

Appendix A

RF Test Data for BT V4.1(BDR/EDR) (Conducted Measurement)

Product Name: Jays q-Seven Wireless

Trade Mark: JAYS

Test Model: Q7W01

Environmental Conditions

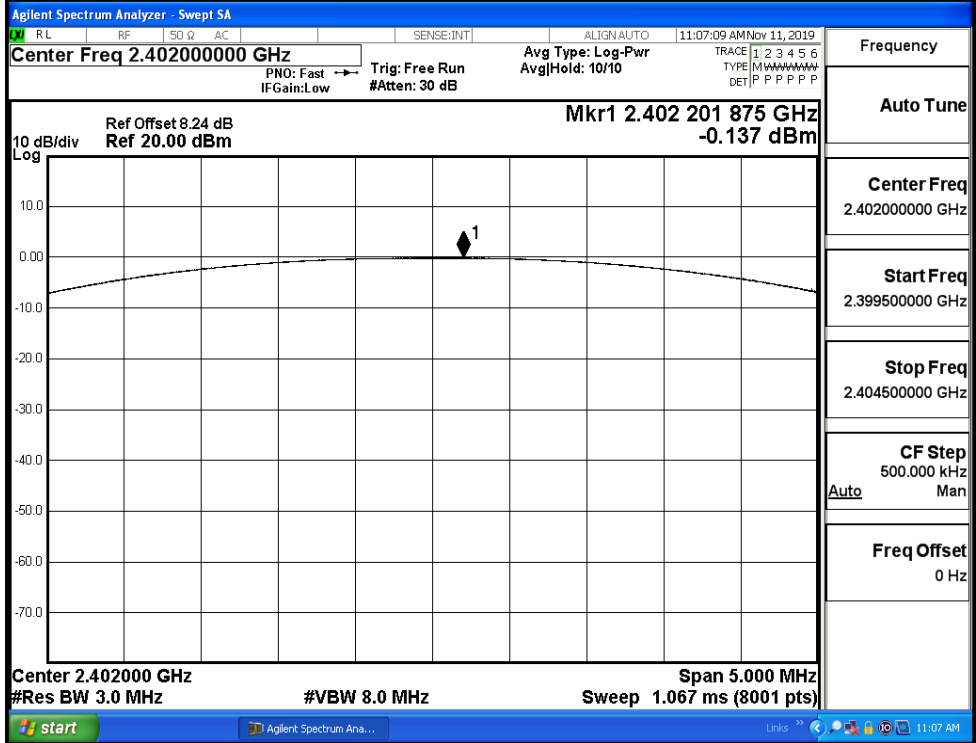
Temperature:	22.8 ° C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Jk Zhou
Supervised by:	Tom.Liu

A.1 Maxmum Conducted Peak Output Power

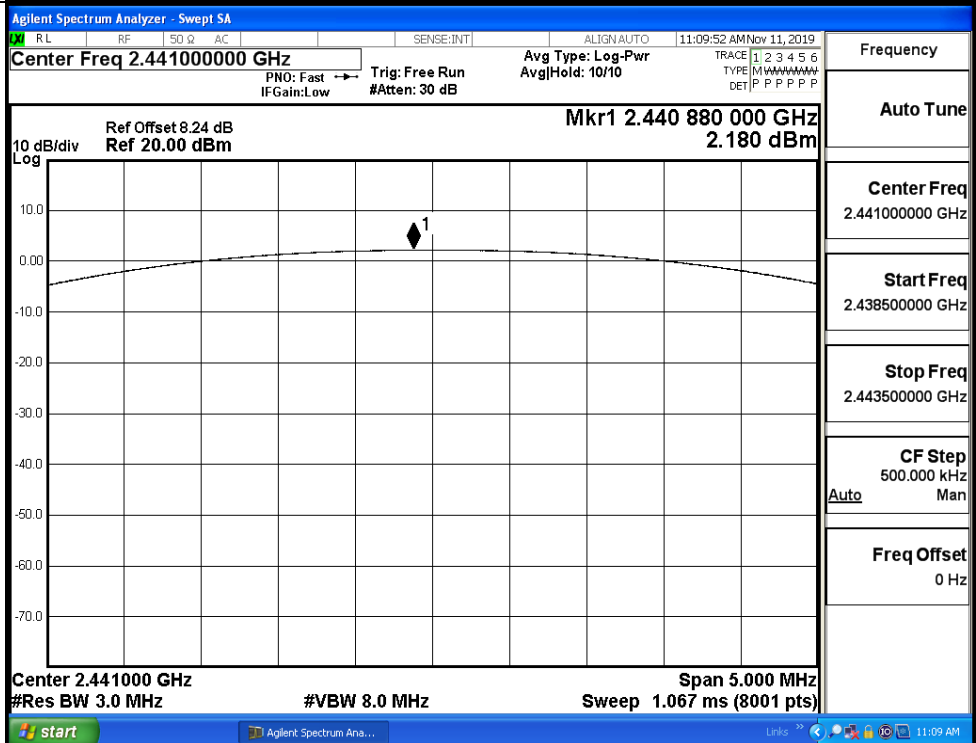
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.137	21	PASS
	MCH	2.180	21	PASS
	HCH	2.985	21	PASS
$\pi/4$ DQPSK	LCH	-0.157	21	PASS
	MCH	2.149	21	PASS
	HCH	2.952	21	PASS
8DPSK	LCH	0.143	21	PASS
	MCH	2.339	21	PASS
	HCH	4.406	21	PASS

Test Graphs

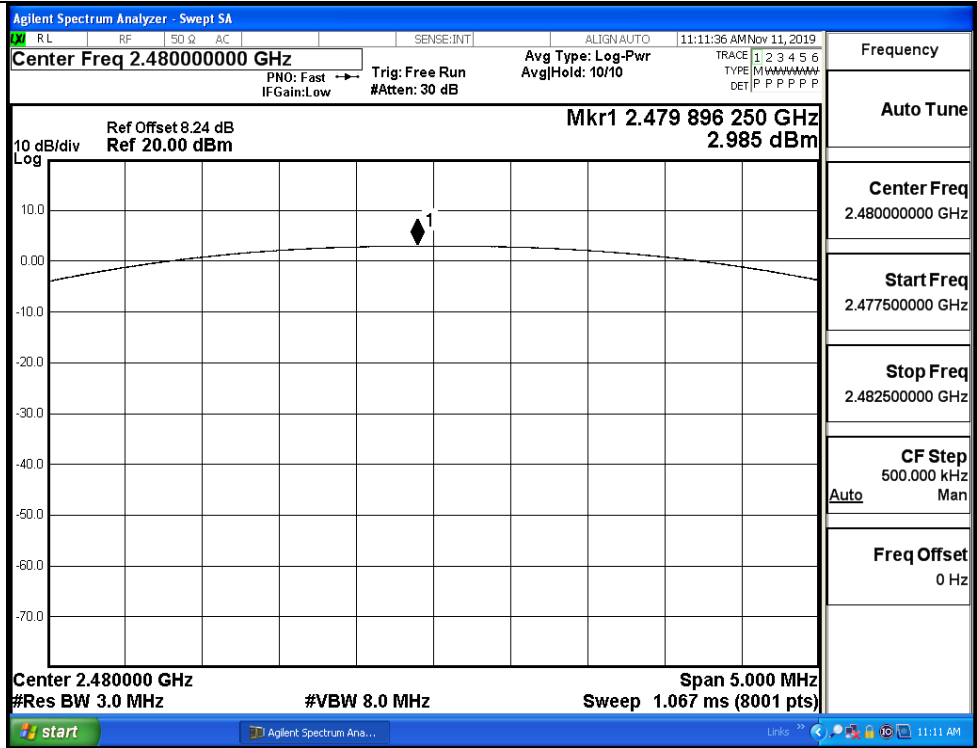
GFSK/LCH



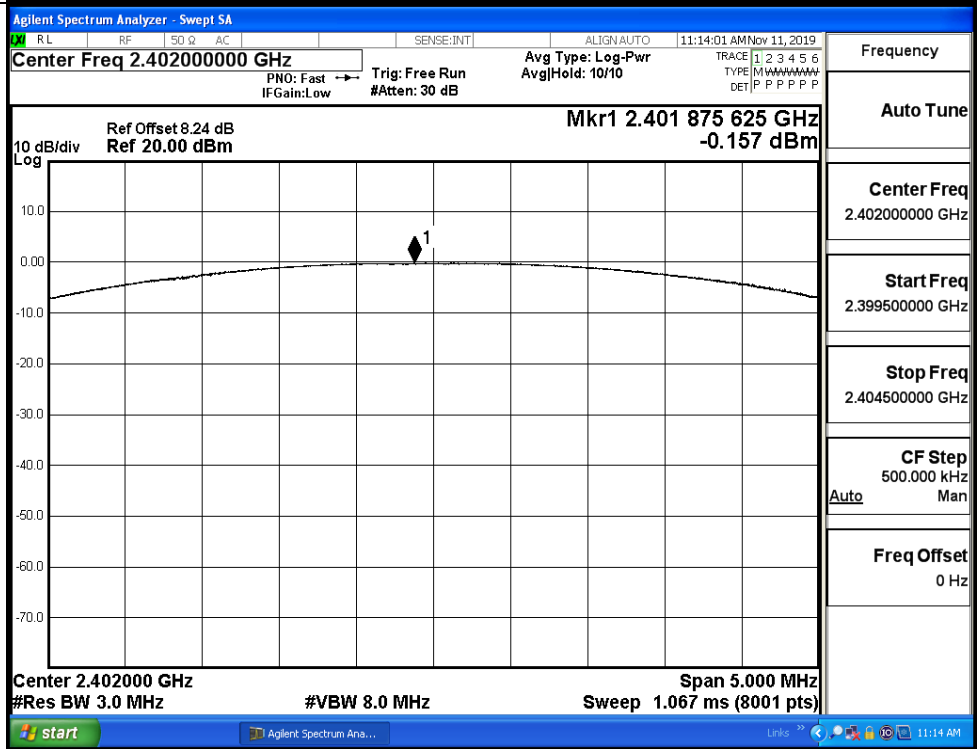
GFSK/MCH

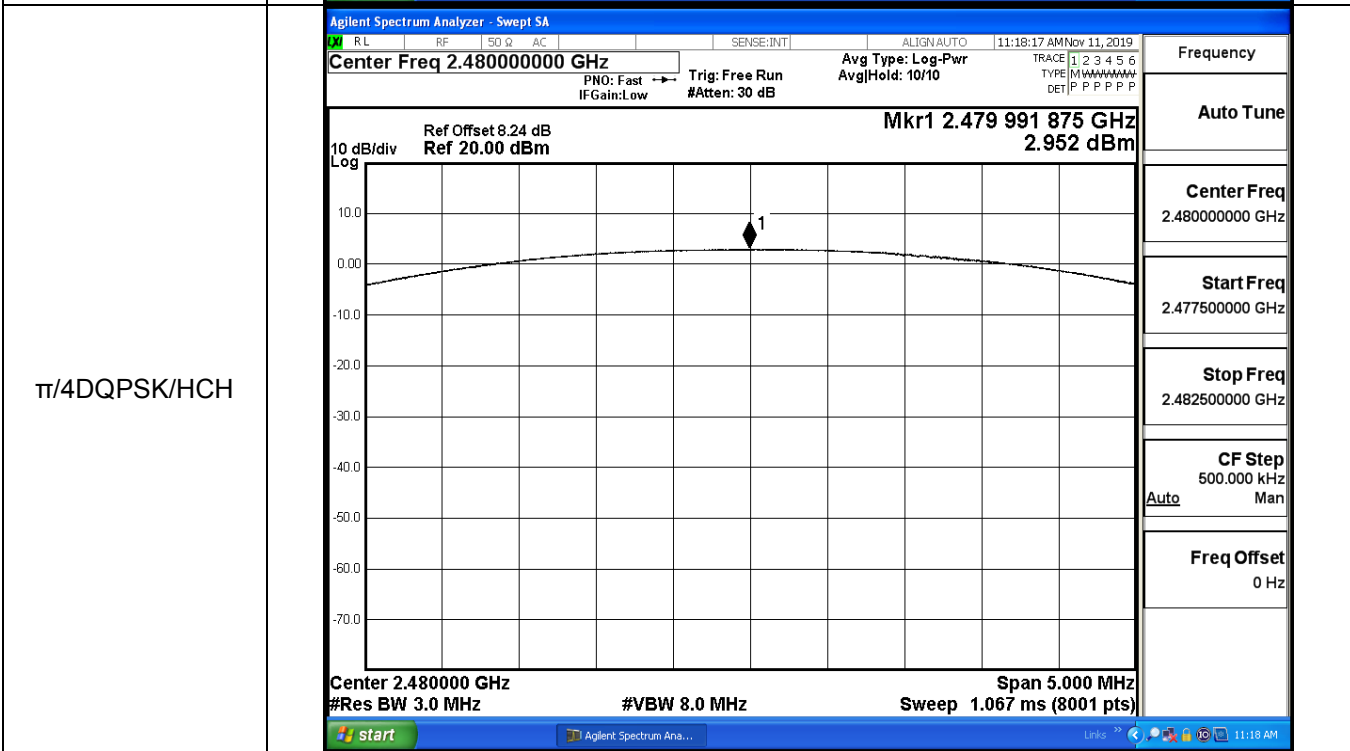
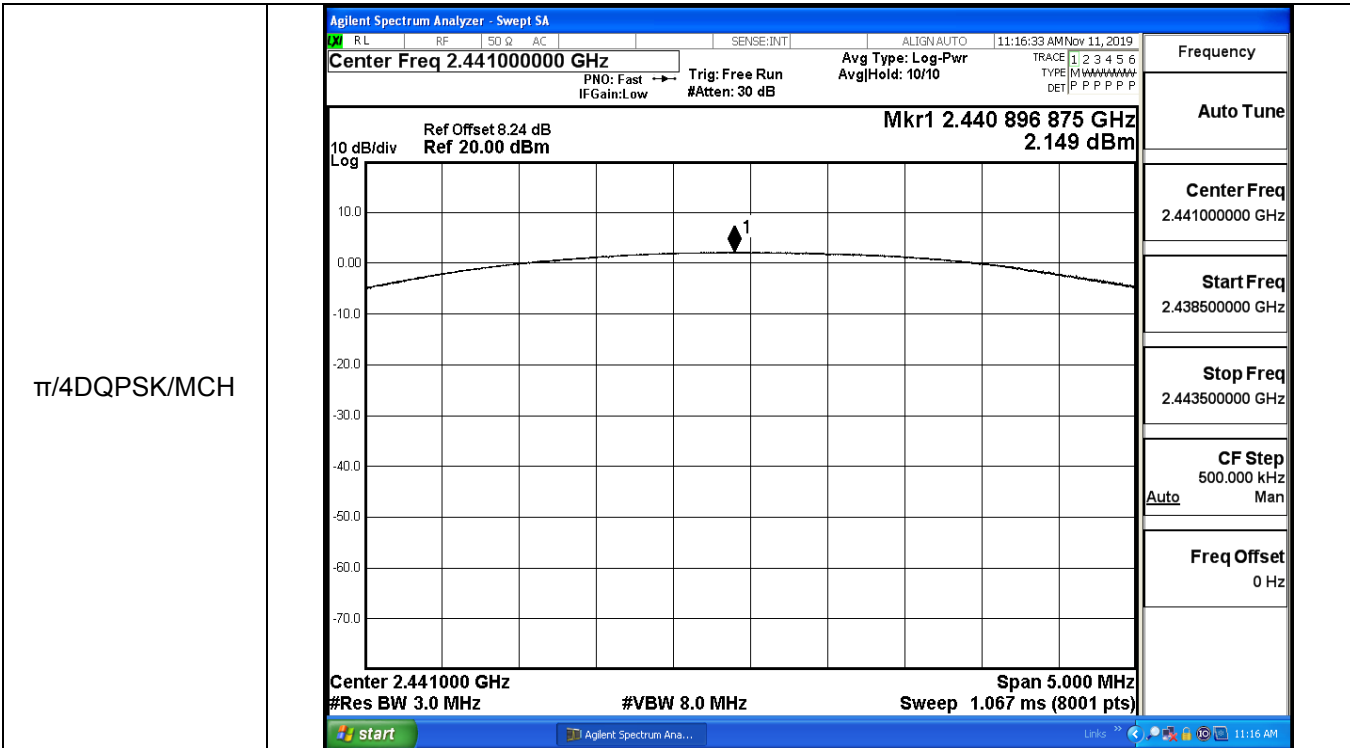


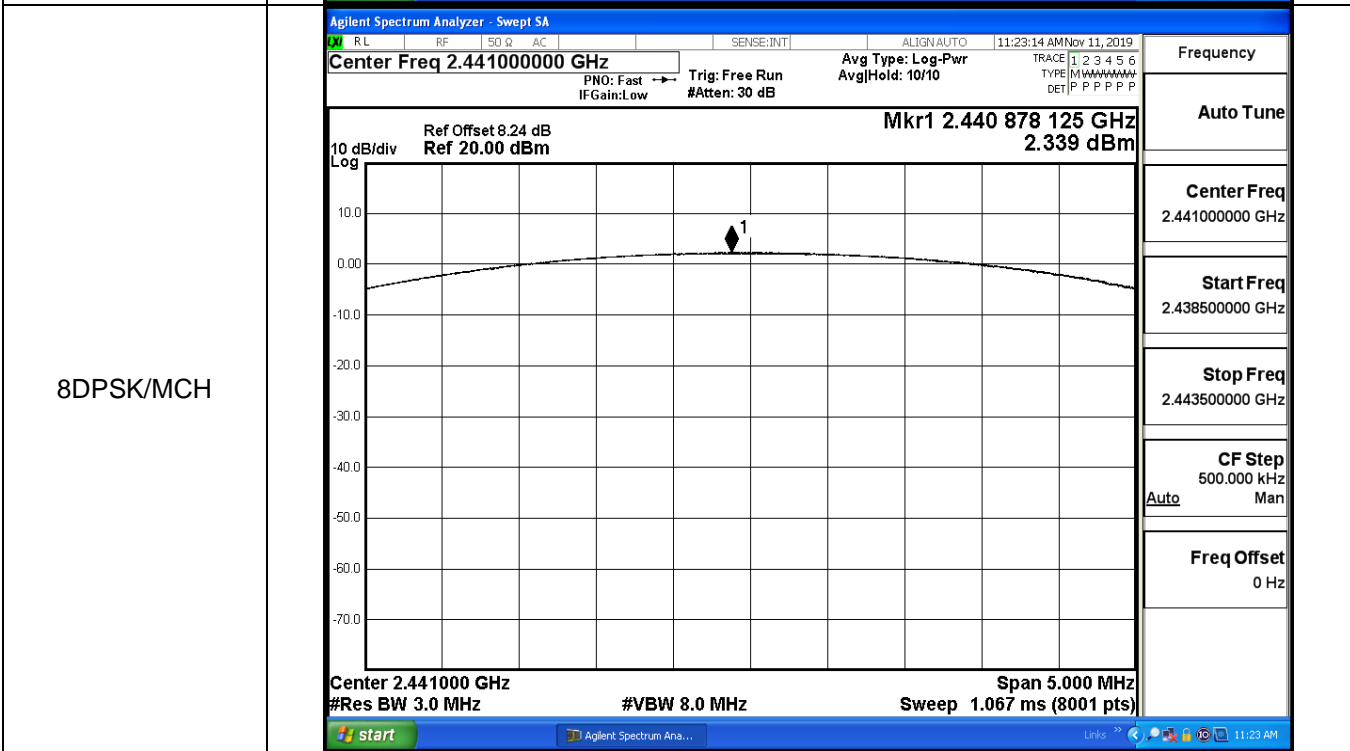
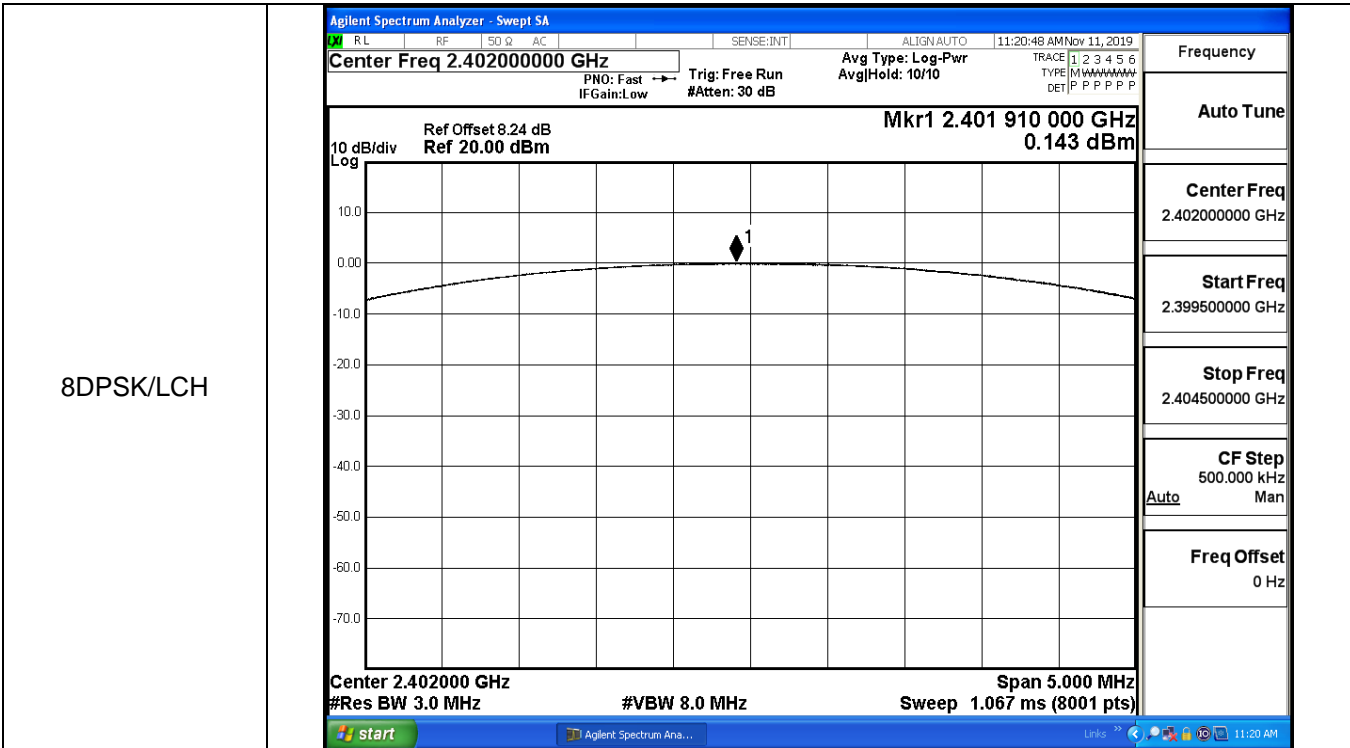
GFSK/HCH



