

Appendix A

RF Test Data for BT V5.0(BDR/EDR) (Conducted Measurement)

Product Name: Kids Walkie Talkie with Wireless Speaker and Music walkie talkie

Trade Mark: N/A

Test Model: D8

Environmental Conditions

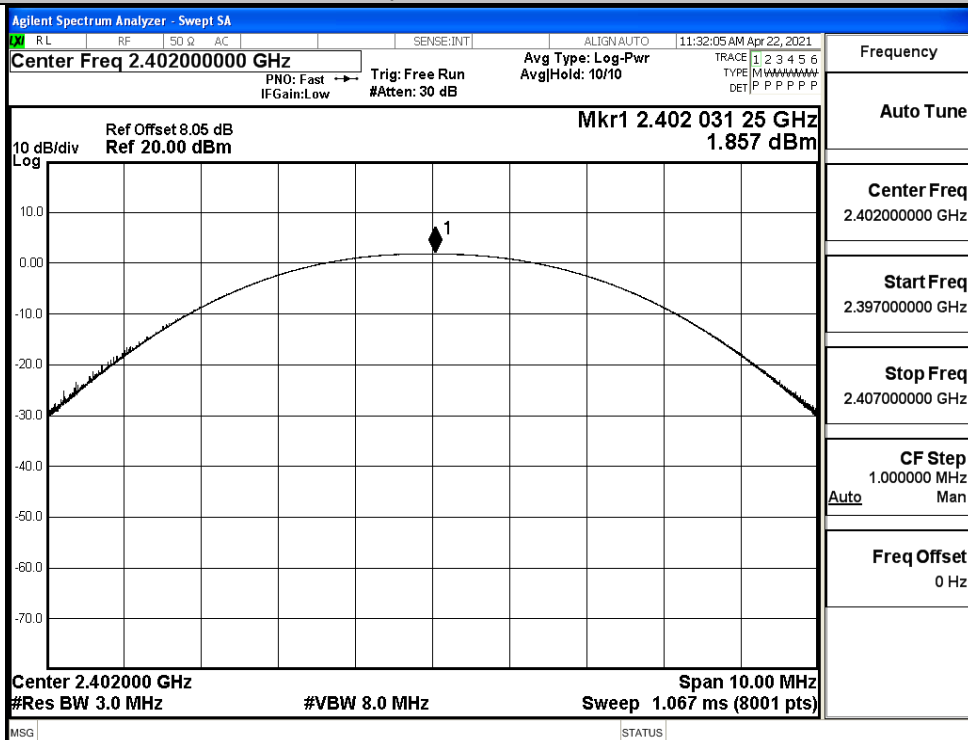
Temperature:	24.6 ° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ken He
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

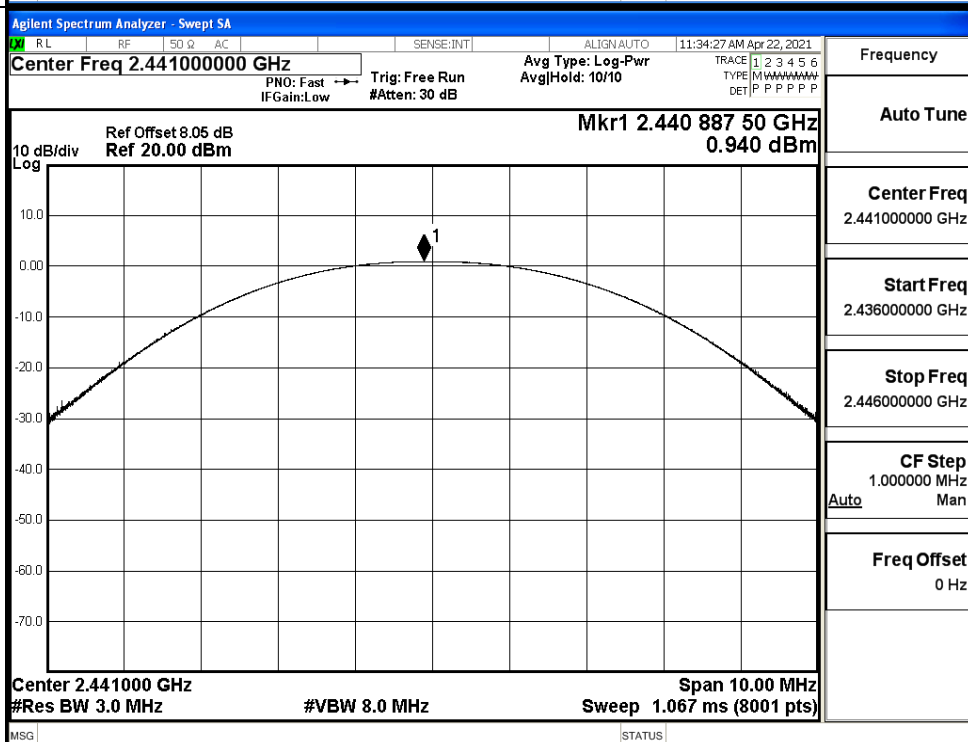
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	1.857	21	PASS
	MCH	0.940	21	PASS
	HCH	-0.310	21	PASS
$\pi/4$ DQPSK	LCH	4.065	21	PASS
	MCH	3.187	21	PASS
	HCH	1.932	21	PASS
8DPSK	LCH	4.571	21	PASS
	MCH	3.695	21	PASS
	HCH	2.403	21	PASS

Test Graphs

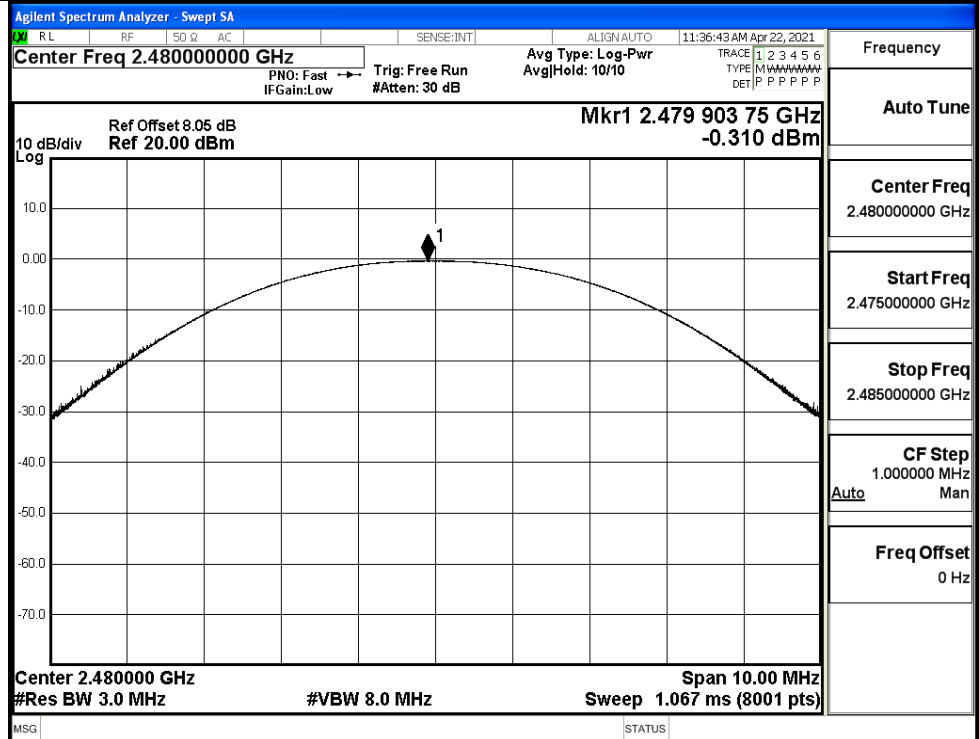
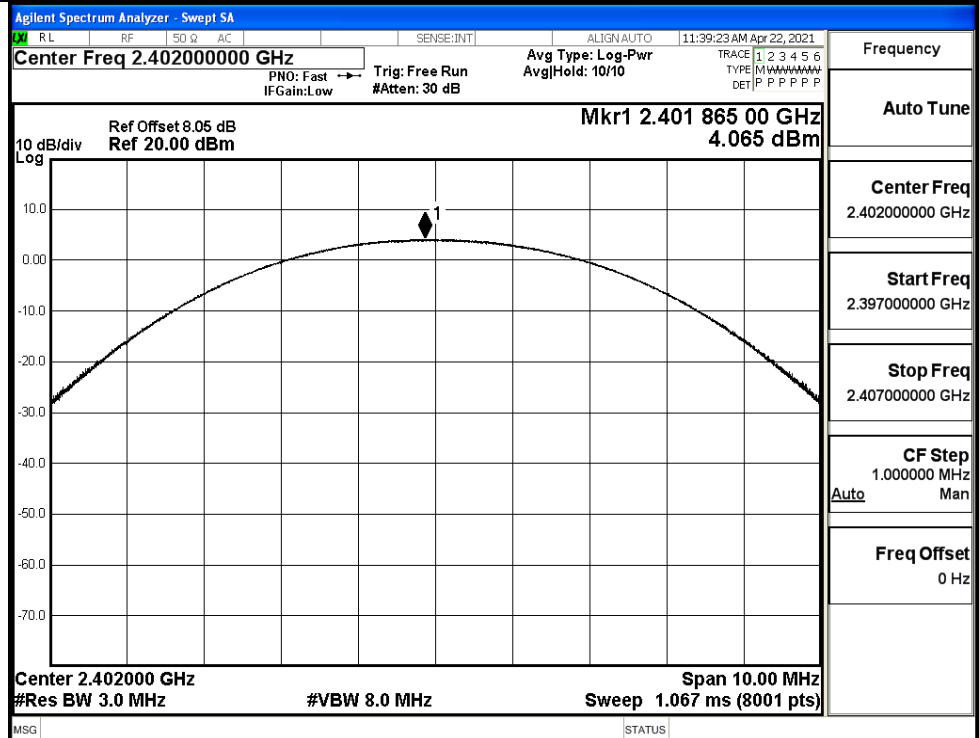
GFSK/LCH

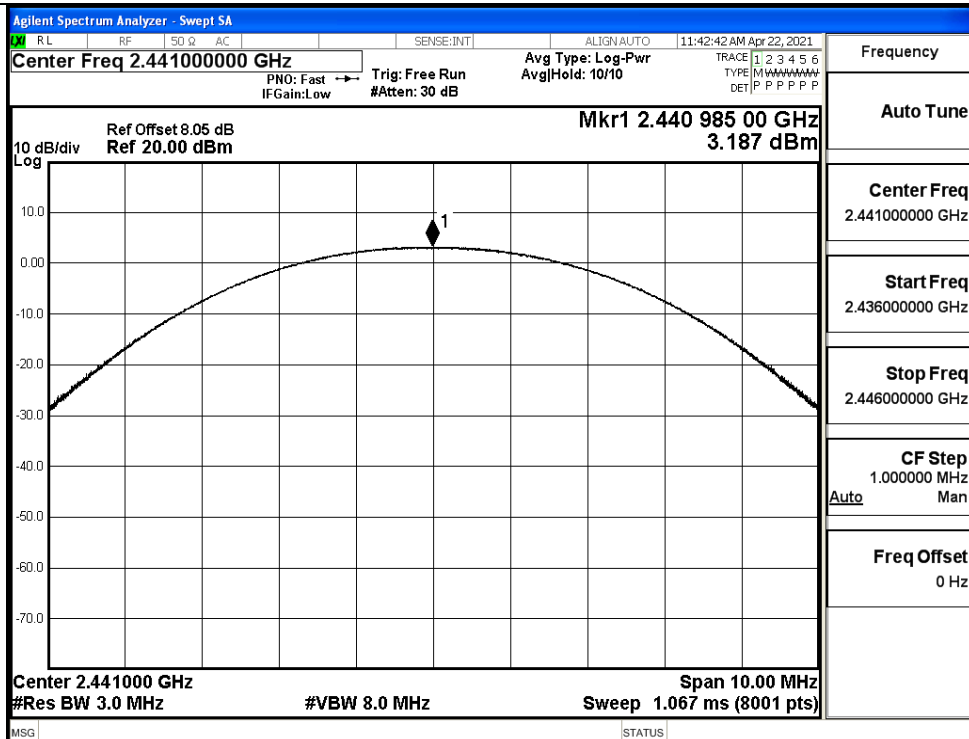
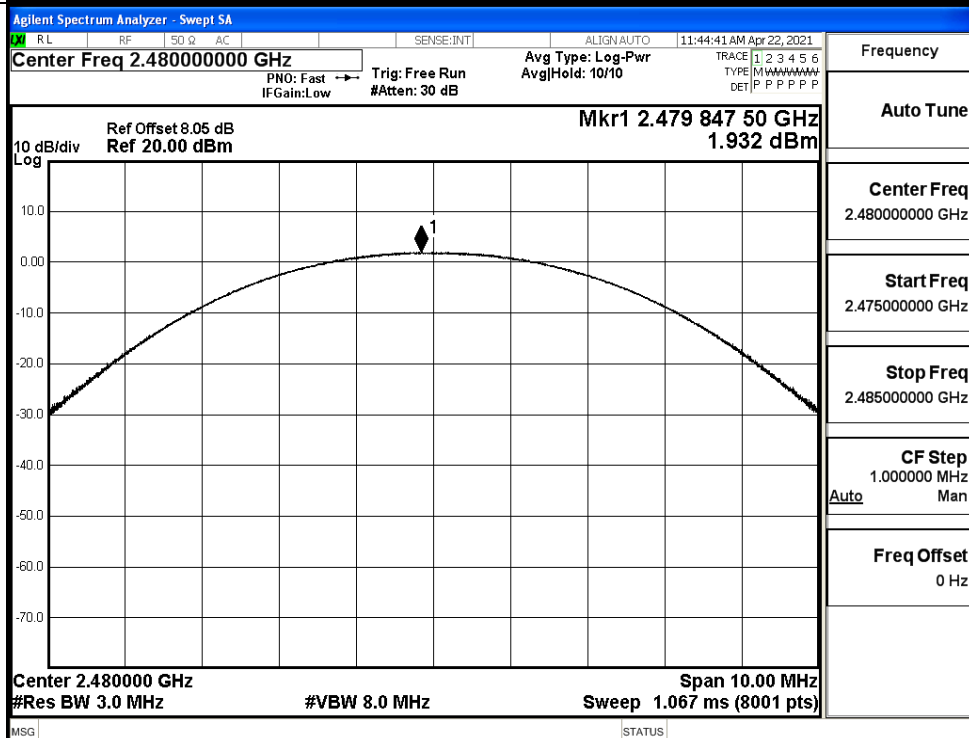


