



Appendix A

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

Product Name: wireless speaker

Trade Mark: HOPESTAR

Test Model: PARTYBOX150

Environmental Conditions

Temperature:	24.9℃
Relative Humidity:	52.5%
ATM Pressure:	101Kpa
Test Engineer:	Emiya lin
Supervised by:	Simba Haung



Contents

Page

COVER PAGE

1	Duty Cycle	3
1.1	Test Result	3
1.2	Test Graphs	4
2	Maximum Conducted Peak Output Power	7
2.1	Test Result	7
2.2	Test Graphs	8
3	20dB Bandwidth	11
3.1	Test Result	11
3.2	Test Graphs	12
4	Carrier Frequency Separation	15
4.1	Test Result	15
4.2	Test Graphs	16
5	Hopping Channel Number	17
5.1	Test Result	17
5.2	Test Graphs	18
6	Dwell Time	19
6.1	Test Result	19
6.2	Test Graphs	20
7	RF Conducted Spurious Emissions	22
7.1	Test Result	22
7.2	Test Graphs	23
8	Band-edge for RF Conducted Emissions	29
8.1	Test Result	29
8.2	Test Graphs	30
9	Restrict-band band-edge measurements	38
9.1	Test Result	38
9.2	Test Graphs	39

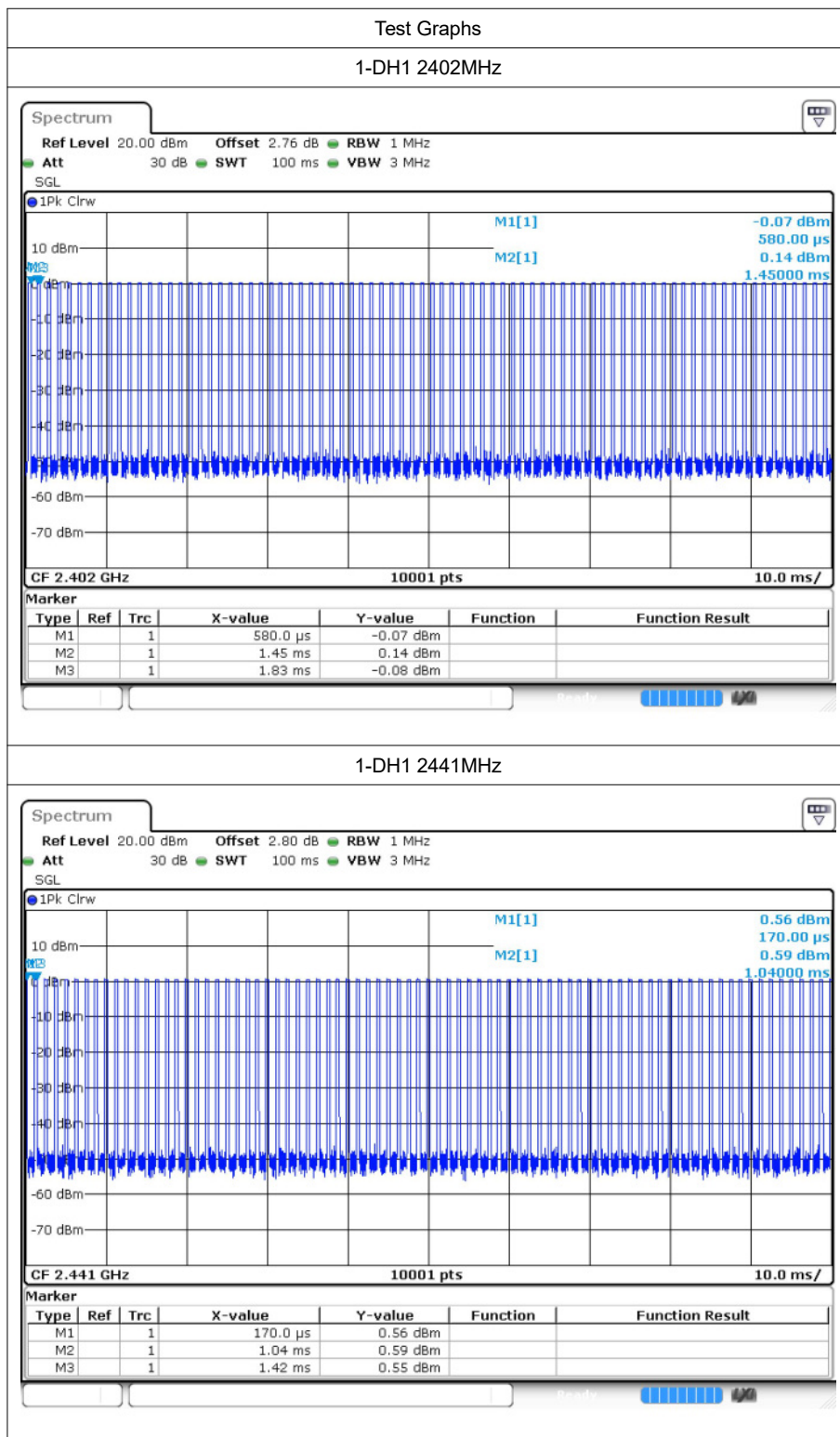


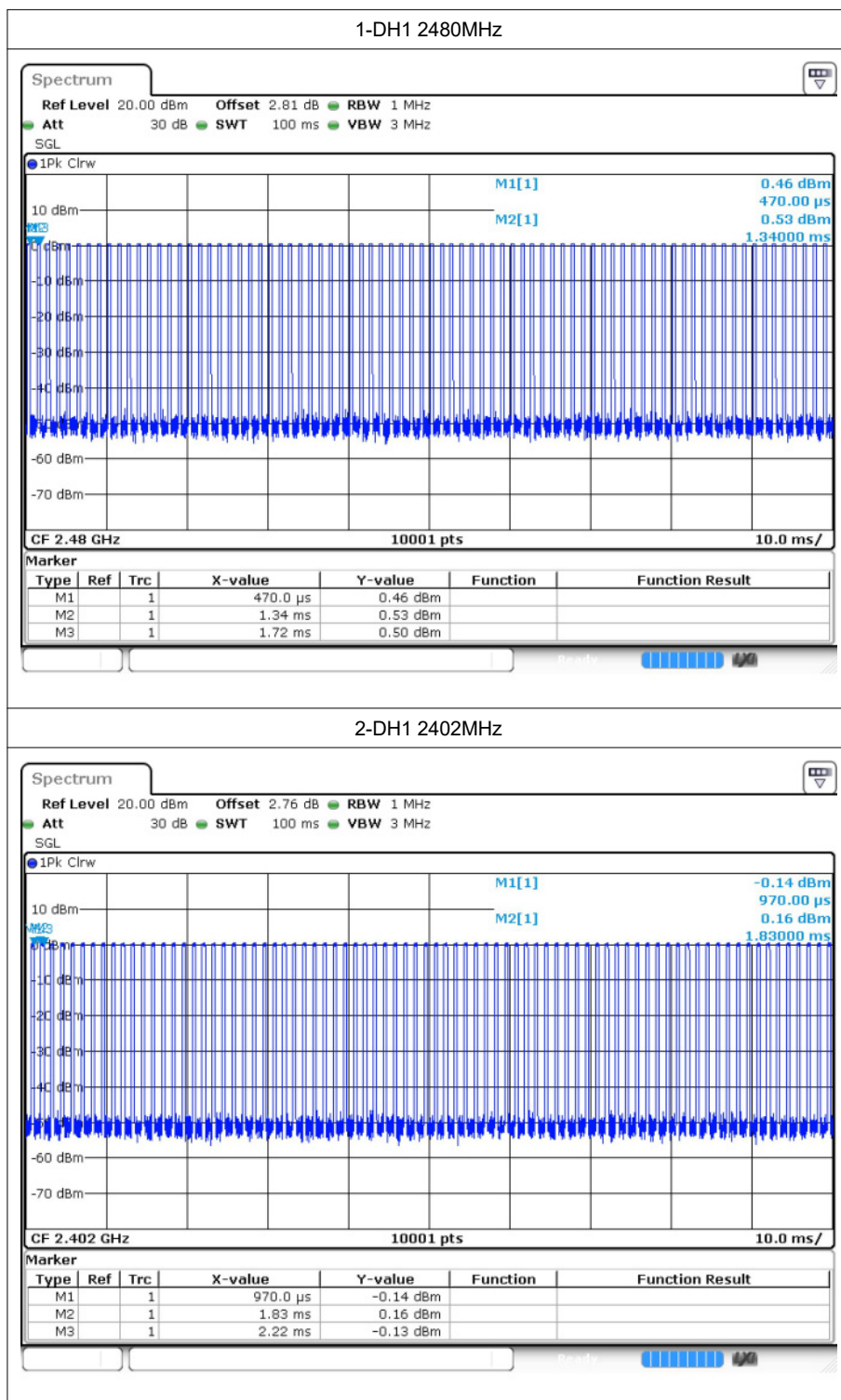
1 Duty Cycle

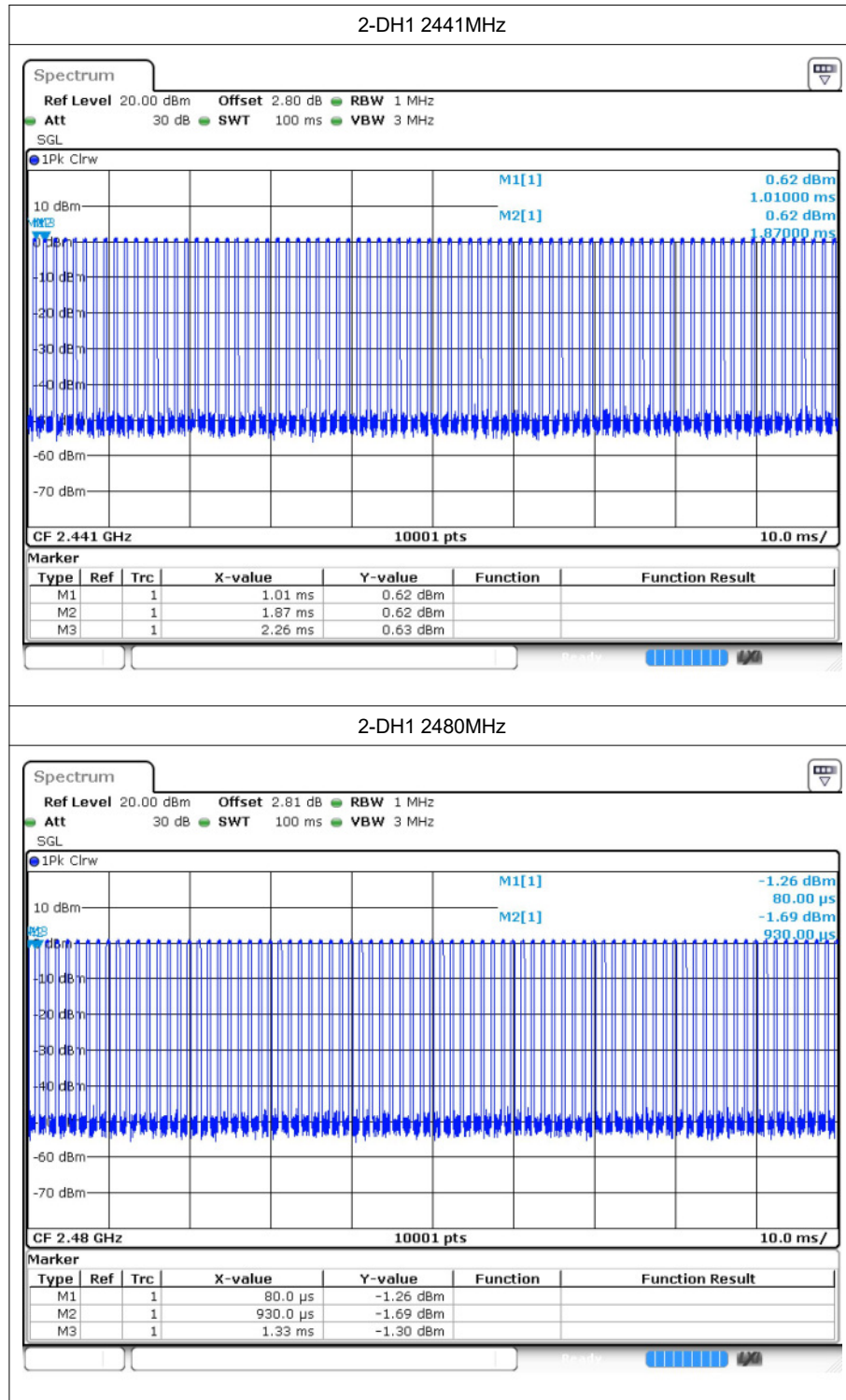
1.1 Test Result

Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor	1/T (kHz)
1-DH1	2402	31.85	4.97	2.63
1-DH1	2441	31.21	5.06	2.63
1-DH1	2480	31.2	5.06	2.63
2-DH1	2402	32	4.95	2.56
2-DH1	2441	32	4.95	2.56
2-DH1	2480	32.81	4.84	2.5

1.2 Test Graphs





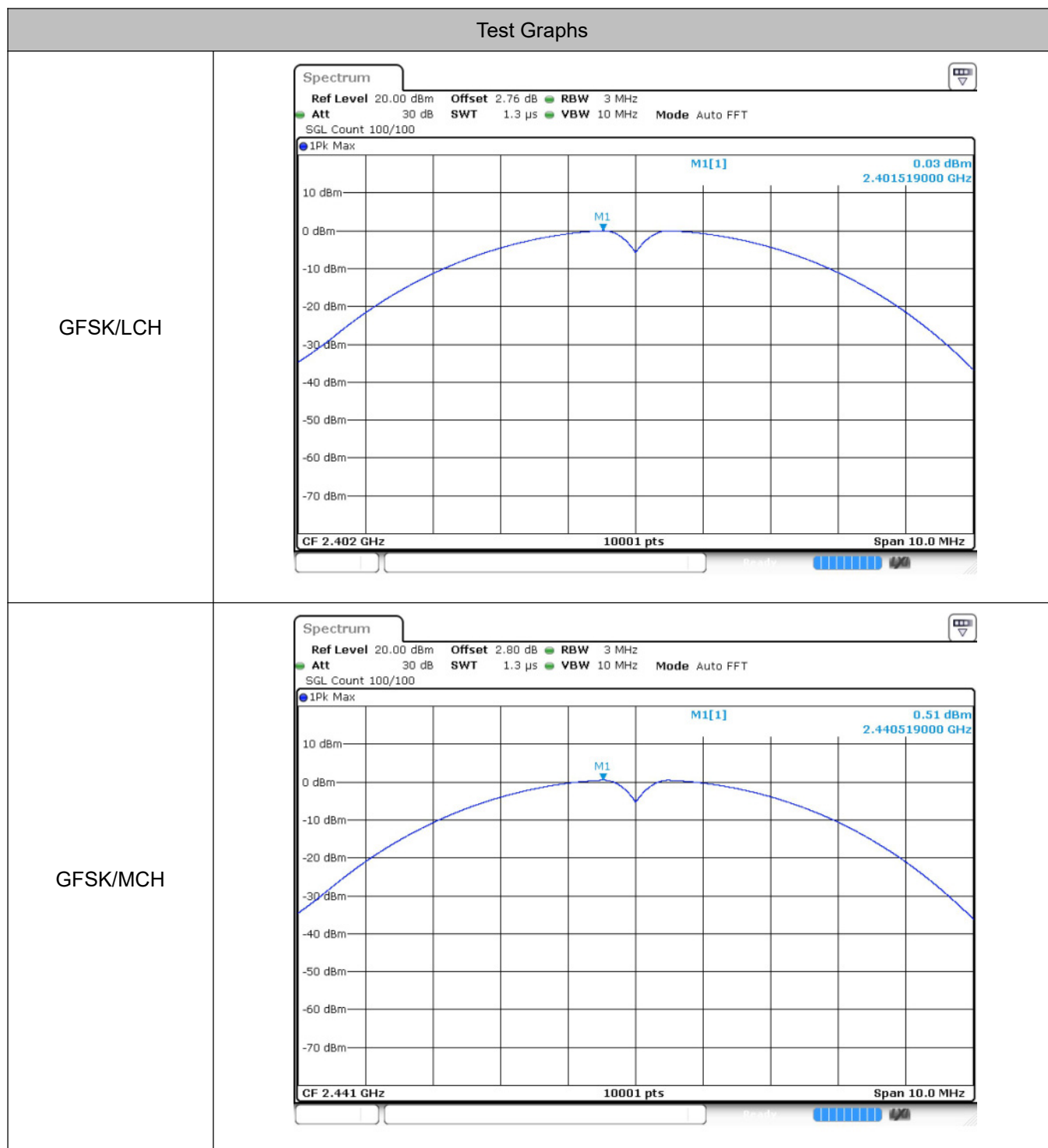


2 Maximum Conducted Peak Output Power

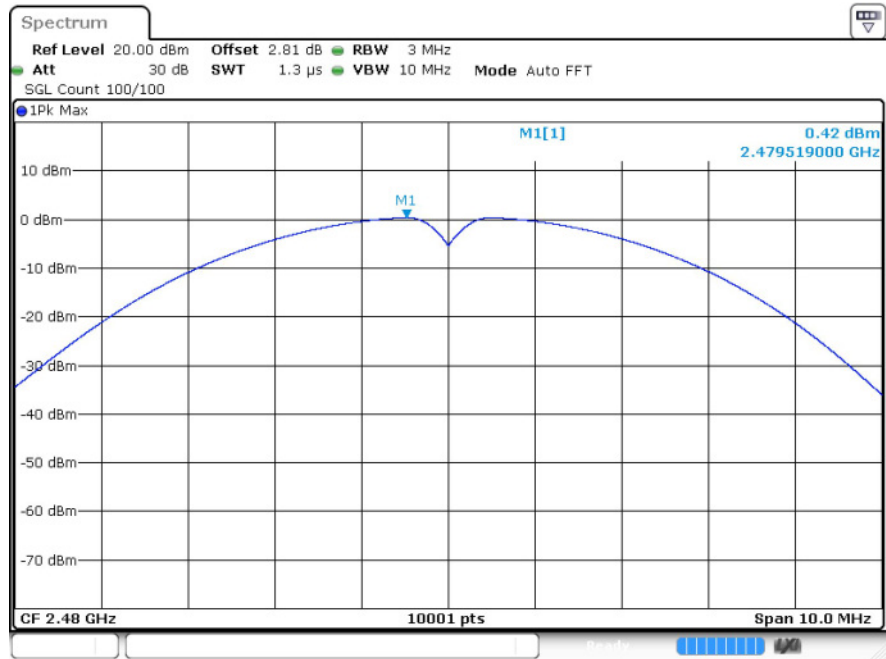
2.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.03	21	Pass
	MCH	0.51	21	Pass
	HCH	0.42	21	Pass
$\pi/4$ DQPSK	LCH	0.8	21	Pass
	MCH	0.87	21	Pass
	HCH	1.19	21	Pass

