

Appendix A

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

Product Name: MONSTER TRIO

Trade Mark: MONSTER

Test Model: MNTRIO

Environmental Conditions

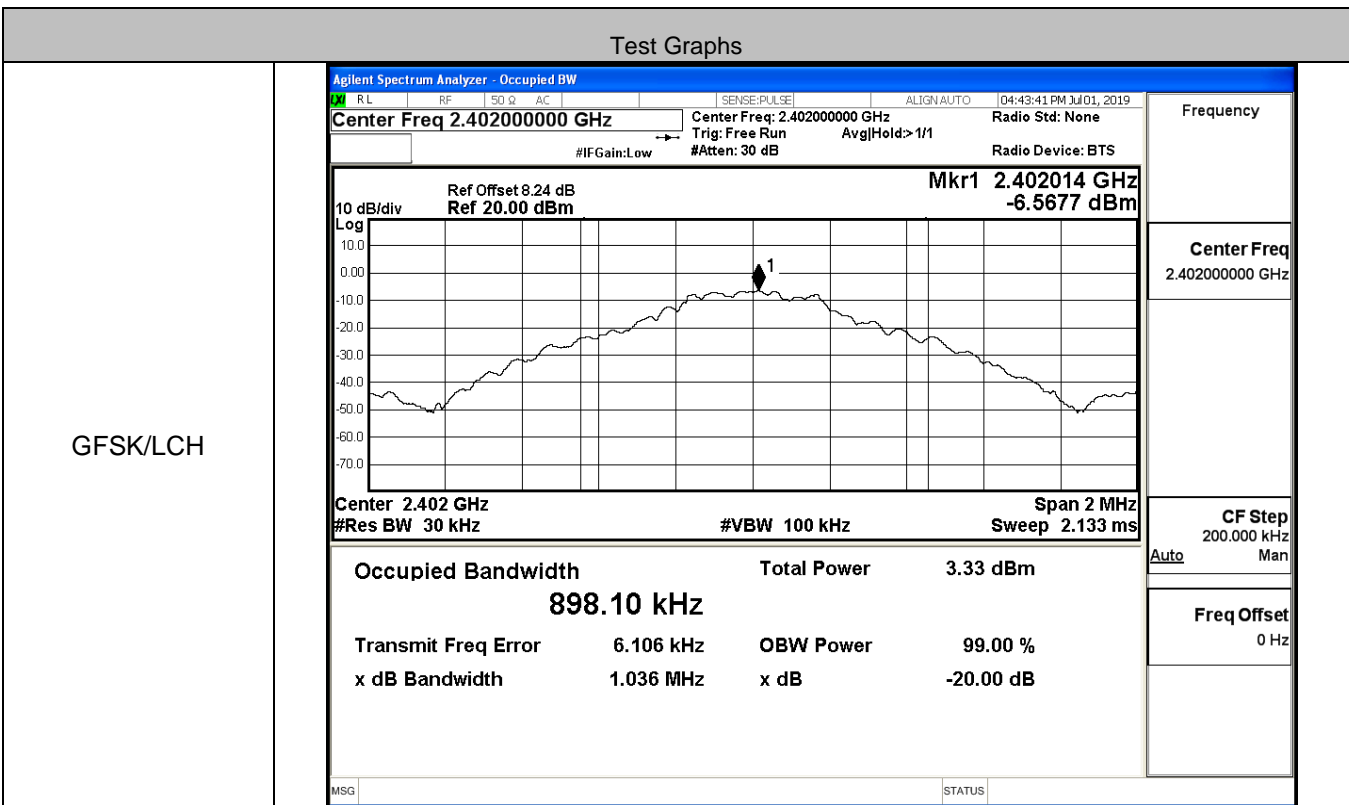
Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	LIHUAN
Supervised by:	Wang.Chuang

A.1 Maxmum Conducted Peak Output Power

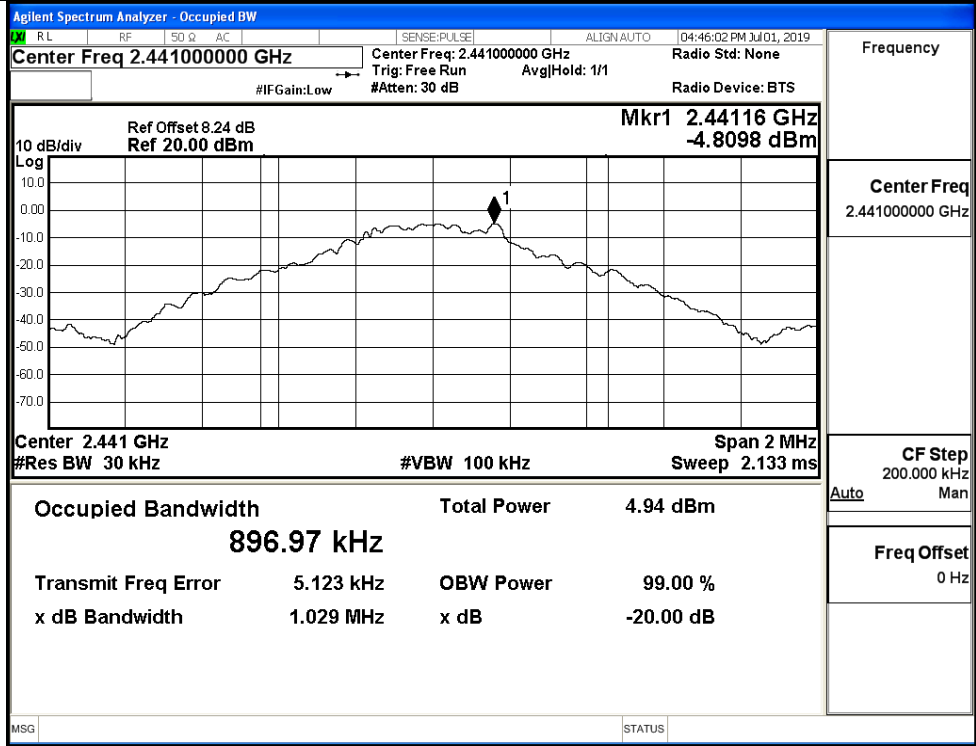
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-3.751	21	PASS
	MCH	-2.275	21	PASS
	HCH	-2.980	21	PASS
$\pi/4$ DQPSK	LCH	-4.440	21	PASS
	MCH	-2.924	21	PASS
	HCH	-3.850	21	PASS
8DPSK	LCH	-4.380	21	PASS
	MCH	-2.769	21	PASS
	HCH	-3.531	21	PASS

A.2 20dB Bandwidth

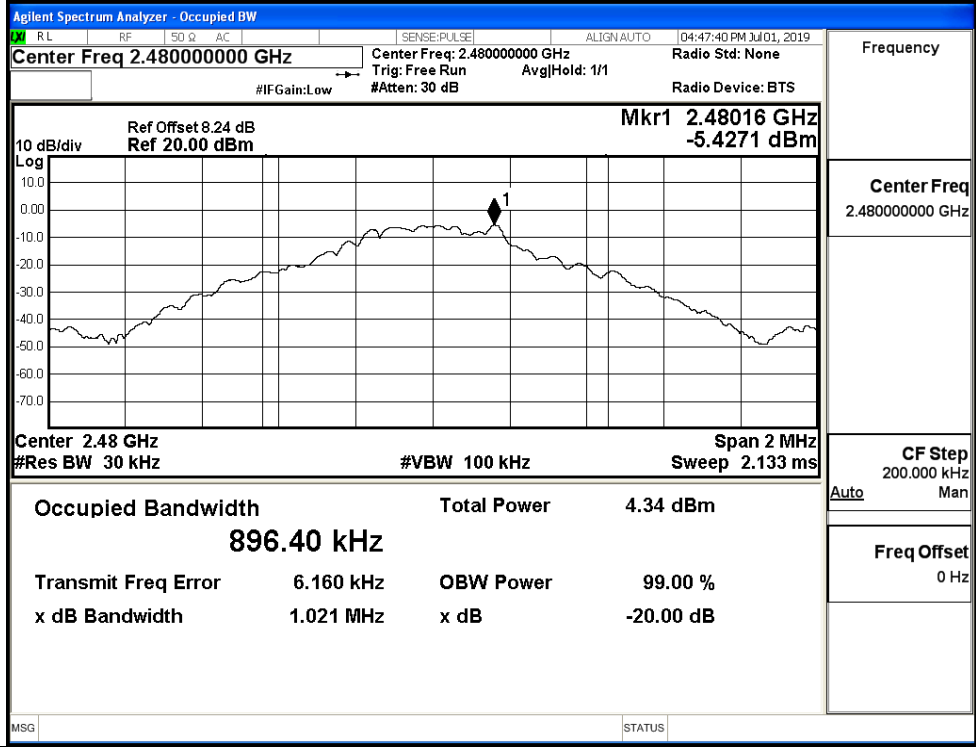
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.036	Not Specified	PASS
	MCH	1.029	Not Specified	PASS
	HCH	1.021	Not Specified	PASS
π/4DQPSK	LCH	1.312	Not Specified	PASS
	MCH	1.292	Not Specified	PASS
	HCH	1.291	Not Specified	PASS
8DPSK	LCH	1.302	Not Specified	PASS
	MCH	1.302	Not Specified	PASS
	HCH	1.296	Not Specified	PASS



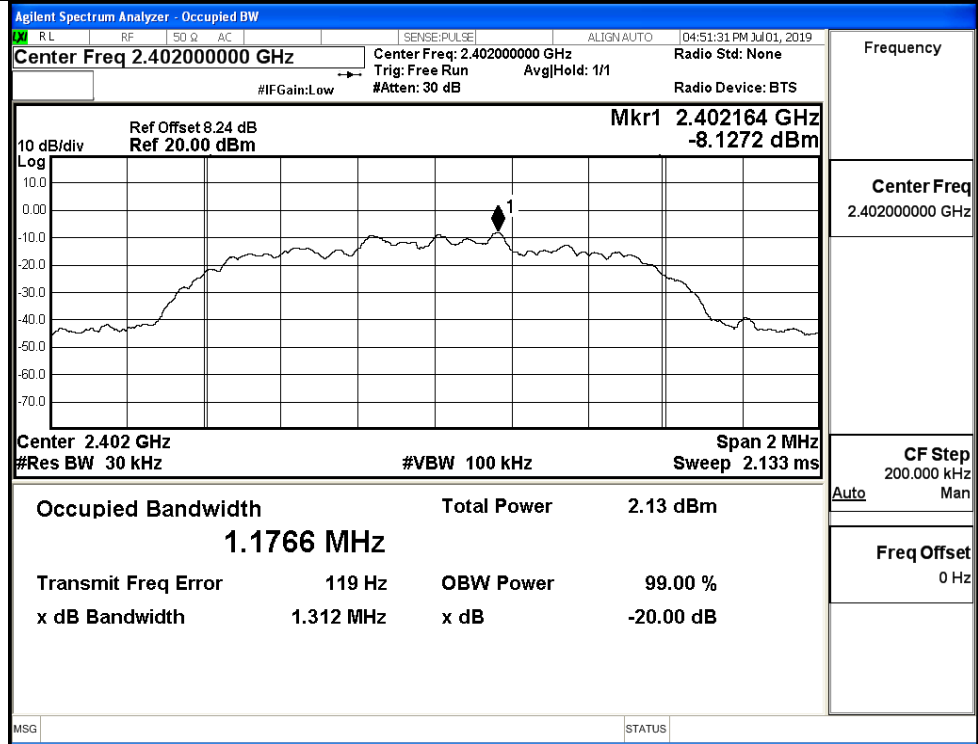
GFSK/MCH



GFSK/HCH

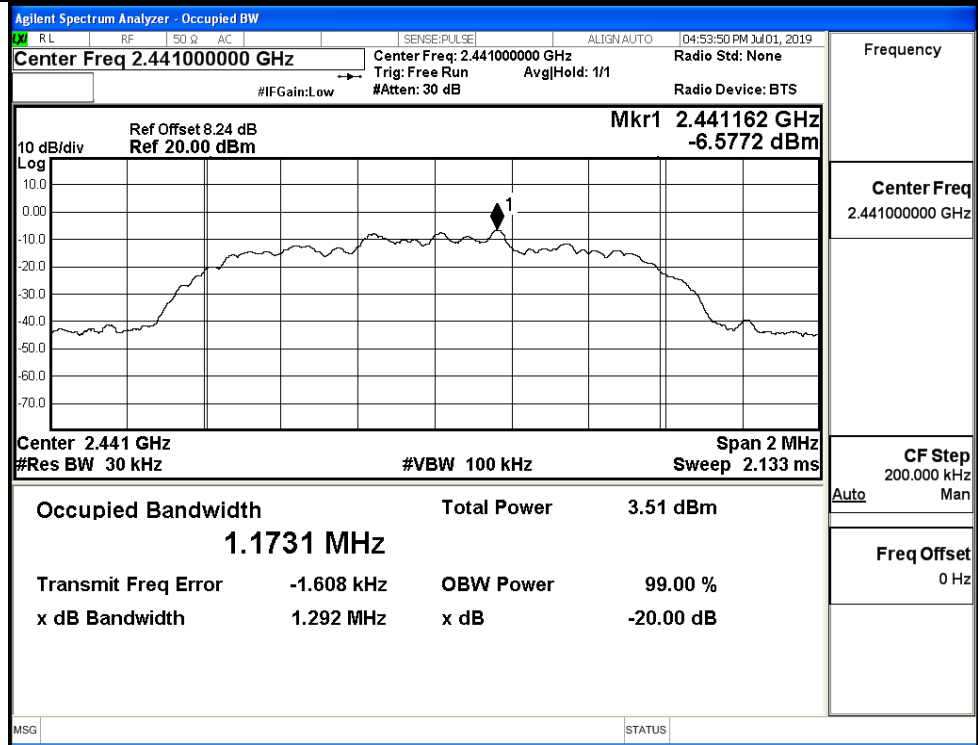


$\pi/4$ DQPSK/LCH



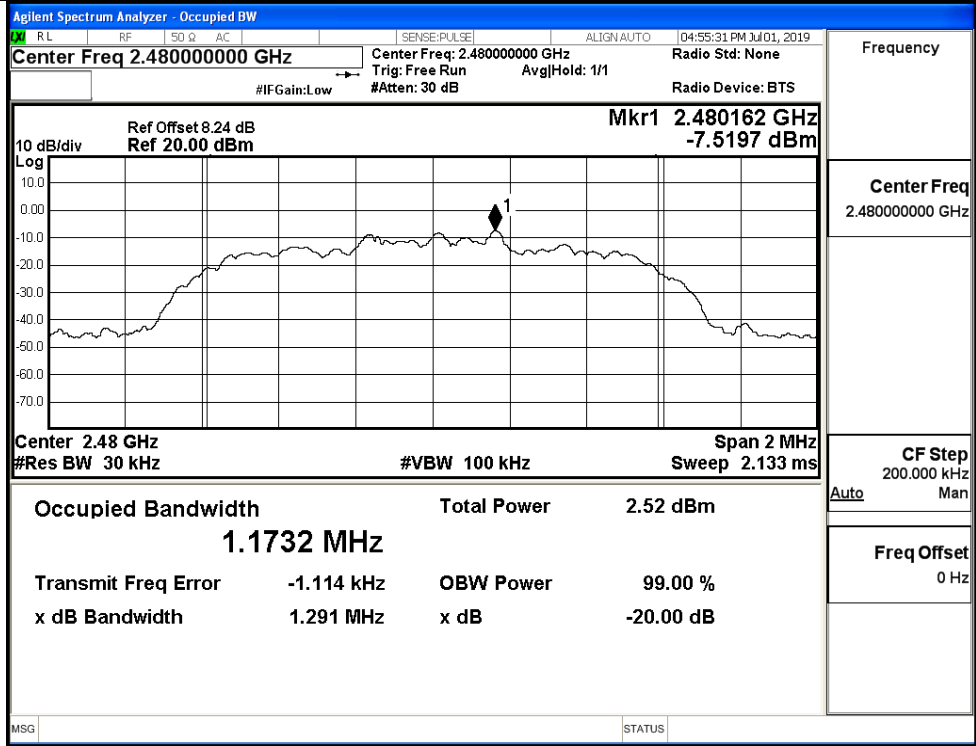
Frequency	2.40200000 GHz
Center Freq	2.40200000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

$\pi/4$ DQPSK/MCH

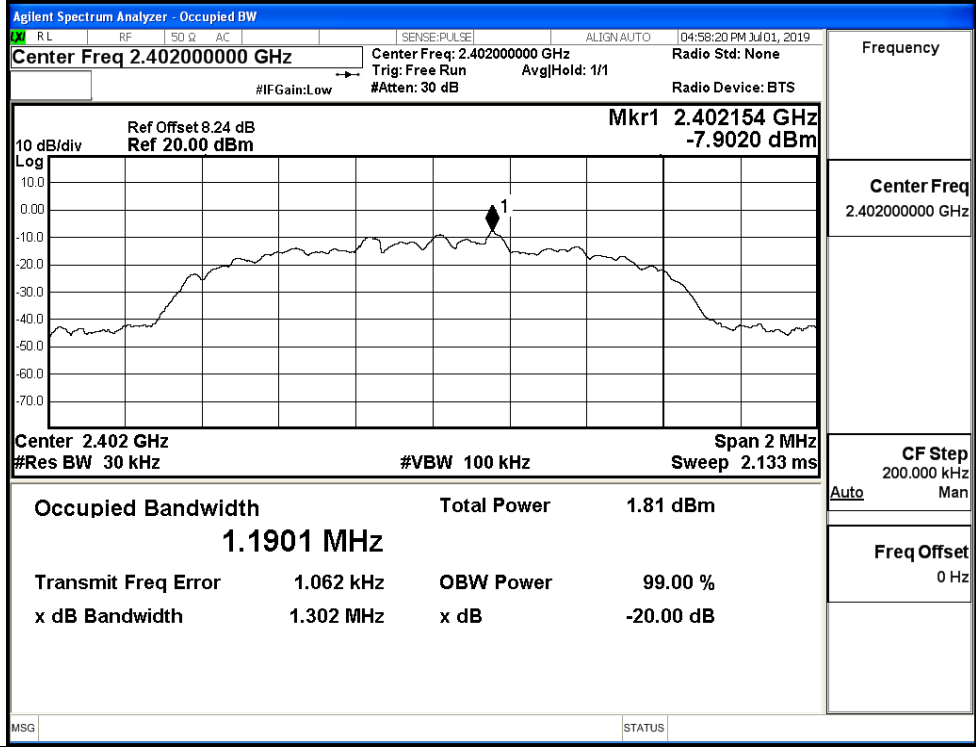


Frequency	2.44100000 GHz
Center Freq	2.44100000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

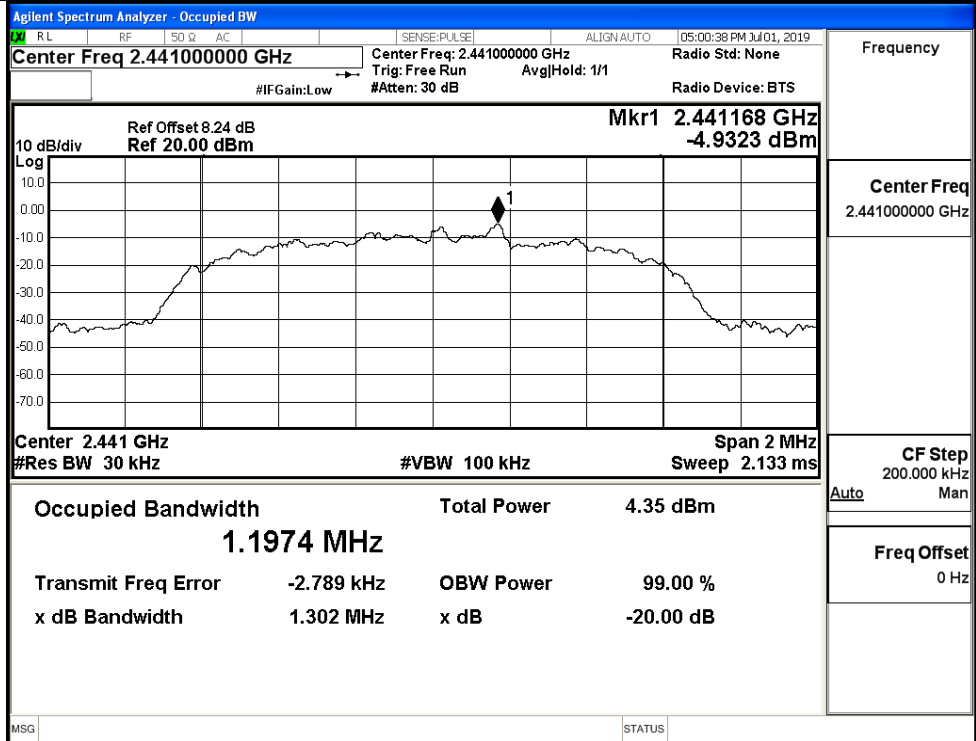
$\pi/4$ DQPSK/HCH



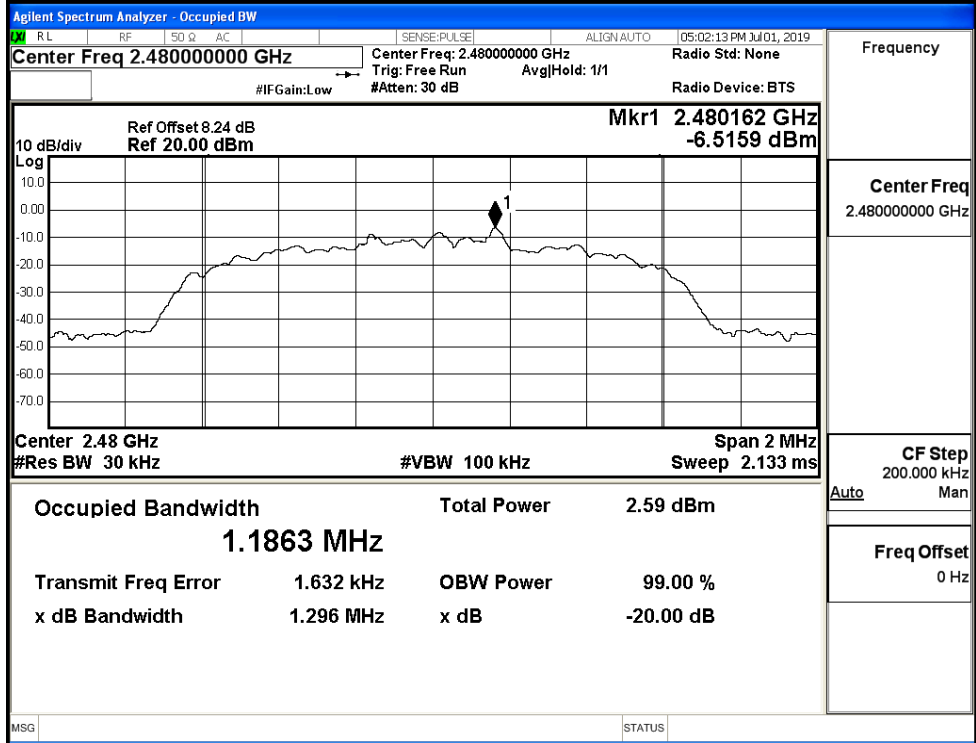
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH



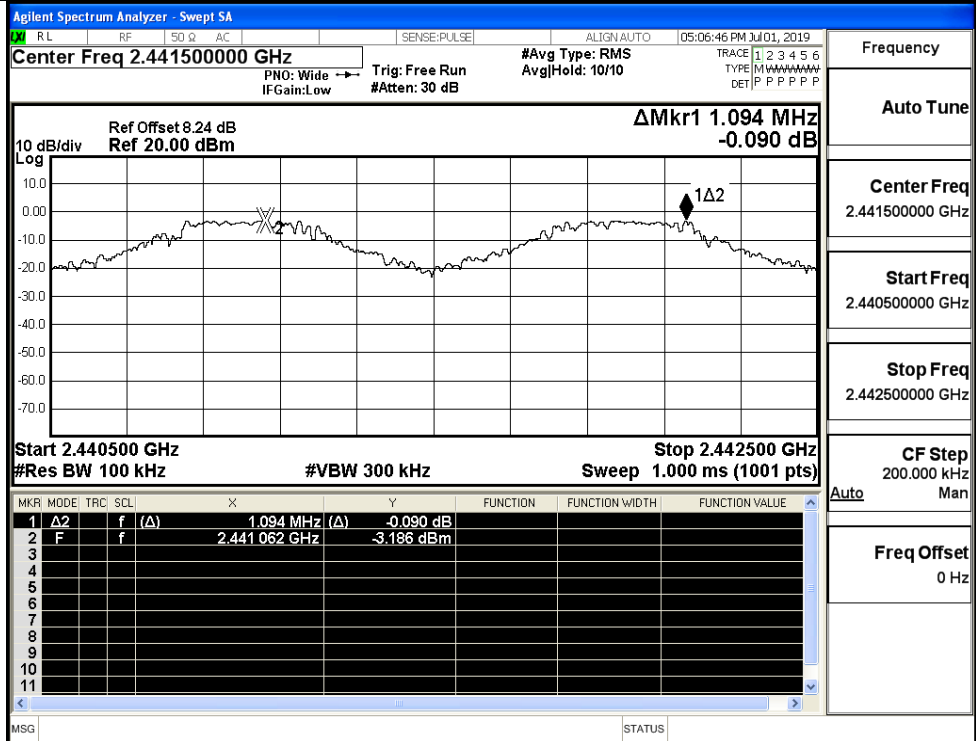
A.3 Carrier Frequency Separation

Mode	Channel	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.950	0.691	PASS
	MCH	1.094	0.691	PASS
	HCH	1.144	0.691	PASS
π/4DQPSK	LCH	1.150	0.875	PASS
	MCH	0.996	0.875	PASS
	HCH	1.110	0.875	PASS
8DPSK	LCH	1.154	0.868	PASS
	MCH	1.314	0.868	PASS
	HCH	0.994	0.868	PASS

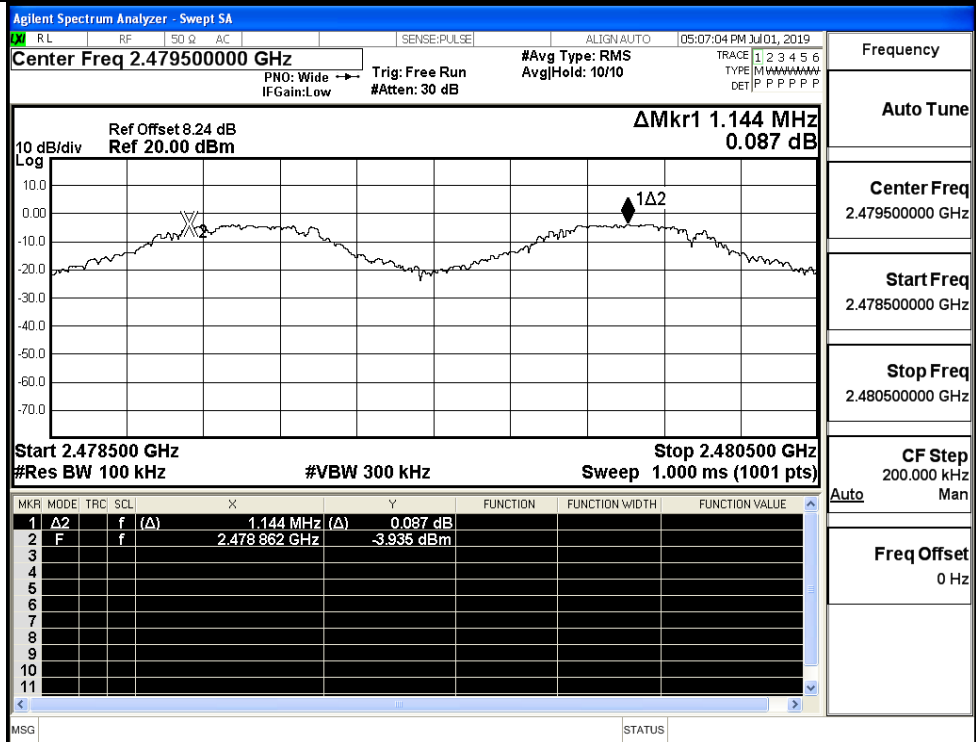
Test Graphs

GFSK/LCH		Frequency Auto Tune Center Freq 2.402500000 GHz Start Freq 2.401500000 GHz Stop Freq 2.403500000 GHz CF Step 200.000 kHz Auto Man Freq Offset 0 Hz																																																																																																												
	Agilent Spectrum Analyzer - Swept SA Center Freq 2.402500000 GHz PNO: Wide → Trig: Free Run Avg Type: Log-Pwr IFGain: Low #Atten: 30 dB AvgHold: 10/10																																																																																																													
	Ref Offset 9.24 dB ΔMkr1 950.25 kHz Ref 20.00 dBm 0.155 dB																																																																																																													
	Start 2.401500 GHz Stop 2.403500 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms (8001 pts)																																																																																																													
	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 10px;"> <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>950.25 kHz (Δ)</td> <td>0.155 dB</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>F</td> <td>f</td> <td></td> <td>2.402 051 50 GHz</td> <td>-4.633 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>9</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>11</td> <td></td> <td></td> <td></td> <td></td> <td></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)	950.25 kHz (Δ)	0.155 dB				2	F	f		2.402 051 50 GHz	-4.633 dBm				3									4									5									6									7									8									9									10									11									
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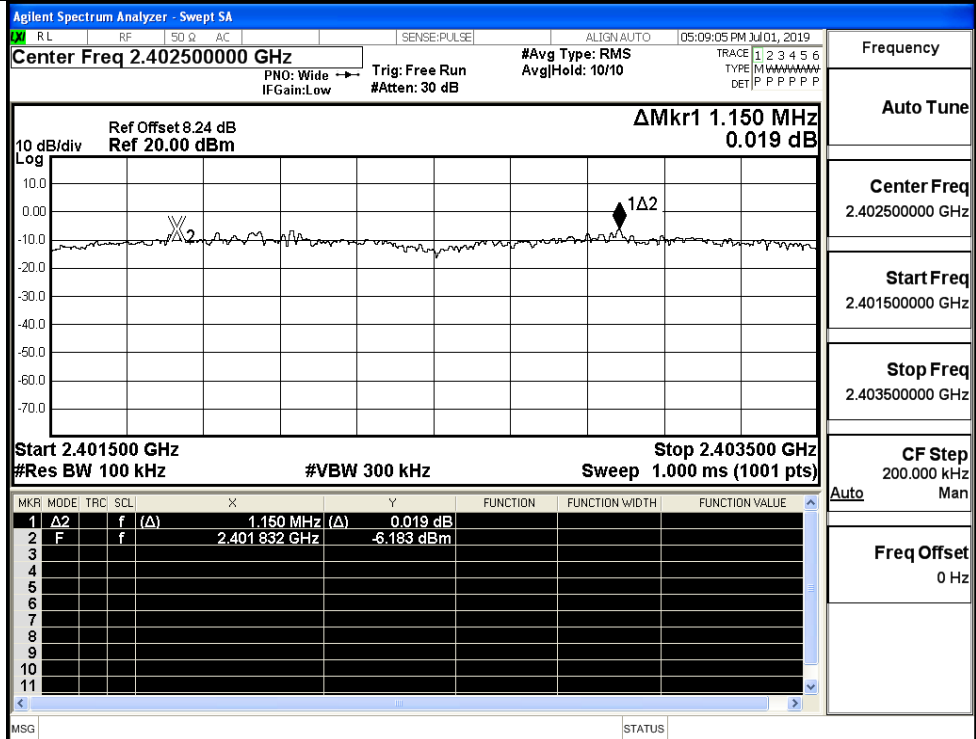
GFSK/MCH



GFSK/HCH

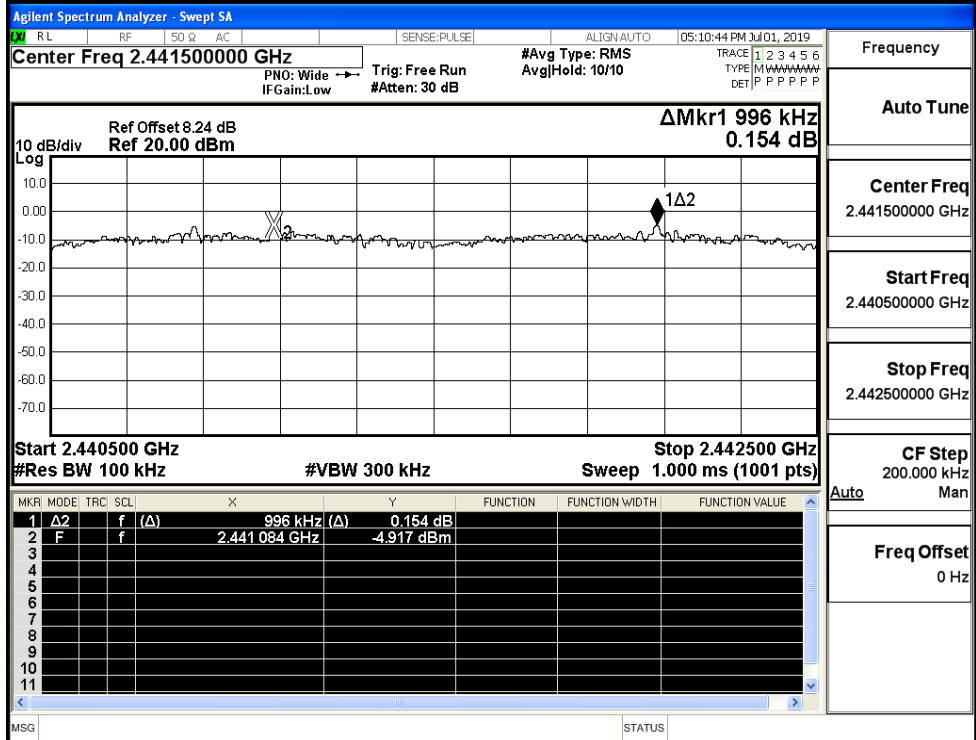


$\pi/4$ DQPSK/LCH



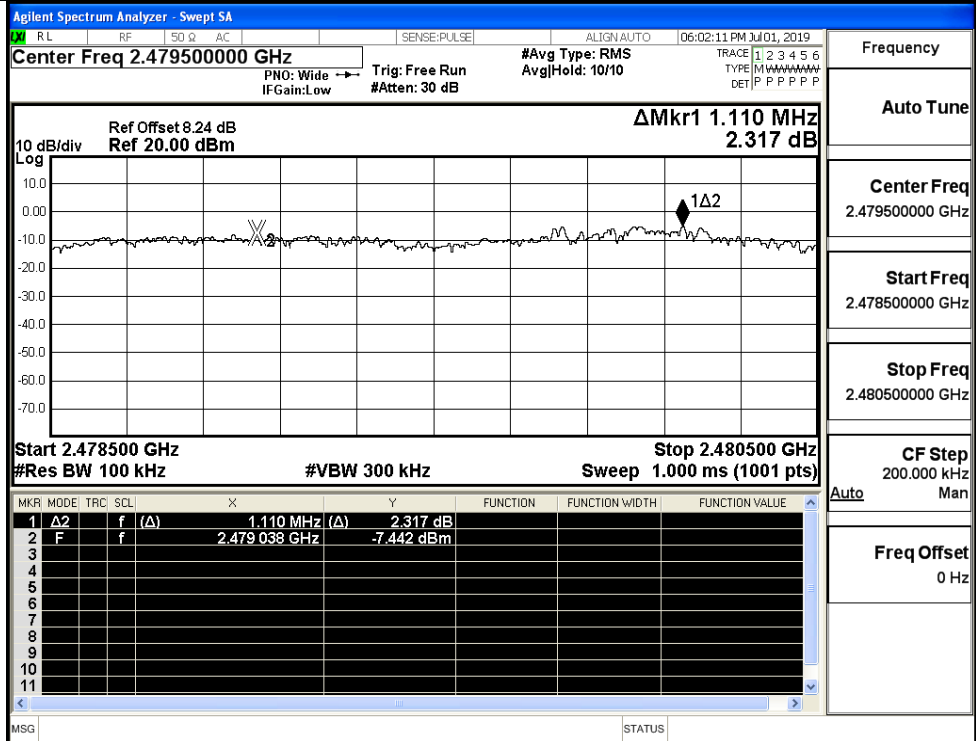
Frequency
Auto Tune
Center Freq
2.402500000 GHz
Start Freq
2.401500000 GHz
Stop Freq
2.403500000 GHz
CF Step
200.000 kHz
Man
Freq Offset
0 Hz

$\pi/4$ DQPSK/MCH



Frequency
Auto Tune
Center Freq
2.441500000 GHz
Start Freq
2.440500000 GHz
Stop Freq
2.442500000 GHz
CF Step
200.000 kHz
Man
Freq Offset
0 Hz

