Appendix A

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

Product Name: Media Player

Trade Mark: N/A

Test Model: YFX51

Environmental Conditions

Temperature:	25.8℃
Relative Humidity:	52.4%
ATM Pressure:	101Kpa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen

Contents

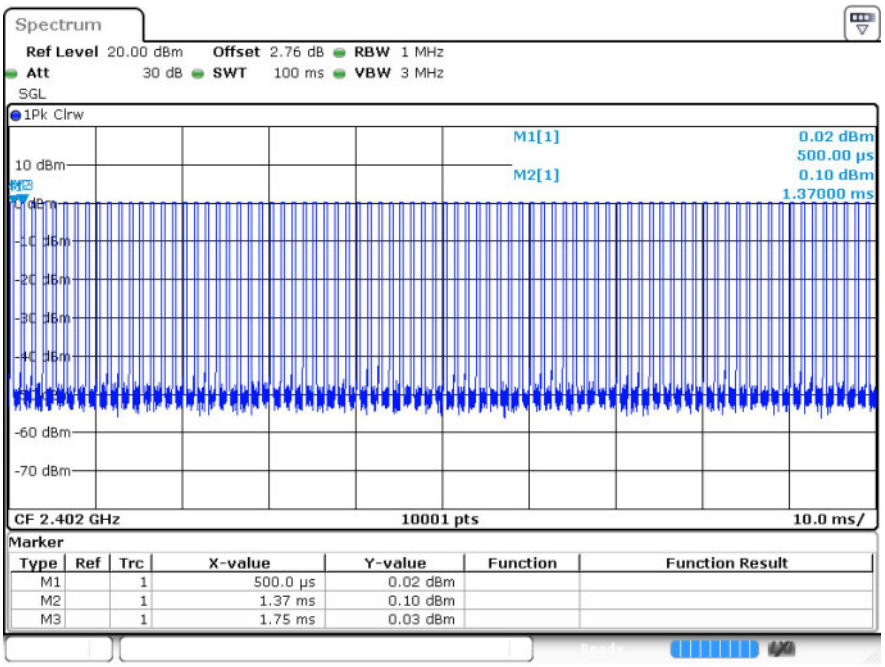
1 Duty Cycle

1.1 Test Result

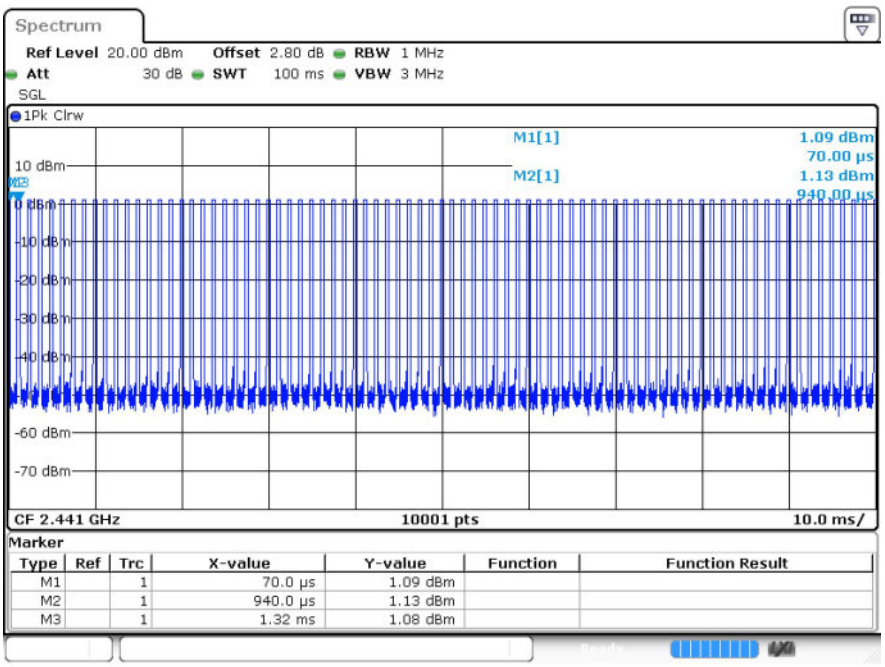
Mode	Frequency (MHz)	Duty Cycle (%)	1/T (kHz)	Factor (dB)
1-DH1	2402	31.2	2.63	5.06
1-DH1	2441	31.21	2.63	5.06
1-DH1	2480	31.43	2.63	5.03
2-DH1	2402	32	2.56	4.95
2-DH1	2441	32.04	2.56	4.94
2-DH1	2480	32	2.56	4.95

1.2 Test Graphs

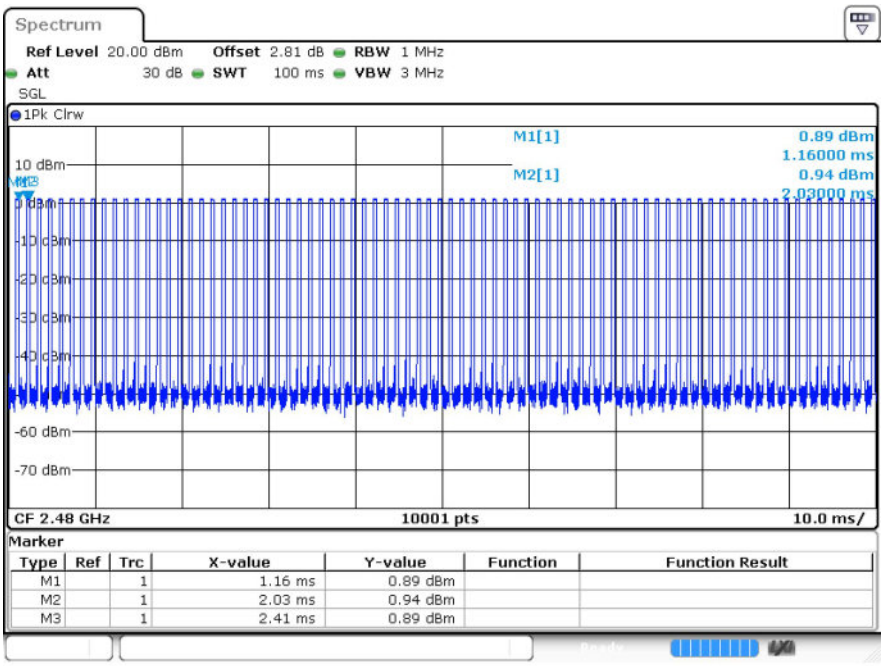
Test Graphs
1-DH1 2402MHz



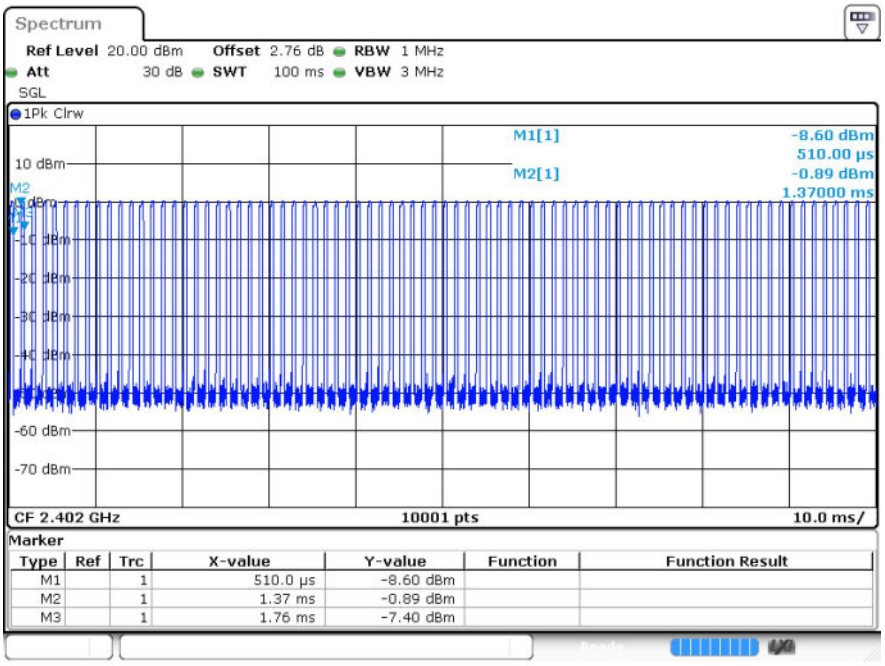
1-DH1 2441MHz



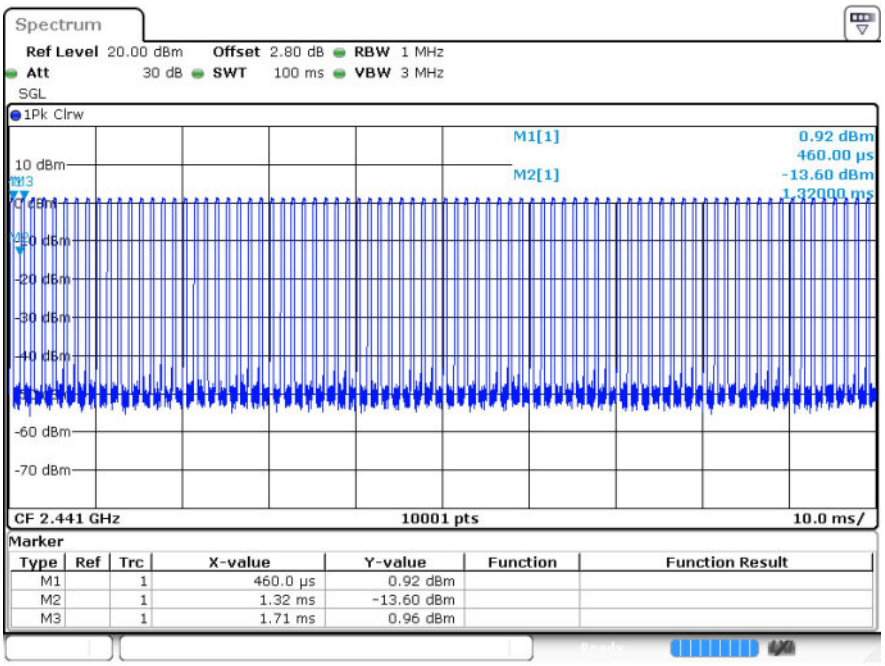
1-DH1 2480MHz



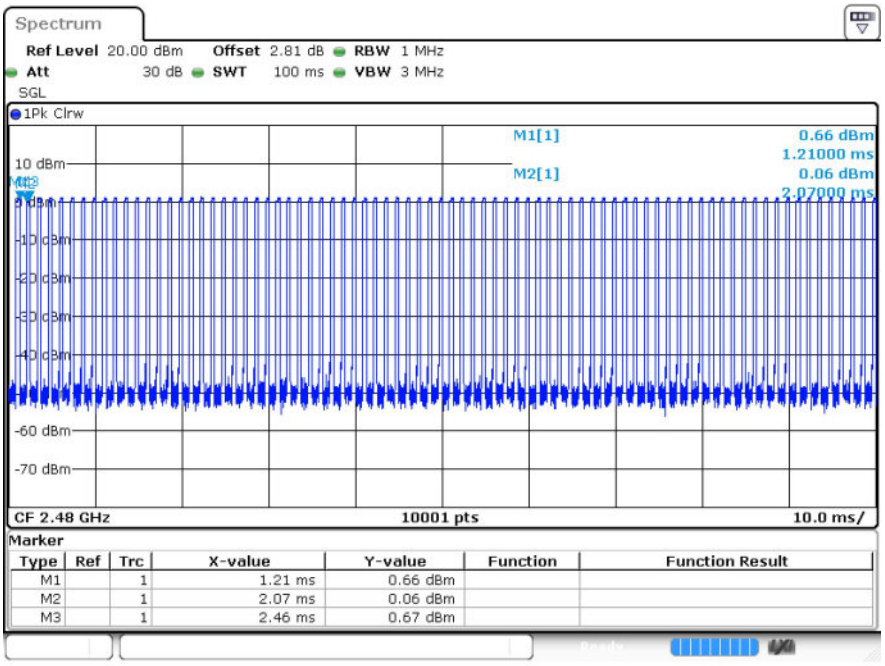
2-DH1 2402MHz



2-DH1 2441MHz



2-DH1 2480MHz

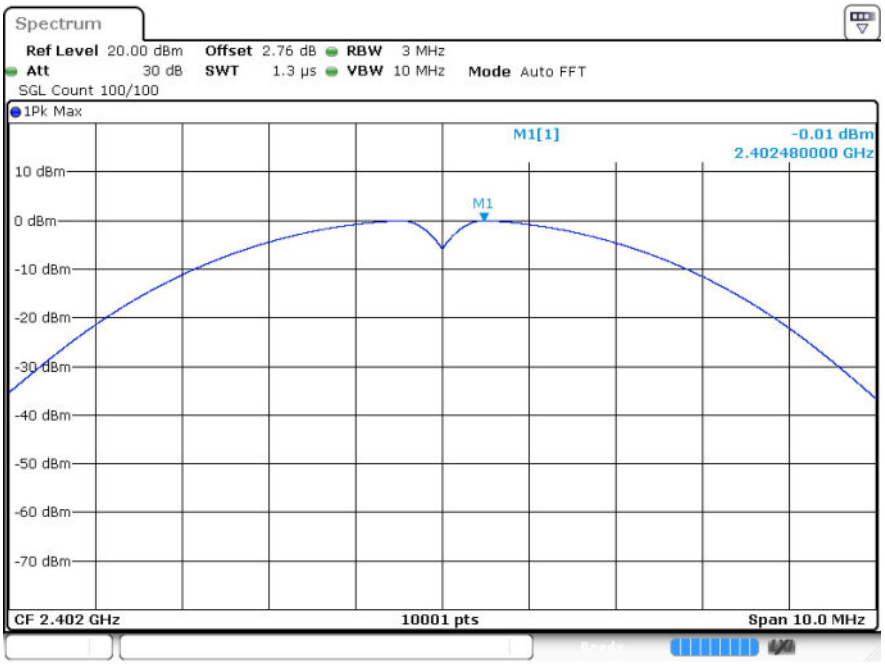
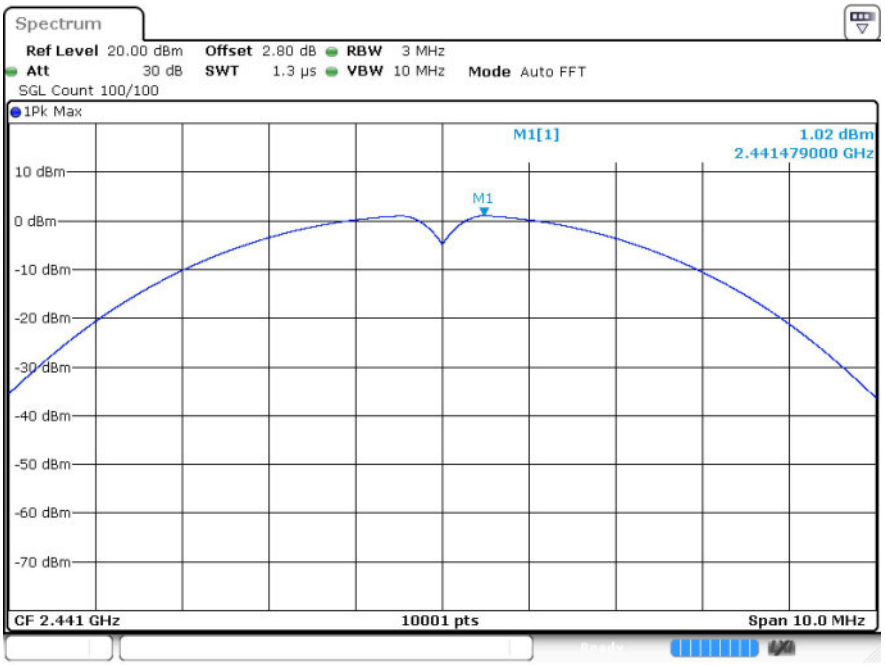


