

Appendix A

RF Test Data for BT V4.0(BDR/EDR) (Conducted Measurement)

Product Name: JayPad

Trade Mark: HealthJay,JayPad

Test Model: JPCD1020211

Environmental Conditions

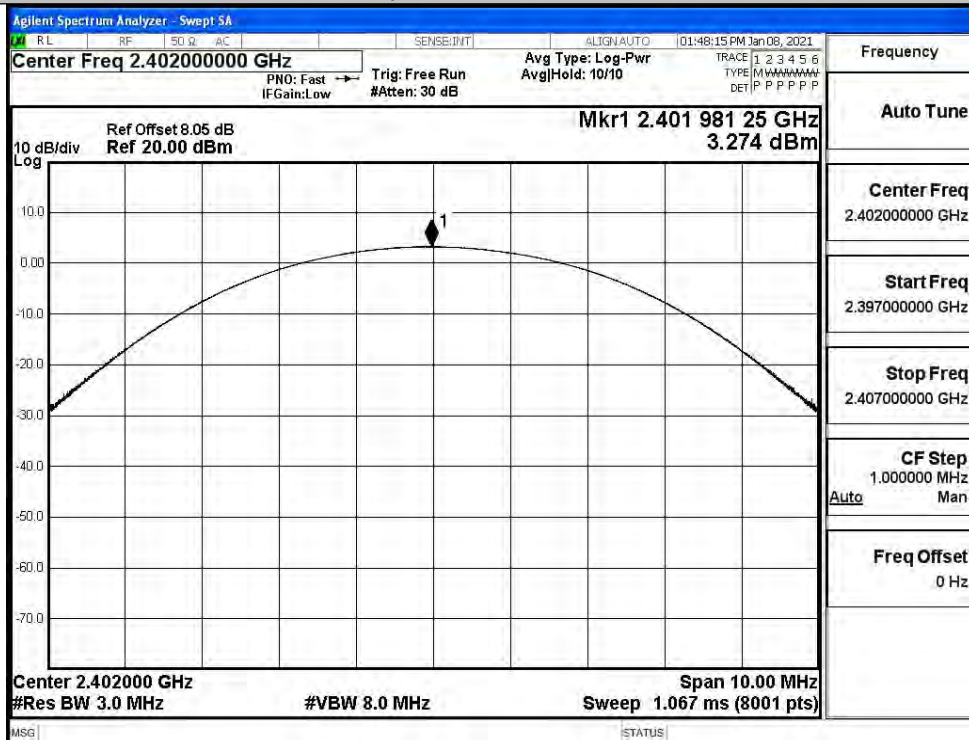
Temperature:	22.3° C
Relative Humidity:	53.9%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

A.1 Maxmum Conducted Peak Output Power

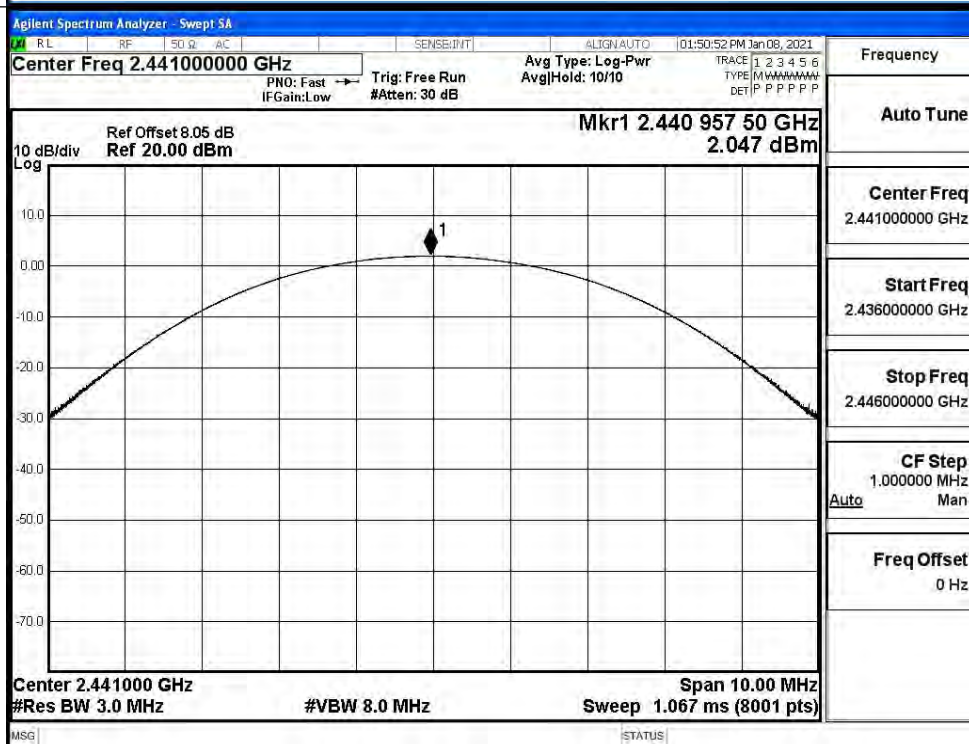
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.274	21	PASS
	MCH	2.047	21	PASS
	HCH	3.467	21	PASS
$\pi/4$ DQPSK	LCH	2.309	21	PASS
	MCH	1.217	21	PASS
	HCH	2.739	21	PASS
8DPSK	LCH	2.503	21	PASS
	MCH	1.356	21	PASS
	HCH	2.887	21	PASS

Test Graphs

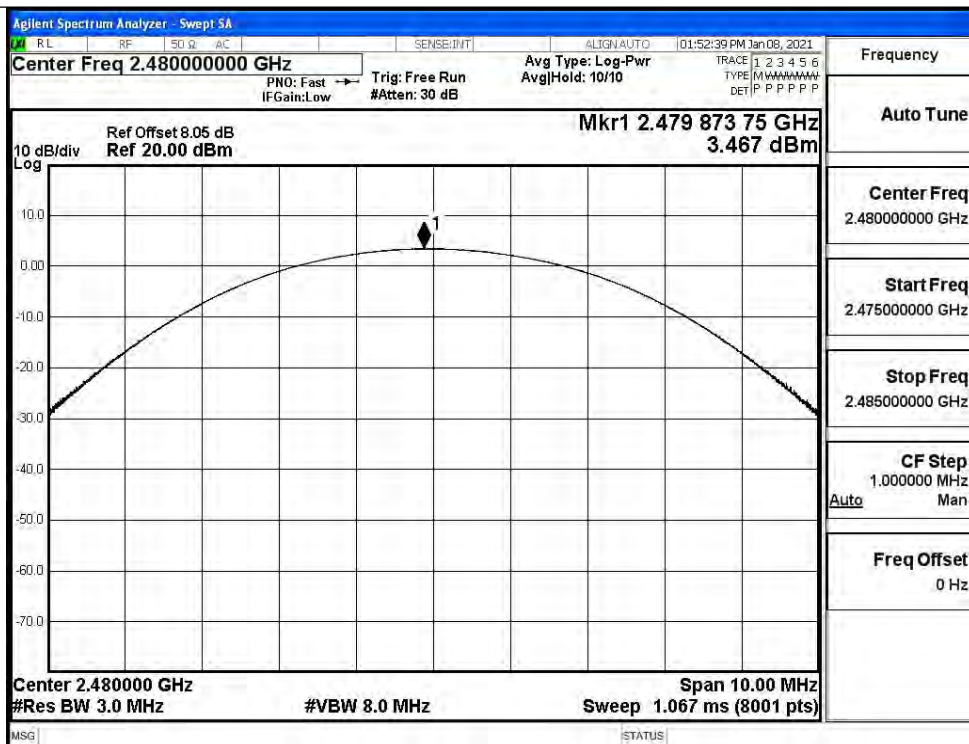
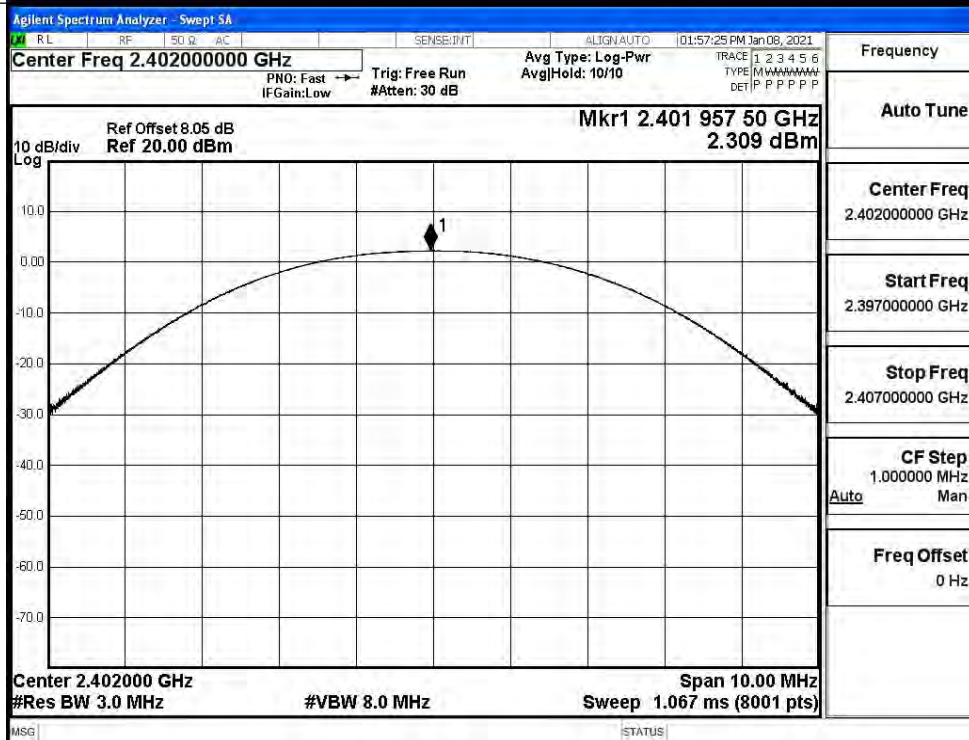
GFSK/LCH

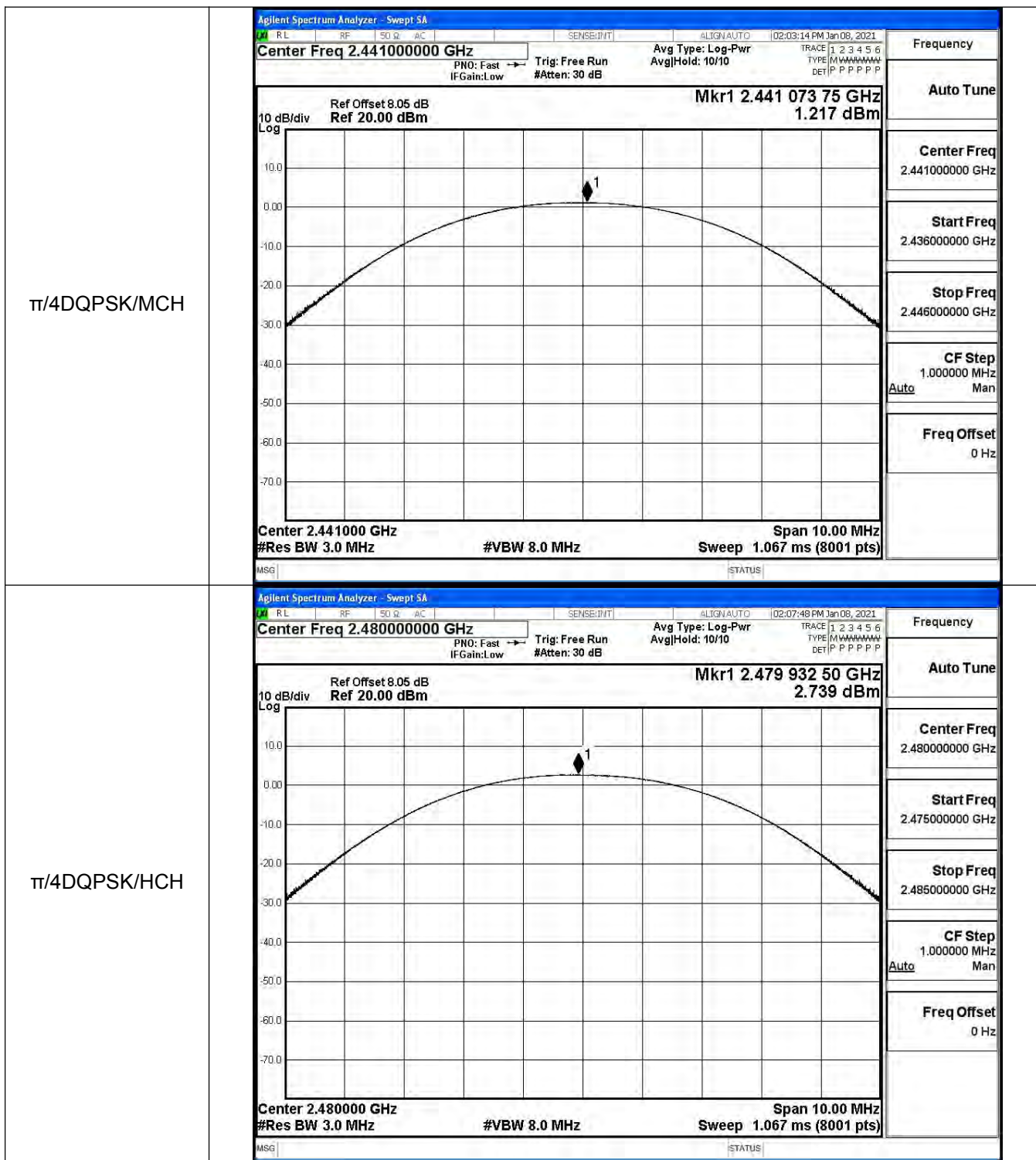


GFSK/MCH

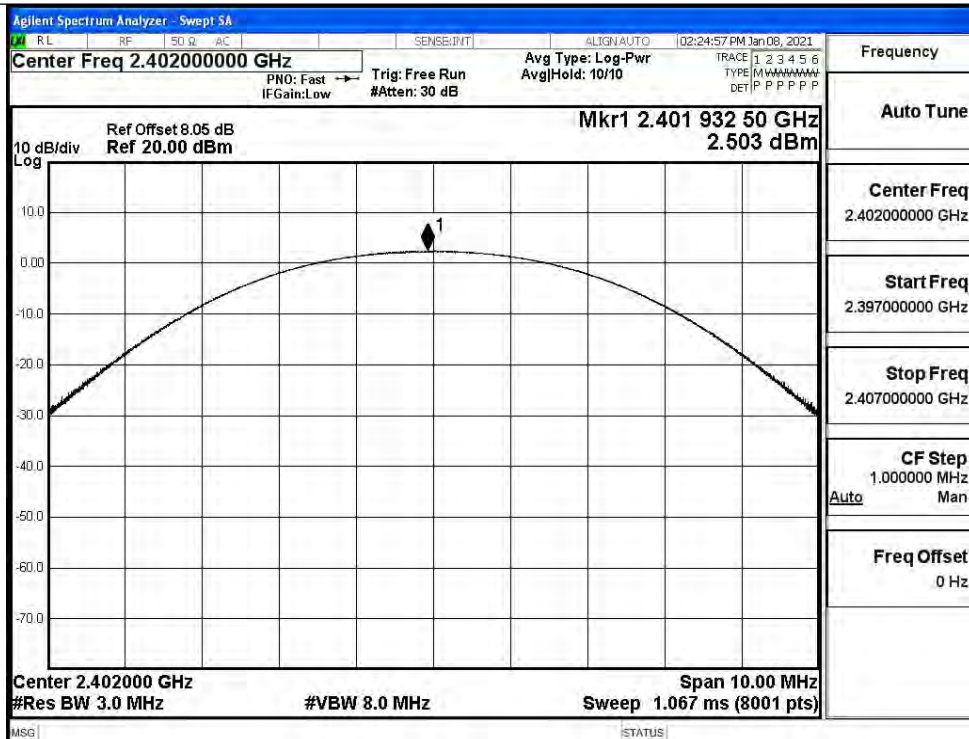


GFSK/HCH

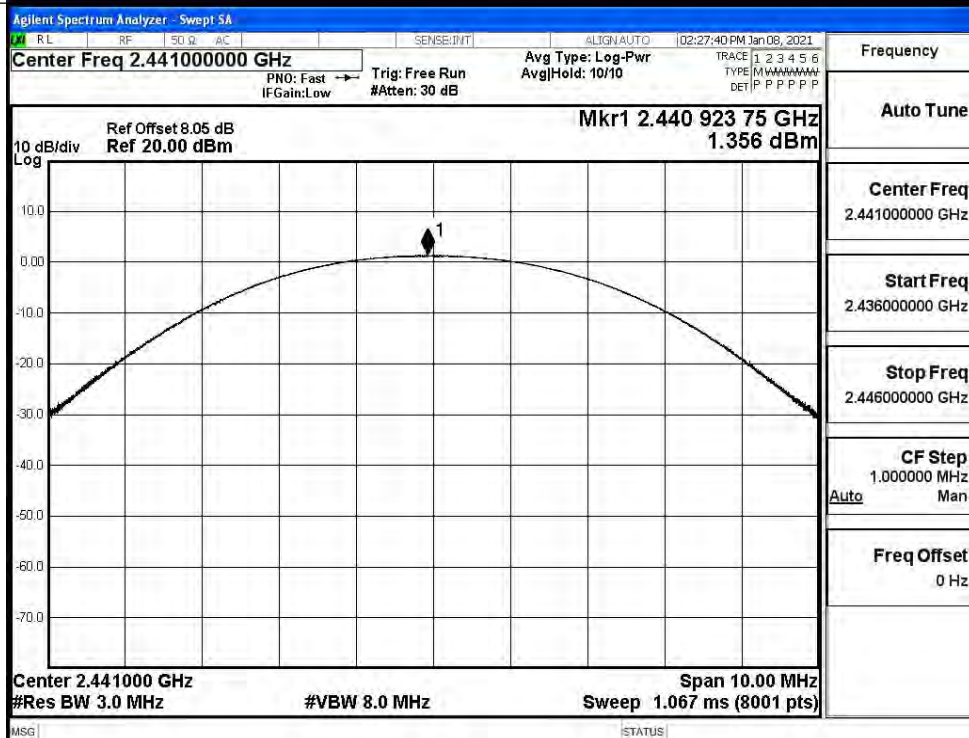
 π /4DQPSK/LCH



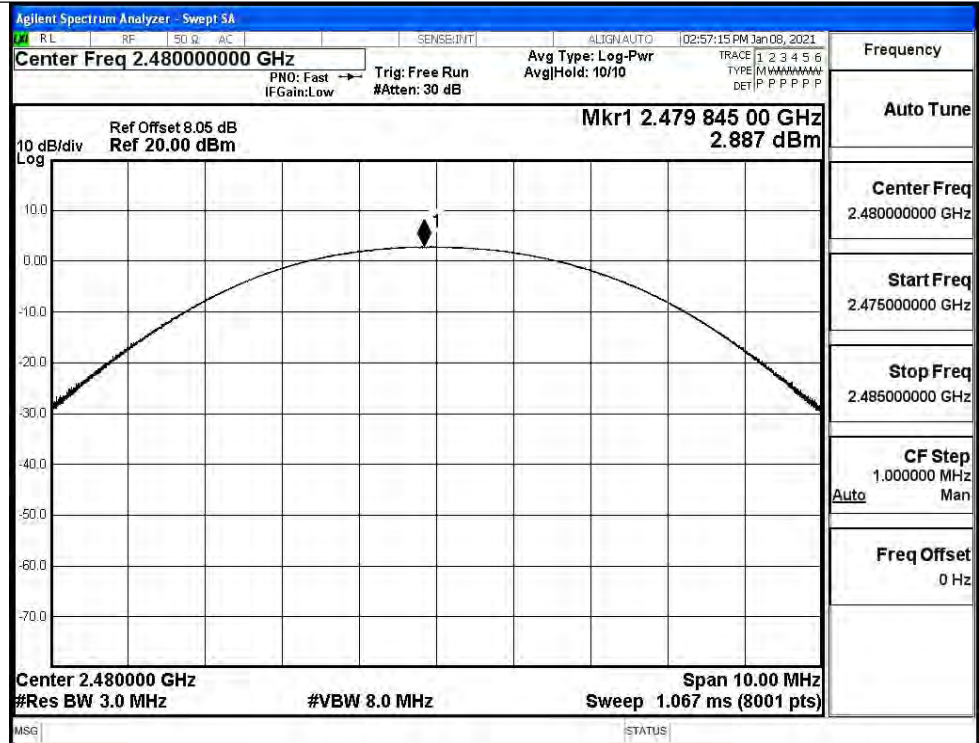
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

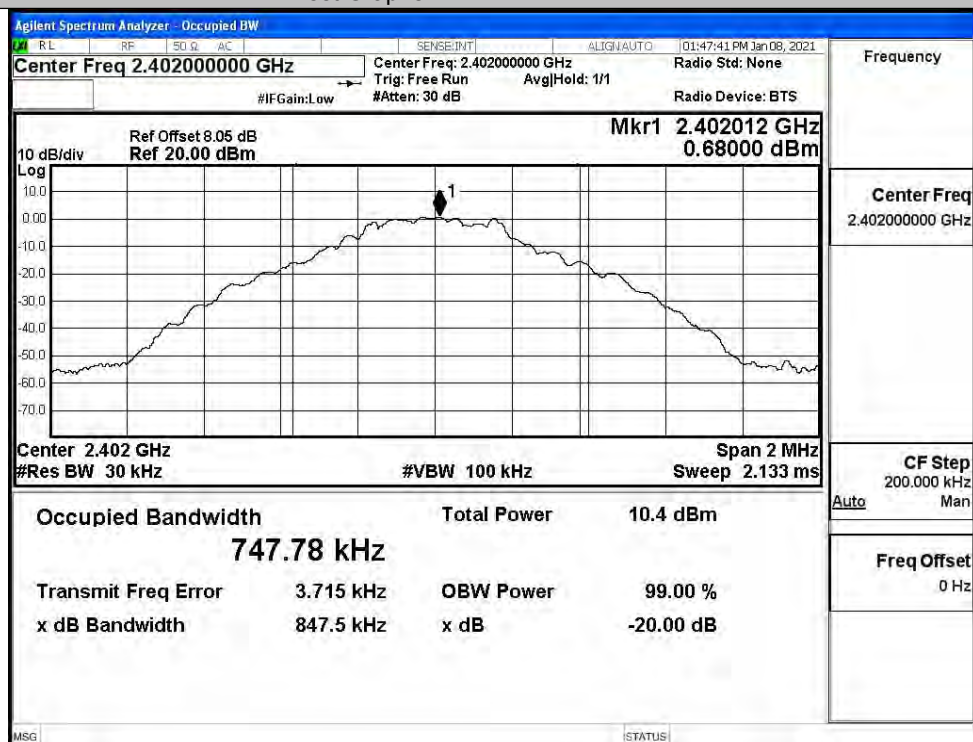


A.2 20dB Bandwidth

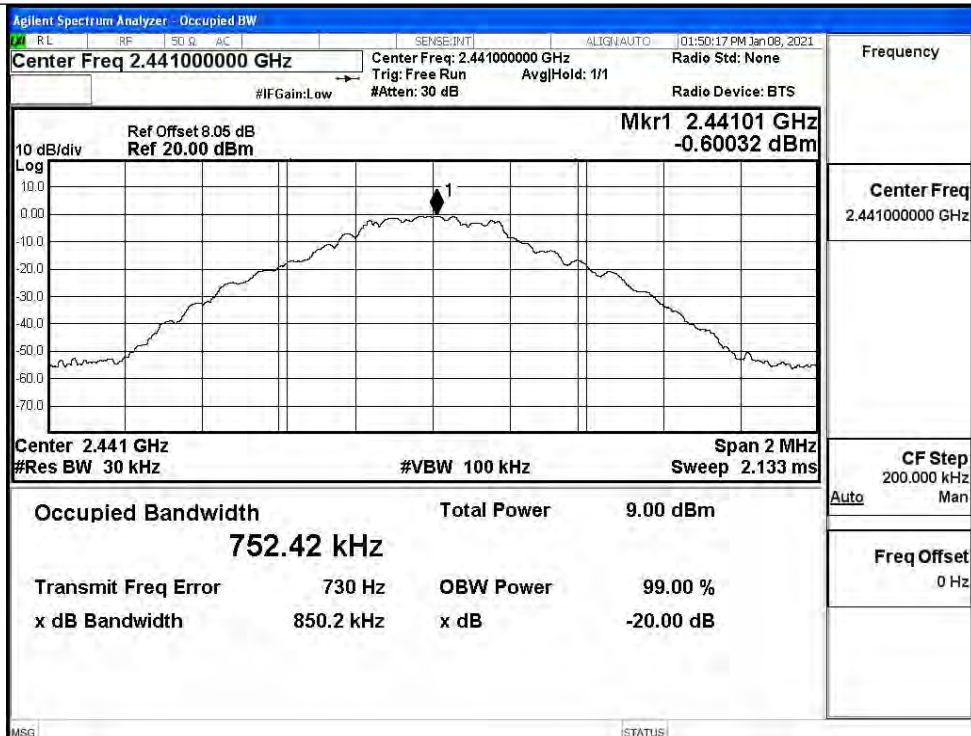
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.8475	Not Specified	PASS
	MCH	0.8502	Not Specified	PASS
	HCH	0.8577	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.273	Not Specified	PASS
	MCH	1.277	Not Specified	PASS
	HCH	1.272	Not Specified	PASS
8DPSK	LCH	1.267	Not Specified	PASS
	MCH	1.280	Not Specified	PASS
	HCH	1.271	Not Specified	PASS

