

Appendix A

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

Product Name: AI Speech Processor

Trade Mark: OEQ®

Test Model: D8

Environmental Conditions

Temperature:	25.8°C
Relative Humidity:	52.2%
ATM Pressure:	101Kpa
Test Engineer:	Leon.yi
Supervised by:	Sean She

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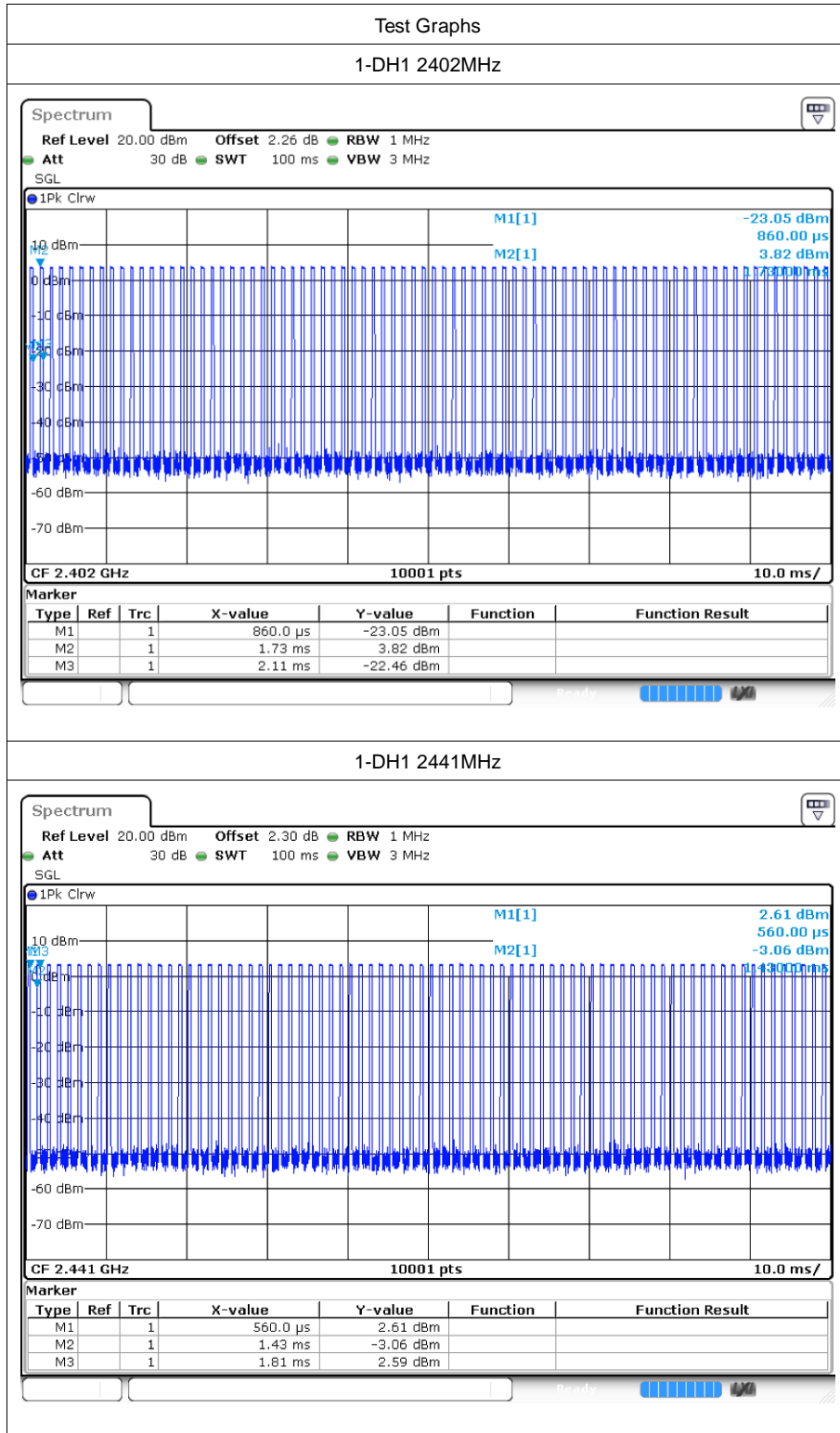
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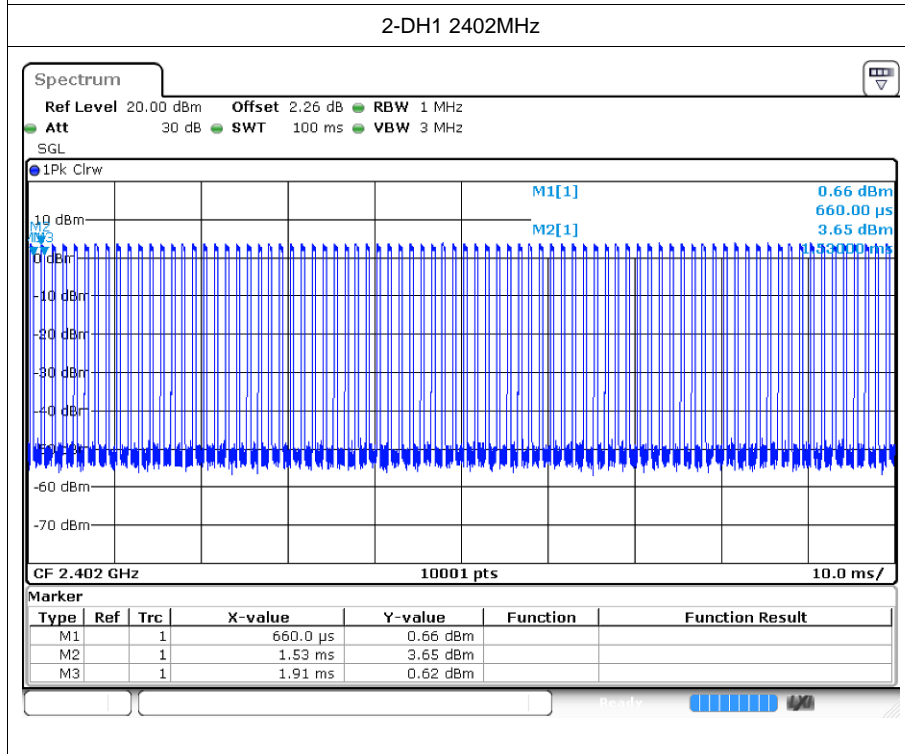
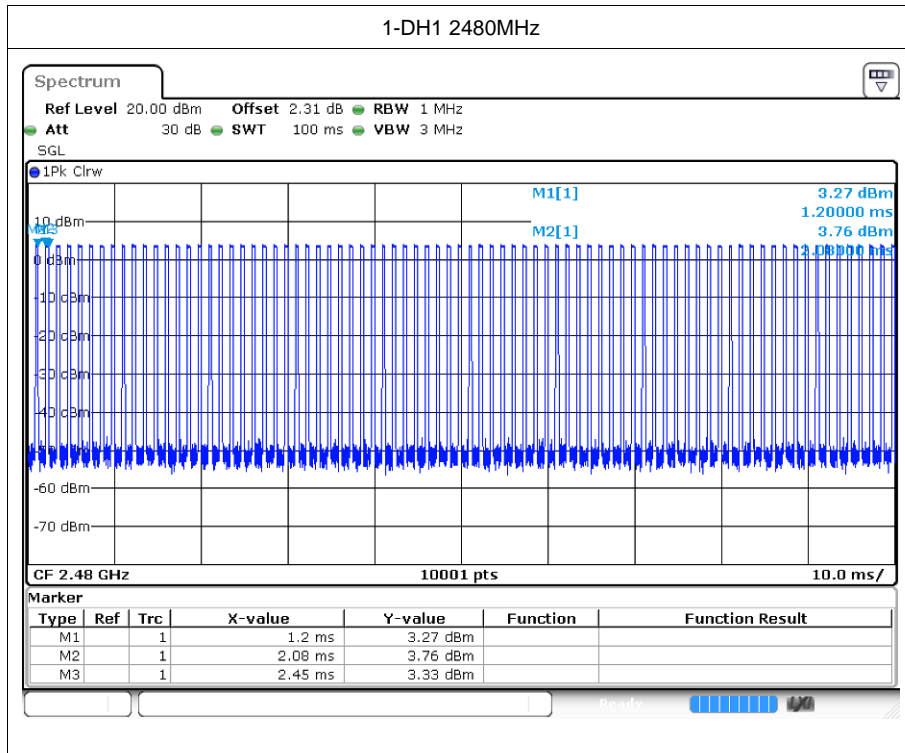
1 Duty Cycle

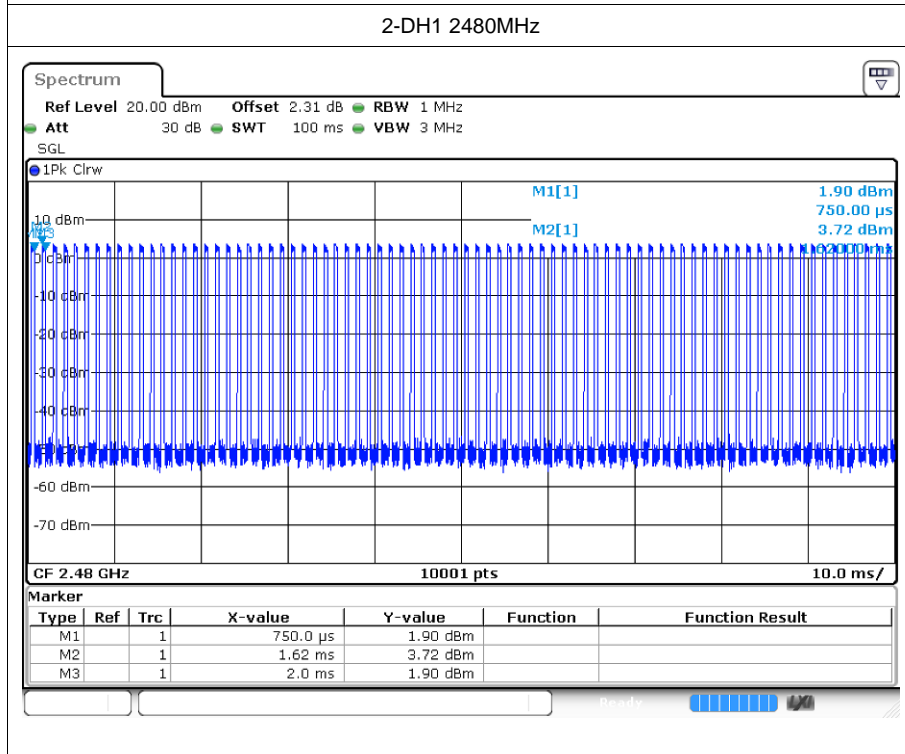
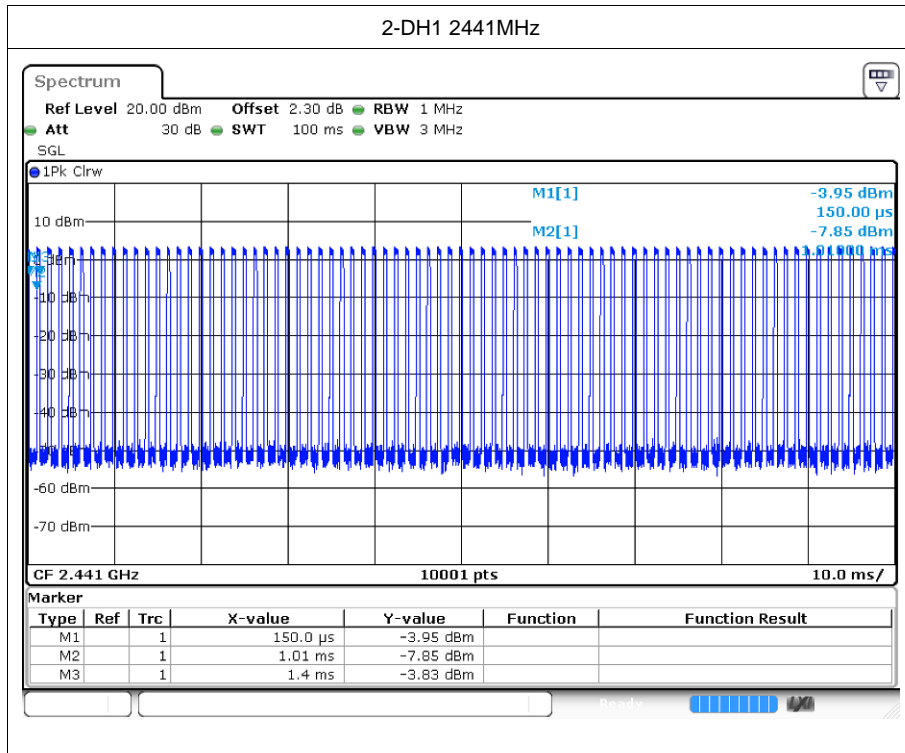
1.1 Test Result

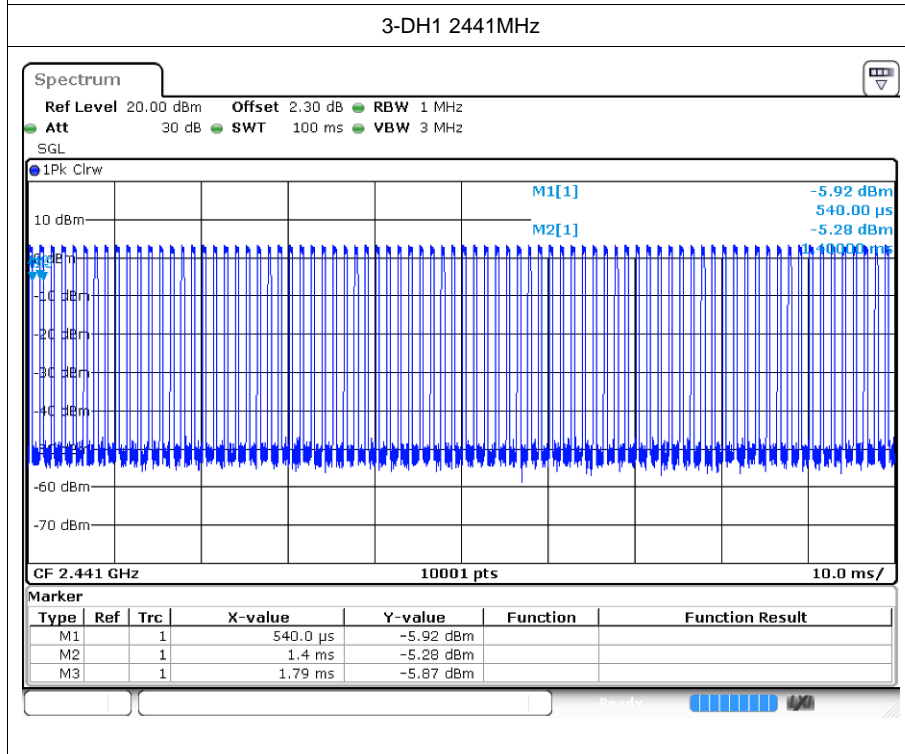
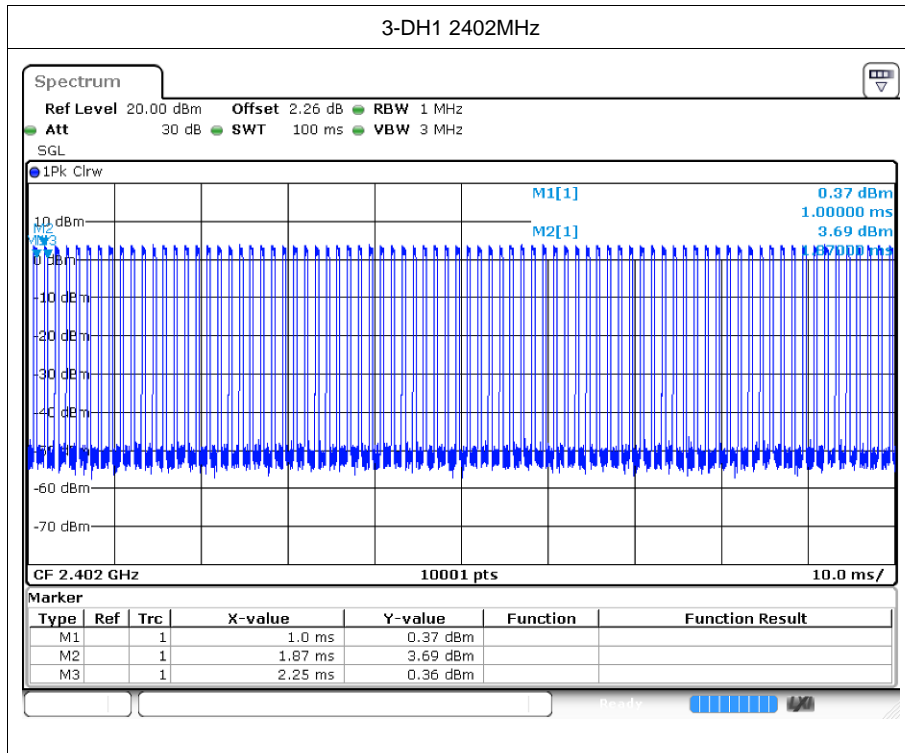
Mode	Frequency (MHz)	Duty Cycle (%)	1/T (kHz)
1-DH1	2402	31.2	2.63
1-DH1	2441	31.2	2.63
1-DH1	2480	30.71	2.7
2-DH1	2402	31.2	2.63
2-DH1	2441	32.01	2.56
2-DH1	2480	31.2	2.63
3-DH1	2402	31.2	2.63
3-DH1	2441	32	2.56
3-DH1	2480	31.21	2.63

