Appendix A

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

Product Name: Respiratory Training Device

Trade Mark: N/A

Test Model: AirFit 1

Environmental Conditions

Temperature:	25.5℃
Relative Humidity:	51.6%
ATM Pressure:	101Kpa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen

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1 Duty Cycle

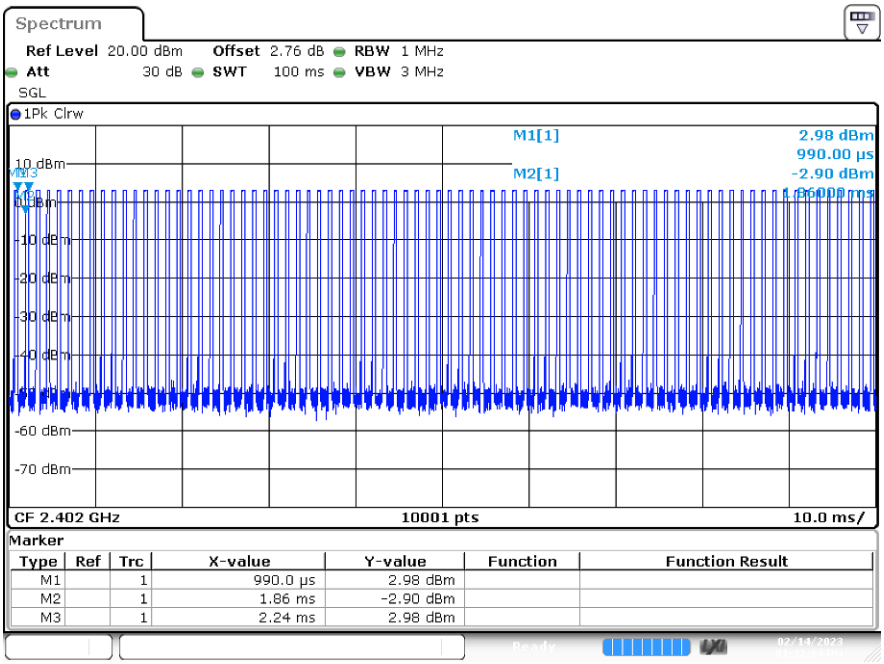
1.1 Test Result

Mode	Frequency (MHz)	Duty Cycle (%)	1/T (kHz)
1-DH1	2402	31	2.63
1-DH1	2441	30.4	2.7
1-DH1	2480	31.2	2.63
2-DH1	2402	32.01	2.56
2-DH1	2441	32	2.56
2-DH1	2480	32.01	2.56

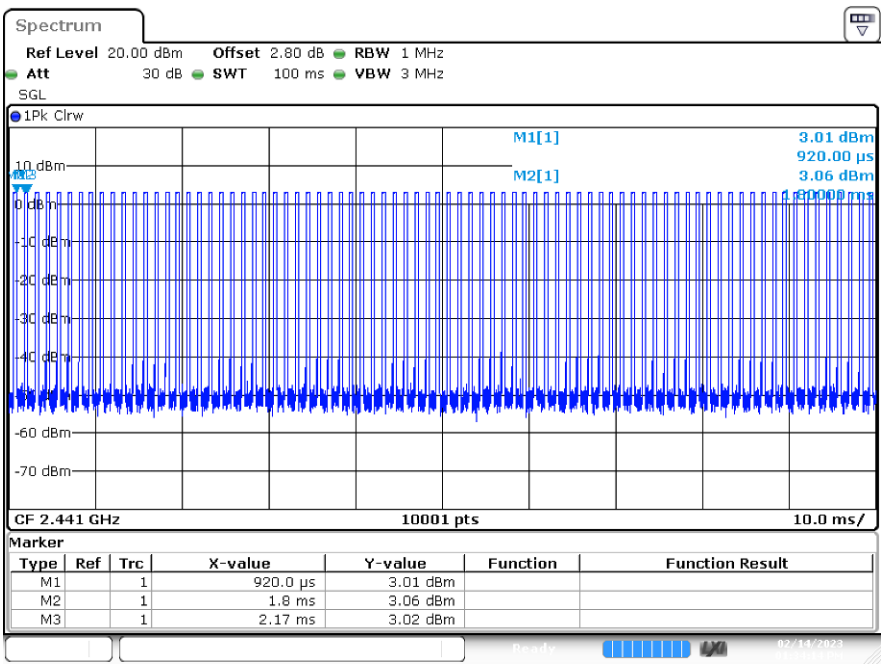
1.2 Test Graphs

Test Graphs

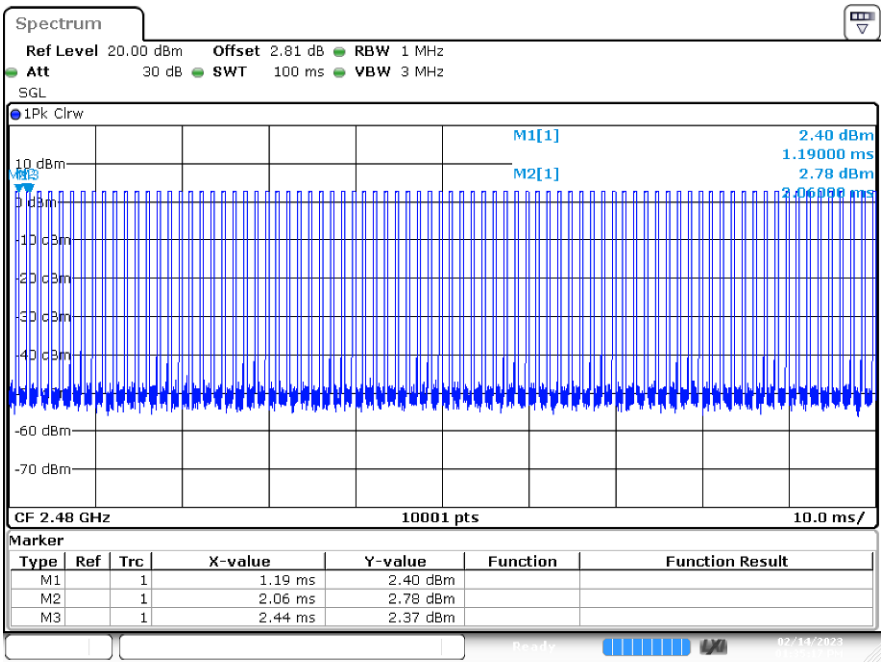
1-DH1 2402MHz



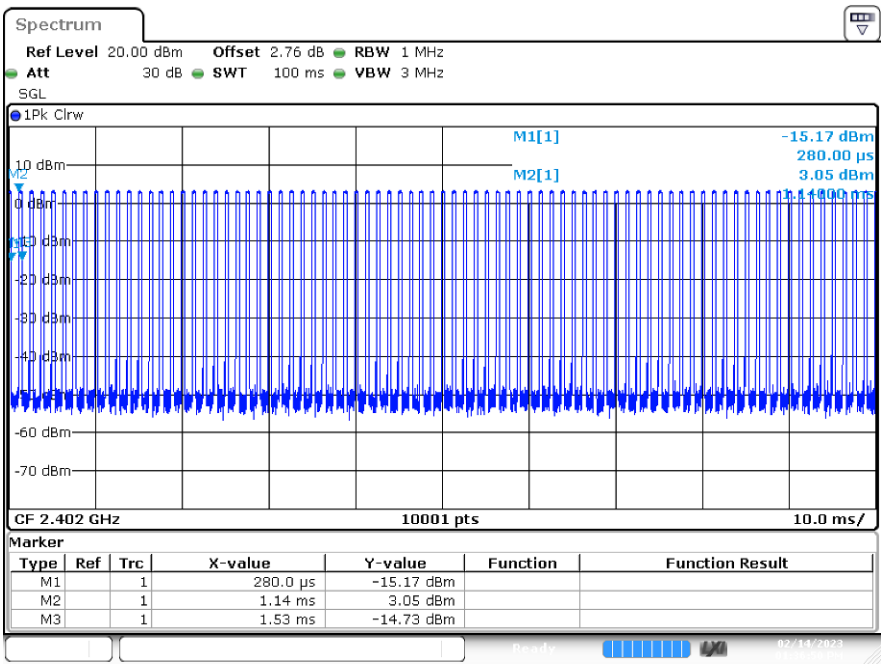
1-DH1 2441MHz



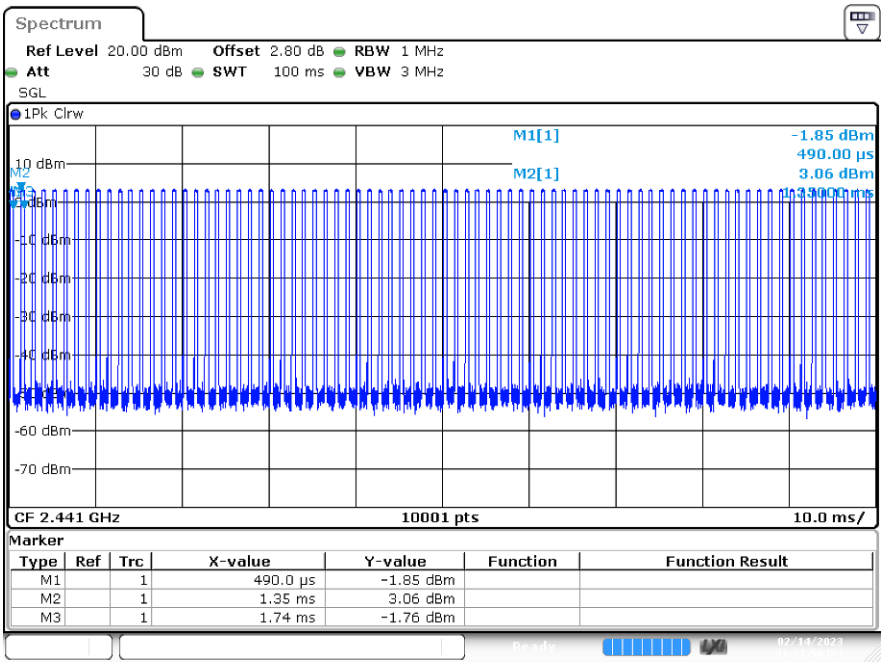
1-DH1 2480MHz



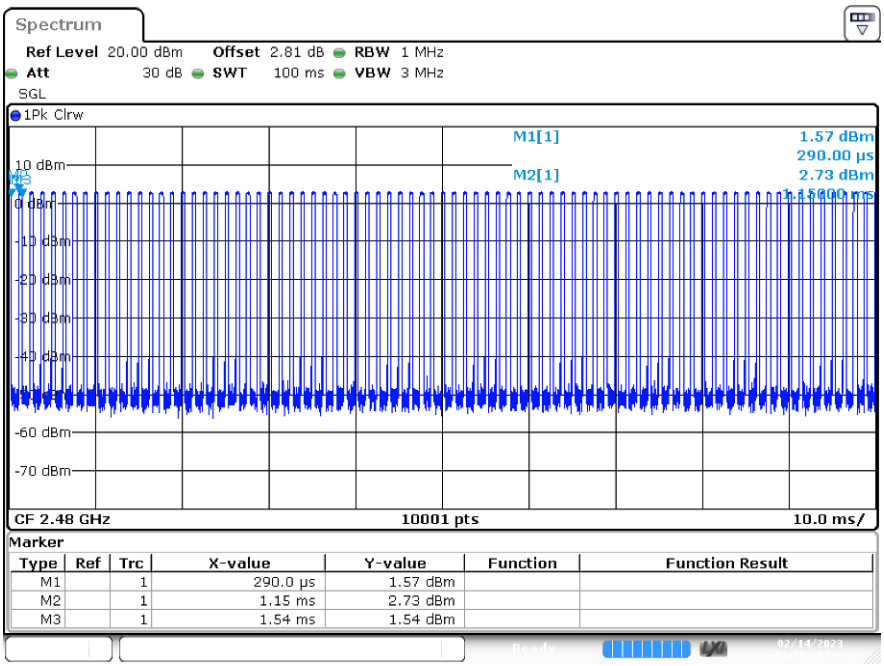
2-DH1 2402MHz



2-DH1 2441MHz



2-DH1 2480MHz

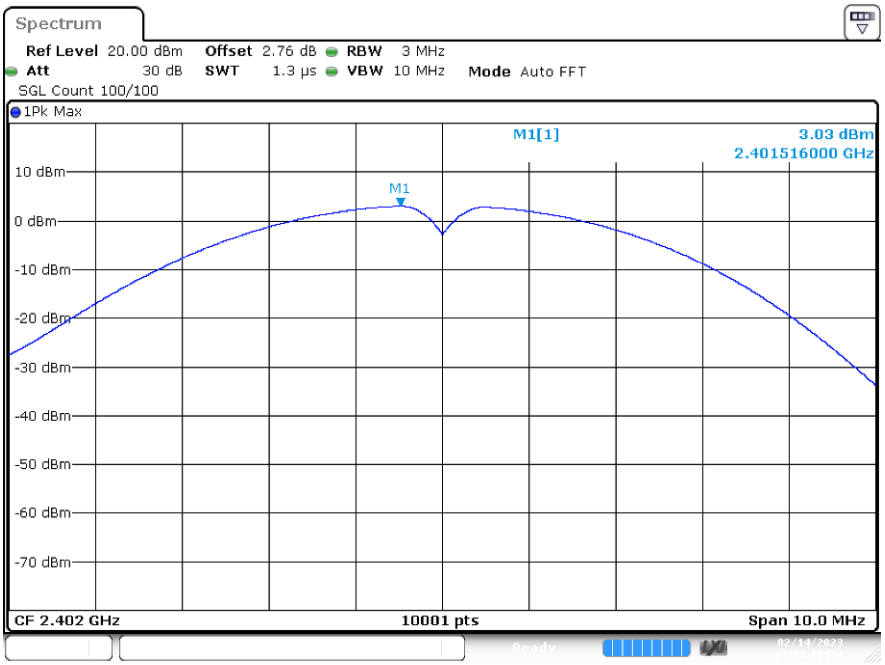
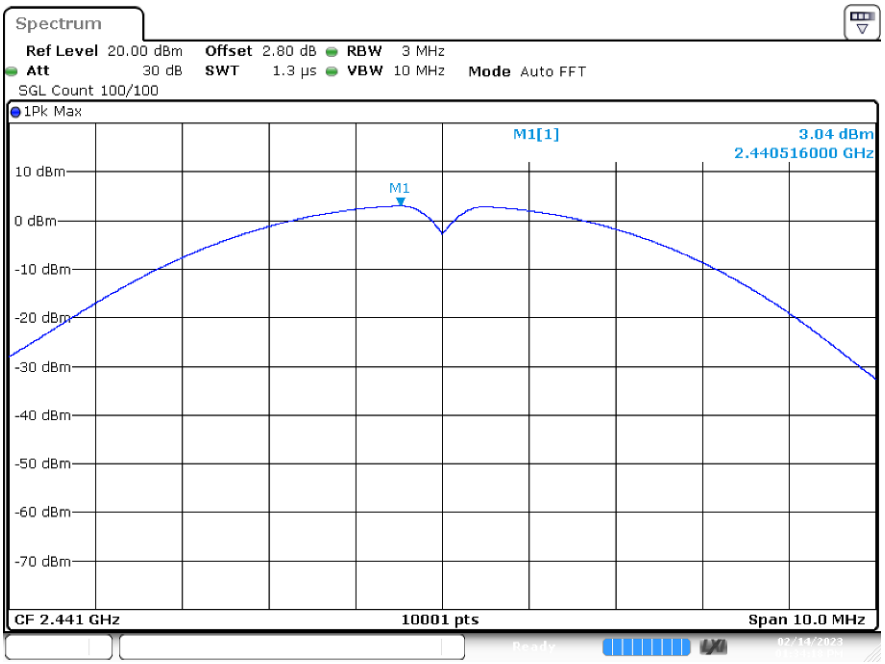