GFSK/MCH

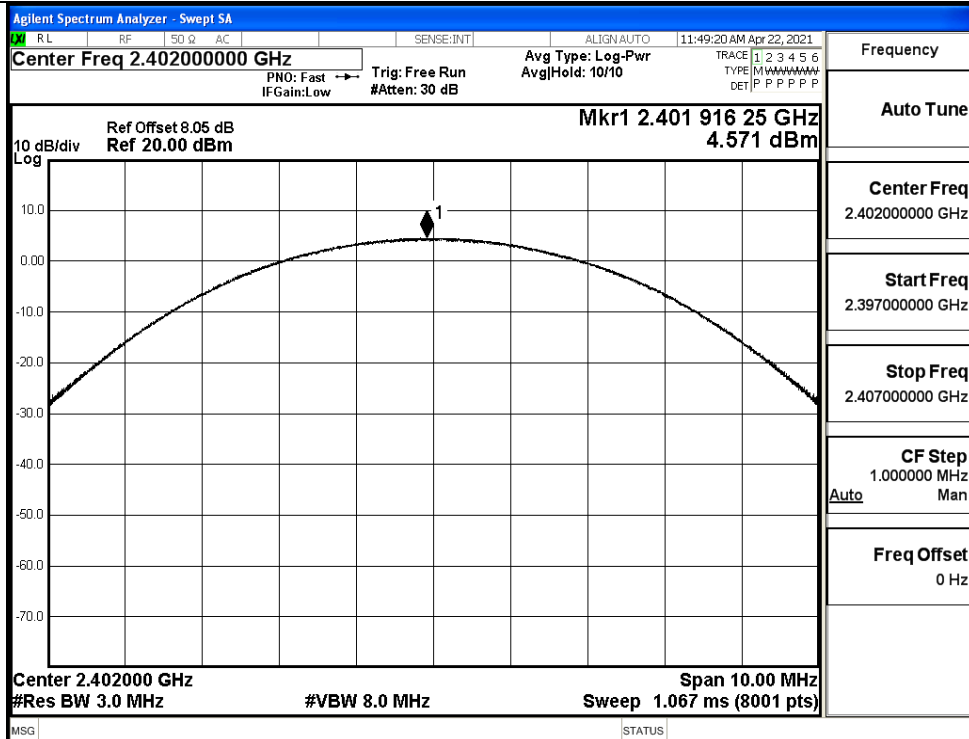


GFSK/HCH

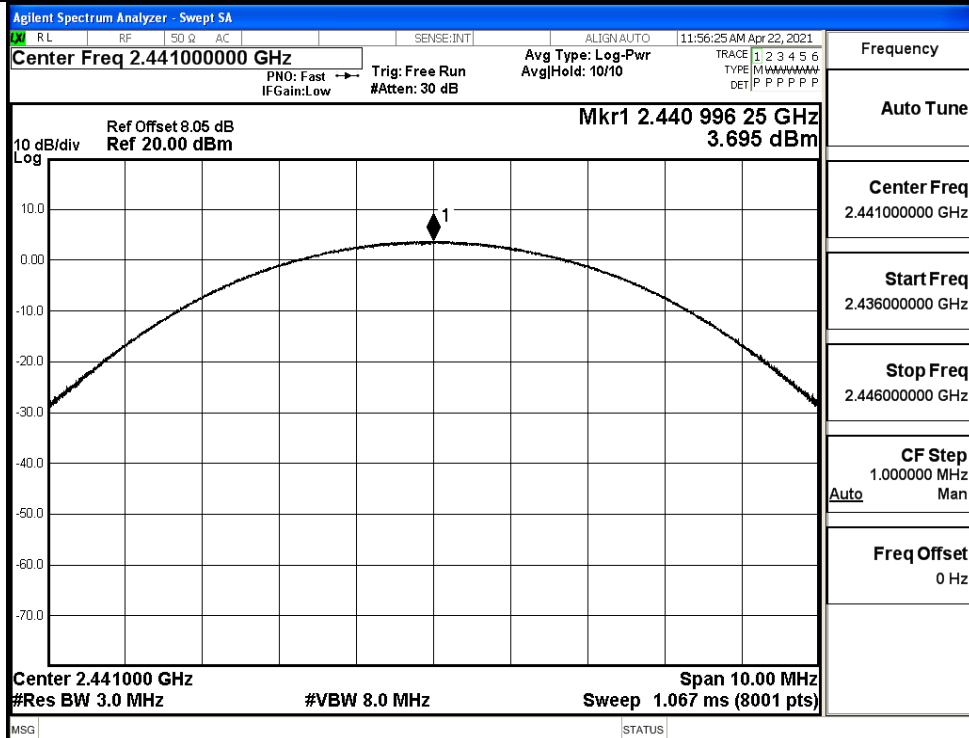
 $\pi/4$ DQPSK/LCH

$\pi/4$ DQPSK/MCH $\pi/4$ DQPSK/HCH

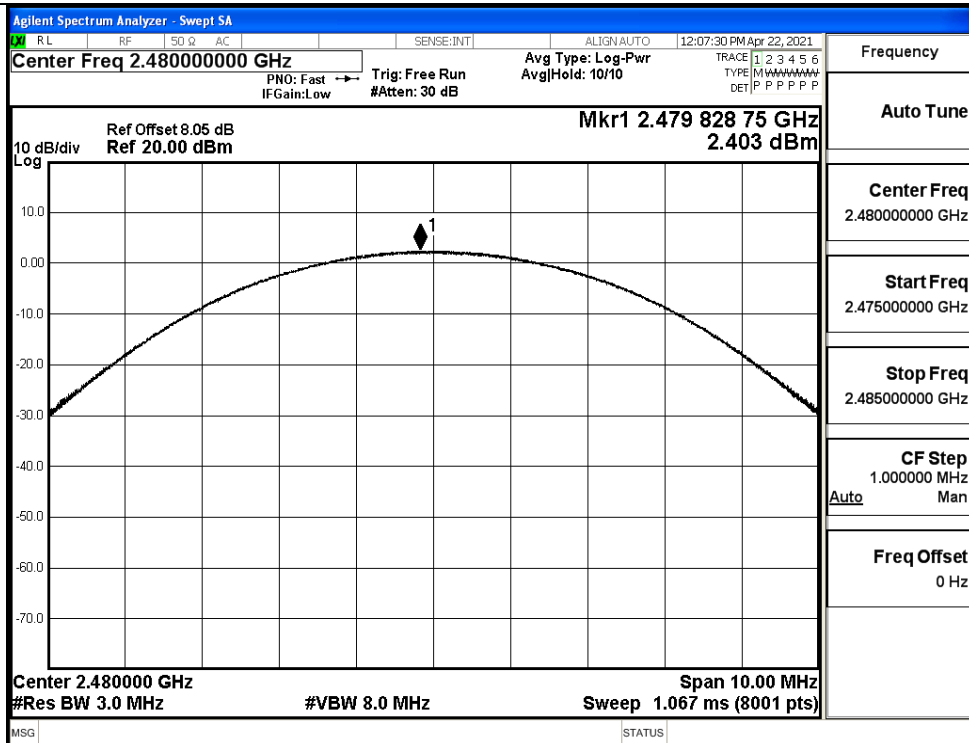
8DPSK/LCH



8DPSK/MCH



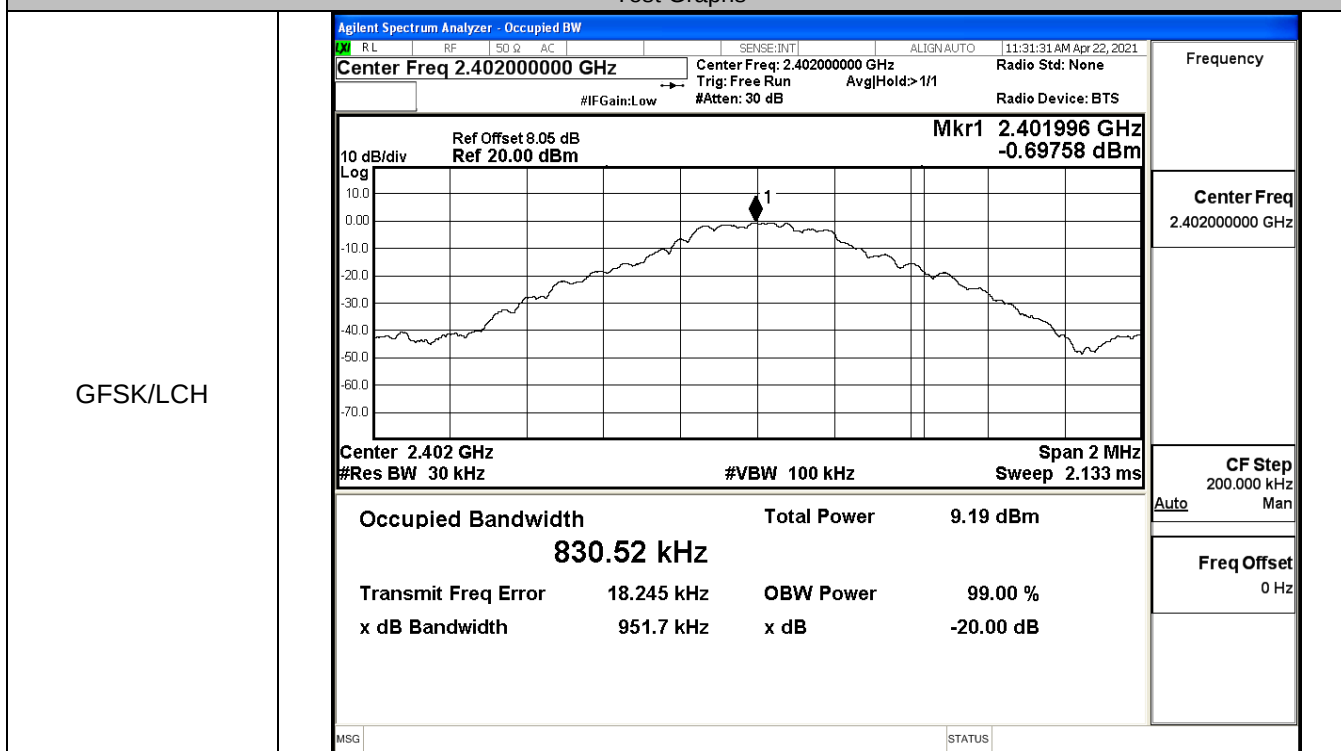
8DPSK/HCH



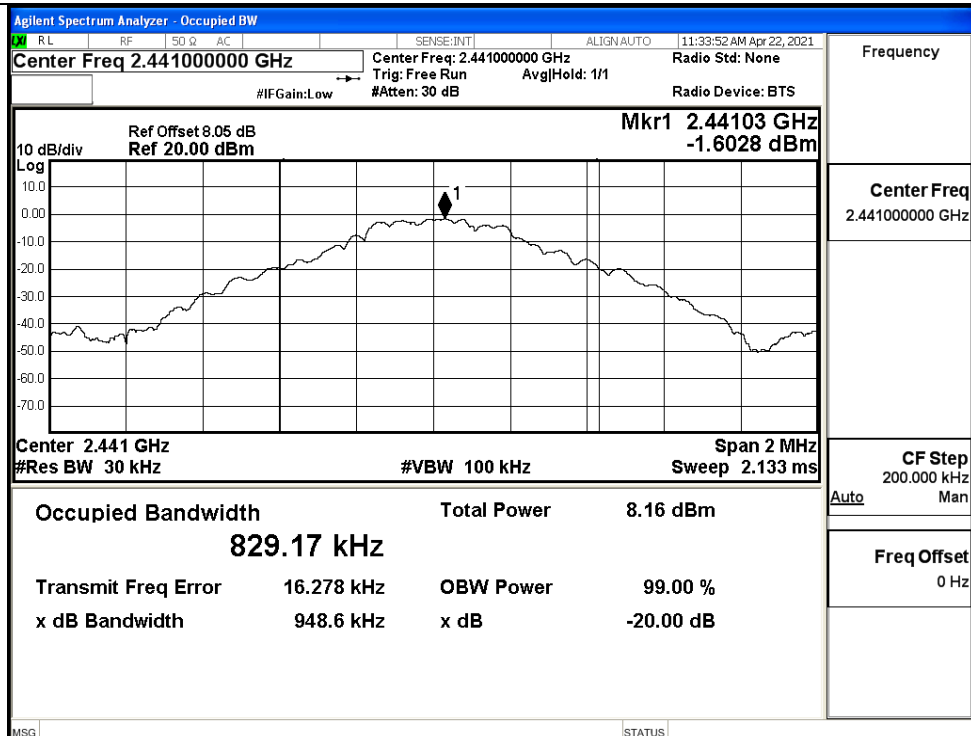
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9517	Not Specified	PASS
	MCH	0.9486	Not Specified	PASS
	HCH	0.9508	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.332	Not Specified	PASS
	MCH	1.331	Not Specified	PASS
	HCH	1.330	Not Specified	PASS
8DPSK	LCH	1.302	Not Specified	PASS
	MCH	1.305	Not Specified	PASS
	HCH	1.302	Not Specified	PASS

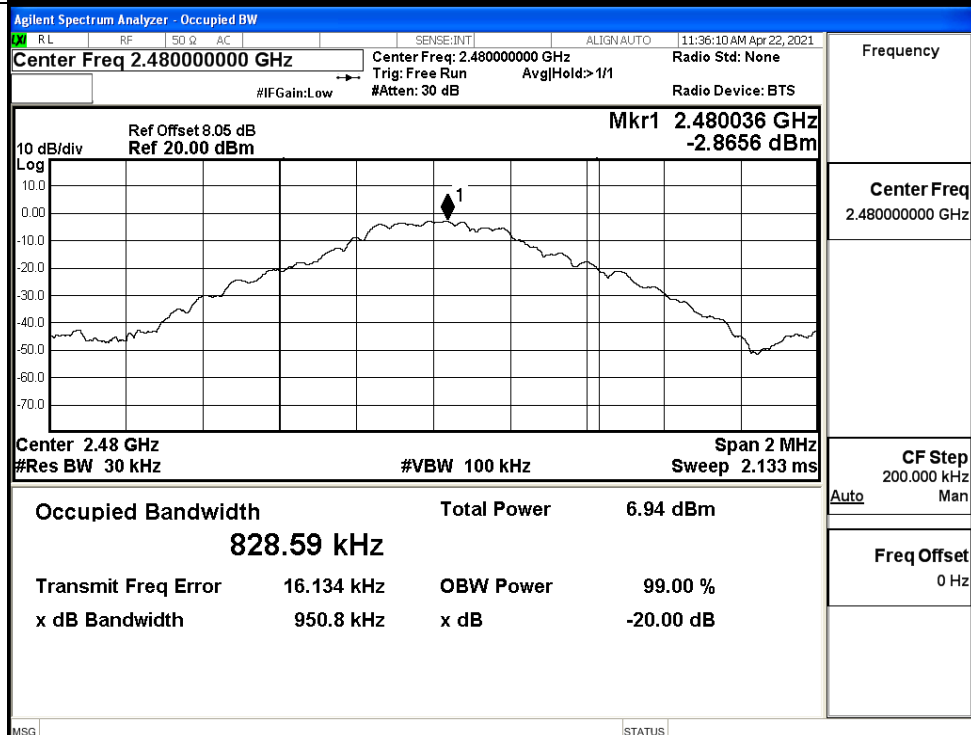
Test Graphs

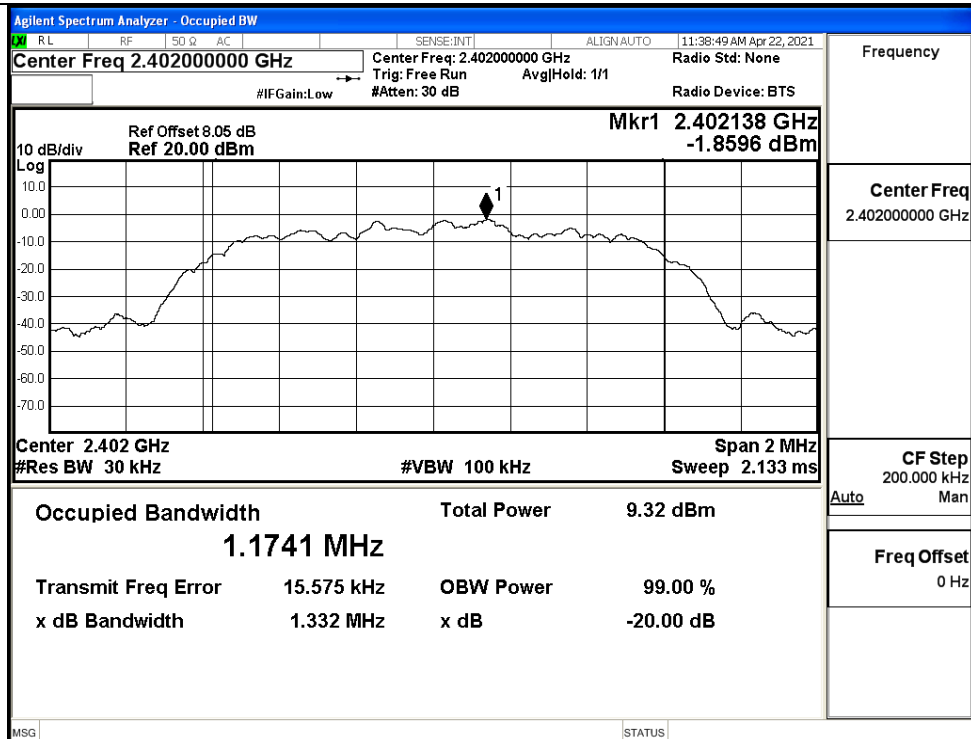
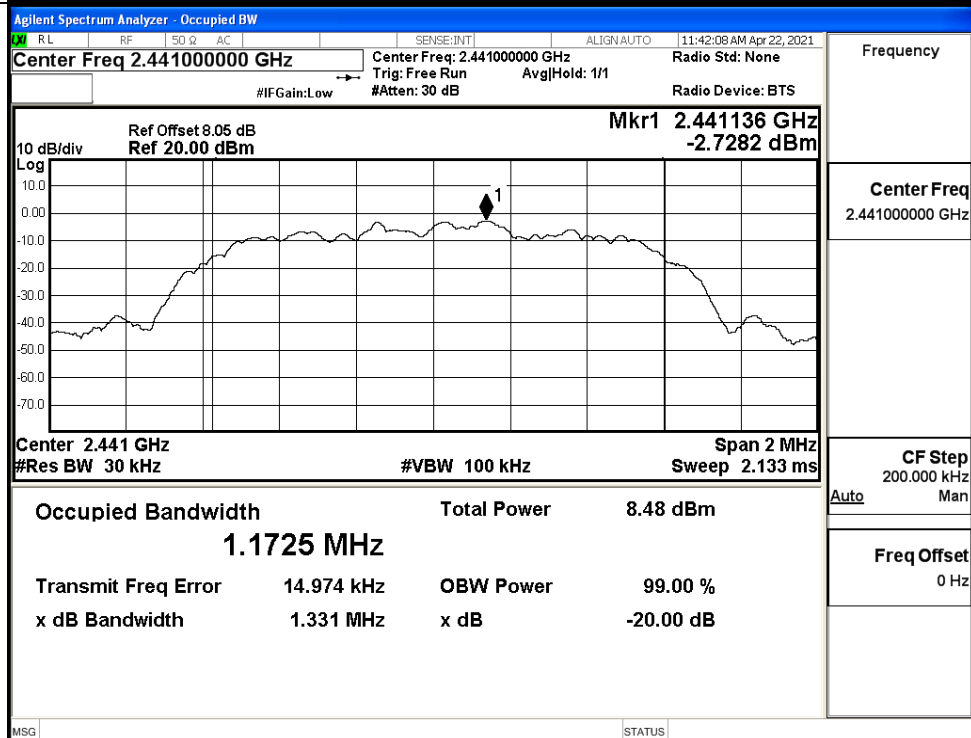


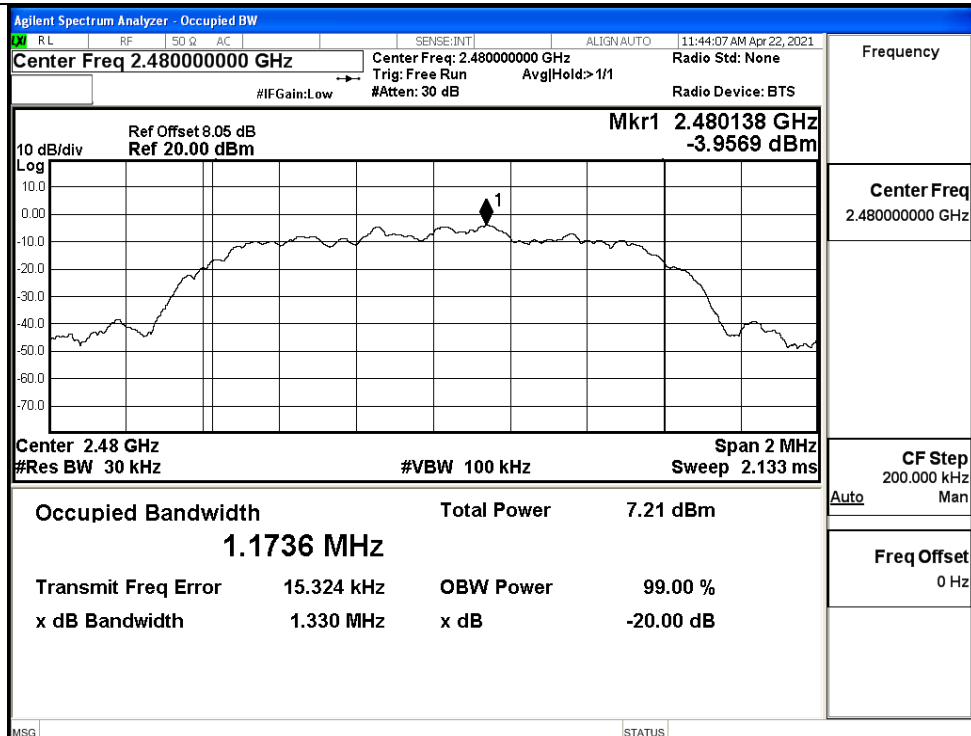
GFSK/MCH



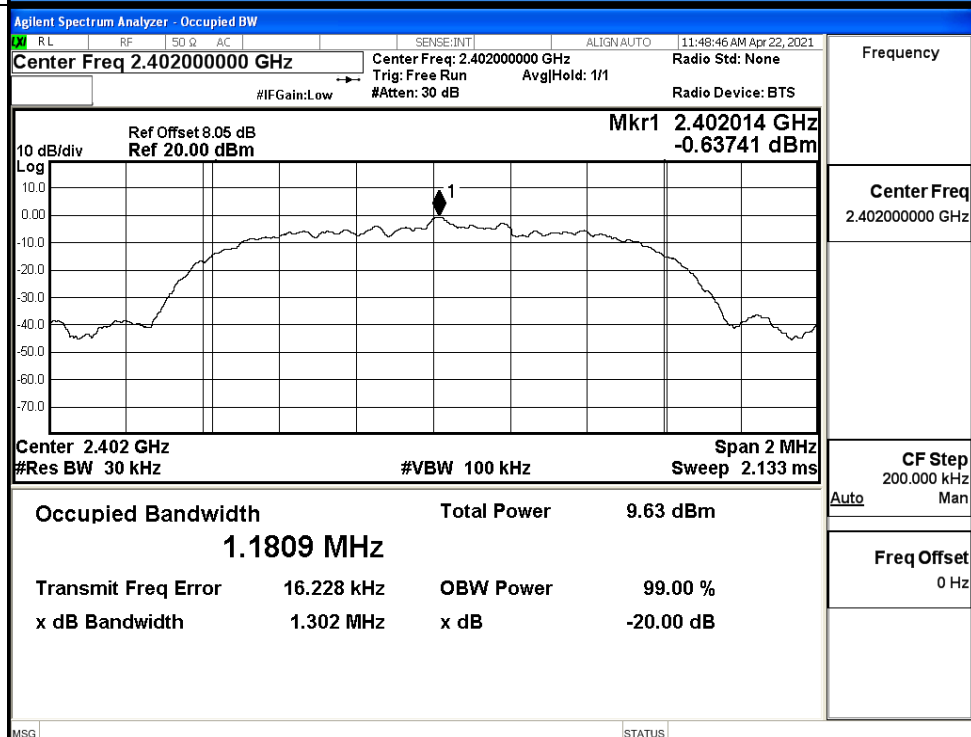
GFSK/HCH



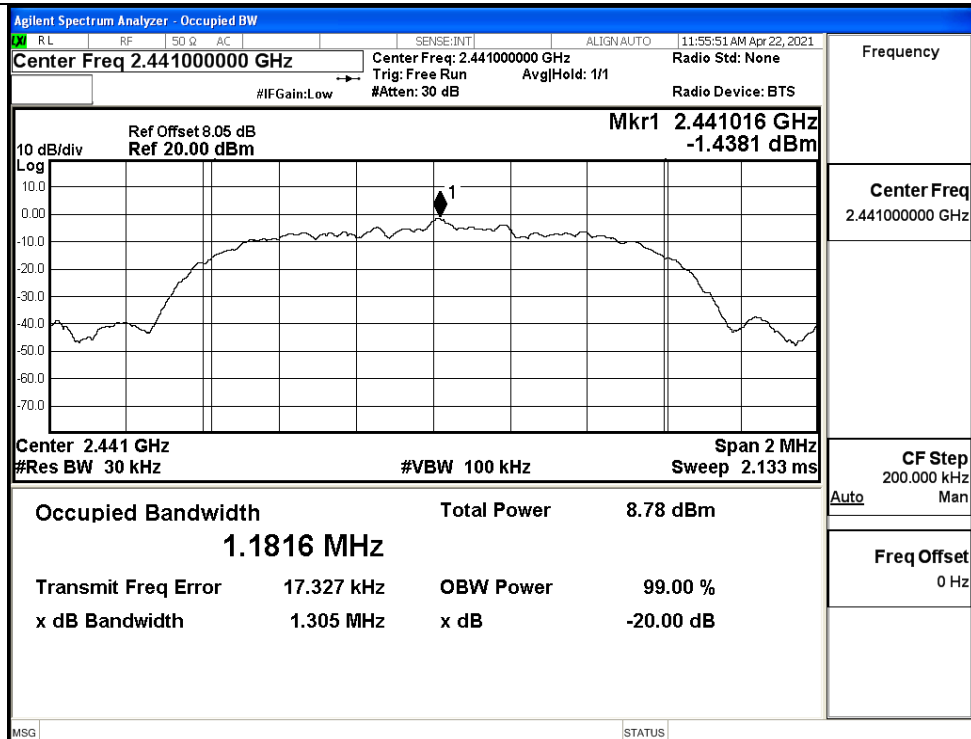
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

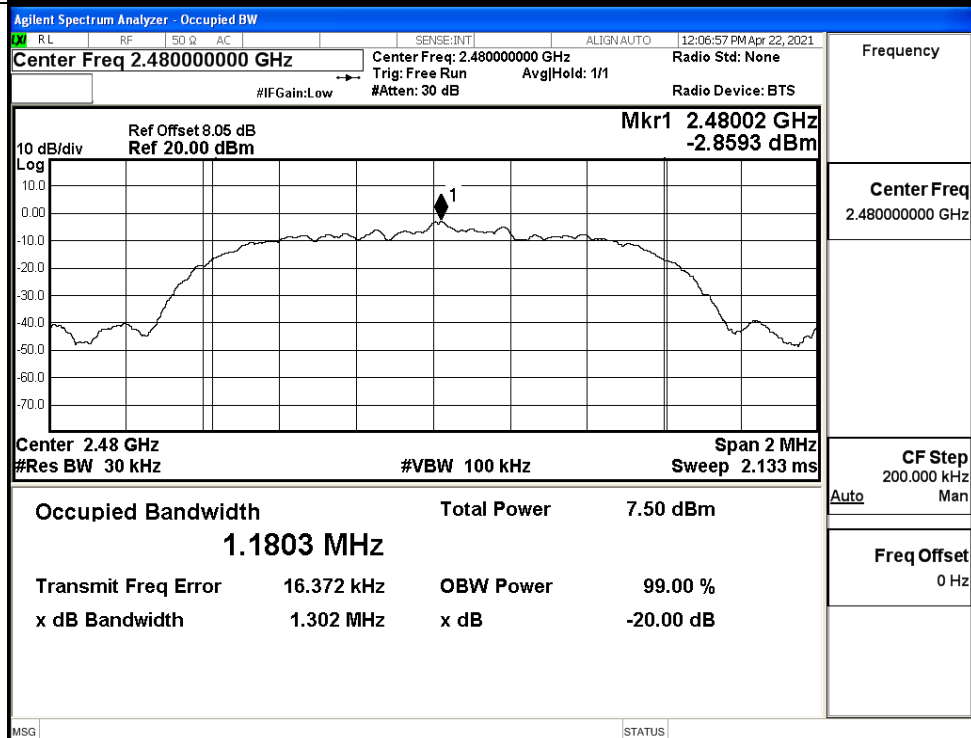
8DPSK/LCH



8DPSK/MCH



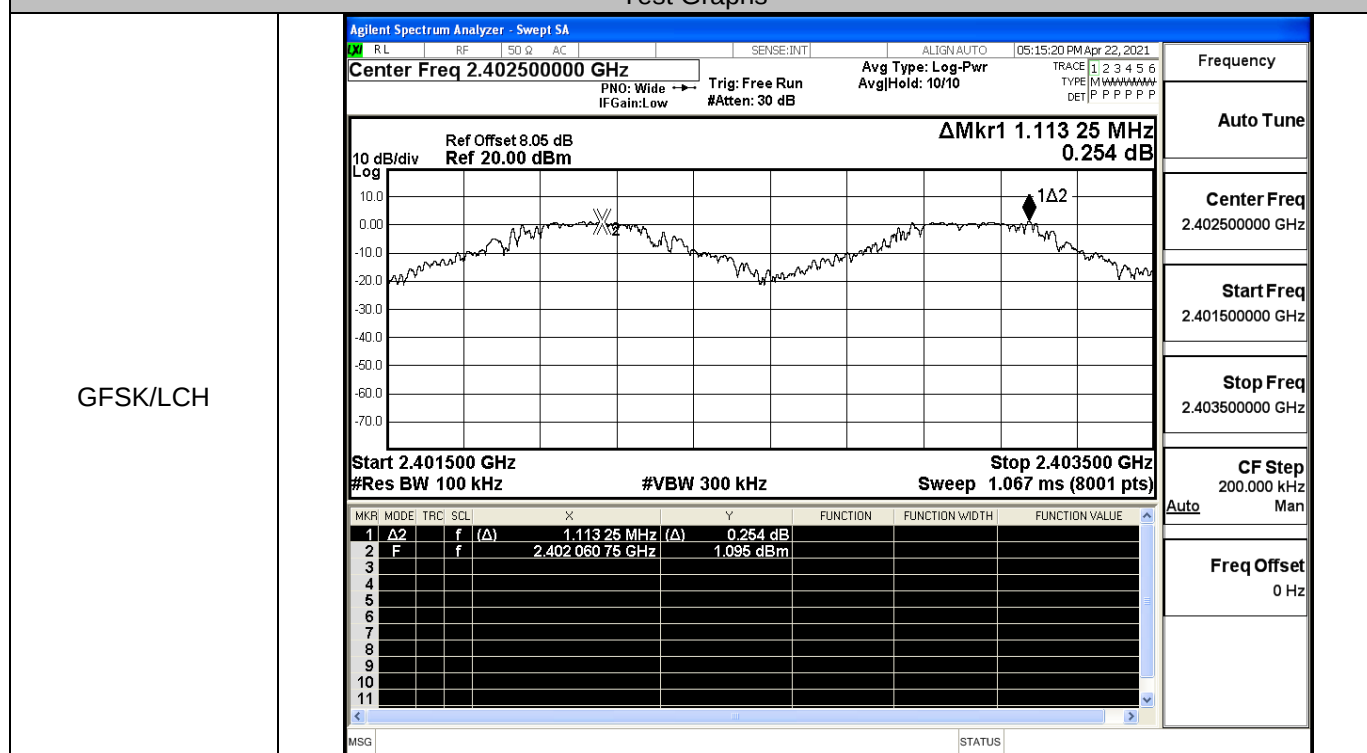
8DPSK/HCH



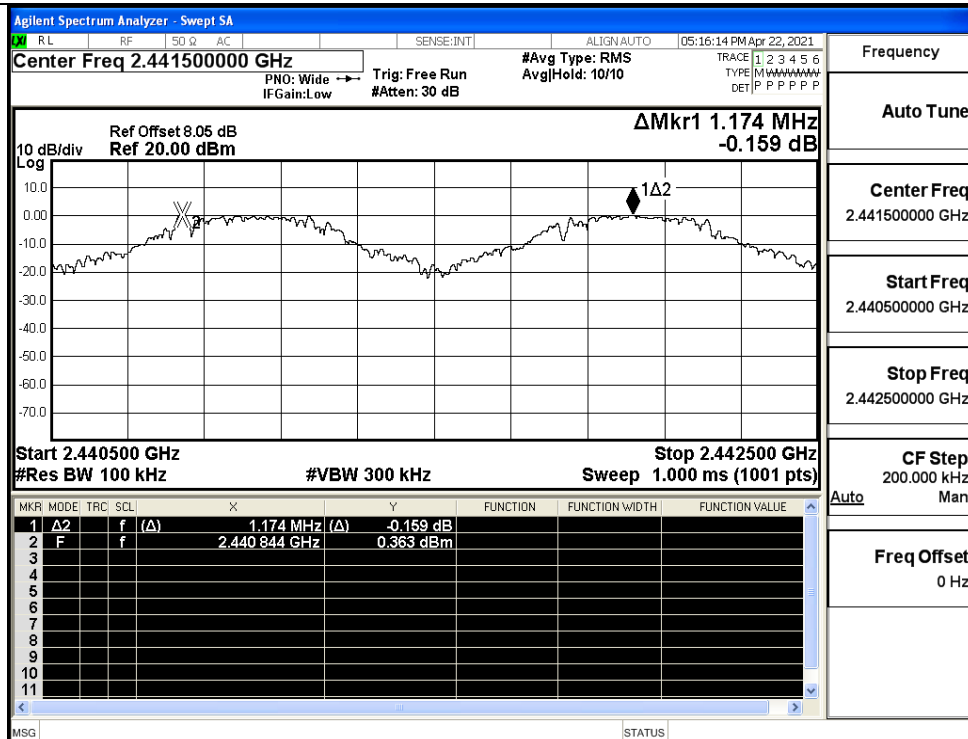
A.3 Carrier Frequency Separation

Mode	Channel	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.113	0.634	PASS
	MCH	1.174	0.634	PASS
	HCH	1.142	0.634	PASS
$\pi/4$ DQPSK	LCH	1.128	0.888	PASS
	MCH	0.998	0.888	PASS
	HCH	1.106	0.888	PASS
8DPSK	LCH	0.960	0.870	PASS
	MCH	1.236	0.870	PASS
	HCH	1.208	0.870	PASS

