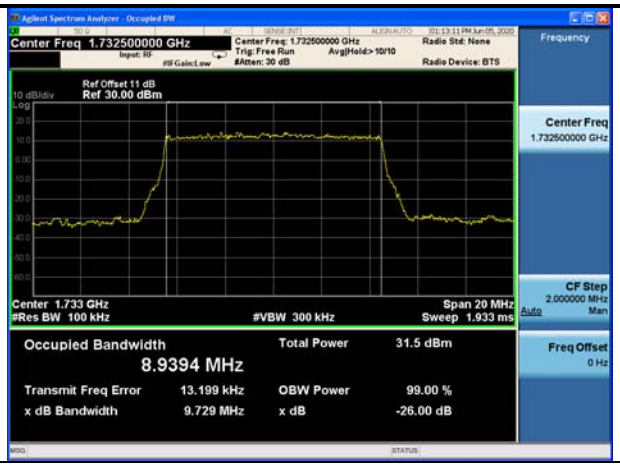

Fig.31

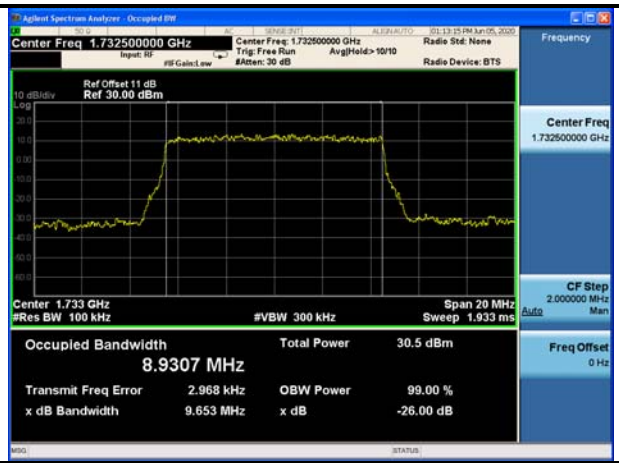

Fig.32

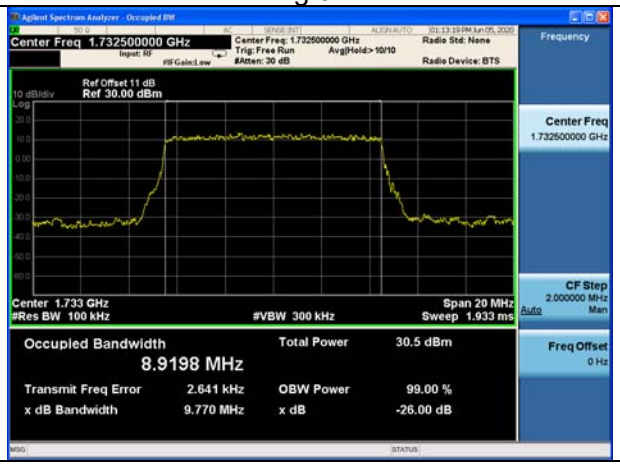

Fig.33

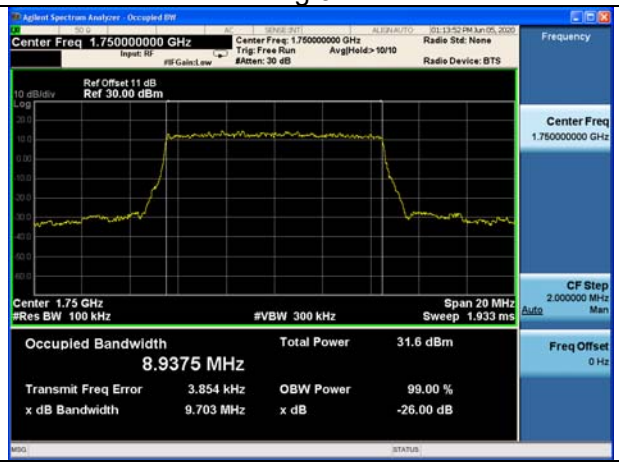

Fig.34

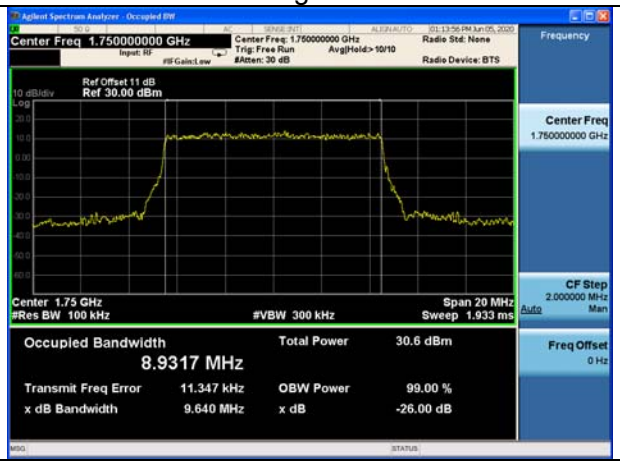

Fig.35

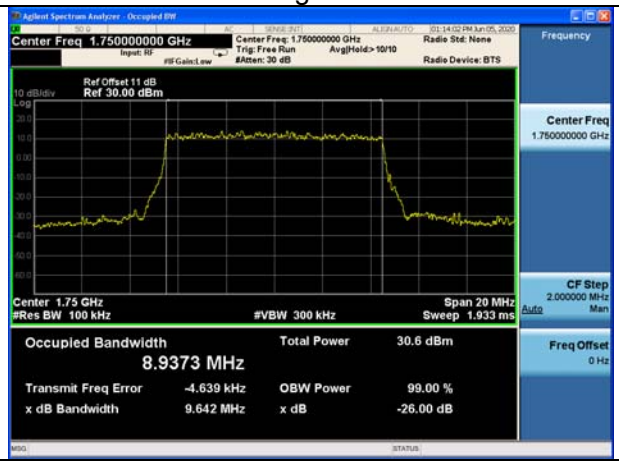

Fig.36

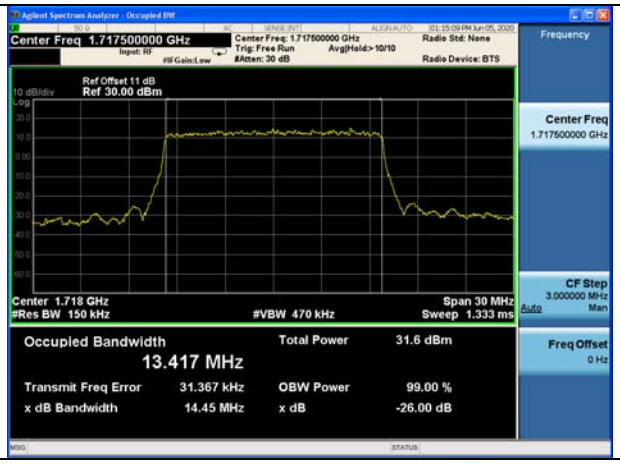

Fig.37

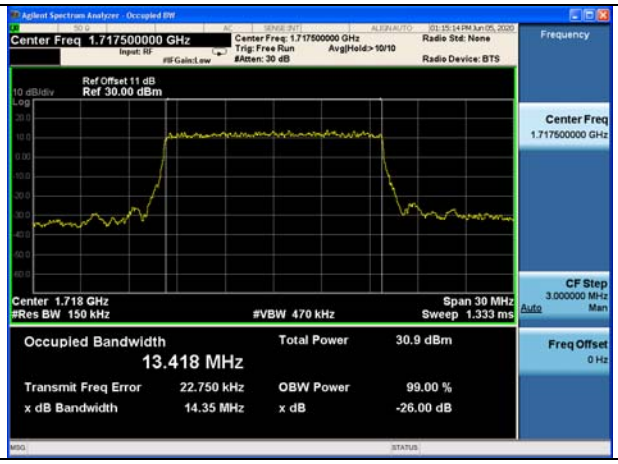

Fig.38

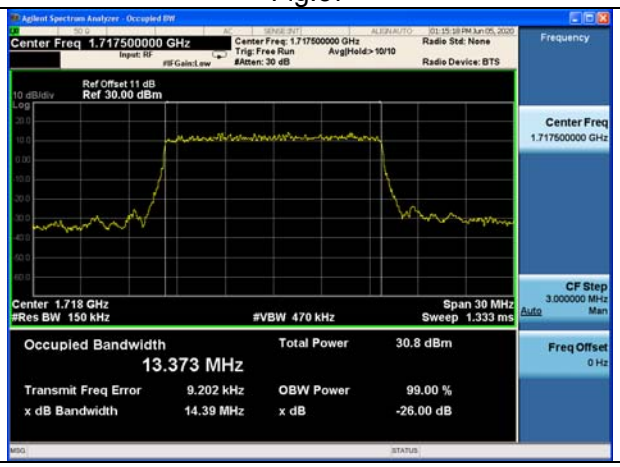

Fig.39

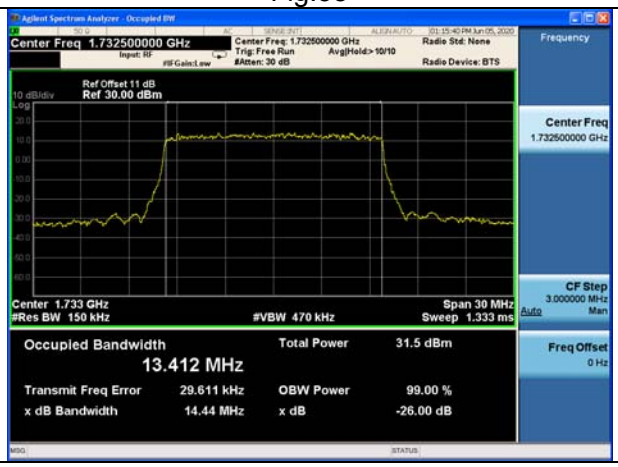

Fig.40

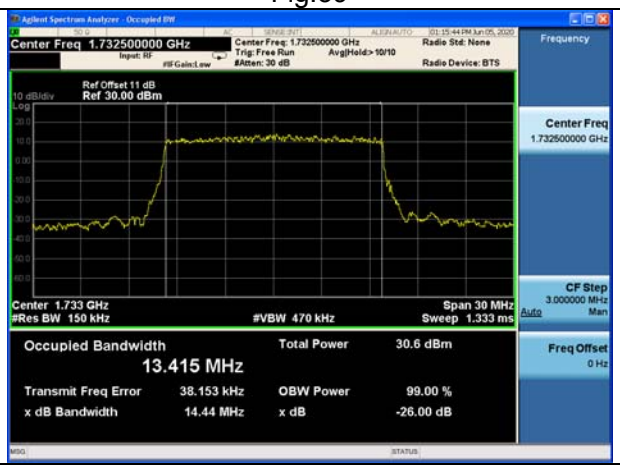

Fig.41

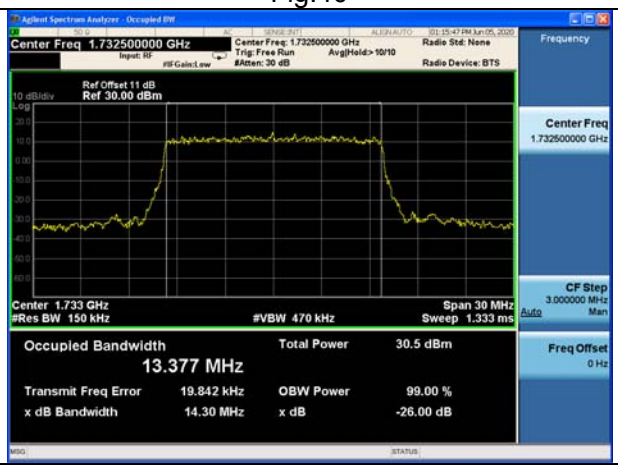