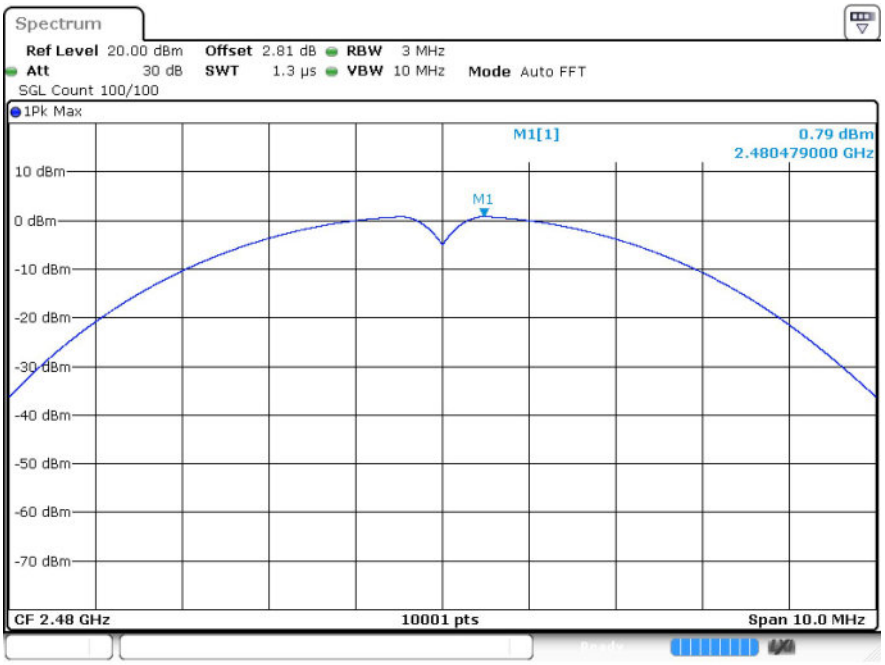
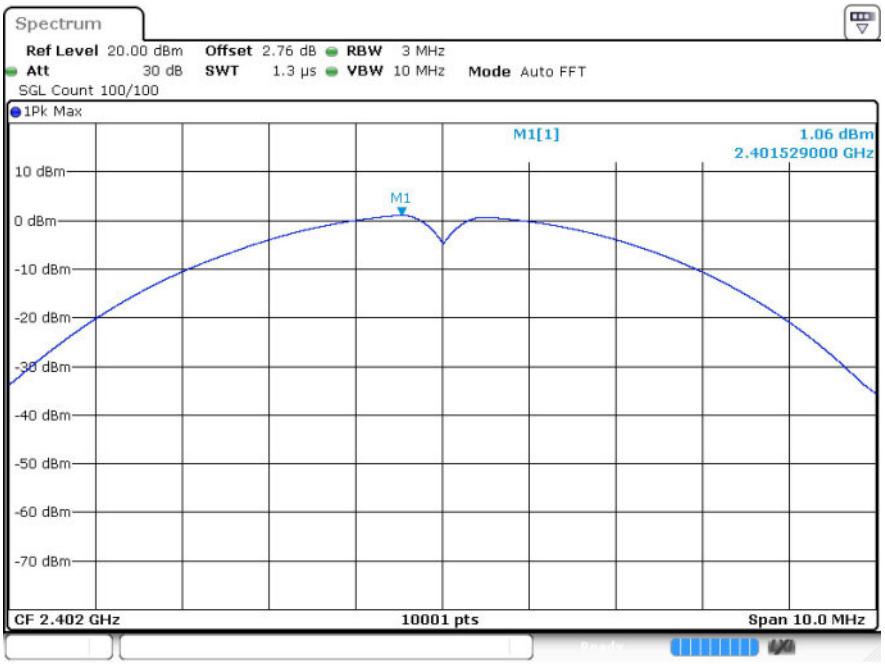
2 Maximum Conducted Peak Output Power

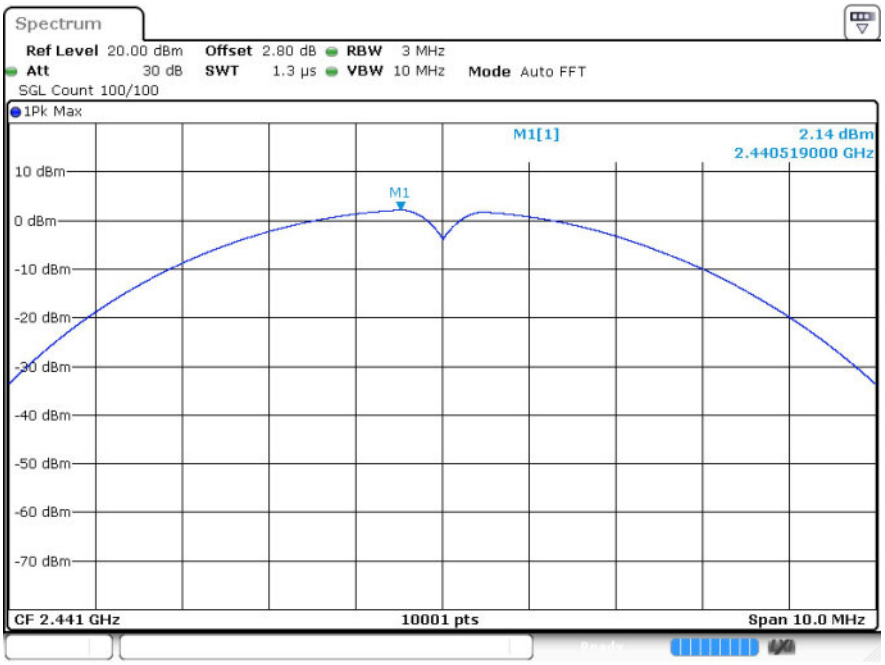
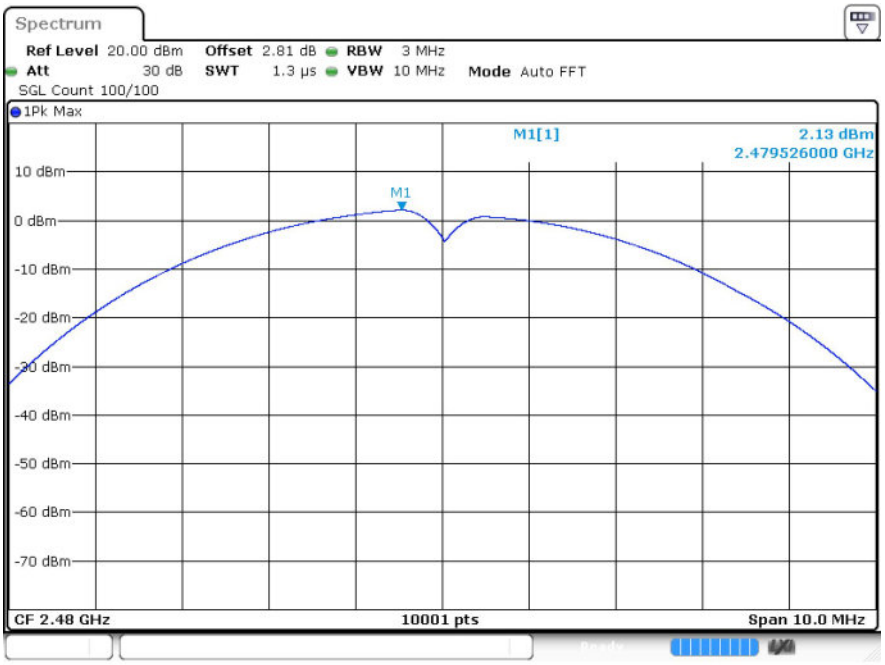
2.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.01	21	Pass
	MCH	1.02	21	Pass
	HCH	0.79	21	Pass
π/4DQPSK	LCH	1.06	21	Pass
	MCH	2.14	21	Pass
	HCH	2.13	21	Pass

2.2 Test Graphs

Test Graphs	
GFSK/LCH	
GFSK/MCH	

GFSK/HCH	
π/4DQPSK/LCH	

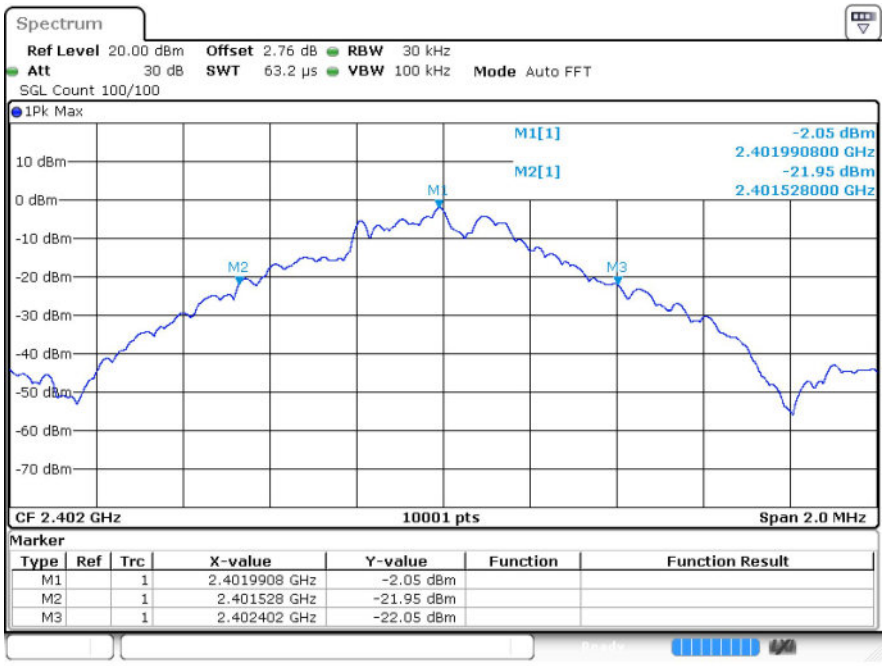
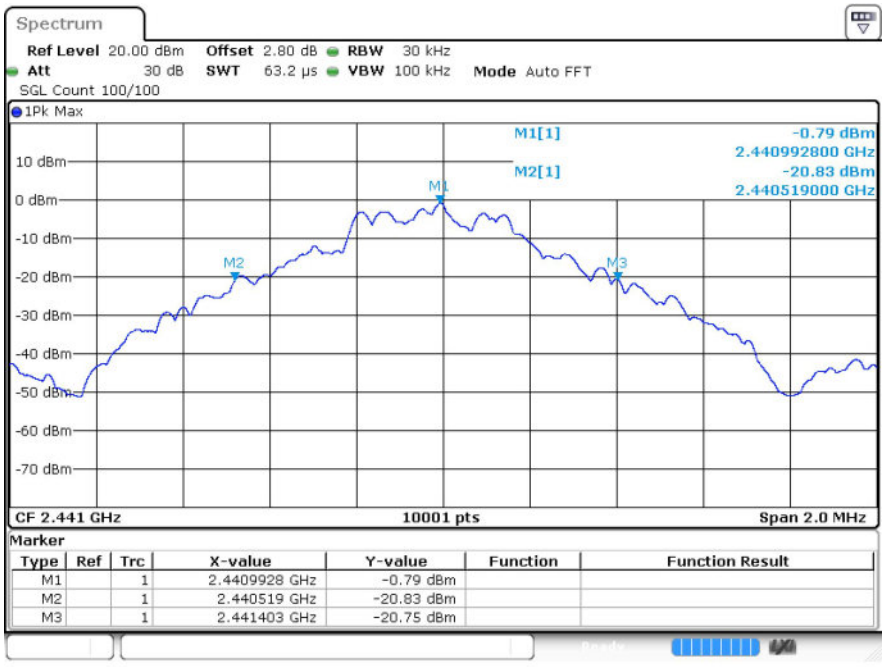
π/4DQPSK/MCH	
π/4DQPSK/HCH	

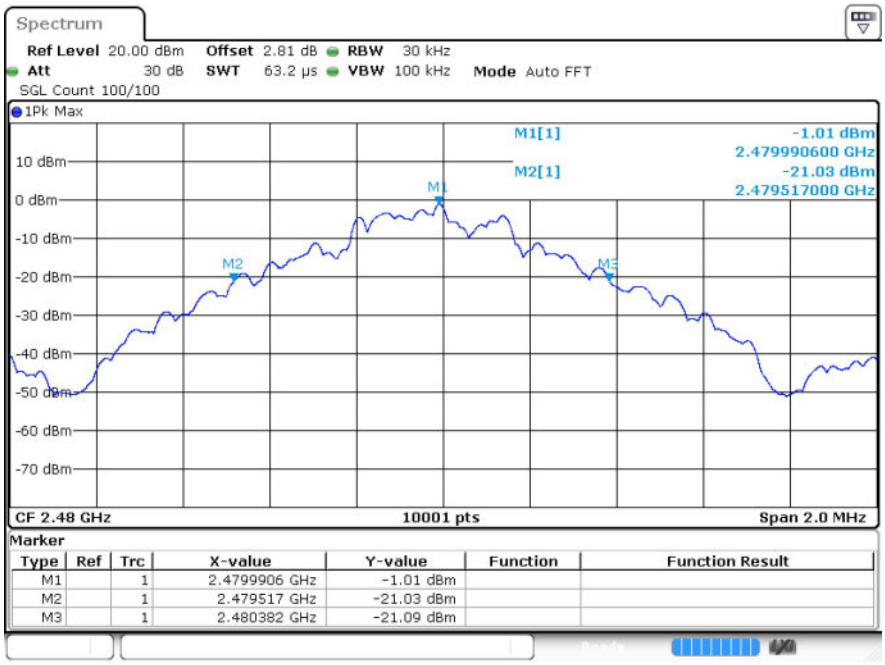
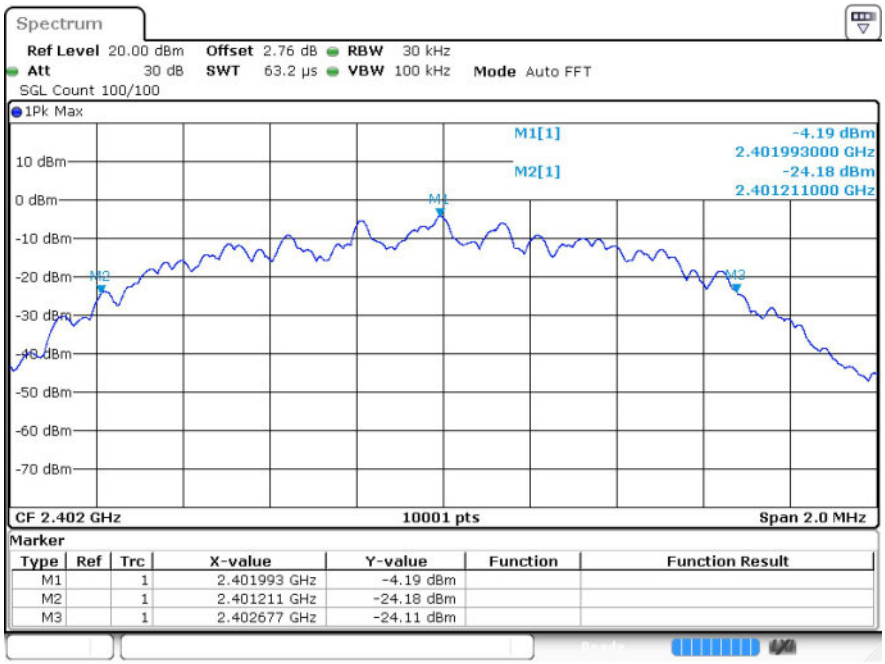
3 20dB Bandwidth

