



Appendix A

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

Product Name: POWER AMPLIFIER

Trade Mark: PYLE

Test Model: PT272AUBT

Environmental Conditions

Temperature:	23.2℃
Relative Humidity:	43.8%
ATM Pressure:	101Kpa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen

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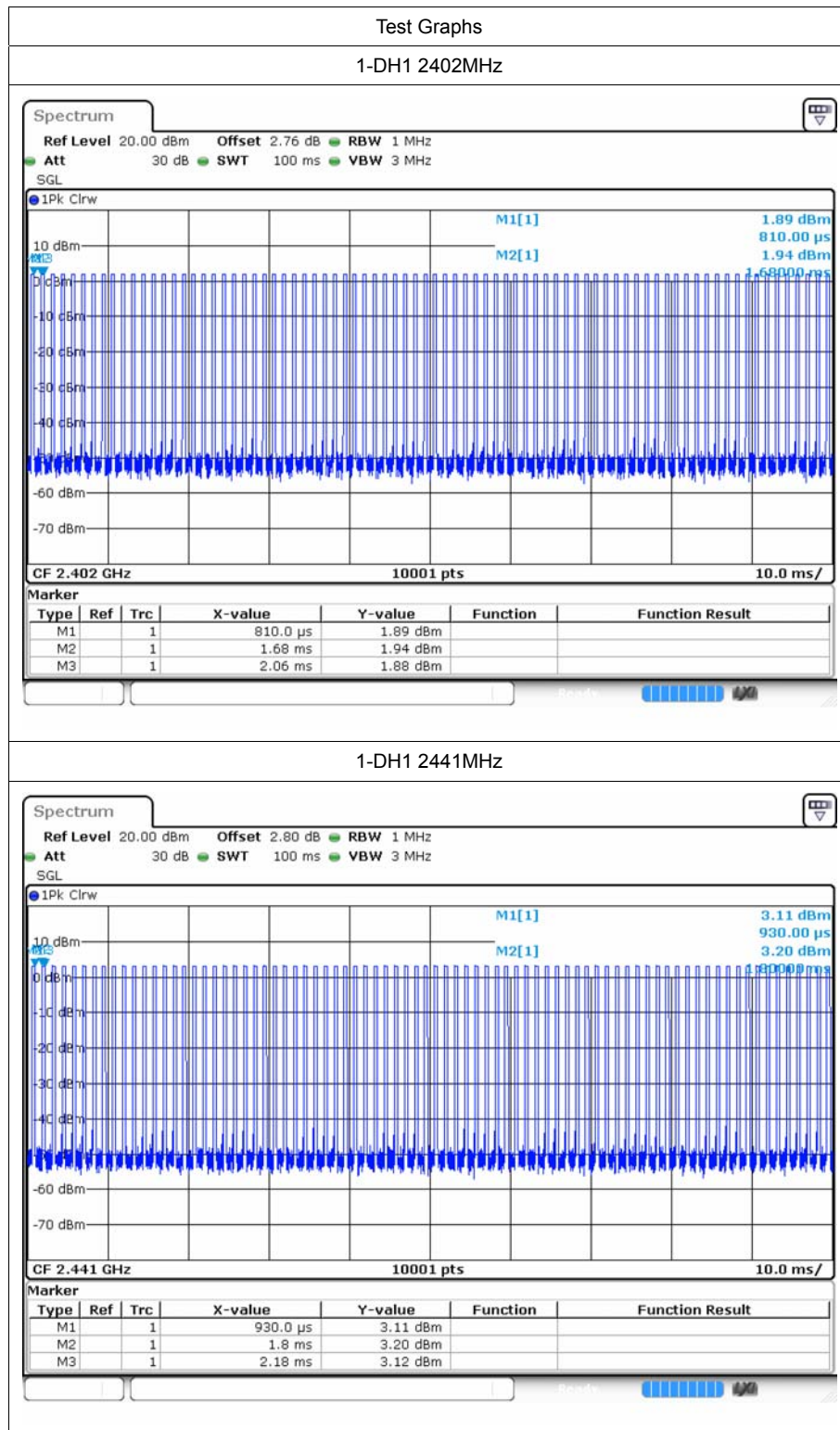
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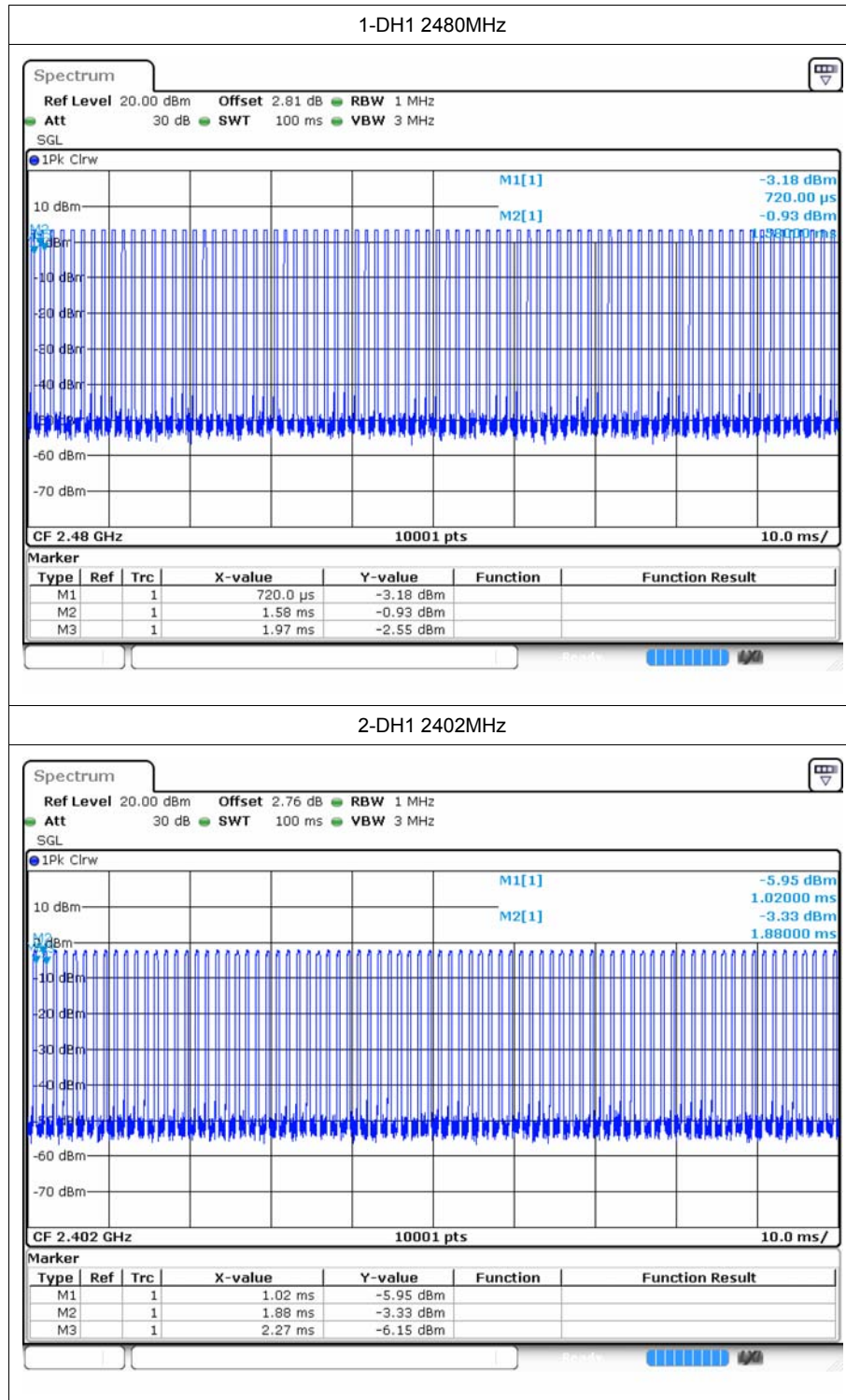
1 Duty Cycle

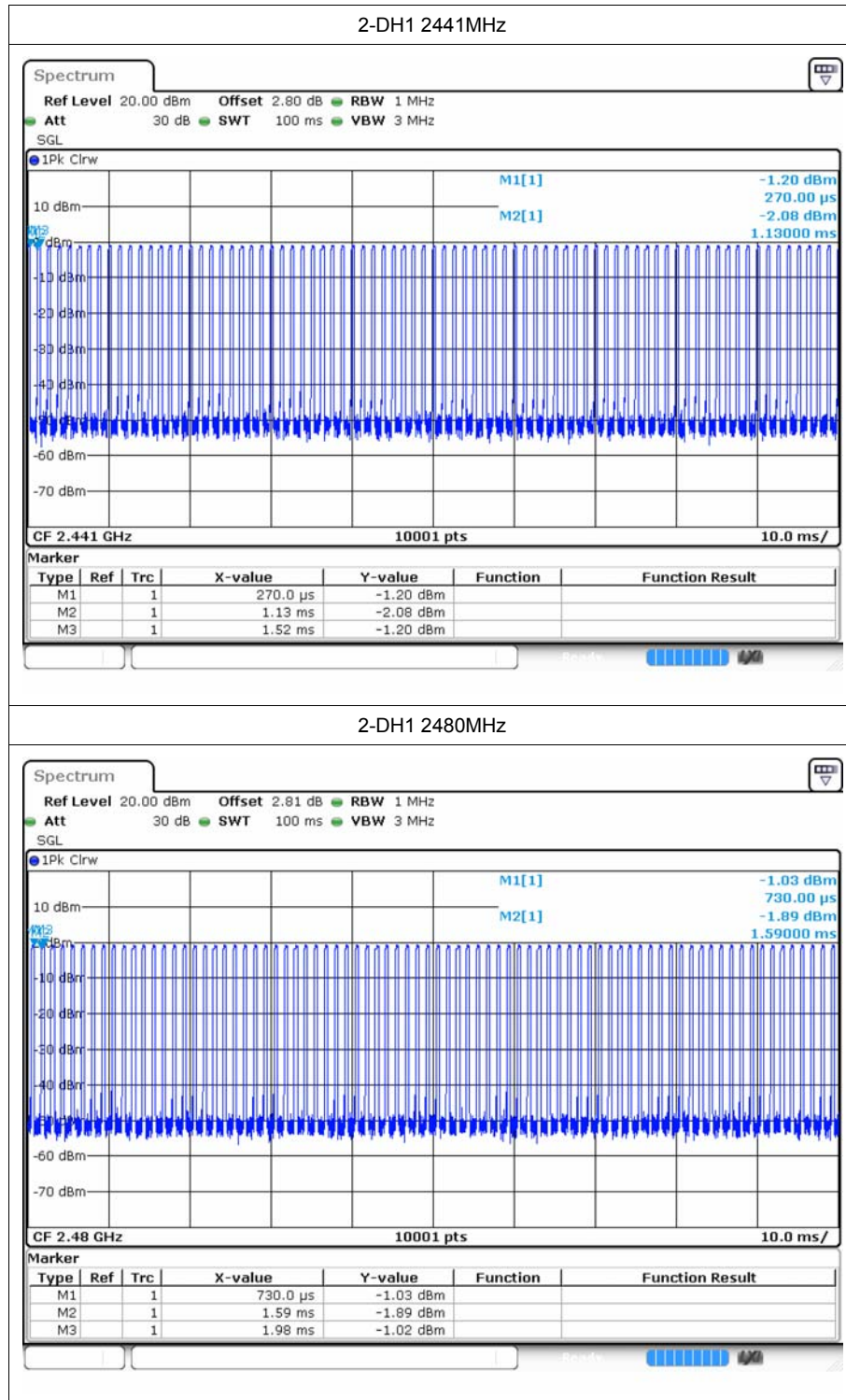
1.1 Test Result

Mode	Frequency (MHz)	Duty Cycle (%)	1/T (kHz)
1-DH1	2402	31.67	2.63
1-DH1	2441	31.84	2.63
1-DH1	2480	31.87	2.56
2-DH1	2402	32	2.56
2-DH1	2441	32.01	2.56
2-DH1	2480	32	2.56