Test Graphs

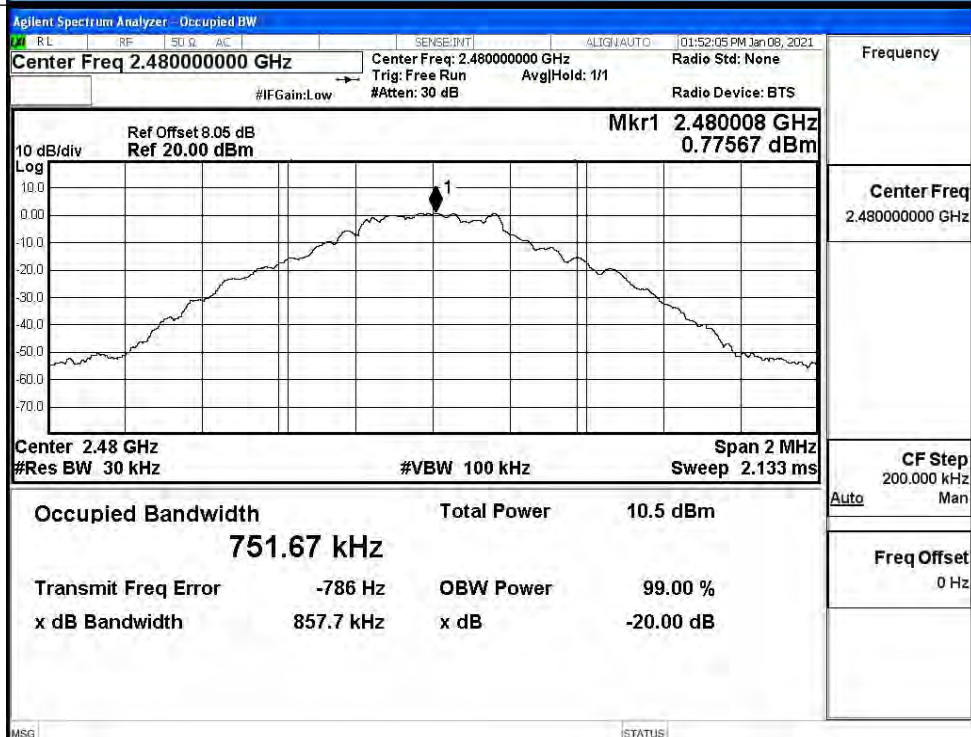
GFSK/LCH

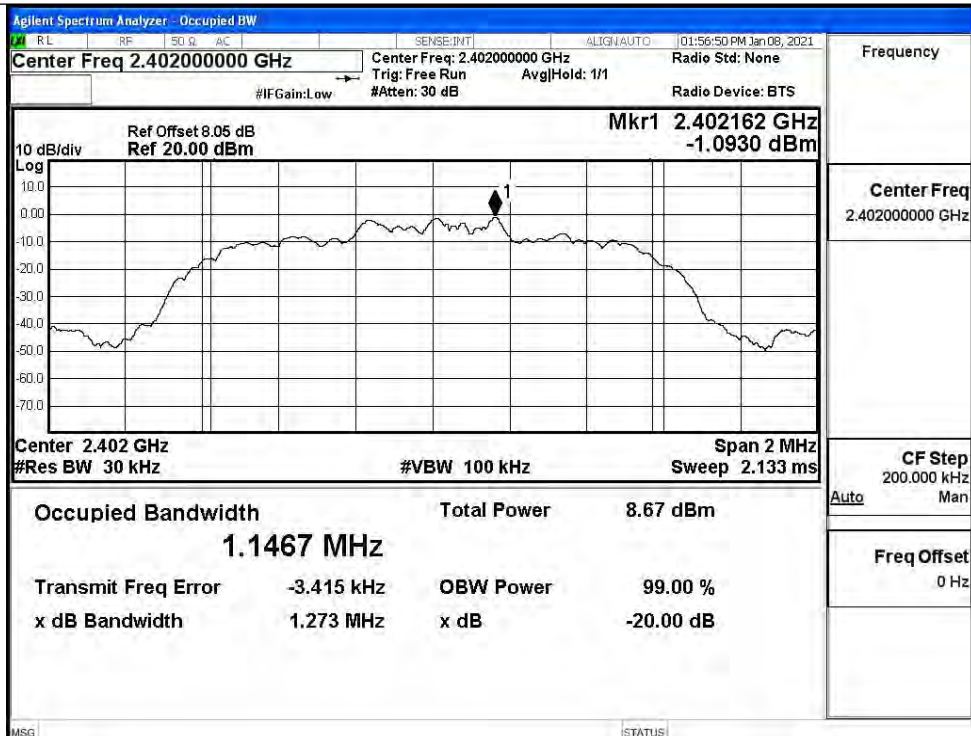
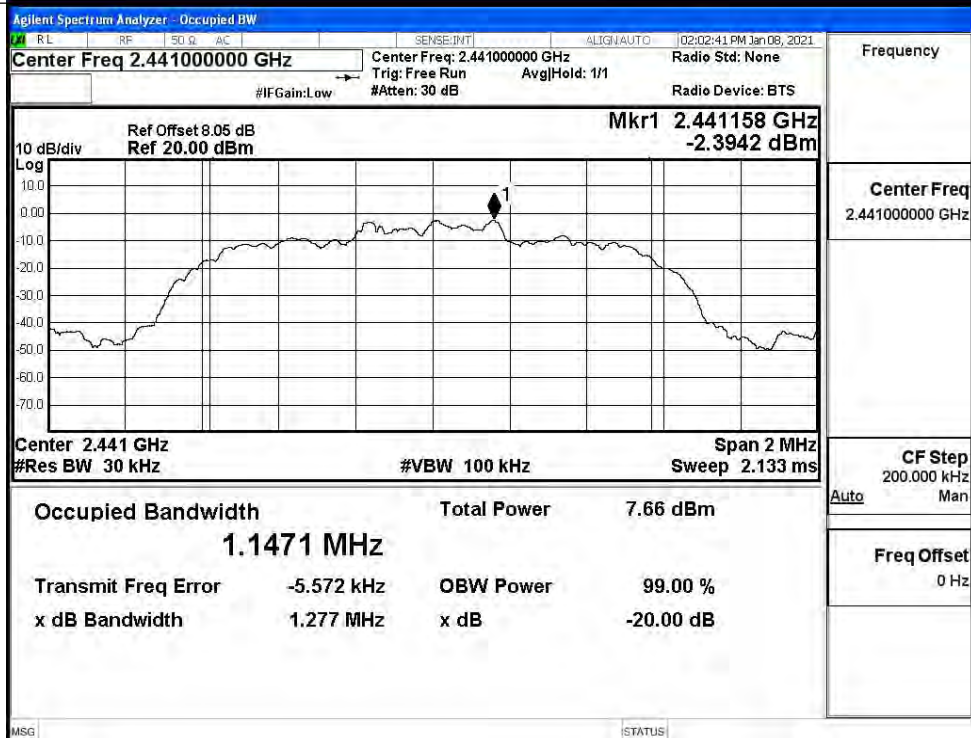


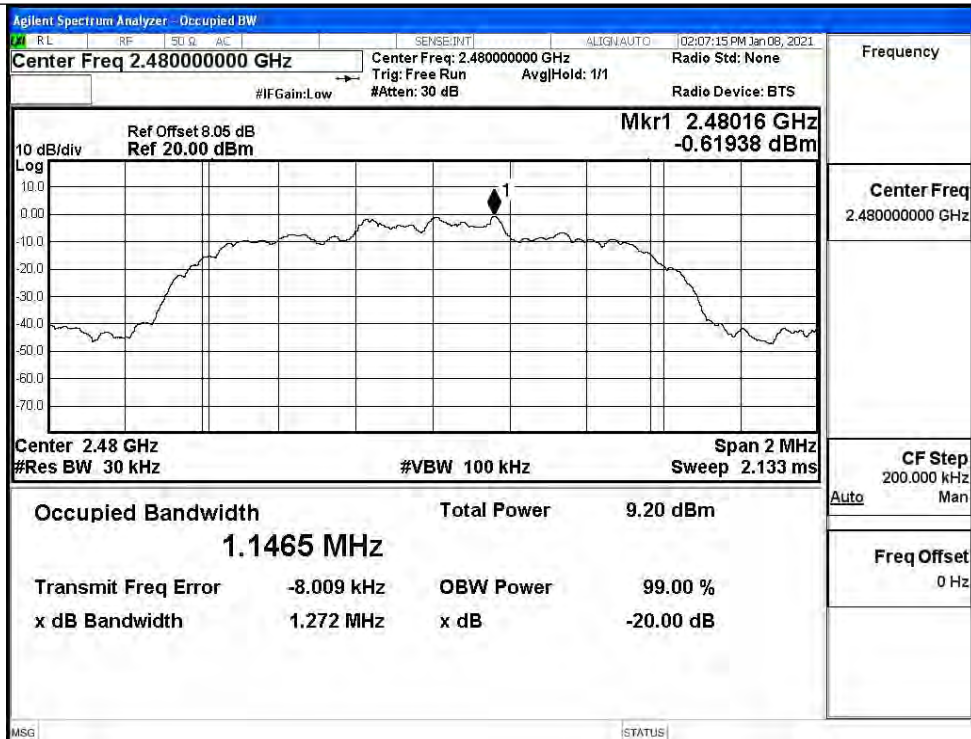
GFSK/MCH



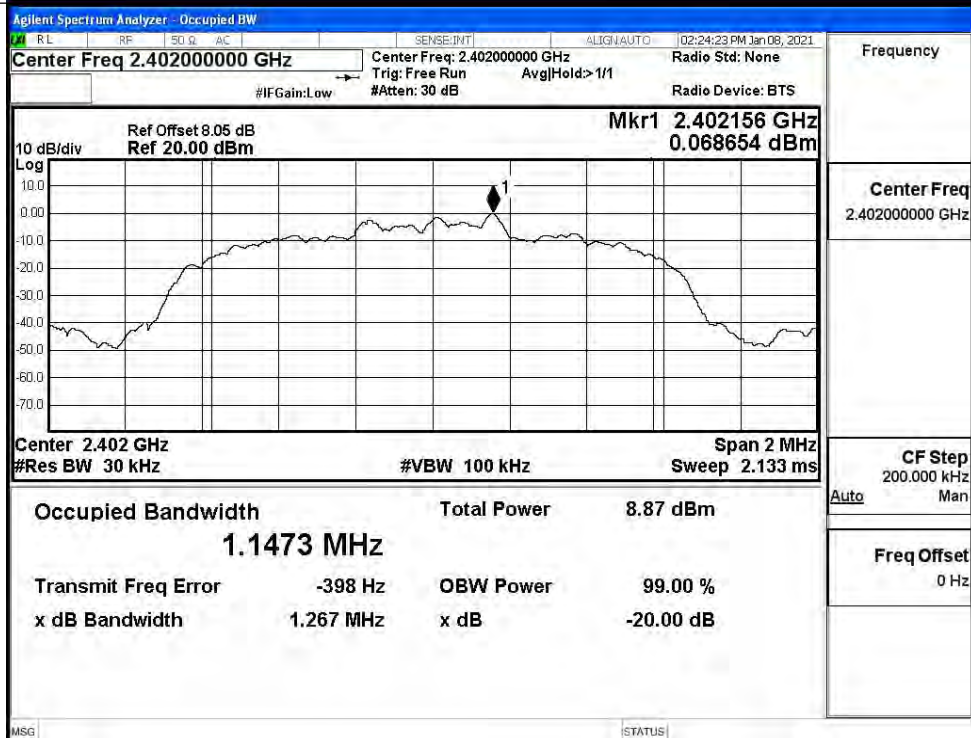
GFSK/HCH



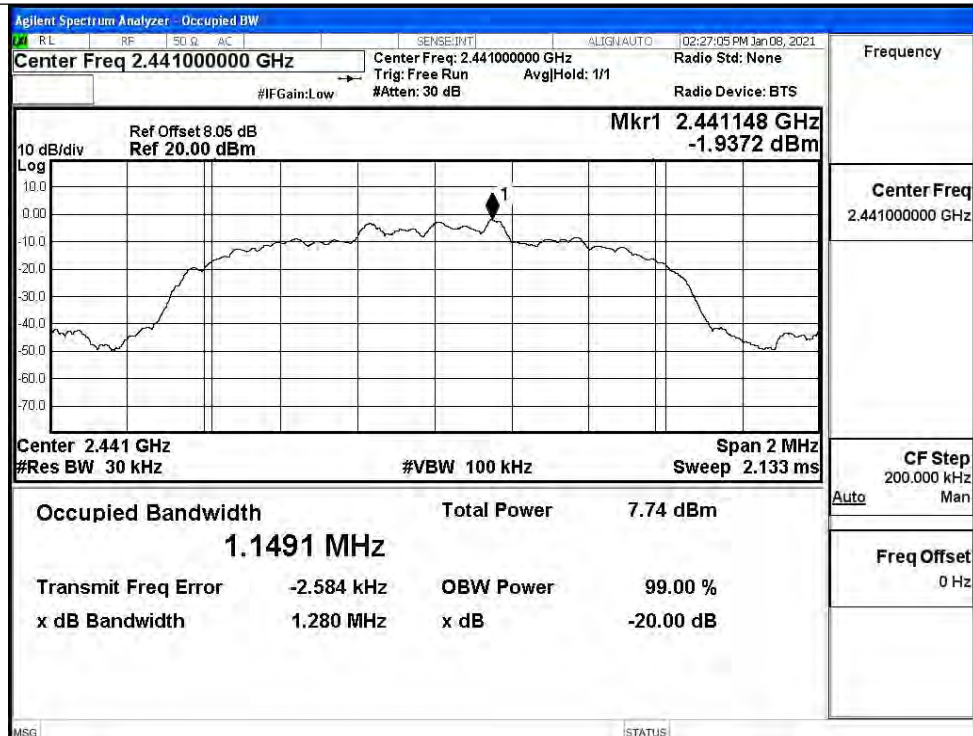
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

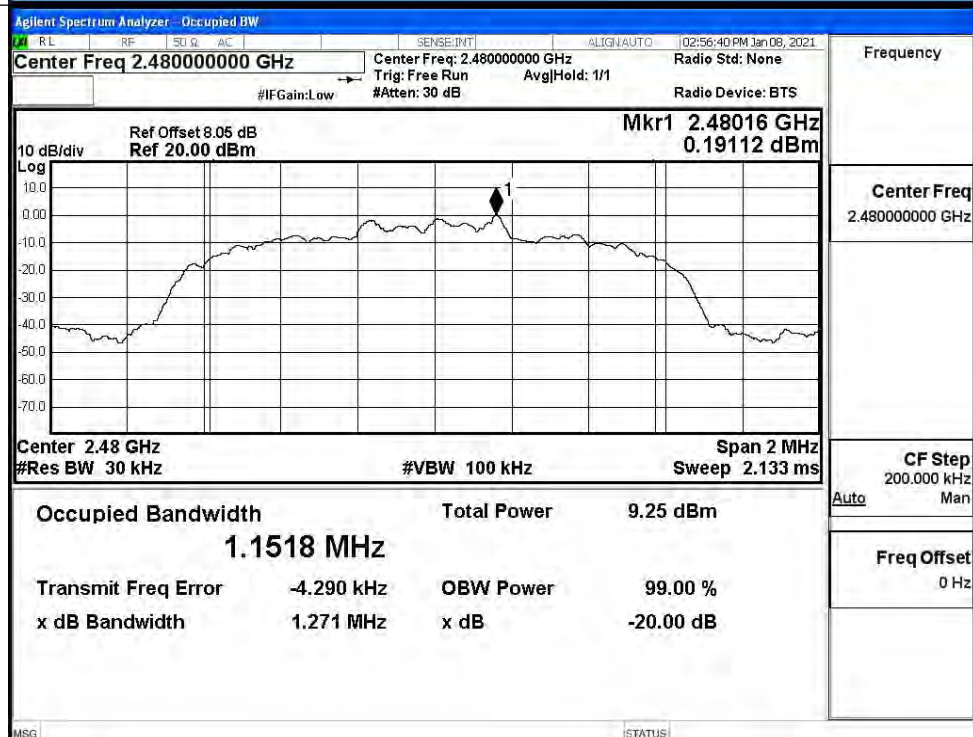
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

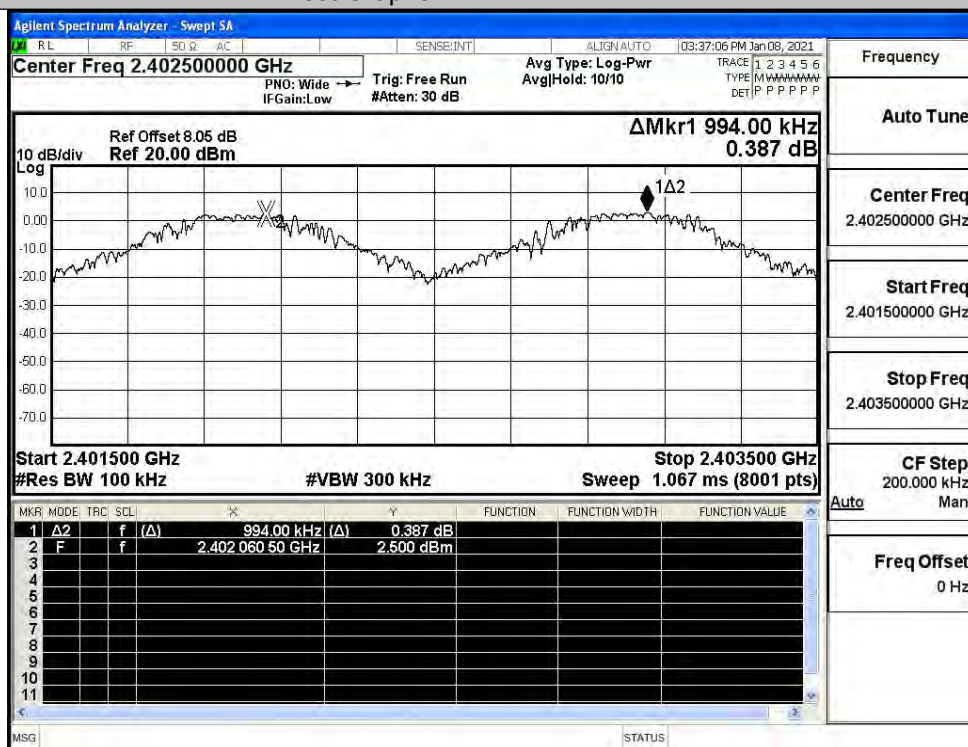


A.3 Carrier Frequency Separation

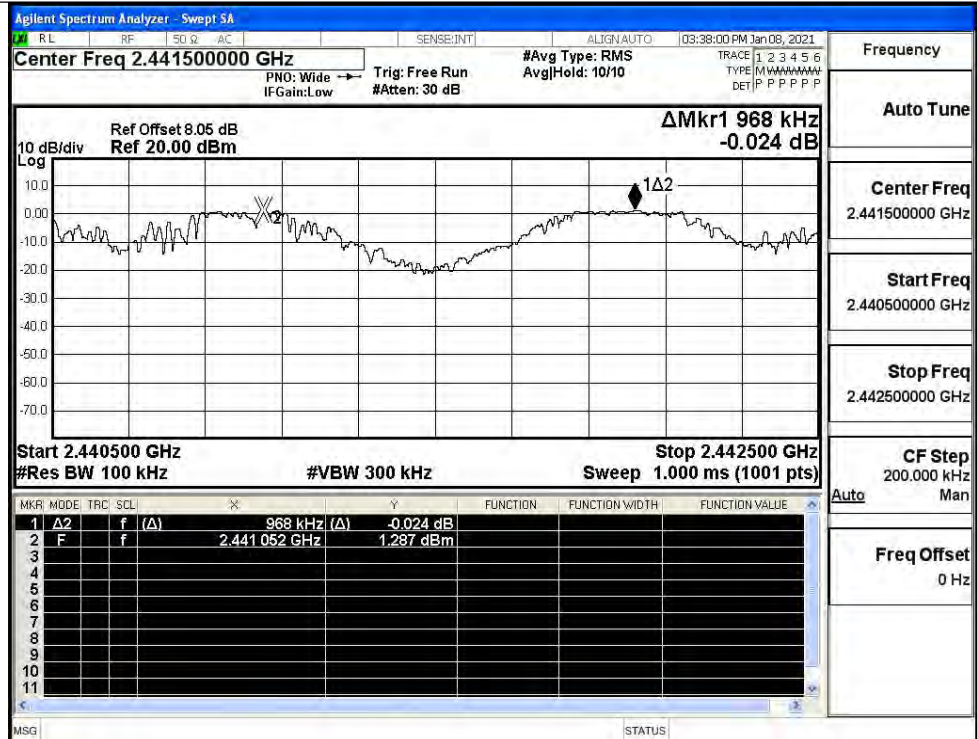
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.994	0.565	PASS
	MCH	0.968	0.567	PASS
	HCH	1.156	0.572	PASS
$\pi/4$ DQPSK	LCH	1.134	0.849	PASS
	MCH	1.158	0.851	PASS
	HCH	1.000	0.848	PASS
8DPSK	LCH	1.020	0.845	PASS
	MCH	0.932	0.853	PASS
	HCH	1.218	0.847	PASS