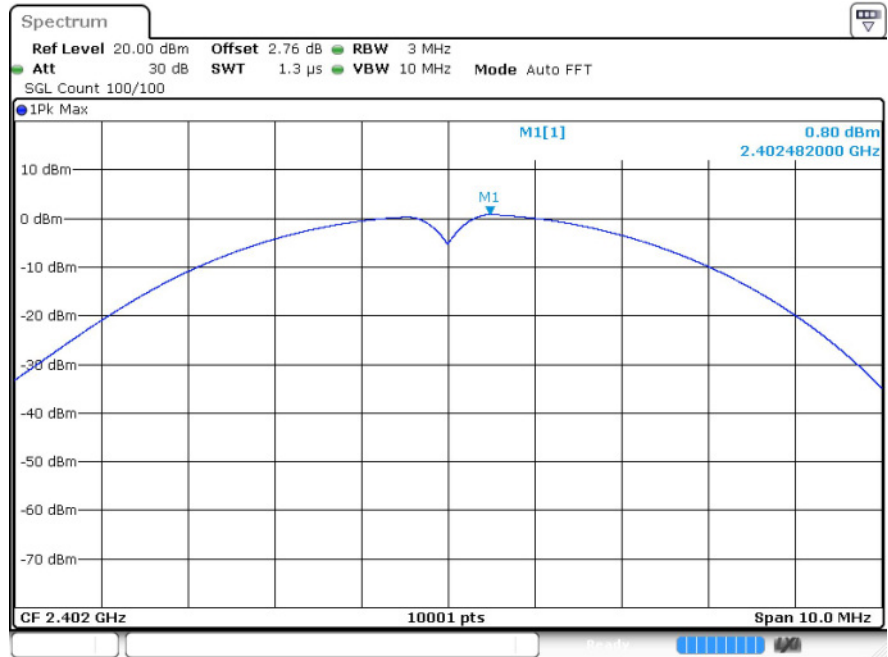
2.2 Test Graphs



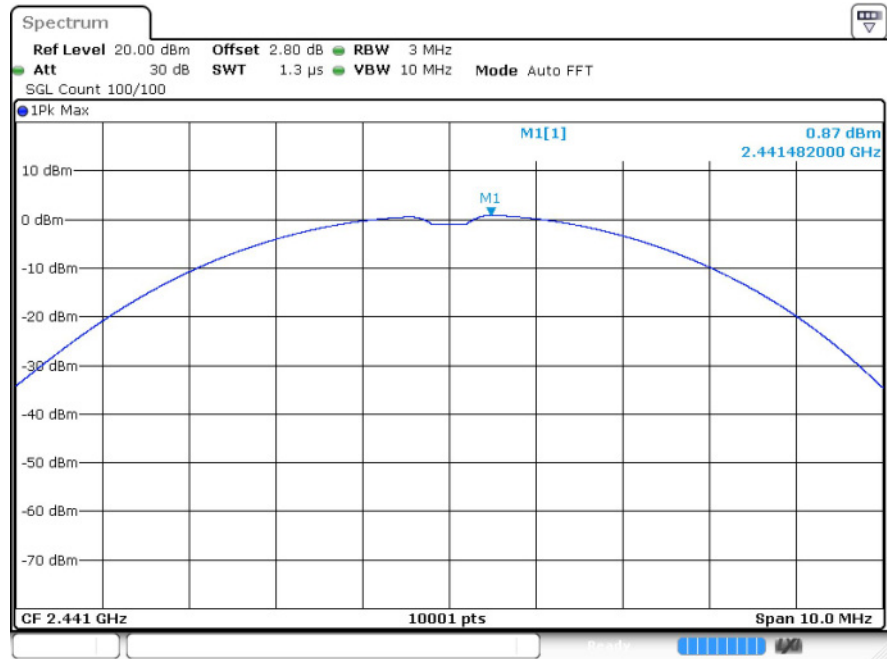
GFSK/HCH



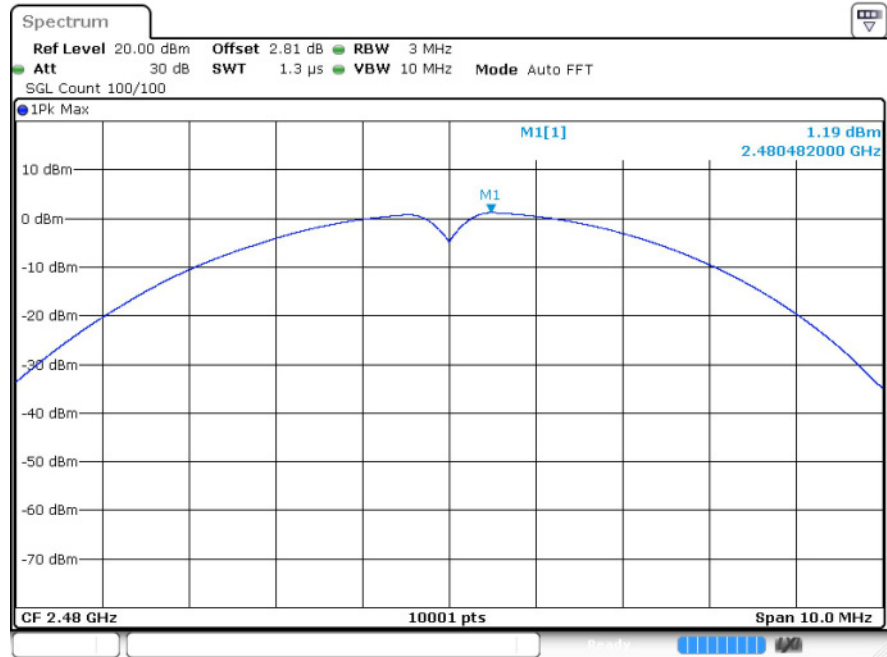
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH

