

## Appendix A

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

Product Name: 6-Inch Rugged Windows Handheld tablet

Trade Mark: N/A

Test Model: DP10

#### Environmental Conditions

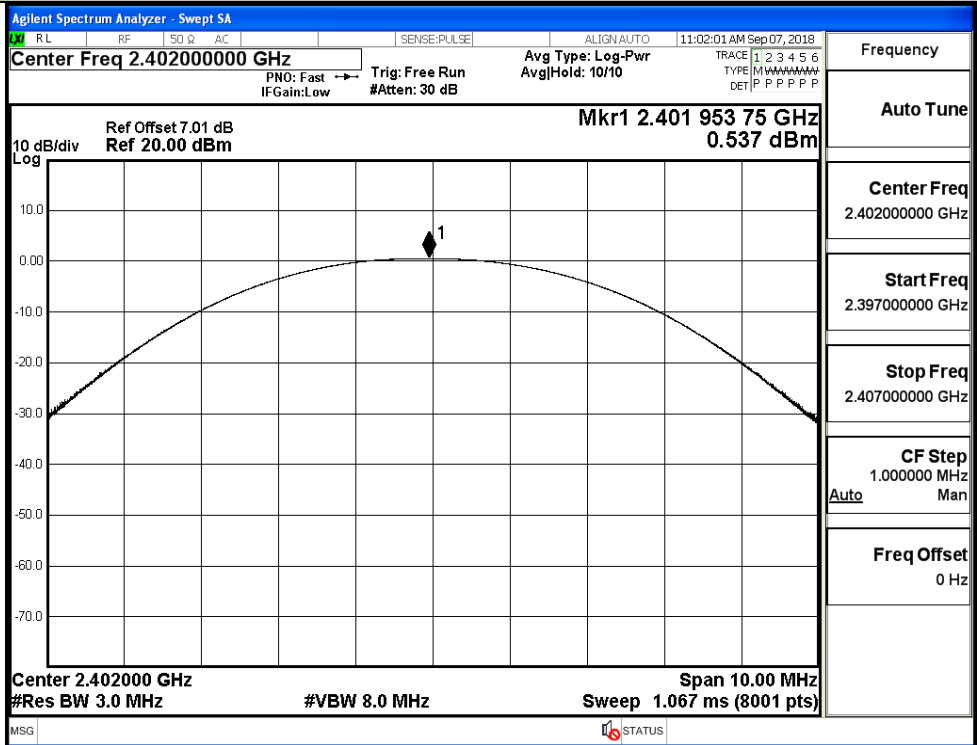
Temperature:	24.6°C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Jayden.Zhuo

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

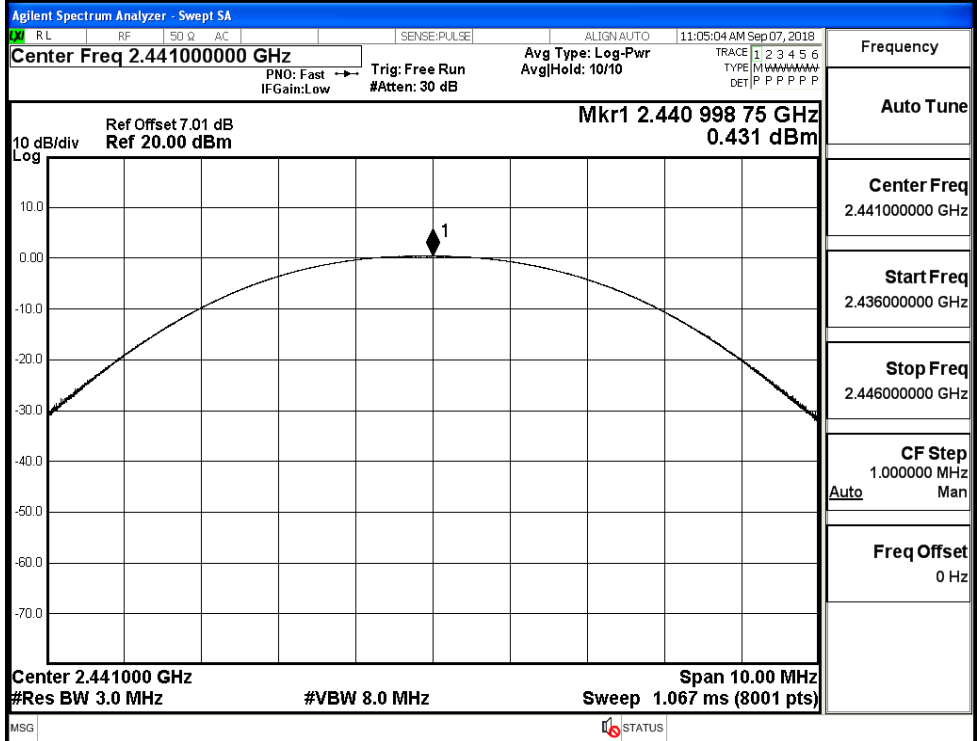
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.537	21	PASS
	MCH	0.431	21	PASS
	HCH	0.331	21	PASS
$\pi/4$ DQPSK	LCH	-0.413	21	PASS
	MCH	-0.569	21	PASS
	HCH	-0.284	21	PASS
8DPSK	LCH	0.060	21	PASS
	MCH	-0.031	21	PASS
	HCH	-0.151	21	PASS

Test Graphs

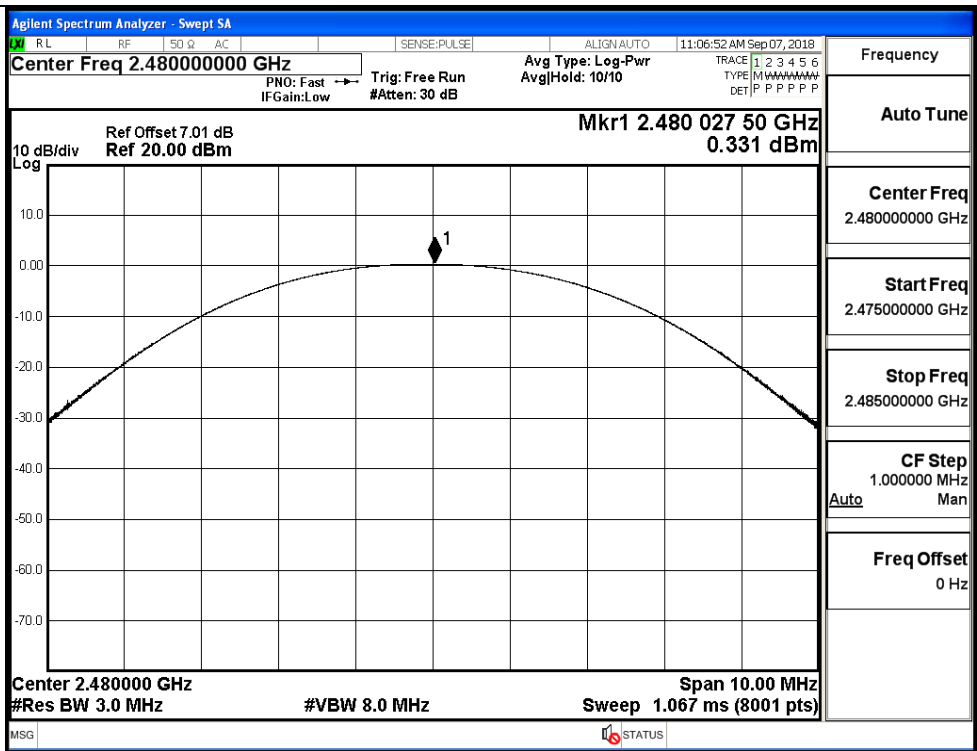
GFSK/LCH



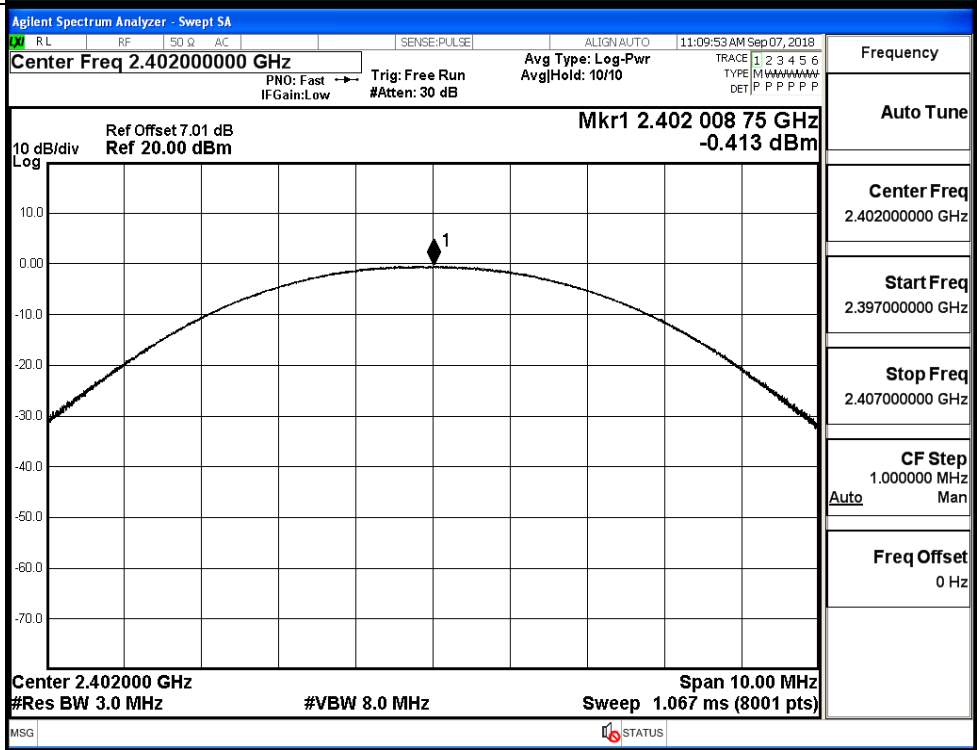
GFSK/MCH



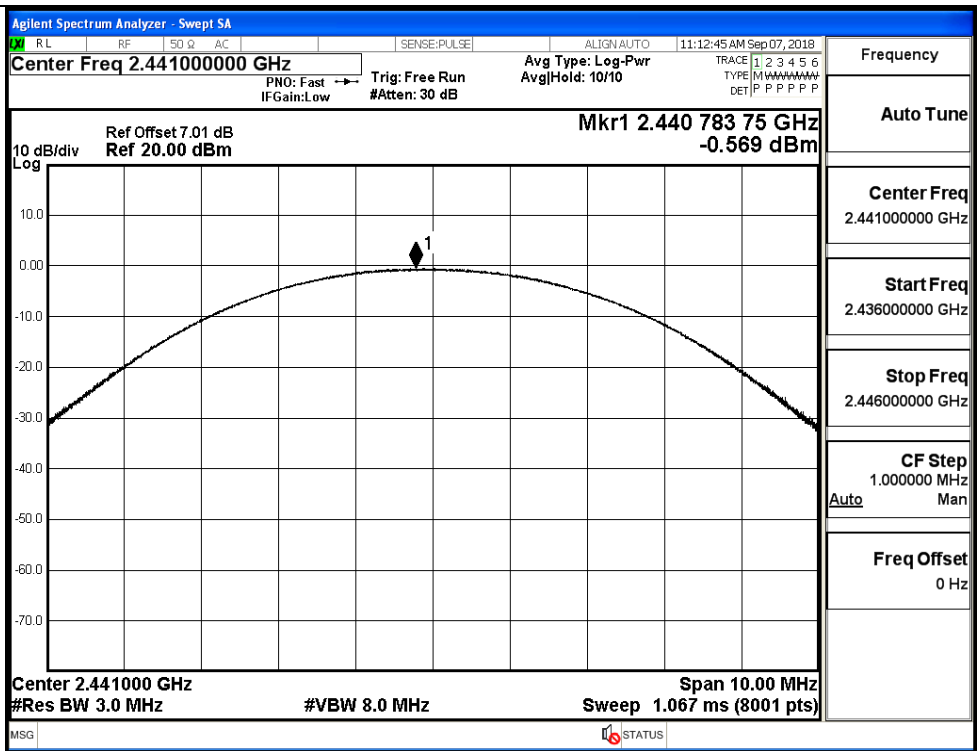
GFSK/HCH



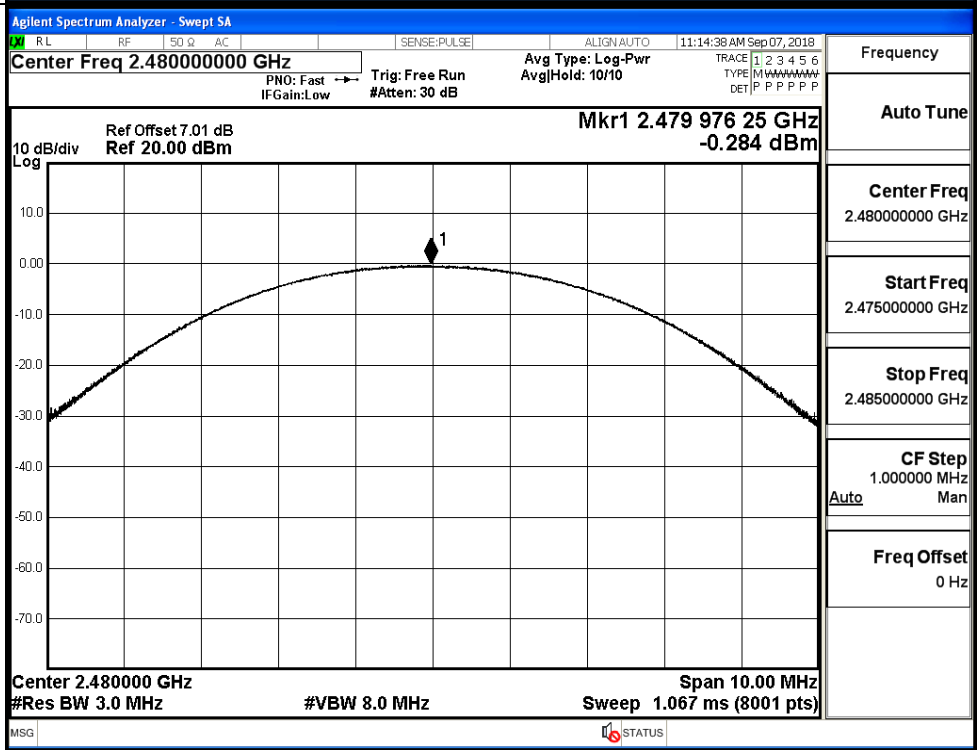
$\pi$ /4DQPSK/LCH



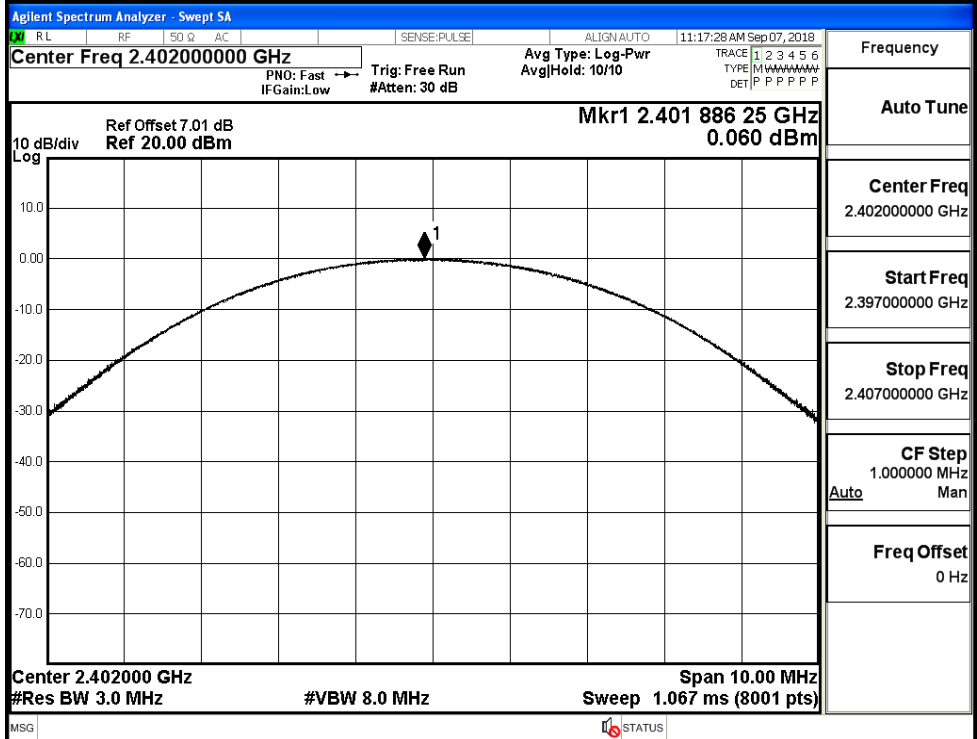
$\pi$ /4DQPSK/MCH



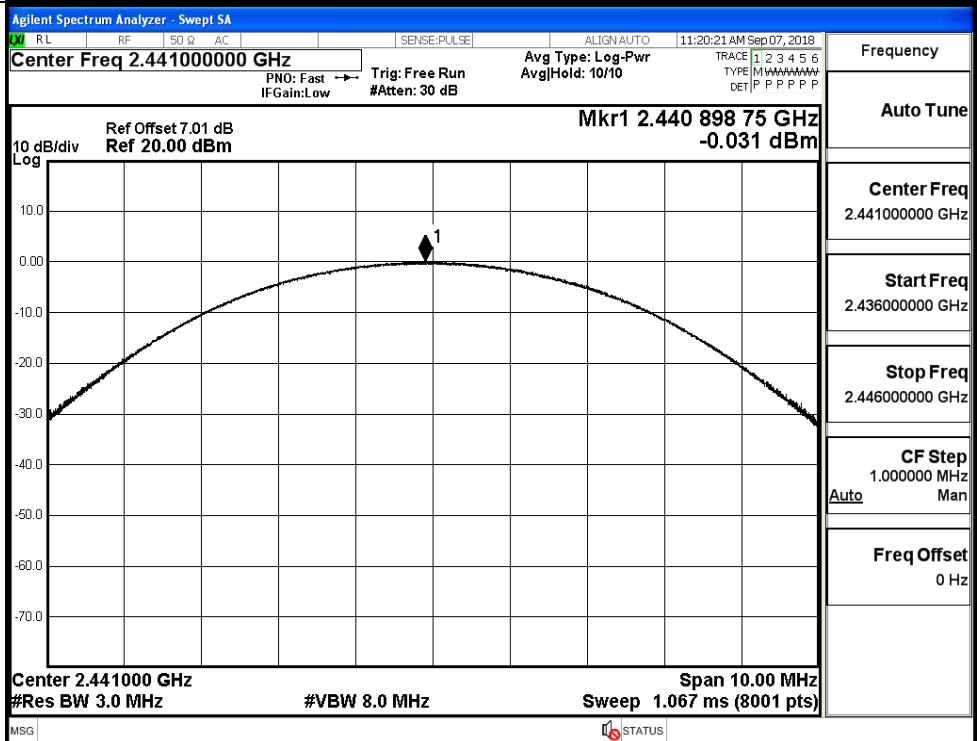
$\pi$ /4DQPSK/HCH



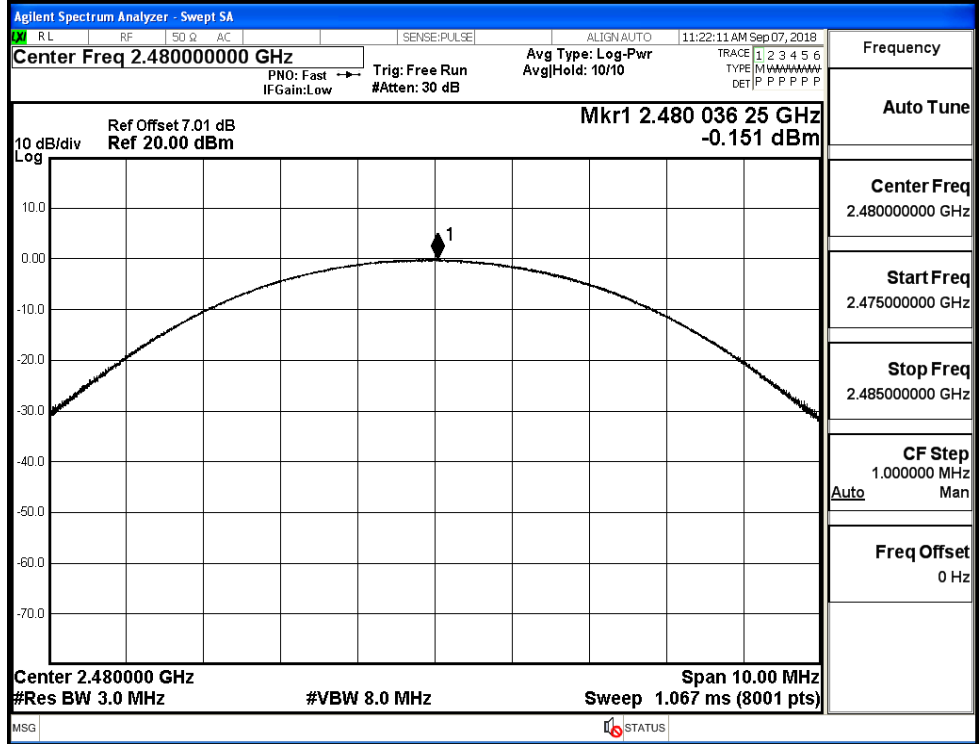
8DPSK/LCH



8DPSK/MCH

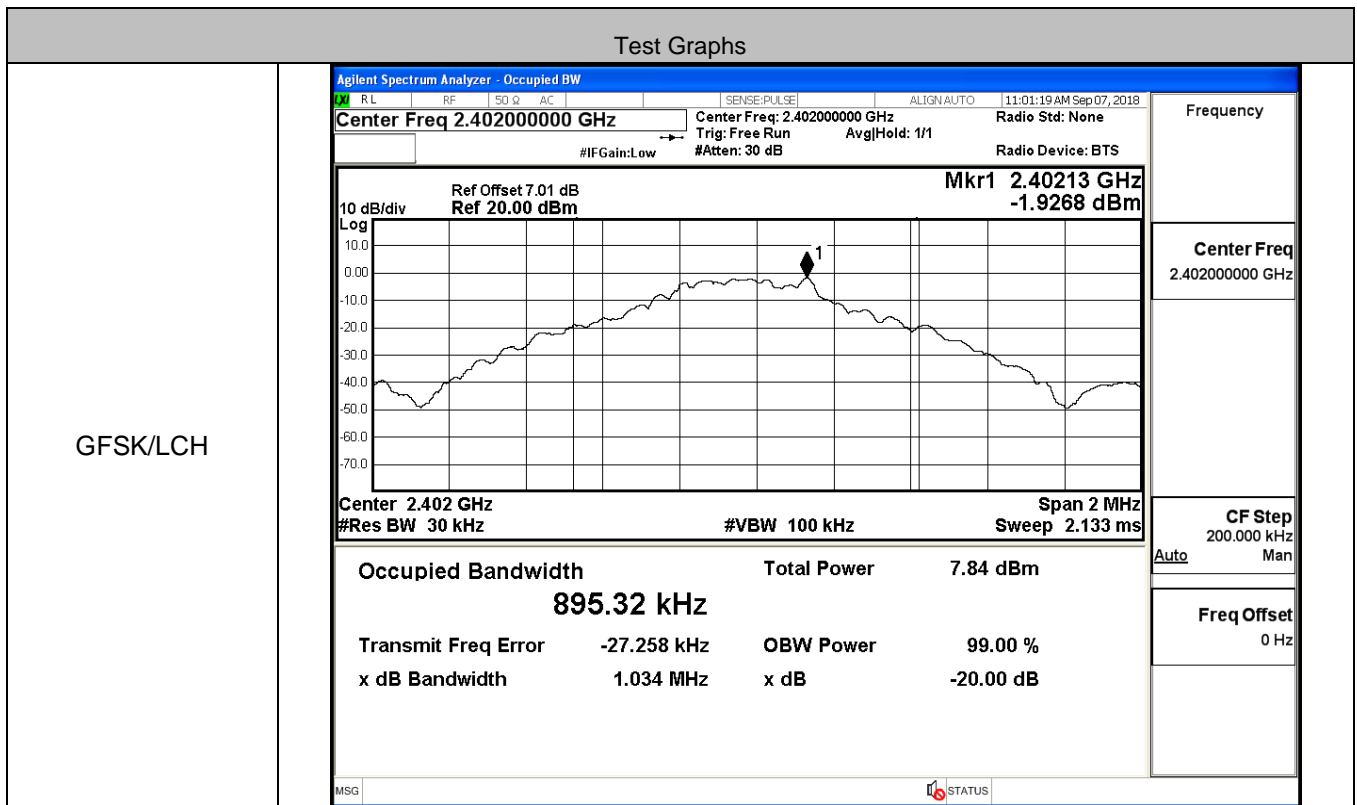


8DPSK/HCH

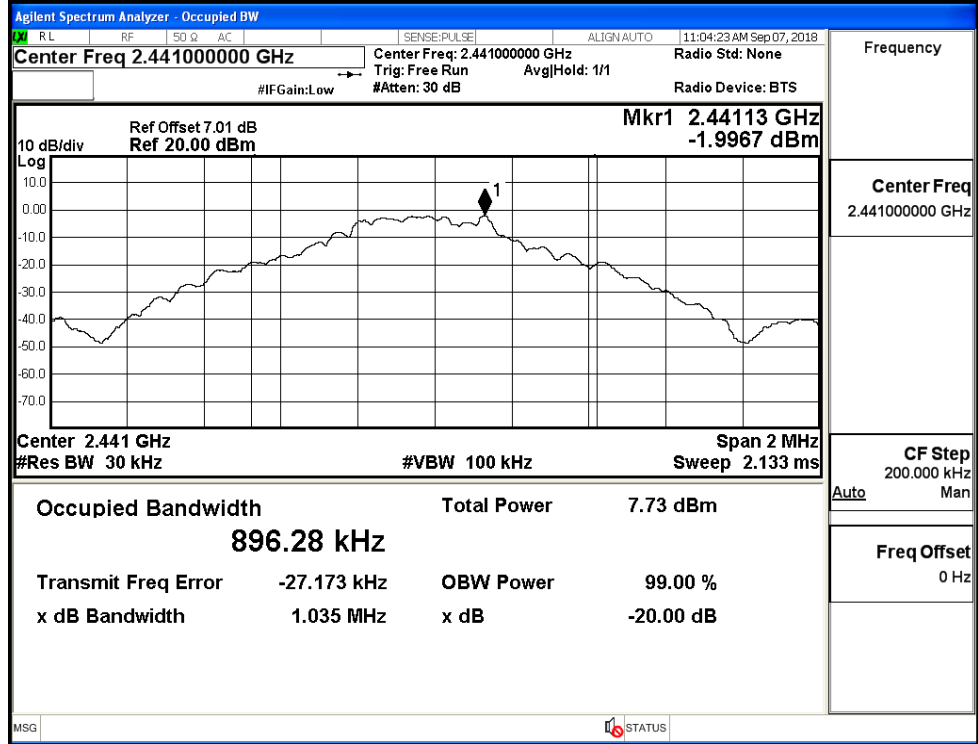


**A.2 99% and 20dB Bandwidth**

Mode	Channel.	99% Bandwidth [MHz]	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.89532	1.034	Not Specified	PASS
	MCH	0.89628	1.035	Not Specified	PASS
	HCH	0.89797	1.032	Not Specified	PASS
π/4DQPSK	LCH	1.1683	1.291	Not Specified	PASS
	MCH	1.1685	1.287	Not Specified	PASS
	HCH	1.1684	1.288	Not Specified	PASS
8DPSK	LCH	1.1775	1.293	Not Specified	PASS
	MCH	1.1770	1.292	Not Specified	PASS
	HCH	1.1803	1.297	Not Specified	PASS

