

Appendix A

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

Product Name: Chuangze brand autonomous mobile intelligent disinfection robot (CZ-RobotDf-AZ type)

Trade Mark: N/A

Test Model: CZ-RobotDf-AZ

Environmental Conditions

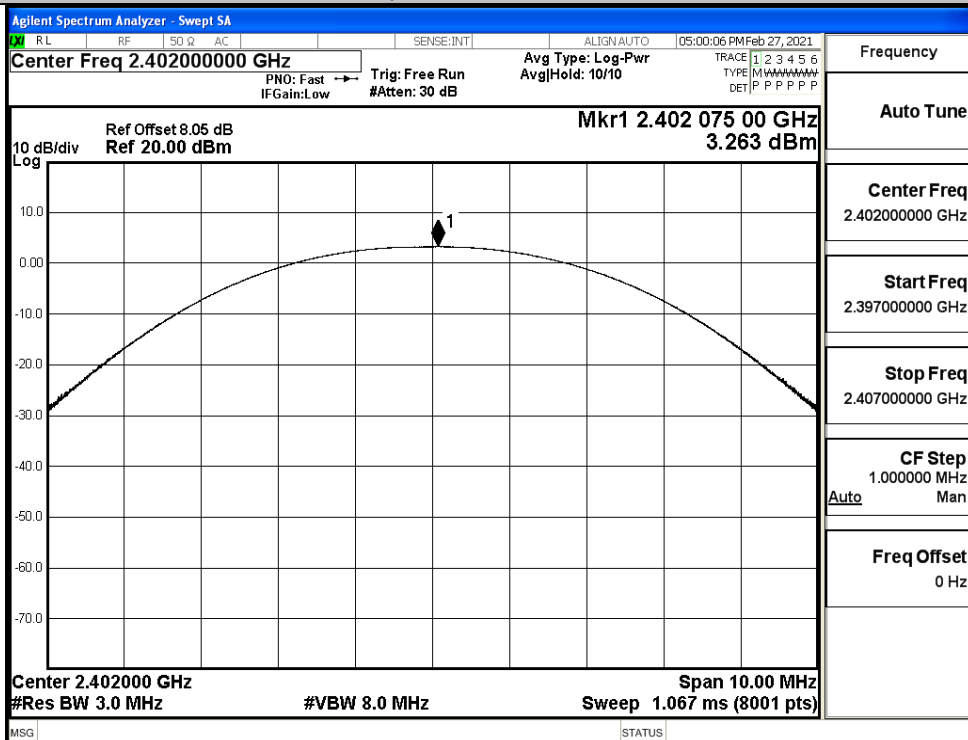
Temperature:	22.1° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

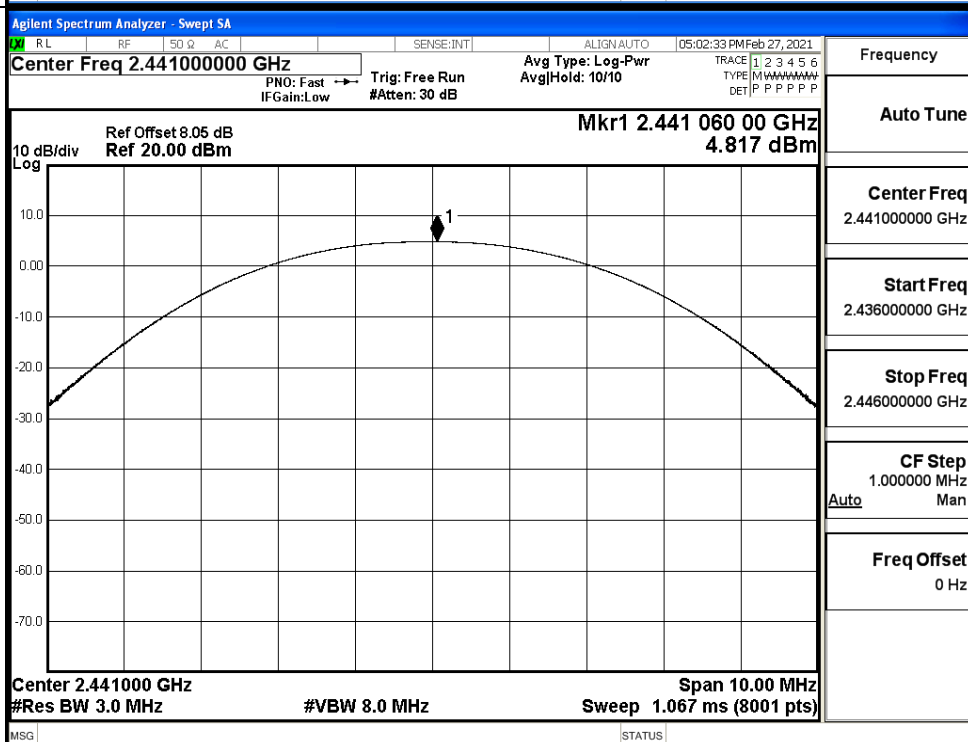
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.263	21	PASS
	MCH	4.817	21	PASS
	HCH	3.250	21	PASS
$\pi/4$ DQPSK	LCH	2.491	21	PASS
	MCH	3.980	21	PASS
	HCH	2.426	21	PASS
8DPSK	LCH	2.542	21	PASS
	MCH	4.100	21	PASS
	HCH	2.613	21	PASS

Test Graphs

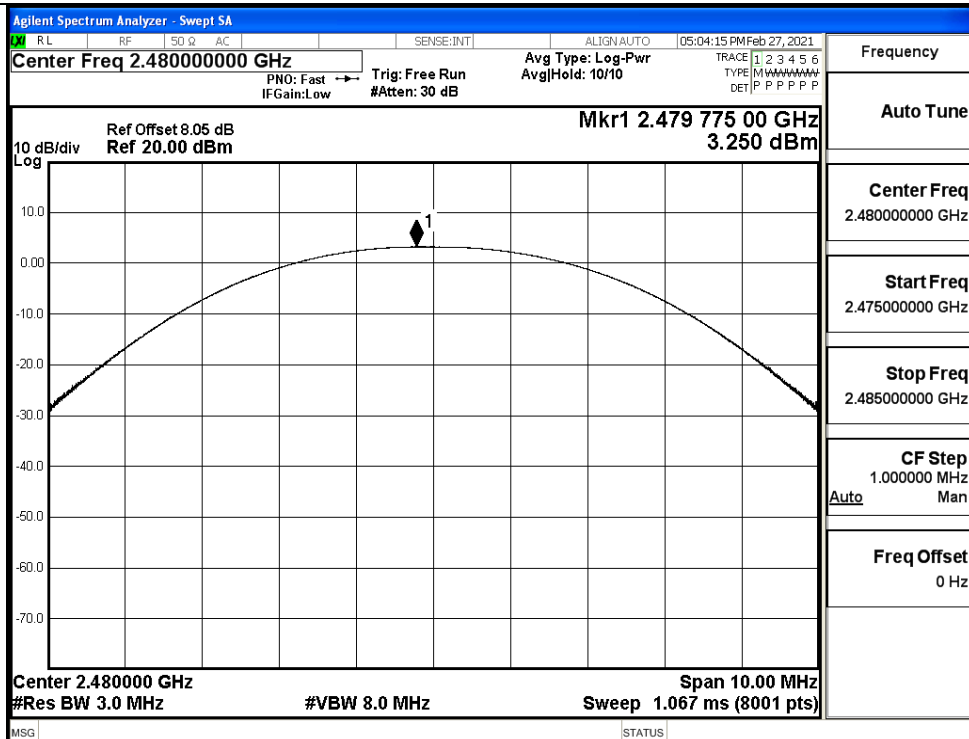
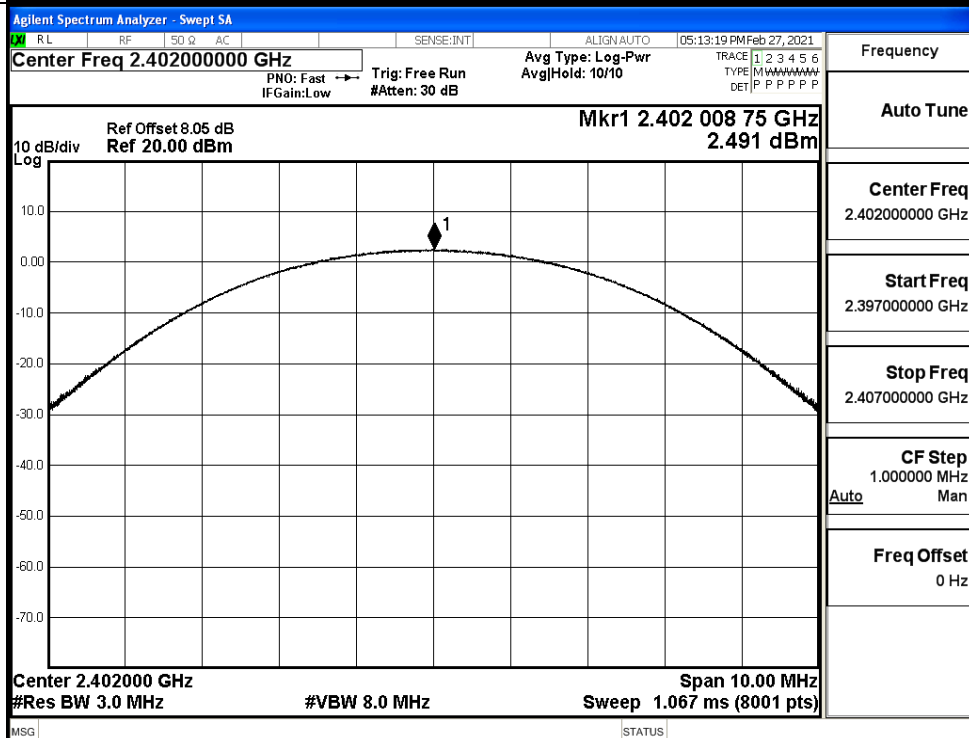
GFSK/LCH

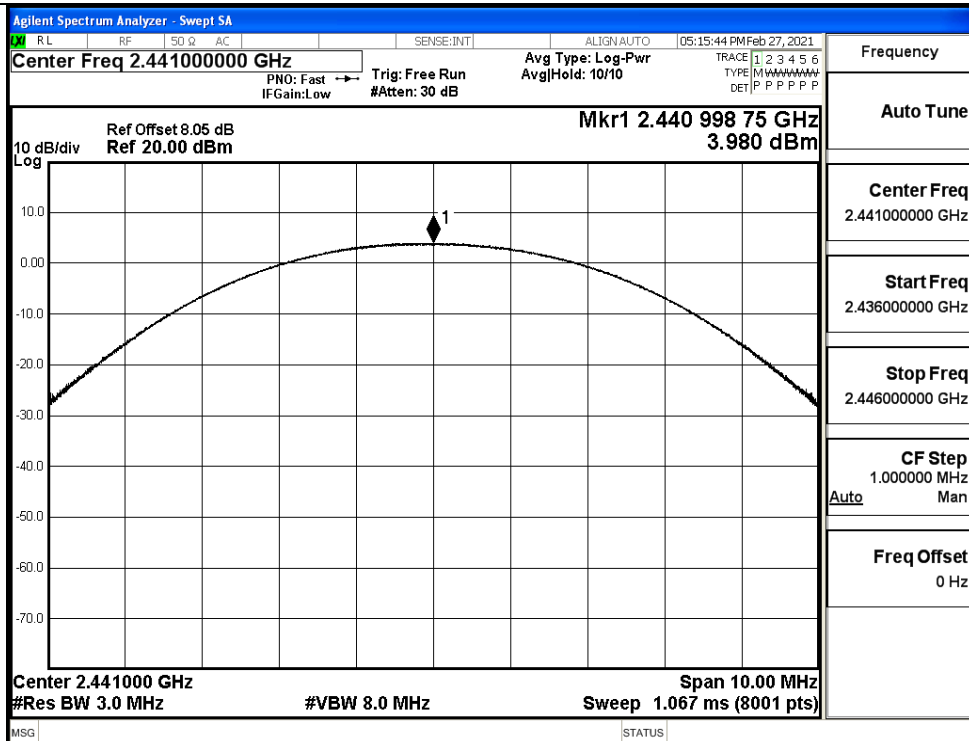
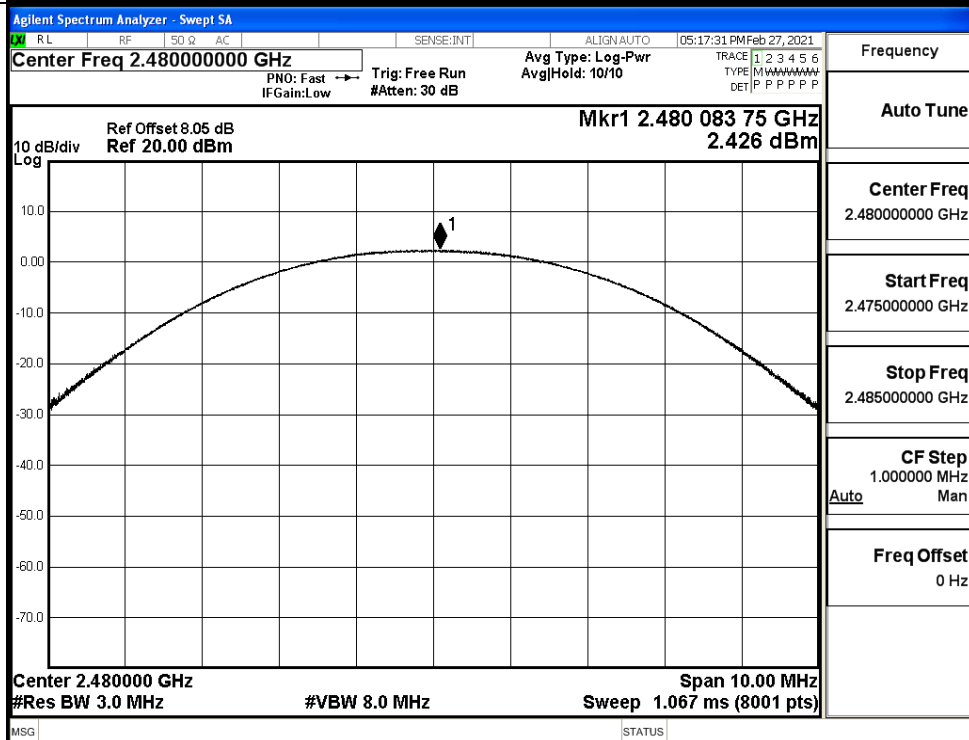