π/4DQPSK/HCH



Frequency

Auto Tune

Center Freq
2.479500000 GHz

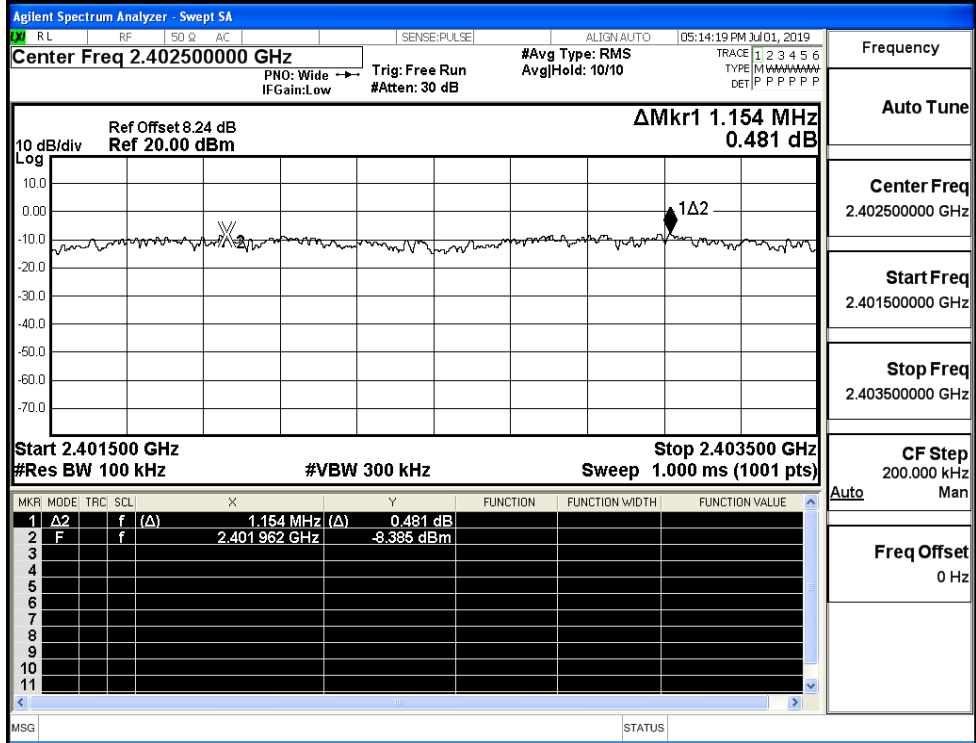
Start Freq
2.478500000 GHz

Stop Freq
2.480500000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

8DPSK/LCH



Frequency

Auto Tune

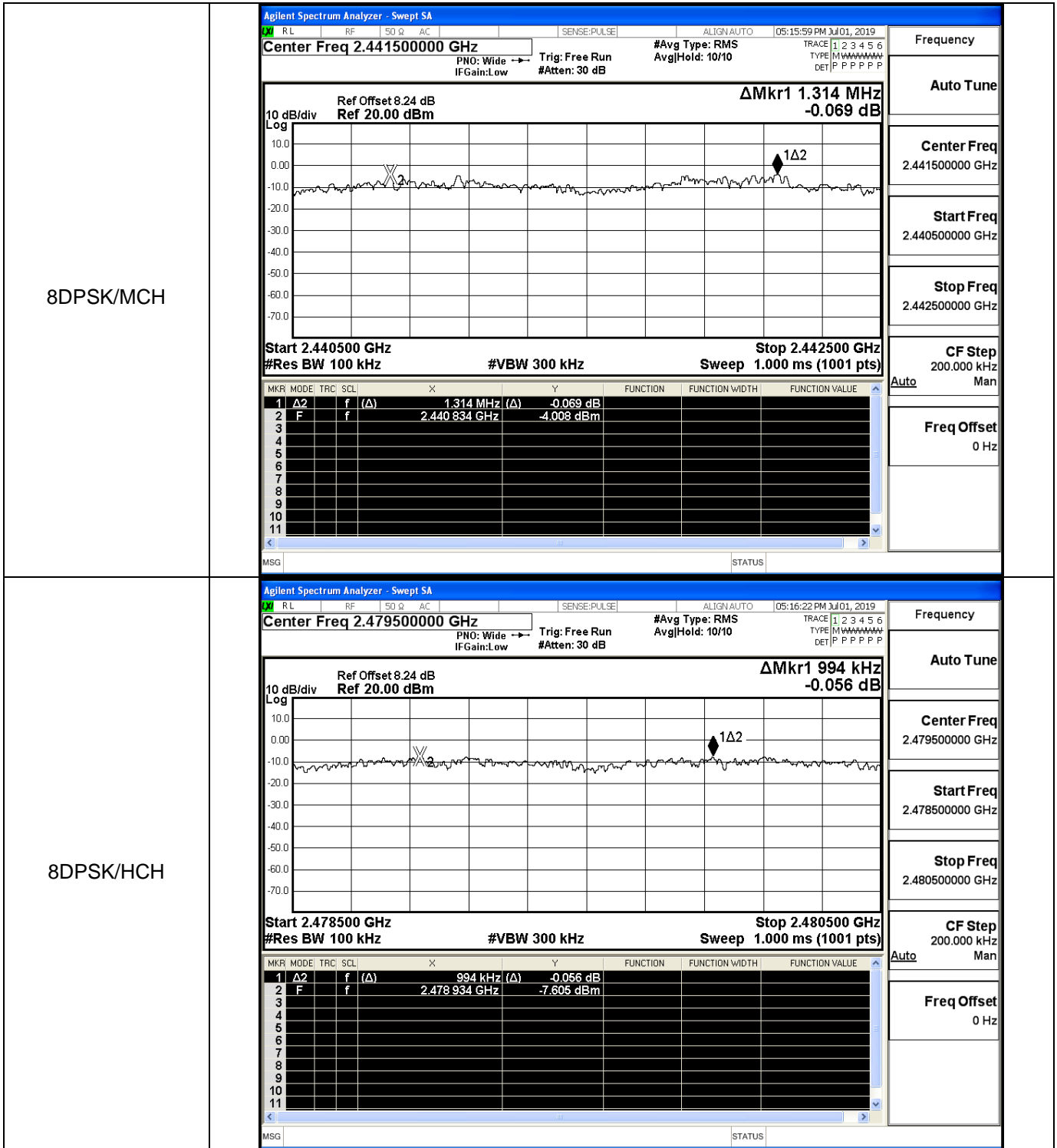
Center Freq
2.402500000 GHz

Start Freq
2.401500000 GHz

Stop Freq
2.403500000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

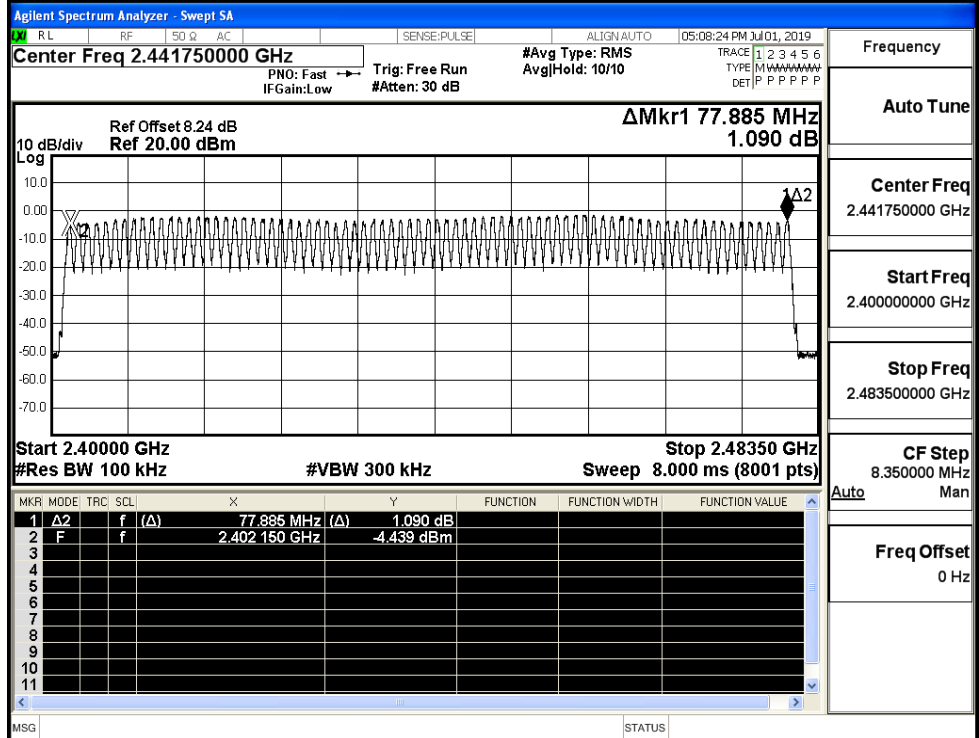


A.4 Hopping Channel Number

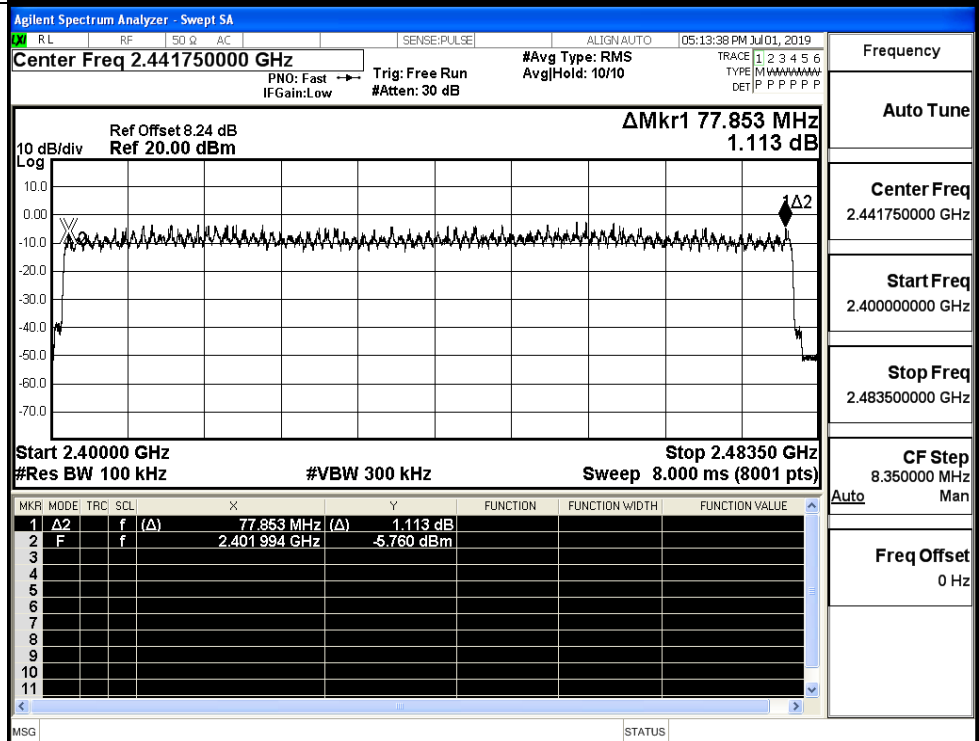
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
π/4DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graphs

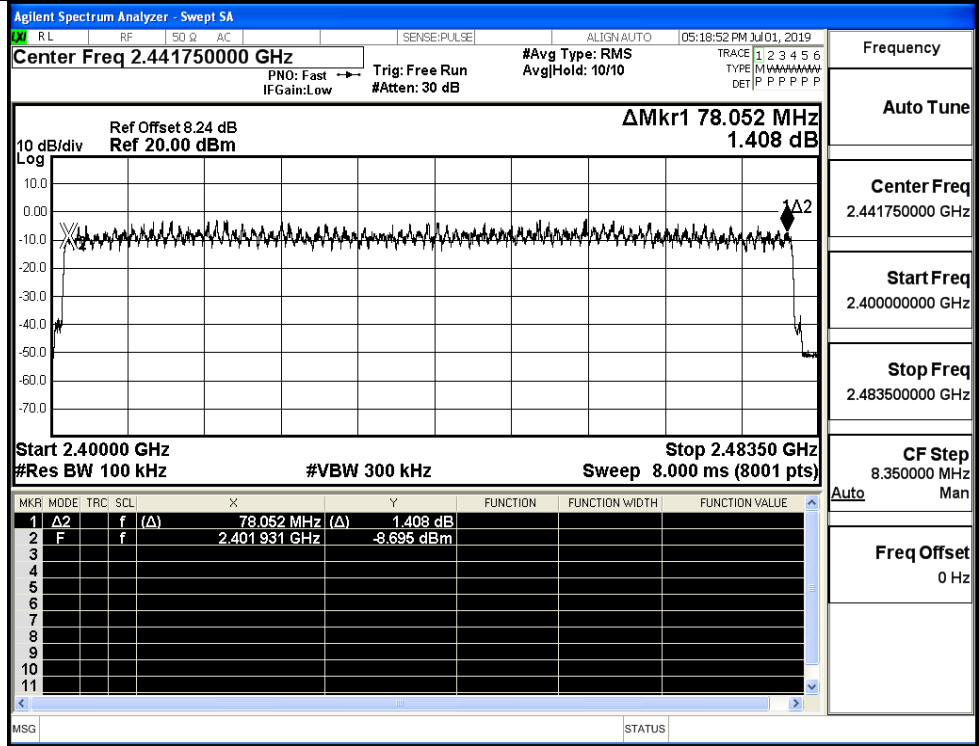
GFSK/Hop



$\pi/4$ DQPSK/Hop

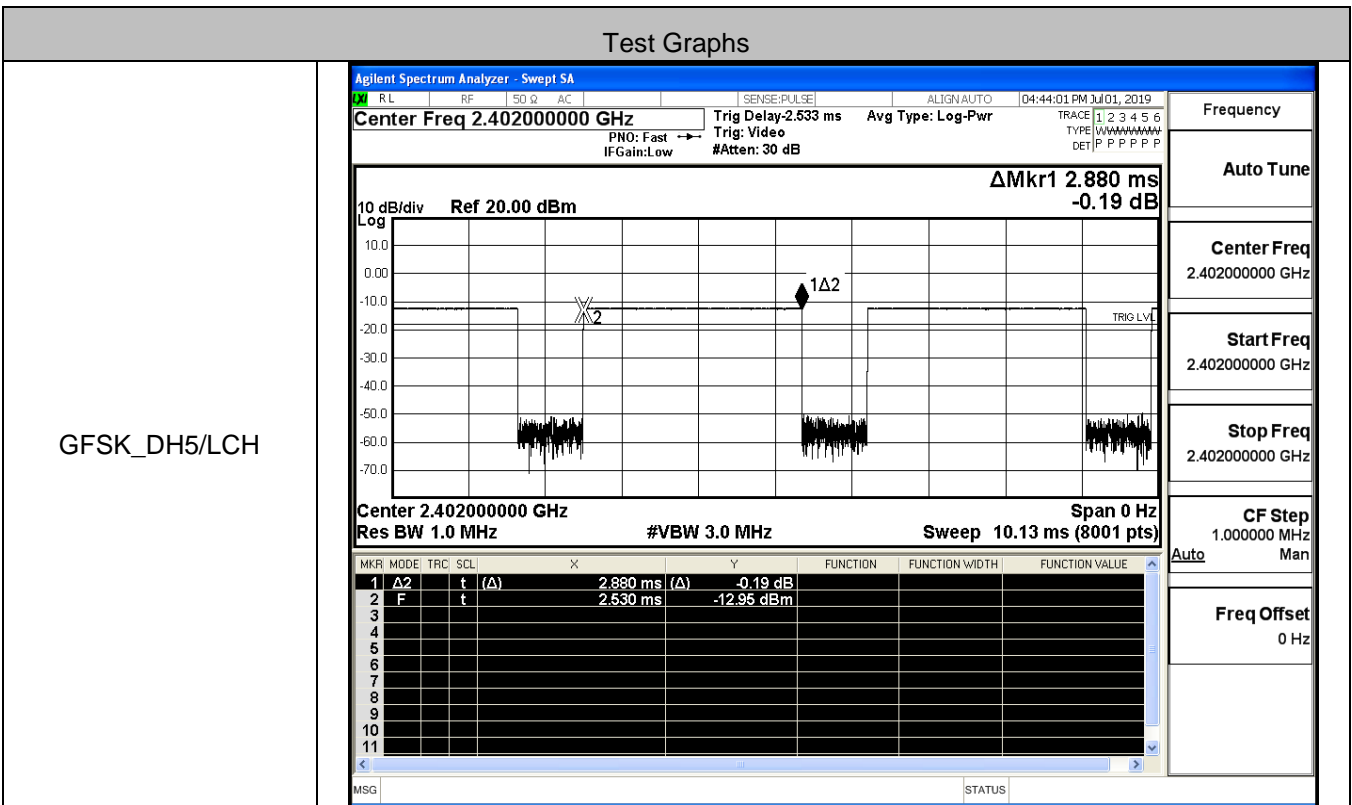


8DPSK/Hop

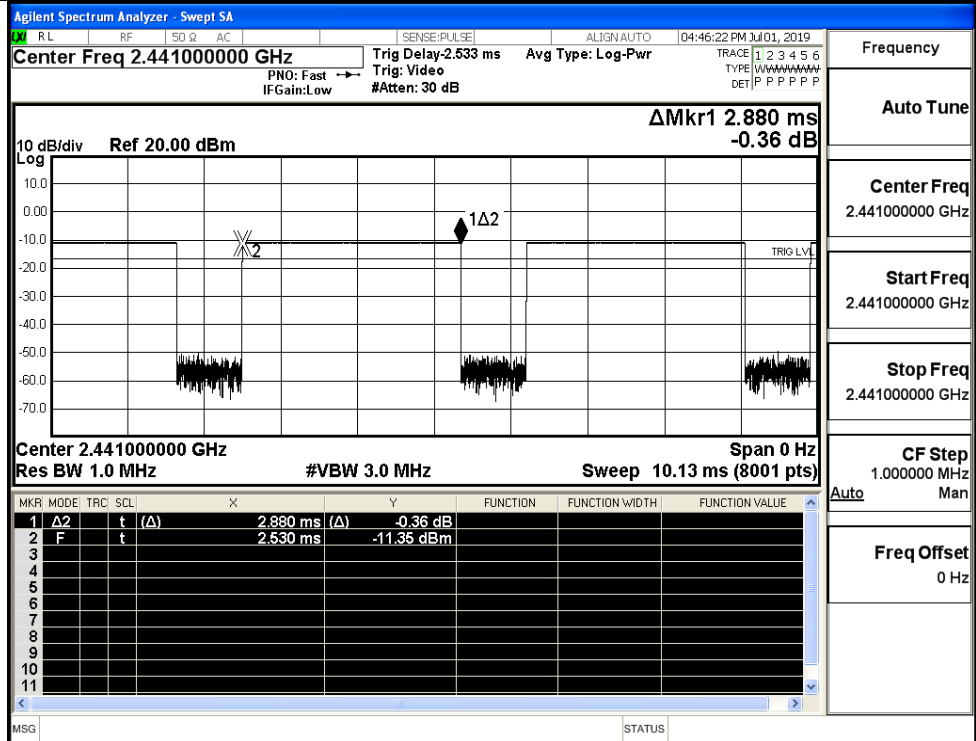


A.5 Dwell Time

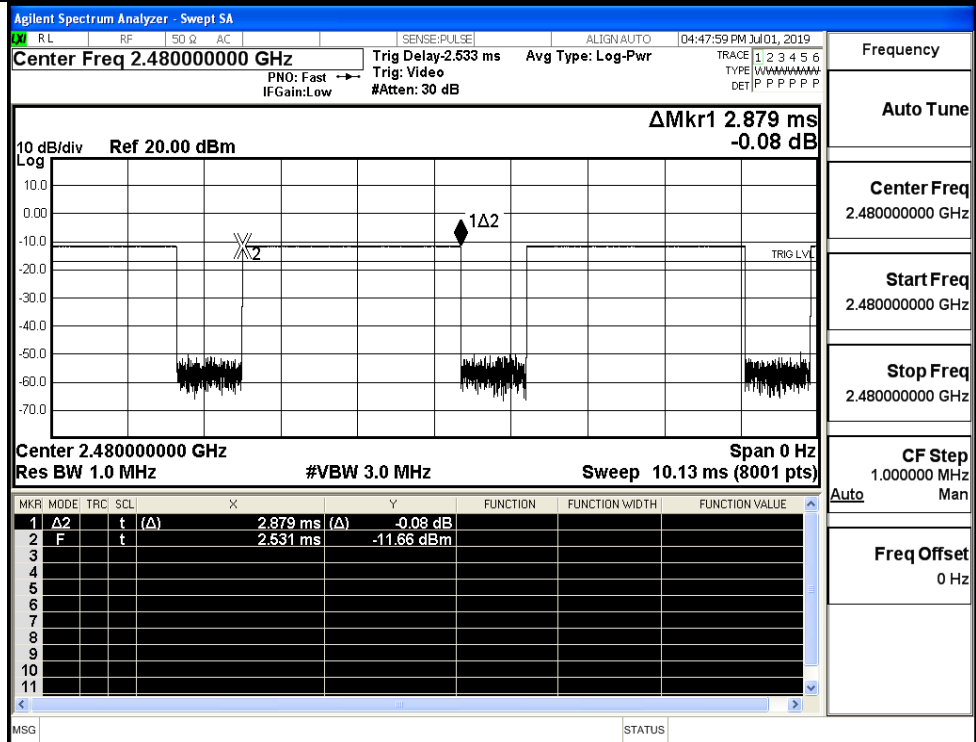
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
π/4DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.88	106.7	0.308	0.4	PASS
	3DH5	MCH	2.88	106.7	0.308	0.4	PASS
	3DH5	HCH	2.88	106.7	0.308	0.4	PASS



