

Appendix A

RF Test Data for BT V4.2 (BDR/EDR) (Conducted Measurement)

Product Name: stacked desk organizer

Trade Mark: Mind reader

Test Model: STAX-BLK

Environmental Conditions

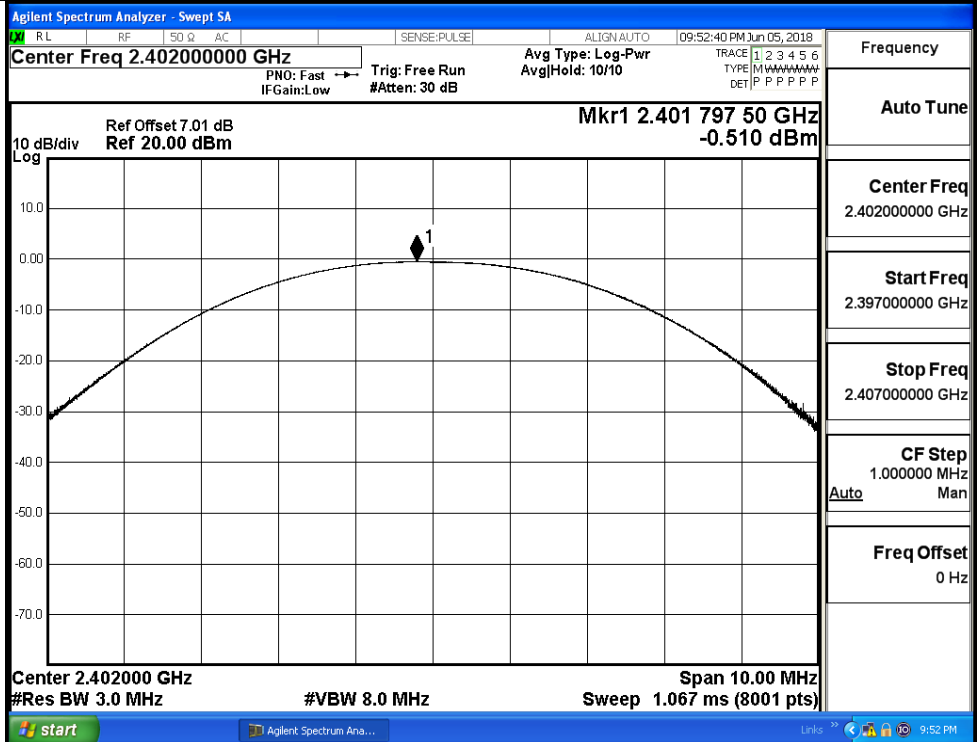
Temperature:	24.6 ° C
Relative Humidity:	54.4%
ATM Pressure:	100.0 kPa
Test Engineer:	WANGCHUANG
Supervised by:	Jayden.Zhuo

A.1 Maximum Conducted Peak Output Power

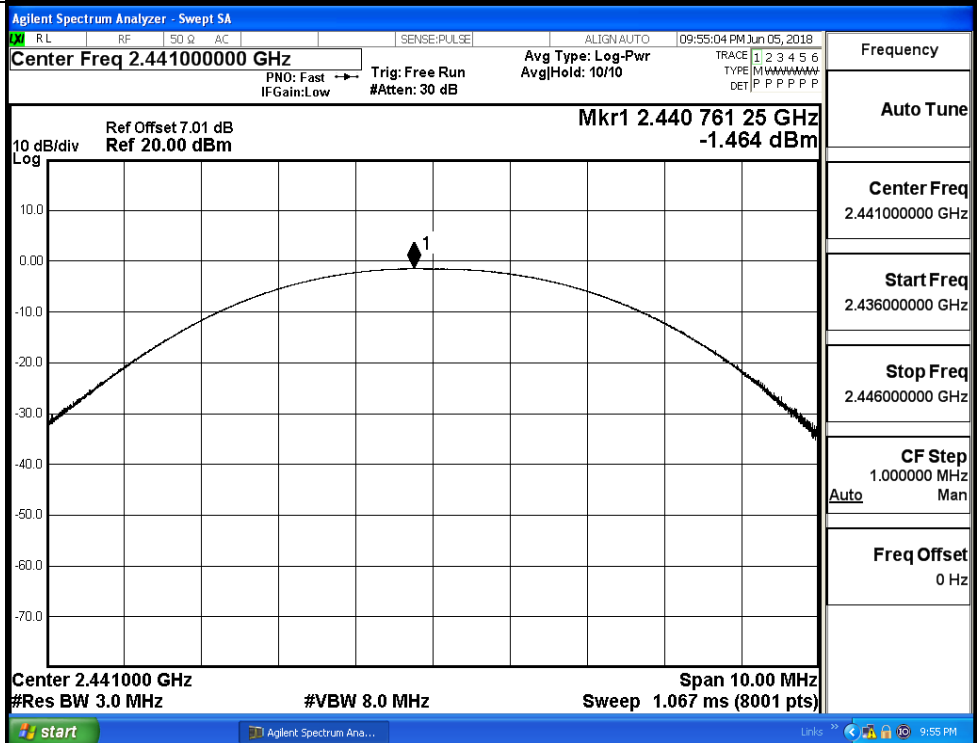
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.510	30	PASS
	MCH	-1.464	30	PASS
	HCH	-1.563	30	PASS
π/4DQPSK	LCH	-1.605	21	PASS
	MCH	-2.358	21	PASS
	HCH	-2.435	21	PASS