GFSK/MCH

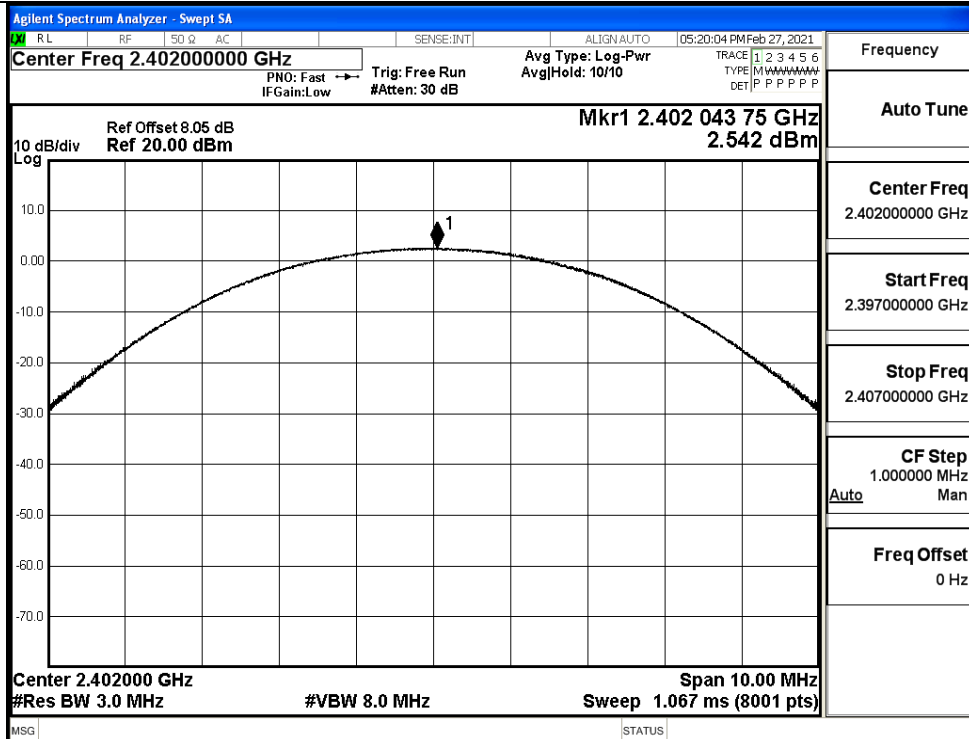


GFSK/HCH

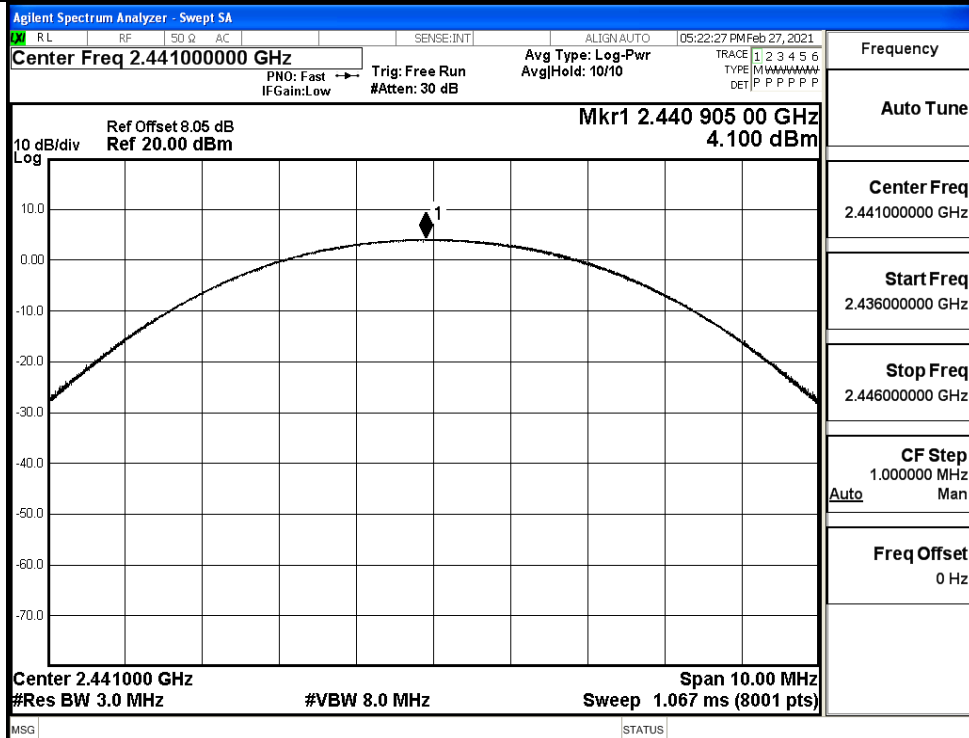
 $\pi/4$ DQPSK/LCH

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

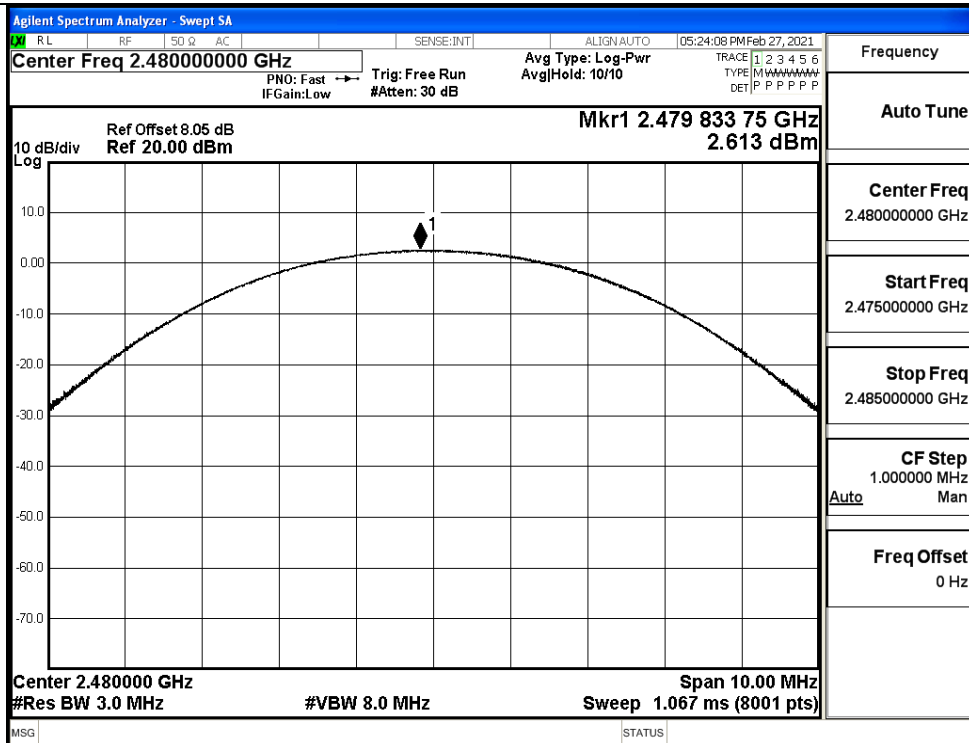
8DPSK/LCH



8DPSK/MCH



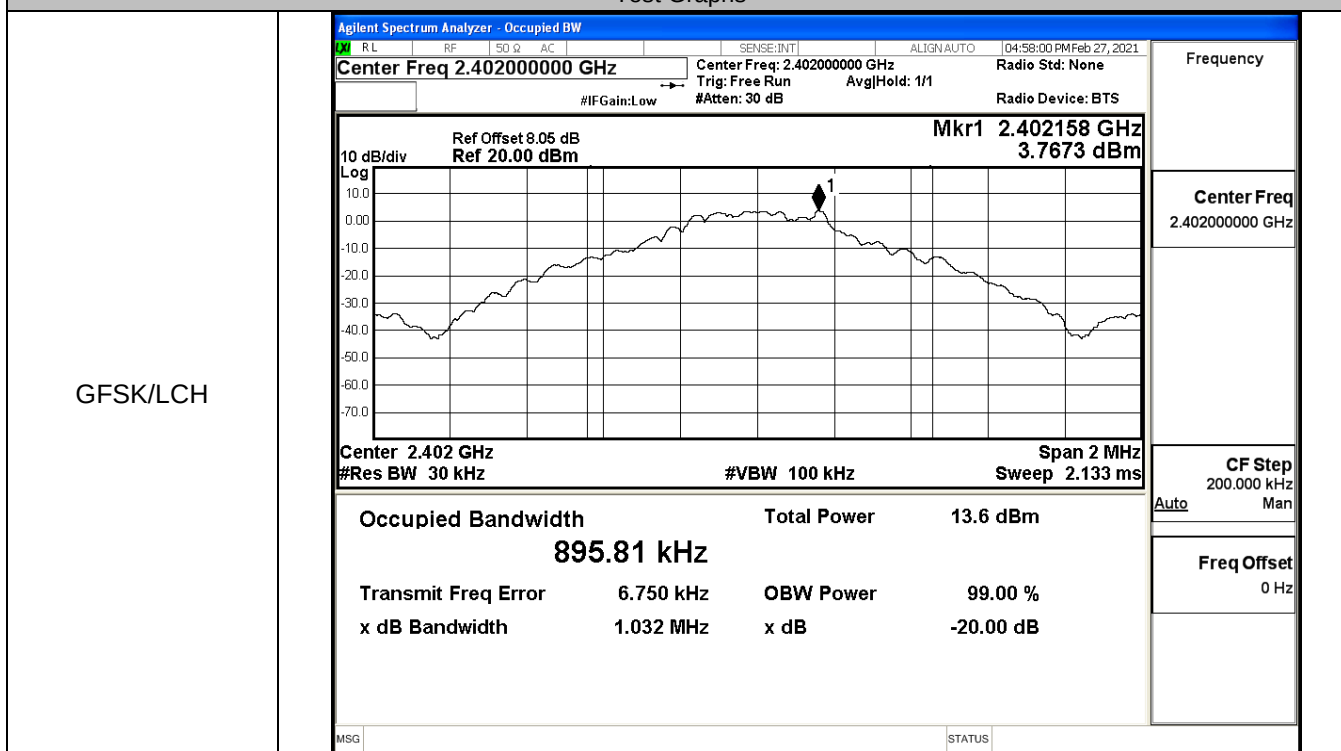
8DPSK/HCH



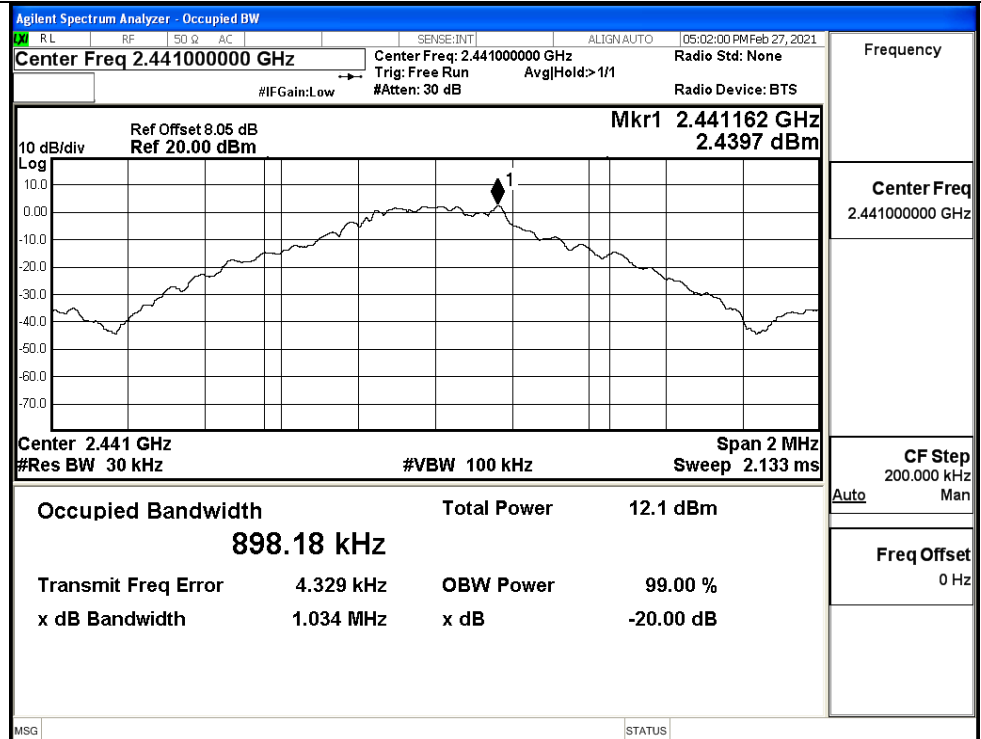
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.032	Not Specified	PASS
	MCH	1.034	Not Specified	PASS
	HCH	1.030	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.287	Not Specified	PASS
	MCH	1.290	Not Specified	PASS
	HCH	1.289	Not Specified	PASS
8DPSK	LCH	1.289	Not Specified	PASS
	MCH	1.299	Not Specified	PASS
	HCH	1.292	Not Specified	PASS

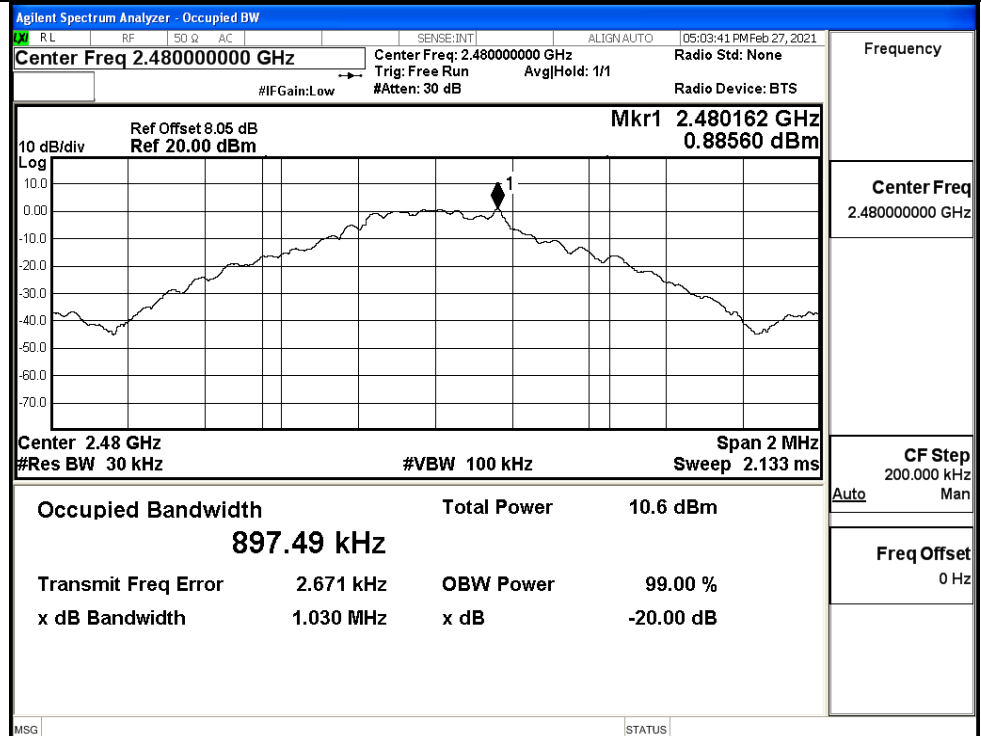
Test Graphs

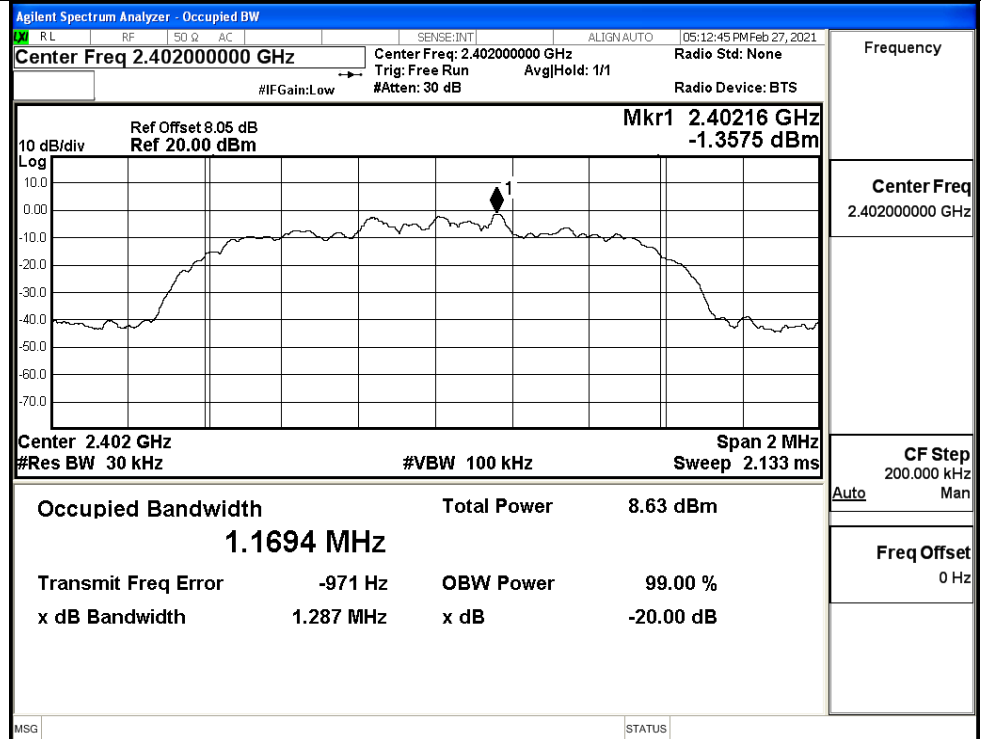
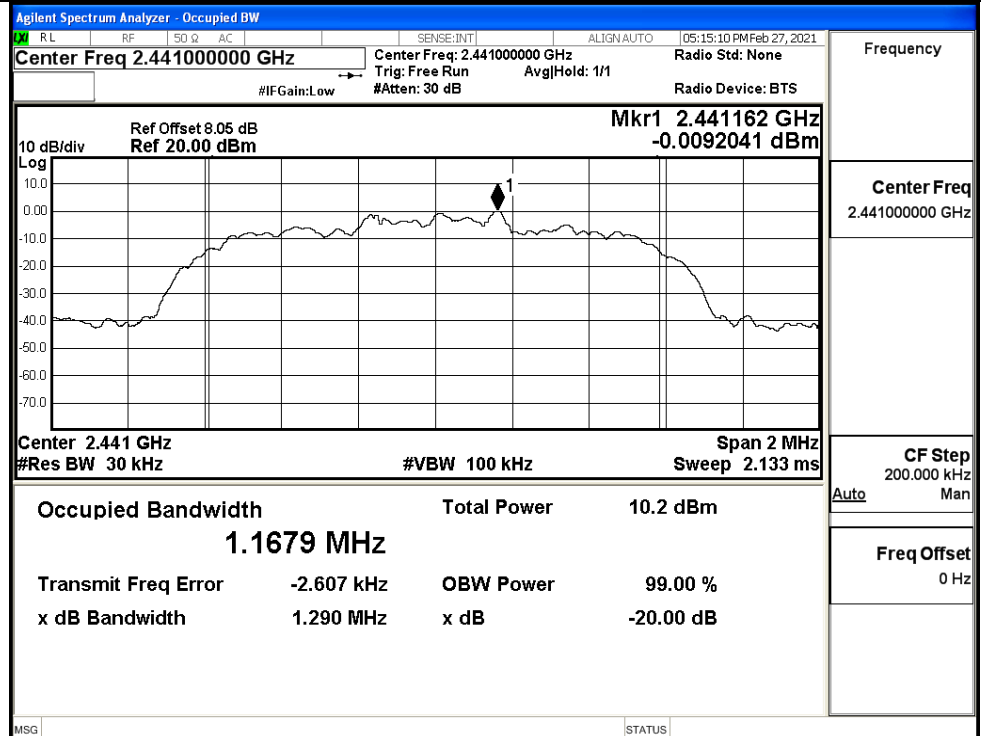


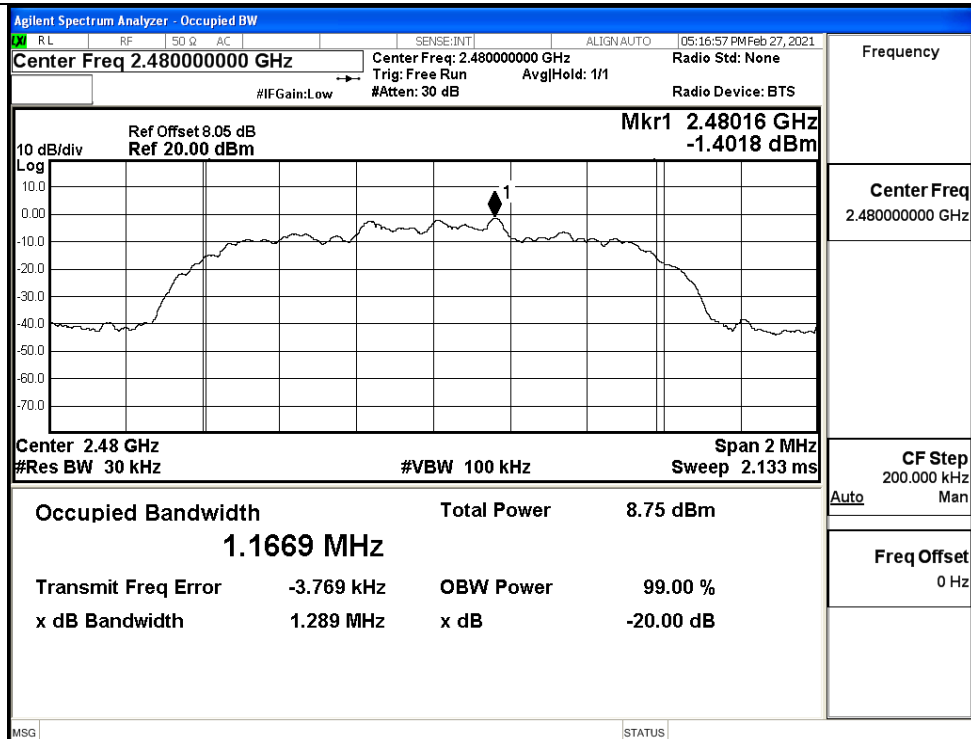
GFSK/MCH



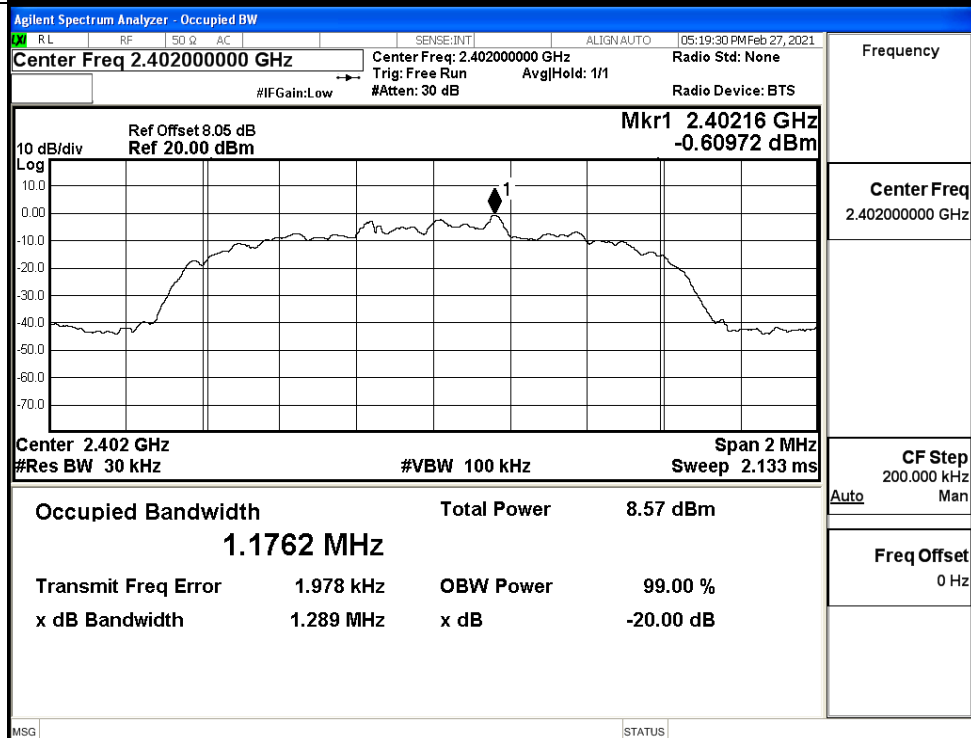
GFSK/HCH



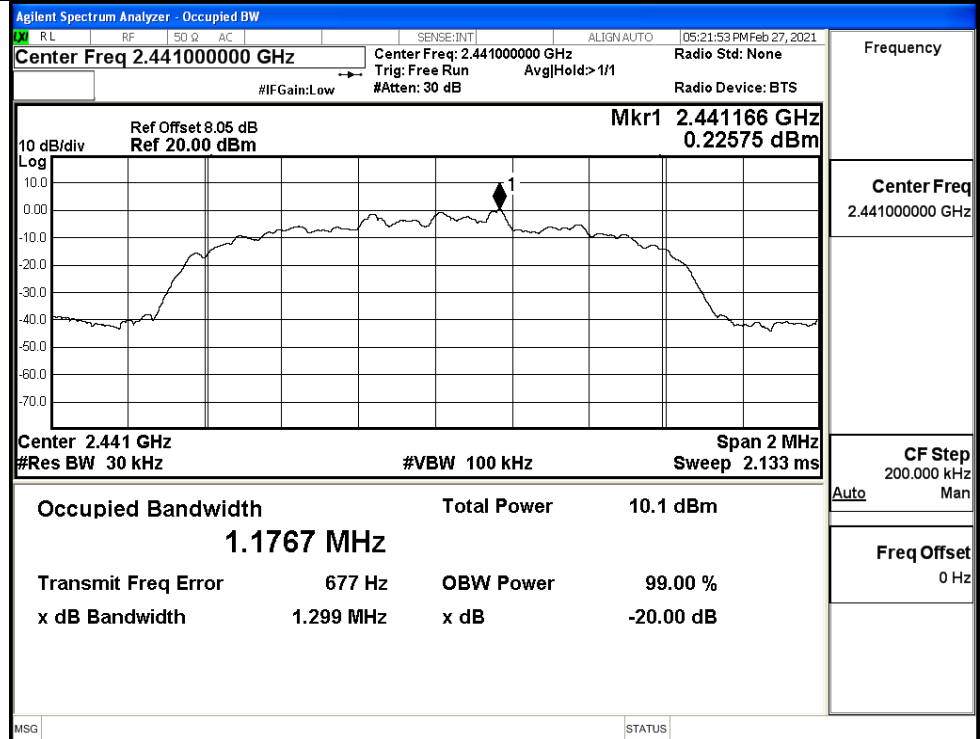
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

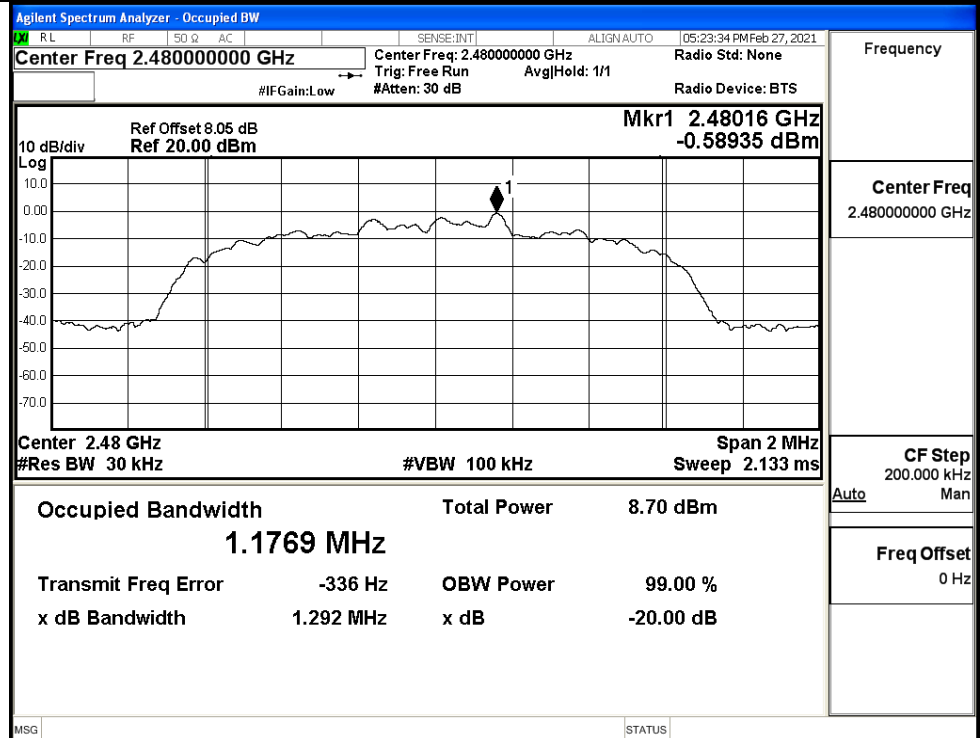
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

