

## Appendix A

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

Product Name: Bluetooth Sport Headset

Trade Mark: AWEI

Test Model: N3

#### Environmental Conditions

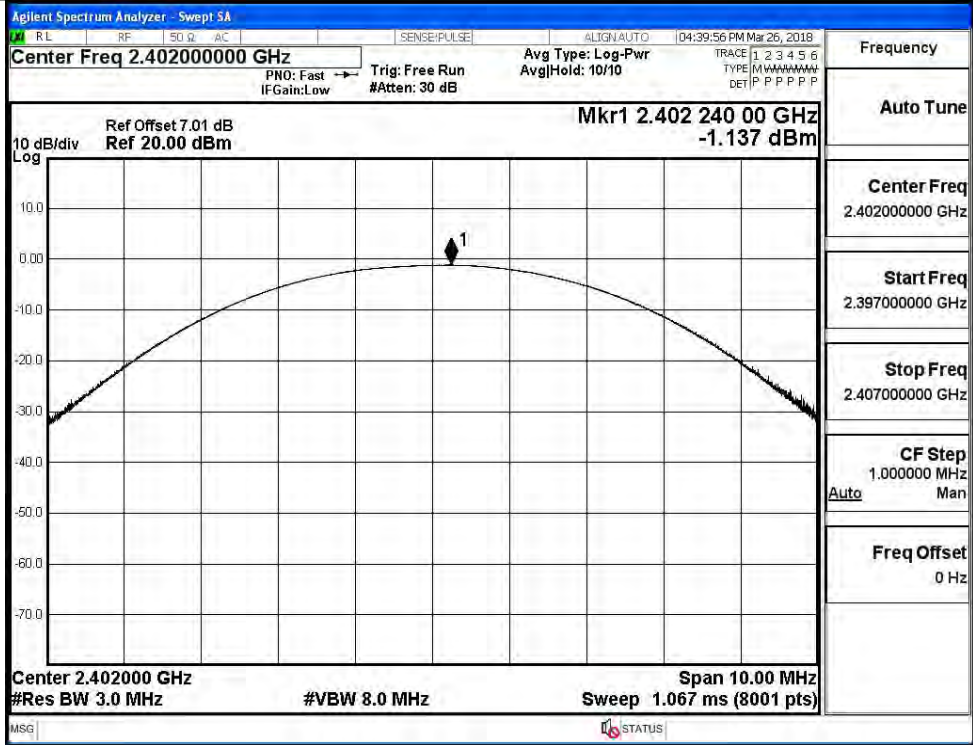
Temperature:	20.8 ° C
Relative Humidity:	50.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Jayden.Zhuo
Supervised by:	Dick.Su

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

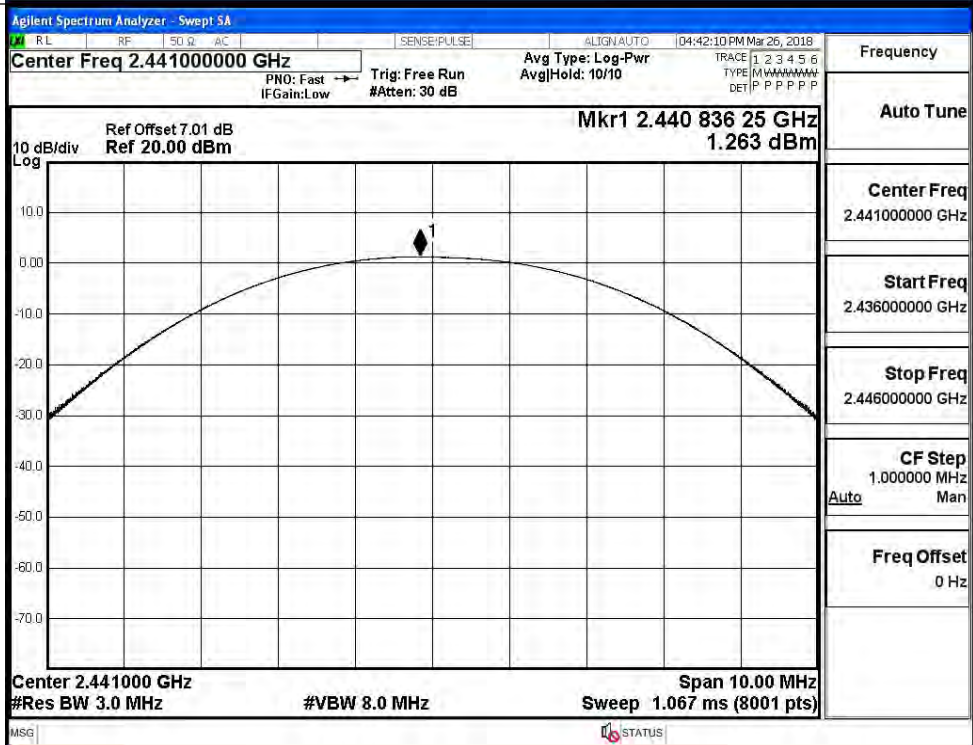
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.137	30	PASS
	MCH	1.263	30	PASS
	HCH	1.799	30	PASS
$\pi/4$ DQPSK	LCH	-3.403	21	PASS
	MCH	-0.543	21	PASS
	HCH	0.131	21	PASS
8DPSK	LCH	-3.058	21	PASS
	MCH	-0.158	21	PASS
	HCH	0.526	21	PASS

Test Graphs

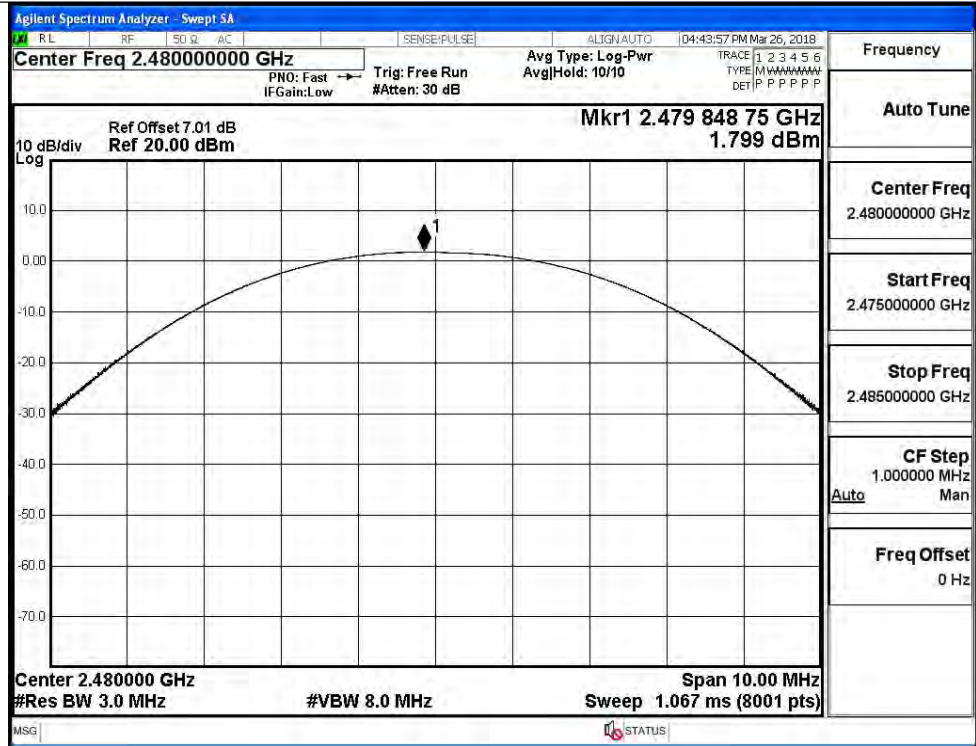
GFSK/LCH



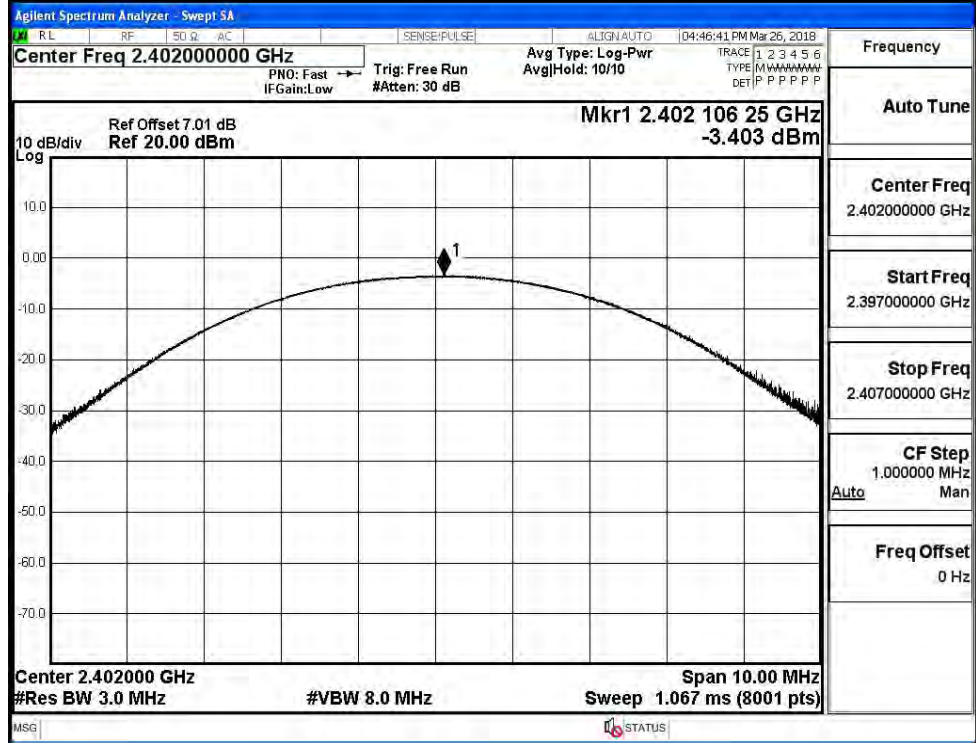
GFSK/MCH



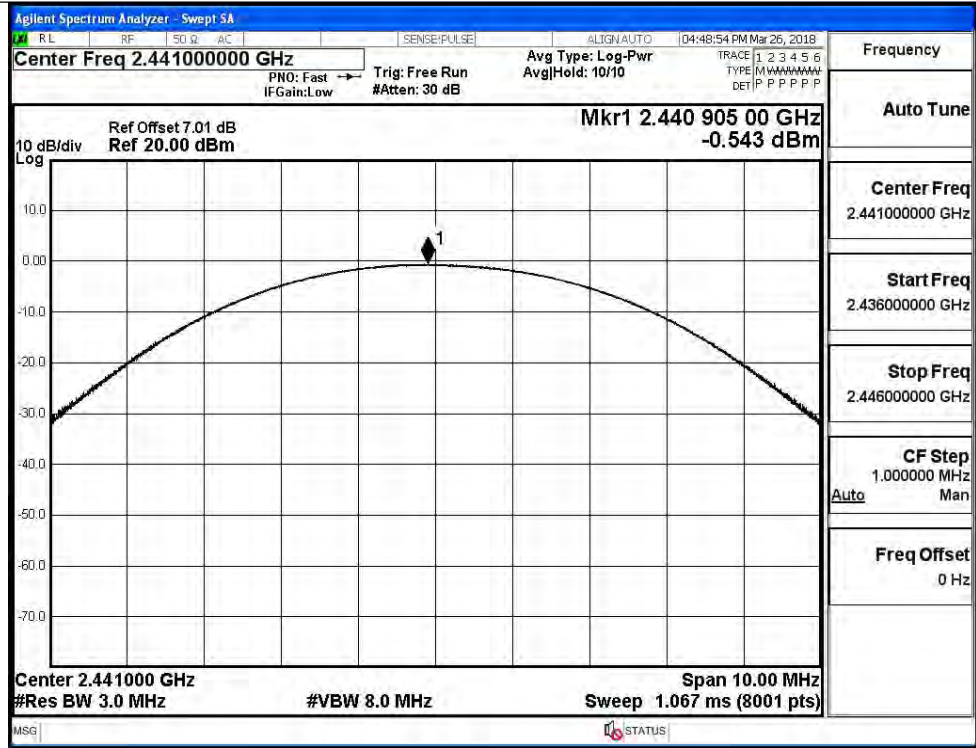
GFSK/HCH



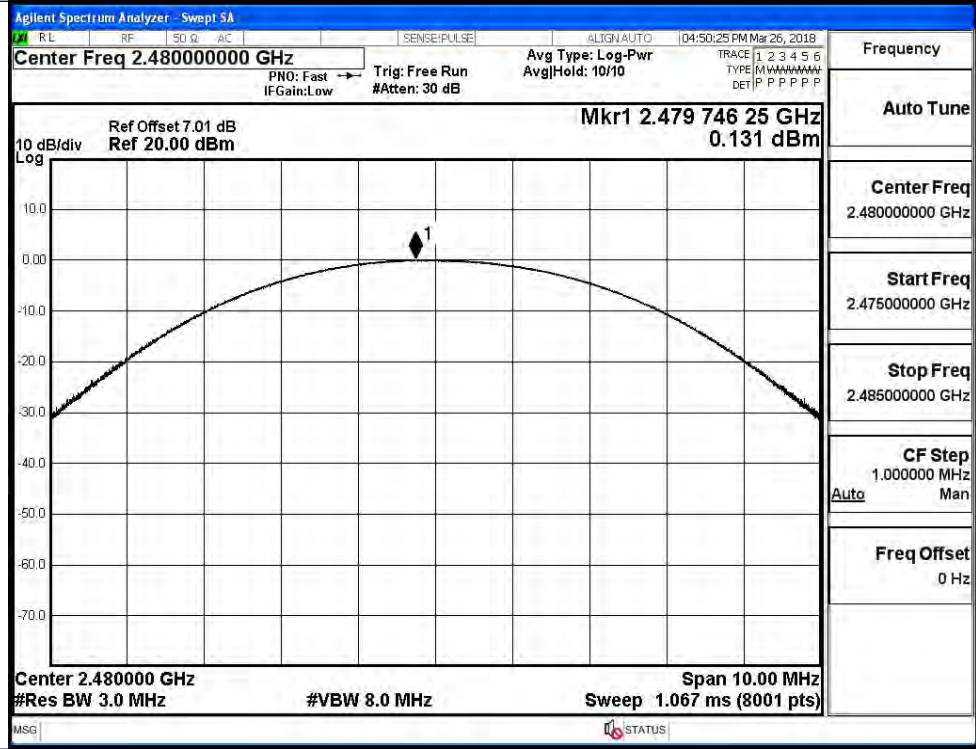
$\pi/4$ DQPSK/LCH



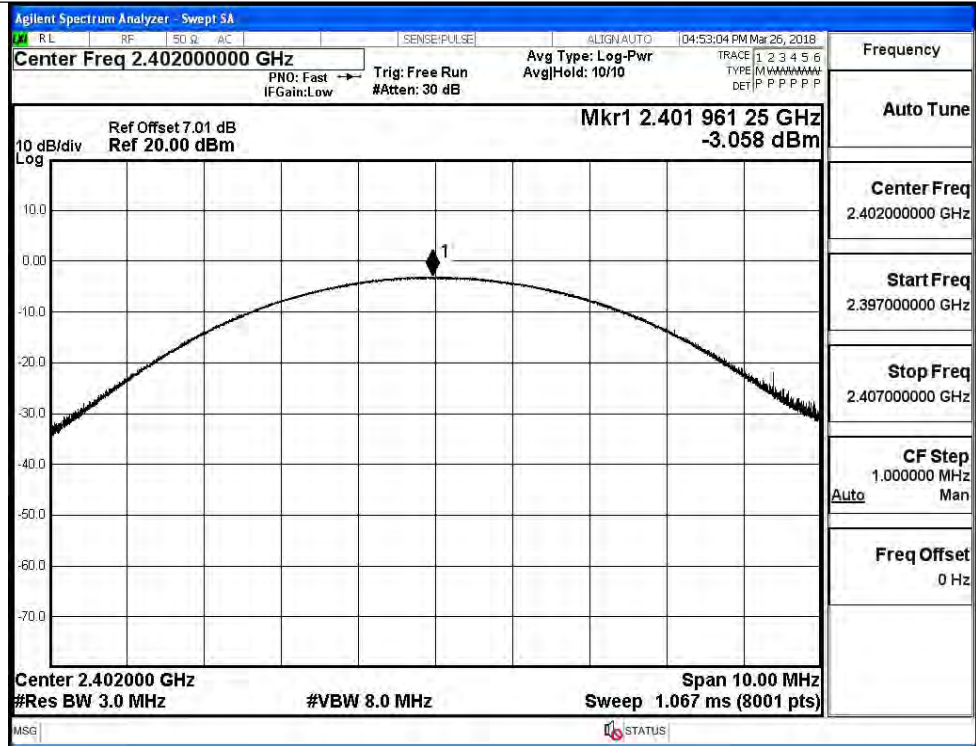
$\pi$ /4DQPSK/MCH



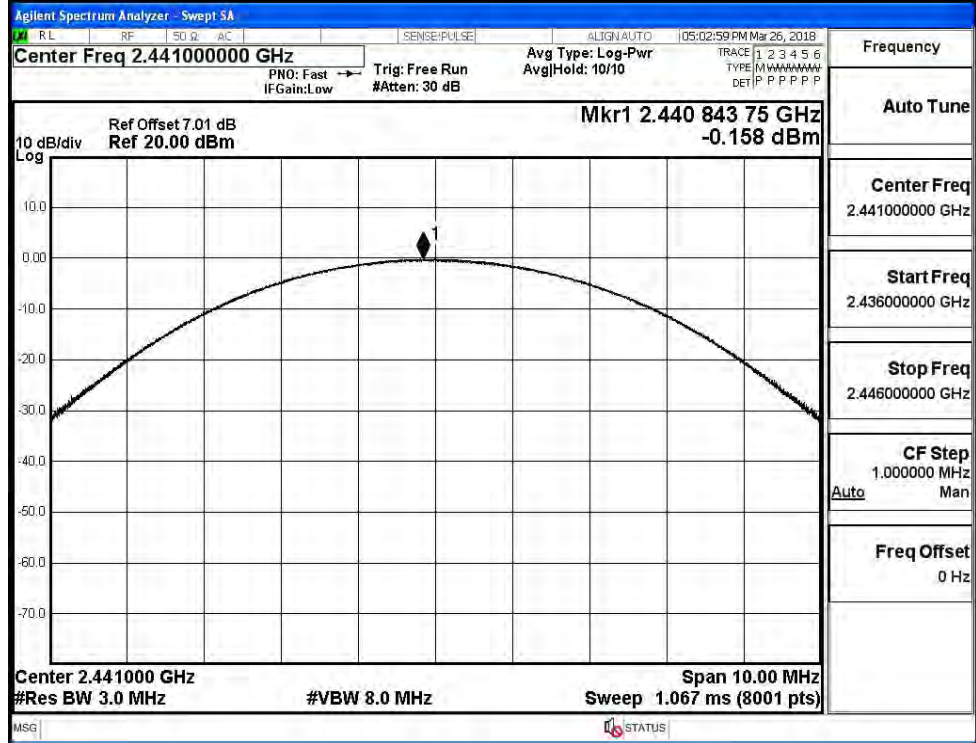
$\pi$ /4DQPSK/HCH



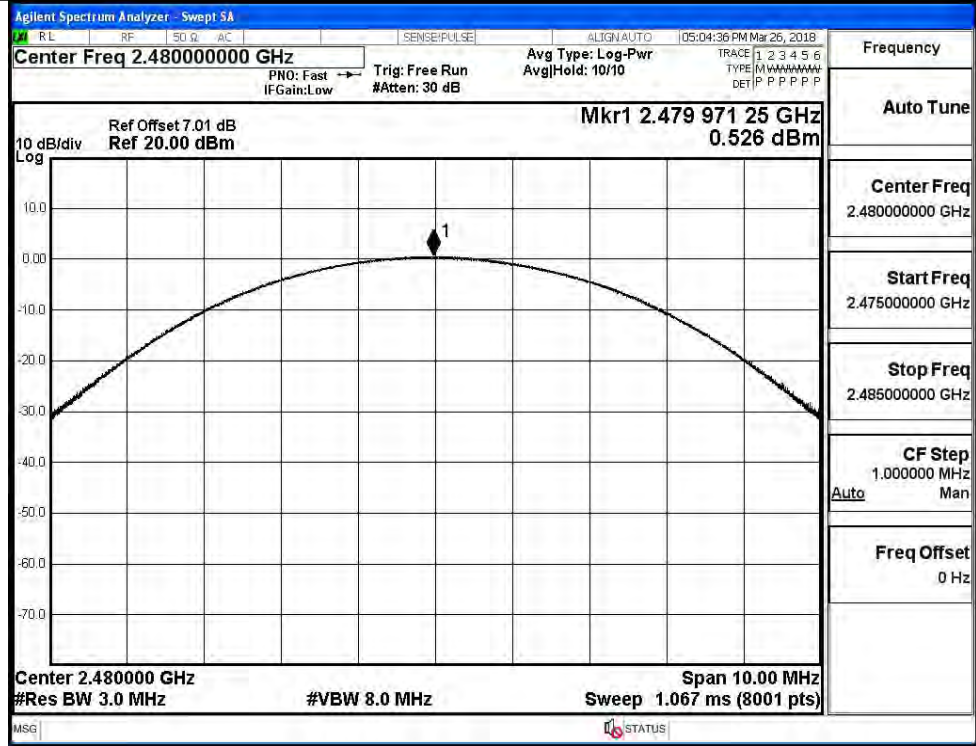
8DPSK/LCH



8DPSK/MCH

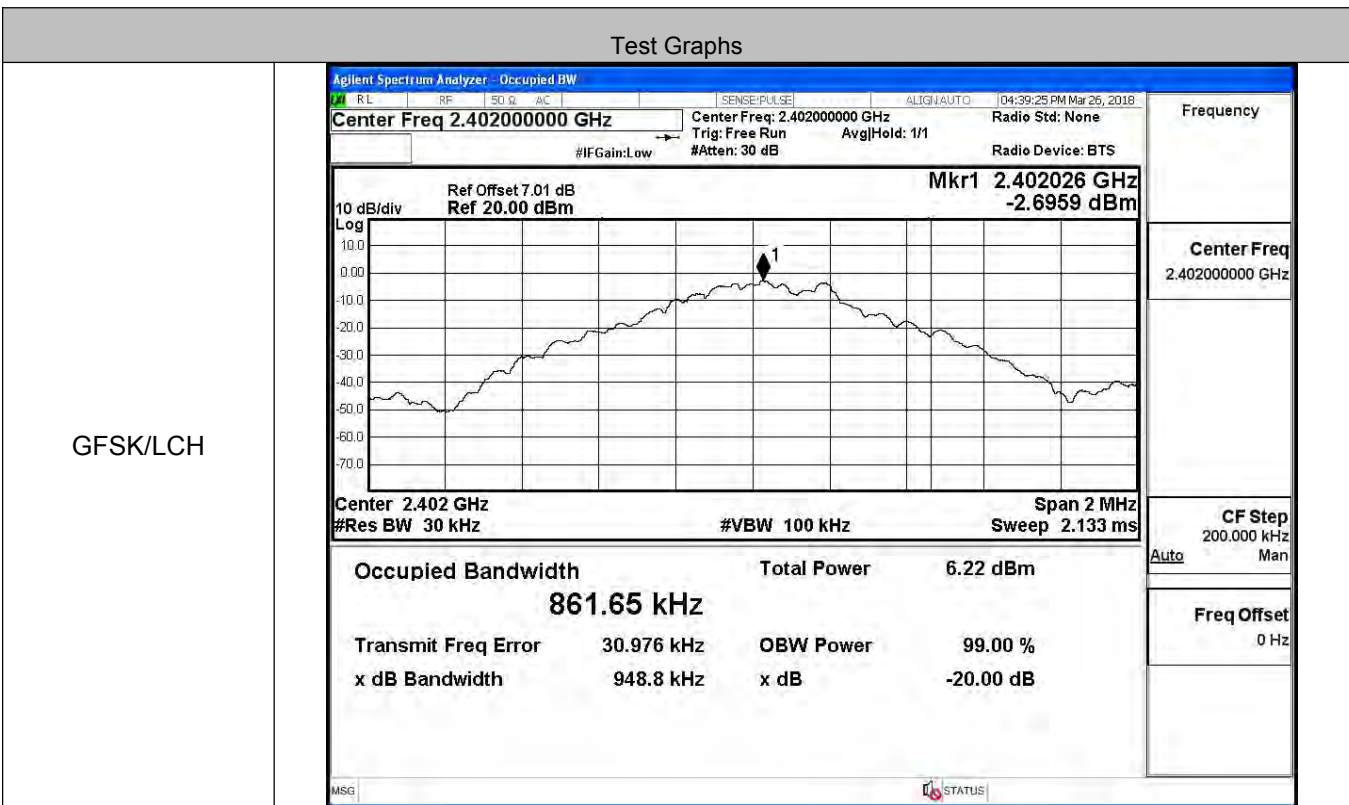


8DPSK/HCH



**A.2 20dB Bandwidth**

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9488	Not Specified	PASS
	MCH	0.9451	Not Specified	PASS
	HCH	0.9450	Not Specified	PASS
π/4DQPSK	LCH	1.259	Not Specified	PASS
	MCH	1.230	Not Specified	PASS
	HCH	1.229	Not Specified	PASS
8DPSK	LCH	1.275	Not Specified	PASS
	MCH	1.258	Not Specified	PASS
	HCH	1.259	Not Specified	PASS

