Appendix A

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

Product Name: Wireless Earphone

Trade Mark: Zayson

Test Model: S23

Environmental Conditions

Temperature:	25.6℃
Relative Humidity:	52.7%
ATM Pressure:	101Kpa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen

Contents

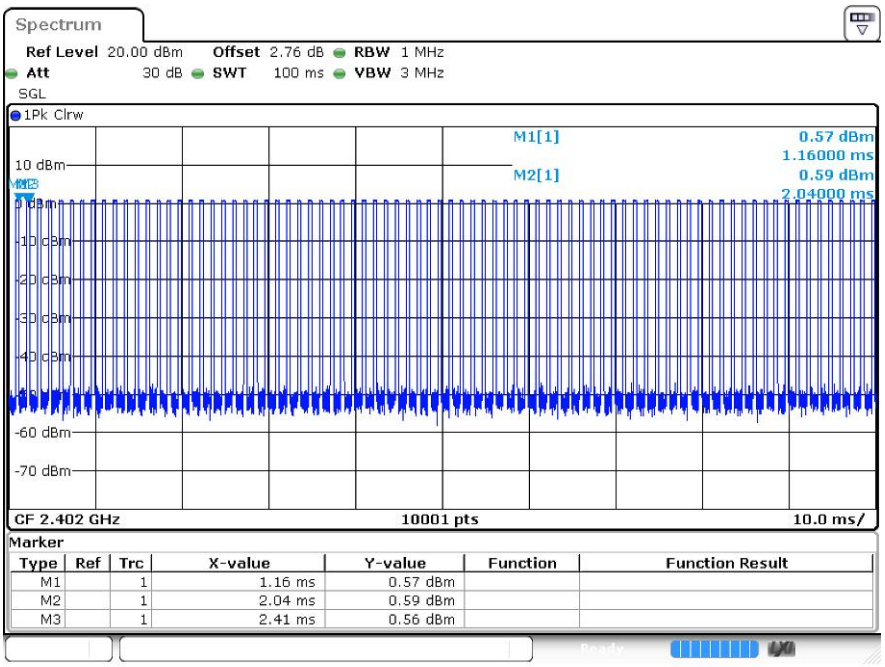
1 Duty Cycle

1.1 Test Result

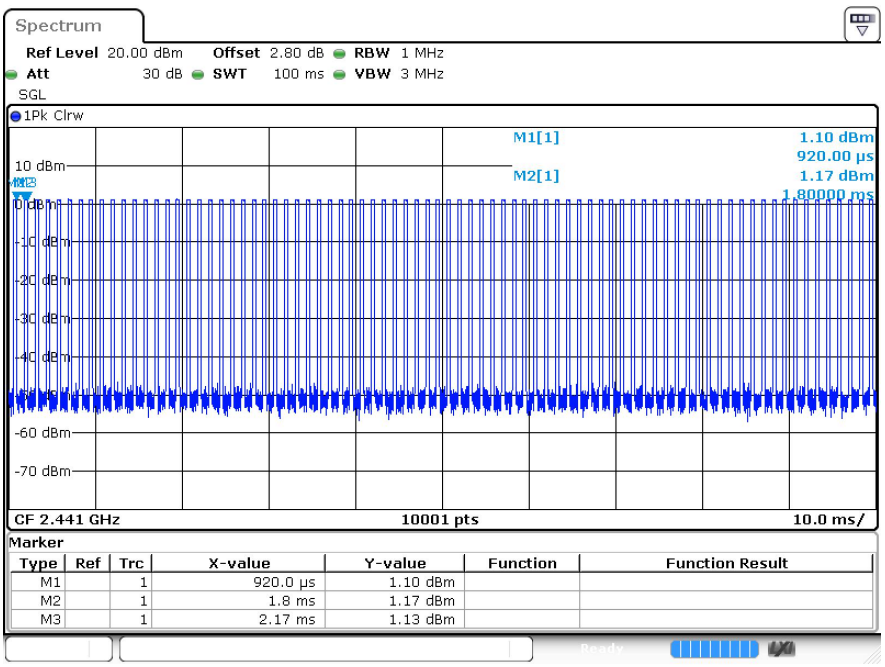
Mode	Frequency (MHz)	Duty Cycle (%)	1/T (kHz)
1-DH1	2402	30.42	2.7
1-DH1	2441	30.4	2.7
1-DH1	2480	31.2	2.63
2-DH1	2402	32	2.56
2-DH1	2441	31.2	2.63
2-DH1	2480	31.21	2.63

