



Appendix A

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

Product Name: Docking Stand Speaker

Trade Mark: N/A

Test Model: DTKJ-U-0721

Environmental Conditions

Temperature:	24.5℃
Relative Humidity:	51.8%
ATM Pressure:	101Kpa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen

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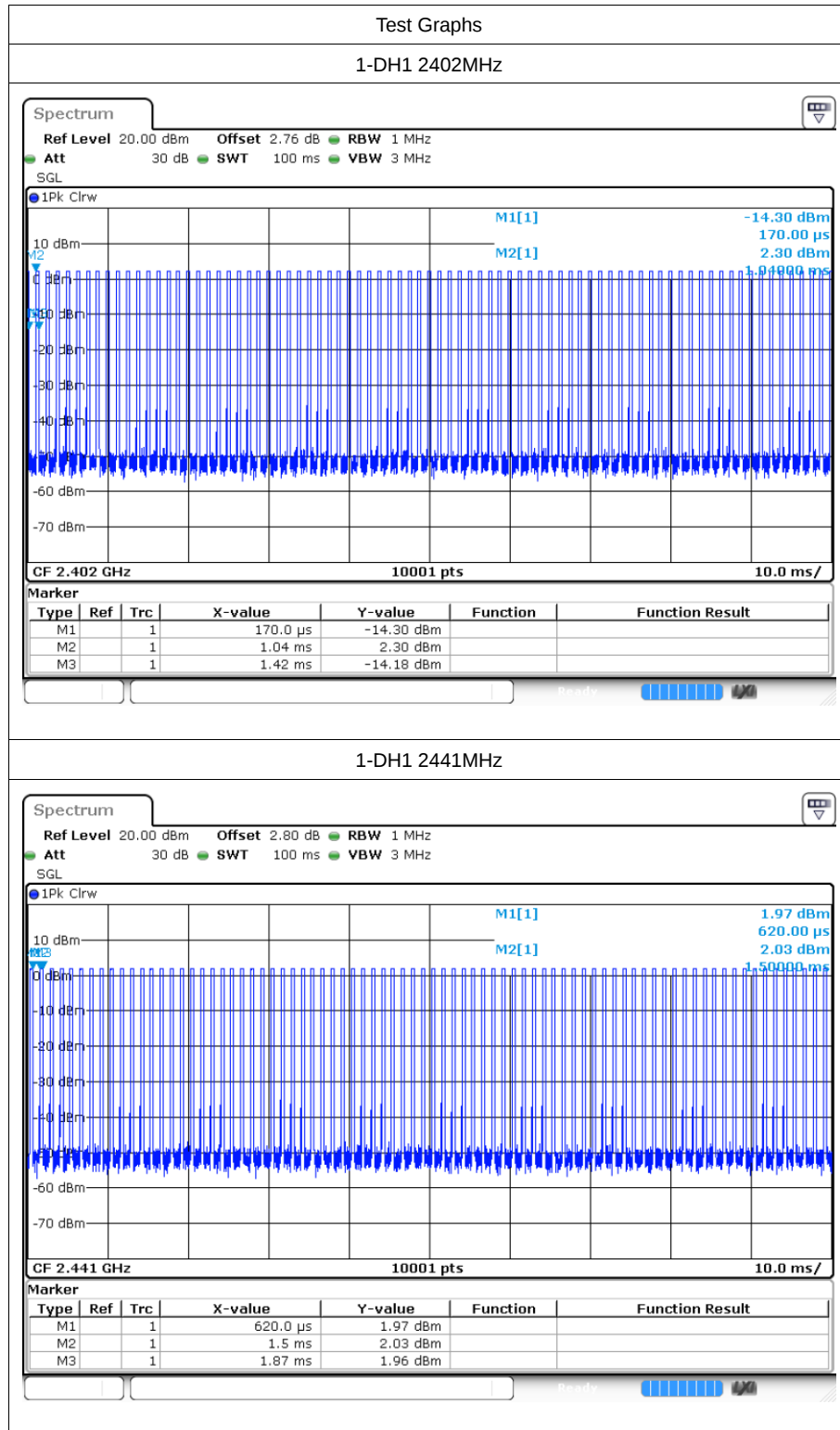
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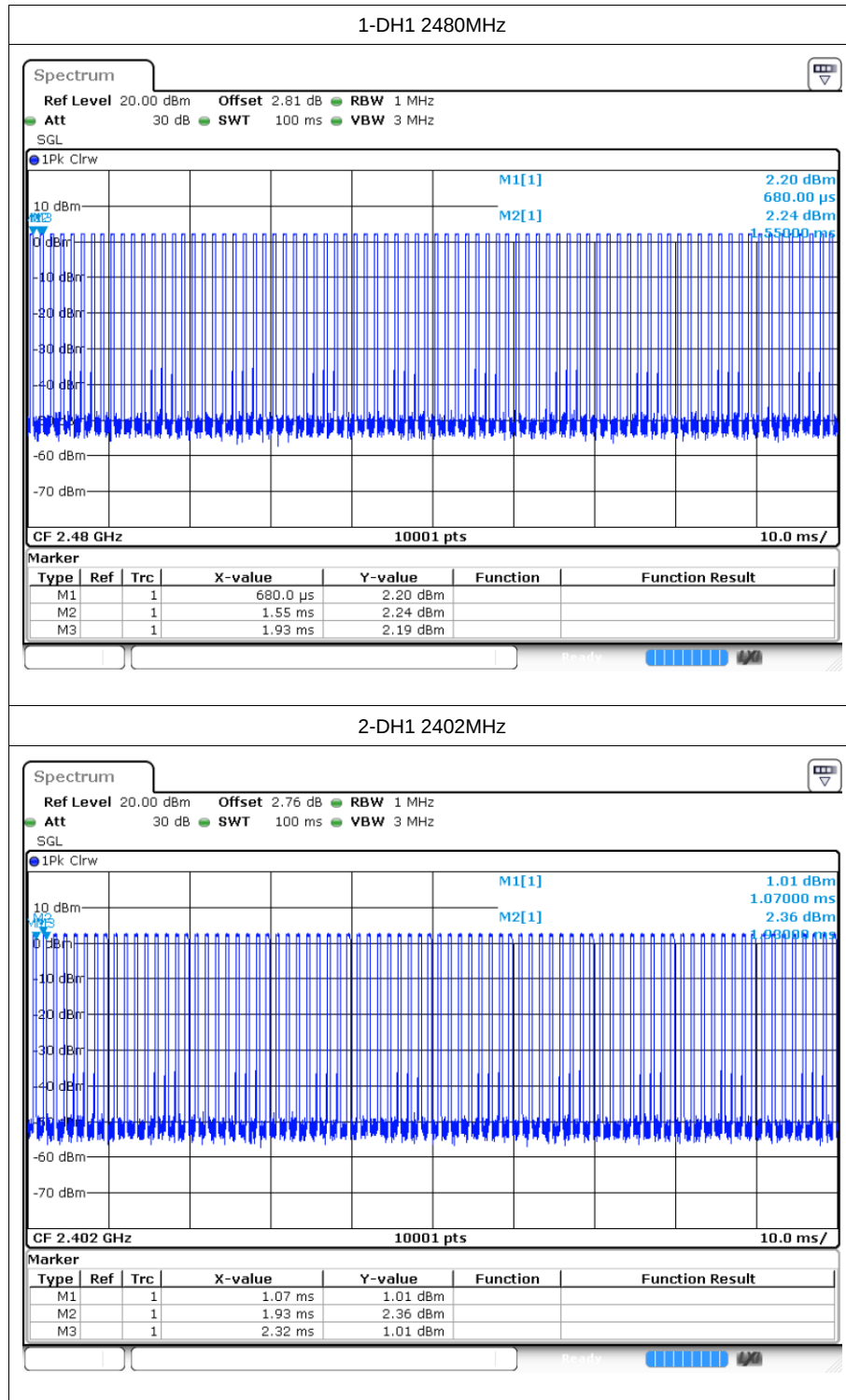
1 Duty Cycle