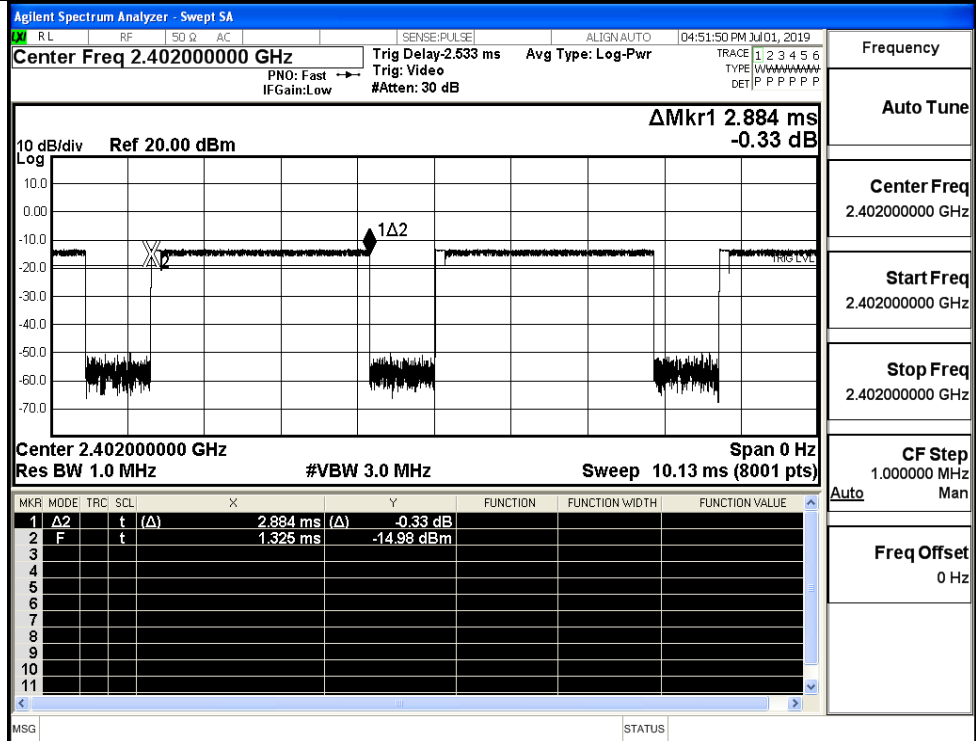
GFSK_DH5/MCH



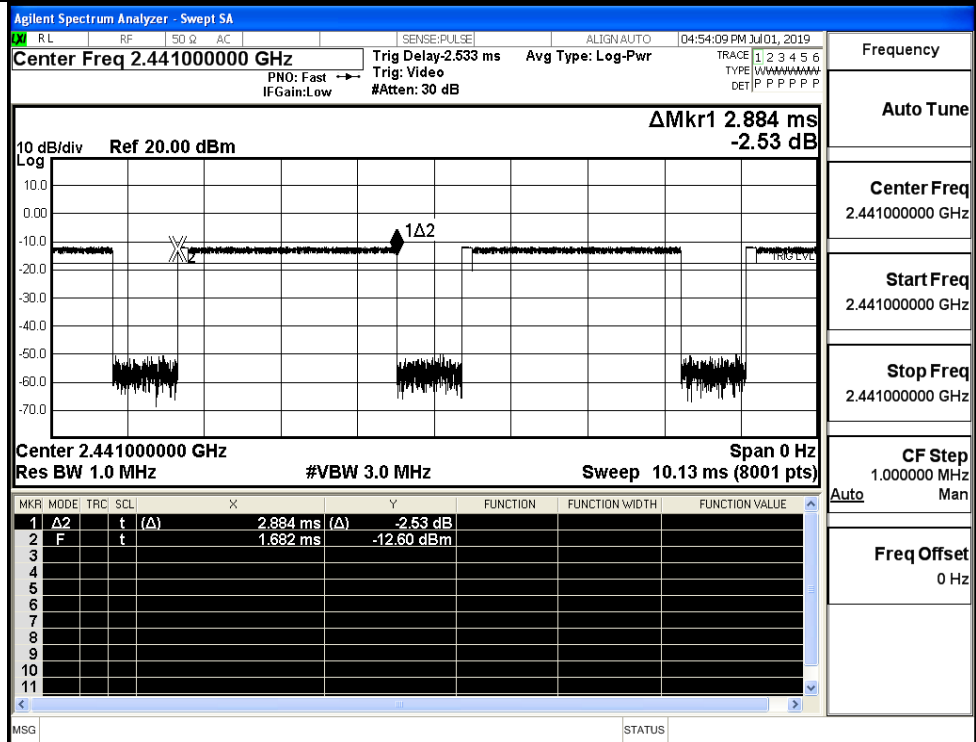
GFSK_DH5/HCH



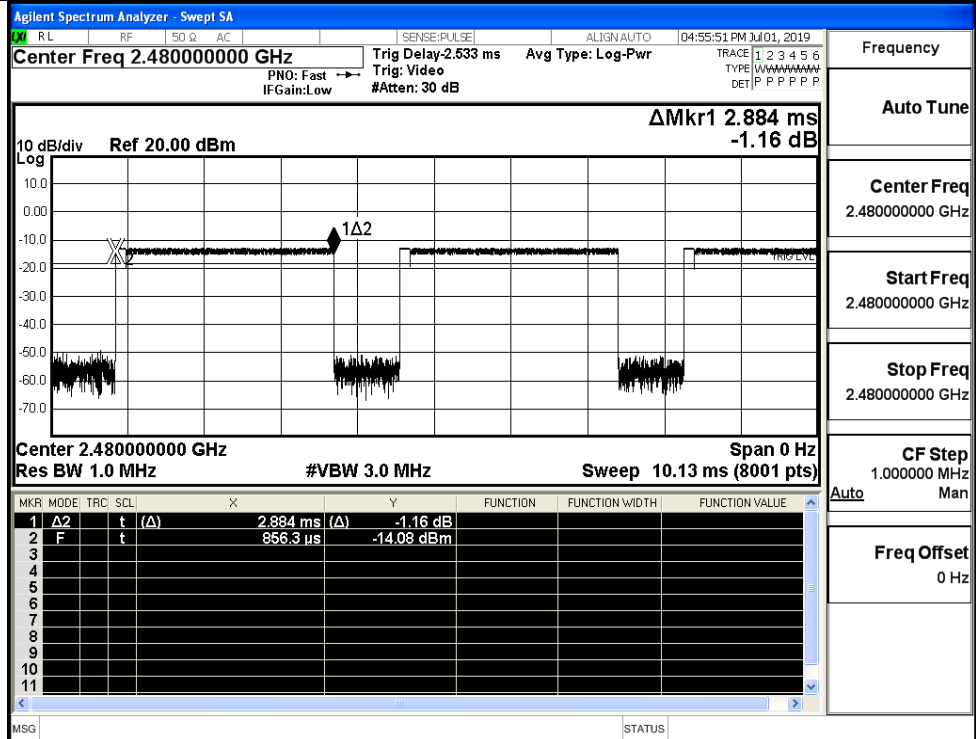
$\pi/4$ DQPSK
_2DH5/LCH



$\pi/4$ DQPSK
_2DH5/MCH



$\pi/4$ DQPSK
_2DH5/HCH



Frequency

Auto Tune

Center Freq
2.480000000 GHz

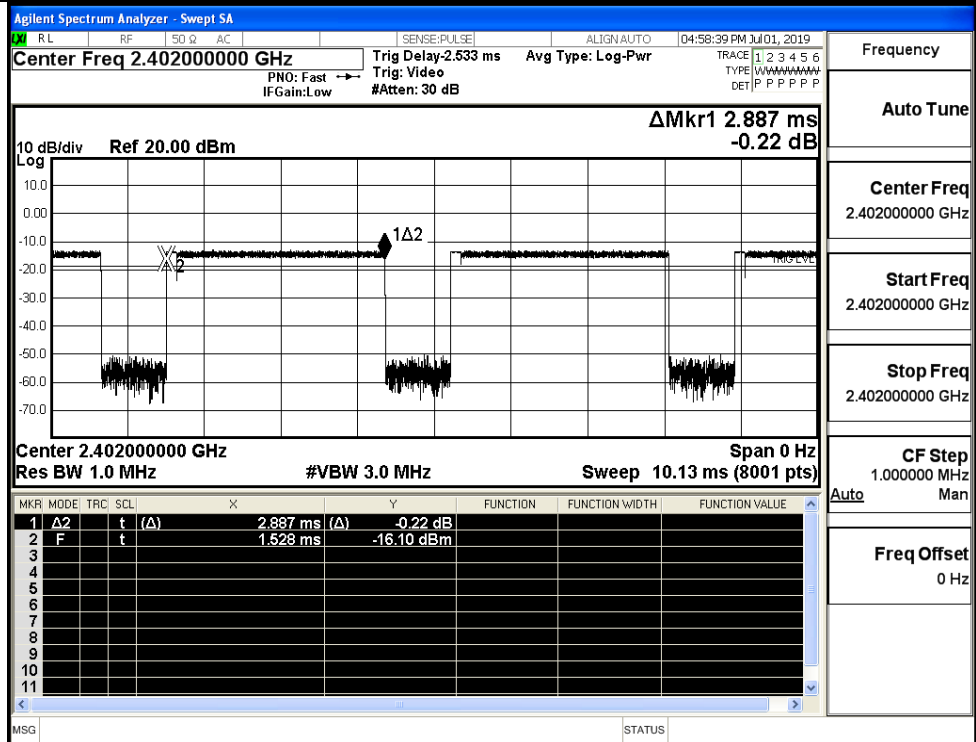
Start Freq
2.480000000 GHz

Stop Freq
2.480000000 GHz

CF Step
1.000000 MHz
Auto Man

Freq Offset
0 Hz

8DPSK_3DH5/LCH



Frequency

Auto Tune

Center Freq
2.402000000 GHz

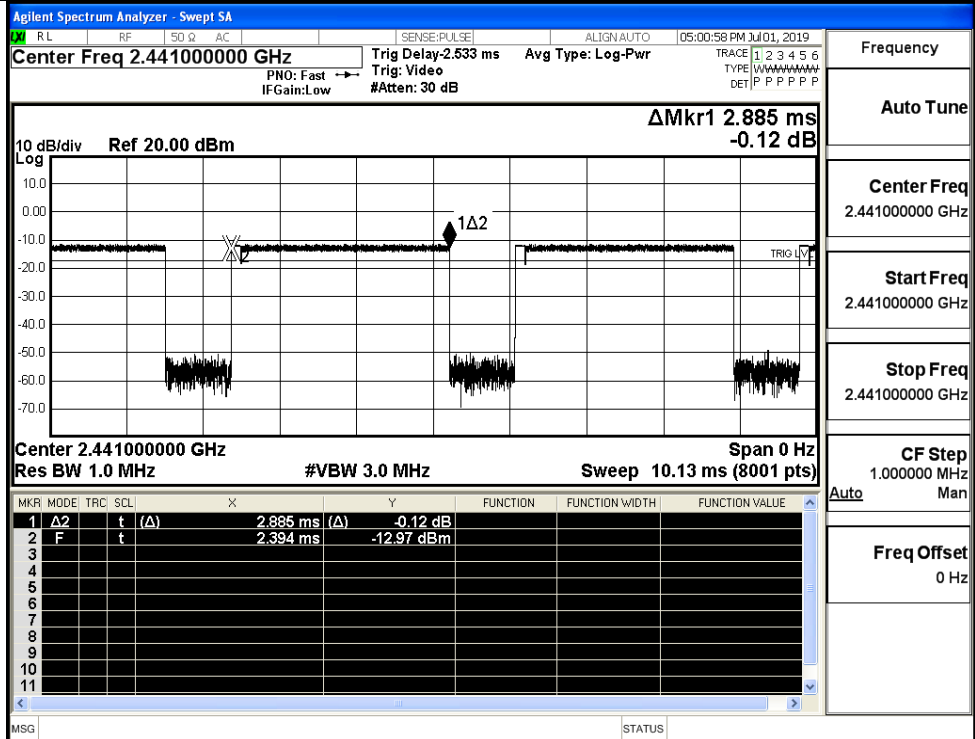
Start Freq
2.402000000 GHz

Stop Freq
2.402000000 GHz

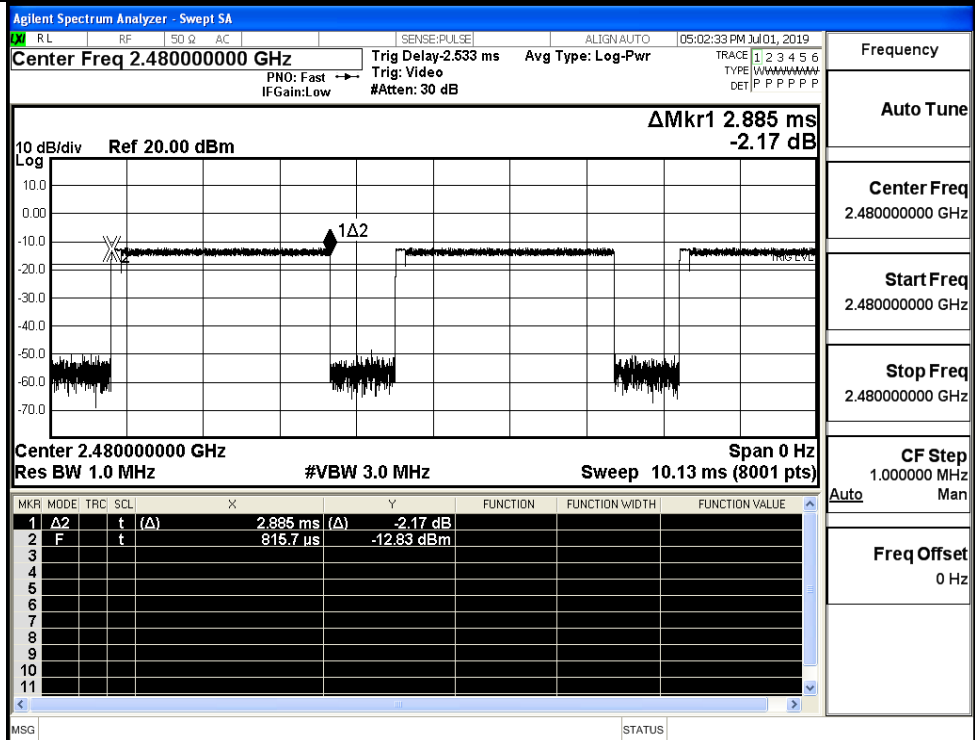
CF Step
1.000000 MHz
Auto Man

Freq Offset
0 Hz

8DPSK_3DH5/MCH



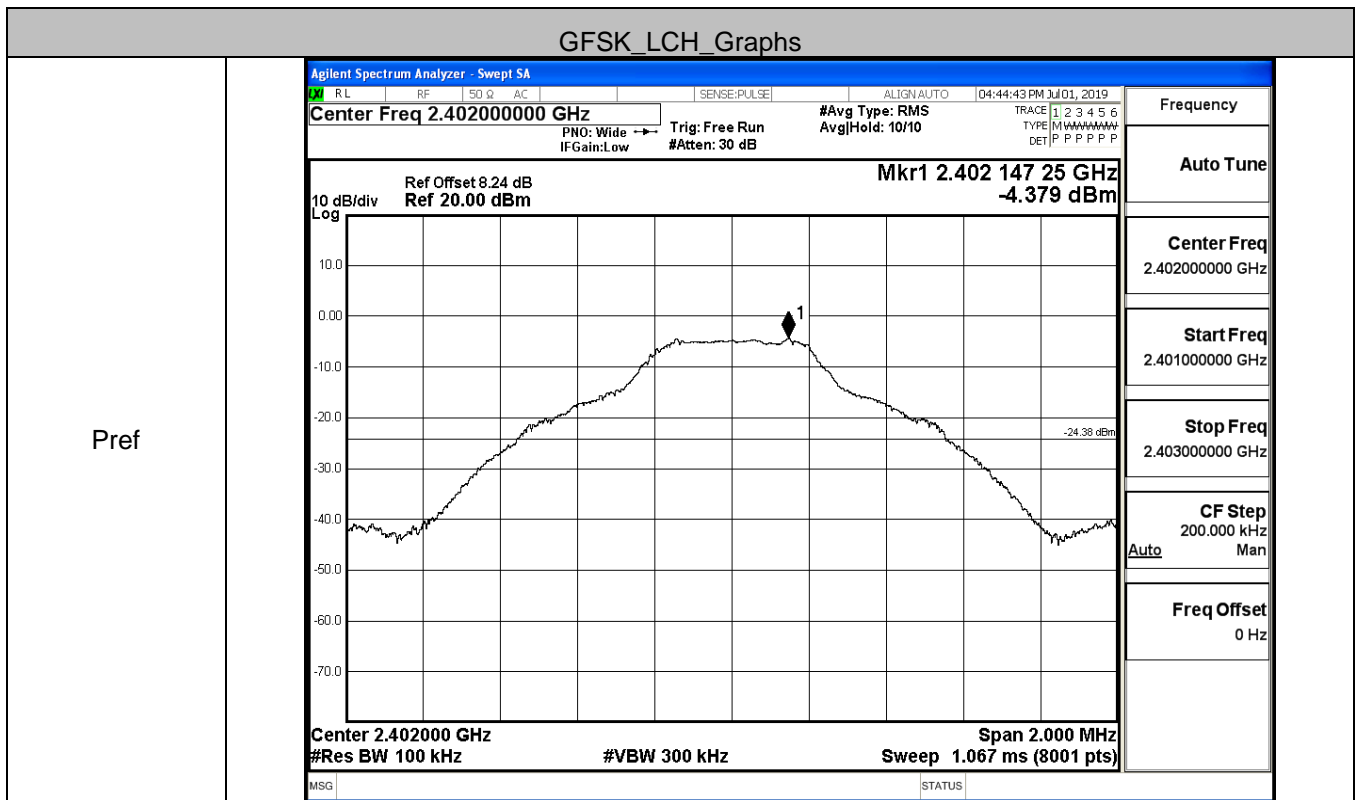
8DPSK_3DH5/HCH



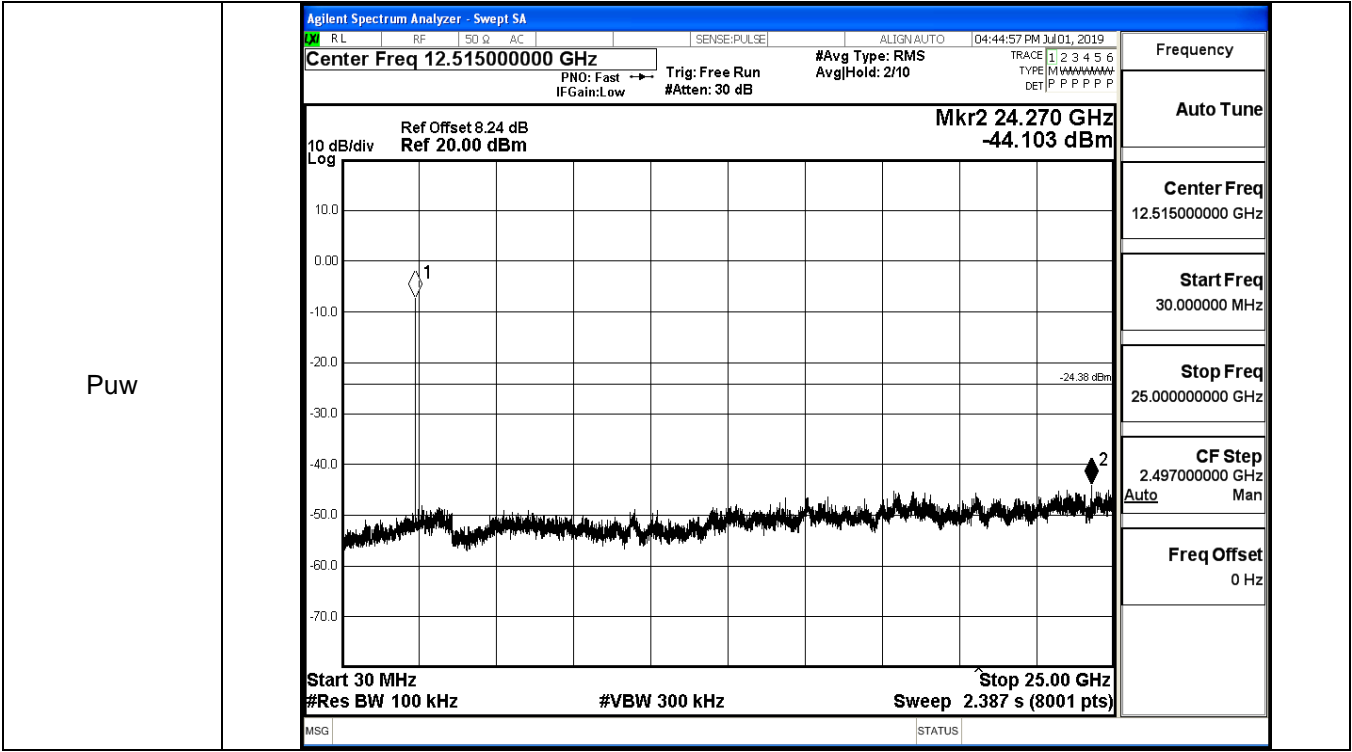
A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-4.379	-44.103	-24.379	PASS
	MCH	-2.587	-45.065	-22.587	PASS
	HCH	-3.284	-43.908	-23.284	PASS
π /4DQPSK	LCH	-5.284	-44.773	-25.284	PASS
	MCH	-3.922	-44.637	-23.922	PASS
	HCH	-4.658	-43.742	-24.658	PASS
8DPSK	LCH	-5.577	-40.660	-25.577	PASS
	MCH	-3.818	-44.566	-23.818	PASS
	HCH	-4.58	-44.717	-24.580	PASS

