

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 17

1 RF Power Output

Test result: Antenna Gain: 1.44dBi

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
QPSK	706.5	23755	5	1	0	23.2	22.49
				1	24	23.2	22.49
				12	6	22.2	21.49
				25	0	22.2	21.49
	710	23790		1	0	23.1	22.39
				1	24	23.2	22.49
				12	6	22.2	21.49
				25	0	22.2	21.49
	713.5	23825		1	0	23.0	22.29
				1	24	23.0	22.29
				12	6	22.2	21.49
				25	0	22.2	21.49

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
16QAM	706.5	23755	5	1	0	22.7	21.99
				1	24	22.8	22.09
				12	6	21.3	20.59
				25	0	21.2	20.49
	710	23790		1	0	22.7	21.99
				1	24	22.8	22.09
				12	6	21.3	20.59
				25	0	21.2	20.49
	713.5	23825		1	0	22.7	21.99
				1	24	22.8	22.09
				12	6	21.3	20.59
				25	0	21.2	20.49

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
64QAM	706.5	23755	5	1	0	22.7	21.99
				1	24	22.9	22.19
				12	6	21.3	20.59
				25	0	21.2	20.49
	710	23790		1	0	22.7	21.99
				1	24	22.9	22.19
				12	6	21.3	20.59
				25	0	21.2	20.49
	713.5	23825		1	0	22.7	21.99
				1	24	22.9	22.19
				12	6	21.3	20.59
				25	0	21.2	20.49

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
QPSK	709	23780	10	1	0	23.3	22.59
				1	49	23.2	22.49
				24	12	22.2	21.49
				50	0	22.2	21.49
	710	23790		1	0	23.3	22.59
				1	49	23.2	22.49
				24	12	22.2	21.49
				50	0	22.2	21.49
	711	23800		1	0	23.3	22.59
				1	49	23.2	22.49
				24	12	22.2	21.49
				50	0	22.2	21.49

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
16QAM	709	23780	10	1	0	22.8	22.09
				1	49	22.8	22.09
				24	12	21.2	20.49
				50	0	21.2	20.49
	710	23790		1	0	22.8	22.09
				1	49	22.8	22.09
				24	12	21.2	20.49
				50	0	21.2	20.49
	711	23800		1	0	22.8	22.09
				1	49	22.8	22.09
				24	12	21.2	20.49
				50	0	21.2	20.49

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
16QAM	709	23780	10	1	0	22.8	22.09
				1	49	22.9	22.19
				24	12	21.1	20.39
				50	0	21.2	20.49
	710	23790		1	0	22.8	22.09
				1	49	22.9	22.19
				24	12	21.1	20.39
				50	0	21.2	20.49
	711	23800		1	0	22.8	22.09
				1	49	22.9	22.19
				24	12	21.1	20.39
				50	0	21.2	20.49

2 Occupied Bandwidth

Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)					
						QPSK		16-QAM		64-QAM	
17	706.5	23755	5	25	0	4.483	Fig.1	4.500	Fig.2	4.501	Fig.3
17	710	23790	5	25	0	4.494	Fig.4	4.495	Fig.5	4.486	Fig.6
17	713.5	23825	5	25	0	4.490	Fig.7	4.478	Fig.8	4.472	Fig.9

Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
17	706.5	23755	5	25	0	4.738	Fig.1	4.774	Fig.2	4.744	Fig.3
17	710	23790	5	25	0	4.749	Fig.4	4.749	Fig.5	4.778	Fig.6
17	713.5	23825	5	25	0	4.769	Fig.7	4.742	Fig.8	4.744	Fig.9

