



Appendix A

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

Product Name: Bluetooth Wireless Headphone

Trade Mark: N/A

Test Model: T69

Environmental Conditions

Temperature:	25.6℃
Relative Humidity:	52.1%
ATM Pressure:	101Kpa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen

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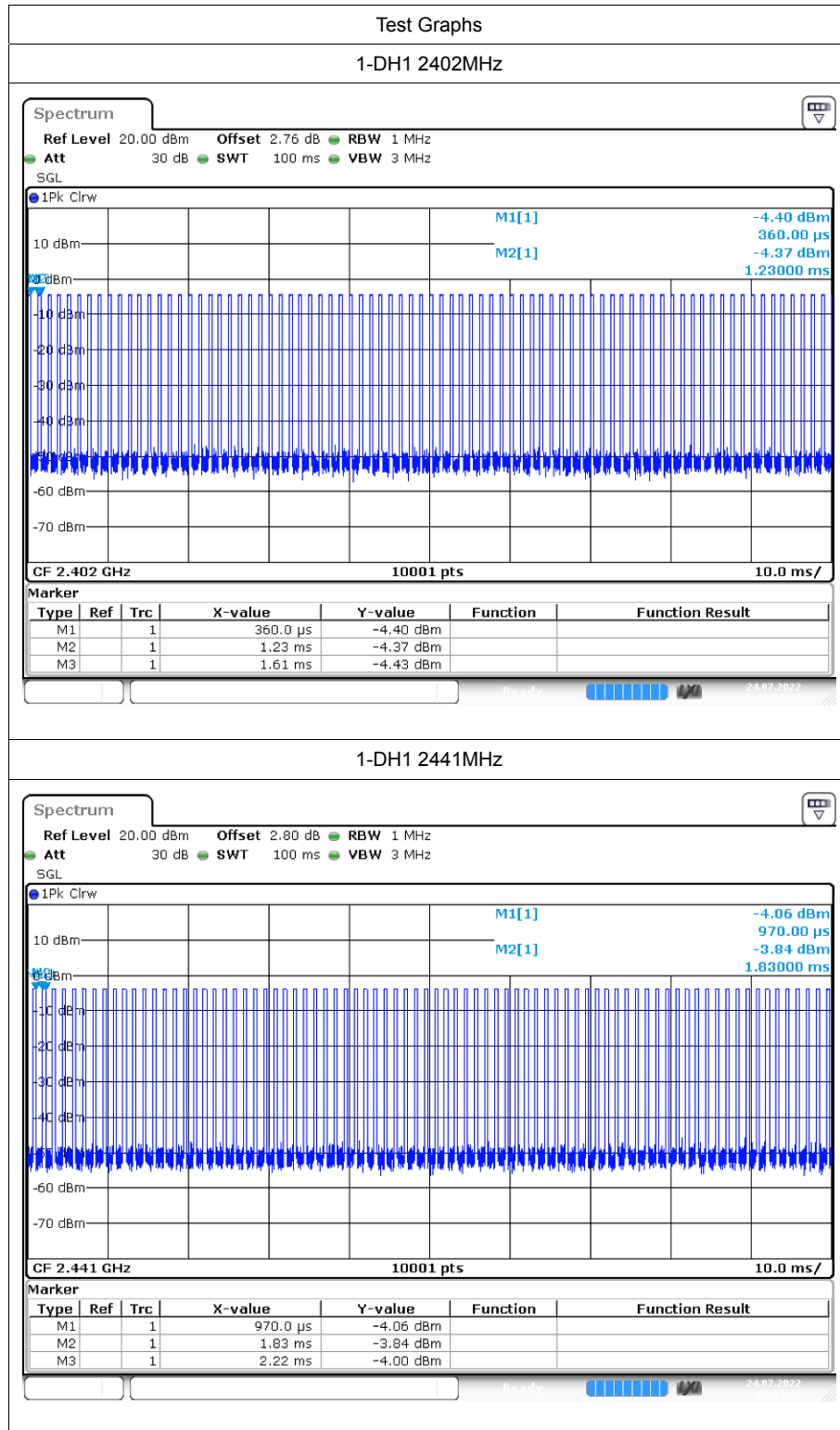
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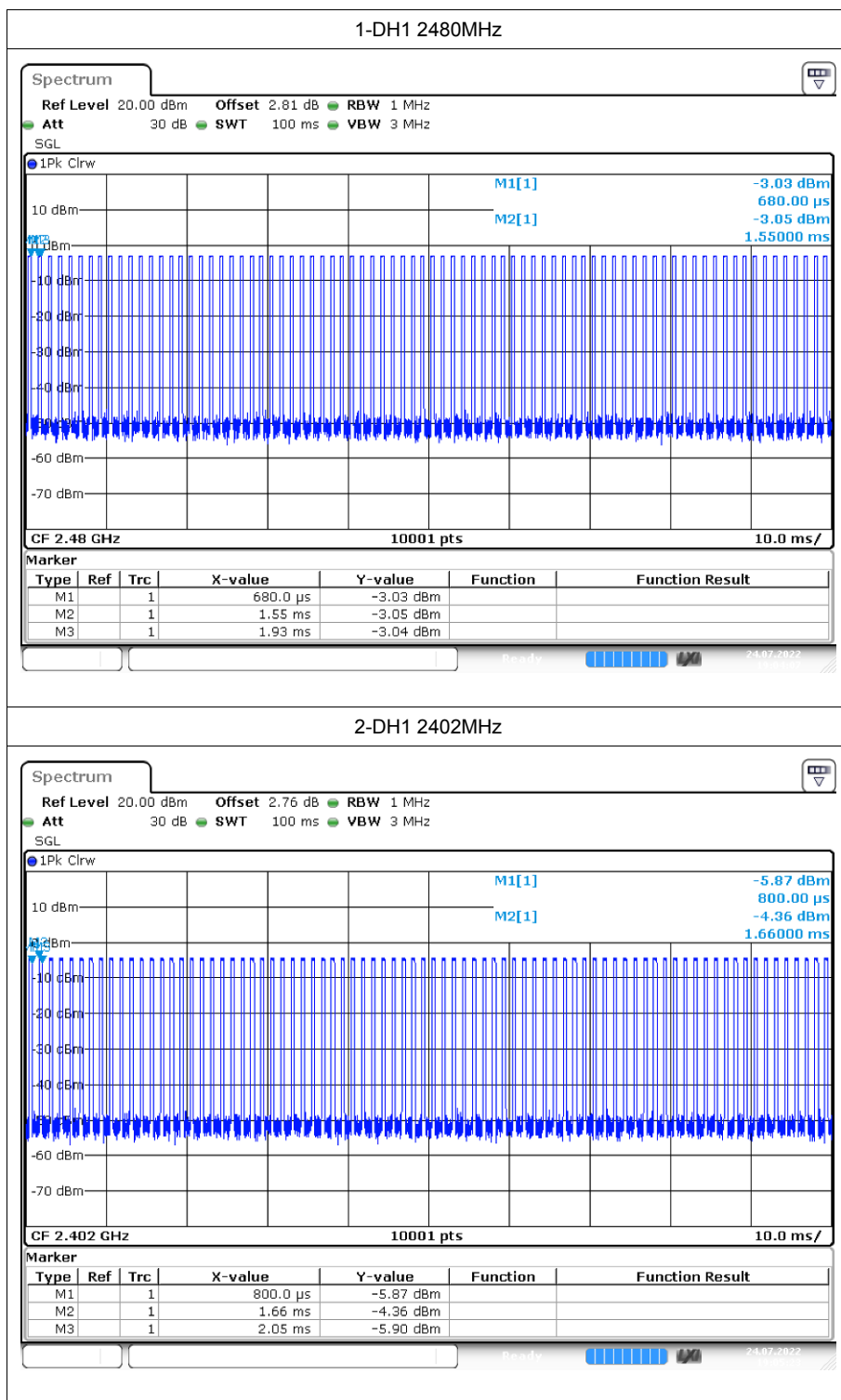
1 Duty Cycle

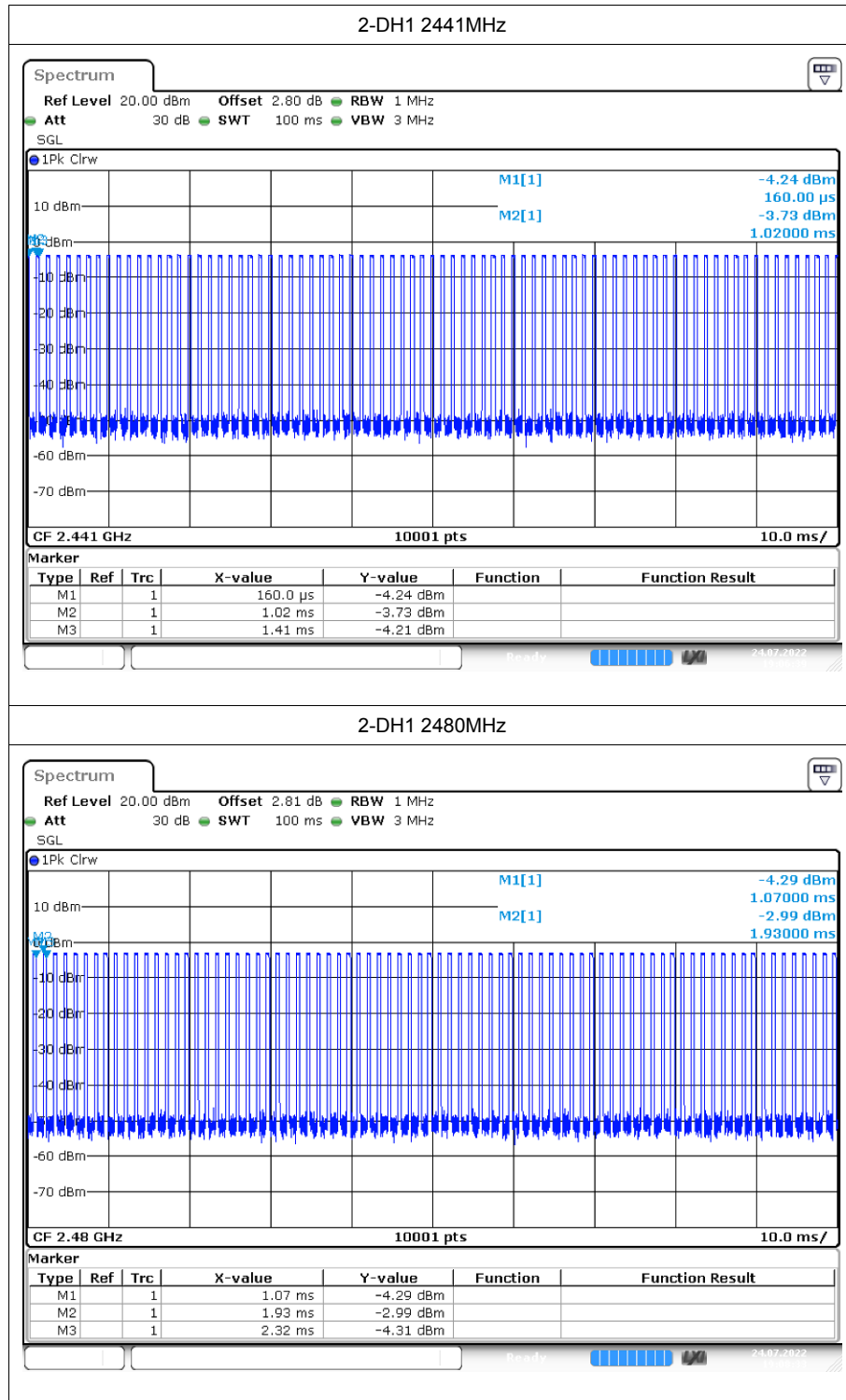
1.1 Test Result

Mode	Frequency (MHz)	Duty Cycle (%)	1/T (kHz)
1-DH1	2402	31.21	2.63
1-DH1	2441	32	2.56
1-DH1	2480	31.2	2.63
2-DH1	2402	32.23	2.56
2-DH1	2441	32.01	2.56
2-DH1	2480	32	2.56