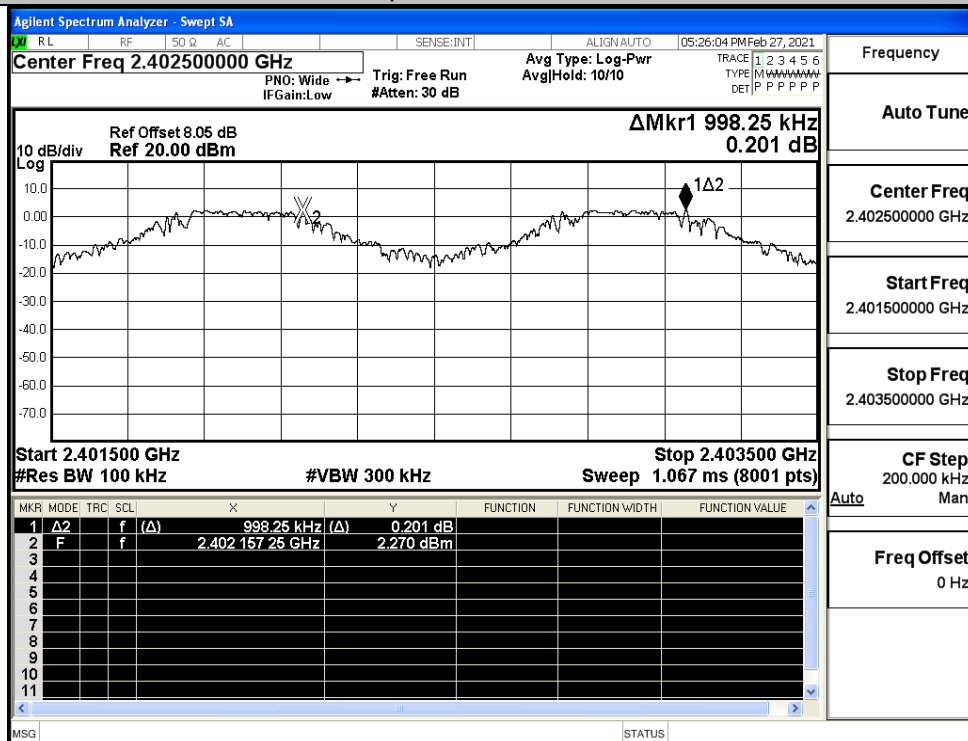


A.3 Carrier Frequency Separation

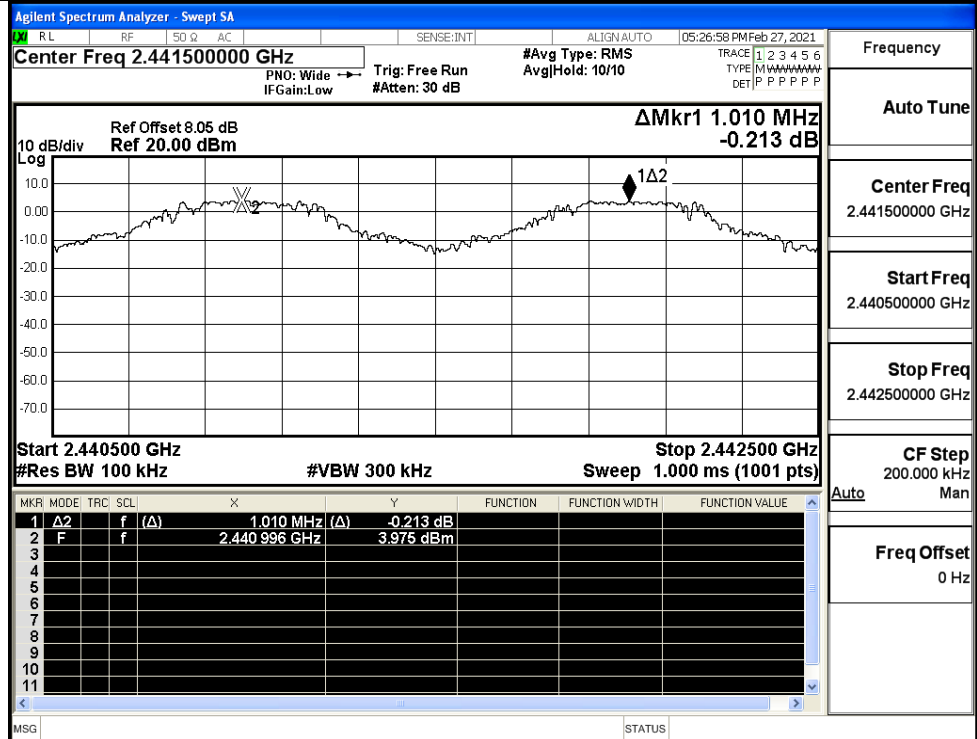
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.998	0.689	PASS
	MCH	1.010	0.689	PASS
	HCH	1.138	0.689	PASS
π /4DQPSK	LCH	1.184	0.860	PASS
	MCH	1.136	0.860	PASS
	HCH	1.000	0.860	PASS
8DPSK	LCH	0.956	0.866	PASS
	MCH	1.212	0.866	PASS
	HCH	1.042	0.866	PASS

Test Graphs

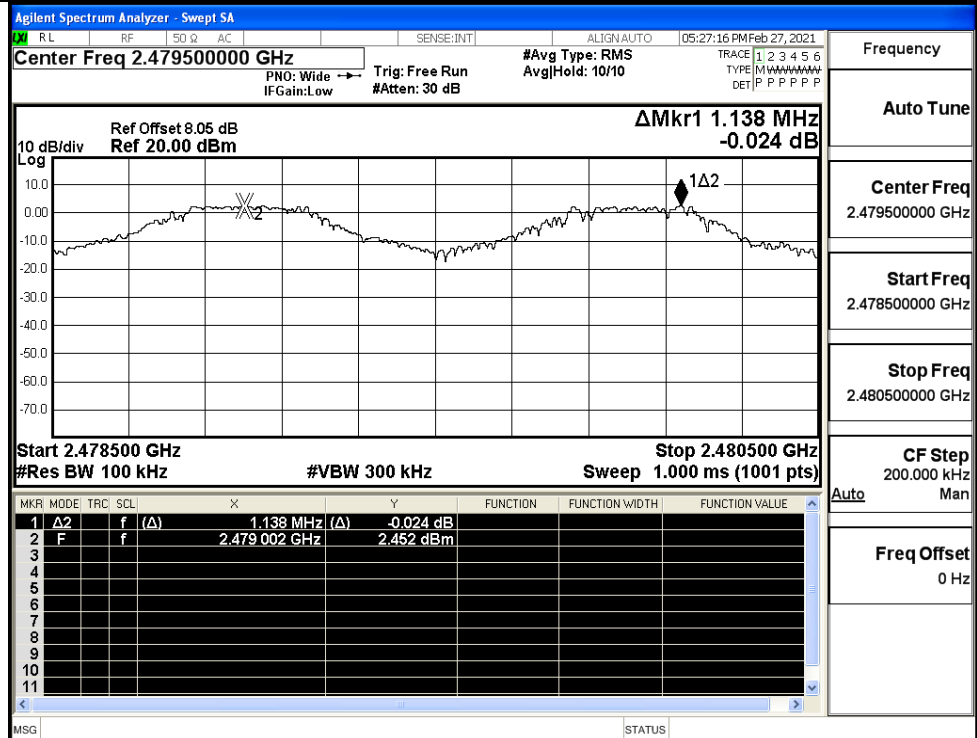
GFSK/LCH

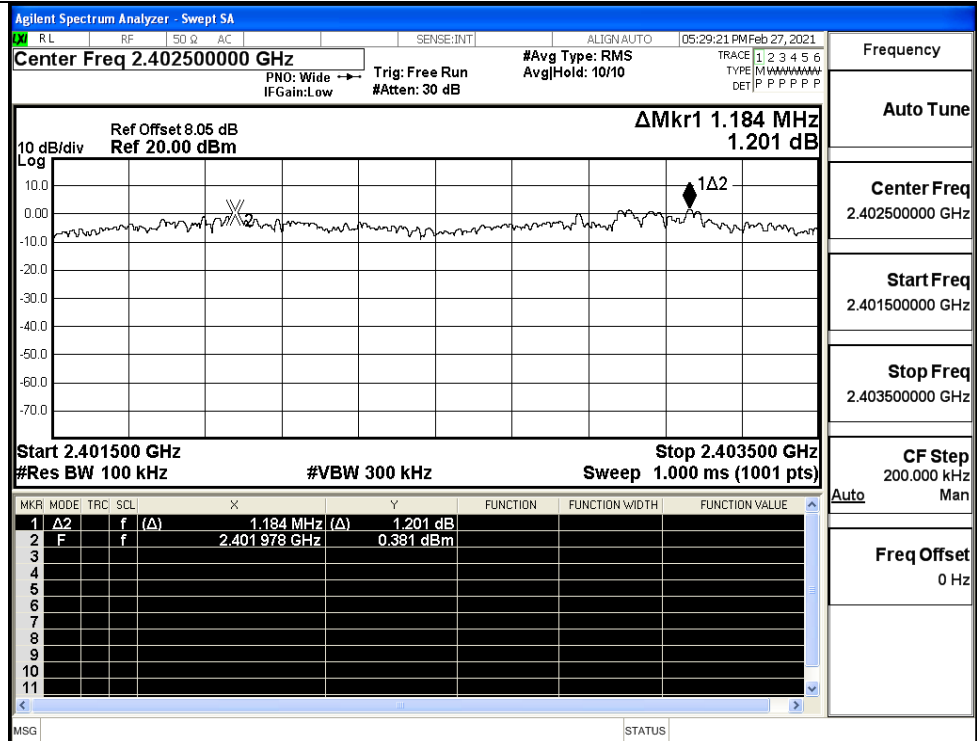
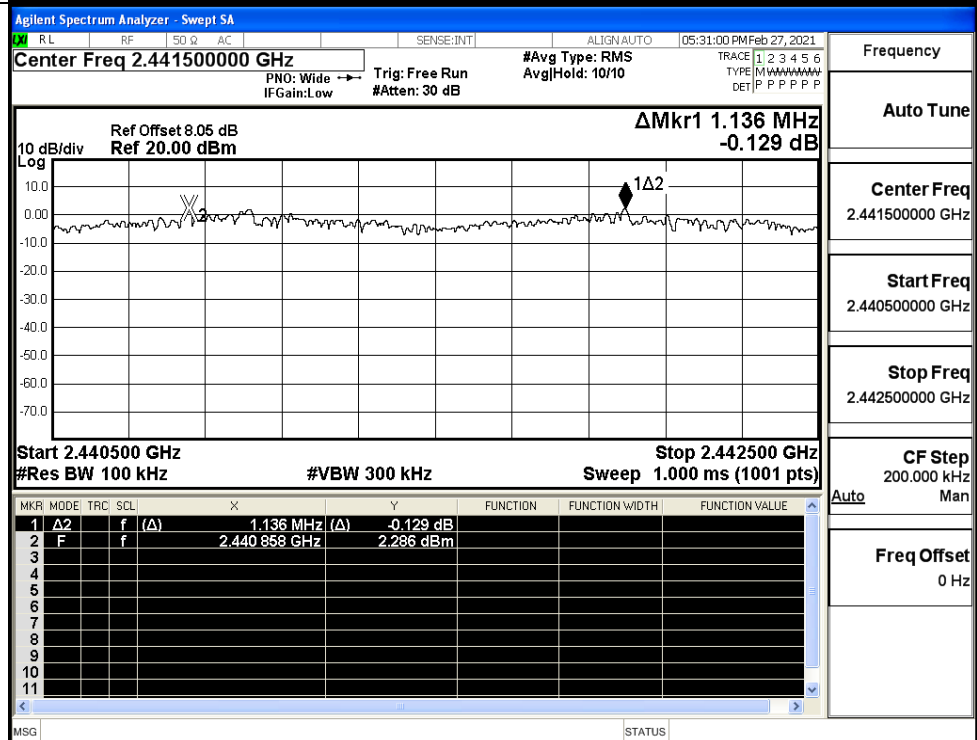


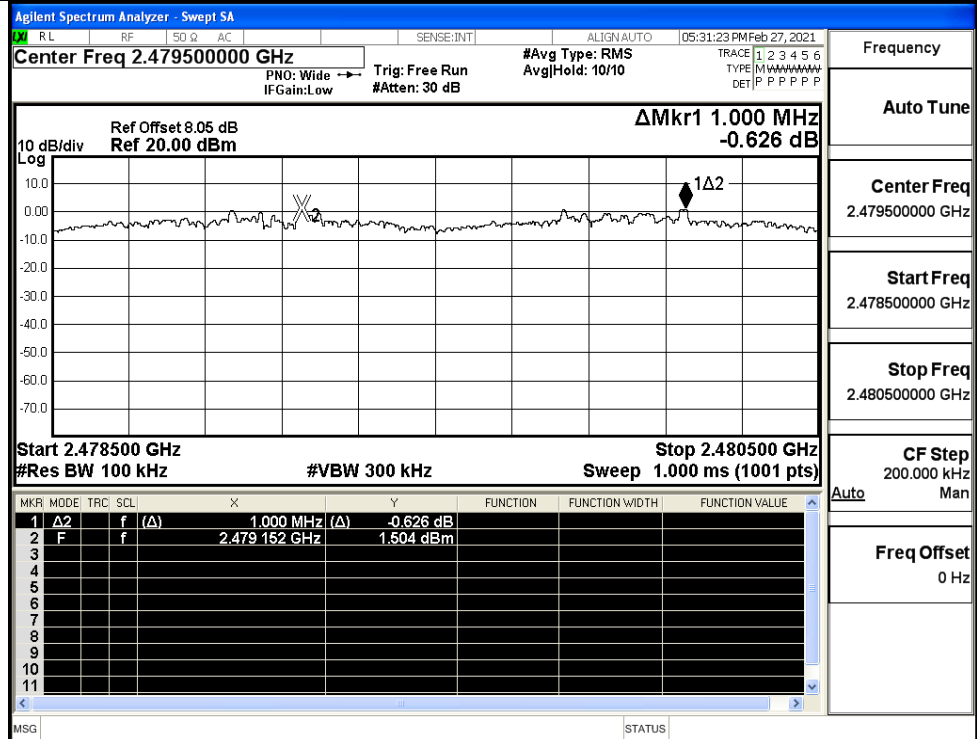
GFSK/MCH



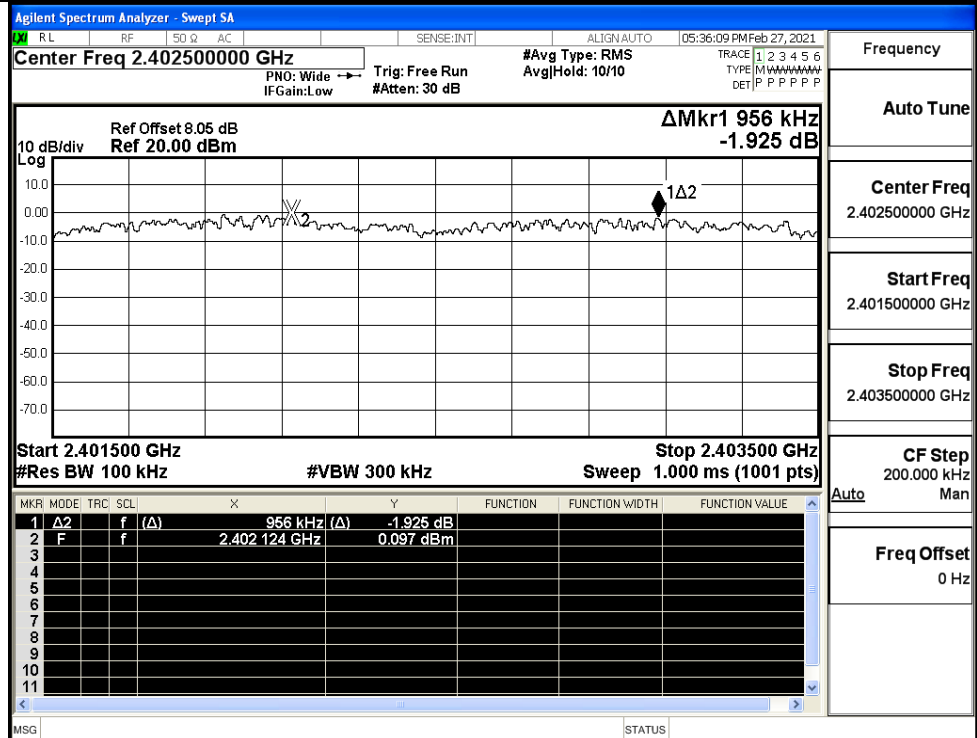
GFSK/HCH



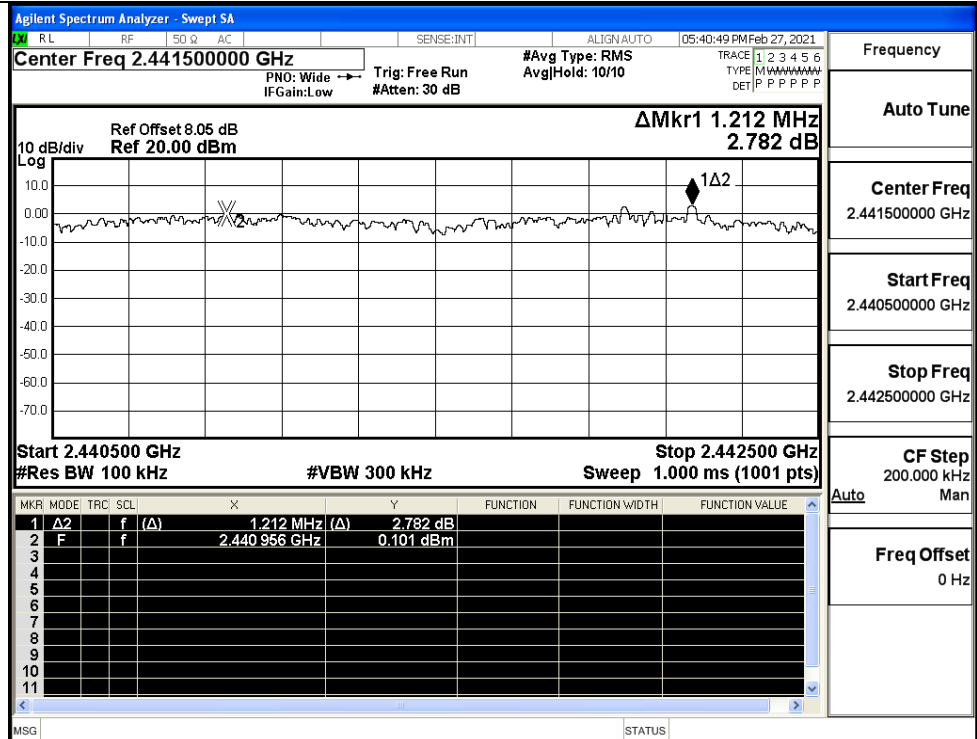
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

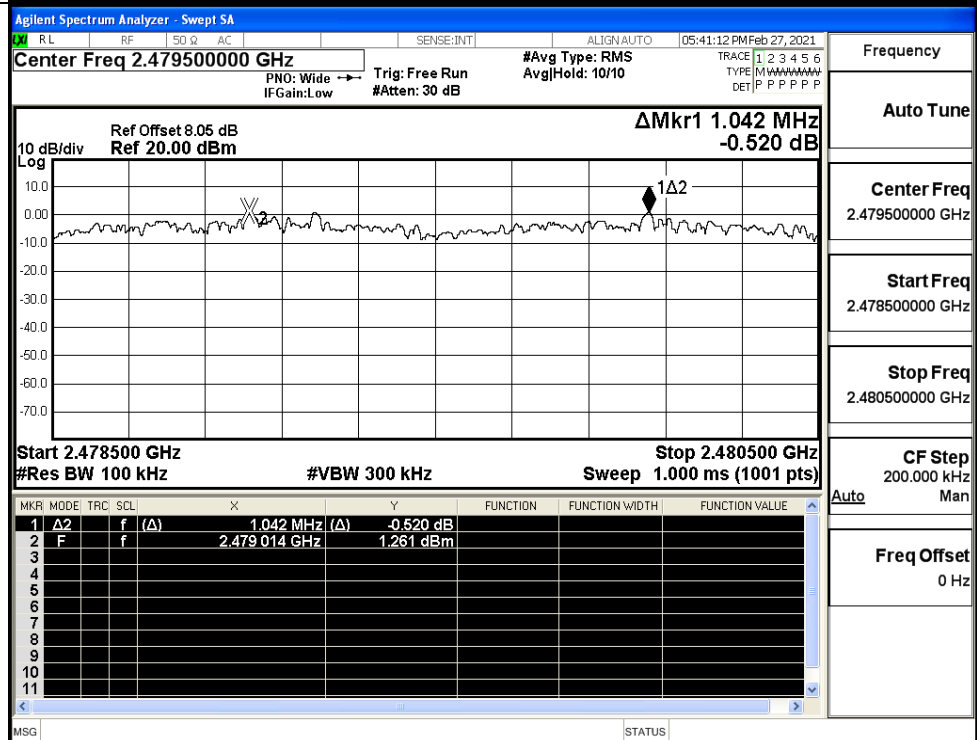
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