Fig.1

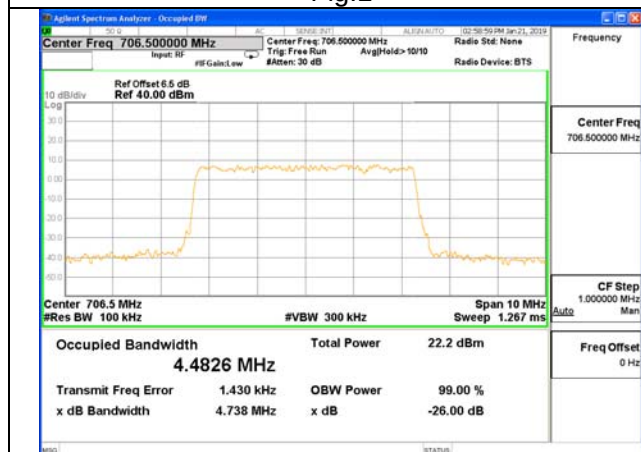


Fig.2

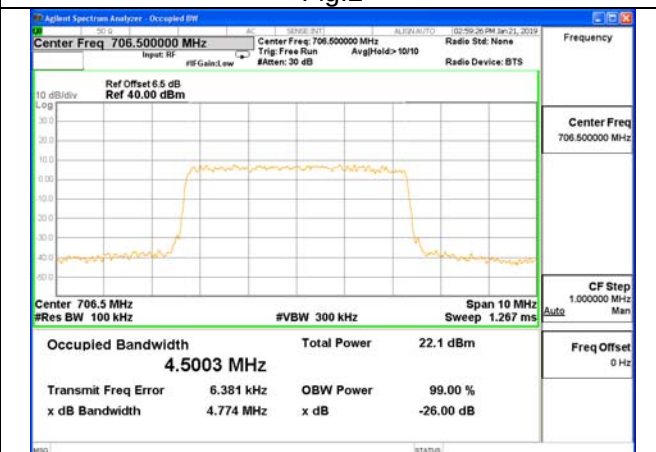


Fig.3

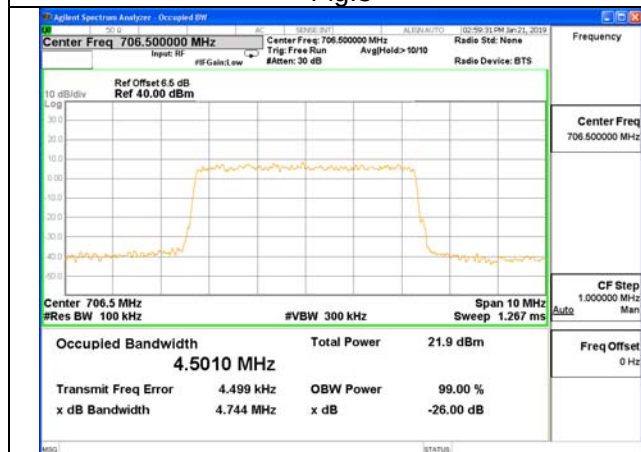


Fig.4

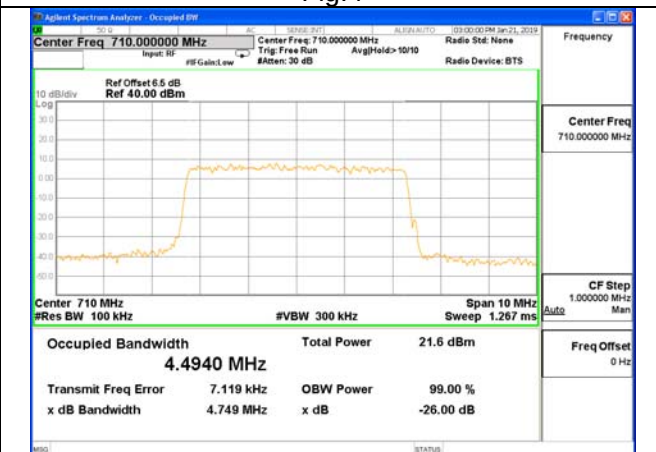


Fig.5

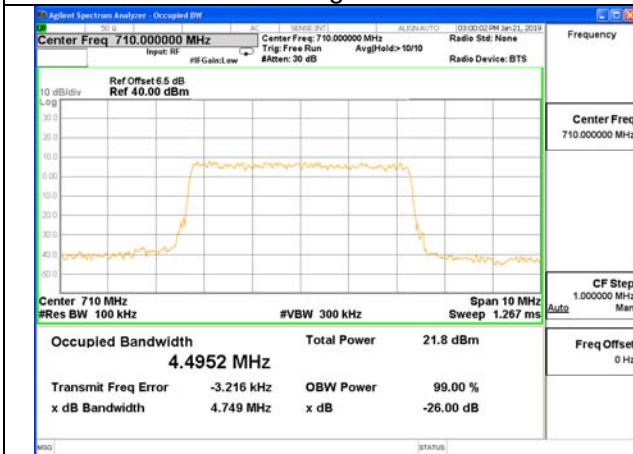


Fig.6

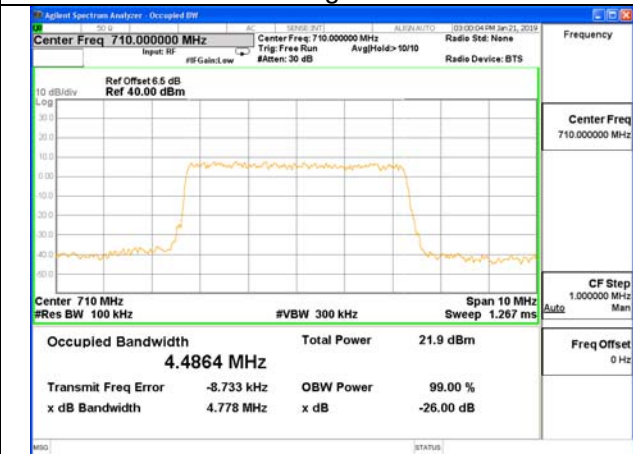


Fig.7

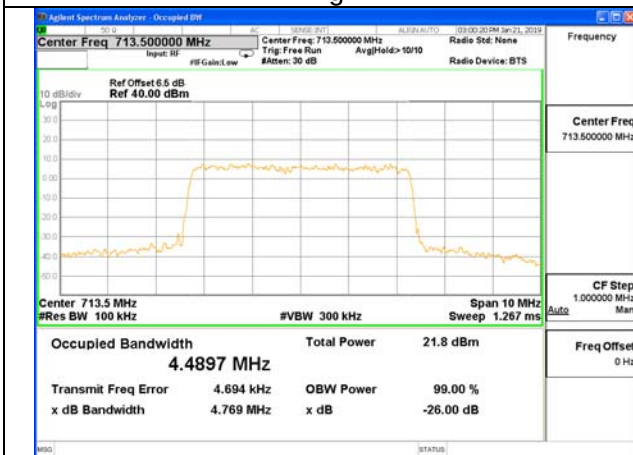


Fig.8

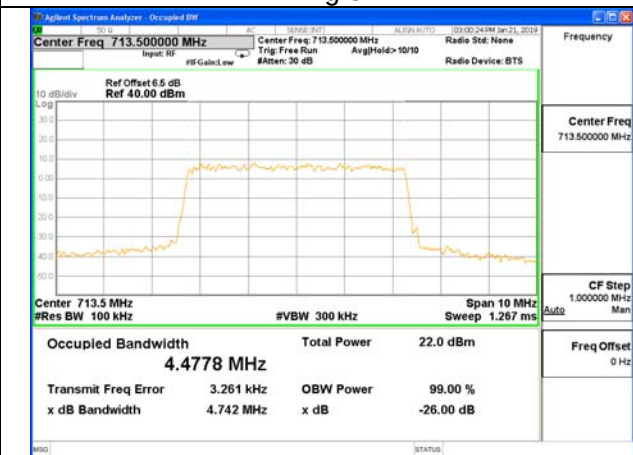
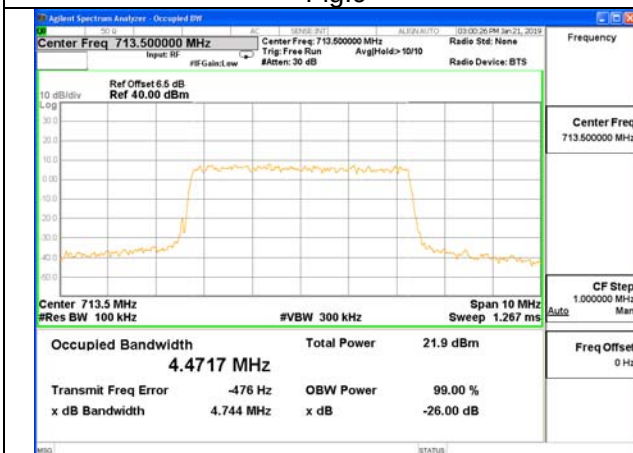


Fig.9



Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)					
						QPSK		16-QAM		64-QAM	
17	709	23780	10	50	0	8.926	Fig.1	8.961	Fig.2	8.965	Fig.3
17	710	23790	10	50	0	8.967	Fig.4	8.935	Fig.5	8.955	Fig.6
17	711	23800	10	50	0	8.969	Fig.7	8.960	Fig.8	8.981	Fig.9

Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
17	709	23780	10	50	0	9.440	Fig.1	9.439	Fig.2	9.456	Fig.3
17	710	23790	10	50	0	9.467	Fig.4	9.464	Fig.5	9.497	Fig.6
17	711	23800	10	50	0	9.451	Fig.7	9.460	Fig.8	9.462	Fig.9