1.2 Test Graphs

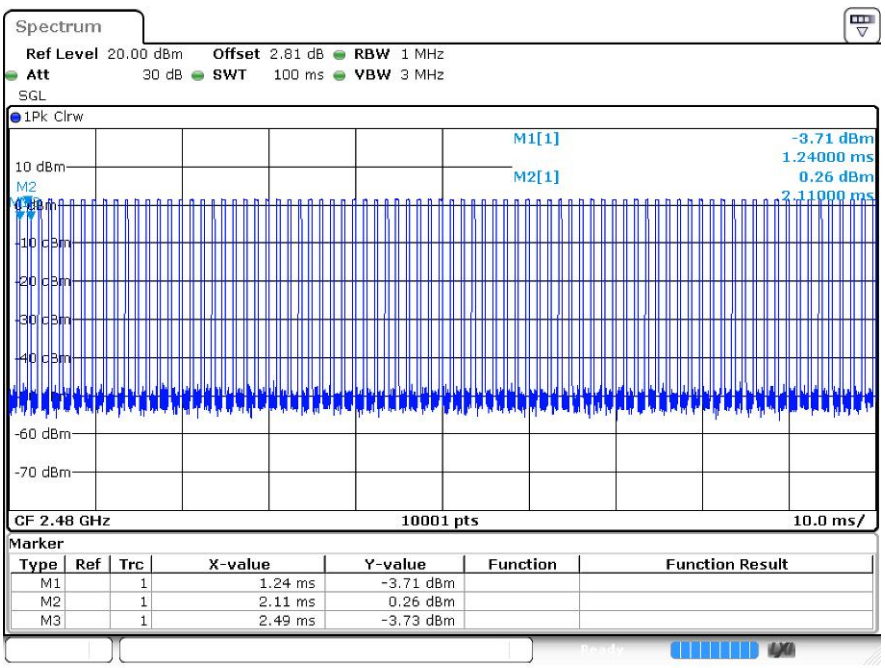
Test Graphs
1-DH1 2402MHz



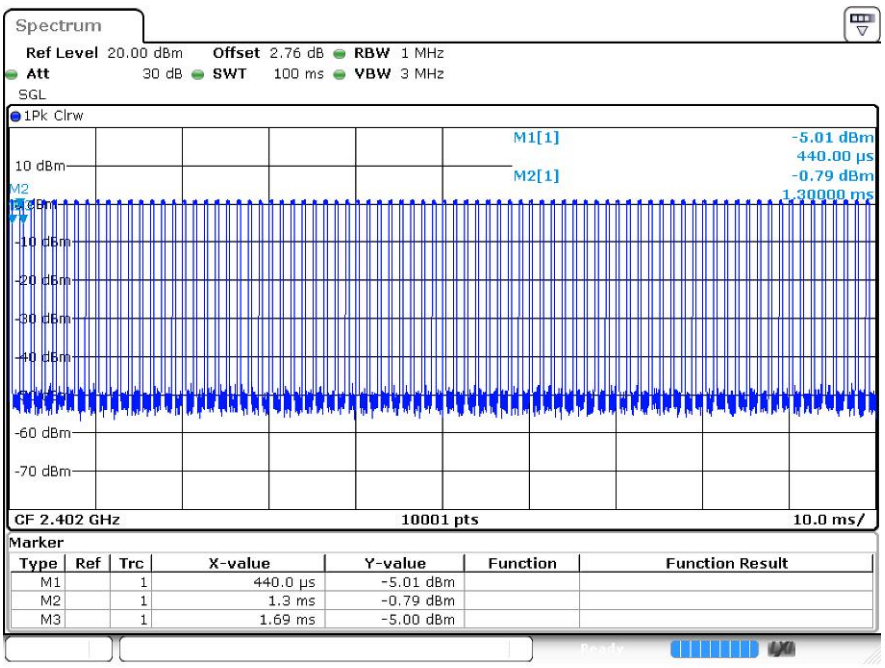
1-DH1 2441MHz



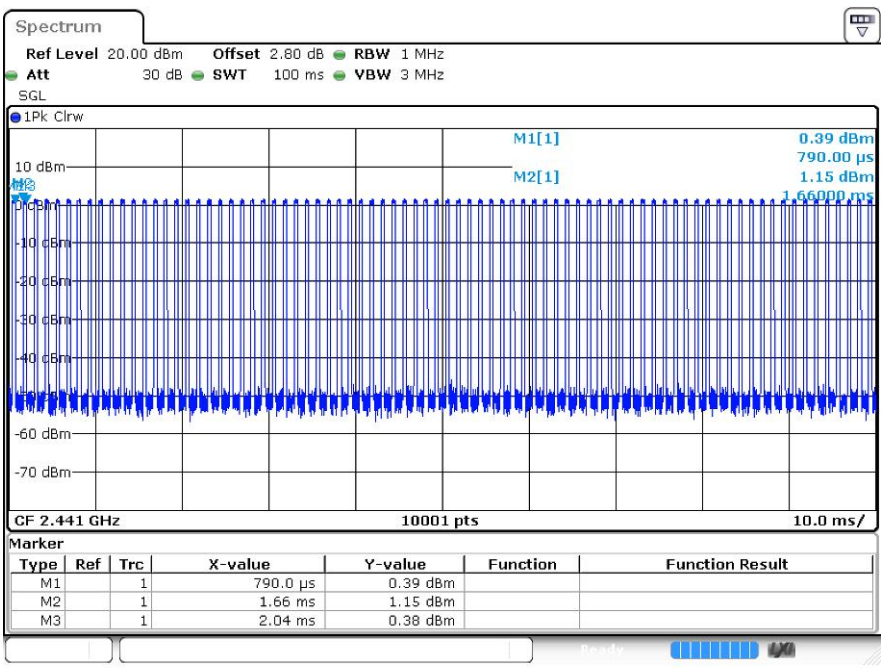
1-DH1 2480MHz



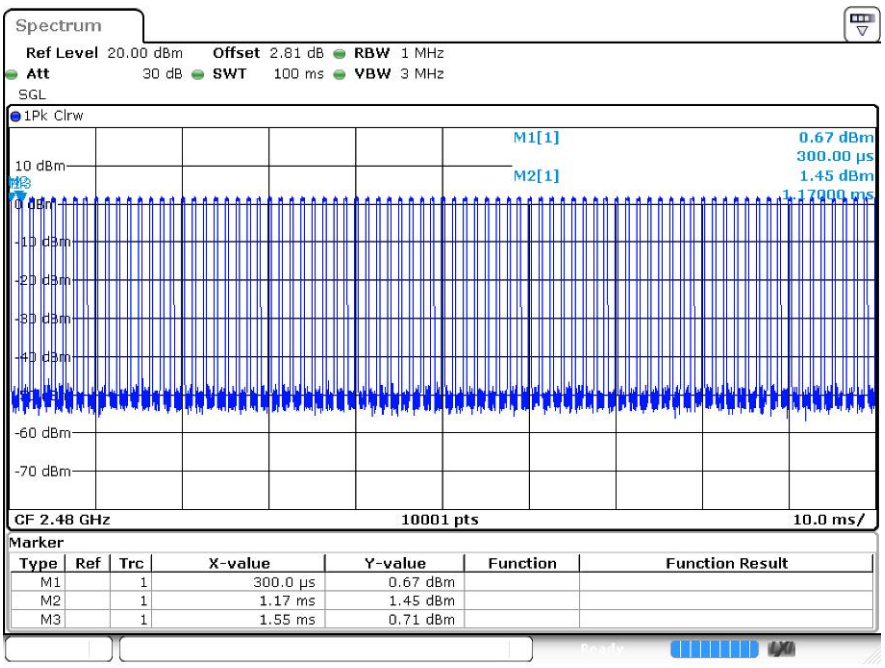
2-DH1 2402MHz



2-DH1 2441MHz



2-DH1 2480MHz

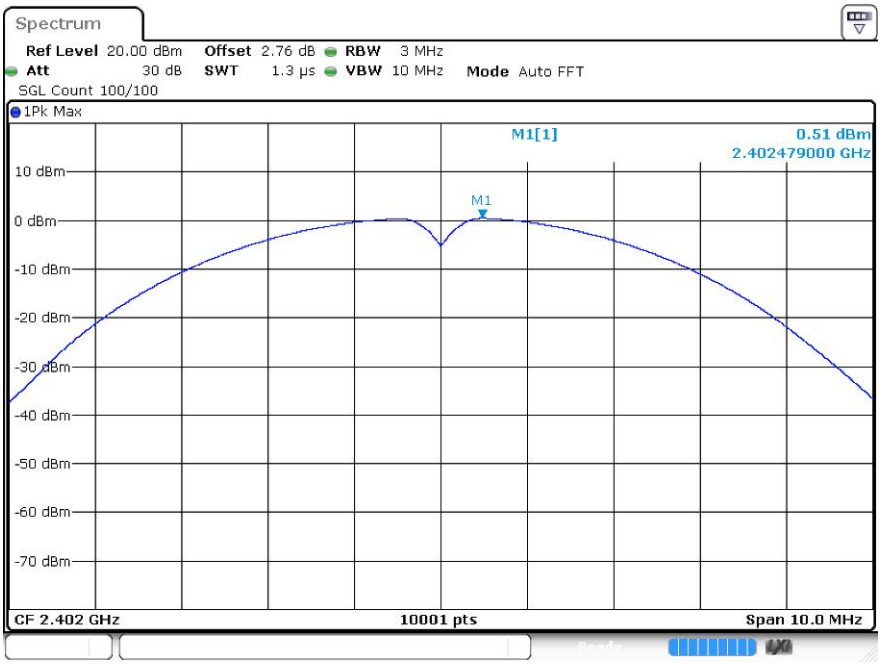
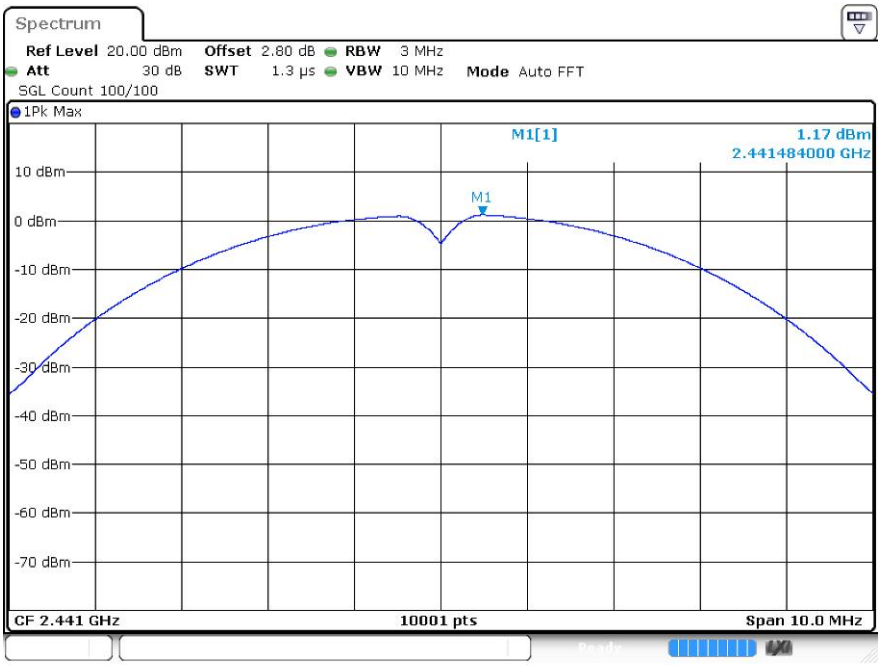


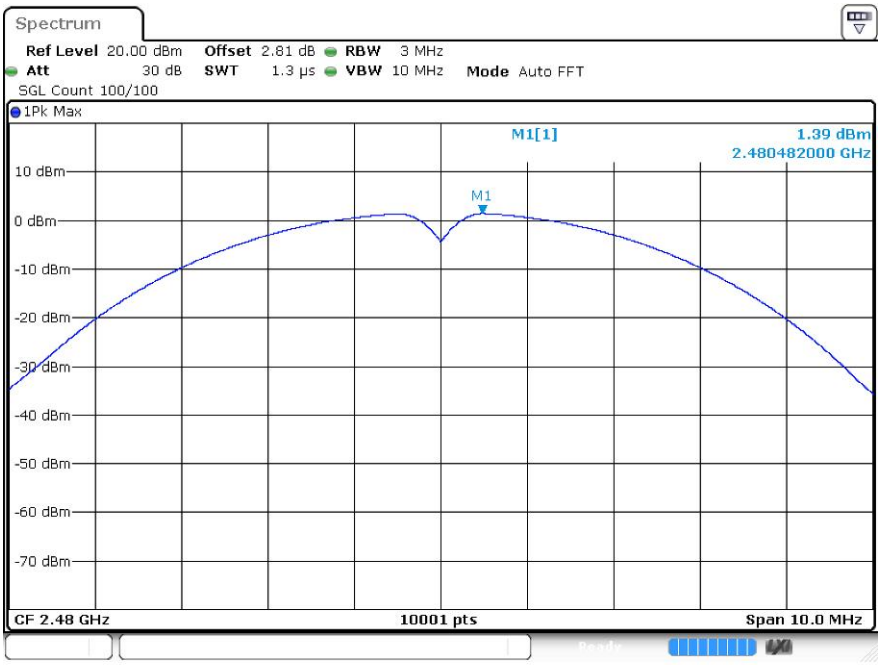
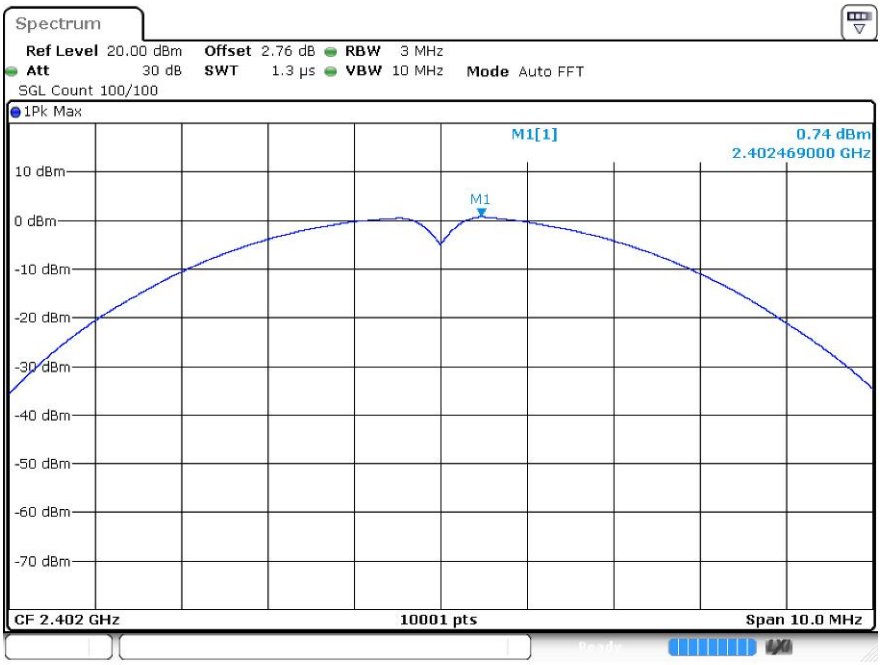
2 Maximum Conducted Peak Output Power

