APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 12

1 RF Power Output

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	699.7	23017	1.4	1	0	23.27
				1	5	23.36
				3	2	22.36
				6	0	22.49
	707.5	23095		1	0	23.31
				1	5	23.35
				3	2	22.44
				6	0	22.38
	715.3	23173		1	0	23.35
				1	5	23.43
				3	2	22.49
				6	0	22.48
16QAM	699.7	23017	1.4	1	0	22.61
				1	5	22.68
				3	2	21.37
				6	0	21.41
	707.5	23095		1	0	22.53
				1	5	22.72
				3	2	21.35
				6	0	21.47
	715.3	23173		1	0	22.56
				1	5	22.61
				3	2	21.47
				6	0	21.64
64QAM	699.7	23017	1.4	1	0	22.57
				1	5	22.71
				3	2	21.29
				6	0	21.34
	707.5	23095		1	0	22.43
				1	5	22.64
				3	2	21.47
				6	0	21.47
	715.3	23173		1	0	22.56
				1	5	22.51
				3	2	21.38
				6	0	21.35

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	700.5	23025	3	1	0	23.30
				1	14	23.36
				8	4	22.31
				15	0	22.38
	707.5	23095		1	0	23.32
				1	14	23.43
				8	4	22.43
				15	0	22.37
	714.5	23165		1	0	23.24
				1	14	23.48
				8	4	22.51
				15	0	22.48
16QAM	700.5	23025	3	1	0	22.54
				1	14	22.70
				8	4	21.46
				15	0	21.50
	707.5	23095		1	0	22.57
				1	14	22.74
				8	4	21.36
				15	0	21.35
	714.5	23165		1	0	22.58
				1	14	22.58
				8	4	21.54
				15	0	21.57
64QAM	700.5	23025	3	1	0	22.49
				1	14	22.65
				8	4	21.30
				15	0	21.41
	707.5	23095		1	0	22.37
				1	14	22.60
				8	4	21.47
				15	0	21.40
	714.5	23165		1	0	22.57
				1	14	22.56
				8	4	21.43
				15	0	21.34

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	701.5	23035	5	1	0	23.40
				1	24	23.36
				12	6	22.39
				25	0	22.43
	707.5	23095		1	0	23.34
				1	24	23.33
				12	6	22.38
				25	0	22.43
	713.5	23155		1	0	23.33
				1	24	23.42
				12	6	22.45
				25	0	22.48
16QAM	701.5	23035	5	1	0	22.53
				1	24	22.59
				12	6	21.32
				25	0	21.48
	707.5	23095		1	0	22.58
				1	24	22.68
				12	6	21.48
				25	0	21.43
	713.5	23155		1	0	22.54
				1	24	22.56
				12	6	21.43
				25	0	21.57
64QAM	701.5	23035	5	1	0	22.57
				1	24	22.71
				12	6	21.42
				25	0	21.43
	707.5	23095		1	0	22.42
				1	24	22.54
				12	6	21.52
				25	0	21.40
	713.5	23155		1	0	22.48
				1	24	22.50
				12	6	21.44
				25	0	21.33

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	704	23060	10	1	0	23.41
				1	49	23.47
				24	12	22.43
				50	0	22.50
	707.5	23095		1	0	23.38
				1	49	23.48
				24	12	22.47
				50	0	22.45
	711	23130		1	0	23.37
				1	49	23.49
				24	12	22.57
				50	0	22.62
16QAM	704	23060	10	1	0	22.66
				1	49	22.71
				24	12	21.46
				50	0	21.55
	707.5	23095		1	0	22.64
				1	49	22.78
				24	12	21.48
				50	0	21.49
	711	23130		1	0	22.62
				1	49	22.70
				24	12	21.57
				50	0	21.65
64QAM	704	23060	10	1	0	22.64
				1	49	22.71
				24	12	21.43
				50	0	21.48
	707.5	23095		1	0	22.45
				1	49	22.68
				24	12	21.52
				50	0	21.47
	711	23130		1	0	22.58
				1	49	22.64
				24	12	21.46
				50	0	21.37

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	
12	699.7	23017	1.4	6	0	1.0793	Fig.1	1.0788	Fig.2	1.0785	Fig.3
	707.5	23095		6	0	1.0784	Fig.4	1.0772	Fig.5	1.0769	Fig.6
	715.3	23173		6	0	1.0781	Fig.7	1.0786	Fig.8	1.0757	Fig.9
	700.5	23025	3	15	0	2.6818	Fig.10	2.6845	Fig.11	2.6810	Fig.12
	707.5	23095		15	0	2.6782	Fig.13	2.6916	Fig.14	2.6827	Fig.15
	714.5	23165		15	0	2.6780	Fig.16	2.6810	Fig.17	2.6917	Fig.18
	701.5	23035	5	25	0	4.4826	Fig.19	4.4772	Fig.20	4.4732	Fig.21
	707.5	23095		25	0	4.4764	Fig.22	4.4885	Fig.23	4.4782	Fig.24
	713.5	23155		25	0	4.4774	Fig.25	4.4823	Fig.26	4.4745	Fig.27
	704	23060	10	50	0	8.9415	Fig.28	8.9258	Fig.29	8.9564	Fig.30
	707.5	23095		50	0	8.9479	Fig.31	8.9252	Fig.32	8.9283	Fig.33
	711	23130		50	0	8.9299	Fig.34	8.9462	Fig.35	8.9422	Fig.36

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
12	699.7	23017	1.4	6	0	1.235	Fig.1	1.242	Fig.2	1.228	Fig.3
	707.5	23095		6	0	1.233	Fig.4	1.256	Fig.5	1.212	Fig.6
	715.3	23173		6	0	1.236	Fig.7	1.239	Fig.8	1.234	Fig.9
	700.5	23015	3	15	0	2.878	Fig.10	2.875	Fig.11	2.874	Fig.12
	707.5	23095		15	0	2.897	Fig.13	2.887	Fig.14	2.899	Fig.15
	714.5	23165		15	0	2.892	Fig.16	2.889	Fig.17	2.878	Fig.18
	701.5	23035	5	25	0	5.093	Fig.19	4.988	Fig.20	4.951	Fig.21
	707.5	23095		25	0	5.008	Fig.22	4.970	Fig.23	5.008	Fig.24
	713.5	23155		25	0	5.107	Fig.25	5.017	Fig.26	4.965	Fig.27
	704	23060	10	50	0	9.866	Fig.28	9.805	Fig.29	9.875	Fig.30
	707.5	23095		50	0	9.868	Fig.31	9.730	Fig.32	9.728	Fig.33
	711	23130		50	0	9.650	Fig.34	9.698	Fig.35	9.656	Fig.36