GFSK_LCH_Graphs

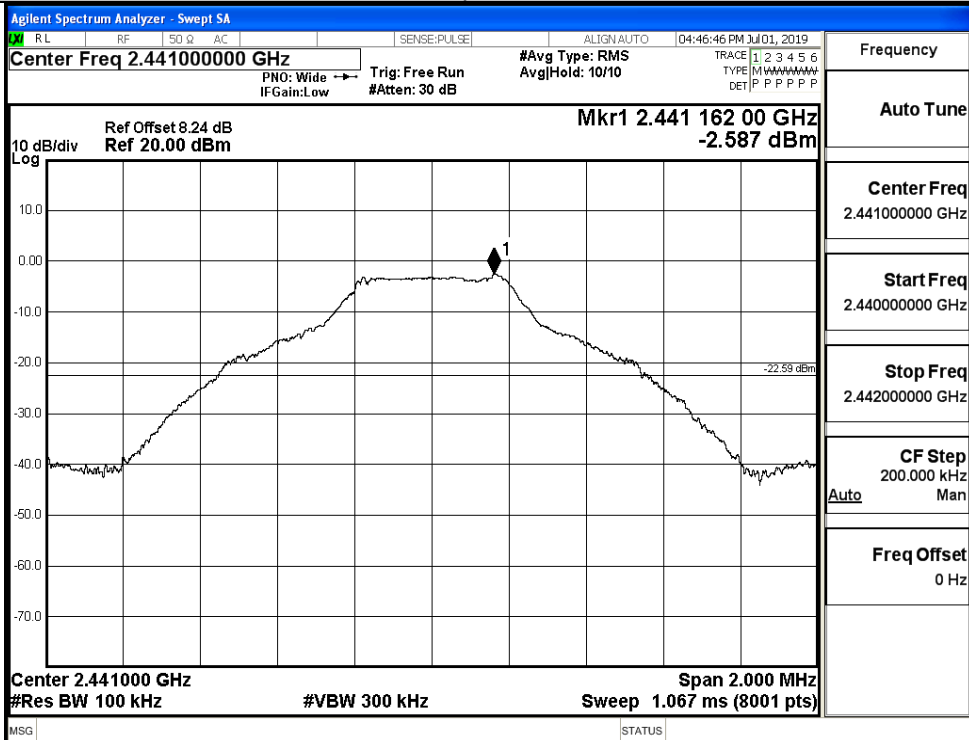


Pref

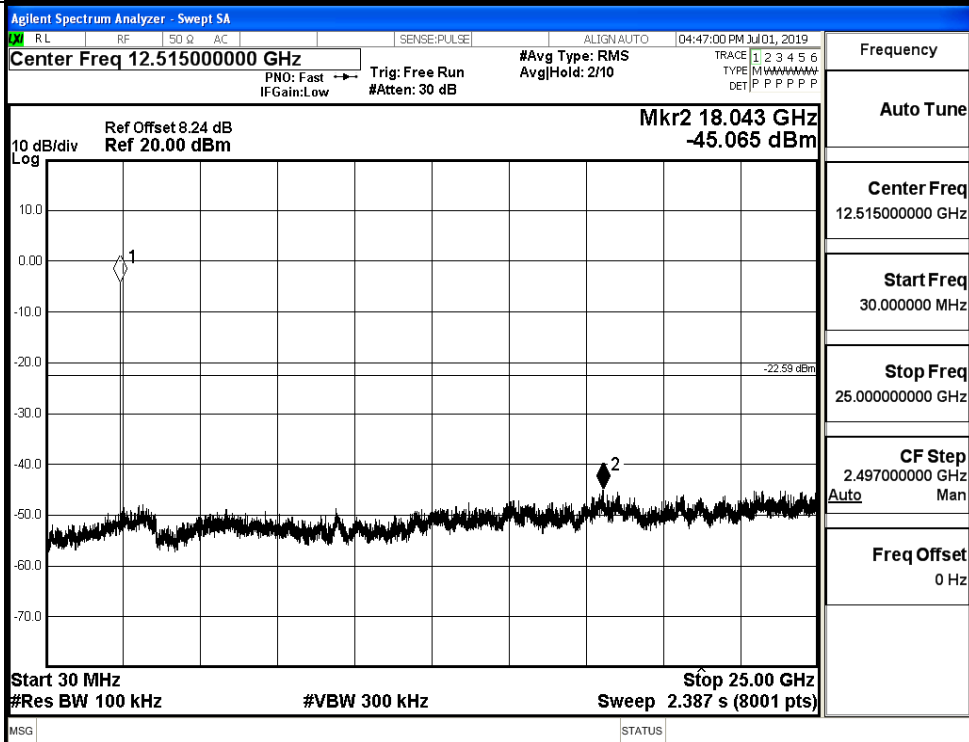


GFSK_MCH_Graphs

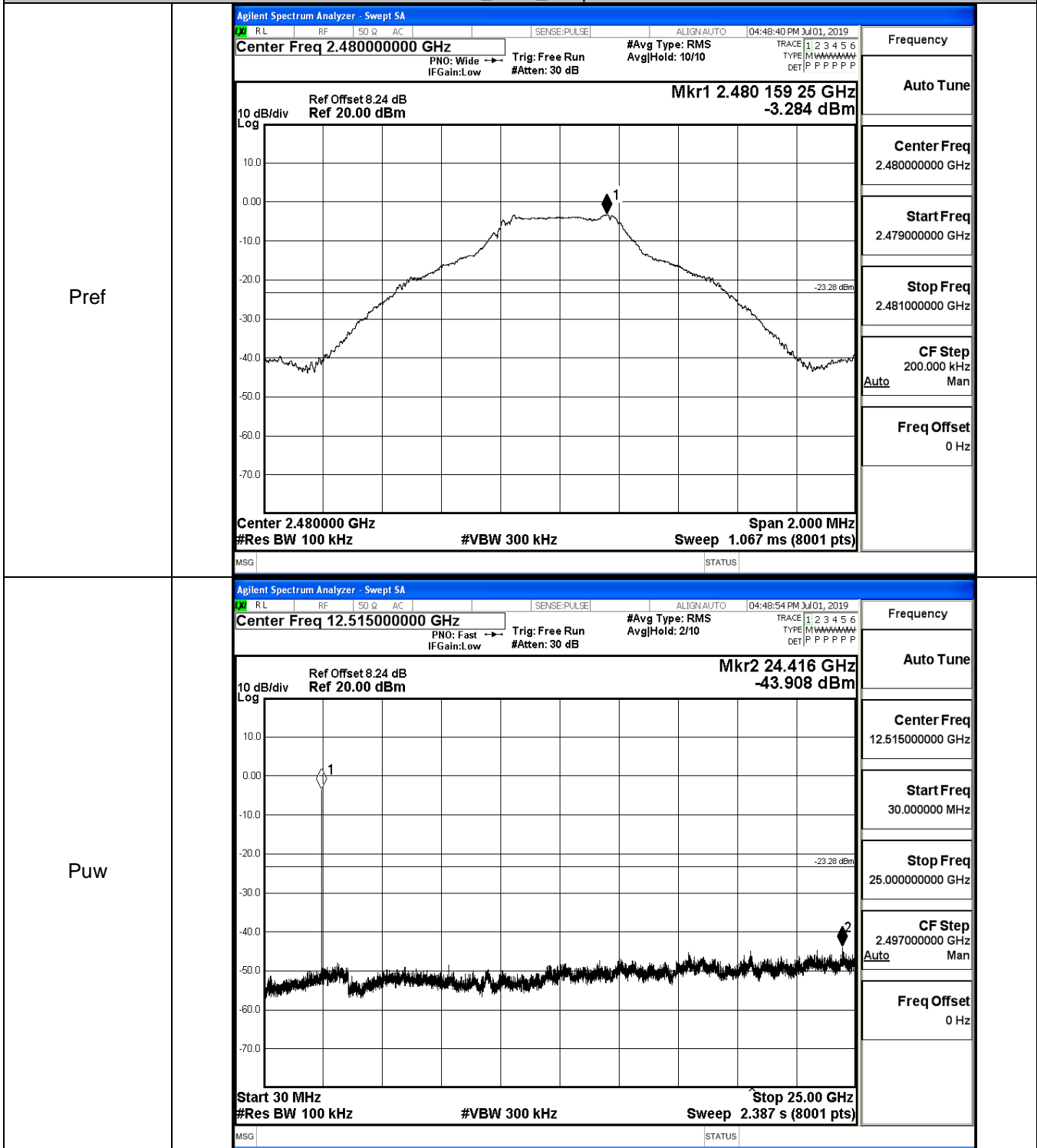
Pref



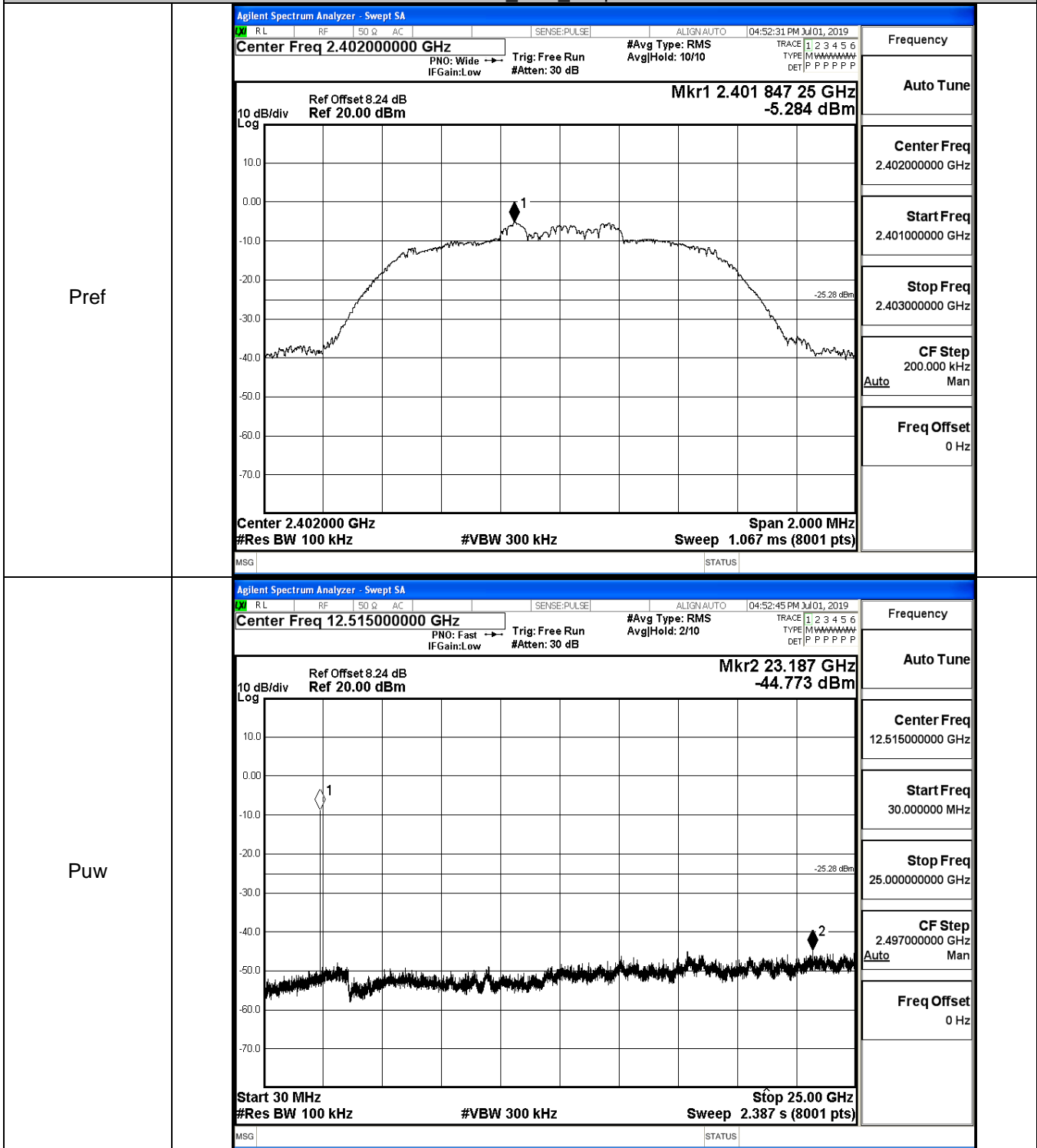
Puw



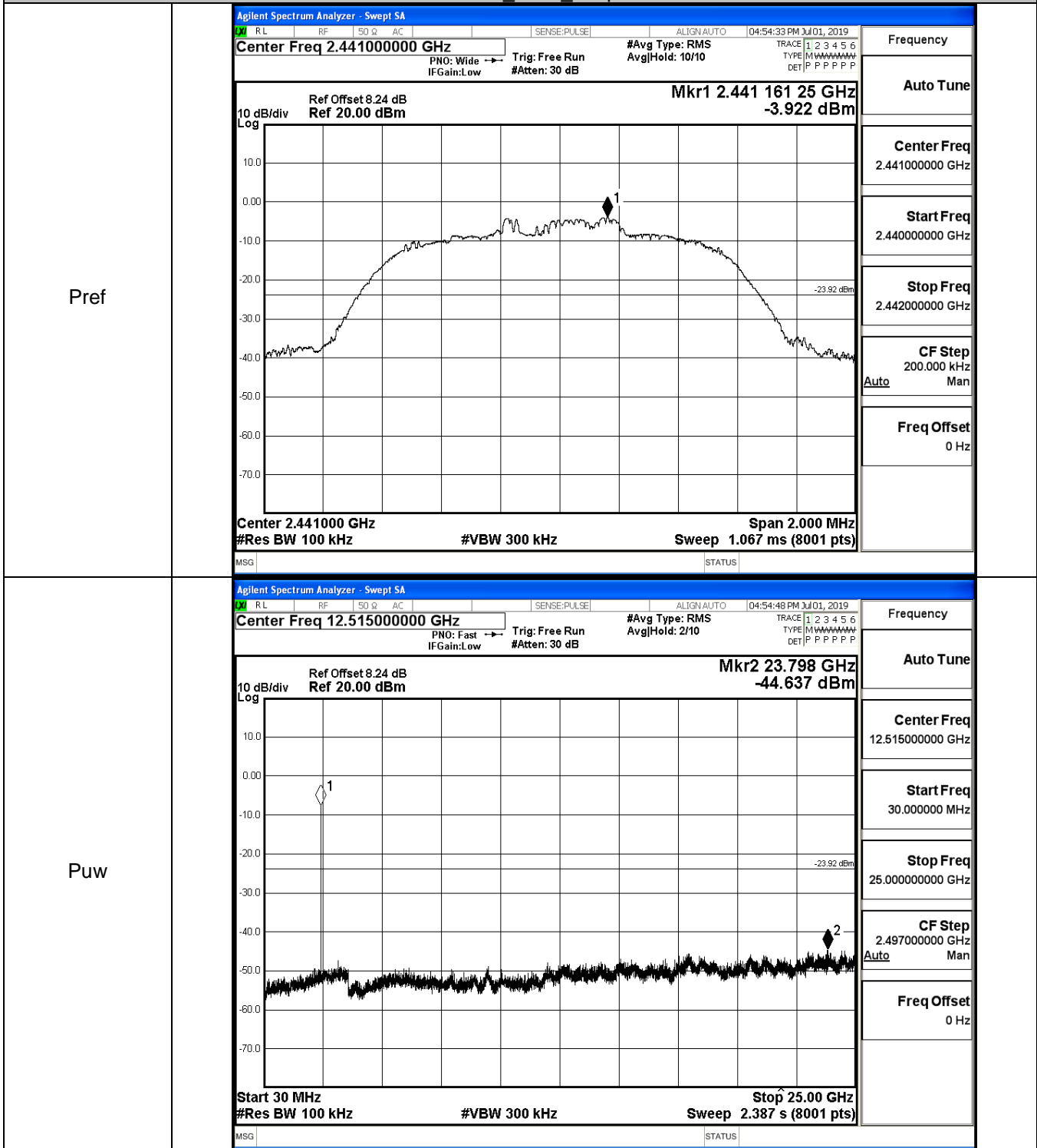
GFSK_HCH_Graphs



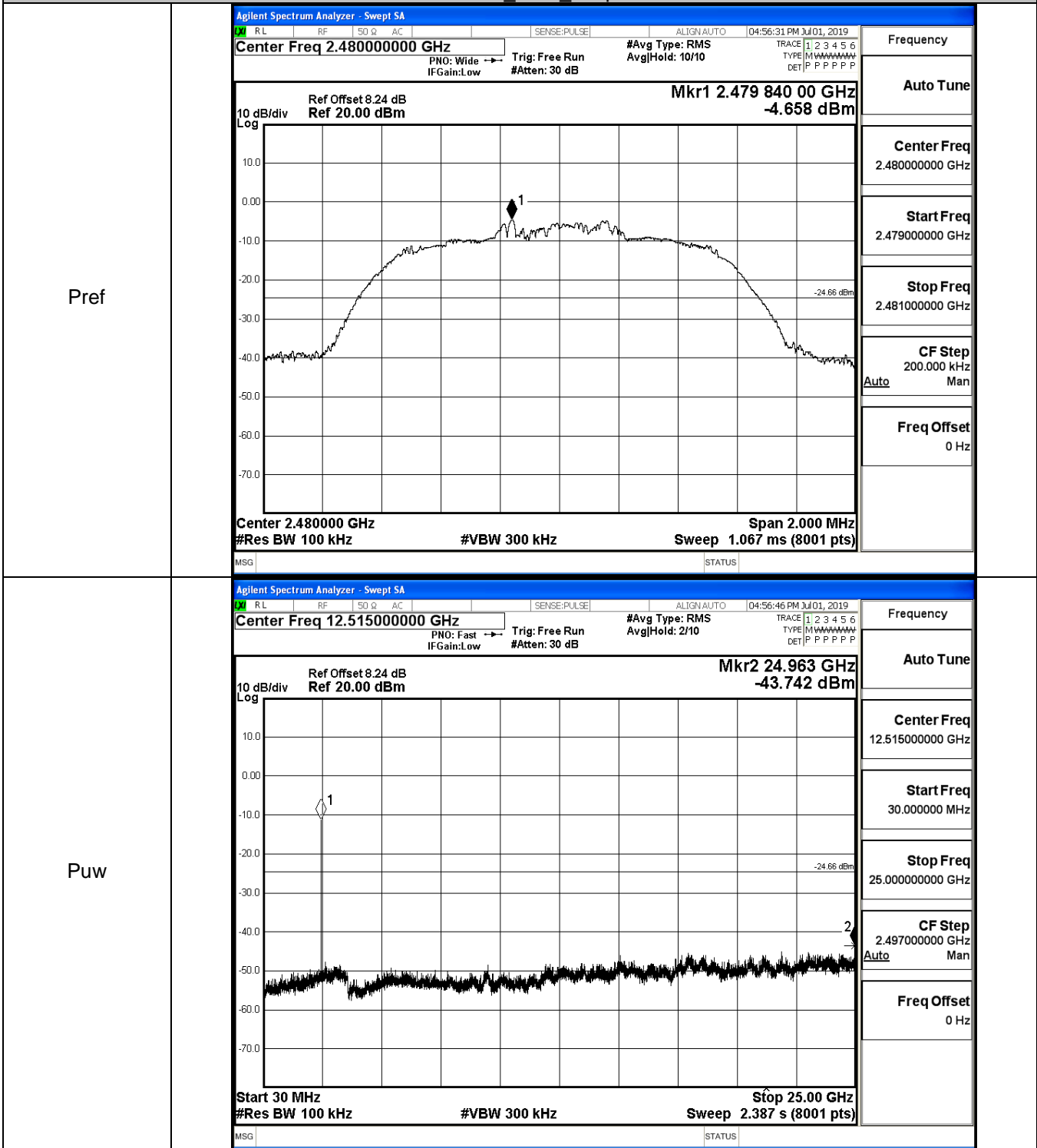
$\pi/4$ DQPSK_LCH_Graphs



$\pi/4$ DQPSK_MCH_Graphs

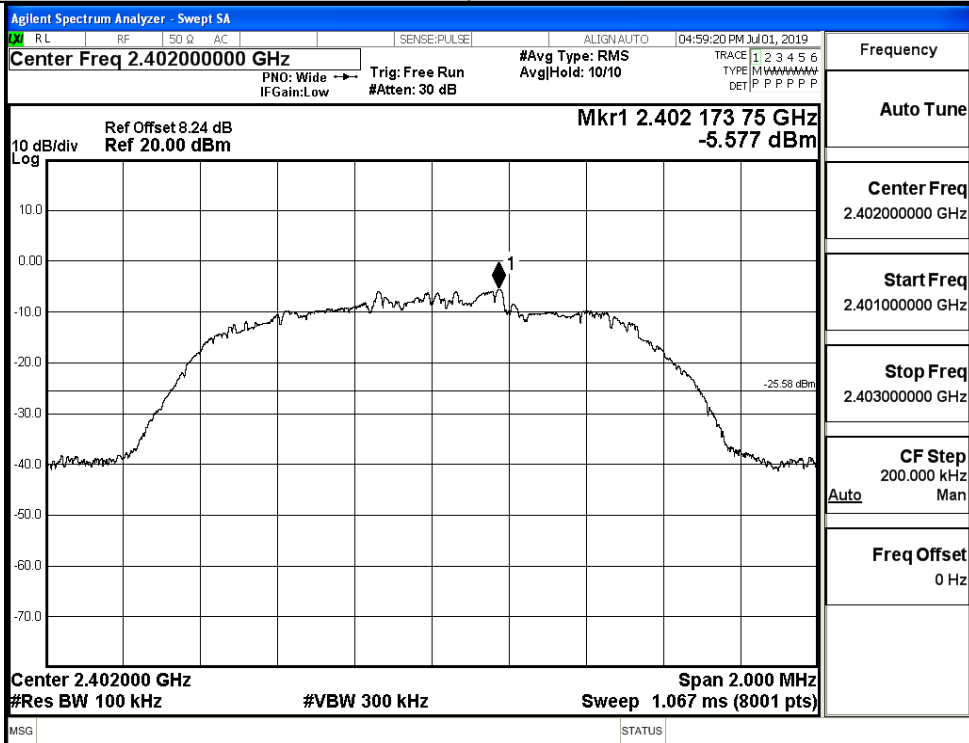


$\pi/4$ DQPSK_HCH_Graphs

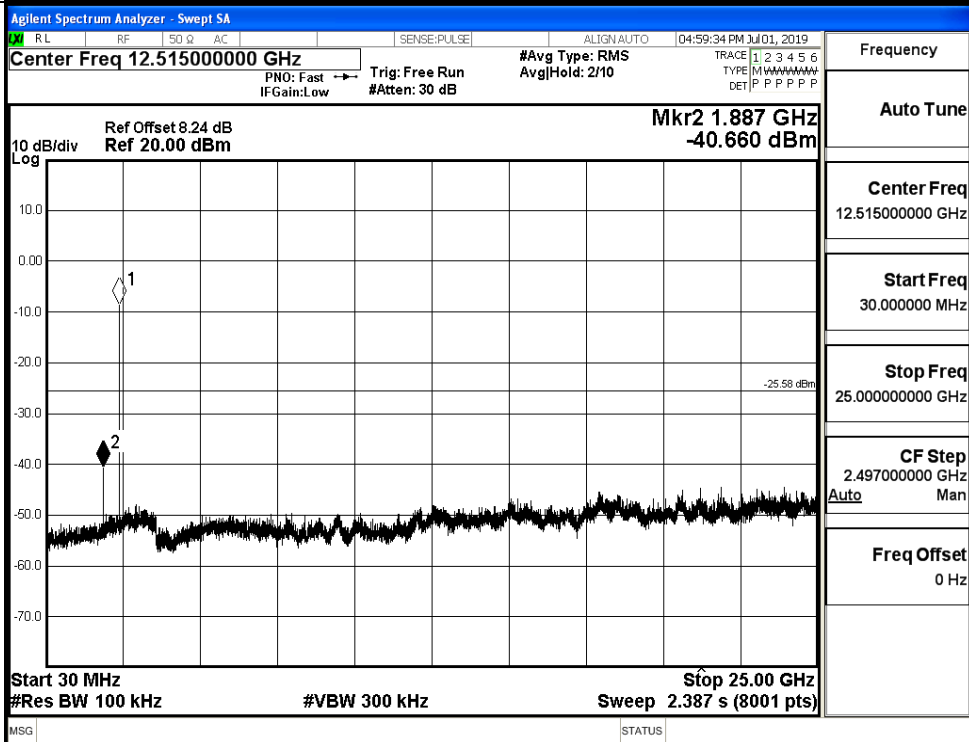


8DPSK_LCH_Graphs

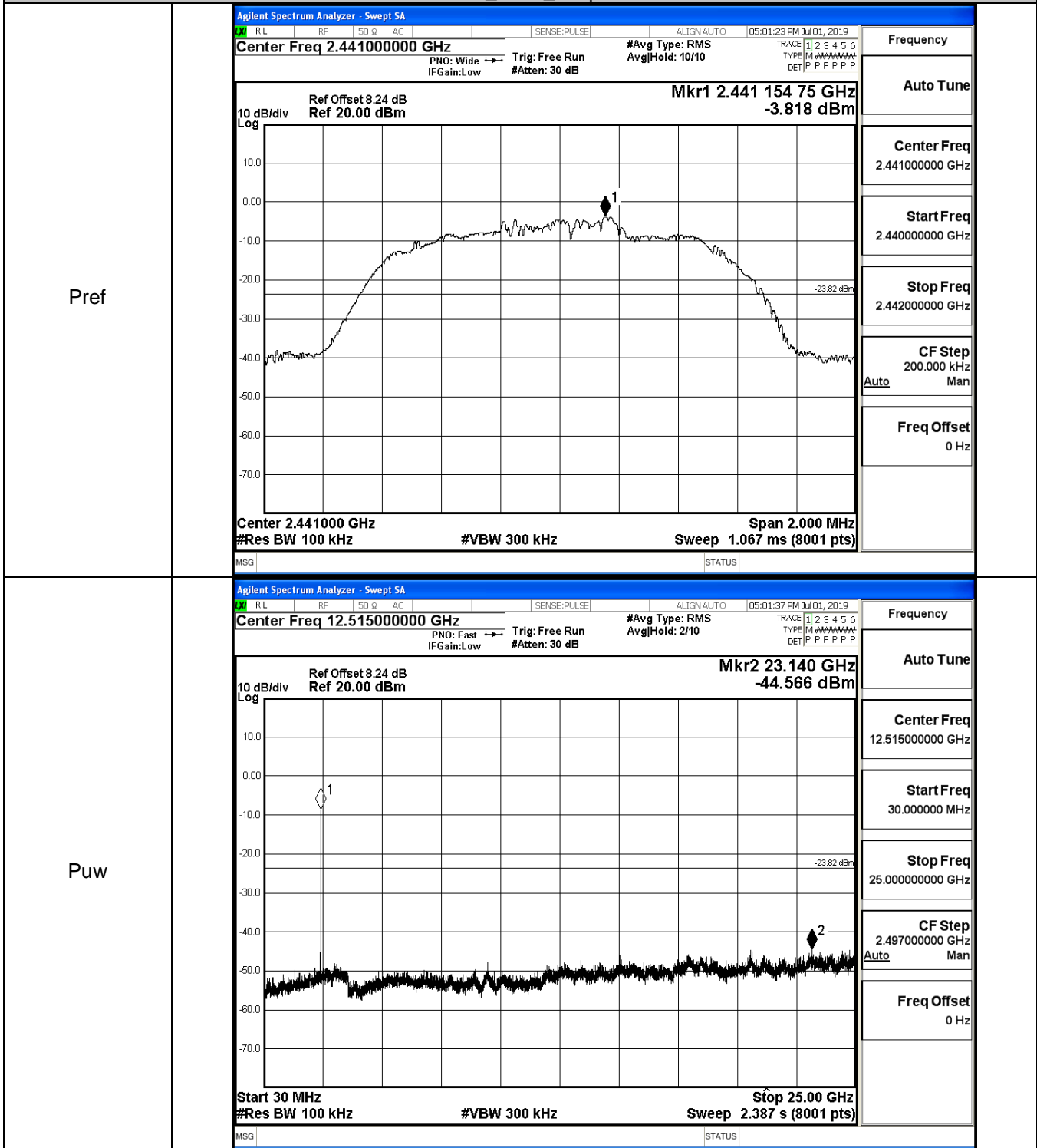
Pref



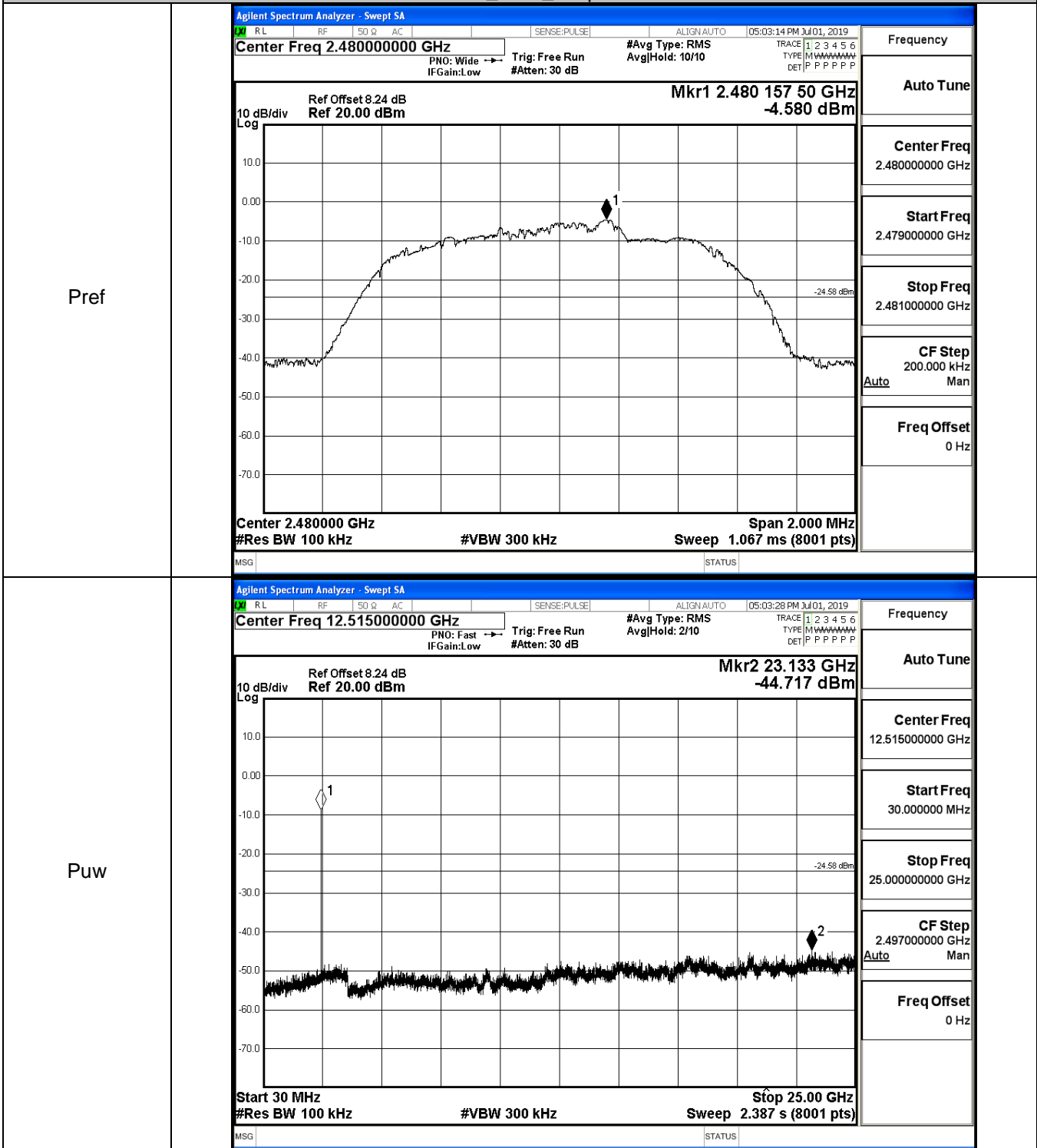
Puw



8DPSK_MCH_Graphs



8DPSK_HCH_Graphs