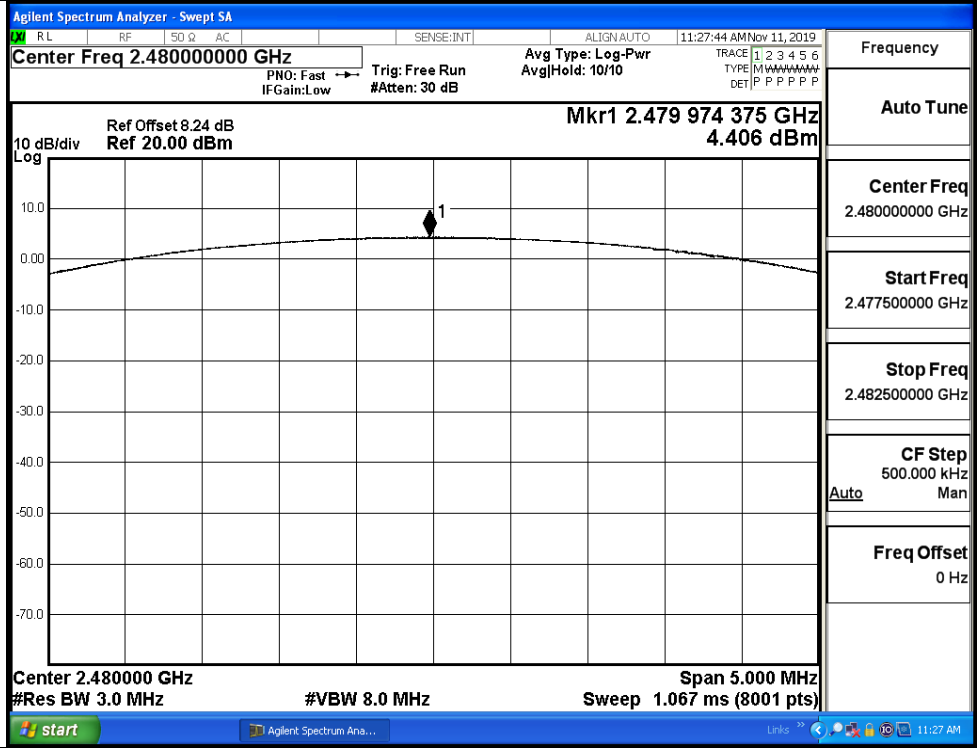
$\pi/4$ DQPSK/LCH





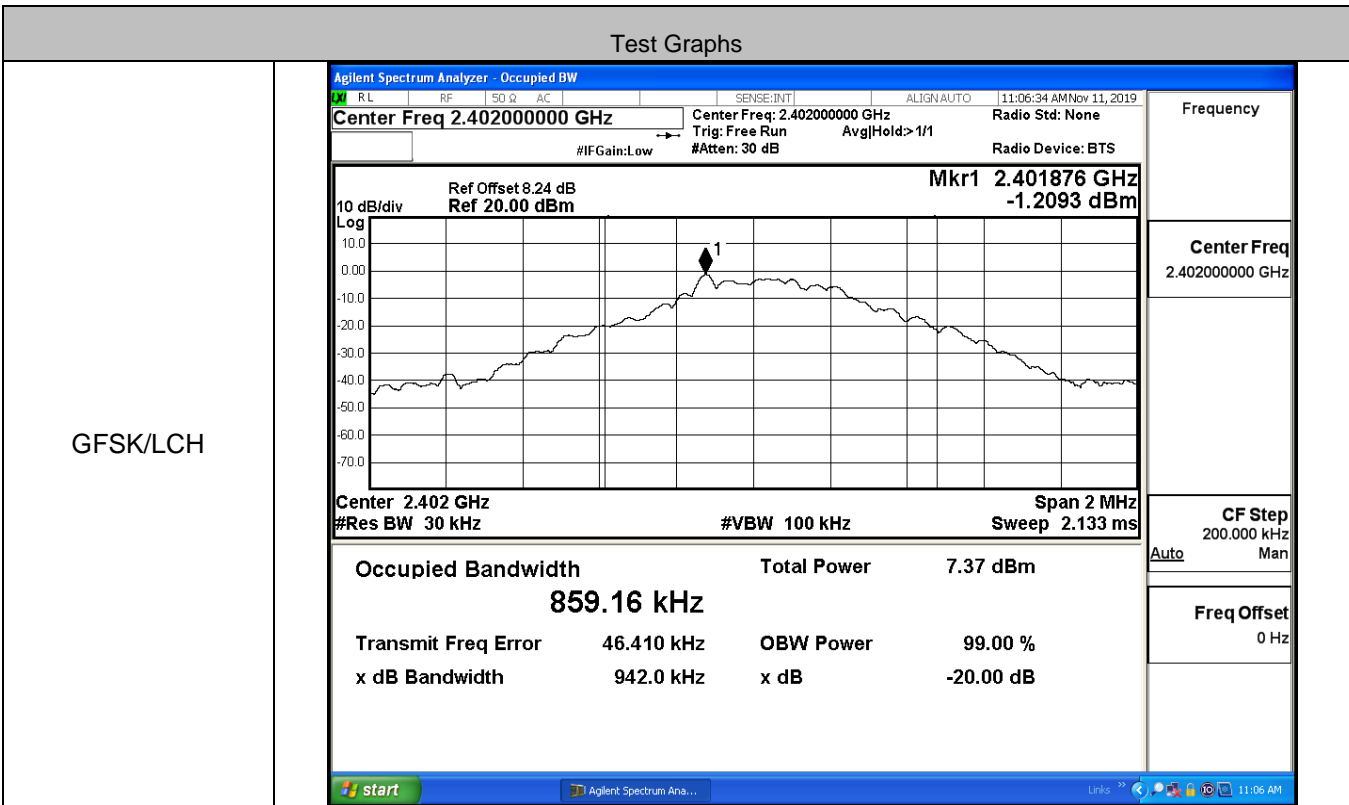


8DPSK/HCH

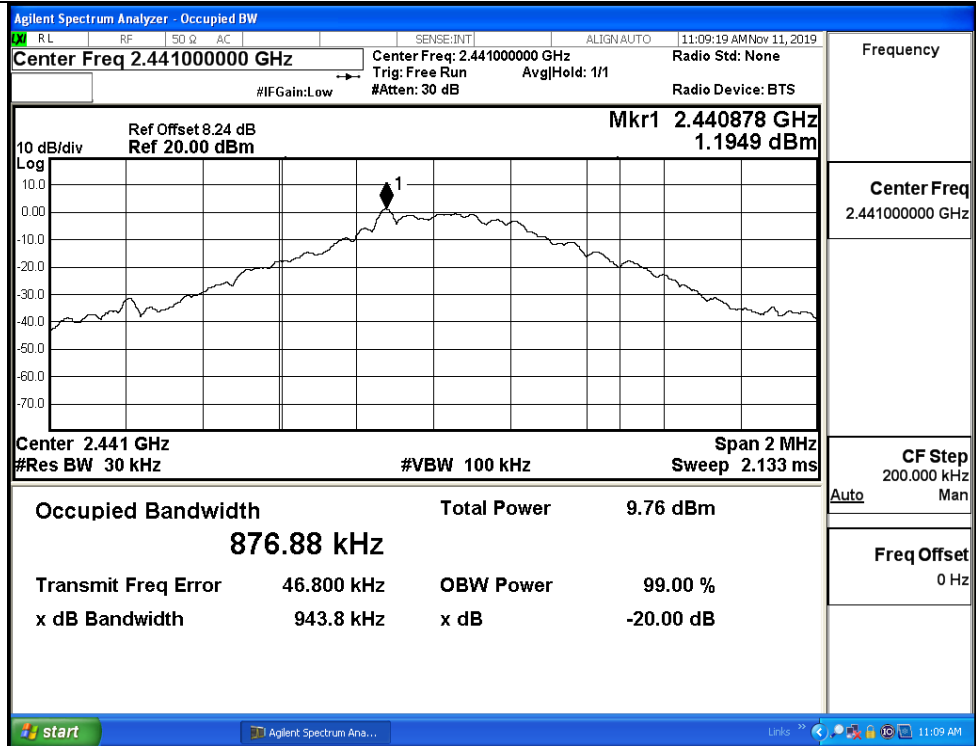


A.2 20dB Bandwidth

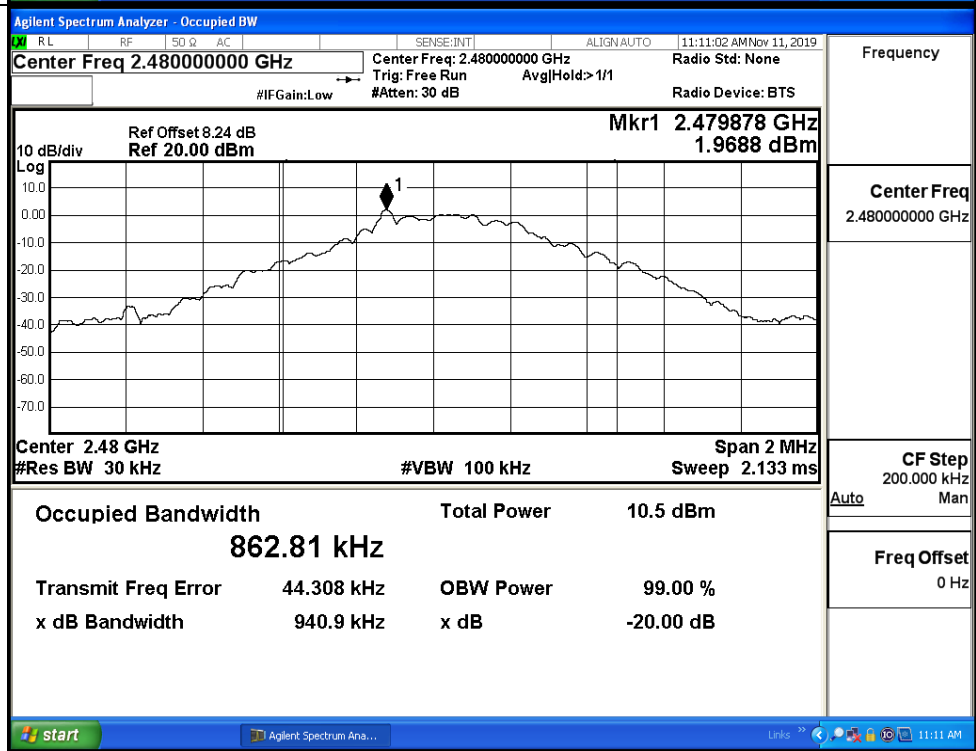
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9420	Not Specified	PASS
	MCH	0.9438	Not Specified	PASS
	HCH	0.9409	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.267	Not Specified	PASS
	MCH	1.268	Not Specified	PASS
	HCH	1.267	Not Specified	PASS
8DPSK	LCH	1.243	Not Specified	PASS
	MCH	1.249	Not Specified	PASS
	HCH	1.248	Not Specified	PASS



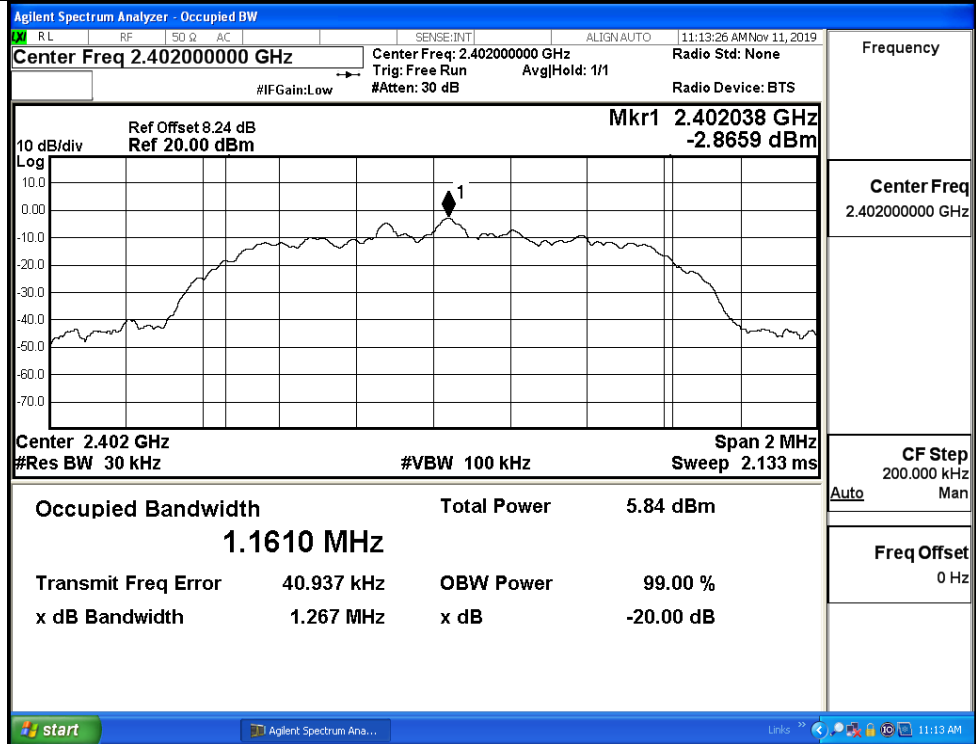
GFSK/MCH



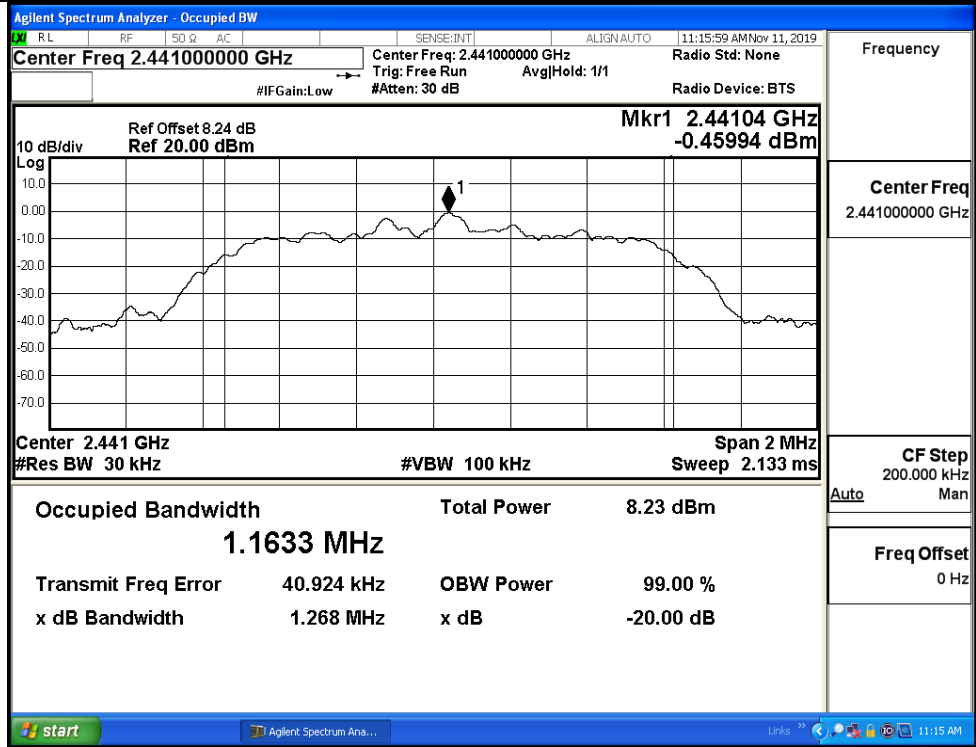
GFSK/HCH



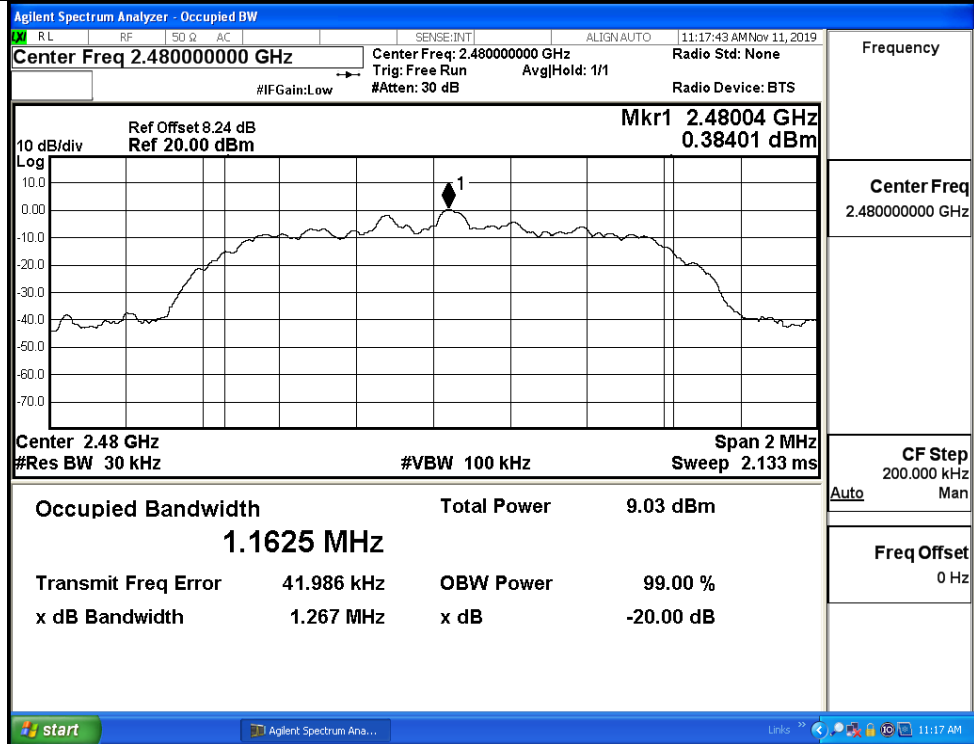
$\pi/4$ DQPSK/LCH



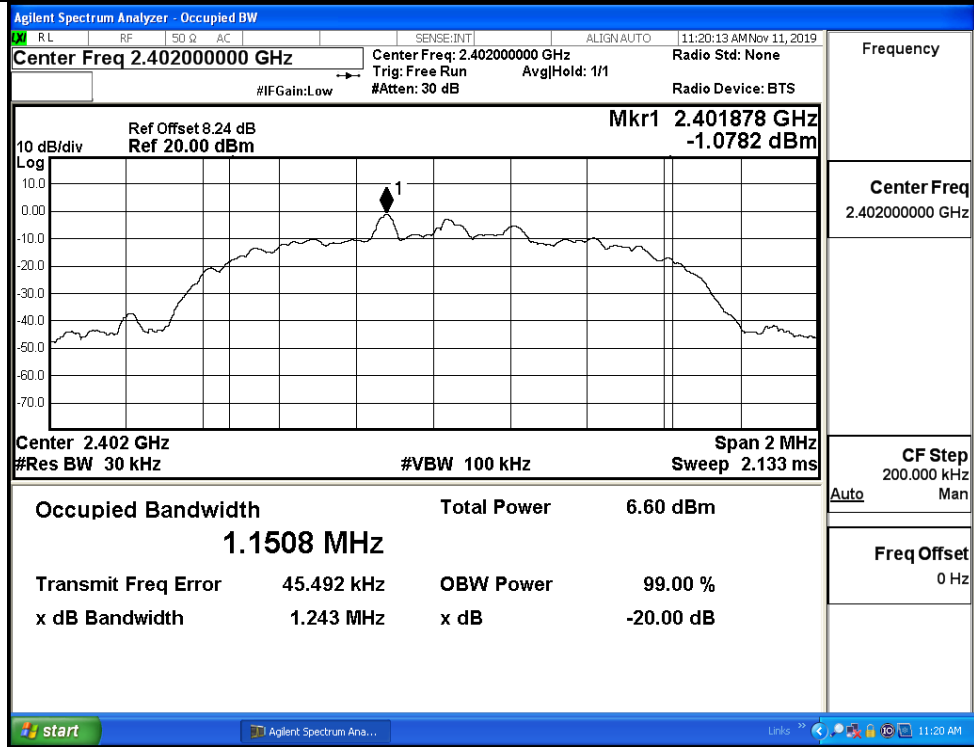
$\pi/4$ DQPSK/MCH



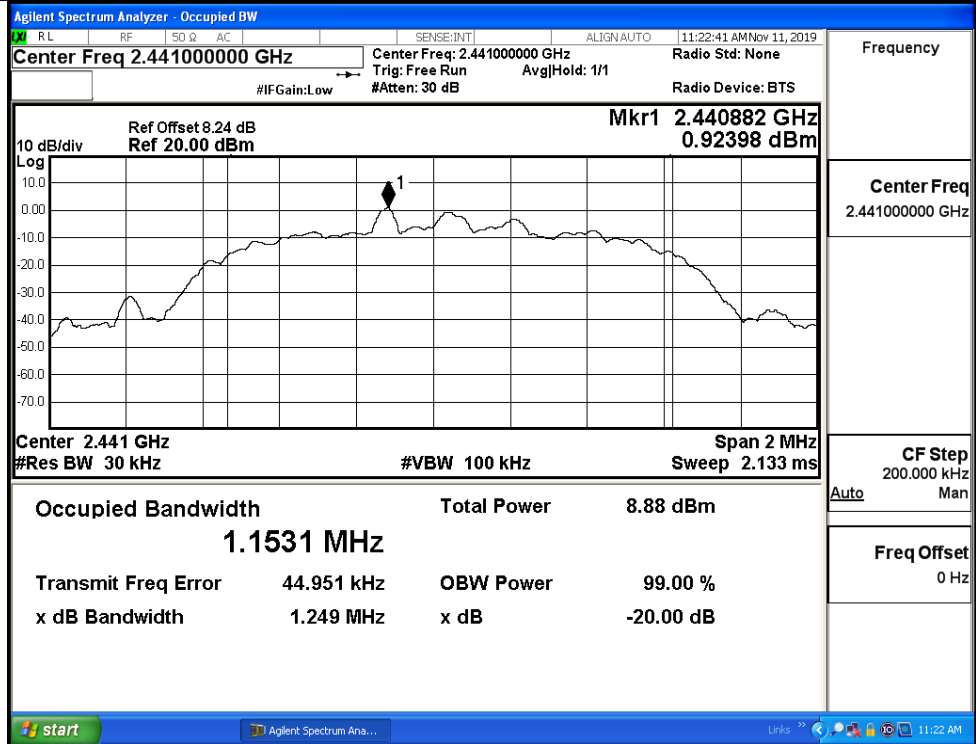
$\pi/4$ DQPSK/HCH



8DPSK/LCH



8DPSK/MCH



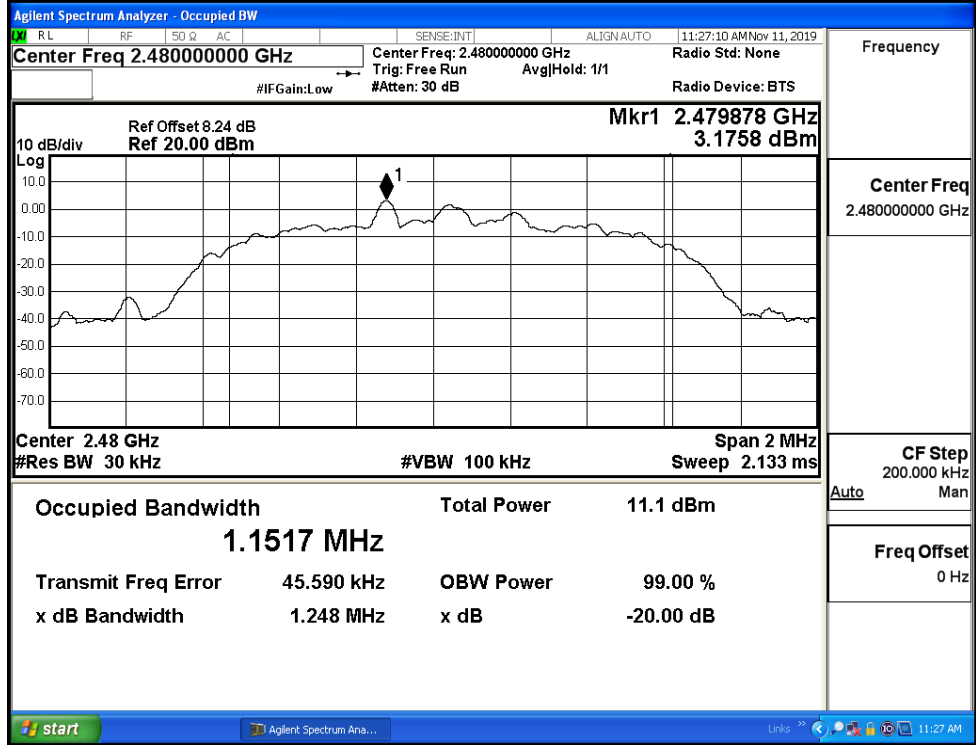
Frequency

Center Freq
2.441000000 GHz

CF Step
200.000 kHz

Freq Offset
0 Hz

8DPSK/HCH



Frequency

Center Freq
2.480000000 GHz

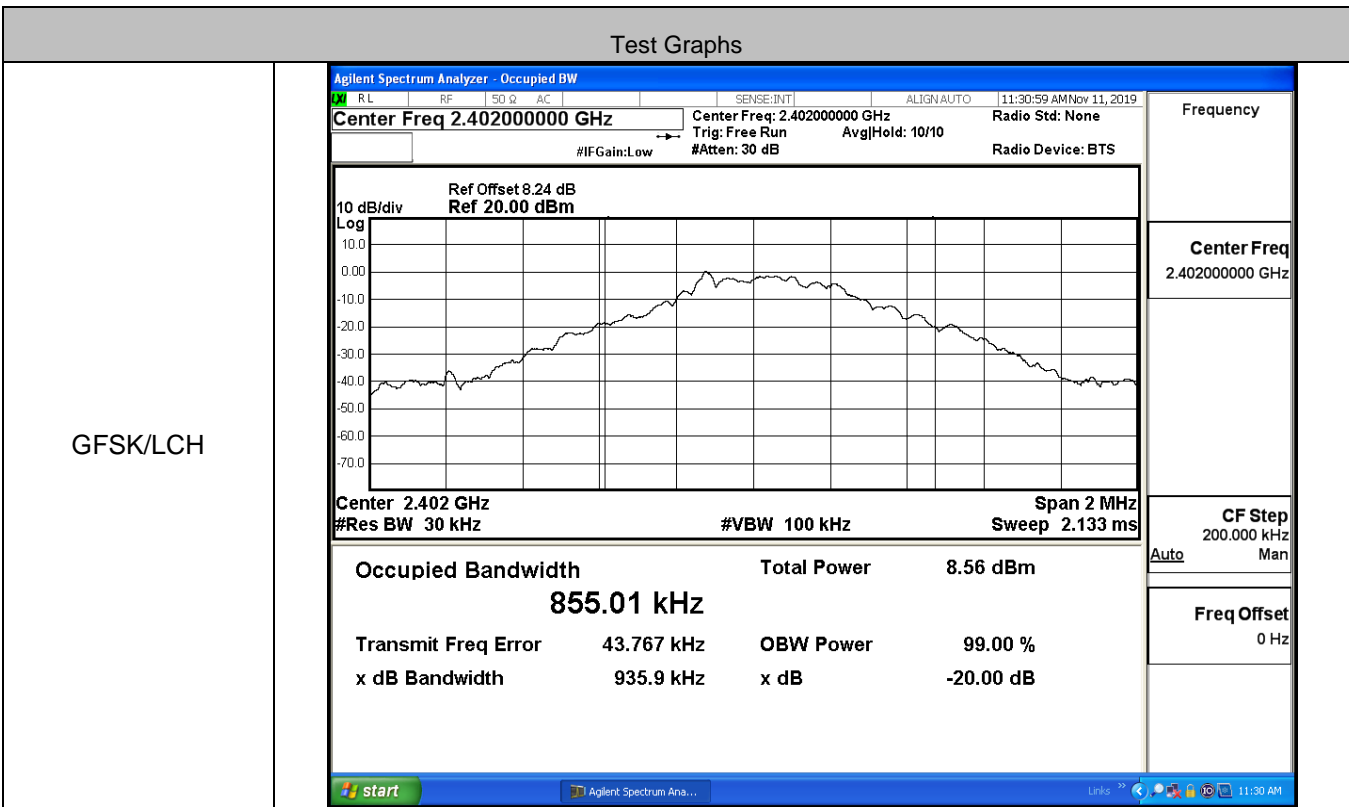
CF Step
200.000 kHz

Freq Offset
0 Hz

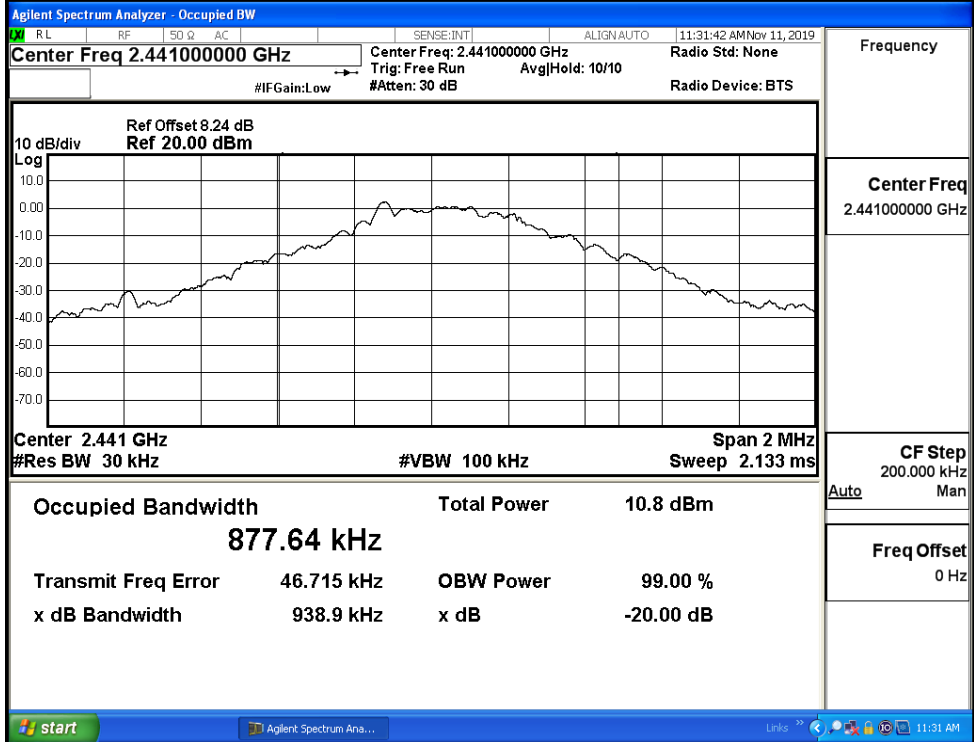
A.3 Occupied Bandwidth

Mode	Channel.	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.85501	Not Specified	PASS
	MCH	0.87764	Not Specified	PASS
	HCH	0.86242	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.1614	Not Specified	PASS
	MCH	1.1657	Not Specified	PASS
	HCH	1.1650	Not Specified	PASS
8DPSK	LCH	1.1576	Not Specified	PASS
	MCH	1.1518	Not Specified	PASS
	HCH	1.1560	Not Specified	PASS