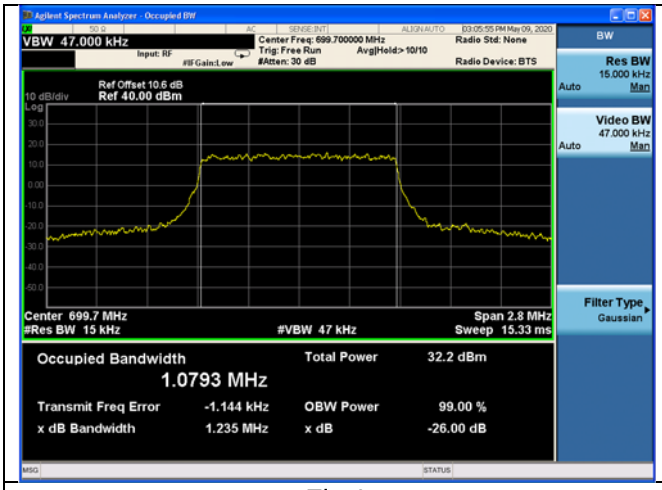

Fig.1

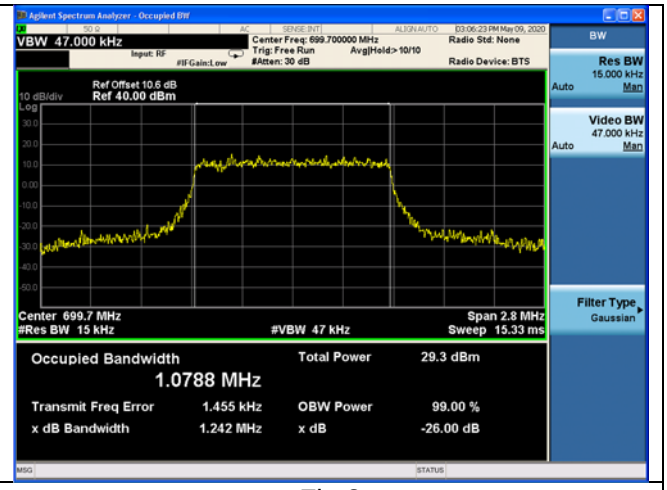

Fig.2

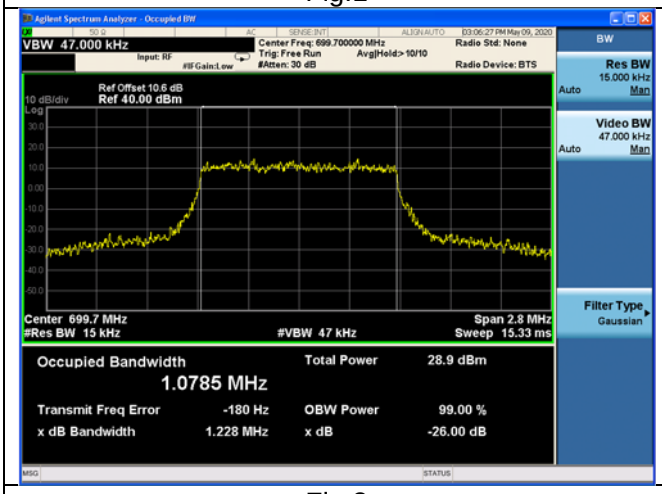

Fig.3

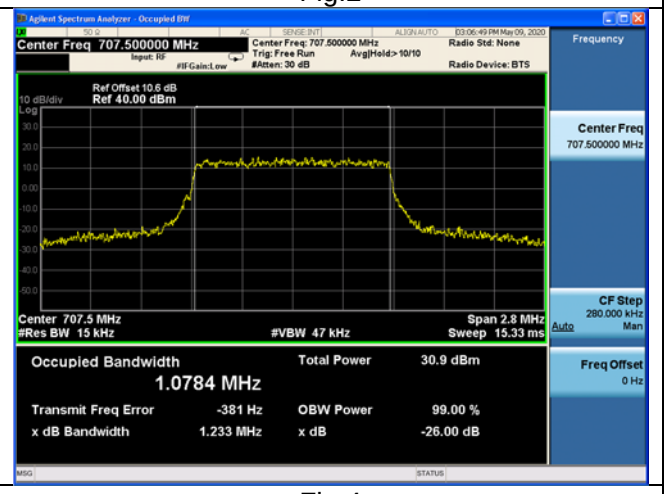

Fig.4

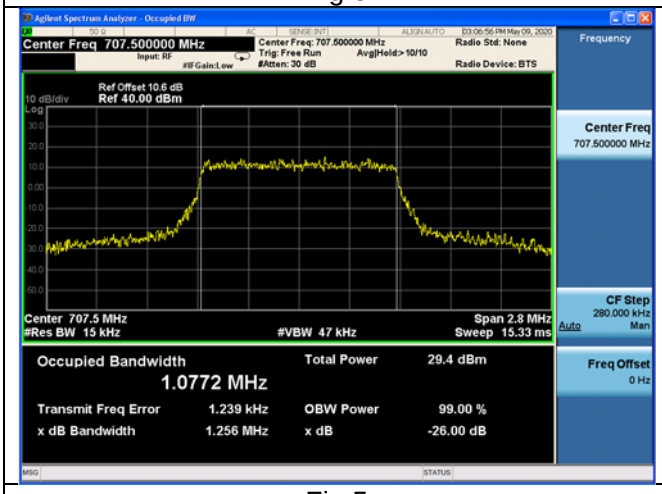

Fig.5

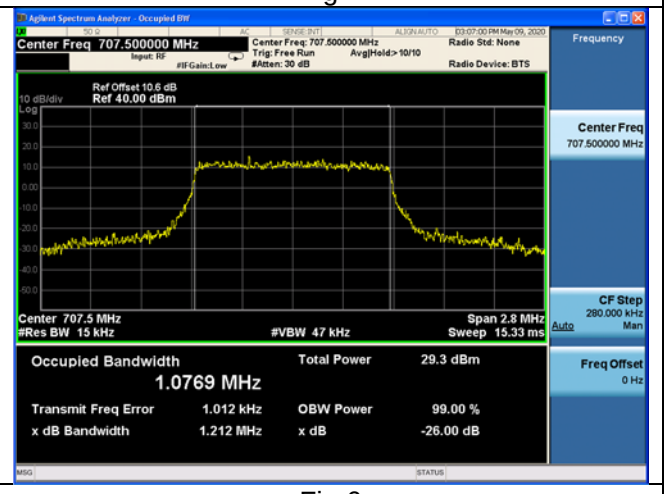

Fig.6

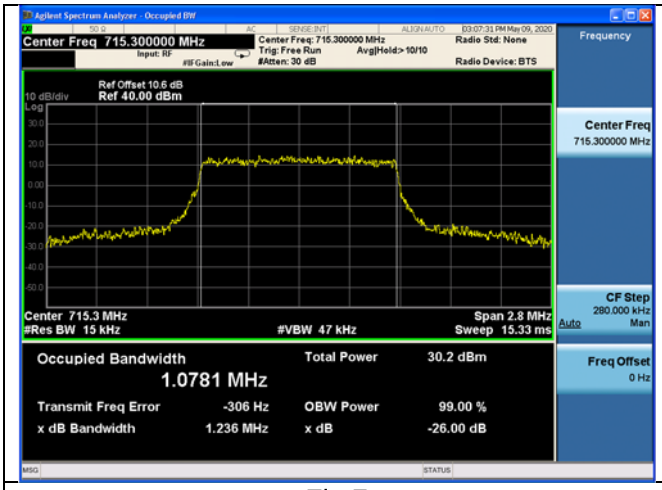

Fig.7

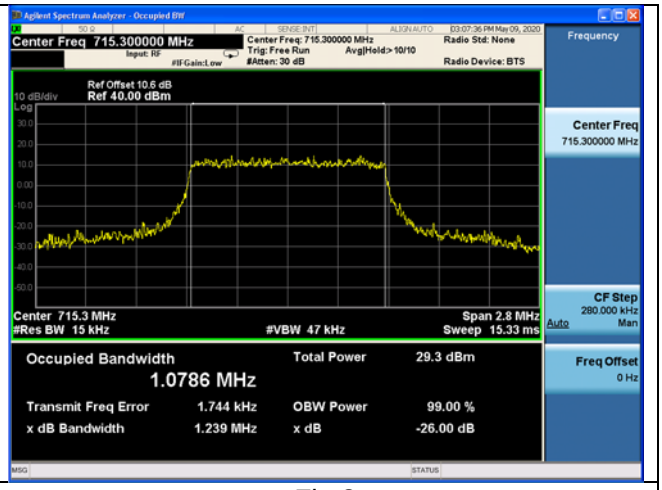

Fig.8

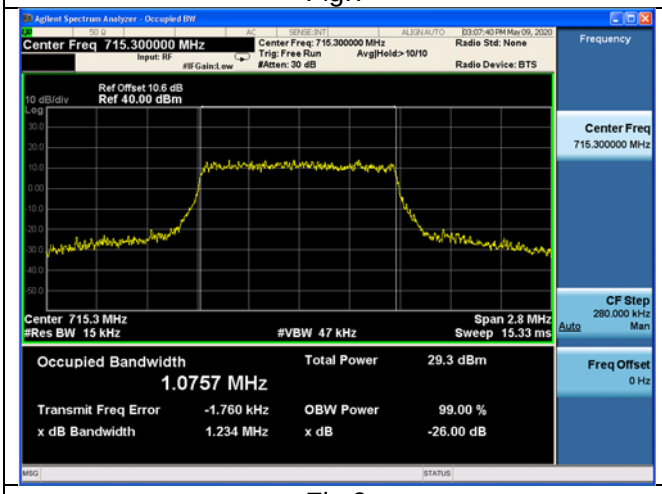

Fig.9

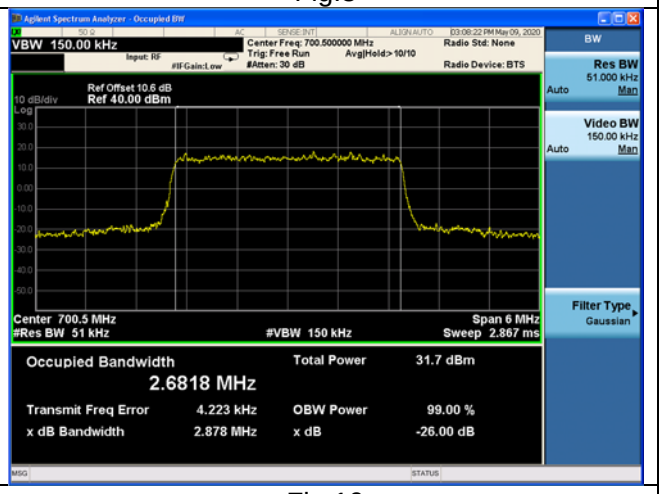

Fig.10