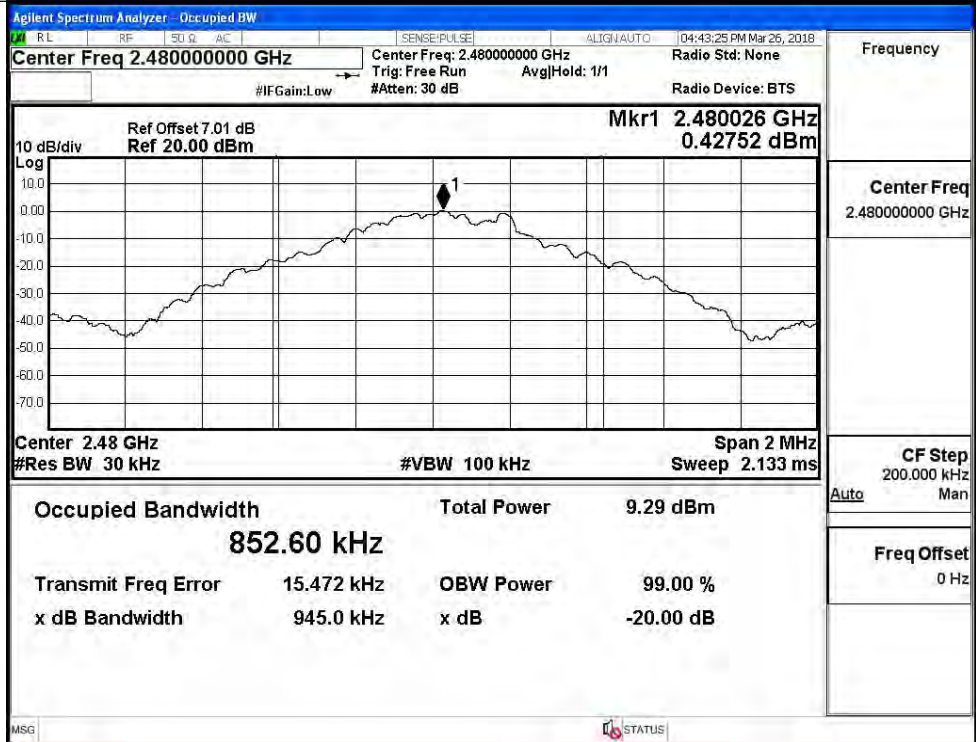


GFSK/MCH



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

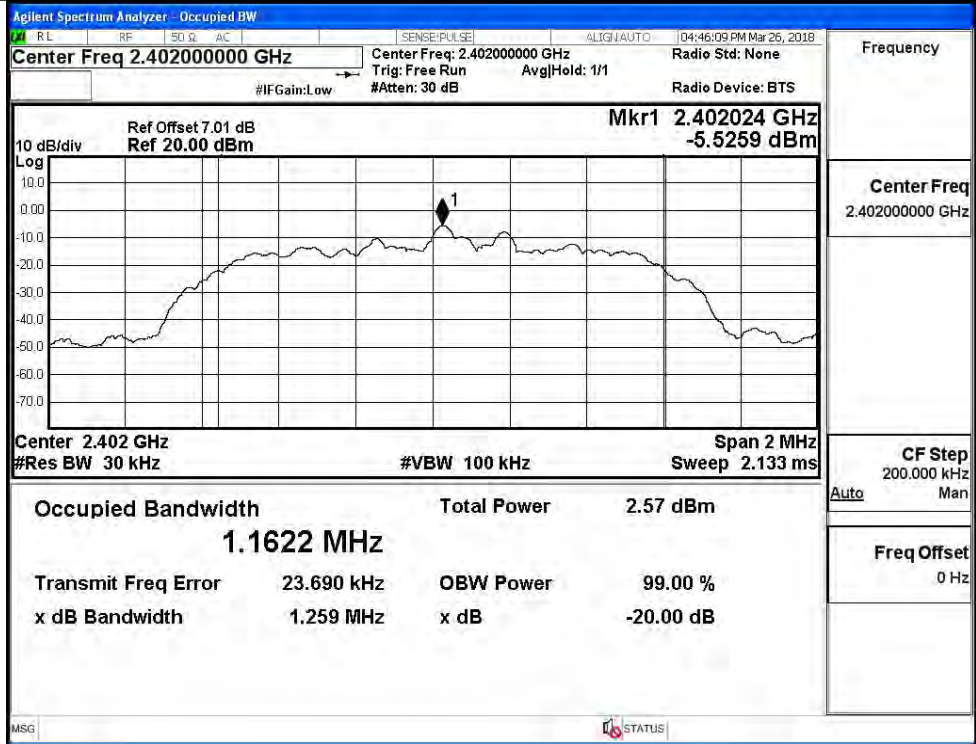
GFSK/HCH



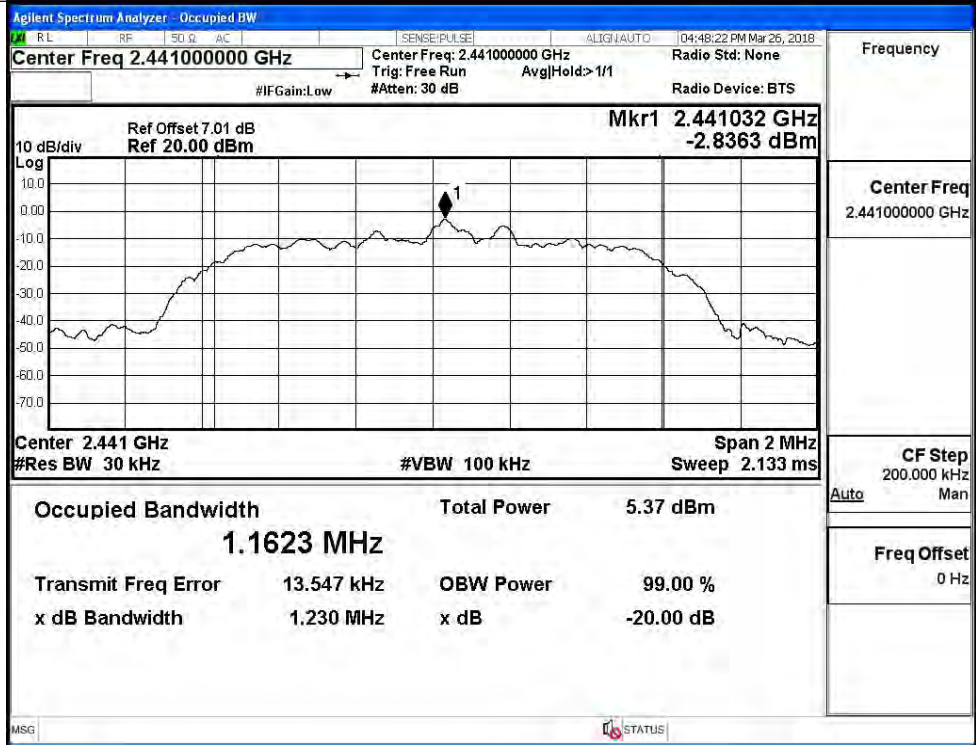
Frequency	2.480000000 GHz
Center Freq	2.480000000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz



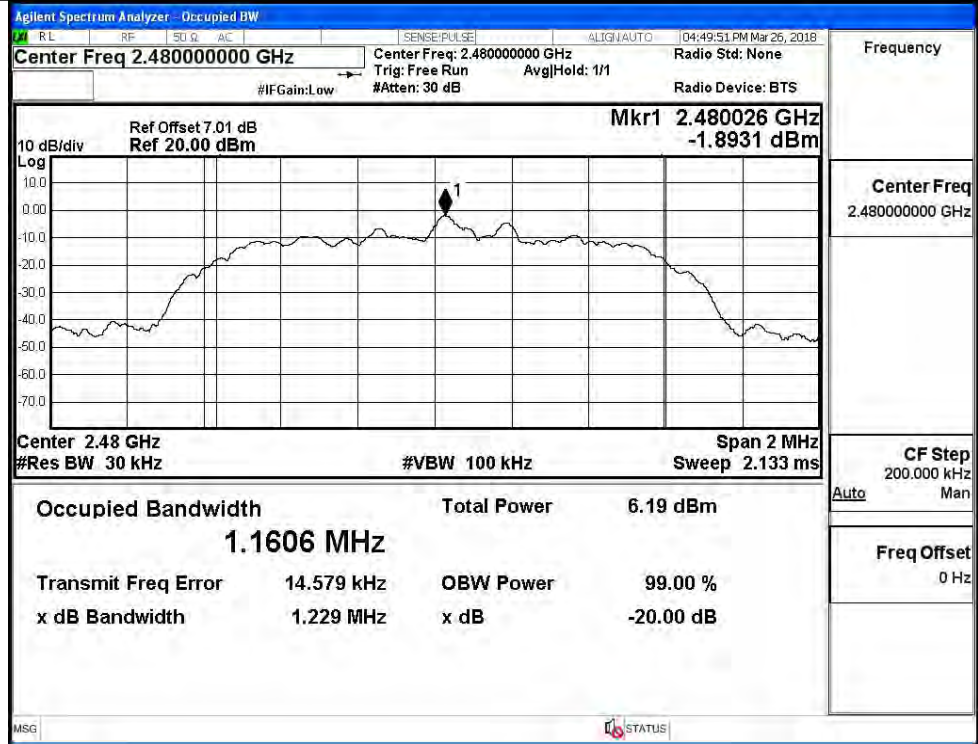
$\pi/4$ DQPSK/LCH



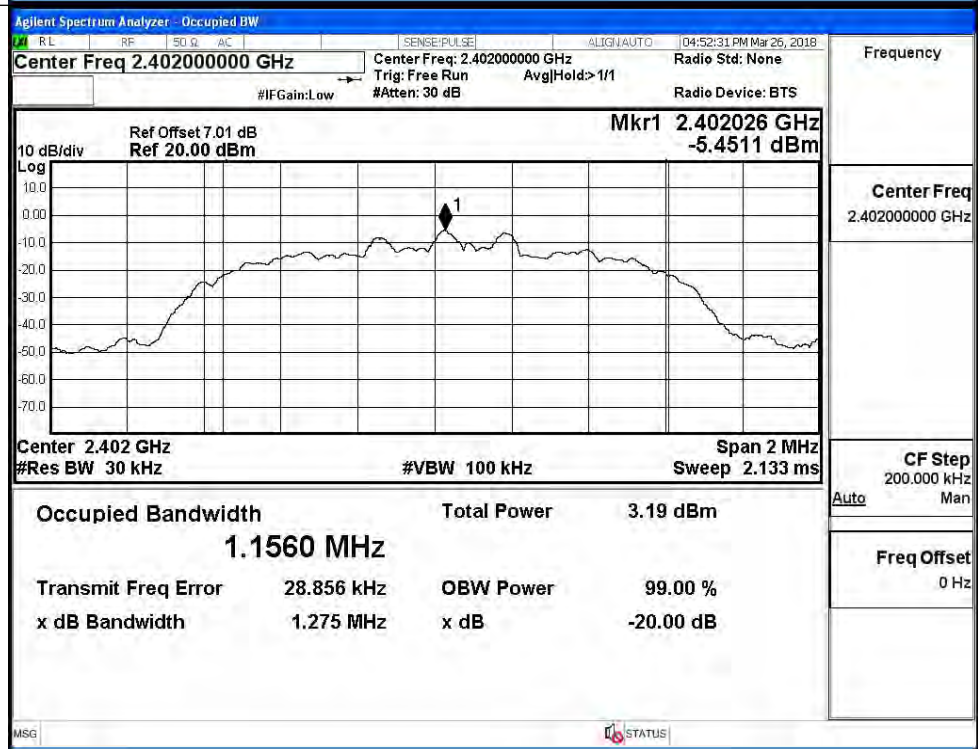
$\pi/4$ DQPSK/MCH



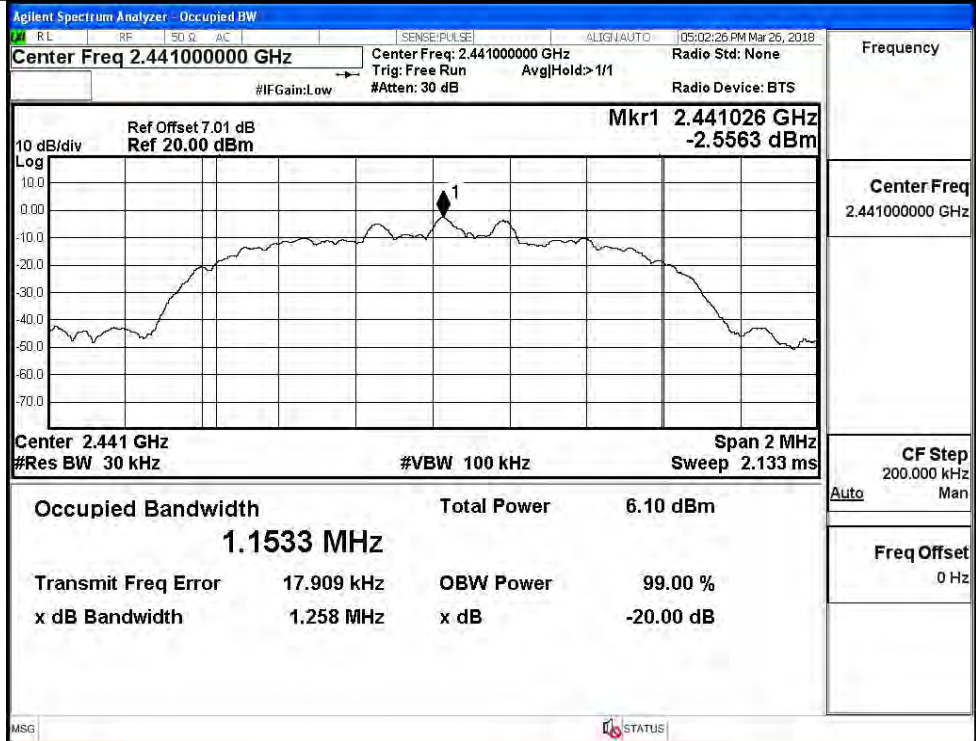
$\pi/4$ DQPSK/HCH



8DPSK/LCH

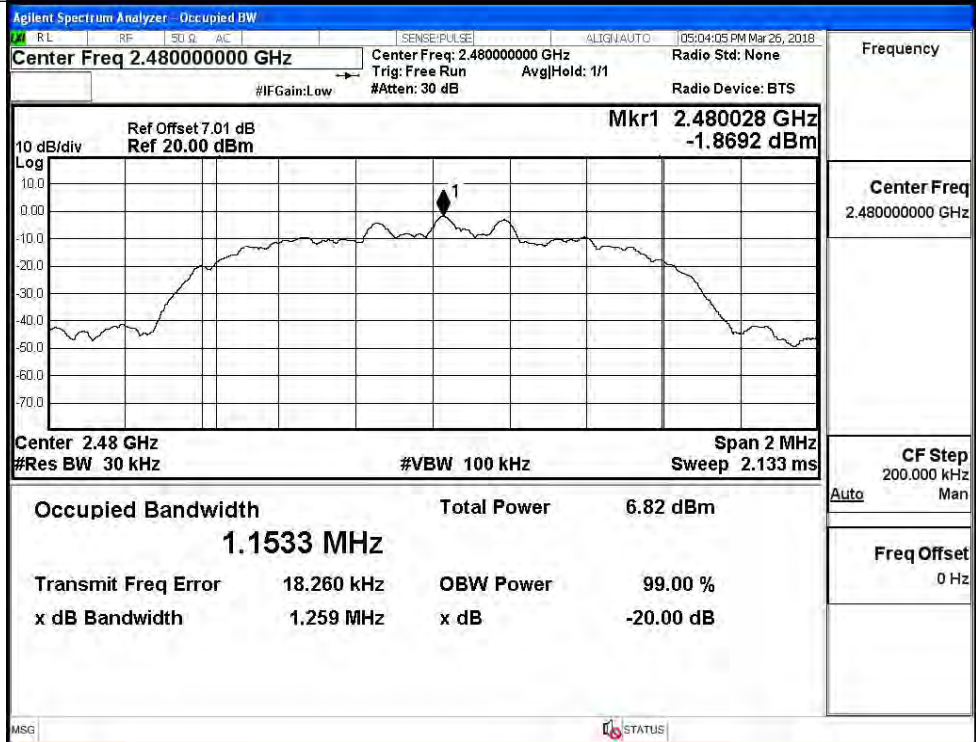


8DPSK/MCH



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

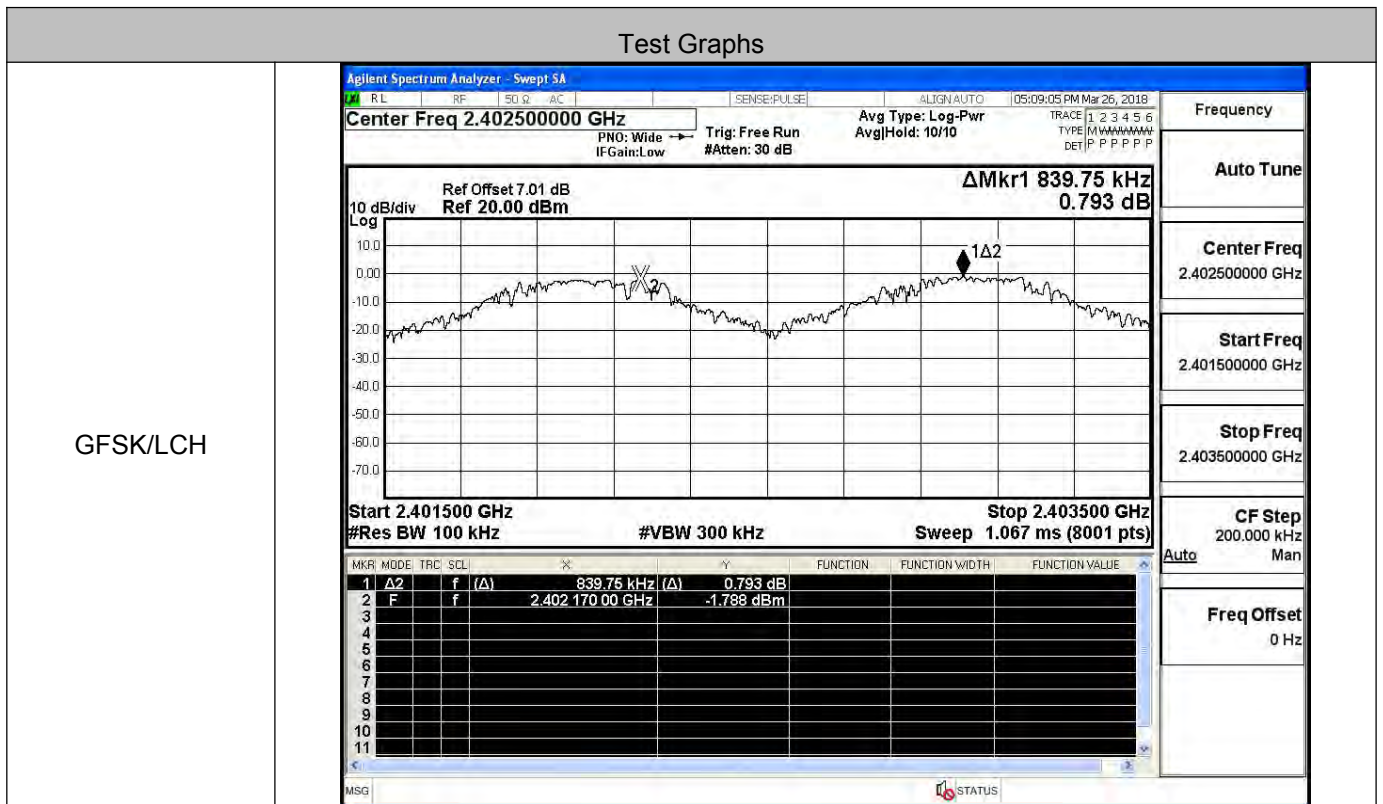
8DPSK/HCH



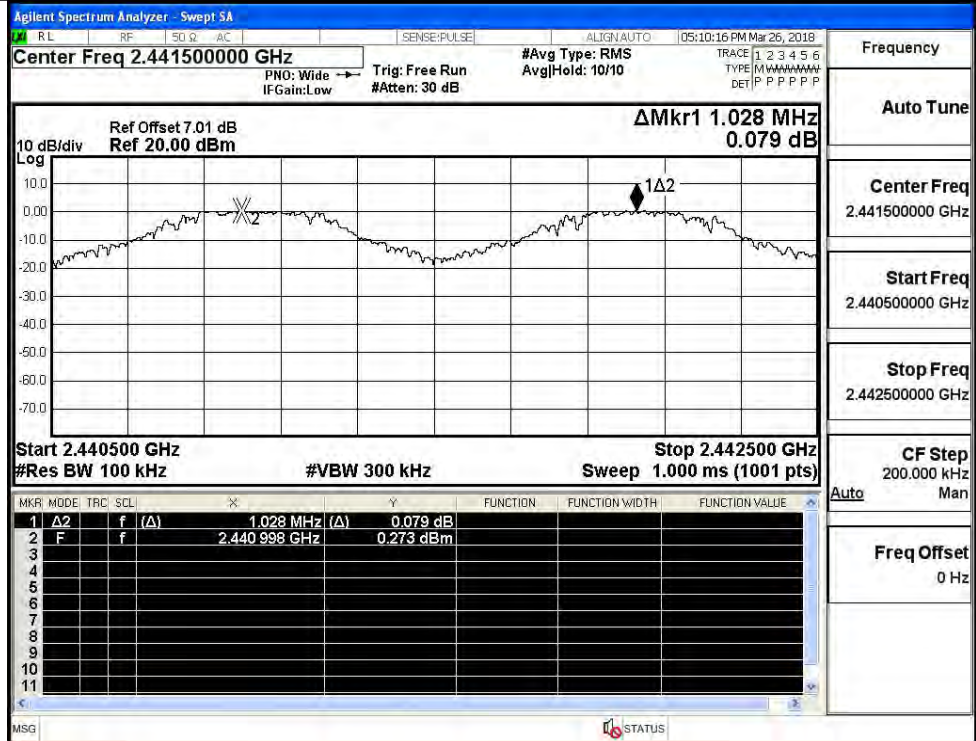
Frequency	2.480000000 GHz
Center Freq	2.480000000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