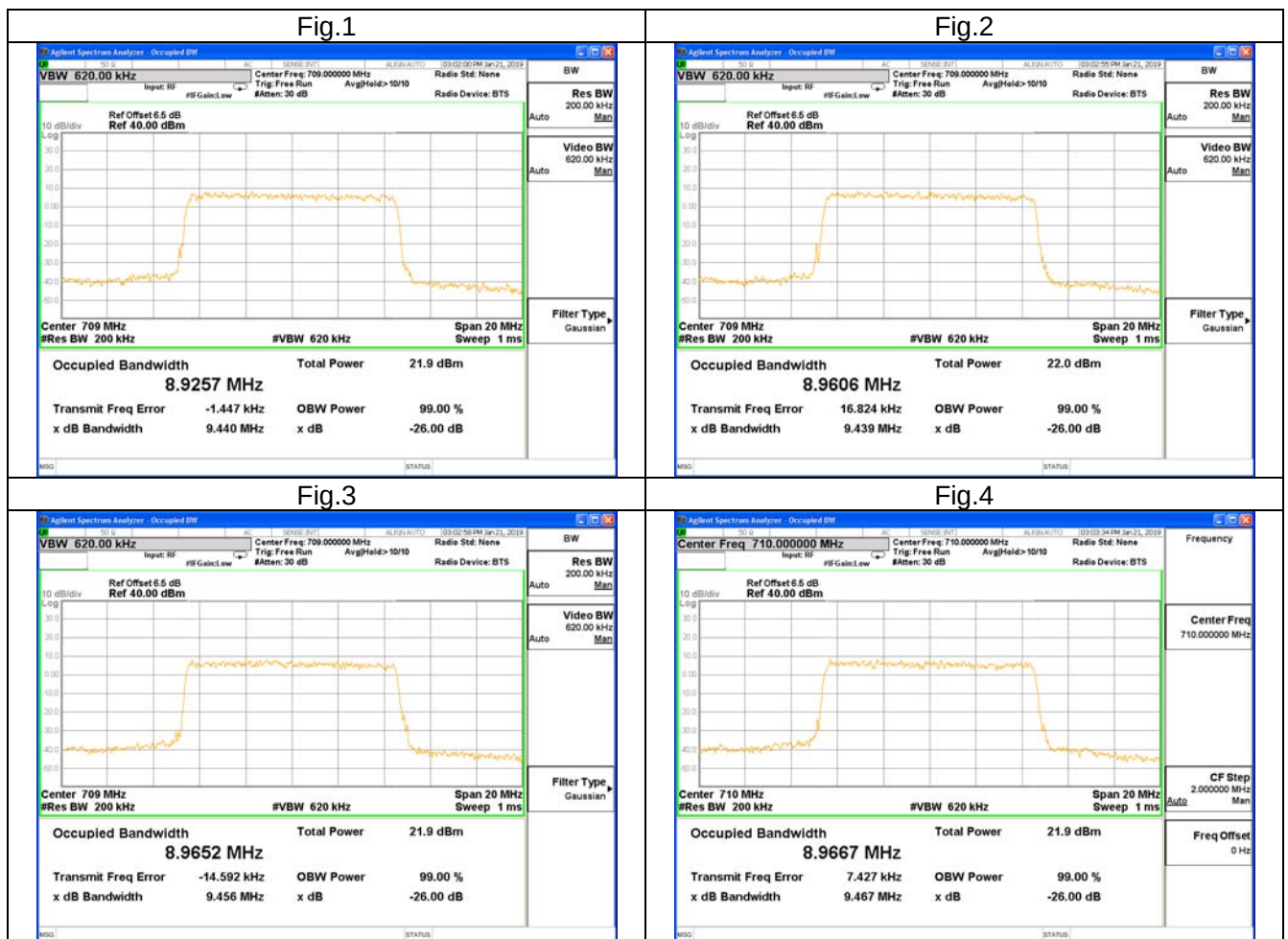


Fig.5

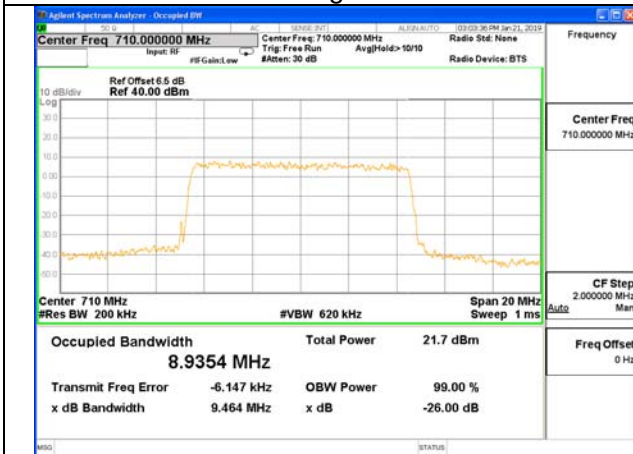


Fig.6

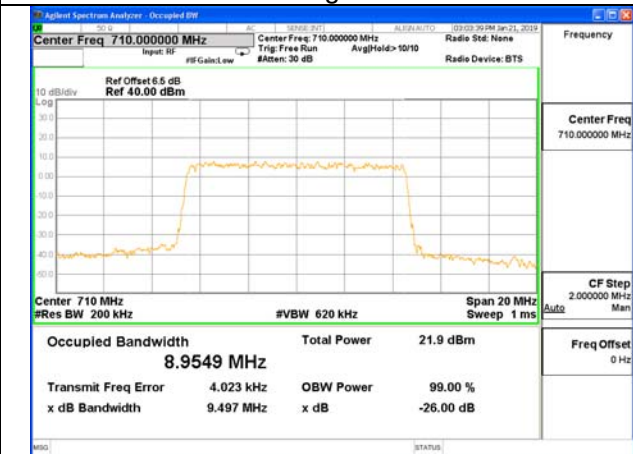


Fig.7

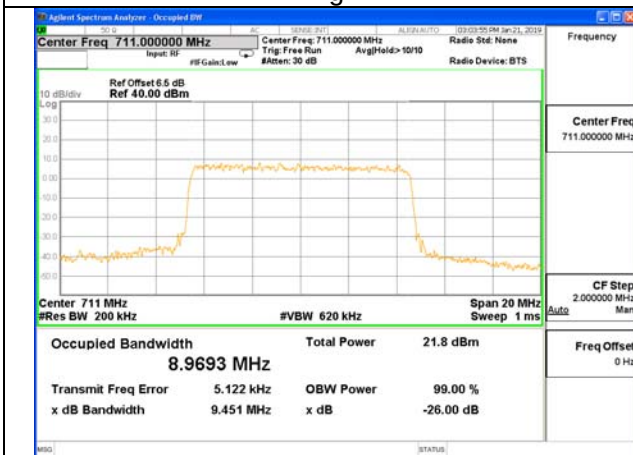


Fig.8

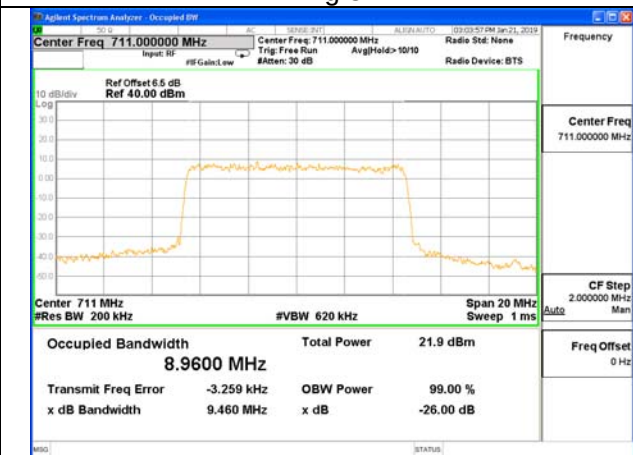