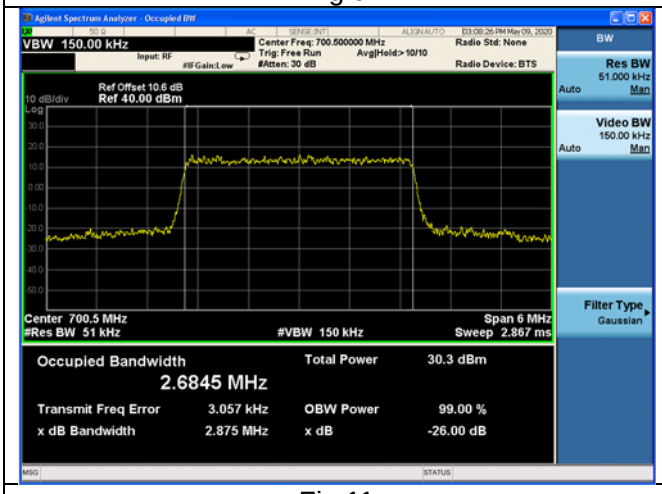

Fig.11

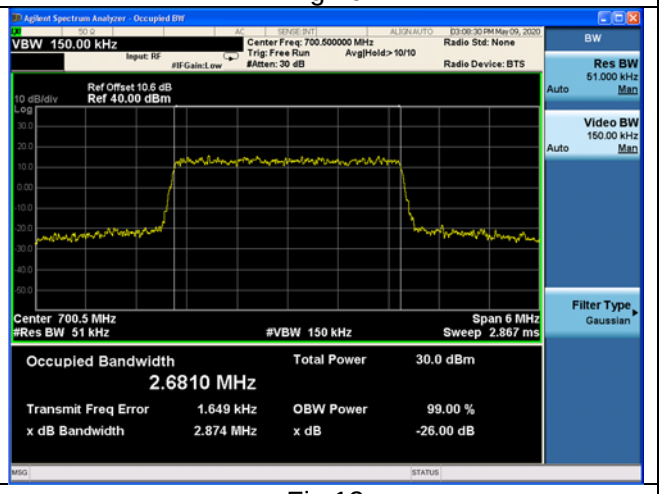

Fig.12

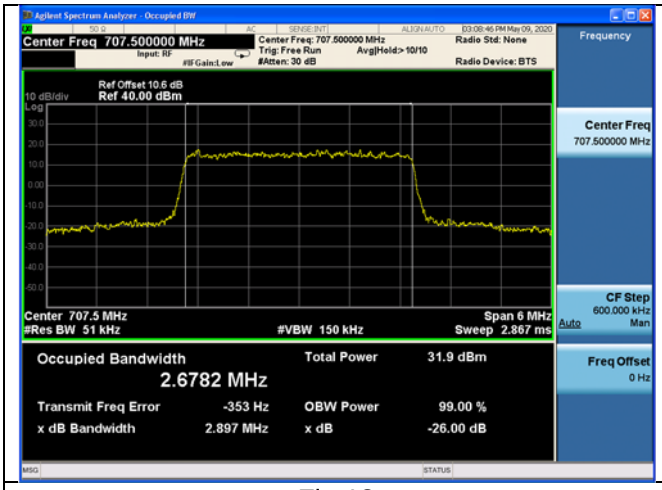

Fig.13

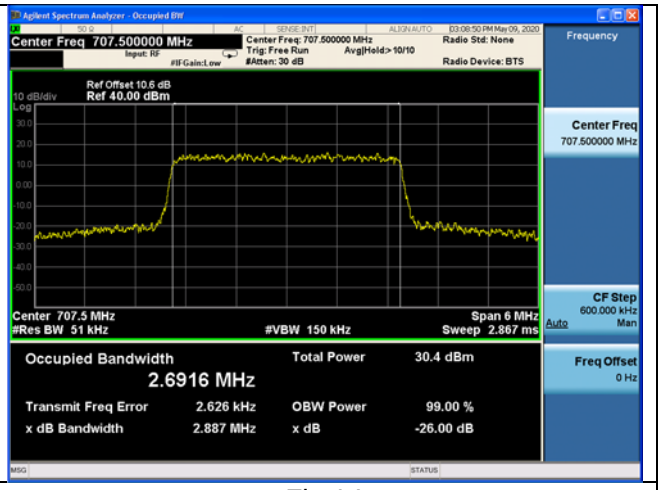

Fig.14

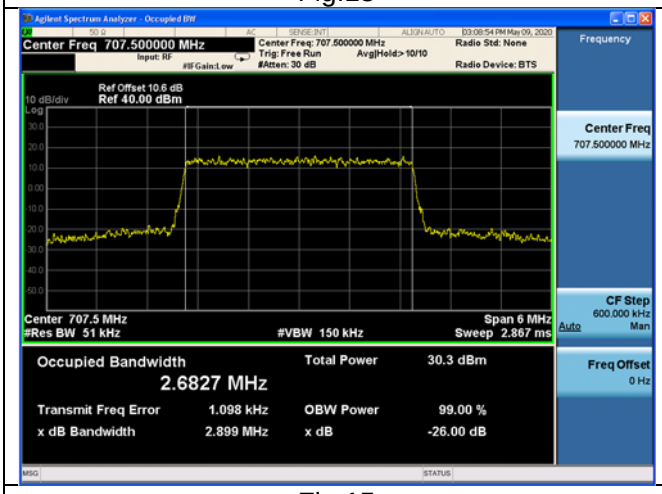

Fig.15

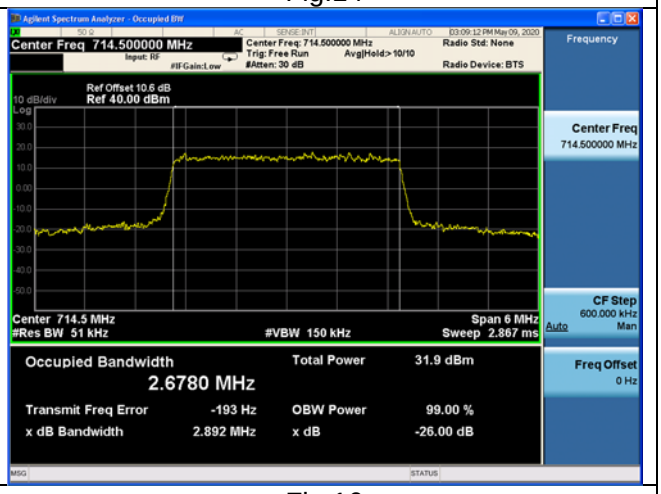

Fig.16

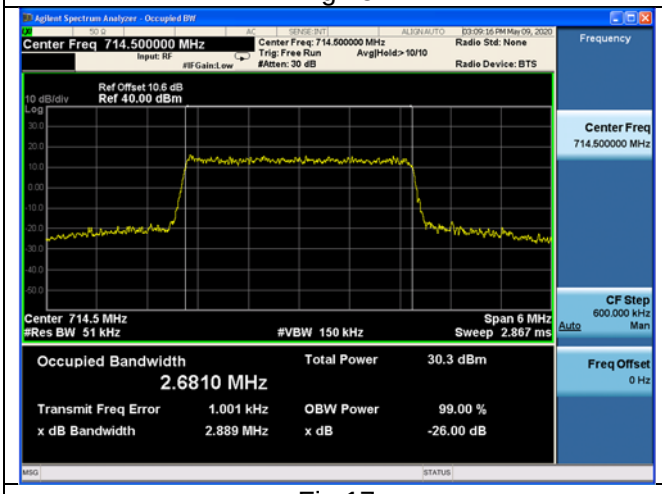

Fig.17

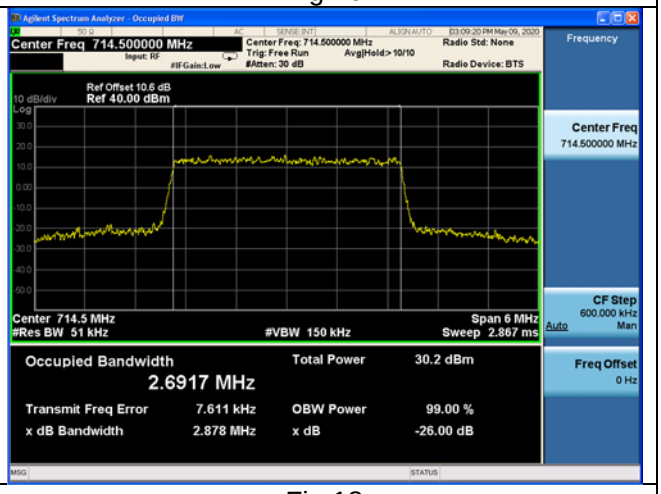

Fig.18

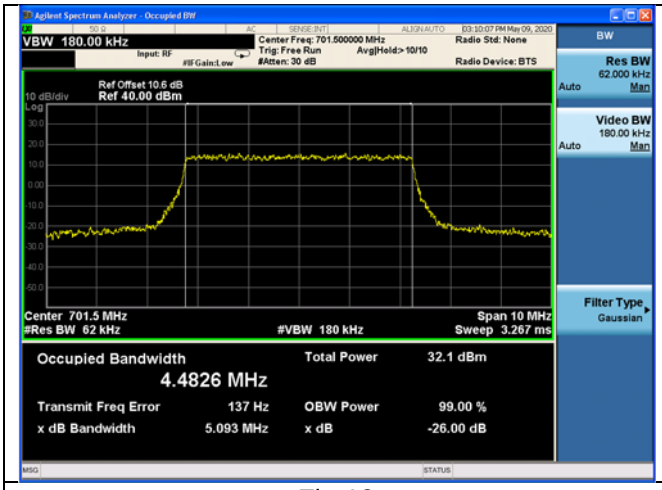

Fig.19

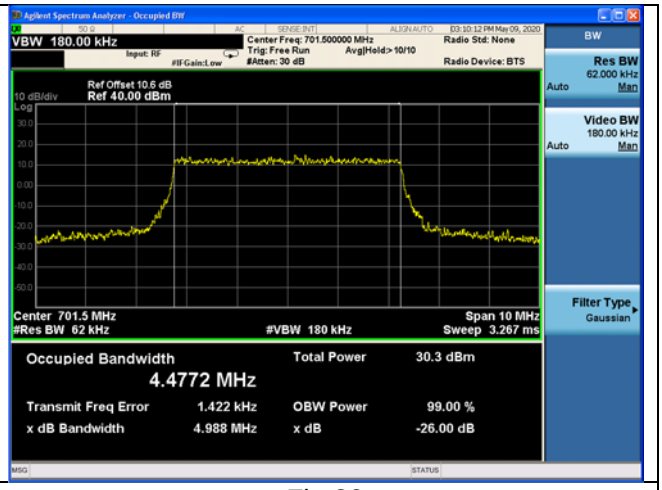

Fig.20