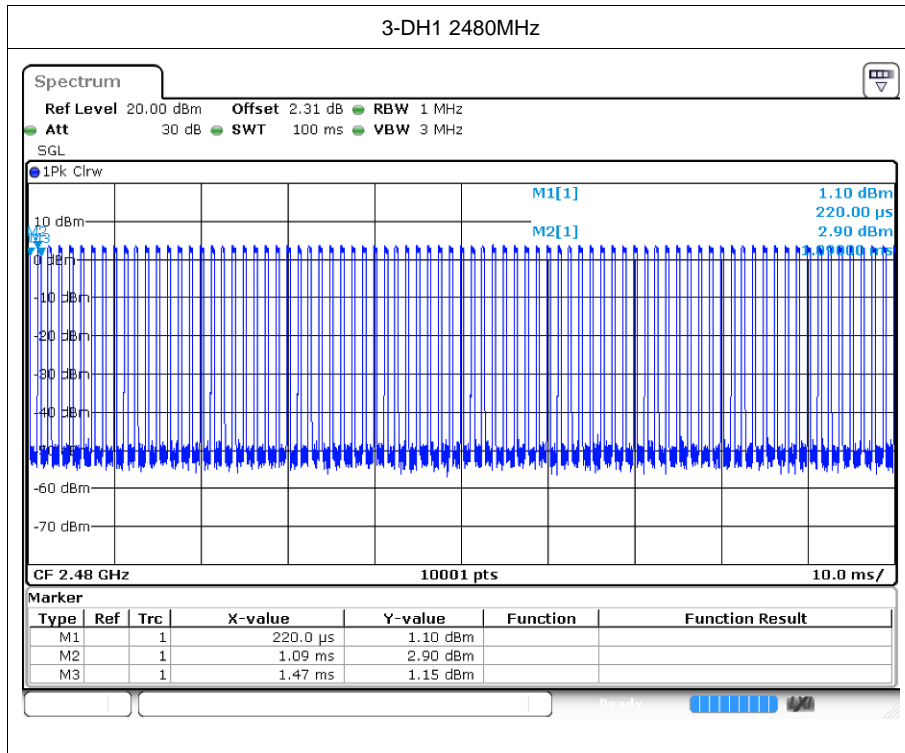
1.2 Test Graphs









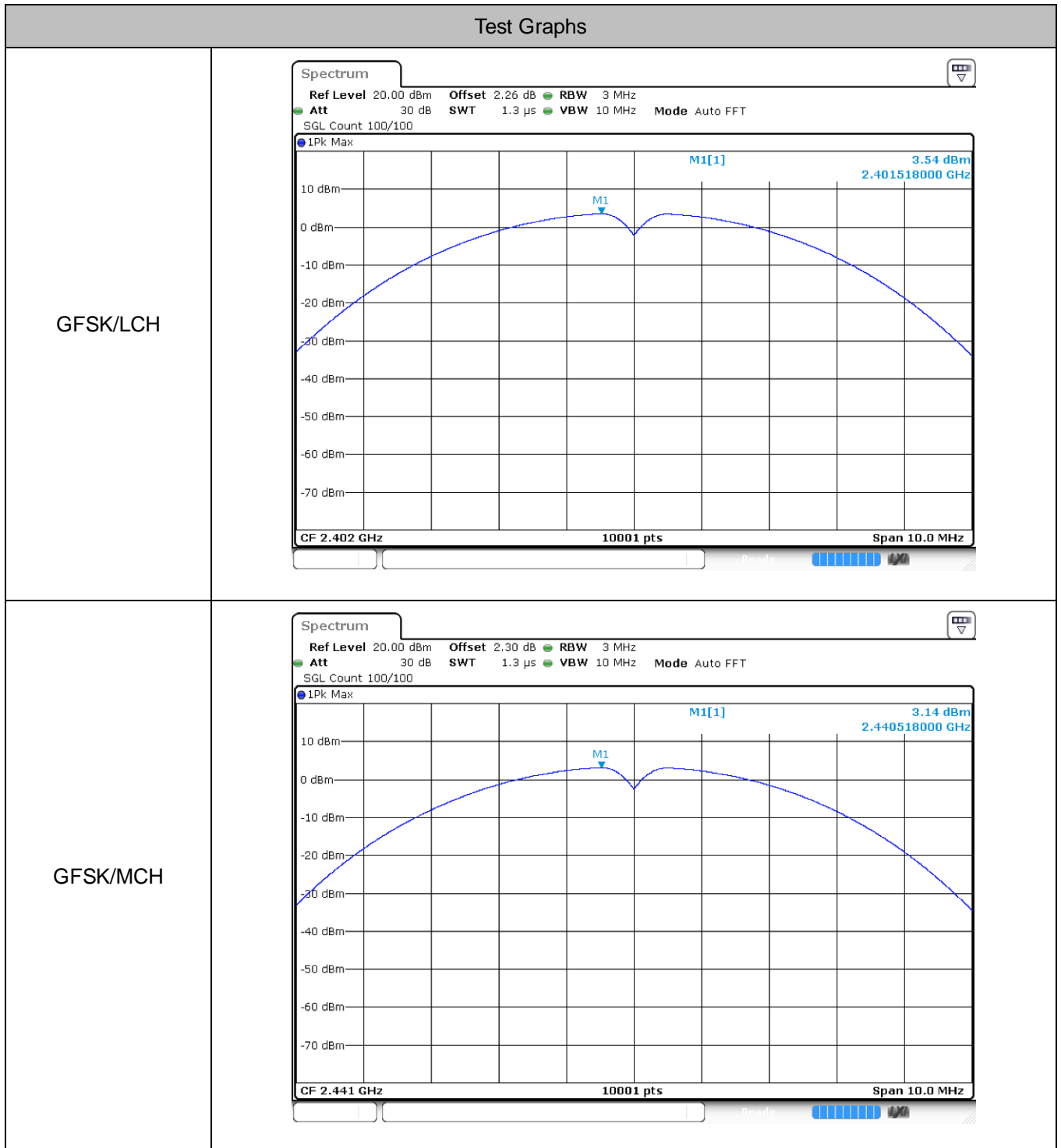


2 Maximum Conducted Peak Output Power

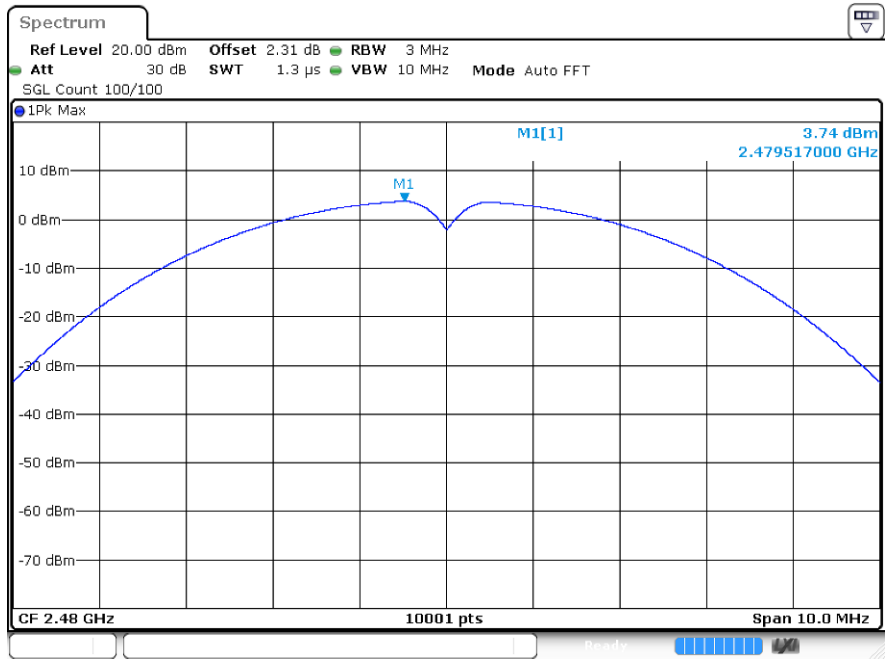
2.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.54	21	Pass
	MCH	3.14	21	Pass
	HCH	3.74	21	Pass
$\pi/4$ DQPSK	LCH	3.59	21	Pass
	MCH	3.02	21	Pass
	HCH	3.38	21	Pass
8DPSK	LCH	3.42	21	Pass
	MCH	3.27	21	Pass
	HCH	3.51	21	Pass

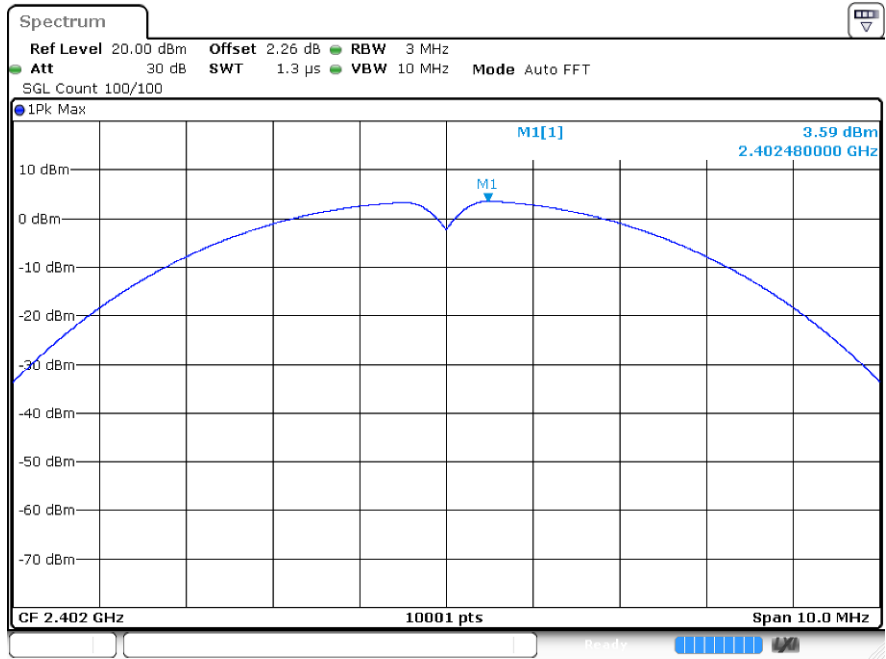
2.2 Test Graphs



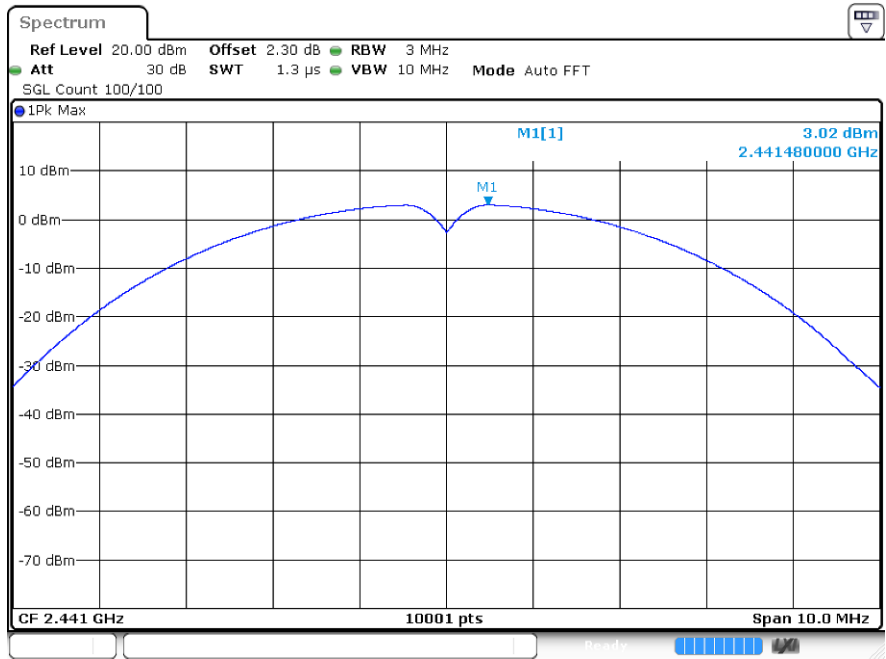
GFSK/HCH



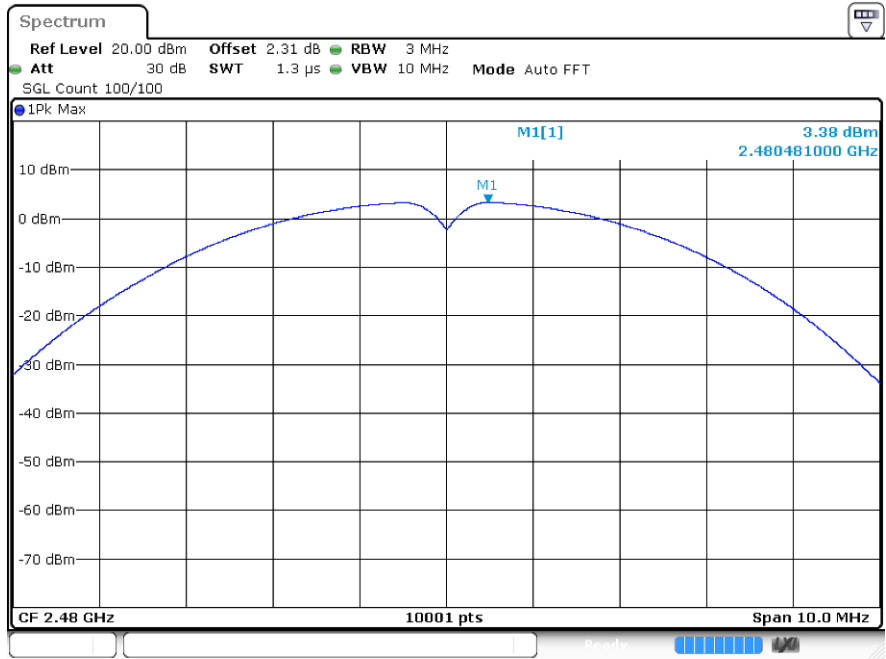
π /4DQPSK/LCH



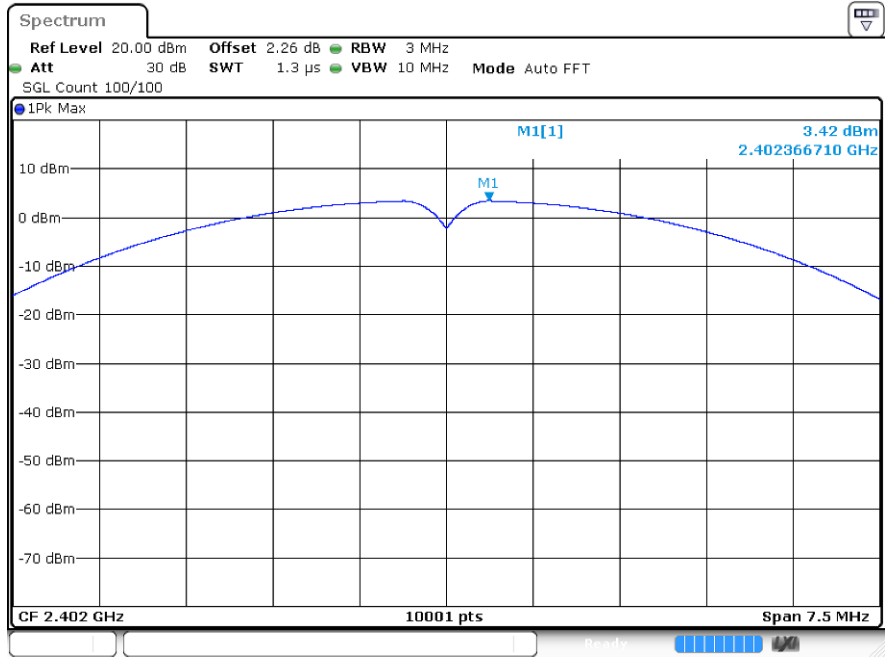
$\pi/4$ DQPSK/MCH



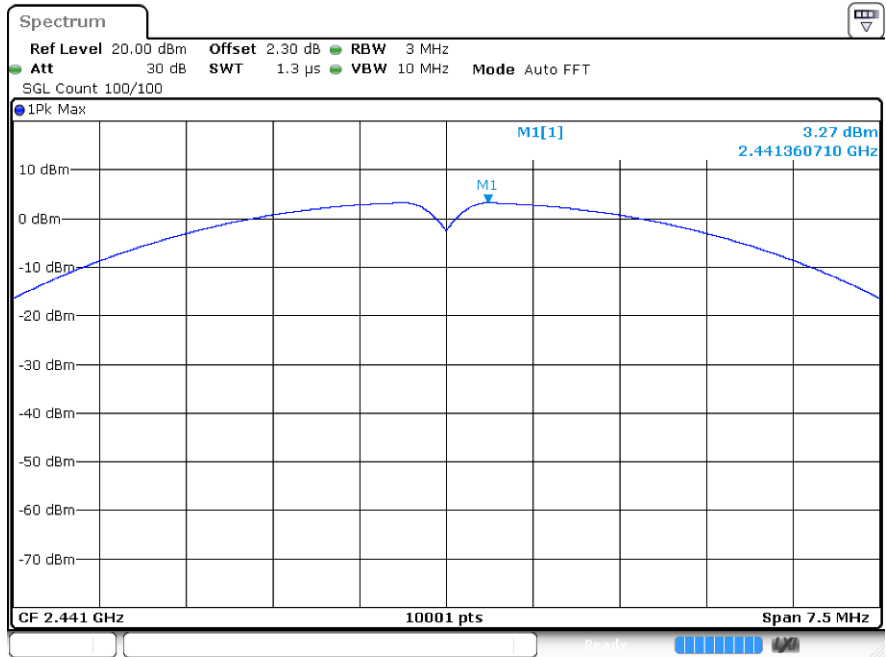
$\pi/4$ DQPSK/HCH



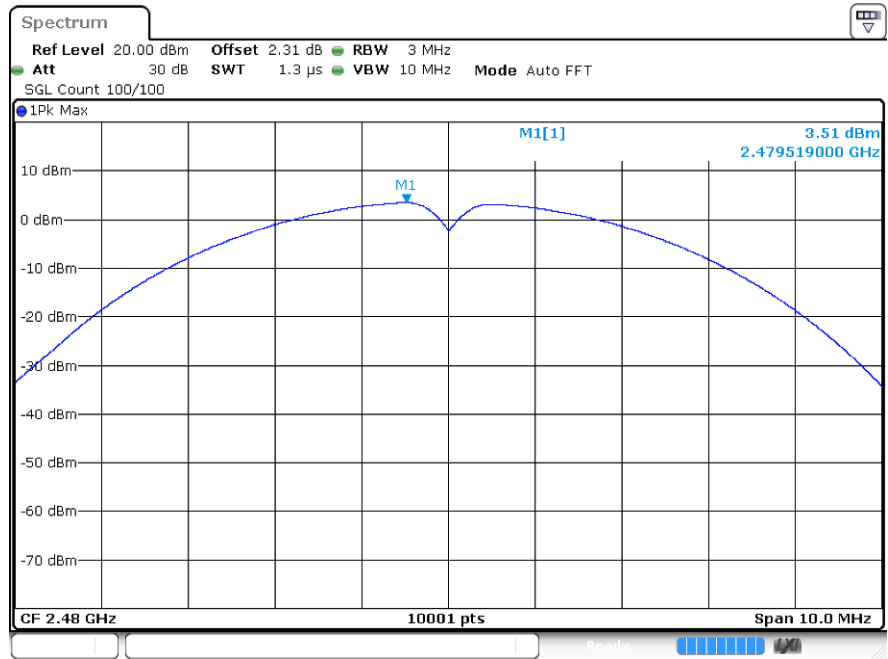
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