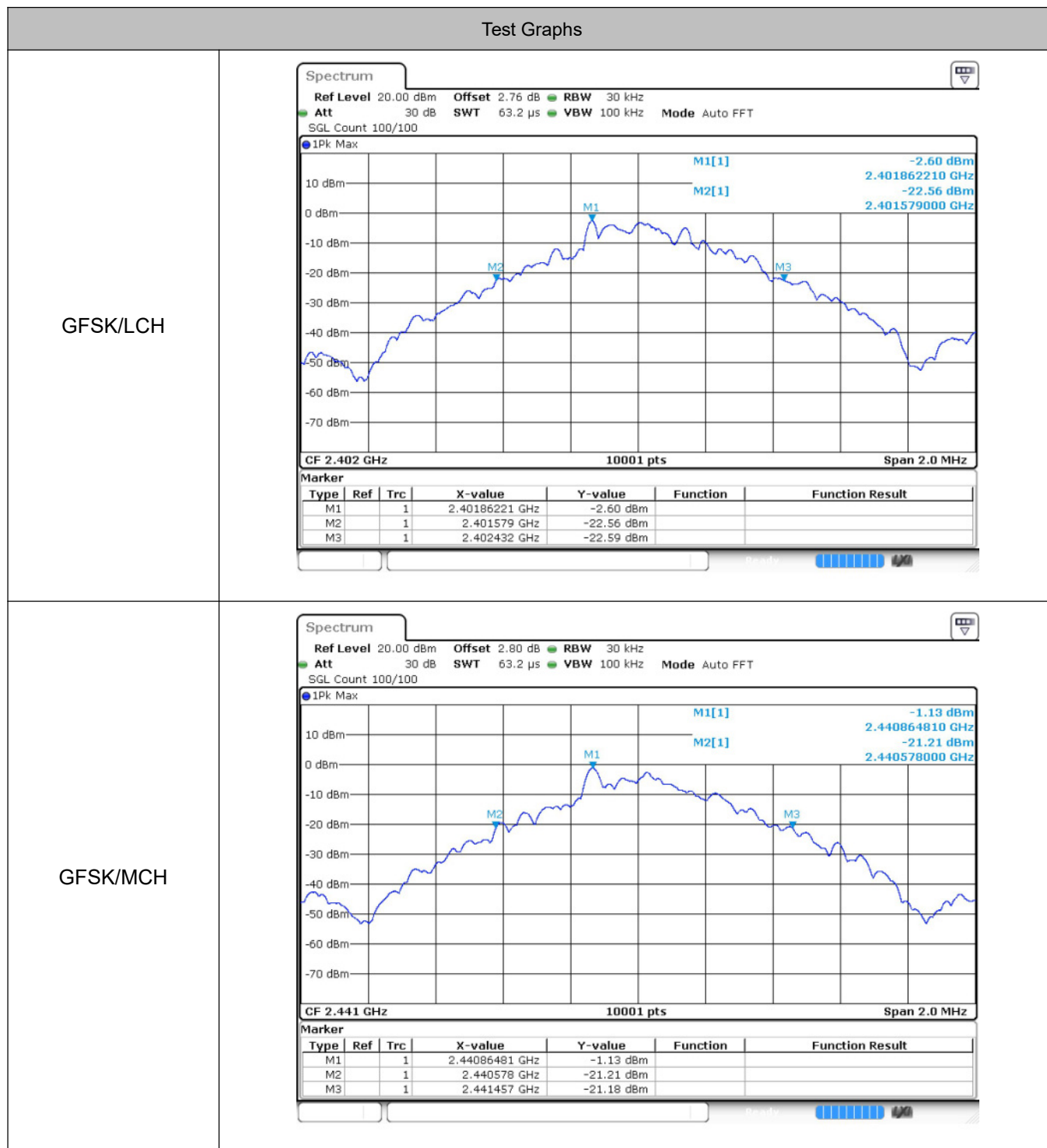


3 20dB Bandwidth

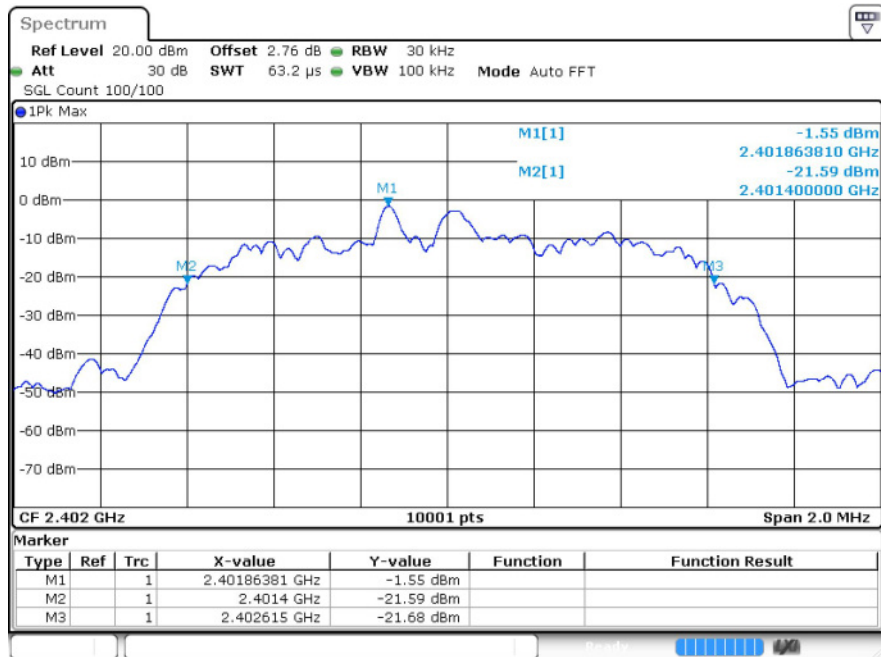
3.1 Test Result

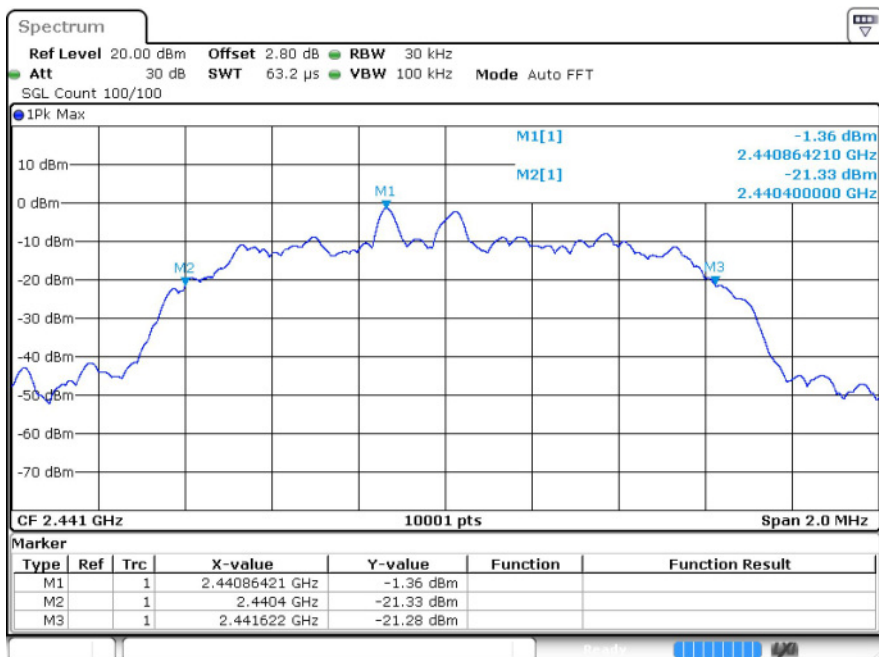
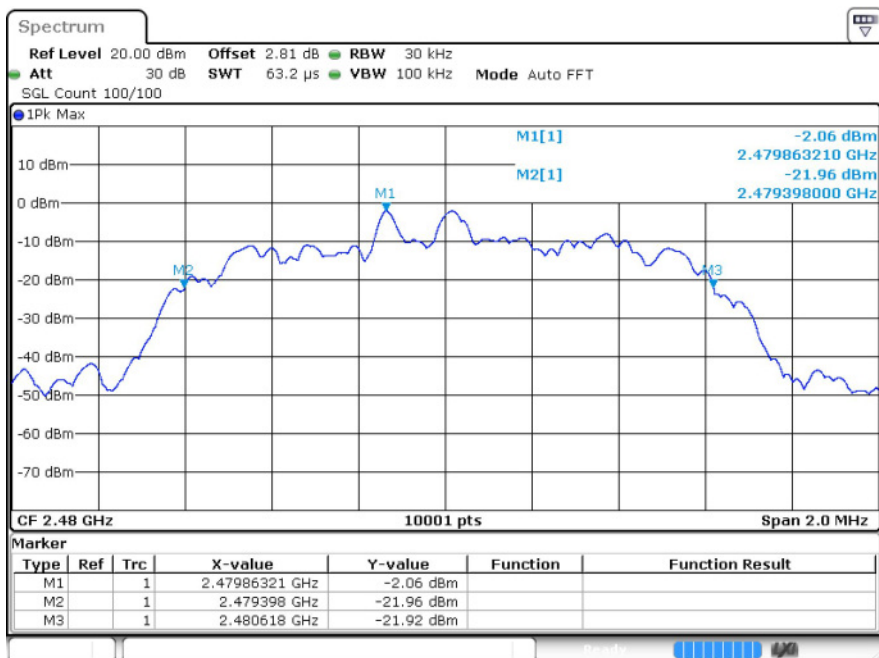
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.853	Not Specified	Pass
	MCH	0.878	Not Specified	Pass
	HCH	0.853	Not Specified	Pass
$\pi/4$ DQPSK	LCH	1.214	Not Specified	Pass
	MCH	1.222	Not Specified	Pass
	HCH	1.22	Not Specified	Pass

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	0.585	Pass
$\pi/4$ DQPSK	MCH	1.002	0.815	Pass