Test Graphs

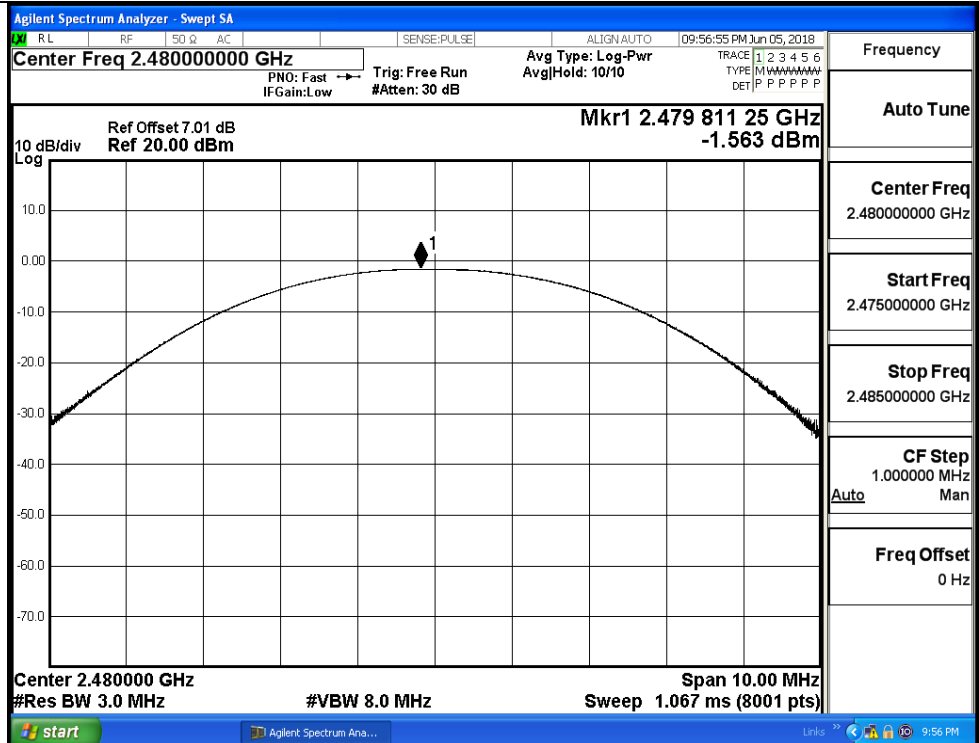
GFSK/LCH



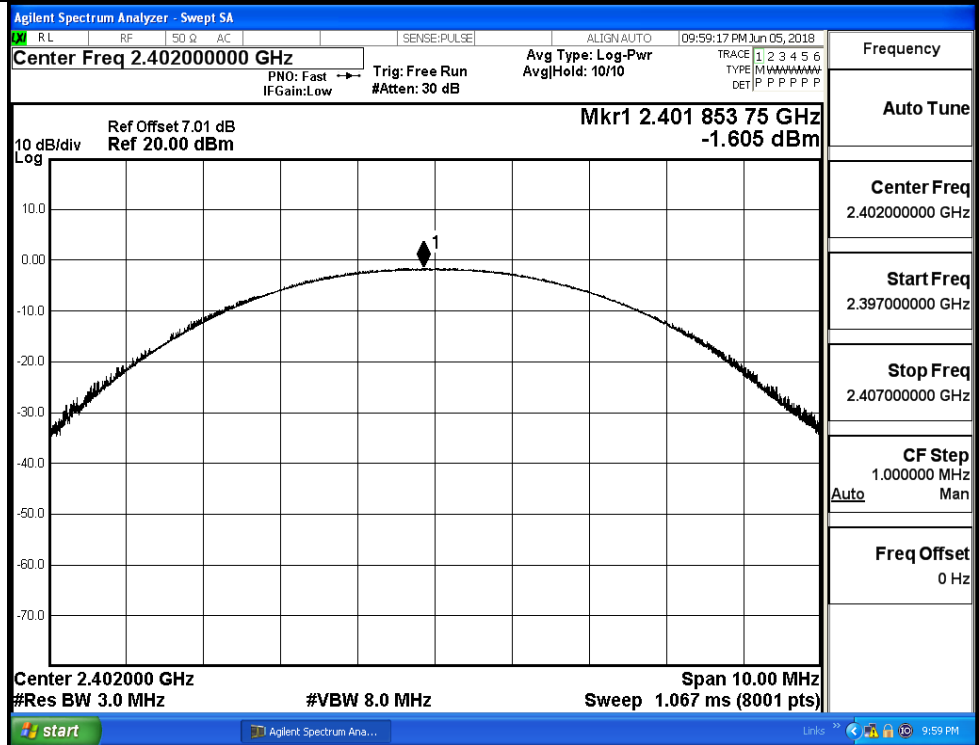
GFSK/MCH



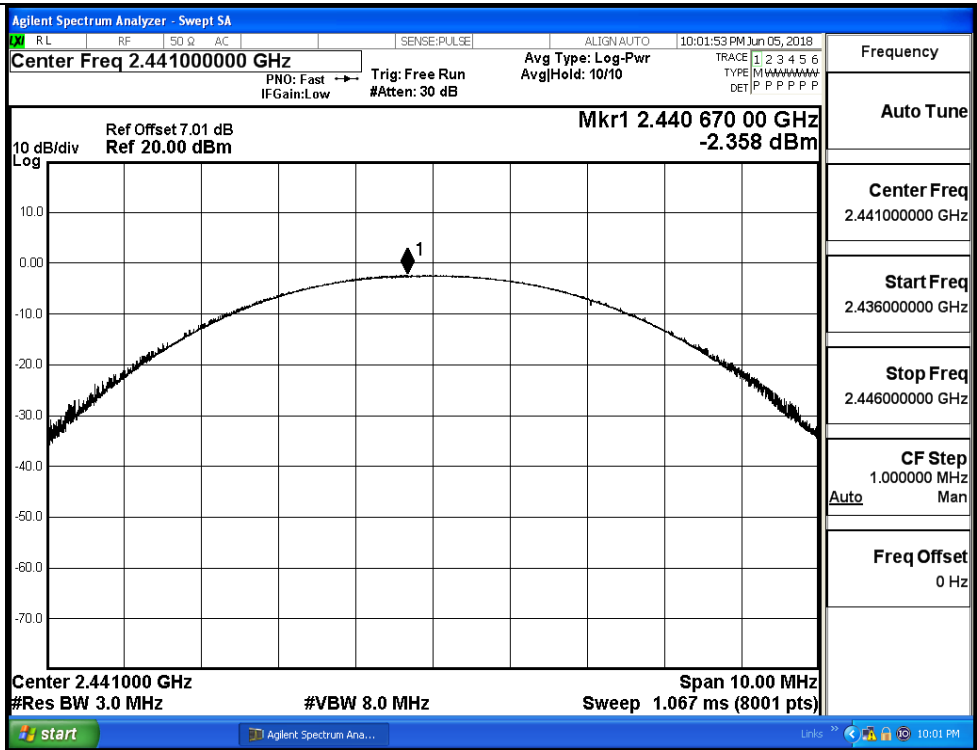
GFSK/HCH



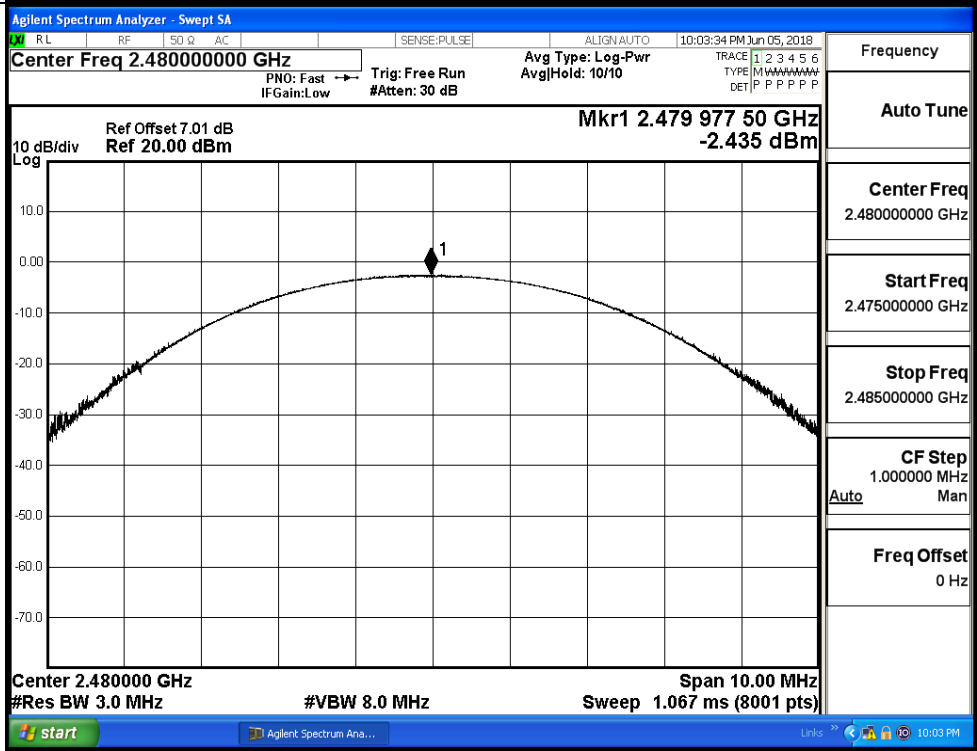
π /4DQPSK/LCH



π /4DQPSK/MCH

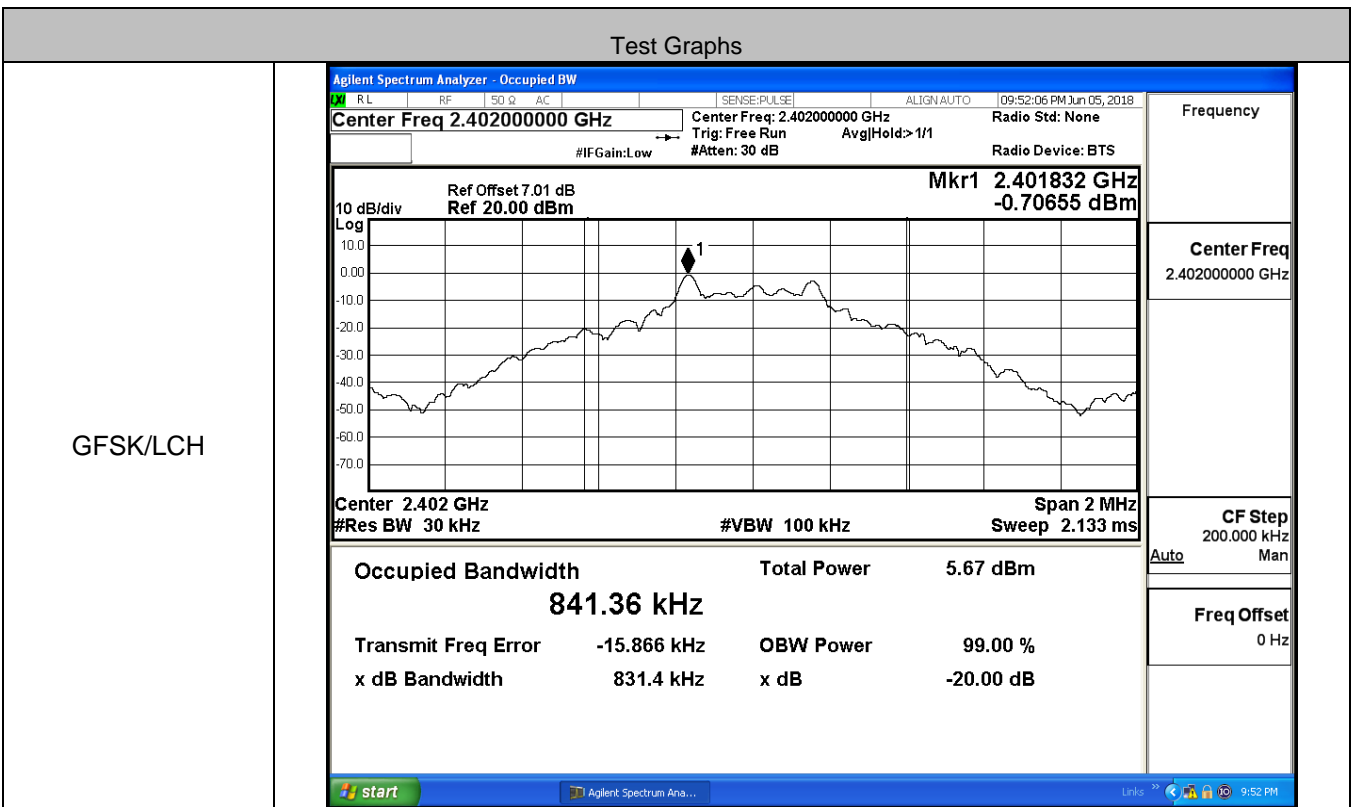


π /4DQPSK/HCH

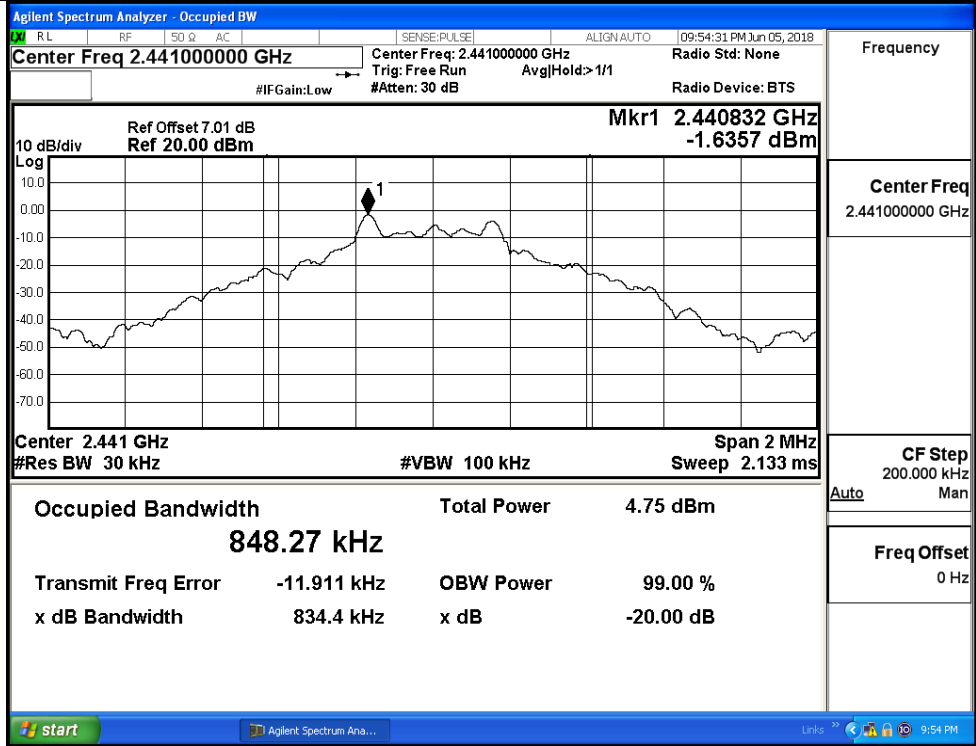


A.2 20dB Bandwidth

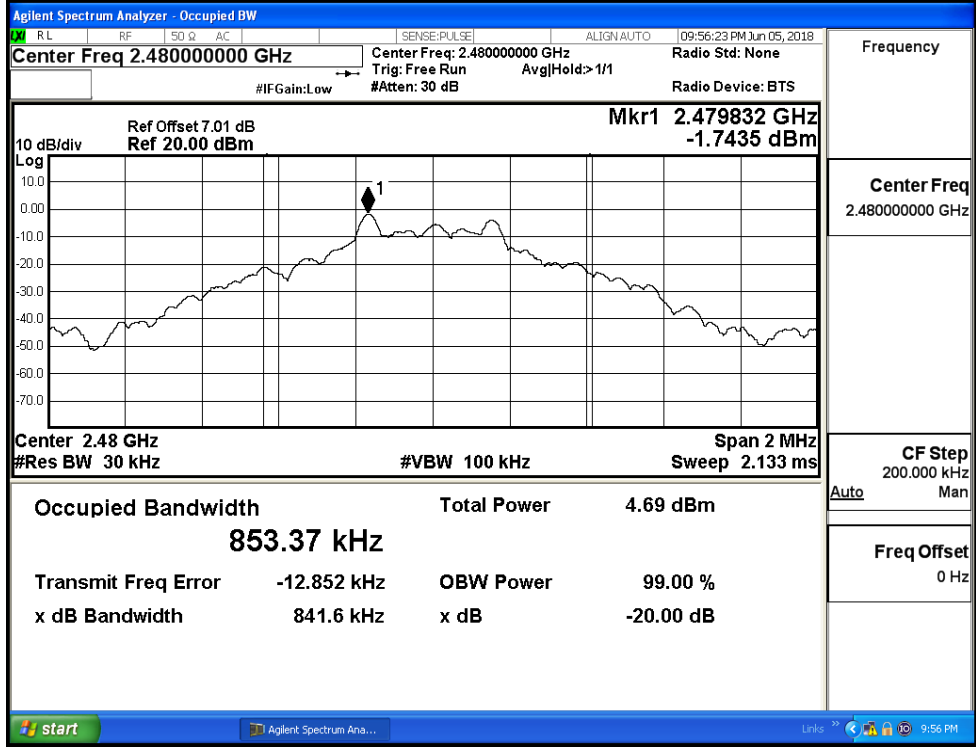
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.8314	Not Specified	PASS
	MCH	0.8344	Not Specified	PASS
	HCH	0.8416	Not Specified	PASS
π/4DQPSK	LCH	1.114	Not Specified	PASS
	MCH	1.117	Not Specified	PASS
	HCH	1.118	Not Specified	PASS



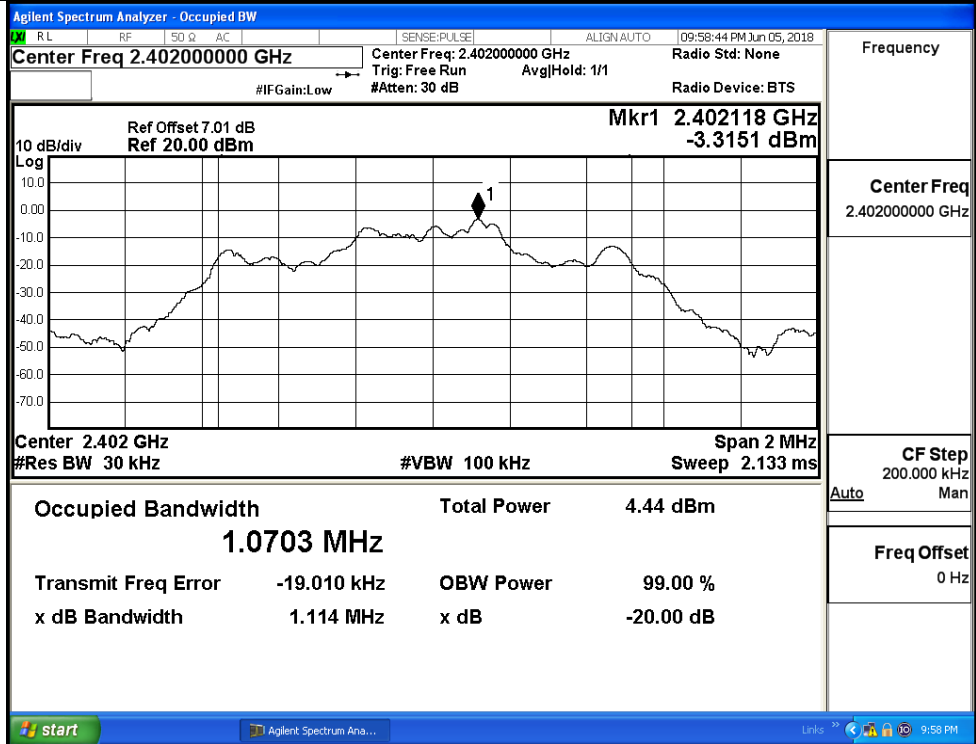
GFSK/MCH



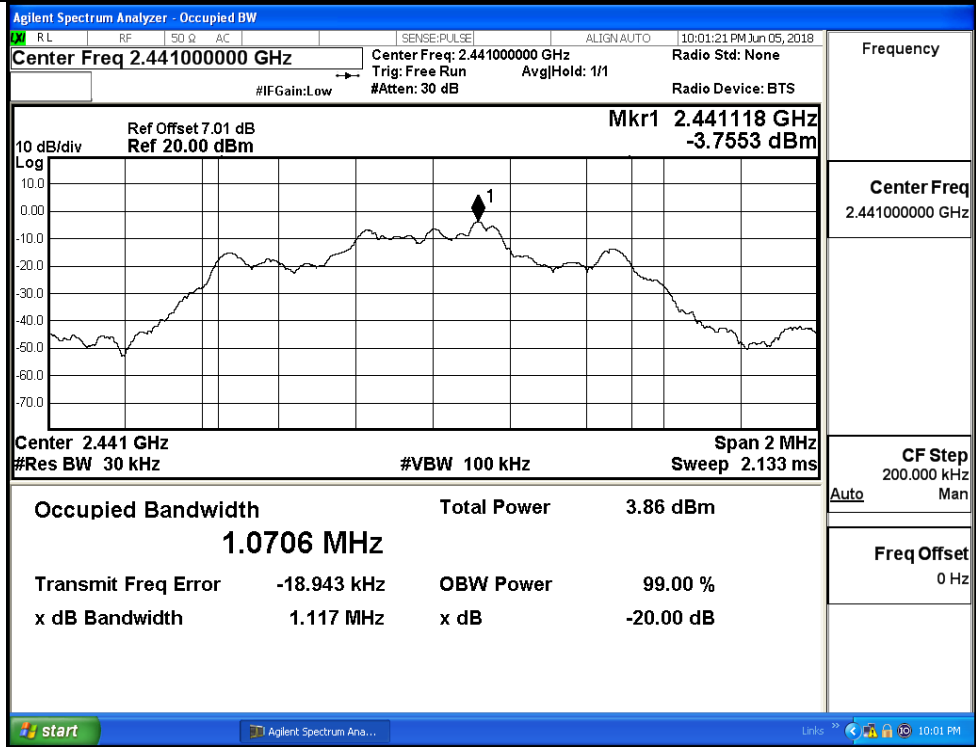
GFSK/HCH



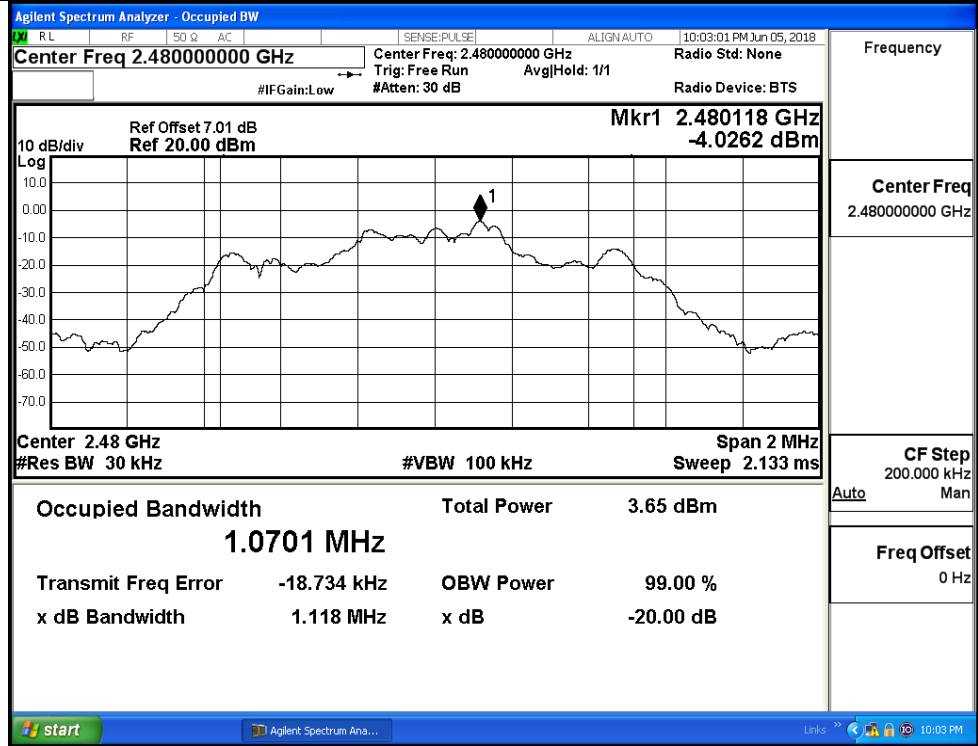
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH

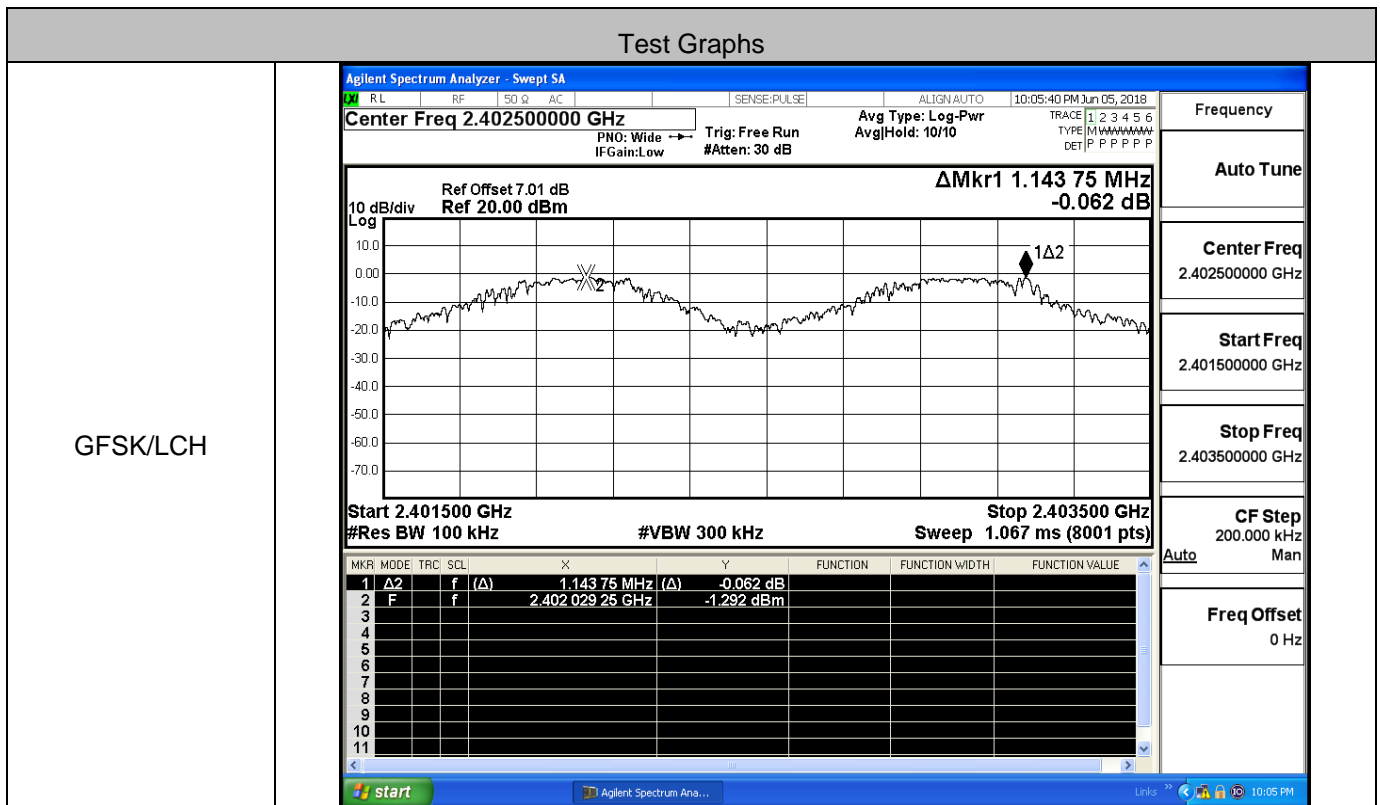


$\pi/4$ DQPSK/HCH

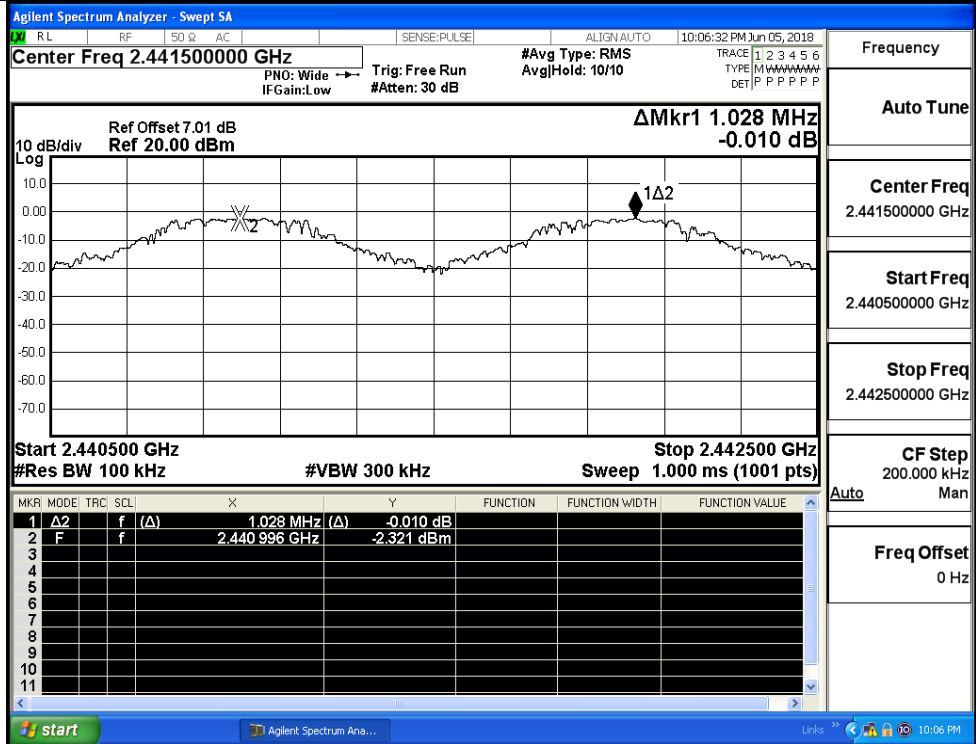


A.3 Carrier Frequency Separation

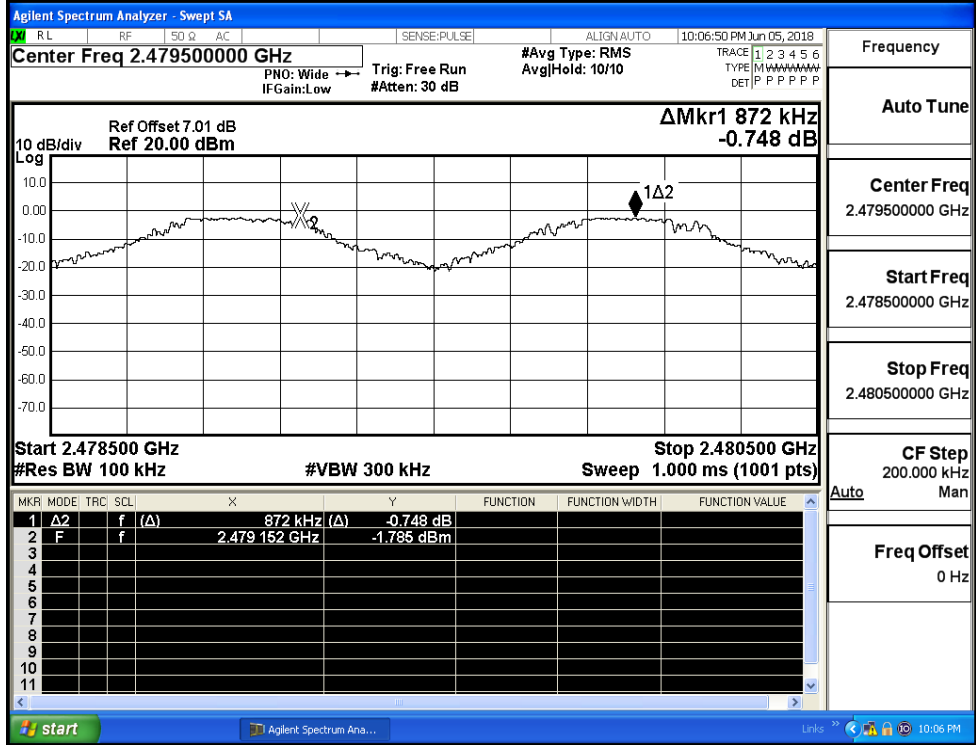
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.144	0.8314	PASS
	MCH	1.028	0.8344	PASS
	HCH	0.872	0.8416	PASS
π/4DQPSK	LCH	1.330	0.745	PASS
	MCH	1.272	0.745	PASS
	HCH	0.918	0.745	PASS



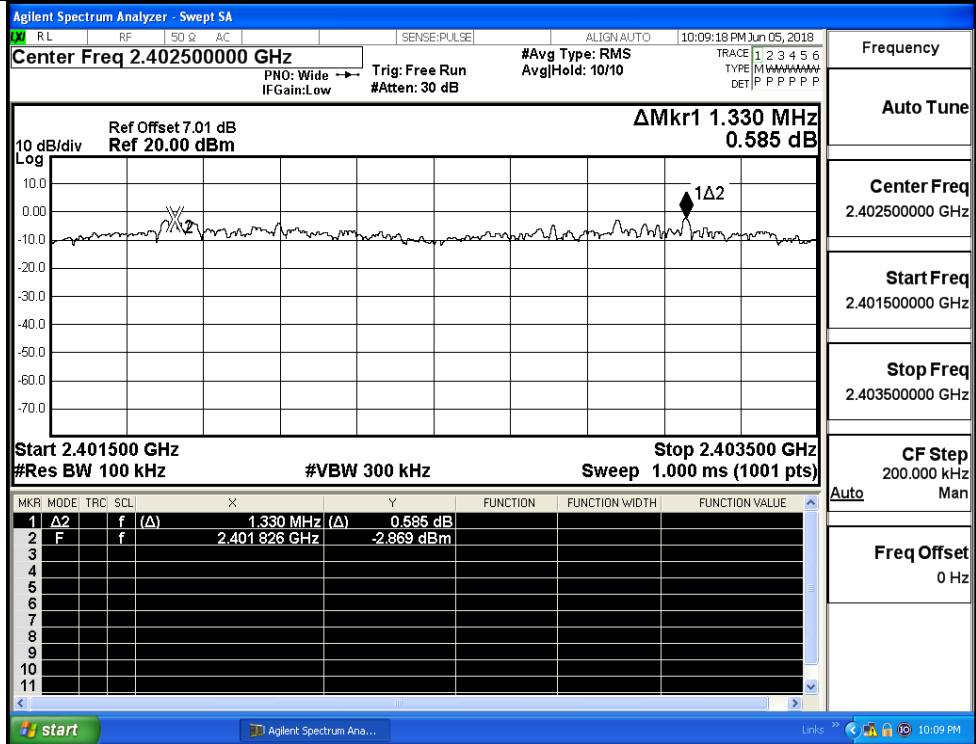
GFSK/MCH



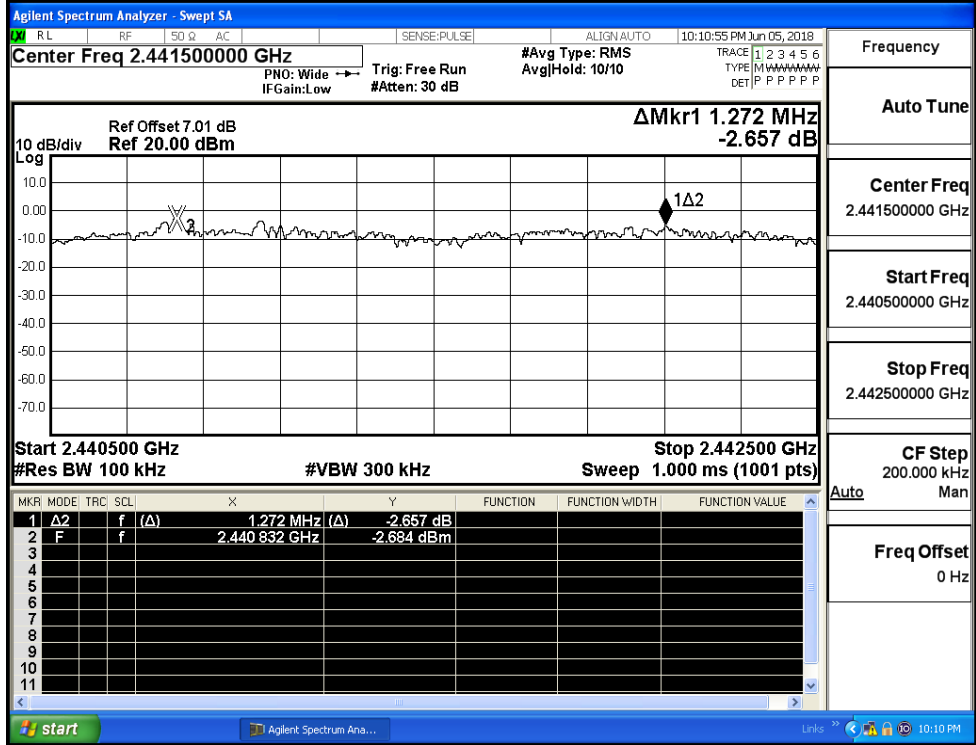
GFSK/HCH



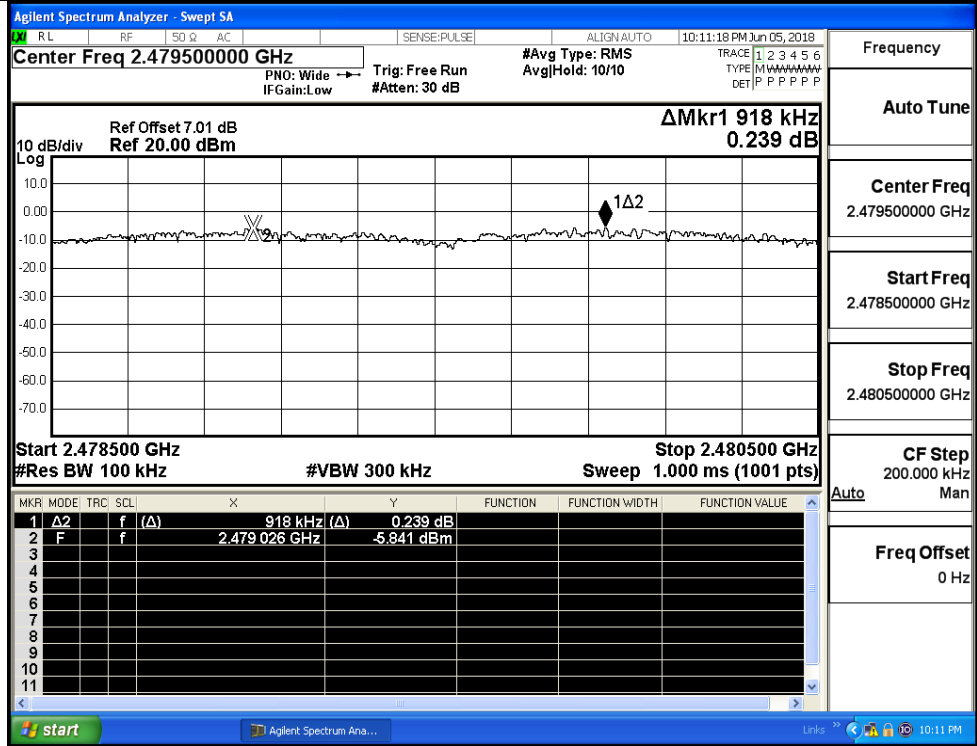
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH



A.4 Hopping Channel Number

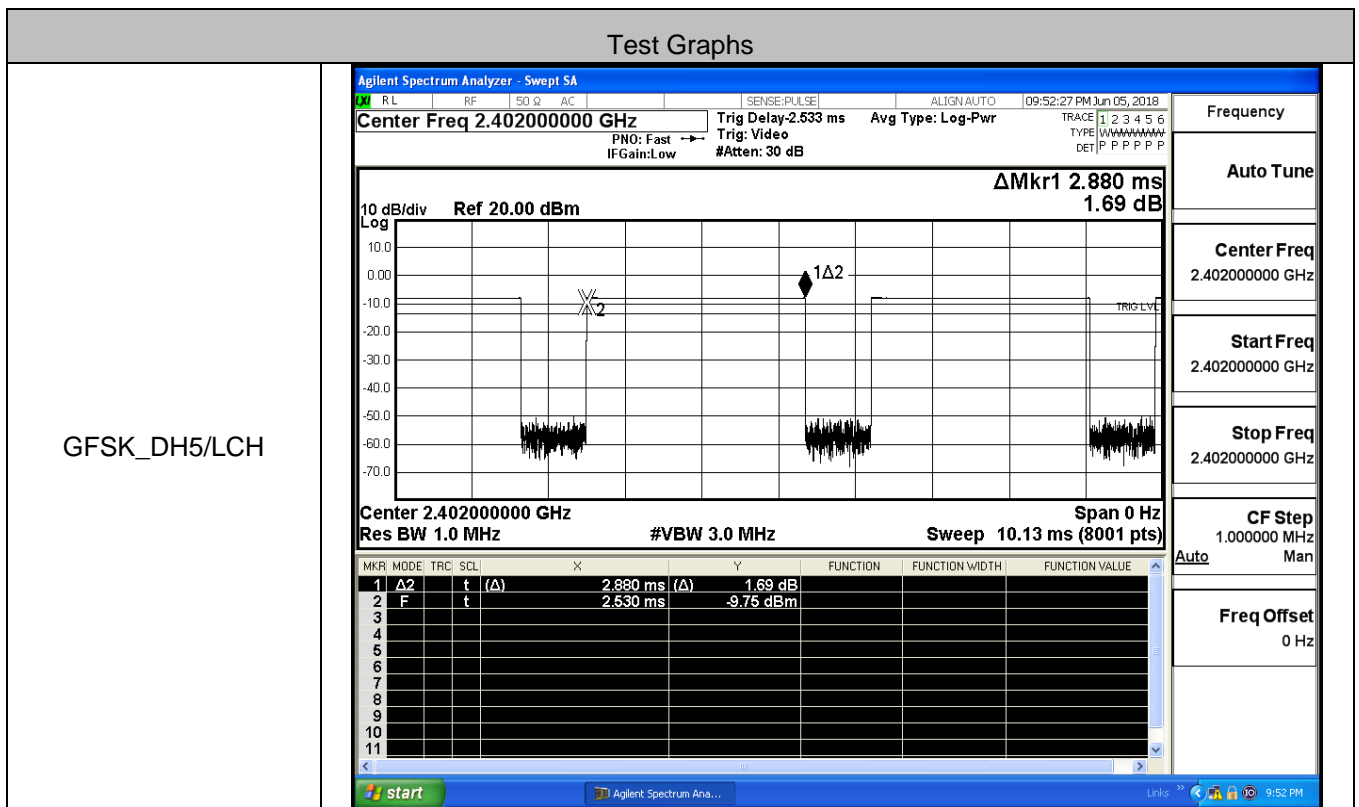
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS

Test Graphs

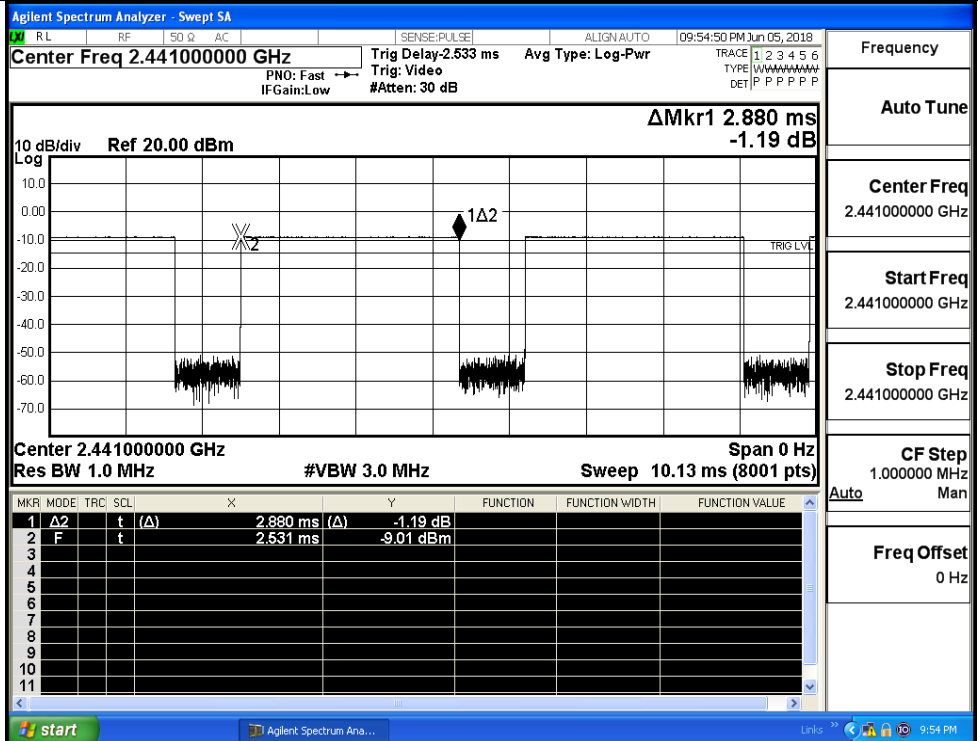
GFSK/Hop	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.441750000 GHz Ref Offset 7.01 dB Ref 20.00 dBm ΔMkr1 77.906 MHz -0.579 dB Start 2.40000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.48350 GHz Sweep 8.000 ms (8001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Δ2</td> <td>f</td> <td>(Δ)</td> <td>77.906 MHz (Δ)</td> <td>-0.579 dB</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>F</td> <td>f</td> <td></td> <td>2.401962 GHz</td> <td>-1.380 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	Δ2	f	(Δ)	77.906 MHz (Δ)	-0.579 dB				2	F	f		2.401962 GHz	-1.380 dBm				Frequency Auto Tune Center Freq 2.441750000 GHz Start Freq 2.400000000 GHz Stop Freq 2.483500000 GHz CF Step 8.350000 MHz Auto Man Freq Offset 0 Hz
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2	F	f		2.401962 GHz	-1.380 dBm																								
$\pi/4$ DQPSK/Hop	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.441750000 GHz Ref Offset 7.01 dB Ref 20.00 dBm ΔMkr1 77.822 MHz -0.428 dB Start 2.40000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.48350 GHz Sweep 8.000 ms (8001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Δ2</td> <td>f</td> <td>(Δ)</td> <td>77.822 MHz (Δ)</td> <td>-0.428 dB</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>F</td> <td>f</td> <td></td> <td>2.402119 GHz</td> <td>-4.145 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	Δ2	f	(Δ)	77.822 MHz (Δ)	-0.428 dB				2	F	f		2.402119 GHz	-4.145 dBm				Frequency Auto Tune Center Freq 2.441750000 GHz Start Freq 2.400000000 GHz Stop Freq 2.483500000 GHz CF Step 8.350000 MHz Auto Man Freq Offset 0 Hz
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1	Δ2	f	(Δ)	77.822 MHz (Δ)	-0.428 dB																								
2	F	f		2.402119 GHz	-4.145 dBm																								

A.5 Dwell Time

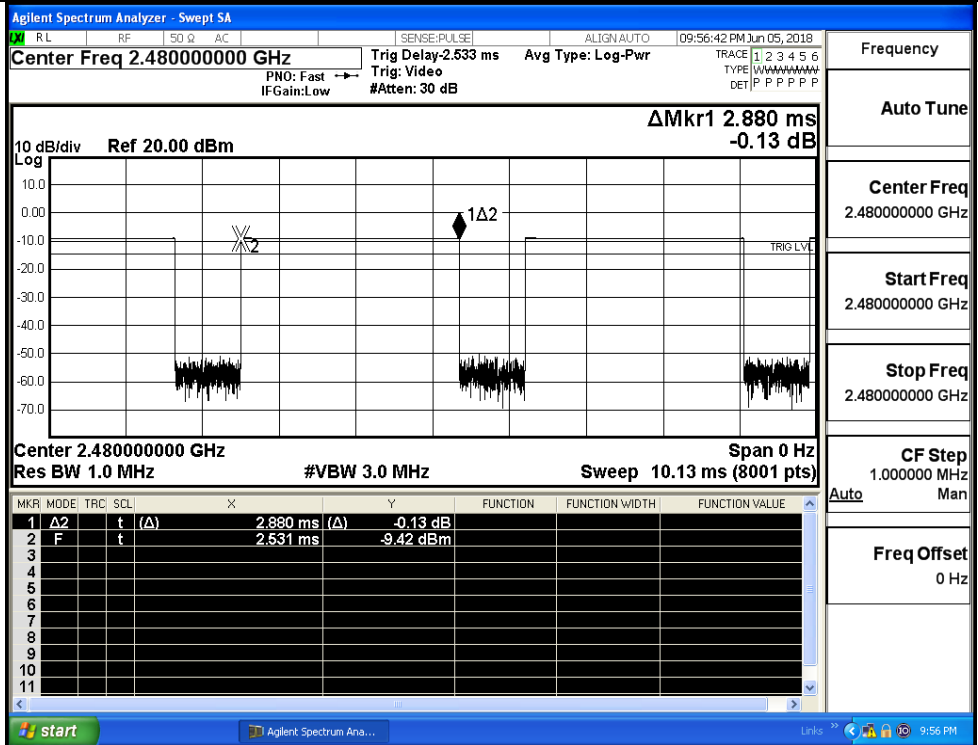
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
π/4DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS



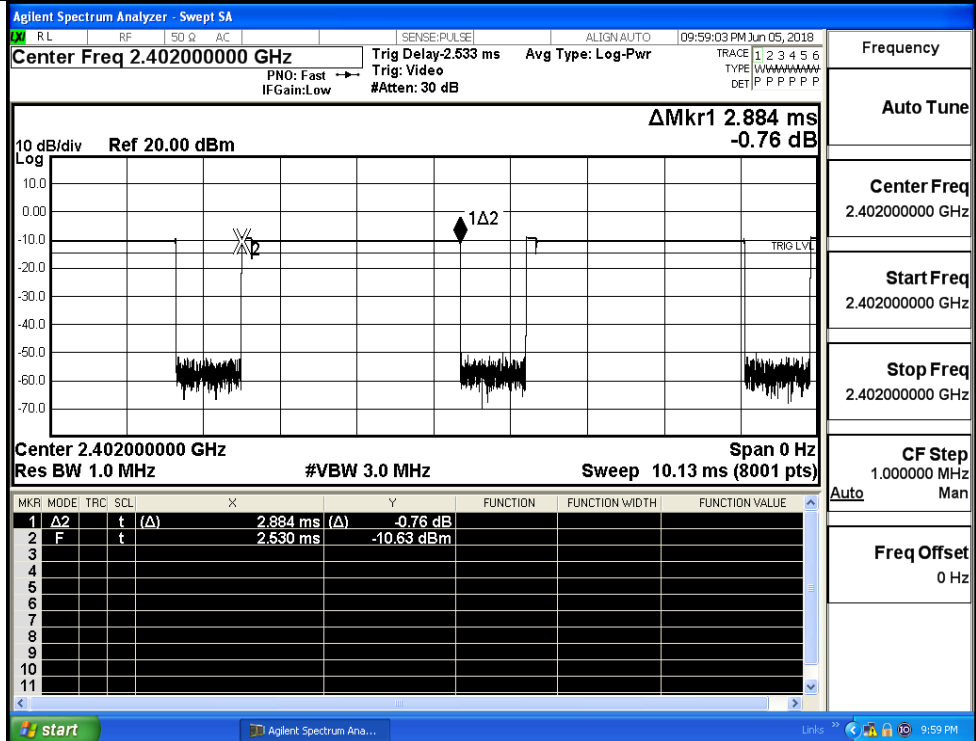
GFSK_DH5/MCH



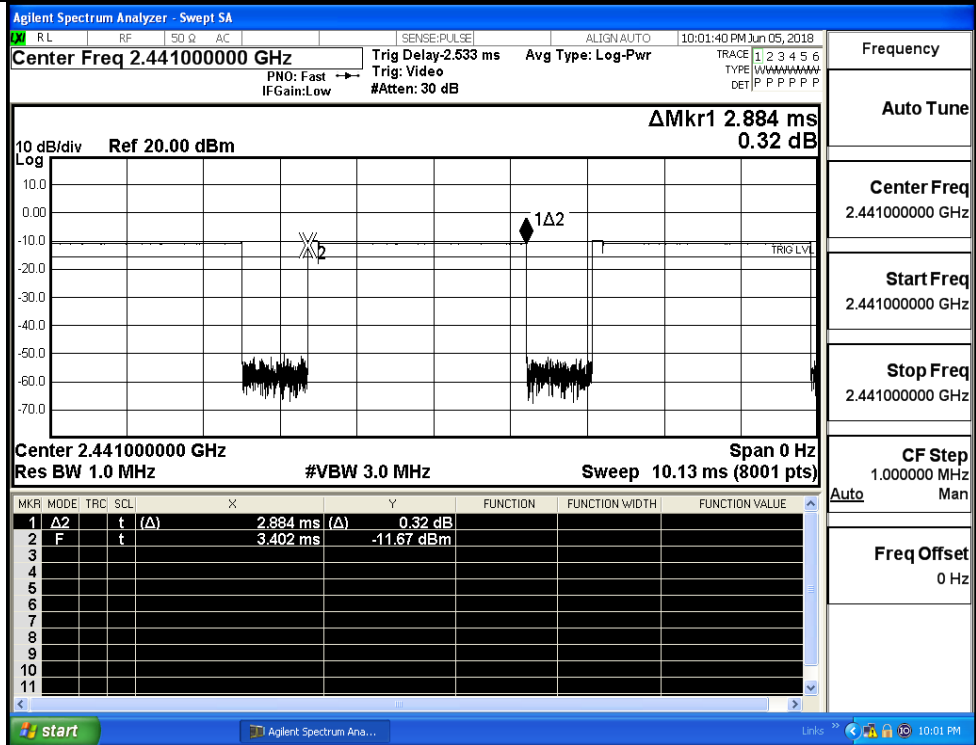
GFSK_DH5/HCH



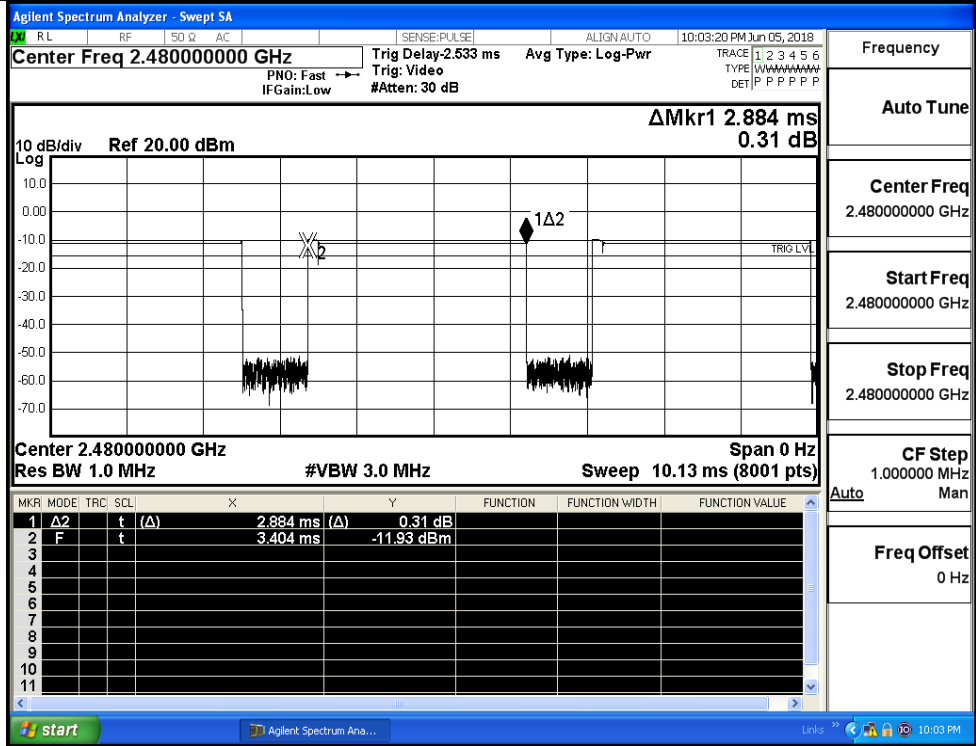
$\pi/4$ DQPSK
_2DH5/LCH



$\pi/4$ DQPSK
_2DH5/MCH



$\pi/4$ DQPSK
_2DH5/HCH

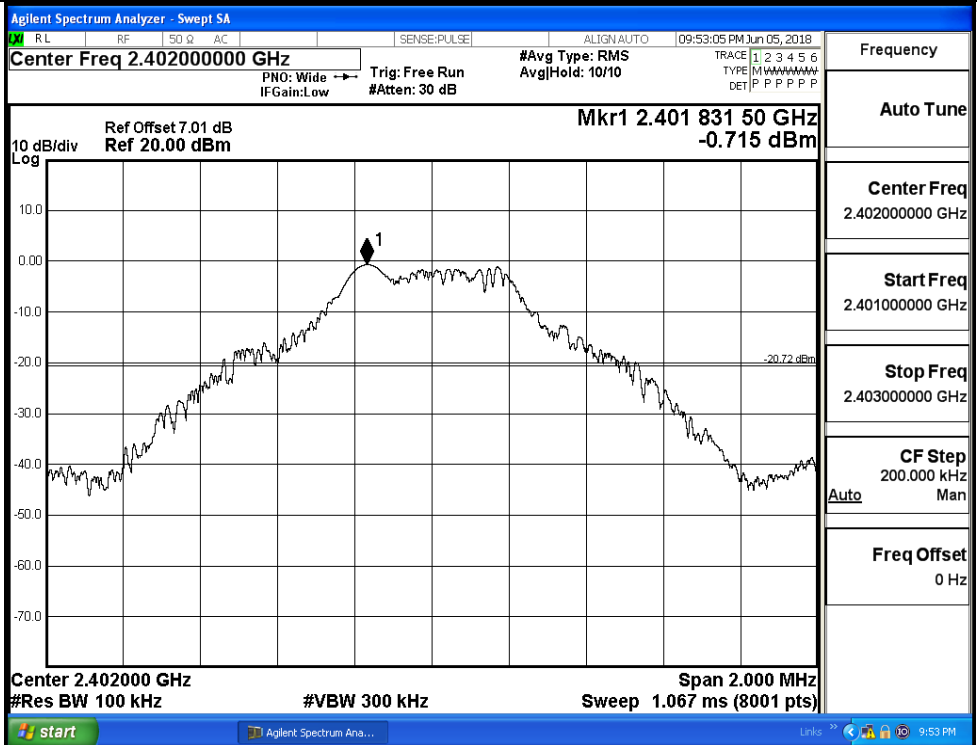


A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.715	-45.025	-20.715	PASS
	MCH	-1.627	-45.011	-21.627	PASS
	HCH	-1.755	-44.654	-21.755	PASS
$\pi/4$ DQPSK	LCH	-2.171	-45.449	-22.171	PASS
	MCH	-2.857	-45.852	-22.857	PASS
	HCH	-2.968	-45.572	-22.968	PASS

GFSK_LCH_Graphs

Pref



Frequency

Auto Tune

Center Freq
2.402000000 GHz

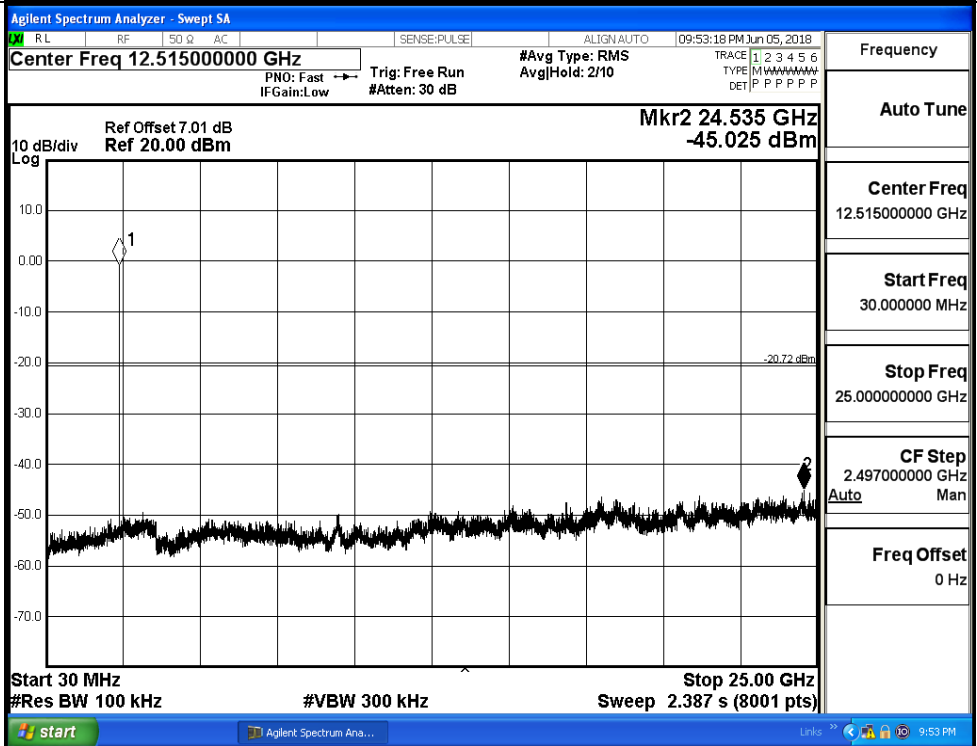
Start Freq
2.401000000 GHz

Stop Freq
2.403000000 GHz

CF Step
200.000 kHz
Auto
Man

Freq Offset
0 Hz

Puw



Frequency

Auto Tune

Center Freq
12.515000000 GHz

Start Freq
30.000000 MHz

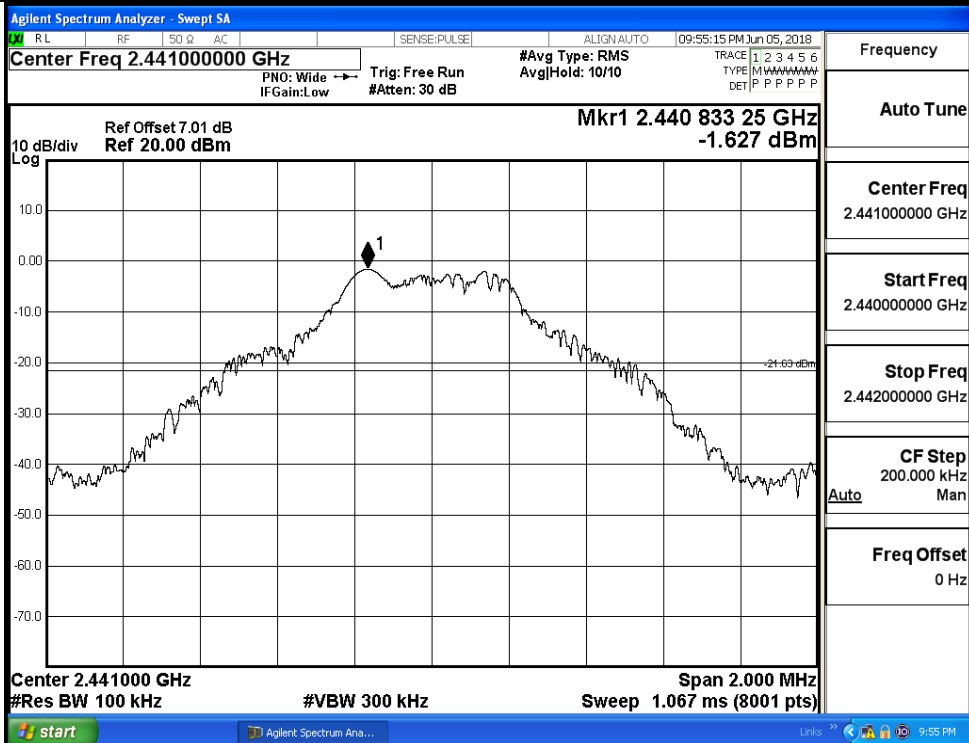
Stop Freq
25.000000000 GHz

CF Step
2.497000000 GHz
Auto
Man

Freq Offset
0 Hz

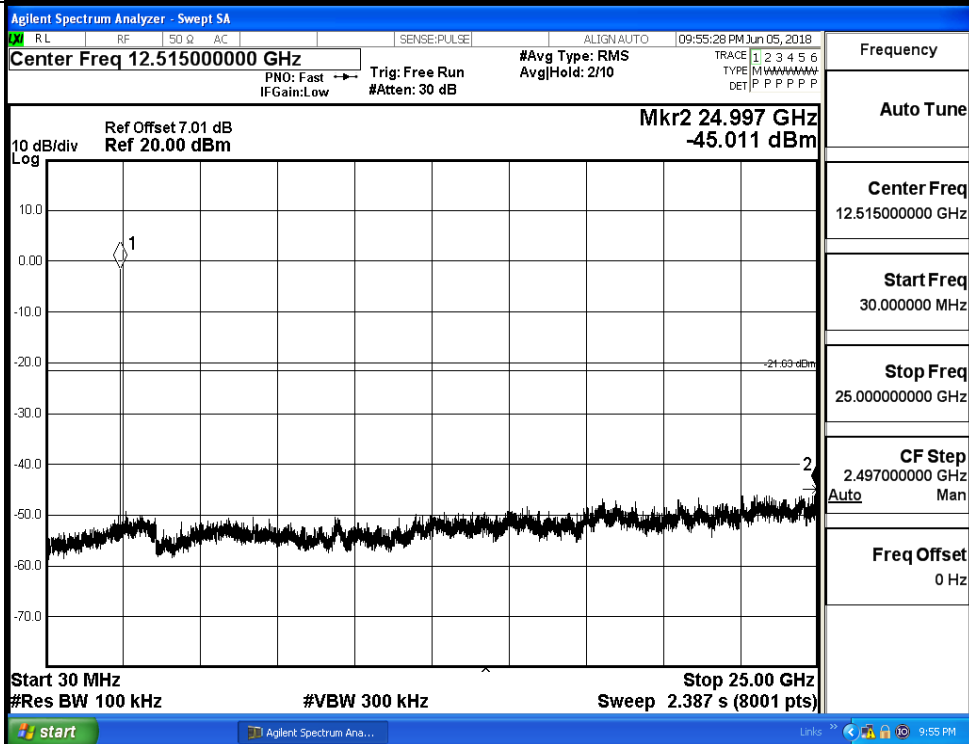
GFSK_MCH_Graphs

Pref



Frequency	2.441000000 GHz
Auto Tune	
Center Freq	2.441000000 GHz
Start Freq	2.440000000 GHz
Stop Freq	2.442000000 GHz
CF Step	200.000 kHz Auto Man
Freq Offset	0 Hz

Puw



Frequency	12.515000000 GHz
Auto Tune	
Center Freq	12.515000000 GHz
Start Freq	30.000000 MHz
Stop Freq	25.000000000 GHz
CF Step	2.497000000 GHz Auto Man
Freq Offset	0 Hz

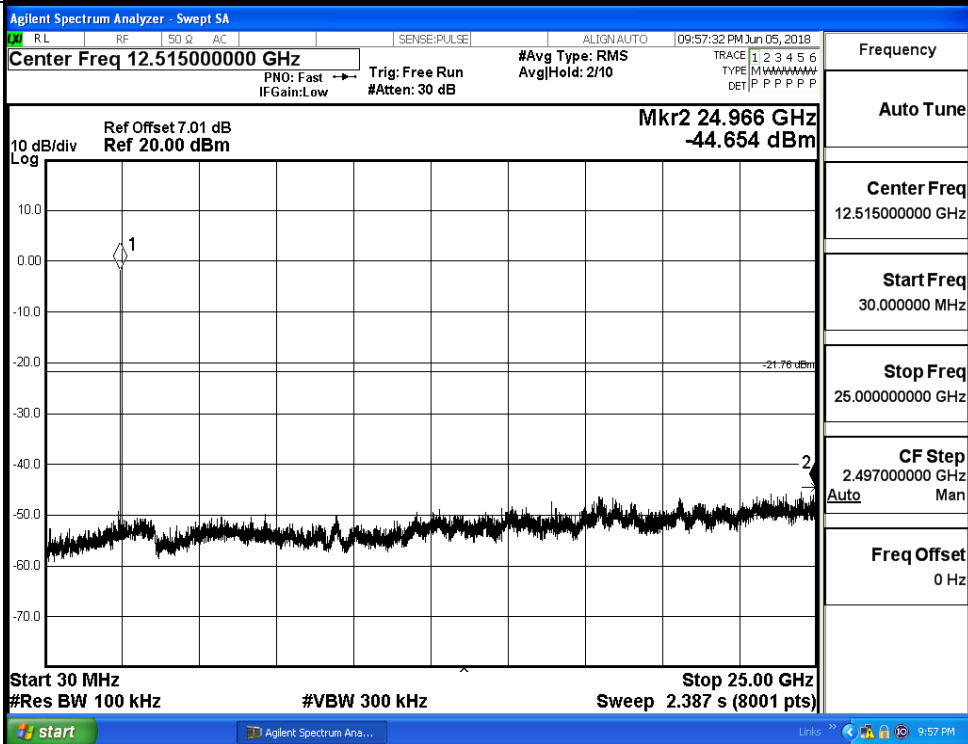
GFSK_HCH_Graphs

Pref



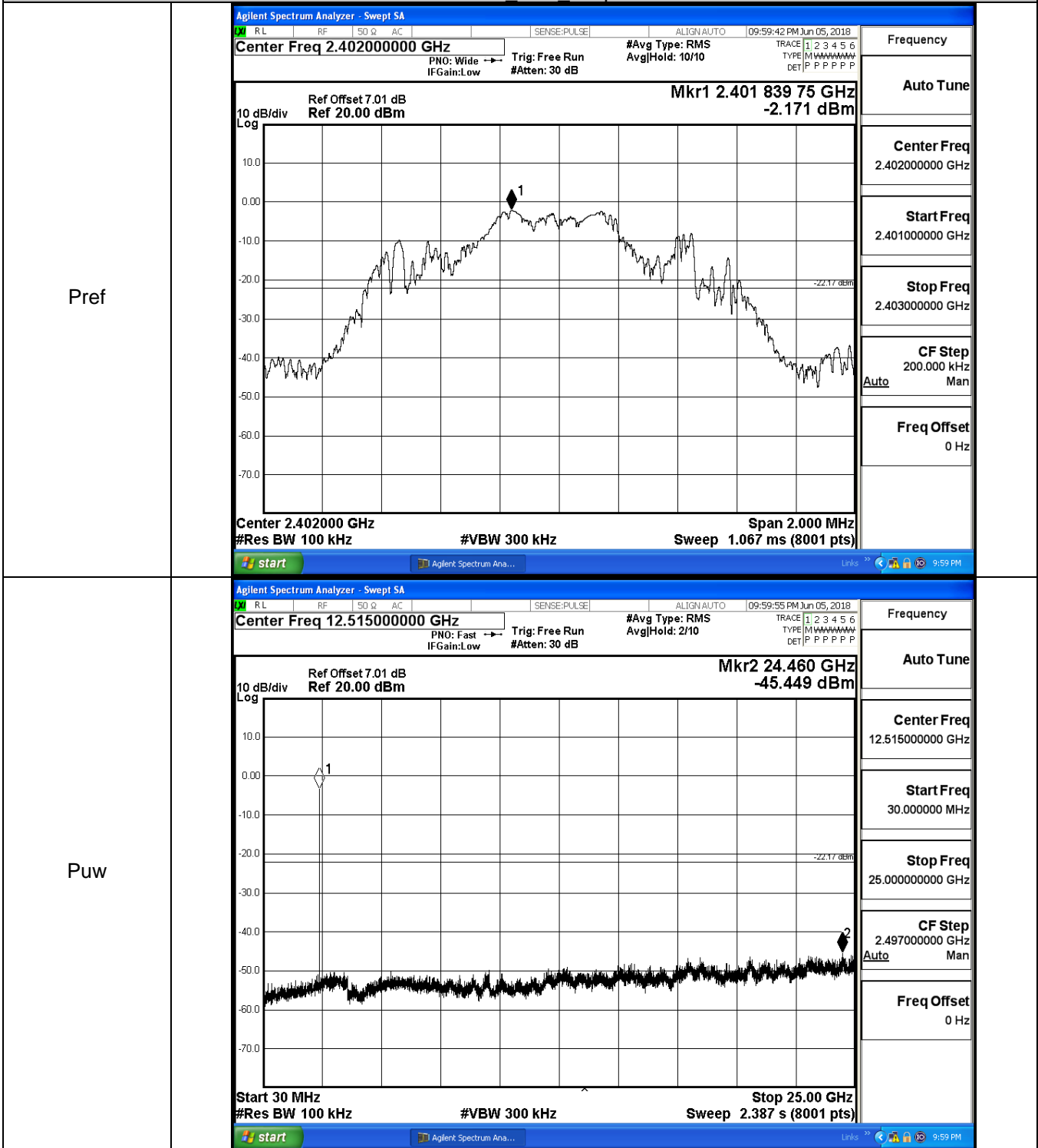
Frequency	
Auto Tune	
Center Freq	2.480000000 GHz
Start Freq	2.479000000 GHz
Stop Freq	2.481000000 GHz
CF Step	200.000 kHz Auto Man
Freq Offset	0 Hz