### A.3 Carrier Frequency Separation

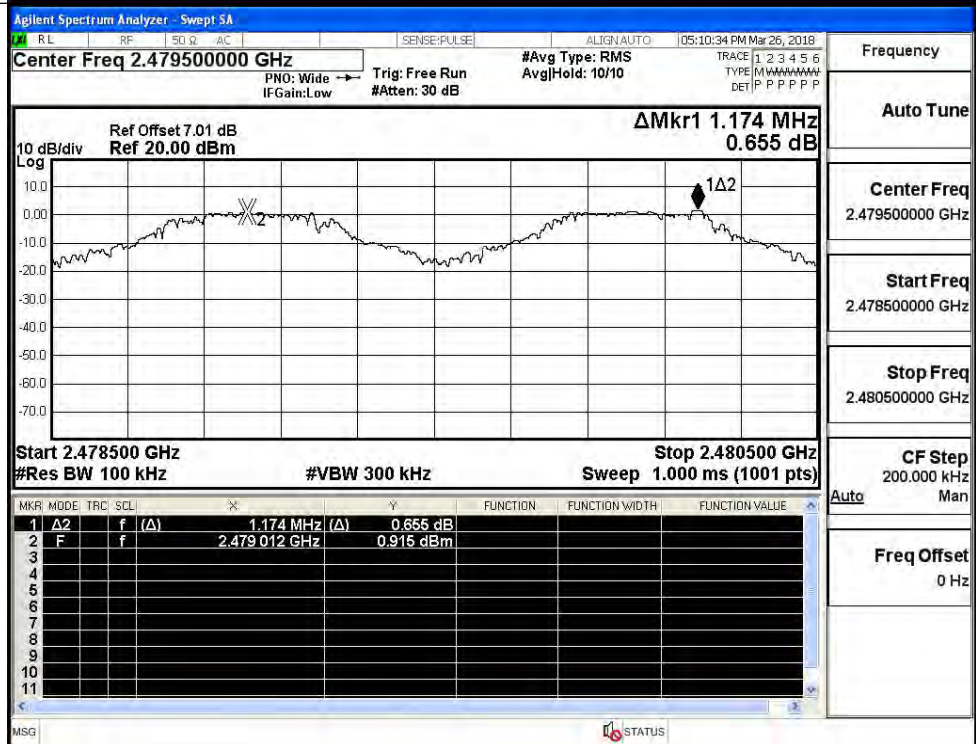
Mode	Channel	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.840	0.9488	PASS
	MCH	1.028	0.630	PASS
	HCH	1.174	0.630	PASS
π/4DQPSK	LCH	0.960	1.259	PASS
	MCH	0.990	1.230	PASS
	HCH	1.004	0.819	PASS
8DPSK	LCH	1.000	0.85	PASS
	MCH	1.030	0.838	PASS
	HCH	1.172	0.839	PASS