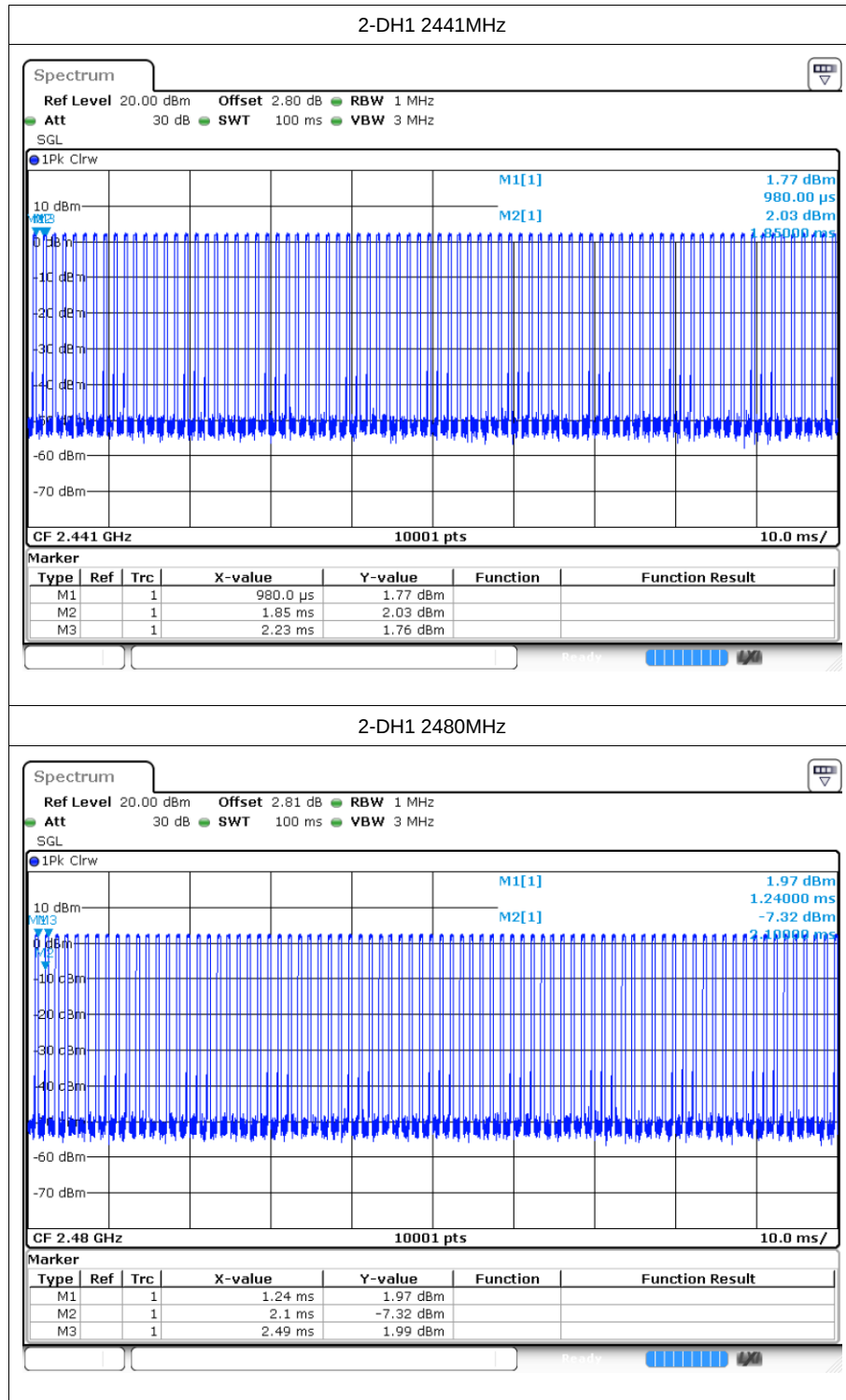
1.1 Test Result

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

1.2 Test Graphs





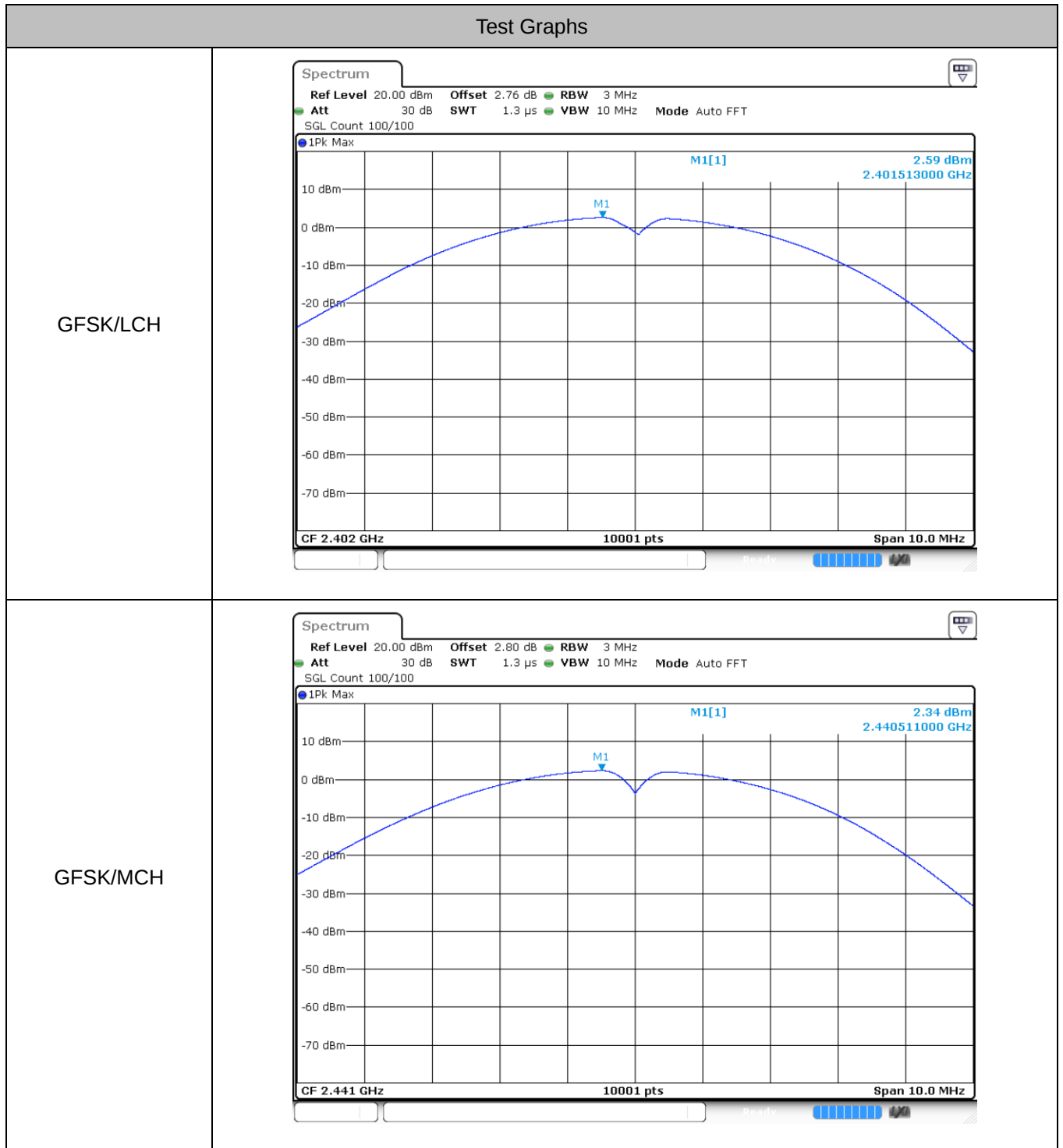


2 Maximum Conducted Peak Output Power

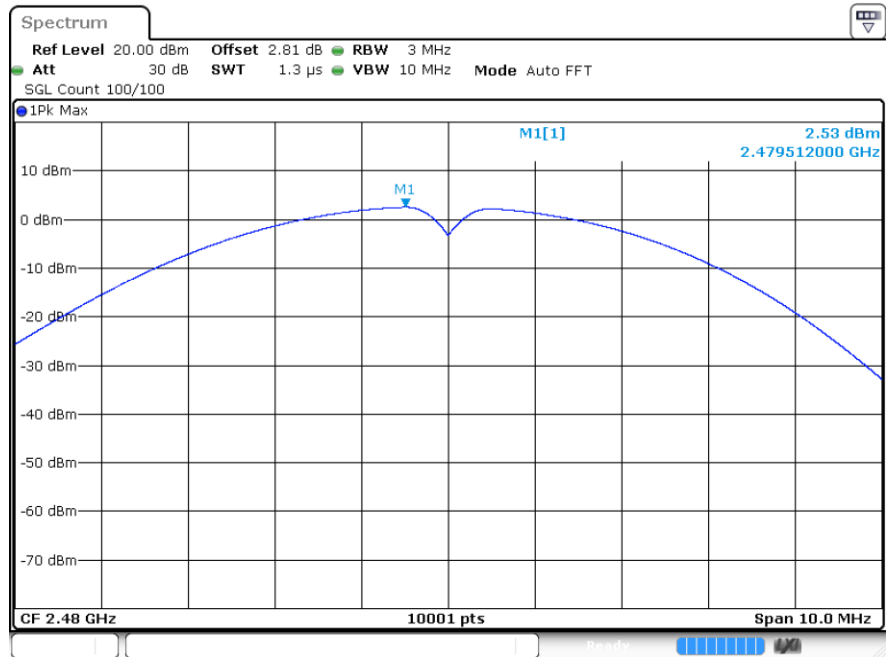
2.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.59	21	Pass
	MCH	2.34	21	Pass
	HCH	2.53	21	Pass
$\pi/4$ DQPSK	LCH	2.79	21	Pass
	MCH	2.37	21	Pass
	HCH	2.73	21	Pass

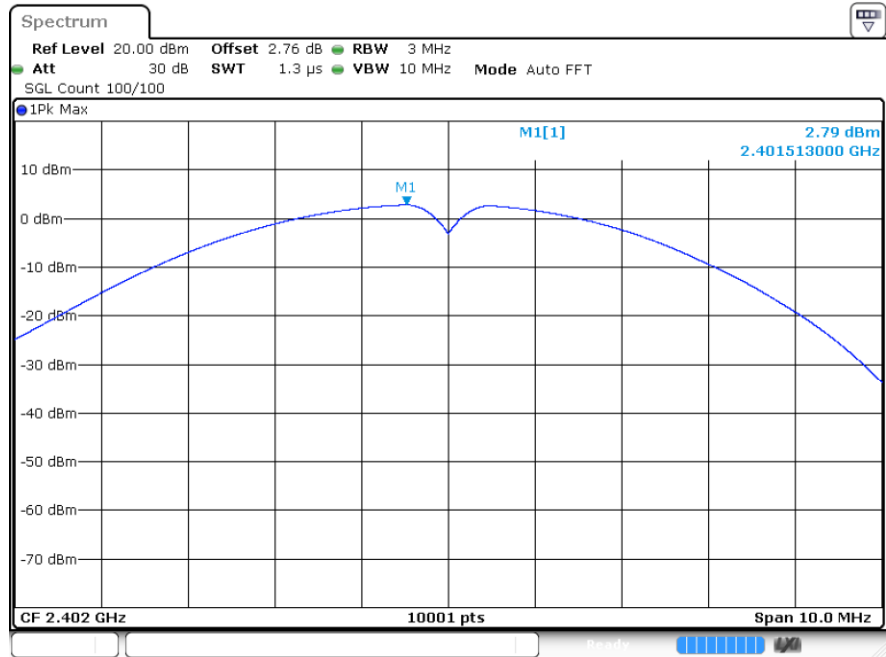
2.2 Test Graphs



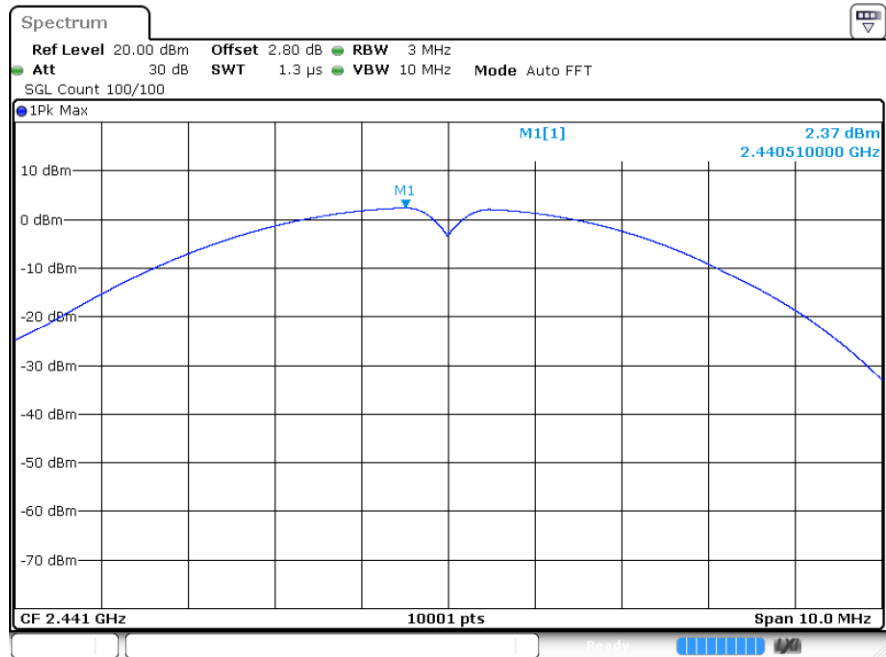
GFSK/HCH



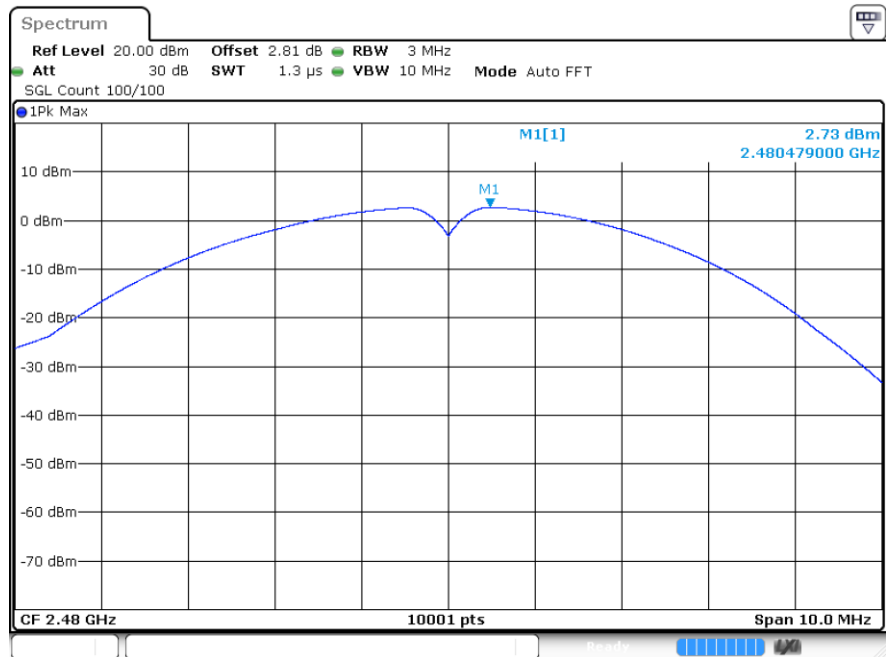
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH

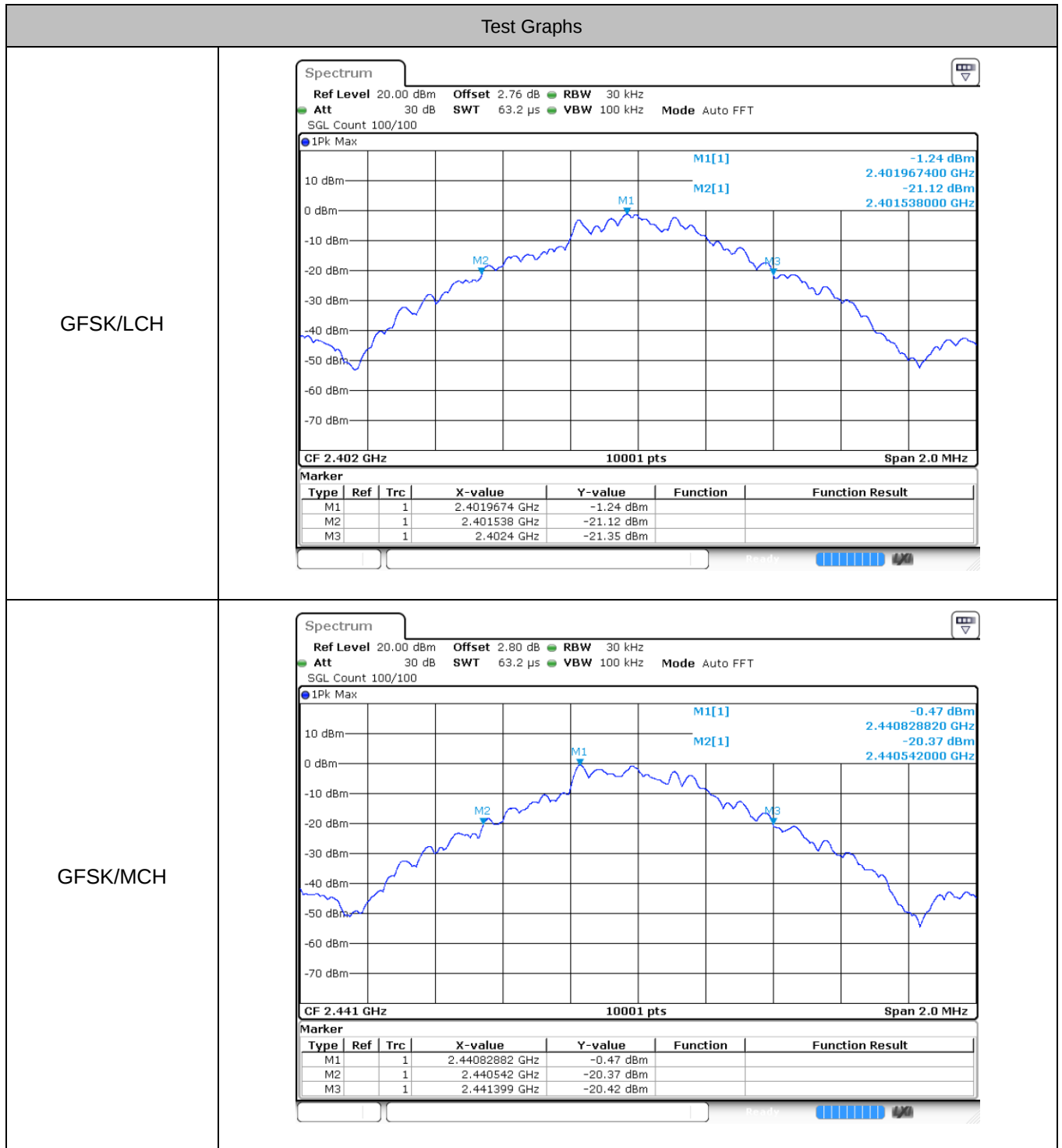


3 20dB Bandwidth

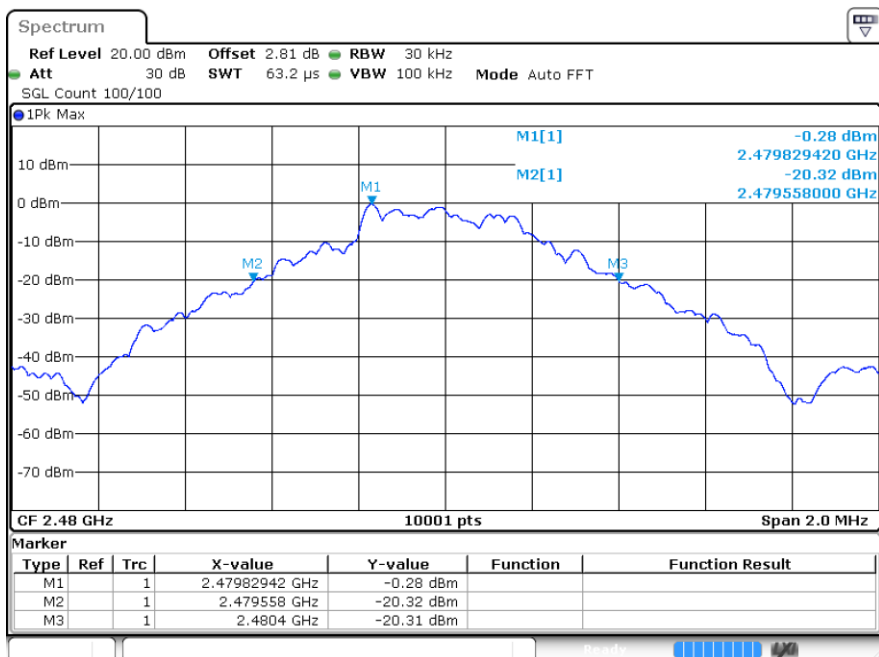
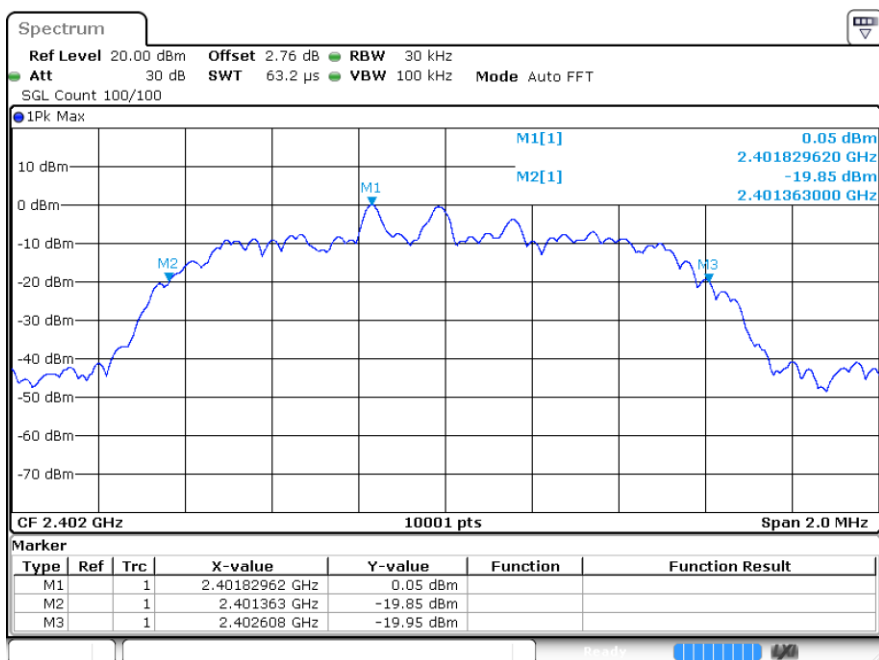
3.1 Test Result

