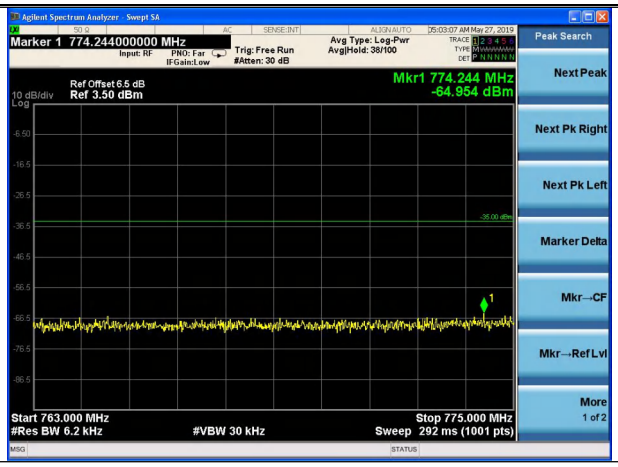

Fig.9

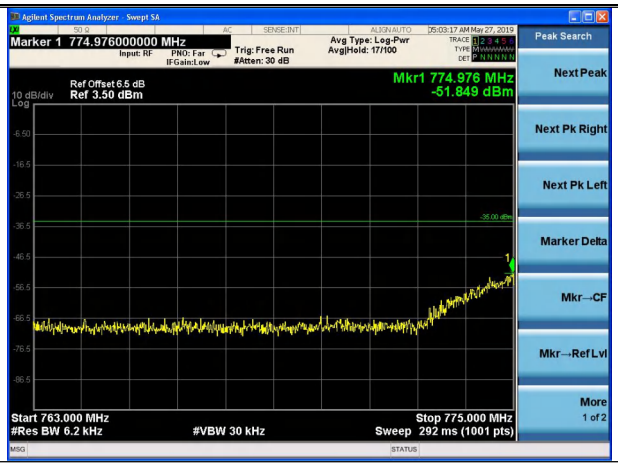

Fig.10

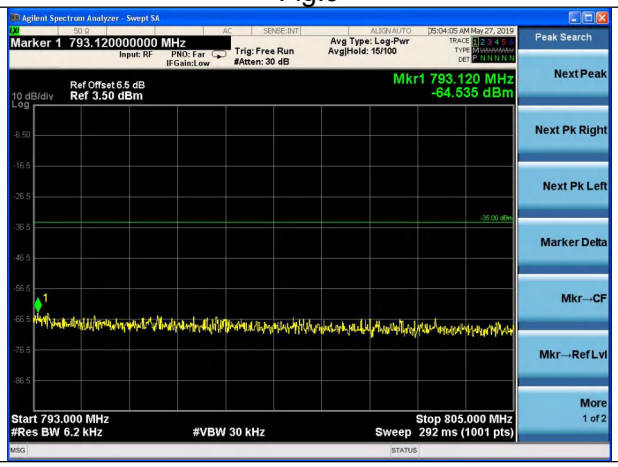

Fig.11

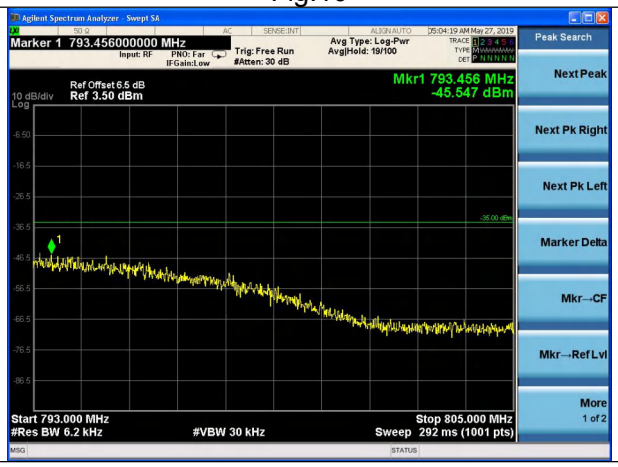

Fig.12

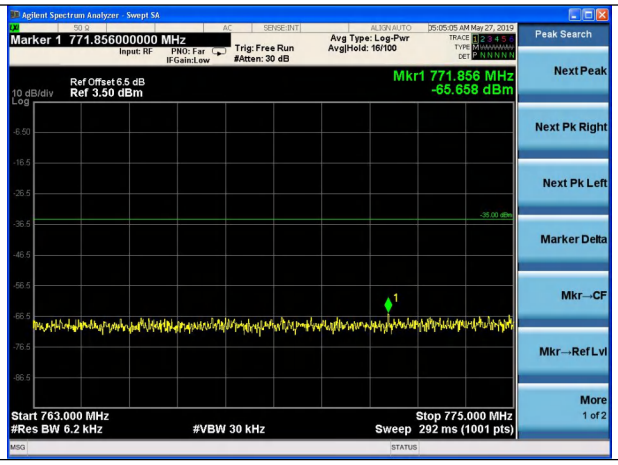

Fig.13

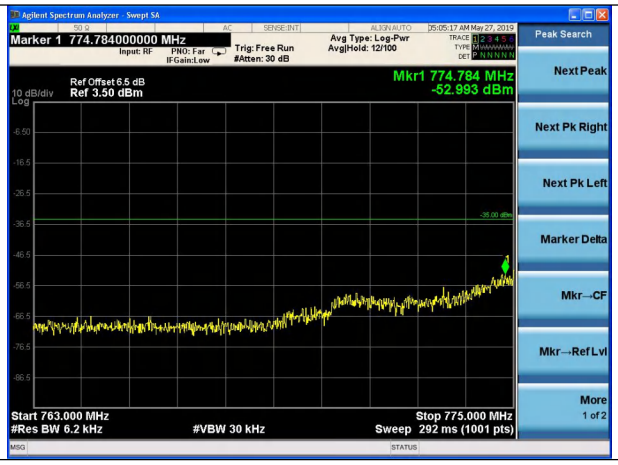

Fig.14


Agilent Spectrum Analyzer - Swept SA
Marker 1 795.676000000 MHz
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 17/100
Ref Offset 6.5 dB
10 dB/div
Ref 3.50 dBm
Mkr1 795.676 MHz
-52.841 dBm
Start 793.000 MHz
#Res BW 6.2 kHz
#VBW 30 kHz
Stop 805.000 MHz
Sweep 292 ms (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

Fig.15


Agilent Spectrum Analyzer - Swept SA
Marker 1 793.012000000 MHz
Trig: Free Run
#Atten: 30 dB
Avg Type: Pwr(RMS)
Avg|Hold: 22/100
Ref Offset 6.5 dB
10 dB/div
Ref 3.50 dBm
Mkr1 793.012 MHz
-43.484 dBm
Start 793.000 MHz
#Res BW 6.2 kHz
#VBW 30 kHz*
Stop 805.000 MHz
Sweep 376 ms (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

Fig.16

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band13 Low Channel	
		5M	10M
-10	NV	0.063	0.060
0	NV	0.041	0.083
10	NV	0.076	0.090
20	NV	0.053	0.075
30	NV	0.050	0.031
40	NV	0.063	0.028
50	NV	0.022	0.041
55	NV	0.036	0.042
20	LV	0.068	0.041
20	HV	0.015	0.075

Temperature(°C)	Voltage	Test Result (ppm) Band13 High Channel	
		5M	10M
-10	NV	0.029	0.019
0	NV	0.035	0.057
10	NV	0.044	0.024
20	NV	0.064	0.028
30	NV	0.081	0.002
40	NV	0.010	0.071
50	NV	0.041	0.046
55	NV	0.034	0.047
20	LV	0.039	0.052
20	HV	0.034	0.038

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 66

1 RF Power Output up Ant

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1710.7	131979	1.4	1	0	17.81
				1	5	17.81
				3	2	16.93
				6	0	16.87
	1745	132322		1	0	17.87
				1	5	17.87
				3	2	16.98
				6	0	16.95
	1779.3	132665		1	0	17.84
				1	5	17.84
				3	2	16.94
				6	0	16.91
16QAM	1710.7	131979	1.4	1	0	17.07
				1	5	17.07
				3	2	15.96
				6	0	15.91
	1745	132322		1	0	16.96
				1	5	16.96
				3	2	15.95
				6	0	15.94
	1779.3	132665		1	0	16.95
				1	5	16.95
				3	2	16.01
				6	0	15.93
64QAM	1710.7	131979	1.4	1	0	16.95
				1	5	16.95
				3	2	15.92
				6	0	15.87
	1745	132322		1	0	16.94
				1	5	16.94
				3	2	15.91
				6	0	15.87
	1779.3	132665		1	0	16.94
				1	5	16.94
				3	2	15.98
				6	0	15.87

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1711.5	131987	3	1	0	17.85
				1	14	17.85
				8	4	16.97
				15	0	16.91
	1745	132322		1	0	17.91
				1	14	17.91
				8	4	17.02
				15	0	16.99
	1778.5	132657		1	0	17.88
				1	14	17.88
				8	4	16.98
				15	0	16.95
16QAM	1711.5	131987	3	1	0	17.11
				1	14	17.11
				8	4	16.00
				15	0	15.95
	1745	132322		1	0	17.00
				1	14	17.00
				8	4	15.99
				15	0	15.98
	1778.5	132657		1	0	16.99
				1	14	16.99
				8	4	16.05
				15	0	15.97
64QAM	1711.5	131987	3	1	0	16.99
				1	14	16.99
				8	4	15.96
				15	0	15.91
	1745	132322		1	0	16.98
				1	14	16.98
				8	4	15.95
				15	0	15.91
	1778.5	132657		1	0	16.98
				1	14	16.98
				8	4	16.02
				15	0	15.91