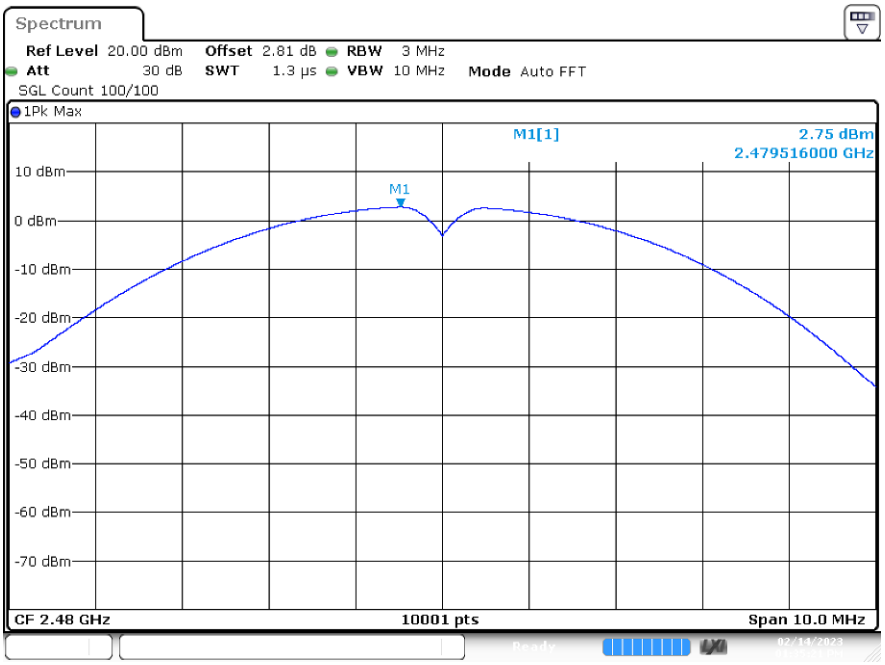
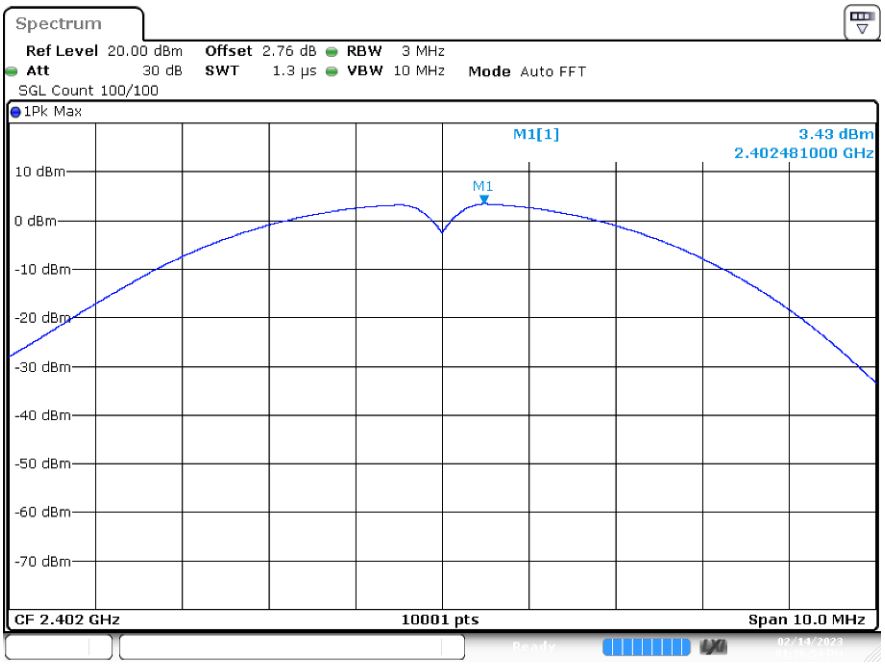
2 Maximum Conducted Peak Output Power

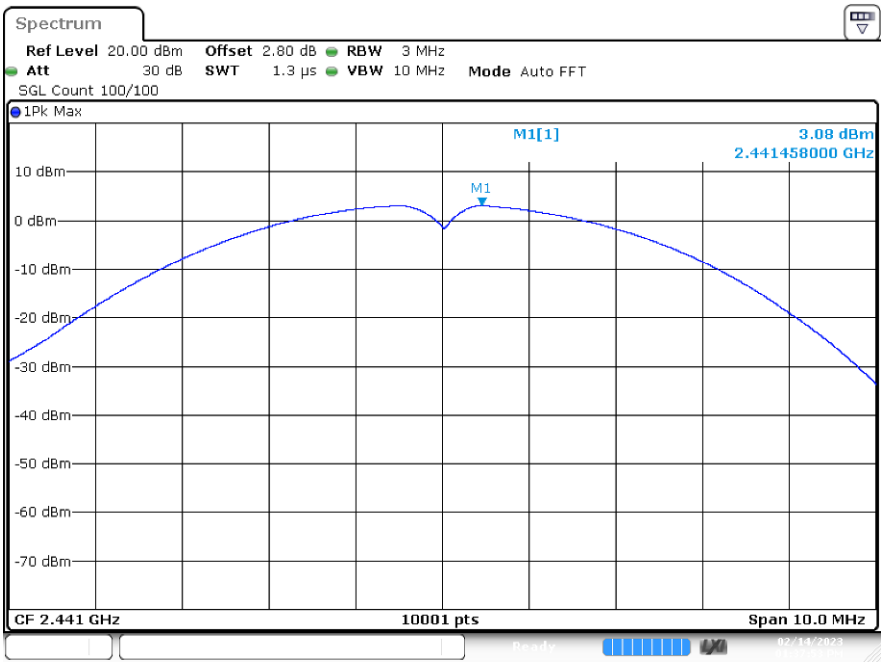
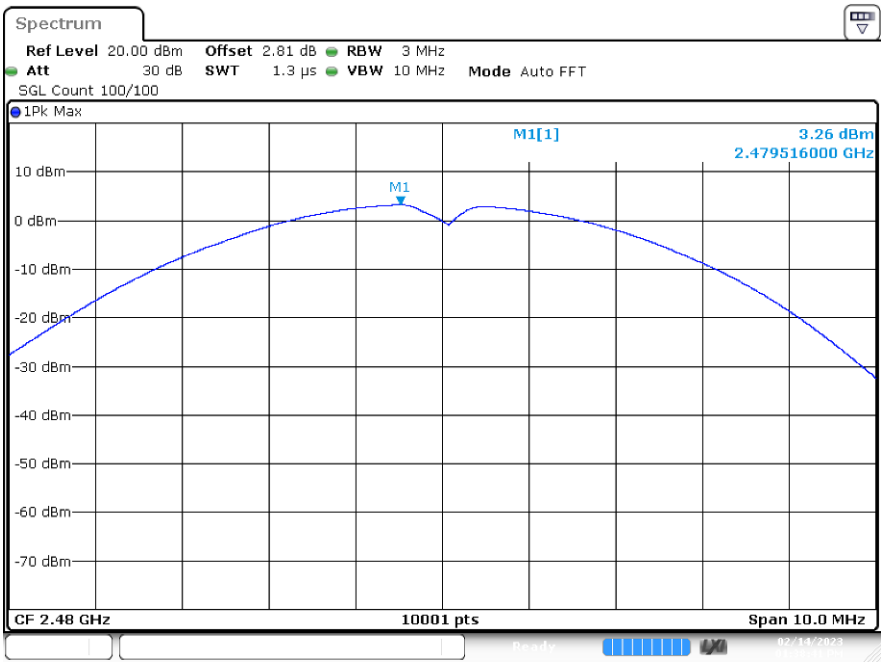
2.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.03	21	Pass
	MCH	3.04	21	Pass
	HCH	2.75	21	Pass
π/4DQPSK	LCH	3.43	21	Pass
	MCH	3.08	21	Pass
	HCH	3.26	21	Pass

2.2 Test Graphs

Test Graphs	
GFSK/LCH	
GFSK/MCH	

GFSK/HCH	
π/4DQPSK/LCH	

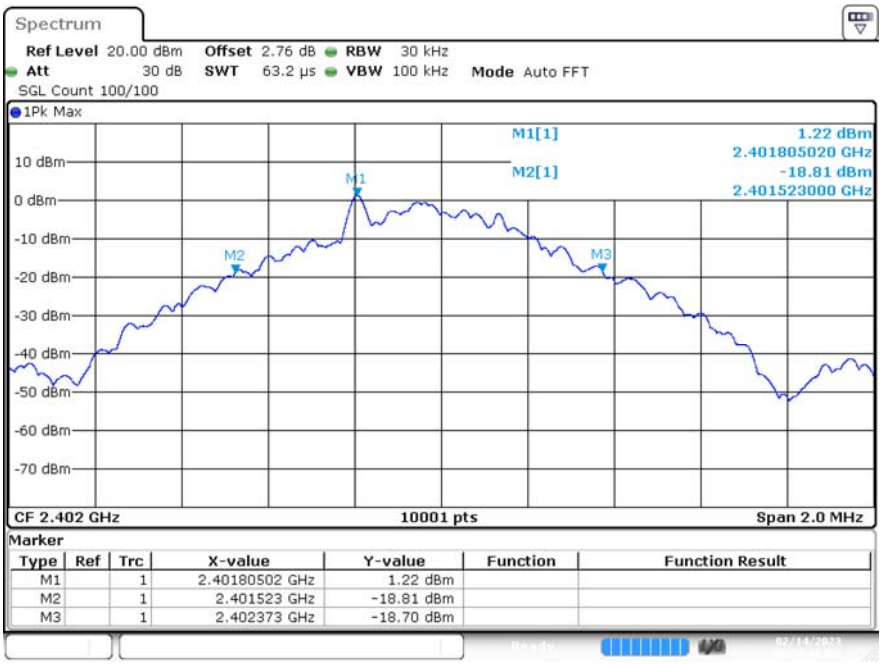
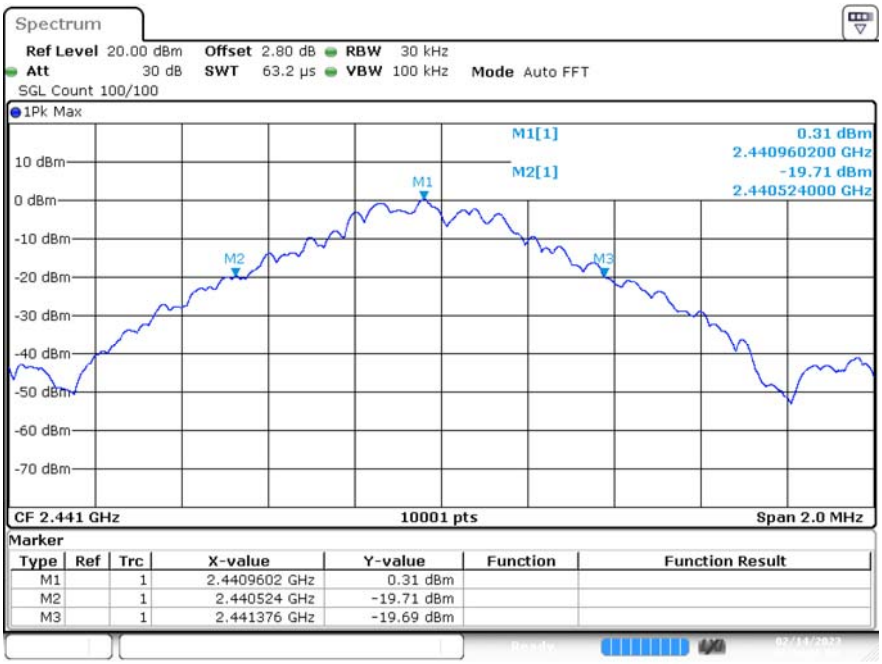
π/4DQPSK/MCH	
π/4DQPSK/HCH	

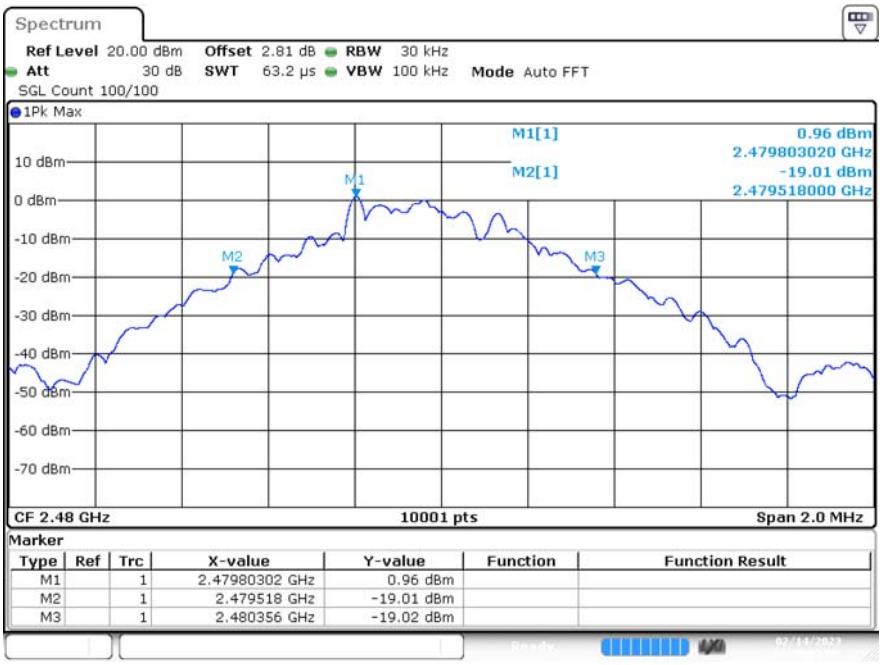
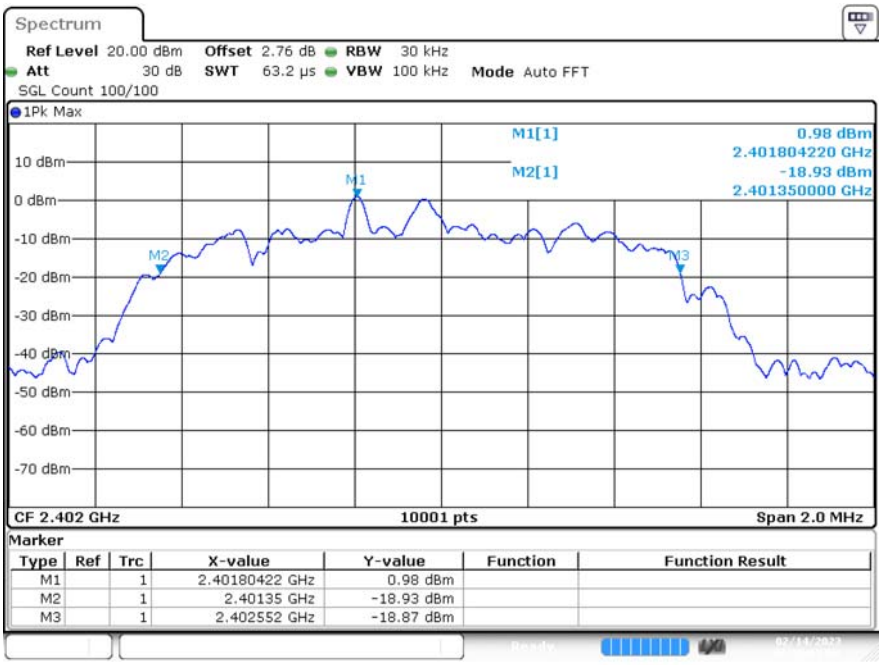
3 20dB Bandwidth