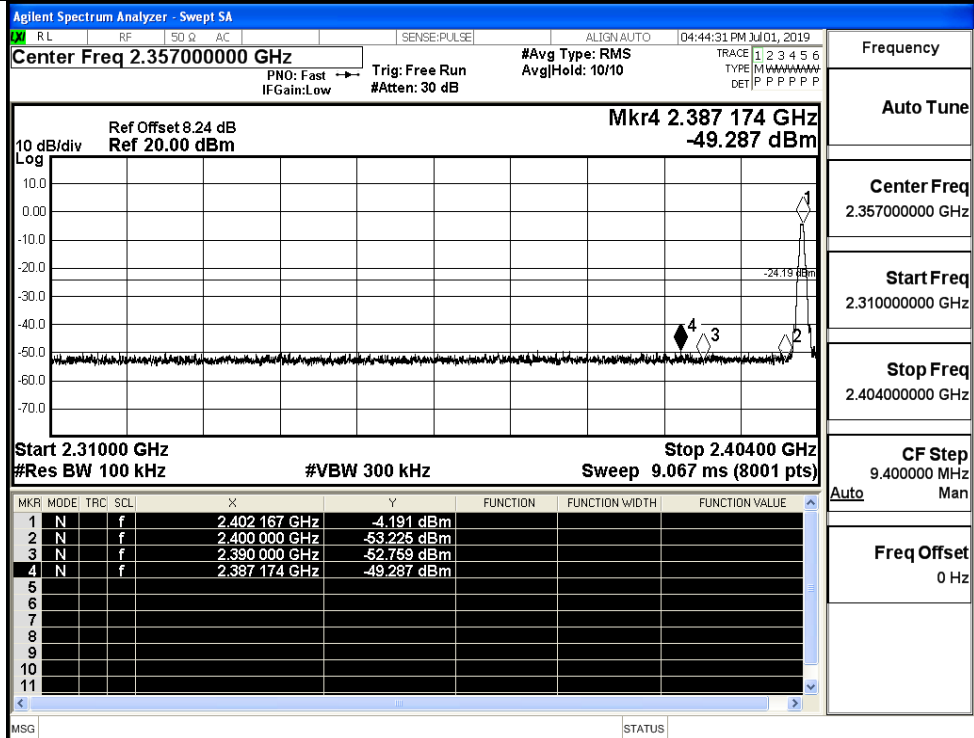


A.7 Band-edge for RF Conducted Emissions

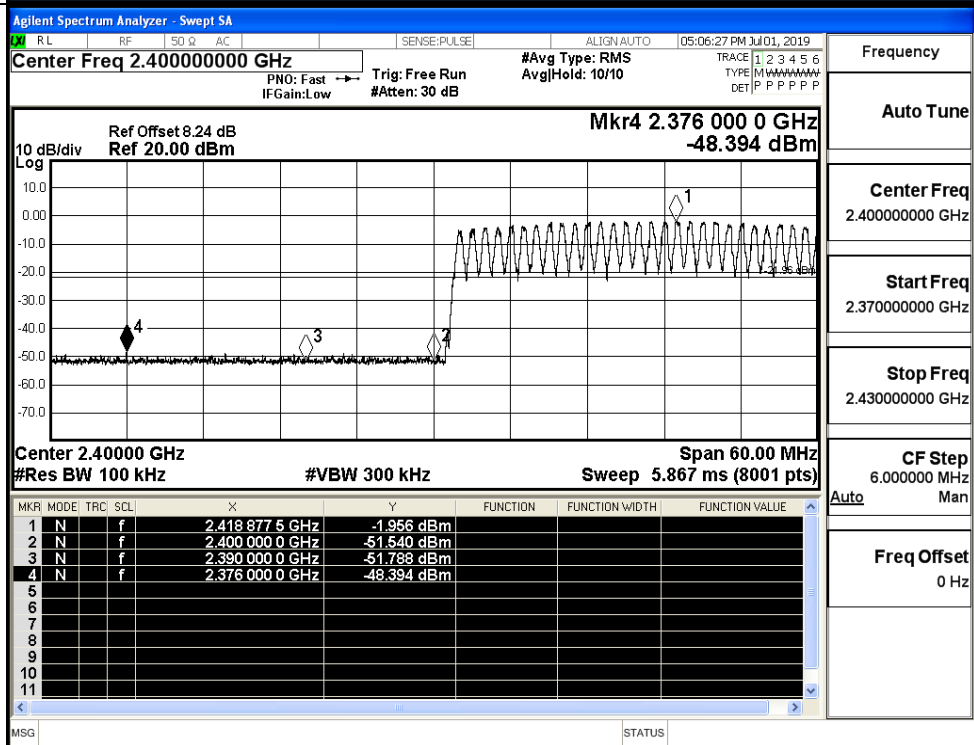
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-4.191	Off	-49.287	-24.19	PASS
			-1.956	On	-48.394	-21.96	PASS
	HCH	2480	-3.178	Off	-48.262	-23.18	PASS
			-1.182	On	-49.132	-21.18	PASS
$\pi/4$ DQPSK	LCH	2402	-8.509	Off	-48.553	-28.51	PASS
			-3.255	On	-48.730	-23.26	PASS
	HCH	2480	-4.680	Off	-48.964	-24.68	PASS
			-2.804	On	-48.813	-22.8	PASS
8DPSK	LCH	2402	-6.294	Off	-49.448	-26.29	PASS
			-3.093	On	-48.979	-23.09	PASS
	HCH	2480	-4.467	Off	-49.457	-24.47	PASS
			-2.699	On	-48.823	-22.7	PASS