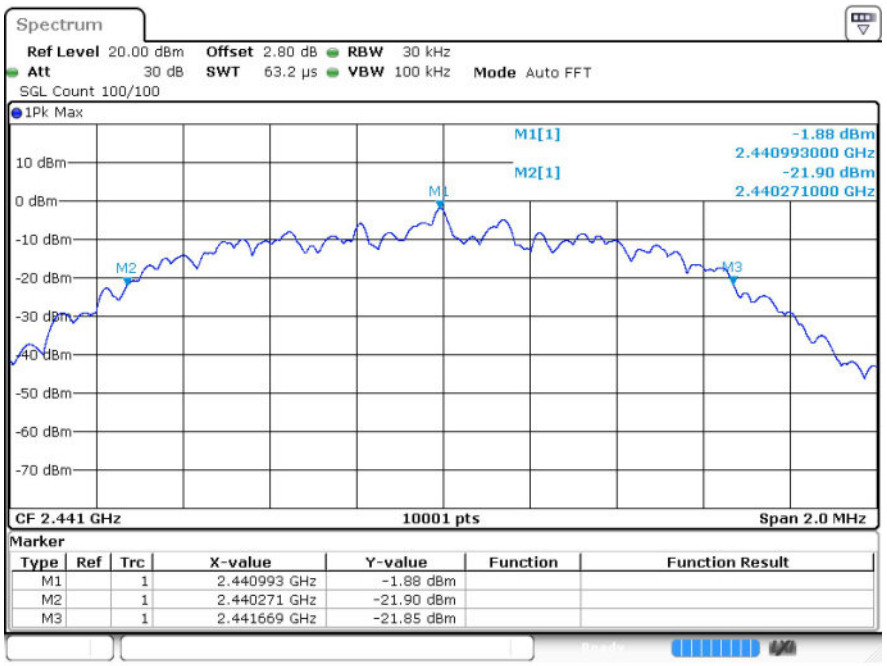
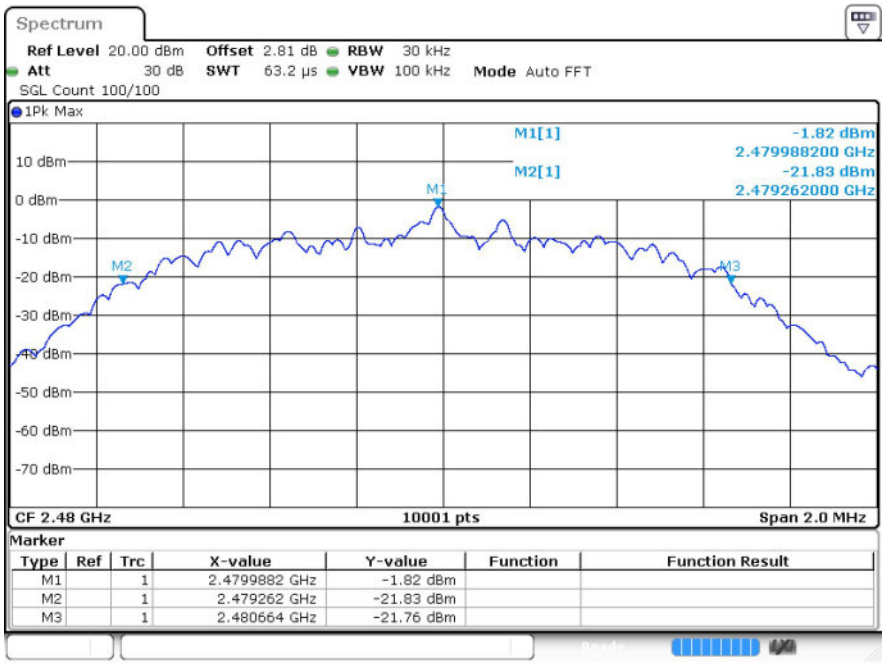
3.1 Test Result

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.874	Not Specified	Pass
	MCH	0.884	Not Specified	Pass
	HCH	0.864	Not Specified	Pass
π/4DQPSK	LCH	1.466	Not Specified	Pass
	MCH	1.398	Not Specified	Pass
	HCH	1.402	Not Specified	Pass

3.2 Test Graphs

Test Graphs	
GFSK/LCH	
GFSK/MCH	

GFSK/HCH	
π/4DQPSK/LCH	

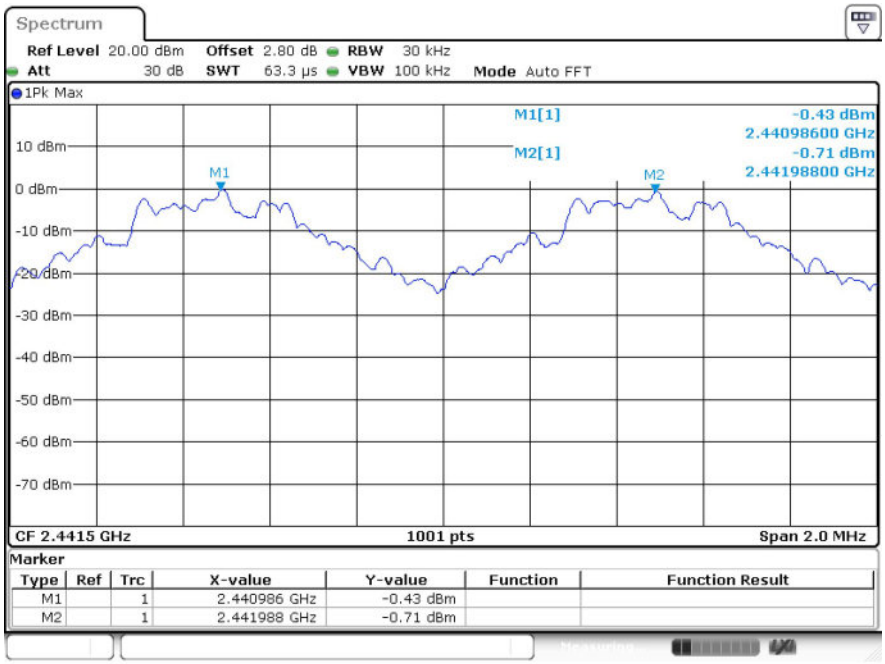
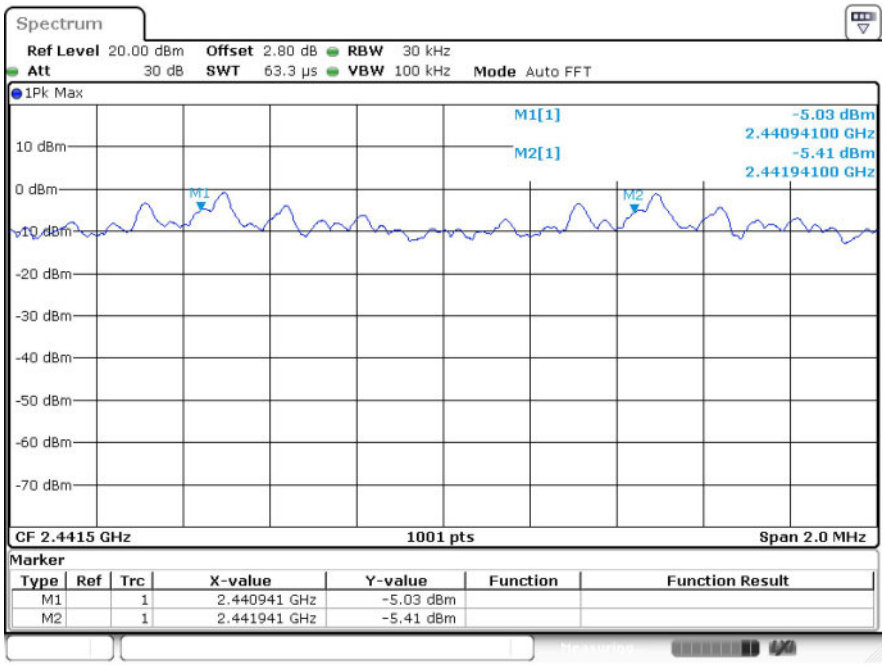
π/4DQPSK/MCH	
π/4DQPSK/HCH	

4 Carrier Frequency Separation

4.1 Test Result

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	MCH	1.002	0.589	Pass
π/4DQPSK	MCH	1	0.932	Pass

4.2 Test Graphs

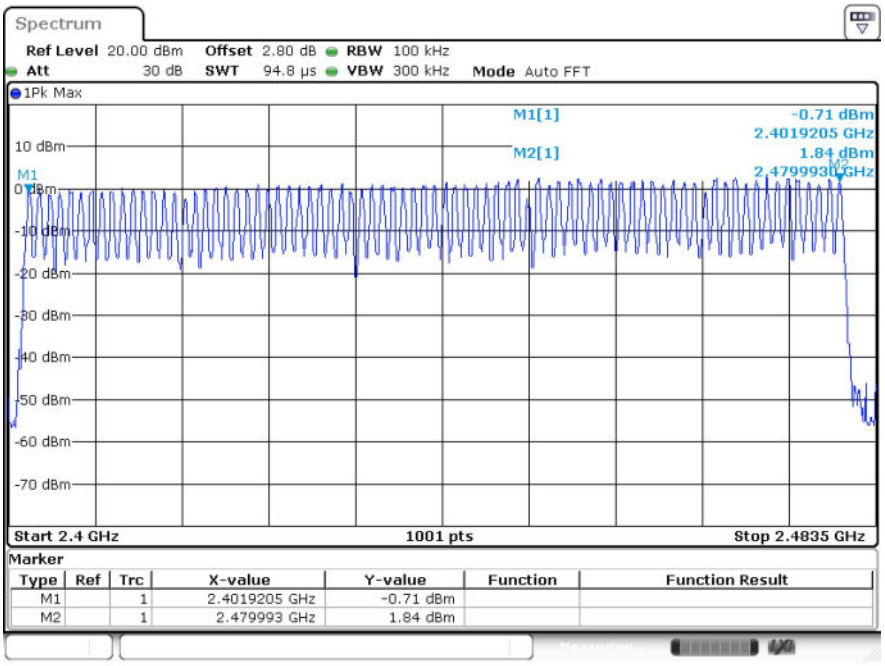
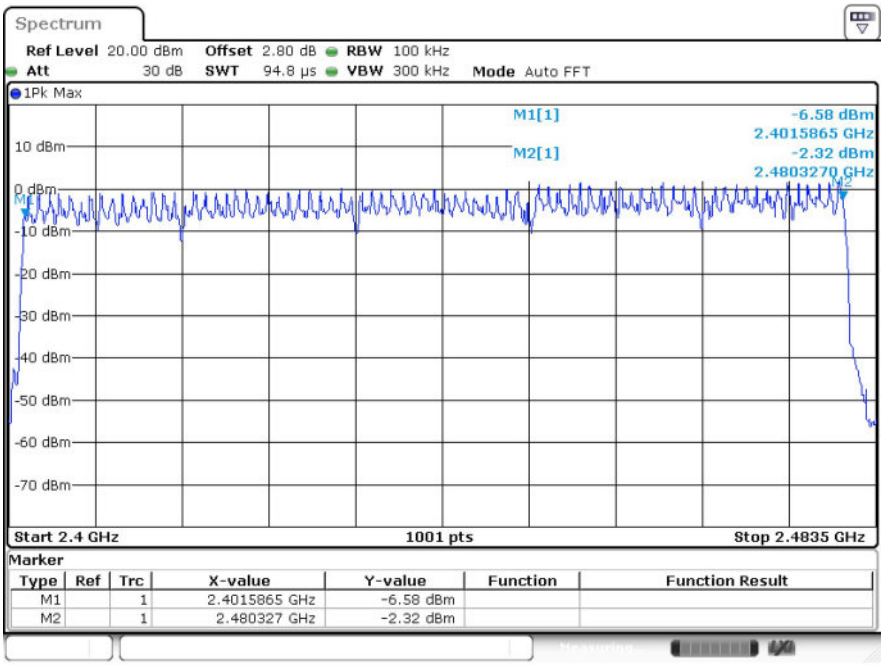
Test Graphs	
GFSK/MCH	
π/4DQPSK/MCH	

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

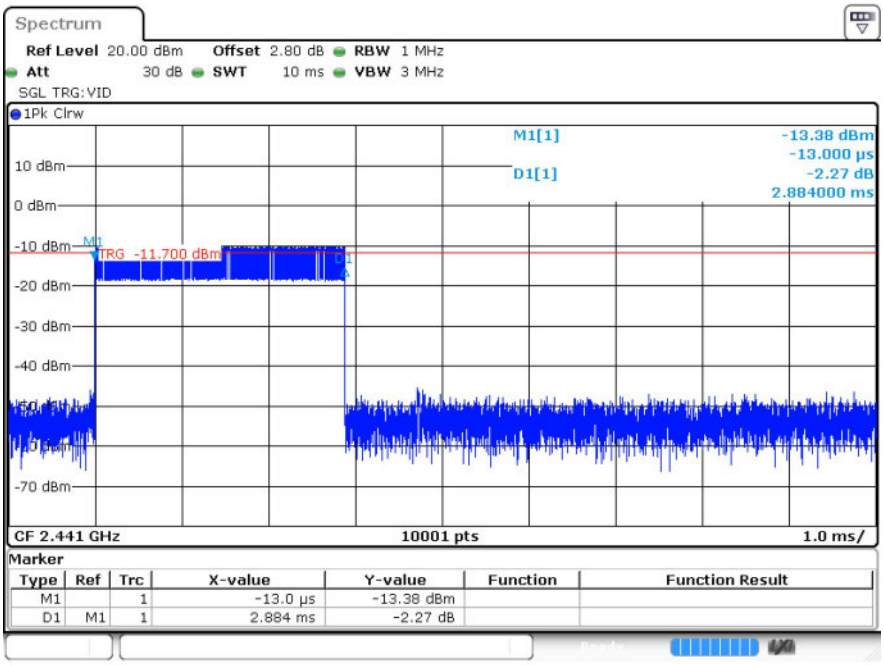
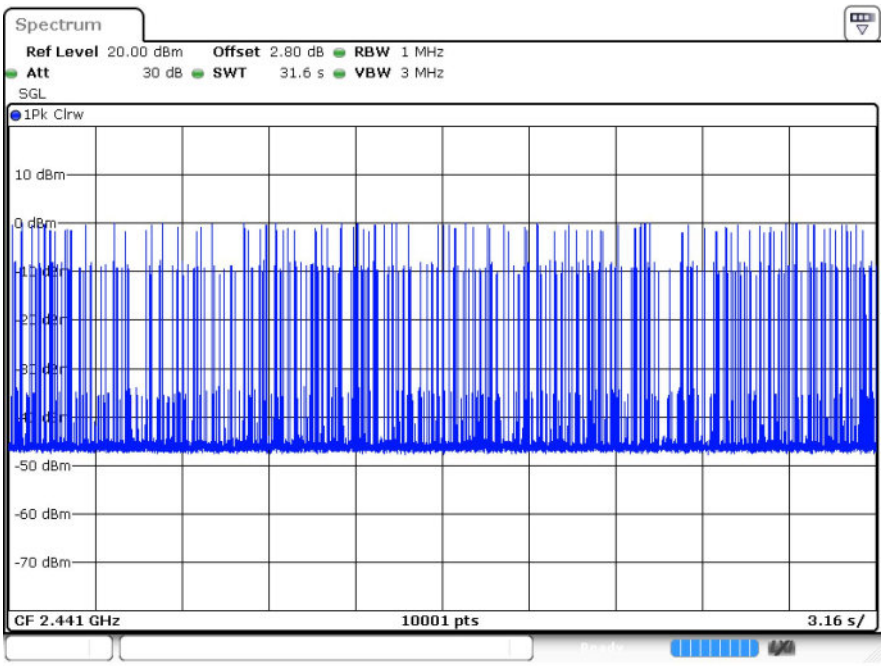
Test Graphs	
GFSK/Hop	
π/4DQPSK/Hop	