1.2 Test Graphs





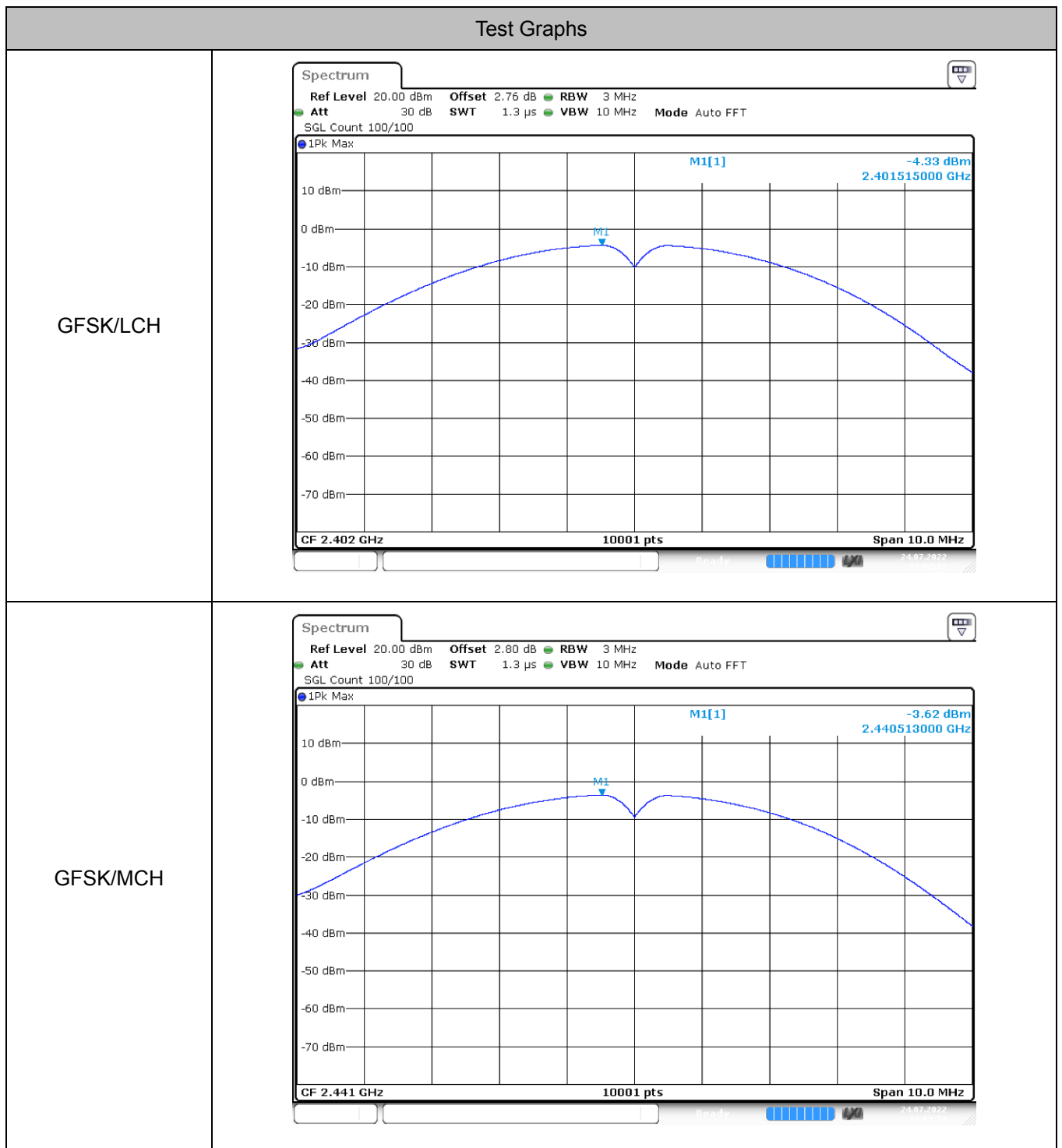


2 Maximum Conducted Peak Output Power

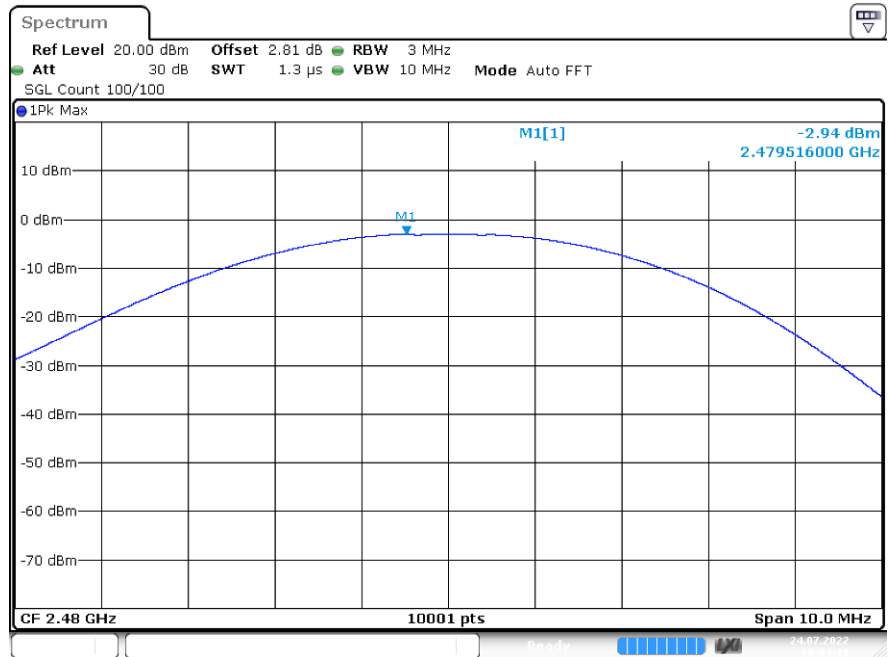
2.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-4.33	21	Pass
	MCH	-3.62	21	Pass
	HCH	-2.94	21	Pass
$\pi/4$ DQPSK	LCH	-3.92	21	Pass
	MCH	-3.5	21	Pass
	HCH	-2.83	21	Pass

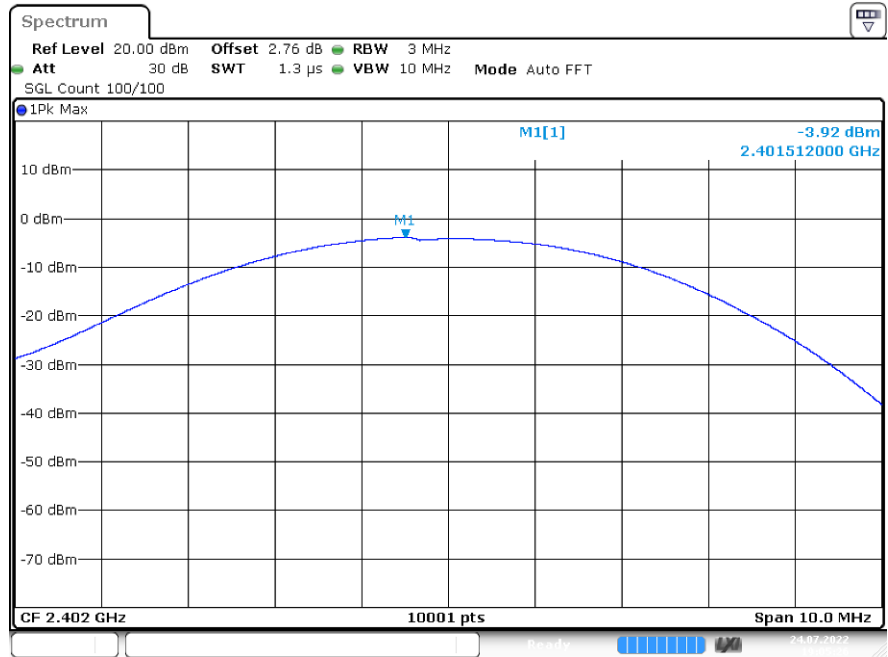
2.2 Test Graphs



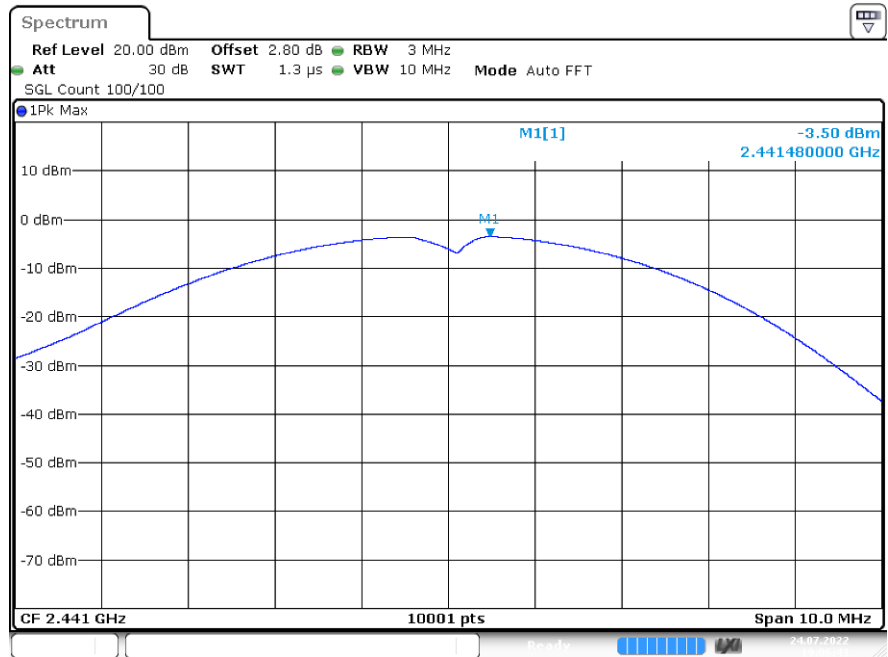
GFSK/HCH



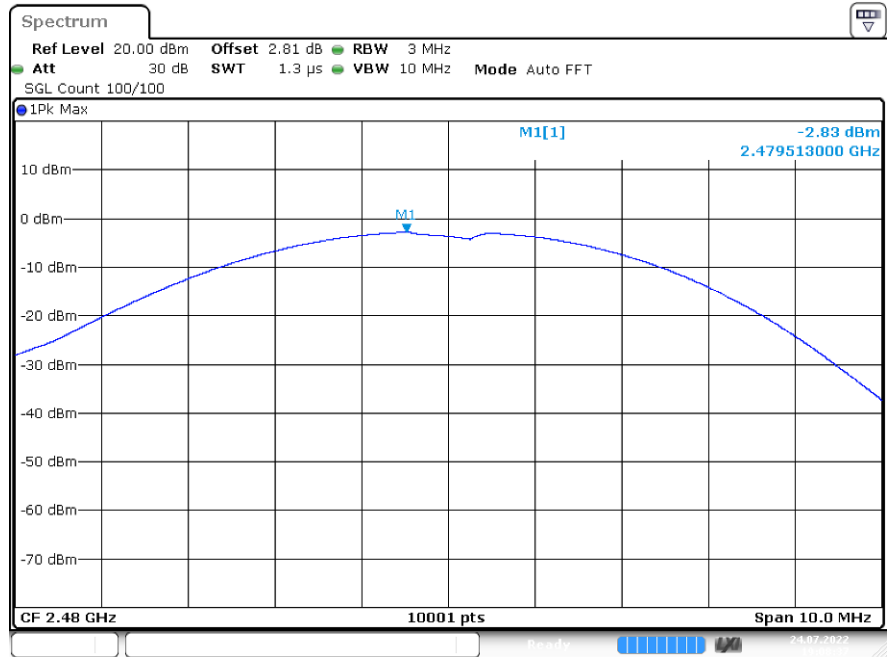
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH



3 20dB Bandwidth

3.1 Test Result

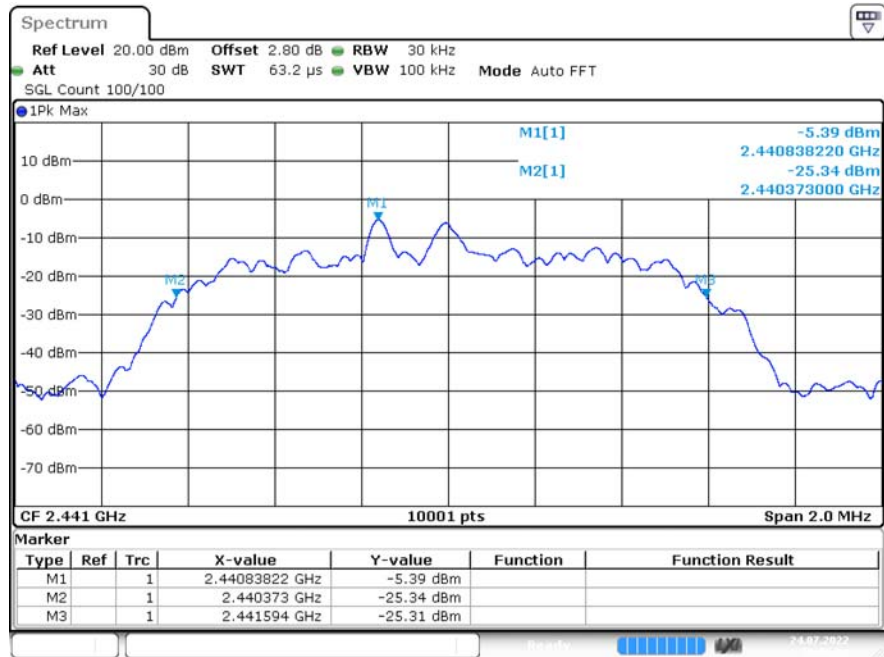
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.851	Not Specified	Pass
	MCH	0.921	Not Specified	Pass
	HCH	0.852	Not Specified	Pass
$\pi/4$ DQPSK	LCH	1.23	Not Specified	Pass
	MCH	1.222	Not Specified	Pass
	HCH	1.213	Not Specified	Pass