Fig.42

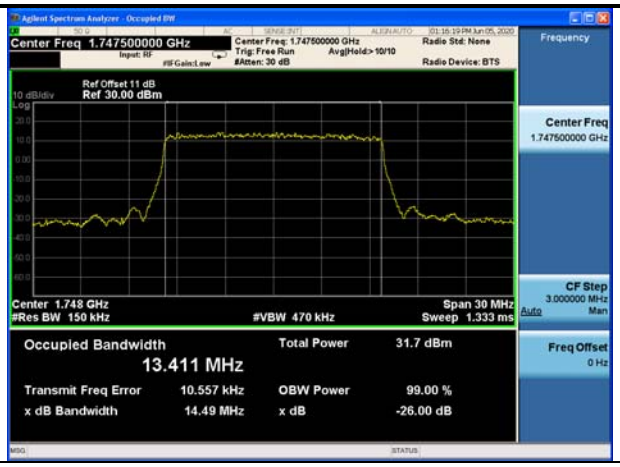

Fig.43

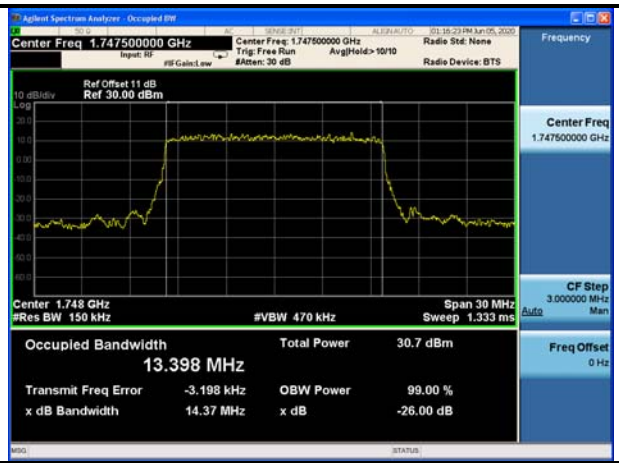

Fig.44

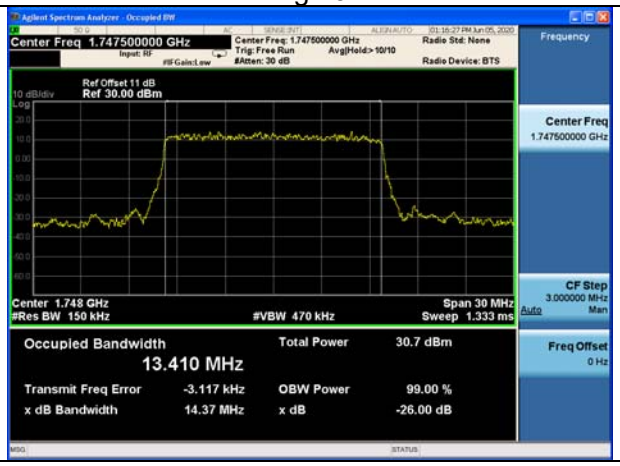

Fig.45

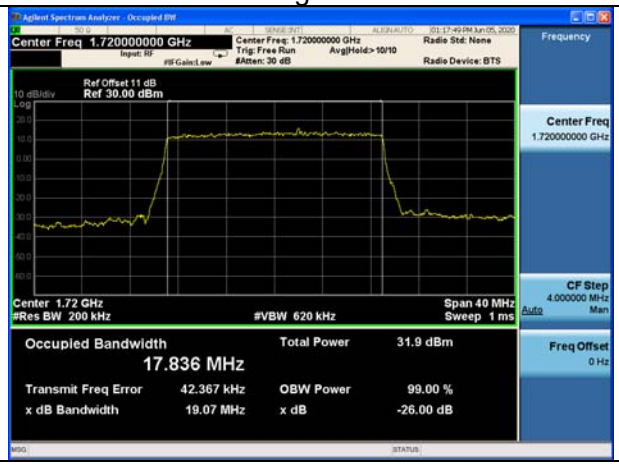

Fig.46

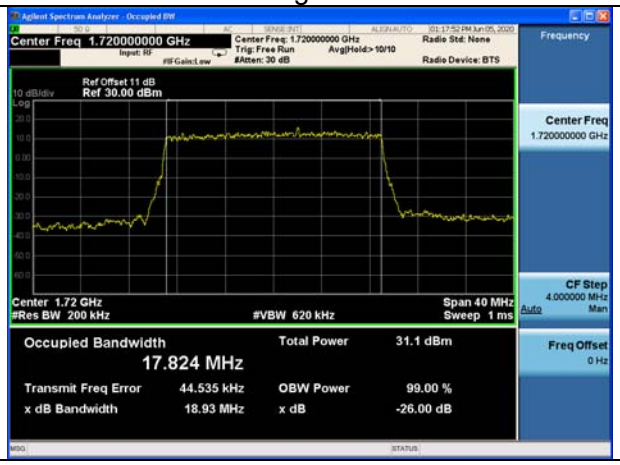

Fig.47

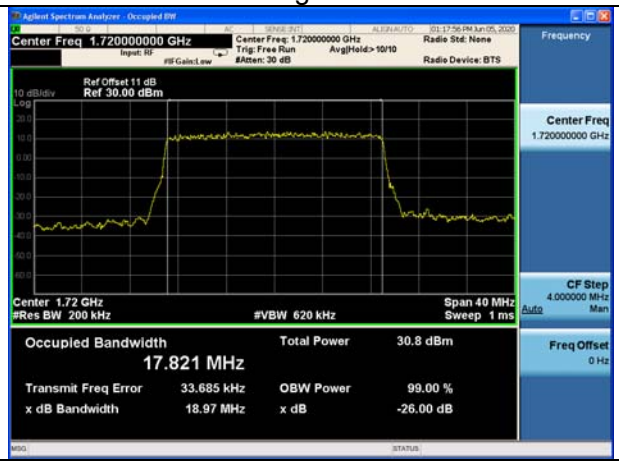

Fig.48

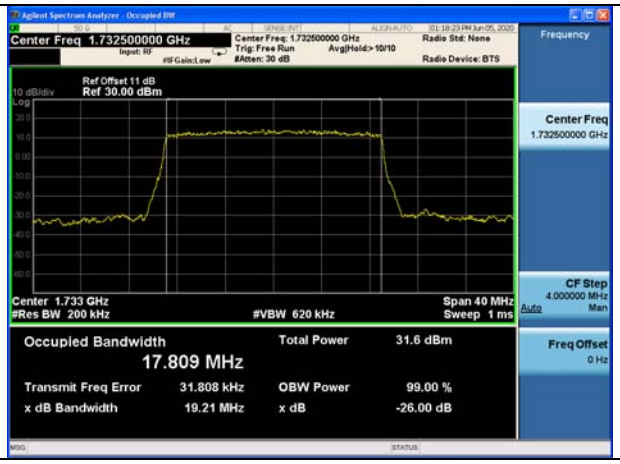

Fig.49

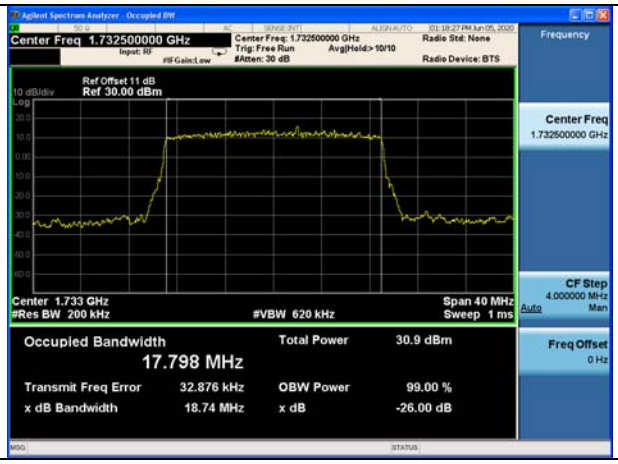

Fig.50

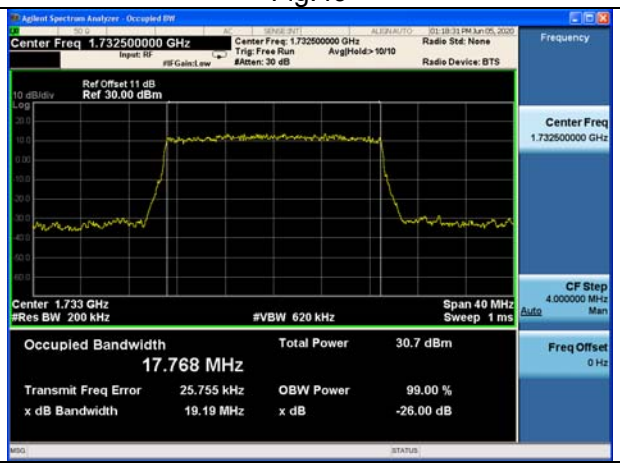

Fig.51

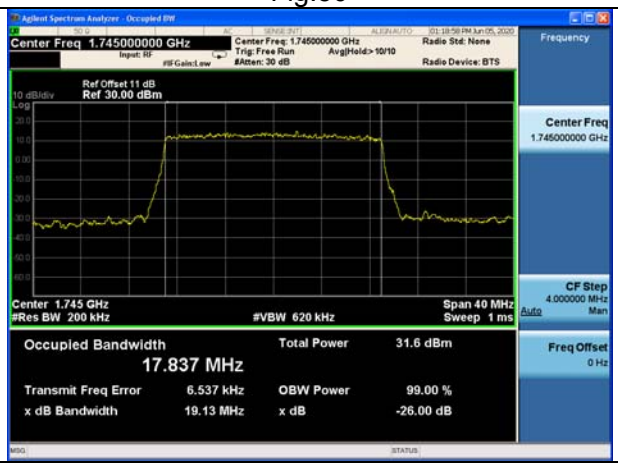

Fig.52

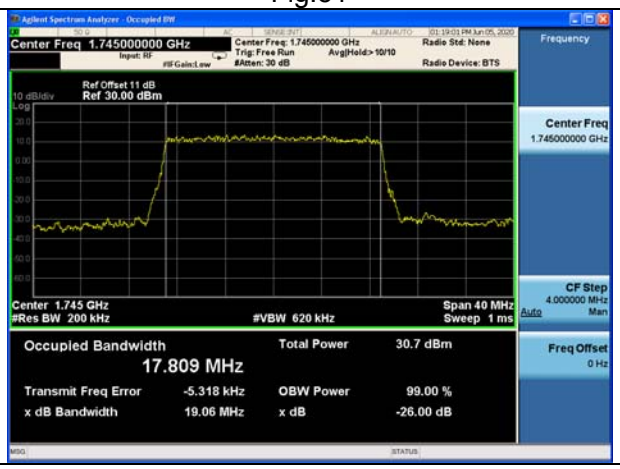

Fig.53