Test Graphs

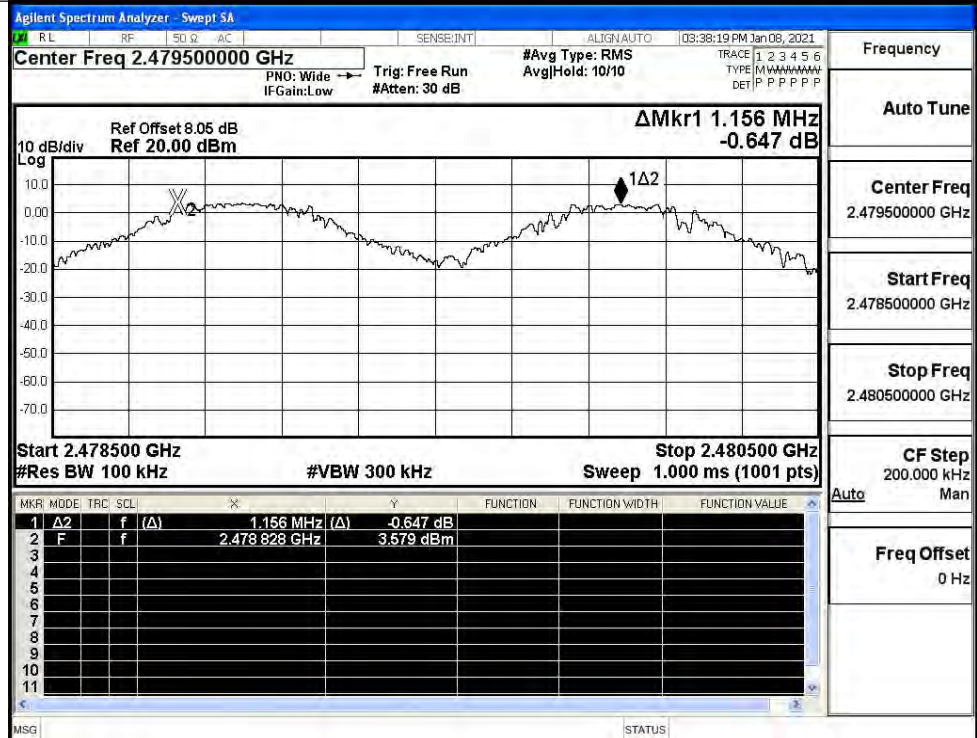
GFSK/LCH

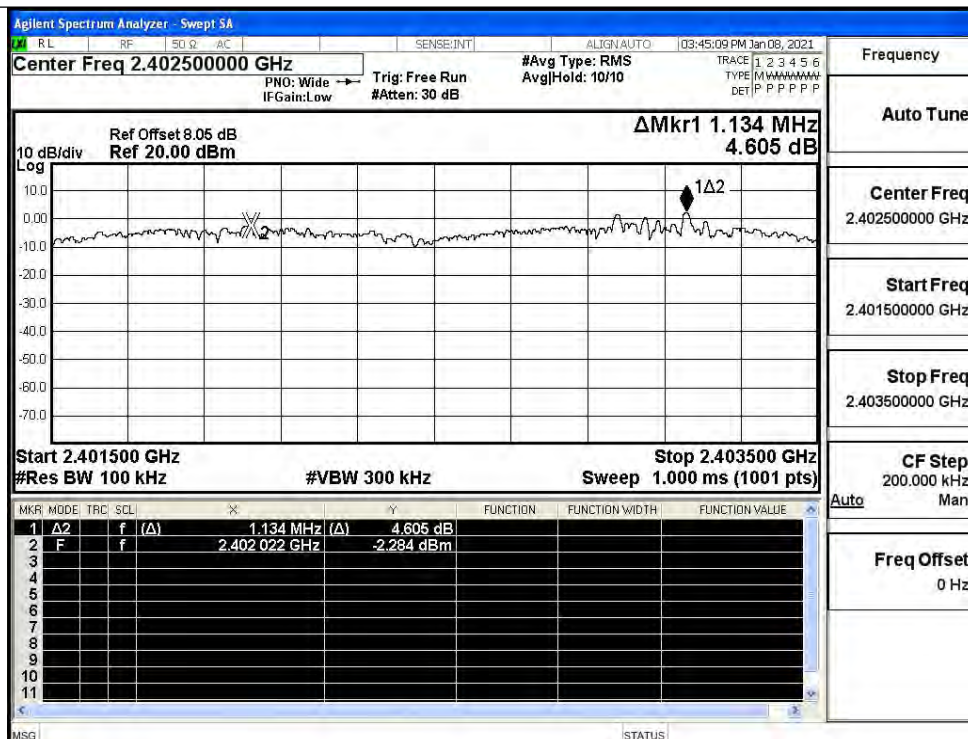
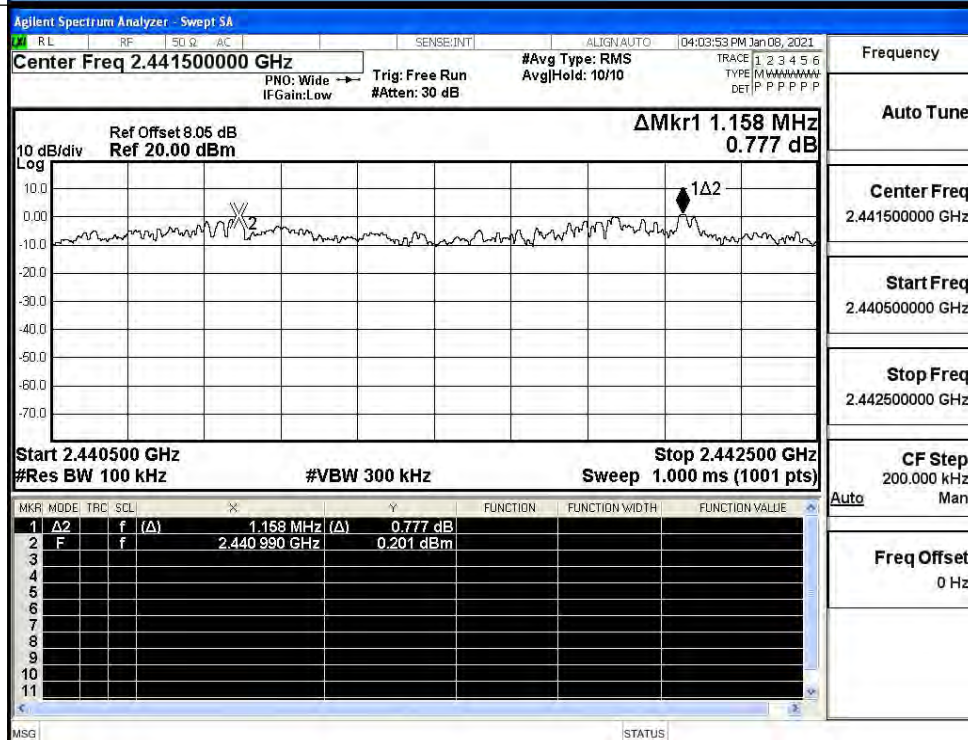


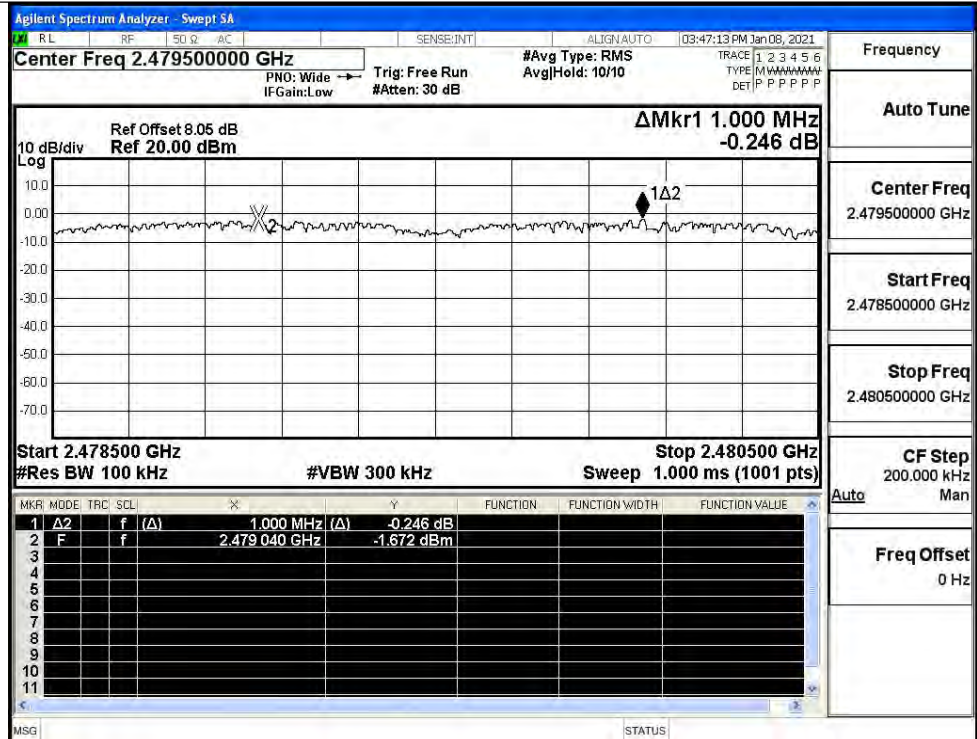
GFSK/MCH



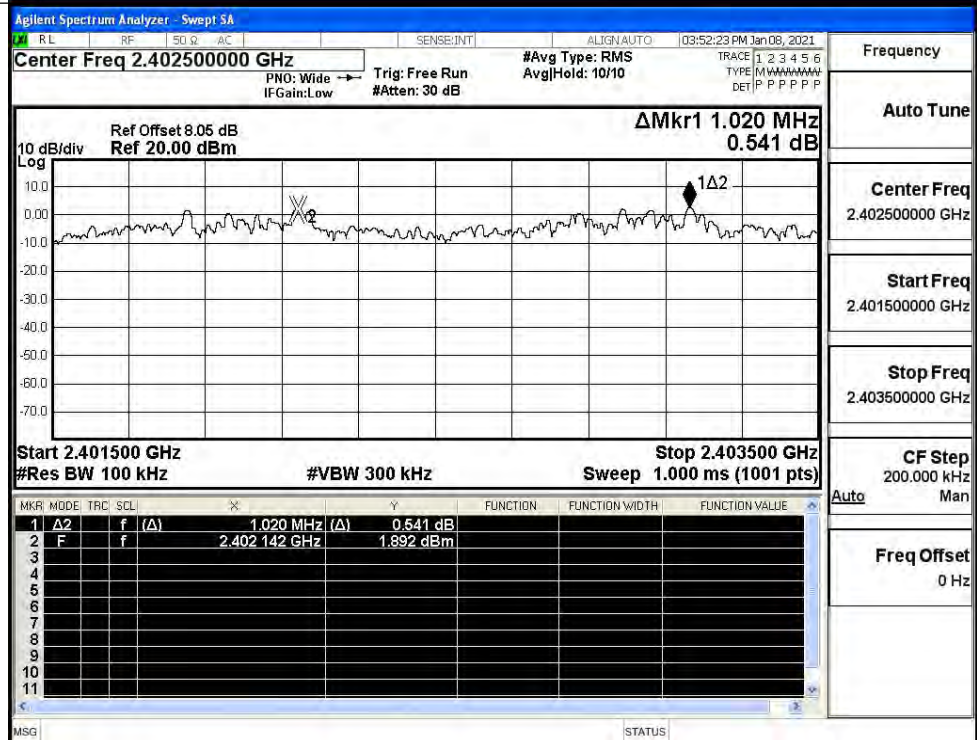
GFSK/HCH



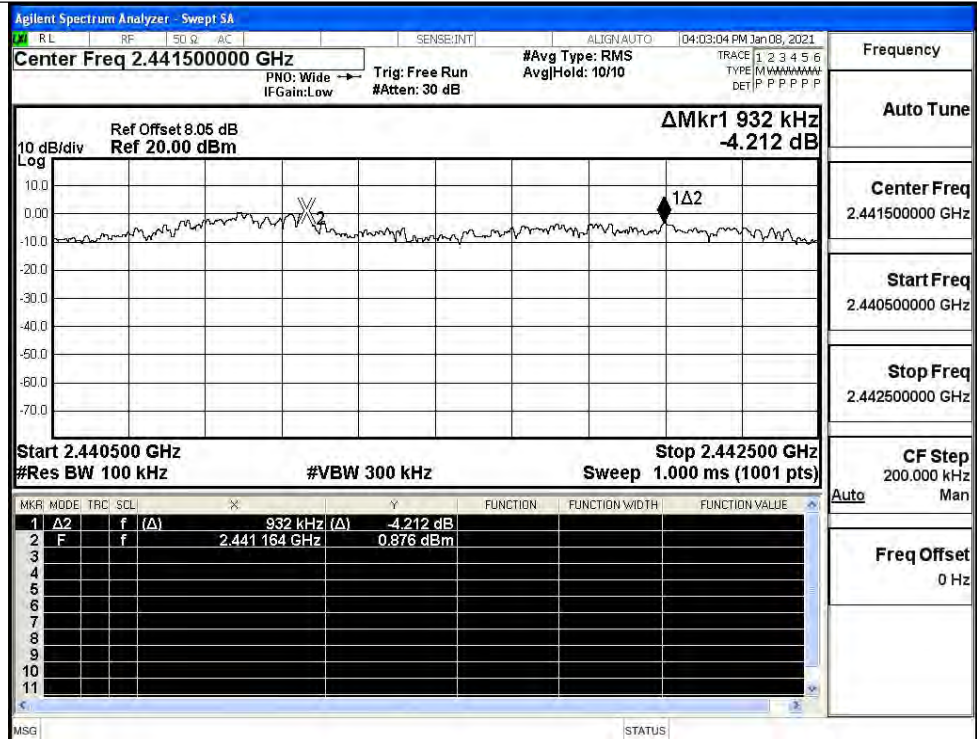
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

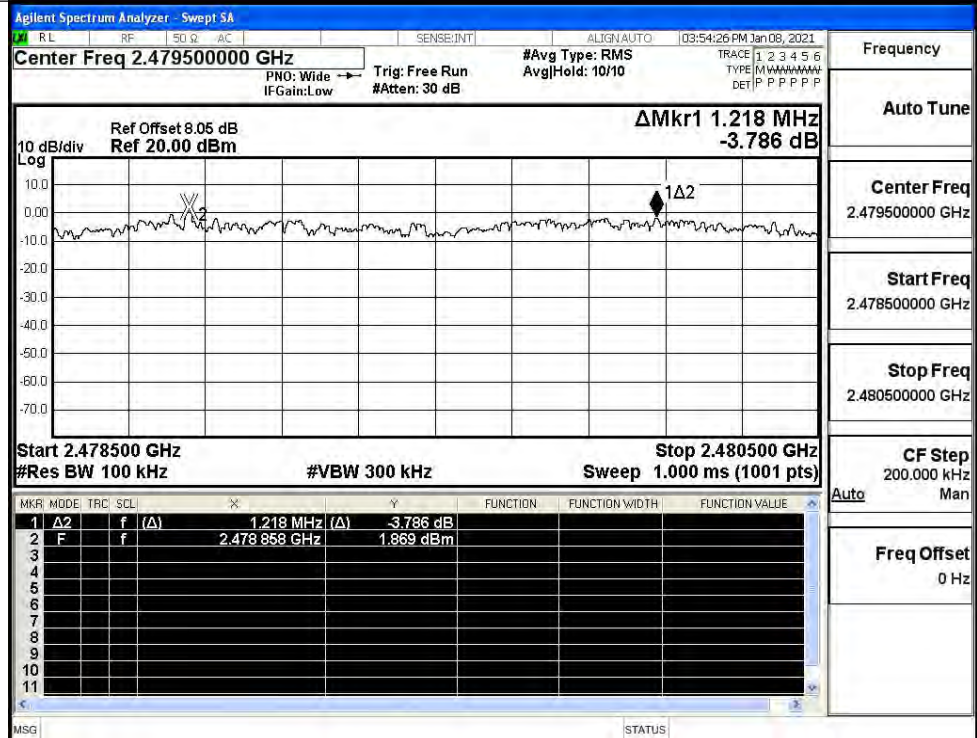
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

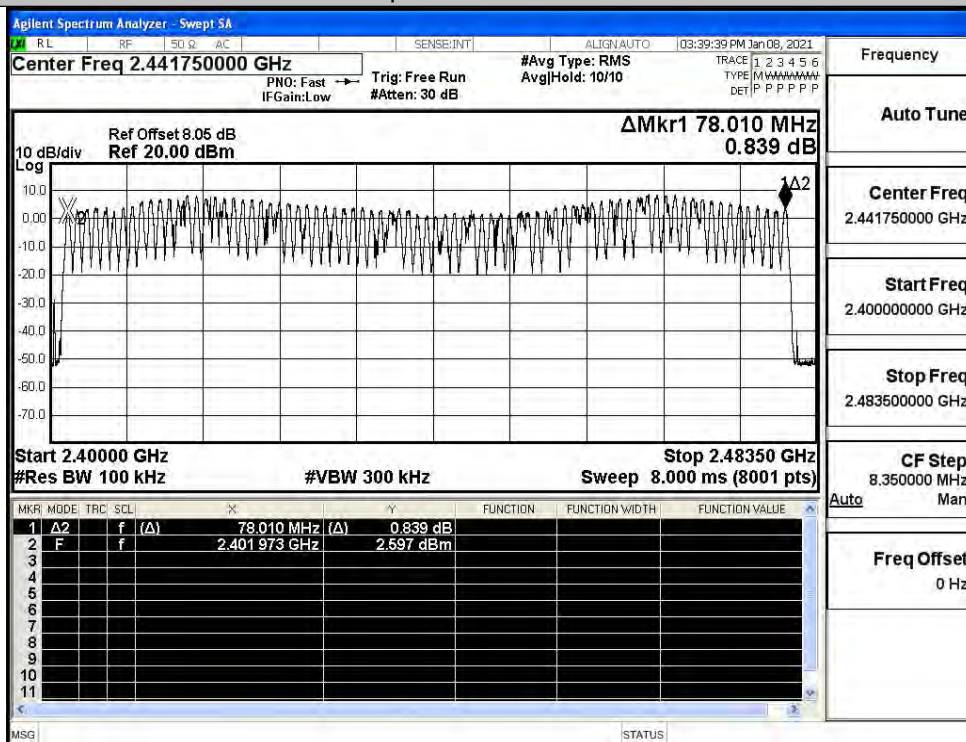
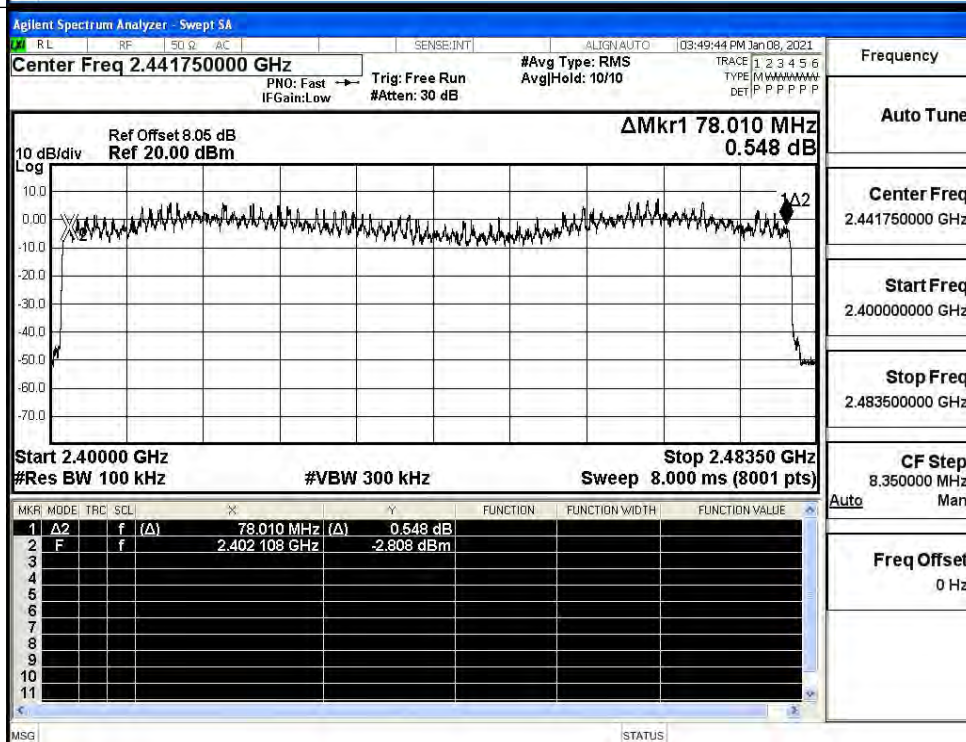


A.4 Hopping Channel Number

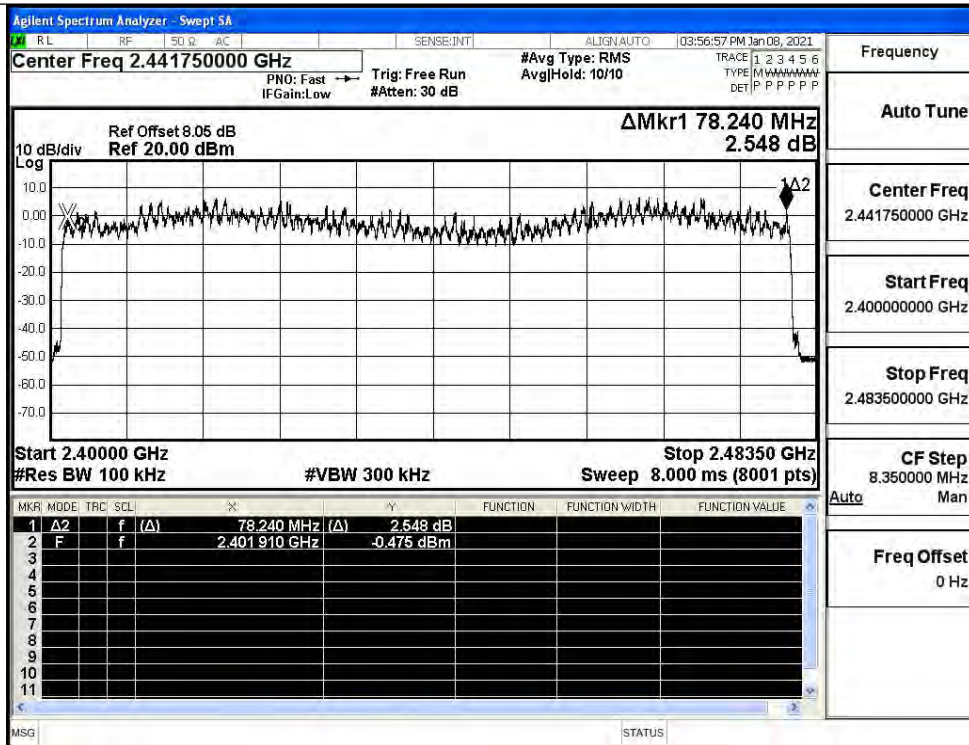
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS
8DPSK	Hop	79	≥ 15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