3.2 Test Graphs



GFSK/HCH


 $\pi/4$ DQPSK/LCH

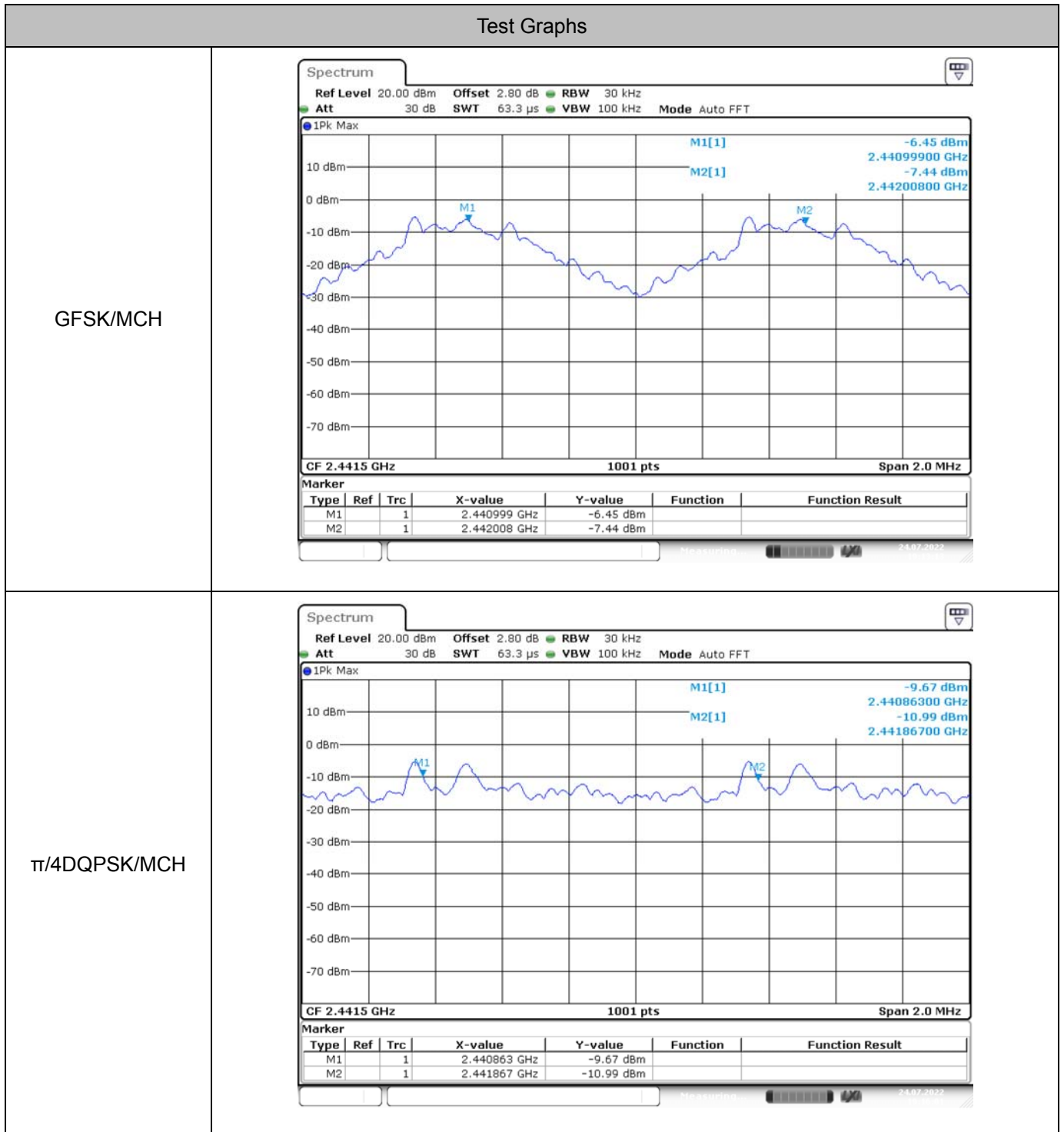

$\pi/4$ DQPSK/MCH

 $\pi/4$ DQPSK/HCH


4 Carrier Frequency Separation

4.1 Test Result

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	MCH	1.009	0.614	Pass
$\pi/4$ DQPSK	MCH	1.004	0.815	Pass

4.2 Test Graphs

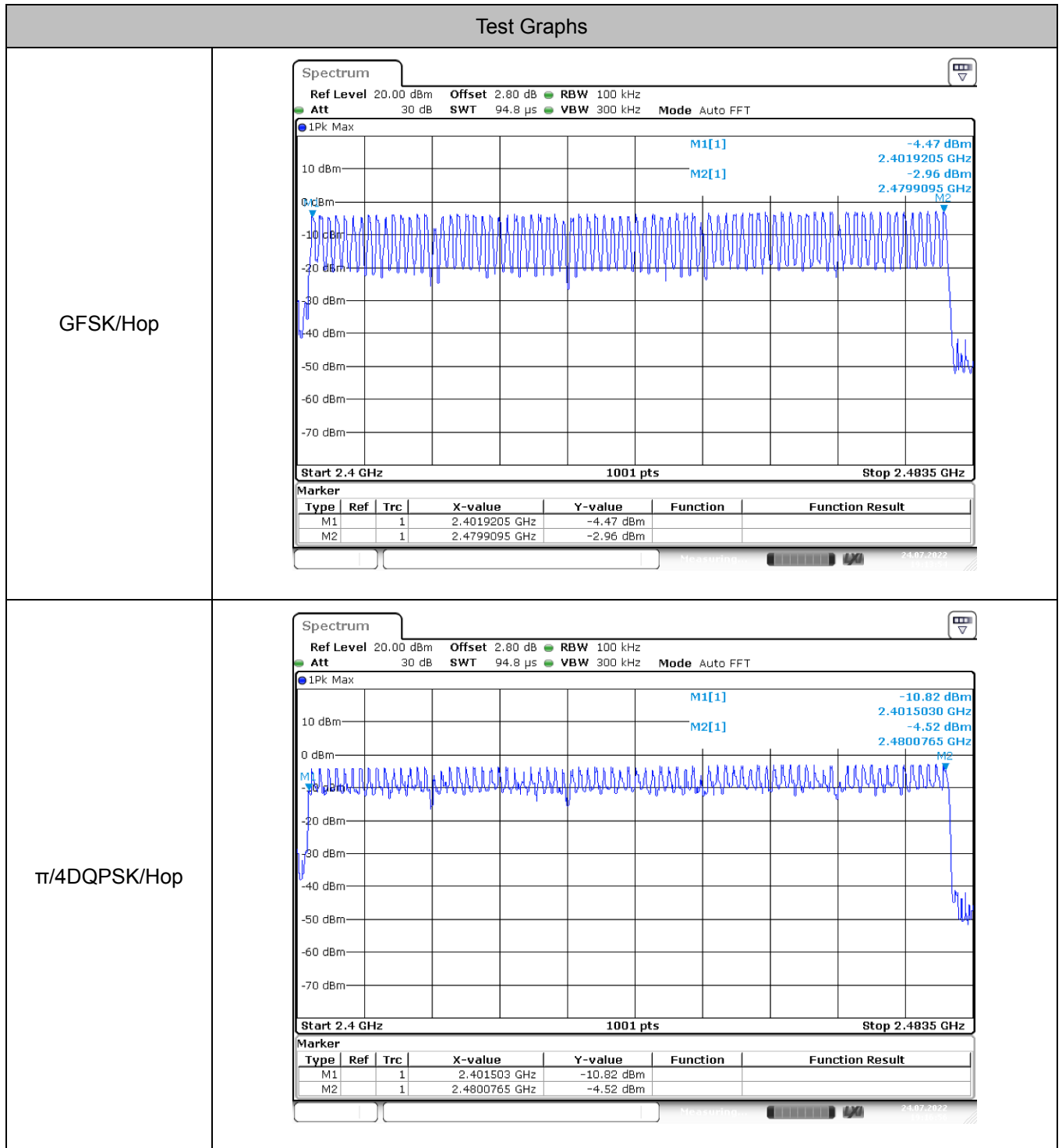


5 Hopping Channel Number

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

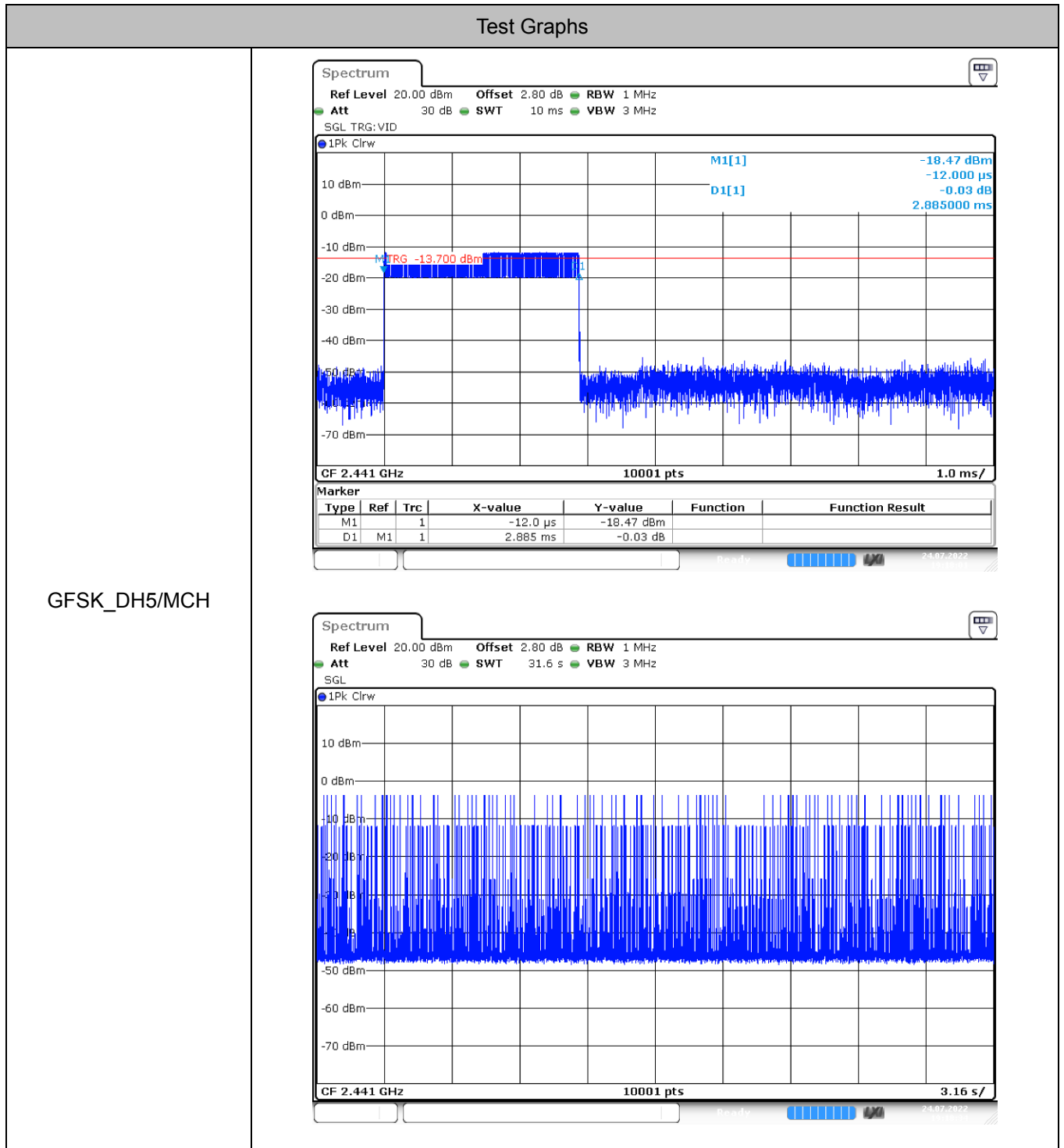


6 Dwell Time

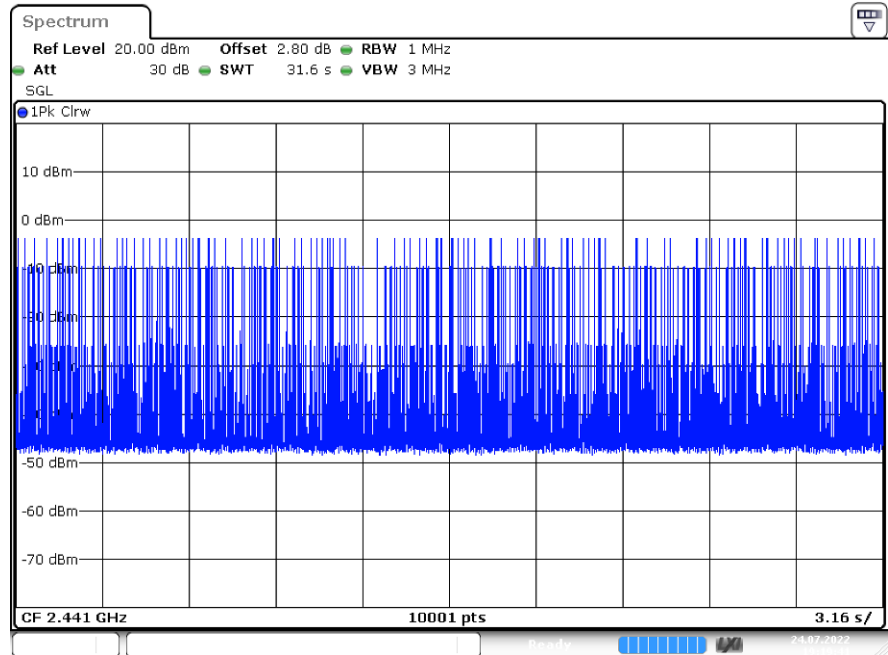
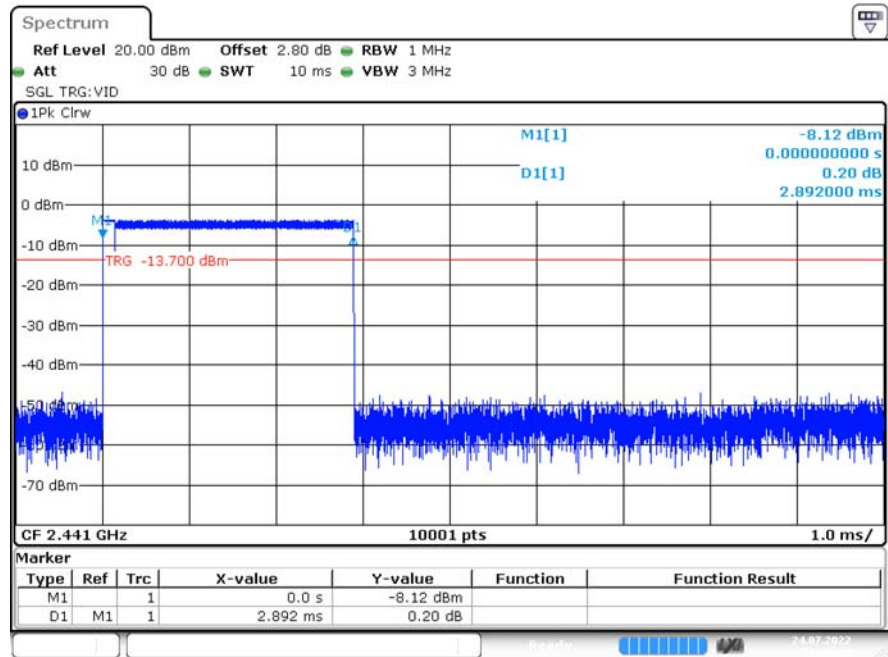
6.1 Test Result

Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.885	104	300.04	0.4	Pass
$\pi/4$ DQPSK	2DH5	MCH	2.892	124	358.608	0.4	Pass

