



Appendix A

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

Product Name: PS100 Party Speaker

Trade Mark: Oakcastle/Majority

Test Model: PS100, 1000002979

Environmental Conditions

Temperature:	25.6℃
Relative Humidity:	53.3%
ATM Pressure:	101Kpa
Test Engineer:	Emiya Lin
Supervised by:	Simba Huang



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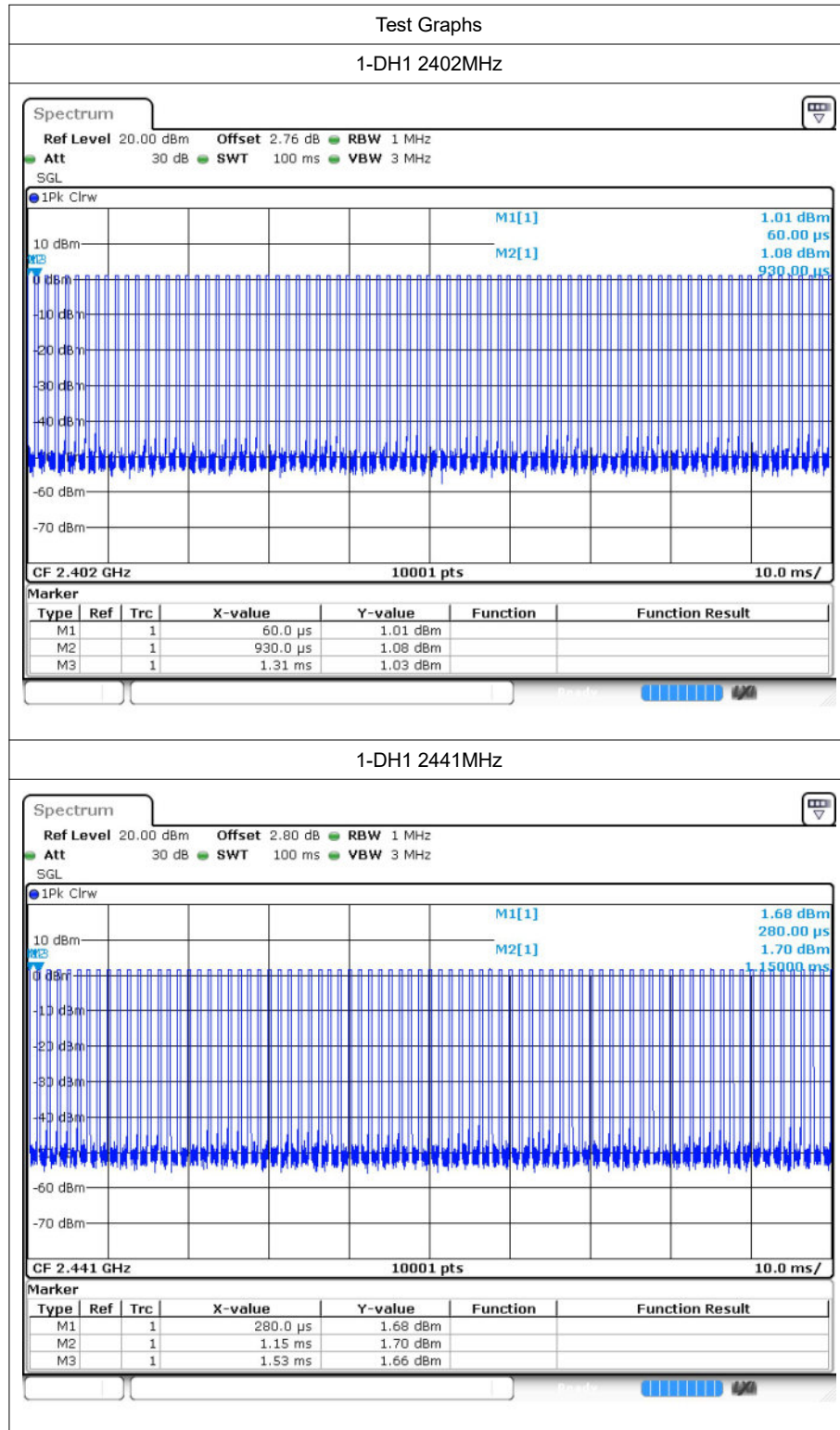
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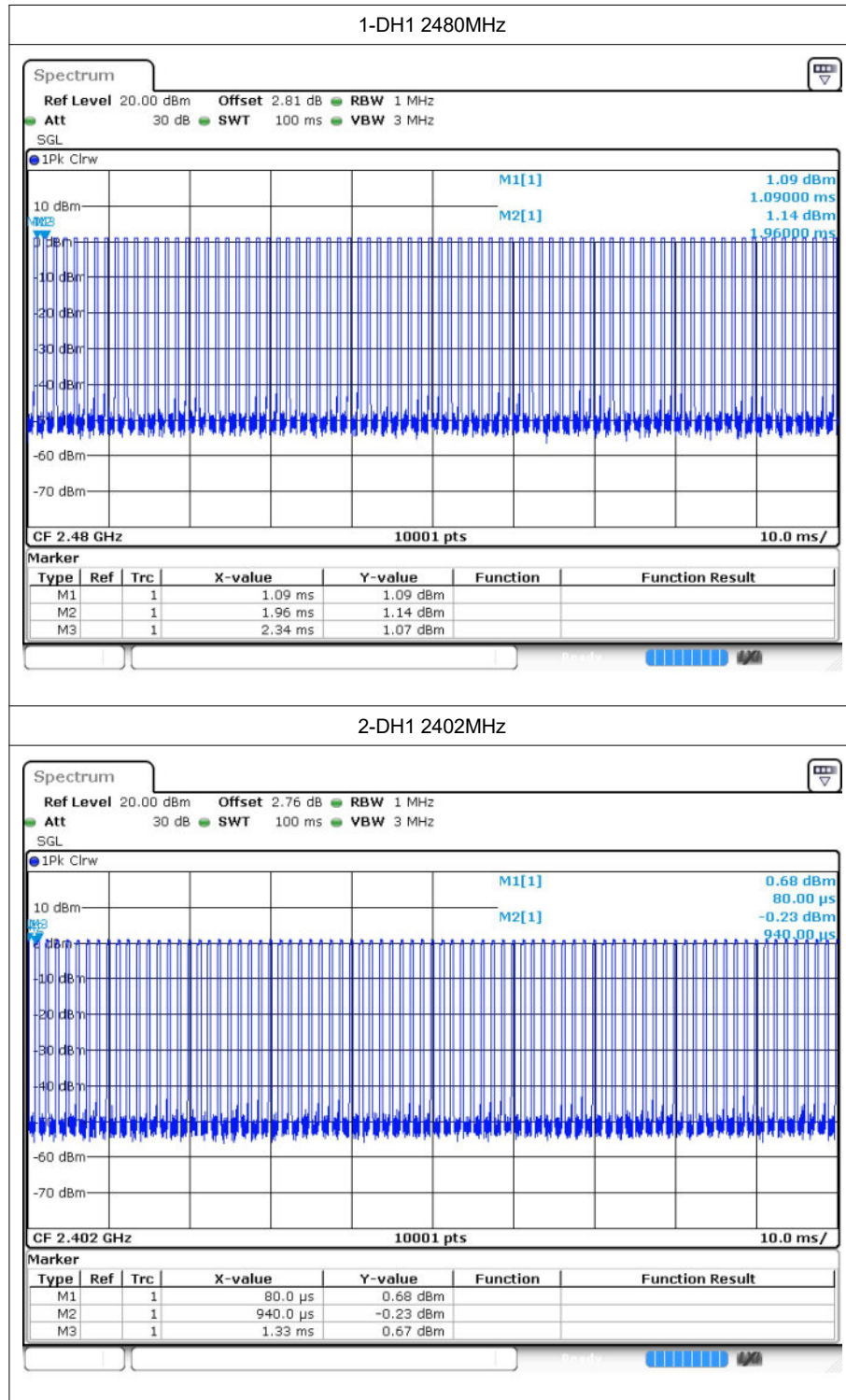
1 Duty Cycle

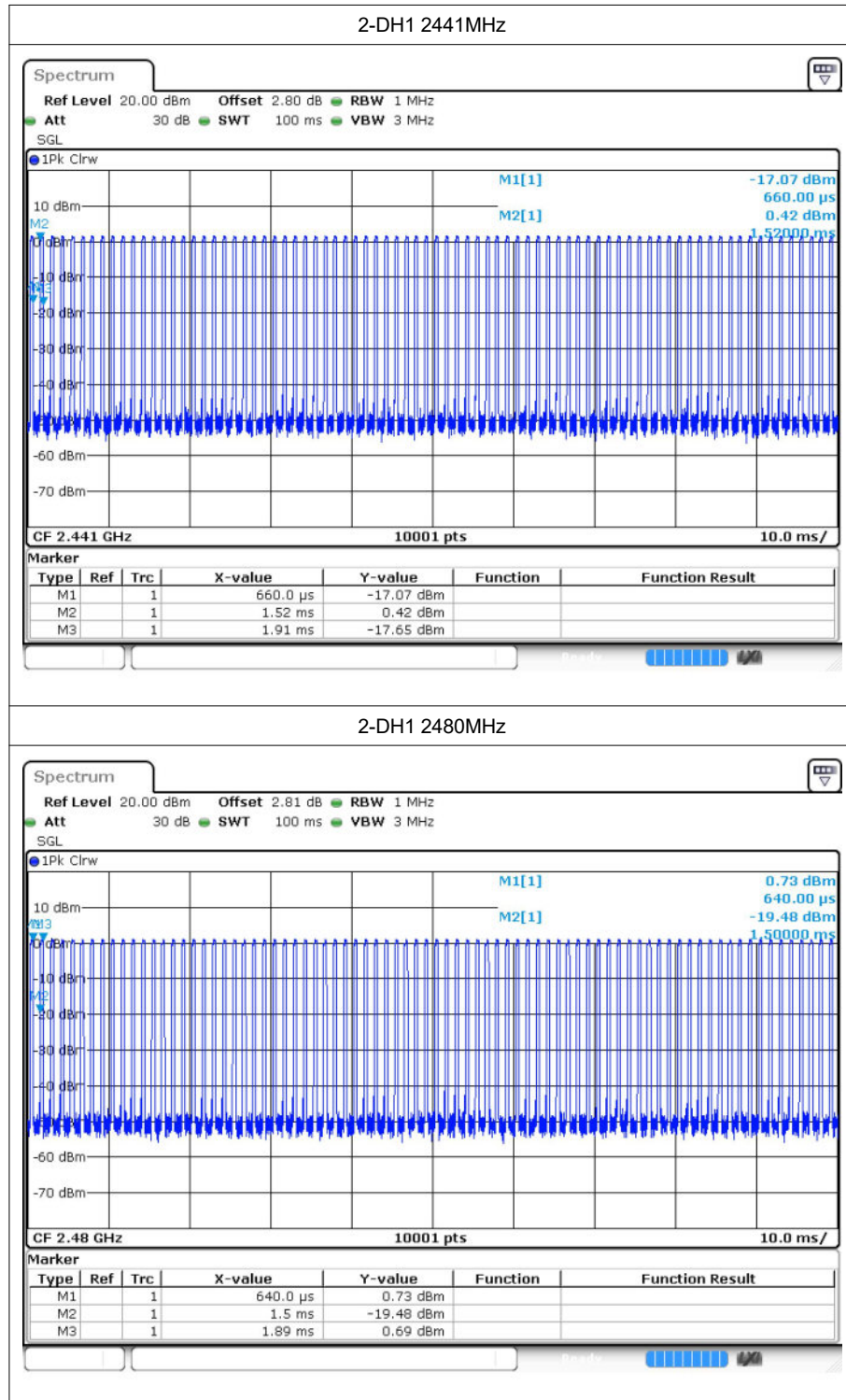
1.1 Test Result

Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor	1/T (kHz)
1-DH1	2402	31.21	5.06	2.63
1-DH1	2441	31.22	5.06	2.63
1-DH1	2480	31.2	5.06	2.63
2-DH1	2402	32.01	4.95	2.56
2-DH1	2441	32.01	4.95	2.56
2-DH1	2480	31.95	4.96	2.56