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1712.5	131997	5	1	0	17.87
				1	24	17.87
				12	6	16.99
				25	0	16.93
	1745	132322		1	0	17.93
				1	24	17.93
				12	6	17.04
				25	0	17.01
	1777.5	132647		1	0	17.90
				1	24	17.90
				12	6	17.00
				25	0	16.97
16QAM	1712.5	131997	5	1	0	17.13
				1	24	17.13
				12	6	16.02
				25	0	15.97
	1745	132322		1	0	17.02
				1	24	17.02
				12	6	16.01
				25	0	16.00
	1777.5	132647		1	0	17.01
				1	24	17.01
				12	6	16.07
				25	0	15.99
64QAM	1712.5	131997	5	1	0	17.01
				1	24	17.01
				12	6	15.98
				25	0	15.93
	1745	132322		1	0	17.00
				1	24	17.00
				12	6	15.97
				25	0	15.93
	1777.5	132647		1	0	17.00
				1	24	17.00
				12	6	16.04
				25	0	15.93

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1715	132022	10	1	0	17.89
				1	49	17.89
				24	12	17.01
				50	0	16.95
	1745	132322		1	0	17.95
				1	49	17.95
				24	12	17.06
				50	0	17.03
	1775	132622		1	0	17.92
				1	49	17.92
				24	12	17.02
				50	0	16.99
16QAM	1715	132022	10	1	0	17.15
				1	49	17.15
				24	12	16.04
				50	0	15.99
	1745	132322		1	0	17.04
				1	49	17.04
				24	12	16.03
				50	0	16.02
	1775	132622		1	0	17.03
				1	49	17.03
				24	12	16.09
				50	0	16.01
64QAM	1715	132022	10	1	0	17.03
				1	49	17.03
				24	12	16.00
				50	0	15.95
	1745	132322		1	0	17.02
				1	49	17.02
				24	12	15.99
				50	0	15.95
	1775	132622		1	0	17.02
				1	49	17.02
				24	12	16.06
				50	0	15.95

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1717.5	132047	15	1	0	17.92
				1	74	17.92
				40	18	17.04
				75	0	16.98
	1745	132322		1	0	17.98
				1	74	17.98
				40	18	17.09
				75	0	17.06
	1772.5	132597		1	0	17.95
				1	74	17.95
				40	18	17.05
				75	0	17.02
16QAM	1717.5	132047	15	1	0	17.18
				1	74	17.18
				40	18	16.07
				75	0	16.02
	1745	132322		1	0	17.07
				1	74	17.07
				40	18	16.06
				75	0	16.05
	1772.5	132597		1	0	17.06
				1	74	17.06
				40	18	16.12
				75	0	16.04
64QAM	1717.5	132047	15	1	0	17.06
				1	74	17.06
				40	18	16.03
				75	0	15.98
	1745	132322		1	0	17.05
				1	74	17.05
				40	18	16.02
				75	0	15.98
	1772.5	132597		1	0	17.05
				1	74	17.05
				40	18	16.09
				75	0	15.98

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1720	132072	20	1	0	17.94
				1	99	17.94
				50	25	17.06
				100	0	17.00
	1745	132322		1	0	17.99
				1	99	17.99
				50	25	17.11
				100	0	17.08
	1770	132572		1	0	17.97
				1	99	17.97
				50	25	17.07
				100	0	17.04
16QAM	1720	132072	20	1	0	17.20
				1	99	17.20
				50	25	16.09
				100	0	16.04
	1745	132322		1	0	17.09
				1	99	17.09
				50	25	16.08
				100	0	16.07
	1770	132572		1	0	17.08
				1	99	17.08
				50	25	16.14
				100	0	16.06
64QAM	1720	132072	20	1	0	17.08
				1	99	17.08
				50	25	16.05
				100	0	16.00
	1745	132322		1	0	17.07
				1	99	17.07
				50	25	16.04
				100	0	16.00
	1770	132572		1	0	17.07
				1	99	17.07
				50	25	16.11
				100	0	16.00

1 RF Power Output down Ant

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1710.7	131979	1.4	1	0	24.57
				1	5	24.57
				3	2	23.69
				6	0	23.63
	1745	132322		1	0	24.63
				1	5	24.63
				3	2	23.74
				6	0	23.71
	1779.3	132665		1	0	24.60
				1	5	24.60
				3	2	23.70
				6	0	23.67
16QAM	1710.7	131979	1.4	1	0	23.83
				1	5	23.83
				3	2	22.72
				6	0	22.67
	1745	132322		1	0	23.72
				1	5	23.72
				3	2	22.71
				6	0	22.70
	1779.3	132665		1	0	23.71
				1	5	23.71
				3	2	22.77
				6	0	22.69
64QAM	1710.7	131979	1.4	1	0	23.71
				1	5	23.71
				3	2	22.68
				6	0	22.63
	1745	132322		1	0	23.70
				1	5	23.70
				3	2	22.67
				6	0	22.63
	1779.3	132665		1	0	23.70
				1	5	23.70
				3	2	22.74
				6	0	22.63

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1711.5	131987	3	1	0	24.60
				1	14	24.60
				8	4	23.72
				15	0	23.66
	1745	132322		1	0	24.66
				1	14	24.66
				8	4	23.77
				15	0	23.74
	1778.5	132657		1	0	24.63
				1	14	24.63
				8	4	23.73
				15	0	23.70
16QAM	1711.5	131987	3	1	0	23.86
				1	14	23.86
				8	4	22.75
				15	0	22.70
	1745	132322		1	0	23.75
				1	14	23.75
				8	4	22.74
				15	0	22.73
	1778.5	132657		1	0	23.74
				1	14	23.74
				8	4	22.80
				15	0	22.72
64QAM	1711.5	131987	3	1	0	23.74
				1	14	23.74
				8	4	22.71
				15	0	22.66
	1745	132322		1	0	23.73
				1	14	23.73
				8	4	22.70
				15	0	22.66
	1778.5	132657		1	0	23.73
				1	14	23.73
				8	4	22.77
				15	0	22.66

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1712.5	131997	5	1	0	24.64
				1	24	24.64
				12	6	23.76
				25	0	23.70
	1745	132322		1	0	24.70
				1	24	24.70
				12	6	23.81
				25	0	23.78
	1777.5	132647		1	0	24.67
				1	24	24.67
				12	6	23.77
				25	0	23.74
16QAM	1712.5	131997	5	1	0	23.90
				1	24	23.90
				12	6	22.79
				25	0	22.74
	1745	132322		1	0	23.79
				1	24	23.79
				12	6	22.78
				25	0	22.77
	1777.5	132647		1	0	23.78
				1	24	23.78
				12	6	22.84
				25	0	22.76
64QAM	1712.5	131997	5	1	0	23.78
				1	24	23.78
				12	6	22.75
				25	0	22.70
	1745	132322		1	0	23.77
				1	24	23.77
				12	6	22.74
				25	0	22.70
	1777.5	132647		1	0	23.77
				1	24	23.77
				12	6	22.81
				25	0	22.70

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1715	132022	10	1	0	24.67
				1	49	24.67
				24	12	23.79
				50	0	23.73
	1745	132322		1	0	24.73
				1	49	24.73
				24	12	23.84
				50	0	23.81
	1775	132622		1	0	24.70
				1	49	24.70
				24	12	23.80
				50	0	23.77
16QAM	1715	132022	10	1	0	23.93
				1	49	23.93
				24	12	22.82
				50	0	22.77
	1745	132322		1	0	23.82
				1	49	23.82
				24	12	22.81
				50	0	22.80
	1775	132622		1	0	23.81
				1	49	23.81
				24	12	22.87
				50	0	22.79
64QAM	1715	132022	10	1	0	23.81
				1	49	23.81
				24	12	22.78
				50	0	22.73
	1745	132322		1	0	23.80
				1	49	23.80
				24	12	22.77
				50	0	22.73
	1775	132622		1	0	23.80
				1	49	23.80
				24	12	22.84
				50	0	22.73

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1717.5	132047	15	1	0	24.69
				1	74	24.69
				40	18	23.81
				75	0	23.75
	1745	132322		1	0	24.75
				1	74	24.75
				40	18	23.86
				75	0	23.83
	1772.5	132597		1	0	24.72
				1	74	24.72
				40	18	23.82
				75	0	23.79
16QAM	1717.5	132047	15	1	0	23.95
				1	74	23.95
				40	18	22.84
				75	0	22.79
	1745	132322		1	0	23.84
				1	74	23.84
				40	18	22.83
				75	0	22.82
	1772.5	132597		1	0	23.83
				1	74	23.83
				40	18	22.89
				75	0	22.81
64QAM	1717.5	132047	15	1	0	23.83
				1	74	23.83
				40	18	22.80
				75	0	22.75
	1745	132322		1	0	23.82
				1	74	23.82
				40	18	22.79
				75	0	22.75
	1772.5	132597		1	0	23.82
				1	74	23.82
				40	18	22.86
				75	0	22.75