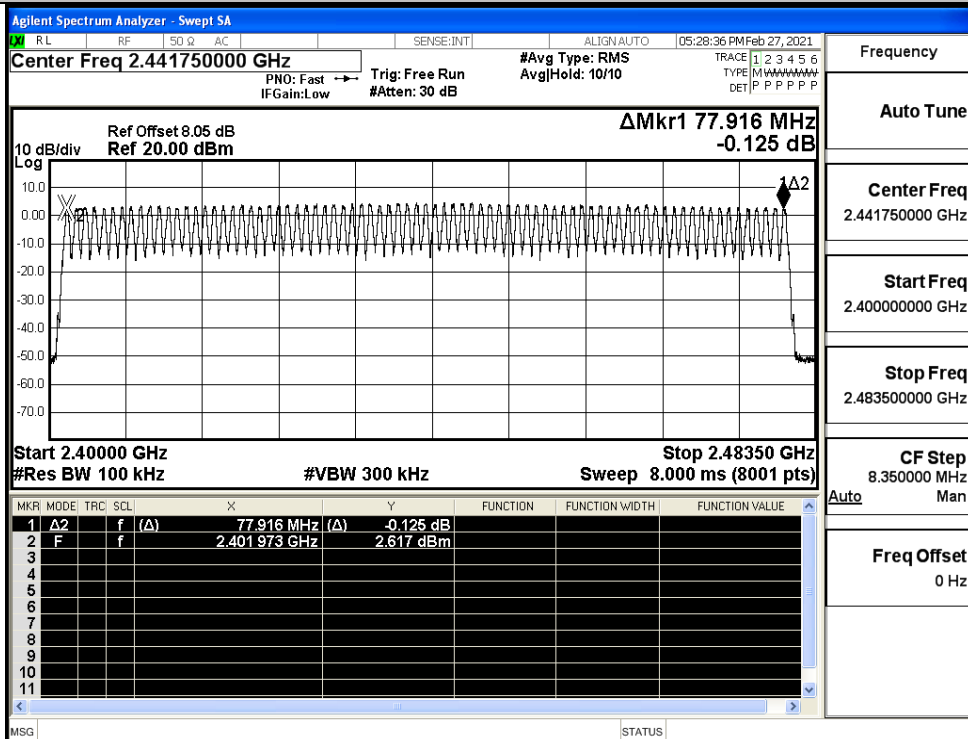
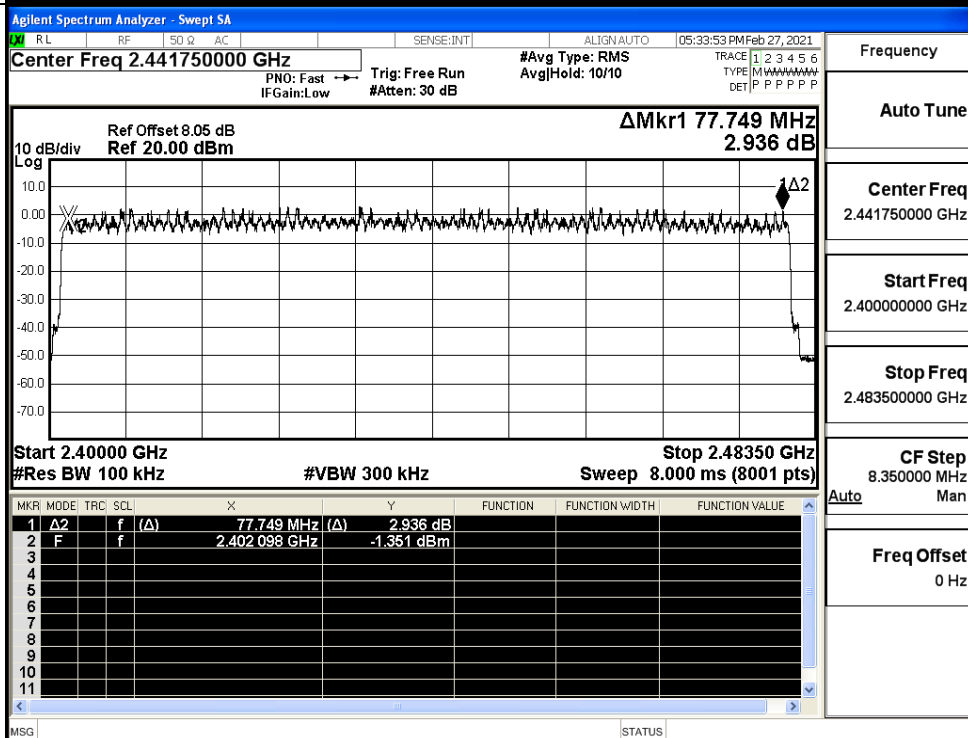


A.4 Hopping Channel Number

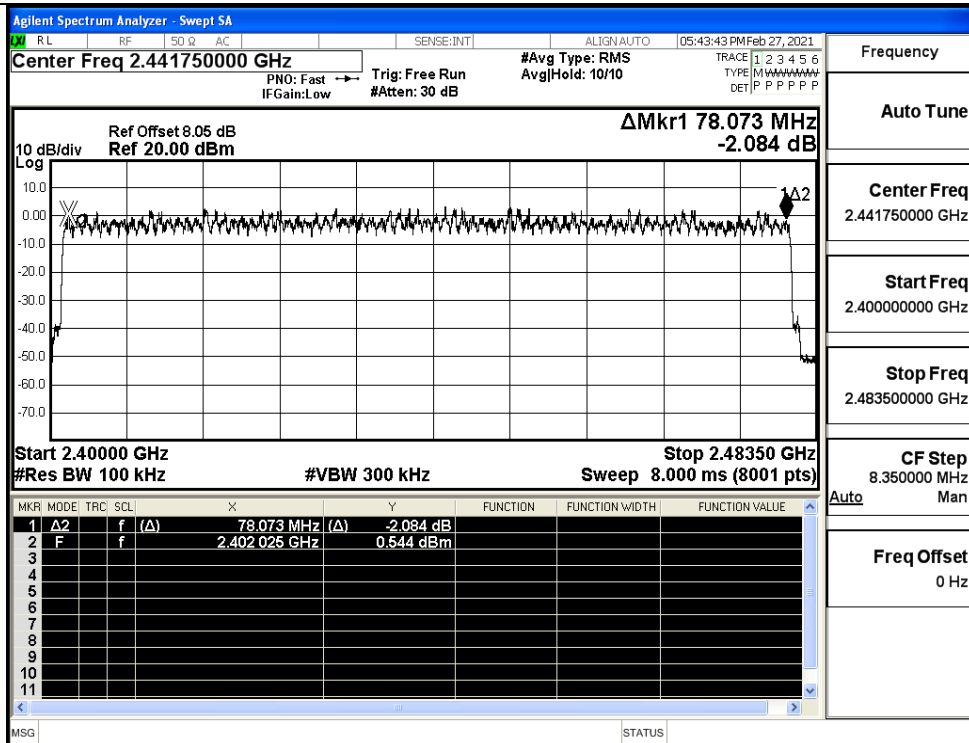
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS
8DPSK	Hop	79	≥ 15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

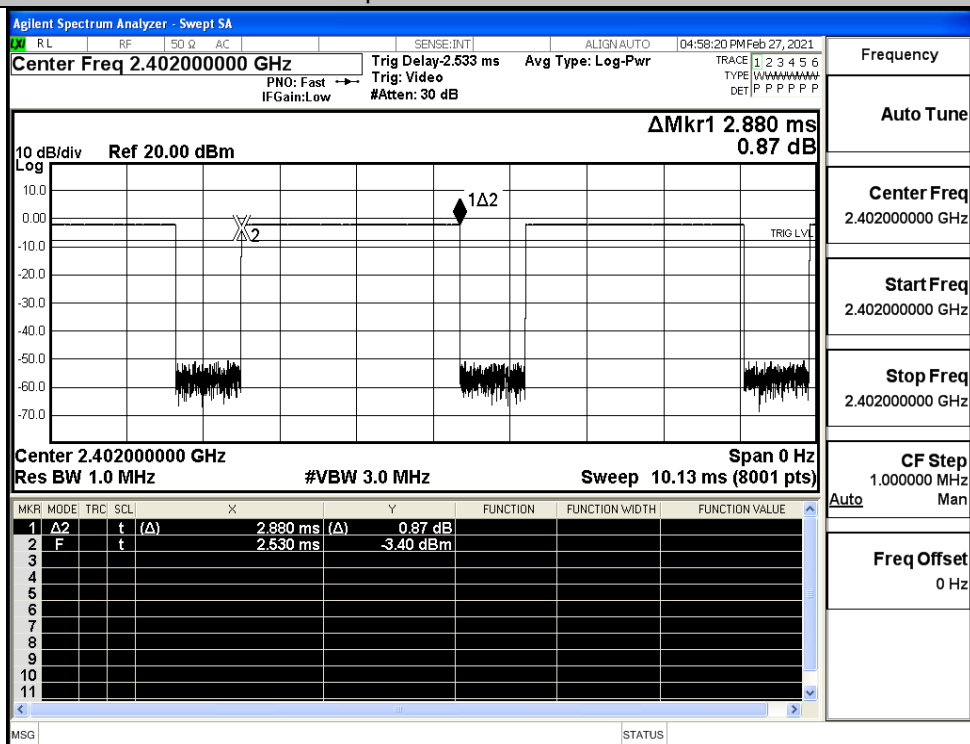


A.5 Dwell Time

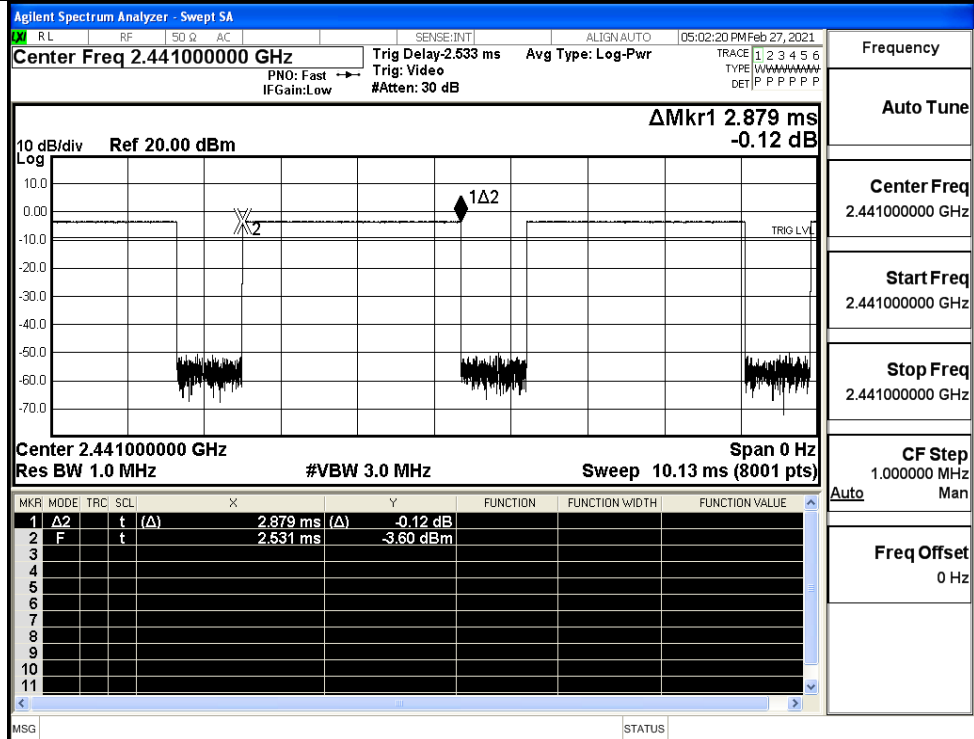
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.88	106.7	0.308	0.4	PASS
	3DH5	MCH	2.88	106.7	0.308	0.4	PASS
	3DH5	HCH	2.88	106.7	0.308	0.4	PASS

Test Graphs

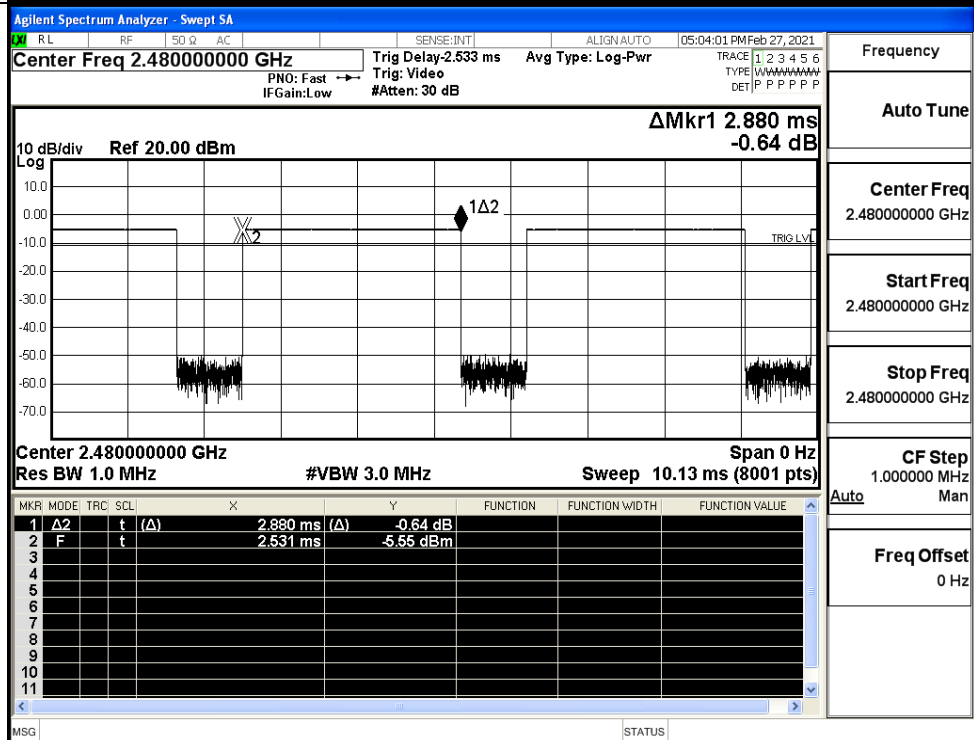
GFSK_DH5/LCH



GFSK_DH5/MCH



GFSK_DH5/HCH



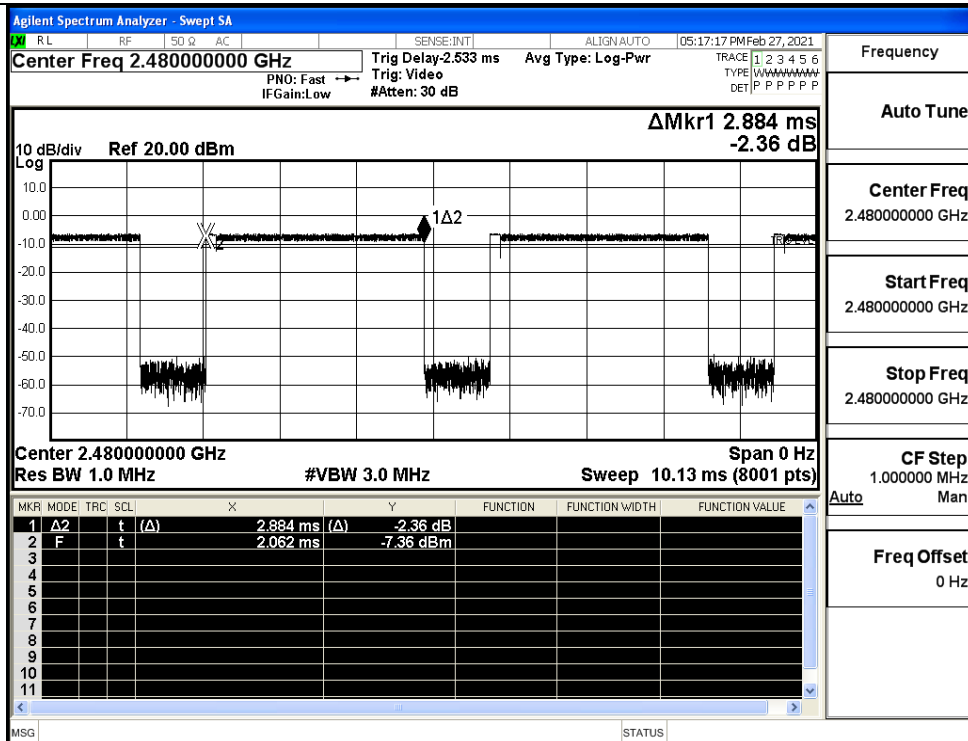
[illegible]

Frequency	
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

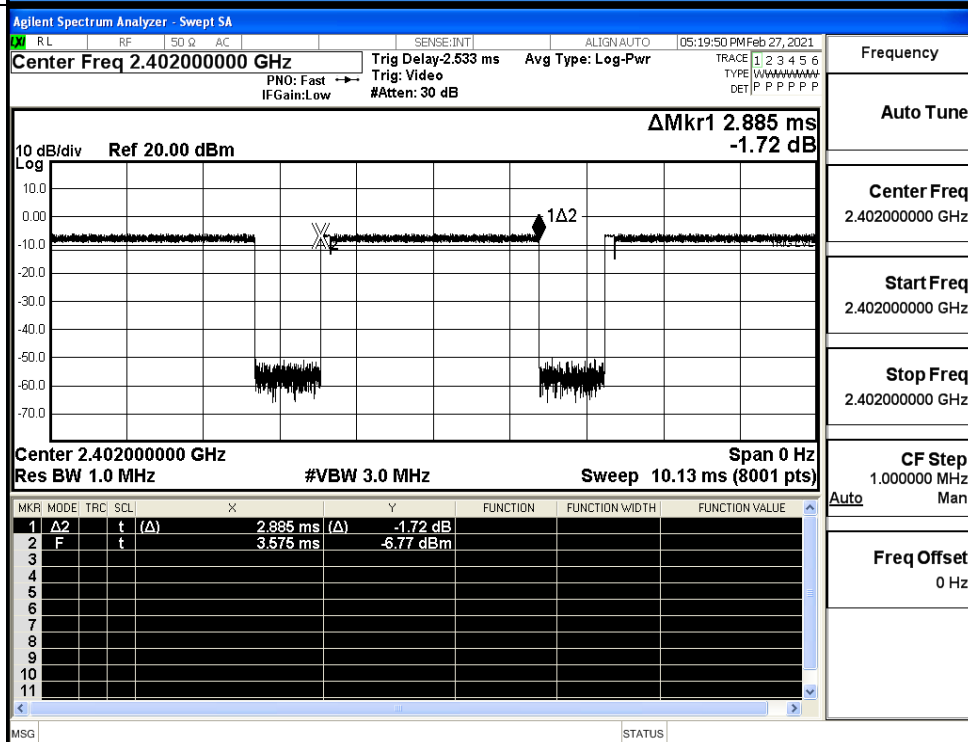
[illegible]

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

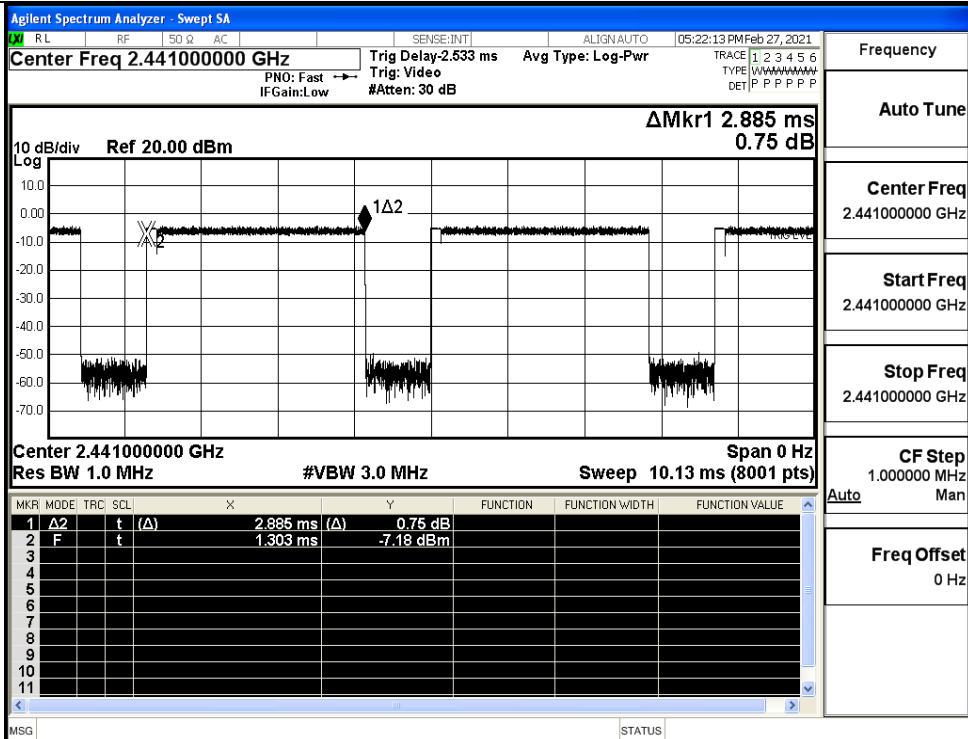
$\pi/4$ DQPSK
_2DH5/HCH



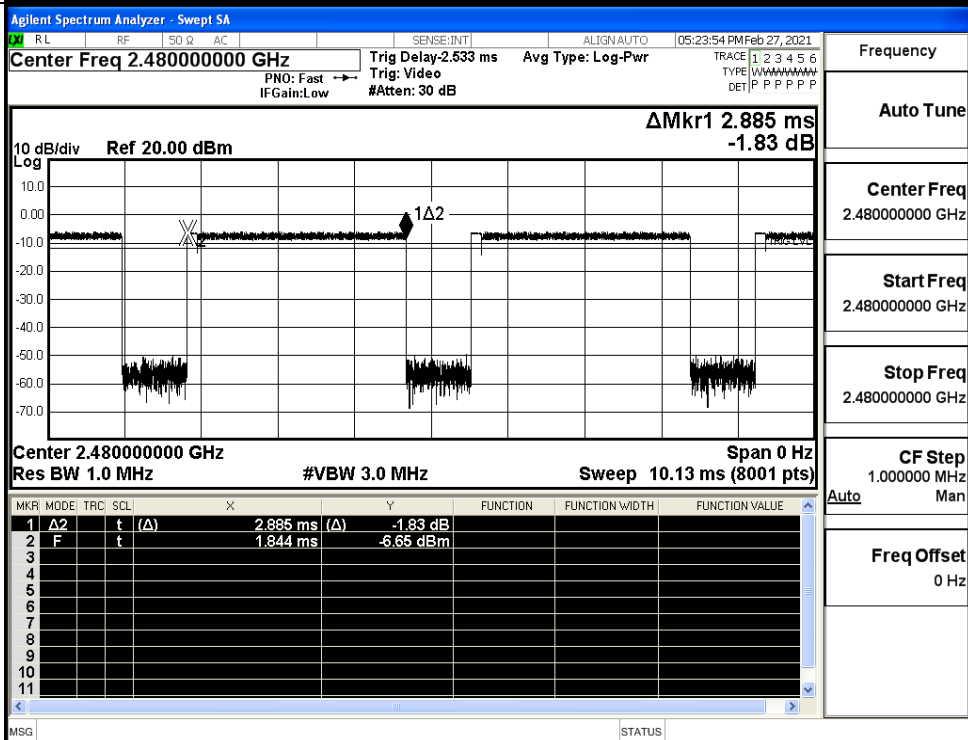
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