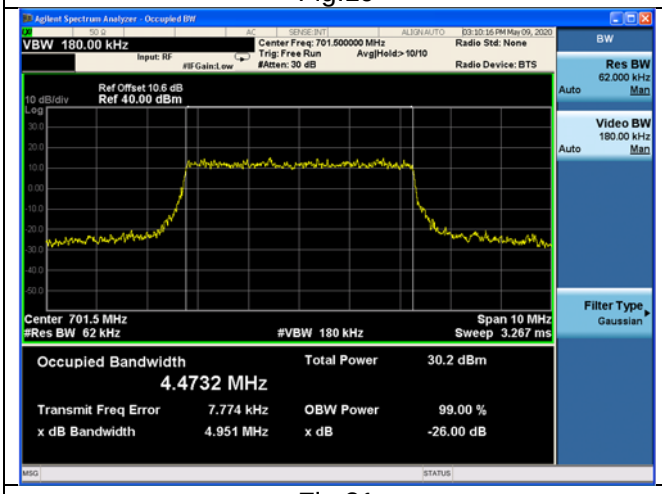

Fig.21

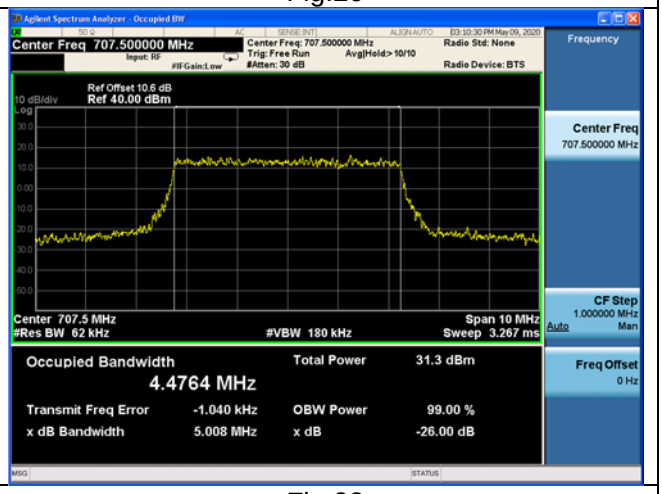

Fig.22

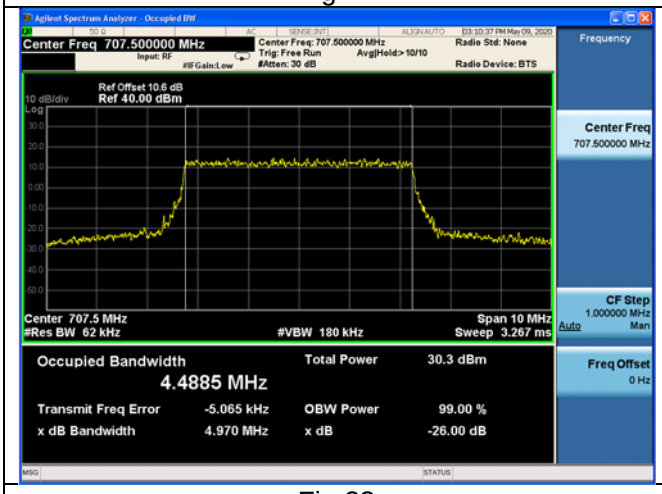

Fig.23

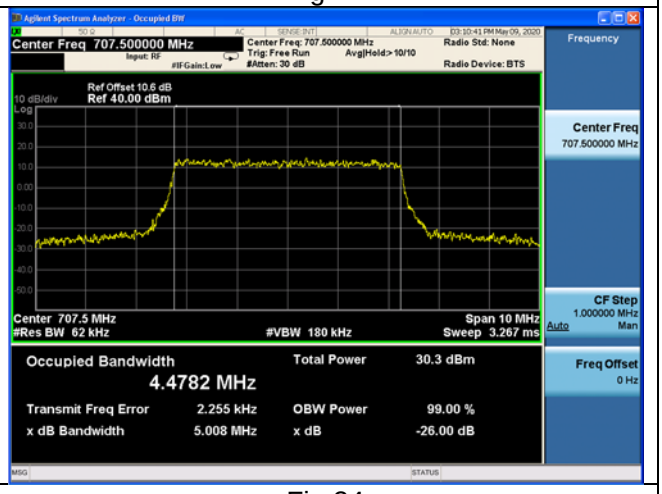

Fig.24

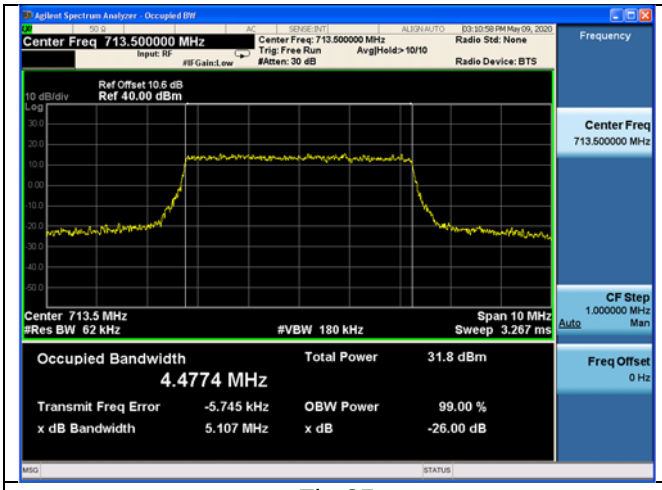

Fig.25

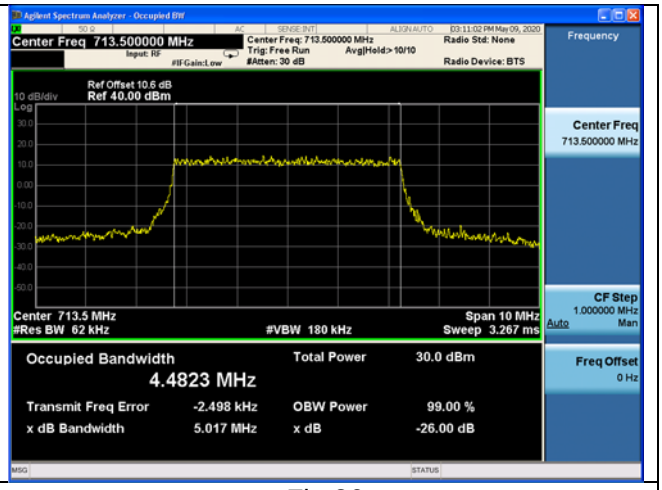

Fig.26

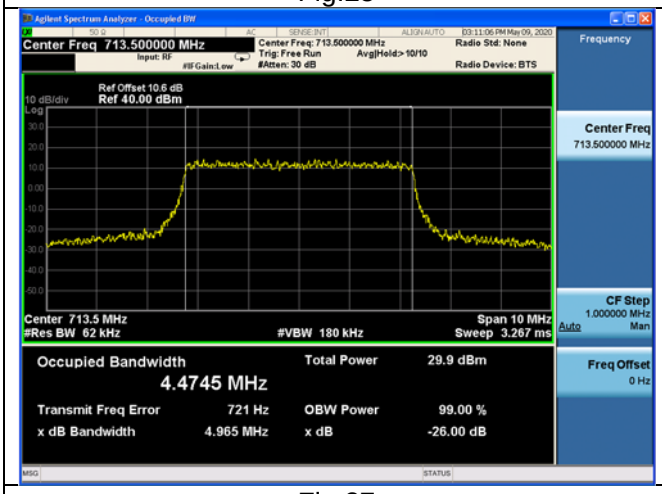

Fig.27

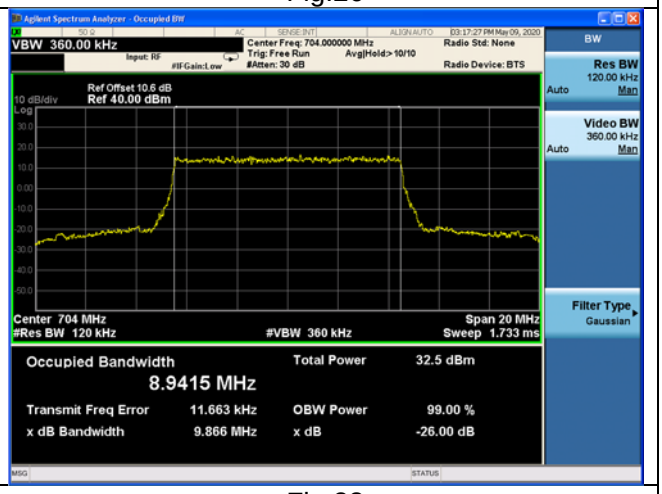

Fig.28

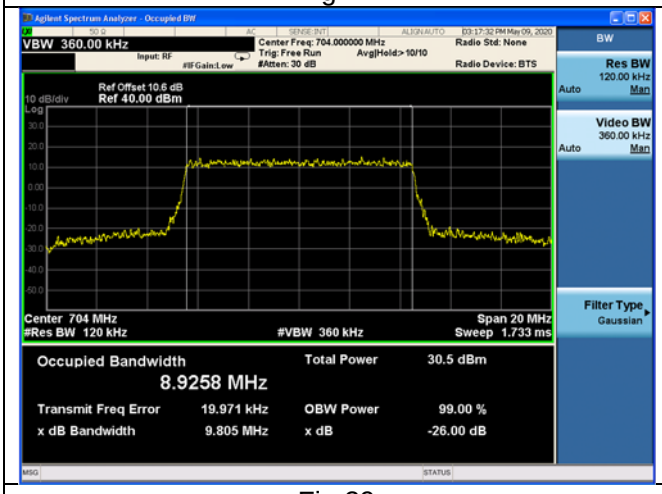

Fig.29

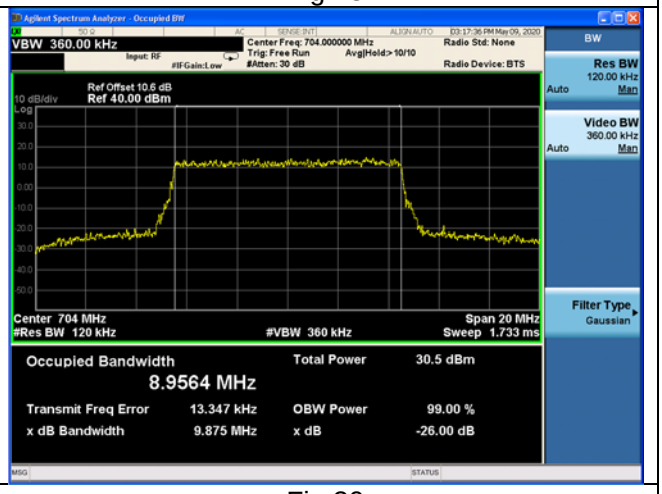

Fig.30

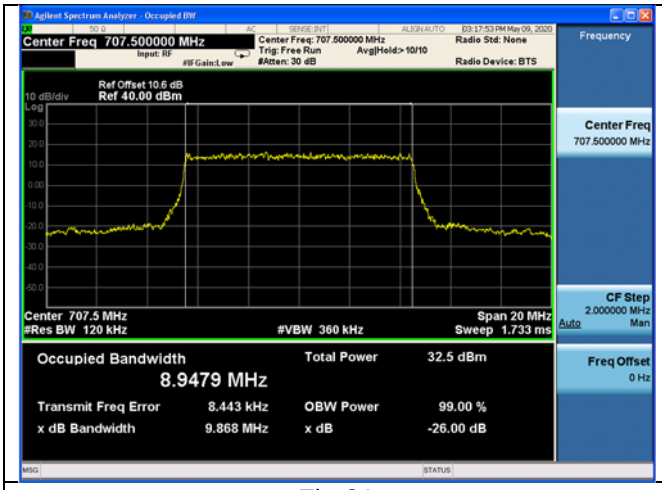