1.2 Test Graphs





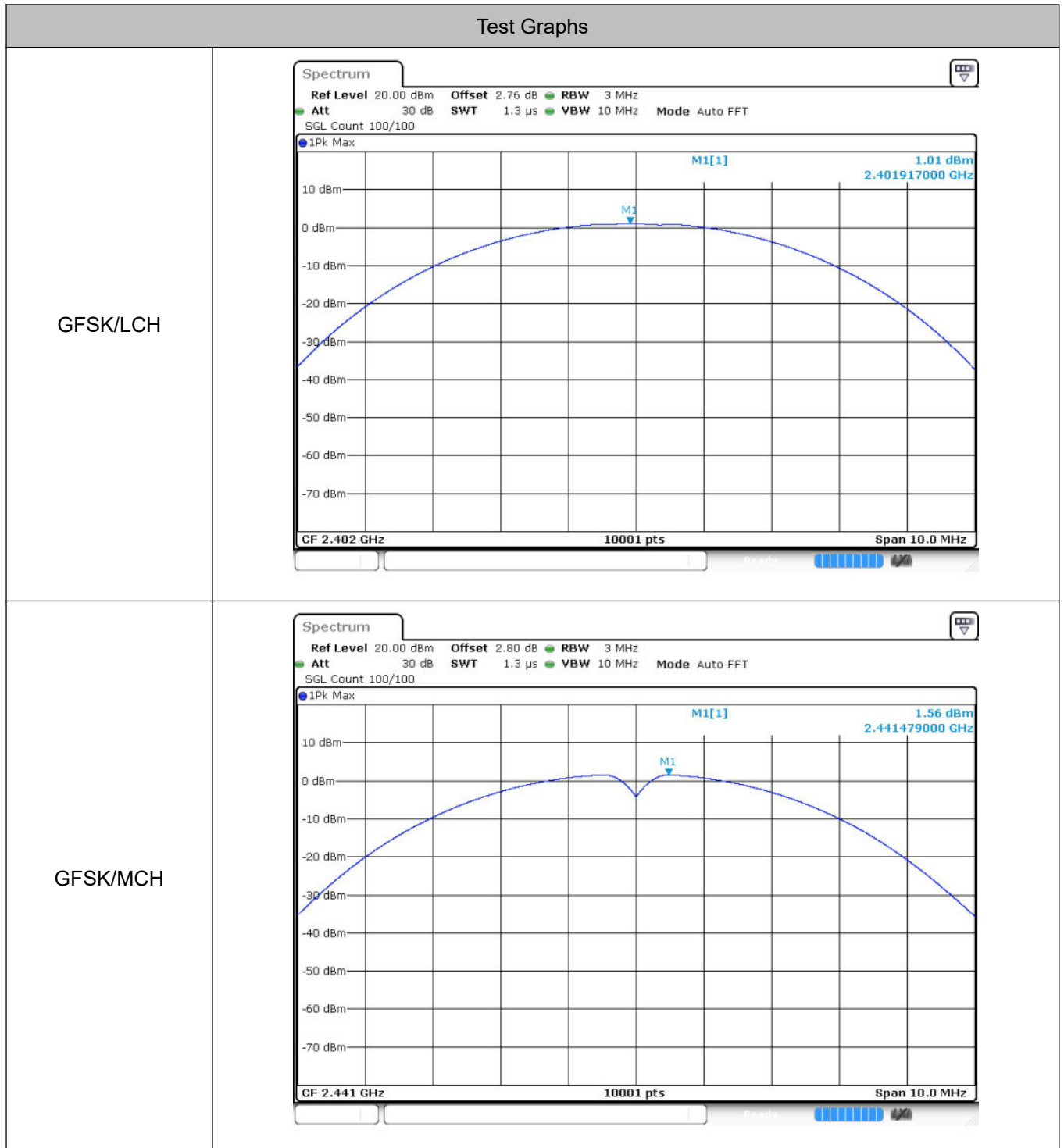


2 Maximum Conducted Peak Output Power

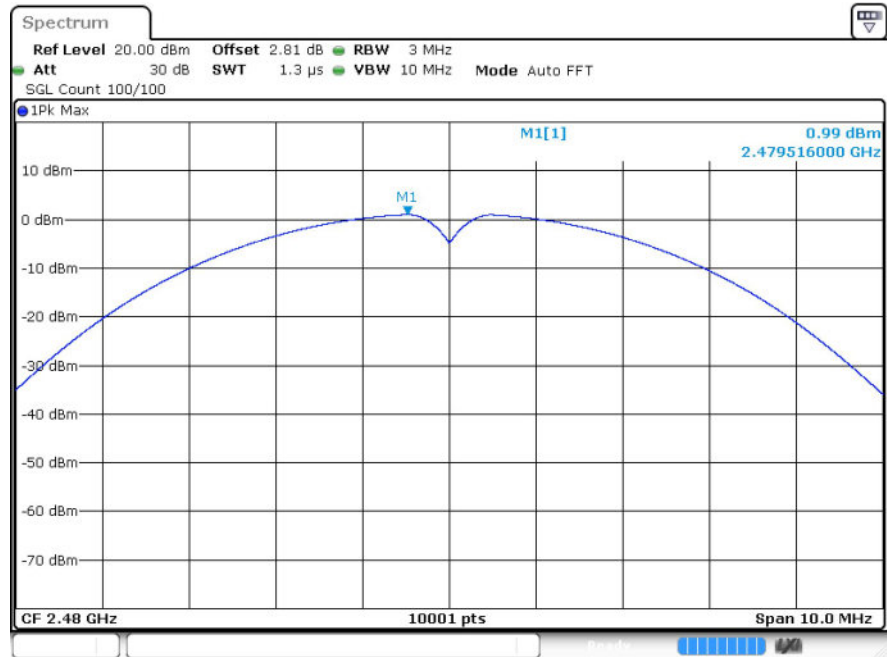
2.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	1.01	21	Pass
	MCH	1.56	21	Pass
	HCH	0.99	21	Pass
$\pi/4$ DQPSK	LCH	1.84	21	Pass
	MCH	2.43	21	Pass
	HCH	1.82	21	Pass

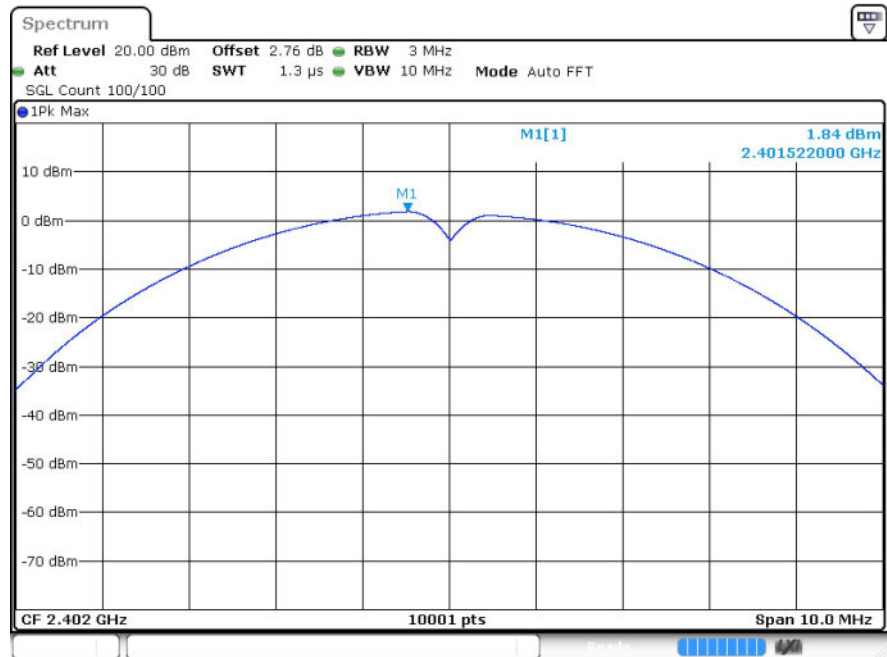
2.2 Test Graphs



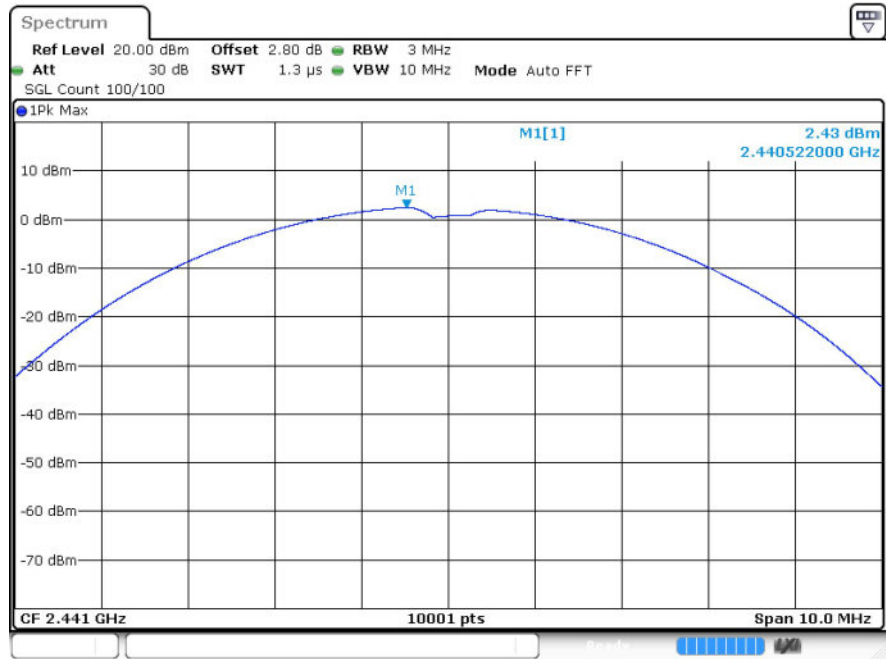
GFSK/HCH



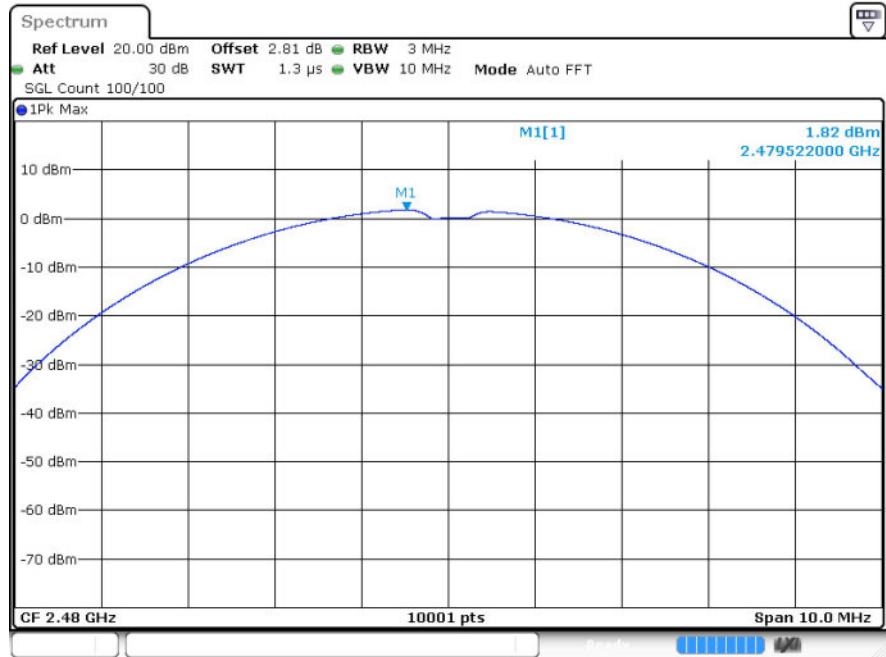
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH

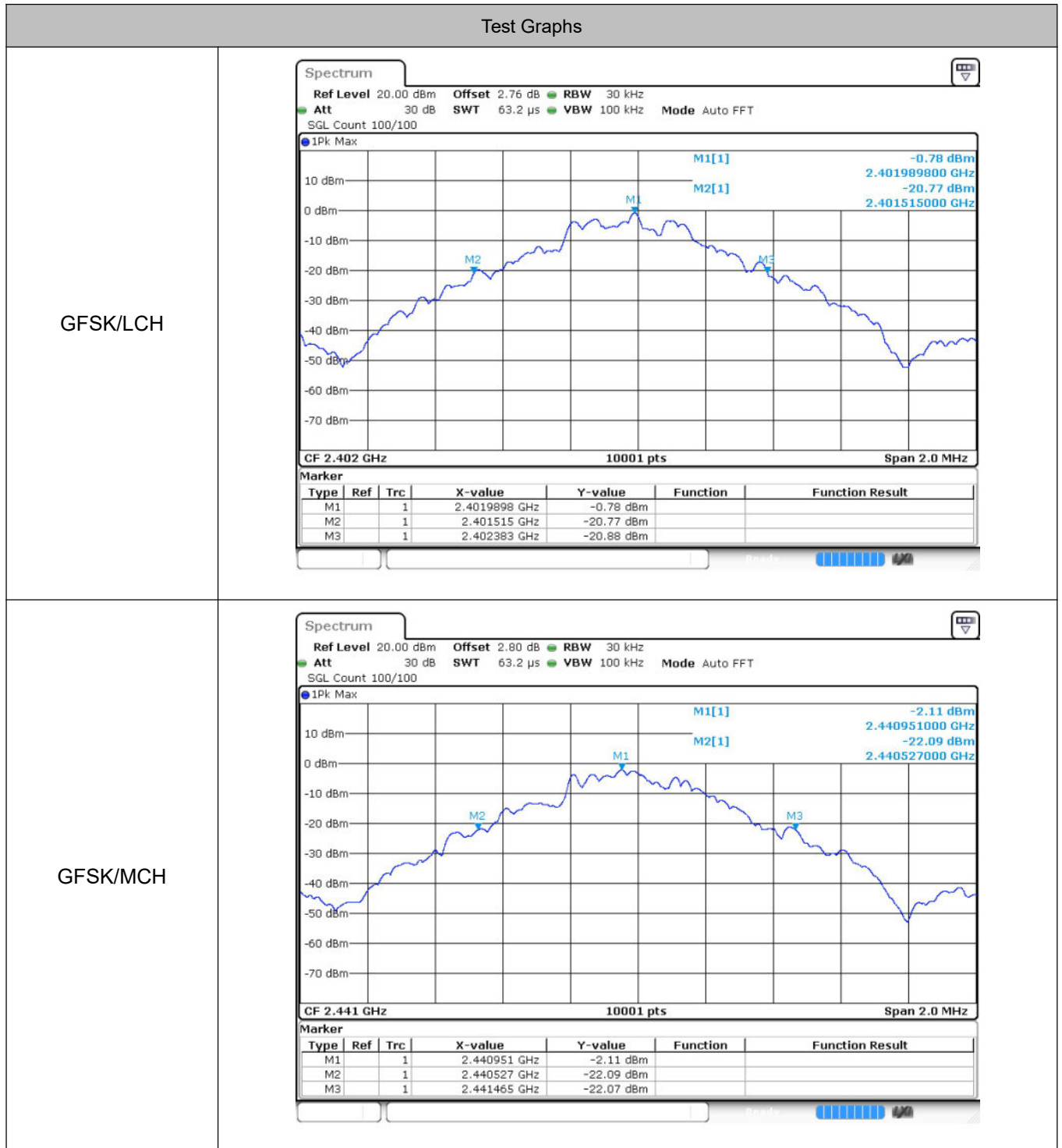


3 20dB Bandwidth

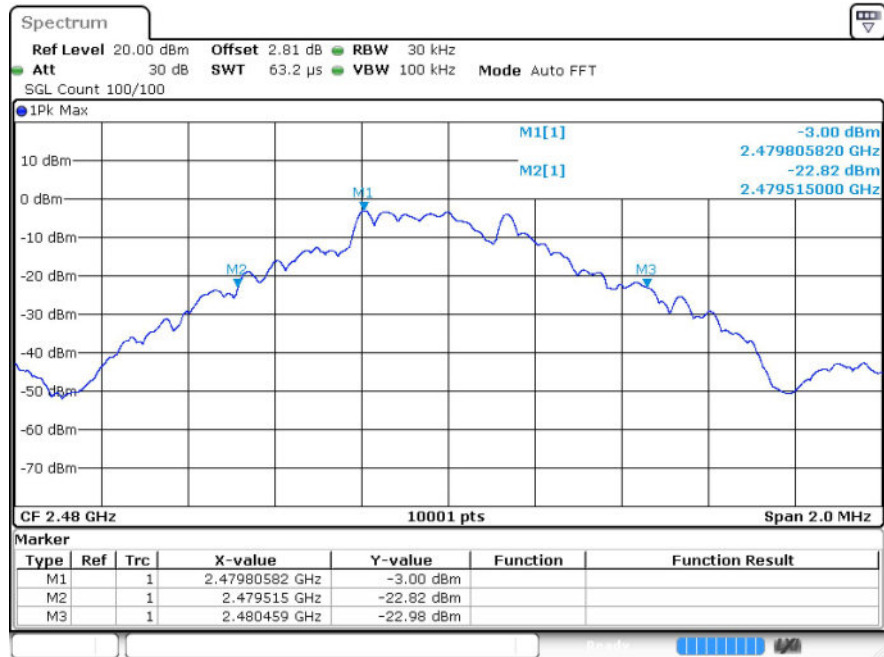
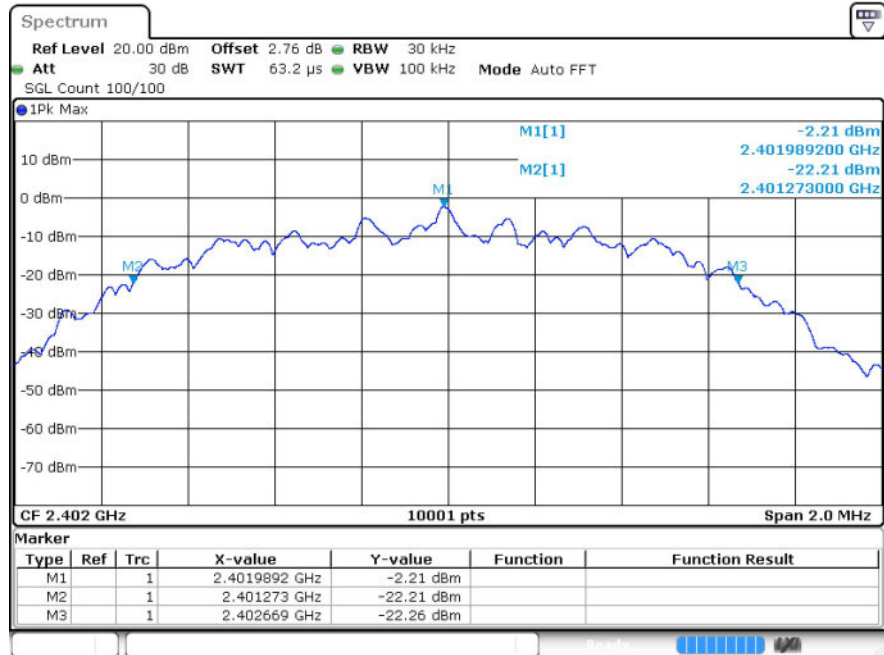
3.1 Test Result

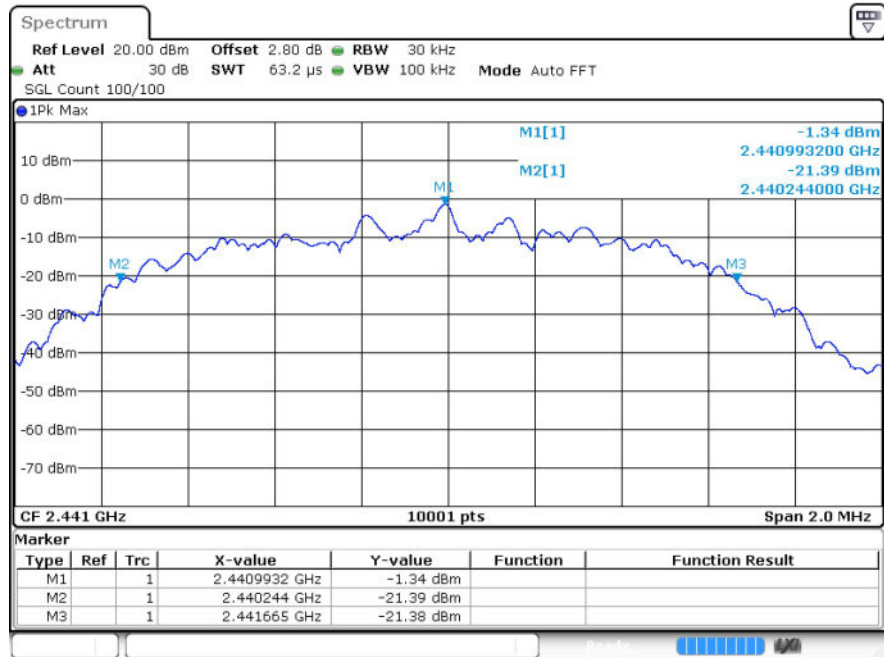
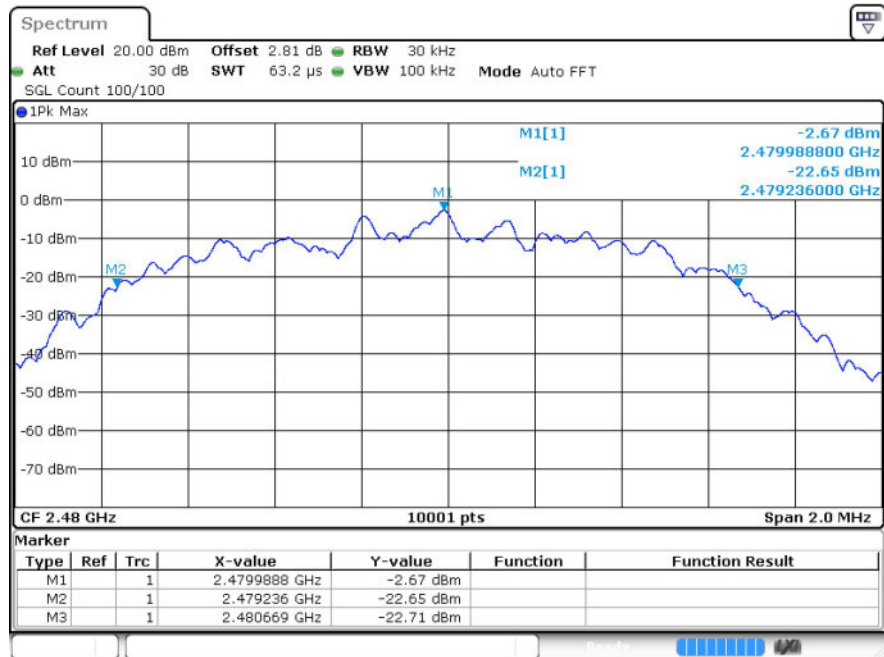
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.868	Not Specified	Pass
	MCH	0.939	Not Specified	Pass
	HCH	0.945	Not Specified	Pass
$\pi/4$ DQPSK	LCH	1.396	Not Specified	Pass
	MCH	1.42	Not Specified	Pass
	HCH	1.433	Not Specified	Pass

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	1.001	0.626	Pass
$\pi/4$ DQPSK	MCH	0.995	0.947	Pass