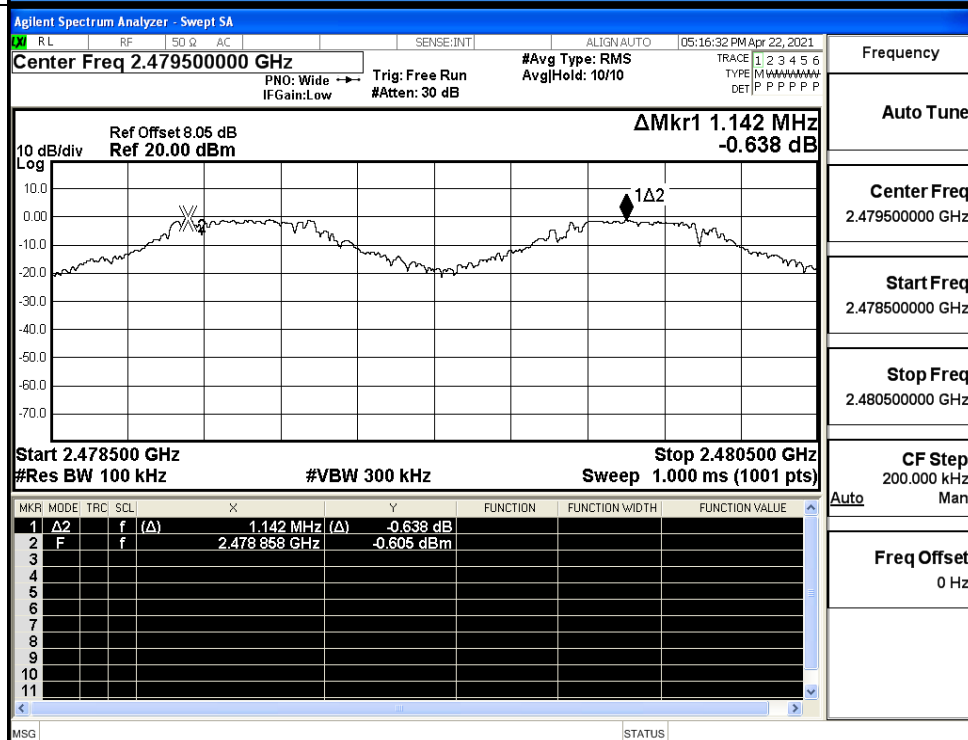
Test Graphs

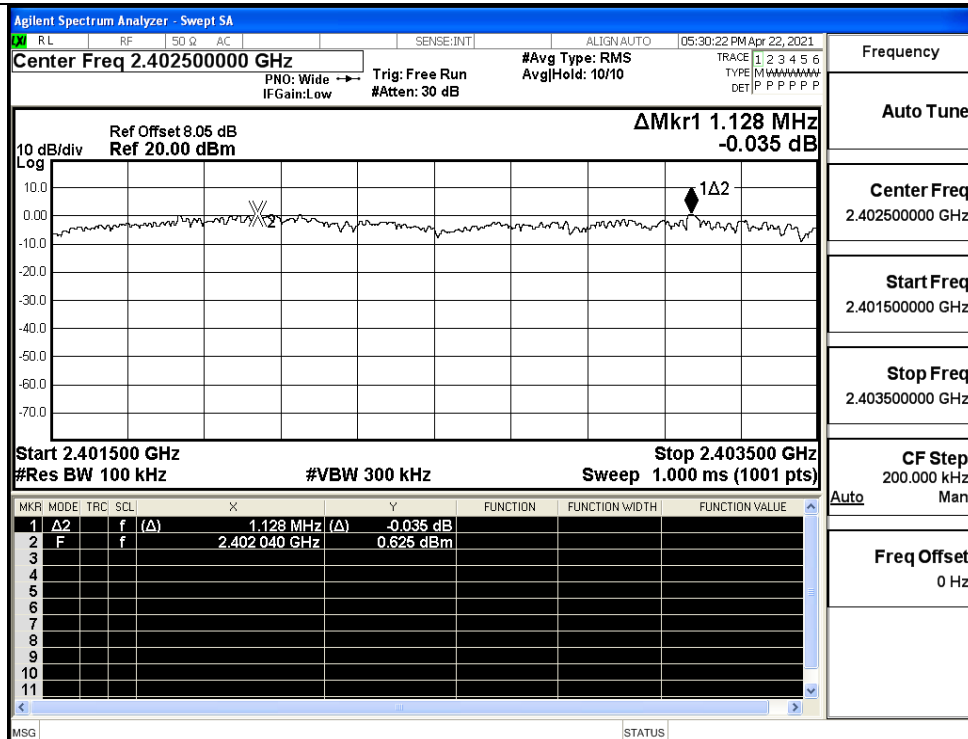
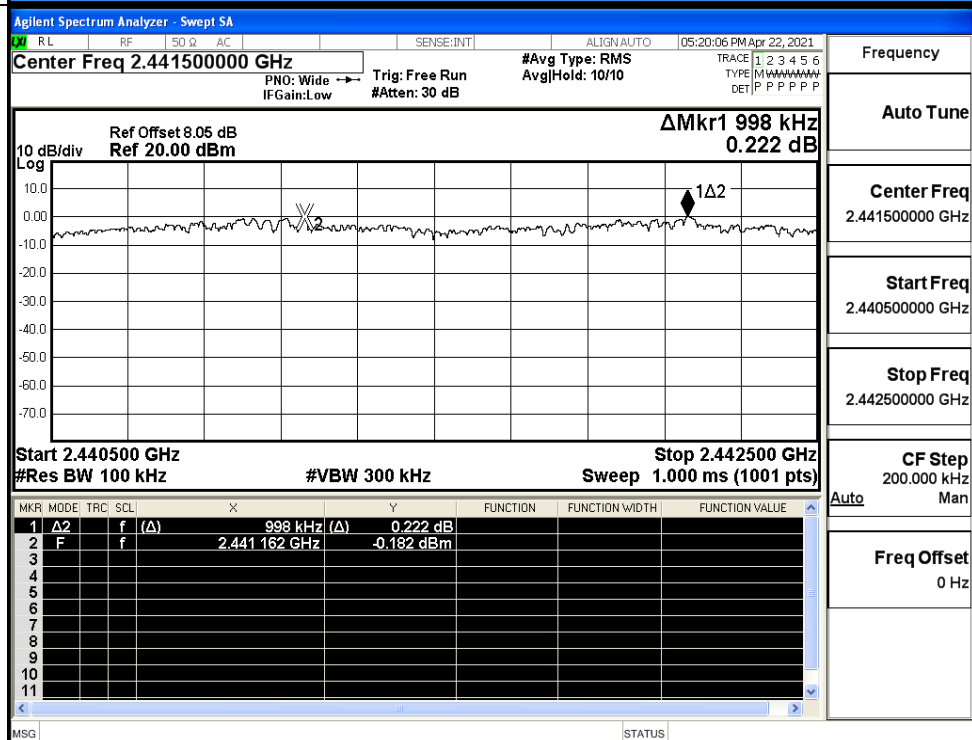


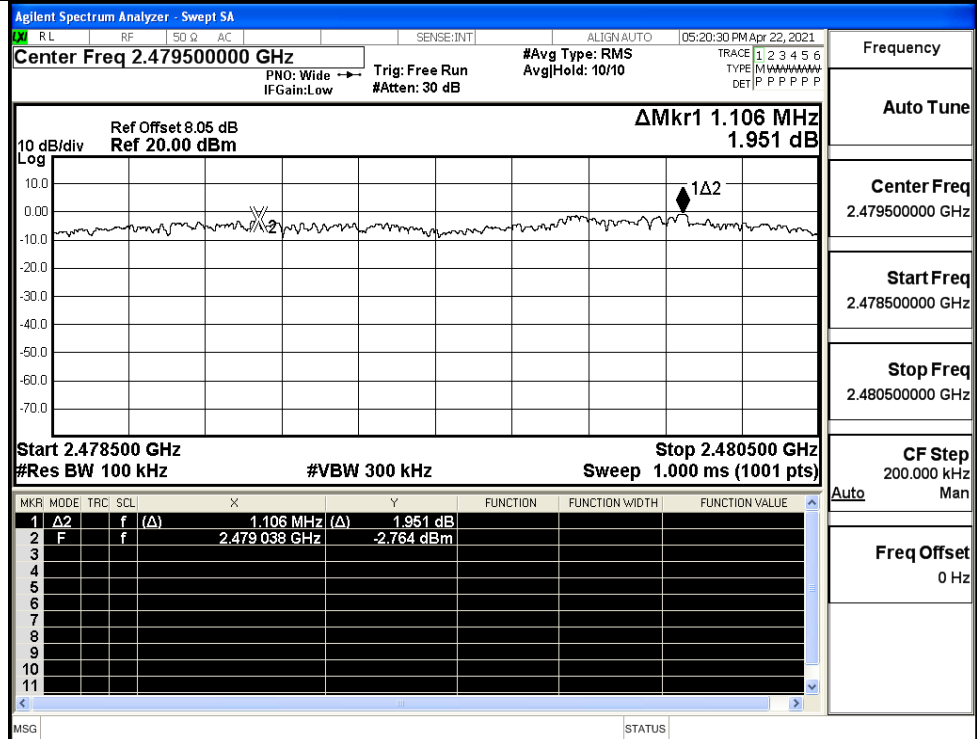
GFSK/MCH



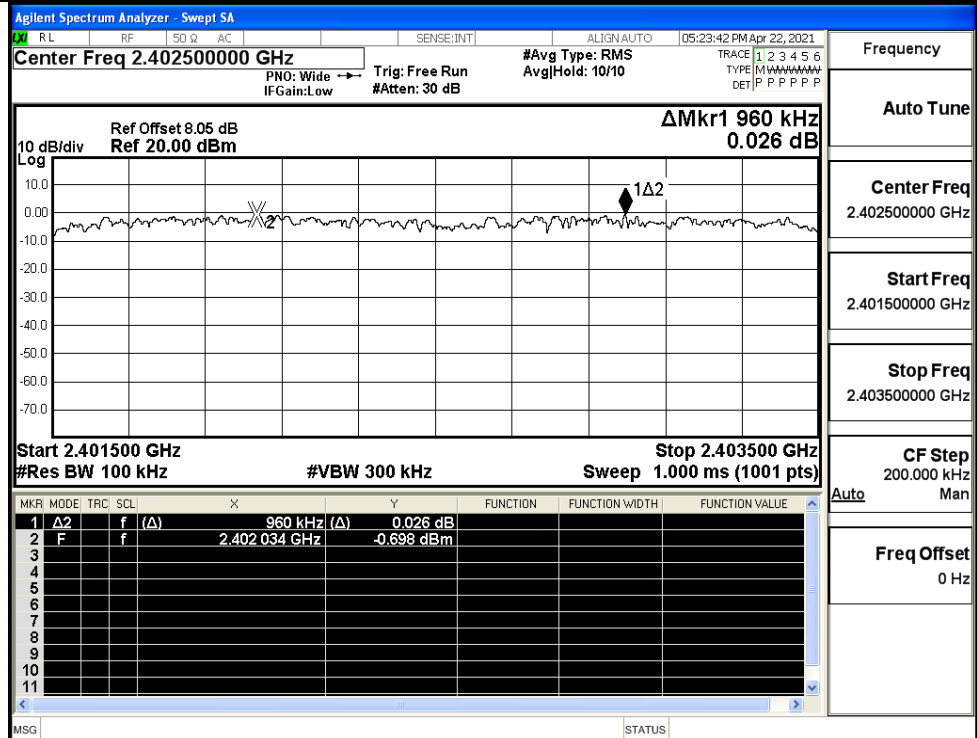
GFSK/HCH



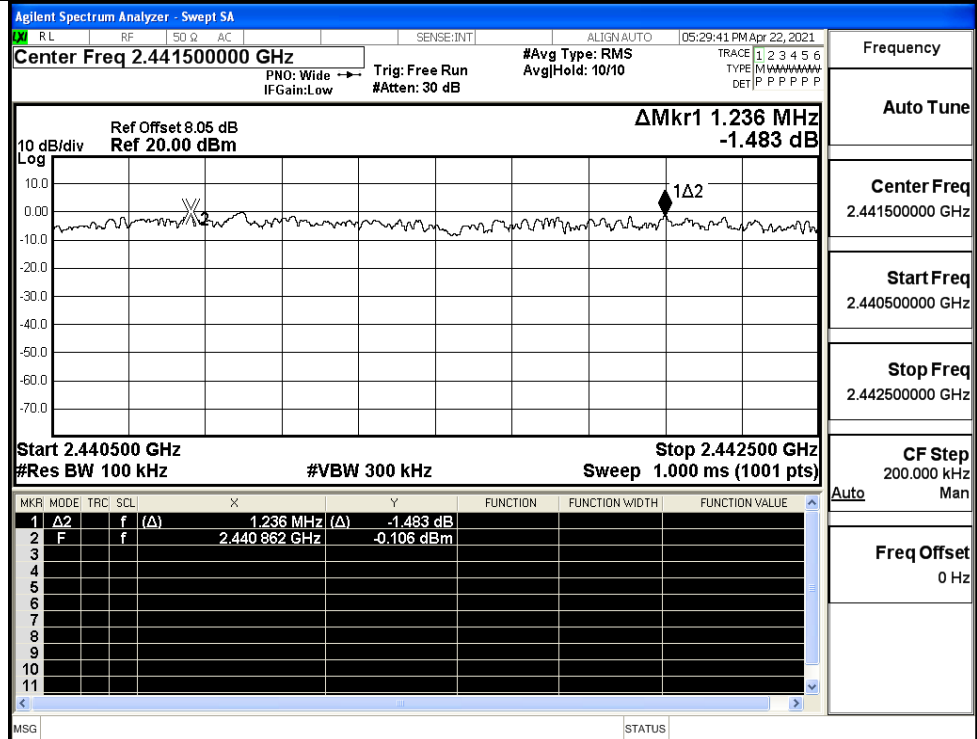
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

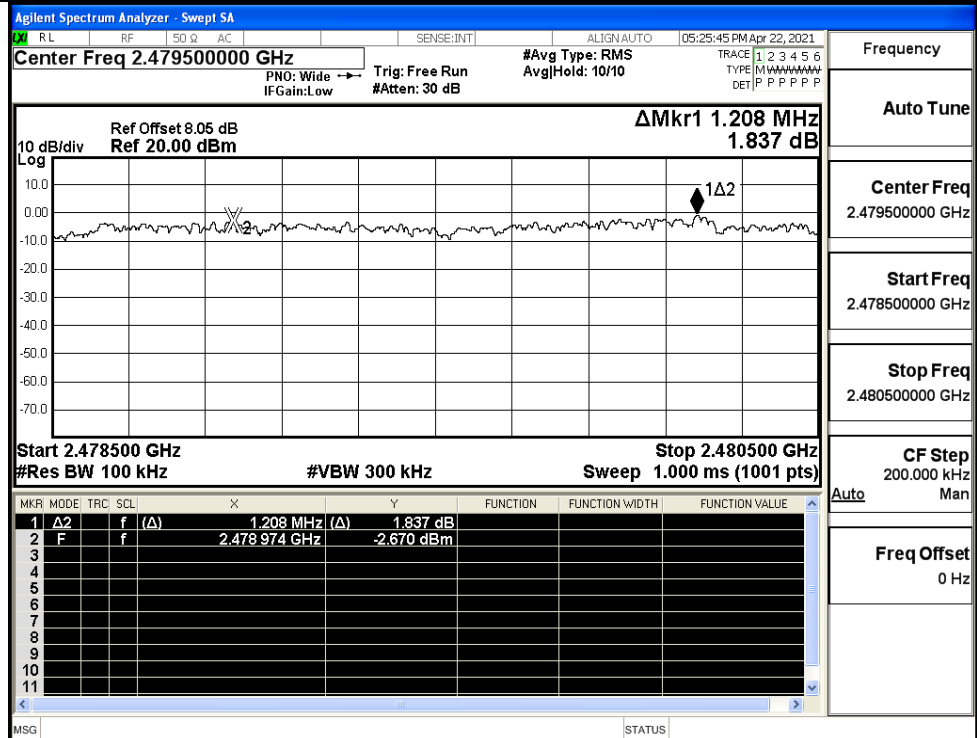
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

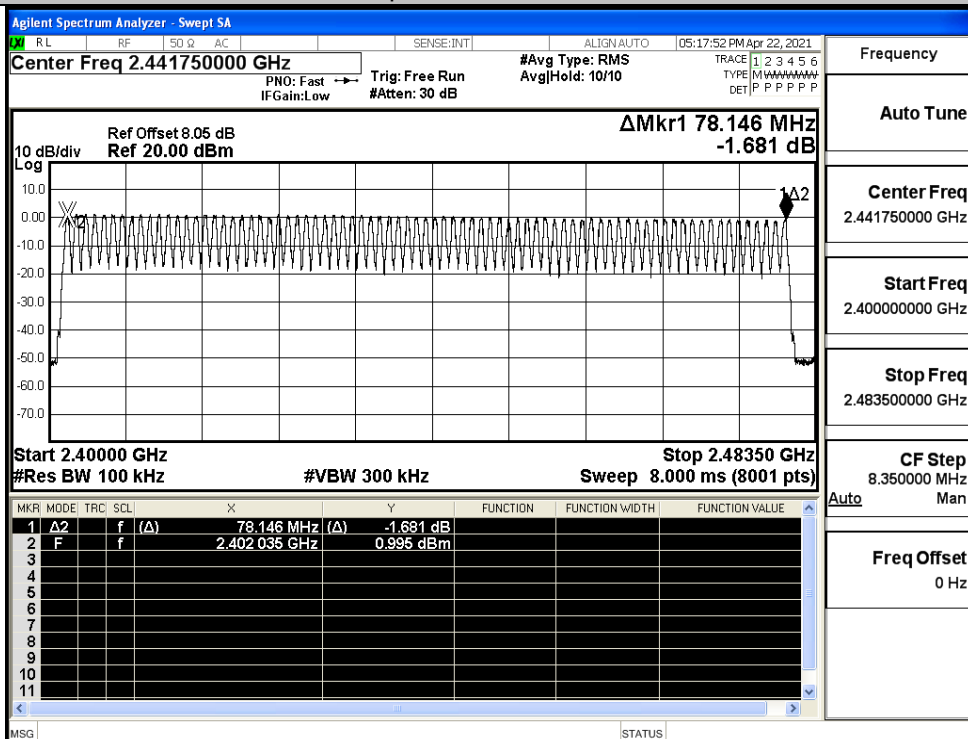
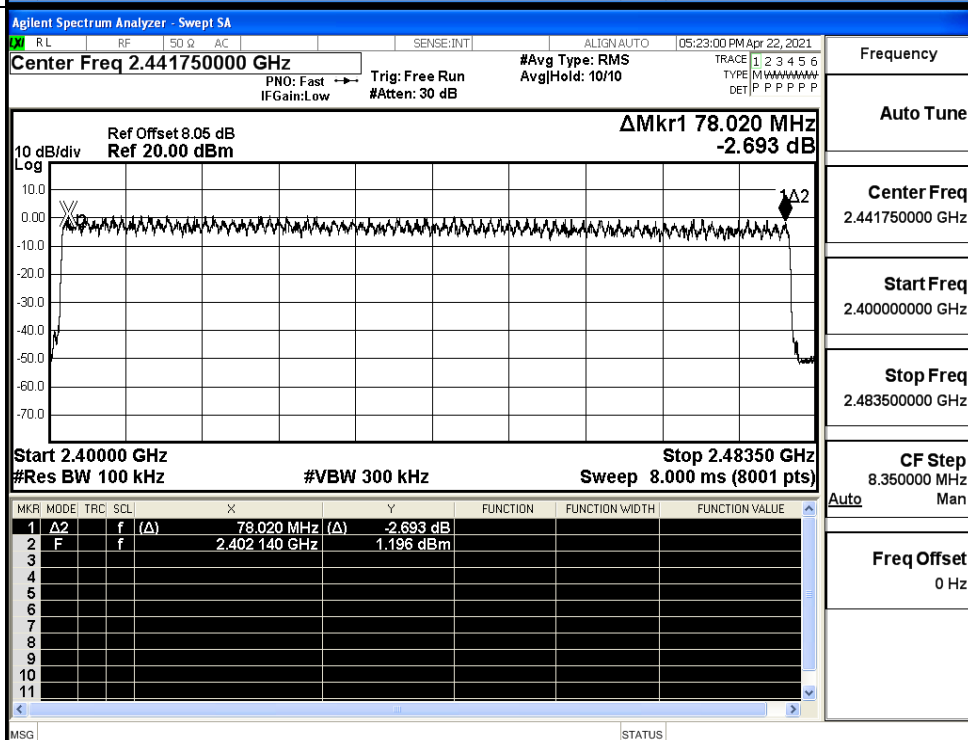