Test Graphs



GFSK/MCH



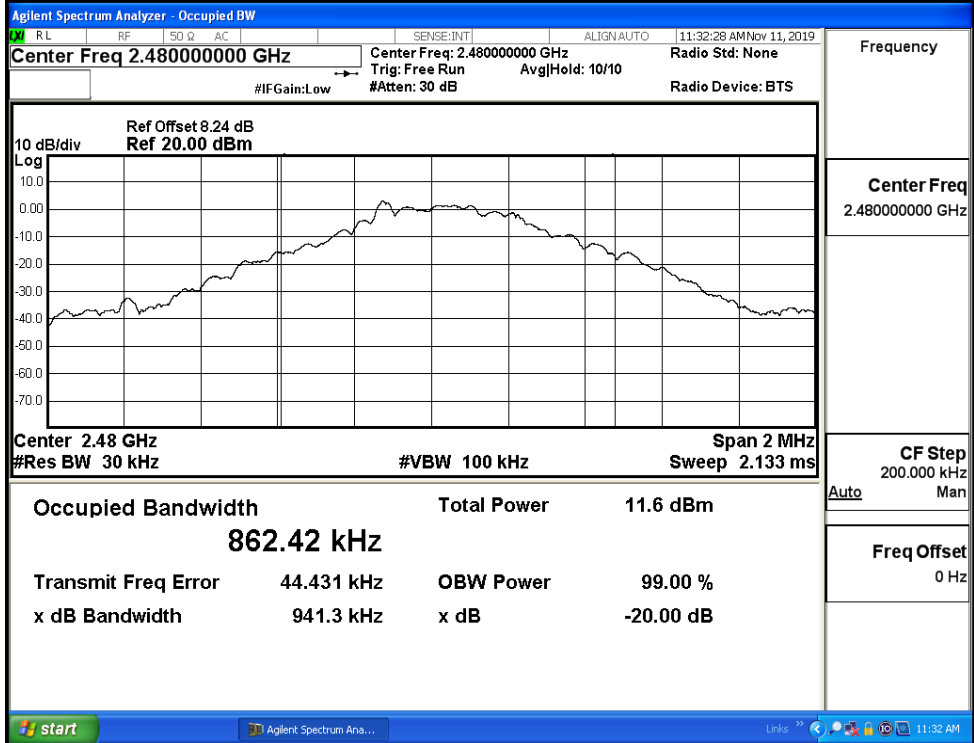
Frequency

Center Freq
2.441000000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

GFSK/HCH



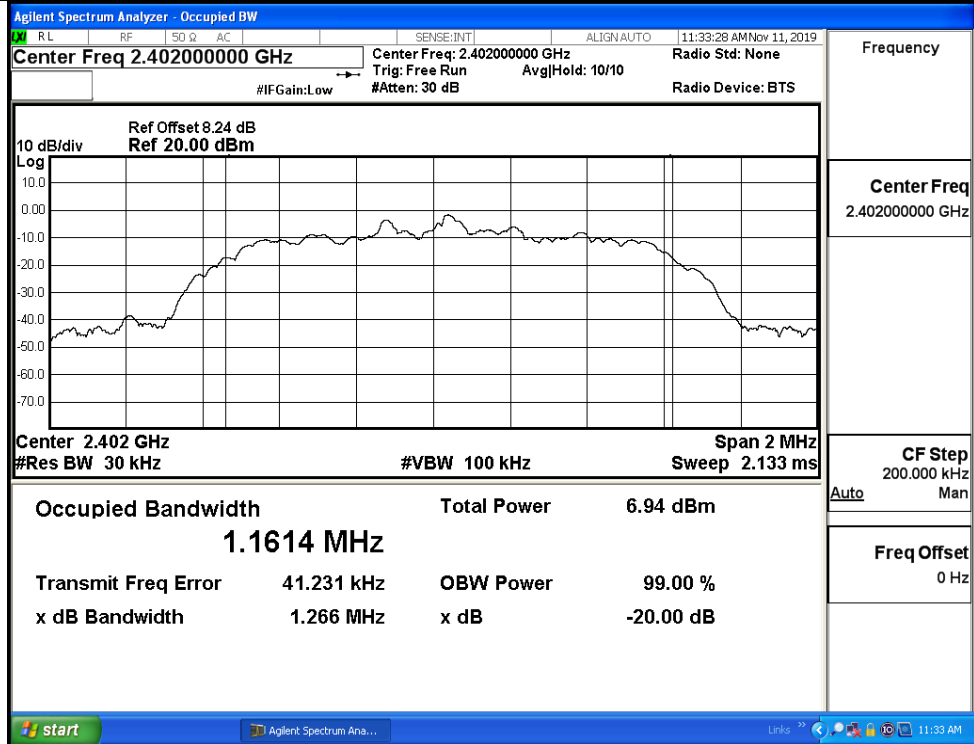
Frequency

Center Freq
2.480000000 GHz

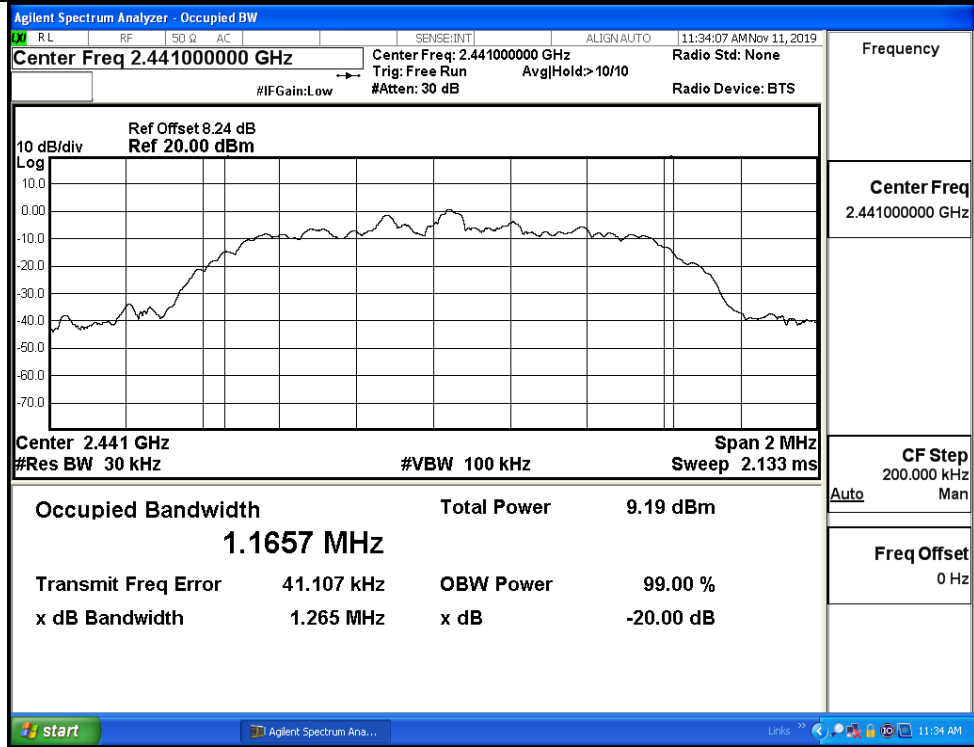
CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

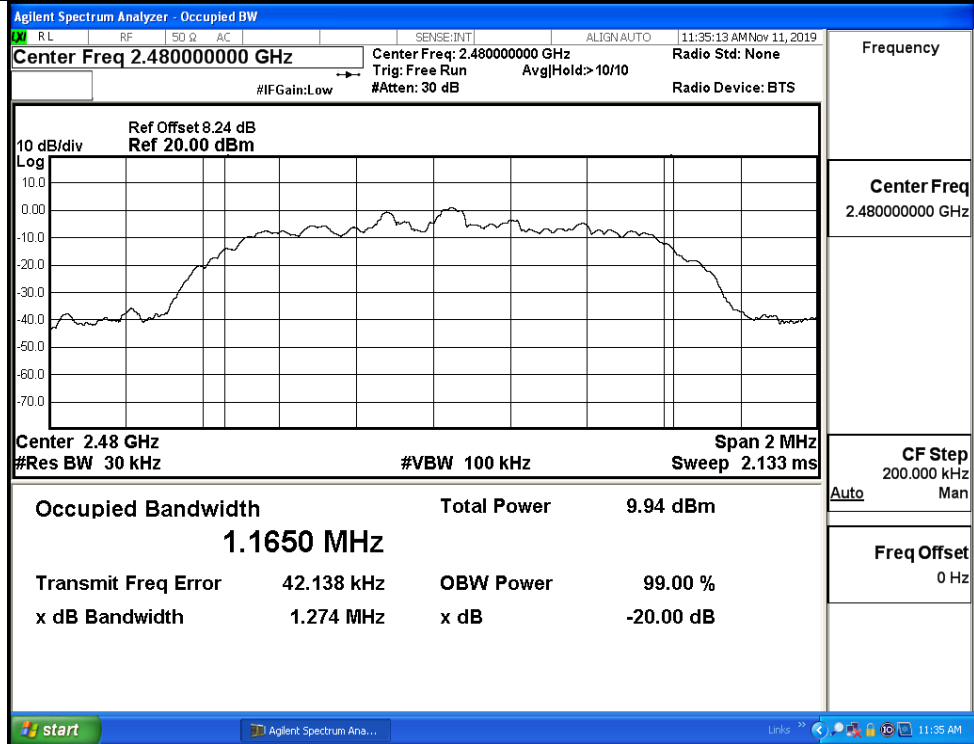
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH

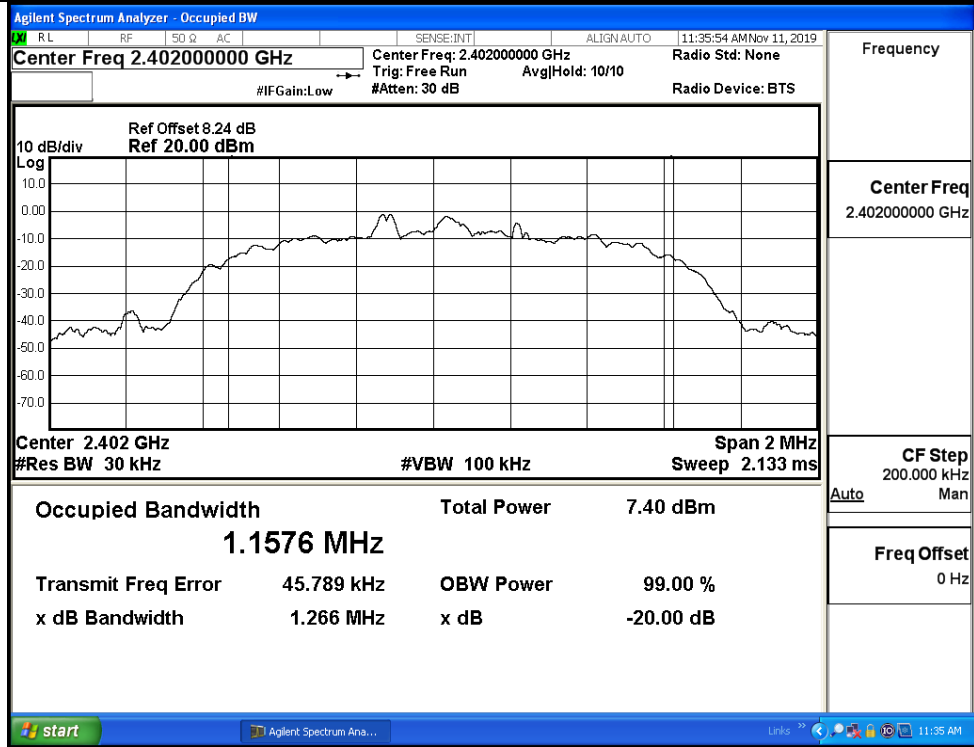


$\pi/4$ DQPSK/HCH

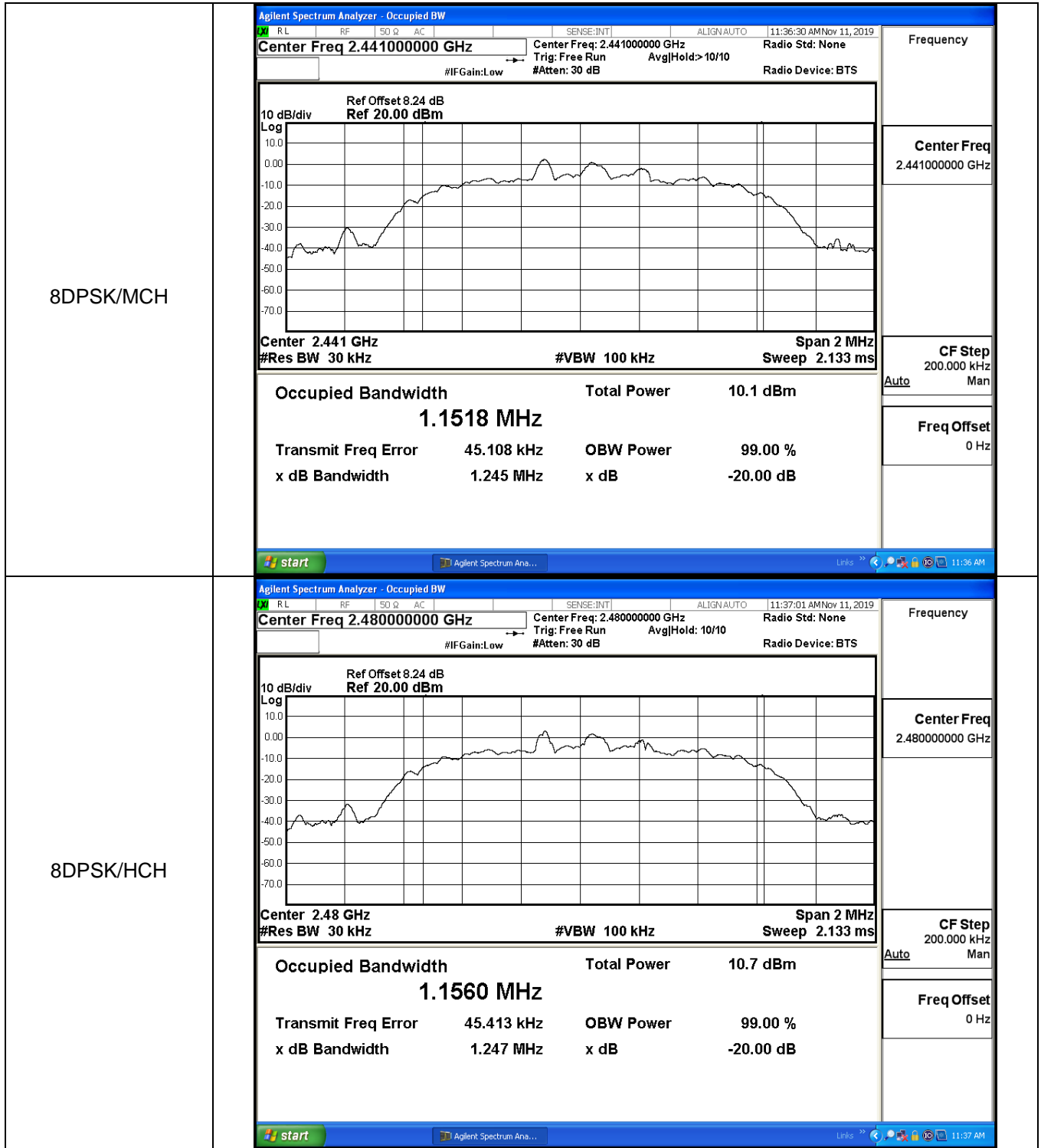


Frequency
Center Freq
2.48000000 GHz
CF Step
200.000 kHz
Auto
Man
Freq Offset
0 Hz

8DPSK/LCH



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



A.4 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.031	0.629	PASS
	MCH	0.970	0.629	PASS
	HCH	0.992	0.629	PASS
$\pi/4$ DQPSK	LCH	1.164	0.845	PASS
	MCH	1.158	0.845	PASS

	HCH	1.072	0.845	PASS
8DPSK	LCH	0.964	0.833	PASS
	MCH	0.960	0.833	PASS
	HCH	1.082	0.833	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

Freq Offset
0 Hz

GFSK/MCH

Frequency

Auto Tune

Center Freq
2.441500000 GHz

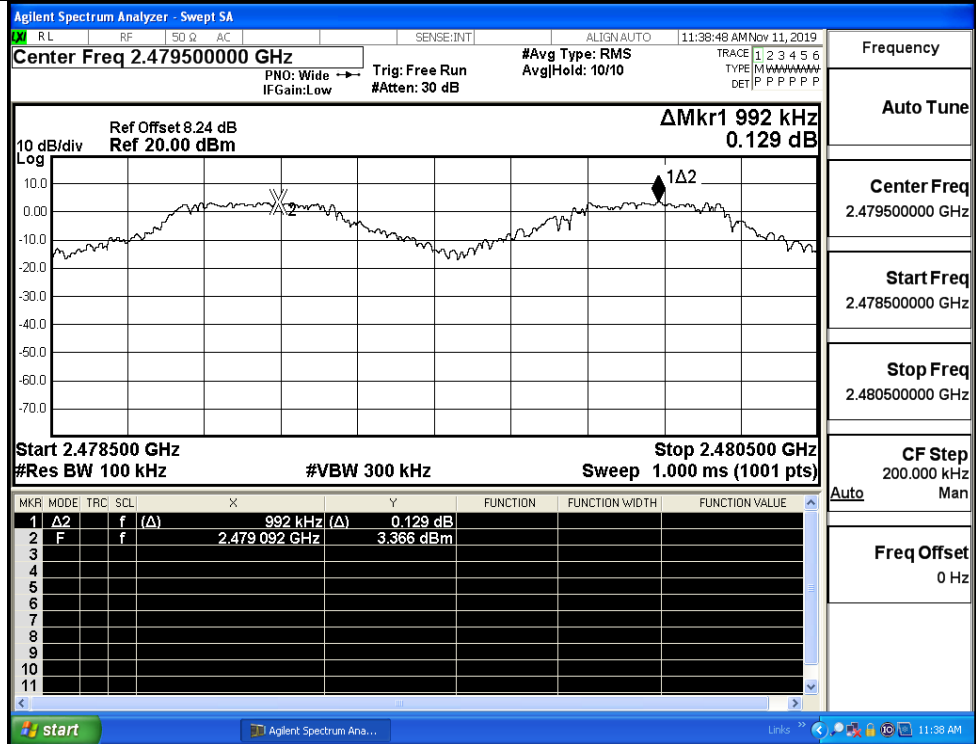
Start Freq
2.440500000 GHz

Stop Freq
2.442500000 GHz

CF Step
200.000 kHz

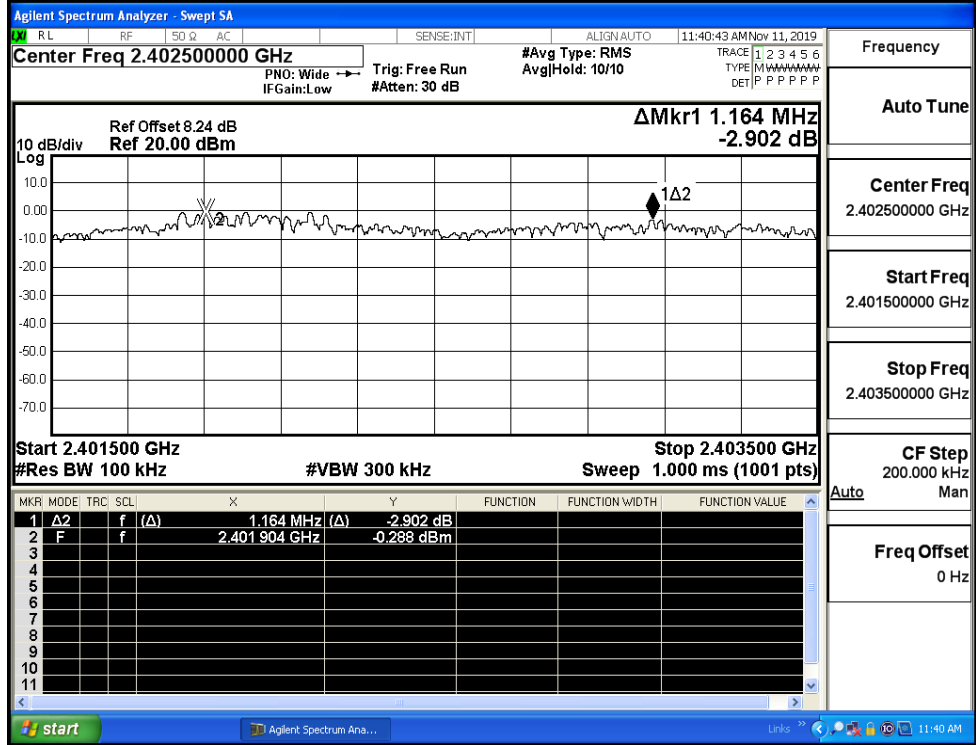
Freq Offset
0 Hz

GFSK/HCH



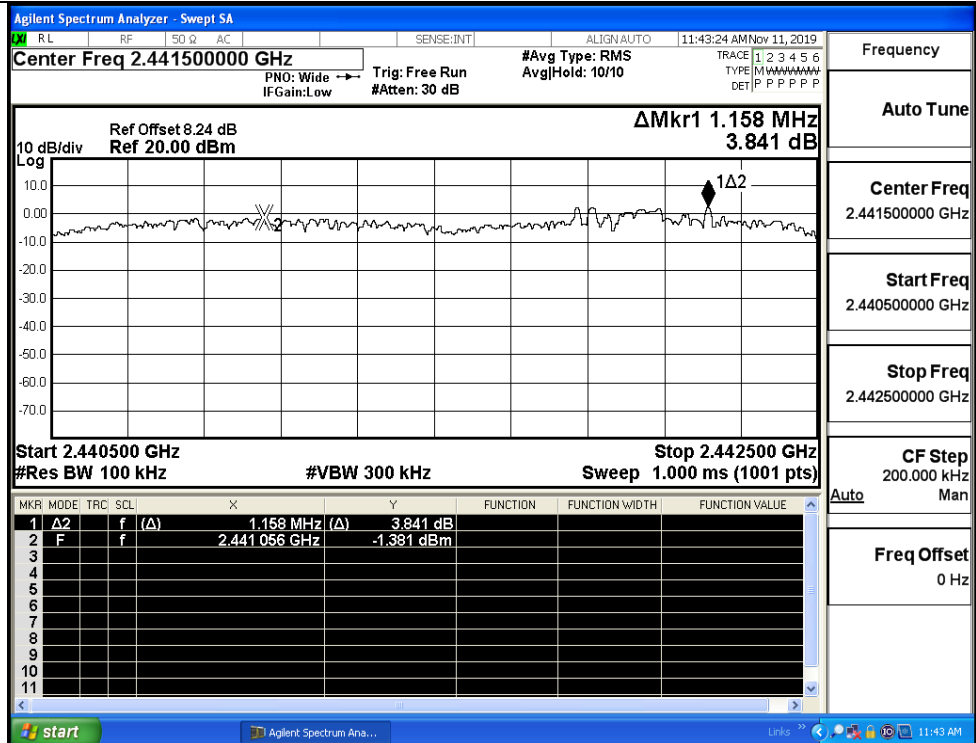
Frequency
Auto Tune
Center Freq
2.479500000 GHz
Start Freq
2.478500000 GHz
Stop Freq
2.480500000 GHz
CF Step
200.000 kHz
Auto
Man
Freq Offset
0 Hz

π/4DQPSK/LCH

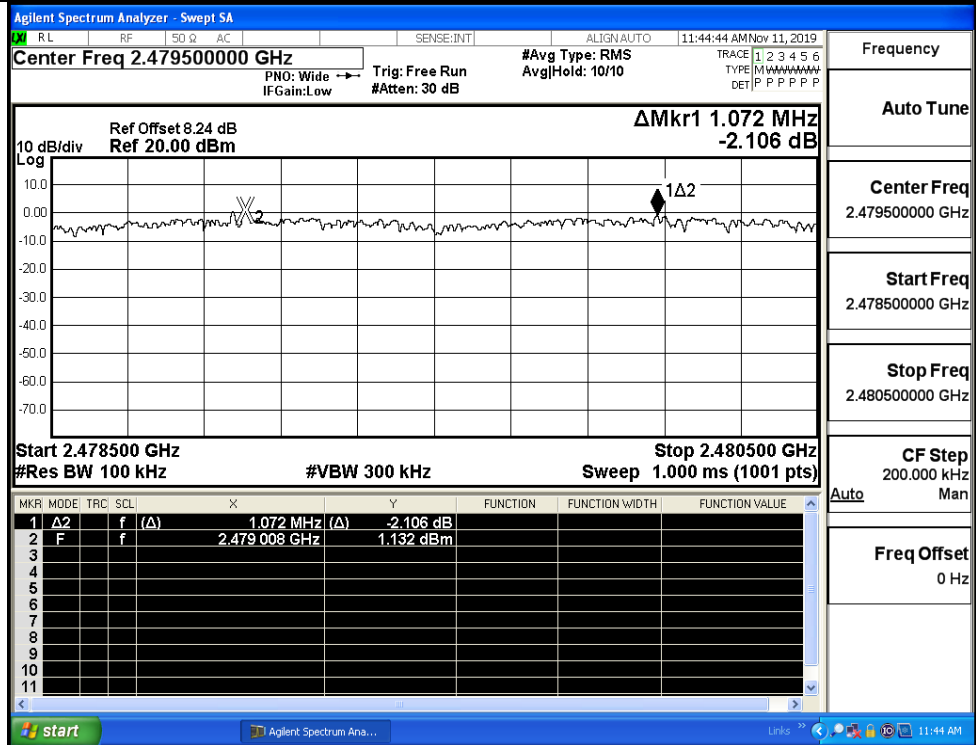


Frequency
Auto Tune
Center Freq
2.402500000 GHz
Start Freq
2.401500000 GHz
Stop Freq
2.403500000 GHz
CF Step
200.000 kHz
Auto
Man
Freq Offset
0 Hz