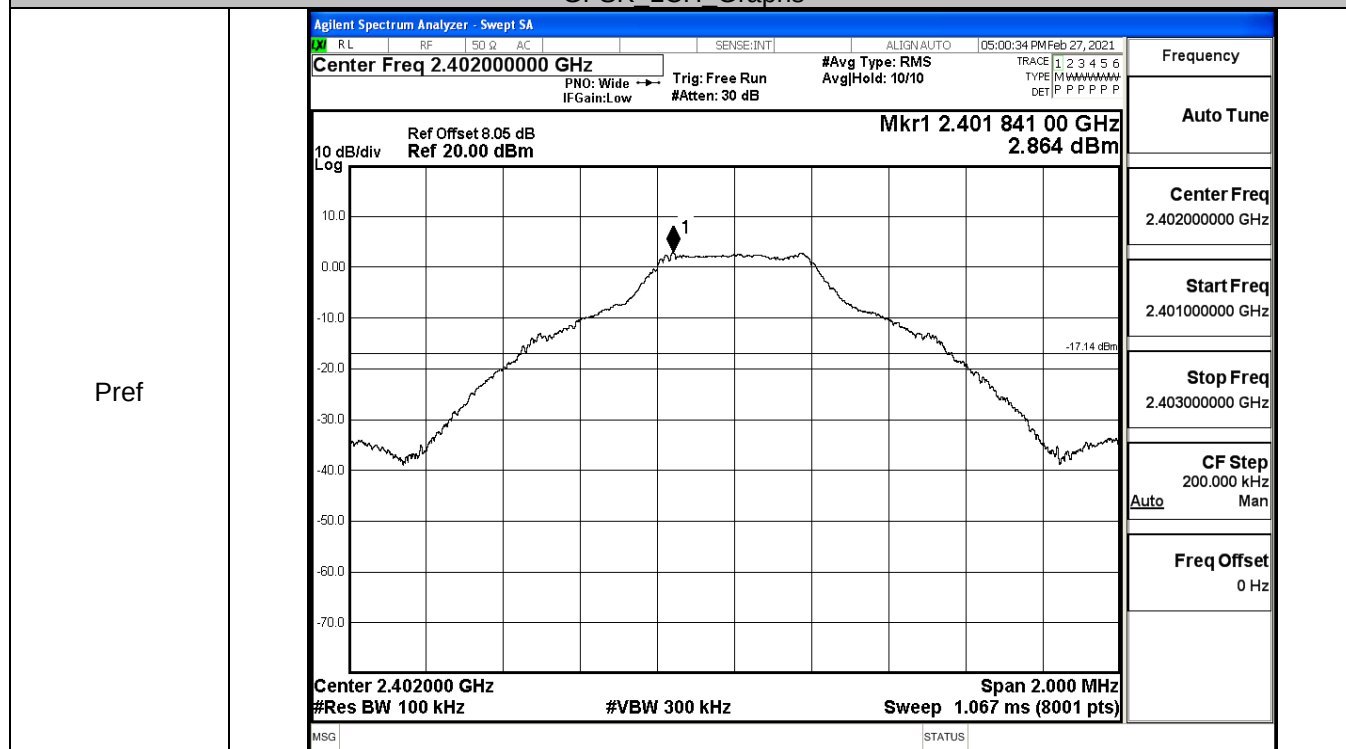
8DPSK_3DH5/HCH



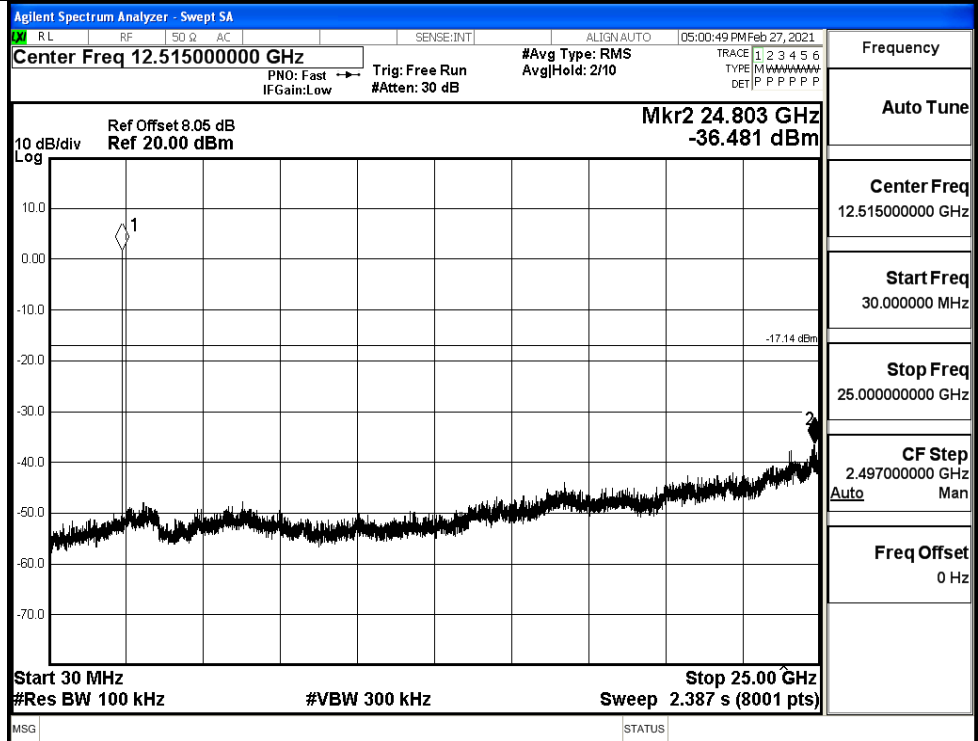
A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.864	-36.481	-17.136	PASS
	MCH	4.53	-37.497	-15.470	PASS
	HCH	2.933	-37.718	-17.067	PASS
$\pi/4$ DQPSK	LCH	1.308	-37.165	-18.692	PASS
	MCH	2.368	-37.341	-17.632	PASS
	HCH	0.775	-37.094	-19.225	PASS
8DPSK	LCH	1.487	-38.462	-18.513	PASS
	MCH	2.985	-38.149	-17.015	PASS
	HCH	1.211	-36.568	-18.789	PASS