Fig.31

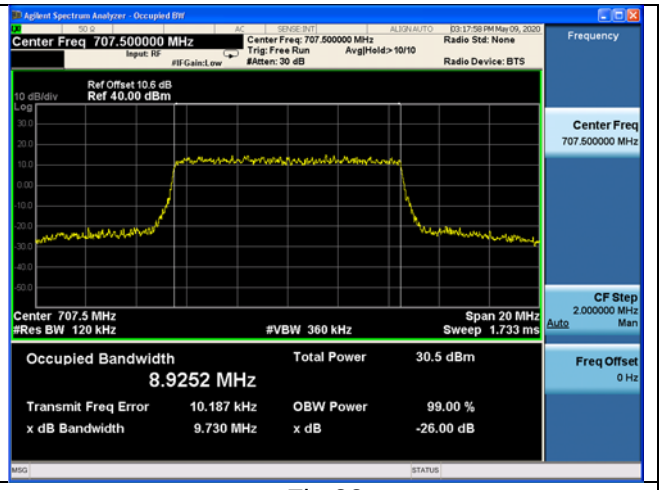

Fig.32

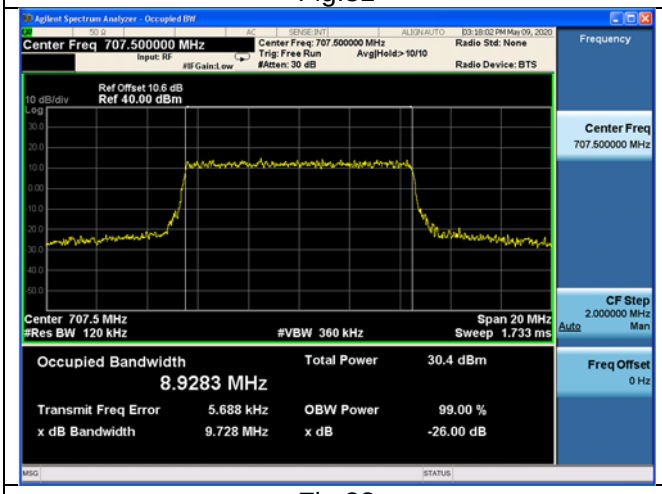

Fig.33

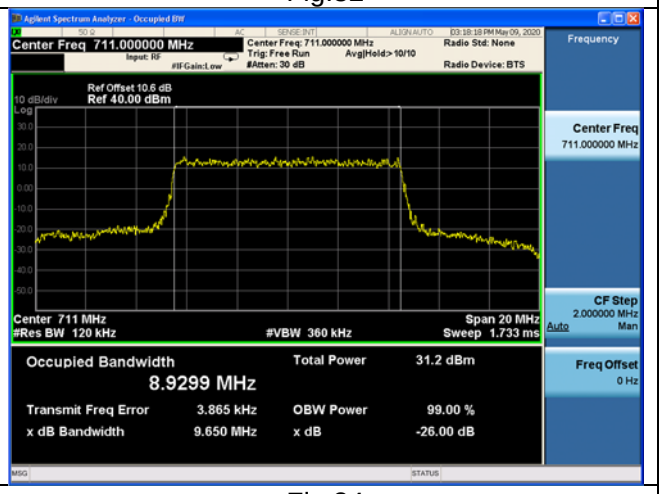

Fig.34

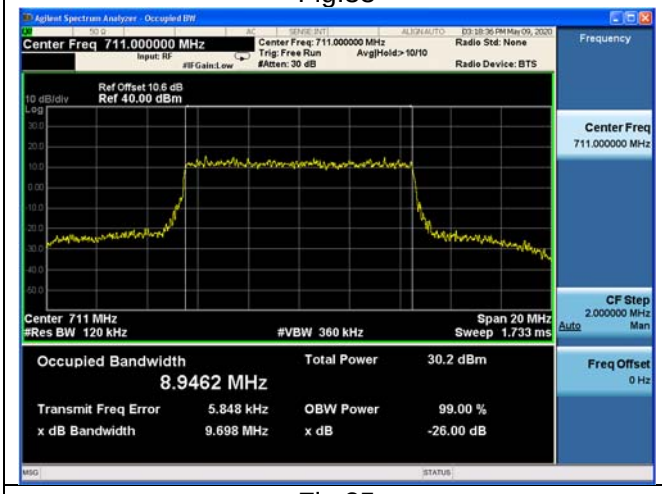

Fig.35

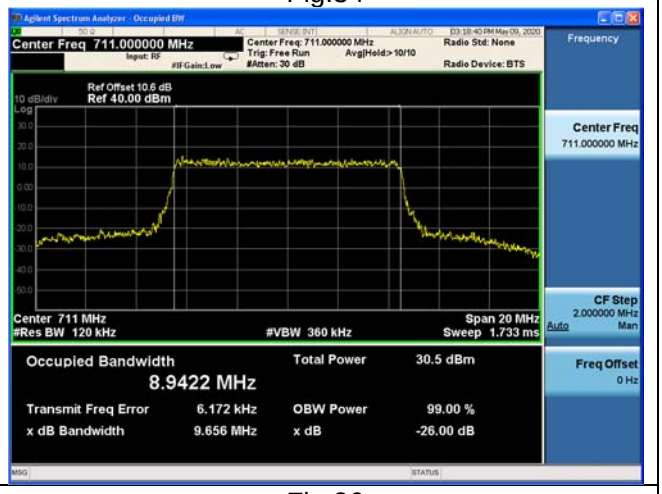

Fig.36

3 Peak-Average Ratio

Band	Carrier frequency (MHz)	Channel	BW (MHz)	RB Size	RB Offset	QPSK	16-QAM	64-QAM
12	707.5	23095	1.4	1	0	Fig.1	Fig.2	Fig.3
			3	1	0	Fig.4	Fig.5	Fig.6
			5	1	0	Fig.7	Fig.8	Fig.9
			10	1	0	Fig.10	Fig.11	Fig.12