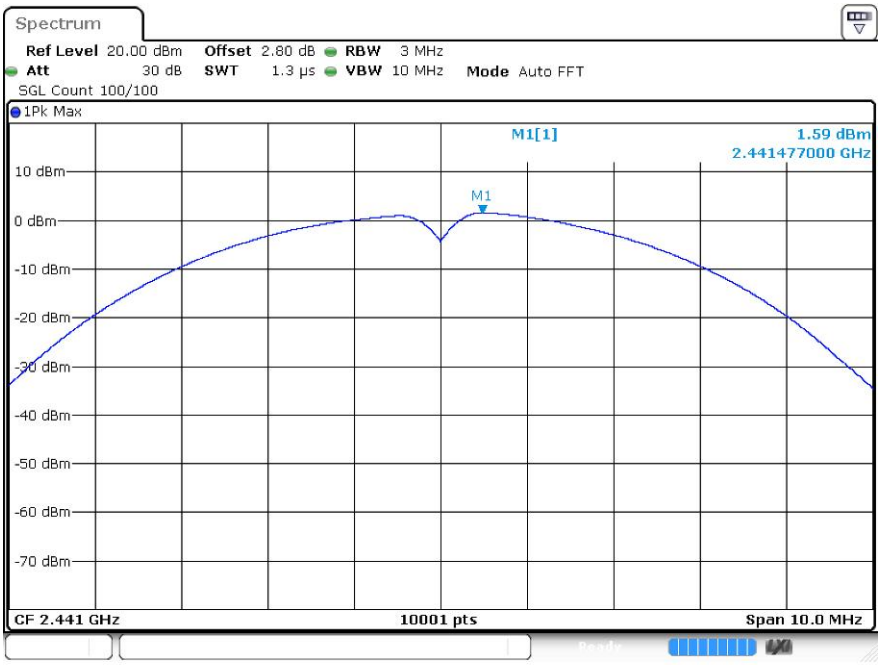
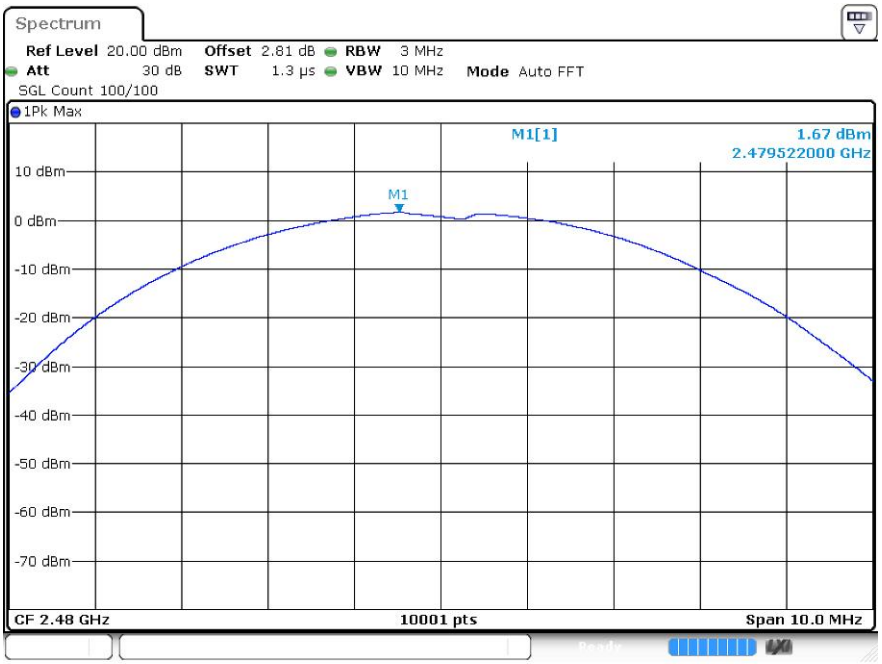
2.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.51	21	Pass
	MCH	1.17	21	Pass
	HCH	1.39	21	Pass
π/4DQPSK	LCH	0.74	21	Pass
	MCH	1.59	21	Pass
	HCH	1.67	21	Pass

2.2 Test Graphs

Test Graphs	
GFSK/LCH	
GFSK/MCH	

GFSK/HCH	
π/4DQPSK/LCH	

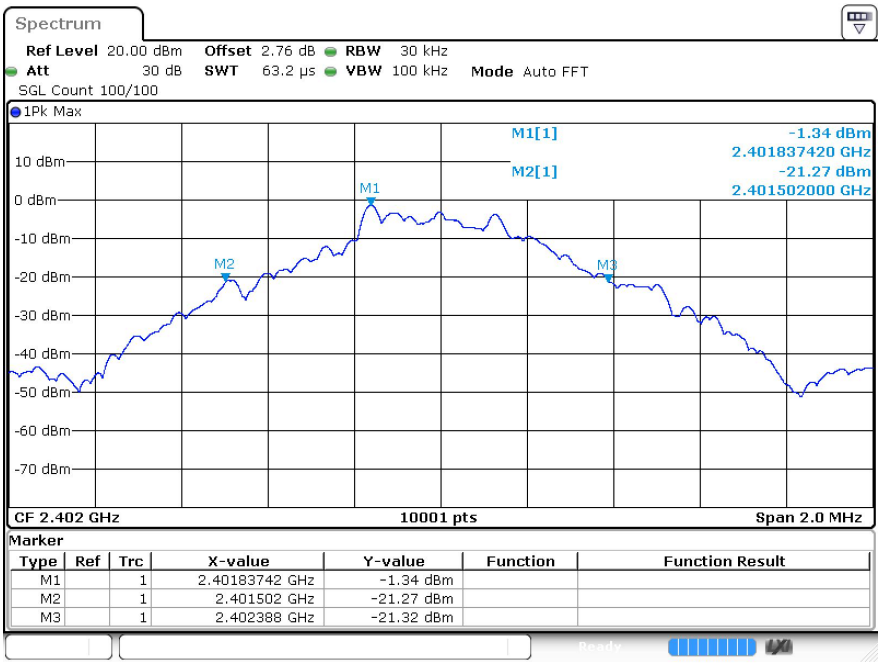
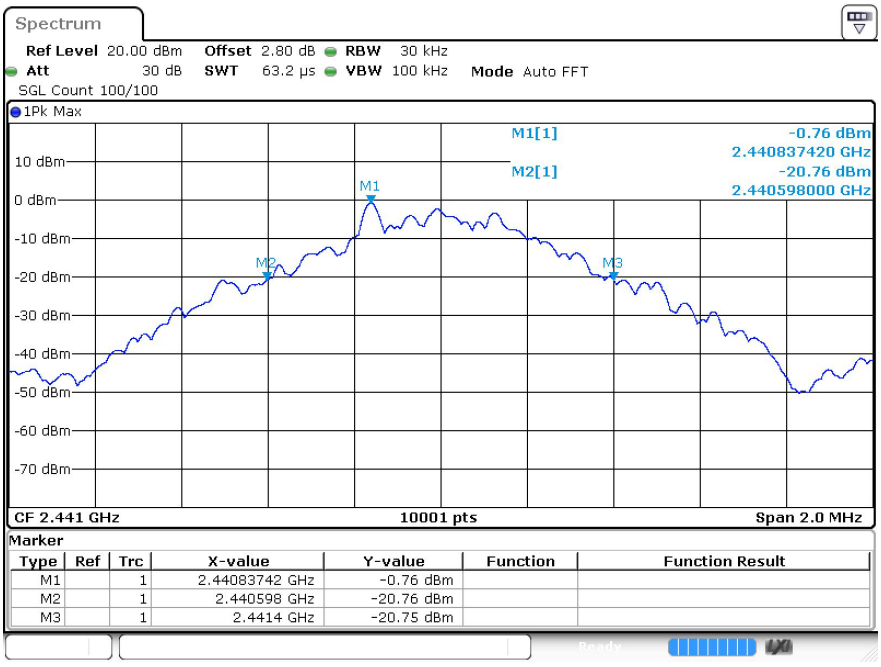
π/4DQPSK/MCH	
π/4DQPSK/HCH	