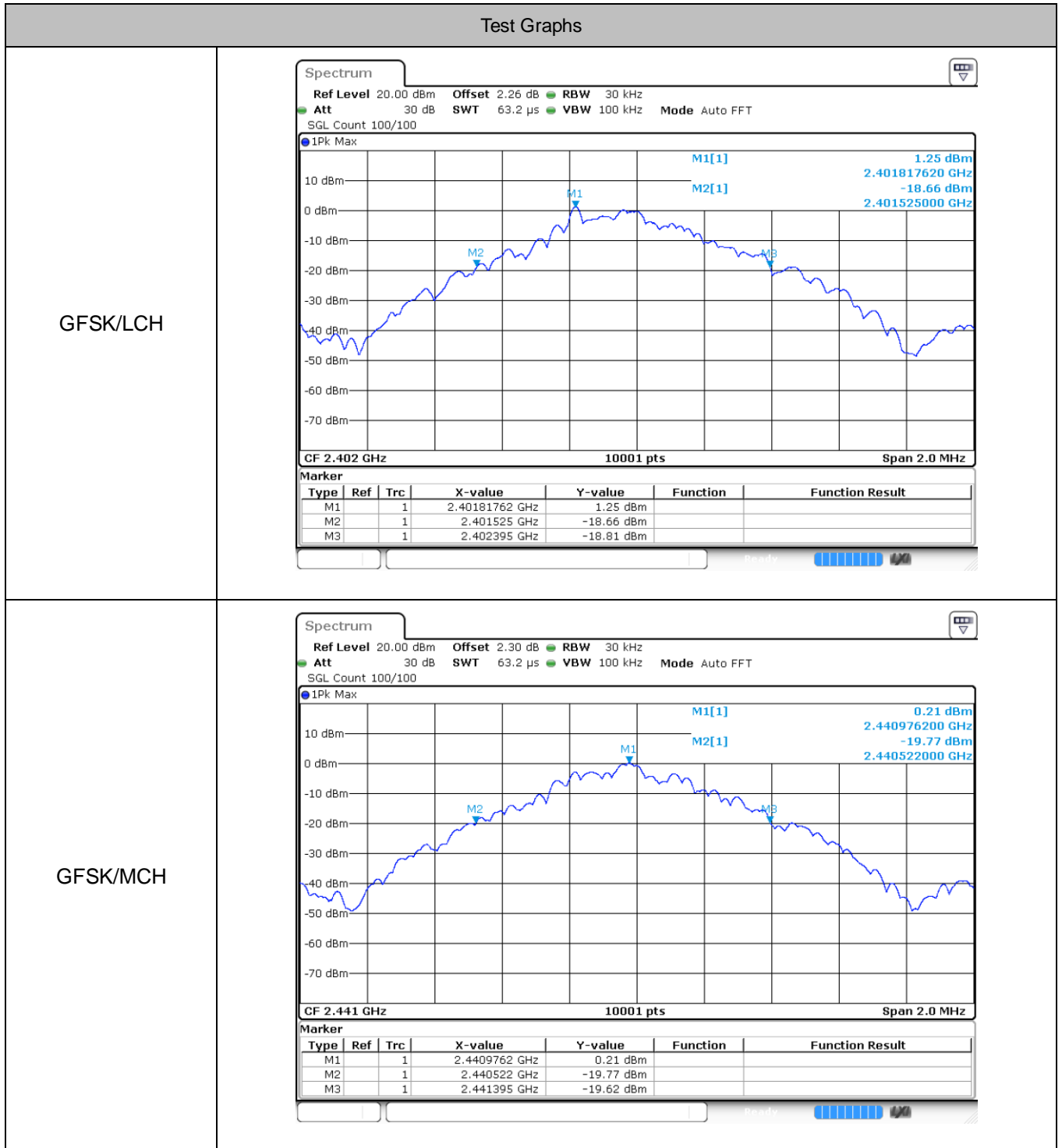


3 20dB Bandwidth

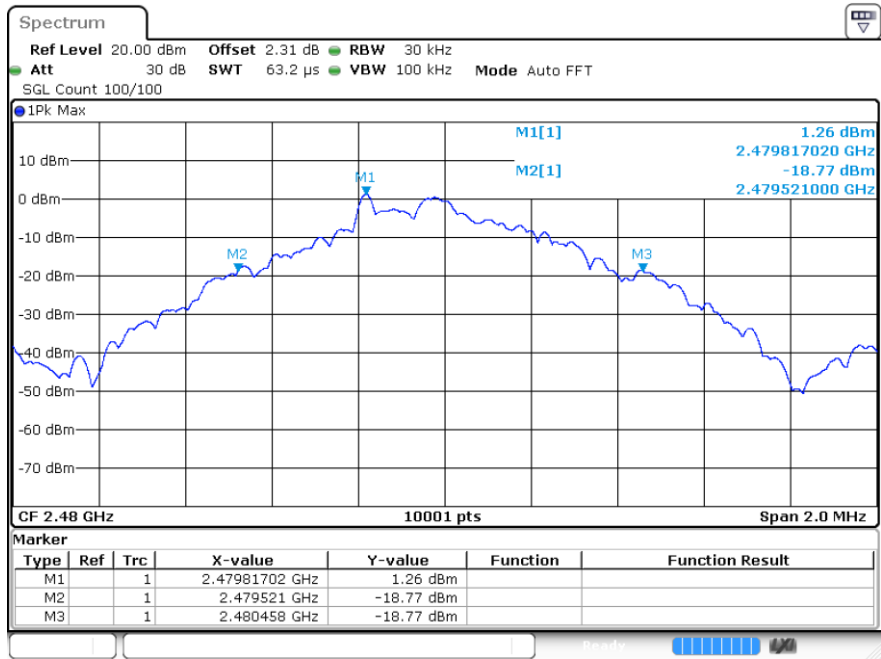
3.1 Test Result

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.87	Not Specified	Pass
	MCH	0.873	Not Specified	Pass
	HCH	0.937	Not Specified	Pass
$\pi/4$ DQPSK	LCH	1.175	Not Specified	Pass
	MCH	1.214	Not Specified	Pass
	HCH	1.206	Not Specified	Pass
8DPSK	LCH	1.189	Not Specified	Pass
	MCH	1.209	Not Specified	Pass
	HCH	1.211	Not Specified	Pass

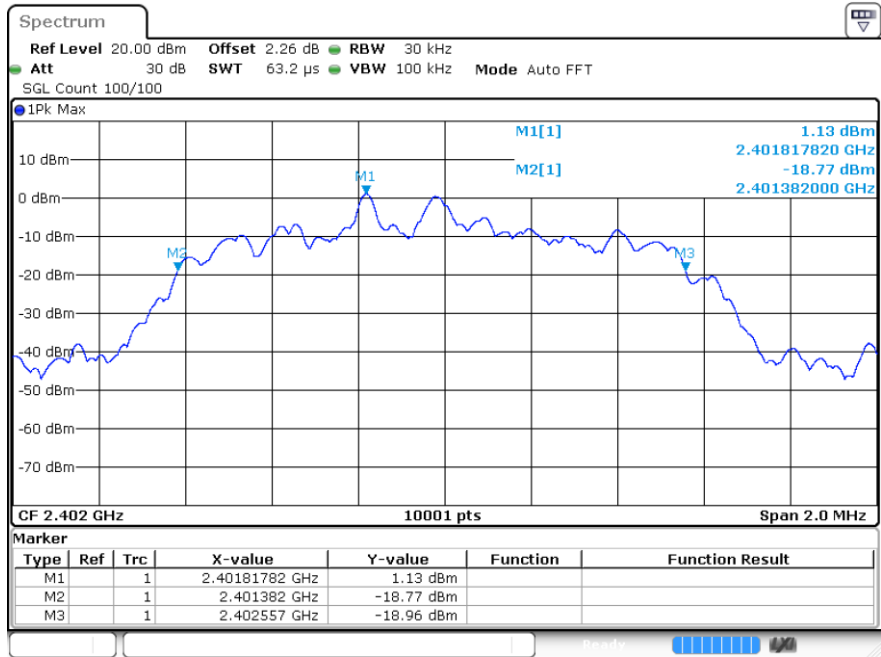
3.2 Test Graphs



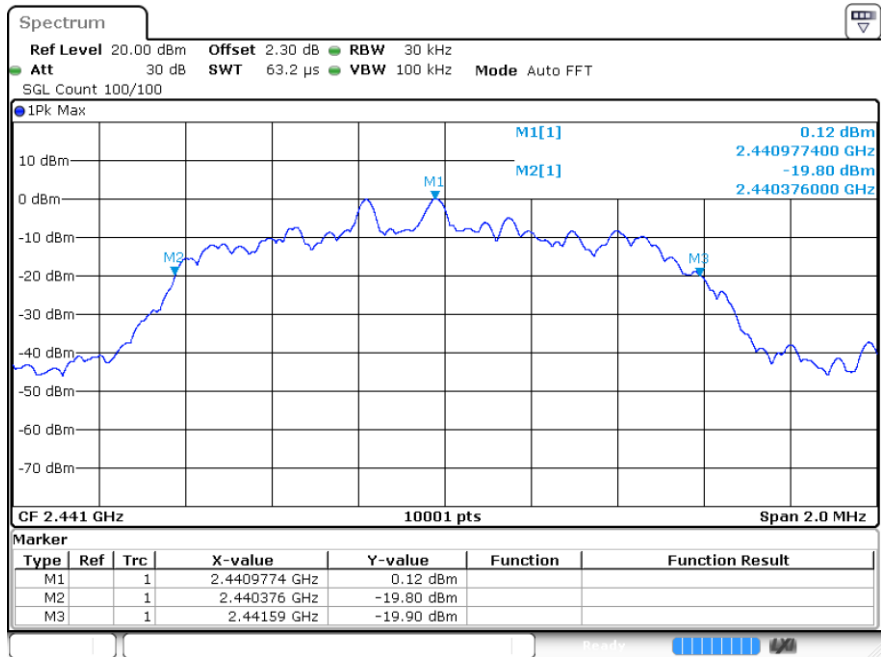
GFSK/HCH



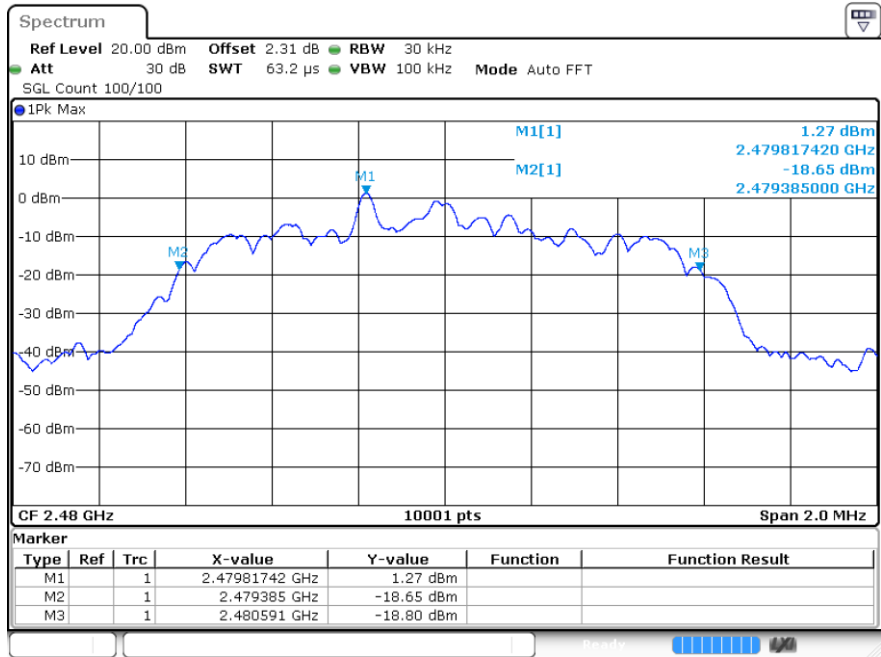
$\pi/4$ DQPSK/LCH



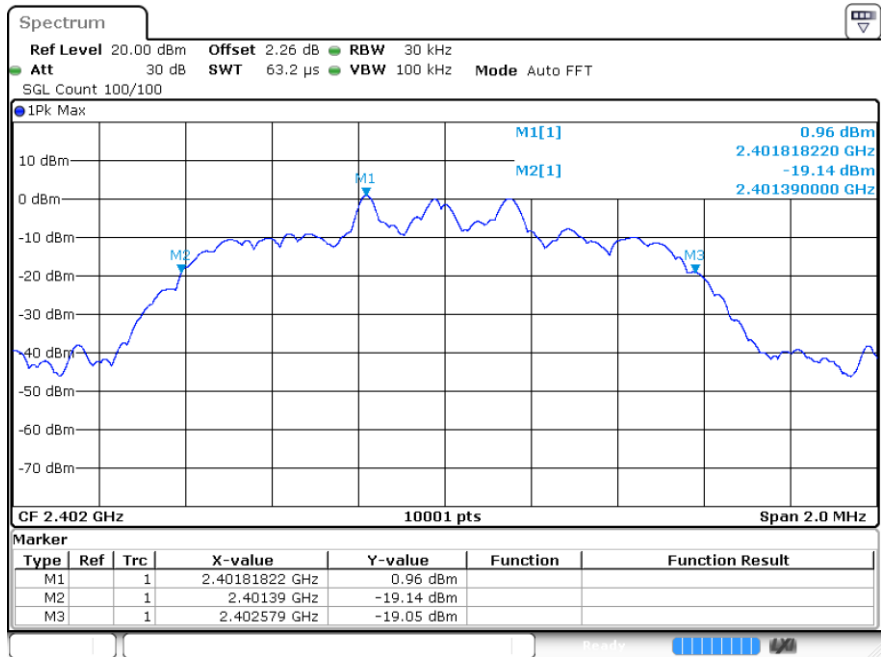
$\pi/4$ DQPSK/MCH



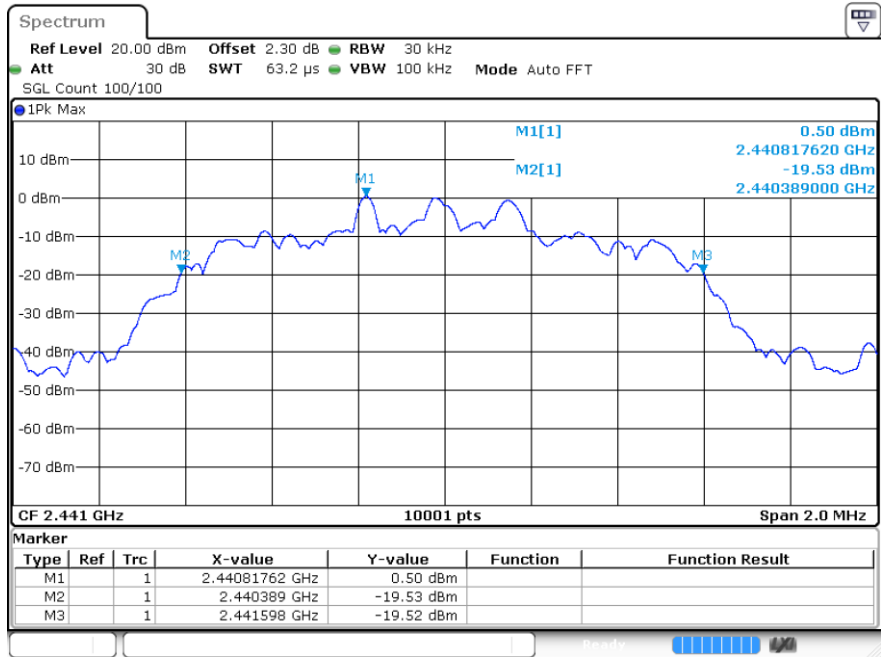
$\pi/4$ DQPSK/HCH



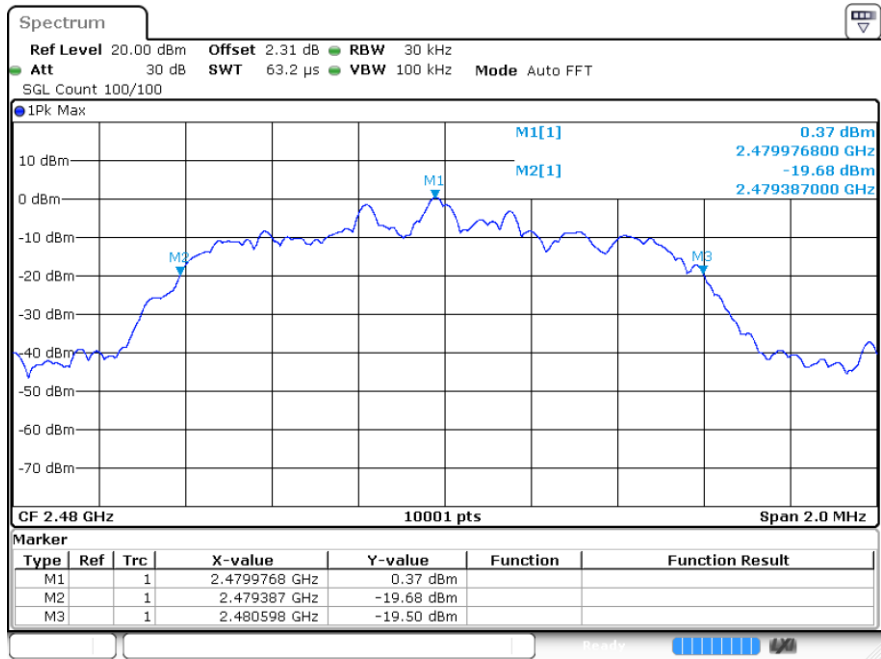
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

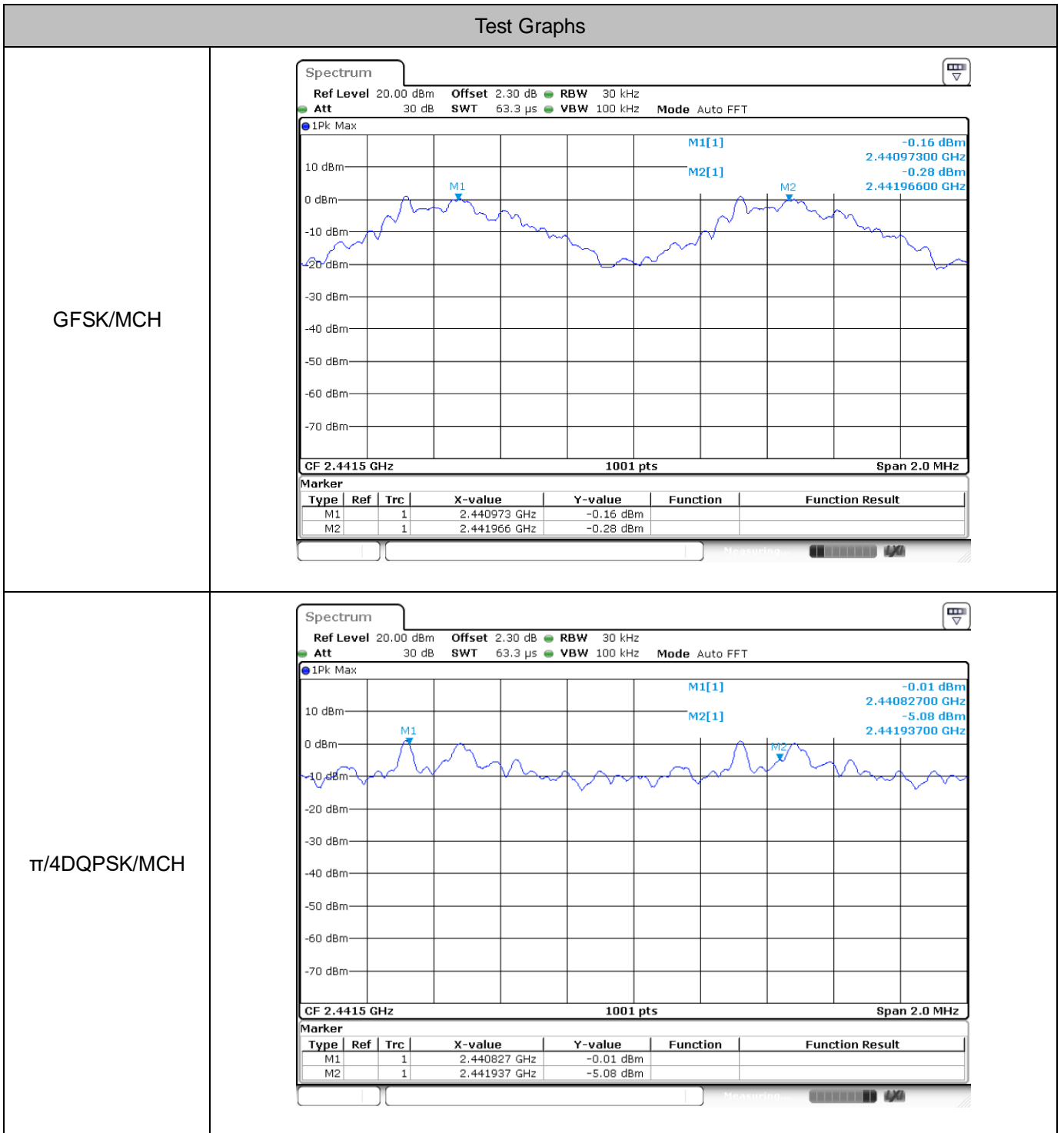


4 Carrier Frequency Separation

4.1 Test Result

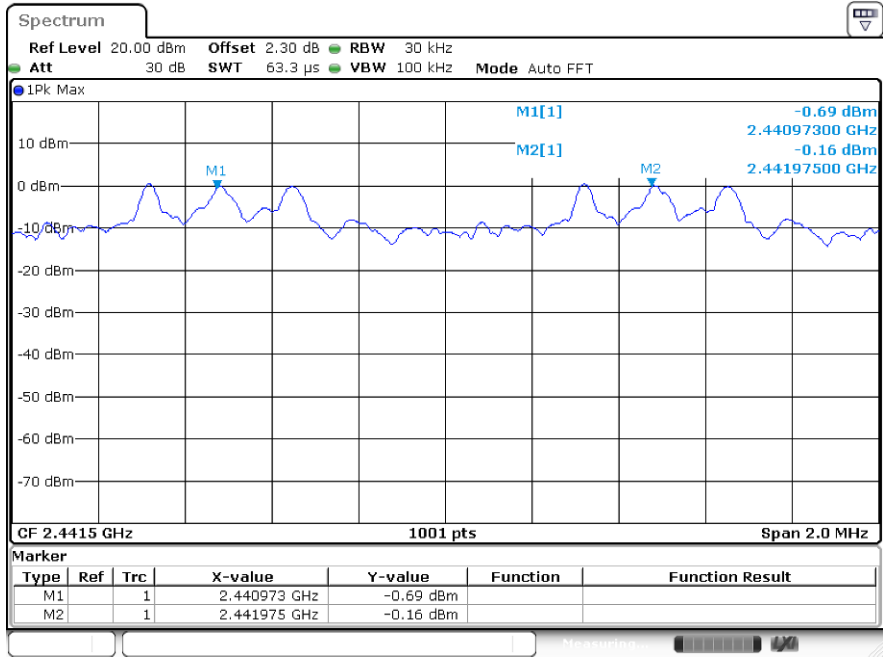
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	MCH	0.993	0.582	Pass
$\pi/4$ DQPSK	MCH	1.11	0.809	Pass
8DPSK	MCH	1.002	0.806	Pass

