Appendix A

RF Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: Open Ear Headband Headphones

Trade Mark: LC-dolida

Test Model: K30

Environmental Conditions

Temperature:	25.4℃
Relative Humidity:	52.7%
ATM Pressure:	101Kpa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen

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1 Duty Cycle

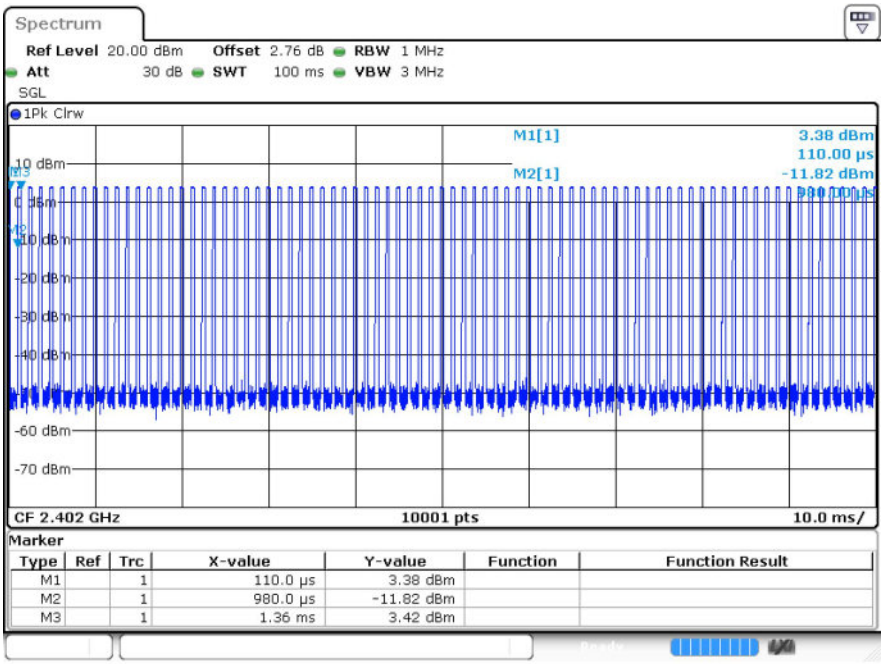
1.1 Test Result

Mode	Frequency (MHz)	Duty Cycle (%)	1/T (kHz)
1-DH1	2402	31.21	2.63
1-DH1	2441	30.41	2.7
1-DH1	2480	31.21	2.63
2-DH1	2402	31.2	2.63
2-DH1	2441	31.21	2.63
2-DH1	2480	32	2.56
3-DH1	2402	31.2	2.63
3-DH1	2441	31.2	2.63
3-DH1	2480	31.2	2.63