GFSK LCH Graphs

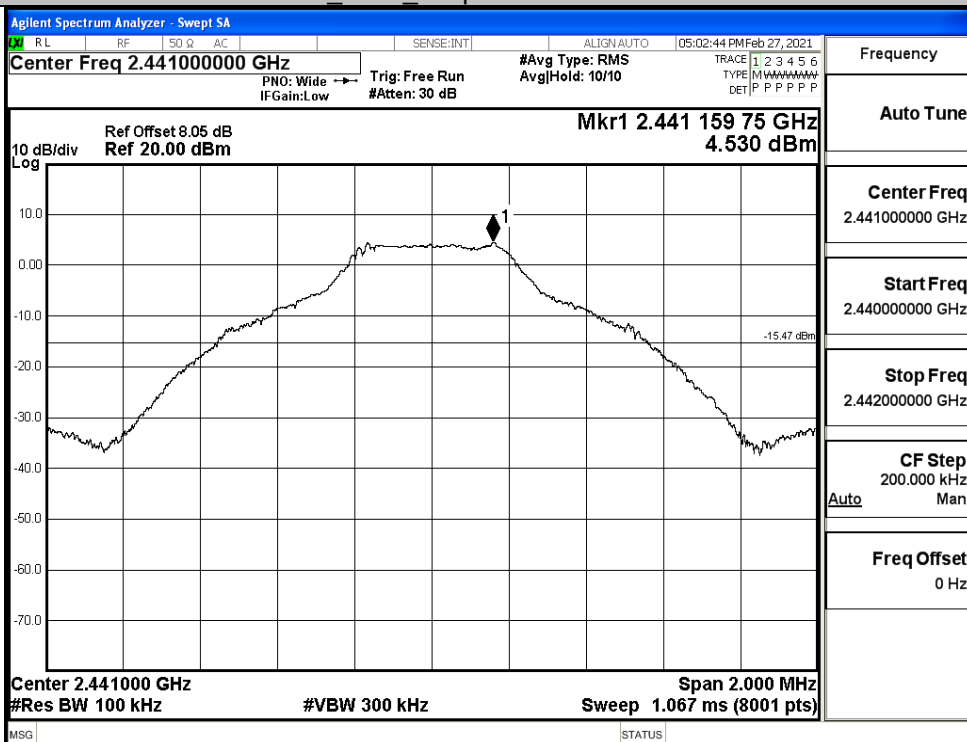


Puw

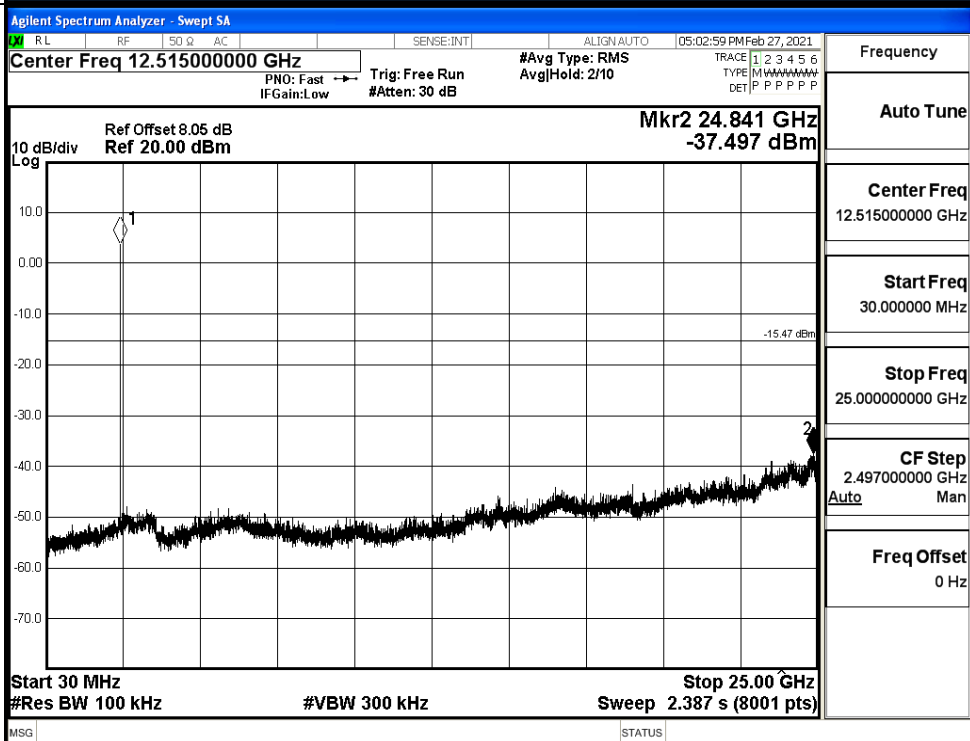


GFSK_MCH_Graphs

Pref

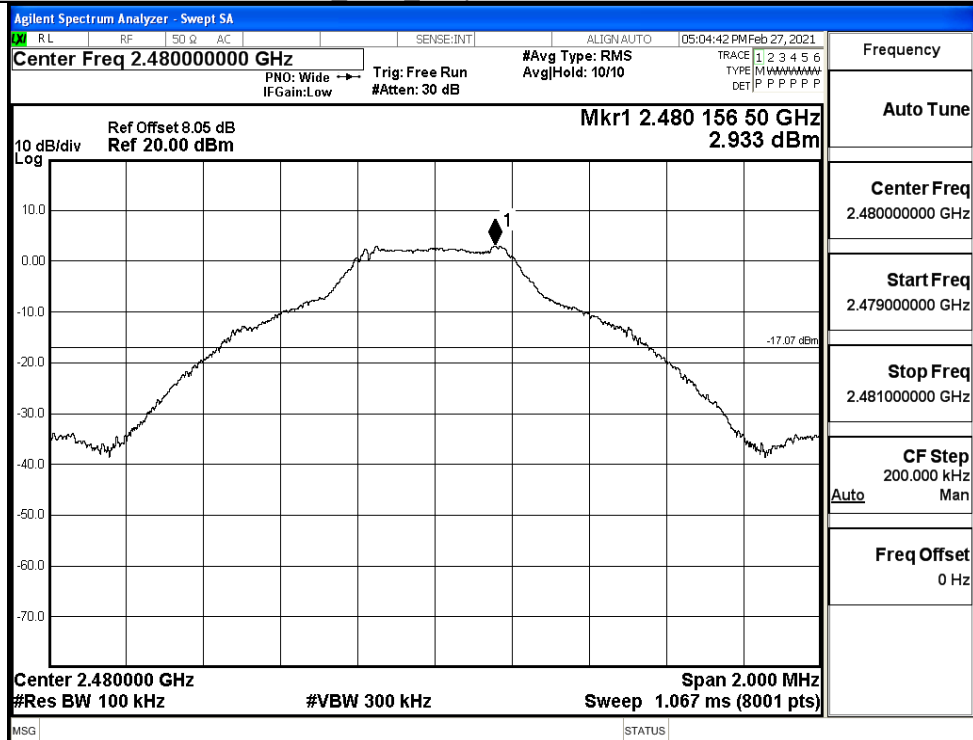


Puw

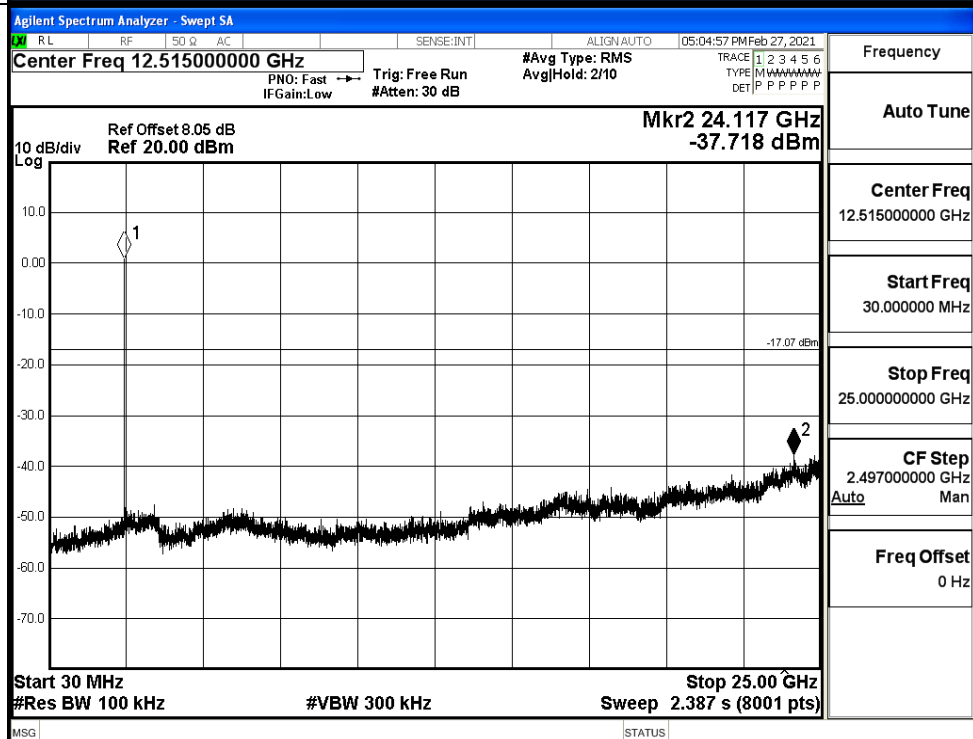


GFSK HCH_Graphs

Pref

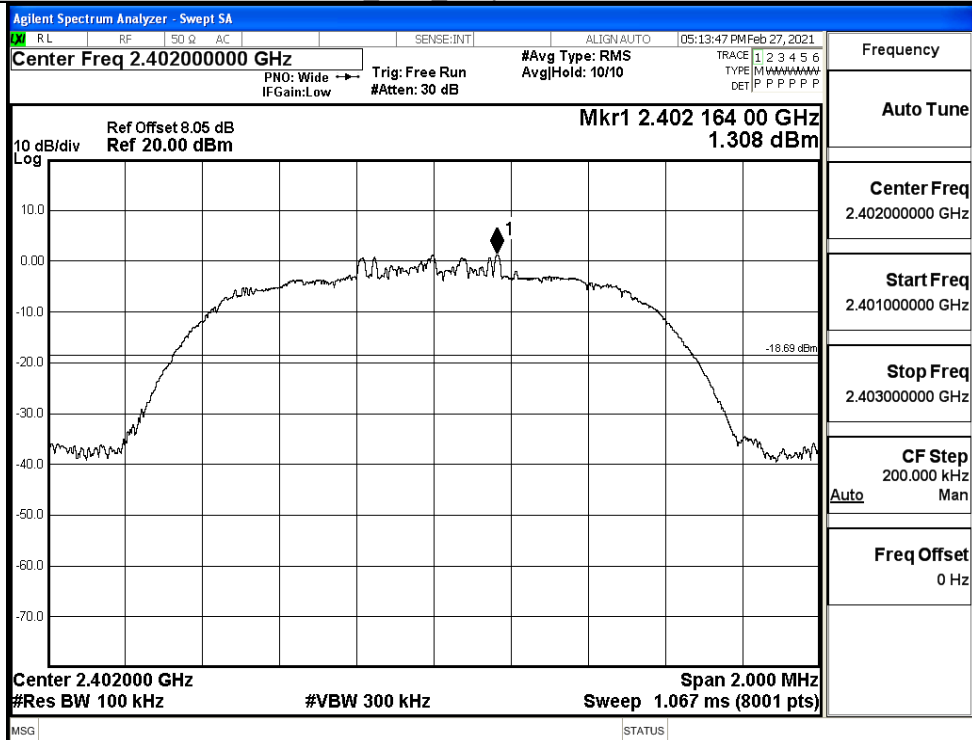


Puw

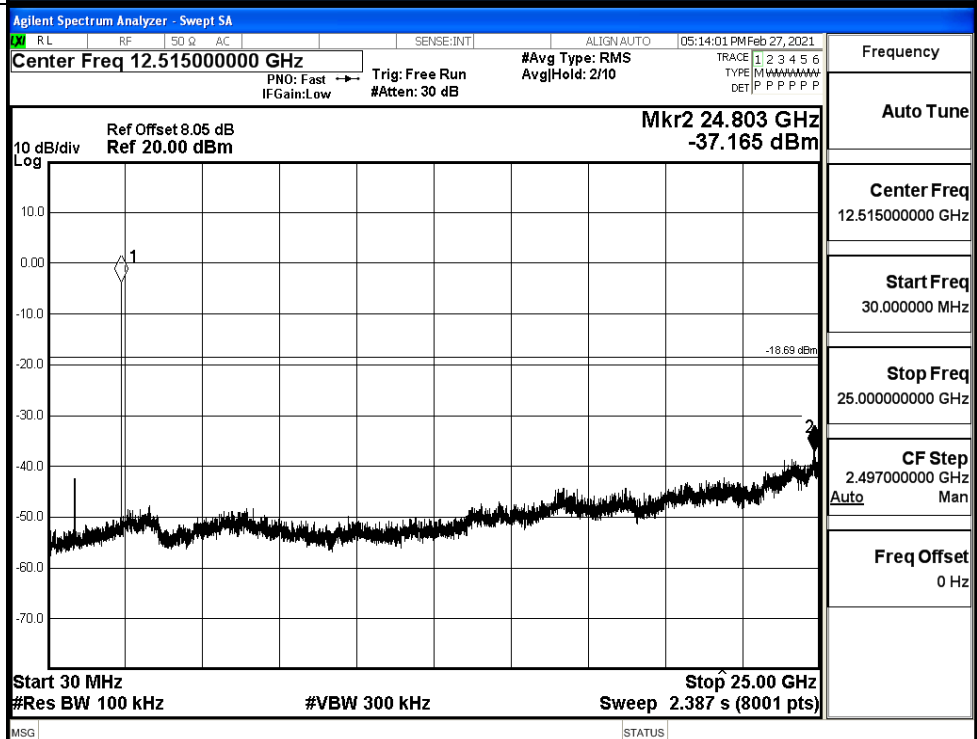


$\pi/4$ DQPSK_LCH_Graphs

Pref

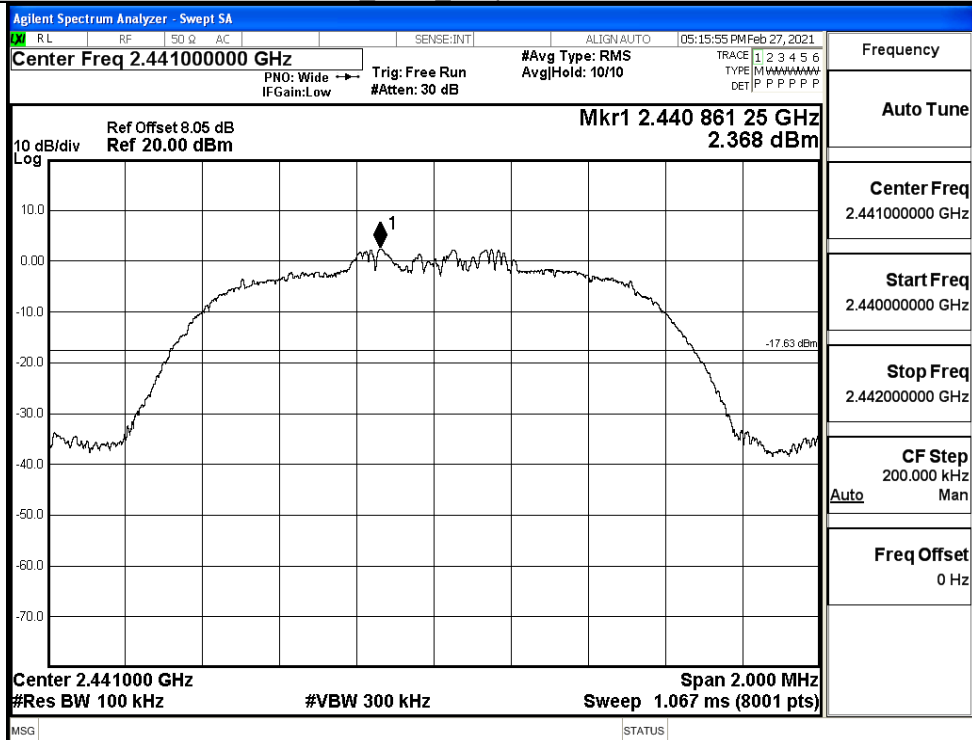


Puw

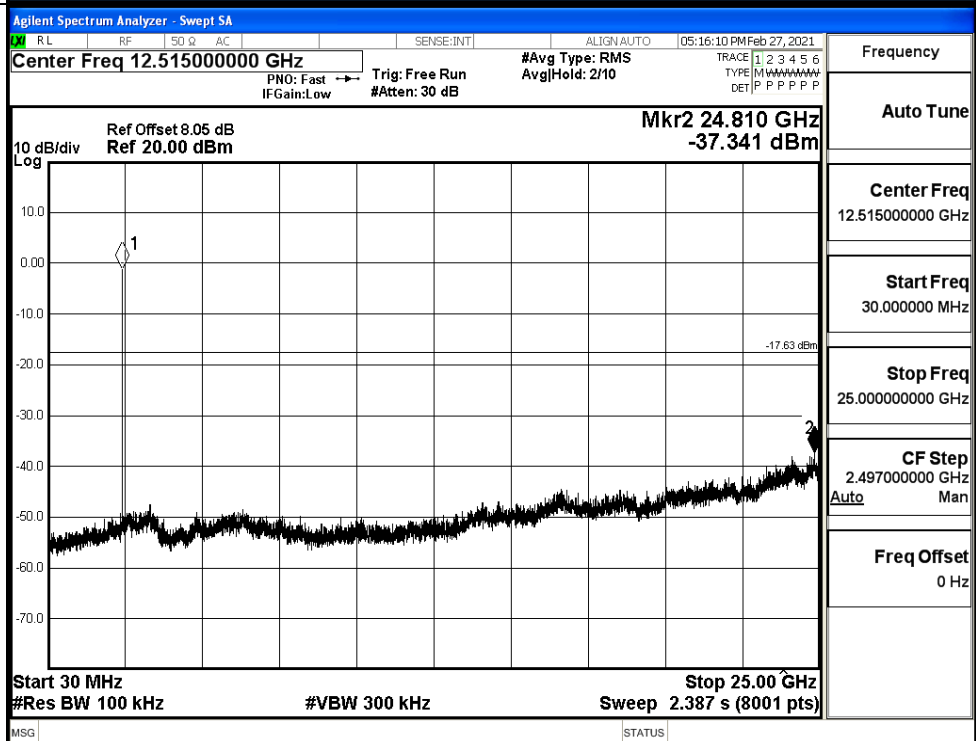


π /4DQPSK_MCH_Graphs

Pref

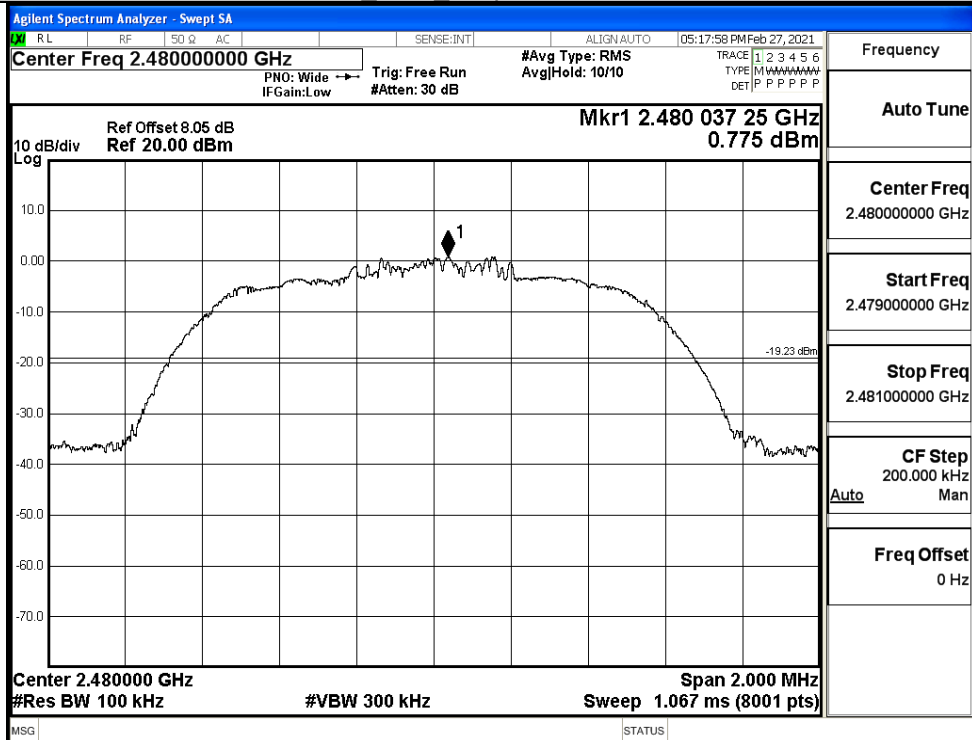


Puw

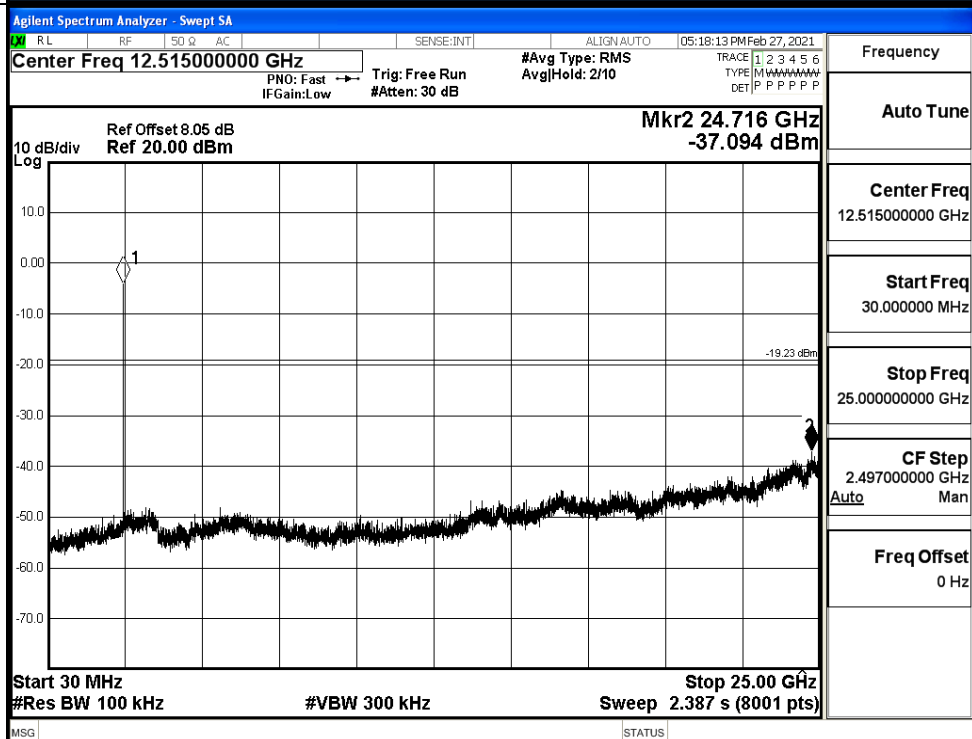


$\pi/4$ DQPSK_HCH_Graphs

Pref

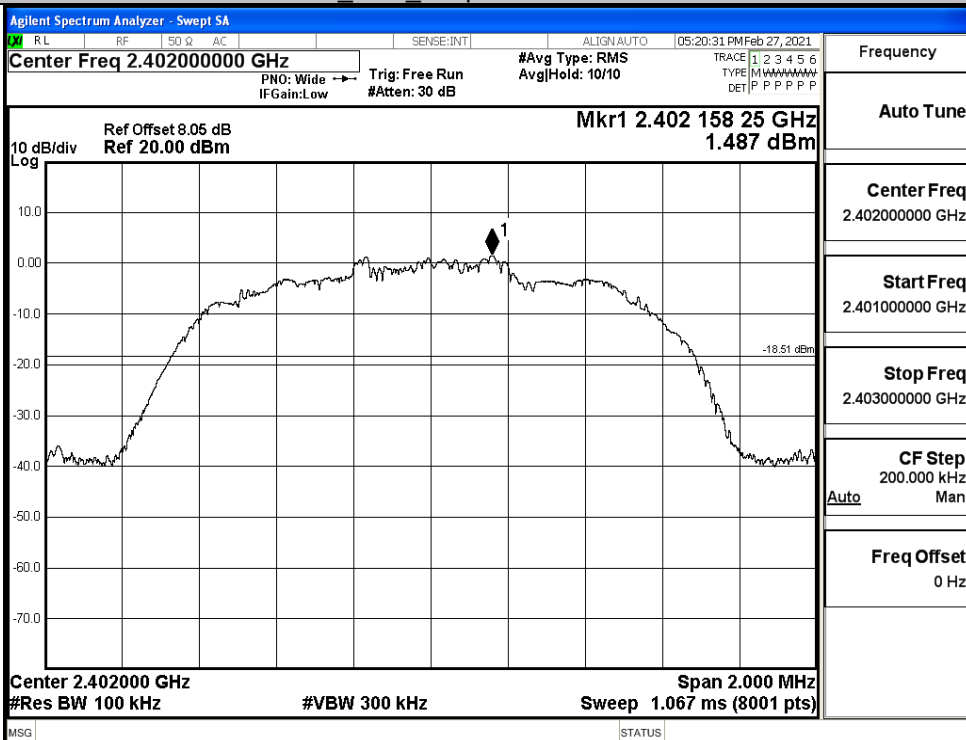


Puw

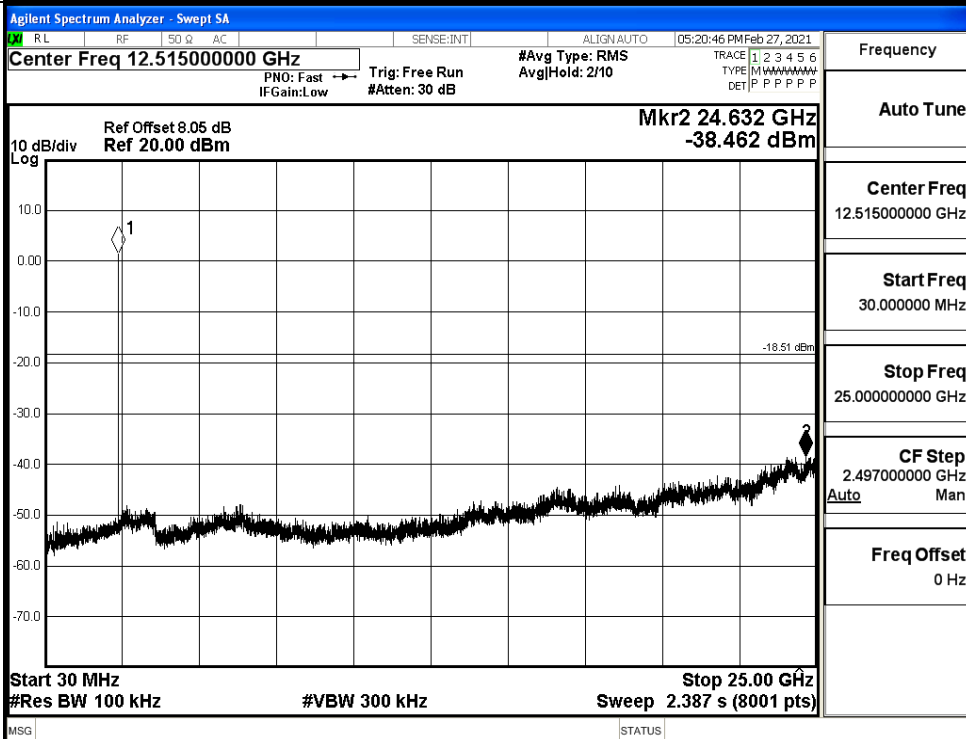


8DPSK_LCH_Graphs

Pref

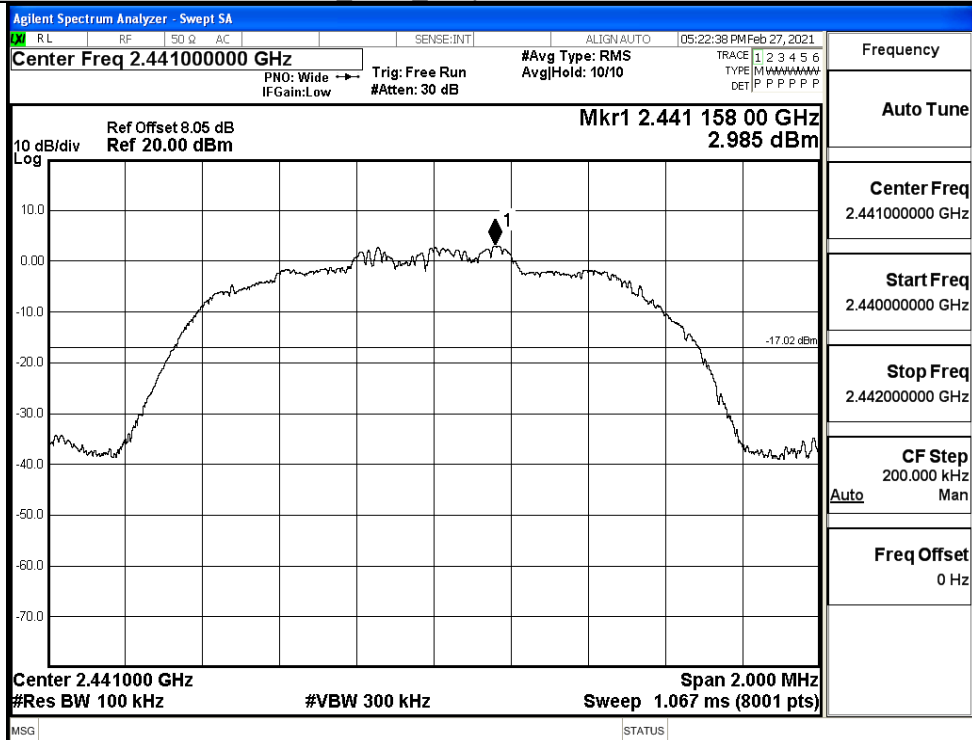