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1720	132072	20	1	0	24.72
				1	99	24.72
				50	25	23.84
				100	0	23.78
	1745	132322		1	0	24.78
				1	99	24.78
				50	25	23.89
				100	0	23.86
	1770	132572		1	0	24.75
				1	99	24.75
				50	25	23.85
				100	0	23.82
16QAM	1720	132072	20	1	0	23.98
				1	99	23.98
				50	25	22.87
				100	0	22.82
	1745	132322		1	0	23.87
				1	99	23.87
				50	25	22.86
				100	0	22.85
	1770	132572		1	0	23.86
				1	99	23.86
				50	25	22.92
				100	0	22.84
64QAM	1720	132072	20	1	0	23.86
				1	99	23.86
				50	25	22.83
				100	0	22.78
	1745	132322		1	0	23.85
				1	99	23.85
				50	25	22.82
				100	0	22.78
	1770	132572		1	0	23.85
				1	99	23.85
				50	25	22.89
				100	0	22.78

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	
66	1710.7	131979	1.4	6	0	1.08	Fig.1	1.08	Fig.2	1.08	Fig.3
	1745	132322		6	0	1.08	Fig.4	1.08	Fig.5	1.08	Fig.6
	1779.3	132665		6	0	1.08	Fig.7	1.07	Fig.8	1.08	Fig.9
	1711.5	131987	3	15	0	2.71	Fig.10	2.69	Fig.11	2.70	Fig.12
	1745	132322		15	0	2.70	Fig.13	2.70	Fig.14	2.71	Fig.15
	1778.5	132657		15	0	2.70	Fig.16	2.70	Fig.17	2.70	Fig.18
	1712.5	131997	5	25	0	4.48	Fig.19	4.49	Fig.20	4.49	Fig.21
	1745	132322		25	0	4.48	Fig.22	4.48	Fig.23	4.49	Fig.24
	1777.5	132647		25	0	4.48	Fig.25	4.49	Fig.26	4.48	Fig.27
	1715	132022	10	50	0	8.93	Fig.28	8.95	Fig.29	8.94	Fig.30
	1745	132322		50	0	8.96	Fig.31	8.94	Fig.32	8.94	Fig.33
	1775	132622		50	0	8.93	Fig.34	8.97	Fig.35	8.95	Fig.36
	1717.5	132047	15	75	0	13.42	Fig.37	13.40	Fig.38	13.40	Fig.39
	1745	132322		75	0	13.39	Fig.40	13.41	Fig.41	13.39	Fig.42
	1772.5	132597		75	0	13.40	Fig.44	13.37	Fig.41	13.36	Fig.45
	1720	132072	20	100	0	17.85	Fig.46	17.85	Fig.47	17.85	Fig.48
	1745	132322		100	0	17.88	Fig.49	17.86	Fig.50	17.87	Fig.51
	1770	132572		100	0	17.86	Fig.52	17.87	Fig.53	17.87	Fig.54

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
66	1710.7	131979	1.4	6	0	1.21	Fig.1	1.20	Fig.2	1.20	Fig.3
	1745	132322		6	0	1.21	Fig.4	1.21	Fig.5	1.21	Fig.6
	1779.3	132665		6	0	1.22	Fig.7	1.20	Fig.8	1.21	Fig.9
	1711.5	131987	3	15	0	2.96	Fig.10	2.99	Fig.11	2.97	Fig.12
	1745	132322		15	0	2.99	Fig.13	2.99	Fig.14	2.98	Fig.15
	1778.5	132657		15	0	2.97	Fig.16	2.96	Fig.17	2.96	Fig.18
	1712.5	131997	5	25	0	4.90	Fig.19	4.88	Fig.20	4.89	Fig.21
	1745	132322		25	0	4.92	Fig.22	4.86	Fig.23	4.94	Fig.24
	1777.5	132647		25	0	4.86	Fig.25	4.84	Fig.26	4.83	Fig.27
	1715	132022	10	50	0	9.65	Fig.28	9.66	Fig.29	9.70	Fig.30
	1745	132322		50	0	9.71	Fig.31	9.57	Fig.32	9.57	Fig.33
	1775	132622		50	0	9.68	Fig.34	9.72	Fig.35	9.62	Fig.36
	1717.5	132047	15	75	0	14.45	Fig.37	14.26	Fig.38	14.51	Fig.39
	1745	132322		75	0	14.24	Fig.40	14.20	Fig.41	14.32	Fig.42
	1772.5	132597		75	0	14.42	Fig.43	14.48	Fig.44	14.30	Fig.45
	1720	132072	20	100	0	19.29	Fig.46	19.10	Fig.47	18.95	Fig.48
	1745	132322		100	0	19.03	Fig.49	19.08	Fig.50	19.11	Fig.51
	1770	132572		100	0	19.25	Fig.52	19.15	Fig.53	19.25	Fig.54

