



Appendix A

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

Product Name: Bluetooth headphone

Trade Mark: iHome

Test Model: iHome TX-30

Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	52.4%
ATM Pressure:	101Kpa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen

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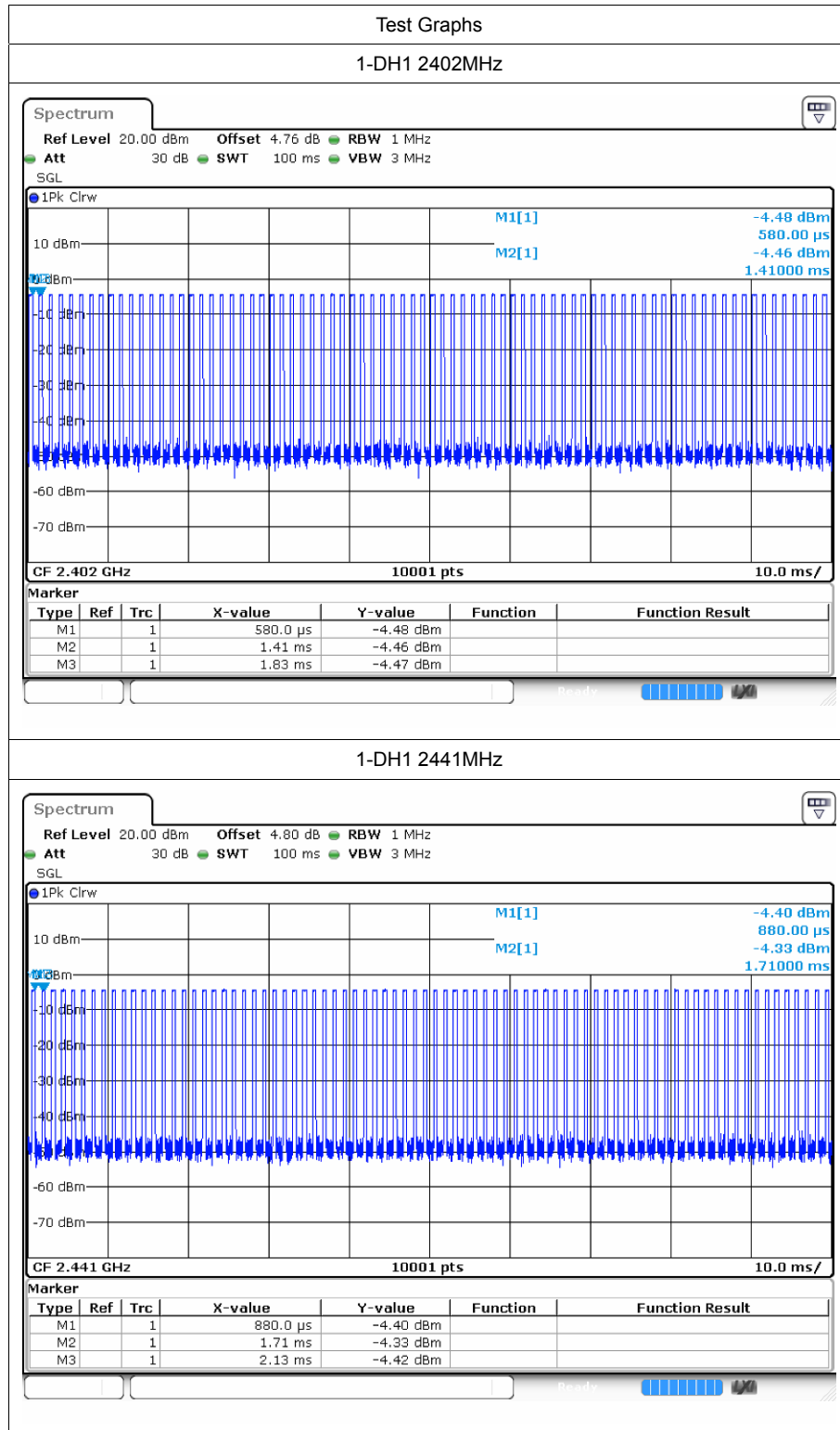
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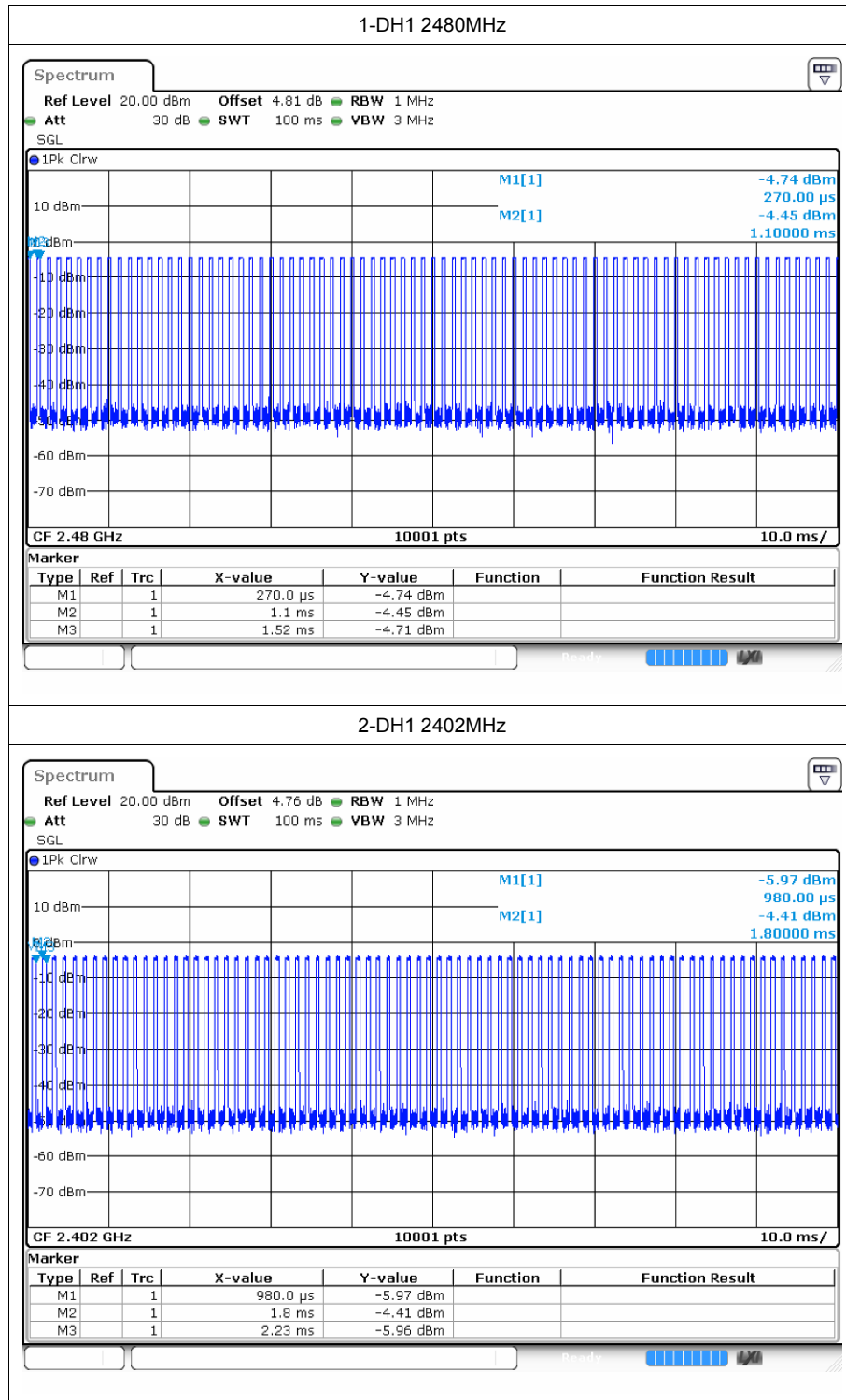
1 Duty Cycle

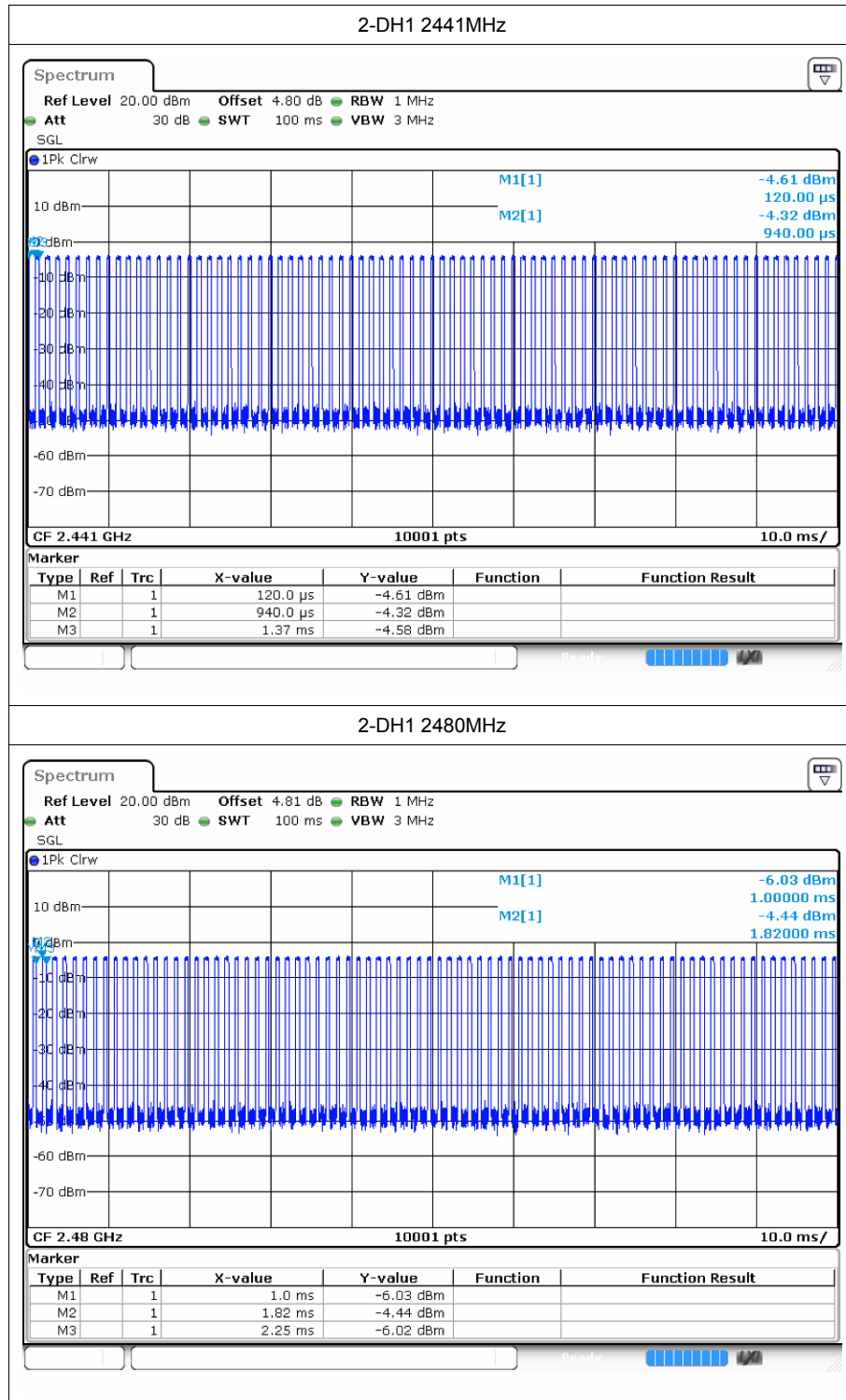
1.1 Test Result

Mode	Frequency (MHz)	Duty Cycle (%)	1/T (kHz)
1-DH1	2402	34.9	2.38
1-DH1	2441	34.4	2.38
1-DH1	2480	34.41	2.38
2-DH1	2402	35.2	2.33
2-DH1	2441	35.21	2.33
2-DH1	2480	35.2	2.33