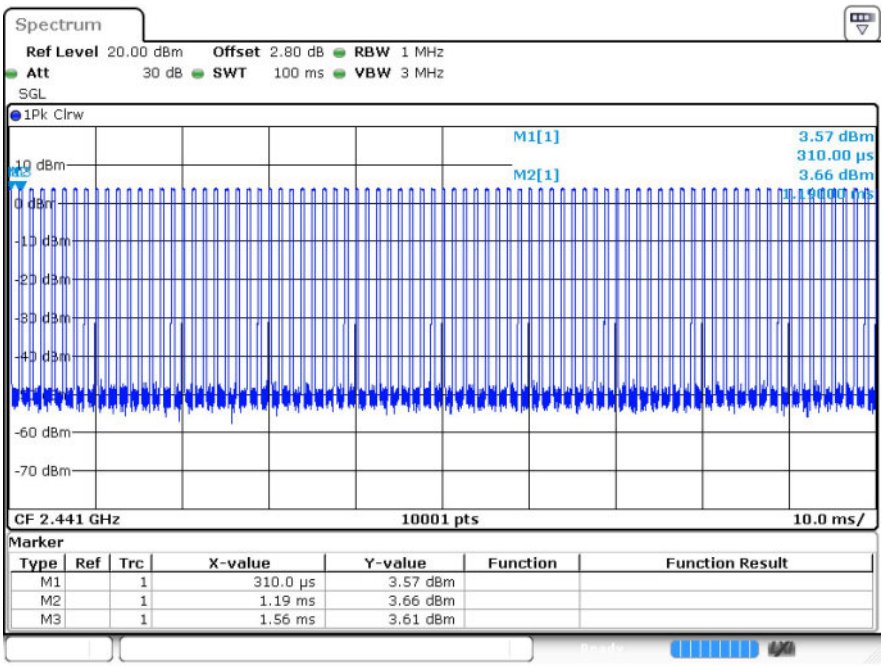
1.2 Test Graphs

Test Graphs

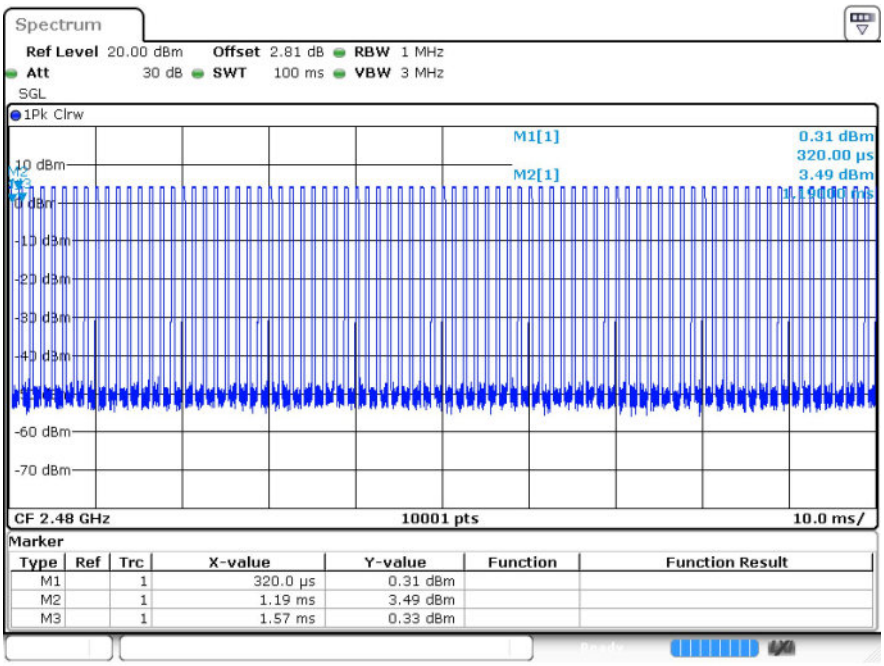
1-DH1 2402MHz



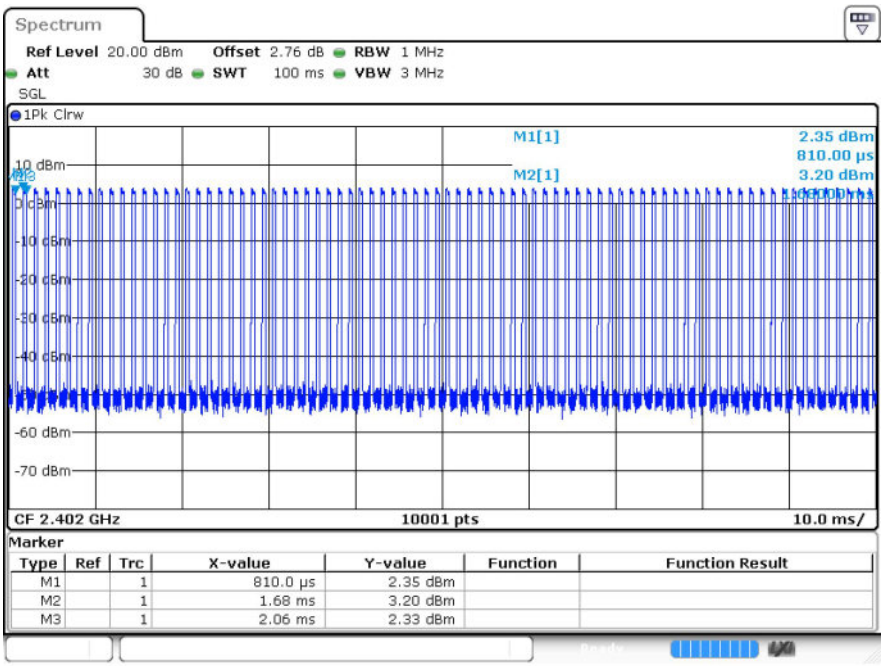
1-DH1 2441MHz



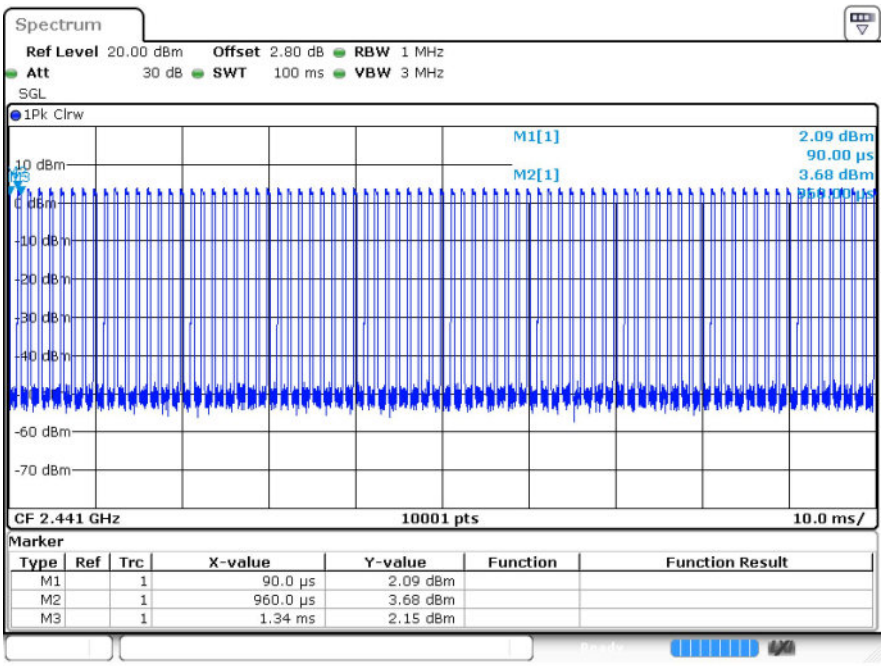
1-DH1 2480MHz



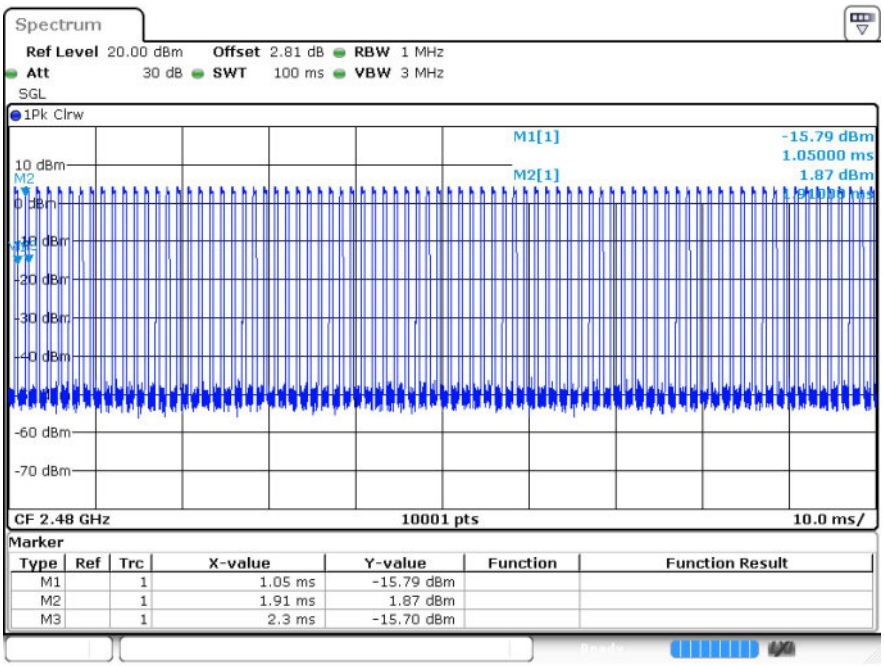
2-DH1 2402MHz



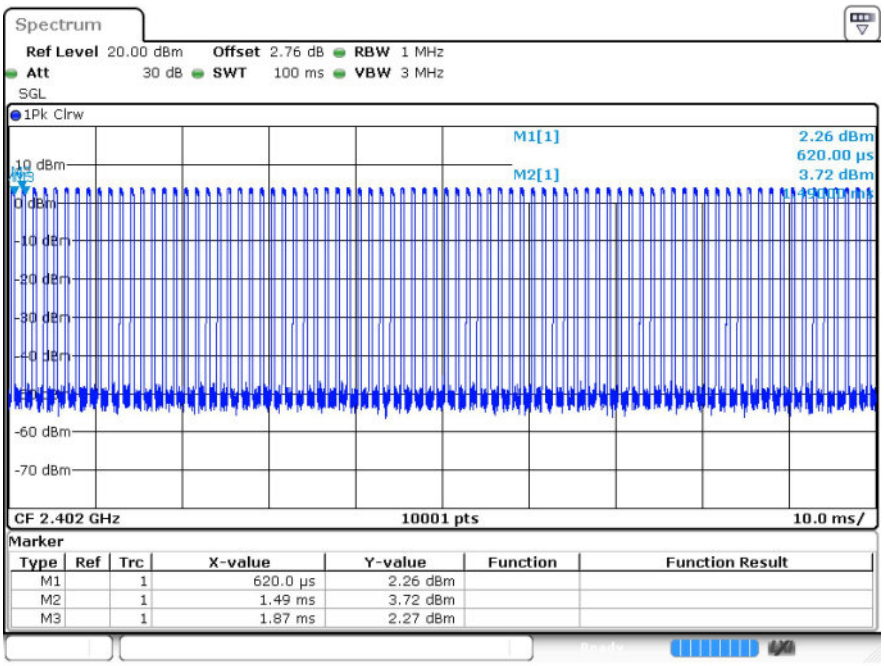
2-DH1 2441MHz



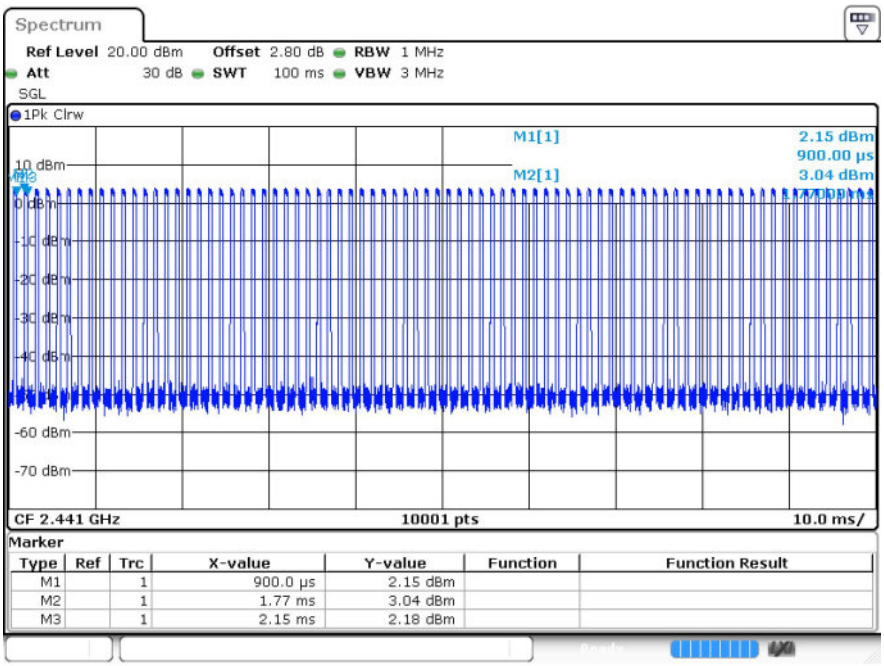
2-DH1 2480MHz



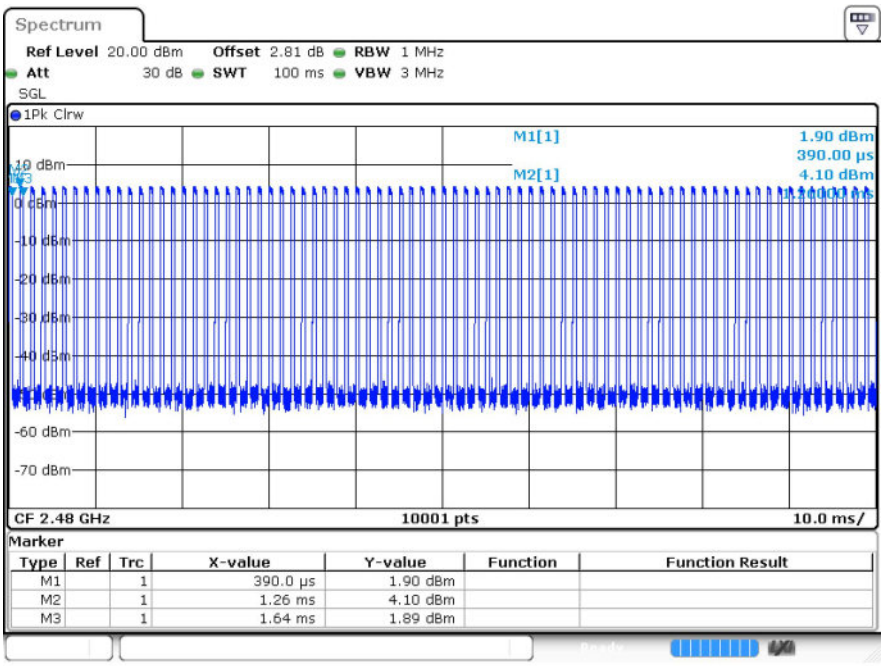
3-DH1 2402MHz



3-DH1 2441MHz



3-DH1 2480MHz

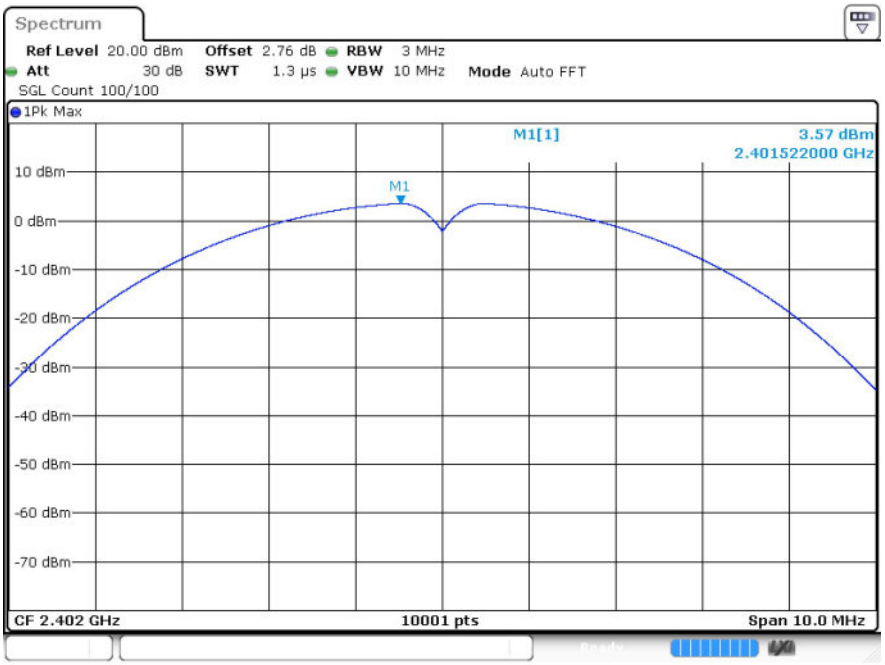
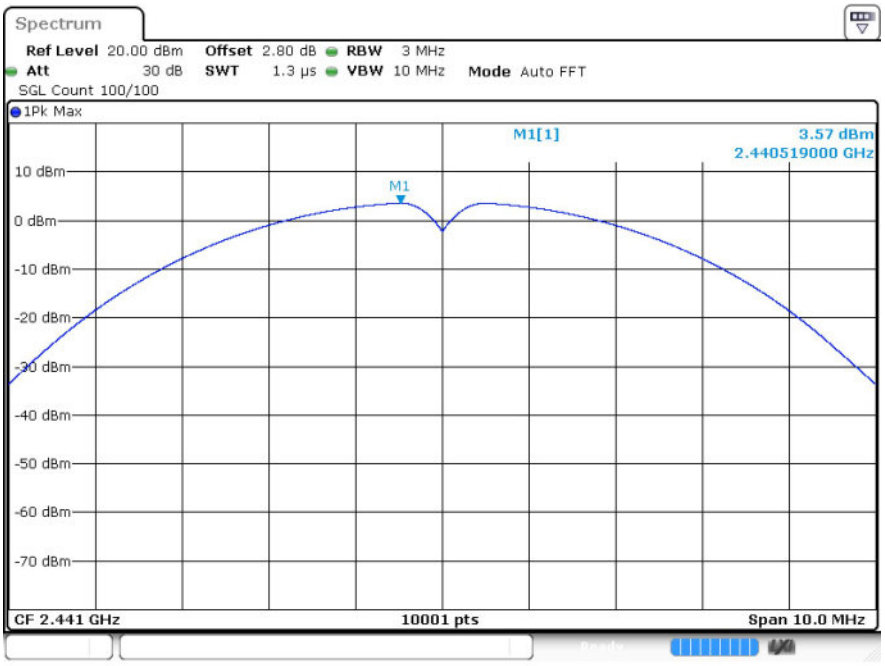


