

Fig.2

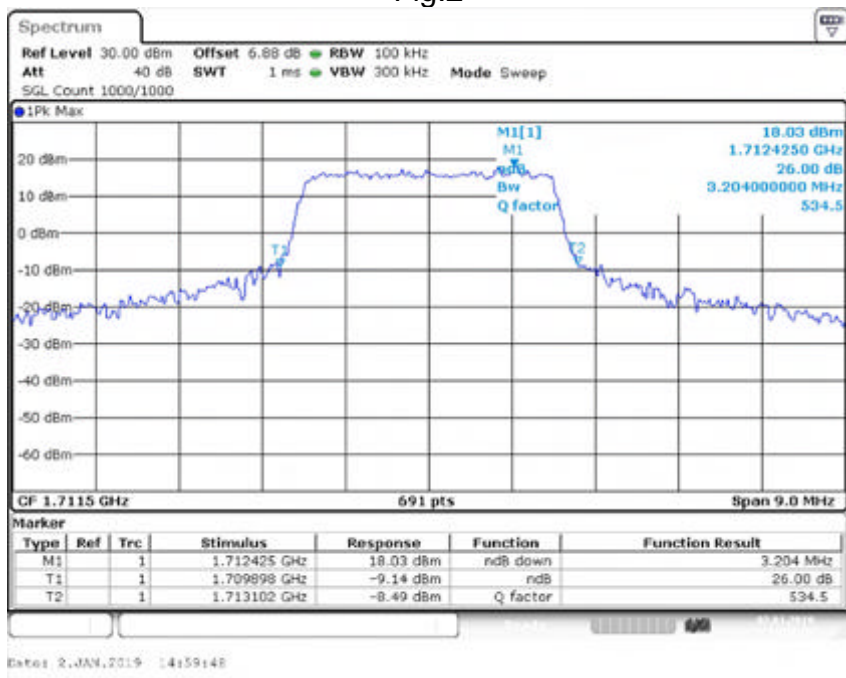


Fig.3

Band	Carrier frequency (MHz)	Channel(Mid)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
4	1732.5	20175	3	15	0	3.204	Fig.1	3.269	Fig.2	3.269	Fig.3

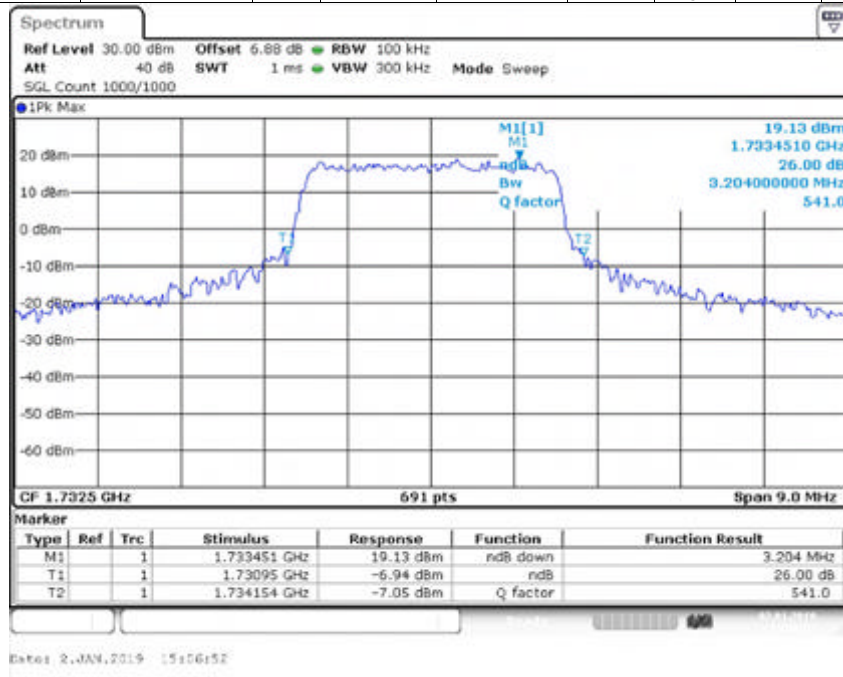


Fig.1

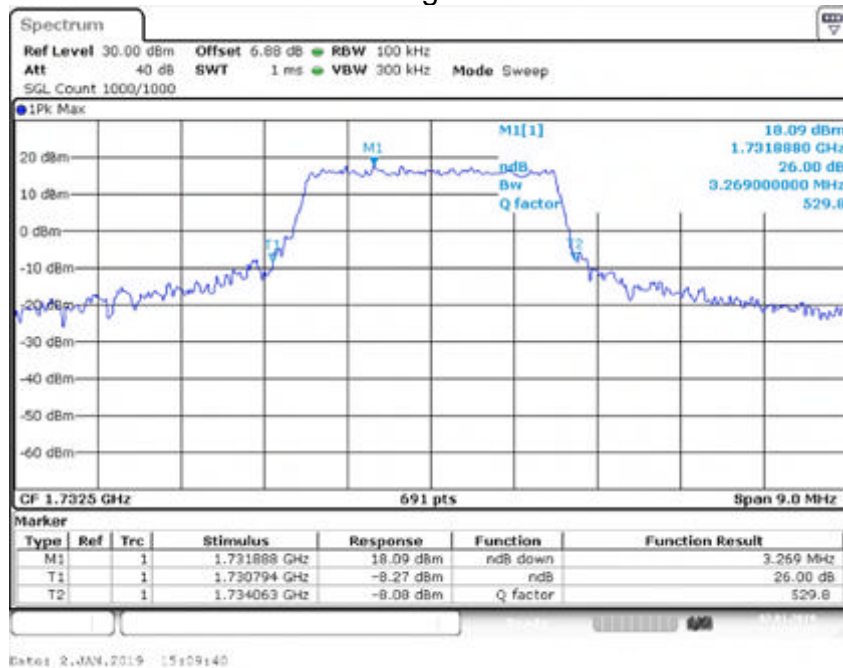


Fig.2

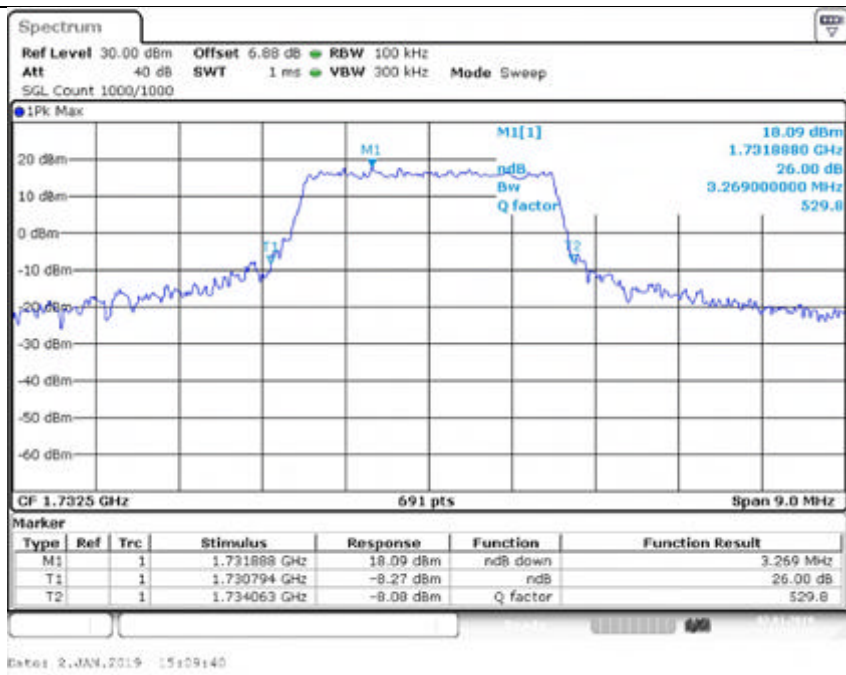


Fig.3

Band	Carrier frequency (MHz)	Channel(High)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
4	1753.5	20385	3	15	0	3.165	Fig.1	3.399	Fig.2	3.399	Fig.3

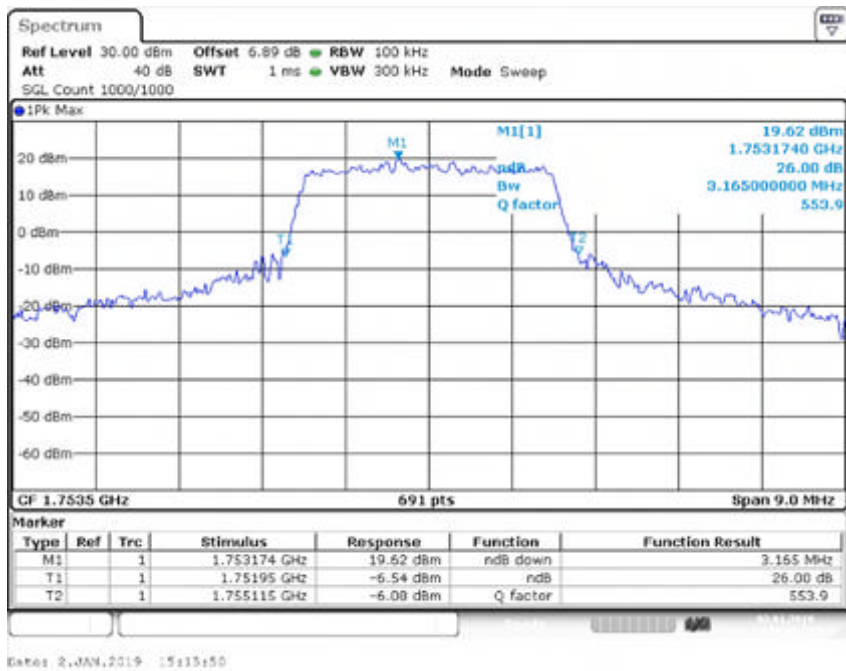


Fig.1

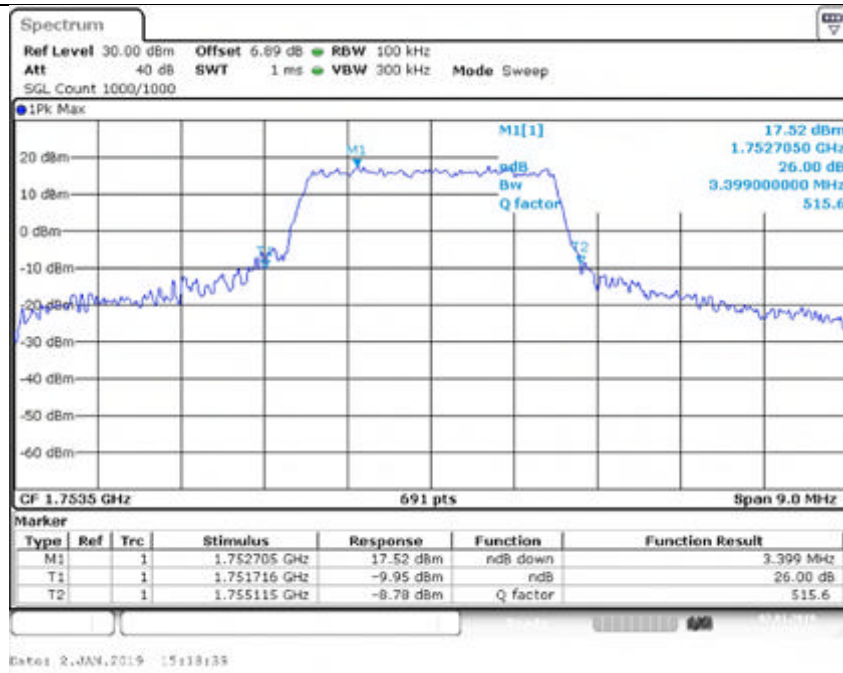


Fig.2

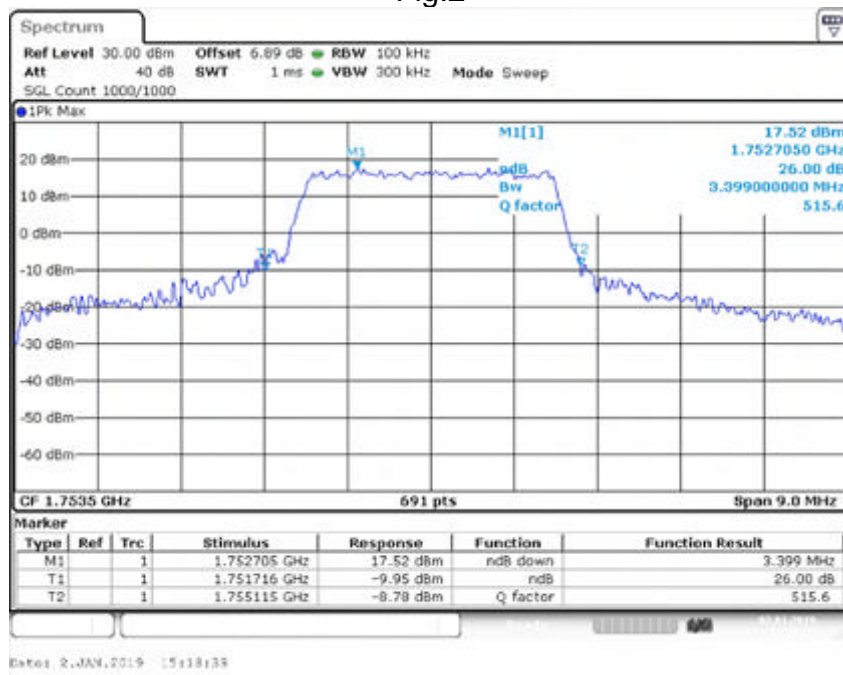


Fig.3

Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
4	1712.5	19975	5	25	0	5.210	Fig.1	5.210	Fig.2	5.210	Fig.3

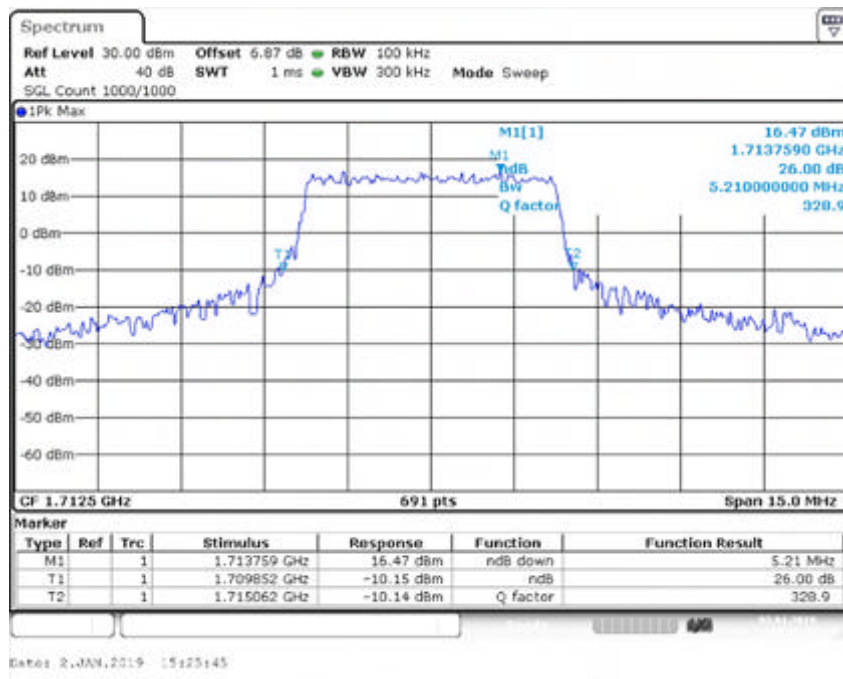


Fig.1



Fig.2

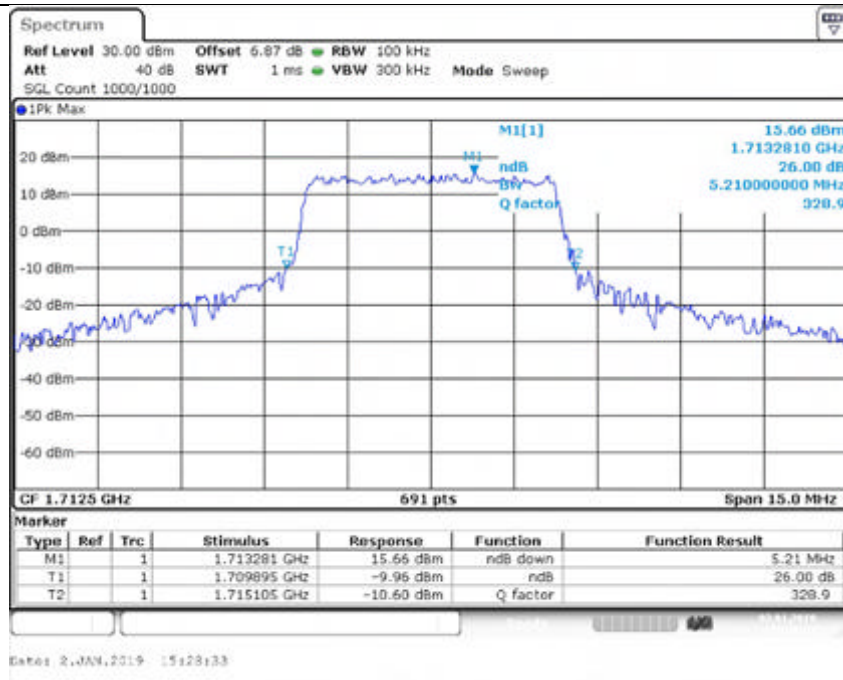


Fig.3

Band	Carrier frequency (MHz)	Channel(Mid)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
4	1732.5	20175	5	25	0	5.080	Fig.1	5.014	Fig.2	5.014	Fig.3

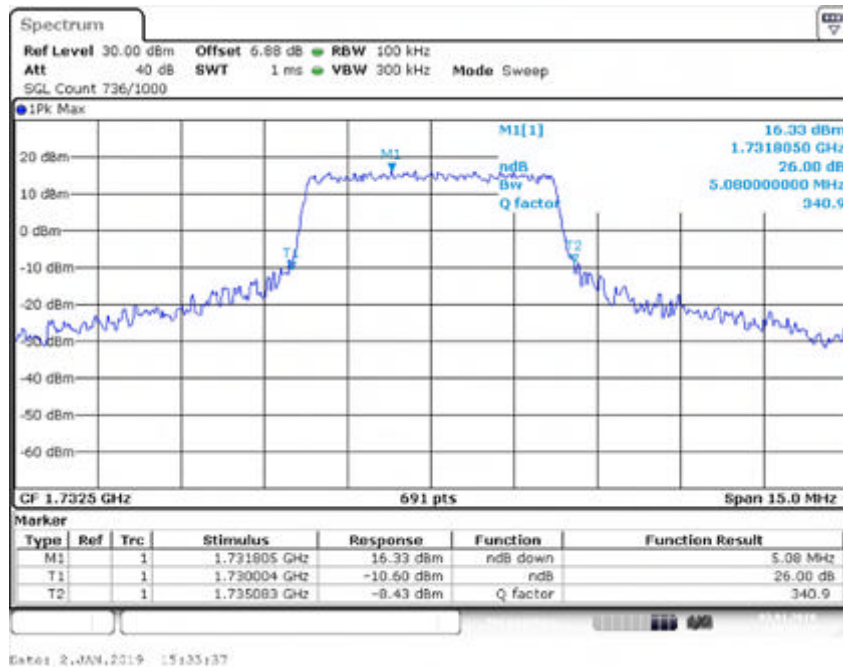


Fig.1

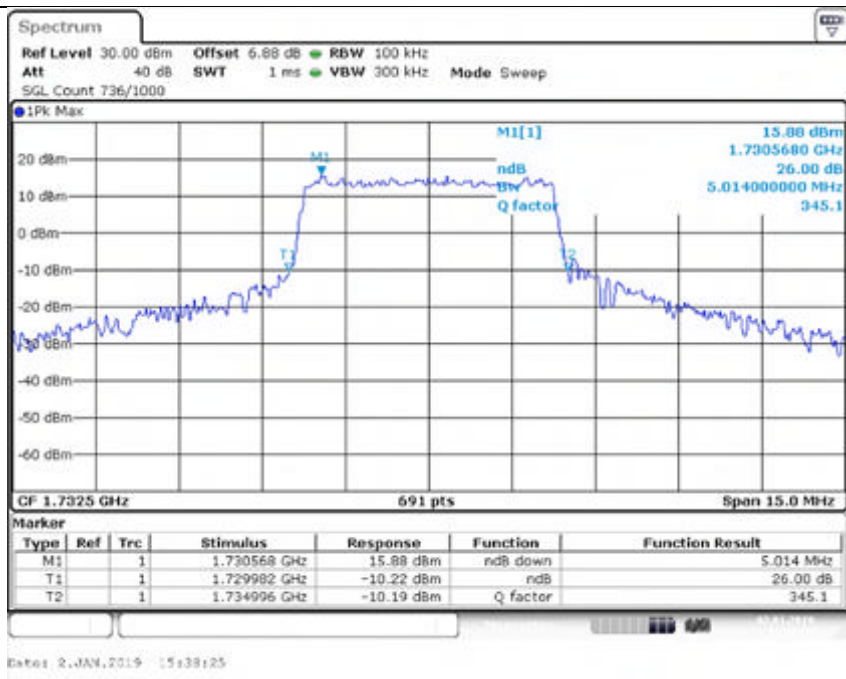


Fig.2

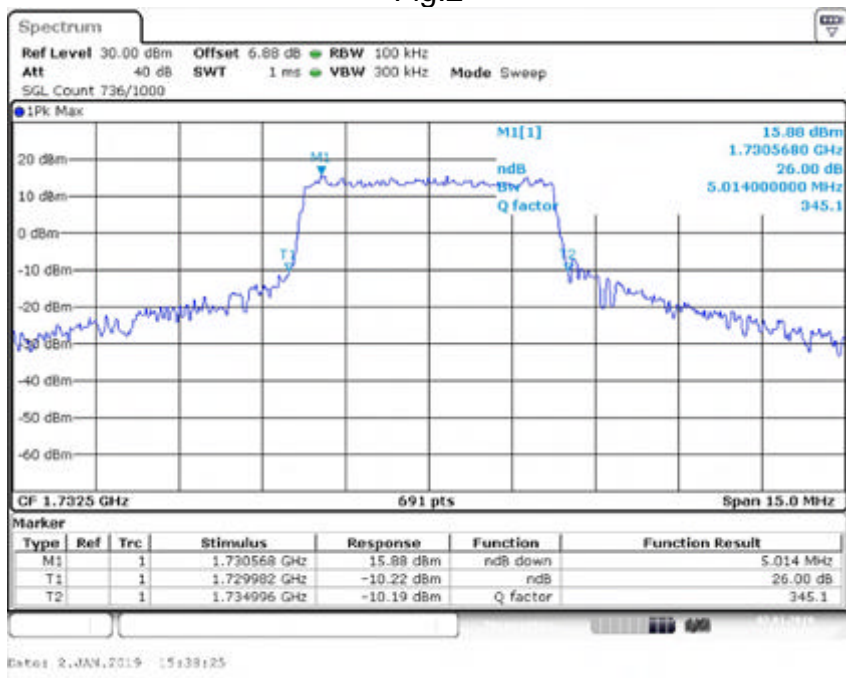


Fig.3

Band	Carrier frequency (MHz)	Channel(High)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
4	1752.5	20375	5	25	0	5.275	Fig.1	5.297	Fig.2	5.297	Fig.3