4.2 Test Graphs





8DPSK/MCH

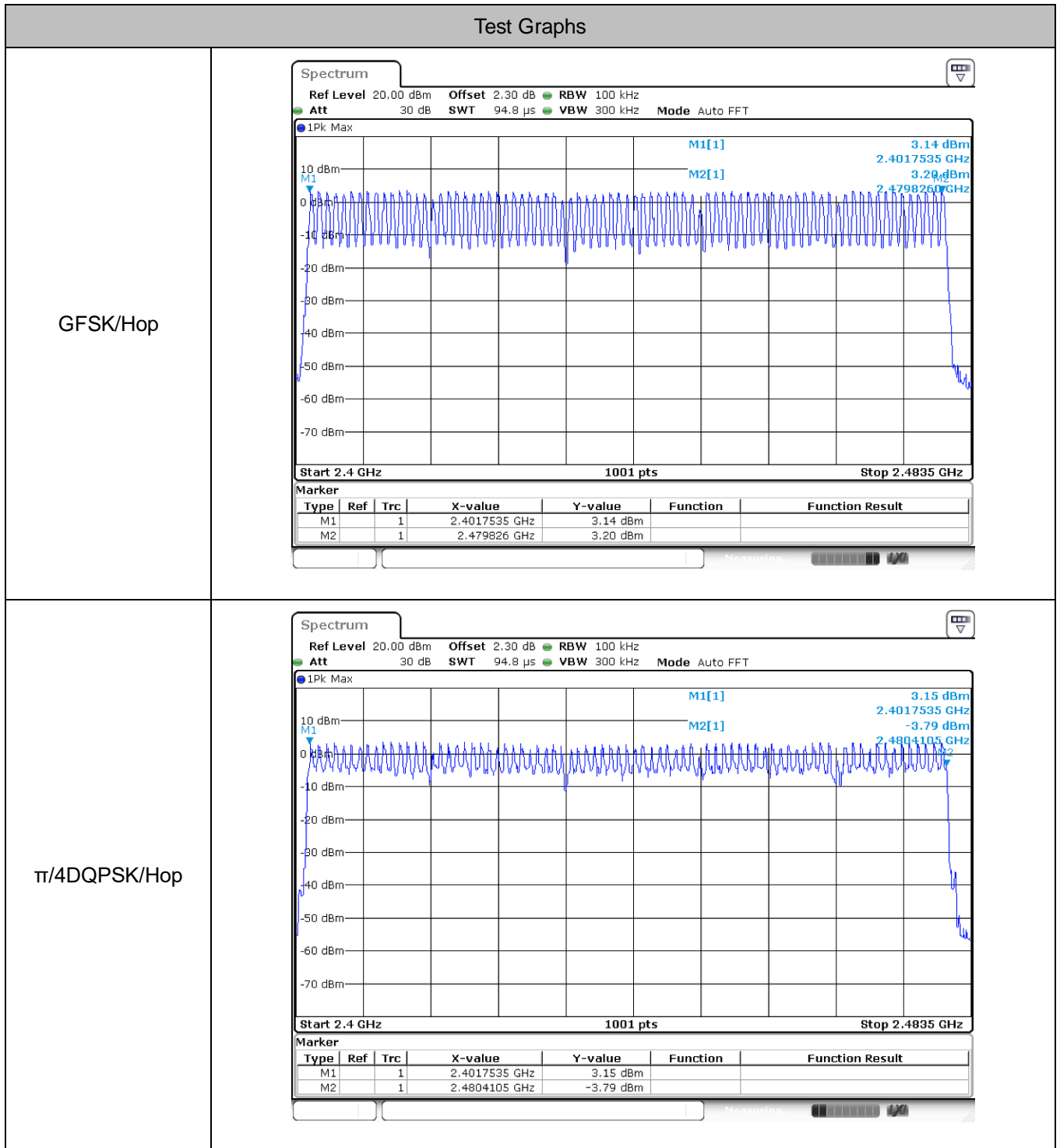


5 Hopping Channel Number

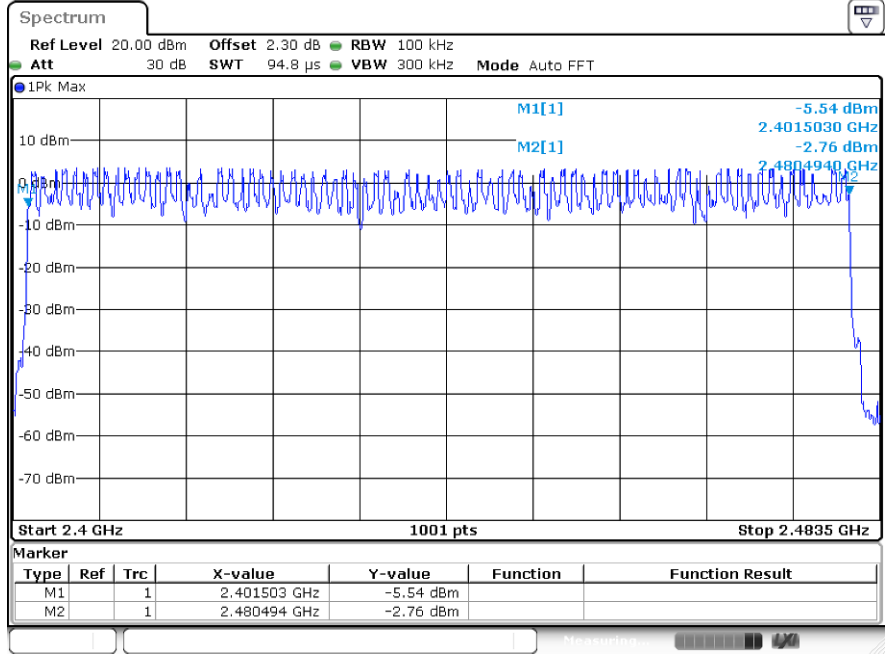
5.1 Test Result

Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS
8DPSK	Hop	79	≥ 15	PASS

5.2 Test Graphs



8DPSK/Hop

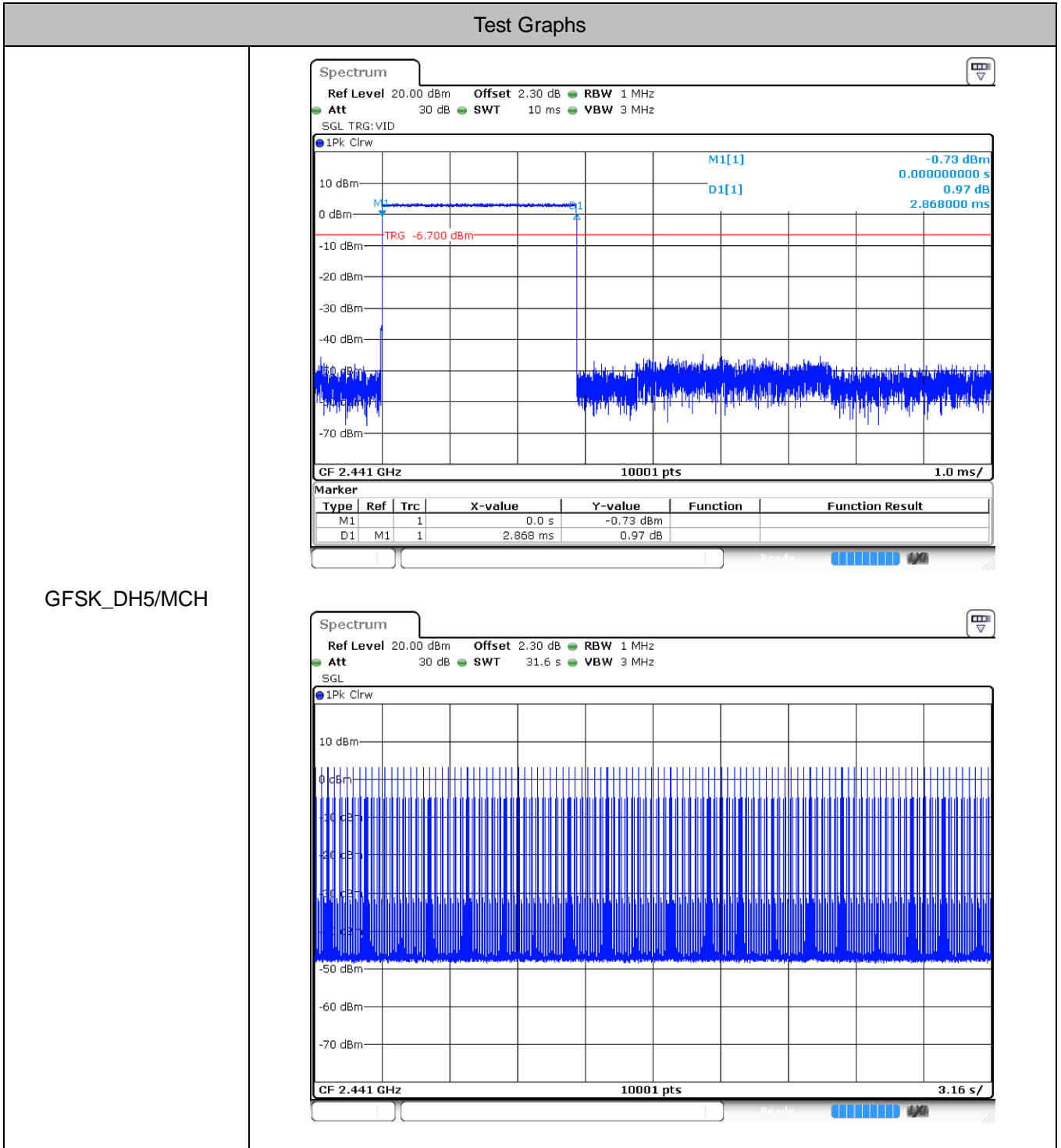


6 Dwell Time

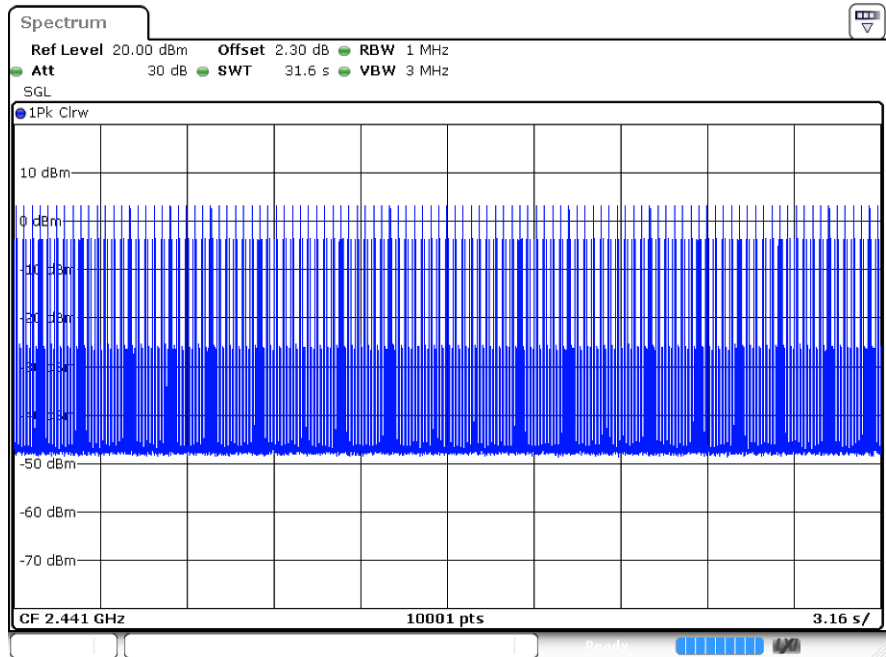
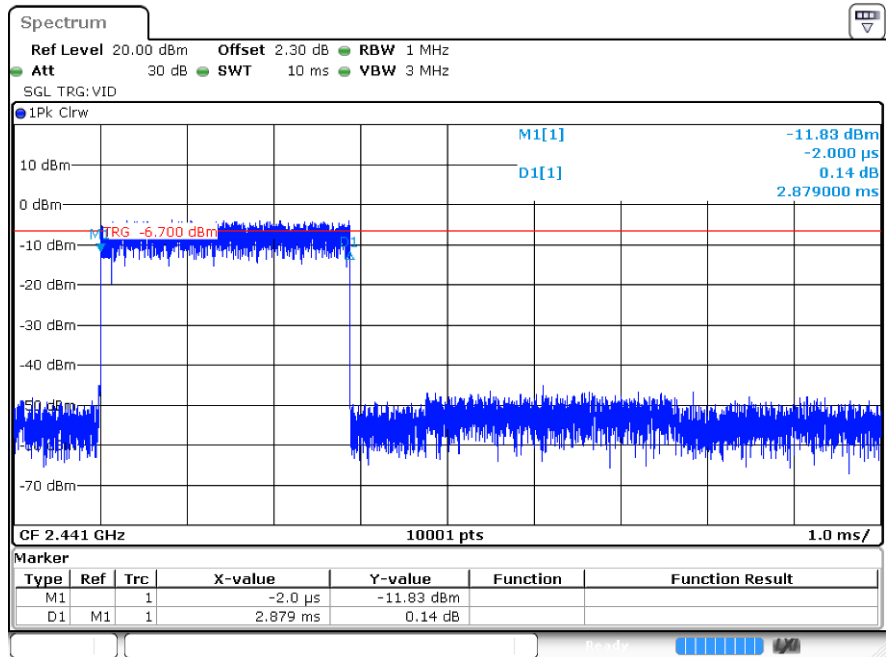
6.1 Test Result

Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.868	107	306.876	0.4	Pass
$\pi/4$ DQPSK	2DH5	MCH	2.879	106	305.174	0.4	Pass
8DPSK	3DH5	MCH	2.88	107	308.16	0.4	Pass

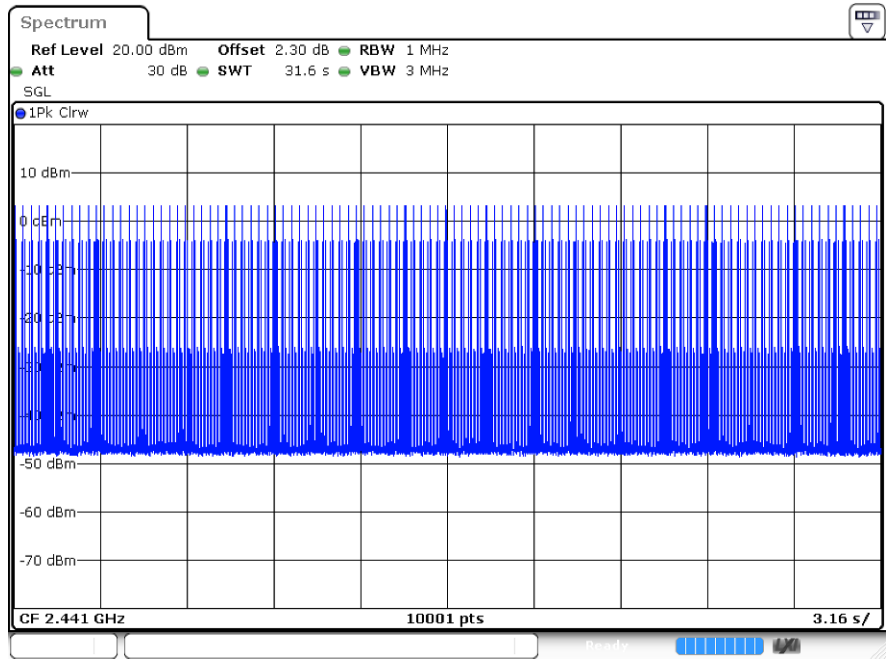
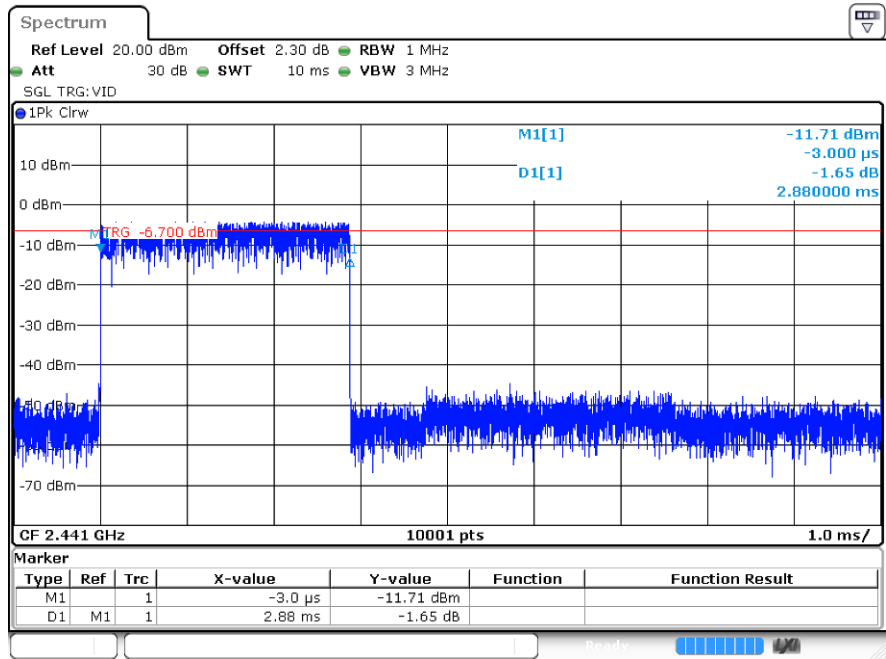
6.2 Test Graphs