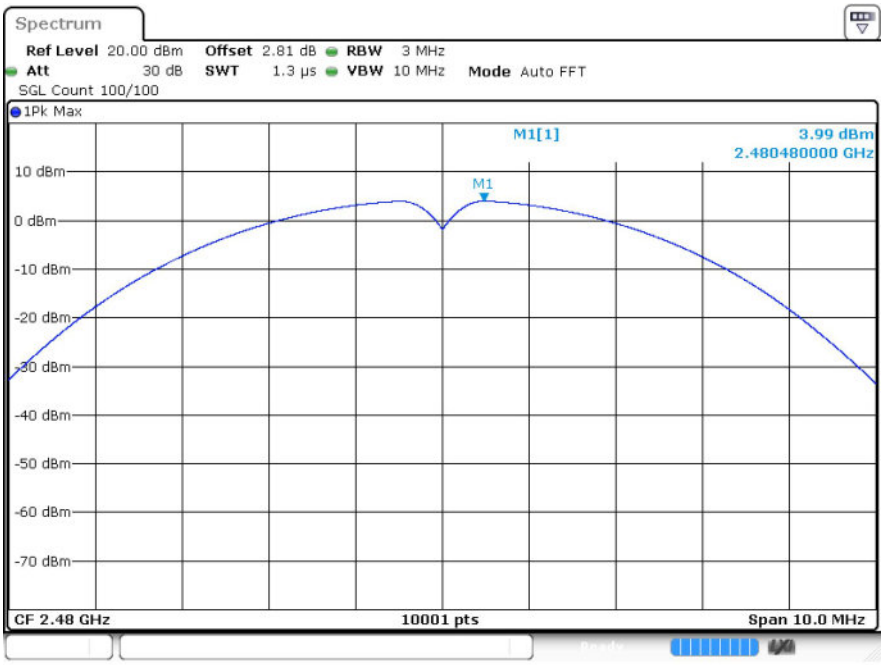
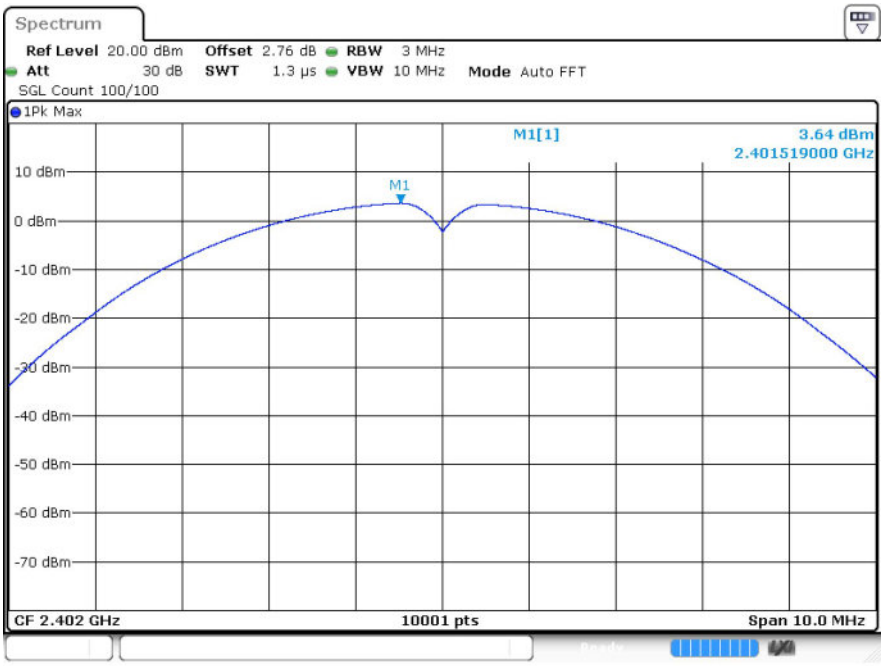
2 Maximum Conducted Peak Output Power

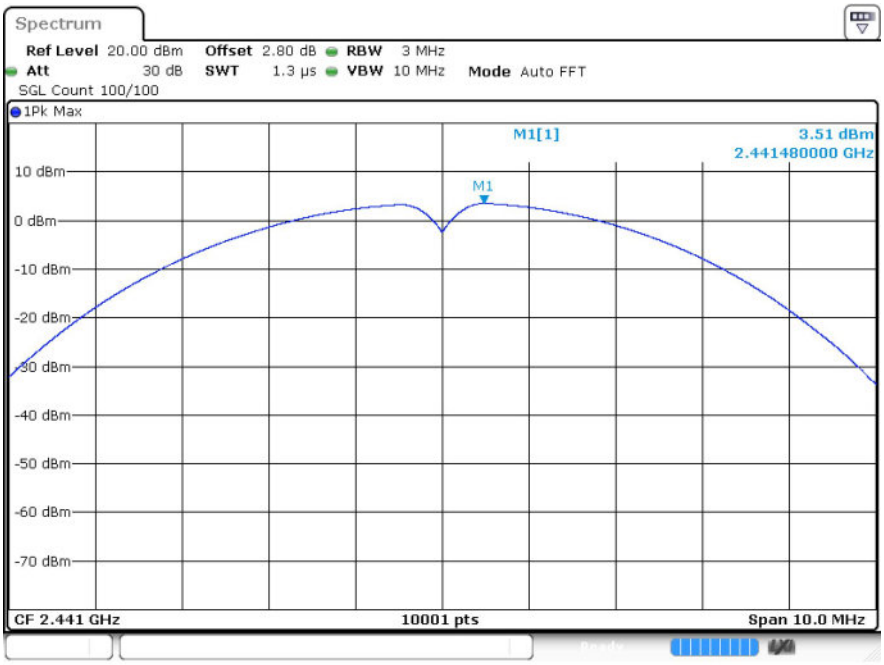
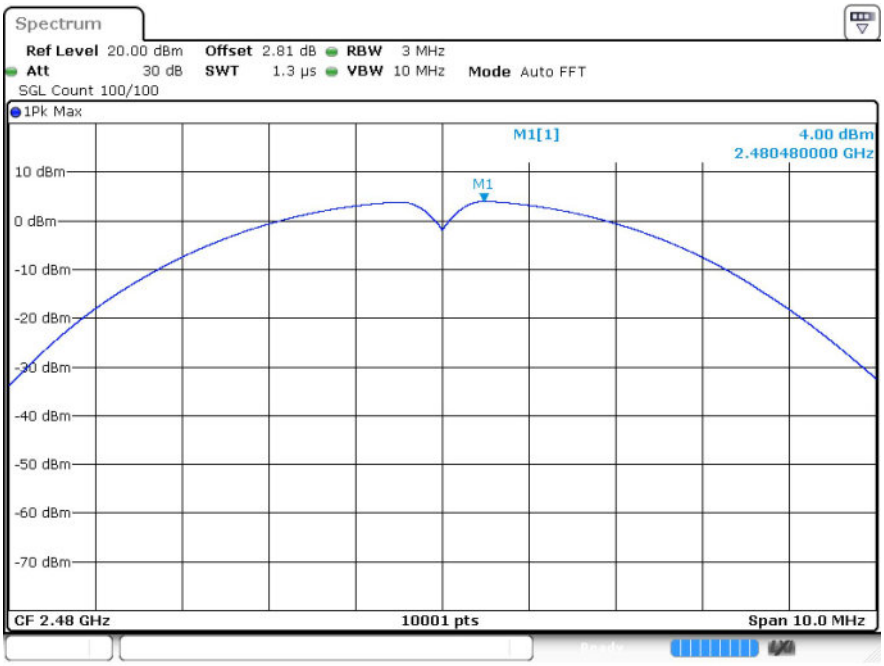
2.1 Test Result

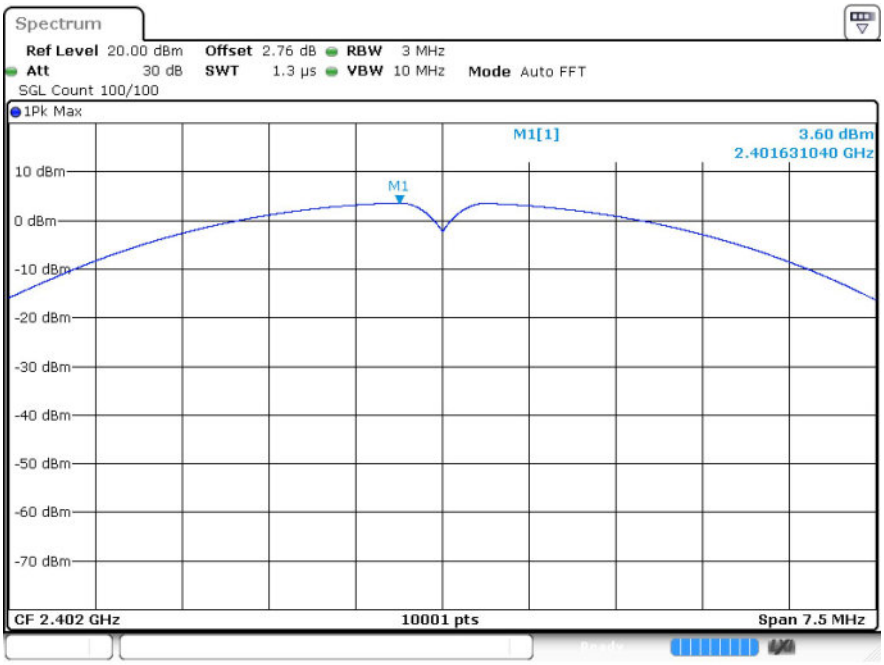
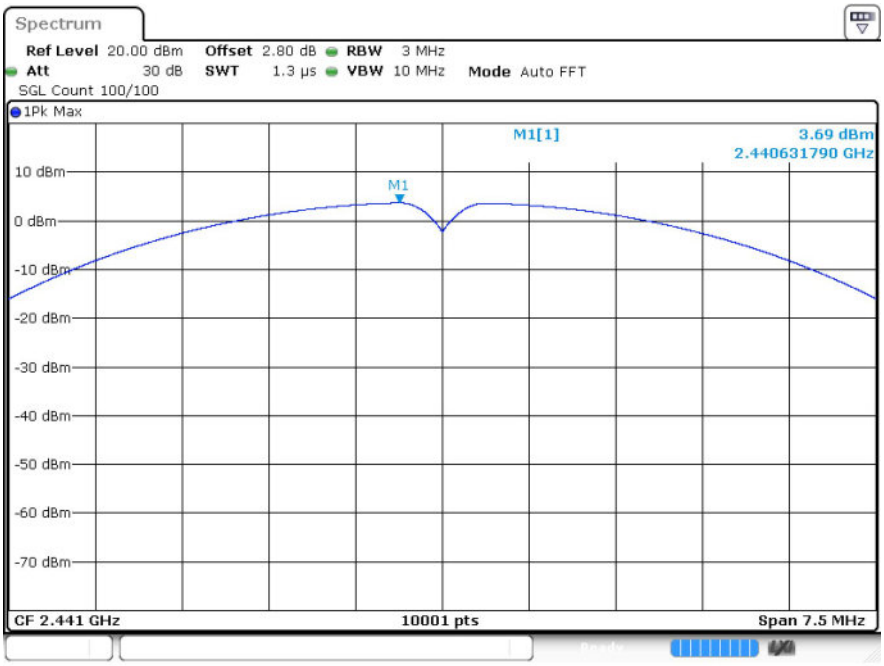
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.57	21	Pass
	MCH	3.57	21	Pass
	HCH	3.99	21	Pass
π/4DQPSK	LCH	3.64	21	Pass
	MCH	3.51	21	Pass
	HCH	4	21	Pass
8DPSK	LCH	3.6	21	Pass
	MCH	3.69	21	Pass
	HCH	3.96	21	Pass