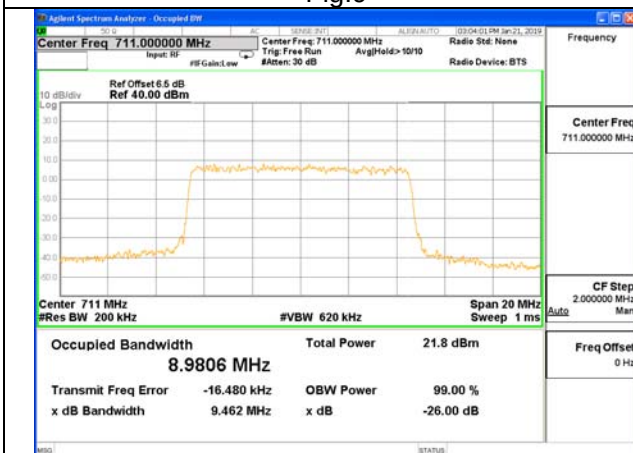
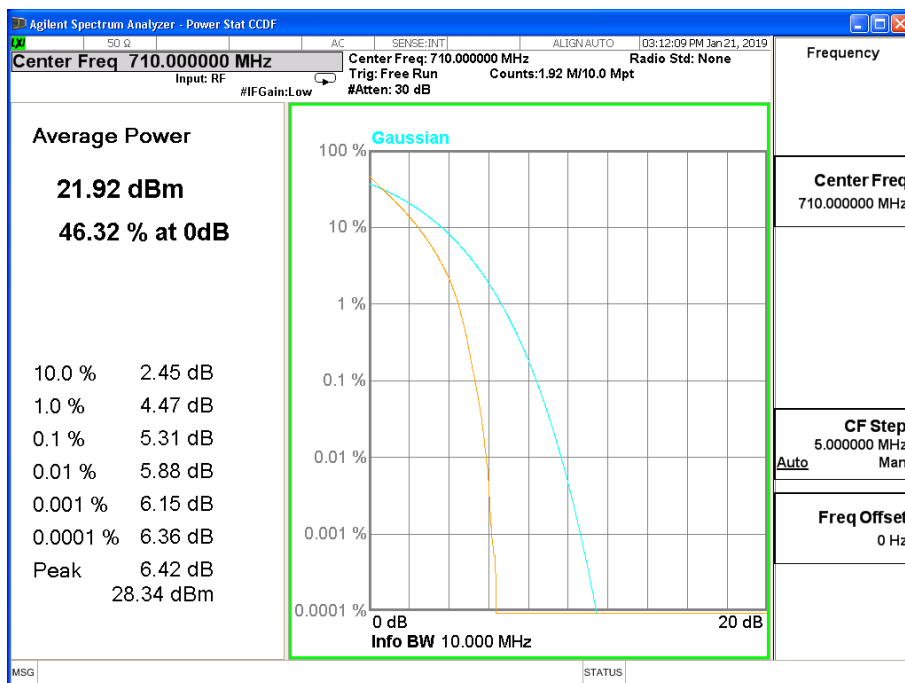


Fig.9

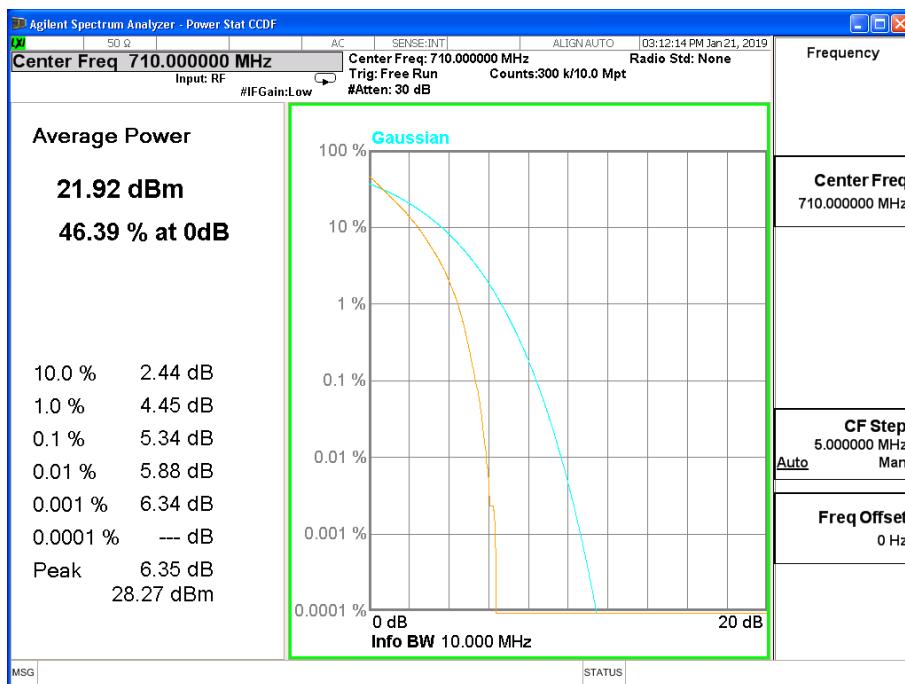


4 Peak-Average Ratio

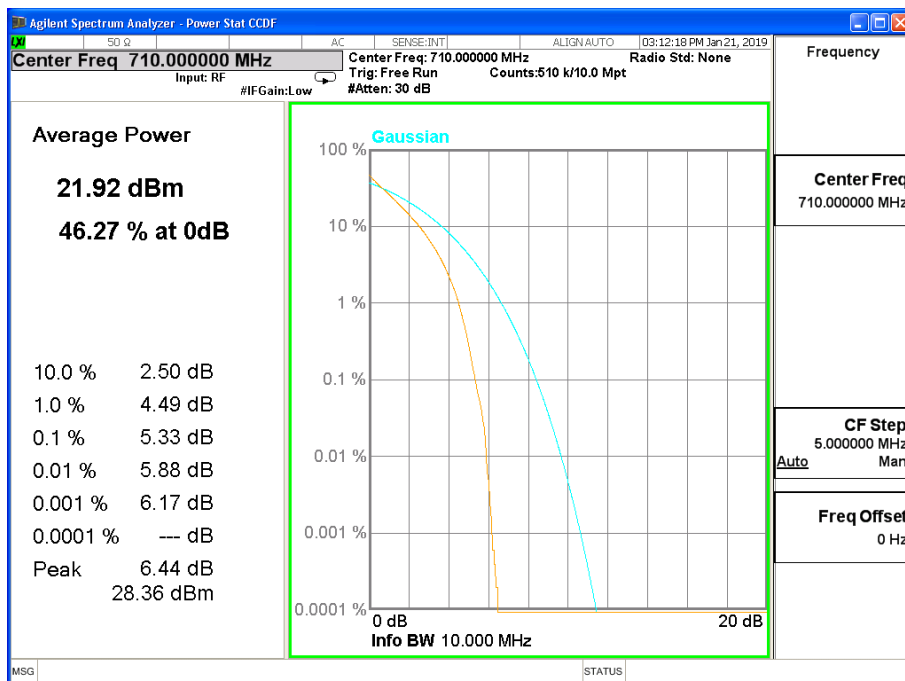
Test result:



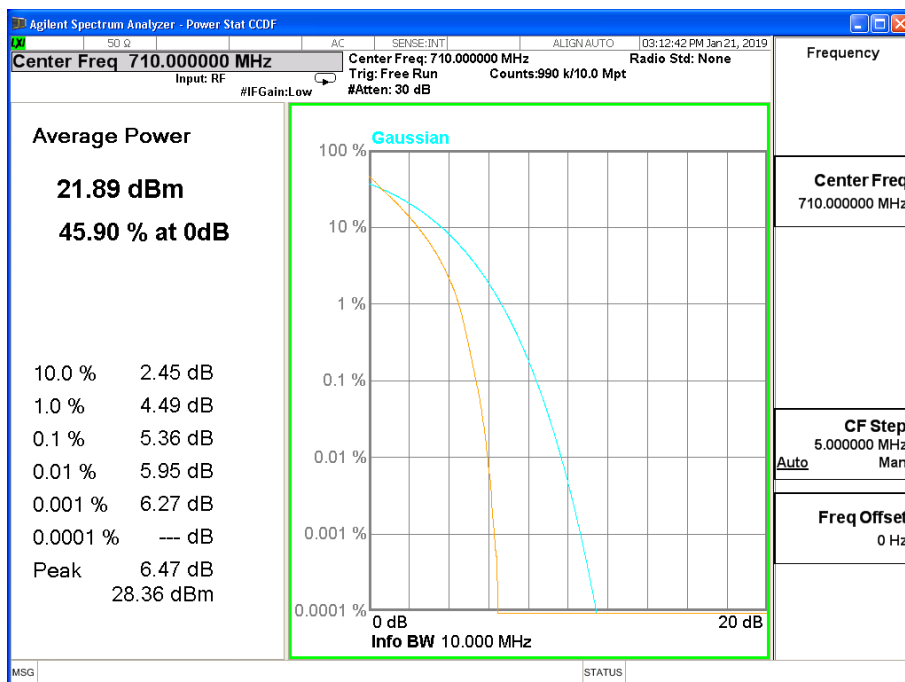
Peak-Average Ratio Plot(5MHz BW,QPSK,Band 17-mid Channel)



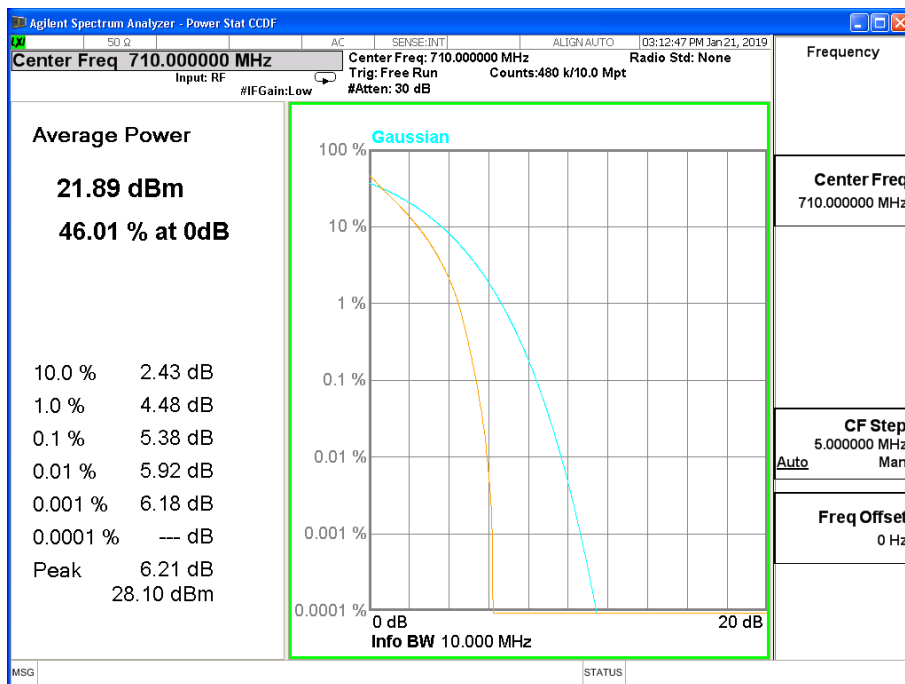
Peak-Average Ratio Plot(5MHz BW,16QAM,Band 17-mid Channel)



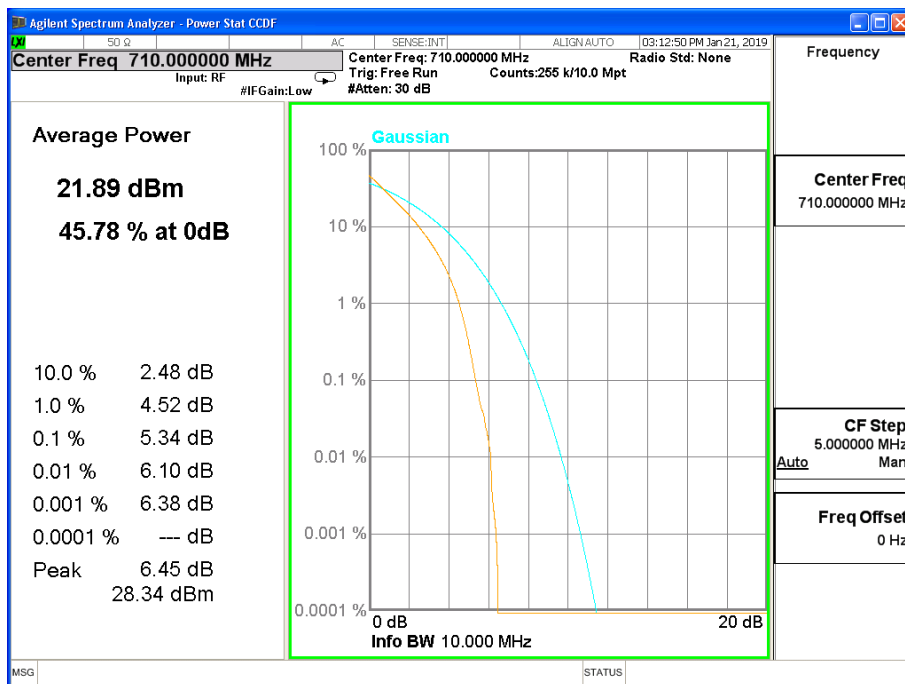
Peak-Average Ratio Plot(5MHz BW,64QAM,Band 17-mid Channel)



Peak-Average Ratio Plot(10MHz BW,QPSK,Band 17-mid Channel)



Peak-Average Ratio Plot(10MHz BW,16QAM,Band 17-mid Channel)



Peak-Average Ratio Plot(10MHz BW,64QAM,Band 17-mid Channel)

5 Spurious Emissions at antenna terminal

Test result

Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
17	709	23780	10	1	0	Fig.1

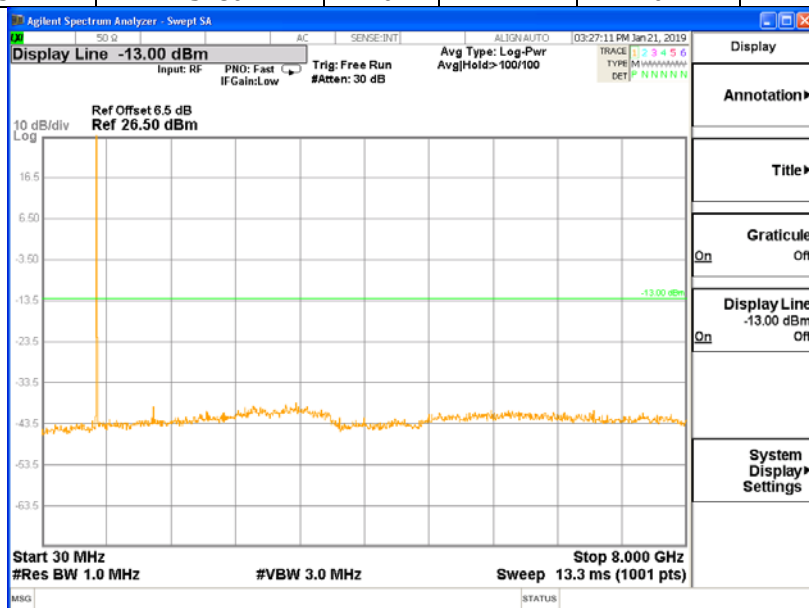


Fig.1

Band	Carrier frequency (MHz)	Channel(Mid)	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
17	710	23790	10	1	0	Fig.1