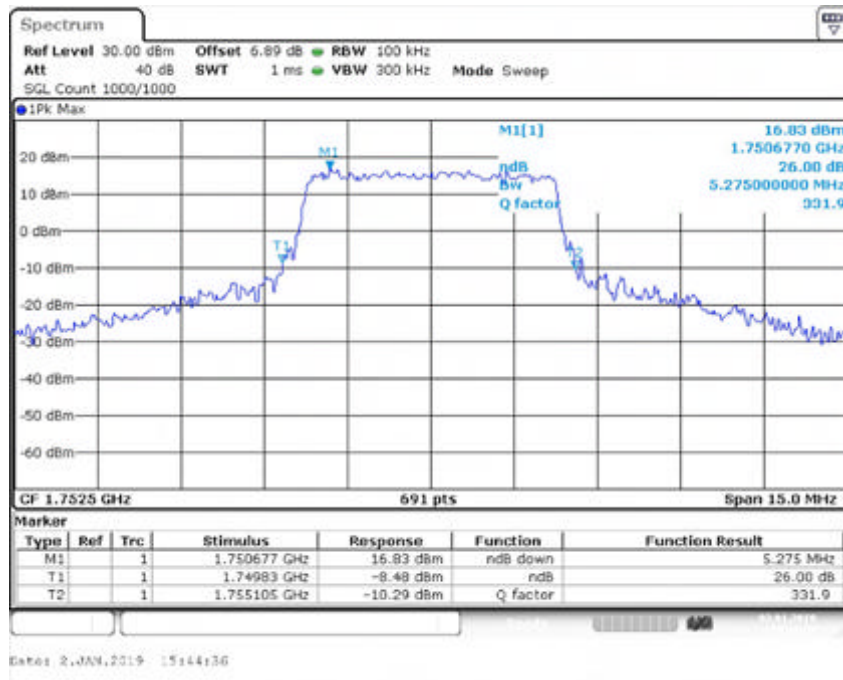


Fig.1



Fig.2

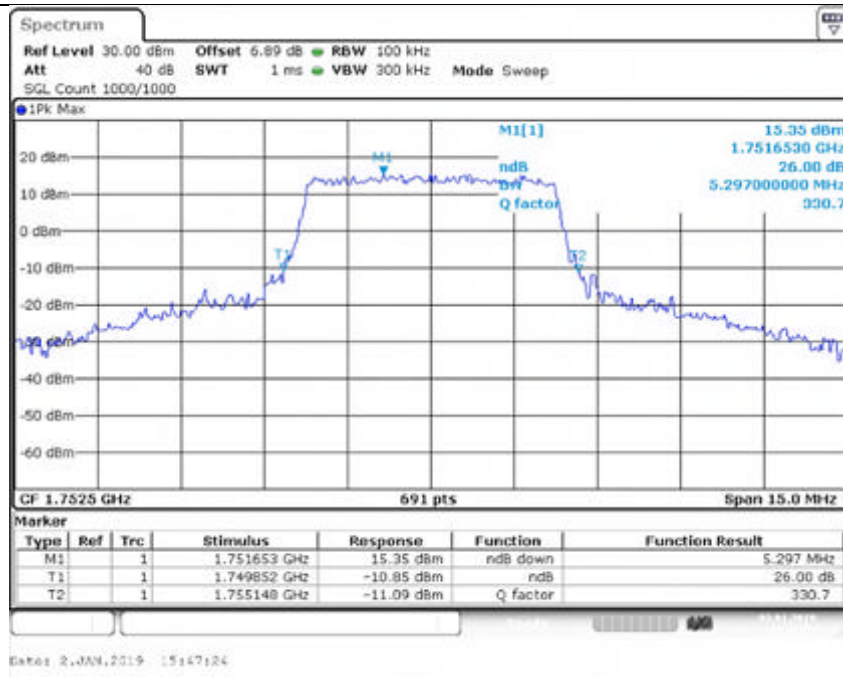


Fig.3

Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		16-QAM	
4	1715	20000	10	50	0	10.246	Fig.1	10.203	Fig.2	10.203	Fig.3

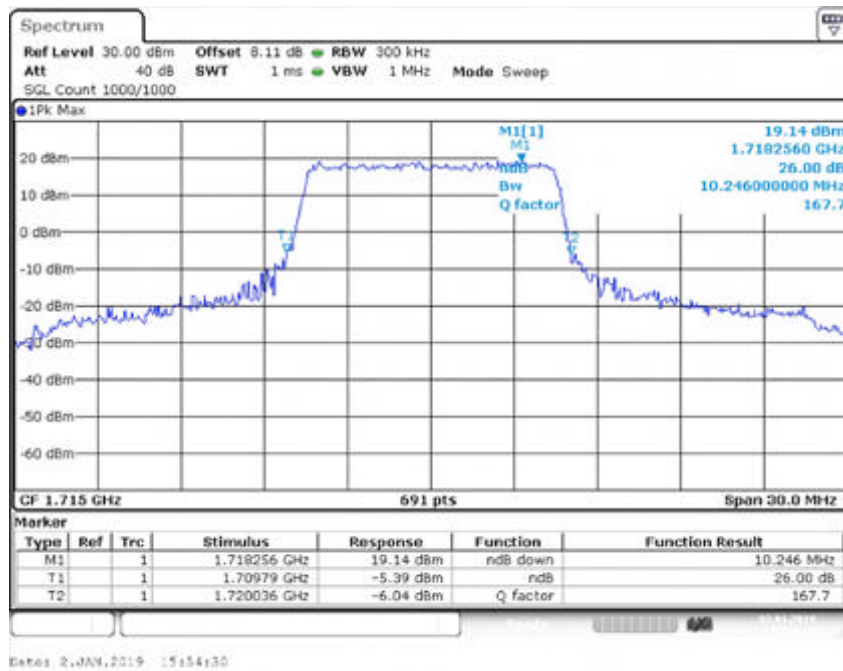


Fig.1

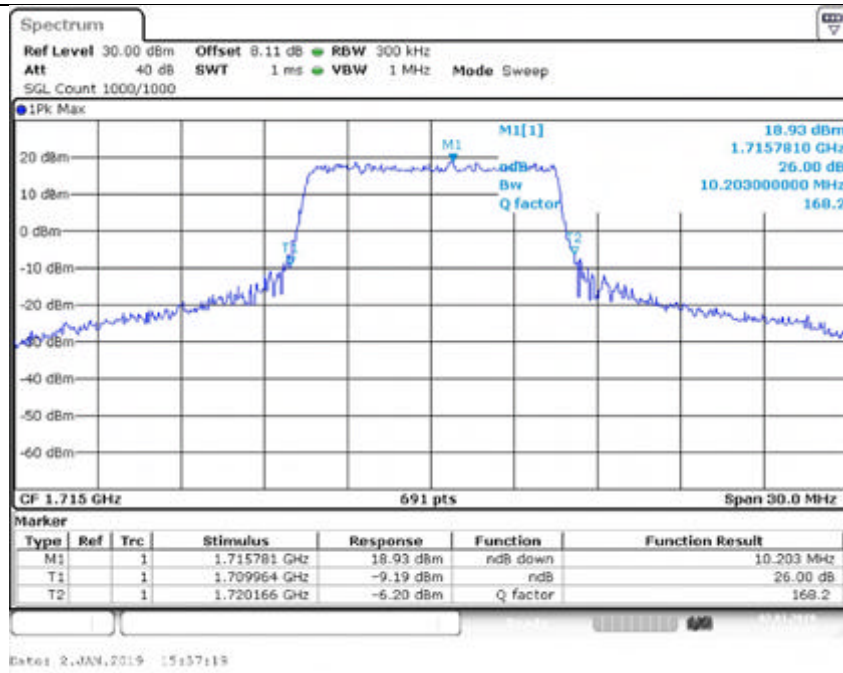


Fig.2

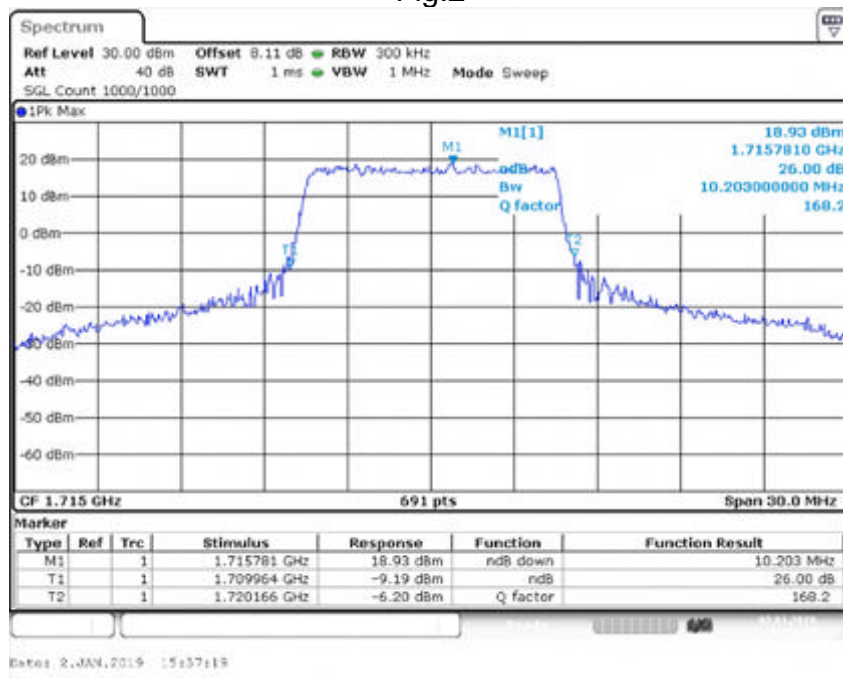


Fig.3

Band	Carrier frequency (MHz)	Channel(Mid)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK	Fig.1	16-QAM	Fig.2	64-QAM	Fig.3
4	1732.5	20175	10	50	0	10.246	Fig.1	10.159	Fig.2	10.159	Fig.3

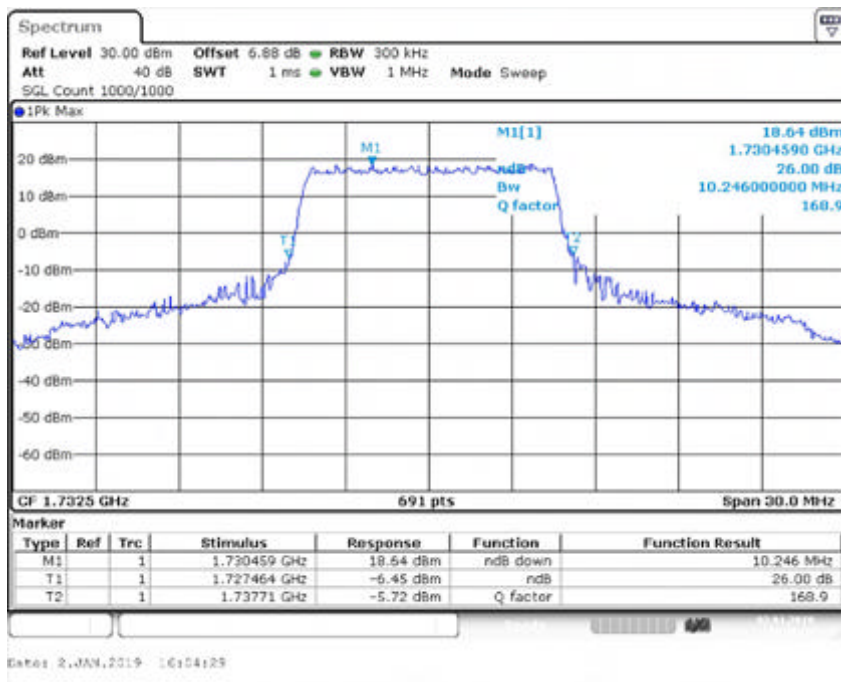


Fig.1

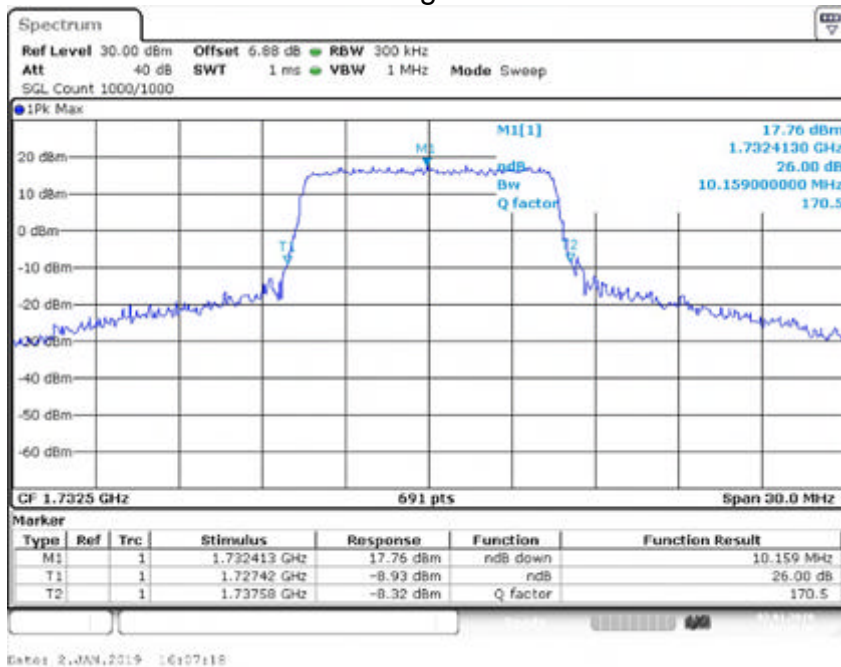


Fig.2

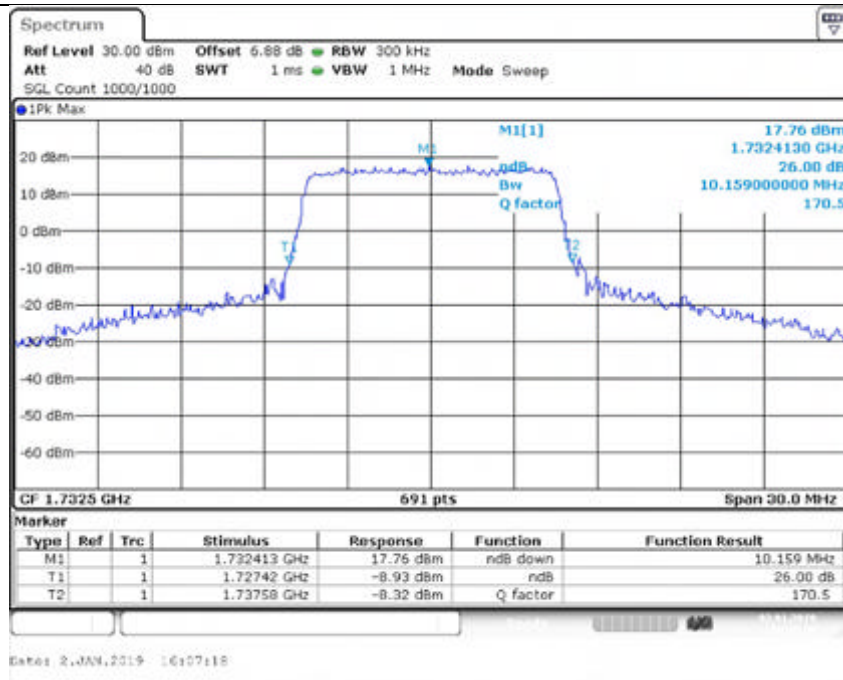


Fig.3

Band	Carrier frequency (MHz)	Channel(High)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		16-QAM	
4	1750	20350	10	50	0	10.376	Fig.1	10.203	Fig.2	10.203	Fig.3

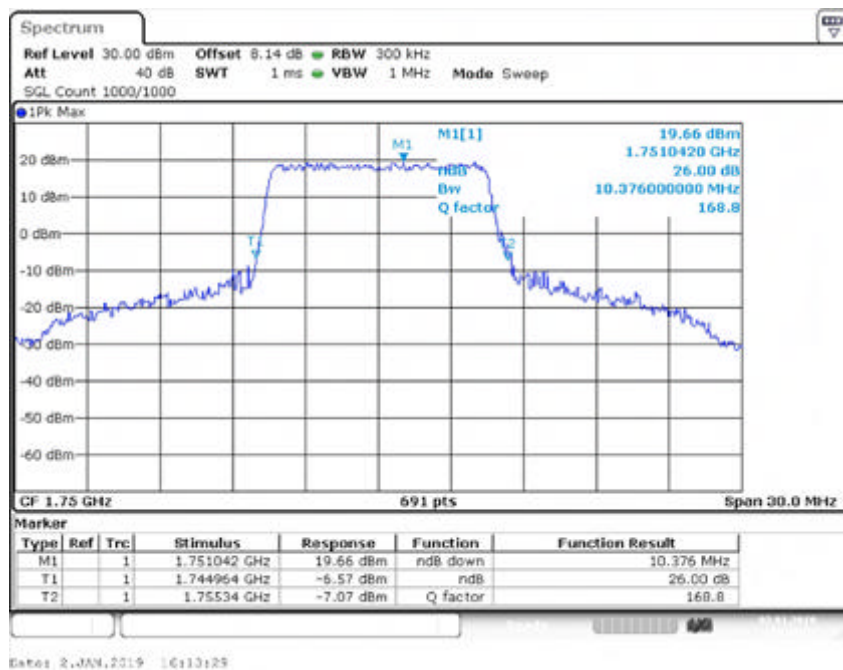


Fig.1

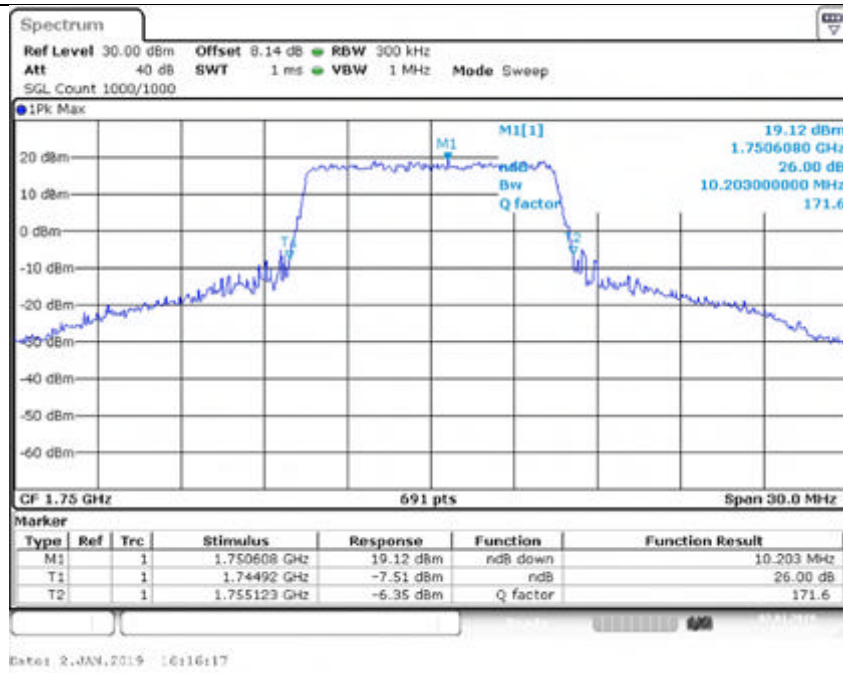


Fig.2

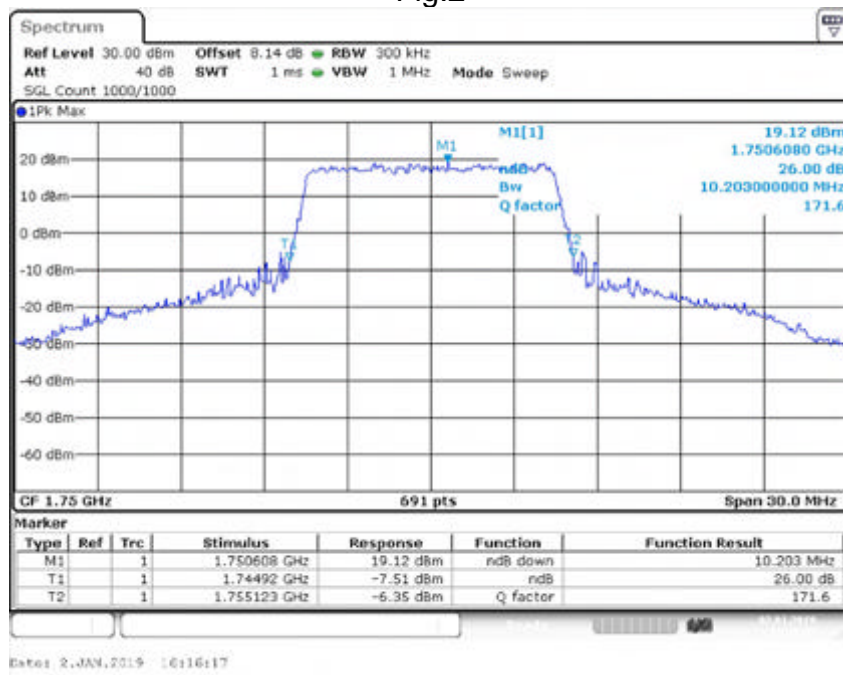


Fig.3

Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		16-QAM	
4	1717.5	20025	15	75	0	15.109	Fig.1	15.109	Fig.2	15.109	Fig.3

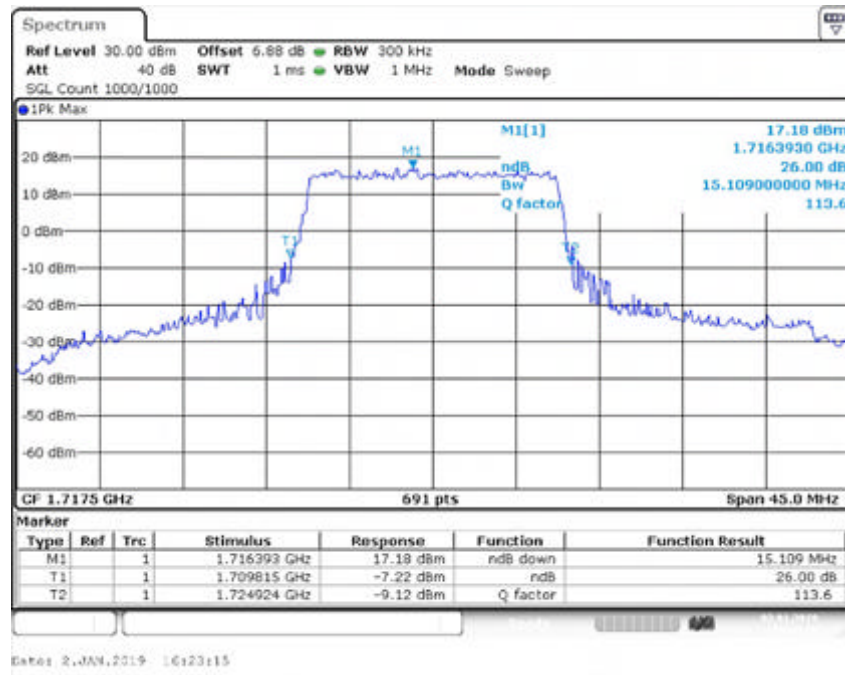


Fig.1

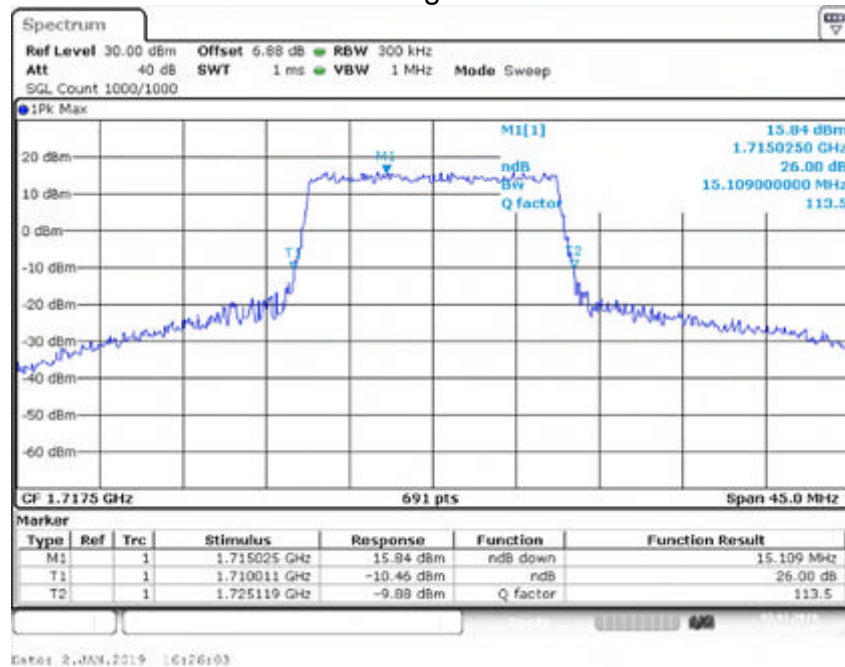


Fig.2

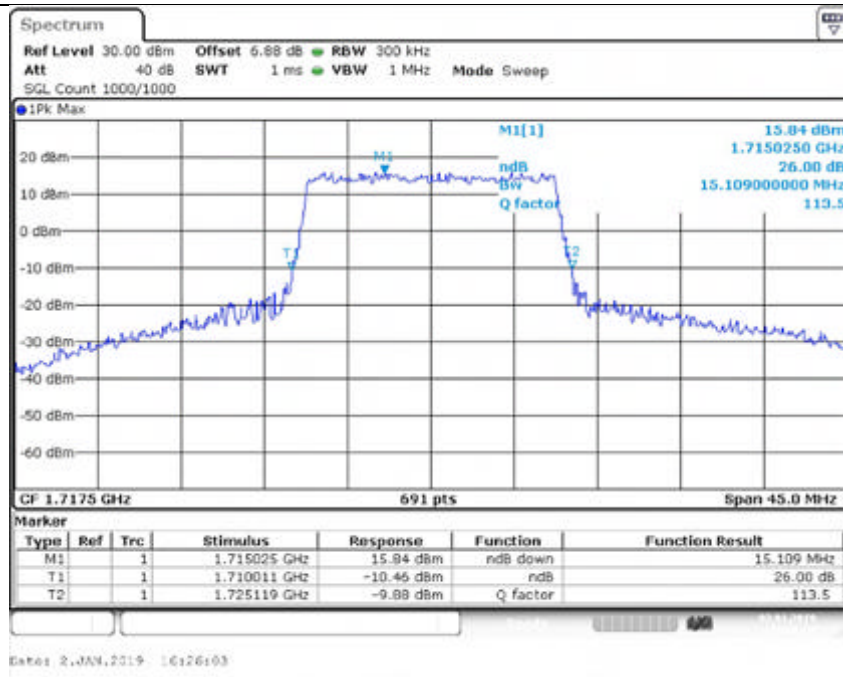


Fig.3

Band	Carrier frequency (MHz)	Channel(Mid)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
4	1732.5	20175	15	75	0	15.043	Fig.1	15.043	Fig.2	15.043	Fig.3