3.1 Test Result

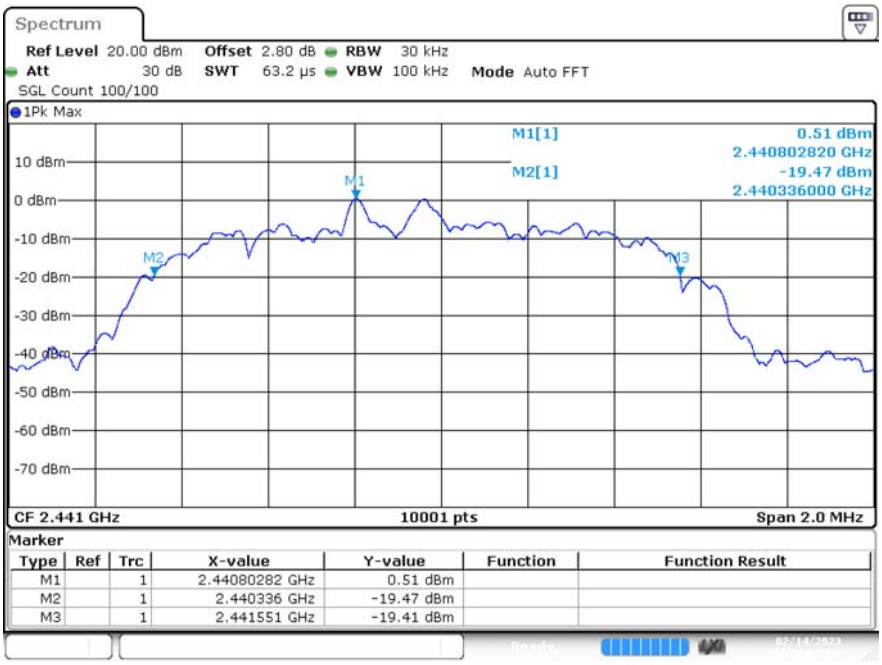
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.85	Not Specified	Pass
	MCH	0.852	Not Specified	Pass
	HCH	0.838	Not Specified	Pass
π/4DQPSK	LCH	1.203	Not Specified	Pass
	MCH	1.215	Not Specified	Pass
	HCH	1.224	Not Specified	Pass

3.2 Test Graphs

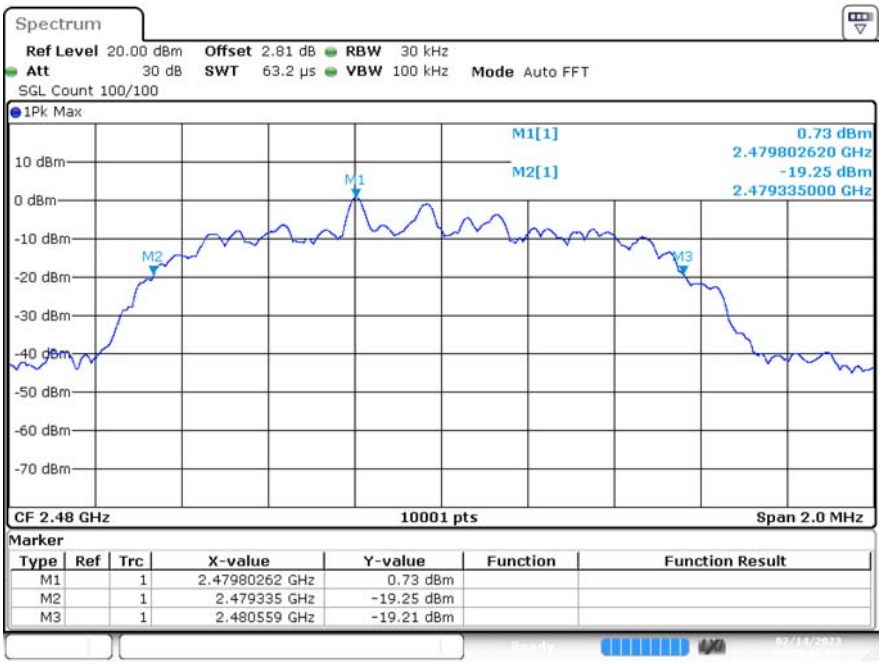
Test Graphs	
GFSK/LCH	
GFSK/MCH	

GFSK/HCH	
π/4DQPSK/LCH	

π/4DQPSK/MCH



π/4DQPSK/HCH

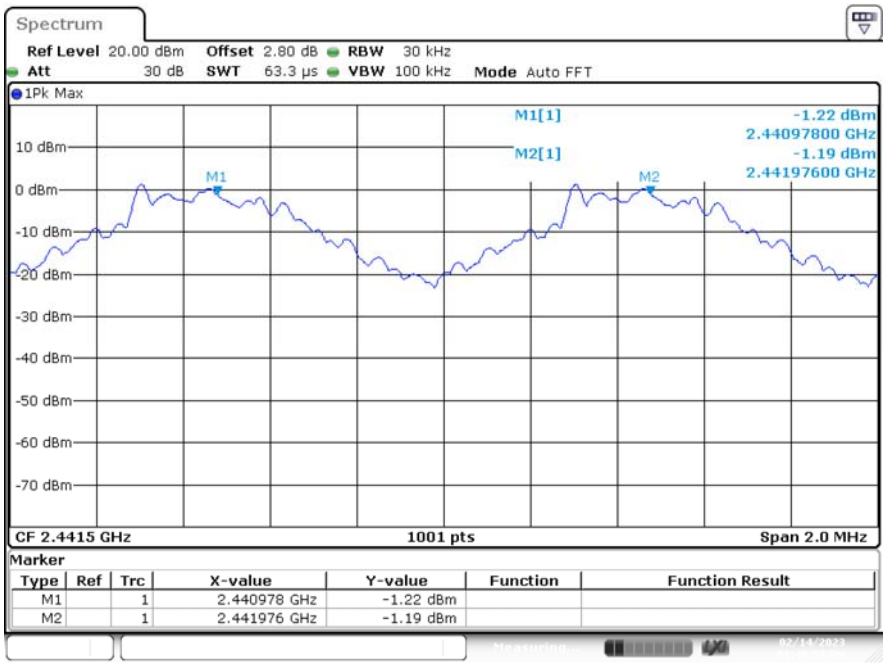
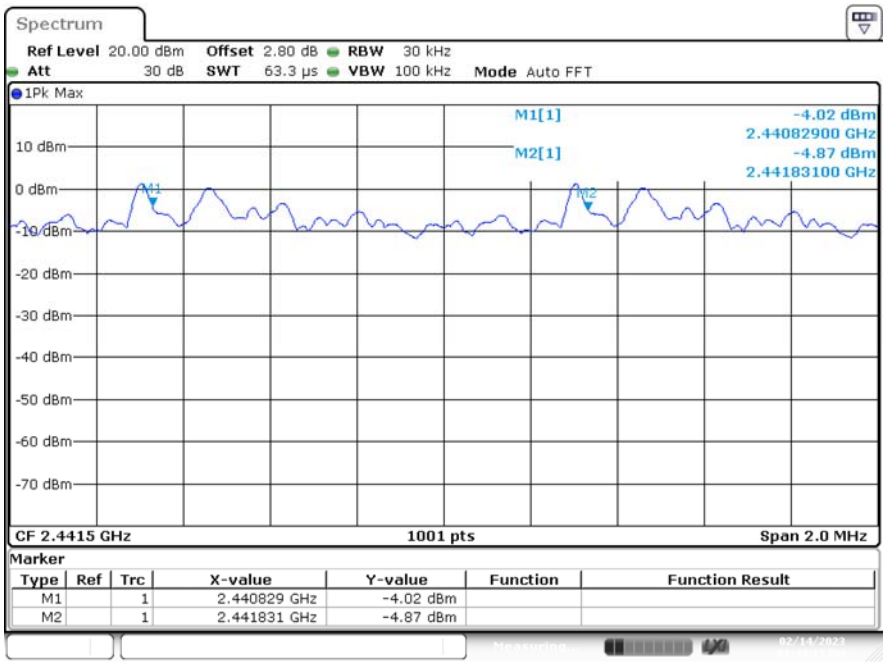


4 Carrier Frequency Separation

4.1 Test Result

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	MCH	0.998	0.568	Pass
π/4DQPSK	MCH	1.002	0.81	Pass

4.2 Test Graphs

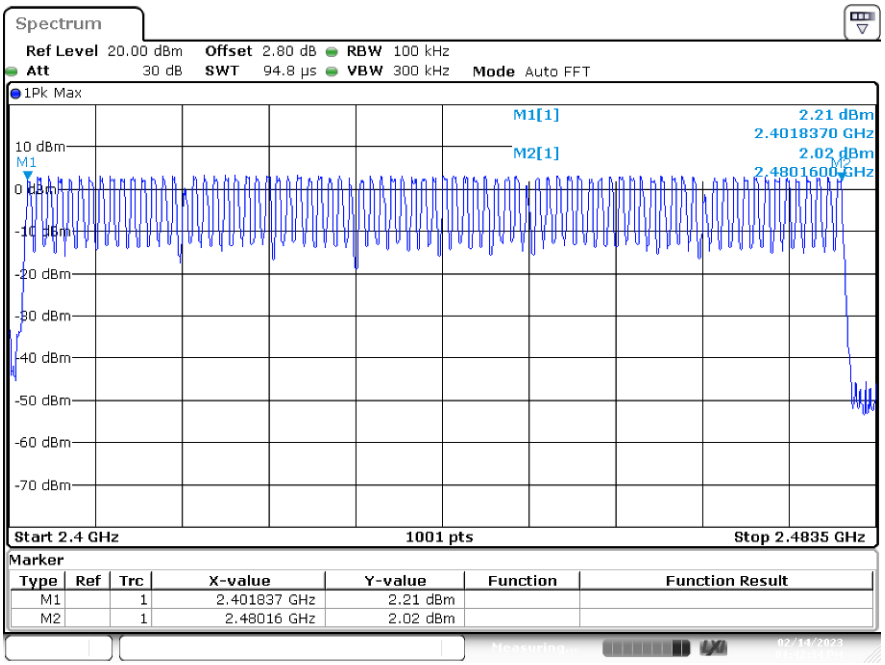
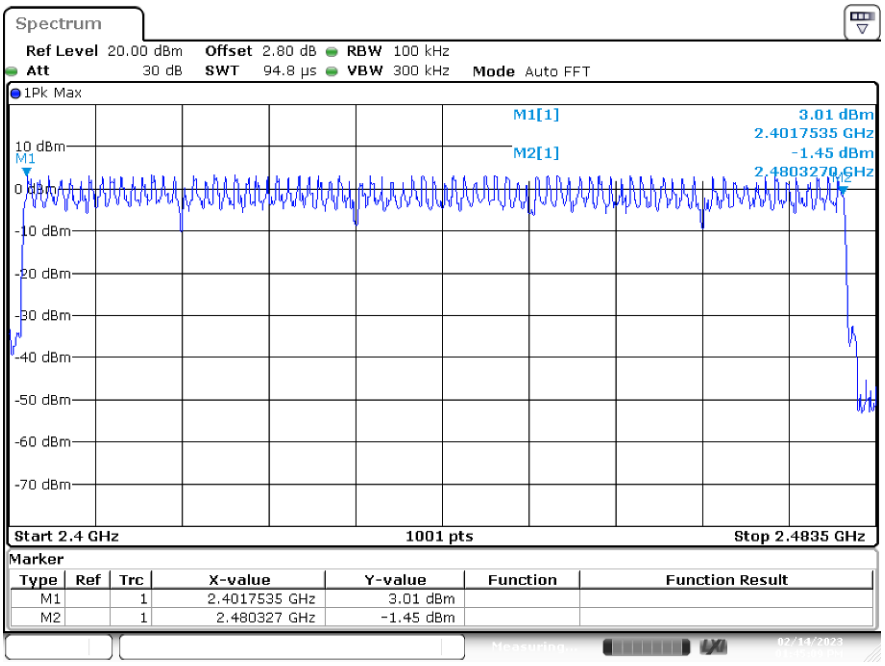
Test Graphs	
GFSK/MCH	
π/4DQPSK/MCH	

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

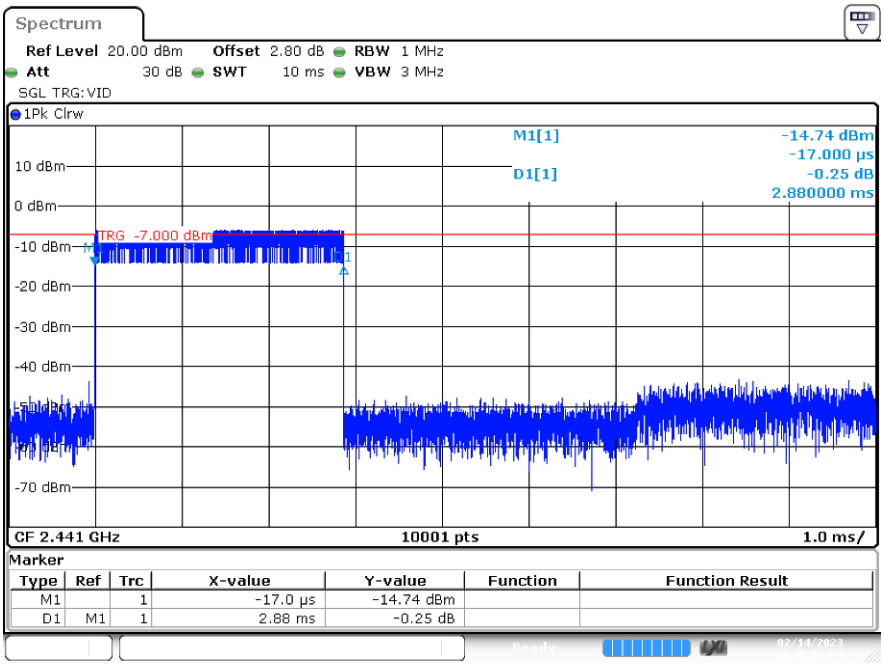
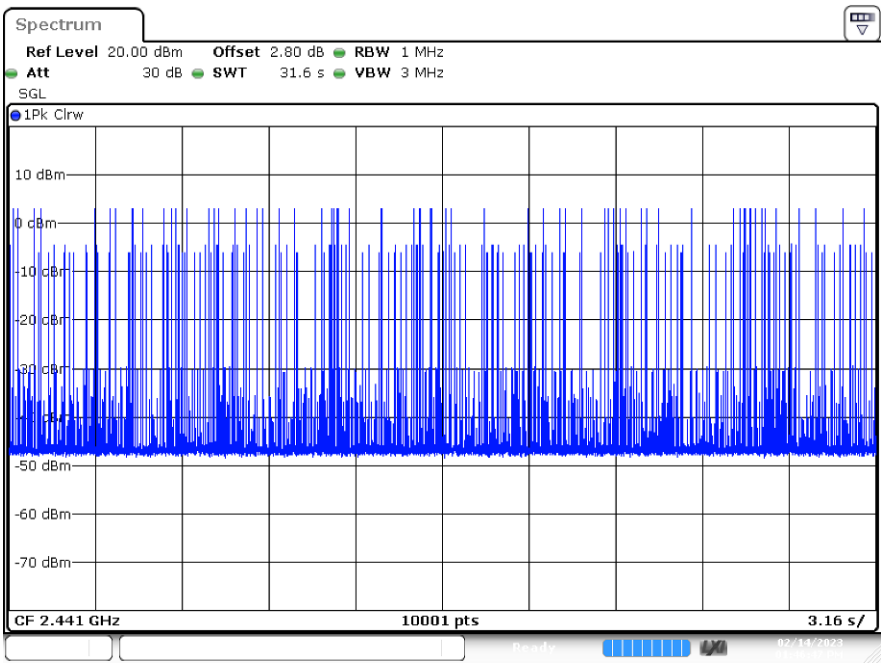
Test Graphs	
GFSK/Hop	
π/4DQPSK/Hop	