1.2 Test Graphs





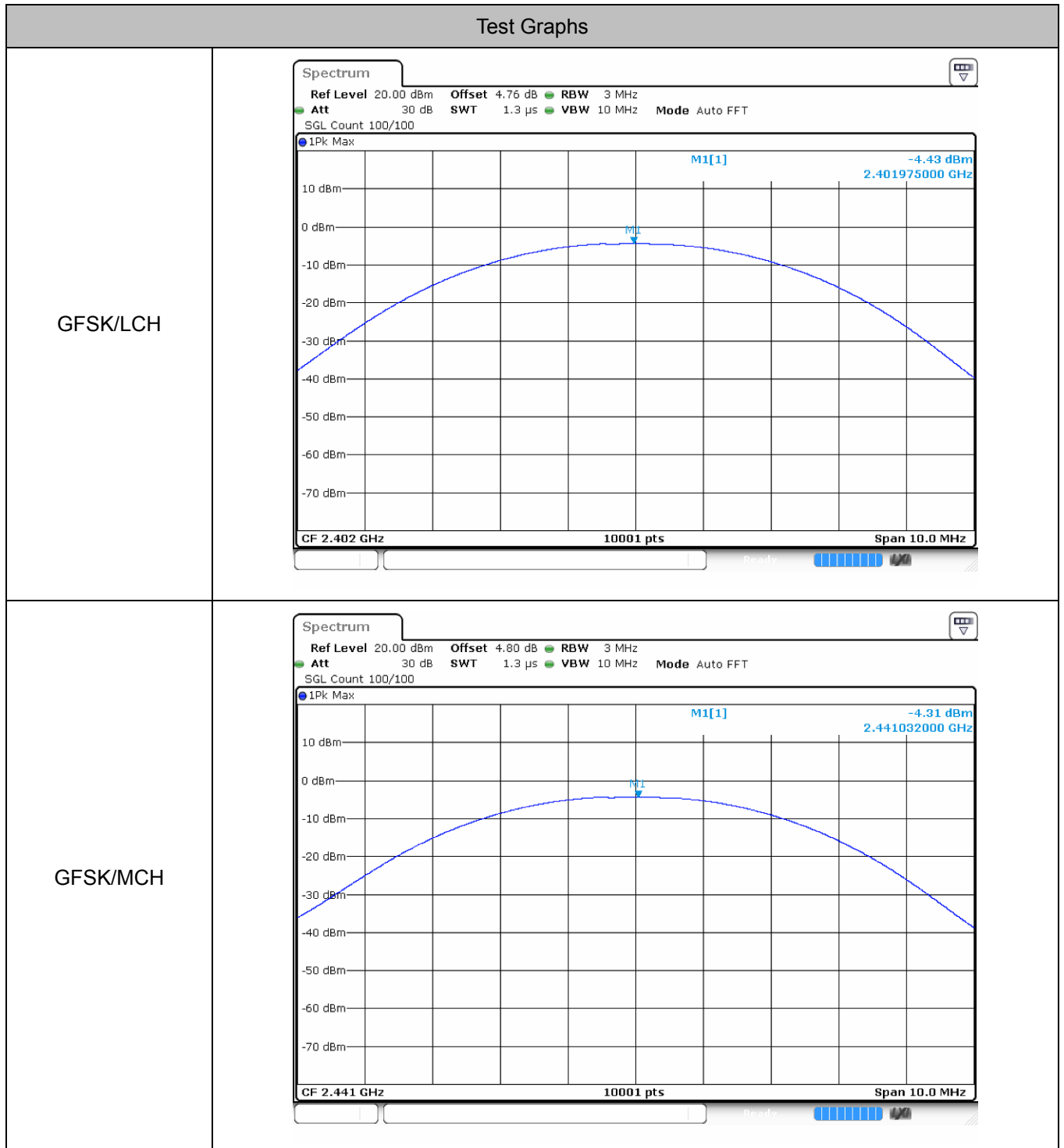


2 Maximum Conducted Peak Output Power

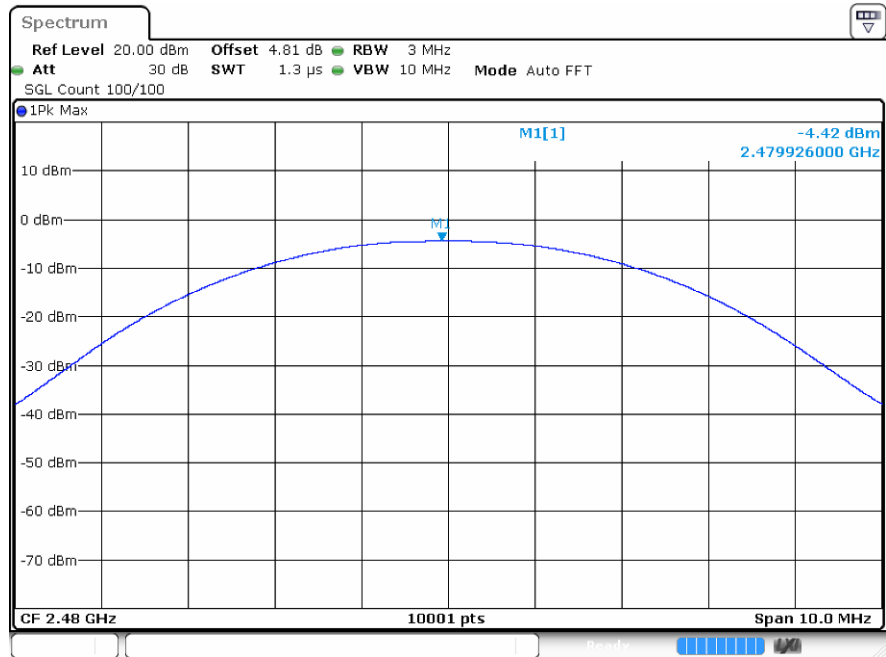
2.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-4.43	21	Pass
	MCH	-4.31	21	Pass
	HCH	-4.42	21	Pass
$\pi/4$ DQPSK	LCH	-3.82	21	Pass
	MCH	-4.02	21	Pass
	HCH	-3.98	21	Pass

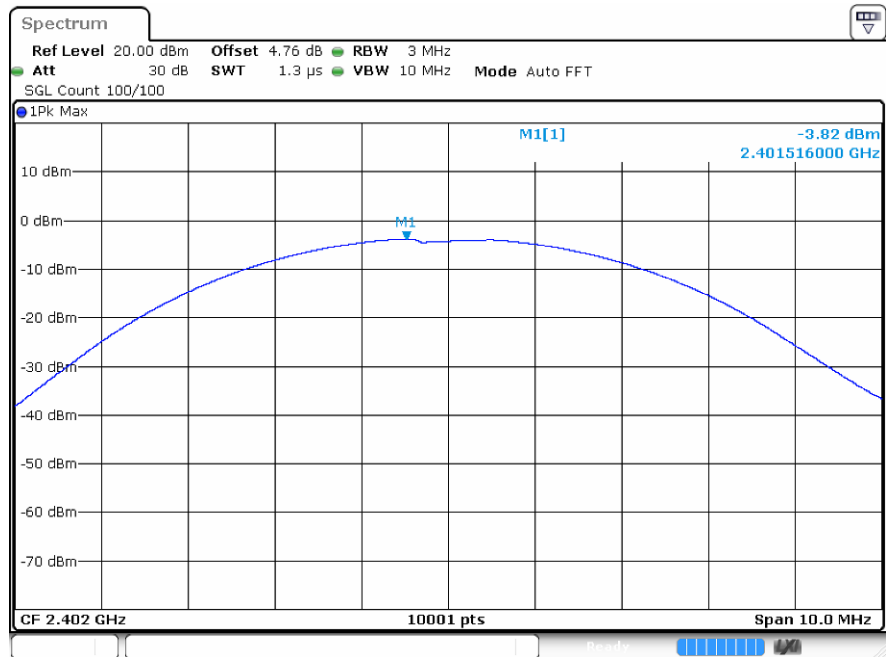
2.2 Test Graphs



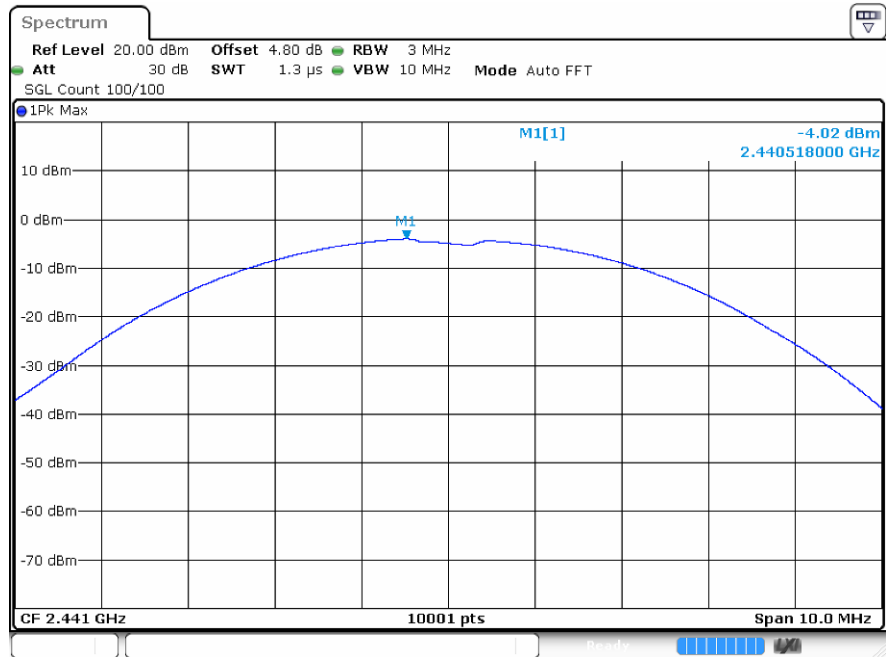
GFSK/HCH



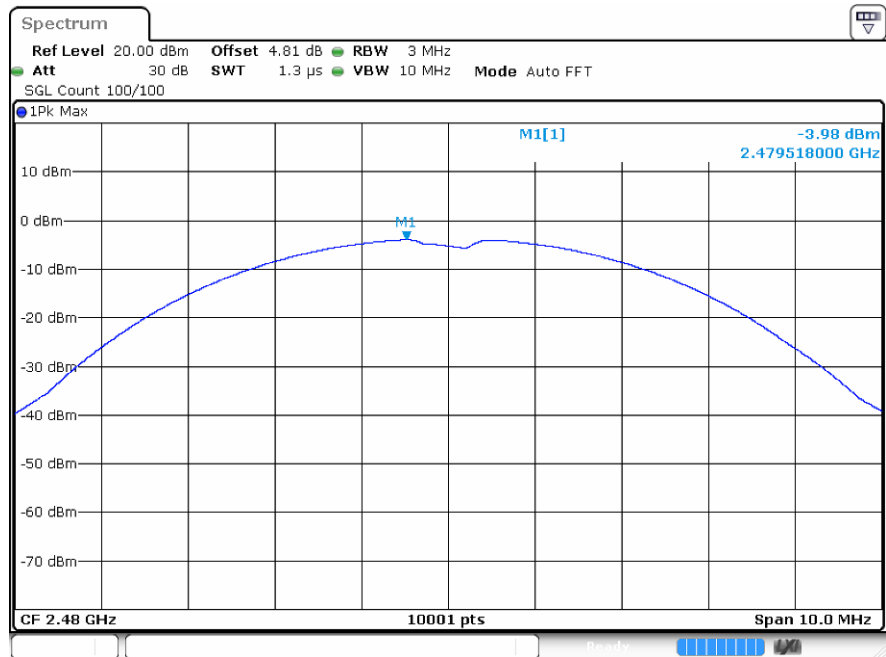
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH

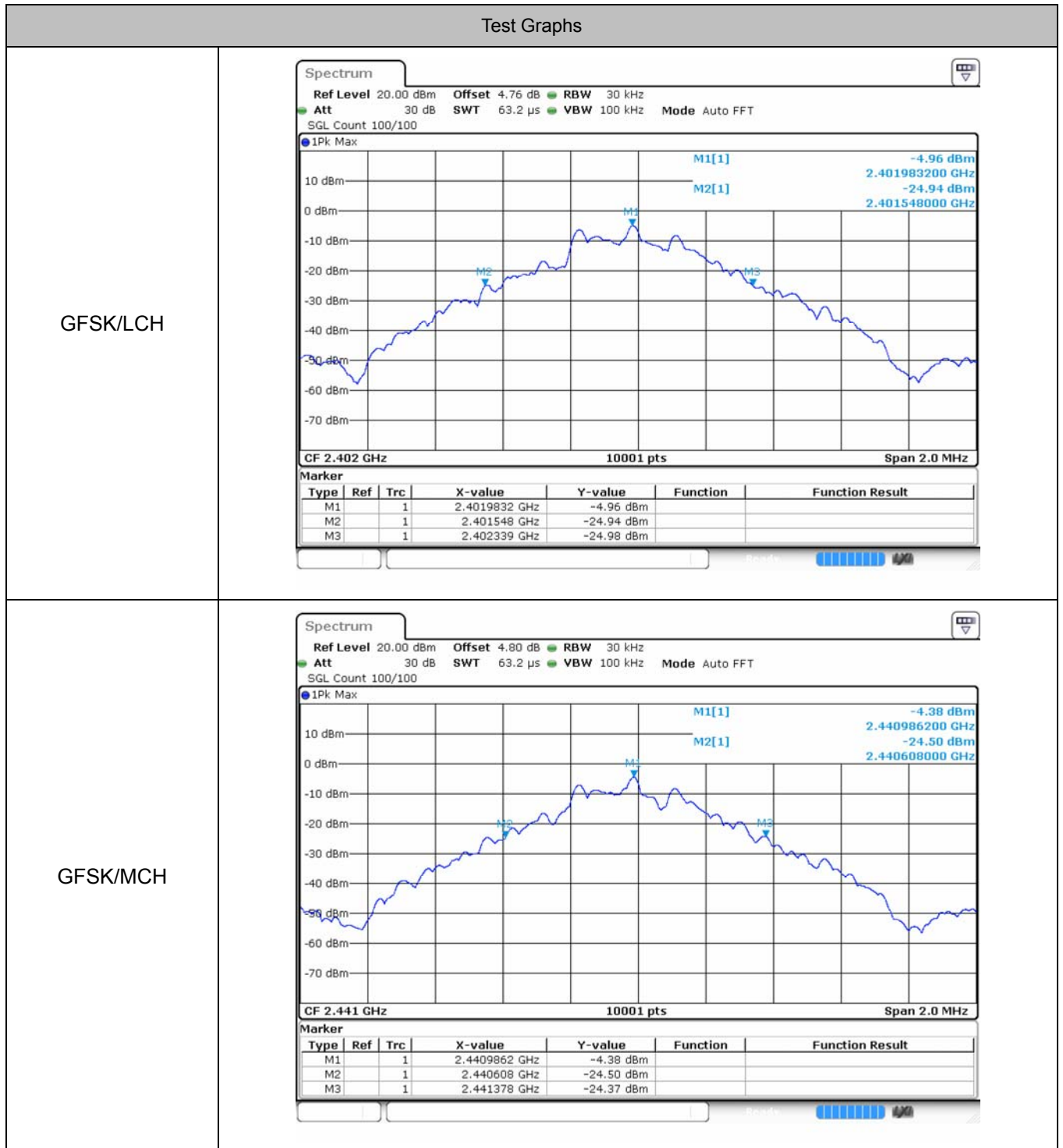


3 20dB Bandwidth

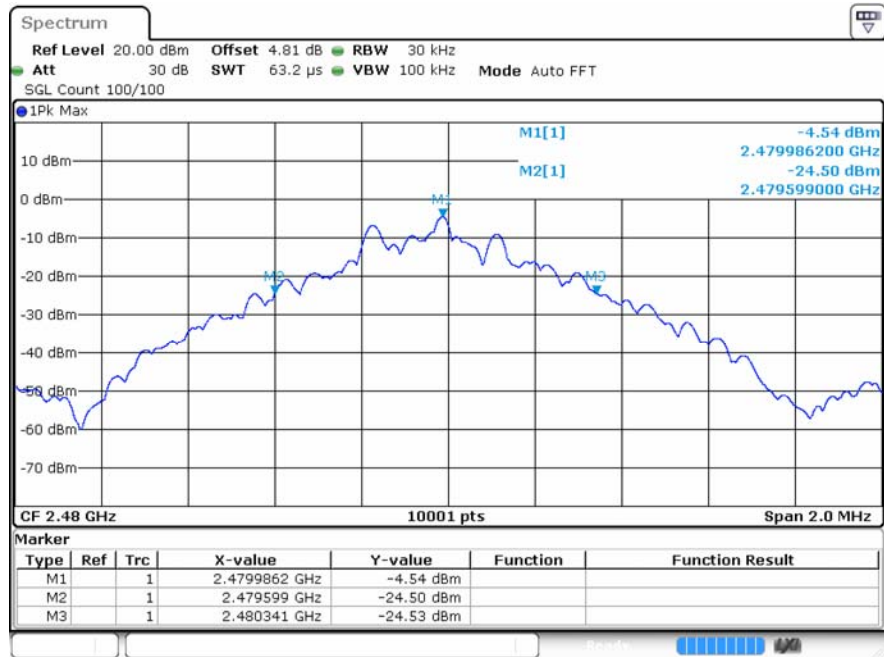
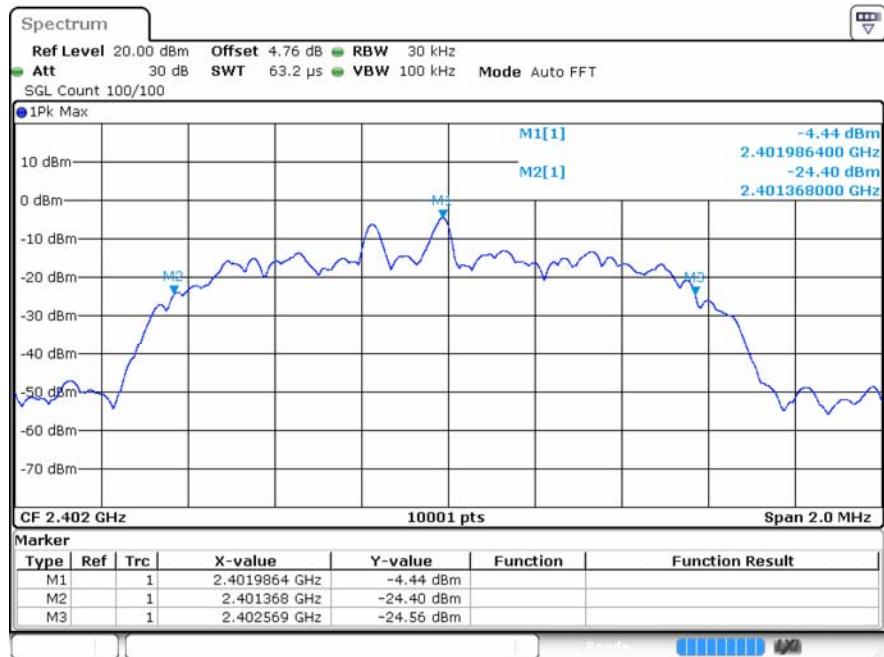
3.1 Test Result