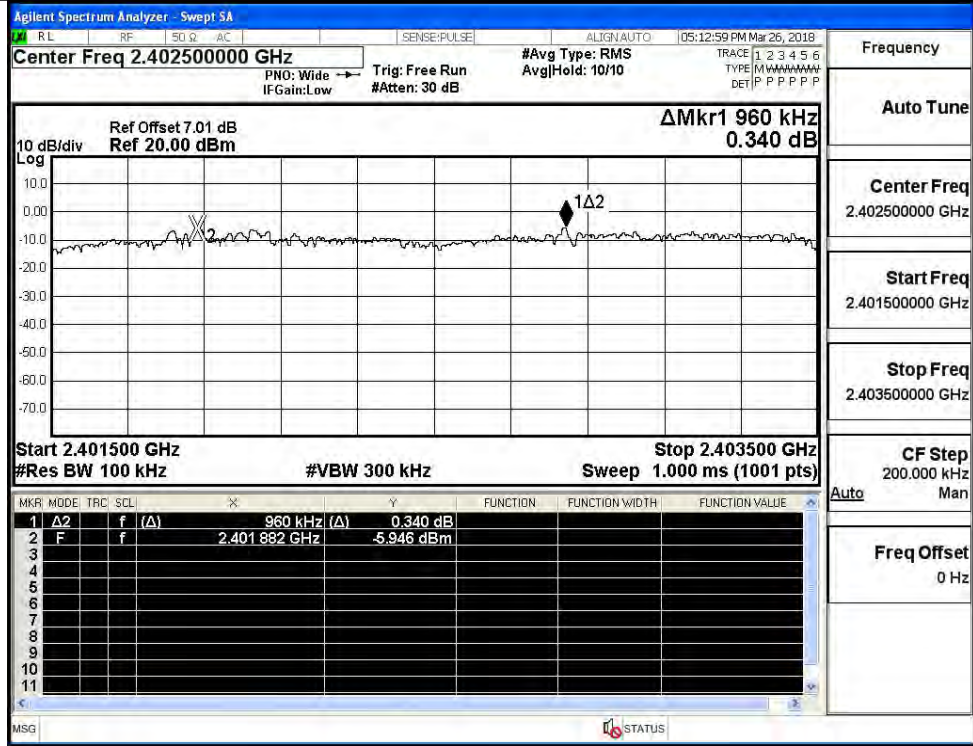
GFSK/MCH



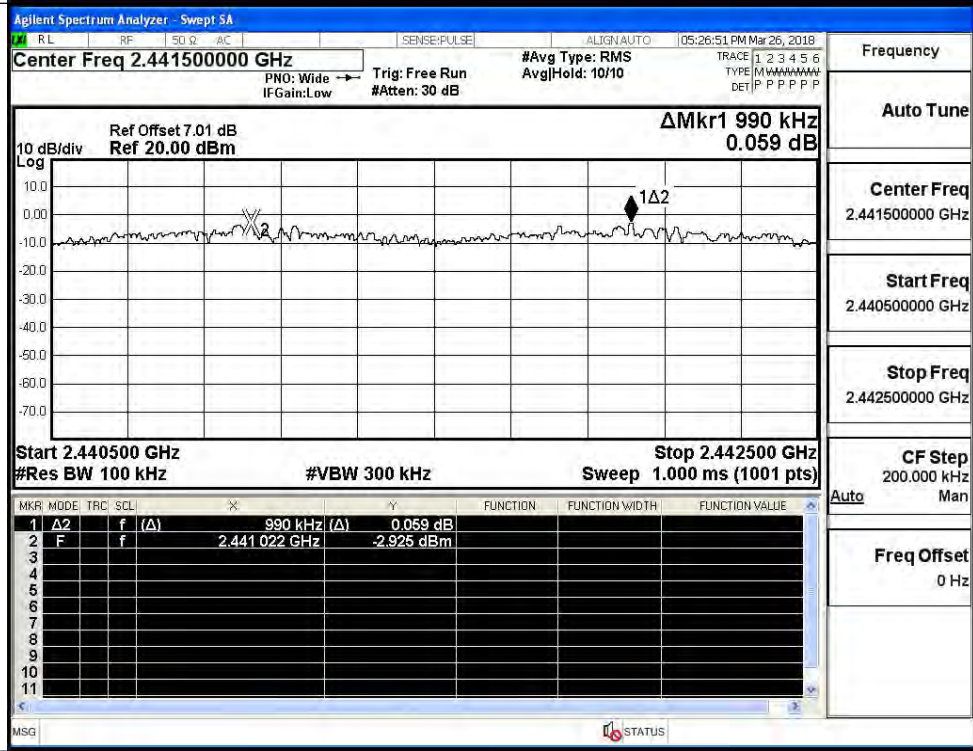
GFSK/HCH



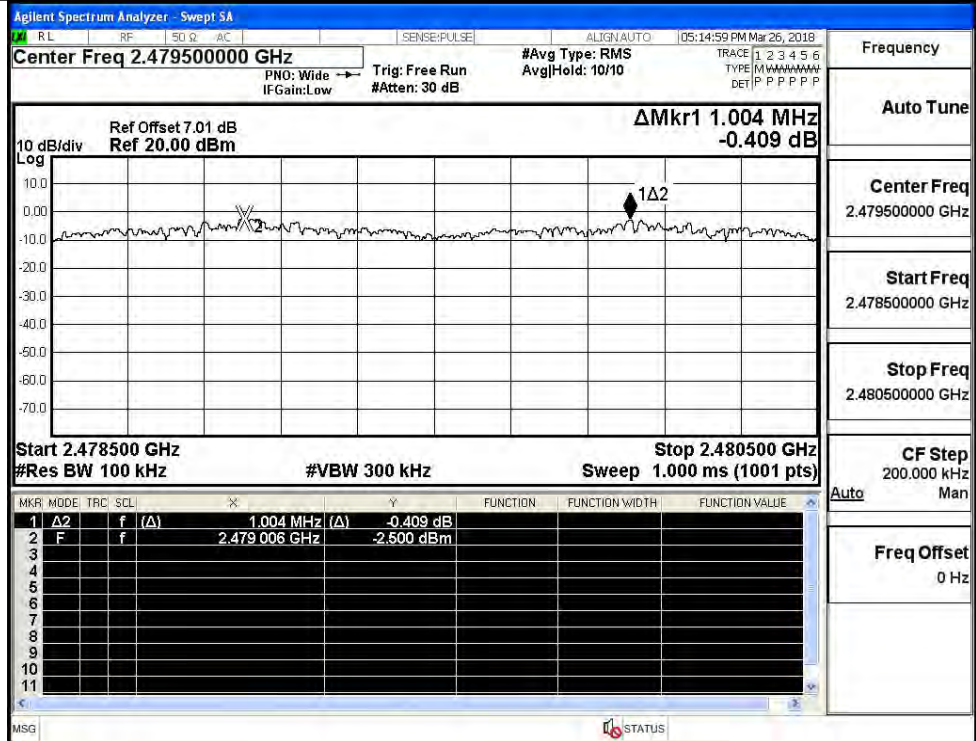
$\pi/4$ DQPSK/LCH



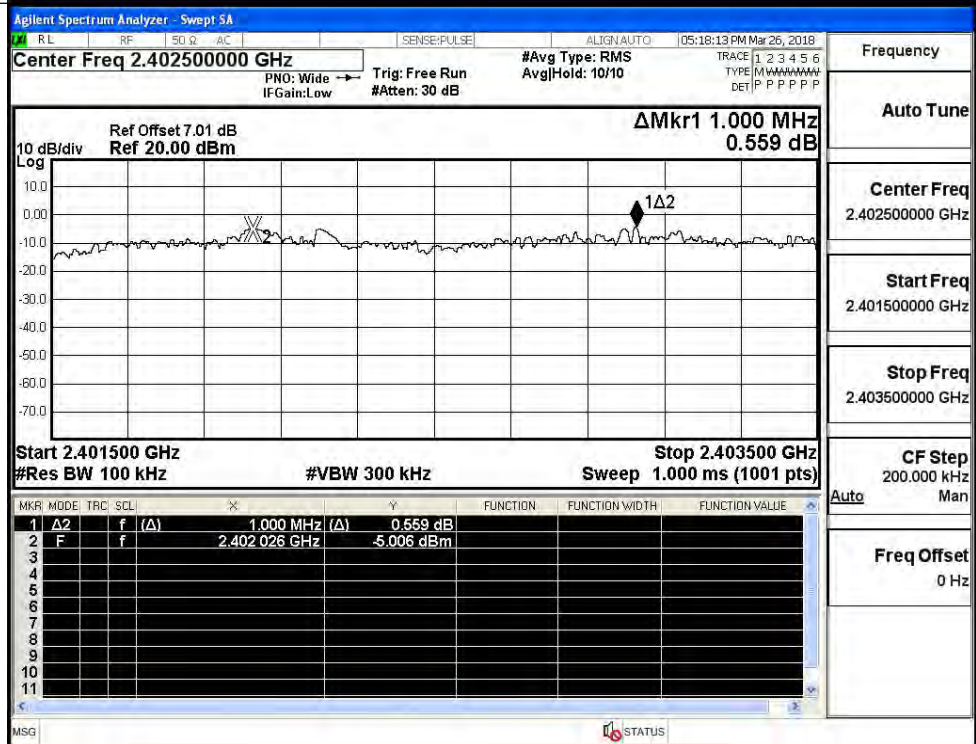
$\pi/4$ DQPSK/MCH

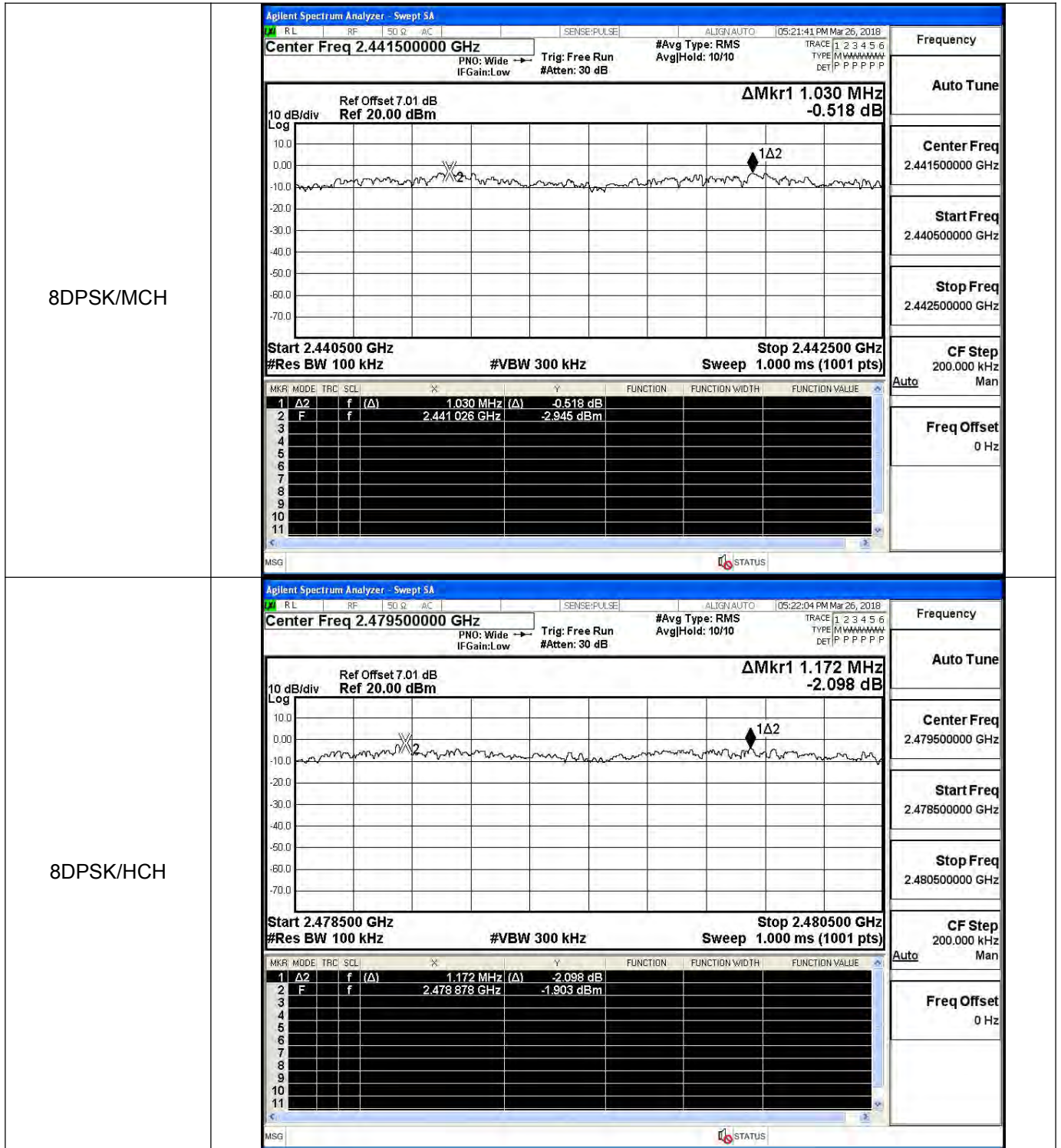


π/4DQPSK/HCH



8DPSK/LCH





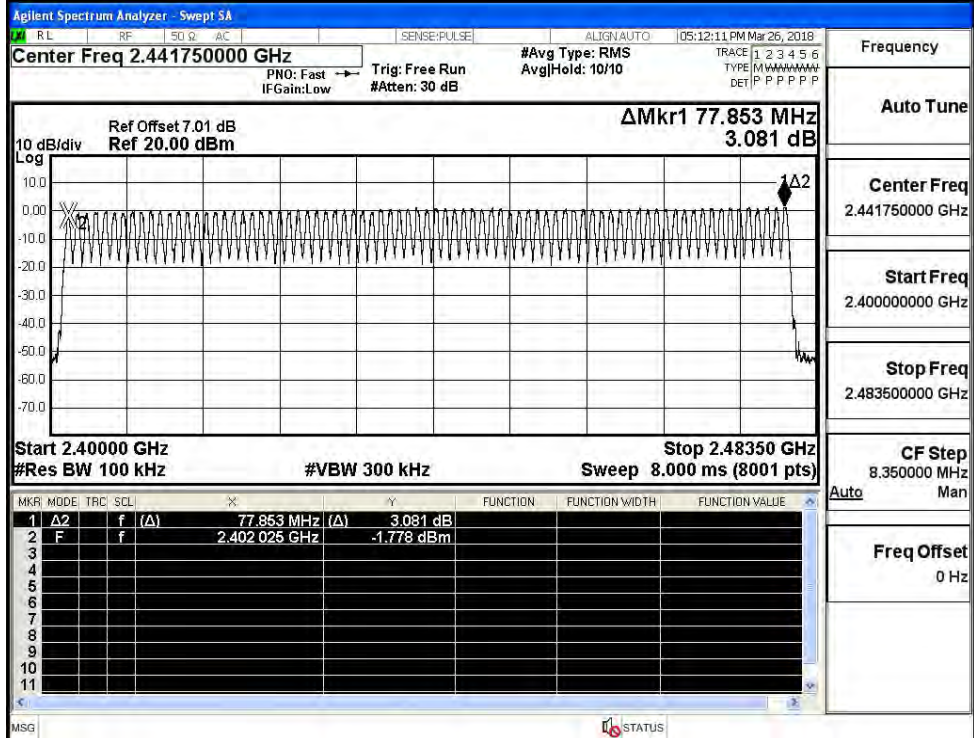
A.4 Hopping Channel Number

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

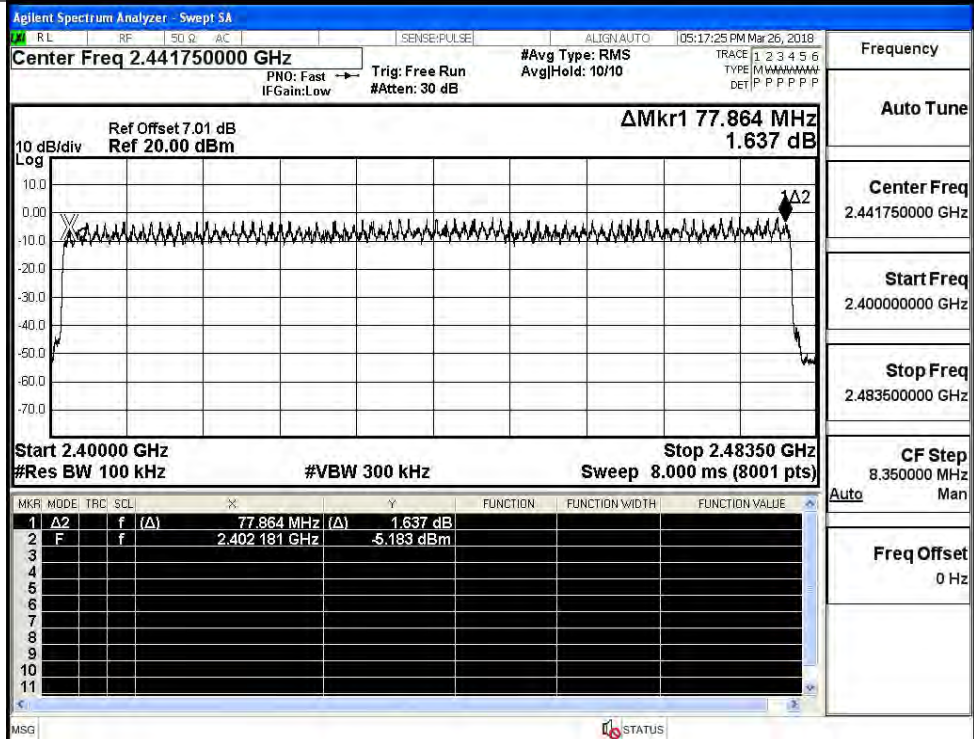


Test Graphs

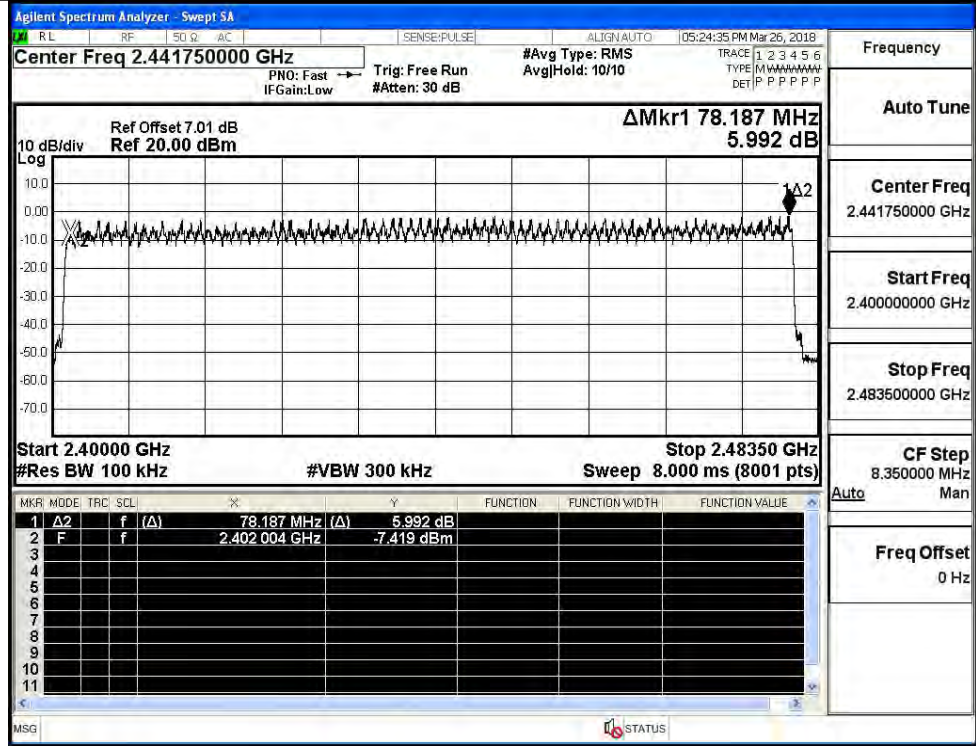
GFSK/Hop



π/4DQPSK/Hop

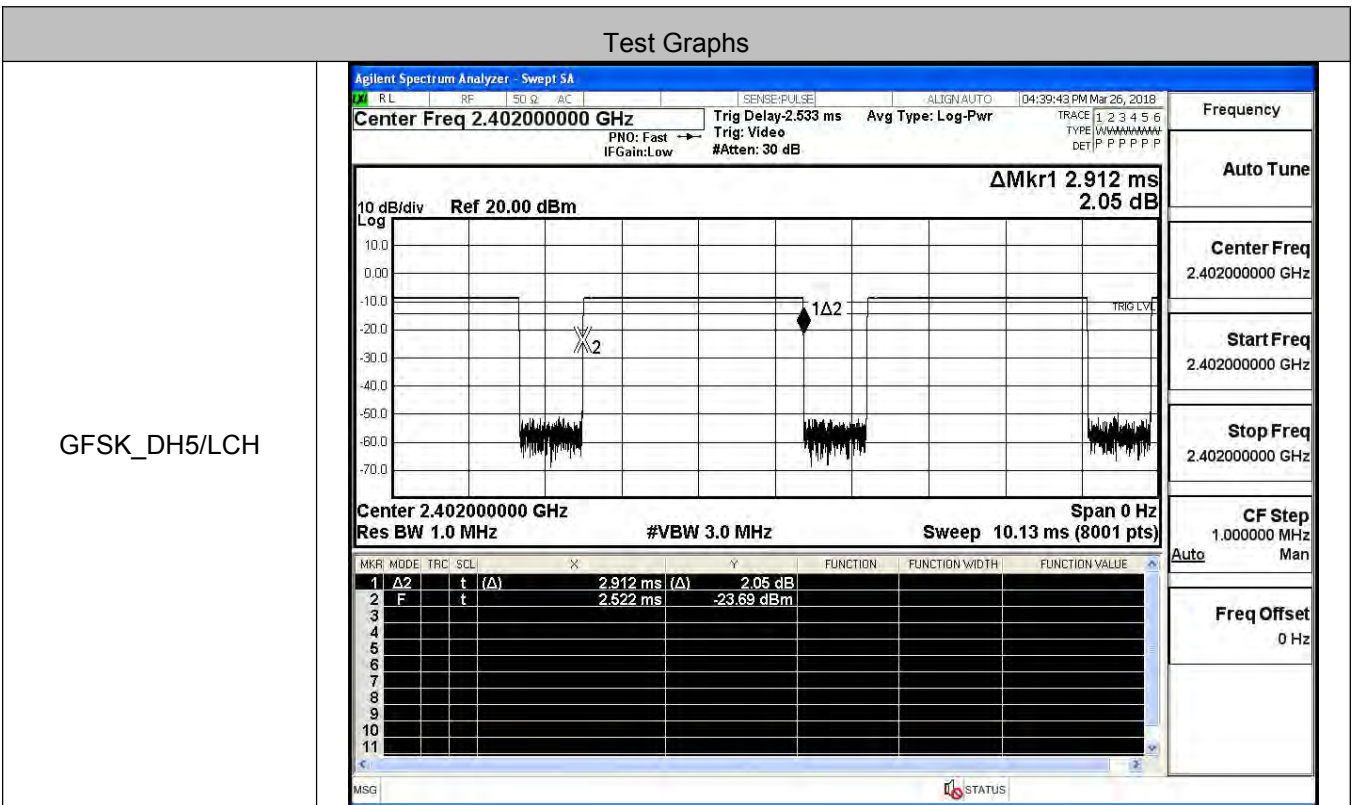


8DPSK/Hop

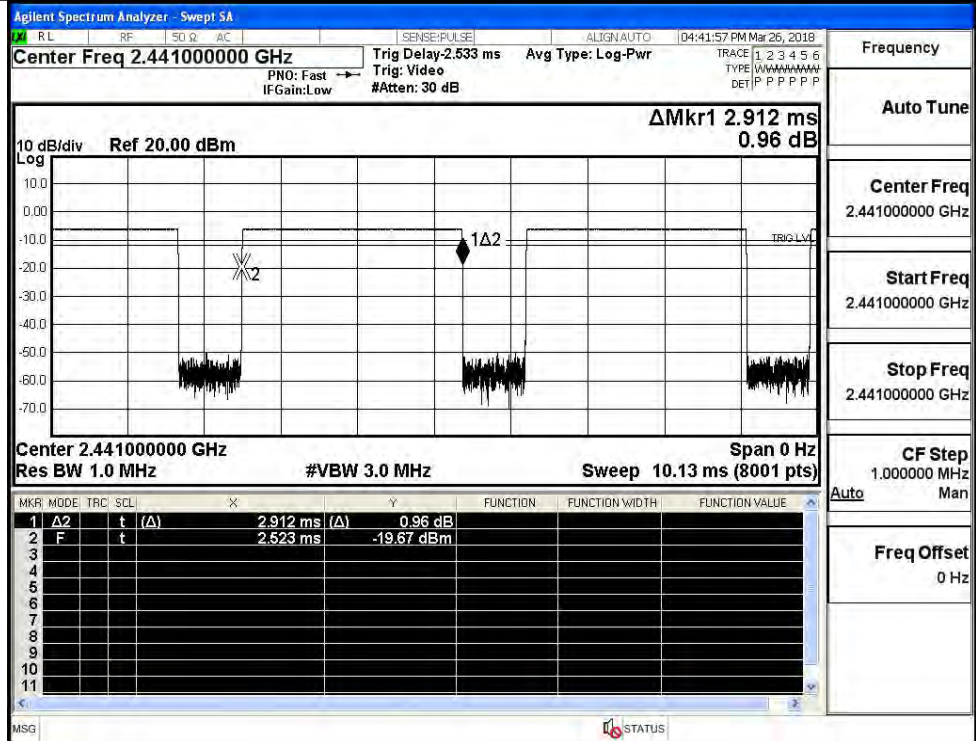


**A.5 Dwell Time**

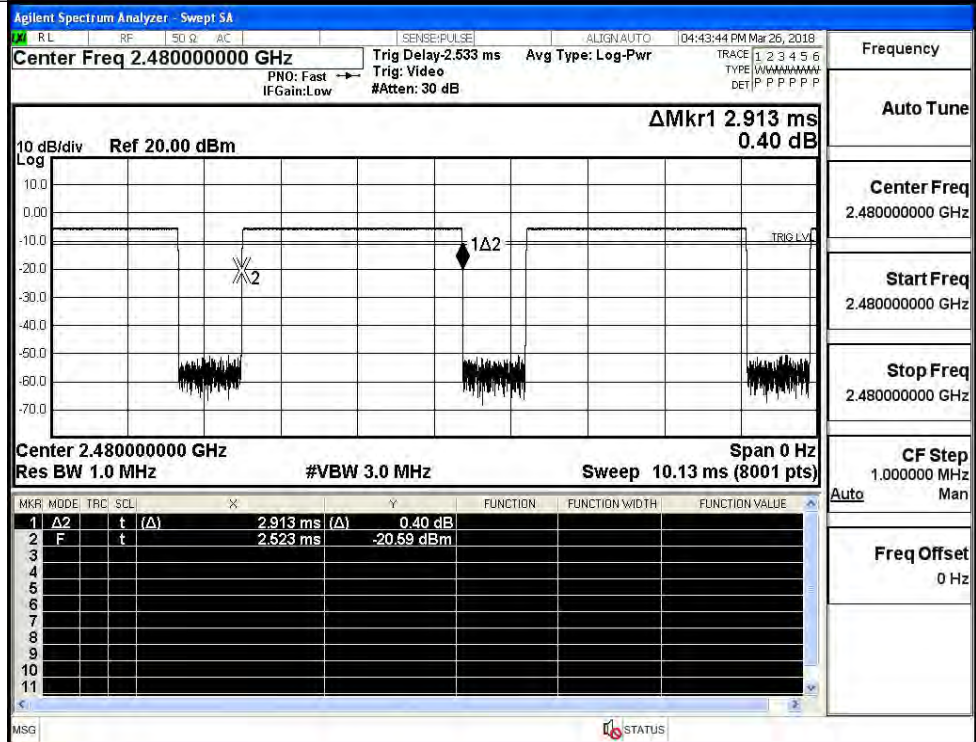
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.91	106.7	0.31	0.4	PASS
	DH5	MCH	2.91	106.7	0.31	0.4	PASS
	DH5	HCH	2.91	106.7	0.31	0.4	PASS
π/4DQPSK	2DH5	LCH	2.91	106.7	0.312	0.4	PASS
	2DH5	MCH	2.91	106.7	0.312	0.4	PASS
	2DH5	HCH	2.91	106.7	0.312	0.4	PASS
8DPSK	3DH5	LCH	2.91	106.7	0.312	0.4	PASS
	3DH5	MCH	2.91	106.7	0.312	0.4	PASS
	3DH5	HCH	2.91	106.7	0.312	0.4	PASS



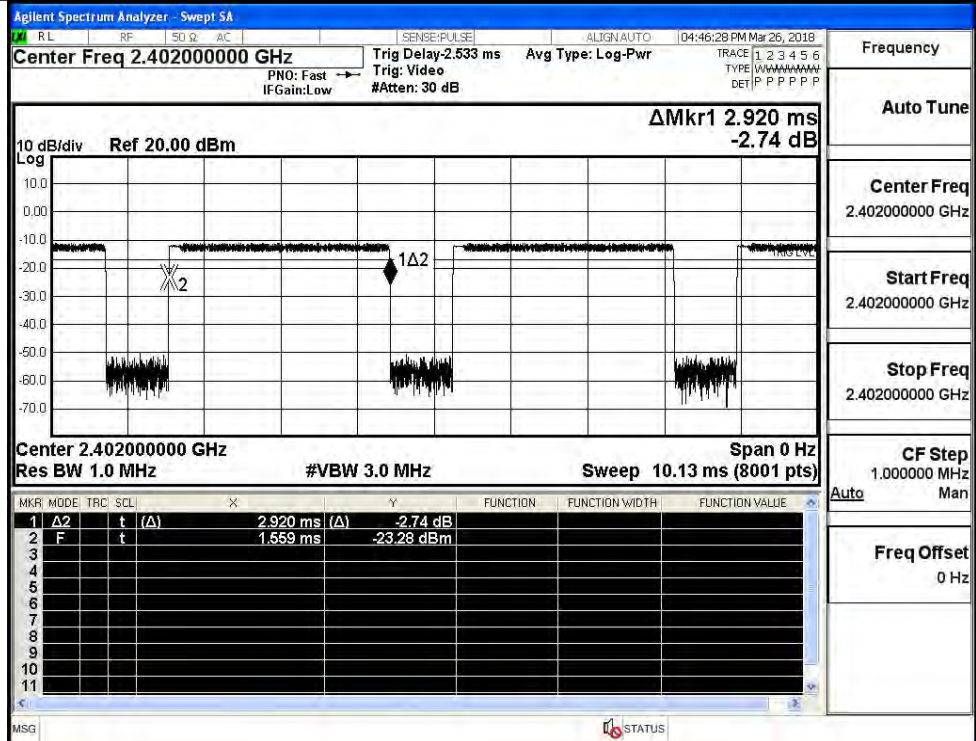
GFSK\_DH5/MCH



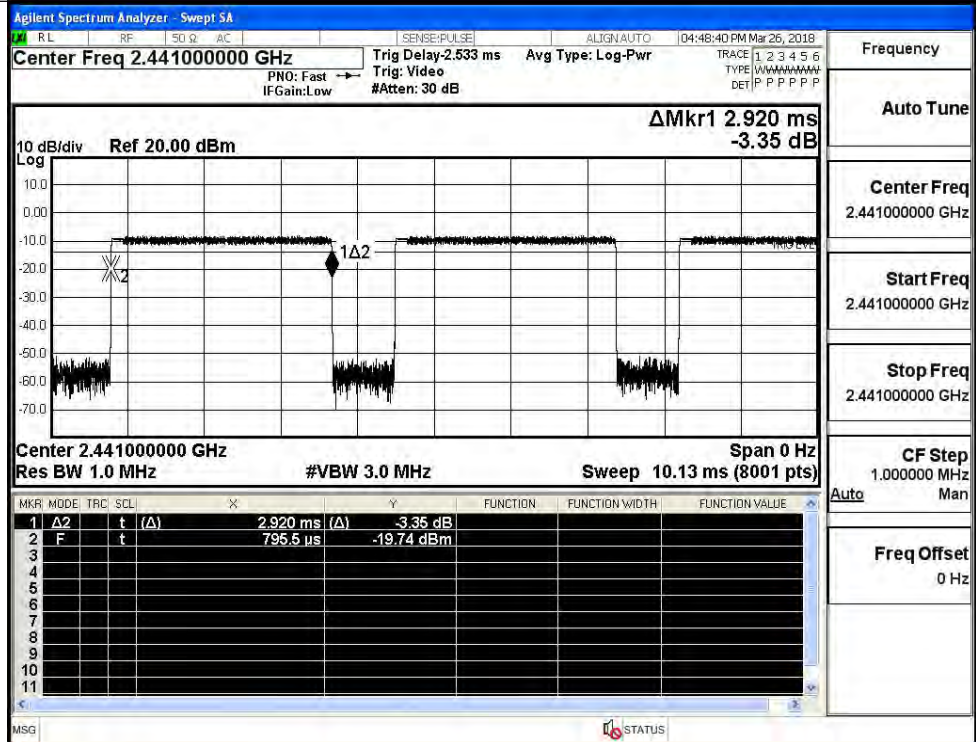
GFSK\_DH5/HCH



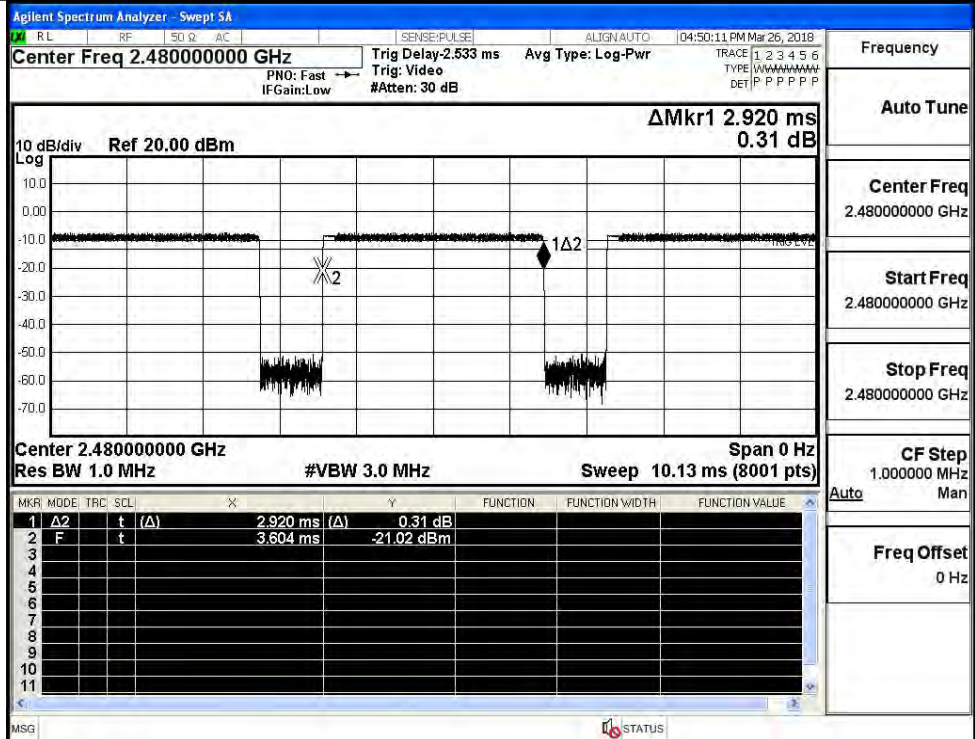
$\pi/4$ DQPSK  
\_2DH5/LCH



$\pi/4$ DQPSK  
\_2DH5/MCH

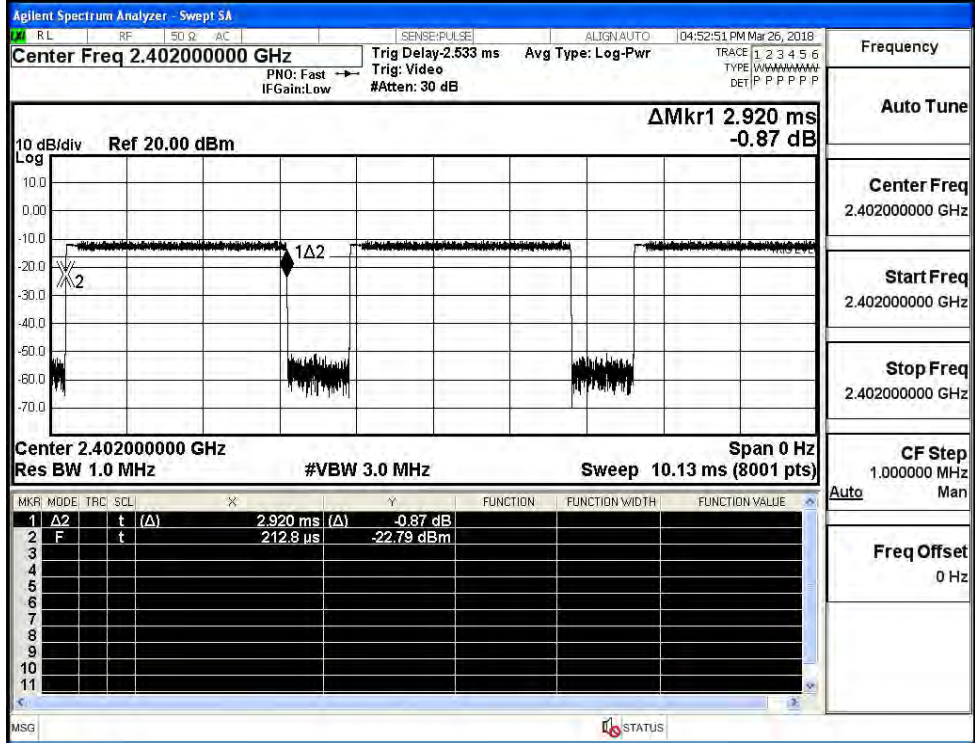


$\pi/4$ DQPSK  
\_2DH5/HCH



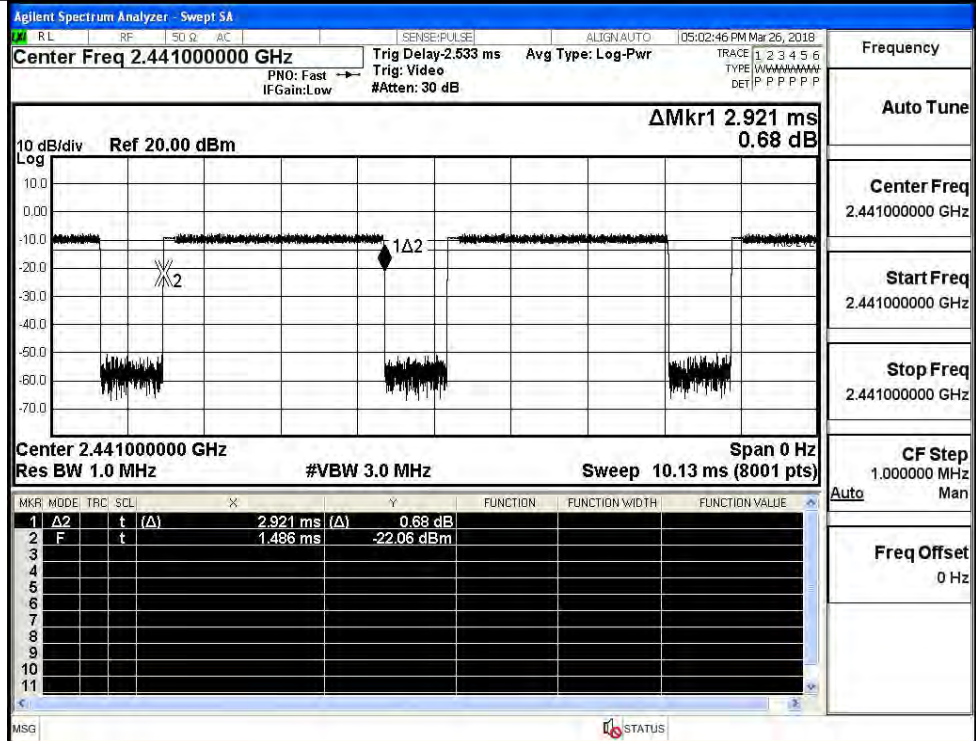
Frequency	2.480000000 GHz
Auto Tune	
Center Freq	2.480000000 GHz
Start Freq	2.480000000 GHz
Stop Freq	2.480000000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK\_3DH5/LCH

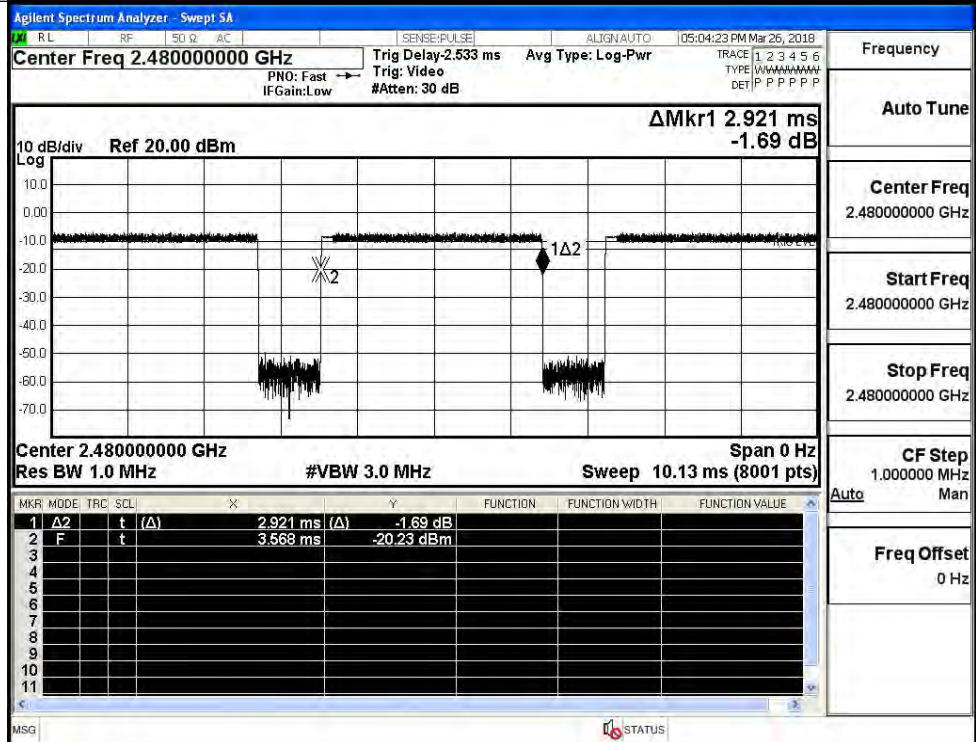


Frequency	2.402000000 GHz
Auto Tune	
Center Freq	2.402000000 GHz
Start Freq	2.402000000 GHz
Stop Freq	2.402000000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK\_3DH5/MCH