6 Dwell Time

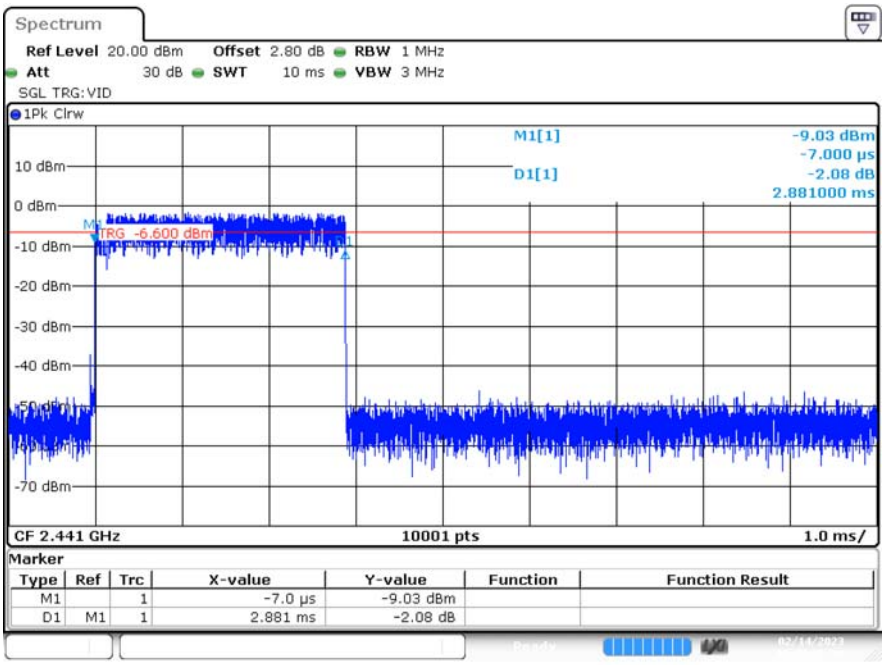
6.1 Test Result

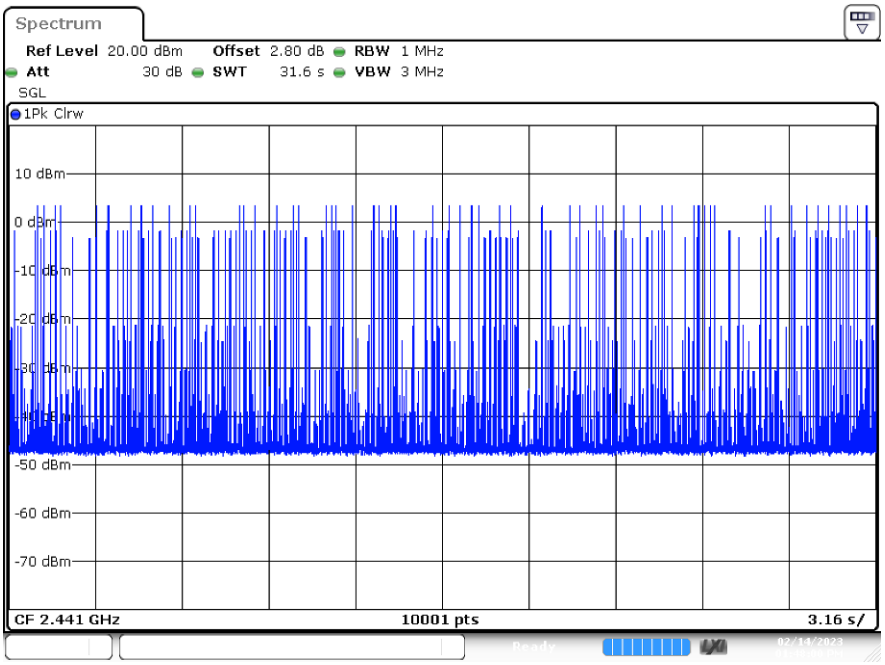
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.88	63	181.44	0.4	Pass
π/4DQPSK	2DH5	MCH	2.881	63	181.503	0.4	Pass

6.2 Test Graphs

Test Graphs	
GFSK_DH5/MCH	 

π/4DQPSK
_2DH5/MCH



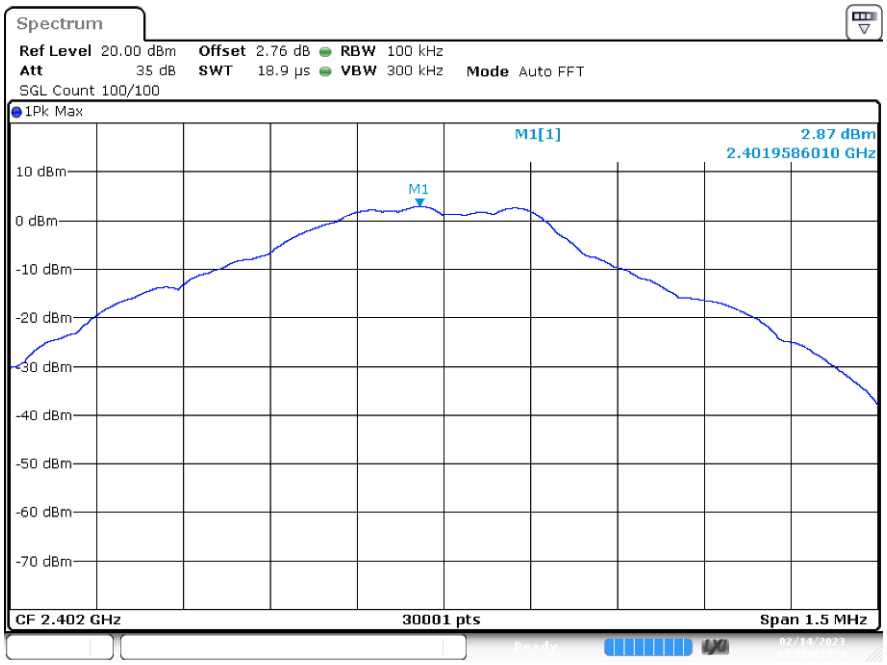
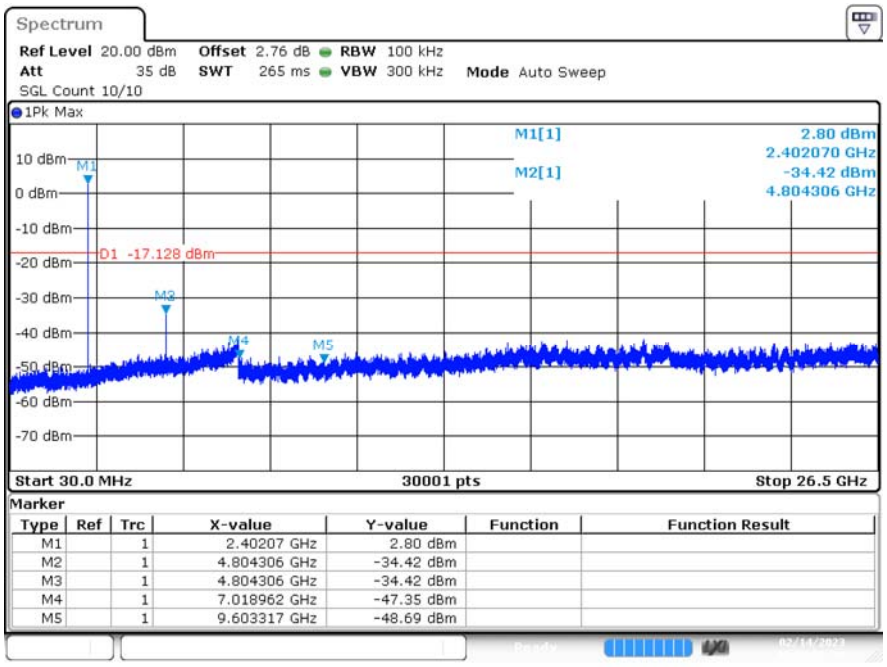


7 RF Conducted Spurious Emissions

7.1 Test Result

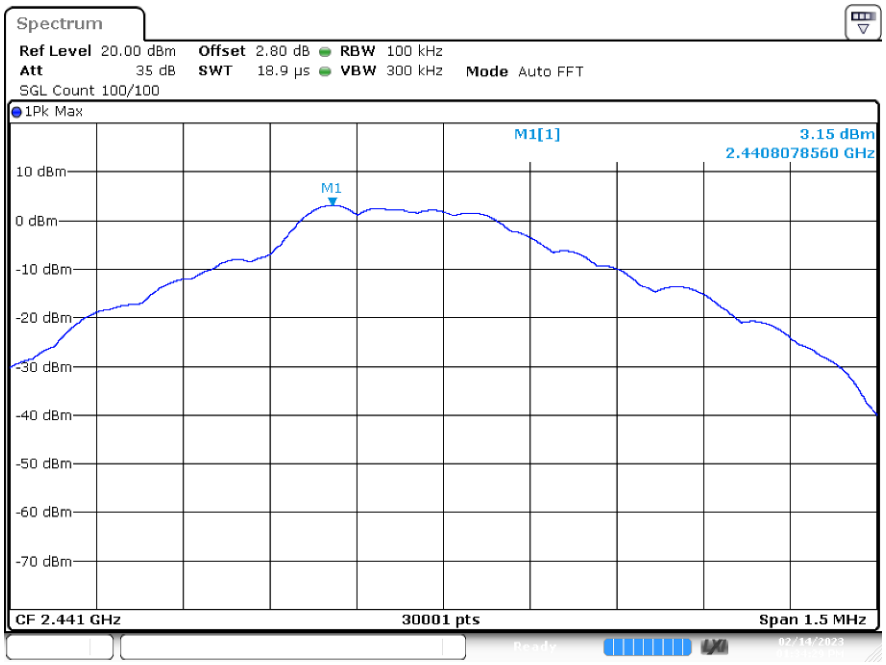
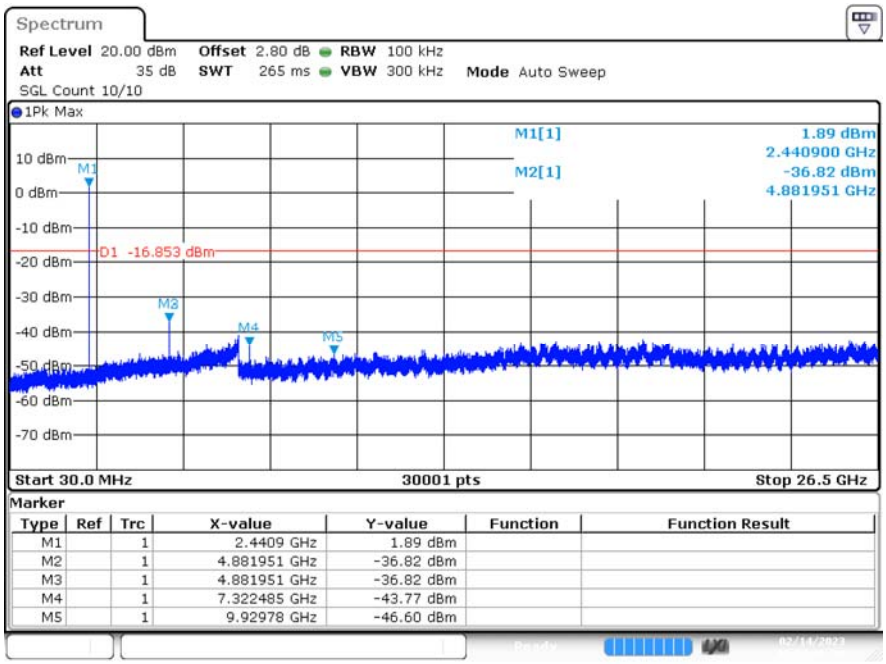
Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-37.28	-20	Pass
	MCH	-39.96	-20	Pass
	HCH	-36.96	-20	Pass
π/4DQPSK	LCH	-37.83	-20	Pass
	MCH	-42.15	-20	Pass
	HCH	-41.83	-20	Pass

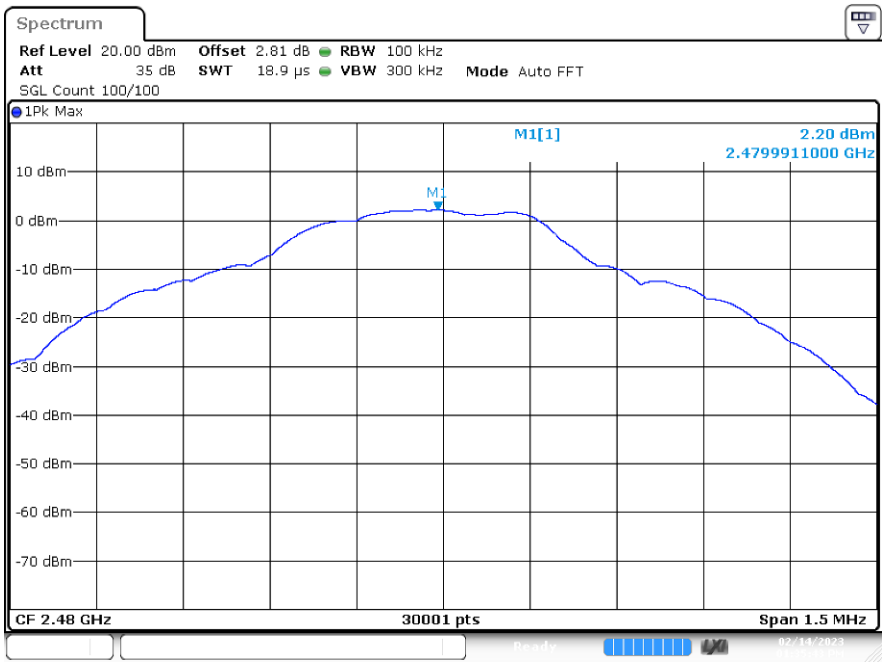
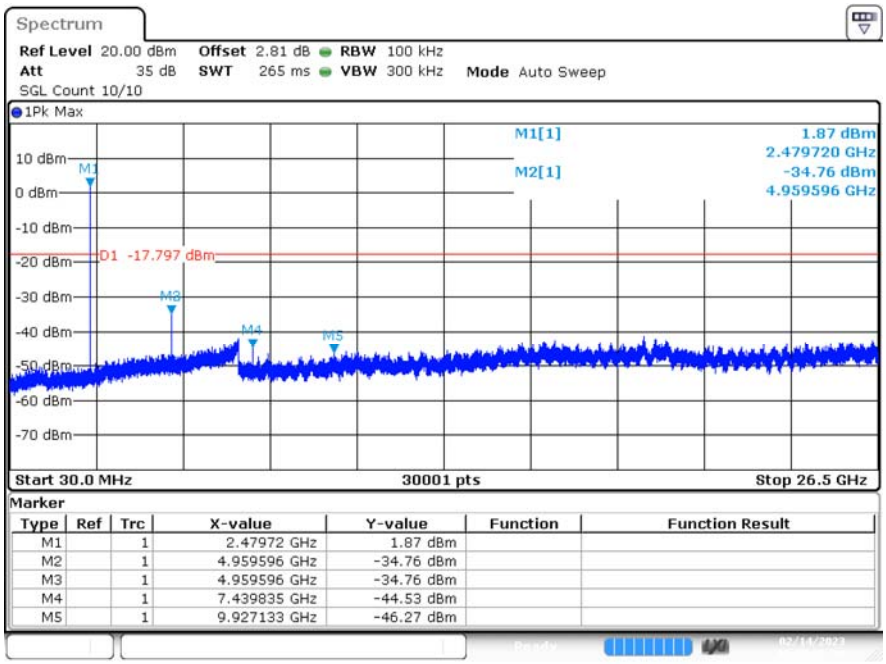
7.2 Test Graphs