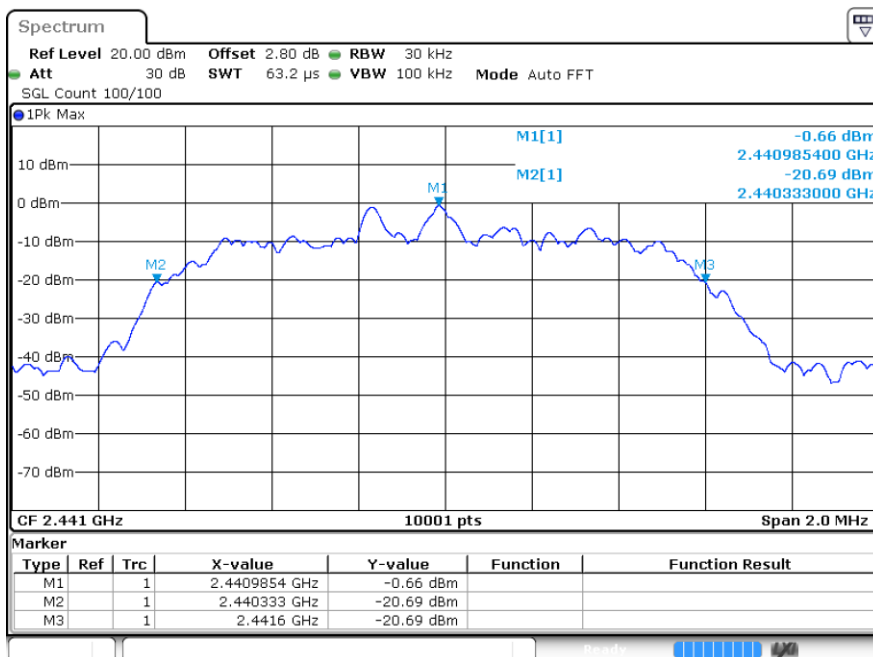
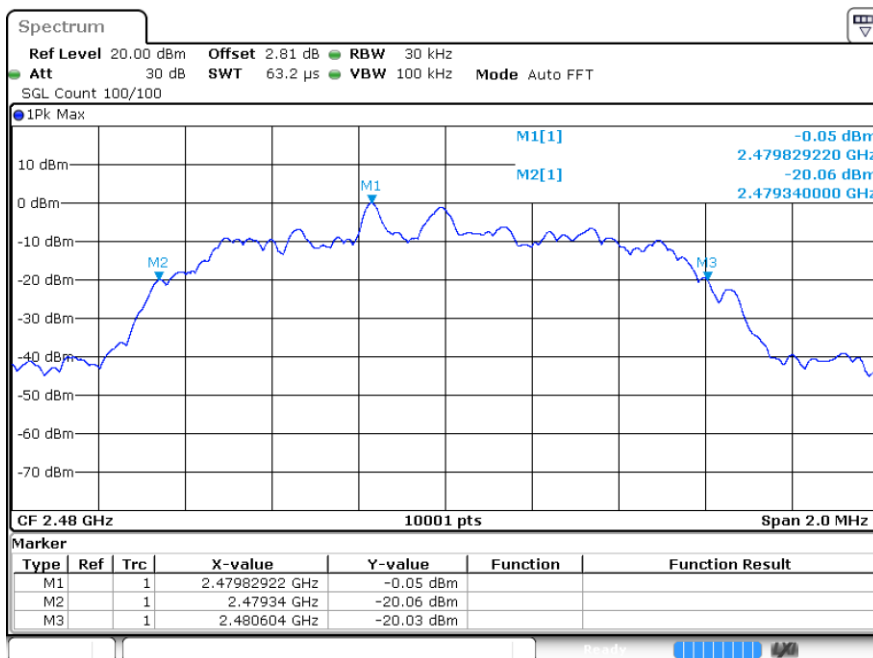
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.862	Not Specified	Pass
	MCH	0.857	Not Specified	Pass
	HCH	0.841	Not Specified	Pass
$\pi/4$ DQPSK	LCH	1.245	Not Specified	Pass
	MCH	1.266	Not Specified	Pass
	HCH	1.264	Not Specified	Pass

3.2 Test Graphs



GFSK/HCH


 $\pi/4$ DQPSK/LCH


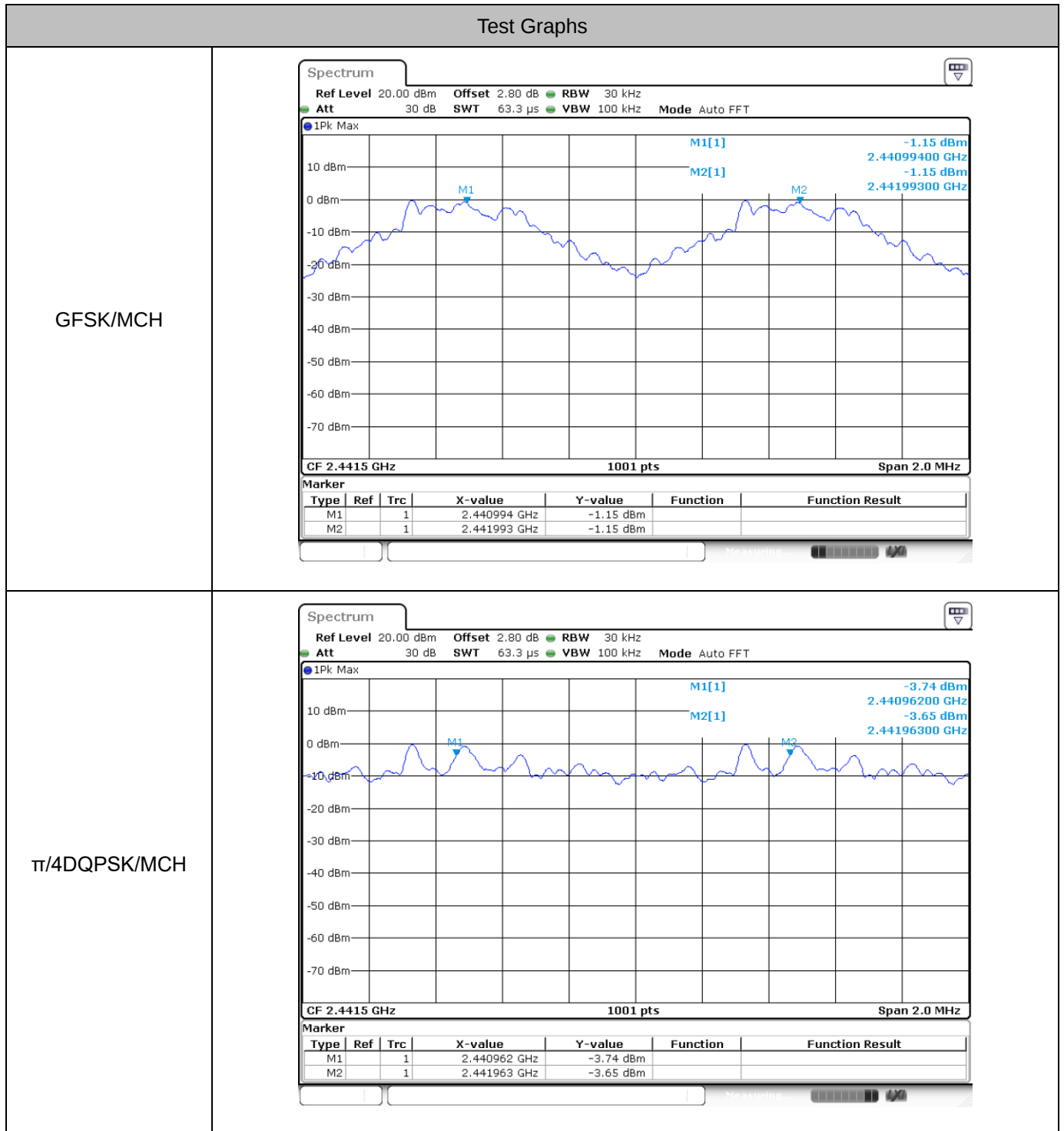
$\pi/4$ DQPSK/MCH

 $\pi/4$ DQPSK/HCH


4 Carrier Frequency Separation

4.1 Test Result

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	MCH	0.999	0.571	Pass
$\pi/4$ DQPSK	MCH	1.001	0.844	Pass