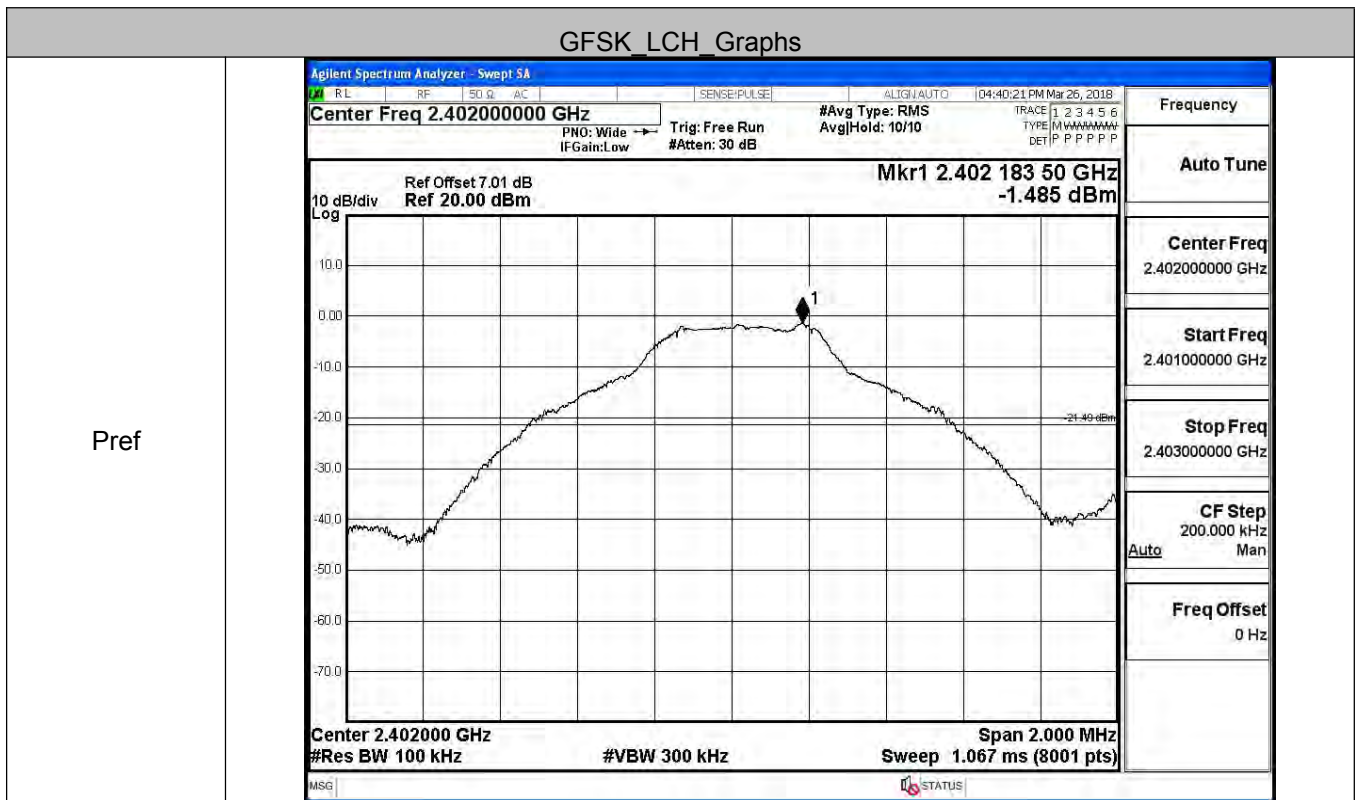
8DPSK\_3DH5/HCH



### A.6 RF Conducted Spurious Emissions

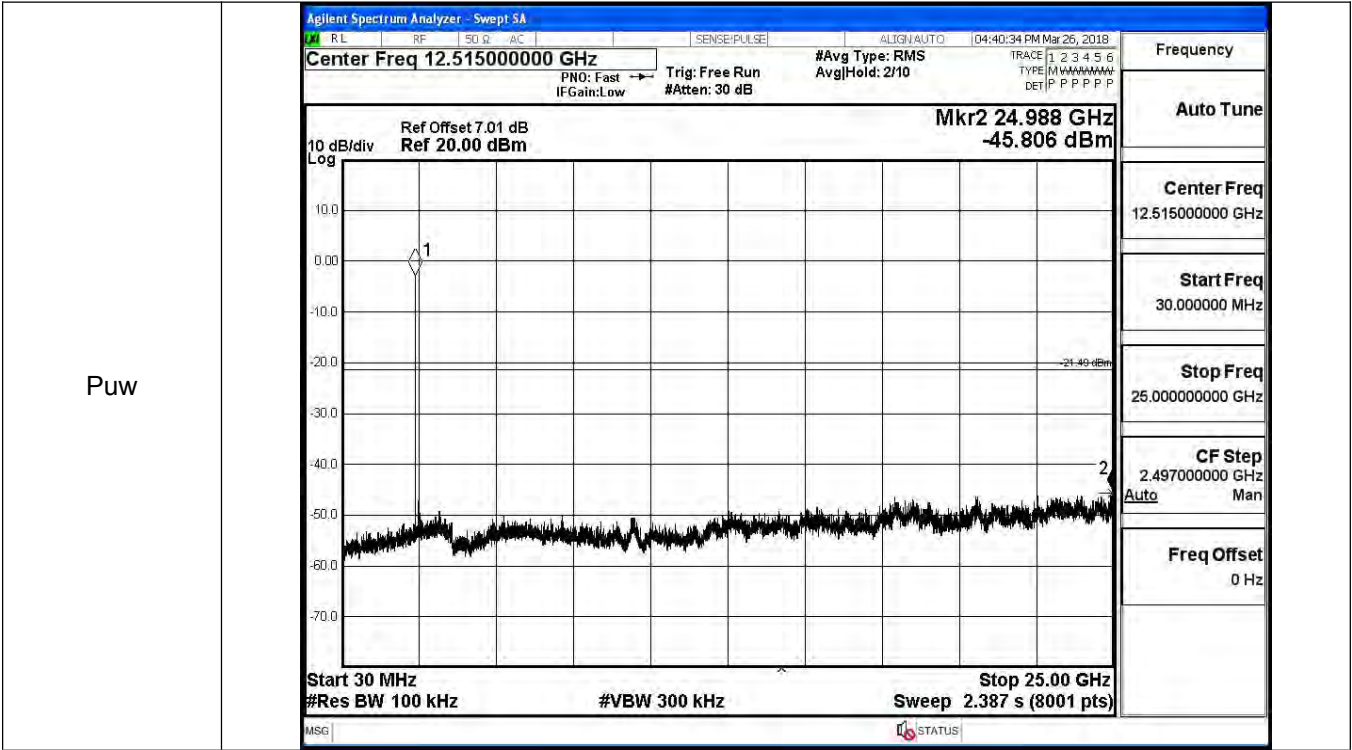
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.485	-45.806	-21.485	PASS
	MCH	0.813	-45.211	-19.187	PASS
	HCH	1.497	-45.683	-18.503	PASS
π/4DQPSK	LCH	-5.076	-45.700	-25.076	PASS
	MCH	-2.265	-45.615	-22.265	PASS
	HCH	-1.472	-45.084	-21.472	PASS
8DPSK	LCH	-4.888	-45.304	-24.888	PASS
	MCH	-2.031	-45.184	-22.031	PASS
	HCH	-1.311	-45.979	-21.311	PASS