$\pi/4$ DQPSK
_2DH5/MCH



8DPSK_3DH5/MCH

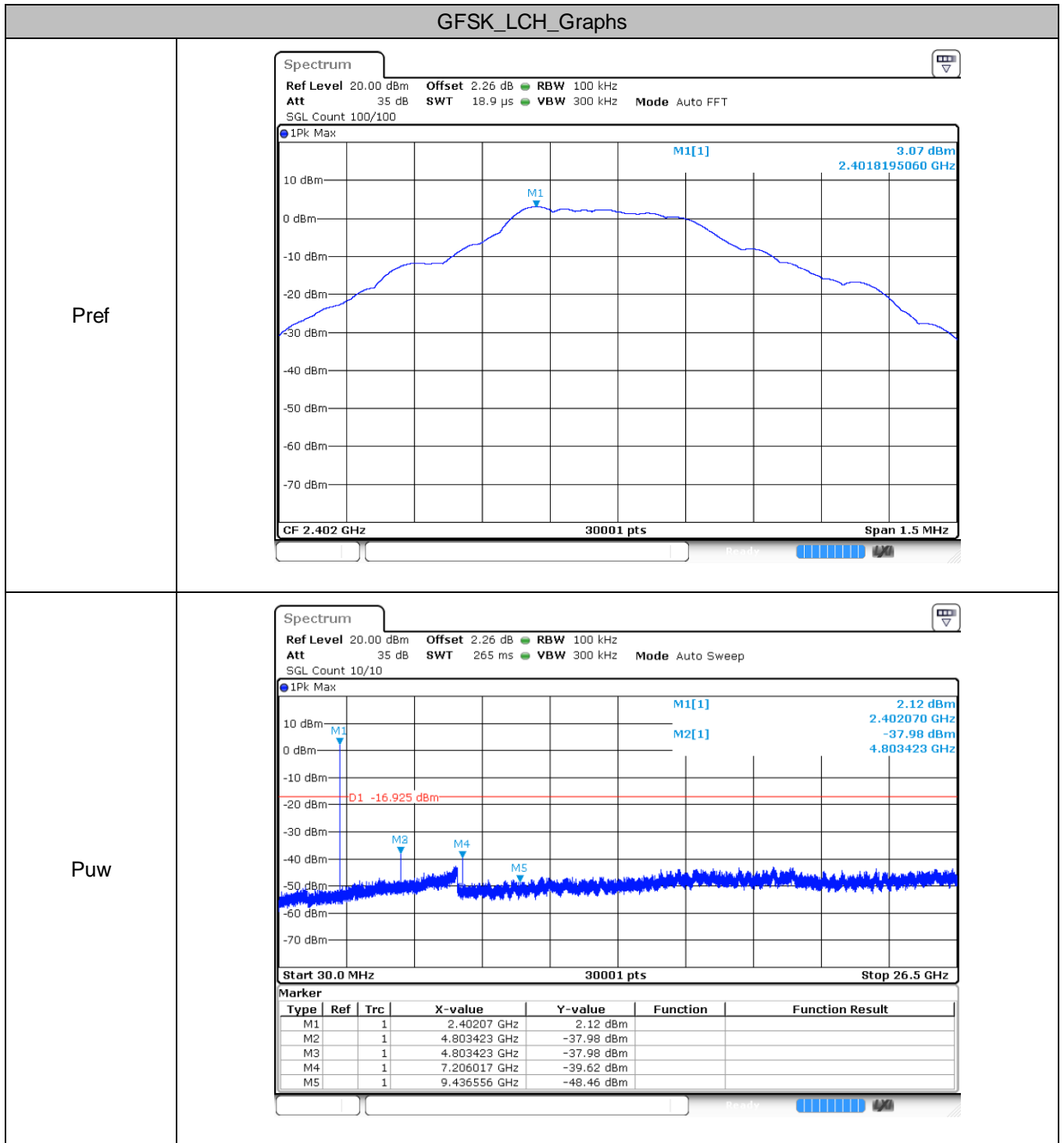


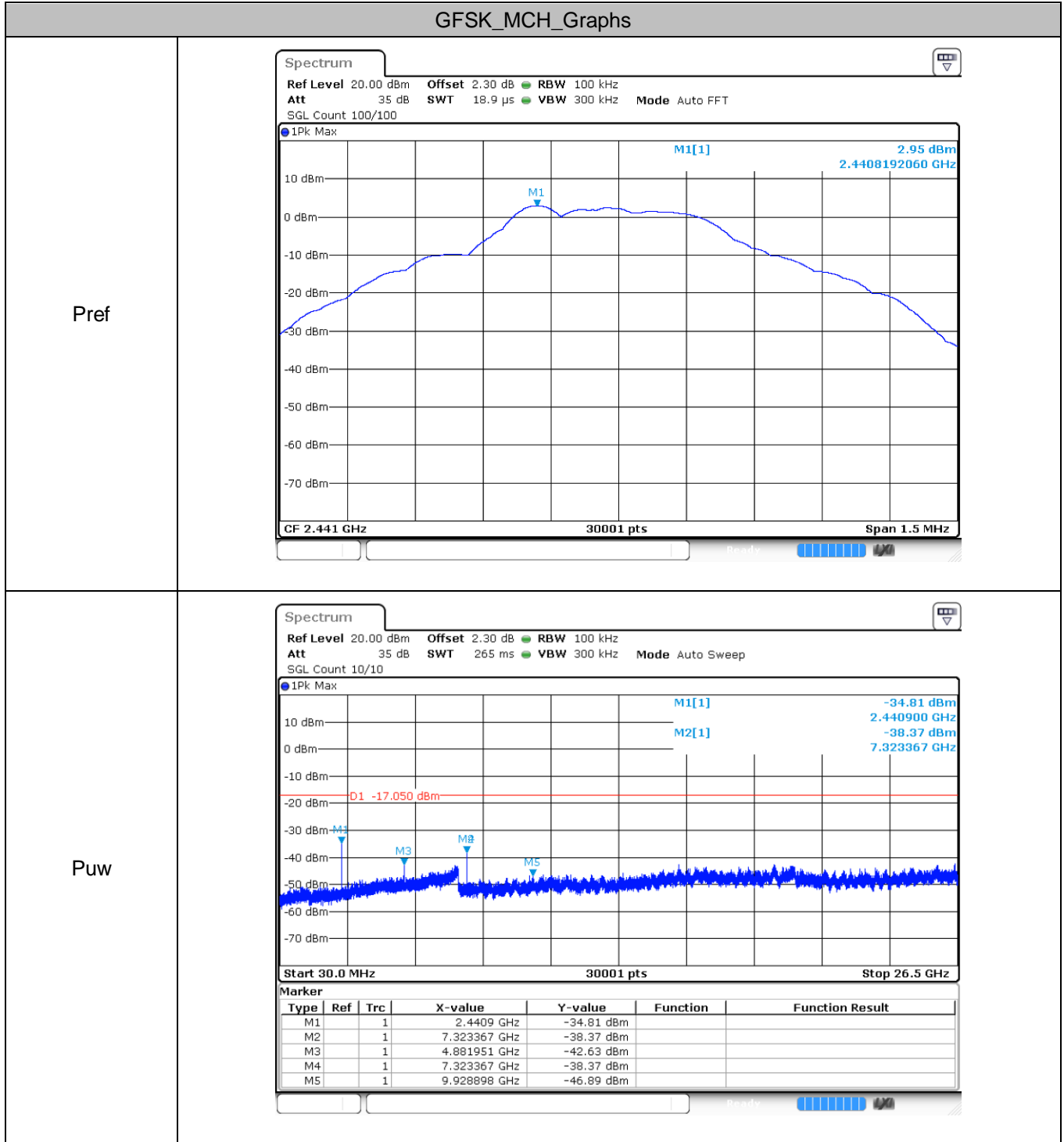
7 RF Conducted Spurious Emissions

7.1 Test Result

Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-41.04	-20	Pass
	MCH	-41.31	-20	Pass
	HCH	-44.22	-20	Pass
$\pi/4$ DQPSK	LCH	-45.56	-20	Pass
	MCH	-44.66	-20	Pass
	HCH	-45.58	-20	Pass
8DPSK	LCH	-40.28	-20	Pass
	MCH	-43.28	-20	Pass
	HCH	-44.84	-20	Pass