1.2 Test Graphs





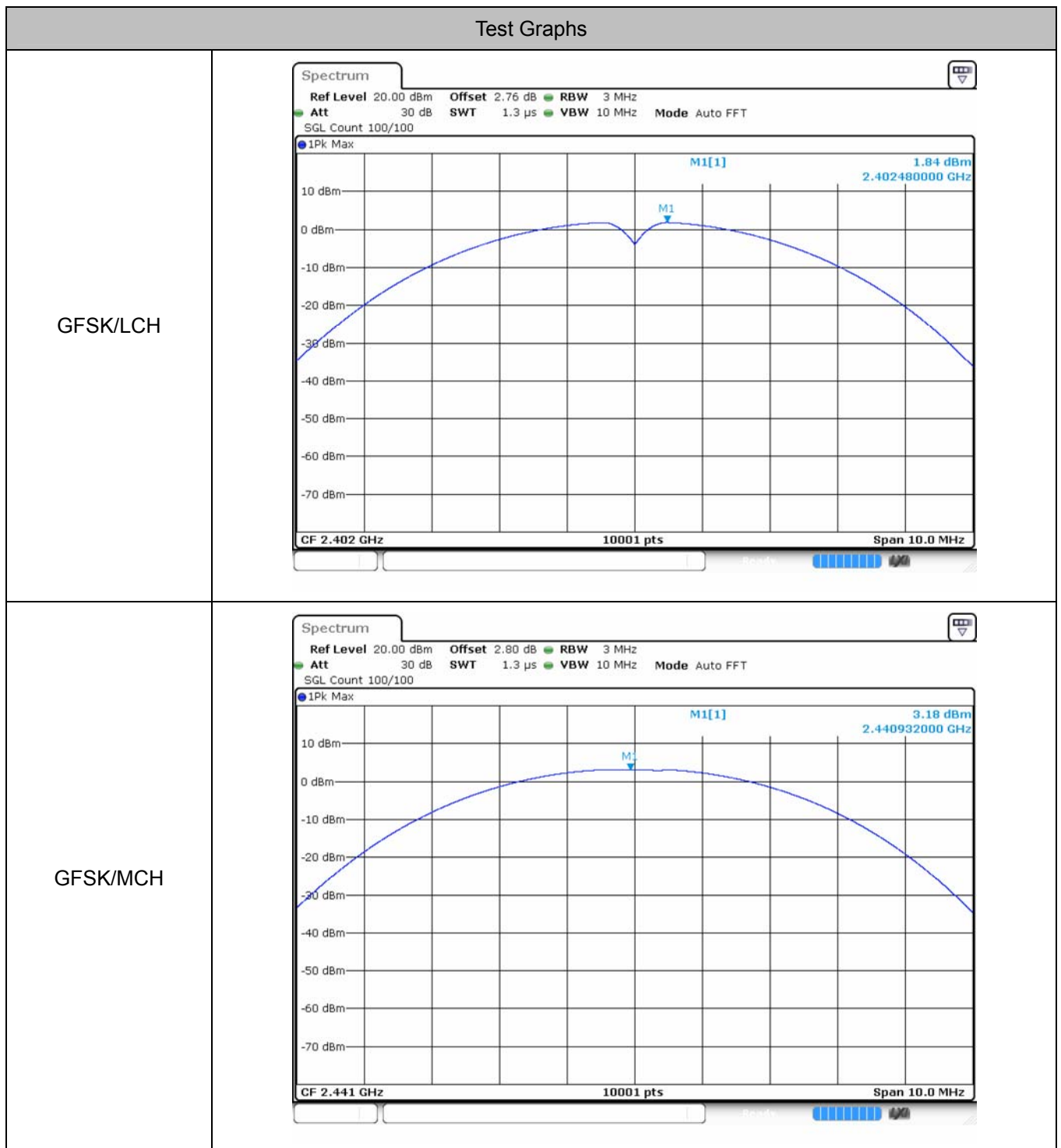


2 Maximum Conducted Peak Output Power

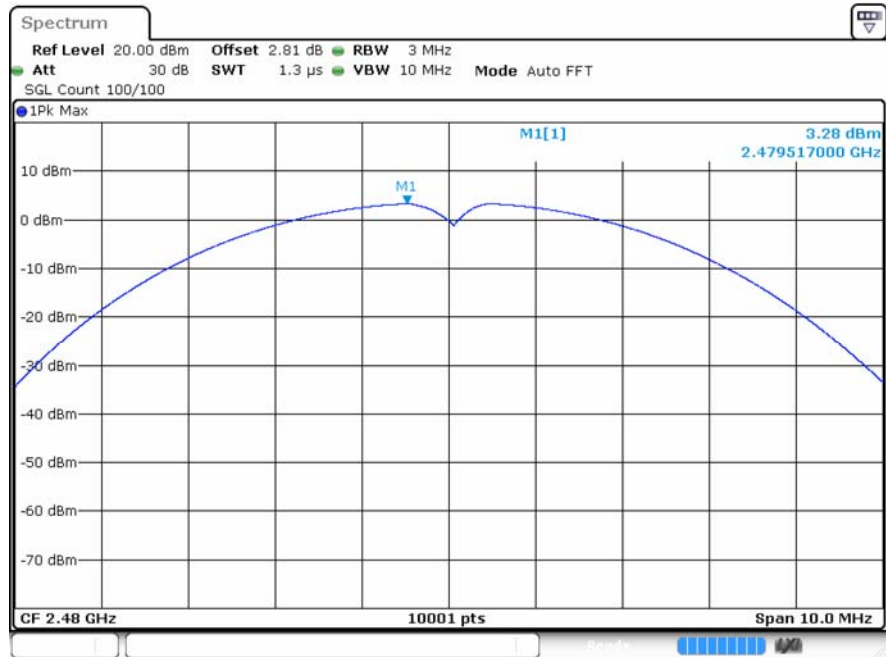
2.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	1.84	21	Pass
	MCH	3.18	21	Pass
	HCH	3.28	21	Pass
$\pi/4$ DQPSK	LCH	-1.18	21	Pass
	MCH	0.11	21	Pass
	HCH	-0.06	21	Pass

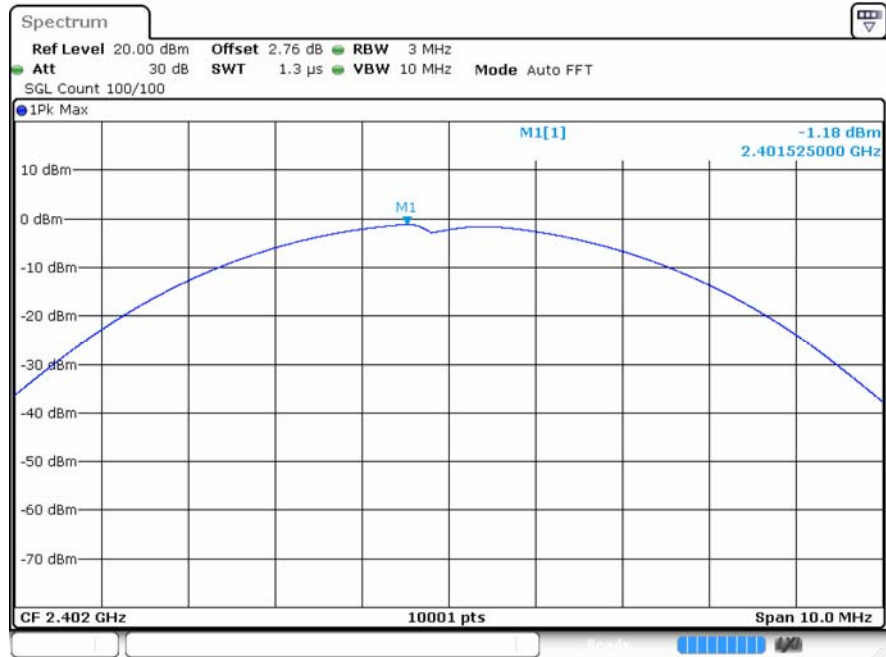
2.2 Test Graphs



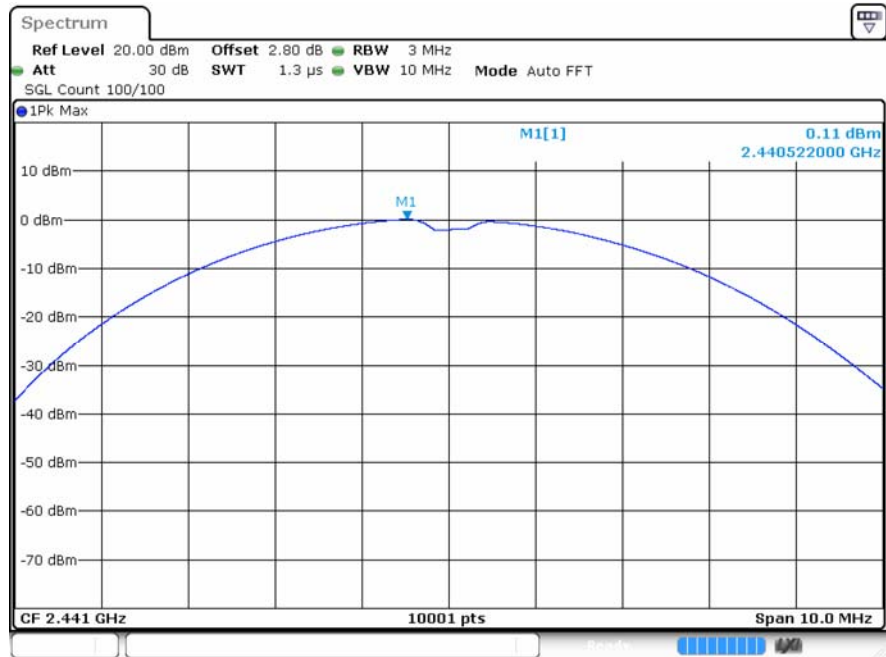
GFSK/HCH



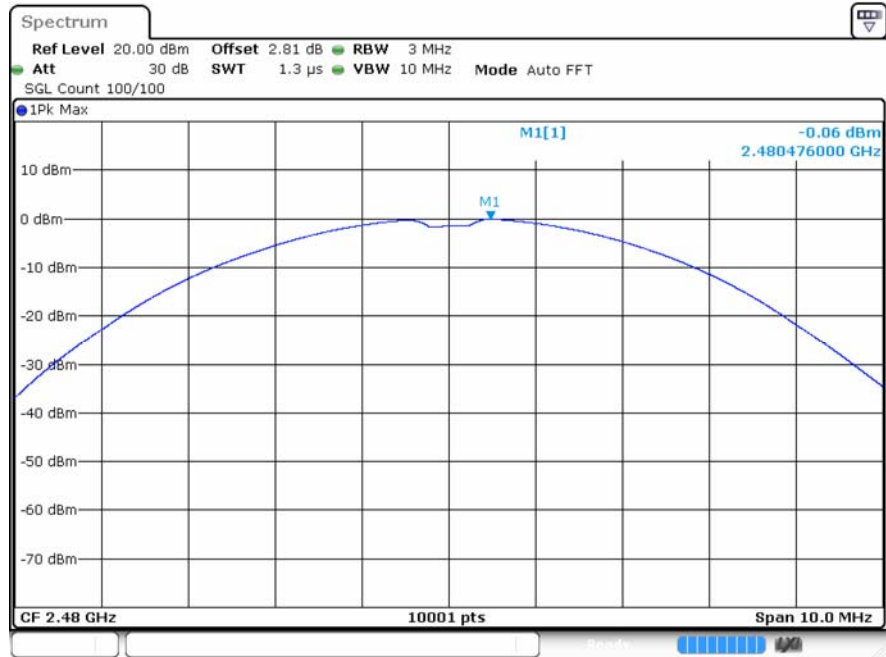
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH

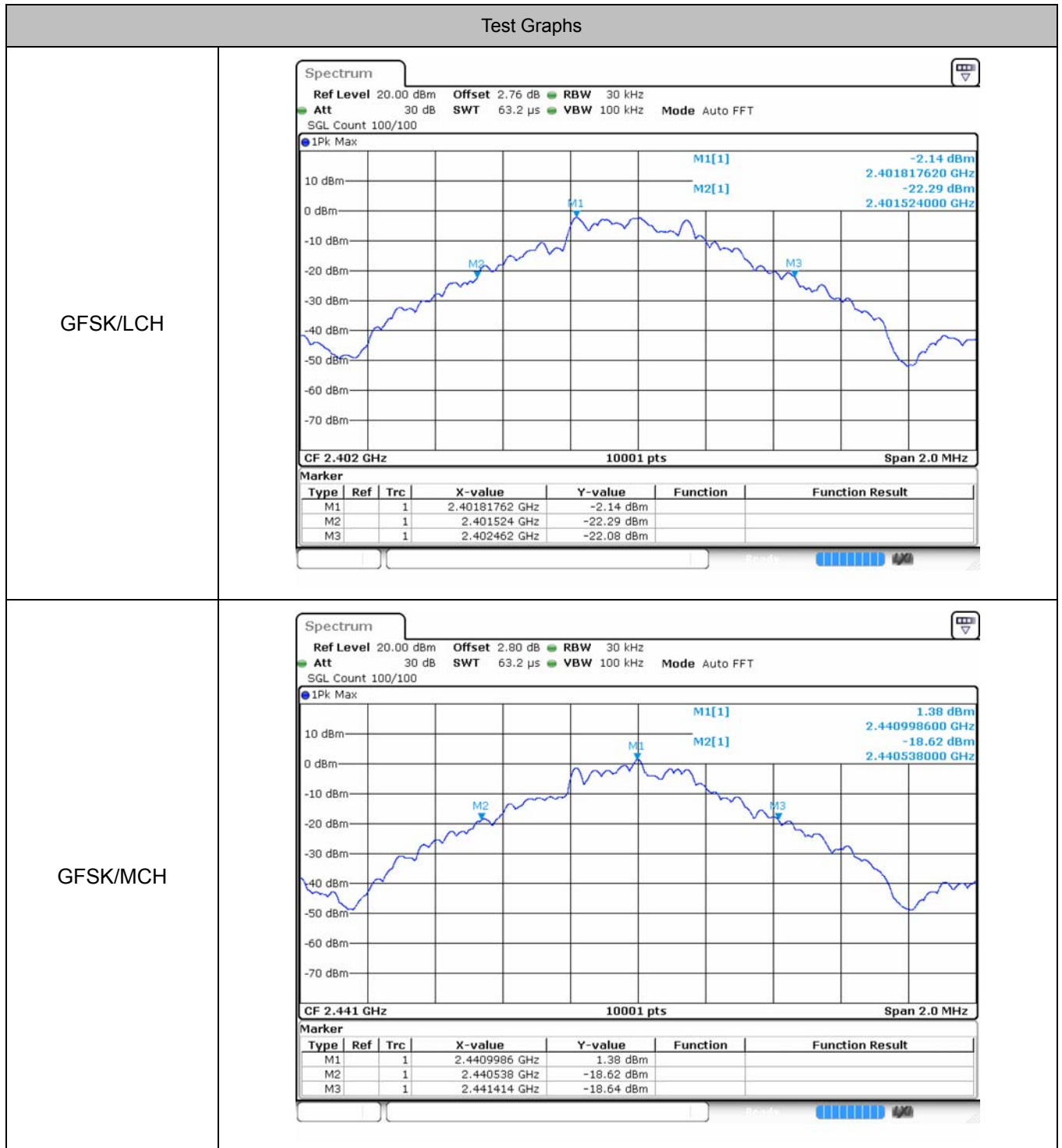


3 20dB Bandwidth

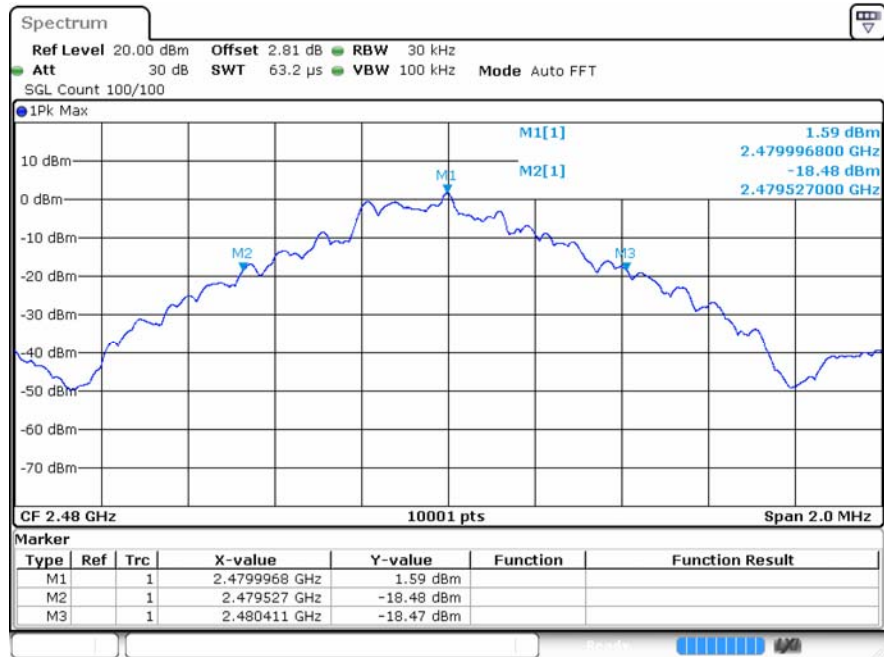
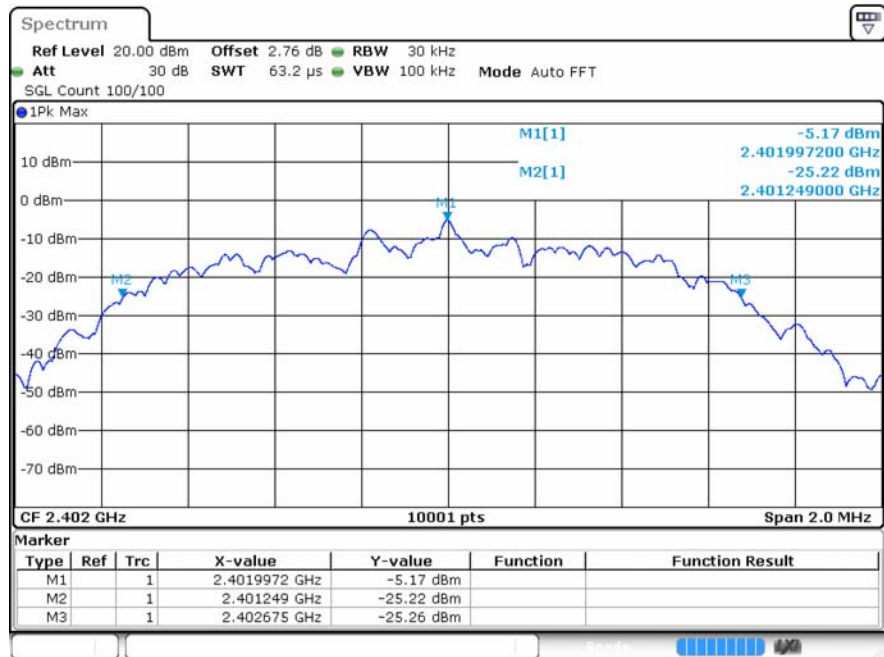
3.1 Test Result

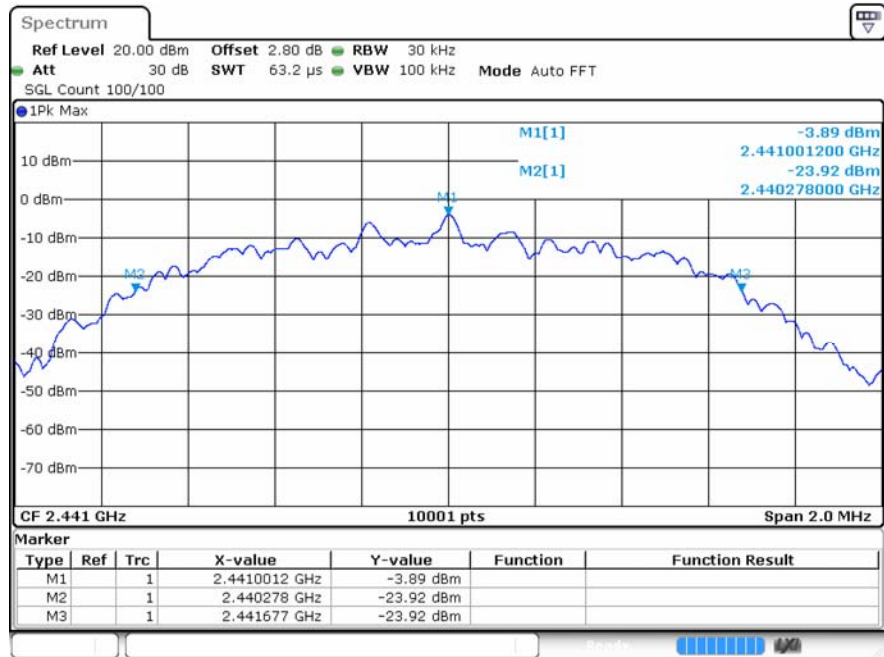
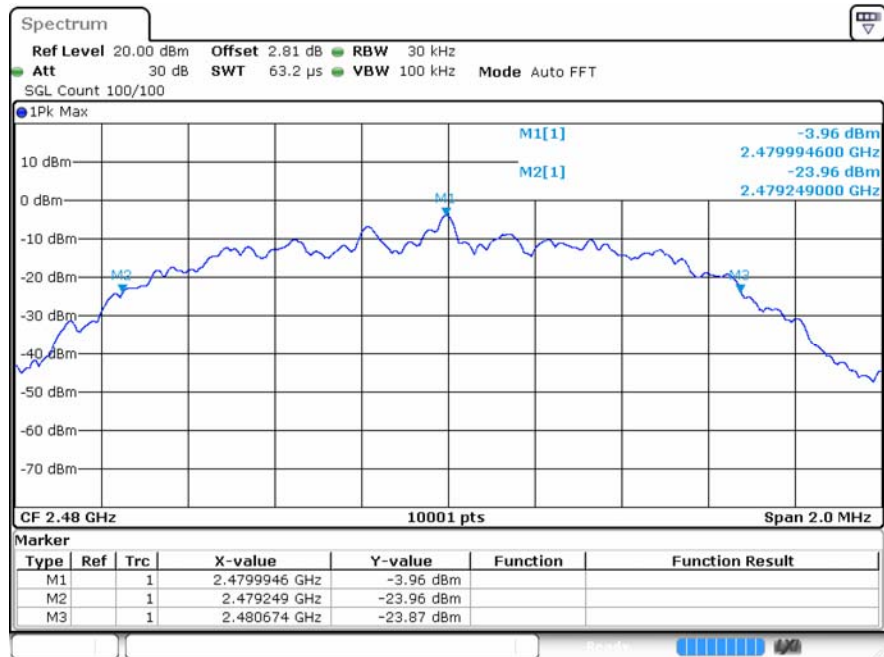
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.938	Not Specified	Pass
	MCH	0.876	Not Specified	Pass
	HCH	0.883	Not Specified	Pass
$\pi/4$ DQPSK	LCH	1.425	Not Specified	Pass
	MCH	1.399	Not Specified	Pass
	HCH	1.425	Not Specified	Pass

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	0.584	Pass
$\pi/4$ DQPSK	MCH	1.009	0.933	Pass

4.2 Test Graphs

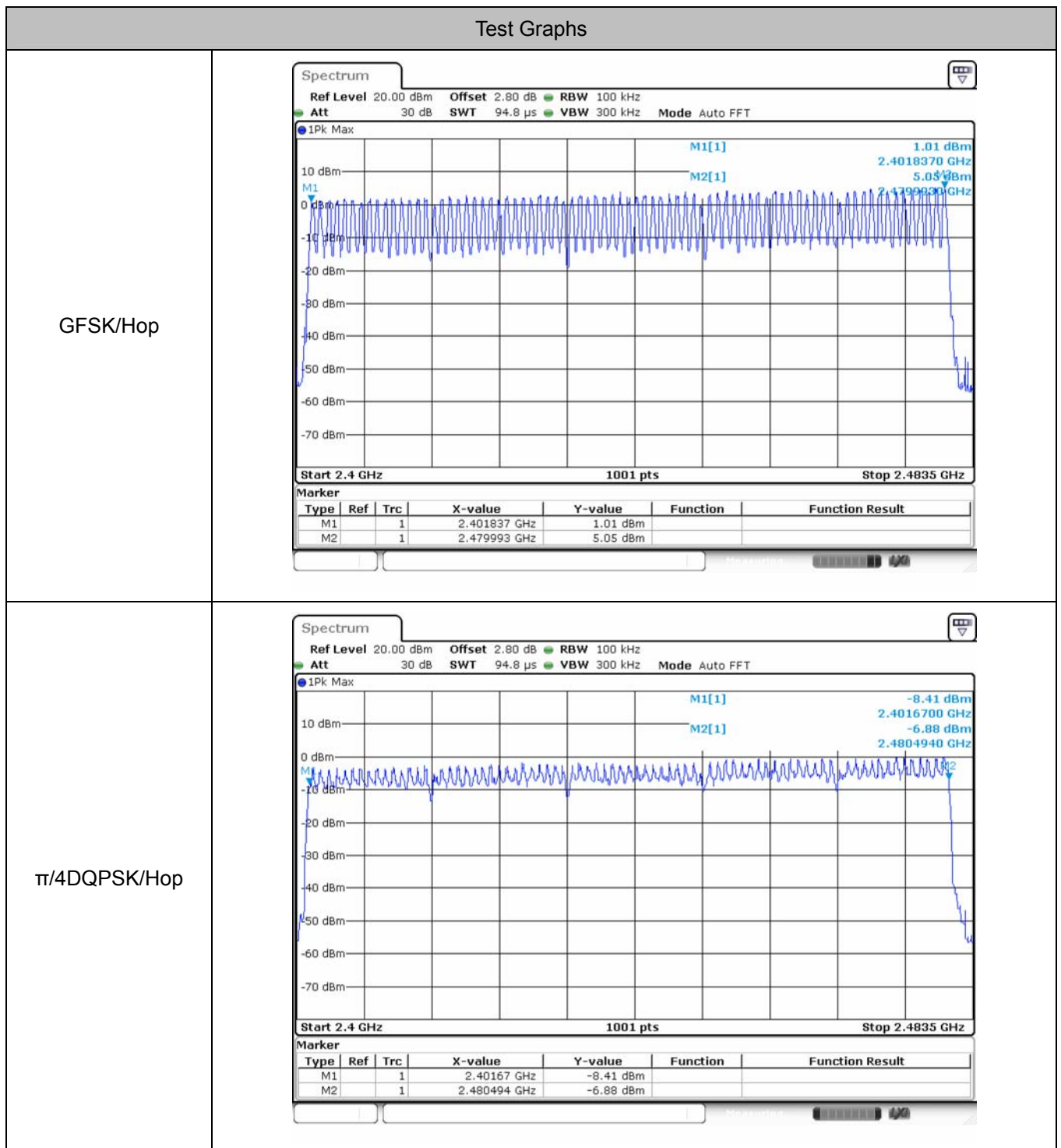


5 Hopping Channel Number

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

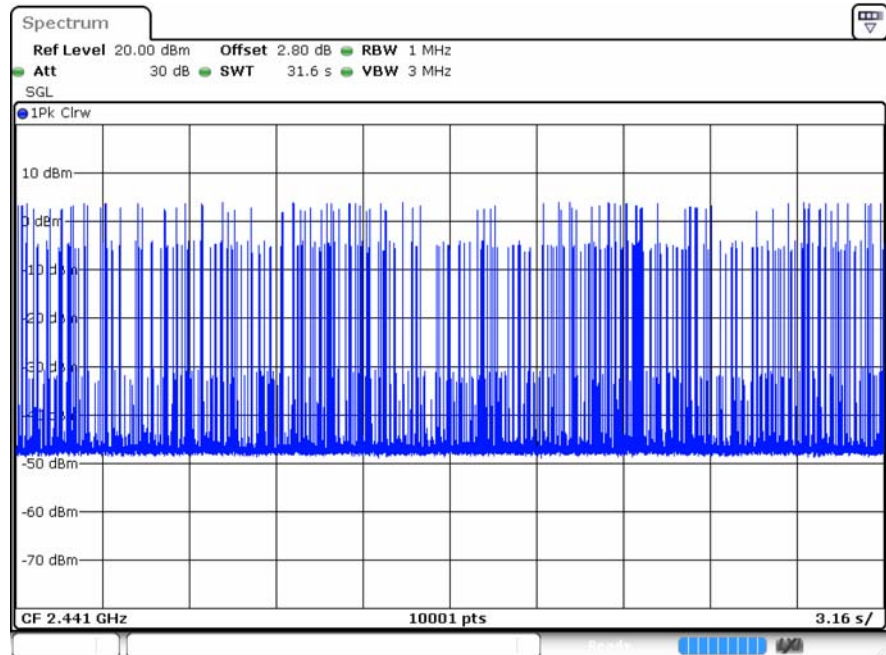
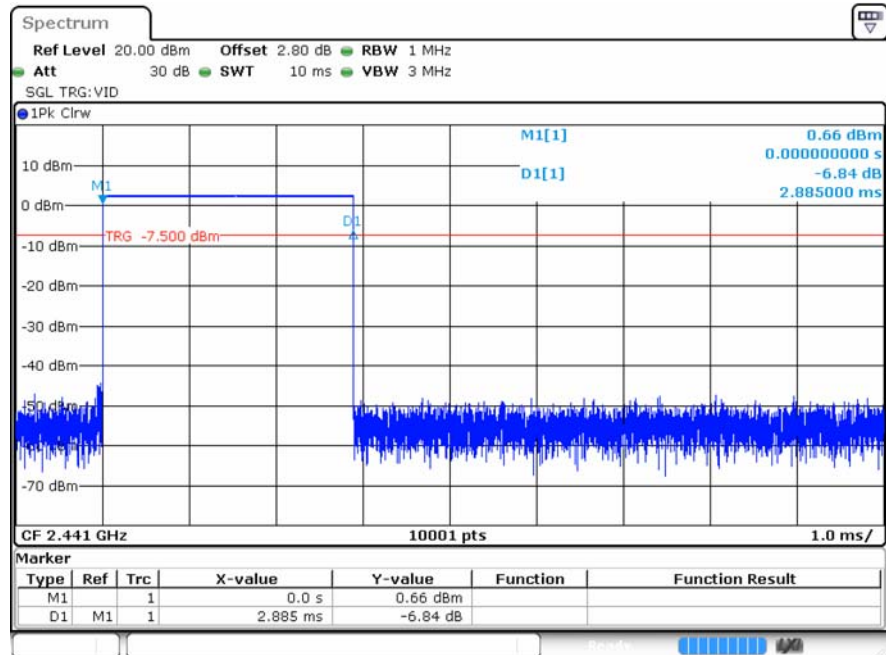
6.1 Test Result

Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.885	99	285.615	0.4	Pass
$\pi/4$ DQPSK	2DH5	MCH	2.889	97	280.233	0.4	Pass

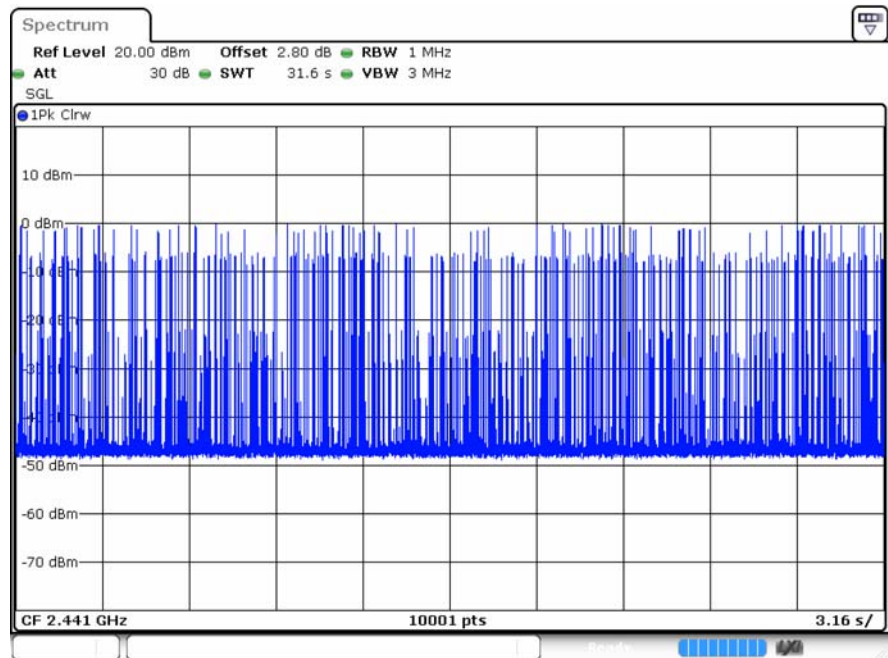
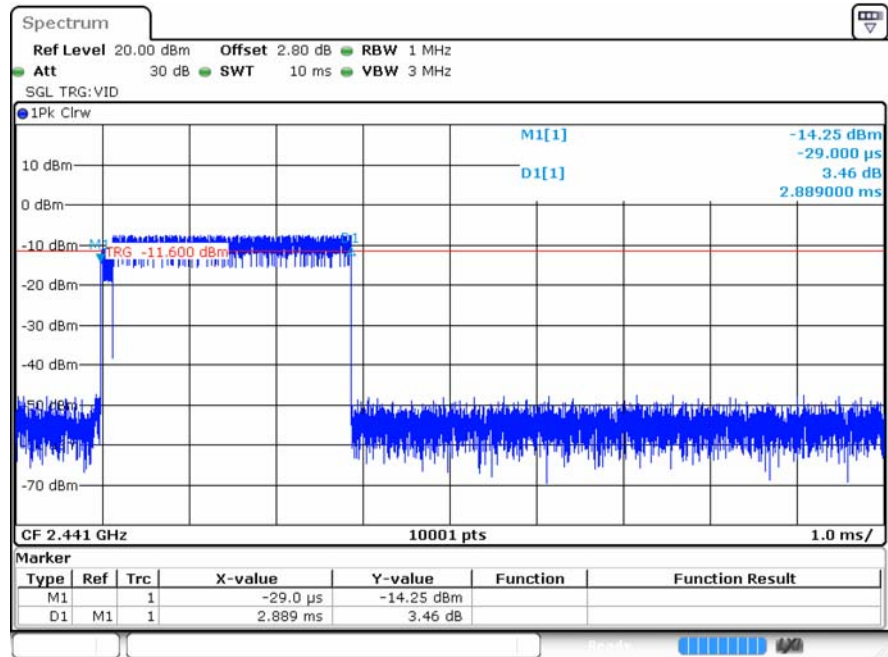
6.2 Test Graphs

Test Graphs

GFSK_DH5/MCH



$\pi/4$ DQPSK
_2DH5/MCH

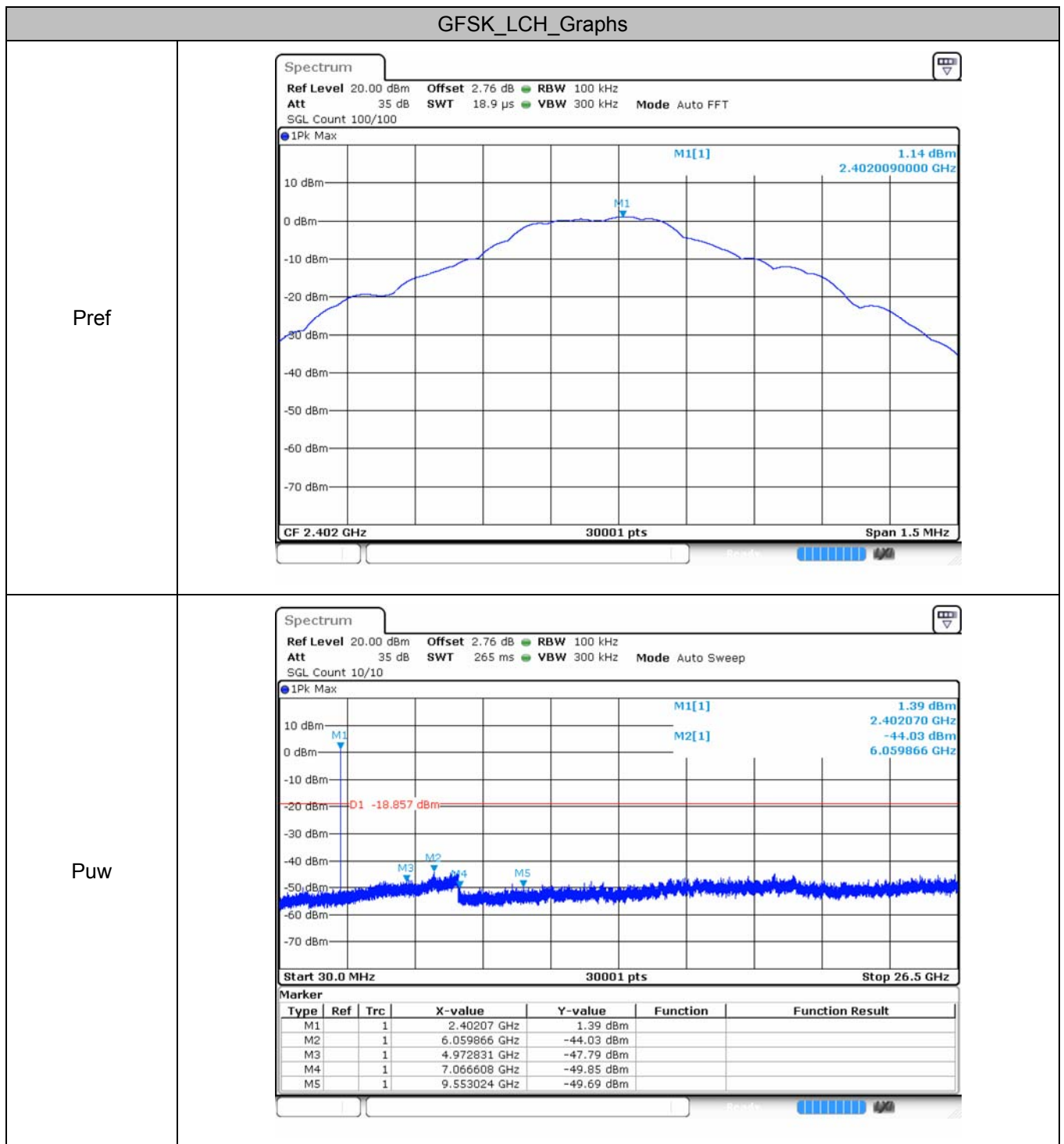


7 RF Conducted Spurious Emissions

7.1 Test Result

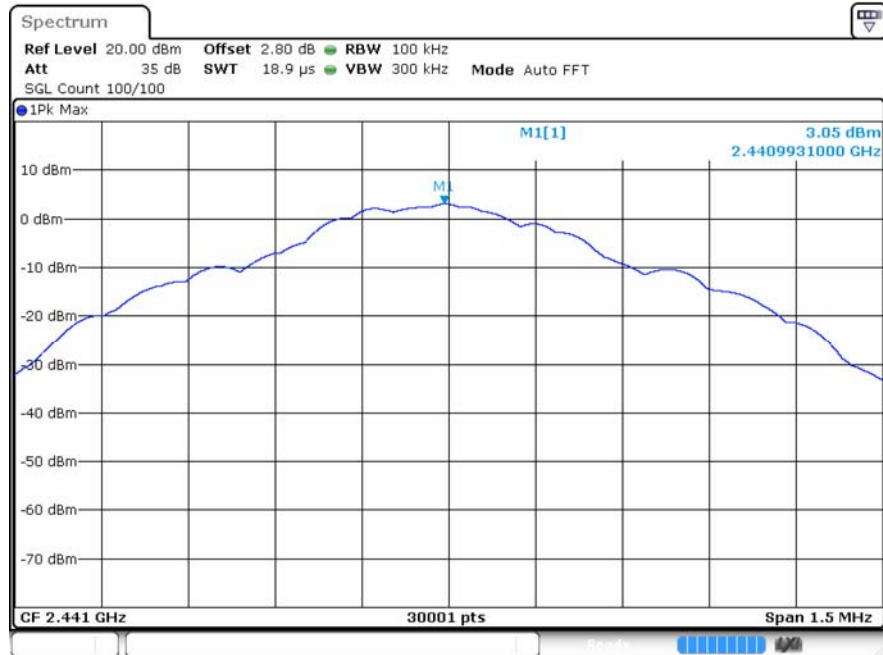
Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-45.16	-20	Pass
	MCH	-47.53	-20	Pass
	HCH	-47.31	-20	Pass
$\pi/4$ DQPSK	LCH	-40.87	-20	Pass
	MCH	-41.74	-20	Pass
	HCH	-42.21	-20	Pass