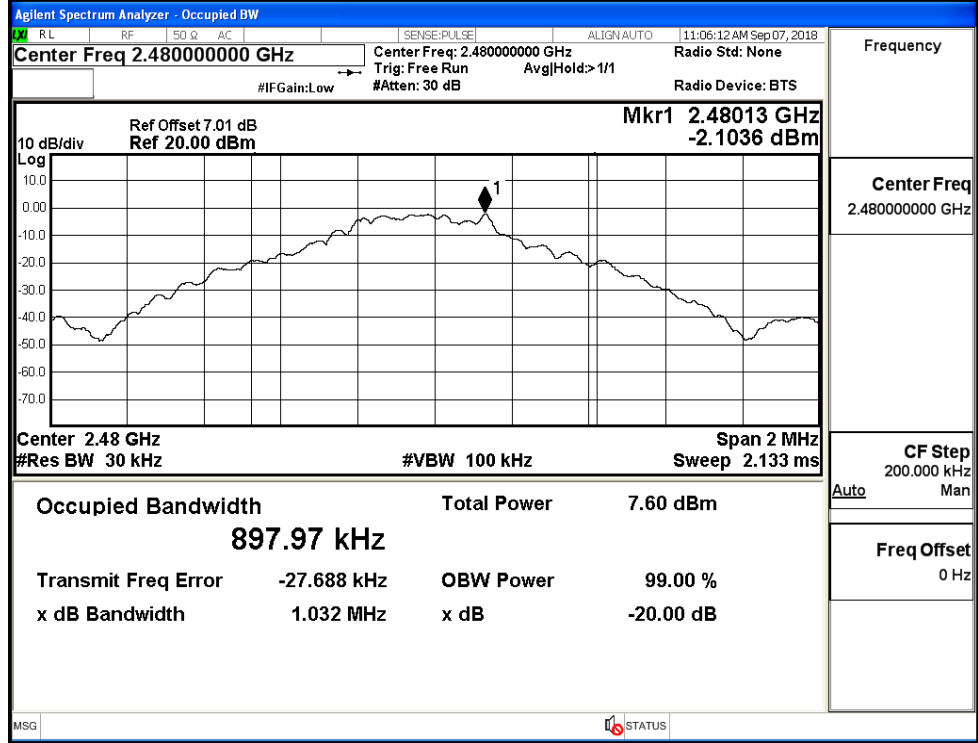


GFSK/MCH



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

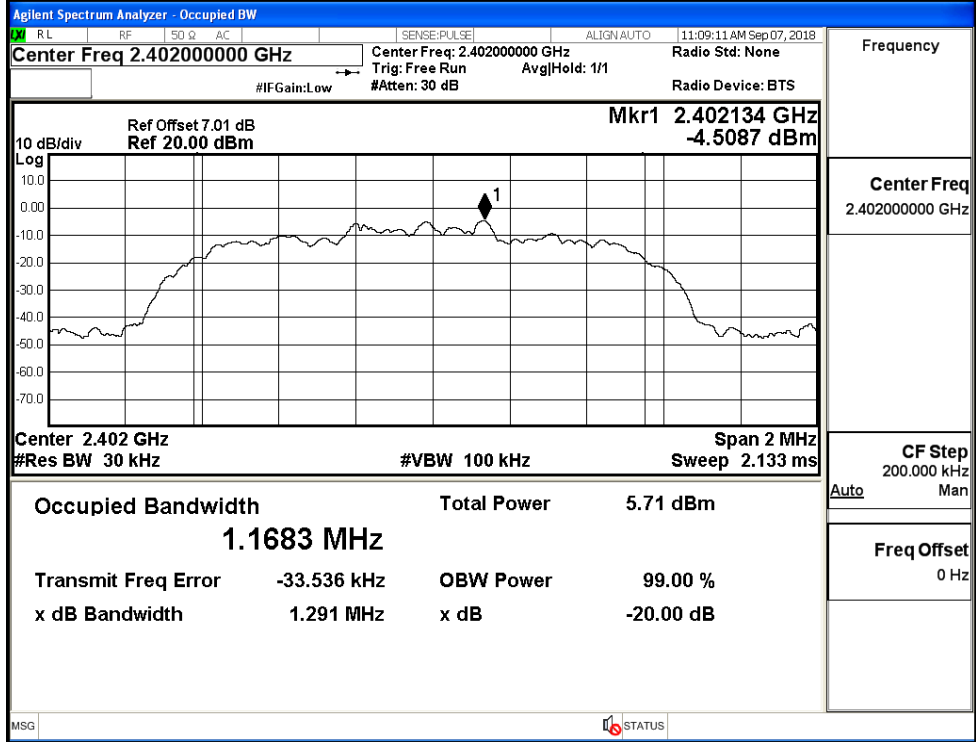
GFSK/HCH



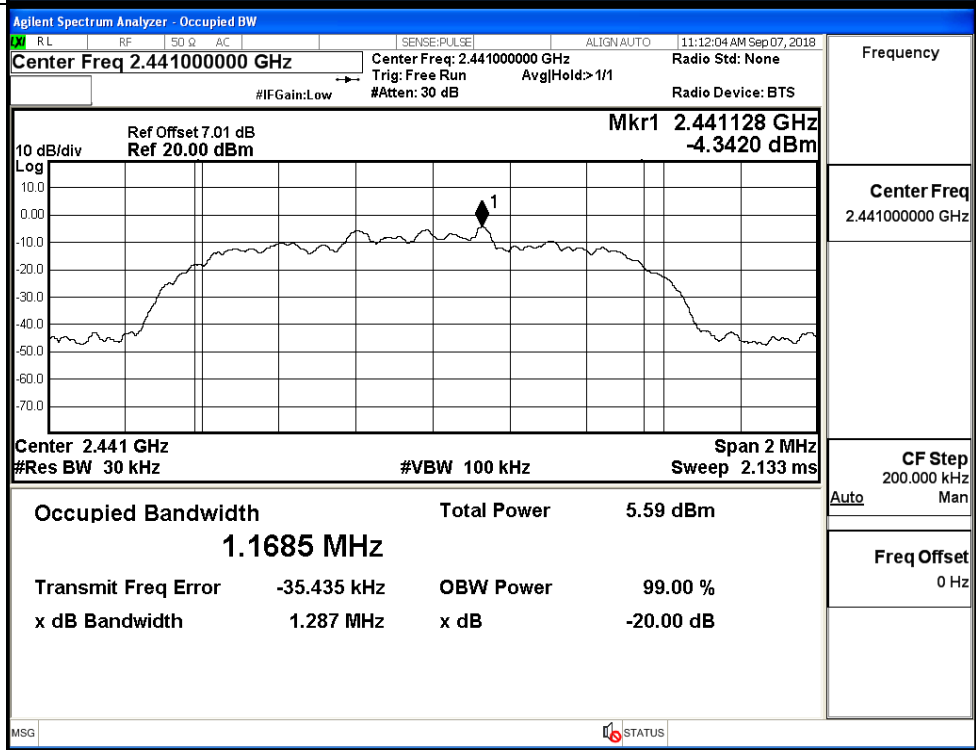
Frequency	2.48000000 GHz
Center Freq	2.48000000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz



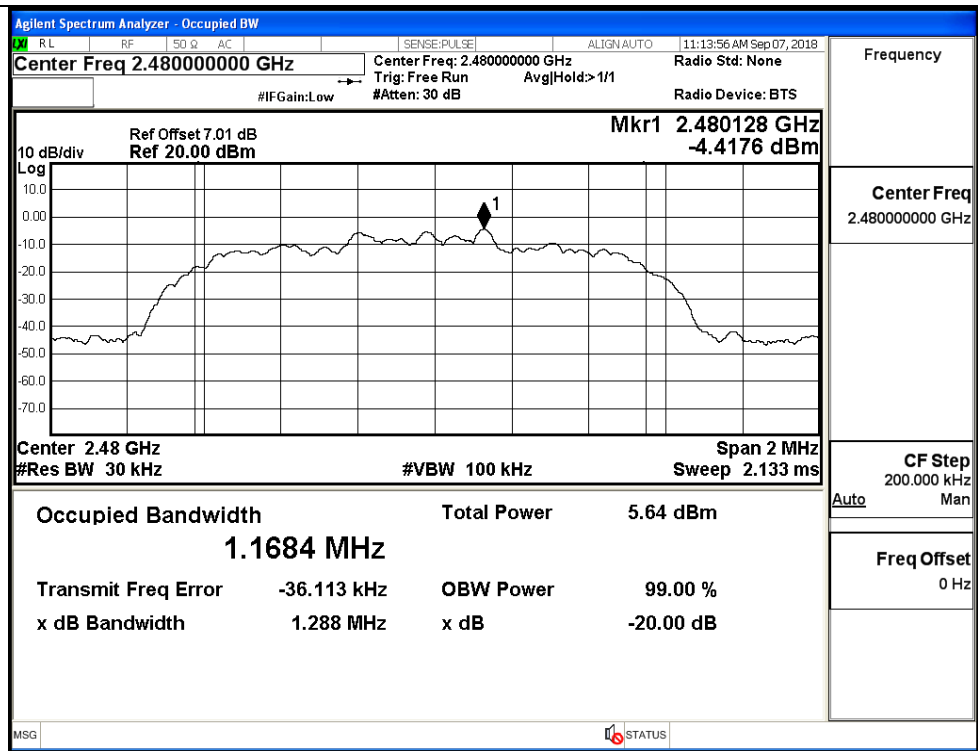
$\pi$ /4DQPSK/LCH



$\pi$ /4DQPSK/MCH

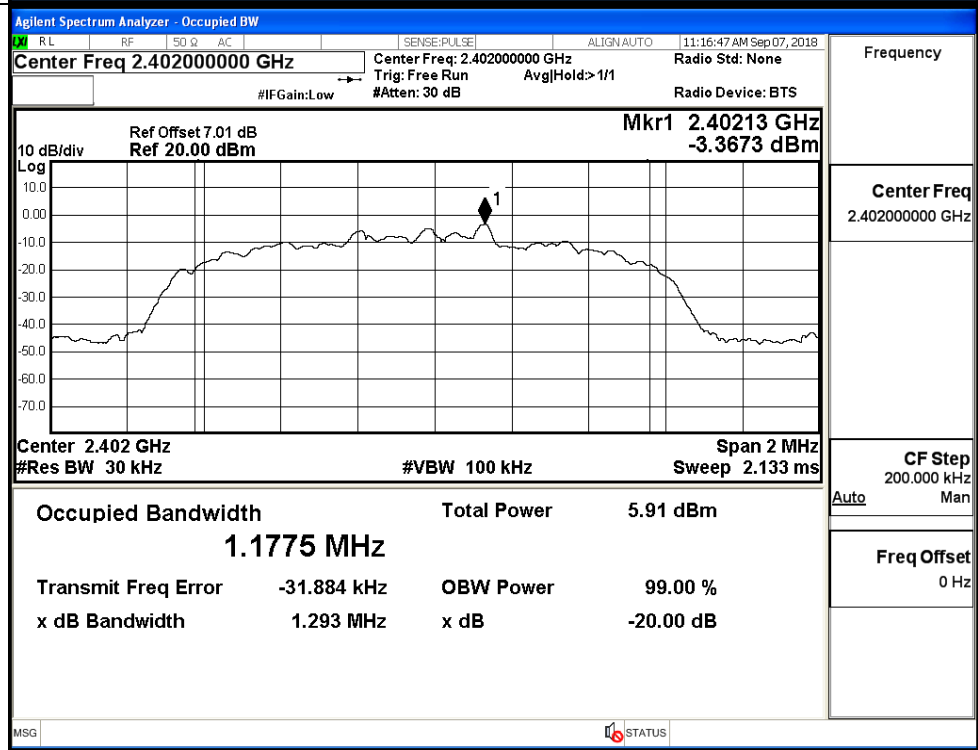


$\pi$ /4DQPSK/HCH



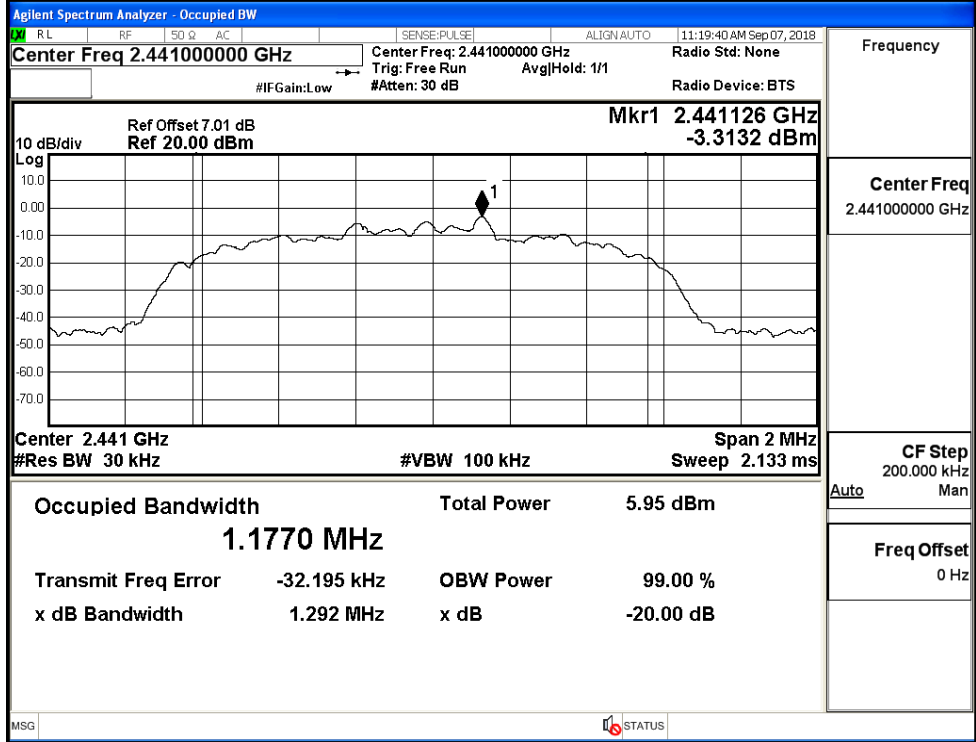
Frequency	2.48000000 GHz
Center Freq	2.48000000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

8DPSK/LCH



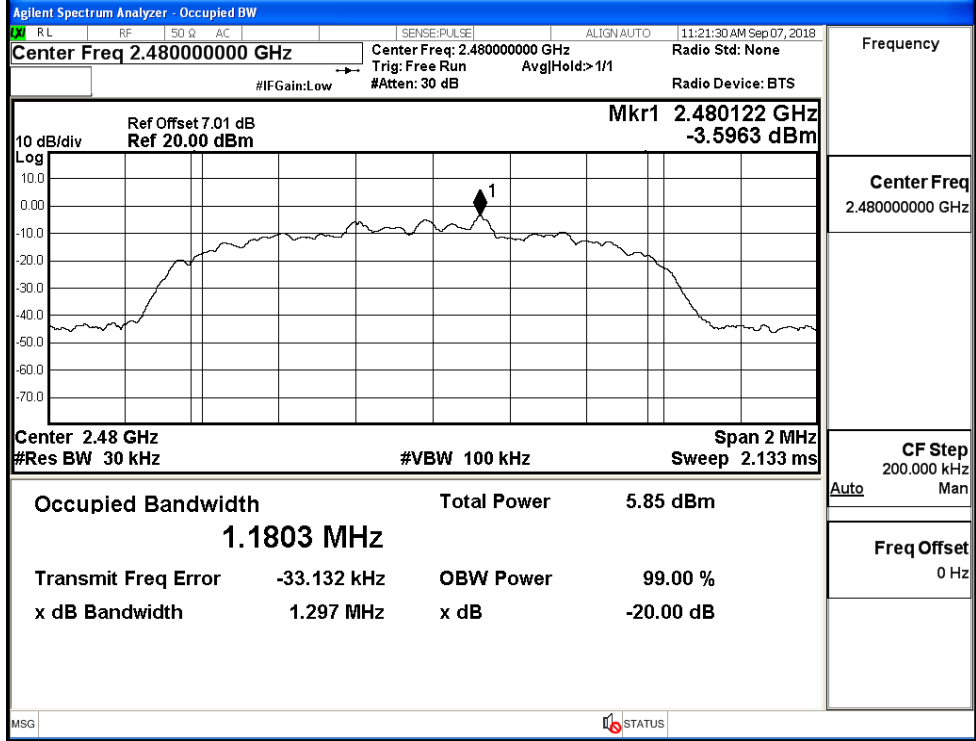
Frequency	2.40200000 GHz
Center Freq	2.40200000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

8DPSK/MCH



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

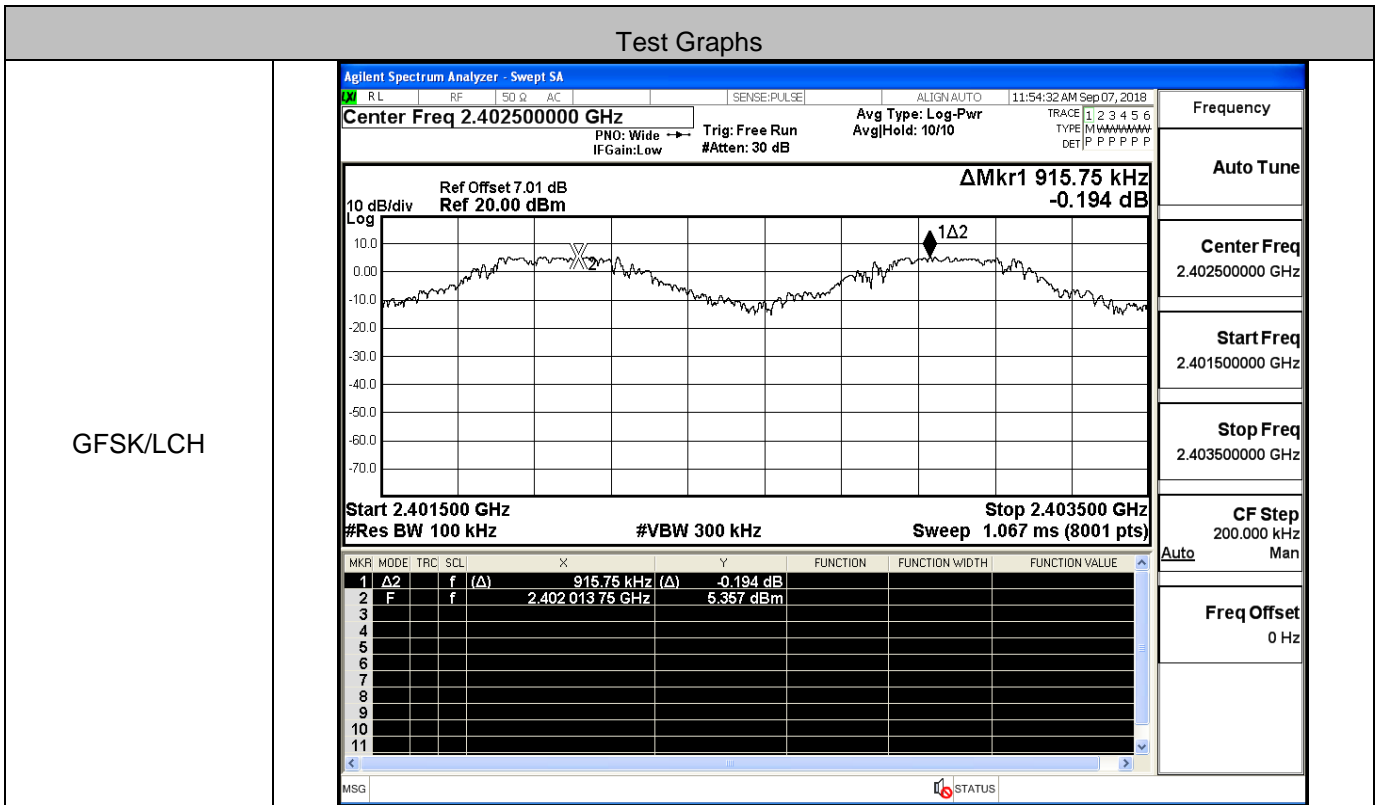
8DPSK/HCH



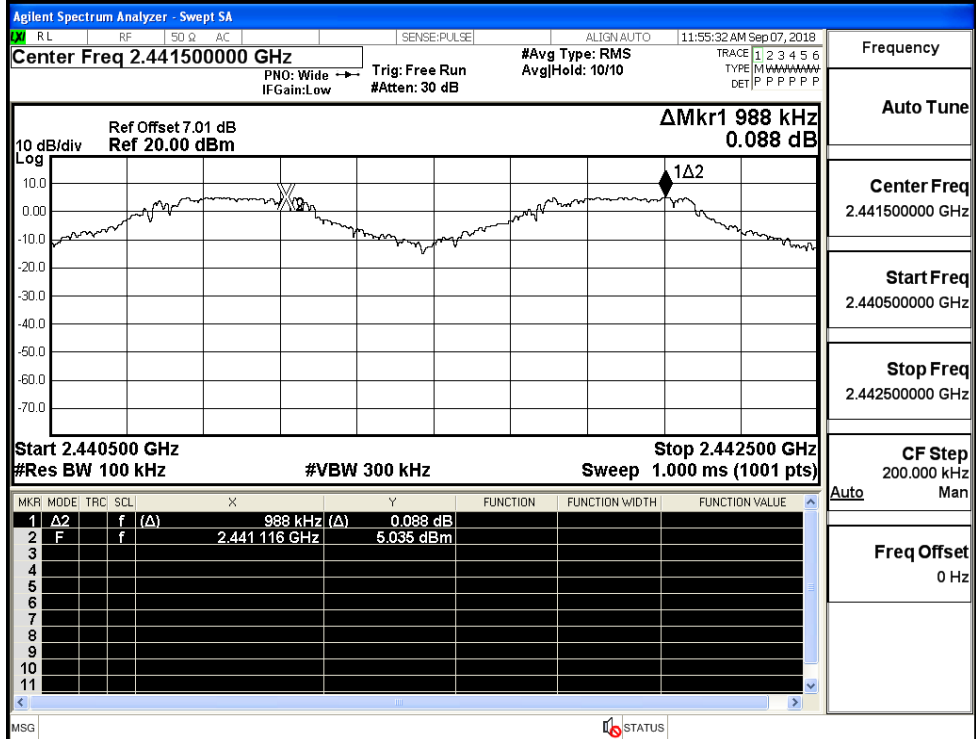
Frequency	2.480000000 GHz
Center Freq	2.480000000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