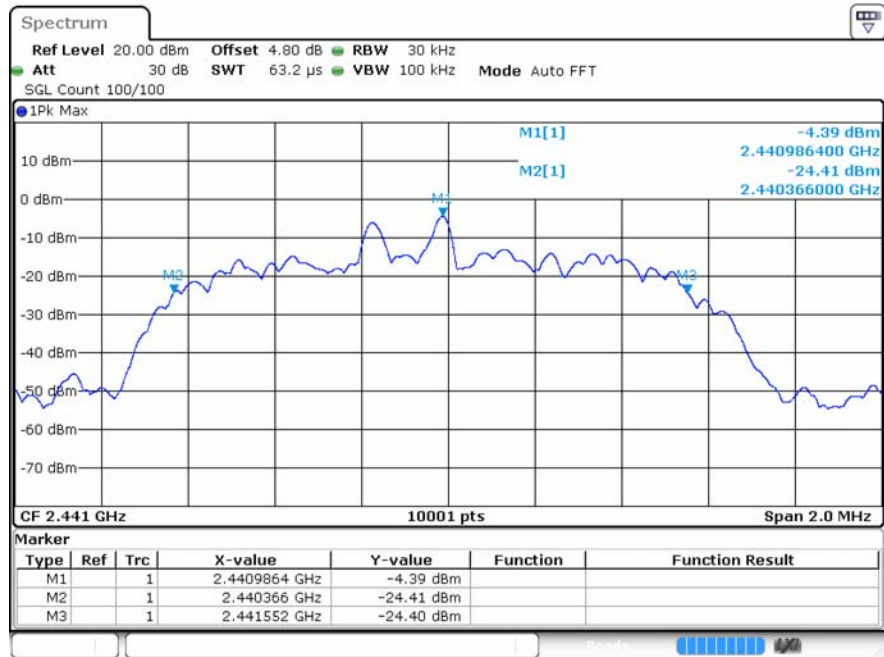
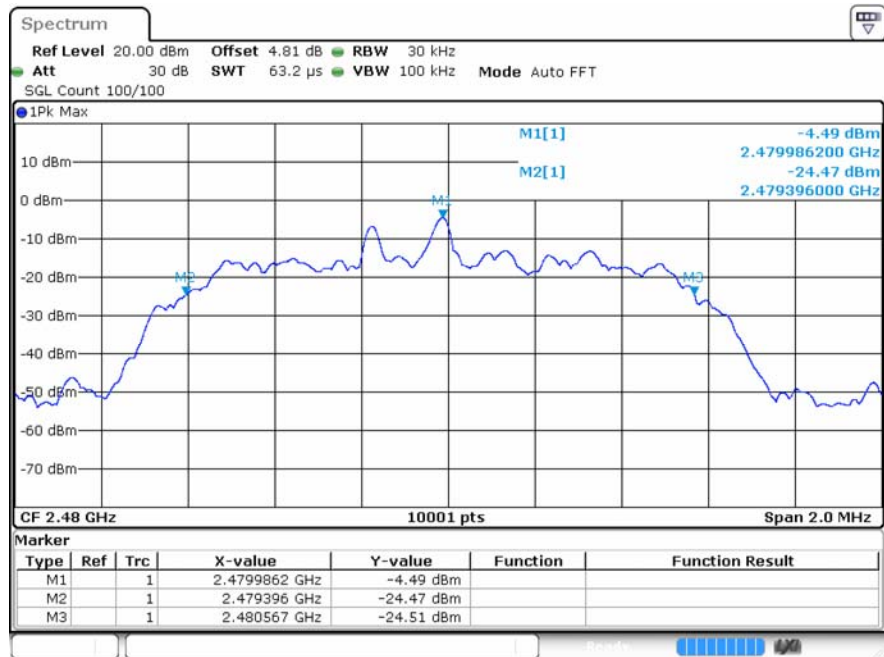
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.791	Not Specified	Pass
	MCH	0.77	Not Specified	Pass
	HCH	0.742	Not Specified	Pass
$\pi/4$ DQPSK	LCH	1.201	Not Specified	Pass
	MCH	1.186	Not Specified	Pass
	HCH	1.171	Not Specified	Pass

3.2 Test Graphs



GFSK/HCH


 $\pi/4$ DQPSK/LCH


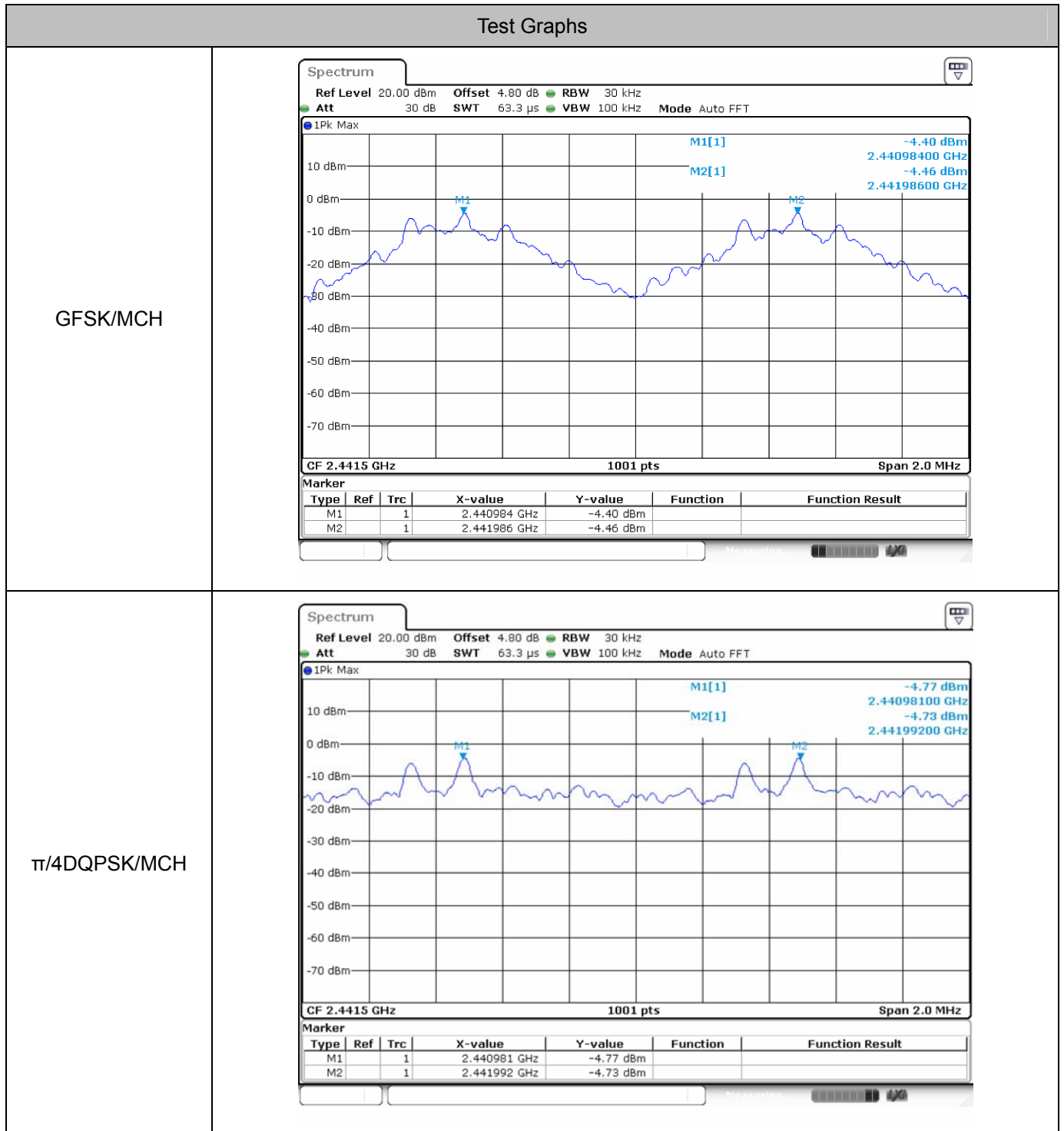
$\pi/4$ DQPSK/MCH

 $\pi/4$ DQPSK/HCH


4 Carrier Frequency Separation

4.1 Test Result

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	MCH	1.002	0.513	Pass
$\pi/4$ DQPSK	MCH	1.011	0.791	Pass