4.2 Test Graphs

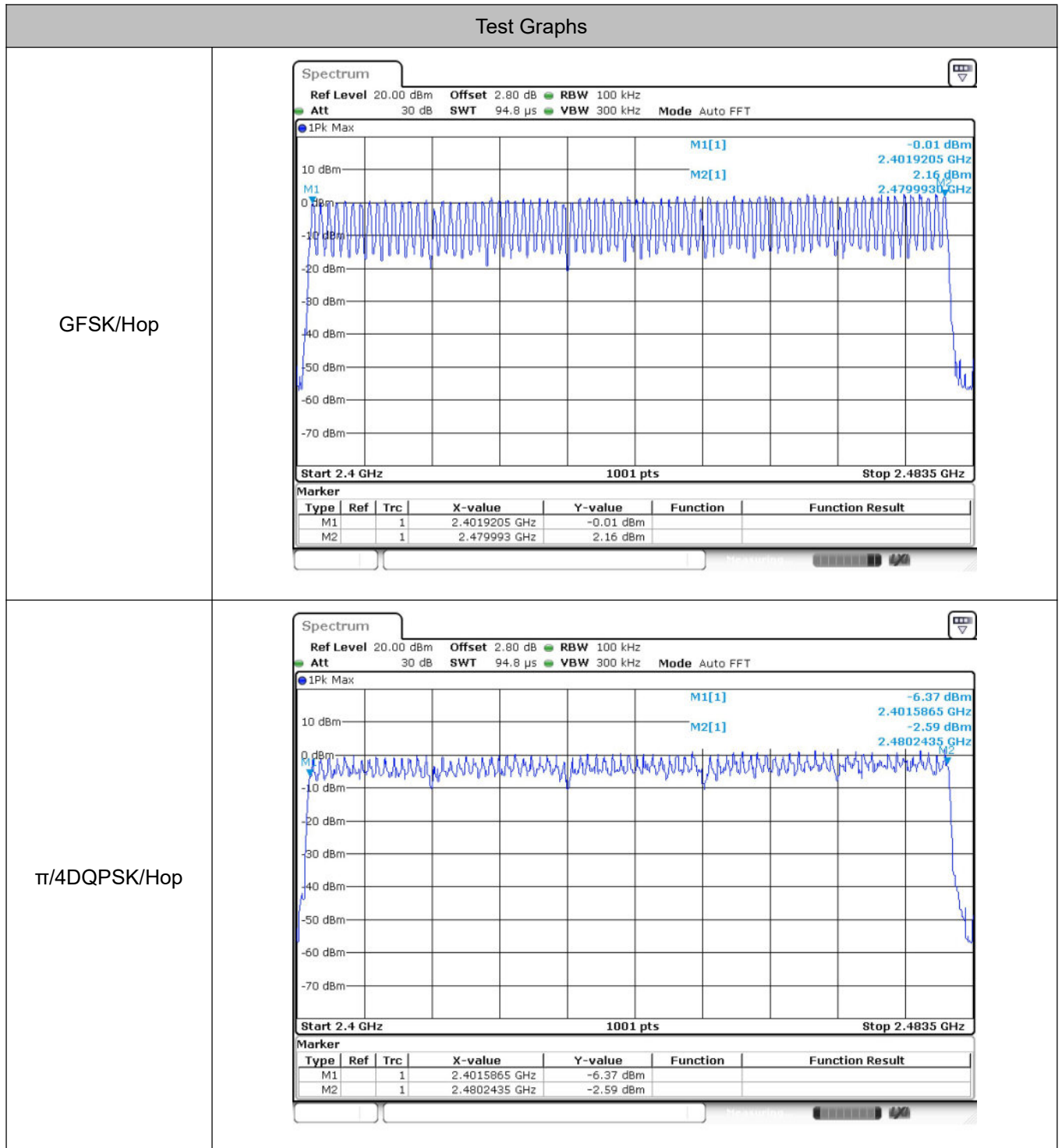


5 Hopping Channel Number

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

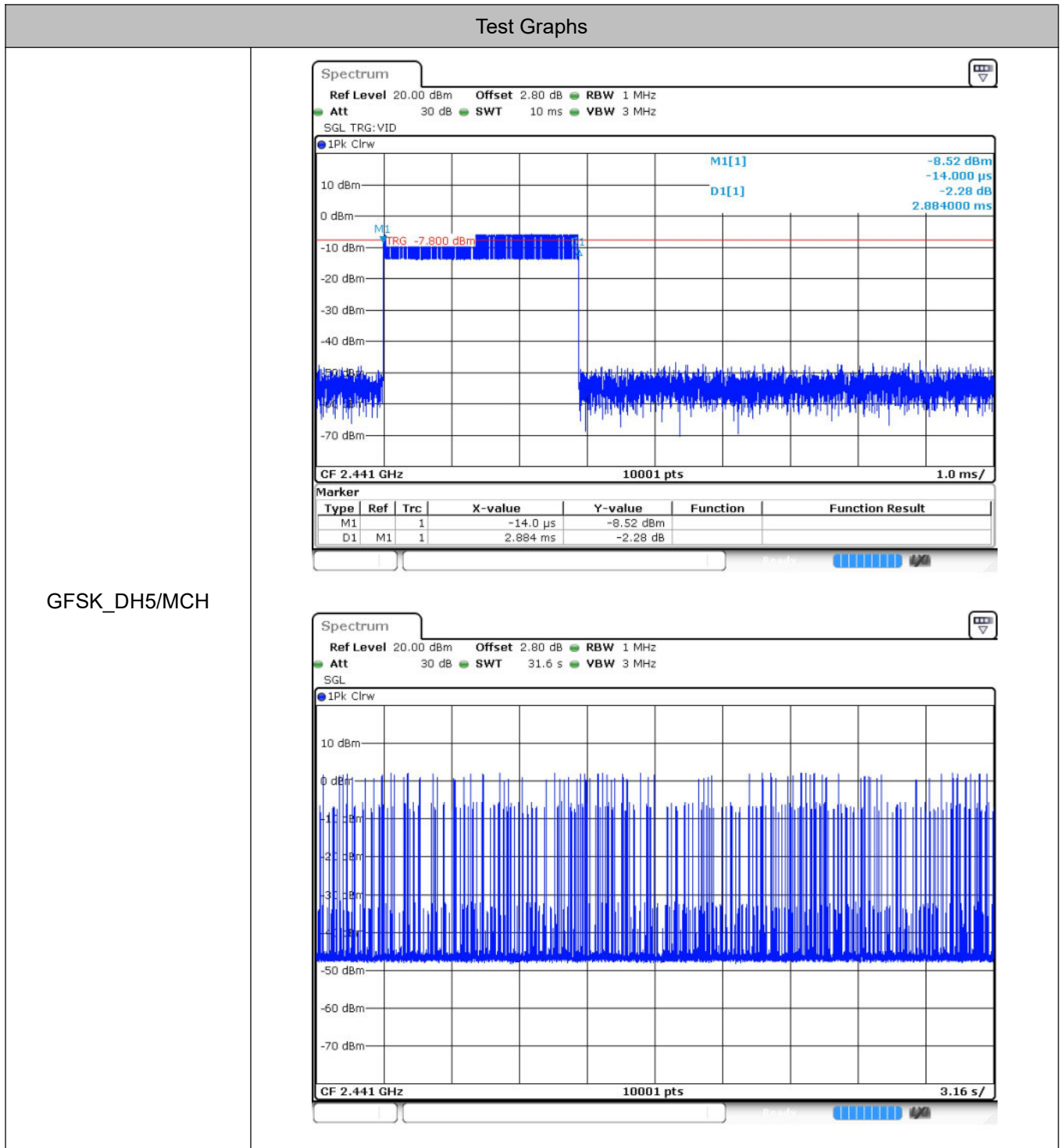


6 Dwell Time

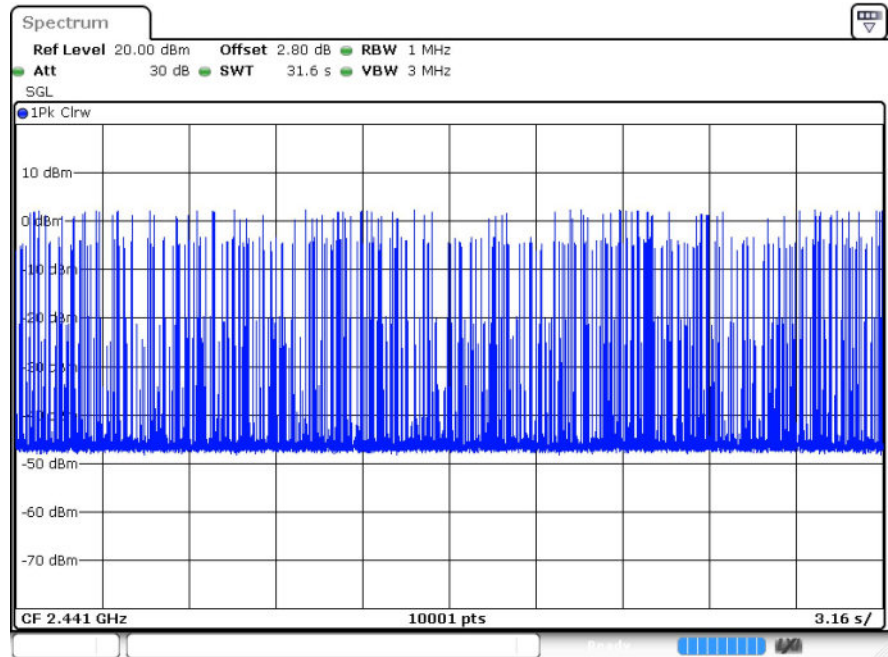
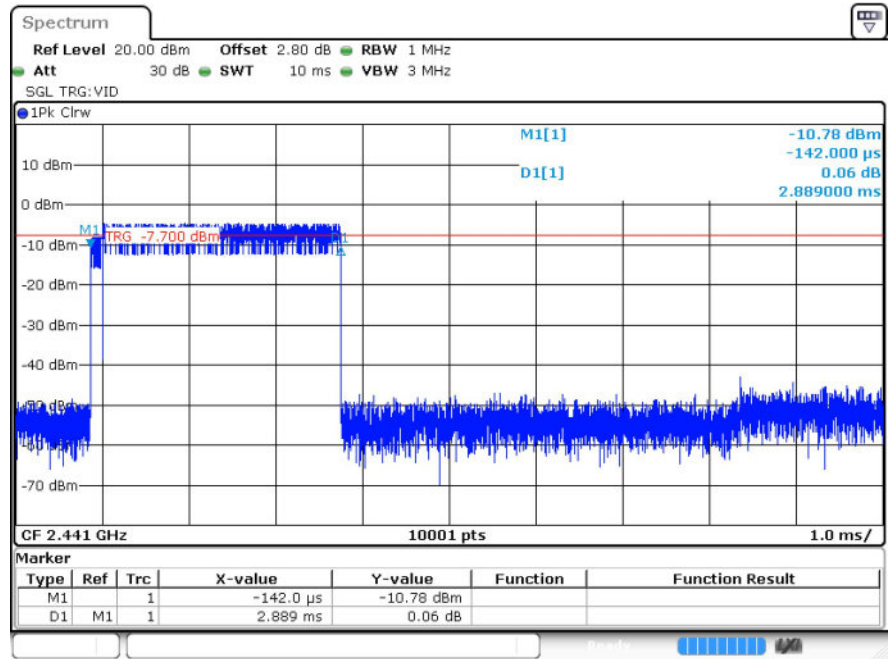
6.1 Test Result

Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.884	96	276.864	0.4	Pass
$\pi/4$ DQPSK	2DH5	MCH	2.889	98	283.122	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	-42.67	-20	Pass
	MCH	-41.75	-20	Pass
	HCH	-41.8	-20	Pass
$\pi/4$ DQPSK	LCH	-40.87	-20	Pass
	MCH	-40.96	-20	Pass
	HCH	-41.23	-20	Pass

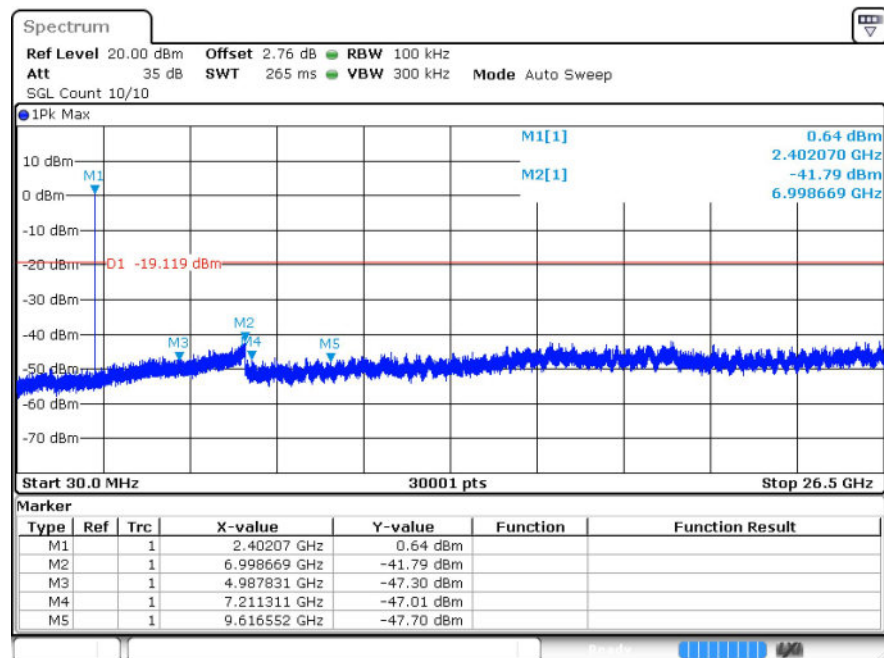
7.2 Test Graphs

GFSK_LCH_Graphs

Pref

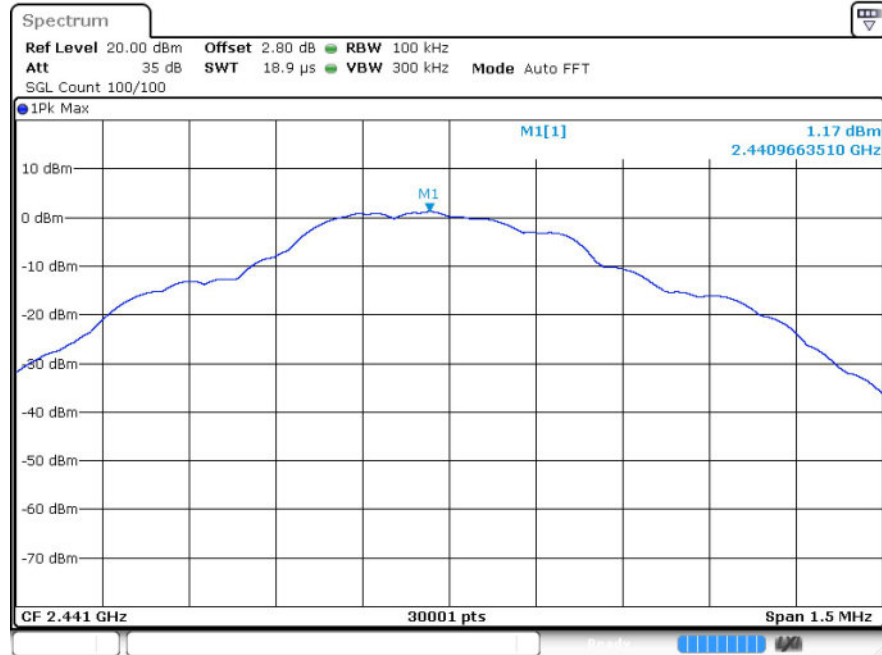


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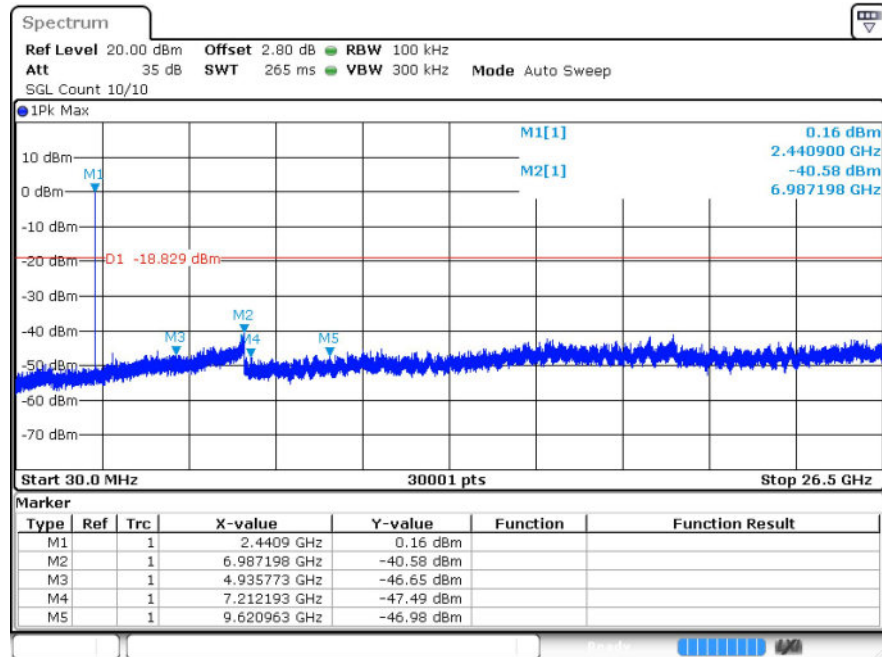


GFSK_MCH_Graphs

Pref

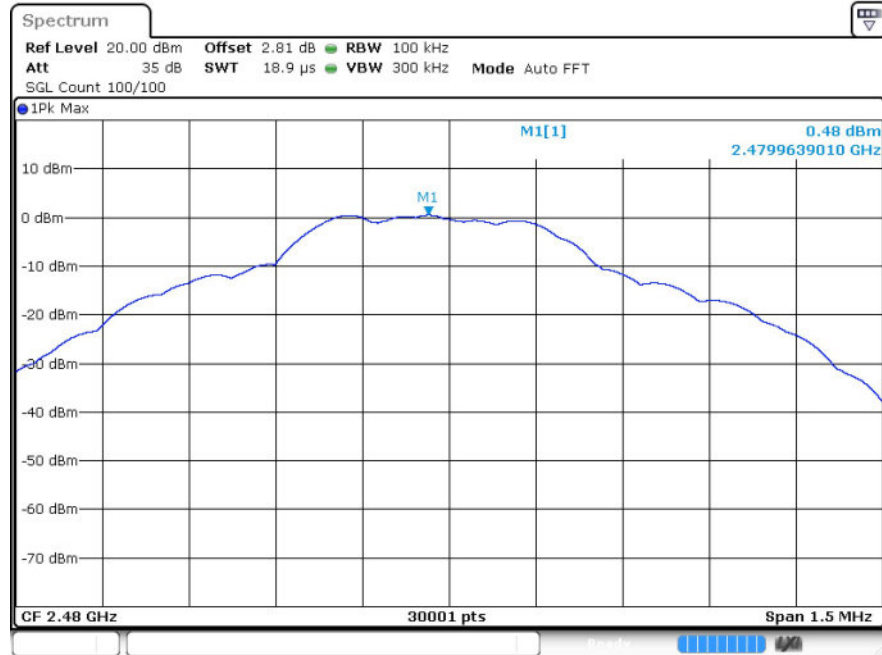


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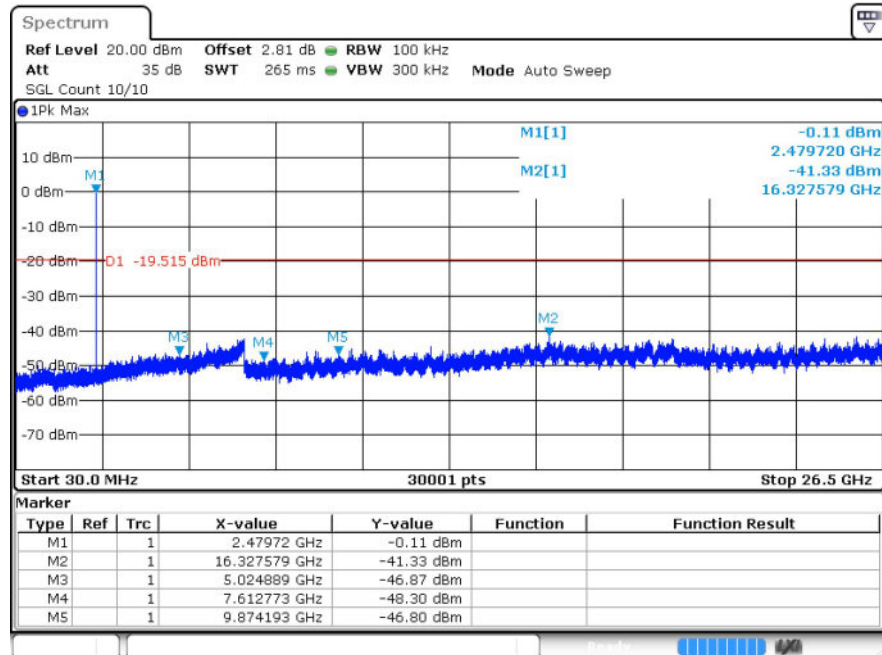