A.4 Hopping Channel Number

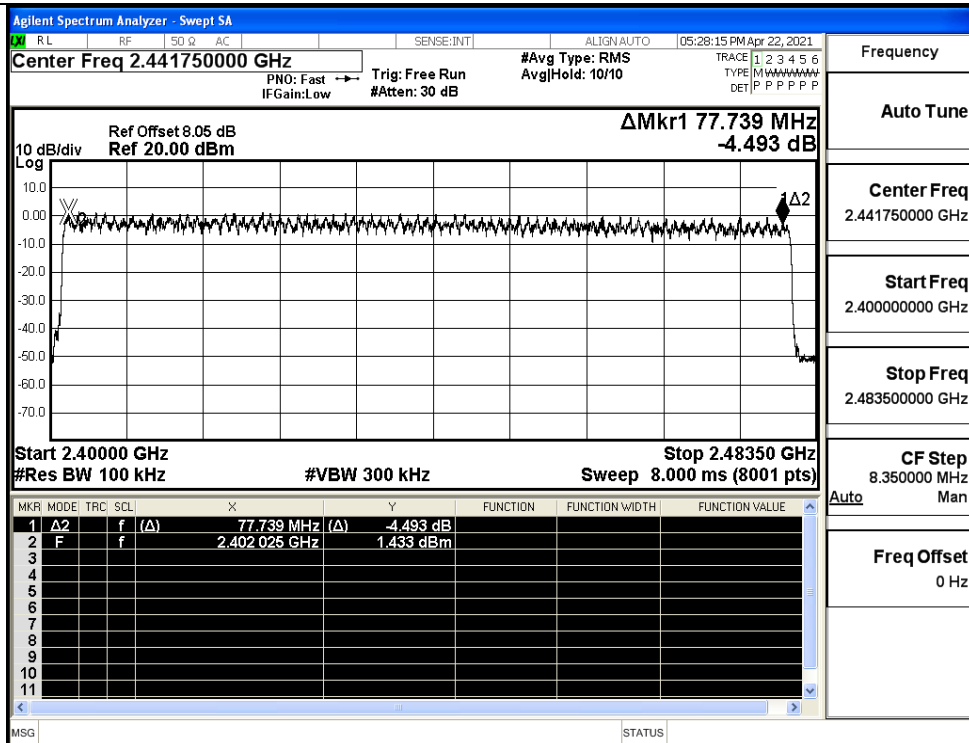
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS
8DPSK	Hop	79	≥ 15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

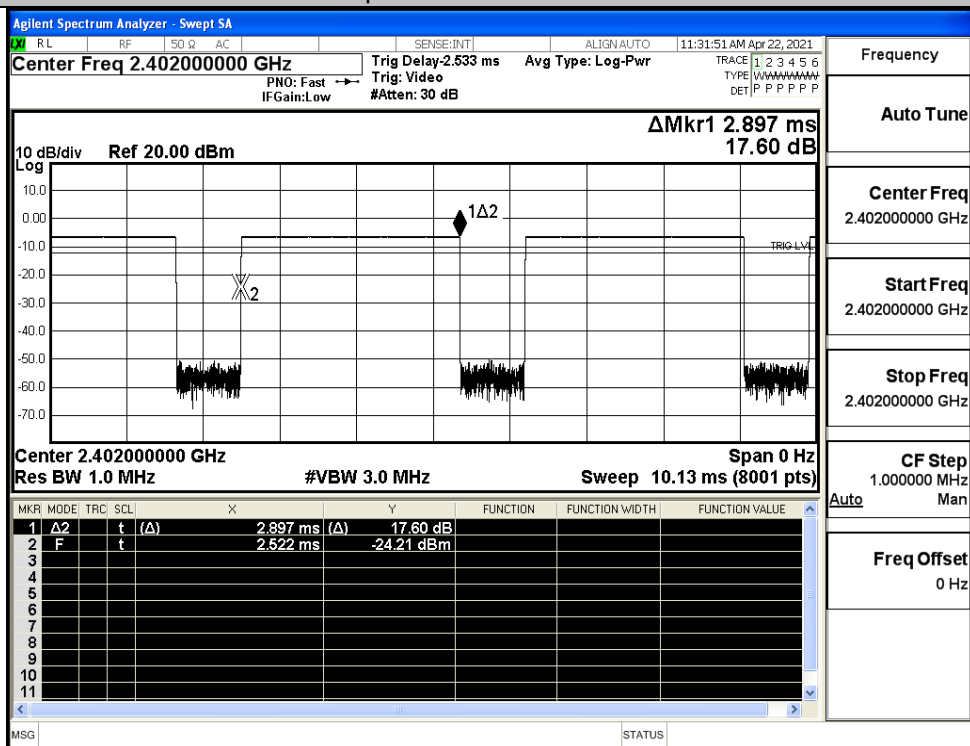


A.5 Dwell Time

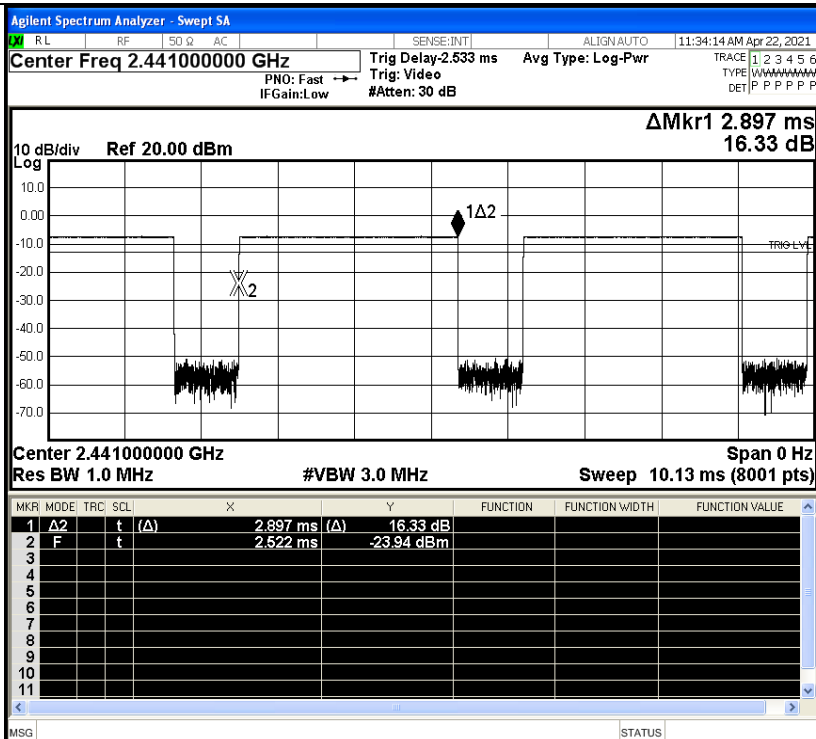
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.9	106.7	0.309	0.4	PASS
	DH5	MCH	2.9	106.7	0.309	0.4	PASS
	DH5	HCH	2.9	106.7	0.309	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.9	106.7	0.309	0.4	PASS
	2DH5	MCH	2.9	106.7	0.309	0.4	PASS
	2DH5	HCH	2.9	106.7	0.309	0.4	PASS
8DPSK	3DH5	LCH	2.9	106.7	0.309	0.4	PASS
	3DH5	MCH	2.9	106.7	0.309	0.4	PASS
	3DH5	HCH	2.9	106.7	0.309	0.4	PASS

Test Graphs

GFSK_DH5/LCH



GFSK_DH5/MCH

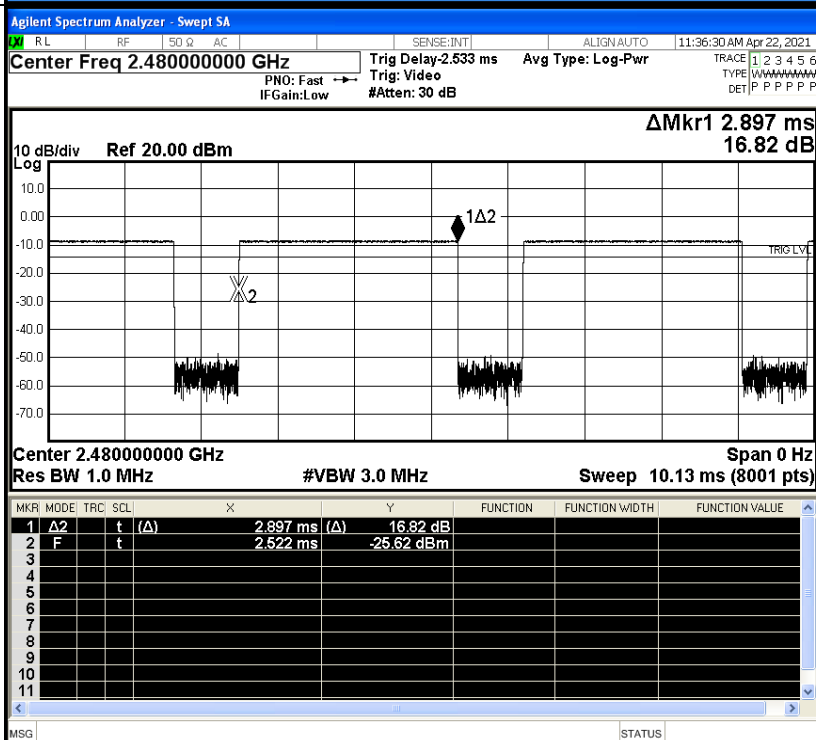


Frequency

Auto Tune

Center Freq
2.441000000 GHzStart Freq
2.441000000 GHzStop Freq
2.441000000 GHzCF Step
1.000000 MHz
Auto ManFreq Offset
0 Hz

GFSK_DH5/HCH

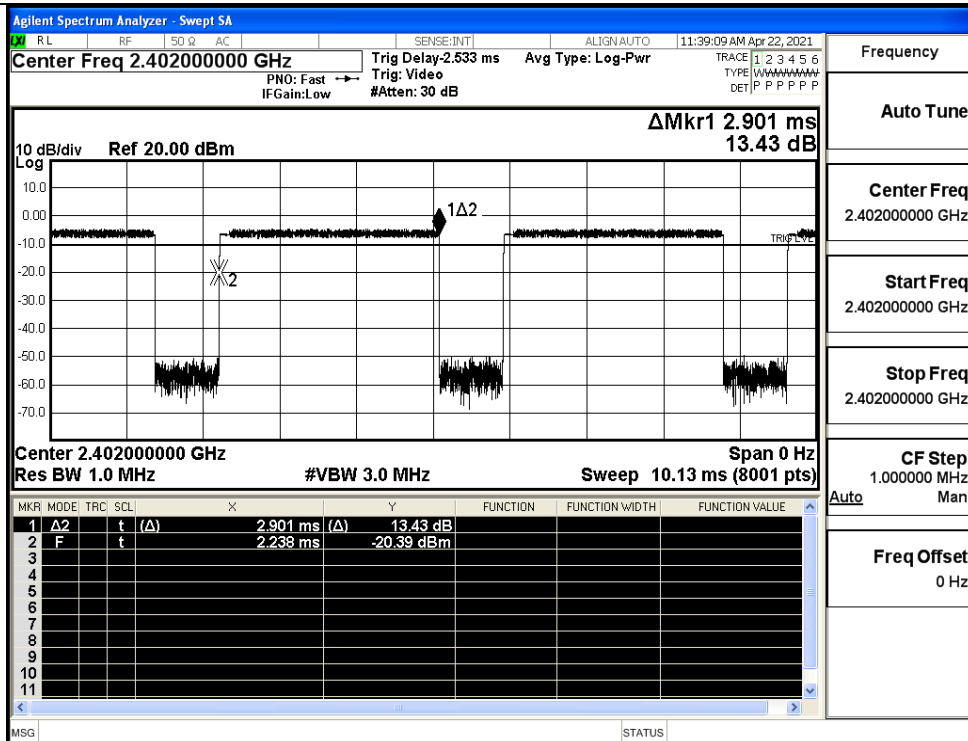


Frequency

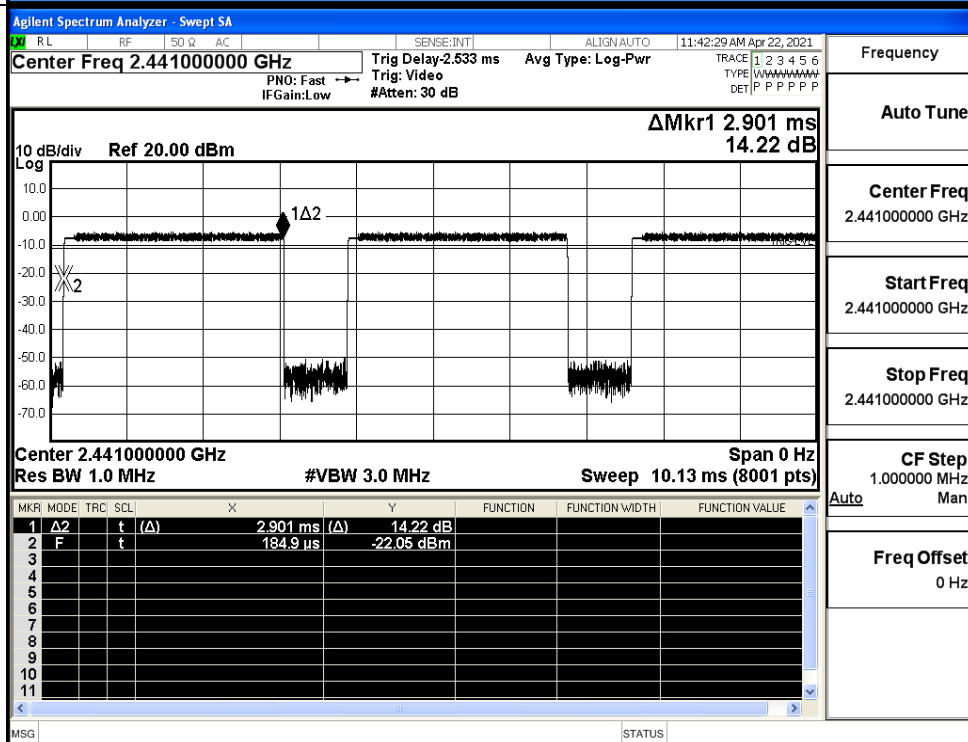
Auto Tune

Center Freq
2.480000000 GHzStart Freq
2.480000000 GHzStop Freq
2.480000000 GHzCF Step
1.000000 MHz
Auto ManFreq Offset
0 Hz

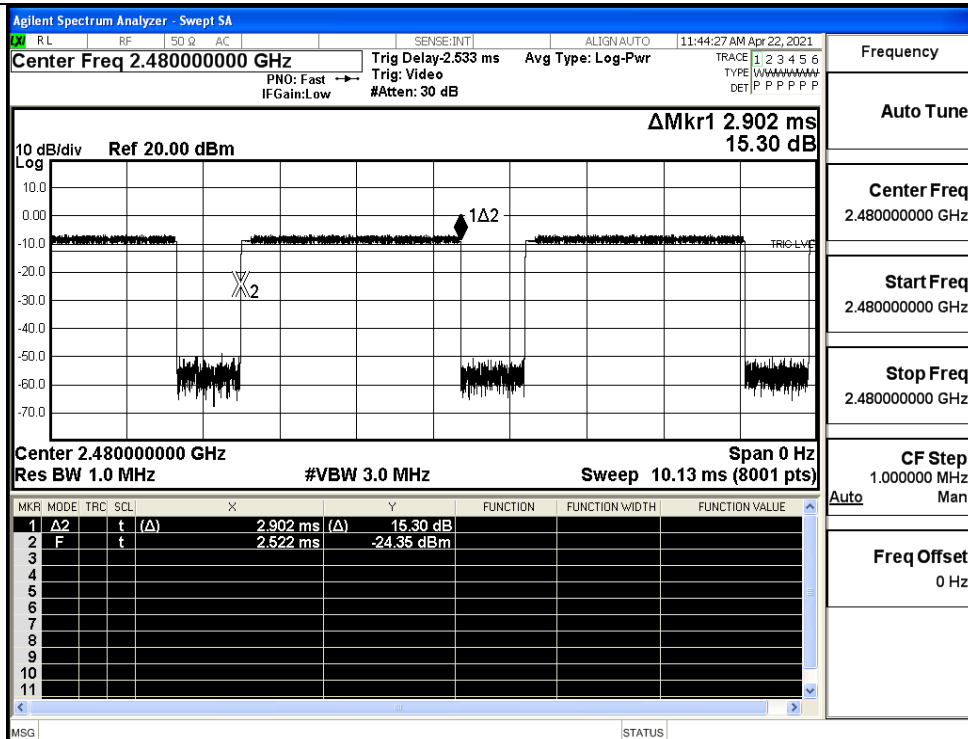
$\pi/4$ DQPSK
_2DH5/LCH



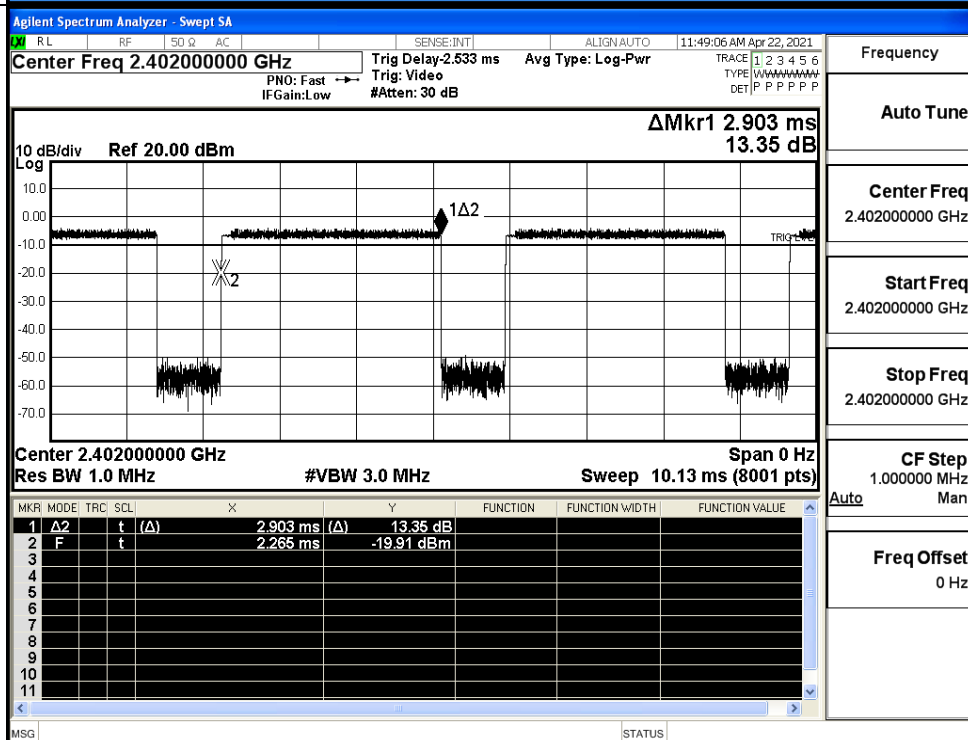
$\pi/4$ DQPSK
_2DH5/MCH



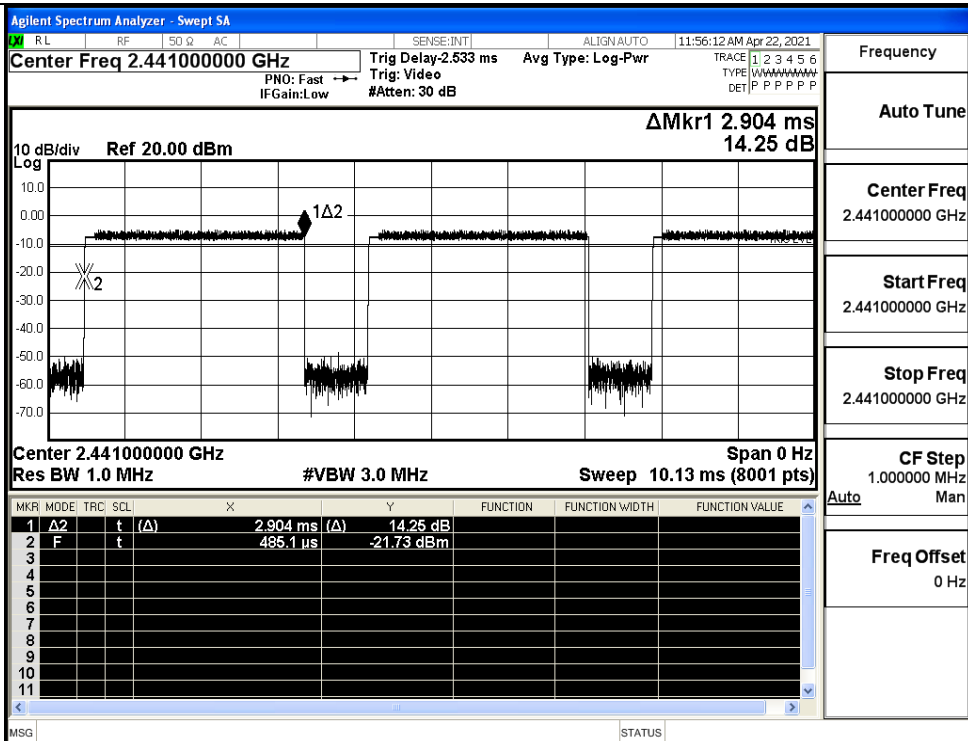
$\pi/4$ DQPSK
_2DH5/HCH



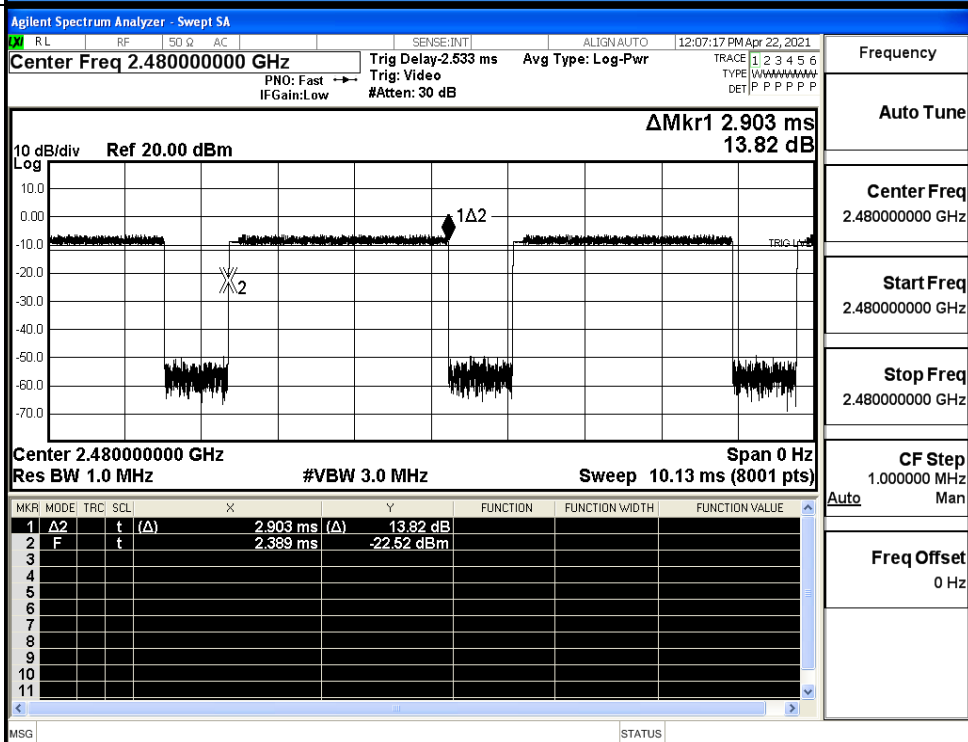
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



