



Appendix A

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

Product Name: Bluetooth headset

Trade Mark: Yincine

Test Model: JL-12

Environmental Conditions

Temperature:	24.3℃
Relative Humidity:	52.1%
ATM Pressure:	101Kpa
Test Engineer:	Emiya lin
Supervised by:	Simba Haung

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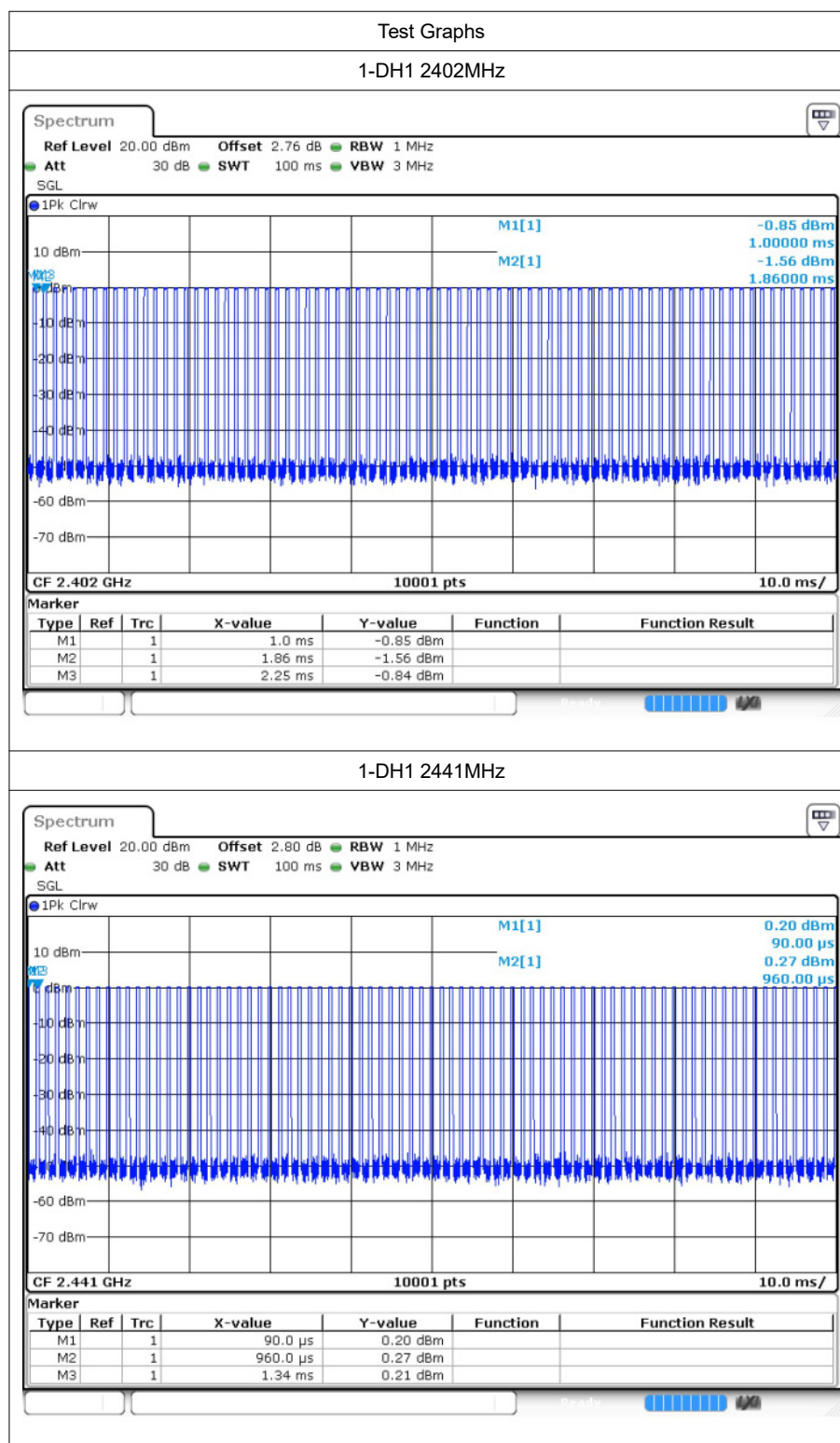
1 Duty Cycle

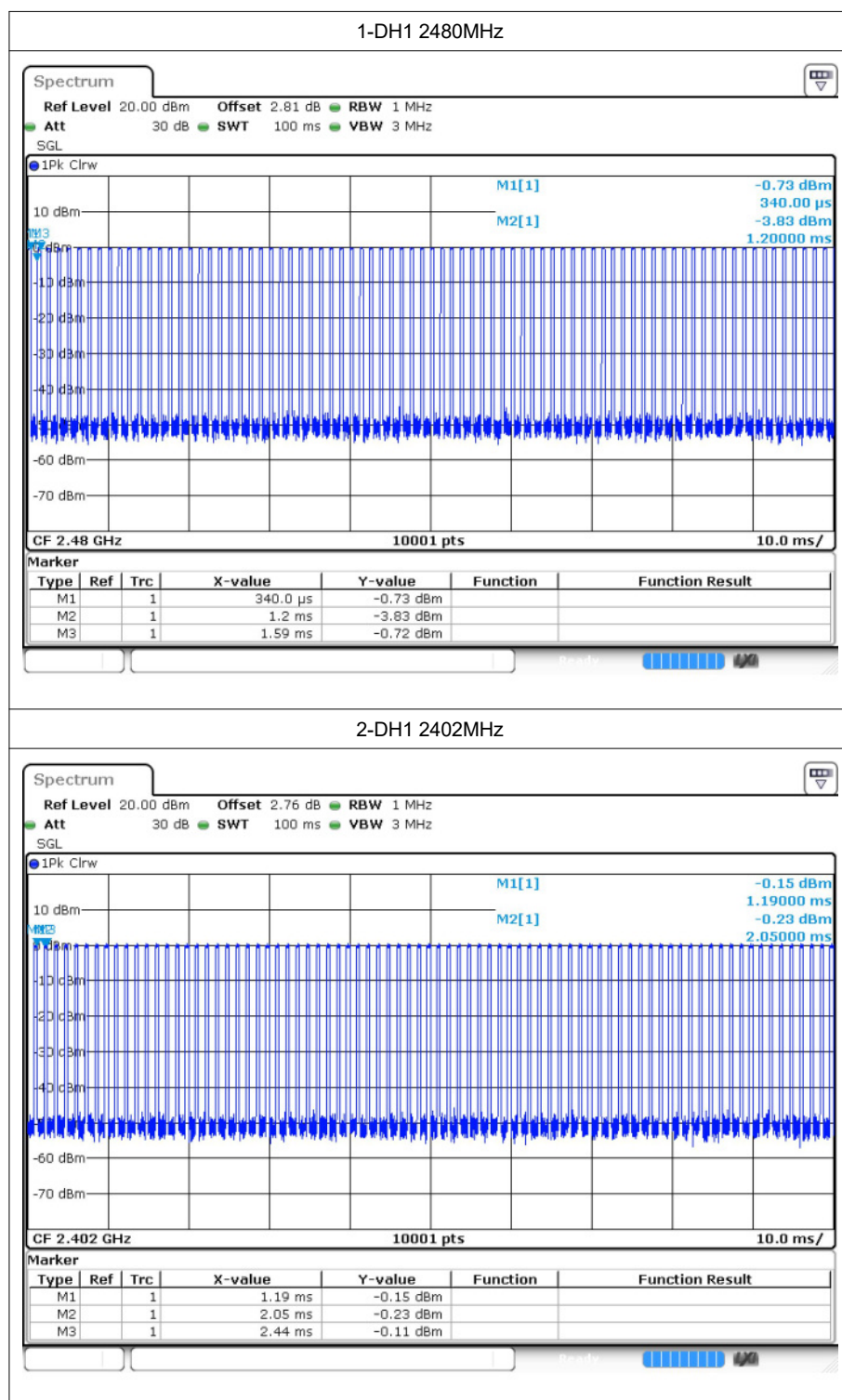
1.1 Test Result

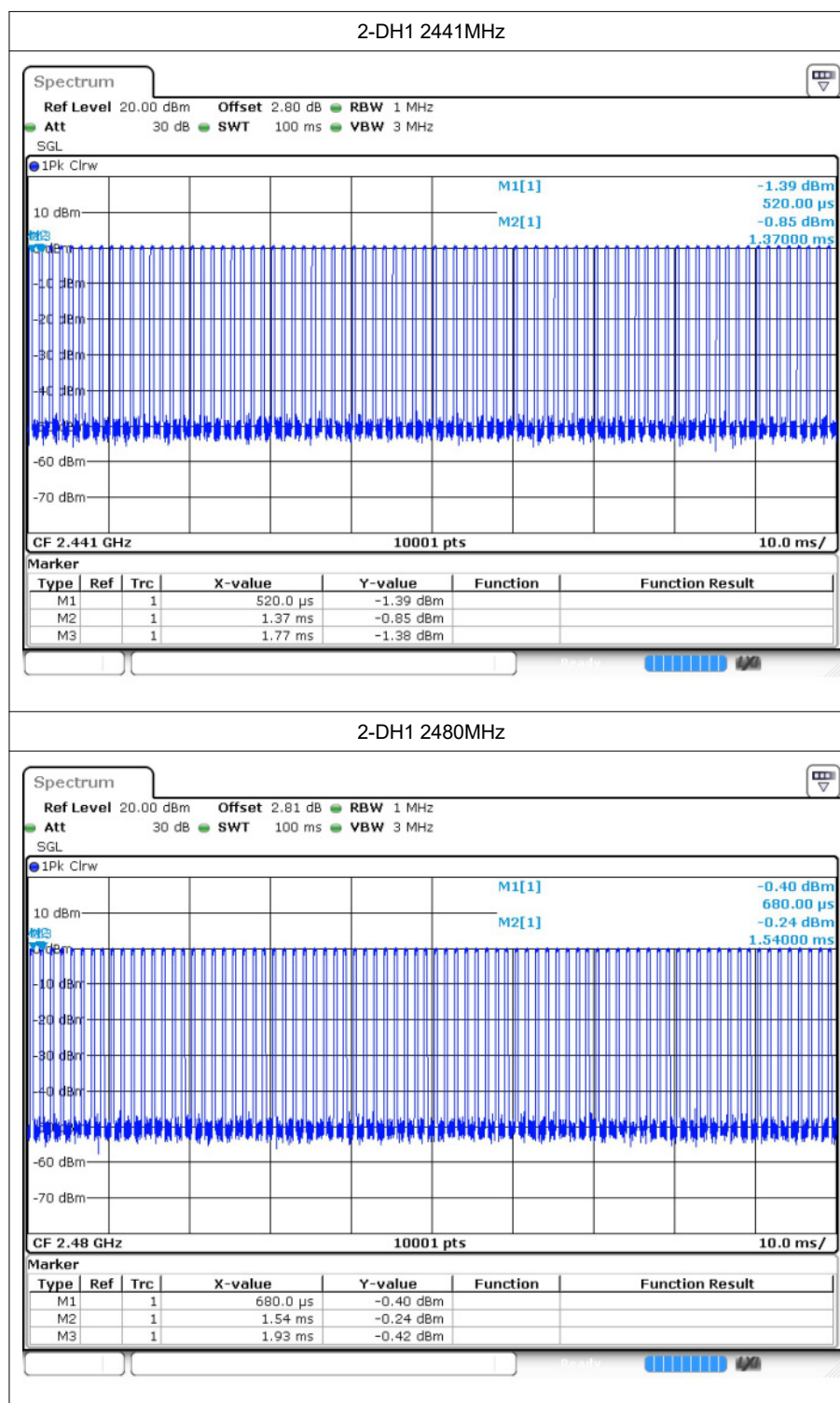
Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor	1/T (kHz)
1-DH1	2402	31.86	4.97	2.56
1-DH1	2441	31.21	5.06	2.63
1-DH1	2480	31.69	4.99	2.56
2-DH1	2402	32.45	4.89	2.56
2-DH1	2441	32.67	4.86	2.5
2-DH1	2480	32	4.95	2.56

Note: Left and right ear have been tested and the only shows the worst case mode.