Test Graphs

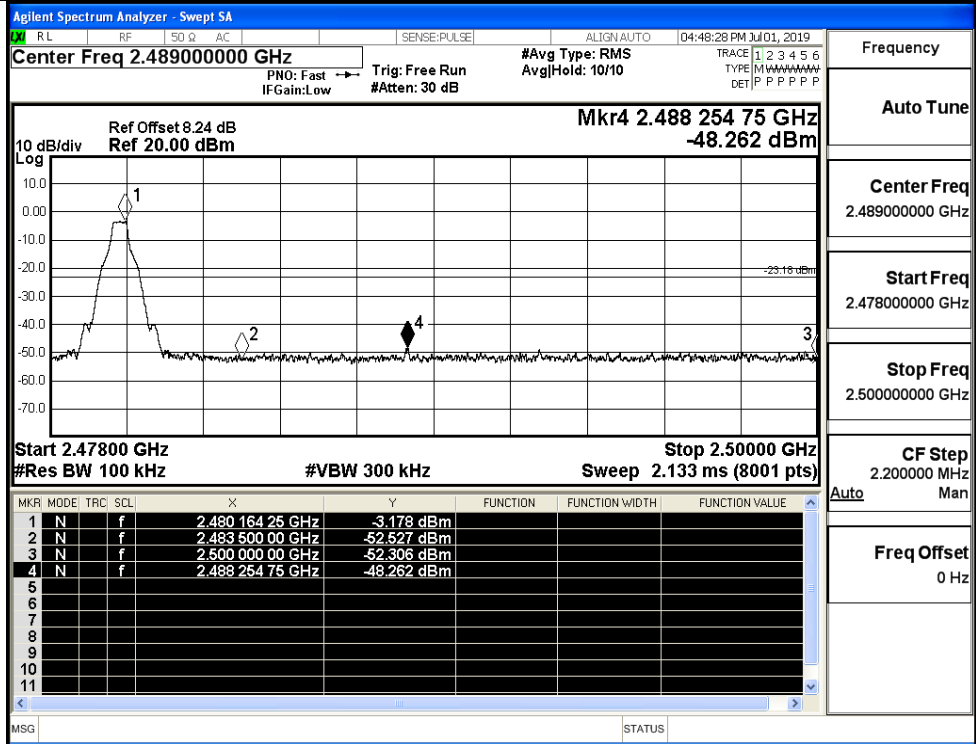
GFSK/LCH/No Hop



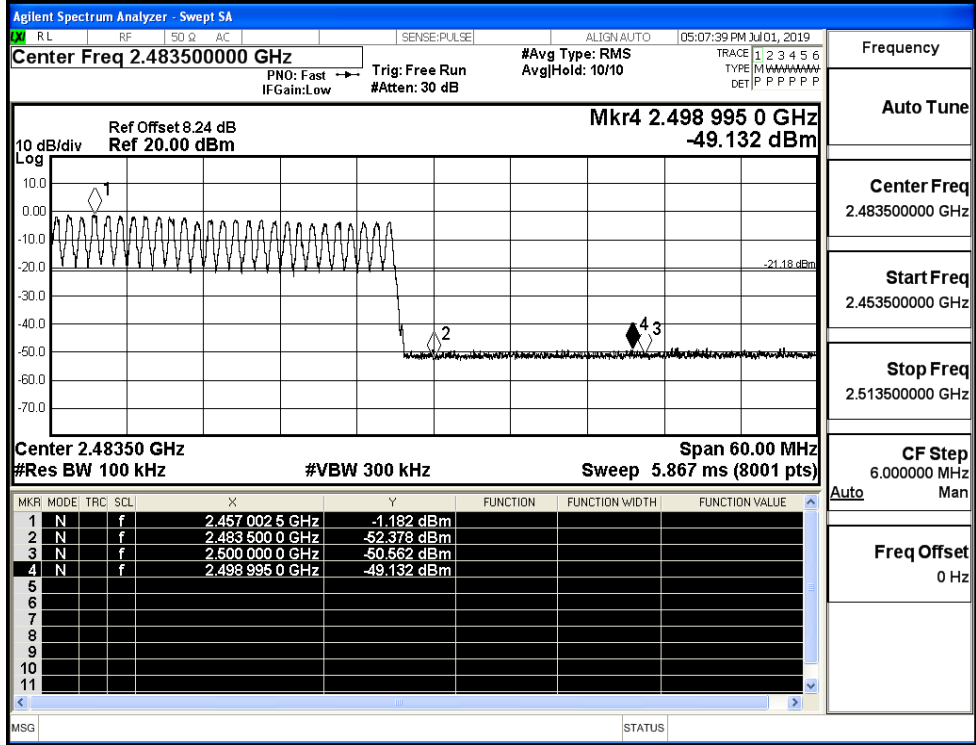
GFSK/LCH/Hop



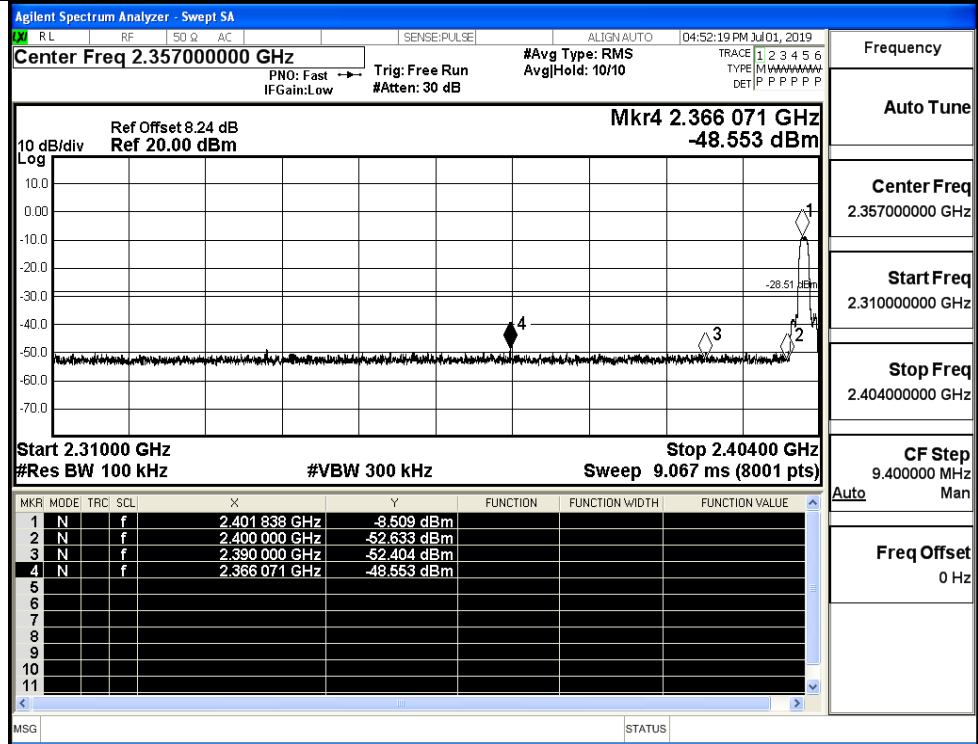
GFSK/HCH/No Hop



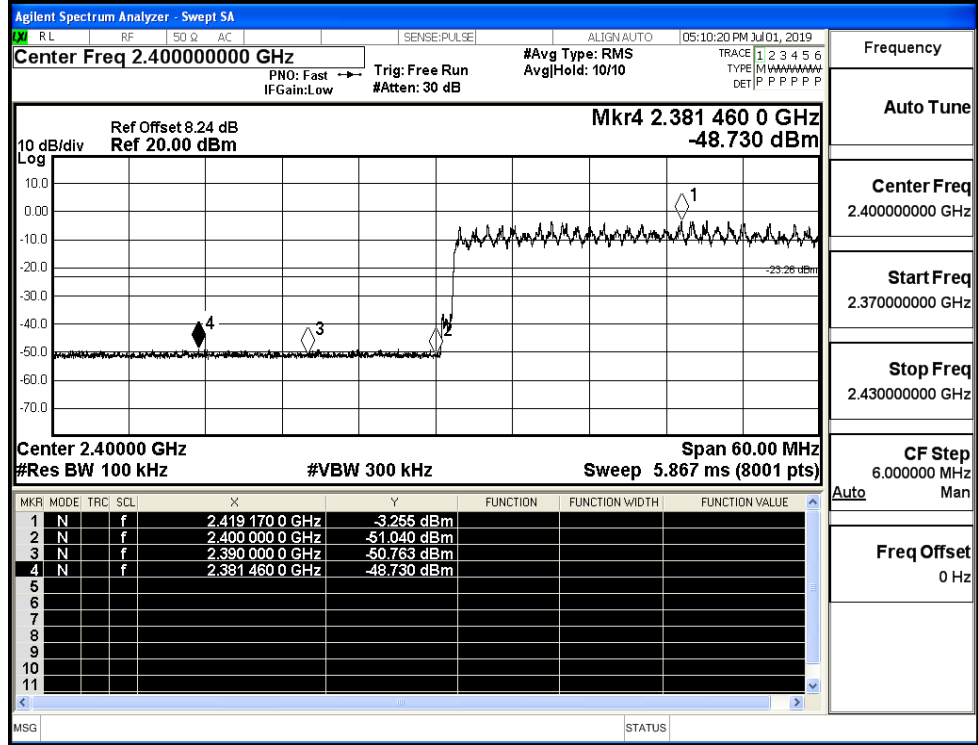
GFSK/HCH/Hop



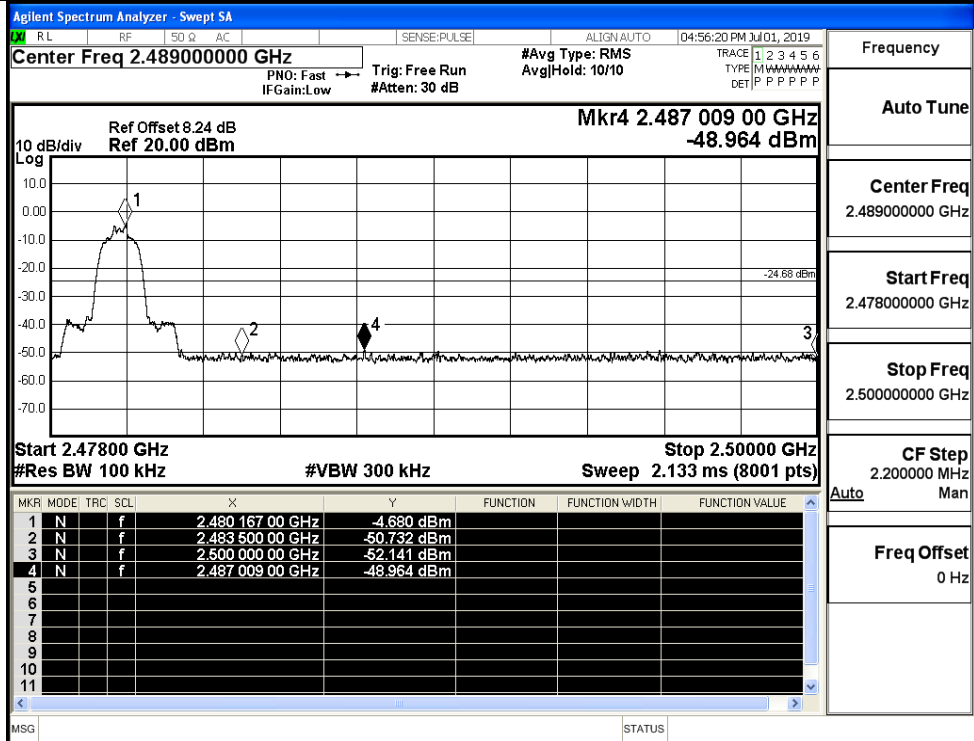
$\pi/4$ DQPSK/LCH/No Hop



$\pi/4$ DQPSK/LCH/Hop

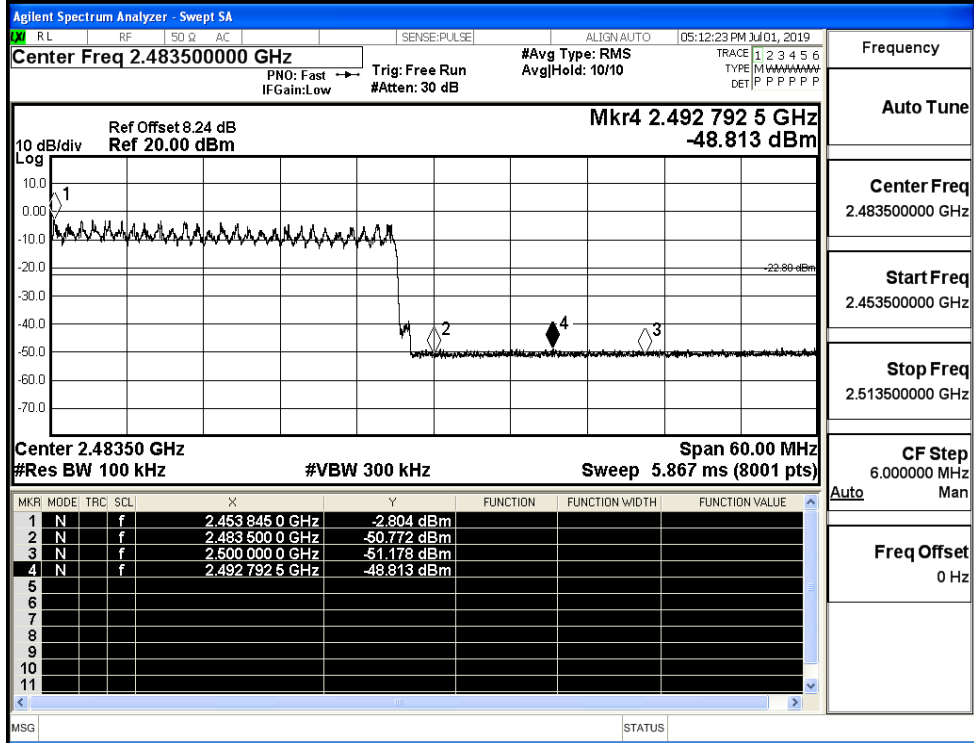


π /4DQPSK/HCH/No
Hop



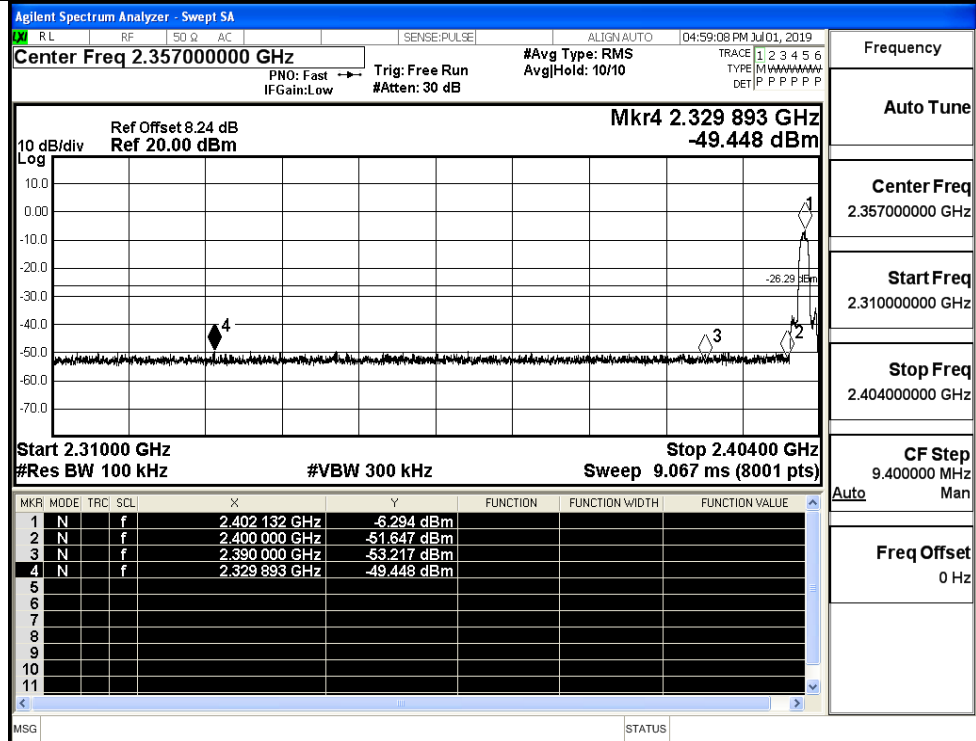
Frequency	
Auto Tune	
Center Freq	2.489000000 GHz
Start Freq	2.478000000 GHz
Stop Freq	2.500000000 GHz
CF Step	2.200000 MHz
Auto	Man
Freq Offset	0 Hz

π /4DQPSK/HCH/Hop



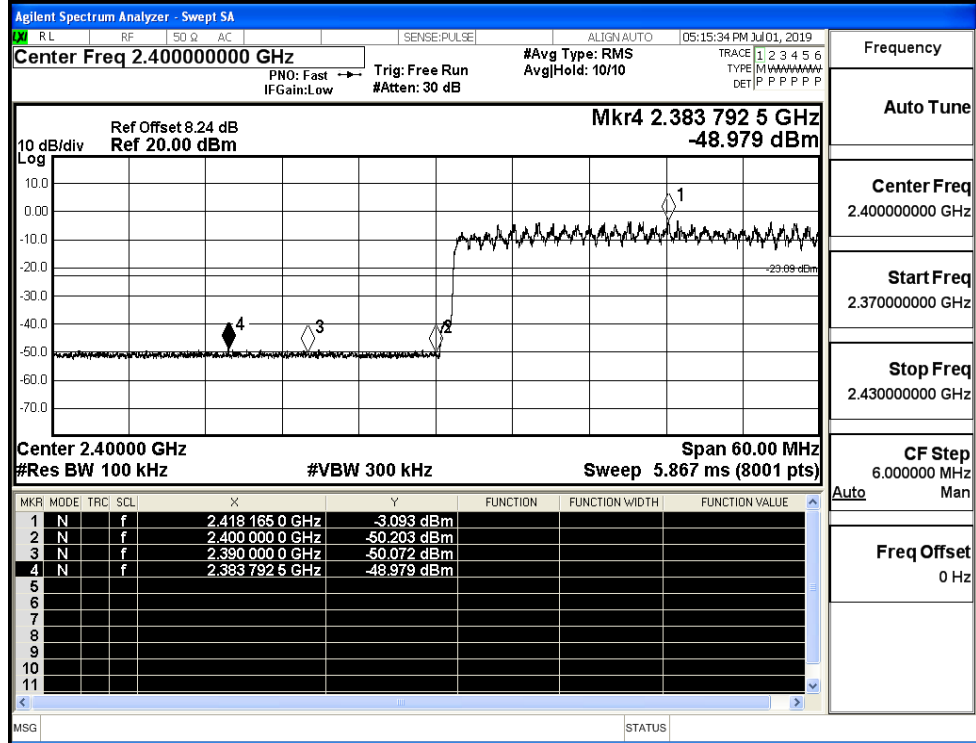
Frequency	
Auto Tune	
Center Freq	2.483500000 GHz
Start Freq	2.453500000 GHz
Stop Freq	2.513500000 GHz
CF Step	6.000000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK/LCH/No Hop



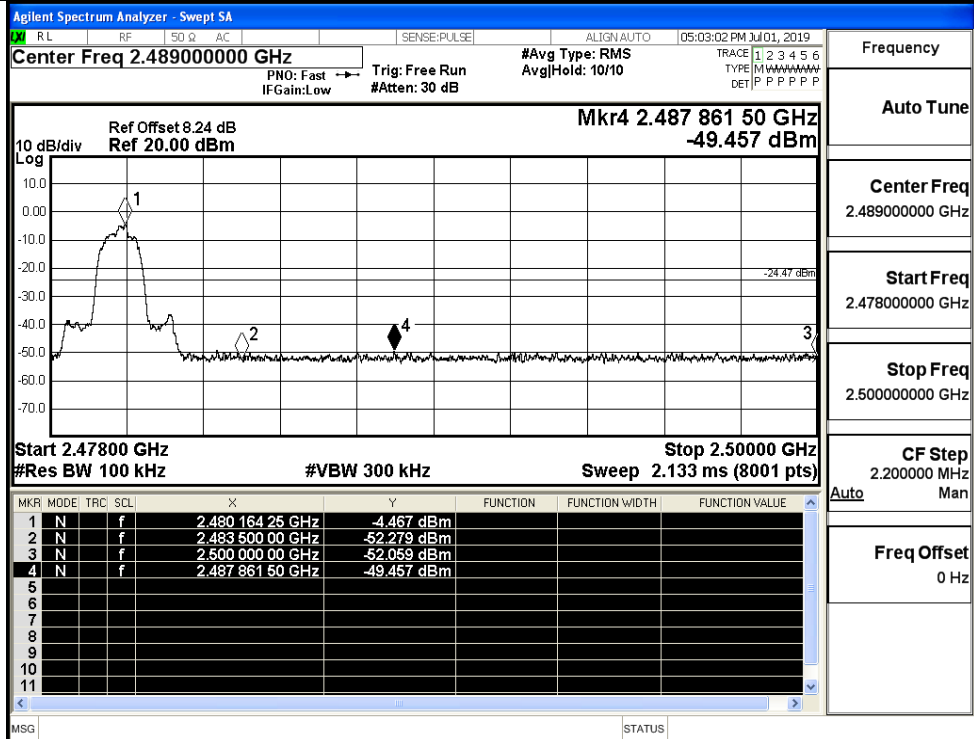
Frequency	2.357000000 GHz
Auto Tune	
Center Freq	2.357000000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.404000000 GHz
CF Step	9.400000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK/LCH/Hop



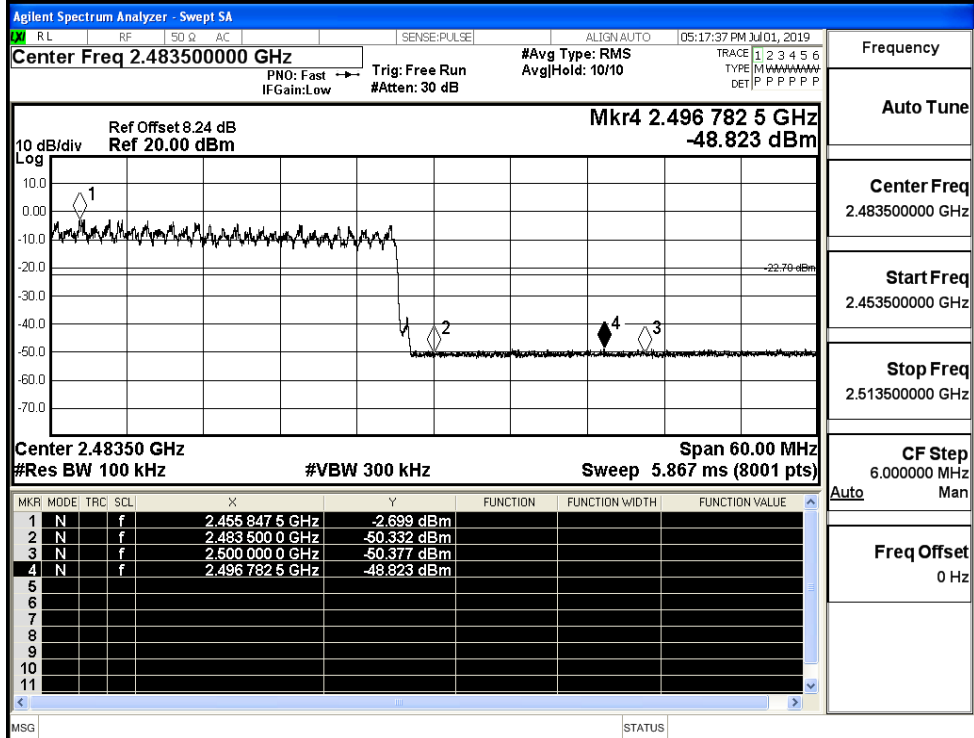
Frequency	2.400000000 GHz
Auto Tune	
Center Freq	2.400000000 GHz
Start Freq	2.370000000 GHz
Stop Freq	2.430000000 GHz
CF Step	6.000000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK/HCH/No Hop



Frequency	
Auto Tune	
Center Freq	2.489000000 GHz
Start Freq	2.478000000 GHz
Stop Freq	2.500000000 GHz
CF Step	2.200000 MHz
Freq Offset	0 Hz

8DPSK/HCH/Hop

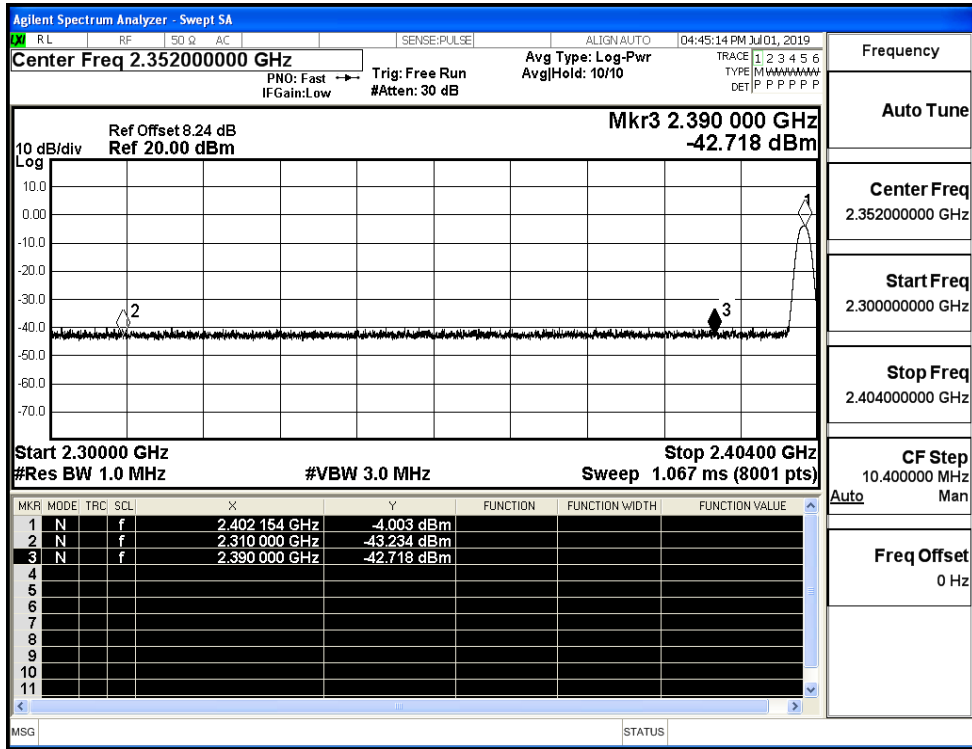


Frequency	
Auto Tune	
Center Freq	2.483500000 GHz
Start Freq	2.453500000 GHz
Stop Freq	2.513500000 GHz
CF Step	6.000000 MHz
Freq Offset	0 Hz

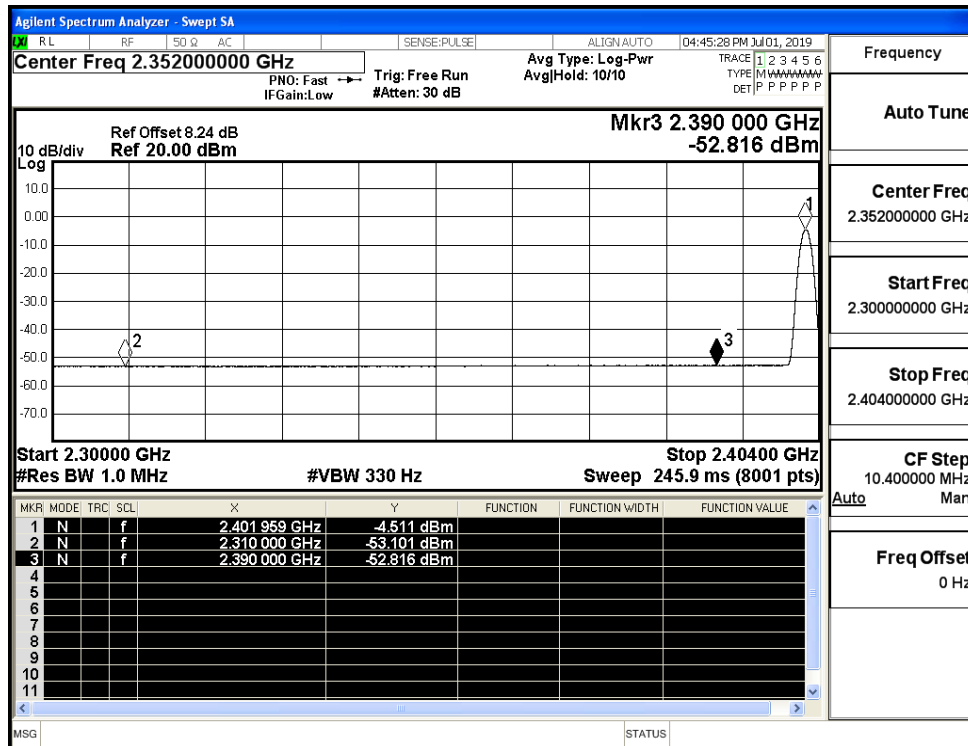
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.23	2.0	0	52.02	PEAK	74	PASS
	Off	2310.0	-53.10	2.0	0	42.16	AV	54	PASS
	Off	2390.0	-42.72	2.0	0	52.54	PEAK	74	PASS
	Off	2390.0	-52.82	2.0	0	42.44	AV	54	PASS
	Off	2483.5	-42.75	2.0	0	52.51	PEAK	74	PASS
	Off	2483.5	-52.60	2.0	0	42.66	AV	54	PASS
	Off	2500.0	-41.76	2.0	0	53.50	PEAK	74	PASS
	Off	2500.0	-52.44	2.0	0	42.81	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.40	2.0	0	51.86	PEAK	74	PASS
	Off	2310.0	-52.97	2.0	0	42.29	AV	54	PASS
	Off	2390.0	-41.16	2.0	0	54.10	PEAK	74	PASS
	Off	2390.0	-52.72	2.0	0	42.54	AV	54	PASS
	Off	2483.5	-42.87	2.0	0	52.38	PEAK	74	PASS
	Off	2483.5	-52.45	2.0	0	42.81	AV	54	PASS
	Off	2500.0	-42.93	2.0	0	52.33	PEAK	74	PASS
	Off	2500.0	-52.39	2.0	0	42.87	AV	54	PASS
8DPSK	Off	2310.0	-42.81	2.0	0	52.45	PEAK	74	PASS
	Off	2310.0	-53.01	2.0	0	42.24	AV	54	PASS
	Off	2390.0	-42.22	2.0	0	53.04	PEAK	74	PASS
	Off	2390.0	-52.79	2.0	0	42.47	AV	54	PASS
	Off	2483.5	-42.43	2.0	0	52.83	PEAK	74	PASS
	Off	2483.5	-52.59	2.0	0	42.67	AV	54	PASS
	Off	2500.0	-43.03	2.0	0	52.23	PEAK	74	PASS
	Off	2500.0	-52.33	2.0	0	42.93	AV	54	PASS