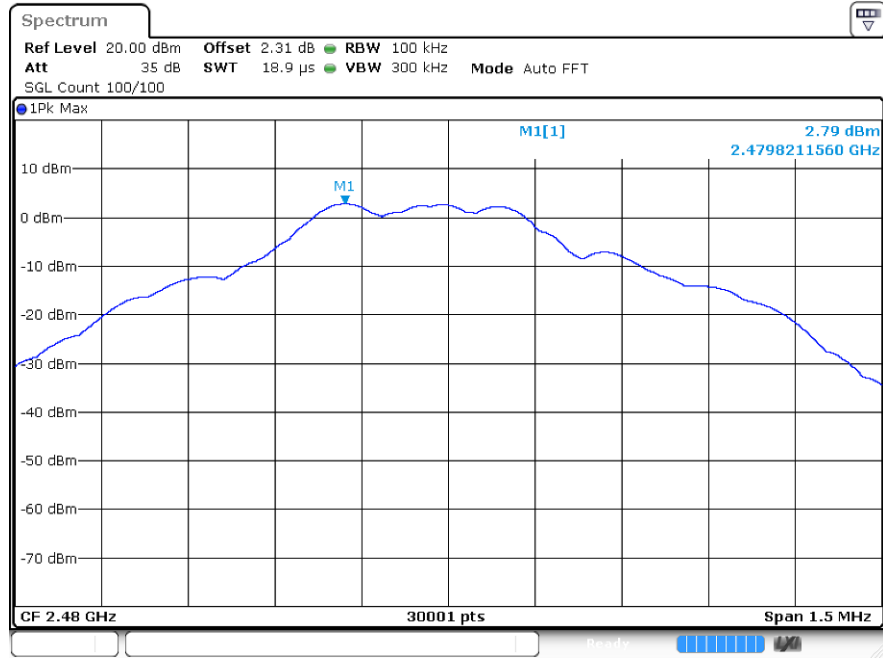
7.2 Test Graphs



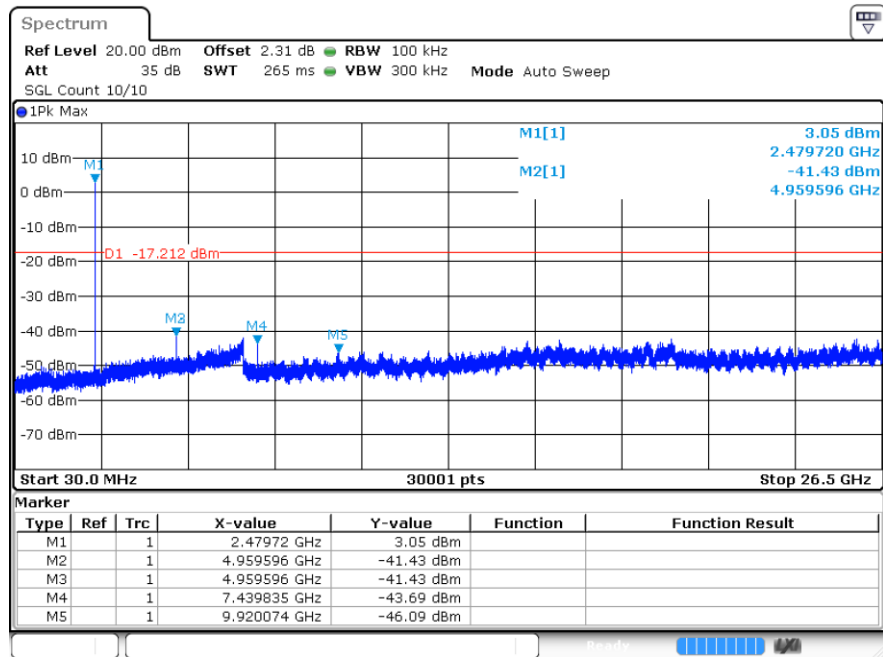


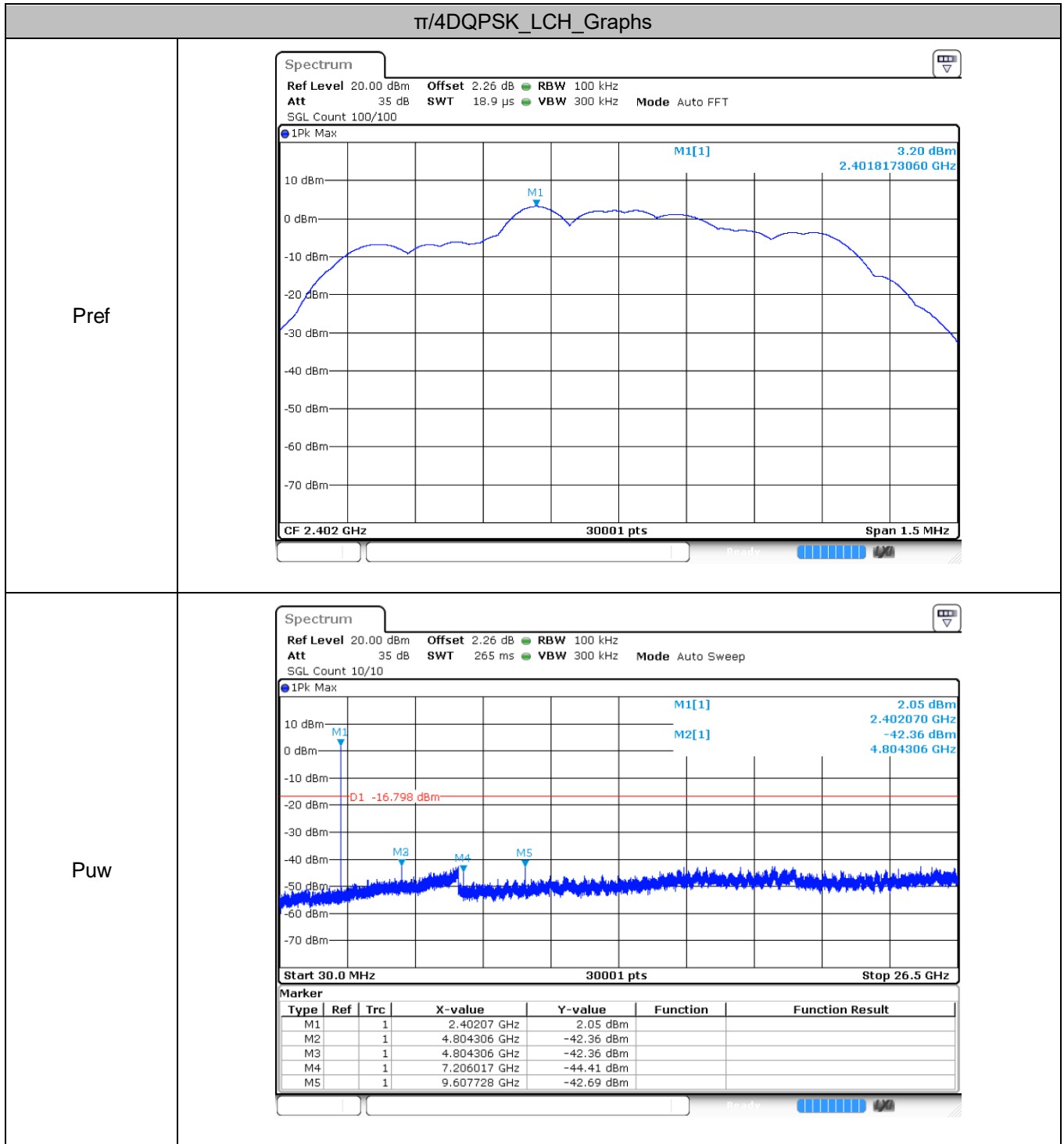
GFSK_HCH_Graphs

Pref



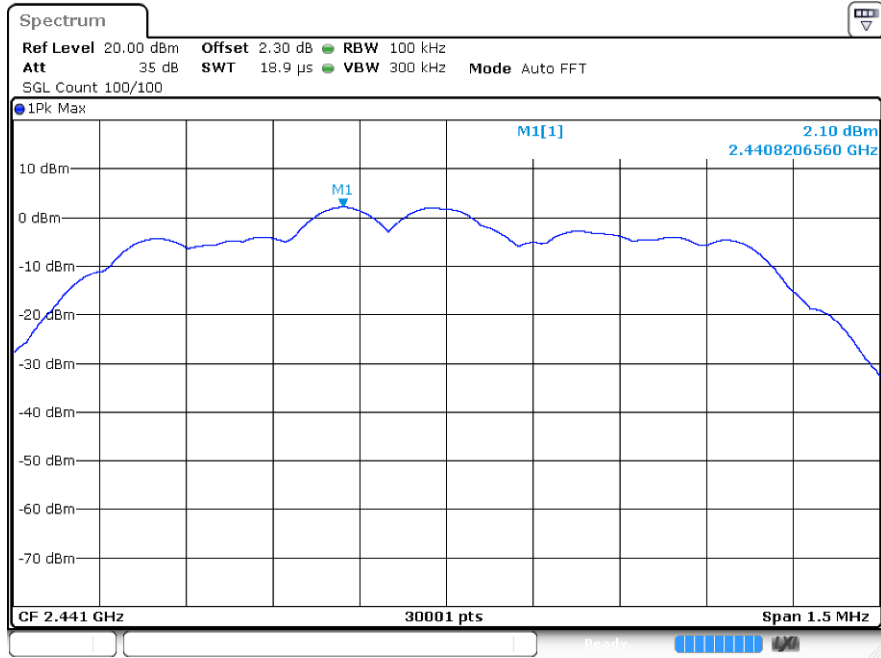
Puw



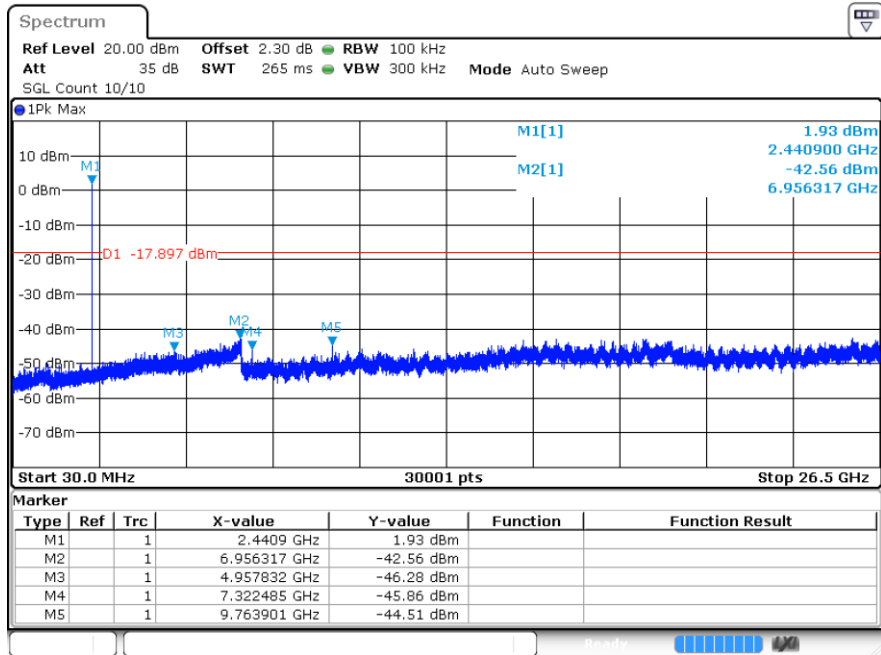


$\pi/4$ DQPSK_MCH_Graphs

Pref

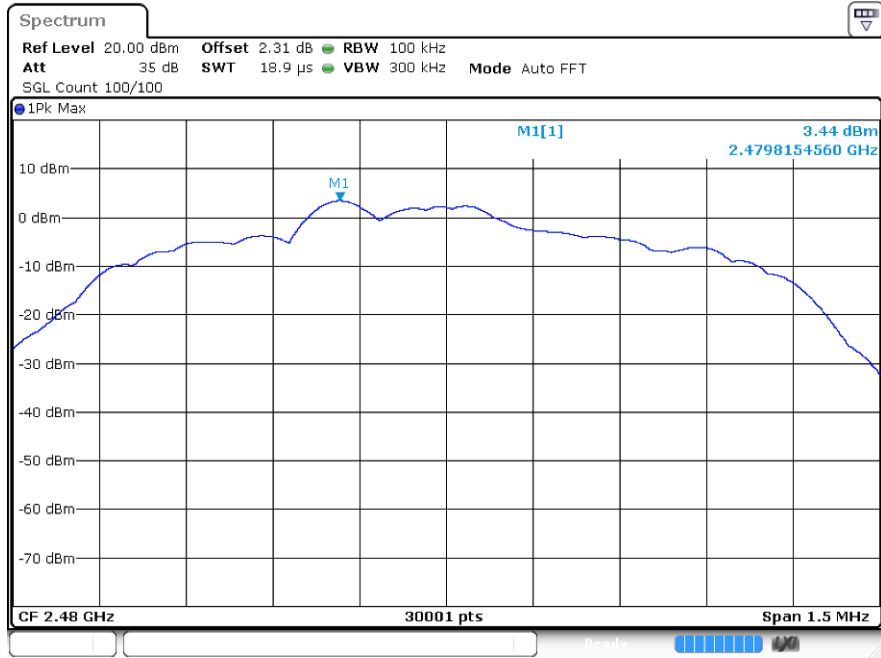


Puw

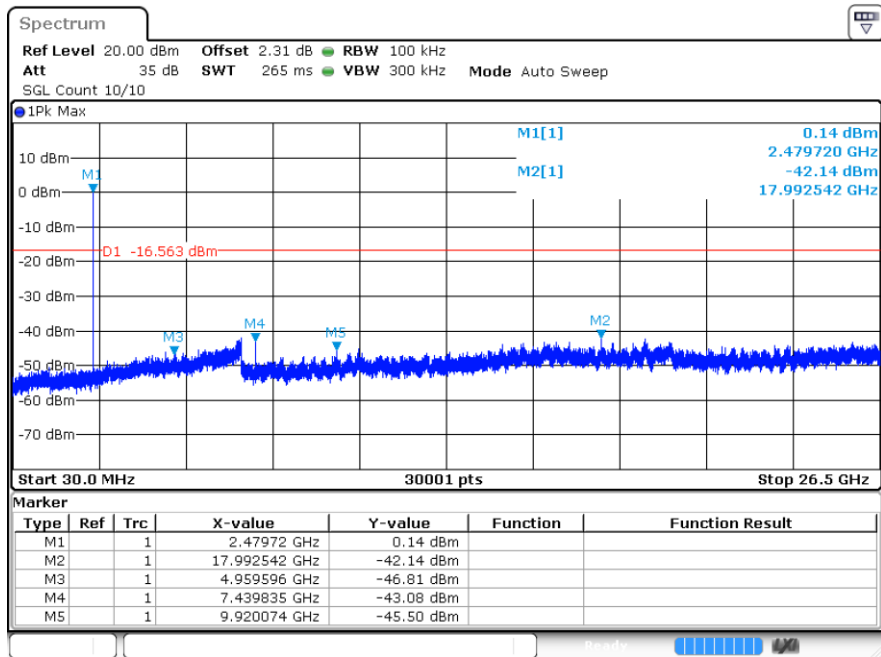


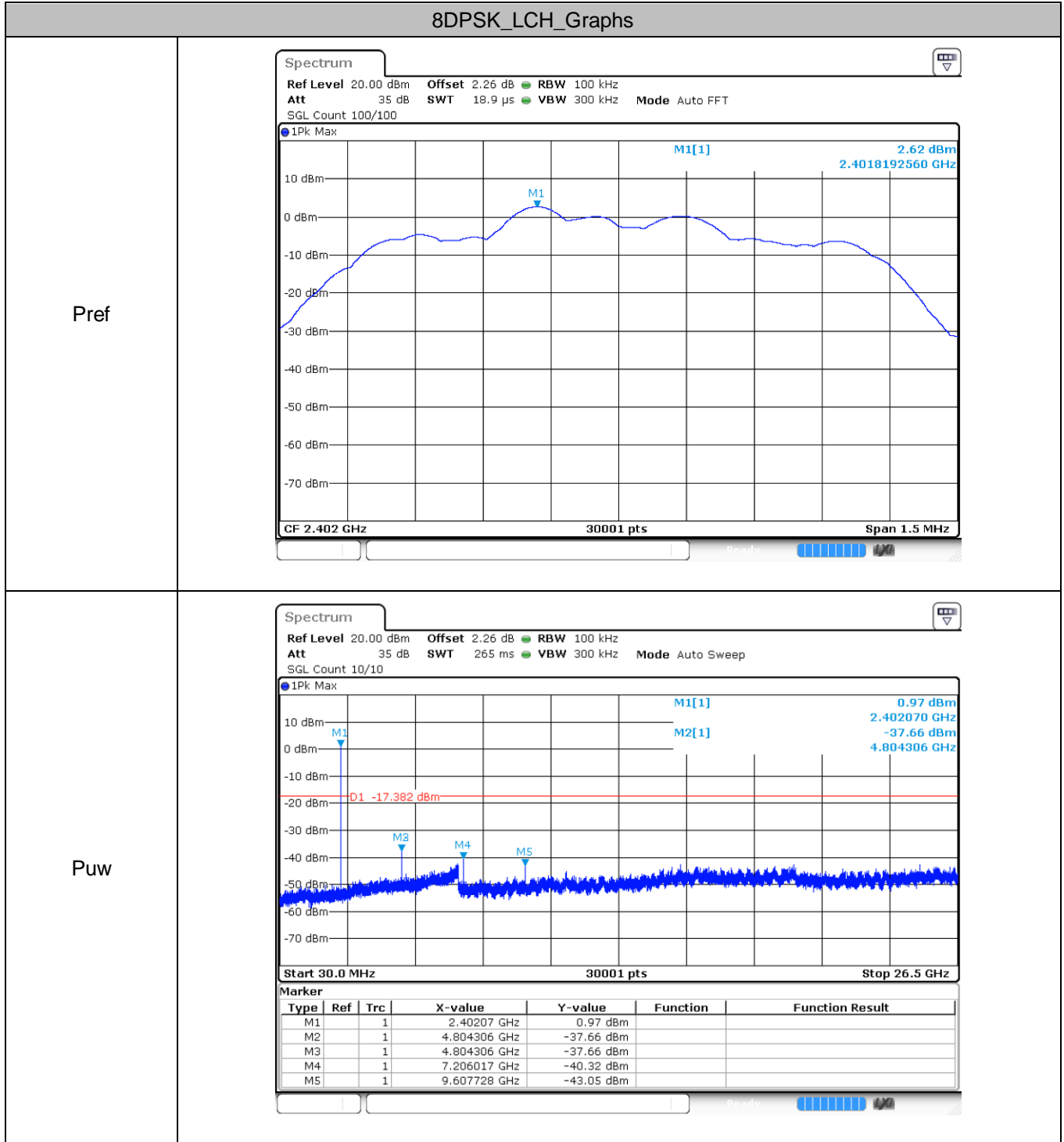
$\pi/4$ DQPSK_HCH_Graphs

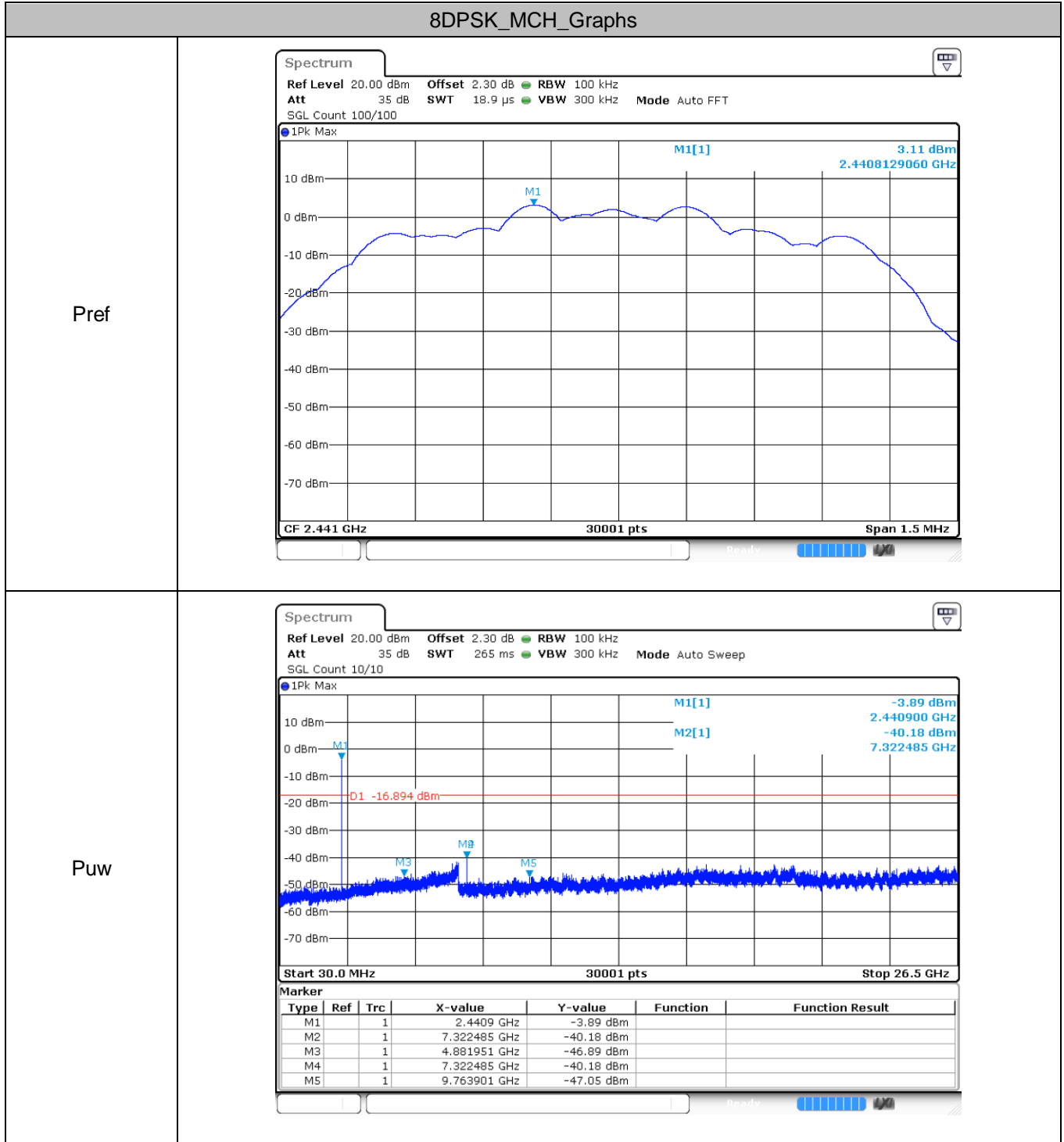
Pref



Puw

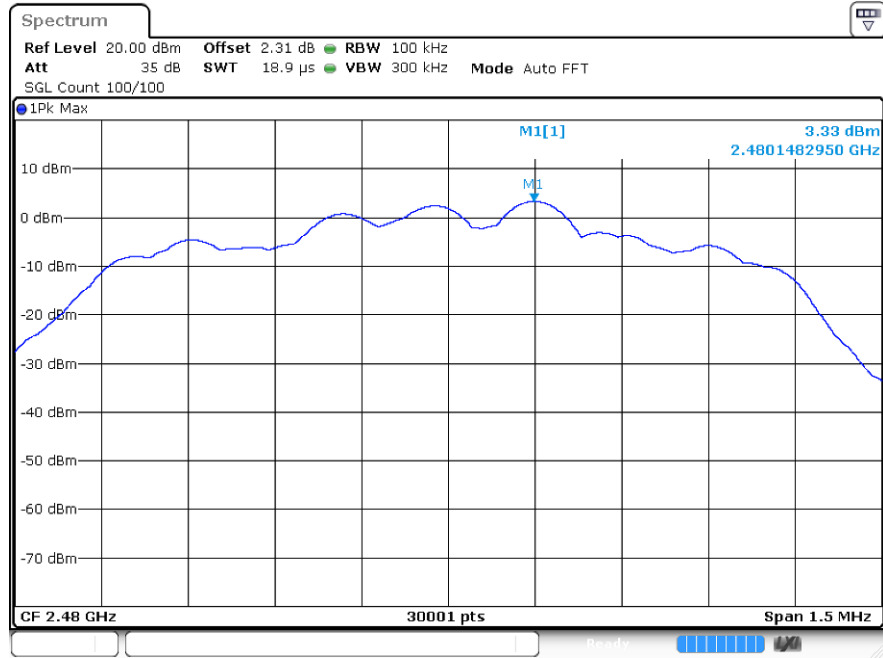




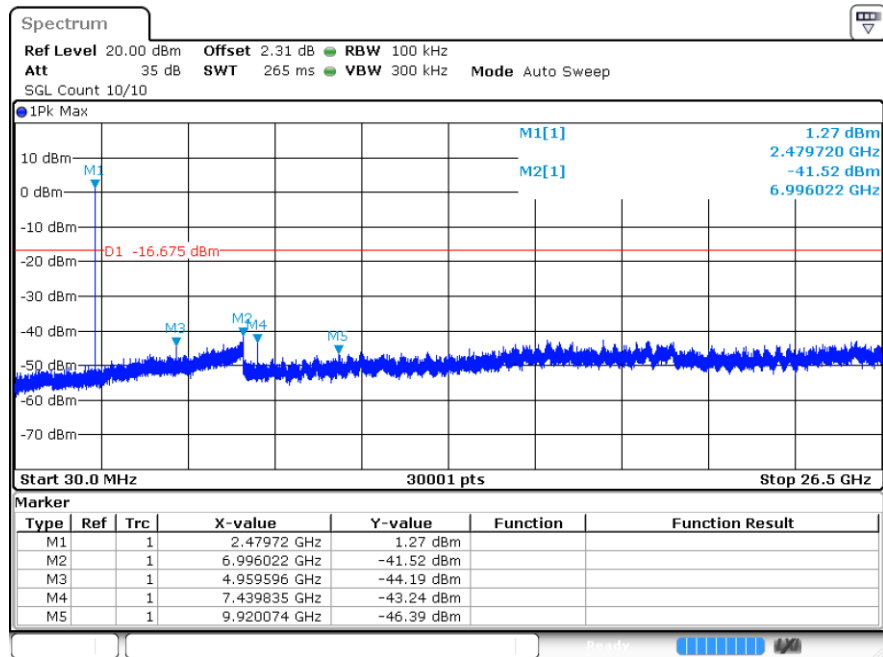


8DPSK_HCH_Graphs