6 Dwell Time

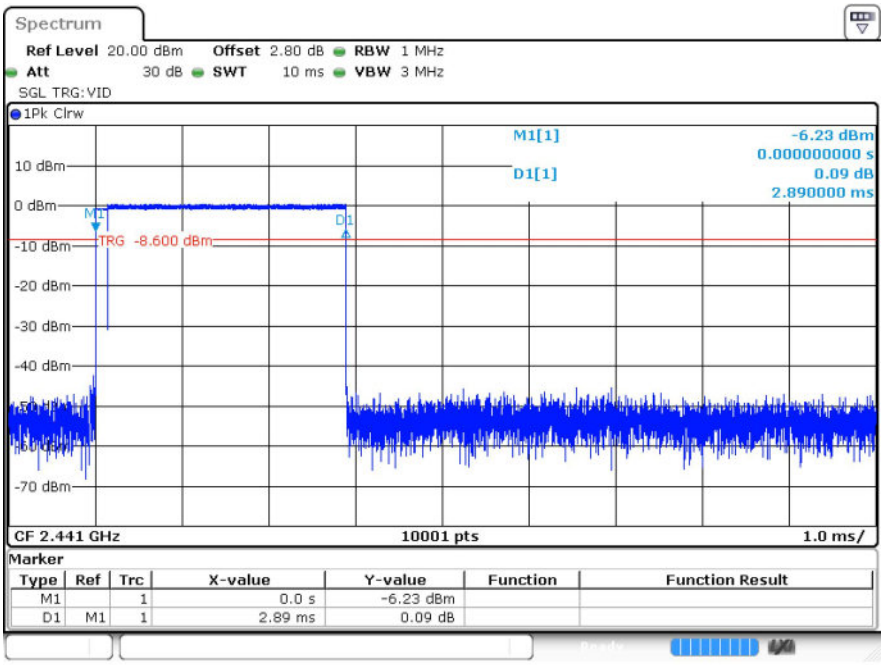
6.1 Test Result

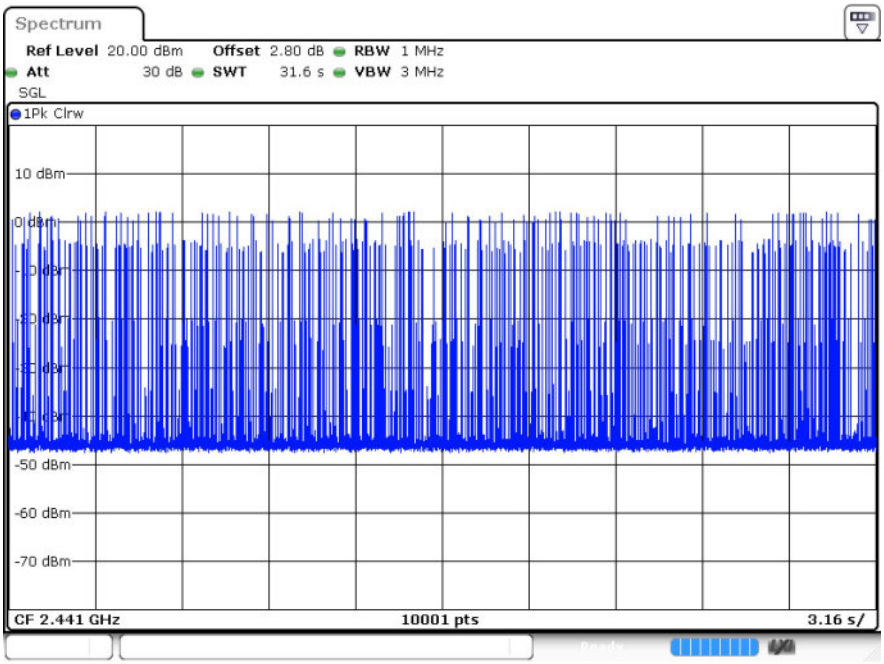
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.884	112	323.008	0.4	Pass
π/4DQPSK	2DH5	MCH	2.89	111	320.79	0.4	Pass

6.2 Test Graphs

Test Graphs	
GFSK_DH5/MCH	 

π/4DQPSK
_2DH5/MCH



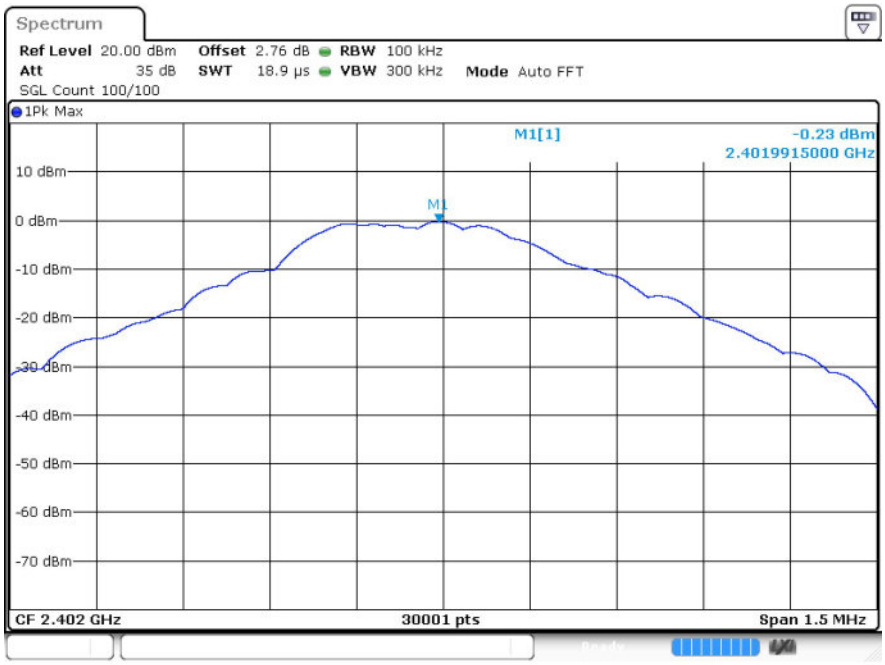
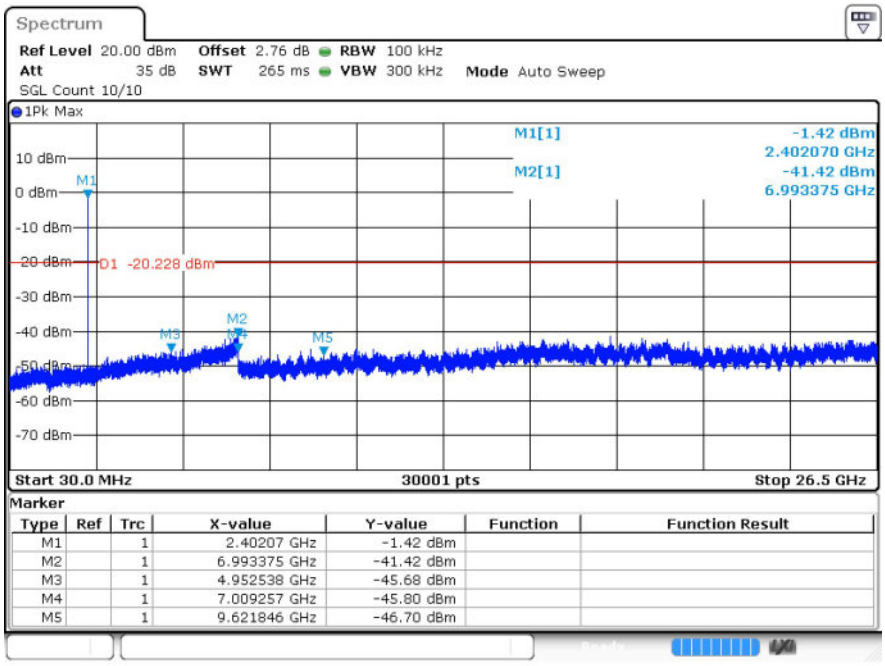


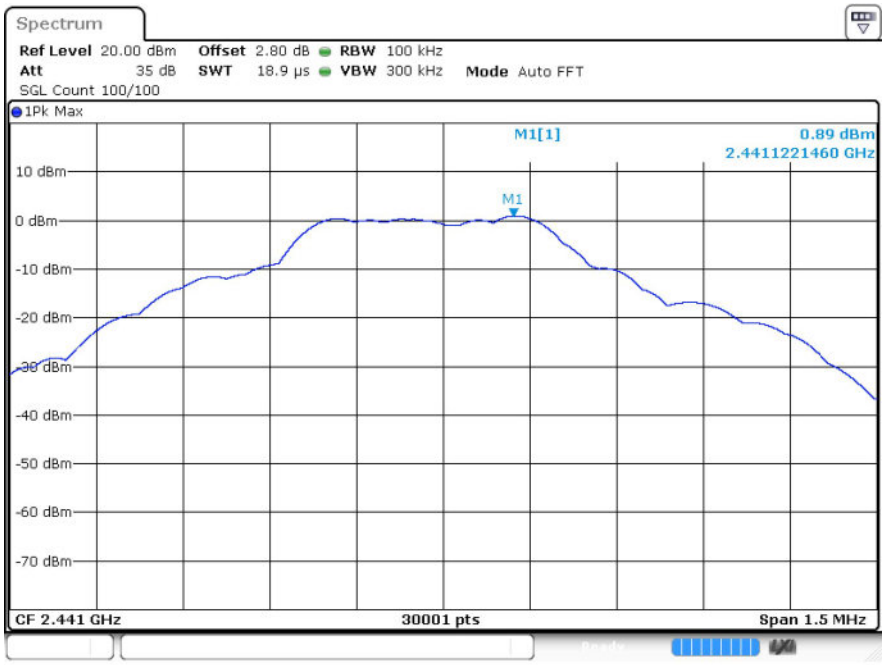
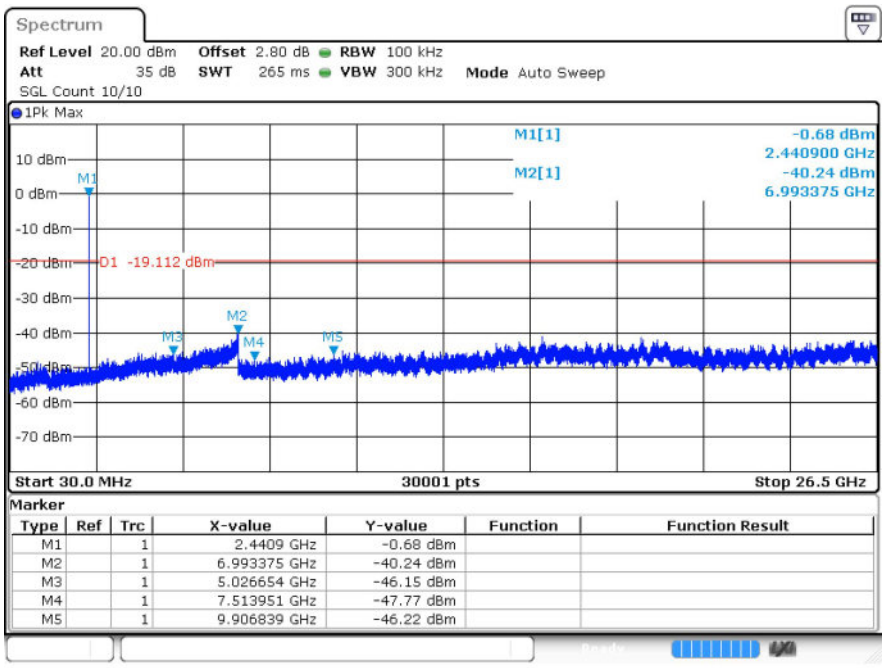
7 RF Conducted Spurious Emissions

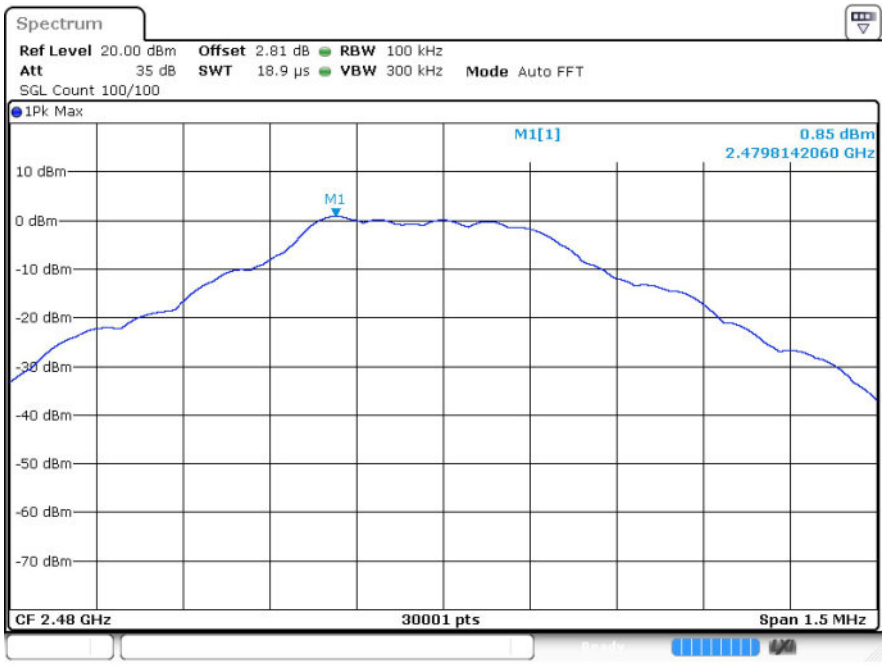
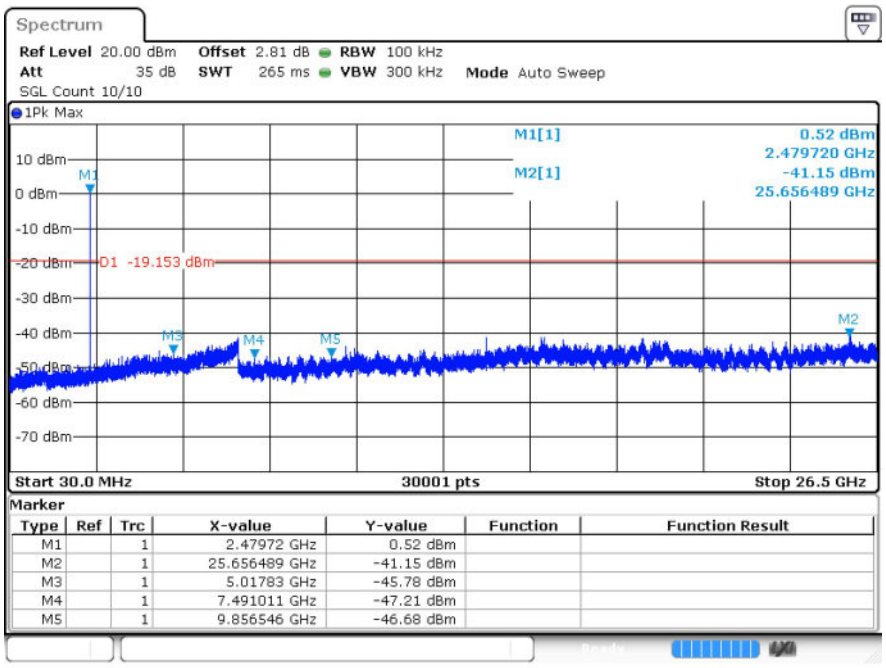
7.1 Test Result