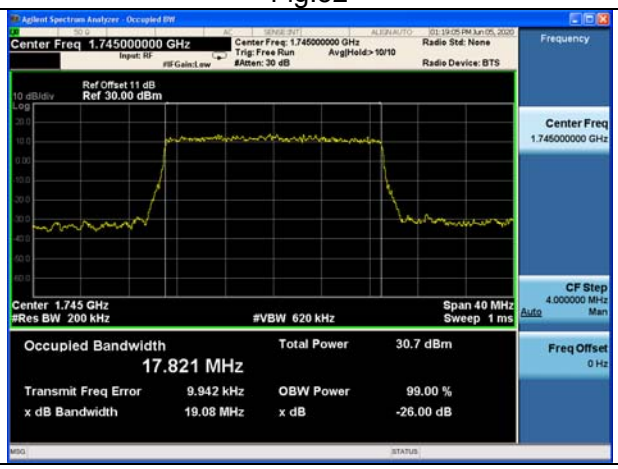

Fig.54

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

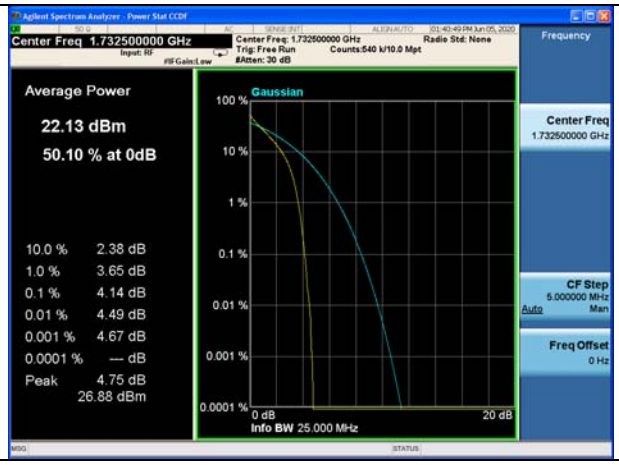

Fig.2

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


Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 1.732500000 GHz
Center Freq: 1.732500000 GHz
Trig: Free Run
#Atten: 30 dB
Counts:360 k/10.0 Mpt
Radio Std: None
Frequency
Average Power
22.33 dBm
49.02 % at 0dB
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
10.0 % 2.42 dB
1.0 % 3.75 dB
0.1 % 4.33 dB
0.01 % 4.66 dB
0.001 % 4.87 dB
0.0001 % --- dB
Peak 4.96 dB
27.29 dBm
0 dB
20 dB
Info BW 25.000 MHz
Center Freq
1.732500000 GHz
CF Step
5.000000 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:630 k/10.0 Mpt
Radio Std: None
Frequency
Average Power
22.35 dBm
49.34 % at 0dB
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
10.0 % 2.35 dB
1.0 % 3.68 dB
0.1 % 4.30 dB
0.01 % 4.61 dB
0.001 % 4.82 dB
0.0001 % --- dB
Peak 4.86 dB
27.21 dBm
0 dB
20 dB
Info BW 25.000 MHz
Center Freq
1.732500000 GHz
CF Step
5.000000 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.1-2
	1732.5	20175	20	1	0	Fig.3-4
	1745	20300	20	1	0	Fig.5-6