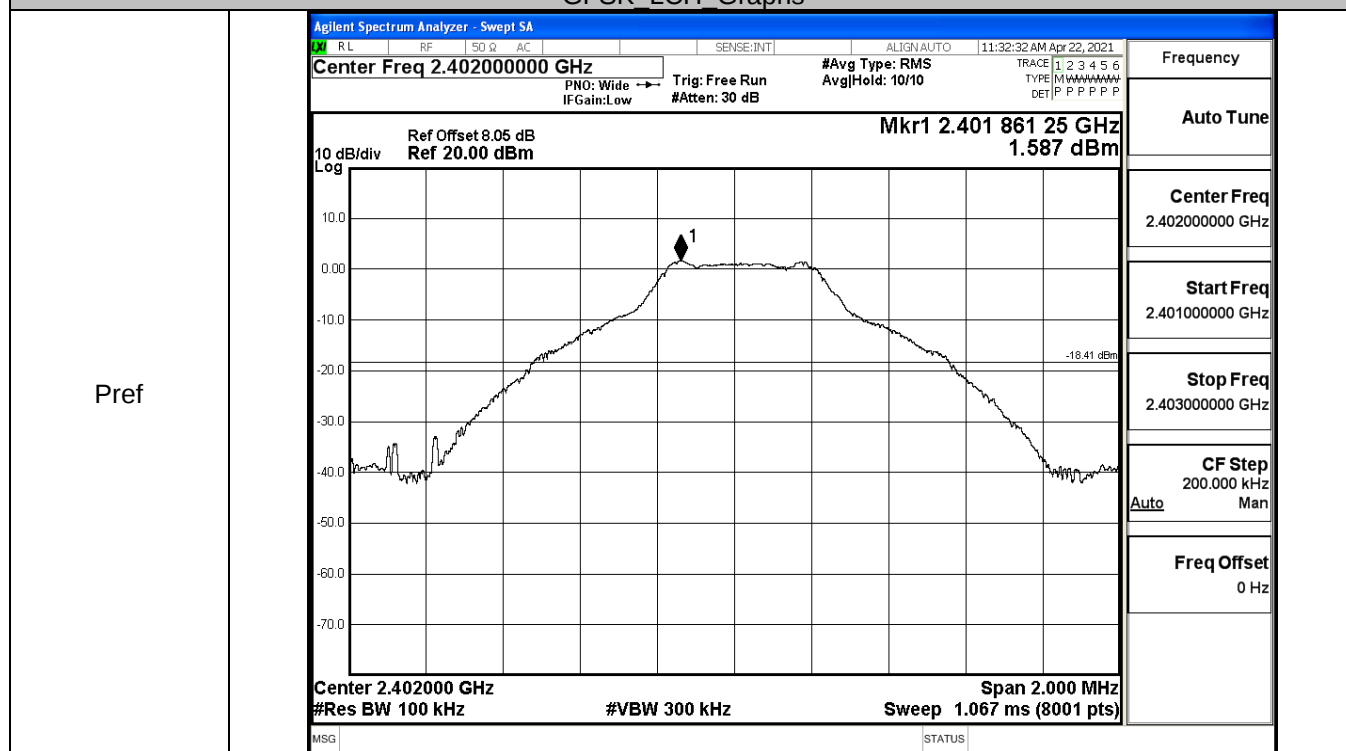
8DPSK_3DH5/HCH



A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	1.587	-37.341	-18.413	PASS
	MCH	0.508	-37.205	-19.492	PASS
	HCH	-0.604	-38.076	-20.604	PASS
$\pi/4$ DQPSK	LCH	1.305	-28.493	-18.695	PASS
	MCH	-0.062	-38.030	-20.062	PASS
	HCH	-0.836	-38.197	-20.836	PASS
8DPSK	LCH	1.093	-37.535	-18.907	PASS
	MCH	0.416	-37.633	-19.584	PASS
	HCH	-0.866	-37.966	-20.866	PASS