4.2 Test Graphs

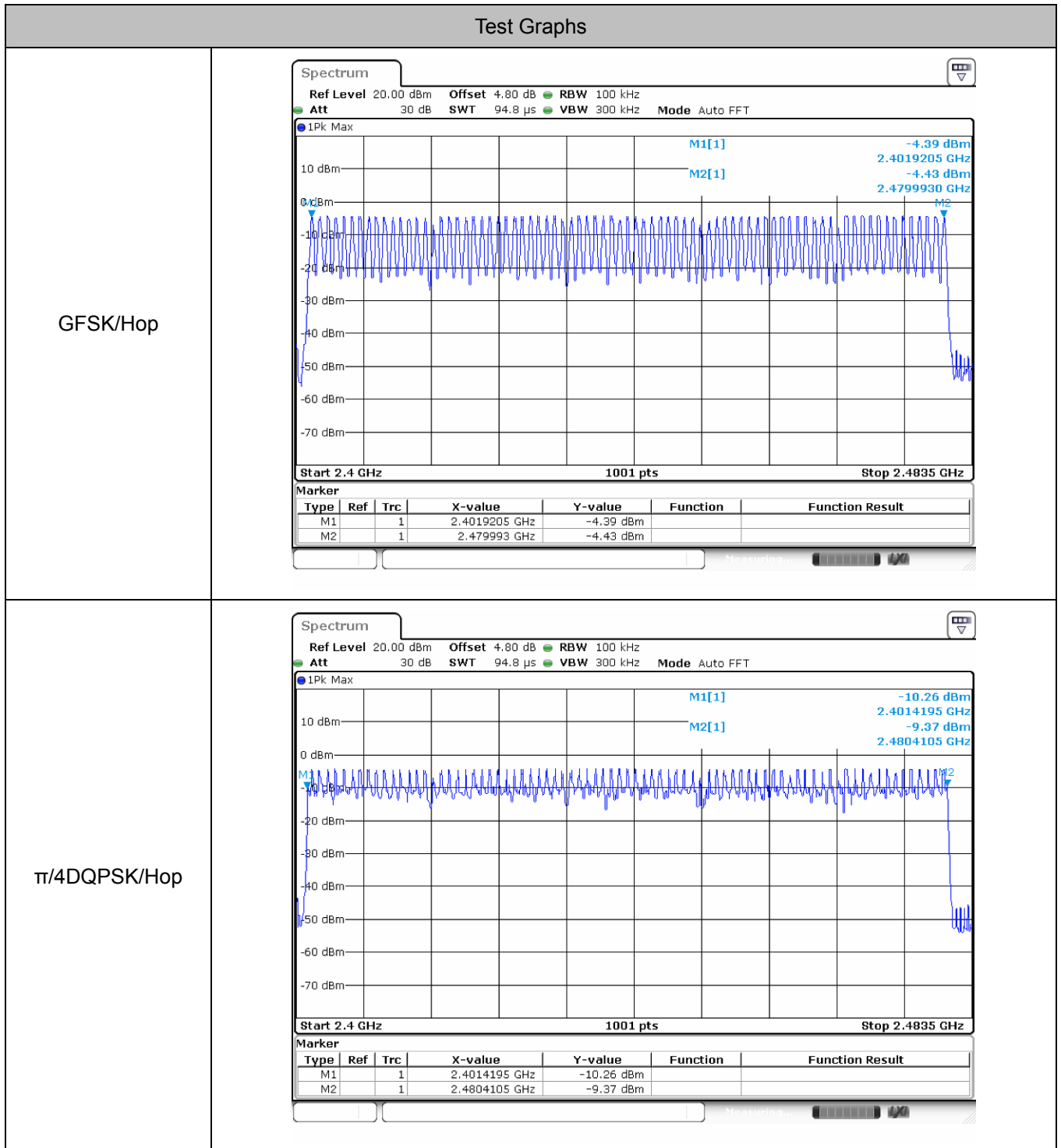


5 Hopping Channel Number

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

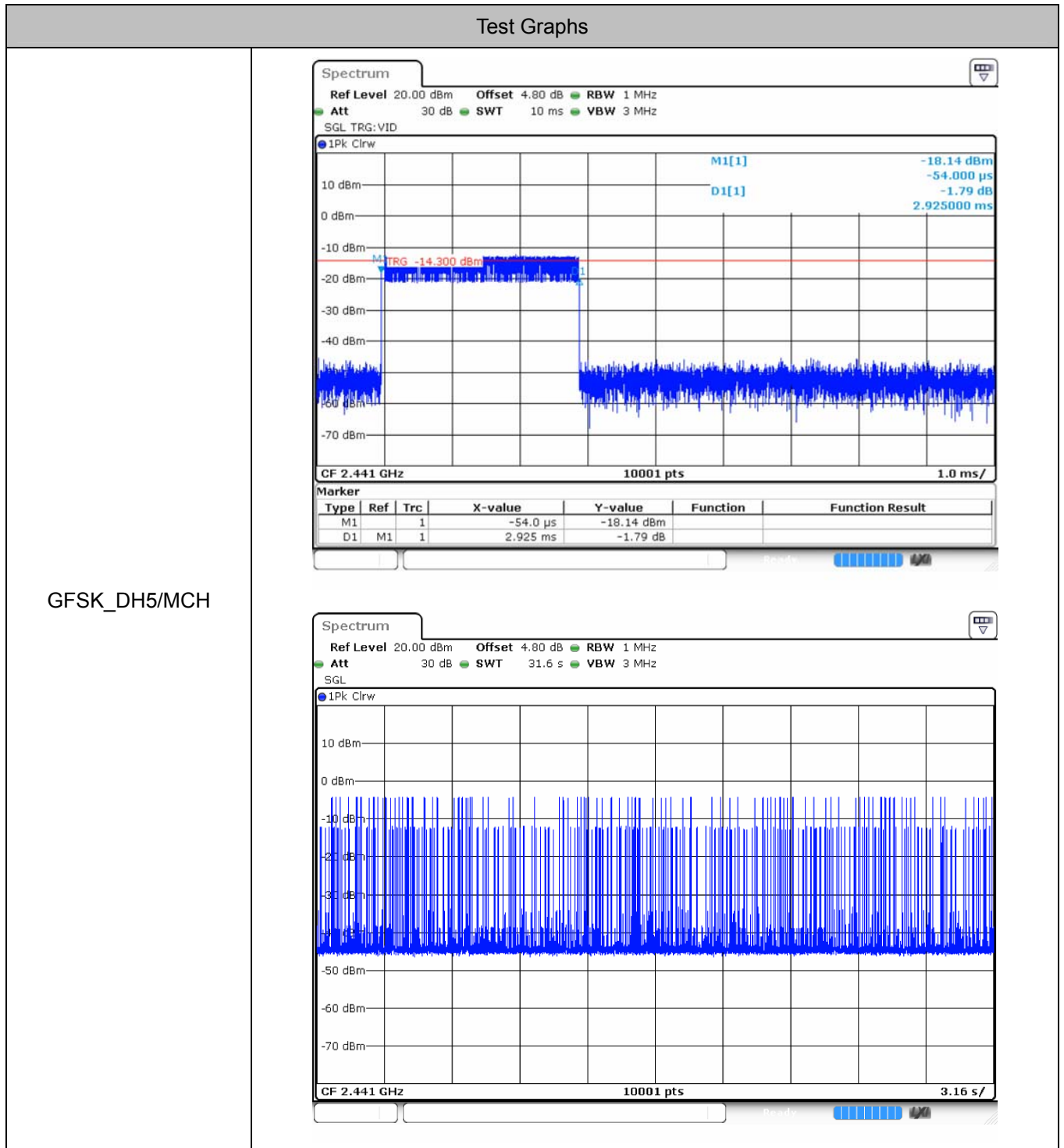


6 Dwell Time

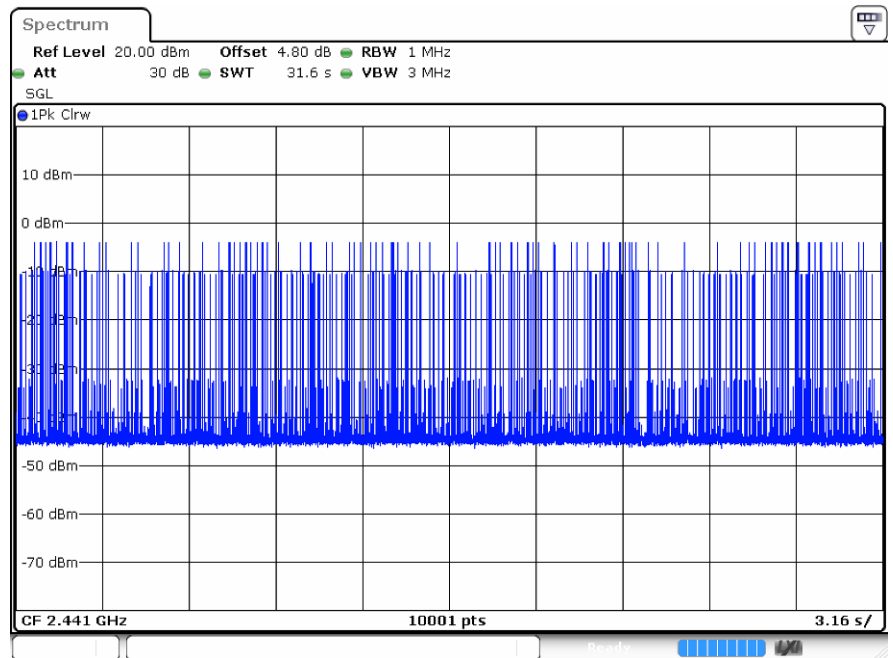
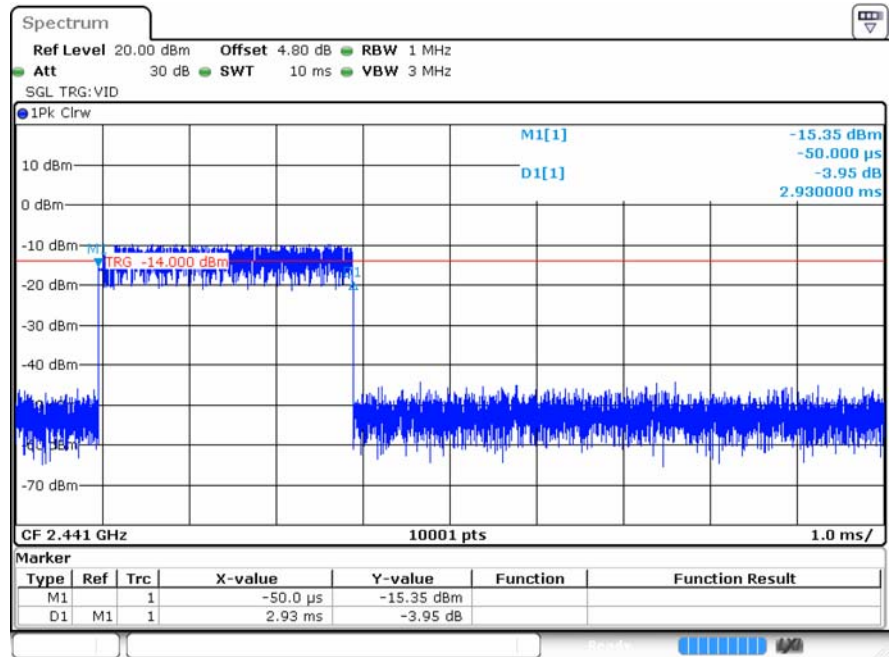
6.1 Test Result

Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.925	114	333.45	0.4	Pass
$\pi/4$ DQPSK	2DH5	MCH	2.93	97	284.21	0.4	Pass

6.2 Test Graphs



$\pi/4$ DQPSK
_2DH5/MCH

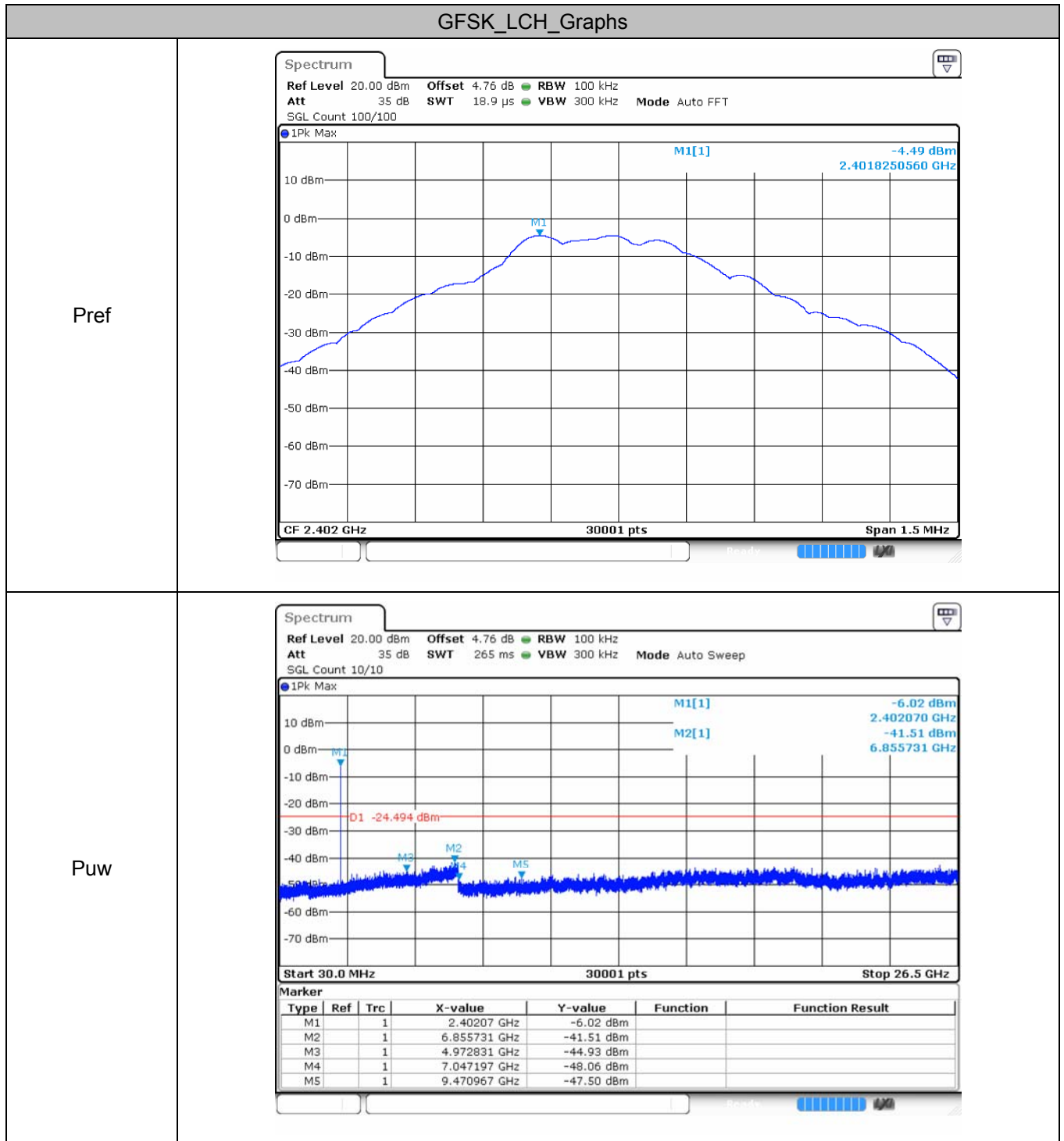


7 RF Conducted Spurious Emissions

7.1 Test Result

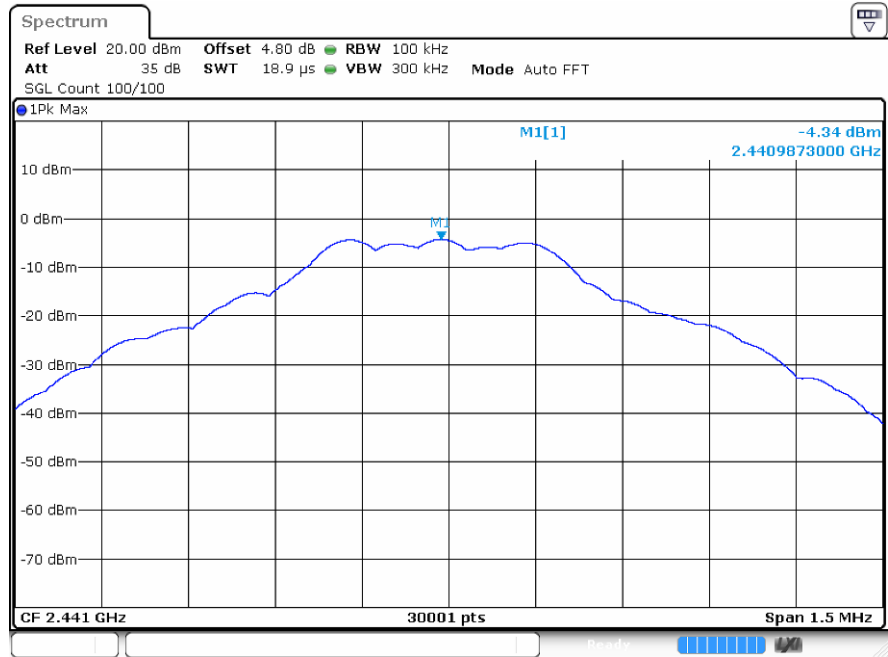
Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-37.01	-20	Pass
	MCH	-37.05	-20	Pass
	HCH	-37.83	-20	Pass
$\pi/4$ DQPSK	LCH	-37.55	-20	Pass
	MCH	-37.5	-20	Pass
	HCH	-37.42	-20	Pass