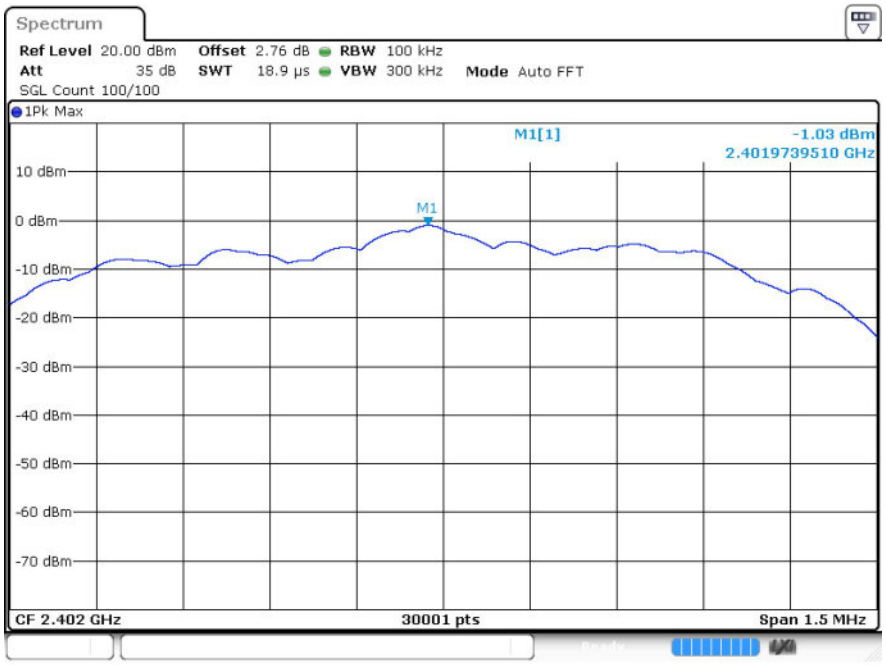
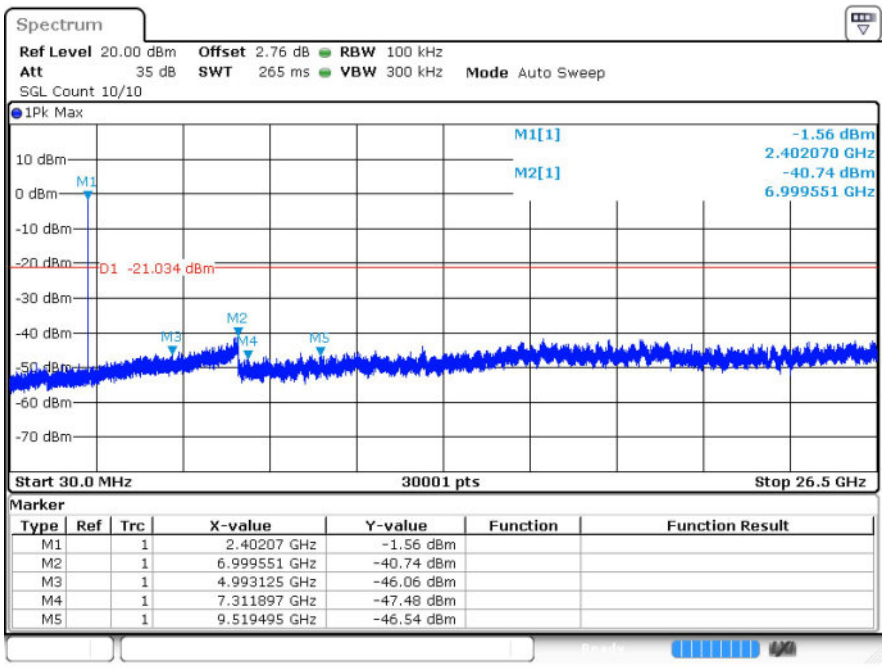
Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-41.19	-20	Pass
	MCH	-41.12	-20	Pass
	HCH	-41.99	-20	Pass
π/4DQPSK	LCH	-39.71	-20	Pass
	MCH	-40.44	-20	Pass
	HCH	-39.71	-20	Pass

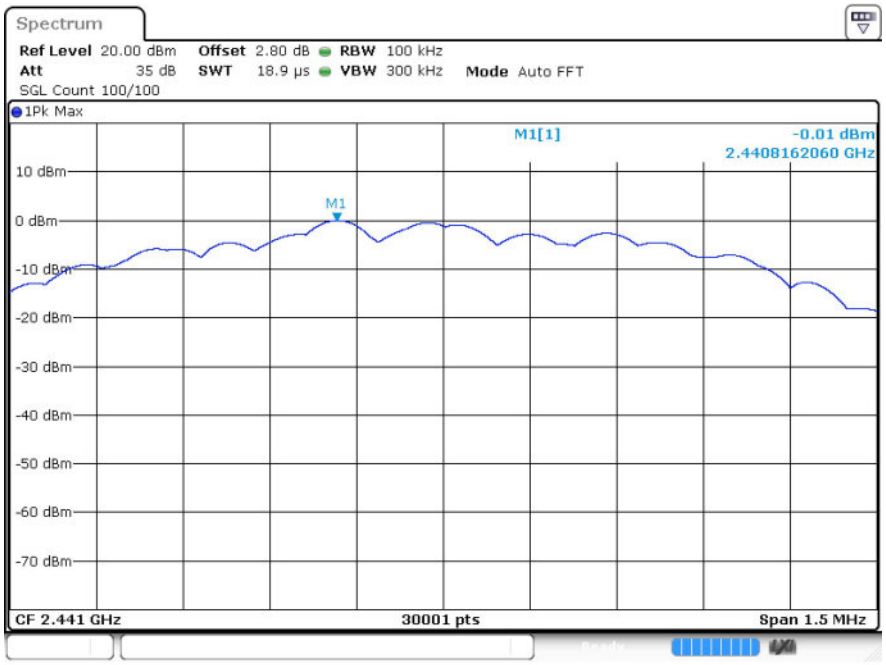
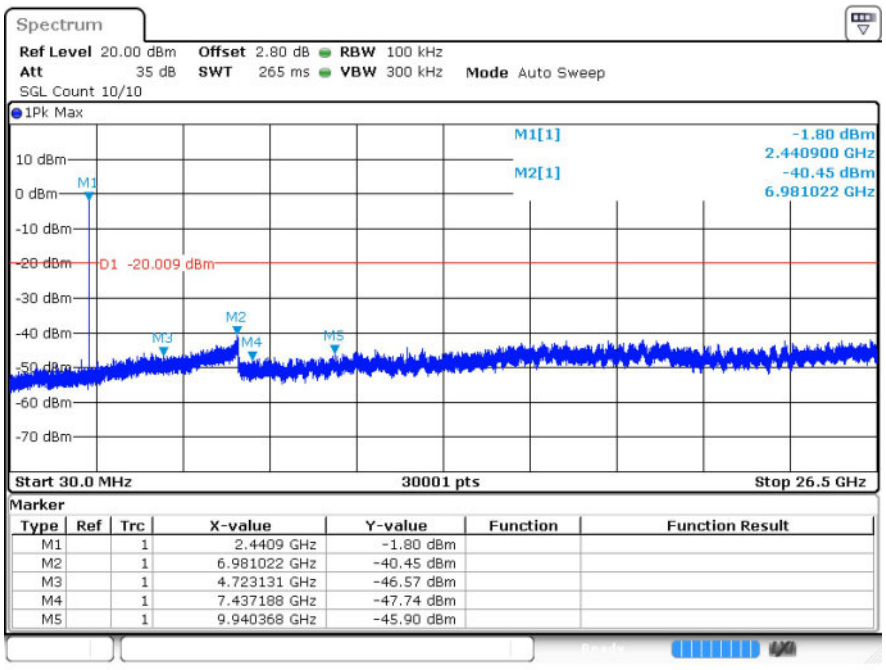
7.2 Test Graphs

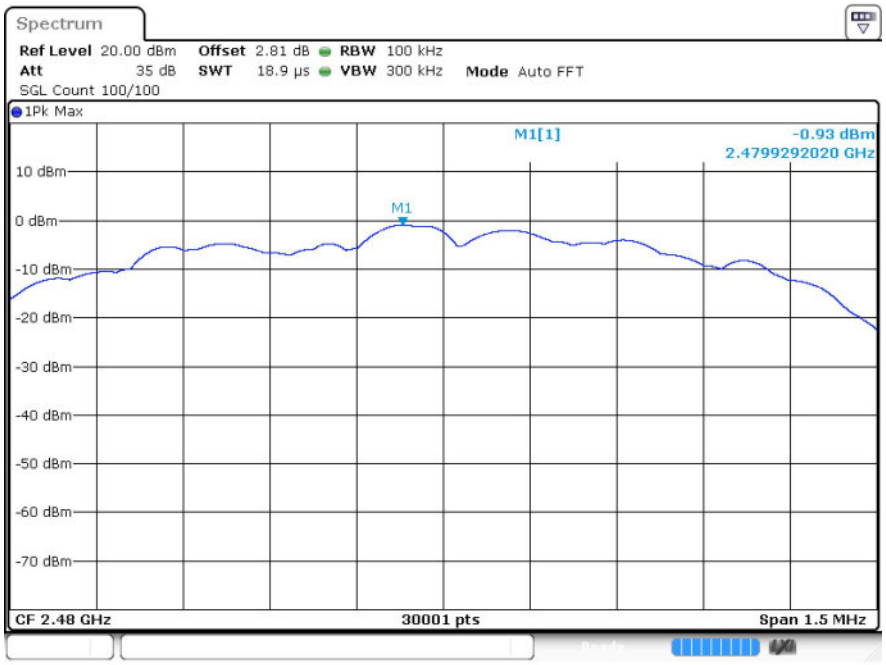
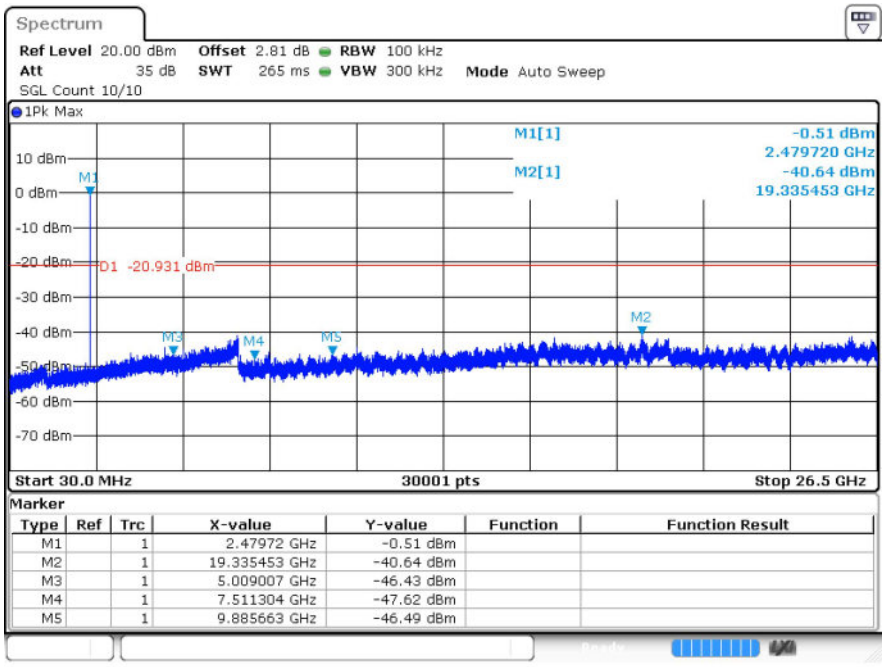
GFSK_LCH_Graphs	
Pref	
Puw	

GFSK_MCH_Graphs	
Pref	
Puw	

GFSK_HCH_Graphs	
Pref	
Puw	

π/4DQPSK_LCH_Graphs	
Pref	
Puw	 Marker Type | Ref | Trc | X-value | Y-value | Function | Function Result M1 | 1 | 2.40207 GHz | -1.56 dBm M2 | 1 | 6.999551 GHz | -40.74 dBm M3 | 1 | 4.993125 GHz | -46.06 dBm M4 | 1 | 7.311897 GHz | -47.48 dBm M5 | 1 | 9.519495 GHz | -46.54 dBm

π/4DQPSK_MCH_Graphs	
Pref	
Puw	 Marker Type | Ref | Trc | X-value | Y-value | Function | Function Result M1 | 1 | 2.4409 GHz | -1.80 dBm M2 | 1 | 6.981022 GHz | -40.45 dBm M3 | 1 | 4.723131 GHz | -46.57 dBm M4 | 1 | 7.437188 GHz | -47.74 dBm M5 | 1 | 9.940368 GHz | -45.90 dBm