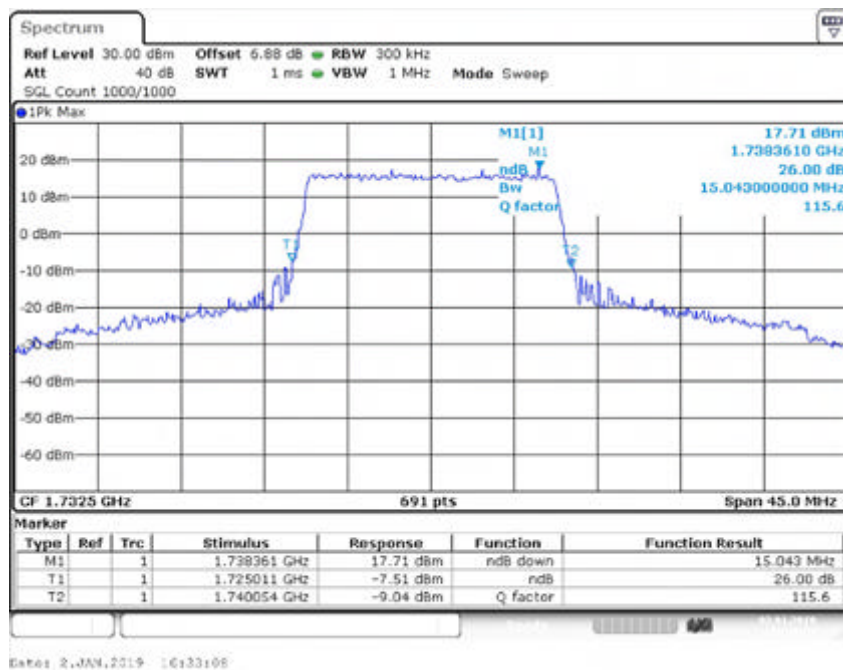


Fig.1

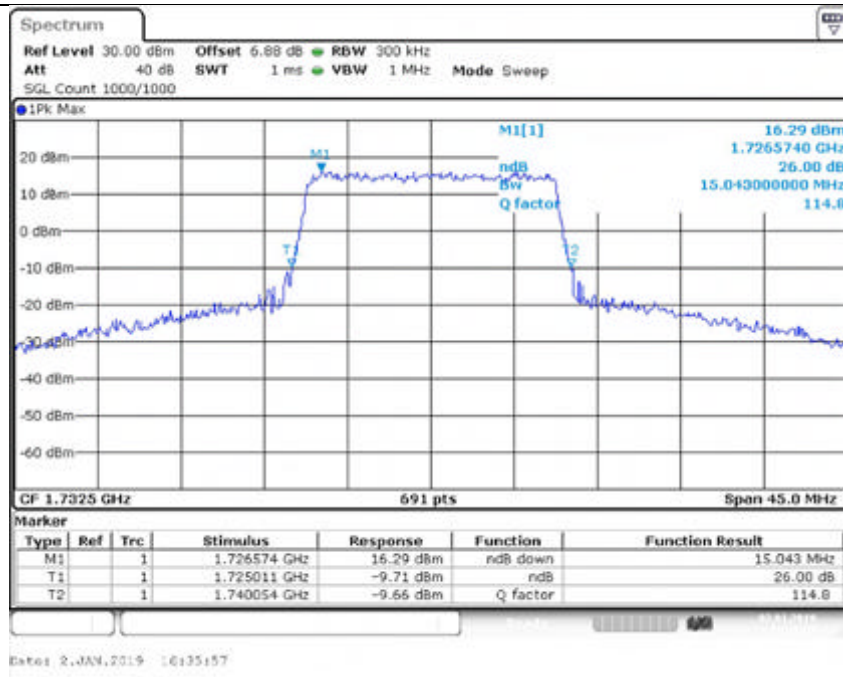


Fig.2

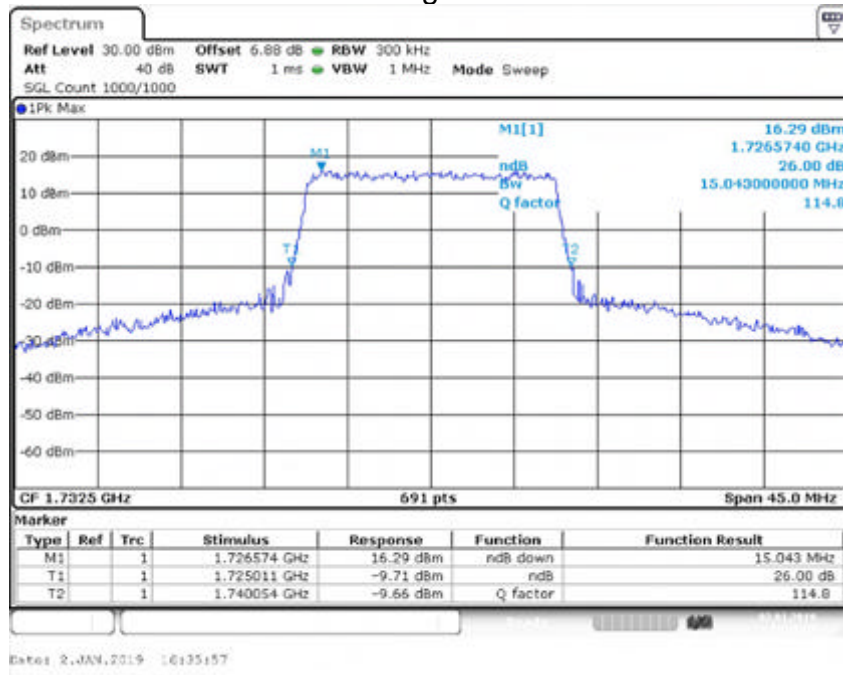


Fig.3

Band	Carrier frequency (MHz)	Channel(High)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		16-QAM	
4	1747.5	20325	15	75	0	15.174	Fig.1	15.109	Fig.2	15.109	Fig.3

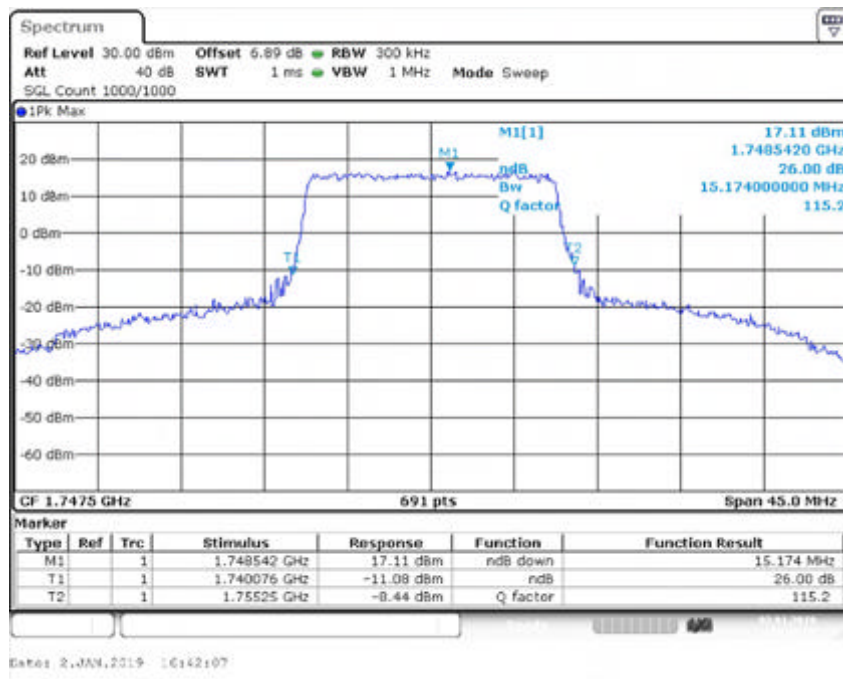


Fig.1

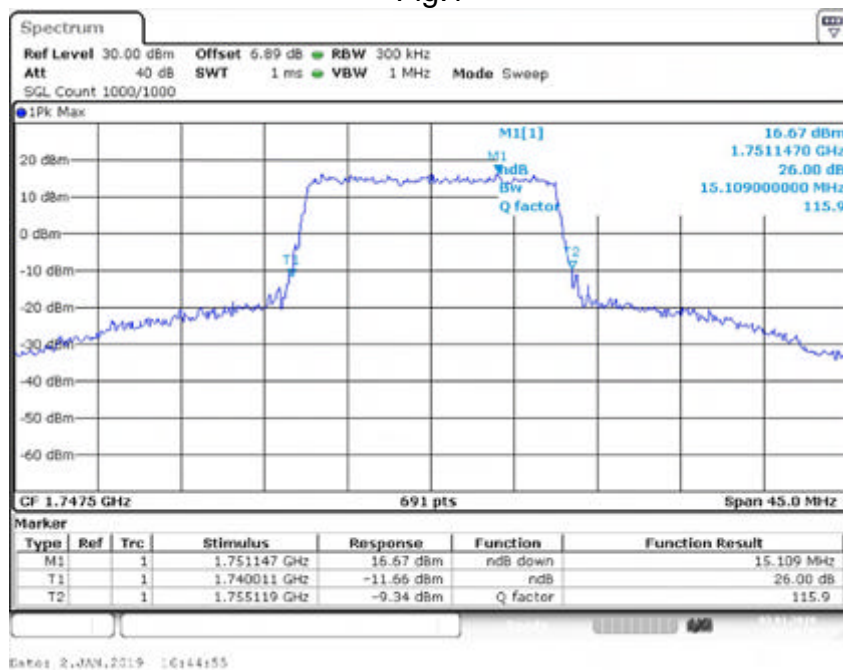


Fig.2

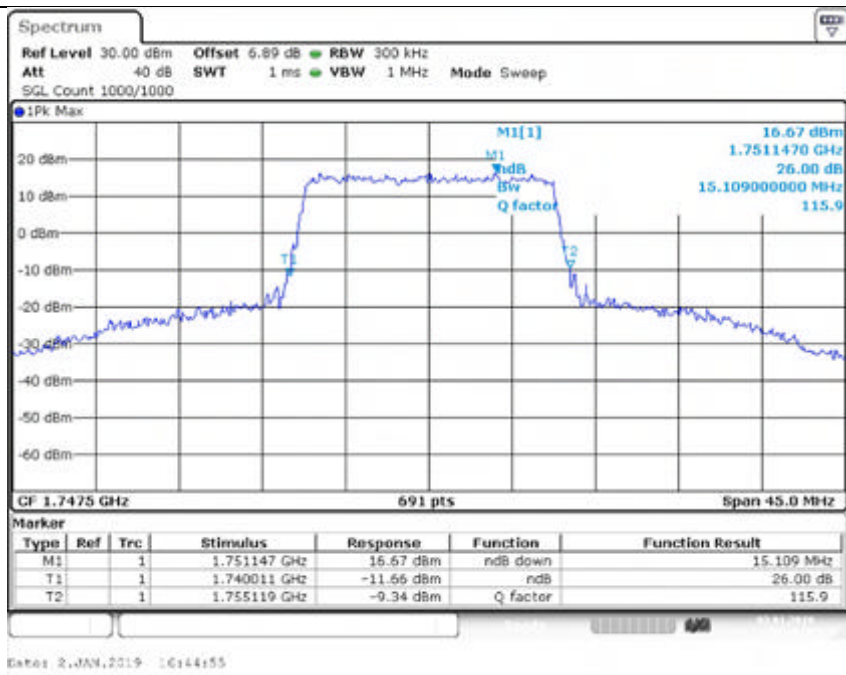


Fig.3

Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK	16-QAM	64-QAM			
4	1720	20050	20	100	0	20.058	Fig.1	19.711	Fig.2	19.711	Fig.3

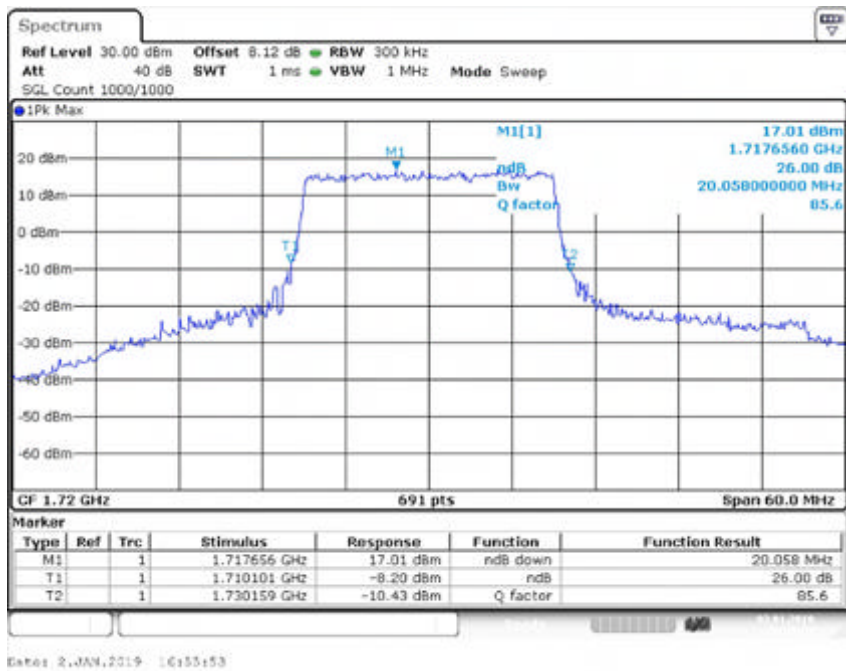


Fig.1

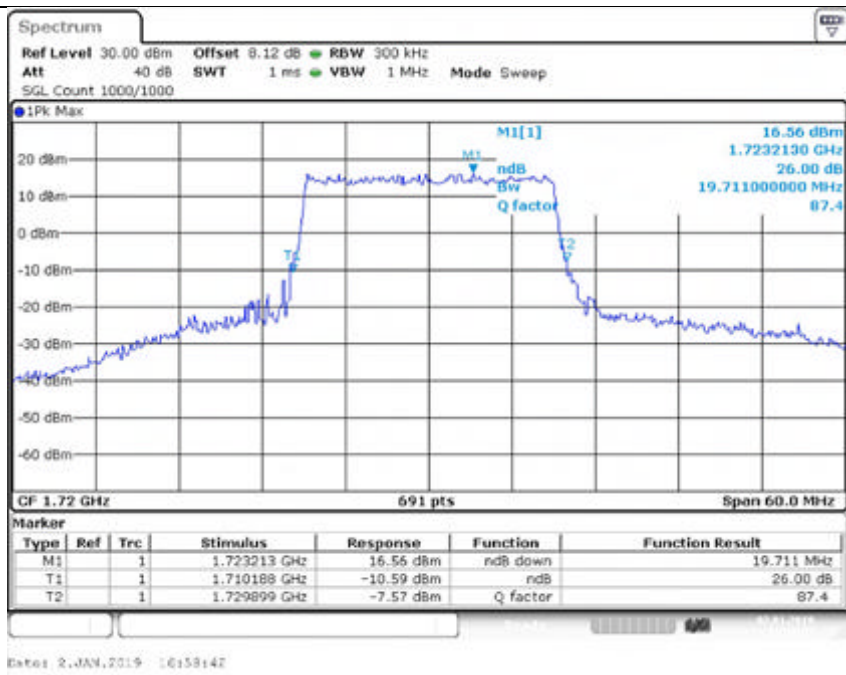


Fig.2

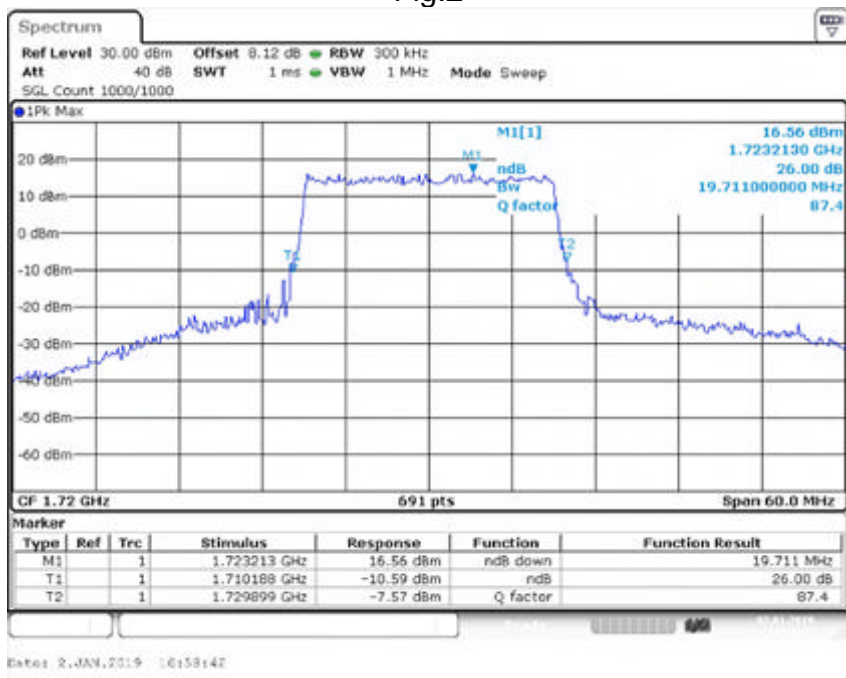


Fig.3

Band	Carrier frequency (MHz)	Channel(Mid)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		64-QAM	
4	1732.5	20175	20	100	0	19.797	Fig.1	19.884	Fig.2	19.884	Fig.3

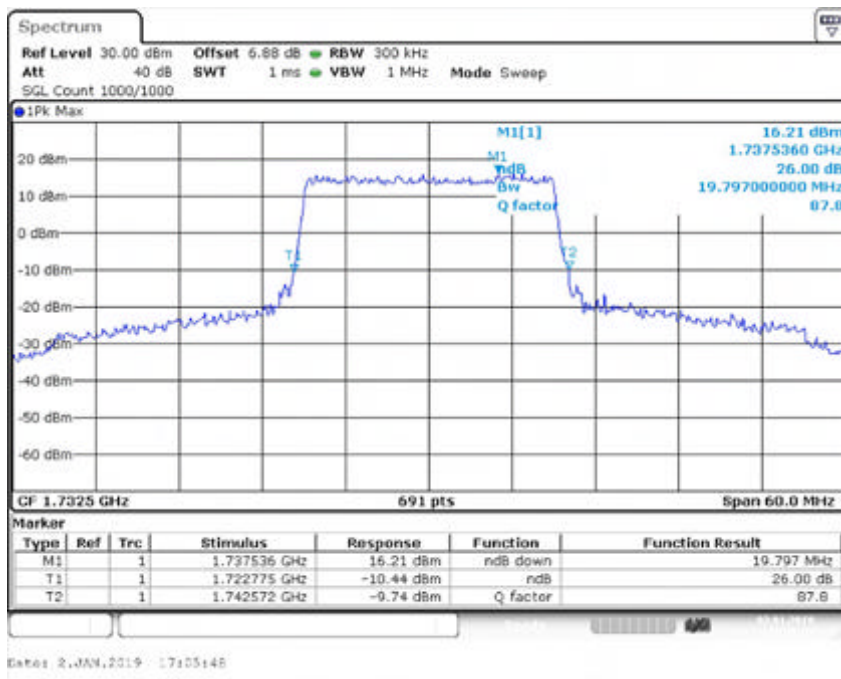


Fig.1

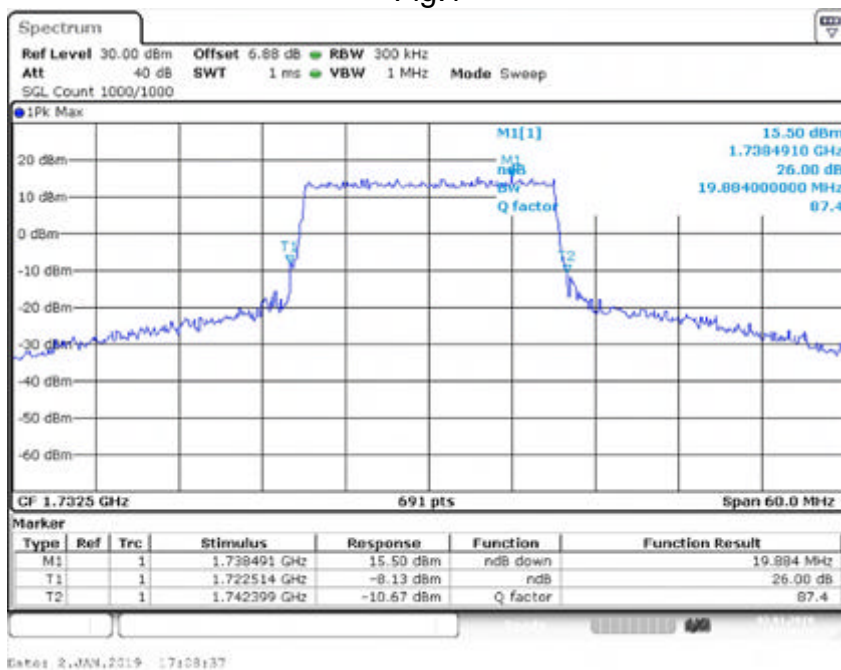


Fig.2

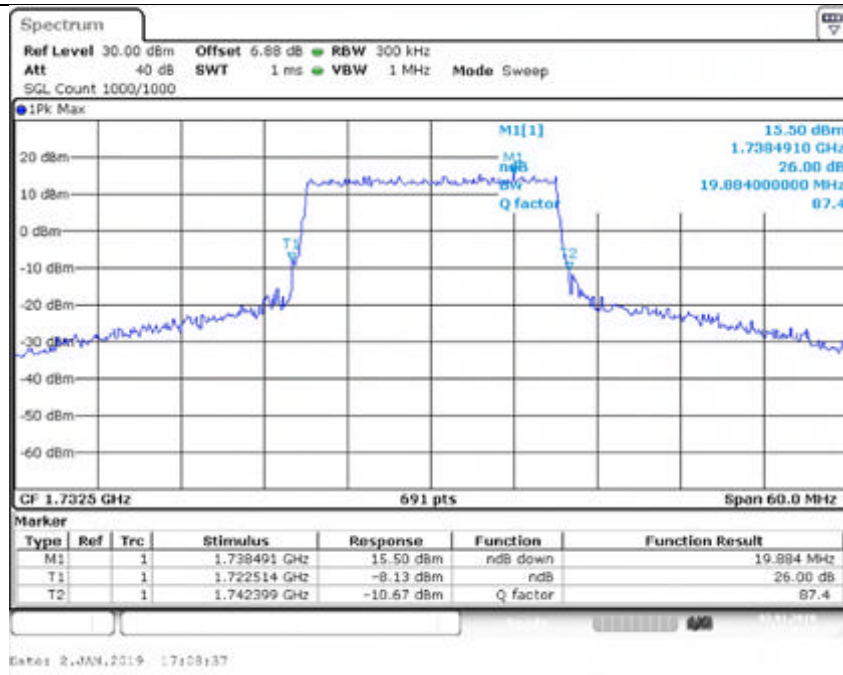


Fig.3

Band	Carrier frequency (MHz)	Channel(High)	BW	RB Size	RB Offset	Bandwidth of -26dB transmitter power (MHz)					
						QPSK		16-QAM		16-QAM	
4	1745	20300	20	100	0	19.450	Fig.1	19.797	Fig.2	19.797	Fig.3

