

## Appendix A

### RF Test Data for BT V2.1+EDR (Conducted Measurement)

Product Name: Tablet PC

Trade Mark: NetThings

Test Model: F716XR

#### Environmental Conditions

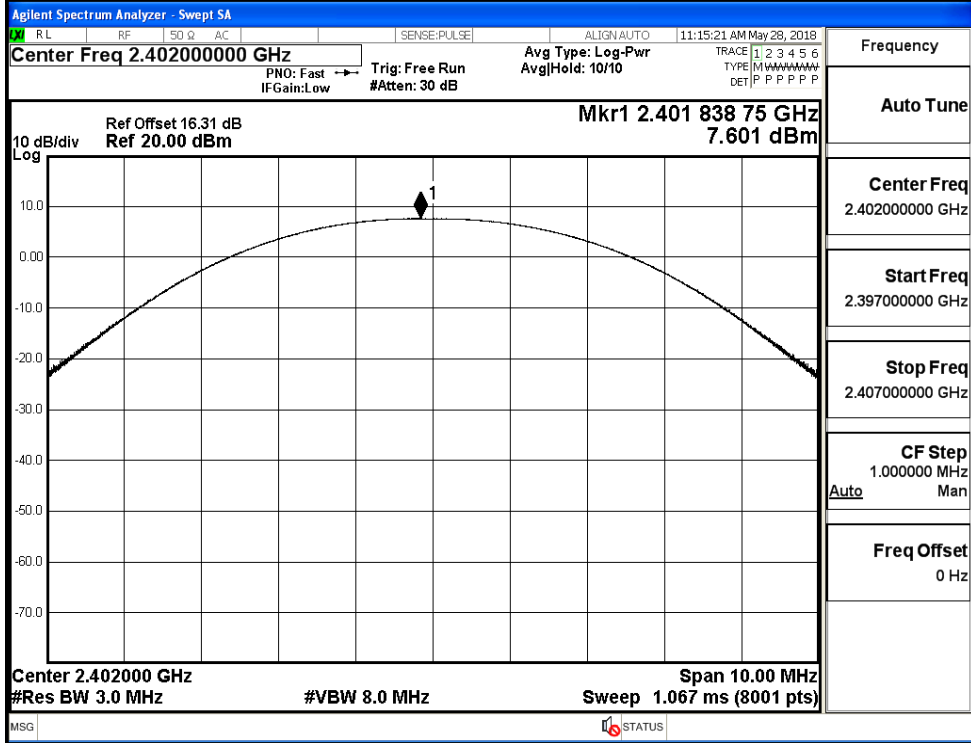
Temperature:	23.7 ° C
Relative Humidity:	56.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom Liu
Supervised by:	Jayden.Zhuo

#### A.1 Maximum Conducted Peak Output Power

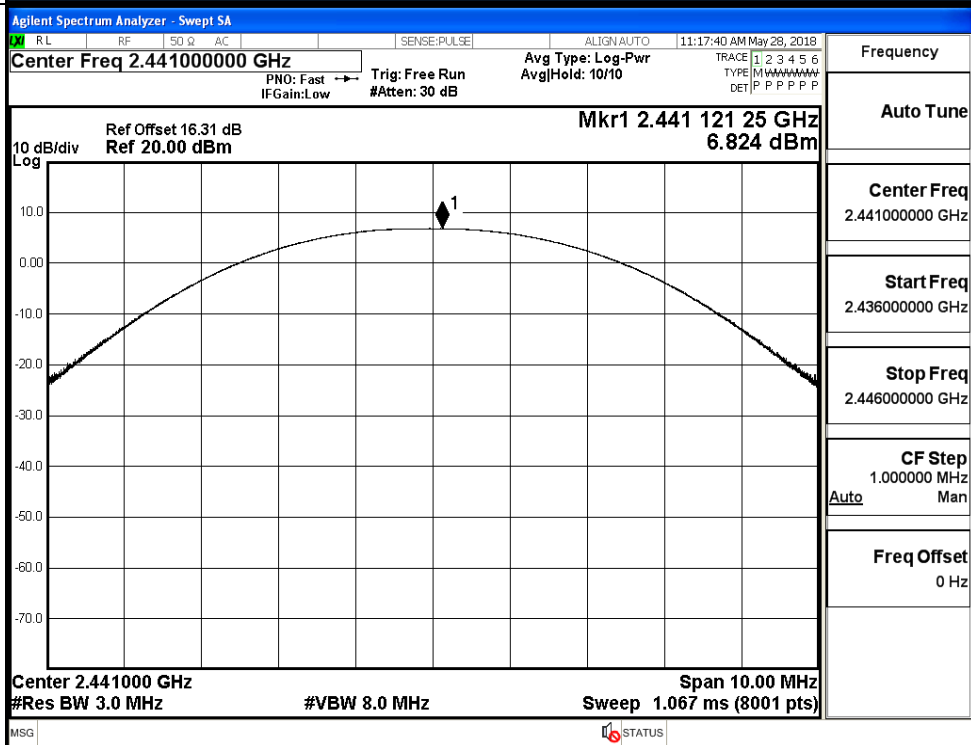
Mode	Channel	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	7.601	30	PASS
	MCH	6.824	30	PASS
	HCH	6.890	30	PASS
$\pi/4$ DQPSK	LCH	6.889	21	PASS
	MCH	6.244	21	PASS
	HCH	6.229	21	PASS
8DPSK	LCH	7.079	21	PASS
	MCH	6.414	21	PASS
	HCH	6.451	21	PASS