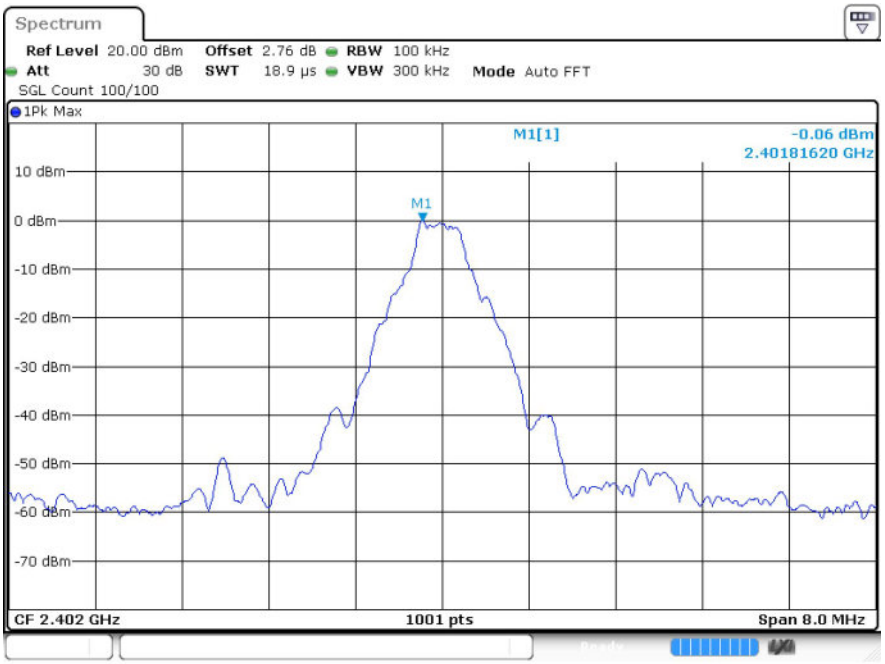
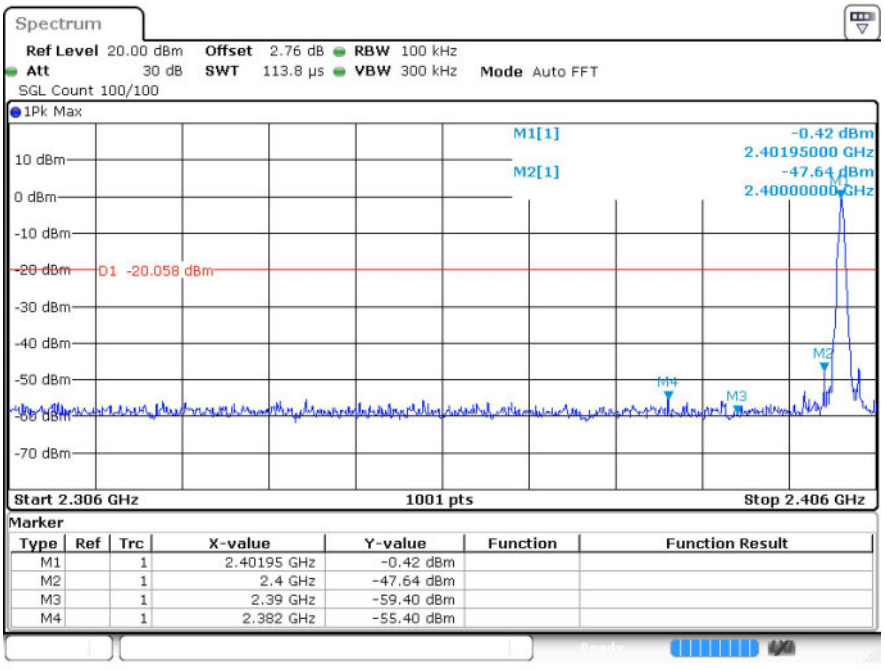
π/4DQPSK_HCH_Graphs	
Pref	
Puw	 Marker Type | Ref | Trc | X-value | Y-value | Function | Function Result M1 | 1 | 2.47972 GHz | -0.51 dBm M2 | 1 | 19.335453 GHz | -40.64 dBm M3 | 1 | 5.009007 GHz | -46.43 dBm M4 | 1 | 7.511304 GHz | -47.62 dBm M5 | 1 | 9.885663 GHz | -46.49 dBm

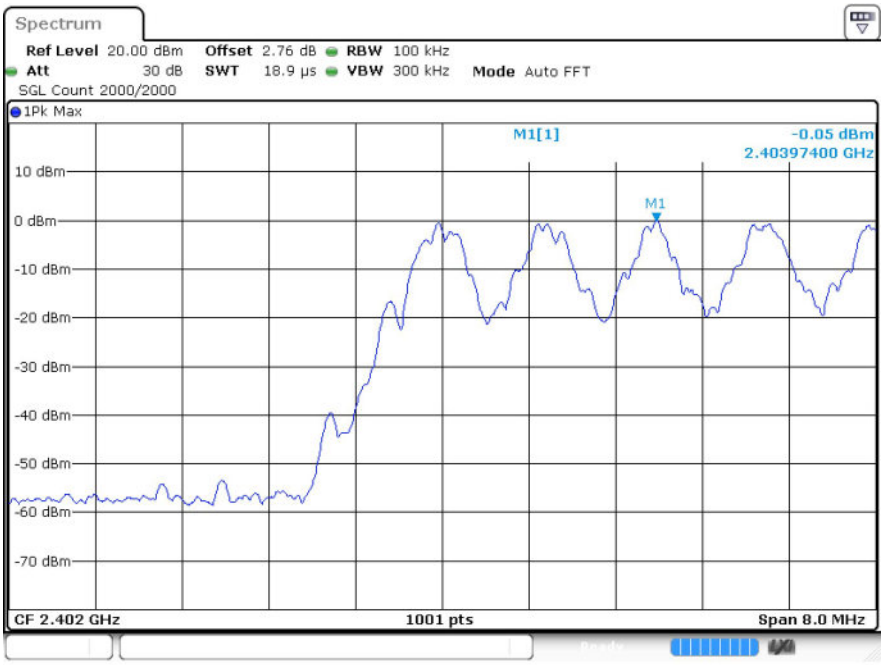
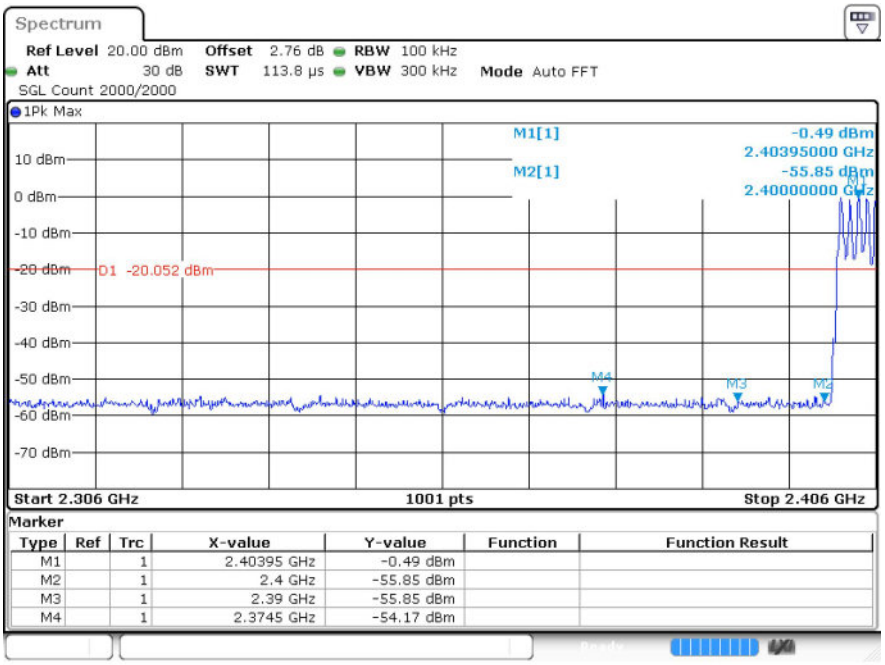
8 Band-edge for RF Conducted Emissions

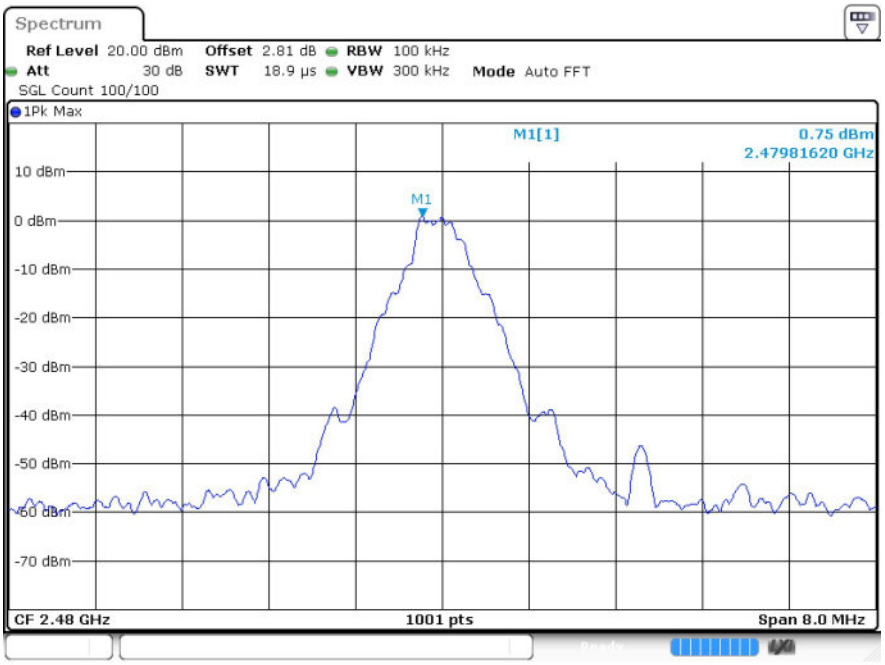
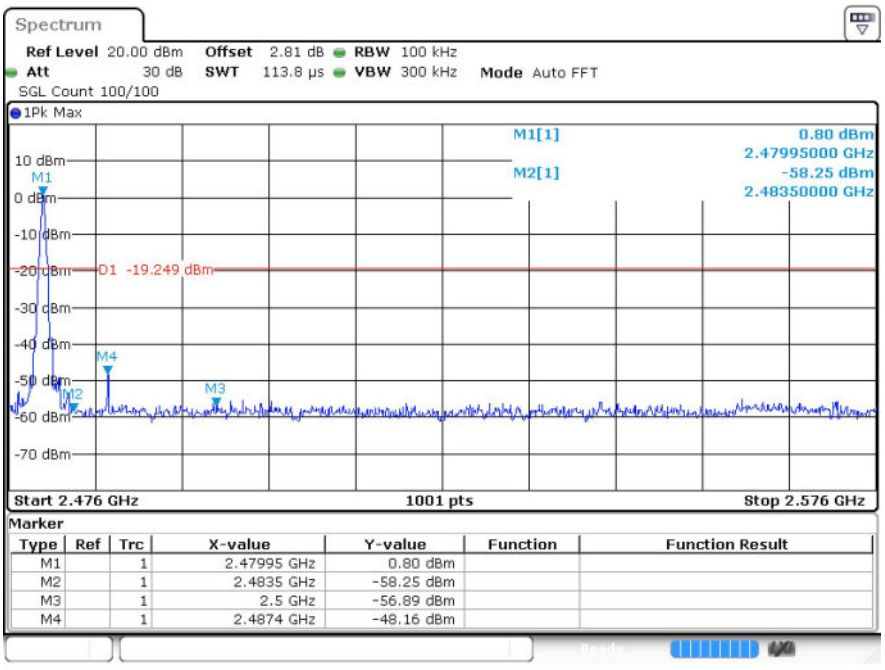
8.1 Test Result

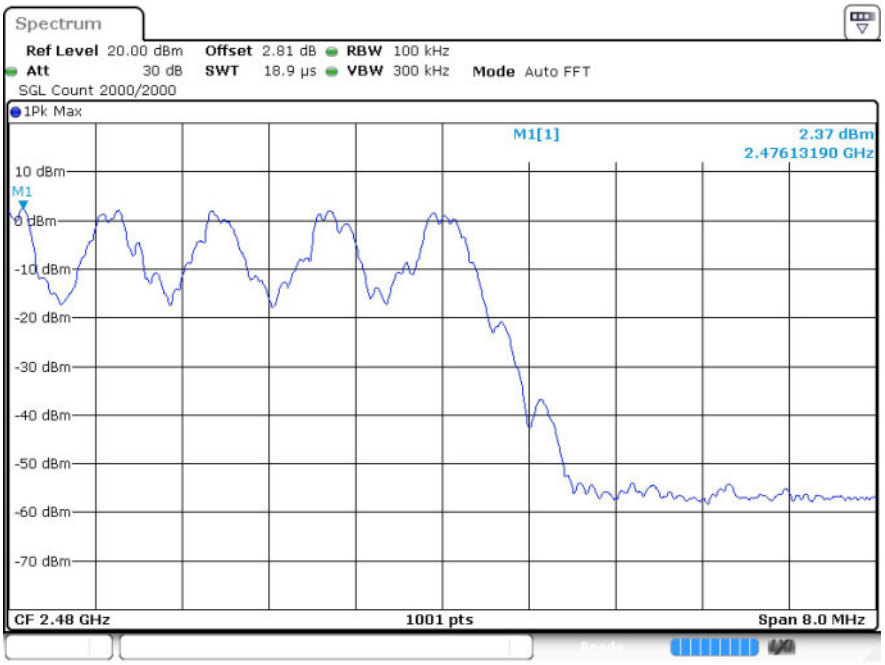
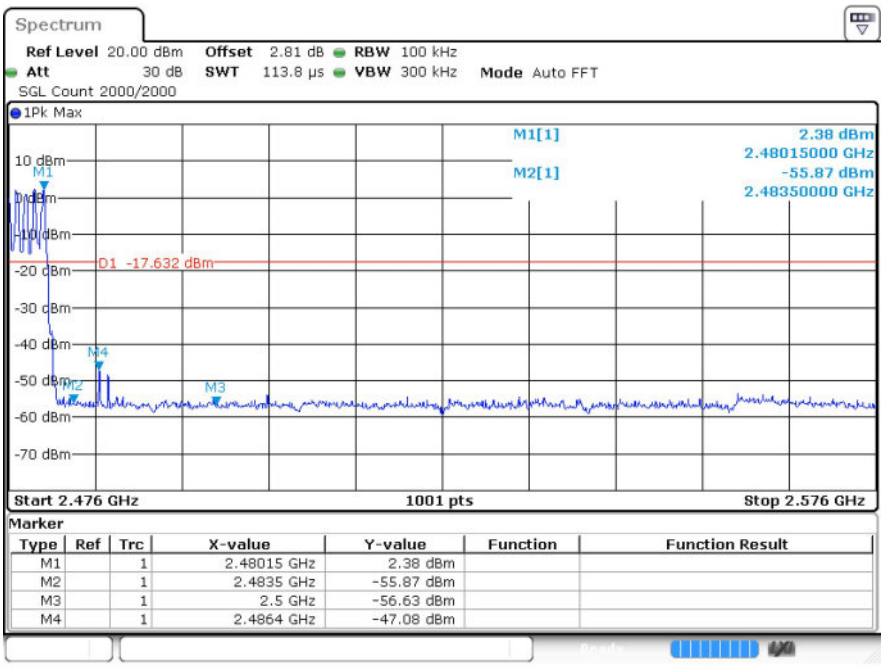
Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	-55.33	-20	Pass
			On	-54.12	-20	Pass
	HCH	2480	Off	-48.91	-20	Pass
			On	-49.45	-20	Pass
π/4DQPSK	LCH	2402	Off	-54.36	-20	Pass
			On	-53.63	-20	Pass
	HCH	2480	Off	-48.26	-20	Pass
			On	-47.89	-20	Pass