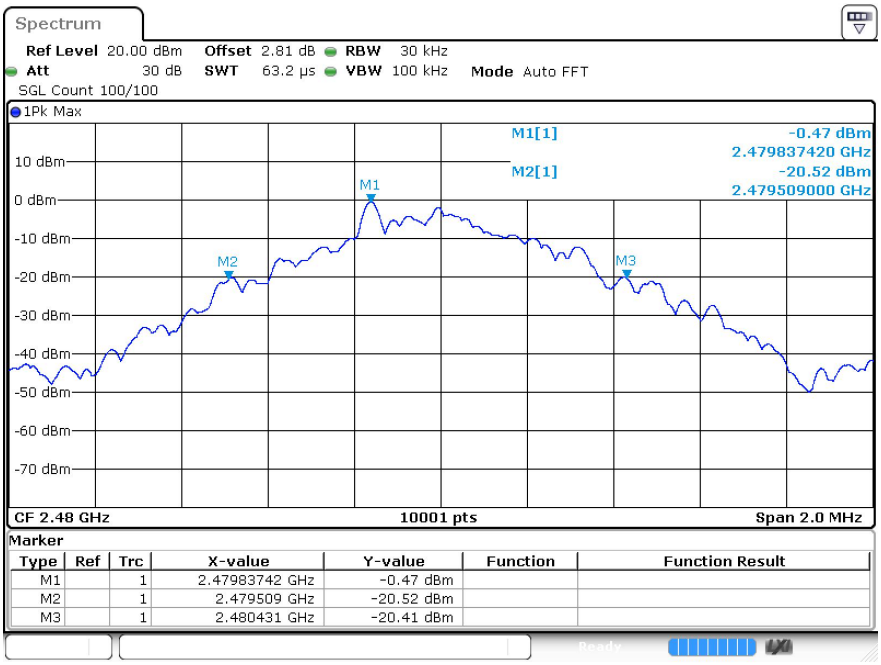
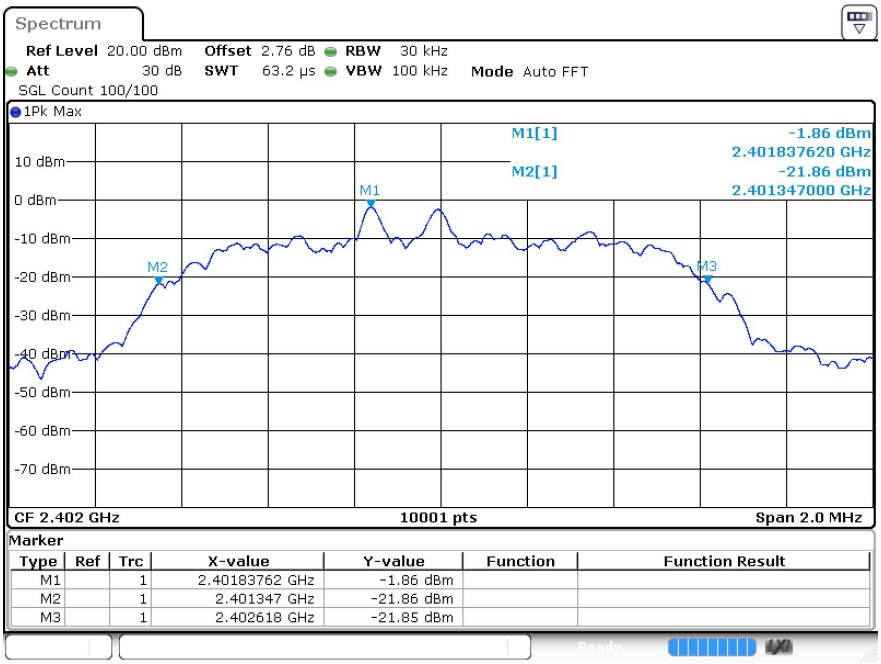
3 20dB Bandwidth

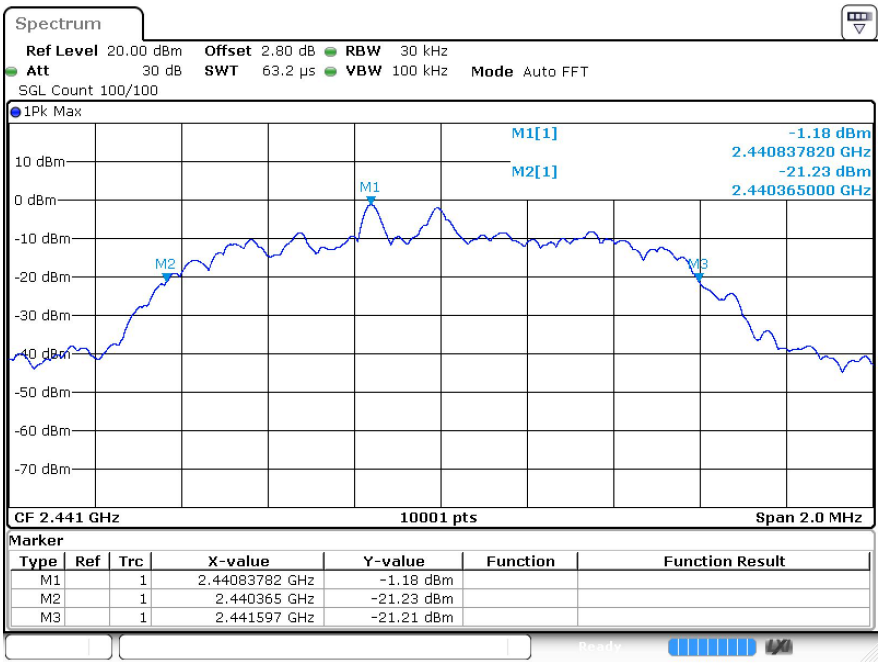
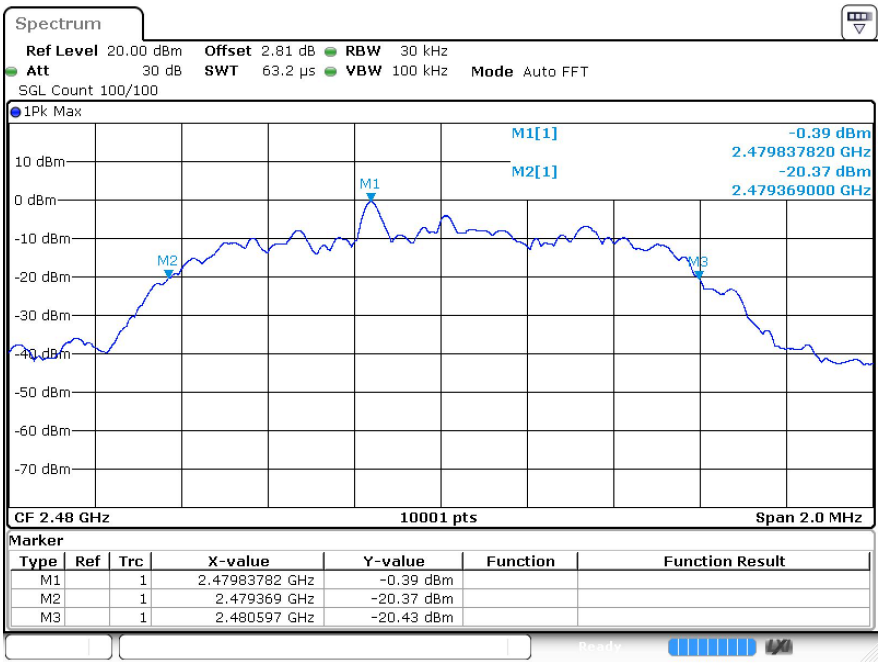
3.1 Test Result

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.886	Not Specified	Pass
	MCH	0.802	Not Specified	Pass
	HCH	0.922	Not Specified	Pass
π/4DQPSK	LCH	1.271	Not Specified	Pass
	MCH	1.231	Not Specified	Pass
	HCH	1.228	Not Specified	Pass

3.2 Test Graphs

Test Graphs	
GFSK/LCH	
GFSK/MCH	

GFSK/HCH	
π/4DQPSK/LCH	

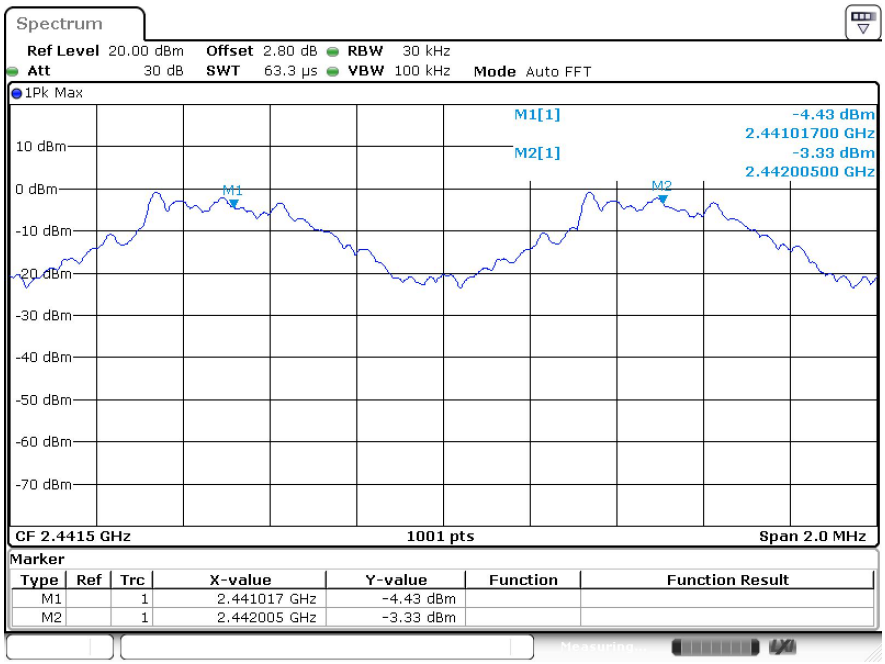
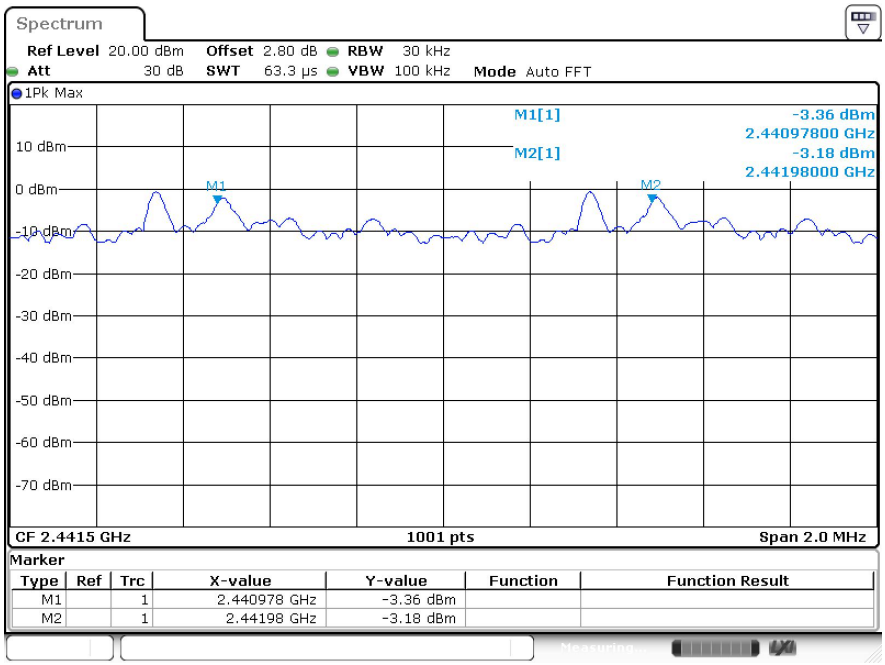
π/4DQPSK/MCH	
π/4DQPSK/HCH	