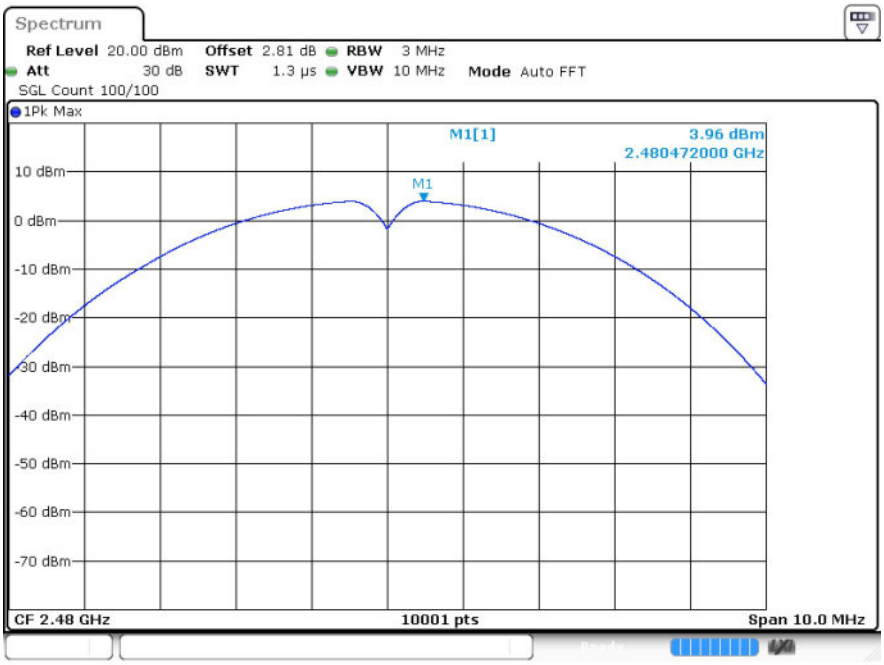
2.2 Test Graphs

Test Graphs	
GFSK/LCH	
GFSK/MCH	

GFSK/HCH	
π/4DQPSK/LCH	

π/4DQPSK/MCH	
π/4DQPSK/HCH	

8DPSK/LCH	
8DPSK/MCH	

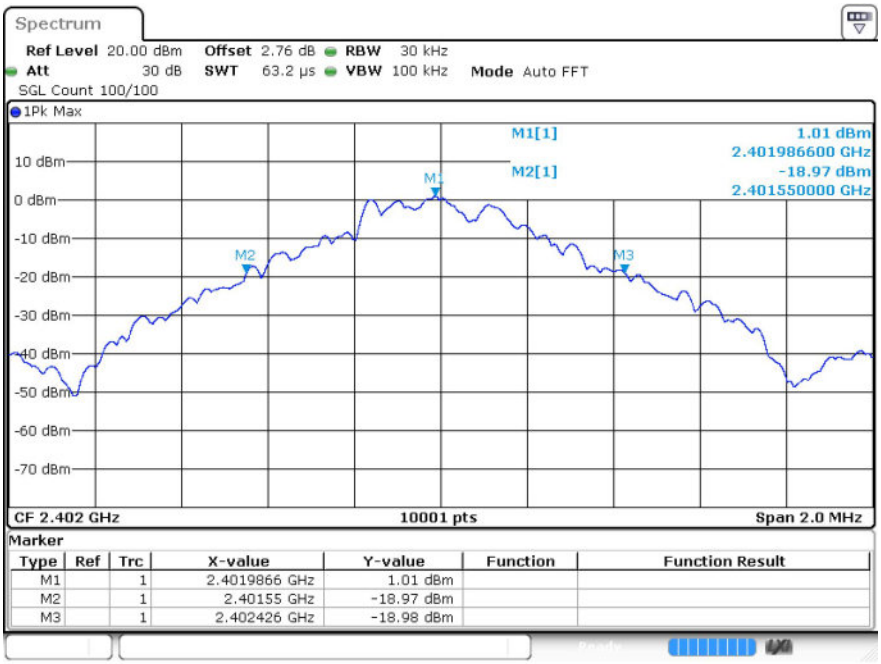
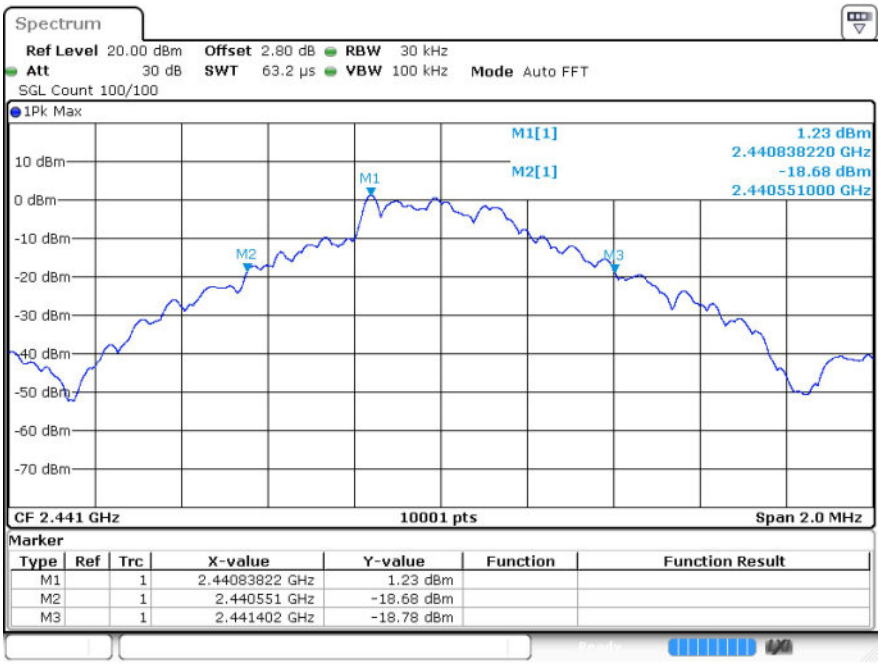
8DPSK/HCH	 Spectrum Ref Level 20.00 dBm Offset 2.81 dB RBW 3 MHz Att 30 dB SWT 1.3 µs VBW 10 MHz Mode Auto FFT SGL Count 100/100 1Pk Max M1[1] 3.96 dBm 2.480472000 GHz M1 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 2.48 GHz 10001 pts Span 10.0 MHz

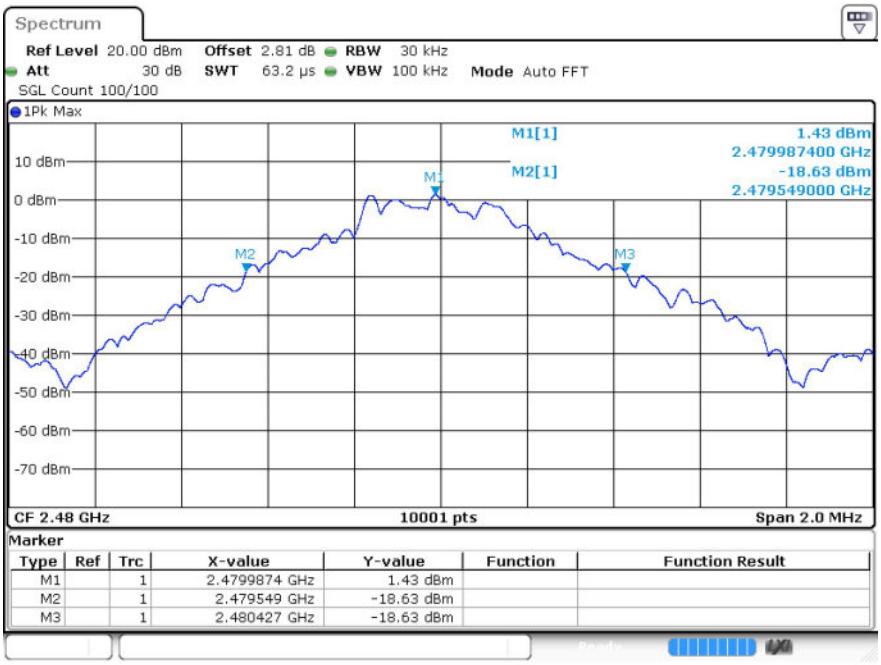
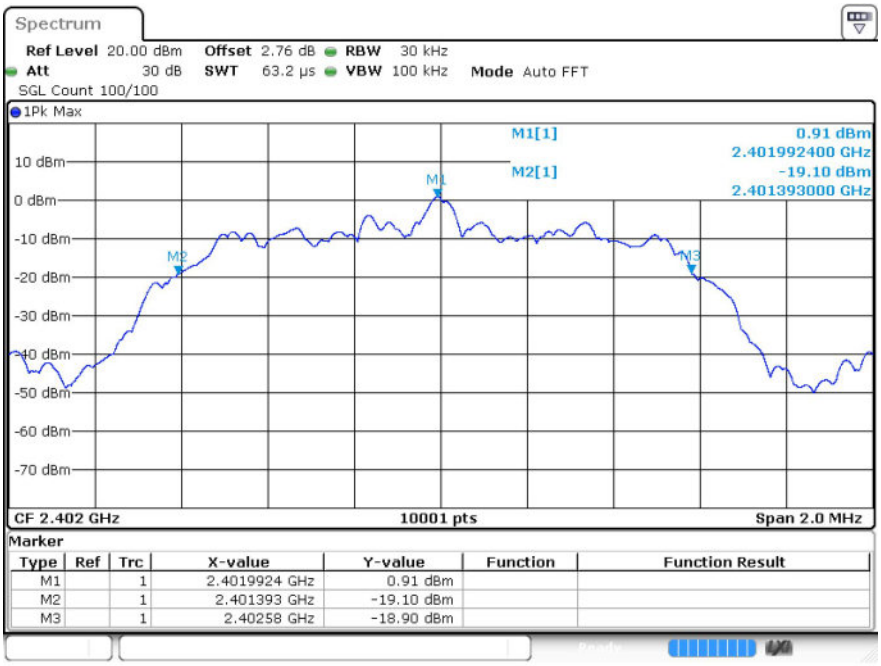
3 20dB Bandwidth