4.2 Test Graphs

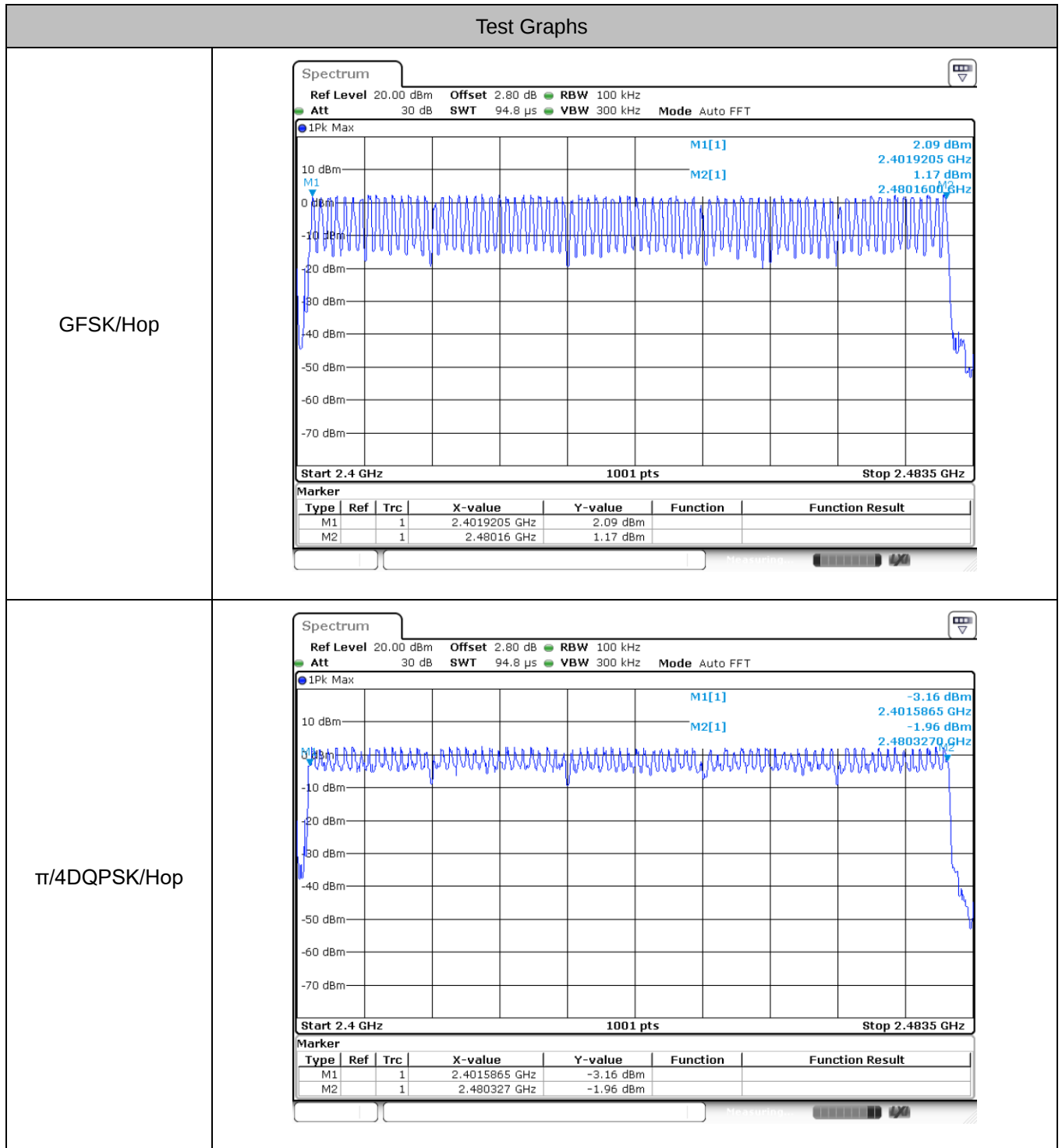


5 Hopping Channel Number

5.1 Test Result

Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS

5.2 Test Graphs

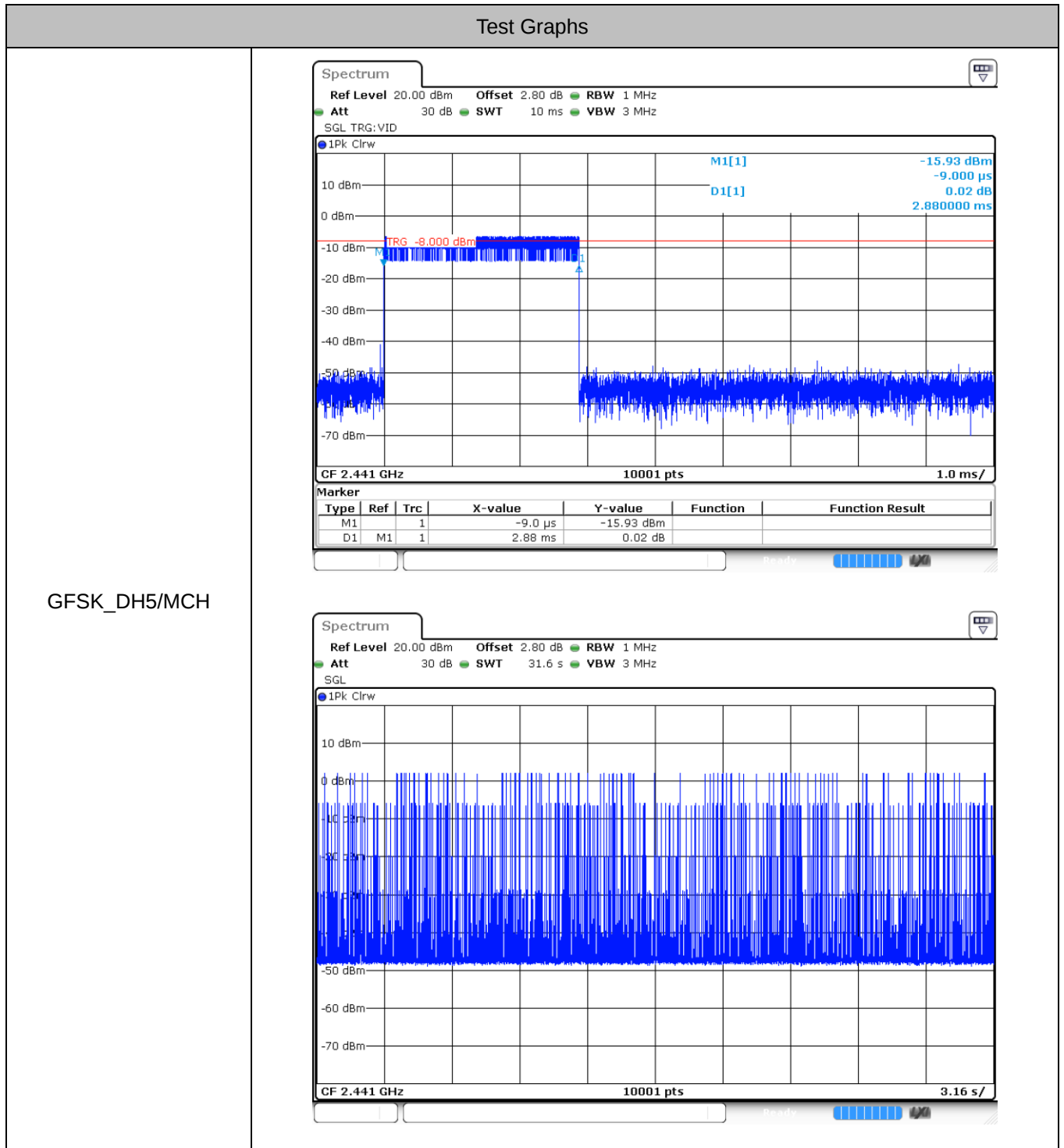


6 Dwell Time

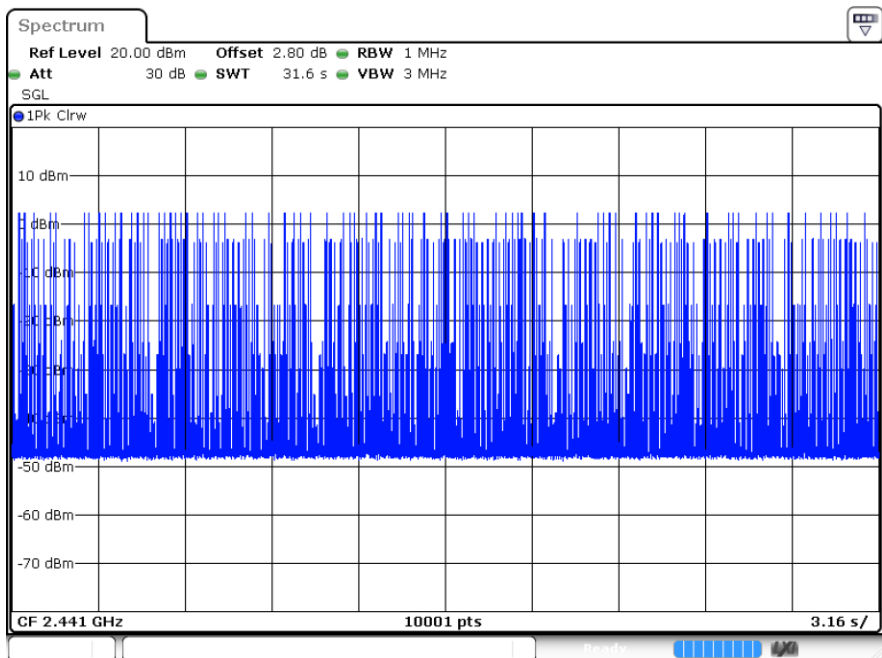
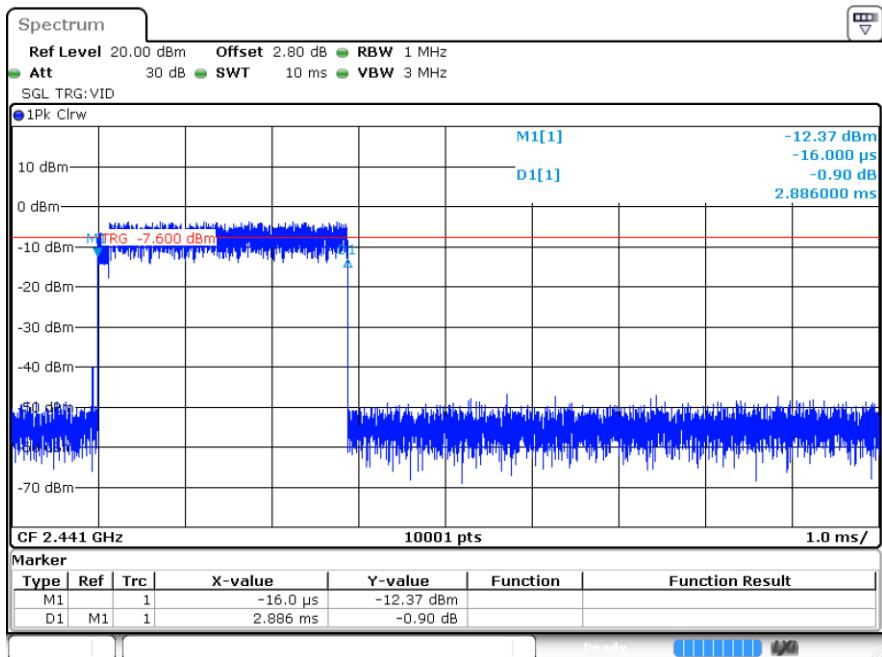
6.1 Test Result

Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.88	111	319.68	0.4	Pass
$\pi/4$ DQPSK	2DH5	MCH	2.886	98	282.828	0.4	Pass

6.2 Test Graphs



$\pi/4$ DQPSK
_2DH5/MCH

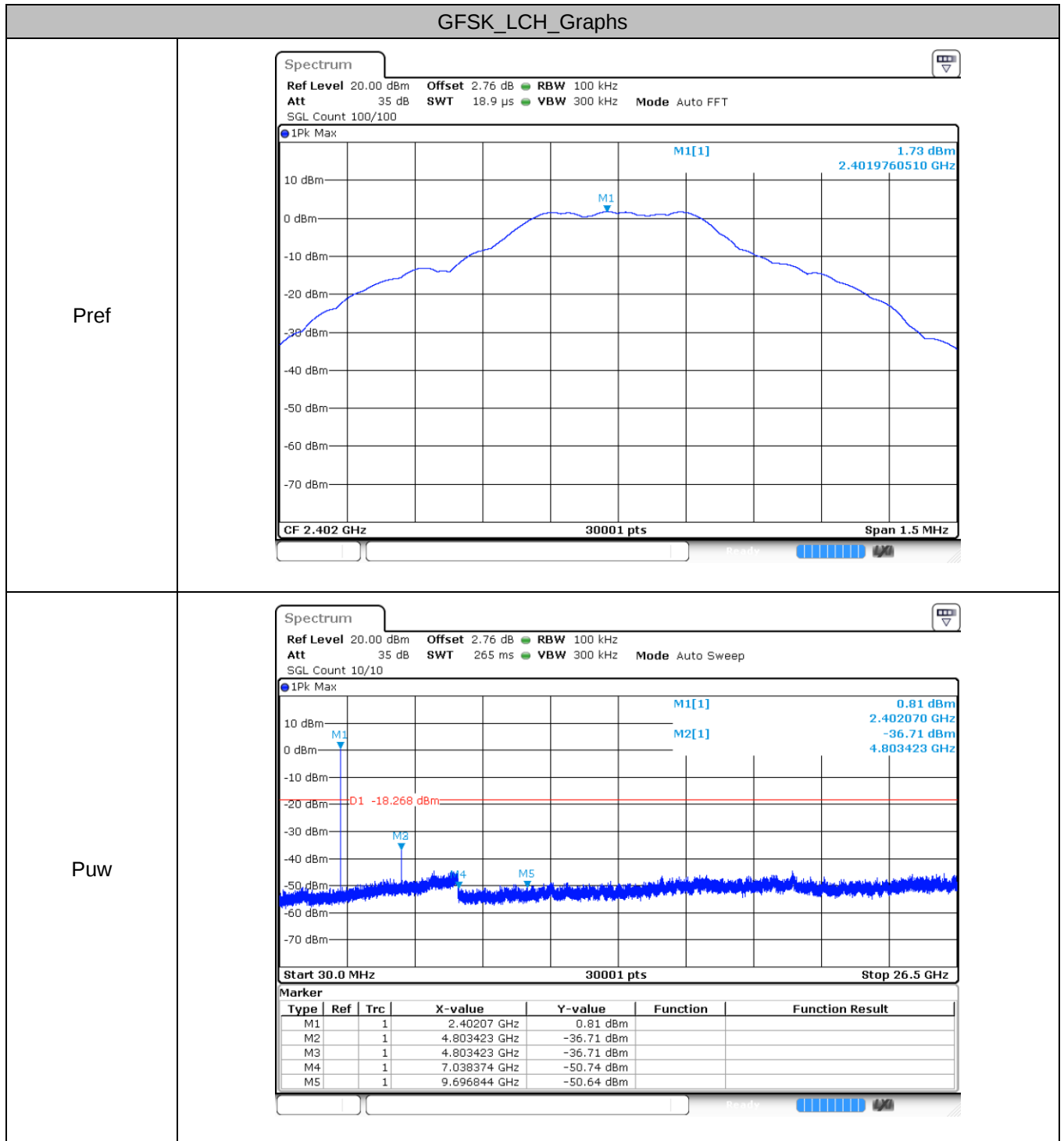


7 RF Conducted Spurious Emissions

7.1 Test Result

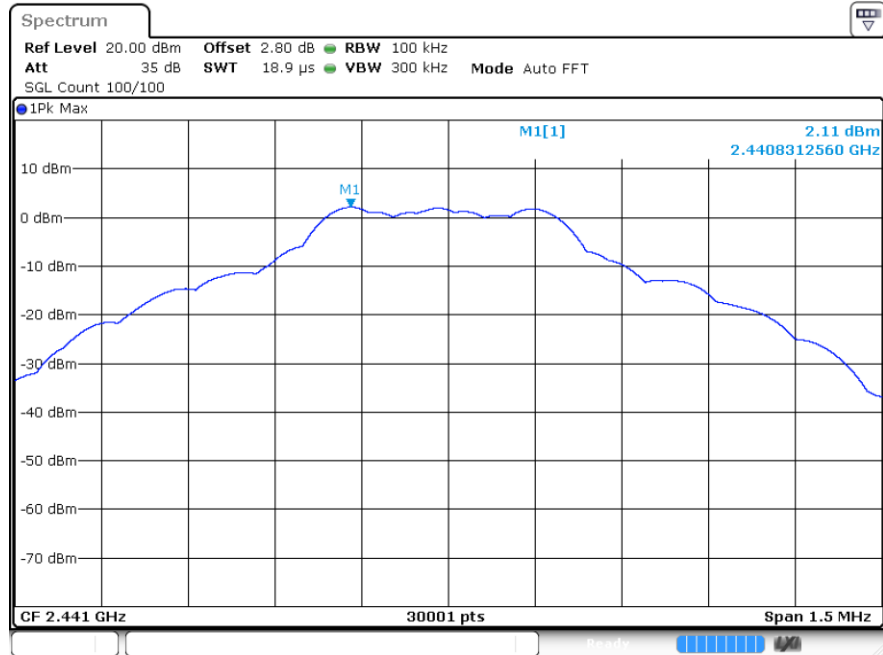
Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-38.43	-20	Pass
	MCH	-38.84	-20	Pass
	HCH	-41.33	-20	Pass
$\pi/4$ DQPSK	LCH	-36.16	-20	Pass
	MCH	-40.34	-20	Pass
	HCH	-42.49	-20	Pass

