

Appendix A

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

Product Name: 14.1" Windows Laptop

Trade Mark: N/A

Test Model: HT14CCIC81ES

Environmental Conditions

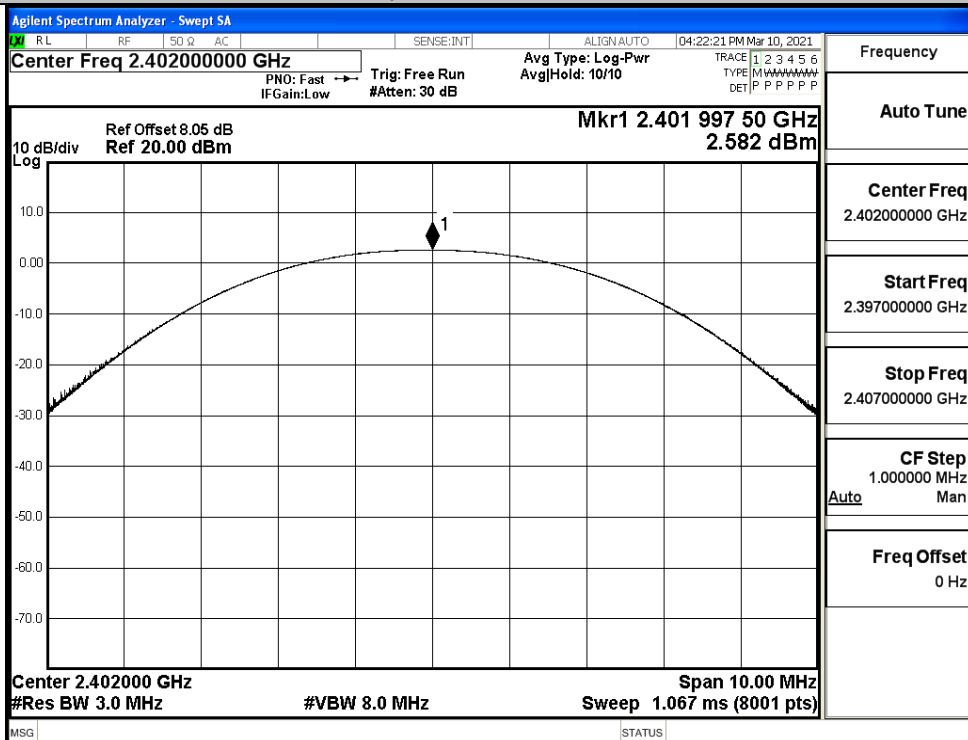
Temperature:	24.8° C
Relative Humidity:	56.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Ben Jin
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

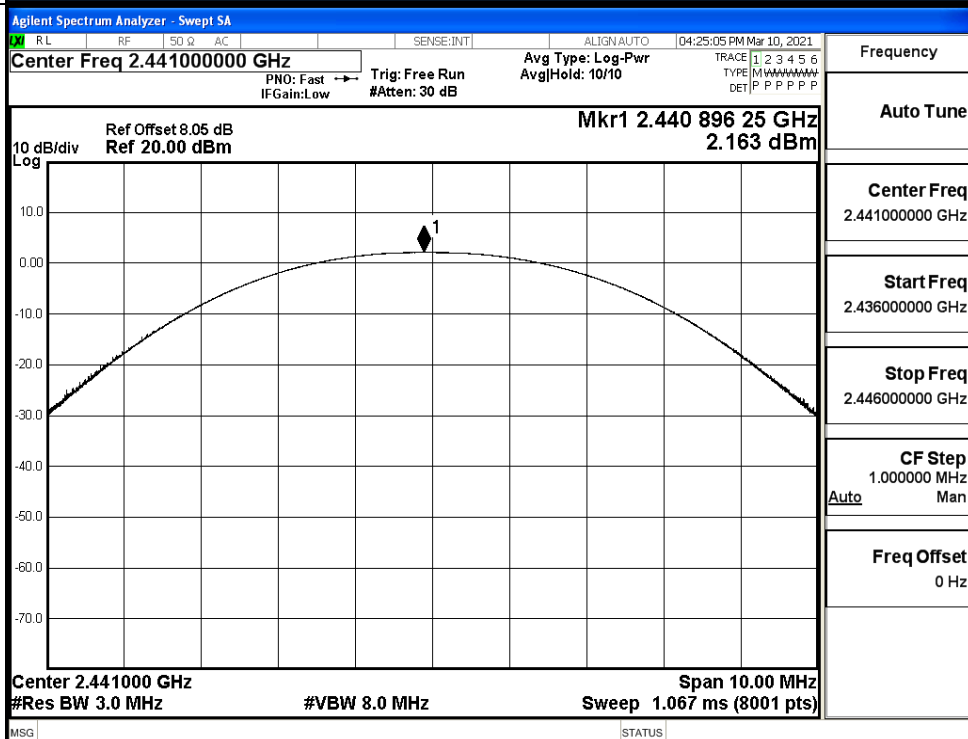
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.582	21	PASS
	MCH	2.163	21	PASS
	HCH	1.000	21	PASS
$\pi/4$ DQPSK	LCH	3.318	21	PASS
	MCH	2.851	21	PASS
	HCH	1.721	21	PASS
8DPSK	LCH	3.653	21	PASS
	MCH	3.207	21	PASS
	HCH	2.158	21	PASS

Test Graphs

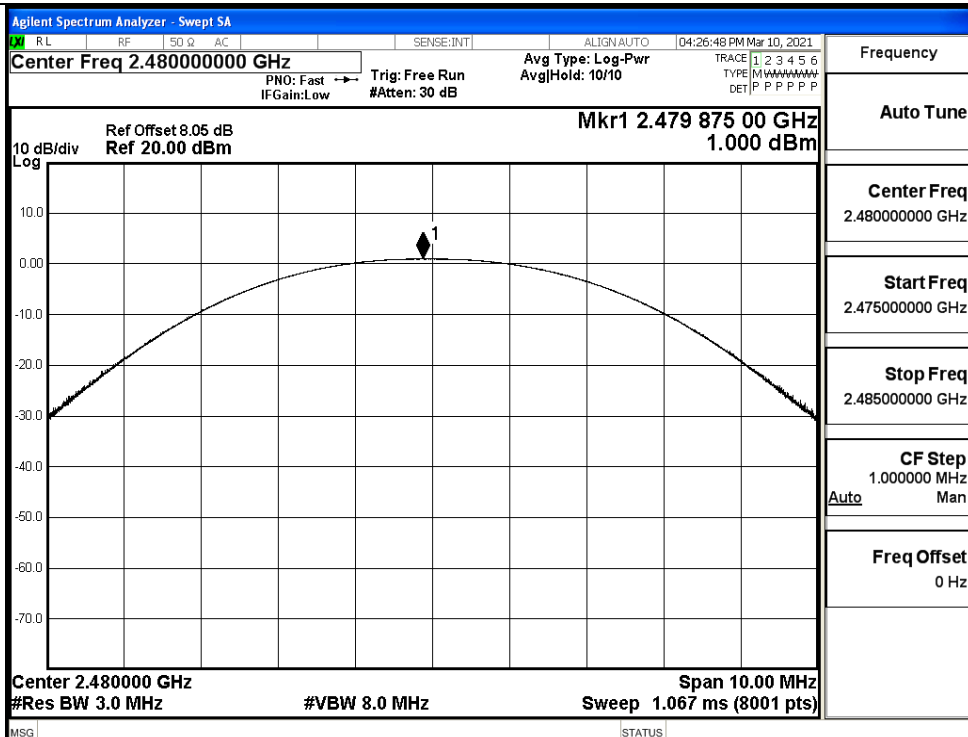
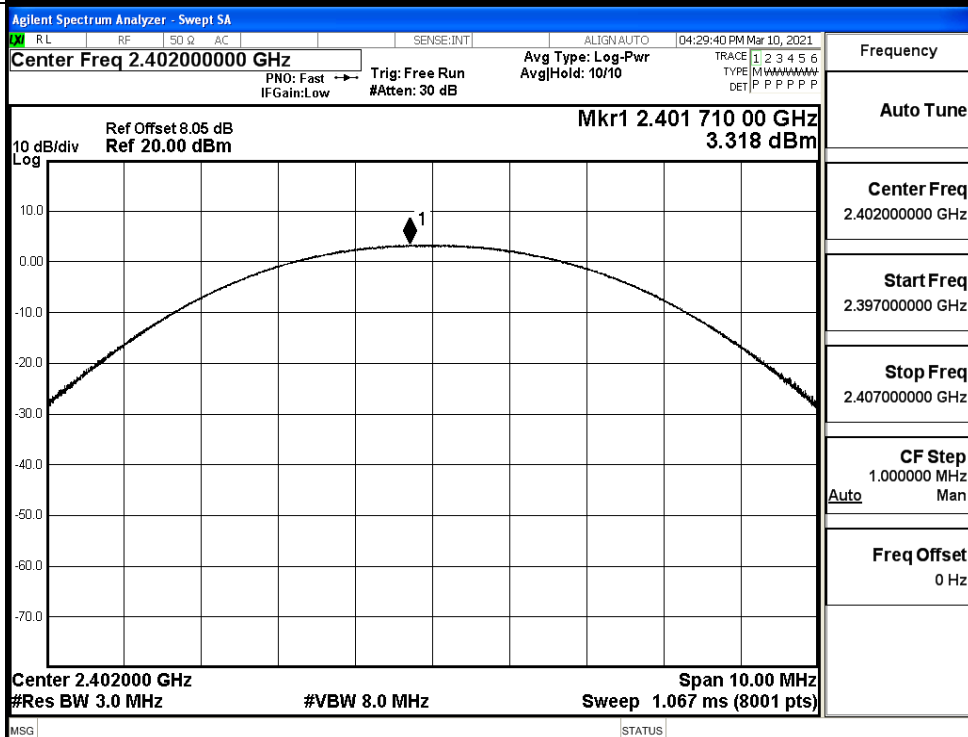
GFSK/LCH

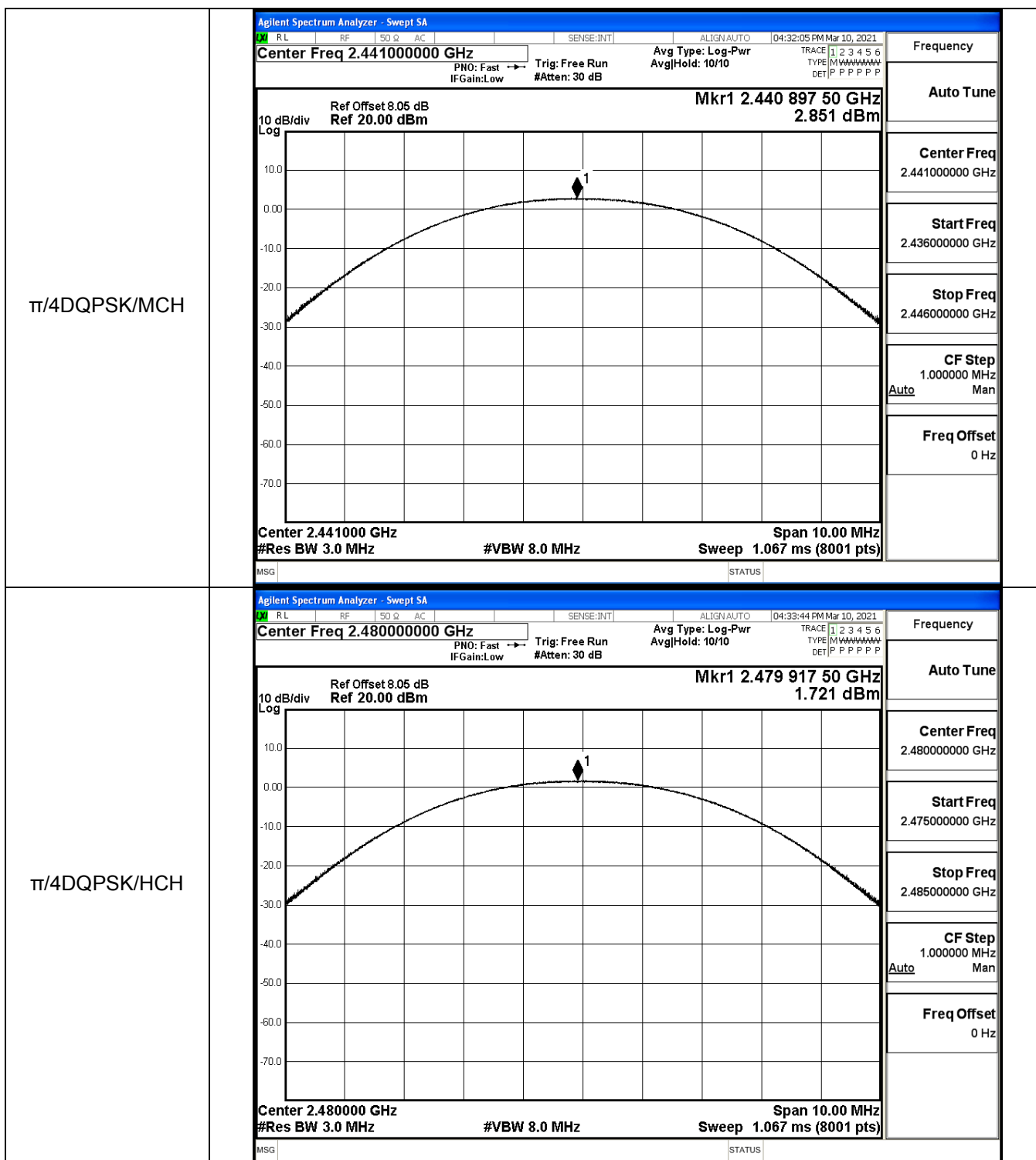


GFSK/MCH

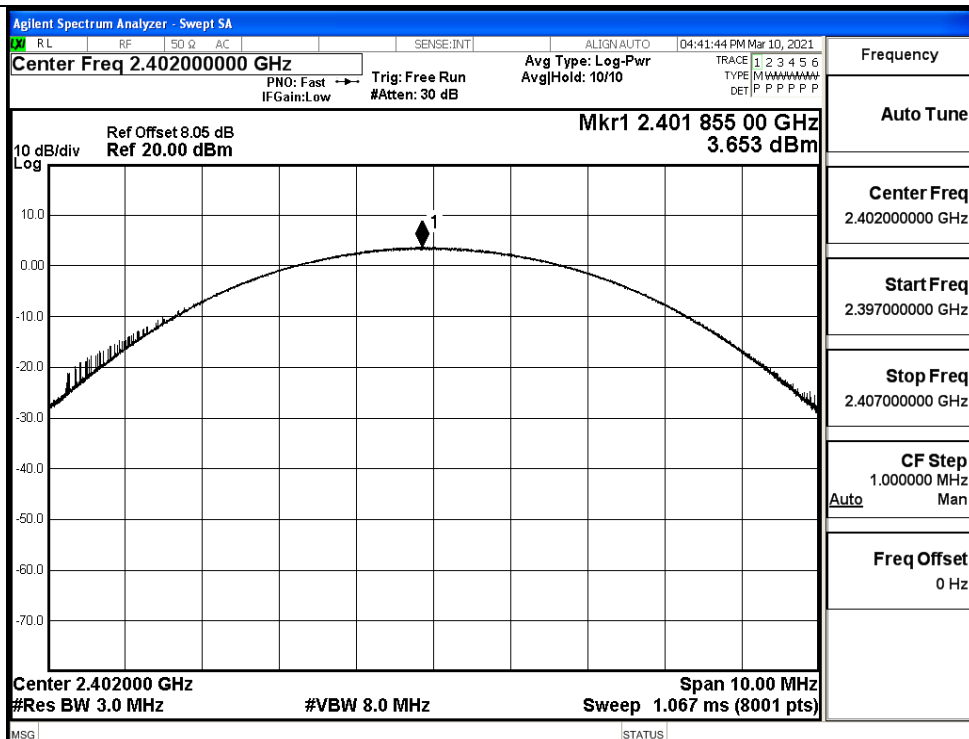


GFSK/HCH

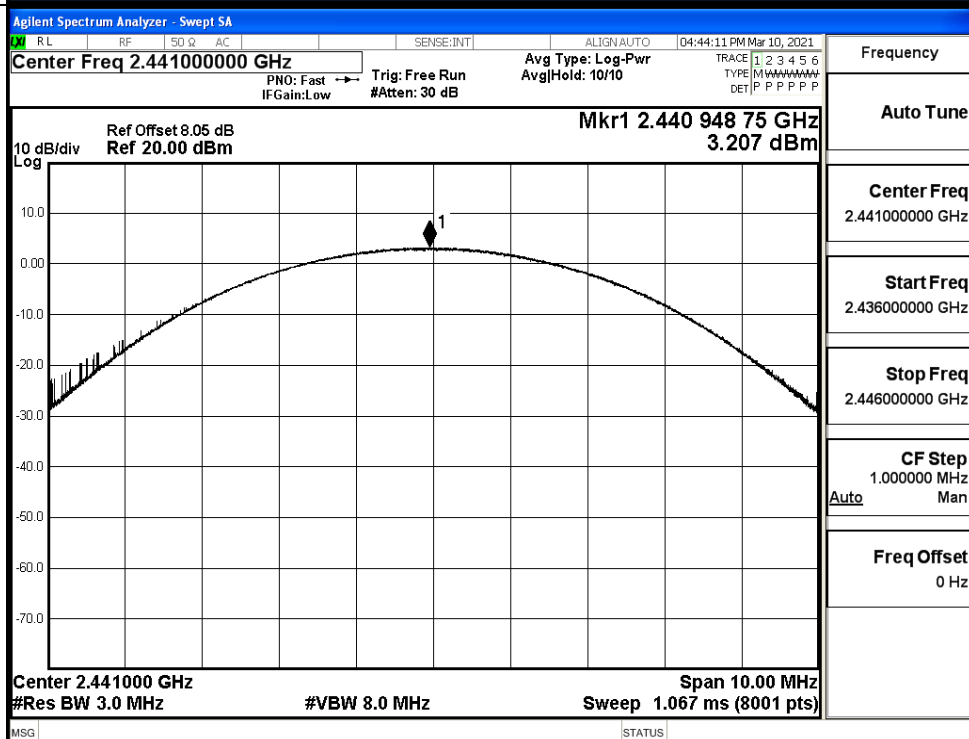
 π /4DQPSK/LCH



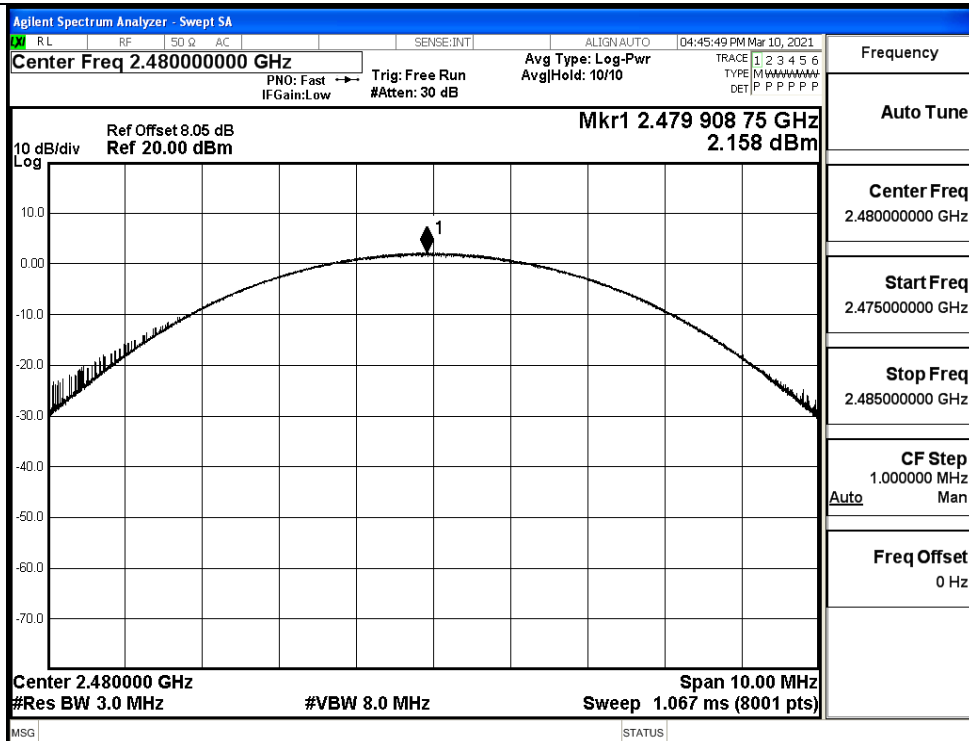
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

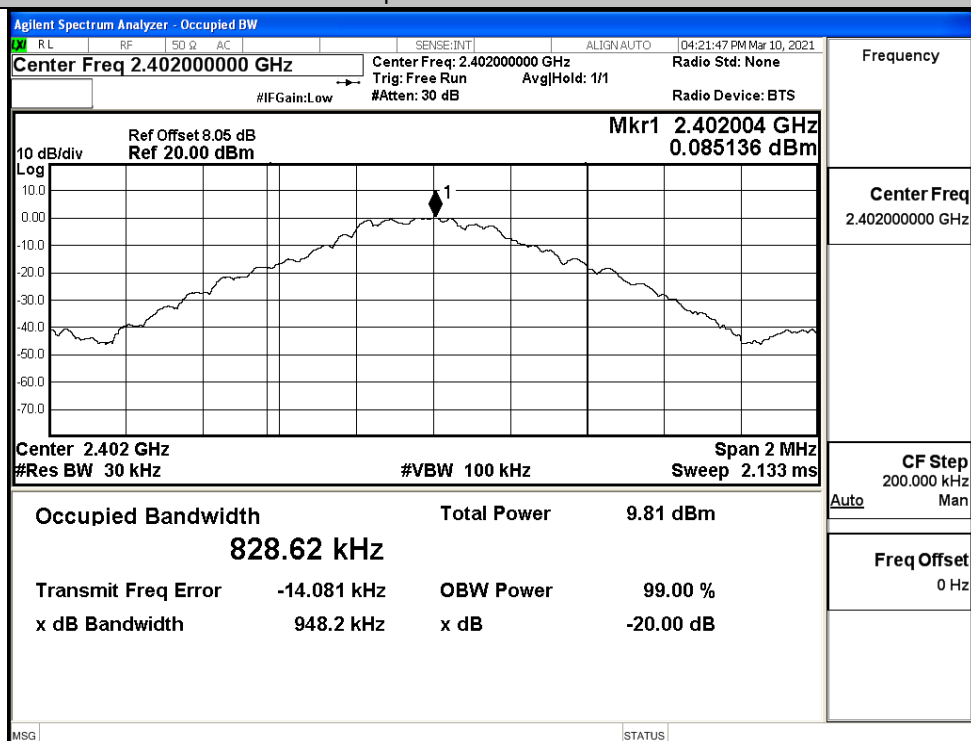


A.2 20dB Bandwidth

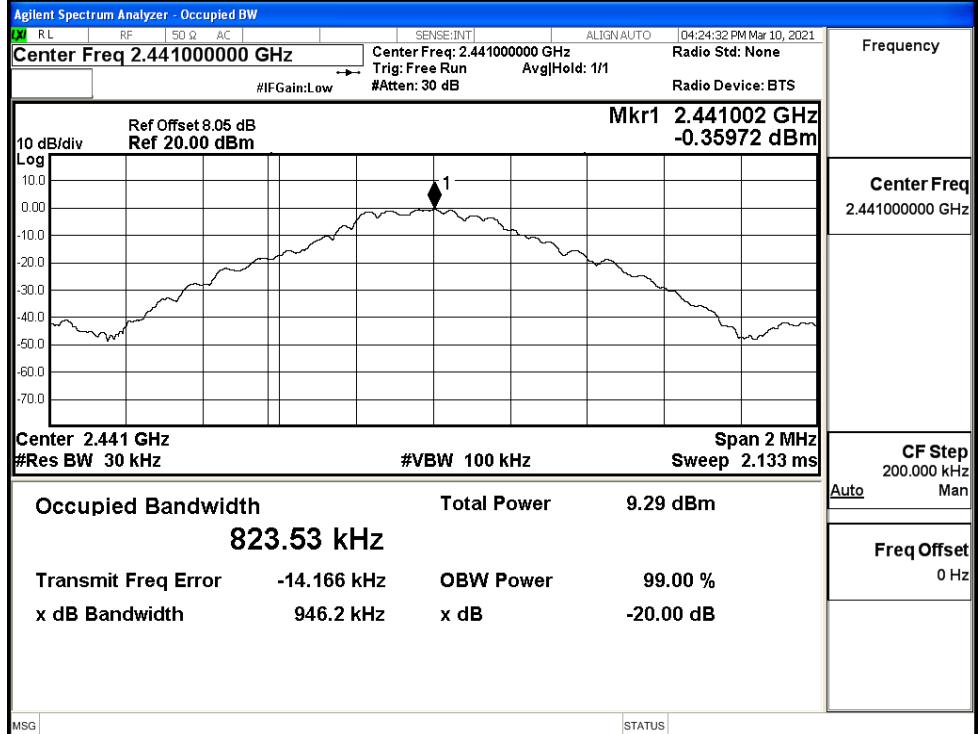
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9482	Not Specified	PASS
	MCH	0.9462	Not Specified	PASS
	HCH	0.9469	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.283	Not Specified	PASS
	MCH	1.280	Not Specified	PASS
	HCH	1.282	Not Specified	PASS
8DPSK	LCH	1.308	Not Specified	PASS
	MCH	1.308	Not Specified	PASS
	HCH	1.309	Not Specified	PASS