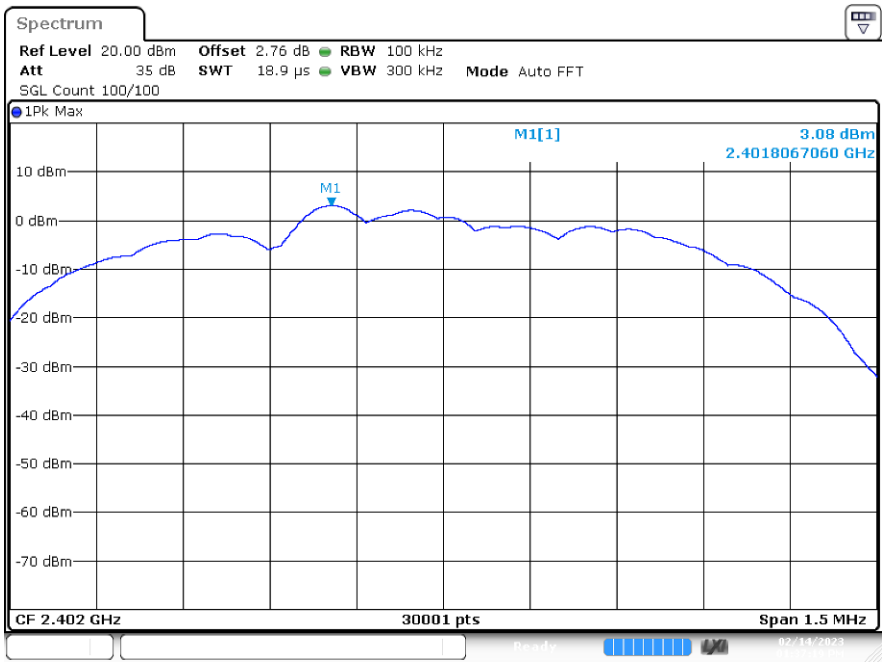
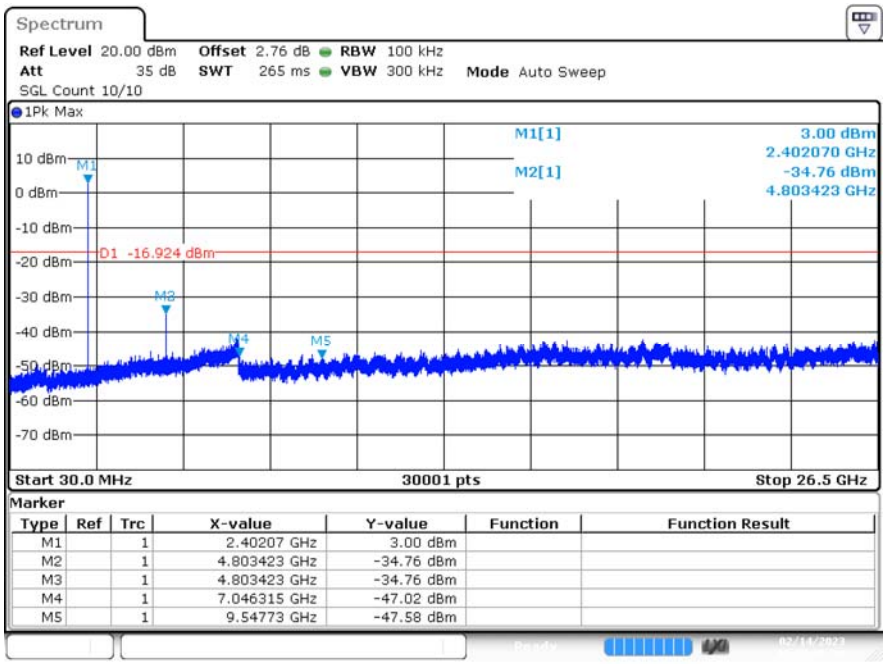
GFSK_LCH_Graphs	
Pref	
Puw	

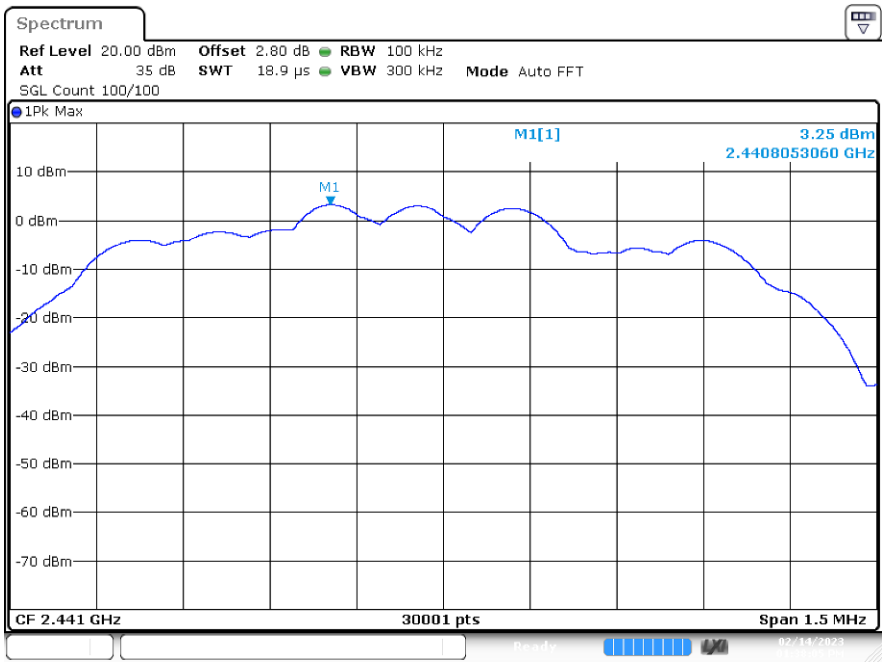
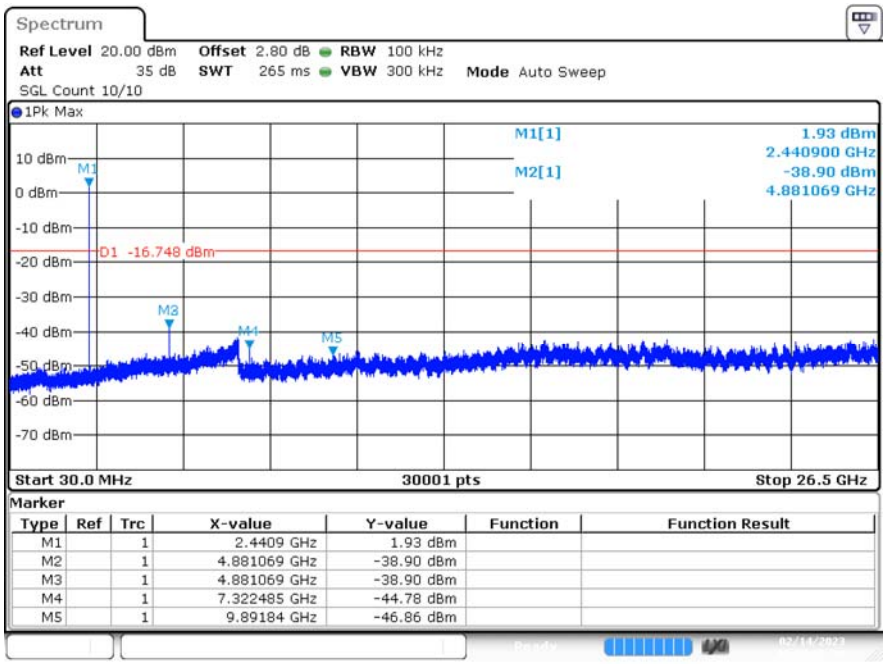
Marker

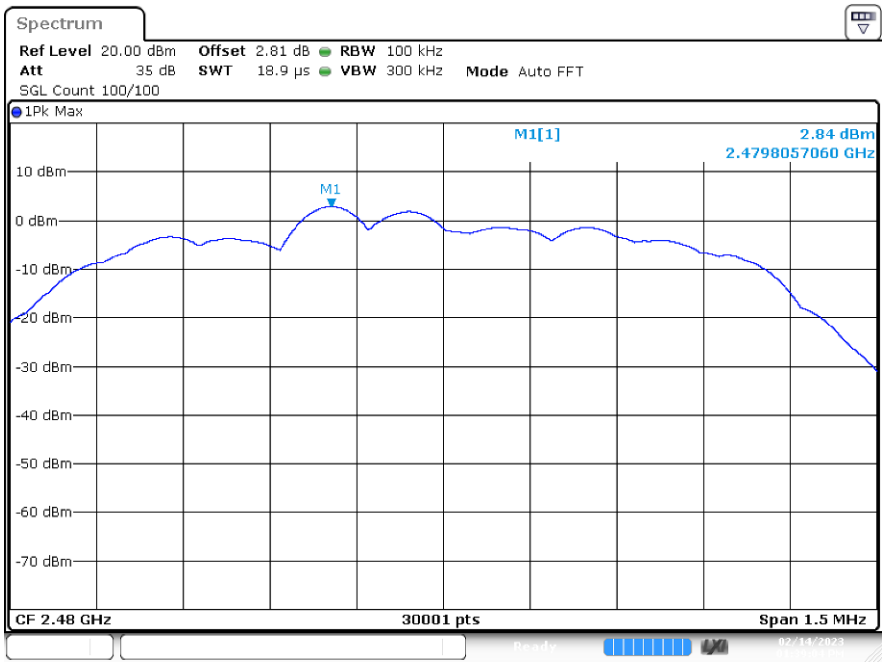
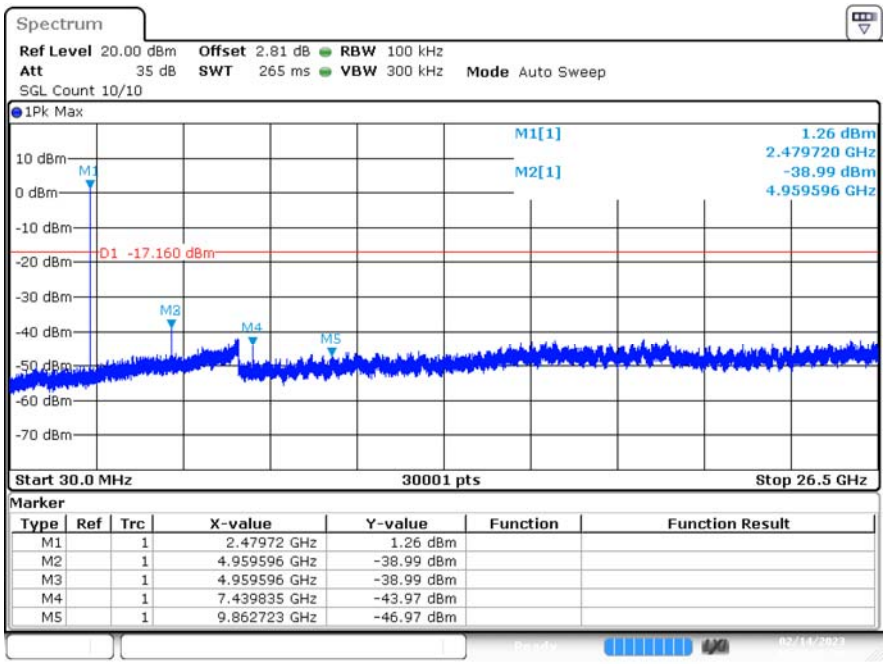
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40207 GHz	2.80 dBm		
M2		1	4.804306 GHz	-34.42 dBm		
M3		1	4.804306 GHz	-34.42 dBm		
M4		1	7.018962 GHz	-47.35 dBm		
M5		1	9.603317 GHz	-48.69 dBm		

GFSK_MCH_Graphs	
Pref	
Puw	

GFSK_HCH_Graphs	
Pref	
Puw	

π/4DQPSK_LCH_Graphs	
Pref	
Puw	

π/4DQPSK_MCH_Graphs	
Pref	
Puw	

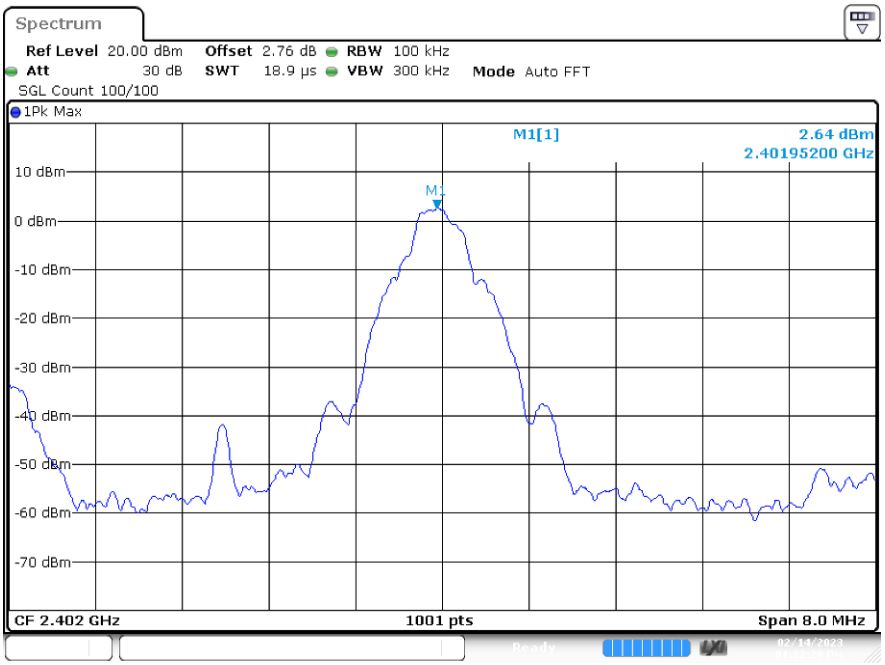
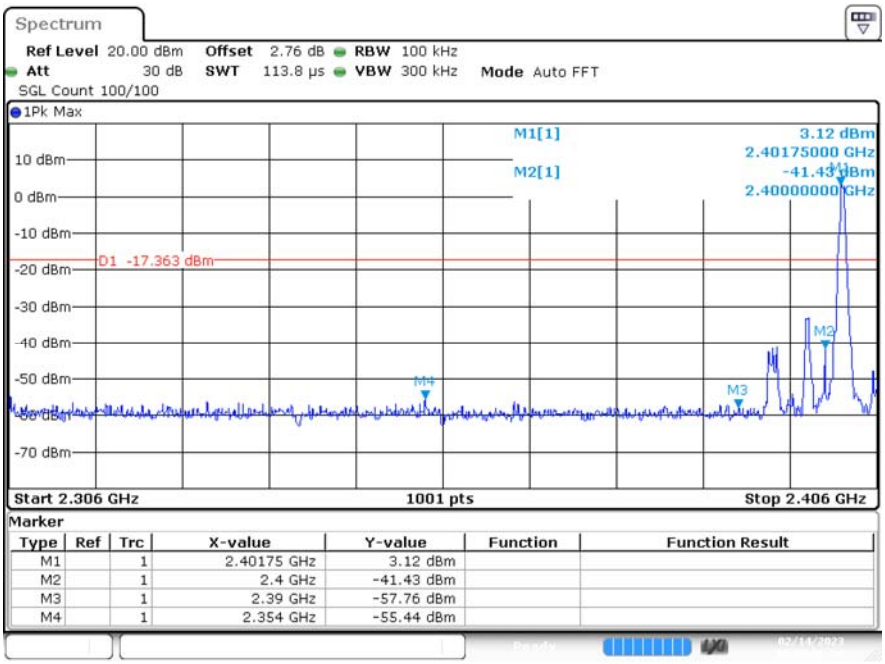
π/4DQPSK_HCH_Graphs	
Pref	
Puw	