GFSK_HCH_Graphs

Pref

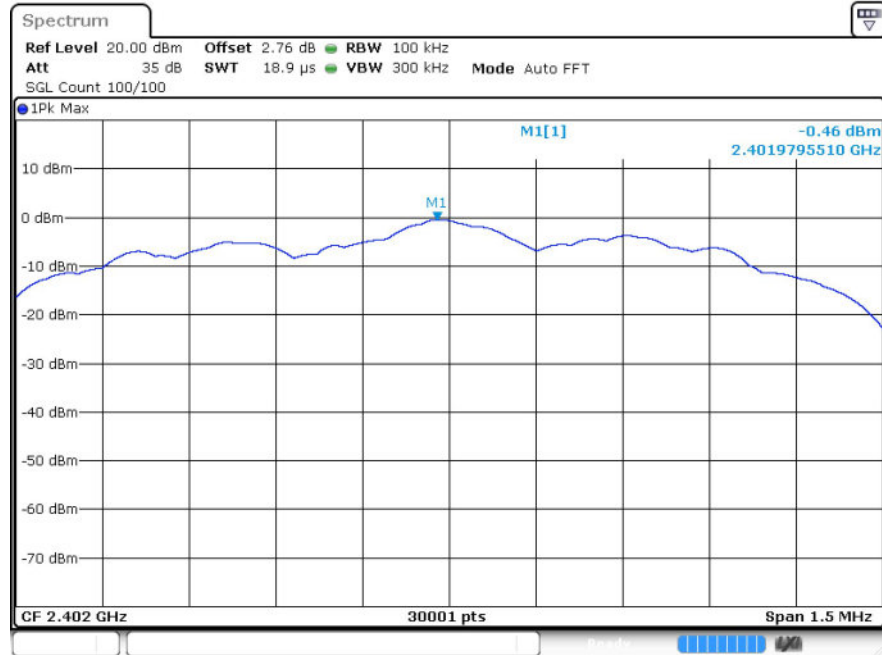


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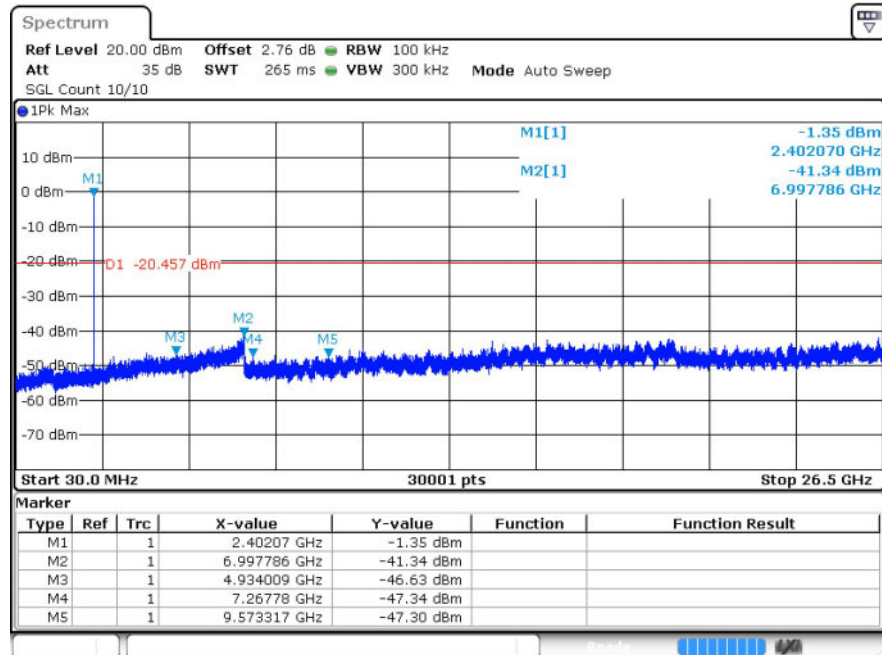


$\pi/4$ DQPSK_LCH_Graphs

Pref

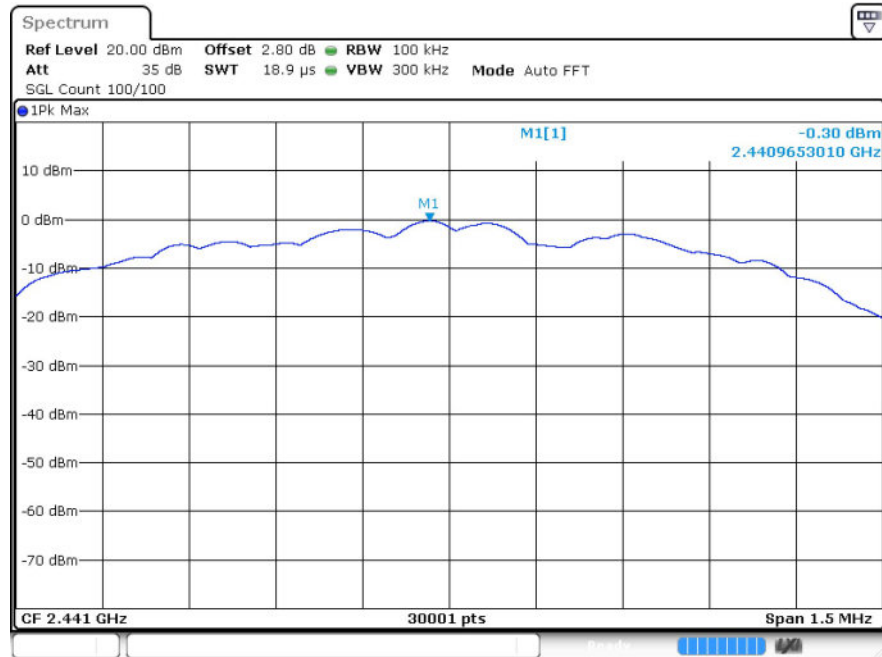


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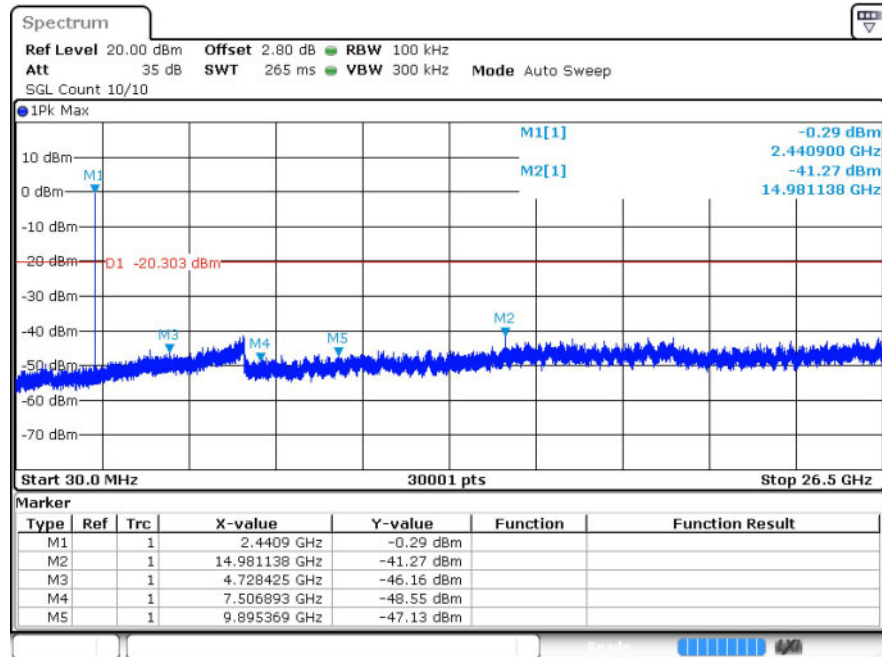


$\pi/4$ DQPSK_MCH_Graphs

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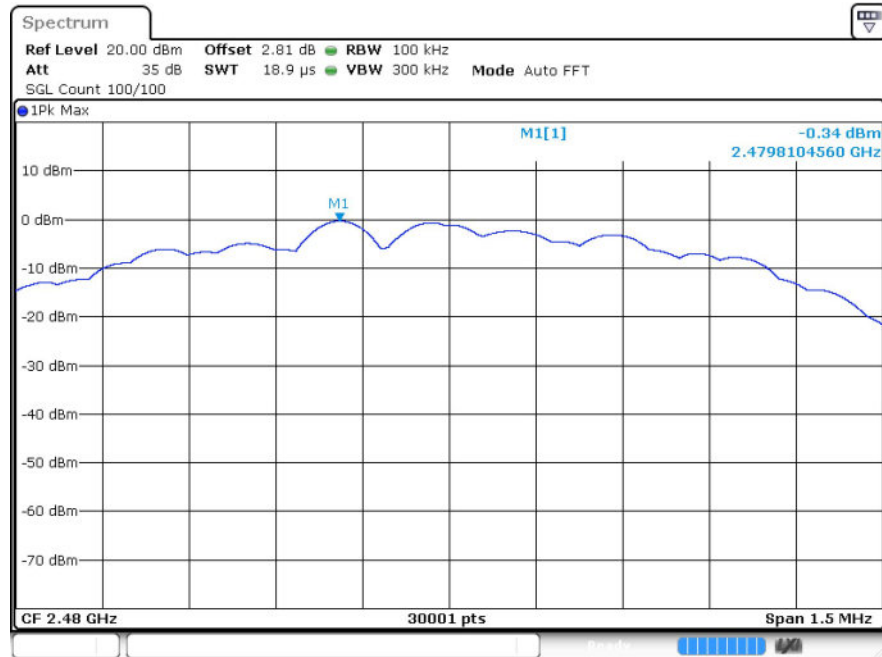


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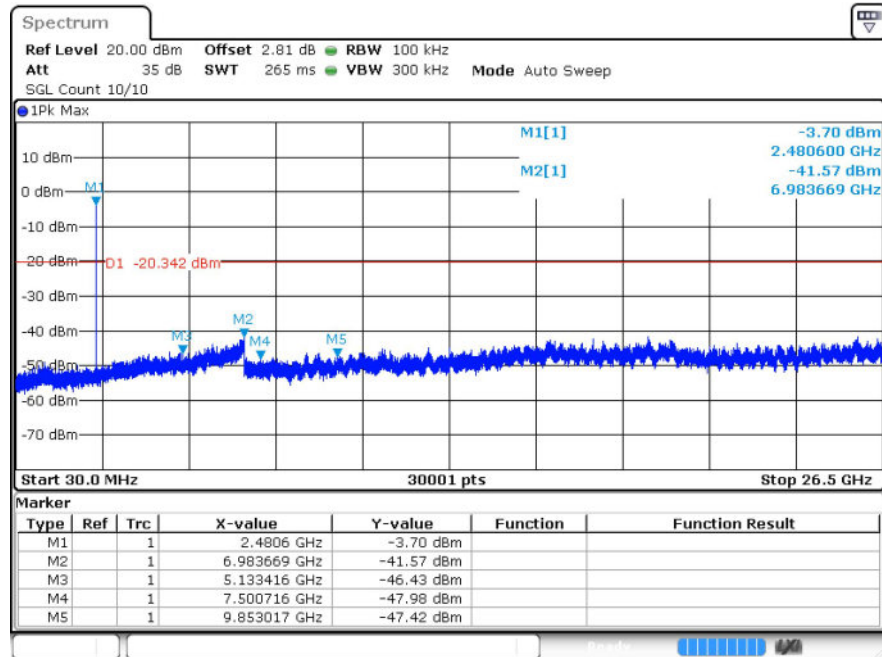