### A.3 Carrier Frequency Separation

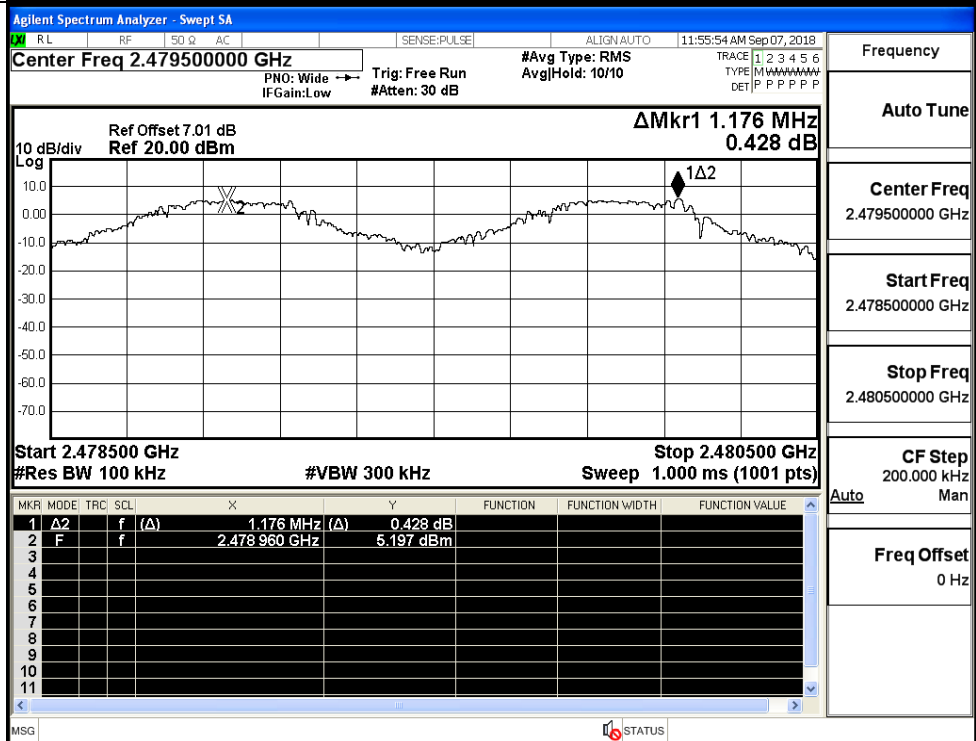
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.916	0.690	PASS
	MCH	0.988	0.690	PASS
	HCH	1.176	0.690	PASS
π/4DQPSK	LCH	0.980	0.861	PASS
	MCH	1.038	0.861	PASS
	HCH	0.880	0.861	PASS
8DPSK	LCH	1.074	0.865	PASS
	MCH	1.292	0.865	PASS
	HCH	1.298	0.865	PASS



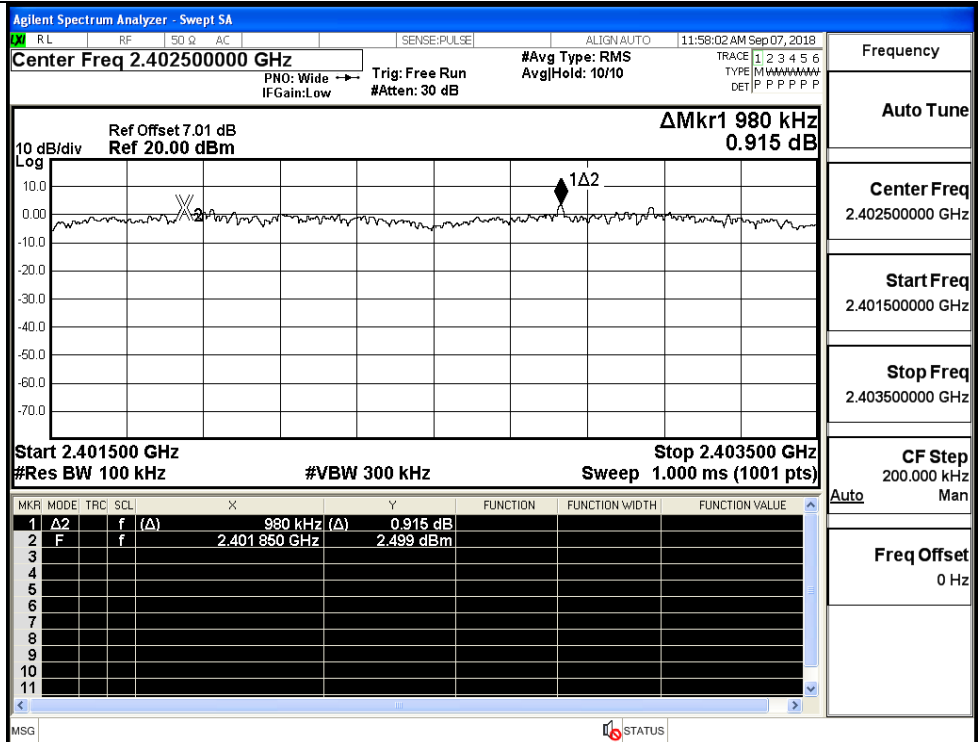
GFSK/MCH



GFSK/HCH

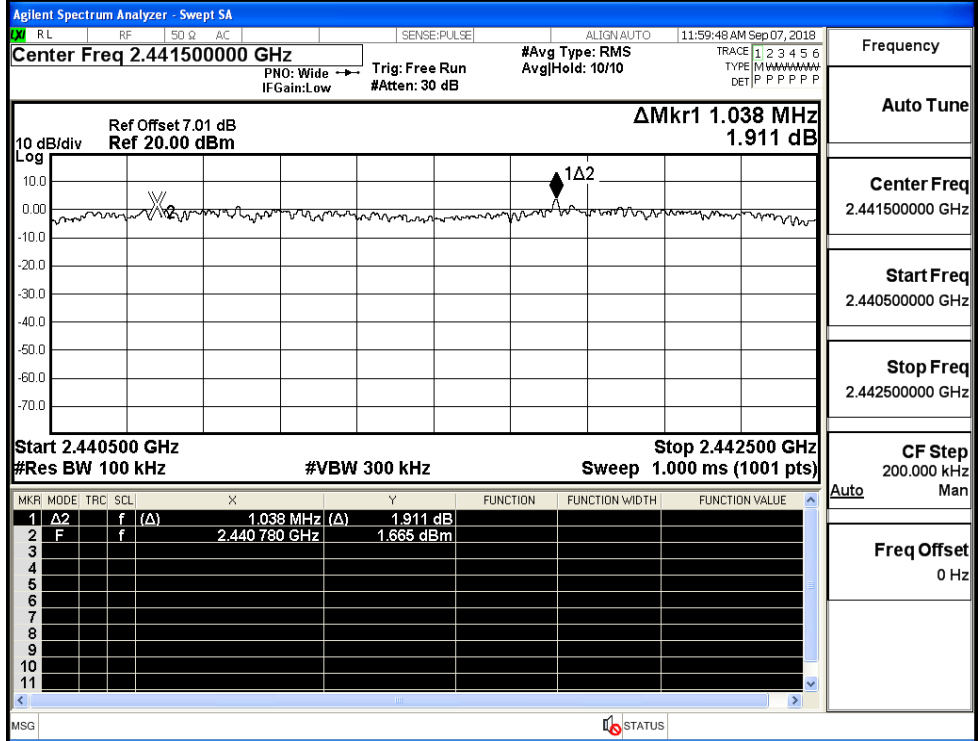


$\pi/4$ DQPSK/LCH



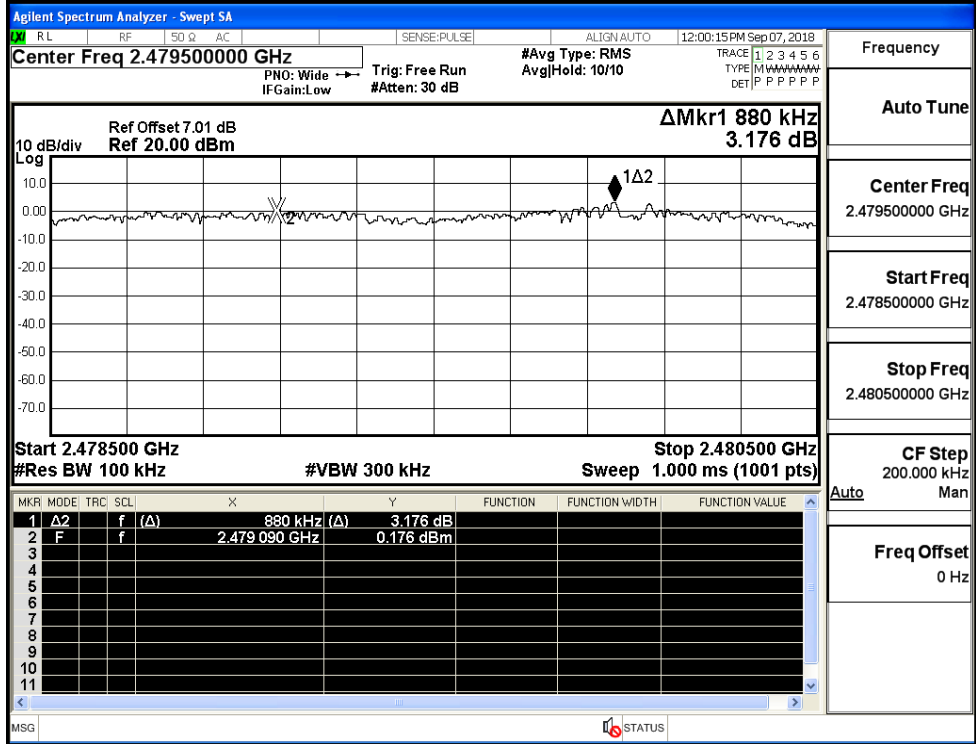
Frequency	Auto Tune
Center Freq	2.402500000 GHz
Start Freq	2.401500000 GHz
Stop Freq	2.403500000 GHz
CF Step	200.000 kHz
Freq Offset	0 Hz

$\pi/4$ DQPSK/MCH



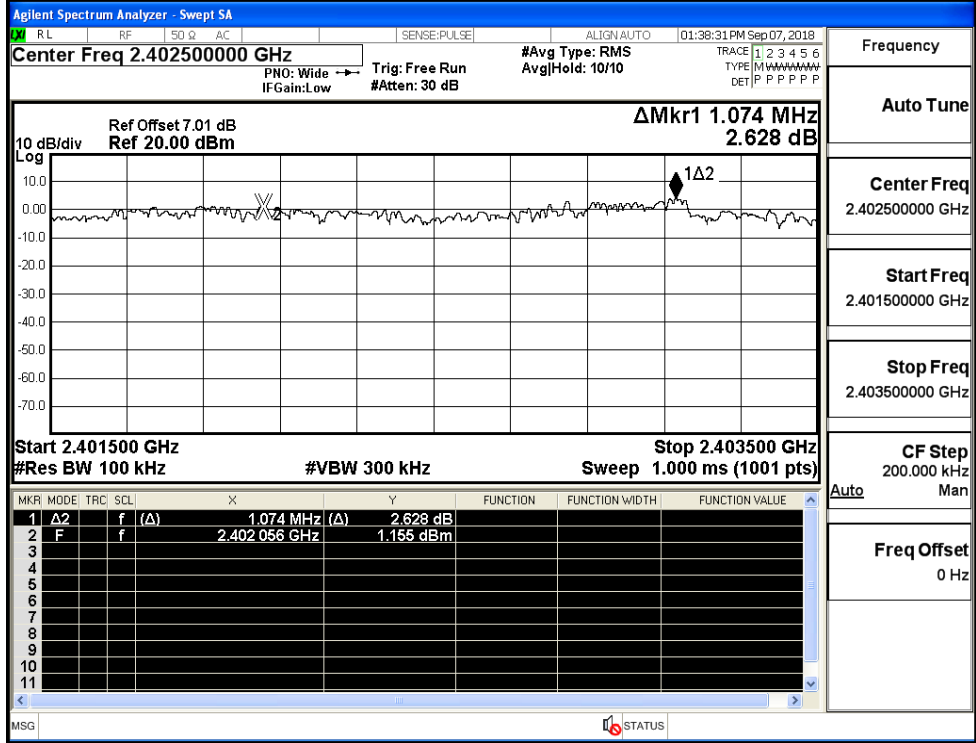
Frequency	Auto Tune
Center Freq	2.441500000 GHz
Start Freq	2.440500000 GHz
Stop Freq	2.442500000 GHz
CF Step	200.000 kHz
Freq Offset	0 Hz

$\pi$ /4DQPSK/HCH



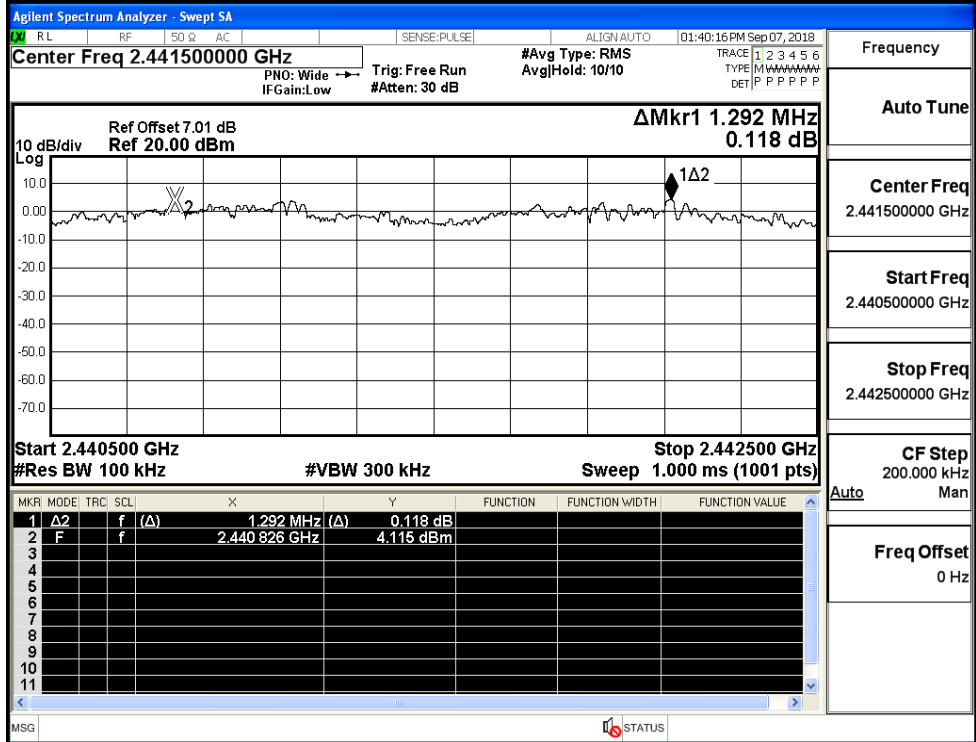
Frequency
Auto Tune
Center Freq 2.479500000 GHz
Start Freq 2.478500000 GHz
Stop Freq 2.480500000 GHz
CF Step 200.000 kHz
Auto Man
Freq Offset 0 Hz

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

8DPSK/MCH



Frequency

Auto Tune

Center Freq  
2.441500000 GHz

Start Freq  
2.440500000 GHz

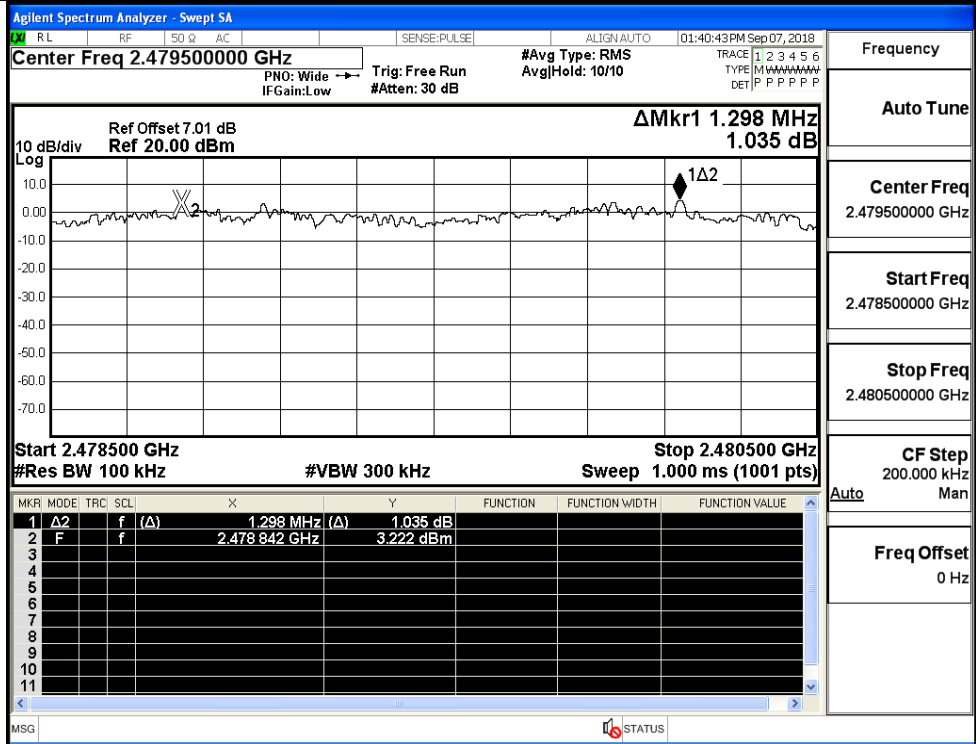
Stop Freq  
2.442500000 GHz

CF Step  
200.000 kHz

Auto Man

Freq Offset  
0 Hz

8DPSK/HCH



Frequency

Auto Tune

Center Freq  
2.479500000 GHz

Start Freq  
2.478500000 GHz

Stop Freq  
2.480500000 GHz

CF Step  
200.000 kHz

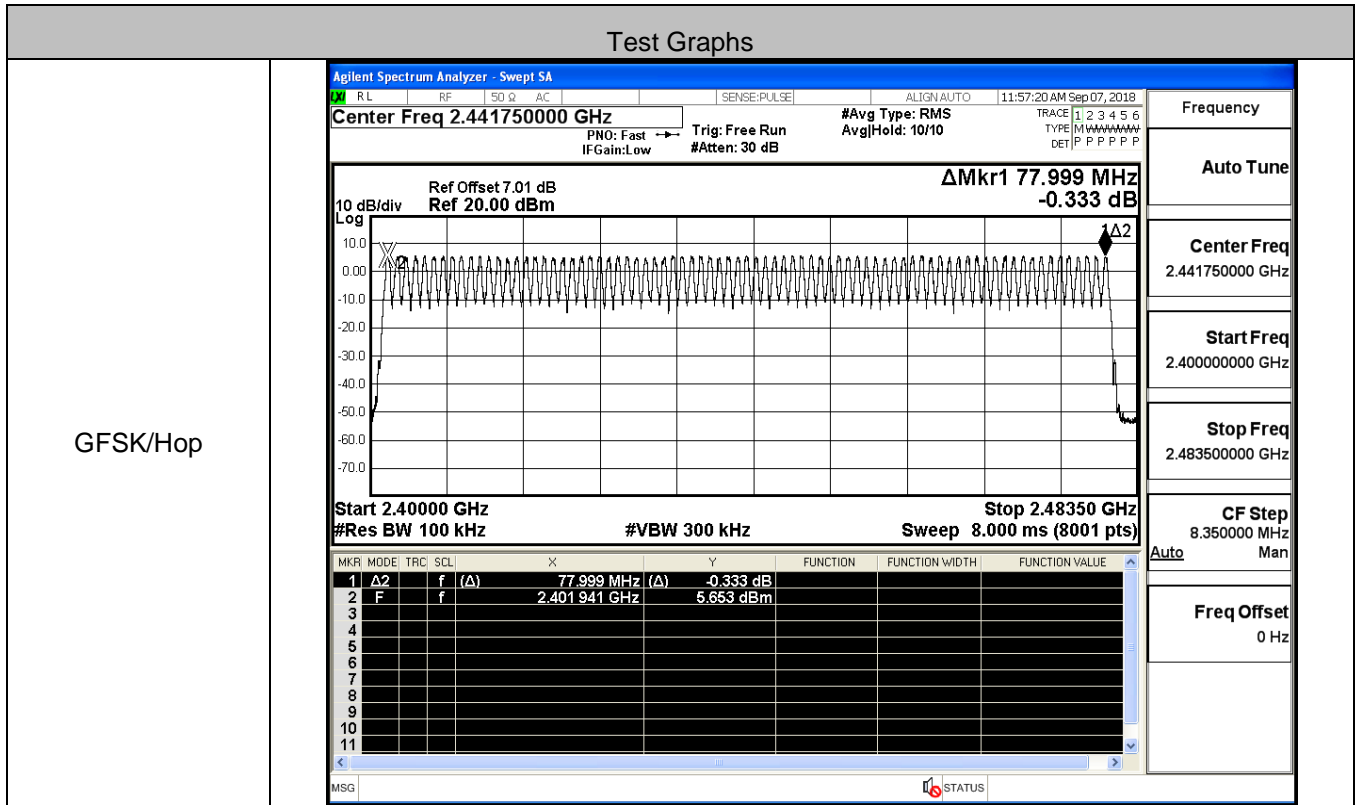
Auto Man

Freq Offset  
0 Hz

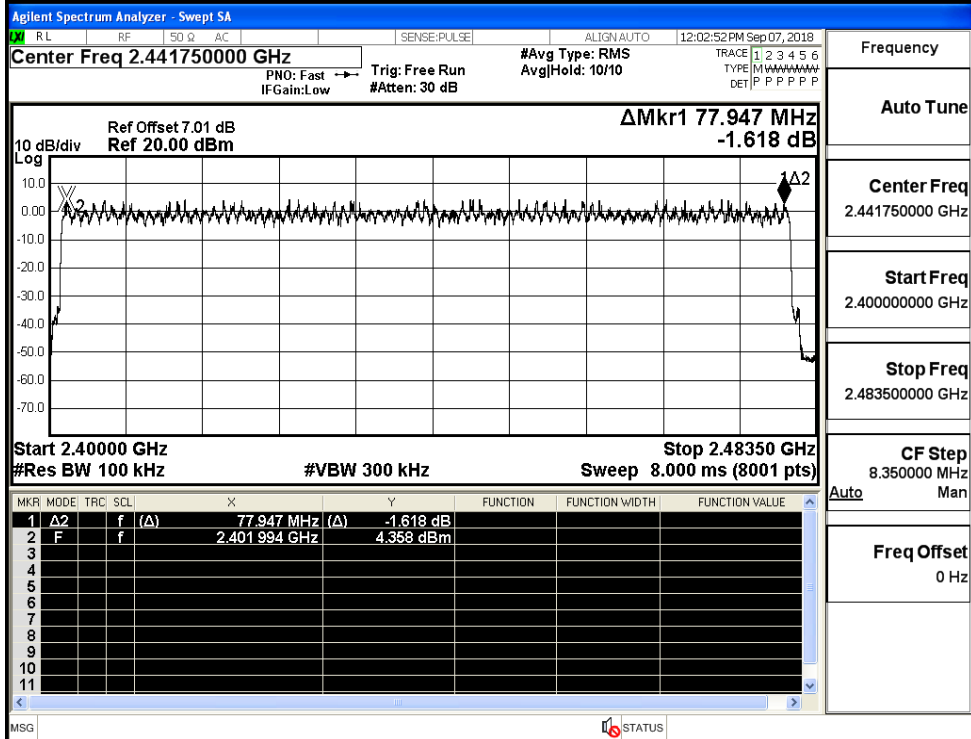


### A.4 Hopping Channel Number

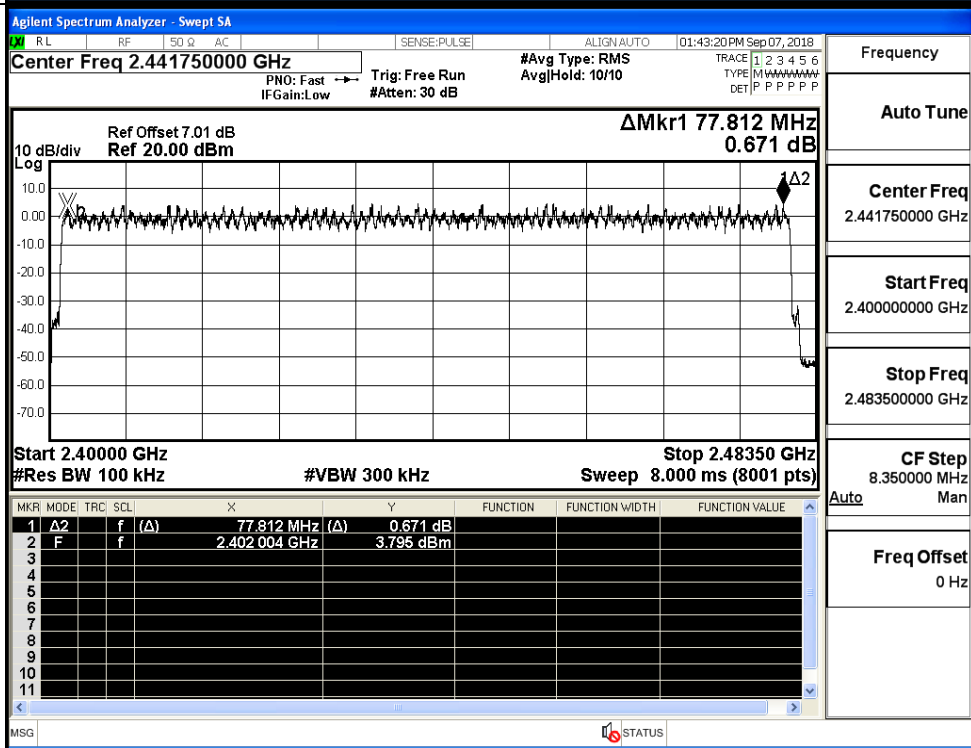
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS



$\pi/4$ DQPSK/Hop

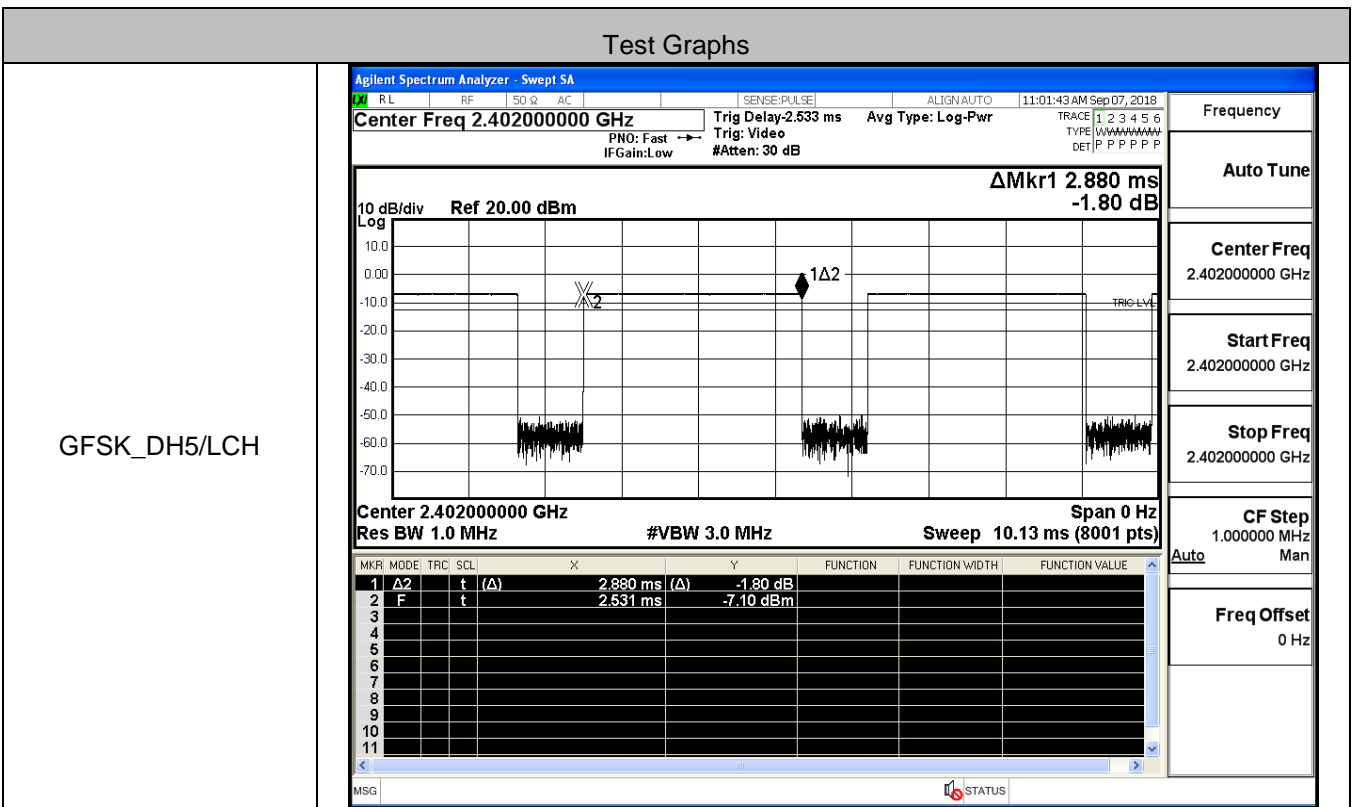


8DPSK/Hop

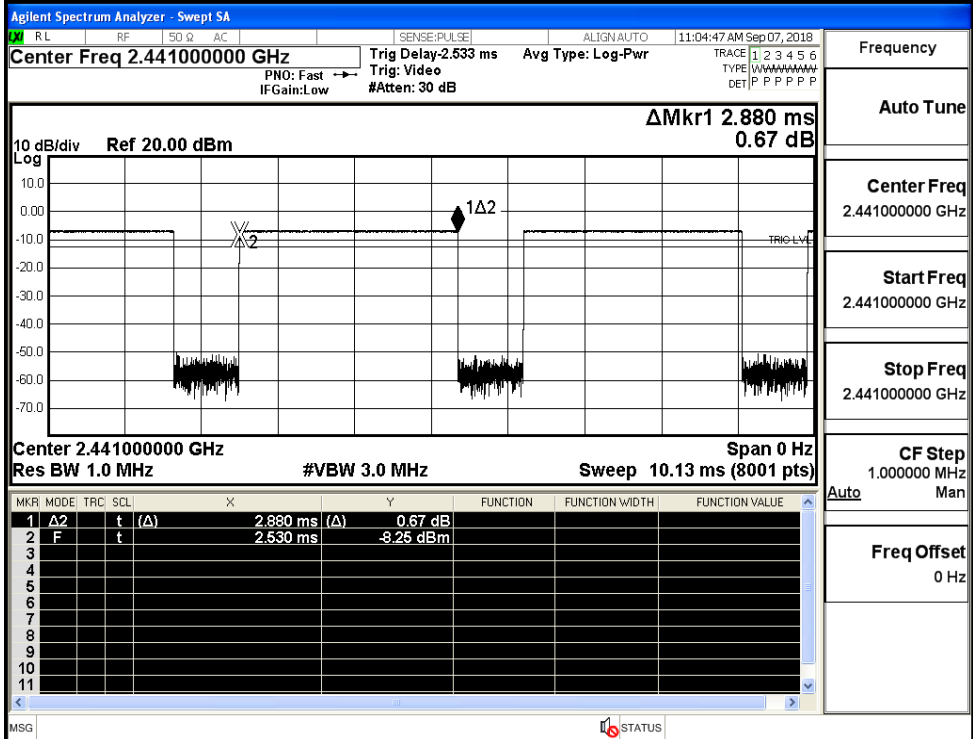


**A.5 Dwell Time**

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	2.89	106.7	0.308	0.4	PASS
	3DH5	MCH	2.89	106.7	0.308	0.4	PASS
	3DH5	HCH	2.89	106.7	0.308	0.4	PASS

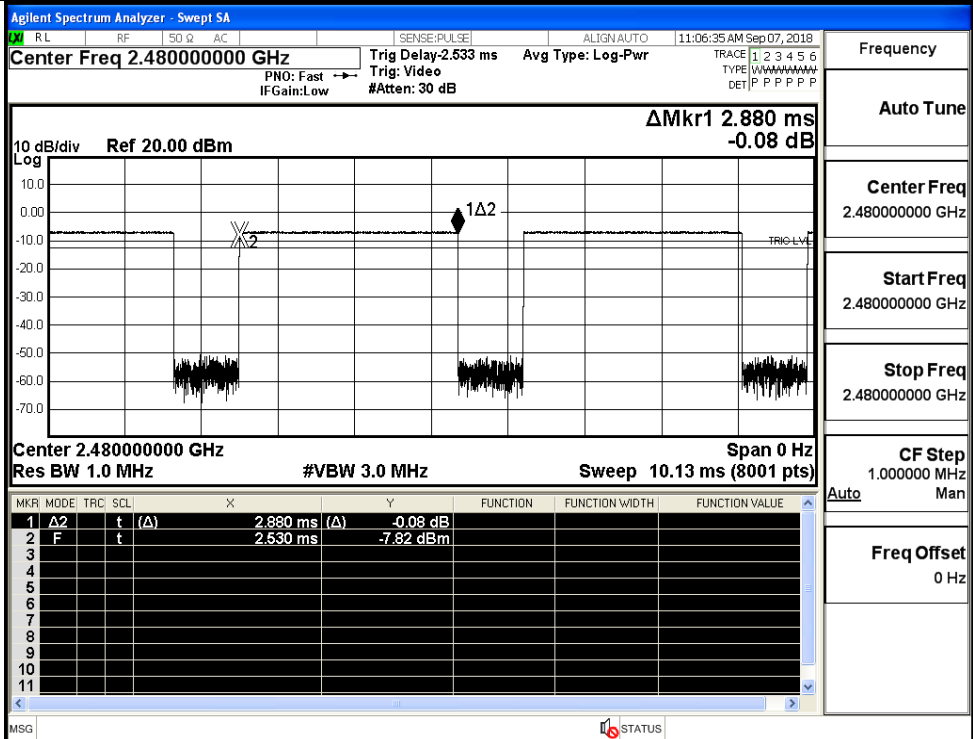


GFSK\_DH5/MCH



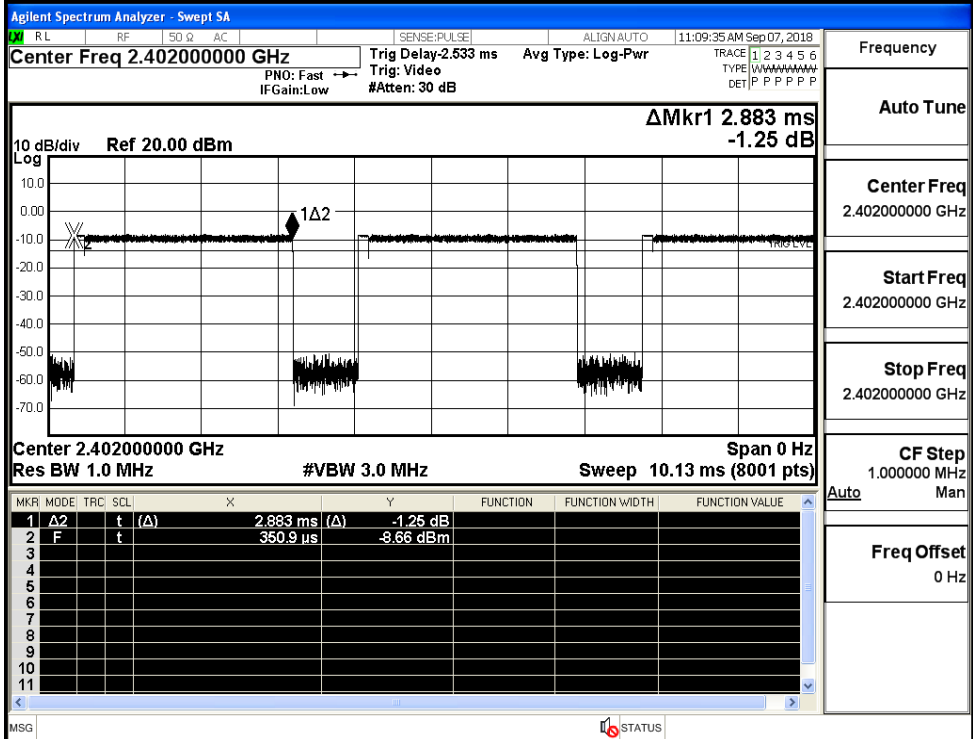
Frequency	
Auto Tune	
Center Freq	2.441000000 GHz
Start Freq	2.441000000 GHz
Stop Freq	2.441000000 GHz
CF Step	1.000000 MHz
Freq Offset	0 Hz

GFSK\_DH5/HCH

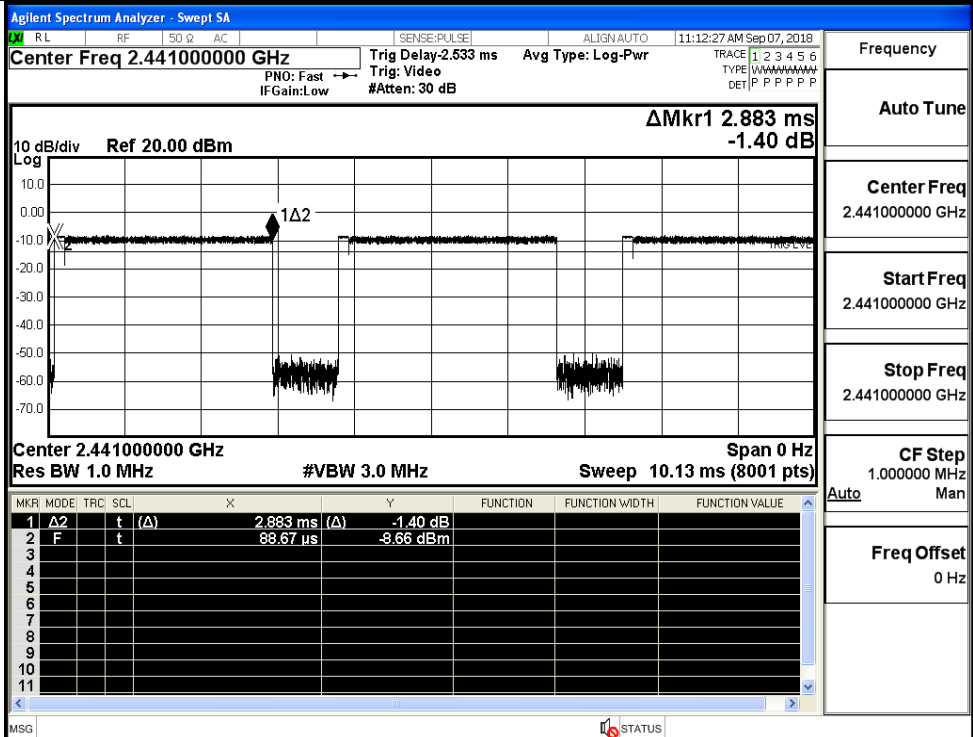


Frequency	
Auto Tune	
Center Freq	2.480000000 GHz
Start Freq	2.480000000 GHz
Stop Freq	2.480000000 GHz
CF Step	1.000000 MHz
Freq Offset	0 Hz

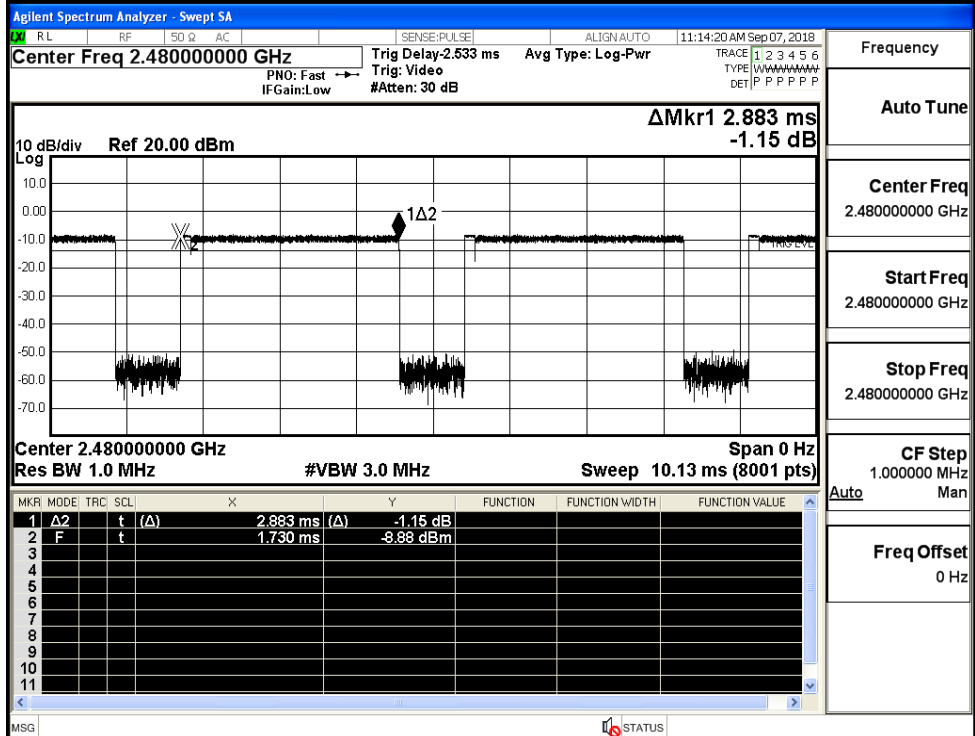
$\pi/4$ DQPSK  
\_2DH5/LCH



$\pi/4$ DQPSK  
\_2DH5/MCH

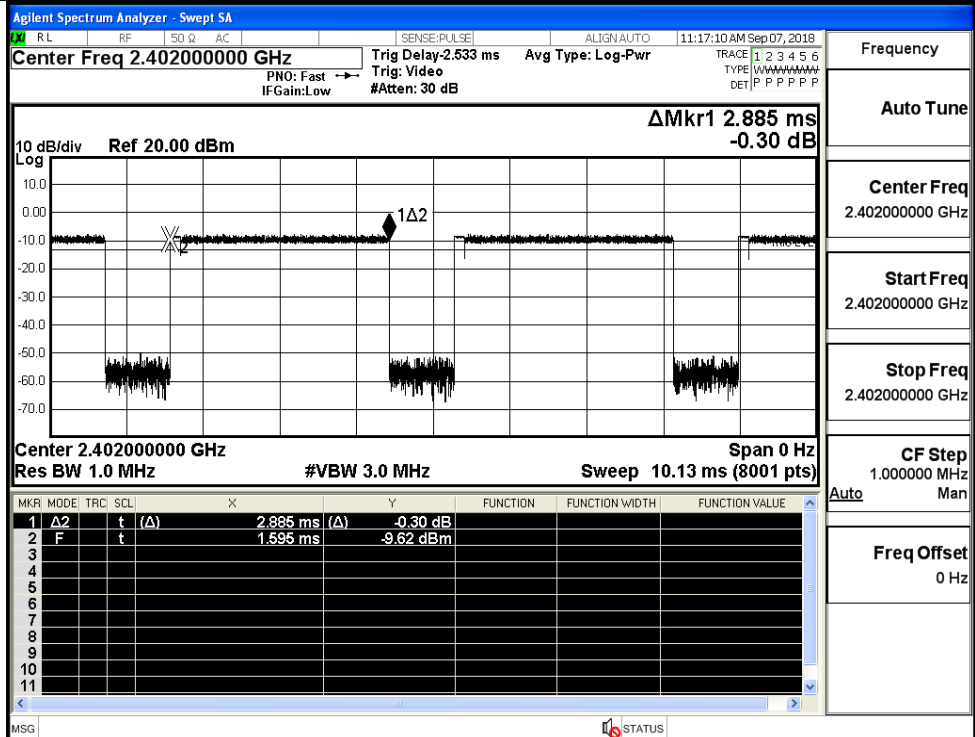


$\pi/4$ DQPSK  
\_2DH5/HCH



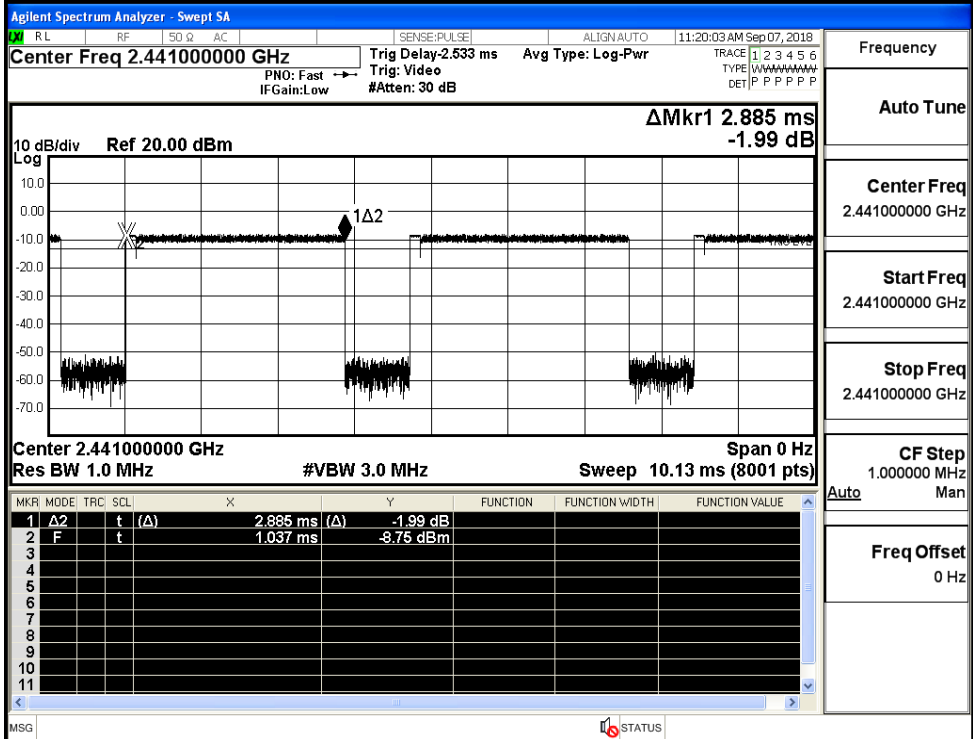
Frequency	2.480000000 GHz
Auto Tune	
Center Freq	2.480000000 GHz
Start Freq	2.480000000 GHz
Stop Freq	2.480000000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK\_3DH5/LCH

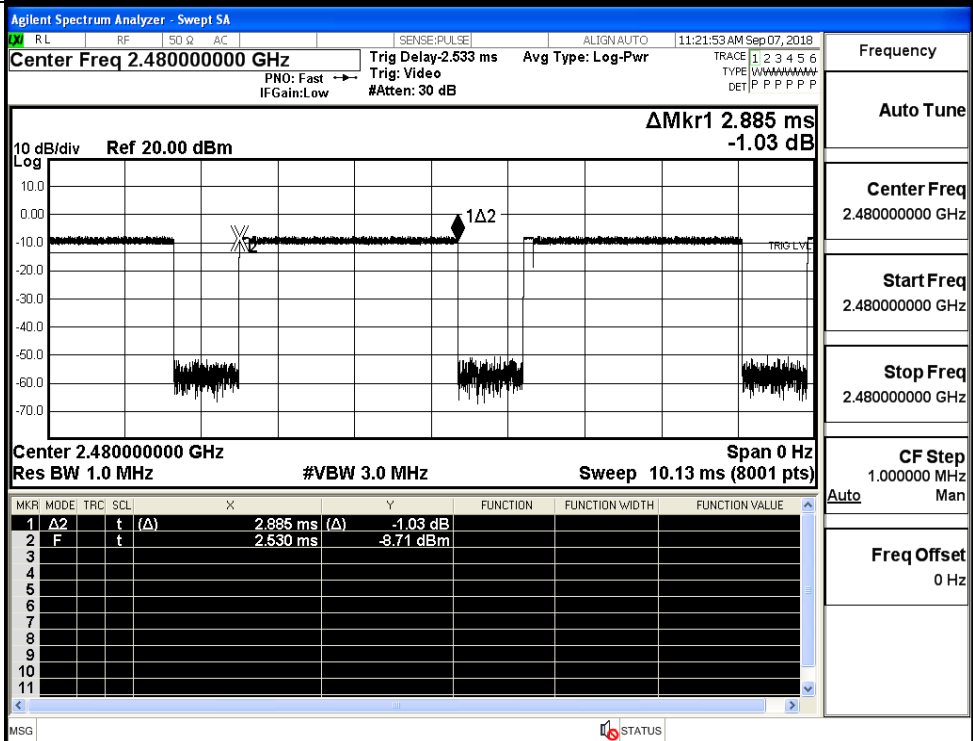


Frequency	2.402000000 GHz
Auto Tune	
Center Freq	2.402000000 GHz
Start Freq	2.402000000 GHz
Stop Freq	2.402000000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK\_3DH5/MCH