Test Graphs

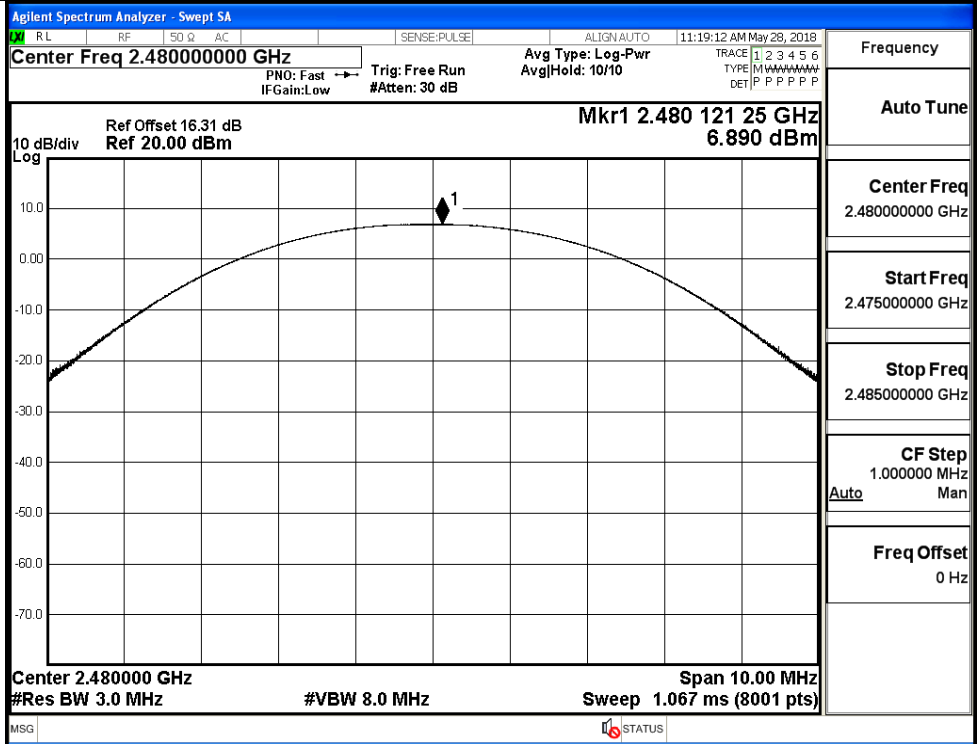
GFSK/LCH



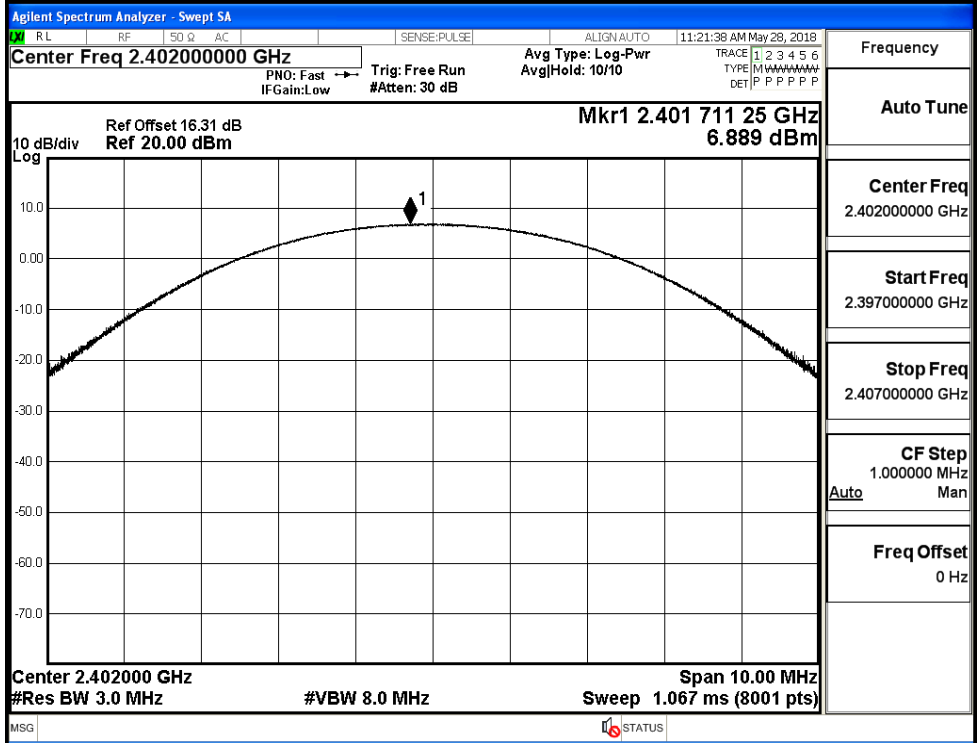
GFSK/MCH



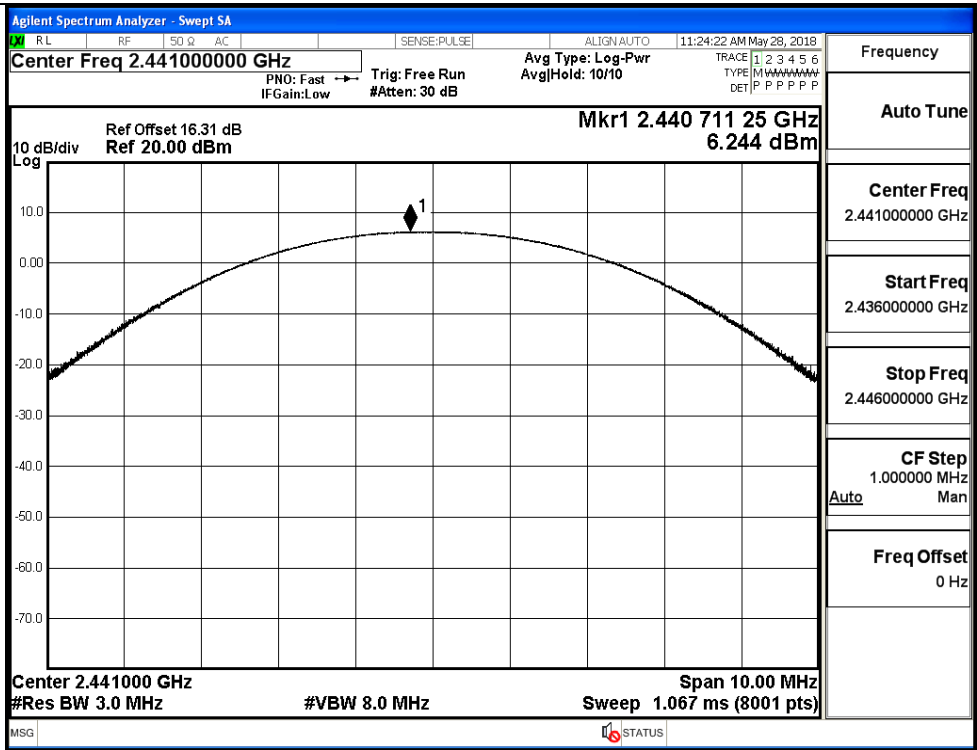
GFSK/HCH



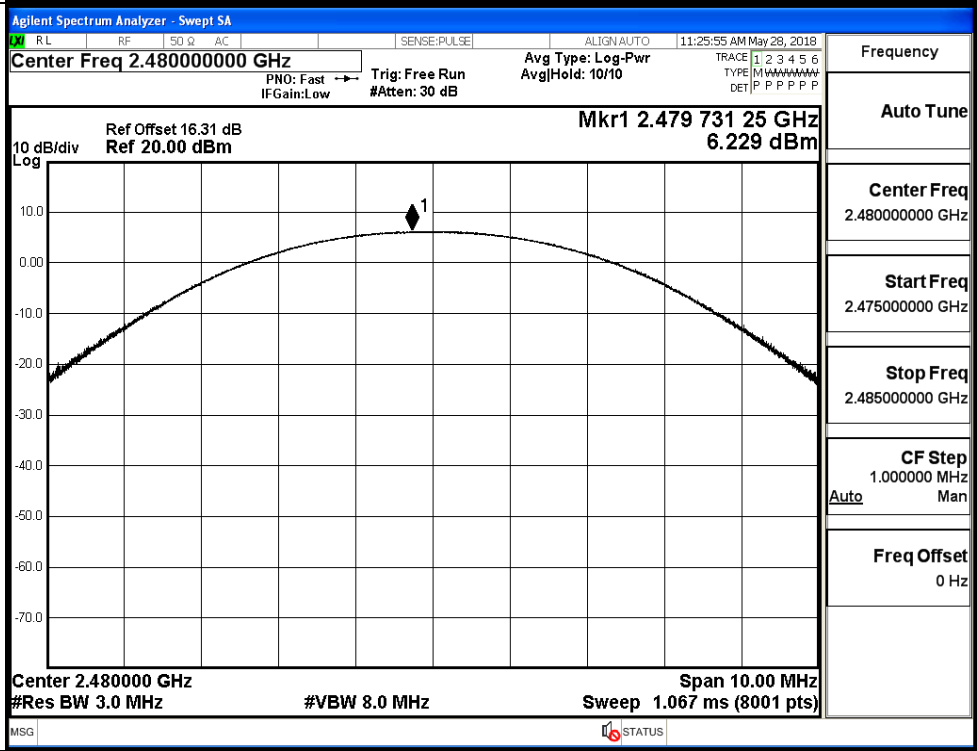
$\pi/4$ DQPSK/LCH



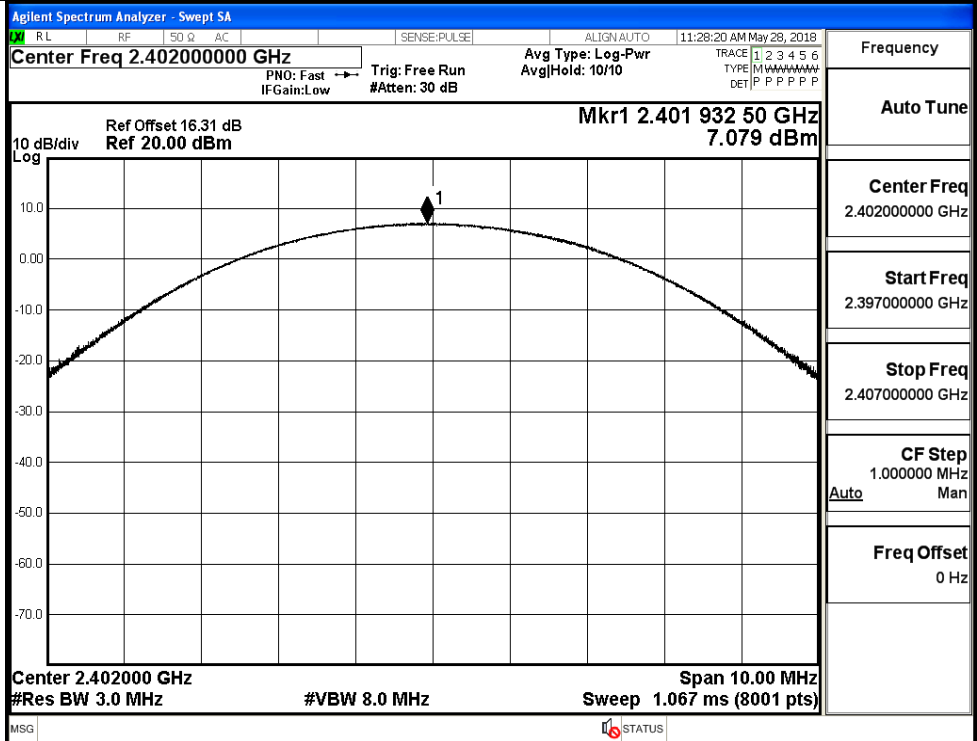
$\pi/4$ DQPSK/MCH



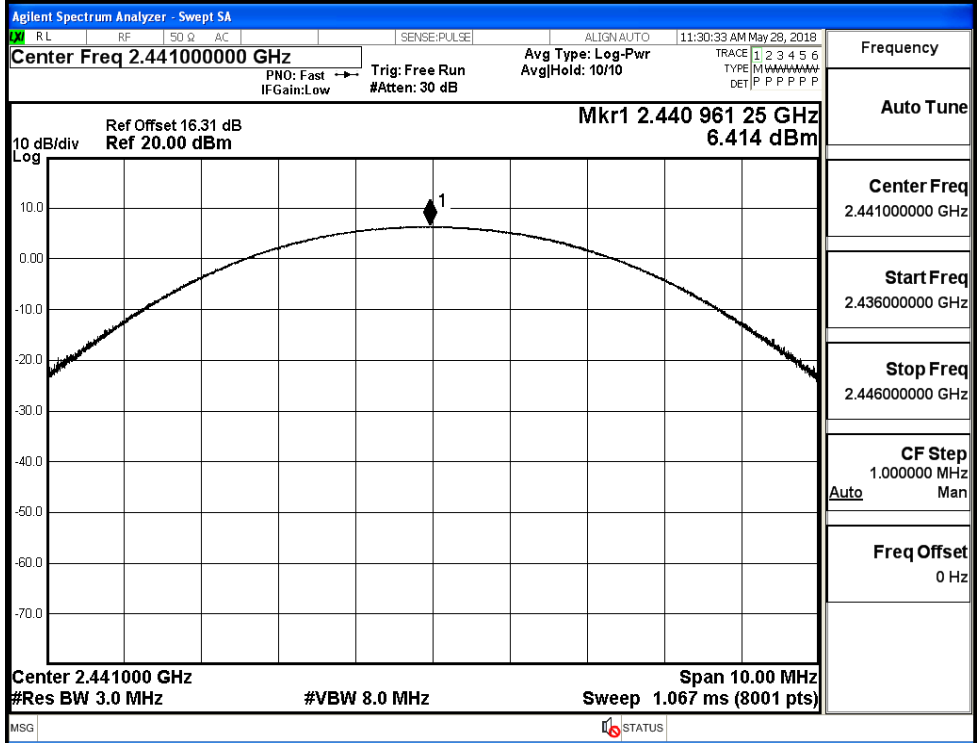
$\pi/4$ DQPSK/HCH



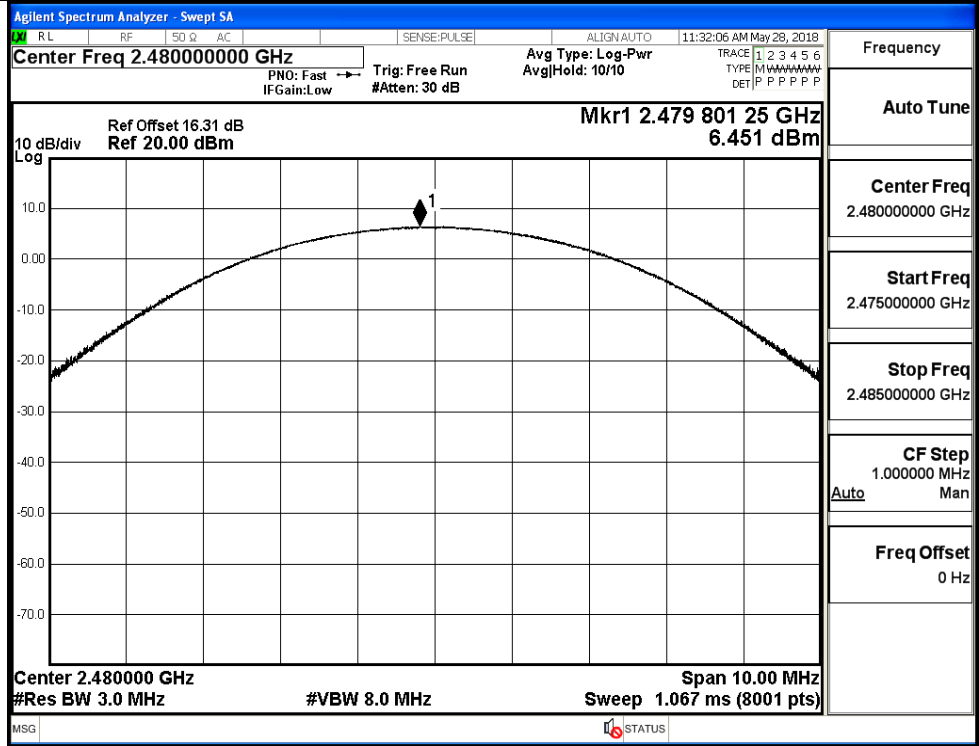
8DPSK/LCH



8DPSK/MCH

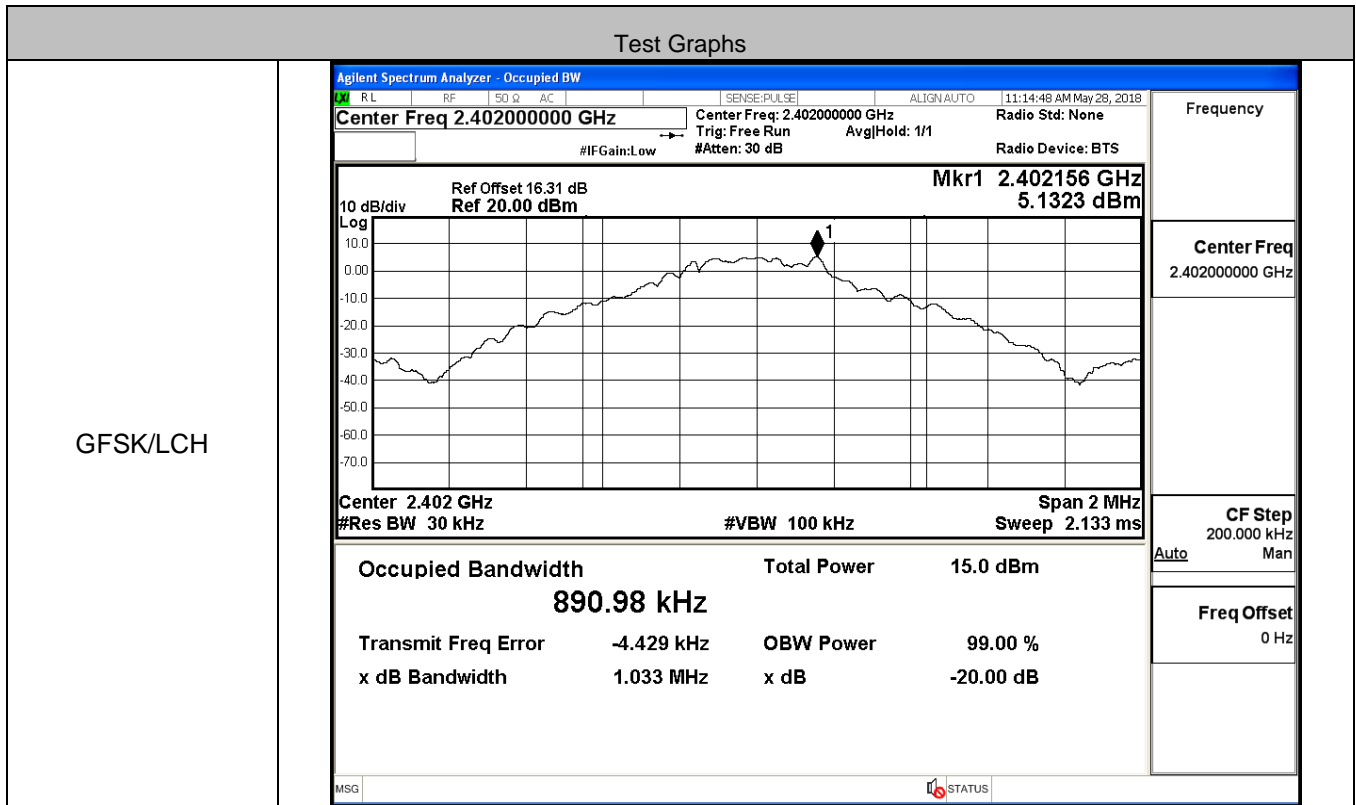


8DPSK/HCH

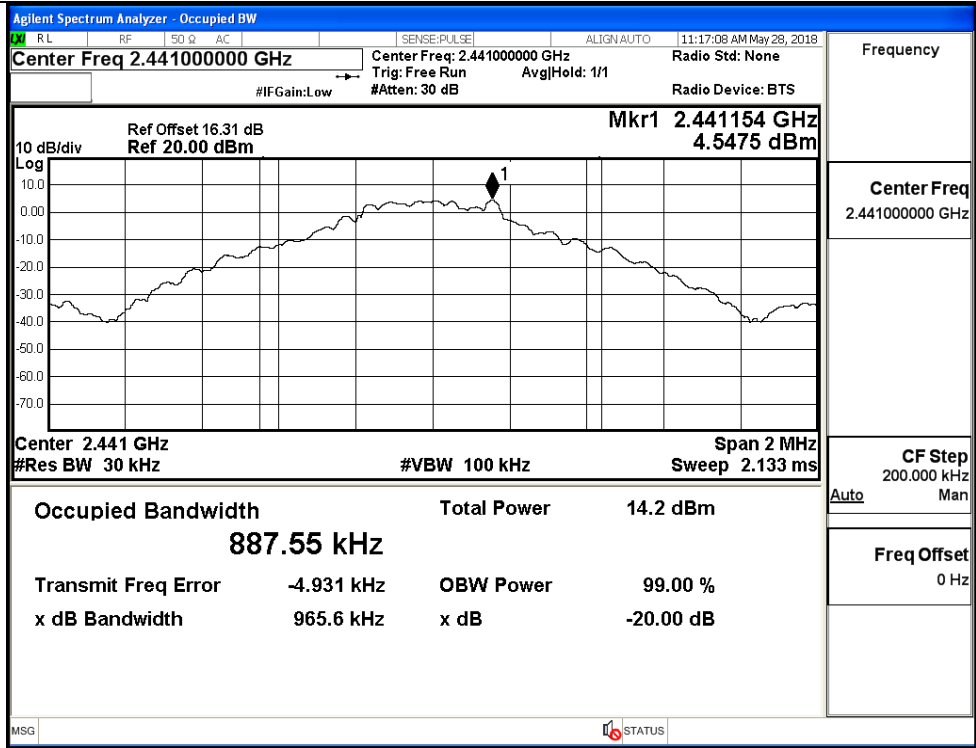


**A.2 99% and 20dB Bandwidth**

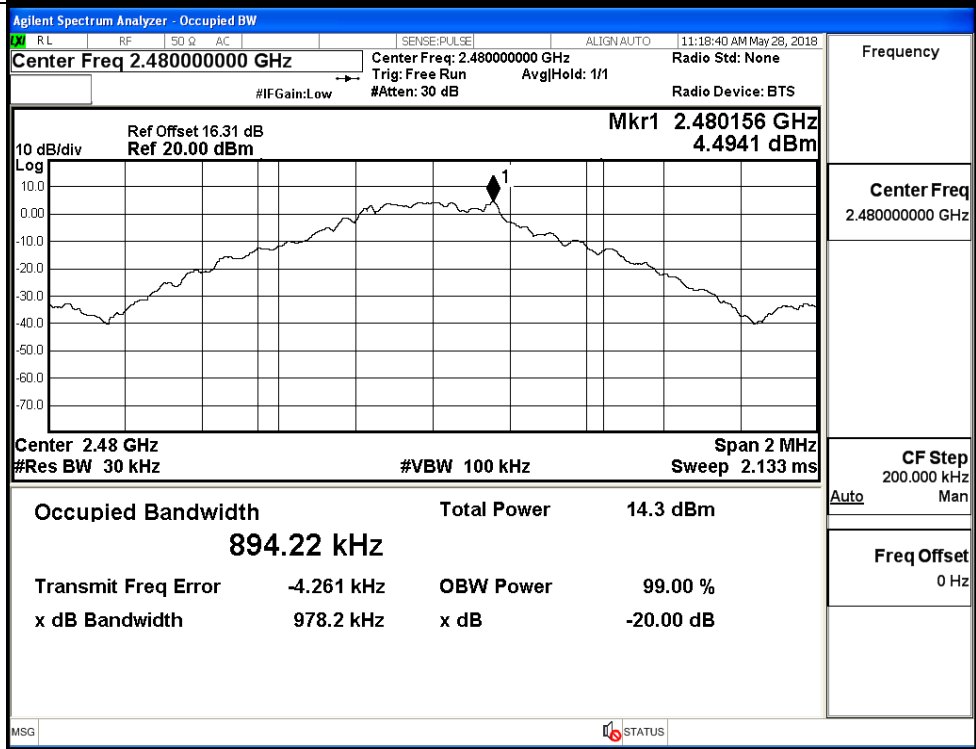
Mode	Channel	99% Bandwidth [MHz]	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.89098	1.033	Not Specified	PASS
	MCH	0.88755	0.9656	Not Specified	PASS
	HCH	0.89422	0.9782	Not Specified	PASS
π/4DQPSK	LCH	1.1735	1.294	Not Specified	PASS
	MCH	1.1779	1.309	Not Specified	PASS
	HCH	1.1752	1.315	Not Specified	PASS
8DPSK	LCH	1.1863	1.295	Not Specified	PASS
	MCH	1.1925	1.300	Not Specified	PASS
	HCH	1.1876	1.299	Not Specified	PASS



GFSK/MCH

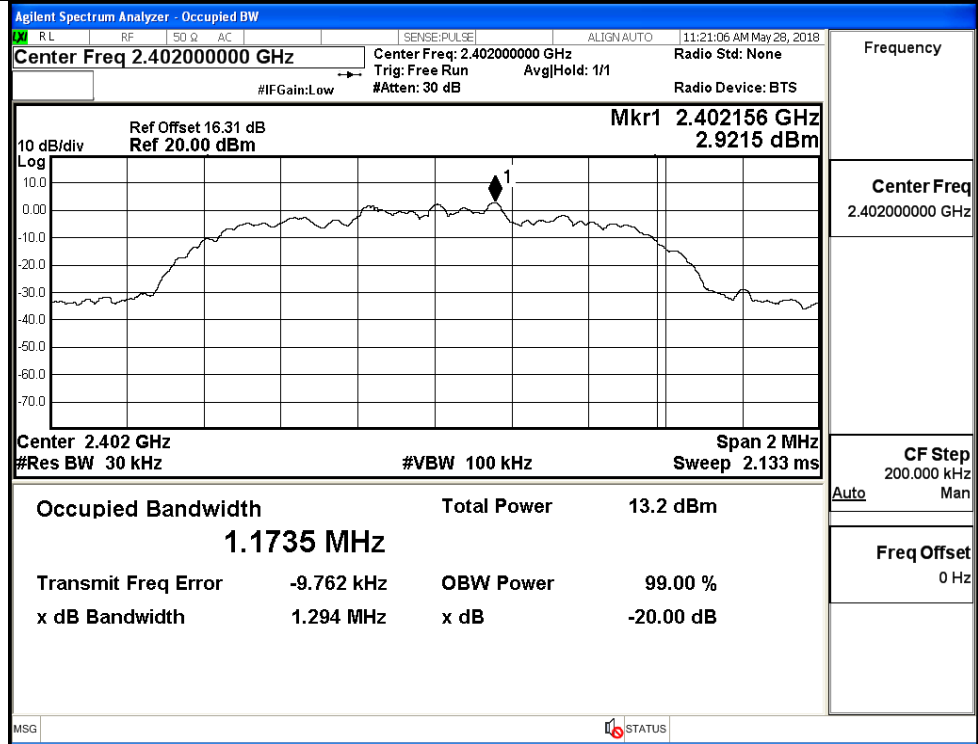


GFSK/HCH

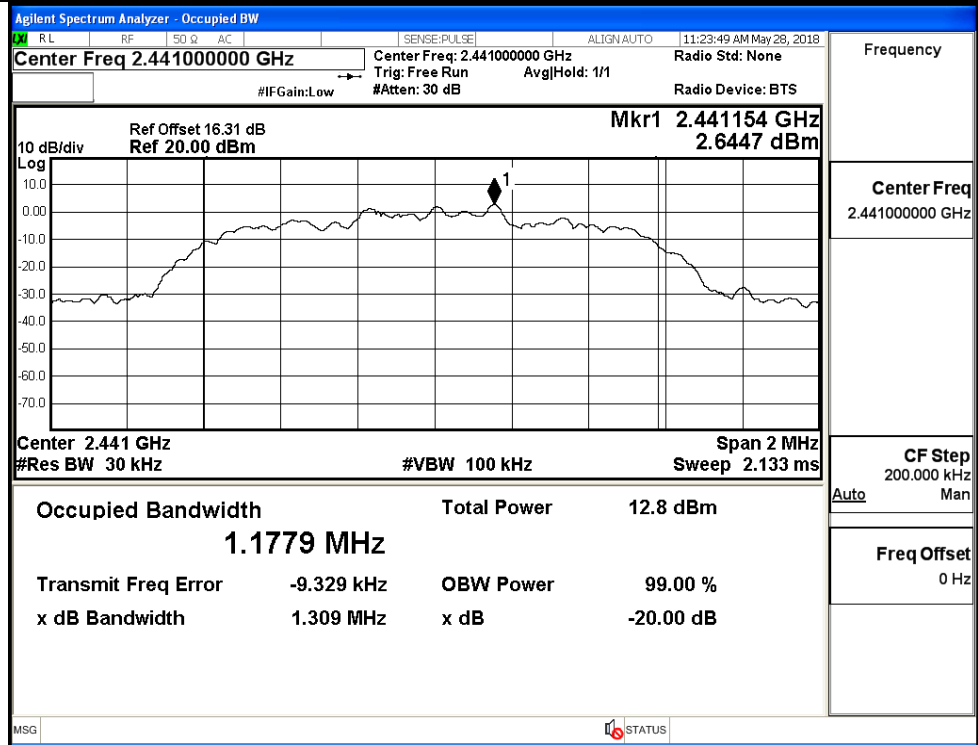




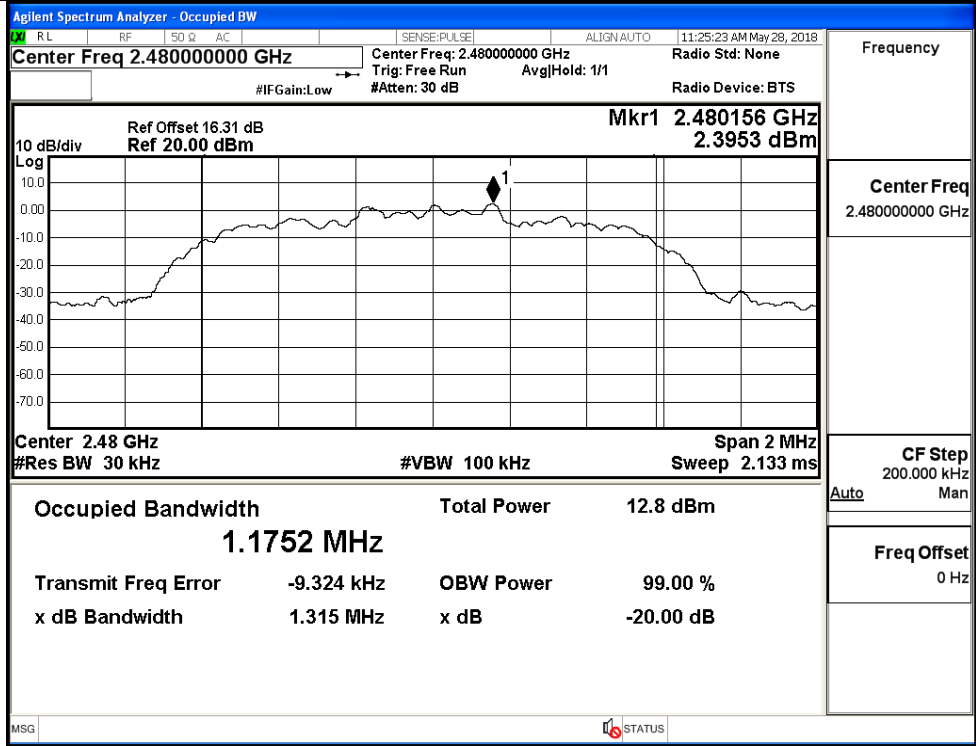
$\pi/4$ DQPSK/LCH



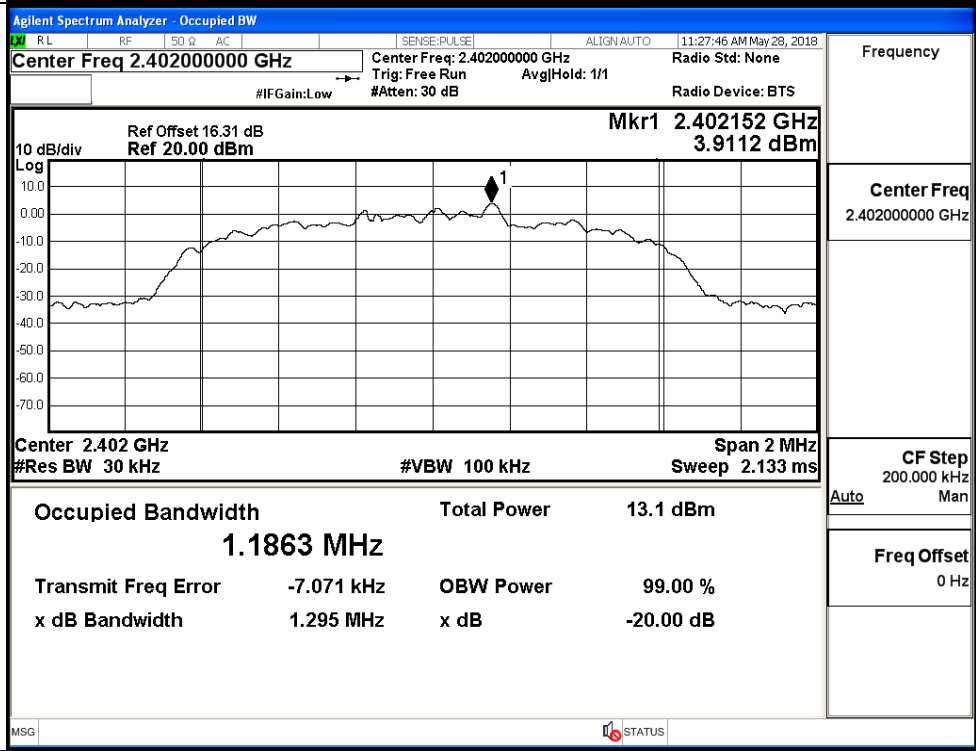
$\pi/4$ DQPSK/MCH



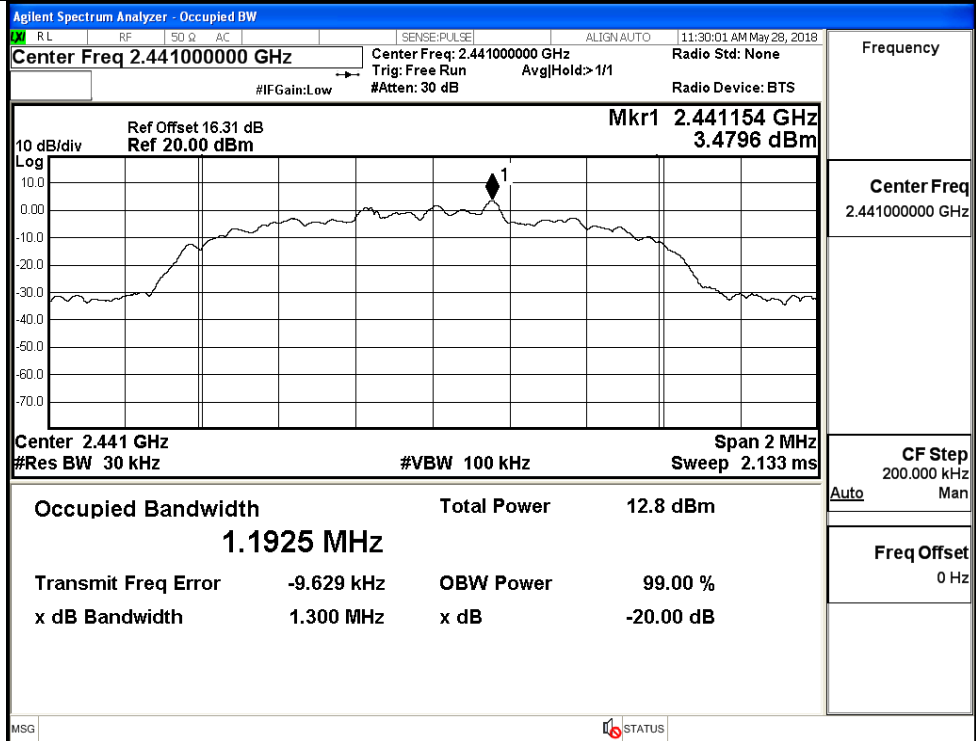
$\pi/4$ DQPSK/HCH



8DPSK/LCH

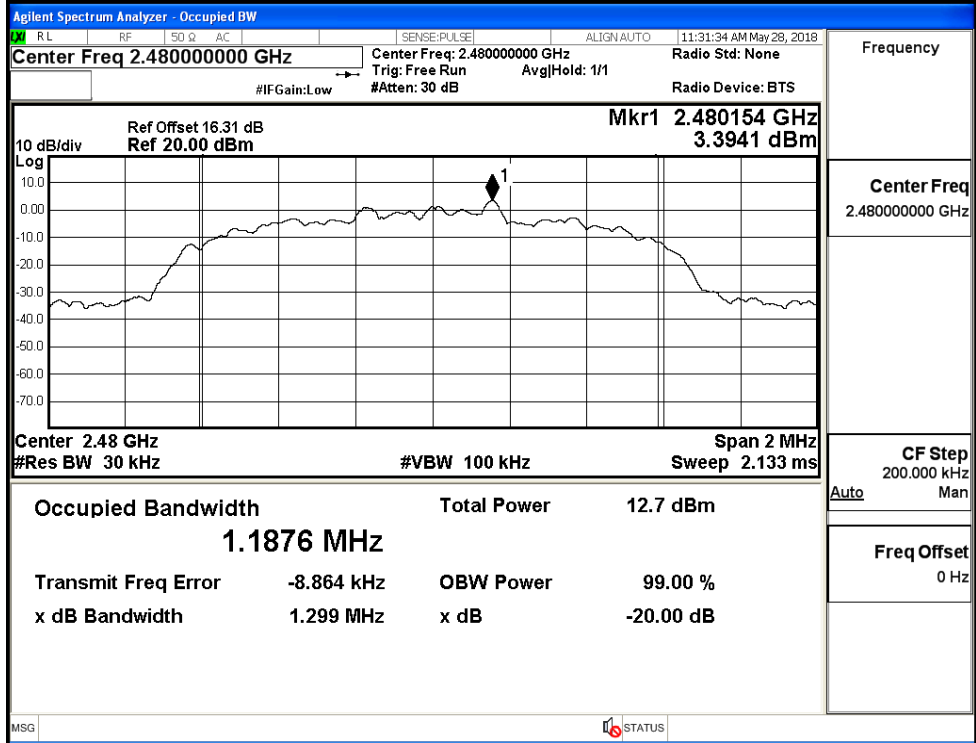


8DPSK/MCH



Frequency	2.441000000 GHz
Center Freq	2.441000000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

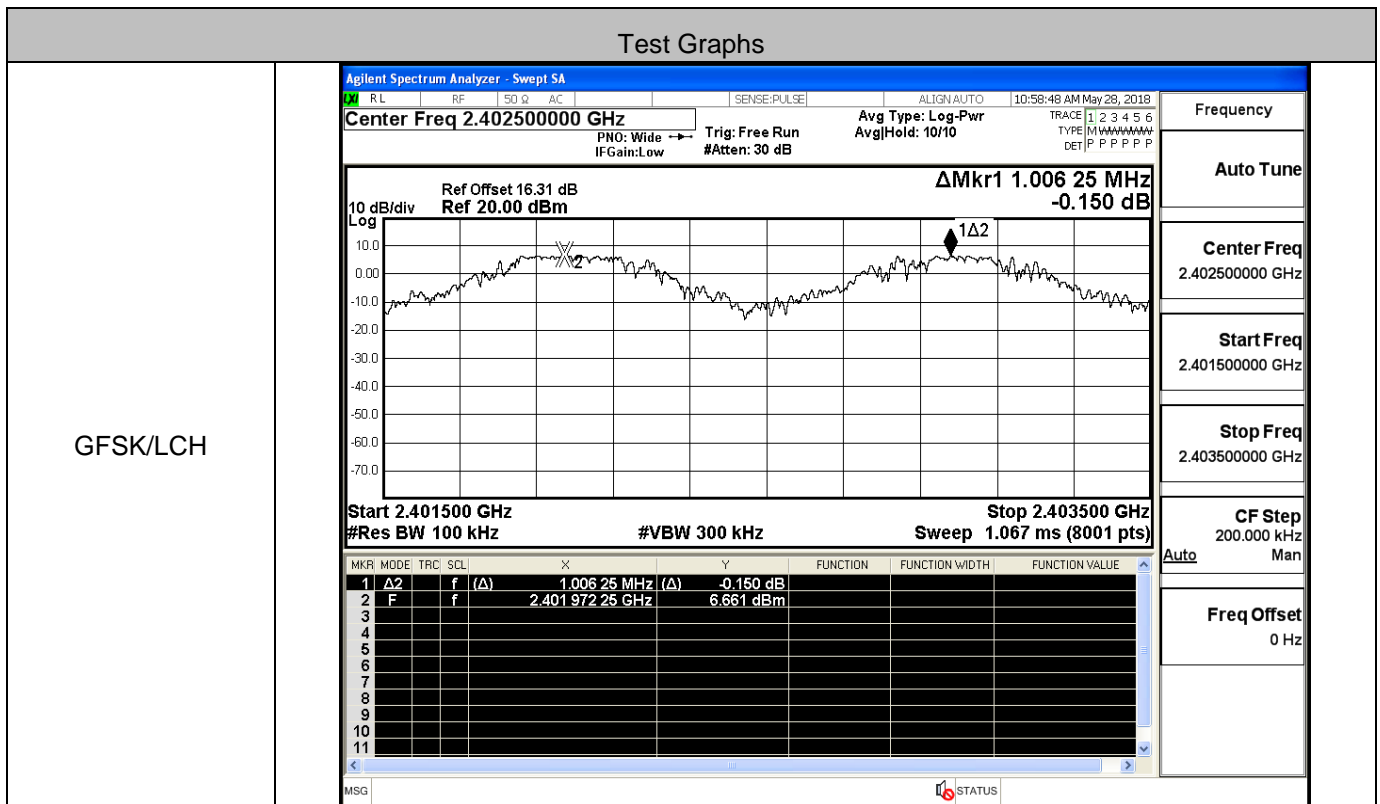
8DPSK/HCH



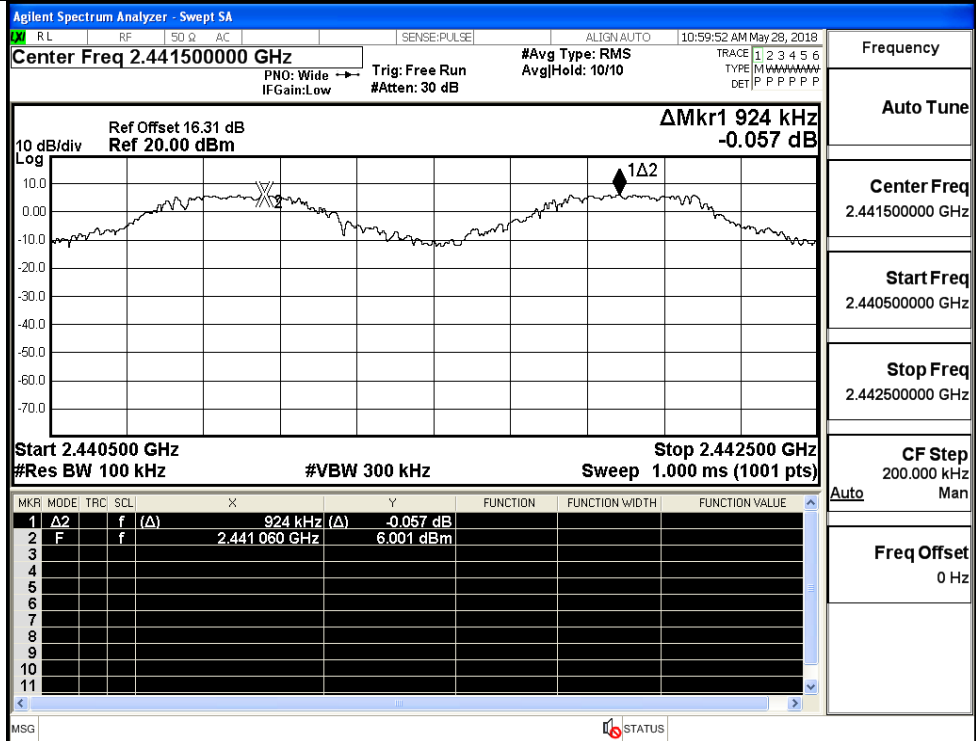
Frequency	2.480000000 GHz
Center Freq	2.480000000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