7.2 Test Graphs

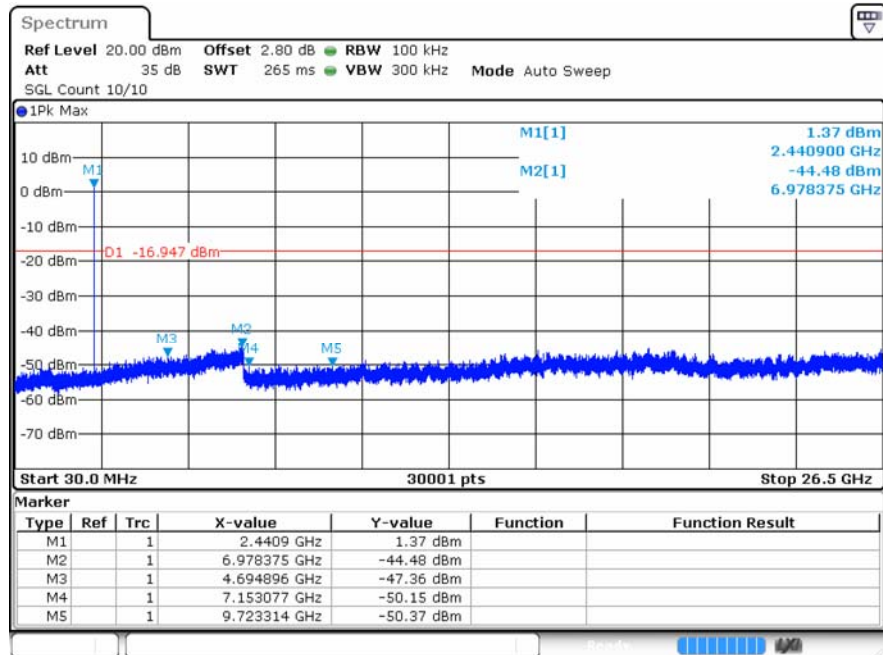


GFSK_MCH_Graphs

Pref



Puw

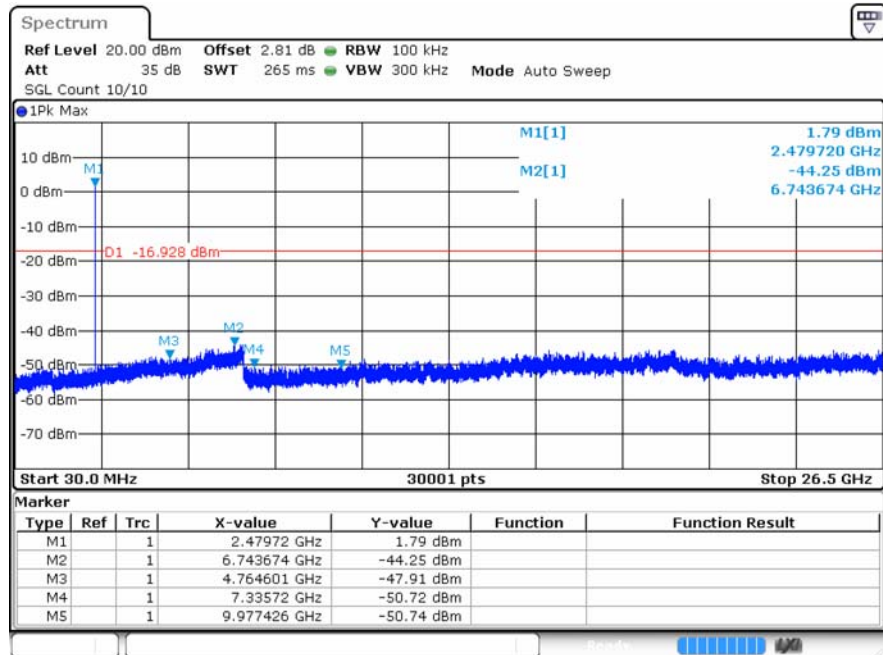


GFSK_HCH_Graphs

Pref

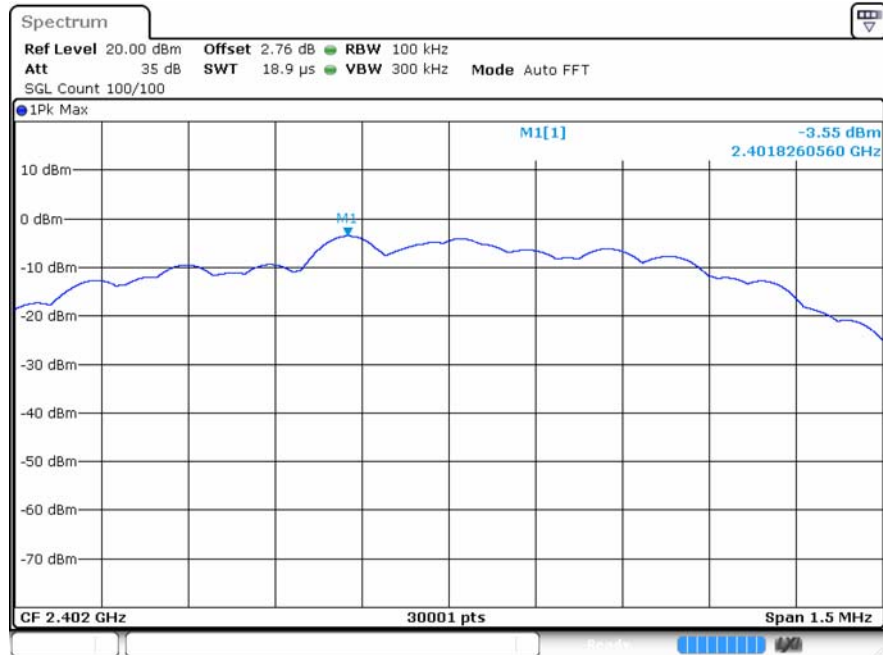


Puw

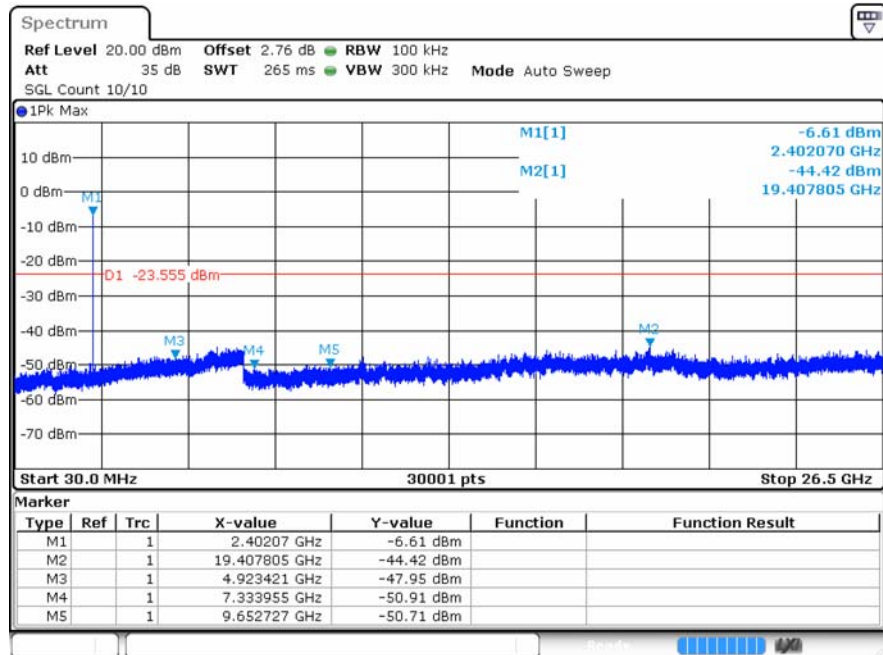


$\pi/4$ DQPSK_LCH_Graphs

Pref

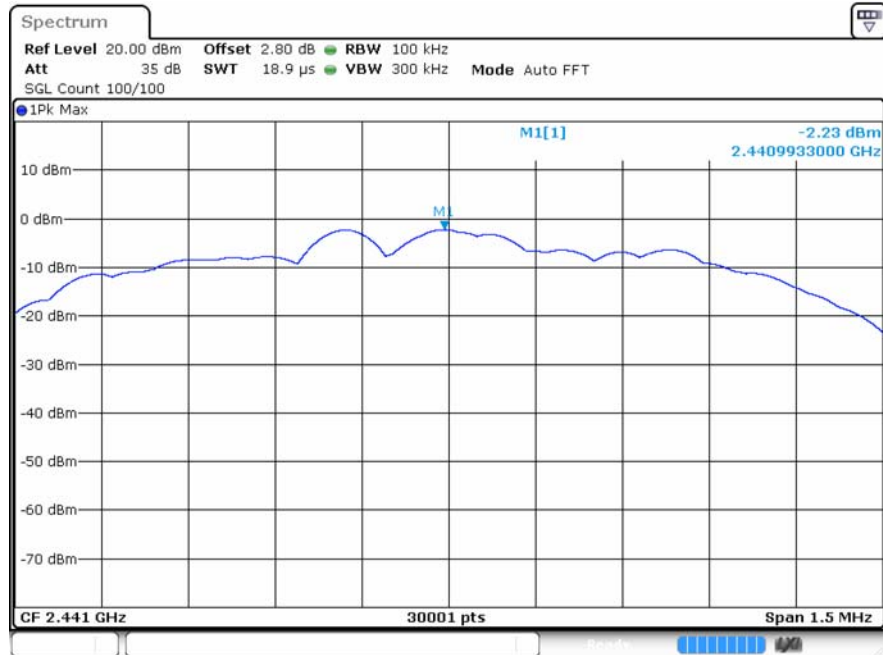


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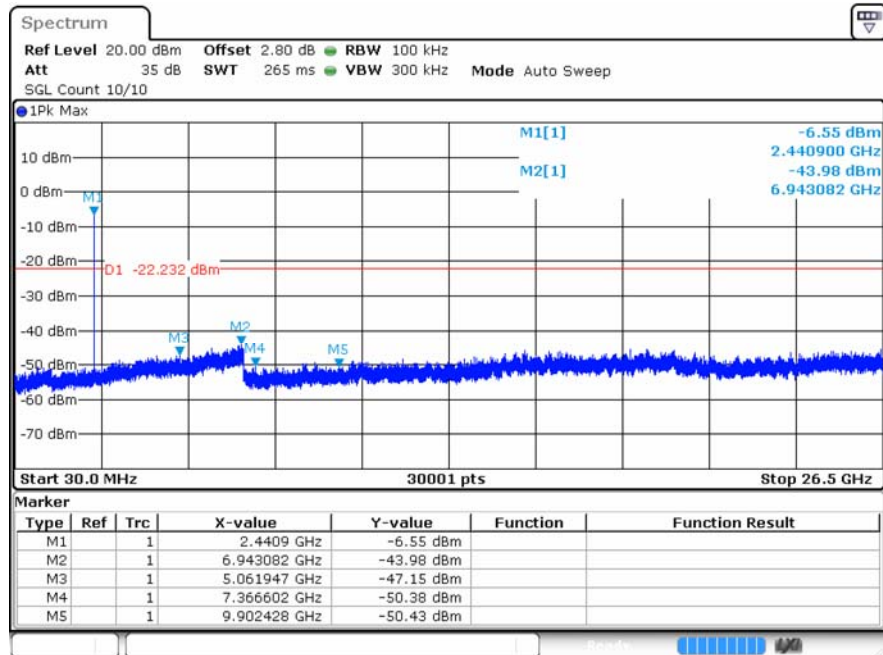


$\pi/4$ DQPSK_MCH_Graphs

Pref

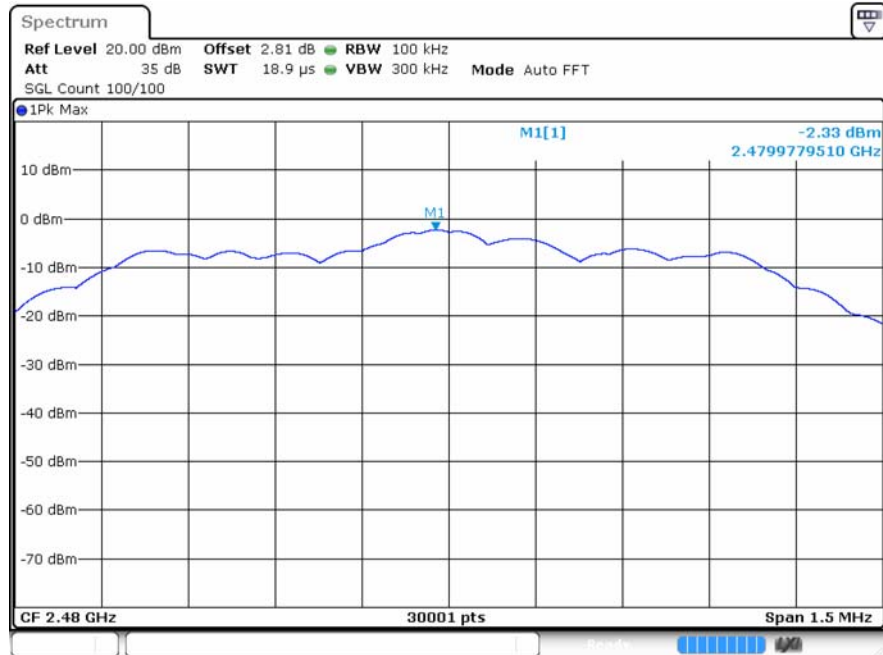


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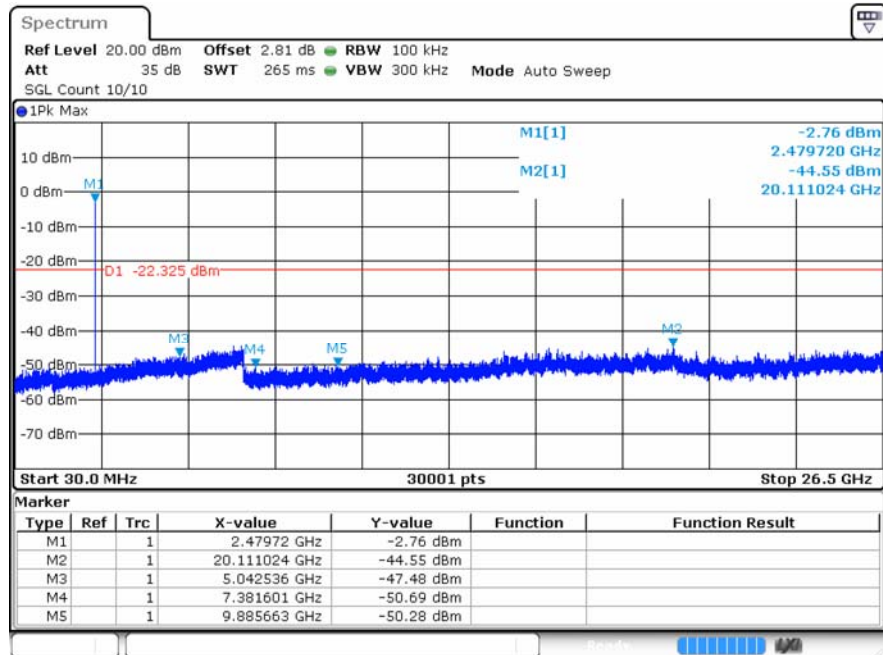