Test Graphs

GFSK/LCH



GFSK/MCH



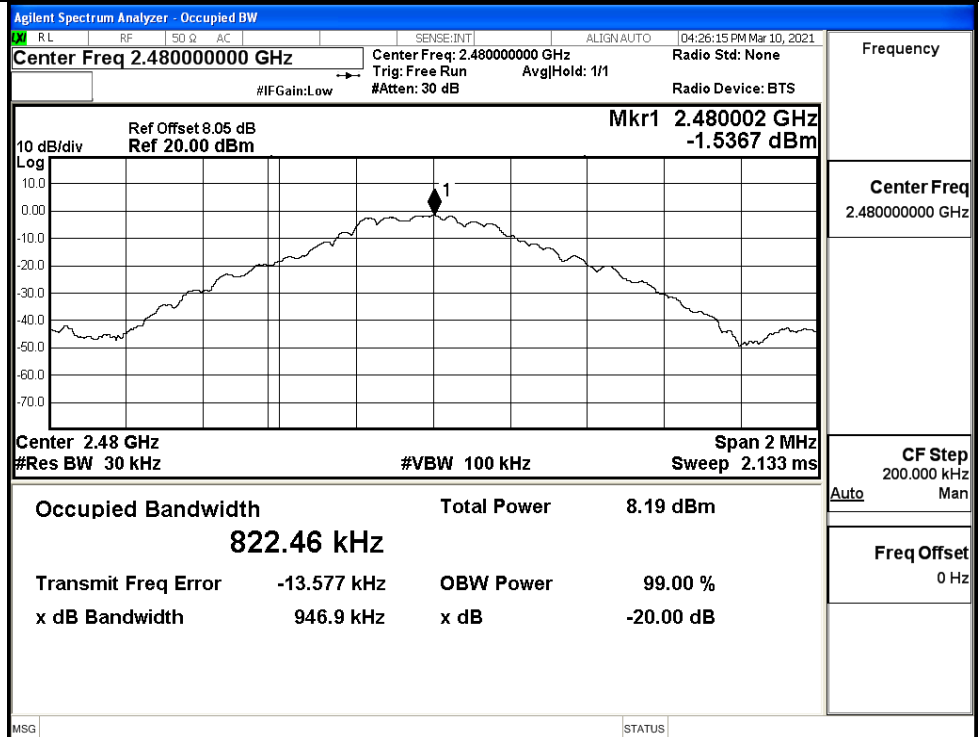
Frequency

Center Freq
2.441000000 GHzCF Step
200.000 kHz
Man

Auto

Freq Offset
0 Hz

GFSK/HCH

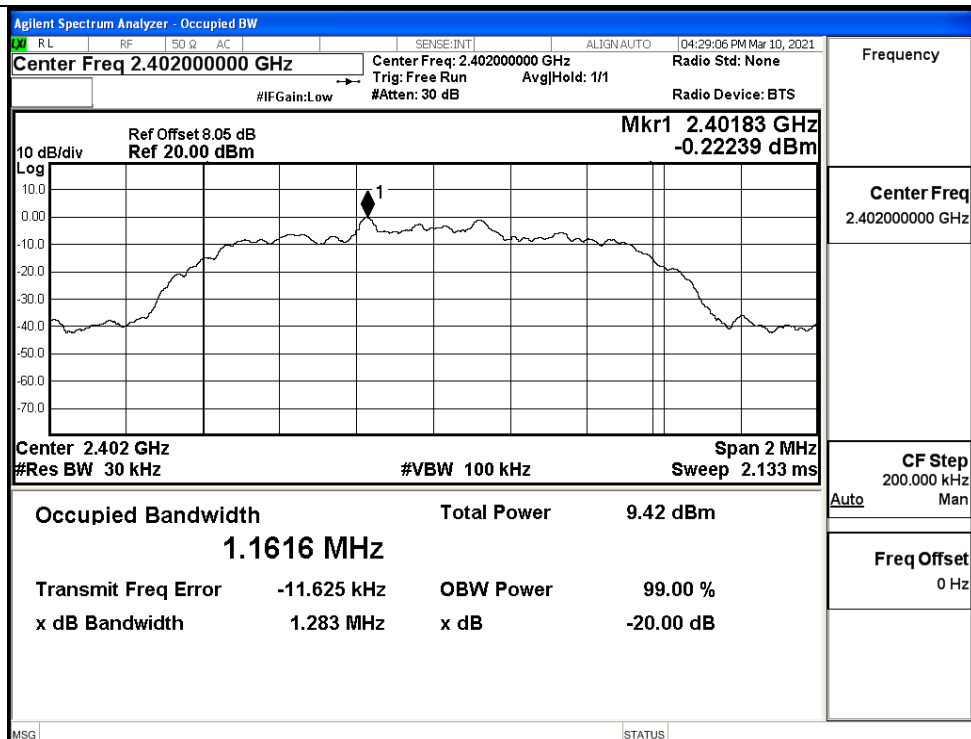


Frequency

Center Freq
2.480000000 GHzCF Step
200.000 kHz
Man

Auto

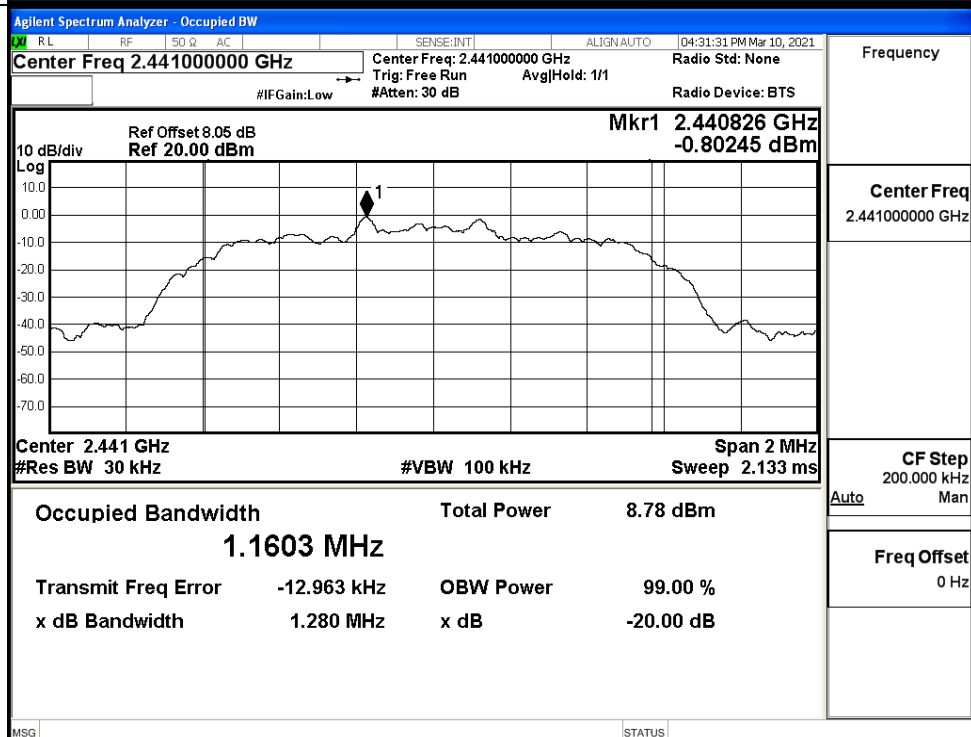
Freq Offset
0 Hz

$\pi/4$ DQPSK/LCH

Frequency

Center Freq
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200.000 kHz
Man

Auto

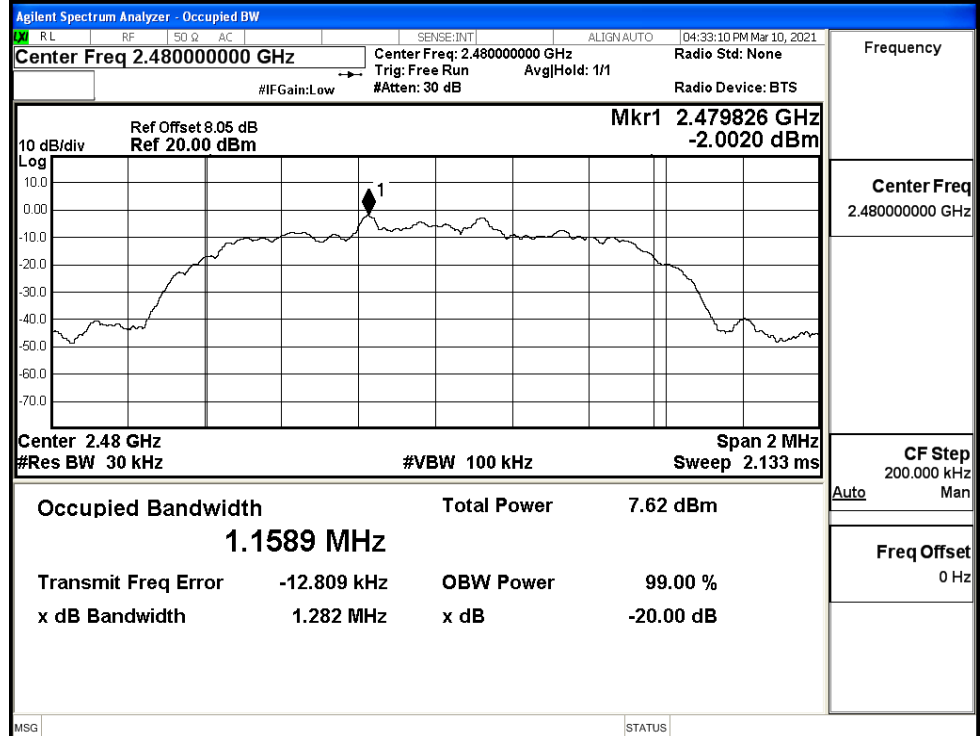
Freq Offset
0 Hz $\pi/4$ DQPSK/MCH

Frequency

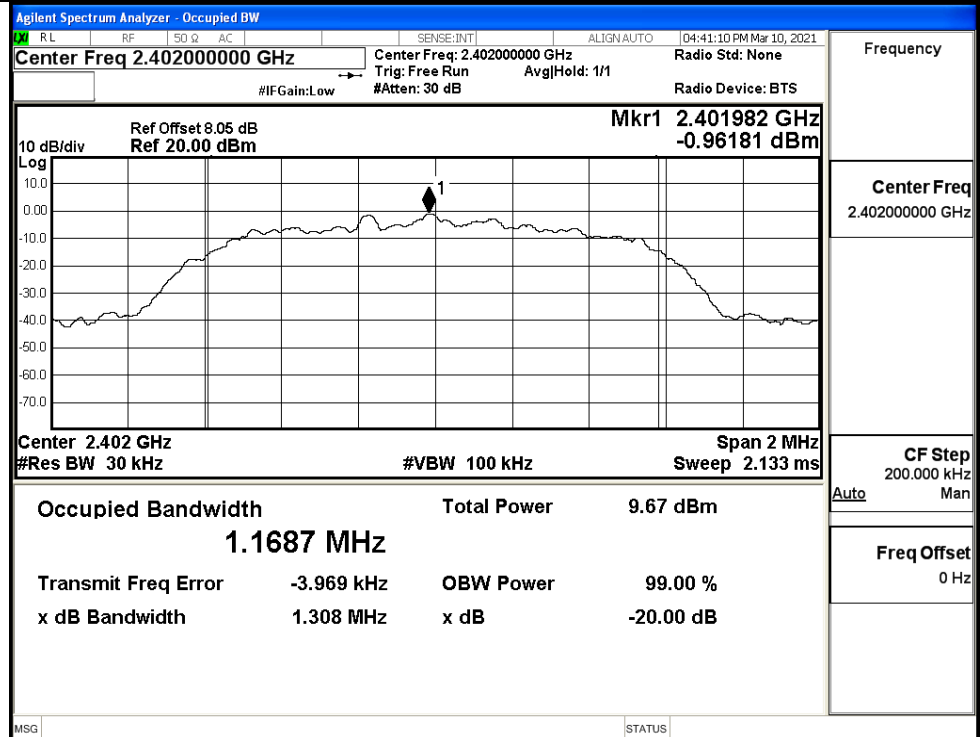
Center Freq
2.441000000 GHzCF Step
200.000 kHz
Man

Auto

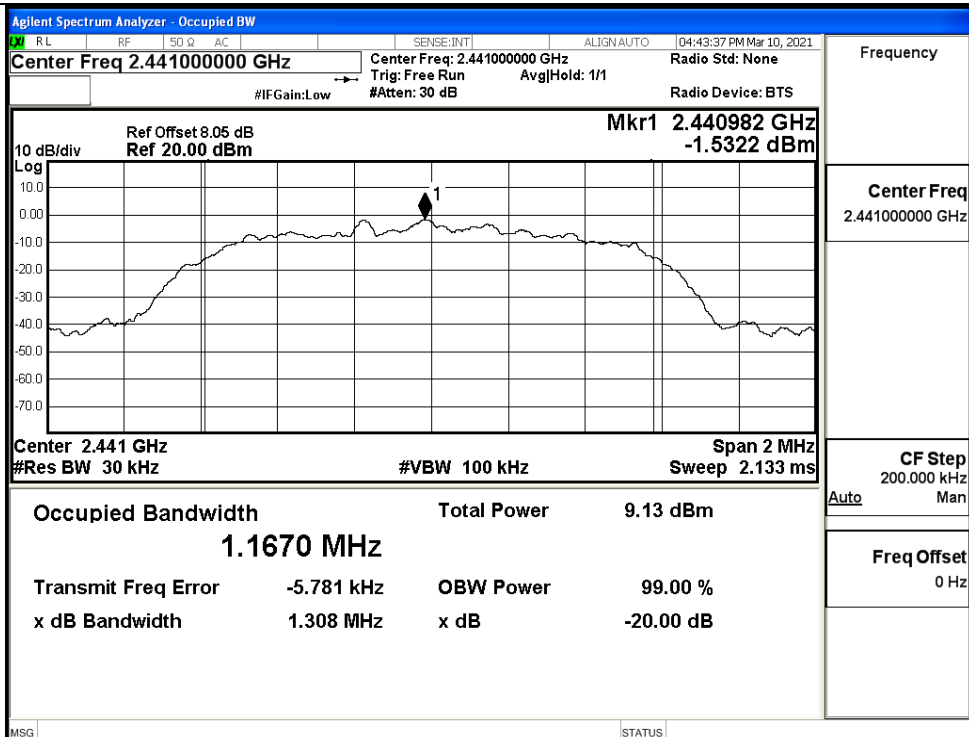
Freq Offset
0 Hz

$\pi/4$ DQPSK/HCH

8DPSK/LCH



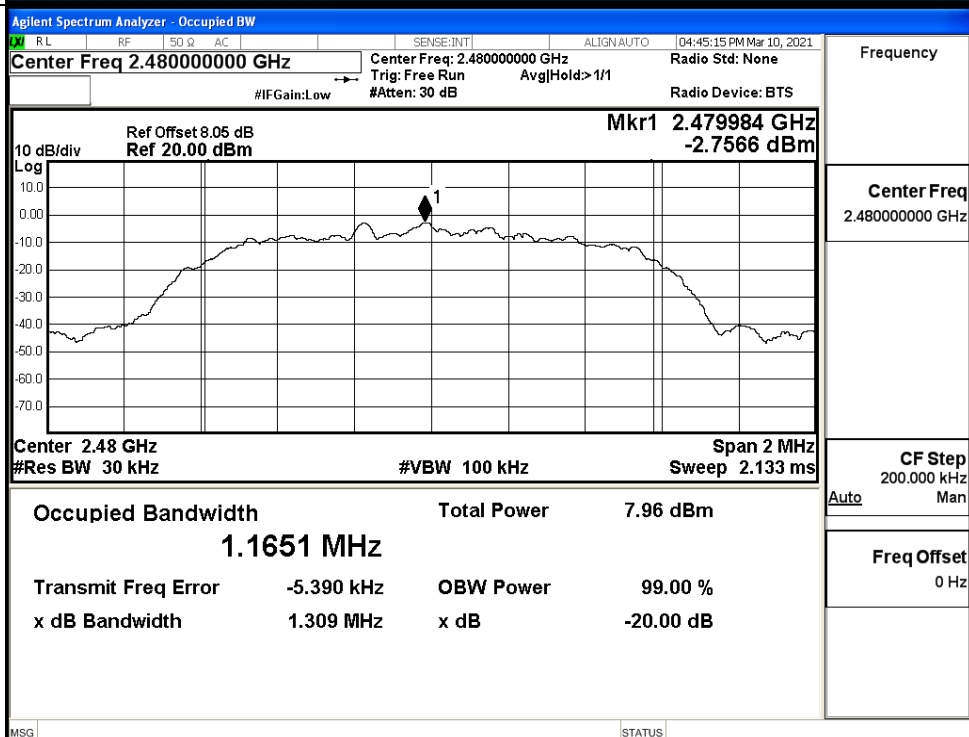
8DPSK/MCH



Frequency

Center Freq
2.441000000 GHzCF Step
200.000 kHz
Auto ManFreq Offset
0 Hz

8DPSK/HCH



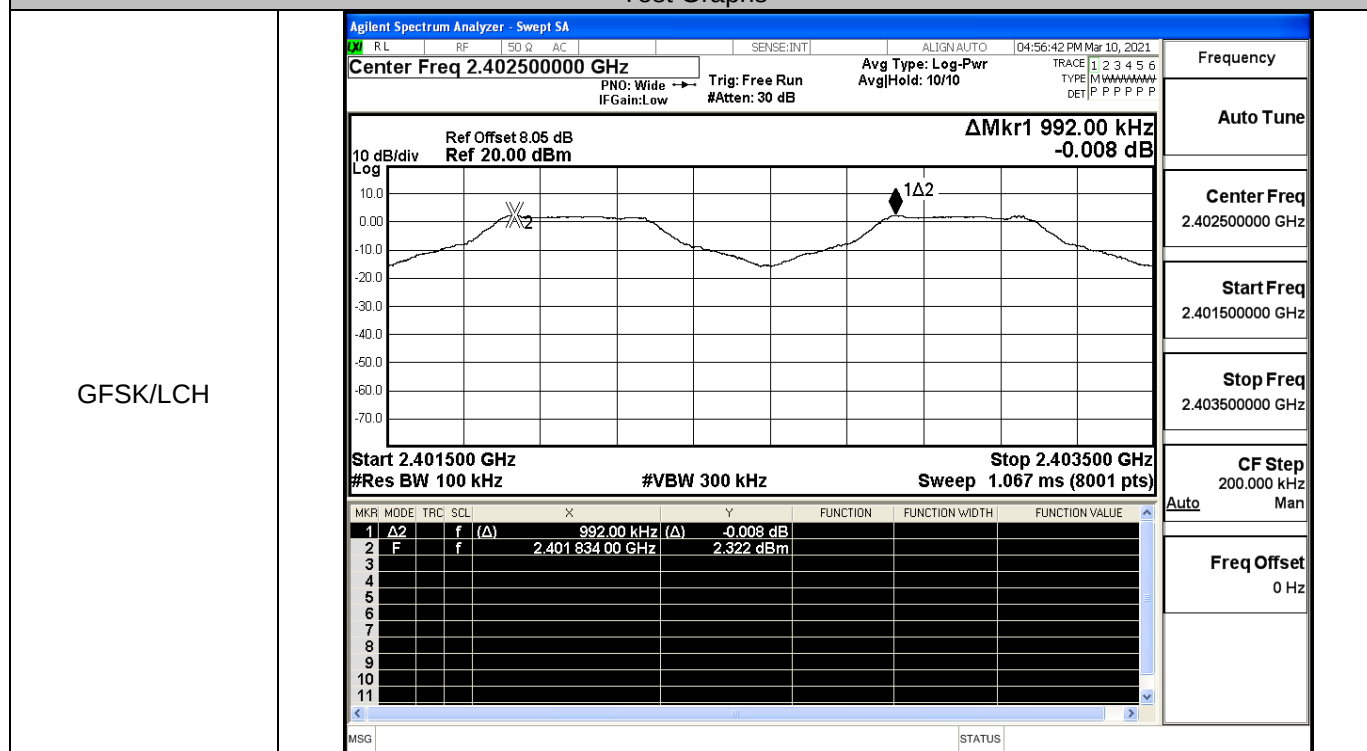
Frequency

Center Freq
2.480000000 GHzCF Step
200.000 kHz
Auto ManFreq Offset
0 Hz

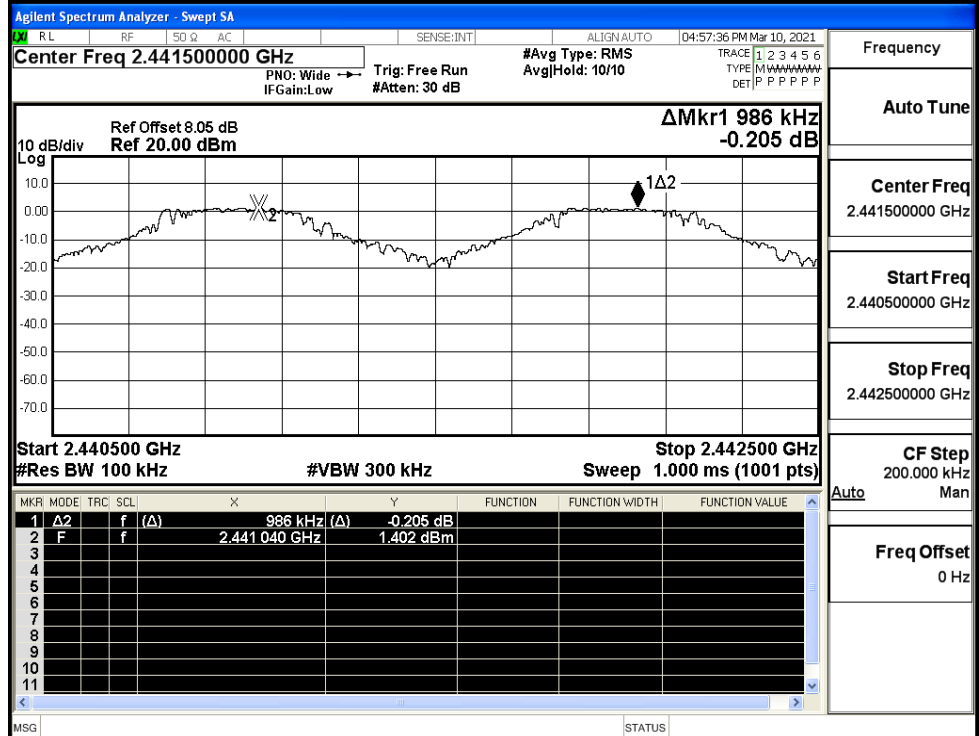
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.992	0.632	PASS
	MCH	0.986	0.632	PASS
	HCH	0.650	0.632	PASS
$\pi/4$ DQPSK	LCH	1.028	0.855	PASS
	MCH	1.008	0.855	PASS
	HCH	0.994	0.855	PASS
8DPSK	LCH	0.998	0.873	PASS
	MCH	1.316	0.873	PASS
	HCH	1.308	0.873	PASS