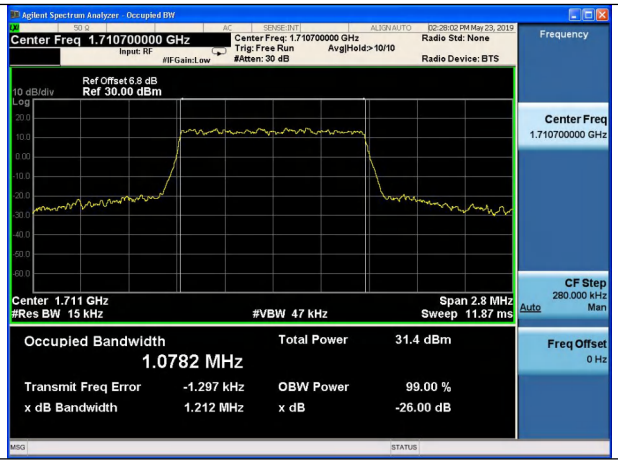

Fig.1

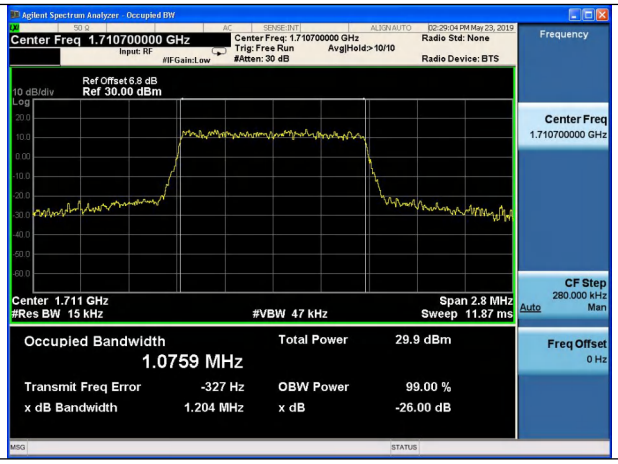

Fig.2

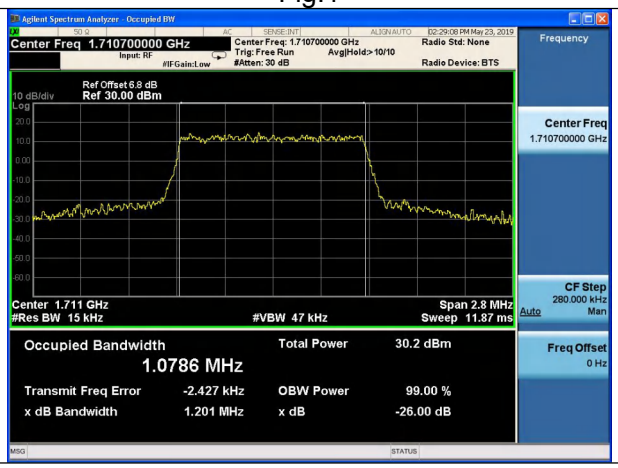

Fig.3

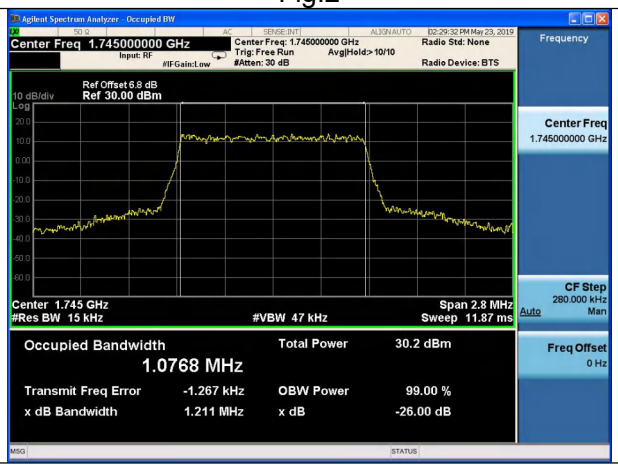

Fig.4

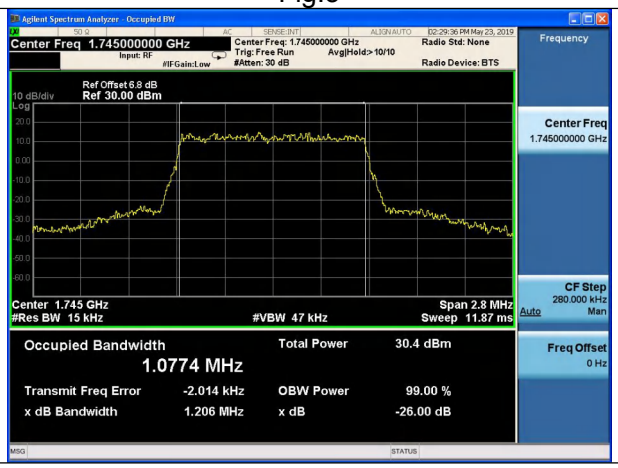

Fig.5

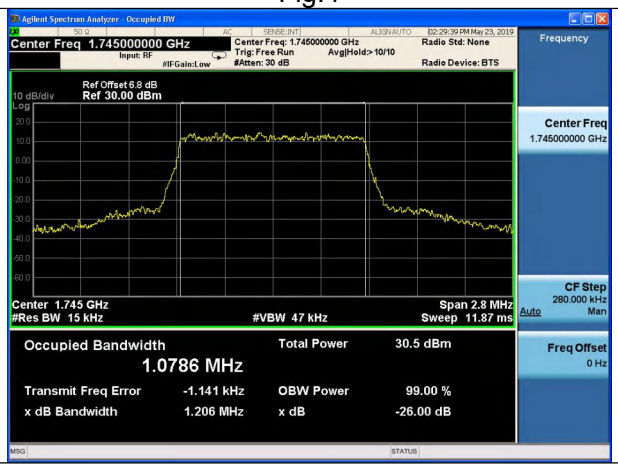

Fig.6

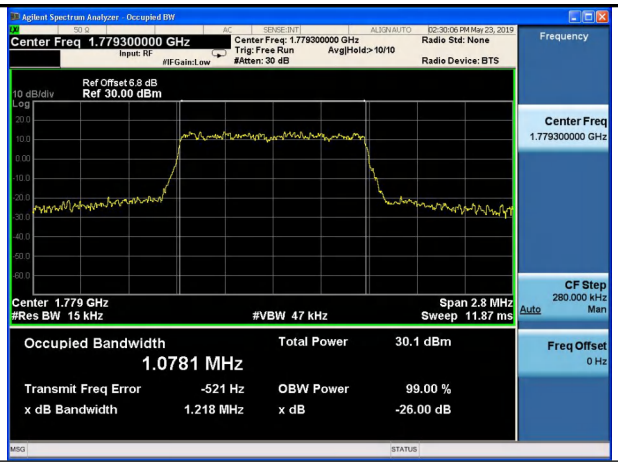

Fig.7

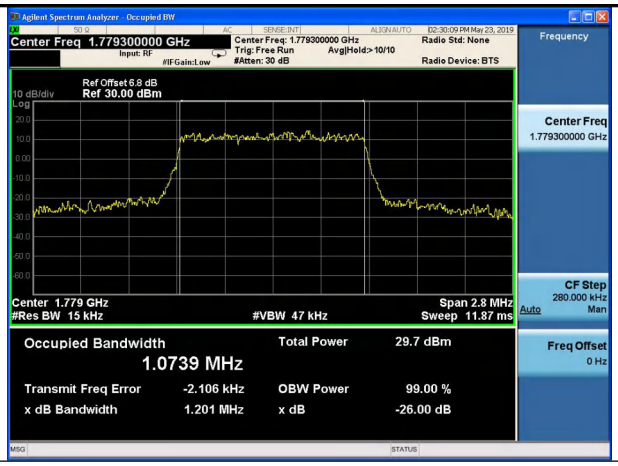

Fig.8

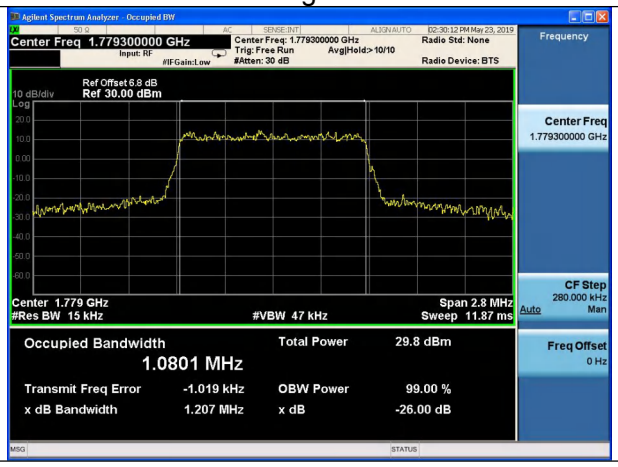

Fig.9

Fig.10

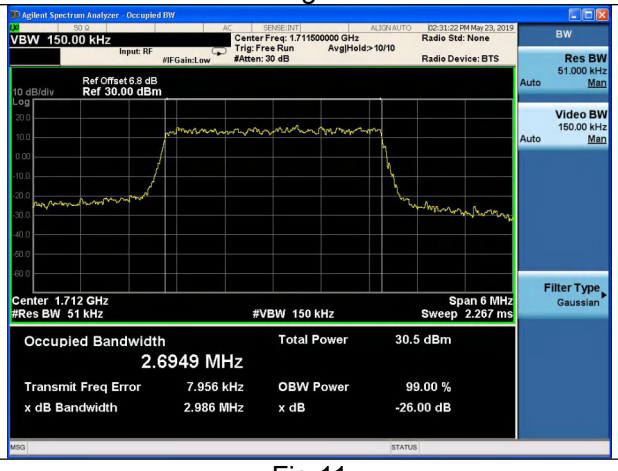

Fig.11

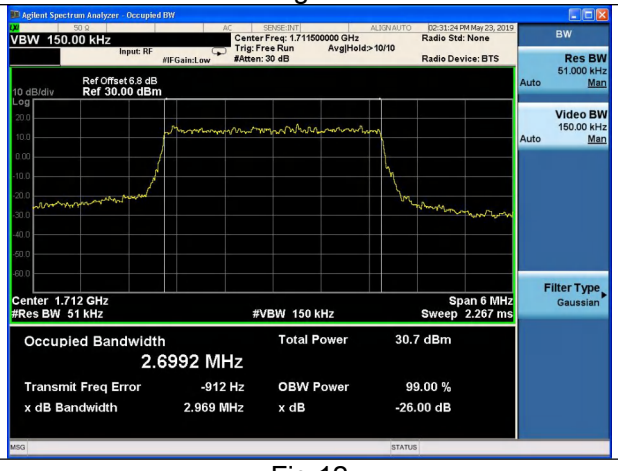