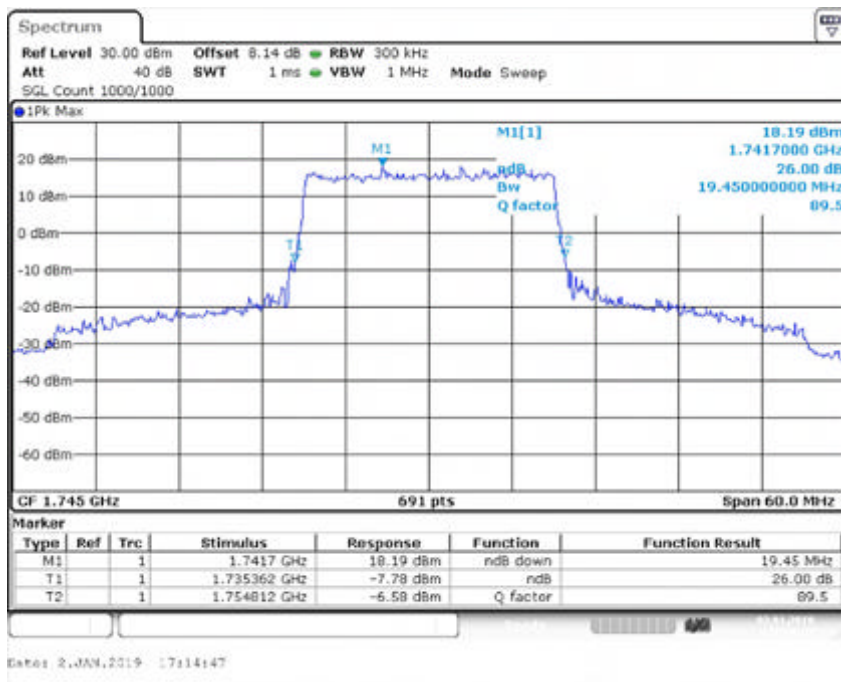


Fig.1

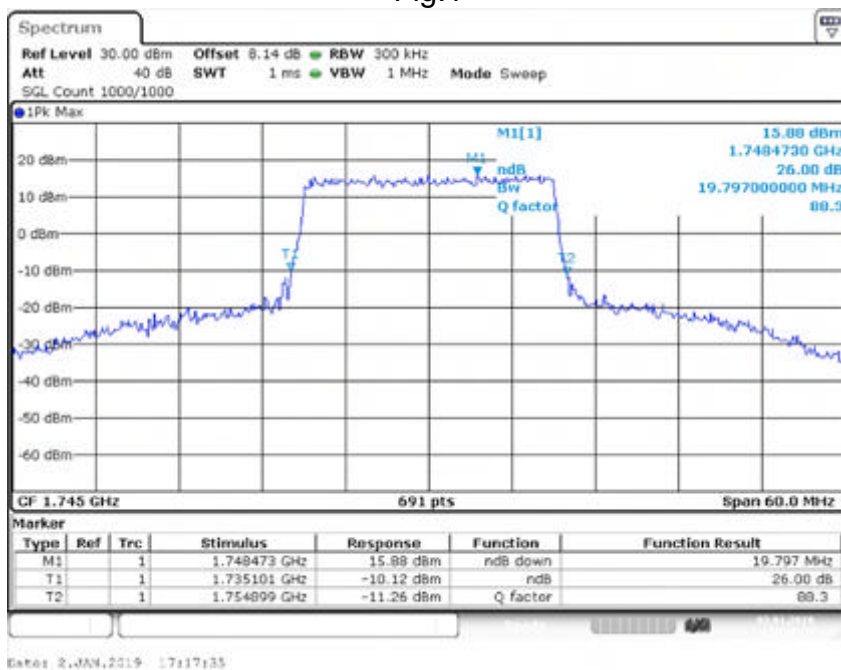


Fig.2

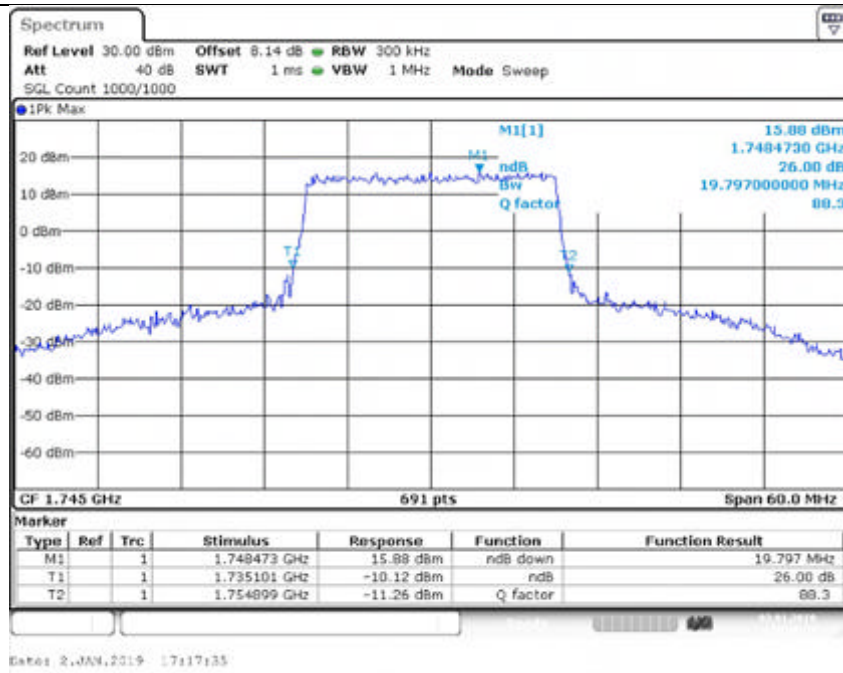
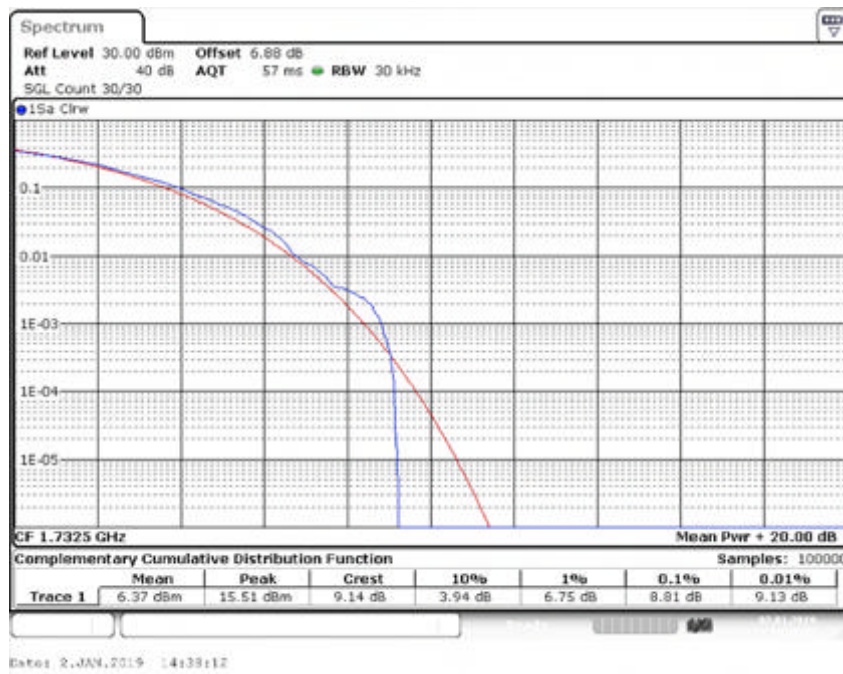


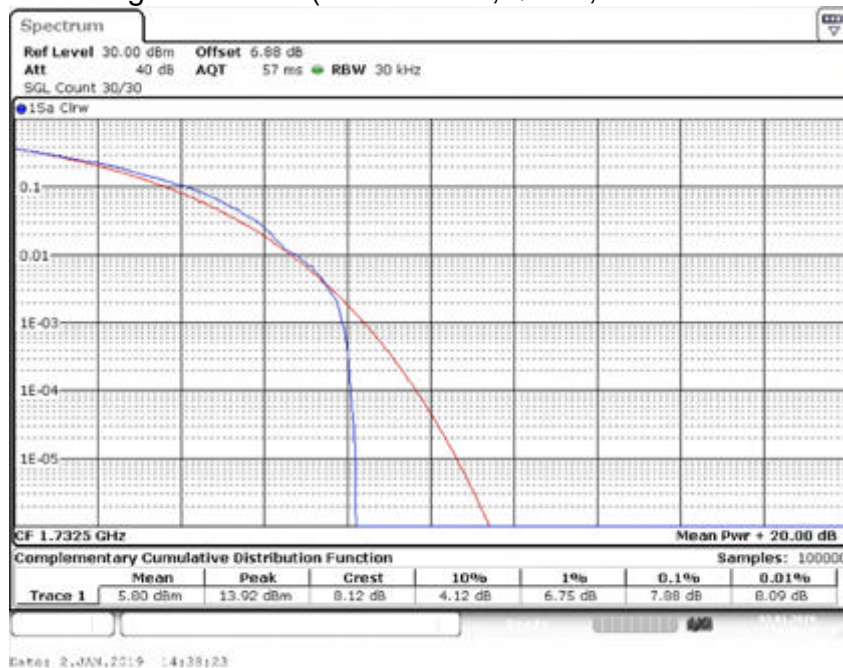
Fig.3

4 Peak-Average Ratio

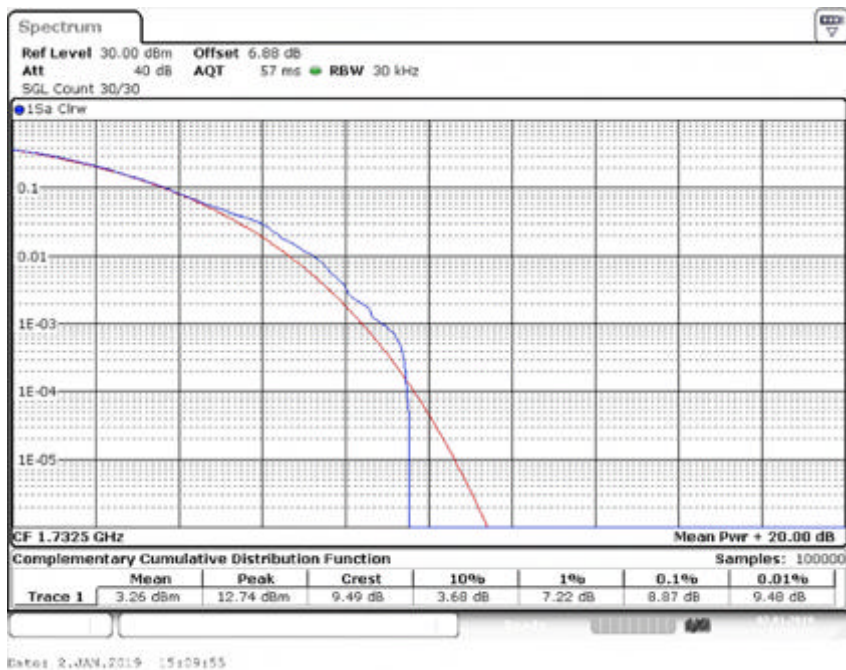
Test result:



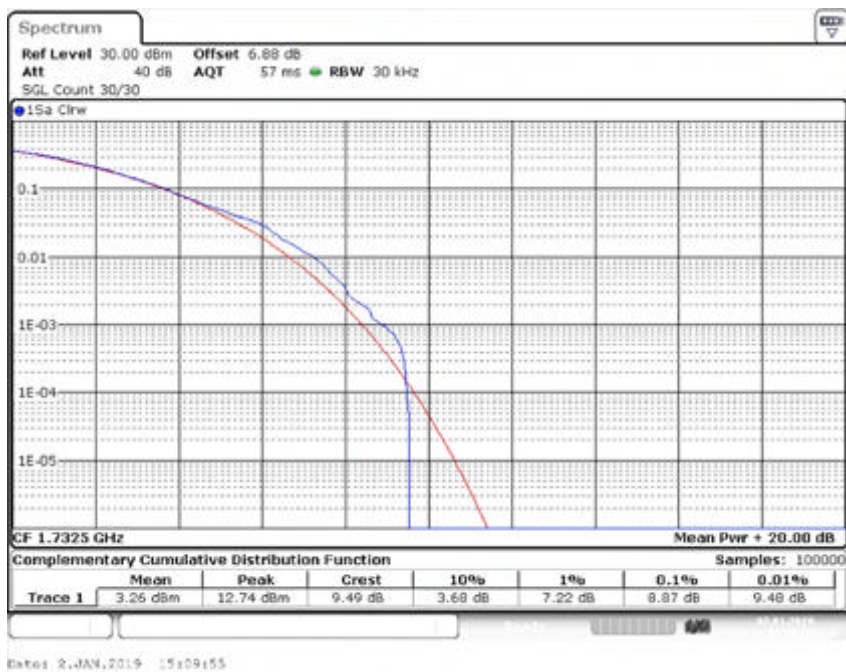
Peak-Average Ratio Plot(1.4MHz BW,QPSK,Band 4-mid Channel)



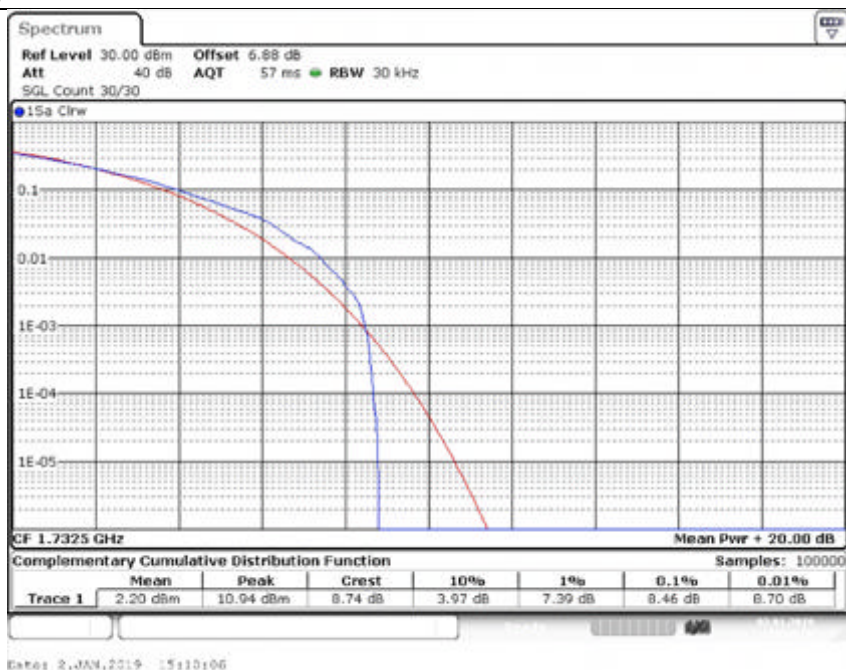
Peak-Average Ratio Plot(1.4MHz BW,16QAM,Band 4-mid Channel)



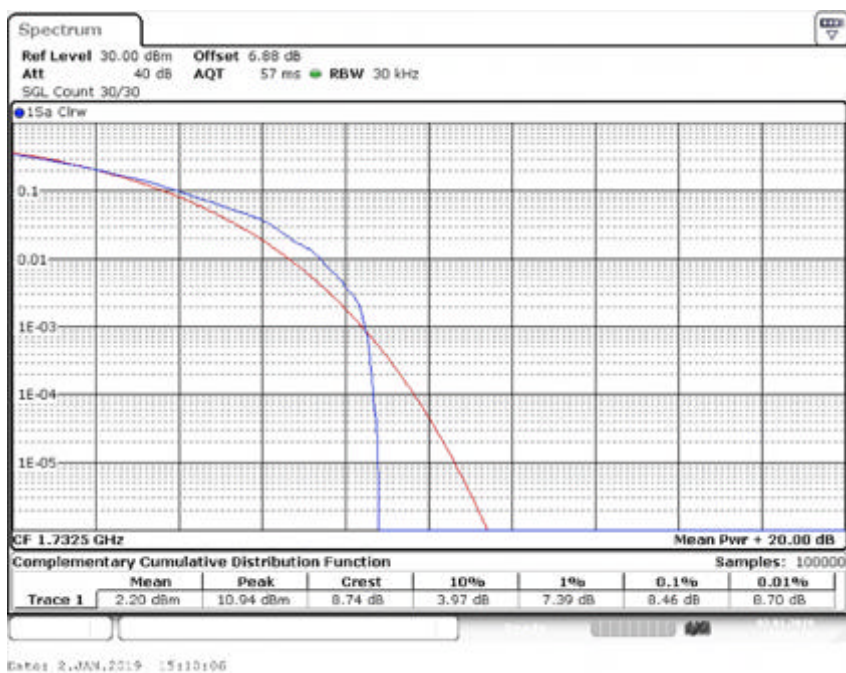
Peak-Average Ratio Plot(1.4MHz BW,64QAM,Band 4-mid Channel)



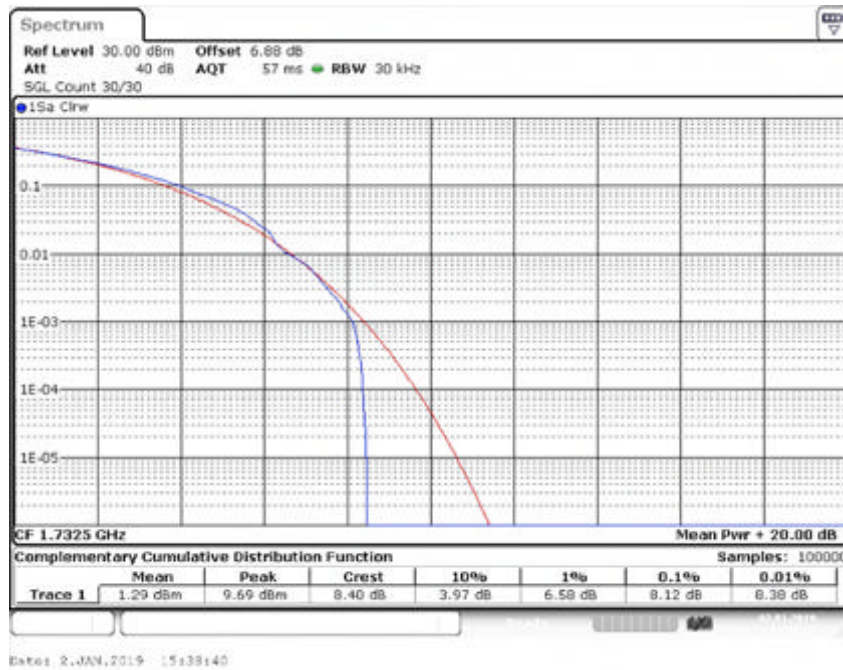
Peak-Average Ratio Plot(3MHz BW,QPSK,Band 4-mid Channel)



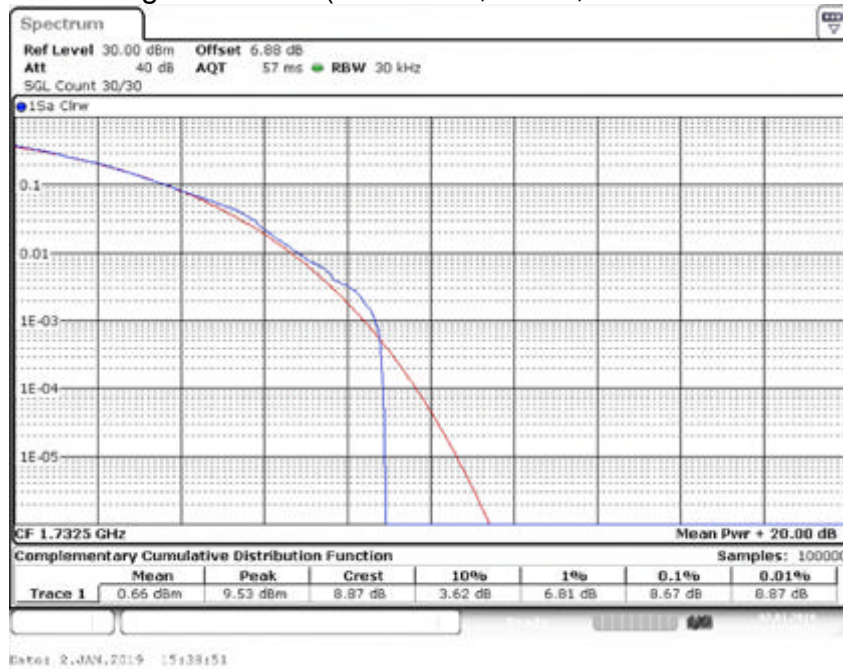
Peak-Average Ratio Plot(3MHz BW,16QAM,Band 4-mid Channel)



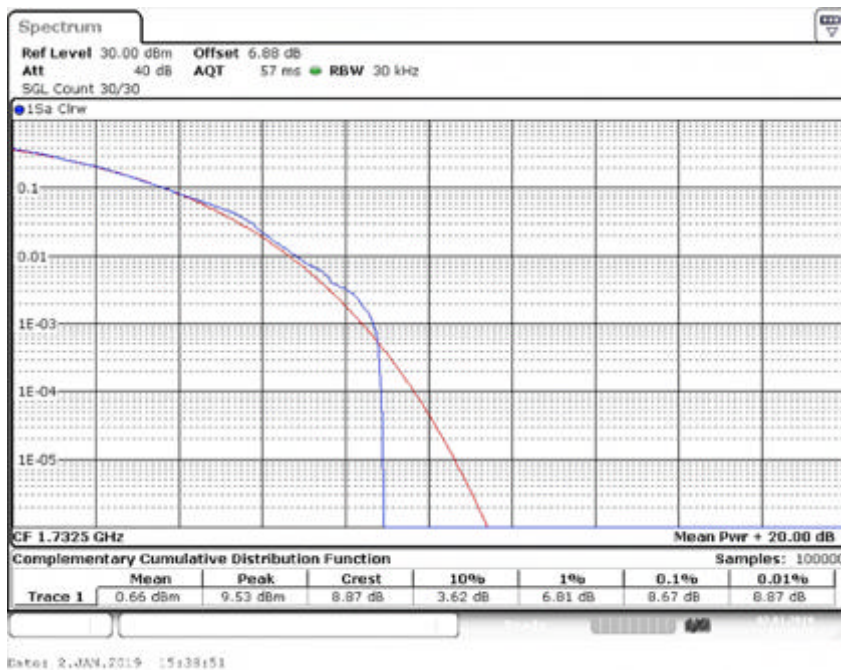
Peak-Average Ratio Plot(3MHz BW,64QAM,Band 4-mid Channel)



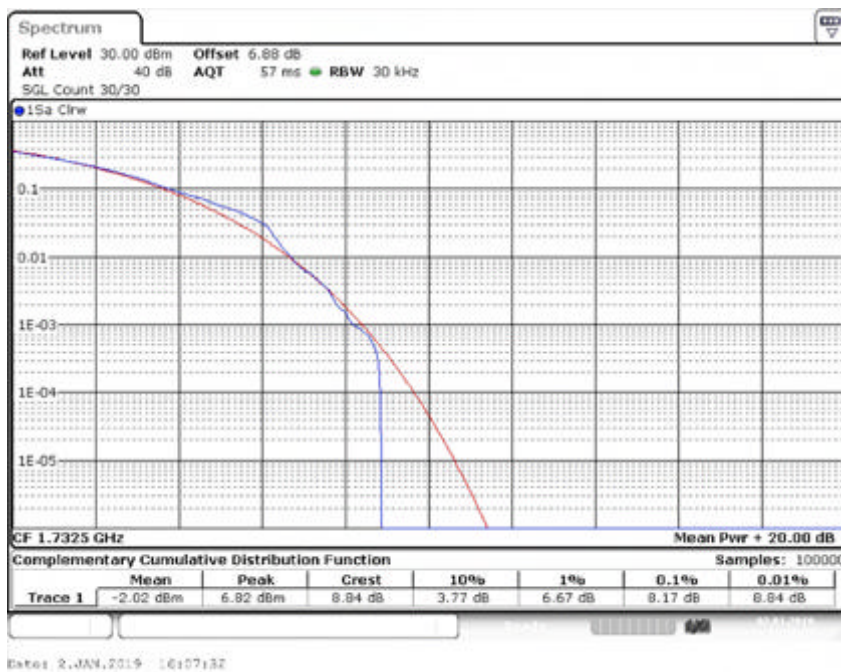
Peak-Average Ratio Plot(5MHz BW,QPSK,Band 4-mid Channel)



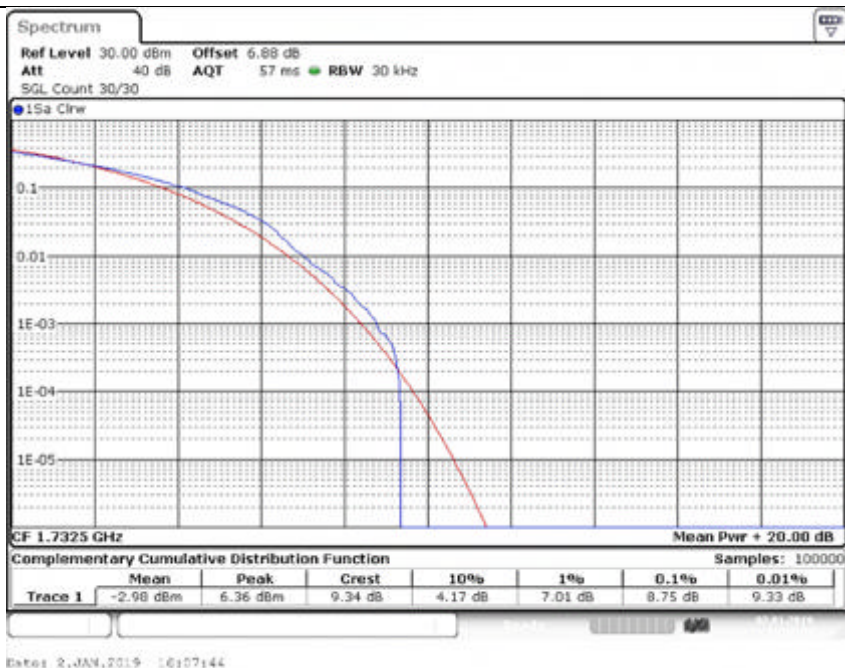
Peak-Average Ratio Plot(5MHz BW,16QAM,Band 4-mid Channel)