### A.3 Carrier Frequency Separation

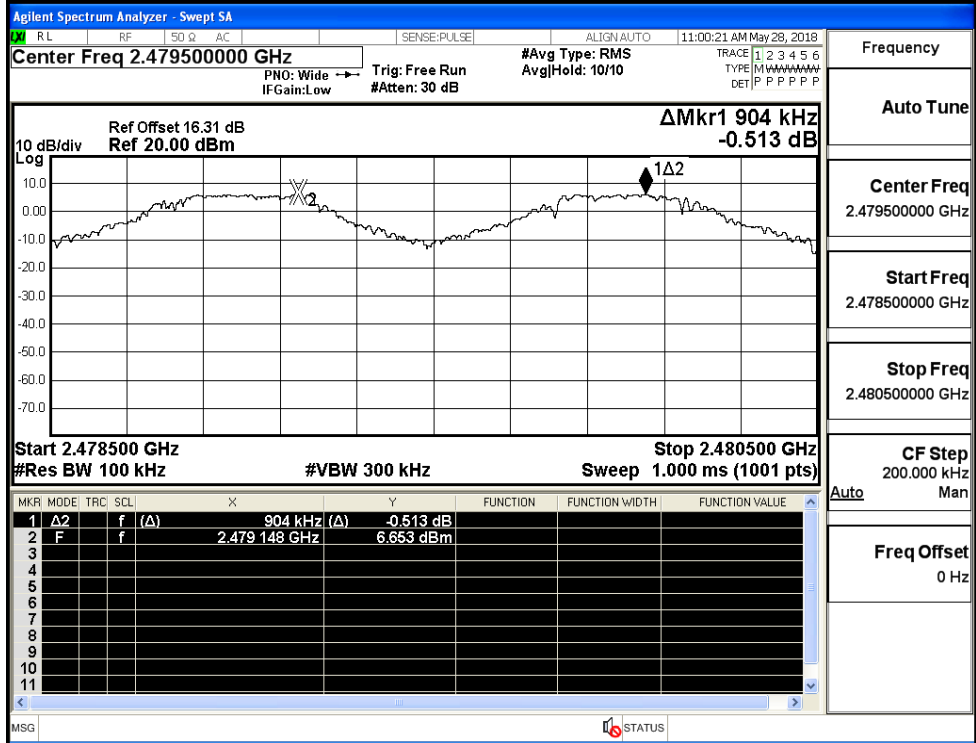
Mode	Channel	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.006	0.025	PASS
	MCH	0.924	0.025	PASS
	HCH	0.904	0.025	PASS
π/4DQPSK	LCH	1.056	0.025	PASS
	MCH	0.990	0.025	PASS
	HCH	0.970	0.025	PASS
8DPSK	LCH	0.916	0.025	PASS
	MCH	0.724	0.025	PASS
	HCH	1.326	0.025	PASS



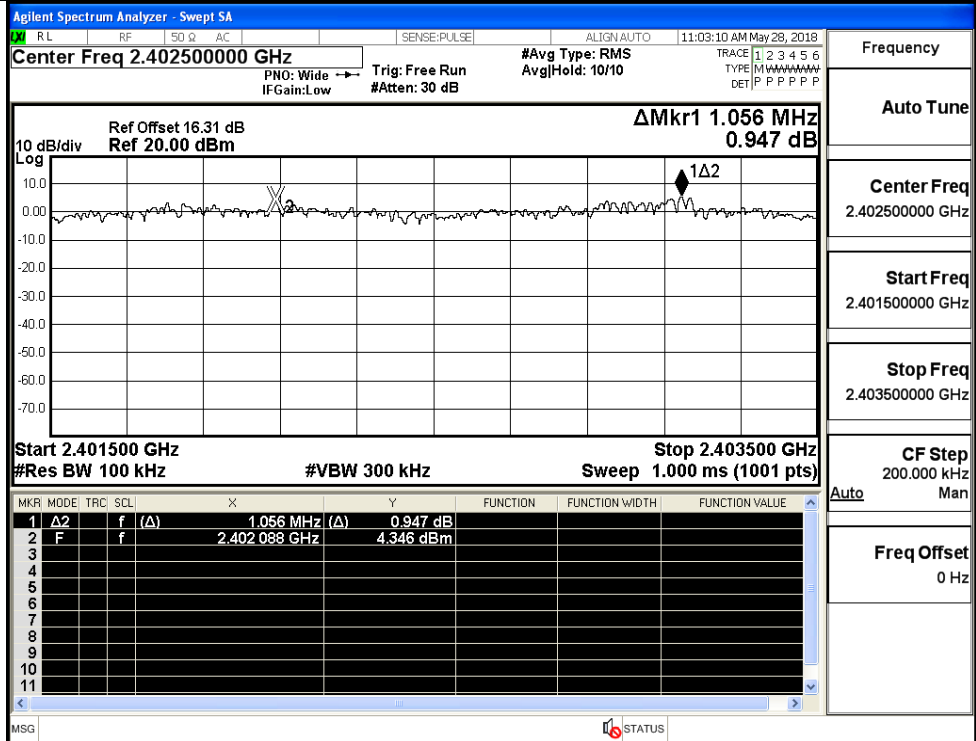
GFSK/MCH



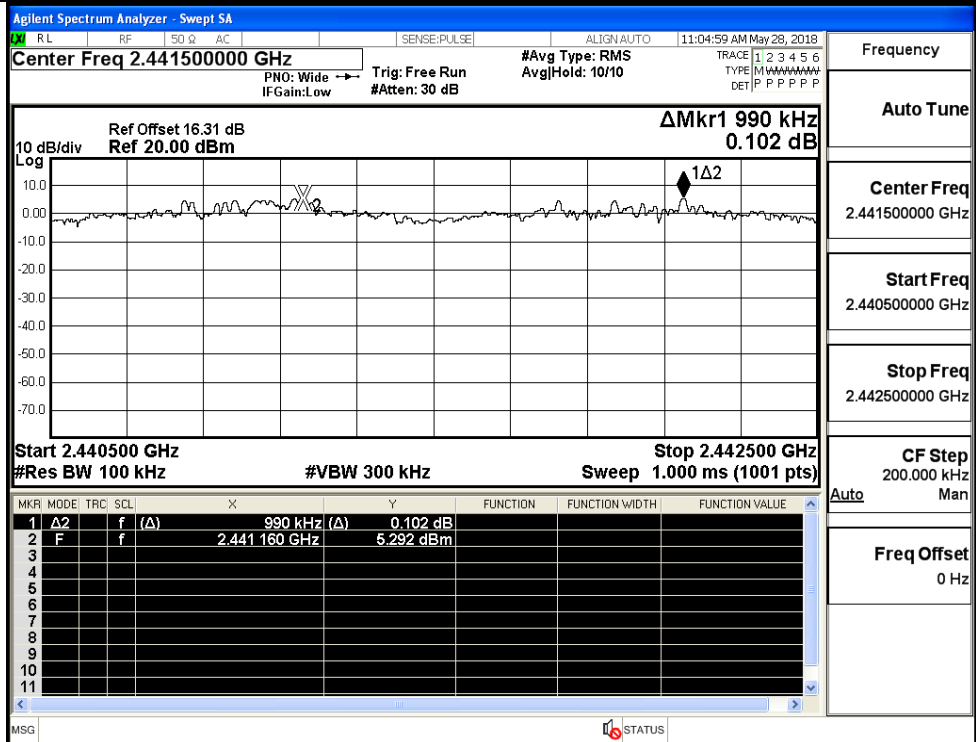
GFSK/HCH



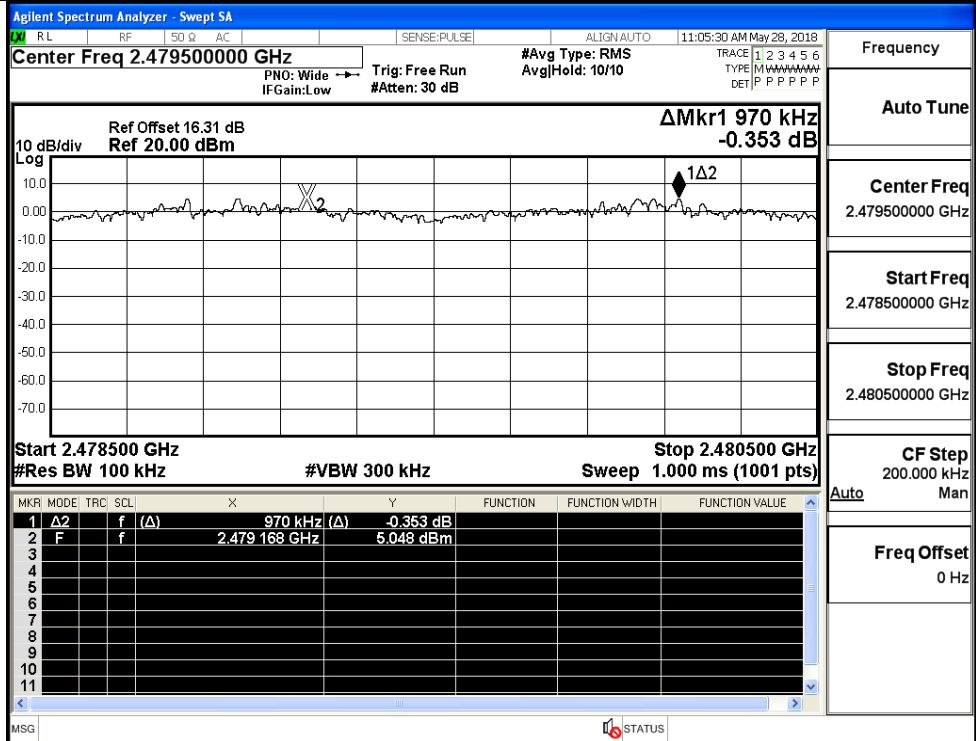
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH

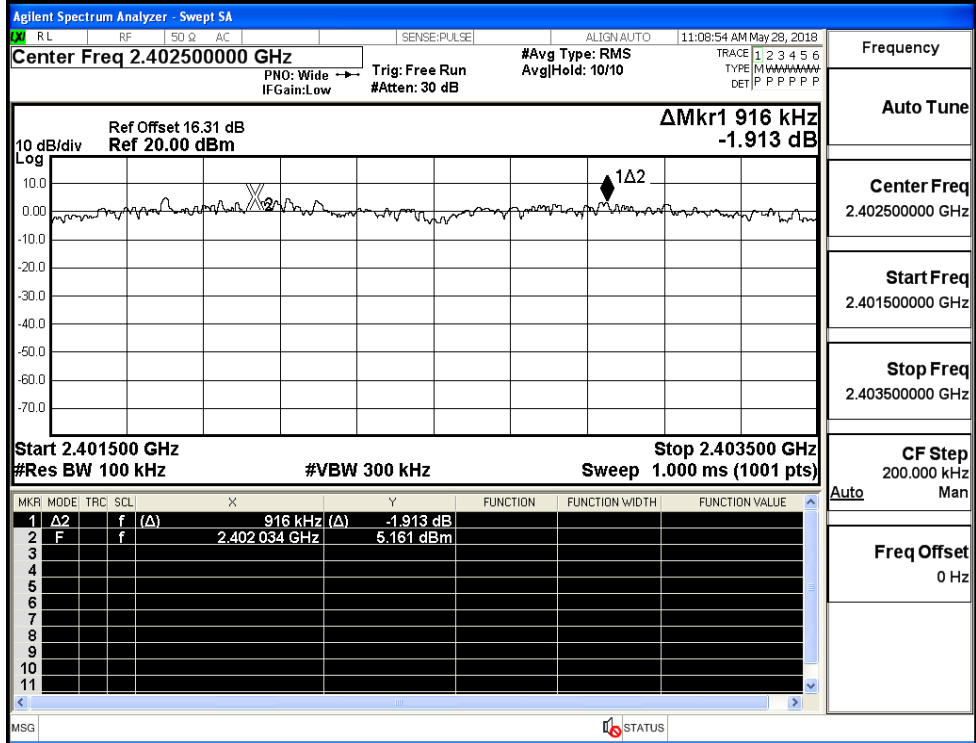


π/4DQPSK/HCH



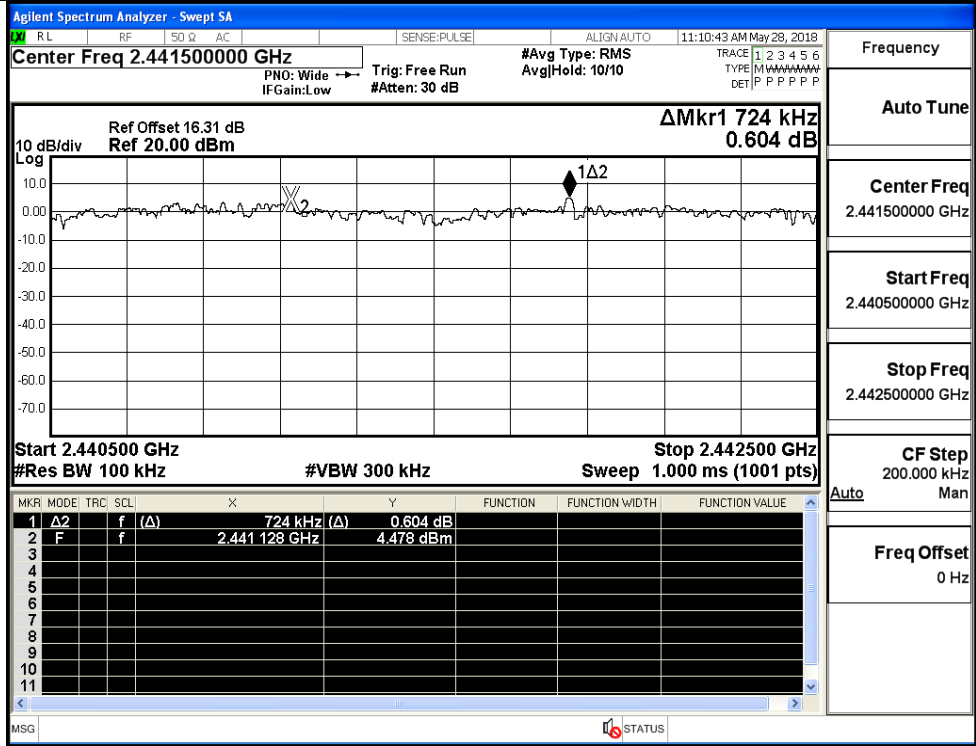
Frequency	2.479500000 GHz
Auto Tune	
Center Freq	2.479500000 GHz
Start Freq	2.478500000 GHz
Stop Freq	2.480500000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

8DPSK/LCH

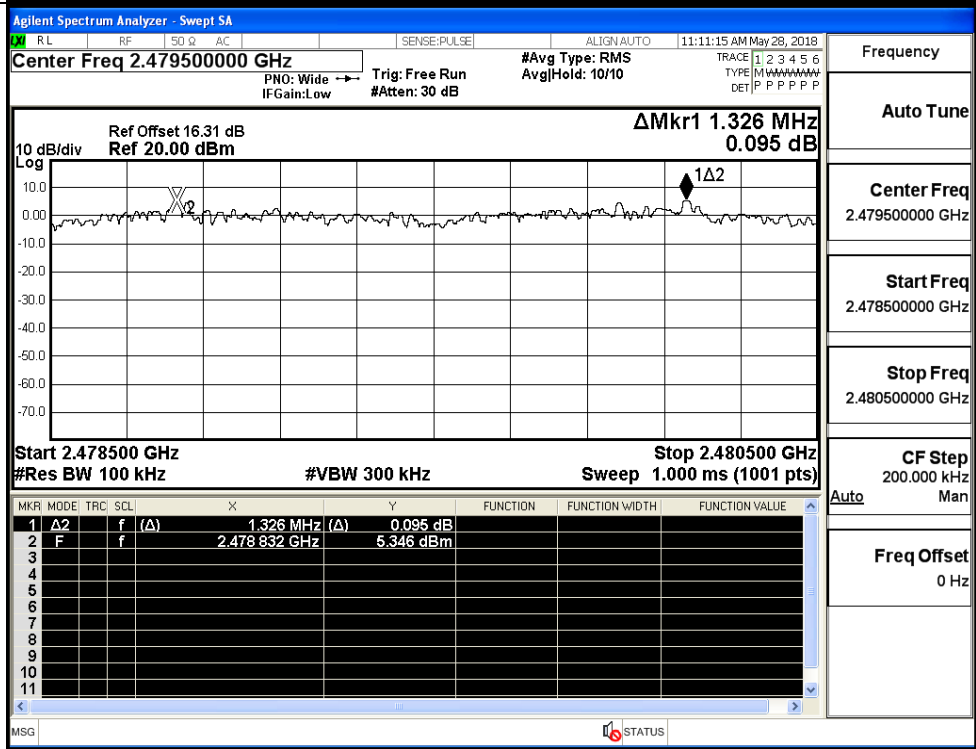


Frequency	2.402500000 GHz
Auto Tune	
Center Freq	2.402500000 GHz
Start Freq	2.401500000 GHz
Stop Freq	2.403500000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

8DPSK/MCH



8DPSK/HCH



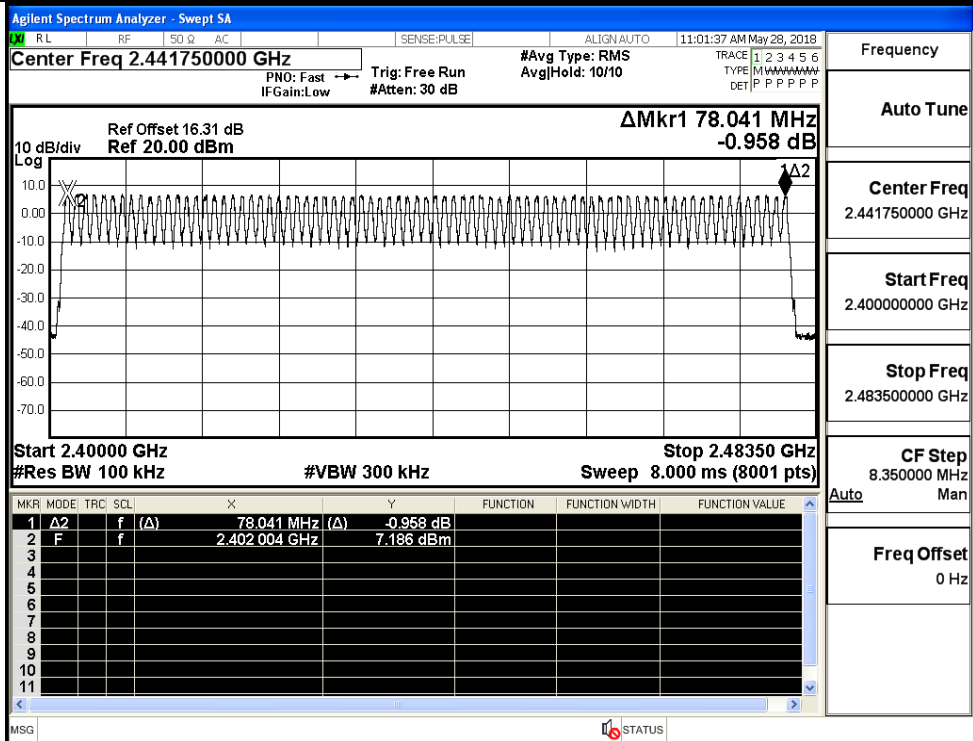


### A.4 Hopping Channel Number

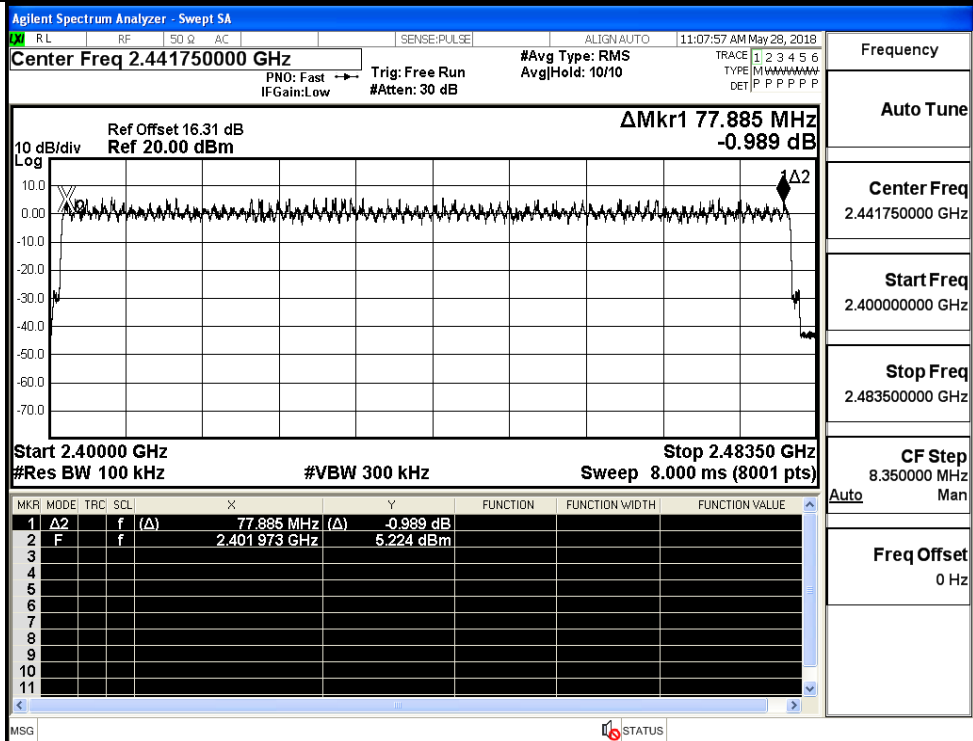
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