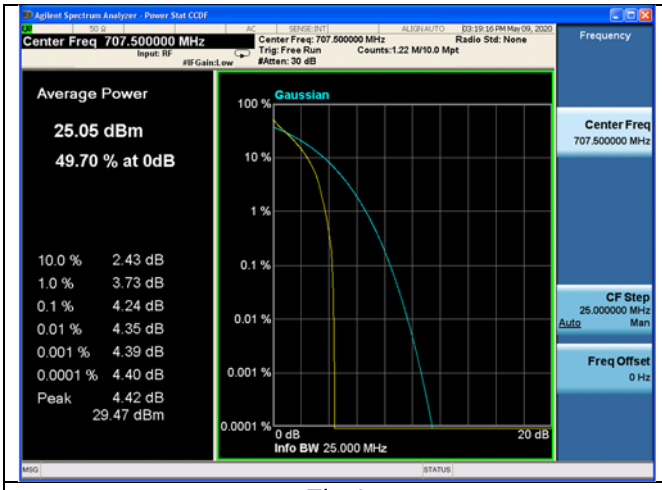

Fig.1

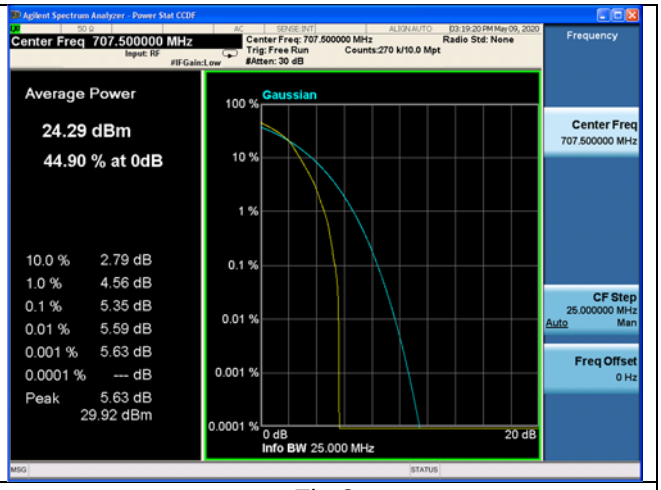

Fig.2

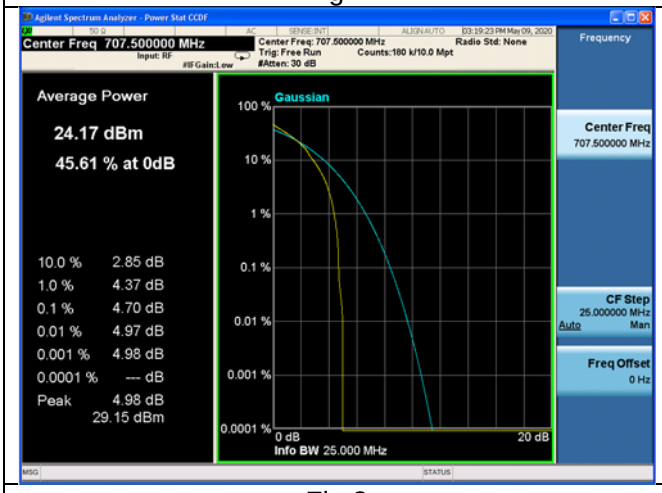

Fig.3

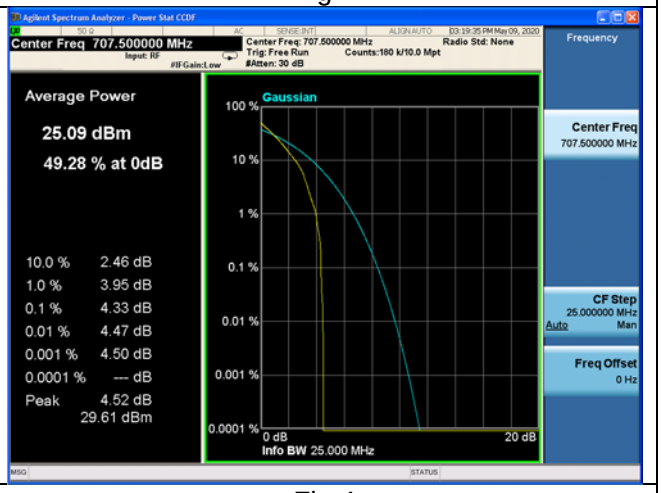

Fig.4

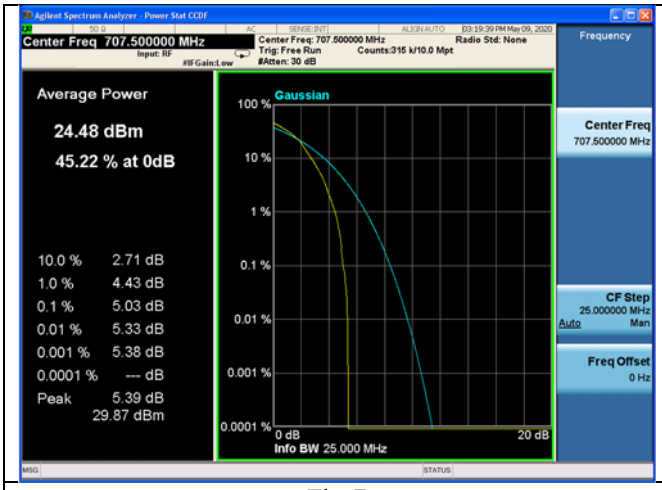

Fig.5

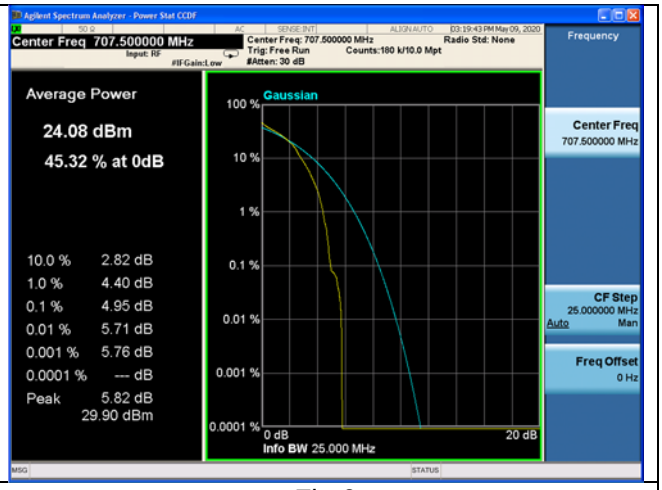

Fig.6

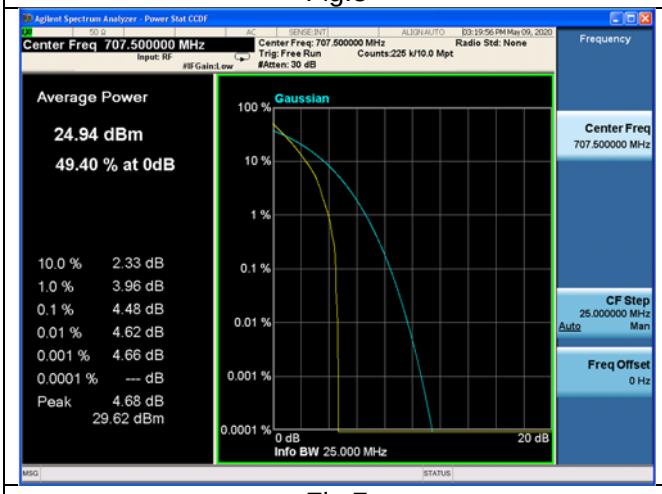

Fig.7

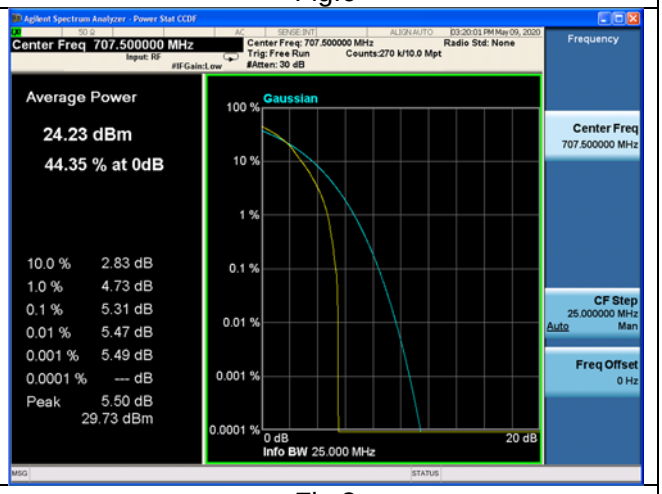

Fig.8

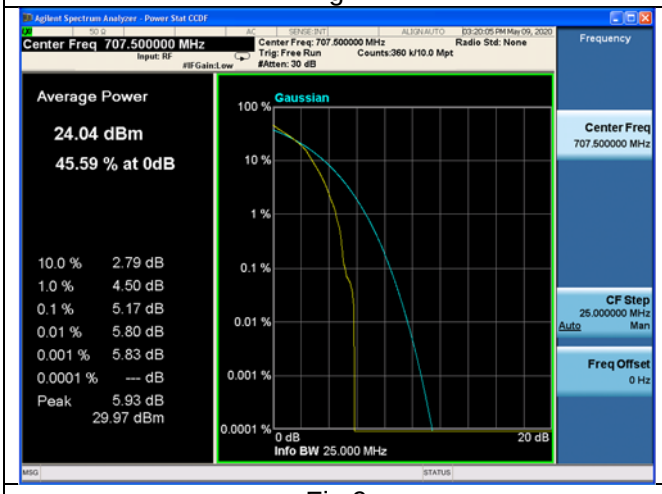

Fig.9

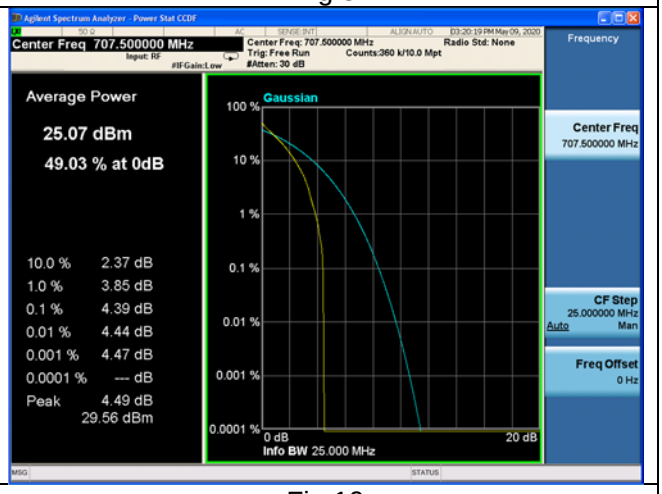

Fig.10

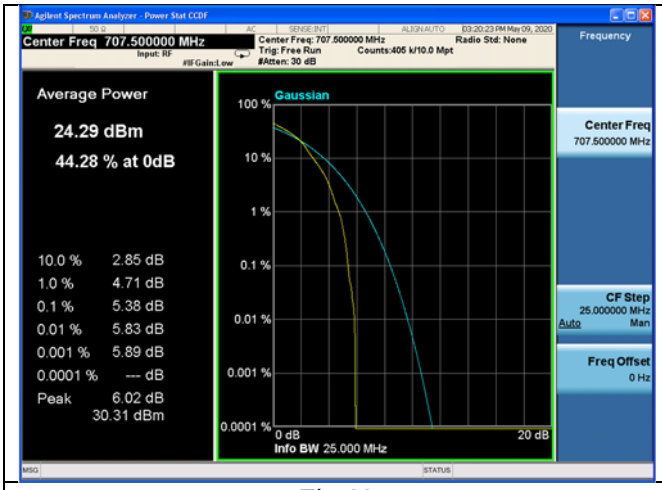
Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 707.500000 MHz
Input: RF
Center Freq: 707.500000 MHz
Trig: Free Run
#Atten: 30 dB
Counts:405 k/10.0 Mpt
Radio Std: None
Frequency
Average Power
24.29 dBm
44.28 % at 0dB
10.0 % 2.85 dB
1.0 % 4.71 dB
0.1 % 5.38 dB
0.01 % 5.83 dB
0.001 % 5.89 dB
0.0001 % --- dB
Peak 6.02 dB
30.31 dBm
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0 dB
20 dB
Info BW 25.000 MHz
Center Freq
707.500000 MHz
CF Step
25.000000 MHz
Auto Man
Freq Offset
0 Hz
MSG
STATUS

Fig.11

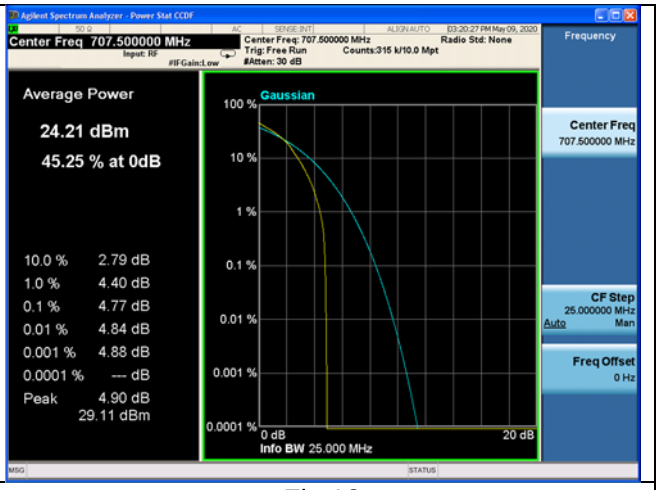
Agilent Spectrum Analyzer - Power Stat CCDF
Center Freq 707.500000 MHz
Input: RF
Center Freq: 707.500000 MHz
Trig: Free Run
#Atten: 30 dB
Counts:315 k/10.0 Mpt
Radio Std: None
Frequency
Average Power
24.21 dBm
45.25 % at 0dB
10.0 % 2.79 dB
1.0 % 4.40 dB
0.1 % 4.77 dB
0.01 % 4.84 dB
0.001 % 4.88 dB
0.0001 % --- dB
Peak 4.90 dB
29.11 dBm
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0 dB
20 dB
Info BW 25.000 MHz
Center Freq
707.500000 MHz
CF Step
25.000000 MHz
Auto Man
Freq Offset
0 Hz
MSG
STATUS