6.2 Test Graphs



$\pi/4$ DQPSK
_2DH5/MCH

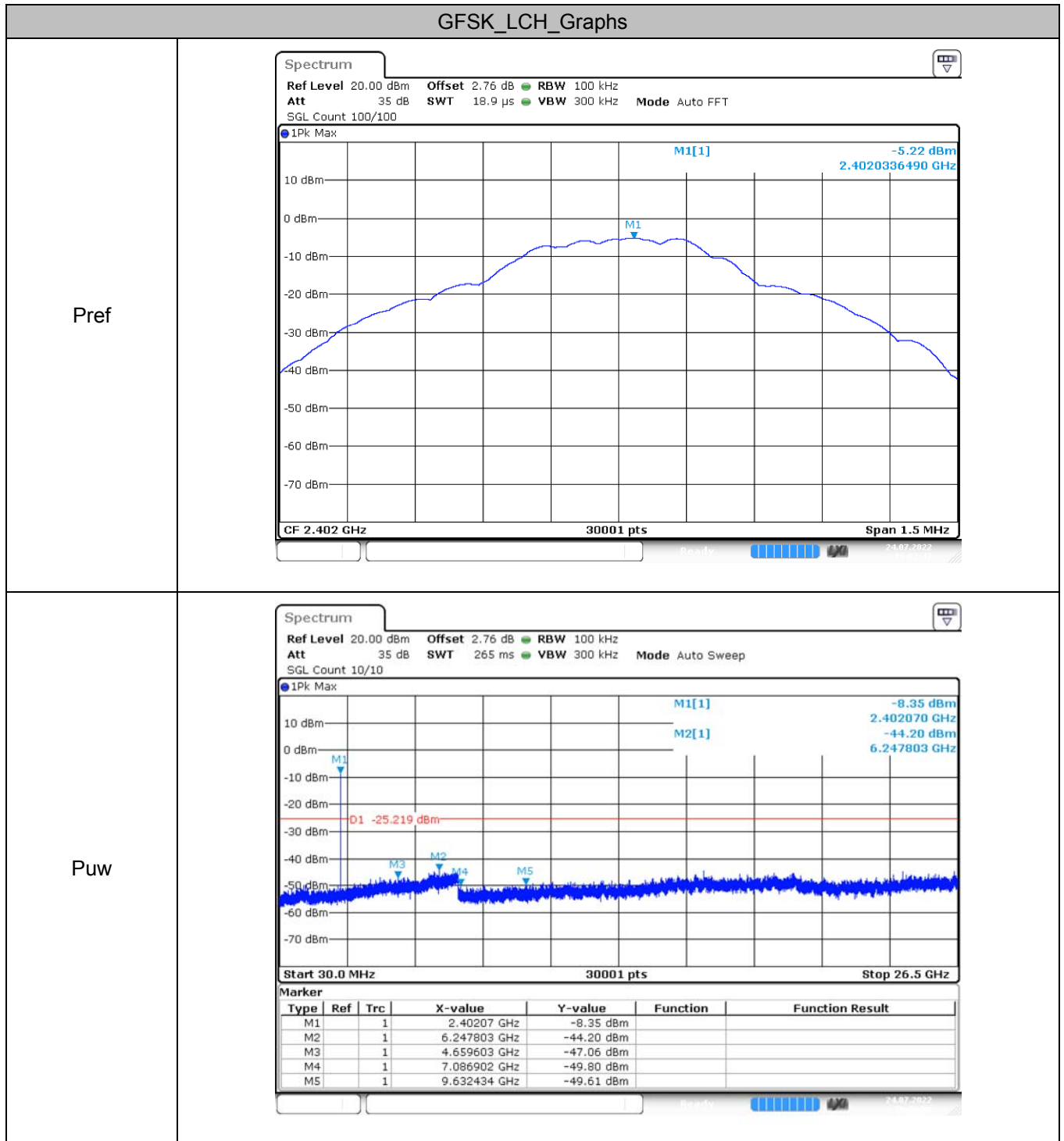


7 RF Conducted Spurious Emissions

7.1 Test Result

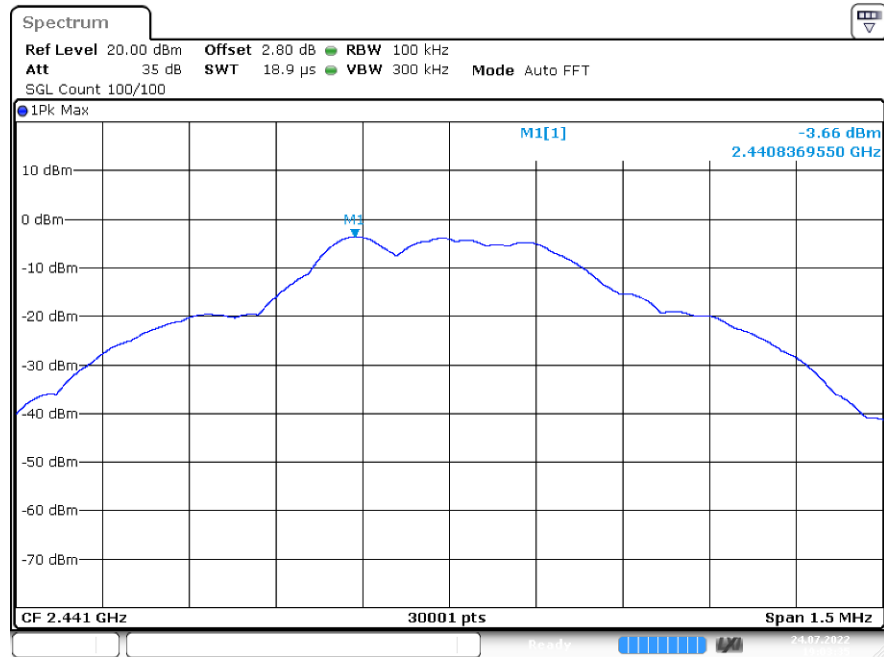
Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-38.98	-20	Pass
	MCH	-40.79	-20	Pass
	HCH	-40.77	-20	Pass
$\pi/4$ DQPSK	LCH	-39.76	-20	Pass
	MCH	-40.11	-20	Pass
	HCH	-41.21	-20	Pass

7.2 Test Graphs

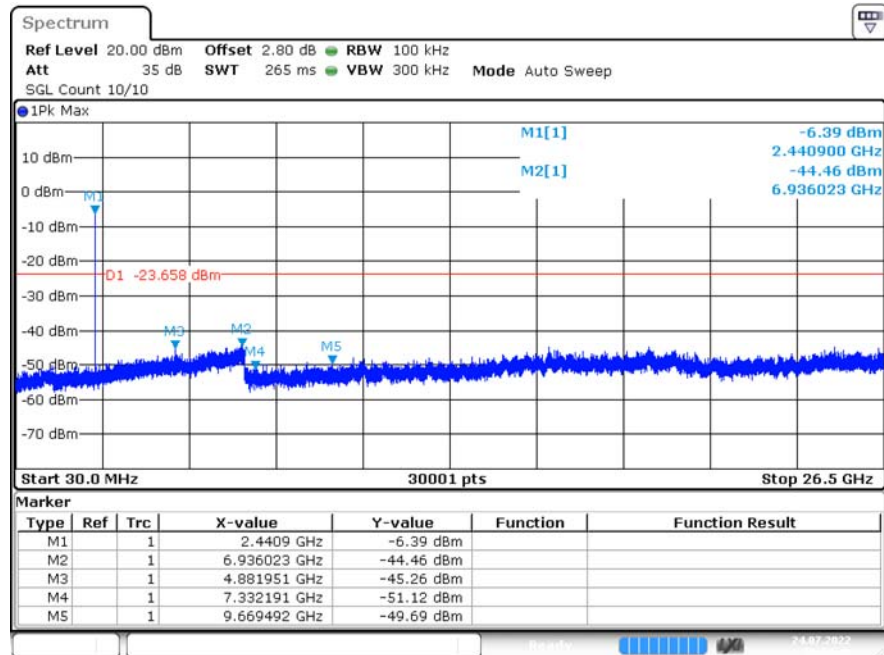


GFSK_MCH_Graphs

Pref

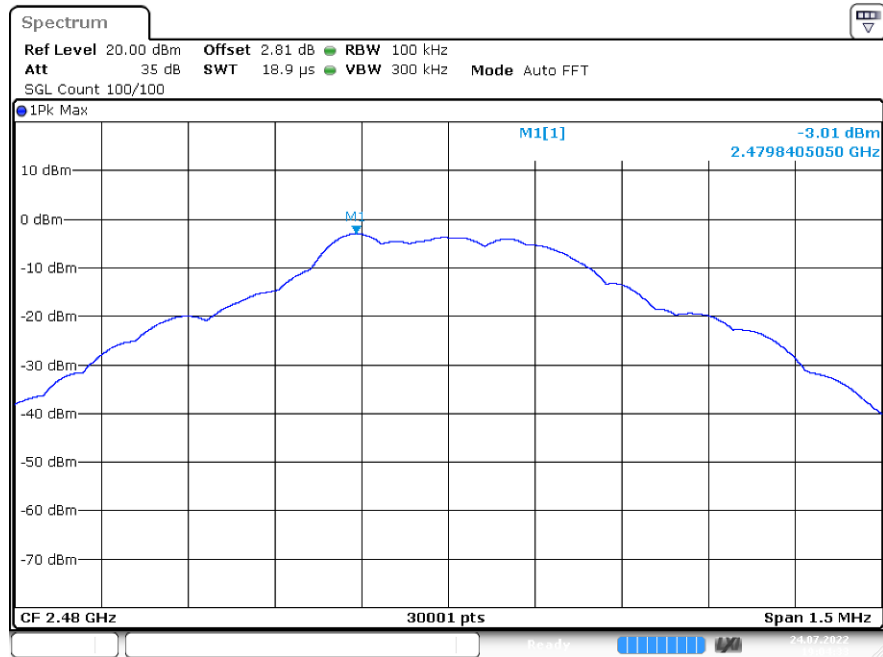


Puw

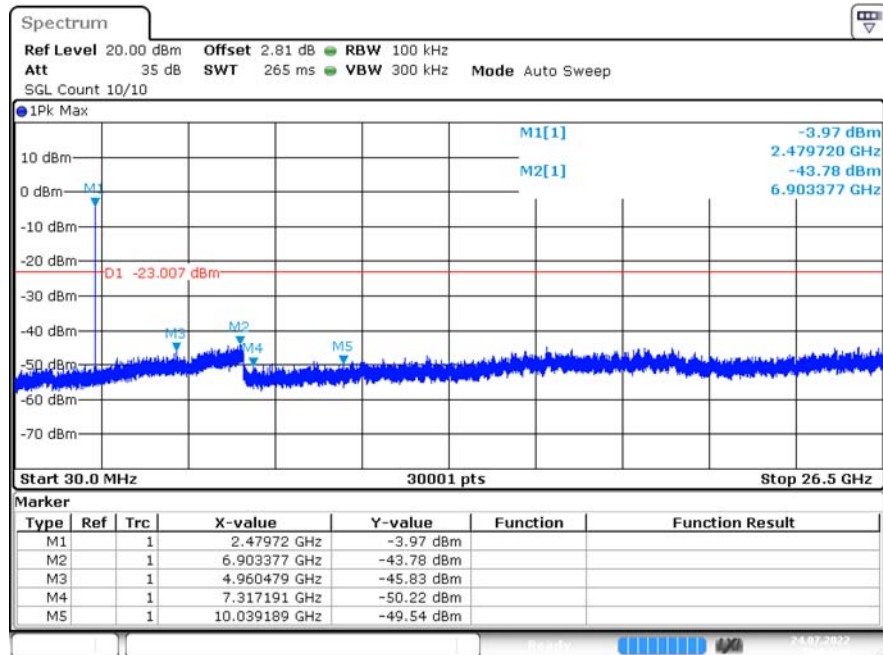


GFSK_HCH_Graphs

Pref

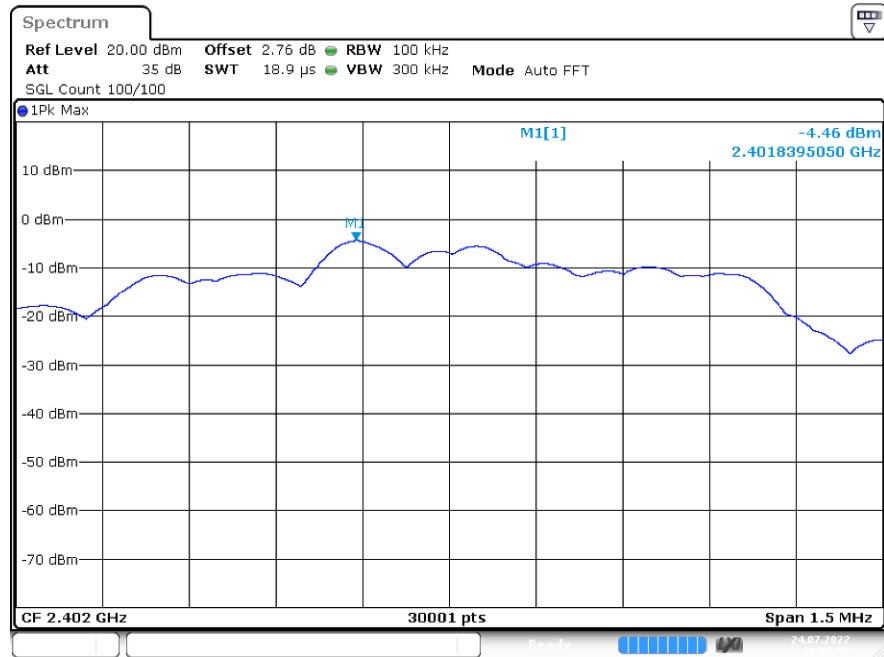


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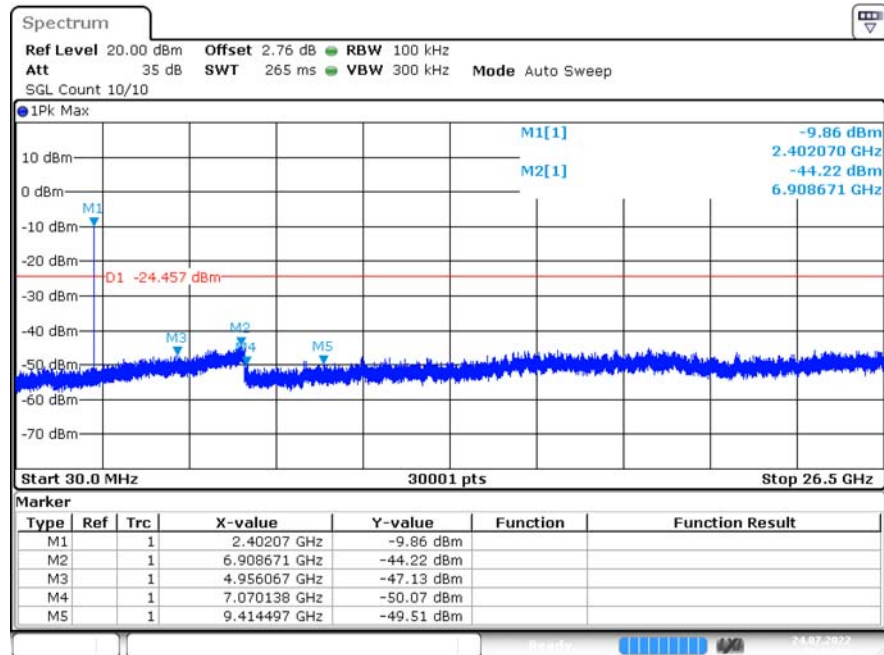