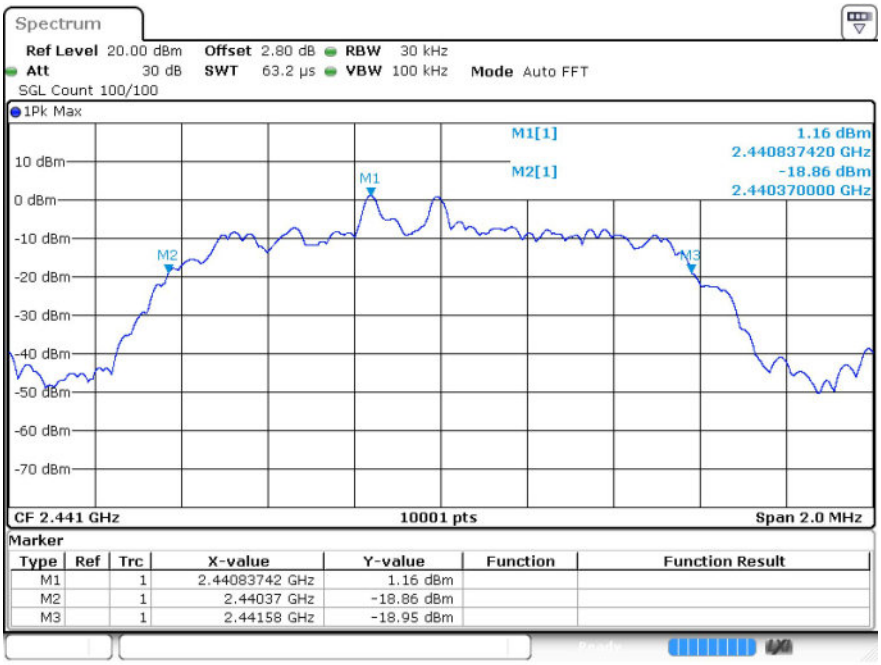
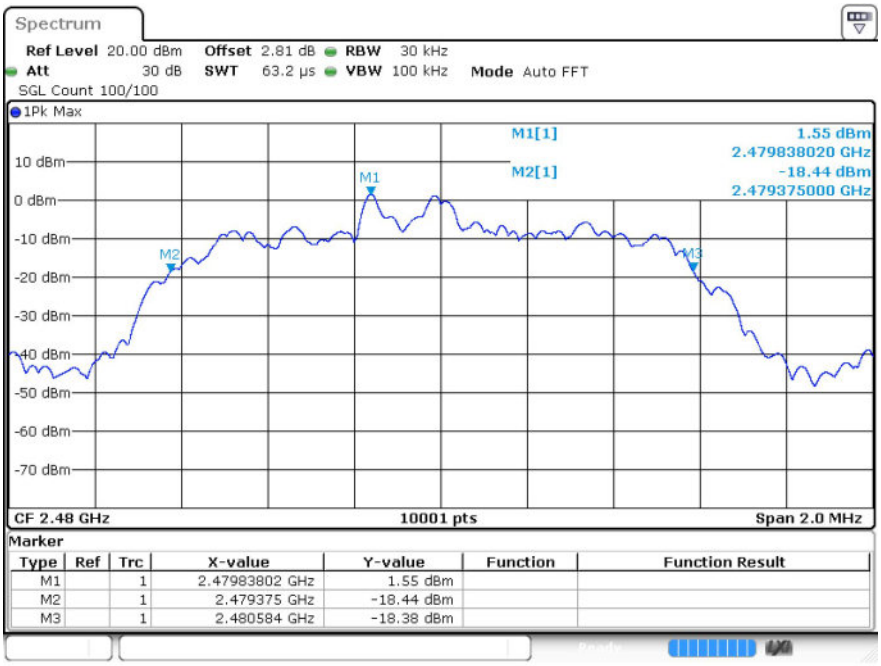
3.1 Test Result

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.876	Not Specified	Pass
	MCH	0.851	Not Specified	Pass
	HCH	0.877	Not Specified	Pass
π/4DQPSK	LCH	1.187	Not Specified	Pass
	MCH	1.209	Not Specified	Pass
	HCH	1.209	Not Specified	Pass
8DPSK	LCH	1.191	Not Specified	Pass
	MCH	1.205	Not Specified	Pass
	HCH	1.209	Not Specified	Pass

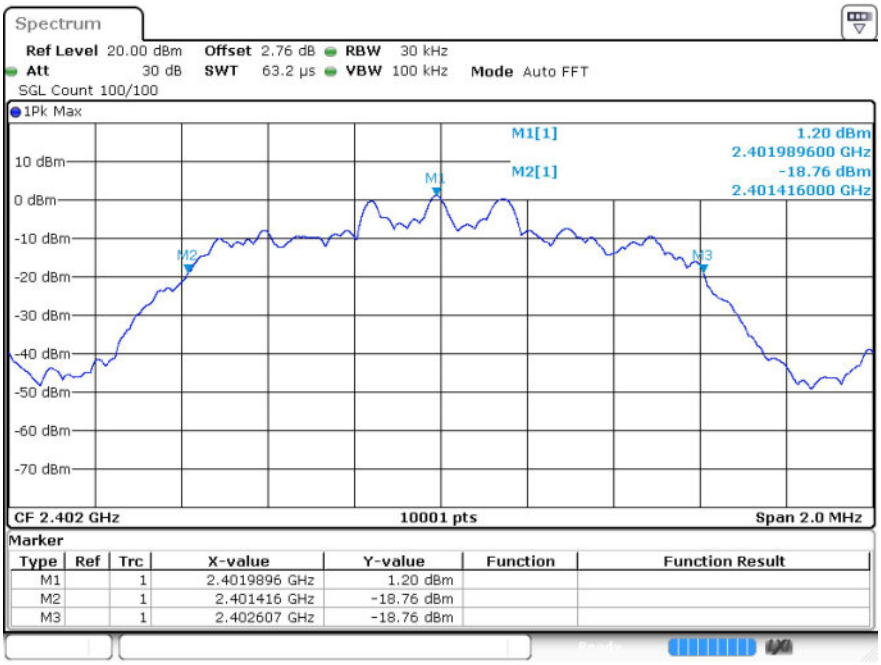
3.2 Test Graphs

Test Graphs	
GFSK/LCH	
GFSK/MCH	

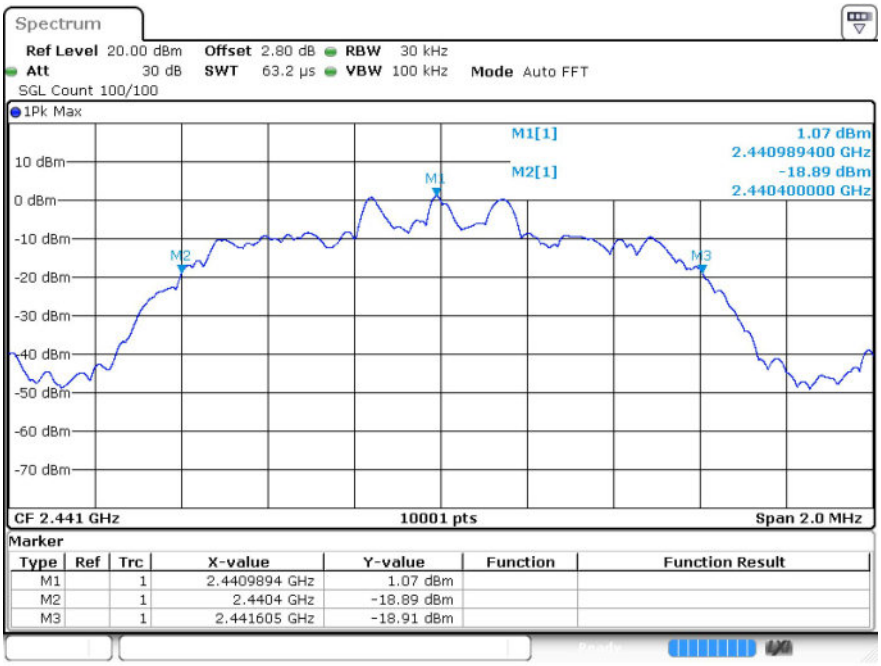
GFSK/HCH	
π/4DQPSK/LCH	

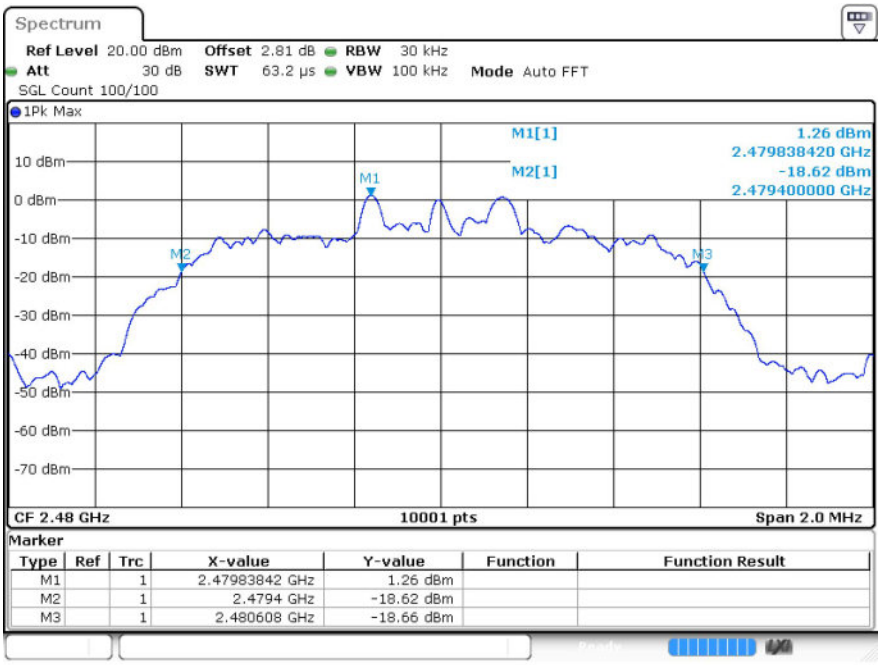
π/4DQPSK/MCH	
π/4DQPSK/HCH	

8DPSK/LCH



8DPSK/MCH



8DPSK/HCH	

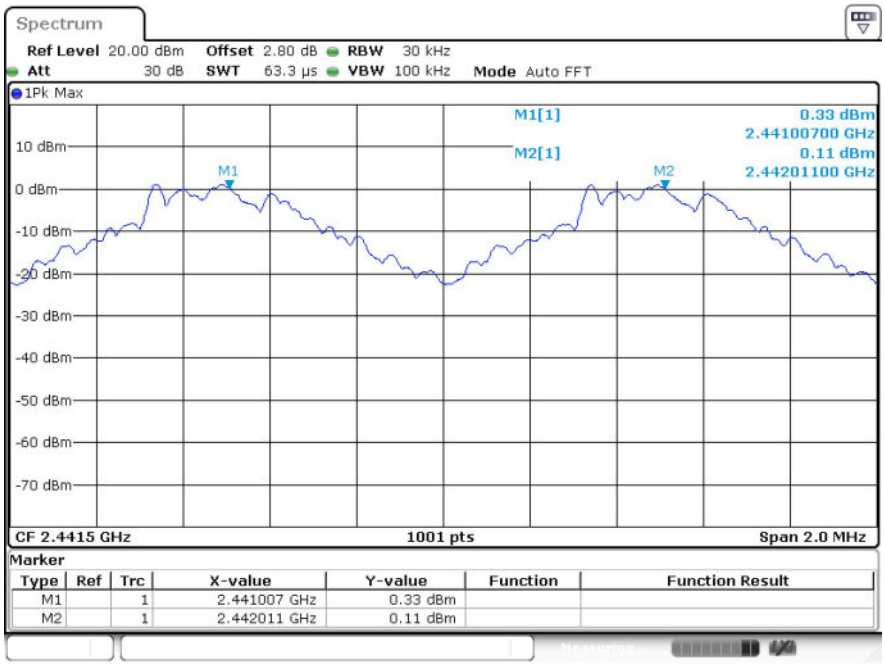
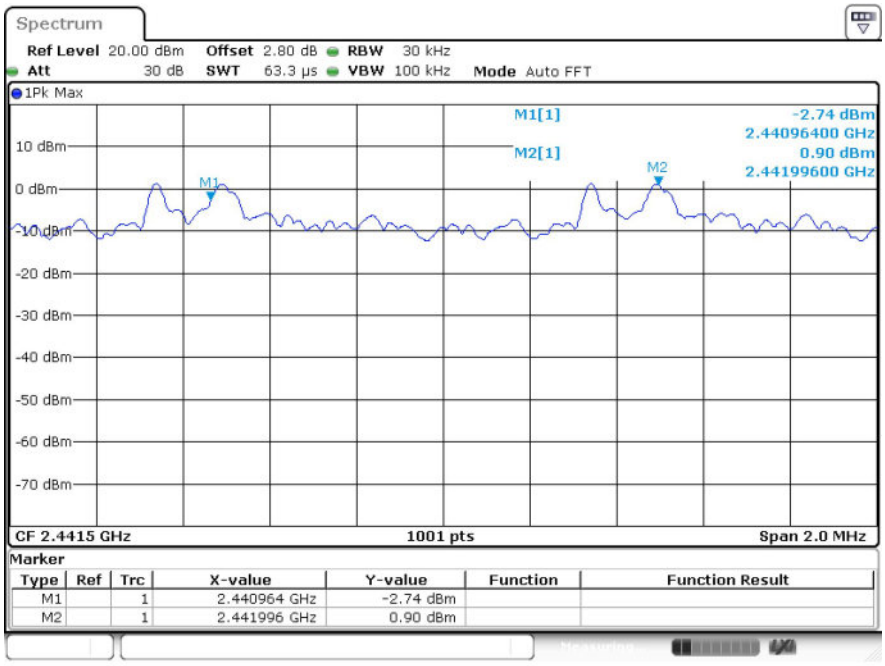
Spectrum
Ref Level 20.00 dBm Offset 2.81 dB RBW 30 kHz
Att 30 dB SWT 63.2 µs VBW 100 kHz Mode Auto FFT
SGL Count 100/100
1Pk Max
M1[1] 1.26 dBm
2.479838420 GHz
M2[1] -18.62 dBm
2.479400000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
M2
M3
CF 2.48 GHz
10001 pts
Span 2.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 2.47983842 GHz 1.26 dBm
M2 1 2.4794 GHz -18.62 dBm
M3 1 2.480608 GHz -18.66 dBm