1.2 Test Graphs







2 Maximum Conducted Peak Output Power

2.1 Test Result

Left:

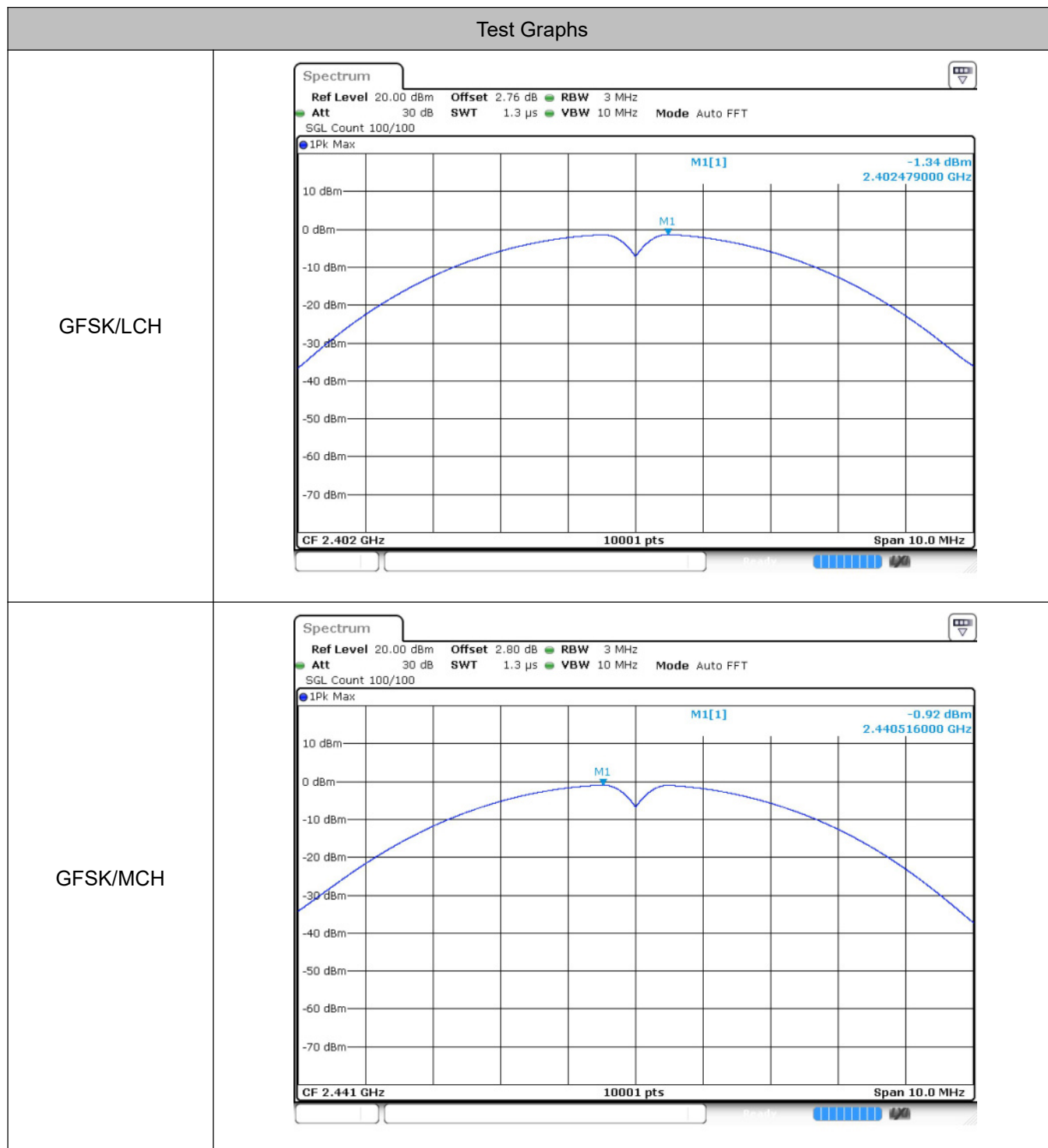
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.34	21	Pass
	MCH	-0.92	21	Pass
	HCH	-1.65	21	Pass
$\pi/4$ DQPSK	LCH	-0.9	21	Pass
	MCH	-0.33	21	Pass
	HCH	-1	21	Pass

Right:

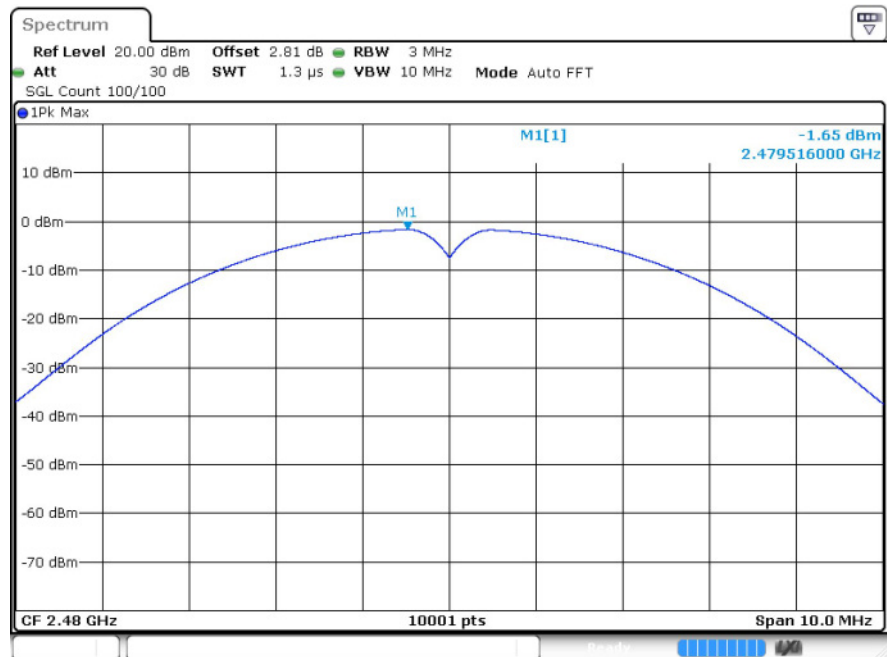
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.34	21	Pass
	MCH	0.15	21	Pass
	HCH	-0.39	21	Pass
$\pi/4$ DQPSK	LCH	0.26	21	Pass
	MCH	0.82	21	Pass
	HCH	0.09	21	Pass

2.2 Test Graphs

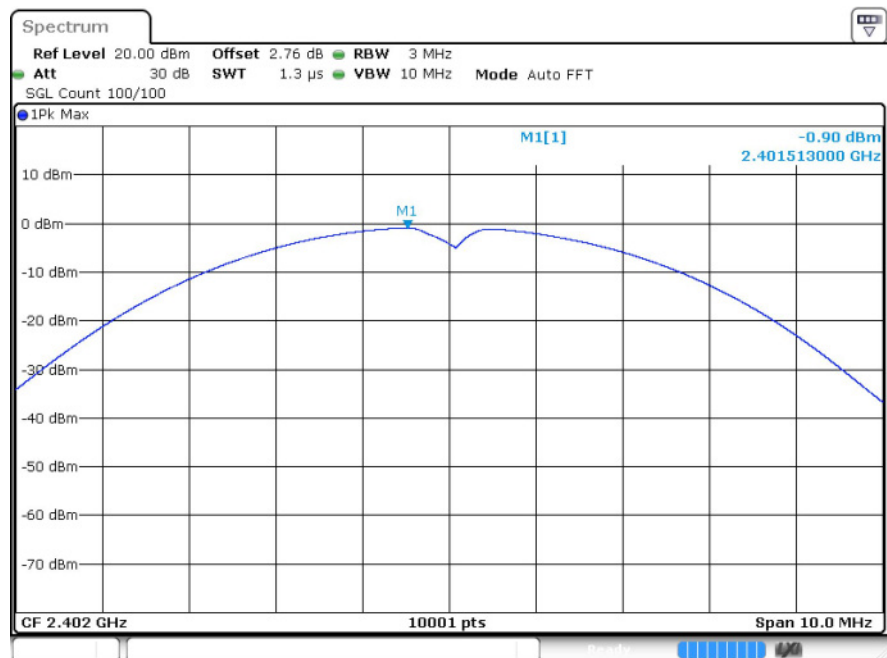
Left:



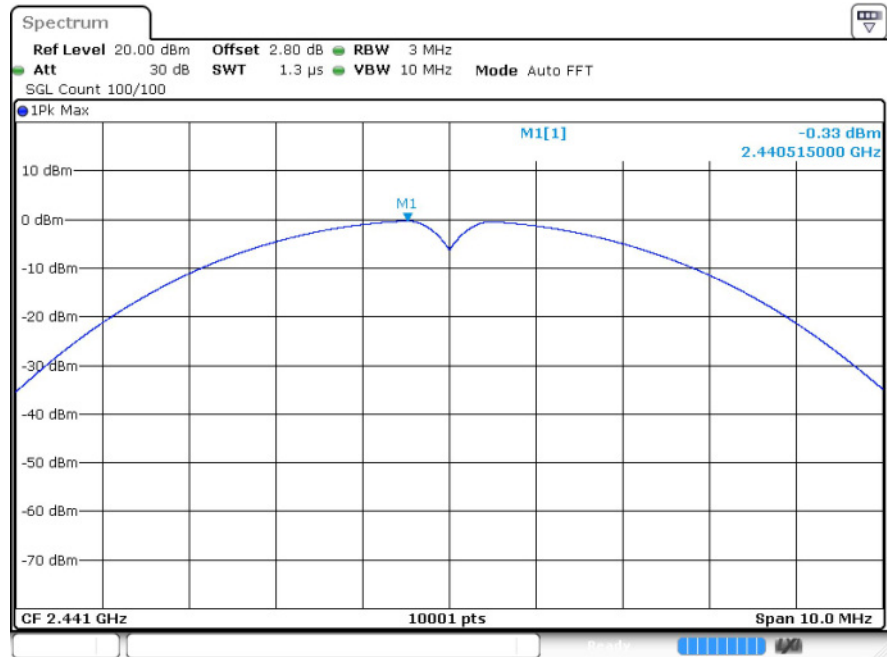
GFSK/HCH



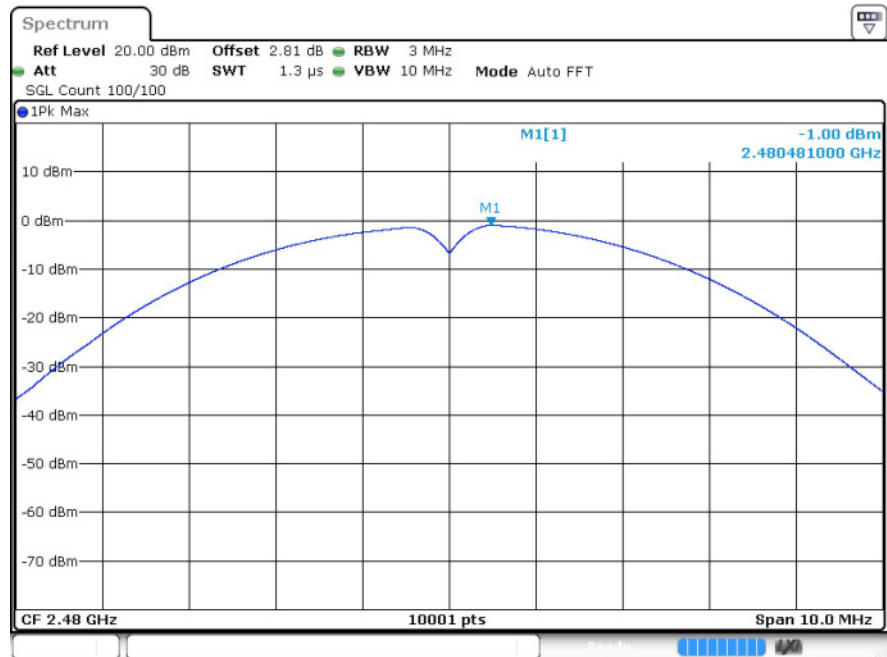
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



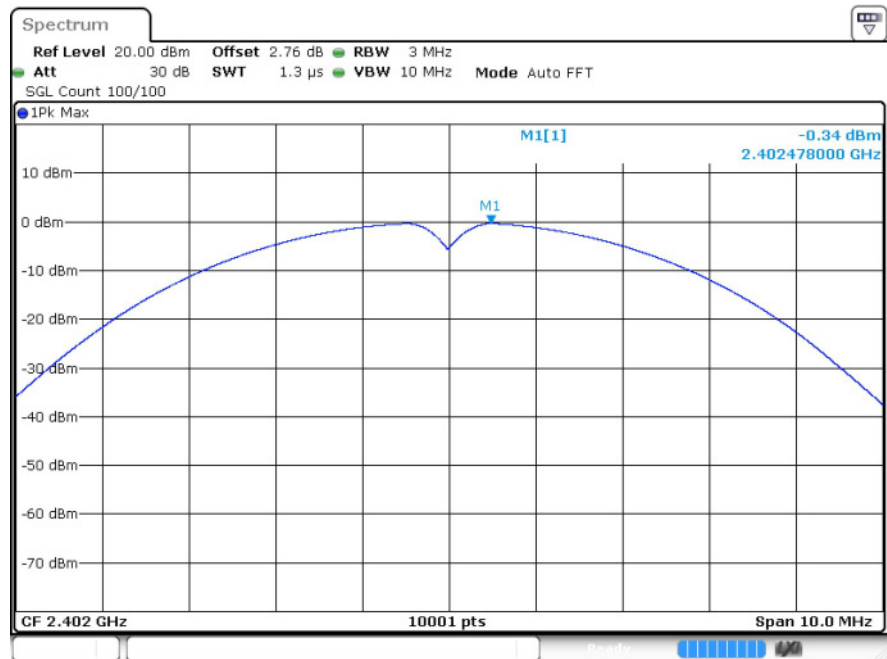
$\pi/4$ DQPSK/HCH



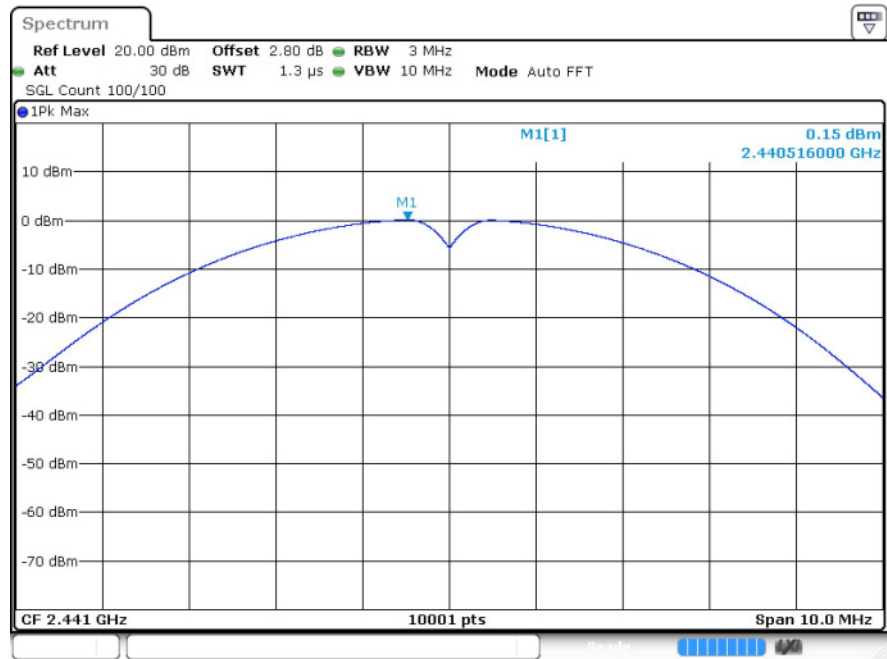
Right:

Test Graphs

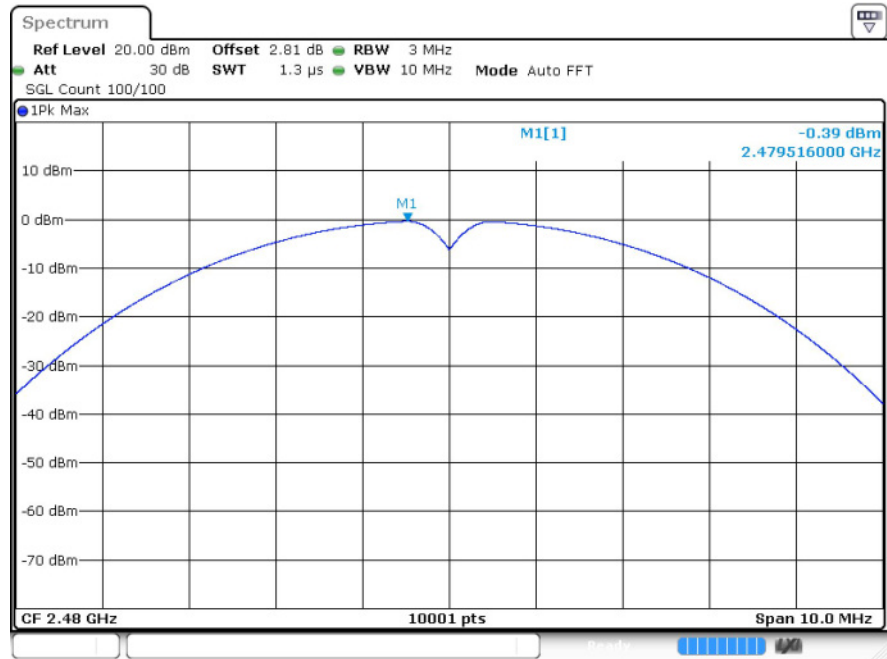
GFSK/LCH



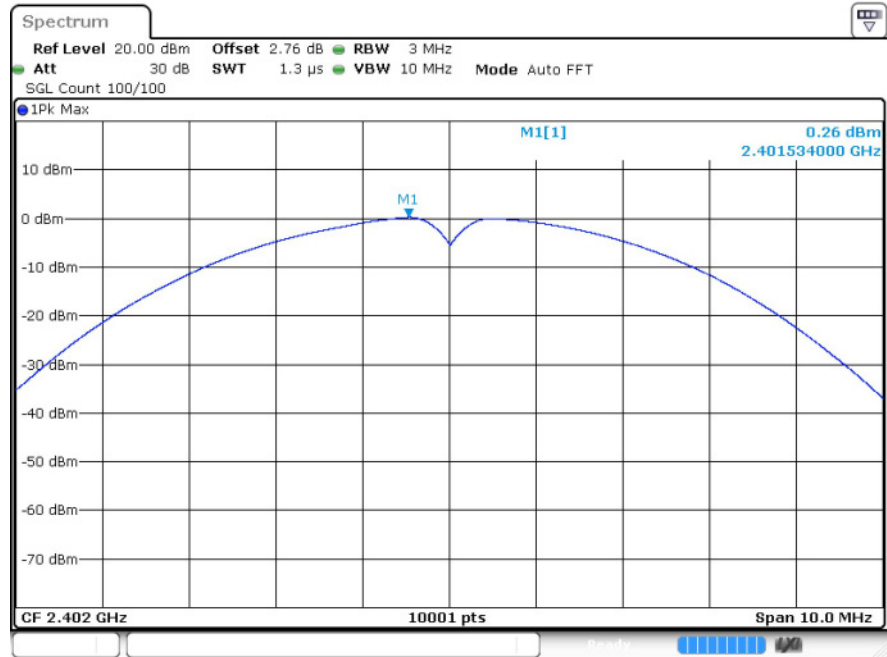
GFSK/MCH



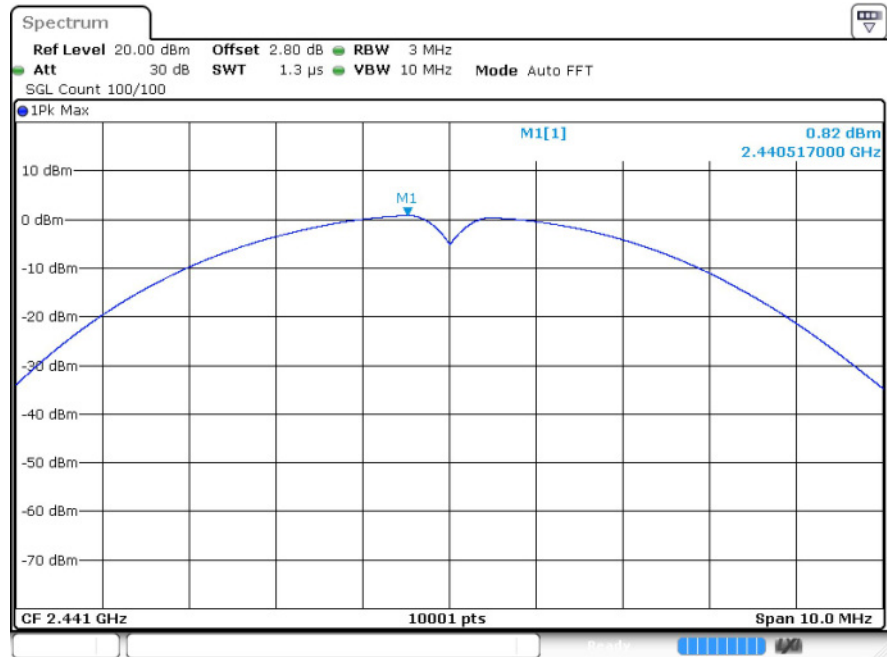
GFSK/HCH



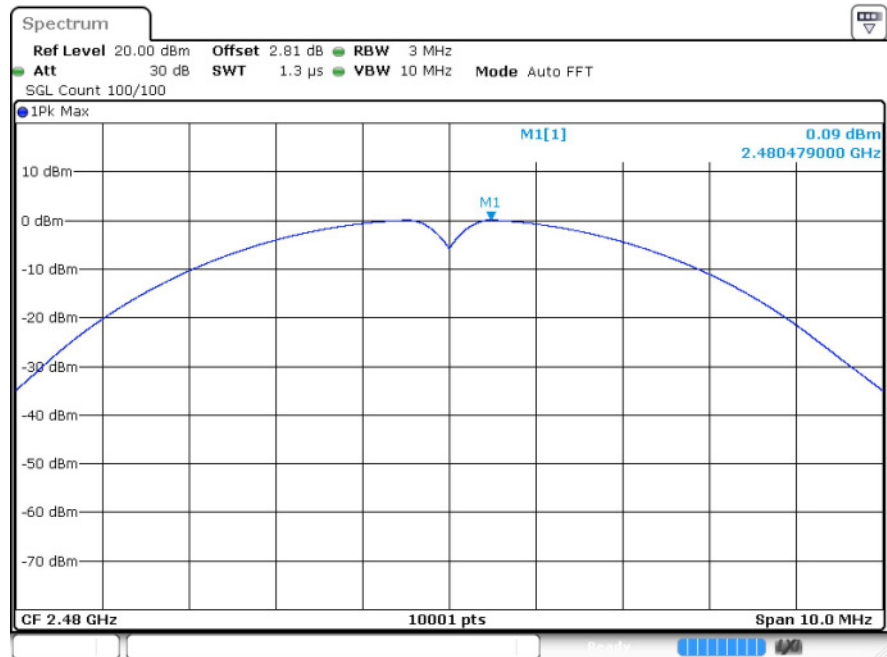
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH



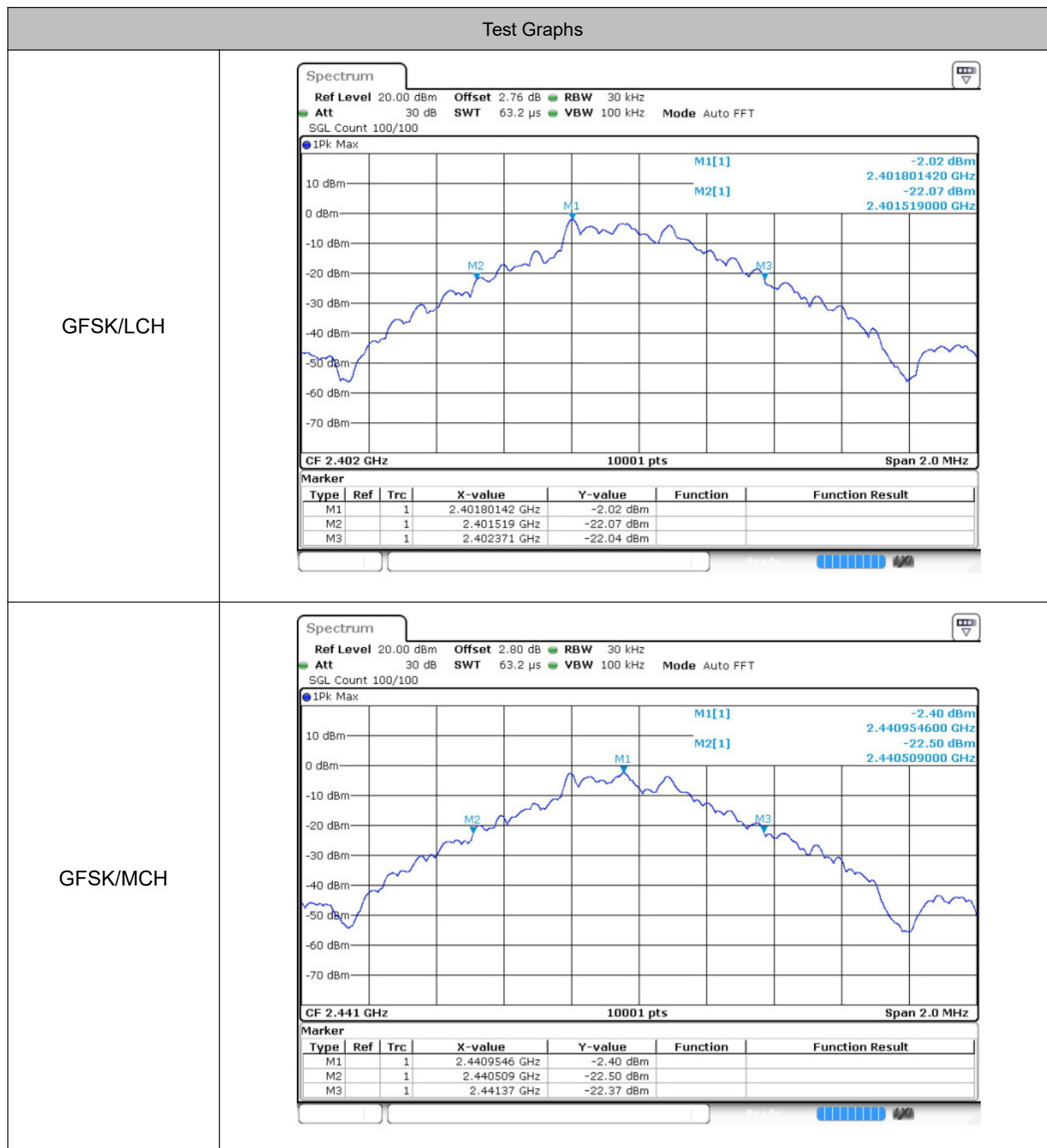
3 20dB Bandwidth

3.1 Test Result

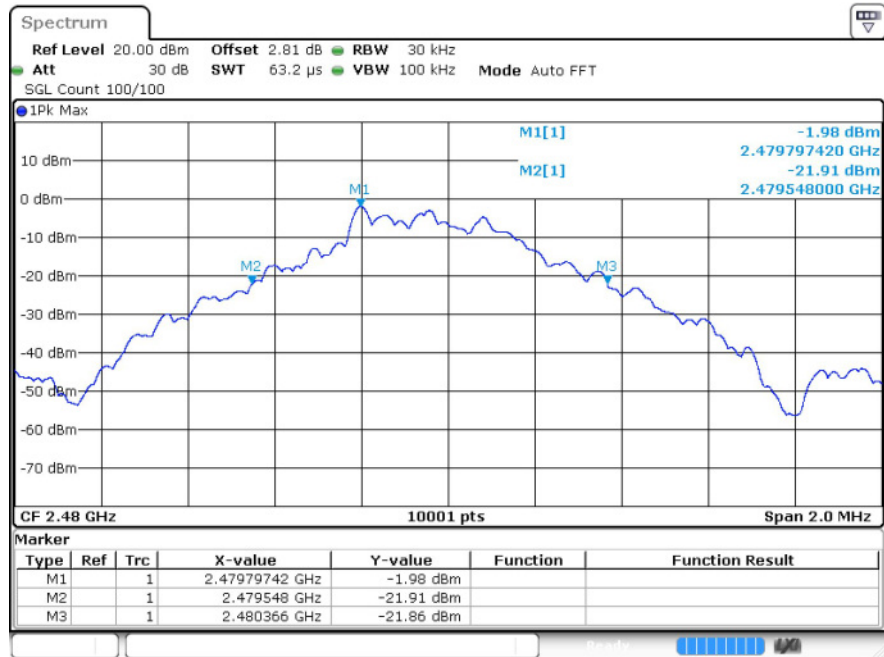
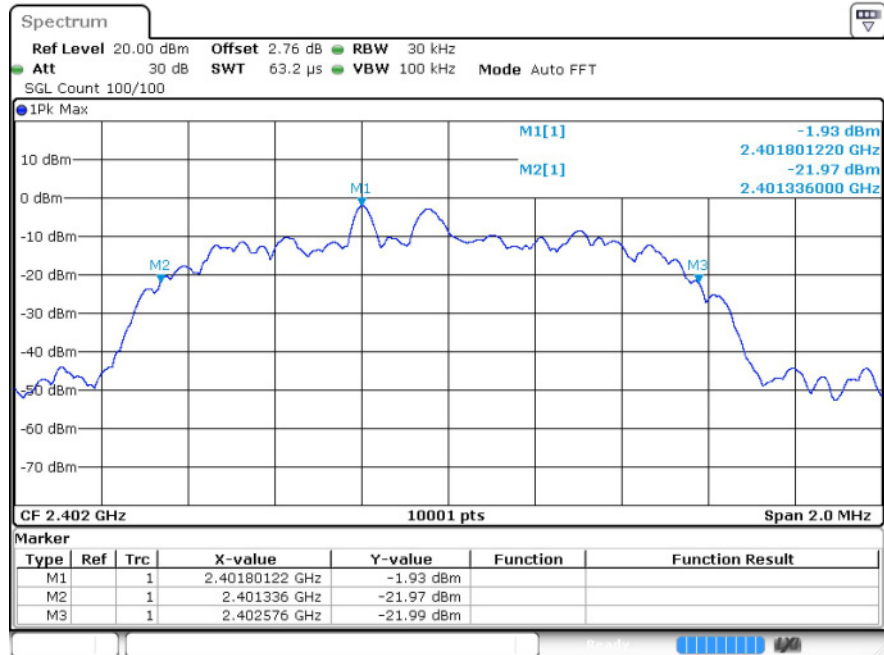
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.851	Not Specified	Pass
	MCH	0.861	Not Specified	Pass
	HCH	0.819	Not Specified	Pass
$\pi/4$ DQPSK	LCH	1.239	Not Specified	Pass
	MCH	1.219	Not Specified	Pass
	HCH	1.223	Not Specified	Pass

Note: Left and right ear have been tested and the only shows the worst case mode.