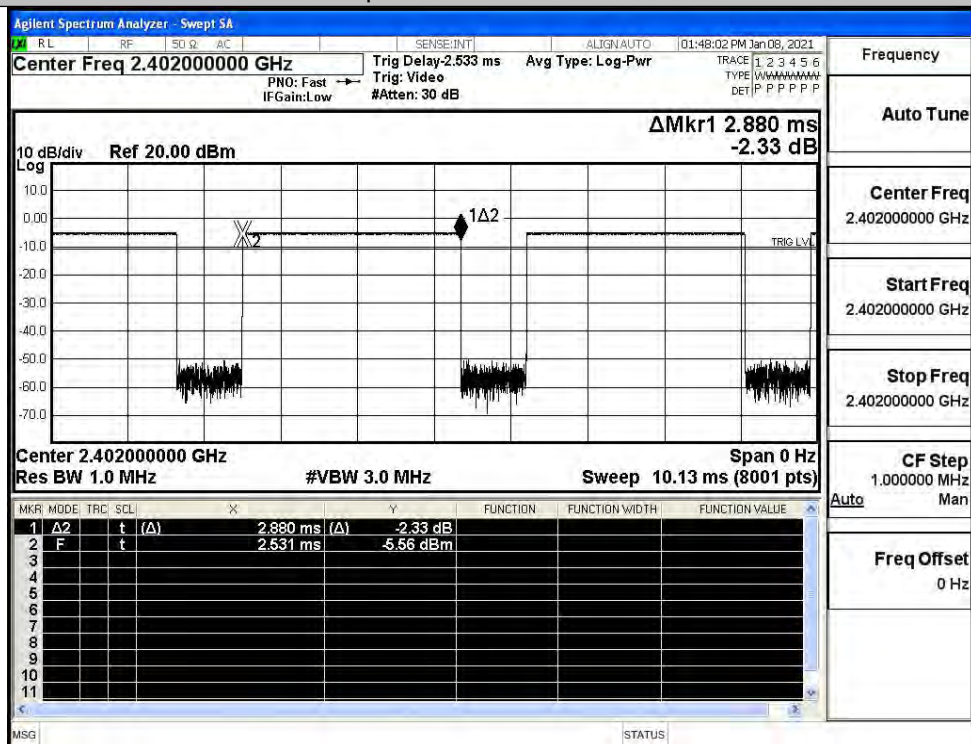


A.5 Dwell Time

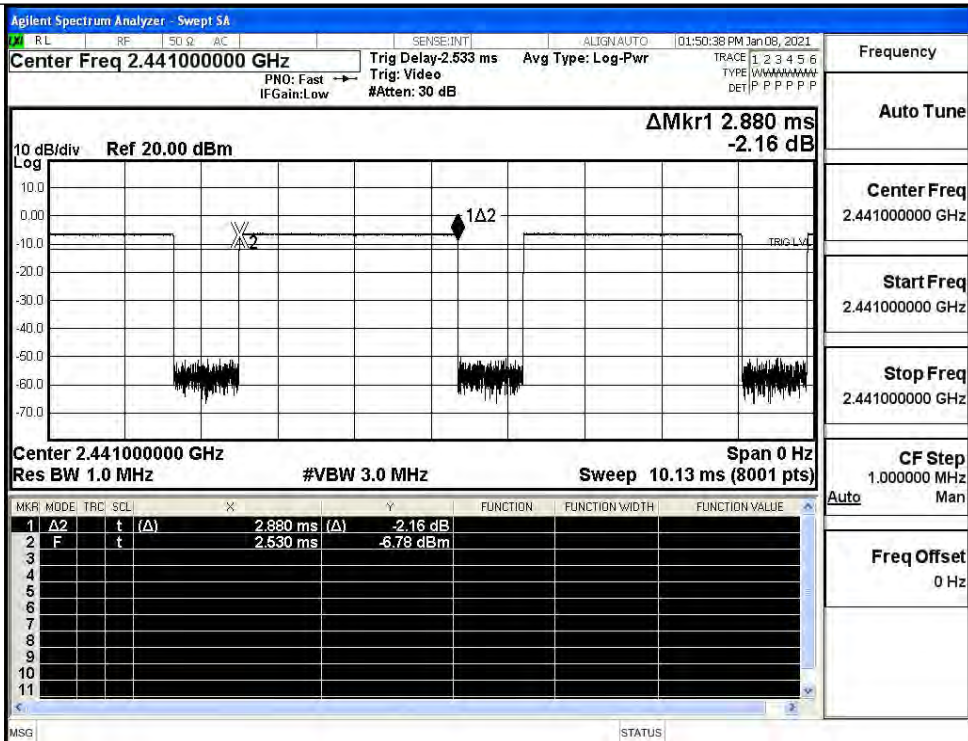
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	1.97	106.7	0.21	0.4	PASS
	3DH5	MCH	1.97	106.7	0.21	0.4	PASS
	3DH5	HCH	1.97	106.7	0.21	0.4	PASS

Test Graphs

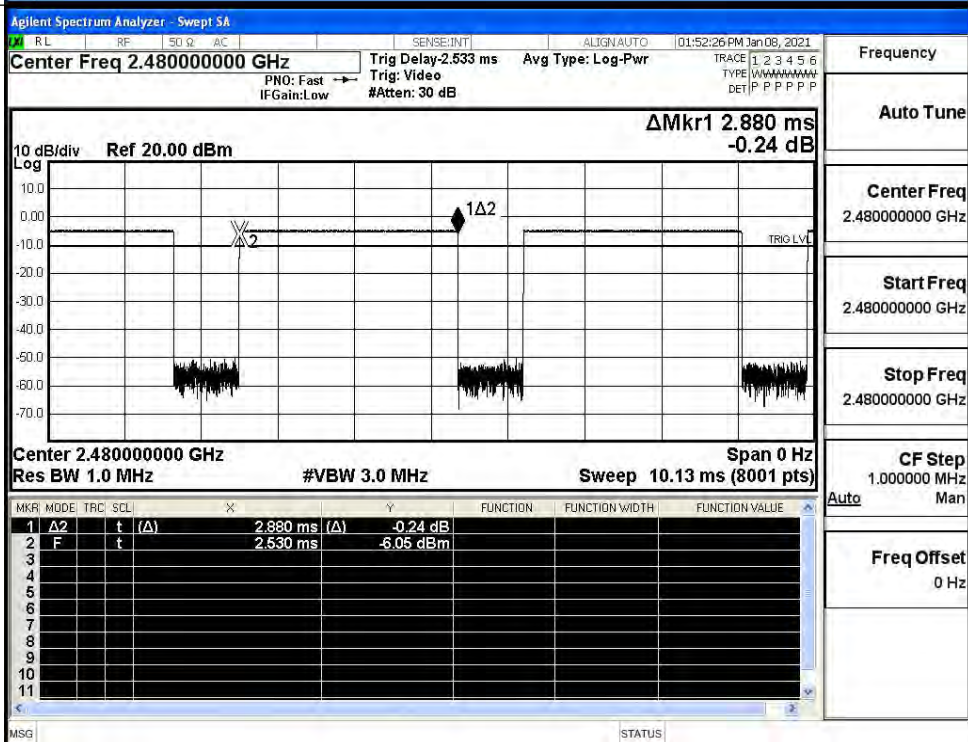
GFSK_DH5/LCH



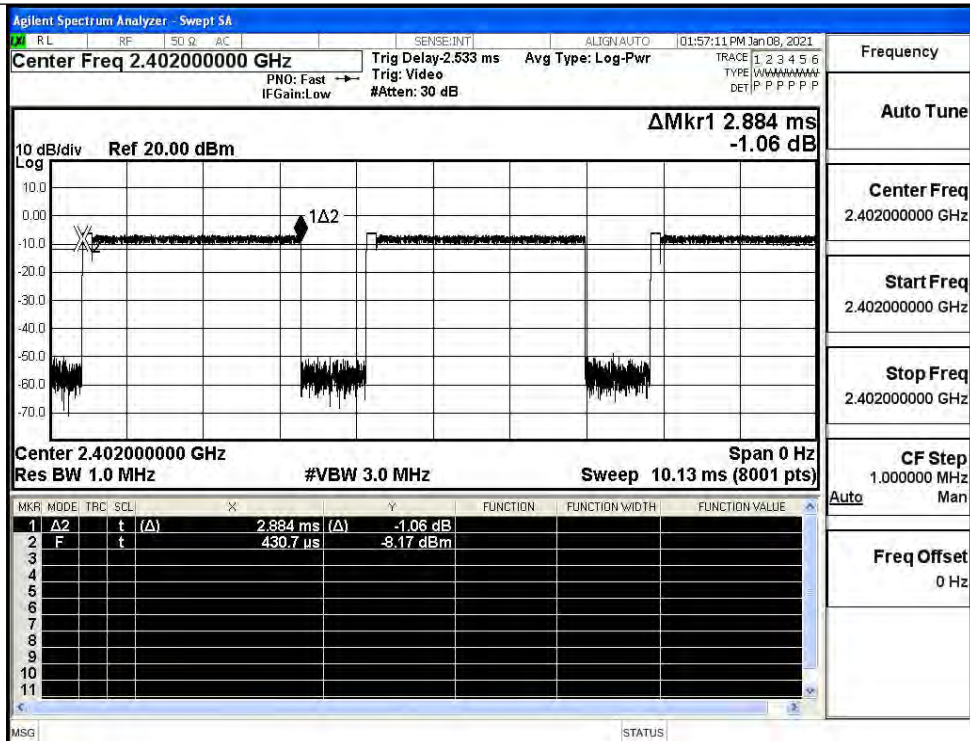
GFSK_DH5/MCH



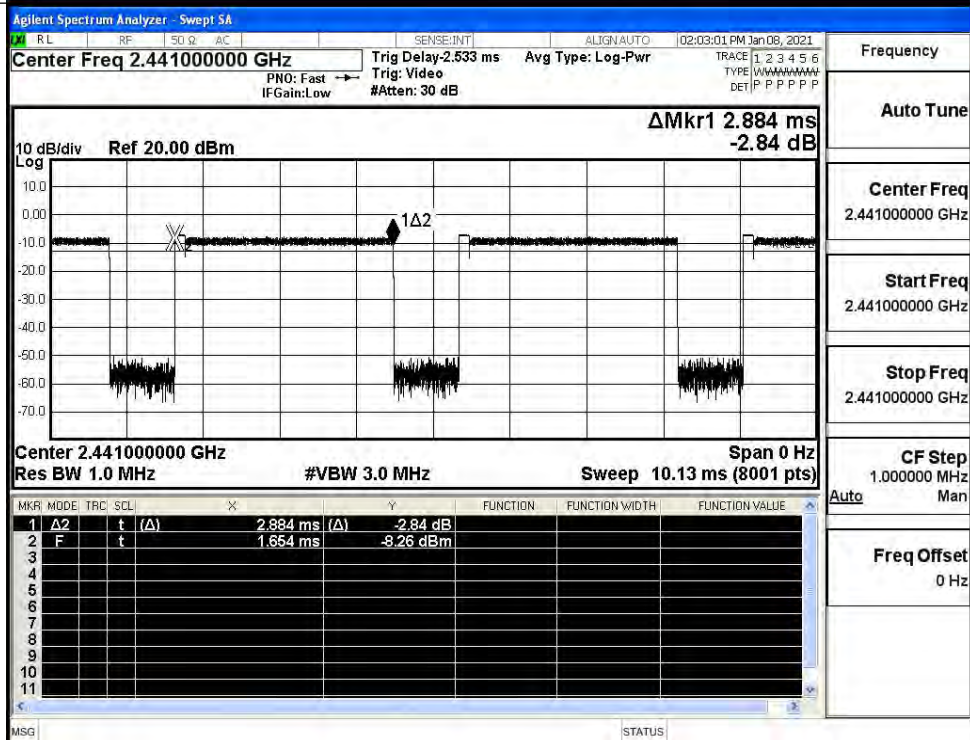
GFSK_DH5/HCH



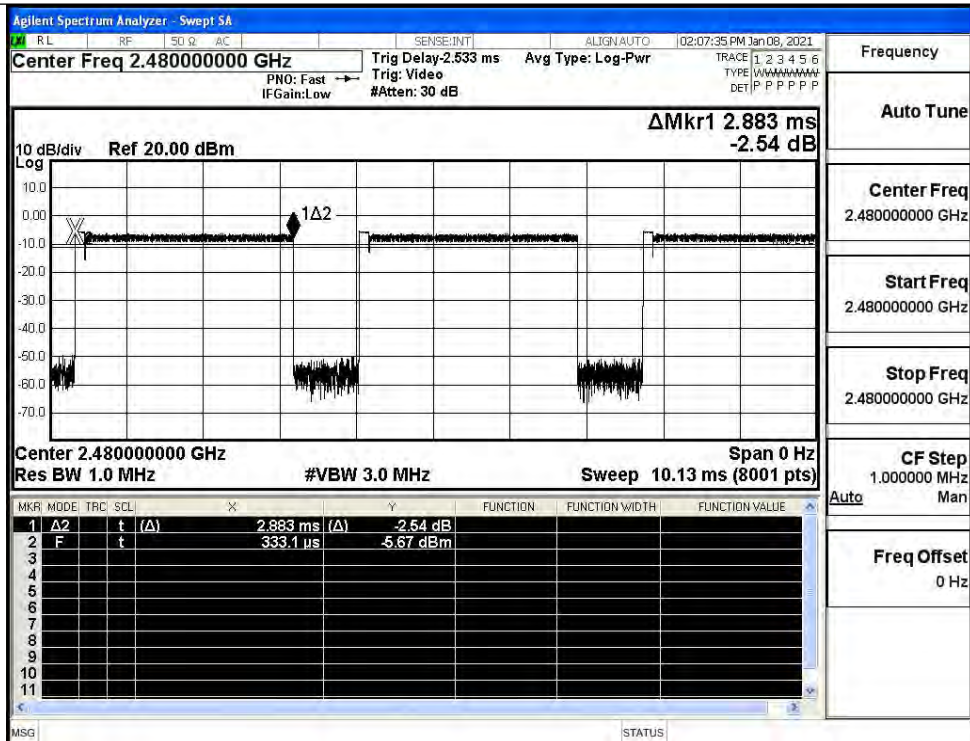
$\pi/4$ DQPSK
_2DH5/LCH



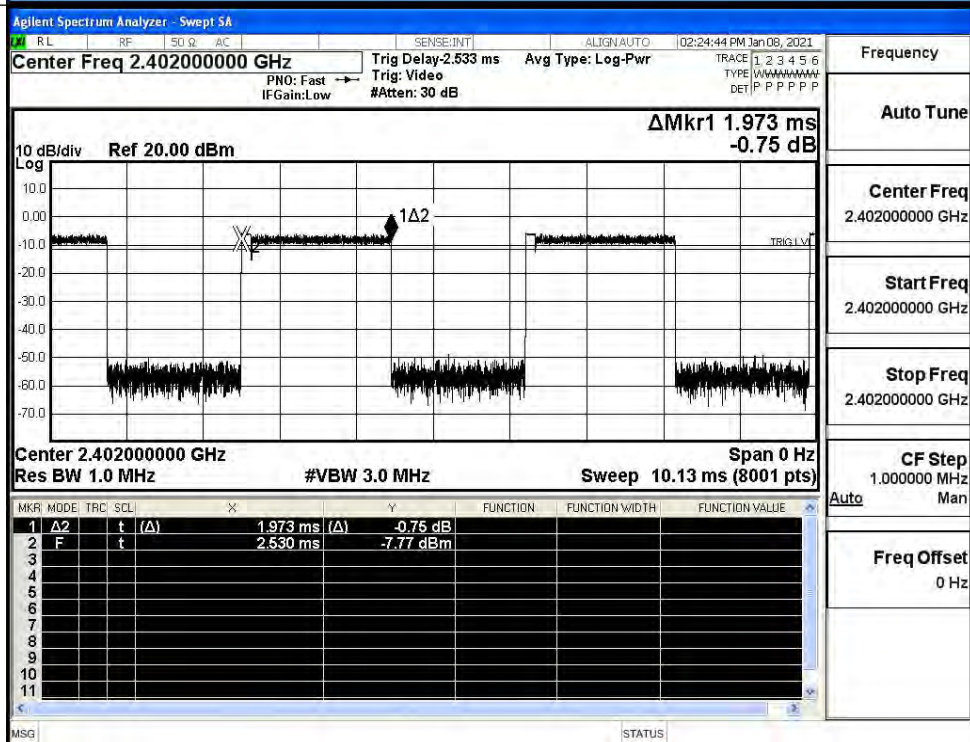
$\pi/4$ DQPSK
_2DH5/MCH



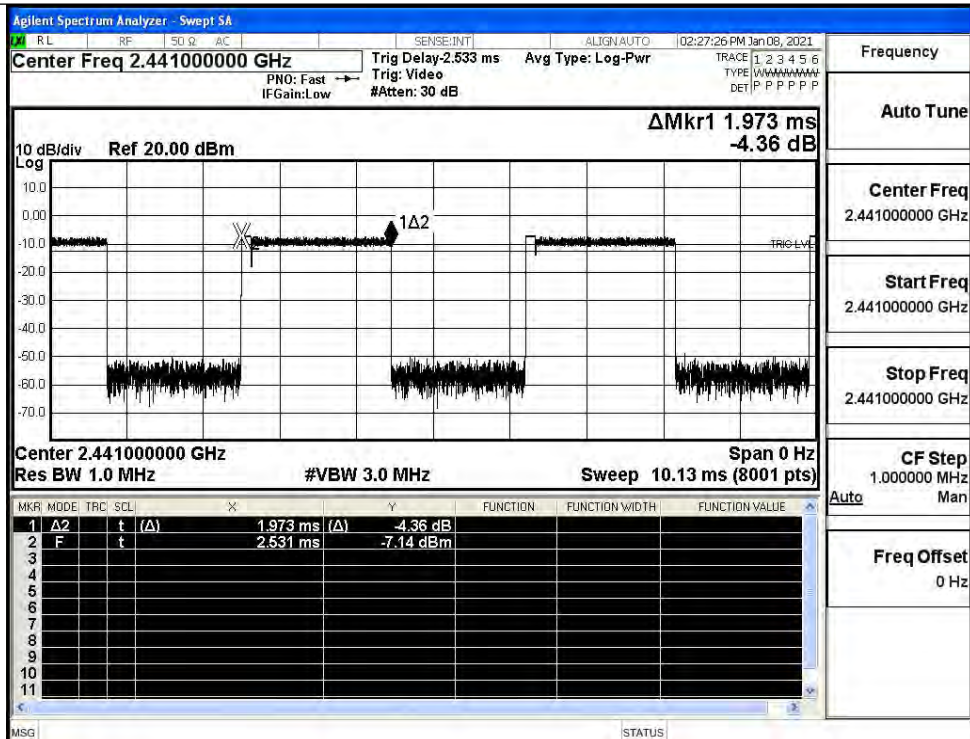
$\pi/4$ DQPSK
_2DH5/HCH



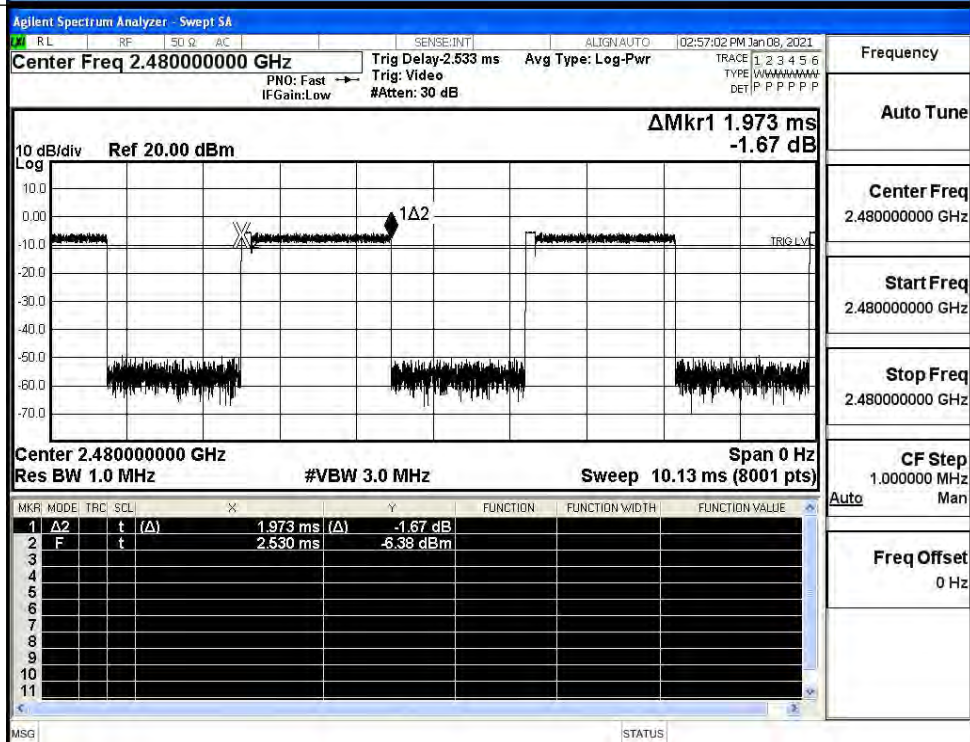
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

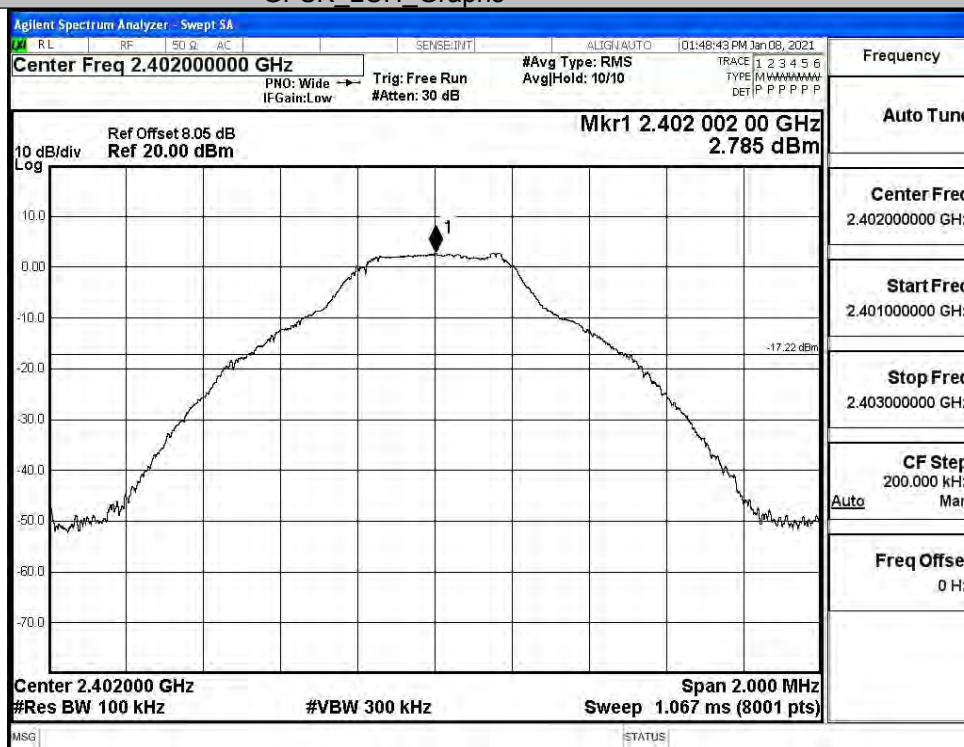


A.6 RF Conducted Spurious Emissions

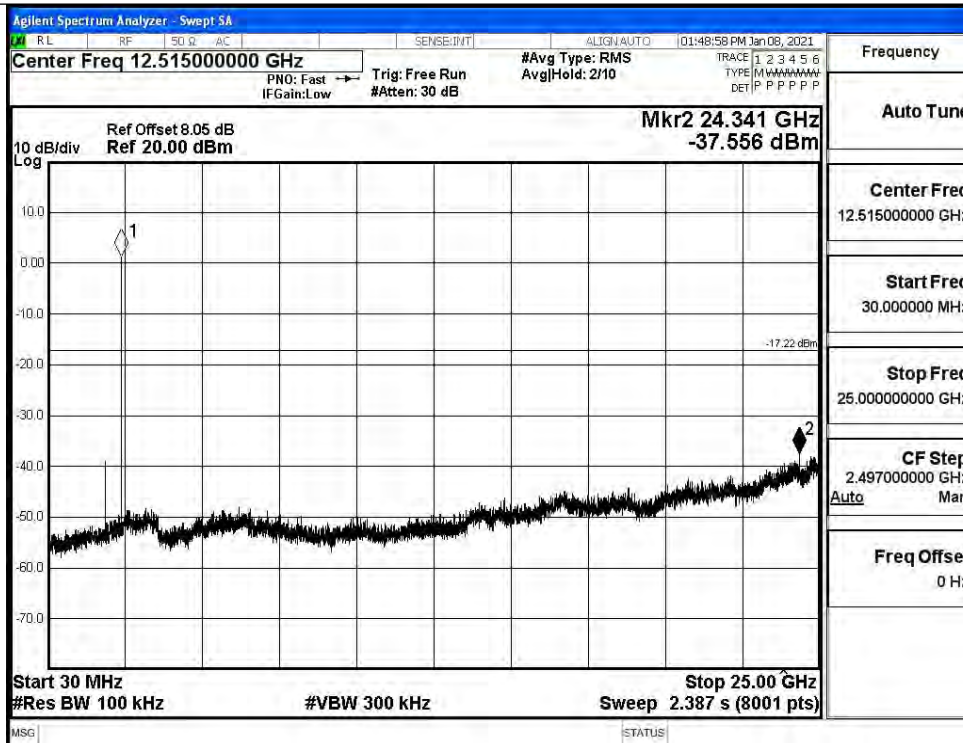
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.785	-37.556	-17.215	PASS
	MCH	1.452	-36.735	-18.548	PASS
	HCH	2.813	-37.132	-17.187	PASS
$\pi/4$ DQPSK	LCH	1.637	-37.544	-18.363	PASS
	MCH	0.687	-37.703	-19.313	PASS
	HCH	2.111	-37.607	-17.889	PASS
8DPSK	LCH	2.105	-37.393	-17.895	PASS
	MCH	0.759	-36.912	-19.241	PASS
	HCH	2.243	-37.311	-17.757	PASS