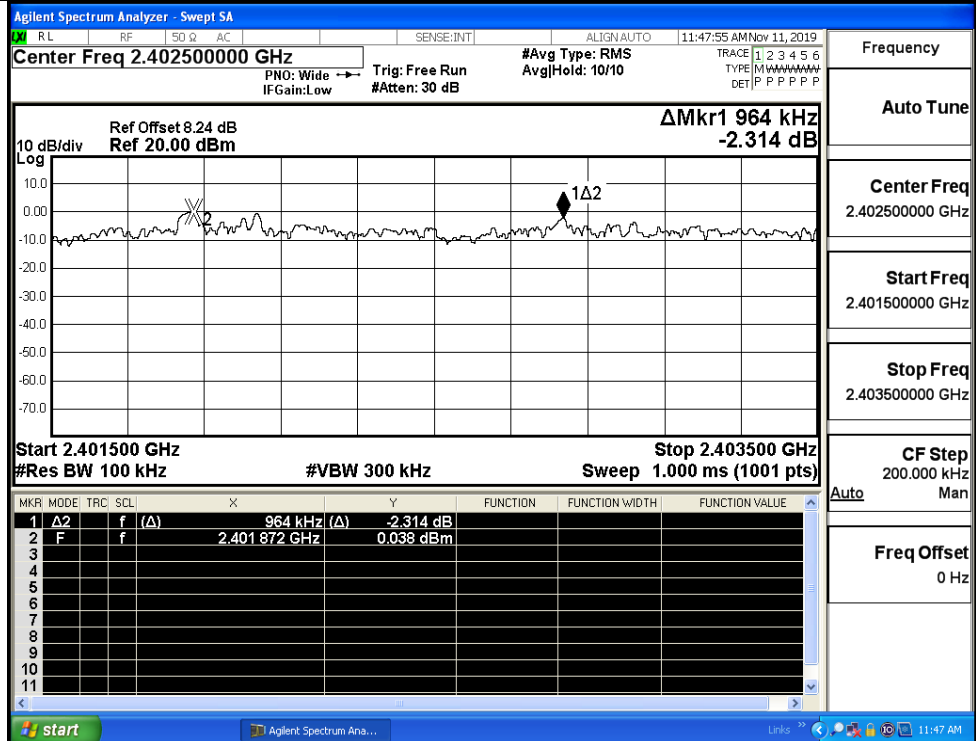
$\pi/4$ DQPSK/MCH



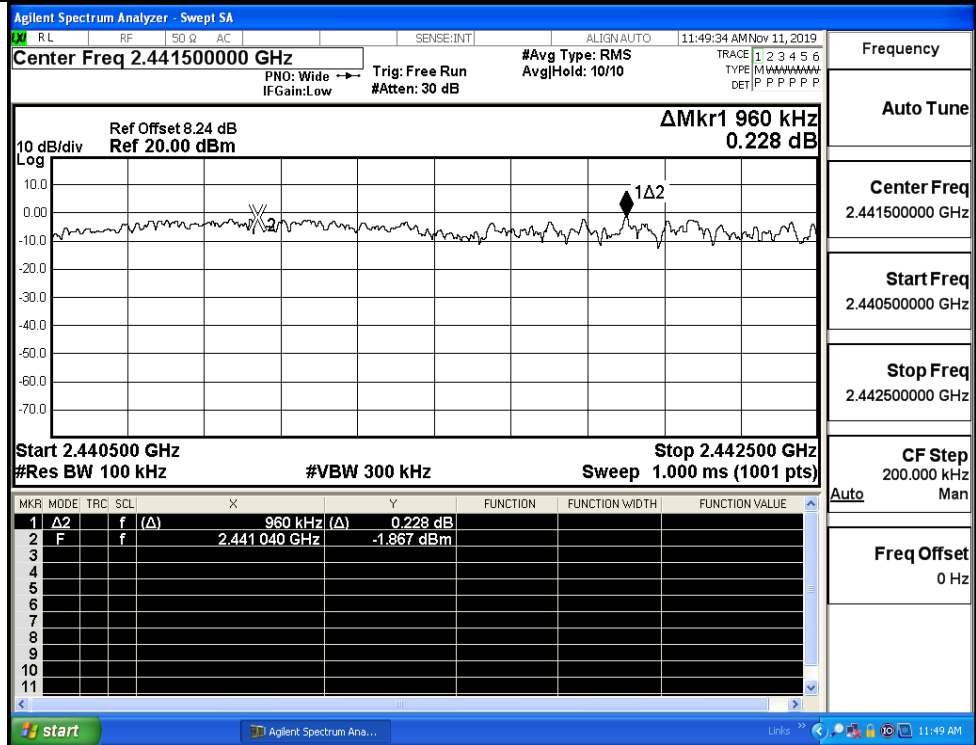
$\pi/4$ DQPSK/HCH



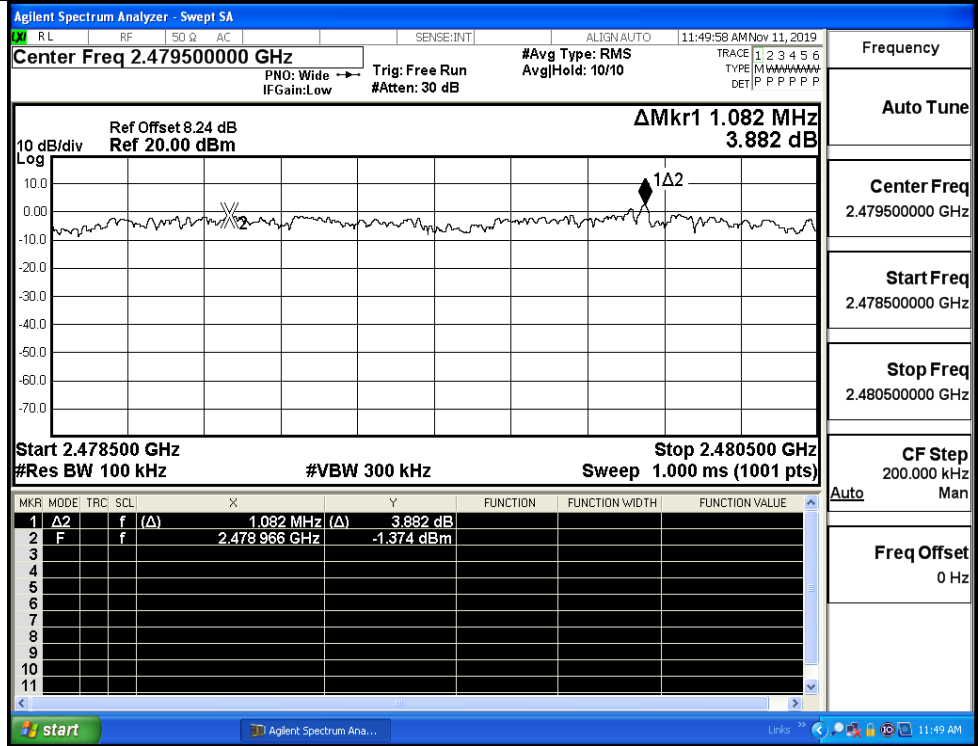
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

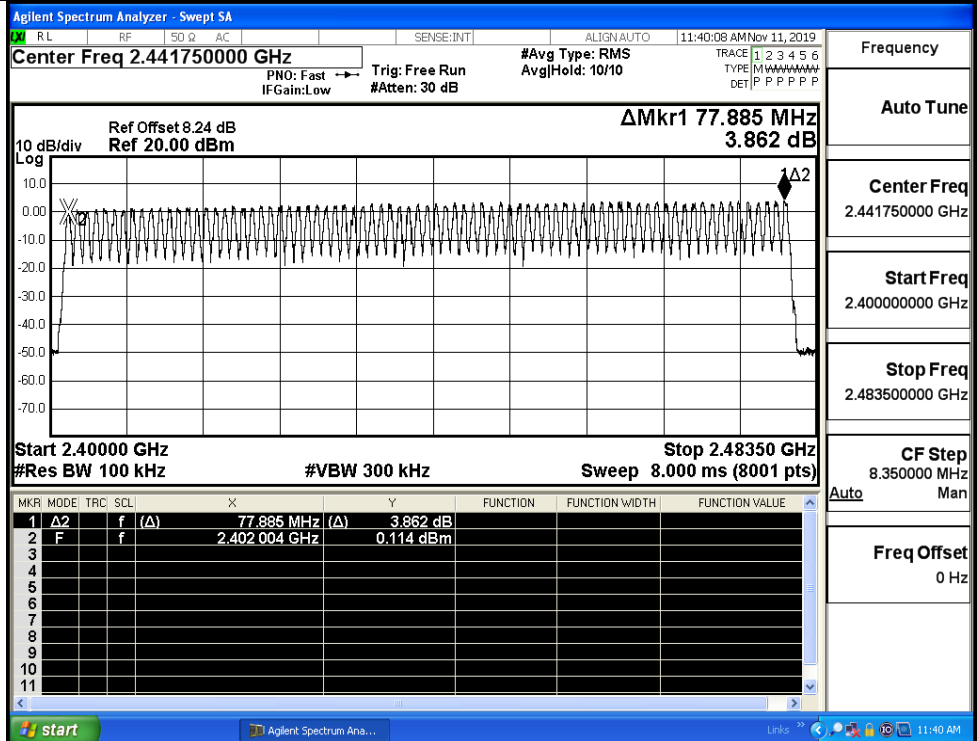


A.5 Hopping Channel Number

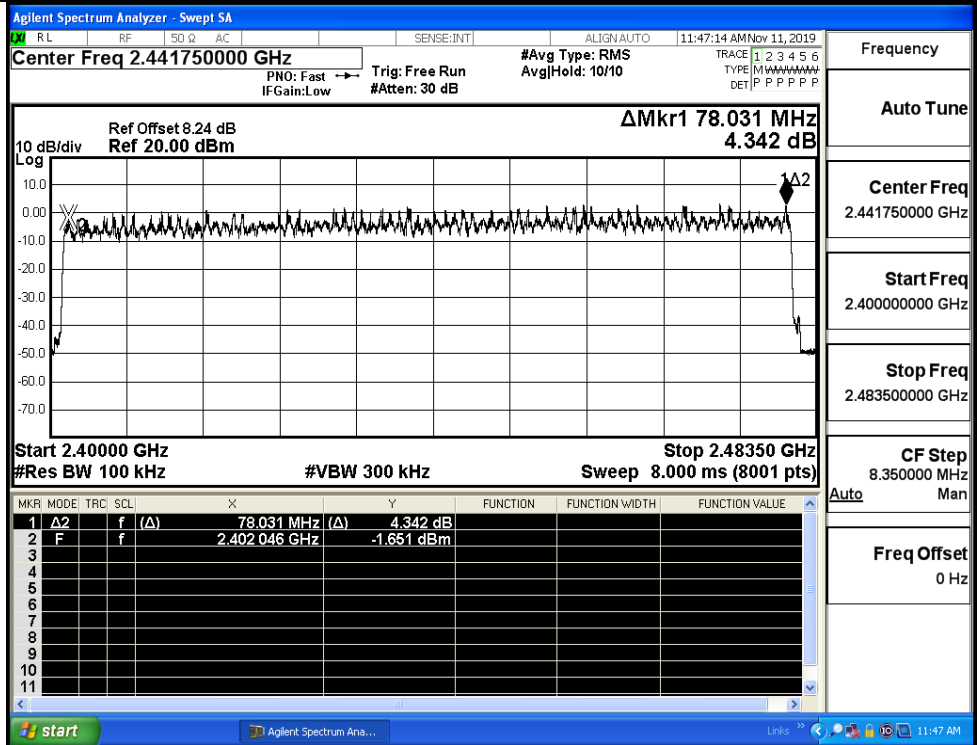
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graphs

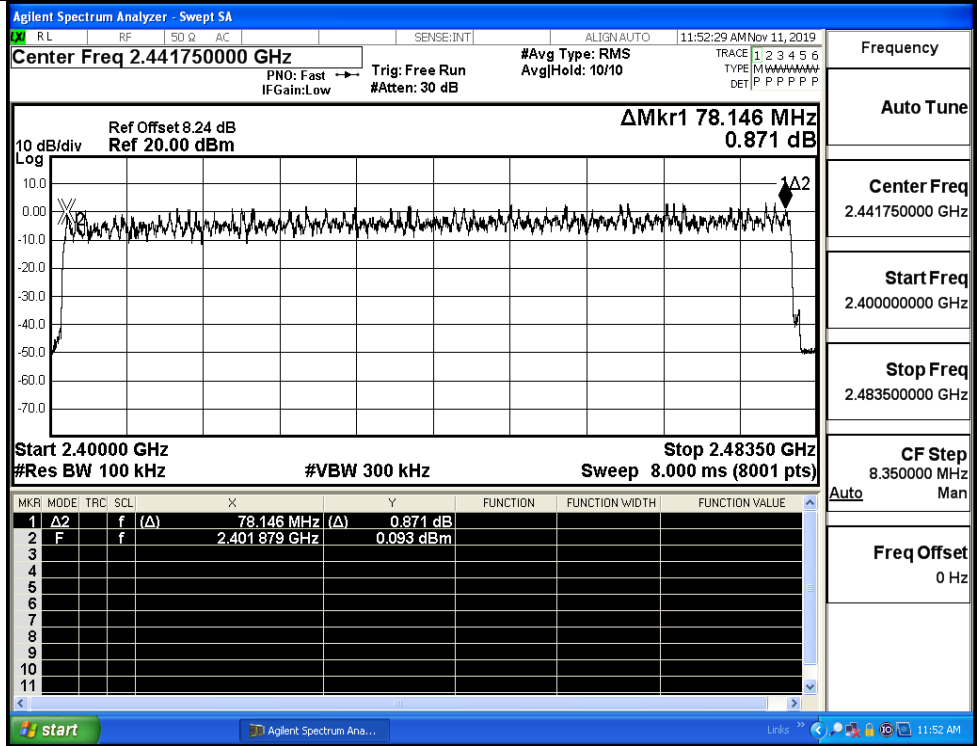
GFSK/Hop



π /4DQPSK/Hop

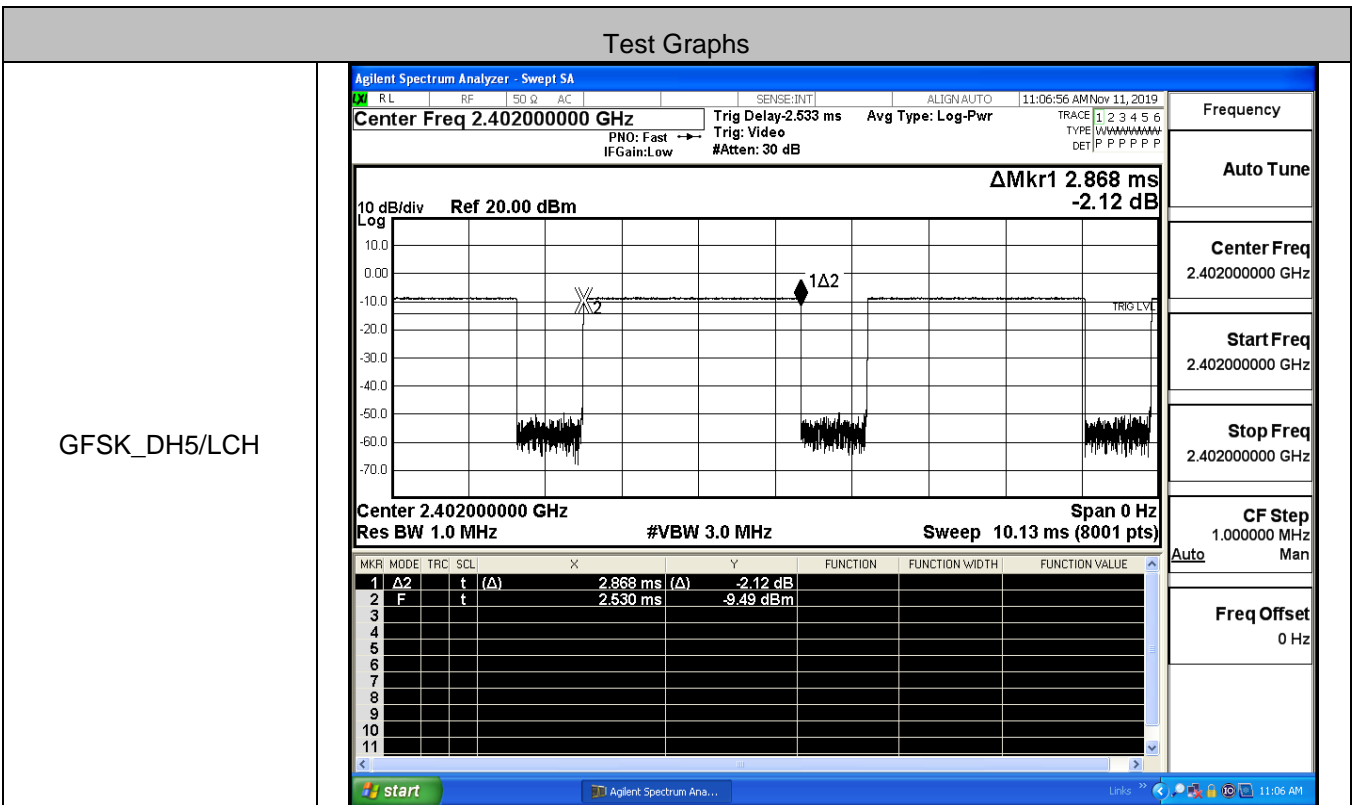


8DPSK/Hop

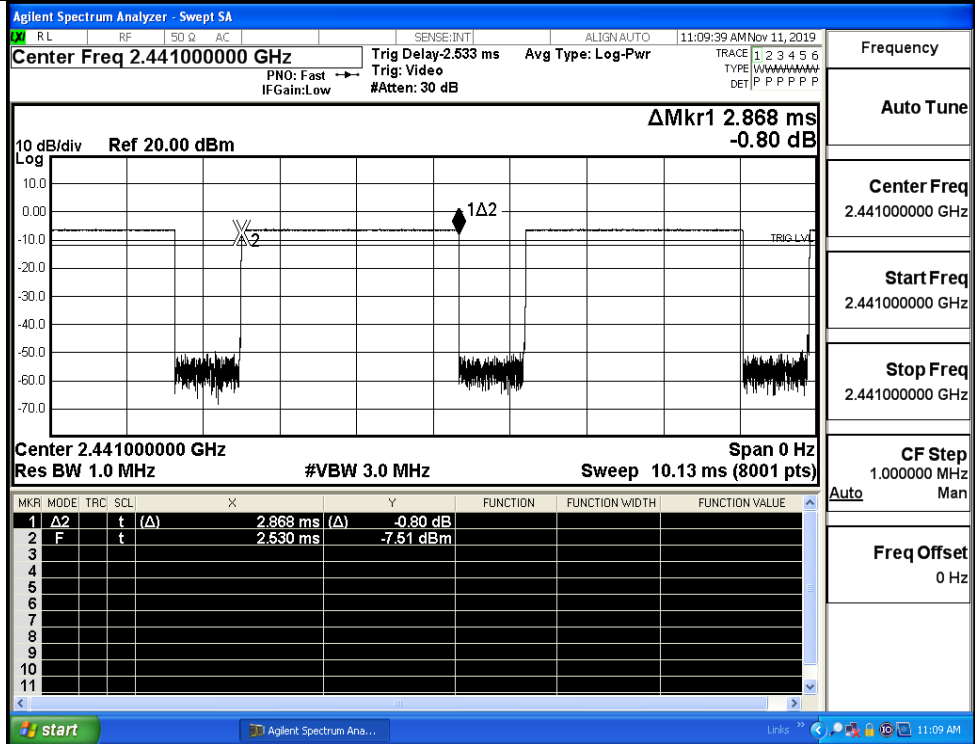


A.6 Dwell Time

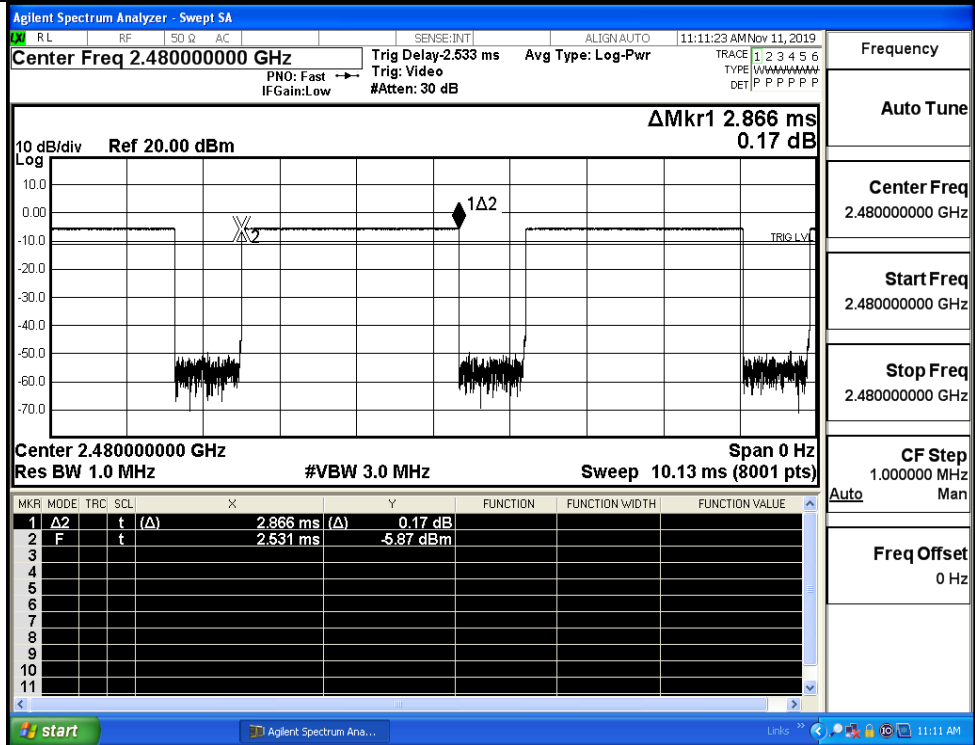
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.87	106.7	0.306	0.4	PASS
	DH5	MCH	2.87	106.7	0.306	0.4	PASS
	DH5	HCH	2.87	106.7	0.306	0.4	PASS
π/4DQPSK	2DH5	LCH	2.87	106.7	0.307	0.4	PASS
	2DH5	MCH	2.87	106.7	0.307	0.4	PASS
	2DH5	HCH	2.87	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.87	106.7	0.307	0.4	PASS
	3DH5	MCH	2.87	106.7	0.307	0.4	PASS
	3DH5	HCH	2.87	106.7	0.307	0.4	PASS