8DPSK\_3DH5/HCH



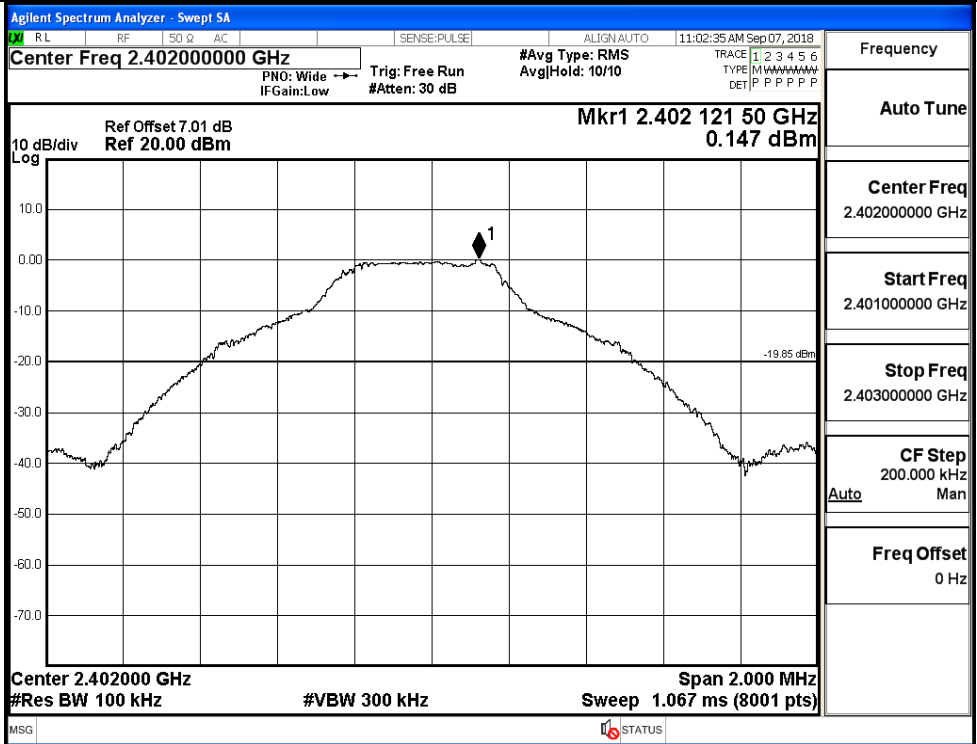
**A.6 RF Conducted Spurious Emissions**

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.147	-45.791	-19.853	PASS
	MCH	0.073	-44.641	-19.927	PASS
	HCH	0.011	-45.781	-19.989	PASS
$\pi/4$ DQPSK	LCH	-1.591	-45.579	-21.591	PASS
	MCH	-2.251	-45.068	-22.251	PASS
	HCH	-1.721	-45.676	-21.721	PASS
8DPSK	LCH	-1.587	-45.955	-21.587	PASS
	MCH	-1.923	-46.193	-21.923	PASS
	HCH	-1.31	-45.411	-21.310	PASS