GFSK LCH Graphs



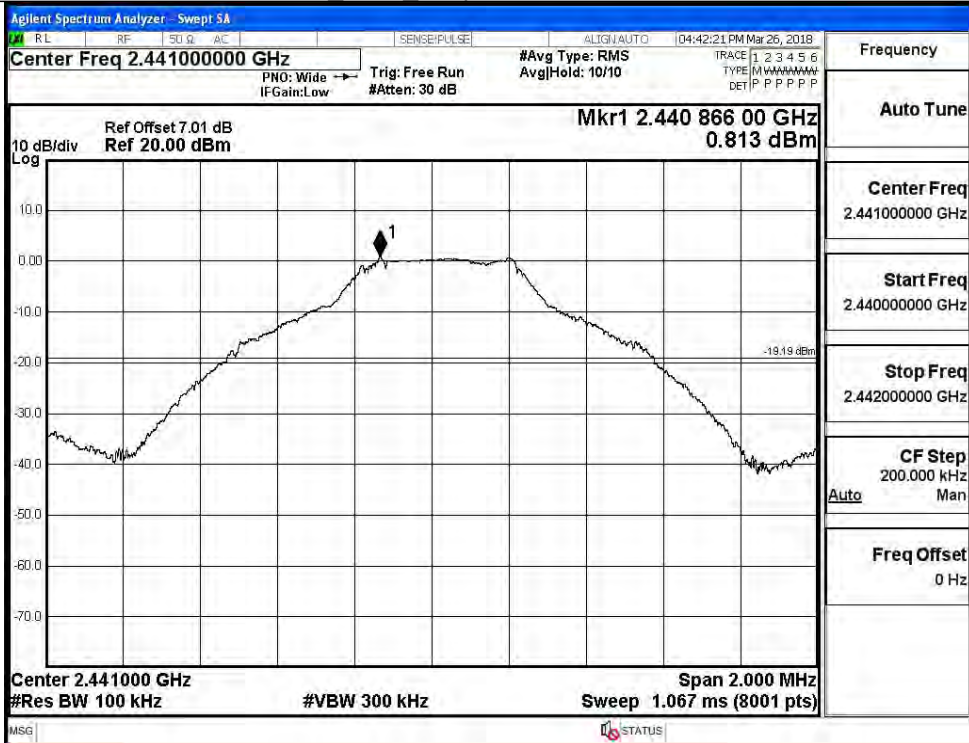
Pref



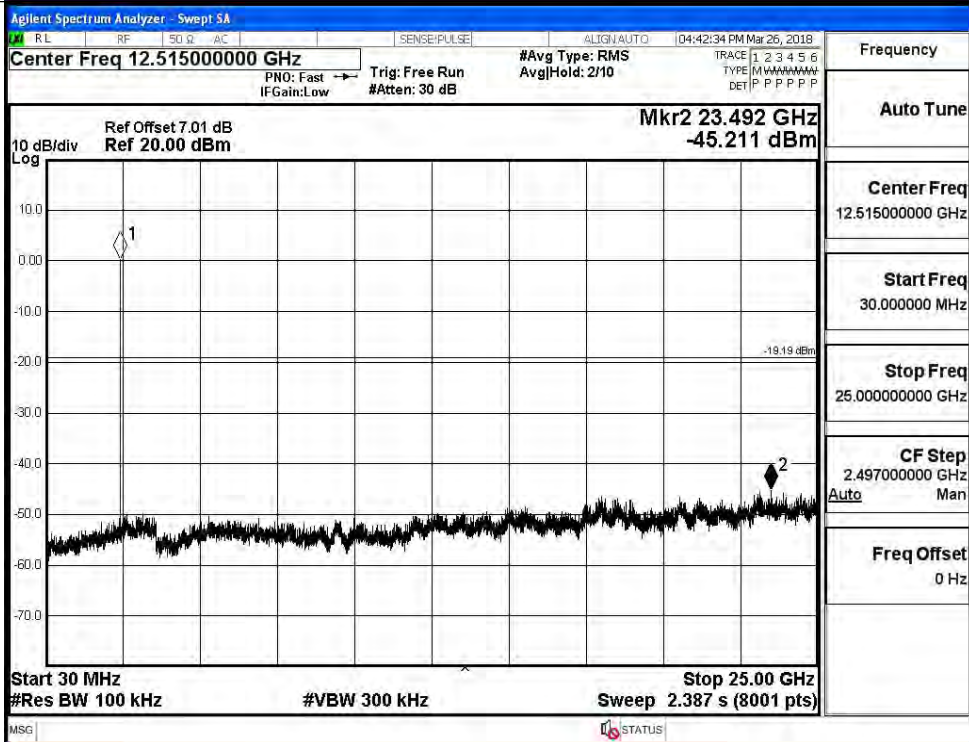


GFSK\_MCH\_Graphs

Pref

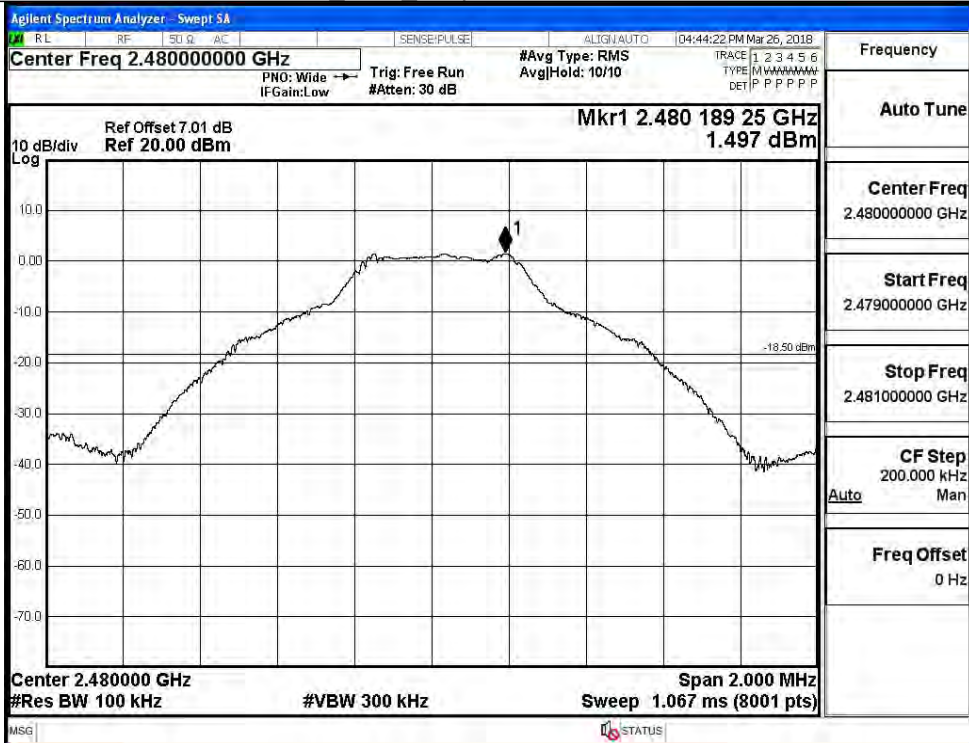


Puw

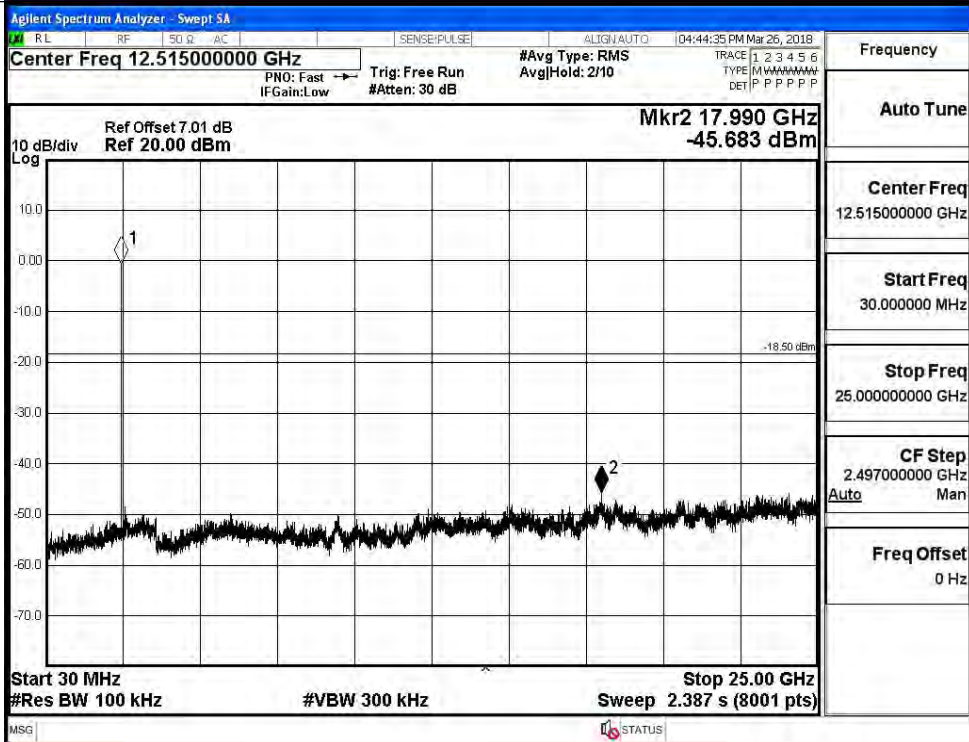


GFSK\_HCH\_Graphs

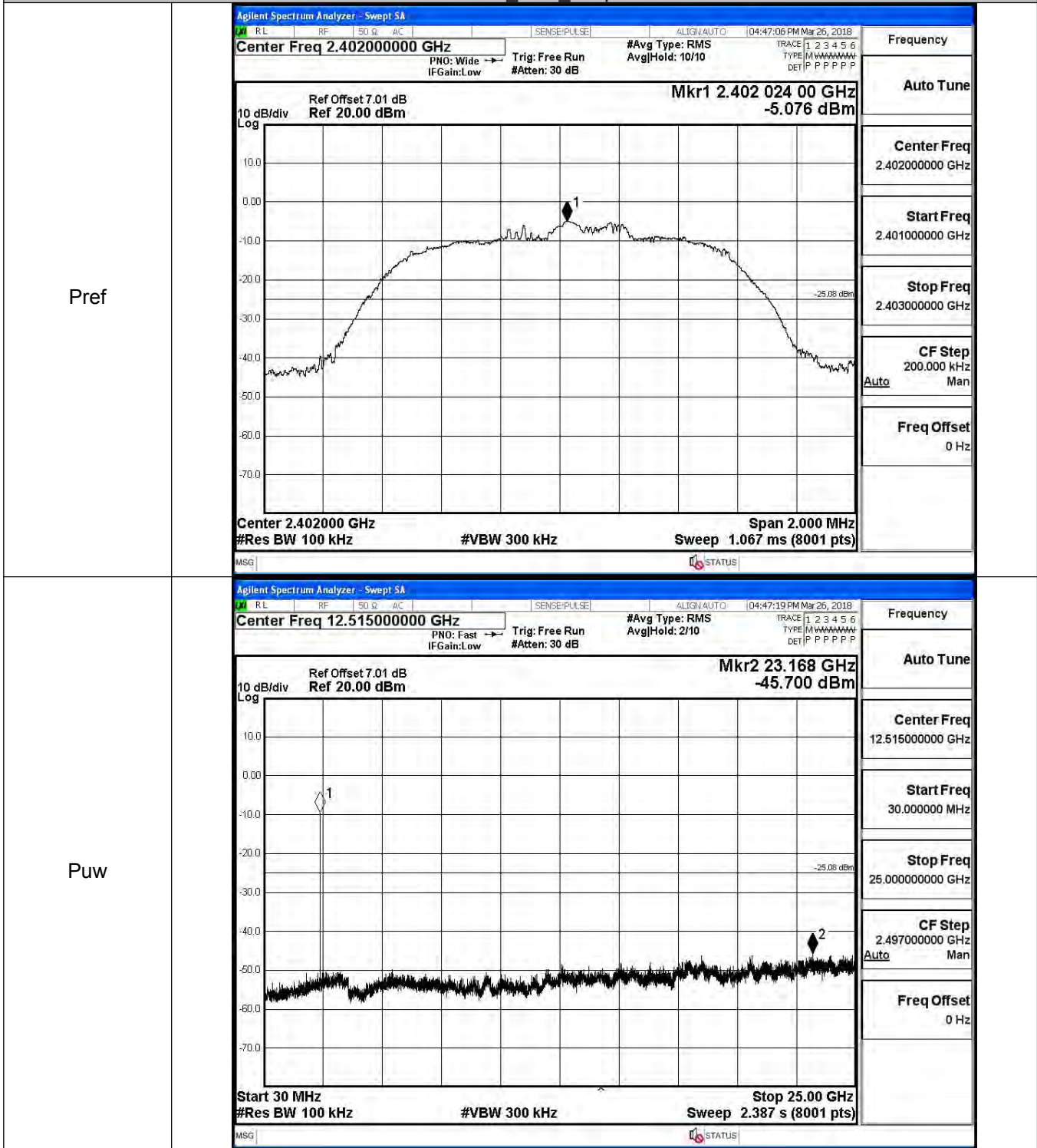
Pref



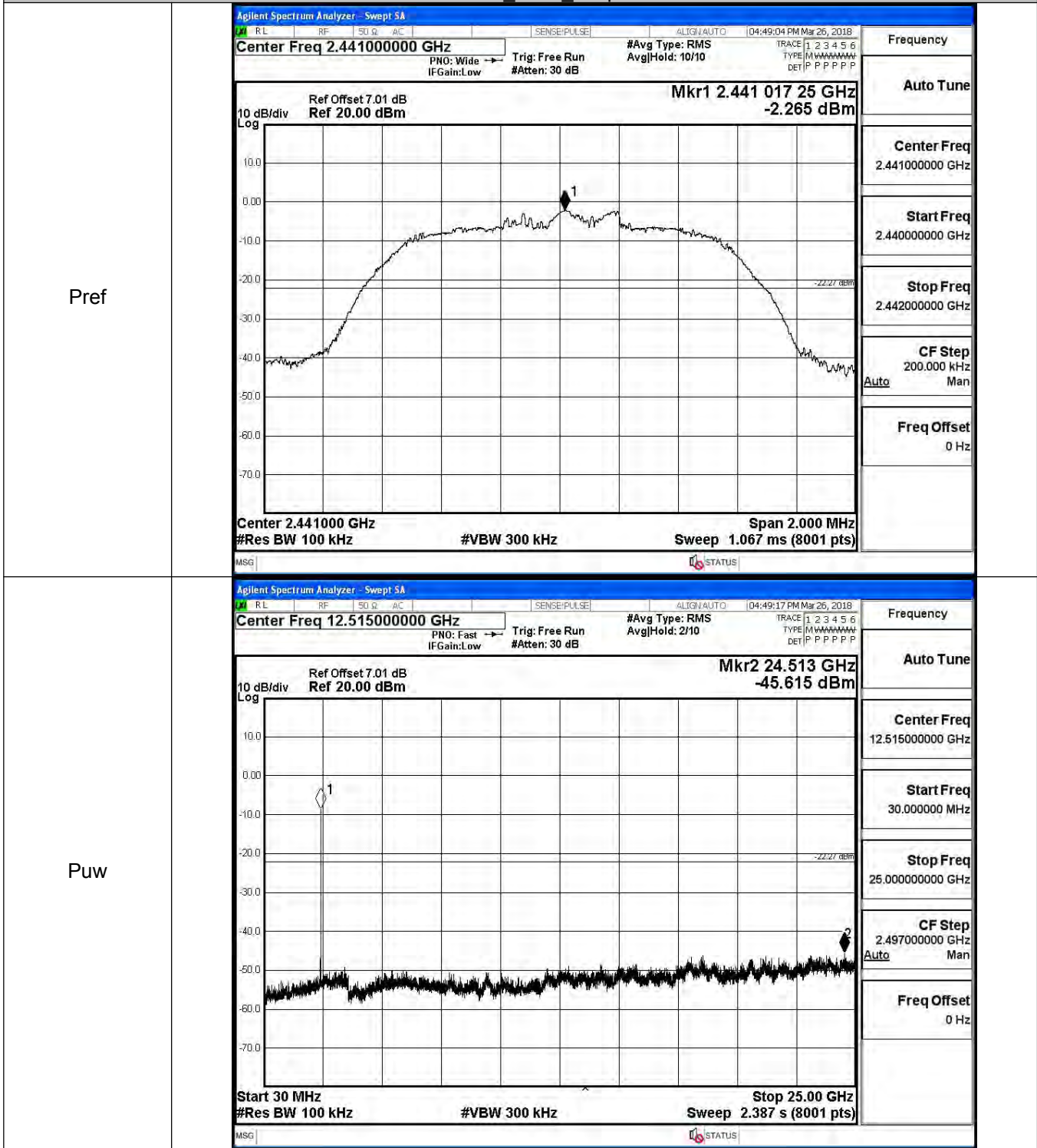
Puw



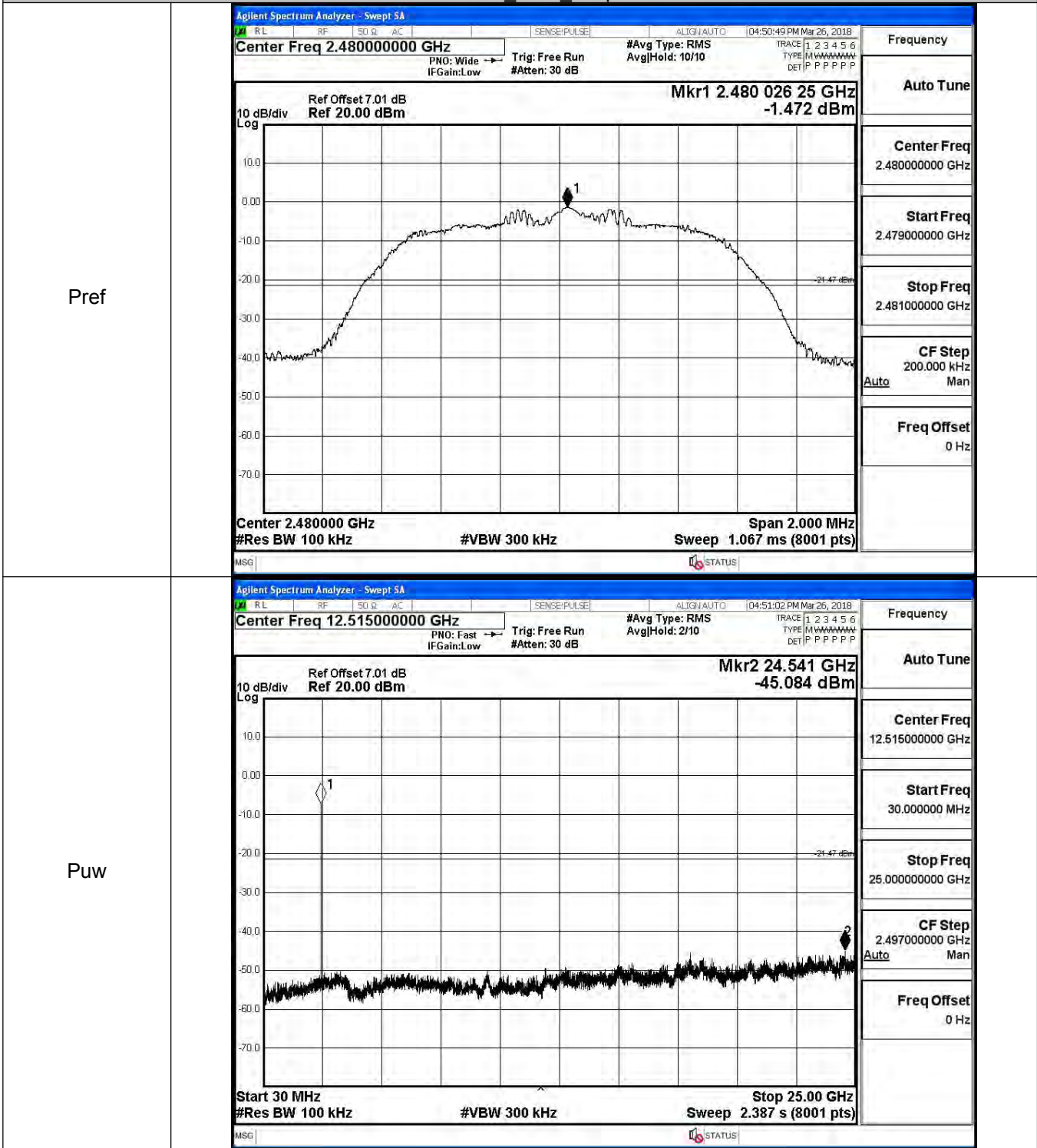
$\pi/4$ DQPSK\_LCH\_Graphs



$\pi/4$ DQPSK\_MCH\_Graphs

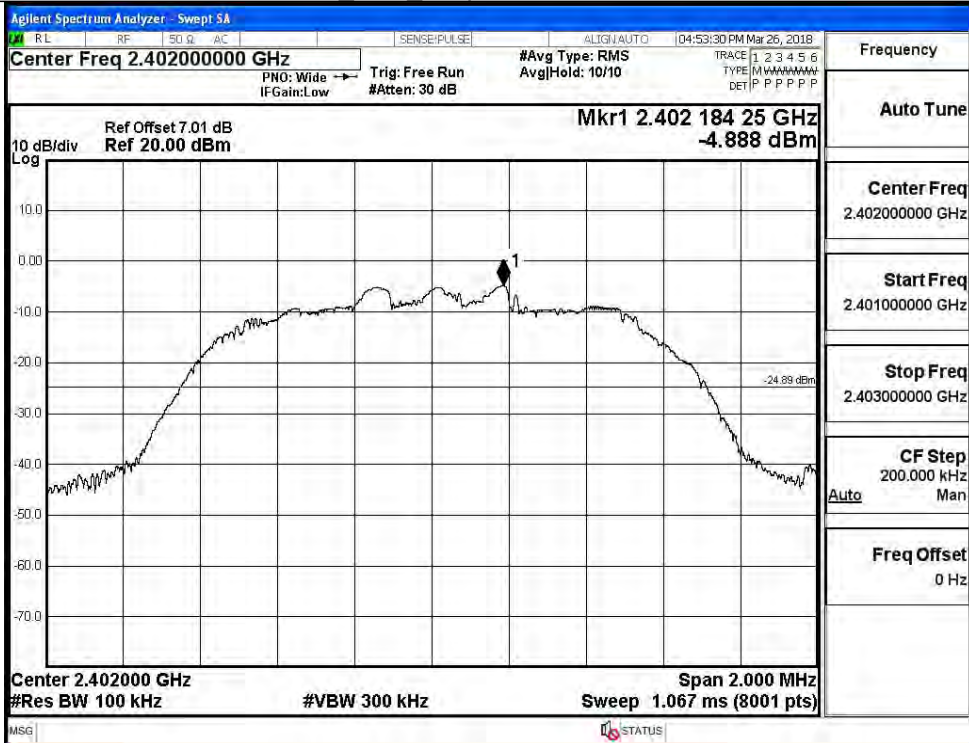


$\pi/4$ DQPSK\_HCH\_Graphs

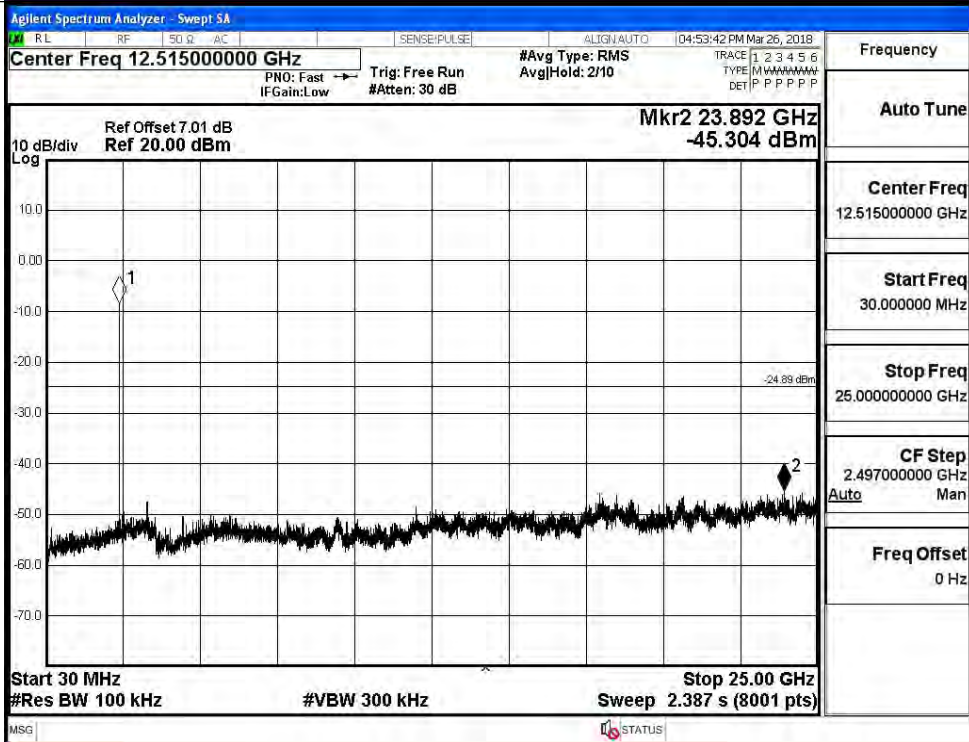


8DPSK\_LCH\_Graphs

Pref

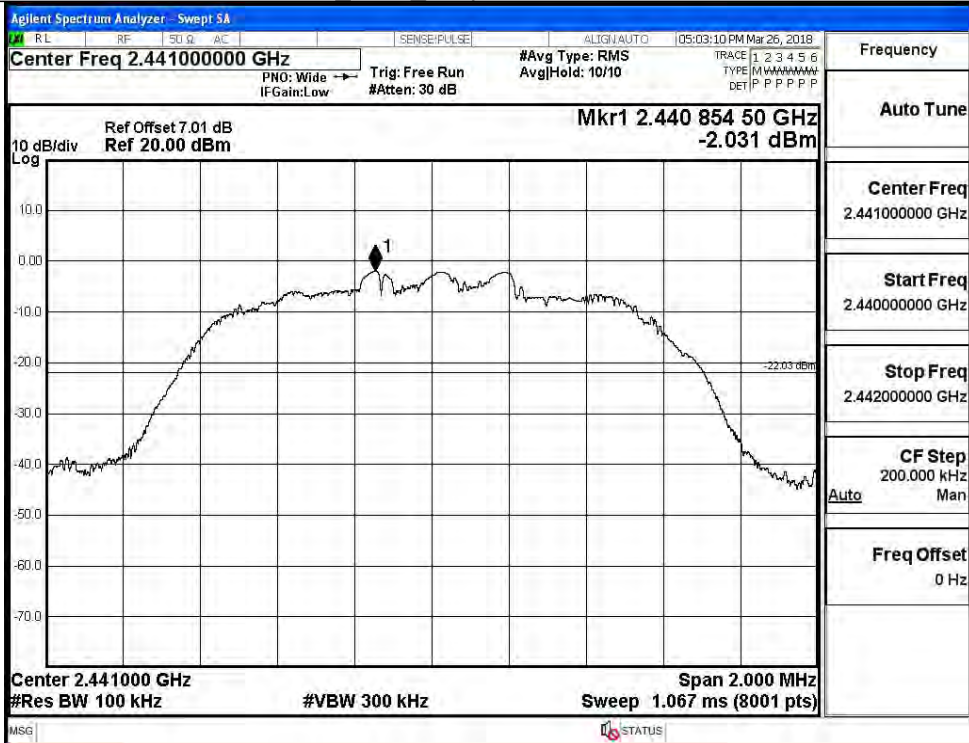


Puw

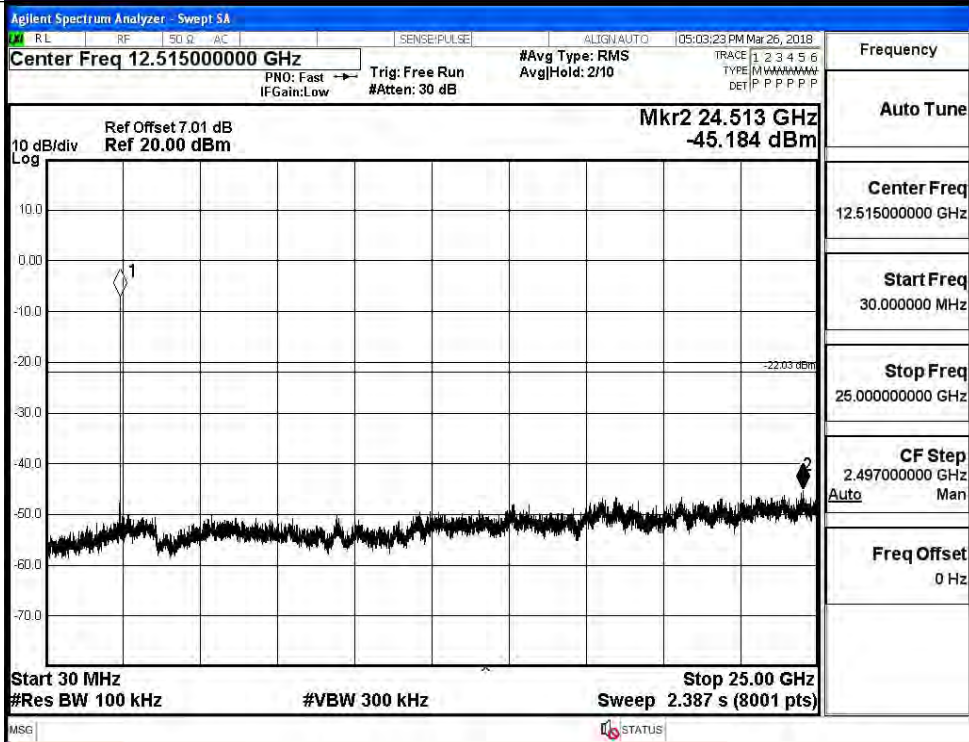


8DPSK\_MCH\_Graphs

Pref



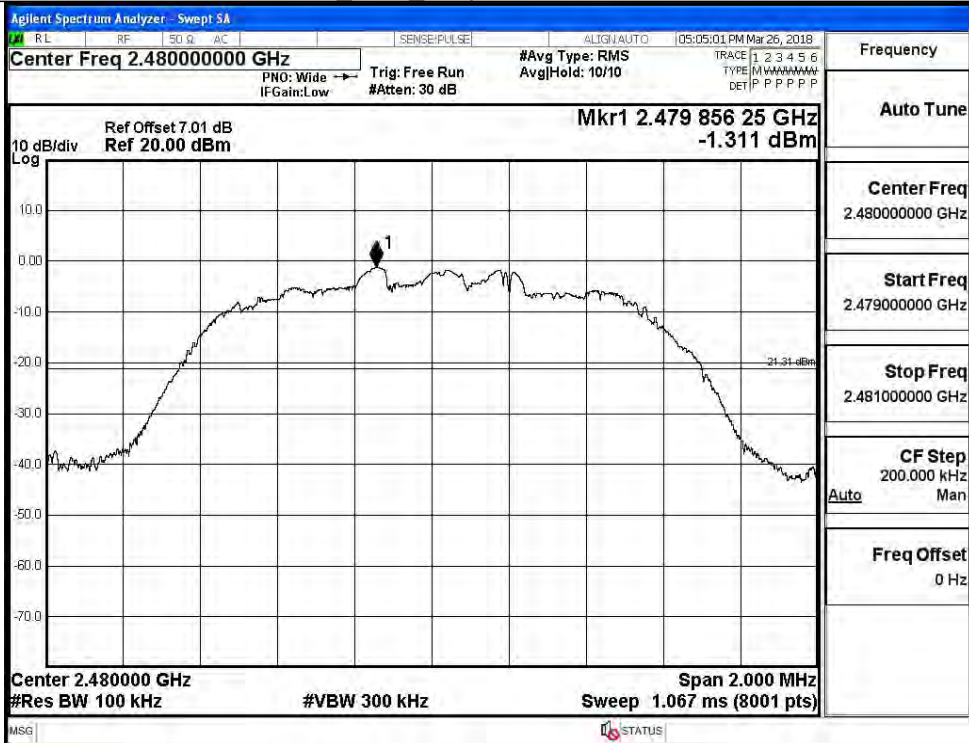
Puw



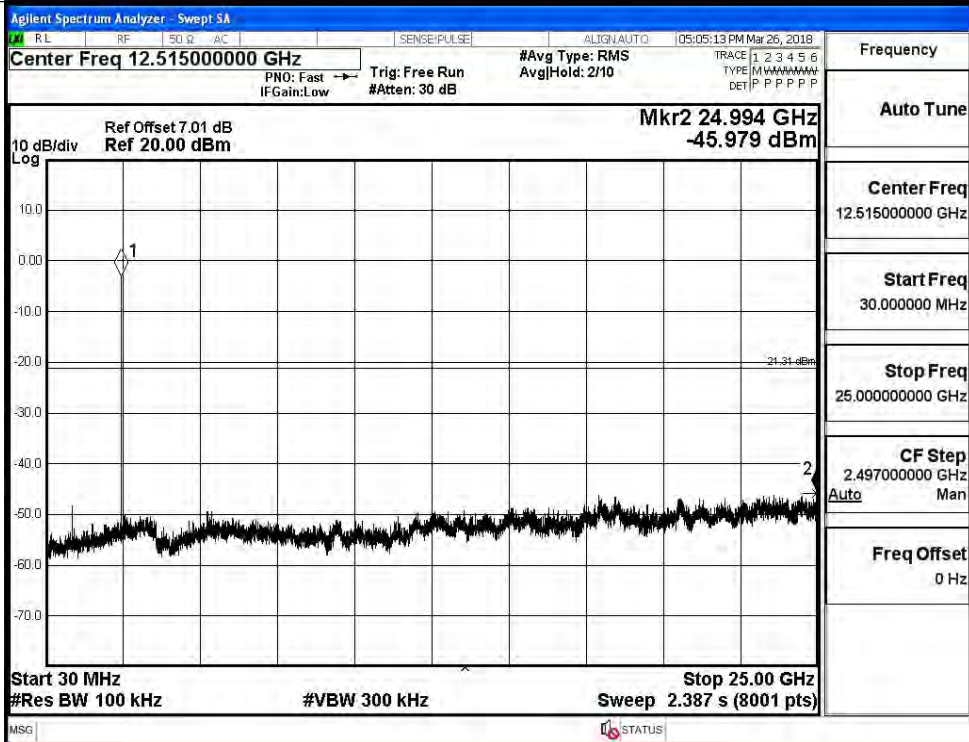


8DPSK\_HCH\_Graphs

Pref



Puw

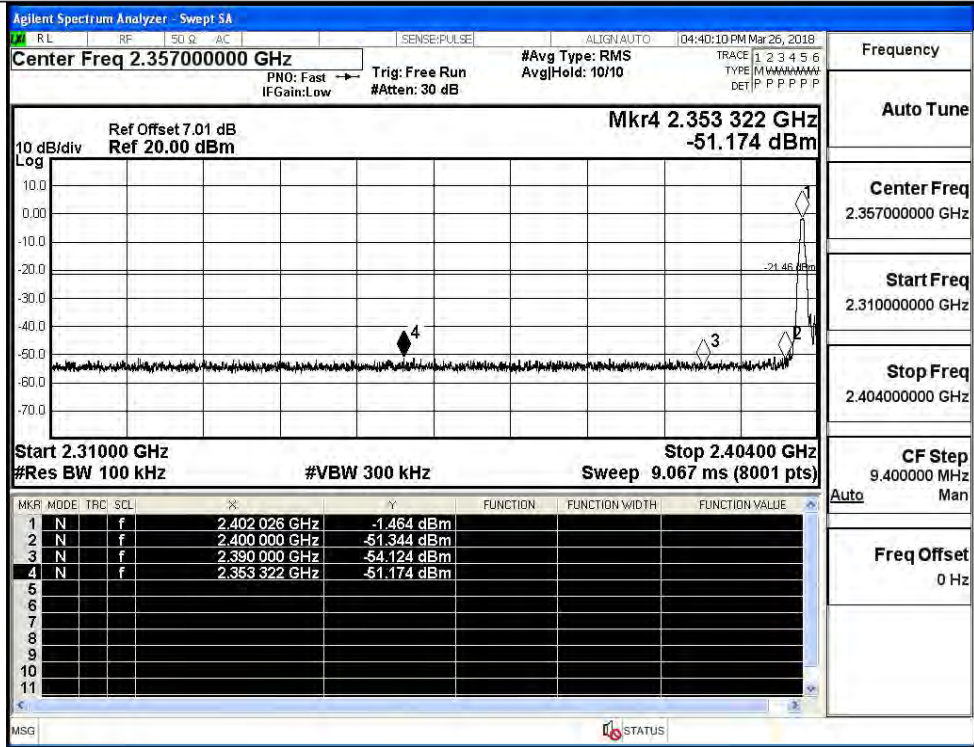


## A.7 Band-edge for RF Conducted Emissions

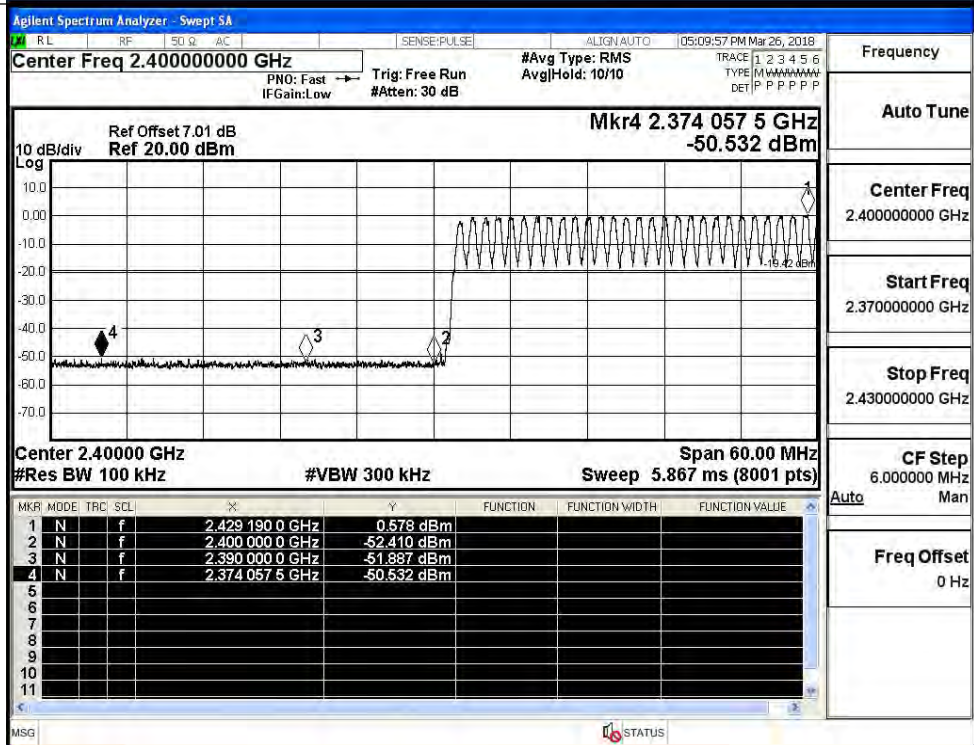
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-1.464	Off	-51.174	-21.46	PASS
			0.578	On	-50.532	-19.42	PASS
	HCH	2480	1.607	Off	-49.854	-18.39	PASS
			1.579	On	-49.730	-18.42	PASS
$\pi/4$ DQPSK	LCH	2402	-4.949	Off	-49.857	-24.95	PASS
			-2.961	On	-50.308	-22.96	PASS
	HCH	2480	-1.413	Off	-50.554	-21.41	PASS
			-1.491	On	-50.417	-21.49	PASS
8DPSK	LCH	2402	-4.886	Off	-50.880	-24.89	PASS
			-2.905	On	-50.402	-22.91	PASS
	HCH	2480	-1.334	Off	-50.137	-21.33	PASS
			-1.489	On	-50.638	-21.49	PASS