4.2 Test Graphs



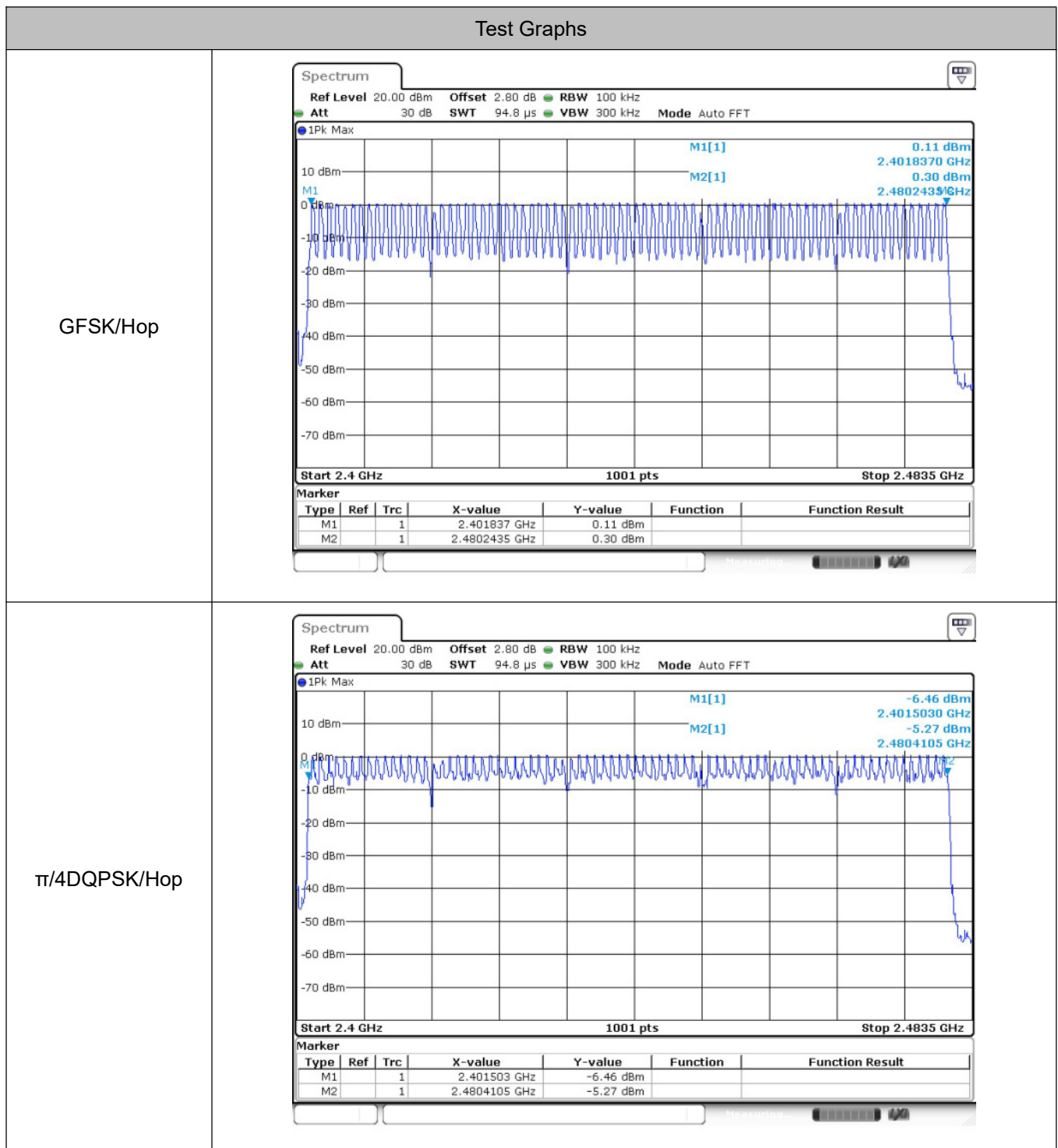


5 Hopping Channel Number

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

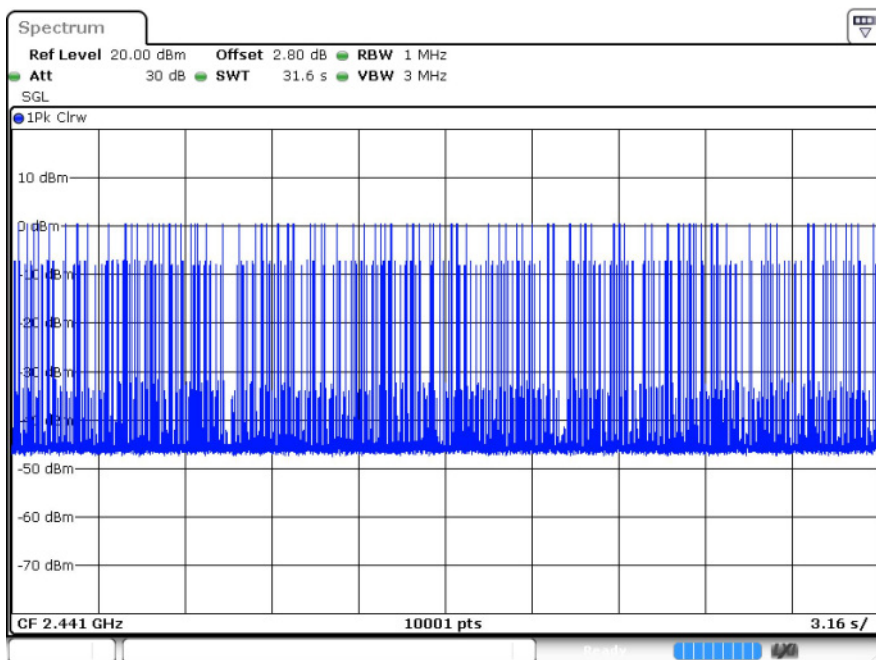
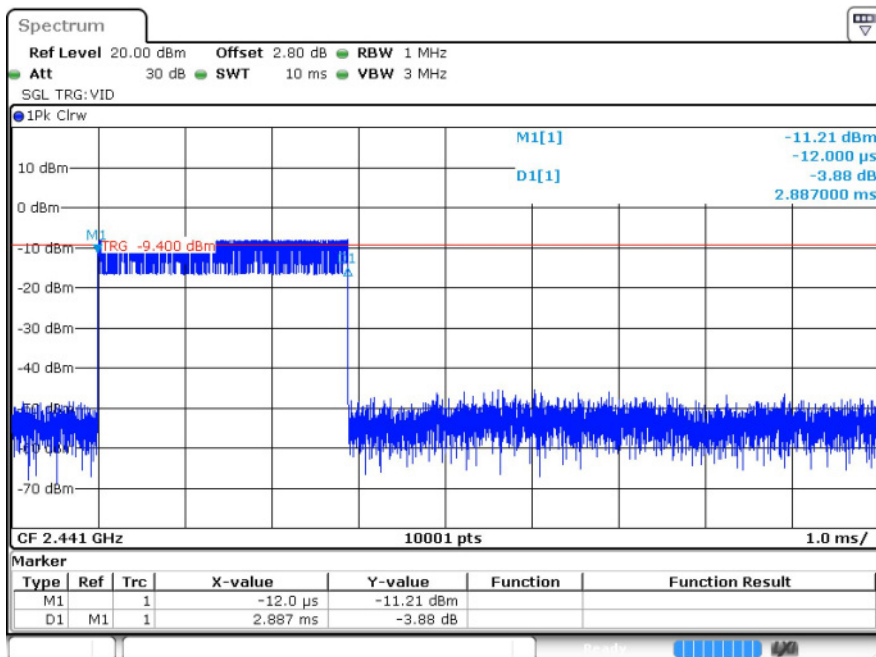
6.1 Test Result

Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.887	110	317.57	0.4	Pass
$\pi/4$ DQPSK	2DH5	MCH	2.891	111	320.901	0.4	Pass

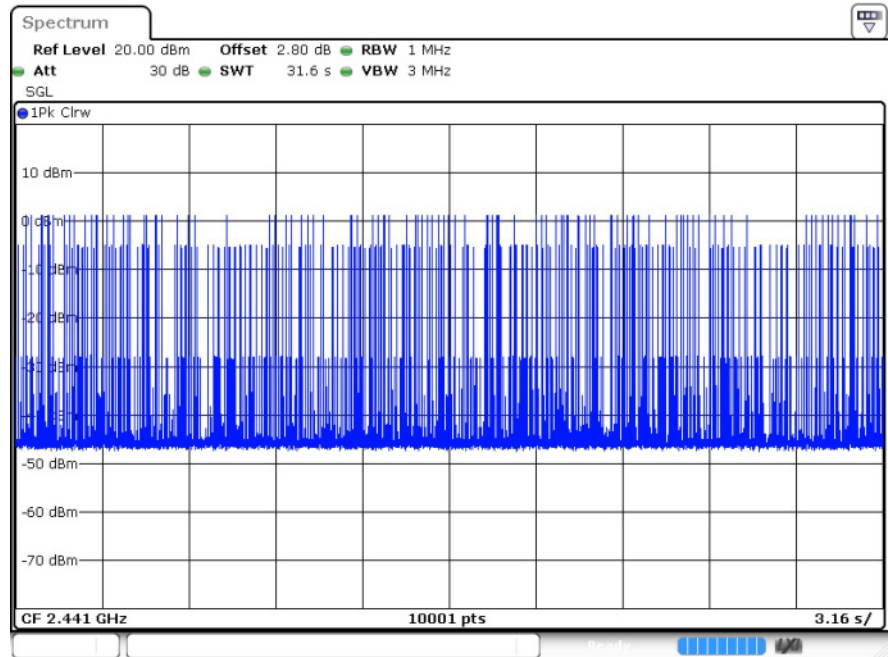
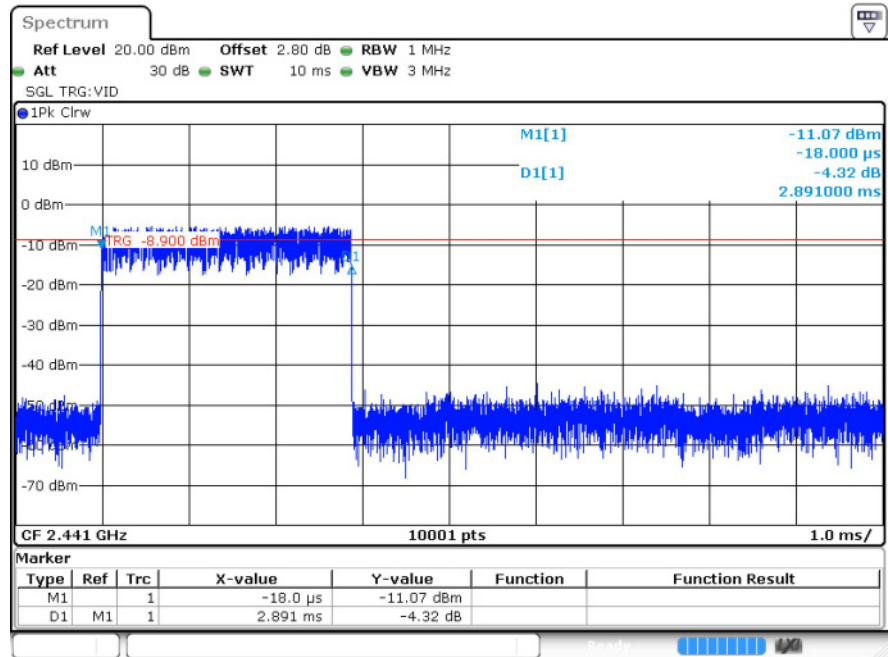
6.2 Test Graphs

Test Graphs

GFSK_DH5/MCH



$\pi/4$ DQPSK
_2DH5/MCH



7 RF Conducted Spurious Emissions

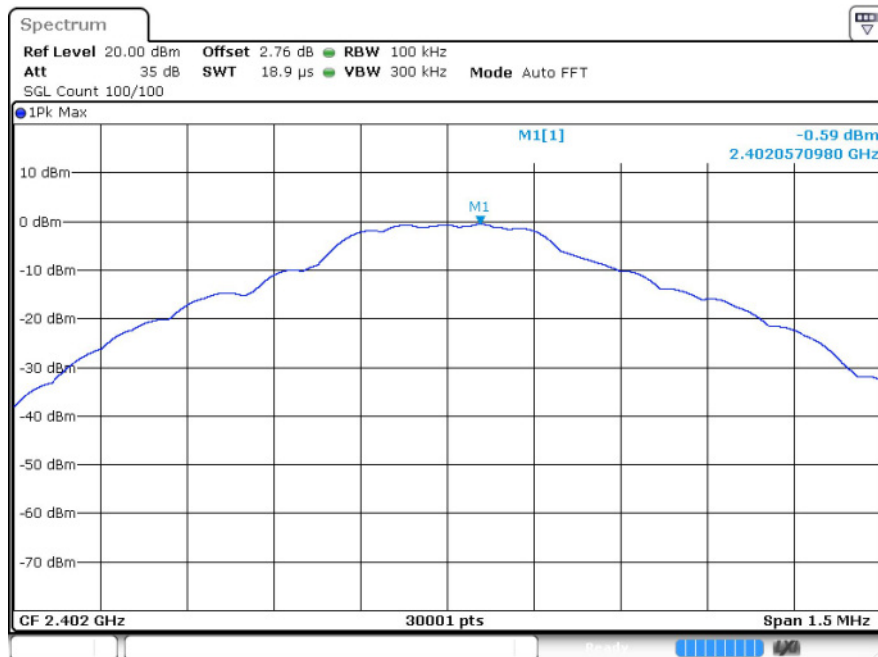
7.1 Test Result

Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-38.22	-20	Pass
	MCH	-39.66	-20	Pass
	HCH	-42.89	-20	Pass
$\pi/4$ DQPSK	LCH	-39.19	-20	Pass
	MCH	-39.81	-20	Pass
	HCH	-42.11	-20	Pass