Puw

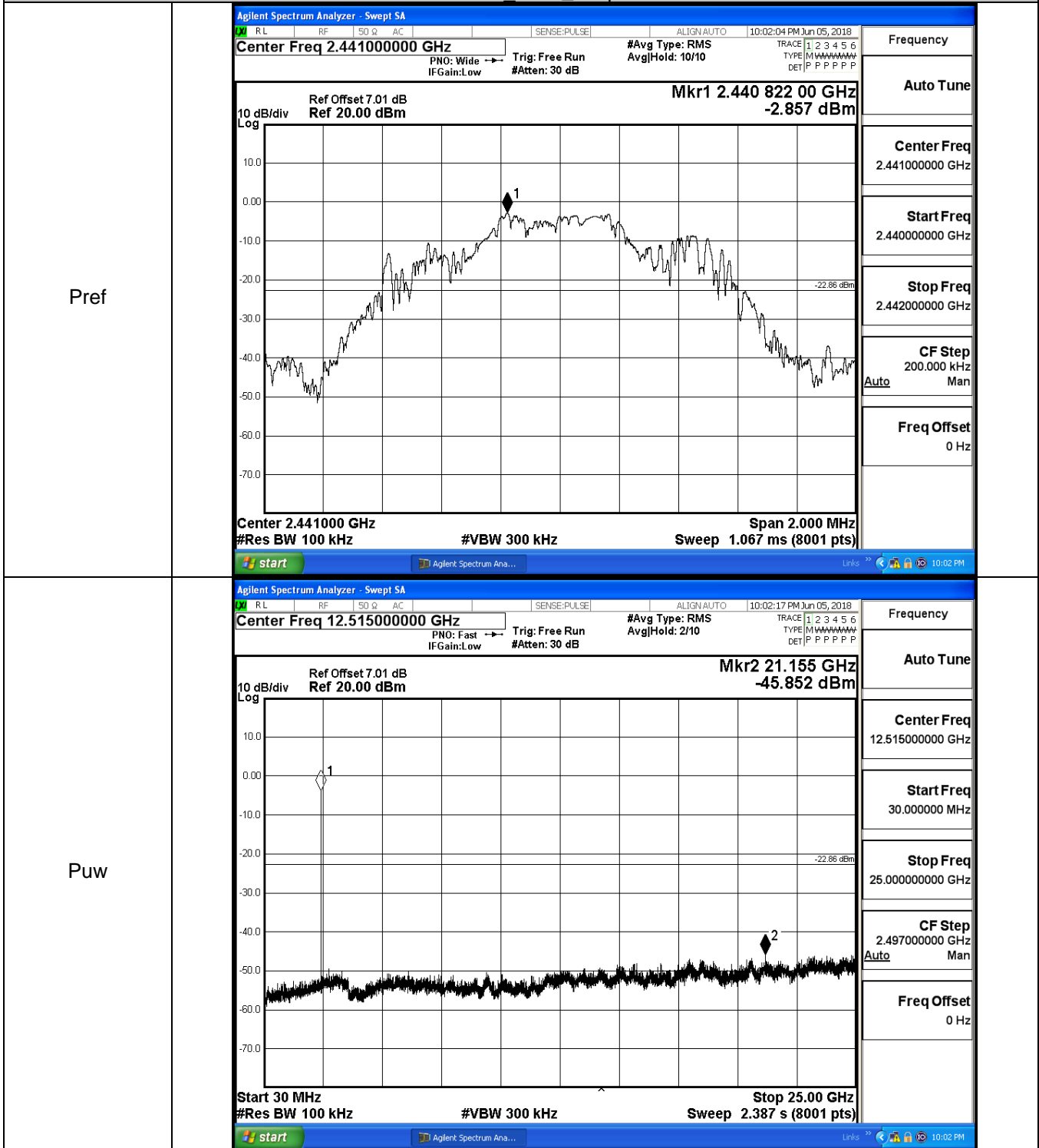


Frequency	
Auto Tune	
Center Freq	12.515000000 GHz
Start Freq	30.000000 MHz
Stop Freq	25.000000000 GHz
CF Step	2.497000000 GHz Auto Man
Freq Offset	0 Hz

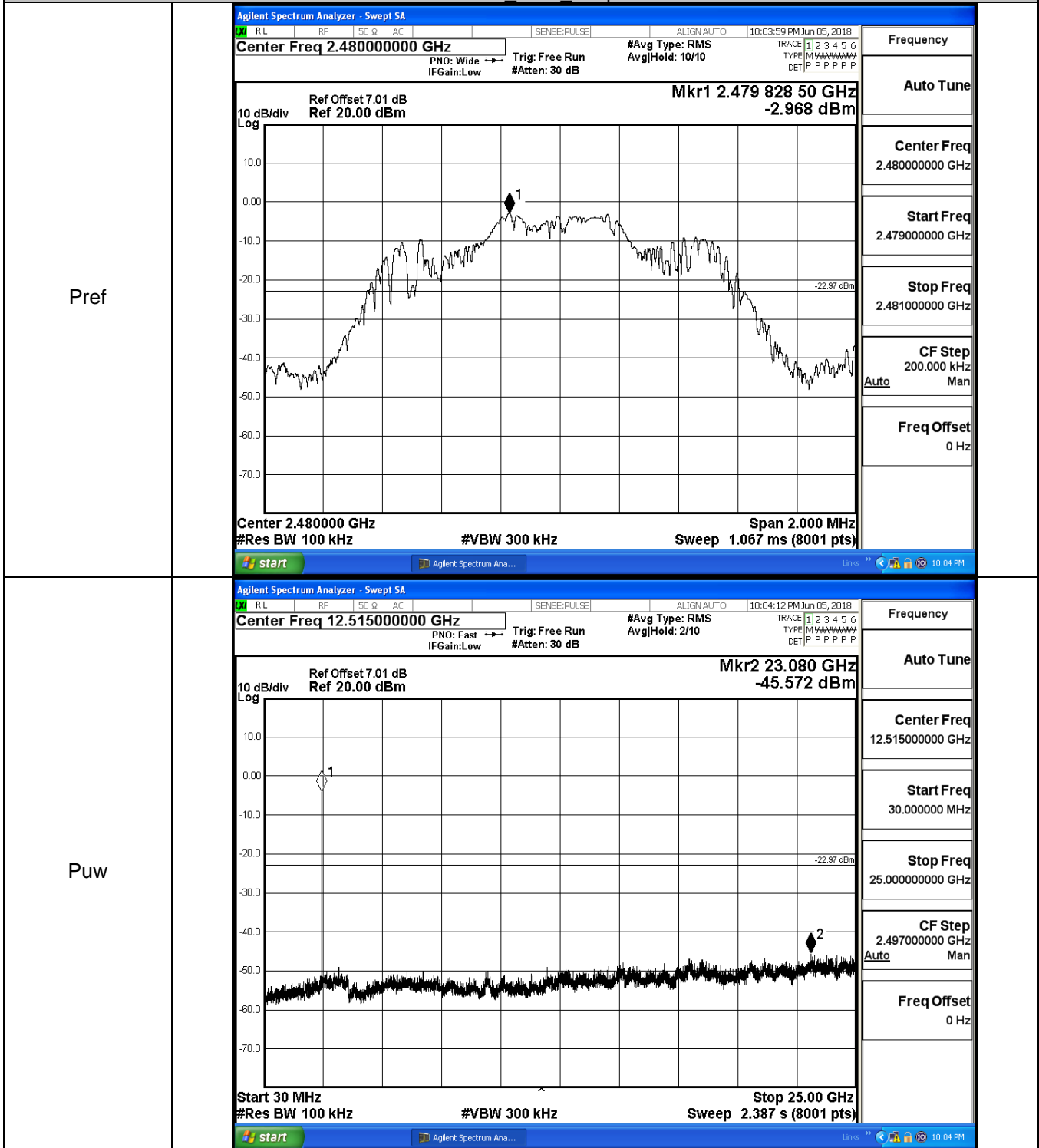
$\pi/4$ DQPSK LCH Graphs



$\pi/4$ DQPSK MCH_Graphs



$\pi/4$ DQPSK HCH Graphs

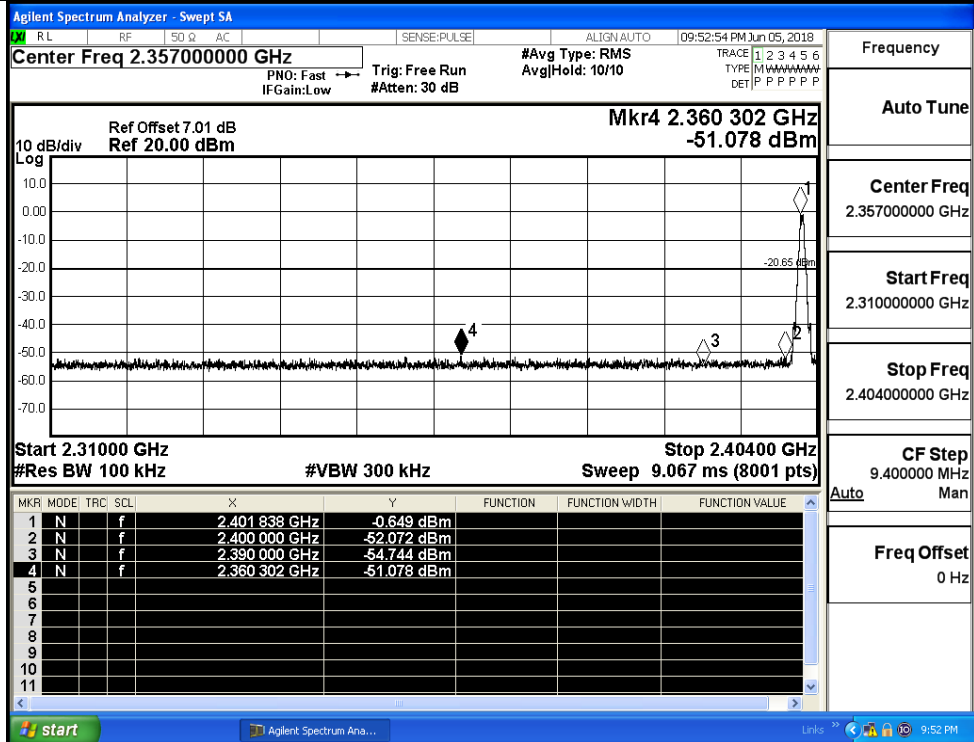


A.7 Band-edge for RF Conducted Emissions

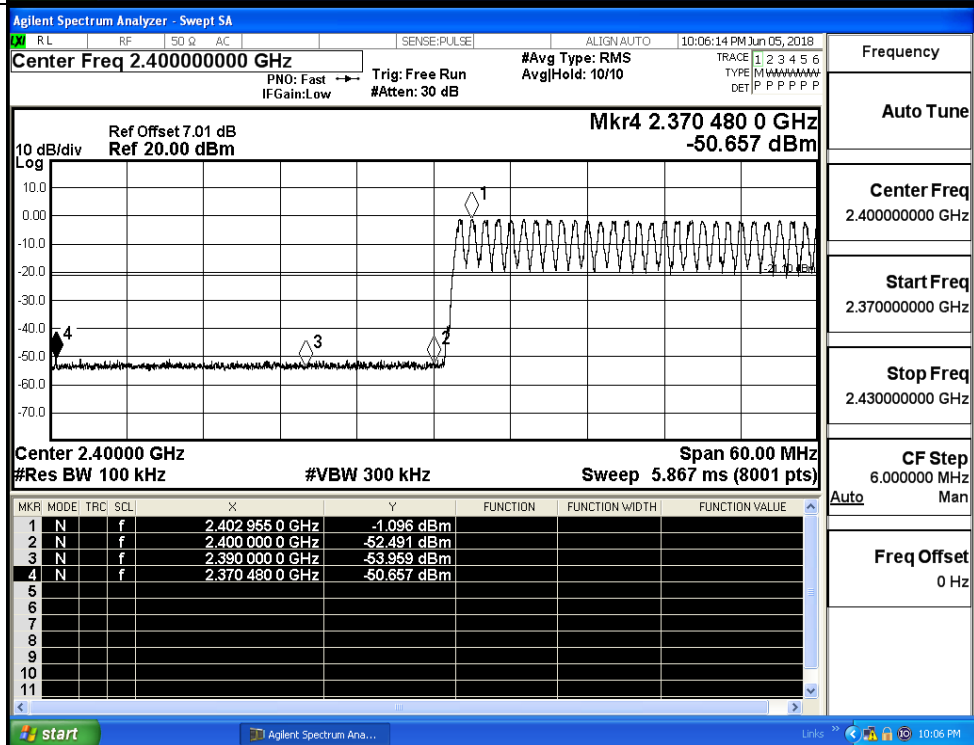
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-0.649	Off	-51.078	-20.65	PASS
			-1.096	On	-50.657	-21.1	PASS
	HCH	2480	-1.697	Off	-50.192	-21.7	PASS
			-1.772	On	-50.758	-21.77	PASS
$\pi/4$ DQPSK	LCH	2402	-2.206	Off	-50.252	-22.21	PASS
			-2.205	On	-50.666	-22.21	PASS
	HCH	2480	-2.996	Off	-51.195	-23	PASS
			-2.939	On	-50.815	-22.94	PASS