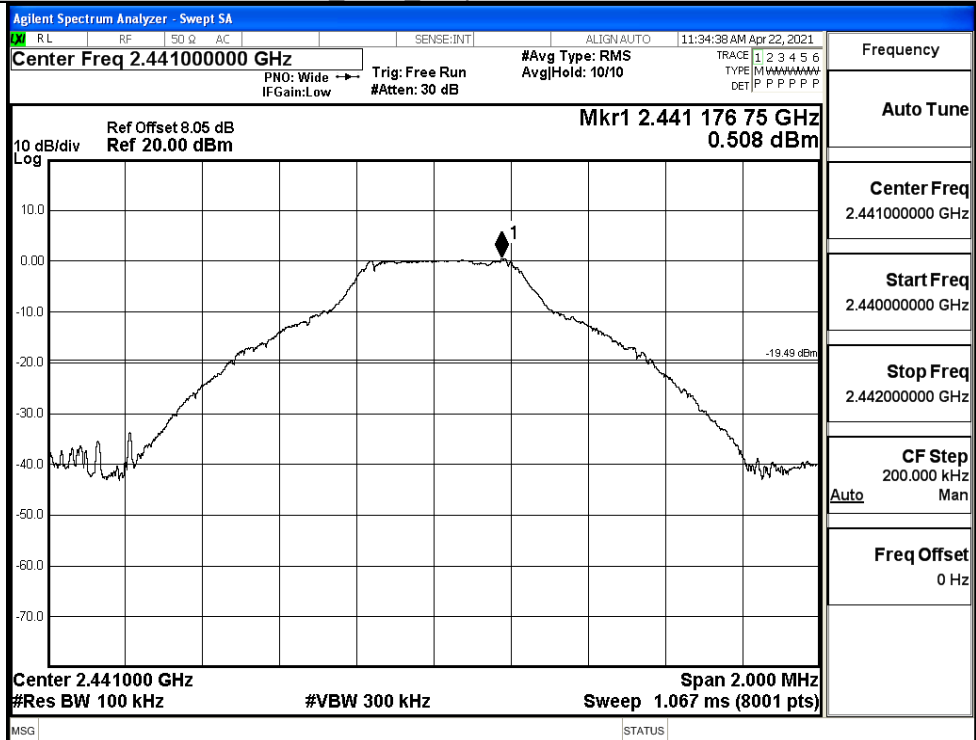
GFSK LCH Graphs





GFSK_MCH_Graphs

Pref

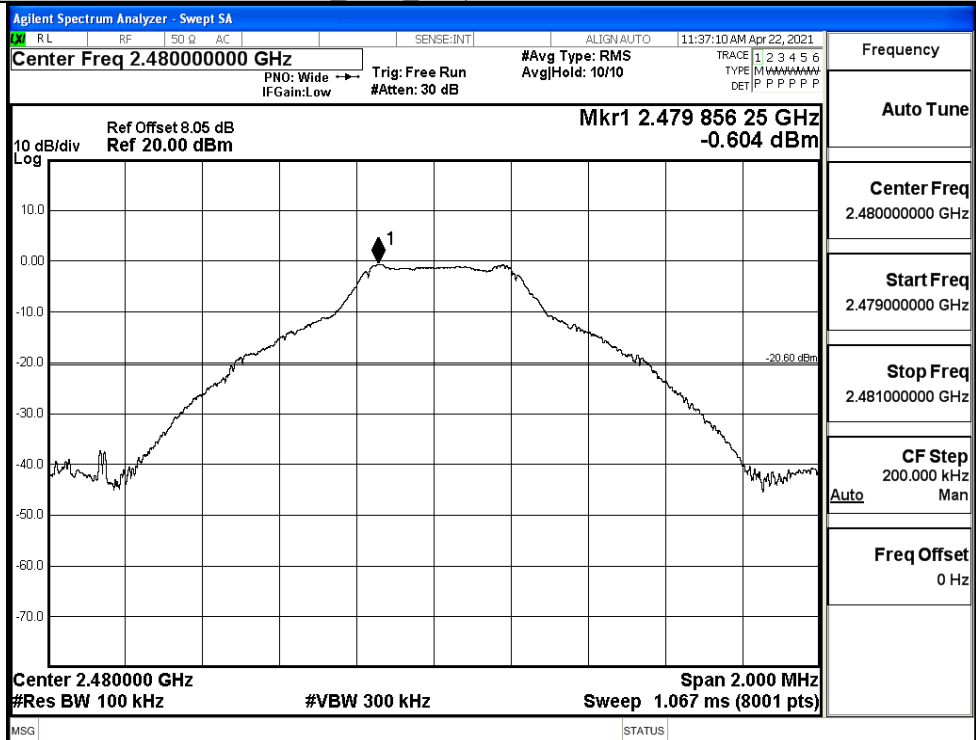


Puw

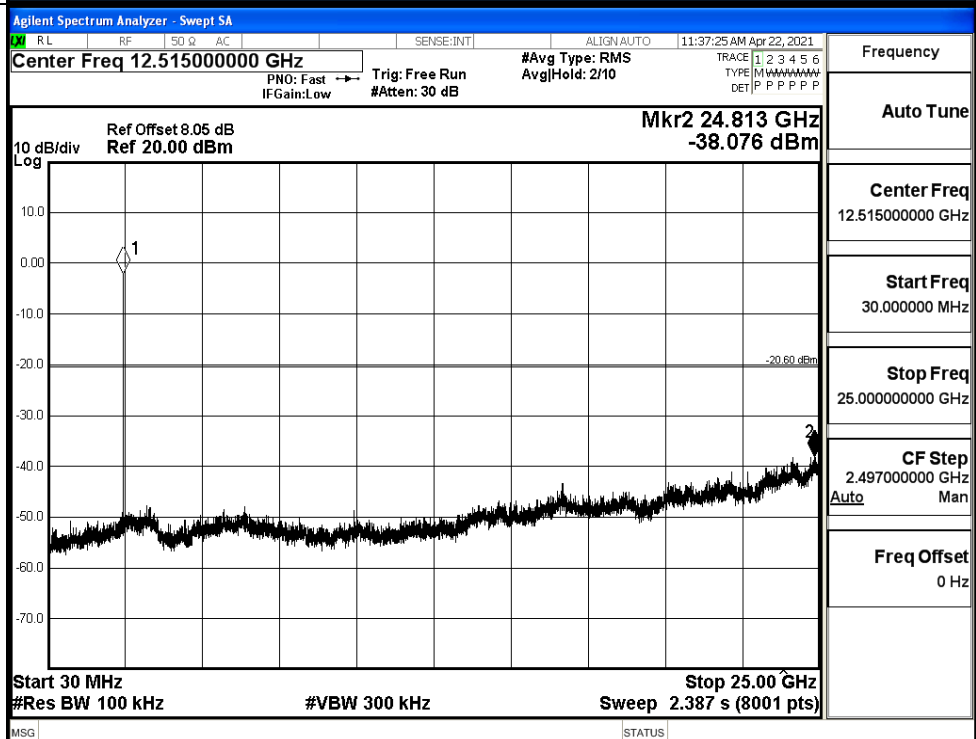


GFSK HCH_Graphs

Pref

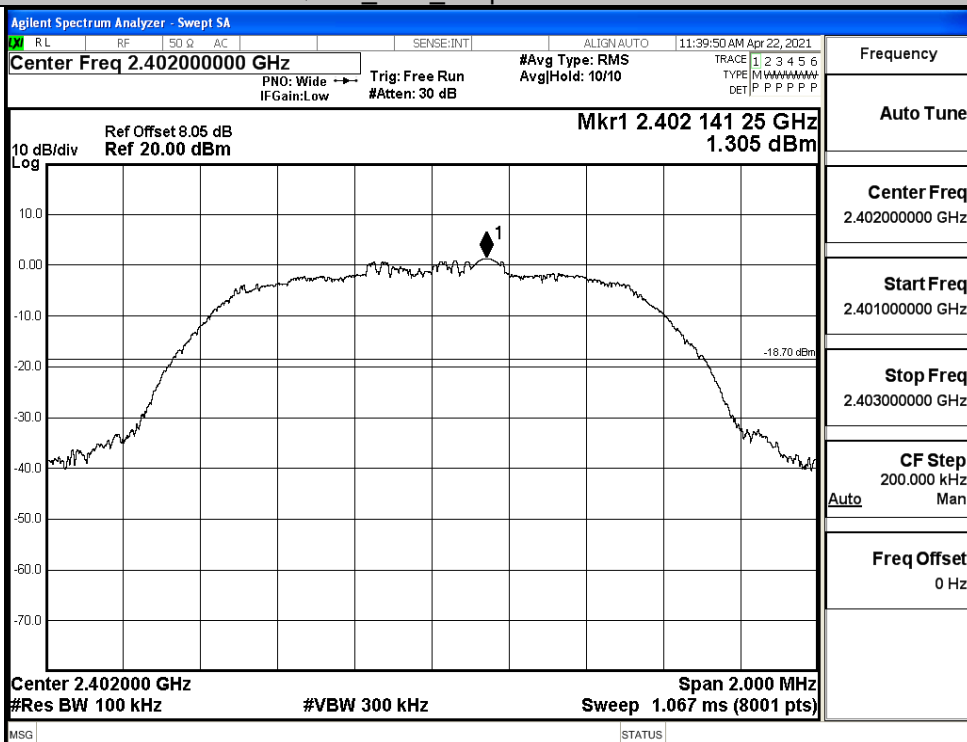


Puw

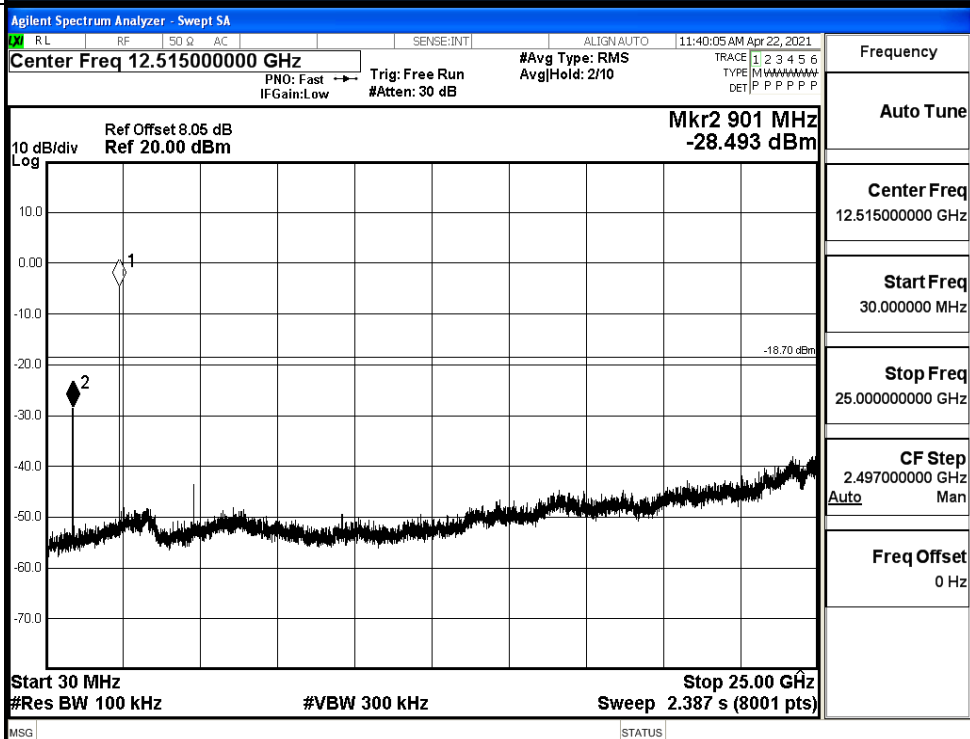


$\pi/4$ DQPSK_LCH_Graphs

Pref

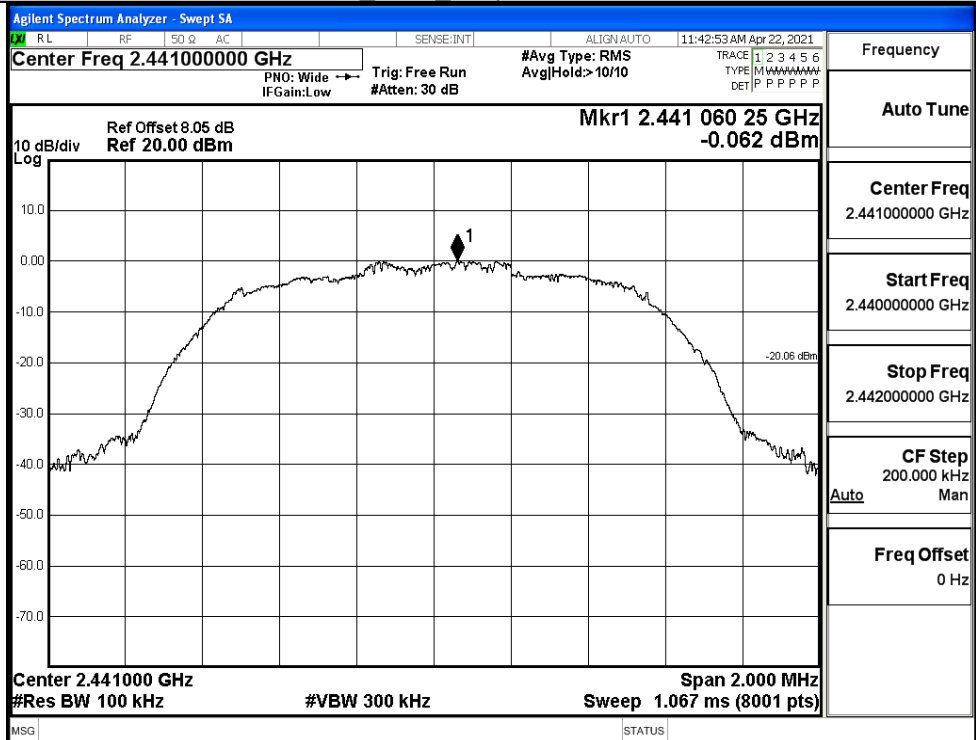


Puw

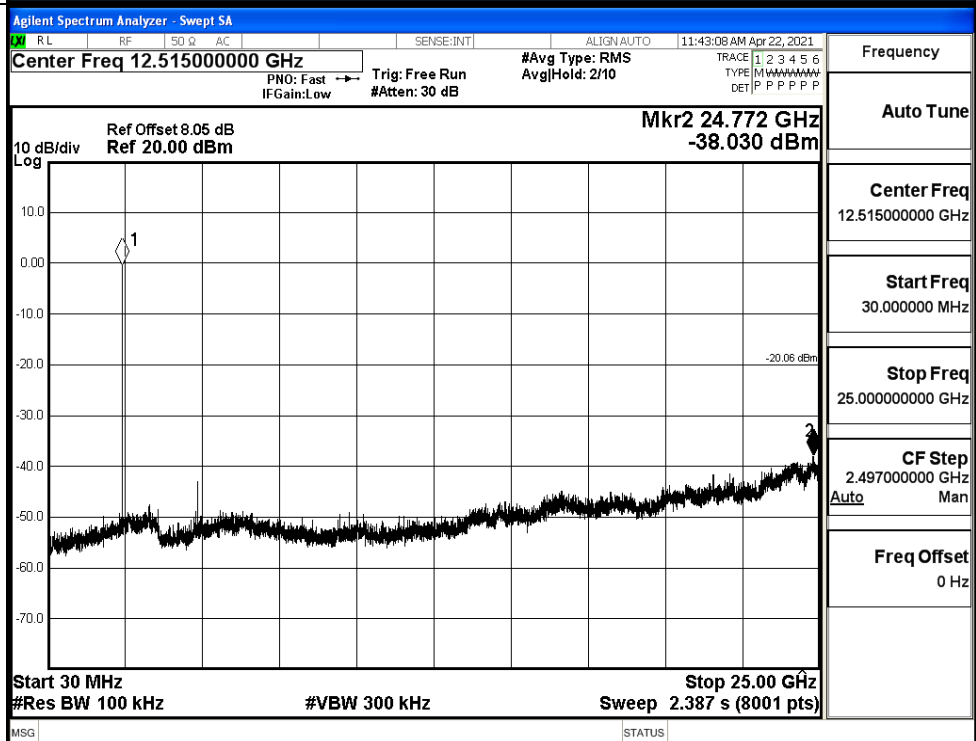


$\pi/4$ DQPSK_MCH_Graphs

Pref

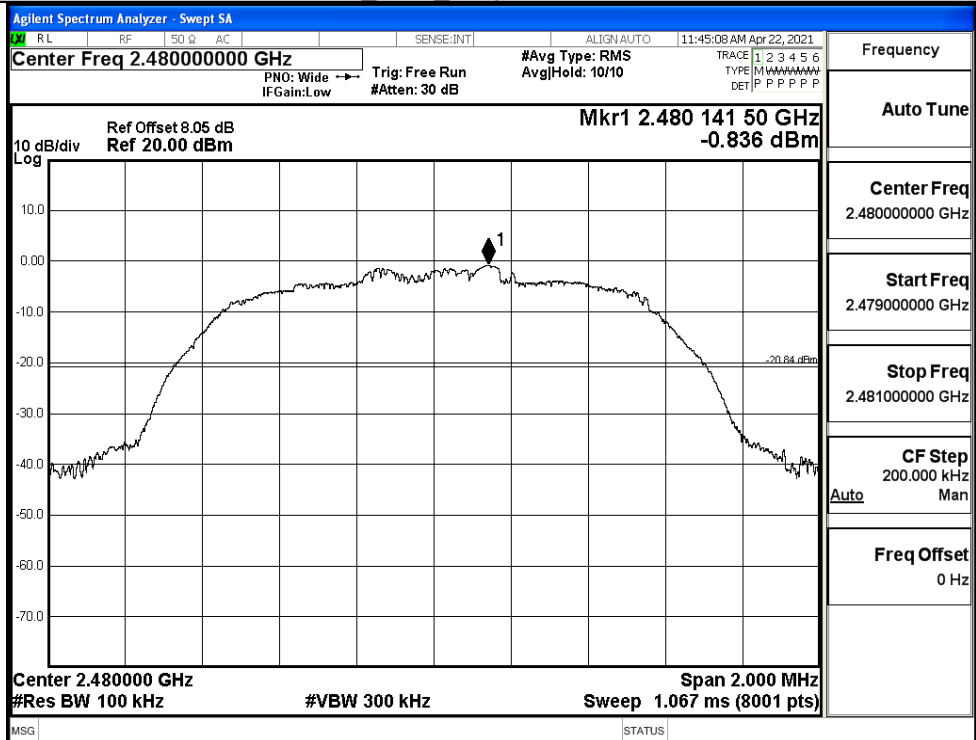


Puw

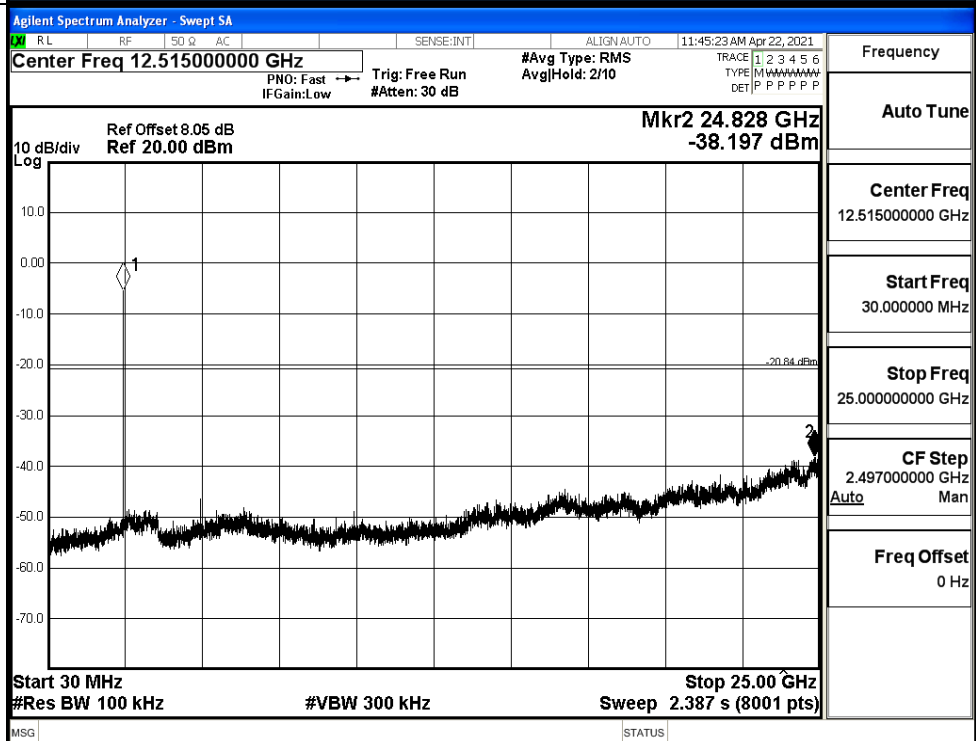


π /4DQPSK_HCH_Graphs

Pref

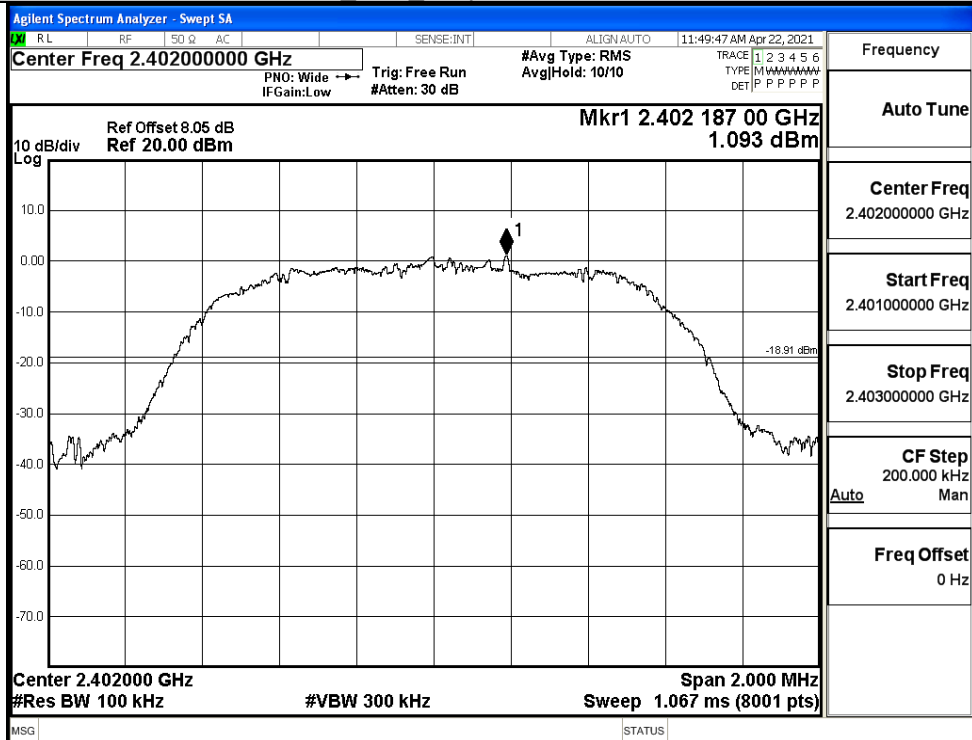


Puw

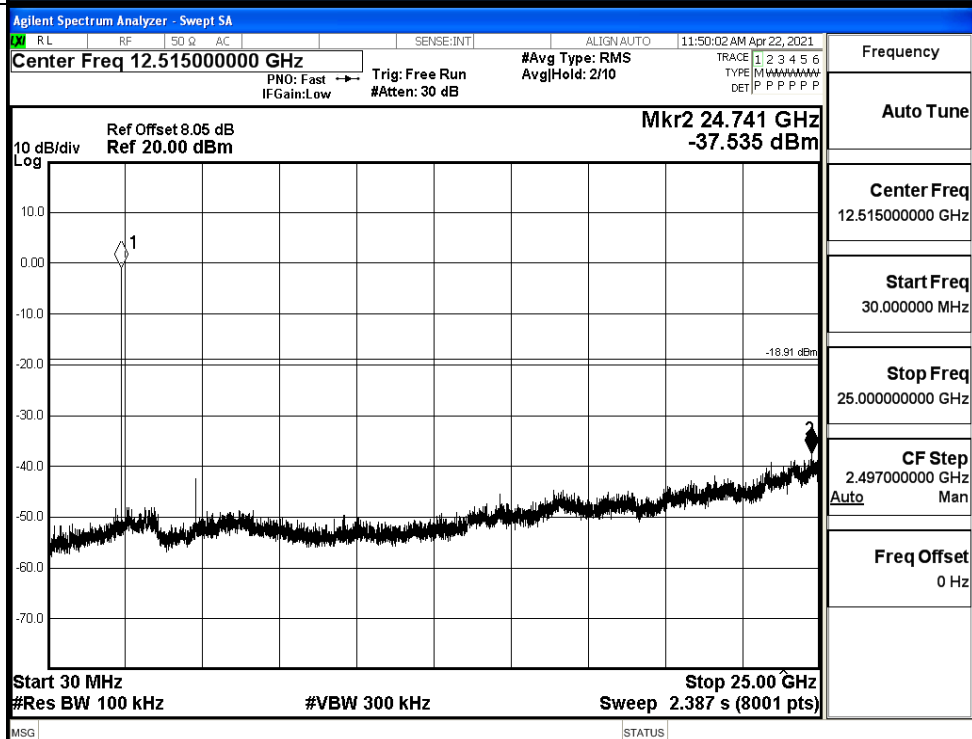


8DPSK_LCH_Graphs

Pref

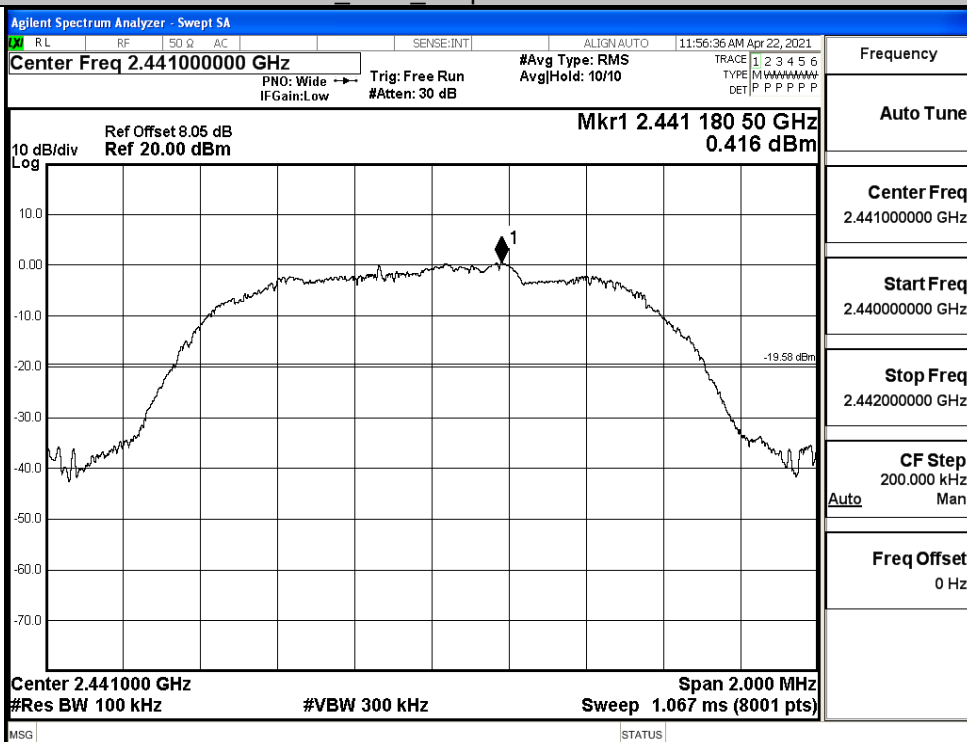


Puw

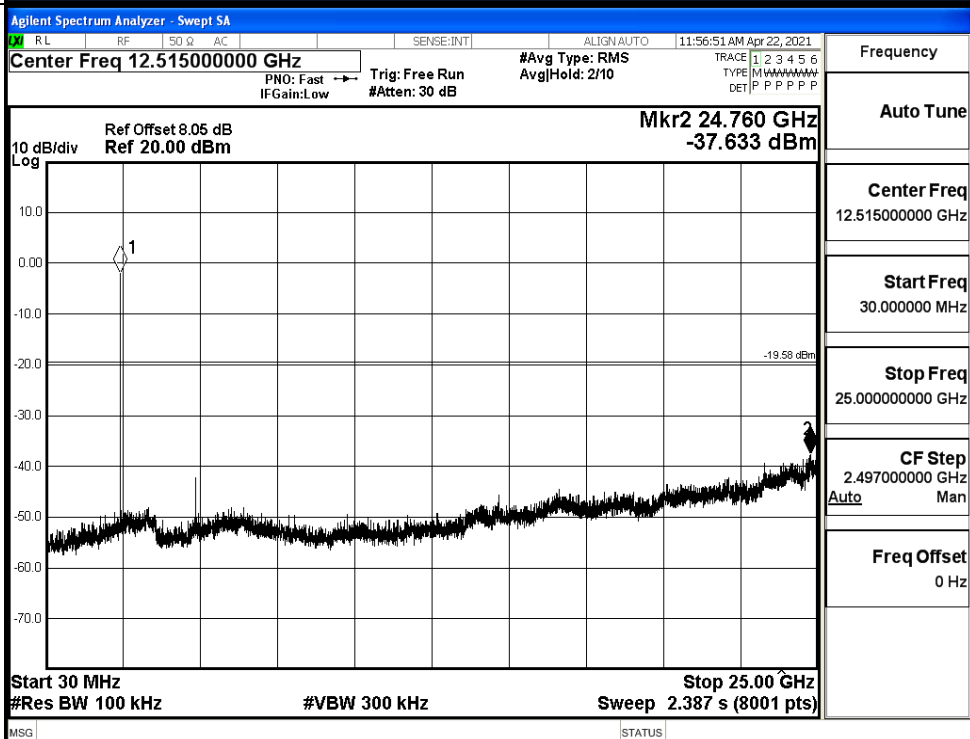


8DPSK_MCH_Graphs

Pref

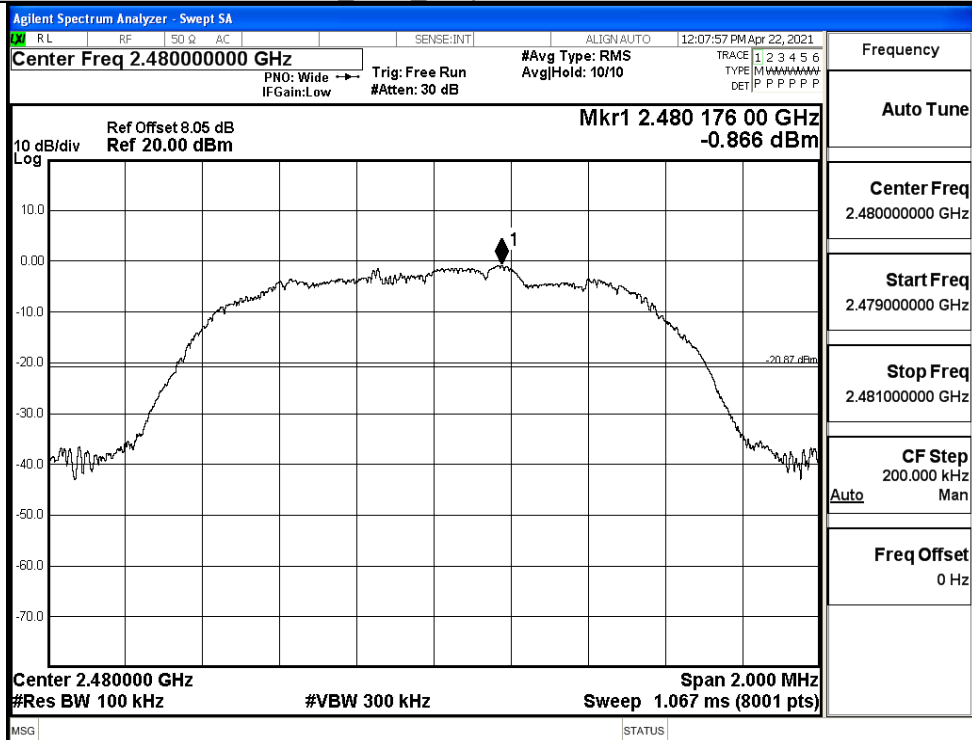


Puw

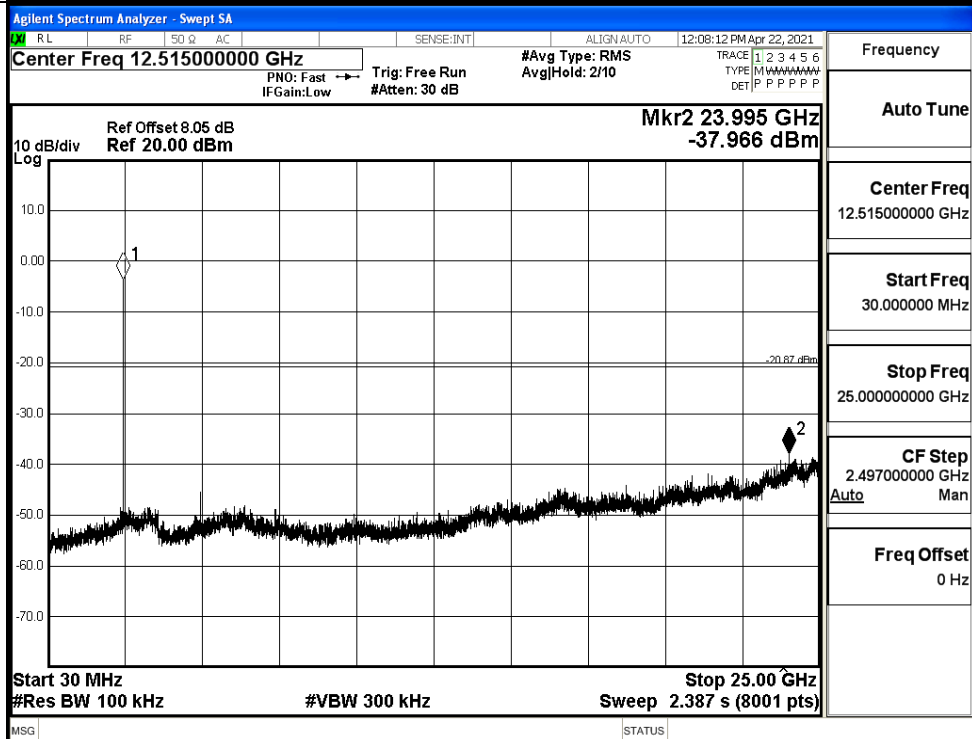


8DPSK_HCH_Graphs

Pref



Puw

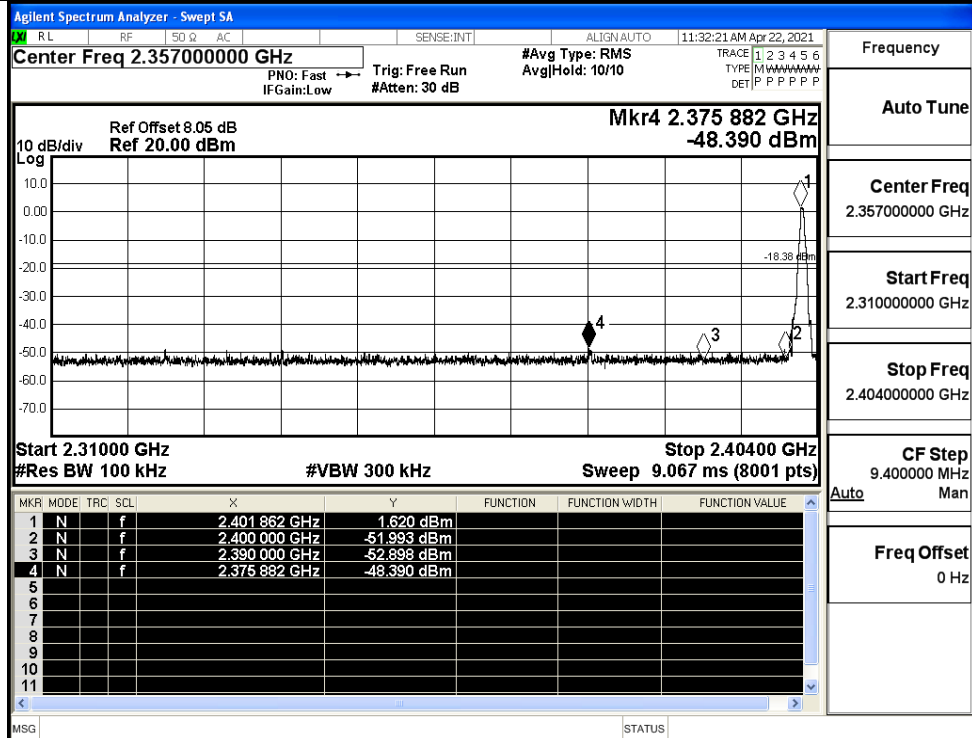


A.7 Band-edge for RF Conducted Emissions

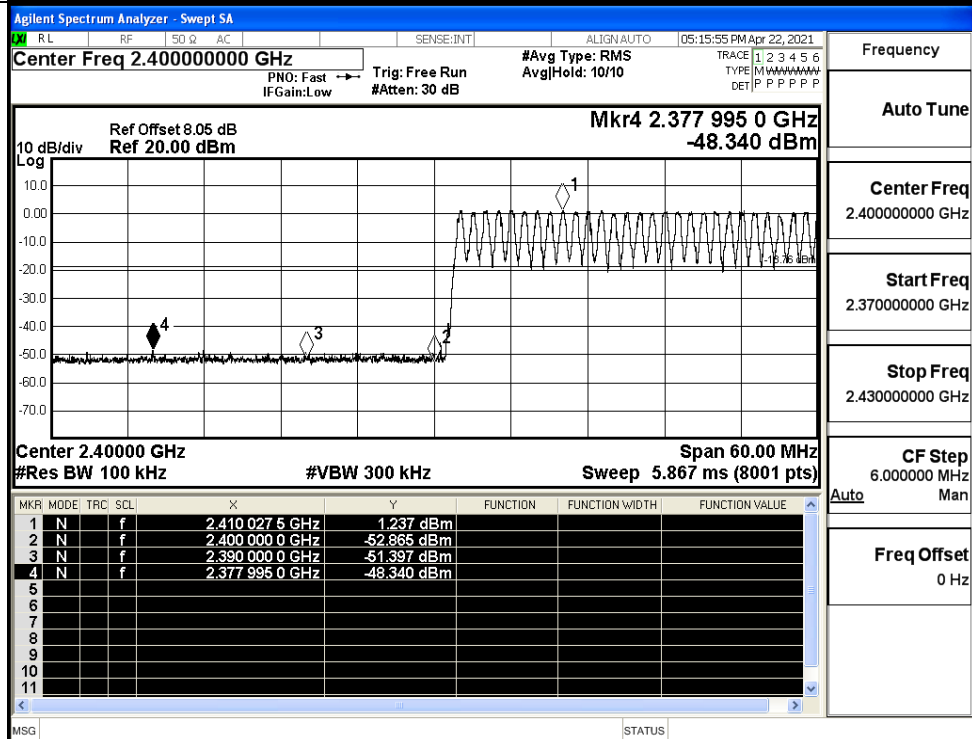
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	1.620	Off	-48.390	-18.38	PASS
			1.237	On	-48.340	-18.76	PASS
	HCH	2480	-0.599	Off	-48.538	-20.6	PASS
			0.014	On	-49.024	-19.99	PASS
$\pi/4$ DQPSK	LCH	2402	1.234	Off	-49.093	-18.77	PASS
			1.029	On	-48.952	-18.97	PASS
	HCH	2480	-1.150	Off	-49.548	-21.15	PASS
			-0.230	On	-48.852	-20.23	PASS
8DPSK	LCH	2402	1.442	Off	-48.407	-18.56	PASS
			1.309	On	-49.232	-18.69	PASS
	HCH	2480	-0.686	Off	-49.142	-20.69	PASS
			0.083	On	-48.756	-19.92	PASS