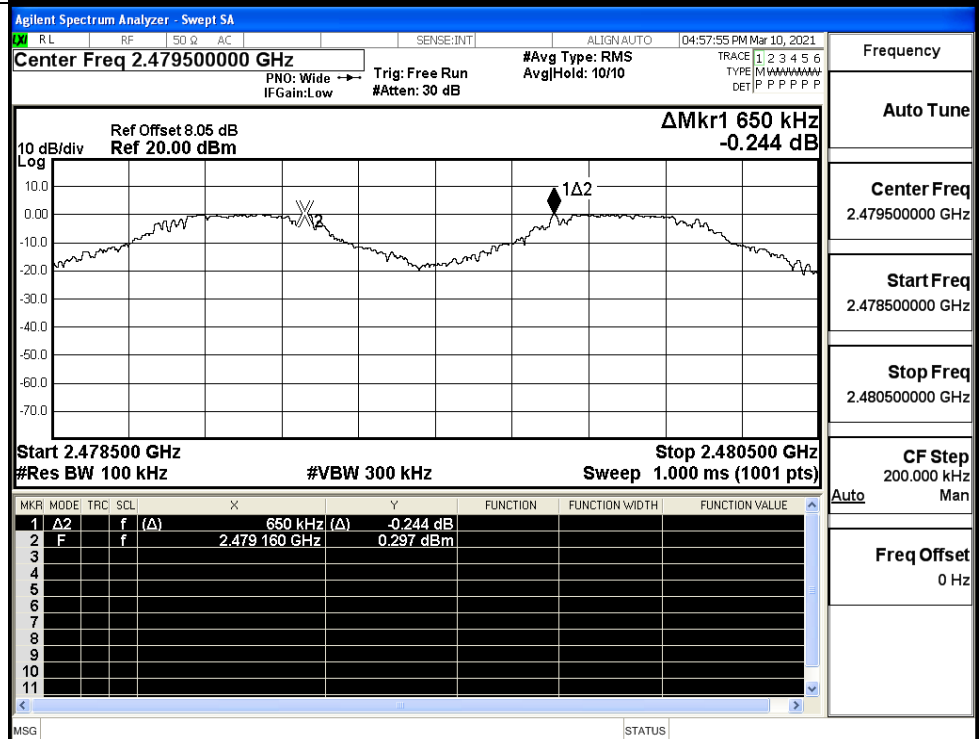
Test Graphs

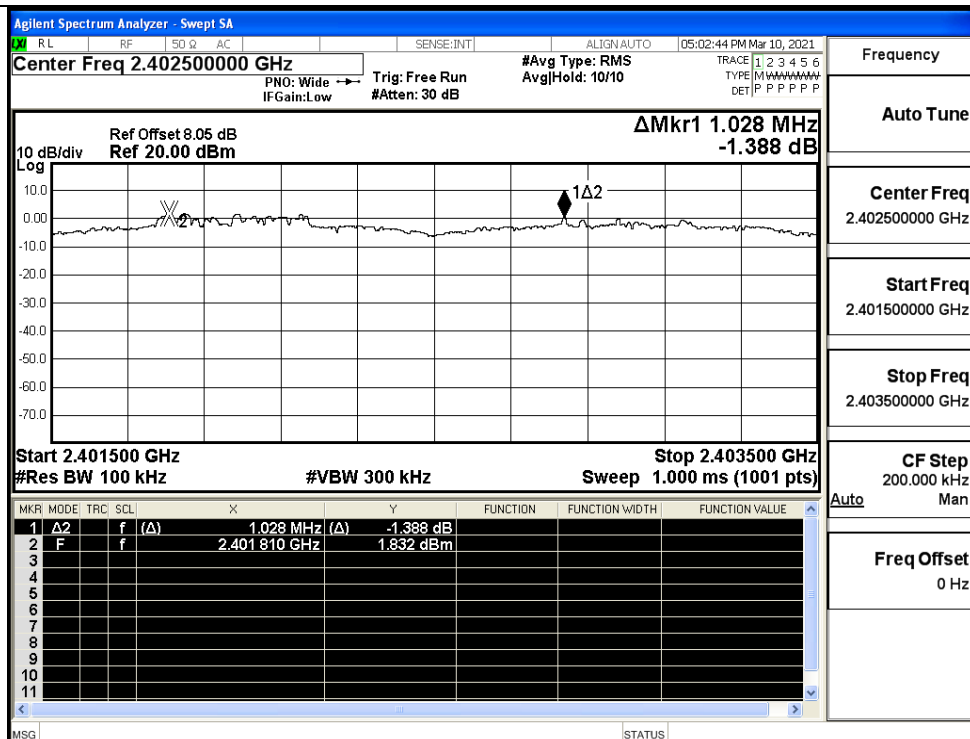


GFSK/MCH



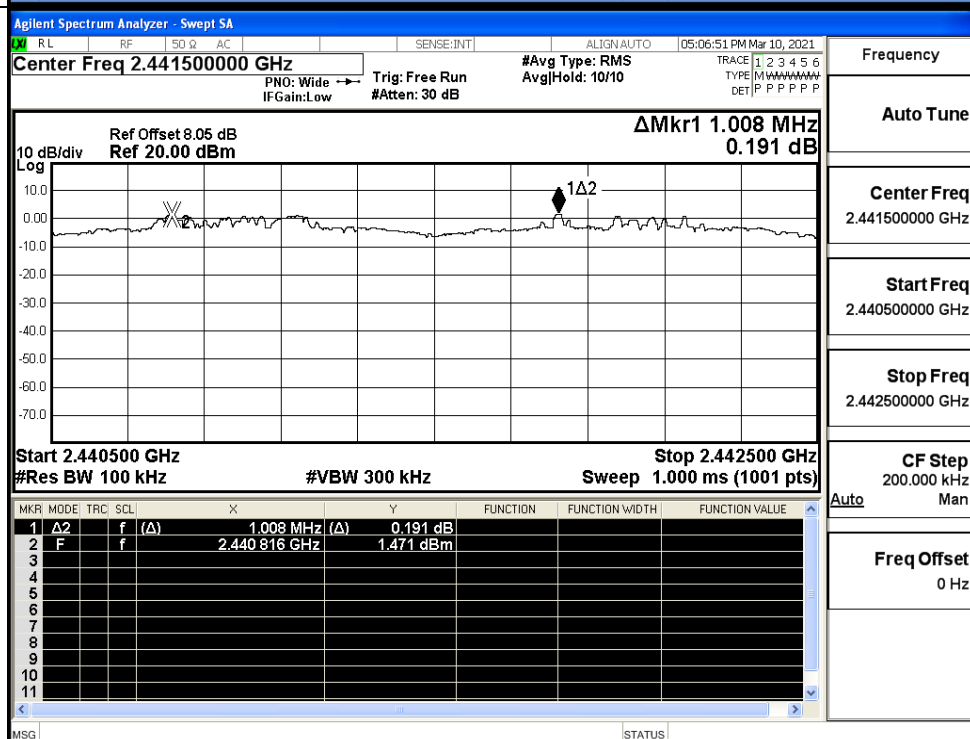
GFSK/HCH



$\pi/4$ DQPSK/LCH

Frequency

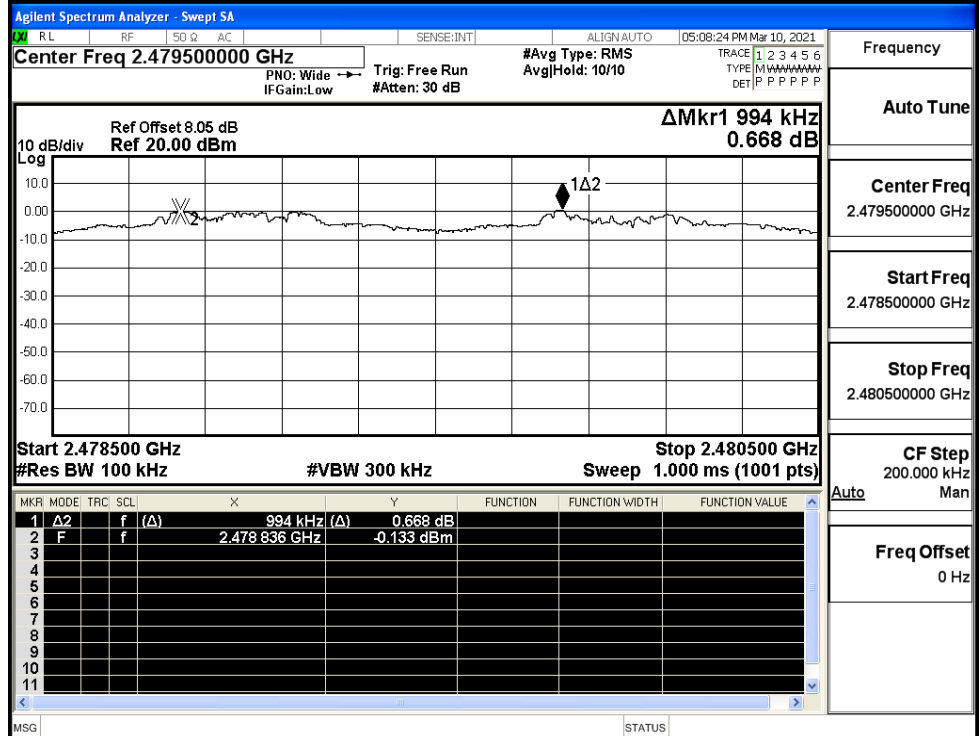
Auto Tune

Center Freq
2.402500000 GHzStart Freq
2.401500000 GHzStop Freq
2.403500000 GHzCF Step
200.000 kHz
ManFreq Offset
0 Hz $\pi/4$ DQPSK/MCH

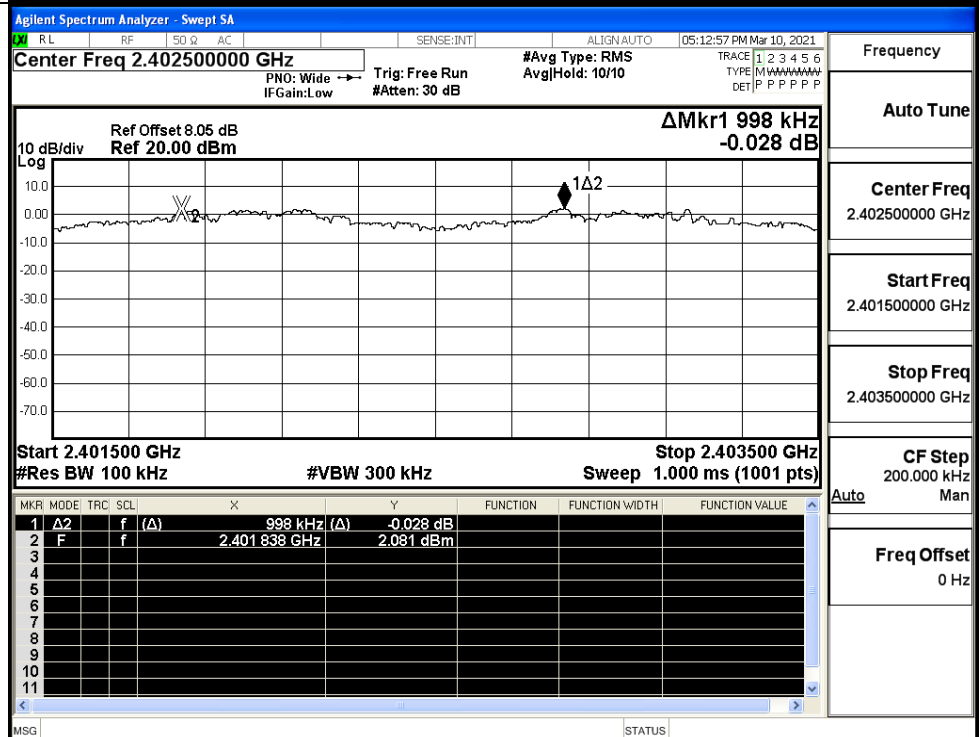
Frequency

Auto Tune

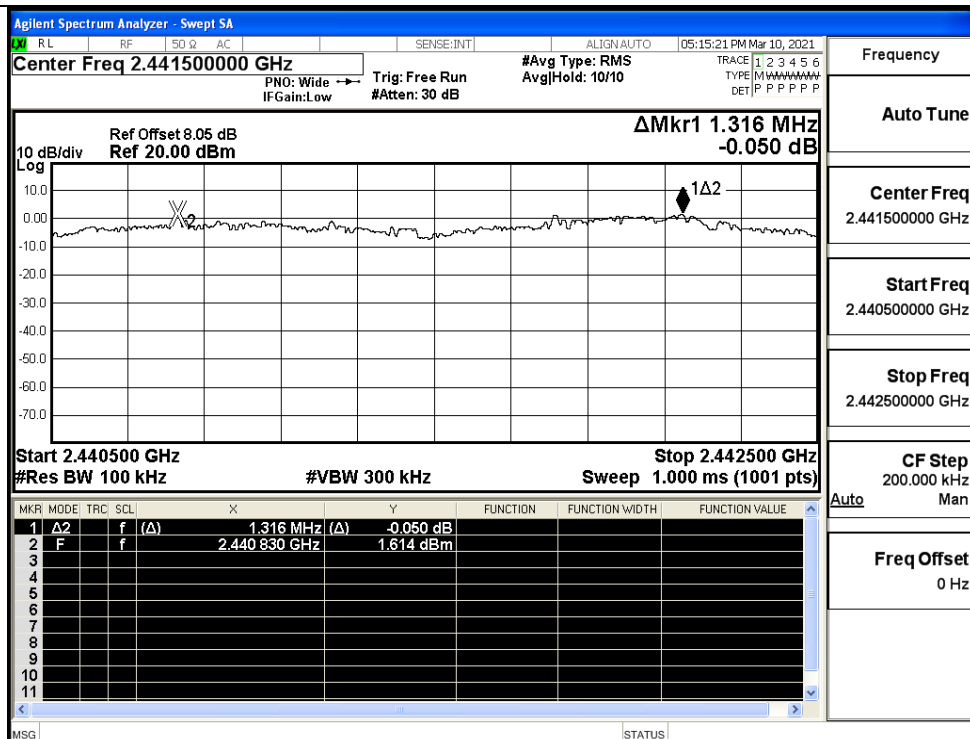
Center Freq
2.441500000 GHzStart Freq
2.440500000 GHzStop Freq
2.442500000 GHzCF Step
200.000 kHz
ManFreq Offset
0 Hz

π /4DQPSK/HCH

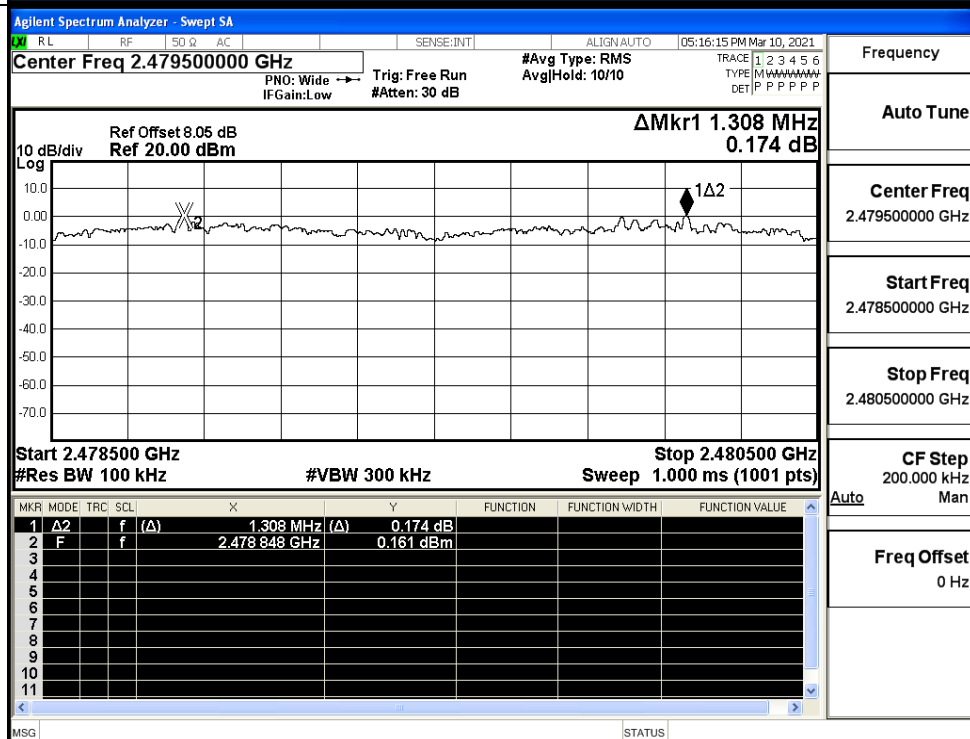
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

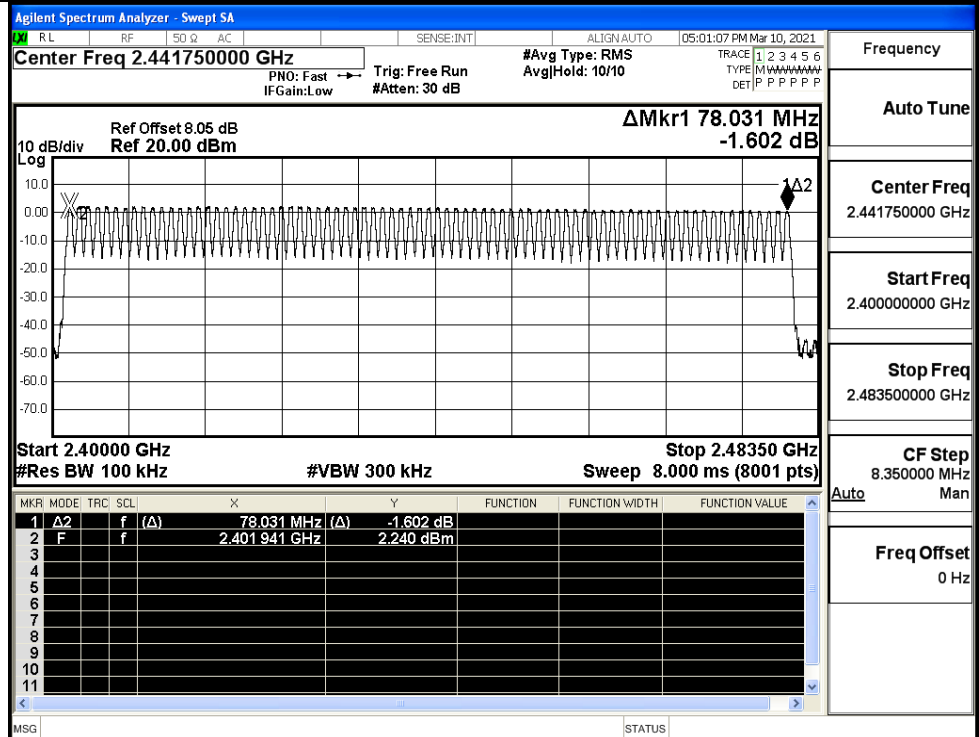
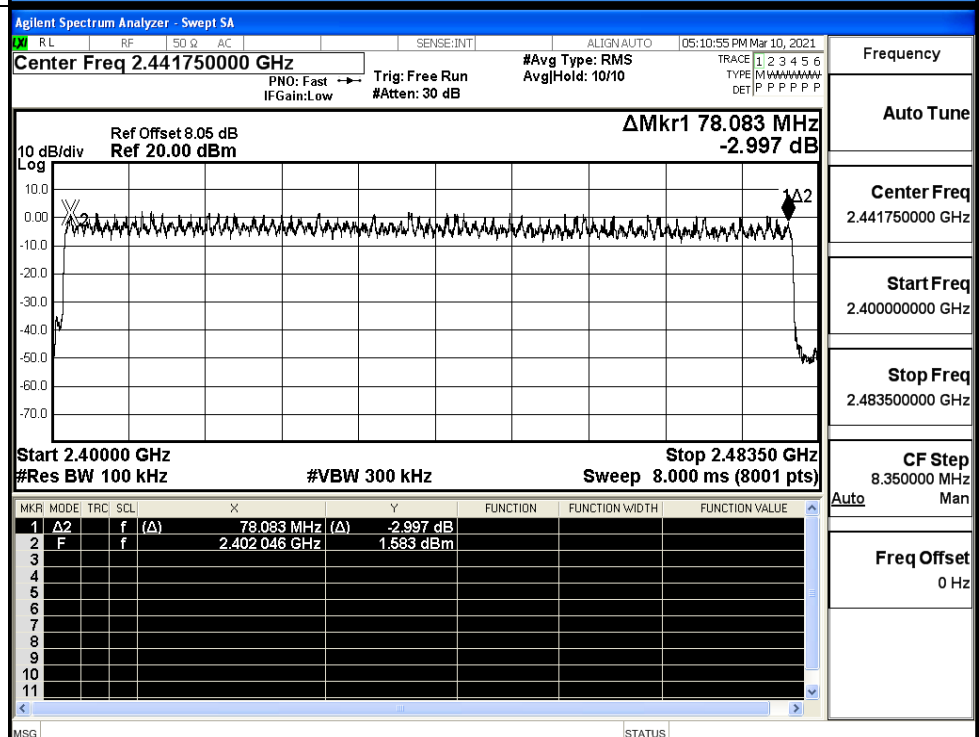


A.4 Hopping Channel Number

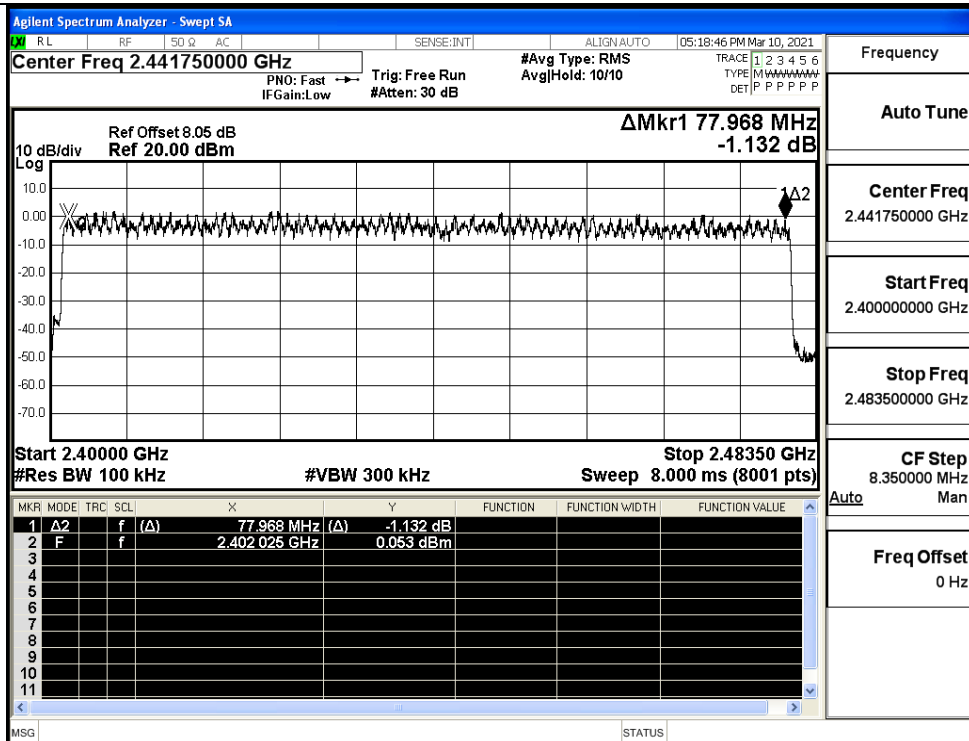
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS
8DPSK	Hop	79	≥ 15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