4 Carrier Frequency Separation

4.1 Test Result

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	MCH	0.988	0.535	Pass
π/4DQPSK	MCH	1.002	0.821	Pass

4.2 Test Graphs

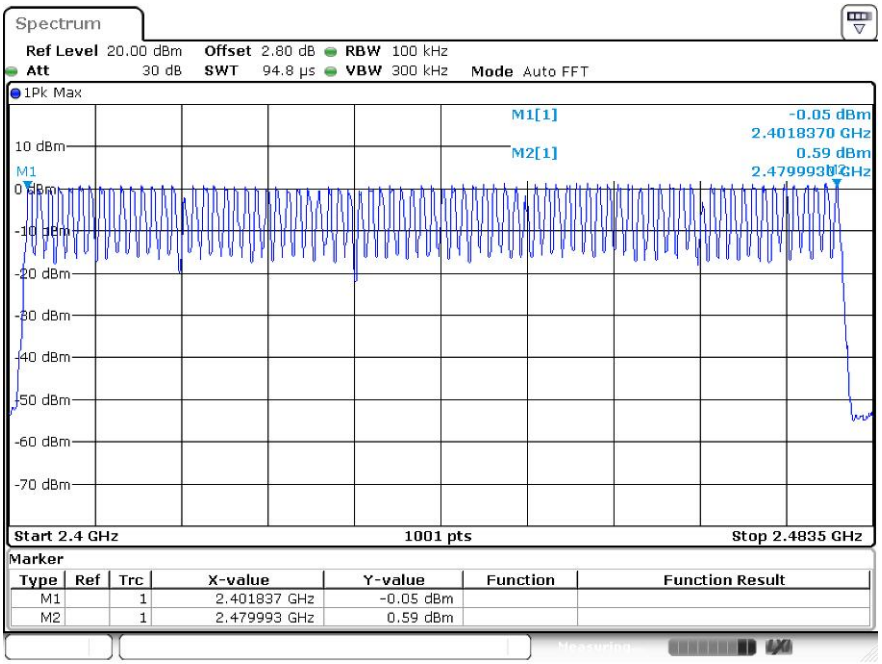
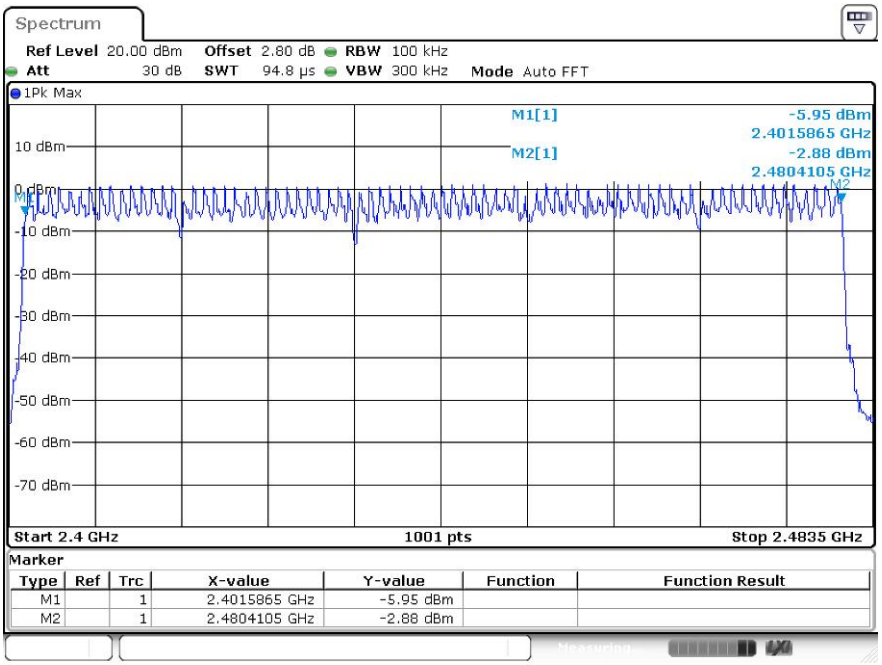
Test Graphs	
GFSK/MCH	
π/4DQPSK/MCH	

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

5.2 Test Graphs

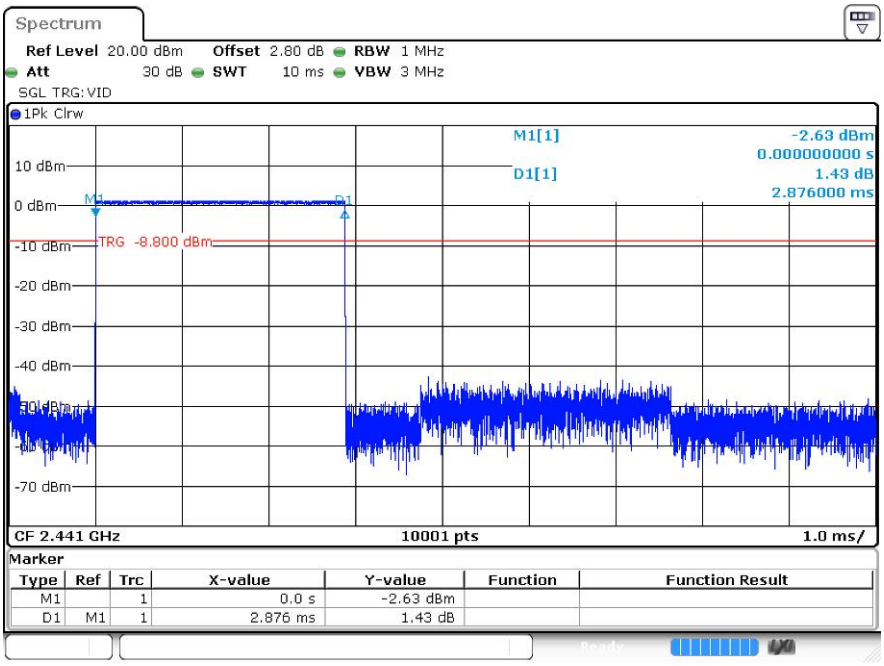
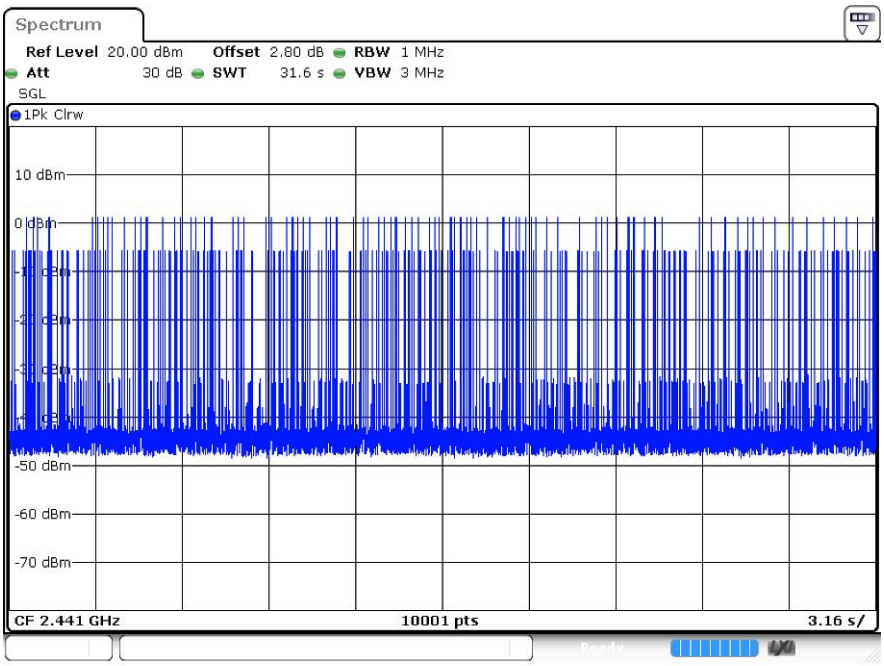
Test Graphs	
GFSK/Hop	
π/4DQPSK/Hop	