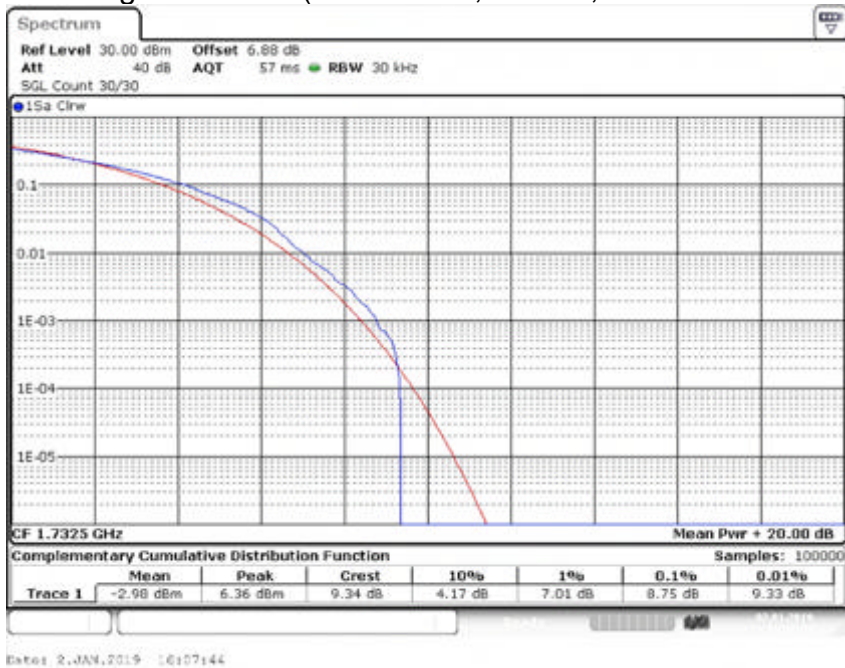
Peak-Average Ratio Plot(5MHz BW,64QAM,Band 4-mid Channel)



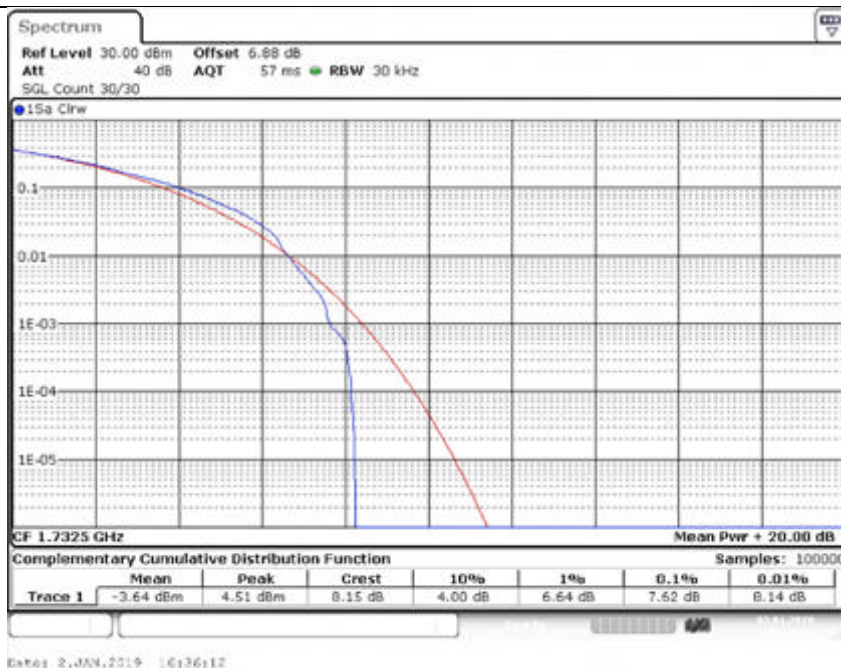
Peak-Average Ratio Plot(10MHz BW,QPSK,Band 4-mid Channel)



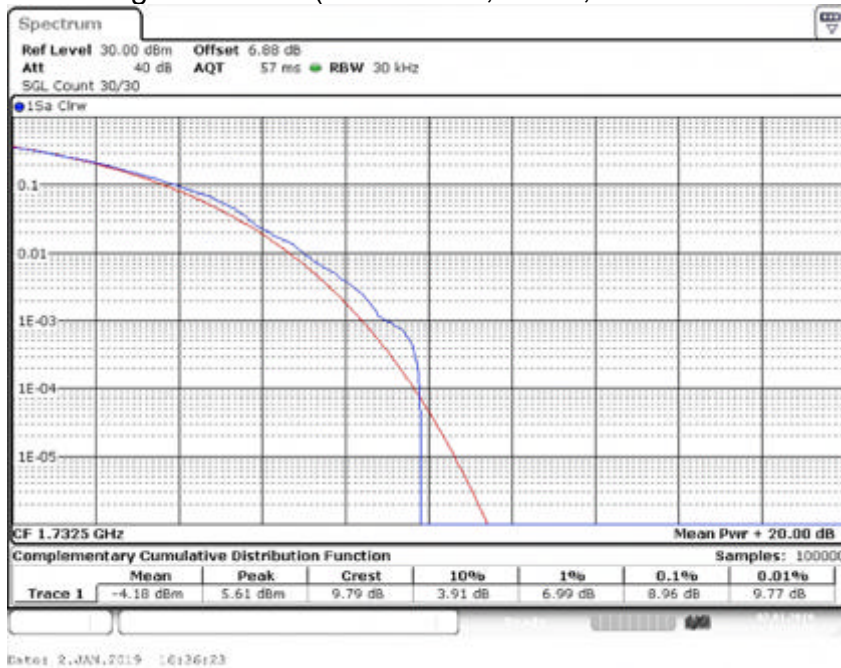
Peak-Average Ratio Plot(10MHz BW,16QAM,Band 4-mid Channel)



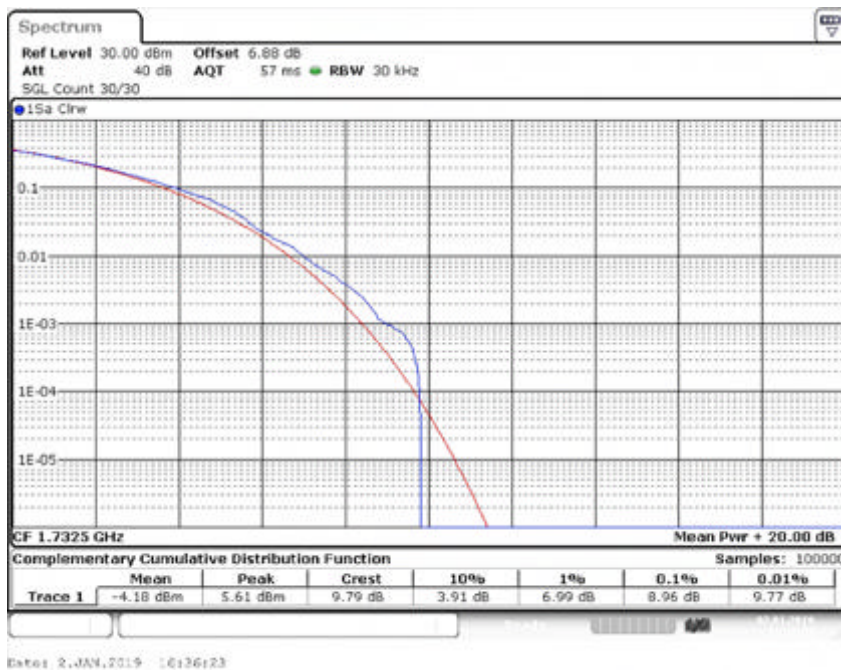
Peak-Average Ratio Plot(10MHz BW,64QAM,Band 4-mid Channel)



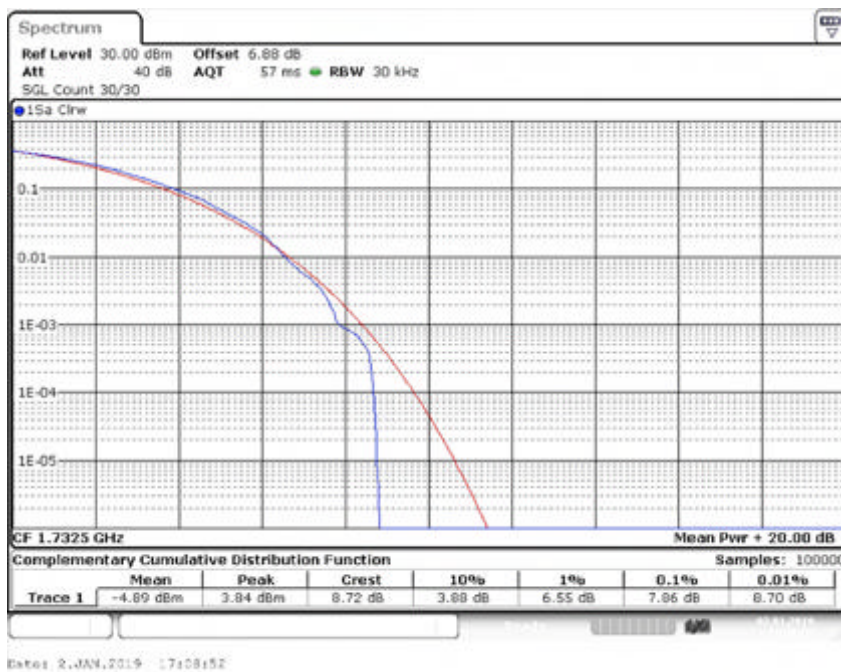
Peak-Average Ratio Plot(15MHz BW,QPSK,Band 4-mid Channel)



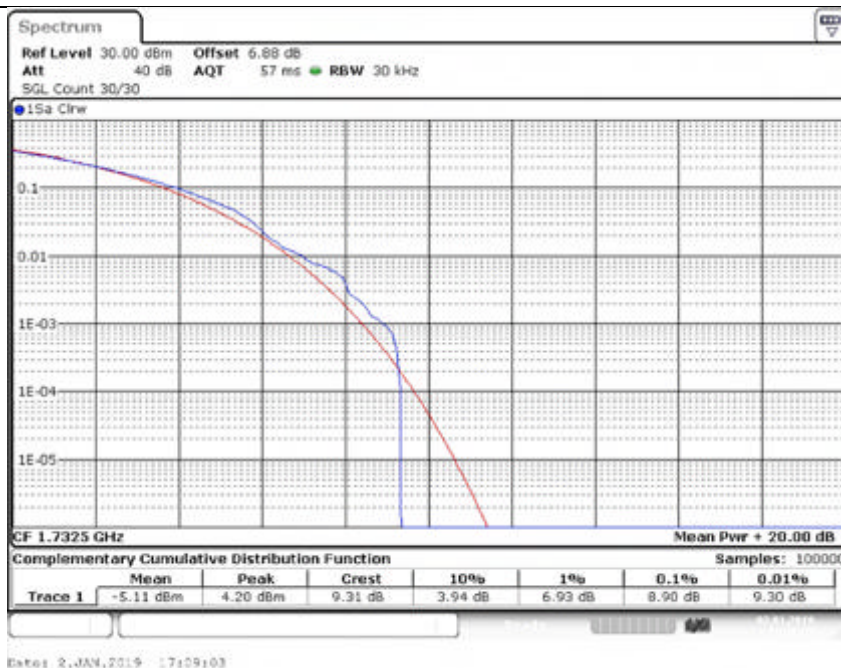
Peak-Average Ratio Plot(15MHz BW,16QAM,Band 4-mid Channel)



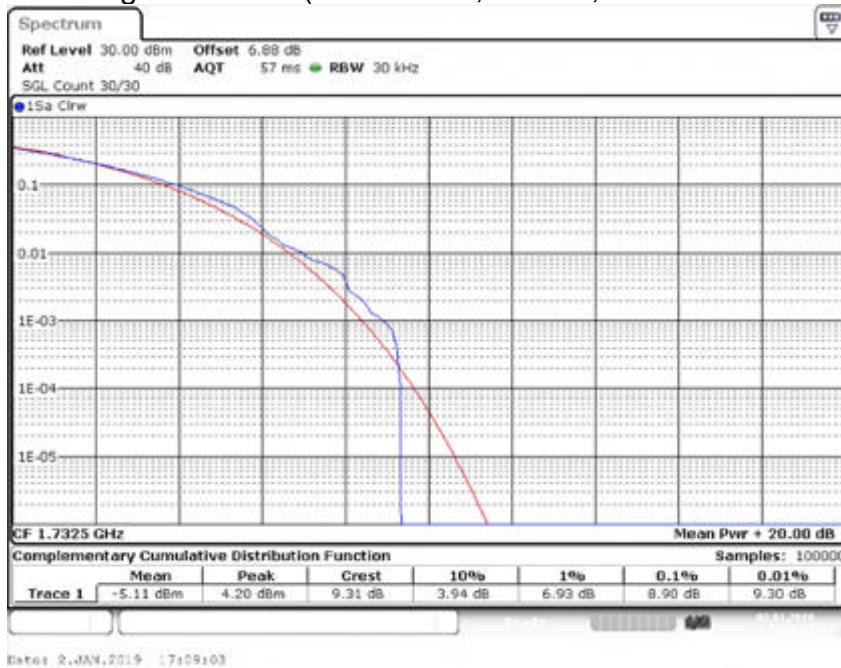
Peak-Average Ratio Plot(15MHz BW,64QAM,Band 4-mid Channel)



Peak-Average Ratio Plot(20MHz BW,QPSK,Band 4-mid Channel)



Peak-Average Ratio Plot(20MHz BW,16QAM,Band 4-mid Channel)



Peak-Average Ratio Plot(20MHz BW,64QAM,Band 4-mid Channel)

5 Spurious Emissions at antenna terminal

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
4	1720	20050	20	1	0	Fig.1

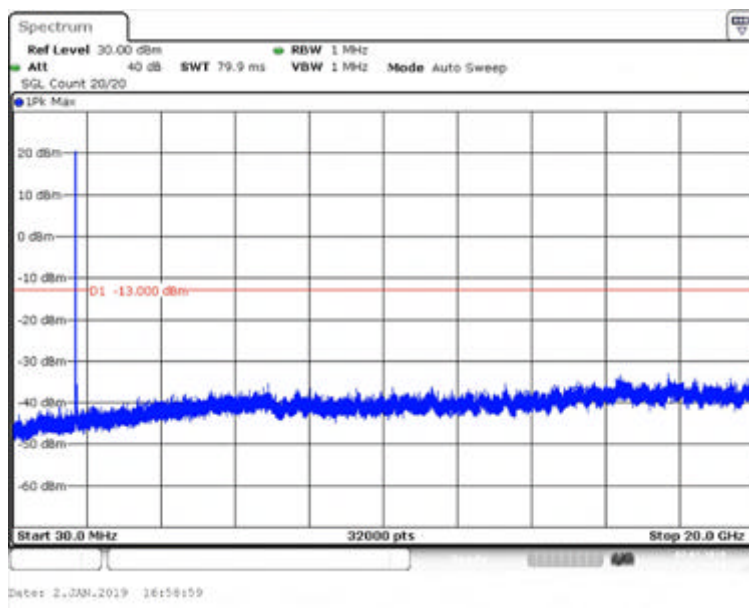


Fig.1

Band	Carrier frequency (MHz)	Channel (Mid)	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
4	1732.5	20175	20	1	0	Fig.4

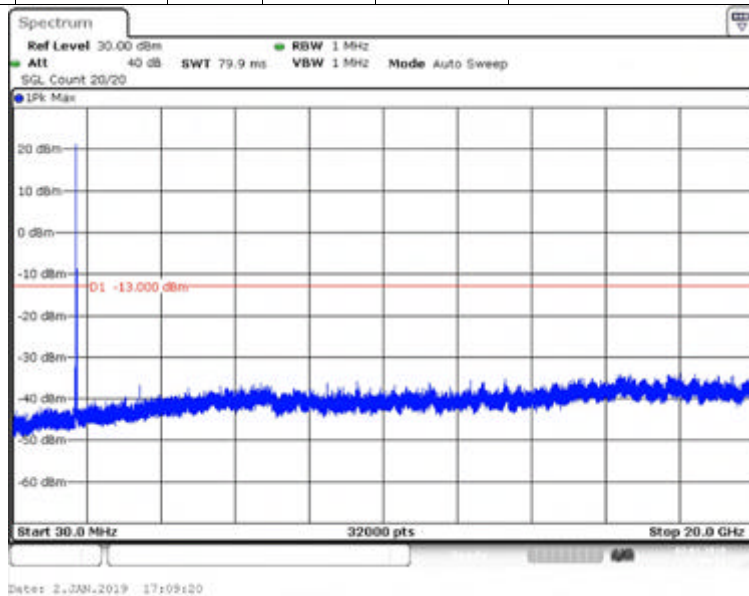


Fig.1

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Conducted Spurious Plot
						QPSK
4	1745	20300	20	1	0	Fig.1

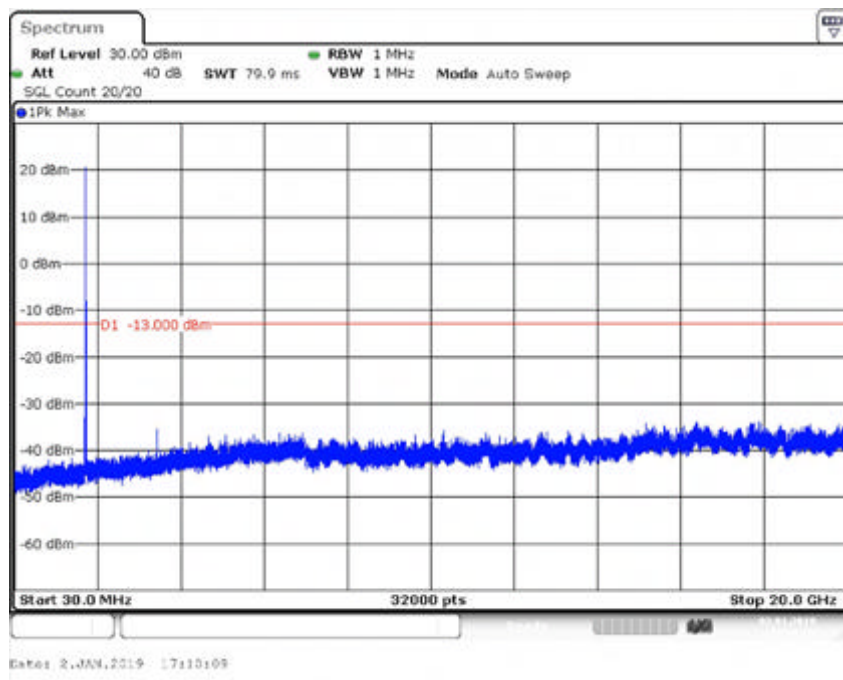


Fig.1

6 Band Edges Compliance

Test result

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1710.7	19957	1.4	1	0	Fig.1
				6	0	Fig.4

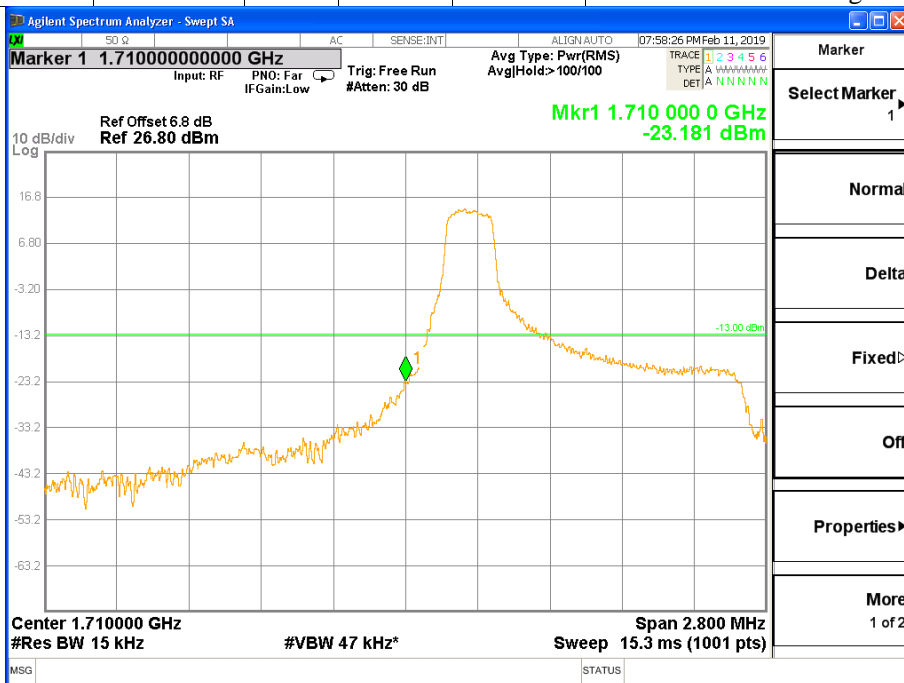


Fig.1

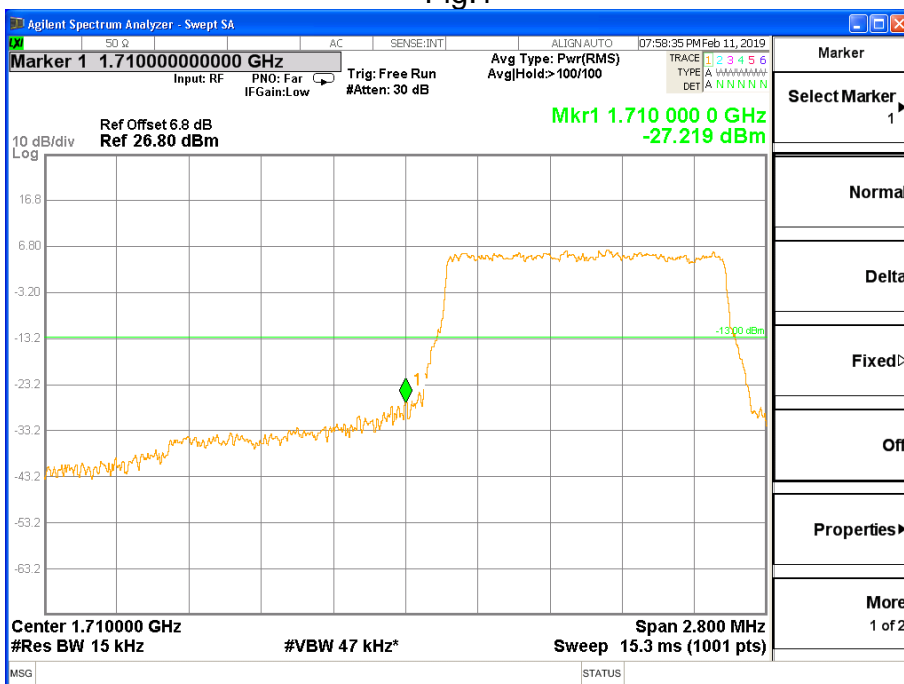


Fig.4

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1754.3	20393	1.4	1	0	Fig.1
				6	0	Fig.4