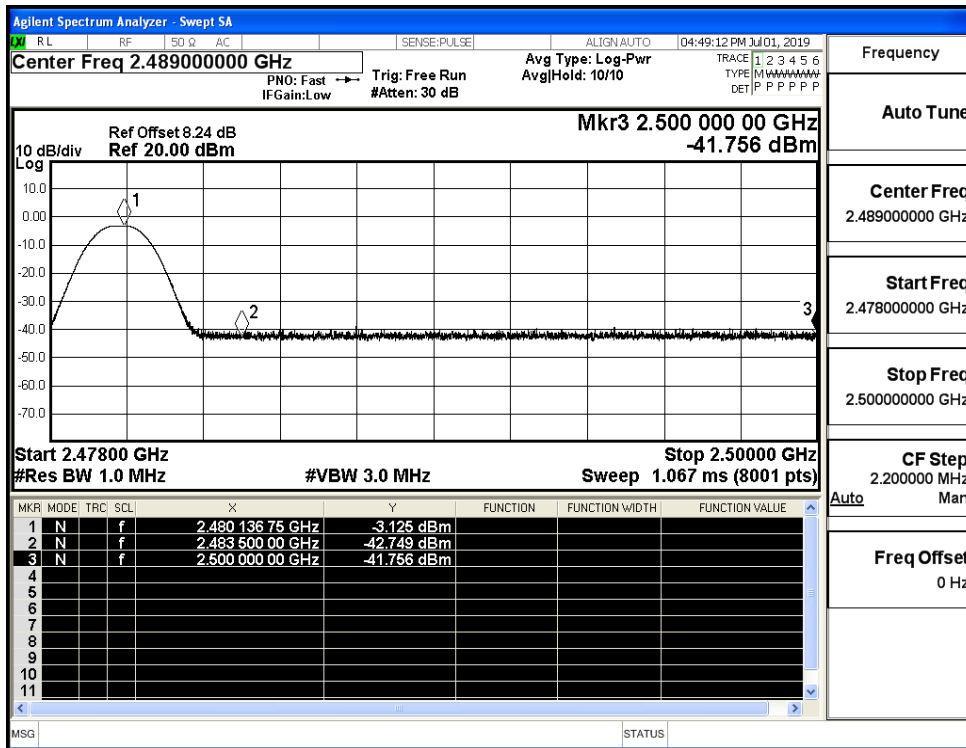
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



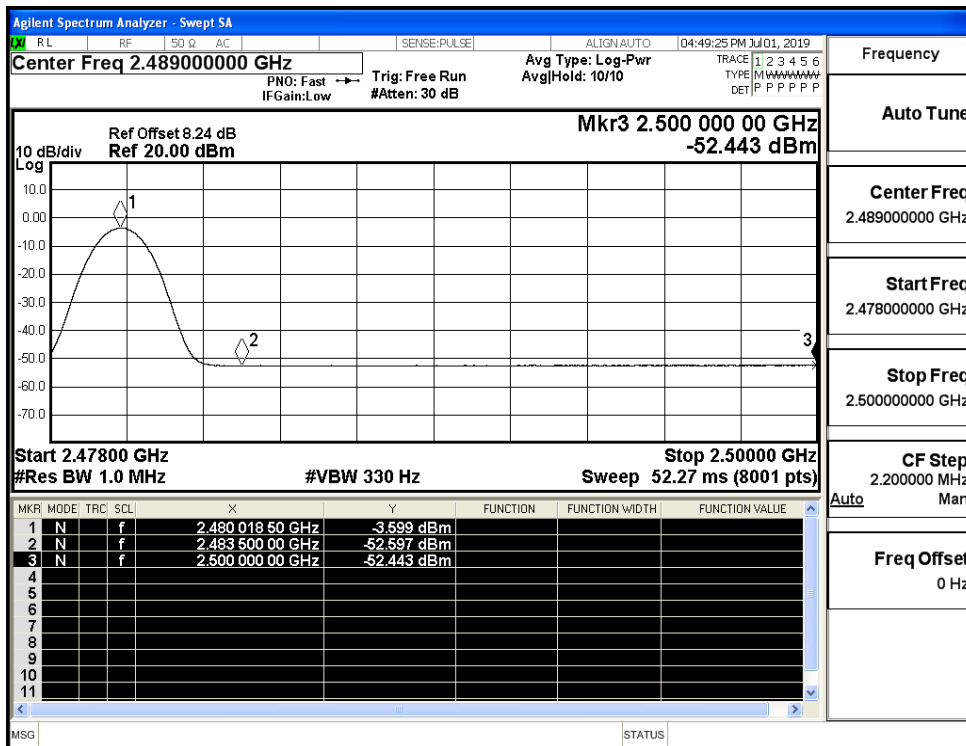
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)



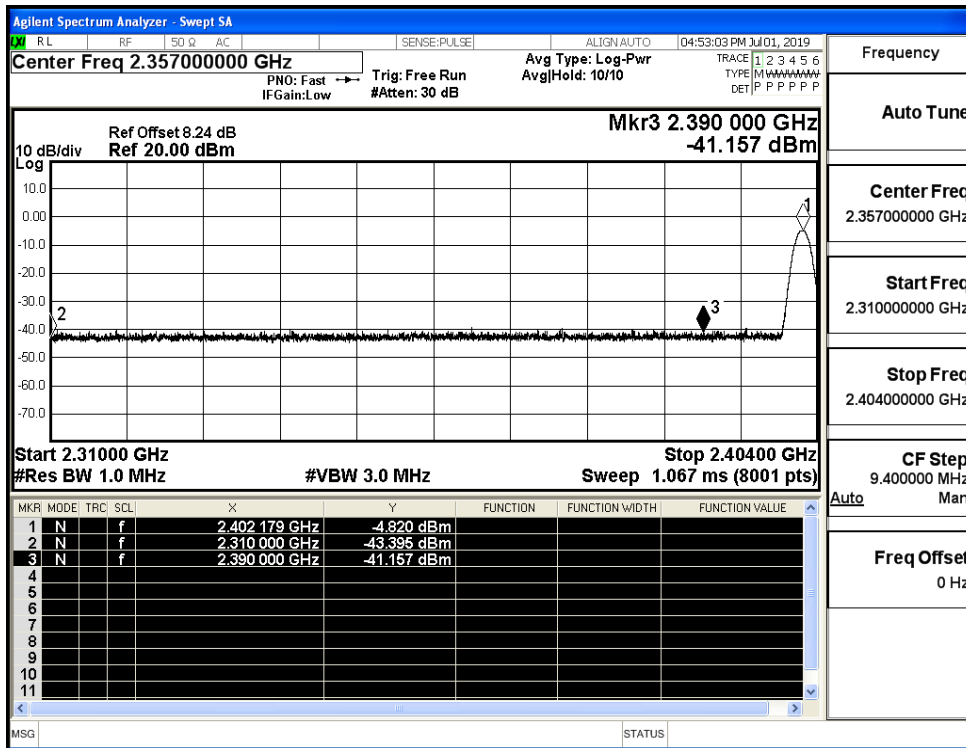
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



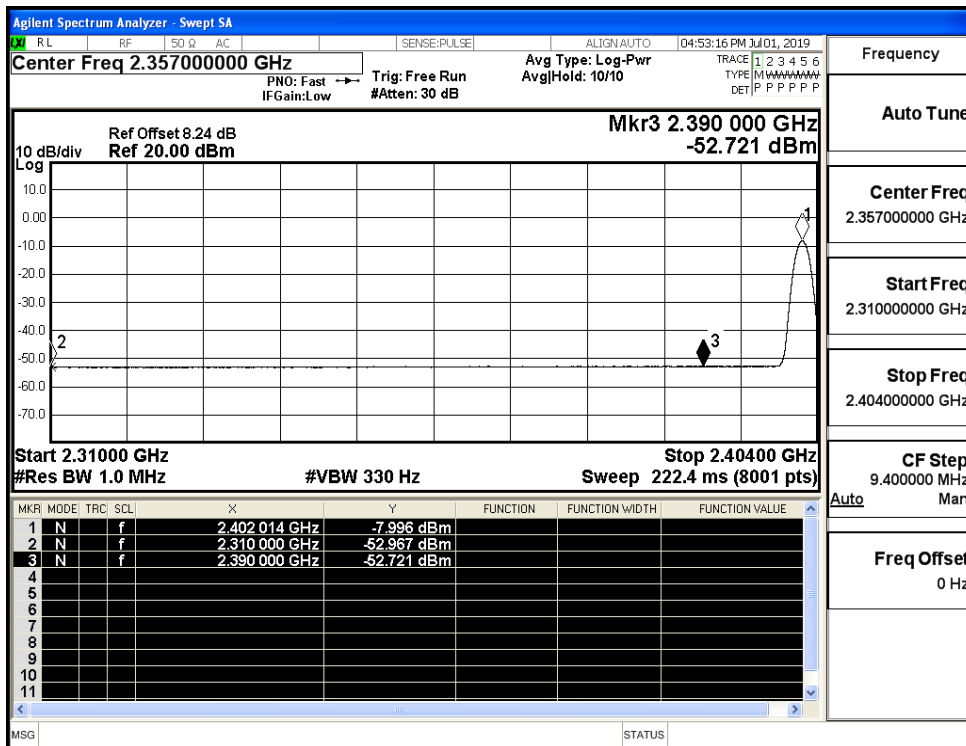
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



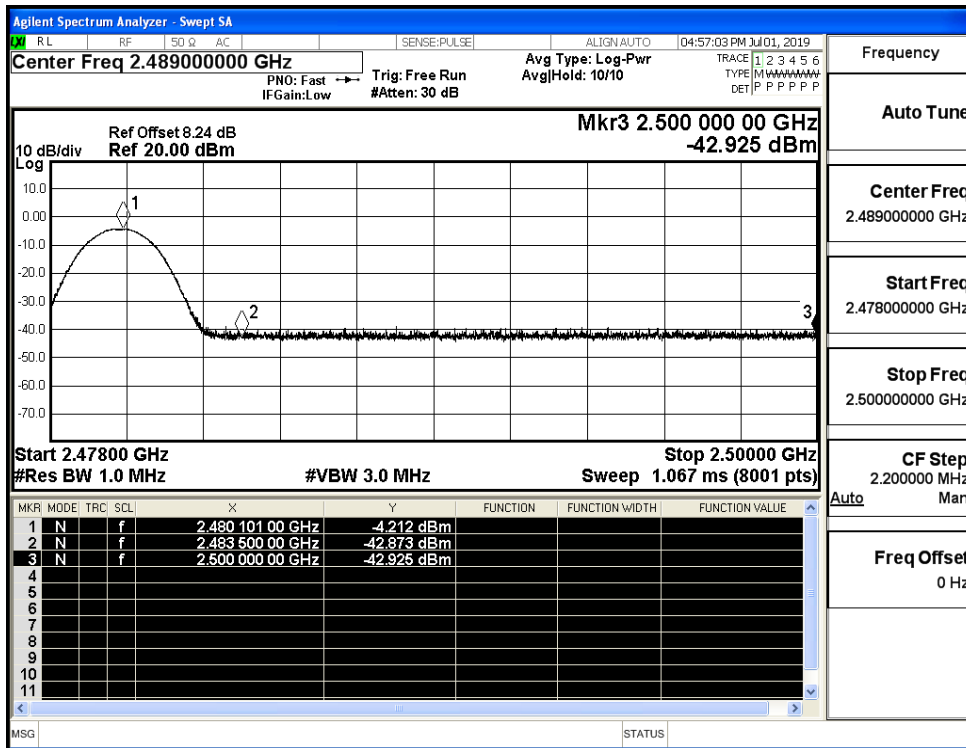
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)



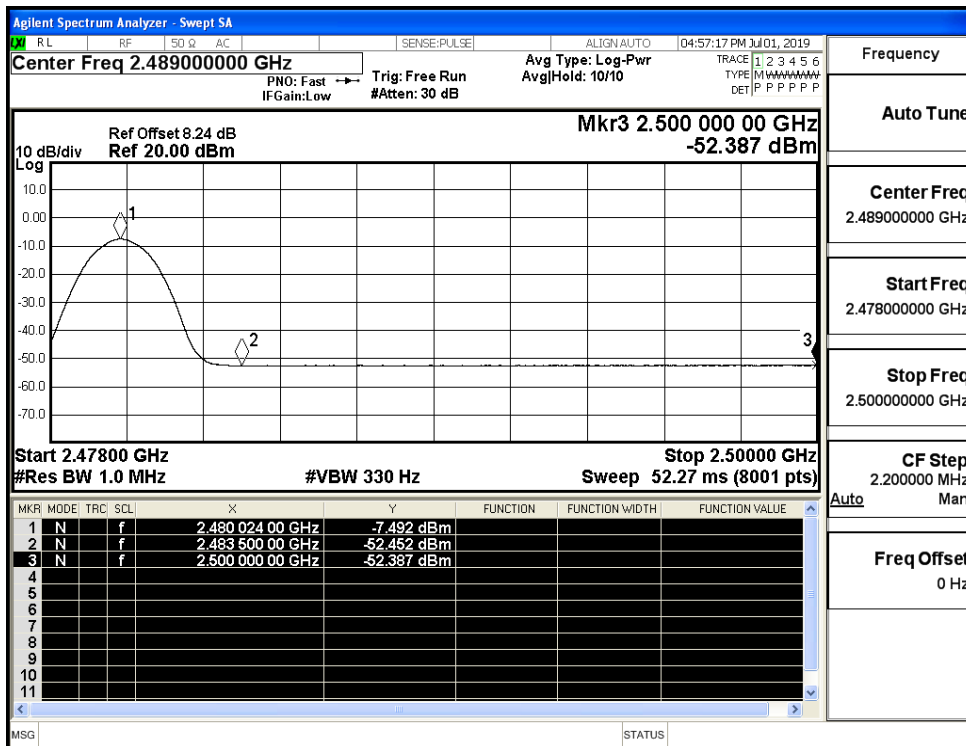
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)



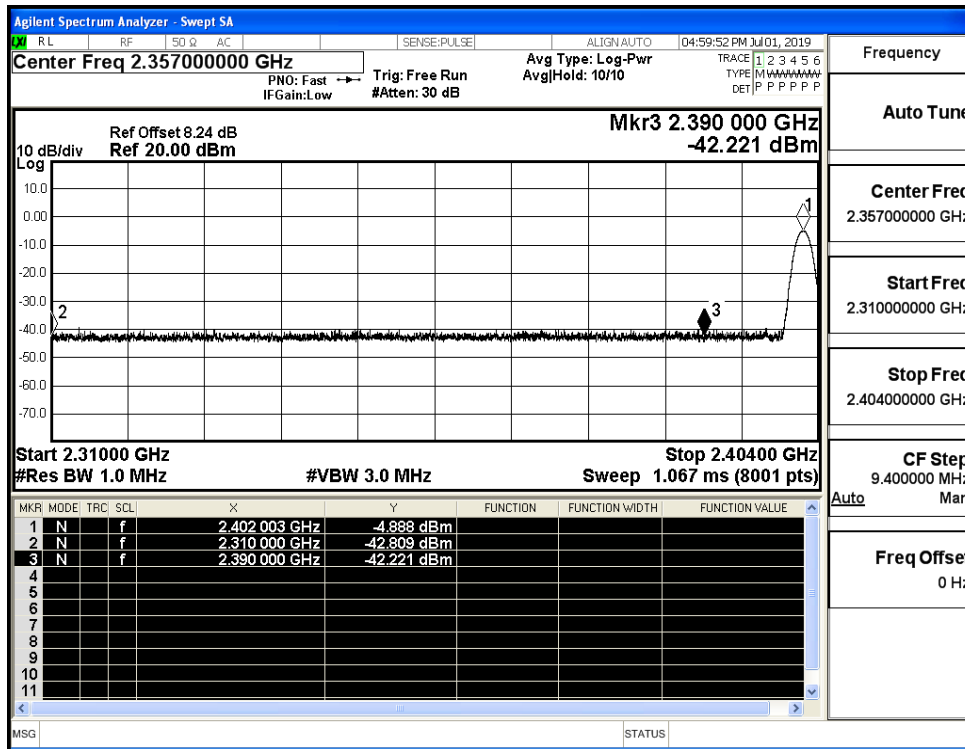
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



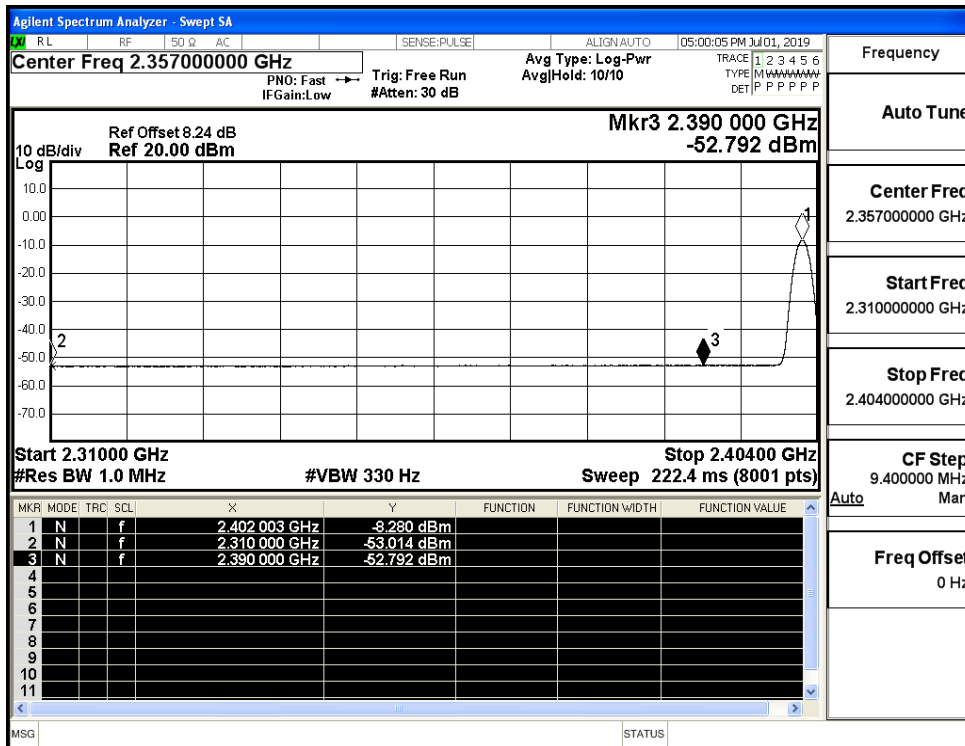
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



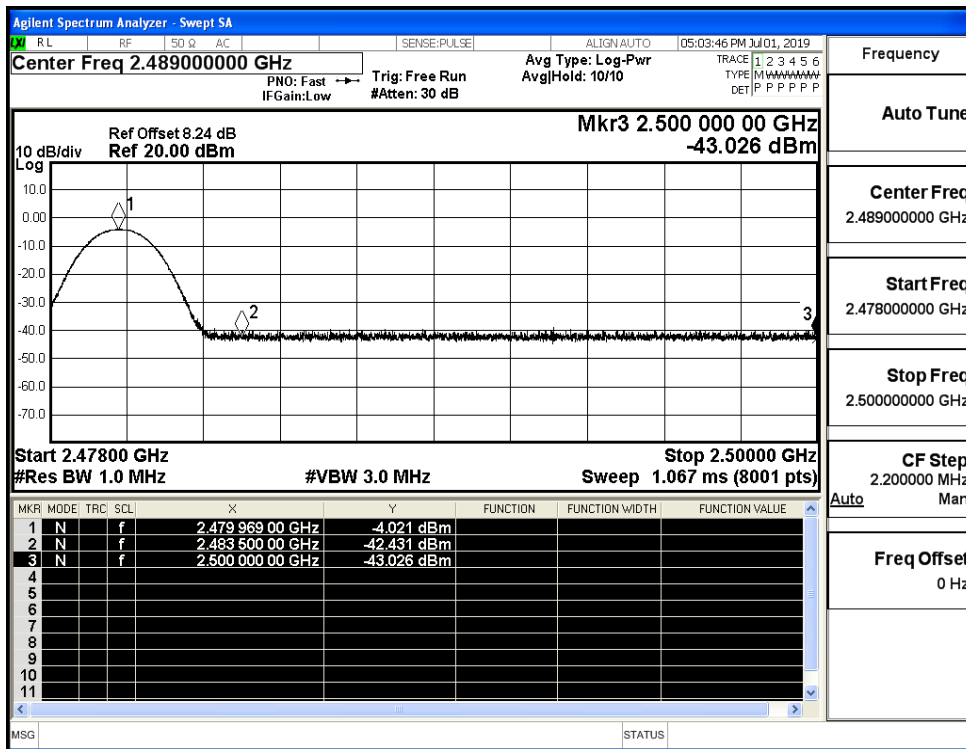
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



Restrict-band band-edge measurements_Hopping Off_8DPSK_Average (Low Channel)



Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (High Channel)



Restrict-band band-edge measurements_Hopping Off_8DPSK_Average (High Channel)