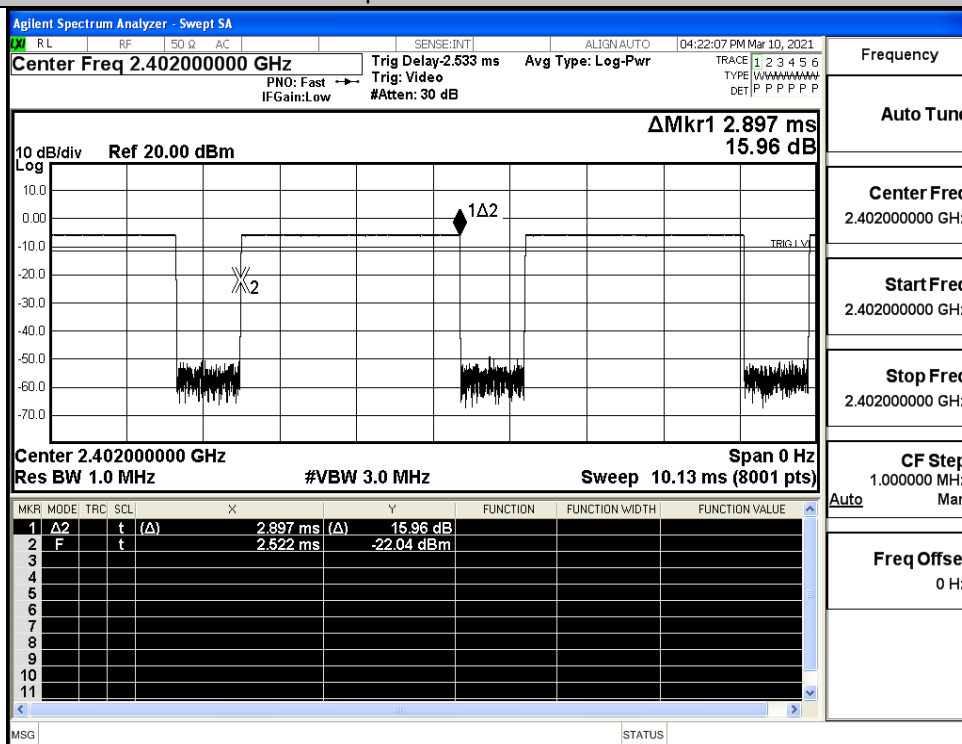


A.5 Dwell Time

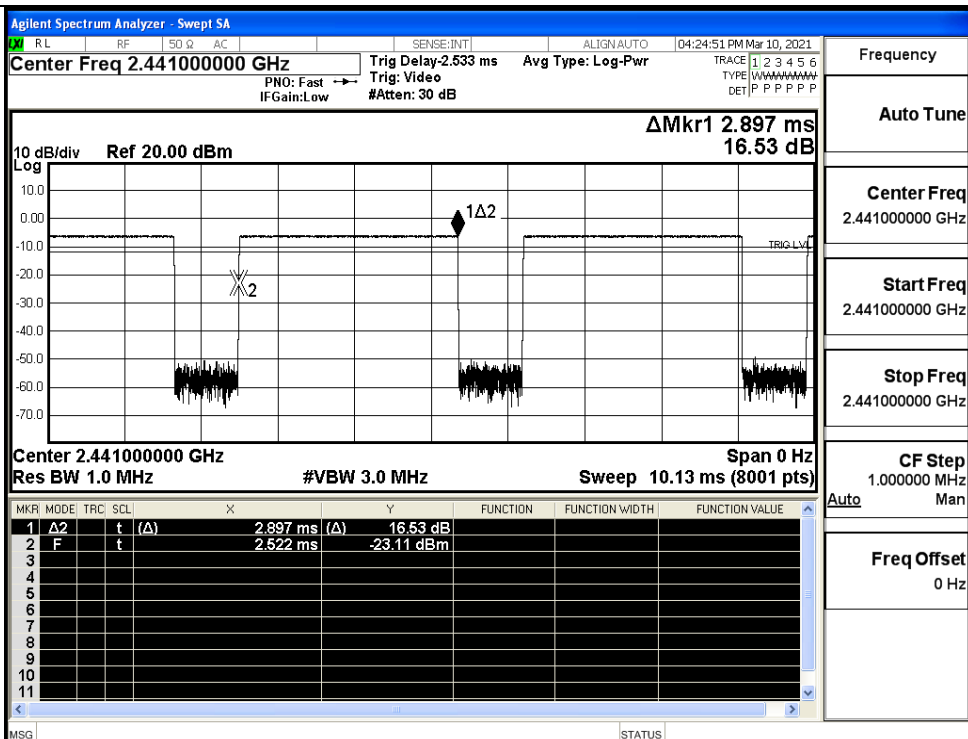
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.9	106.7	0.309	0.4	PASS
	DH5	MCH	2.9	106.7	0.309	0.4	PASS
	DH5	HCH	2.9	106.7	0.309	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.9	106.7	0.309	0.4	PASS
	2DH5	MCH	2.9	106.7	0.309	0.4	PASS
	2DH5	HCH	2.9	106.7	0.309	0.4	PASS
8DPSK	3DH5	LCH	2.9	106.7	0.31	0.4	PASS
	3DH5	MCH	2.9	106.7	0.31	0.4	PASS
	3DH5	HCH	2.9	106.7	0.31	0.4	PASS

Test Graphs

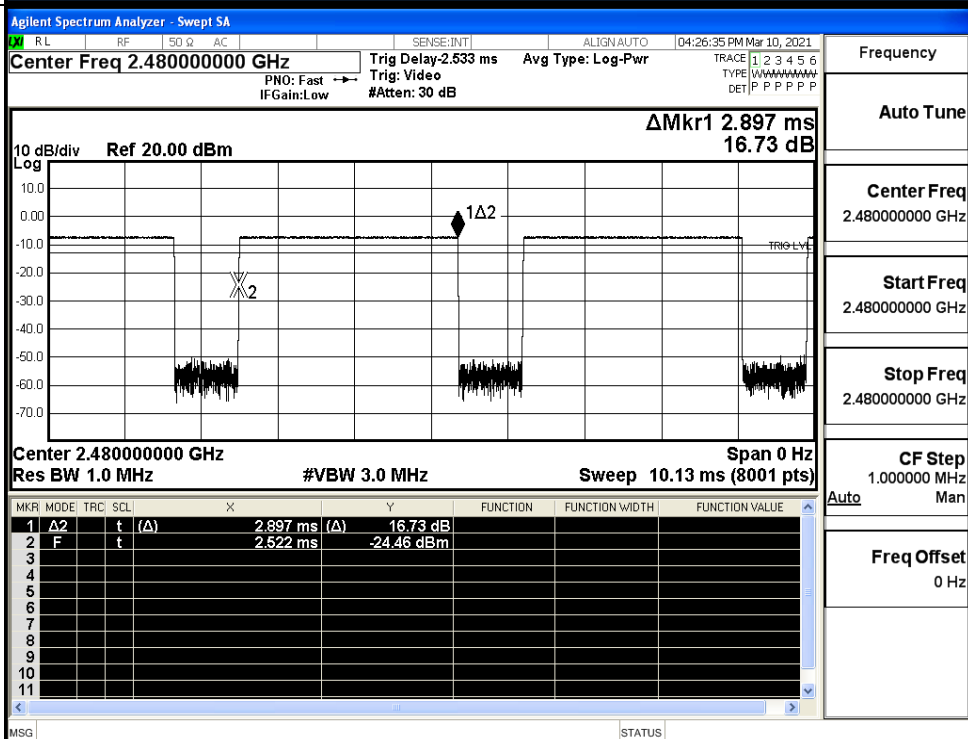
GFSK_DH5/LCH



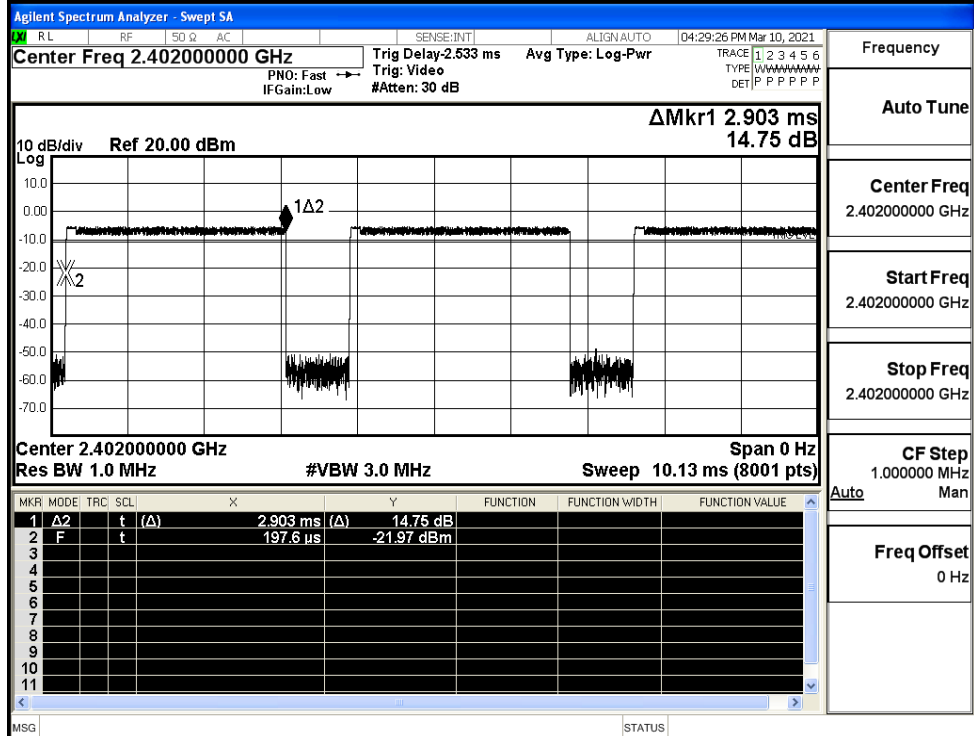
GFSK_DH5/MCH



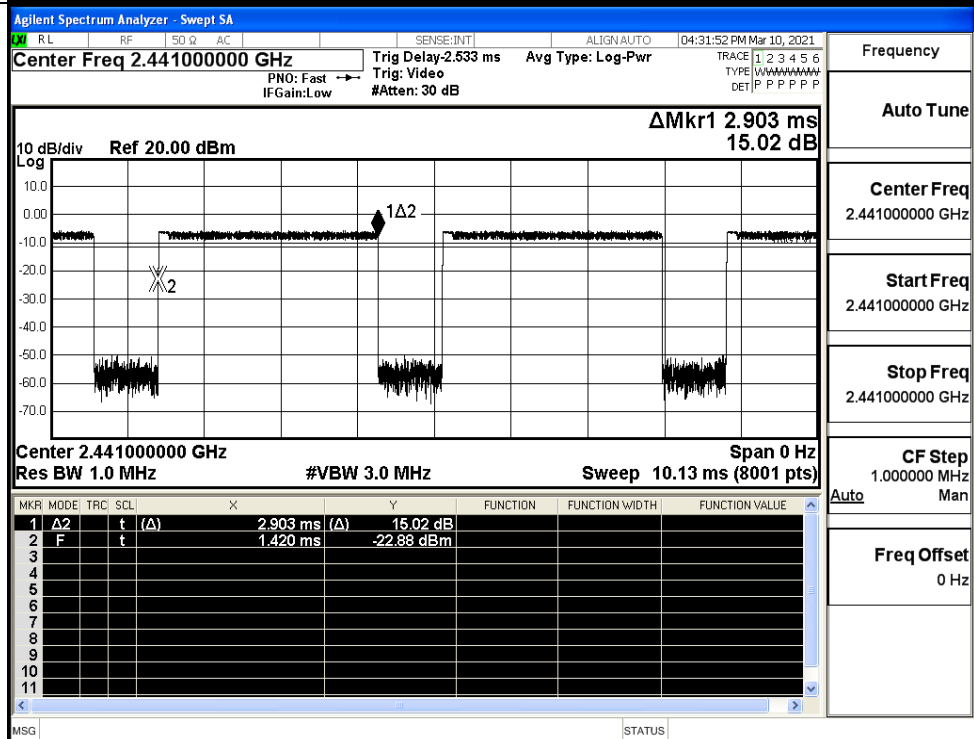
GFSK_DH5/HCH



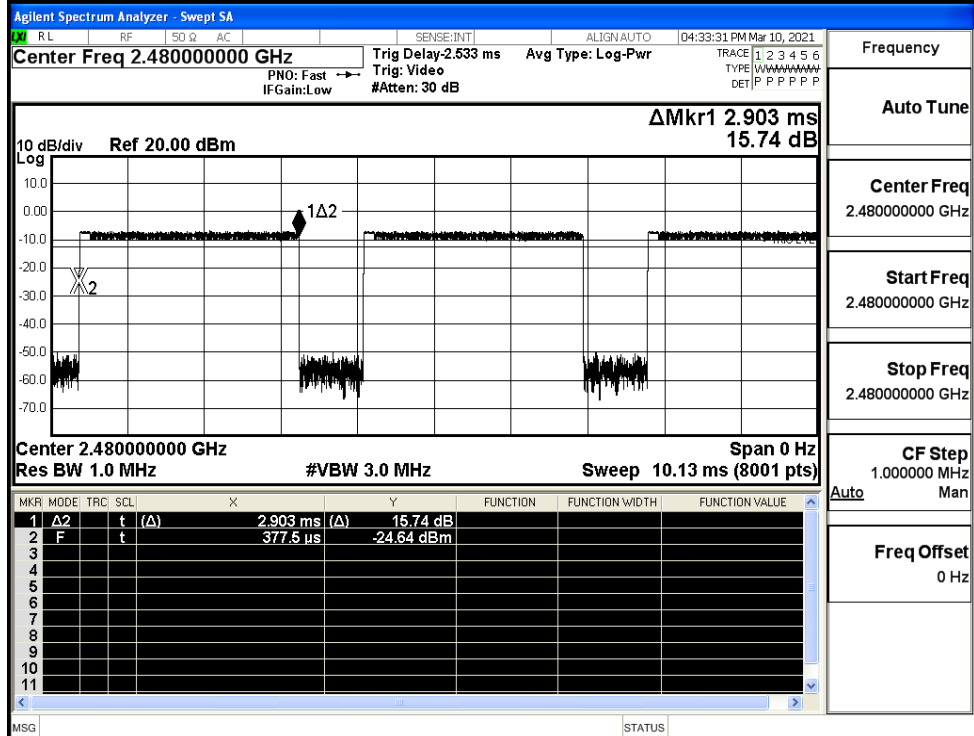
$\pi/4$ DQPSK
_2DH5/LCH



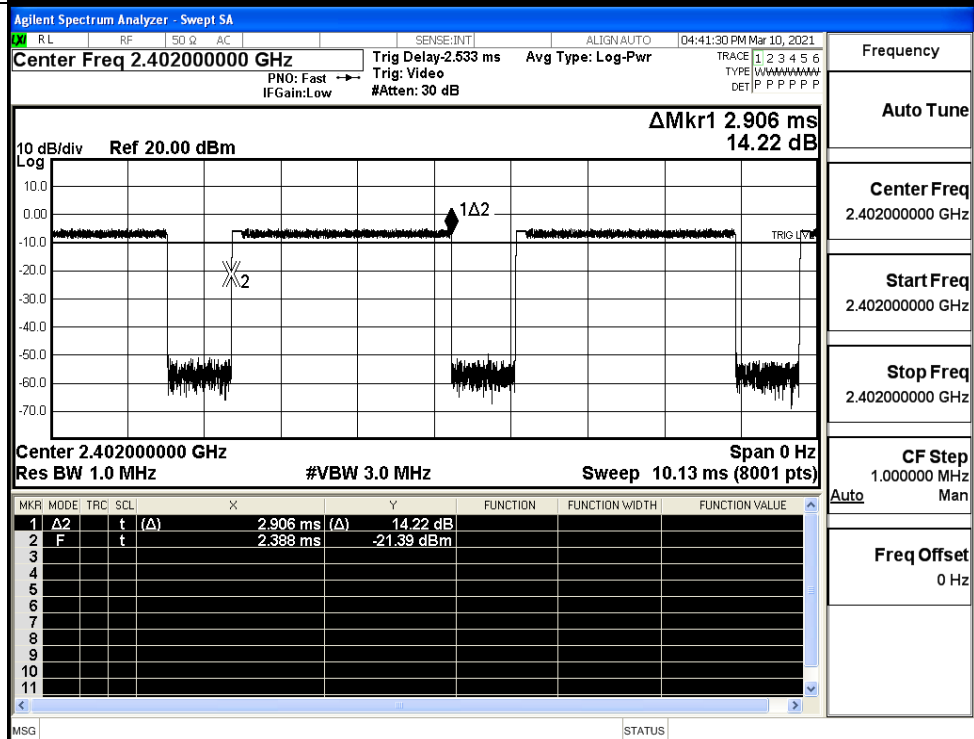
$\pi/4$ DQPSK
_2DH5/MCH



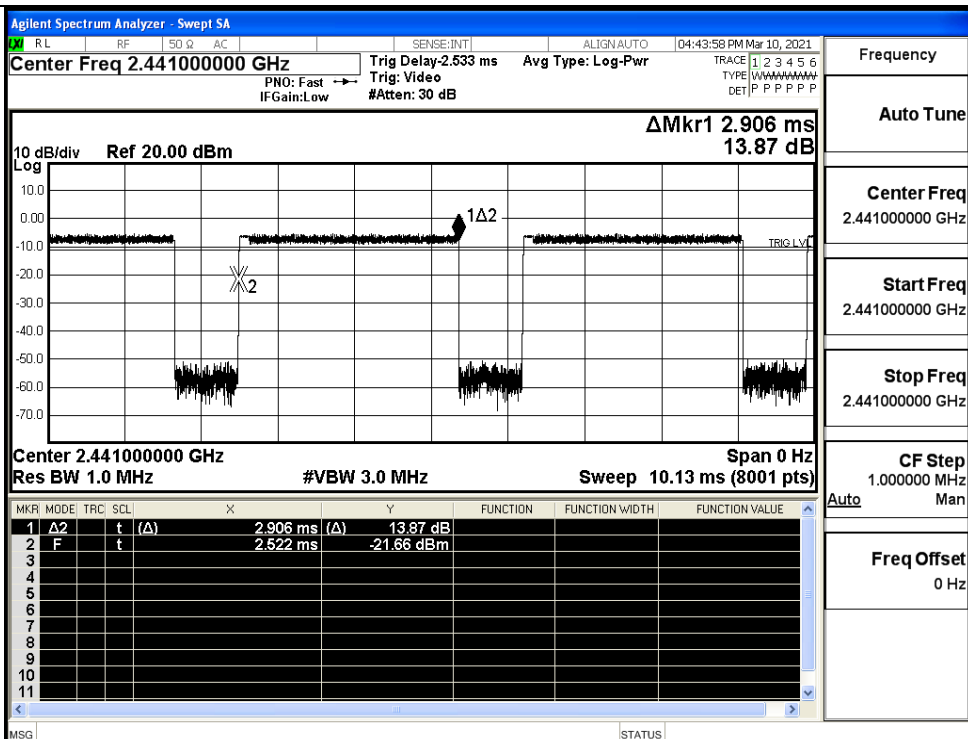
$\pi/4$ DQPSK
_2DH5/HCH



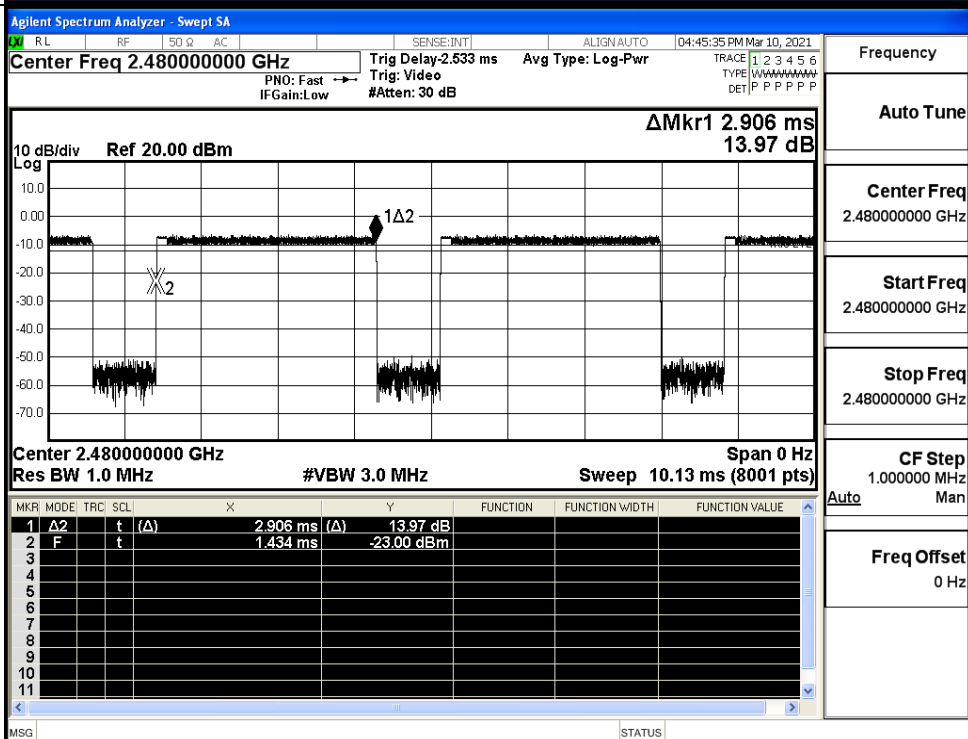
8DPSK _3DH5/LCH



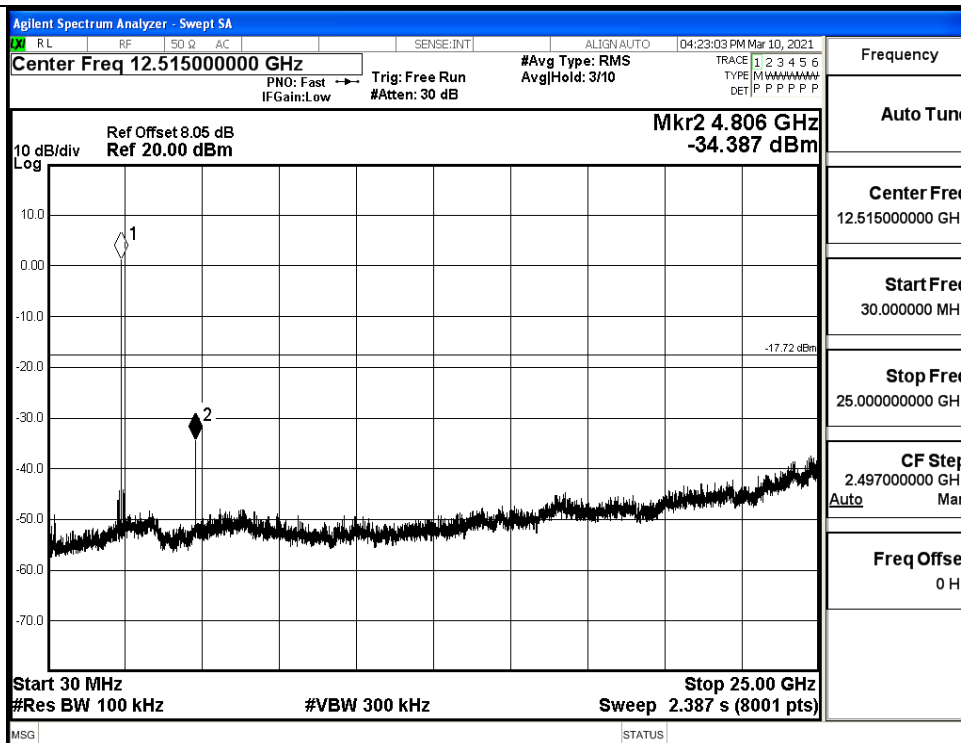
8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