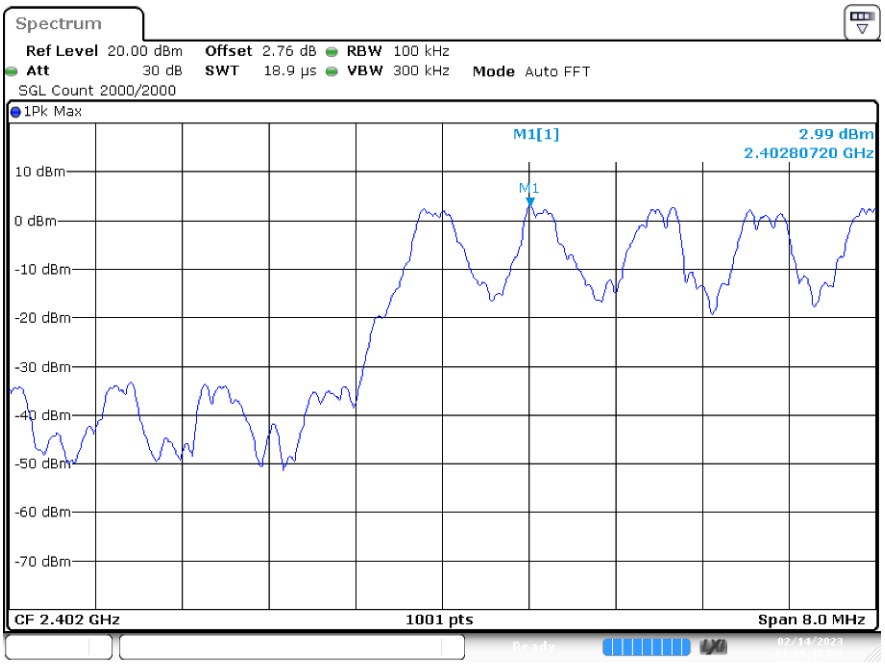
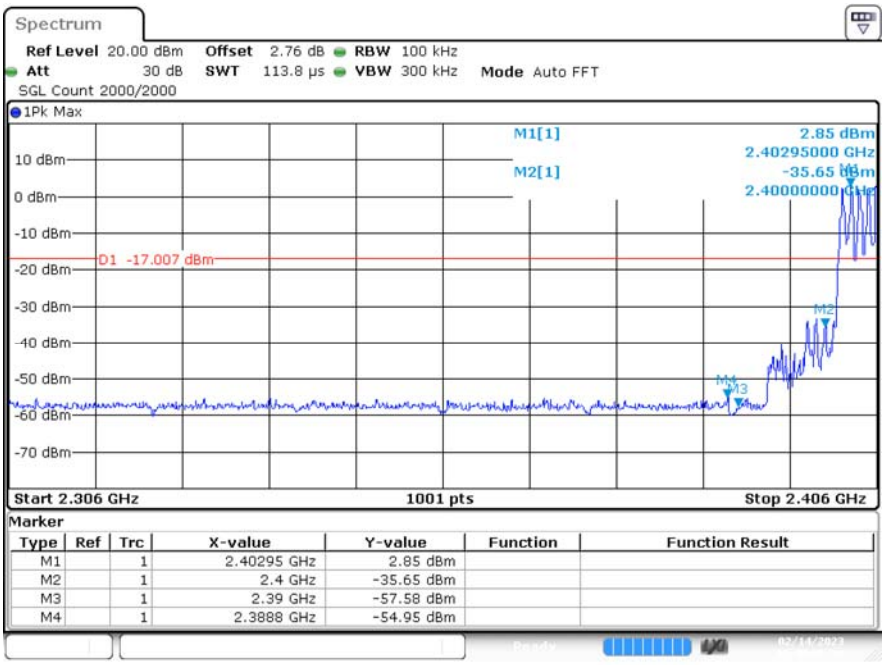
8 Band-edge for RF Conducted Emissions

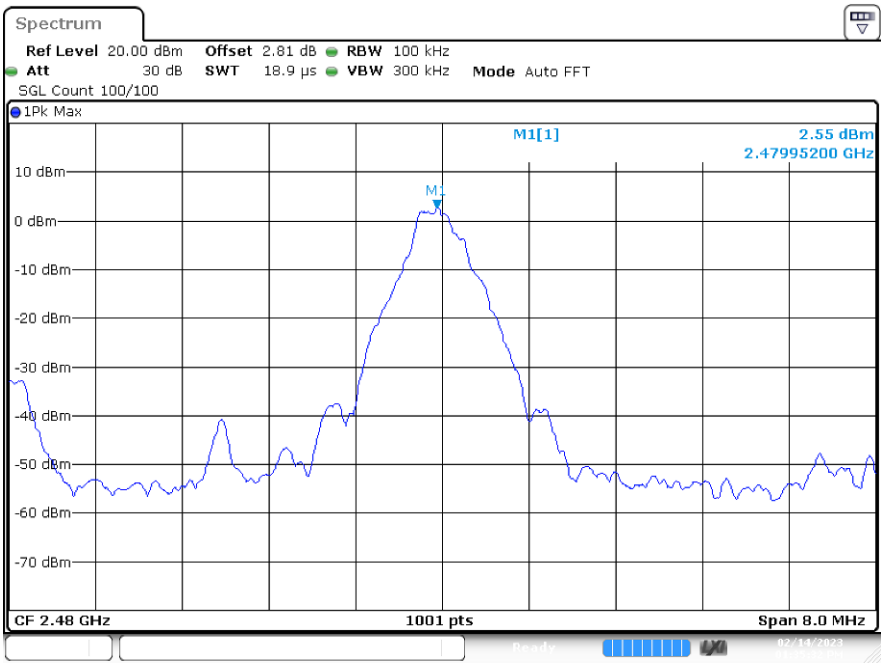
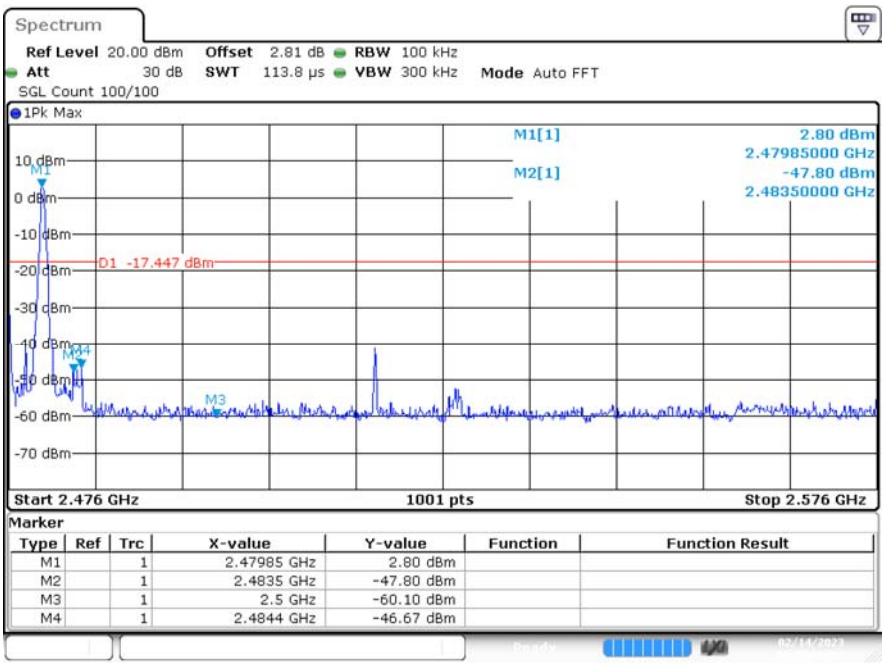
8.1 Test Result

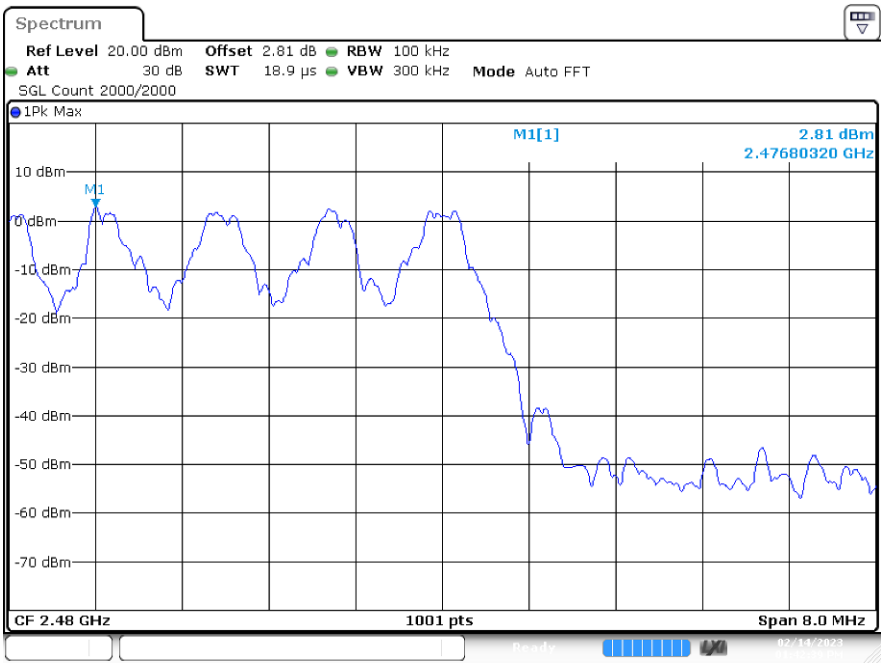
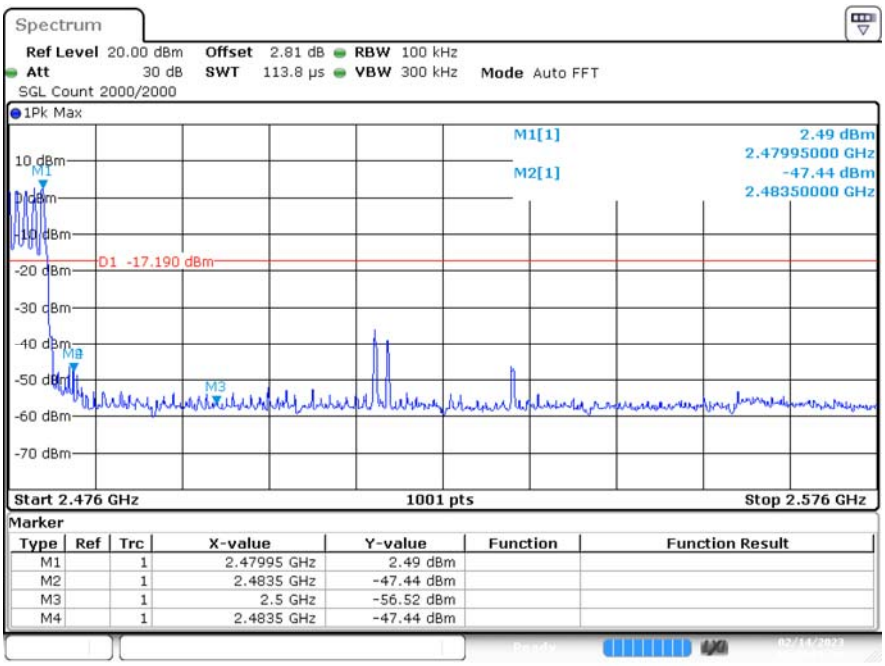
Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	-58.07	-20	Pass
			On	-57.93	-20	Pass
	HCH	2480	Off	-49.22	-20	Pass
			On	-50.25	-20	Pass
π/4DQPSK	LCH	2402	Off	-58.9	-20	Pass
			On	-57.41	-20	Pass
	HCH	2480	Off	-50.14	-20	Pass
			On	-48.93	-20	Pass