$\pi/4$ DQPSK_HCH_Graphs

Pref



Puw

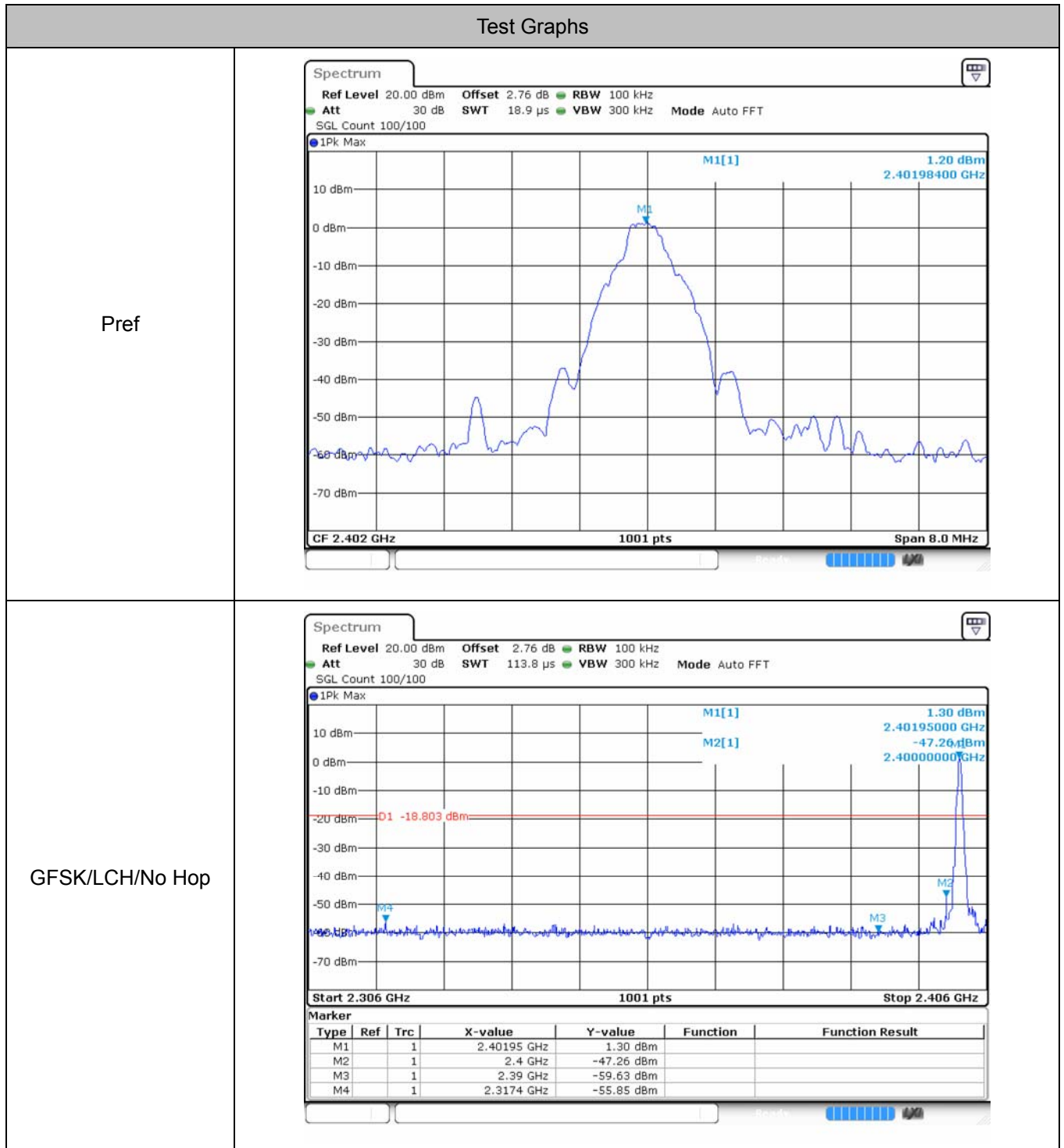


8 Band-edge for RF Conducted Emissions

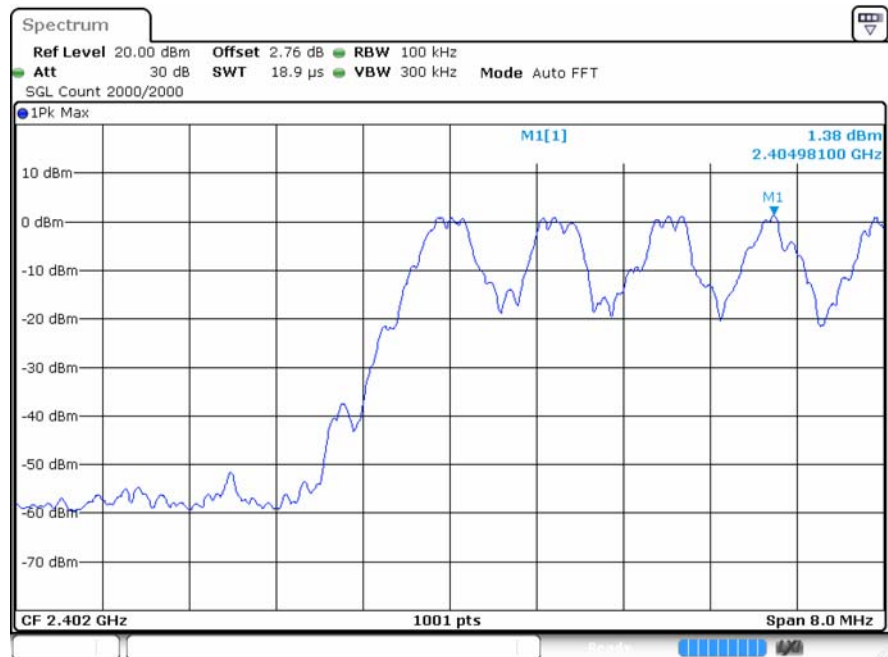
8.1 Test Result

Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	-57.04	-20	Pass
			On	-53.86	-20	Pass
	HCH	2480	Off	-59.33	-20	Pass
			On	-55.34	-20	Pass
$\pi/4$ DQPSK	LCH	2402	Off	-52.24	-20	Pass
			On	-52.52	-20	Pass
	HCH	2480	Off	-47.95	-20	Pass
			On	-45.97	-20	Pass

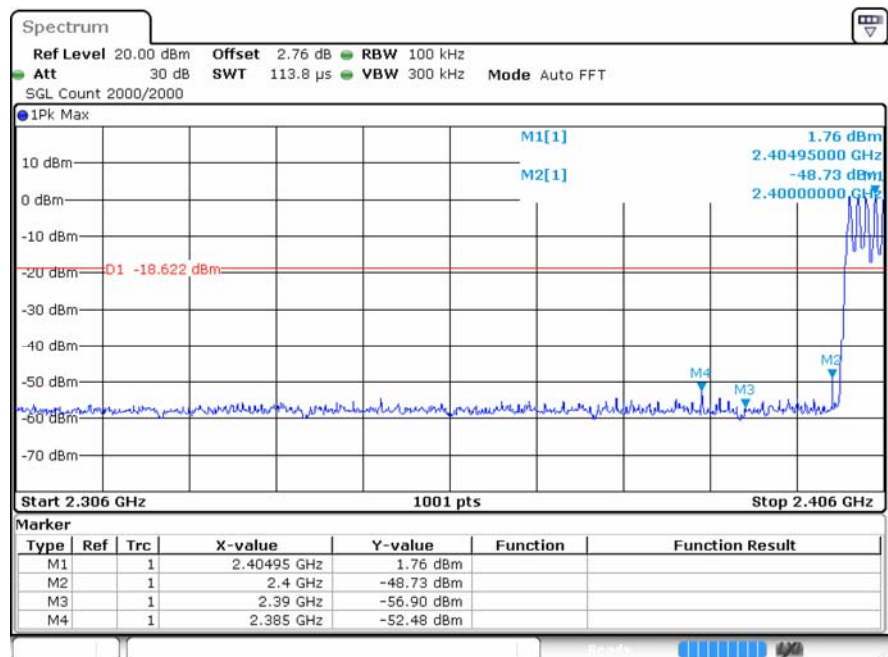
8.2 Test Graphs



Ref



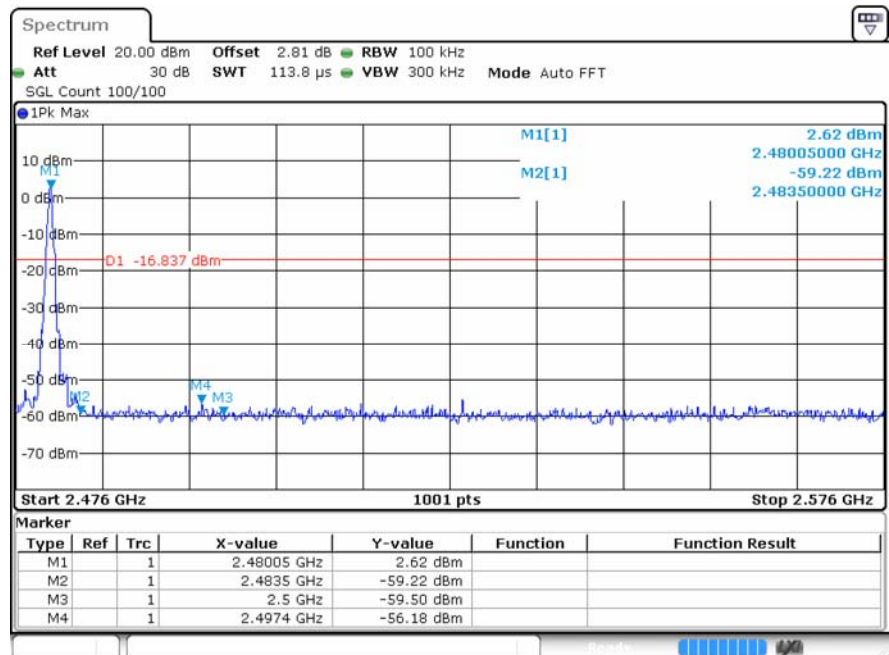
GFSK/LCH/Hop



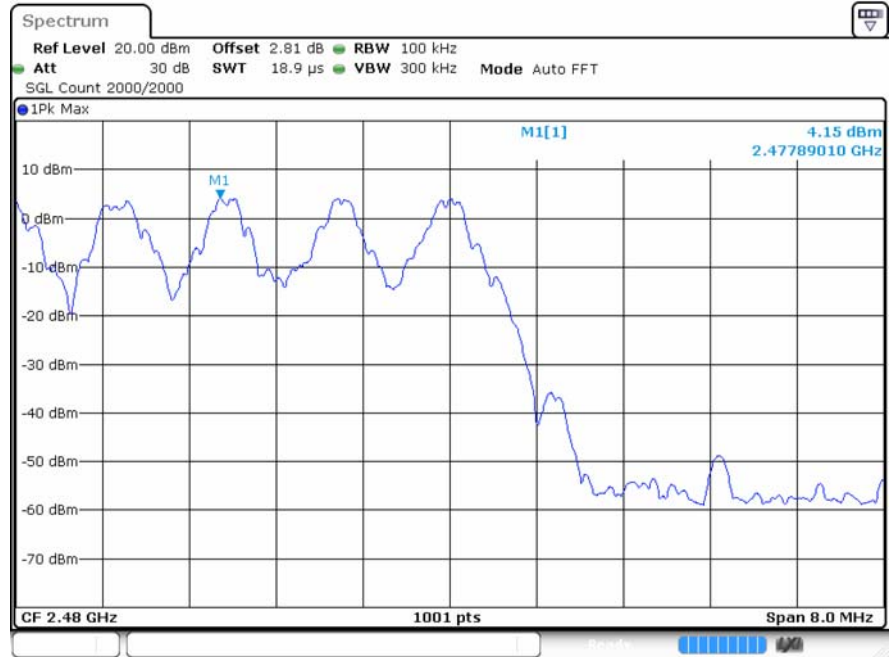
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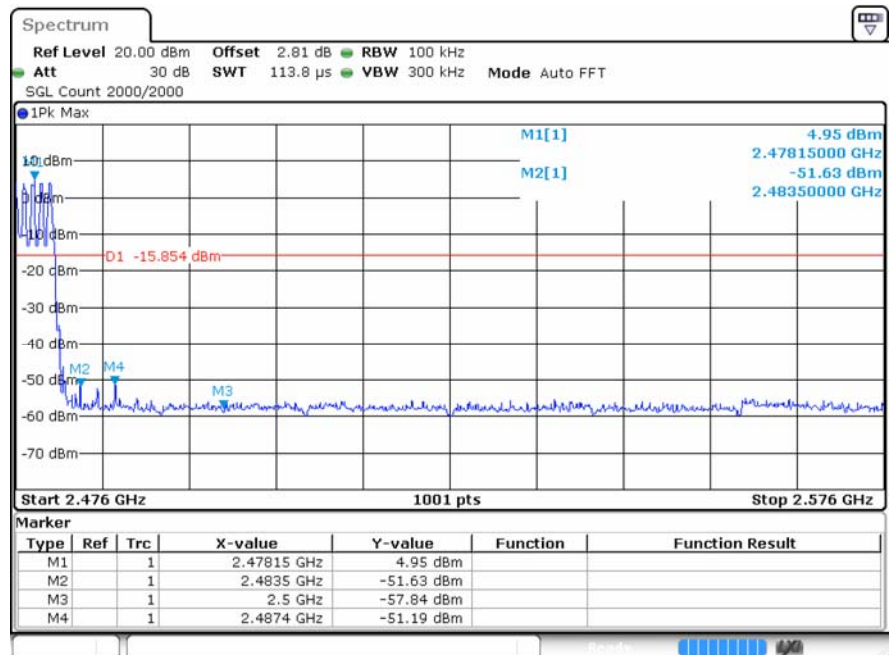
GFSK/HCH/No Hop