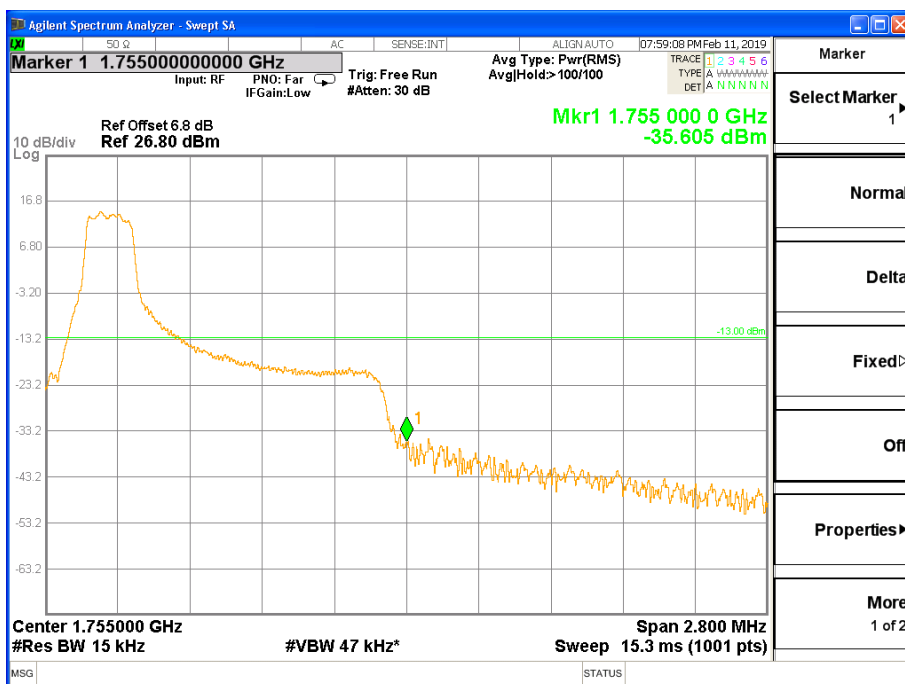


Fig.1

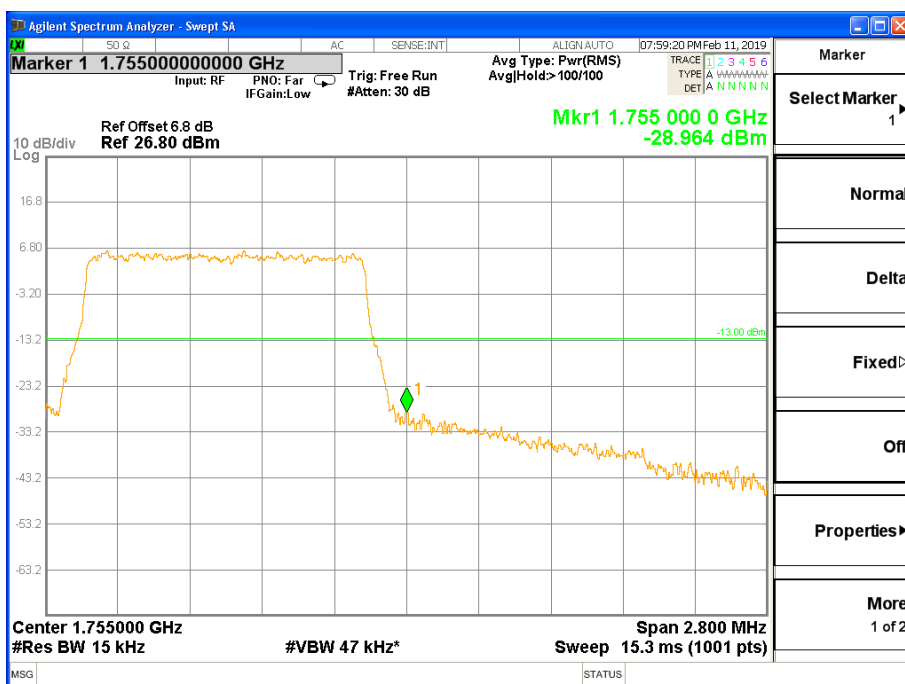


Fig.4

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1711.5	19965	3	1	0	Fig.1
				15	0	Fig.4

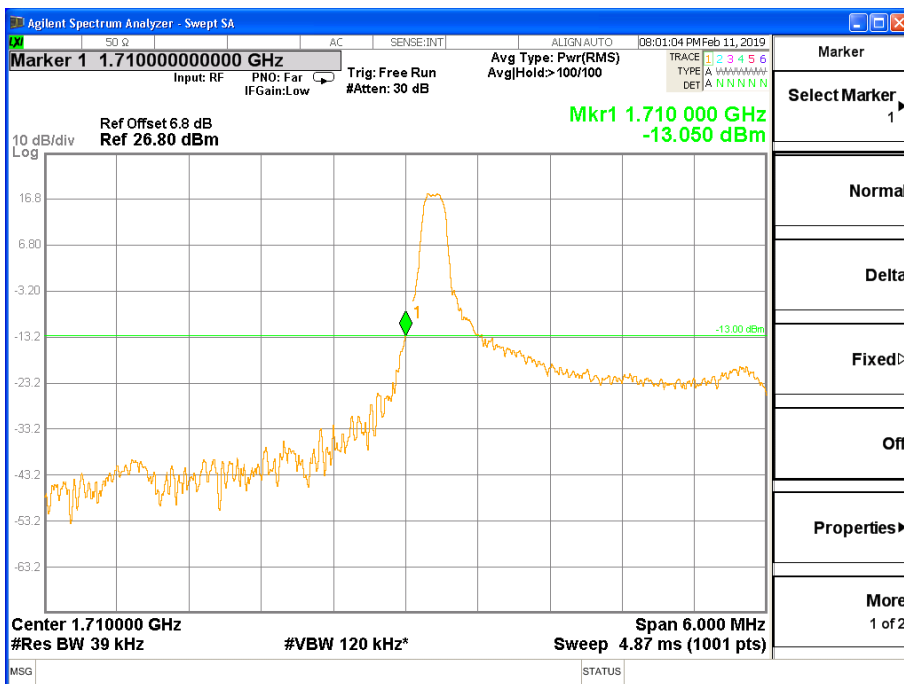


Fig.1

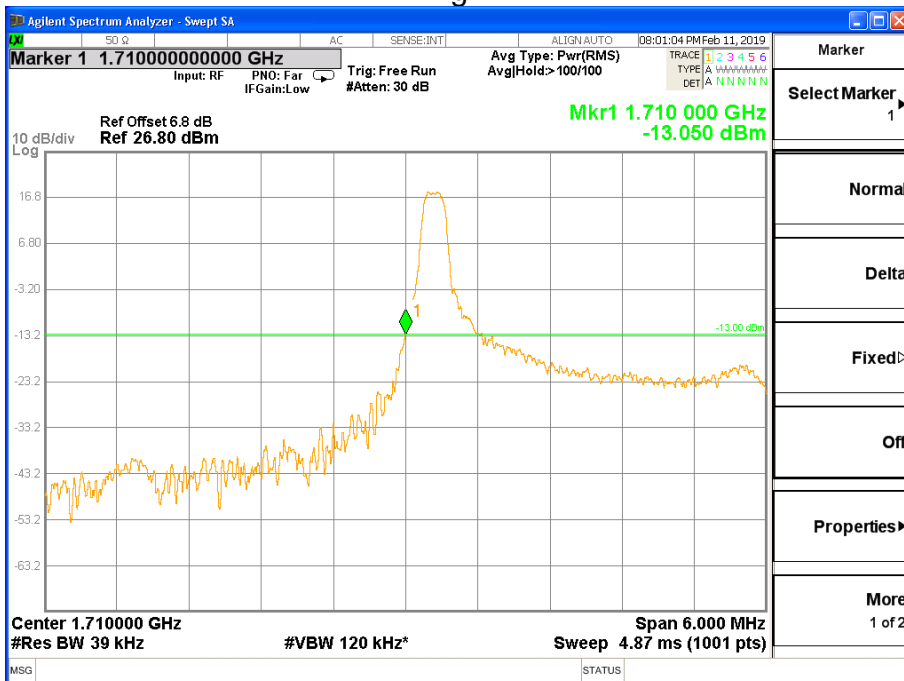


Fig.4

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1753.5	20385	3	1	0	Fig.1
				15	0	Fig.4

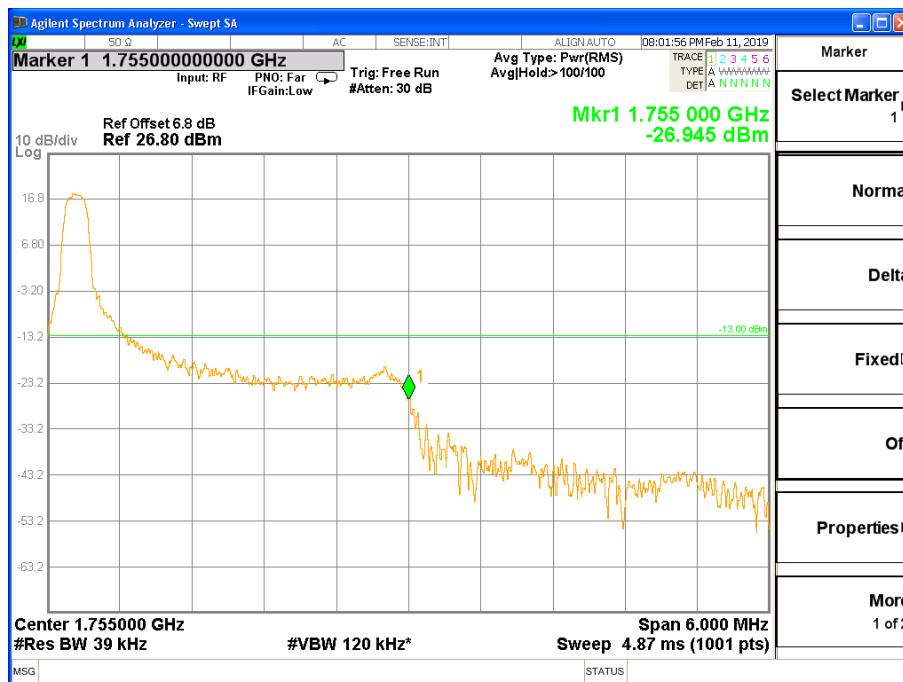


Fig.1

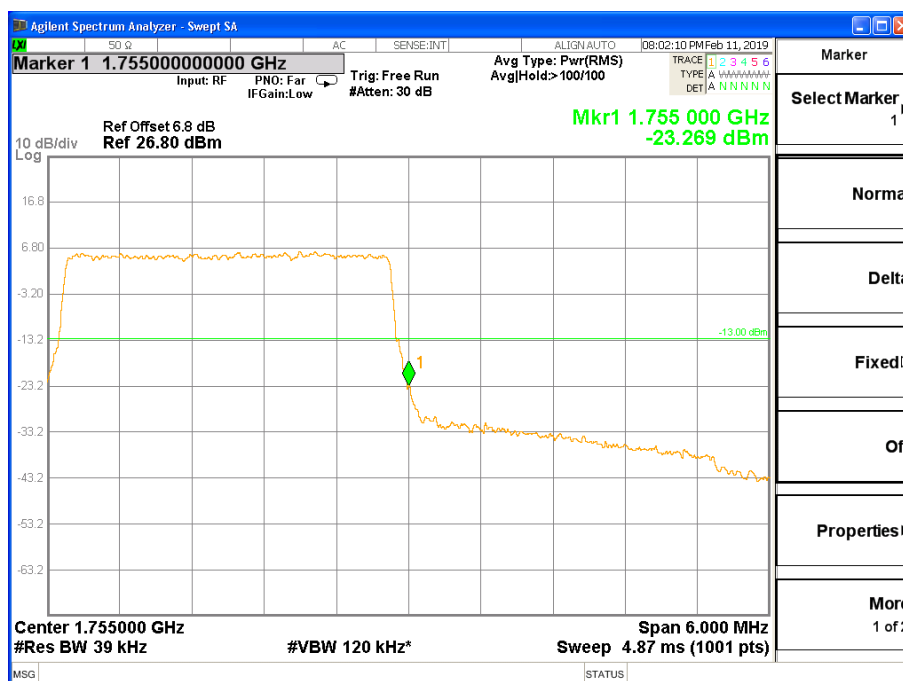


Fig.4

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1712.5	19975	5	1	0	Fig.1
				25	0	Fig.4

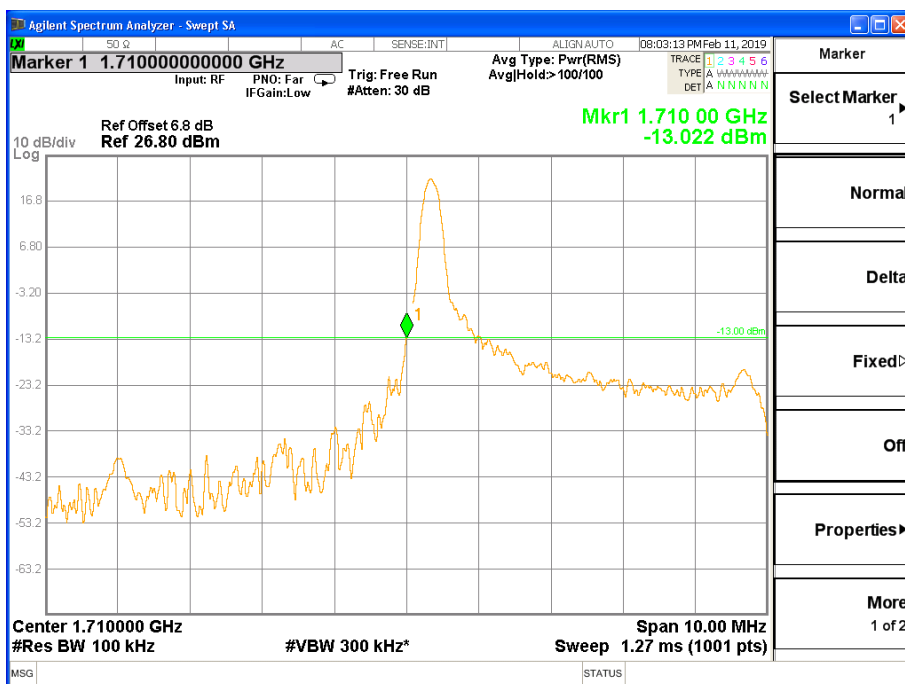


Fig.1

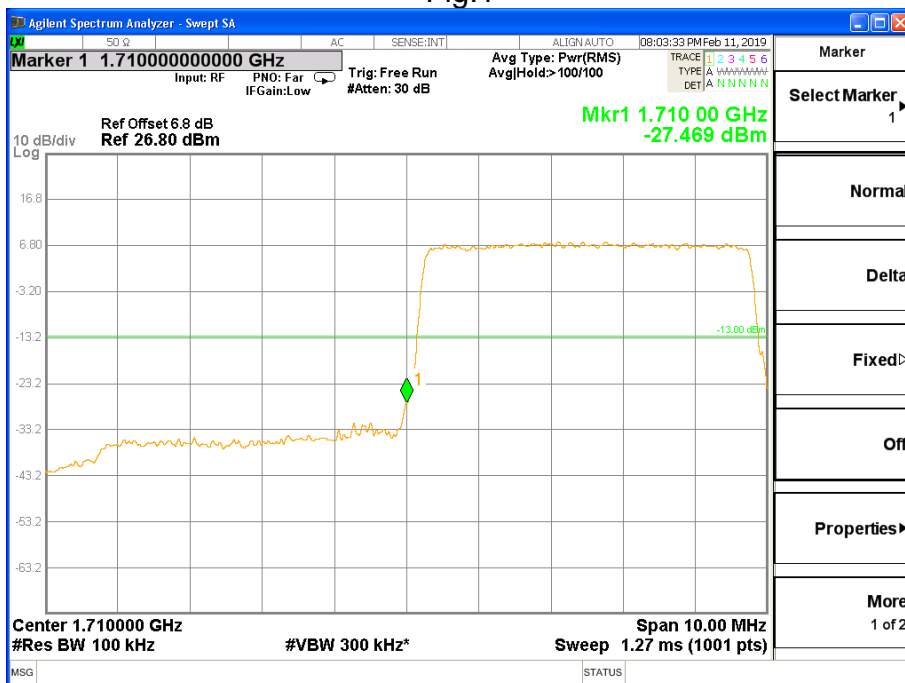


Fig.4

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1752.5	20375	5	1	0	Fig.1
				25	0	Fig.4

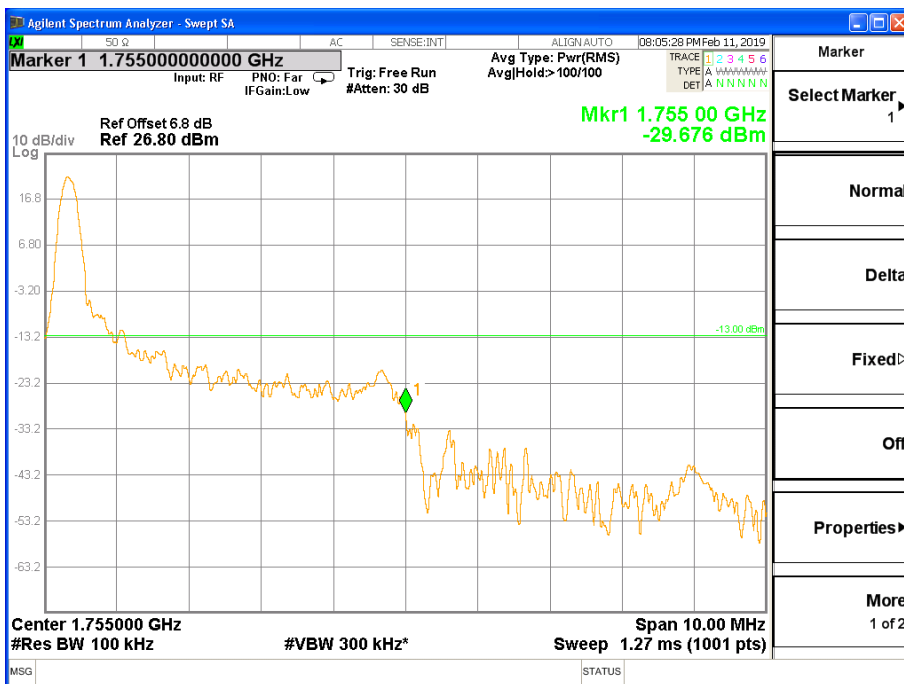


Fig.1

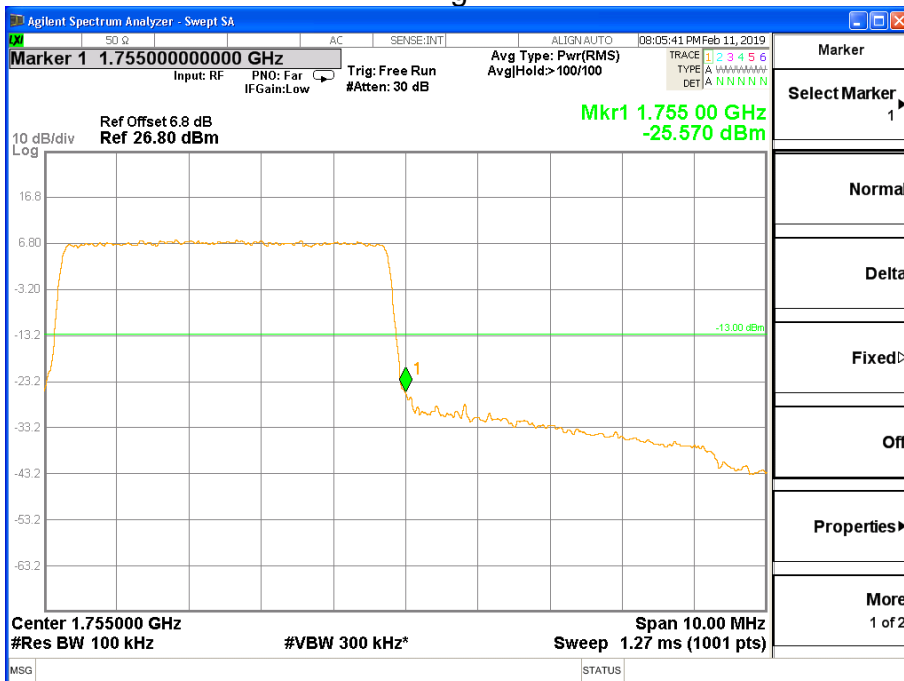


Fig.4

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1715	20000	10	1	0	Fig.1
				50	0	Fig.4

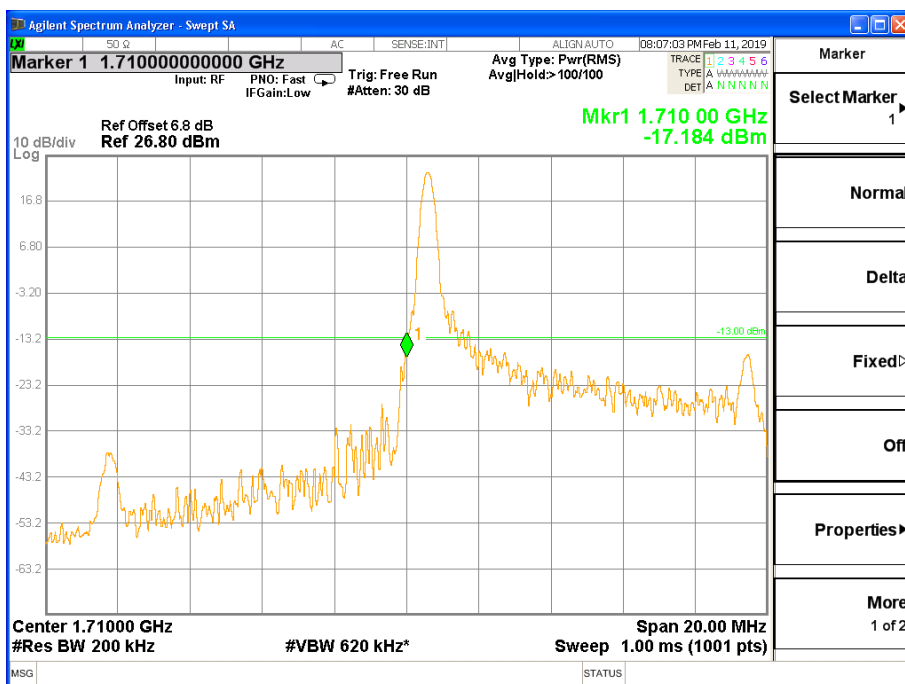


Fig.1

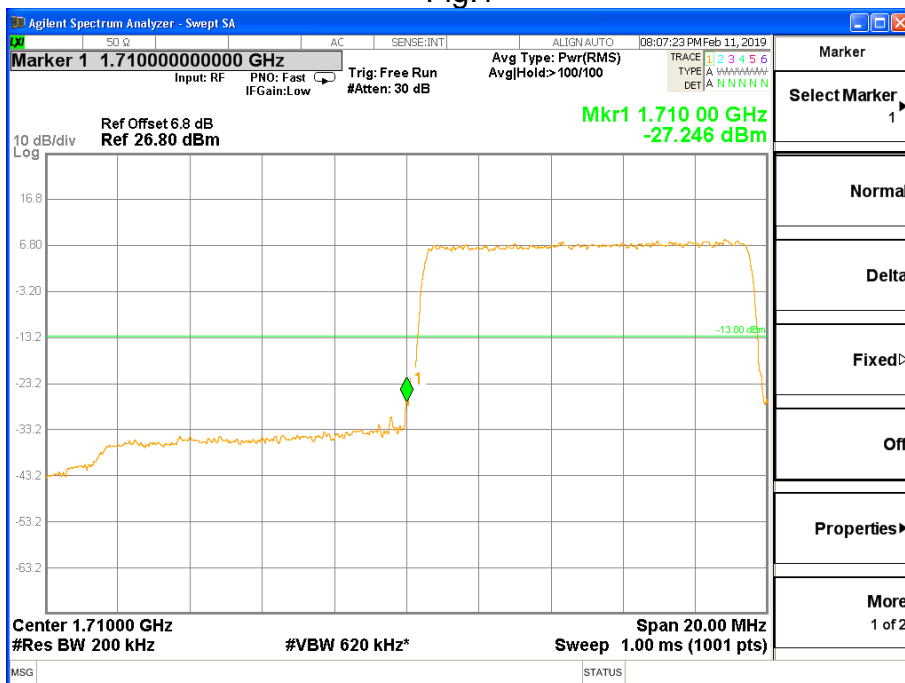


Fig.4

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1750	20350	10	1	0	Fig.1
				50	0	Fig.4