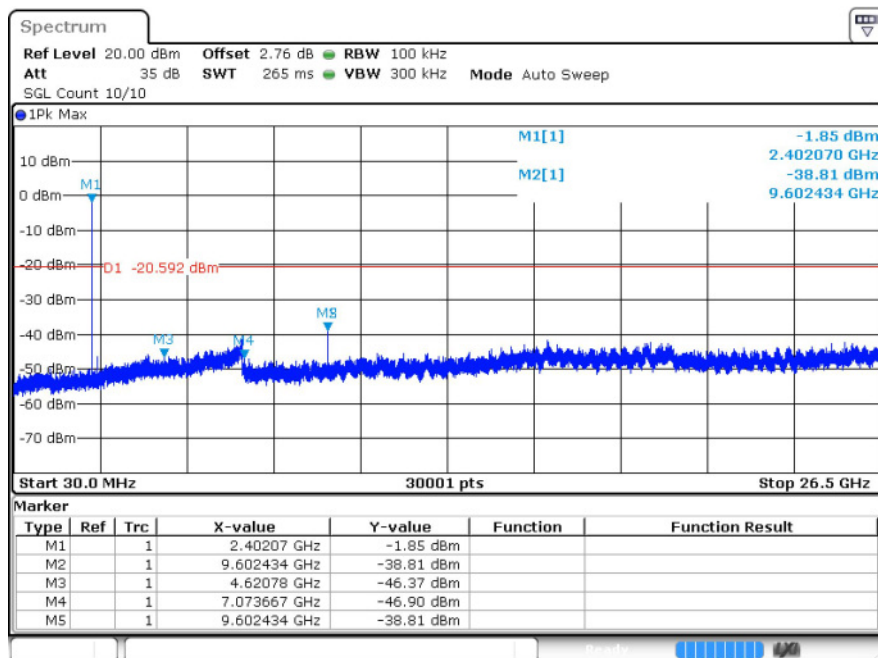
7.2 Test Graphs

GFSK_LCH_Graphs

Pref

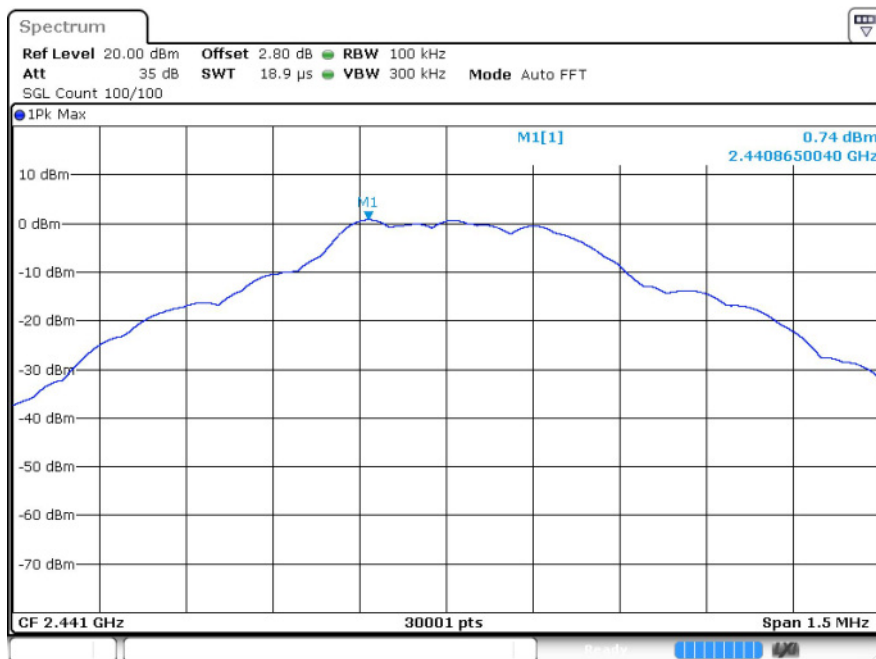


Puw

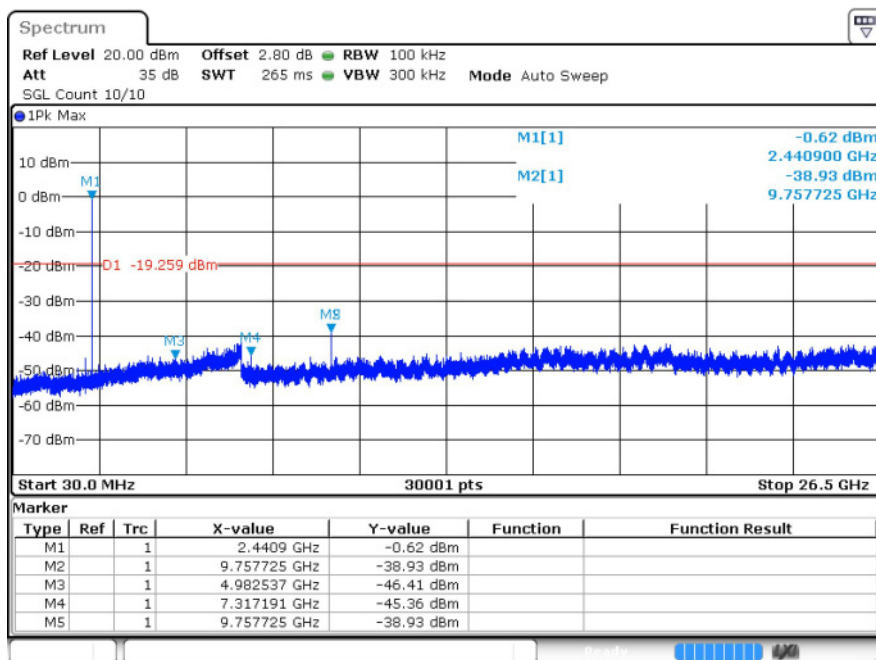


GFSK_MCH_Graphs

Pref

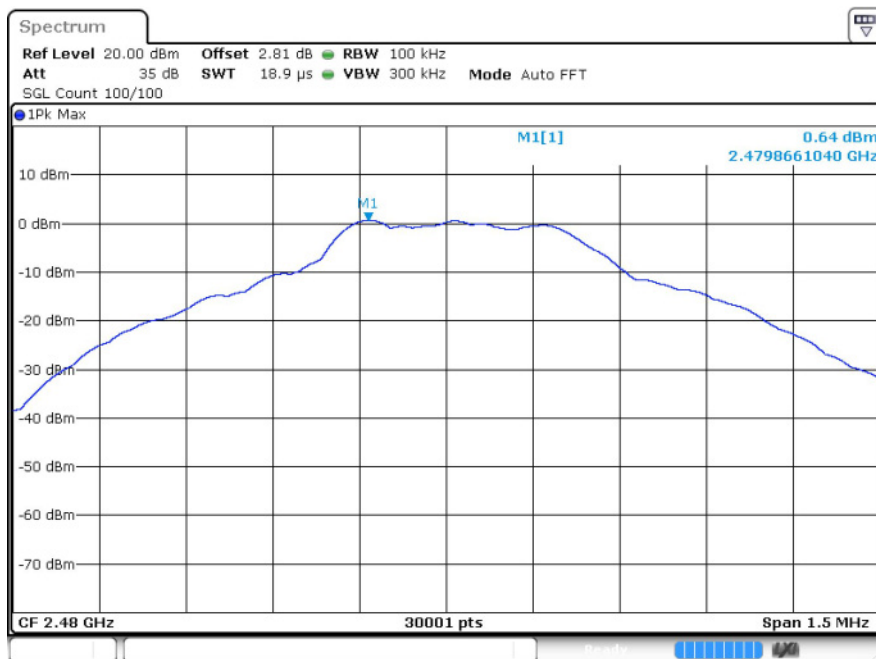


Puw

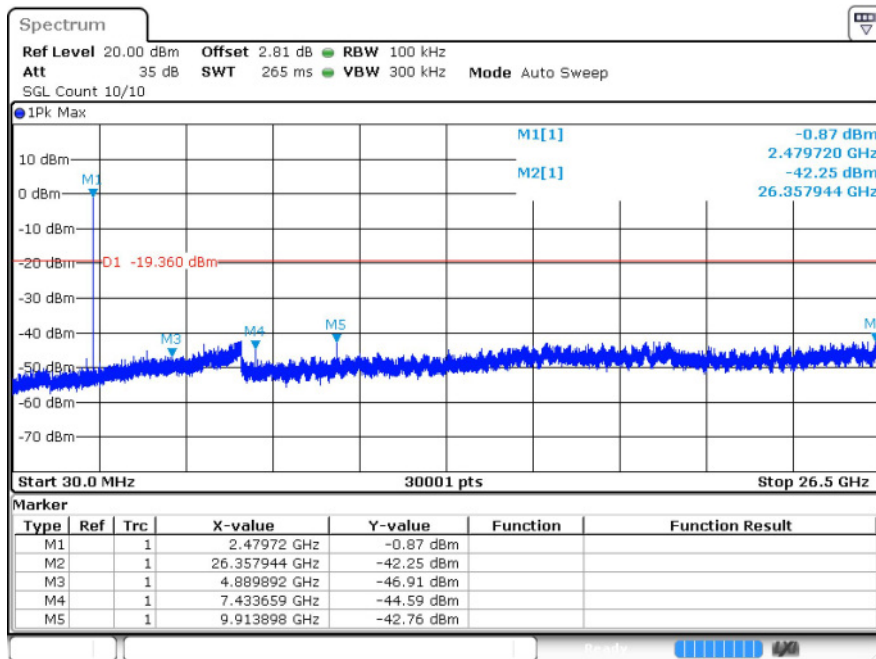


GFSK_HCH_Graphs

Pref

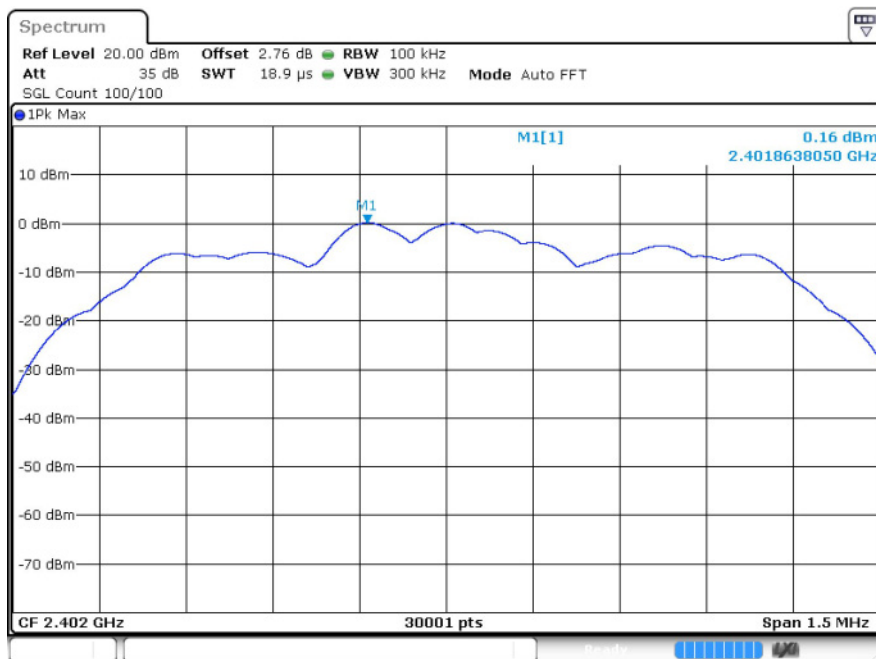


Puw