Pref



Puw

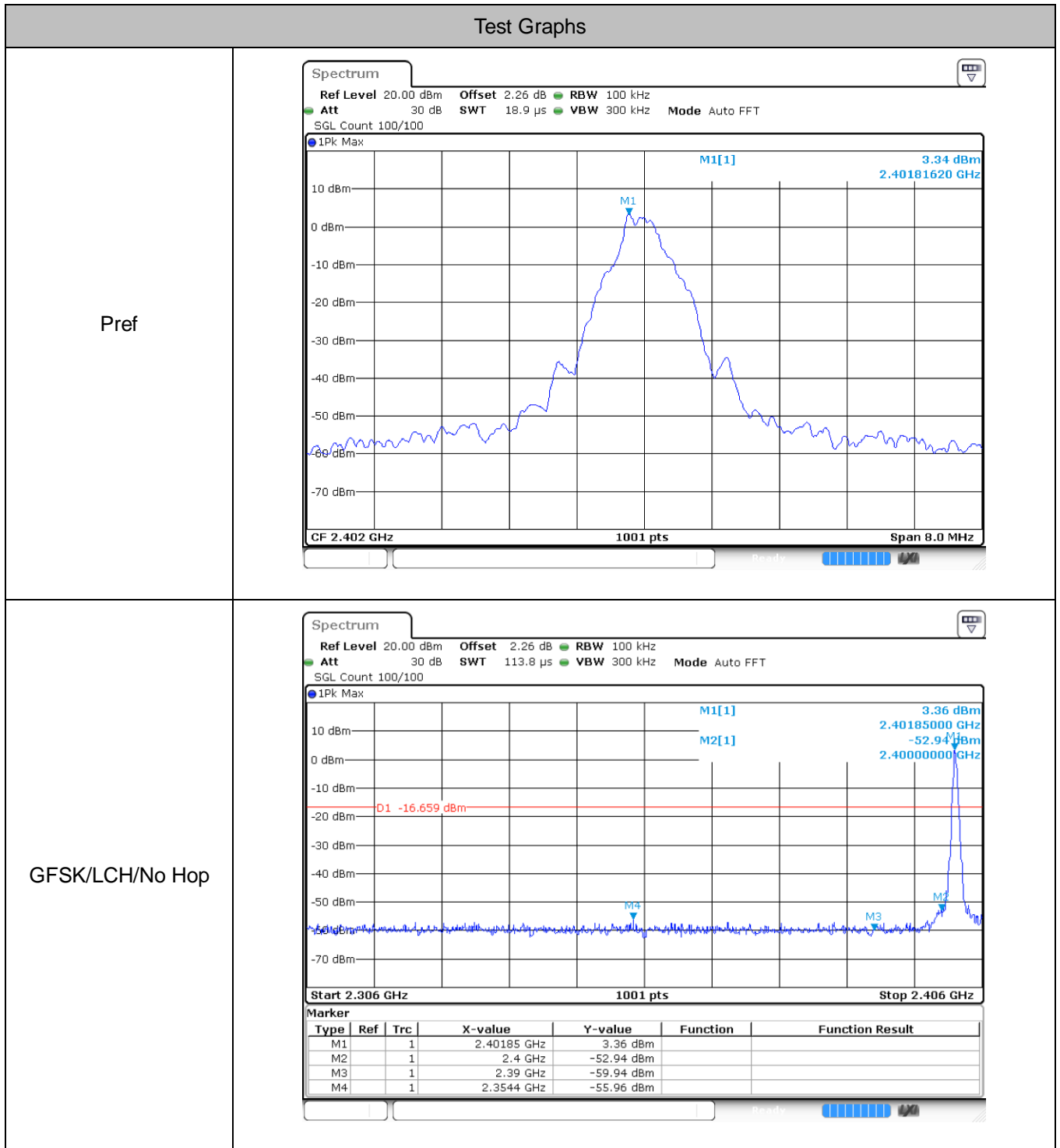


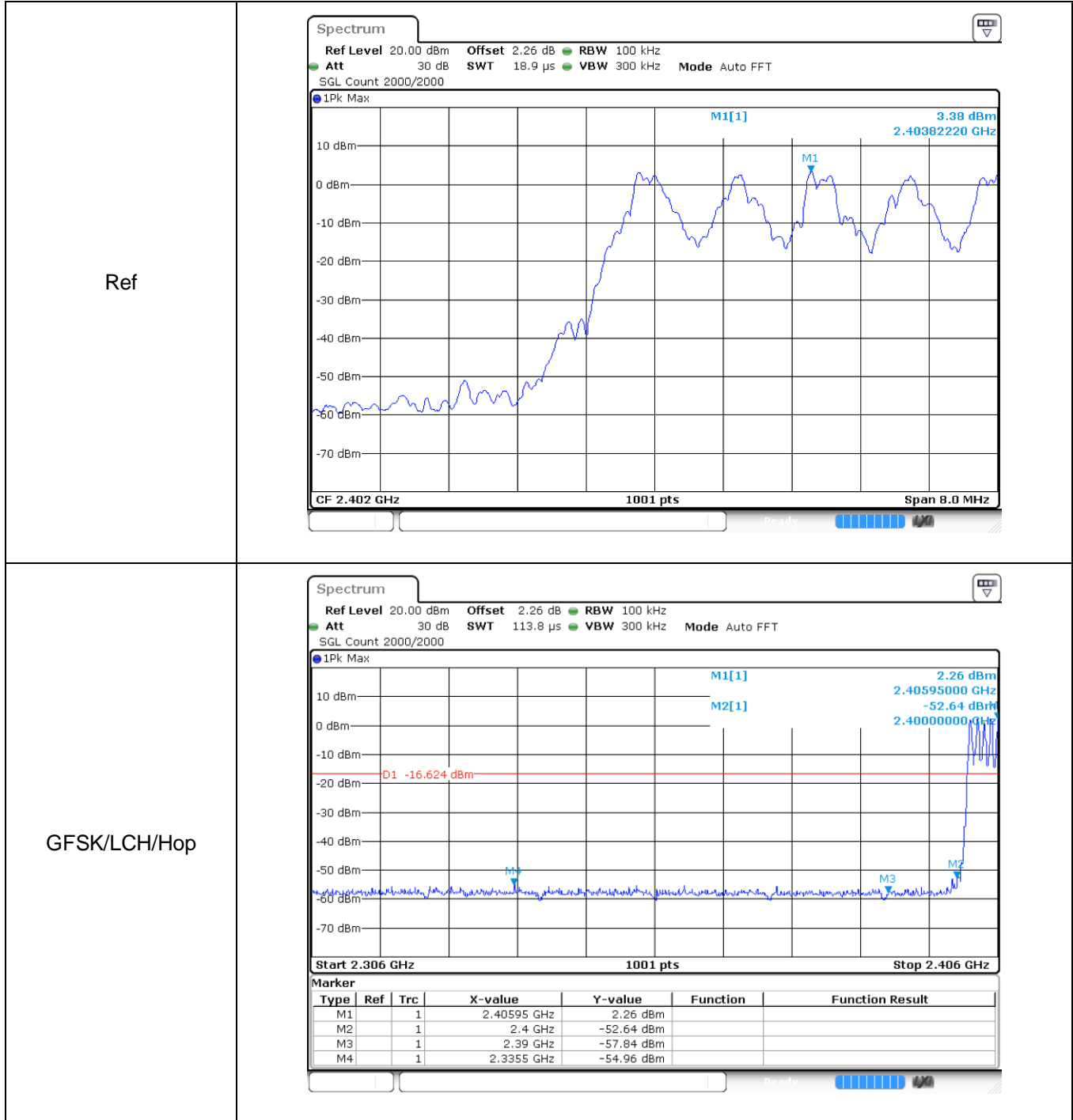
8 Band-edge for RF Conducted Emissions

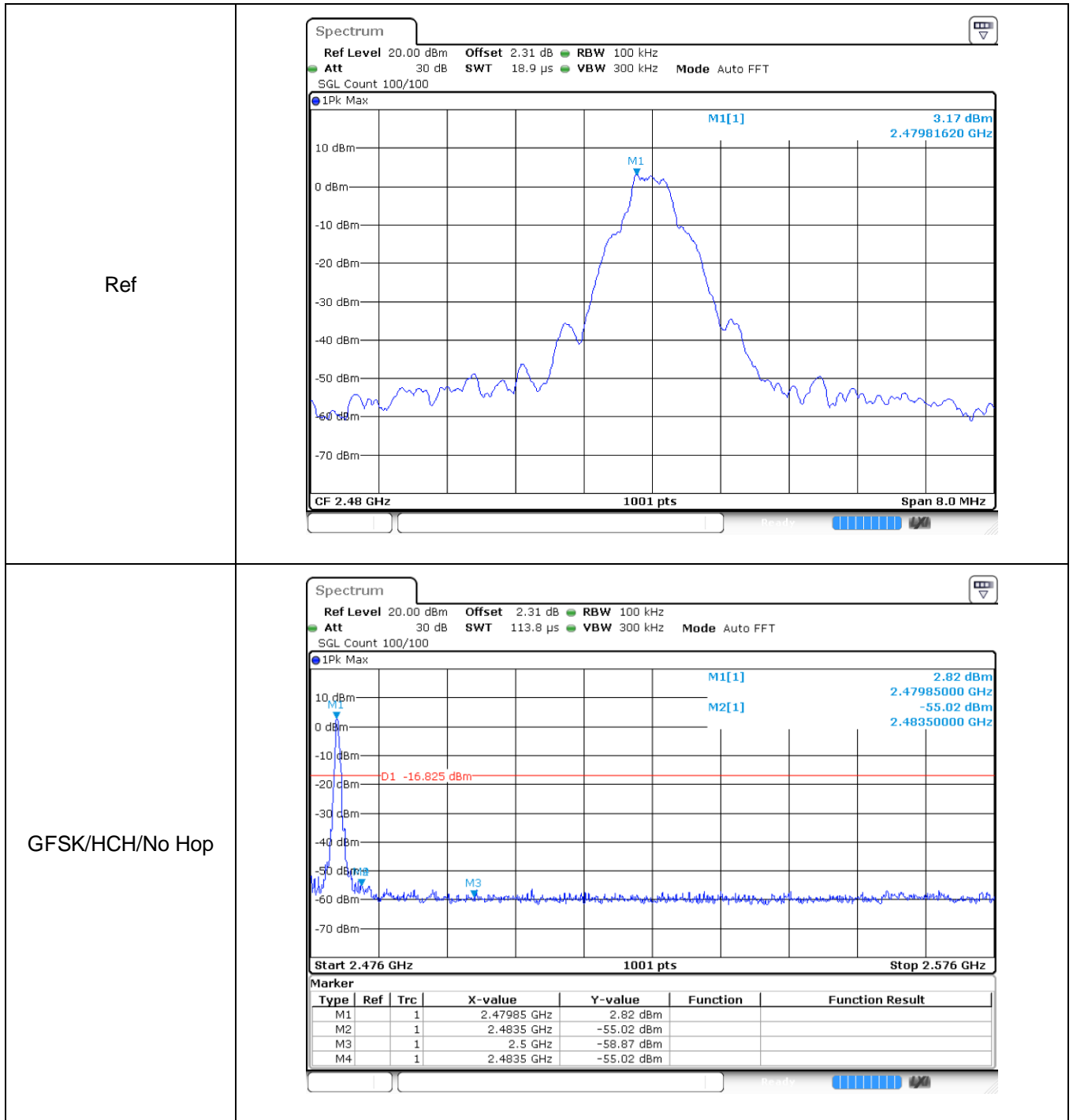
8.1 Test Result

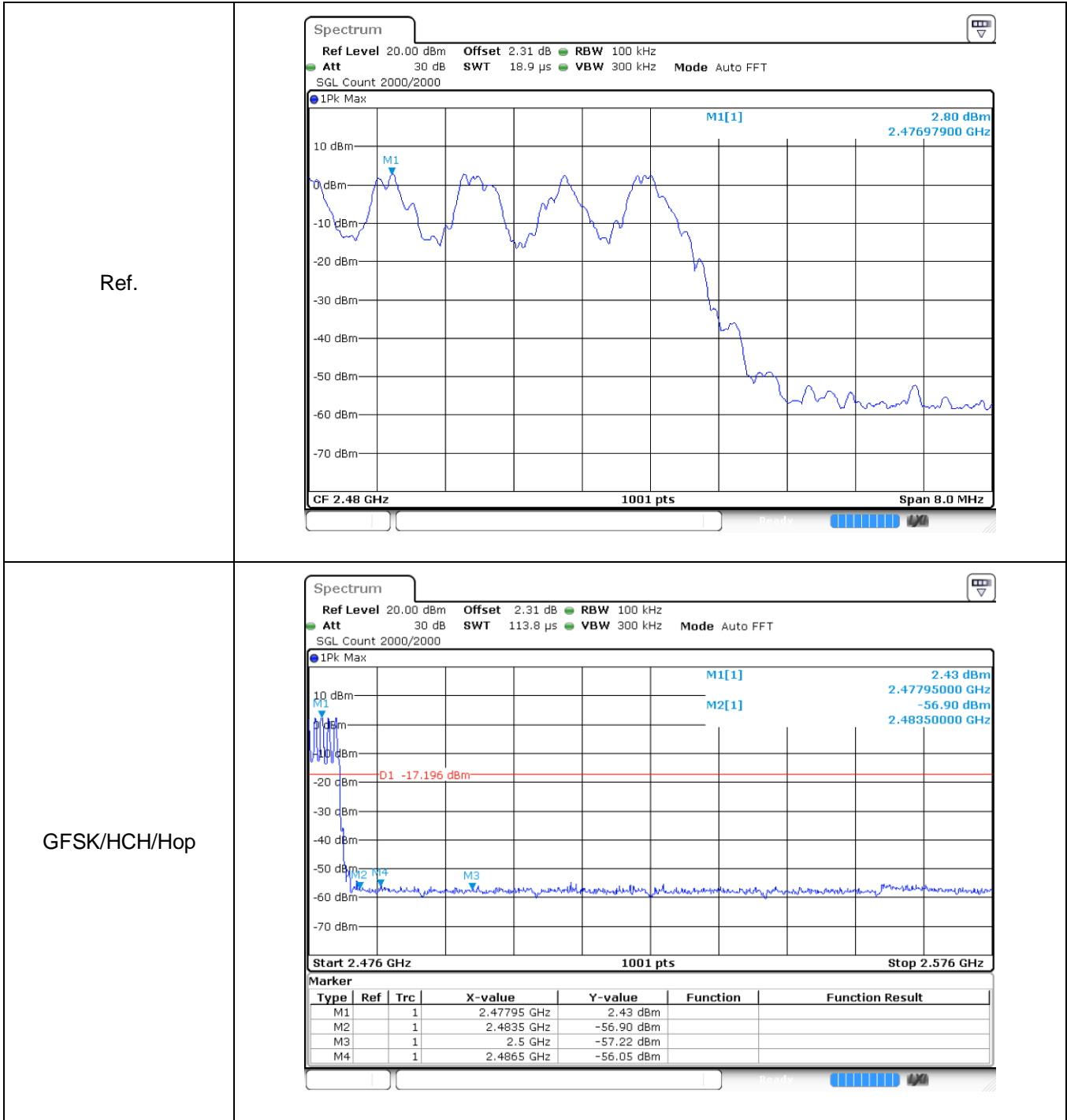
Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	-59.29	-20	Pass
			On	-58.34	-20	Pass
	HCH	2480	Off	-58.18	-20	Pass
			On	-58.85	-20	Pass
$\pi/4$ DQPSK	LCH	2402	Off	-58.14	-20	Pass
			On	-58.34	-20	Pass
	HCH	2480	Off	-59.2	-20	Pass
			On	-57.71	-20	Pass
8DPSK	LCH	2402	Off	-59.41	-20	Pass
			On	-58.14	-20	Pass
	HCH	2480	Off	-55.16	-20	Pass
			On	-57.96	-20	Pass