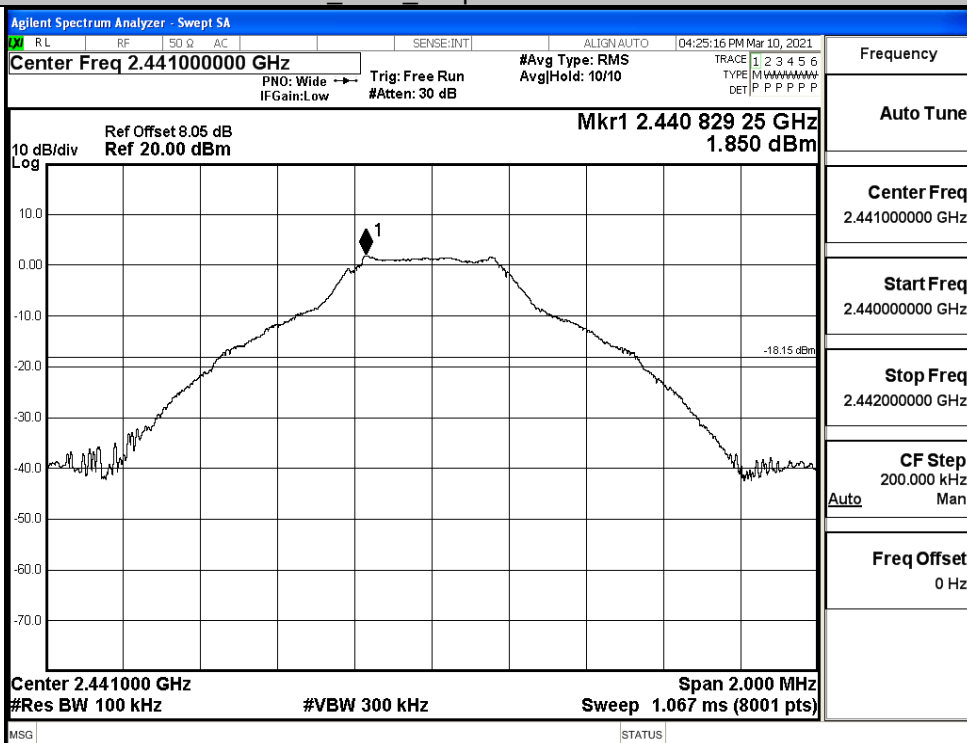


Puw

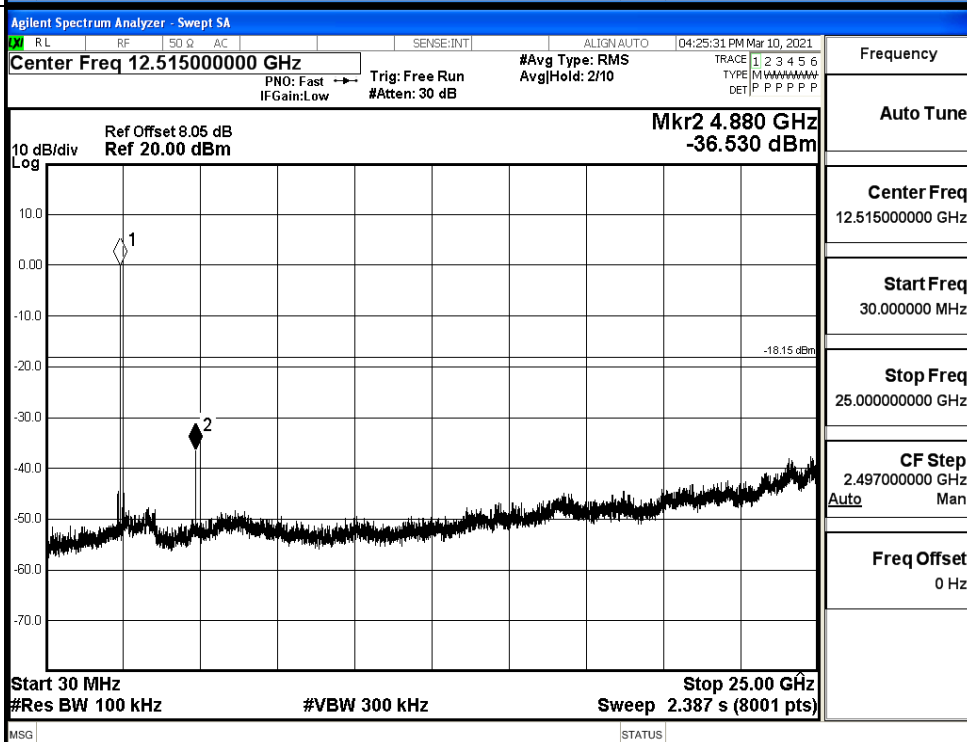


GFSK MCH_Graphs

Pref

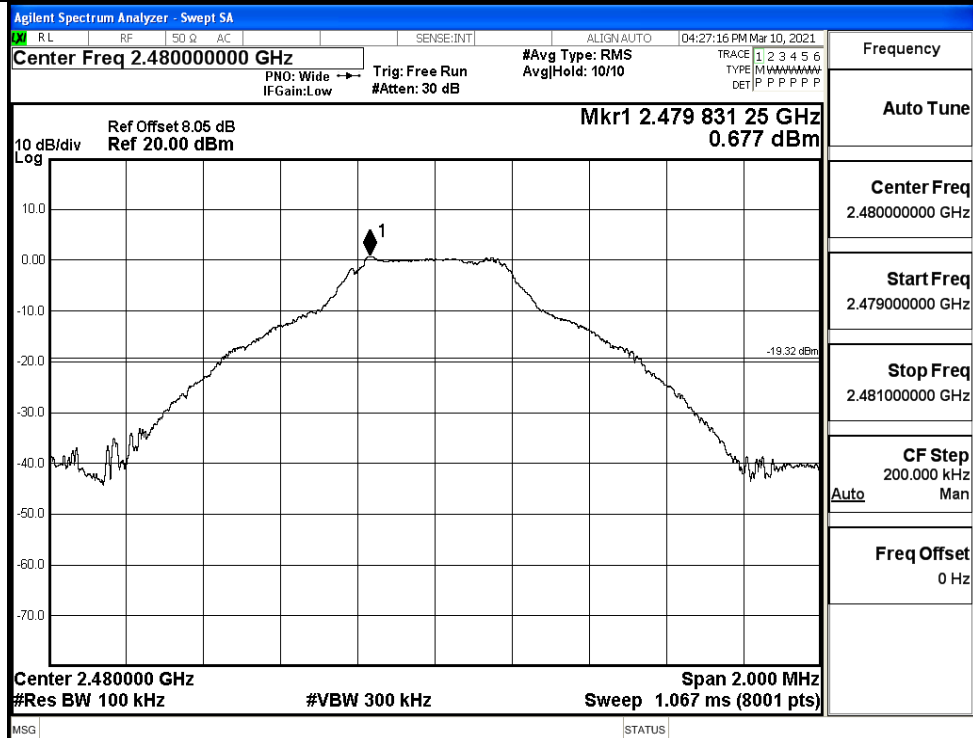


Puw

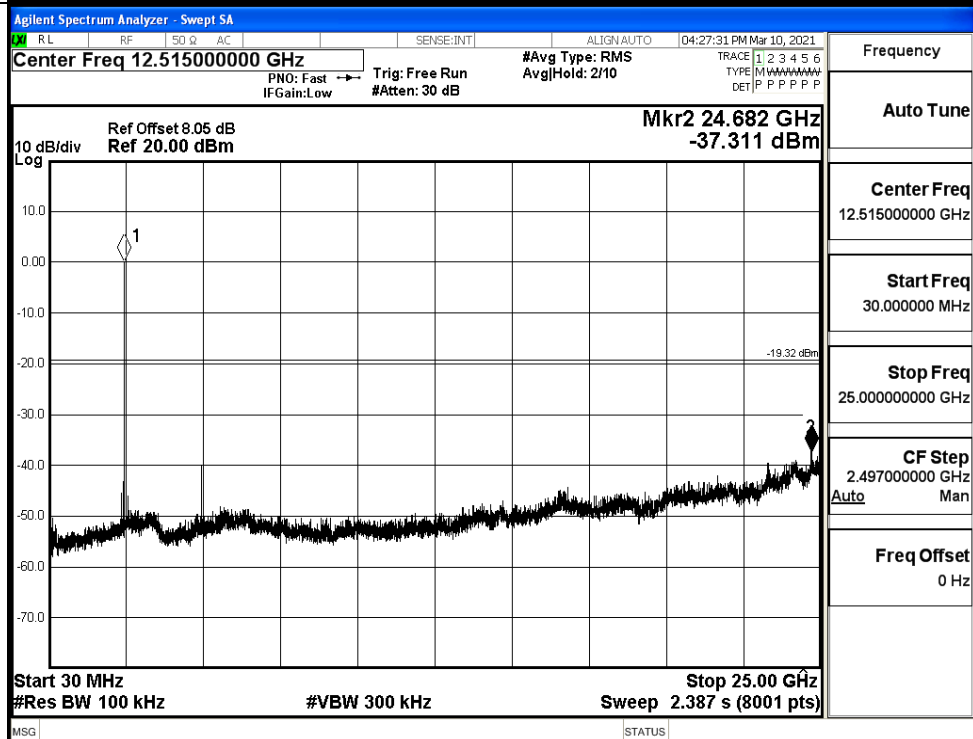


GFSK HCH Graphs

Pref

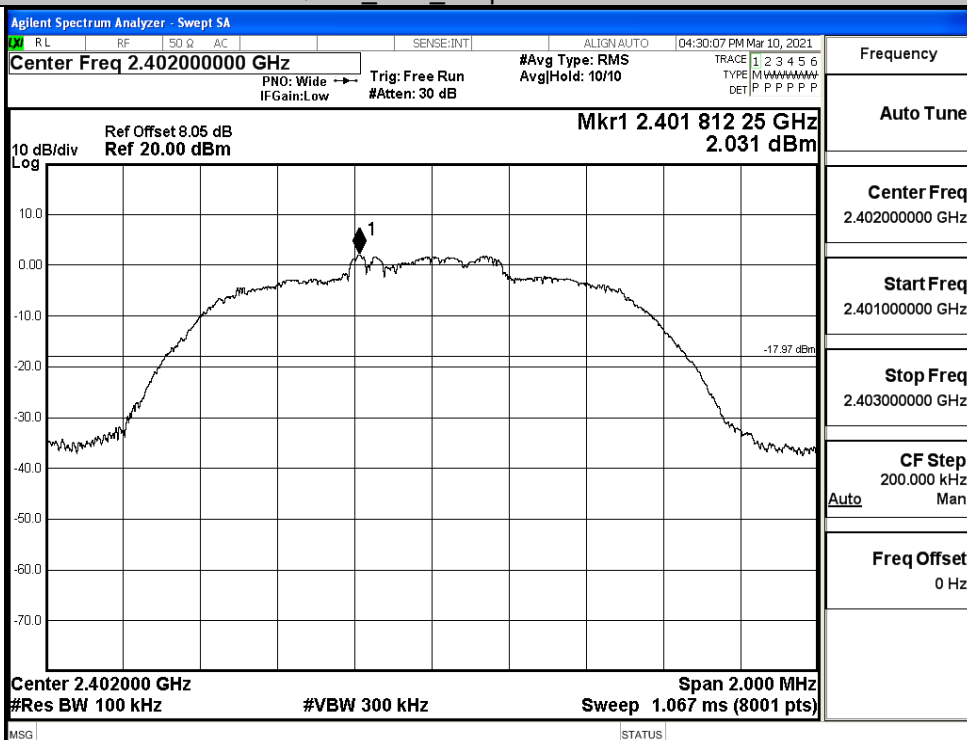


Puw

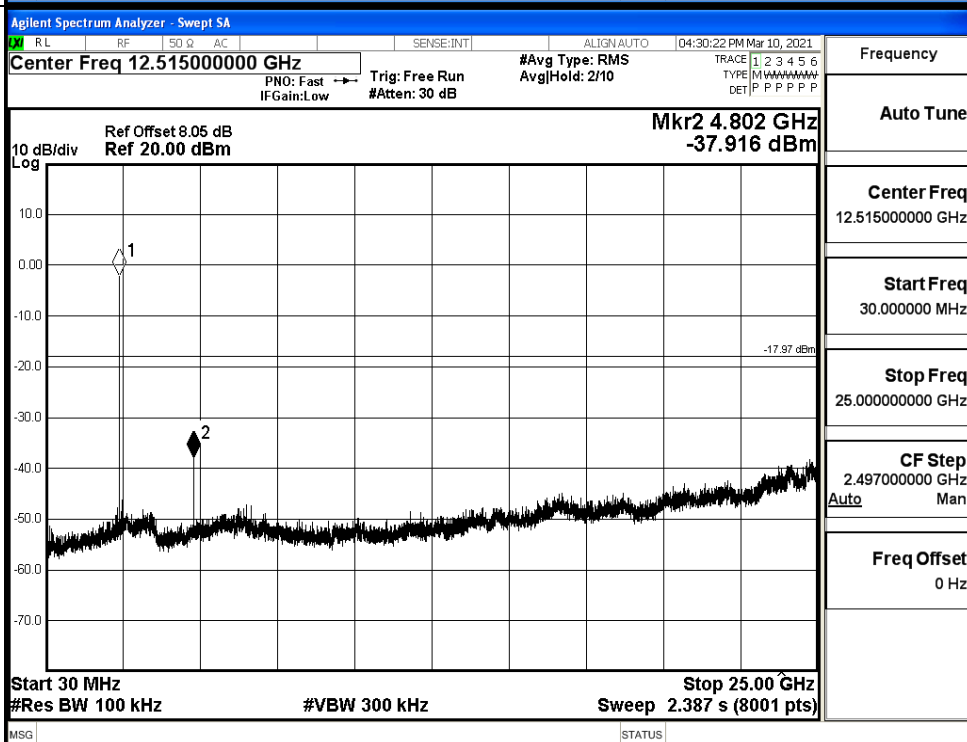


$\pi/4$ DQPSK LCH_Graphs

Pref

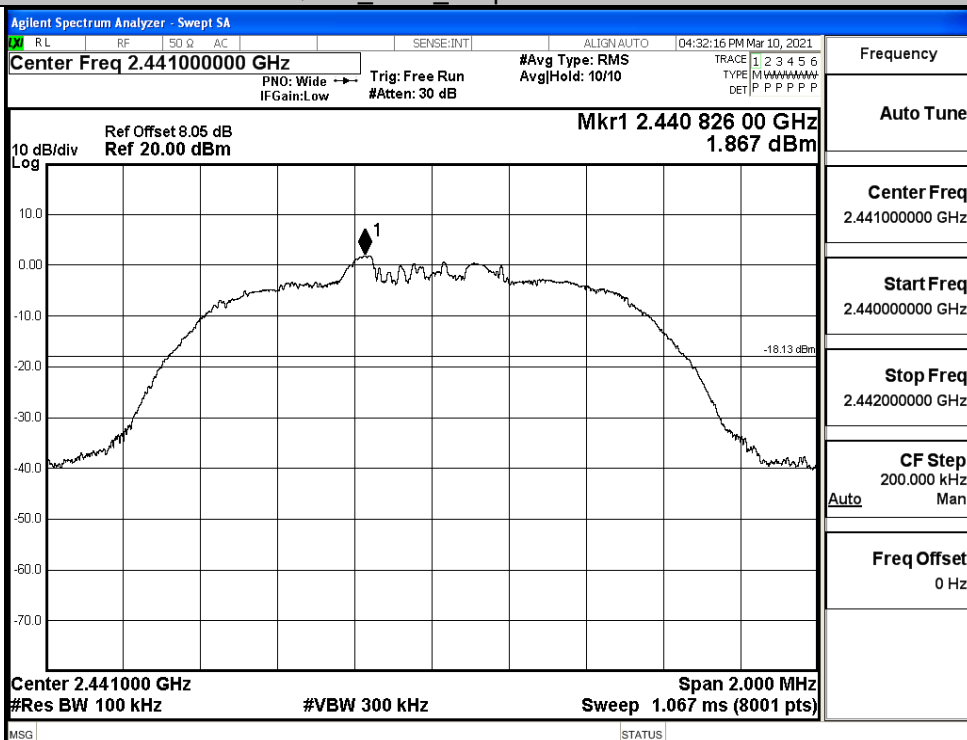


Puw

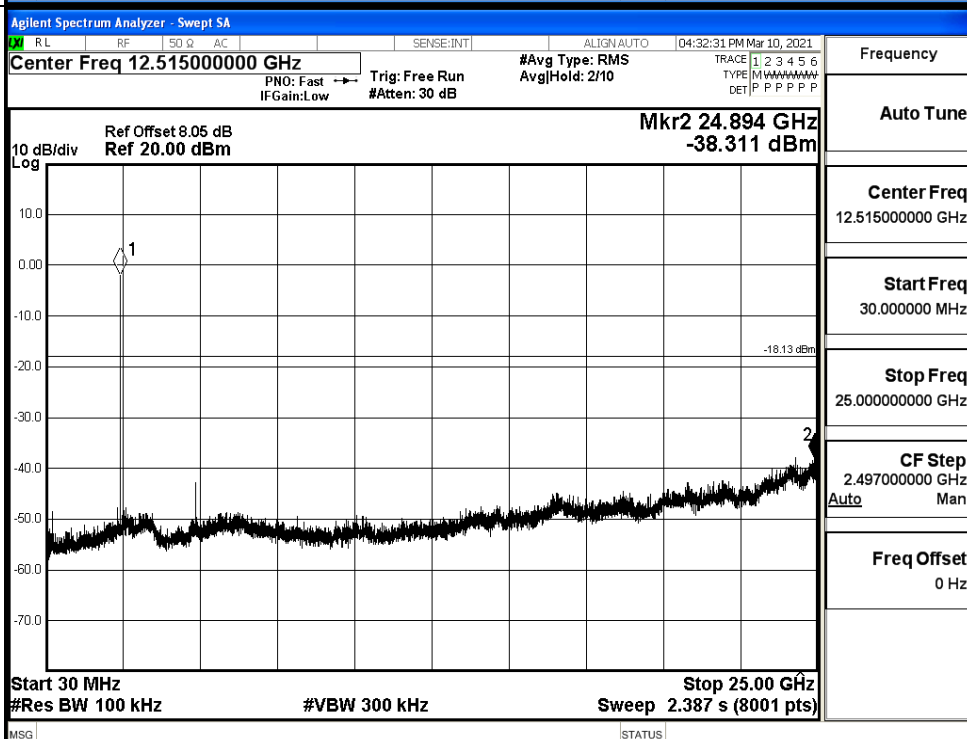


π /4DQPSK_MCH_Graphs

Pref

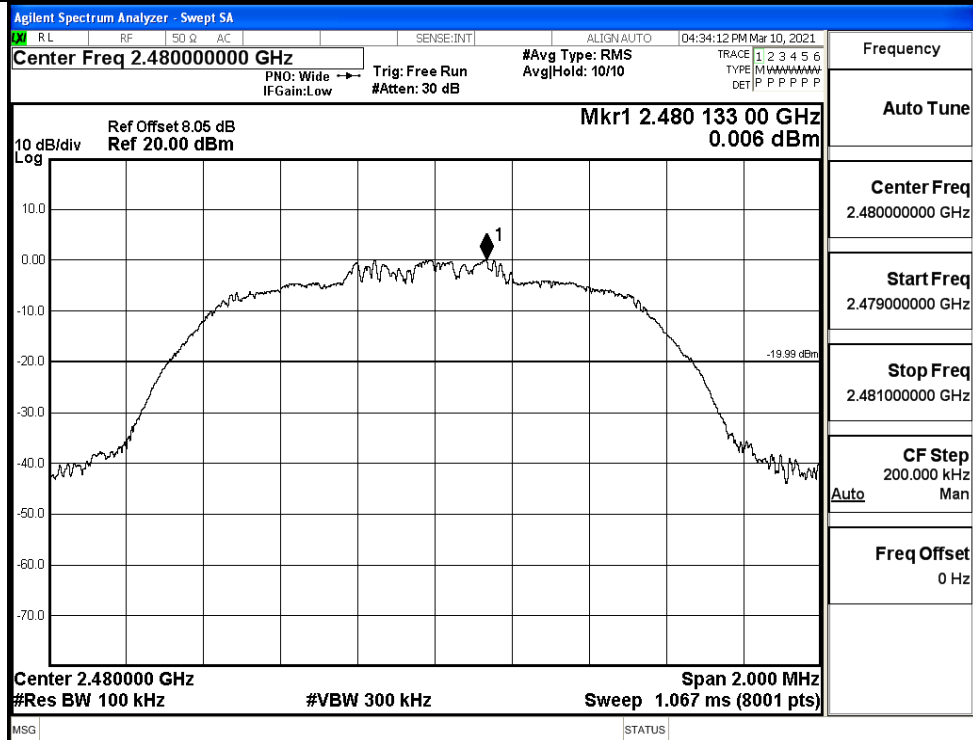


Puw

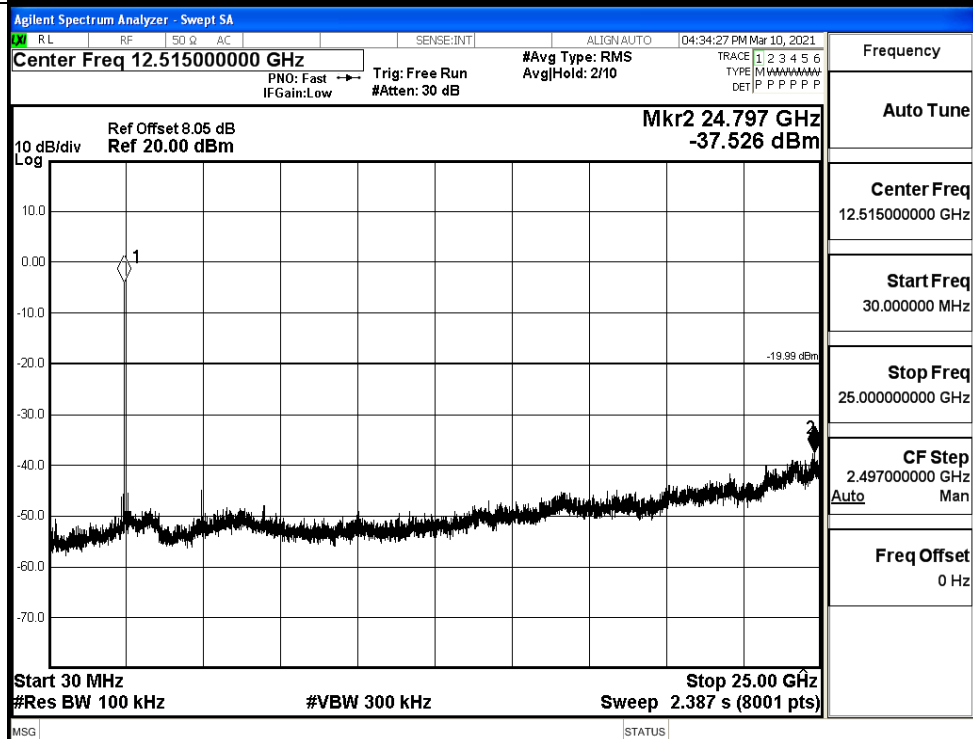


$\pi/4$ DQPSK_HCH_Graphs

Pref

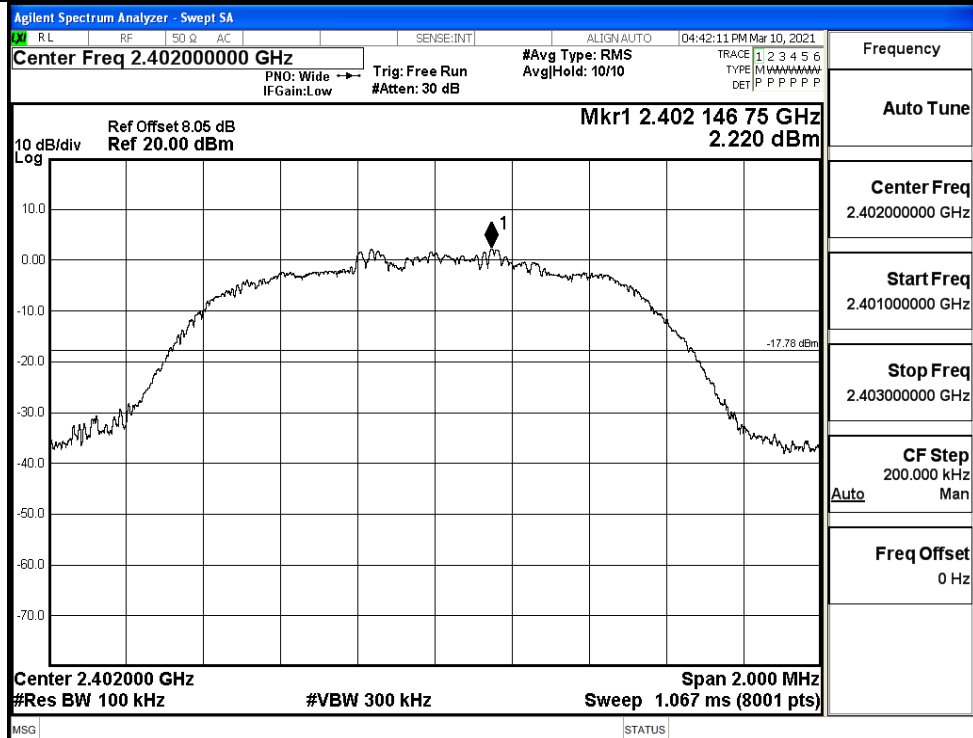


Puw

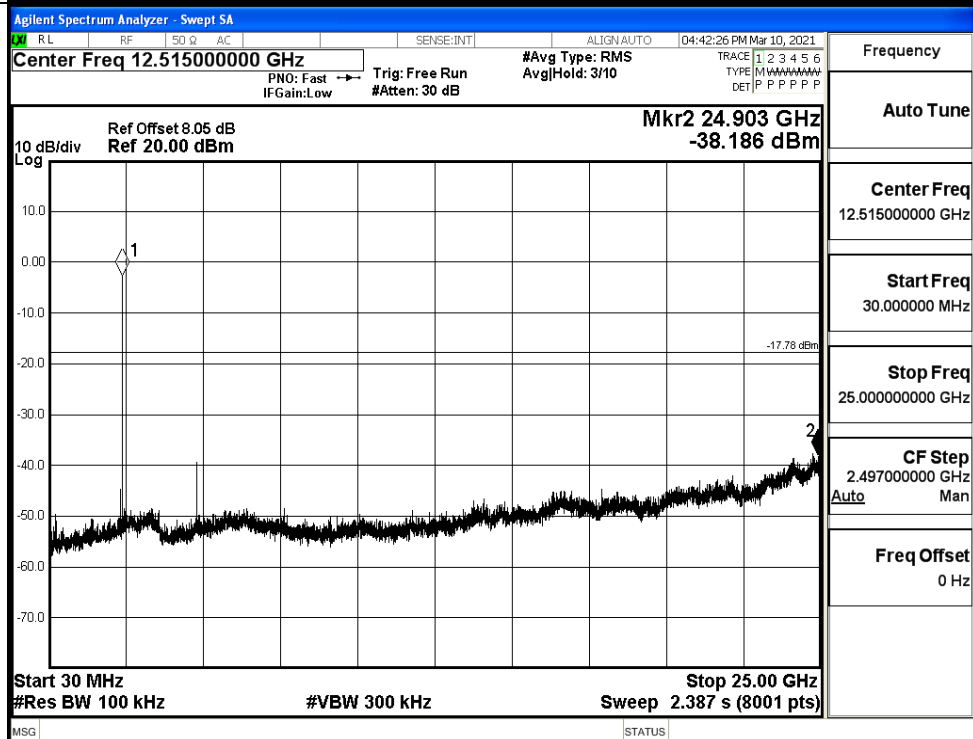


8DPSK_LCH_Graphs

Pref

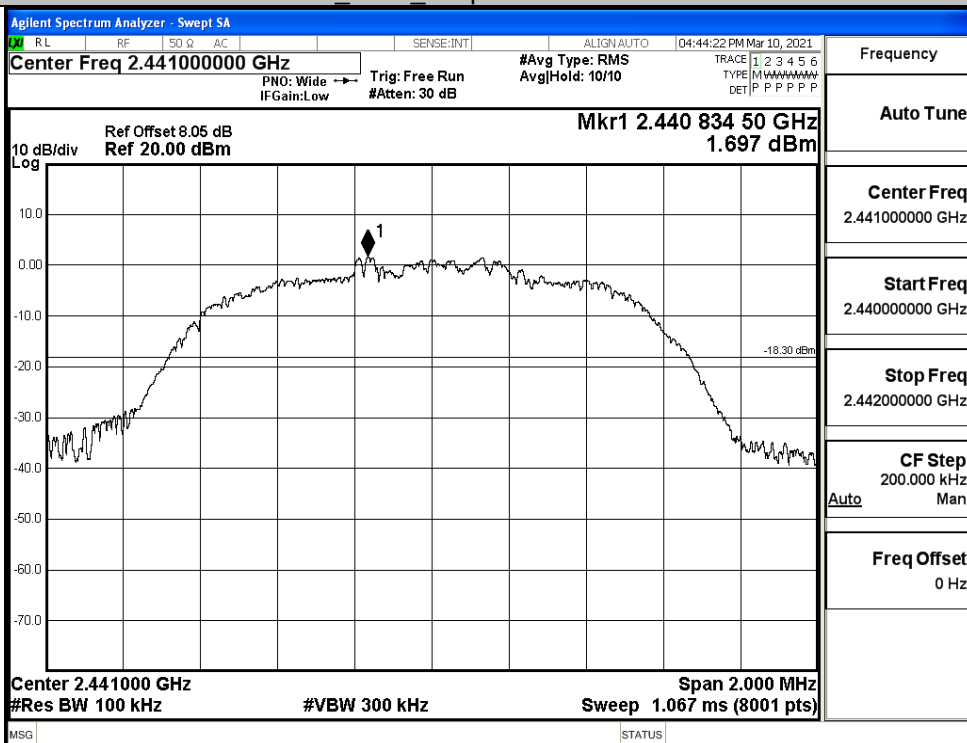


Puw

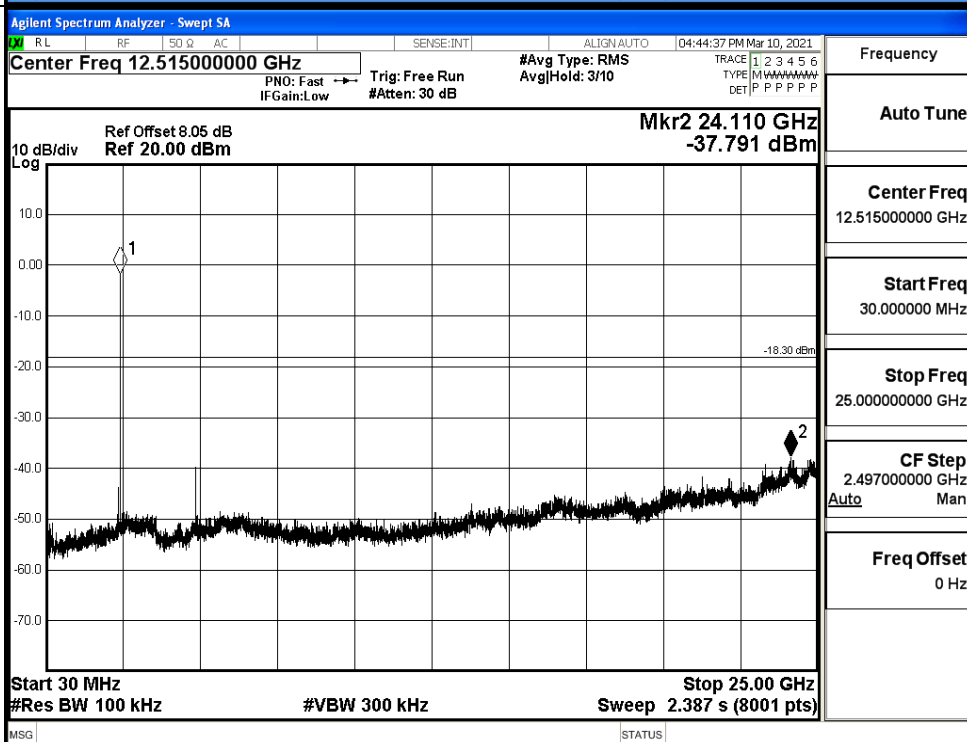