Fig.12

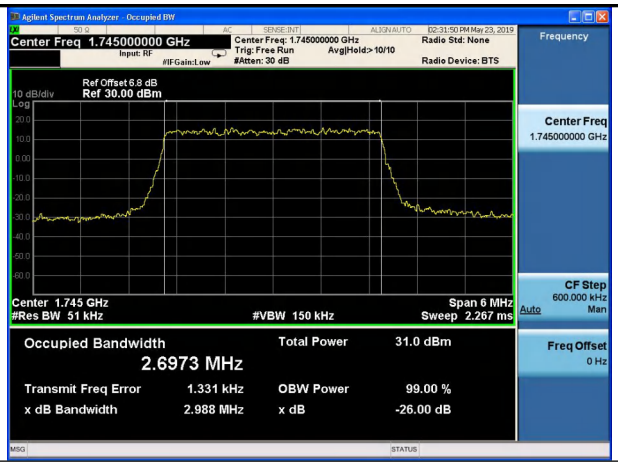

Fig.13

Fig.14

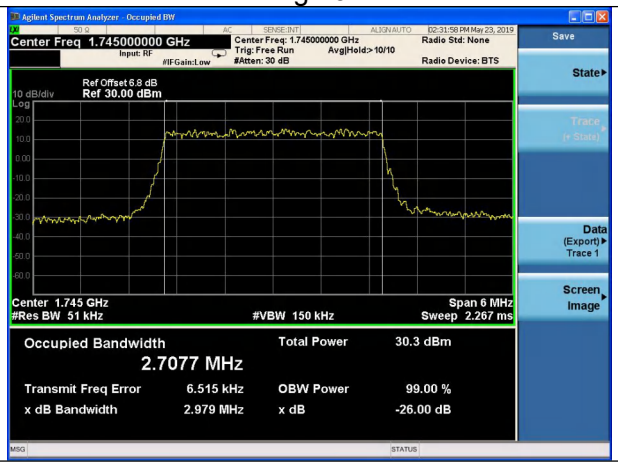

Fig.15

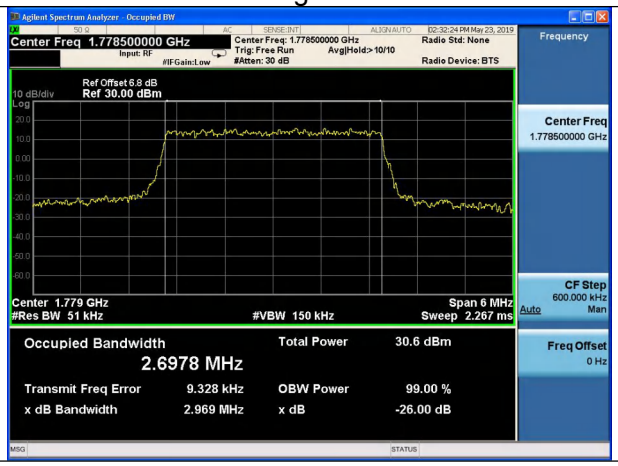

Fig.16

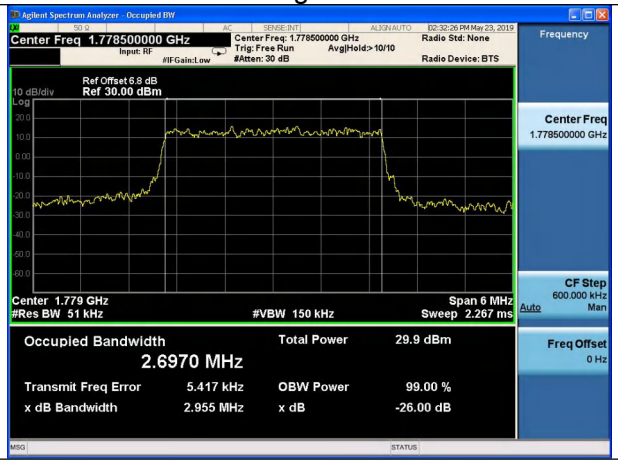

Fig.17

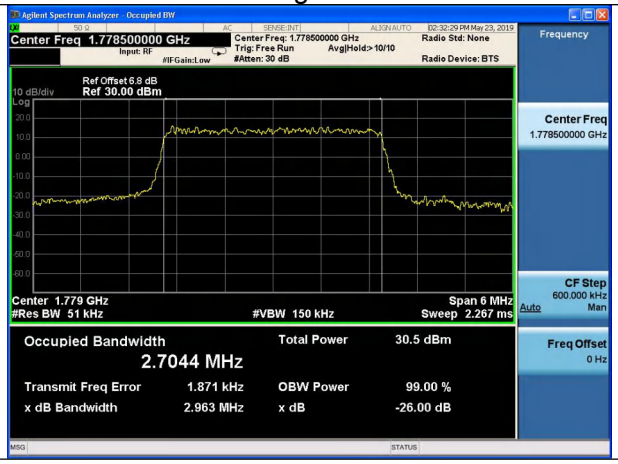

Fig.18

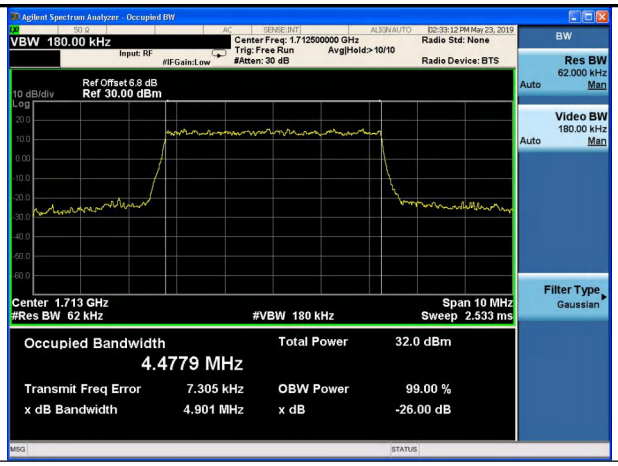

Fig.19

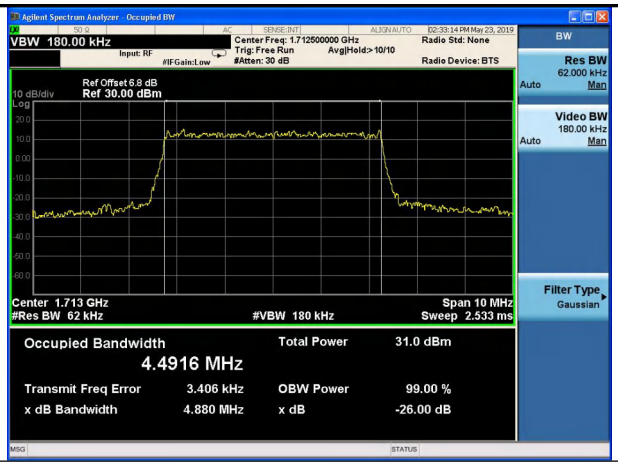

Fig.20

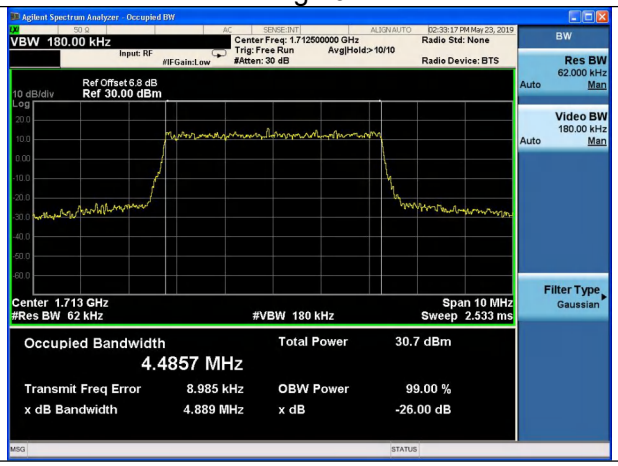

Fig.21

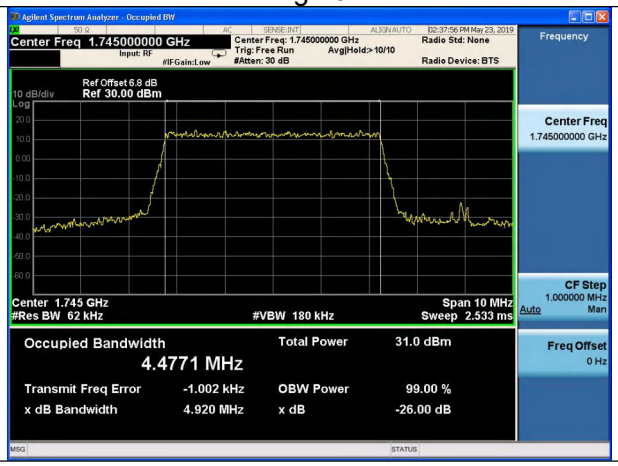

Fig.22

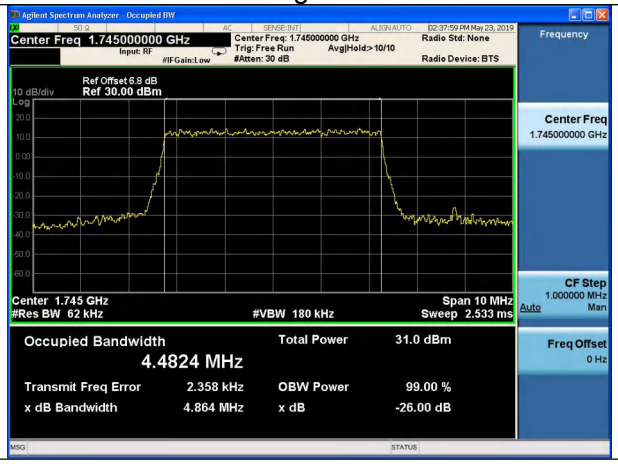