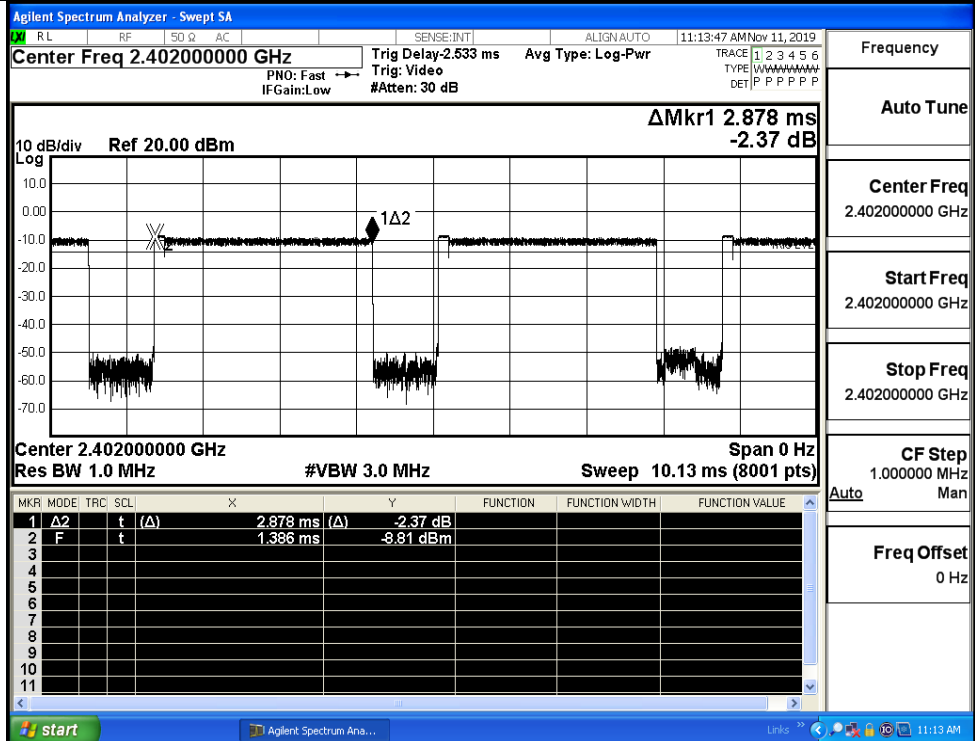
GFSK_DH5/MCH



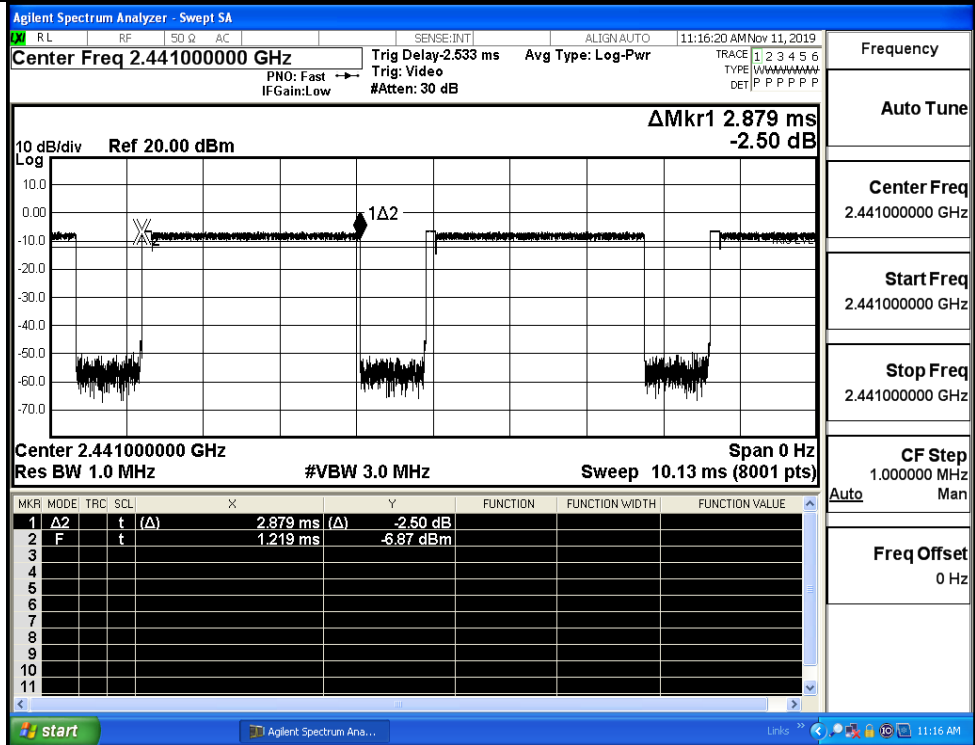
GFSK_DH5/HCH



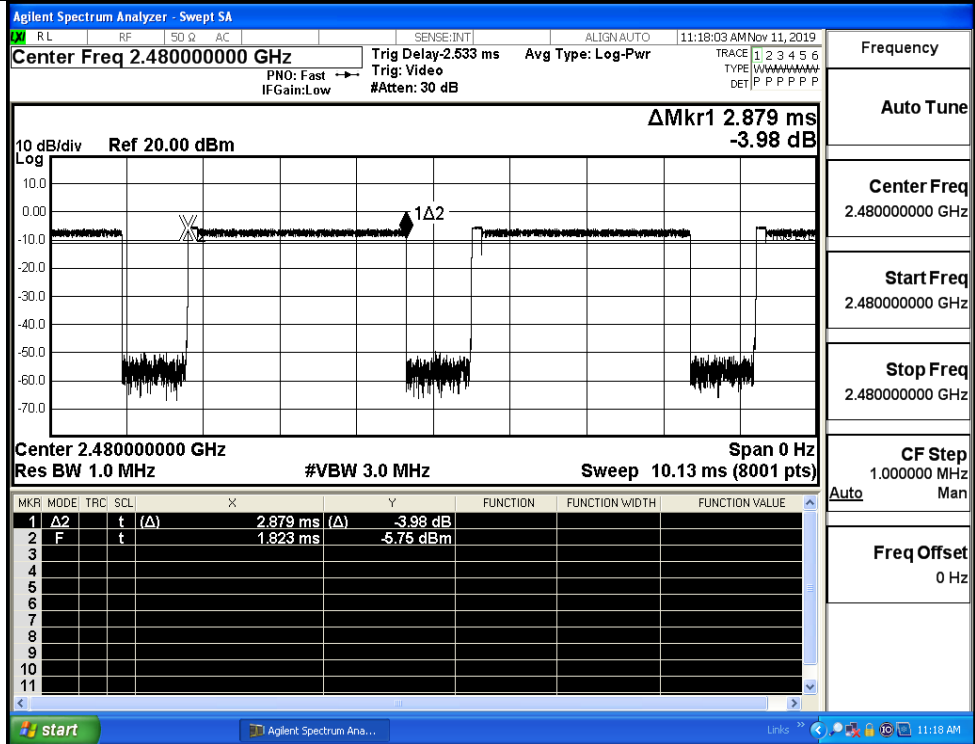
$\pi/4$ DQPSK
_2DH5/LCH



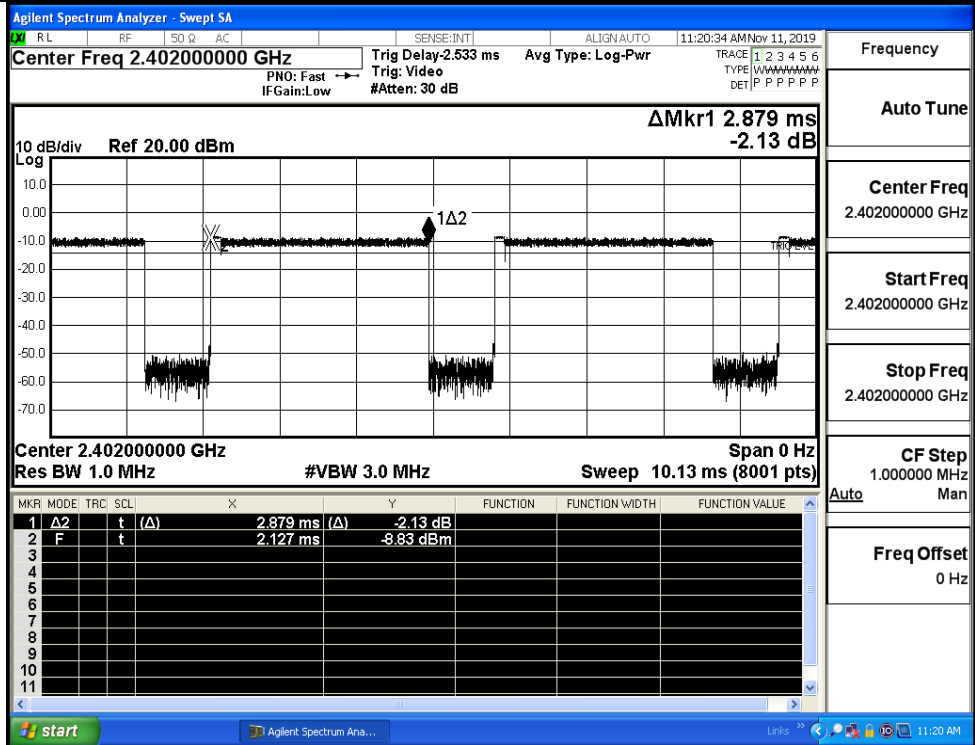
$\pi/4$ DQPSK
_2DH5/MCH



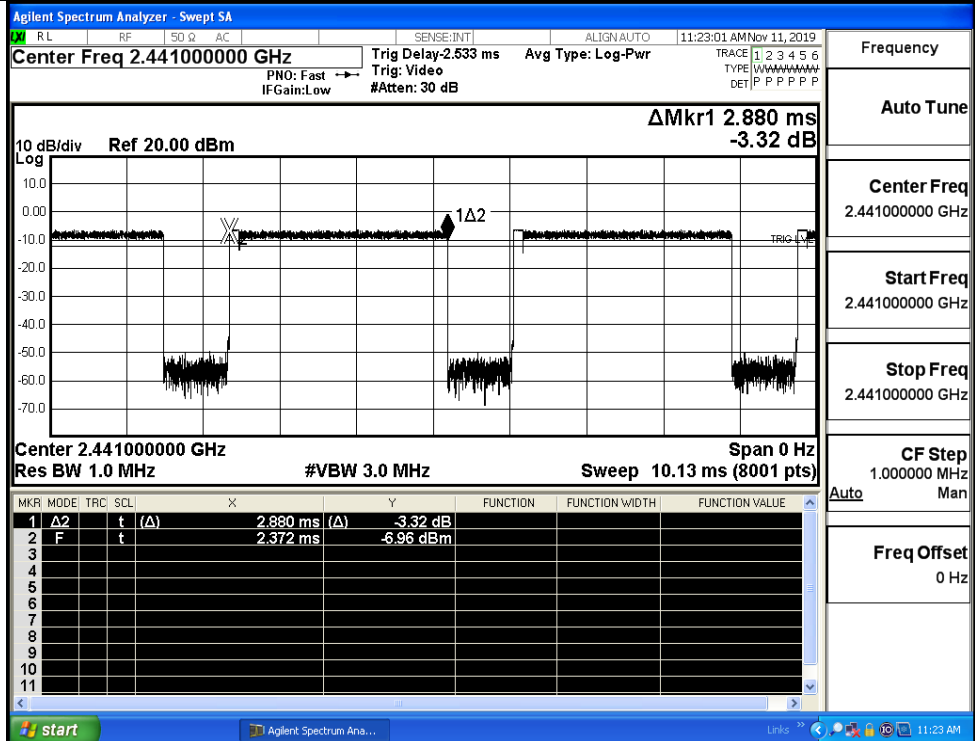
$\pi/4$ DQPSK
_2DH5/HCH



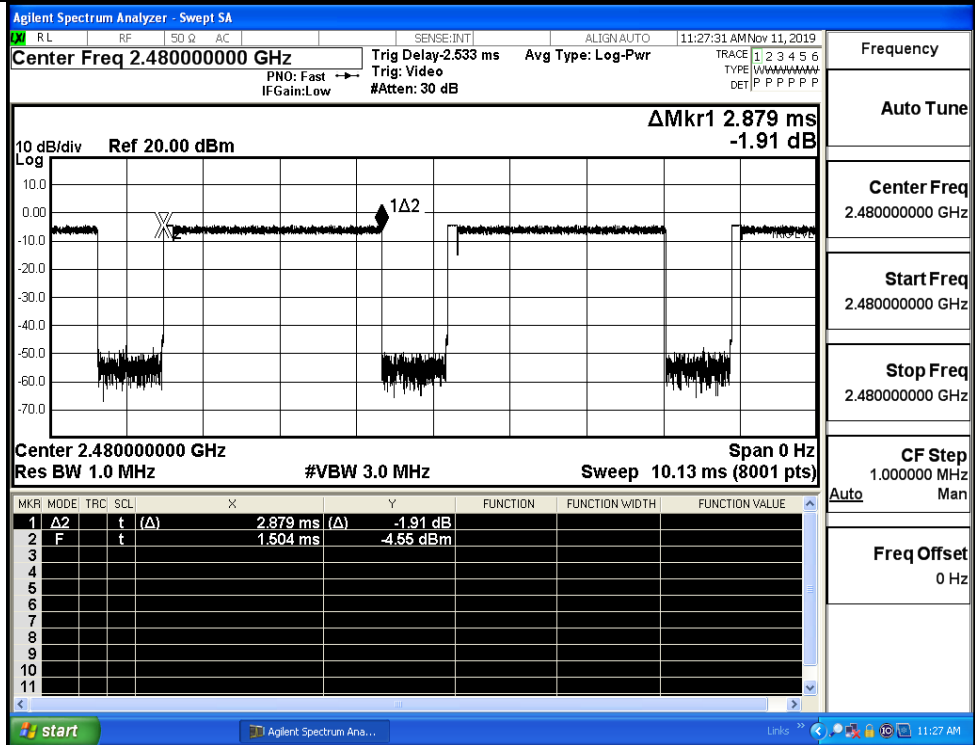
8DPSK_3DH5/LCH



8DPSK_3DH5/MCH

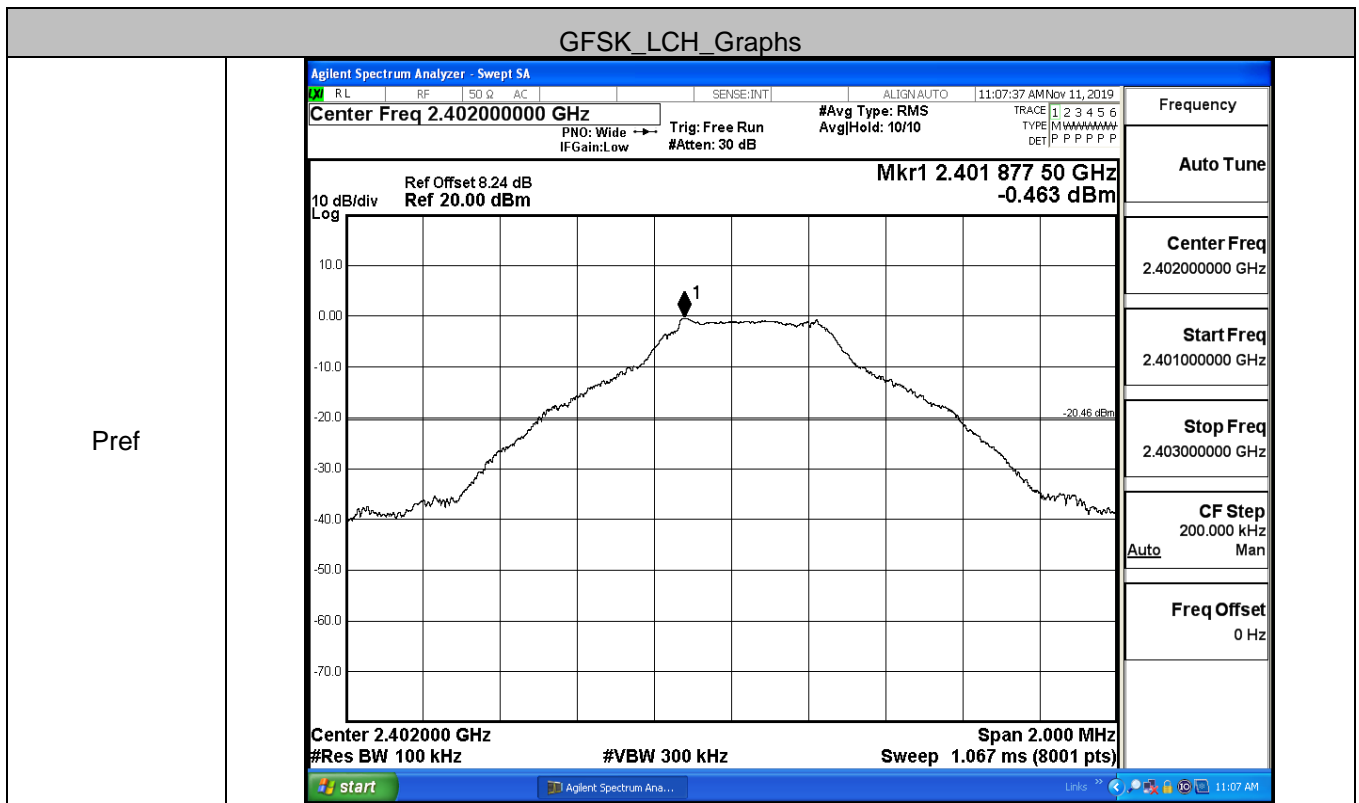


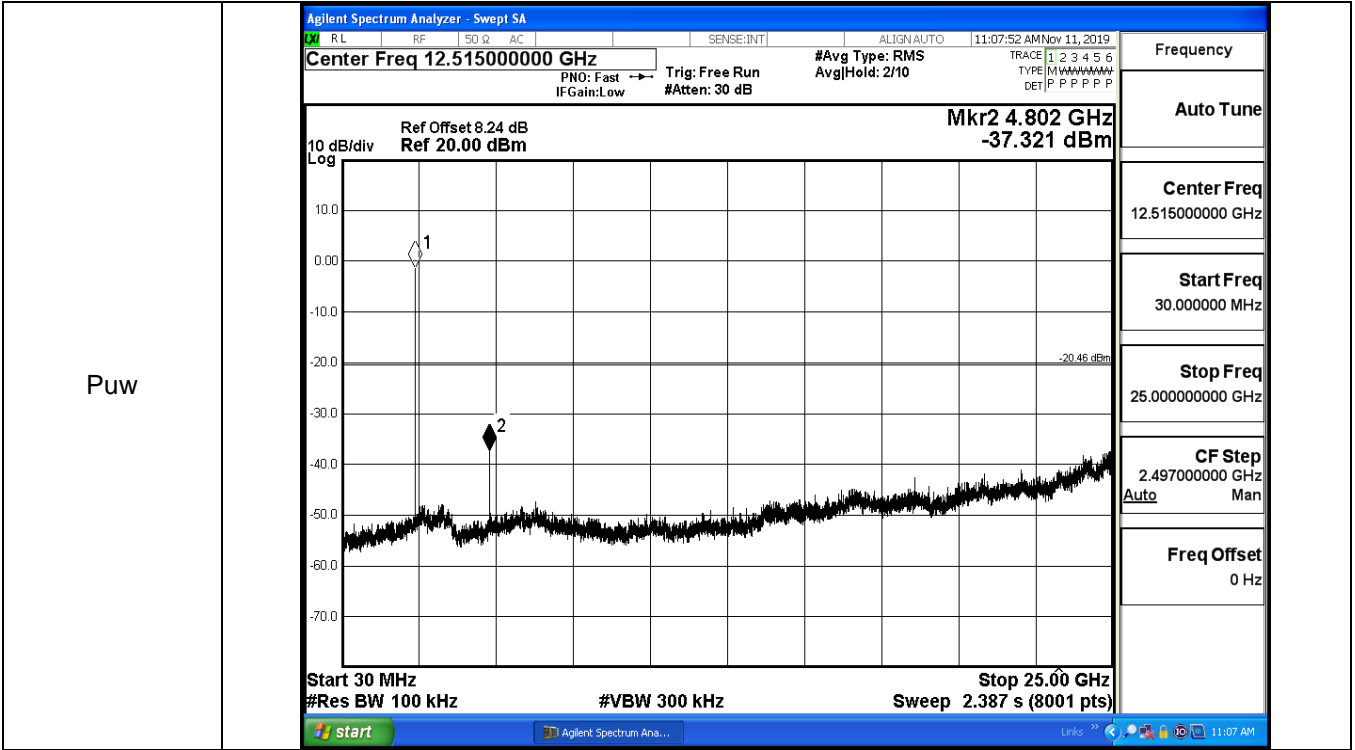
8DPSK_3DH5/HCH



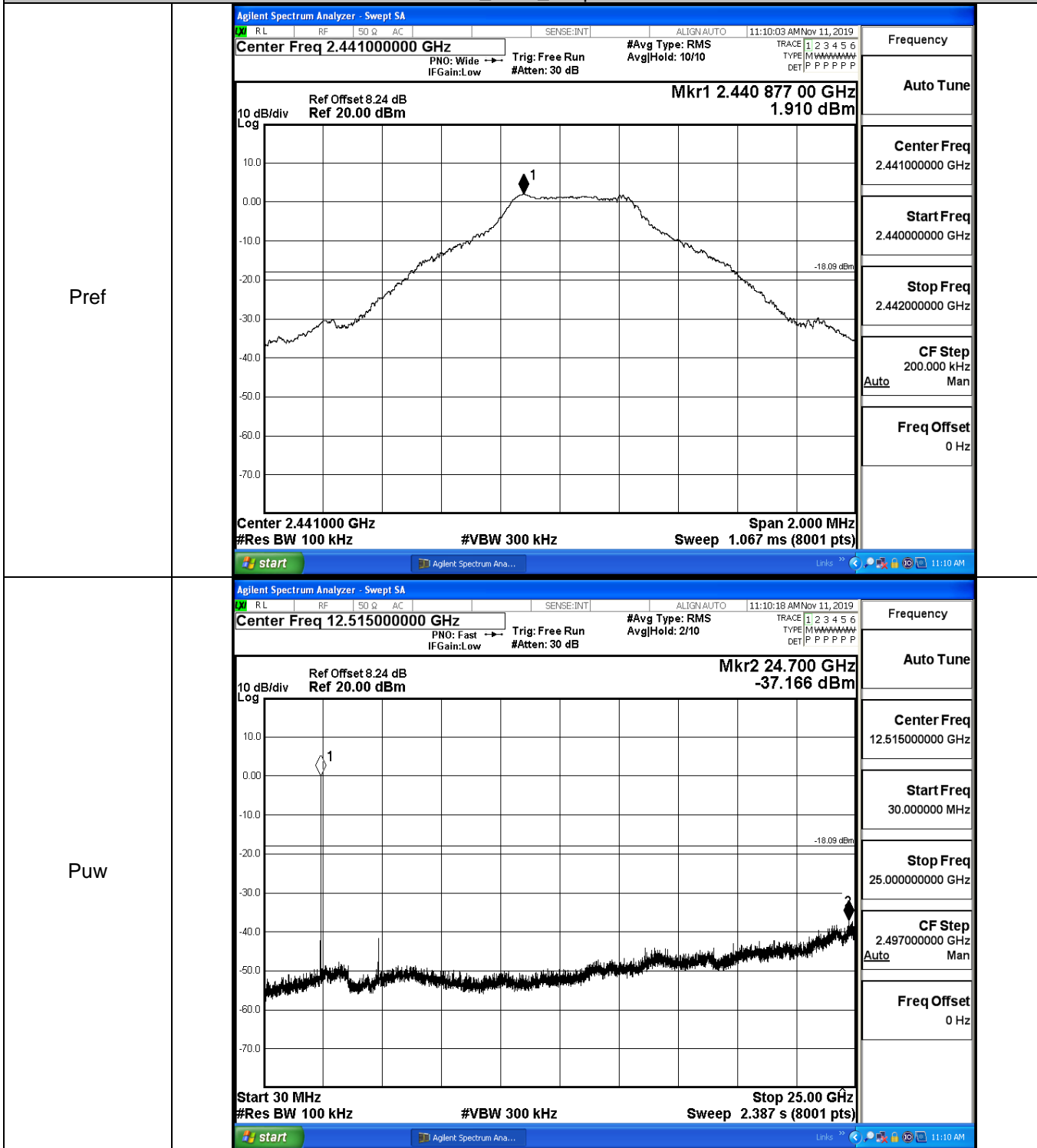
A.7 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.463	-37.321	-20.463	PASS
	MCH	1.91	-37.166	-18.090	PASS
	HCH	2.715	-36.814	-17.285	PASS
π /4DQPSK	LCH	-0.526	-37.152	-20.526	PASS
	MCH	1.248	-37.097	-18.752	PASS
	HCH	1.959	-37.423	-18.041	PASS
8DPSK	LCH	-0.818	-36.595	-20.818	PASS
	MCH	1.898	-37.762	-18.102	PASS
	HCH	3.949	-37.589	-16.051	PASS