6 Dwell Time

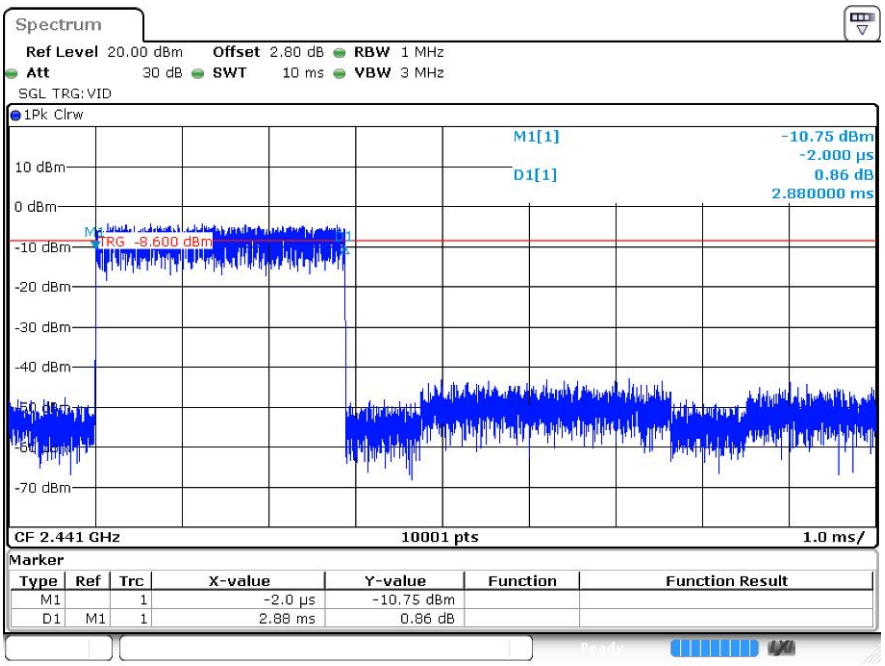
6.1 Test Result

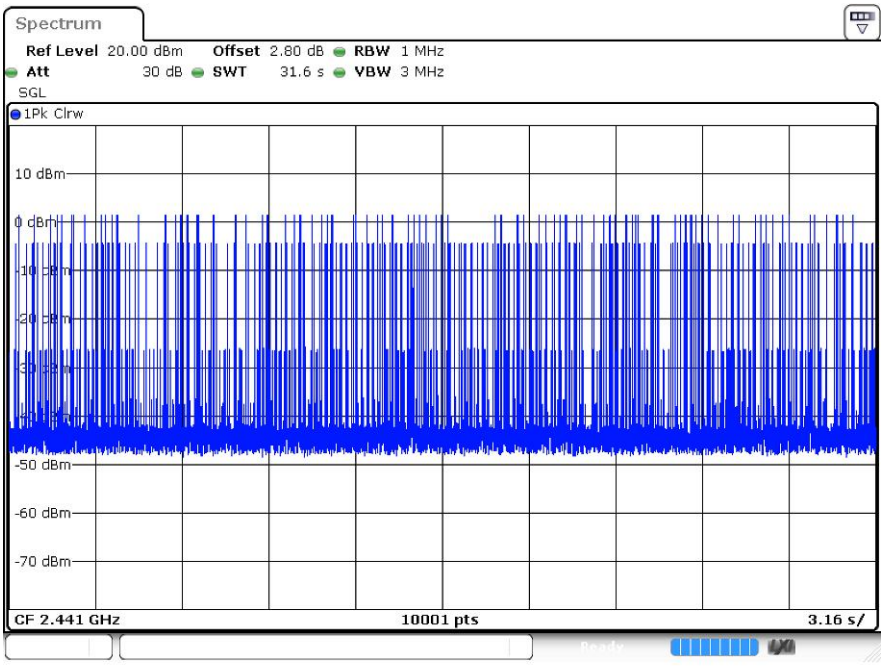
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.876	97	278.972	0.4	Pass
π/4DQPSK	2DH5	MCH	2.88	104	299.52	0.4	Pass

6.2 Test Graphs

Test Graphs	
GFSK_DH5/MCH	 

π/4DQPSK
_2DH5/MCH



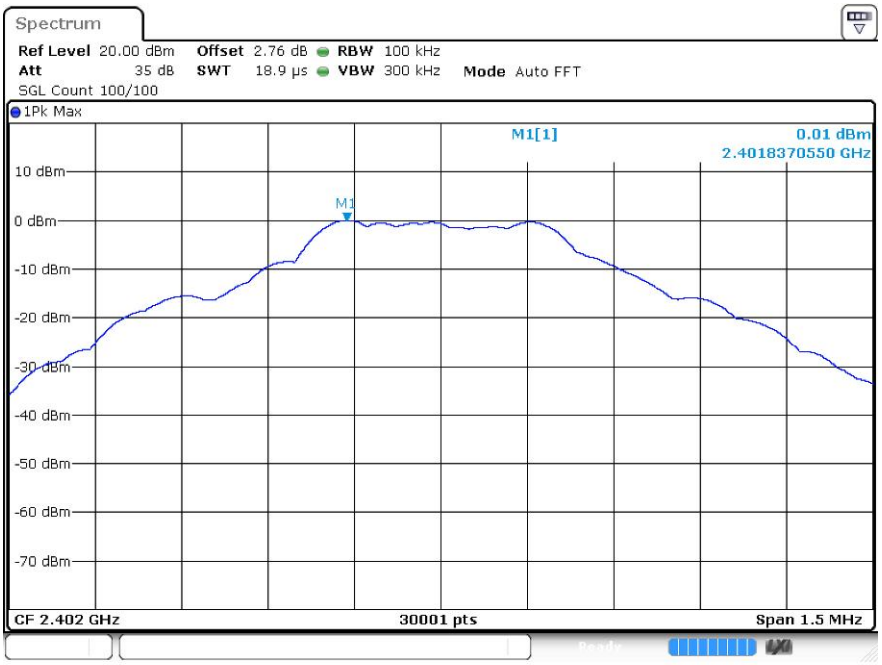
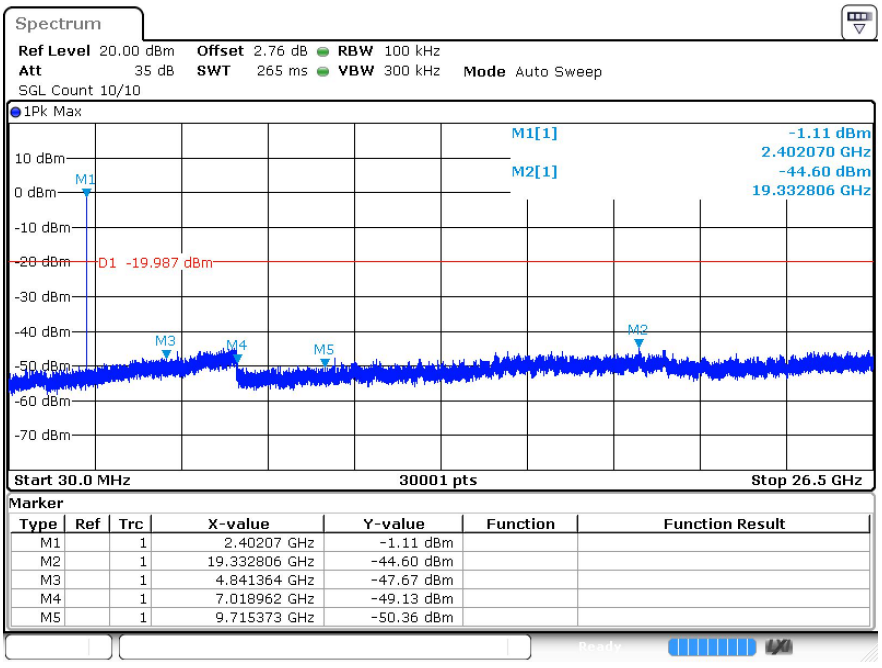