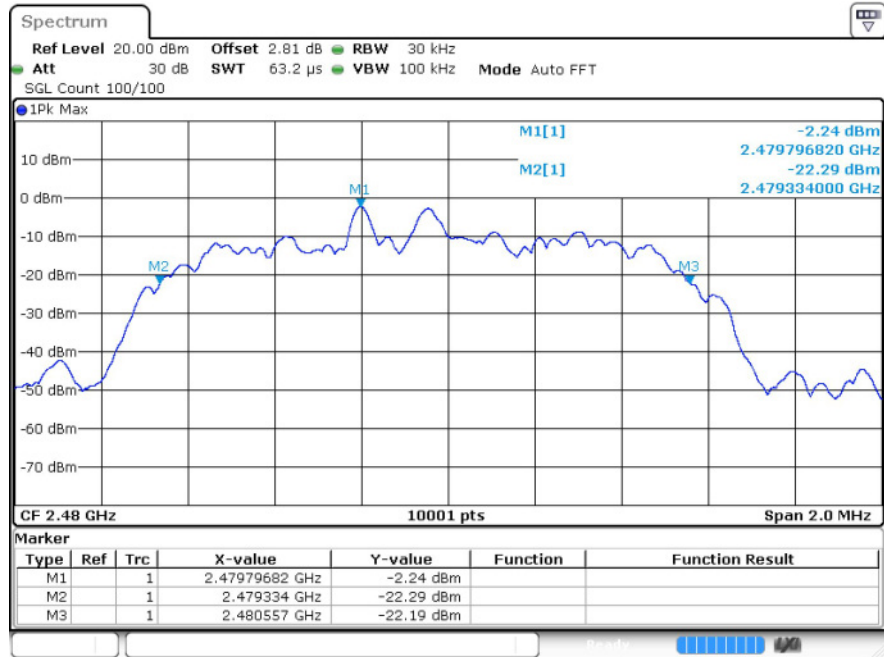
3.2 Test Graphs



GFSK/HCH


 $\pi/4$ DQPSK/LCH


$\pi/4$ DQPSK/MCH

 $\pi/4$ DQPSK/HCH


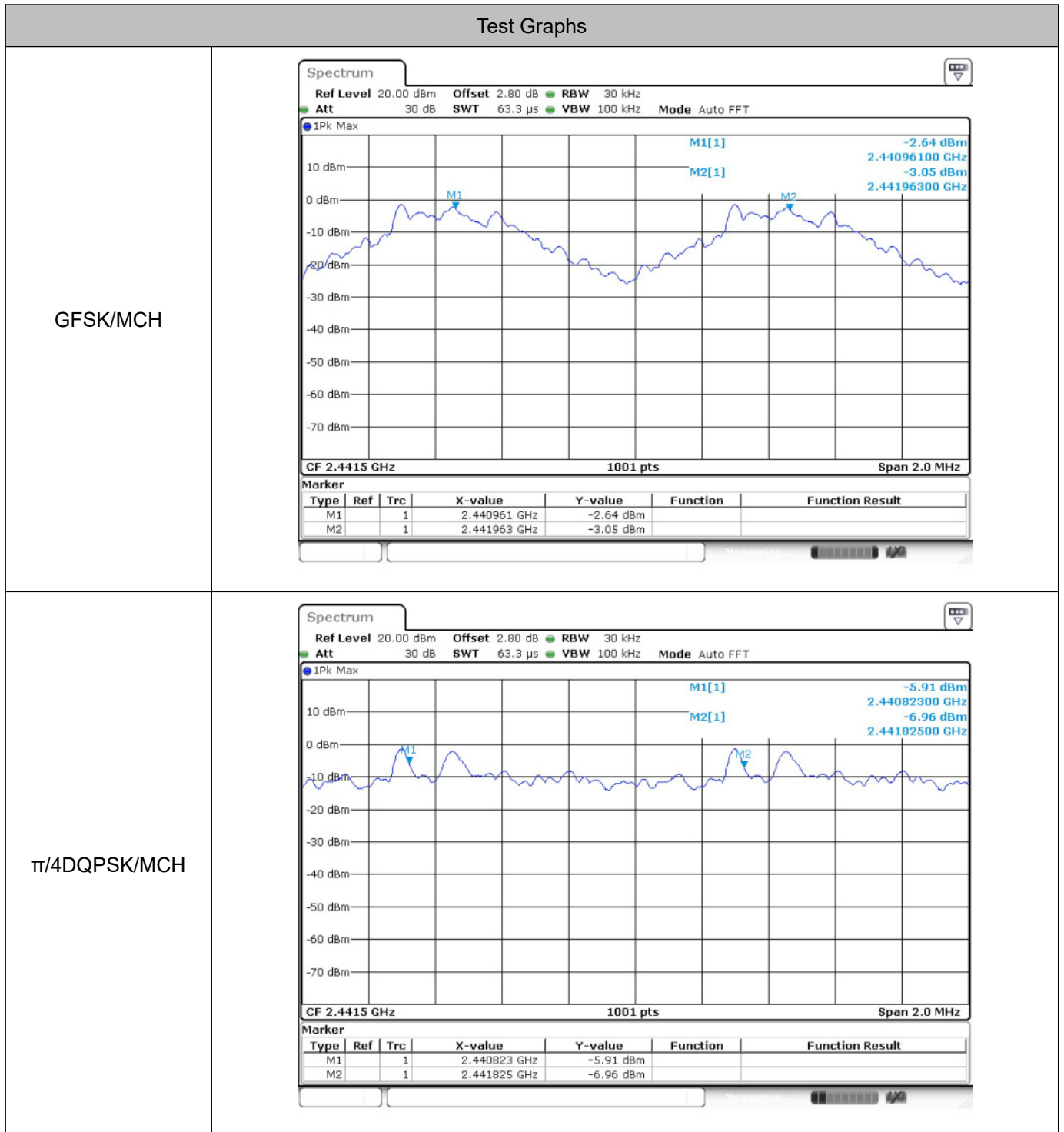
4 Carrier Frequency Separation

4.1 Test Result

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	MCH	1.002	0.574	Pass
$\pi/4$ DQPSK	MCH	1.002	0.813	Pass

Note: Left and right ear have been tested and the only shows the worst case mode.

4.2 Test Graphs



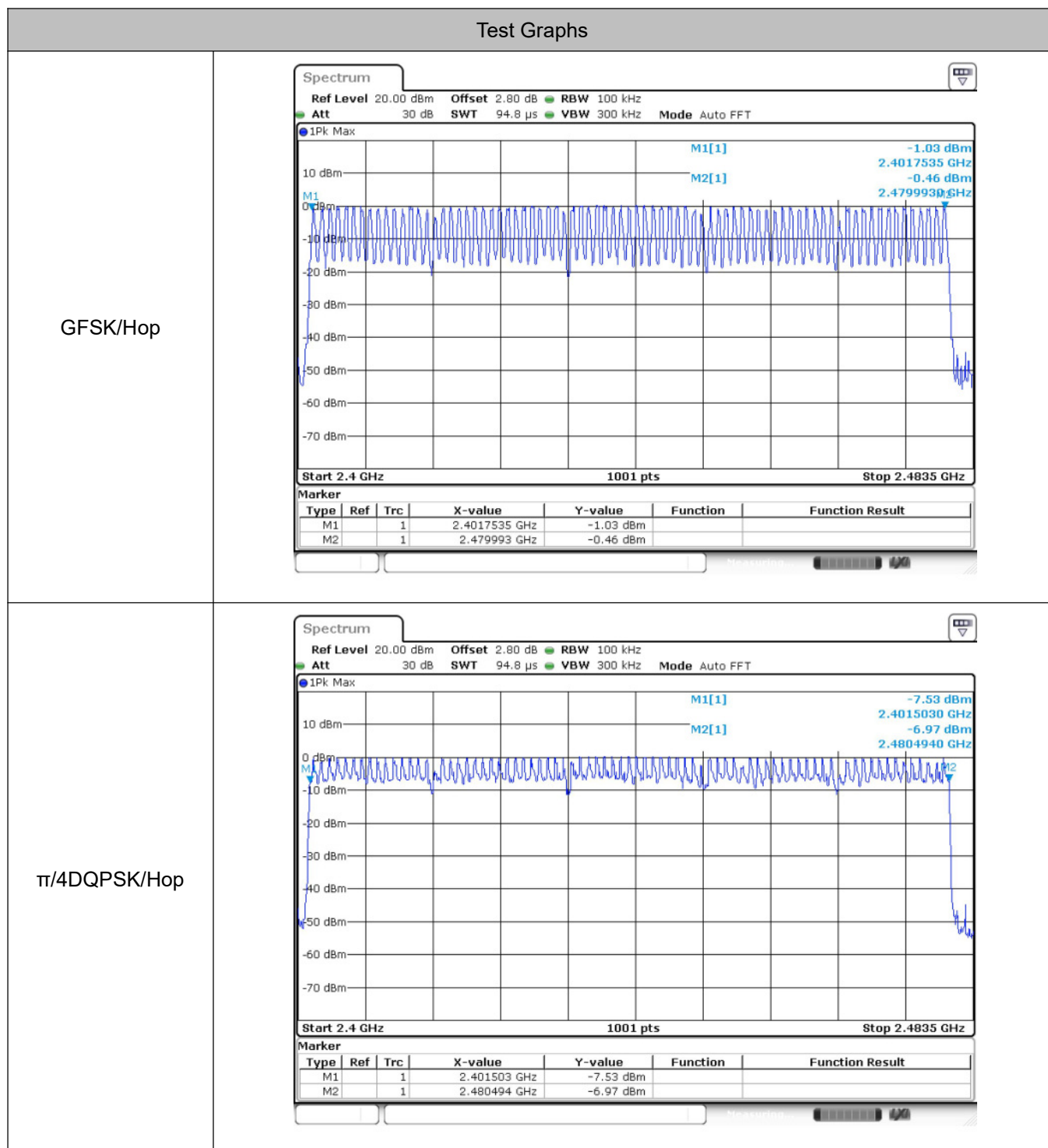
5 Hopping Channel Number

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

Note: Left and right ear have been tested and the only shows the worst case mode.