$\pi/4$ DQPSK_LCH_Graphs

Pref

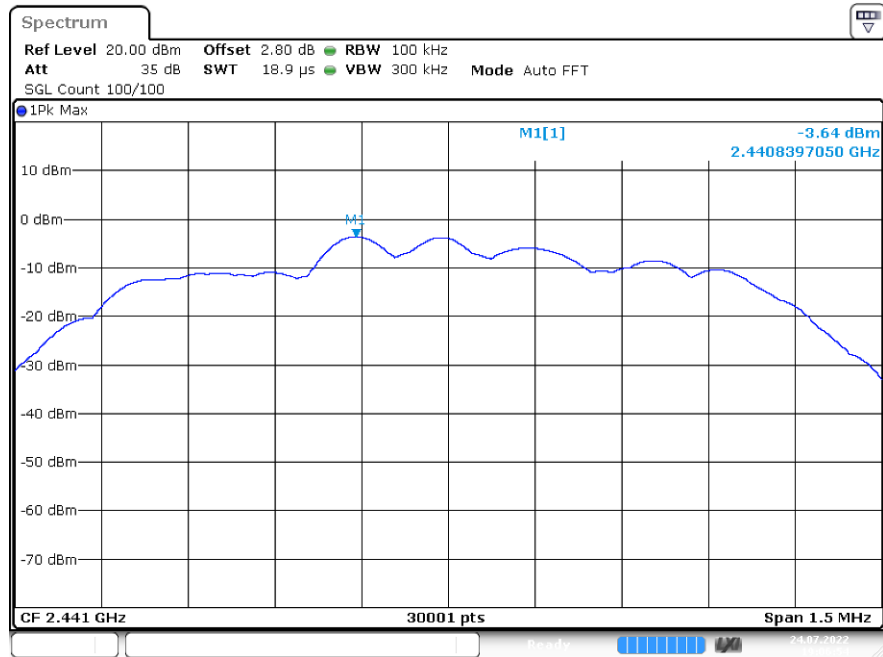


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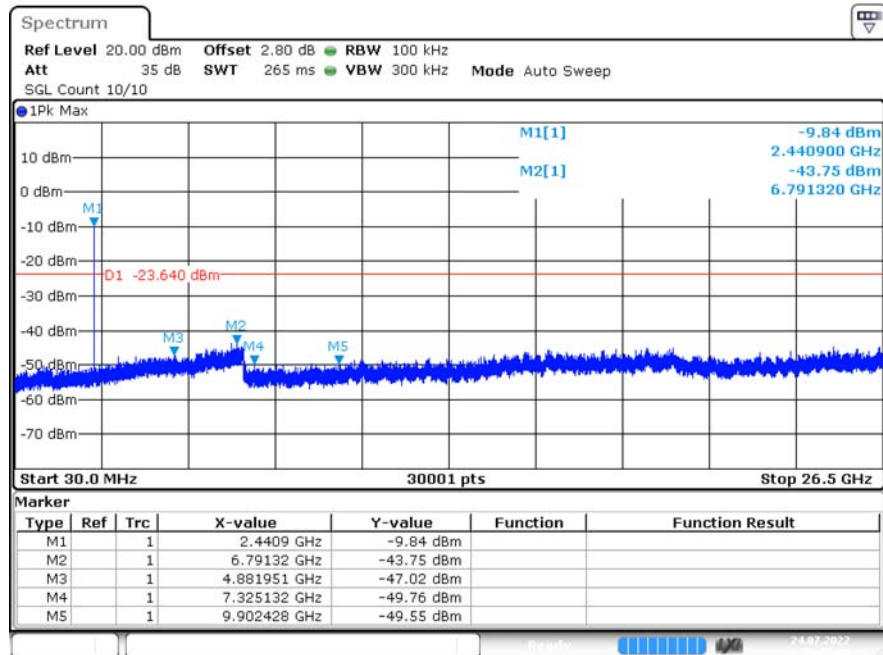


$\pi/4$ DQPSK_MCH_Graphs

Pref

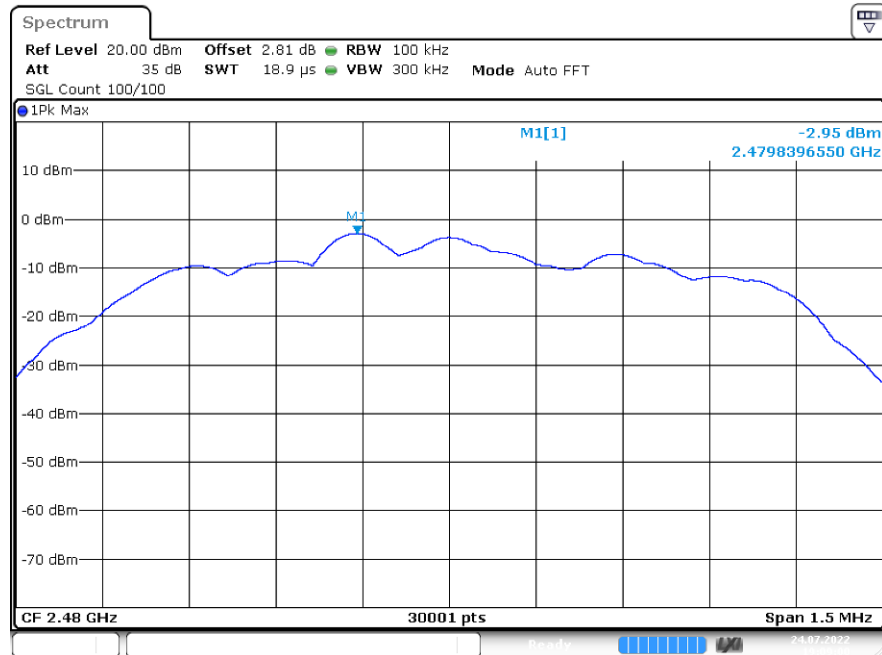


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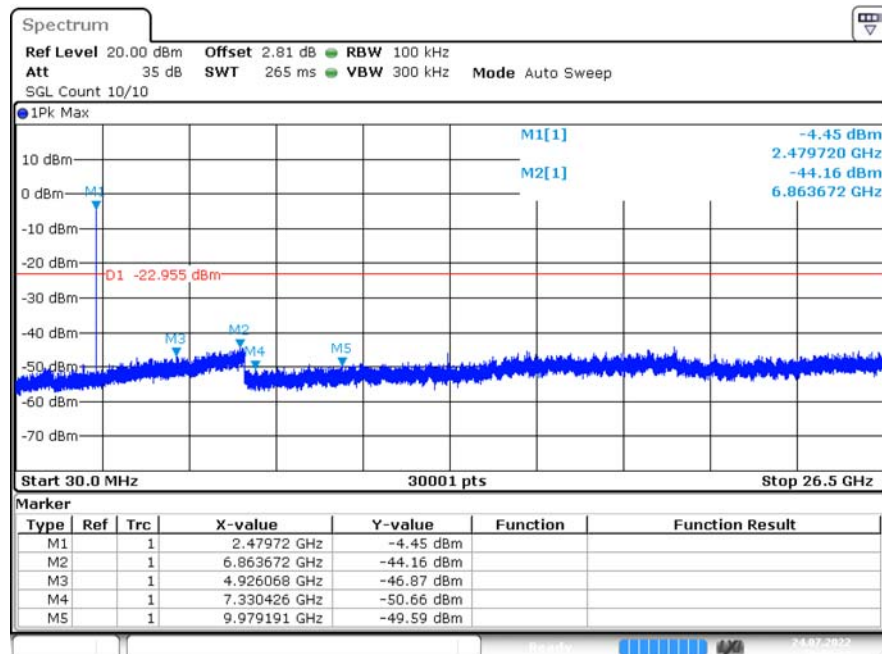


$\pi/4$ DQPSK_HCH_Graphs

Pref



Puw

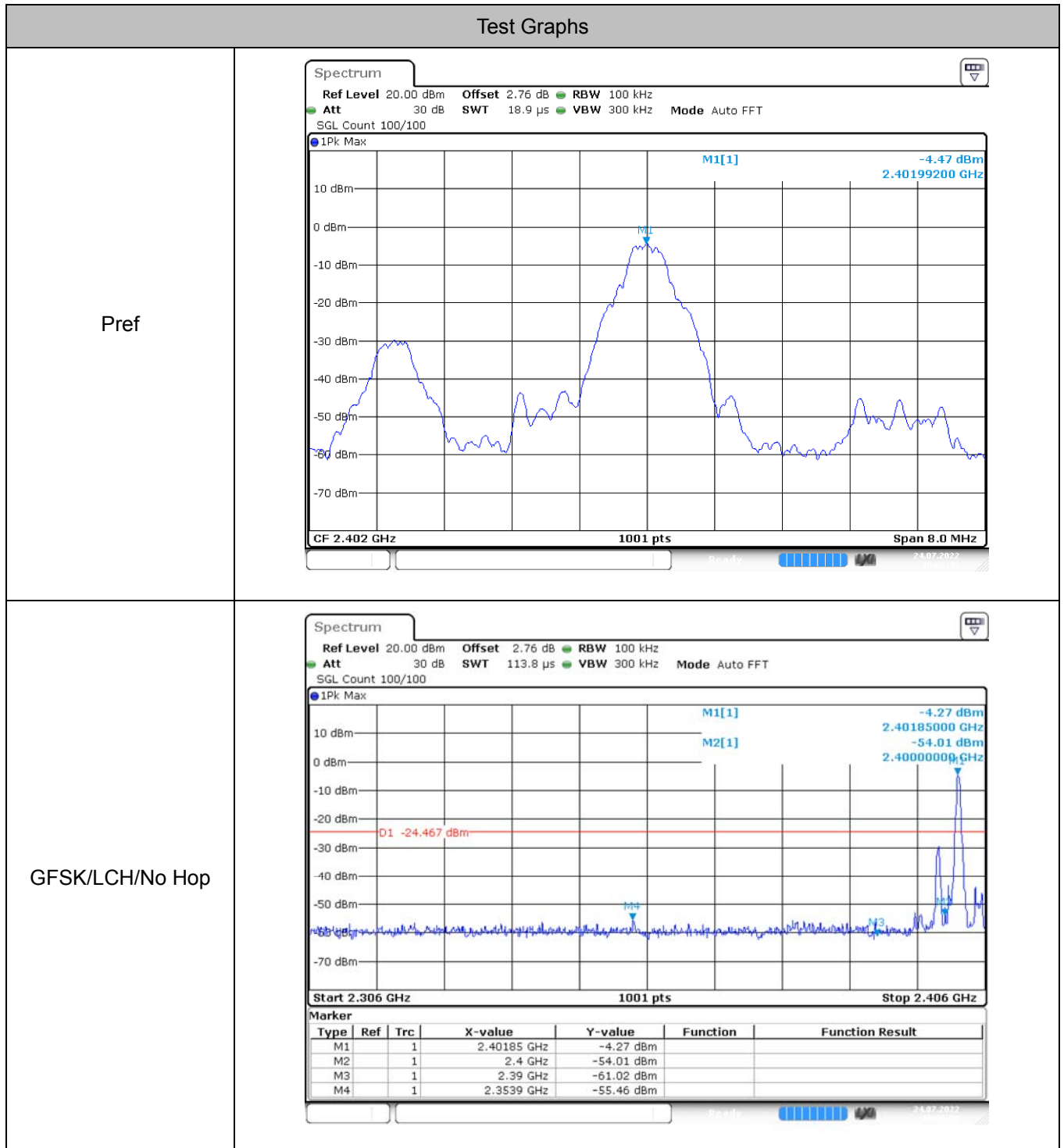


8 Band-edge for RF Conducted Emissions

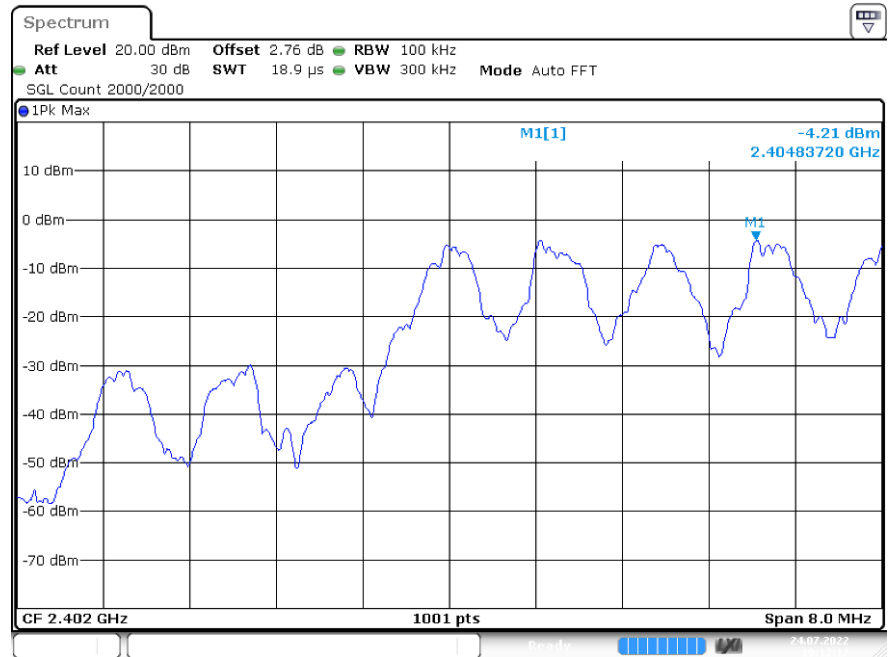
8.1 Test Result

Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	-50.99	-20	Pass
			On	-49.74	-20	Pass
	HCH	2480	Off	-41.17	-20	Pass
			On	-42.05	-20	Pass
$\pi/4$ DQPSK	LCH	2402	Off	-52.05	-20	Pass
			On	-50.59	-20	Pass
	HCH	2480	Off	-44.49	-20	Pass
			On	-46.07	-20	Pass