7.2 Test Graphs

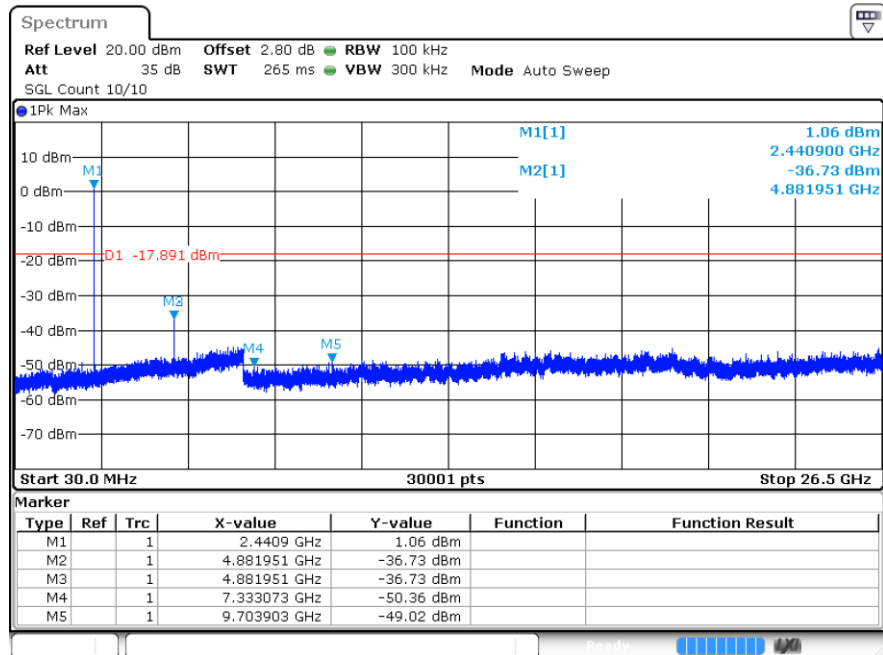


GFSK_MCH_Graphs

Pref

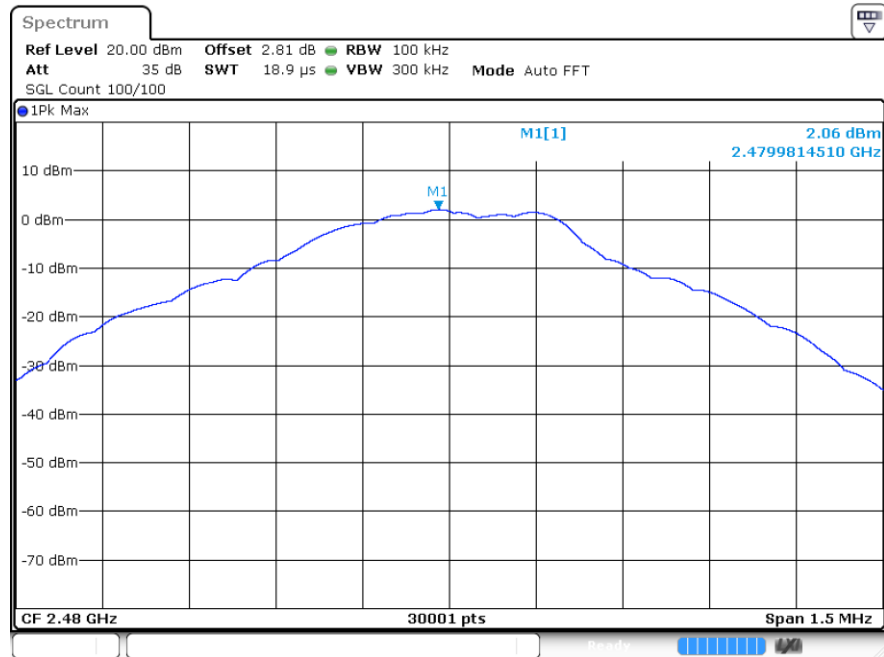


Puw

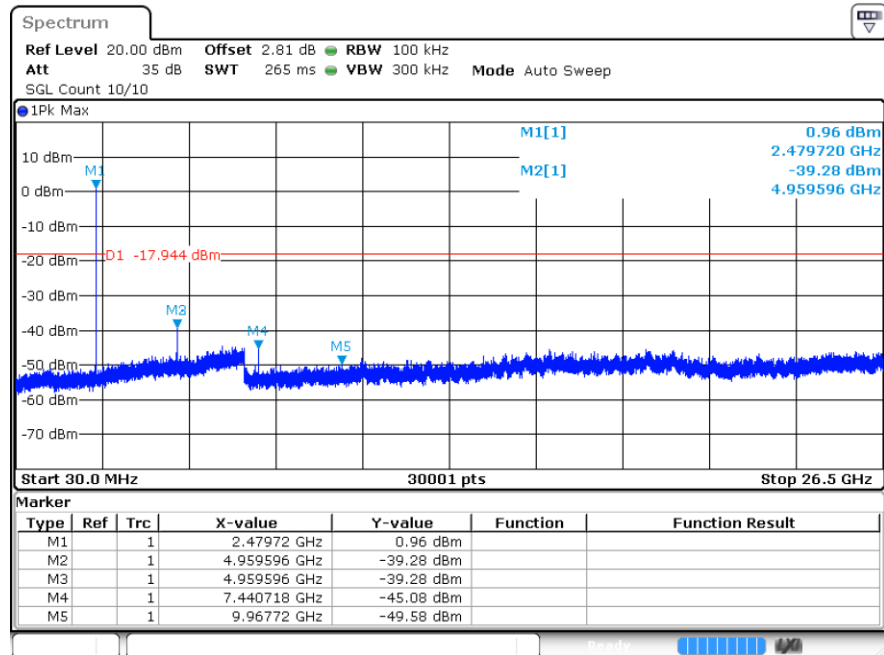


GFSK_HCH_Graphs

Pref

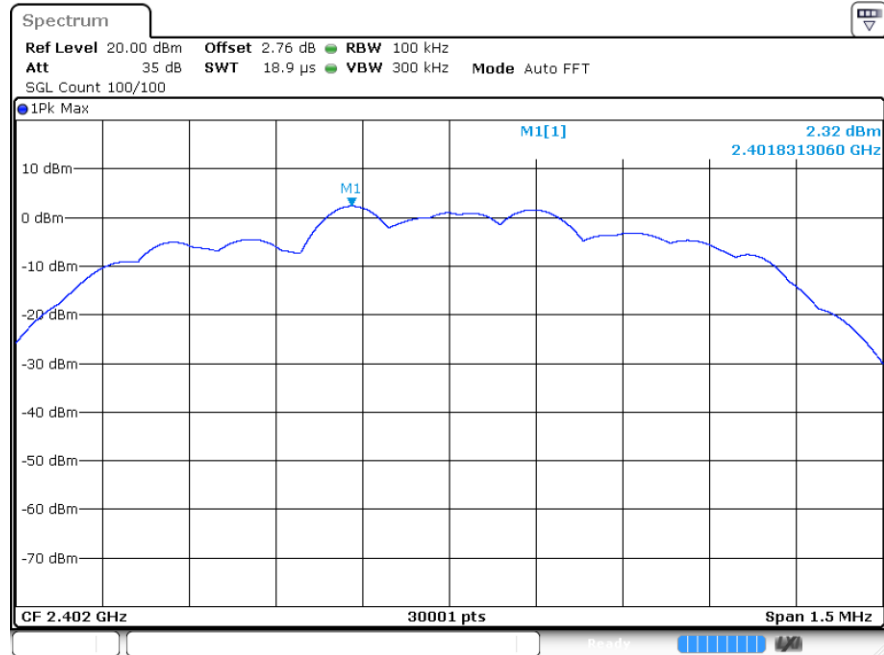


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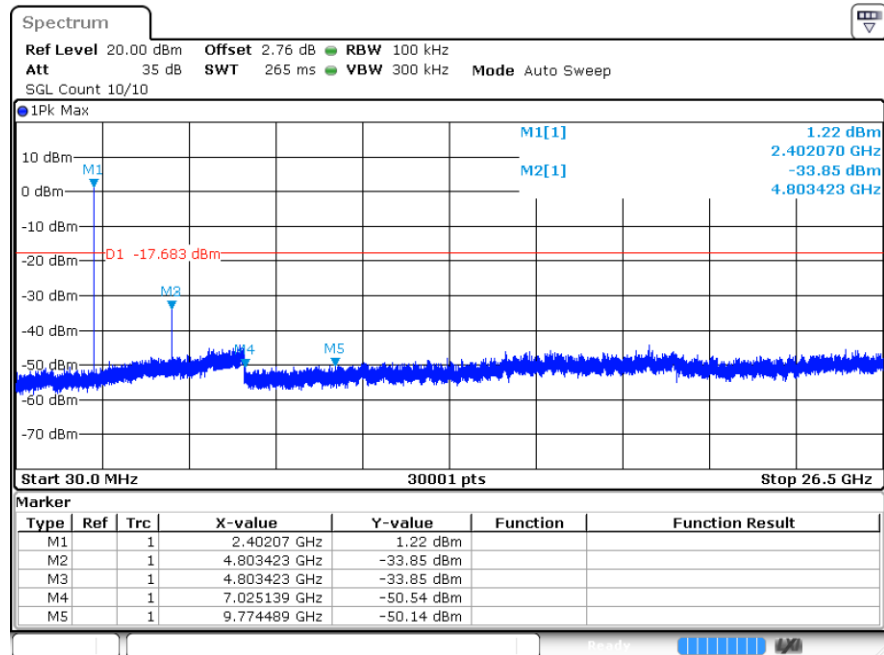


$\pi/4$ DQPSK_LCH_Graphs

Pref

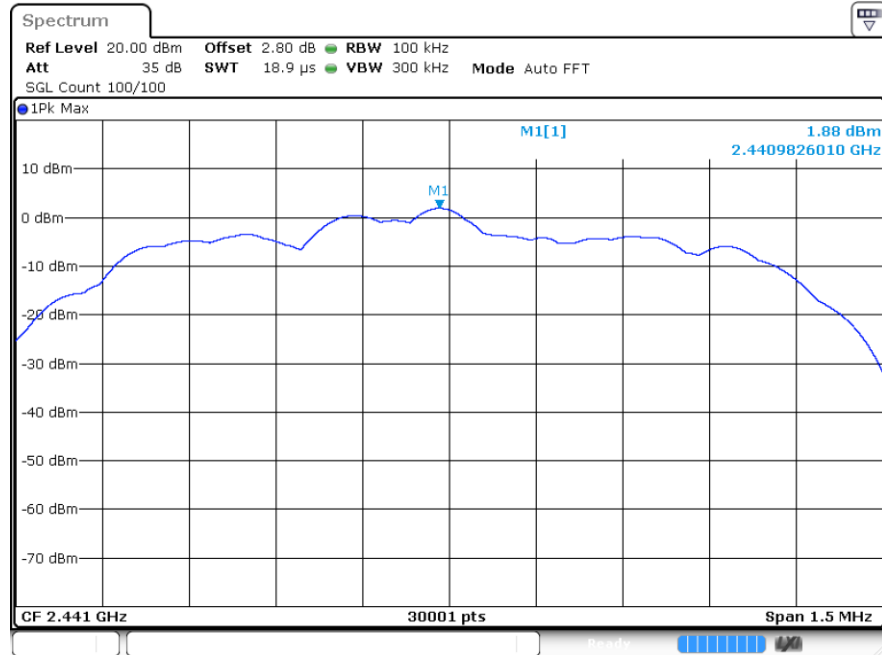


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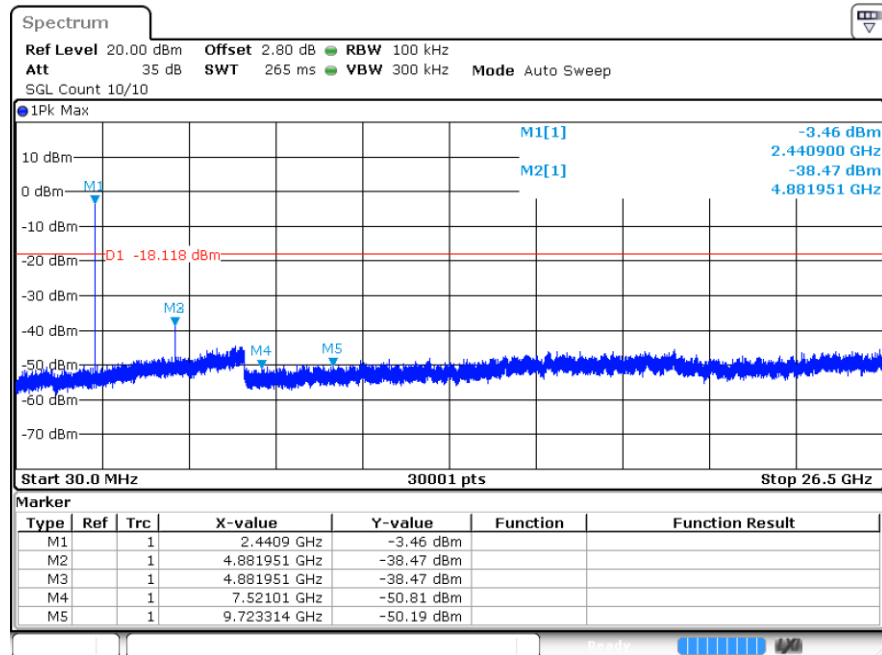


π /4DQPSK_MCH_Graphs

Pref

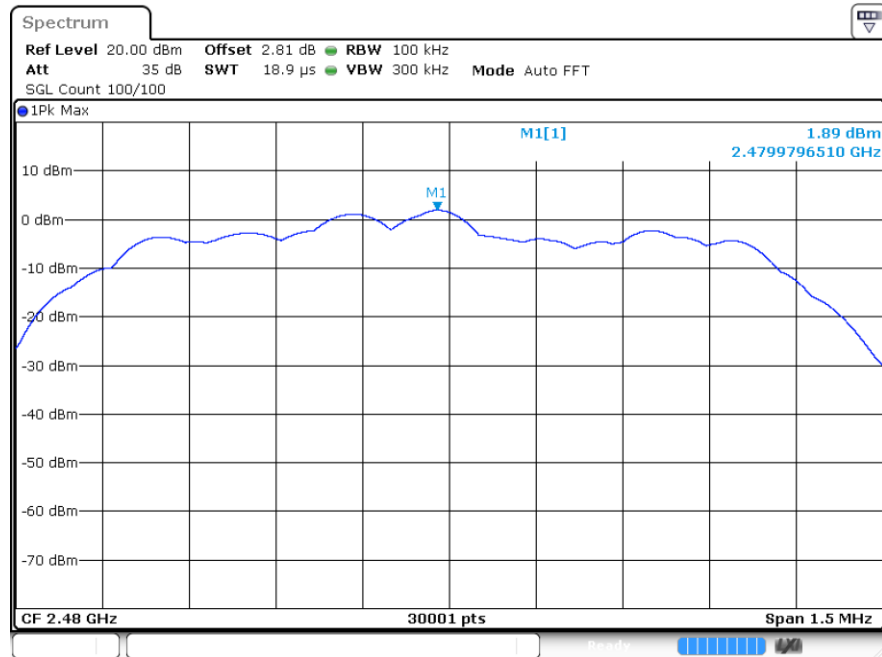


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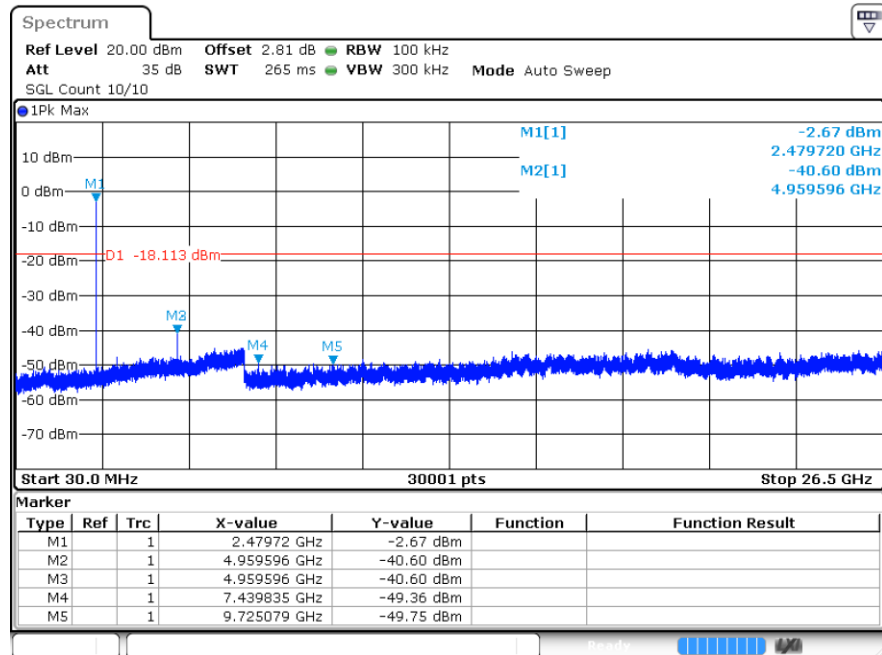