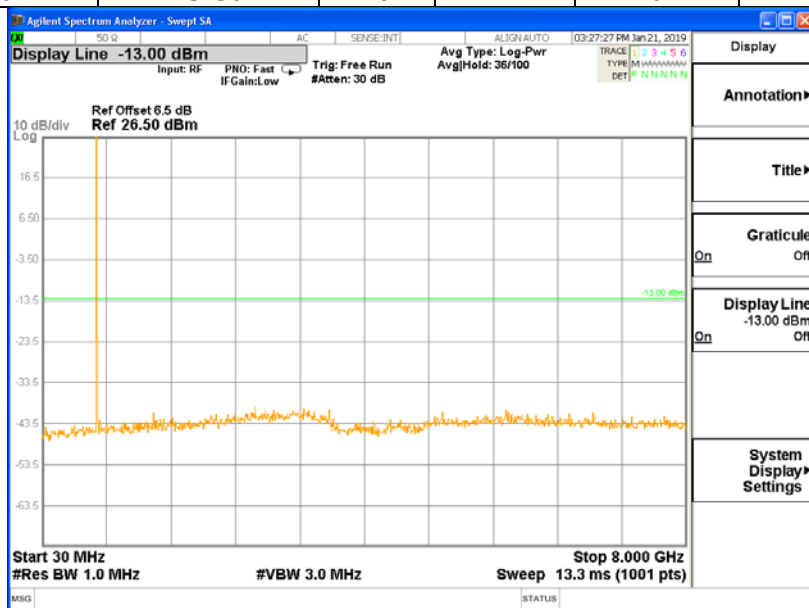


Fig.1

Band	Carrier frequency (MHz)	Channel(High)	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
17	711	23800	10	1	0	Fig.1

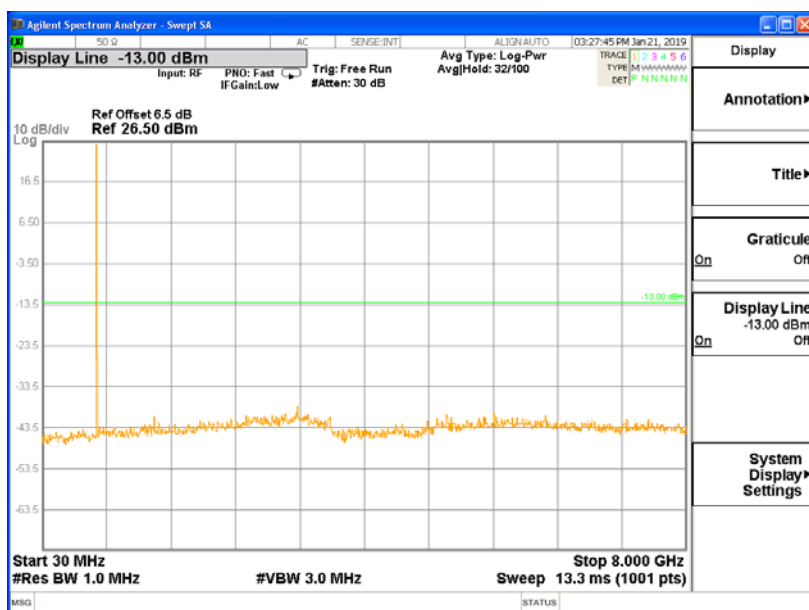


Fig.1

6 Band Edges Compliance

Test result

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
17	706.5	23755	5	1	0	Fig.1
				25	0	Fig.4

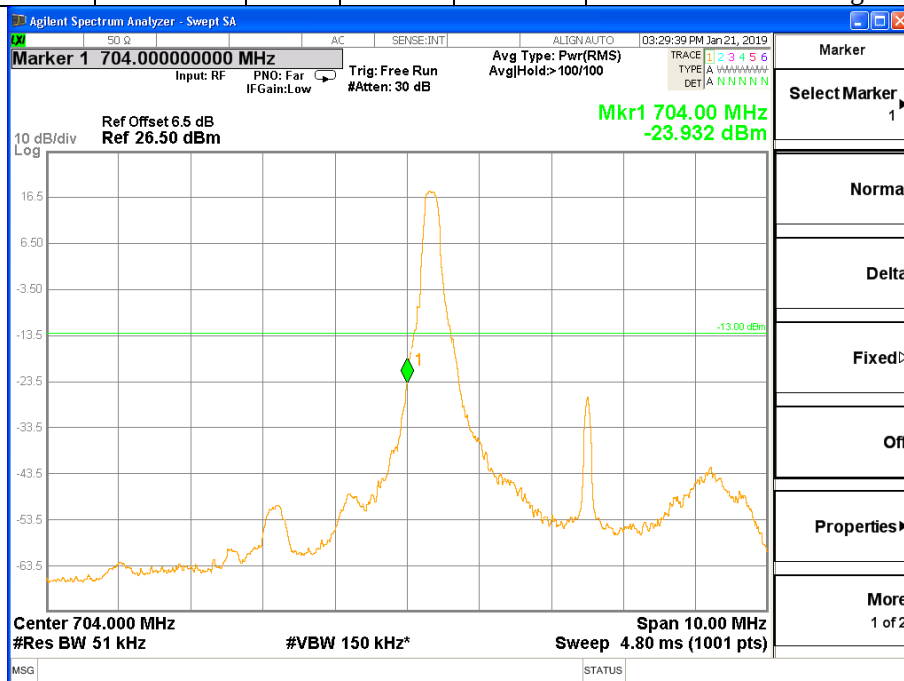


Fig.1

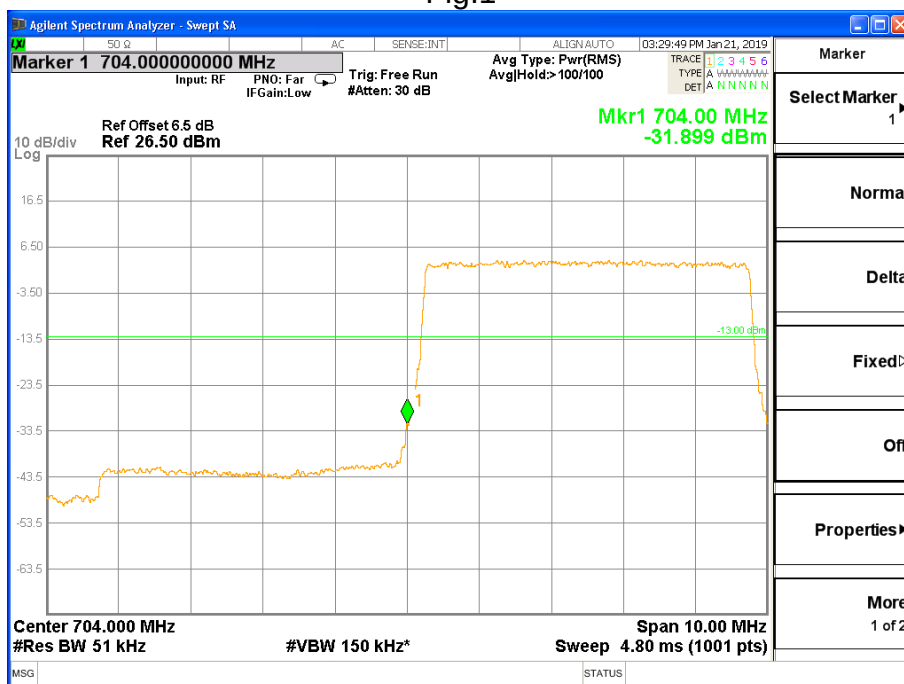


Fig.4

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
17	713.5	23825	5	1	0	Fig.1
				25	0	Fig.4