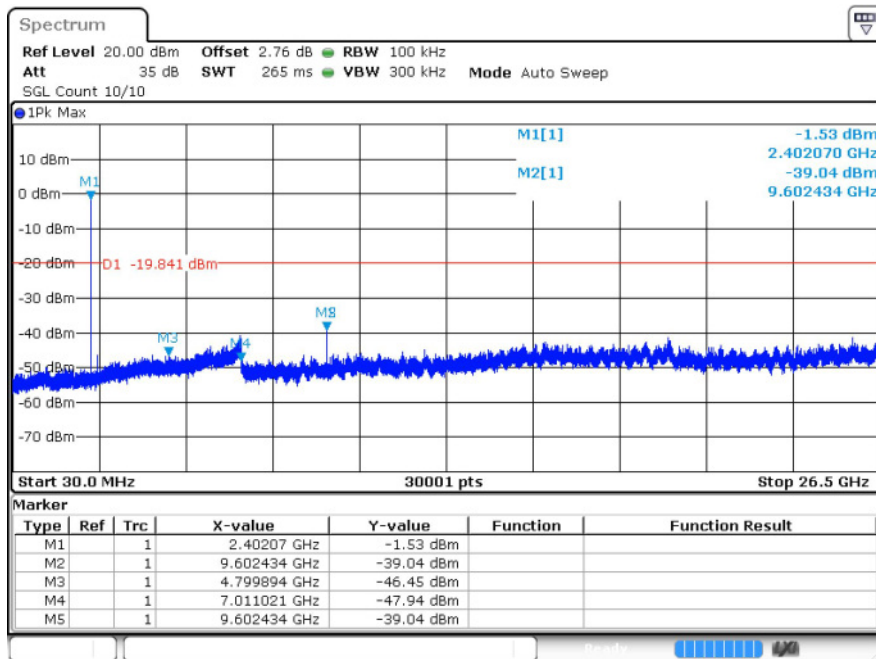


$\pi/4$ DQPSK_LCH_Graphs

Pref

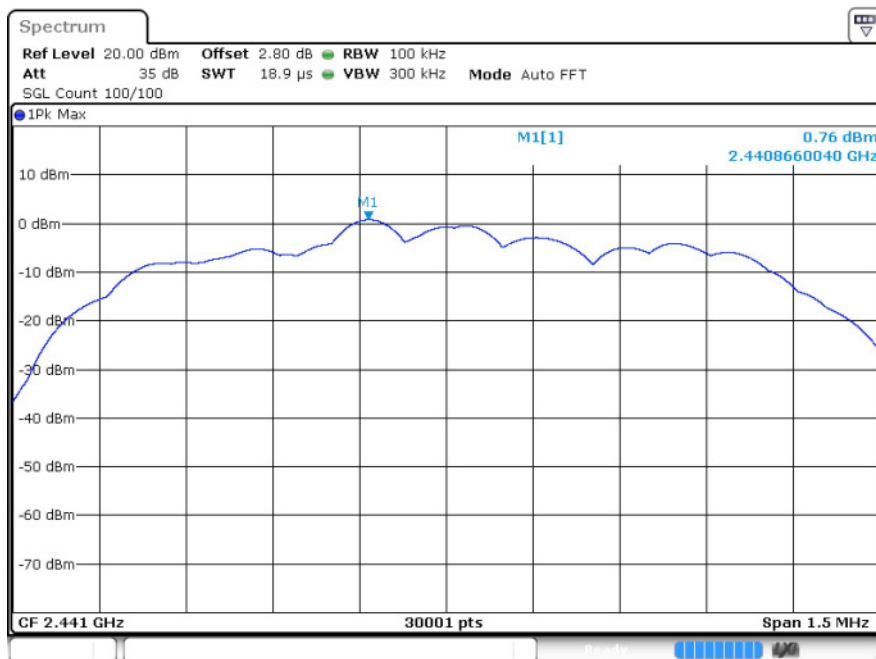


Puw

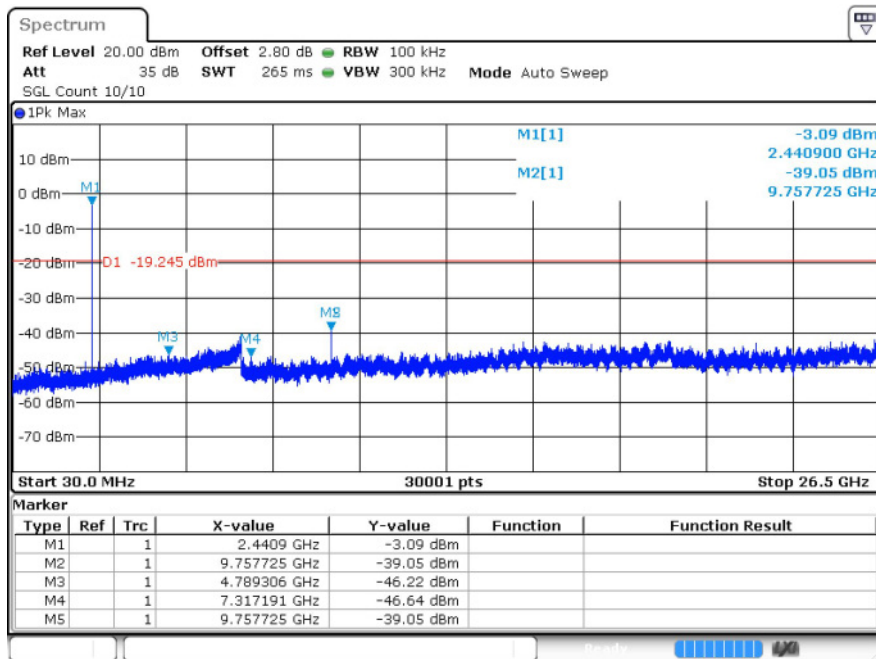


π /4DQPSK_MCH_Graphs

Pref

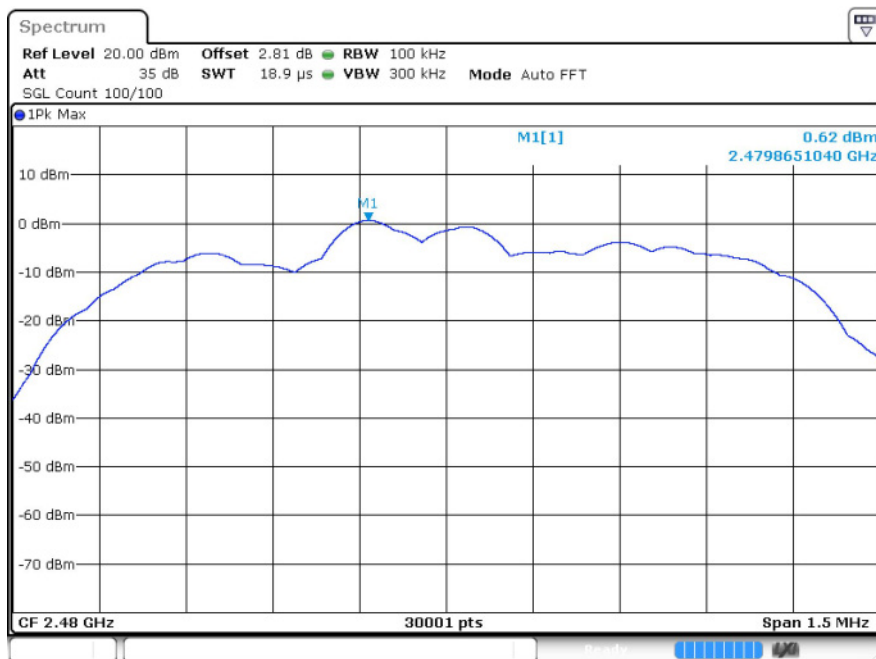


Puw

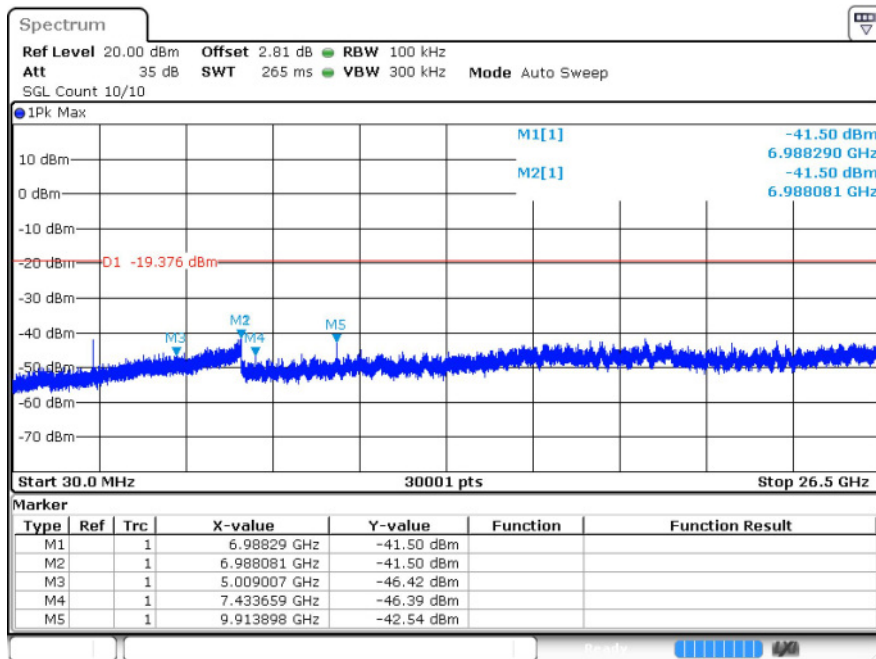


$\pi/4$ DQPSK_HCH_Graphs

Pref



Puw

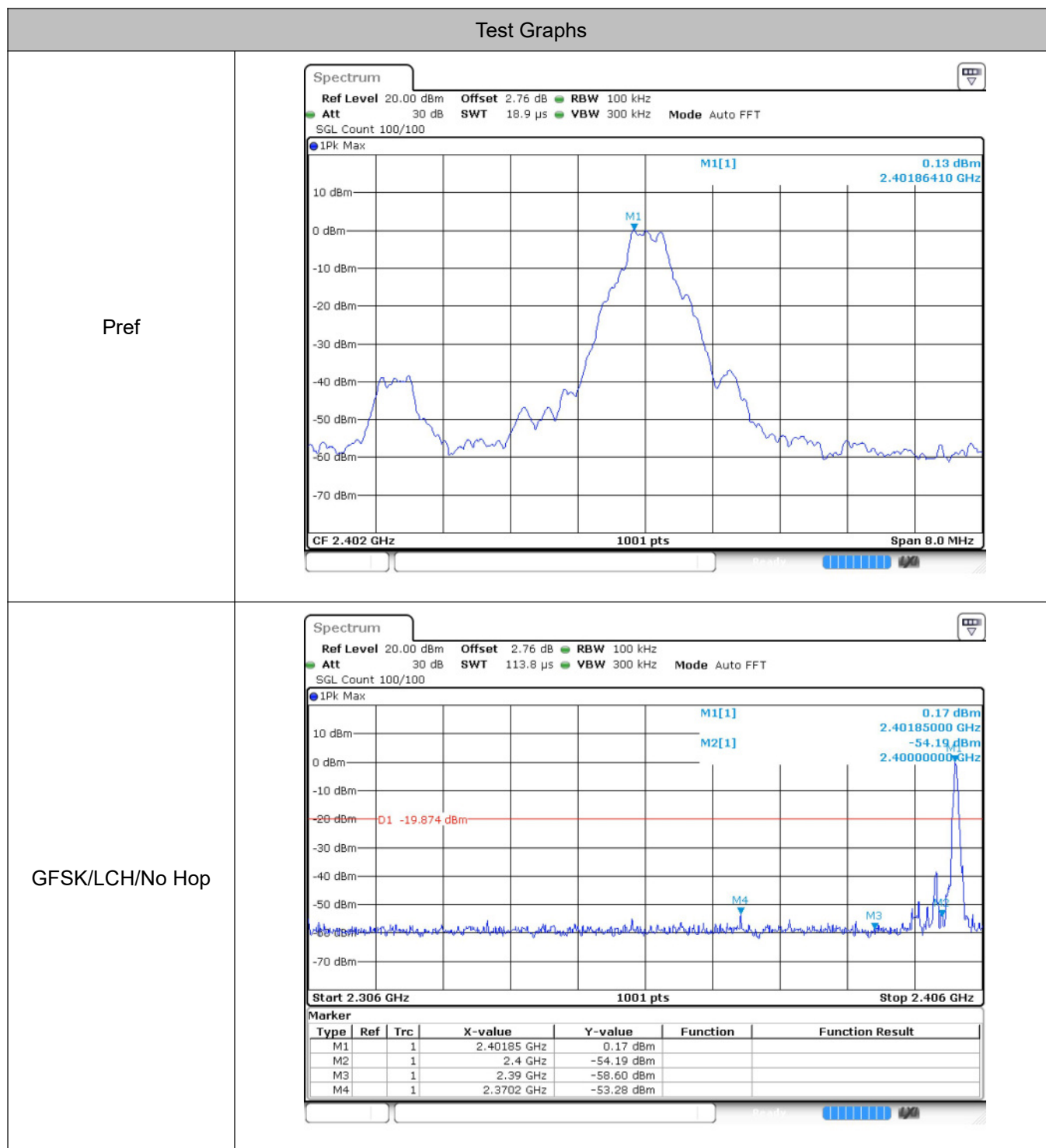


8 Band-edge for RF Conducted Emissions