7.2 Test Graphs

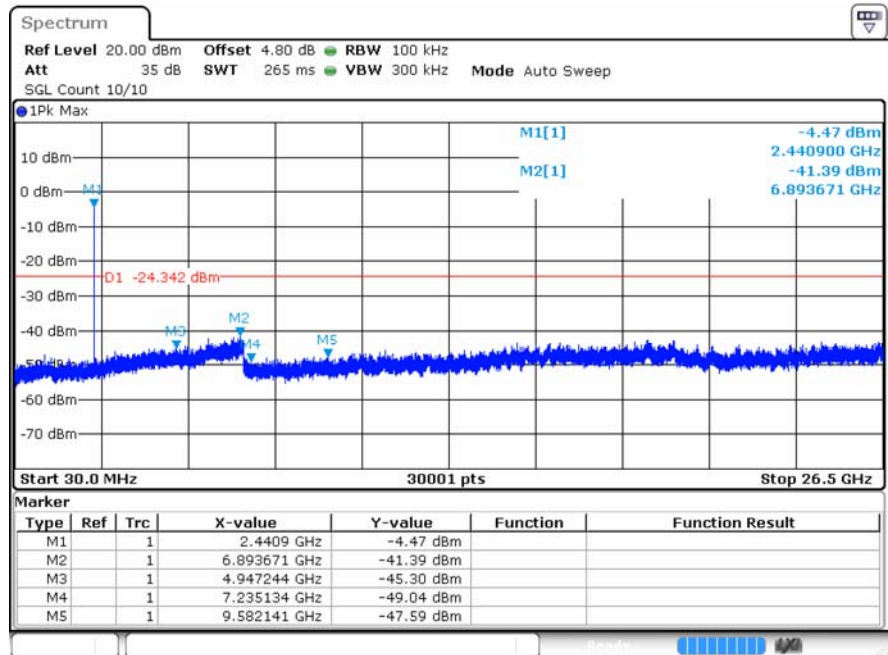


GFSK_MCH_Graphs

Pref

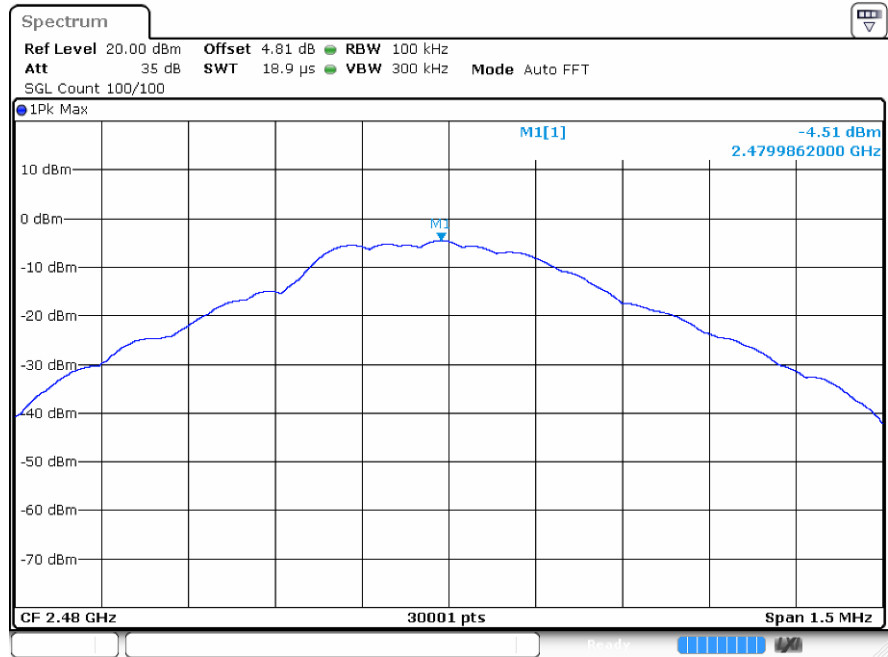


Puw

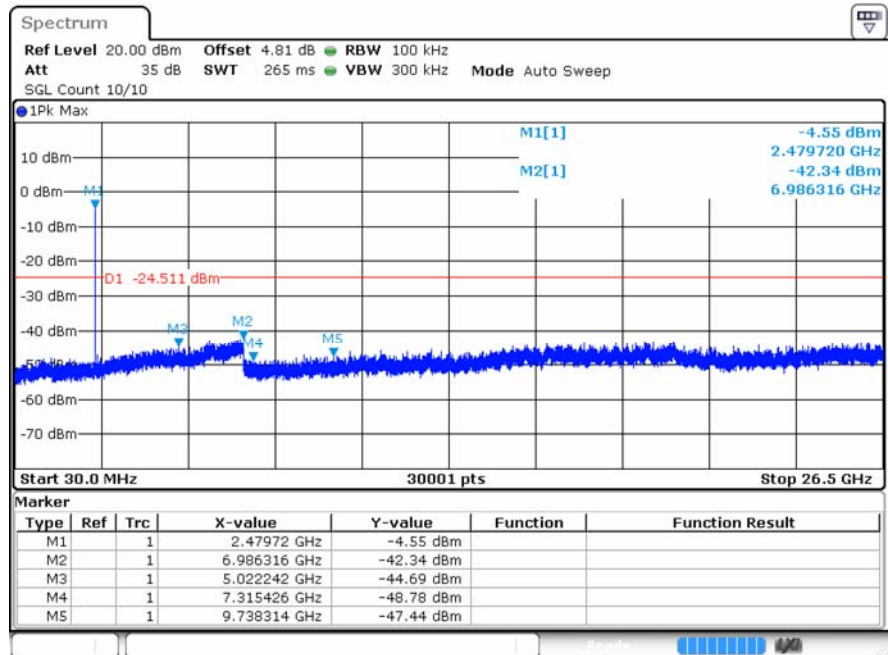


GFSK_HCH_Graphs

Pref

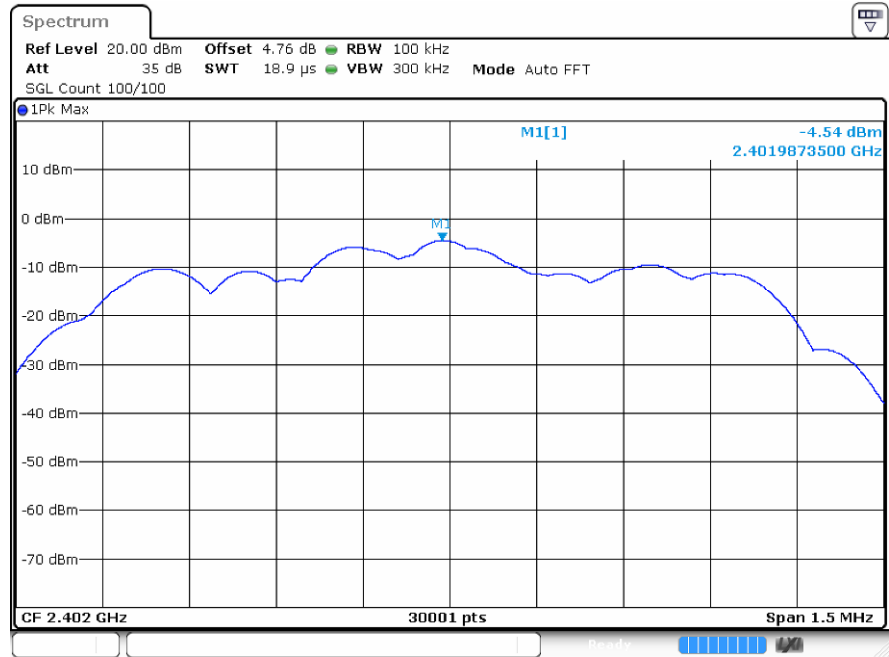


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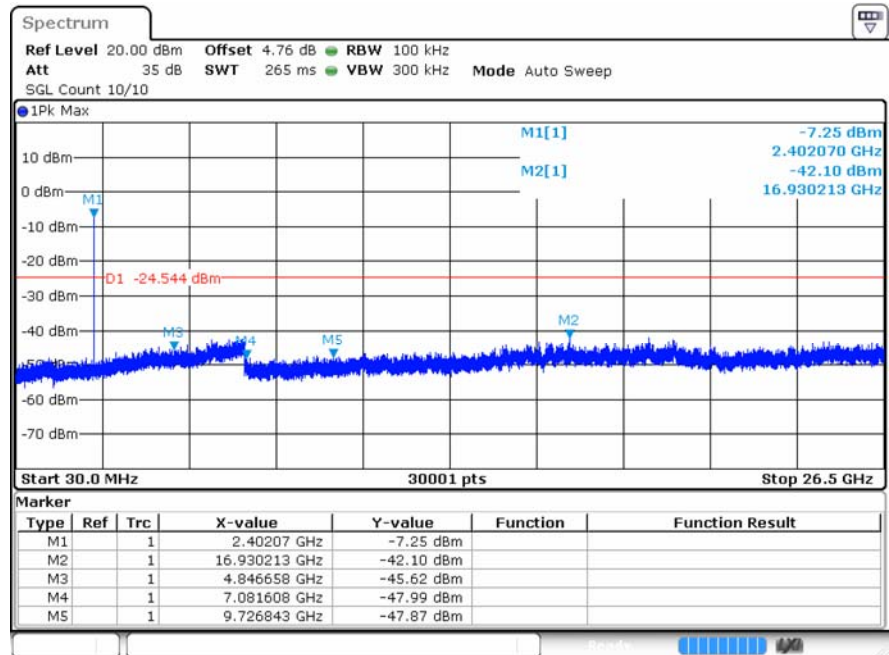


$\pi/4$ DQPSK_LCH_Graphs

Pref

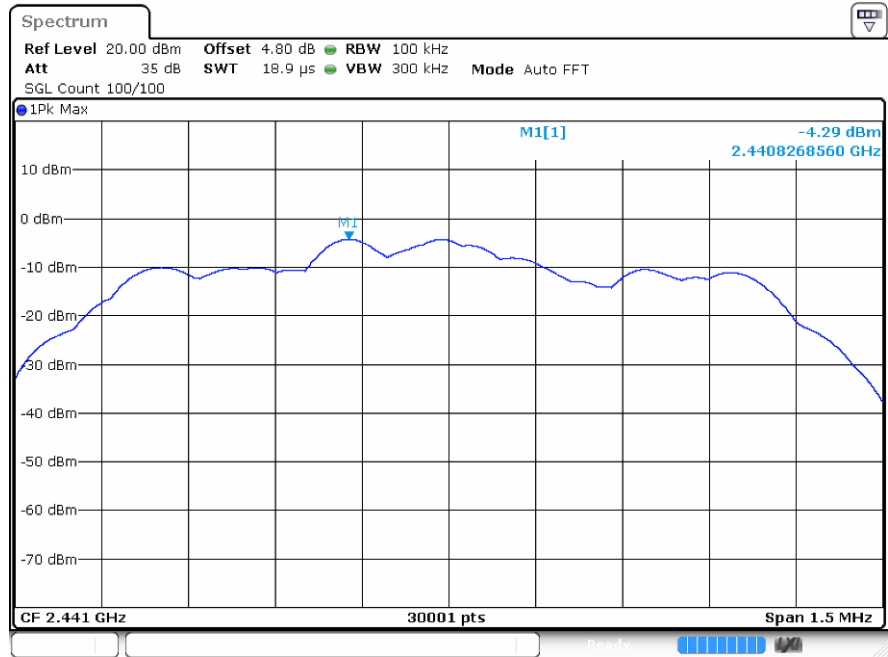


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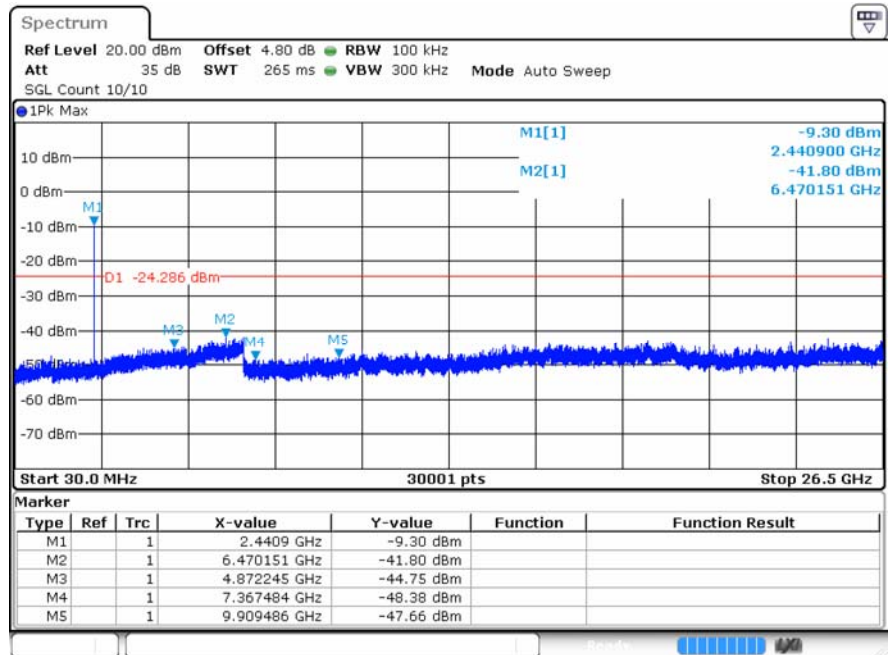


$\pi/4$ DQPSK_MCH_Graphs

Pref

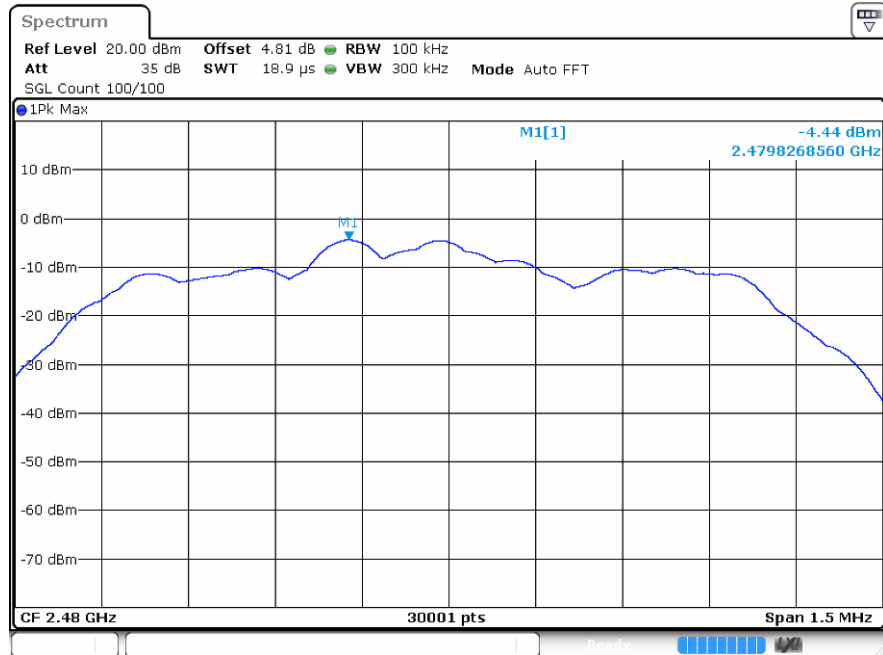


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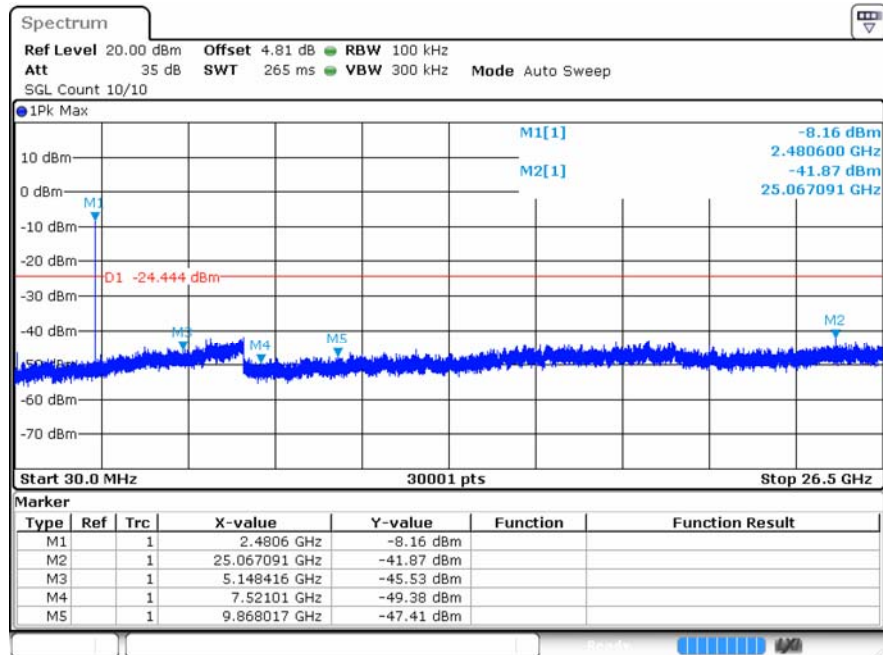