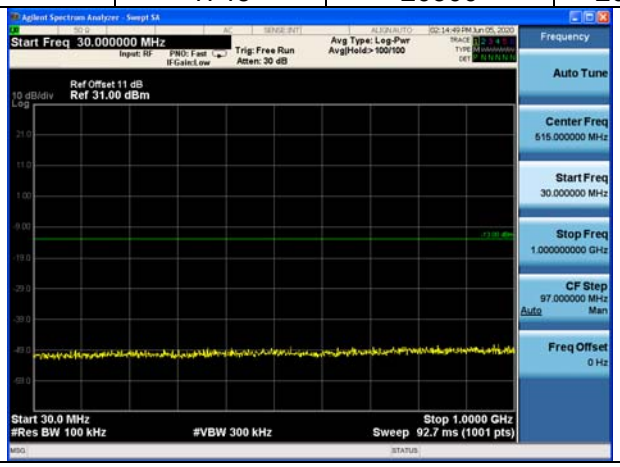

Fig.1

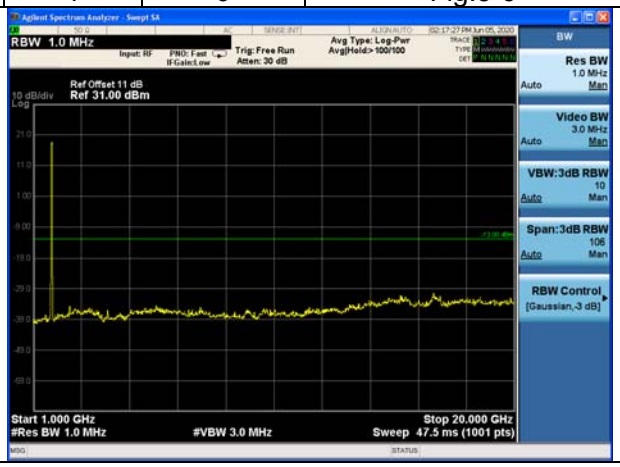

Fig.2

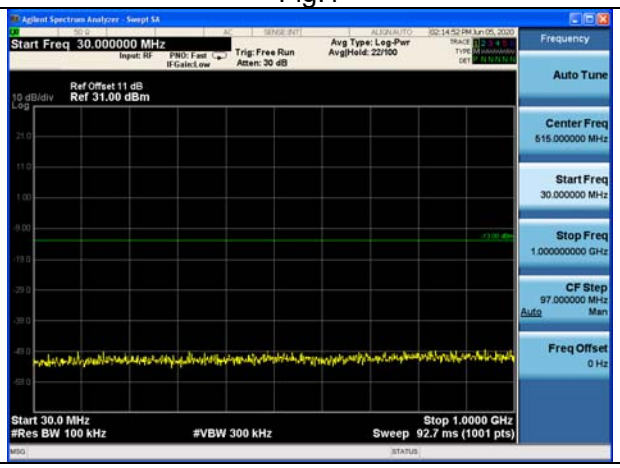

Fig3

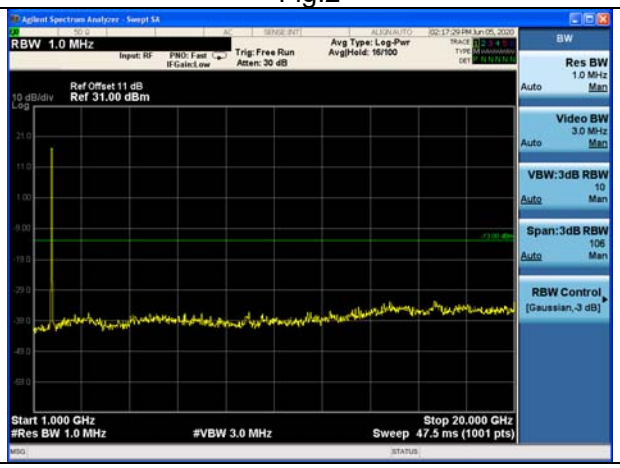

Fig4

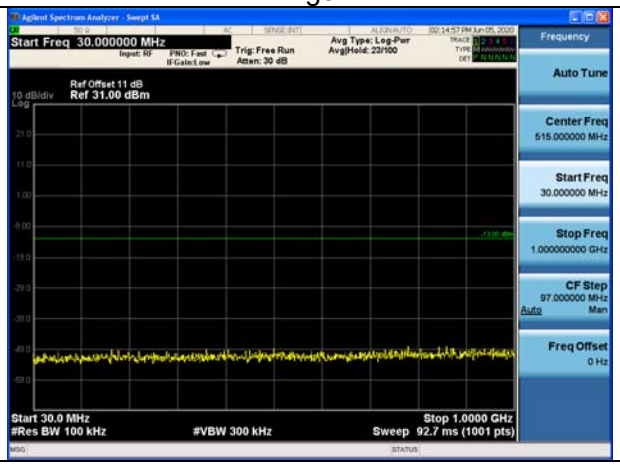

Fig5

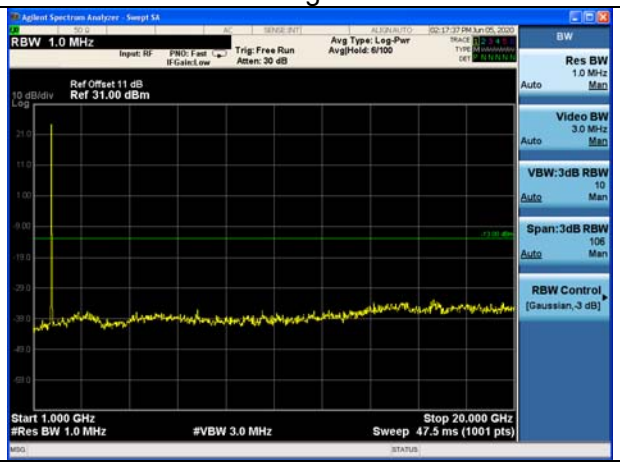

Fig6

5 Band Edges Compliance

Test result

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

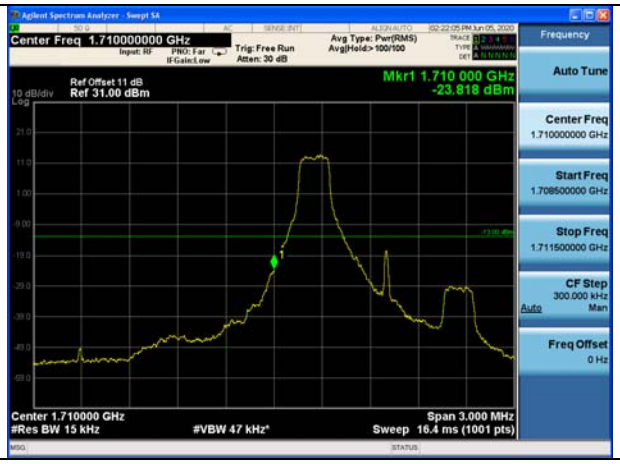

Fig.1

Fig.2