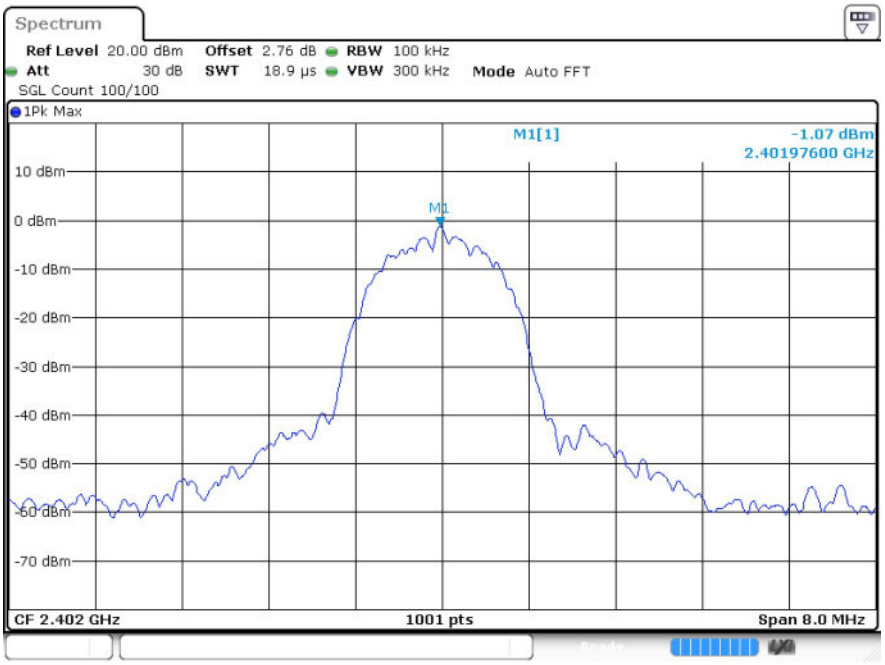
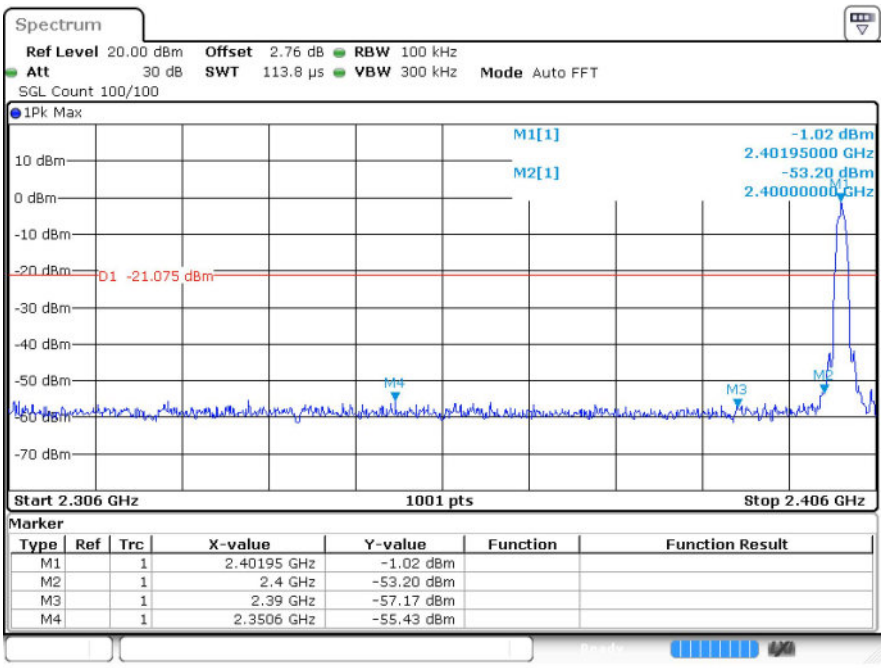
8.2 Test Graphs

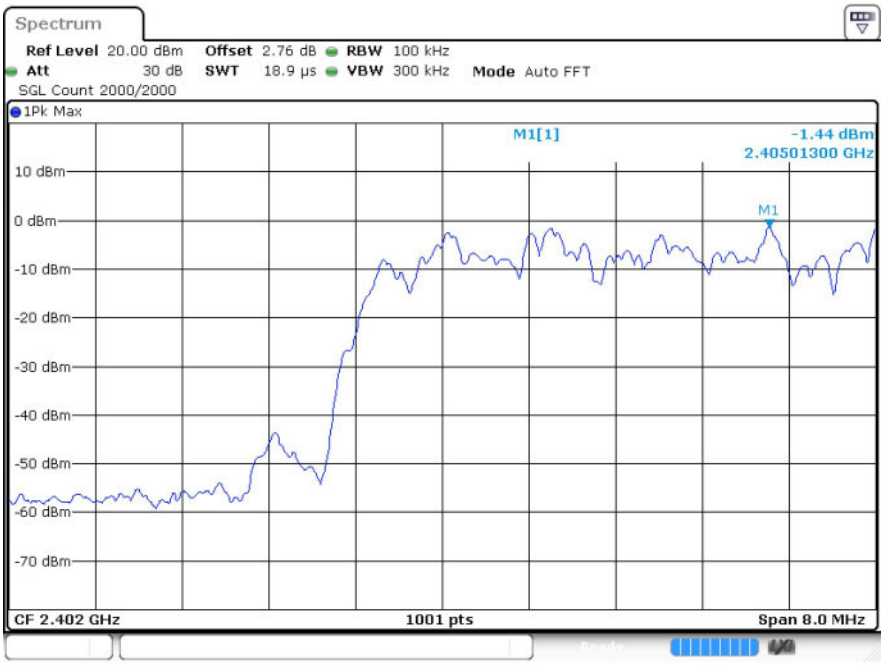
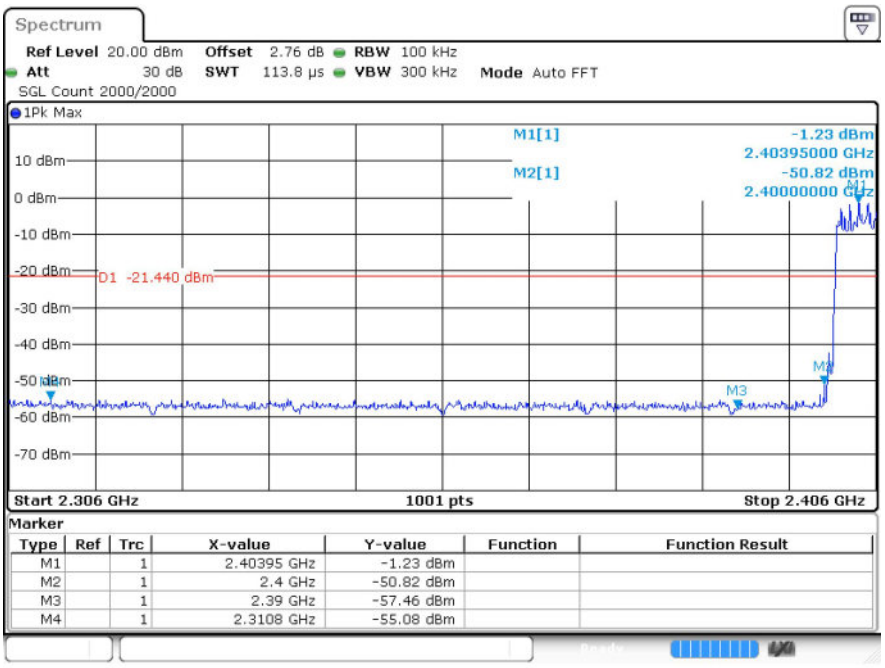
Test Graphs	
Pref	
GFSK/LCH/No Hop	

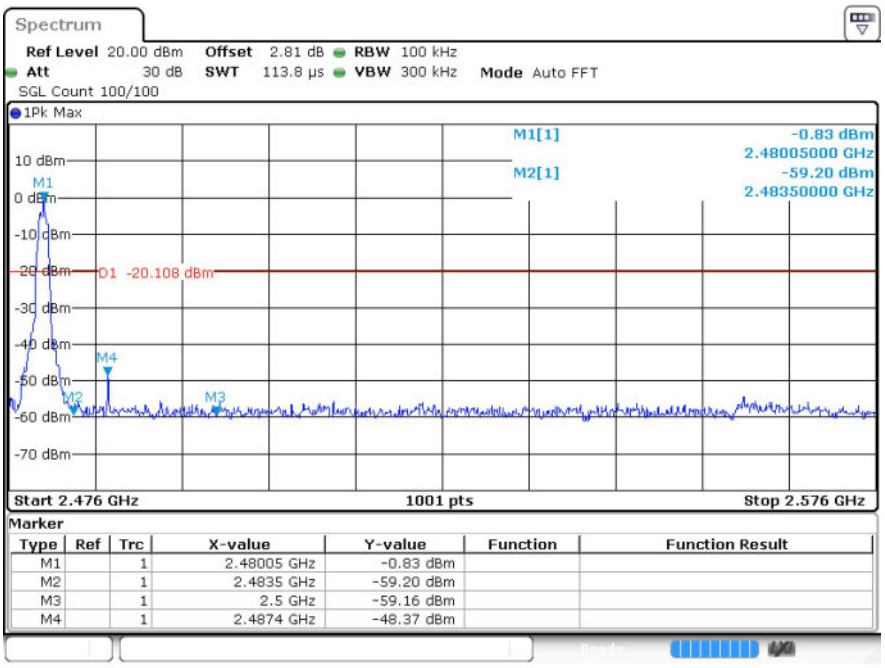
Ref	
GFSK/LCH/Hop	 Marker Type | Ref | Trc | X-value | Y-value | Function | Function Result M1 | | 1 | 2.40395 GHz | -0.49 dBm M2 | | 1 | 2.4 GHz | -55.85 dBm M3 | | 1 | 2.39 GHz | -55.85 dBm M4 | | 1 | 2.3745 GHz | -54.17 dBm

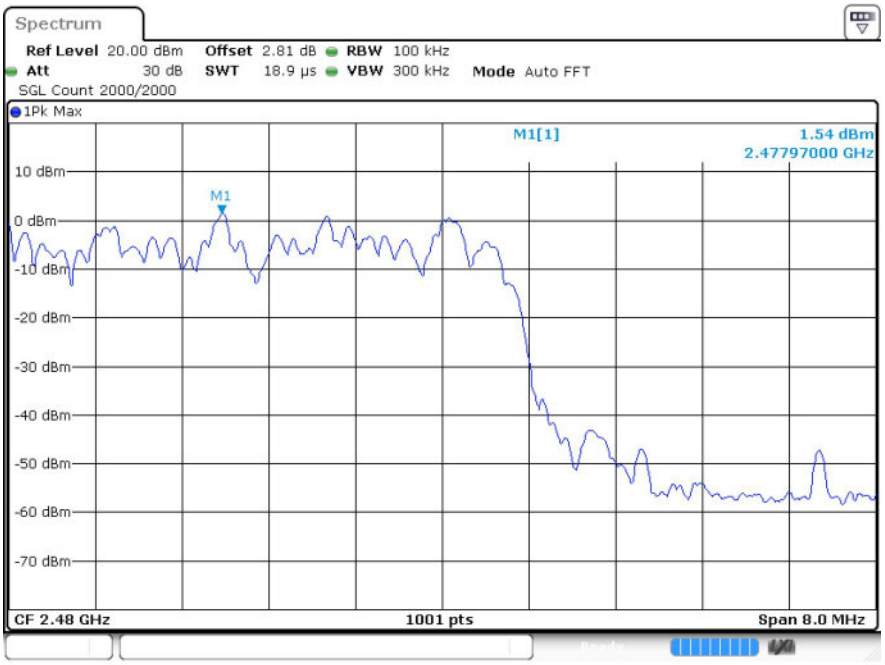
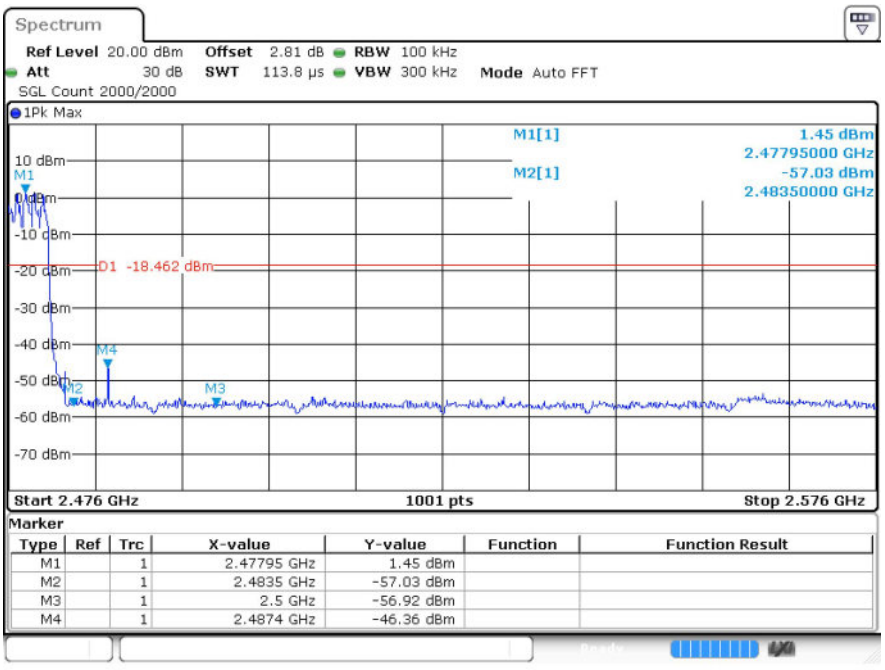
Ref	
GFSK/HCH/No Hop	 Marker Type Ref Trc X-value Y-value Function Function Result M1 1 2.47995 GHz 0.80 dBm M2 1 2.4835 GHz -58.25 dBm M3 1 2.5 GHz -56.89 dBm M4 1 2.4874 GHz -48.16 dBm

Ref.	
GFSK/HCH/Hop	 Marker Type Ref Trc X-value Y-value Function Function Result M1 1 2.48015 GHz 2.38 dBm M2 1 2.4835 GHz -55.87 dBm M3 1 2.5 GHz -56.63 dBm M4 1 2.4864 GHz -47.08 dBm