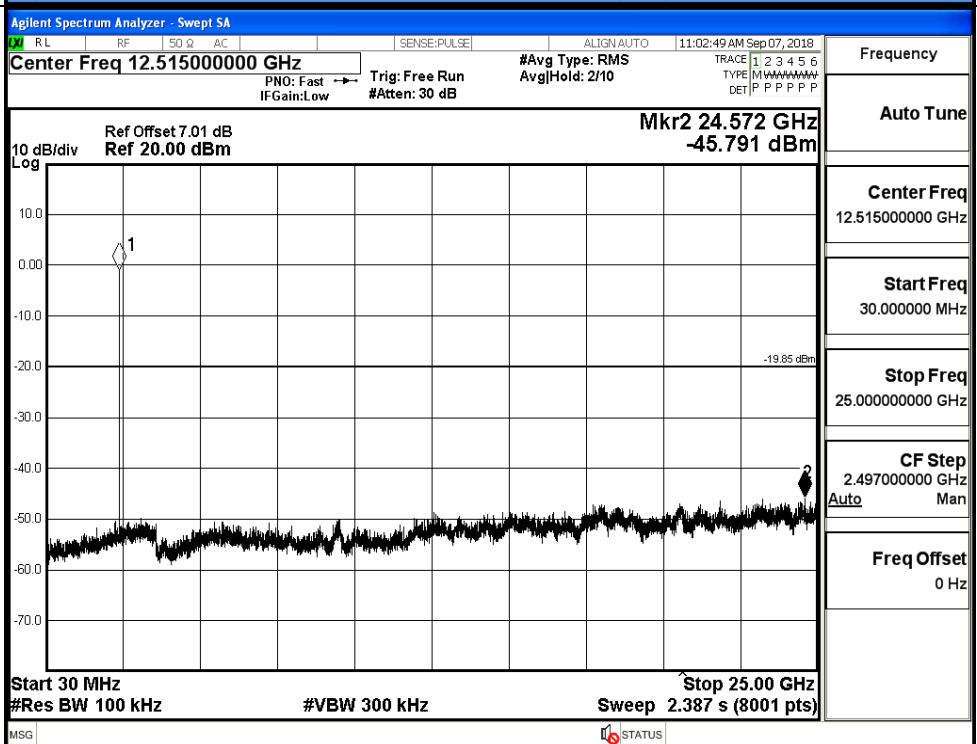


GFSK\_LCH\_Graphs

Pref

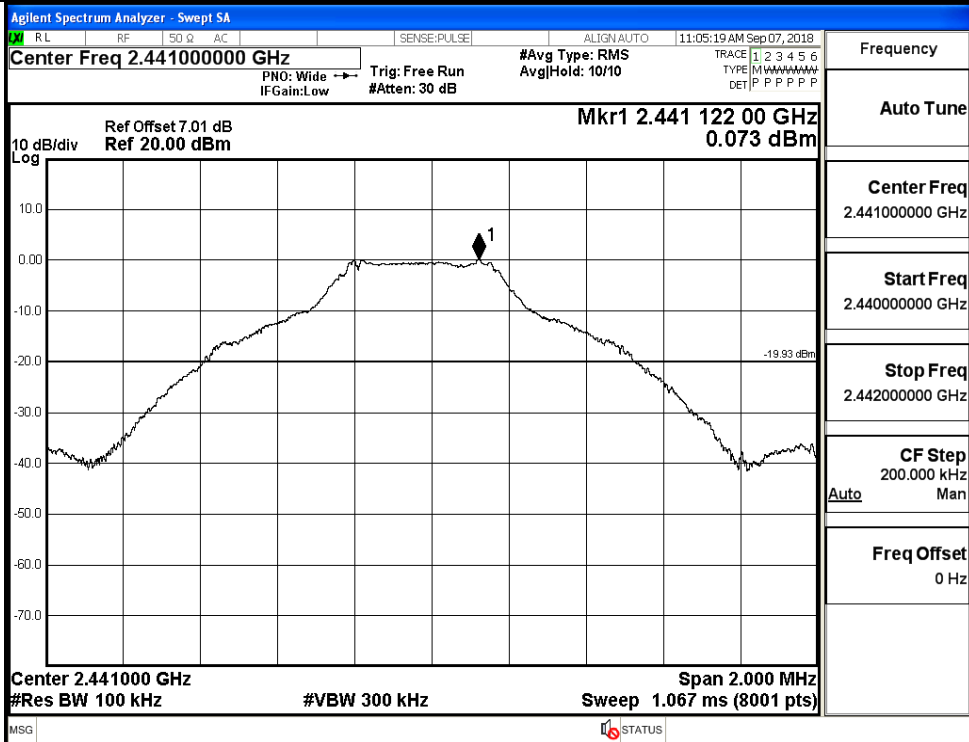


Puw

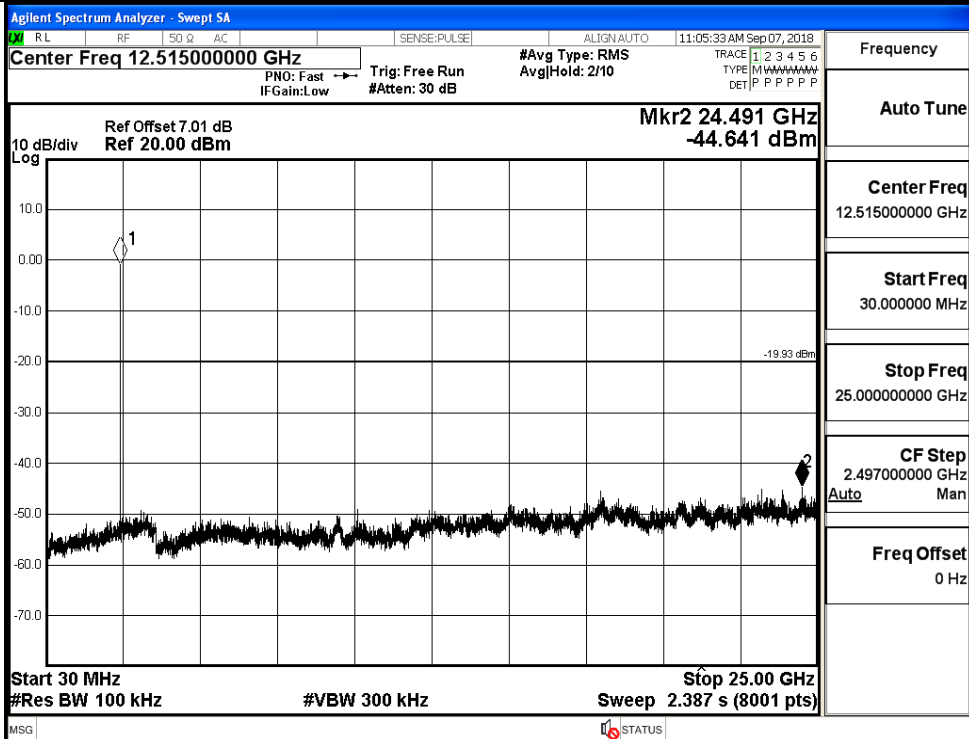


GFSK\_MCH\_Graphs

Pref

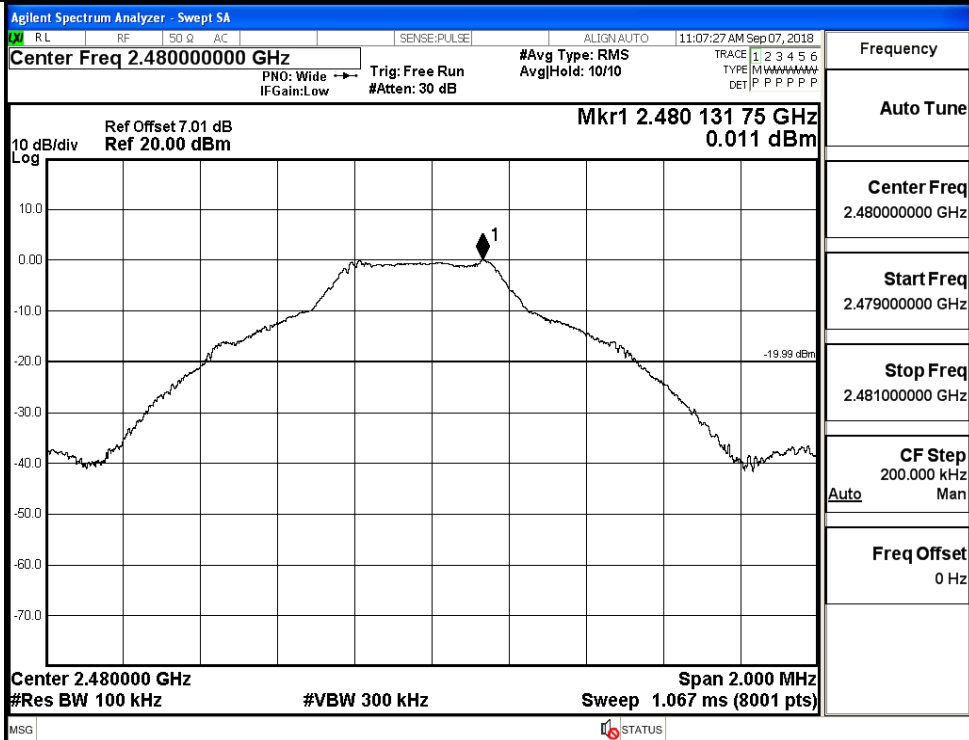


Puw

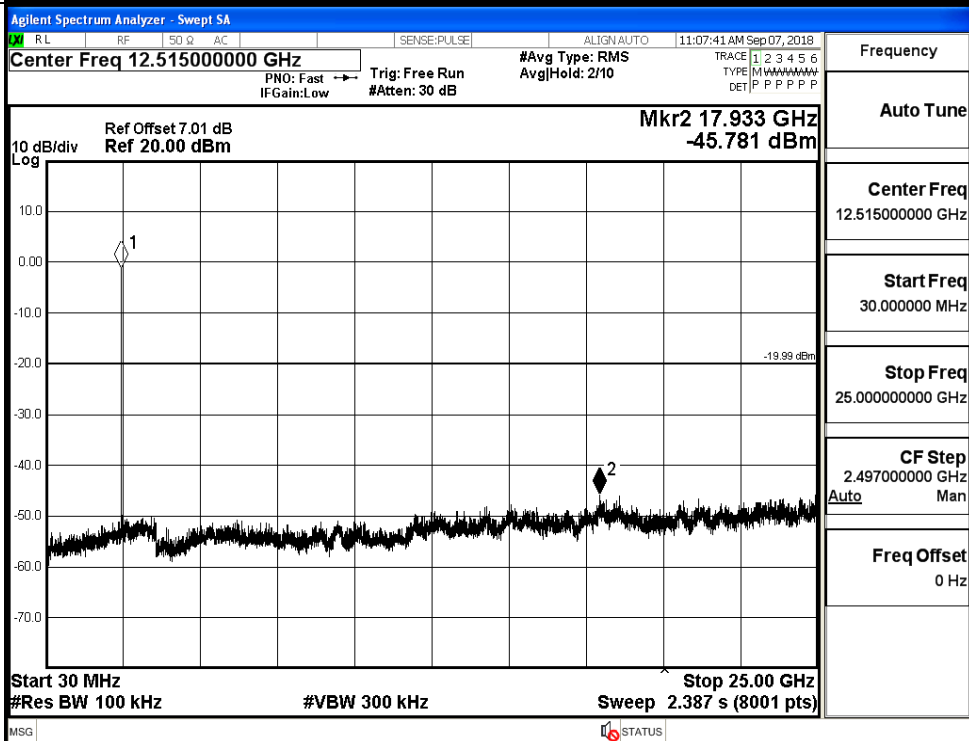


GFSK\_HCH\_Graphs

Pref

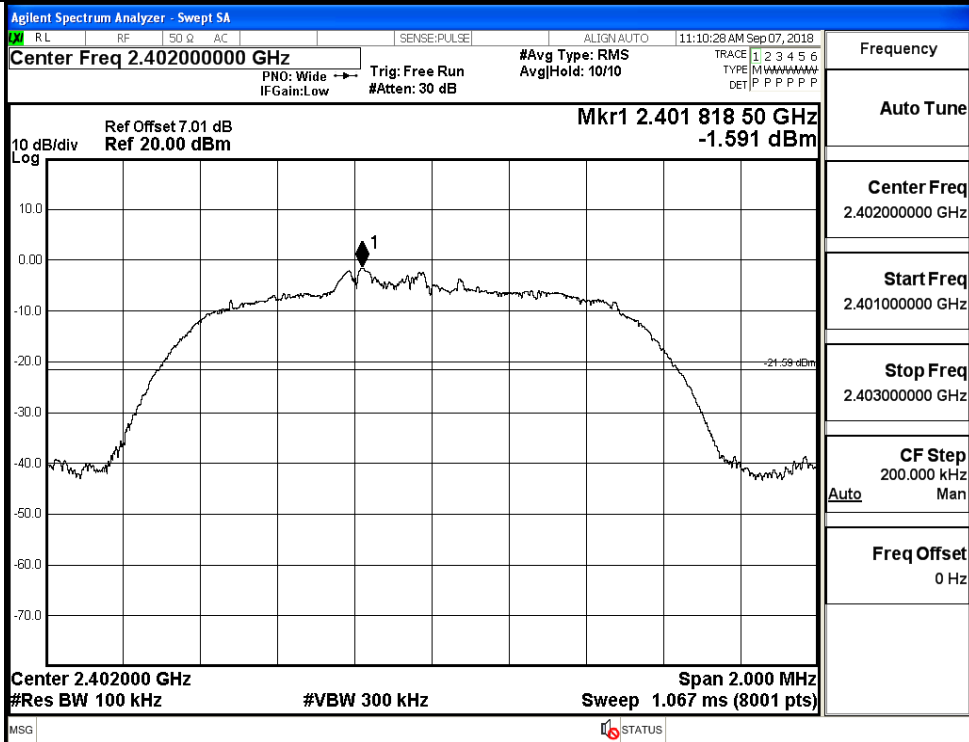


Puw

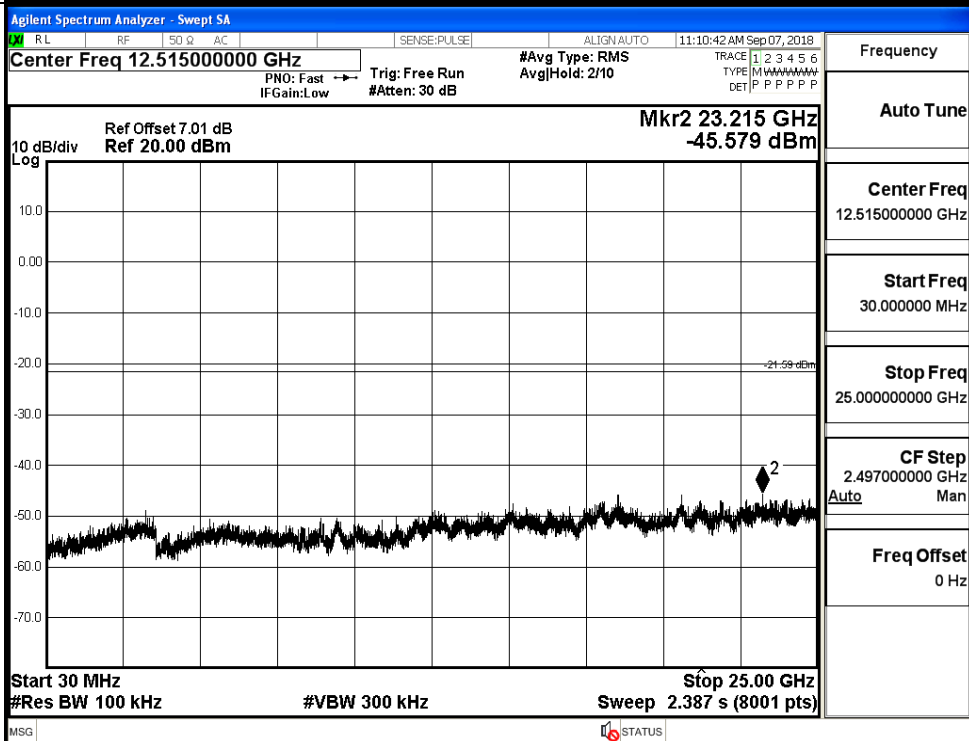


$\pi/4$ DQPSK LCH Graphs

Pref

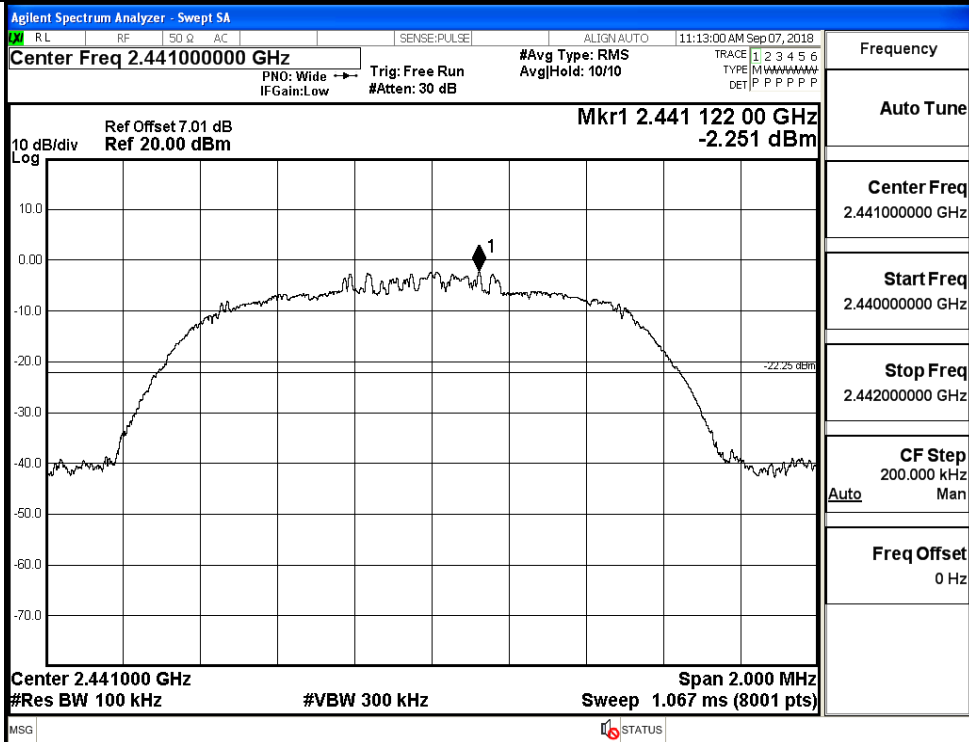


Puw

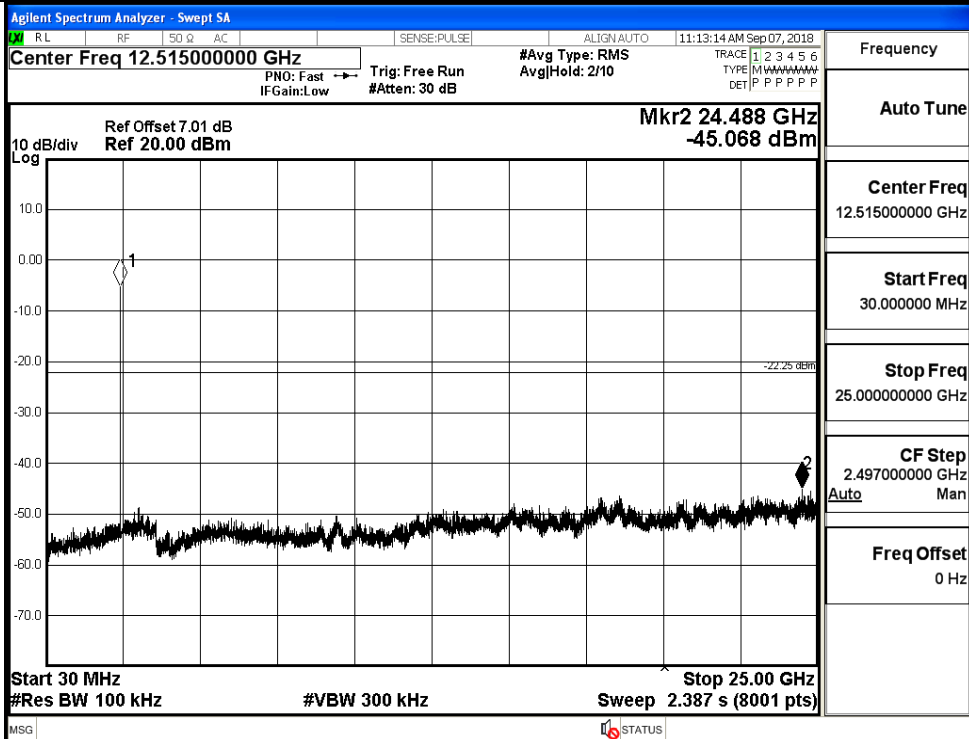


$\pi/4$ DQPSK MCH Graphs

Pref

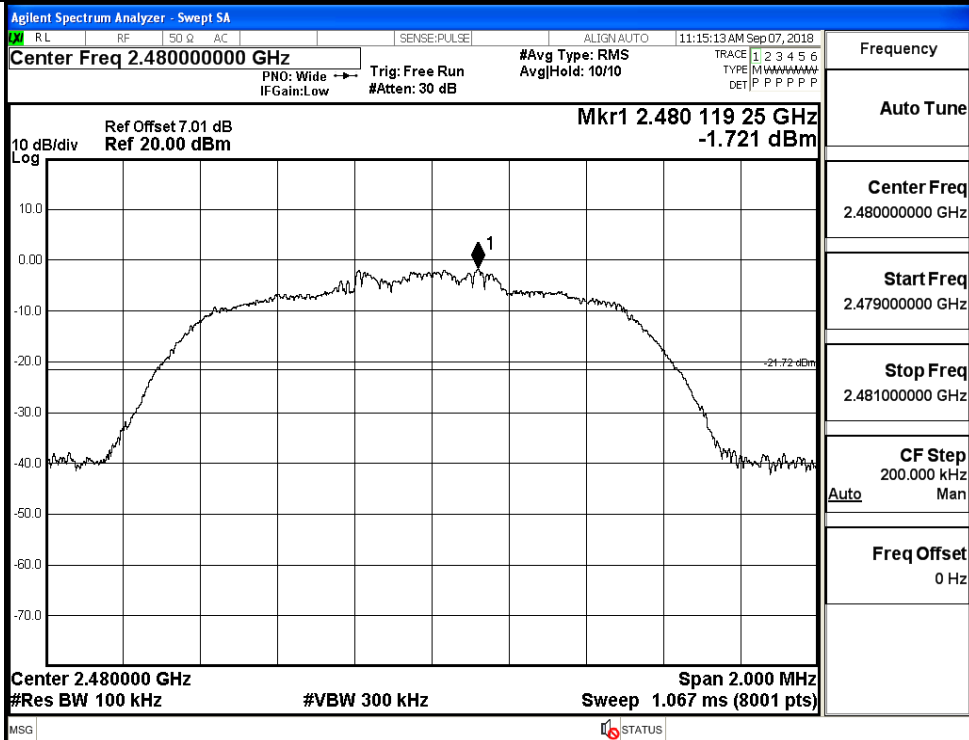


Puw

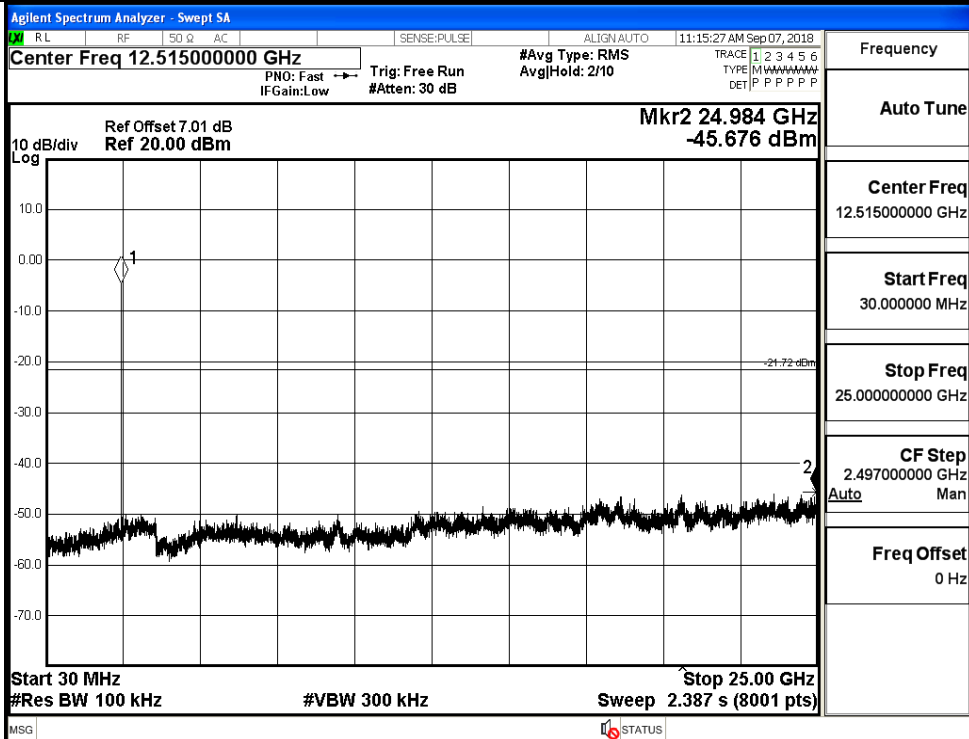


$\pi/4$ DQPSK\_HCH\_Graphs

Pref

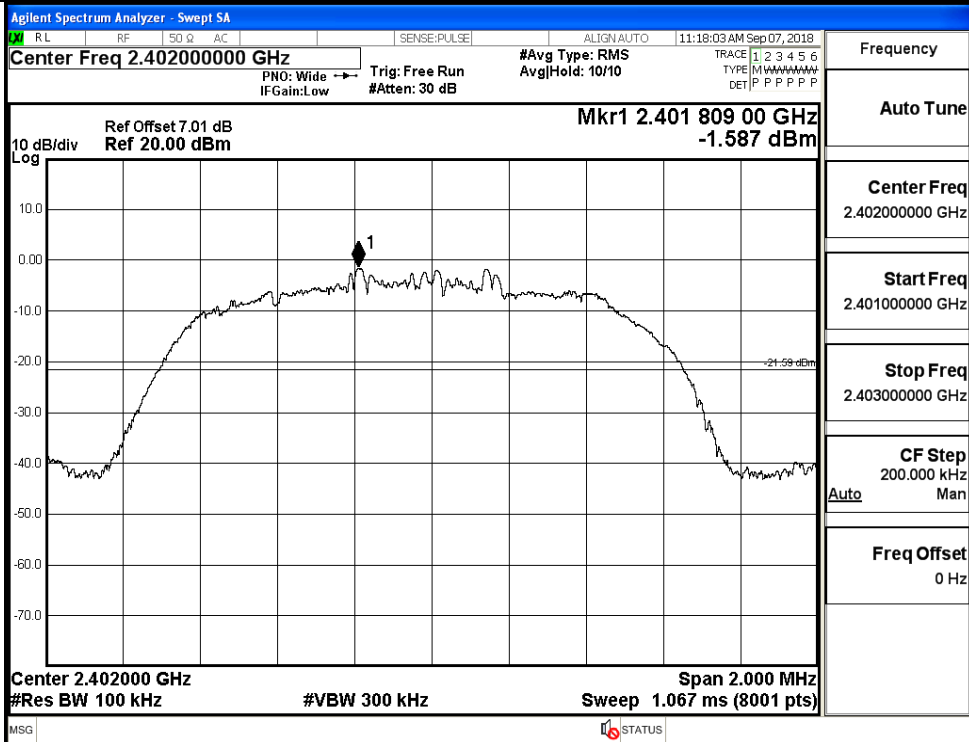


Puw

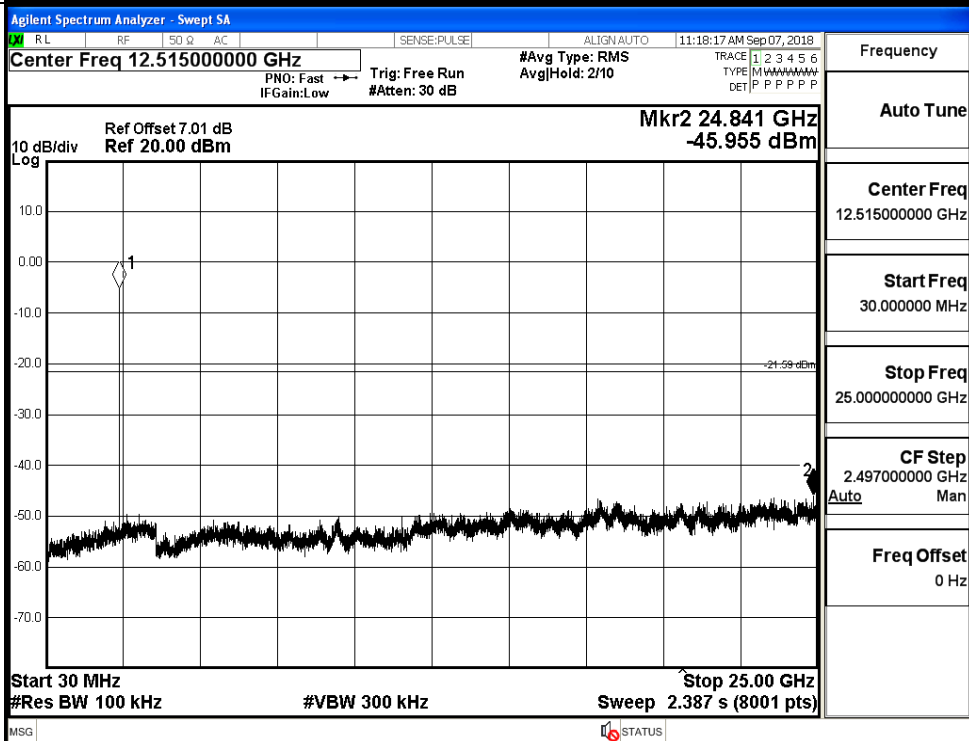


8DPSK\_LCH\_Graphs

Pref

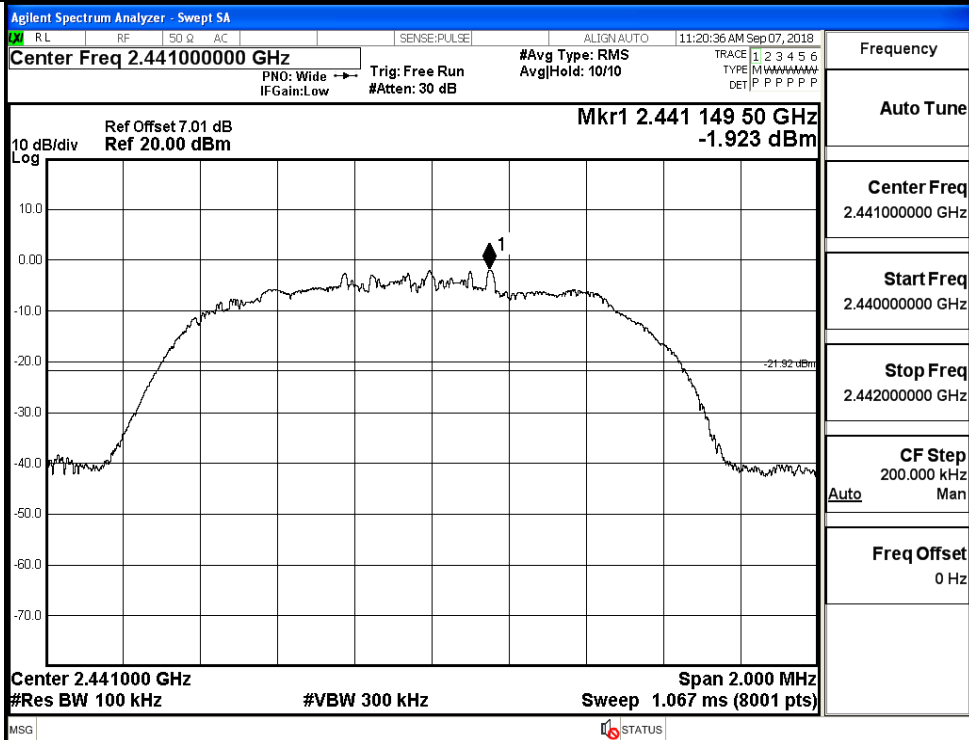


Puw

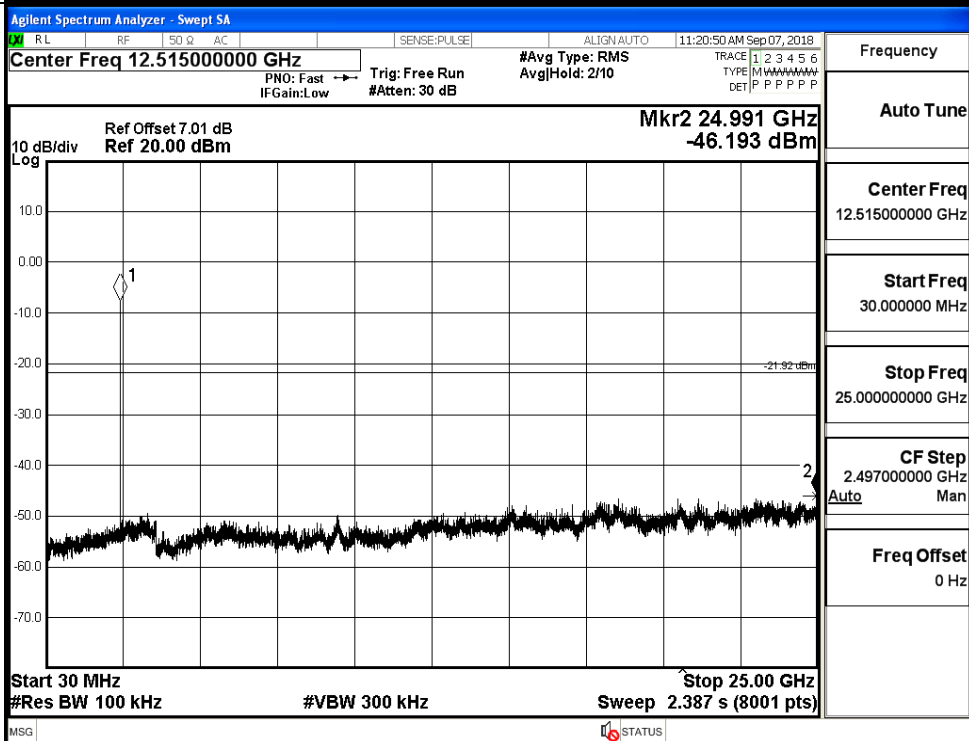


8DPSK\_MCH\_Graphs

Pref



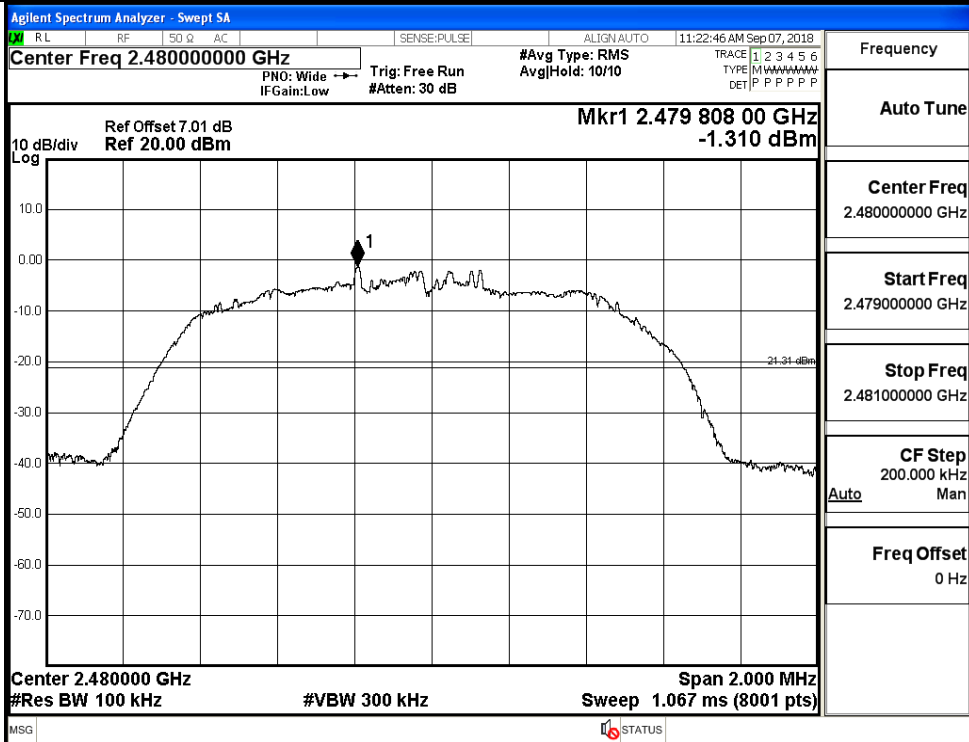
Puw



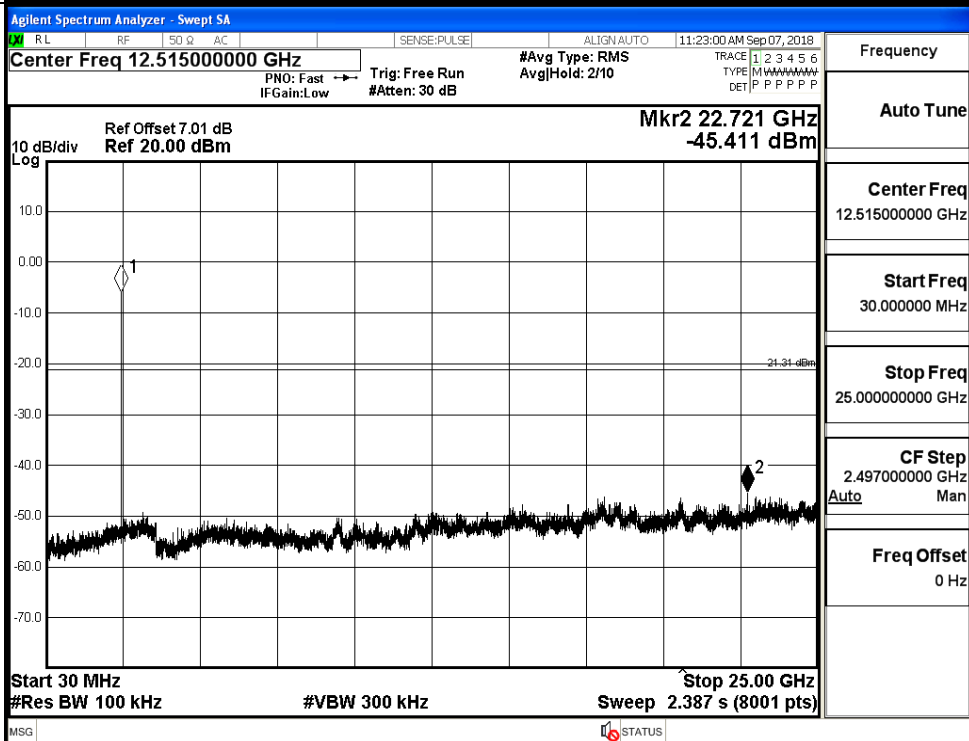


8DPSK\_HCH\_Graphs

Pref



Puw

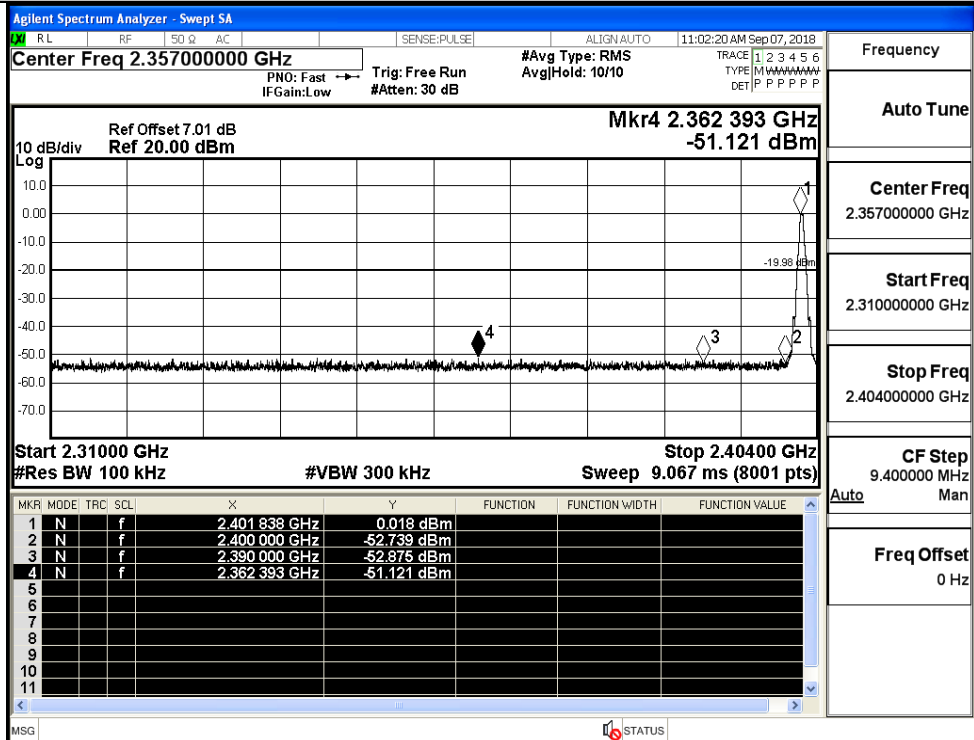


## A.7 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	0.018	Off	-51.121	-19.98	PASS
			5.833	On	-50.621	-14.17	PASS
	HCH	2480	-0.121	Off	-49.861	-20.12	PASS
			5.885	On	-50.056	-14.12	PASS
$\pi$ /4DQPSK	LCH	2402	-3.801	Off	-51.120	-23.8	PASS
			4.285	On	-50.545	-15.72	PASS
	HCH	2480	-1.252	Off	-49.780	-21.25	PASS
			4.368	On	-49.852	-15.63	PASS
8DPSK	LCH	2402	-1.609	Off	-50.418	-21.61	PASS
			4.485	On	-49.888	-15.52	PASS
	HCH	2480	-1.357	Off	-50.853	-21.36	PASS
			4.421	On	-50.267	-15.58	PASS

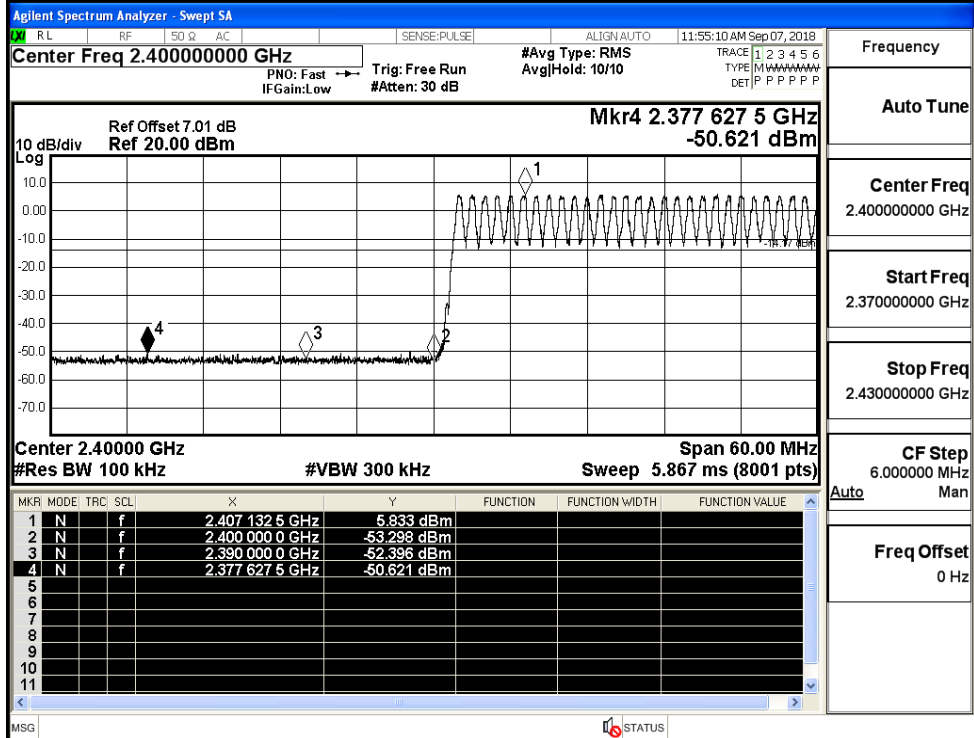
Test Graphs

GFSK/LCH/No Hop



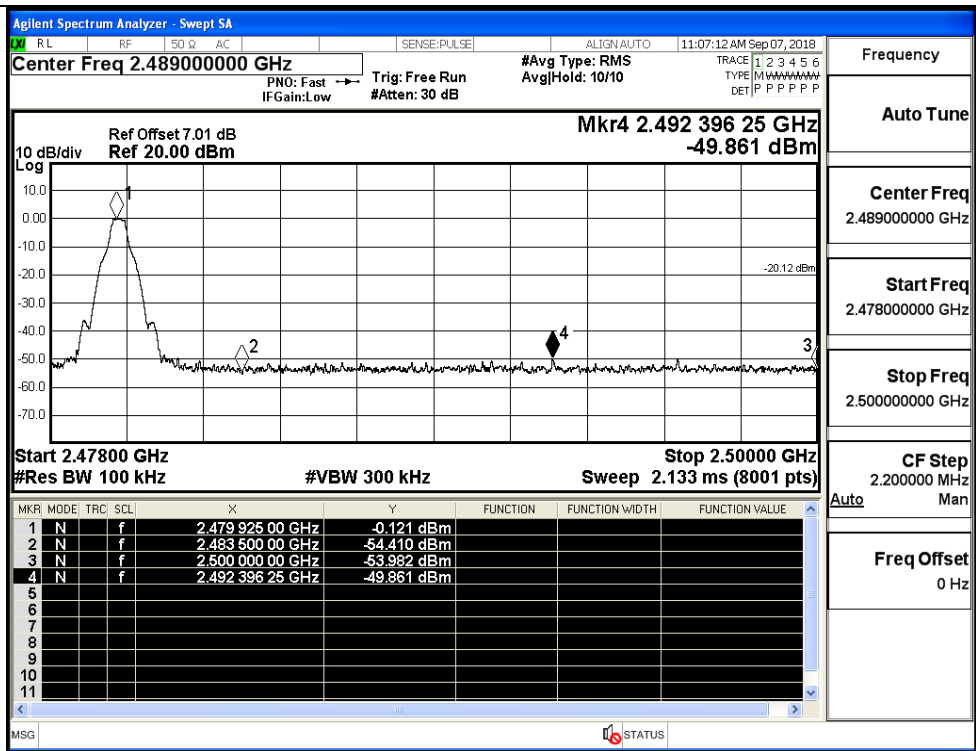
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Auto Tune	
Center Freq	2.357000000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.404000000 GHz
CF Step	9.400000 MHz
Auto	Man
Freq Offset	0 Hz