5.2 Test Graphs



6 Dwell Time

6.1 Test Result

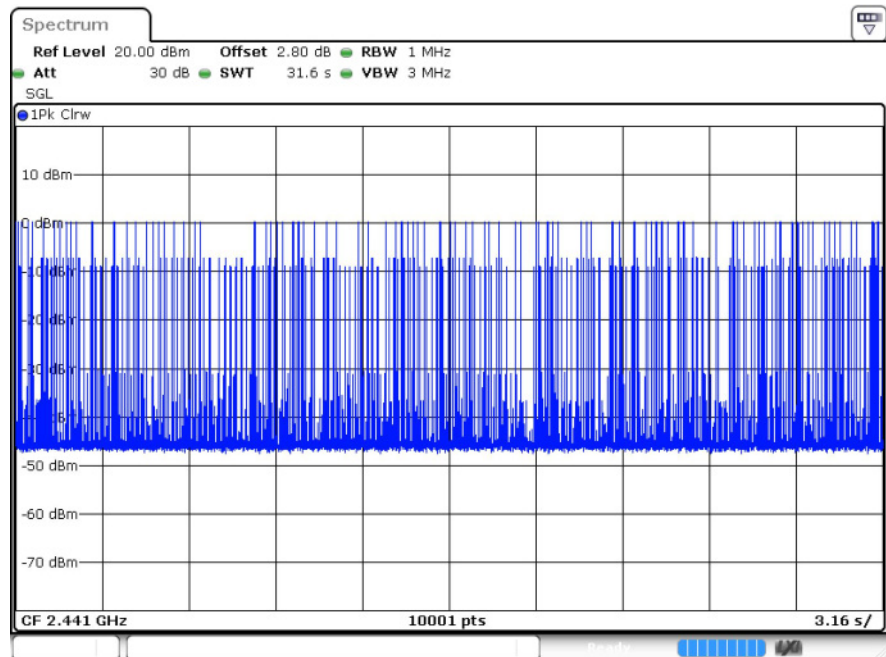
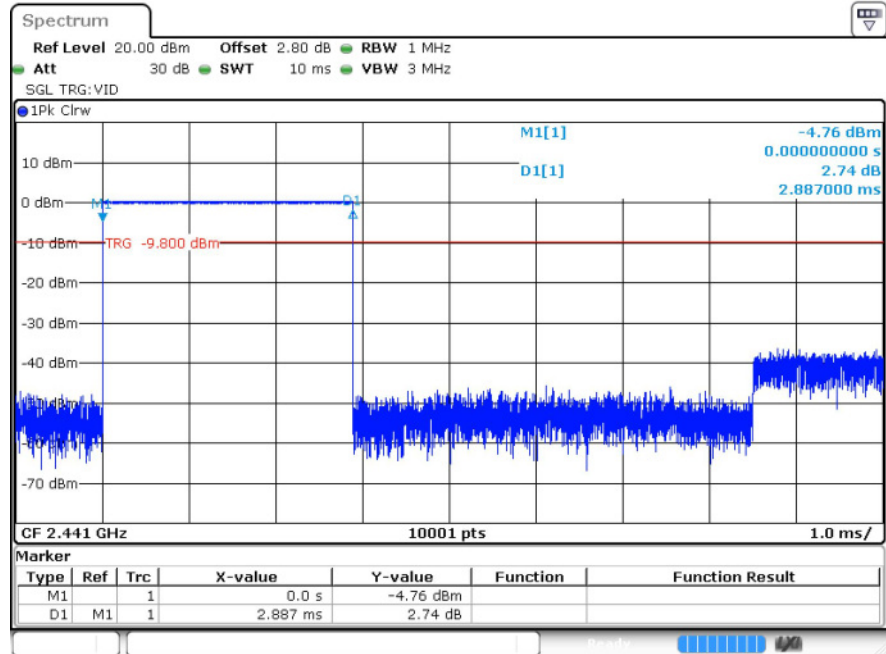
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	MCH	2.887	114	329.118	0.4	Pass
$\pi/4$ DQPSK	2DH5	MCH	2.892	124	358.608	0.4	Pass

Note: Left and right ear have been tested and the only shows the worst case mode.

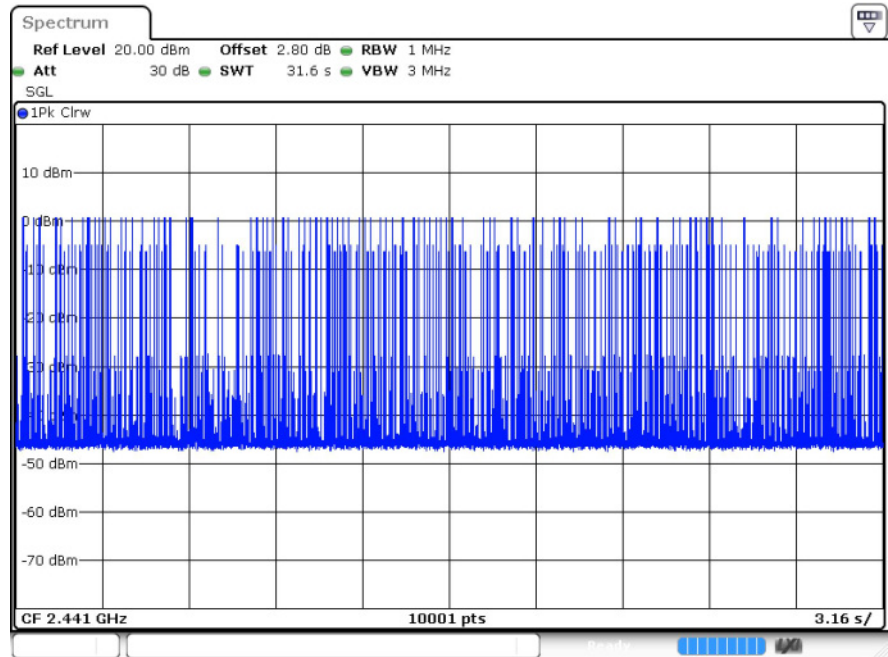
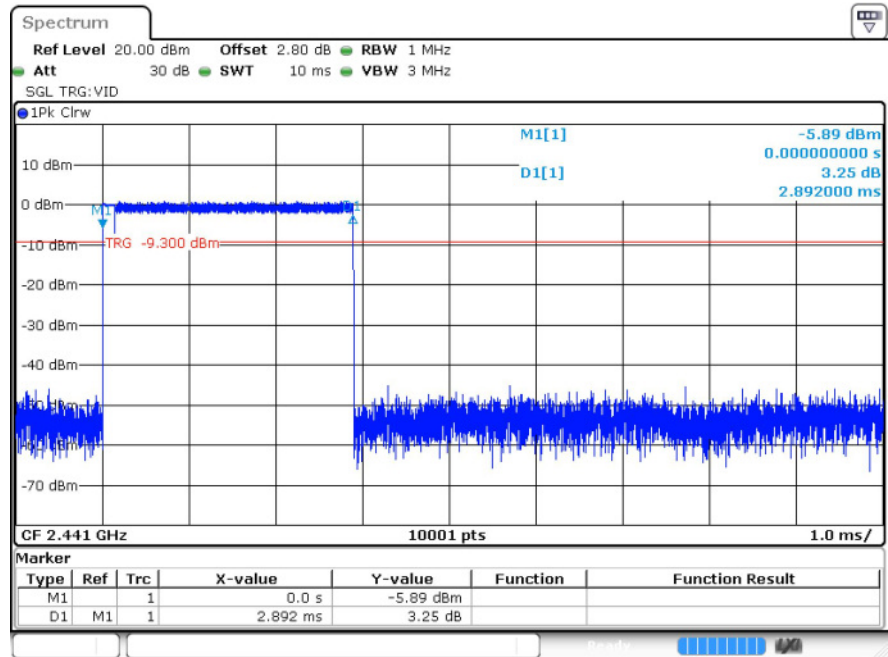
6.2 Test Graphs

Test Graphs

GFSK_DH5/MCH



$\pi/4$ DQPSK
_2DH5/MCH



7 RF Conducted Spurious Emissions

7.1 Test Result

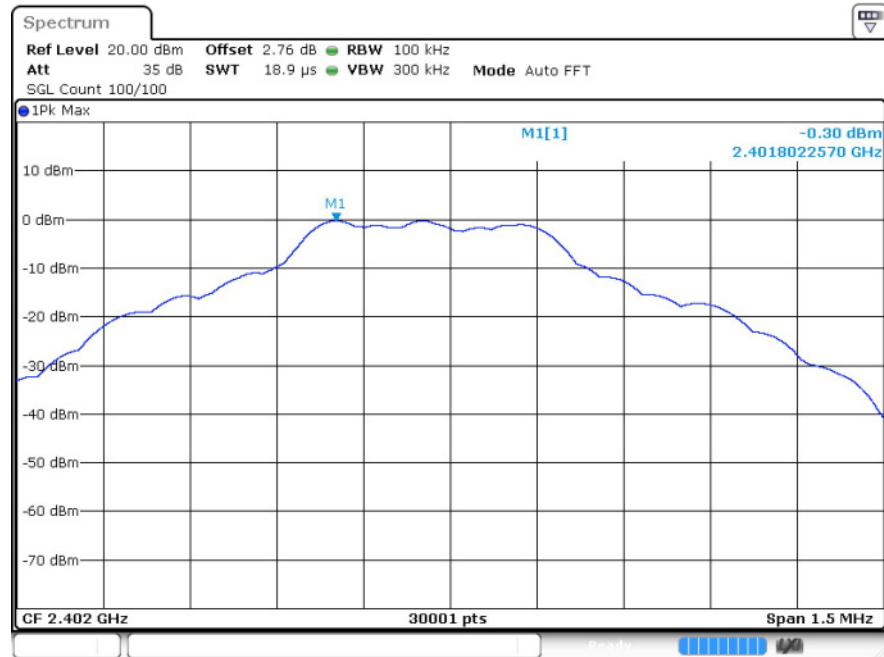
Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-39.4	-20	Pass
	MCH	-41.07	-20	Pass
	HCH	-40.95	-20	Pass
$\pi/4$ DQPSK	LCH	-40.83	-20	Pass
	MCH	-41.49	-20	Pass
	HCH	-41.06	-20	Pass

Note: Left and right ear have been tested and the only shows the worst case mode.