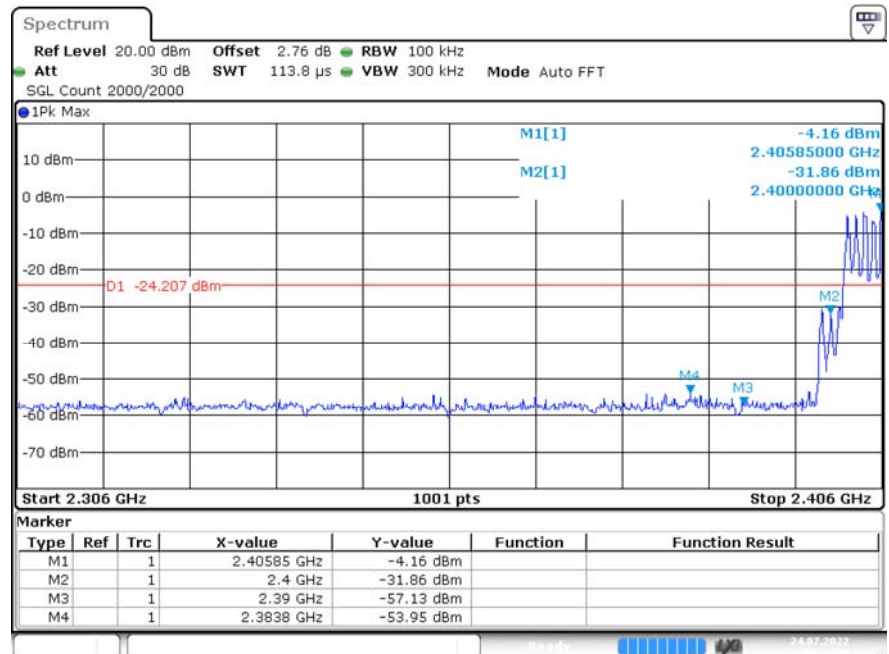
8.2 Test Graphs



Ref



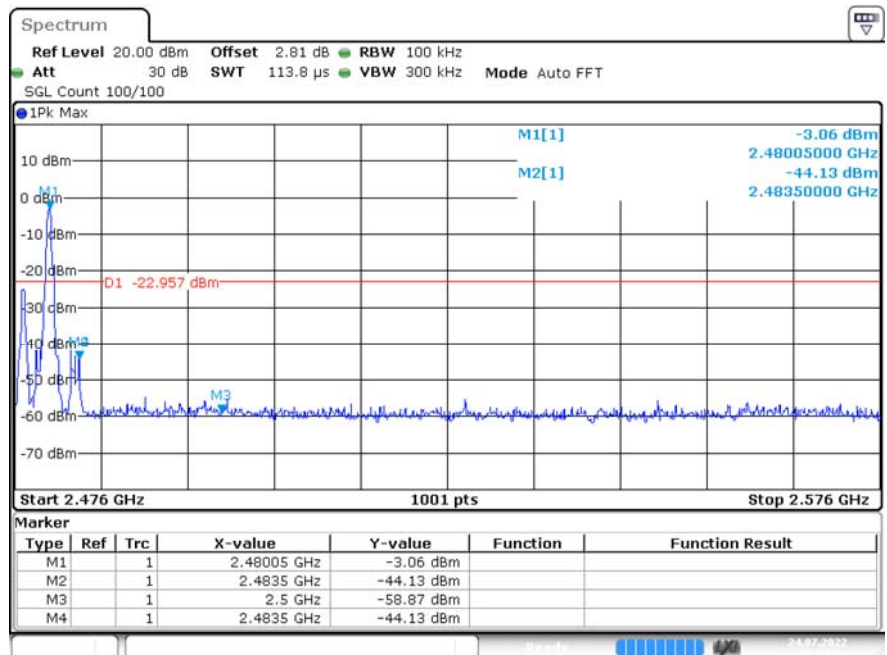
GFSK/LCH/Hop



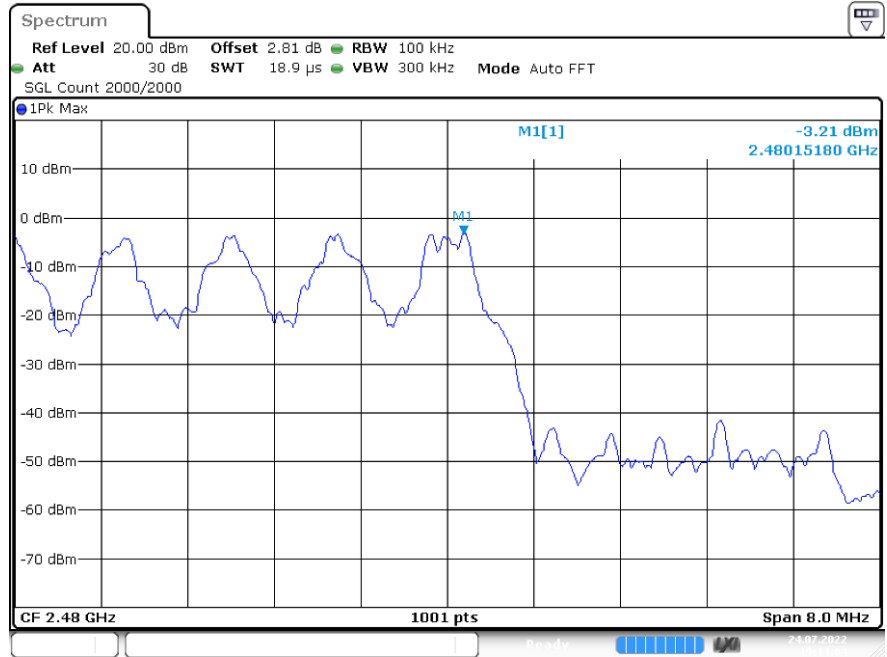
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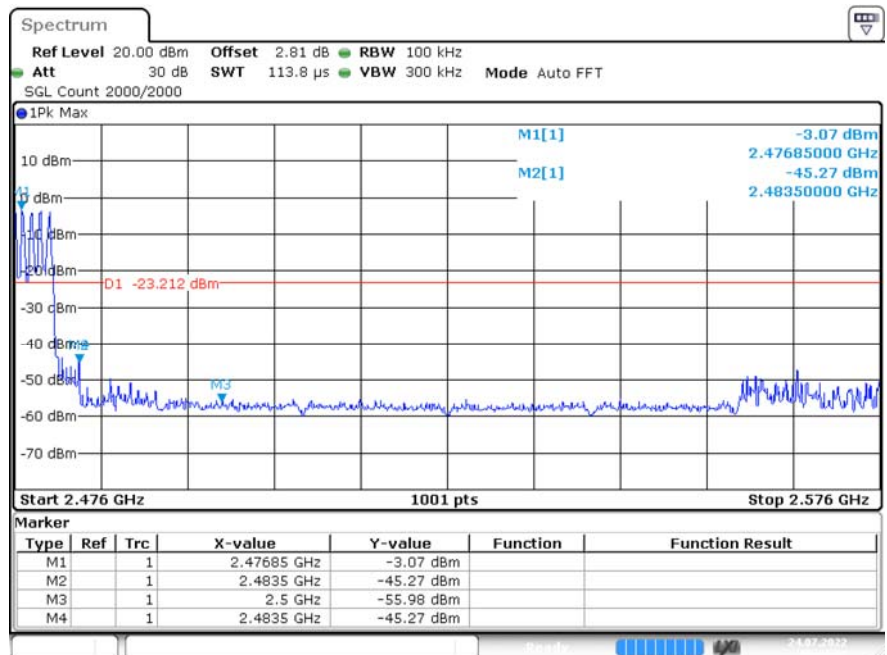
GFSK/HCH/No Hop



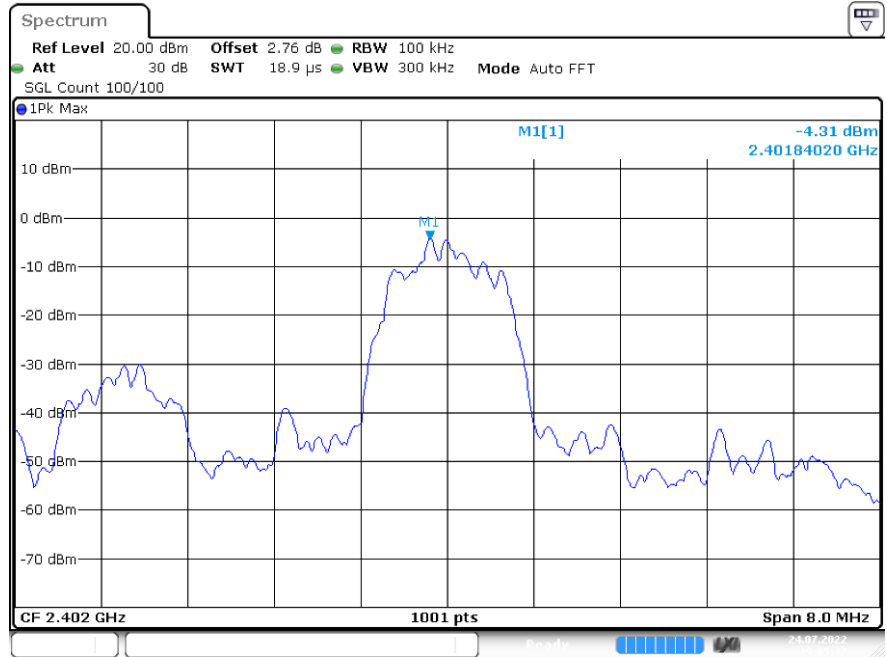
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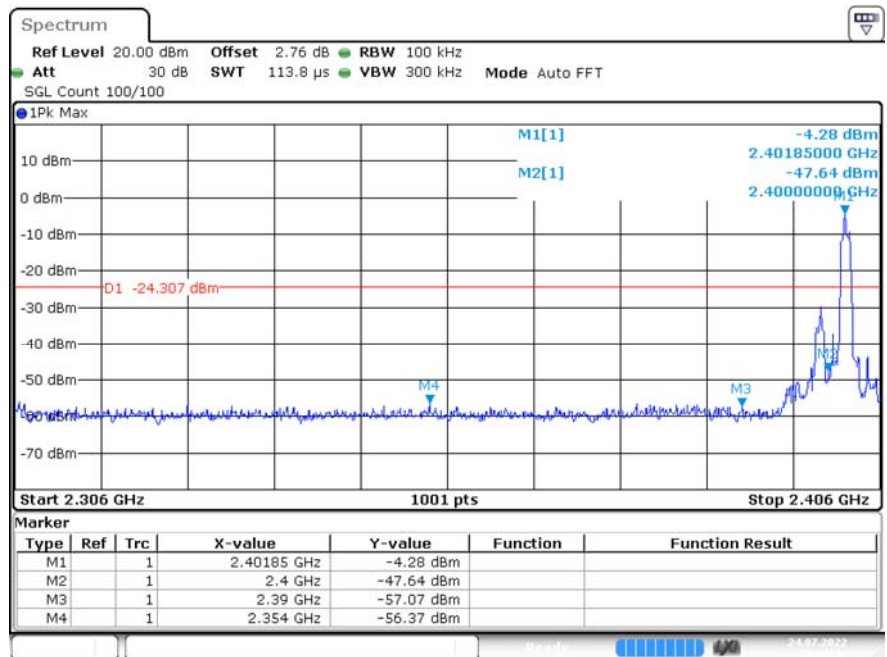
GFSK/HCH/Hop