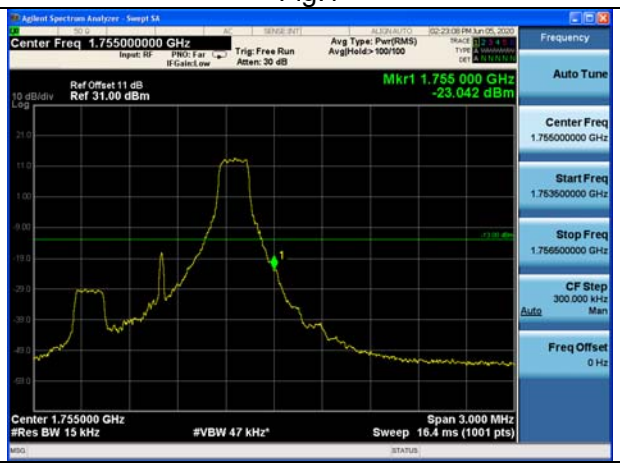

Fig.3

Fig.4

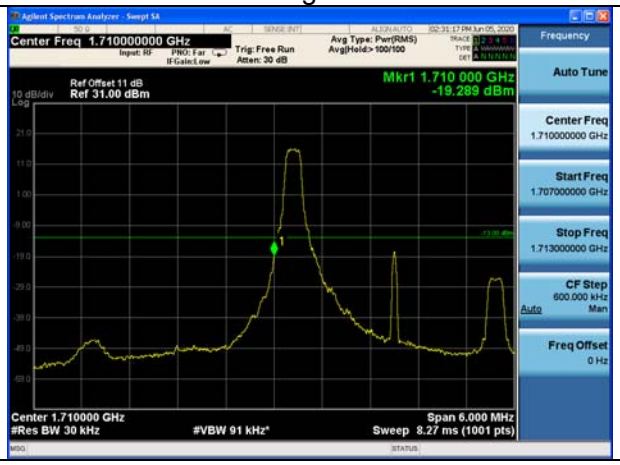

Fig.5

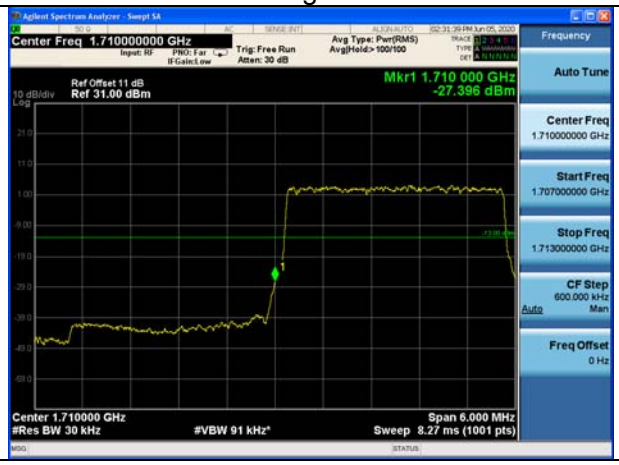

Fig.6

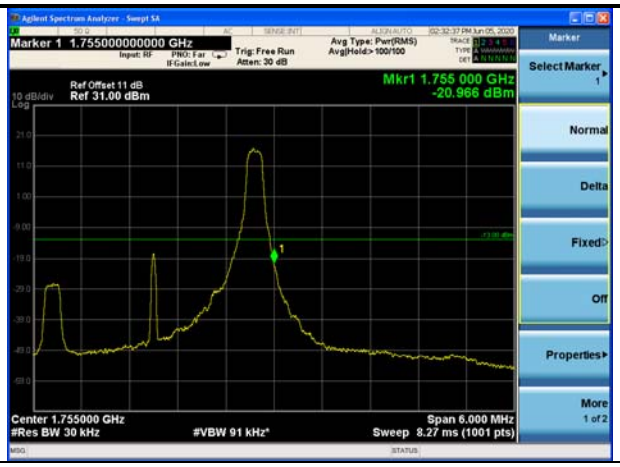

Fig.7

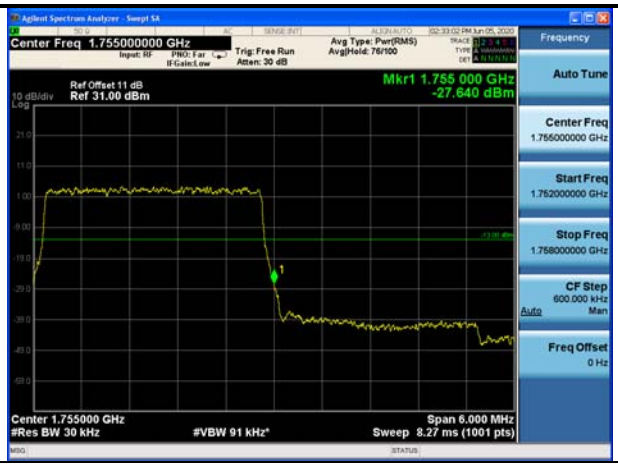

Fig.8

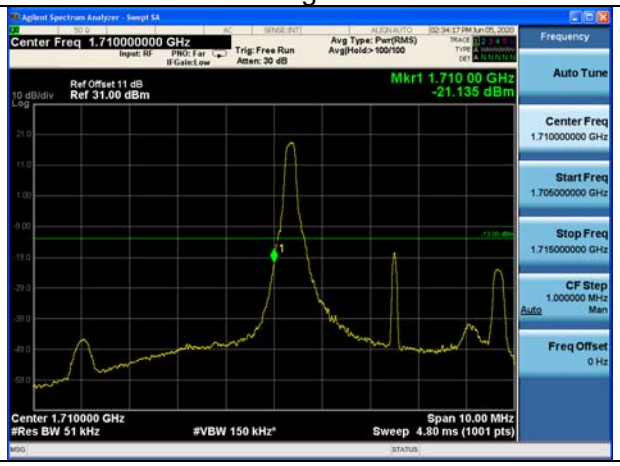

Fig.9

Fig.10

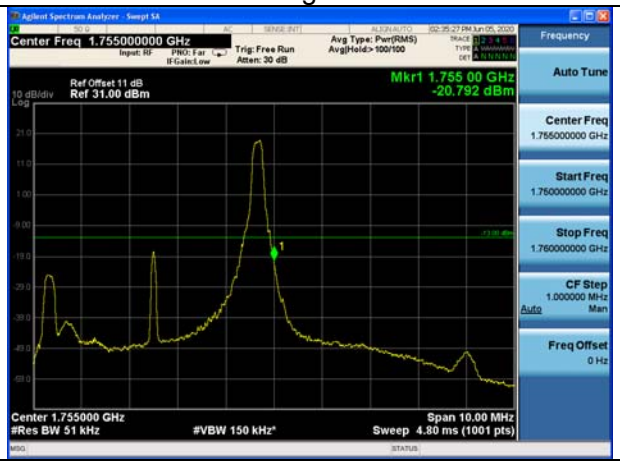

Fig.11

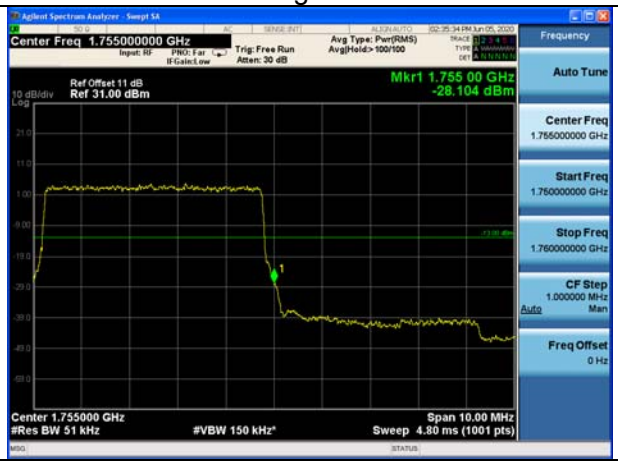

Fig.12

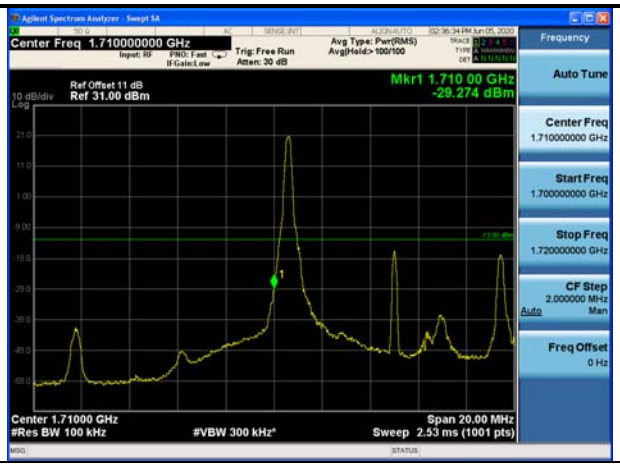