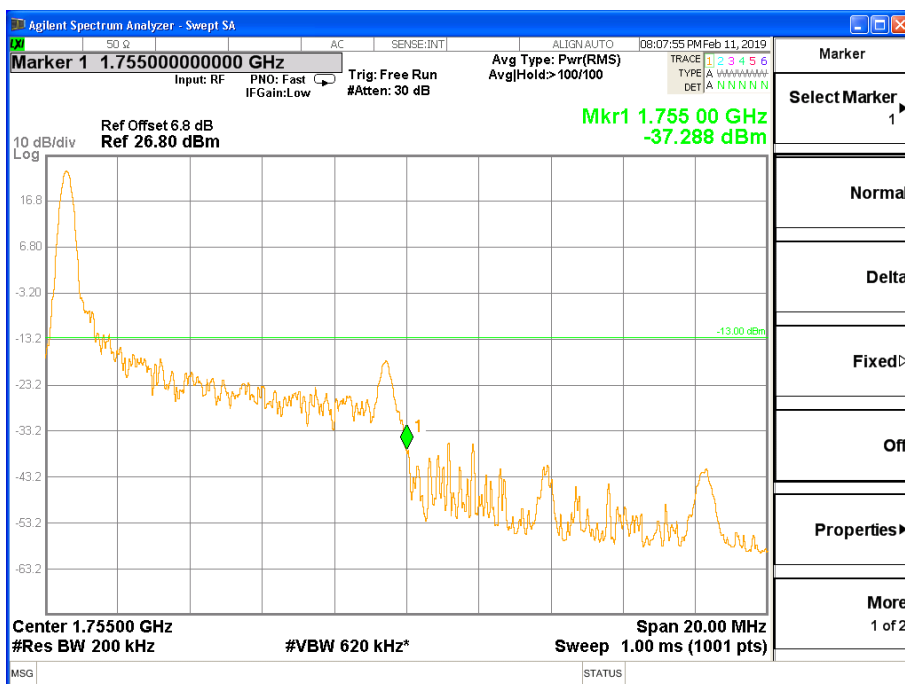


Fig.1

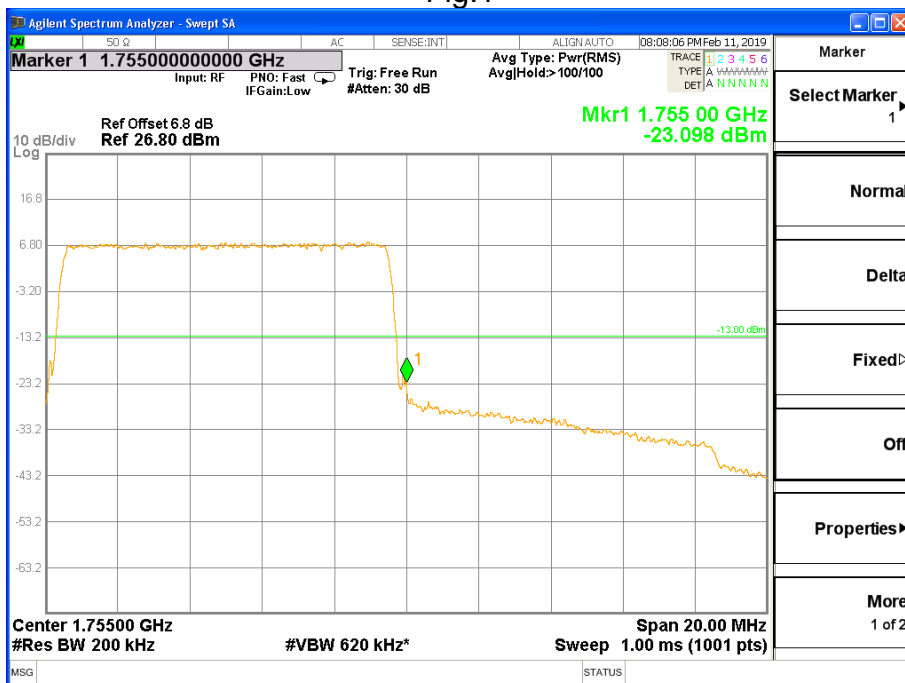


Fig.4

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1717.5	20025	15	1	0	Fig.1
				75	0	Fig.4

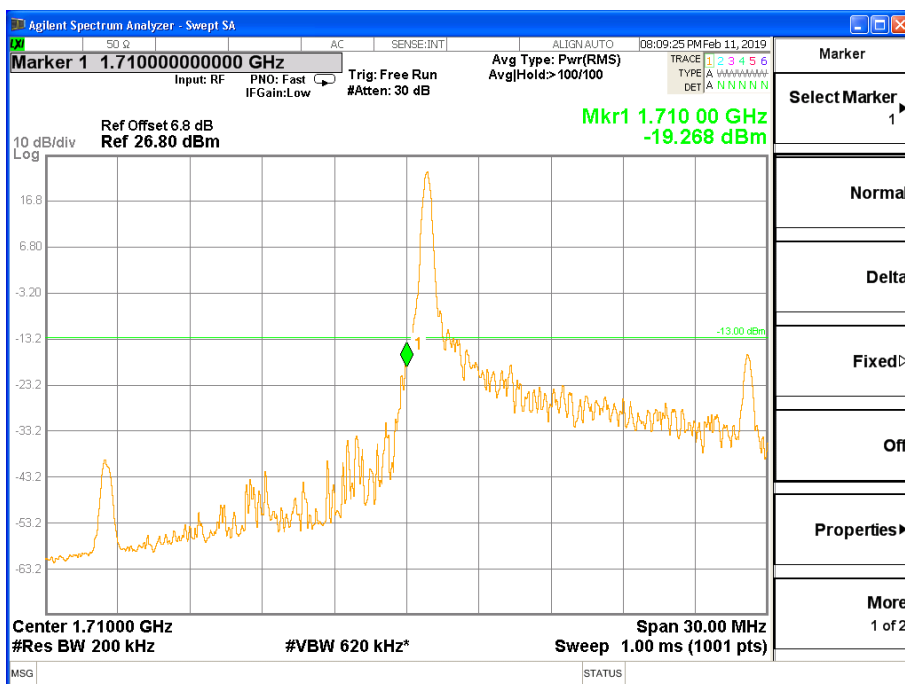


Fig.1

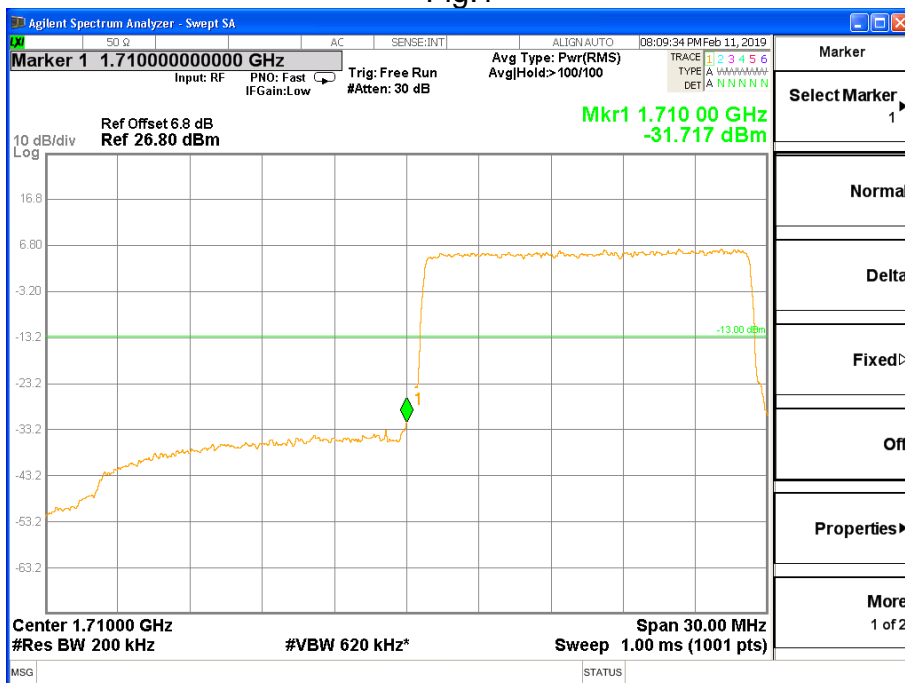


Fig.4

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1747.5	20325	15	1	0	Fig.1
				75	0	Fig.4

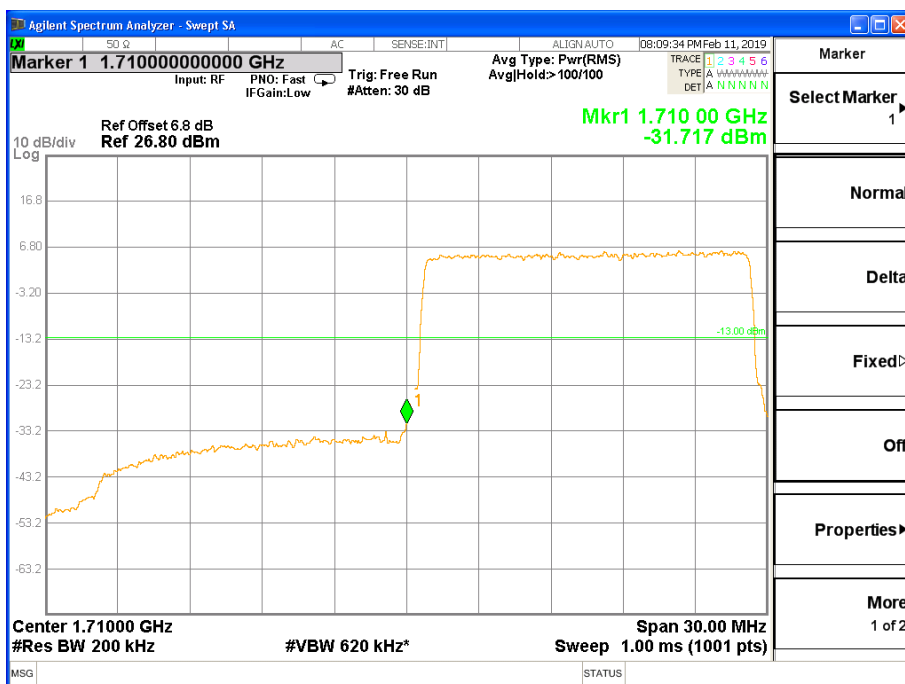


Fig.1

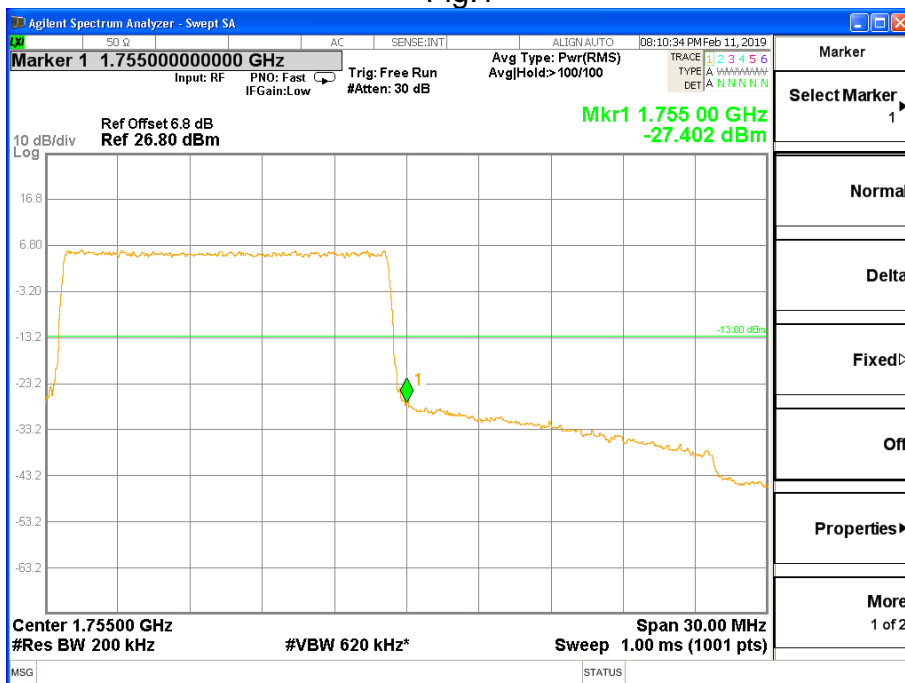


Fig.4

Band	Carrier frequency (MHz)	Channel (Low)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1720	20050	20	1	0	Fig.1
				100	0	Fig.4

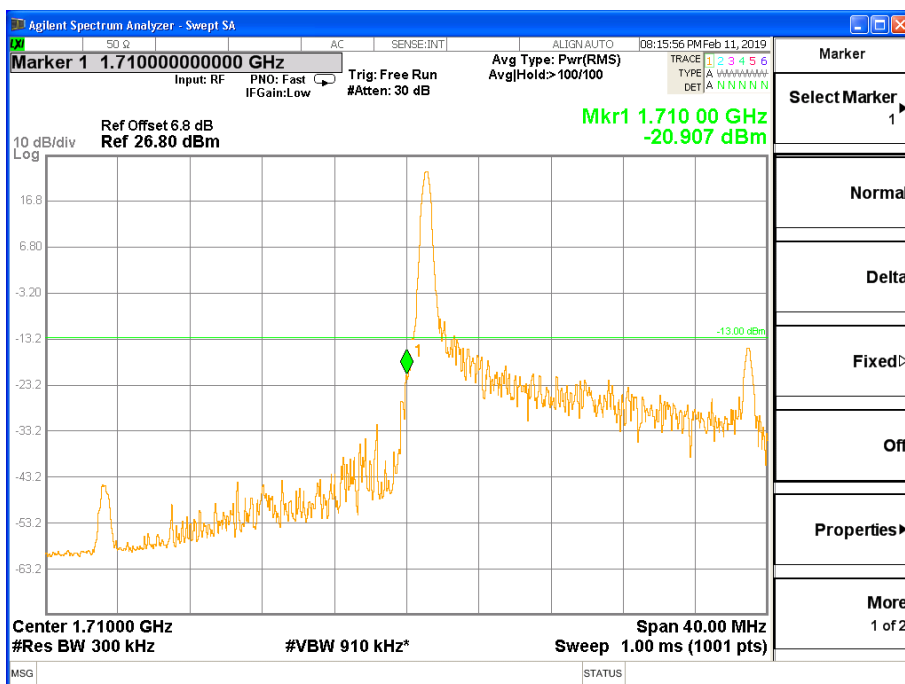


Fig.1

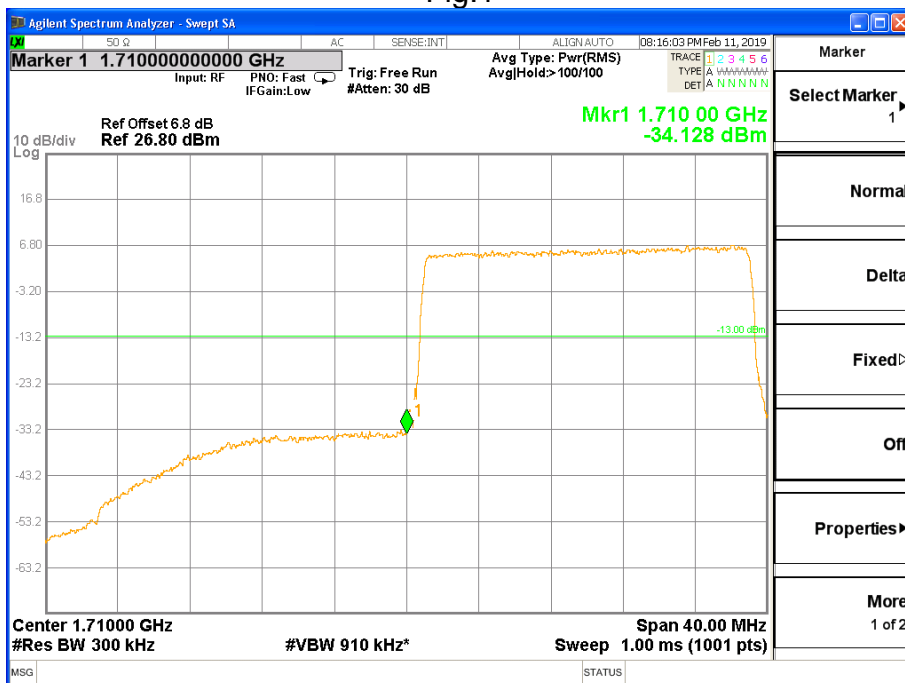


Fig.4

Band	Carrier frequency (MHz)	Channel (High)	BW	RB Size	RB Offset	Band EdgesPlot
						QPSK
4	1745	20300	20	1	0	Fig.1
				100	0	Fig.4

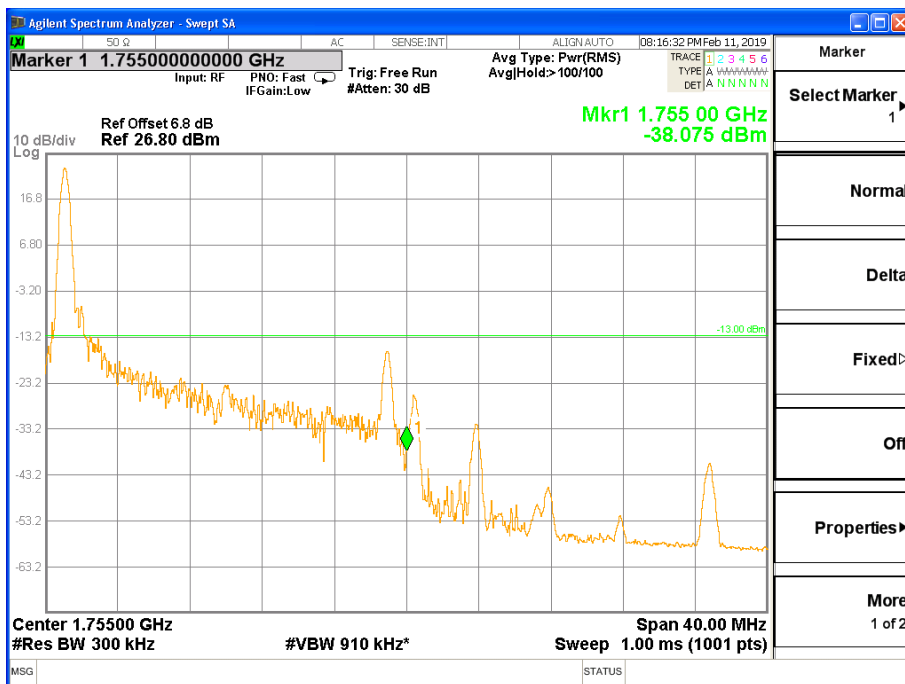


Fig.1

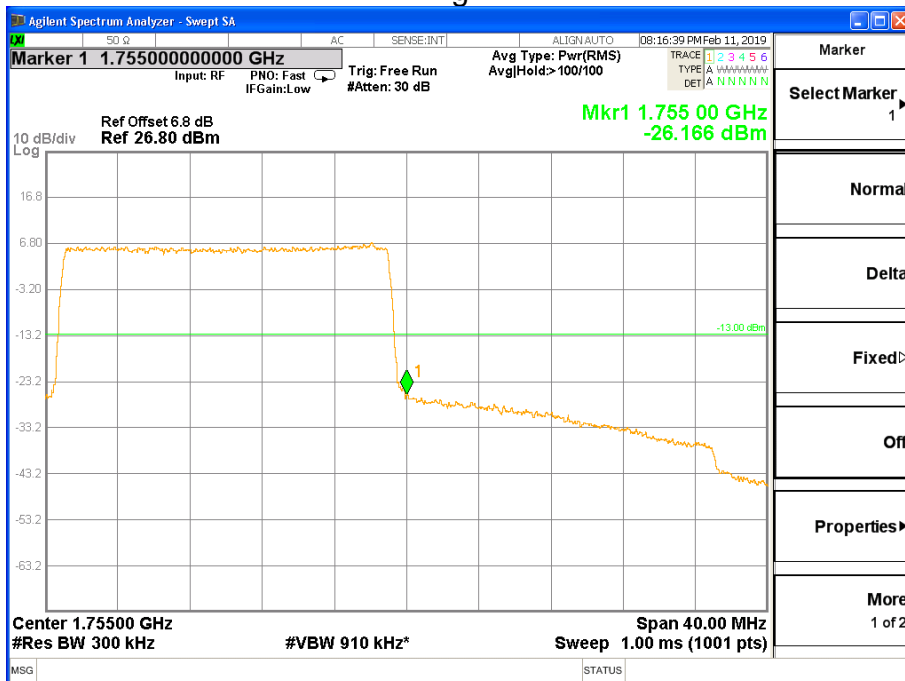


Fig.4

7 Frequency Stability

Test result:

Band	BW	Test Result (ppm)@NV		Test Result (ppm)@NT	
		Temperature(°C)		Voltage	
4	1.4	-10	0.003	LV	0.008
		0	0.006		
		10	0.003		
		20	0.003		
		30	0.000	HV	
		20	0.009		
		40	0.001		
		50	-0.001		
	55	-0.006	LV		
	3	-10		0.004	0.006
		0		0.001	
		10		0.001	
		20		0.007	
		30		0.003	HV
		20		0.007	
		40		0.006	
		50	0.003		
	55	0.004	LV		
	5	-10		0.006	0.006
		0		0.003	
		10		0.001	
		20		0.001	
		30		0.006	HV
		20		0.006	
		40		0.004	
		50	0.003		
	55	0.005	LV		
	10	-10		0.006	0.001
		0		0.004	
		10		0.006	
		20		0.003	
		30	0.003		

		20	0.005	HV	0.006
		40	0.003		
		50	0.002		
		55	0.006		
	15	LV	-10	0.003	0.004
			0	0.002	
			10	0.003	
			20	0.004	
		HV	30	0.006	0.001
			20	0.001	
			40	0.006	
			50	0.002	
	20	LV	55	0.005	0.002
			-10	0.001	
			0	0.002	
			10	0.002	
		HV	20	0.006	0.000
			30	0.003	
			20	0.005	
			40	0.002	
		50	0.001		
		55	0.001		

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

LTE Band 5

1 RF Power Output

Test result:

Antenna Gain: -7.5dBi

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
QPSK	824.7	20407	1.4	1	0	20.4	13.8
				1	5	20.4	10.8
				3	2	20.4	10.8
				6	0	19.7	10.1
	836.5	20525		1	0	20.5	13.9
				1	5	20.6	11.0
				3	2	20.6	11.0
				6	0	20.0	10.4
	848.3	20643		1	0	20.6	14.0
				1	5	20.6	11.0
				3	2	20.5	10.9
				6	0	19.8	10.2

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
16QAM	824.7	20407	1.4	1	0	20.5	10.9
				1	5	20.4	10.8
				3	2	20.1	10.5
				6	0	19.0	9.4
	836.5	20525		1	0	19.7	10.1
				1	5	19.8	10.2
				3	2	20.2	10.6
				6	0	19.2	9.6
	848.3	20643		1	0	20.2	10.6
				1	5	20.1	10.5
				3	2	20.1	10.5
				6	0	19.1	9.5

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
64QAM	824.7	20407	1.4	1	0	20.0	10.4
				1	5	19.6	10.0
				3	2	19.5	9.9
				6	0	18.6	9.0
	836.5	20525		1	0	19.1	9.5
				1	5	19.2	9.6
				3	2	19.5	9.9
				6	0	18.8	9.2
	848.3	20643		1	0	19.8	10.2
				1	5	20.0	10.4
				3	2	19.5	9.9
				6	0	18.7	9.1

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
QPSK	825.5	20415	3	1	0	20.3	10.7
				1	14	20.1	10.5
				8	4	19.8	10.2
				15	0	20.0	10.4
	836.5	20525		1	0	21.3	11.7
				1	14	21.4	11.8
				8	4	20.5	10.9
				15	0	20.6	11.0
	847.5	20635		1	0	21.0	11.4
				1	14	21.1	11.5
				8	4	20.4	10.8
				15	0	20.5	10.9

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
16QAM	825.5	20415	3	1	0	20.3	10.7
				1	14	20.3	10.7
				8	4	19.1	9.5
				15	0	18.9	9.3
	836.5	20525		1	0	20.9	11.3
				1	14	20.9	11.3
				8	4	19.7	10.1
				15	0	19.6	10.0
	847.5	20635		1	0	20.1	10.5
				1	14	20.2	10.6
				8	4	19.7	10.1
				15	0	19.6	10.0

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
64QAM	825.5	20415	3	1	0	20.0	10.4
				1	14	19.8	10.2
				8	4	18.6	9.0
				15	0	18.1	8.5
	836.5	20525		1	0	20.2	10.6
				1	14	20.3	10.7
				8	4	19.3	9.7
				15	0	19.1	9.5
	847.5	20635		1	0	19.5	9.9
				1	14	19.6	10.0
				8	4	19.2	9.6
				15	0	19.1	9.5

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
QPSK	826.5	20425	5	1	0	20.5	10.9
				1	24	20.4	10.8
				12	6	19.9	10.3
				25	0	19.7	10.1
	836.5	20525		1	0	21.0	11.4
				1	24	21.0	11.4
				12	6	20.6	11.0
				25	0	20.4	10.8
	846.5	20625		1	0	21.3	11.7
				1	24	21.3	11.7
				12	6	20.5	10.9
				25	0	20.6	11.0

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
16QAM	826.5	20425	5	1	0	19.3	9.7
				1	24	19.2	9.6
				12	6	18.9	9.3
				25	0	19.0	9.4
	836.5	20525		1	0	20.5	10.9
				1	24	20.4	10.8
				12	6	19.5	9.9
				25	0	19.5	9.9
	846.5	20625		1	0	20.5	10.9
				1	24	20.6	11.0
				12	6	20.4	10.8
				25	0	19.7	10.1

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
64QAM	826.5	20425	5	1	0	18.8	9.2
				1	24	18.6	9.0
				12	6	18.4	8.8
				25	0	18.5	8.9
	836.5	20525		1	0	20.0	10.4
				1	24	19.7	10.1
				12	6	18.7	9.1
				25	0	19.0	9.4
	846.5	20625		1	0	20.1	10.5
				1	24	20.1	10.5
				12	6	19.9	10.3
				25	0	19.2	9.6