Test Graphs

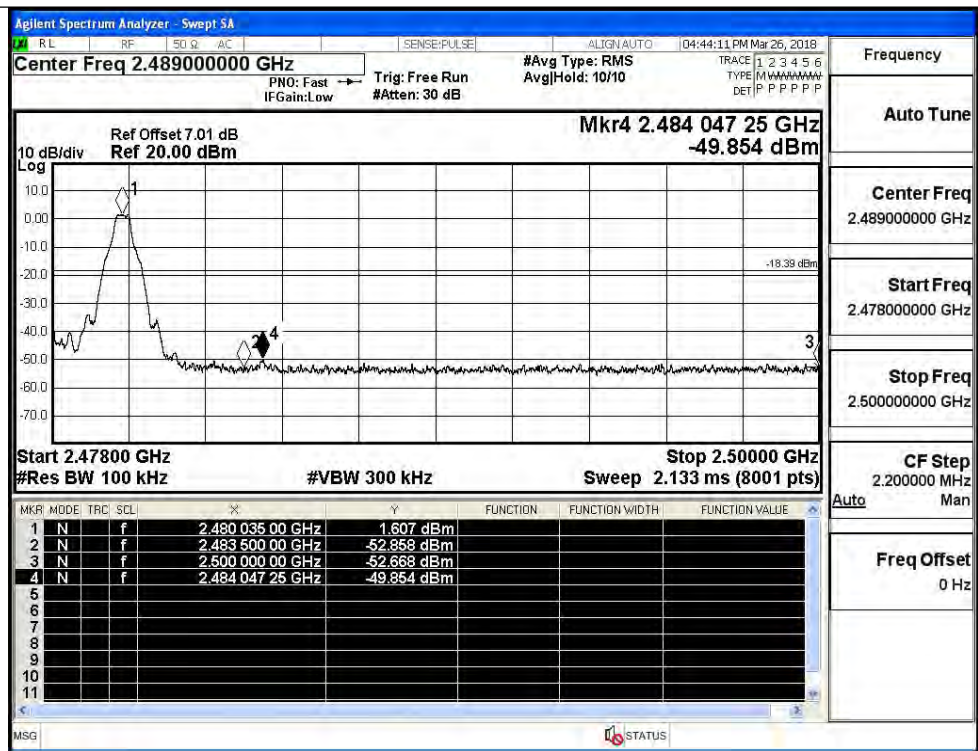
GFSK/LCH/No Hop



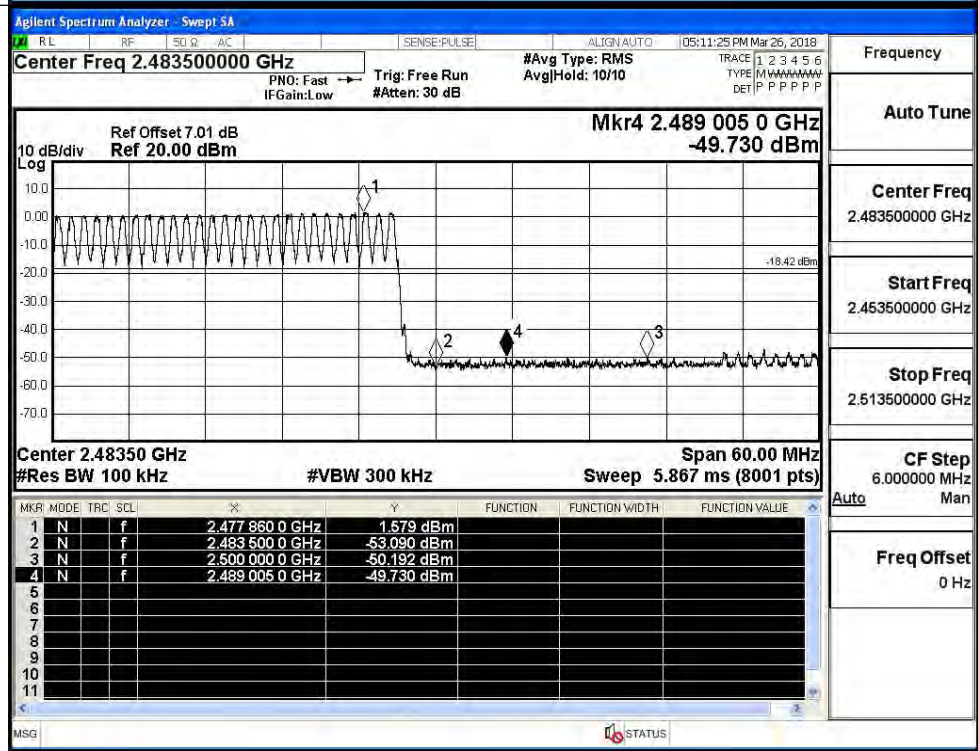
GFSK/LCH/Hop



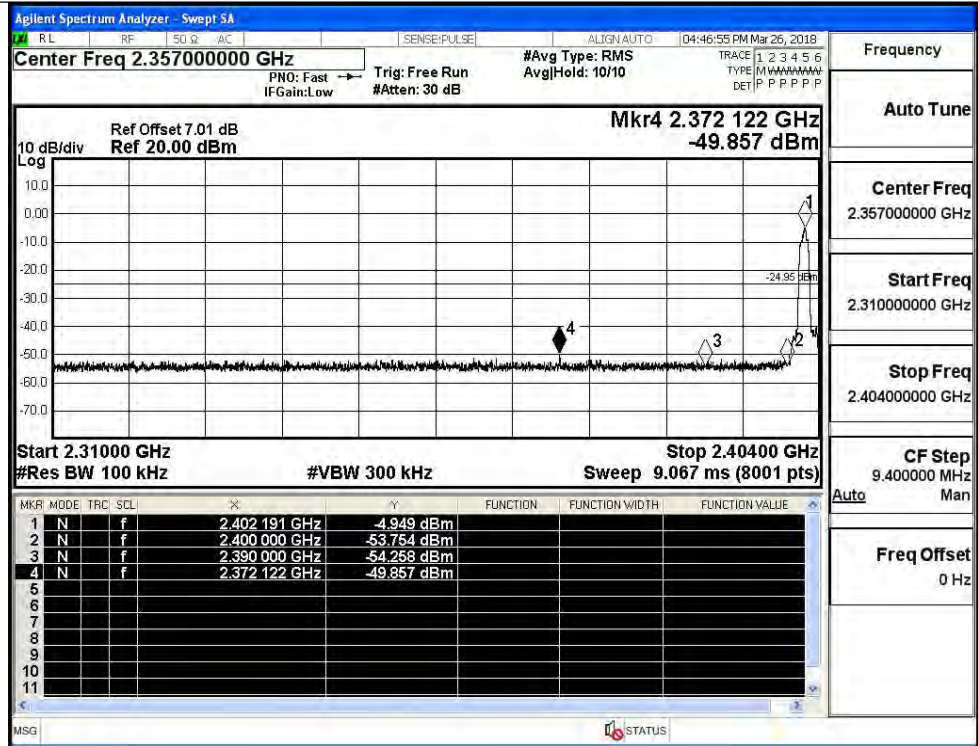
GFSK/HCH/No Hop



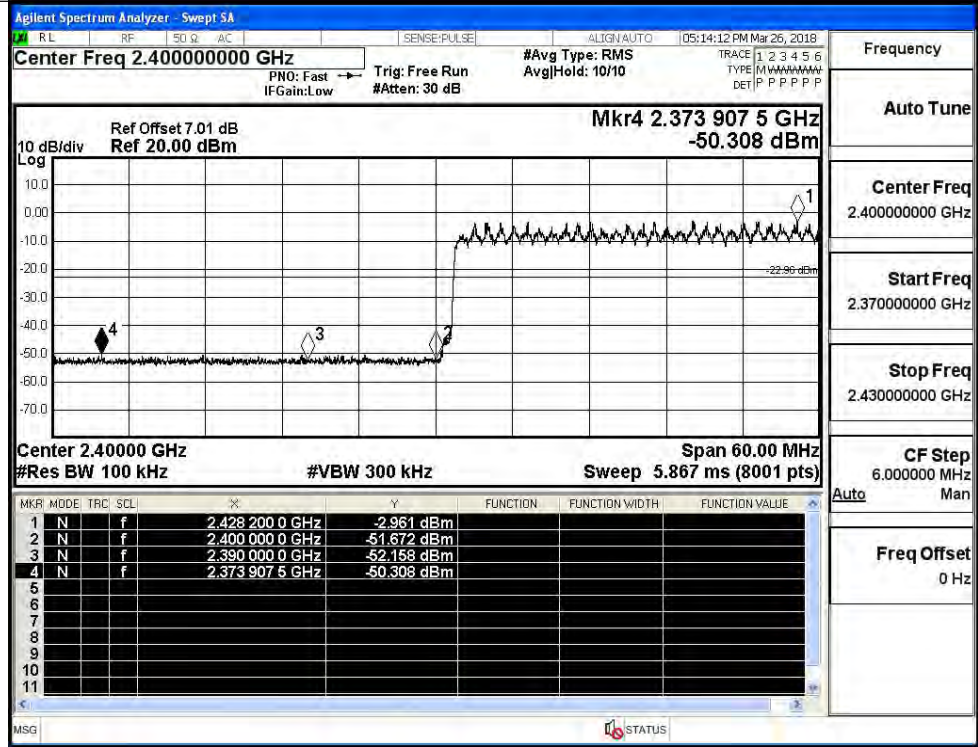
GFSK/HCH/Hop



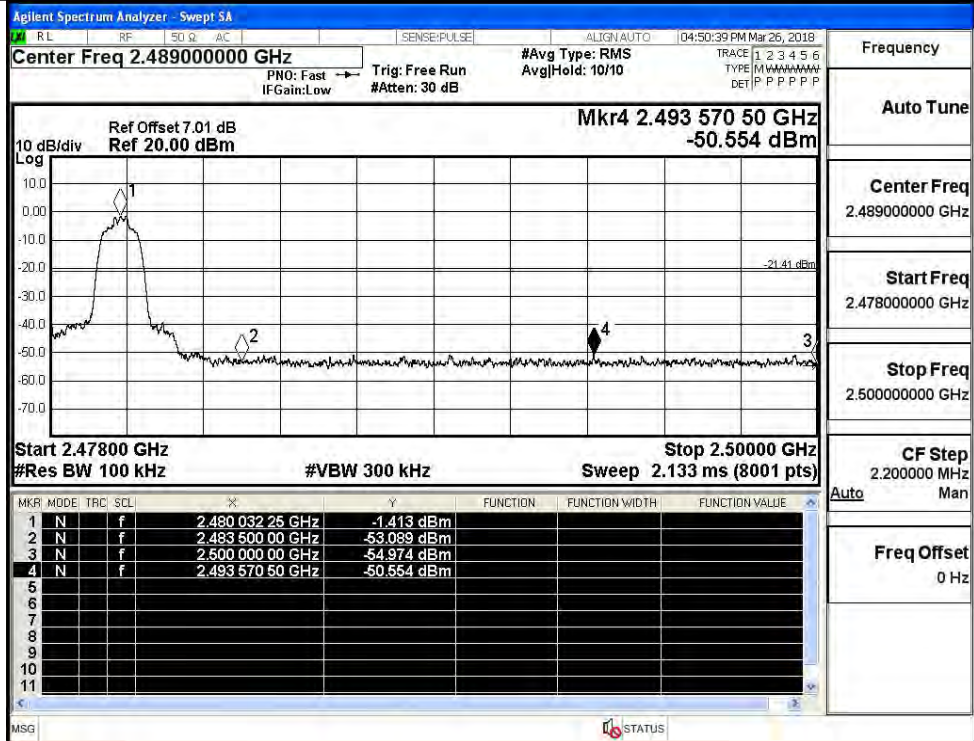
$\pi/4$ DQPSK/LCH/No Hop



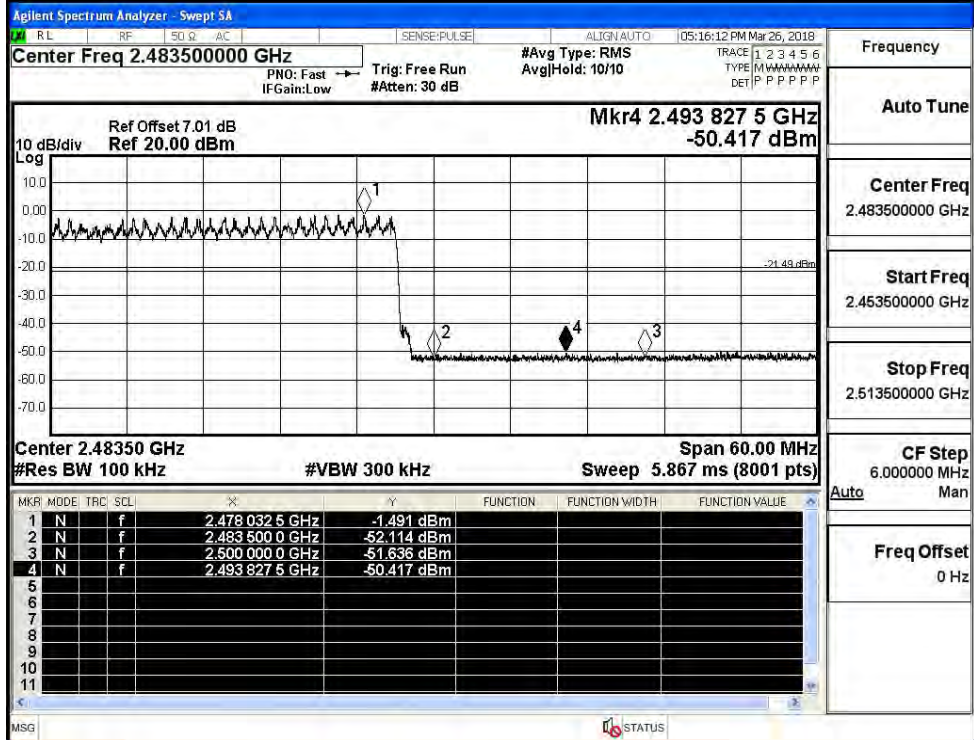
$\pi/4$ DQPSK/LCH/Hop



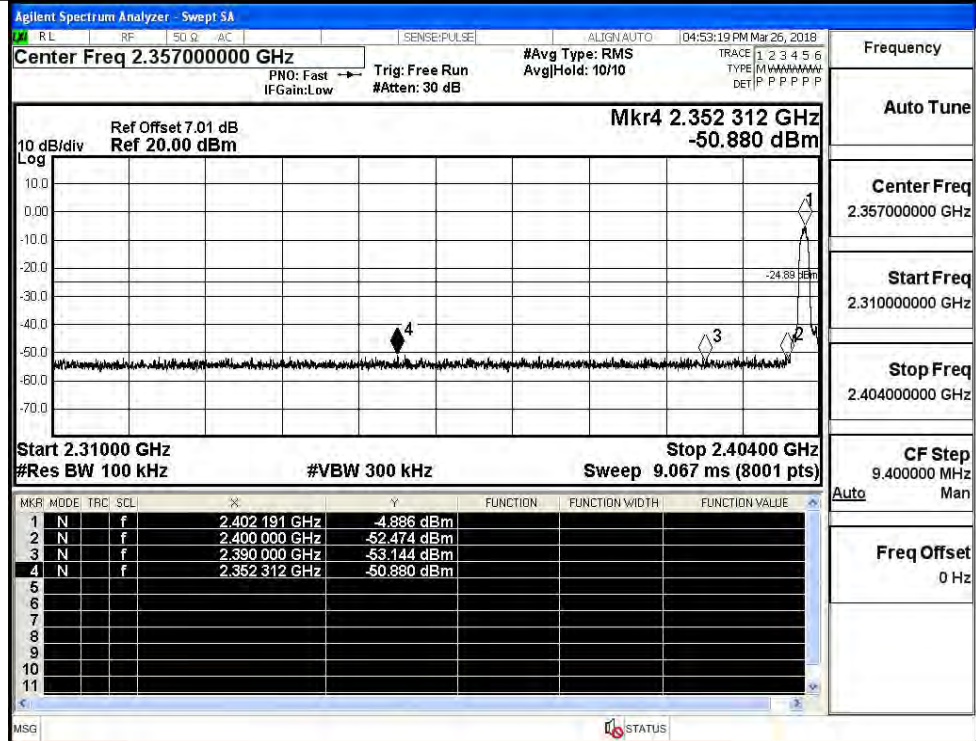
$\pi/4$ DQPSK/HCH/No Hop



$\pi/4$ DQPSK/HCH/Hop

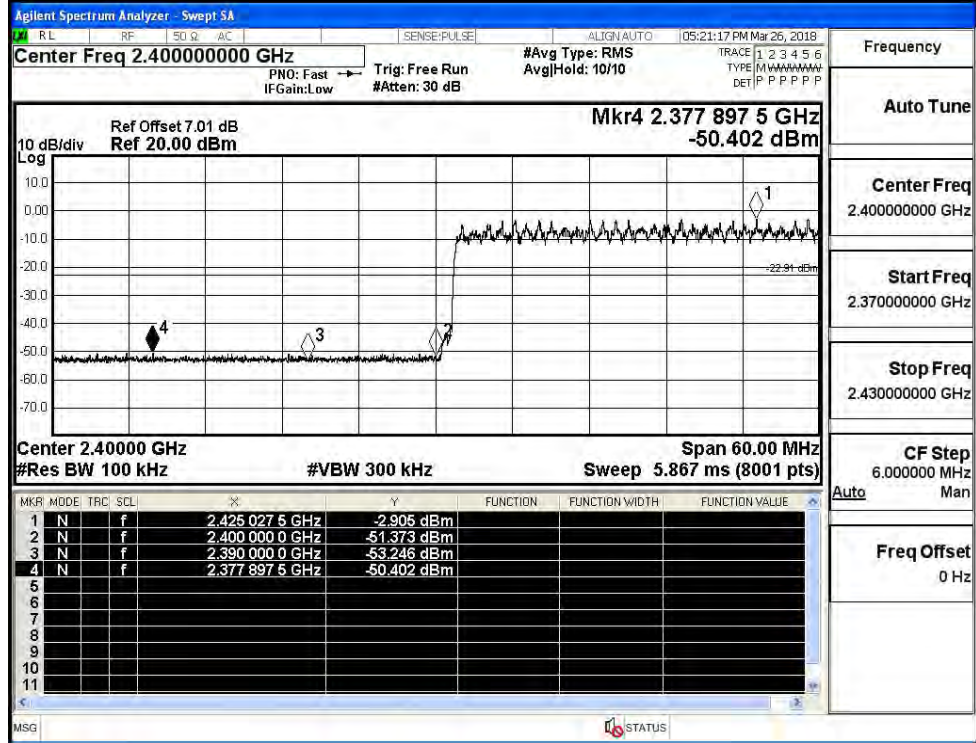


8DPSK/LCH/No Hop



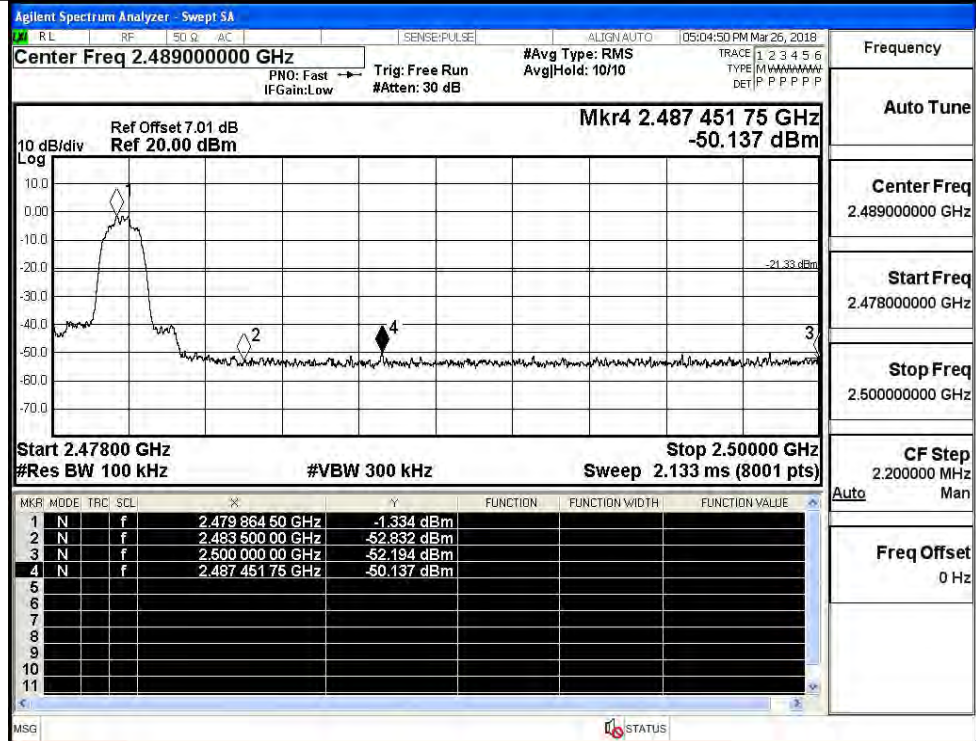
Frequency
Auto Tune
Center Freq 2.357000000 GHz
Start Freq 2.310000000 GHz
Stop Freq 2.404000000 GHz
CF Step 9.400000 MHz
Freq Offset 0 Hz

8DPSK/LCH/Hop

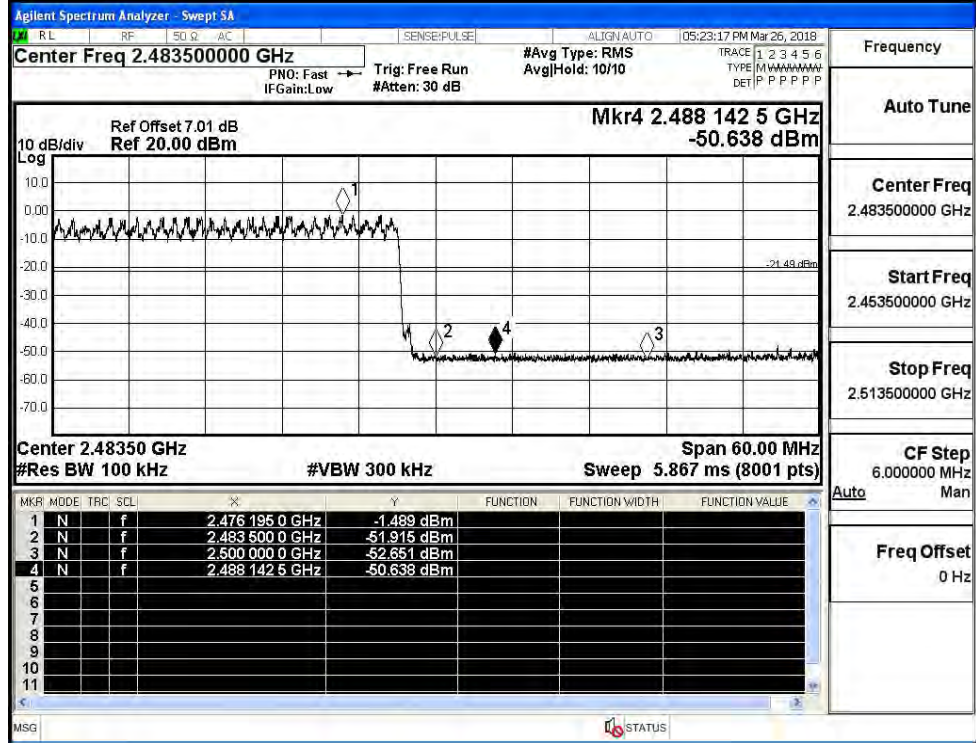


Frequency
Auto Tune
Center Freq 2.400000000 GHz
Start Freq 2.370000000 GHz
Stop Freq 2.430000000 GHz
CF Step 6.000000 MHz
Freq Offset 0 Hz

8DPSK/HCH/No Hop



8DPSK/HCH/Hop

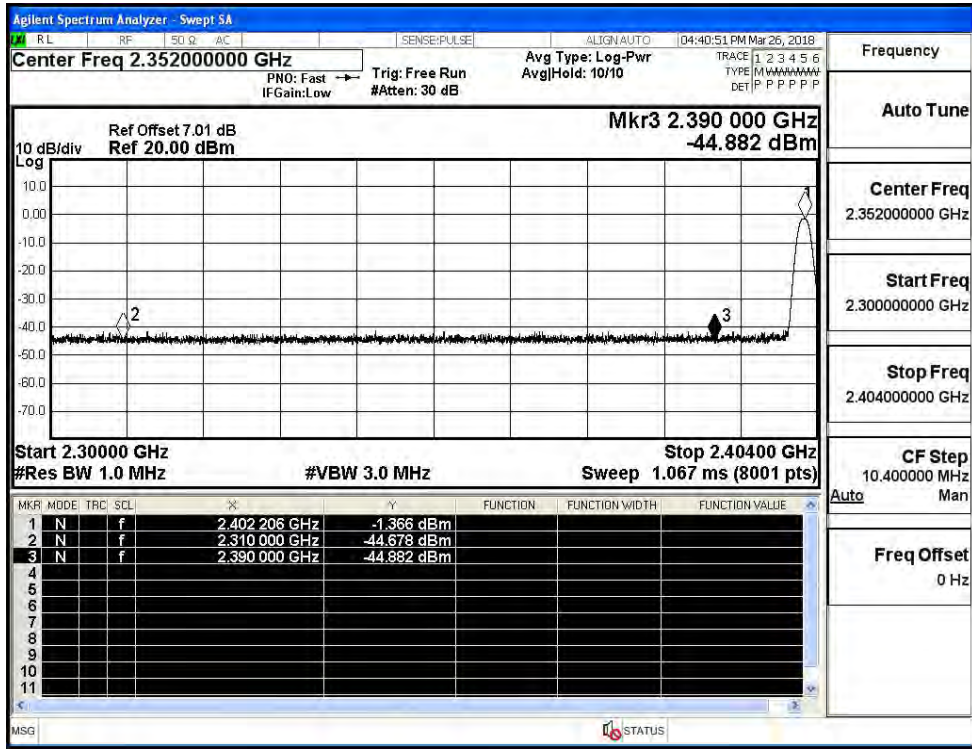




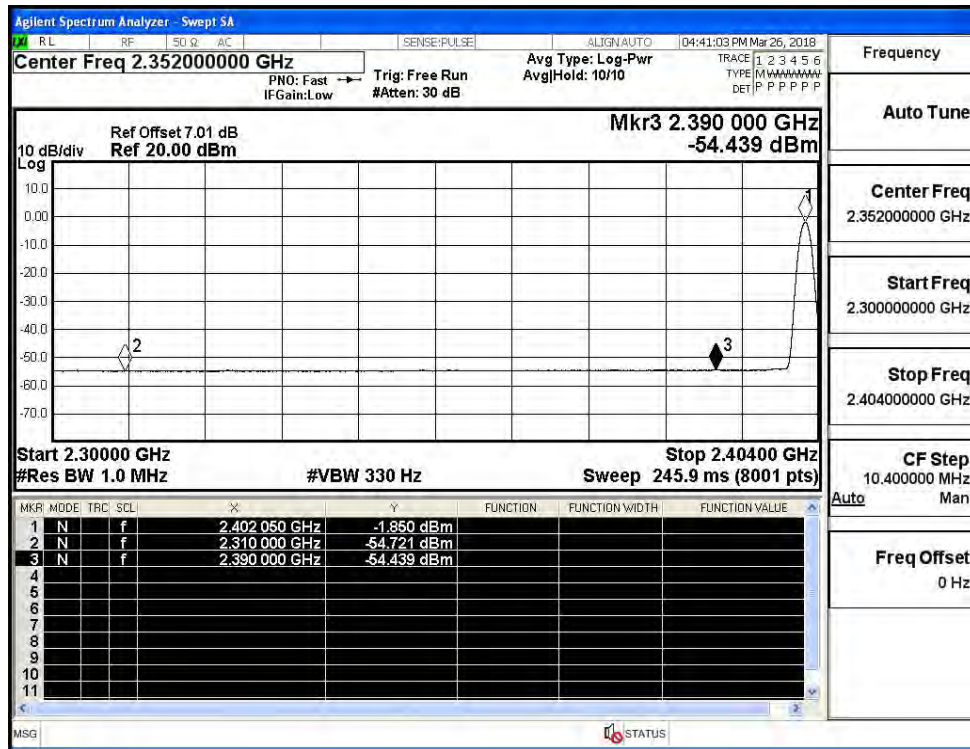
## A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-44.68	2.0	0	52.58	PEAK	74	PASS
	Off	2310.0	-54.72	2.0	0	42.54	AV	54	PASS
	Off	2390.0	-44.88	2.0	0	52.38	PEAK	74	PASS
	Off	2390.0	-54.44	2.0	0	42.82	AV	54	PASS
	Off	2483.5	-43.50	2.0	0	53.76	PEAK	74	PASS
	Off	2483.5	-53.34	2.0	0	43.92	AV	54	PASS
	Off	2500.0	-44.88	2.0	0	52.38	PEAK	74	PASS
	Off	2500.0	-53.99	2.0	0	43.27	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-44.15	2.0	0	53.11	PEAK	74	PASS
	Off	2310.0	-54.70	2.0	0	42.56	AV	54	PASS
	Off	2390.0	-44.54	2.0	0	52.72	PEAK	74	PASS
	Off	2390.0	-54.37	2.0	0	42.89	AV	54	PASS
	Off	2483.5	-42.98	2.0	0	54.28	PEAK	74	PASS
	Off	2483.5	-53.51	2.0	0	43.75	AV	54	PASS
	Off	2500.0	-43.14	2.0	0	54.12	PEAK	74	PASS
	Off	2500.0	-54.04	2.0	0	43.22	AV	54	PASS
8DPSK	Off	2310.0	-44.07	2.0	0	53.19	PEAK	74	PASS
	Off	2310.0	-54.72	2.0	0	42.54	AV	54	PASS
	Off	2390.0	-44.92	2.0	0	52.34	PEAK	74	PASS
	Off	2390.0	-54.45	2.0	0	42.81	AV	54	PASS
	Off	2483.5	-43.88	2.0	0	53.38	PEAK	74	PASS
	Off	2483.5	-53.72	2.0	0	43.54	AV	54	PASS
	Off	2500.0	-44.17	2.0	0	53.09	PEAK	74	PASS
	Off	2500.0	-54.06	2.0	0	43.2	AV	54	PASS