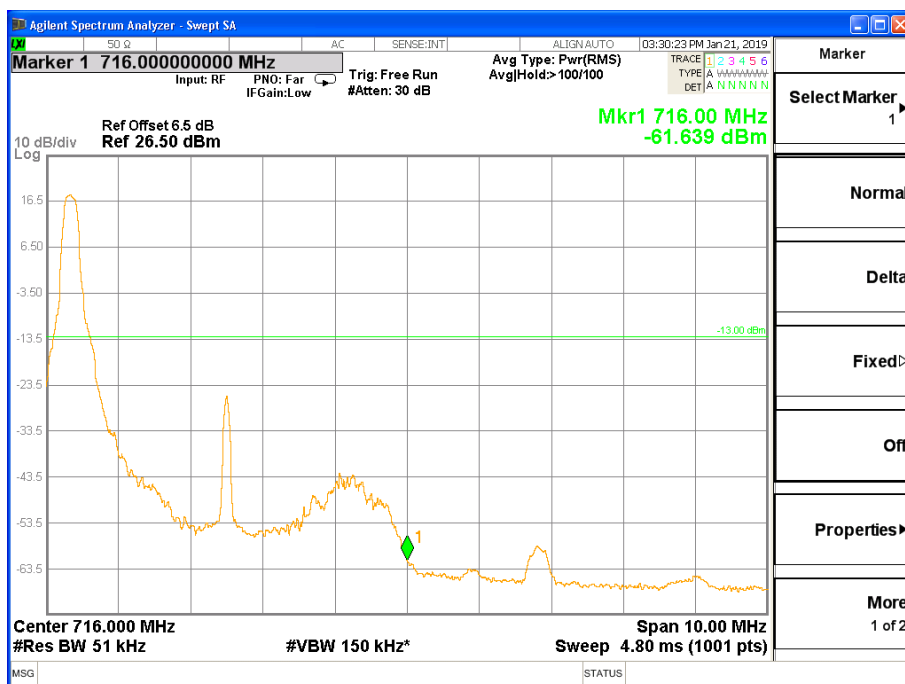


Fig.1

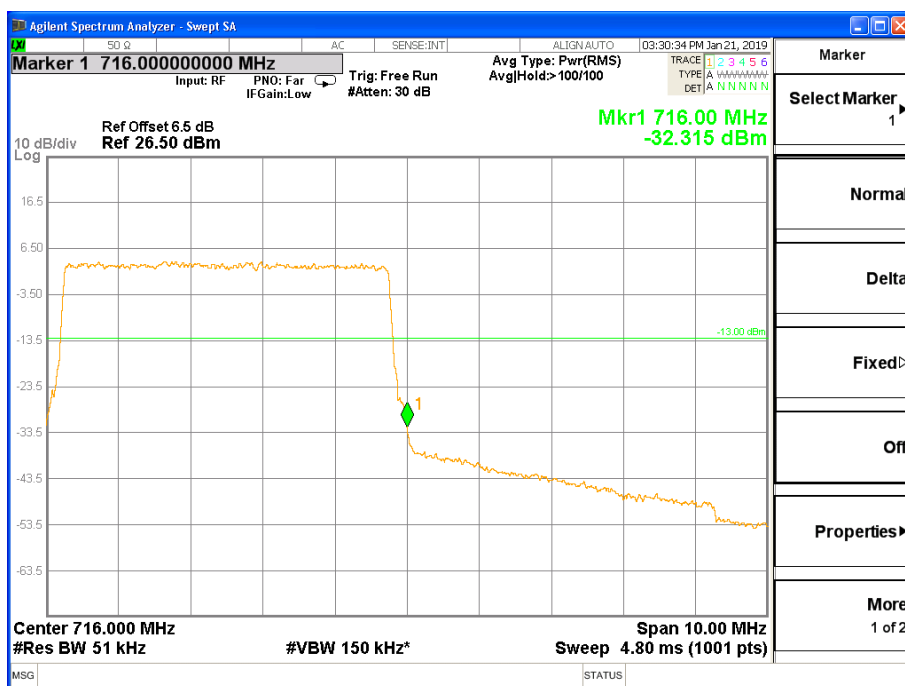


Fig.4

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
17	709	23780	10	1	0	Fig.1
				50	0	Fig.4