4 Carrier Frequency Separation

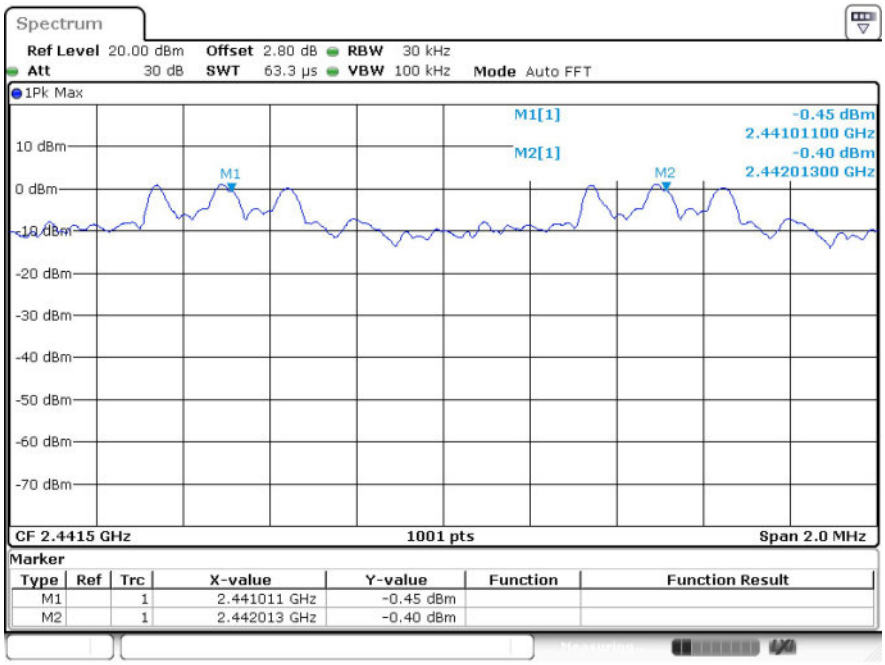
4.1 Test Result

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	MCH	1.004	0.567	Pass
π/4DQPSK	MCH	1.032	0.806	Pass
8DPSK	MCH	1.002	0.803	Pass

4.2 Test Graphs

Test Graphs	
GFSK/MCH	
π/4DQPSK/MCH	

8DPSK/MCH

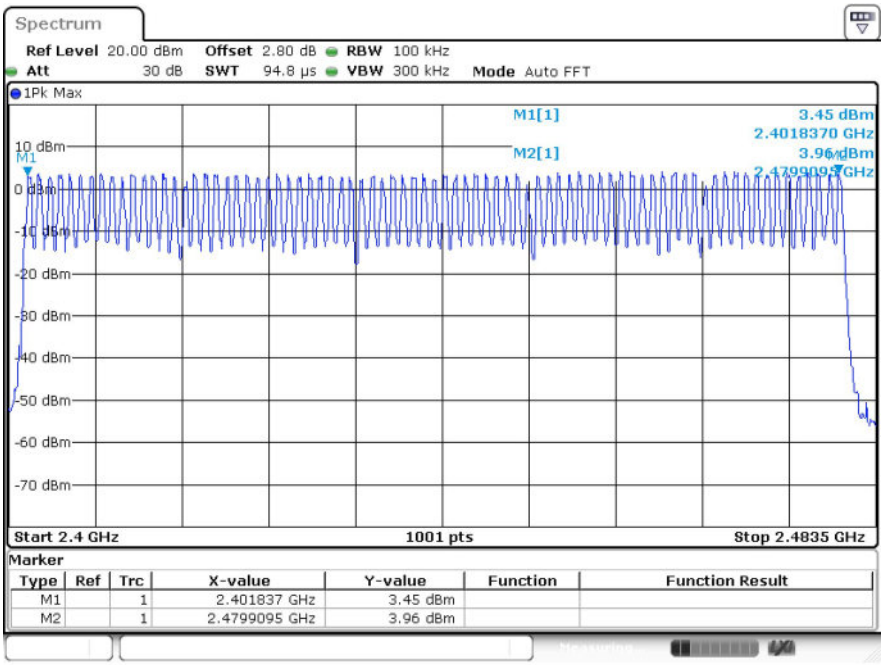
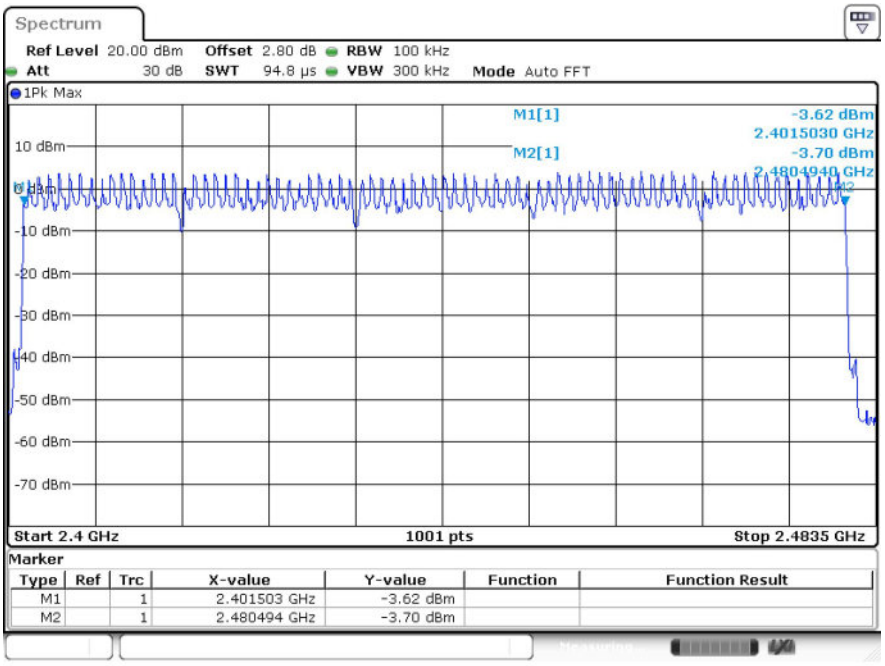

Spectrum
Ref Level 20.00 dBm Offset 2.80 dB RBW 30 kHz
Att 30 dB SWT 63.3 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1] -0.45 dBm 2.44101100 GHz
M2[1] -0.40 dBm 2.44201300 GHz
M1
M2
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 2.4415 GHz
1001 pts
Span 2.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 2.441011 GHz -0.45 dBm
M2 1 2.442013 GHz -0.40 dBm

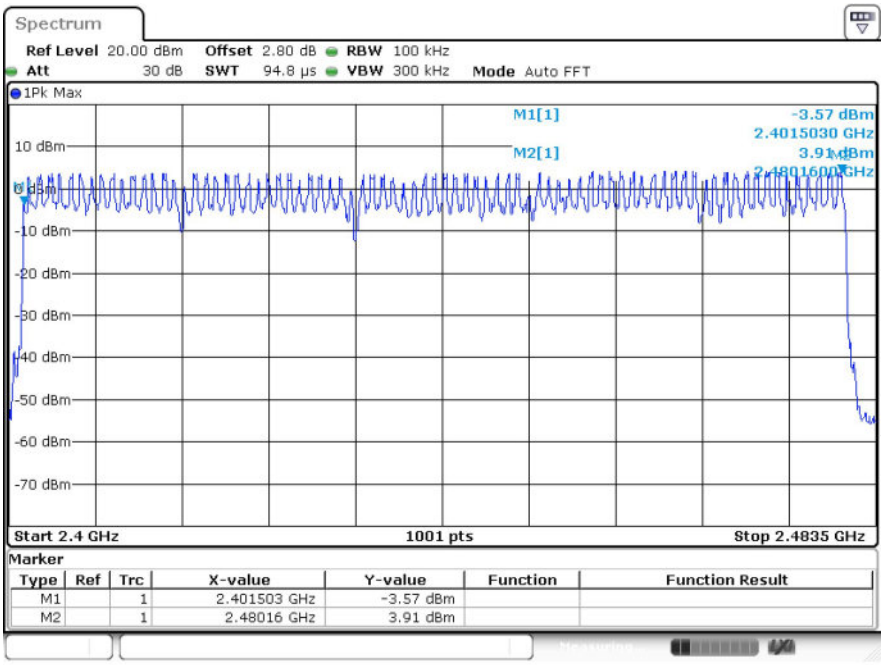
5 Hopping Channel Number

5.1 Test Result

Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
π/4DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