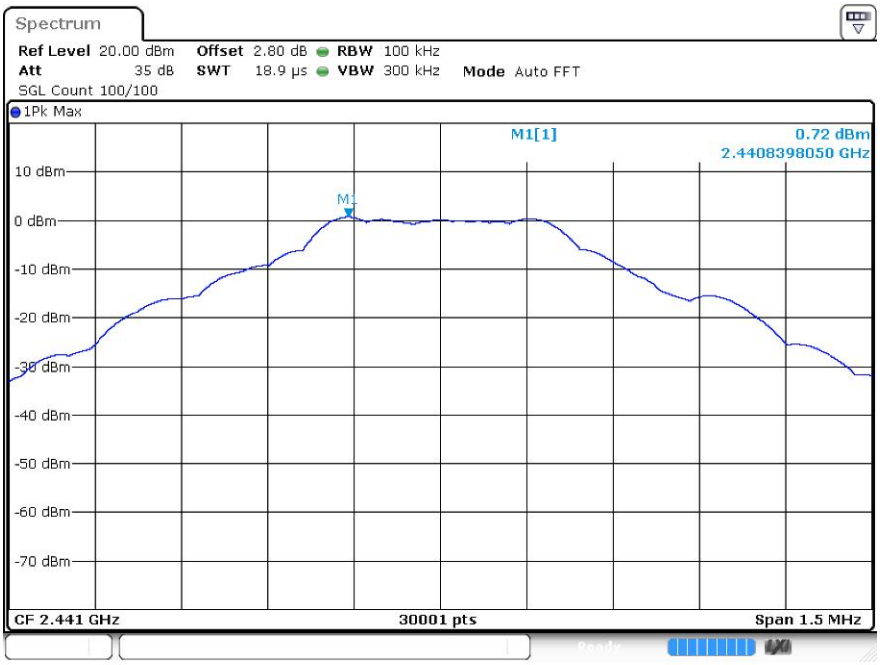
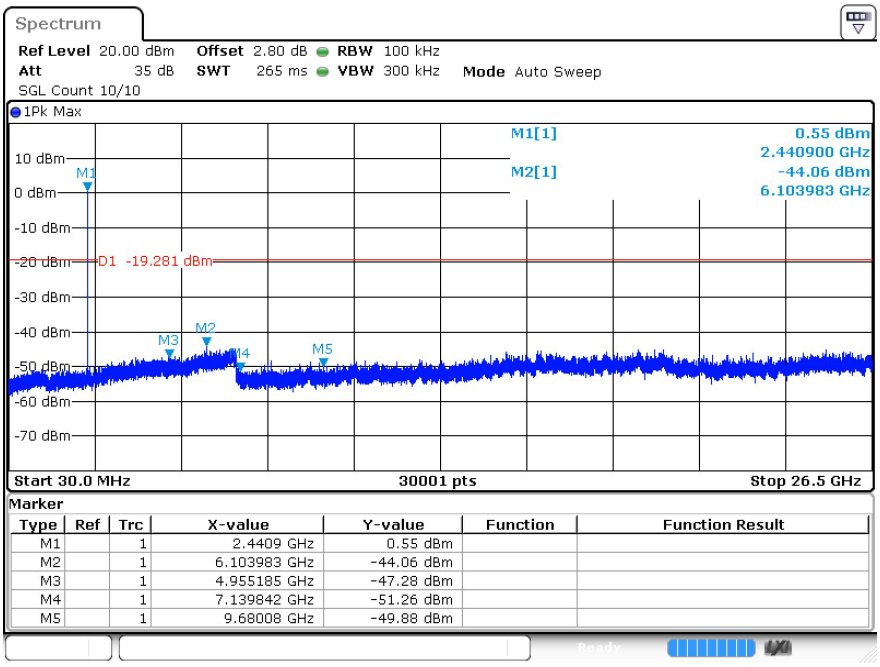
7 RF Conducted Spurious Emissions

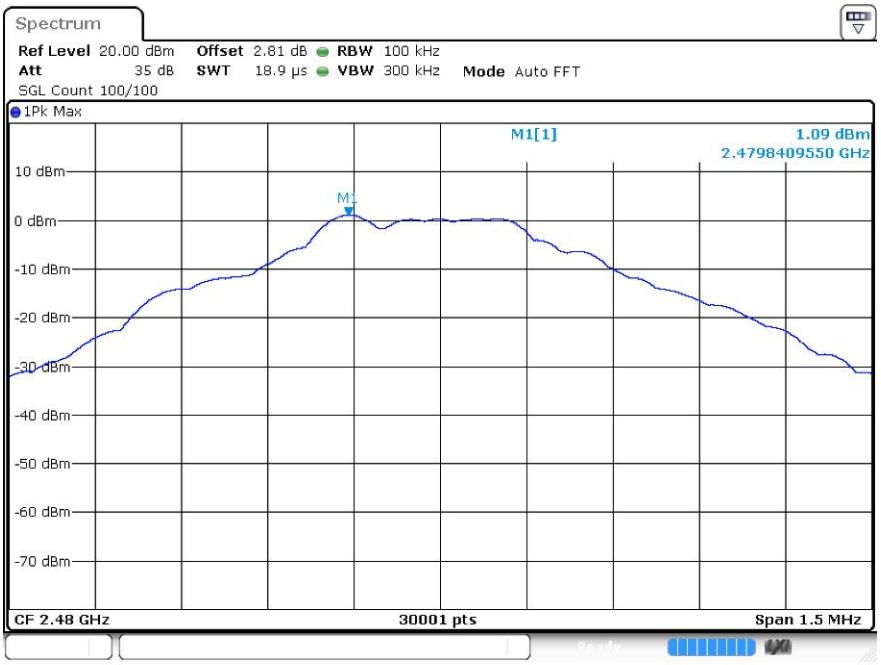
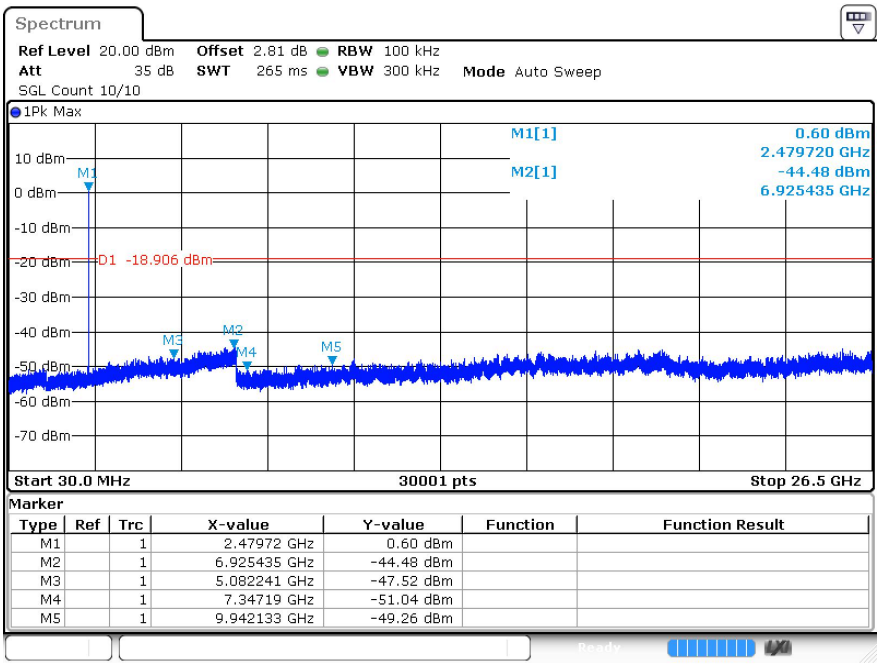
7.1 Test Result

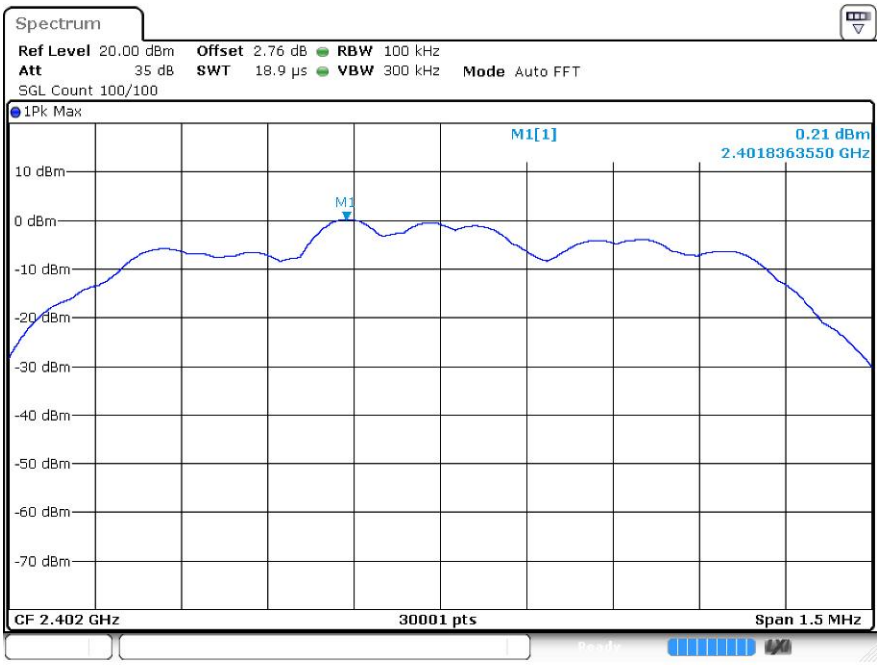
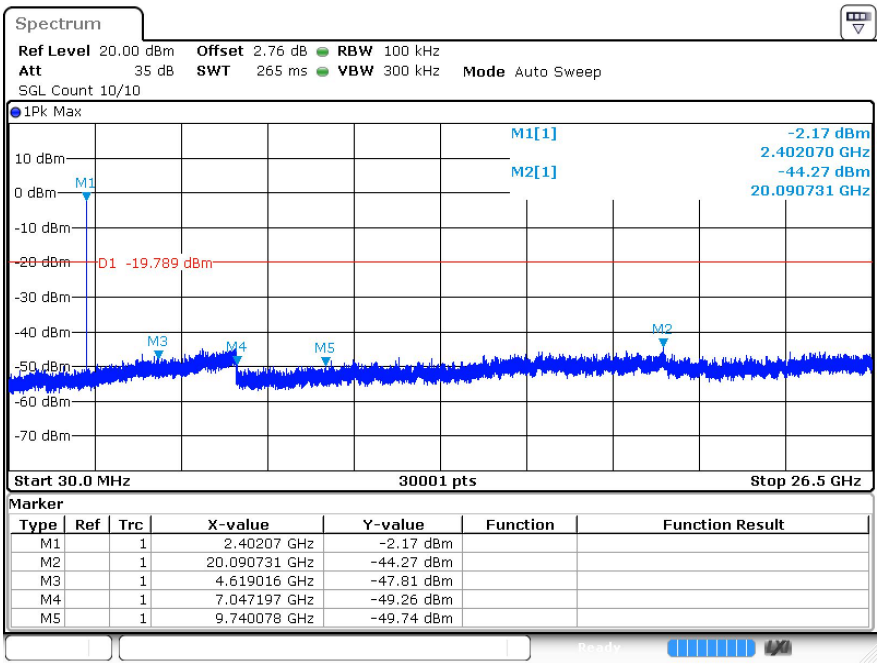
Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-44.6	-20	Pass
	MCH	-44.77	-20	Pass
	HCH	-45.57	-20	Pass
π/4DQPSK	LCH	-44.47	-20	Pass
	MCH	-44.3	-20	Pass
	HCH	-44.32	-20	Pass