Fig.23

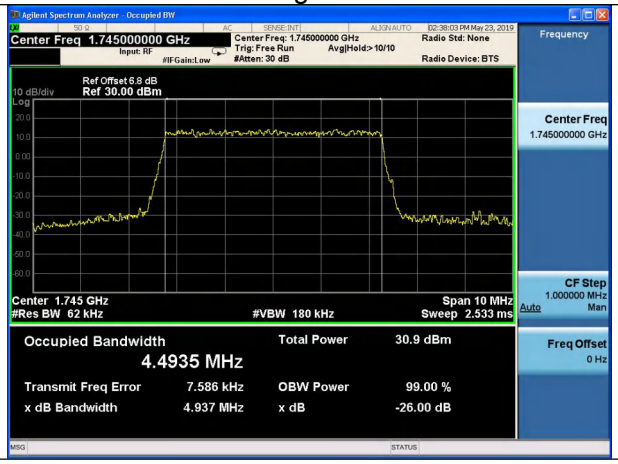

Fig.24

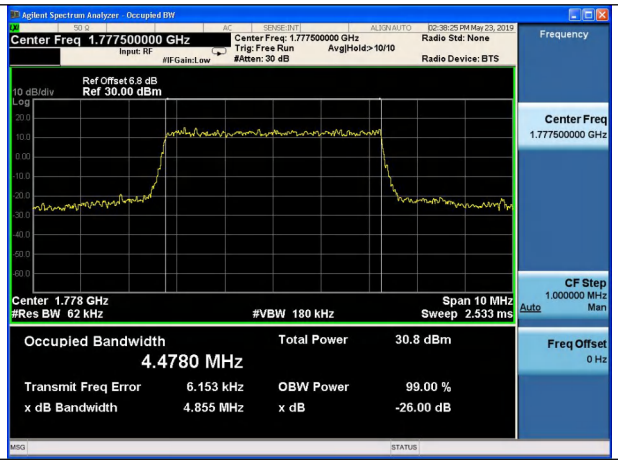

Fig.25

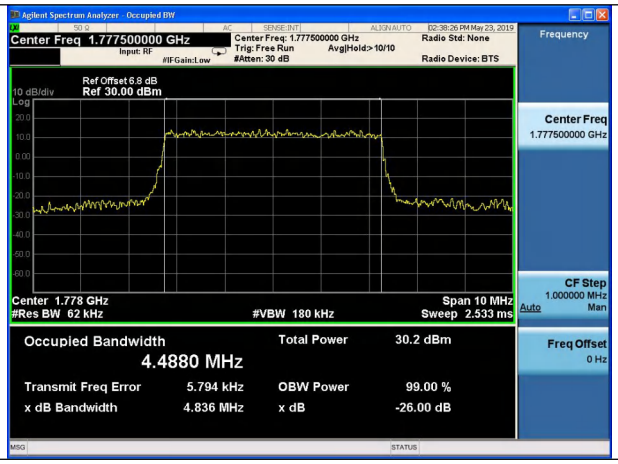

Fig.26

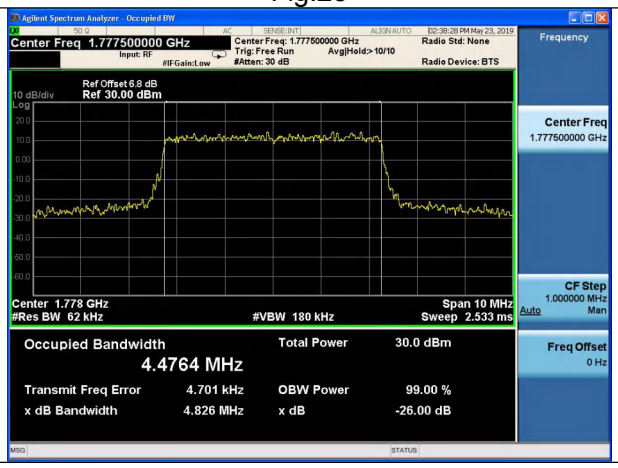

Fig.27

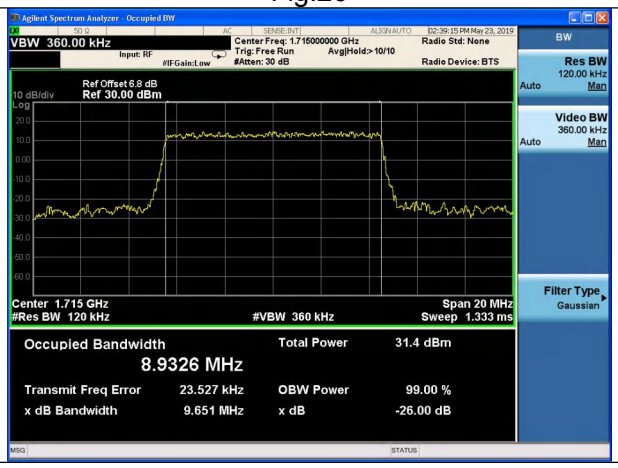

Fig.28

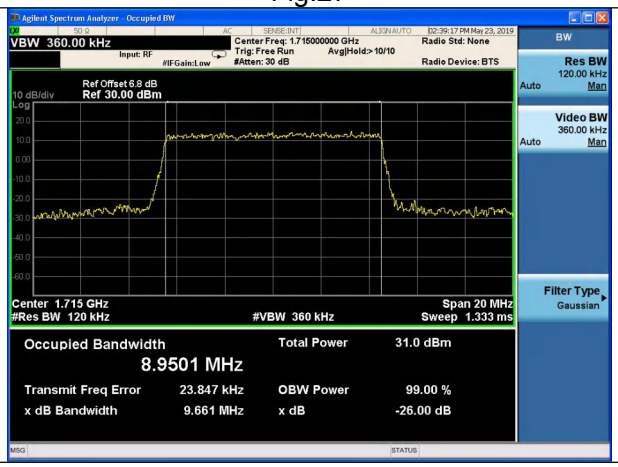

Fig.29

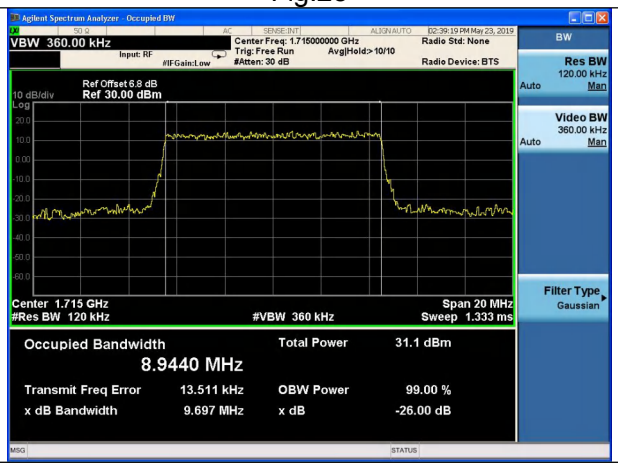

Fig.30

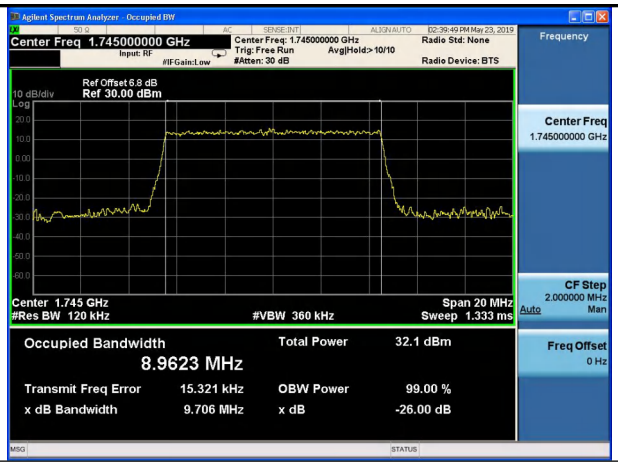

Fig.31

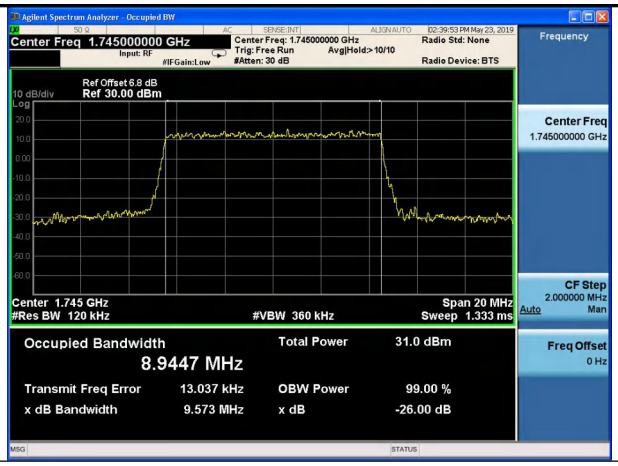

Fig.32

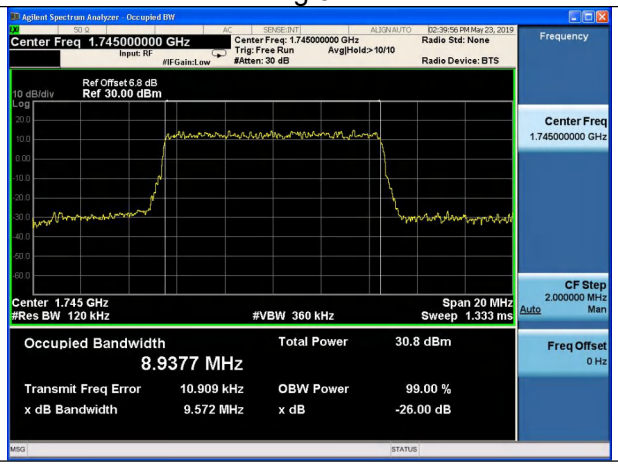

Fig.33