8DPSK MCH_Graphs

Pref

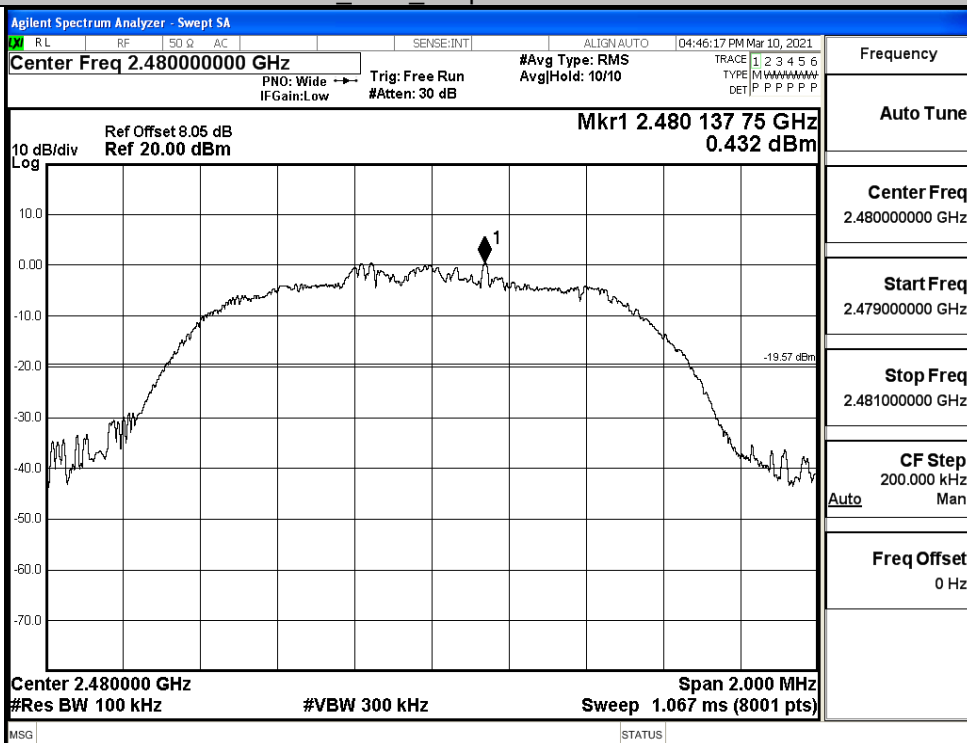


Puw

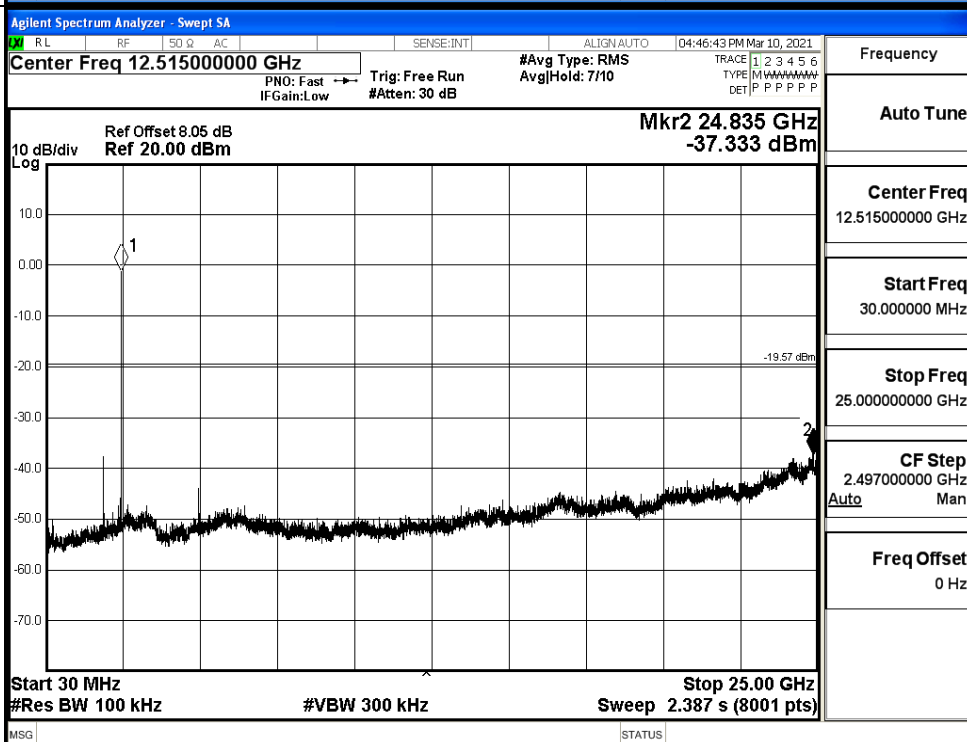


8DPSK_HCH_Graphs

Pref



Puw

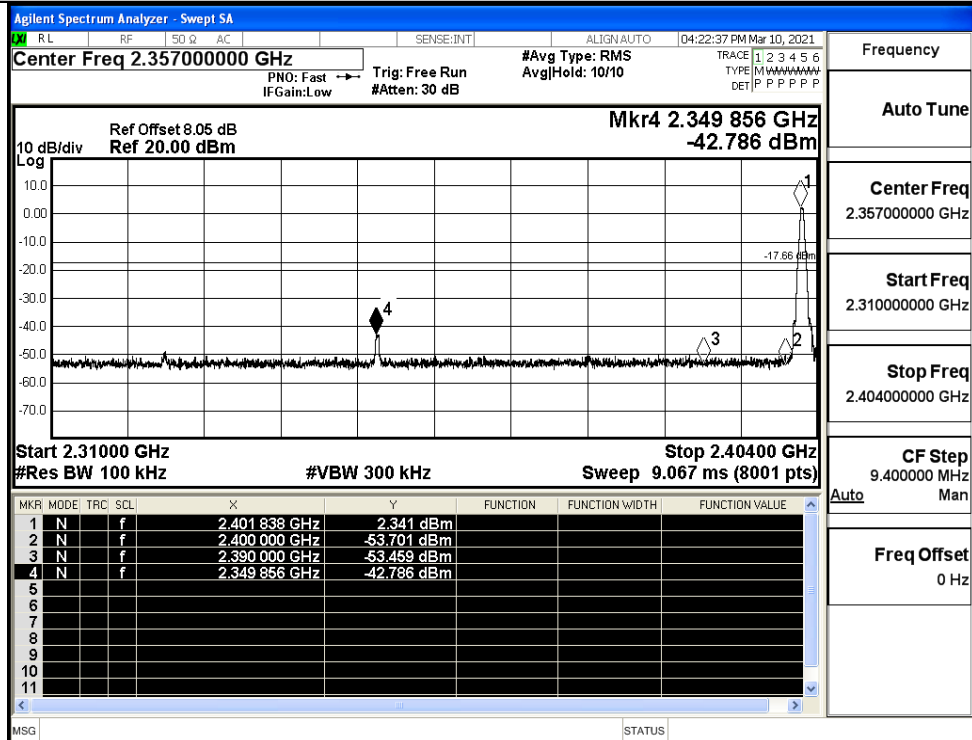


A.7 Band-edge for RF Conducted Emissions

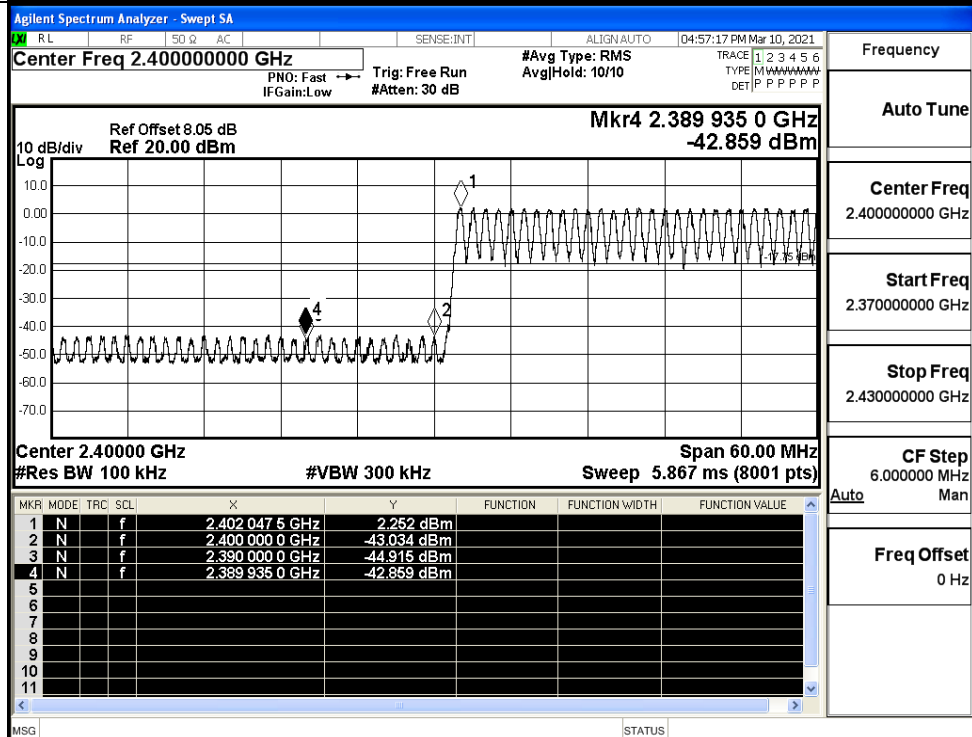
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	2.341	Off	-42.786	-17.66	PASS
			2.252	On	-42.859	-17.75	PASS
	HCH	2480	0.581	Off	-48.929	-19.42	PASS
			1.015	On	-44.530	-18.99	PASS
$\pi/4$ DQPSK	LCH	2402	2.463	Off	-43.211	-17.54	PASS
			2.146	On	-42.244	-17.85	PASS
	HCH	2480	0.732	Off	-49.256	-19.27	PASS
			0.540	On	-45.657	-19.46	PASS
8DPSK	LCH	2402	0.849	Off	-44.863	-19.15	PASS
			2.203	On	-43.371	-17.8	PASS
	HCH	2480	0.201	Off	-49.094	-19.8	PASS
			1.064	On	-45.001	-18.94	PASS