Ref	
π/4DQPSK/LCH/No Hop	

Ref	
π/4DQPSK/LCH/Hop	

Ref	
π/4DQPSK/HCH/No Hop	

Ref	
π/4DQPSK/HCH/Hop	

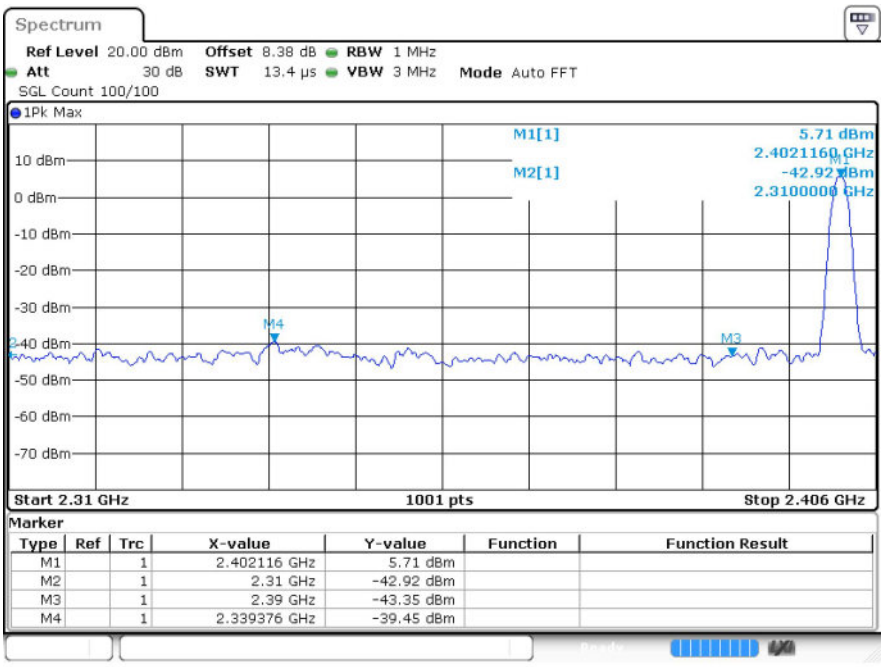
9 Restrict-band band-edge measurements

9.1 Test Result

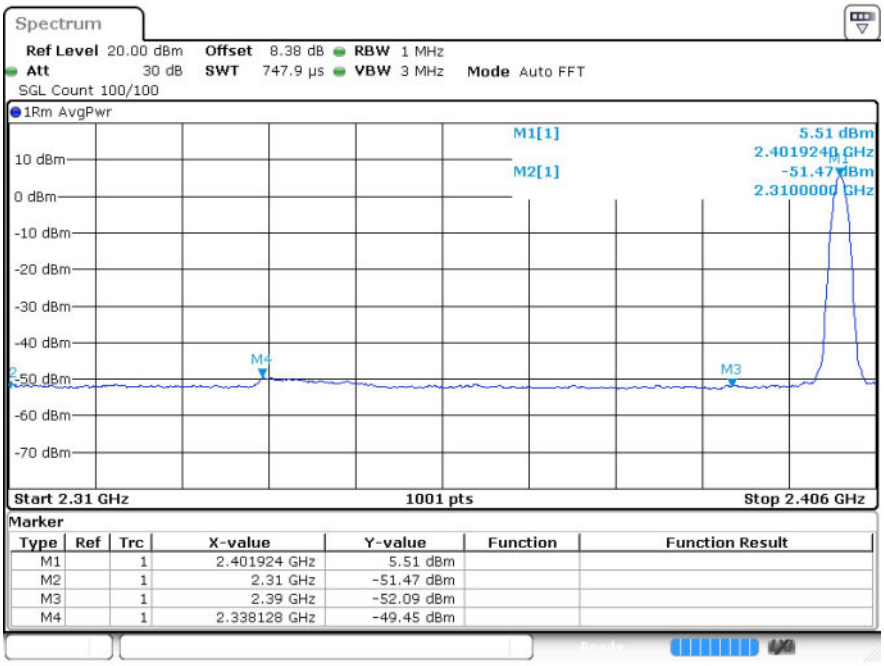
Test Mode	Hopping	Freq.	Power [dBm]	Gain	Factor (dB)	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-42.91	2.499	-	54.82	PEAK	74	Pass
	Off	2310.0	-51.46	2.499	5.06	51.33	AV	54	Pass
	Off	2339.376	-39.45	2.499	-	58.28	PEAK	74	Pass
	Off	2338.128	-49.44	2.499	5.06	53.35	AV	54	Pass
	Off	2390.0	-43.35	2.499	-	54.38	PEAK	74	Pass
	Off	2390.0	-52.08	2.499	5.06	50.71	AV	54	Pass
	Off	2483.5	-42.02	2.499	-	55.71	PEAK	74	Pass
	Off	2483.5	-50.71	2.499	5.03	52.05	AV	54	Pass
	Off	2487.52	-40.6	2.499	-	57.13	PEAK	74	Pass
	Off	2487.424	-49.54	2.499	5.03	53.22	AV	54	Pass
	Off	2500.0	-43.71	2.499	-	54.02	PEAK	74	Pass
	Off	2500.0	-51.72	2.499	5.03	51.04	AV	54	Pass
π/4DQPSK	Off	2310.0	-43.72	2.499	-	54.01	PEAK	74	Pass
	Off	2310.0	-51.7	2.499	4.95	50.98	AV	54	Pass
	Off	2342.256	-39.51	2.499	-	58.22	PEAK	74	Pass
	Off	2338.32	-49.66	2.499	4.95	53.02	AV	54	Pass
	Off	2390.0	-43.21	2.499	-	54.52	PEAK	74	Pass
	Off	2390.0	-51.66	2.499	4.95	51.02	AV	54	Pass
	Off	2483.5	-42.79	2.499	-	54.94	PEAK	74	Pass
	Off	2483.5	-50.24	2.499	4.95	52.44	AV	54	Pass
	Off	2487.352	-39.72	2.499	-	58.01	PEAK	74	Pass
	Off	2483.848	-50.21	2.499	4.95	52.47	AV	54	Pass
	Off	2500.0	-45	2.499	-	52.73	PEAK	74	Pass
	Off	2500.0	-51.47	2.499	4.95	51.21	AV	54	Pass

9.2 Test Graphs

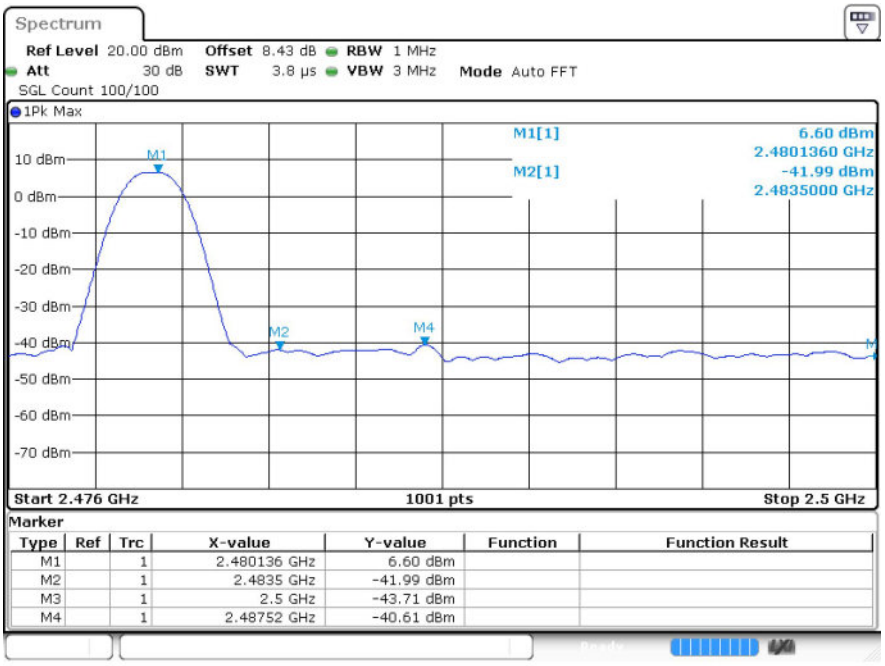
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



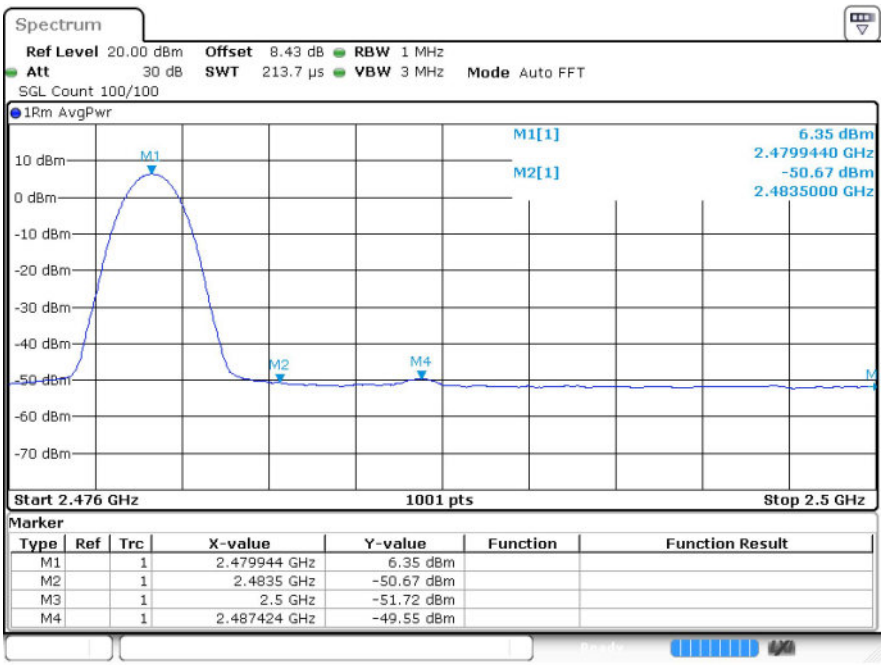
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



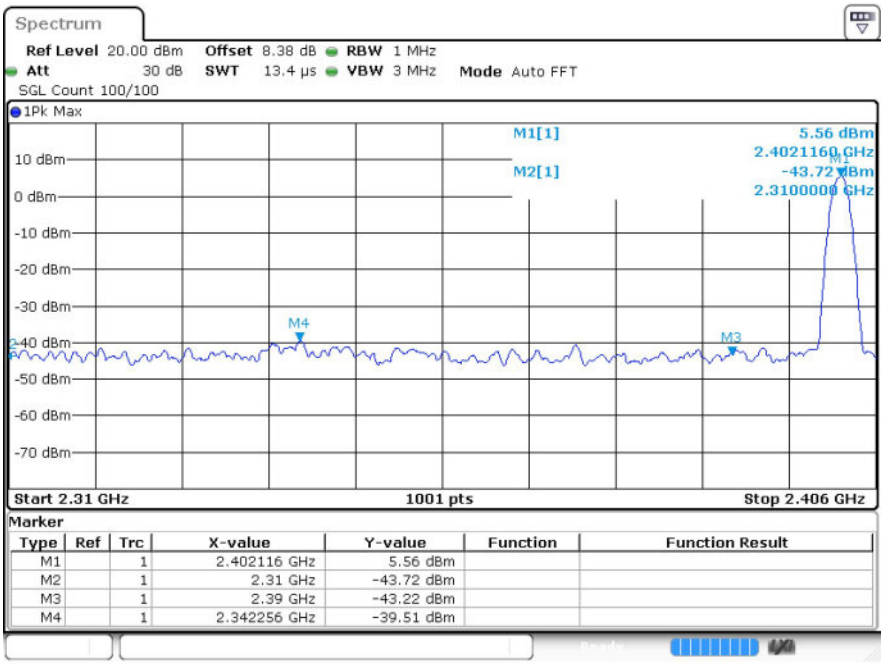
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



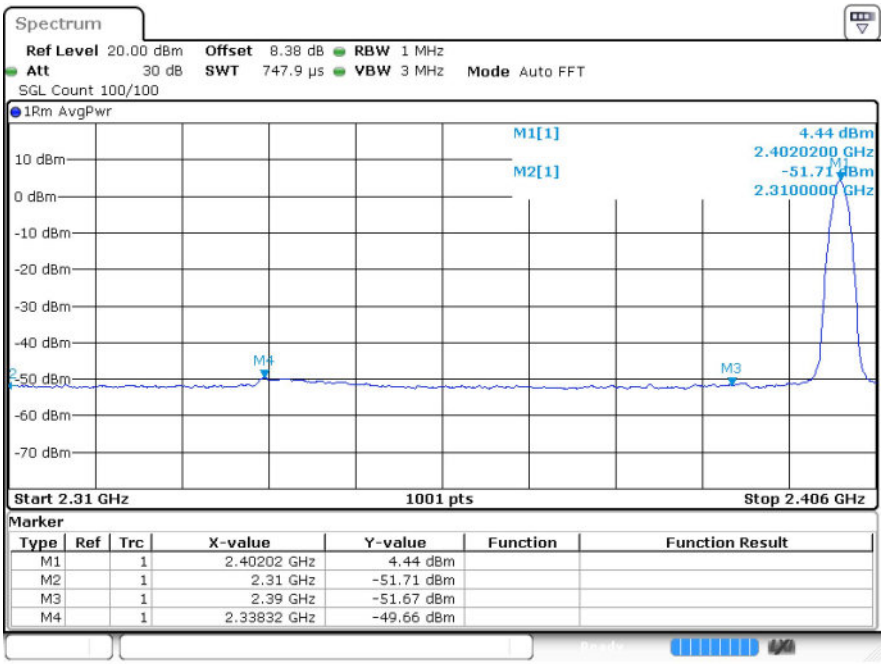
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



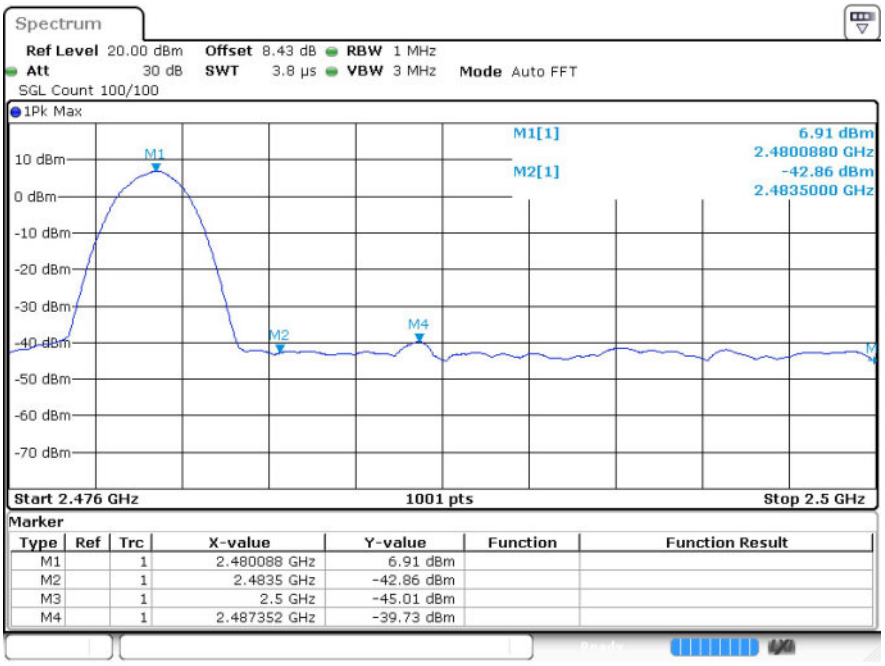
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (Low Channel)



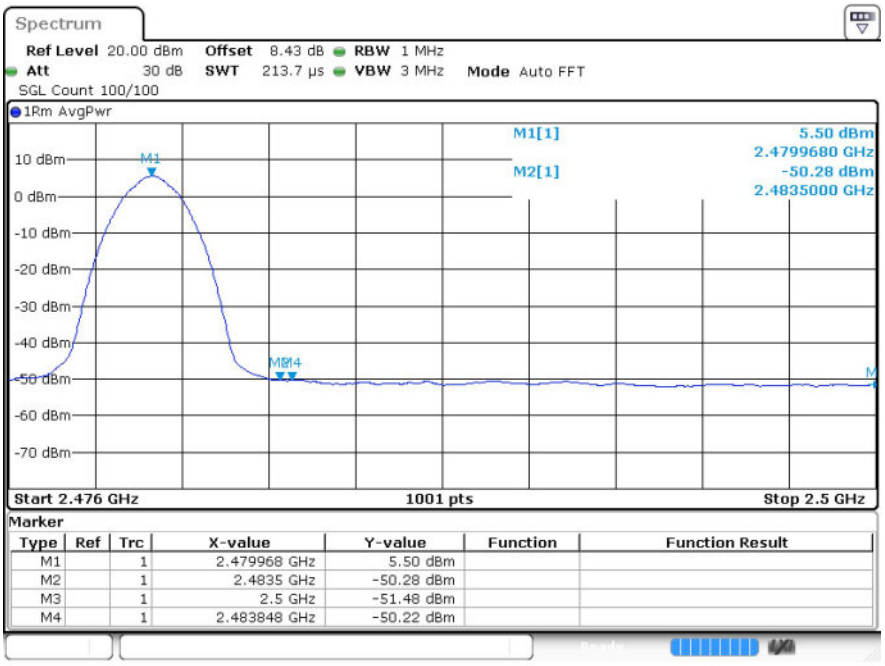
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (Low Channel)



Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



---The End---