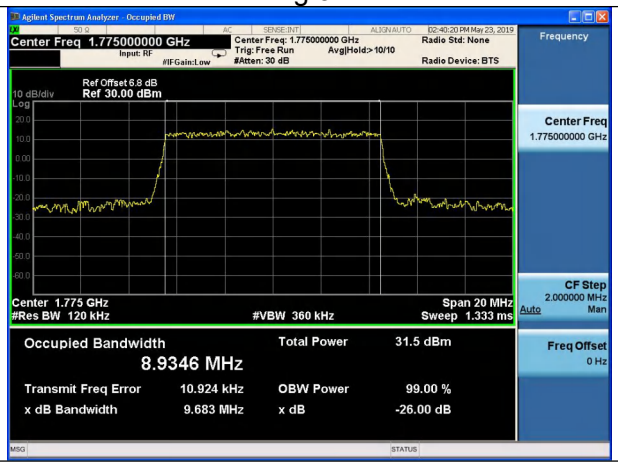

Fig.34

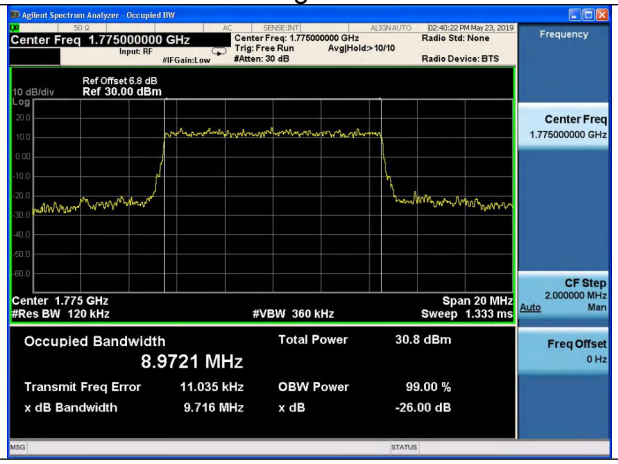

Fig.35

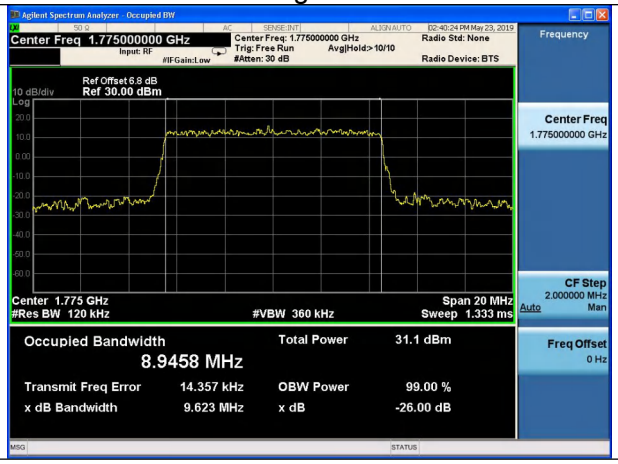

Fig.36

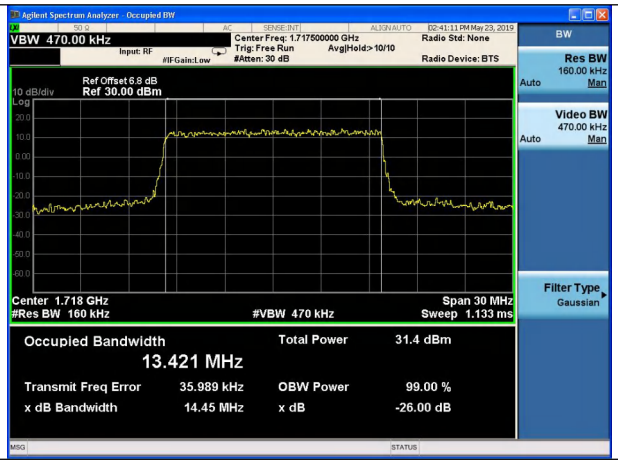

Fig.37

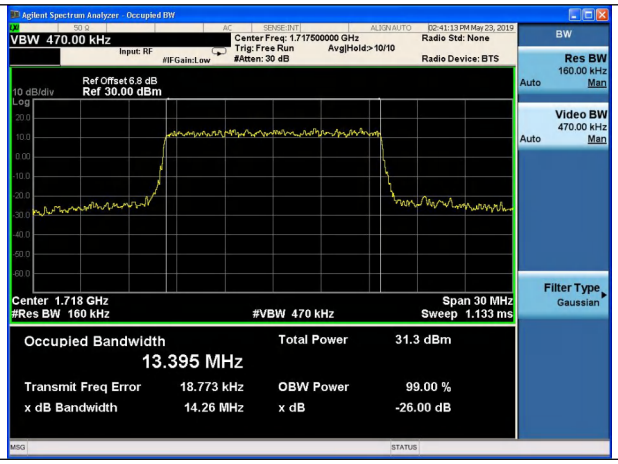

Fig.38

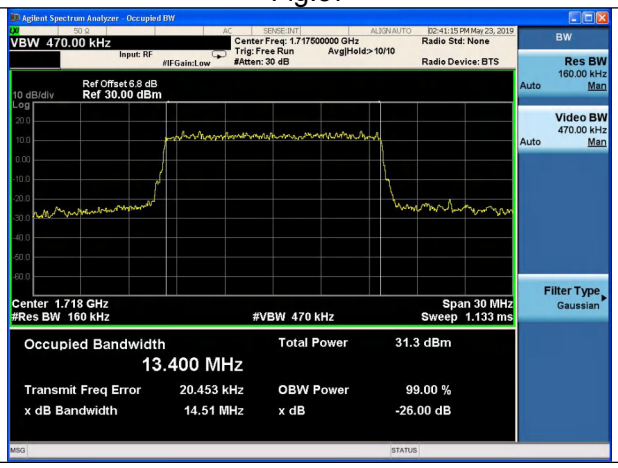

Fig.39

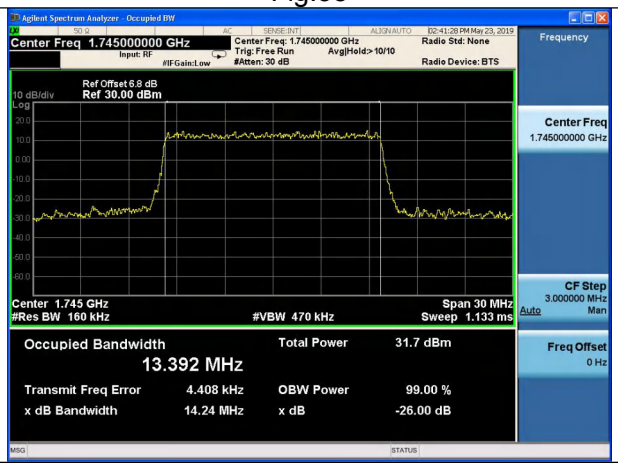

Fig.40

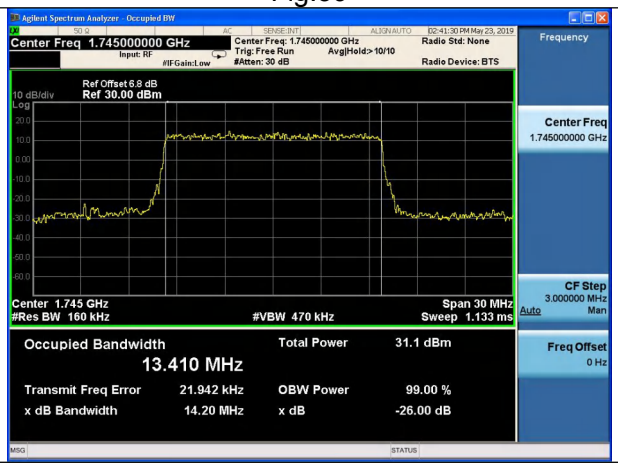

Fig.41

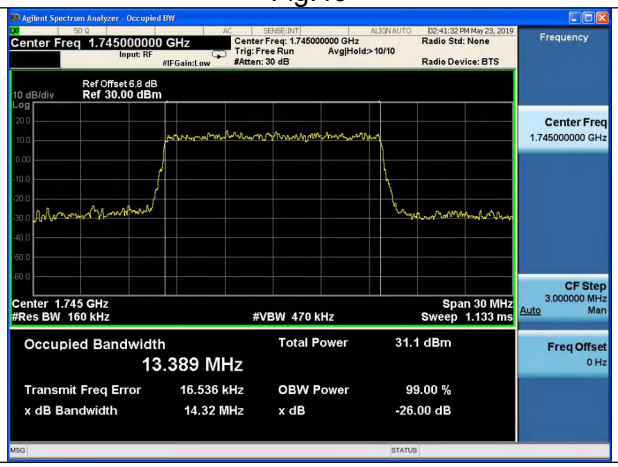

Fig.42

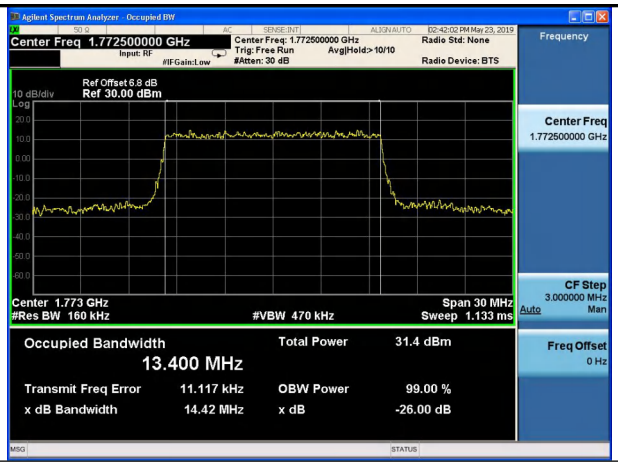

Fig.43

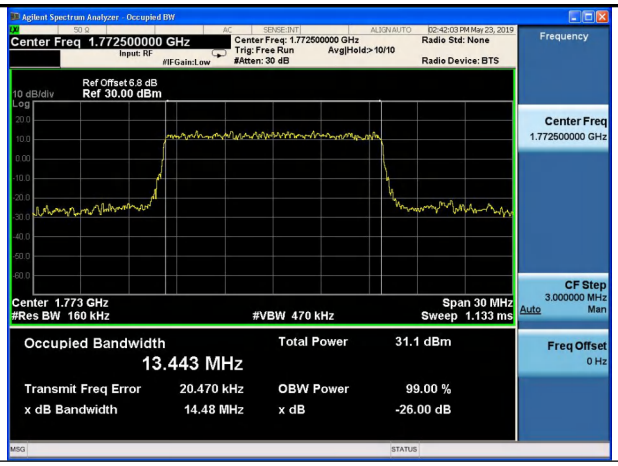