GFSK LCH Graphs

Pref

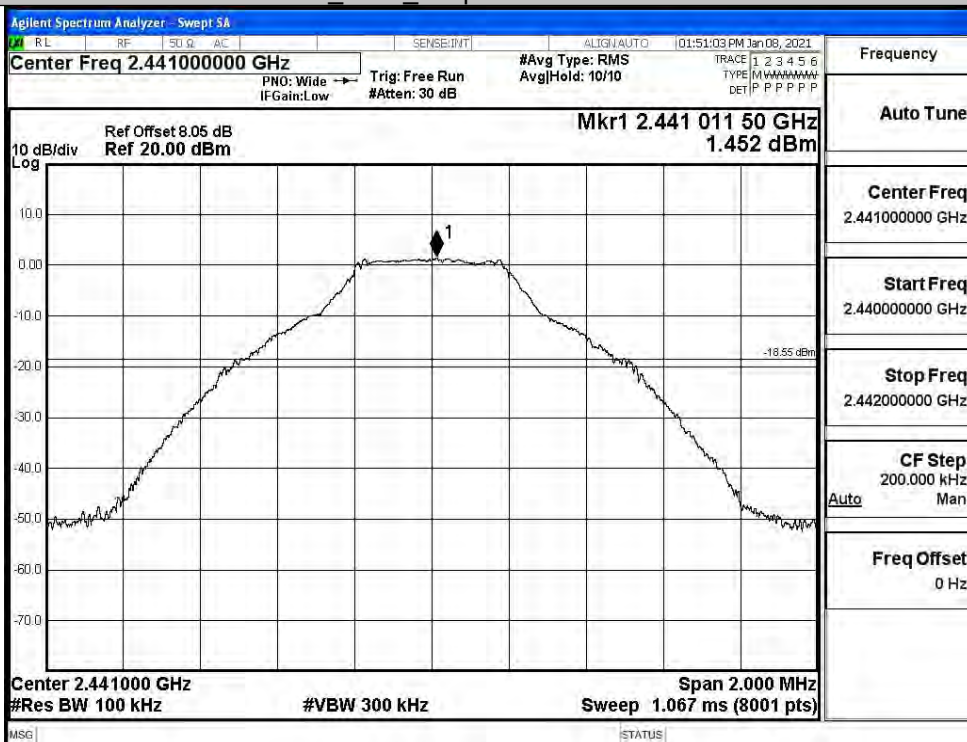


Puw

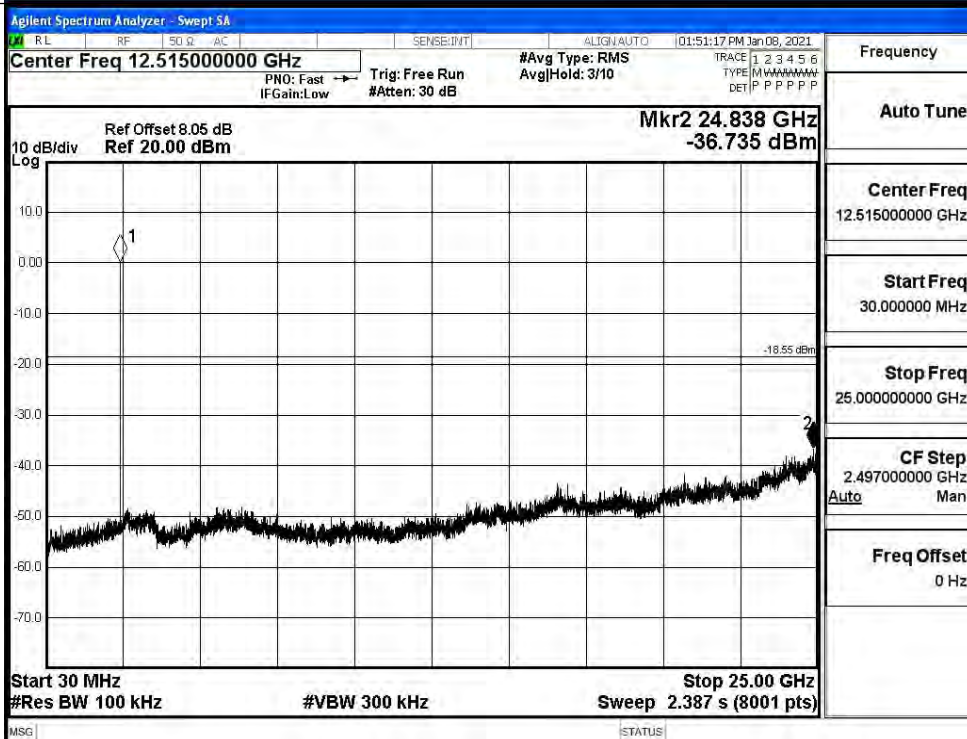


GFSK_MCH_Graphs

Pref

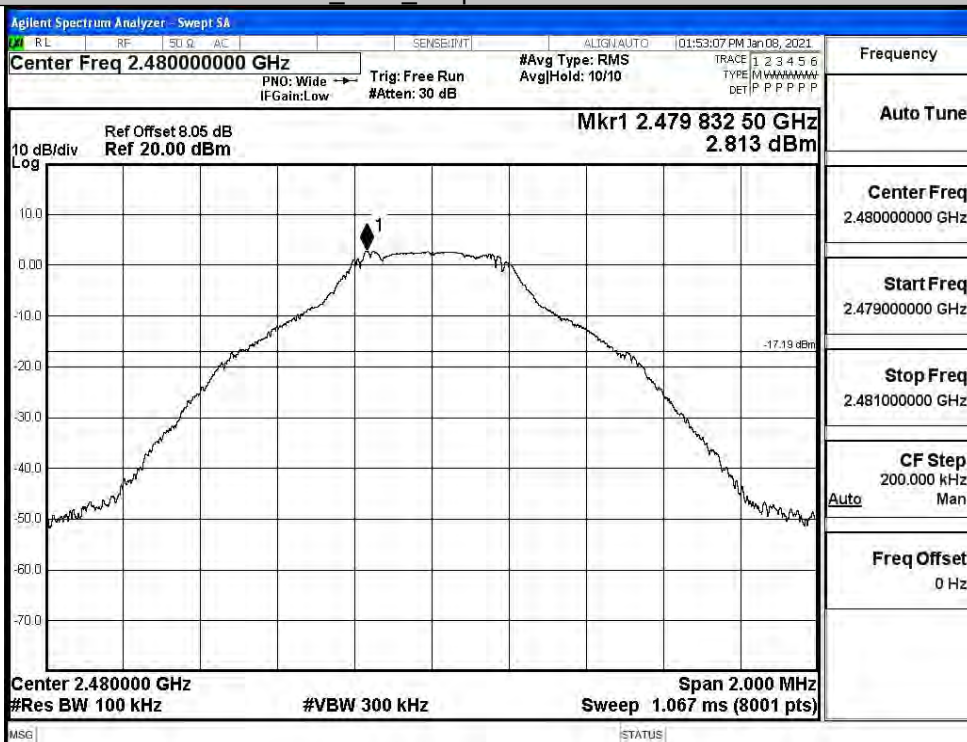


Puw

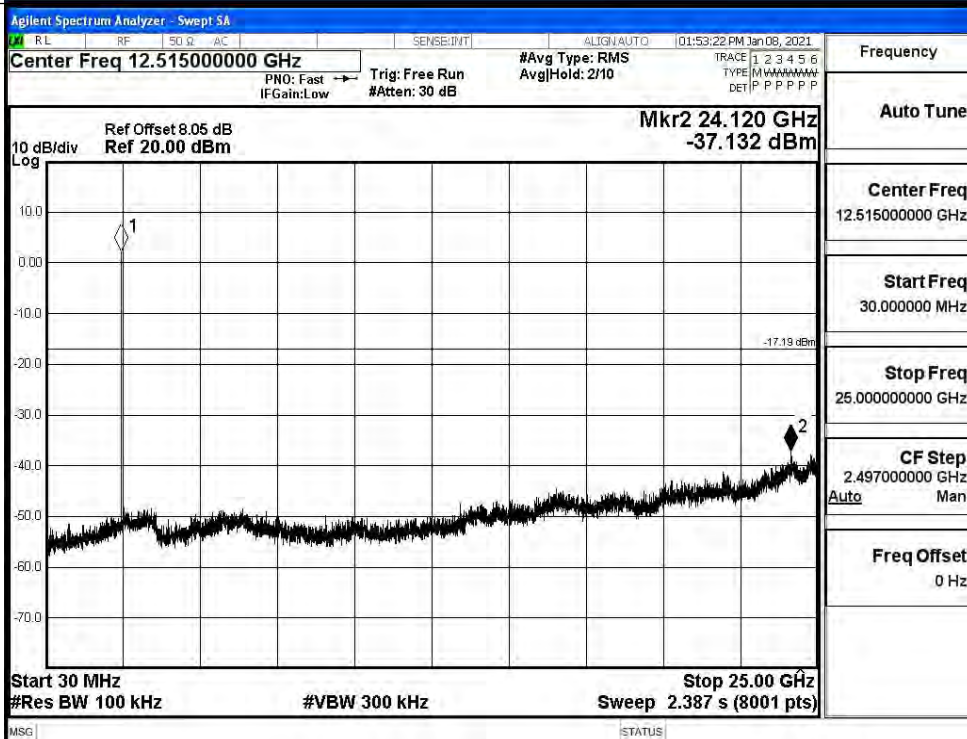


GFSK_HCH_Graphs

Pref

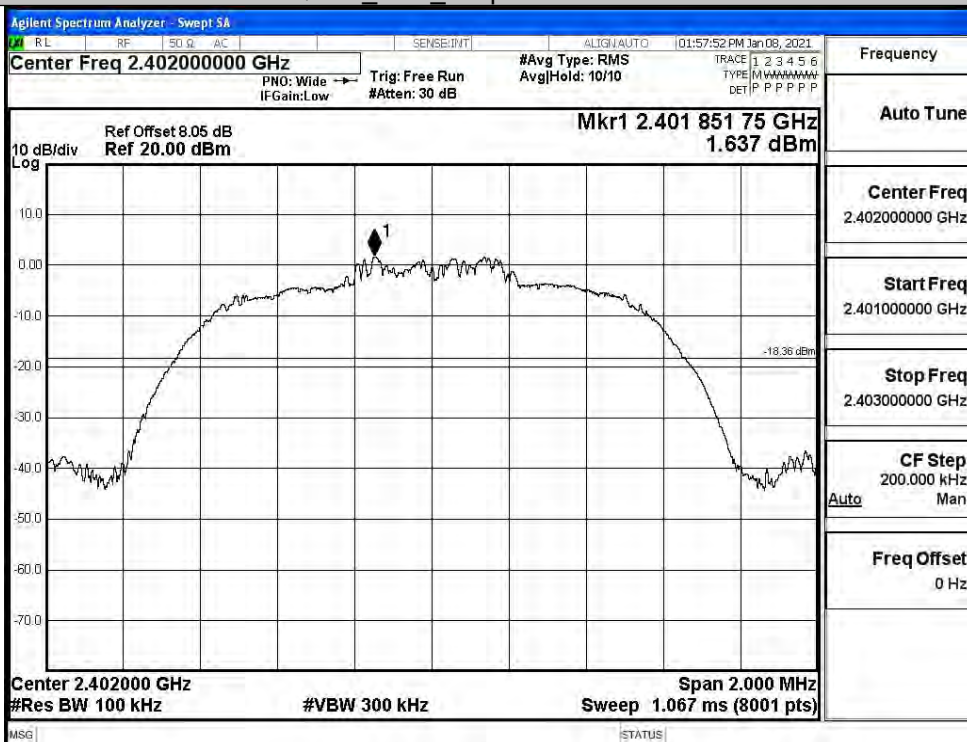


Puw

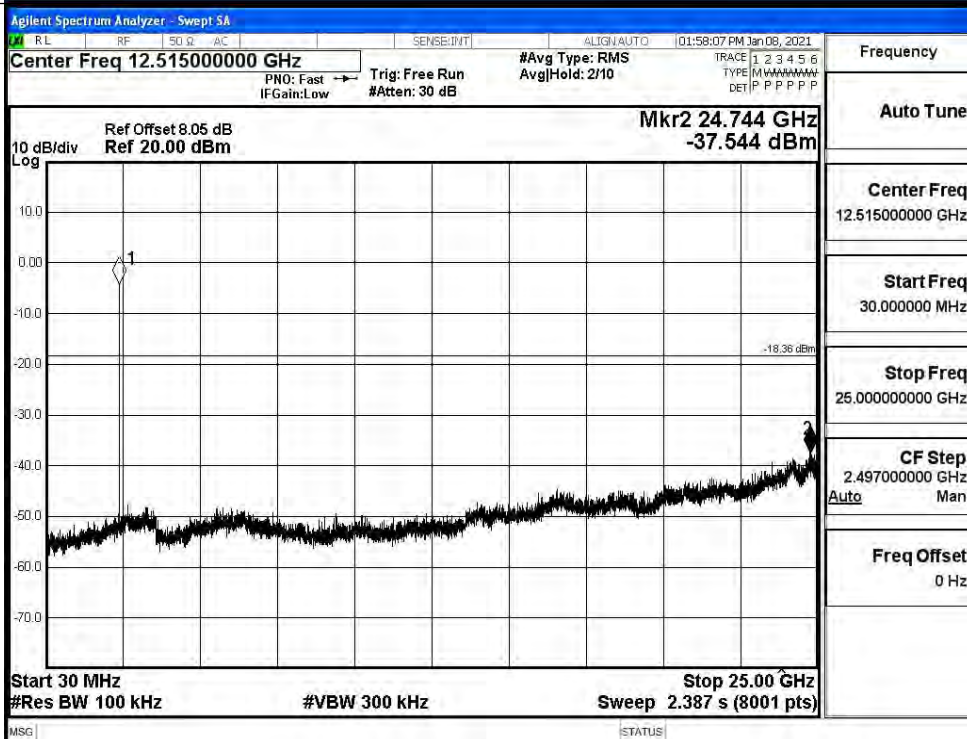


$\pi/4$ DQPSK_LCH_Graphs

Pref

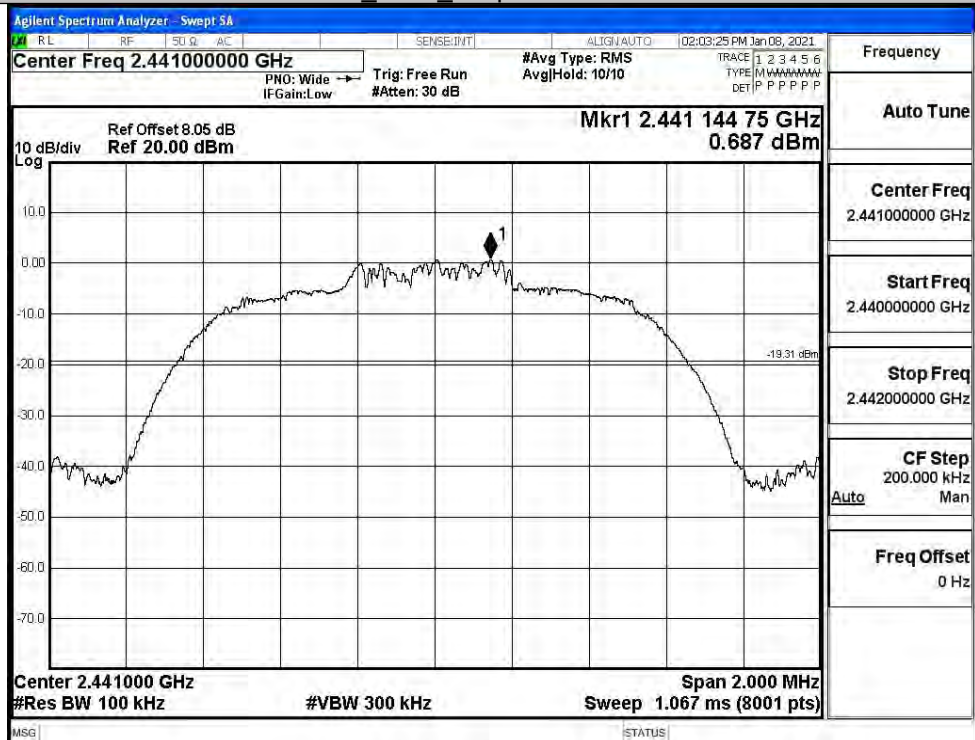


Puw

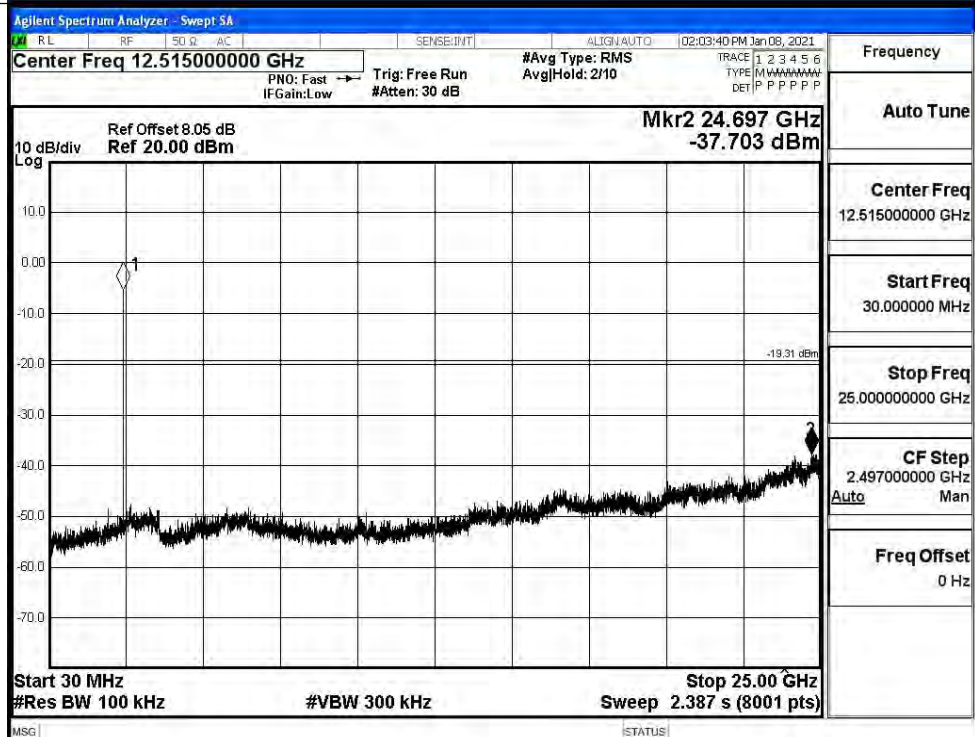


$\pi/4$ DQPSK_MCH_Graphs

Pref

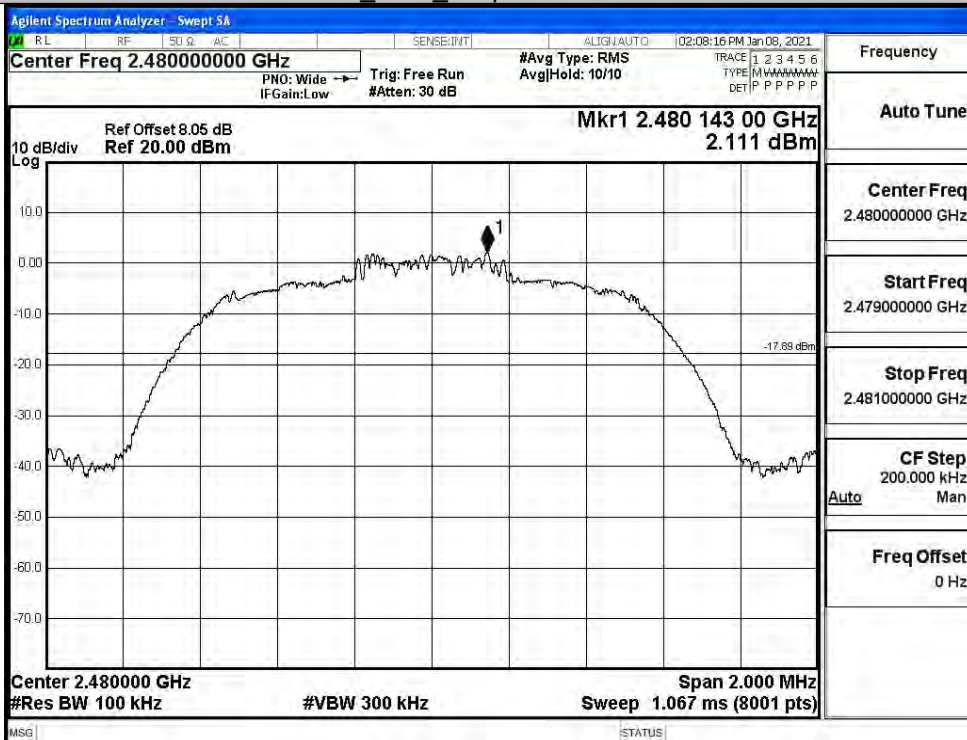


Puw

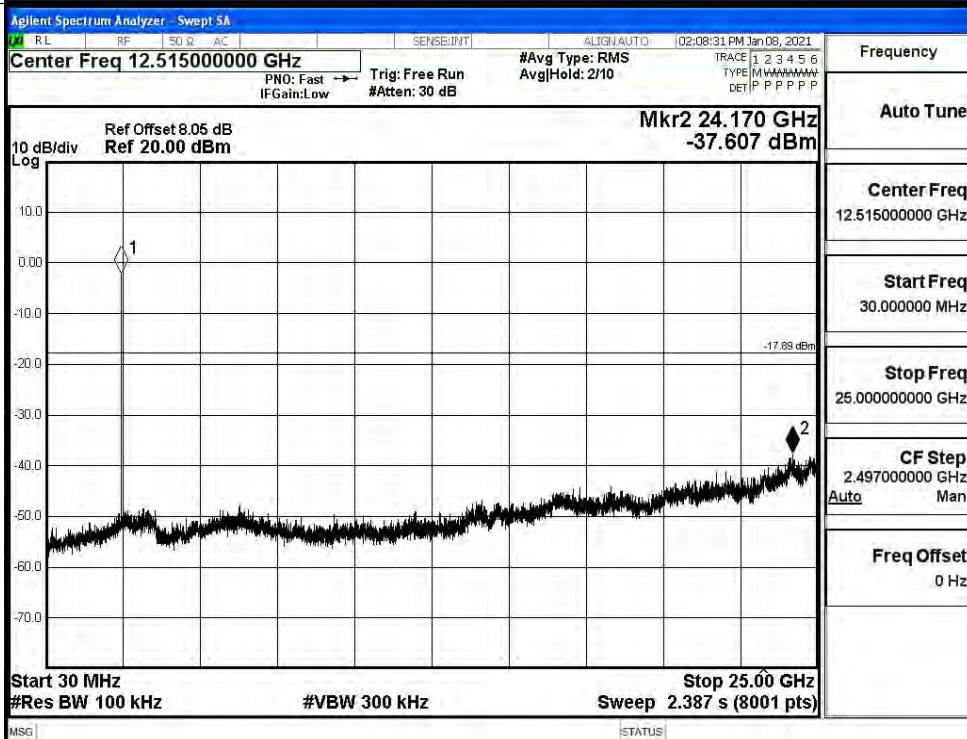


$\pi/4$ DQPSK_HCH_Graphs

Pref

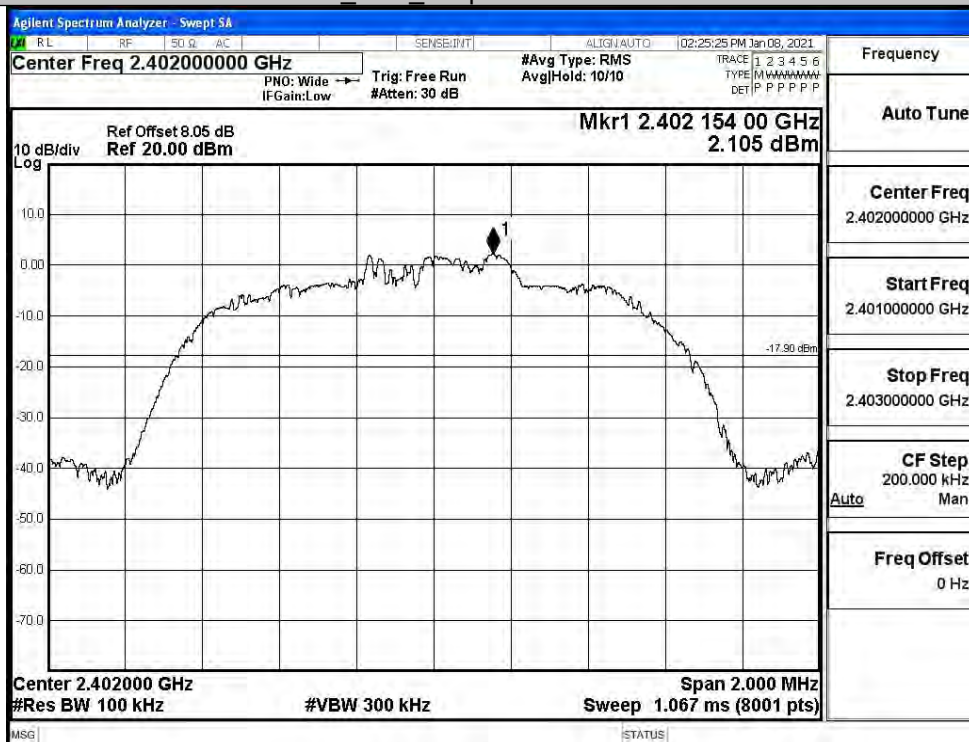


Puw

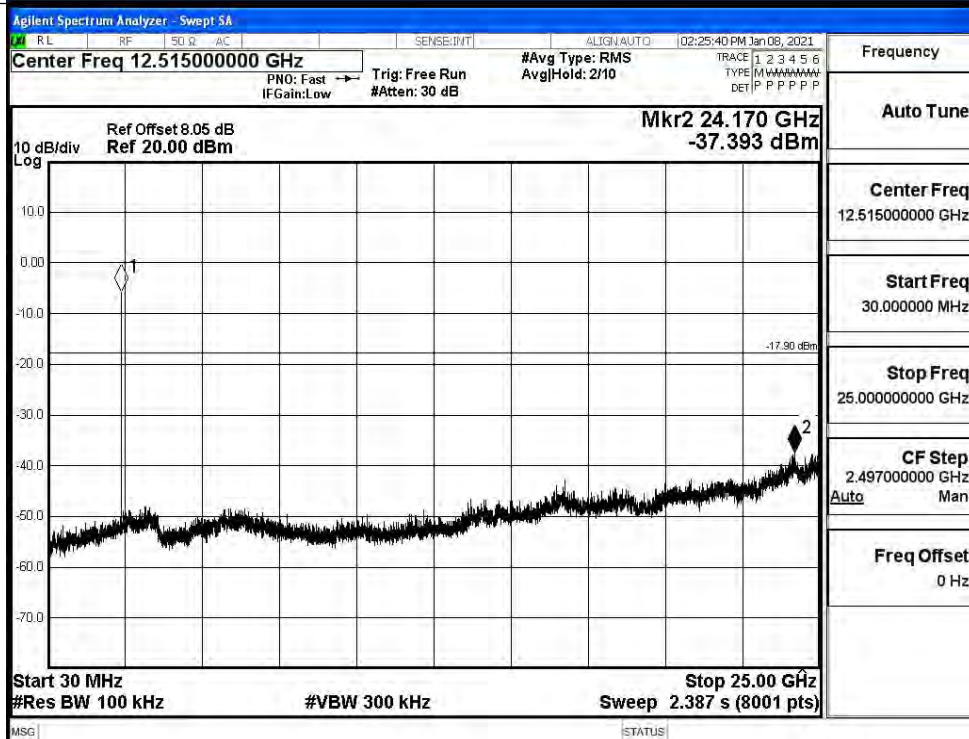


8DPSK_LCH_Graphs

Pref

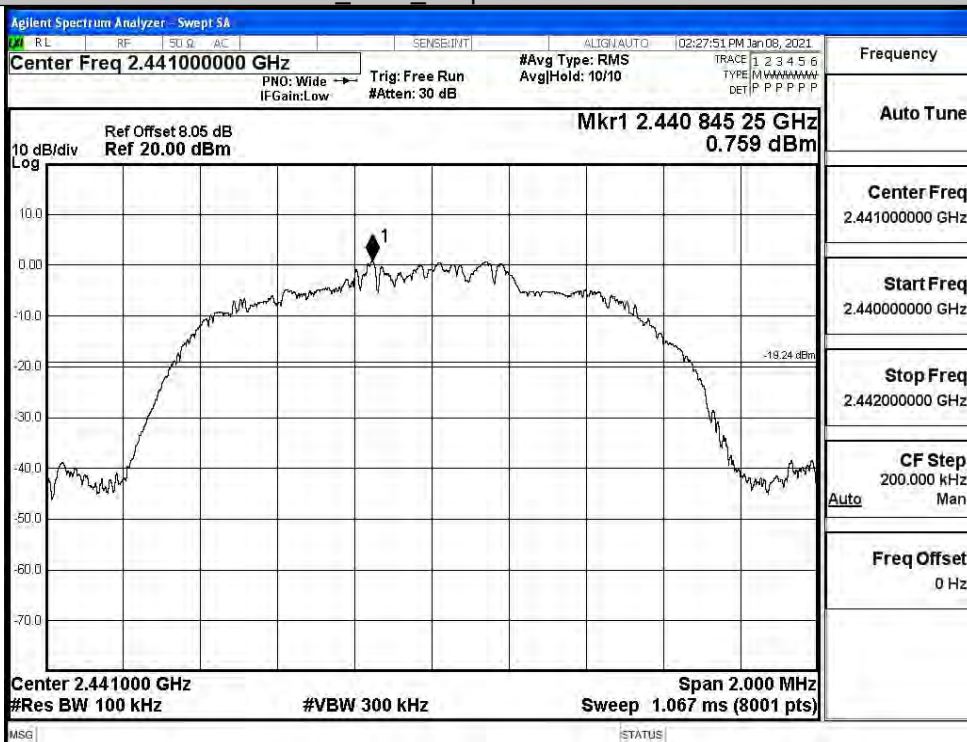


Puw