Test Graphs

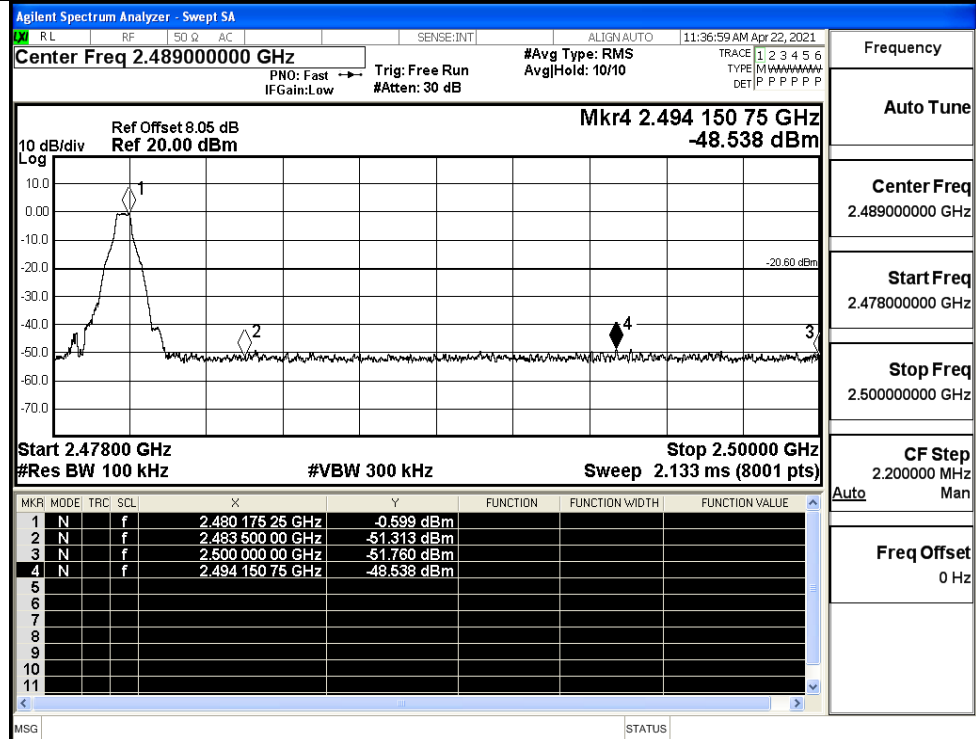
GFSK/LCH/No Hop



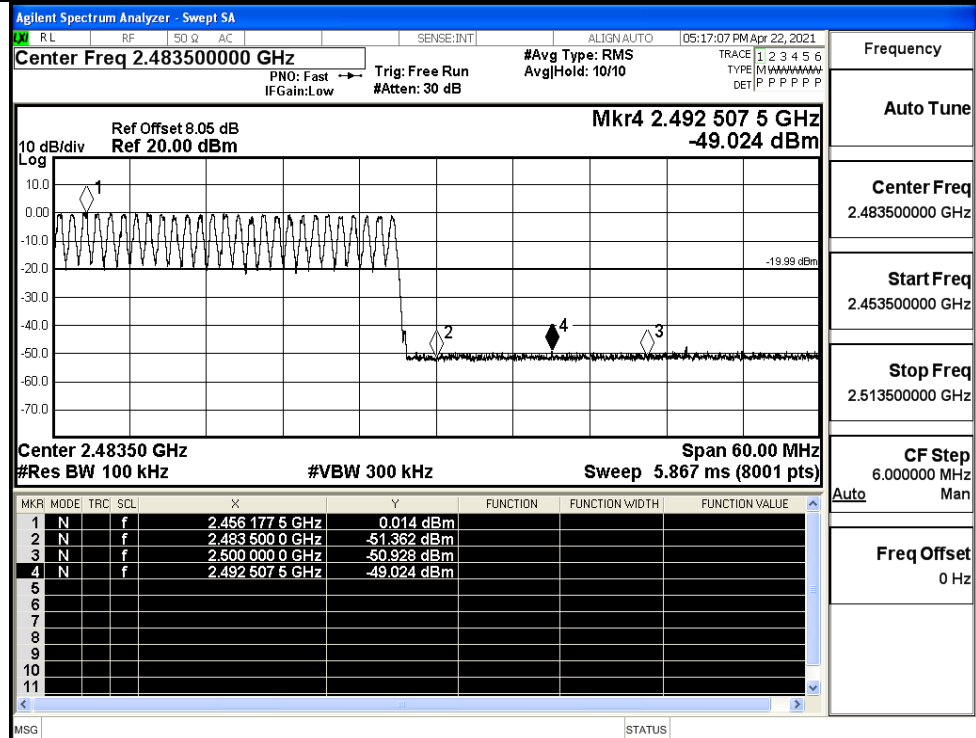
GFSK/LCH/Hop



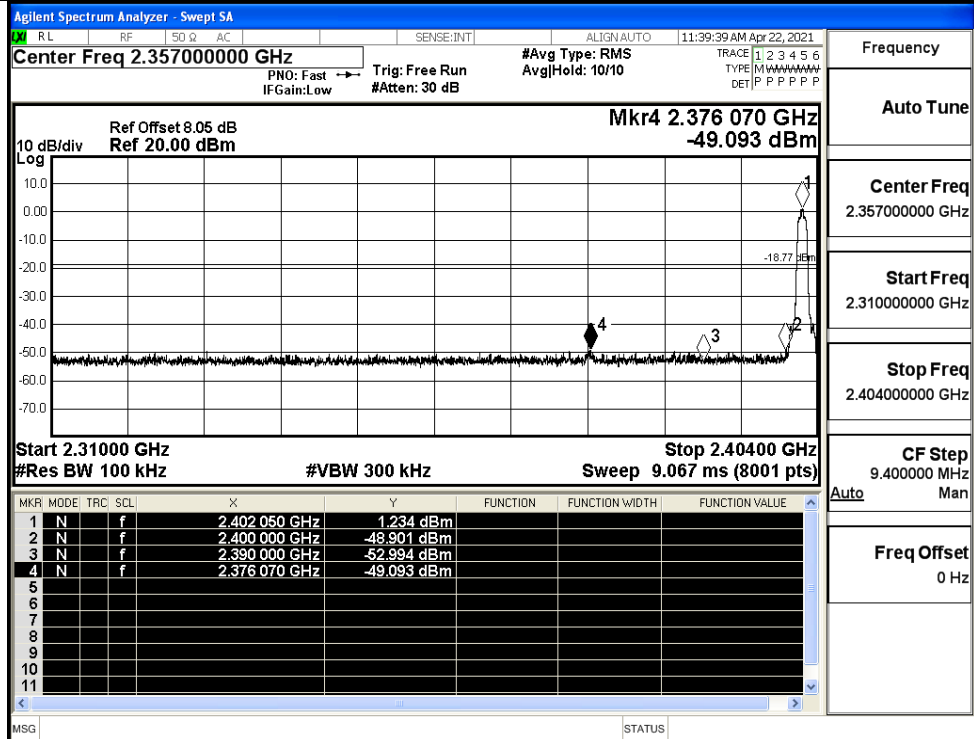
GFSK/HCH/No Hop



GFSK/HCH/Hop



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



Frequency

Auto Tune

Center Freq
2.357000000 GHz

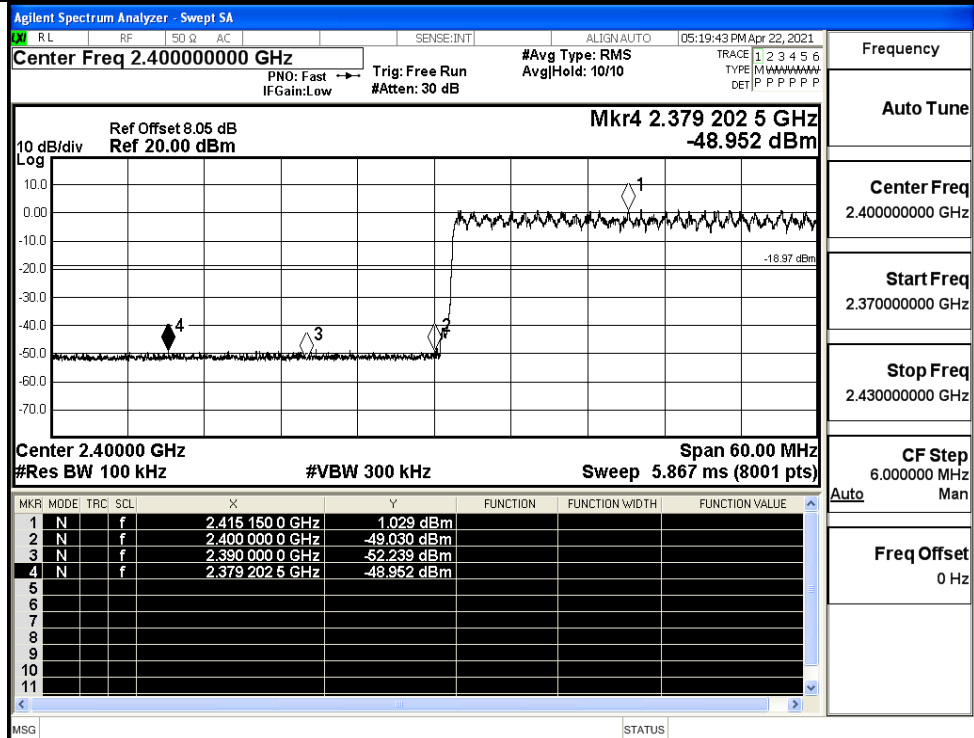
Start Freq
2.310000000 GHz

Stop Freq
2.404000000 GHz

CF Step
9.400000 MHz
Auto Man

Freq Offset
0 Hz

$\pi/4$ DQPSK/LCH/Hop



Frequency

Auto Tune

Center Freq
2.400000000 GHz

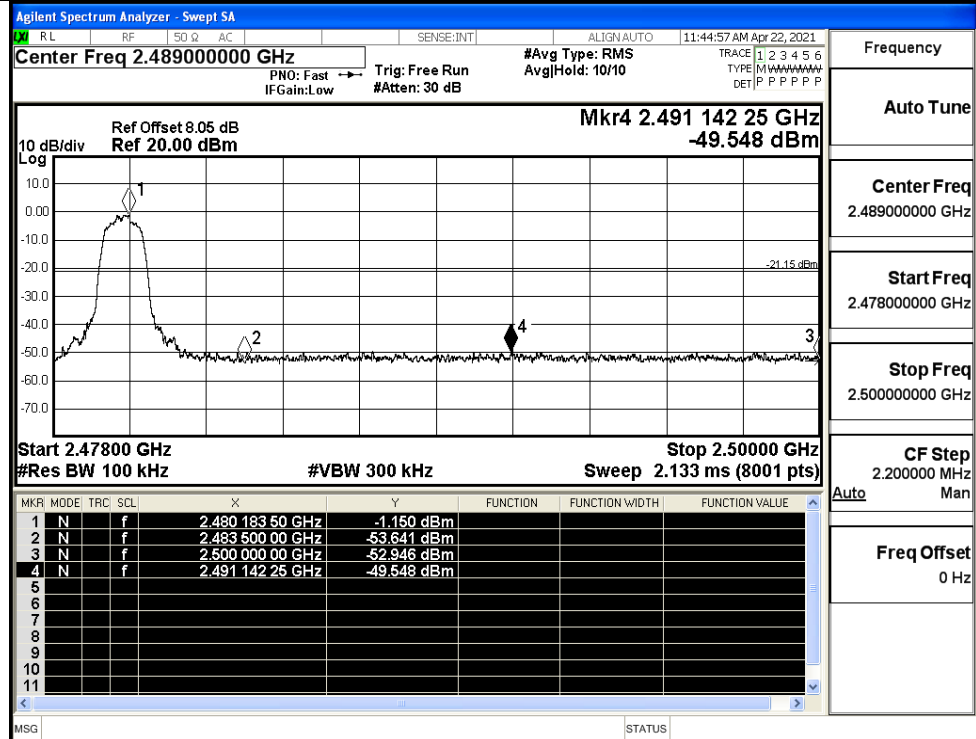
Start Freq
2.370000000 GHz

Stop Freq
2.430000000 GHz

CF Step
6.000000 MHz
Auto Man

Freq Offset
0 Hz

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



Frequency

Auto Tune

Center Freq
2.489000000 GHz

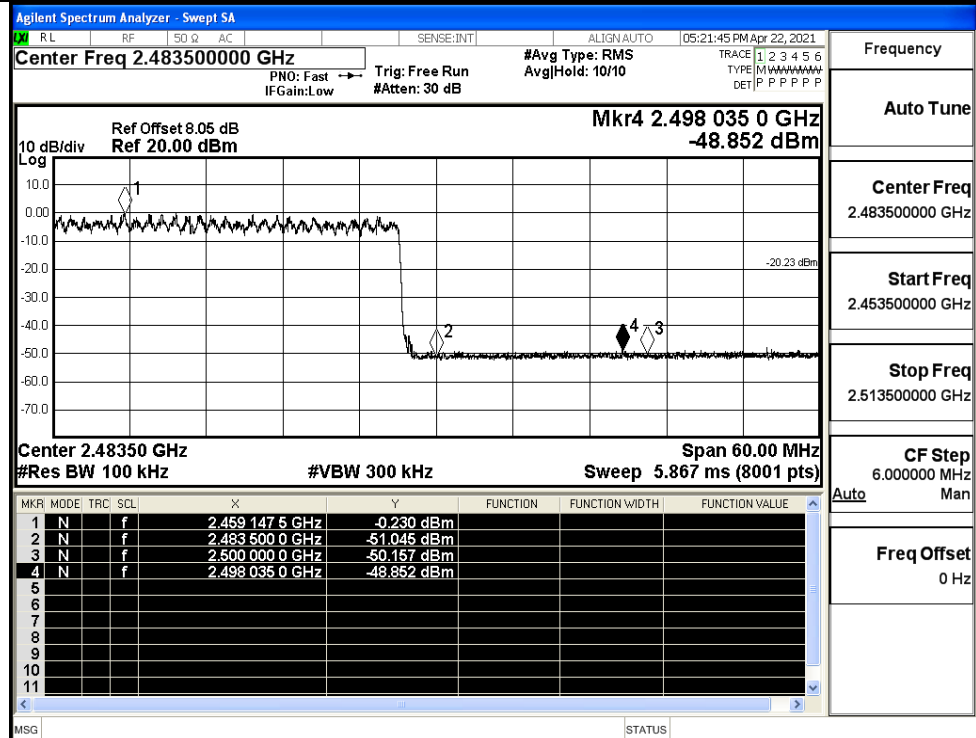
Start Freq
2.478000000 GHz

Stop Freq
2.500000000 GHz

CF Step
2.200000 MHz
Auto Man

Freq Offset
0 Hz

$\pi/4$ DQPSK/HCH/Hop



Frequency

Auto Tune

Center Freq
2.483500000 GHz

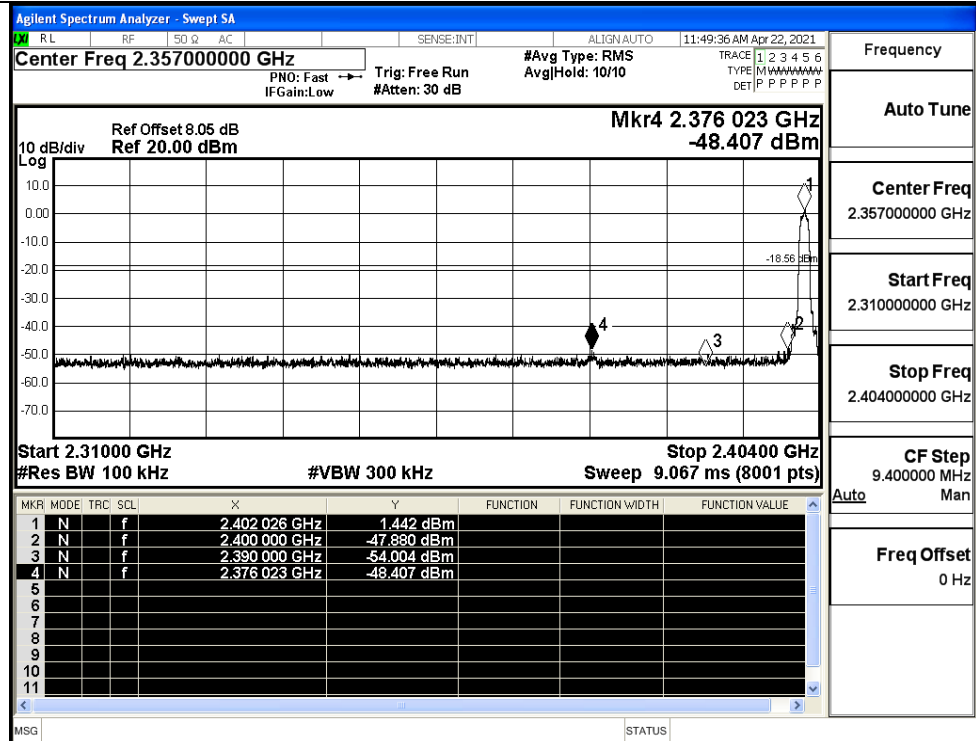
Start Freq
2.453500000 GHz

Stop Freq
2.513500000 GHz

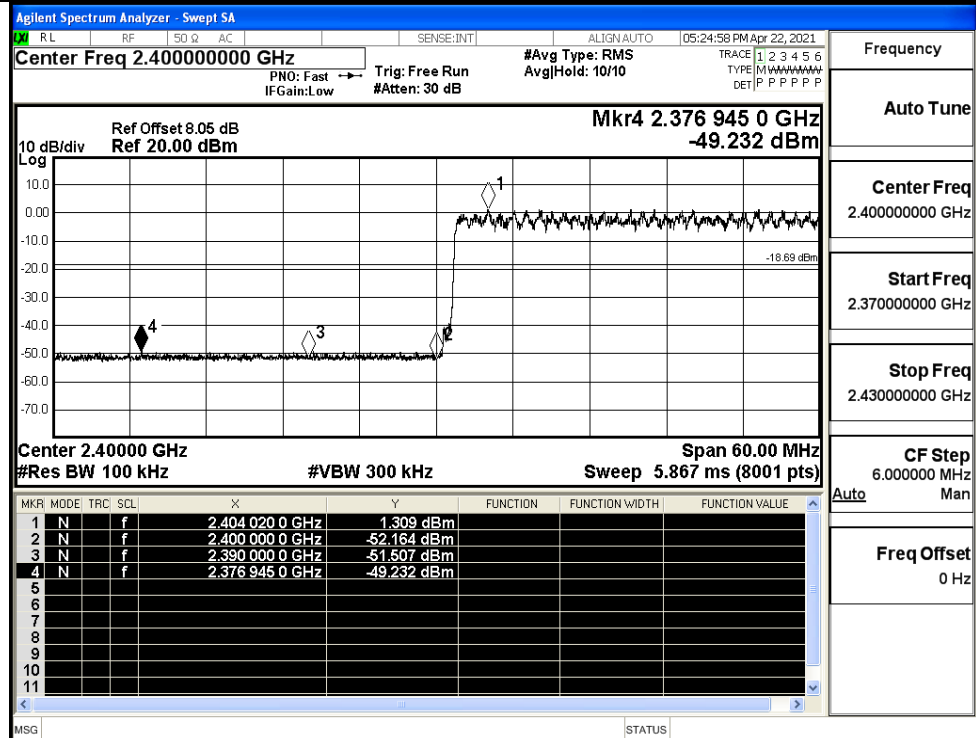
CF Step
6.000000 MHz
Auto Man

Freq Offset
0 Hz

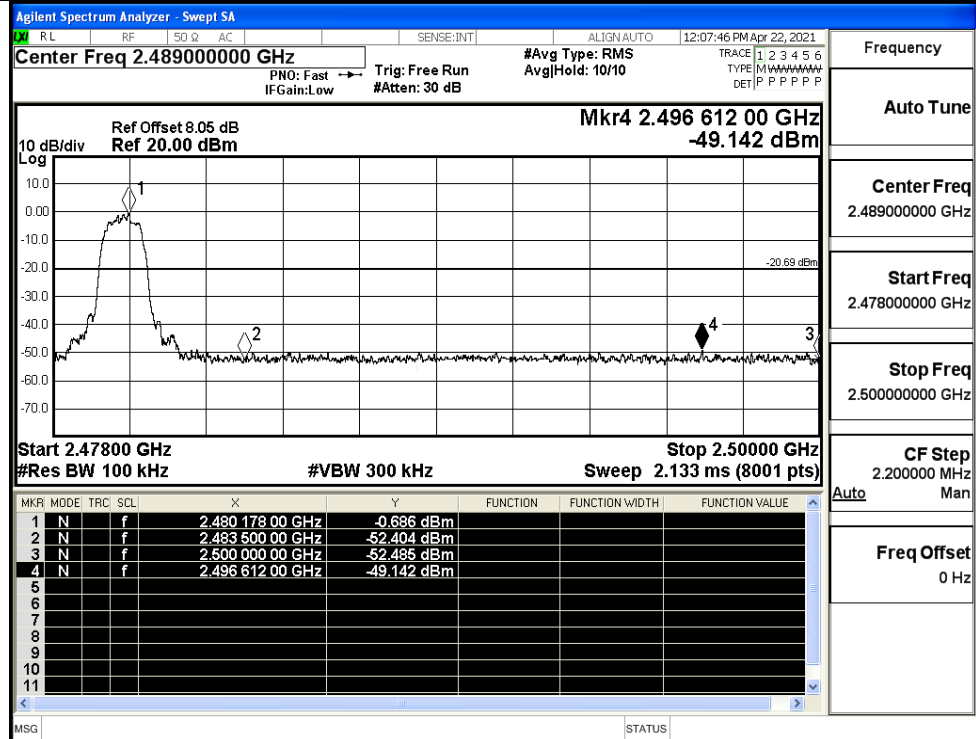
8DPSK/LCH/No Hop



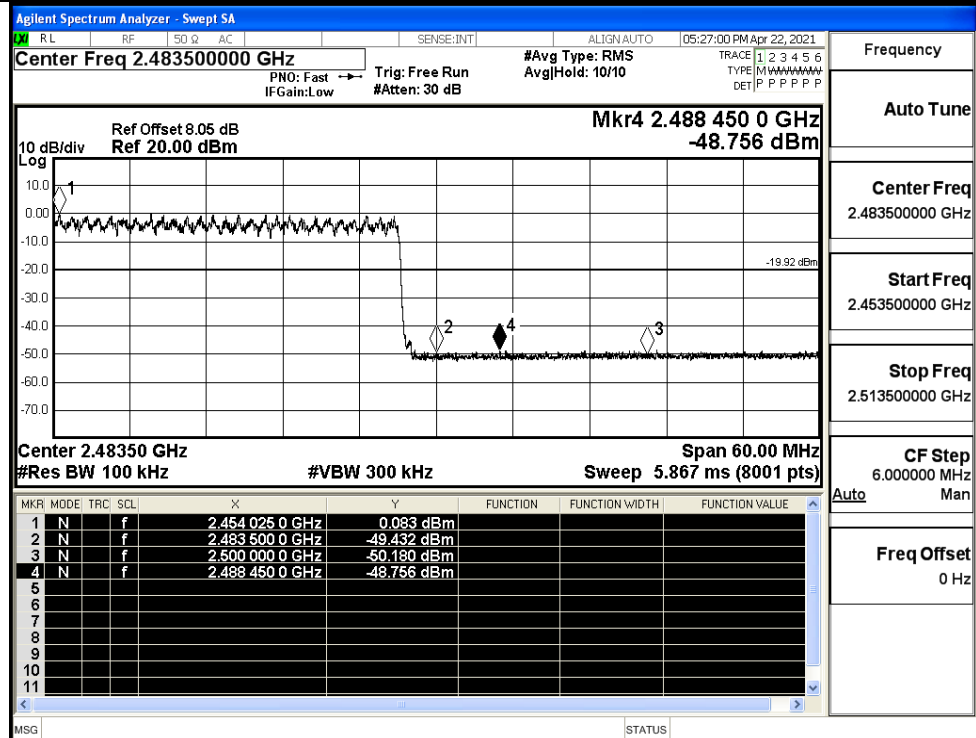
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



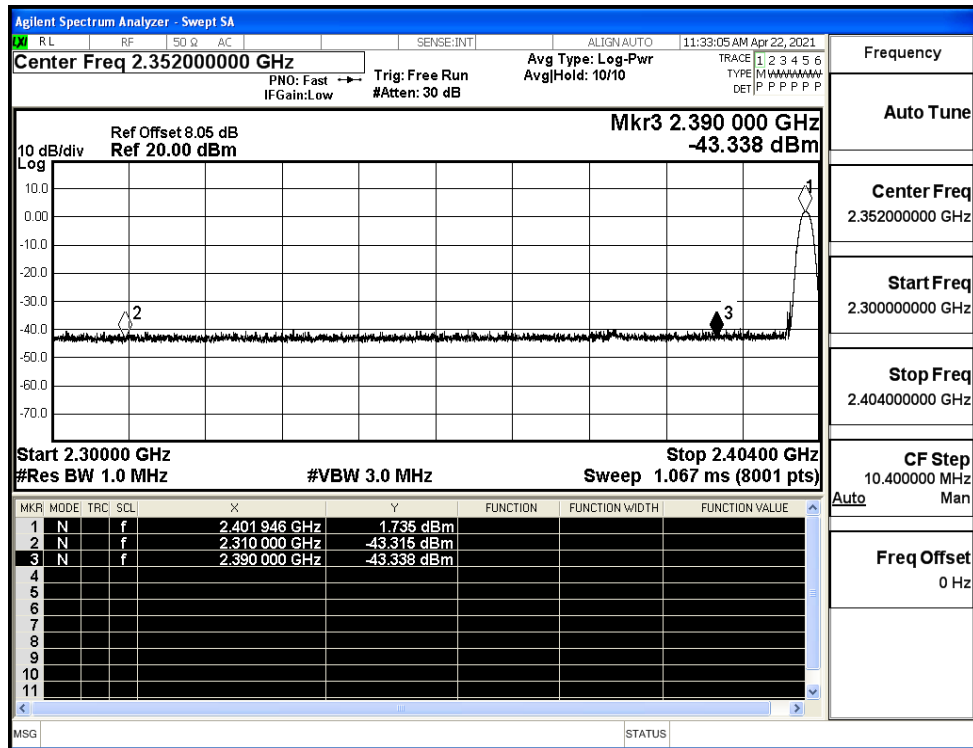
8DPSK/HCH/Hop



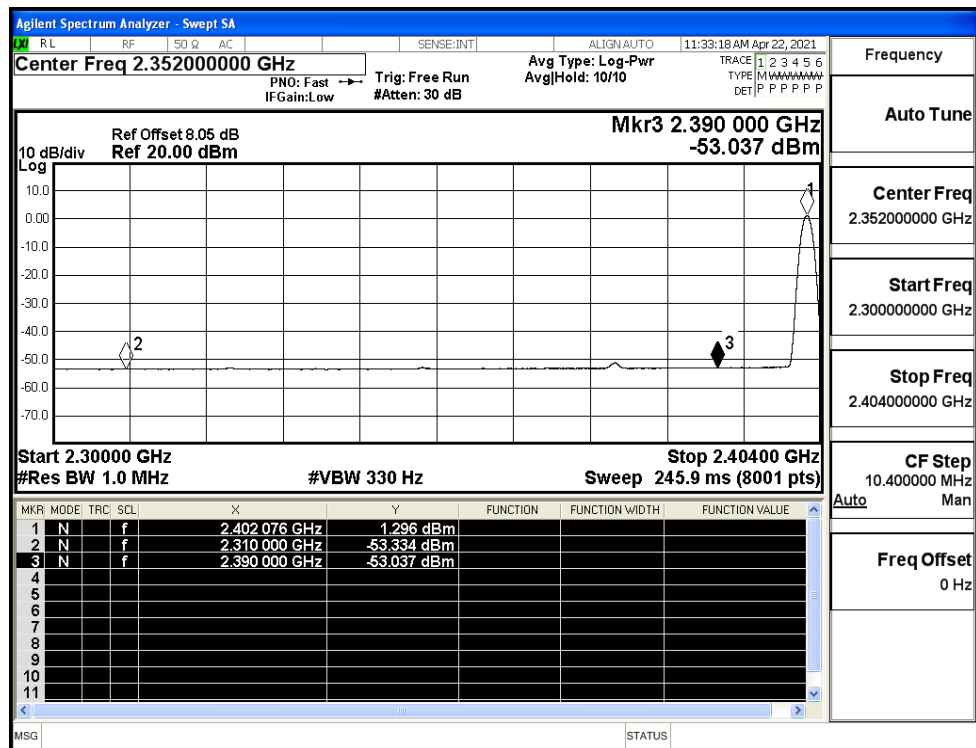
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.32	2.0	0	53.94	PEAK	74	PASS
	Off	2310.0	-53.33	2.0	0	43.93	AV	54	PASS
	Off	2390.0	-43.34	2.0	0	53.92	PEAK	74	PASS
	Off	2390.0	-53.04	2.0	0	44.22	AV	54	PASS
	Off	2483.5	-43.48	2.0	0	53.78	PEAK	74	PASS
	Off	2483.5	-52.45	2.0	0	44.81	AV	54	PASS
	Off	2500.0	-41.26	2.0	0	56.00	PEAK	74	PASS
	Off	2500.0	-52.26	2.0	0	45.00	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-44.21	2.0	0	53.05	PEAK	74	PASS
	Off	2310.0	-53.49	2.0	0	43.77	AV	54	PASS
	Off	2390.0	-42.49	2.0	0	54.77	PEAK	74	PASS
	Off	2390.0	-53.02	2.0	0	44.24	AV	54	PASS
	Off	2483.5	-42.54	2.0	0	54.72	PEAK	74	PASS
	Off	2483.5	-52.46	2.0	0	44.8	AV	54	PASS
	Off	2500.0	-42.53	2.0	0	54.73	PEAK	74	PASS
	Off	2500.0	-52.33	2.0	0	44.93	AV	54	PASS
8DPSK	Off	2310.0	-44.00	2.0	0	53.26	PEAK	74	PASS
	Off	2310.0	-53.47	2.0	0	43.79	AV	54	PASS
	Off	2390.0	-41.10	2.0	0	56.16	PEAK	74	PASS
	Off	2390.0	-53.04	2.0	0	44.22	AV	54	PASS
	Off	2483.5	-43.29	2.0	0	53.97	PEAK	74	PASS
	Off	2483.5	-52.51	2.0	0	44.75	AV	54	PASS
	Off	2500.0	-42.20	2.0	0	55.06	PEAK	74	PASS
	Off	2500.0	-52.34	2.0	0	44.92	AV	54	PASS