$\pi/4$ DQPSK_HCH_Graphs

Pref



Puw

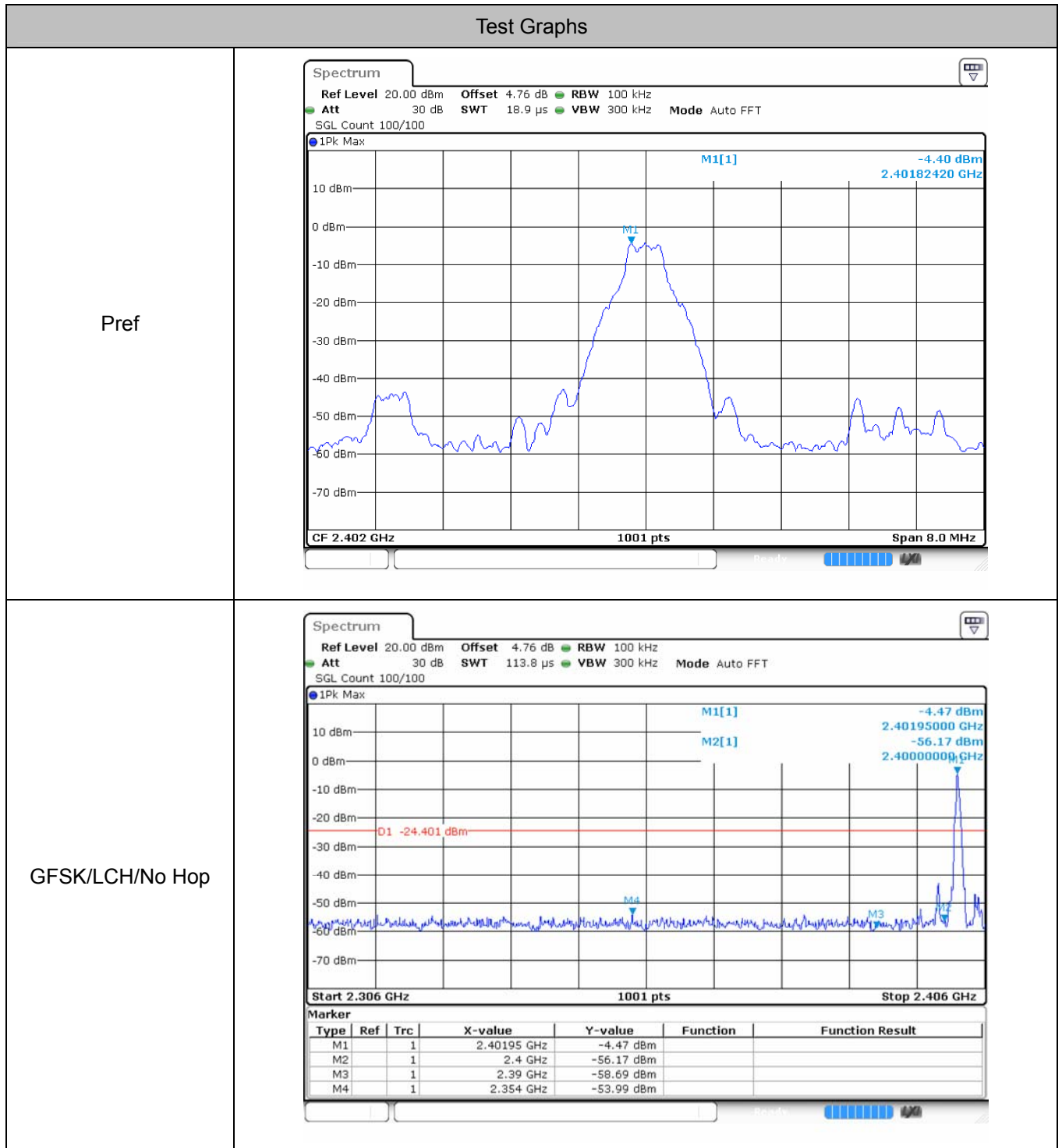


8 Band-edge for RF Conducted Emissions

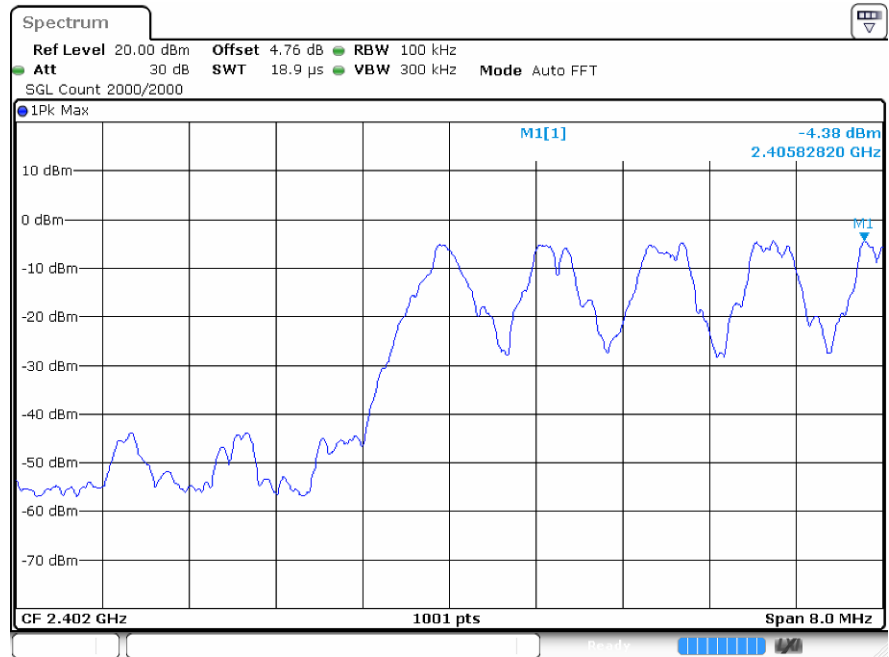
8.1 Test Result

Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	-49.58	-20	Pass
			On	-48.12	-20	Pass
	HCH	2480	Off	-46.28	-20	Pass
			On	-47.56	-20	Pass
$\pi/4$ DQPSK	LCH	2402	Off	-50	-20	Pass
			On	-48.77	-20	Pass
	HCH	2480	Off	-47.61	-20	Pass
			On	-48.65	-20	Pass

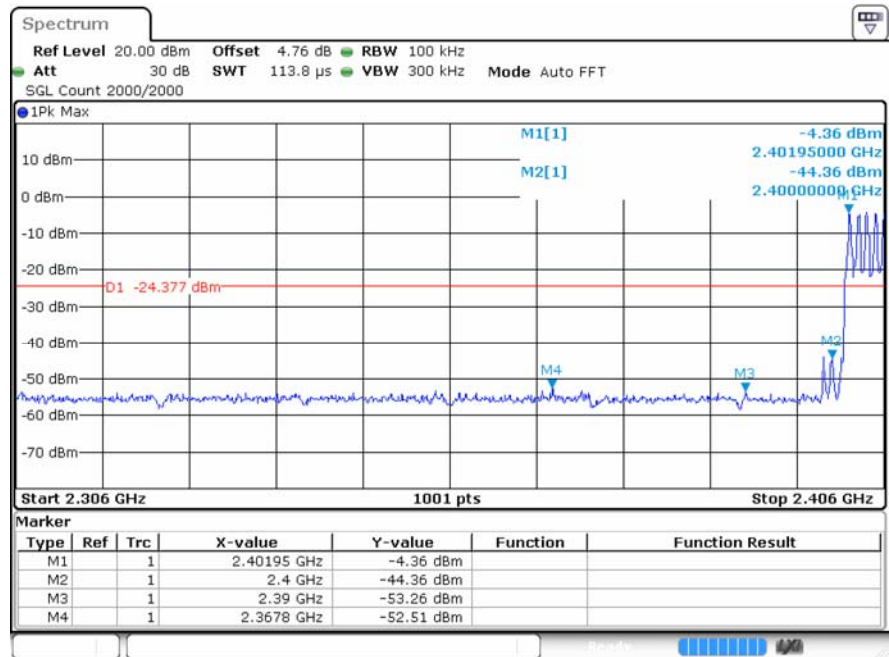
8.2 Test Graphs



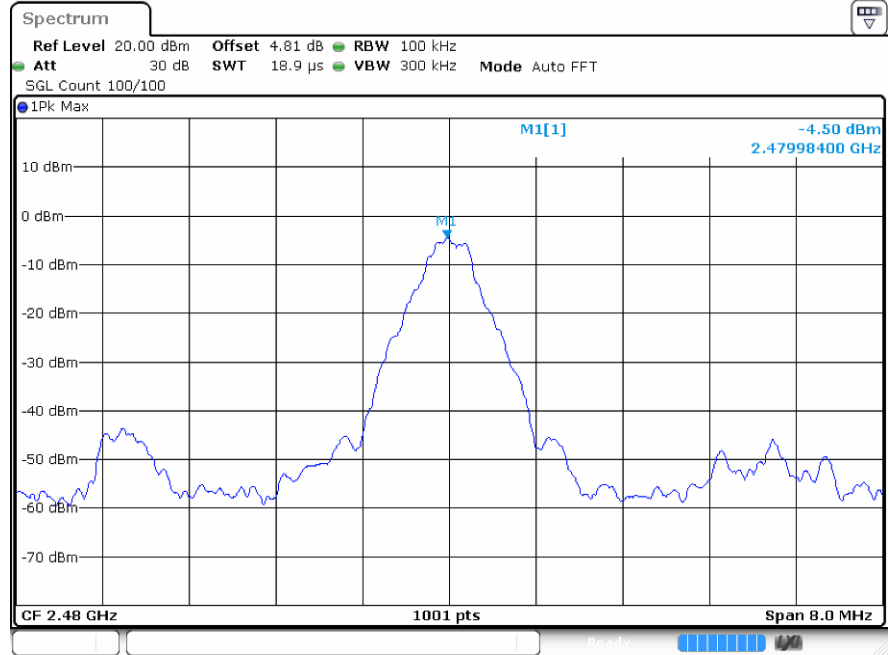
Ref



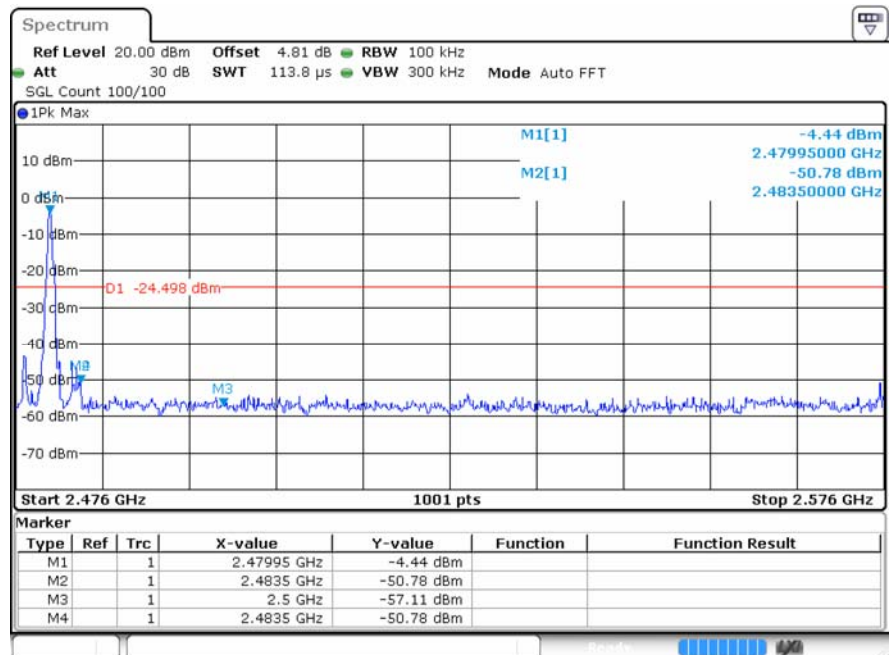
GFSK/LCH/Hop



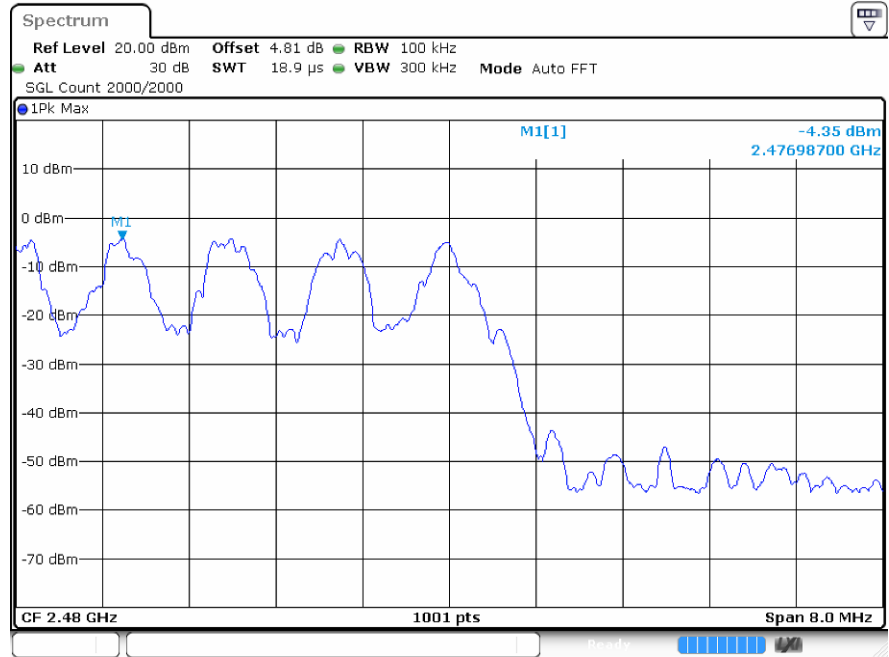
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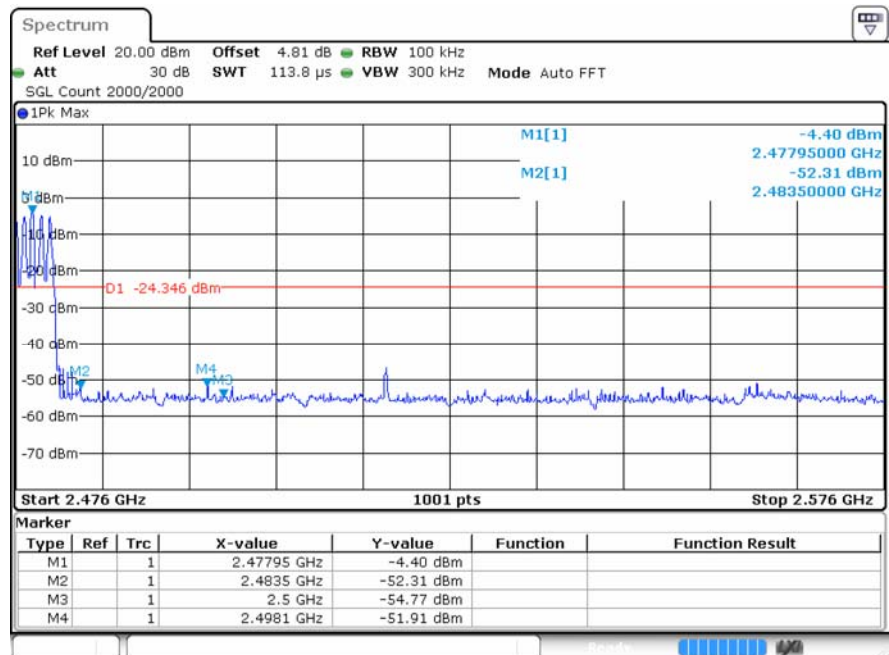
GFSK/HCH/No Hop



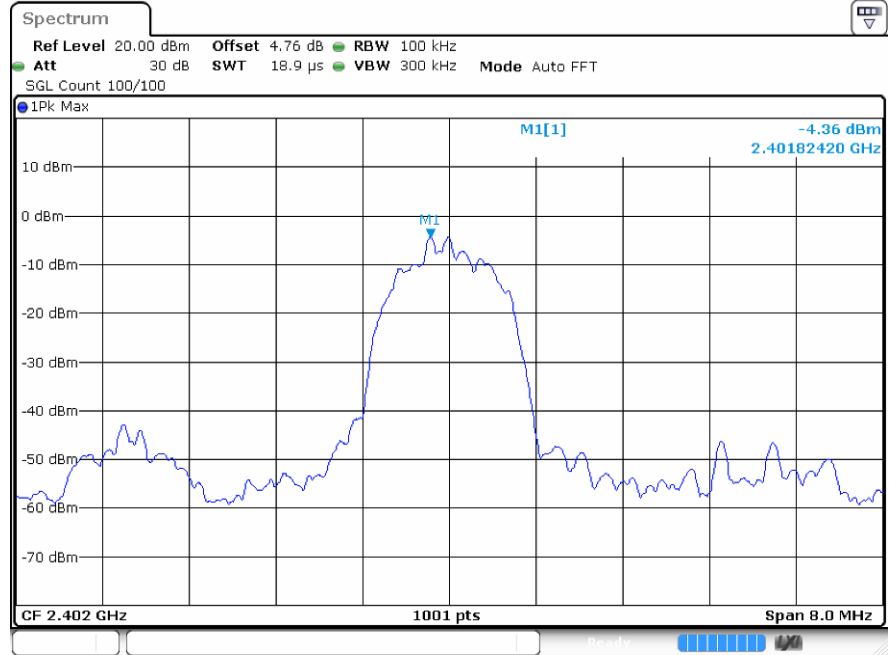
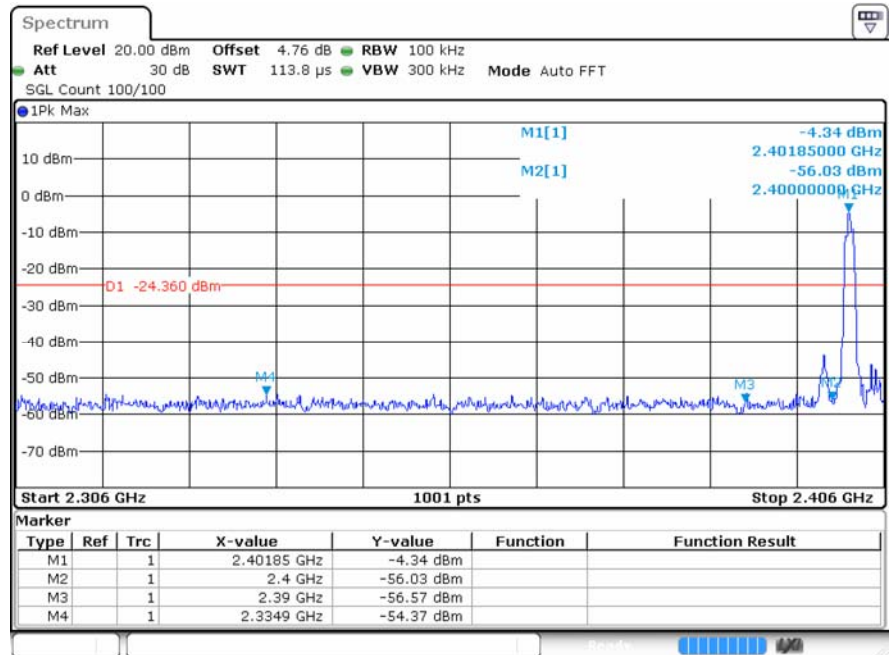
Ref.