#### Test Graphs

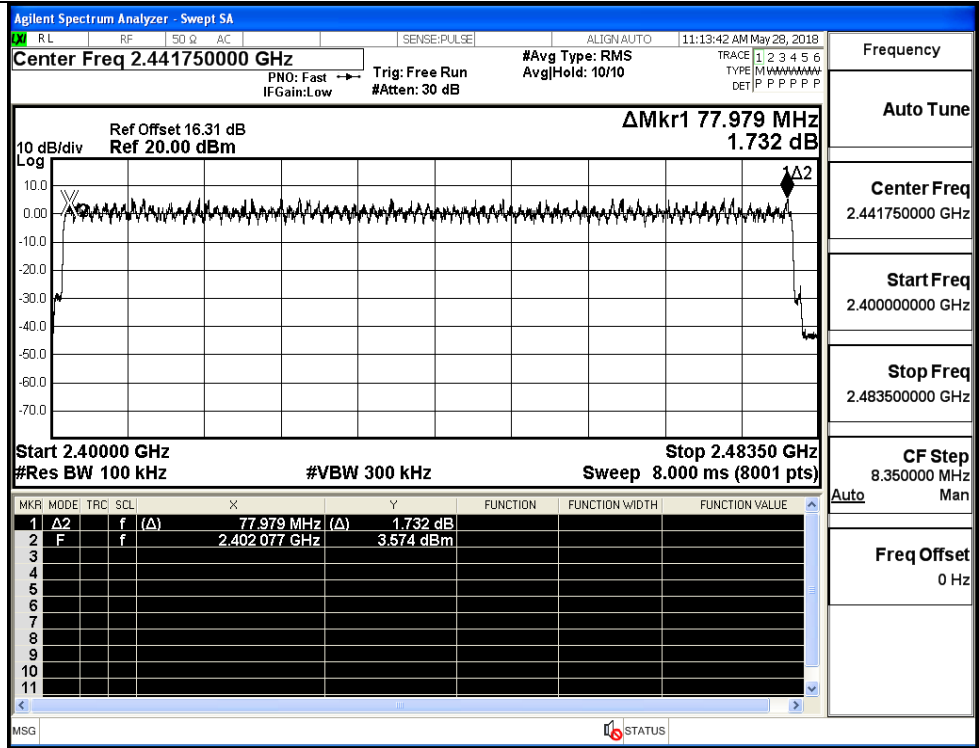
GFSK/Hop



$\pi/4$ DQPSK/Hop

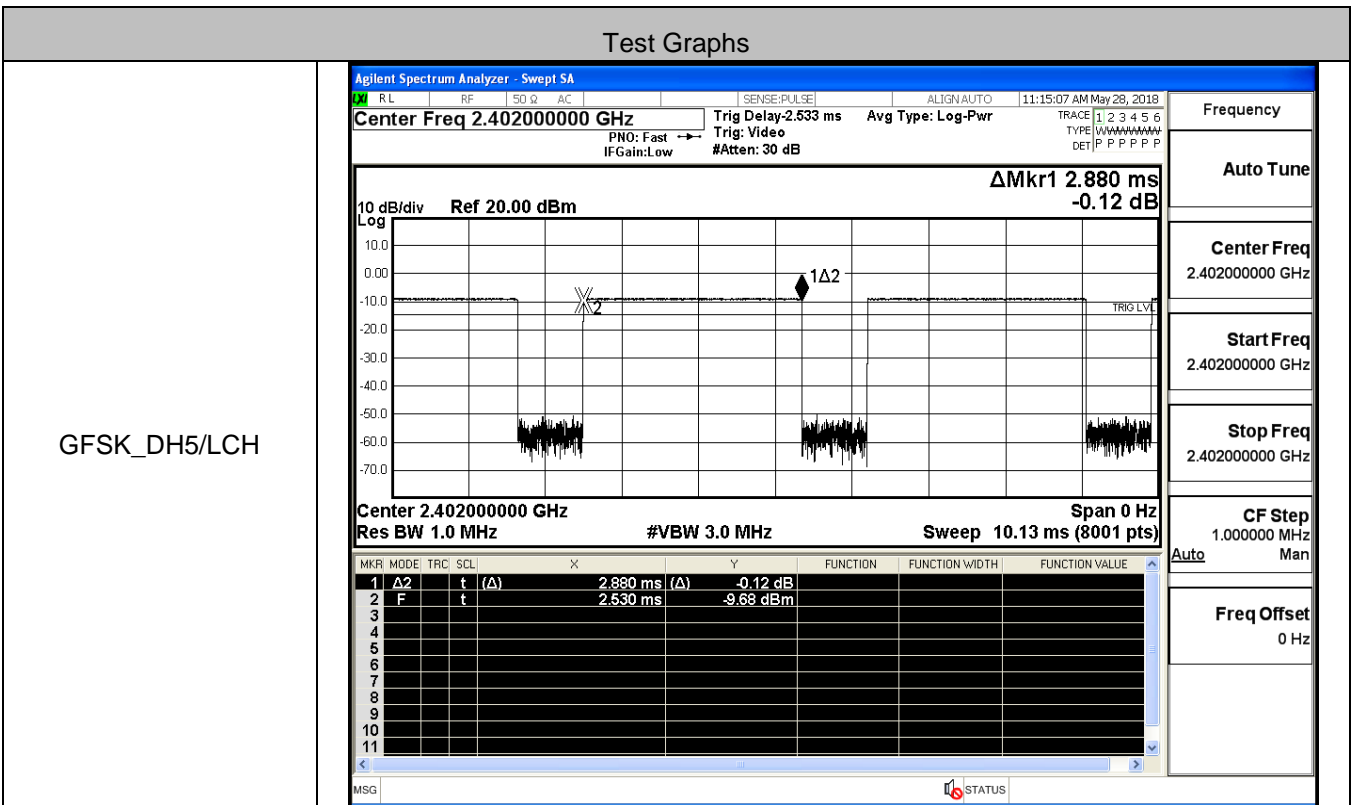


8DPSK/Hop

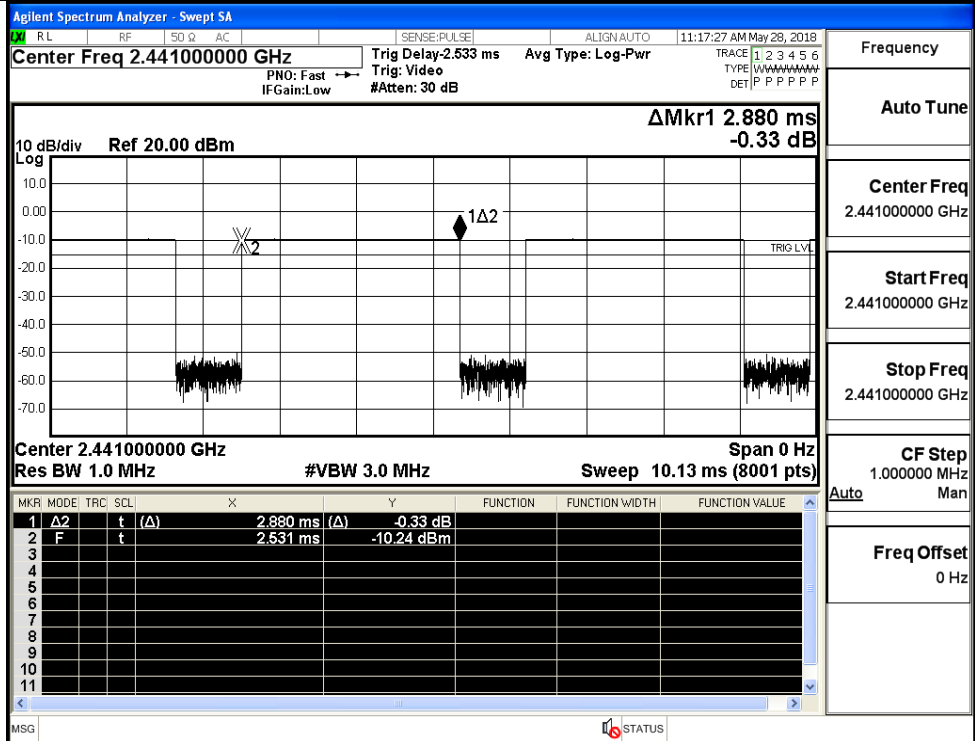


A.5 Dwell Time

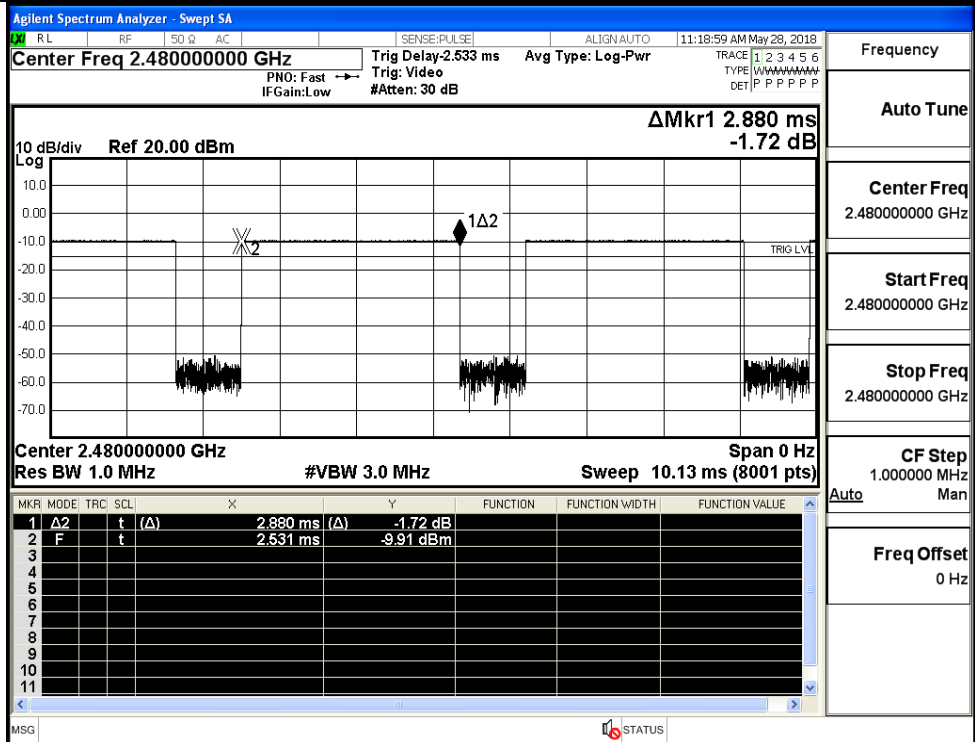
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
π/4DQPSK	2DH5	LCH	2.88	106.7	0.303	0.4	PASS
	2DH5	MCH	2.88	106.7	0.303	0.4	PASS
	2DH5	HCH	2.88	106.7	0.303	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