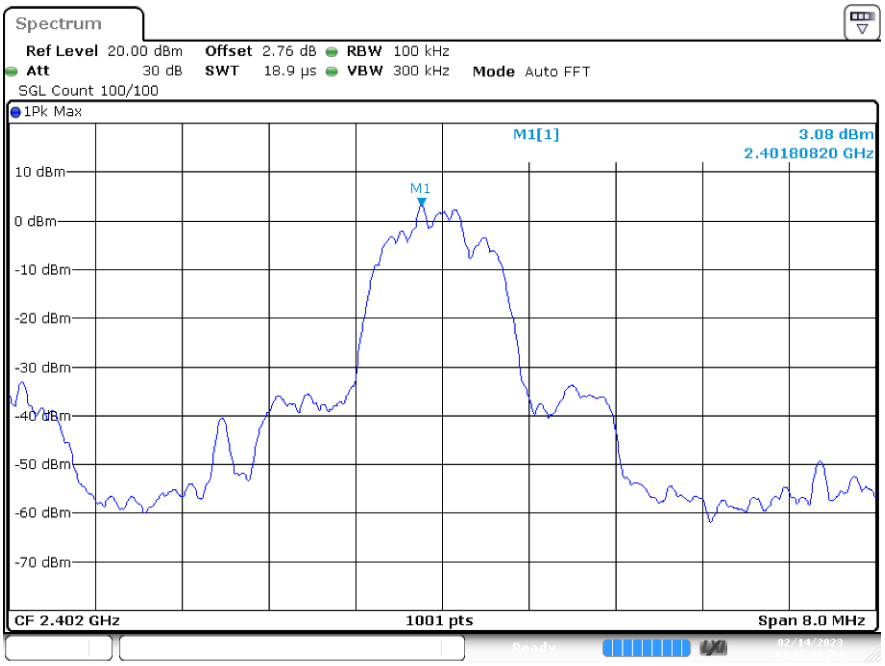
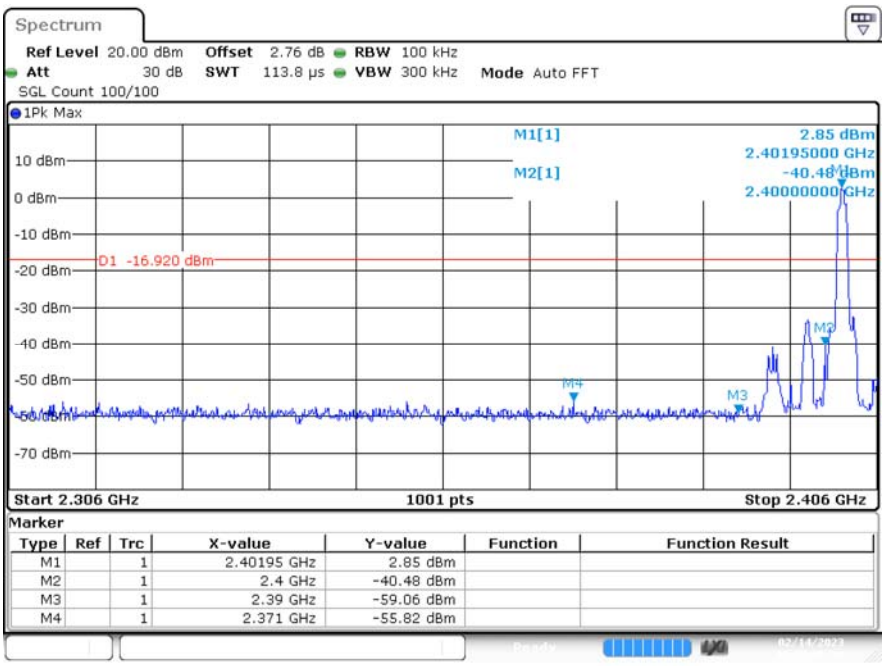
8.2 Test Graphs

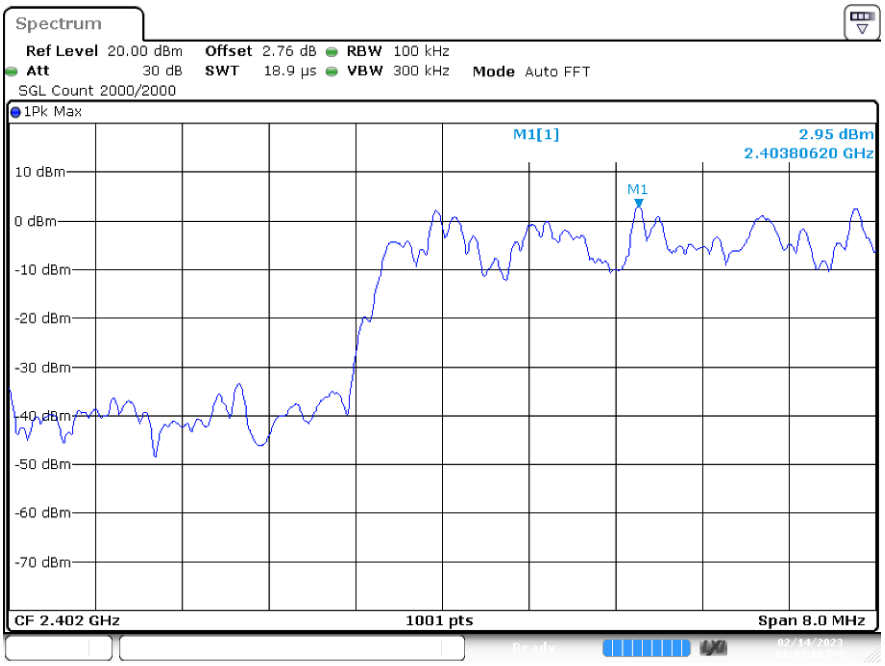
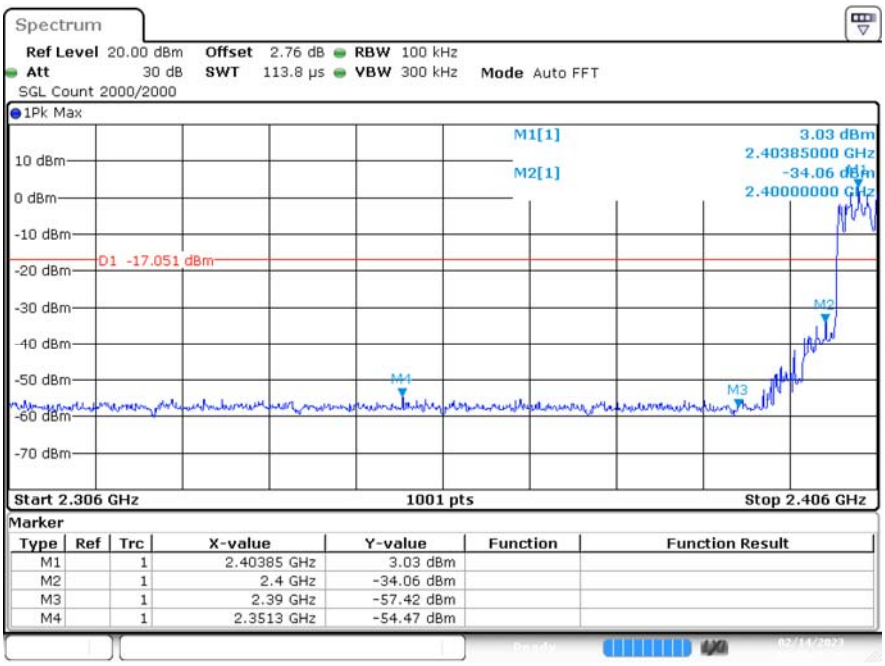
Test Graphs	
Pref	
GFSK/LCH/No Hop	

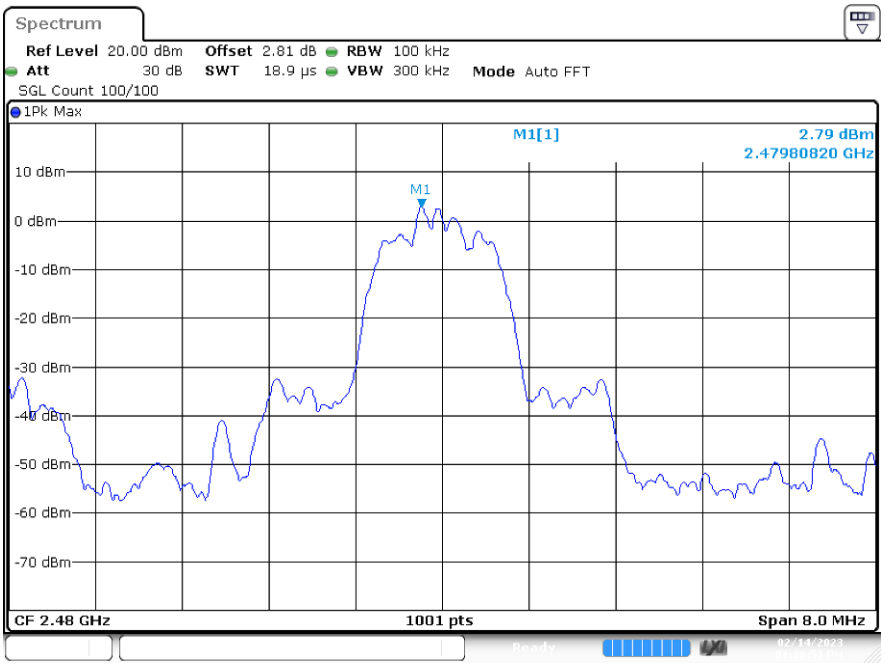
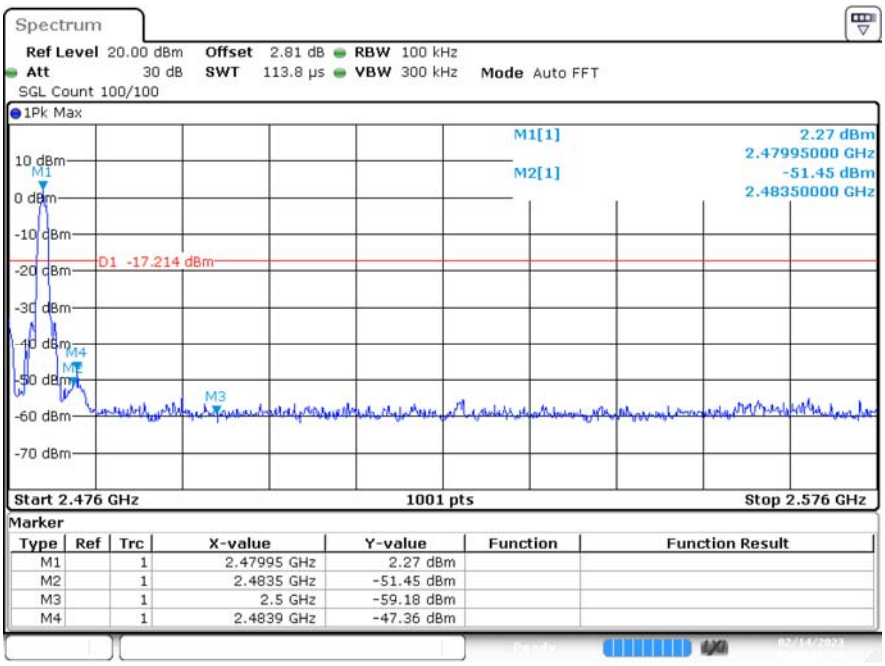
Ref	
GFSK/LCH/Hop	

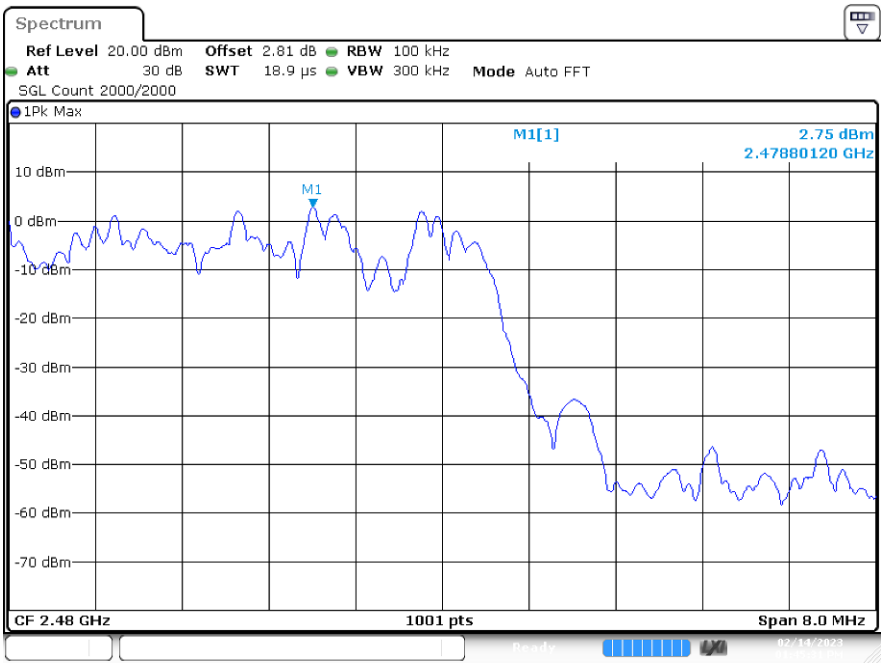
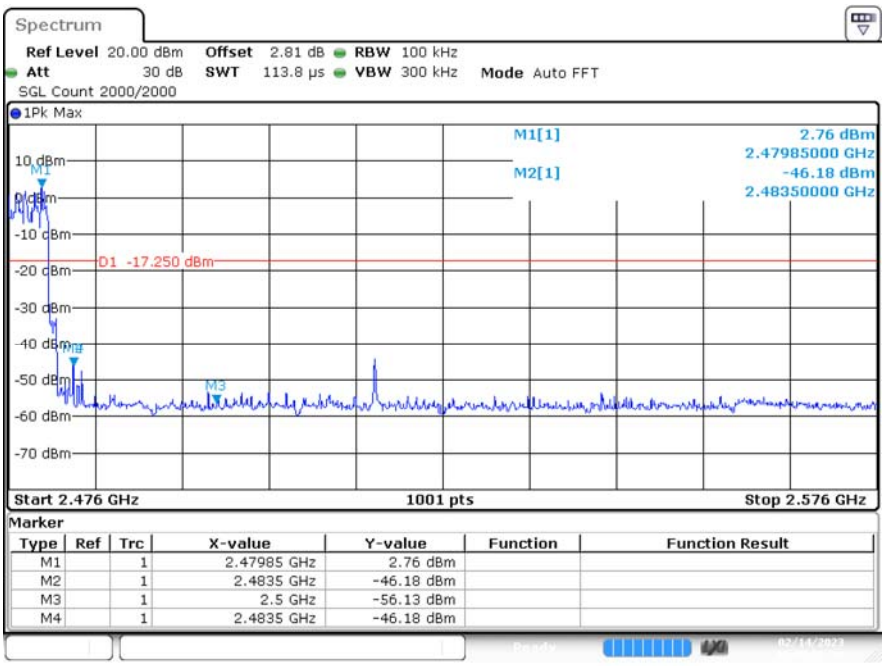
Ref	
GFSK/HCH/No Hop	