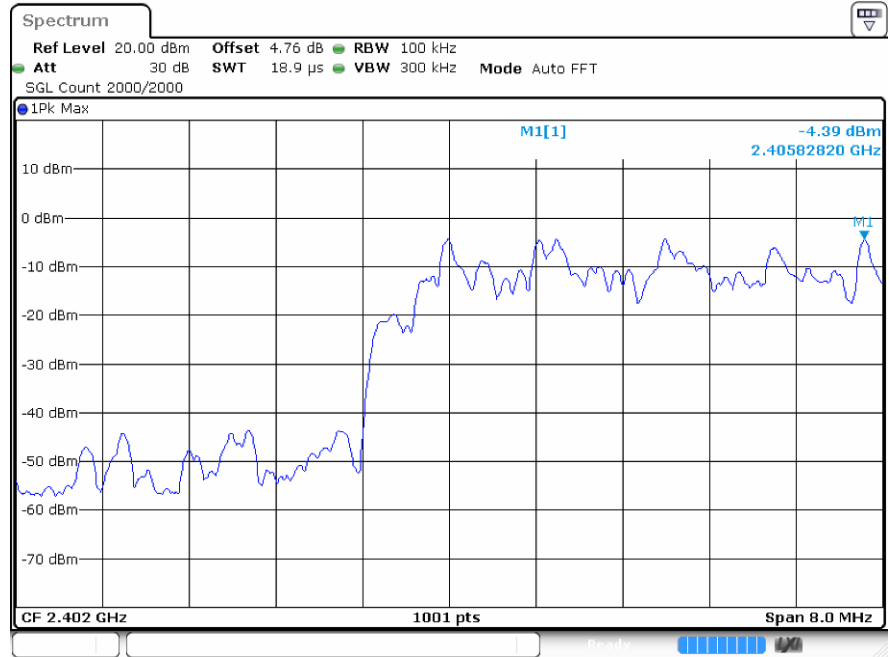
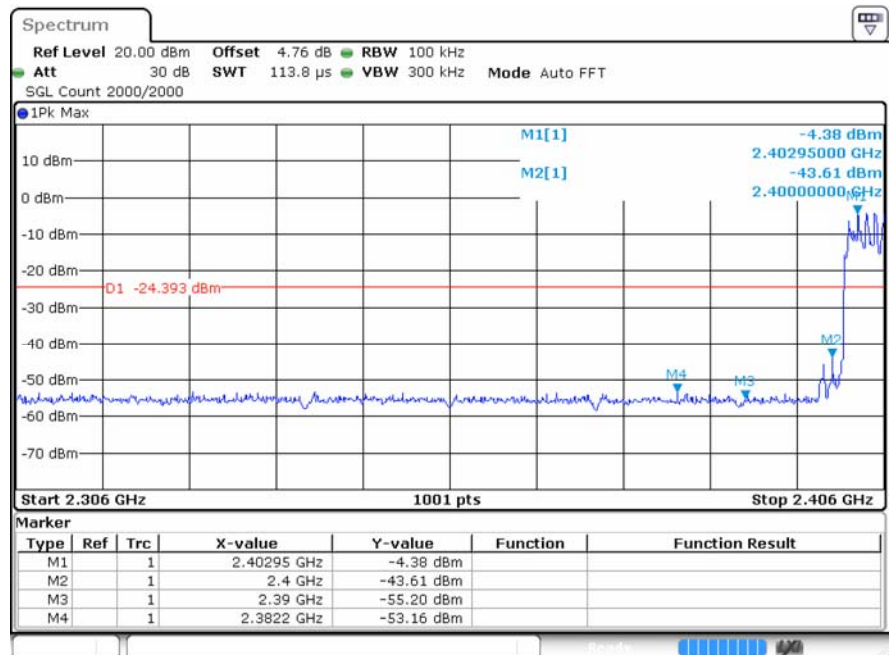
GFSK/HCH/Hop



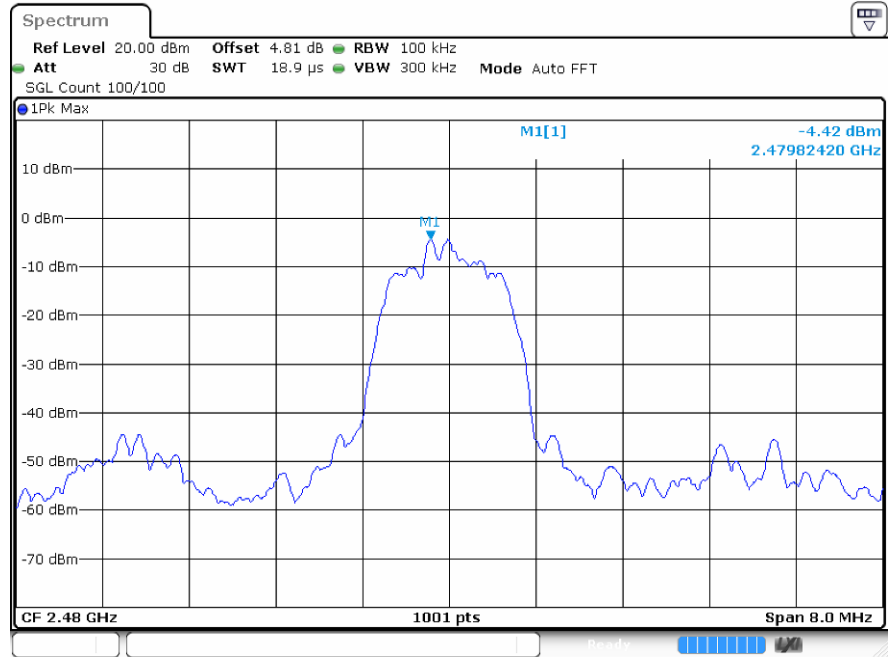
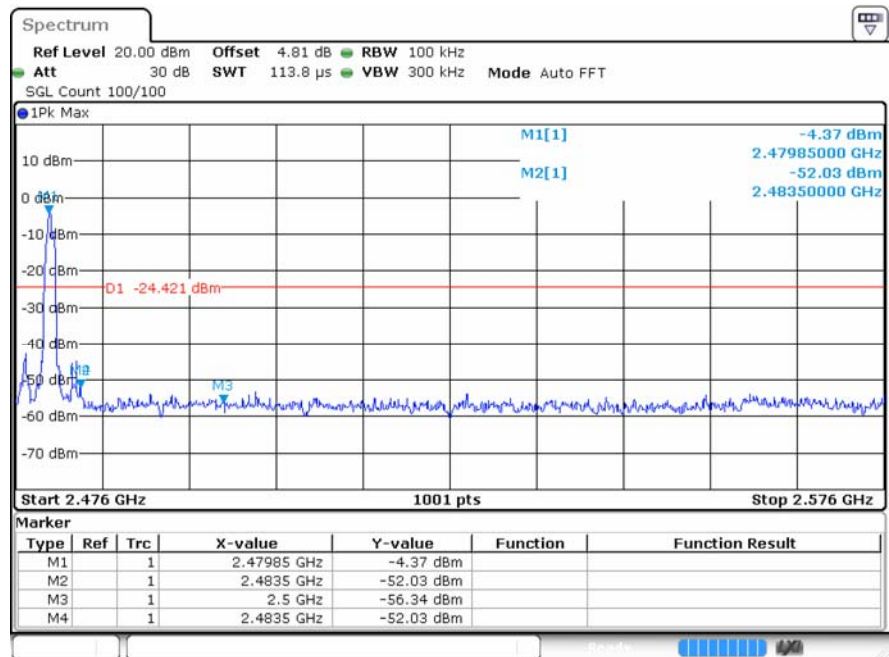
Ref


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


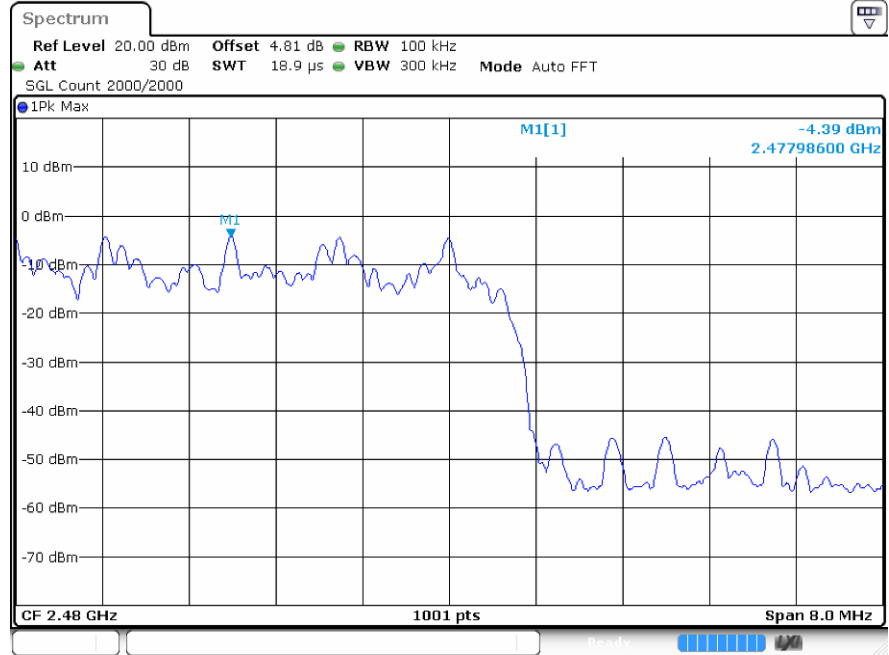
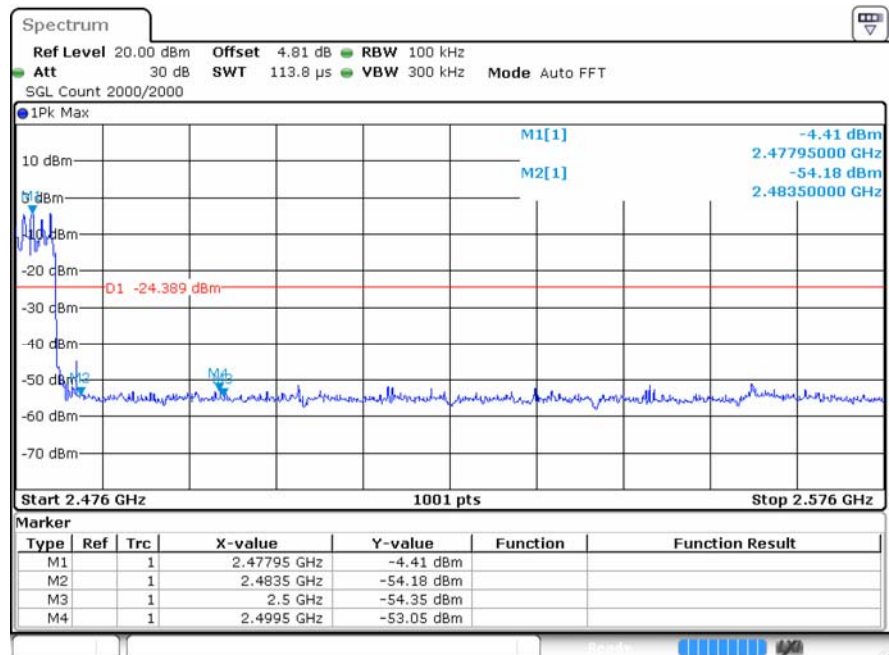
Ref