$\pi/4$ DQPSK_HCH_Graphs

Pref



Puw

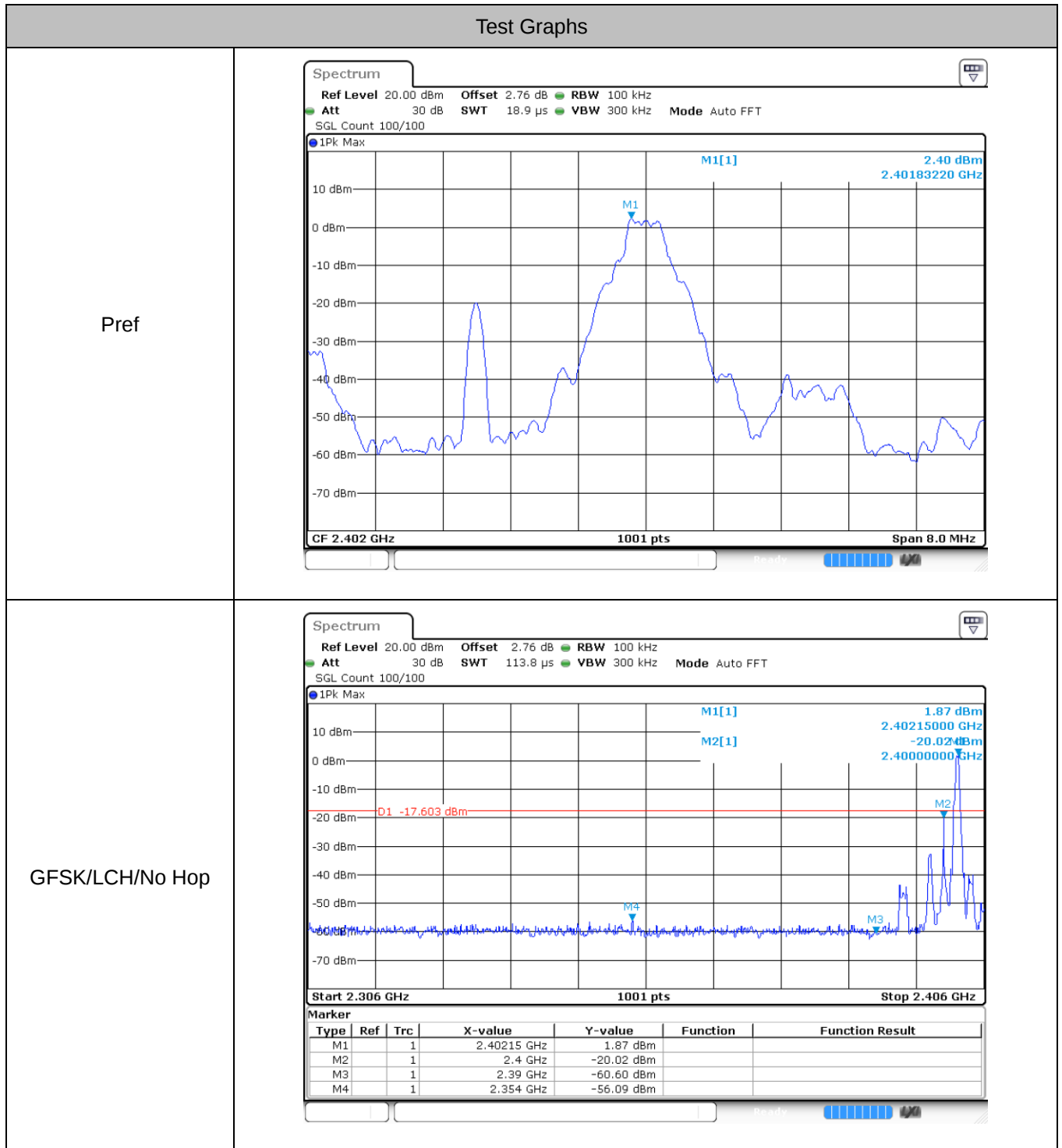


8 Band-edge for RF Conducted Emissions

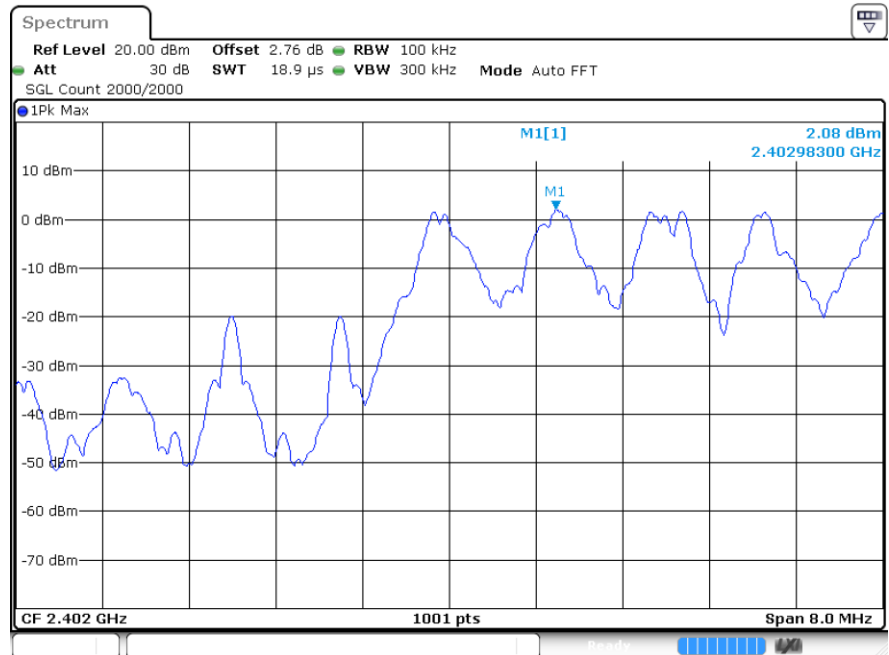
8.1 Test Result

Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	-58.49	-20	Pass
			On	-57.08	-20	Pass
	HCH	2480	Off	-48.34	-20	Pass
			On	-46.05	-20	Pass
$\pi/4$ DQPSK	LCH	2402	Off	-56.99	-20	Pass
			On	-57.72	-20	Pass
	HCH	2480	Off	-46.7	-20	Pass
			On	-48.76	-20	Pass

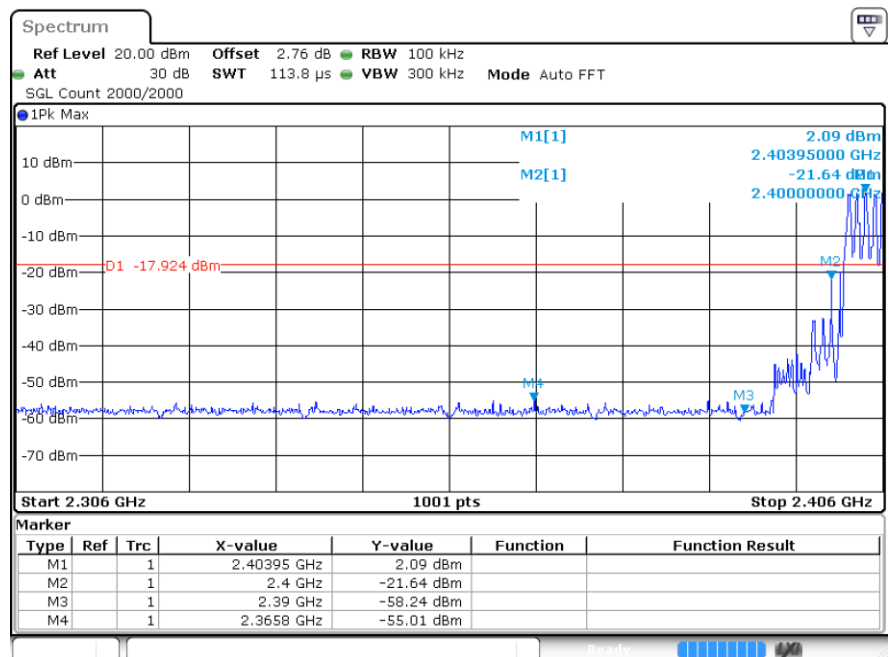
8.2 Test Graphs



Ref



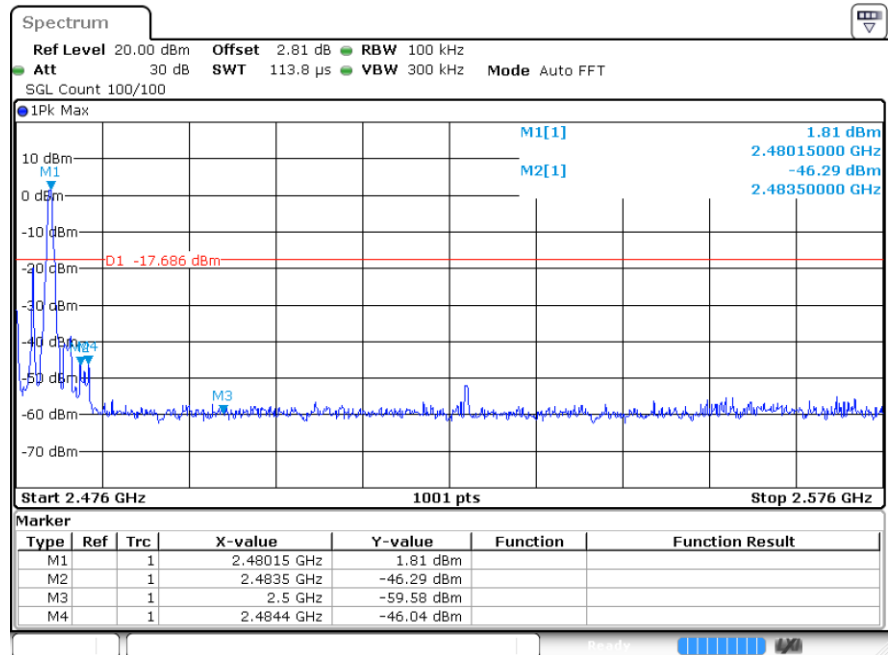
GFSK/LCH/Hop



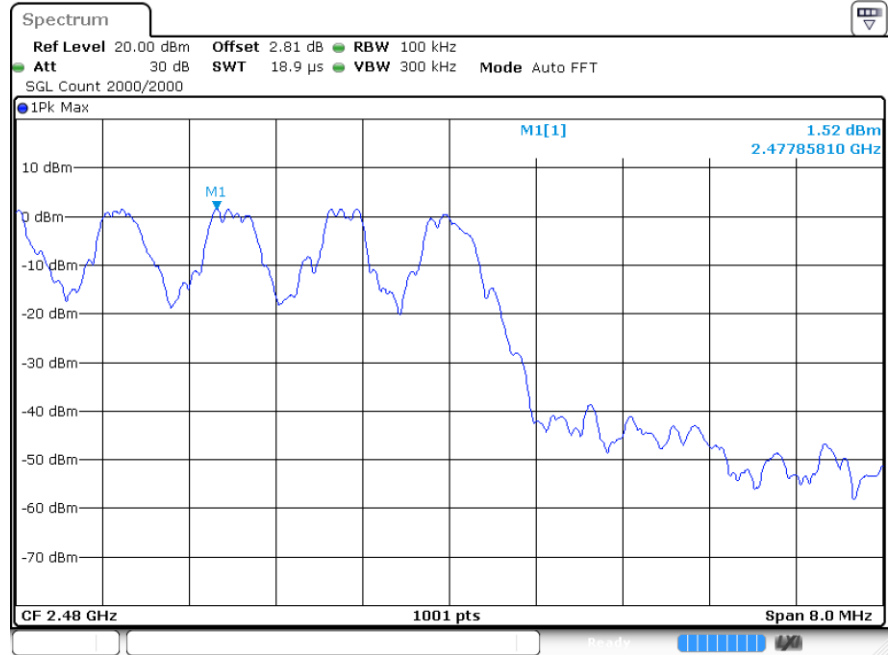
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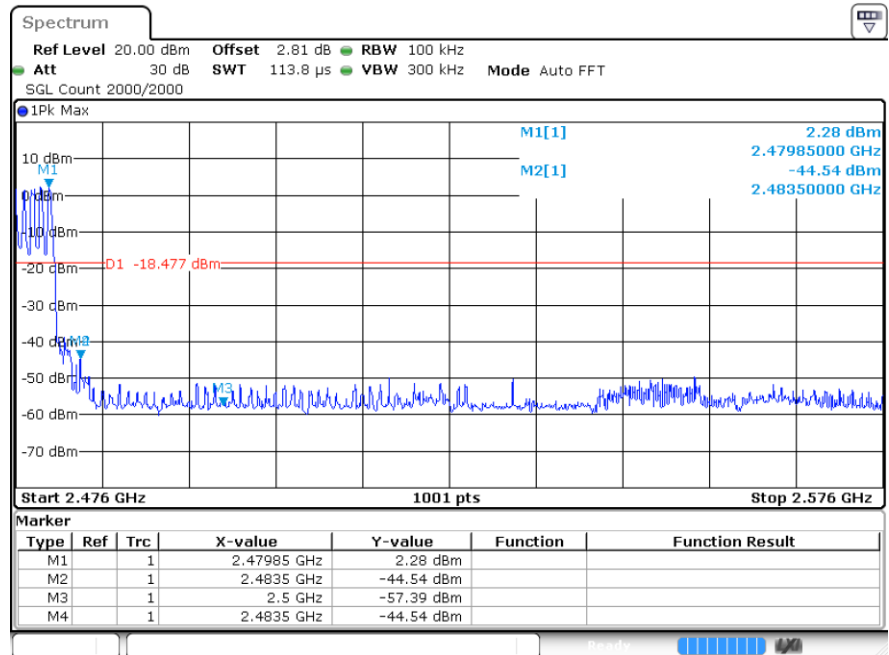
GFSK/HCH/No Hop



Ref.