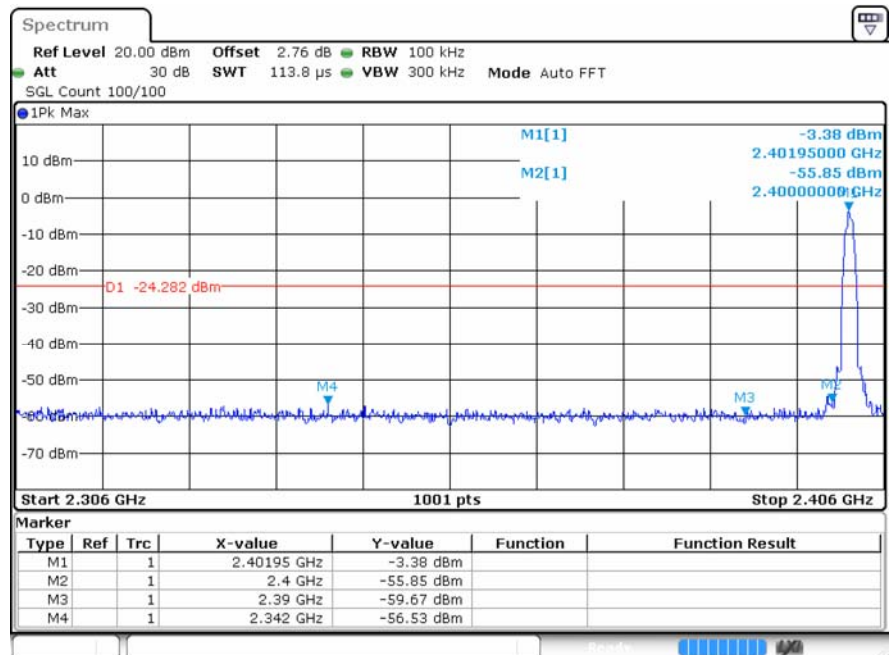
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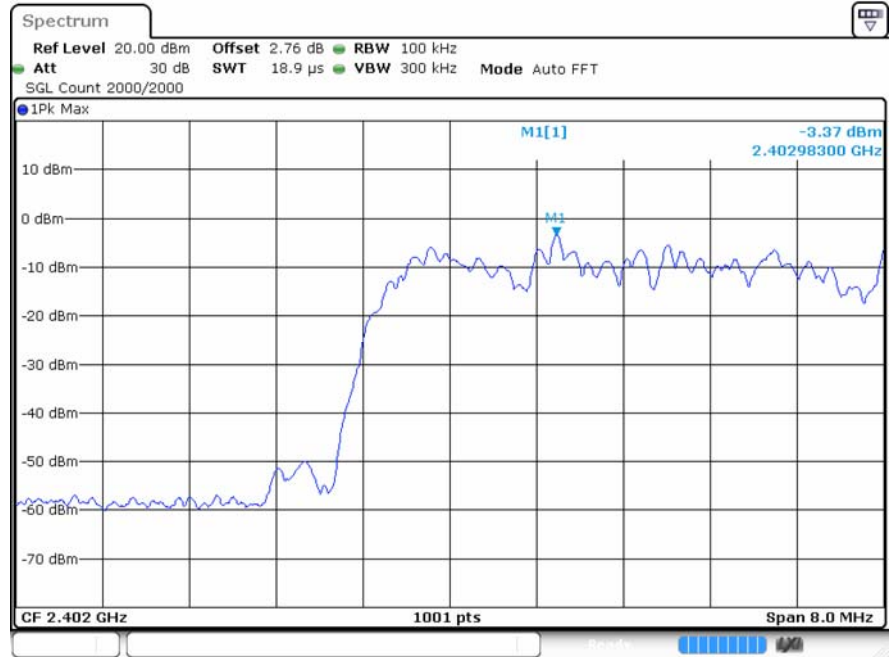
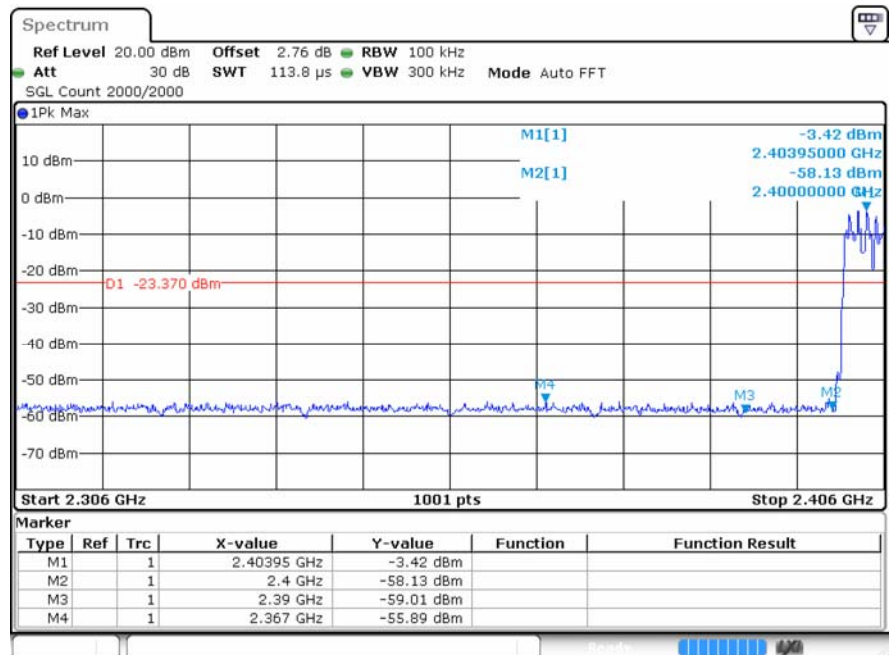
GFSK/HCH/Hop



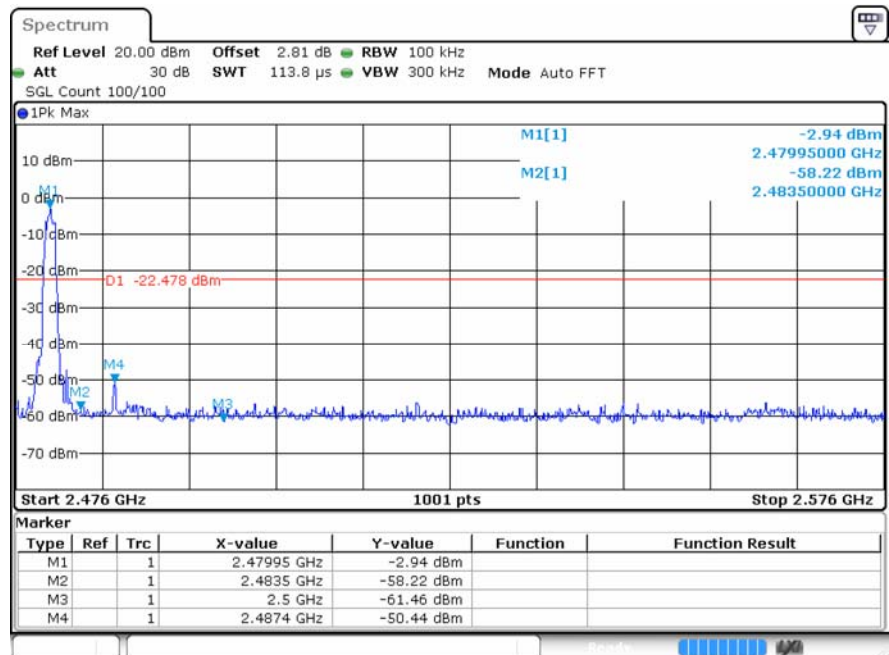
Ref


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


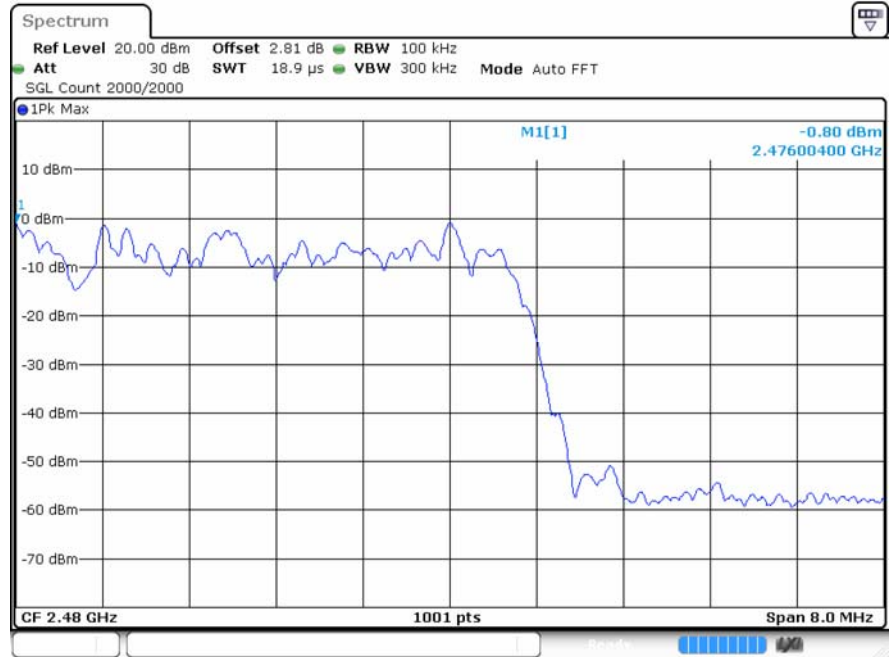
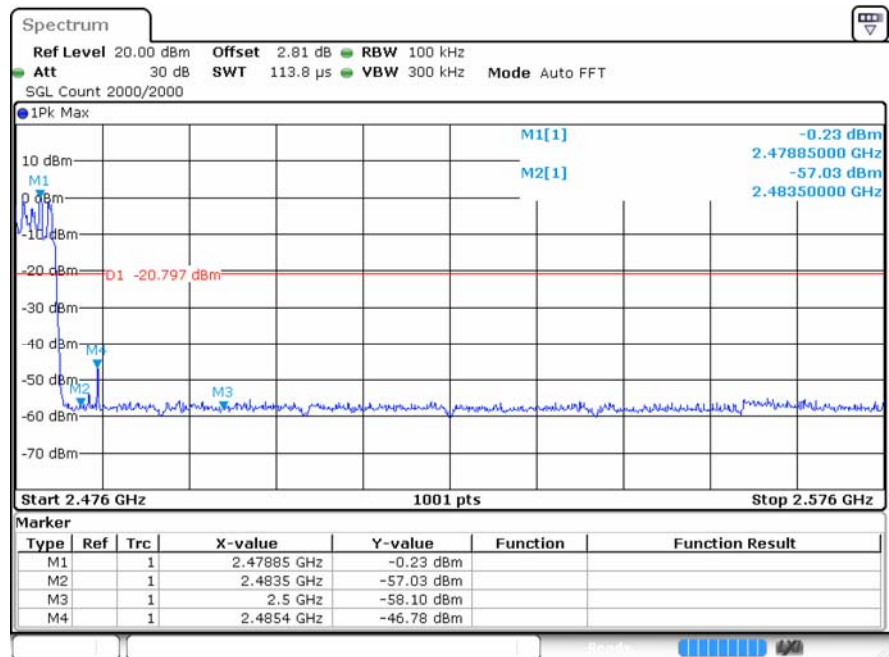
Ref