Test Graphs

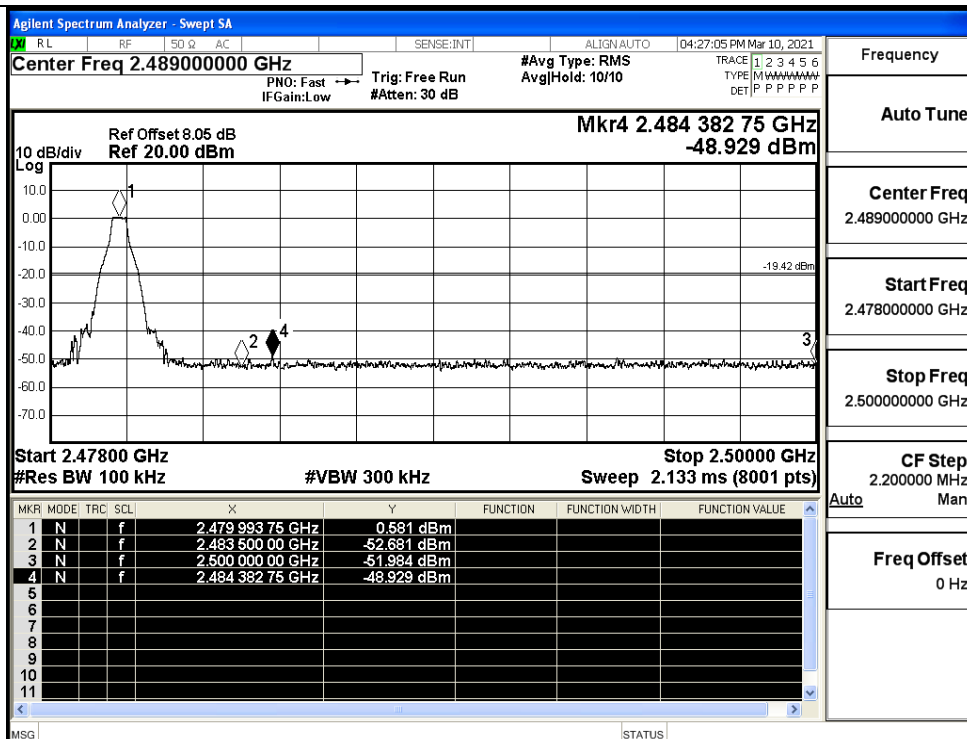
GFSK/LCH/No Hop



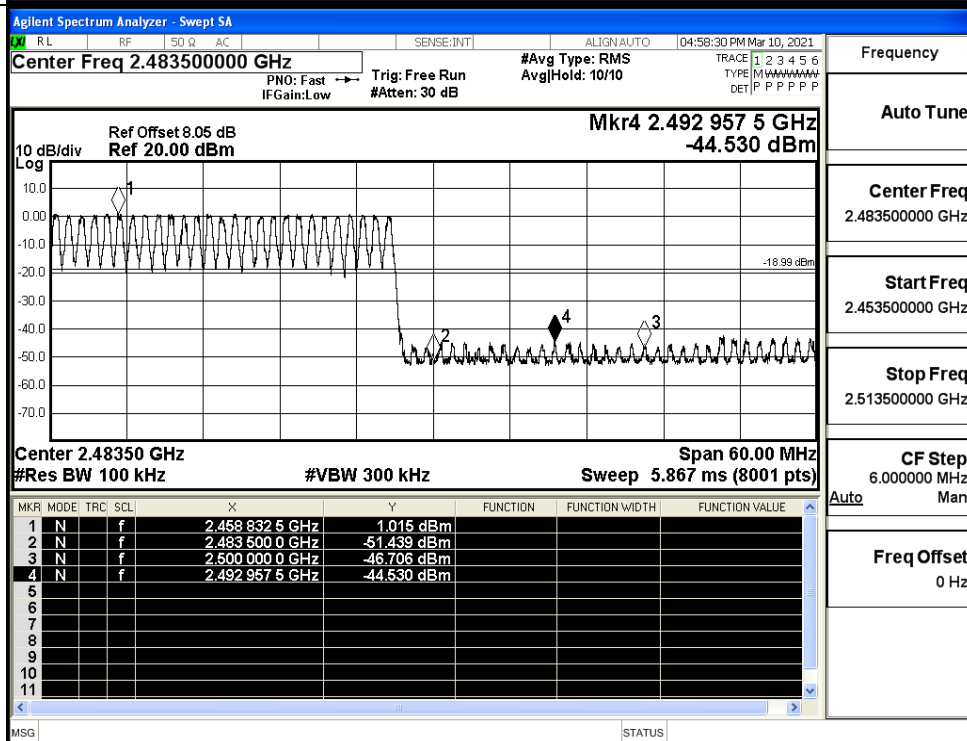
GFSK/LCH/Hop



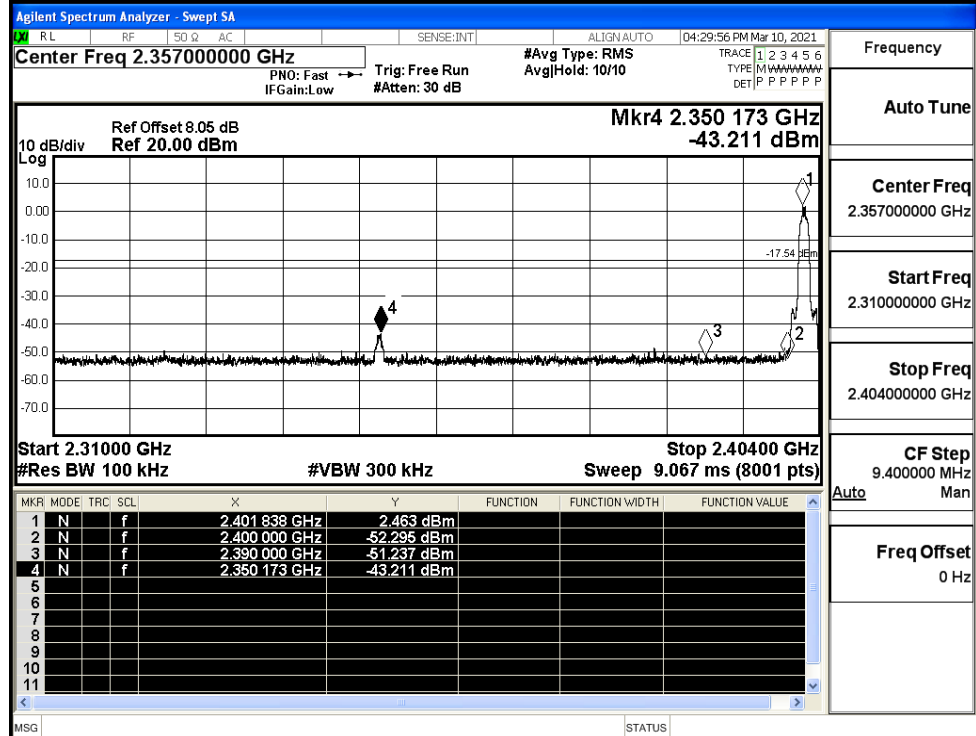
GFSK/HCH/No Hop



GFSK/HCH/Hop



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

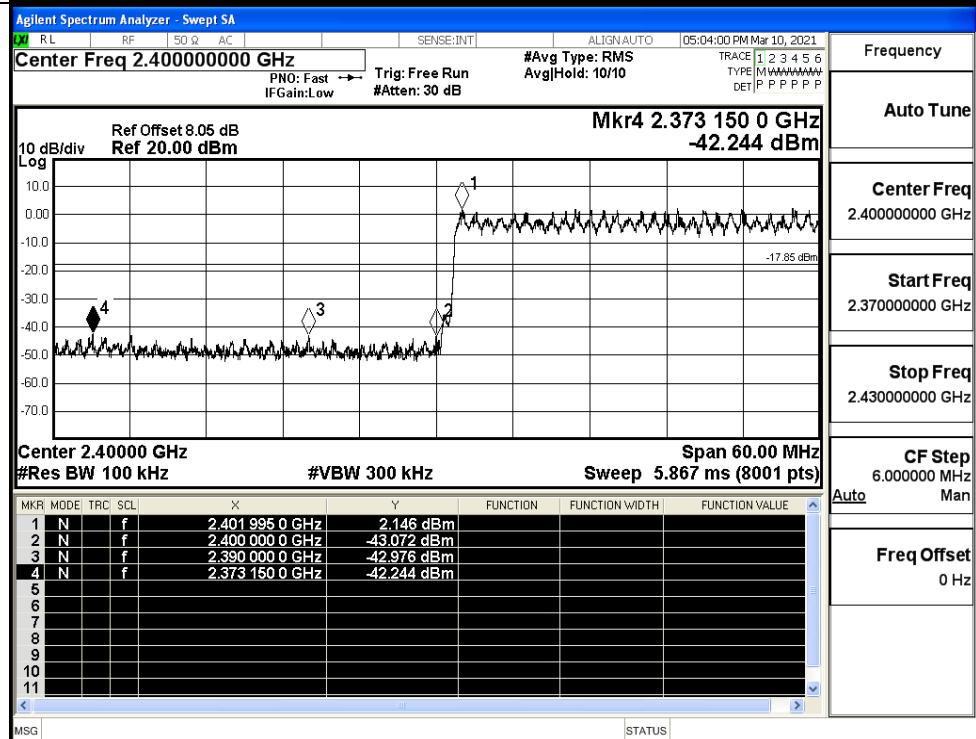


Frequency

Auto Tune

Center Freq
2.357000000 GHzStart Freq
2.310000000 GHzStop Freq
2.404000000 GHzCF Step
9.400000 MHz
Auto ManFreq Offset
0 Hz

$\pi/4$ DQPSK/LCH/Hop

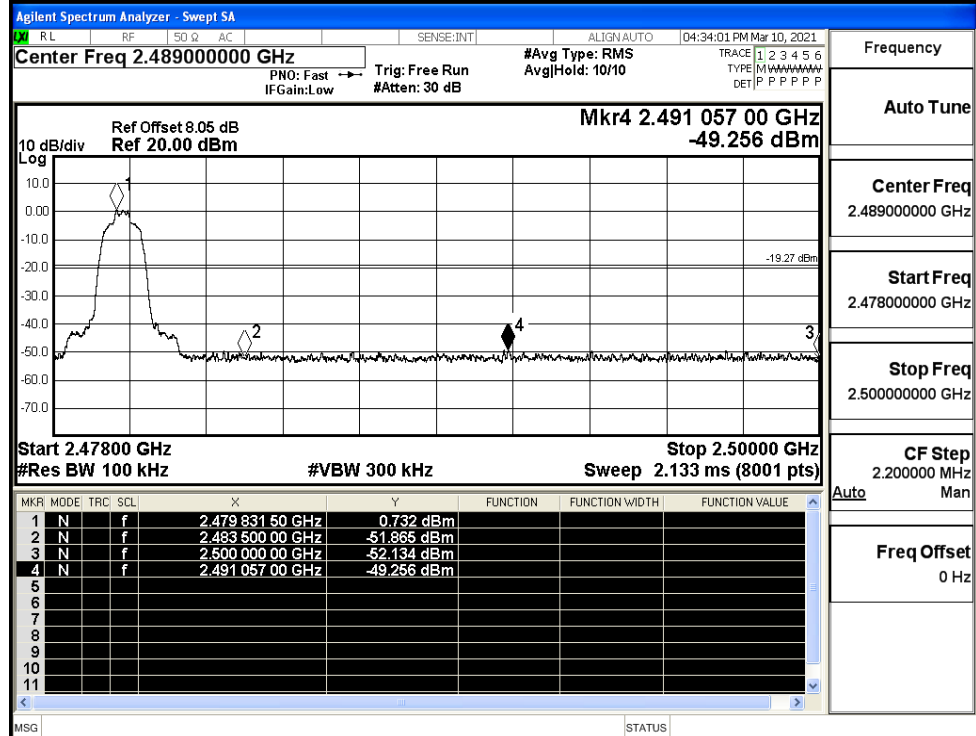


Frequency

Auto Tune

Center Freq
2.400000000 GHzStart Freq
2.370000000 GHzStop Freq
2.430000000 GHzCF Step
6.000000 MHz
Auto ManFreq Offset
0 Hz

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



Frequency

Auto Tune

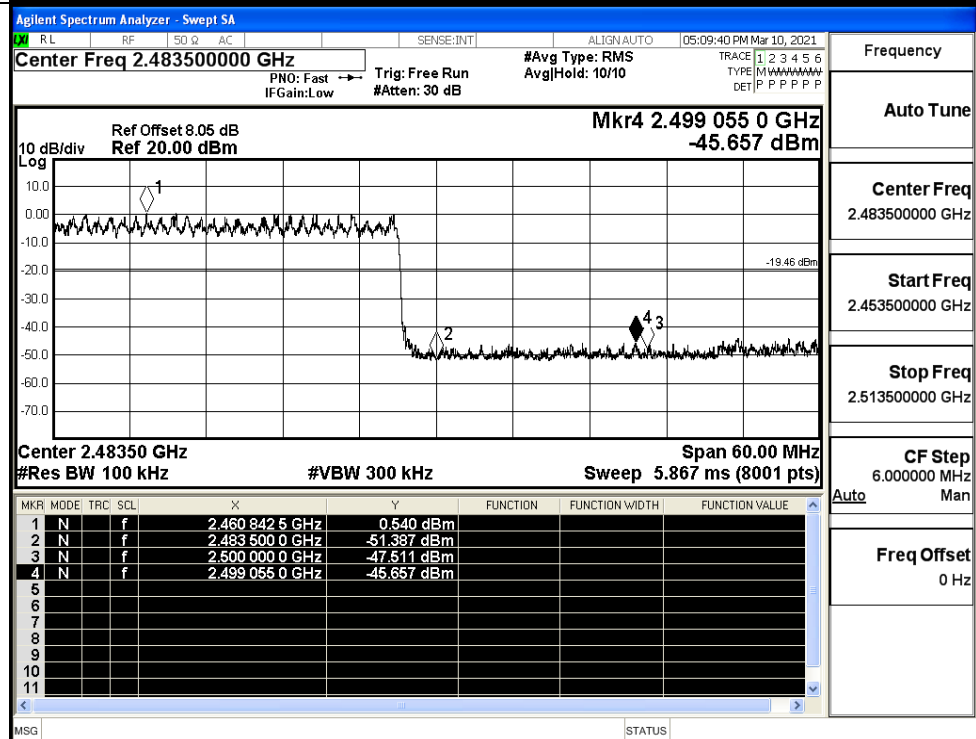
Center Freq
2.489000000 GHzStart Freq
2.478000000 GHzStop Freq
2.500000000 GHzCF Step
2.200000 MHz

Auto

Man

Freq Offset
0 Hz

$\pi/4$ DQPSK/HCH/Hop



Frequency

Auto Tune

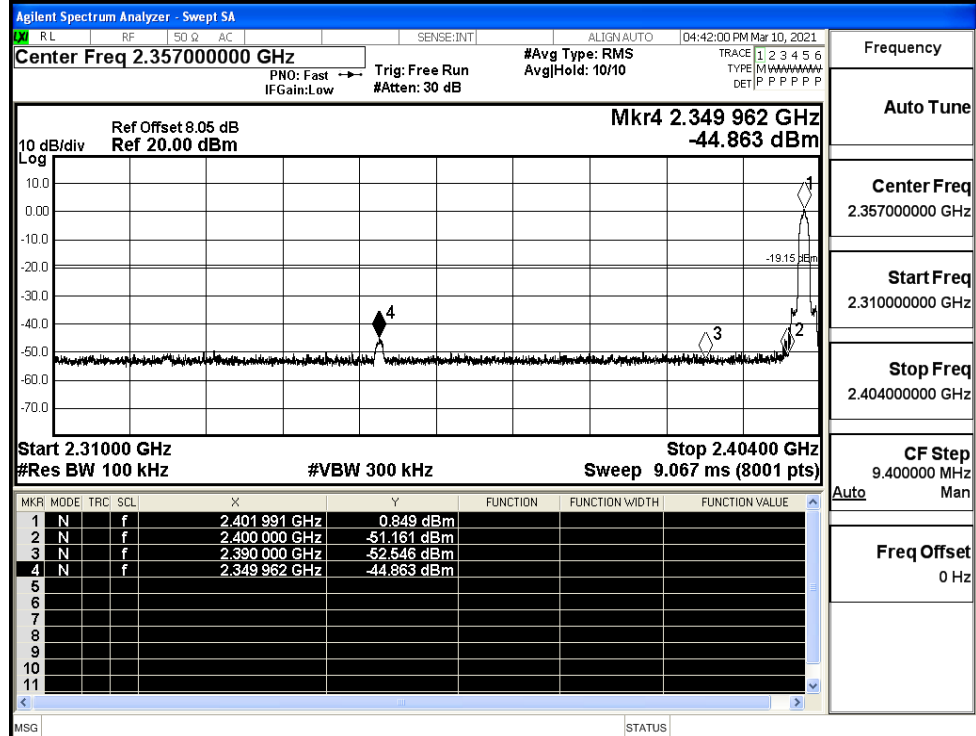
Center Freq
2.483500000 GHzStart Freq
2.453500000 GHzStop Freq
2.513500000 GHzCF Step
6.000000 MHz

Auto

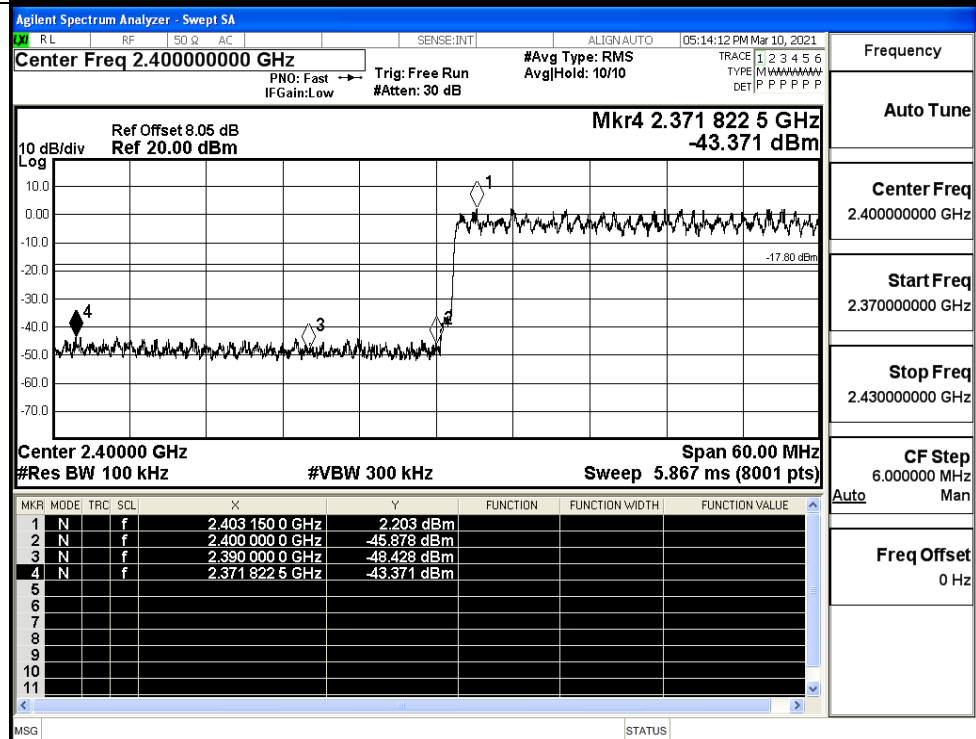
Man

Freq Offset
0 Hz

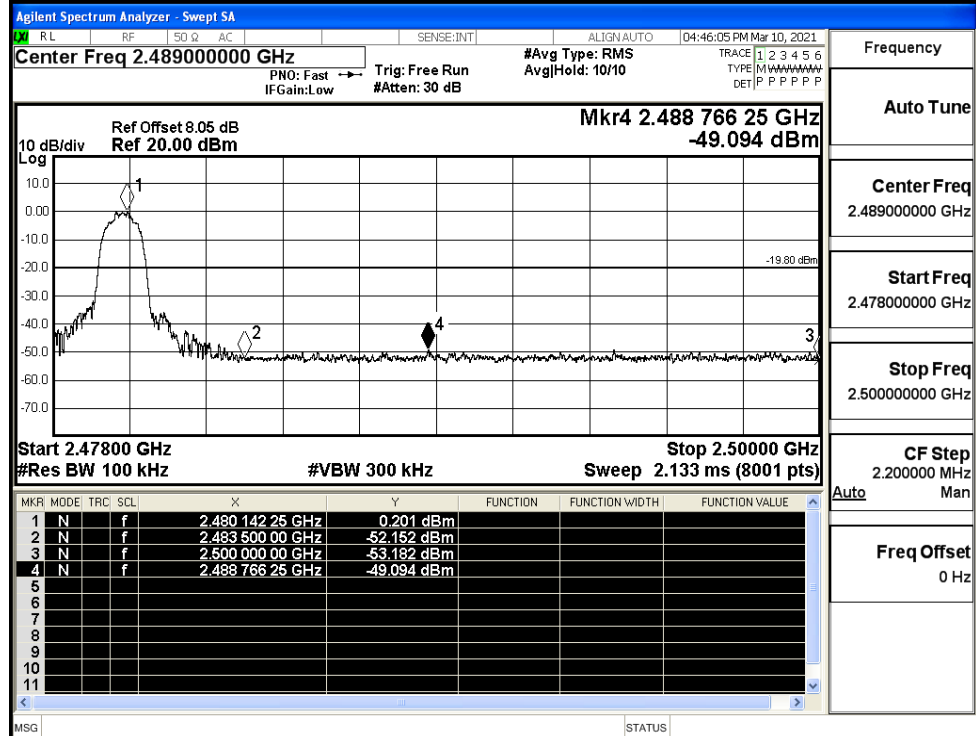
8DPSK/LCH/No Hop



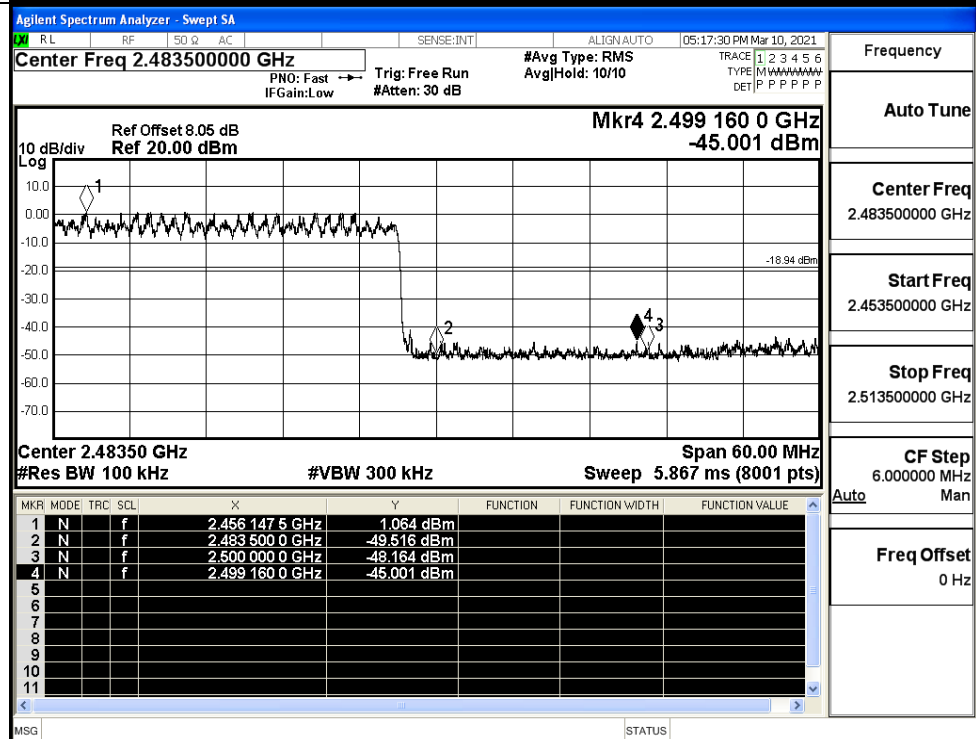
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



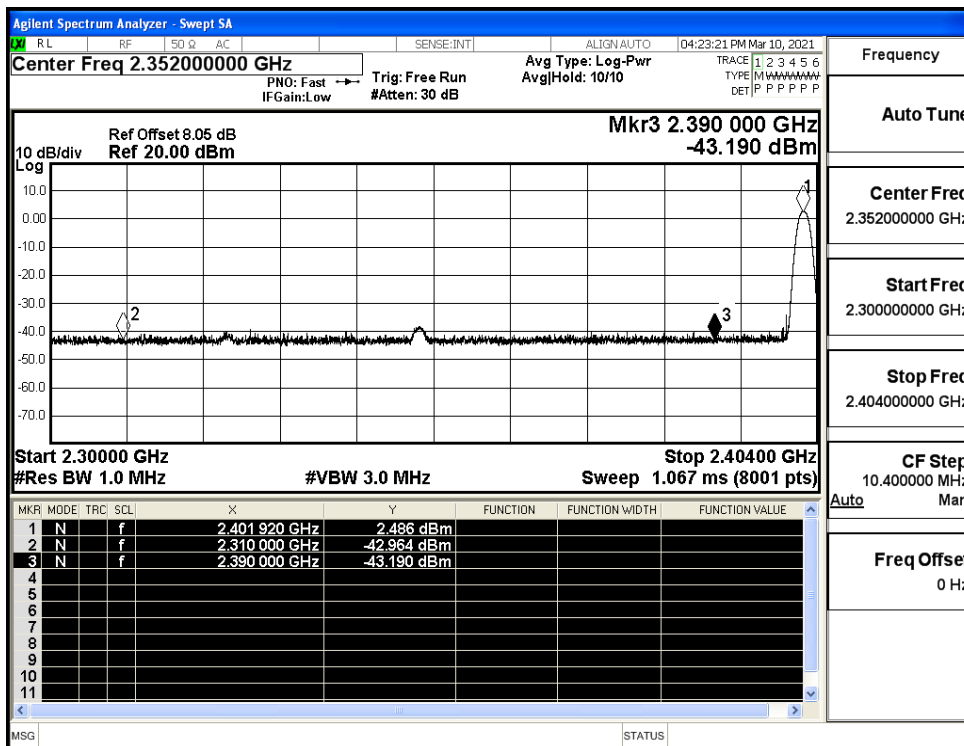
8DPSK/HCH/Hop



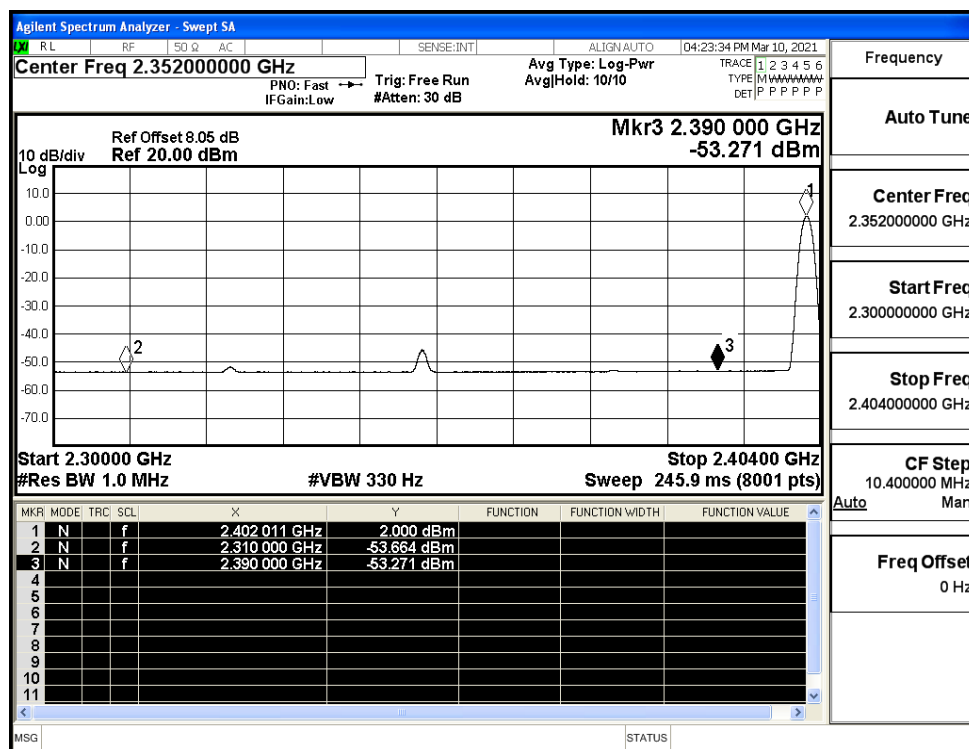
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-42.96	2.0	0	54.27	PEAK	74	PASS
	Off	2310.0	-53.66	2.0	0	43.57	AV	54	PASS
	Off	2390.0	-43.19	2.0	0	54.04	PEAK	74	PASS
	Off	2390.0	-53.27	2.0	0	43.96	AV	54	PASS
	Off	2483.5	-42.47	2.0	0	54.76	PEAK	74	PASS
	Off	2483.5	-52.57	2.0	0	44.66	AV	54	PASS
	Off	2500.0	-40.52	2.0	0	56.71	PEAK	74	PASS
	Off	2500.0	-52.59	2.0	0	44.64	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-42.82	2.0	0	54.41	PEAK	74	PASS
	Off	2310.0	-53.61	2.0	0	43.62	AV	54	PASS
	Off	2390.0	-43.65	2.0	0	53.58	PEAK	74	PASS
	Off	2390.0	-53.20	2.0	0	44.03	AV	54	PASS
	Off	2483.5	-42.41	2.0	0	54.82	PEAK	74	PASS
	Off	2483.5	-52.58	2.0	0	44.65	AV	54	PASS
	Off	2500.0	-42.34	2.0	0	54.89	PEAK	74	PASS
	Off	2500.0	-52.43	2.0	0	44.80	AV	54	PASS
8DPSK	Off	2310.0	-43.02	2.0	0	54.21	PEAK	74	PASS
	Off	2310.0	-53.50	2.0	0	43.73	AV	54	PASS
	Off	2390.0	-43.28	2.0	0	53.95	PEAK	74	PASS
	Off	2390.0	-53.15	2.0	0	44.08	AV	54	PASS
	Off	2483.5	-42.00	2.0	0	55.23	PEAK	74	PASS
	Off	2483.5	-52.66	2.0	0	44.57	AV	54	PASS
	Off	2500.0	-42.61	2.0	0	54.62	PEAK	74	PASS
	Off	2500.0	-52.44	2.0	0	44.79	AV	54	PASS