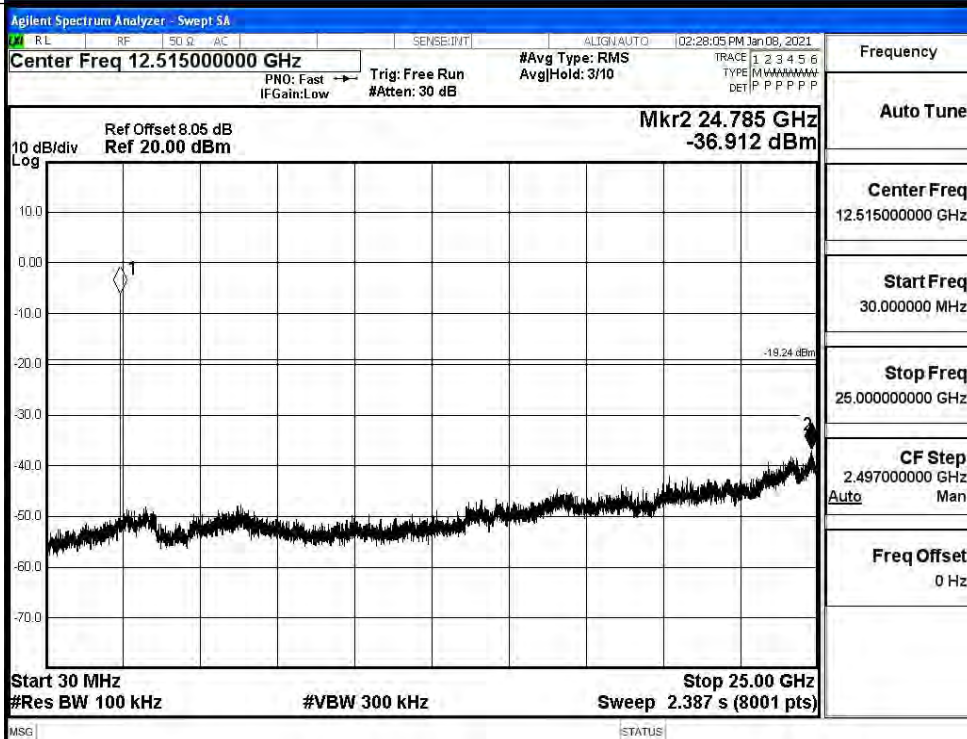


8DPSK_MCH_Graphs

Pref

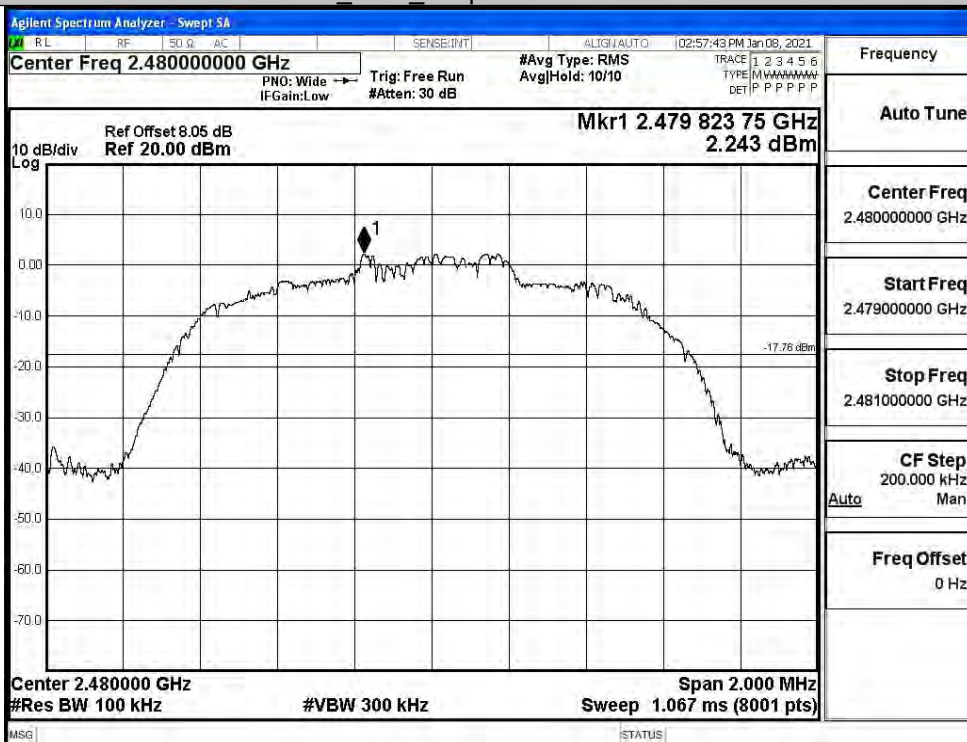


Puw

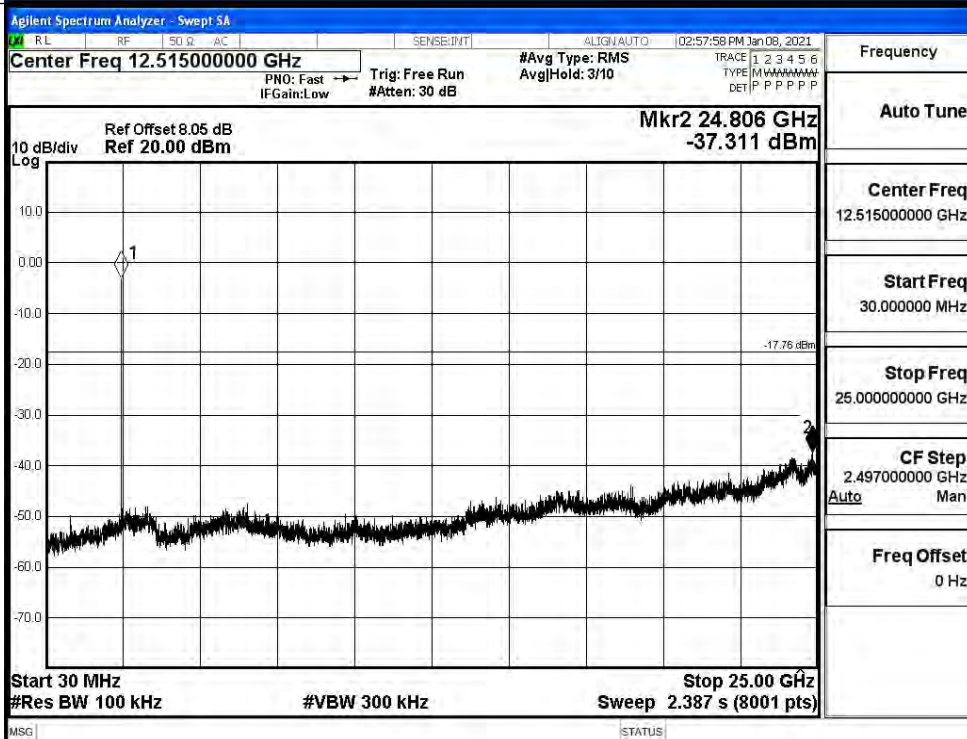


8DPSK_HCH_Graphs

Pref



Puw

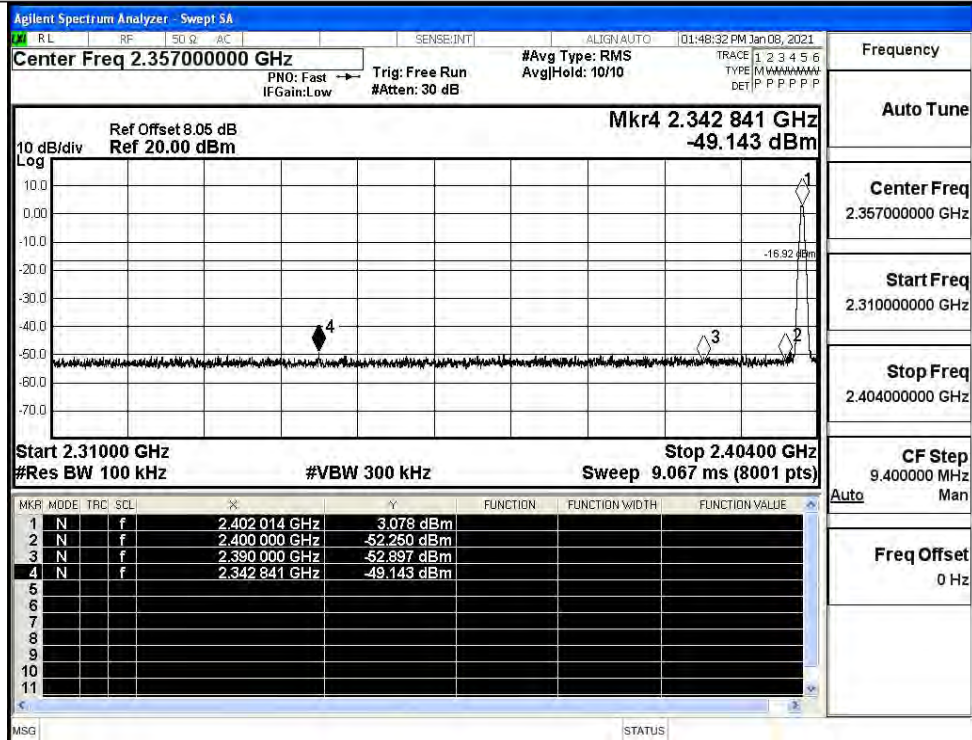


A.7 Band-edge for RF Conducted Emissions

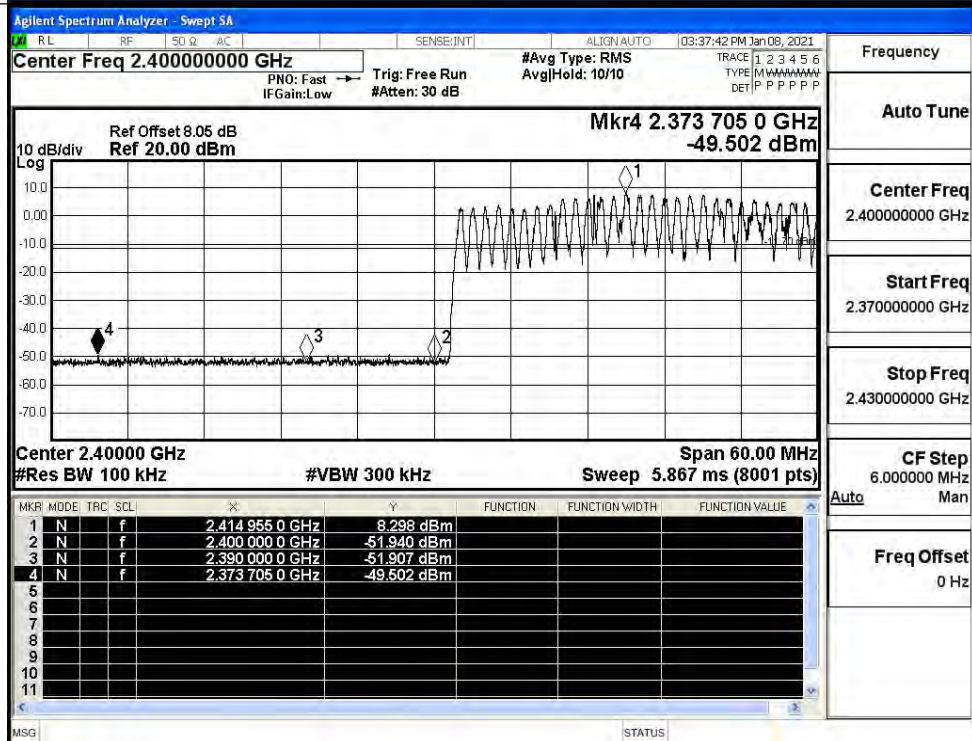
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	3.078	Off	-49.143	-16.92	PASS
			8.298	On	-49.502	-11.7	PASS
	HCH	2480	3.359	Off	-48.635	-16.64	PASS
			8.565	On	-48.466	-11.44	PASS
$\pi/4$ DQPSK	LCH	2402	1.663	Off	-49.769	-18.34	PASS
			7.105	On	-49.390	-12.9	PASS
	HCH	2480	2.546	Off	-49.521	-17.45	PASS
			7.707	On	-48.421	-12.29	PASS
8DPSK	LCH	2402	1.979	Off	-49.887	-18.02	PASS
			6.816	On	-49.174	-13.18	PASS
	HCH	2480	2.507	Off	-48.819	-17.49	PASS
			7.464	On	-48.671	-12.54	PASS