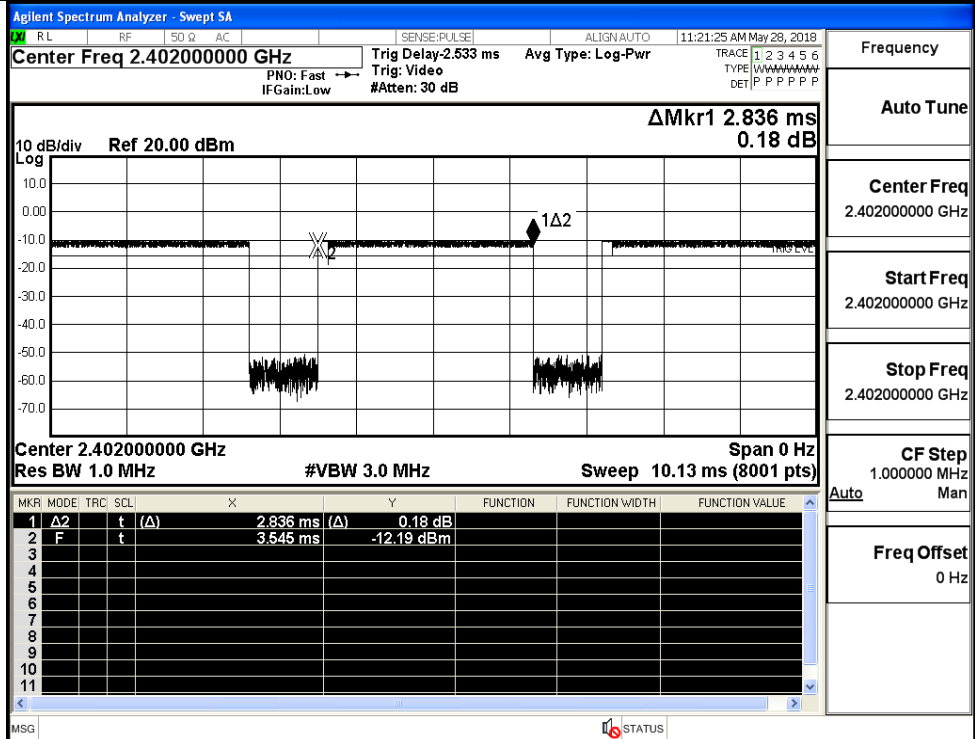
GFSK\_DH5/MCH



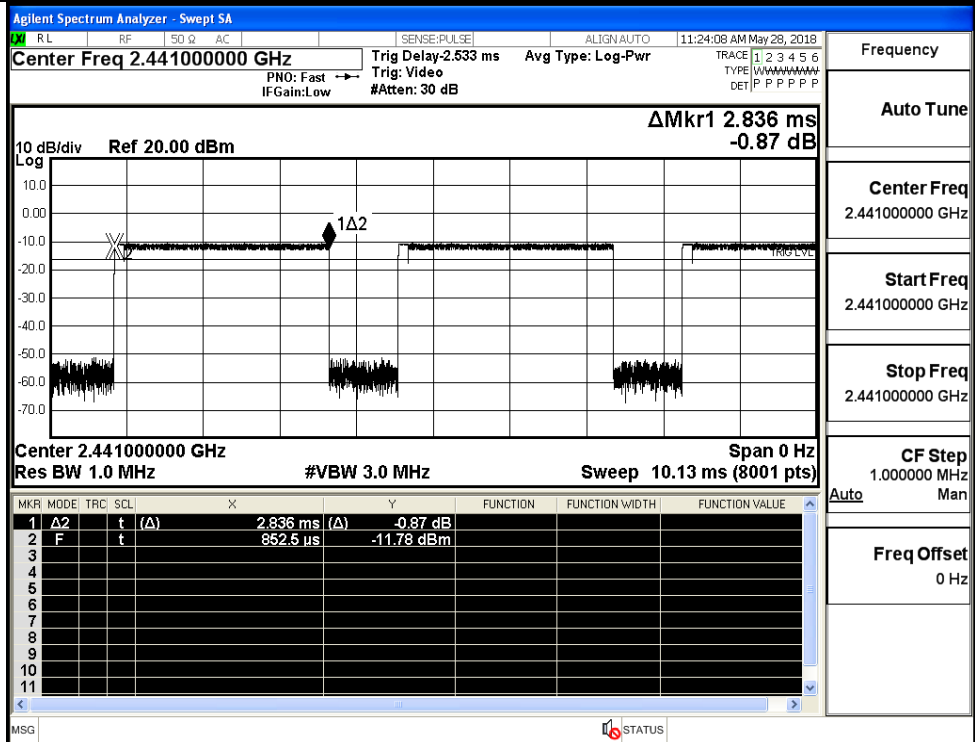
GFSK\_DH5/HCH



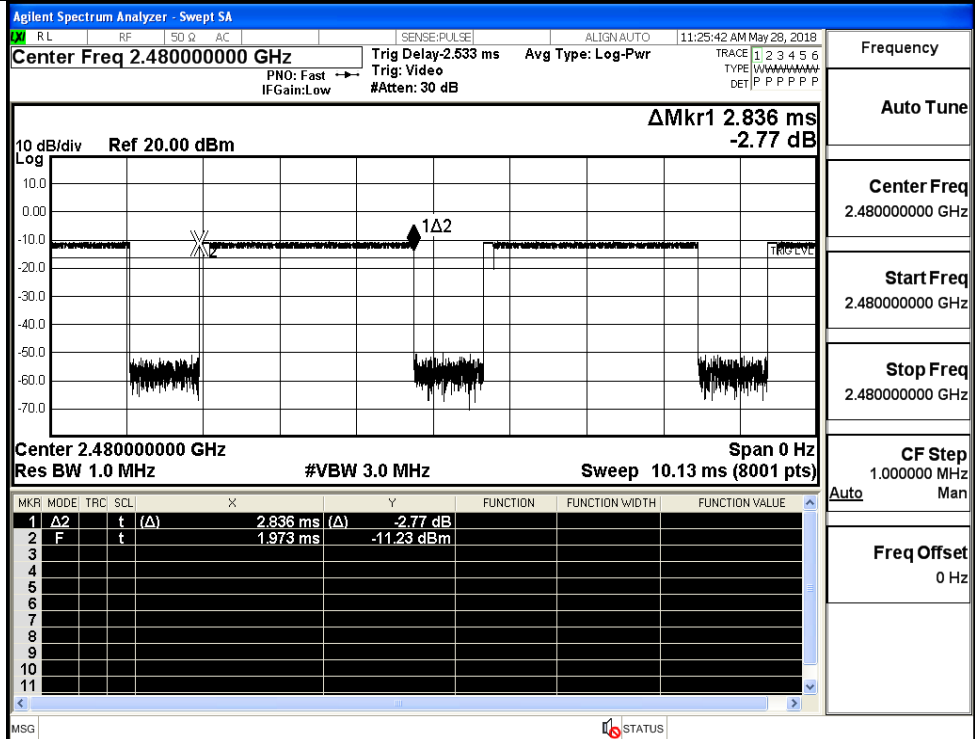
$\pi/4$ DQPSK  
\_2DH5/LCH



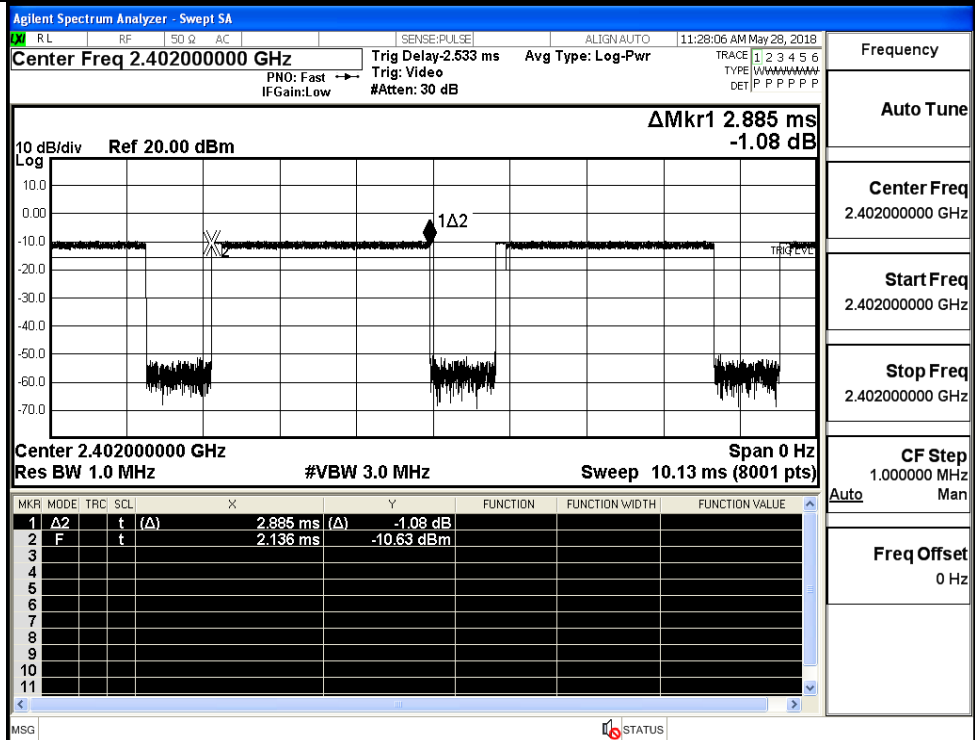
$\pi/4$ DQPSK  
\_2DH5/MCH



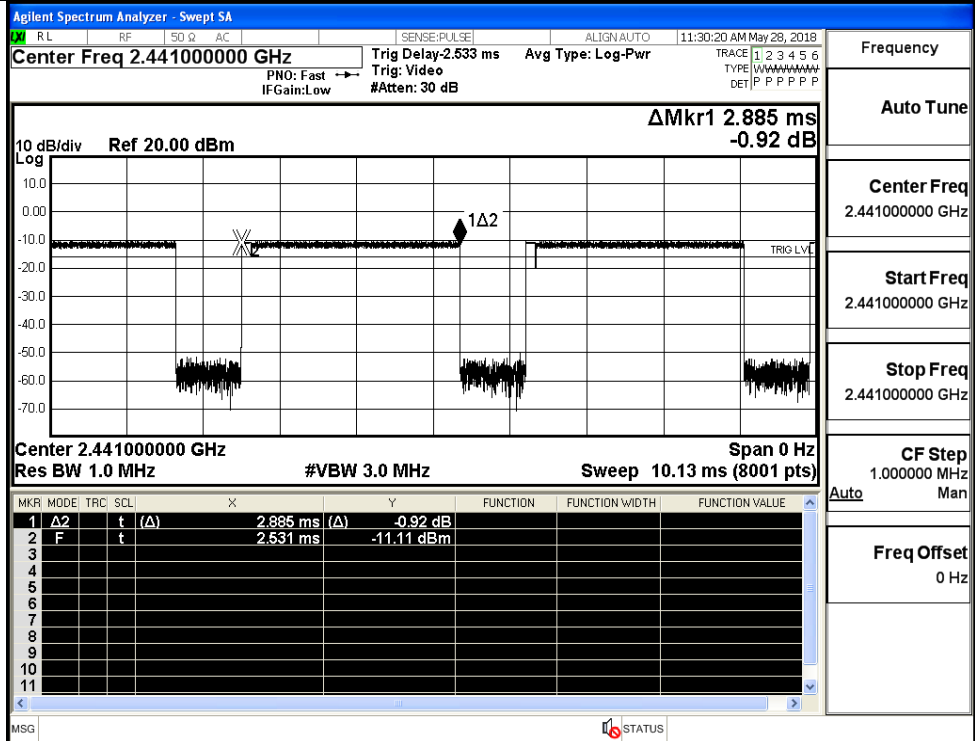
$\pi/4$ DQPSK  
\_2DH5/HCH



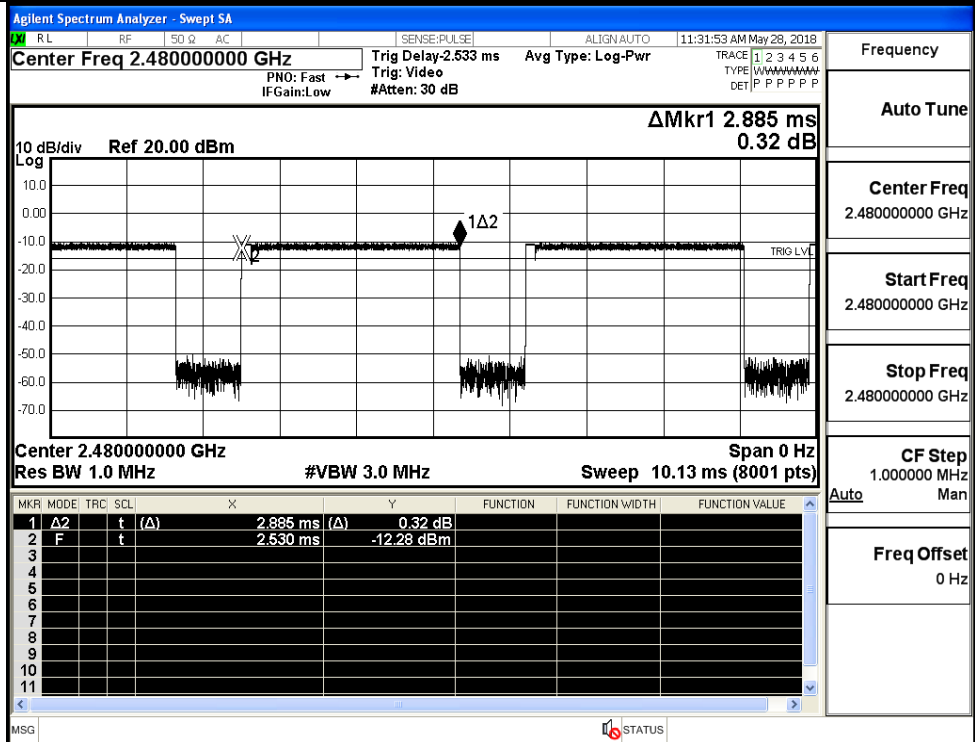
8DPSK\_3DH5/LCH



8DPSK\_3DH5/MCH



8DPSK\_3DH5/HCH



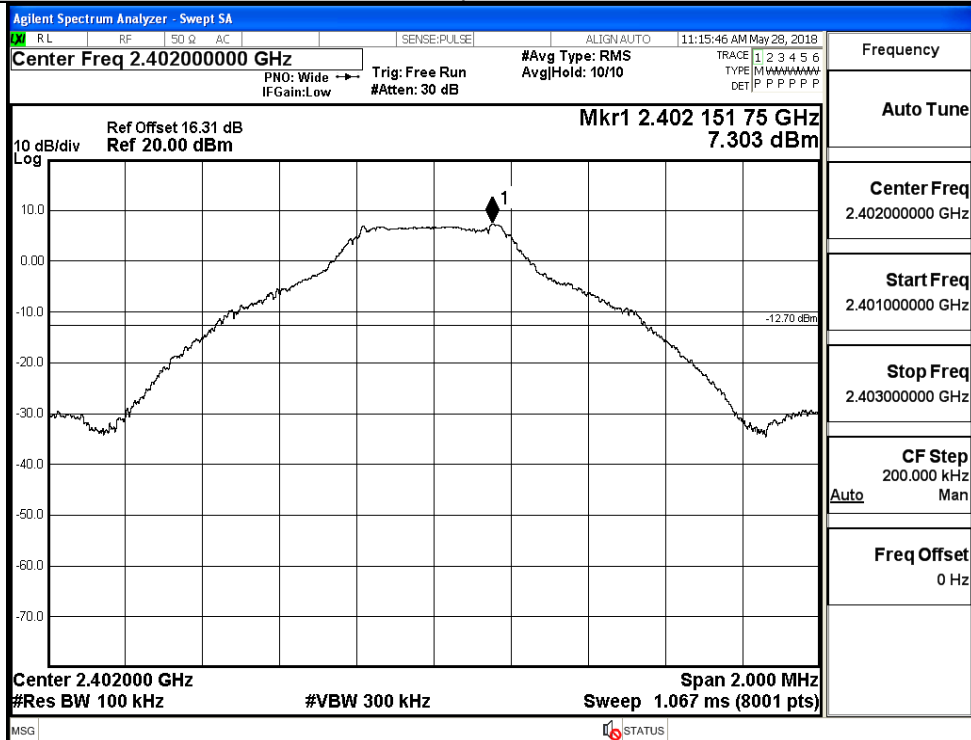
**A.6 RF Conducted Spurious Emissions**

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	7.303	-36.533	-12.697	PASS
	MCH	6.048	-36.432	-13.952	PASS
	HCH	6.583	-34.666	-13.417	PASS
$\pi/4$ DQPSK	LCH	5.779	-35.920	-14.221	PASS
	MCH	5.389	-36.556	-14.611	PASS
	HCH	5.457	-35.154	-14.543	PASS
8DPSK	LCH	6.006	-34.688	-13.994	PASS
	MCH	5.534	-33.767	-14.466	PASS
	HCH	5.317	-35.711	-14.683	PASS