 $\pi/4$ DQPSK/LCH/Hop


Ref


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


Ref


 $\pi/4$ DQPSK/HCH/Hop


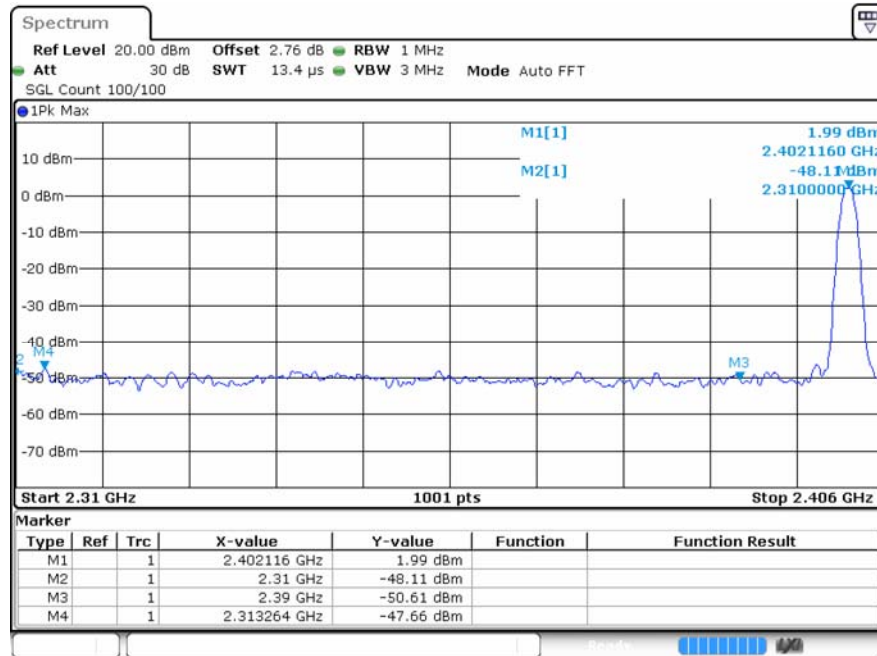
9 Restrict-band band-edge measurements

9.1 Test Result

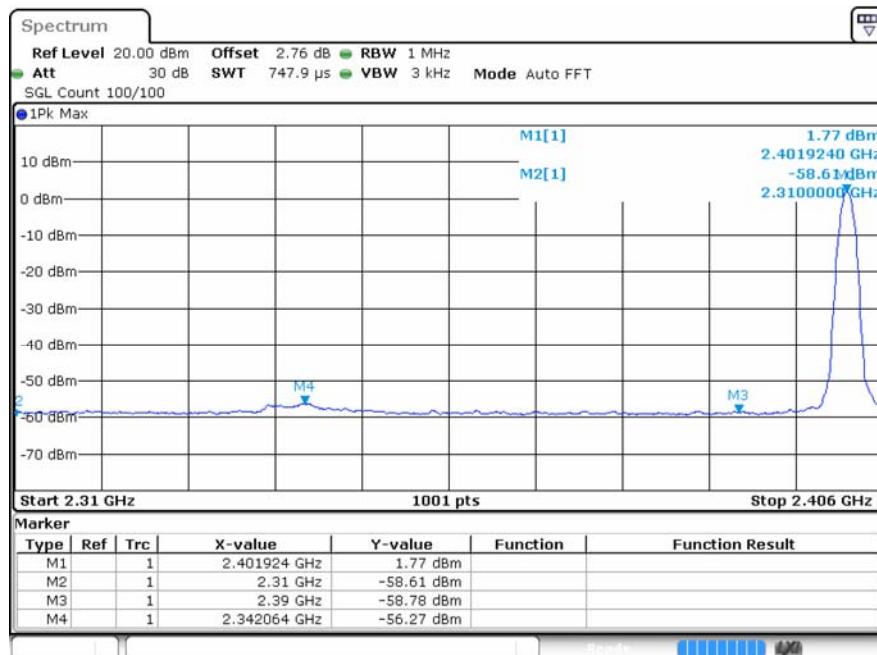
Test Mode	Hopping	Freq.	Power [dBm]	Gain	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-48.1	2	49.16	PEAK	74	Pass
	Off	2310.0	-58.6	2	38.66	AV	54	Pass
	Off	2313.264	-47.65	2	49.61	PEAK	74	Pass
	Off	2342.064	-56.26	2	41	AV	54	Pass
	Off	2390.0	-50.6	2	46.66	PEAK	74	Pass
	Off	2390.0	-58.77	2	38.49	AV	54	Pass
	Off	2483.5	-49.11	2	48.15	PEAK	74	Pass
	Off	2483.5	-55.49	2	41.77	AV	54	Pass
	Off	2483.872	-48.47	2	48.79	PEAK	74	Pass
	Off	2483.512	-55.49	2	41.77	AV	54	Pass
	Off	2500.0	-50.83	2	46.43	PEAK	74	Pass
	Off	2500.0	-58.19	2	39.07	AV	54	Pass
$\pi/4$ DQPSK	Off	2310.0	-50.85	2	46.41	PEAK	74	Pass
	Off	2310.0	-58.46	2	38.8	AV	54	Pass
	Off	2338.032	-46.96	2	50.3	PEAK	74	Pass
	Off	2341.008	-56.61	2	40.65	AV	54	Pass
	Off	2390.0	-49.41	2	47.85	PEAK	74	Pass
	Off	2390.0	-58.36	2	38.9	AV	54	Pass
	Off	2483.5	-50.48	2	46.78	PEAK	74	Pass
	Off	2483.5	-56.62	2	40.64	AV	54	Pass
	Off	2487.352	-43.17	2	54.09	PEAK	74	Pass
	Off	2483.944	-56.41	2	40.85	AV	54	Pass
	Off	2500.0	-50.7	2	46.56	PEAK	74	Pass
	Off	2500.0	-58.21	2	39.05	AV	54	Pass

9.2 Test Graphs

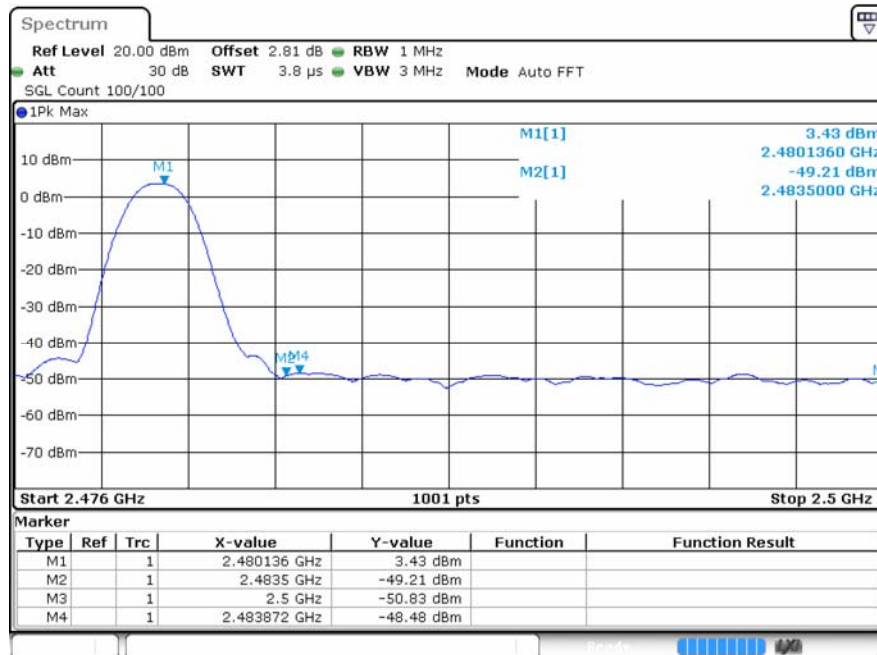
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



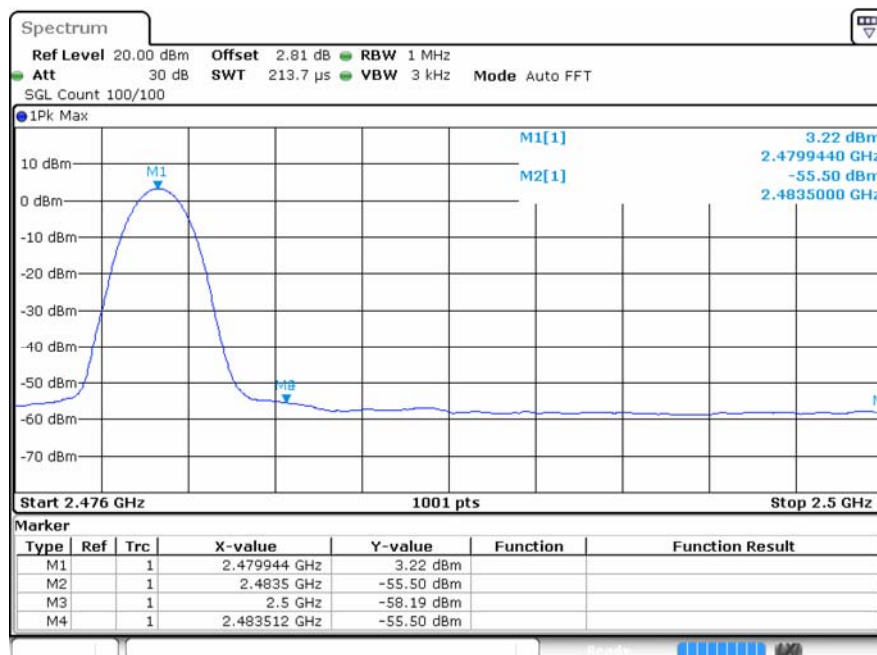
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



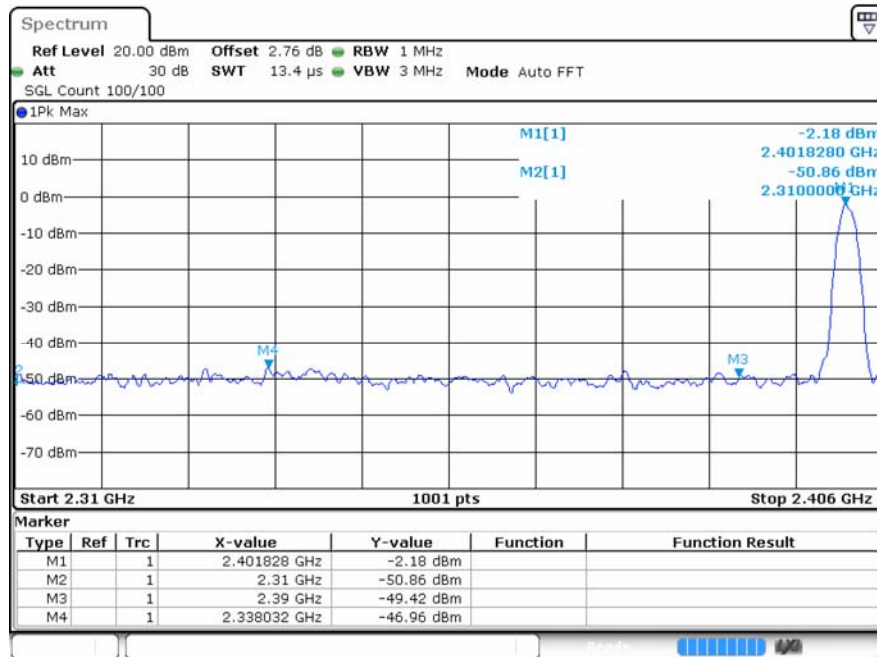
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



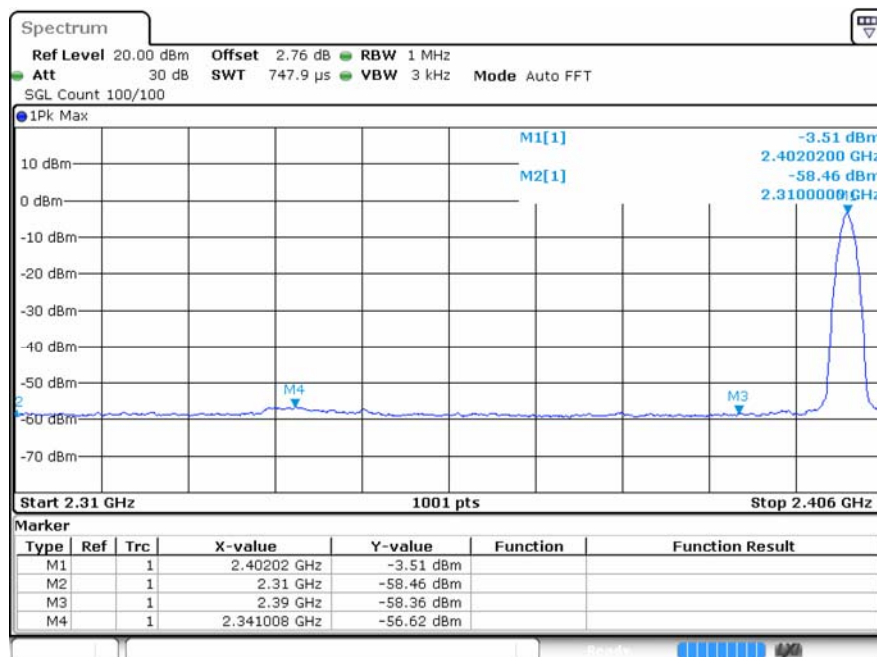
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



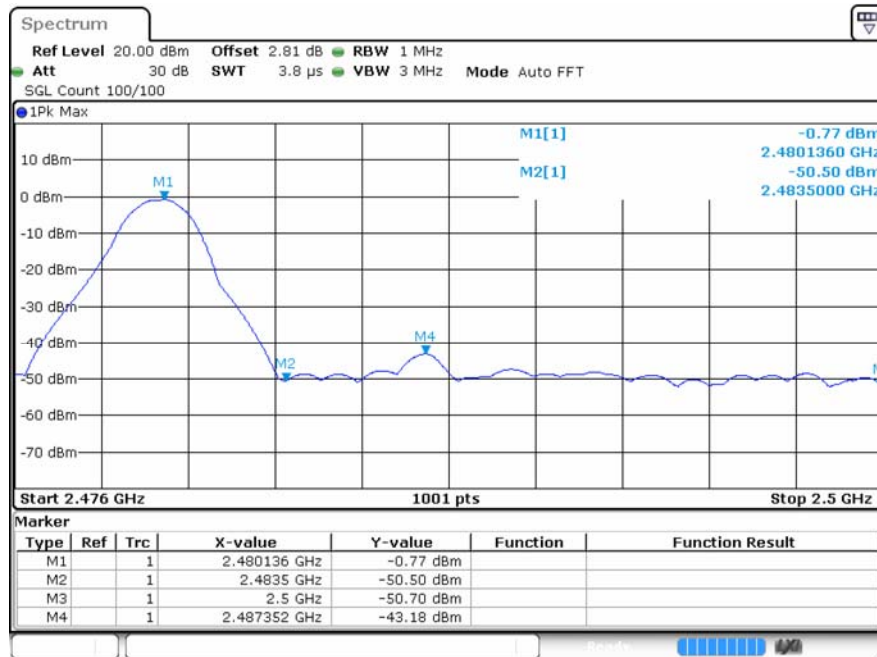
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (Low Channel)



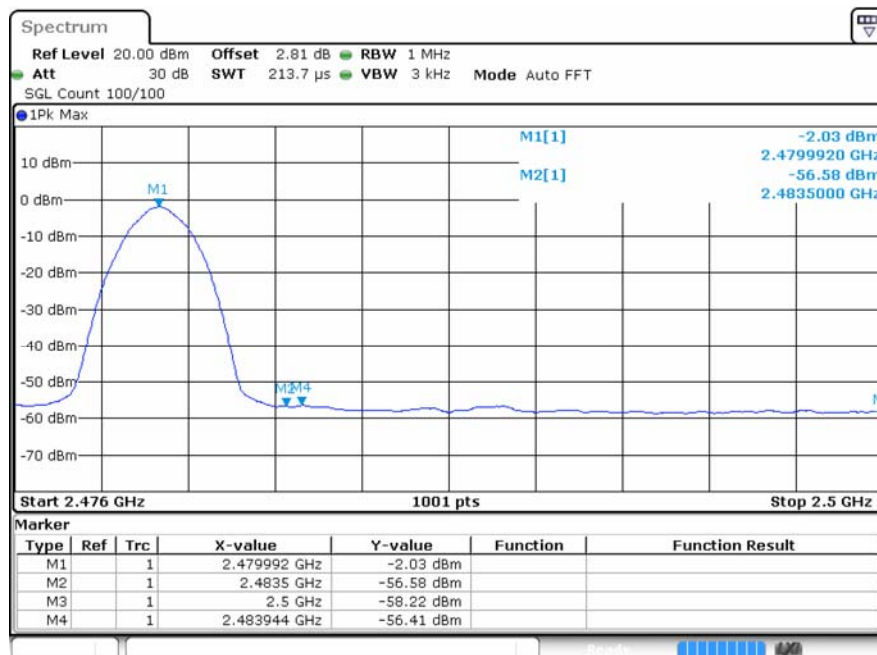
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (Low Channel)



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---