Fig.12

4 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
12	704	23060	10	1	0	Fig.1-2
	707.5	23095	10	1	0	Fig.3-4
	711	23130	10	1	0	Fig.4-5

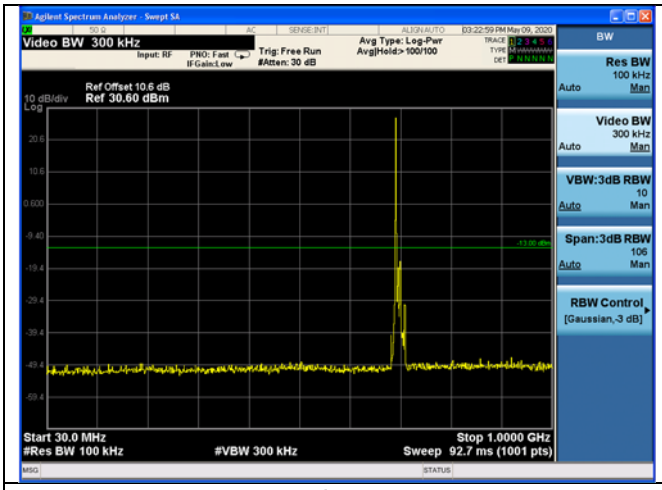

Fig.1

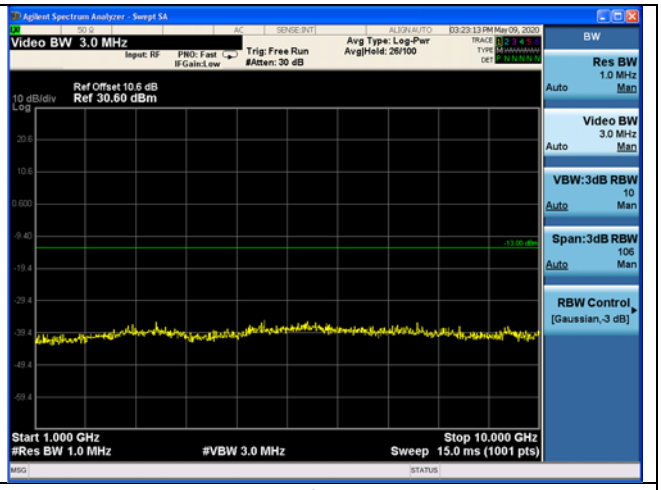

Fig.2

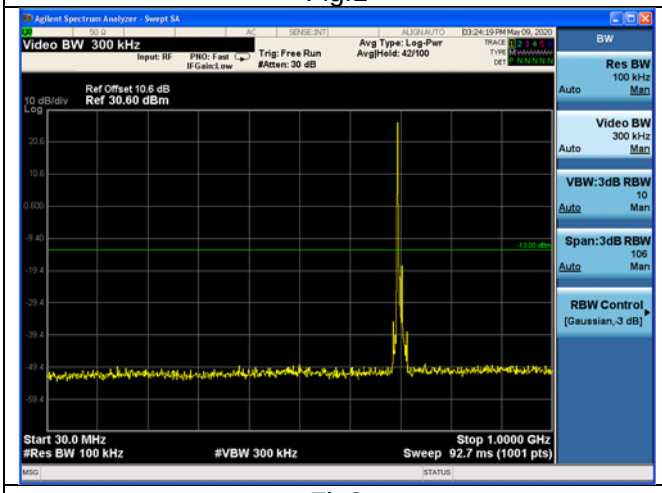

Fig3

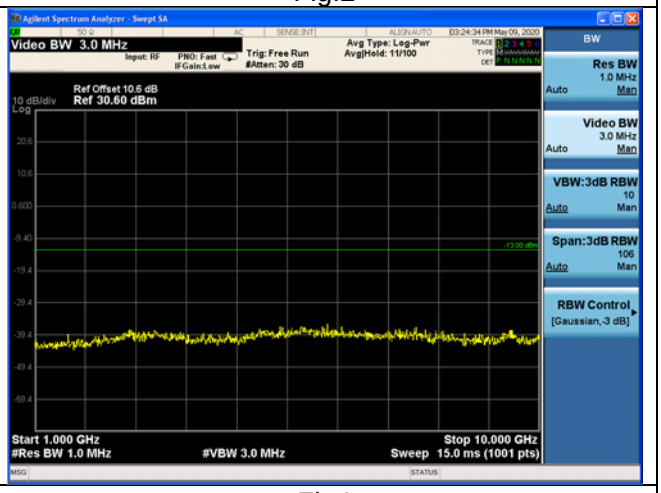

Fig4

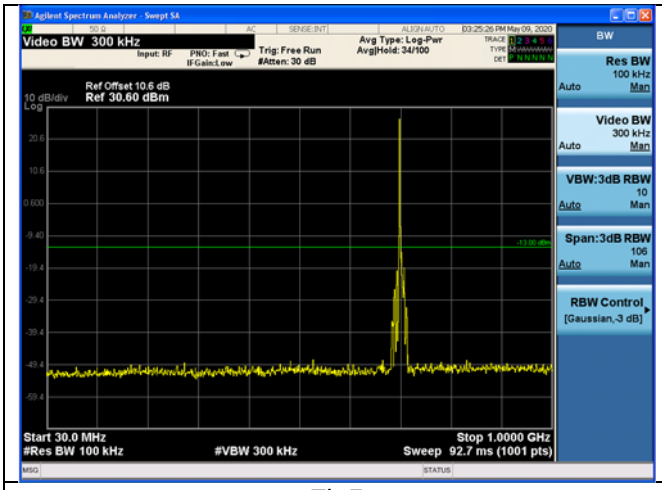
Agilent Spectrum Analyzer - Swept SA
Video BW 300 kHz
Avg Type: Log-Pwr
Avg|Hold: 34/100
Trig: Free Run
#Atten: 30 dB
Ref Offset 10.6 dB
10 dB/div
Ref 30.60 dBm
BW
Res BW
100 kHz
Auto
Man
Video BW
300 kHz
VBW:3dB RBW
10
Span:3dB RBW
106
RBW Control
[Gaussian,-3 dB]
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 92.7 ms (1001 pts)

Fig5

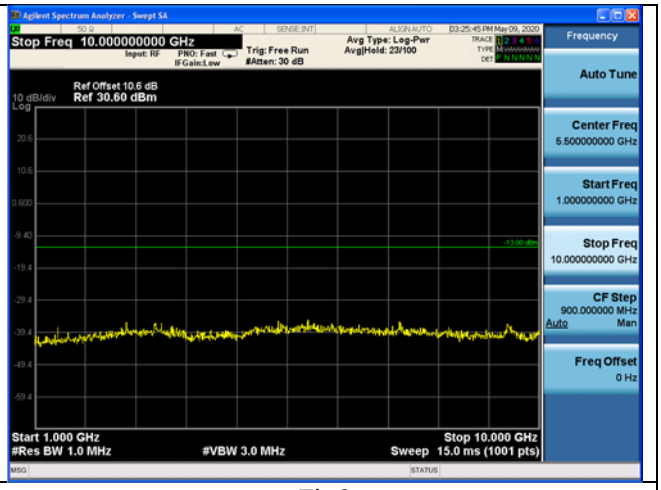
Agilent Spectrum Analyzer - Swept SA
Stop Freq 10.000000000 GHz
Avg Type: Log-Pwr
Avg|Hold: 23/100
Trig: Free Run
#Atten: 30 dB
Ref Offset 10.6 dB
10 dB/div
Ref 30.60 dBm
Frequency
Auto Tune
Center Freq
5.500000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
900.000000 MHz
Auto
Man
Freq Offset
0 Hz
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
Sweep 15.0 ms (1001 pts)

Fig6

5 Band Edges Compliance

Test result

Band	Carrier frequency (MHz)	Channel	BW	RB Size	RB Offset	Band Edges Plot
						QPSK
12	699.7	23017	1.4	1	0	Fig.1
				6	0	Fig.2
	715.3	23173		1	5	Fig.3
				6	0	Fig.4
	700.5	23025	3	1	0	Fig.5
				15	0	Fig.6
	714.5	23165		1	14	Fig.7
				15	0	Fig.8
	701.5	23035	5	1	0	Fig.9
				25	0	Fig.10
	713.5	23155		1	24	Fig.11
				25	0	Fig.12
	704	23060	10	1	0	Fig.13
				50	0	Fig.14
	711	23130		1	49	Fig.15
				50	0	Fig.16