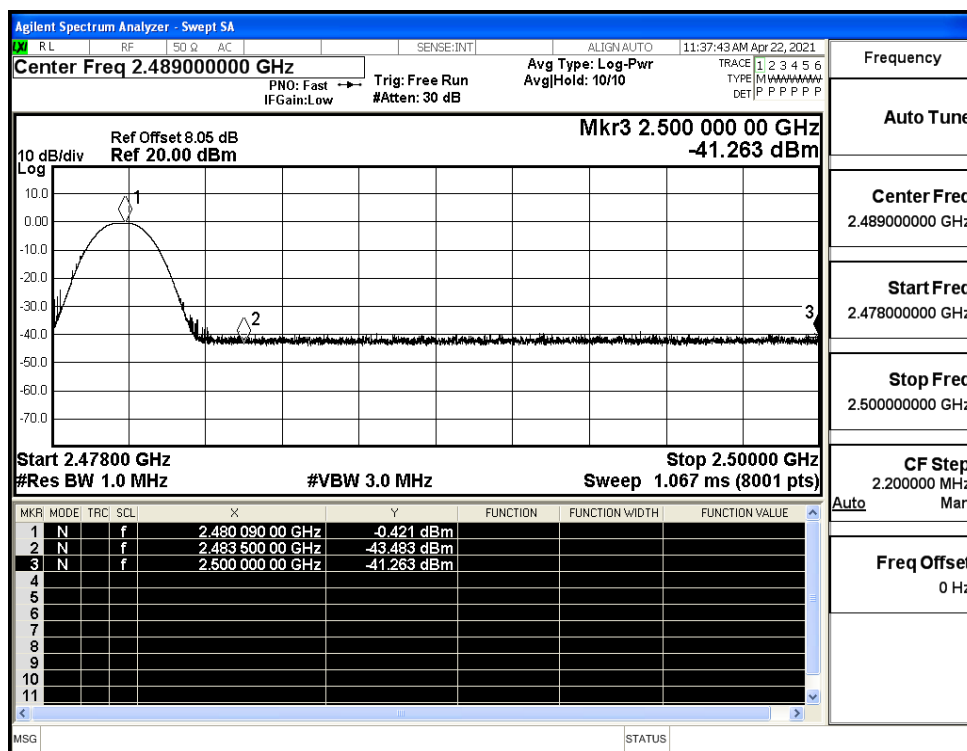
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



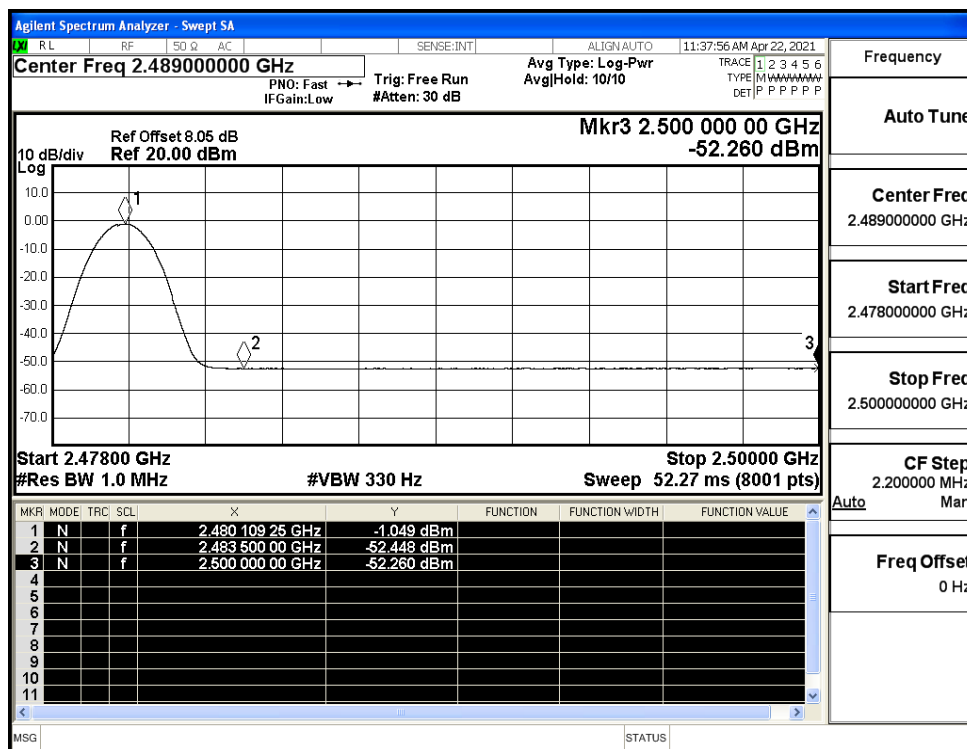
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

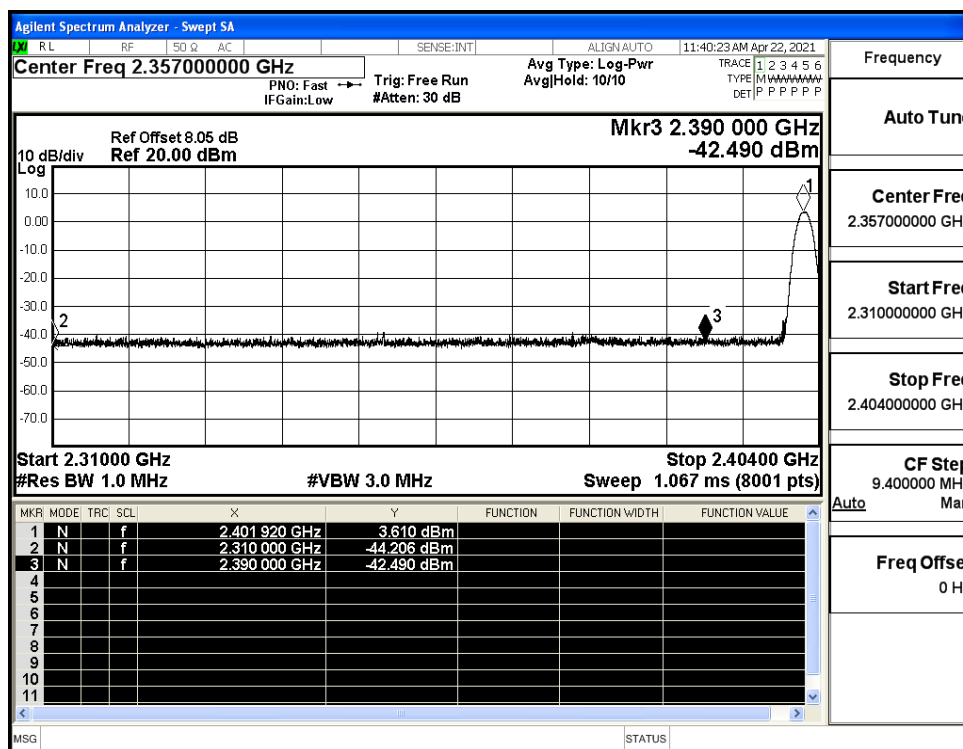
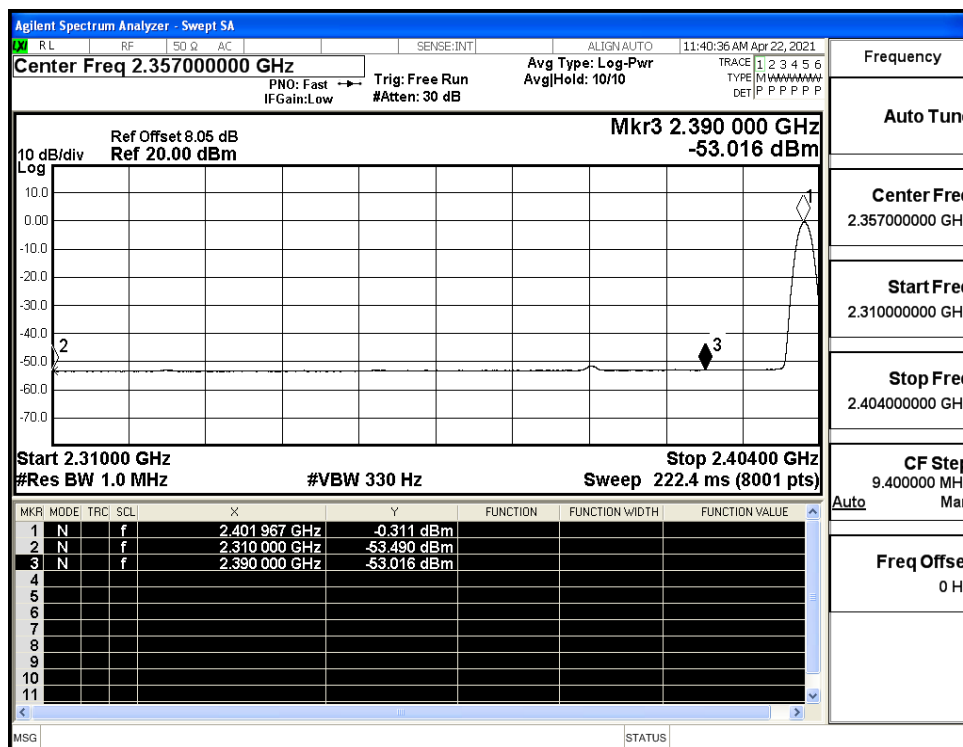


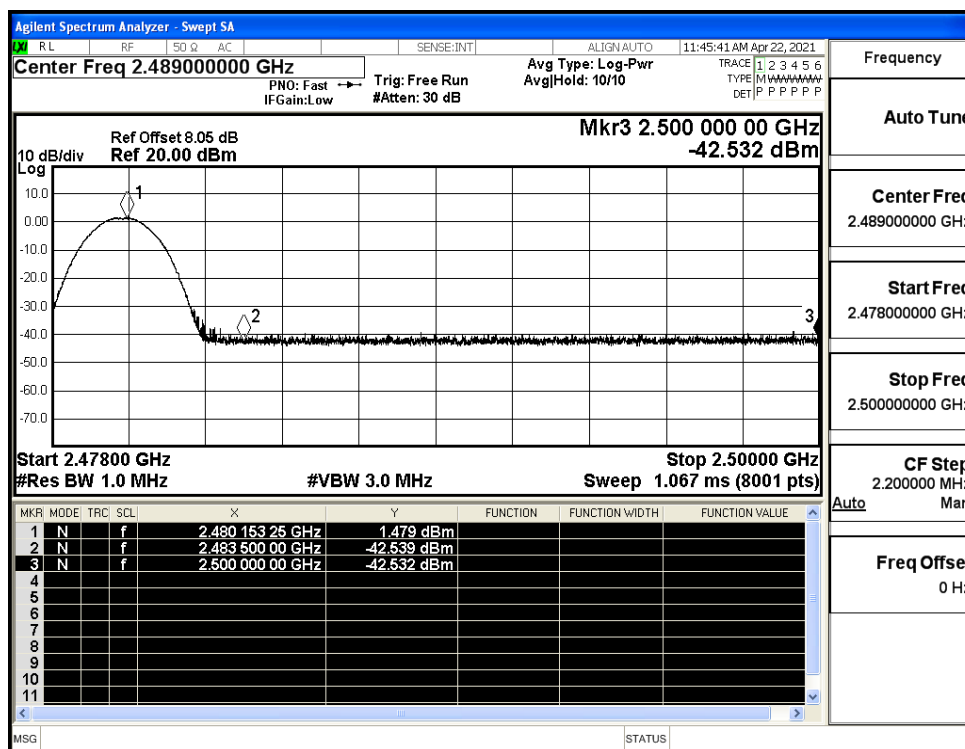
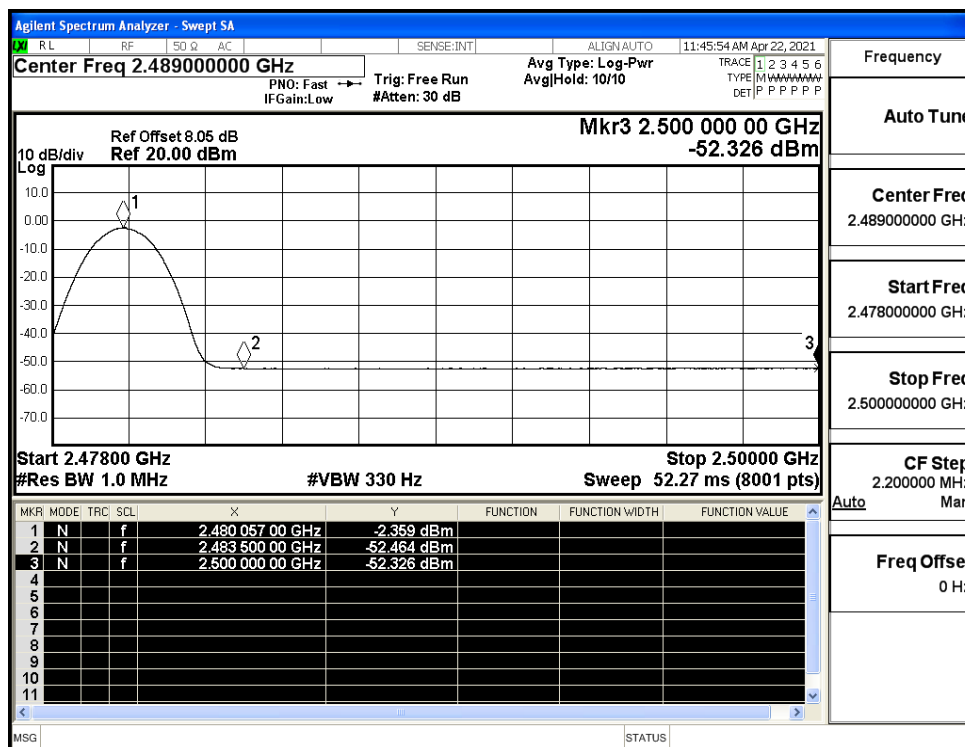
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



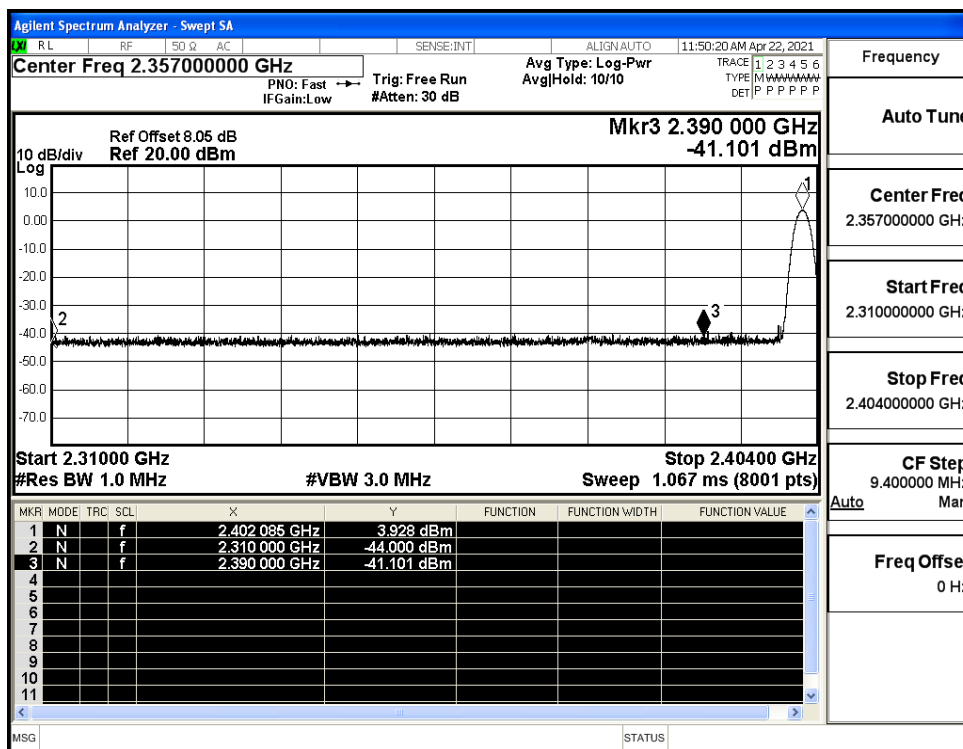
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



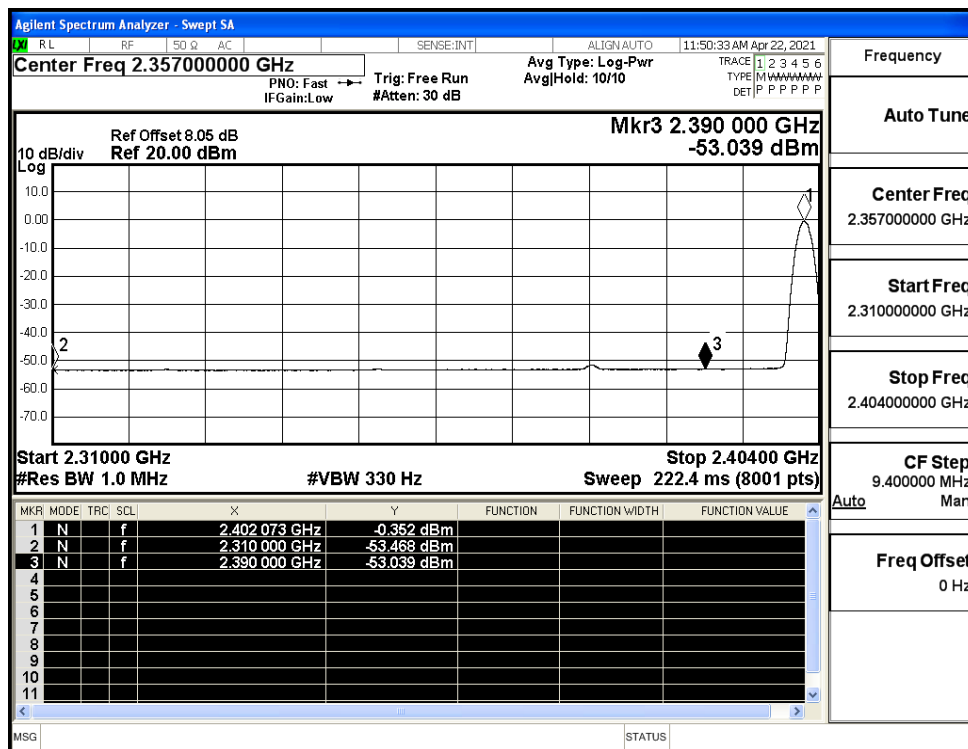
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

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)

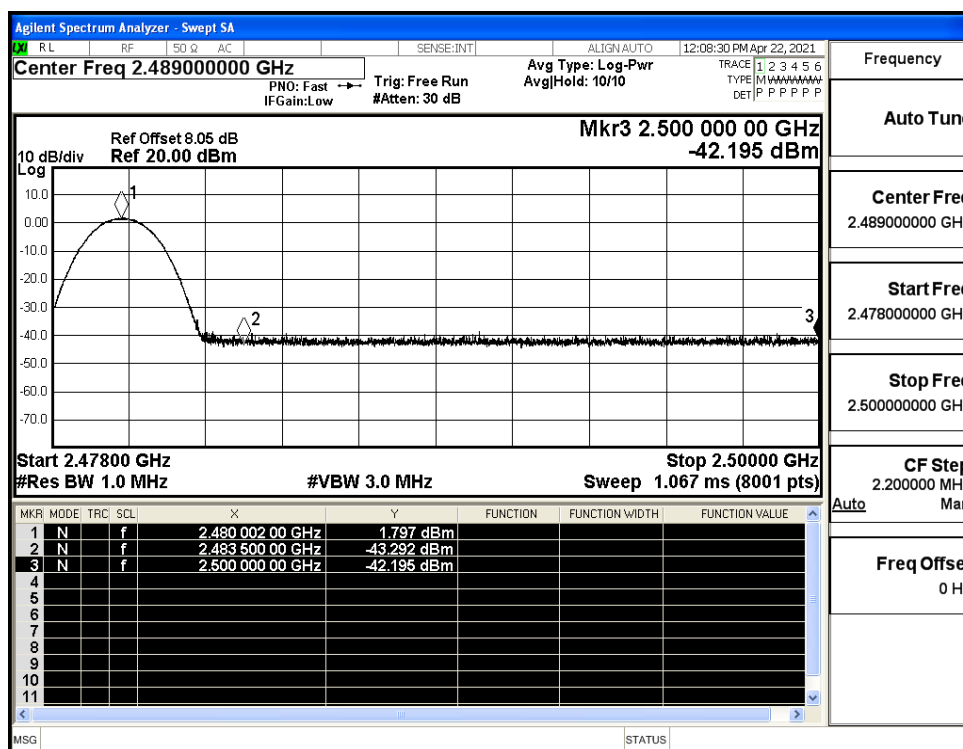
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