Fig.13

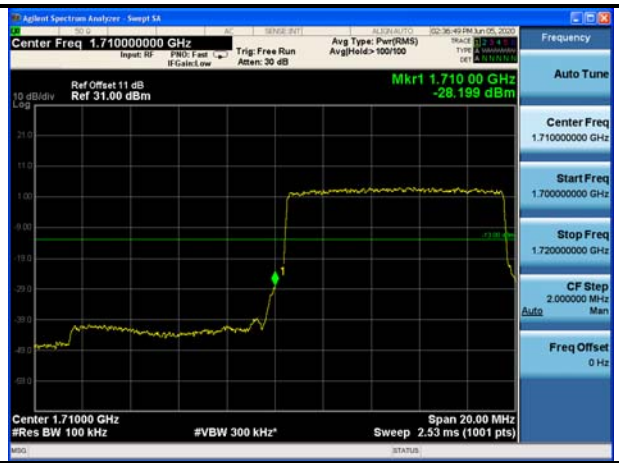

Fig.14

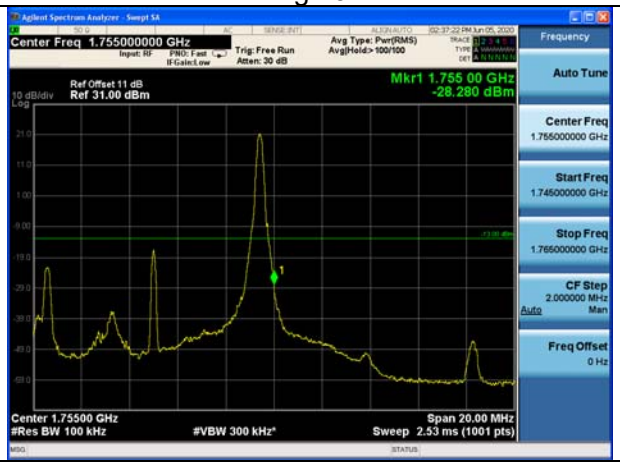

Fig.15

Fig.16

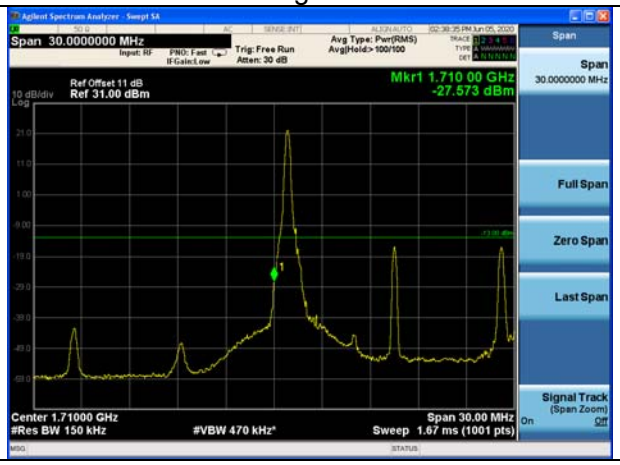

Fig.17

Fig.18

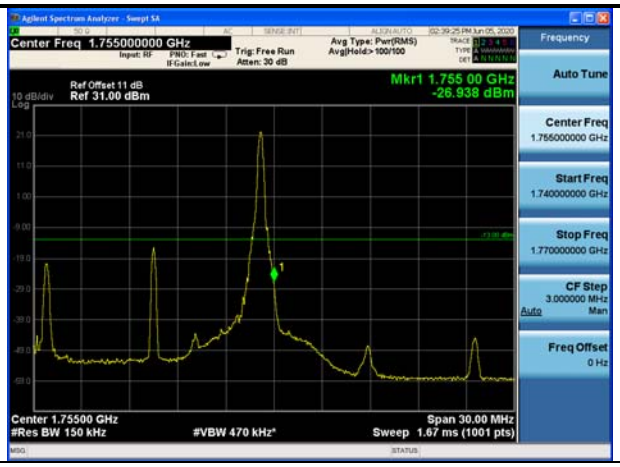

Fig.19

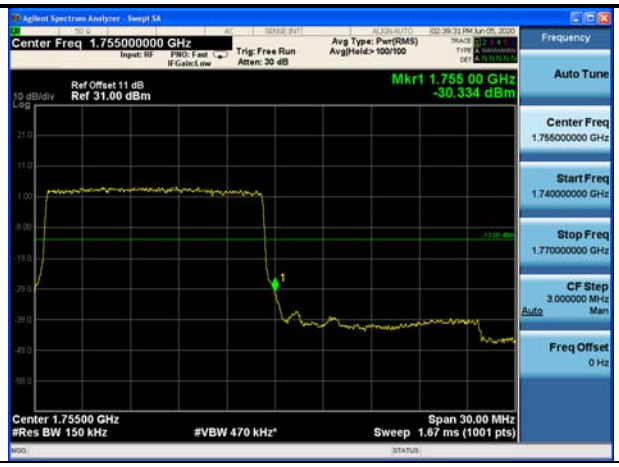

Fig.20

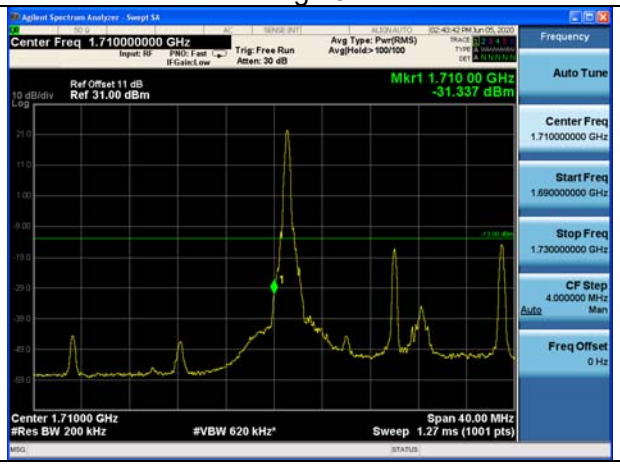

Fig.21

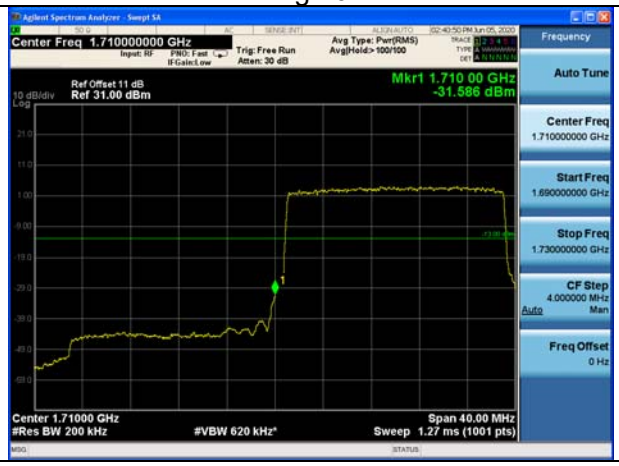

Fig.22

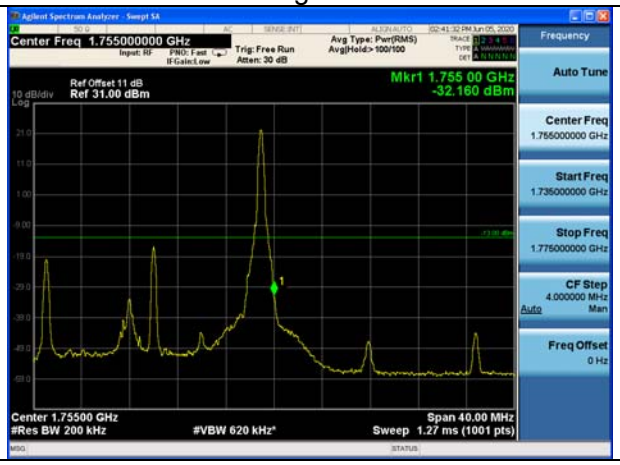

Fig.23

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	-0.004	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
+55	NV	-0.005	0.017	-0.002	-0.003	0.006	0.012
+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
-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	-0.022	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
+55	NV	-0.004	-0.014	0.004	0.014	0.004	0.002
+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