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
QPSK	829	20450	10	1	0	23.4	13.8
				1	49	20.4	10.8
				24	12	19.9	10.3
				50	0	20.0	10.4
	836.5	20525		1	0	21.4	11.8
				1	49	21.3	11.7
				24	12	20.5	10.9
				50	0	20.5	10.9
	844	20600		1	0	21.4	11.8
				1	49	21.4	11.8
				24	12	20.5	10.9
				50	0	20.4	10.8

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
16QAM	829	20450	10	1	0	20.3	10.7
				1	49	20.2	10.6
				24	12	19.1	9.5
				50	0	18.8	9.2
	836.5	20525		1	0	20.9	11.3
				1	49	20.9	11.3
				24	12	19.6	10.0
				50	0	19.6	10.0
	844	20600		1	0	21.2	11.6
				1	49	21.3	11.7
				24	12	19.6	10.0
				50	0	19.5	9.9

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted Average (dBm)	ERP Average(dBm)
64QAM	829	20450	10	1	0	20.0	10.7
				1	49	19.7	10.6
				24	12	18.6	9.5
				50	0	18.2	9.2
	836.5	20525		1	0	20.6	11.3
				1	49	20.5	11.3
				24	12	19.1	10.0
				50	0	19.2	10.0
	844	20600		1	0	20.8	11.6
				1	49	20.9	11.7
				24	12	19.1	10.0
				50	0	19.0	9.9

2 Occupied Bandwidth

Test result

Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)					
						QPSK		16-QAM		64-QAM	
5	824.7	20407	1.4	6	0	1.112	Fig.1	1.106	Fig.2	1.106	Fig.3

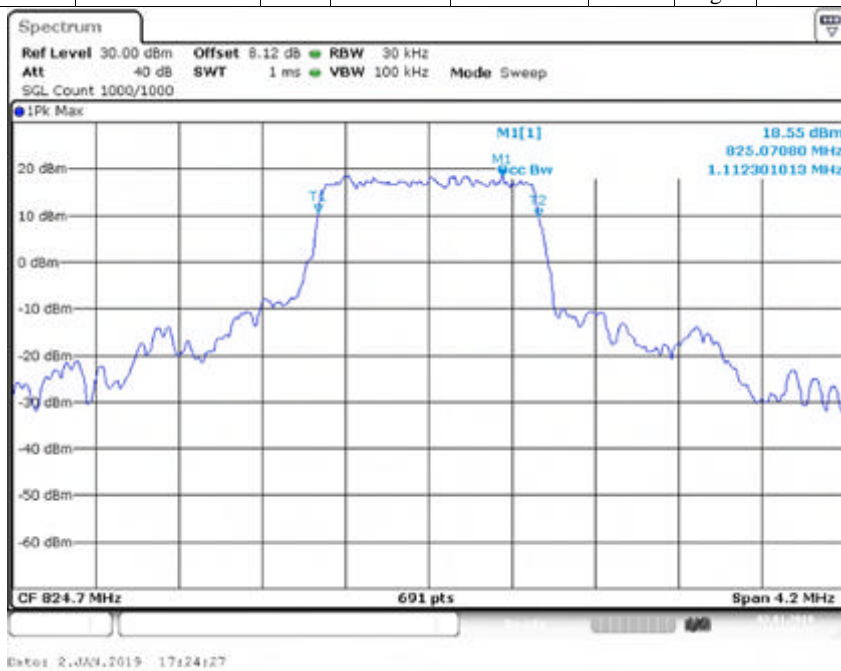


Fig.1

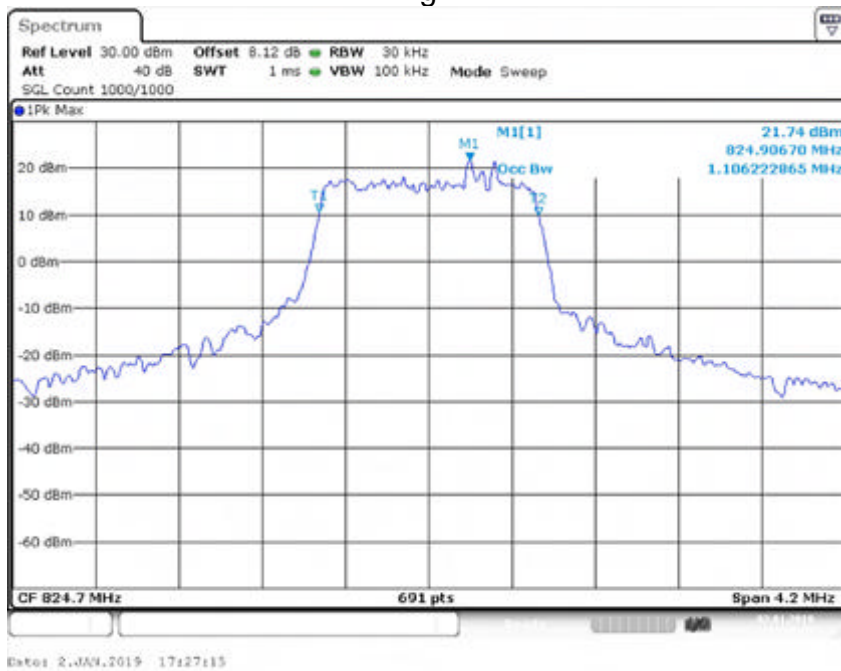


Fig.2

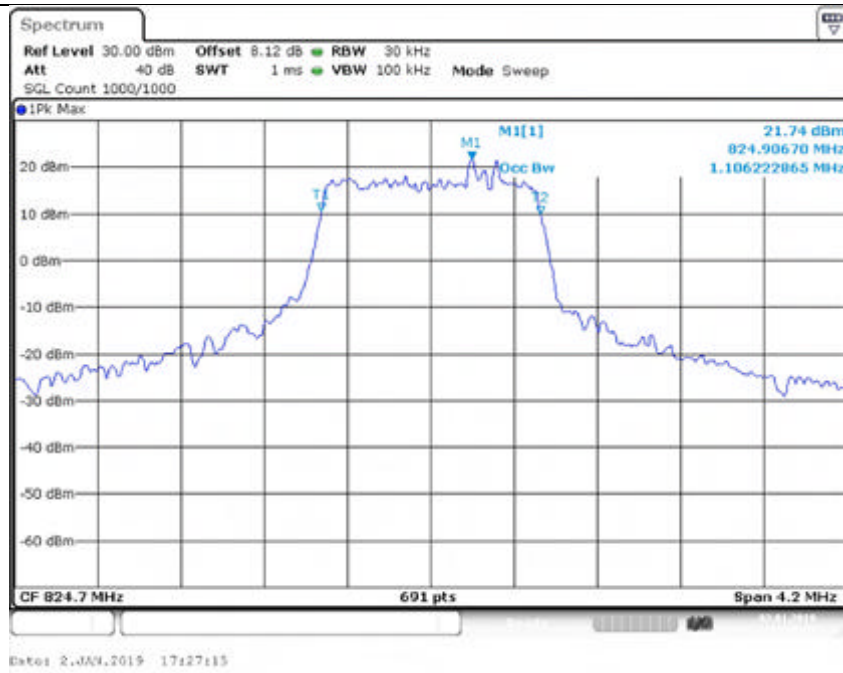


Fig.3

Band	Carrier frequency (MHz)	Channel(Mid)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)					
						QPSK		16-QAM		64-QAM	
5	836.5	20525	1.4	6	0	1.106	Fig.1	1.100	Fig.2	1.100	Fig.3

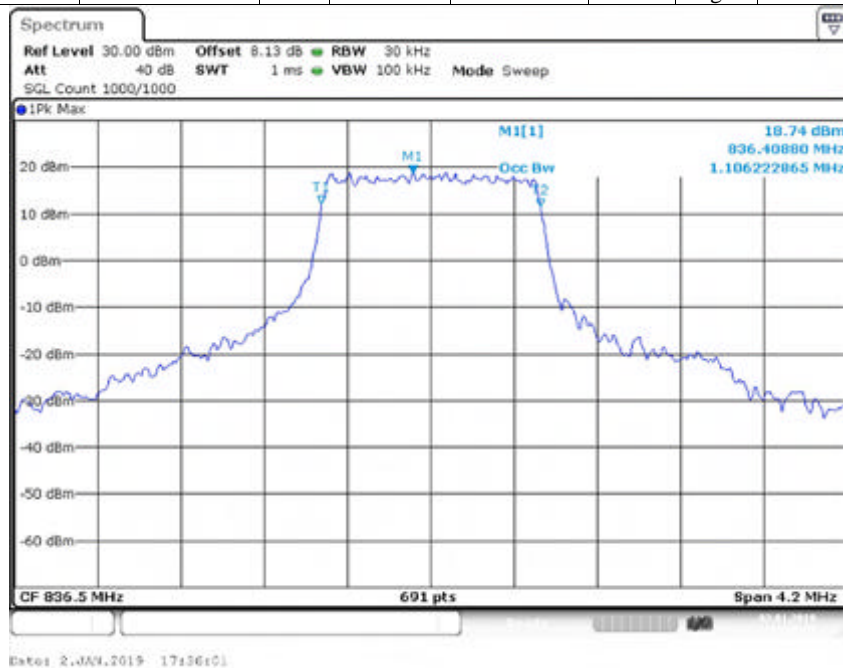


Fig.1

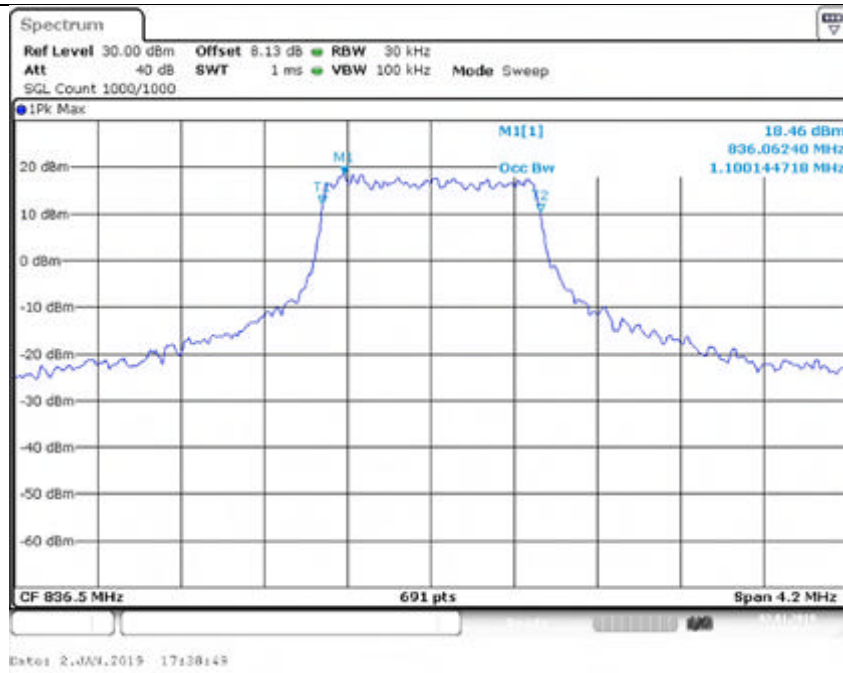


Fig.2

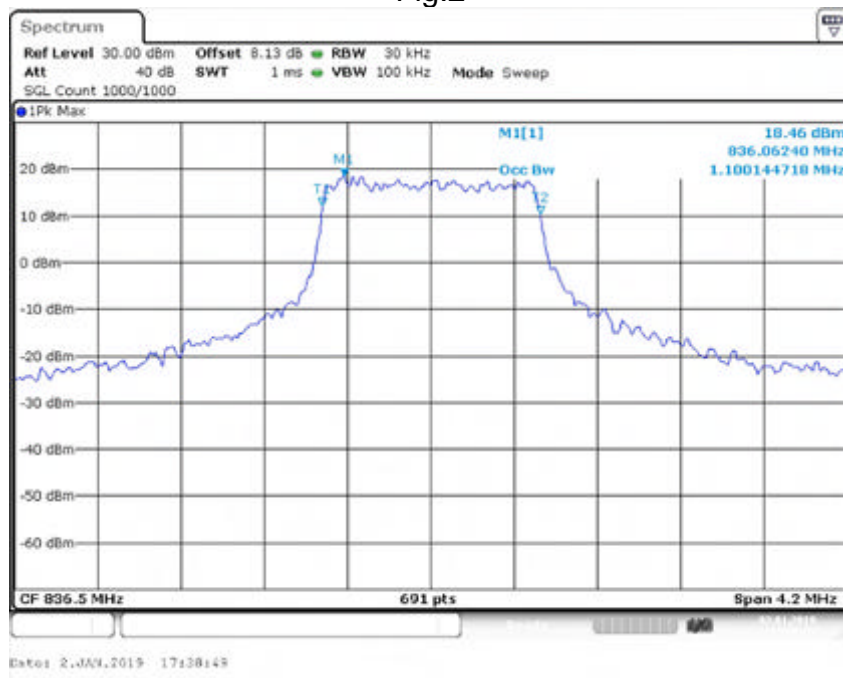


Fig.3

Band	Carrier frequency (MHz)	Channel(High)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)					
						QPSK		16-QAM		64-QAM	
5	848.3	20643	1.4	6	0	1.100	Fig.1	1.106	Fig.2	1.106	Fig.3

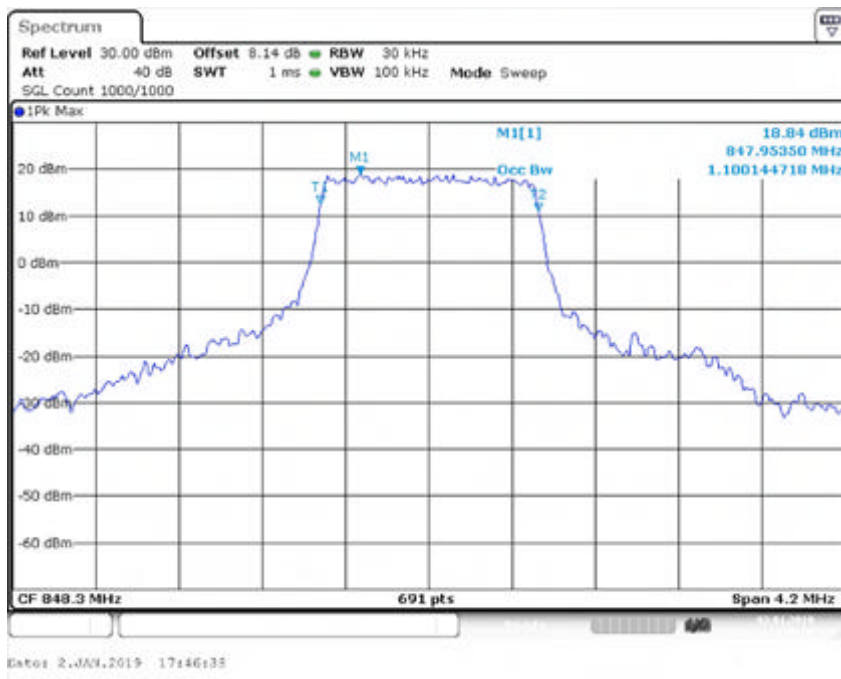


Fig.1

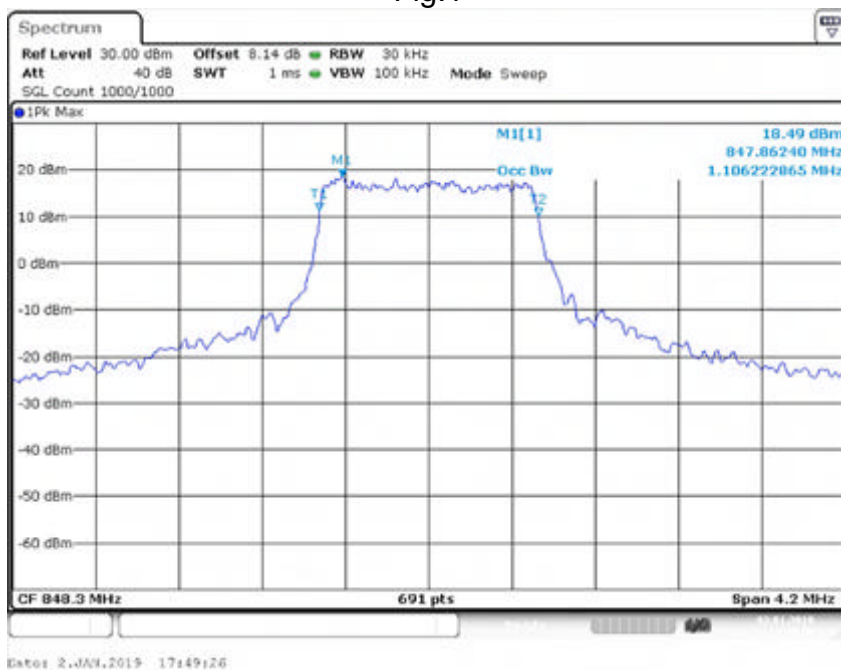


Fig.2

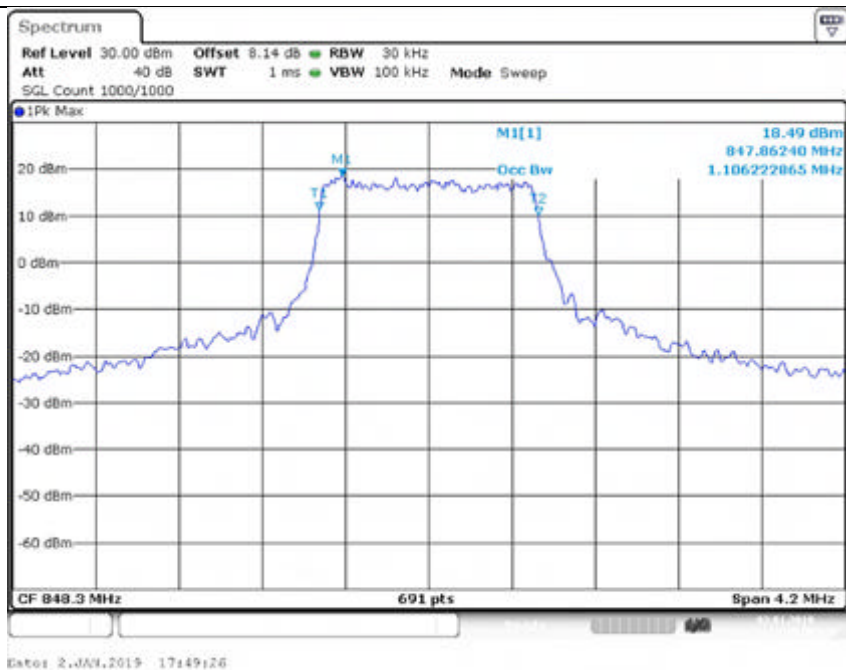


Fig.3

Band	Carrier frequency (MHz)	Channel(Low)	BW	RB Size	RB Offset	Bandwidth of 99% Power (MHz)					
						QPSK		16-QAM		64-QAM	
5	825.5	20415	3	15	0	2.787	Fig.1	2.774	Fig.2	2.774	Fig.3

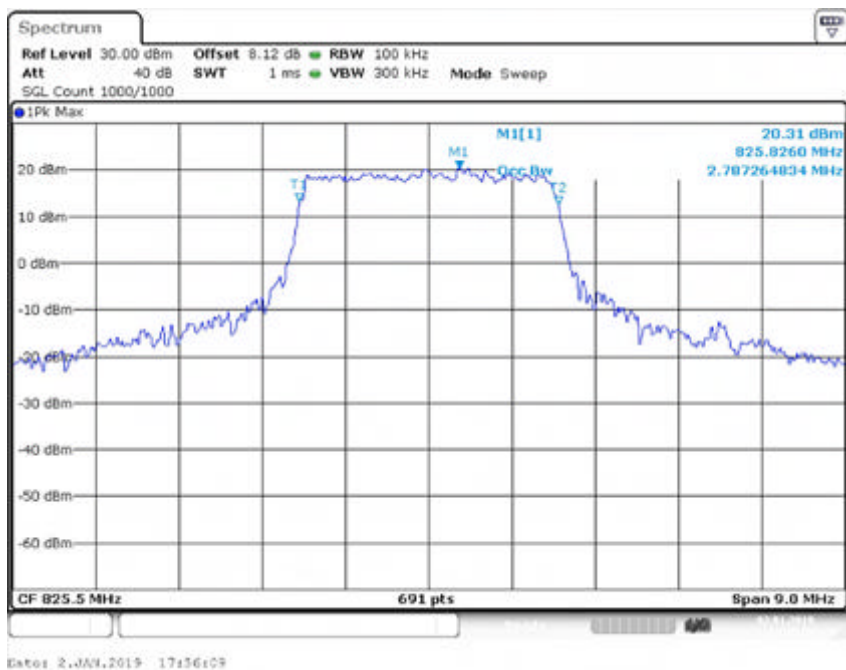


Fig.1

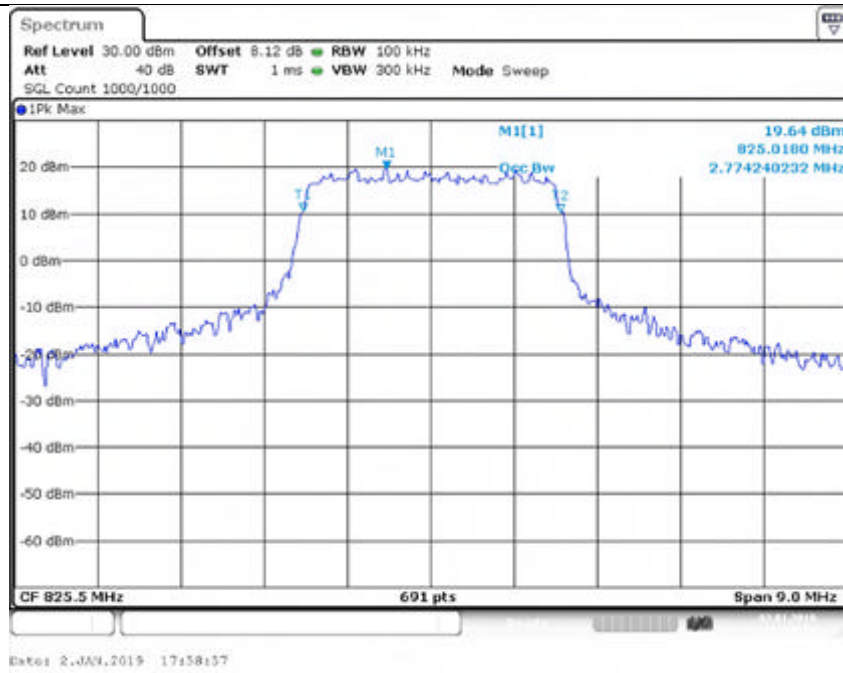


Fig.2

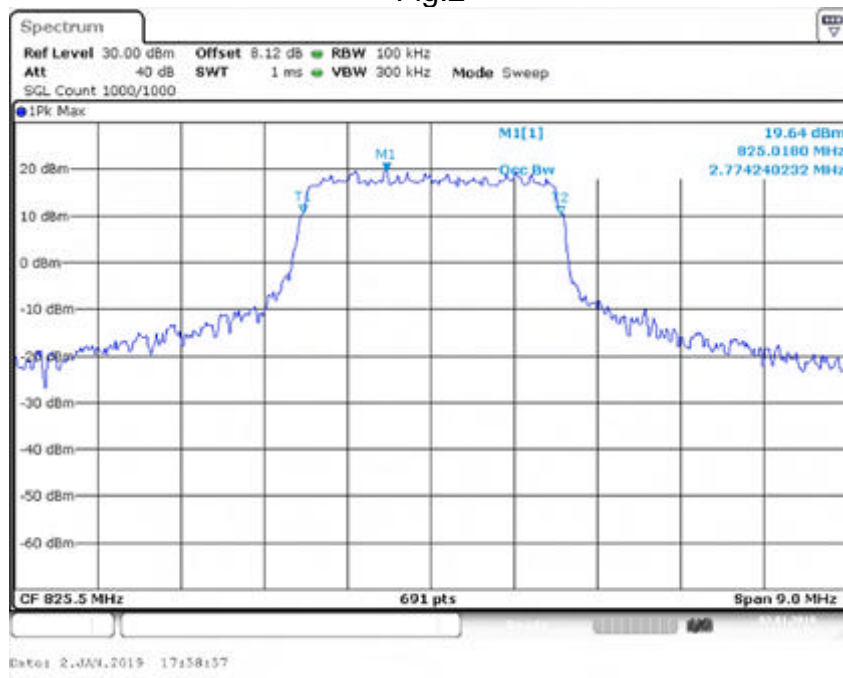


Fig.3