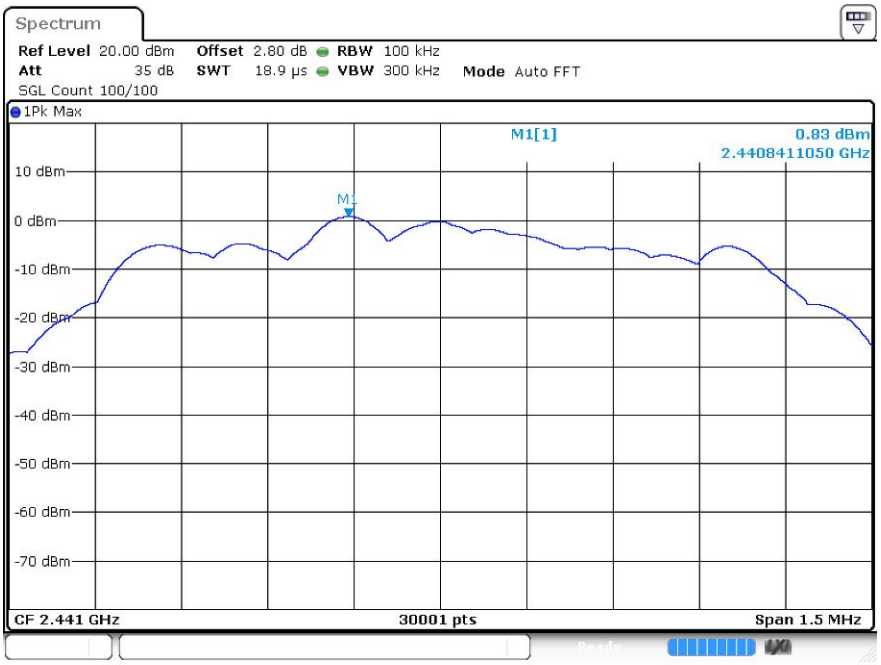
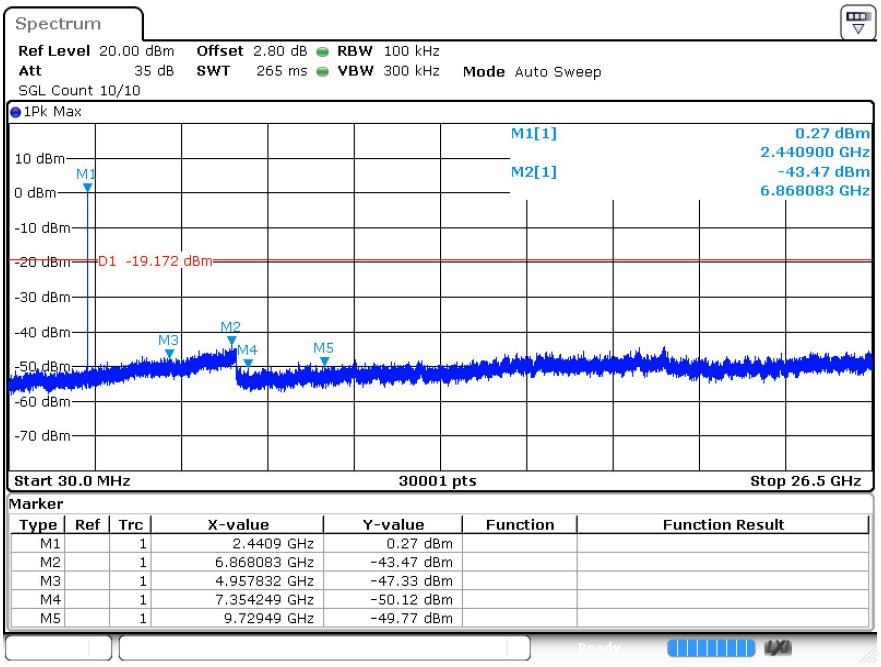
7.2 Test Graphs

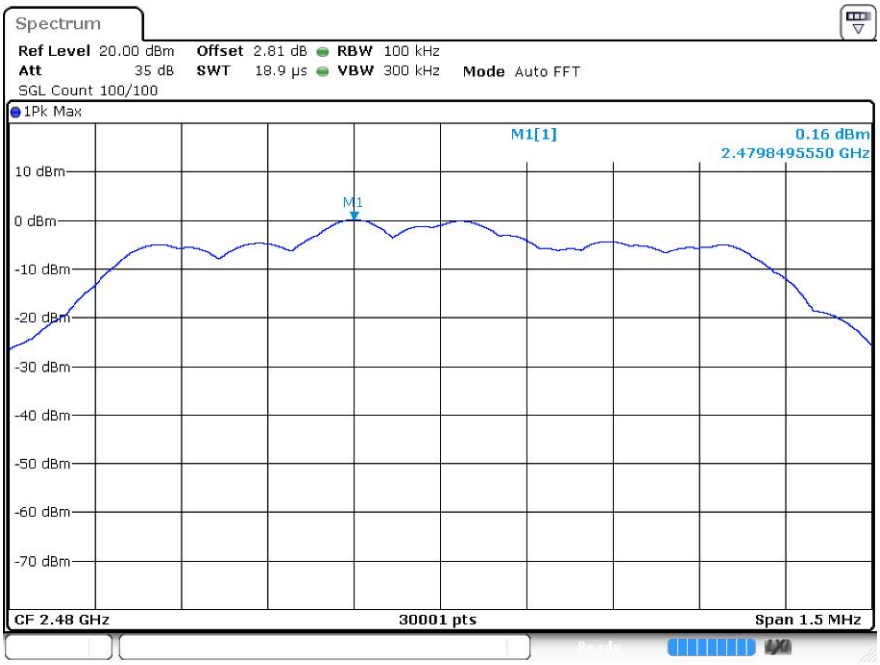
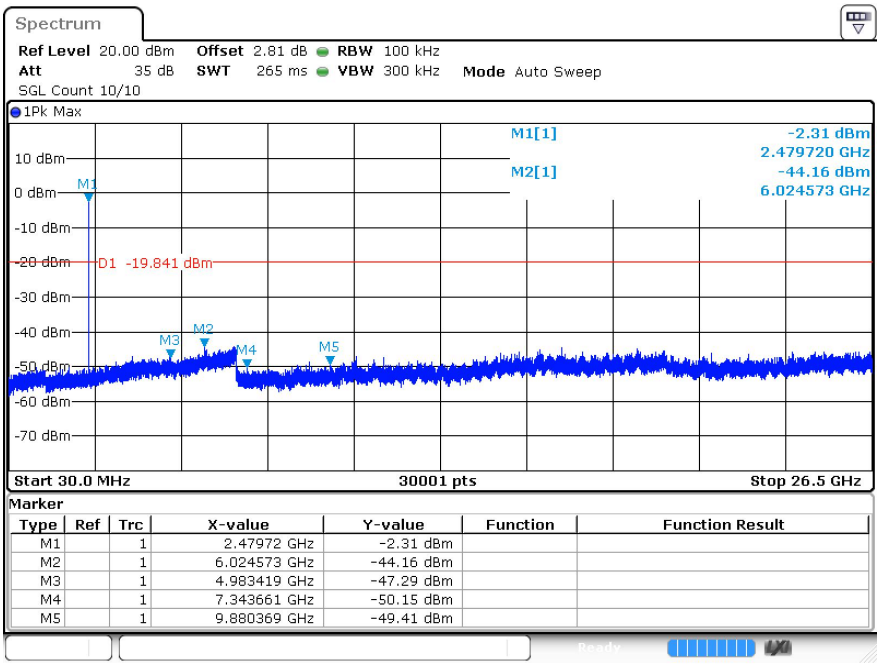
GFSK_LCH_Graphs	
Pref	
Puw	

GFSK_MCH_Graphs	
Pref	
Puw	

GFSK_HCH_Graphs	
Pref	
Puw	 Marker Type | Ref | Trc | X-value | Y-value | Function | Function Result M1 | 1 | 2.47972 GHz | 0.60 dBm M2 | 1 | 6.925435 GHz | -44.48 dBm M3 | 1 | 5.082241 GHz | -47.52 dBm M4 | 1 | 7.34719 GHz | -51.04 dBm M5 | 1 | 9.942133 GHz | -49.26 dBm

π/4DQPSK_LCH_Graphs	
Pref	
Puw	 Marker Type | Ref | Trc | X-value | Y-value | Function | Function Result M1 | | 1 | 2.40207 GHz | -2.17 dBm | | M2 | | 1 | 20.090731 GHz | -44.27 dBm | | M3 | | 1 | 4.619016 GHz | -47.81 dBm | | M4 | | 1 | 7.047197 GHz | -49.26 dBm | | M5 | | 1 | 9.740078 GHz | -49.74 dBm | |

π/4DQPSK_MCH_Graphs	
Pref	
Puw	

π/4DQPSK_HCH_Graphs	
Pref	
Puw	

8 Band-edge for RF Conducted Emissions

8.1 Test Result

Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	-53.88	-20	Pass
			On	-53.91	-20	Pass
	HCH	2480	Off	-53.83	-20	Pass
			On	-52.68	-20	Pass
π/4DQPSK	LCH	2402	Off	-52.97	-20	Pass
			On	-52.96	-20	Pass
	HCH	2480	Off	-52.2	-20	Pass
			On	-52.33	-20	Pass