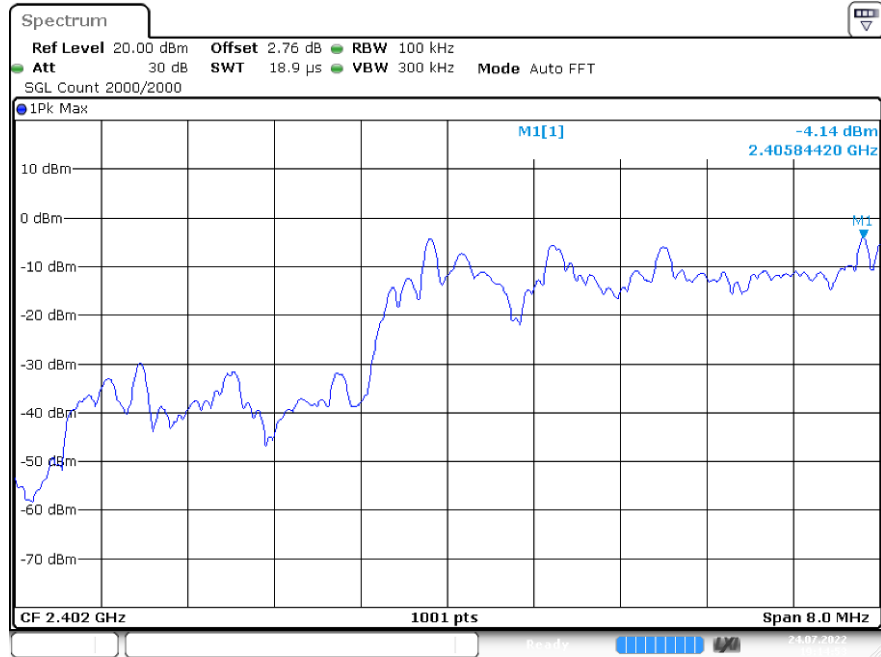
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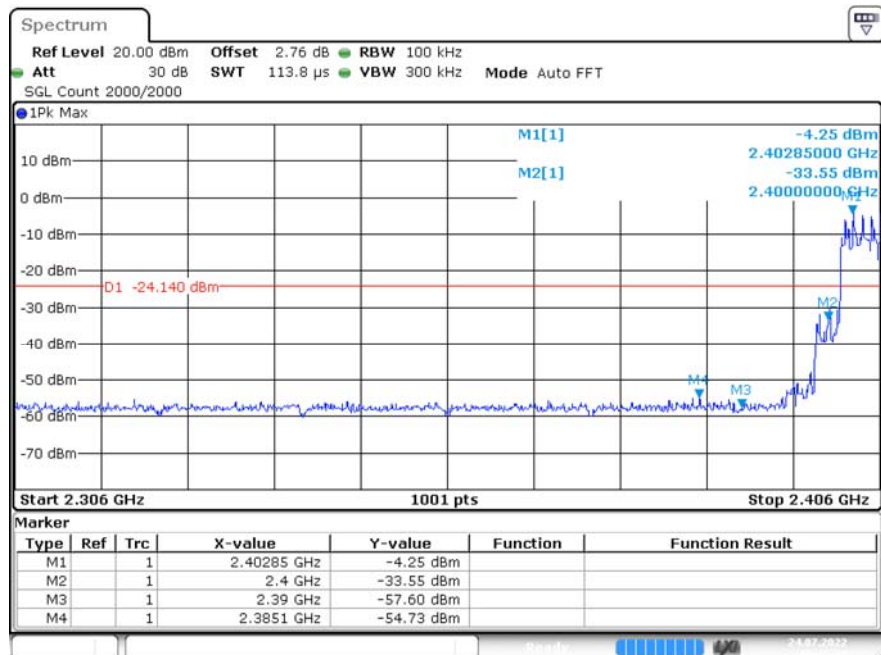
$\pi/4$ DQPSK/LCH/No Hop



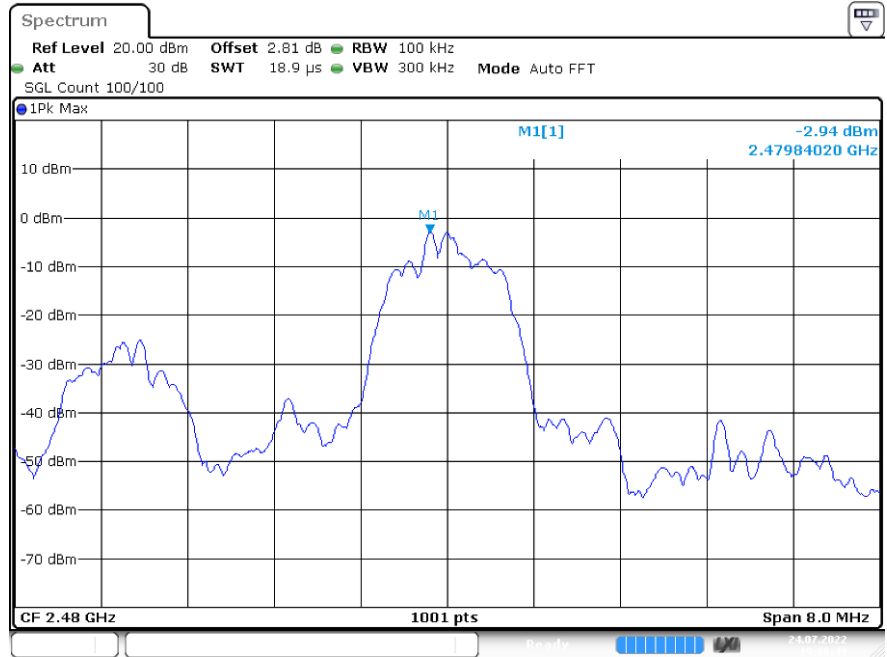
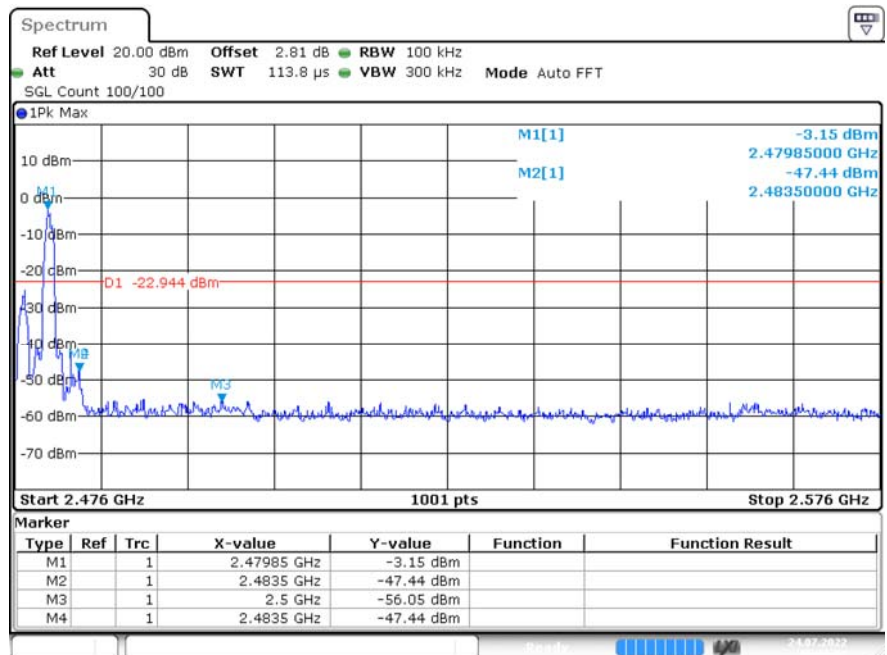
Ref



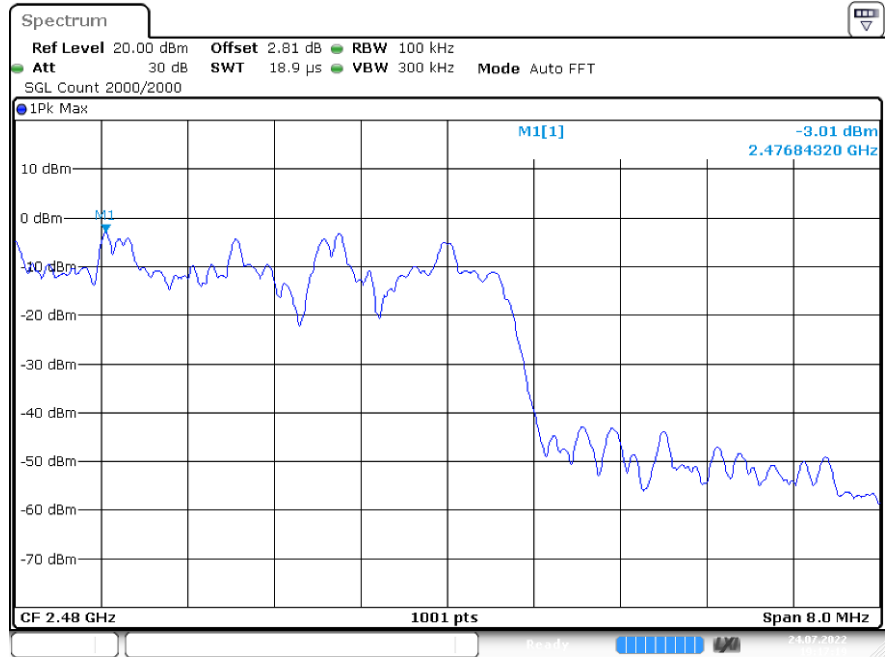
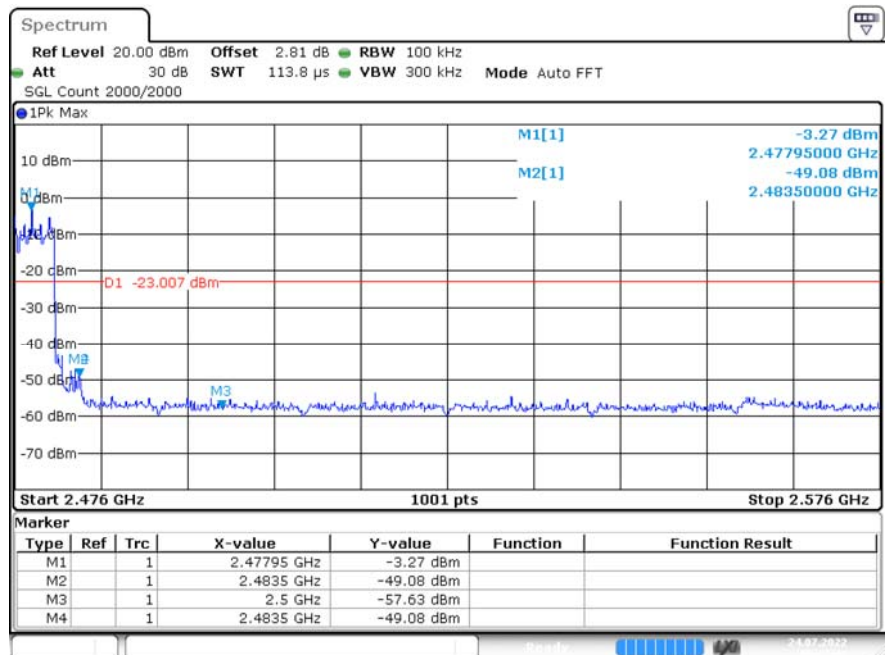
$\pi/4$ DQPSK/LCH/Hop