Test Graphs

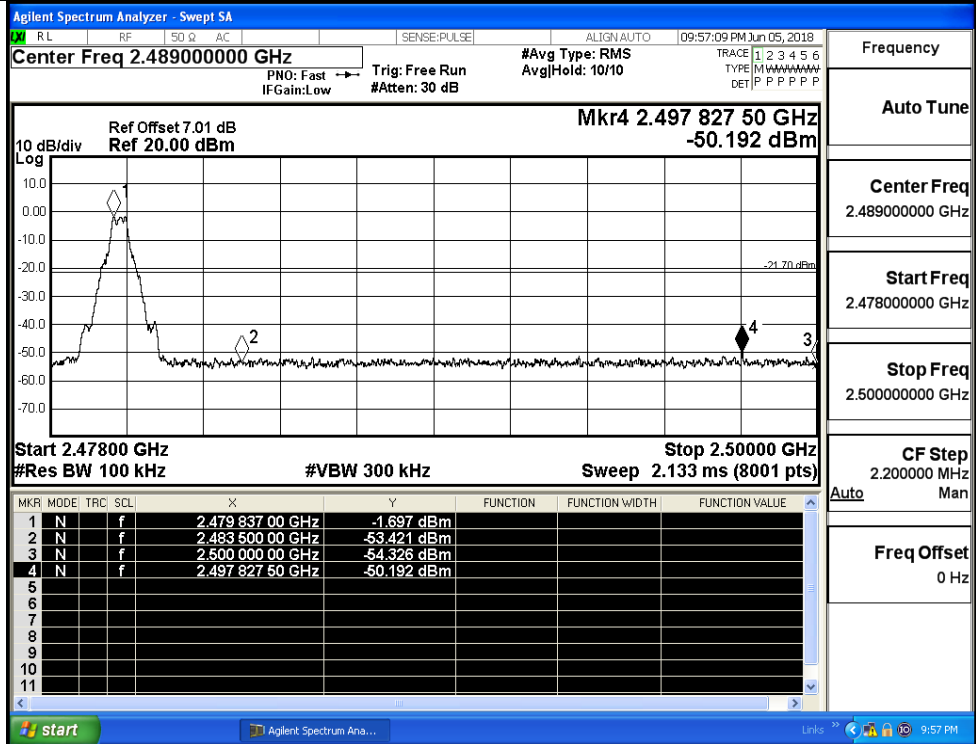
GFSK/LCH/No Hop



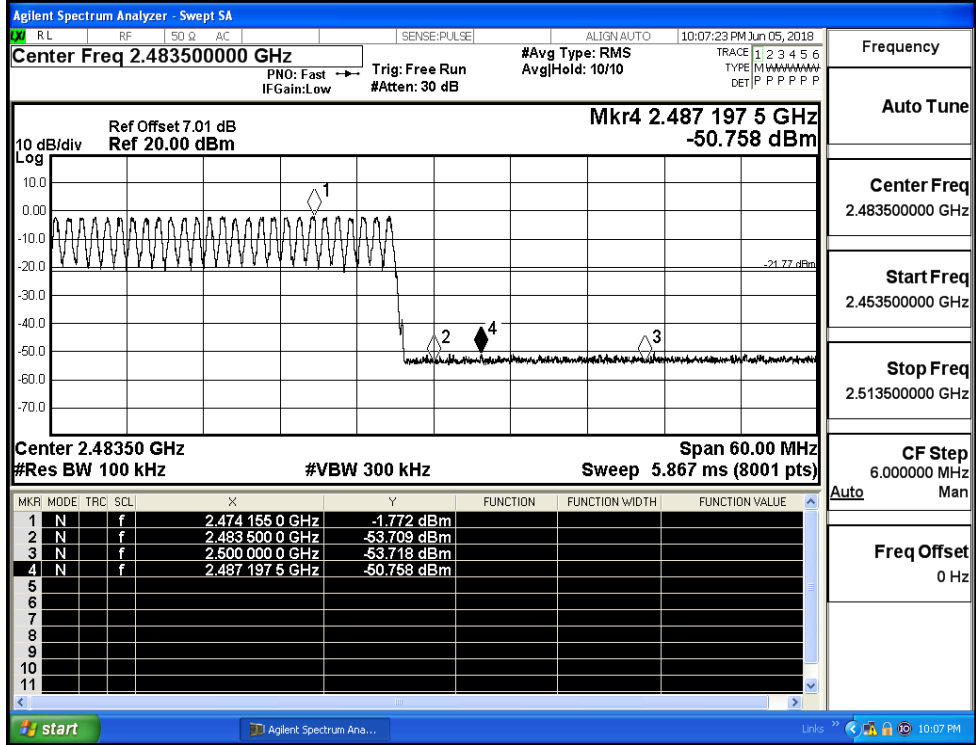
GFSK/LCH/Hop



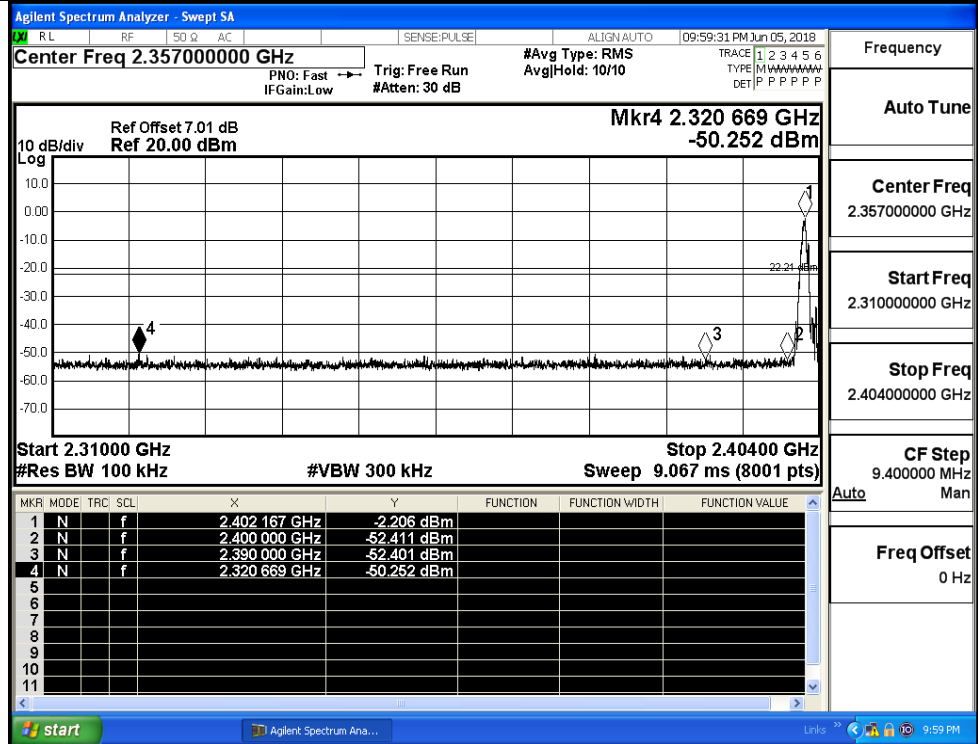
GFSK/HCH/No Hop



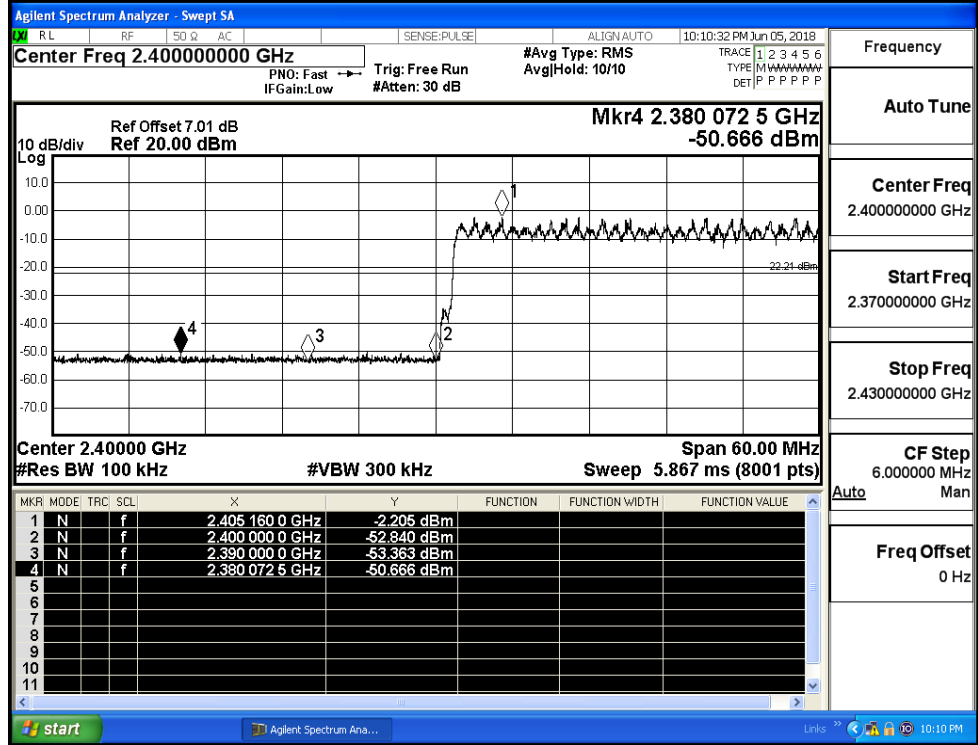
GFSK/HCH/Hop



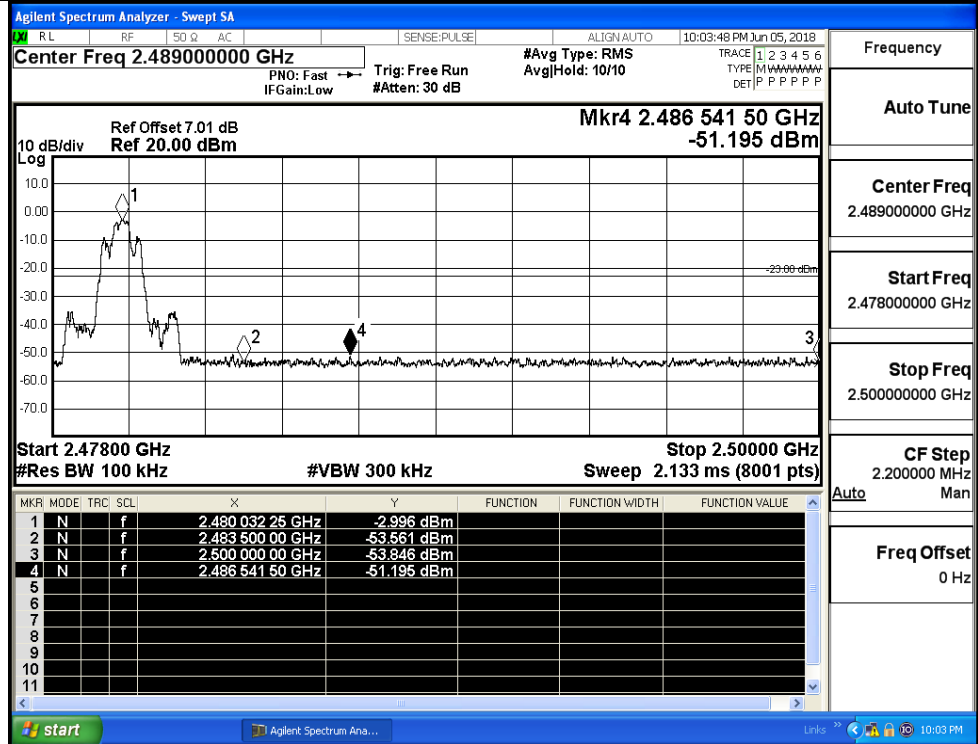
$\pi/4$ DQPSK/LCH/No
Hop



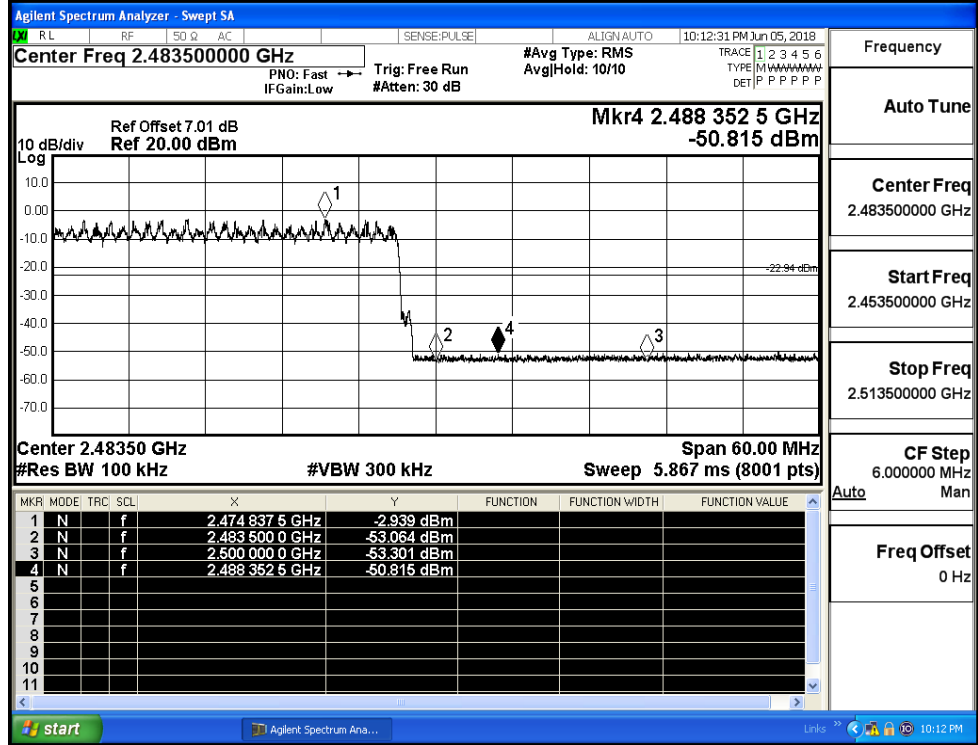
$\pi/4$ DQPSK/LCH/Hop



π /4DQPSK/HCH/No
Hop



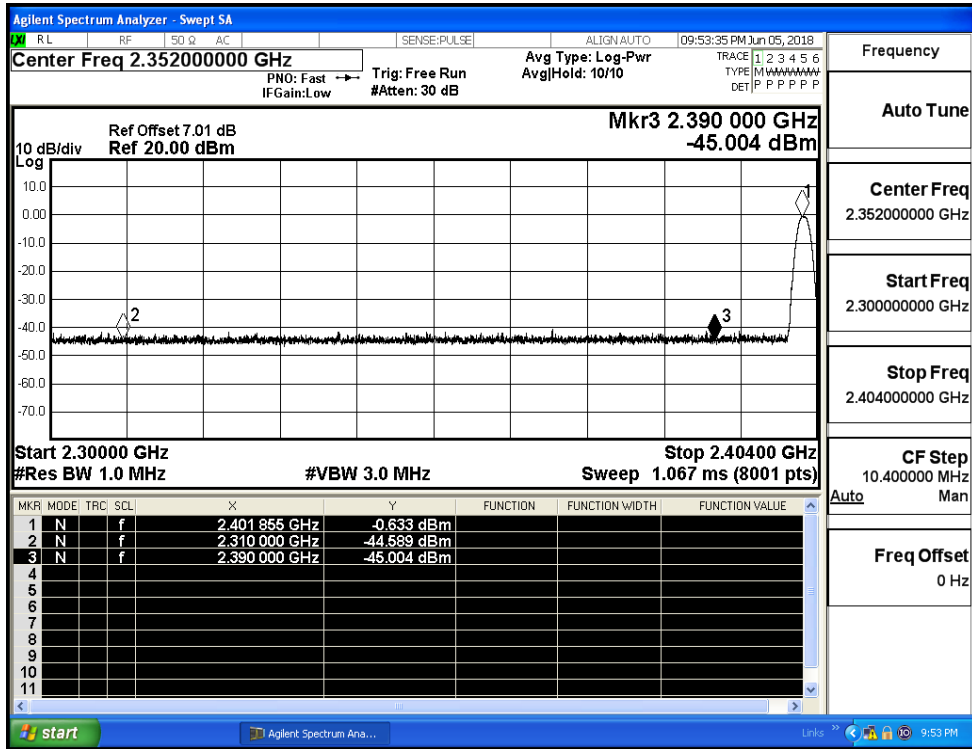
π /4DQPSK/HCH/Hop



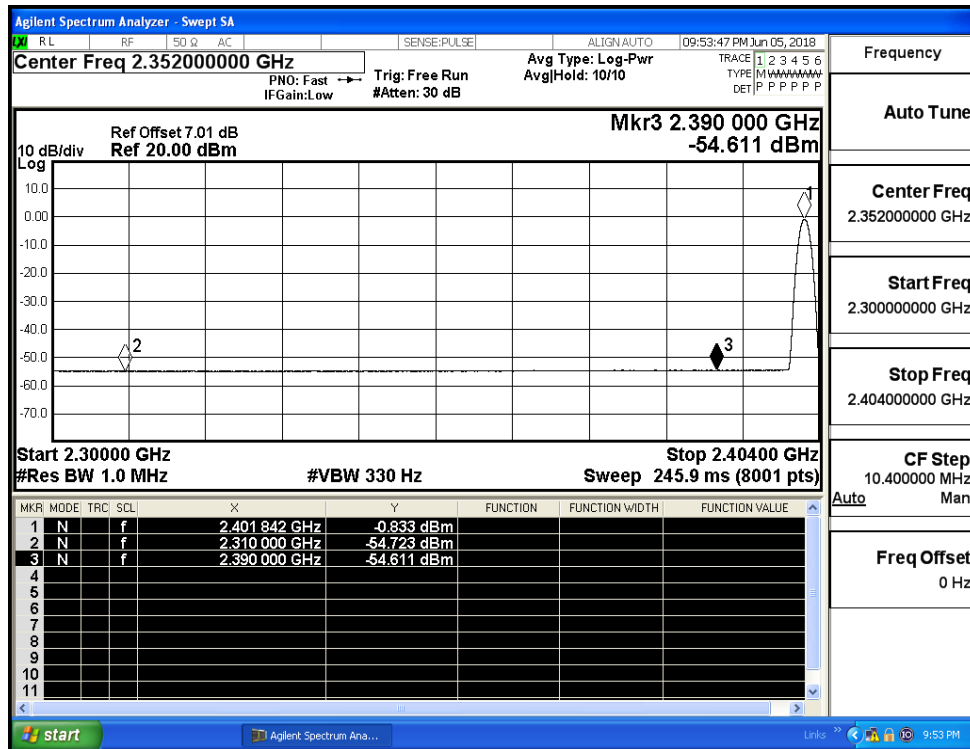
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-44.59	2.0	0	52.67	PEAK	74	PASS
	Off	2310.0	-54.72	2.0	0	42.53	AV	54	PASS
	Off	2390.0	-45.00	2.0	0	52.25	PEAK	74	PASS
	Off	2390.0	-54.61	2.0	0	42.65	AV	54	PASS
	Off	2483.5	-43.99	2.0	0	53.27	PEAK	74	PASS
	Off	2483.5	-54.31	2.0	0	42.95	AV	54	PASS
	Off	2500.0	-44.69	2.0	0	52.57	PEAK	74	PASS
	Off	2500.0	-54.12	2.0	0	43.14	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-44.53	2.0	0	52.73	PEAK	74	PASS