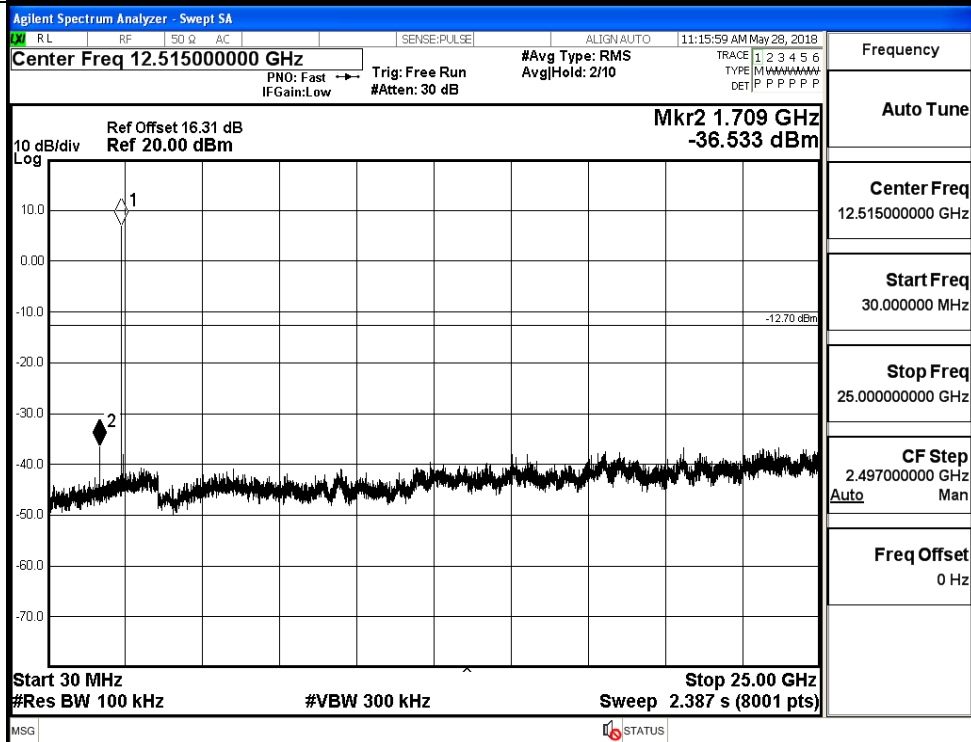


GFSK\_LCH\_Graphs

Pref

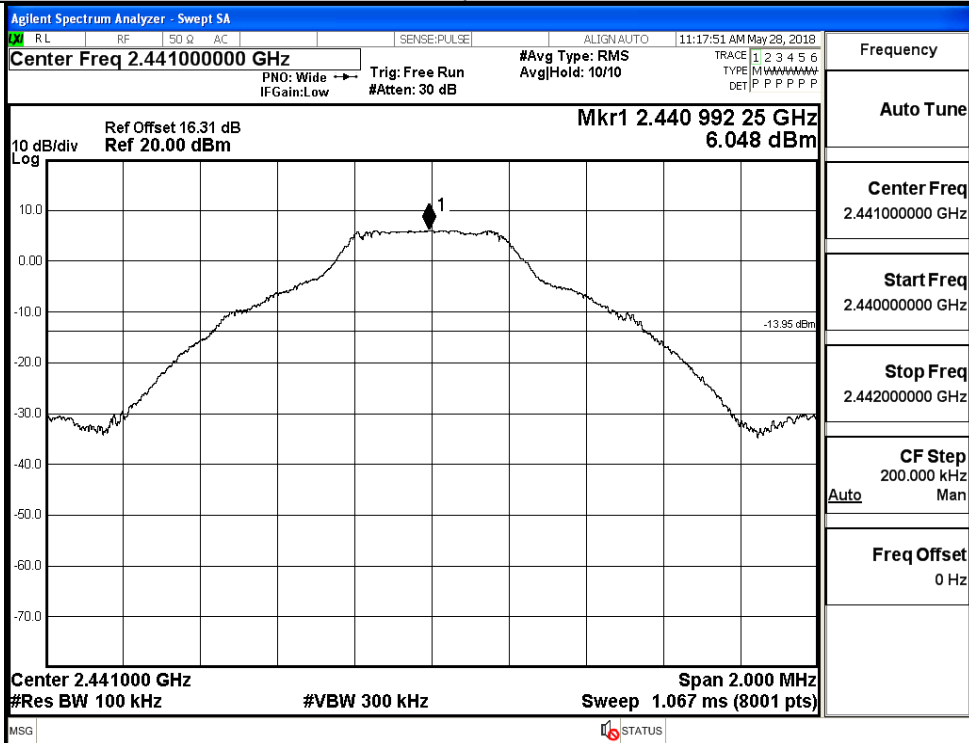


Puw

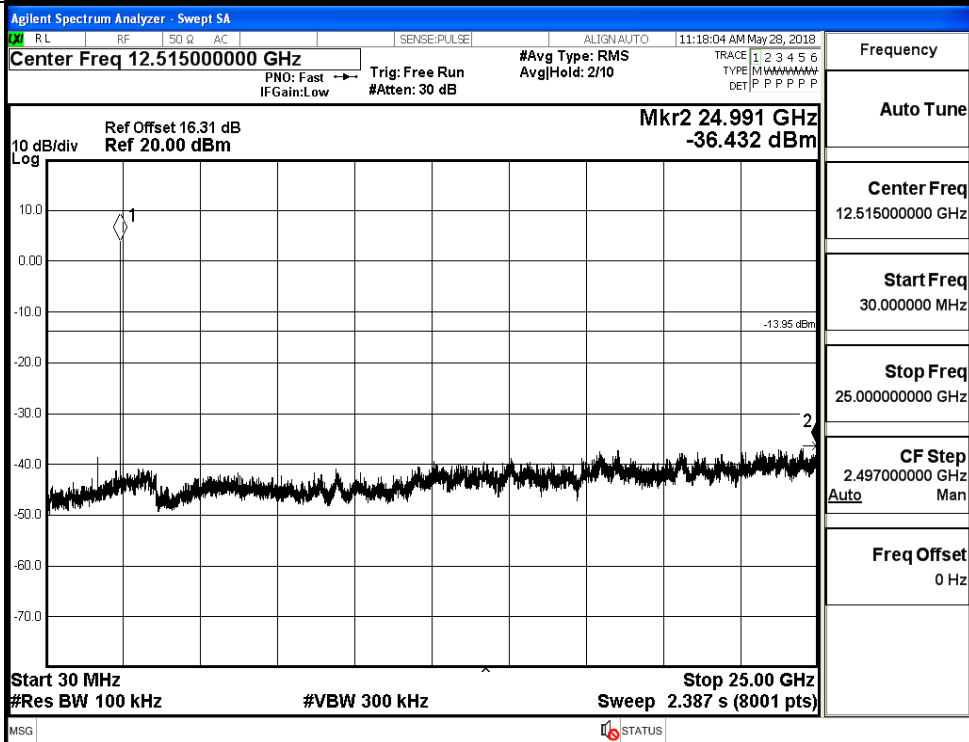


GFSK\_MCH\_Graphs

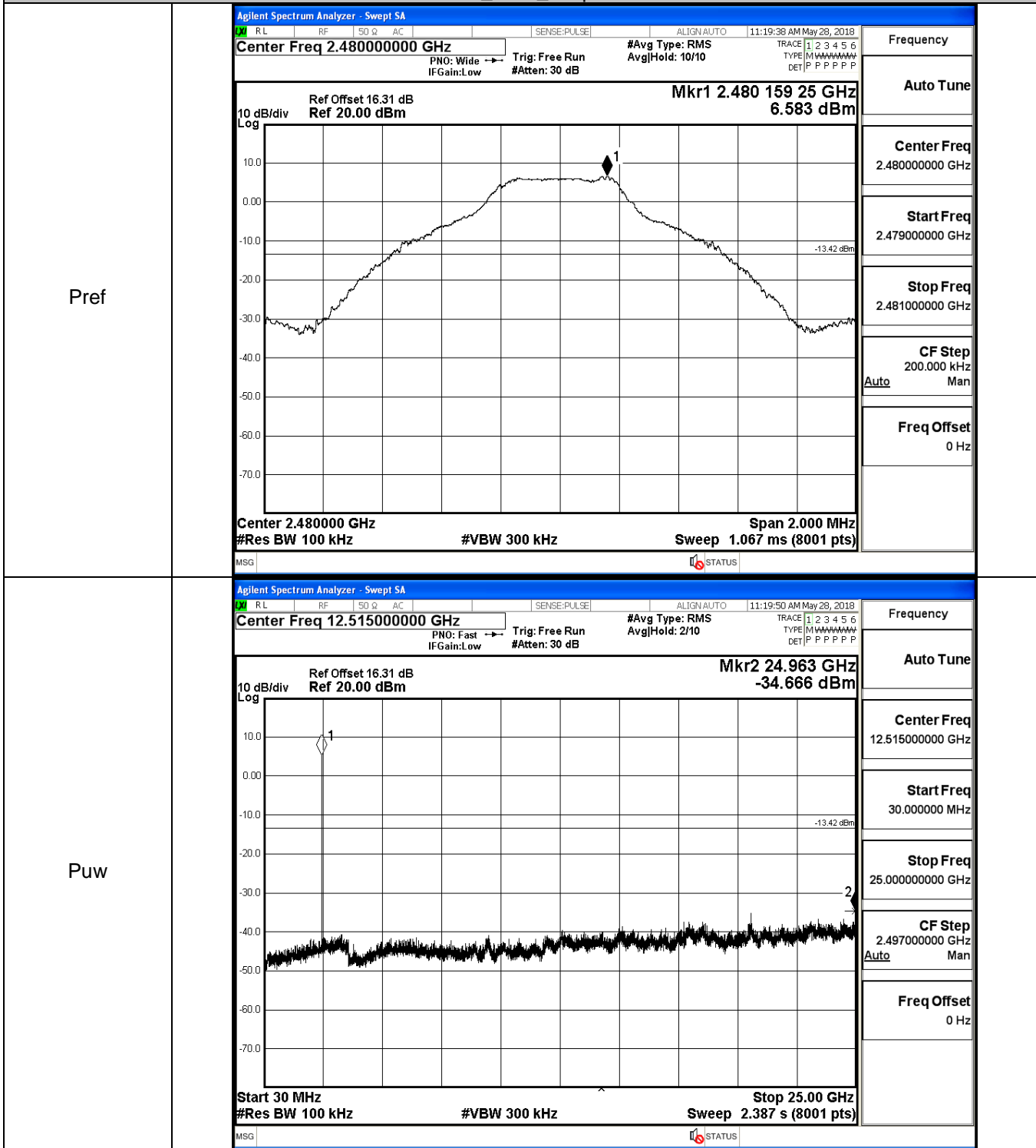
Pref



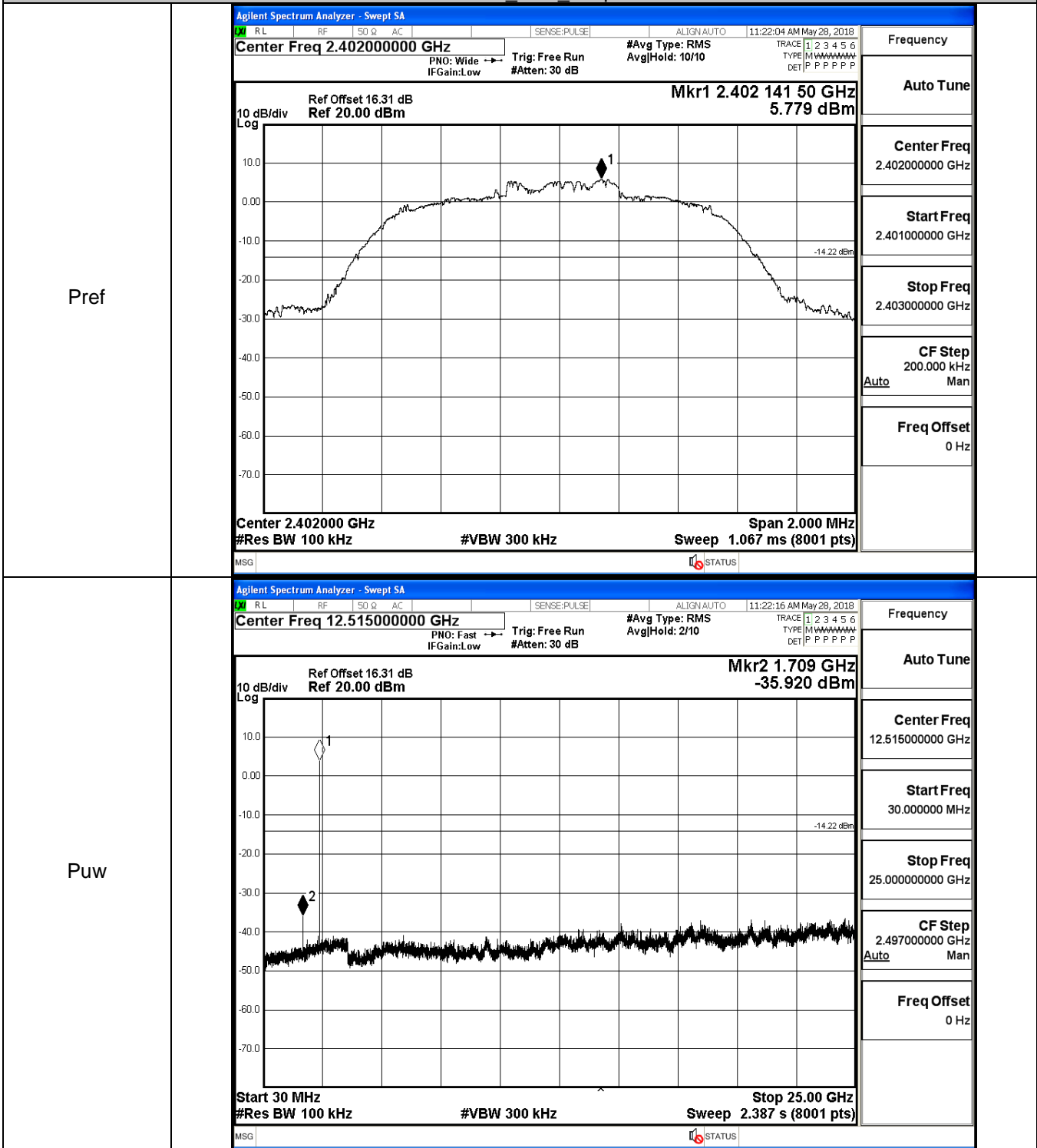
Puw



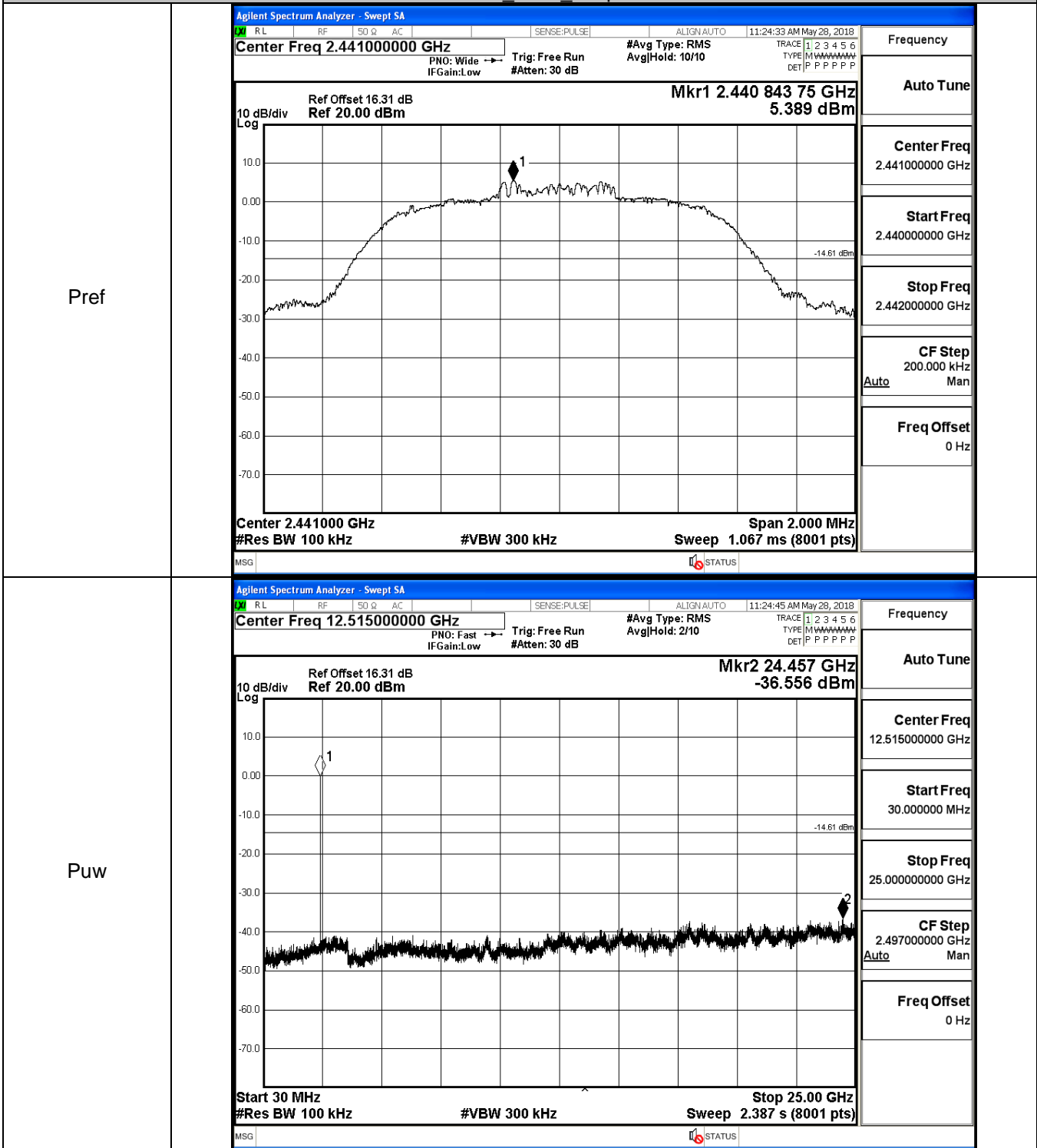
GFSK\_HCH\_Graphs



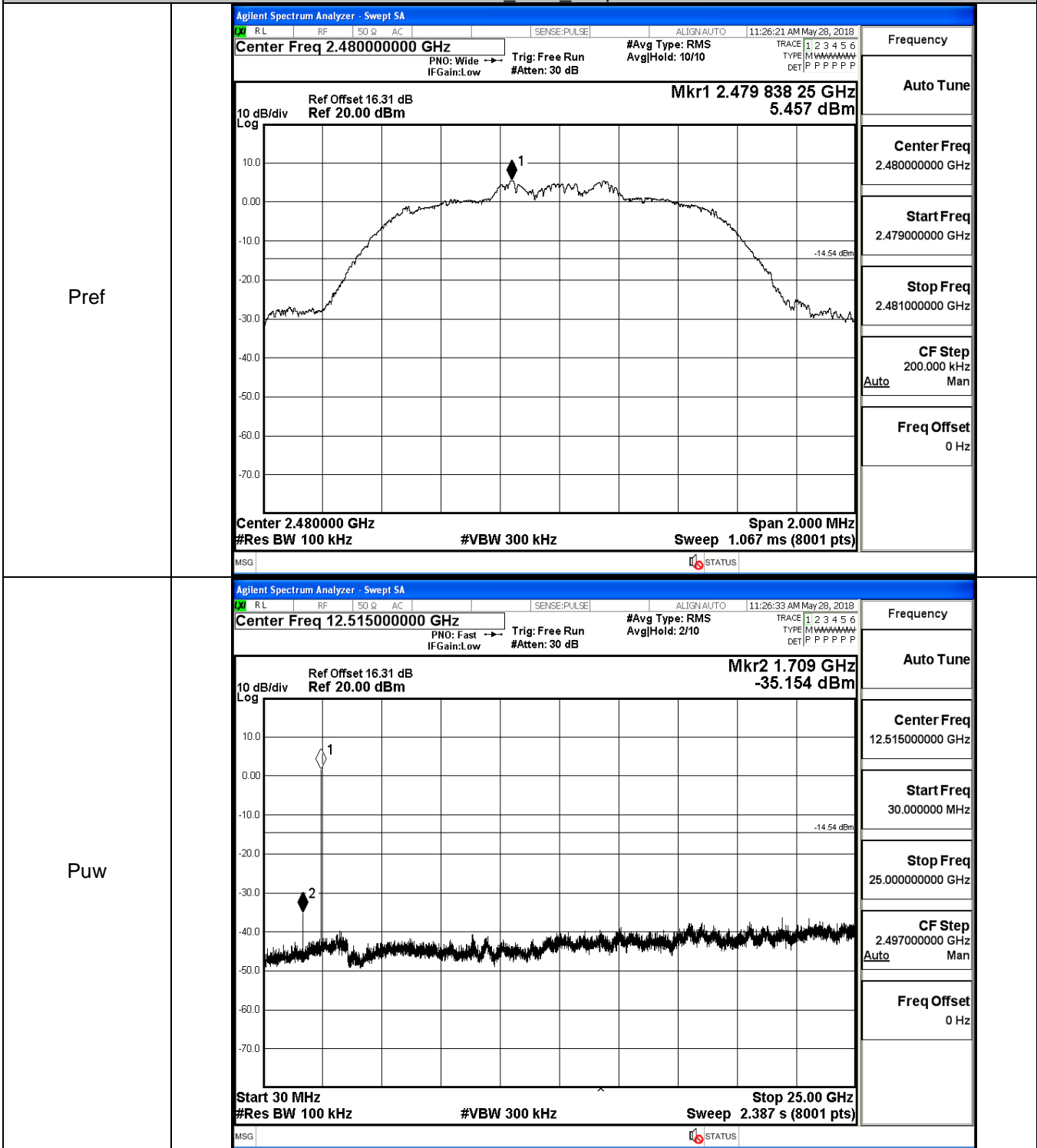
$\pi/4$ DQPSK LCH\_Graphs



$\pi/4$ DQPSK MCH Graphs

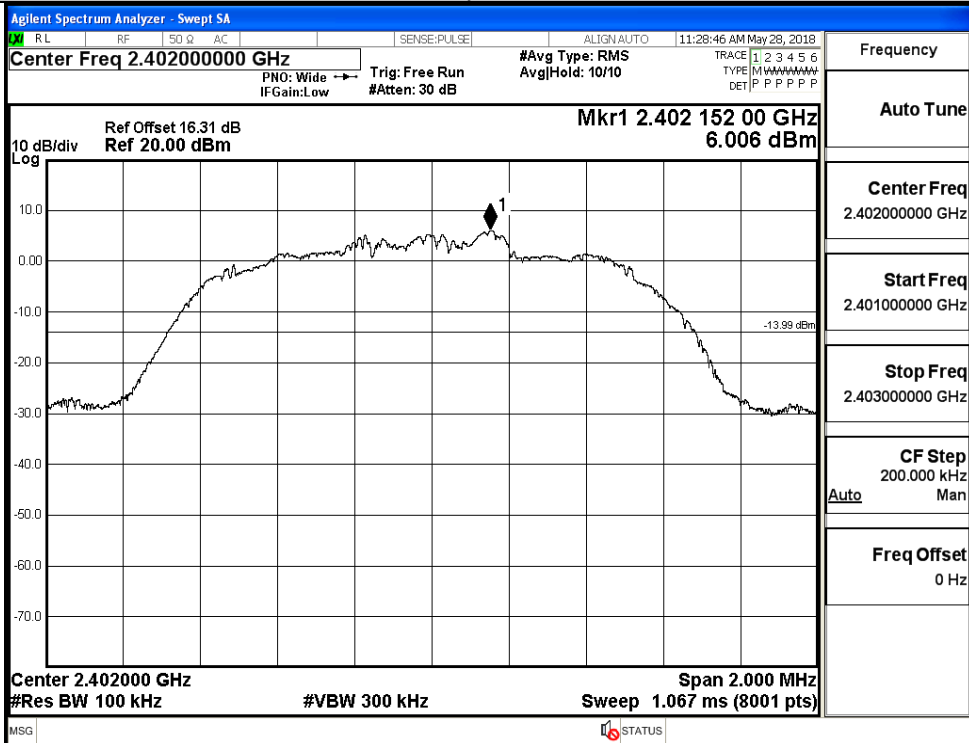


$\pi/4$ DQPSK\_HCH\_Graphs

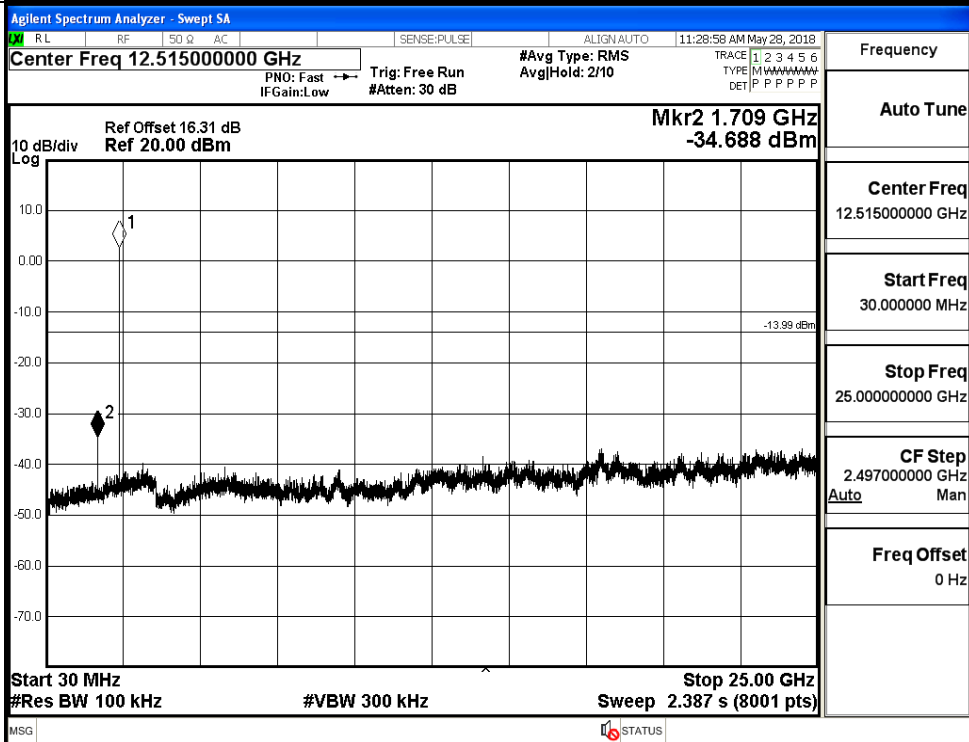


8DPSK\_LCH\_Graphs

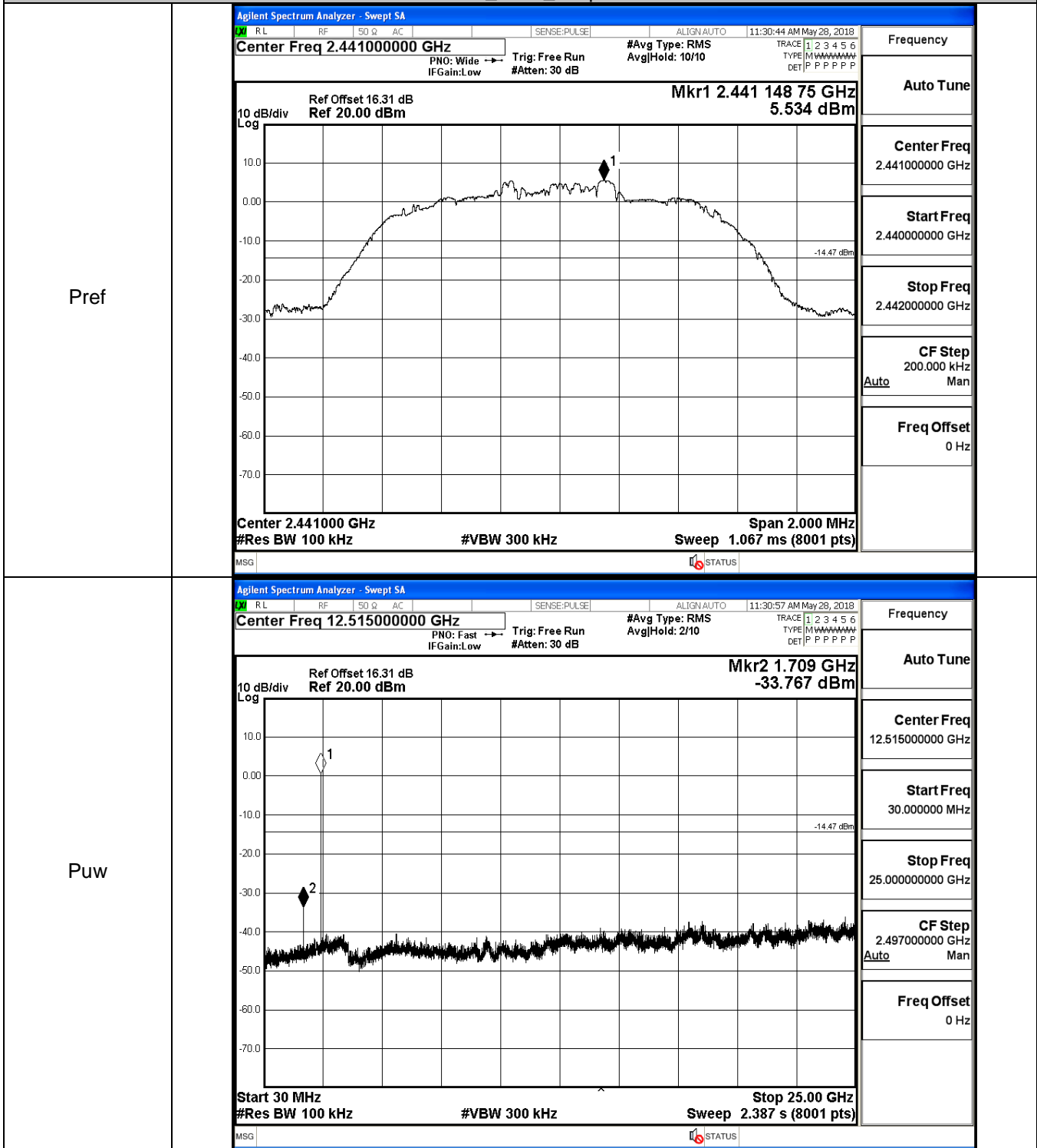
Pref



Puw

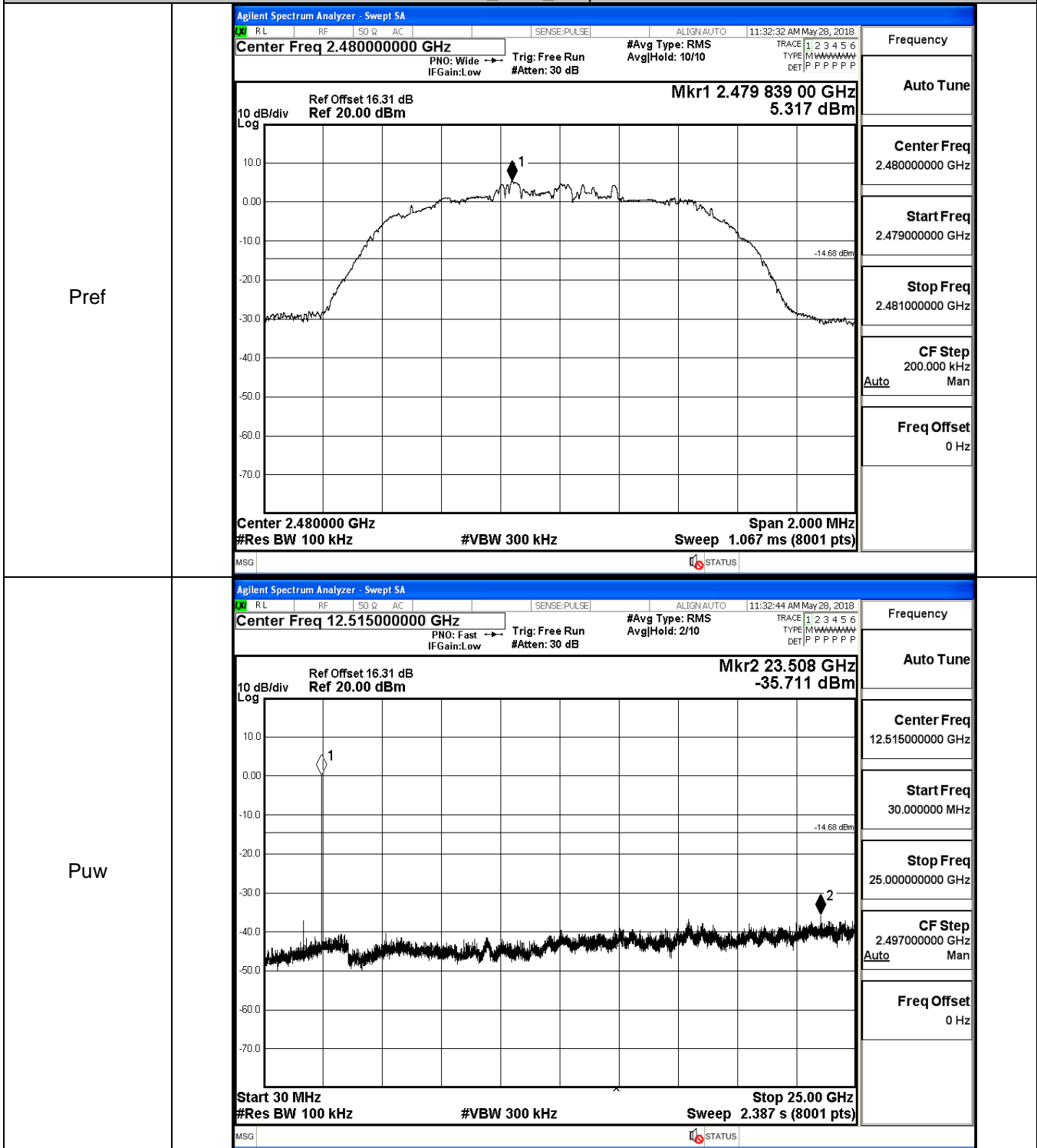


8DPSK\_MCH\_Graphs





8DPSK\_HCH\_Graphs

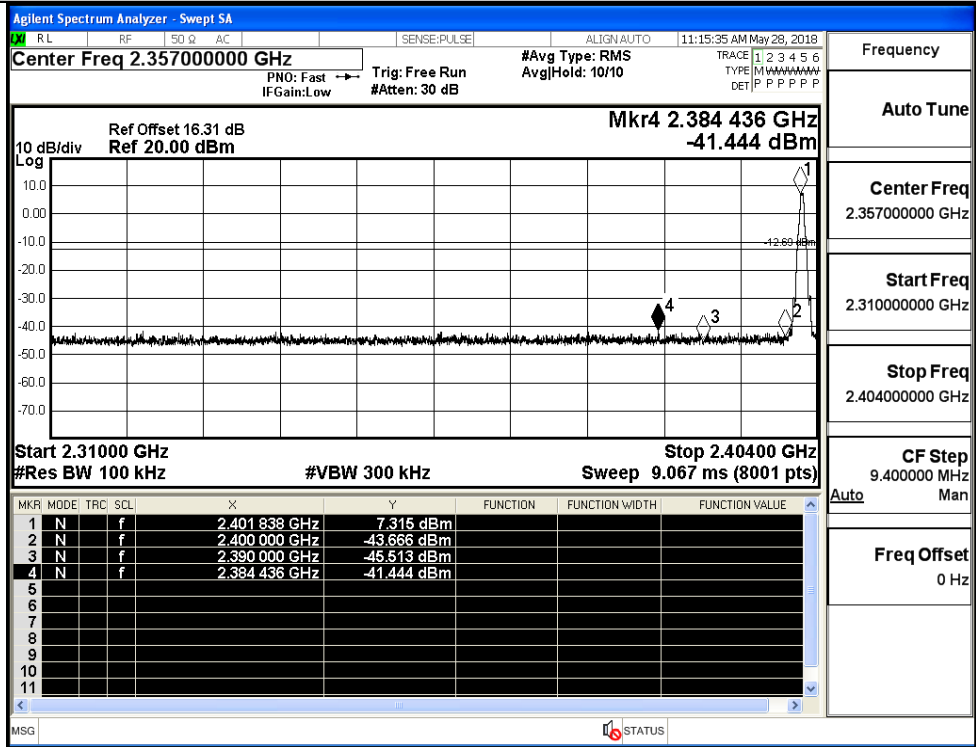


## A.7 Band-edge for RF Conducted Emissions

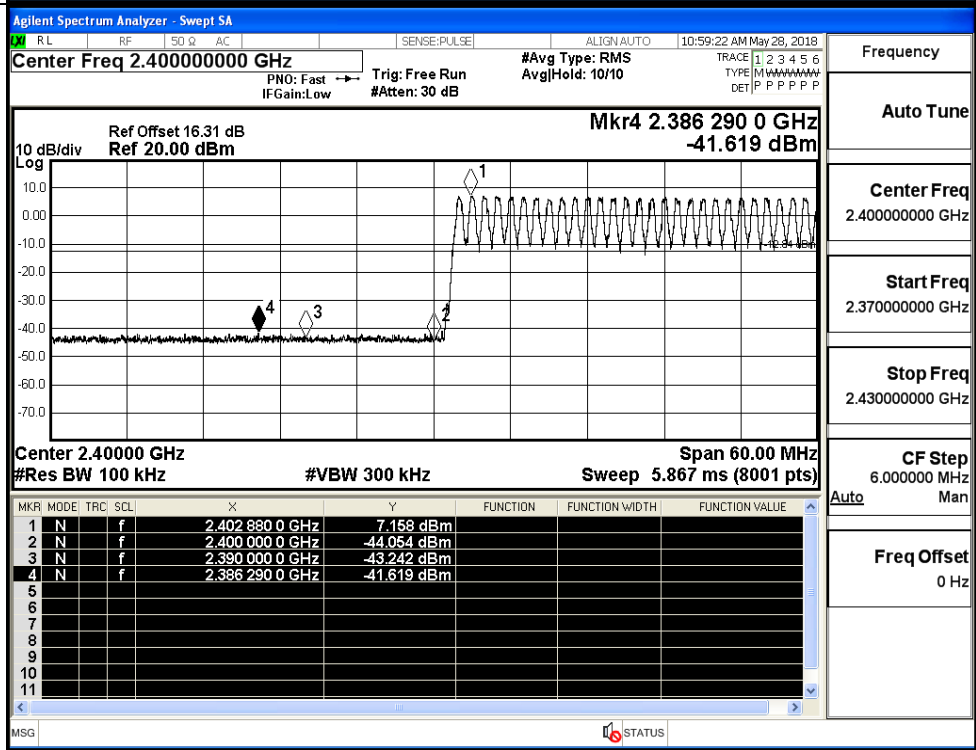
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	7.315	Off	-41.444	-12.69	PASS
			7.158	On	-41.619	-12.84	PASS
	HCH	2480	6.556	Off	-41.504	-13.44	PASS
			6.493	On	-41.071	-13.51	PASS
$\pi/4$ DQPSK	LCH	2402	5.705	Off	-41.103	-14.3	PASS
			5.916	On	-41.074	-14.08	PASS
	HCH	2480	5.388	Off	-40.220	-14.61	PASS
			5.408	On	-40.489	-14.59	PASS
8DPSK	LCH	2402	5.611	Off	-41.672	-14.39	PASS
			5.869	On	-41.117	-14.13	PASS
	HCH	2480	5.260	Off	-41.244	-14.74	PASS
			5.521	On	-41.241	-14.48	PASS