$\pi/4$ DQPSK_HCH_Graphs

Pref



Puw

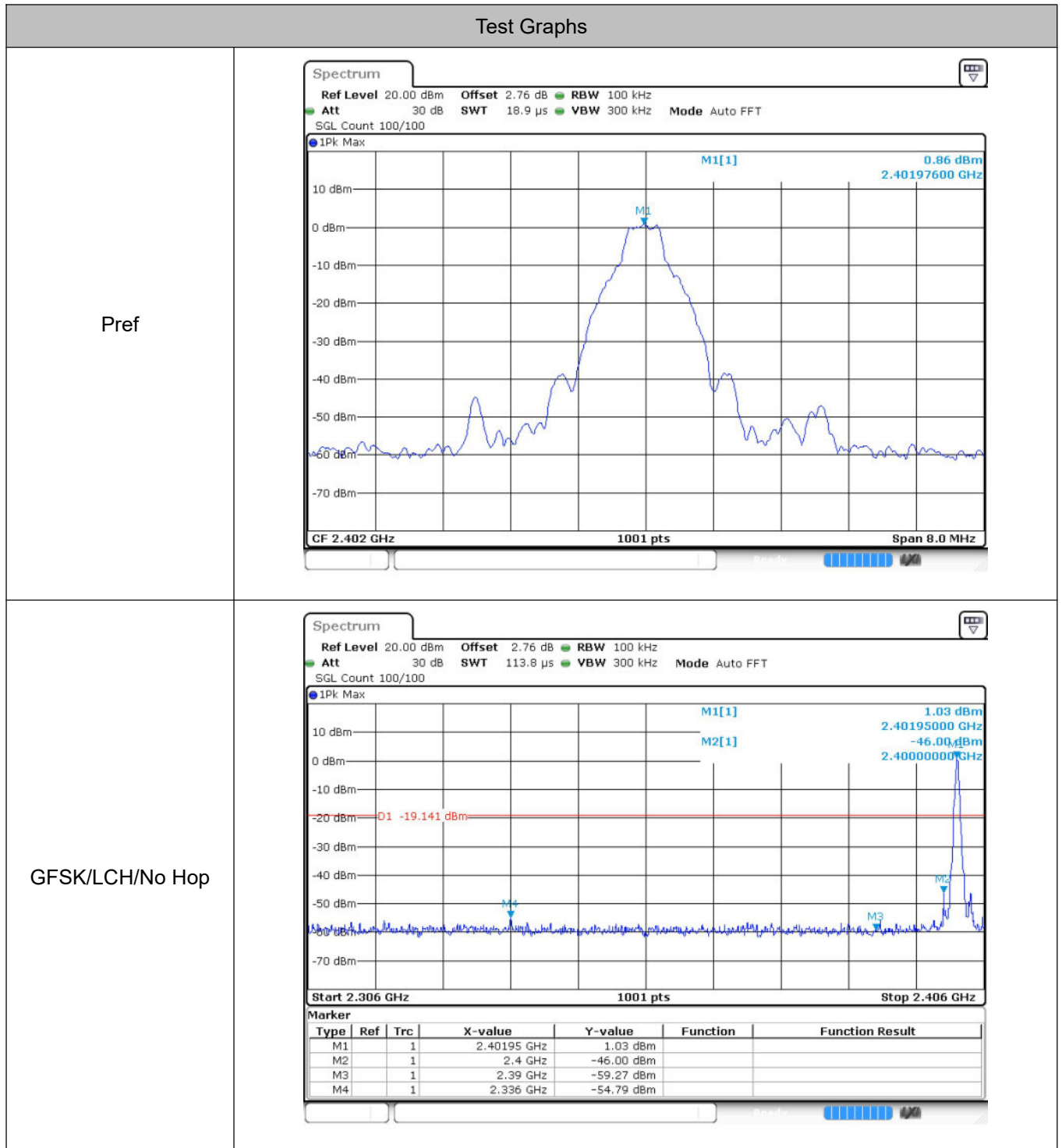


8 Band-edge for RF Conducted Emissions

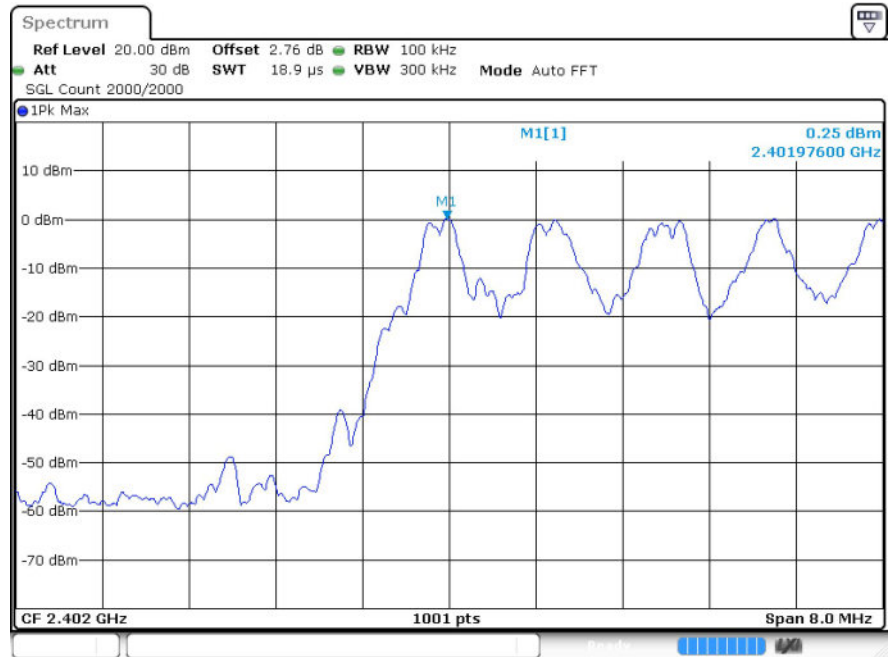
8.1 Test Result

Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	-55.65	-20	Pass
			On	-55.18	-20	Pass
	HCH	2480	Off	-55.76	-20	Pass
			On	-51.97	-20	Pass
$\pi/4$ DQPSK	LCH	2402	Off	-54.66	-20	Pass
			On	-53.06	-20	Pass
	HCH	2480	Off	-48.7	-20	Pass
			On	-49.39	-20	Pass

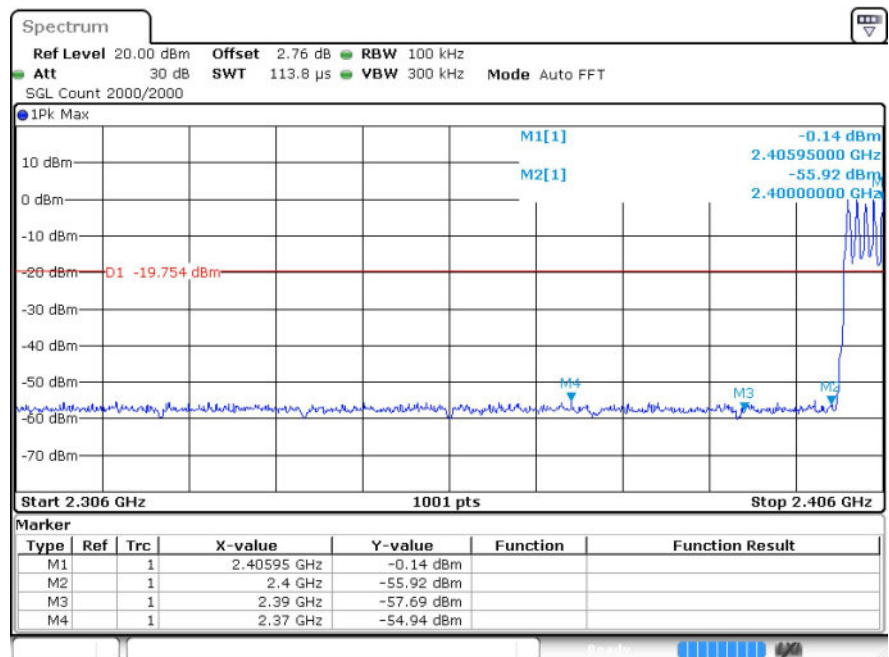
8.2 Test Graphs



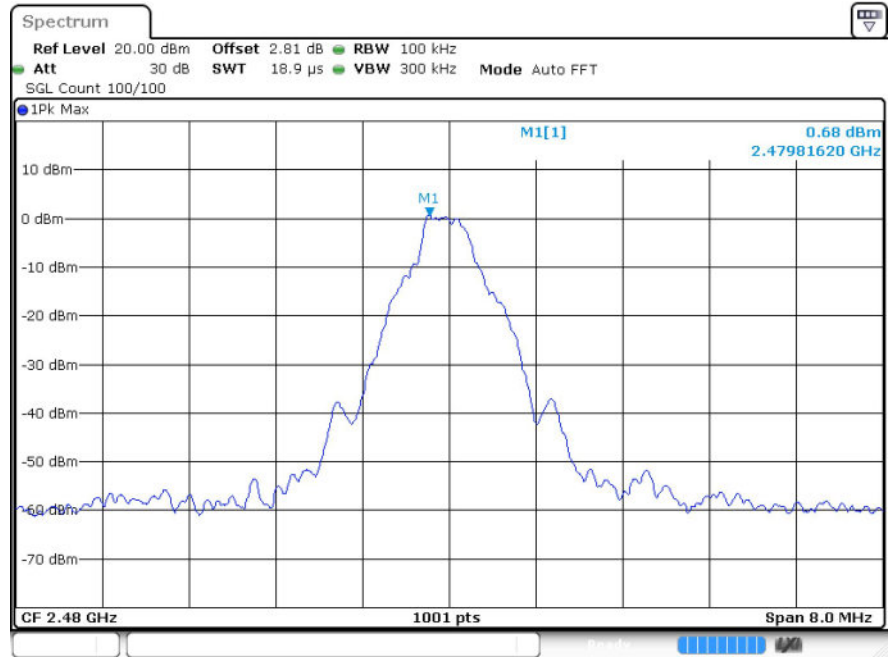
Ref



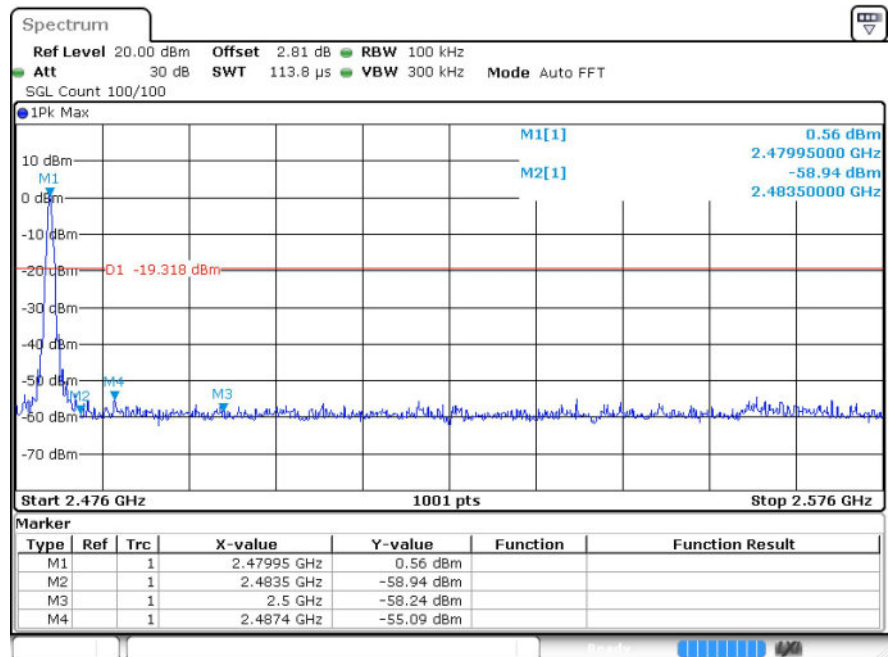
GFSK/LCH/Hop



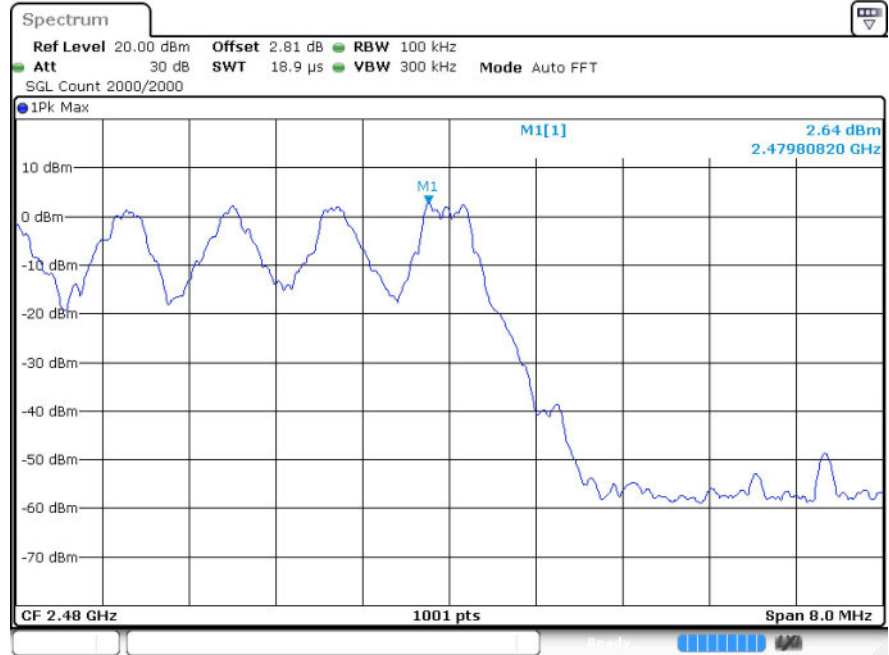
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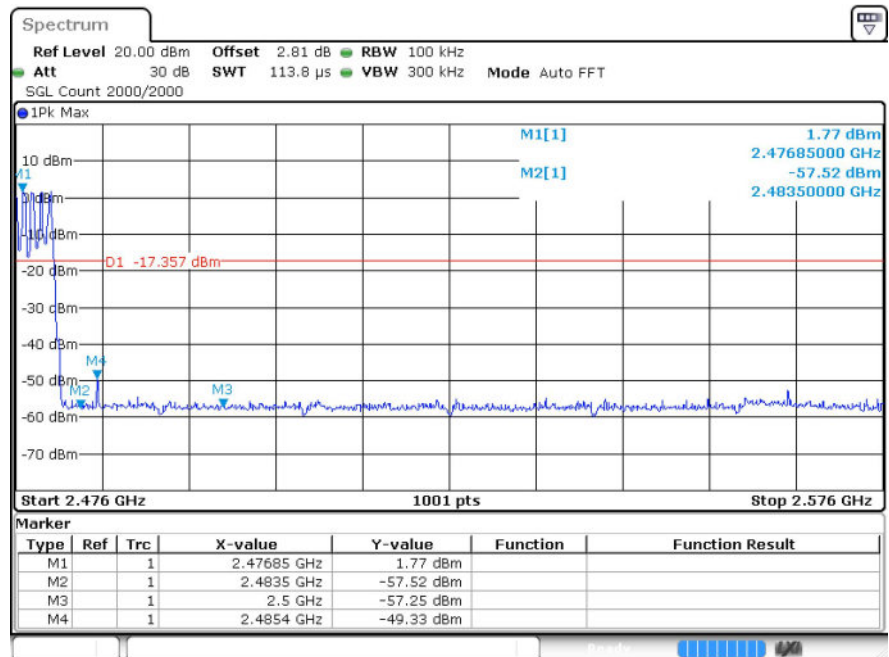
GFSK/HCH/No Hop