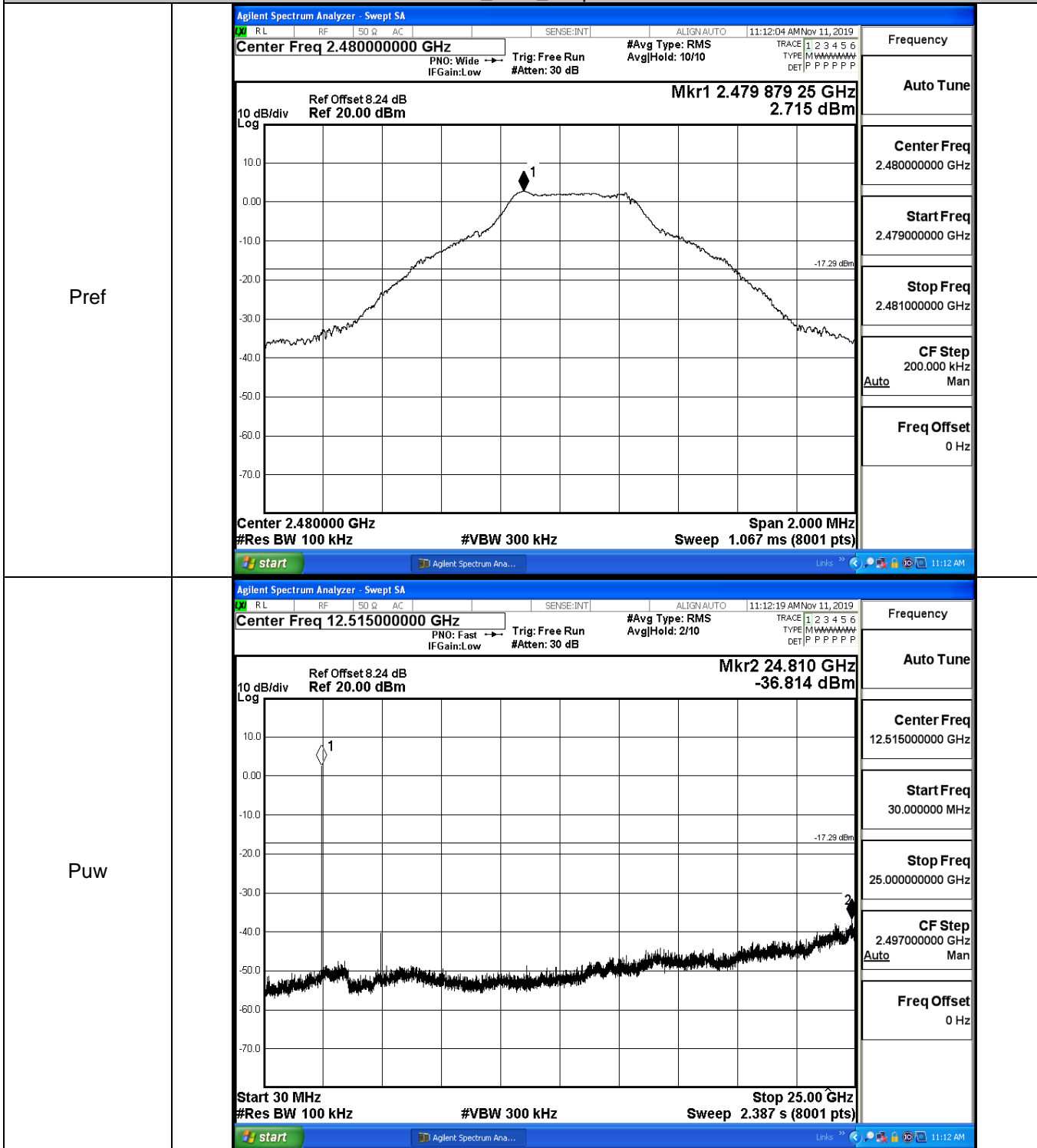




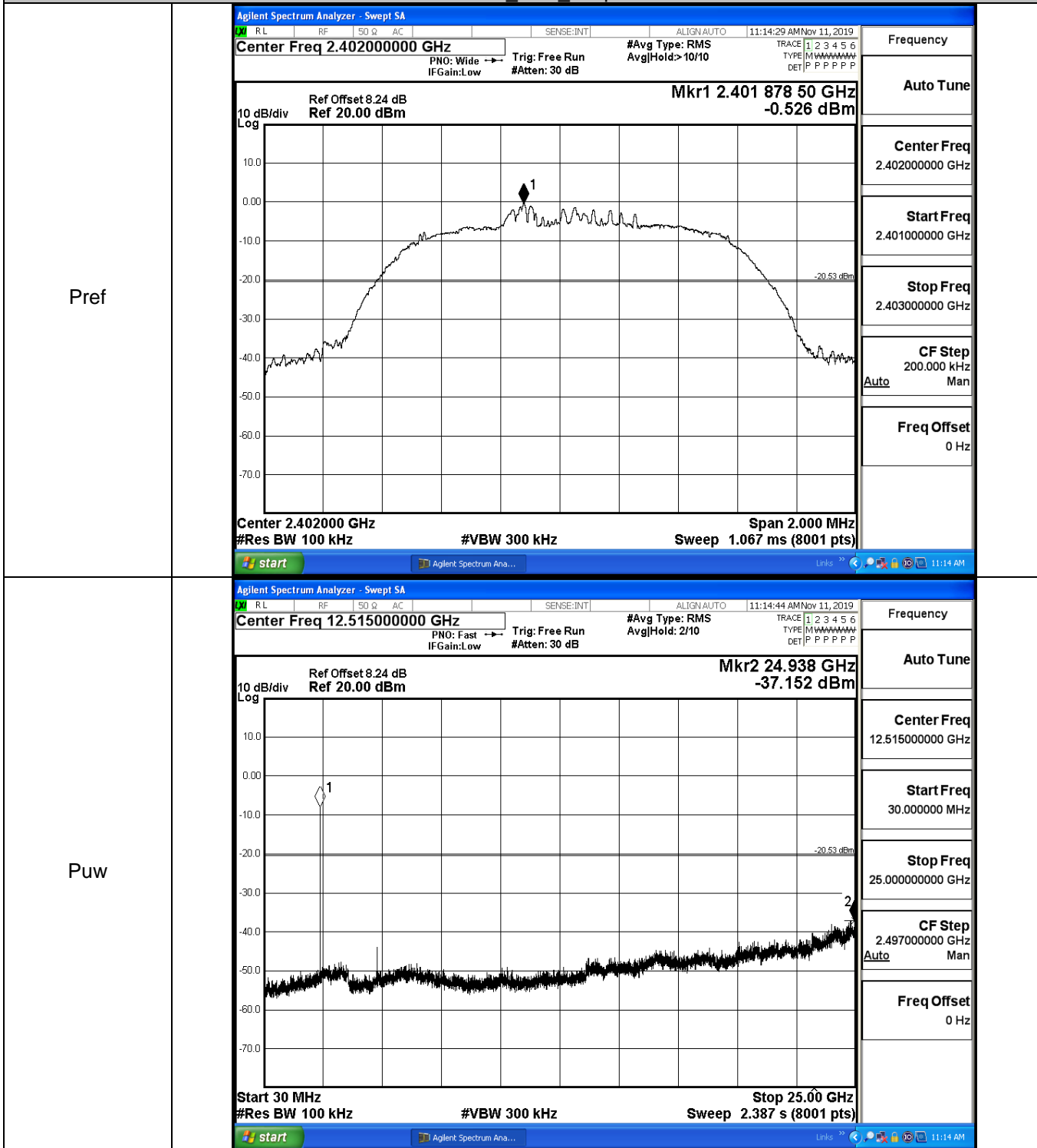
GFSK_MCH_Graphs



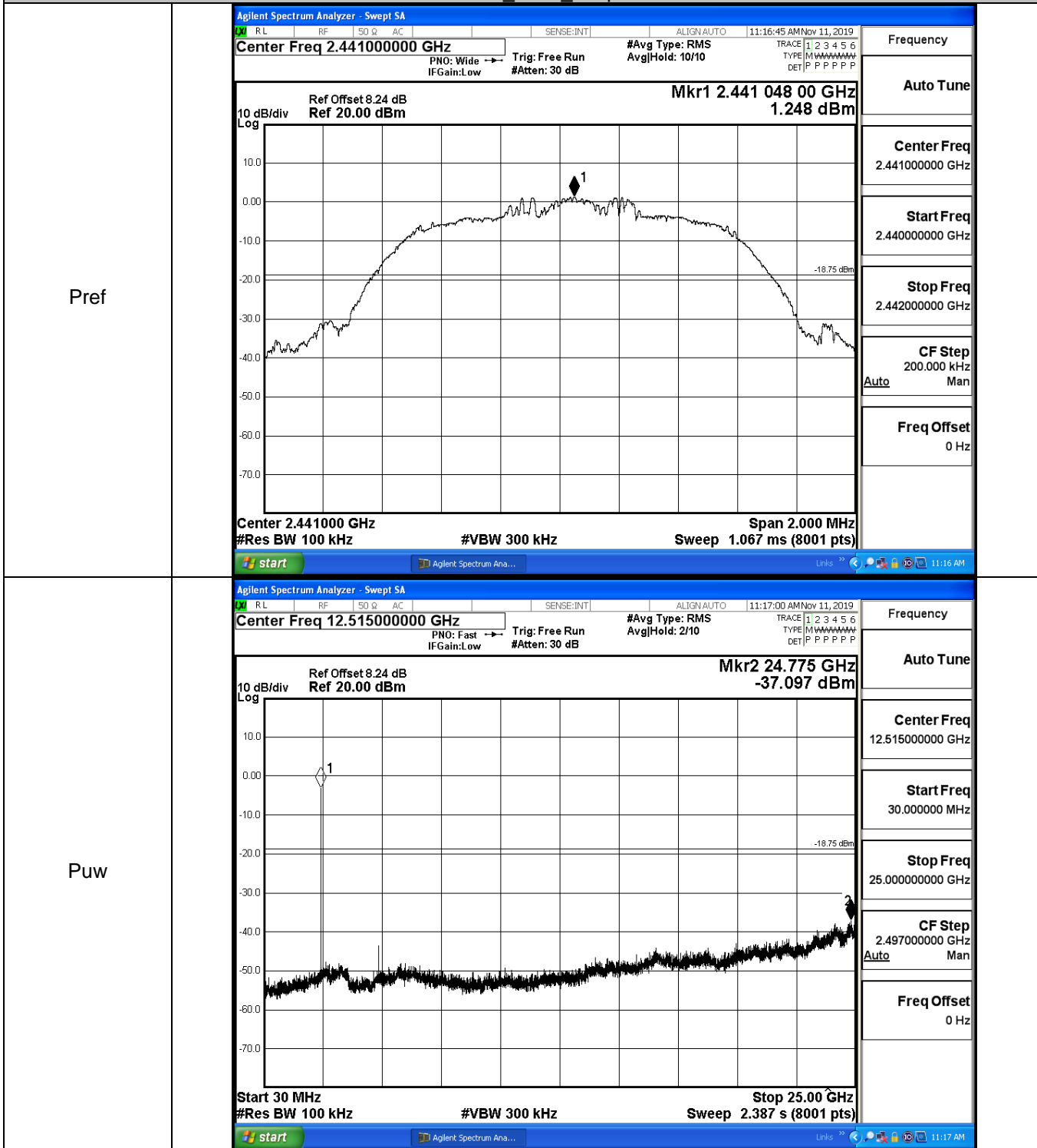
GFSK_HCH_Graphs



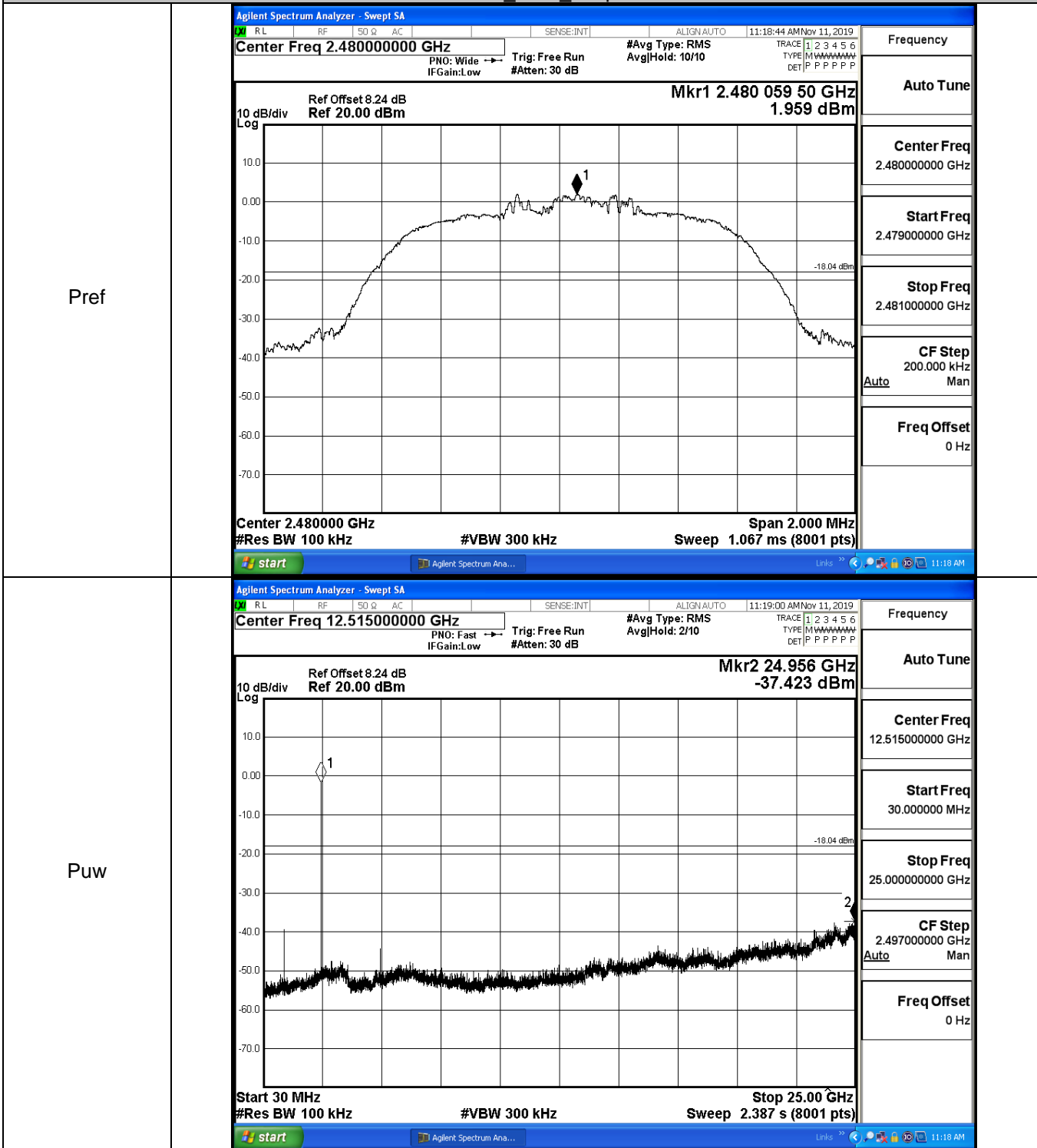
$\pi/4$ DQPSK_LCH_Graphs



$\pi/4$ DQPSK_MCH_Graphs

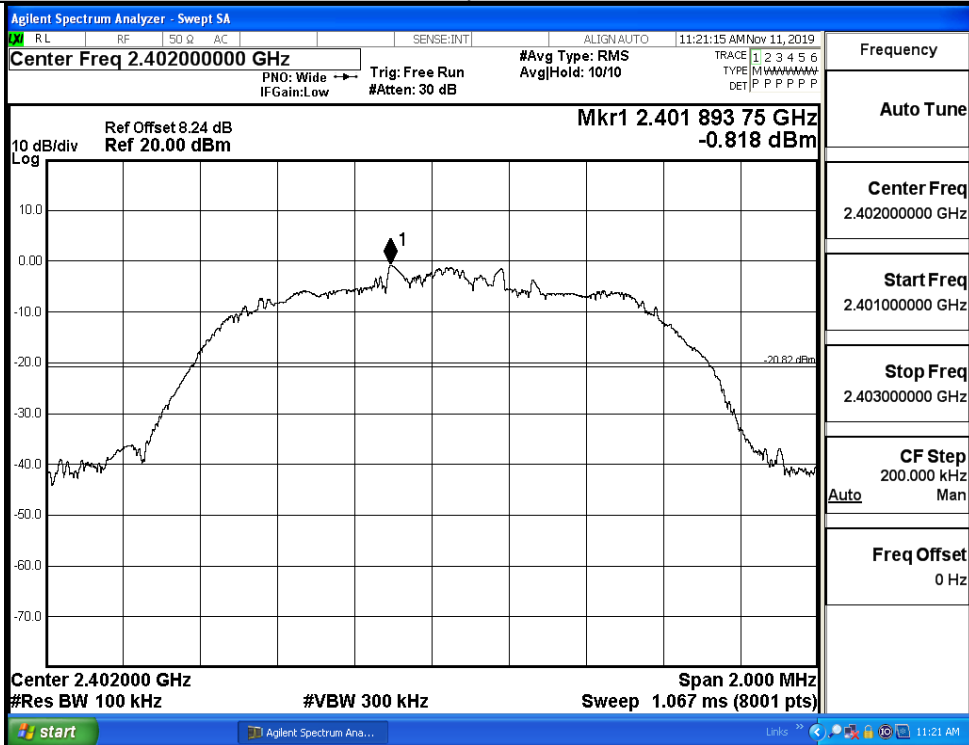


$\pi/4$ DQPSK_HCH_Graphs



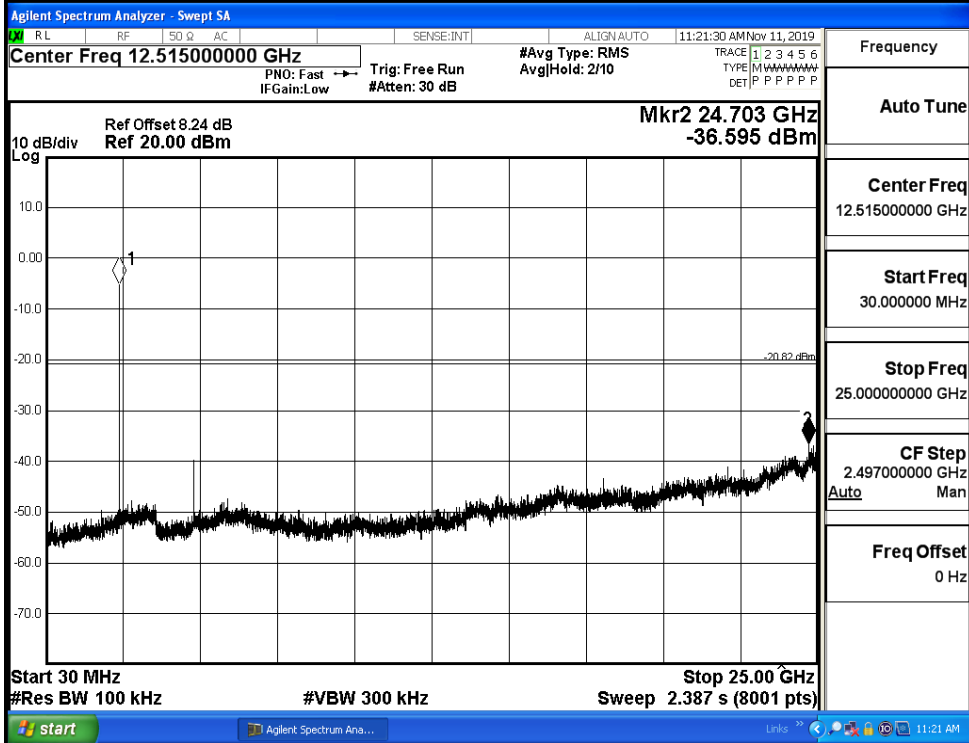
8DPSK_LCH_Graphs

Pref



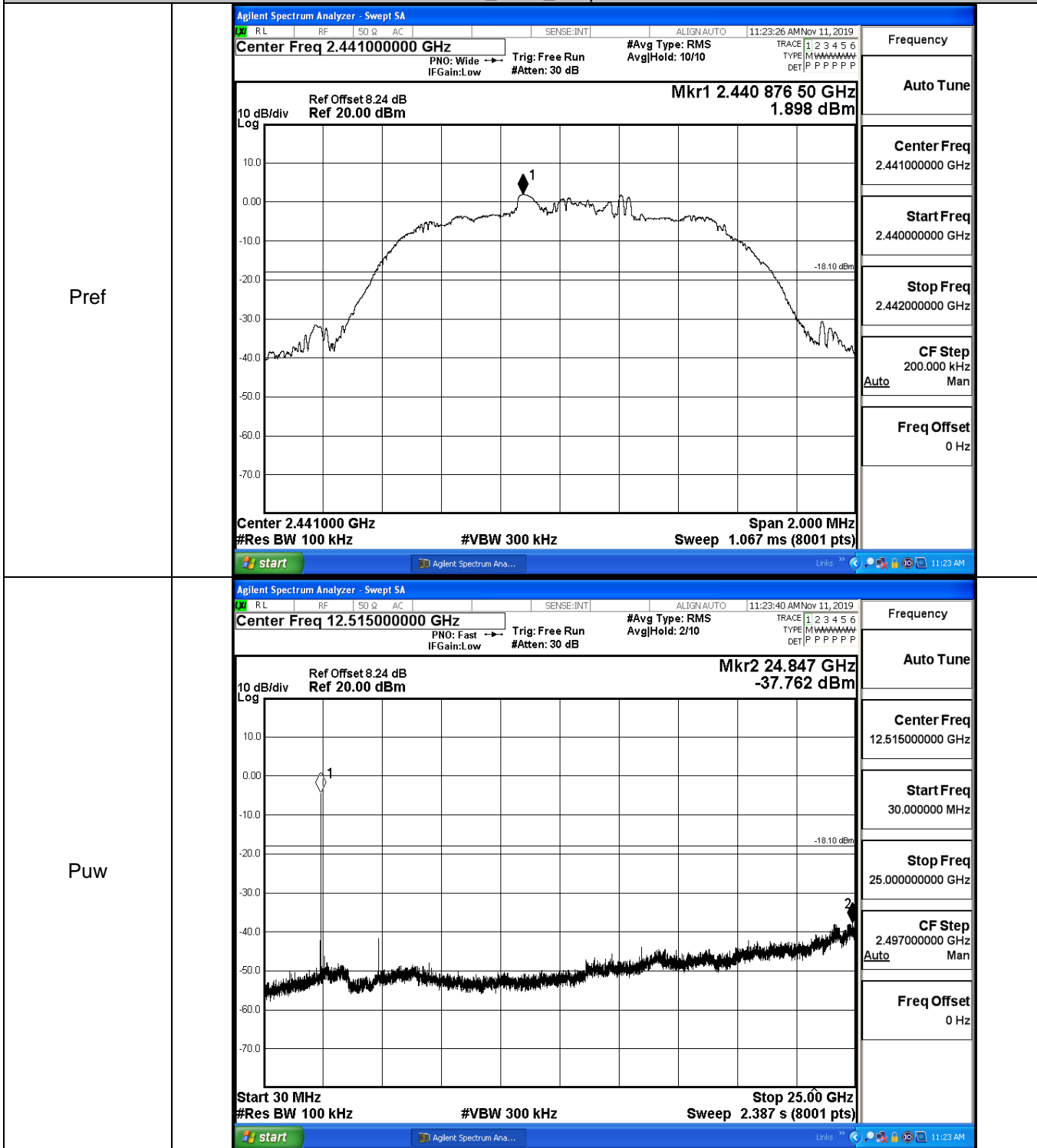
Frequency	
Auto Tune	
Center Freq	2.402000000 GHz
Start Freq	2.401000000 GHz
Stop Freq	2.403000000 GHz
CF Step	200.000 kHz
	Auto Man
Freq Offset	0 Hz

Puw

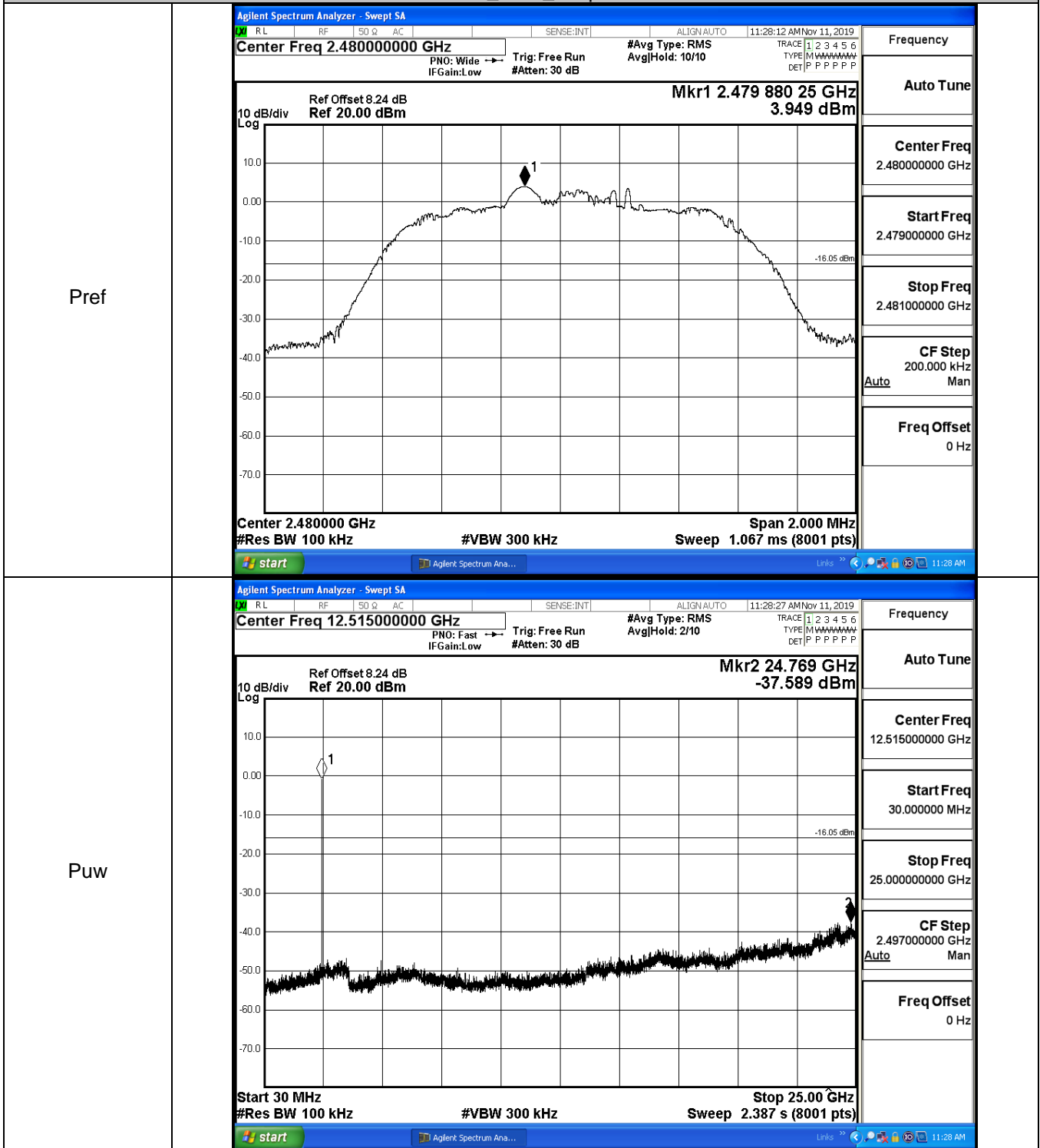


Frequency	
Auto Tune	
Center Freq	12.515000000 GHz
Start Freq	30.000000 MHz
Stop Freq	25.000000000 GHz
CF Step	2.497000000 GHz
	Auto Man
Freq Offset	0 Hz

8DPSK_MCH_Graphs



8DPSK_HCH_Graphs

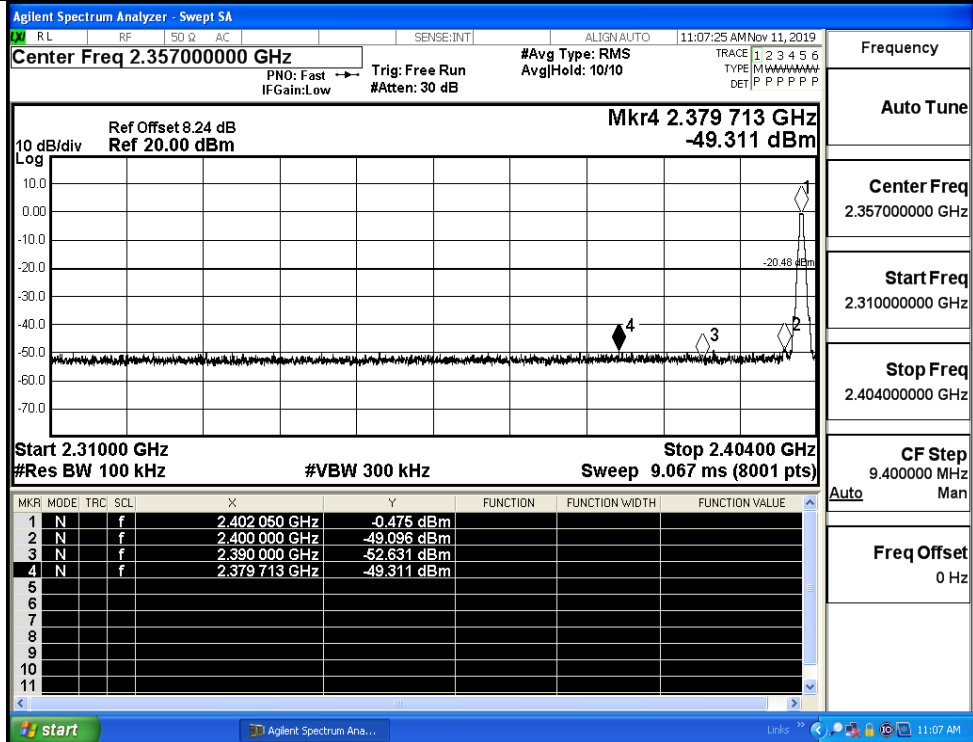


A.8 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-0.475	Off	-49.311	-20.48	PASS
			2.675	On	-47.251	-17.33	PASS
	HCH	2480	2.744	Off	-48.618	-17.26	PASS
			3.792	On	-47.569	-16.21	PASS
$\pi/4$ DQPSK	LCH	2402	-1.084	Off	-49.587	-21.08	PASS
			2.448	On	-47.791	-17.55	PASS
	HCH	2480	2.719	Off	-48.856	-17.28	PASS
			3.054	On	-45.863	-16.95	PASS
8DPSK	LCH	2402	-0.350	Off	-49.473	-20.35	PASS
			1.739	On	-47.491	-18.26	PASS
	HCH	2480	3.870	Off	-47.218	-16.13	PASS
			3.020	On	-46.353	-16.98	PASS