Fig.44

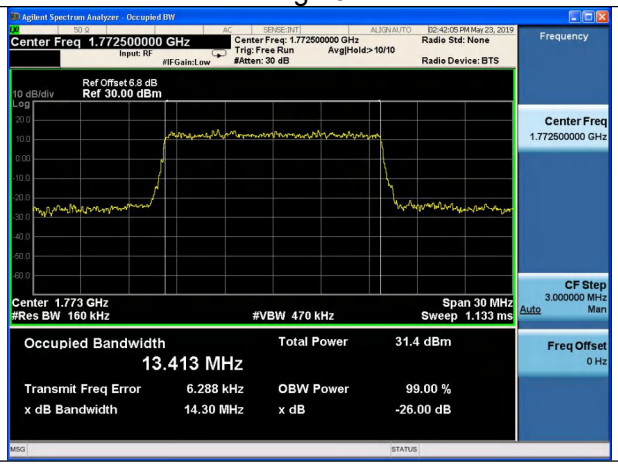

Fig.45

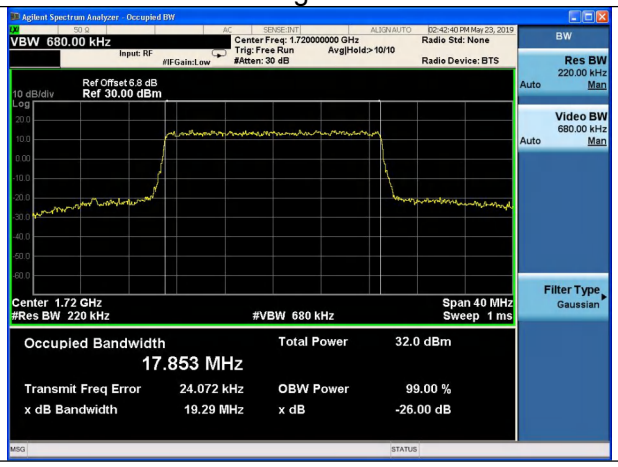

Fig.46

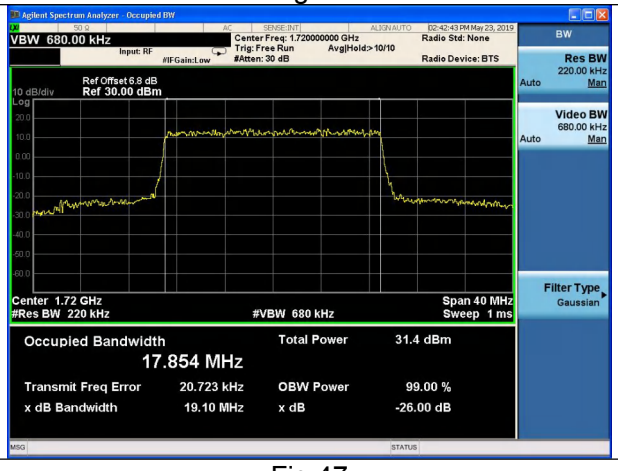

Fig.47

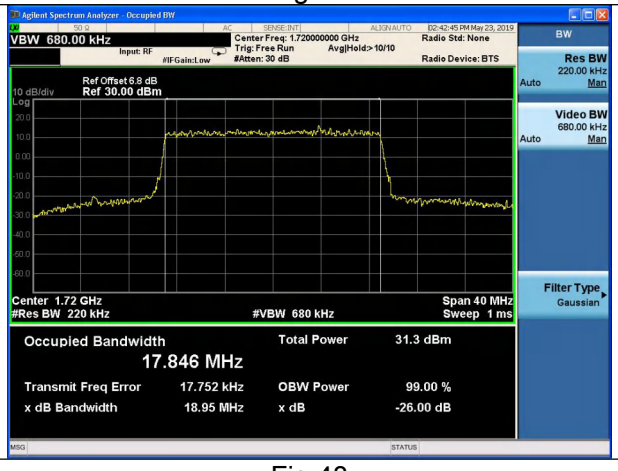

Fig.48

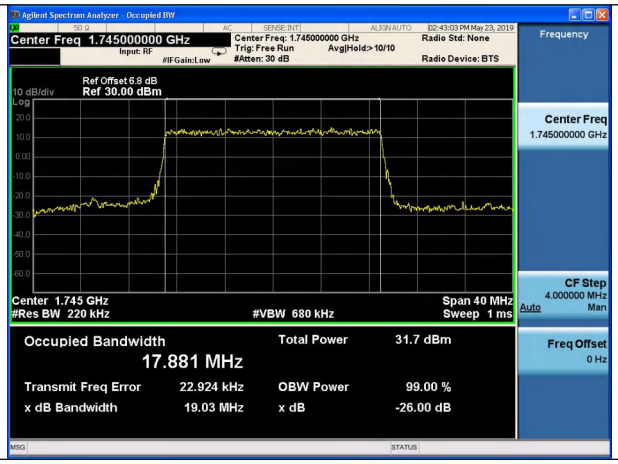

Fig.49

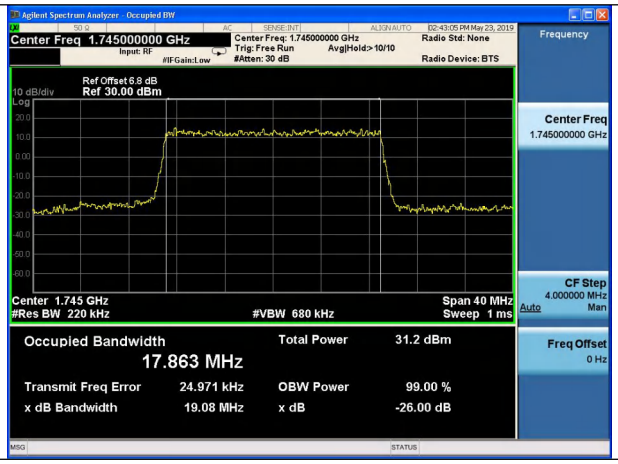

Fig.50

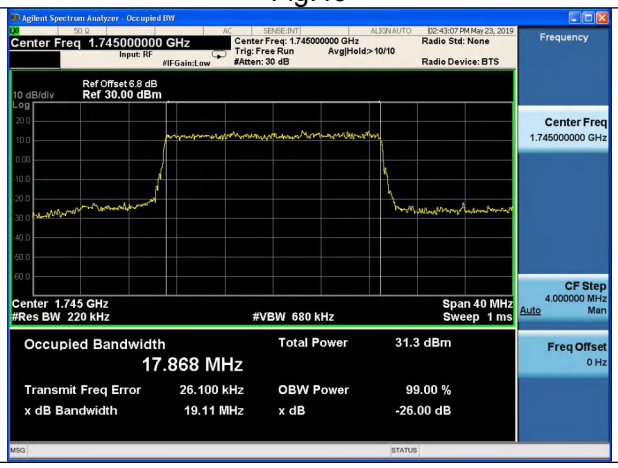

Fig.51

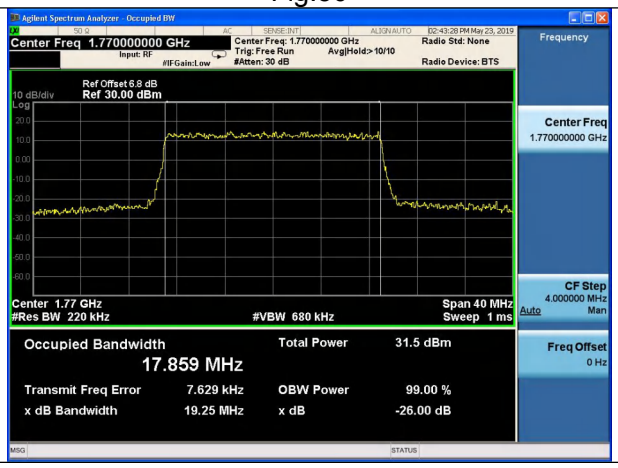

Fig.52

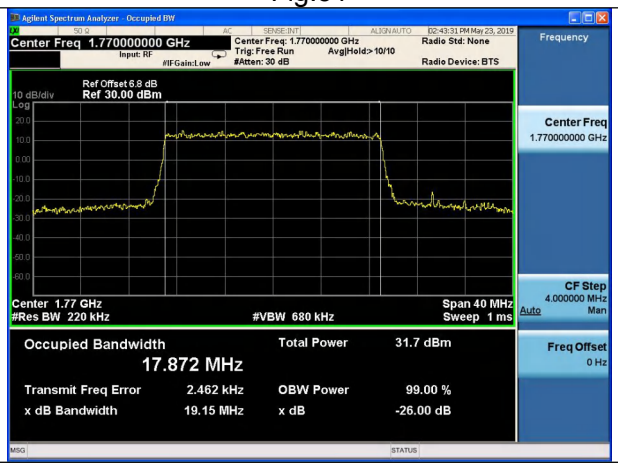

Fig.53

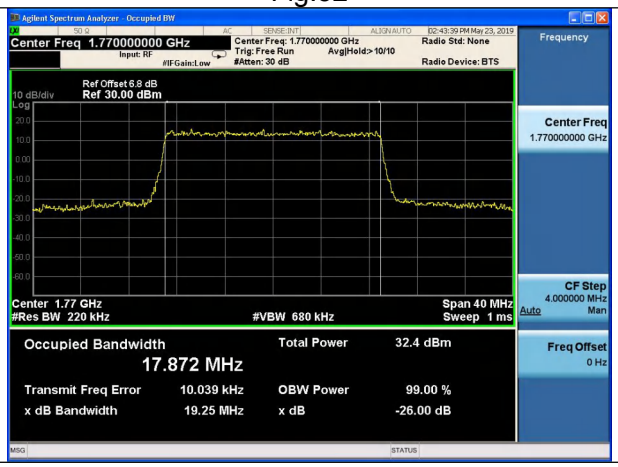

Fig.54