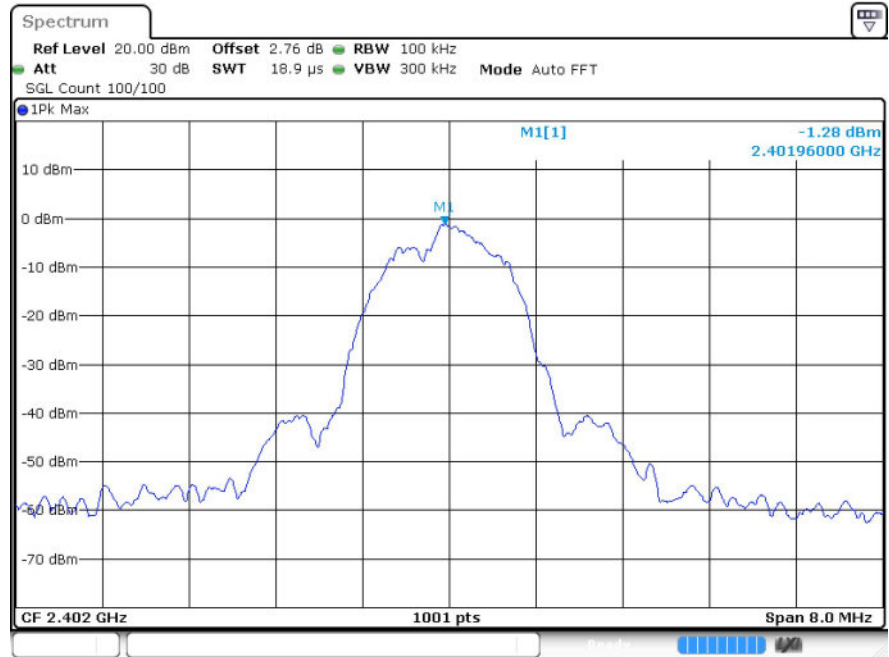
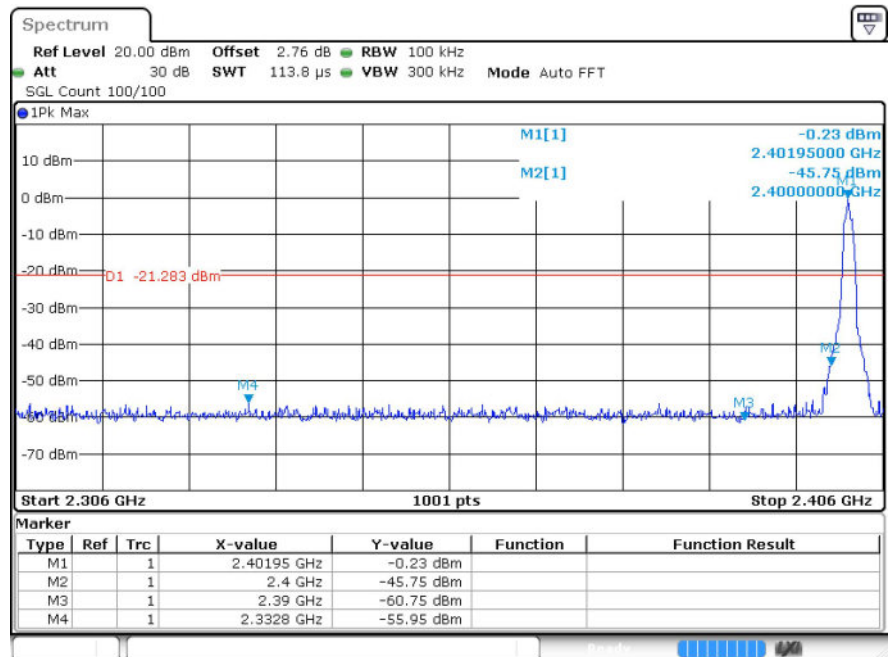
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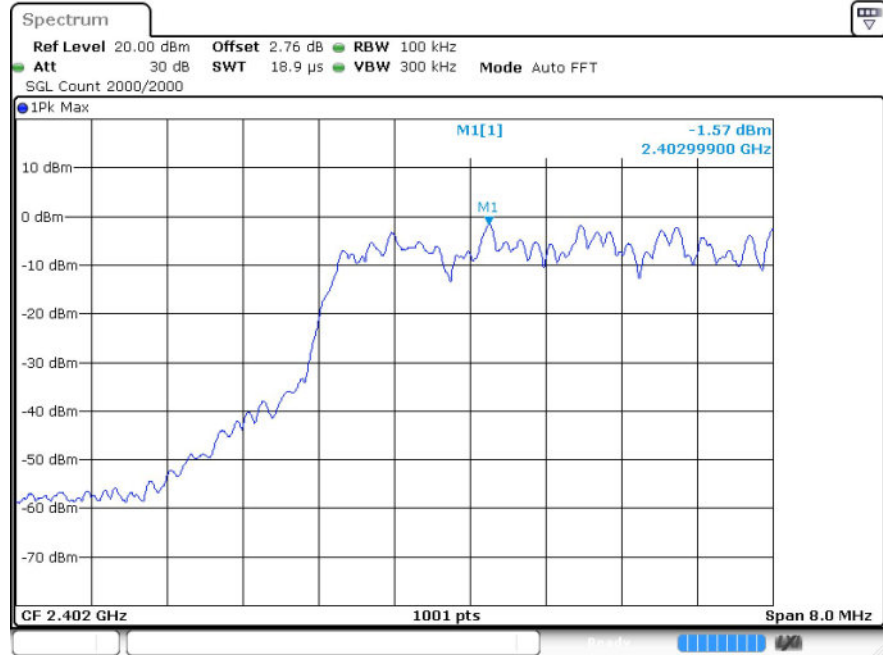
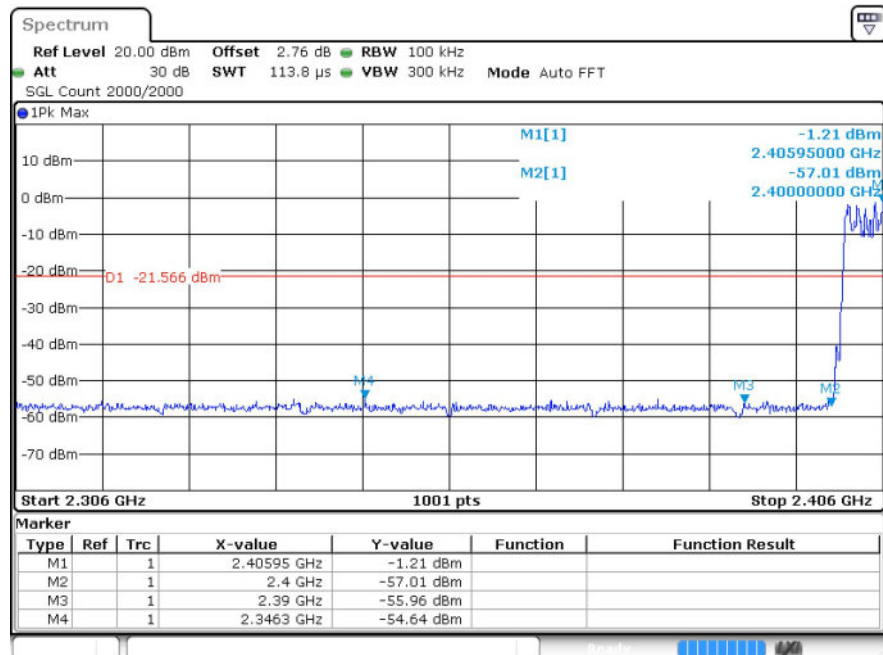
GFSK/HCH/Hop



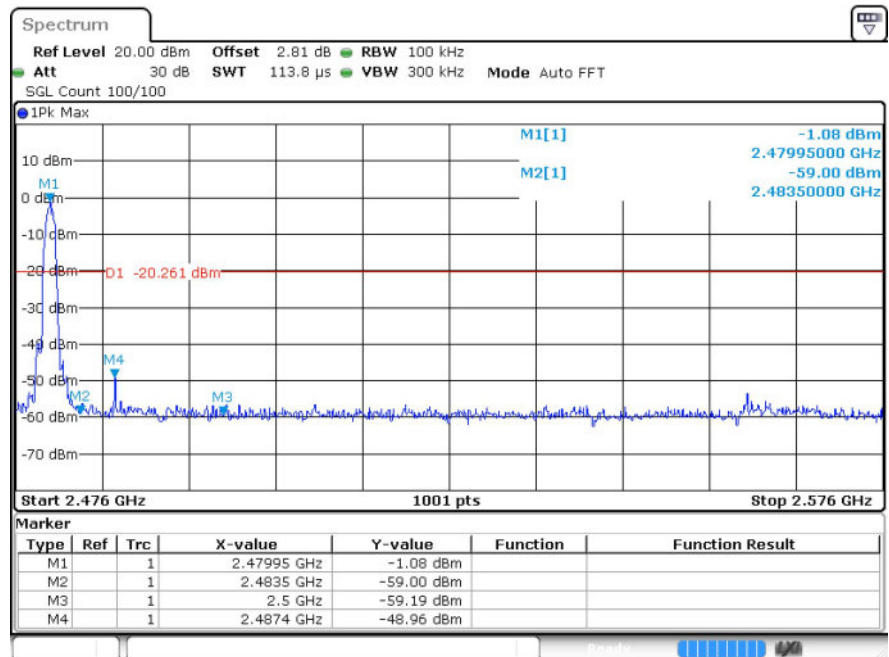
Ref


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


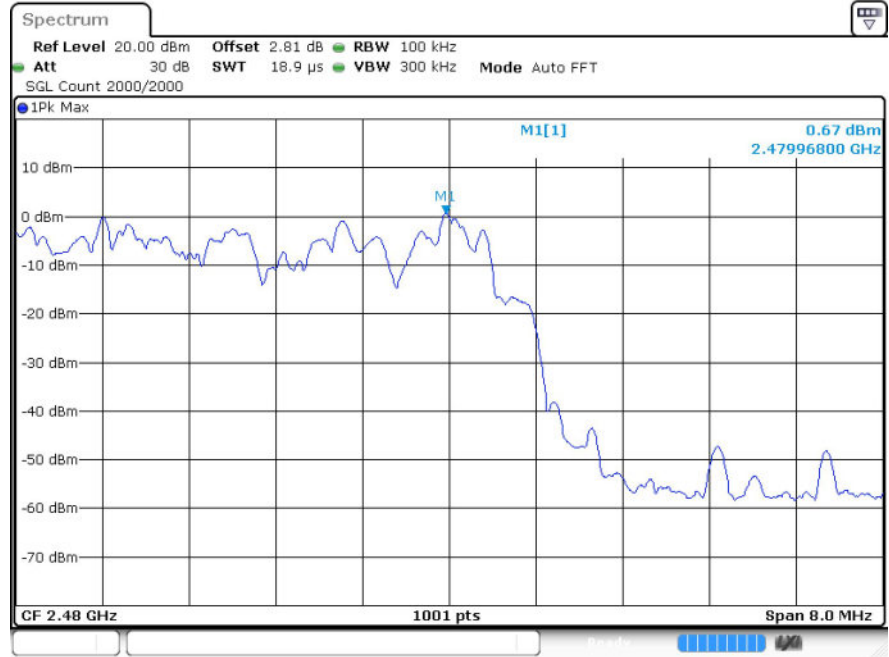
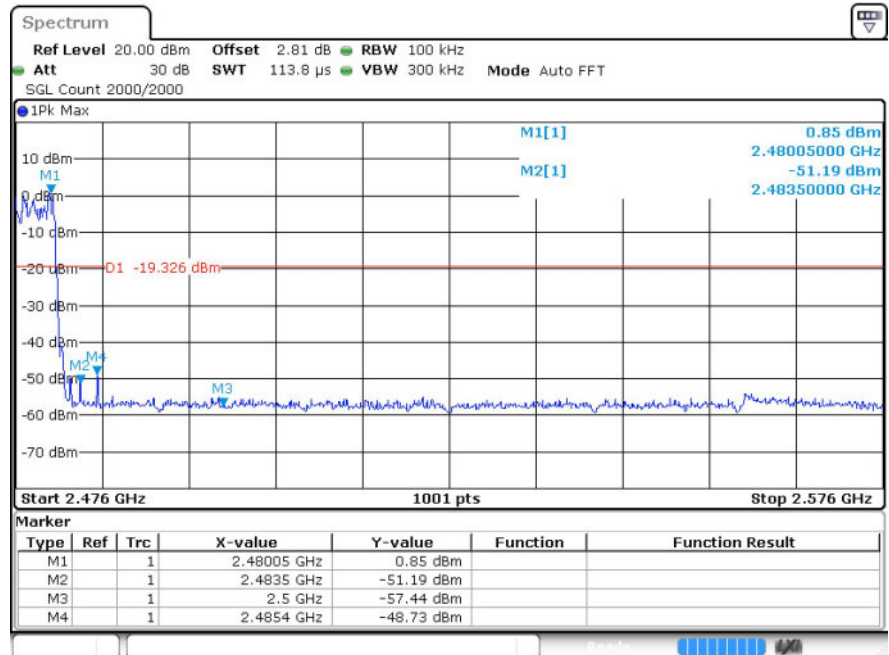
Ref