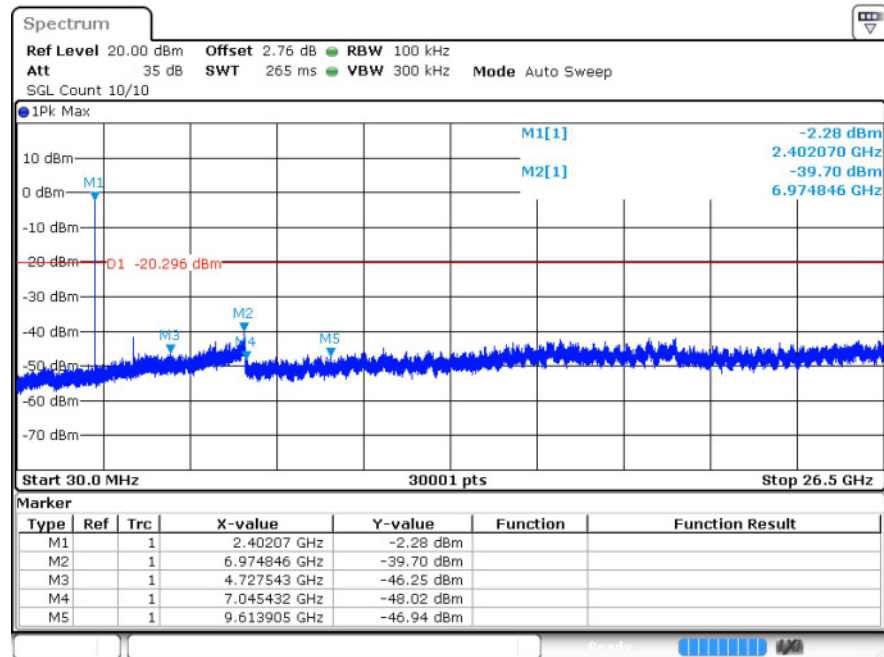
7.2 Test Graphs

GFSK_LCH_Graphs

Pref

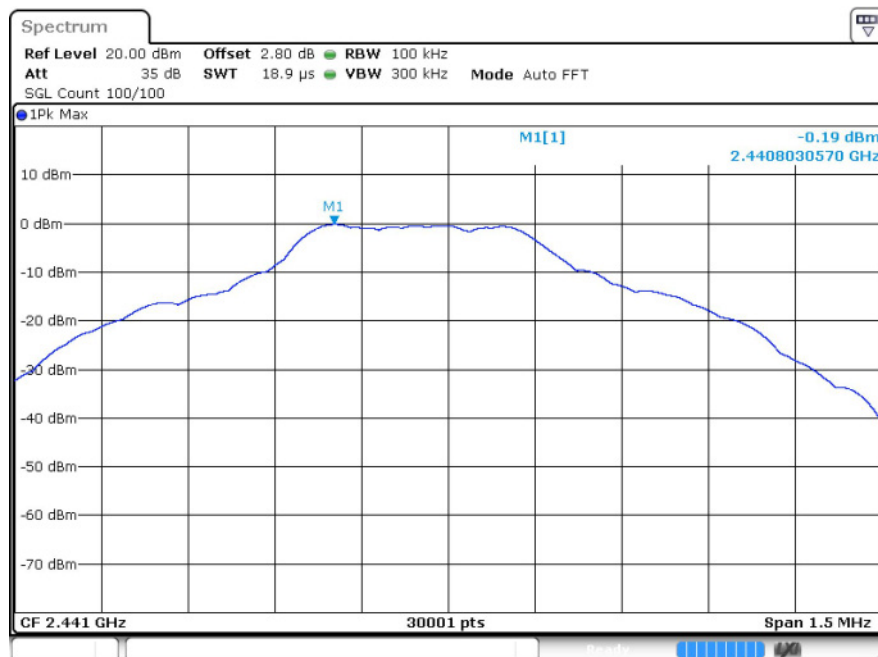


Puw

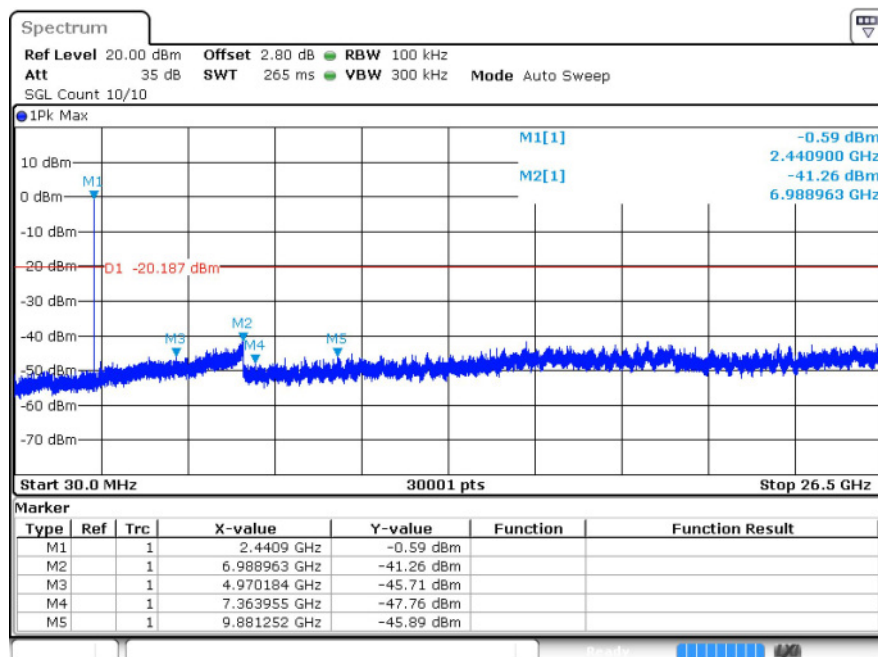


GFSK_MCH_Graphs

Pref

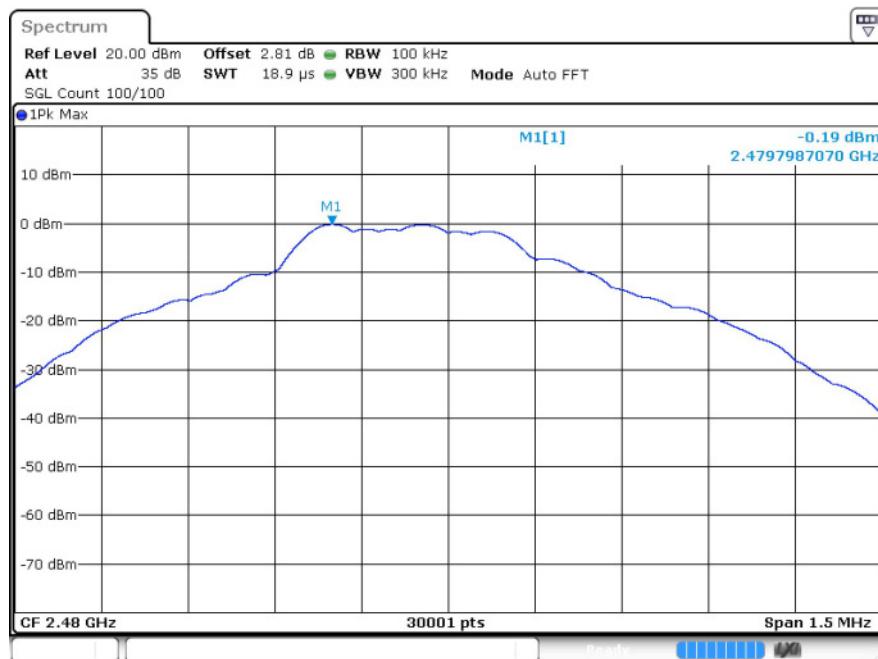


Puw

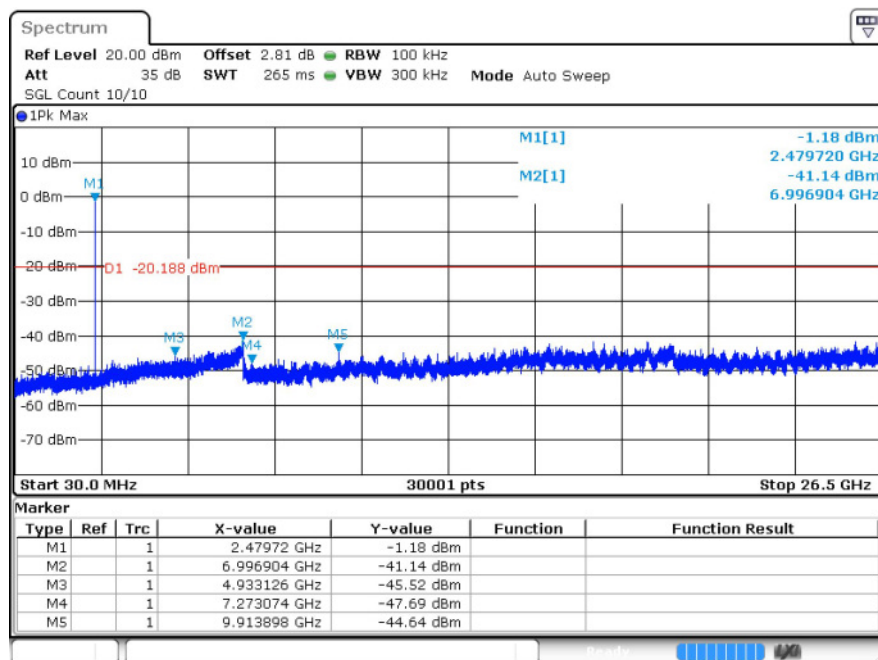


GFSK_HCH_Graphs

Pref

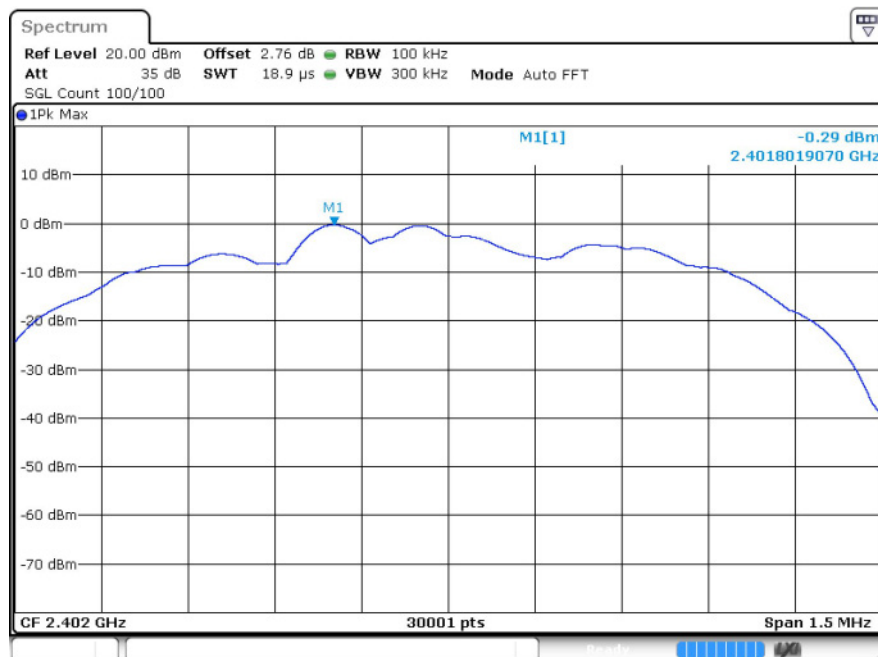


Puw

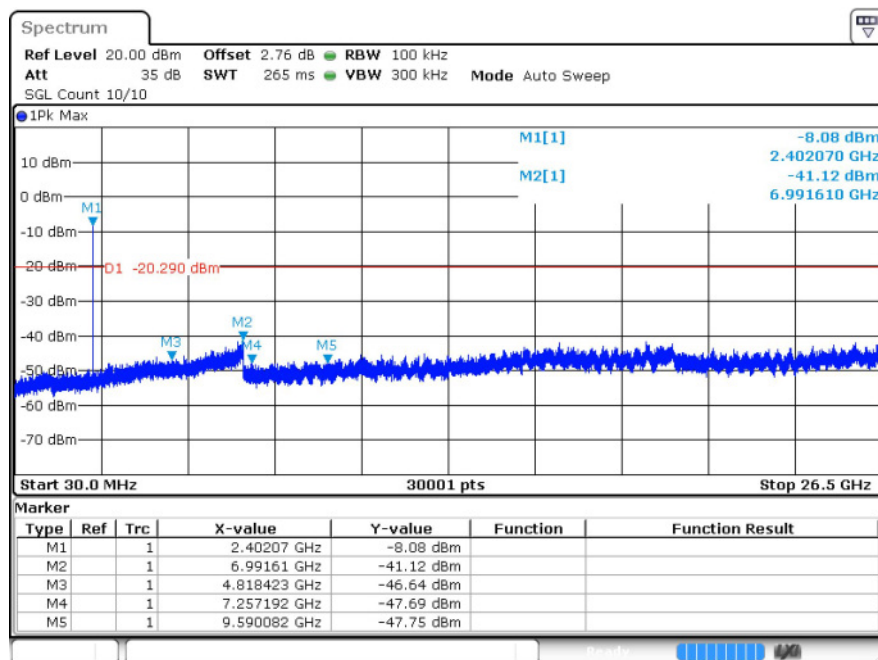


$\pi/4$ DQPSK_LCH_Graphs

Pref

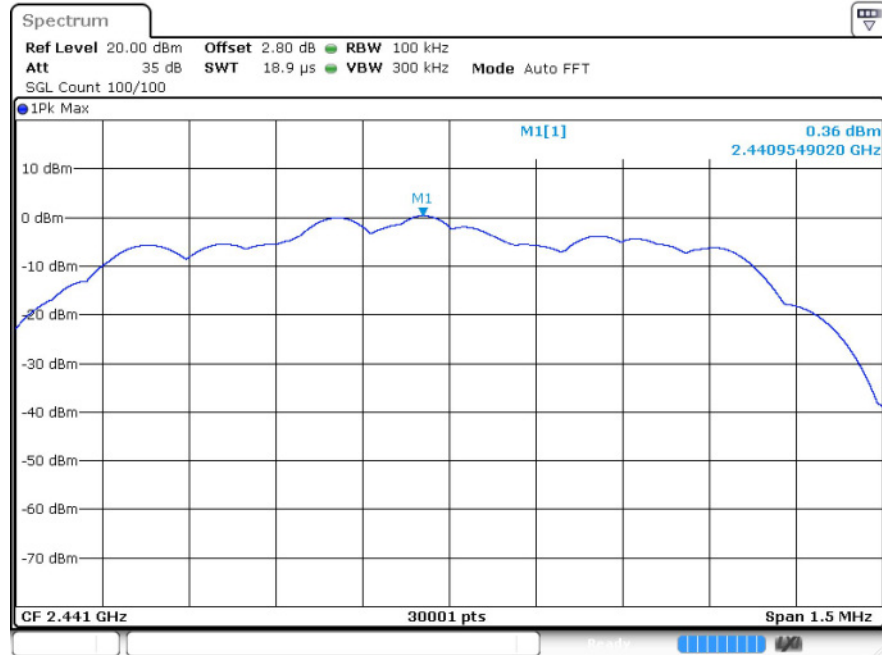


Puw

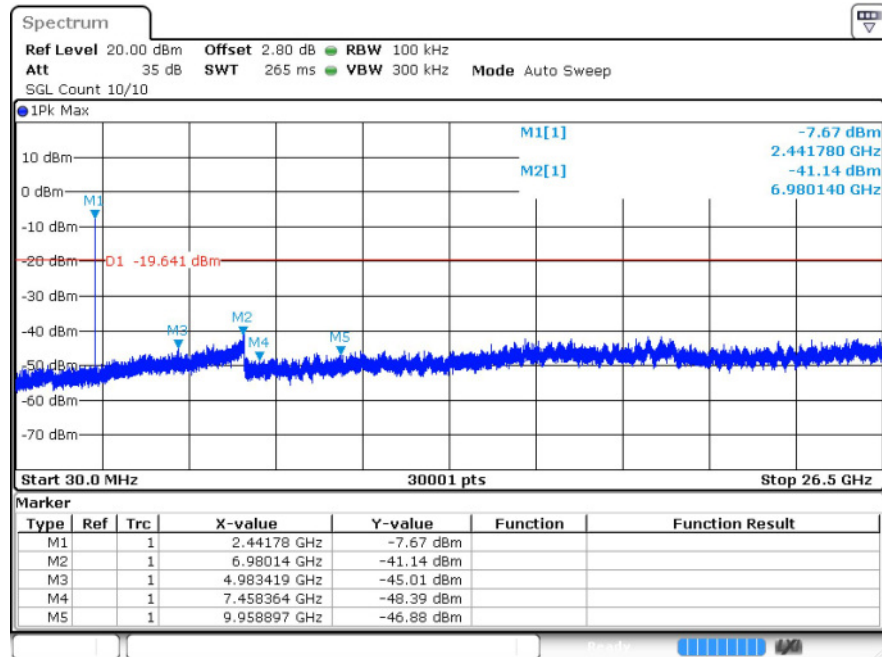