	Off	2310.0	-54.67	2.0	0	42.59	AV	54	PASS
	Off	2390.0	-42.68	2.0	0	54.57	PEAK	74	PASS
	Off	2390.0	-54.60	2.0	0	42.66	AV	54	PASS
	Off	2483.5	-43.95	2.0	0	53.30	PEAK	74	PASS
	Off	2483.5	-54.06	2.0	0	43.20	AV	54	PASS
	Off	2500.0	-43.71	2.0	0	53.55	PEAK	74	PASS
	Off	2500.0	-54.20	2.0	0	43.05	AV	54	PASS

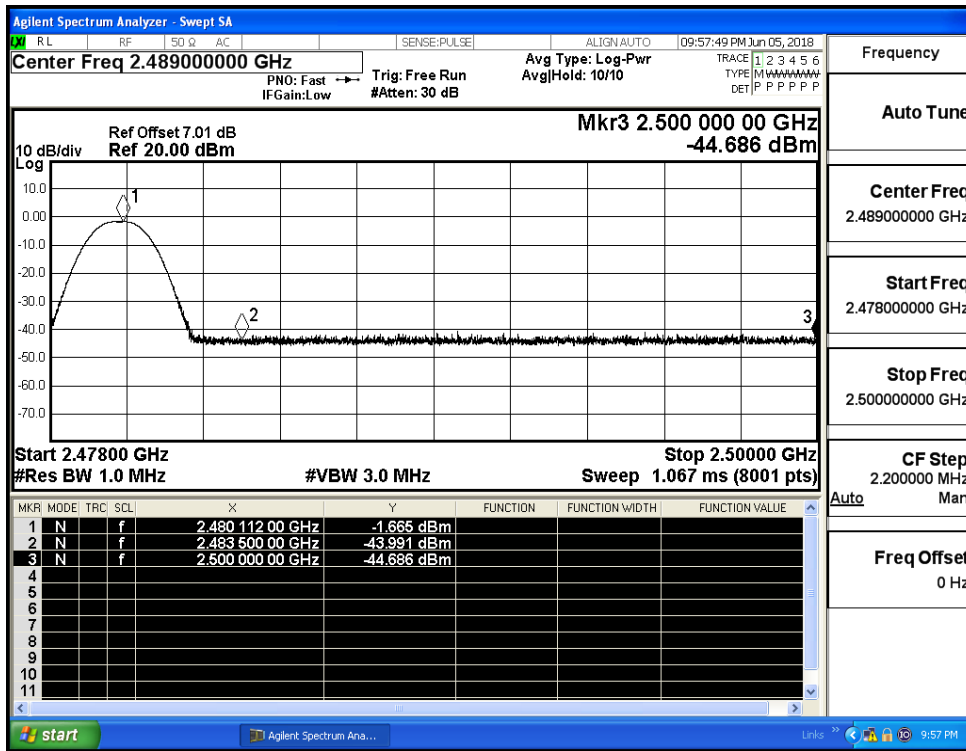
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



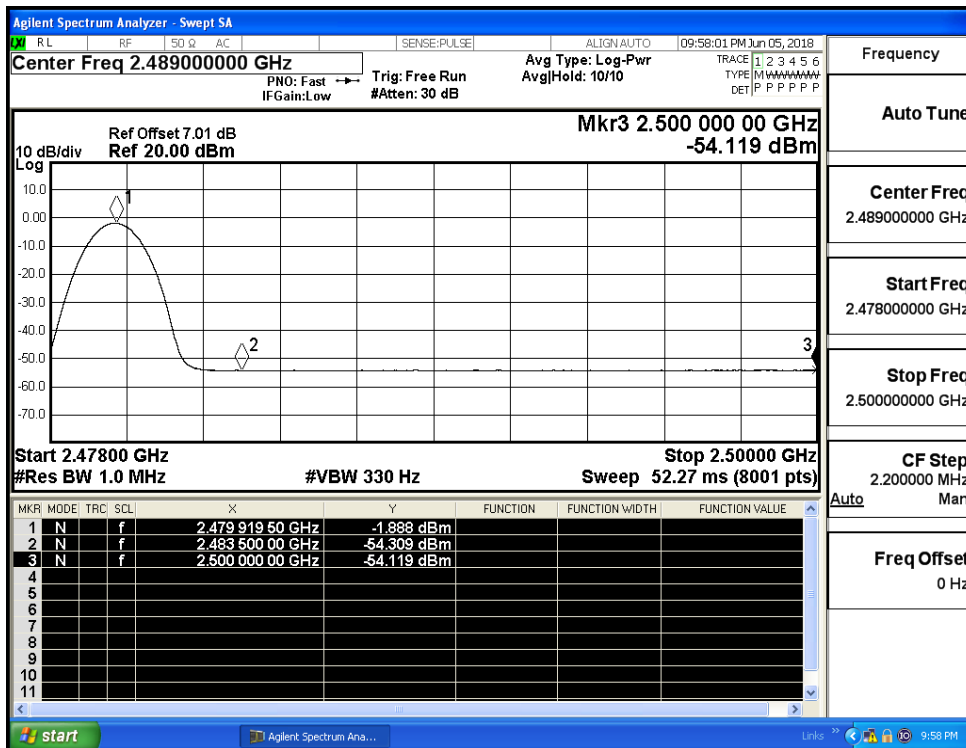
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)



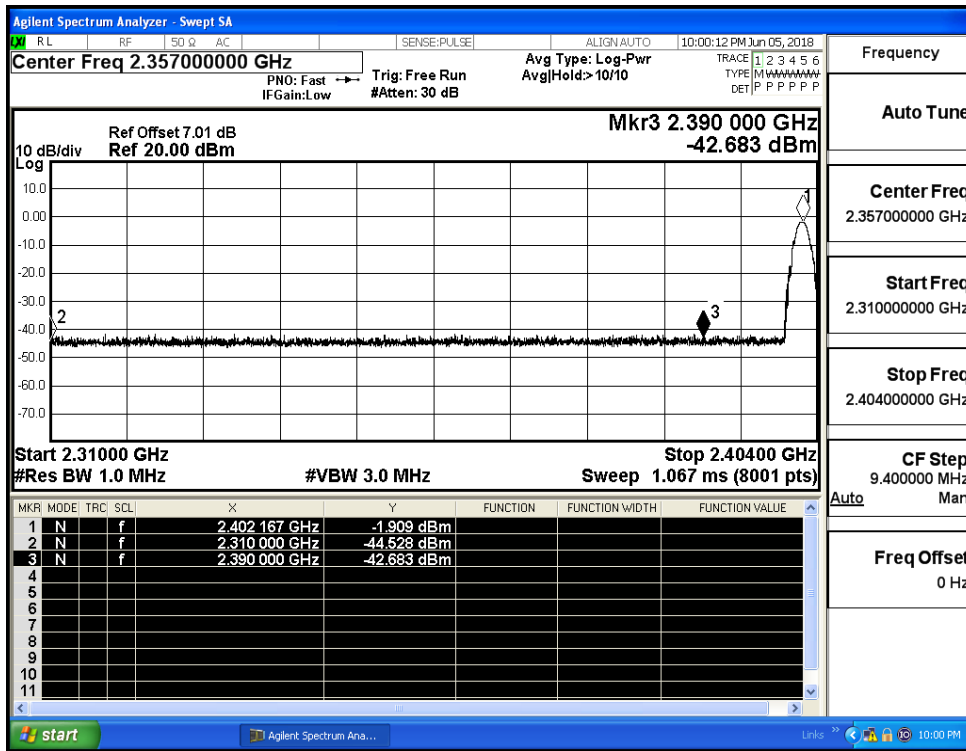
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



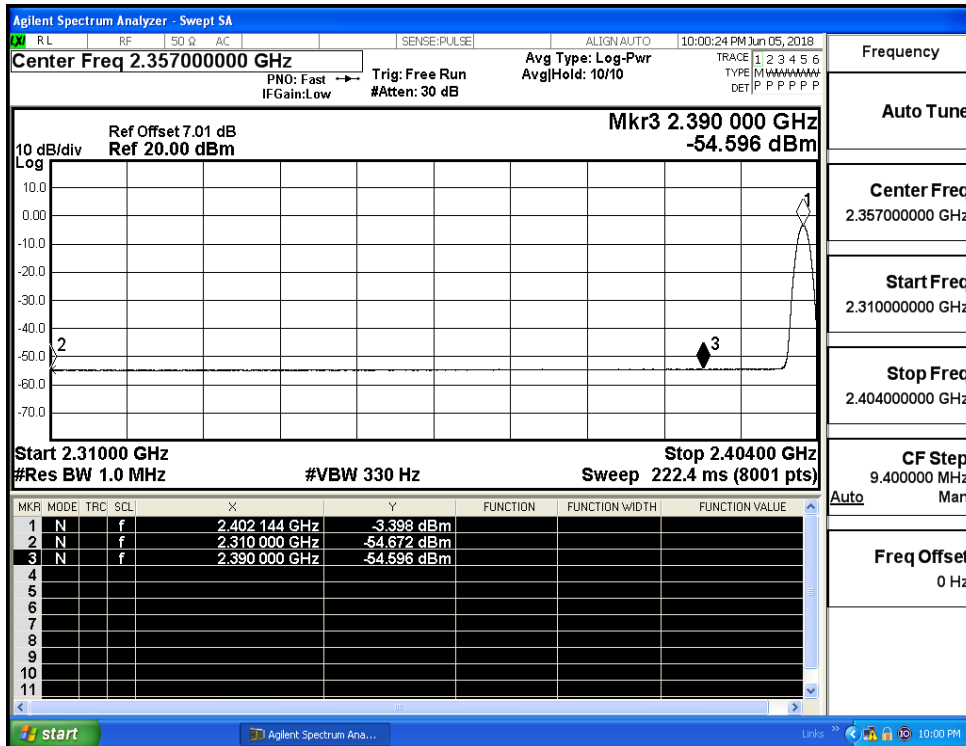
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



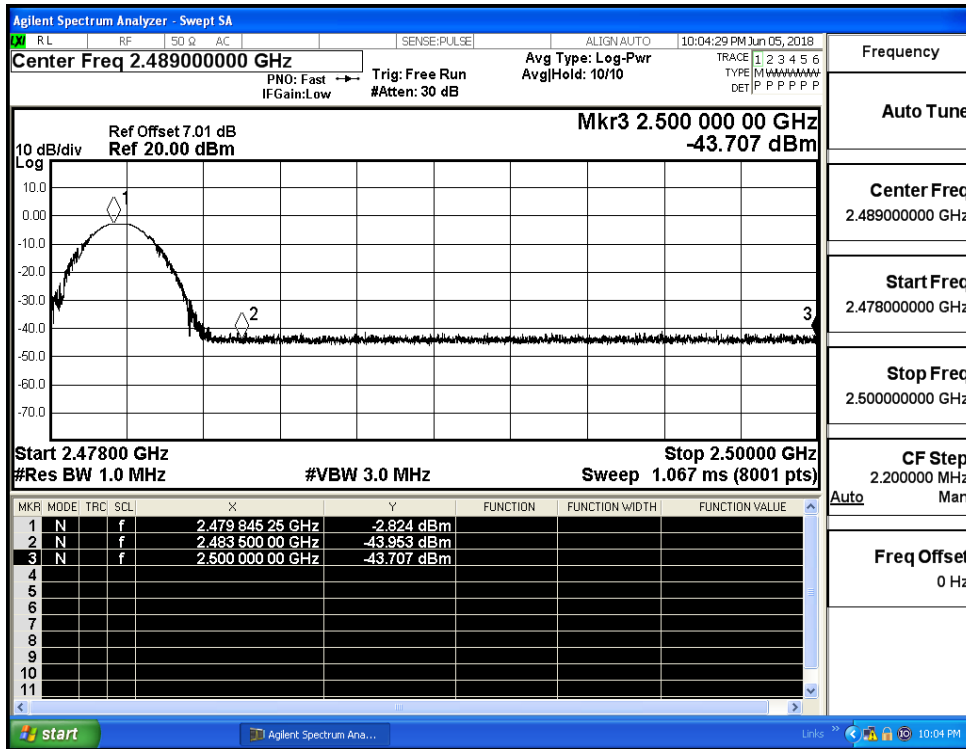
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)



Restrict-band band-edge measurements_Hopping Off $\pi/4$ -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)