 $\pi/4$ DQPSK/LCH/Hop


Ref


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


Ref


 $\pi/4$ DQPSK/HCH/Hop


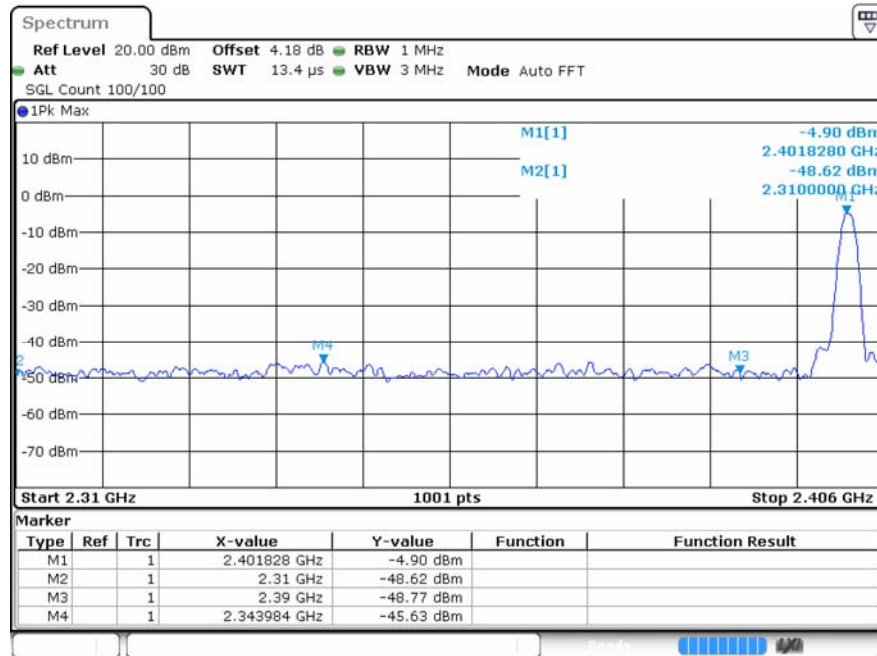
9 Restrict-band band-edge measurements

9.1 Test Result

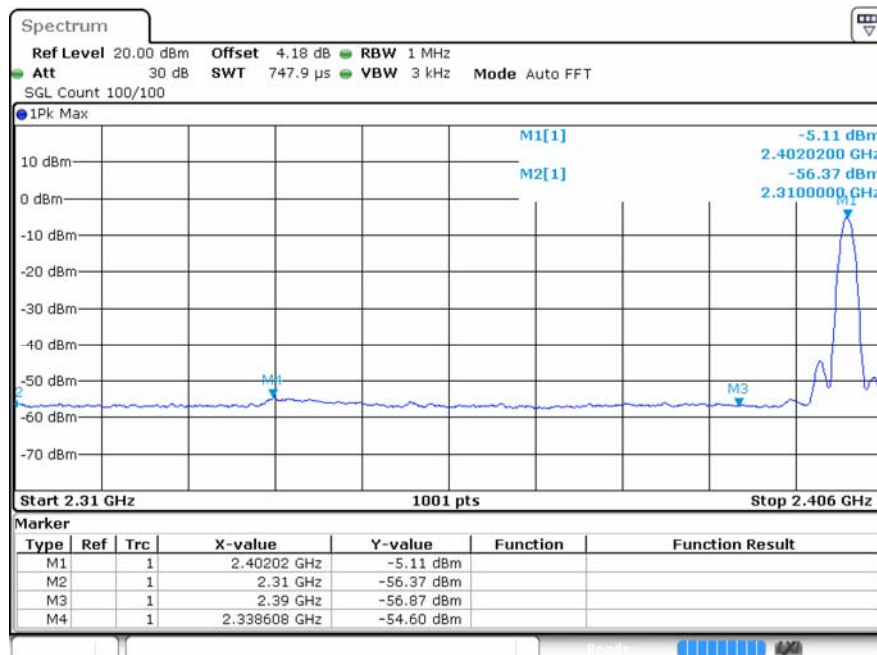
Test Mode	Hopping	Freq.	Power [dBm]	Gain	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-48.61	2	48.65	PEAK	74	Pass
	Off	2310.0	-56.36	2	40.9	AV	54	Pass
	Off	2343.984	-45.62	2	51.64	PEAK	74	Pass
	Off	2338.608	-54.6	2	42.66	AV	54	Pass
	Off	2390.0	-48.76	2	48.5	PEAK	74	Pass
	Off	2390.0	-56.87	2	40.39	AV	54	Pass
	Off	2483.5	-43.55	2	53.71	PEAK	74	Pass
	Off	2483.5	-50.99	2	46.27	AV	54	Pass
	Off	2483.512	-43.55	2	53.71	PEAK	74	Pass
	Off	2483.512	-50.99	2	46.27	AV	54	Pass
	Off	2500.0	-47.05	2	50.21	PEAK	74	Pass
	Off	2500.0	-56.11	2	41.15	AV	54	Pass
$\pi/4$ DQPSK	Off	2310.0	-49.76	2	47.5	PEAK	74	Pass
	Off	2310.0	-56.57	2	40.69	AV	54	Pass
	Off	2343.984	-44.76	2	52.5	PEAK	74	Pass
	Off	2340.432	-54.76	2	42.5	AV	54	Pass
	Off	2390.0	-48.02	2	49.24	PEAK	74	Pass
	Off	2390.0	-56.88	2	40.38	AV	54	Pass
	Off	2483.5	-45.95	2	51.31	PEAK	74	Pass
	Off	2483.5	-51.17	2	46.09	AV	54	Pass
	Off	2483.68	-45.59	2	51.67	PEAK	74	Pass
	Off	2483.512	-51.17	2	46.09	AV	54	Pass
	Off	2500.0	-48.24	2	49.02	PEAK	74	Pass
	Off	2500.0	-55.52	2	41.74	AV	54	Pass

9.2 Test Graphs

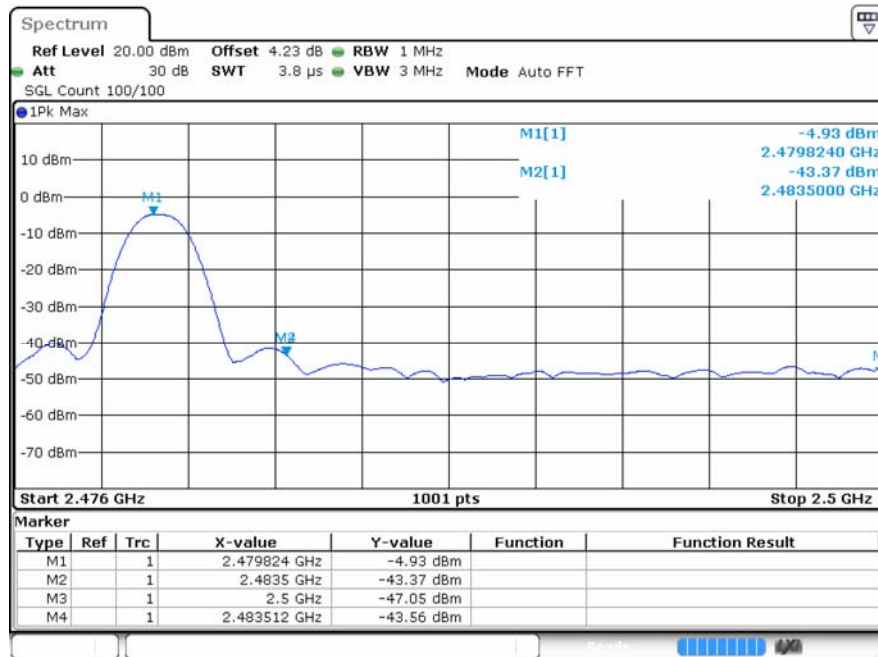
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



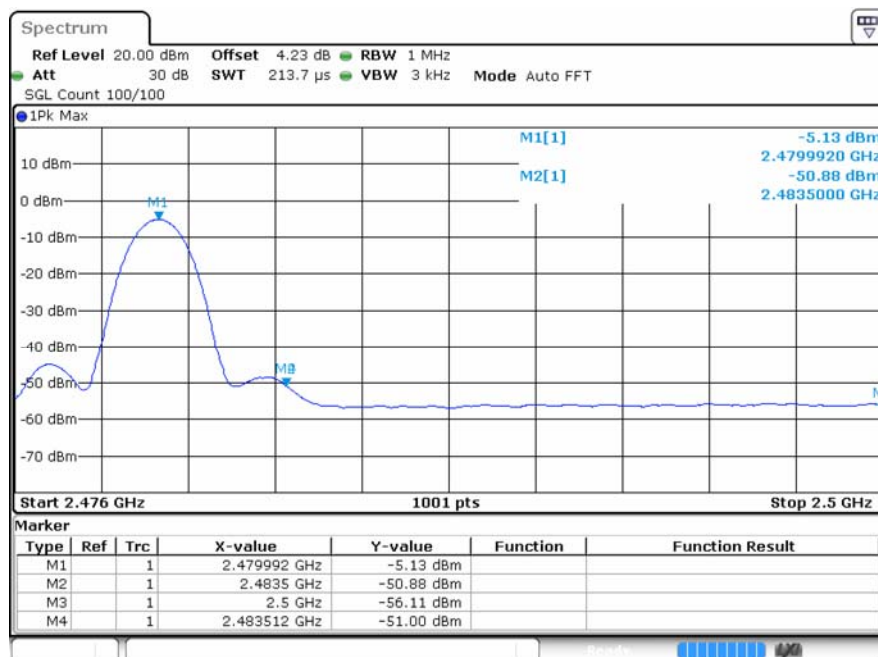
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



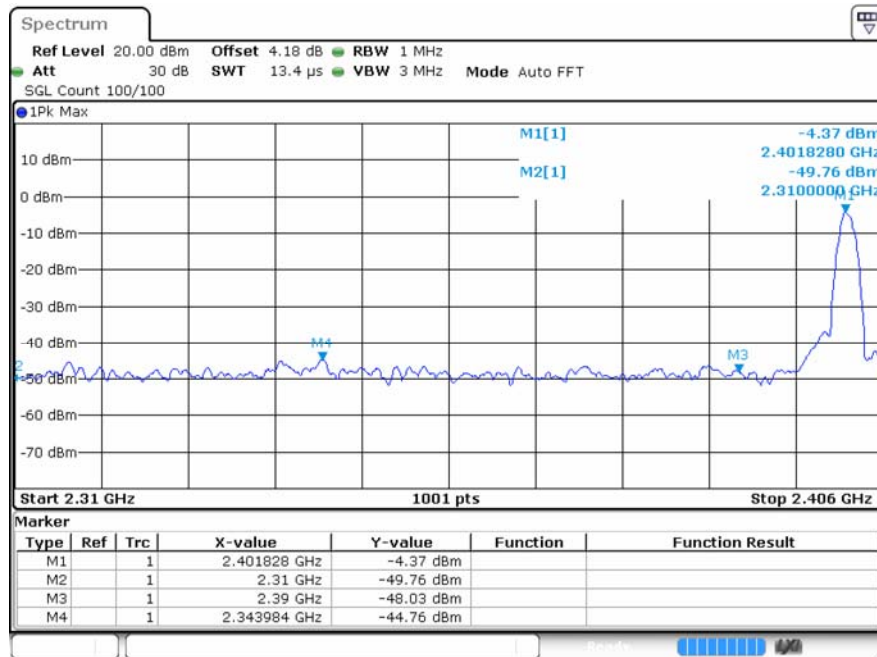
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



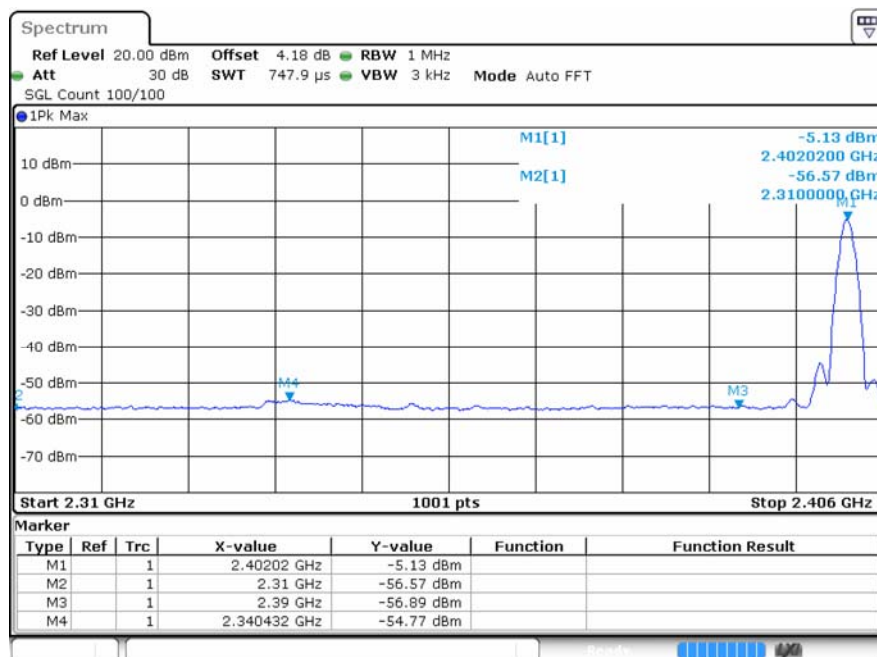
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



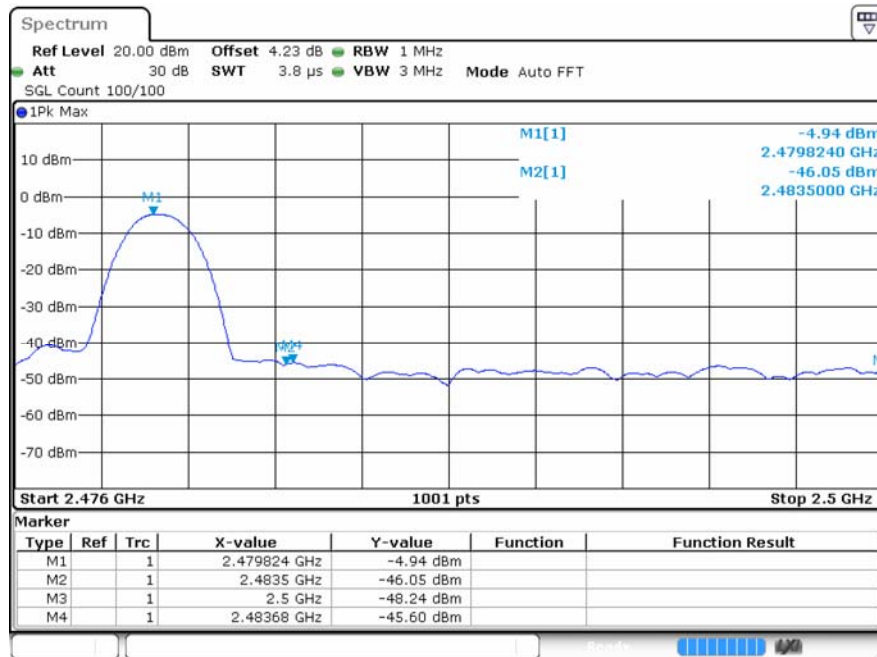
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (Low Channel)



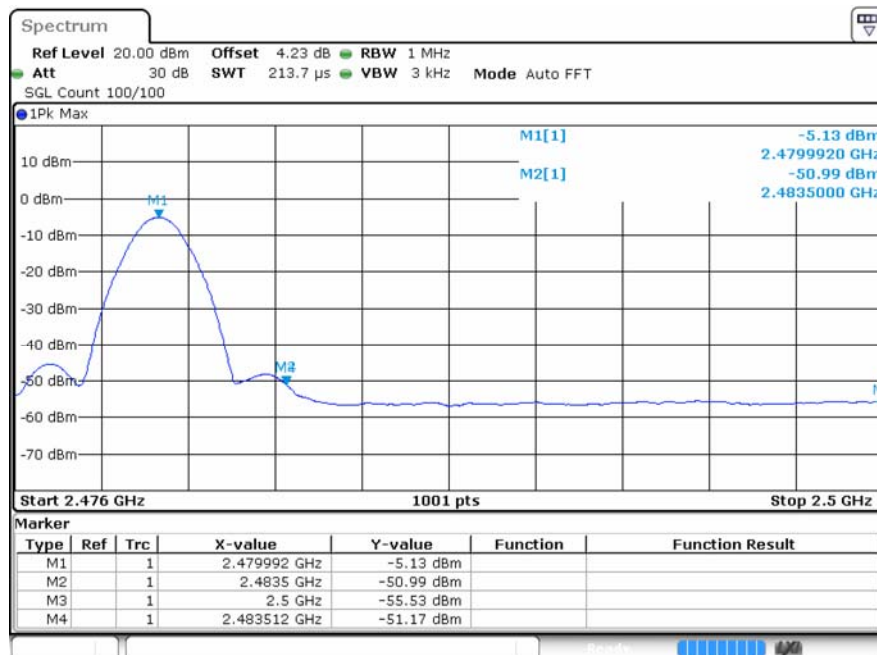
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (Low Channel)



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---