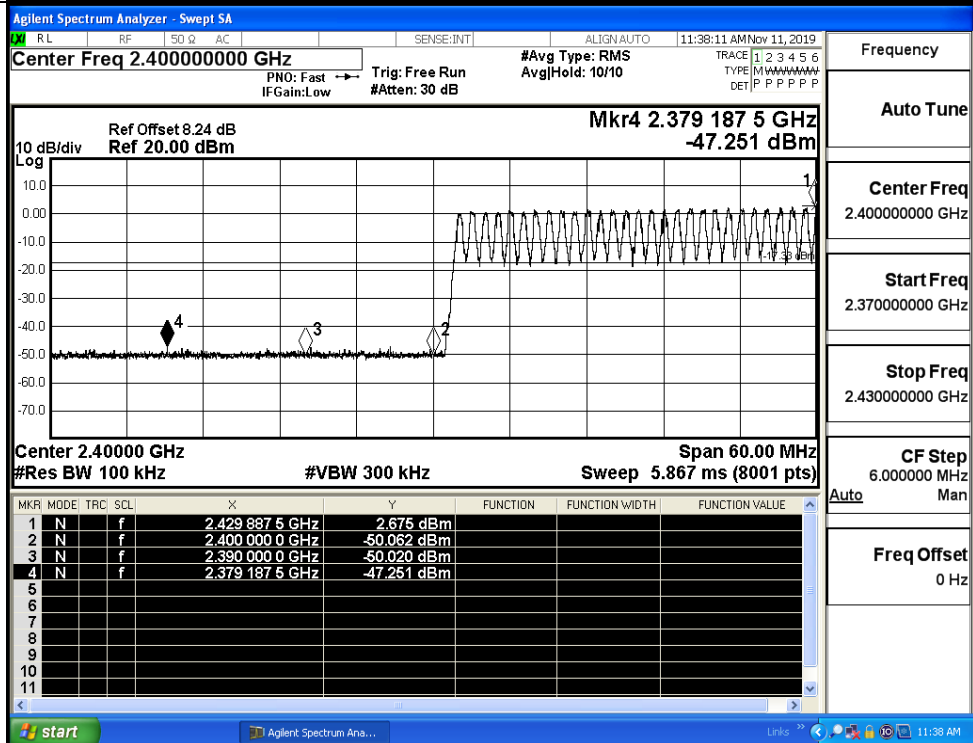
Test Graphs

GFSK/LCH/No Hop



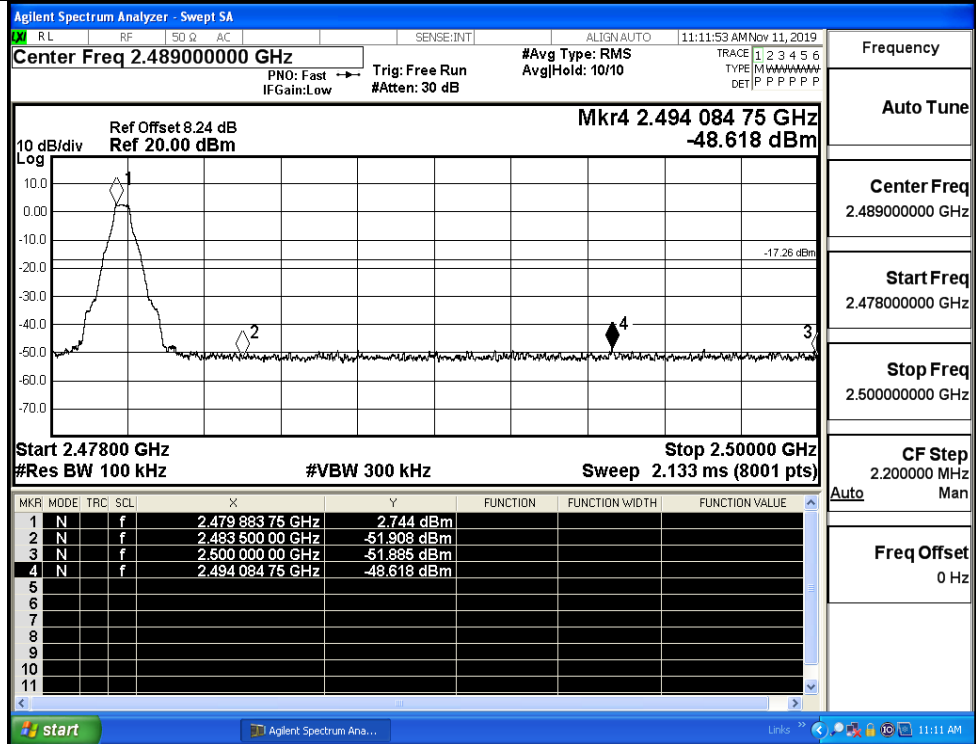
Frequency	2.357000000 GHz
Auto Tune	
Center Freq	2.357000000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.404000000 GHz
CF Step	9.400000 MHz
Auto	Man
Freq Offset	0 Hz

GFSK/LCH/Hop

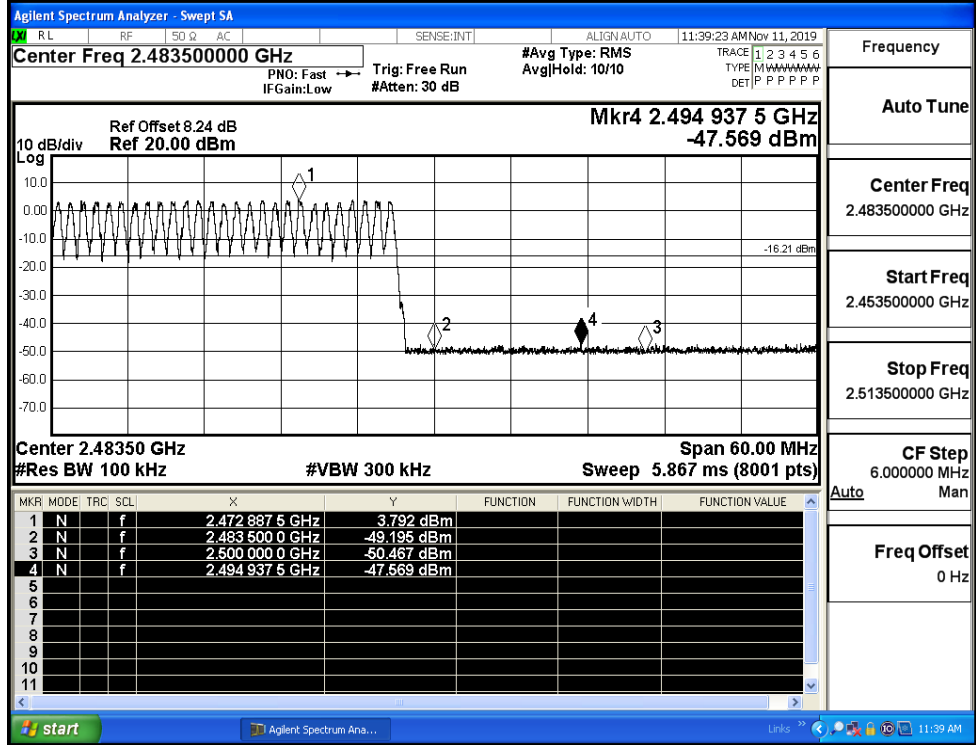


Frequency	2.400000000 GHz
Auto Tune	
Center Freq	2.400000000 GHz
Start Freq	2.370000000 GHz
Stop Freq	2.430000000 GHz
CF Step	6.000000 MHz
Auto	Man
Freq Offset	0 Hz

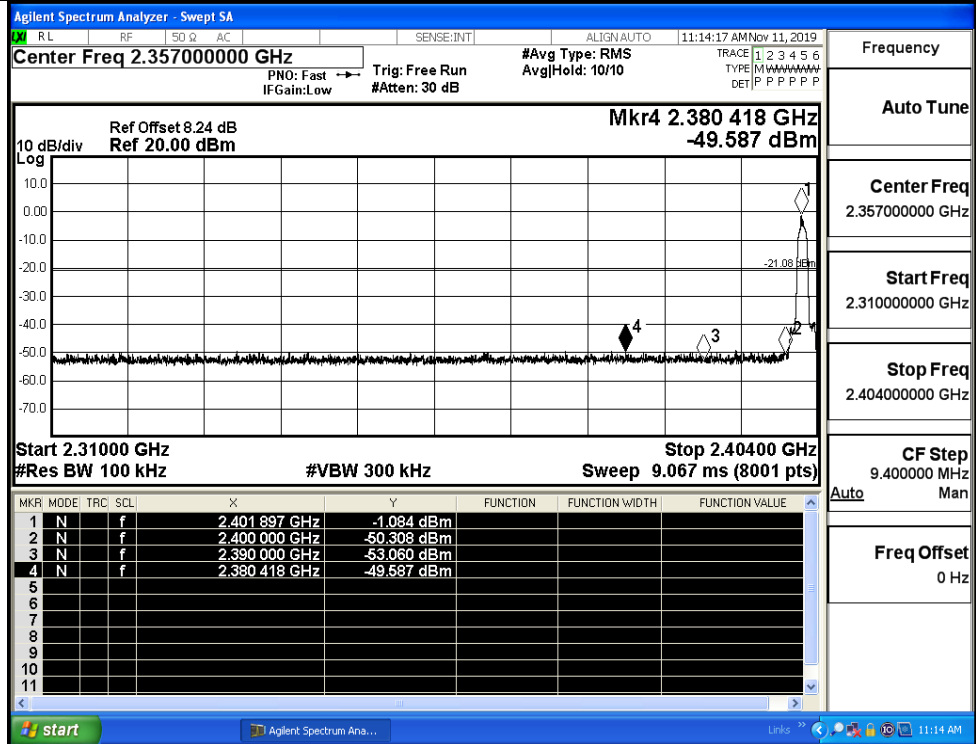
GFSK/HCH/No Hop



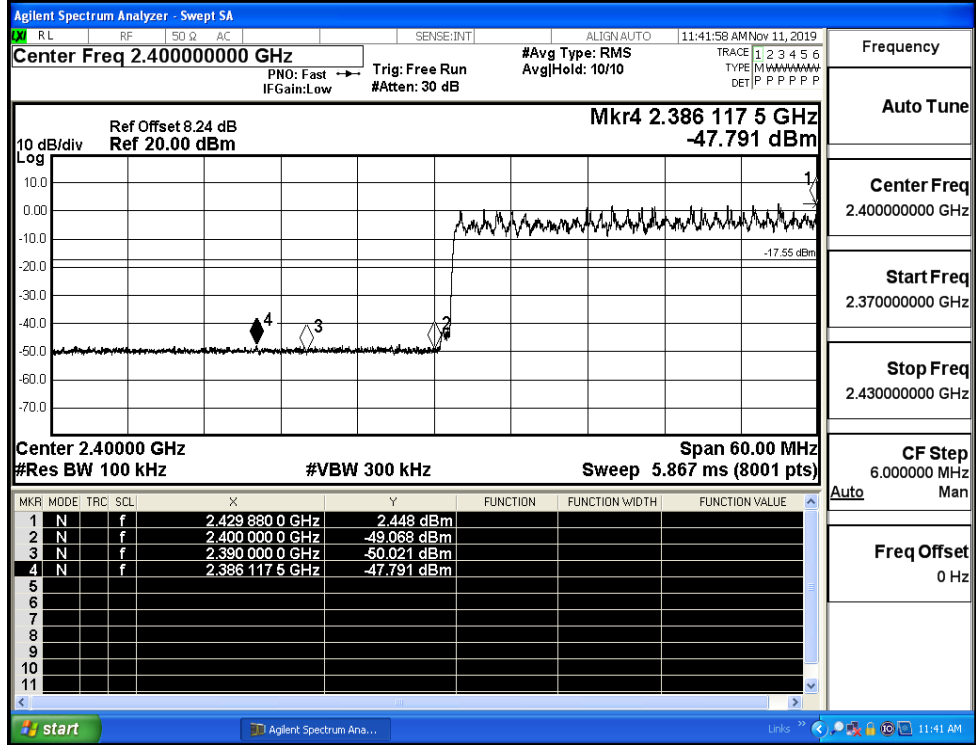
GFSK/HCH/Hop



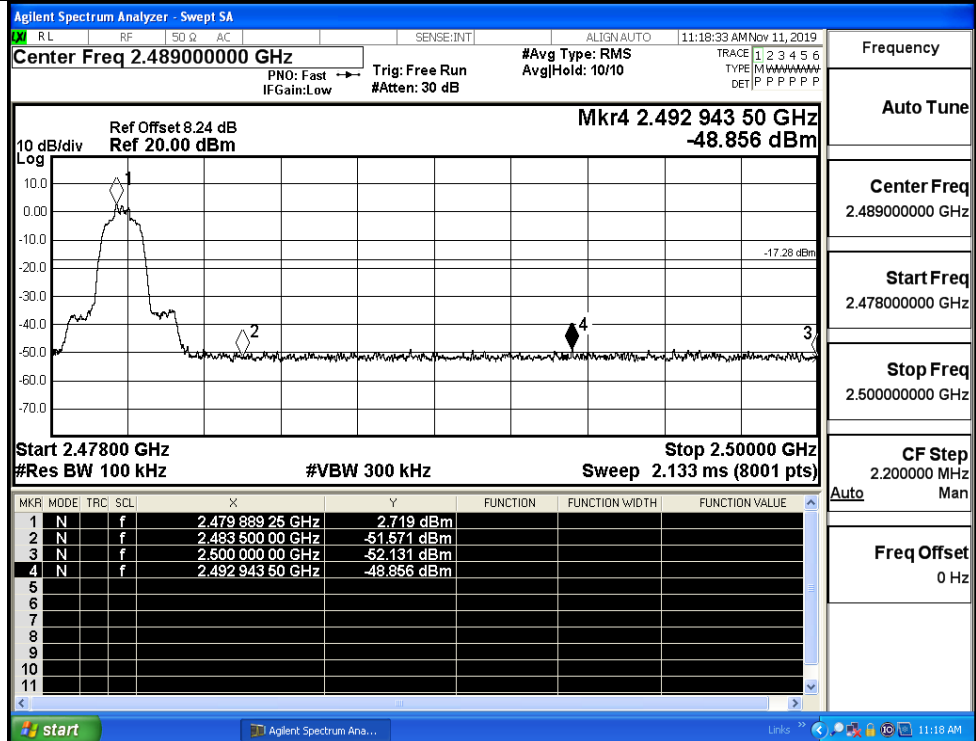
$\pi/4$ DQPSK/LCH/No
Hop



$\pi/4$ DQPSK/LCH/Hop

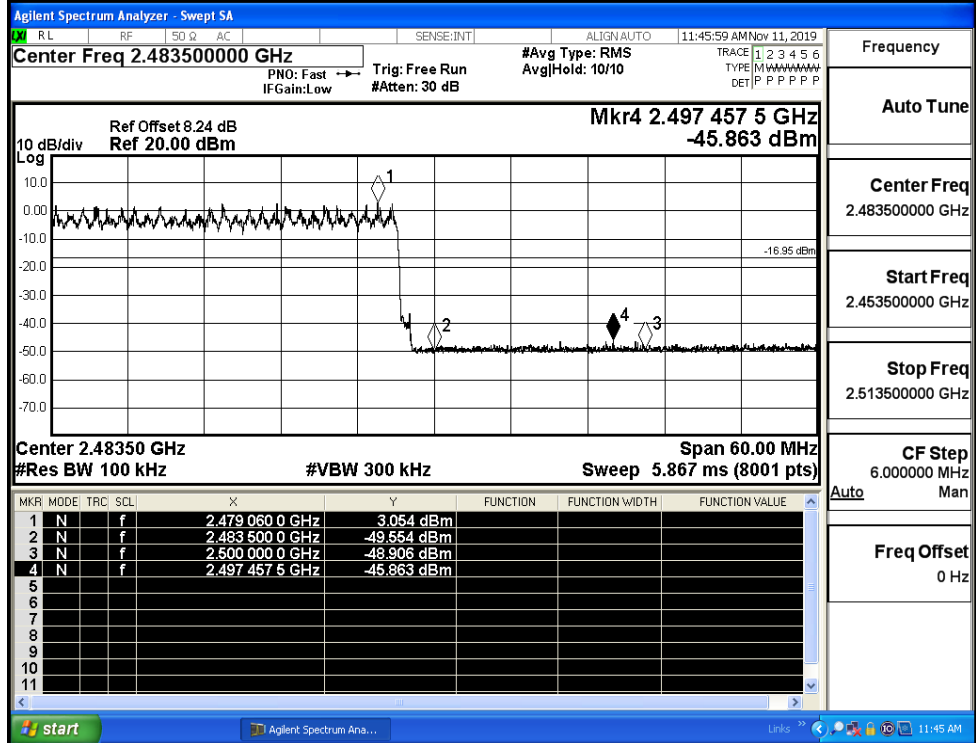


π /4DQPSK/HCH/No
Hop



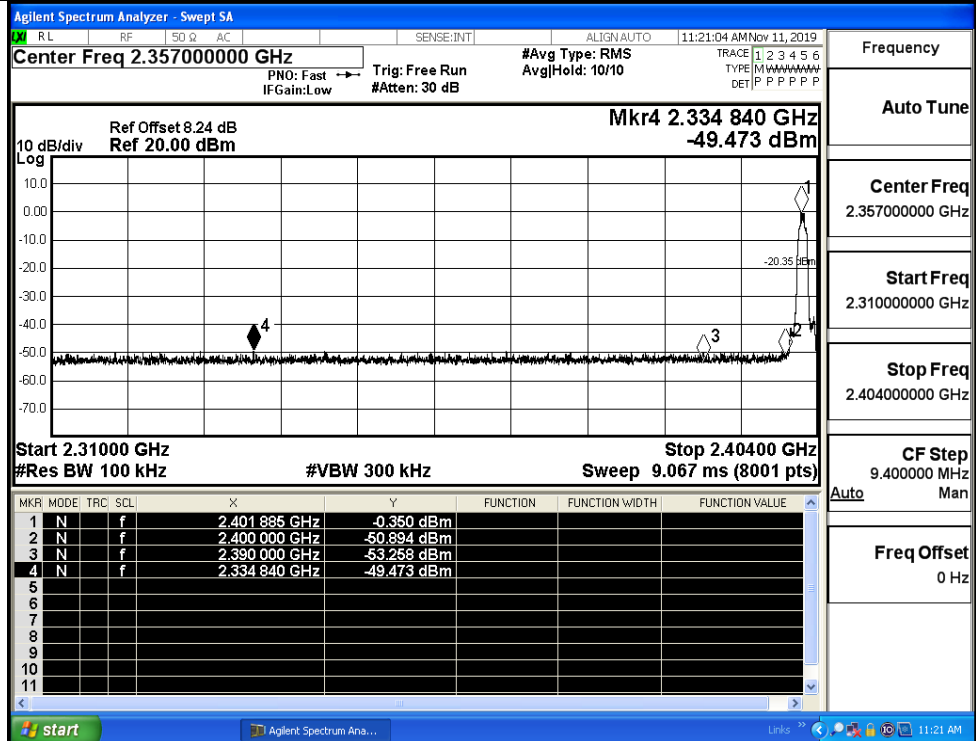
Frequency
Auto Tune
Center Freq
2.489000000 GHz
Start Freq
2.478000000 GHz
Stop Freq
2.500000000 GHz
CF Step
2.200000 MHz
Auto Man
Freq Offset
0 Hz

π /4DQPSK/HCH/Hop



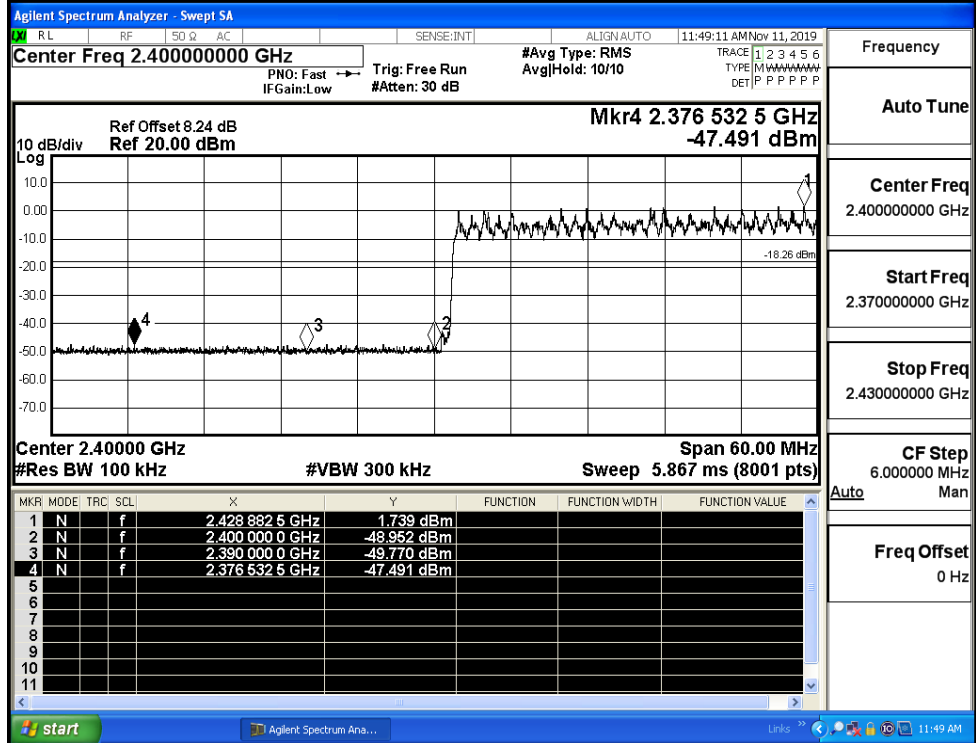
Frequency
Auto Tune
Center Freq
2.483500000 GHz
Start Freq
2.453500000 GHz
Stop Freq
2.513500000 GHz
CF Step
6.000000 MHz
Auto Man
Freq Offset
0 Hz

8DPSK/LCH/No Hop



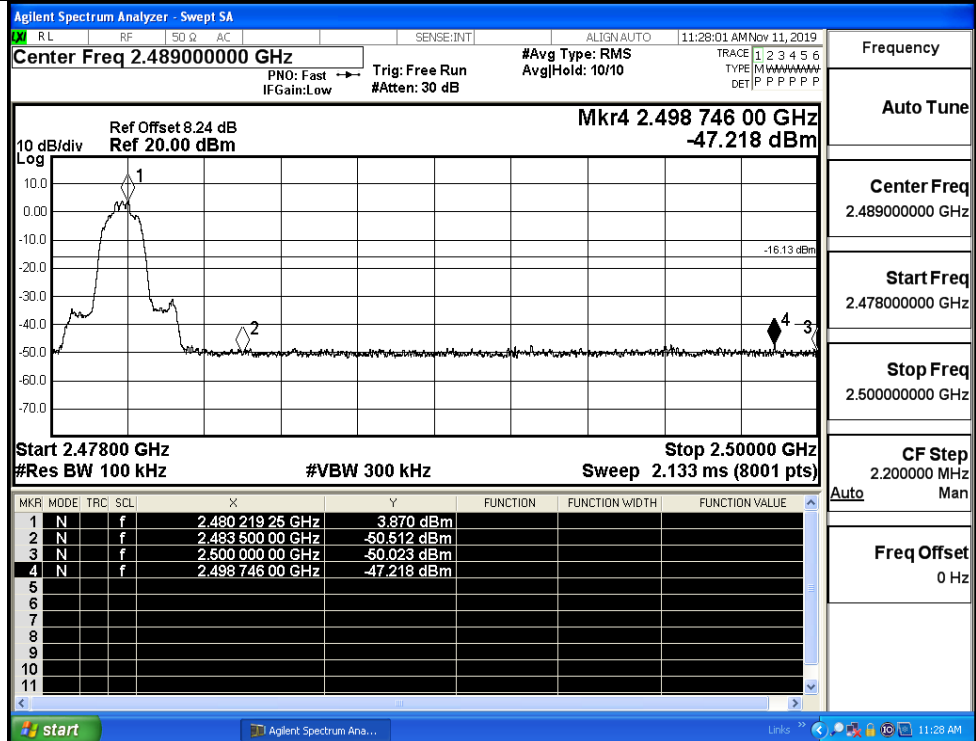
Frequency
Auto Tune
Center Freq
2.357000000 GHz
Start Freq
2.310000000 GHz
Stop Freq
2.404000000 GHz
CF Step
9.400000 MHz
Auto Man
Freq Offset
0 Hz

8DPSK/LCH/Hop



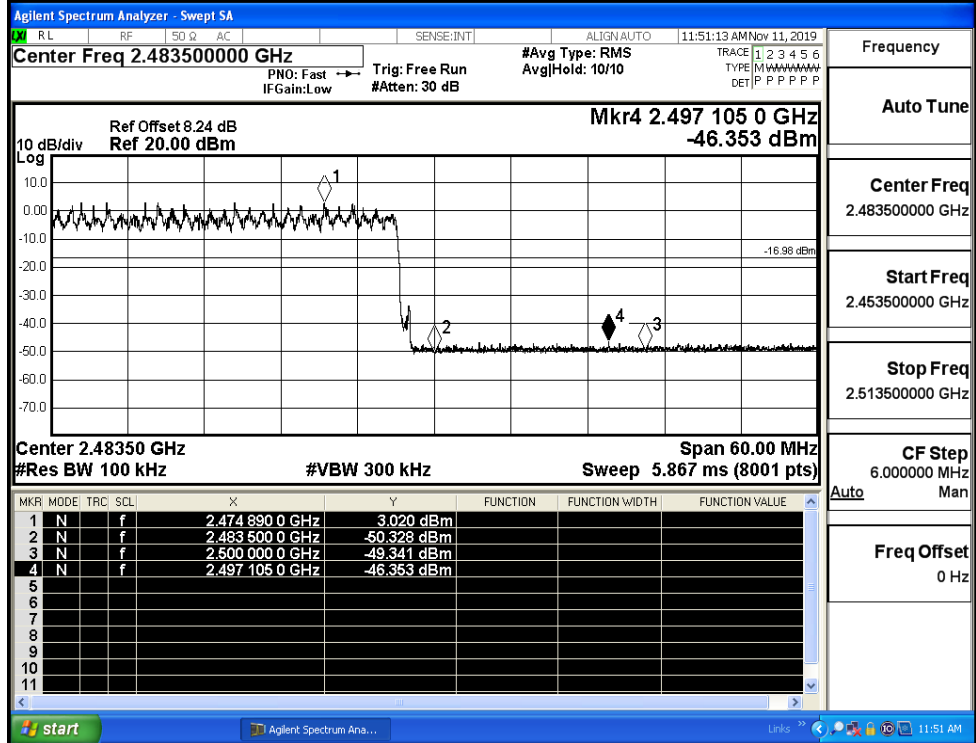
Frequency
Auto Tune
Center Freq
2.400000000 GHz
Start Freq
2.370000000 GHz
Stop Freq
2.430000000 GHz
CF Step
6.000000 MHz
Auto Man
Freq Offset
0 Hz