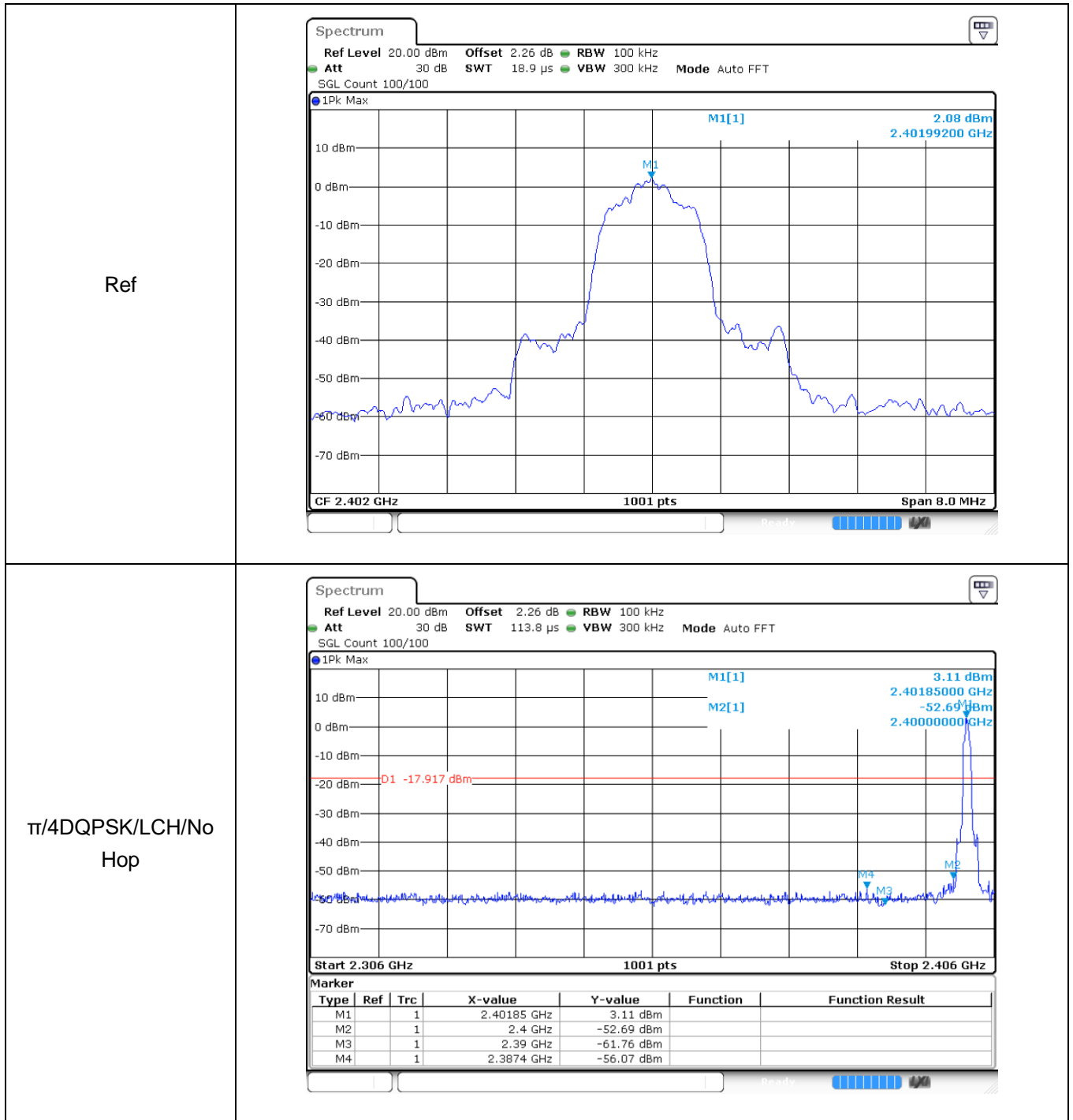
8.2 Test Graphs

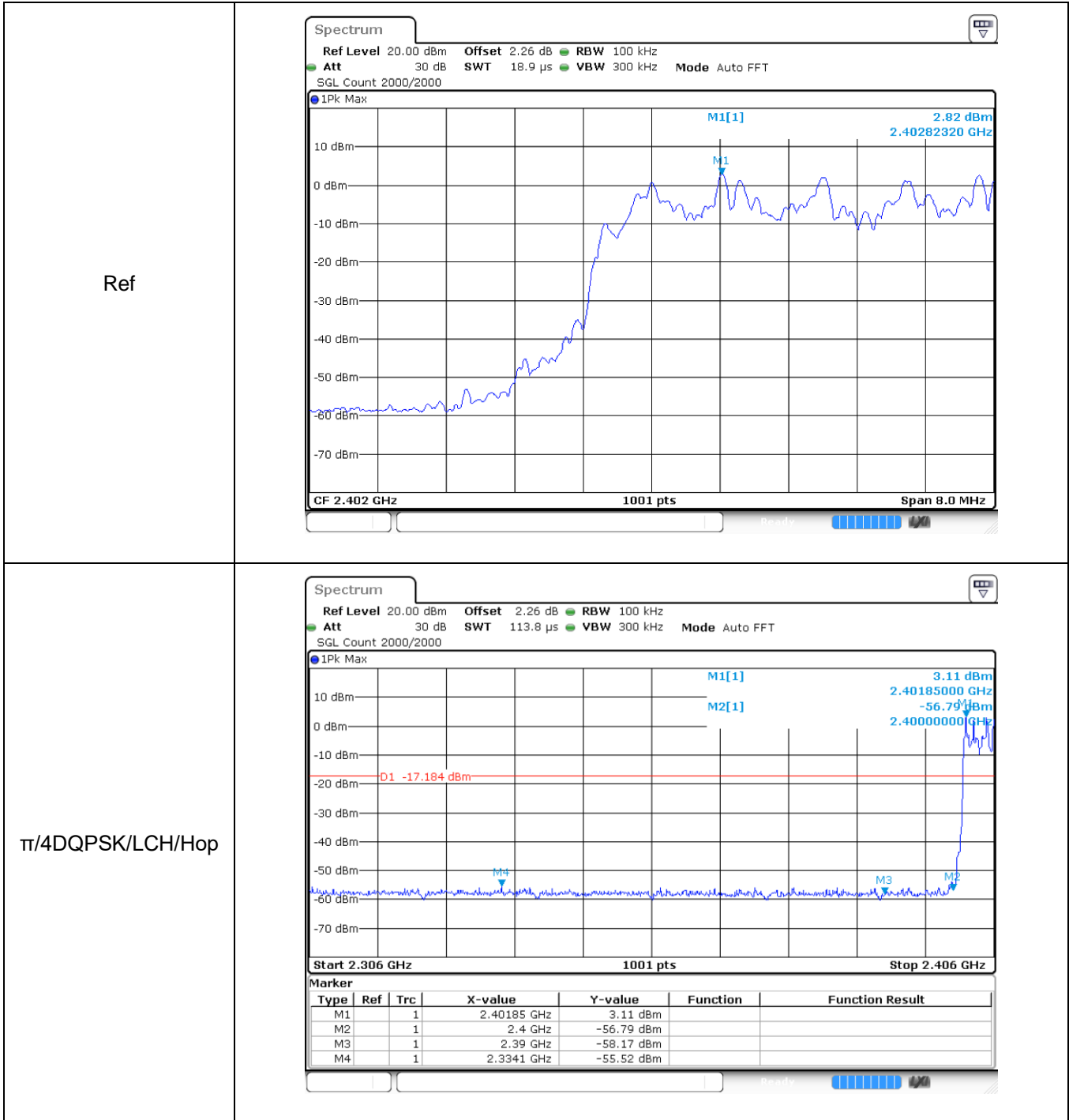


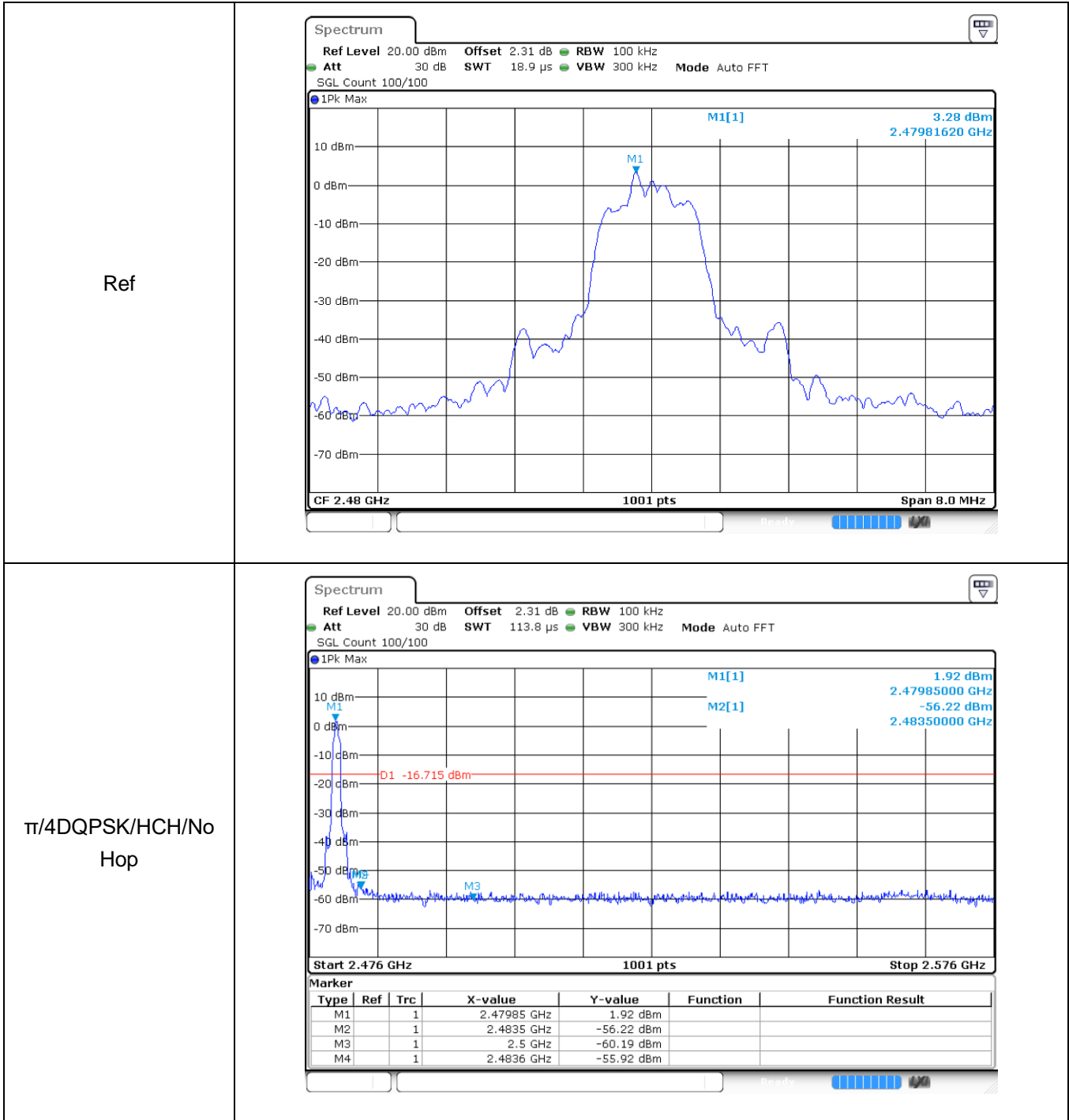


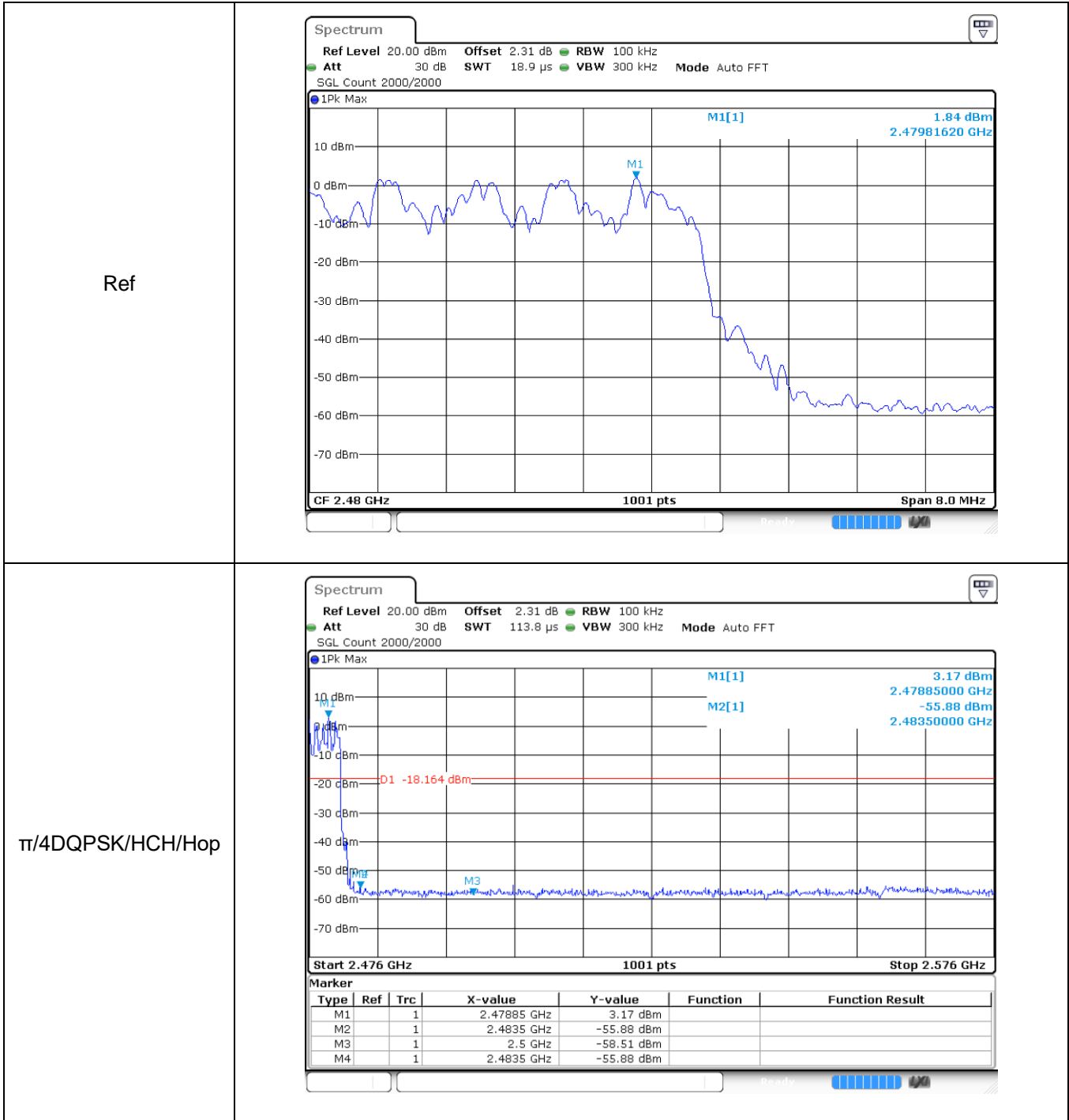


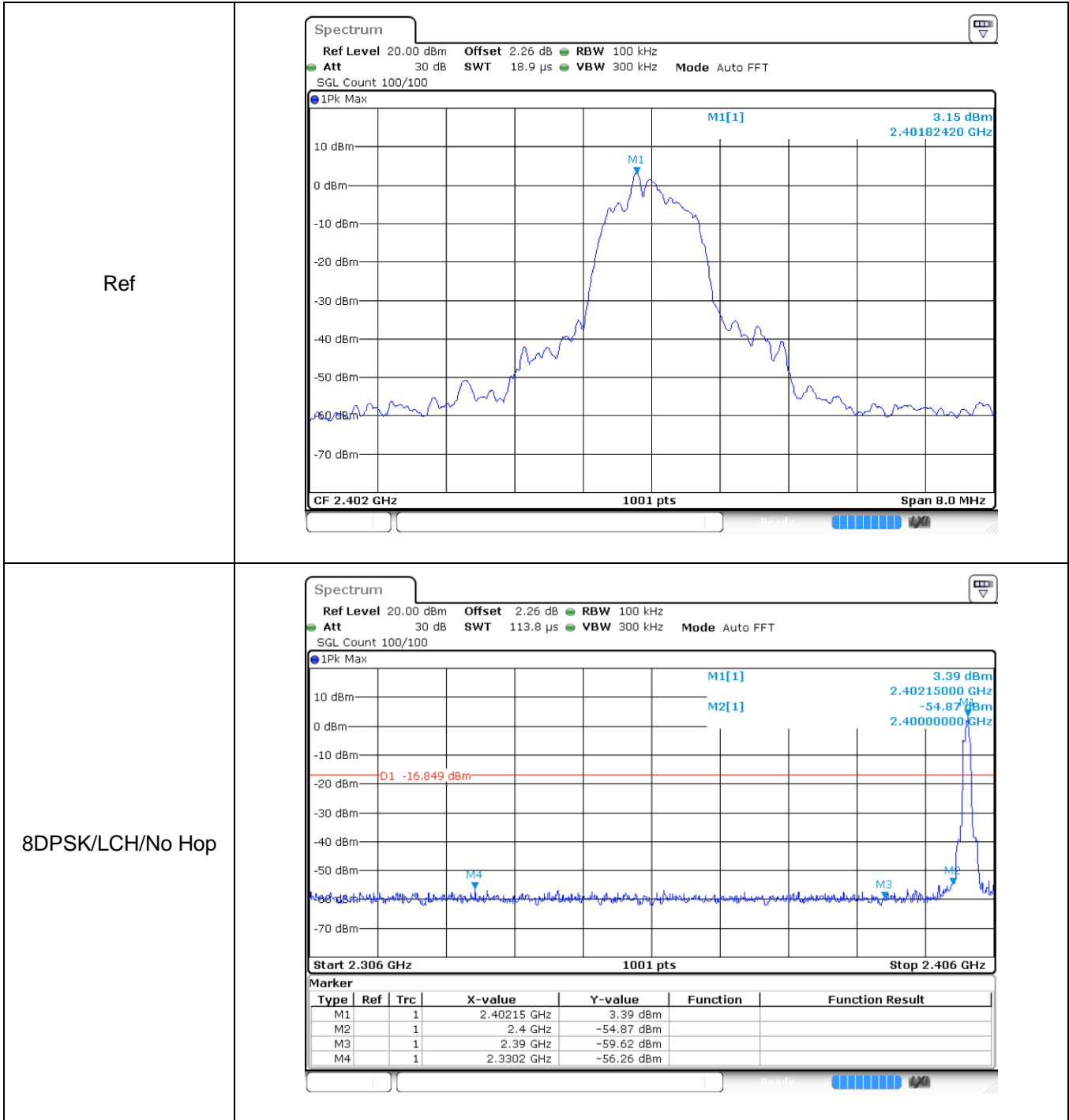


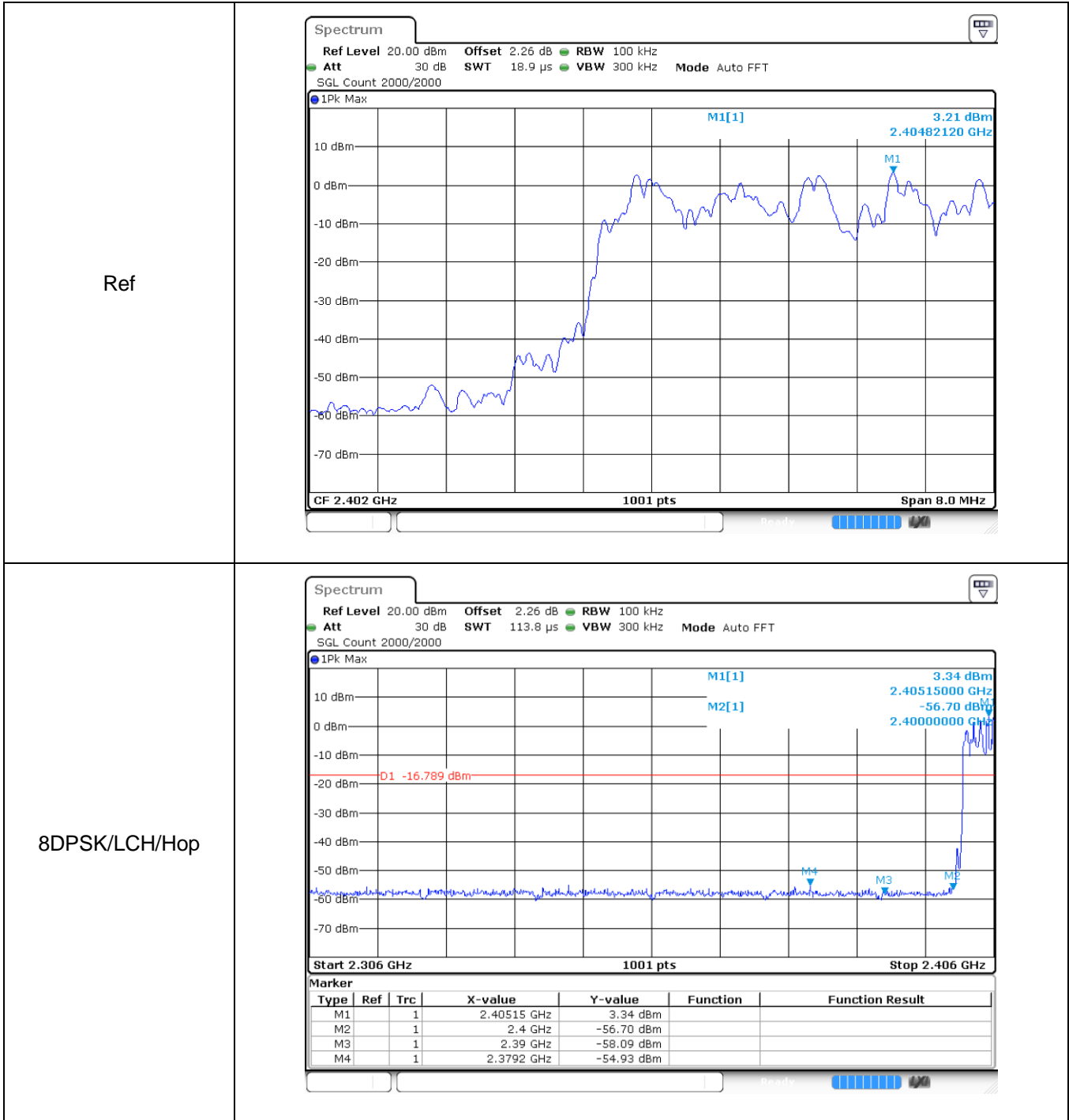


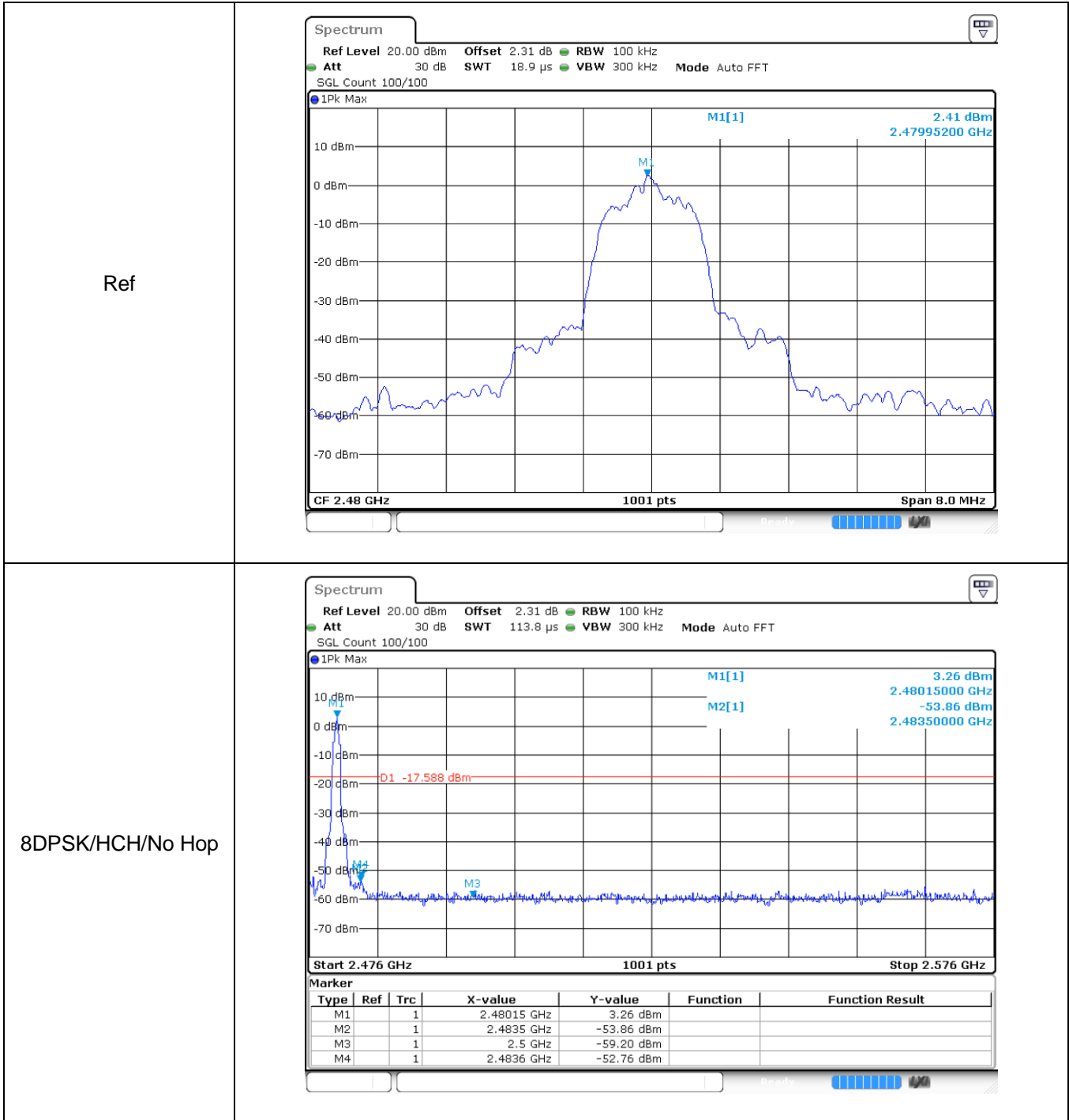


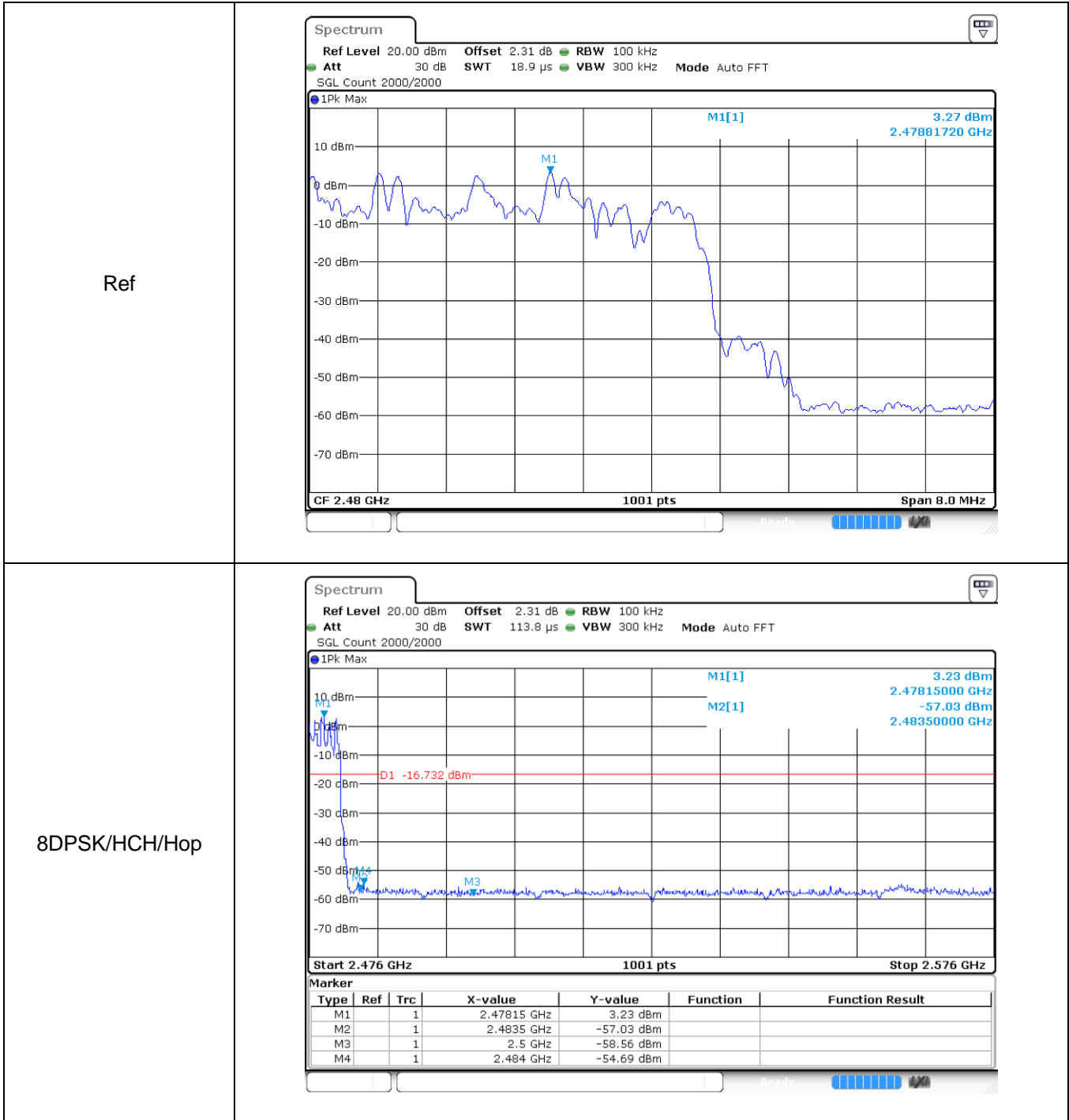












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