Test Graphs

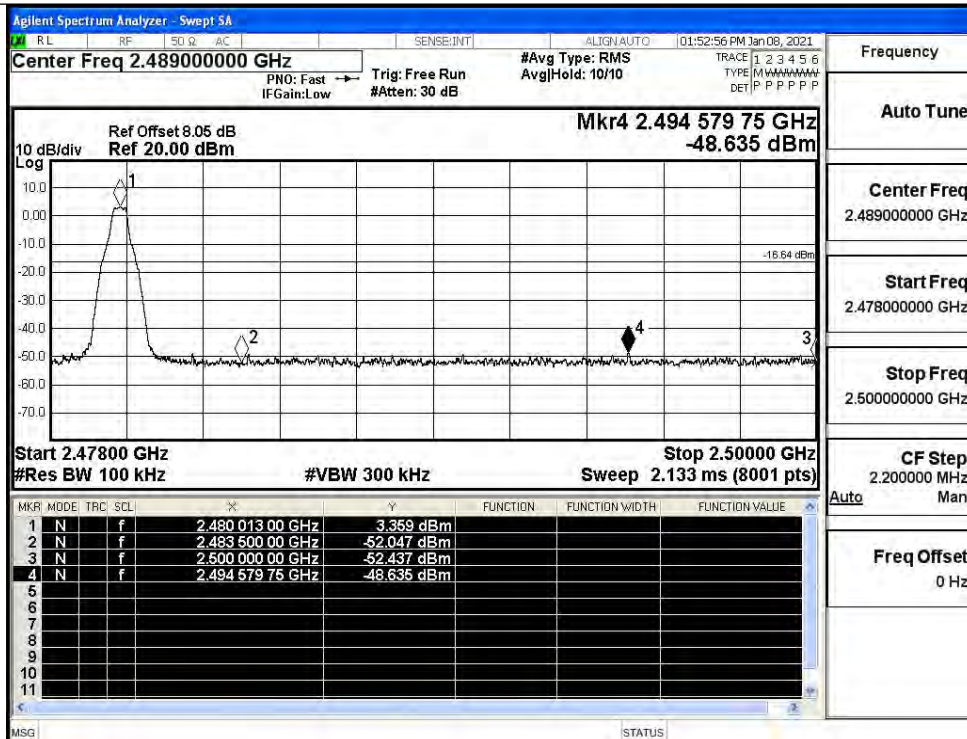
GFSK/LCH/No Hop



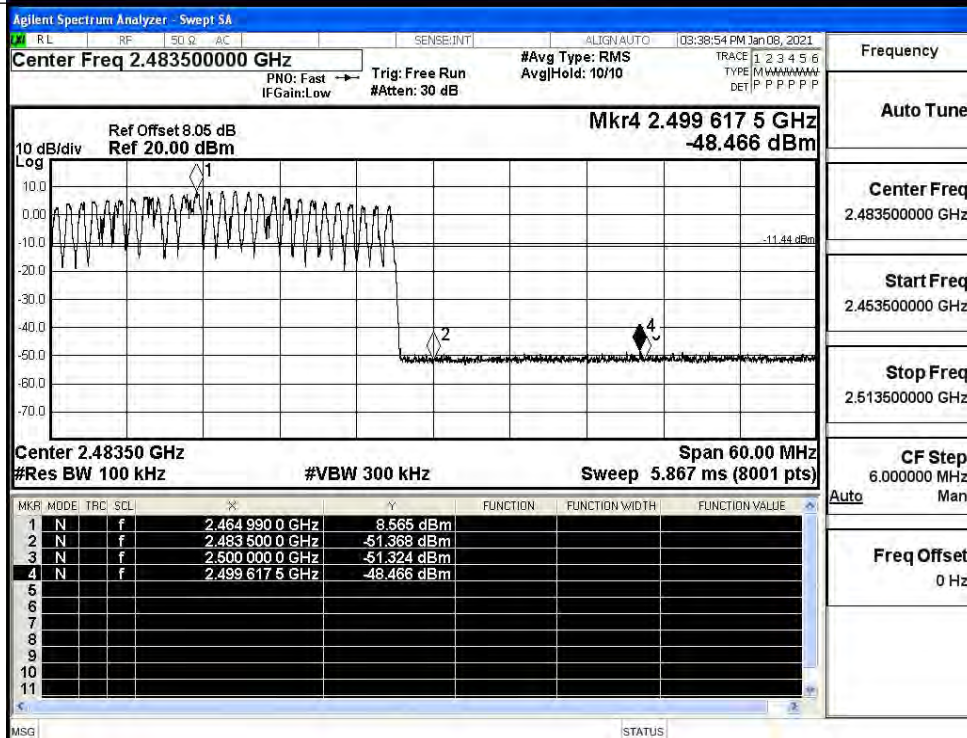
GFSK/LCH/Hop



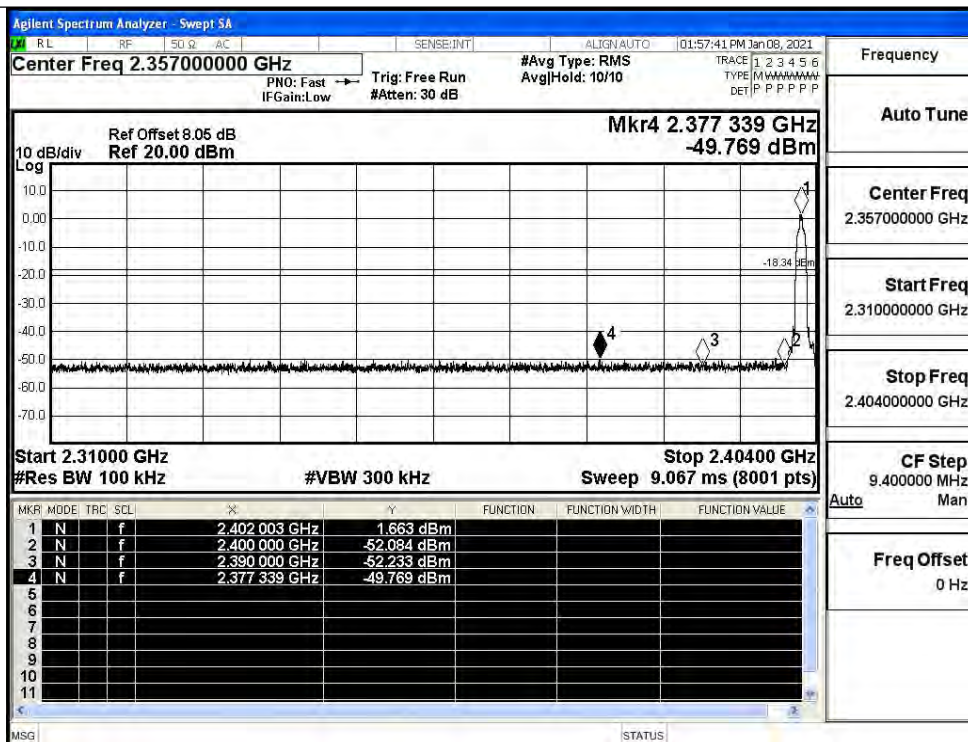
GFSK/HCH/No Hop



GFSK/HCH/Hop



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



Frequency

Auto Tune

Center Freq
2.357000000 GHz

Start Freq
2.310000000 GHz

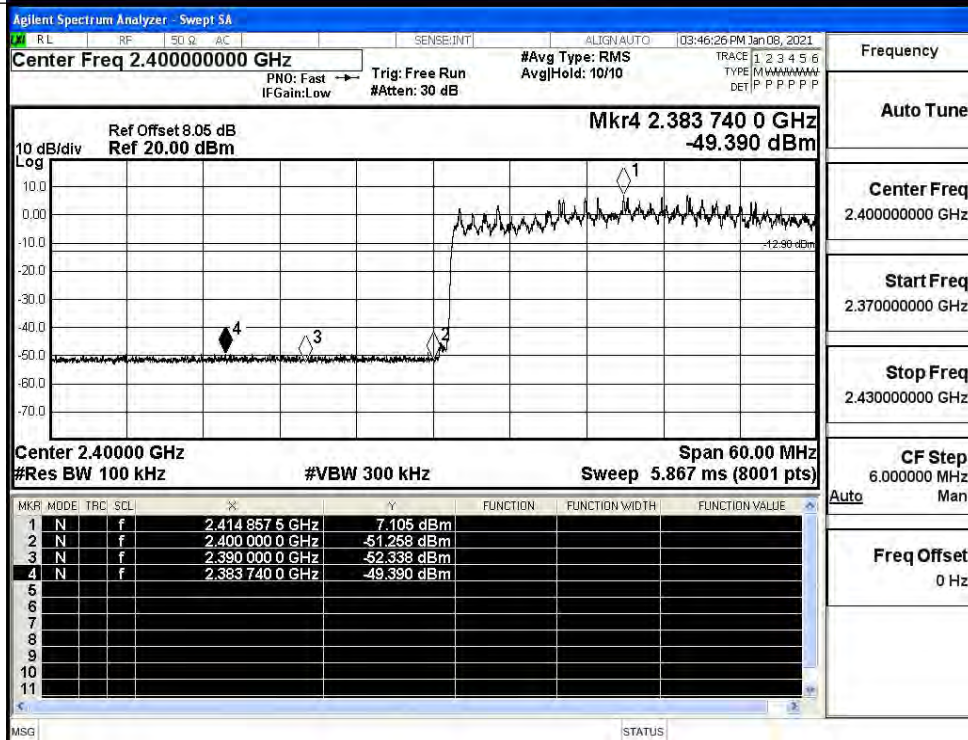
Stop Freq
2.404000000 GHz

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

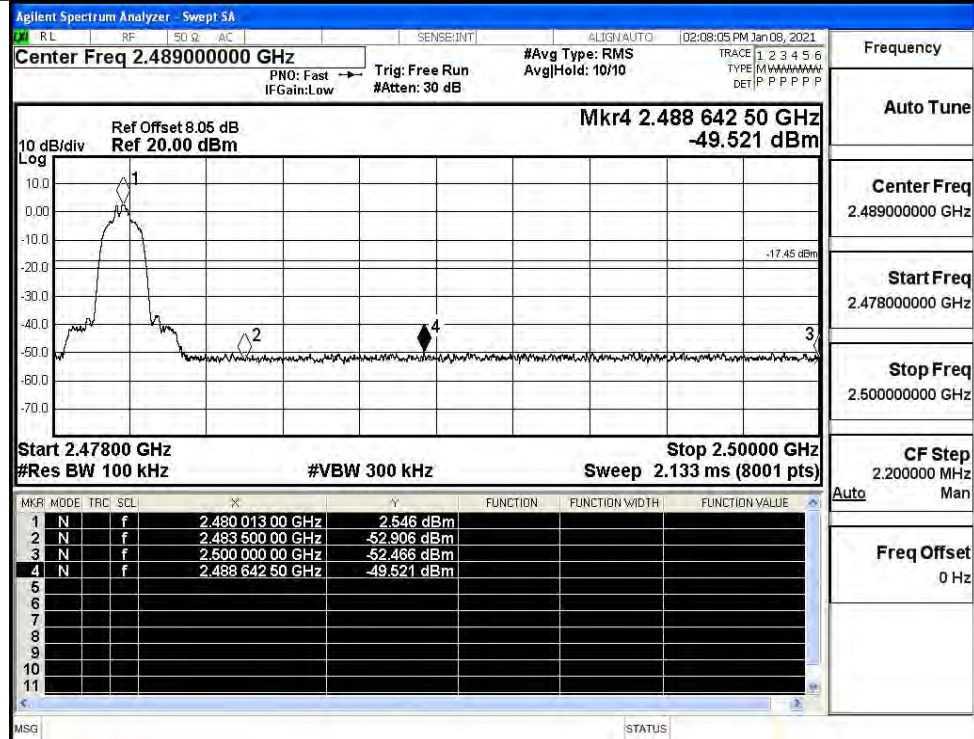
Stop Freq
2.430000000 GHz

CF Step
6.000000 MHz

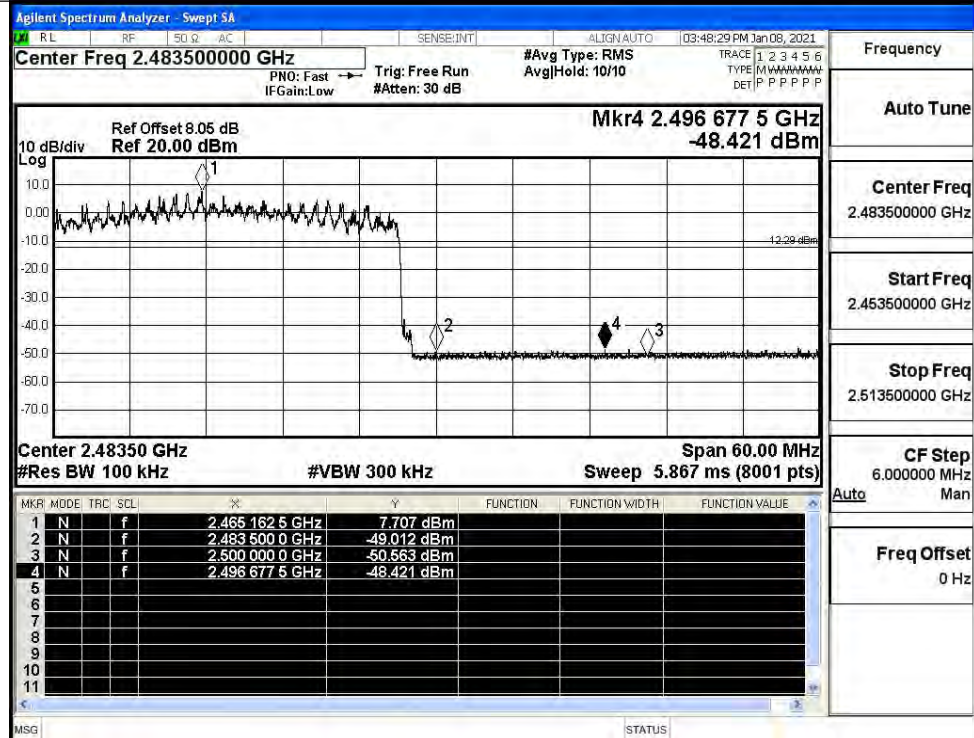
Auto Man

Freq Offset
0 Hz

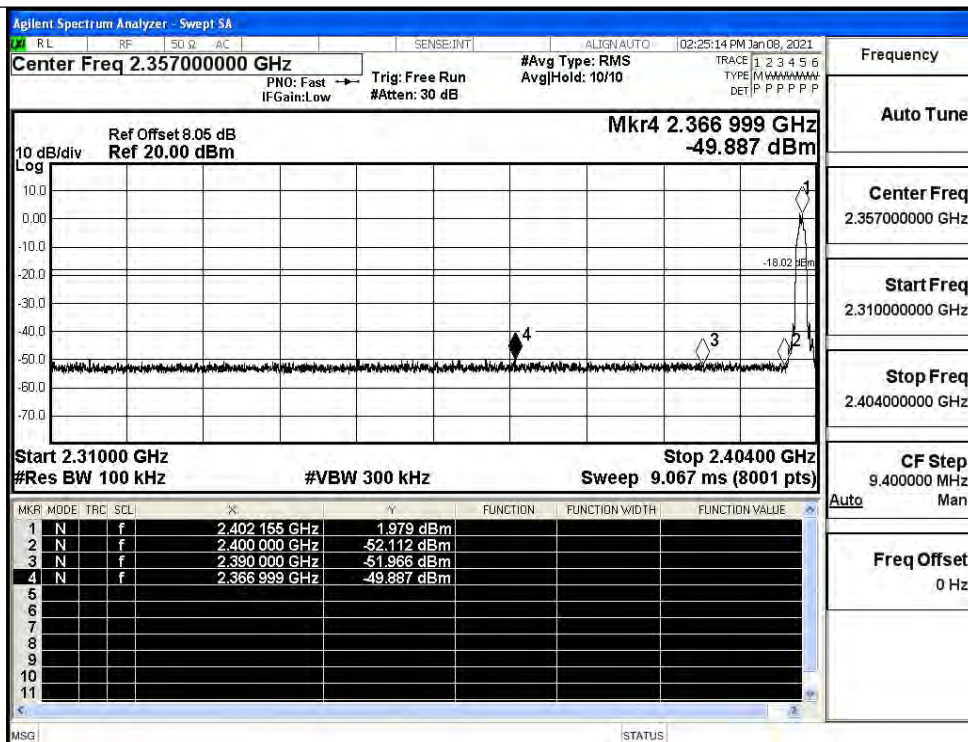
$\pi/4$ DQPSK/HCH/No
Hop



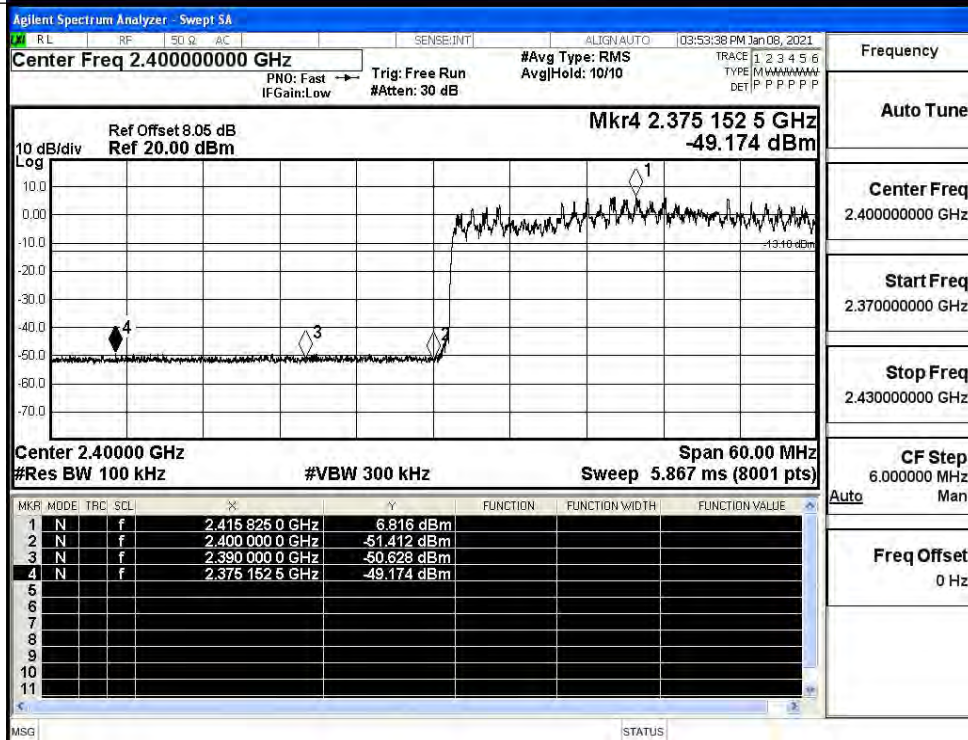
$\pi/4$ DQPSK/HCH/Hop



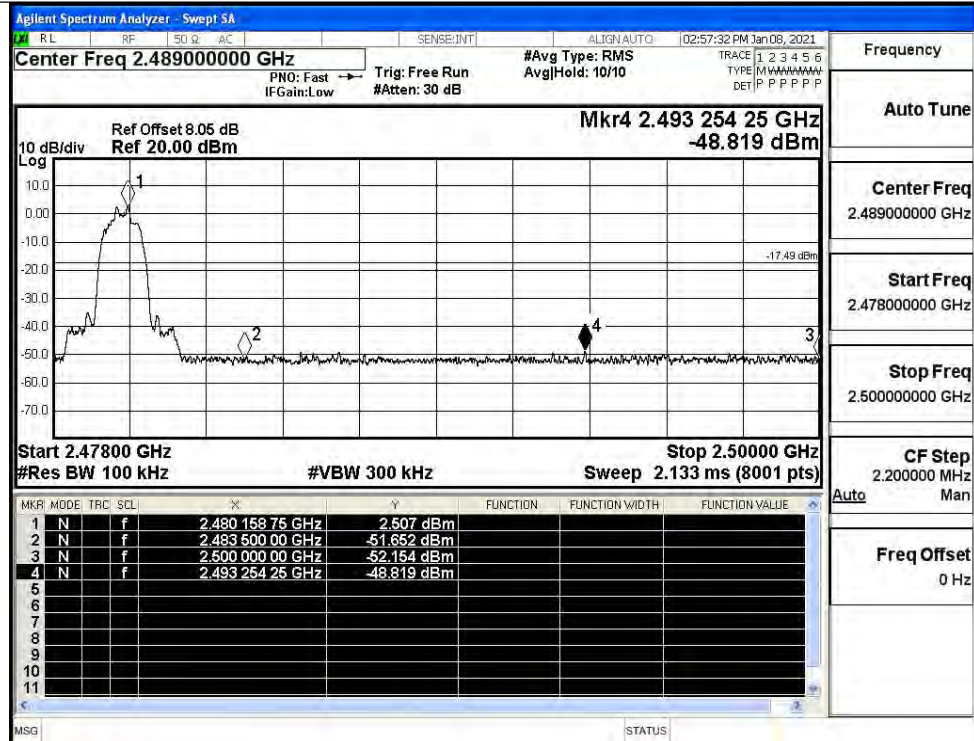
8DPSK/LCH/No Hop



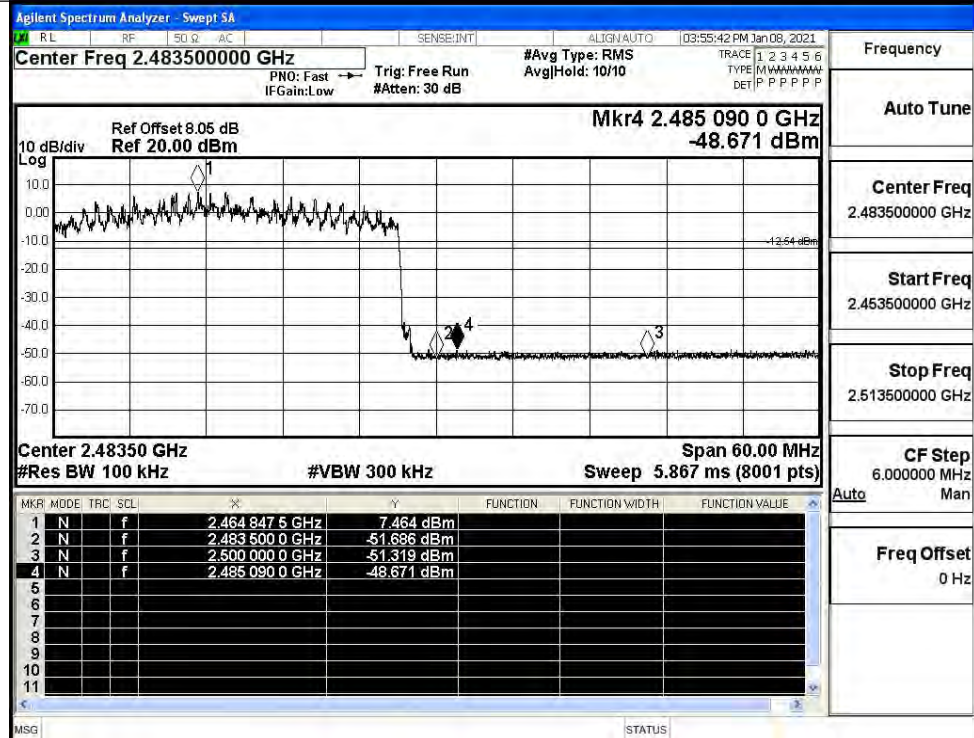
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



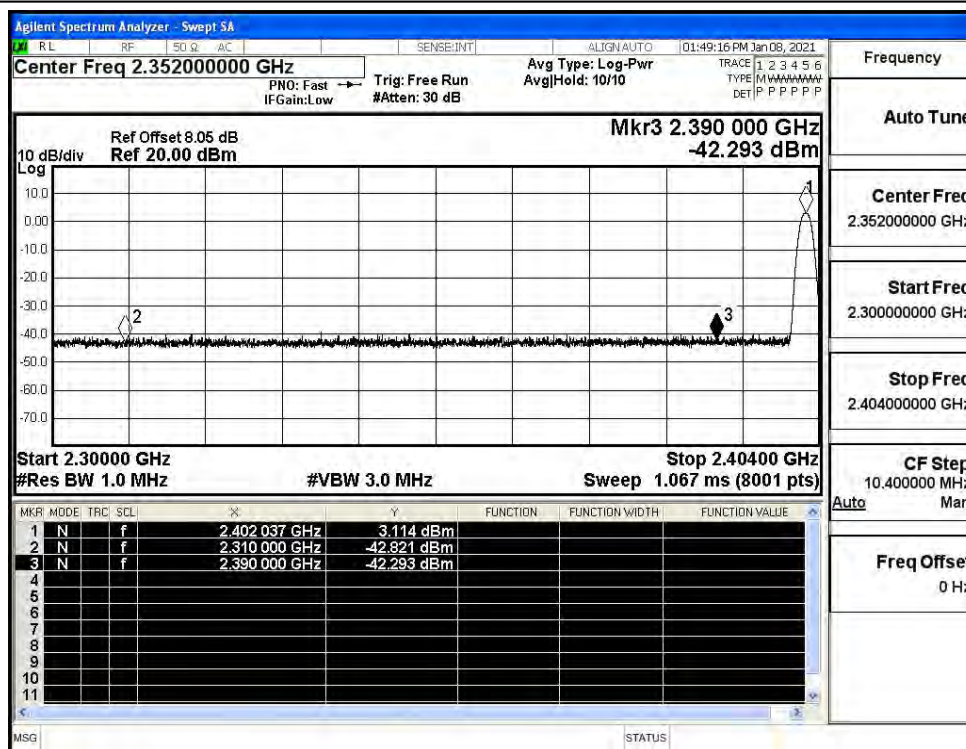
8DPSK/HCH/Hop



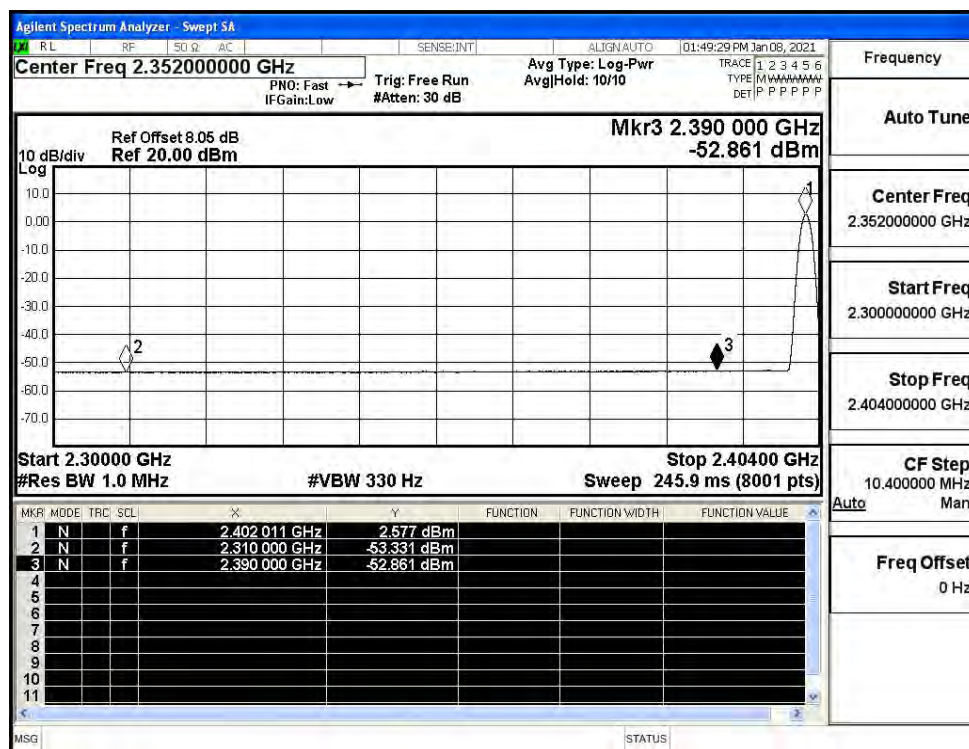
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-42.82	2.0	0	54.41	PEAK	74	PASS
	Off	2310.0	-53.33	2.0	0	43.90	AV	54	PASS
	Off	2390.0	-42.29	2.0	0	54.94	PEAK	74	PASS
	Off	2390.0	-52.86	2.0	0	44.37	AV	54	PASS
	Off	2483.5	-42.84	2.0	0	54.39	PEAK	74	PASS
	Off	2483.5	-52.41	2.0	0	44.82	AV	54	PASS
	Off	2500.0	-42.23	2.0	0	55.00	PEAK	74	PASS
	Off	2500.0	-52.37	2.0	0	44.86	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-42.75	2.0	0	54.48	PEAK	74	PASS
	Off	2310.0	-53.49	2.0	0	43.74	AV	54	PASS
	Off	2390.0	-43.24	2.0	0	53.99	PEAK	74	PASS
	Off	2390.0	-53.12	2.0	0	44.11	AV	54	PASS
	Off	2483.5	-42.63	2.0	0	54.60	PEAK	74	PASS
	Off	2483.5	-52.53	2.0	0	44.70	AV	54	PASS
	Off	2500.0	-43.09	2.0	0	54.14	PEAK	74	PASS
	Off	2500.0	-52.35	2.0	0	44.88	AV	54	PASS
8DPSK	Off	2310.0	-42.67	2.0	0	54.56	PEAK	74	PASS
	Off	2310.0	-53.36	2.0	0	43.87	AV	54	PASS
	Off	2390.0	-41.99	2.0	0	55.24	PEAK	74	PASS
	Off	2390.0	-53.04	2.0	0	44.19	AV	54	PASS
	Off	2483.5	-42.52	2.0	0	54.71	PEAK	74	PASS
	Off	2483.5	-52.50	2.0	0	44.73	AV	54	PASS
	Off	2500.0	-41.75	2.0	0	55.48	PEAK	74	PASS
	Off	2500.0	-52.45	2.0	0	44.78	AV	54	PASS