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
Auto Man
Freq Offset
0 Hz

8DPSK/HCH/Hop

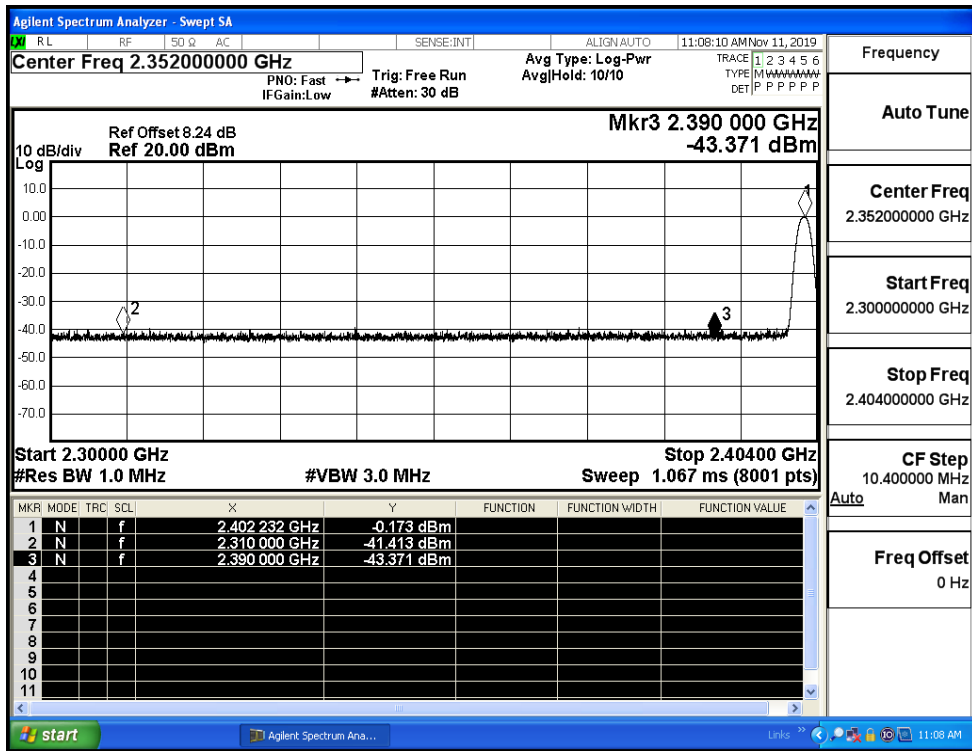


Frequency
Auto Tune
Center Freq
2.483500000 GHz
Start Freq
2.453500000 GHz
Stop Freq
2.513500000 GHz
CF Step
6.000000 MHz
Auto Man
Freq Offset
0 Hz

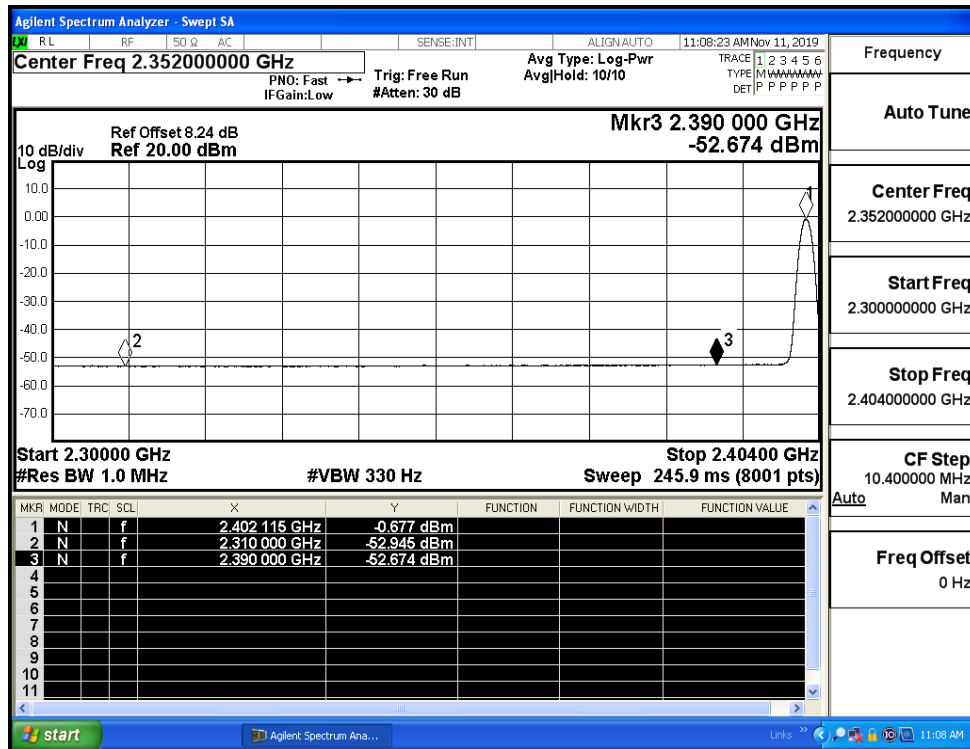
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-41.41	2.0	0	53.84	PEAK	74	PASS
	Off	2310.0	-52.95	2.0	0	42.31	AV	54	PASS
	Off	2390.0	-43.37	2.0	0	51.89	PEAK	74	PASS
	Off	2390.0	-52.67	2.0	0	42.58	AV	54	PASS
	Off	2483.5	-41.09	2.0	0	54.17	PEAK	74	PASS
	Off	2483.5	-51.99	2.0	0	43.27	AV	54	PASS
	Off	2500.0	-40.80	2.0	0	54.46	PEAK	74	PASS
	Off	2500.0	-51.96	2.0	0	43.30	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.63	2.0	0	51.63	PEAK	74	PASS
	Off	2310.0	-53.07	2.0	0	42.19	AV	54	PASS
	Off	2390.0	-42.31	2.0	0	52.95	PEAK	74	PASS
	Off	2390.0	-52.67	2.0	0	42.59	AV	54	PASS
	Off	2483.5	-40.78	2.0	0	54.48	PEAK	74	PASS
	Off	2483.5	-51.91	2.0	0	43.34	AV	54	PASS
	Off	2500.0	-42.20	2.0	0	53.06	PEAK	74	PASS
	Off	2500.0	-52.06	2.0	0	43.20	AV	54	PASS
8DPSK	Off	2310.0	-42.97	2.0	0	52.28	PEAK	74	PASS
	Off	2310.0	-52.94	2.0	0	42.32	AV	54	PASS
	Off	2390.0	-42.46	2.0	0	52.80	PEAK	74	PASS
	Off	2390.0	-52.63	2.0	0	42.63	AV	54	PASS
	Off	2483.5	-39.83	2.0	0	55.43	PEAK	74	PASS
	Off	2483.5	-50.59	2.0	0	44.67	AV	54	PASS
	Off	2500.0	-40.07	2.0	0	55.19	PEAK	74	PASS
	Off	2500.0	-50.60	2.0	0	44.65	AV	54	PASS

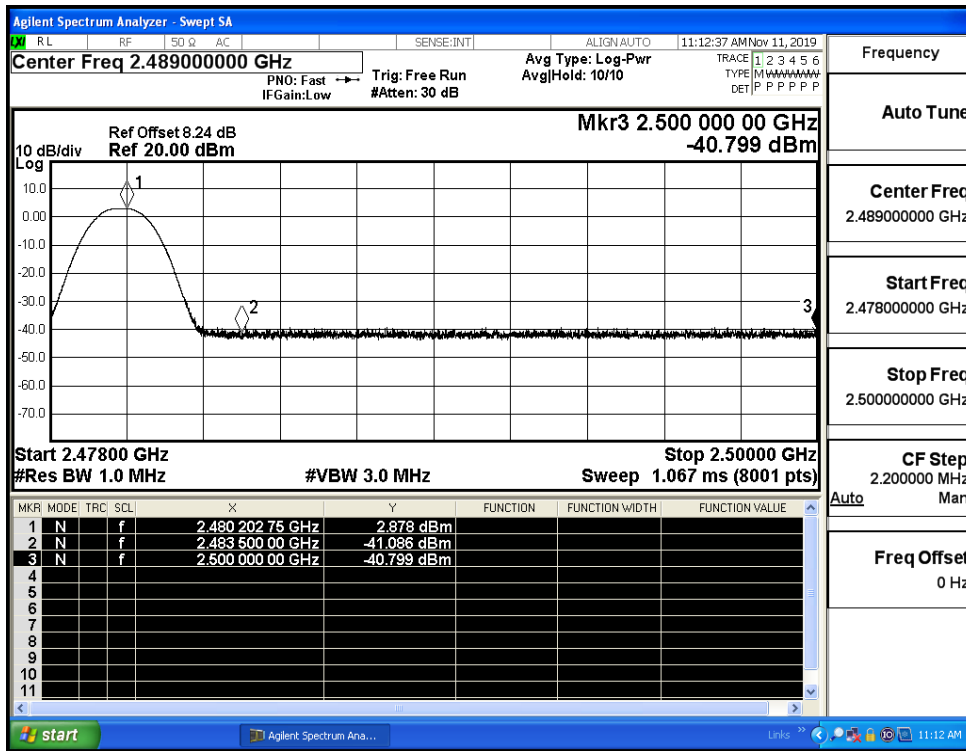
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



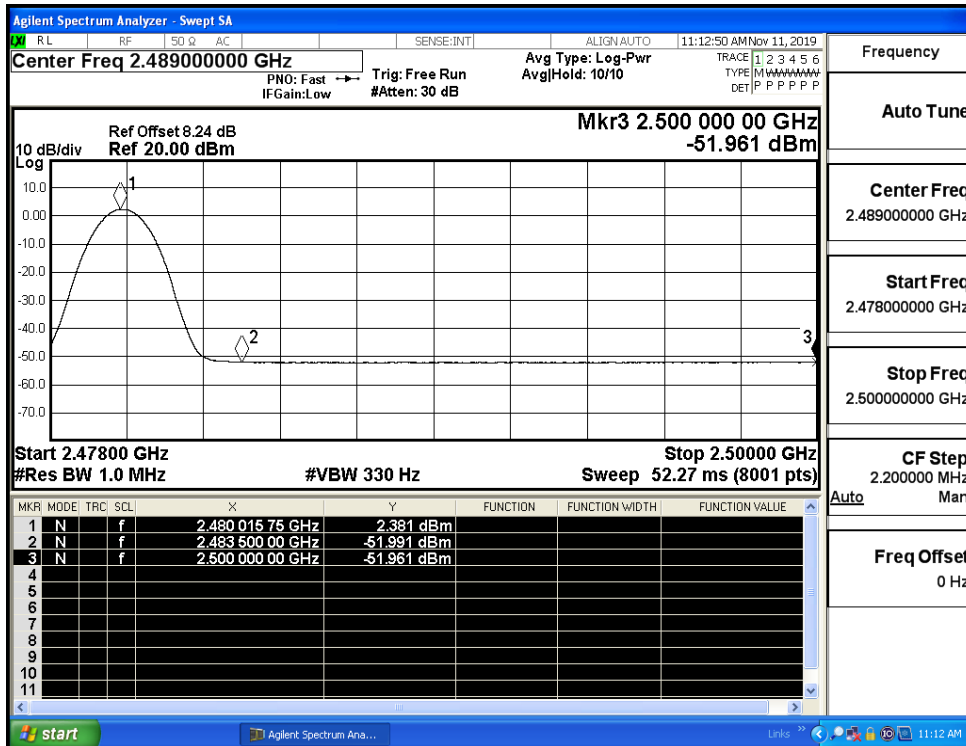
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)



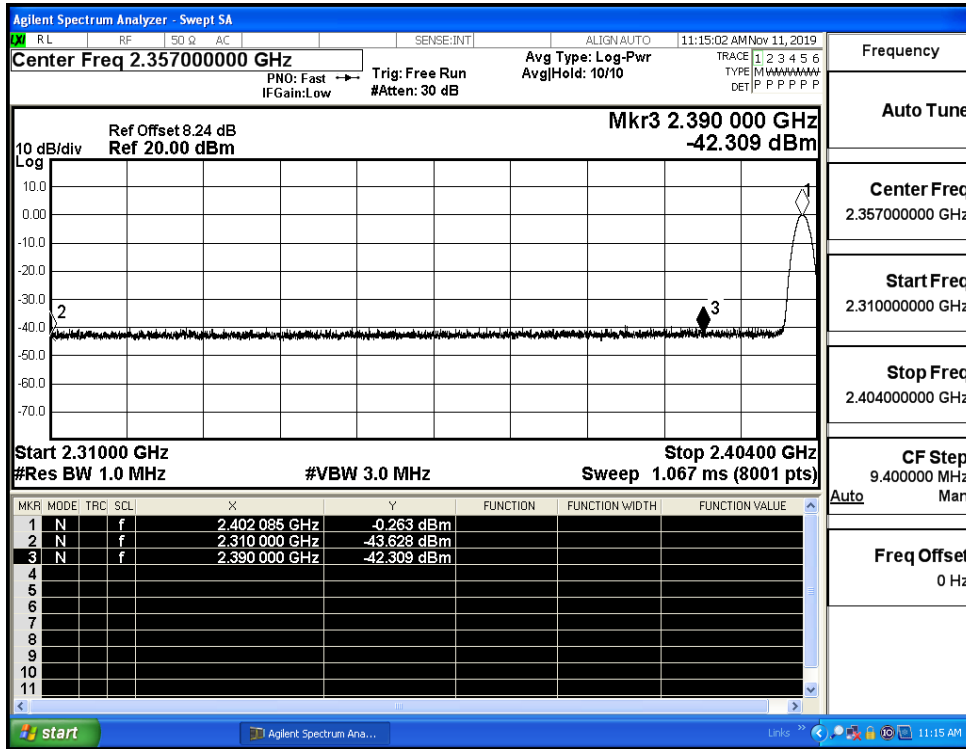
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



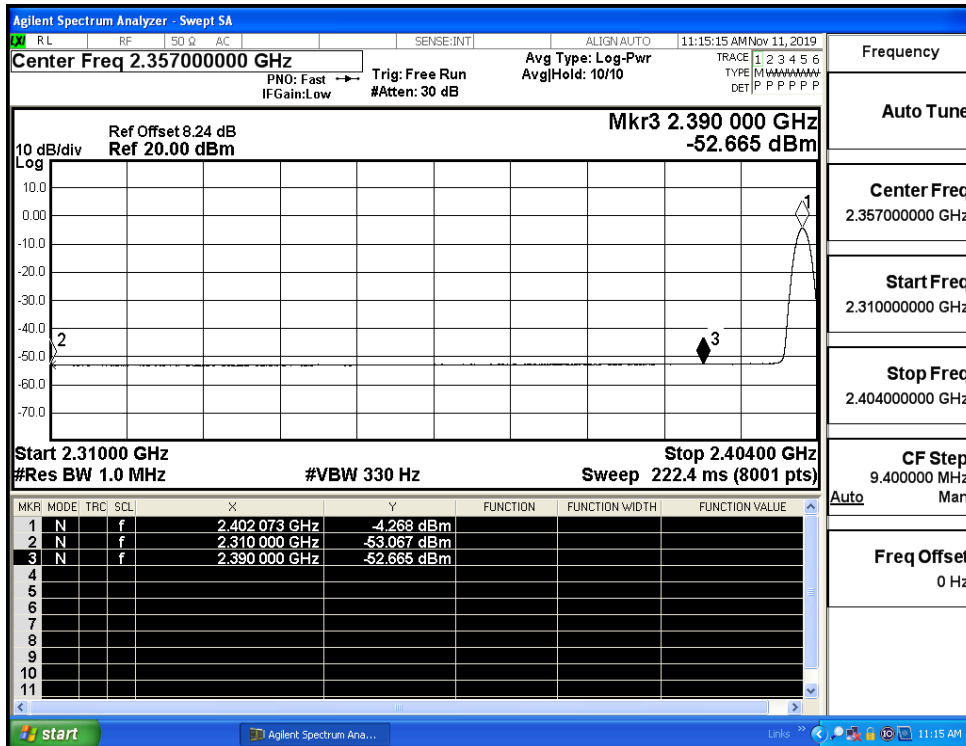
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



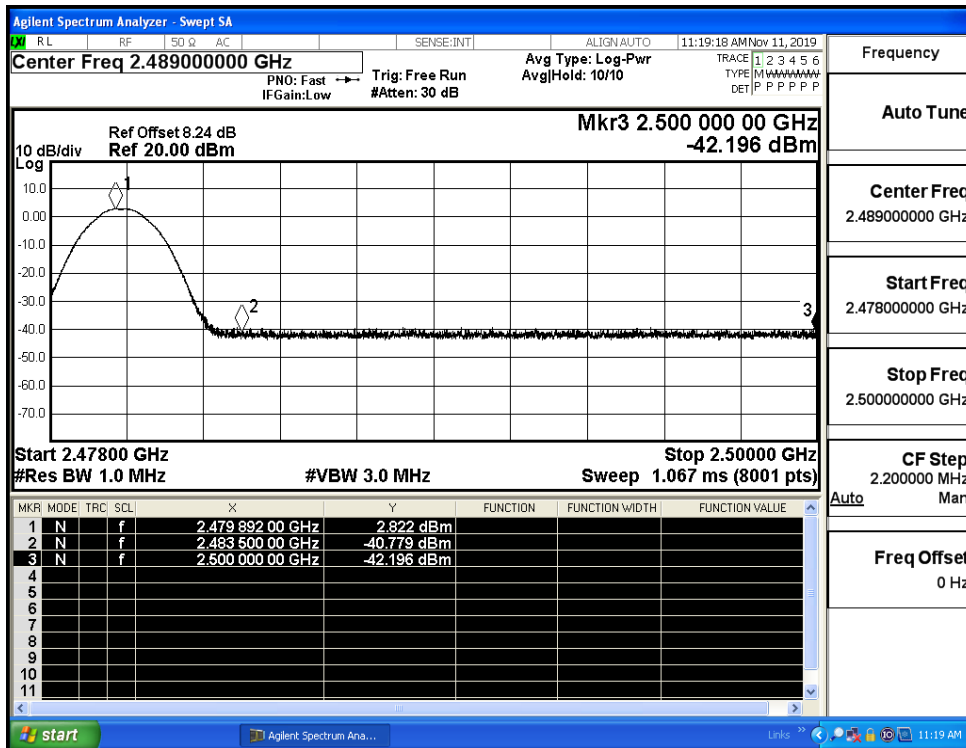
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)



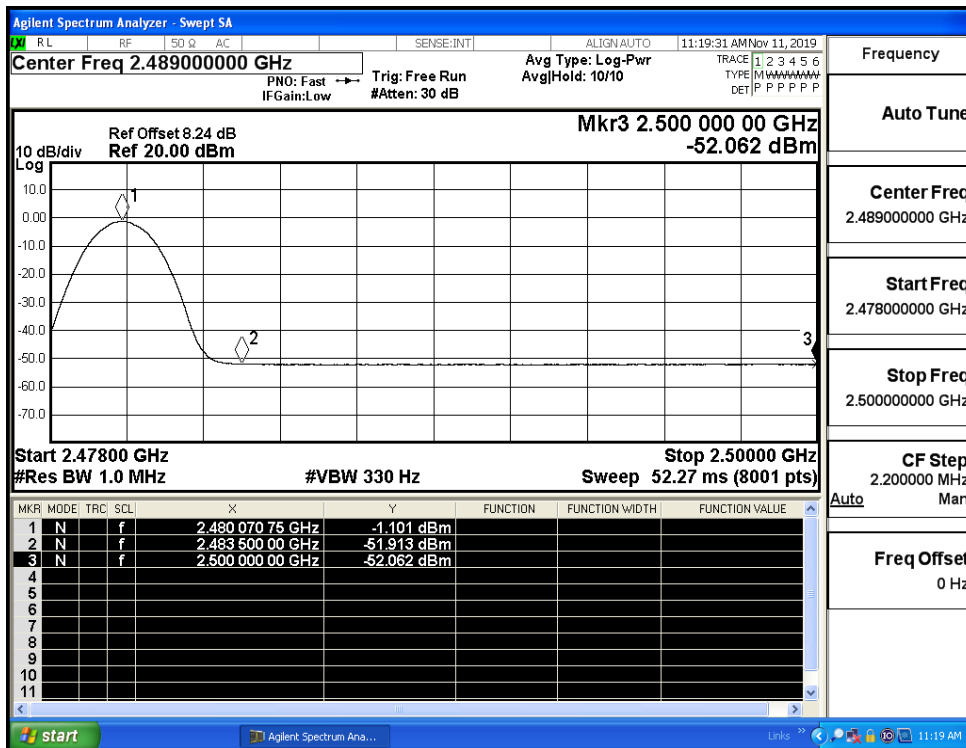
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)



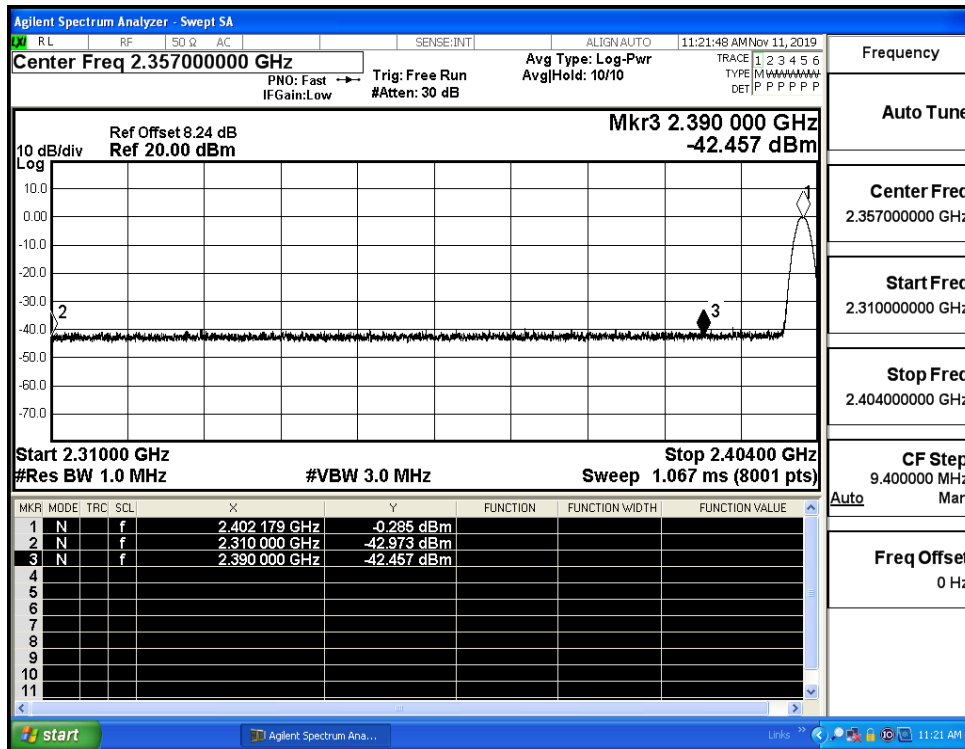
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (High Channel)



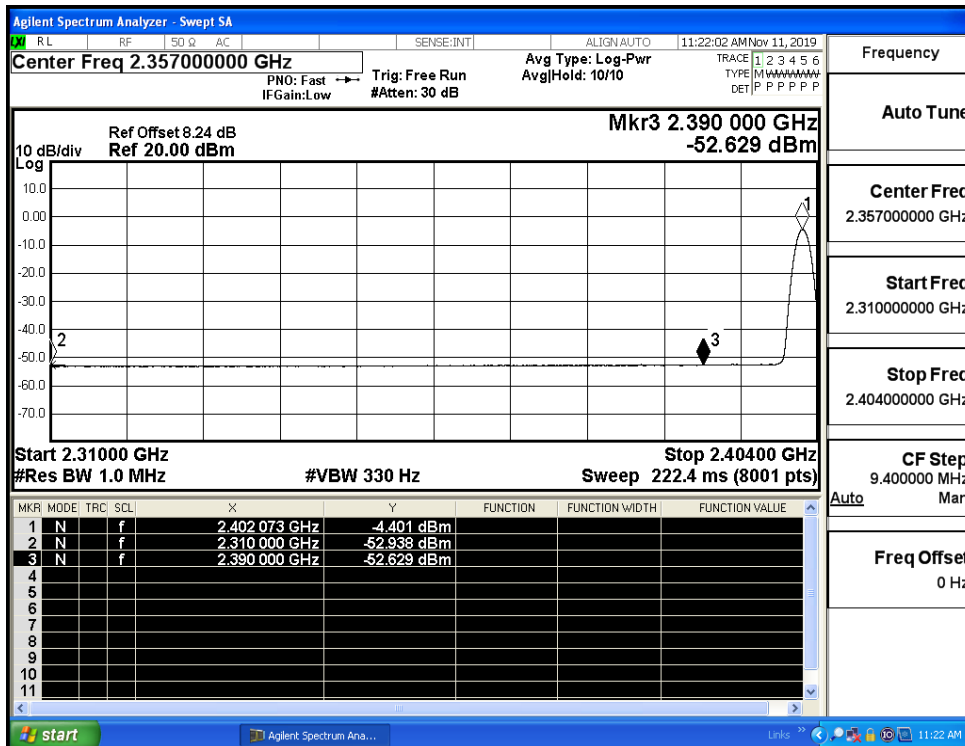
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (High Channel)



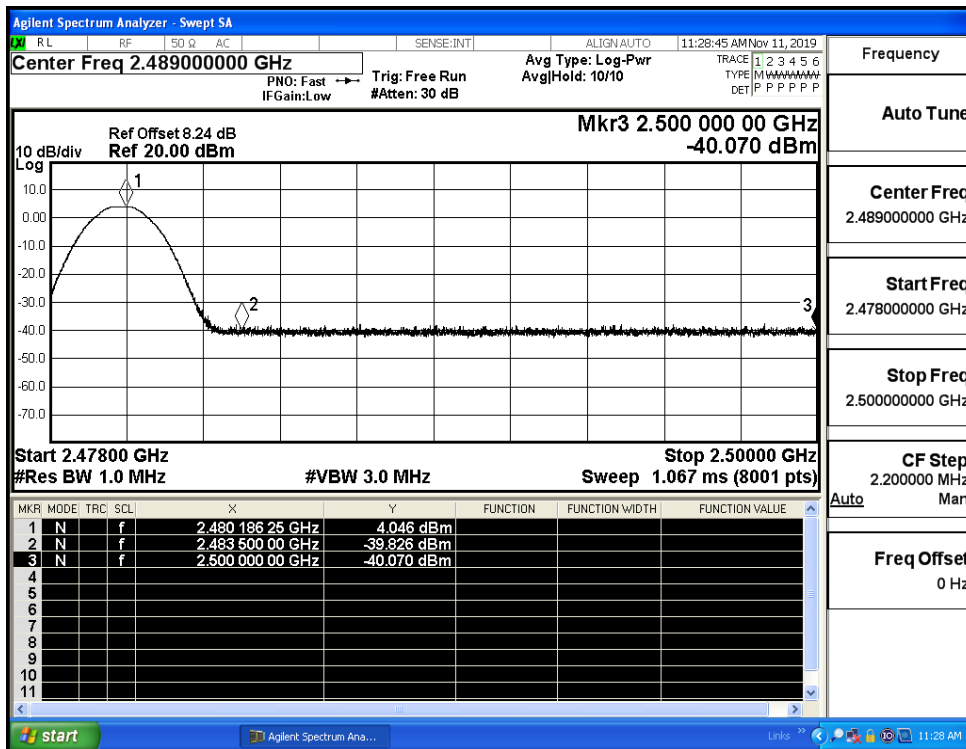
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