5.2 Test Graphs

Test Graphs	
GFSK/Hop	
π/4DQPSK/Hop	

8DPSK/Hop	

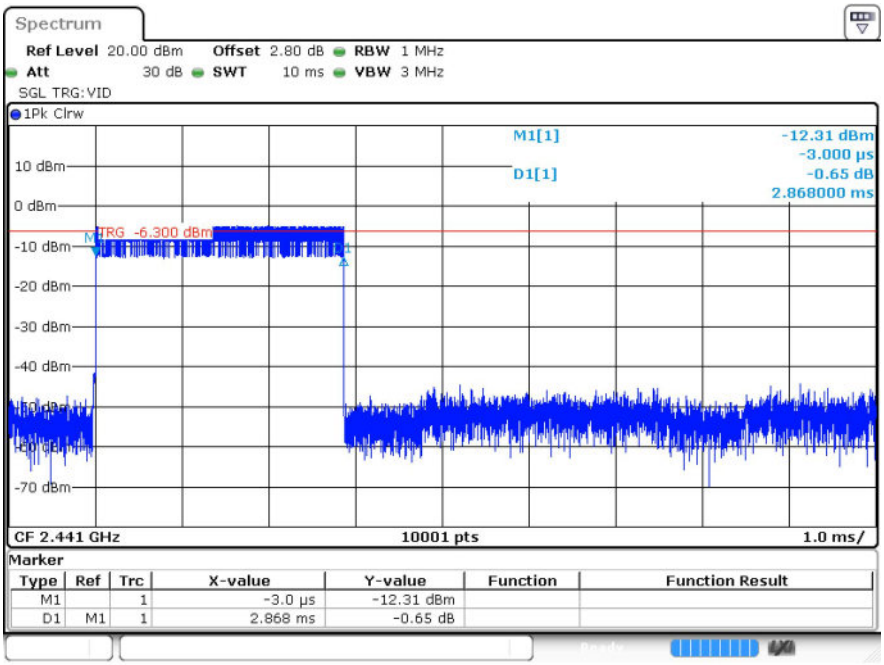
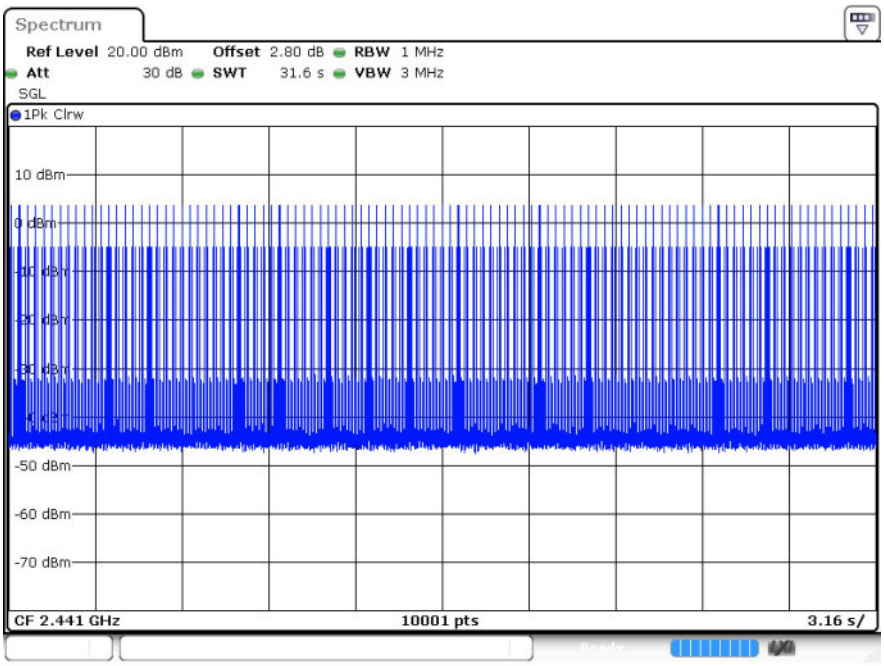
Spectrum
Ref Level 20.00 dBm Offset 2.80 dB RBW 100 kHz
Att 30 dB SWT 94.8 µs VBW 300 kHz Mode Auto FFT
1Pk Max
M1[1] -3.57 dBm 2.4015030 GHz
M2[1] 3.91 dBm 2.48016000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
Start 2.4 GHz 1001 pts Stop 2.4835 GHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 2.401503 GHz -3.57 dBm
M2 1 2.48016 GHz 3.91 dBm

6 Dwell Time

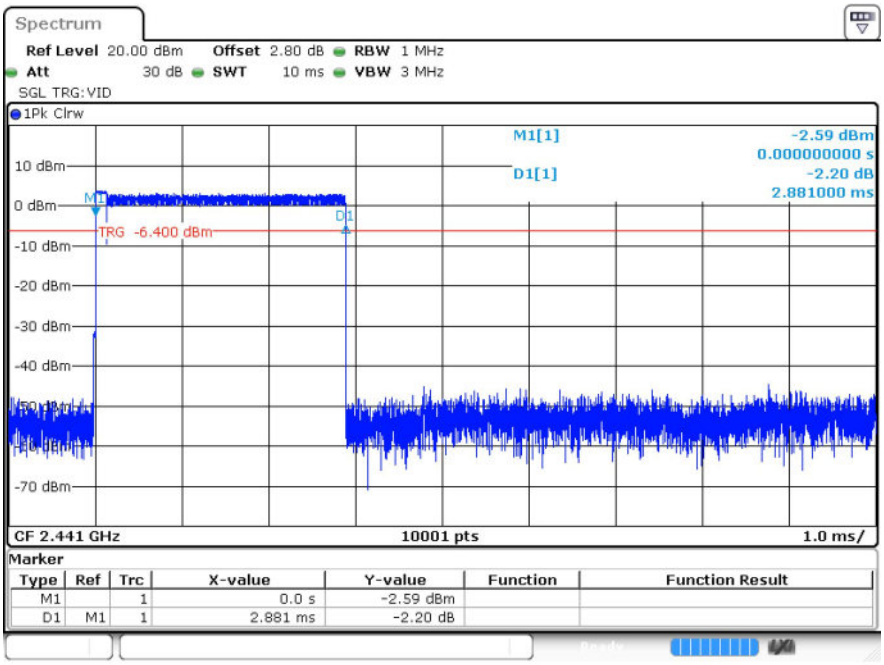
6.1 Test Result

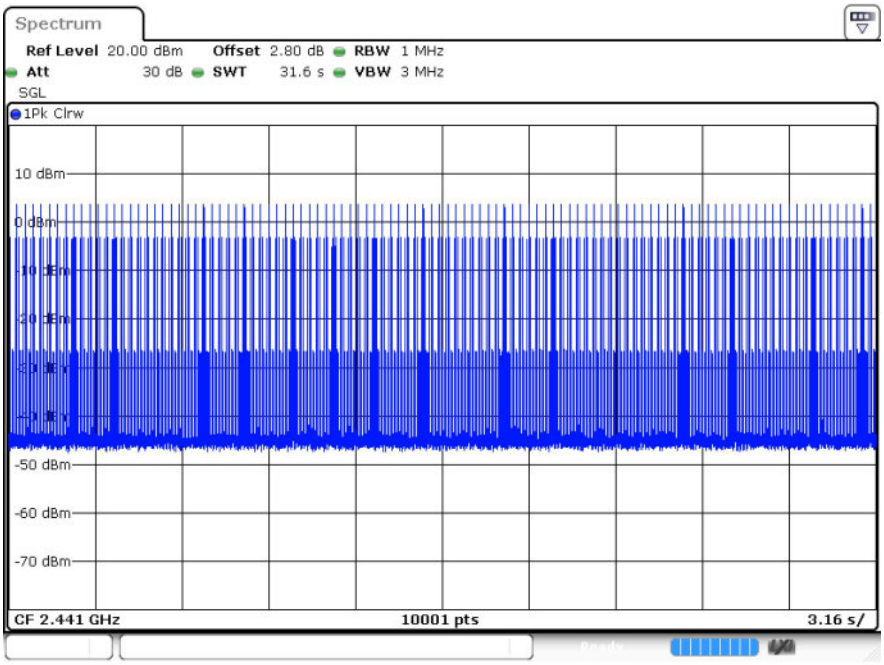
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.868	106	304.008	0.4	Pass
π/4DQPSK	2DH5	MCH	2.881	106	305.386	0.4	Pass
8DPSK	3DH5	MCH	2.881	106	305.386	0.4	Pass