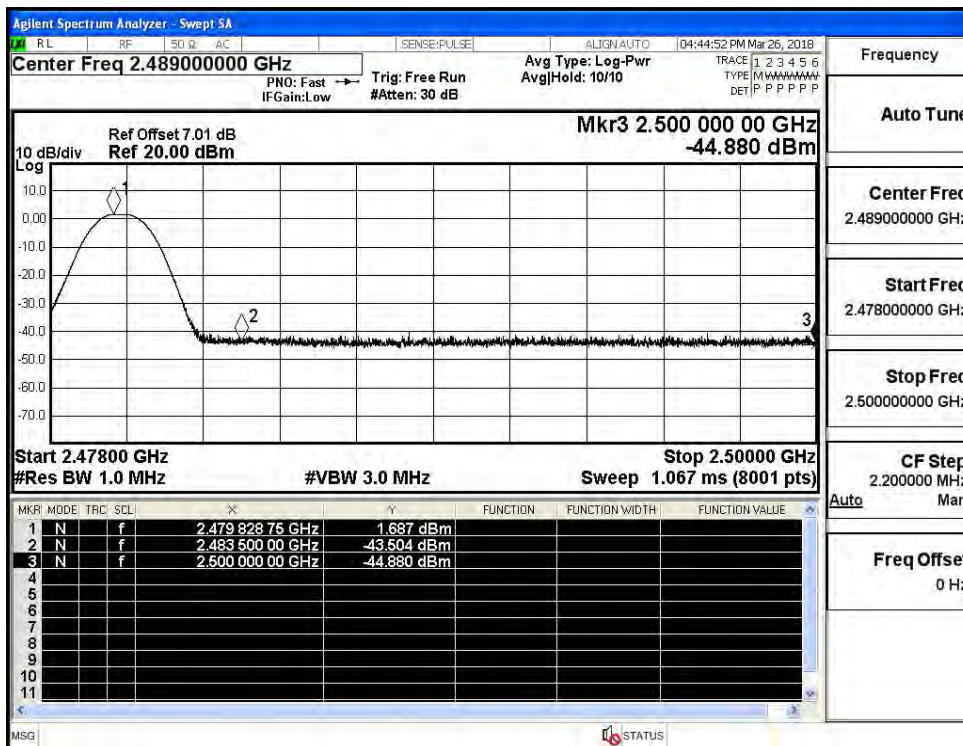
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_PEAK (Low Channel)



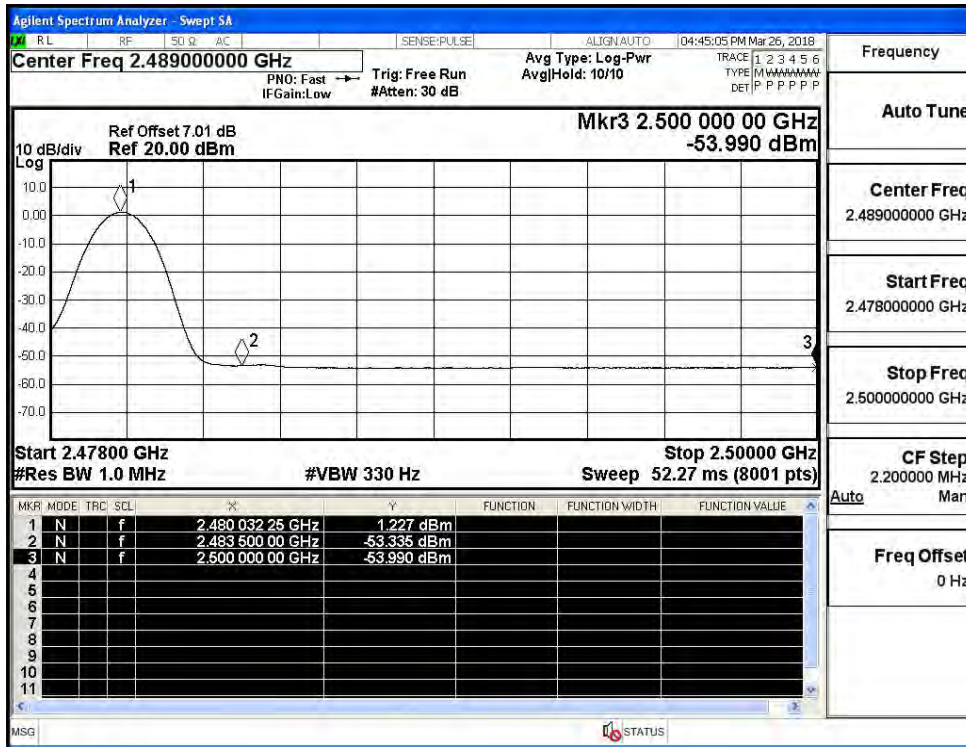
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (Low Channel)



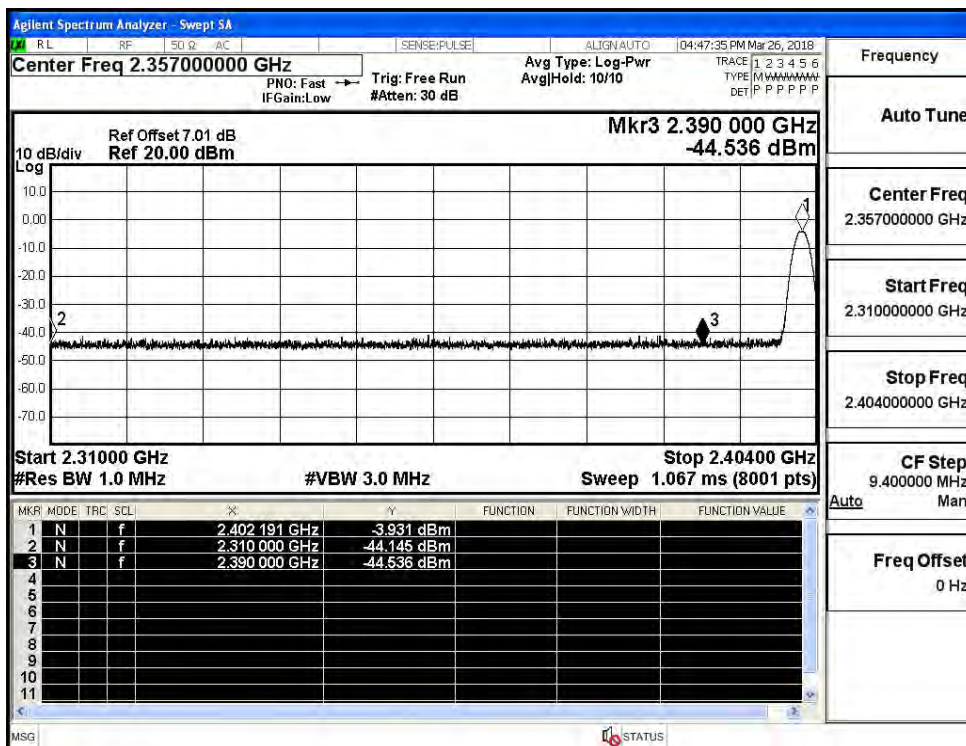
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_PEAK (High Channel)



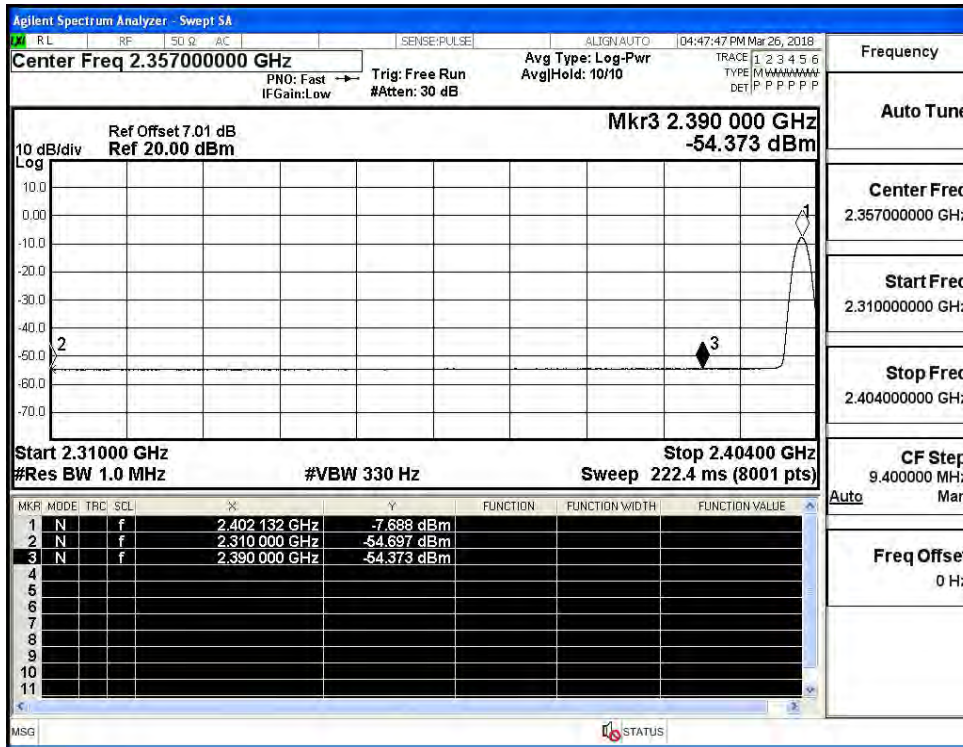
Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (High Channel)



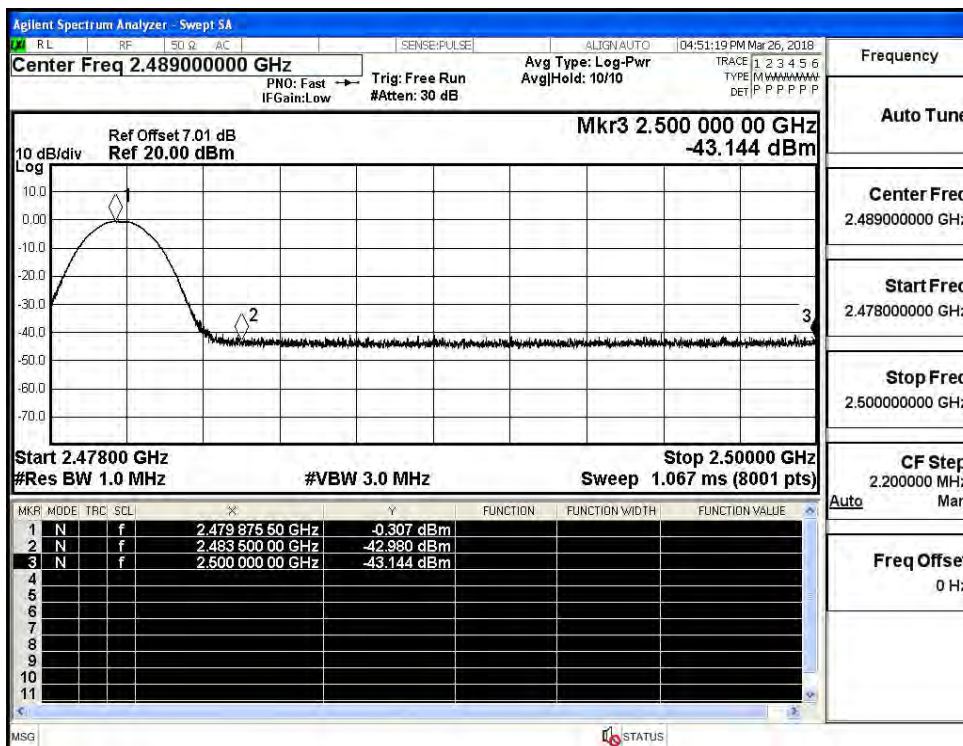
Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_PEAK (Low Channel)



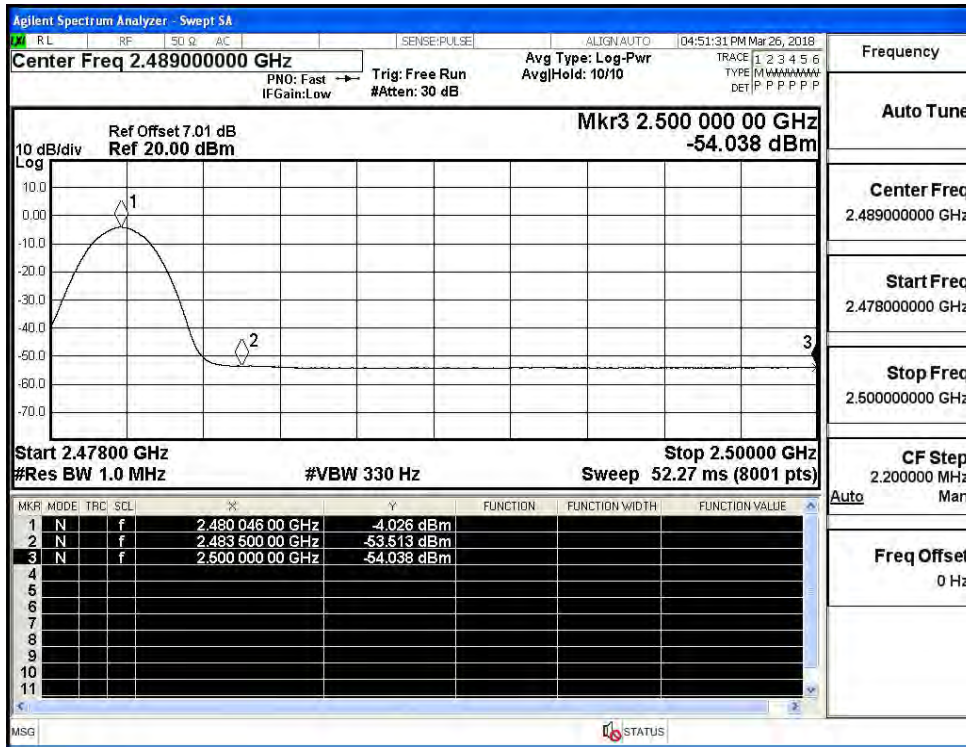
Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_Average (Low Channel)



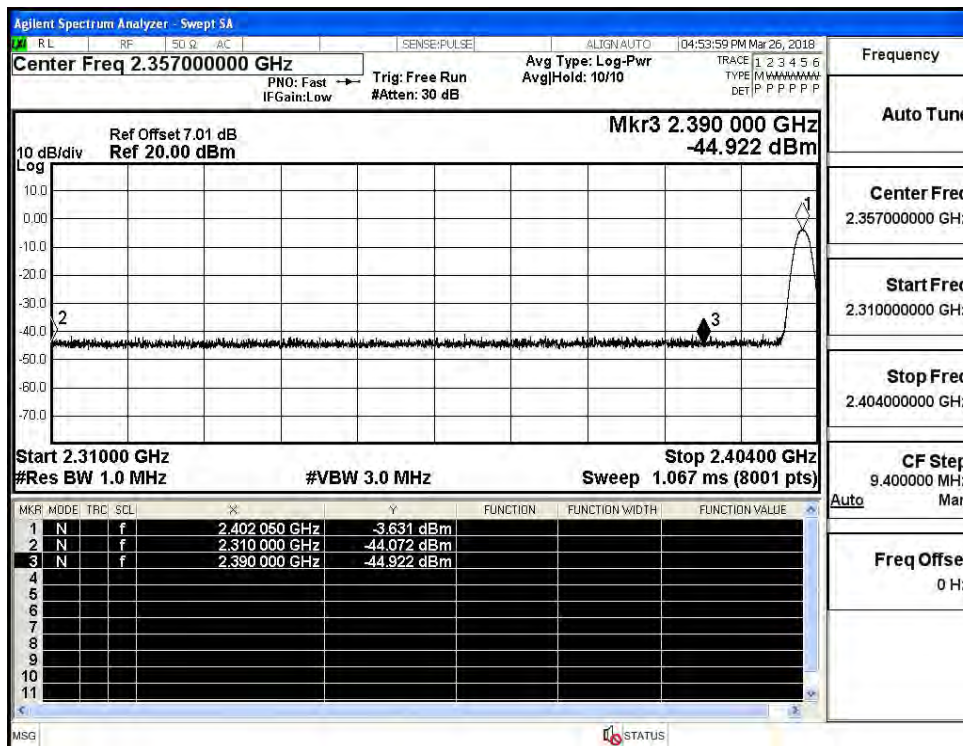
Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_PEAK (High Channel)



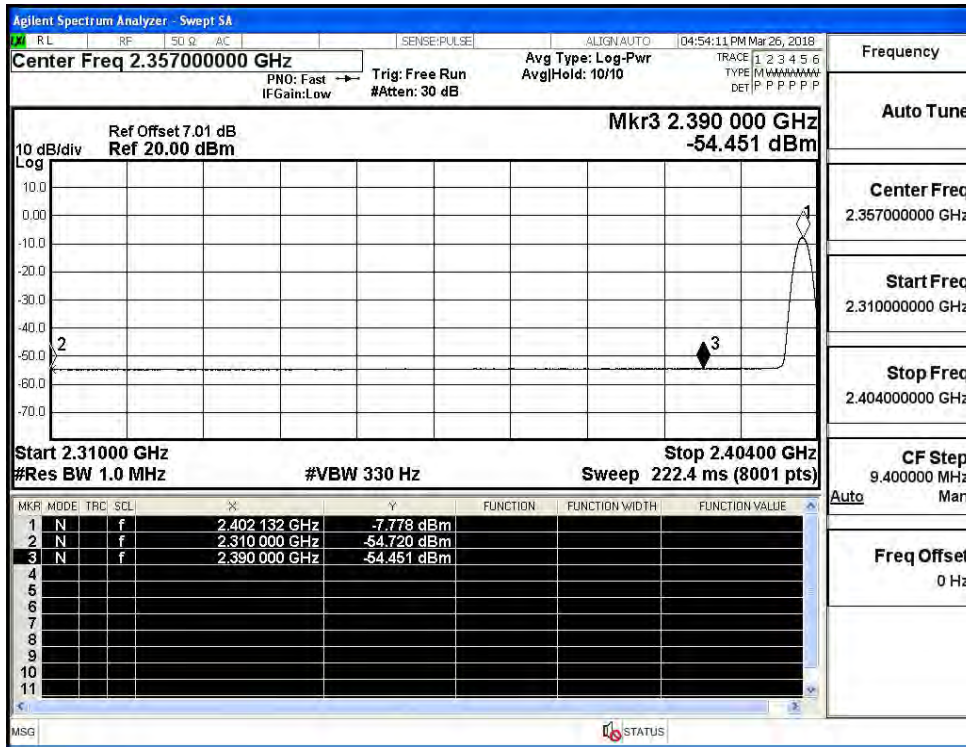
Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average (High Channel)



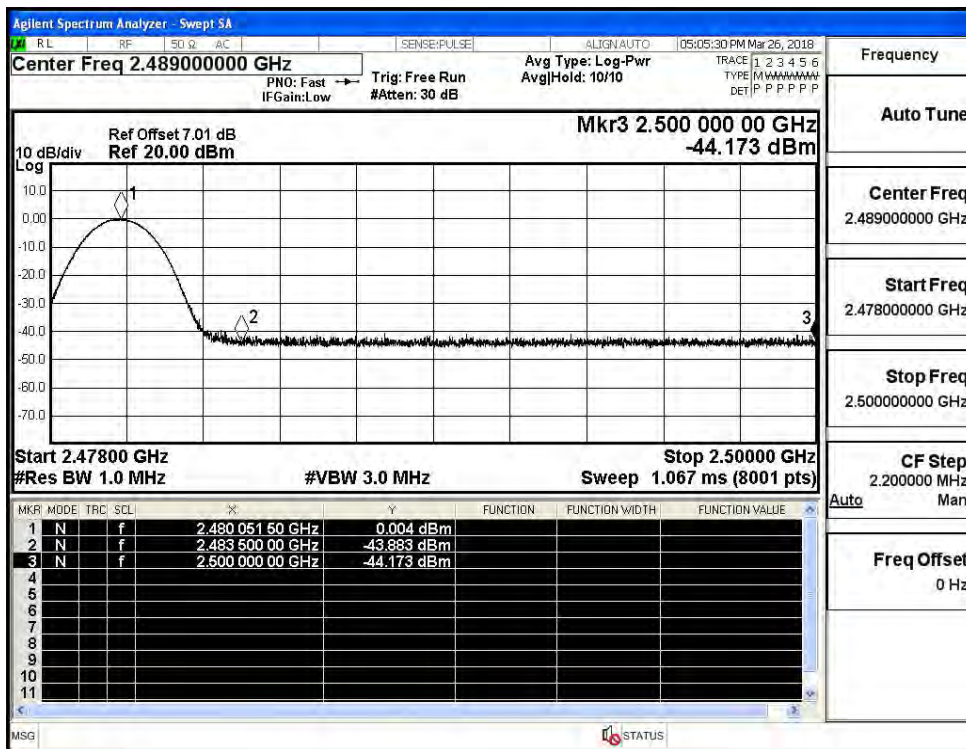
Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_PEAK (Low Channel)



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)