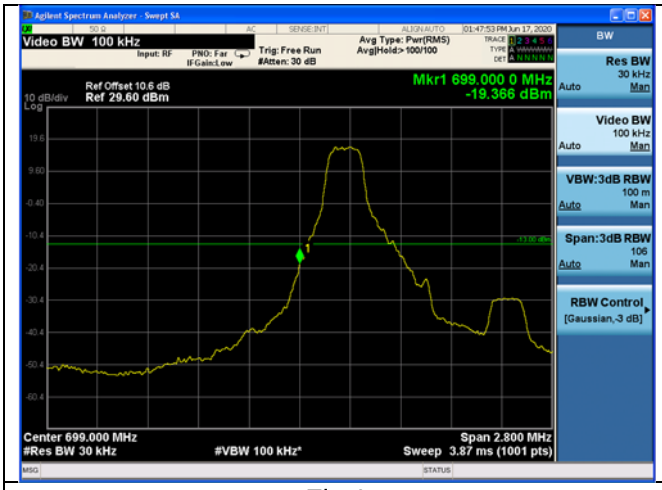

Fig.1

Fig.2

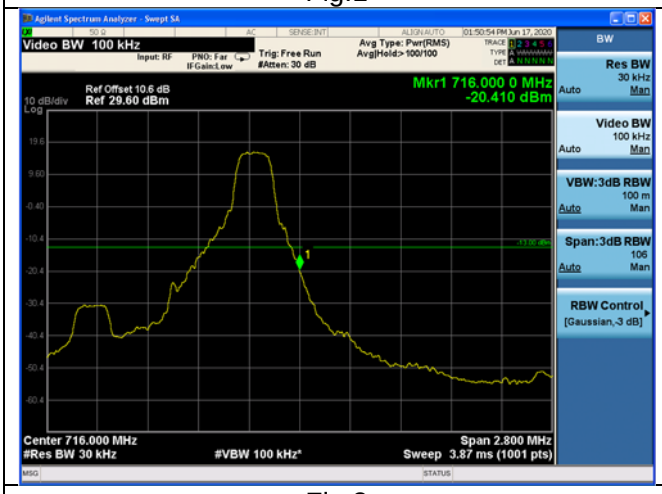

Fig.3

Fig.4

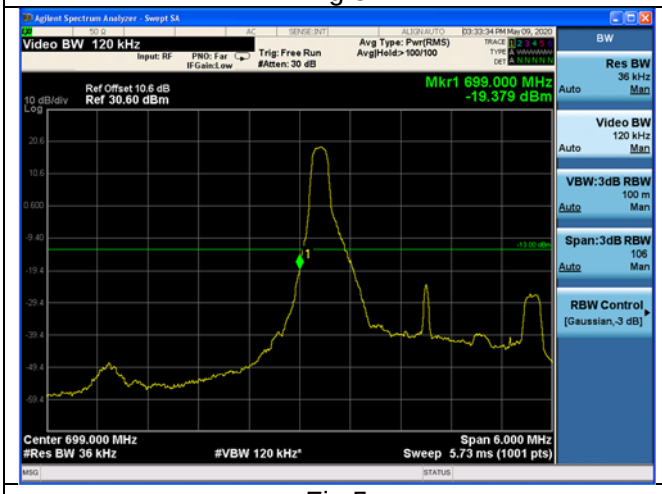

Fig.5

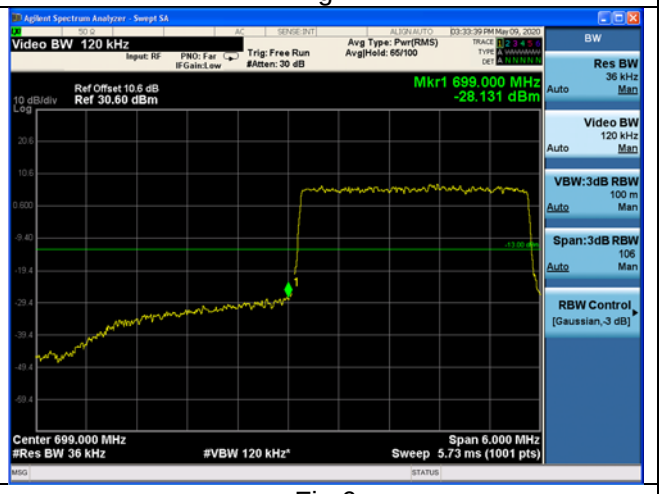

Fig.6

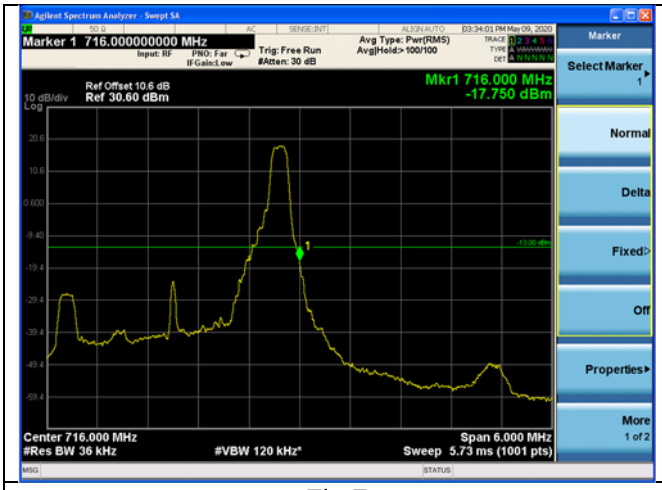

Fig.7

Fig.8

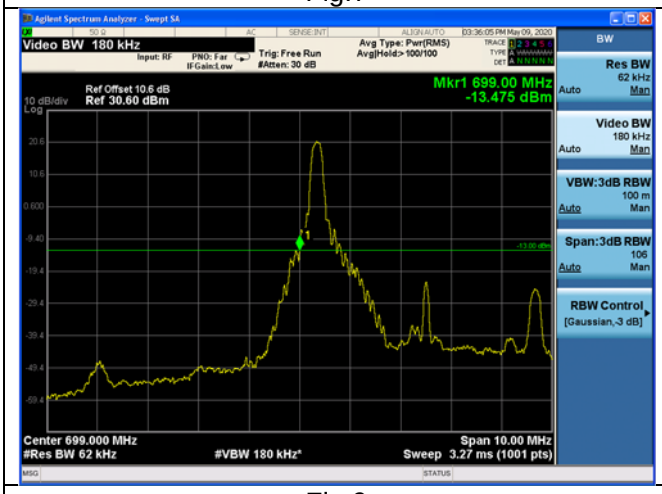

Fig.9

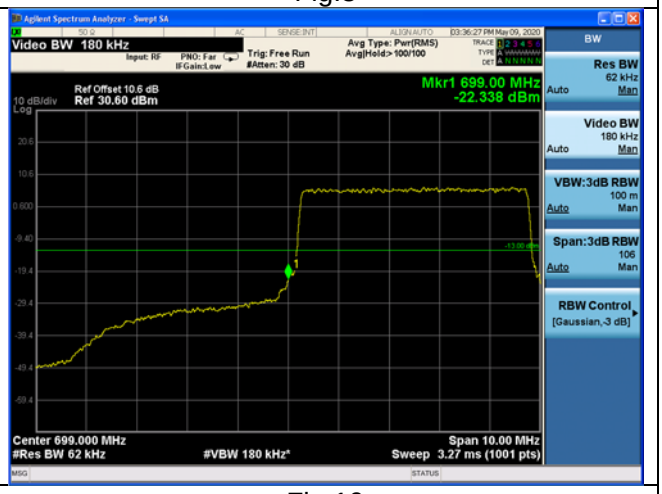

Fig.10

Fig.11

Fig.12

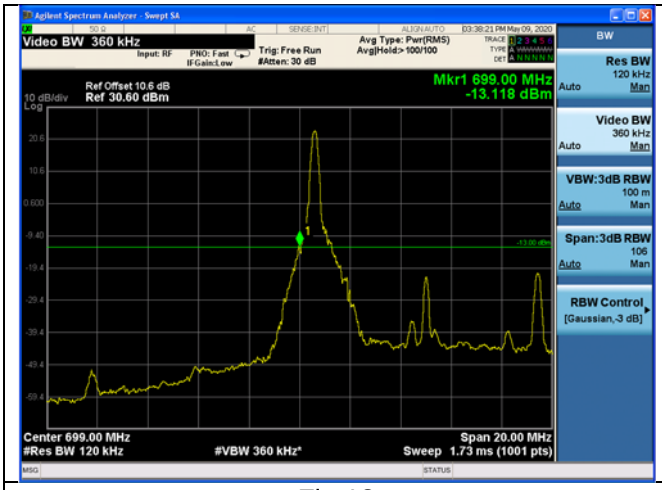

Fig.13

Fig.14

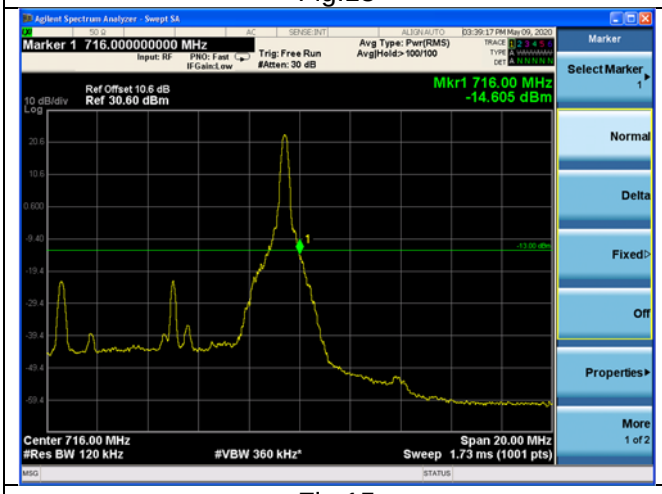

Fig.15

Fig.16

6 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band12 Low Channel			
		1.4M	3M	5M	10M
-10	NV	-0.003	0.046	0.092	-0.072
0	NV	0.053	-0.083	-0.086	-0.003
+10	NV	-0.008	-0.032	0.028	-0.096
+20	NV	0.000	0.000	0.000	0.000
+30	NV	-0.086	0.069	-0.042	0.000
+40	NV	-0.061	0.006	-0.053	0.024
+50	NV	0.017	0.086	-0.067	-0.026
+55	NV	0.023	0.031	0.044	0.079
+20	LV	-0.063	0.098	0.003	-0.038
+20	HV	-0.040	-0.023	-0.057	0.028

Temperature(°C)	Voltage	Test Result (ppm) Band12 High Channel			
		1.4M	3M	5M	10M
-10	NV	0.075	0.045	0.008	-0.083
0	NV	0.084	-0.098	-0.022	-0.013
+10	NV	-0.058	-0.082	0.097	-0.071
+20	NV	0.000	0.000	0.000	0.000
+30	NV	0.006	0.039	-0.072	0.033
+40	NV	-0.094	0.042	0.074	-0.002
+50	NV	0.039	0.035	-0.067	0.026
+55	NV	-0.011	0.032	-0.034	0.091
+20	LV	0.096	-0.017	0.033	-0.064
+20	HV	0.054	-0.074	-0.003	0.060