Test Graphs

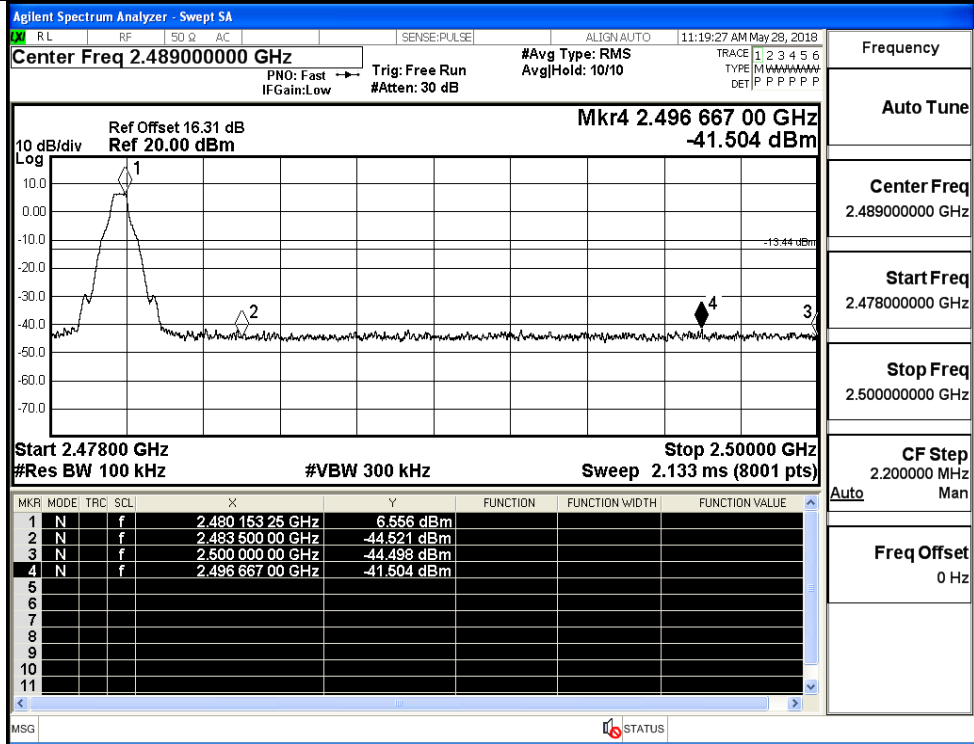
GFSK/LCH/No Hop



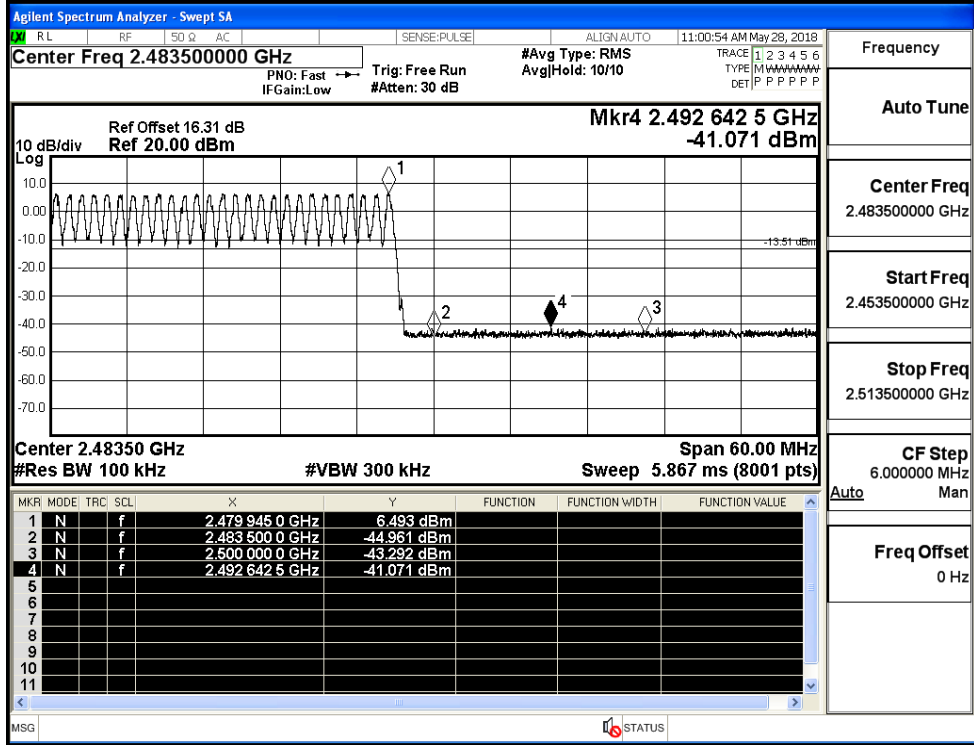
GFSK/LCH/Hop



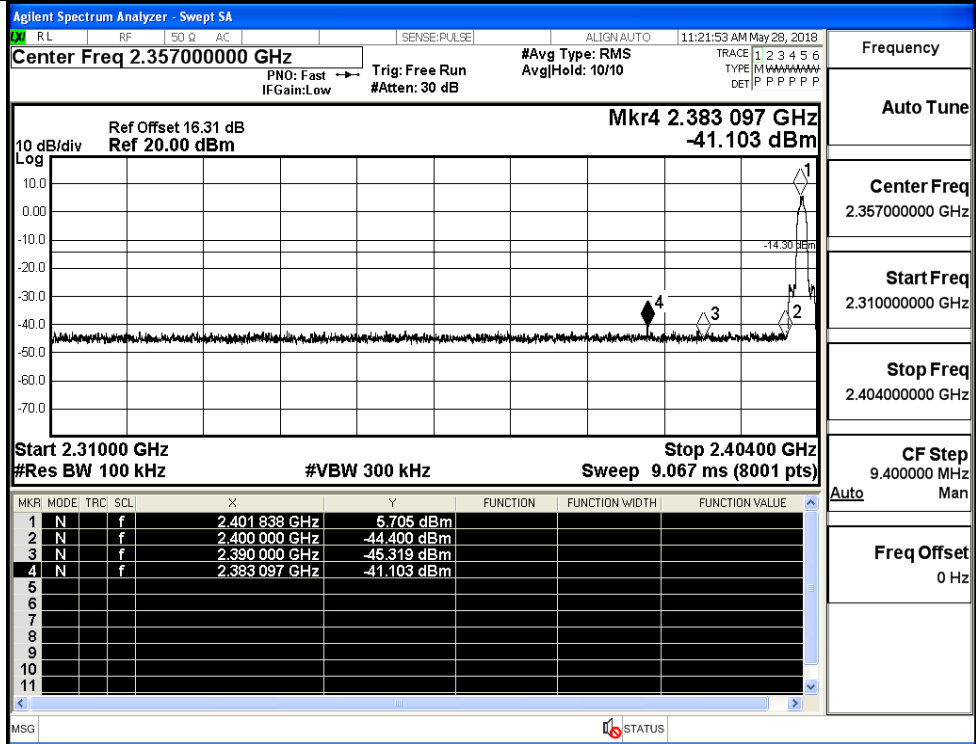
GFSK/HCH/No Hop



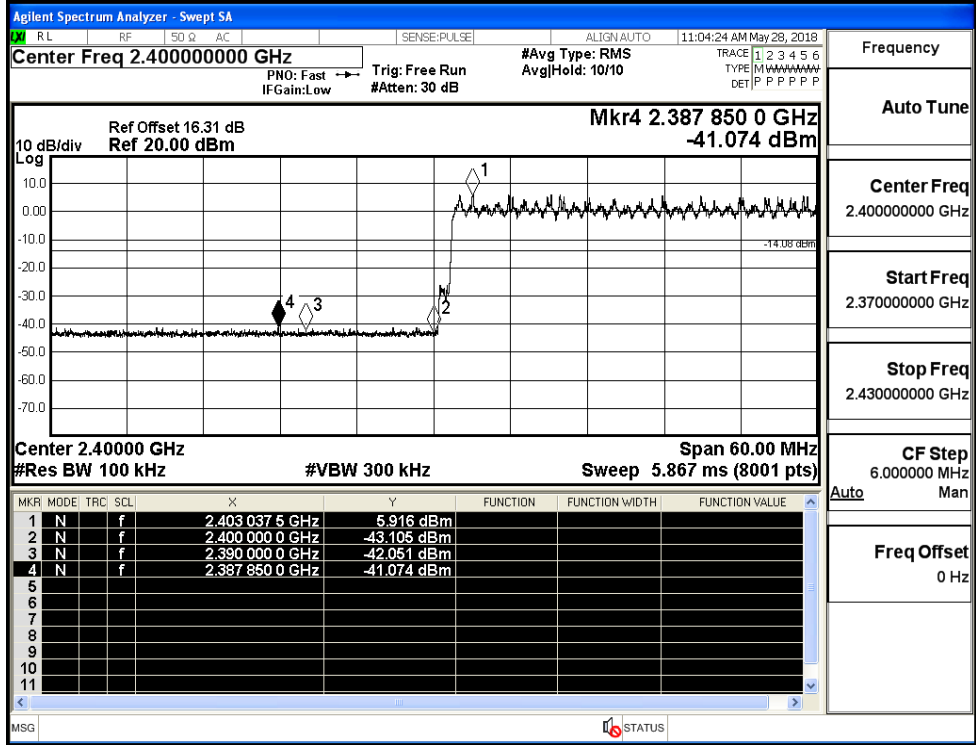
GFSK/HCH/Hop



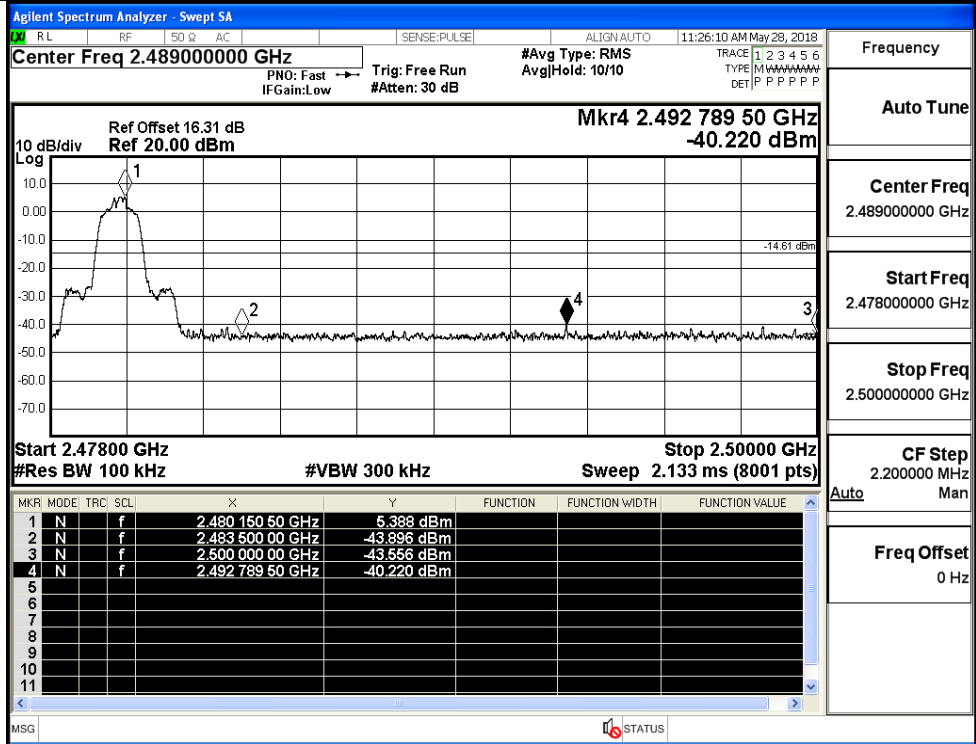
$\pi/4$ DQPSK/LCH/No Hop



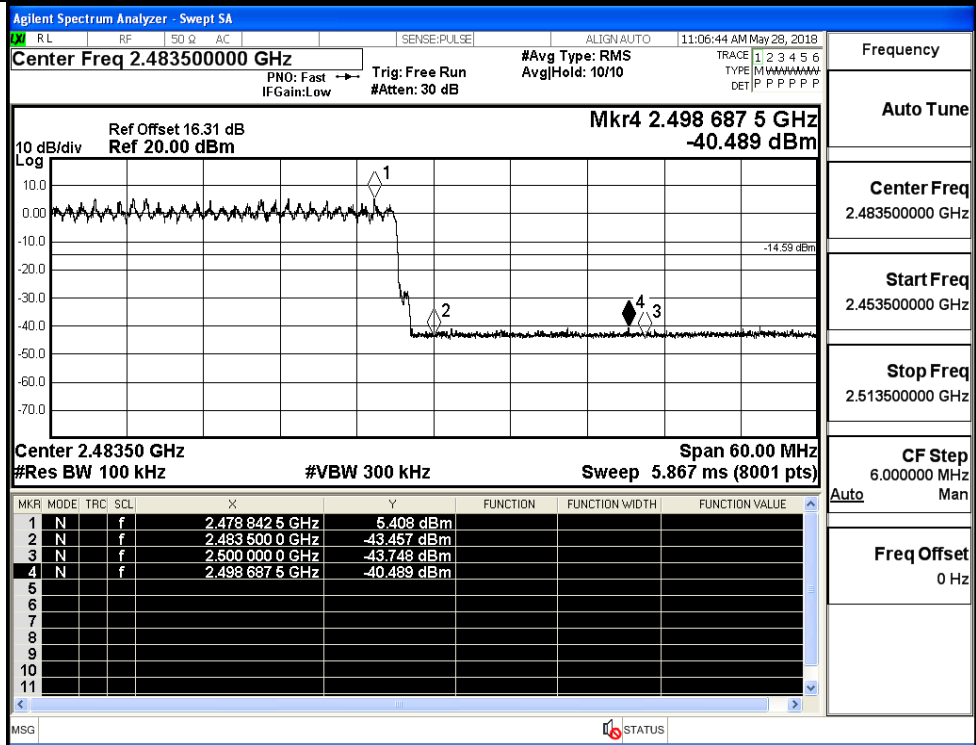
$\pi/4$ DQPSK/LCH/Hop



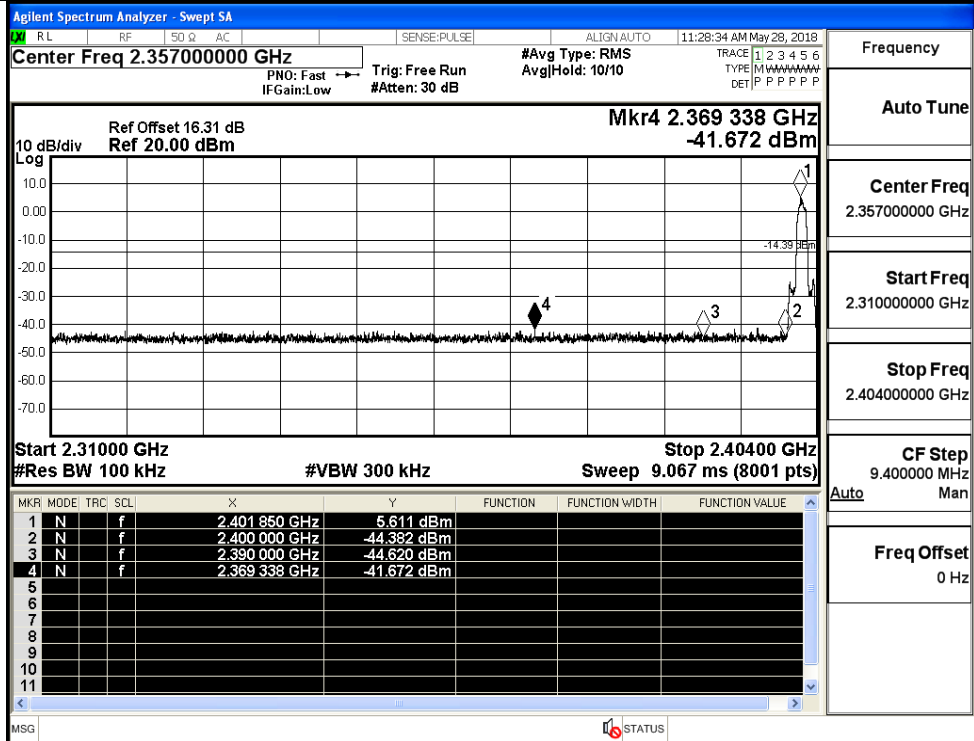
$\pi$ /4DQPSK/HCH/No  
Hop



$\pi$ /4DQPSK/HCH/Hop

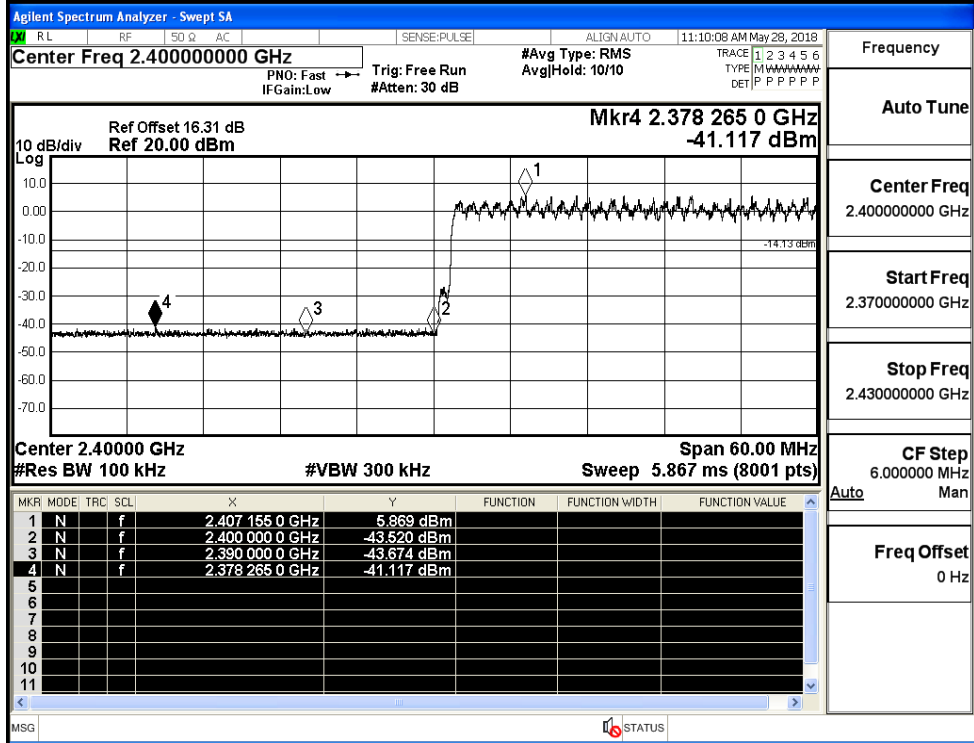


8DPSK/LCH/No Hop



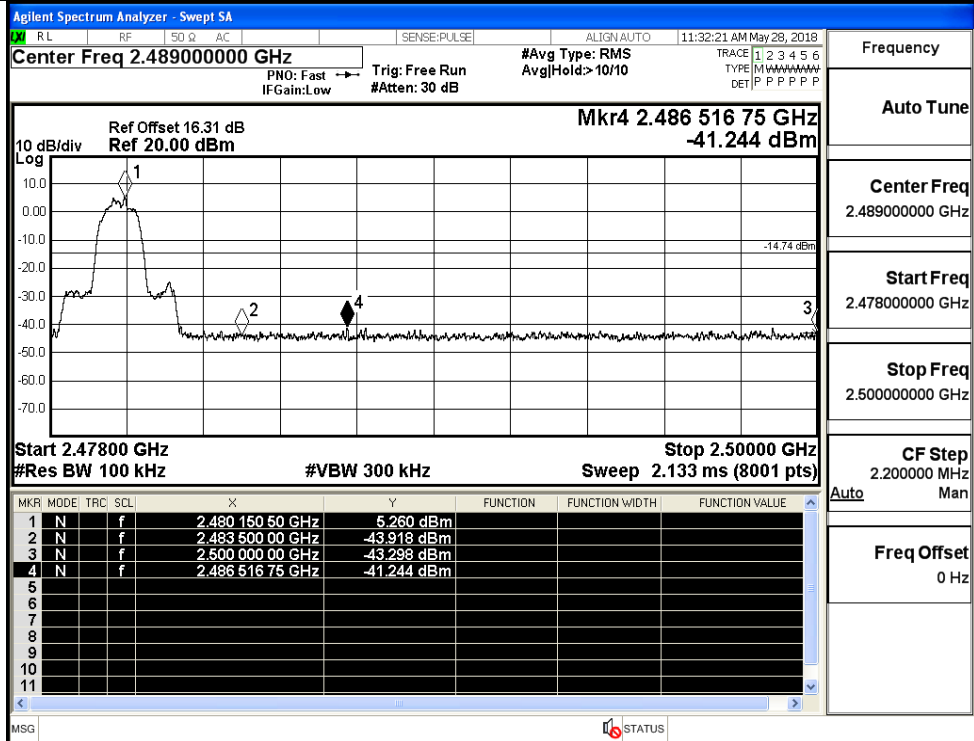
Frequency  
Auto Tune  
Center Freq  
2.357000000 GHz  
Start Freq  
2.310000000 GHz  
Stop Freq  
2.404000000 GHz  
CF Step  
9.400000 MHz  
Auto Man  
Freq Offset  
0 Hz

8DPSK/LCH/Hop



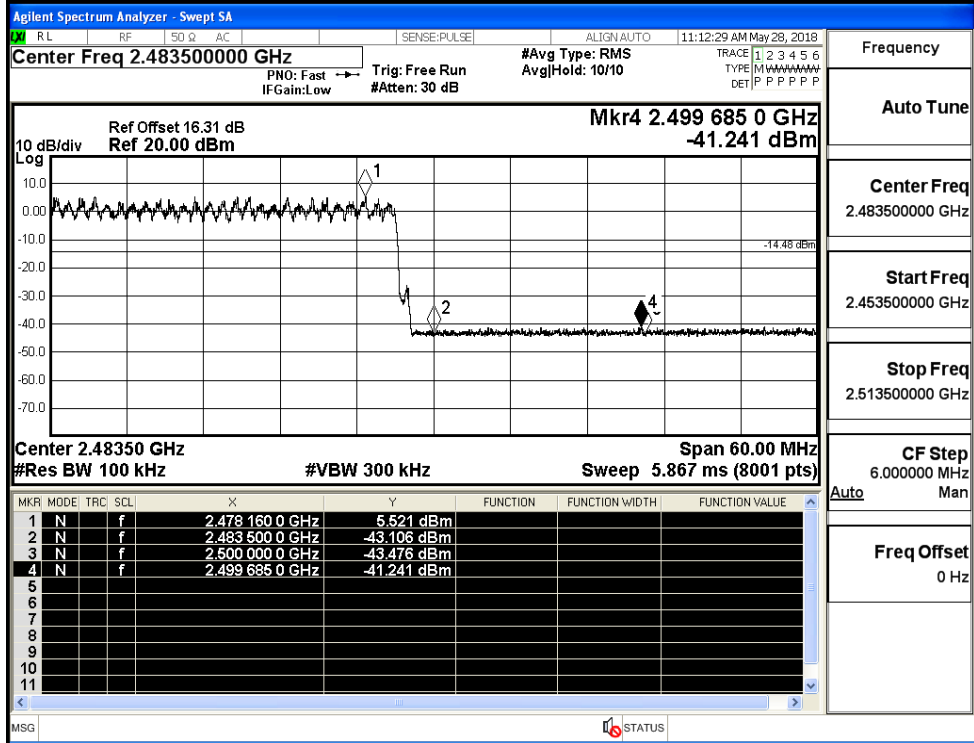
Frequency  
Auto Tune  
Center Freq  
2.400000000 GHz  
Start Freq  
2.370000000 GHz  
Stop Freq  
2.430000000 GHz  
CF Step  
6.000000 MHz  
Auto Man  
Freq Offset  
0 Hz

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
Freq Offset	0 Hz

8DPSK/HCH/Hop



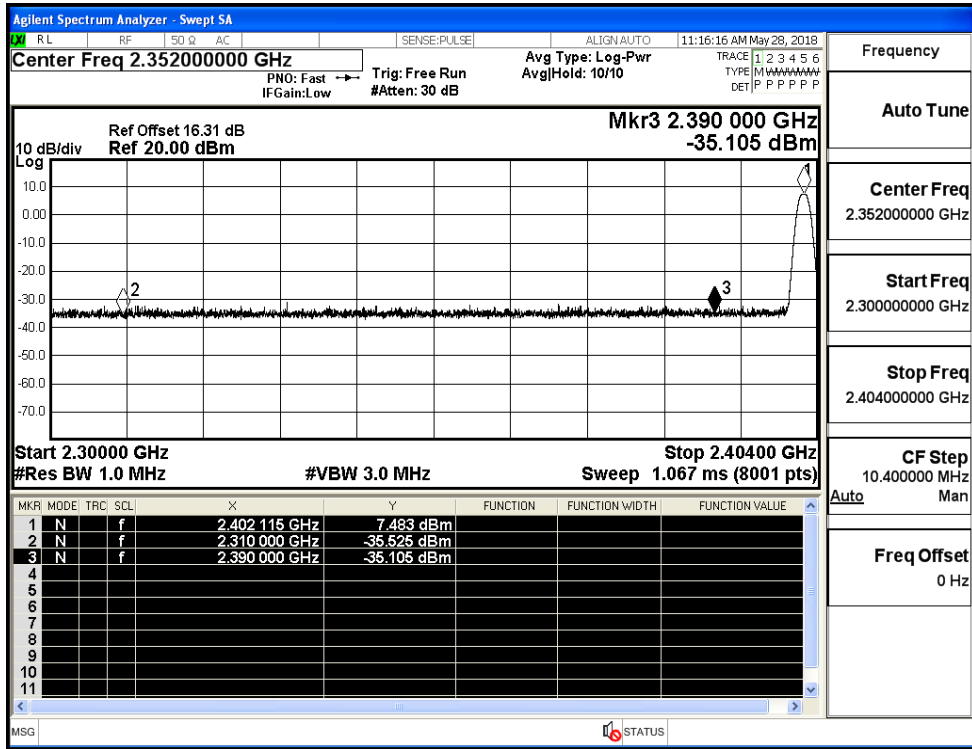
Frequency	
Auto Tune	
Center Freq	2.483500000 GHz
Start Freq	2.453500000 GHz
Stop Freq	2.513500000 GHz
CF Step	6.000000 MHz
Freq Offset	0 Hz