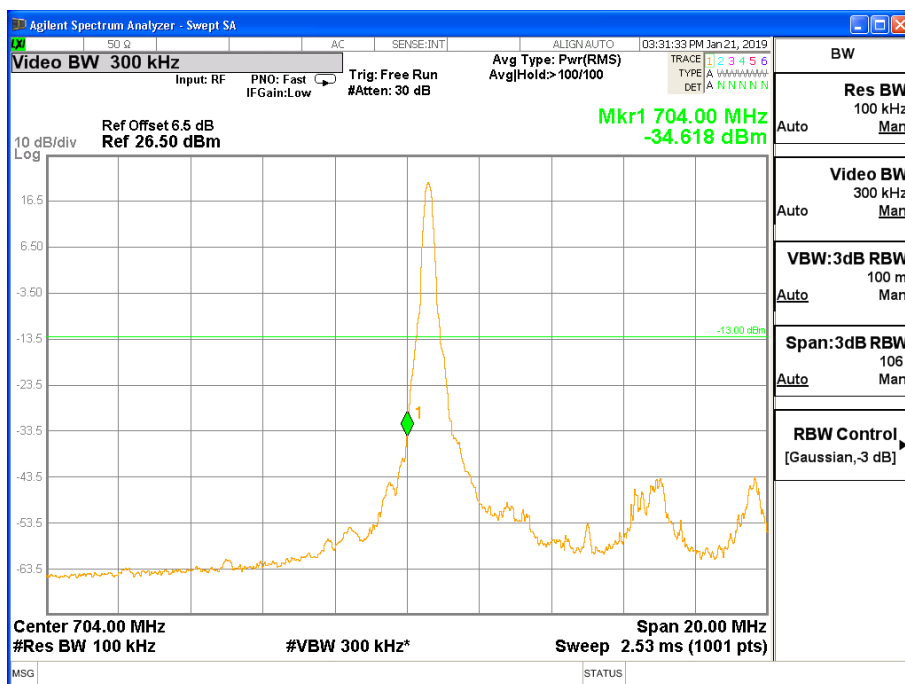


Fig.1

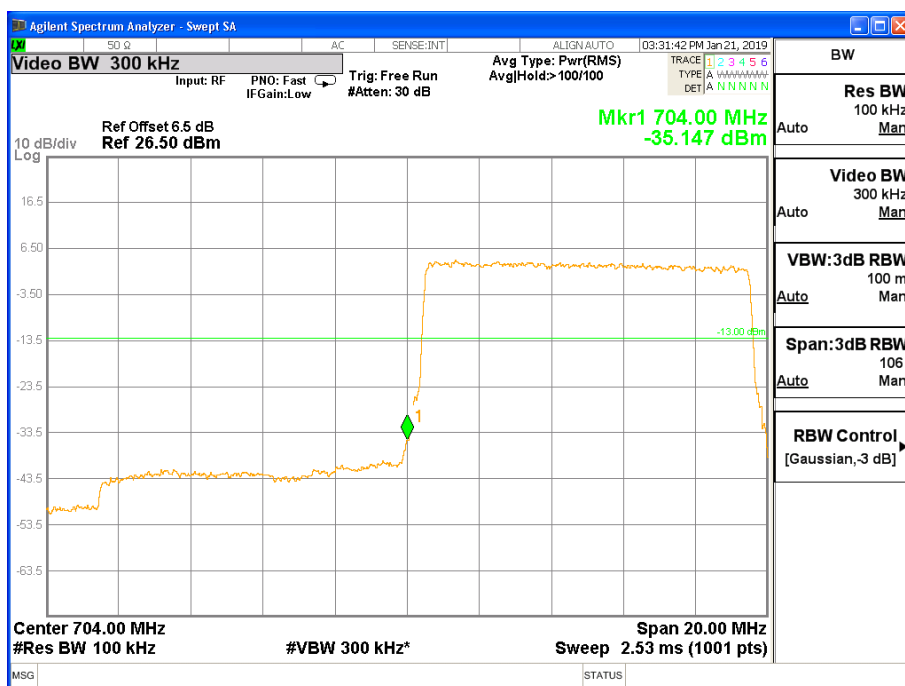


Fig.4

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
17	711	23800	10	1	0	Fig.1
				50	0	Fig.4

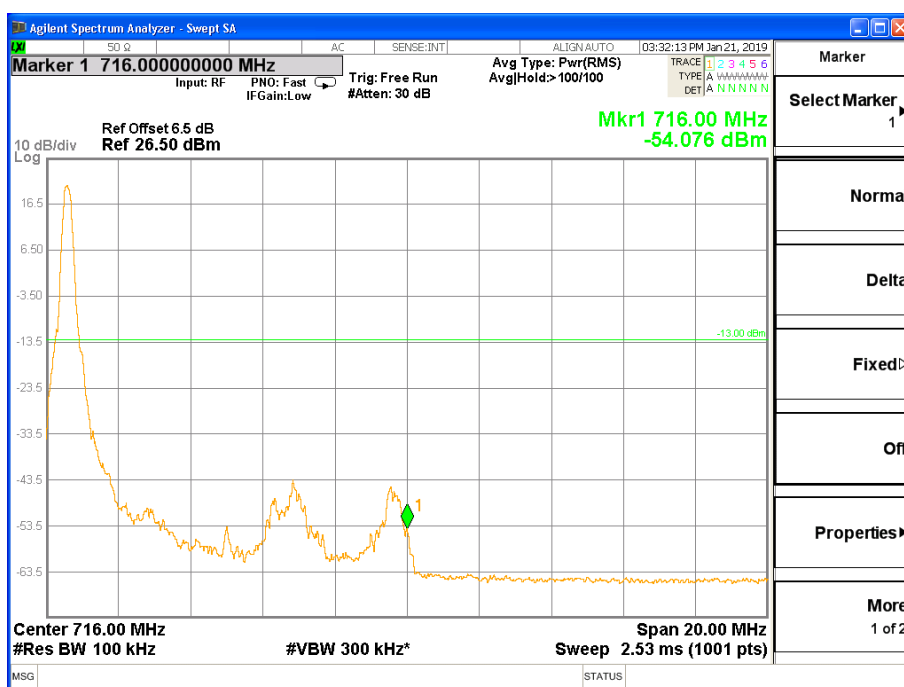


Fig.1

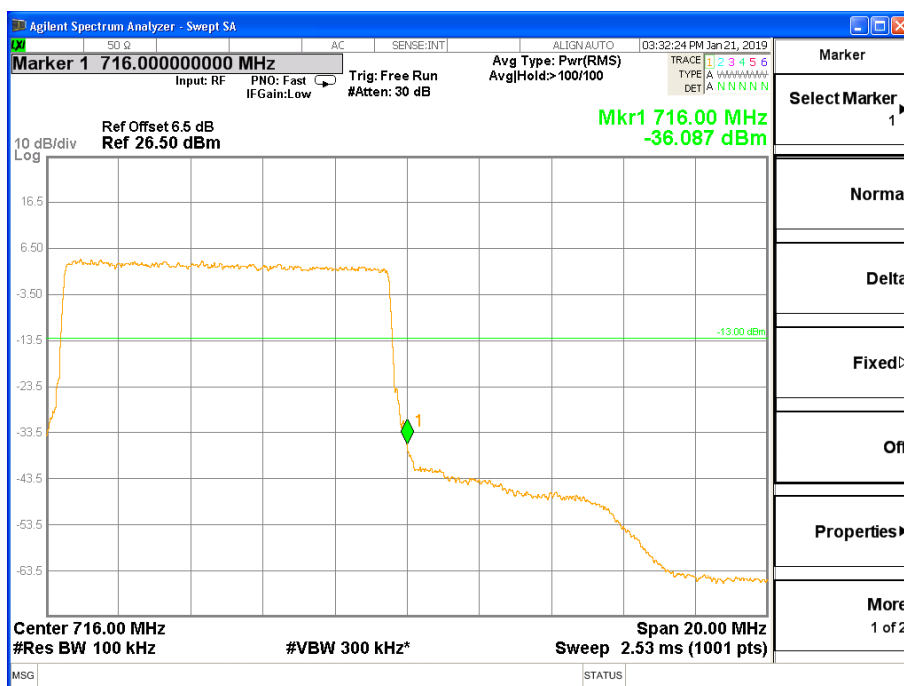


Fig.4

7 Frequency Stability

Test result:

Temperature(°C)	Voltage	Test Result (ppm) Band17 Low Channel	
		5M	10M
-10	NV	0.012	0.016
0	NV	-0.003	0.018
+10	NV	0.005	0.015
+20	NV	0.012	0.016
+30	NV	0.003	0.020
+40	NV	0.016	-0.016
+50	NV	0.011	0.001
+55	NV	0.019	-0.018
+20	LV	-0.001	0.013
+20	HV	0.012	0.018

Temperature(°C)	Voltage	Test Result (ppm) Band17 High Channel	
		5M	10M
-10	NV	0.012	0.016
0	NV	0.005	0.007
+10	NV	0.016	0.016
+20	NV	0.017	-0.007
+30	NV	-0.002	0.006
+40	NV	0.002	0.012
+50	NV	0.008	0.005
+55	NV	0.017	-0.013
+20	LV	-0.001	0.009
+20	HV	0.016	0.014