Puw



8DPSK_MCH_Graphs

Pref

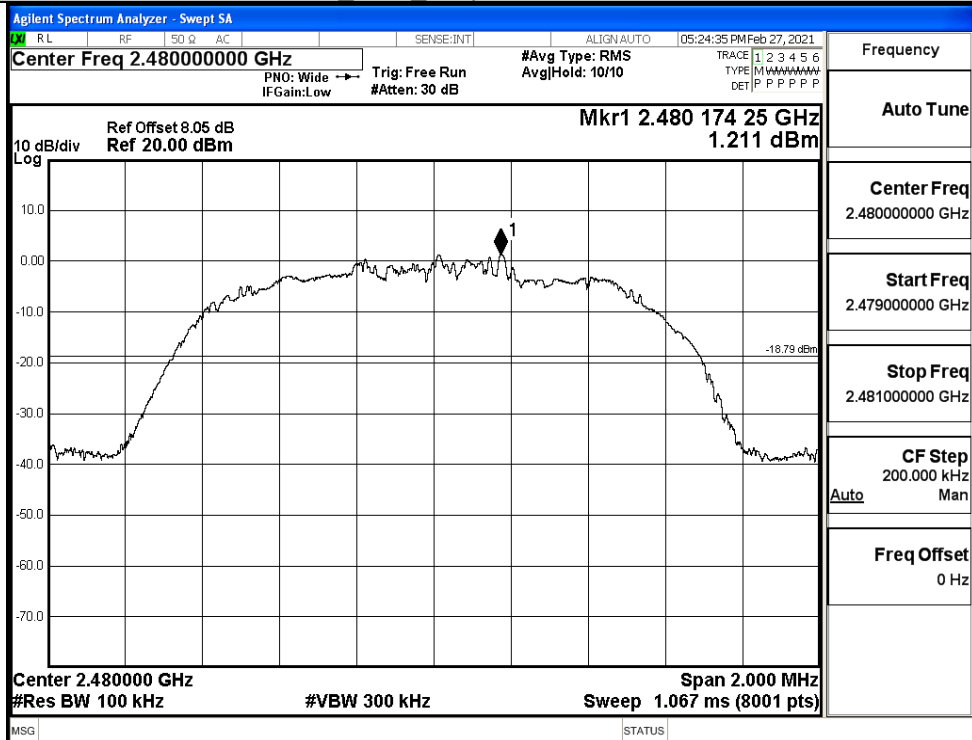


Puw

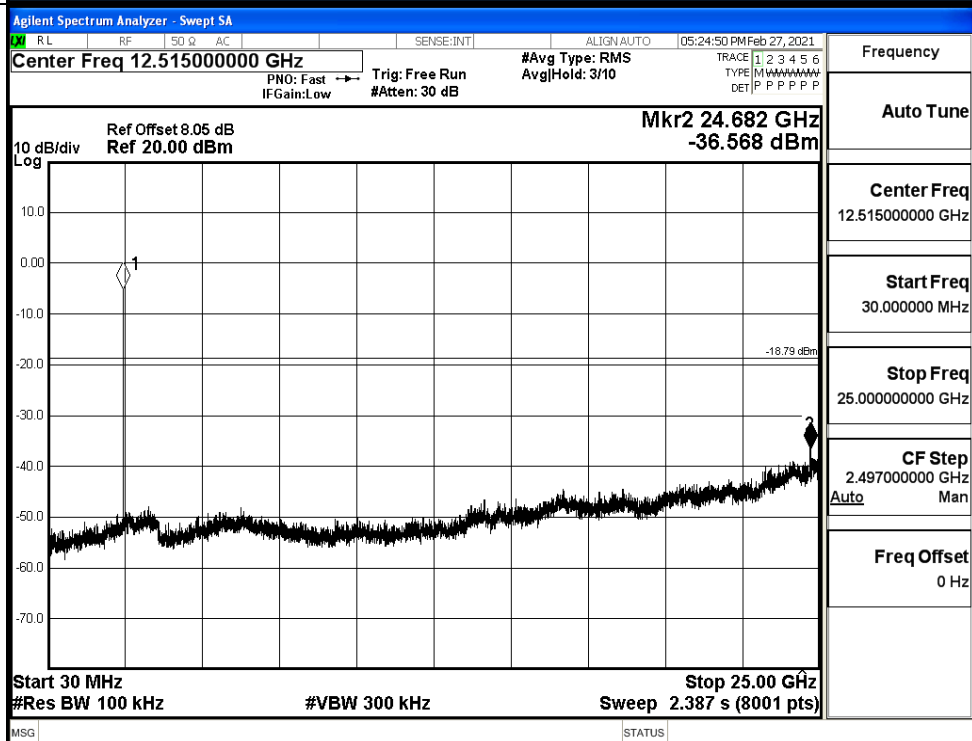


8DPSK_HCH_Graphs

Pref



Puw

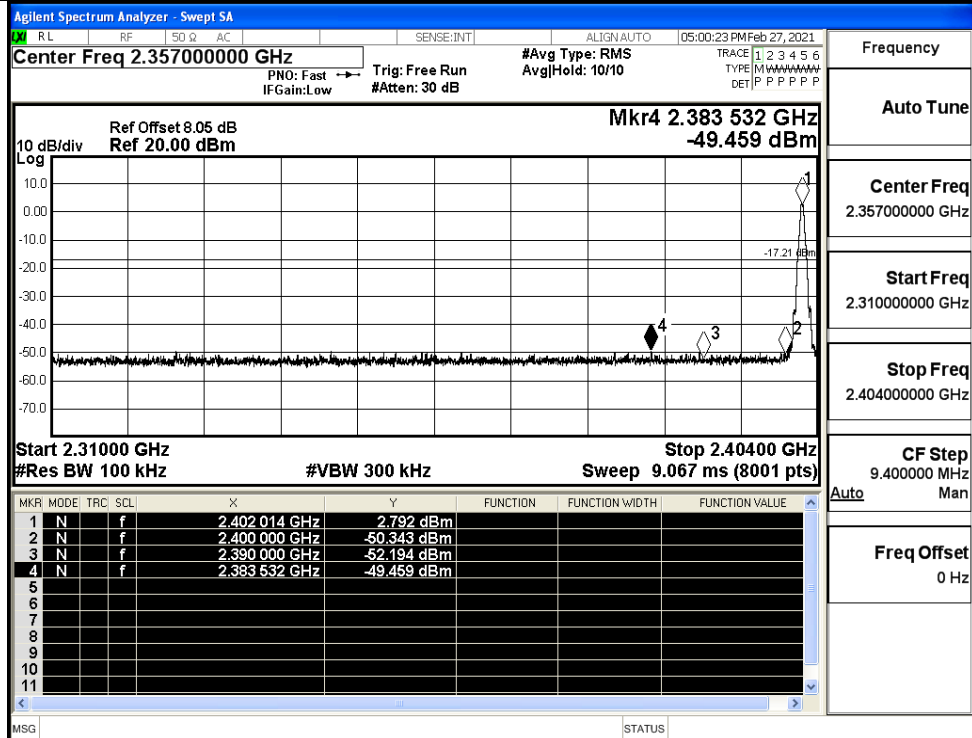


A.7 Band-edge for RF Conducted Emissions

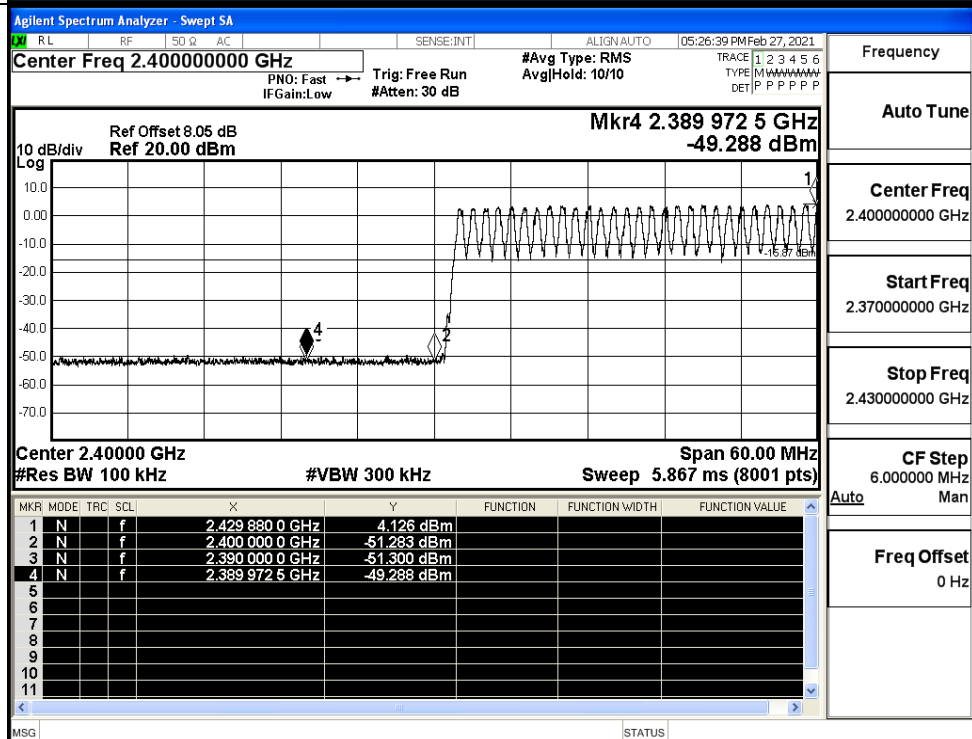
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	2.792	Off	-49.459	-17.21	PASS
			4.126	On	-49.288	-15.87	PASS
	HCH	2480	3.087	Off	-48.453	-16.91	PASS
			4.210	On	-47.957	-15.79	PASS
$\pi/4$ DQPSK	LCH	2402	0.904	Off	-49.247	-19.1	PASS
			2.881	On	-48.592	-17.12	PASS
	HCH	2480	1.557	Off	-48.800	-18.44	PASS
			2.682	On	-48.345	-17.32	PASS
8DPSK	LCH	2402	1.462	Off	-49.613	-18.54	PASS
			2.665	On	-48.738	-17.34	PASS
	HCH	2480	1.678	Off	-49.512	-18.32	PASS
			2.336	On	-48.188	-17.66	PASS