 $\pi/4$ DQPSK/LCH/Hop


Ref


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


Ref


 $\pi/4$ DQPSK/HCH/Hop


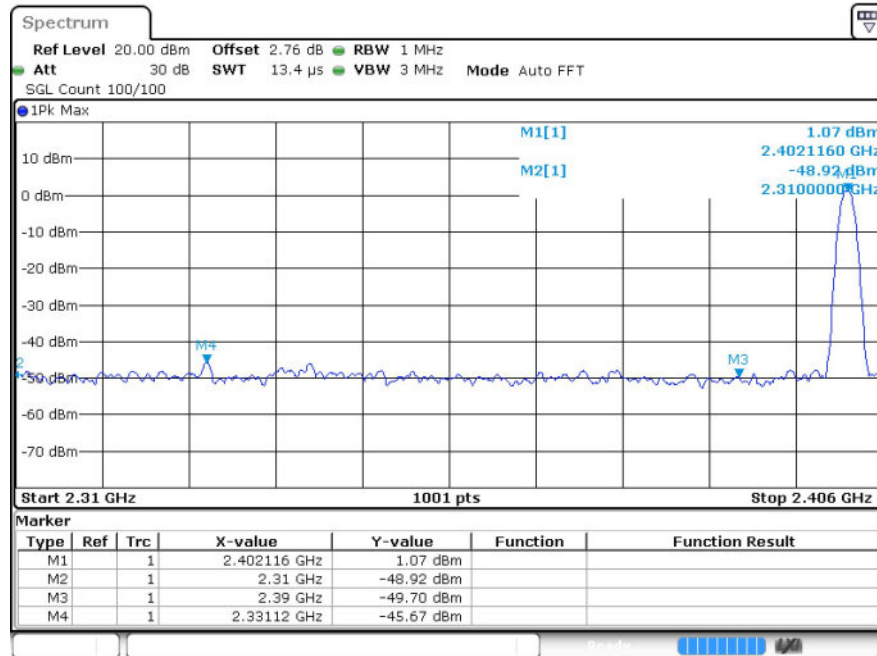
9 Restrict-band band-edge measurements

9.1 Test Result

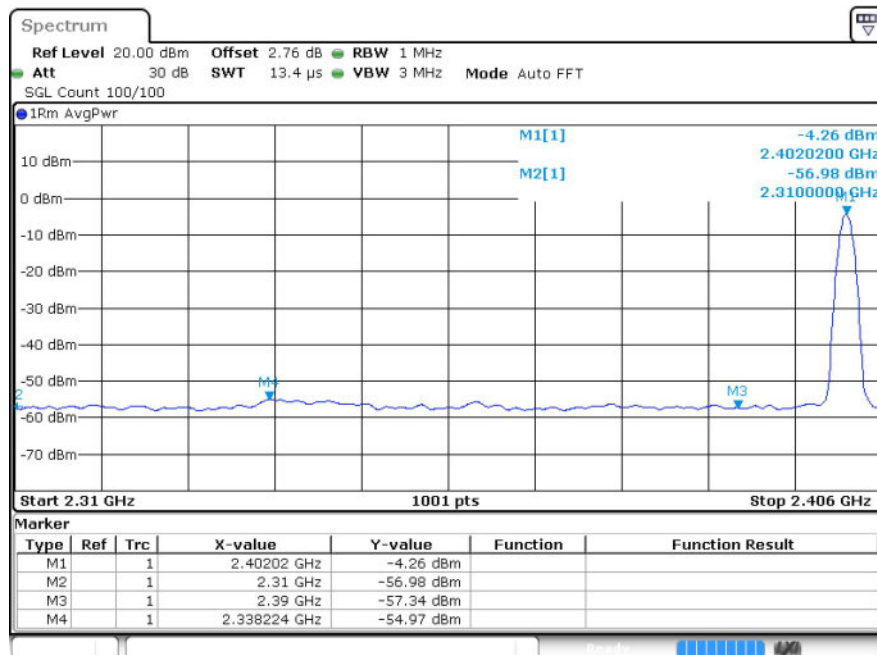
Test Mode	Hopping	Freq.	Power [dBm]	Gain	Duty Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-48.92	2	-	48.34	PEAK	74	Pass
	Off	2310.0	-56.98	2	5.06	45.34	AV	54	Pass
	Off	2331.12	-45.66	2	-	51.6	PEAK	74	Pass
	Off	2338.224	-54.97	2	5.06	47.35	AV	54	Pass
	Off	2390.0	-49.7	2	-	47.56	PEAK	74	Pass
	Off	2390.0	-57.34	2	5.06	44.98	AV	54	Pass
	Off	2483.5	-48.27	2	-	48.99	PEAK	74	Pass
	Off	2483.5	-56.96	2	5.06	45.36	AV	54	Pass
	Off	2485.336	-46.93	2	-	50.33	PEAK	74	Pass
	Off	2490.208	-55.49	2	5.06	46.83	AV	54	Pass
	Off	2500.0	-49.7	2	-	47.56	PEAK	74	Pass
	Off	2500.0	-56.77	2	5.06	45.55	AV	54	Pass
$\pi/4$ DQPSK	Off	2310.0	-51.26	2	-	46	PEAK	74	Pass
	Off	2310.0	-56.92	2	4.95	45.29	AV	54	Pass
	Off	2338.32	-46.04	2	-	51.22	PEAK	74	Pass
	Off	2338.032	-54.67	2	4.95	47.54	AV	54	Pass
	Off	2390.0	-48.84	2	-	48.42	PEAK	74	Pass
	Off	2390.0	-57.18	2	4.95	45.03	AV	54	Pass
	Off	2483.5	-49.89	2	-	47.37	PEAK	74	Pass
	Off	2483.5	-55.69	2	4.96	46.53	AV	54	Pass
	Off	2494.48	-47.11	2	-	50.15	PEAK	74	Pass
	Off	2487.472	-55.51	2	4.96	46.71	AV	54	Pass
	Off	2500.0	-48.71	2	-	48.55	PEAK	74	Pass
	Off	2500.0	-56.71	2	4.96	45.51	AV	54	Pass

9.2 Test Graphs

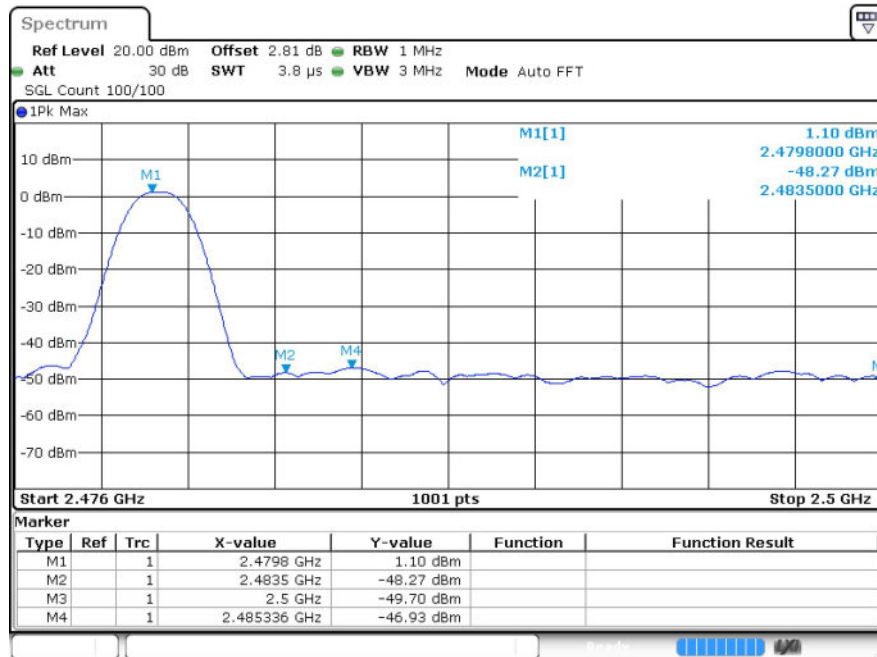
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



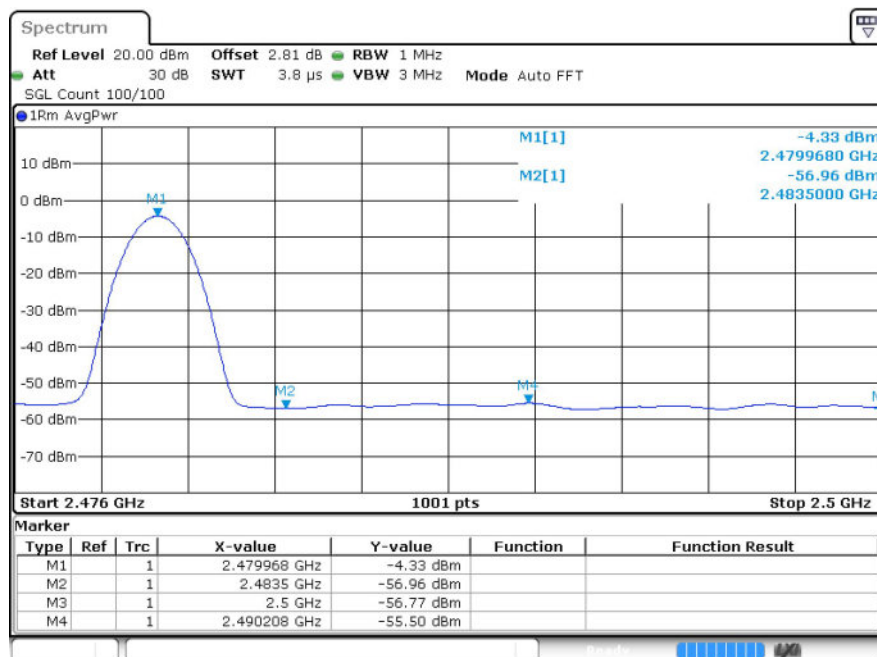
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



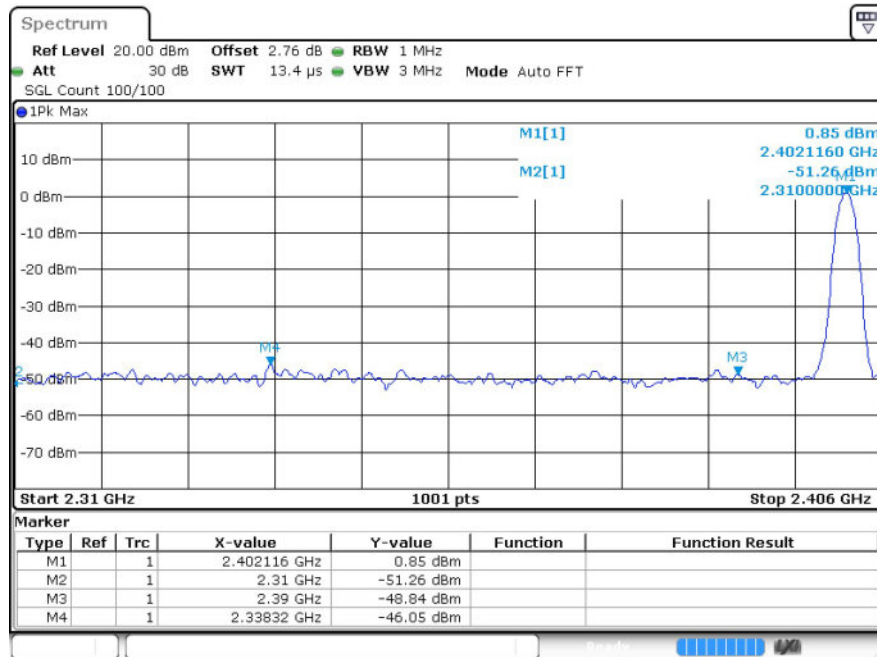
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



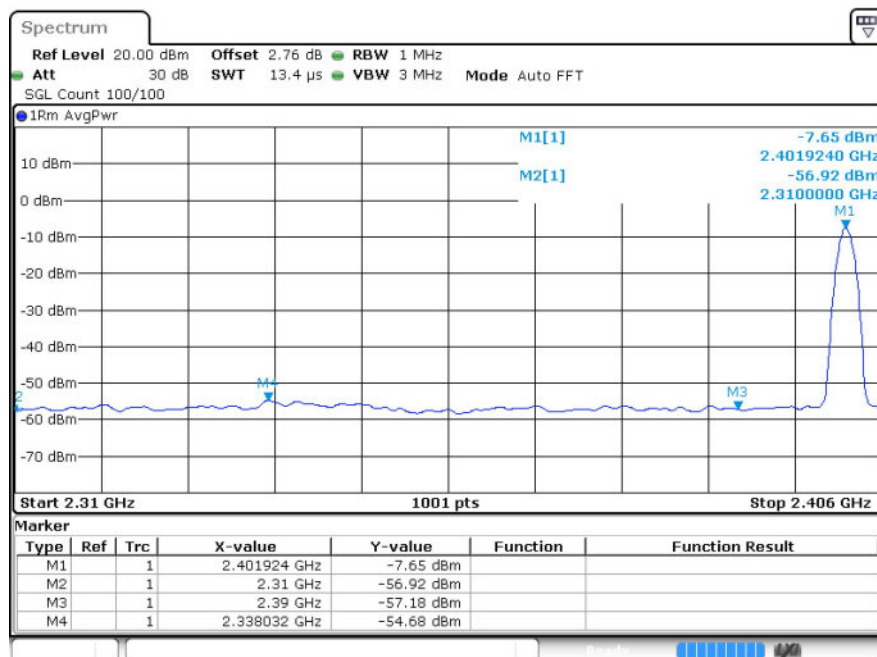
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



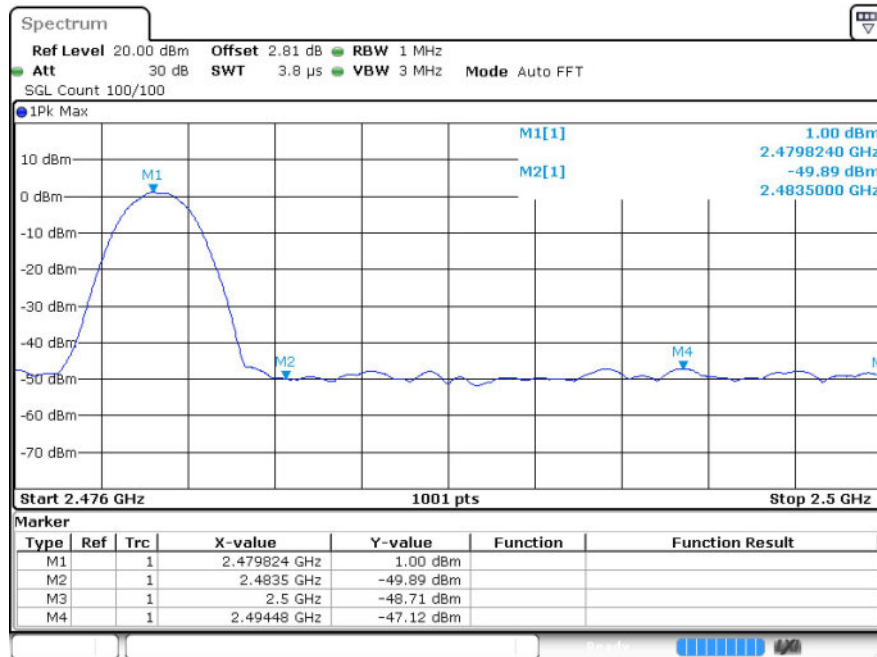
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (Low Channel)



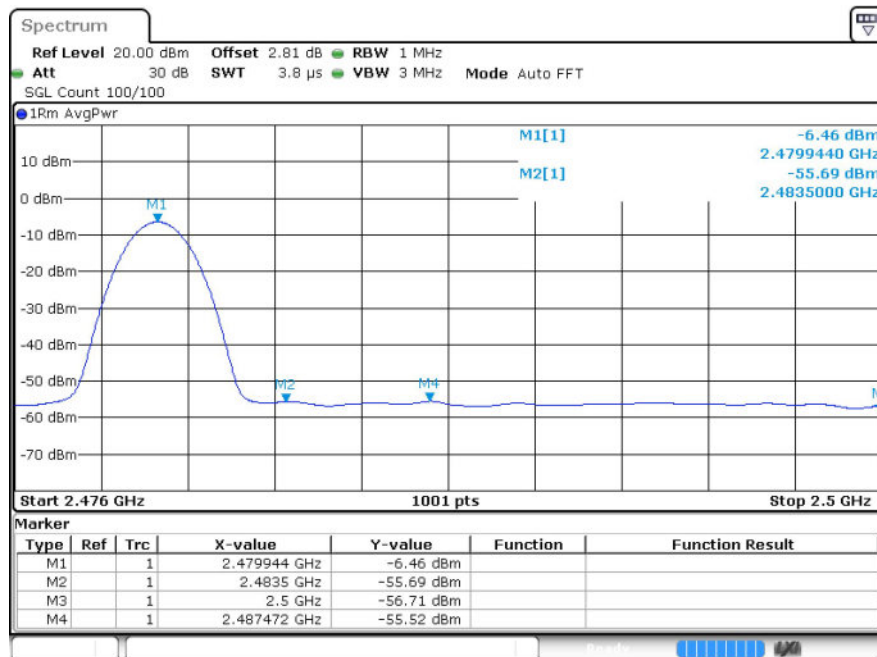
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (Low Channel)



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---