π /4DQPSK_MCH_Graphs

Pref

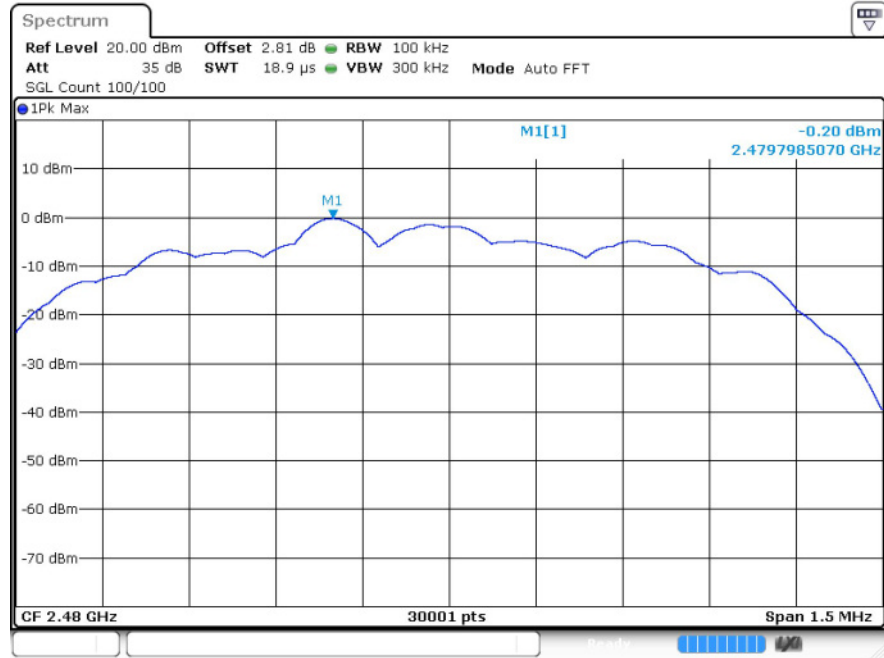


Puw

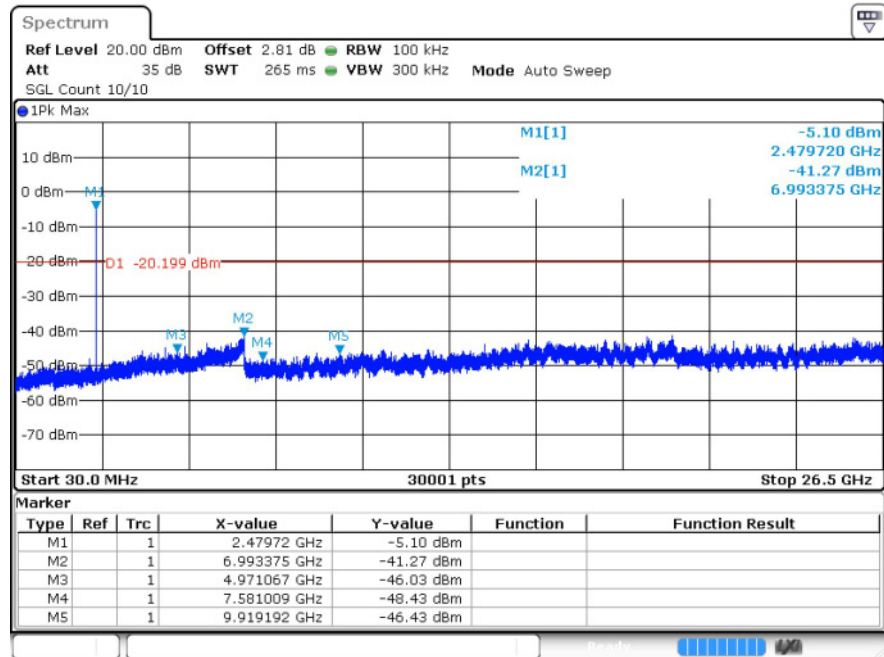


$\pi/4$ DQPSK_HCH_Graphs

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	-54.97	-20	Pass
			On	-54.13	-20	Pass
	HCH	2480	Off	-51	-20	Pass
			On	-53.83	-20	Pass
$\pi/4$ DQPSK	LCH	2402	Off	-55.78	-20	Pass
			On	-54.53	-20	Pass
	HCH	2480	Off	-54.56	-20	Pass
			On	-54.59	-20	Pass

Note: Left and right ear have been tested and the only shows the worst case mode.