6.2 Test Graphs

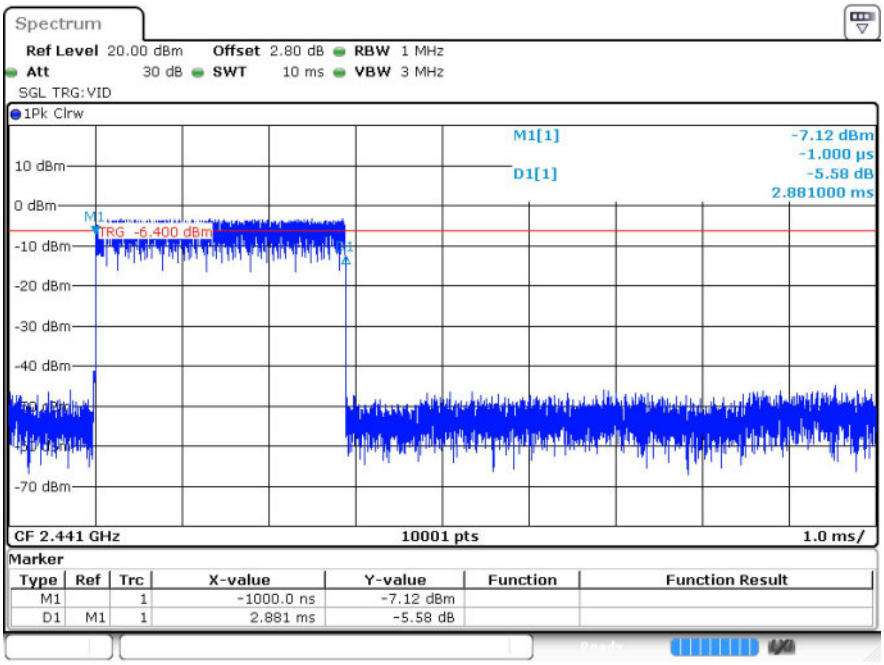
Test Graphs	
GFSK_DH5/MCH	 

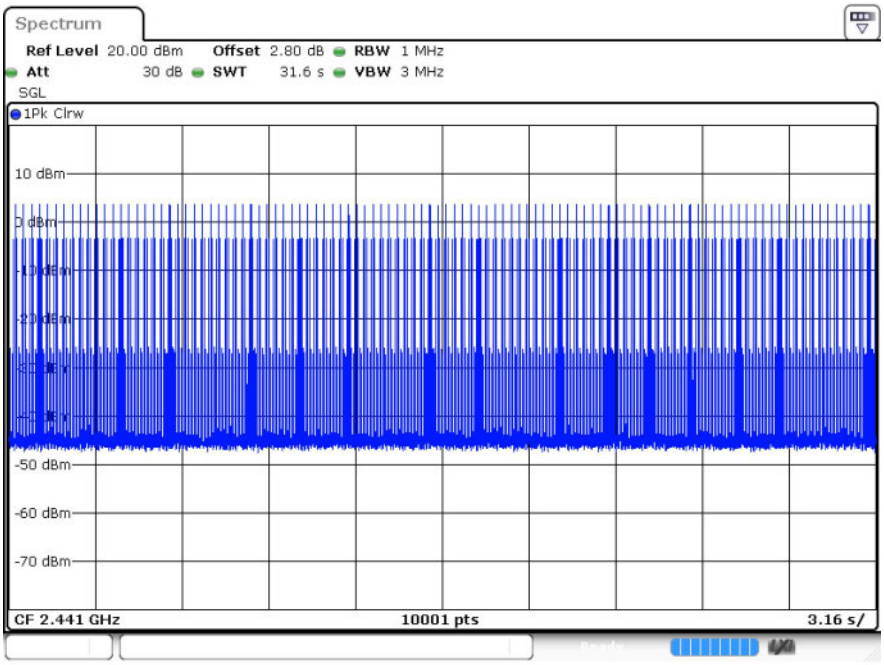
π/4DQPSK
_2DH5/MCH





8DPSK _3DH5/MCH



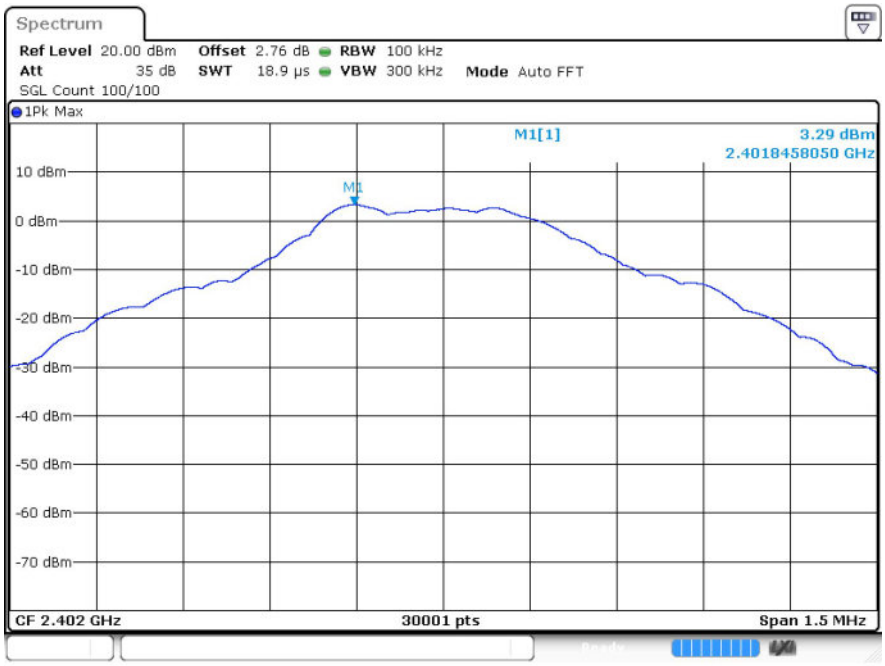
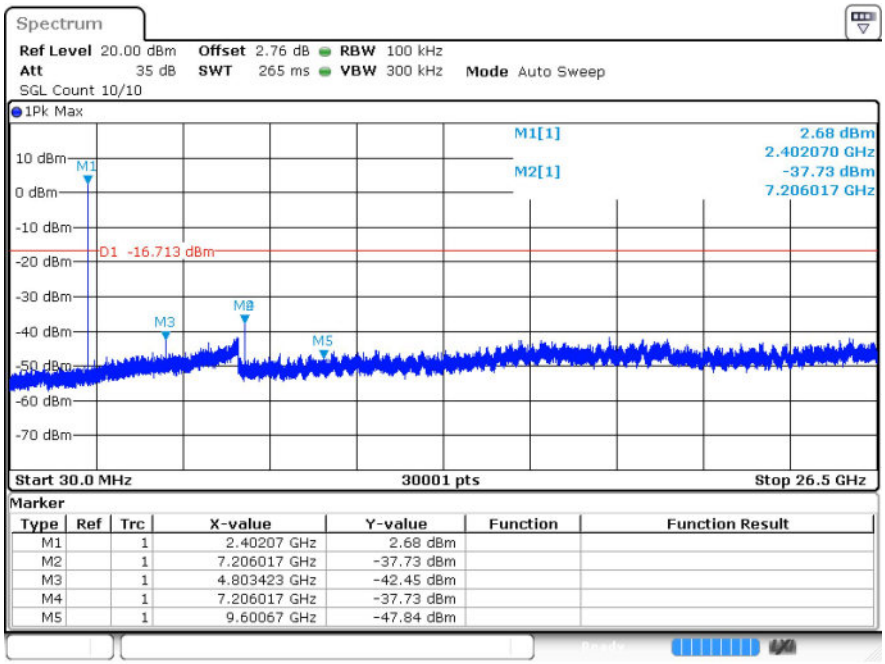


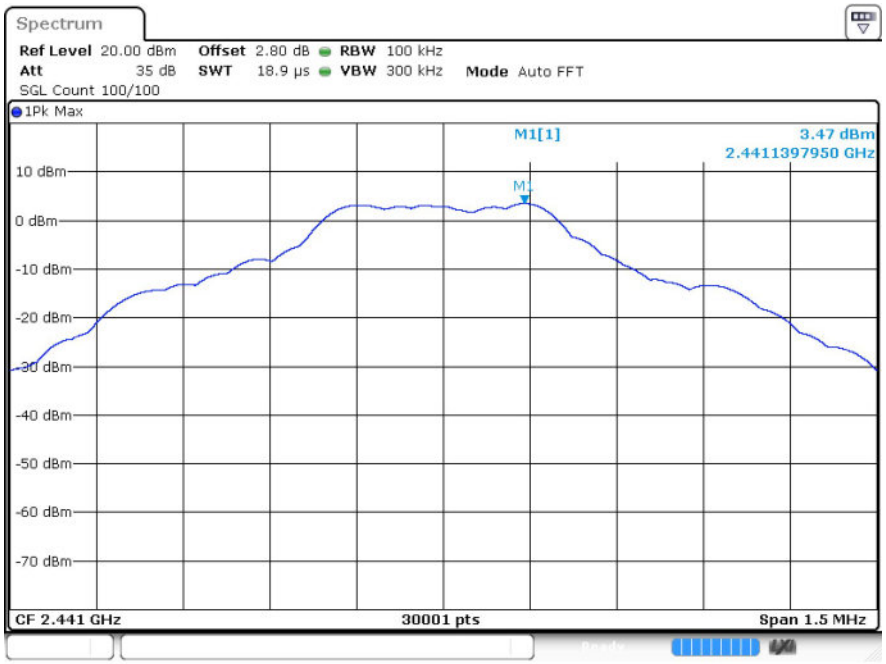
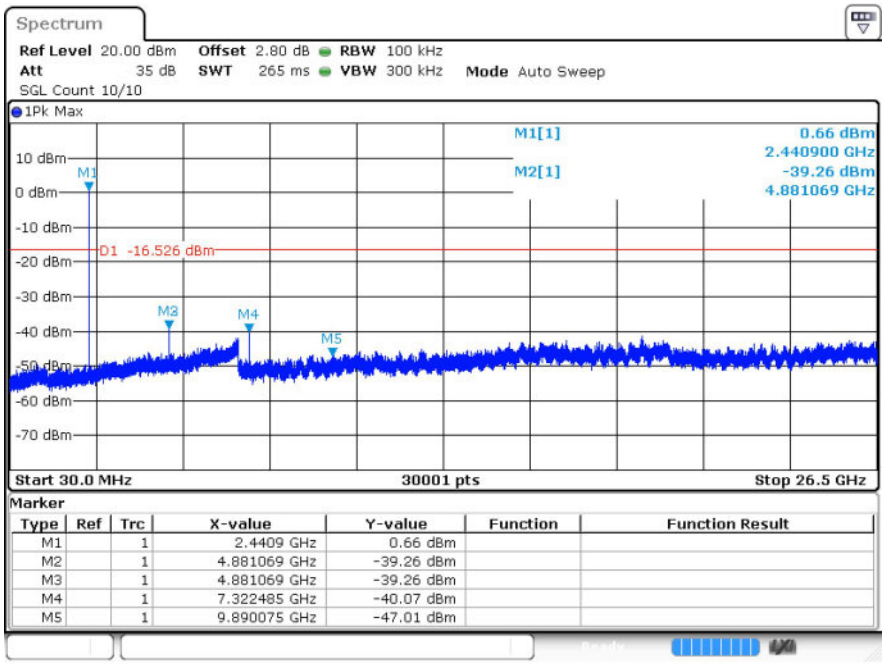
7 RF Conducted Spurious Emissions

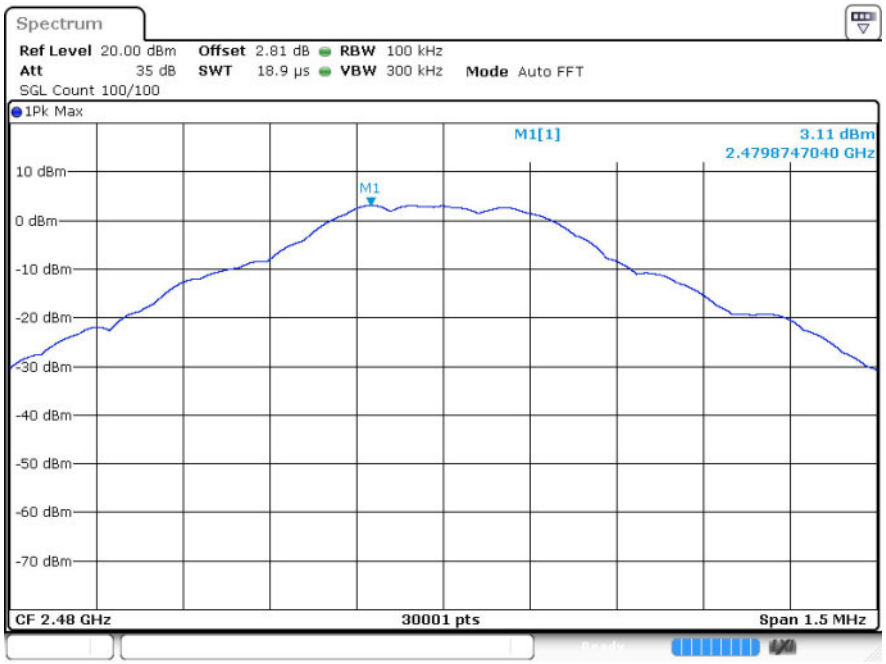
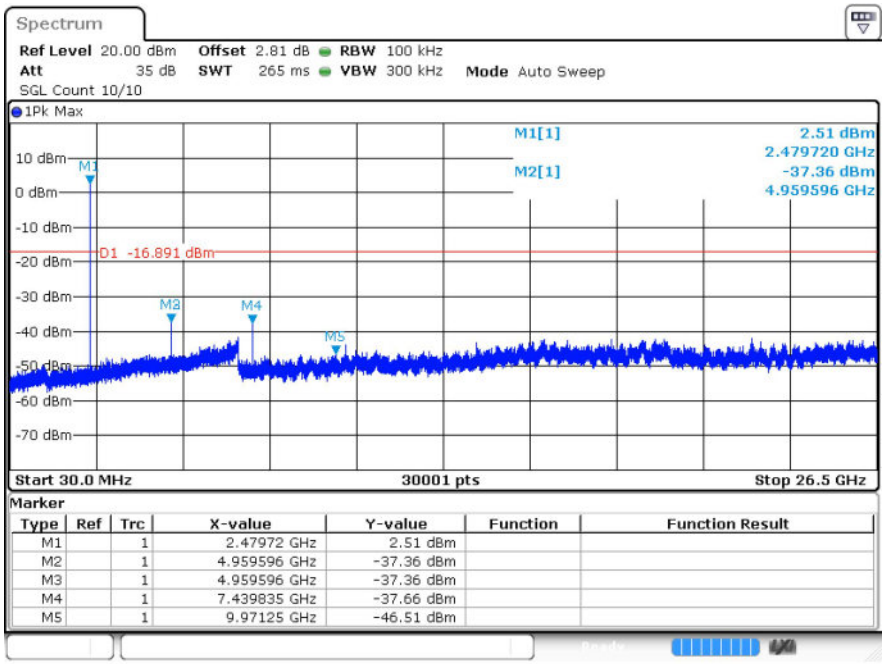
7.1 Test Result

Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-41.02	-20	Pass
	MCH	-42.72	-20	Pass
	HCH	-40.46	-20	Pass
π/4DQPSK	LCH	-43.5	-20	Pass
	MCH	-42.92	-20	Pass
	HCH	-40.62	-20	Pass
8DPSK	LCH	-41.9	-20	Pass
	MCH	-42.09	-20	Pass
	HCH	-42.45	-20	Pass

7.2 Test Graphs

GFSK_LCH_Graphs	
Pref	
Puw	

GFSK_MCH_Graphs	
Pref	
Puw	

GFSK_HCH_Graphs	
Pref	
Puw