GFSK/LCH/Hop

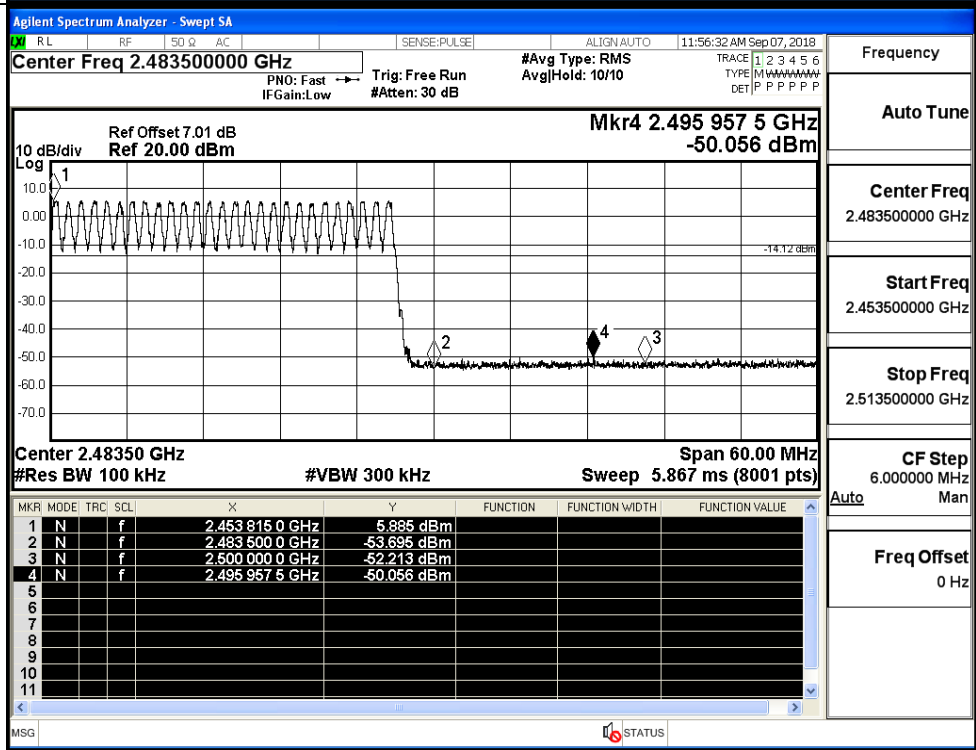


Frequency	2.400000000 GHz
Auto Tune	
Center Freq	2.400000000 GHz
Start Freq	2.370000000 GHz
Stop Freq	2.430000000 GHz
CF Step	6.000000 MHz
Auto	Man
Freq Offset	0 Hz

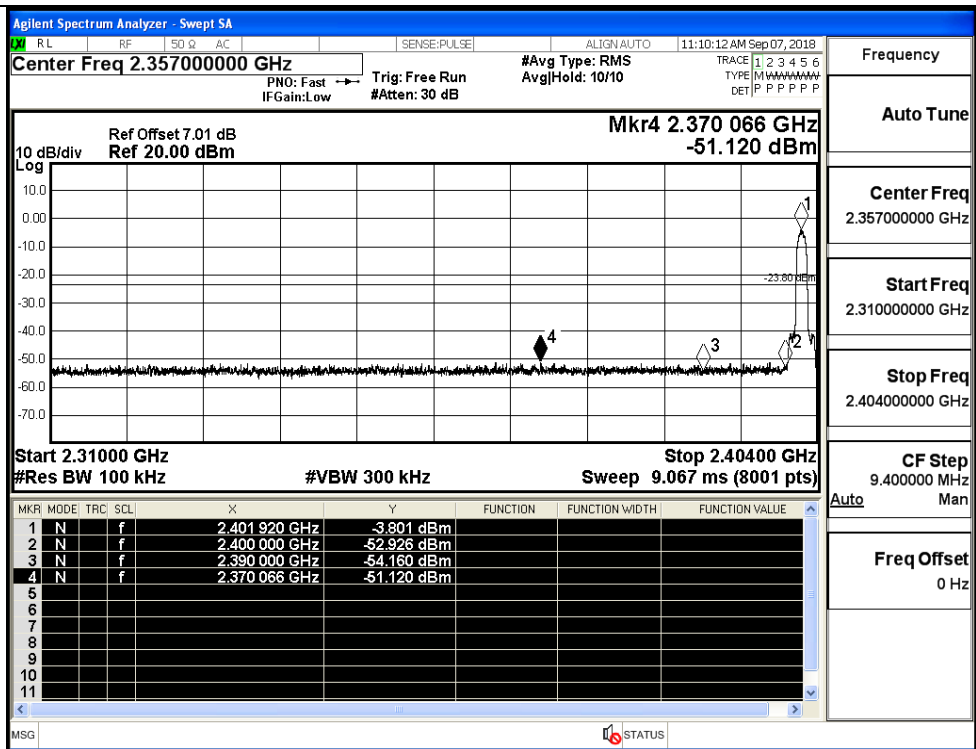
GFSK/HCH/No Hop



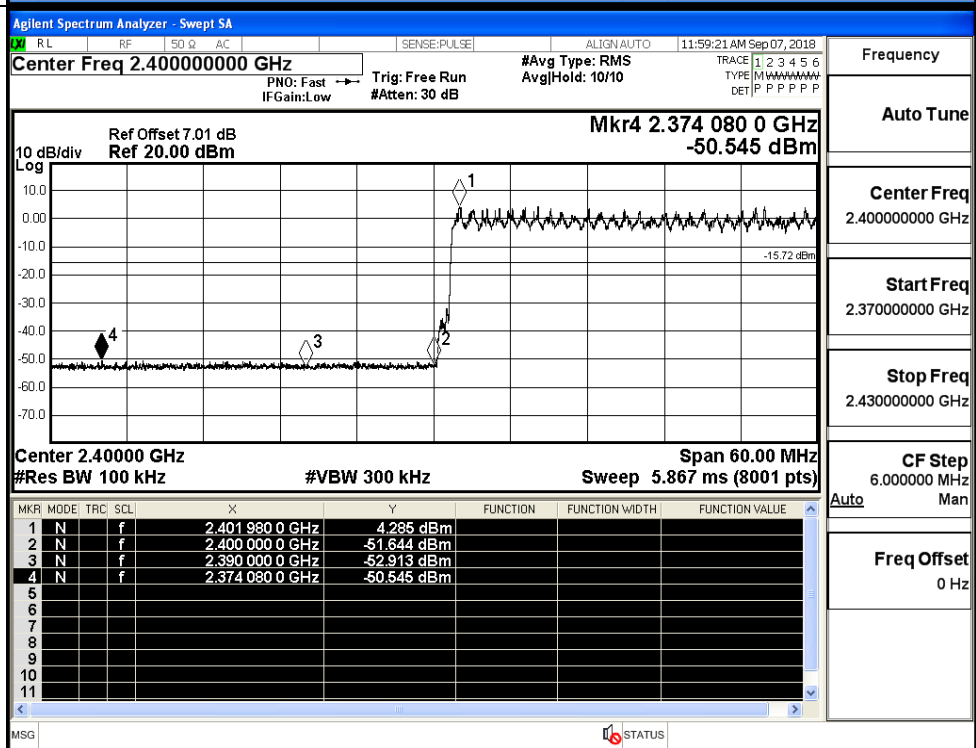
GFSK/HCH/Hop



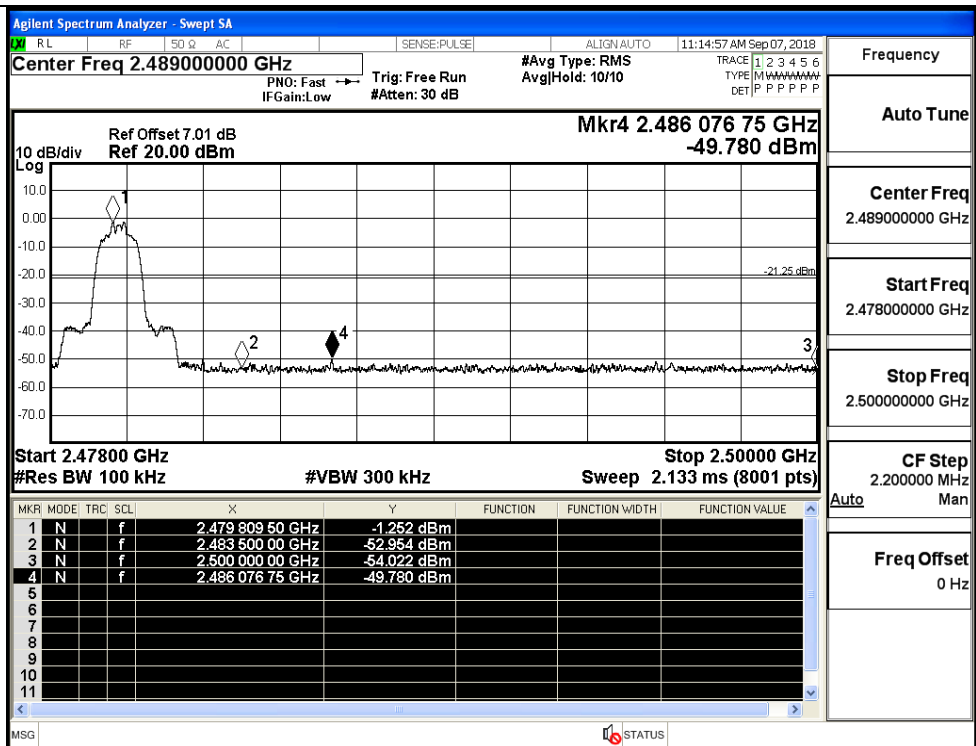
$\pi$ /4DQPSK/LCH/No  
Hop



$\pi$ /4DQPSK/LCH/Hop

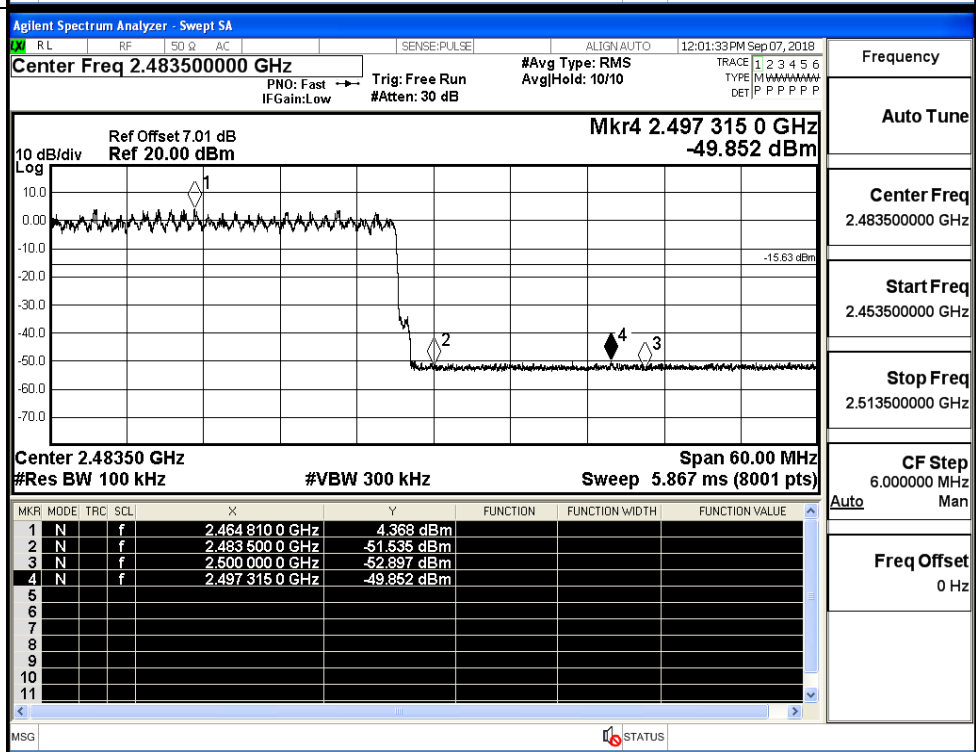


$\pi$ /4DQPSK/HCH/No  
Hop



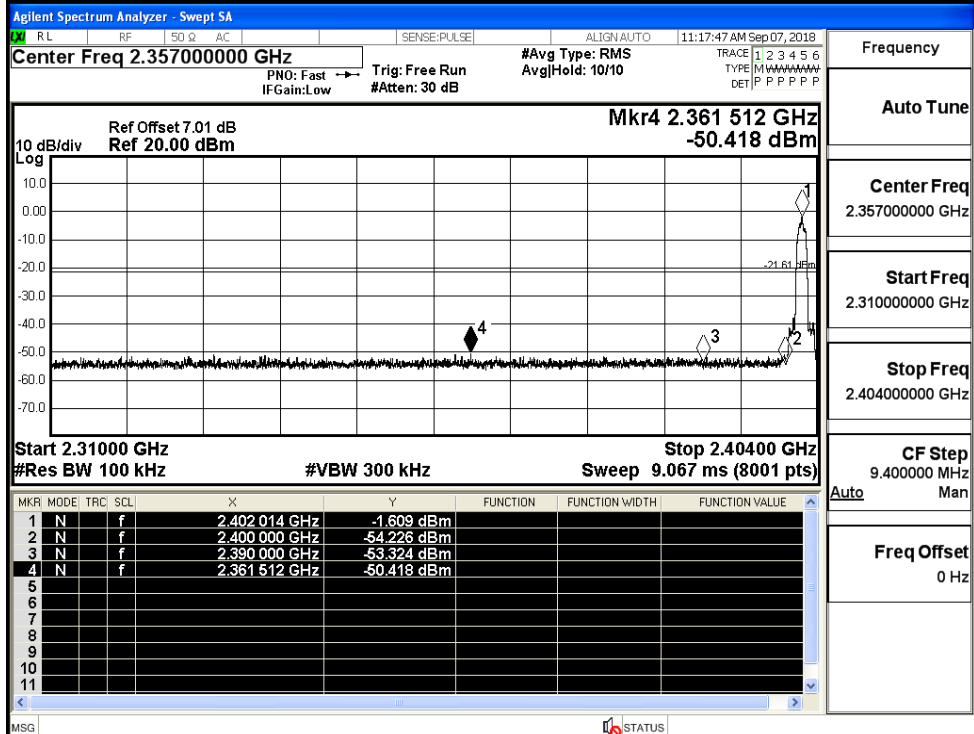
Frequency	
Auto Tune	
Center Freq	2.489000000 GHz
Start Freq	2.478000000 GHz
Stop Freq	2.500000000 GHz
CF Step	2.200000 MHz
Auto	Man
Freq Offset	0 Hz

$\pi$ /4DQPSK/HCH/Hop



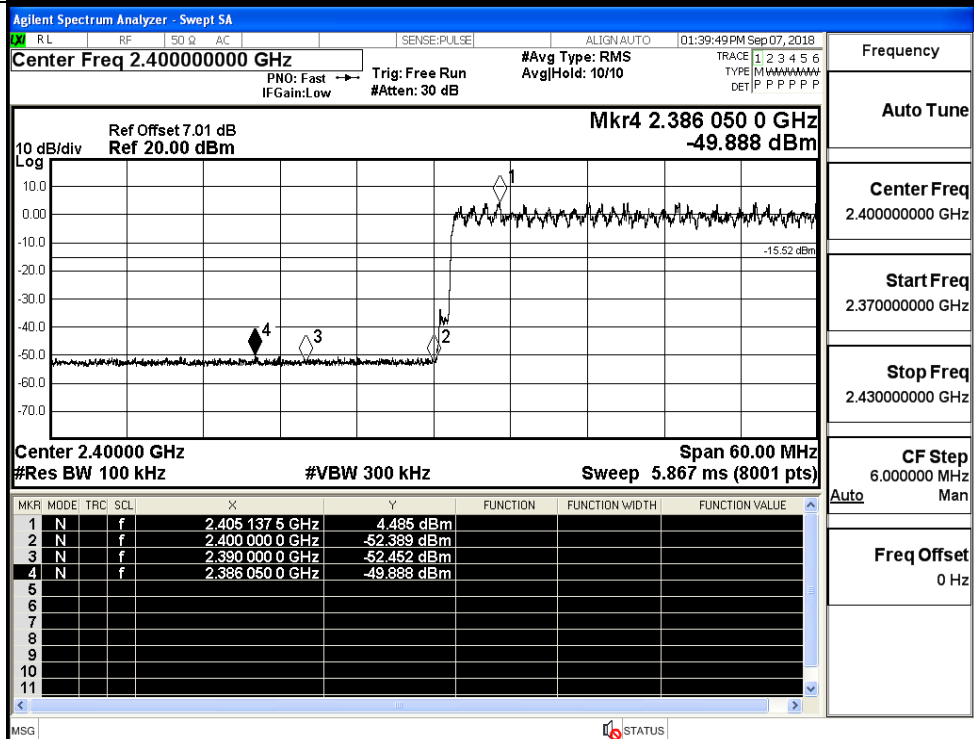
Frequency	
Auto Tune	
Center Freq	2.483500000 GHz
Start Freq	2.453500000 GHz
Stop Freq	2.513500000 GHz
CF Step	6.000000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK/LCH/No Hop



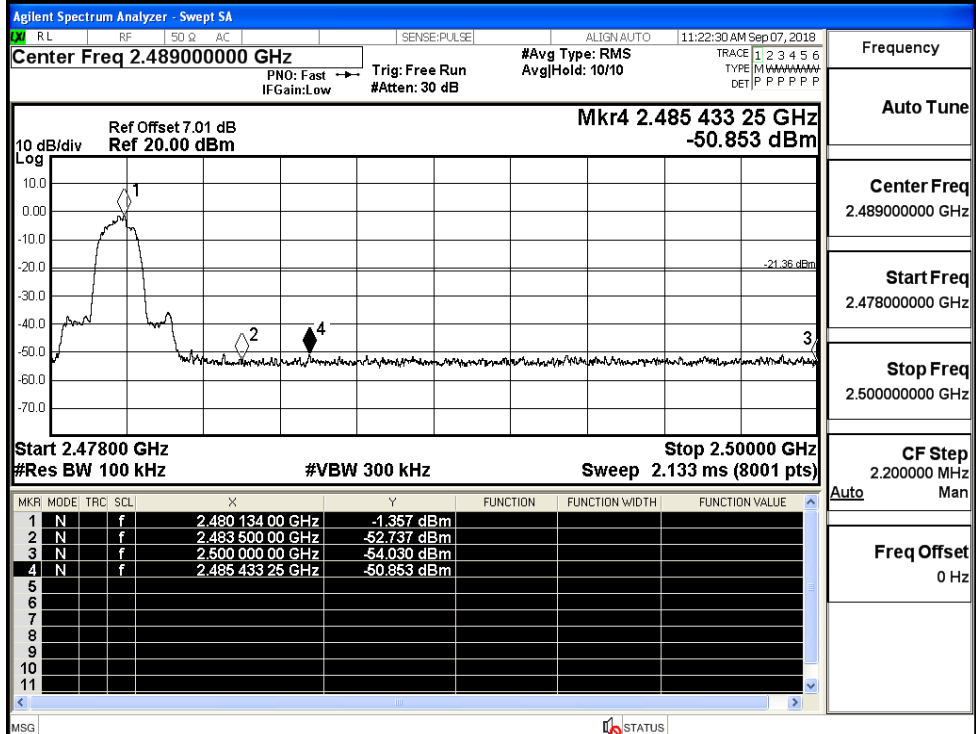
Frequency	
Auto Tune	
Center Freq	2.357000000 GHz
Start Freq	2.310000000 GHz
Stop Freq	2.404000000 GHz
CF Step	9.400000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK/LCH/Hop



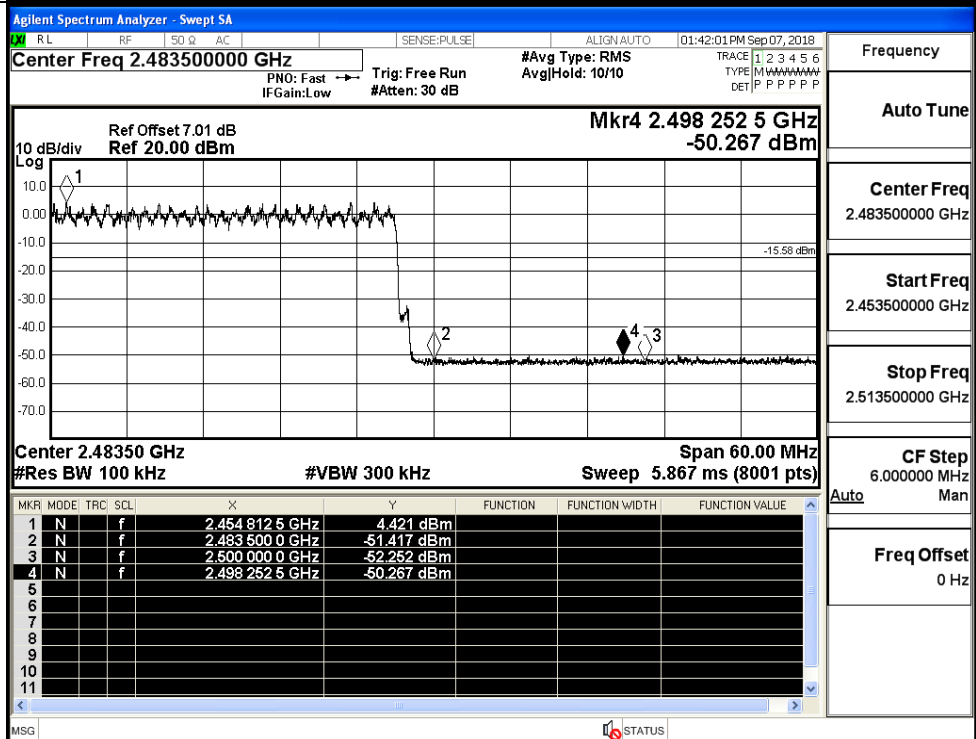
Frequency	
Auto Tune	
Center Freq	2.400000000 GHz
Start Freq	2.370000000 GHz
Stop Freq	2.430000000 GHz
CF Step	6.000000 MHz
Auto	Man
Freq Offset	0 Hz

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



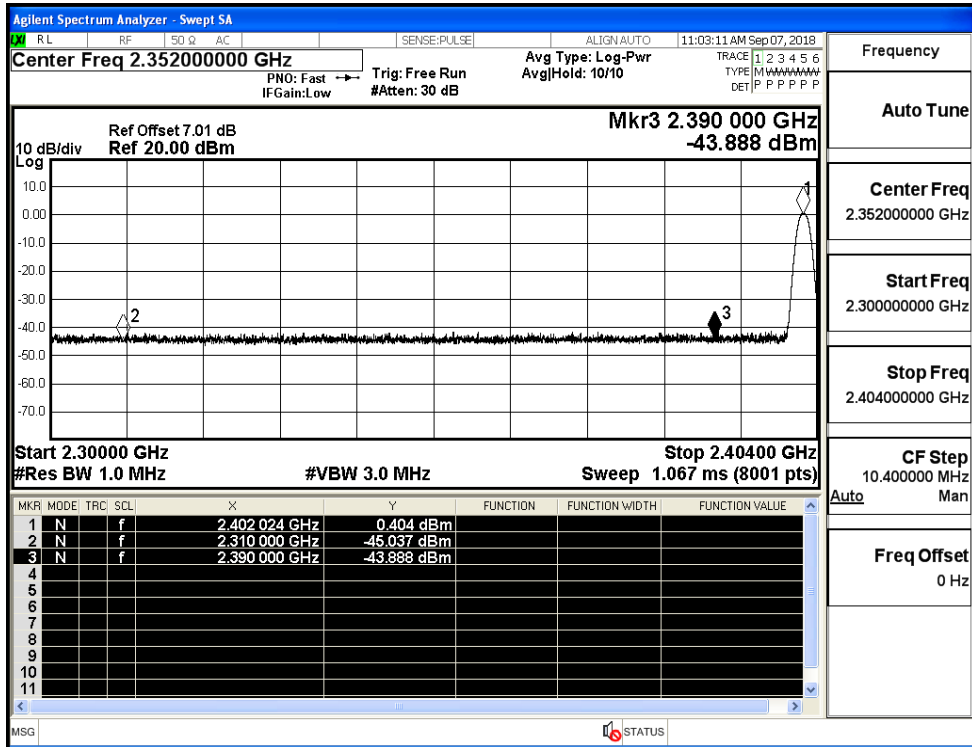
Frequency	
Auto Tune	
Center Freq	2.483500000 GHz
Start Freq	2.453500000 GHz
Stop Freq	2.513500000 GHz
CF Step	6.000000 MHz
Auto	Man
Freq Offset	0 Hz