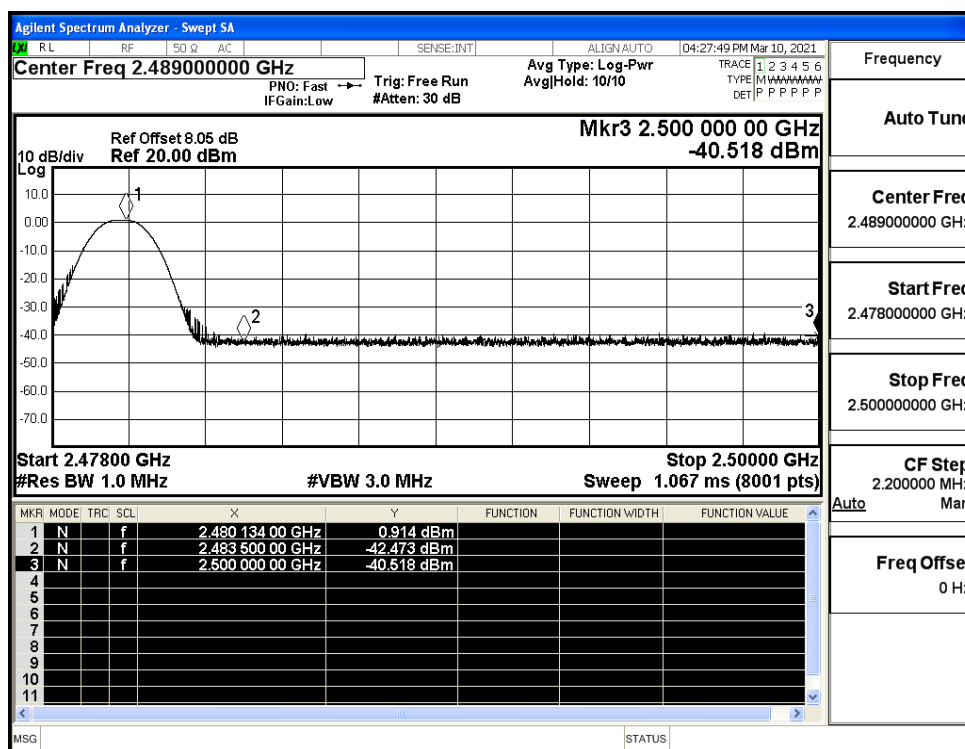
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



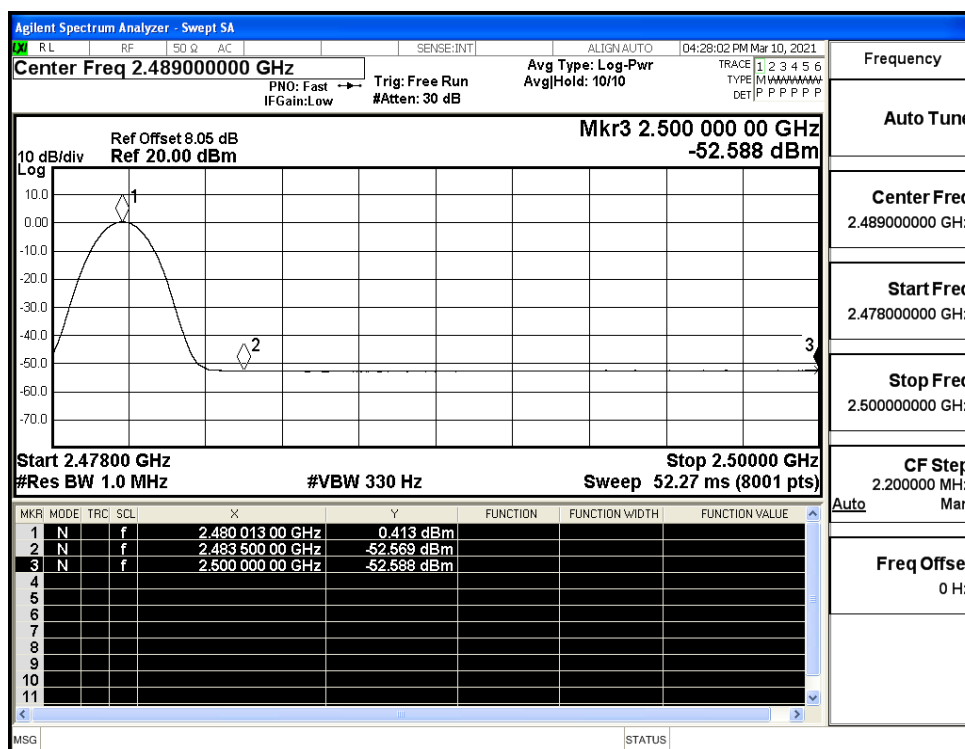
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

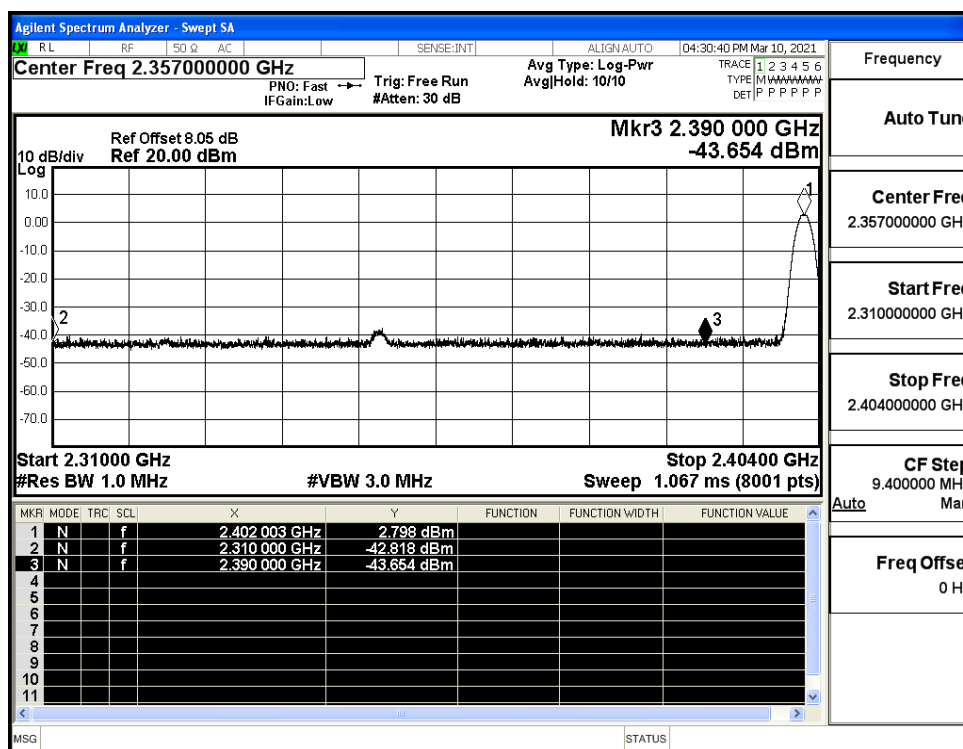
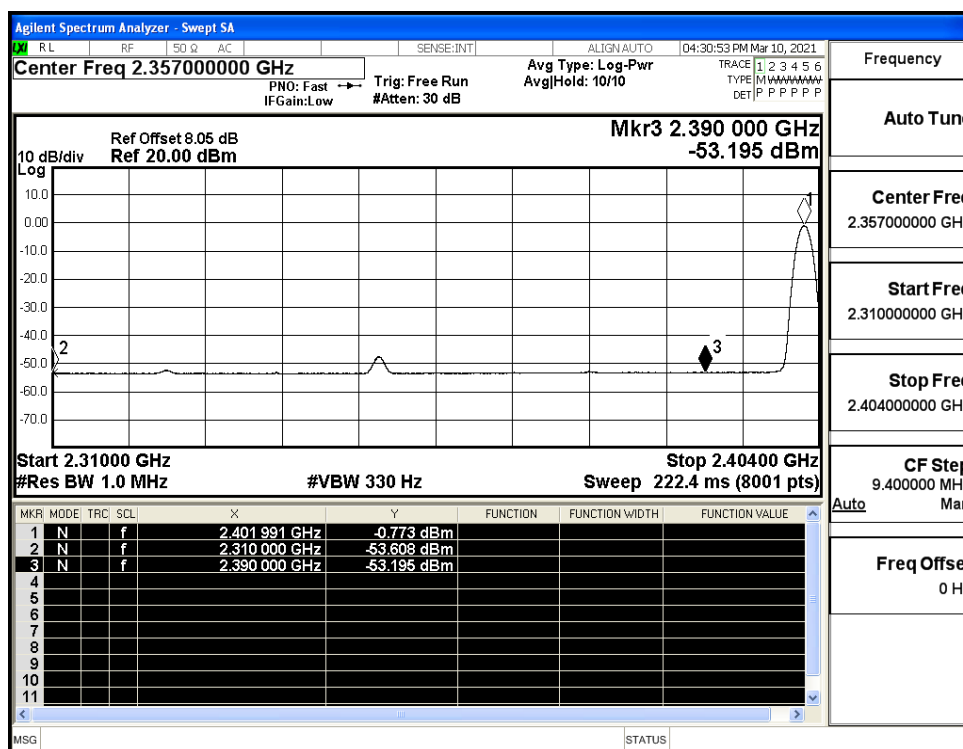


Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)

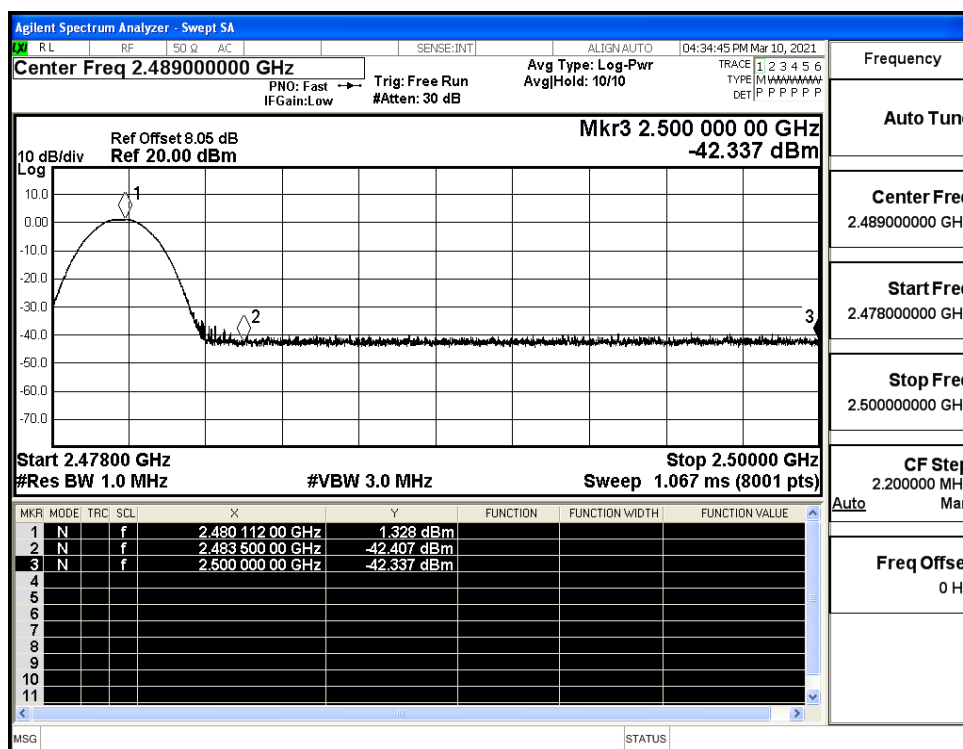


Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)

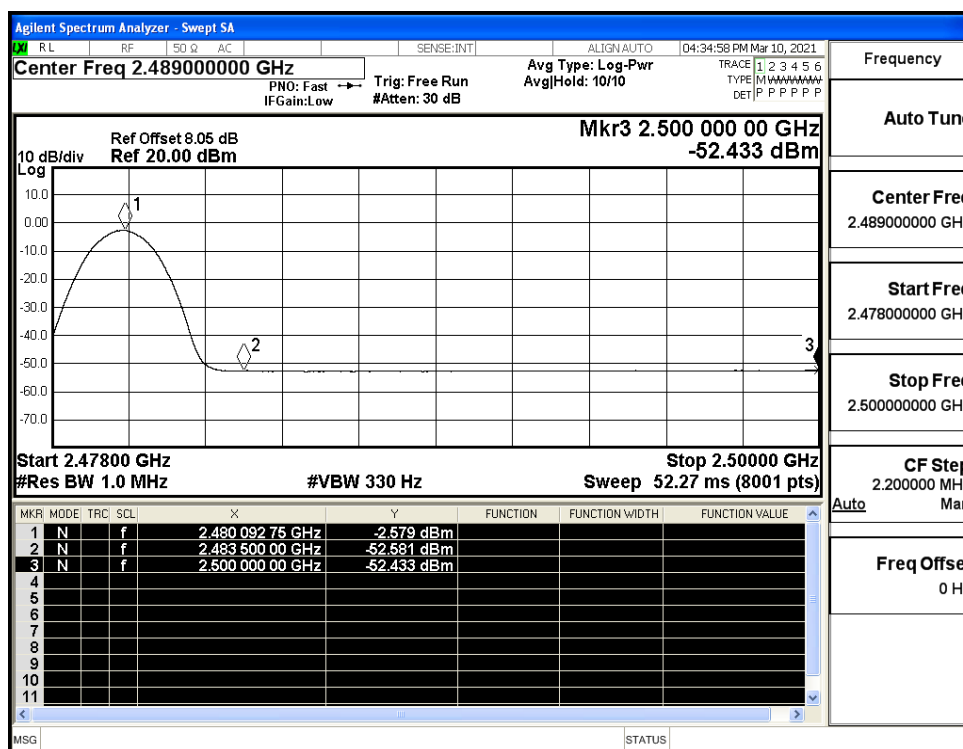


Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

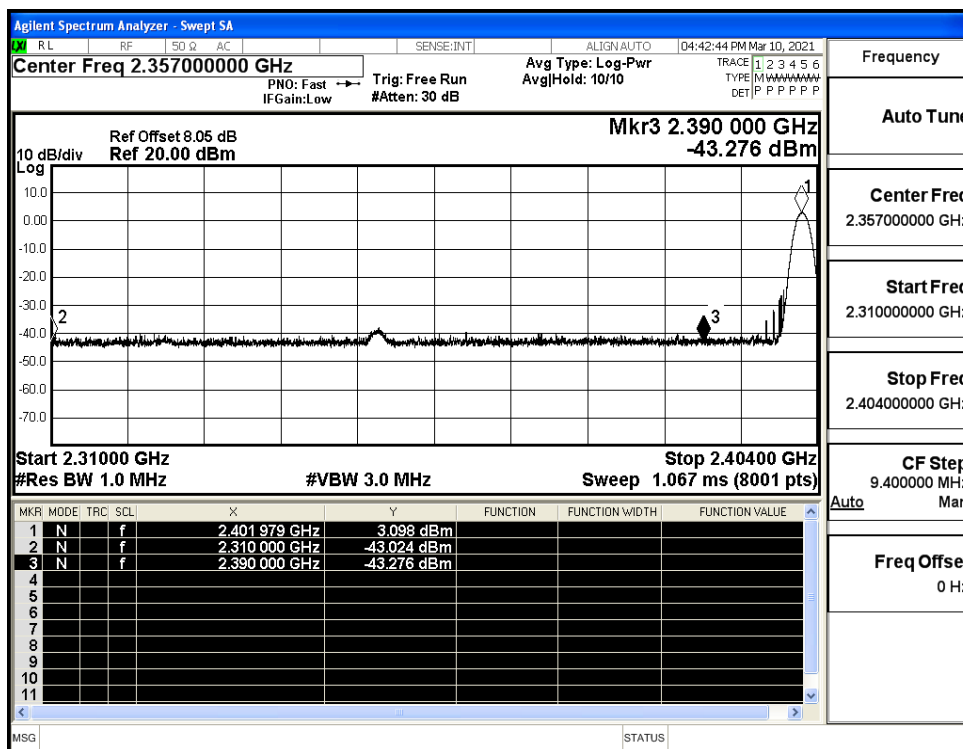
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



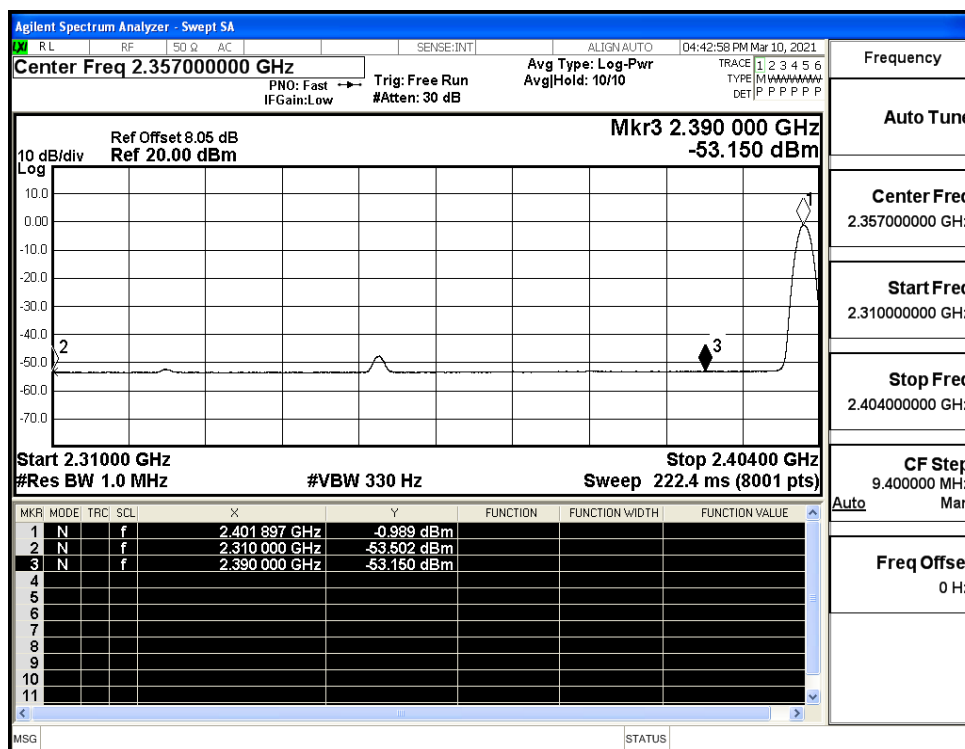
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



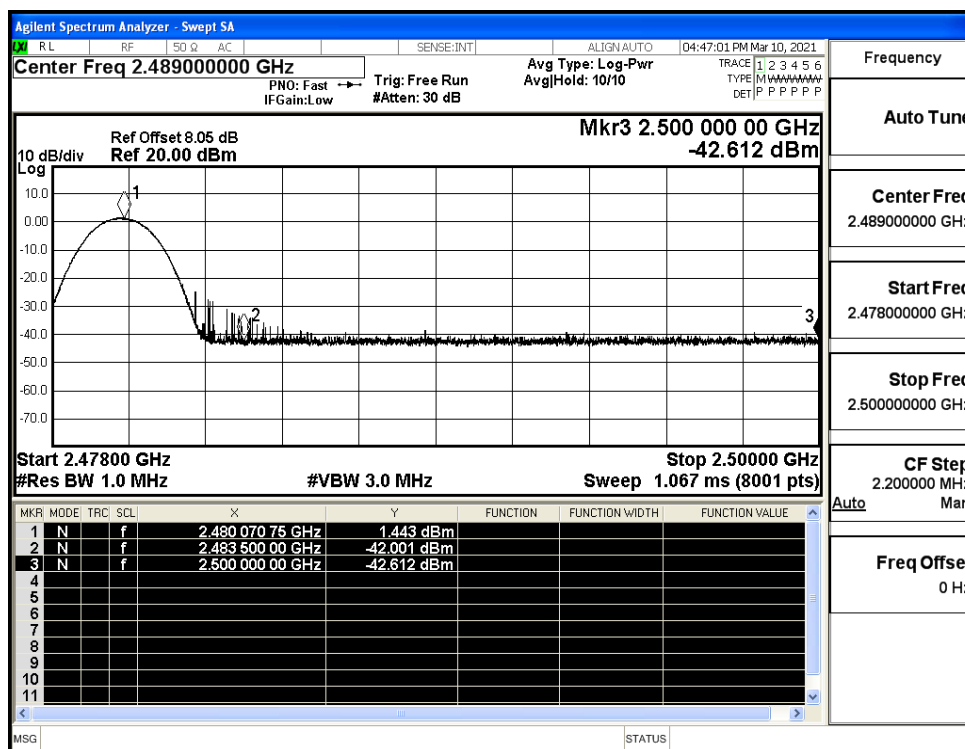
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