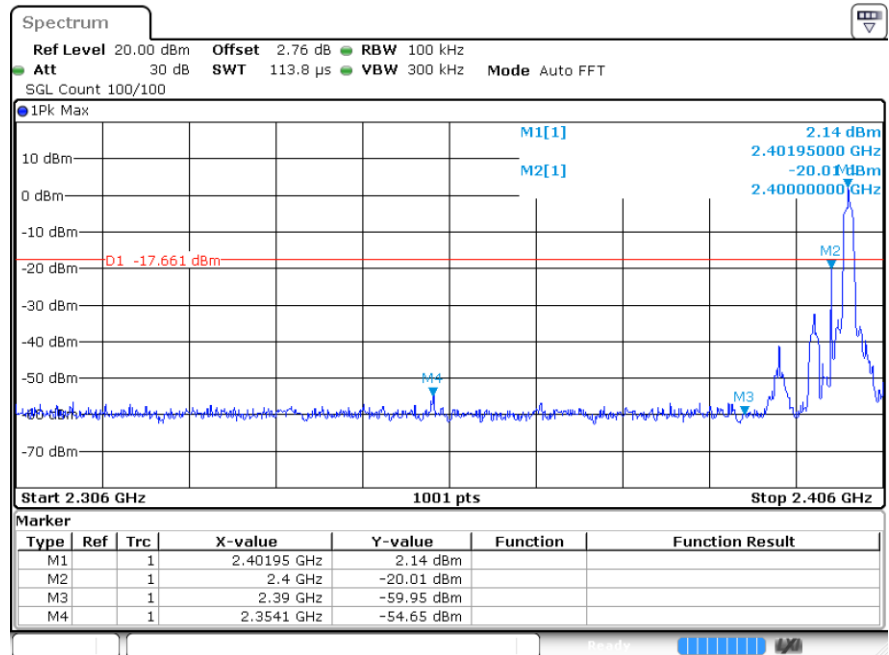
GFSK/HCH/Hop



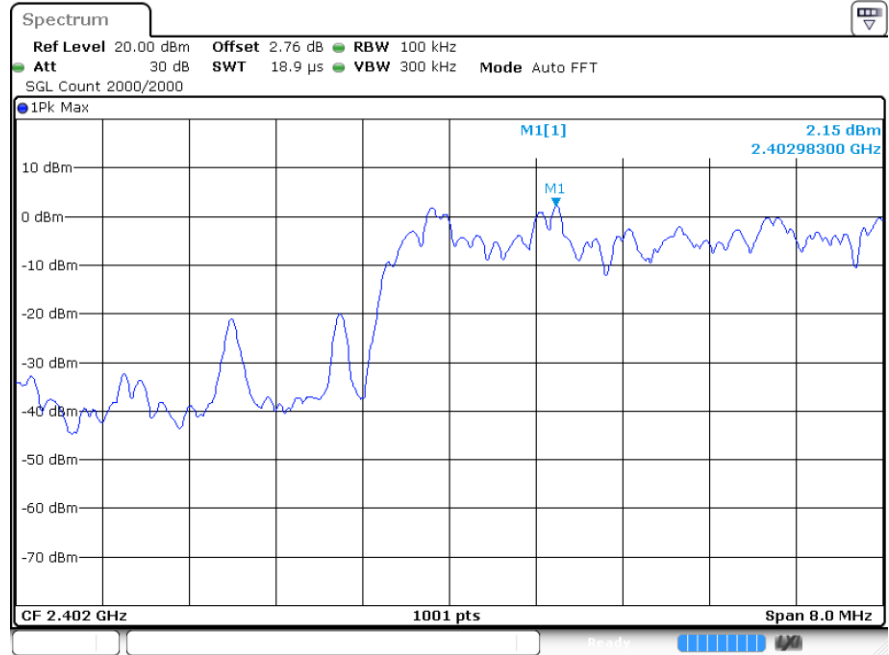
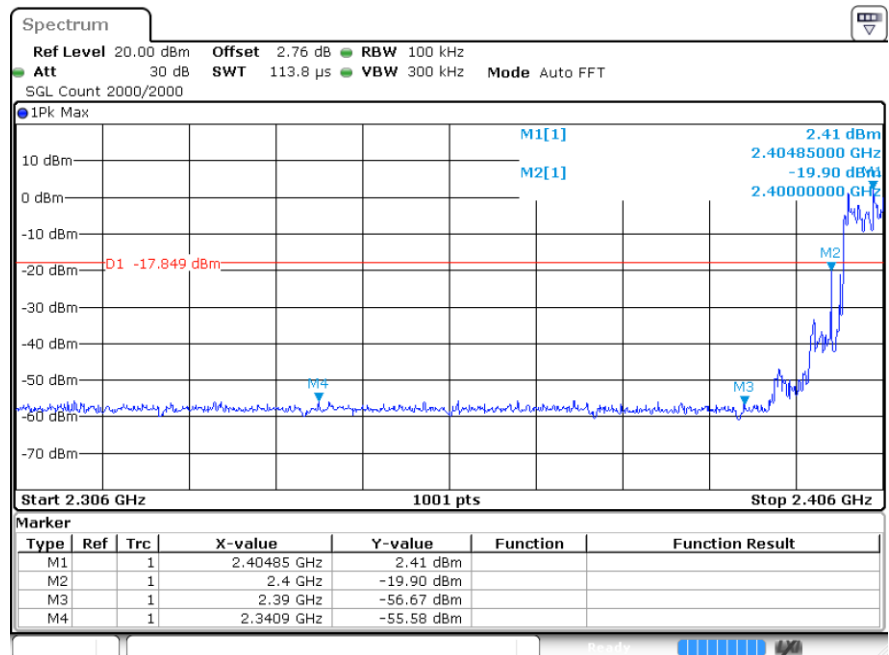
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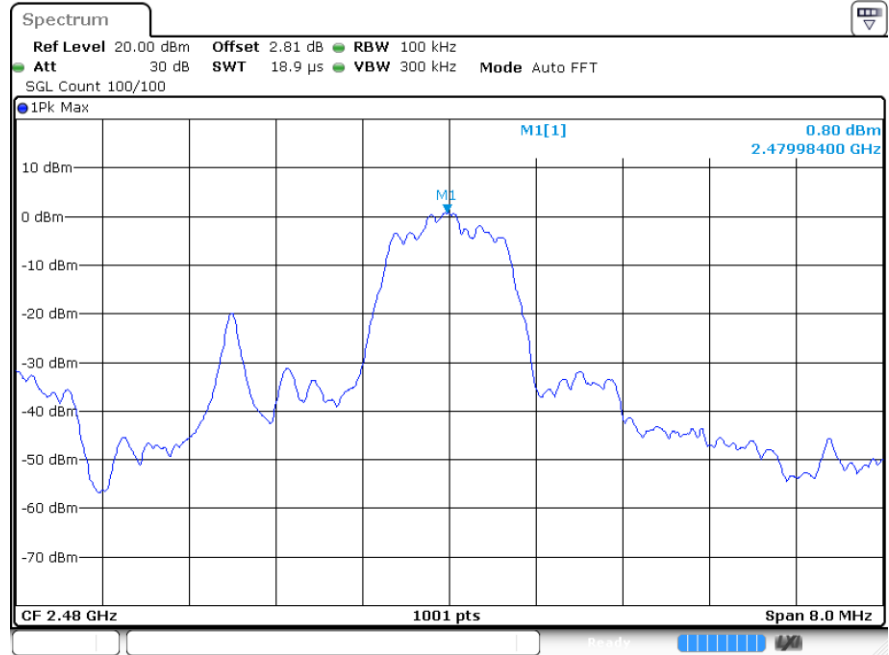
$\pi/4$ DQPSK/LCH/No
Hop



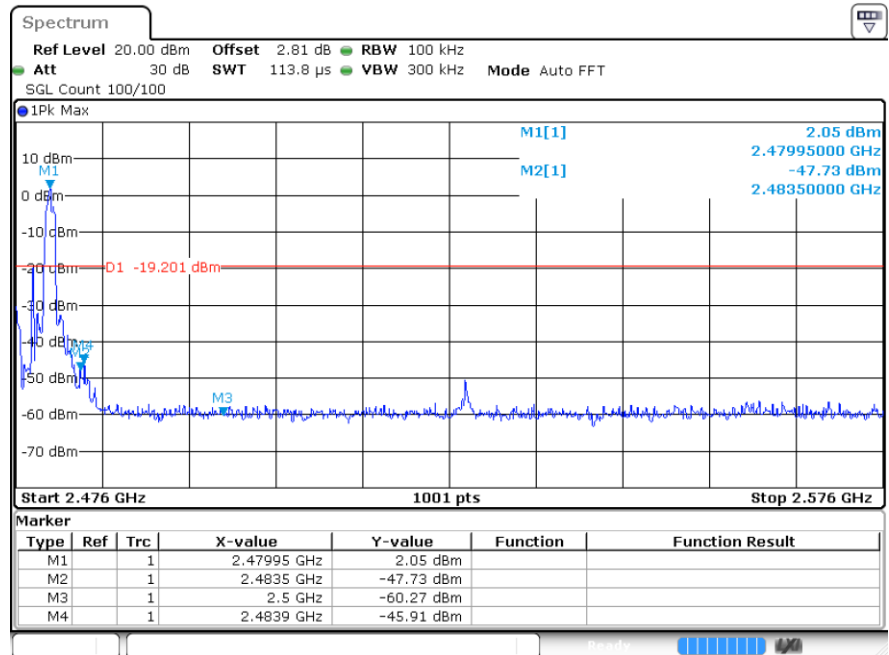
Ref


 $\pi/4$ DQPSK/LCH/Hop


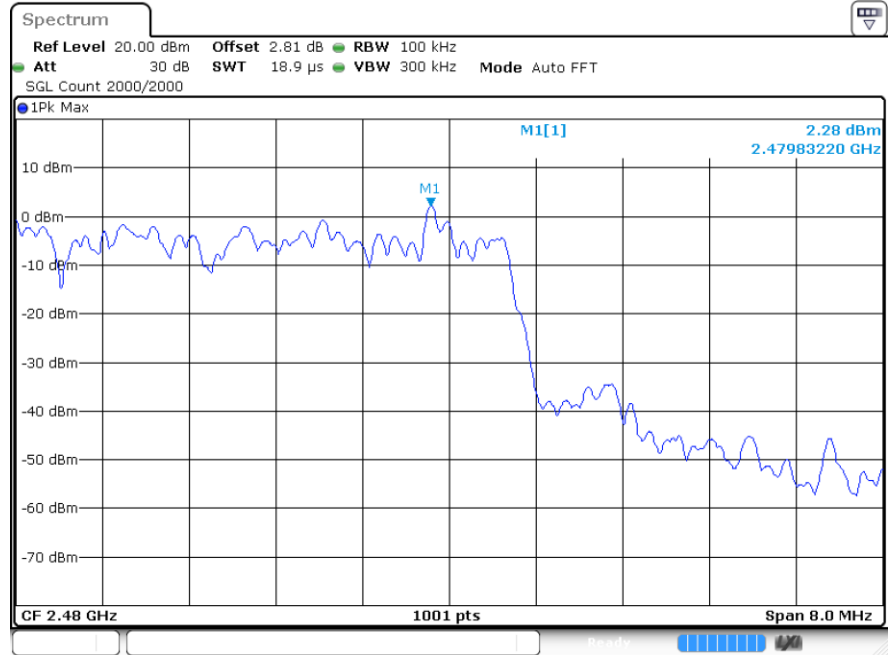
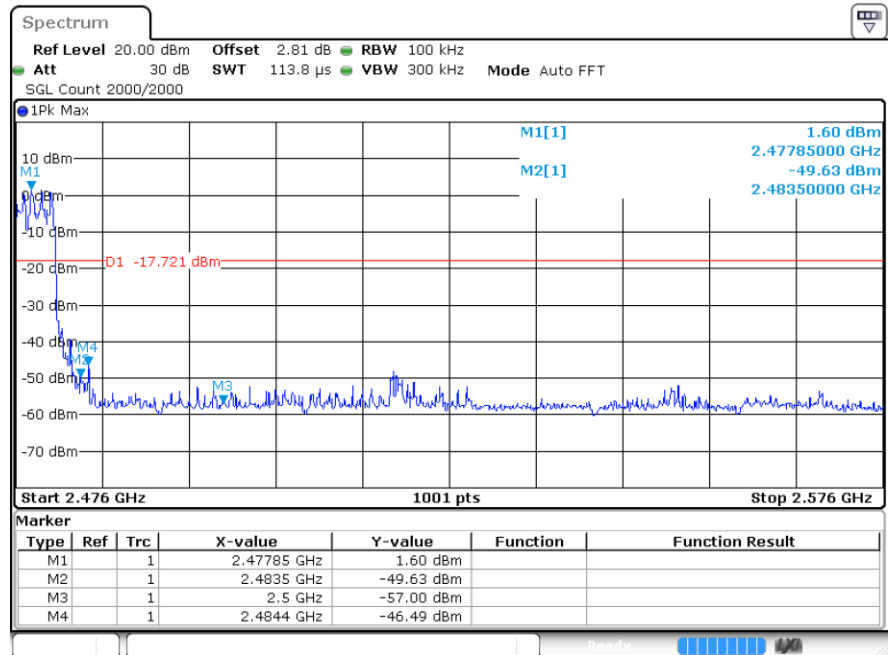
Ref