Ref.	
GFSK/HCH/Hop	

Ref	
π/4DQPSK/LCH/No Hop	

Ref	
π/4DQPSK/LCH/Hop	

Ref	
π/4DQPSK/HCH/No Hop	

Ref	
π/4DQPSK/HCH/Hop	

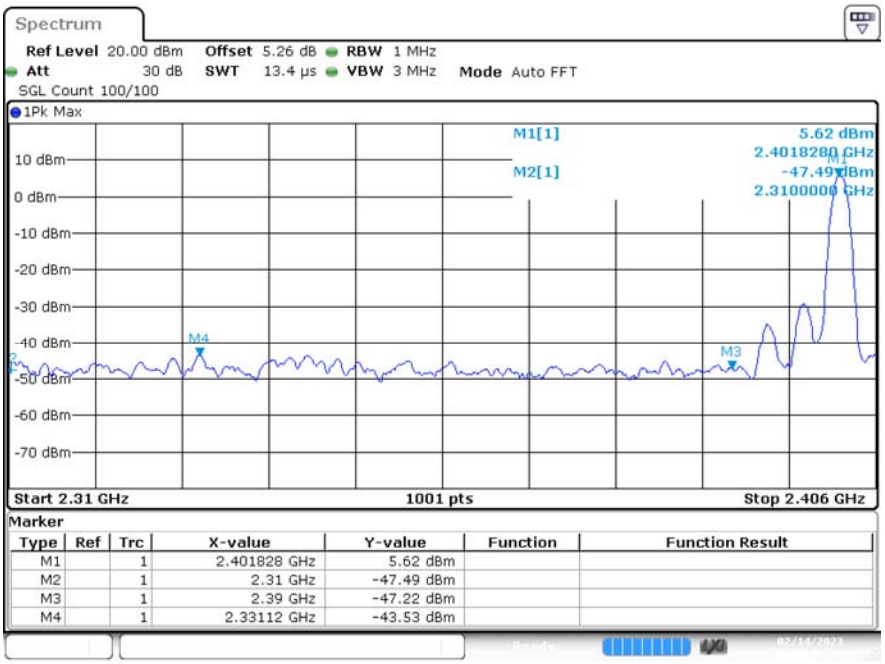
9 Restrict-band band-edge measurements

9.1 Test Result

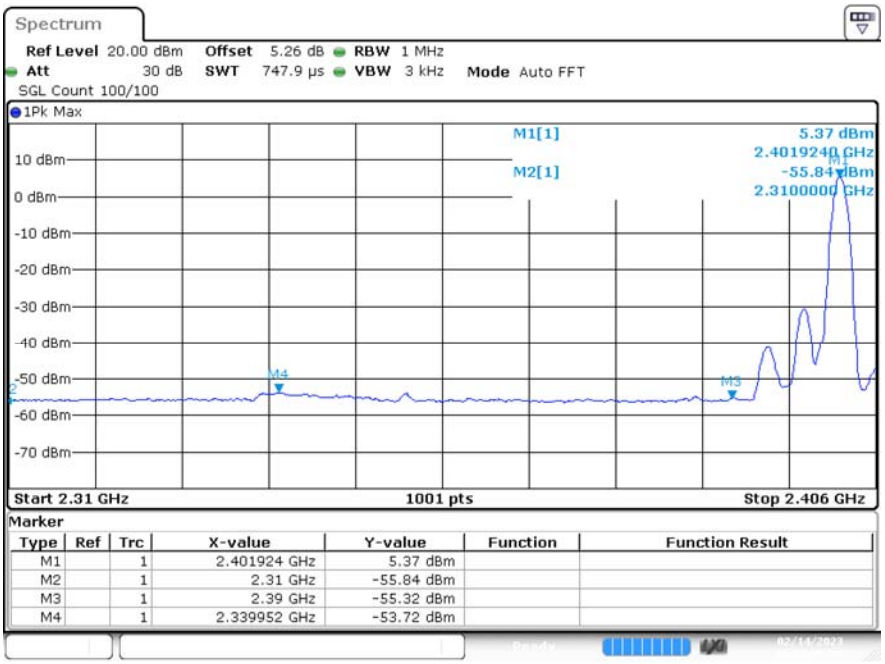
Test Mode	Hopping	Freq.	Power [dBm]	Gain	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-47.49	2.5	50.27	PEAK	74	Pass
	Off	2310.0	-55.84	2.5	41.92	AV	54	Pass
	Off	2331.12	-43.52	2.5	54.24	PEAK	74	Pass
	Off	2339.952	-53.72	2.5	44.04	AV	54	Pass
	Off	2390.0	-47.21	2.5	50.55	PEAK	74	Pass
	Off	2390.0	-55.31	2.5	42.45	AV	54	Pass
	Off	2483.5	-40.74	2.5	57.02	PEAK	74	Pass
	Off	2483.5	-45.81	2.5	51.95	AV	54	Pass
	Off	2483.656	-40.53	2.5	57.23	PEAK	74	Pass
	Off	2483.8	-45.45	2.5	52.31	AV	54	Pass
	Off	2500.0	-46.2	2.5	51.56	PEAK	74	Pass
	Off	2500.0	-55.53	2.5	42.23	AV	54	Pass
π/4DQPSK	Off	2310.0	-47.09	2.5	50.67	PEAK	74	Pass
	Off	2310.0	-55.63	2.5	42.13	AV	54	Pass
	Off	2321.904	-43.98	2.5	53.78	PEAK	74	Pass
	Off	2338.8	-53.71	2.5	44.05	AV	54	Pass
	Off	2390.0	-46.59	2.5	51.17	PEAK	74	Pass
	Off	2390.0	-55.98	2.5	41.78	AV	54	Pass
	Off	2483.5	-42.35	2.5	55.41	PEAK	74	Pass
	Off	2483.5	-45.67	2.5	52.09	AV	54	Pass
	Off	2484.568	-39.65	2.5	58.11	PEAK	74	Pass
	Off	2483.728	-45.24	2.5	52.52	AV	54	Pass
	Off	2500.0	-46.82	2.5	50.94	PEAK	74	Pass
	Off	2500.0	-55.65	2.5	42.11	AV	54	Pass

9.2 Test Graphs

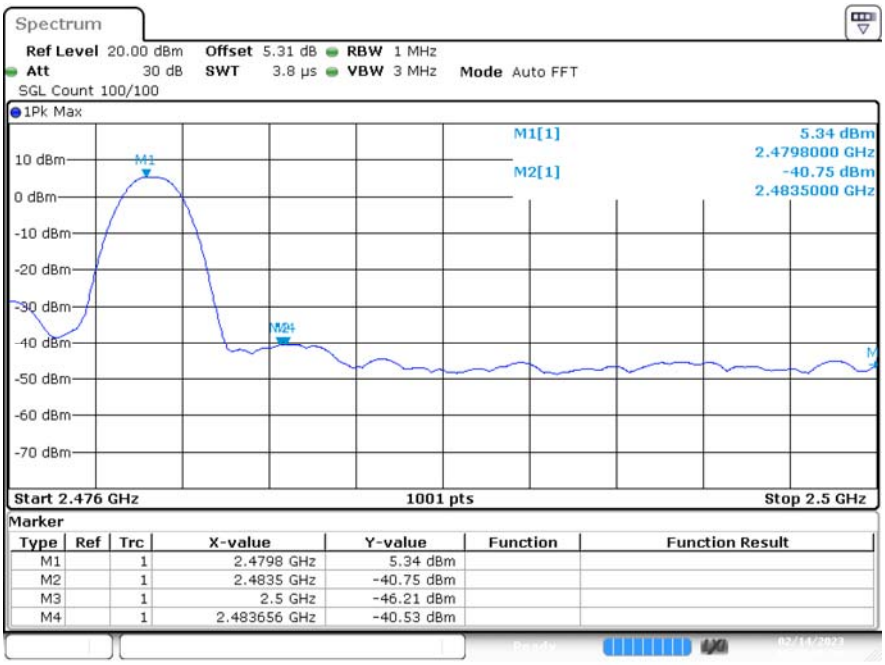
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



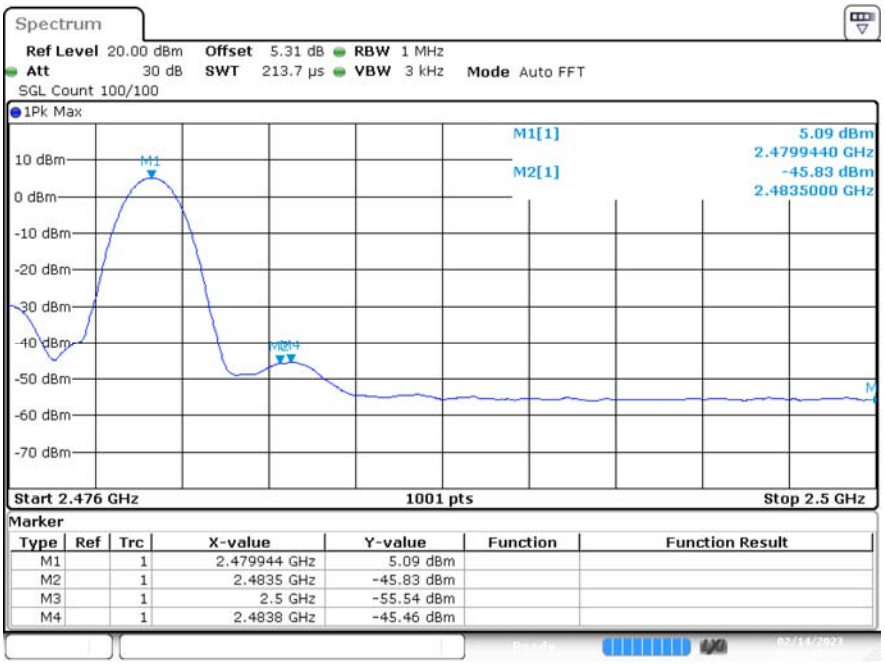
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



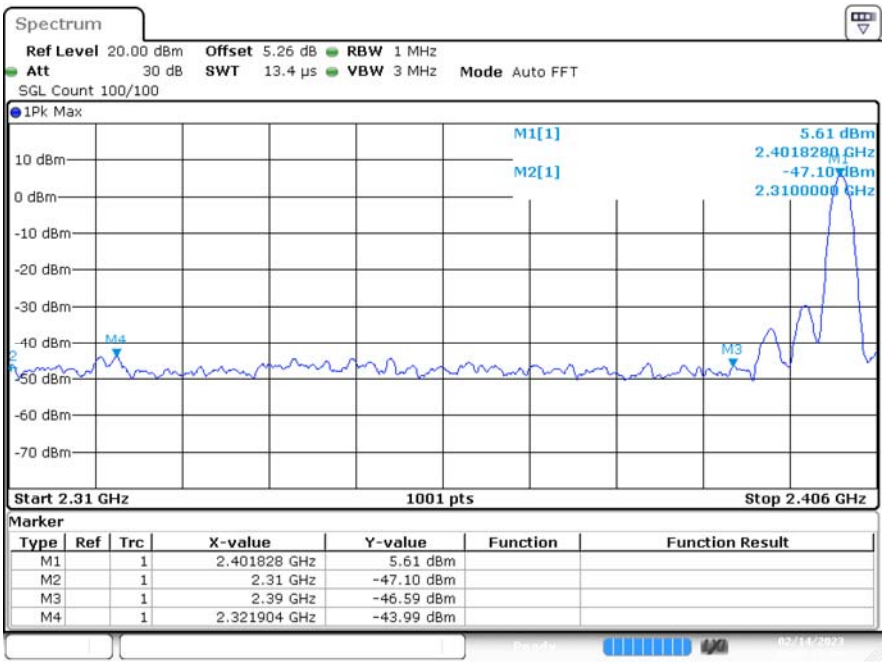
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



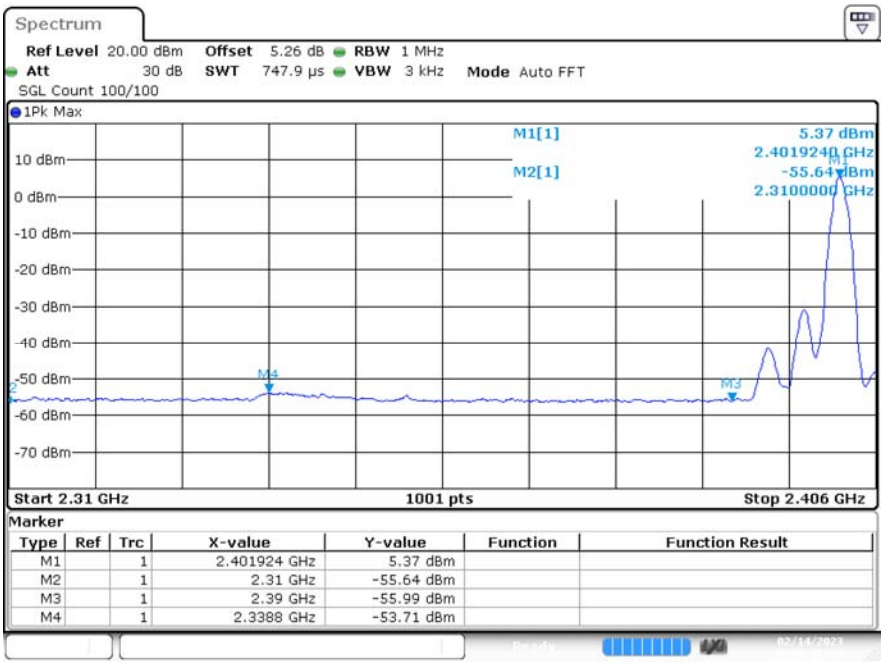
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



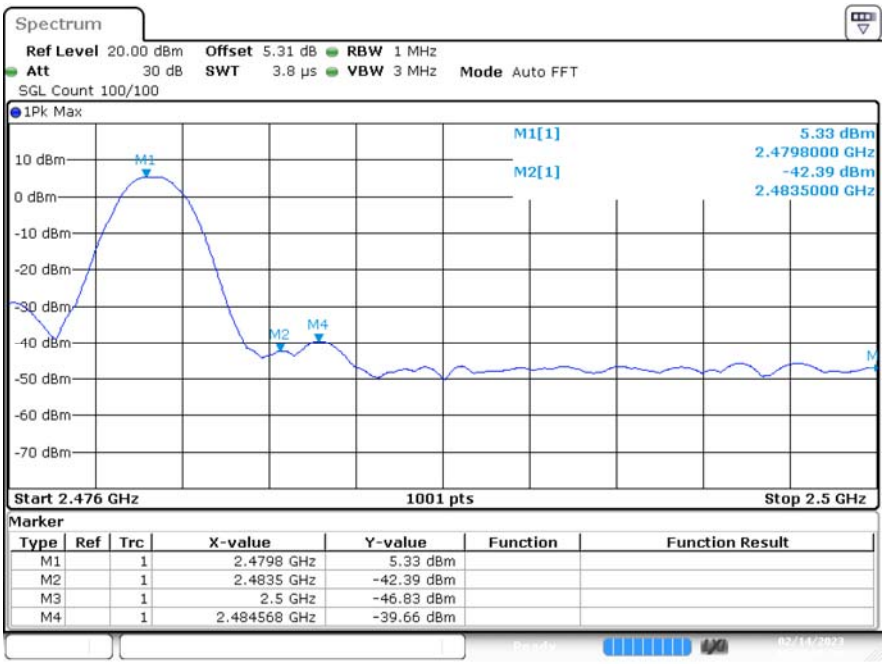
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (Low Channel)



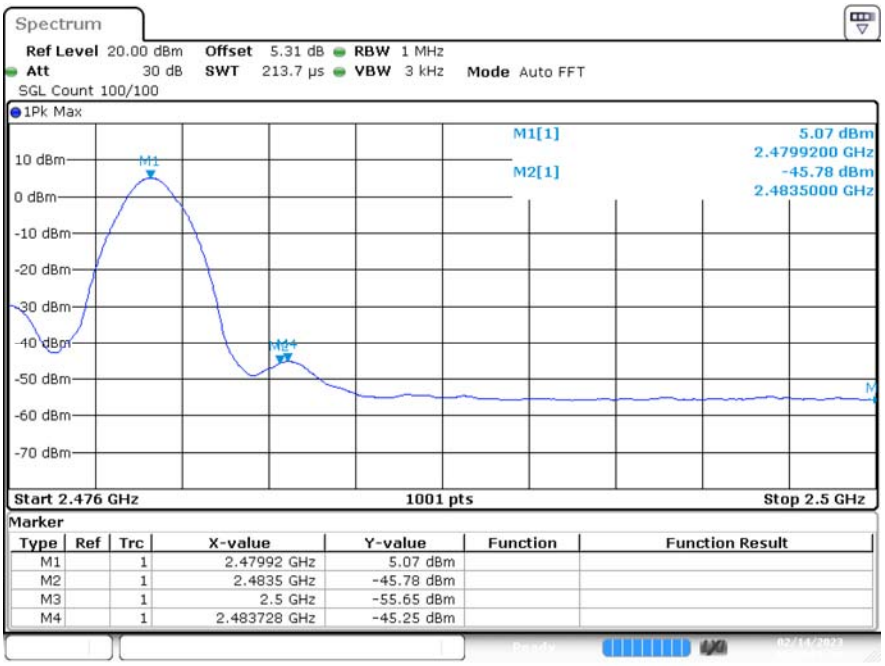
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (Low Channel)



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---