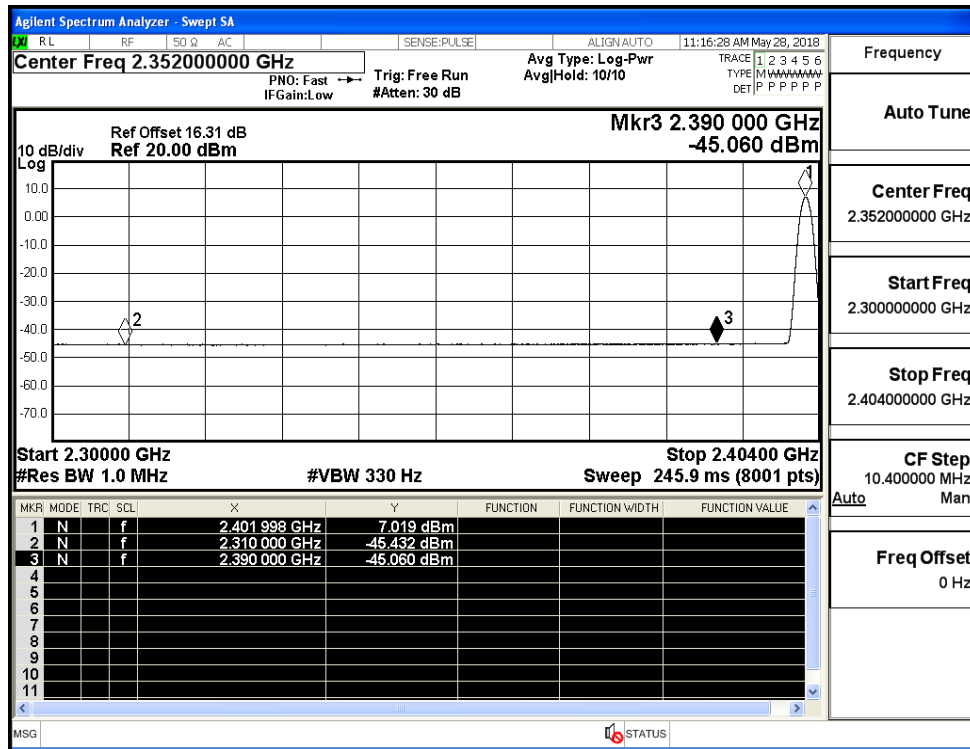
## A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-35.53	2.0	0	59.73	PEAK	74	PASS
	Off	2310.0	-45.43	2.0	0	49.83	AV	54	PASS
	Off	2390.0	-35.11	2.0	0	60.15	PEAK	74	PASS
	Off	2390.0	-45.06	2.0	0	50.20	AV	54	PASS
	Off	2483.5	-35.03	2.0	0	60.23	PEAK	74	PASS
	Off	2483.5	-44.86	2.0	0	50.40	AV	54	PASS
	Off	2500.0	-35.59	2.0	0	59.66	PEAK	74	PASS
	Off	2500.0	-44.82	2.0	0	50.43	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-35.35	2.0	0	59.91	PEAK	74	PASS
	Off	2310.0	-45.39	2.0	0	49.87	AV	54	PASS
	Off	2390.0	-33.43	2.0	0	61.82	PEAK	74	PASS
	Off	2390.0	-45.18	2.0	0	50.08	AV	54	PASS
	Off	2483.5	-34.95	2.0	0	60.31	PEAK	74	PASS
	Off	2483.5	-44.82	2.0	0	50.44	AV	54	PASS
	Off	2500.0	-34.08	2.0	0	61.18	PEAK	74	PASS
	Off	2500.0	-44.72	2.0	0	50.54	AV	54	PASS
8DPSK	Off	2310.0	-35.04	2.0	0	60.22	PEAK	74	PASS
	Off	2310.0	-45.33	2.0	0	49.92	AV	54	PASS
	Off	2390.0	-34.57	2.0	0	60.69	PEAK	74	PASS
	Off	2390.0	-45.19	2.0	0	50.07	AV	54	PASS
	Off	2483.5	-33.69	2.0	0	61.57	PEAK	74	PASS
	Off	2483.5	-44.64	2.0	0	50.62	AV	54	PASS
	Off	2500.0	-35.83	2.0	0	59.43	PEAK	74	PASS
	Off	2500.0	-44.77	2.0	0	50.48	AV	54	PASS

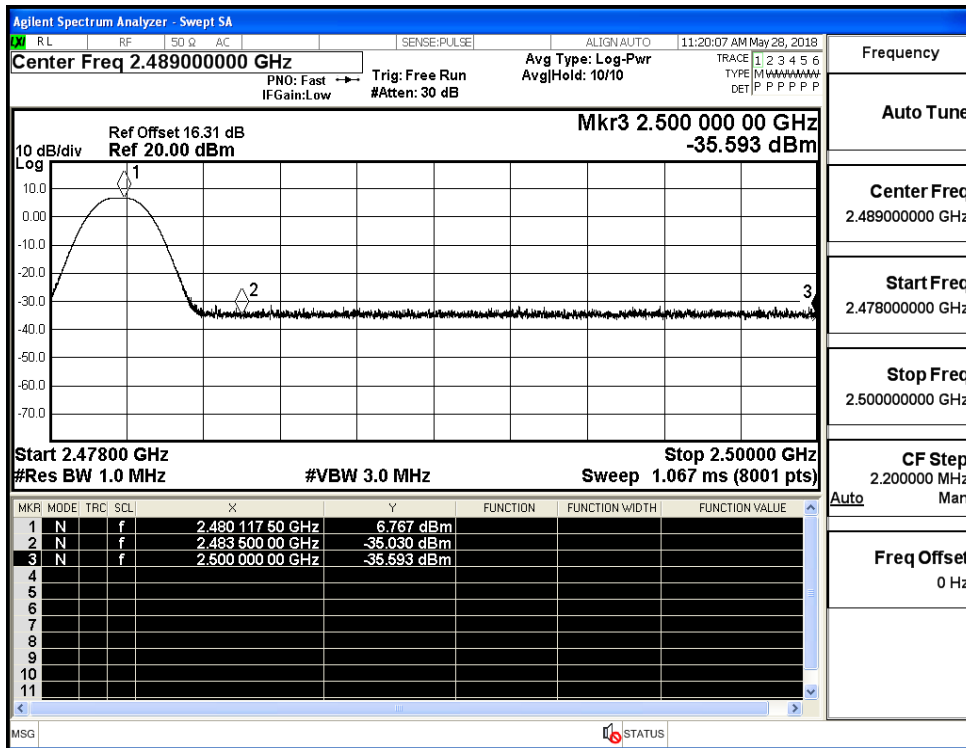
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_PEAK (Low Channel)



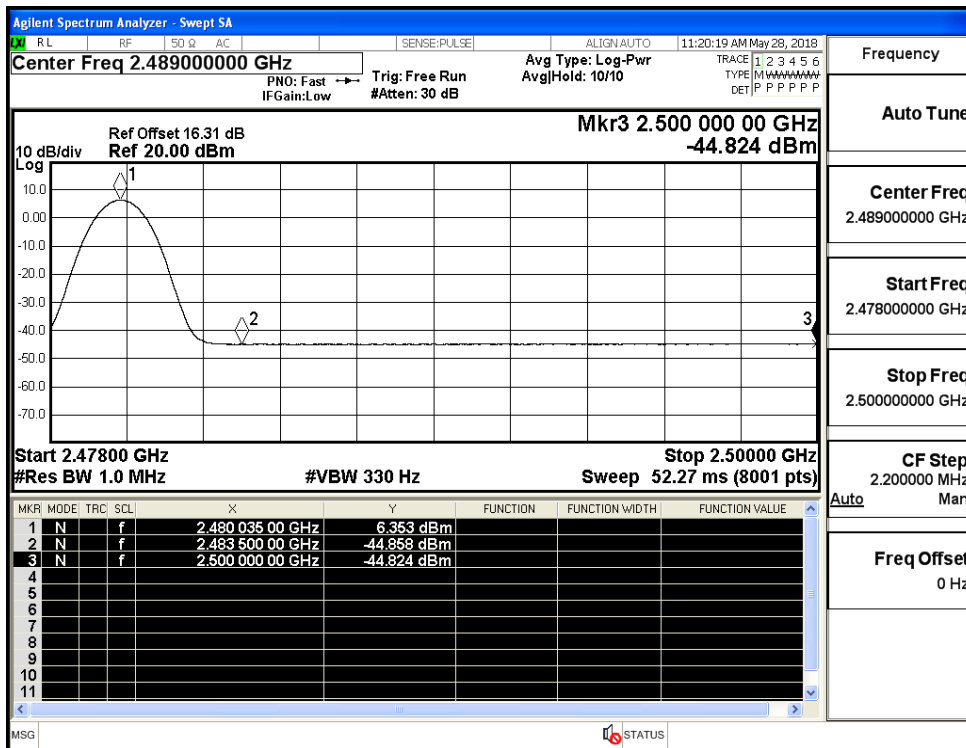
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (Low Channel)



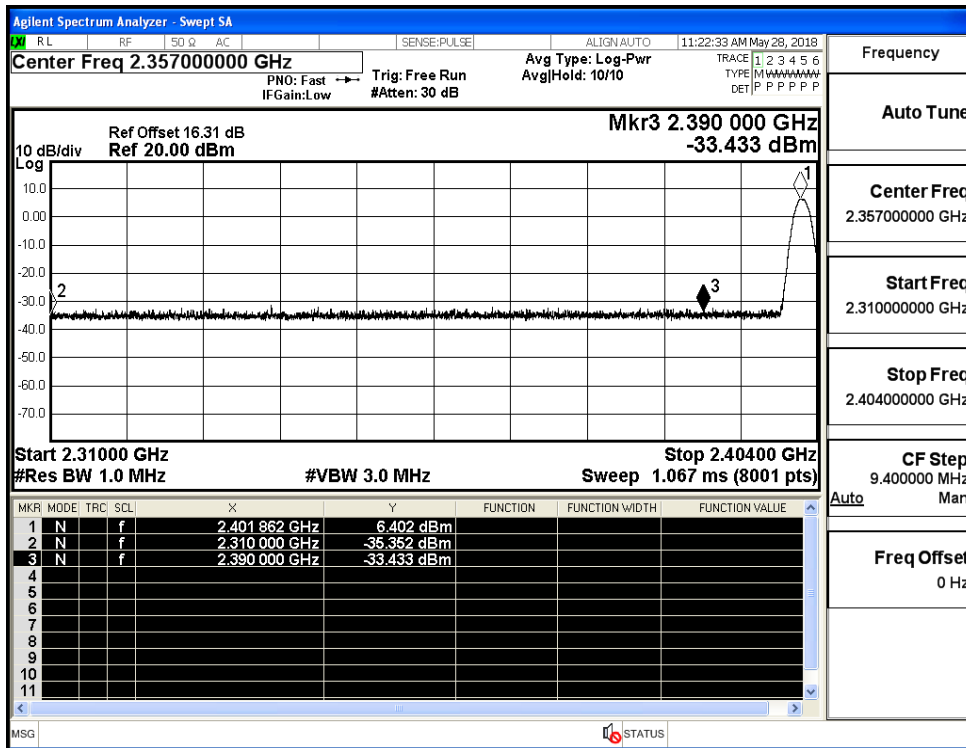
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_PEAK (High Channel)



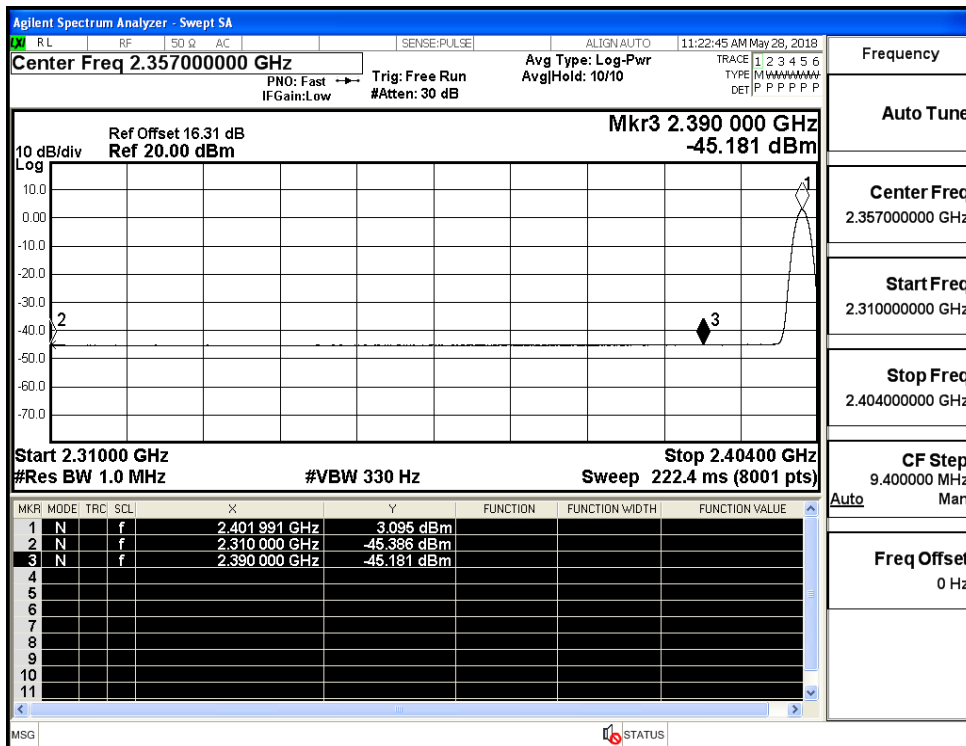
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (High Channel)



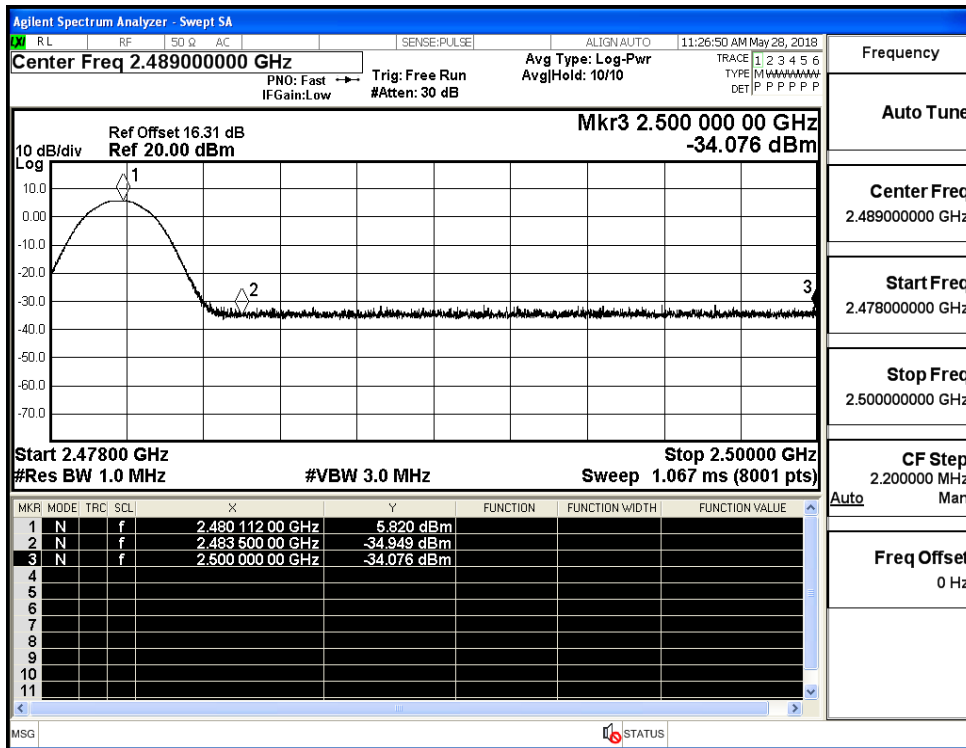
Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_PEAK (Low Channel)



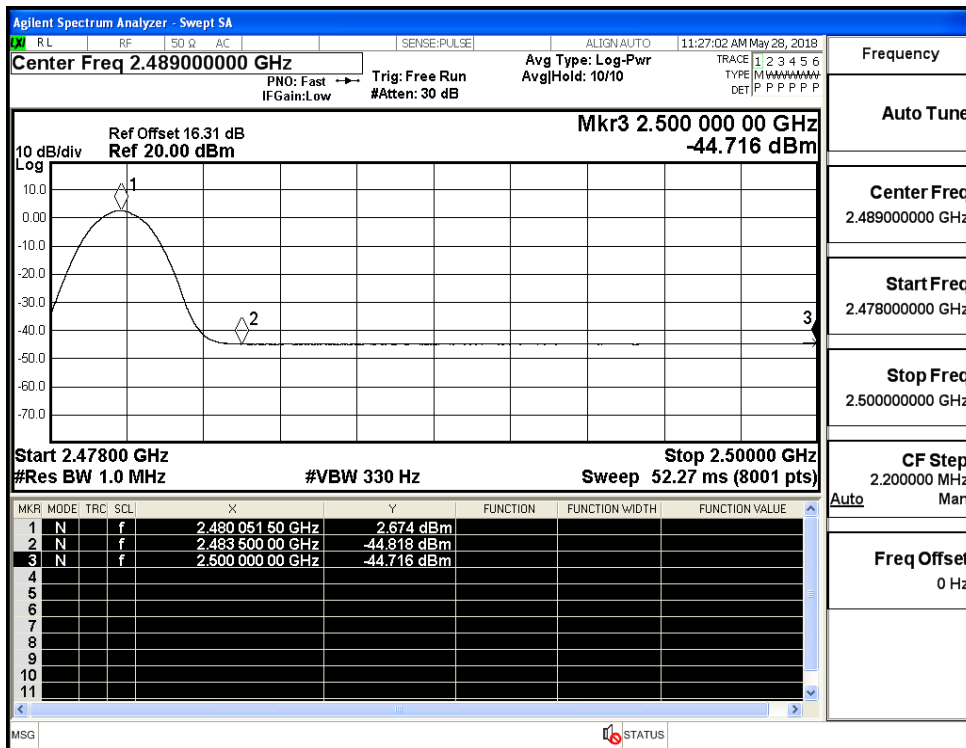
Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_Average (Low Channel)



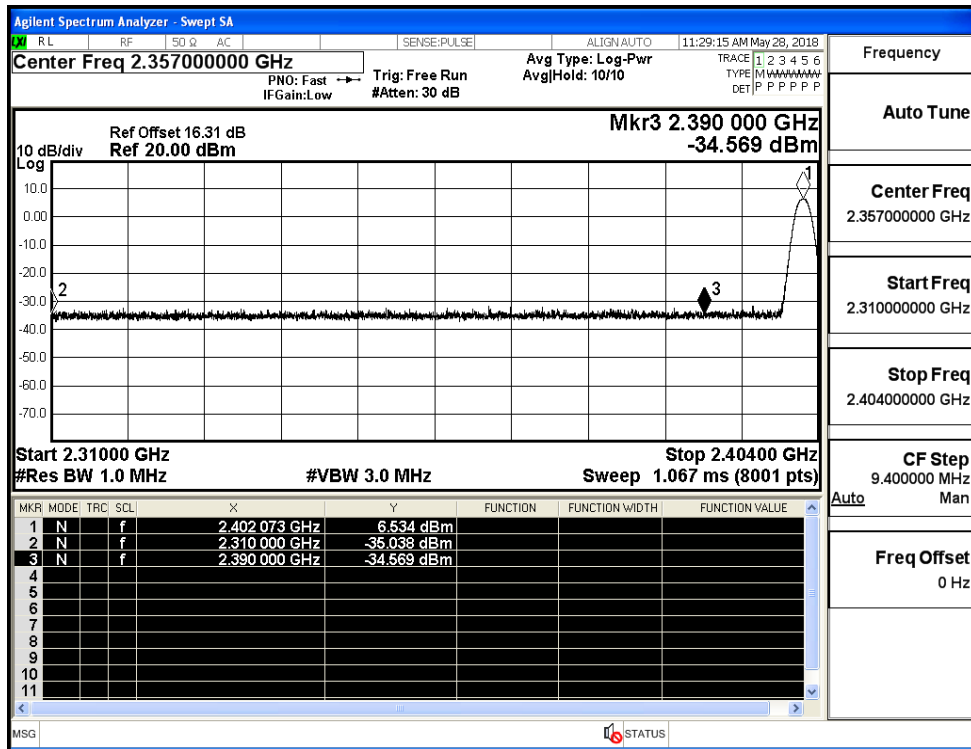
Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_PEAK (High Channel)



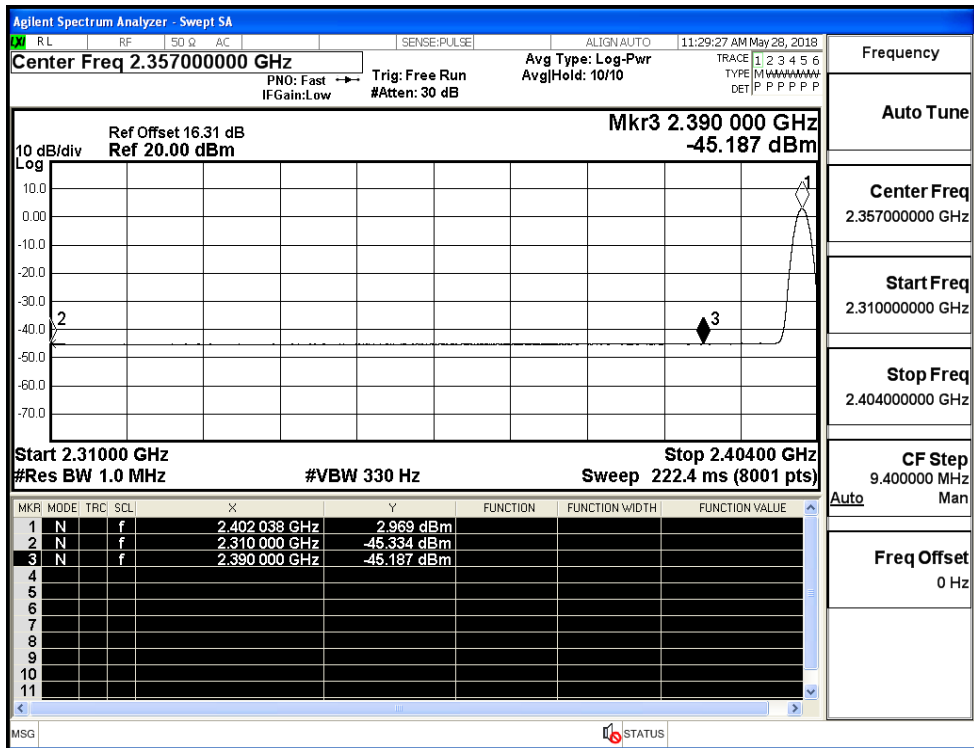
Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_Average (High Channel)



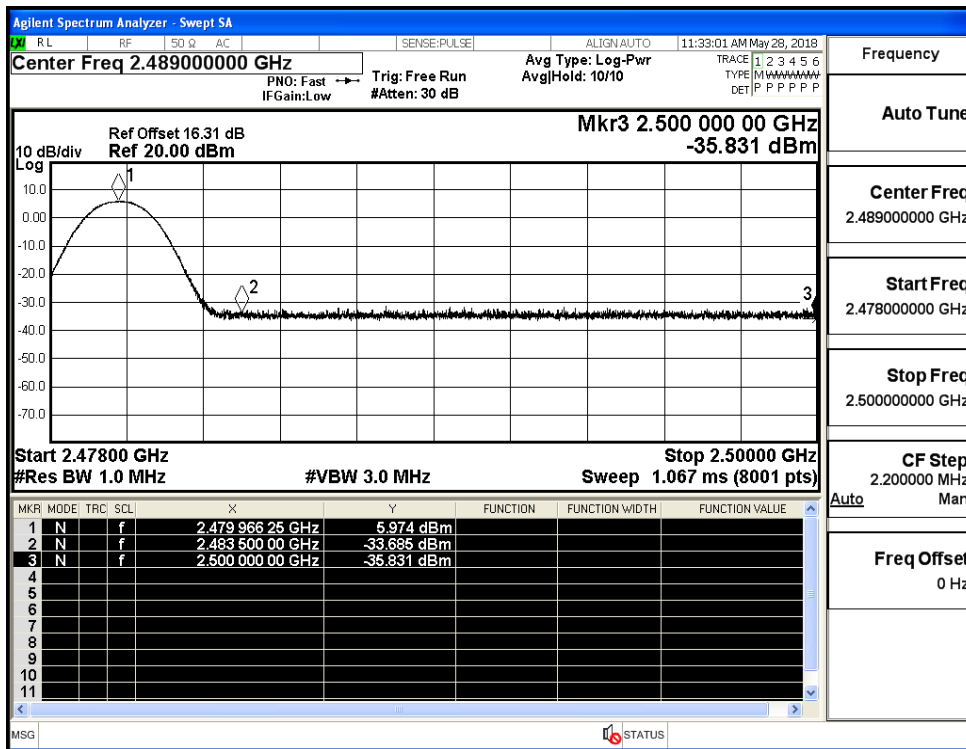
Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_PEAK (Low Channel)



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)