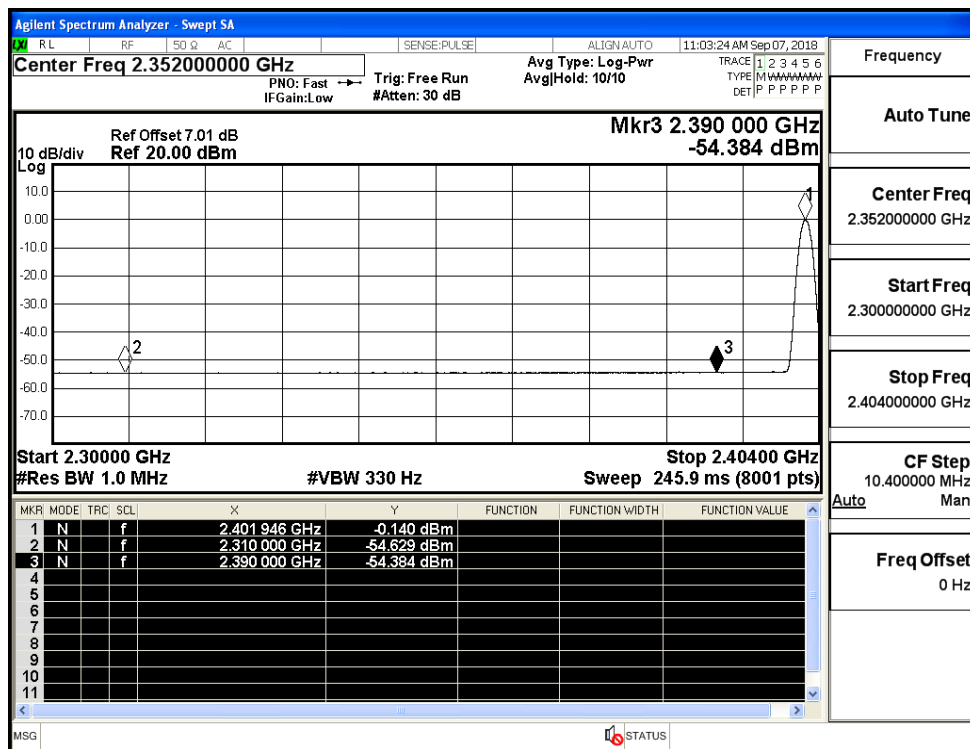
## A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-45.037	2.50	0	52.691	PEAK	74	PASS
	Off	2310.0	-54.629	2.50	0	43.099	AV	54	PASS
	Off	2390.0	-43.888	2.50	0	53.840	PEAK	74	PASS
	Off	2390.0	-54.384	2.50	0	43.344	AV	54	PASS
	Off	2483.5	-44.175	2.50	0	53.553	PEAK	74	PASS
	Off	2483.5	-54.056	2.50	0	43.672	AV	54	PASS
	Off	2500.0	-44.108	2.50	0	53.620	PEAK	74	PASS
	Off	2500.0	-54.033	2.50	0	43.695	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-44.122	2.50	0	53.606	PEAK	74	PASS
	Off	2310.0	-54.743	2.50	0	42.985	AV	54	PASS
	Off	2390.0	-43.986	2.50	0	53.742	PEAK	74	PASS
	Off	2390.0	-54.394	2.50	0	43.334	AV	54	PASS
	Off	2483.5	-44.516	2.50	0	53.212	PEAK	74	PASS
	Off	2483.5	-54.088	2.50	0	43.640	AV	54	PASS
	Off	2500.0	-42.914	2.50	0	54.814	PEAK	74	PASS
	Off	2500.0	-53.997	2.50	0	43.731	AV	54	PASS
8DPSK	Off	2310.0	-45.384	2.50	0	52.344	PEAK	74	PASS
	Off	2310.0	-54.436	2.50	0	43.292	AV	54	PASS
	Off	2390.0	-43.255	2.50	0	54.473	PEAK	74	PASS
	Off	2390.0	-54.333	2.50	0	43.395	AV	54	PASS
	Off	2483.5	-44.642	2.50	0	53.086	PEAK	74	PASS
	Off	2483.5	-54.005	2.50	0	43.723	AV	54	PASS
	Off	2500.0	-42.303	2.50	0	55.425	PEAK	74	PASS
	Off	2500.0	-54.035	2.50	0	43.693	AV	54	PASS

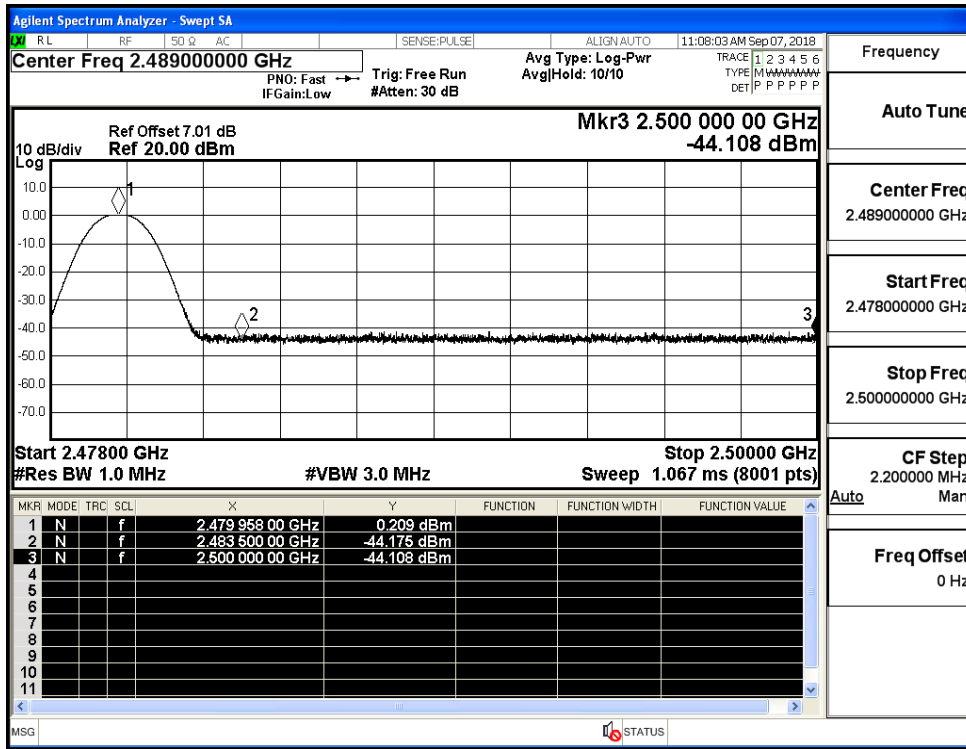
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_PEAK (Low Channel)



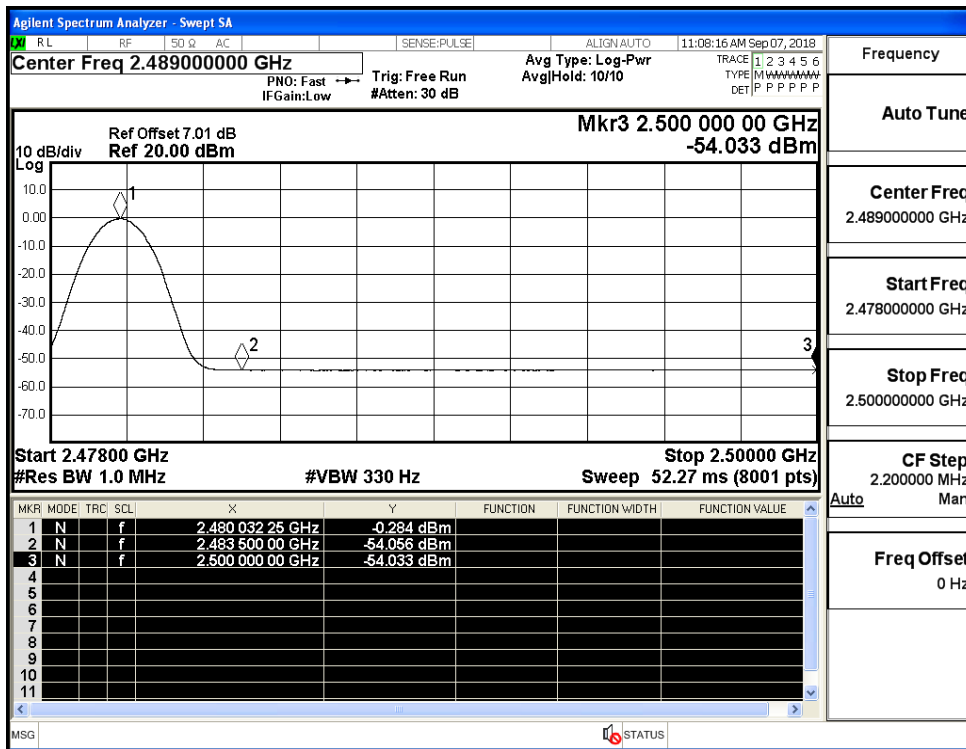
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (Low Channel)



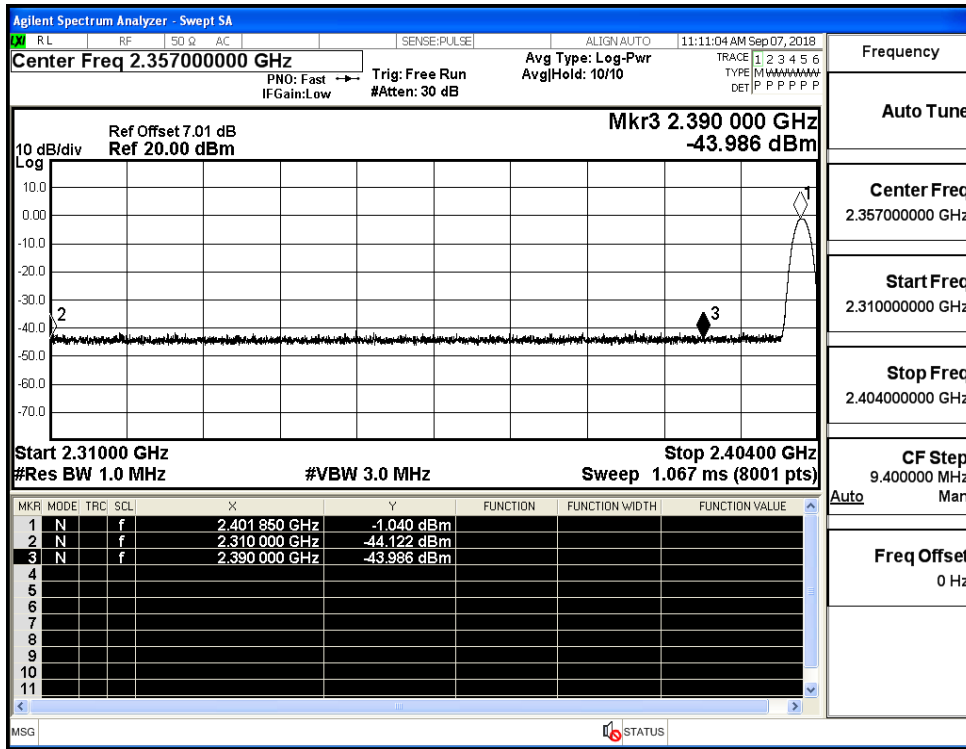
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_PEAK (High Channel)



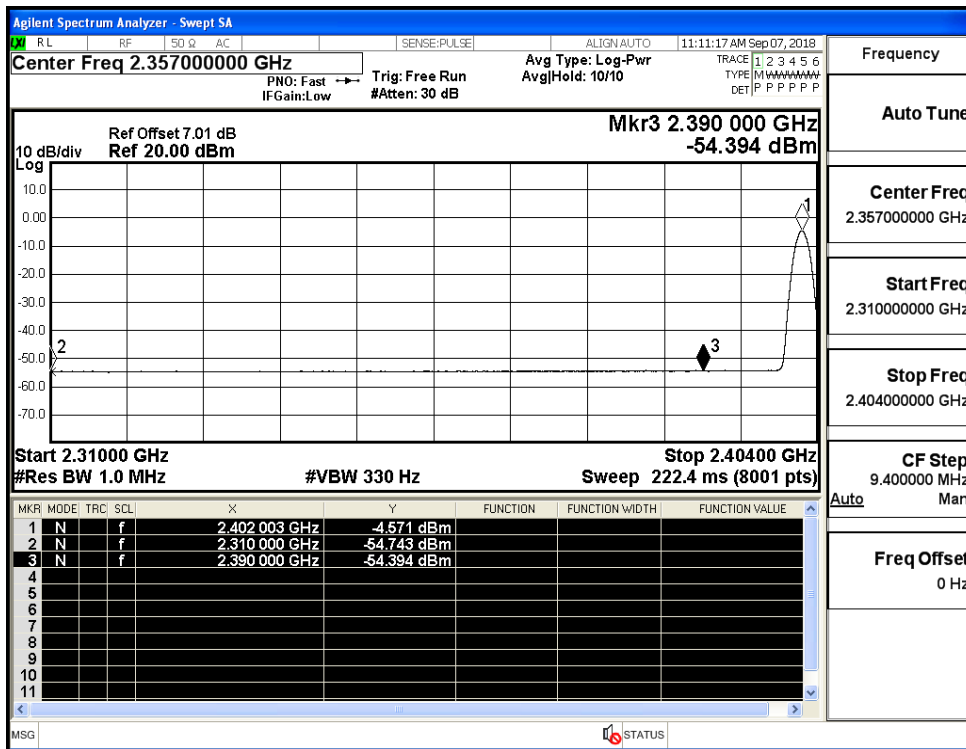
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (High Channel)



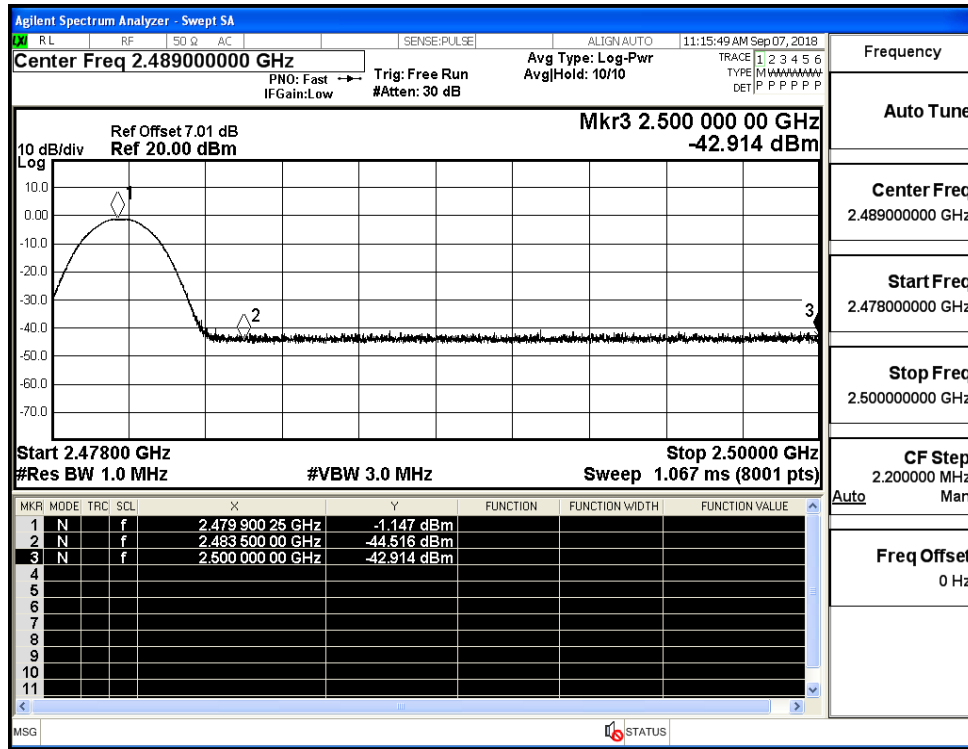
Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_PEAK (Low Channel)



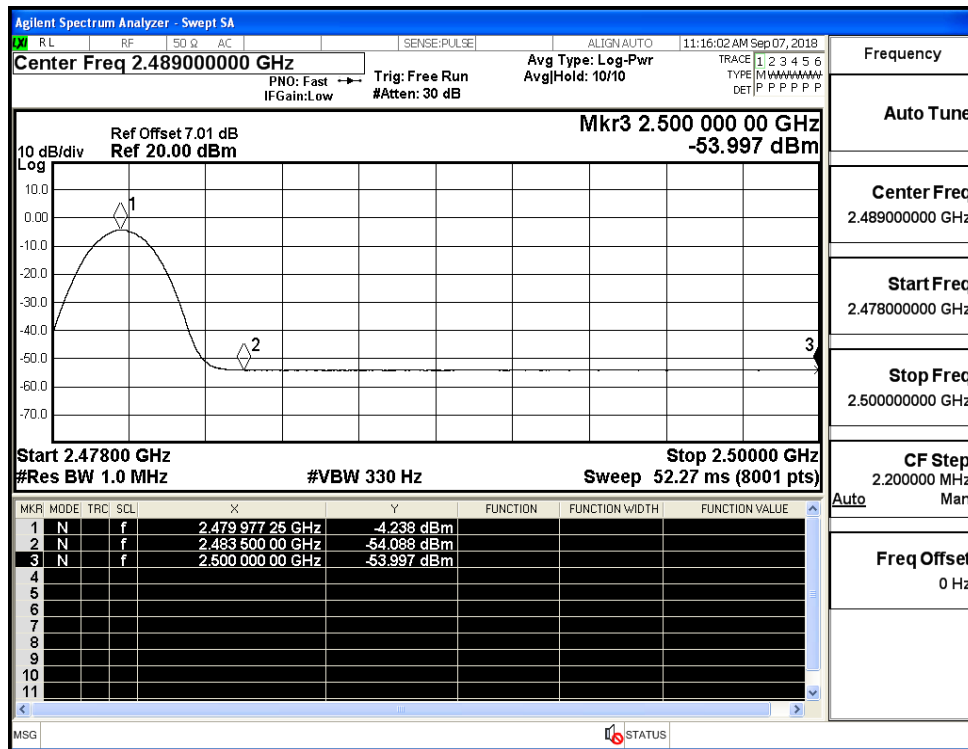
Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_Average (Low Channel)



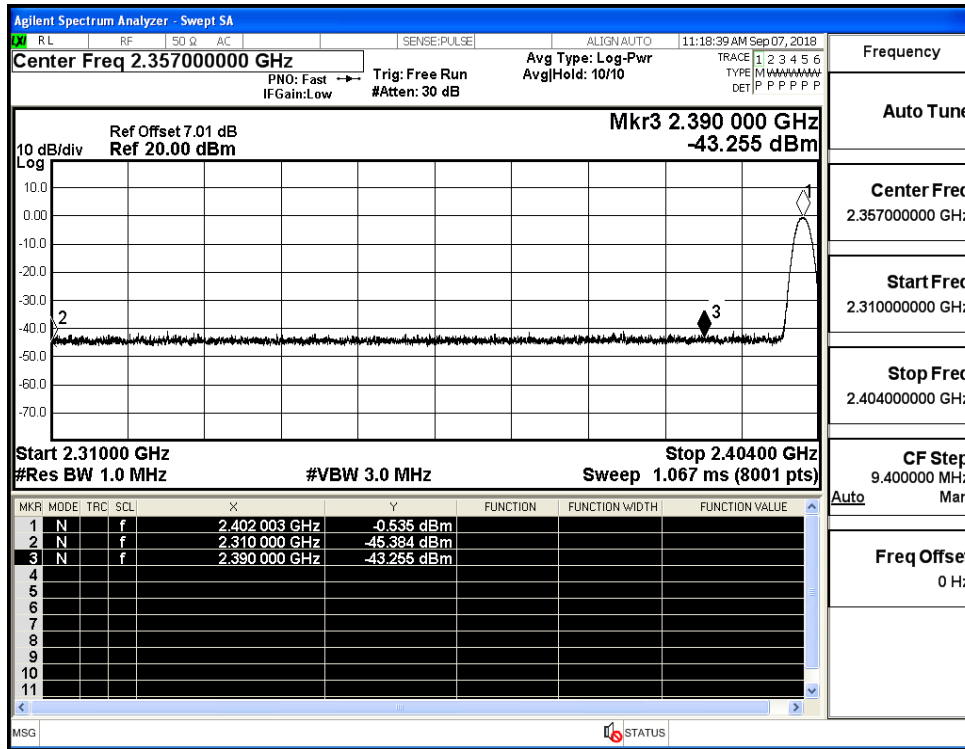
Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_PEAK (High Channel)



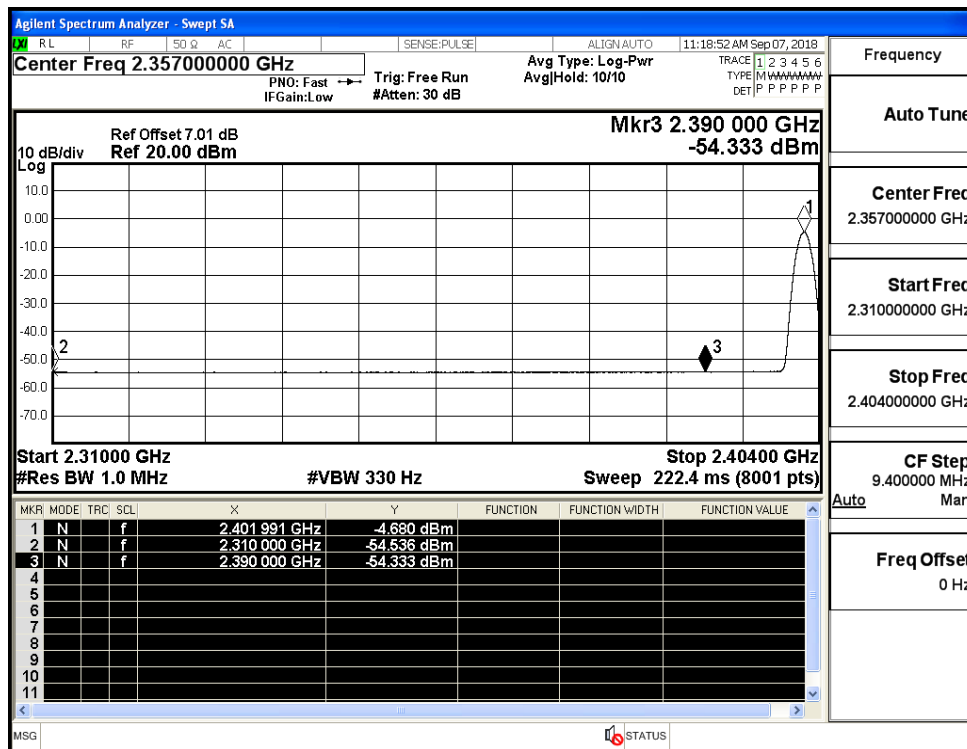
Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average (High Channel)



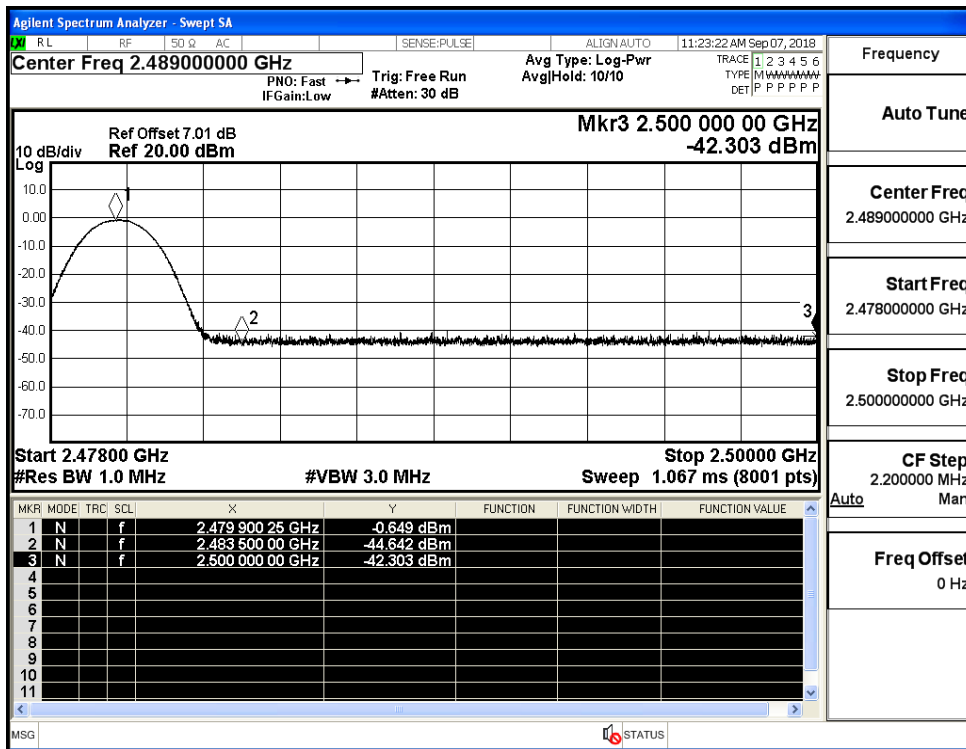
Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_PEAK (Low Channel)



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)