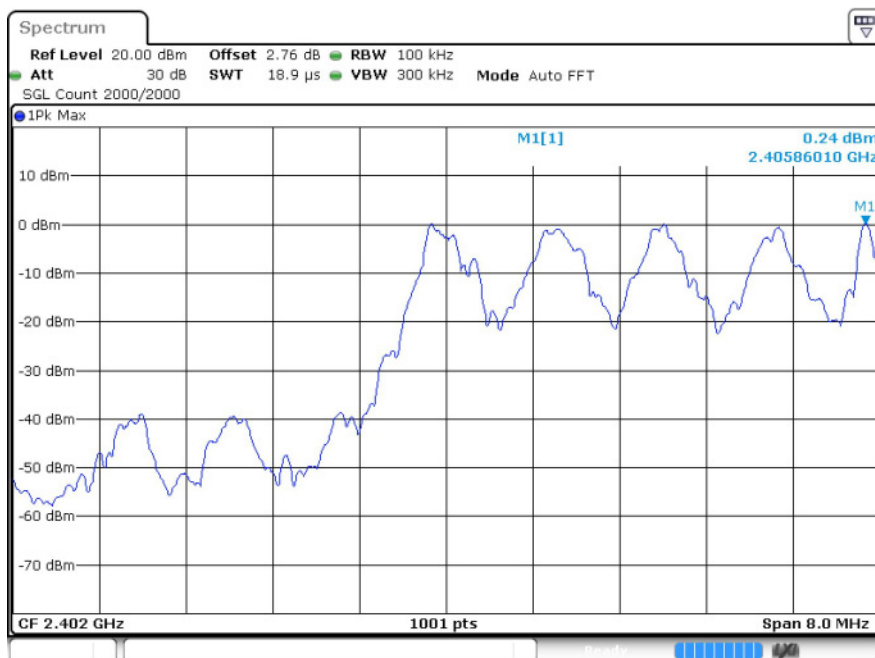
8.1 Test Result

Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	-53.4	-20	Pass
			On	-54.12	-20	Pass
	HCH	2480	Off	-56.33	-20	Pass
			On	-53.94	-20	Pass
$\pi/4$ DQPSK	LCH	2402	Off	-55.72	-20	Pass
			On	-54.35	-20	Pass
	HCH	2480	Off	-57.03	-20	Pass
			On	-54.3	-20	Pass

8.2 Test Graphs



Ref



GFSK/LCH/Hop