Ref


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


Ref


 $\pi/4$ DQPSK/HCH/Hop


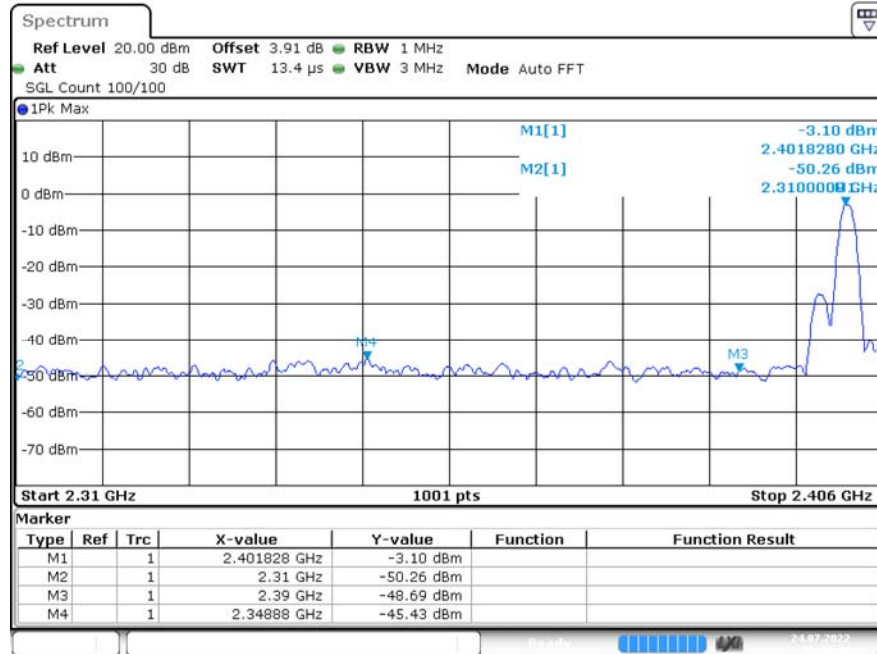
9 Restrict-band band-edge measurements

9.1 Test Result

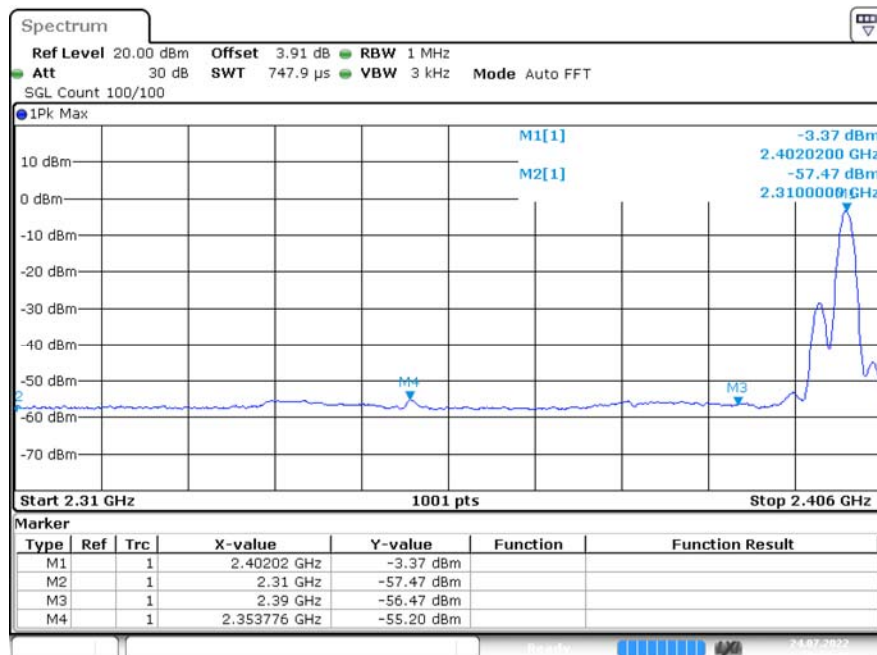
Test Mode	Hopping	Freq.	Power [dBm]	Gain	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-50.26	2	47	PEAK	74	Pass
	Off	2310.0	-57.46	2	39.8	AV	54	Pass
	Off	2348.88	-45.43	2	51.83	PEAK	74	Pass
	Off	2353.776	-55.2	2	42.06	AV	54	Pass
	Off	2390.0	-48.69	2	48.57	PEAK	74	Pass
	Off	2390.0	-56.46	2	40.8	AV	54	Pass
	Off	2483.5	-40.67	2	56.59	PEAK	74	Pass
	Off	2483.5	-46.2	2	51.06	AV	54	Pass
	Off	2483.512	-40.67	2	56.59	PEAK	74	Pass
	Off	2483.512	-46.2	2	51.06	AV	54	Pass
	Off	2500.0	-45.55	2	51.71	PEAK	74	Pass
	Off	2500.0	-54.54	2	42.72	AV	54	Pass
$\pi/4$ DQPSK	Off	2310.0	-48.47	2	48.79	PEAK	74	Pass
	Off	2310.0	-57.14	2	40.12	AV	54	Pass
	Off	2338.992	-44.94	2	52.32	PEAK	74	Pass
	Off	2381.136	-55.21	2	42.05	AV	54	Pass
	Off	2390.0	-48.78	2	48.48	PEAK	74	Pass
	Off	2390.0	-56.42	2	40.84	AV	54	Pass
	Off	2483.5	-40.56	2	56.7	PEAK	74	Pass
	Off	2483.5	-47.25	2	50.01	AV	54	Pass
	Off	2483.512	-40.56	2	56.7	PEAK	74	Pass
	Off	2483.512	-47.25	2	50.01	AV	54	Pass
	Off	2500.0	-48.02	2	49.24	PEAK	74	Pass
	Off	2500.0	-55.22	2	42.04	AV	54	Pass

9.2 Test Graphs

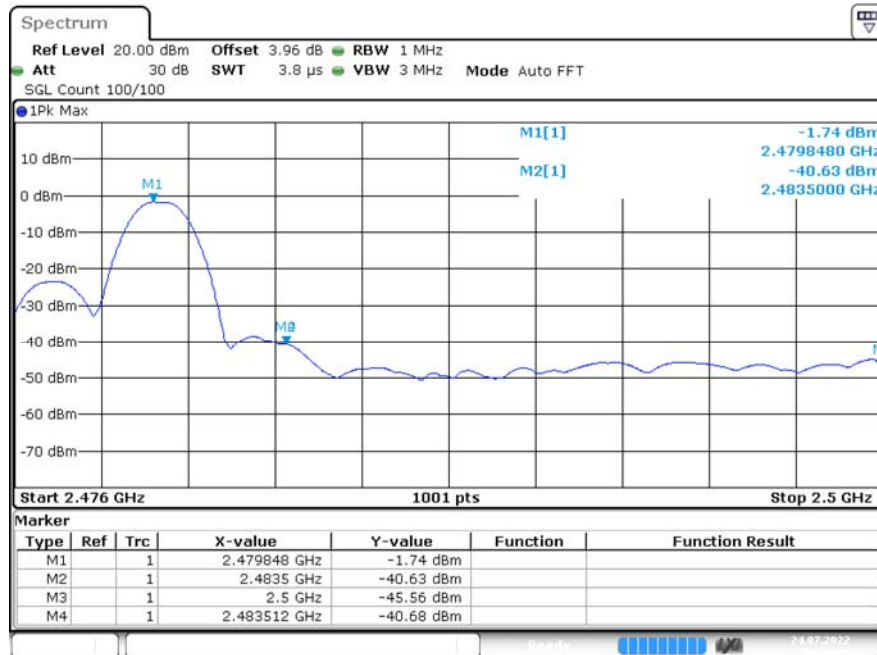
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



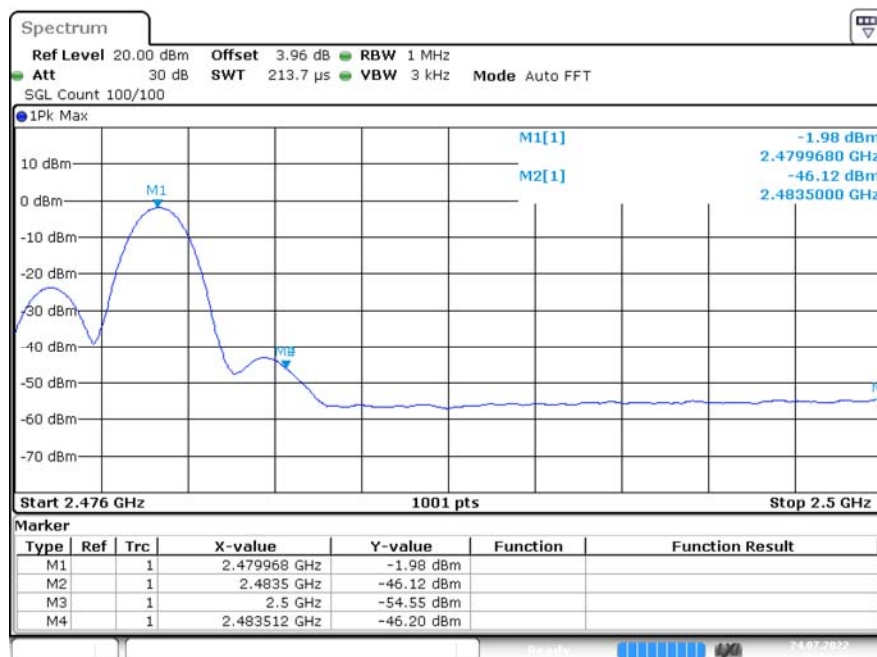
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



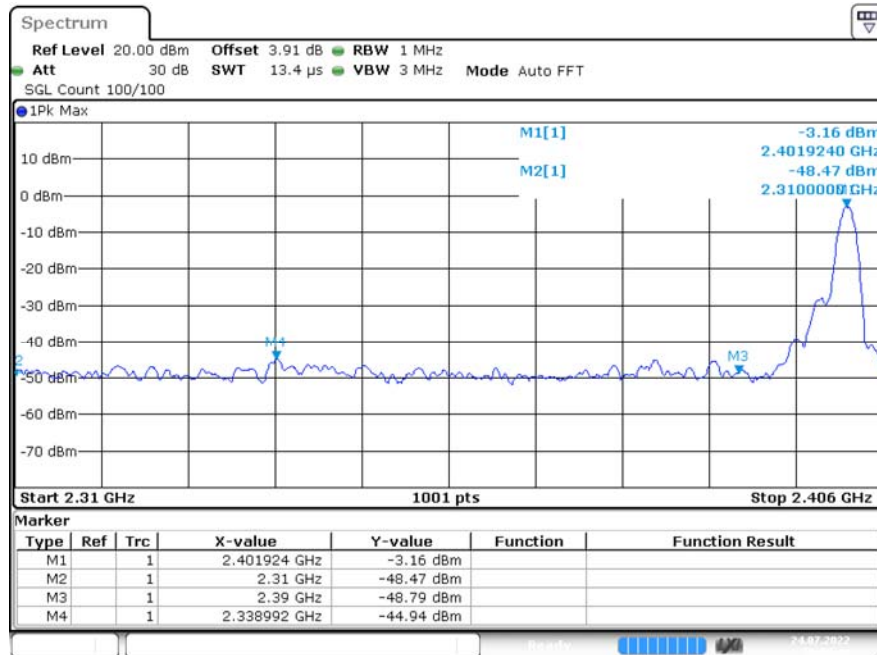
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



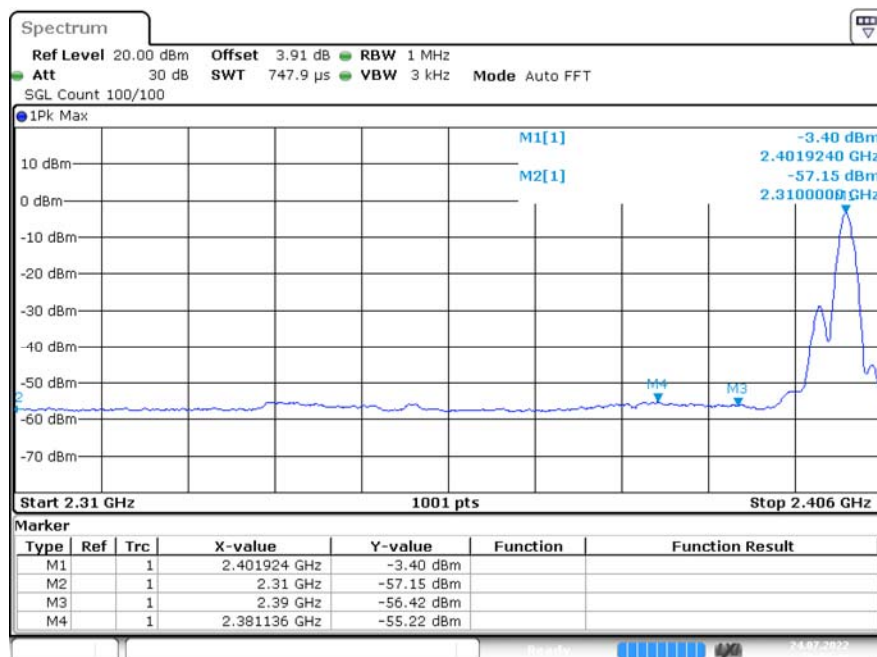
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



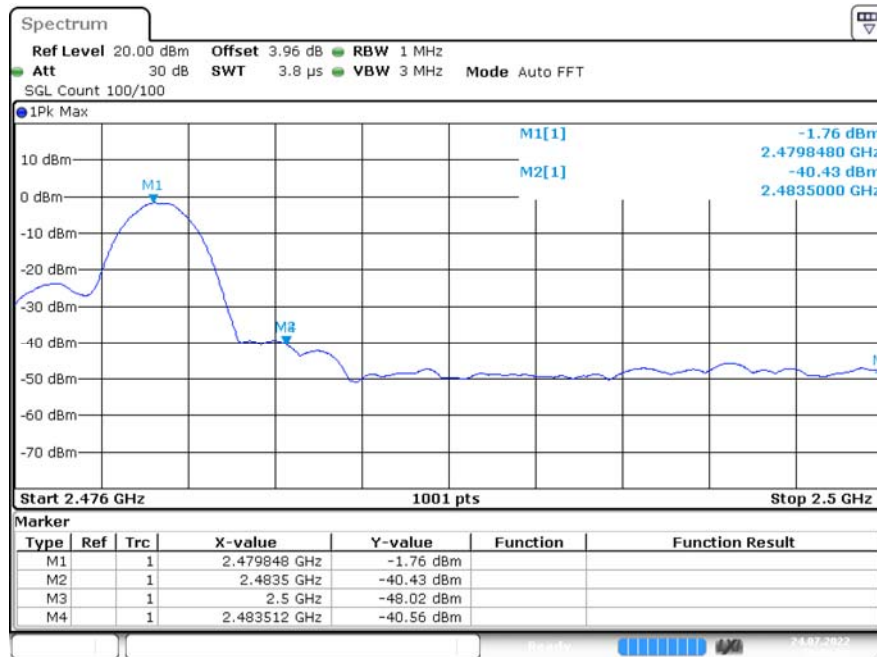
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (Low Channel)



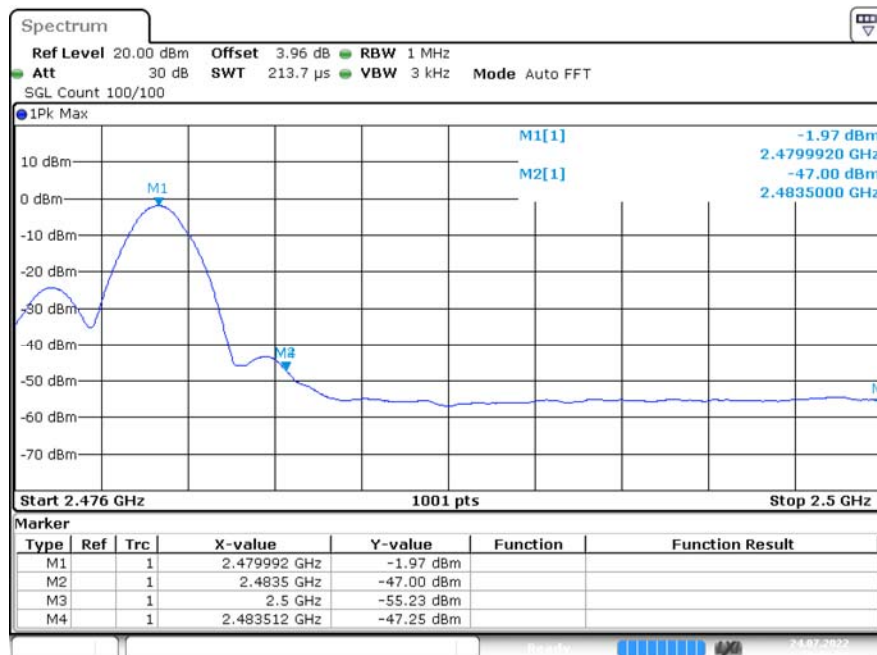
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (Low Channel)



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---