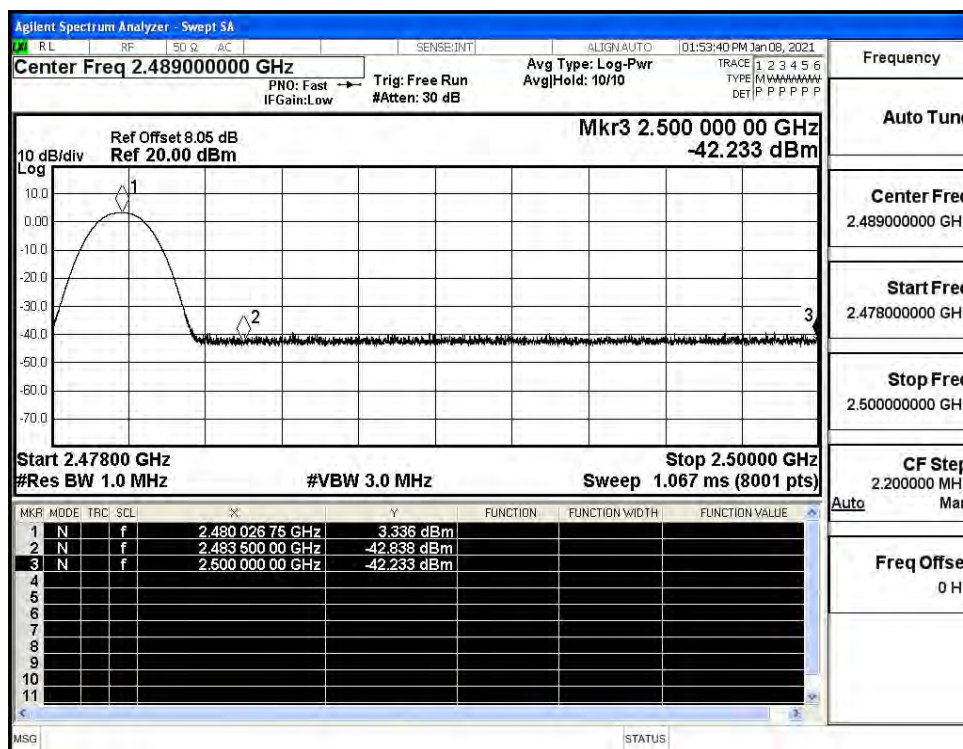
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



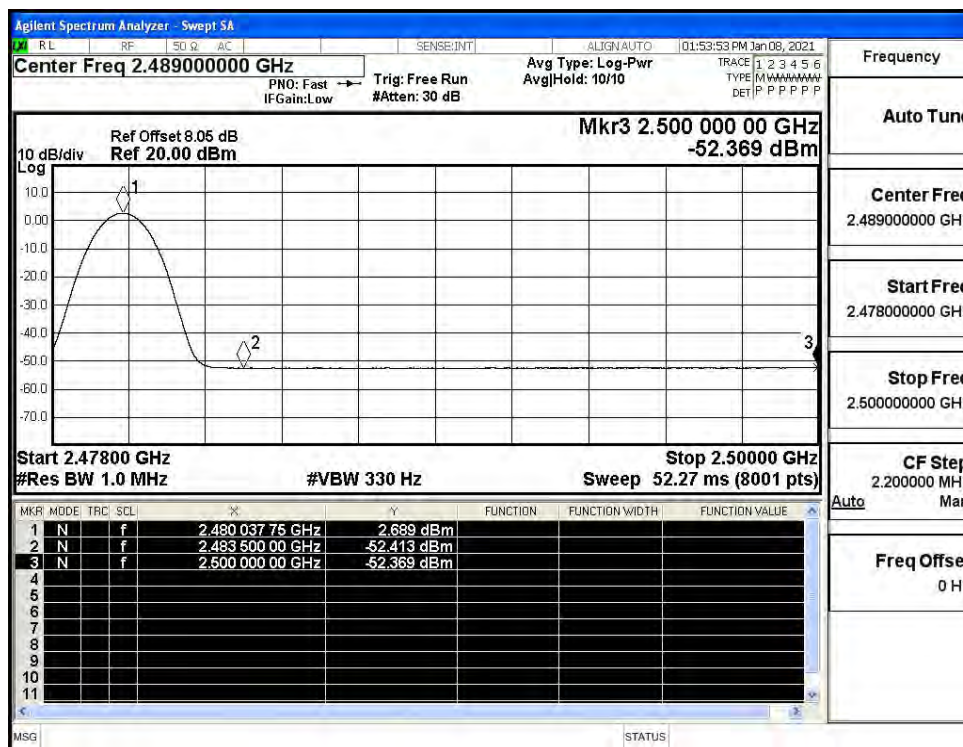
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

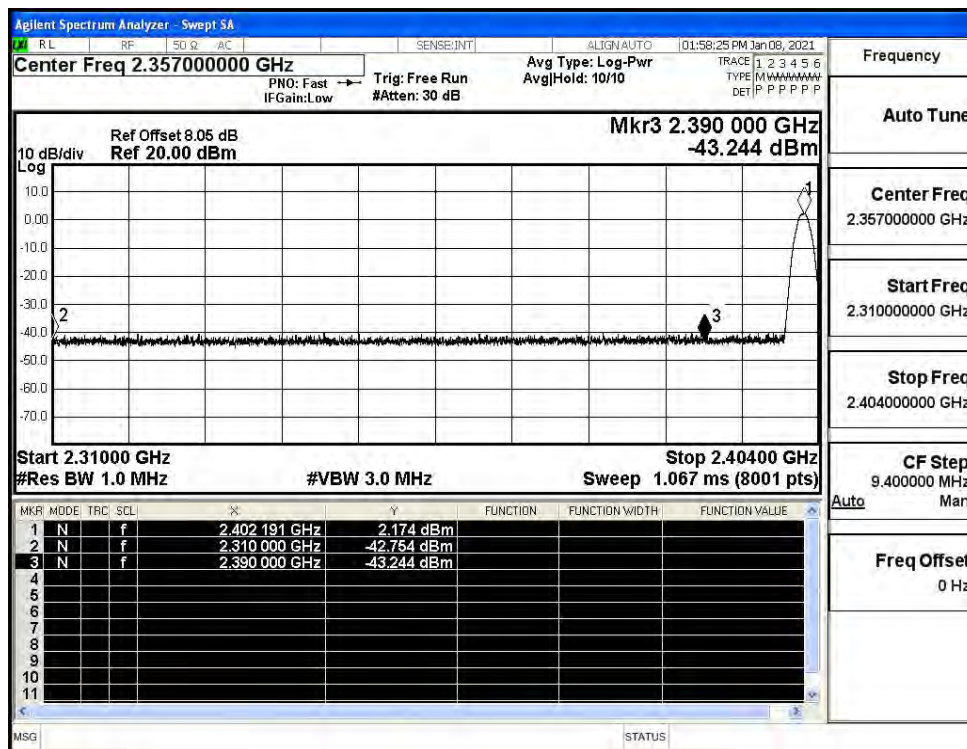
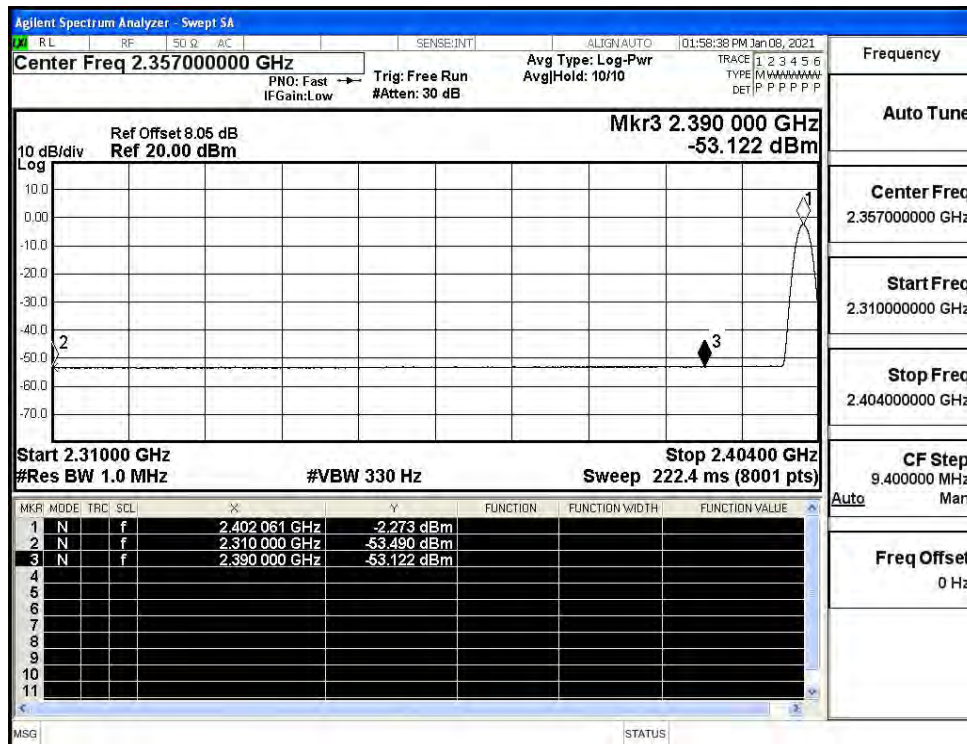


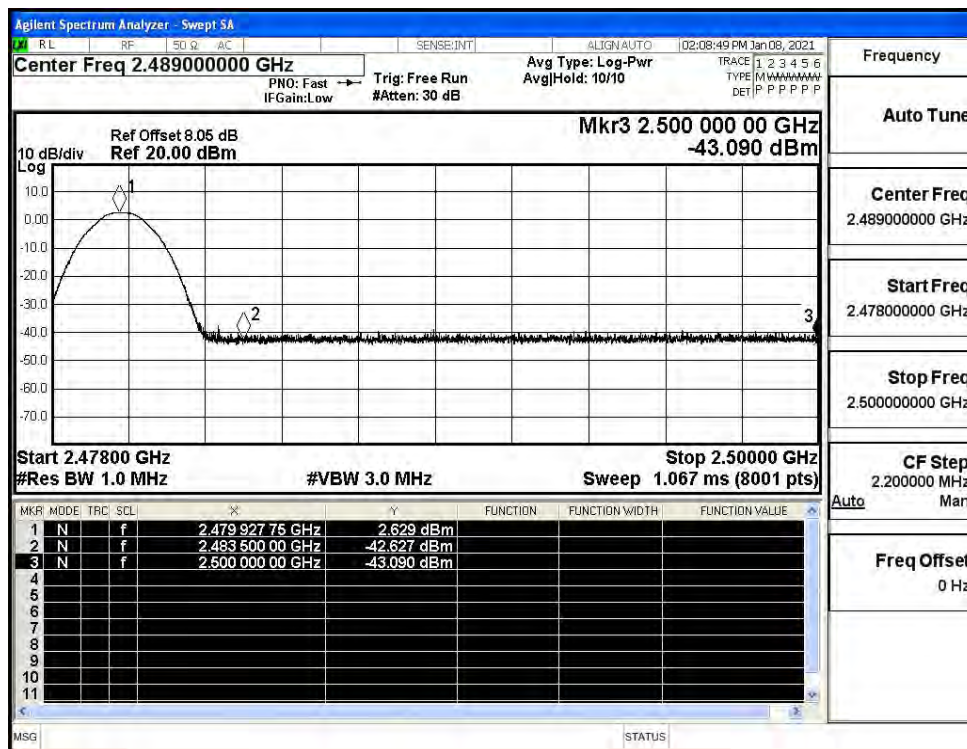
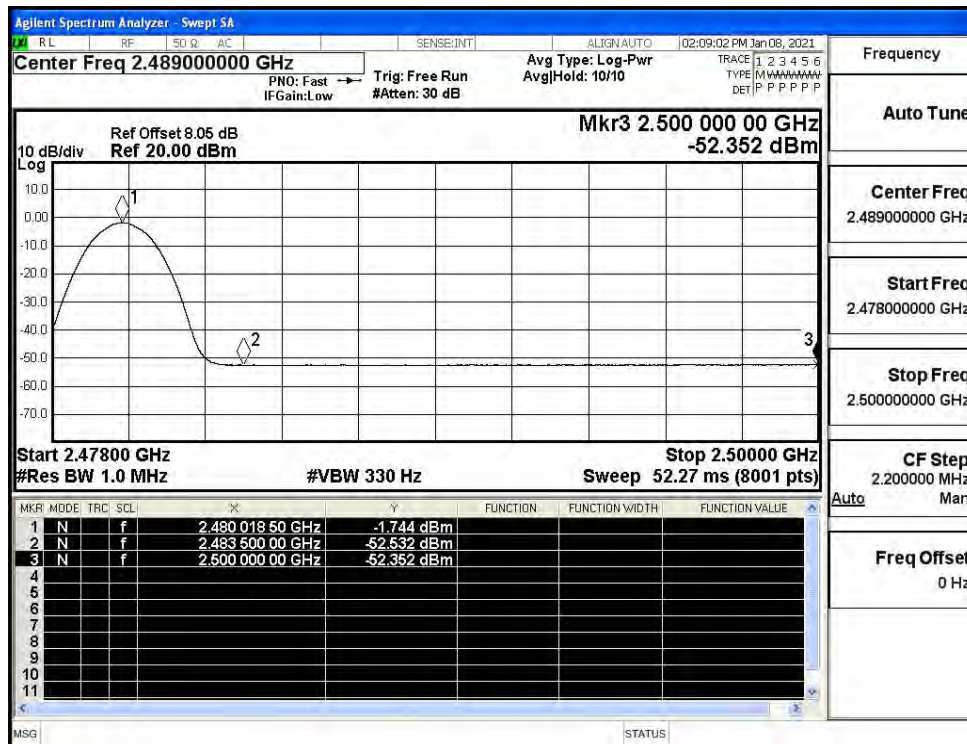
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



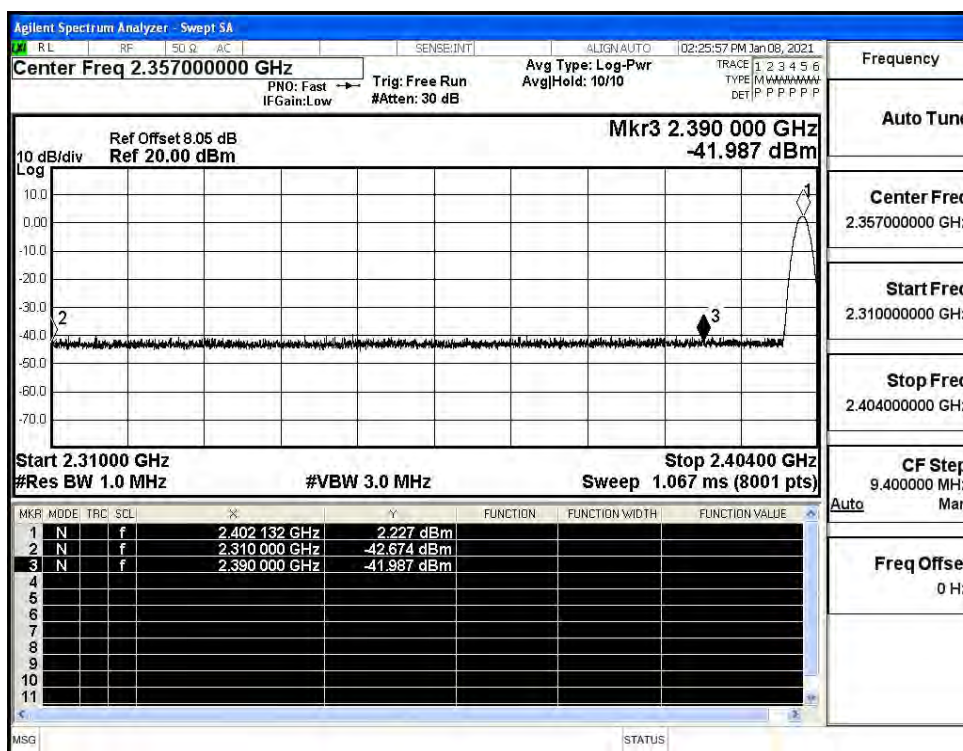
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



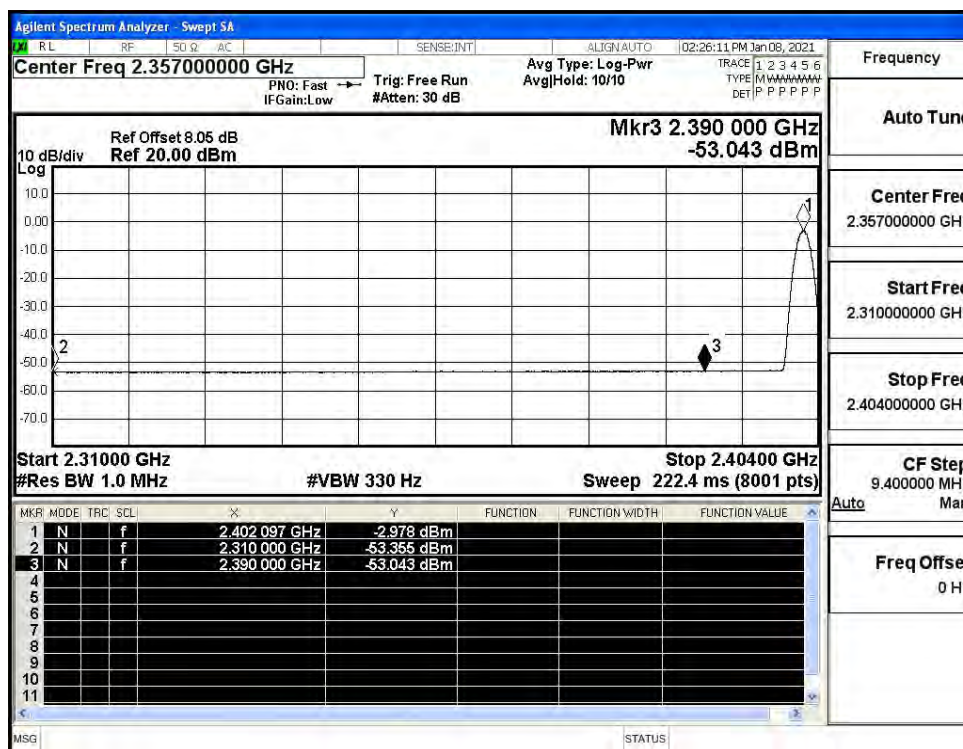
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

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)

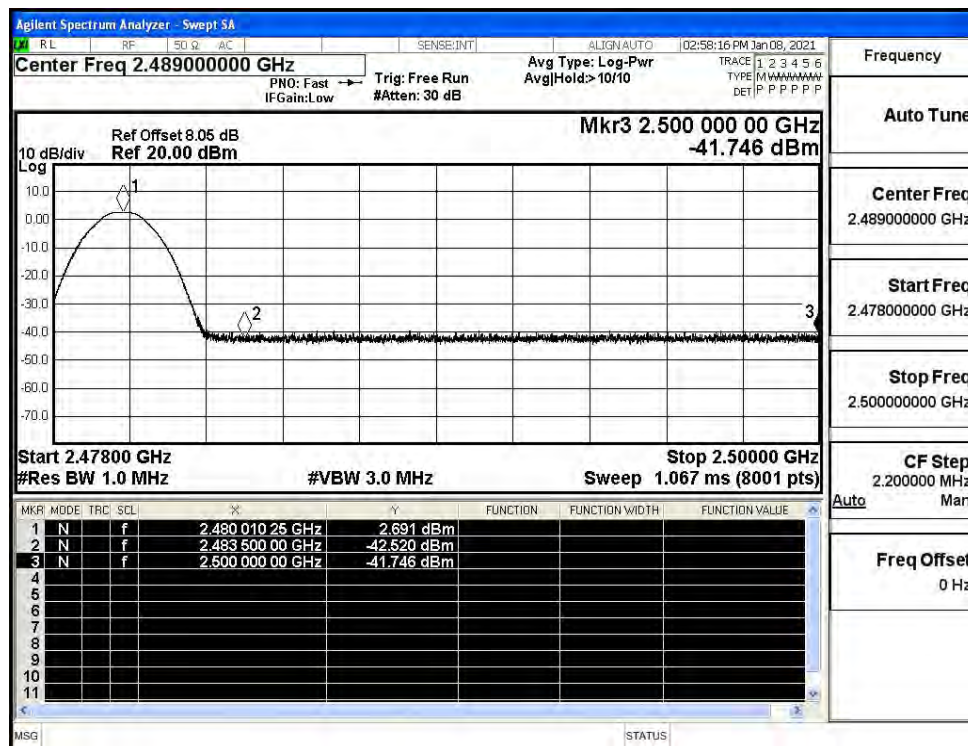
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