$\pi/4$ DQPSK/HCH/No Hop



Ref


 $\pi/4$ DQPSK/HCH/Hop


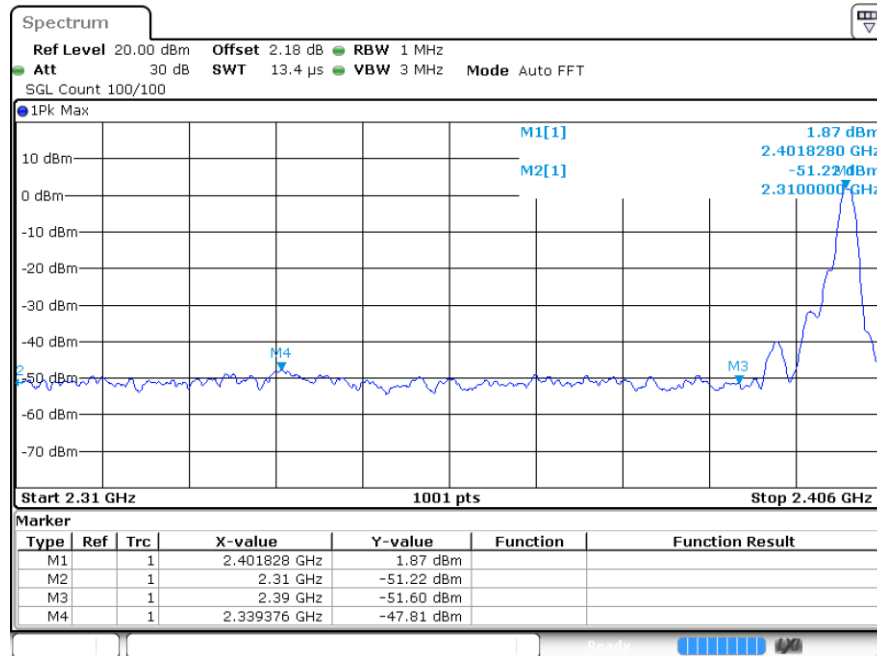
9 Restrict-band band-edge measurements

9.1 Test Result

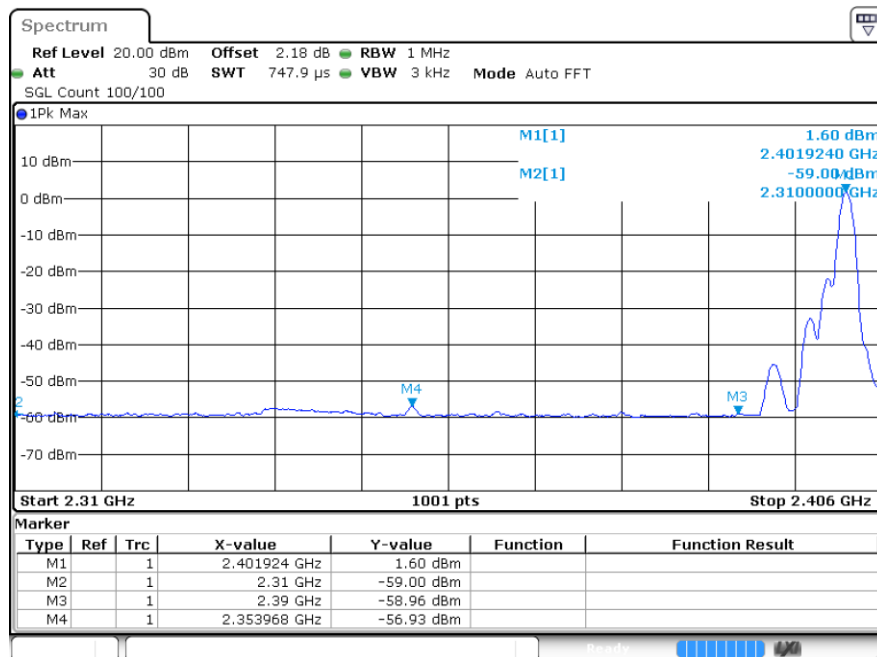
Test Mode	Hopping	Freq.	Power [dBm]	Gain	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-51.22	2	46.04	PEAK	74	Pass
	Off	2310.0	-59	2	38.26	AV	54	Pass
	Off	2339.376	-47.8	2	49.46	PEAK	74	Pass
	Off	2353.968	-56.92	2	40.34	AV	54	Pass
	Off	2390.0	-51.6	2	45.66	PEAK	74	Pass
	Off	2390.0	-58.96	2	38.3	AV	54	Pass
	Off	2483.5	-42.06	2	55.2	PEAK	74	Pass
	Off	2483.5	-47.63	2	49.63	AV	54	Pass
	Off	2483.584	-42.02	2	55.24	PEAK	74	Pass
	Off	2483.872	-46.95	2	50.31	AV	54	Pass
	Off	2500.0	-51.38	2	45.88	PEAK	74	Pass
	Off	2500.0	-59.01	2	38.25	AV	54	Pass
$\pi/4$ DQPSK	Off	2310.0	-53.18	2	44.08	PEAK	74	Pass
	Off	2310.0	-59.29	2	37.97	AV	54	Pass
	Off	2317.2	-47.5	2	49.76	PEAK	74	Pass
	Off	2340.432	-57.32	2	39.94	AV	54	Pass
	Off	2390.0	-50.54	2	46.72	PEAK	74	Pass
	Off	2390.0	-59.06	2	38.2	AV	54	Pass
	Off	2483.5	-42.71	2	54.55	PEAK	74	Pass
	Off	2483.5	-48.19	2	49.07	AV	54	Pass
	Off	2483.728	-42.51	2	54.75	PEAK	74	Pass
	Off	2483.872	-47.04	2	50.22	AV	54	Pass
	Off	2500.0	-48.11	2	49.15	PEAK	74	Pass
	Off	2500.0	-58.78	2	38.48	AV	54	Pass

9.2 Test Graphs

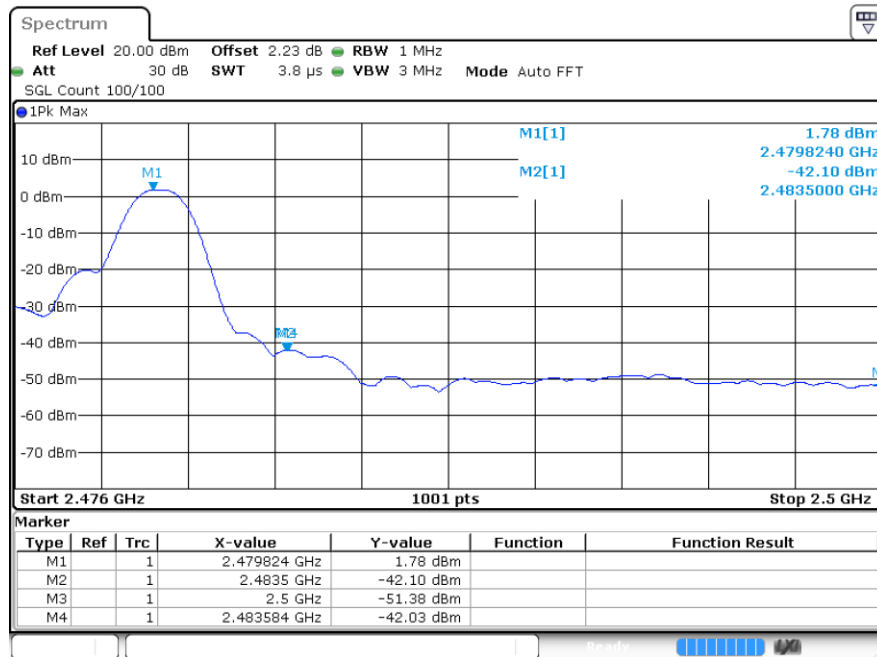
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



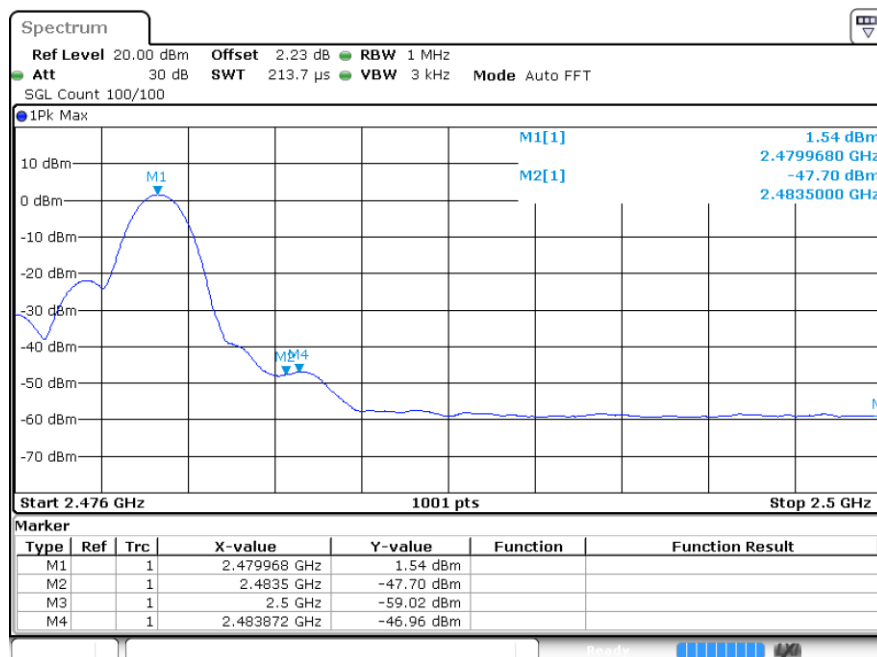
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



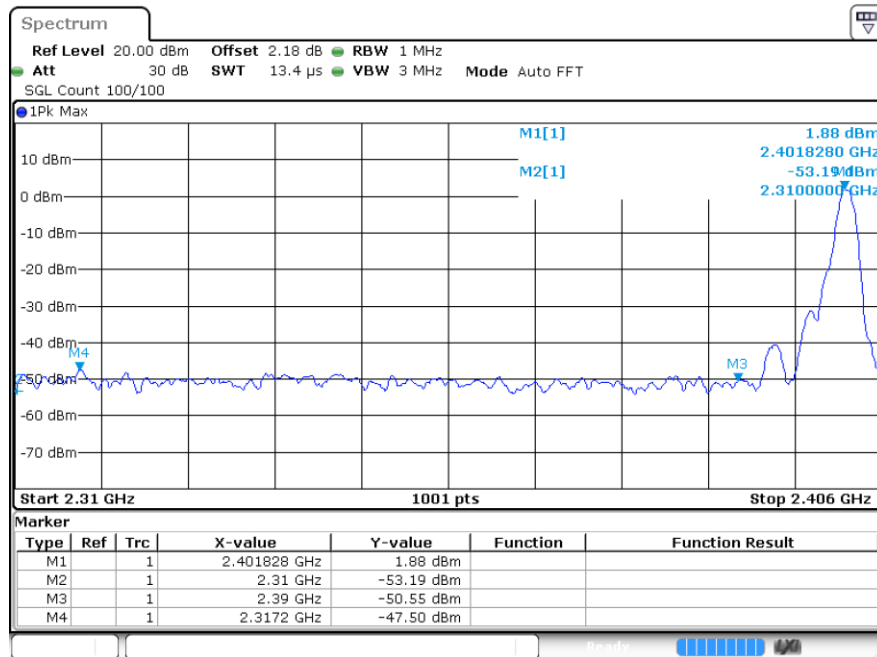
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



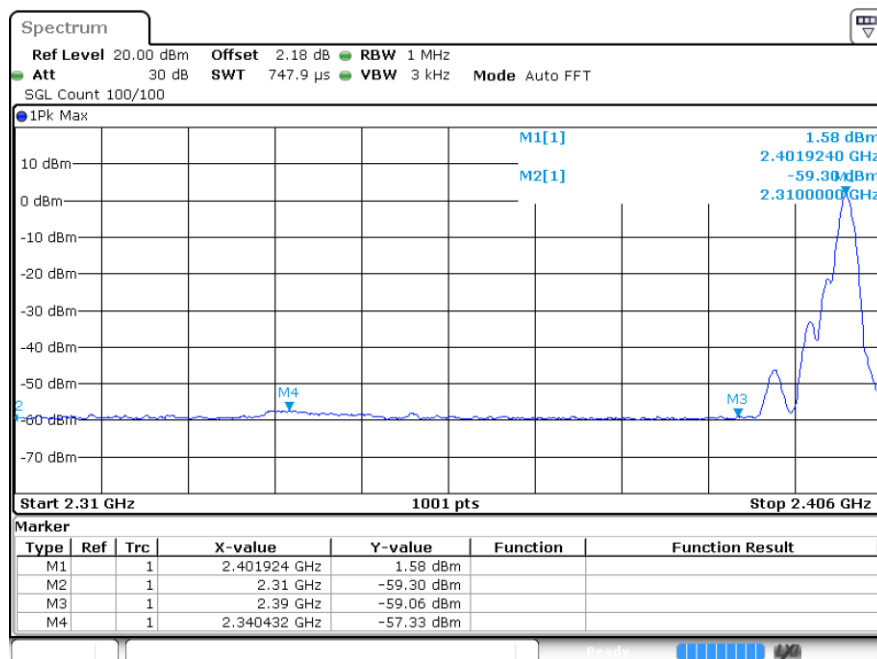
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



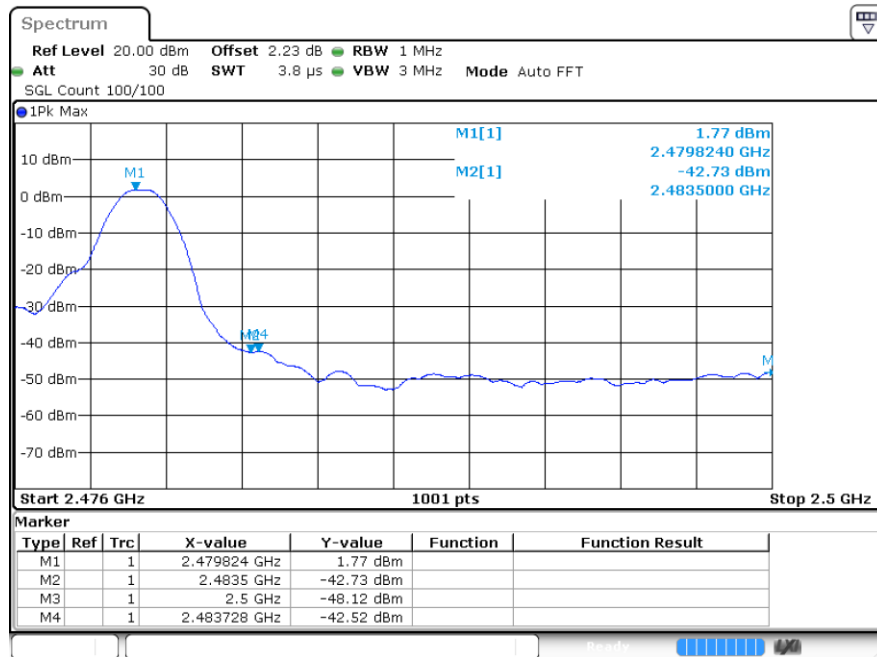
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (Low Channel)



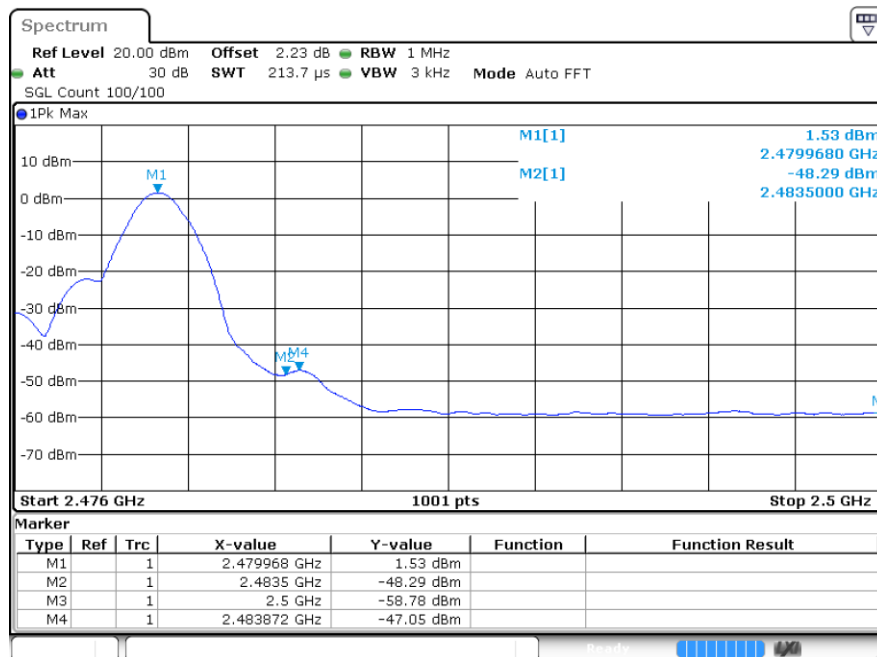
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (Low Channel)



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---