Test Graphs

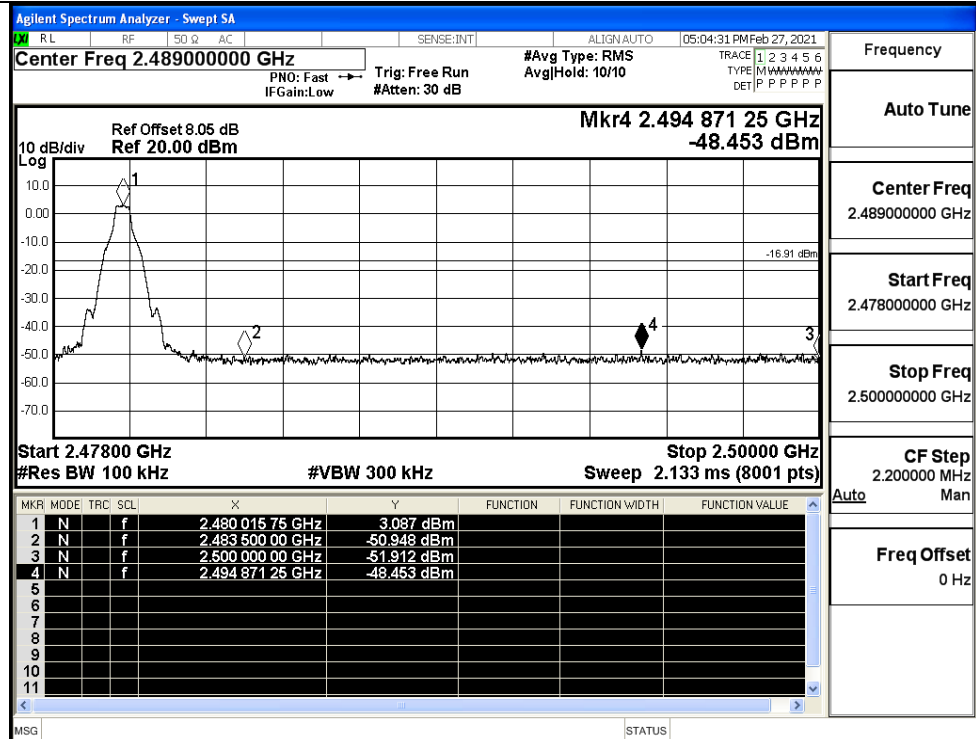
GFSK/LCH/No Hop



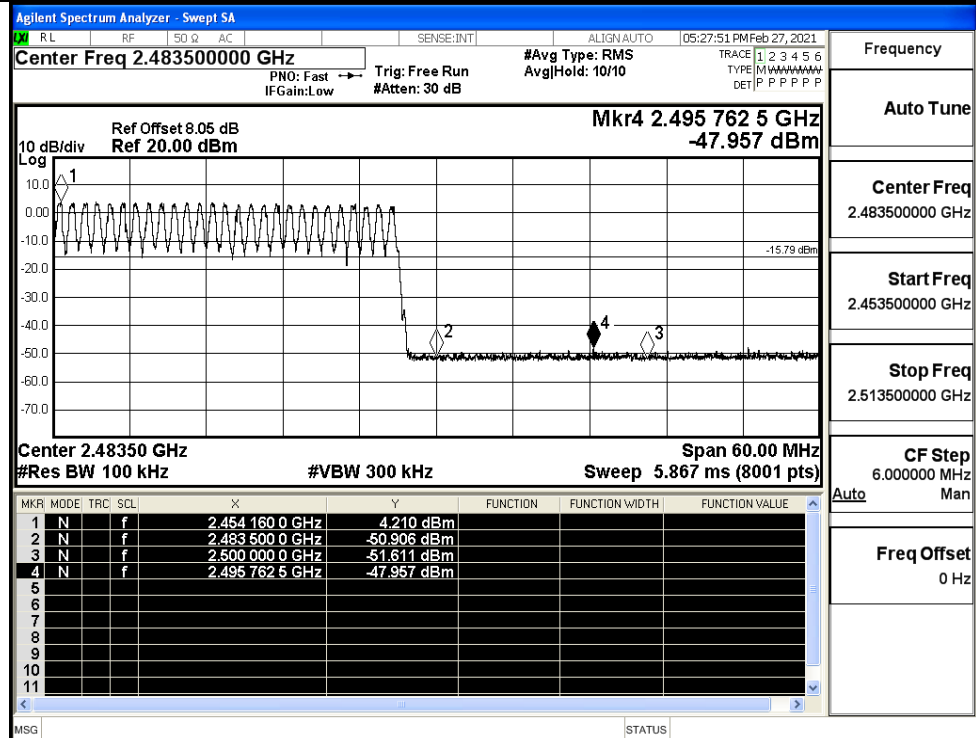
GFSK/LCH/Hop



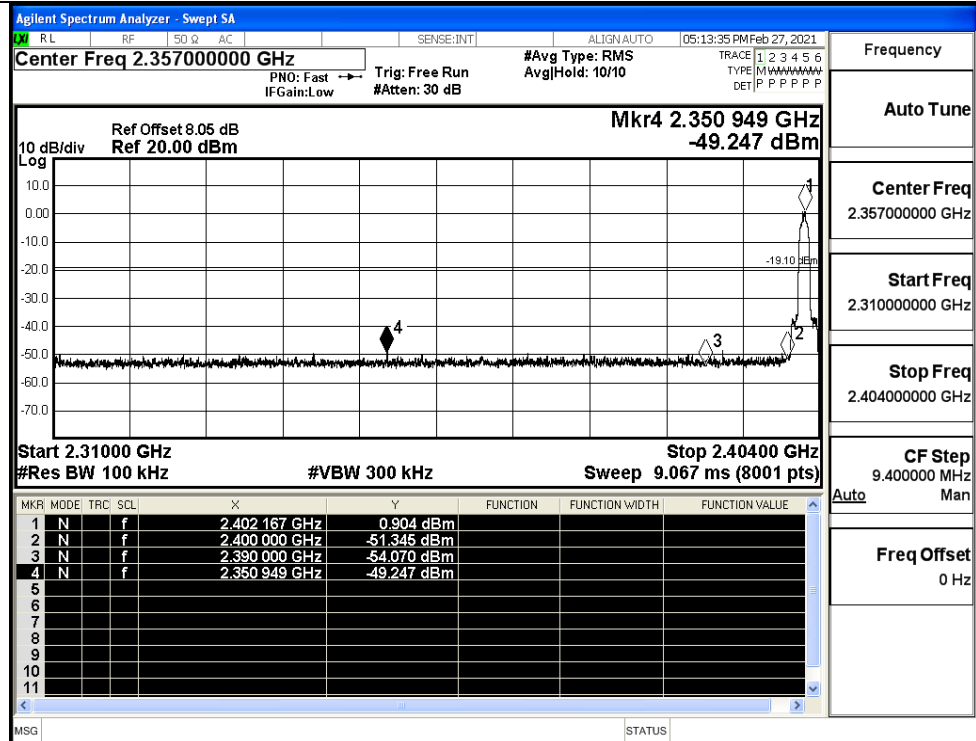
GFSK/HCH/No Hop



GFSK/HCH/Hop



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

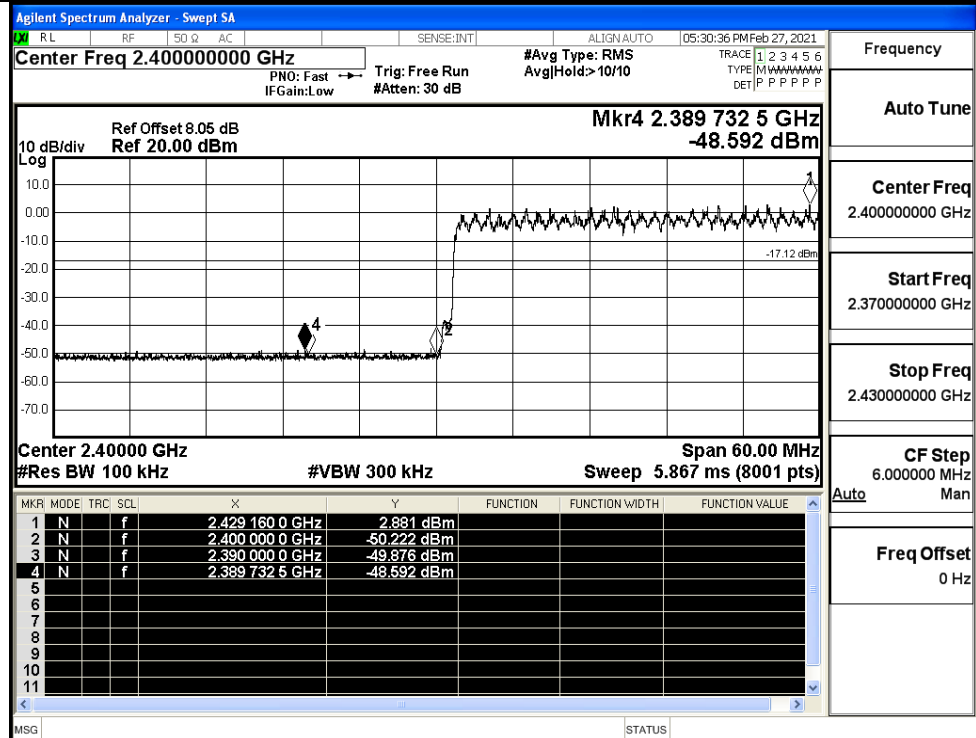


Frequency

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

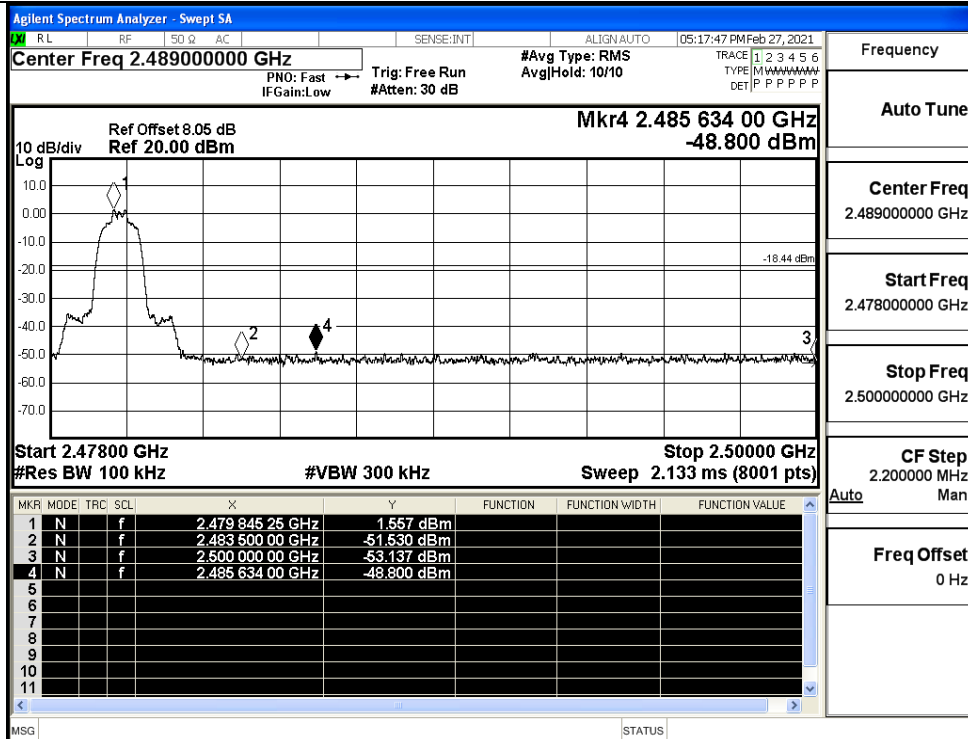


Frequency

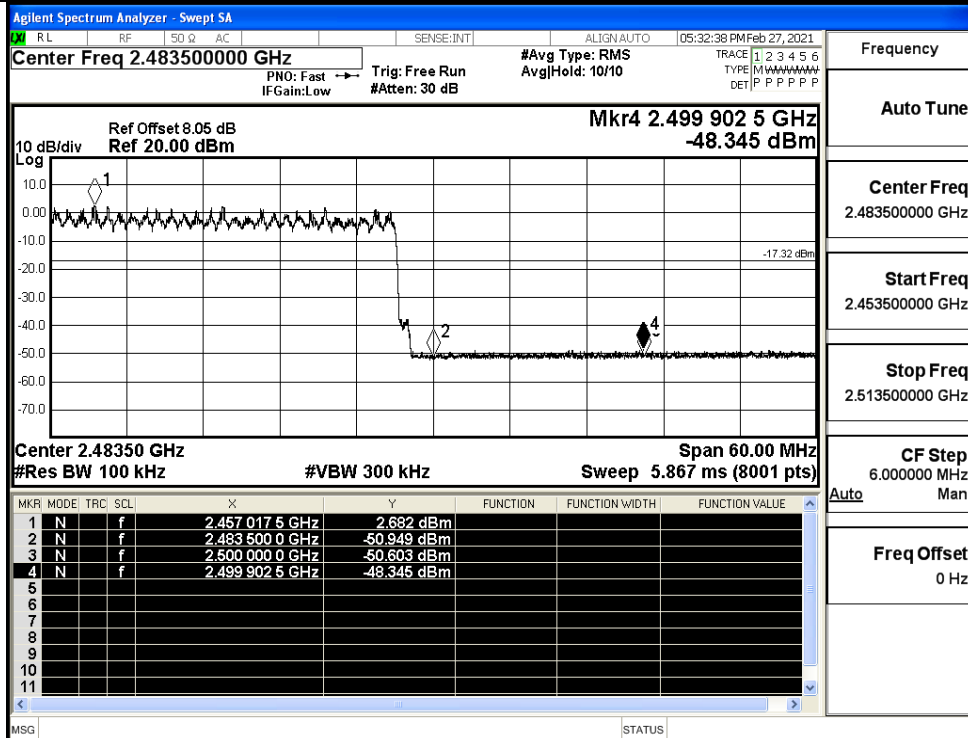
Auto Tune

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

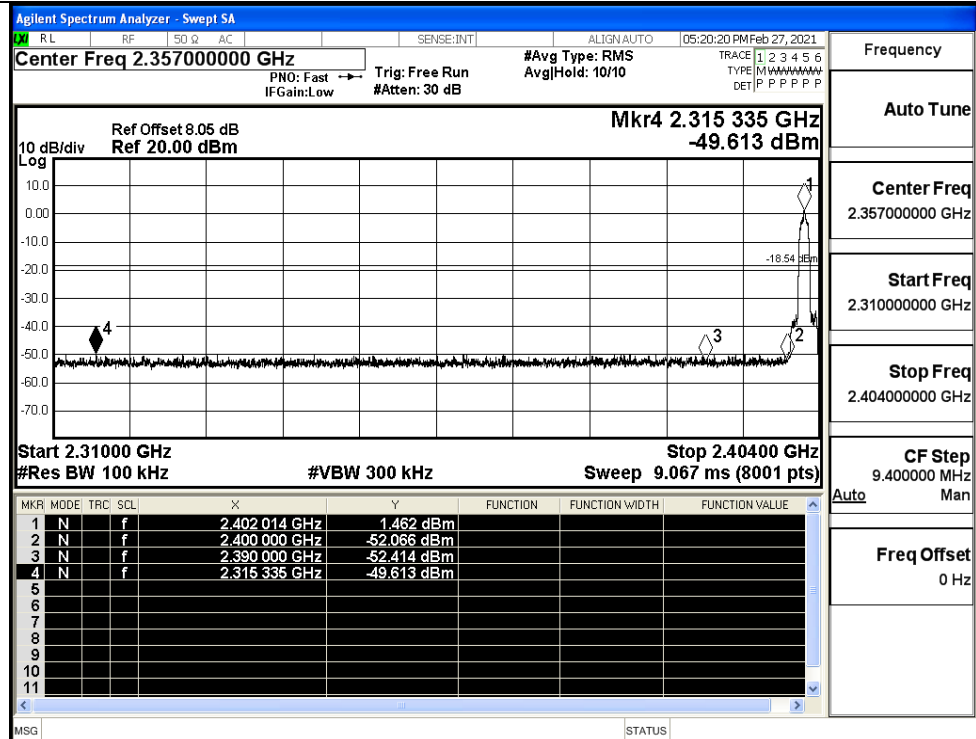
$\pi/4$ DQPSK/HCH/No
Hop



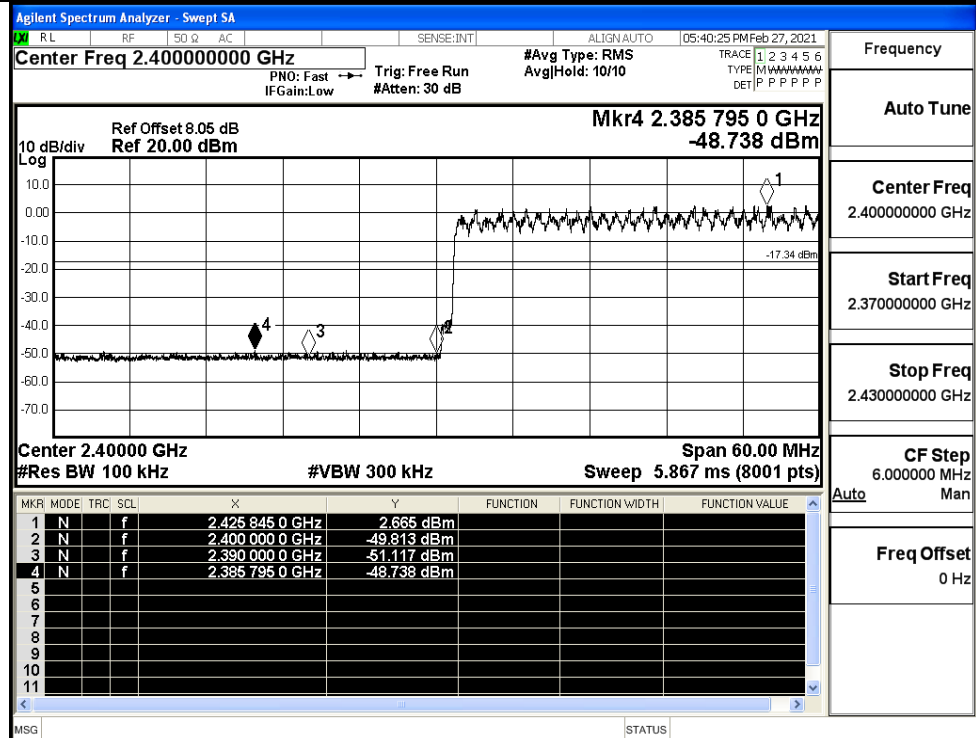
$\pi/4$ DQPSK/HCH/Hop



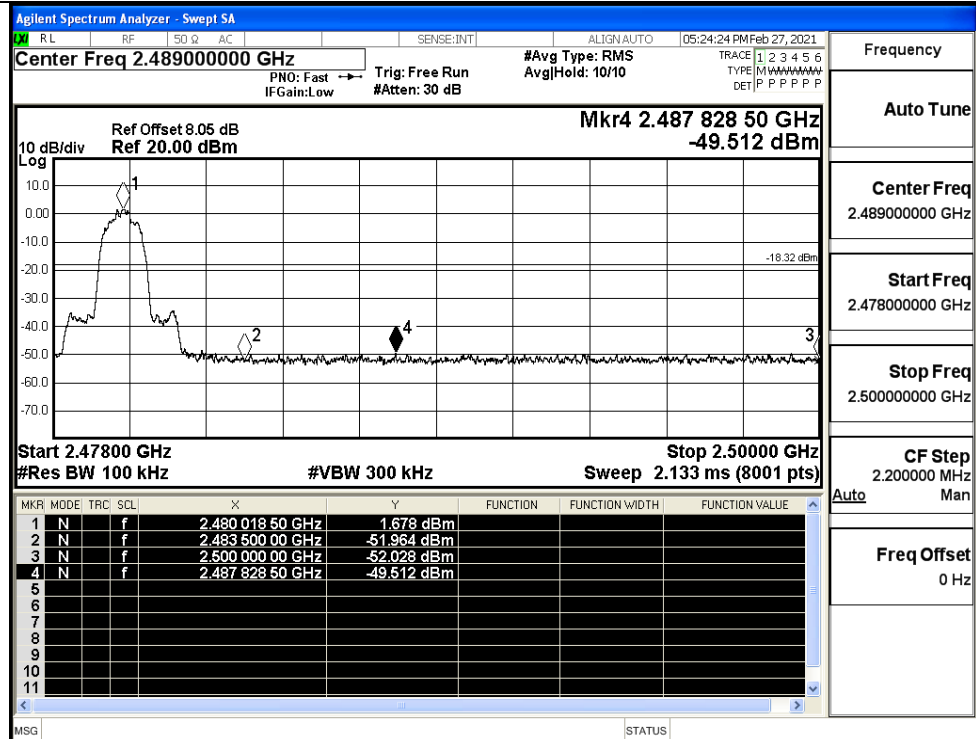
8DPSK/LCH/No Hop



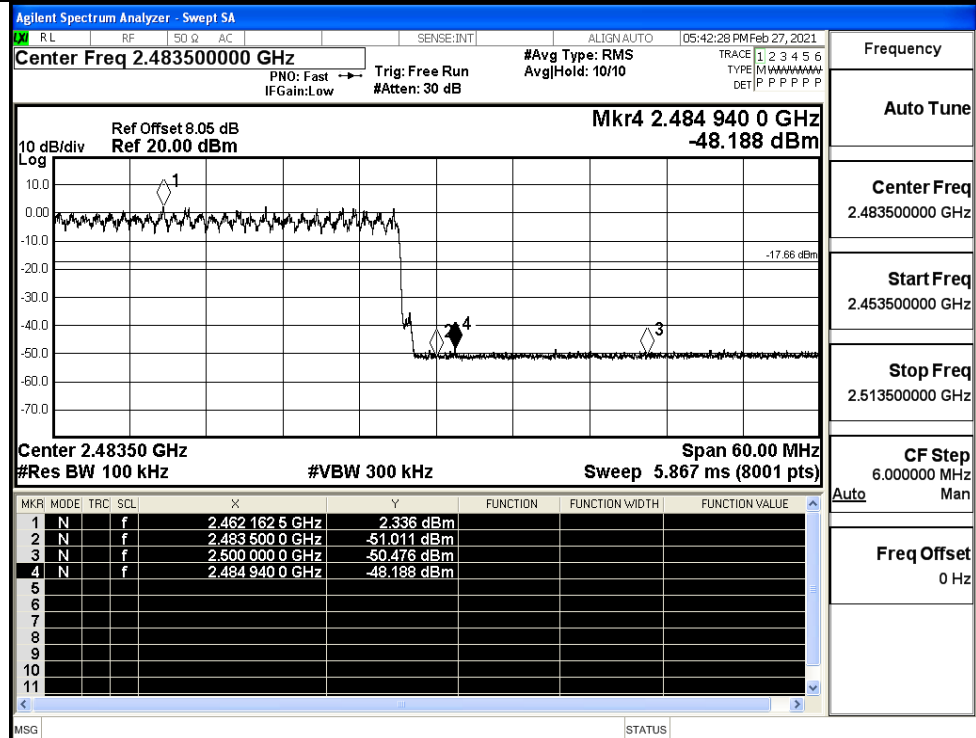
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



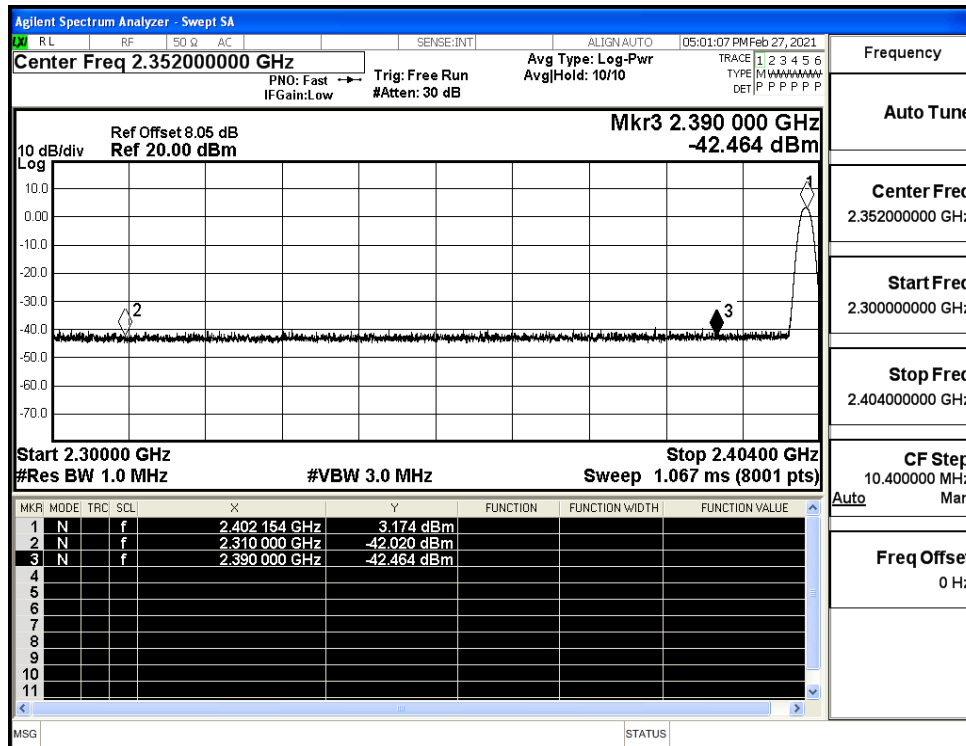
8DPSK/HCH/Hop



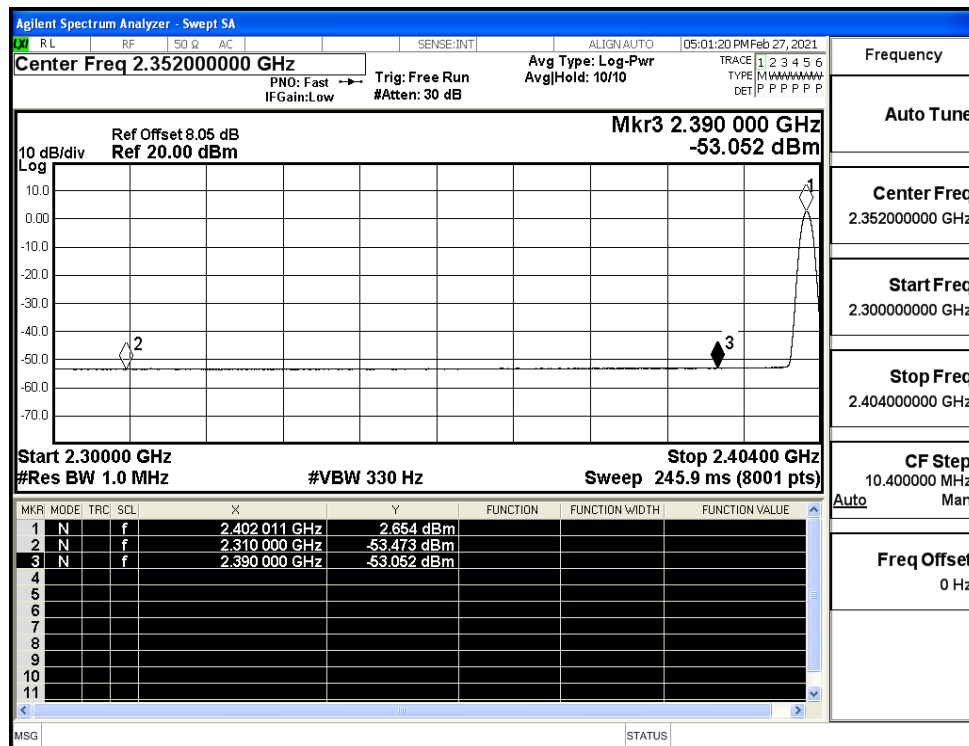
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-42.02	2.0	0	53.24	PEAK	74	PASS
	Off	2310.0	-53.47	2.0	0	41.78	AV	54	PASS
	Off	2390.0	-42.46	2.0	0	52.79	PEAK	74	PASS
	Off	2390.0	-53.05	2.0	0	42.21	AV	54	PASS
	Off	2483.5	-42.75	2.0	0	52.50	PEAK	74	PASS
	Off	2483.5	-52.41	2.0	0	42.85	AV	54	PASS
	Off	2500.0	-42.07	2.0	0	53.19	PEAK	74	PASS
	Off	2500.0	-52.30	2.0	0	42.95	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.58	2.0	0	51.68	PEAK	74	PASS
	Off	2310.0	-53.27	2.0	0	41.99	AV	54	PASS
	Off	2390.0	-43.29	2.0	0	51.97	PEAK	74	PASS
	Off	2390.0	-52.90	2.0	0	42.36	AV	54	PASS
	Off	2483.5	-43.00	2.0	0	52.26	PEAK	74	PASS
	Off	2483.5	-52.44	2.0	0	42.81	AV	54	PASS
	Off	2500.0	-42.54	2.0	0	52.71	PEAK	74	PASS
	Off	2500.0	-52.43	2.0	0	42.83	AV	54	PASS
8DPSK	Off	2310.0	-42.73	2.0	0	52.52	PEAK	74	PASS
	Off	2310.0	-53.31	2.0	0	41.95	AV	54	PASS
	Off	2390.0	-42.38	2.0	0	52.88	PEAK	74	PASS
	Off	2390.0	-53.03	2.0	0	42.23	AV	54	PASS
	Off	2483.5	-42.89	2.0	0	52.37	PEAK	74	PASS
	Off	2483.5	-52.47	2.0	0	42.79	AV	54	PASS
	Off	2500.0	-42.47	2.0	0	52.78	PEAK	74	PASS
	Off	2500.0	-52.32	2.0	0	42.94	AV	54	PASS

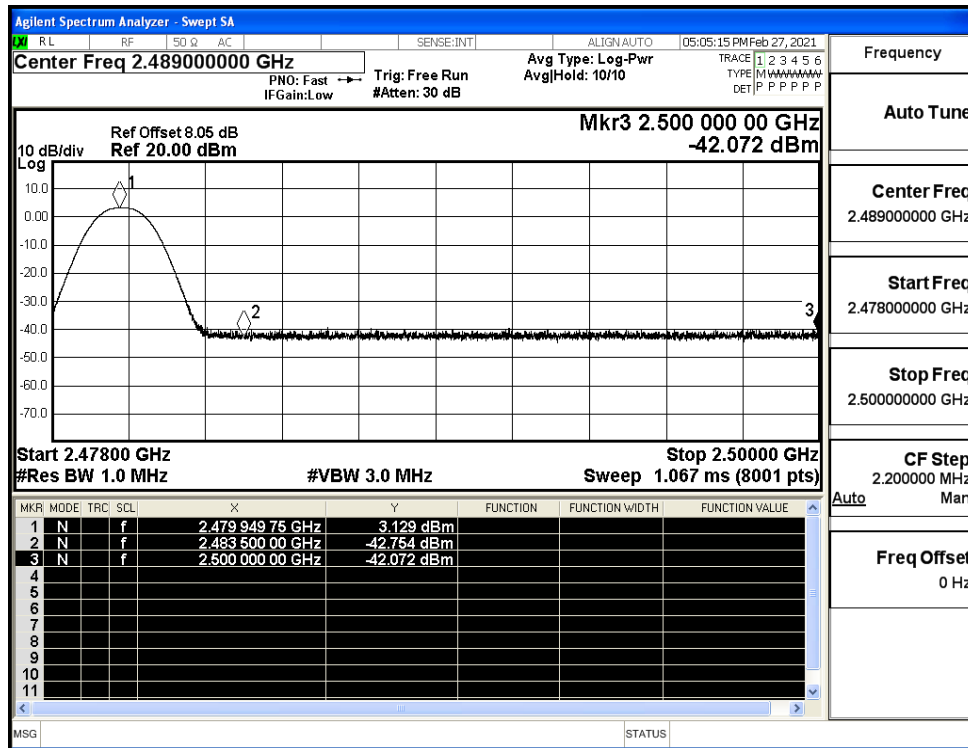
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



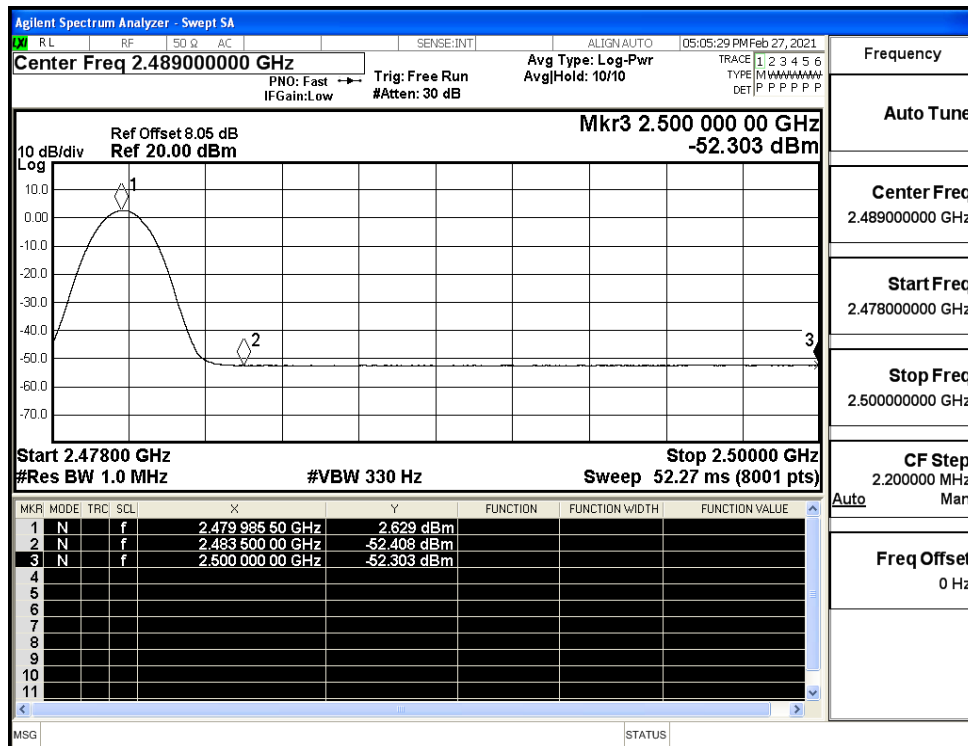
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

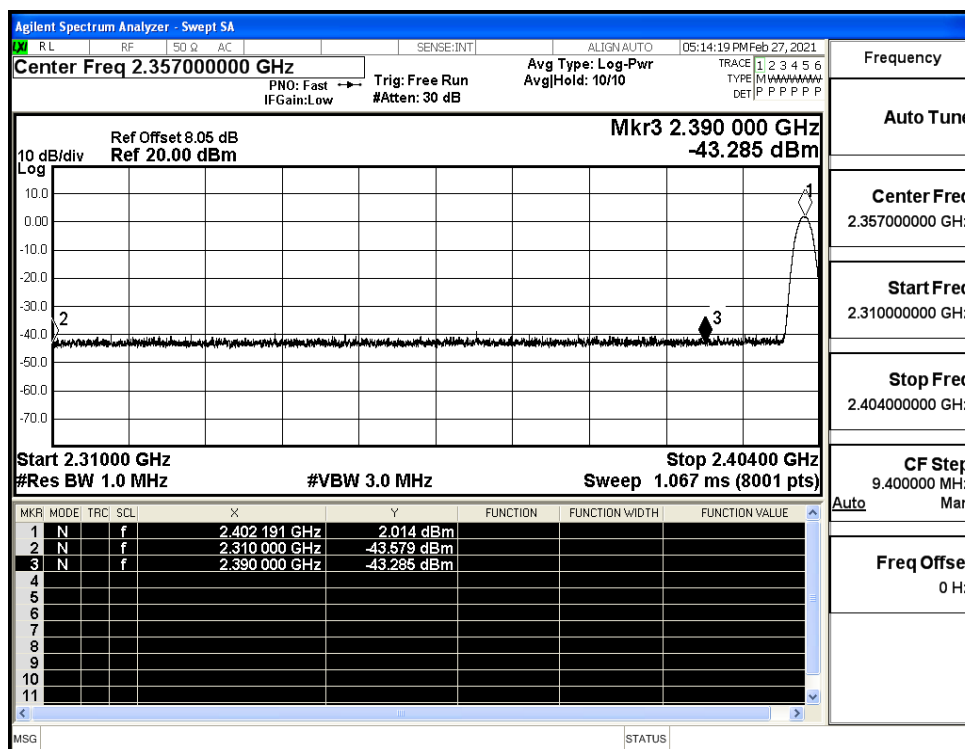
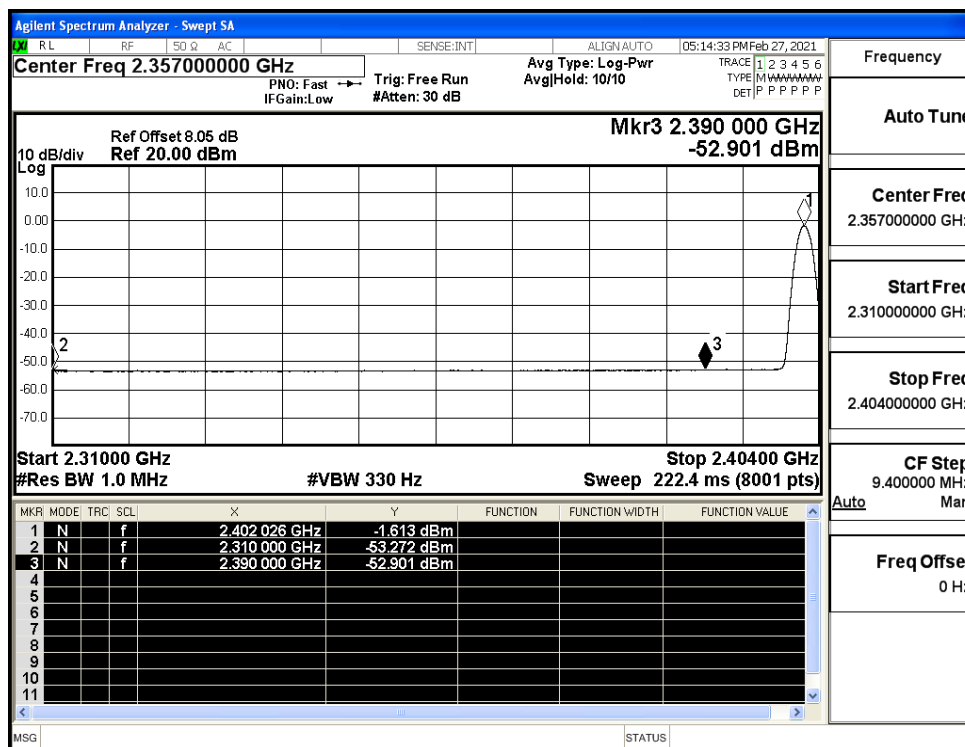


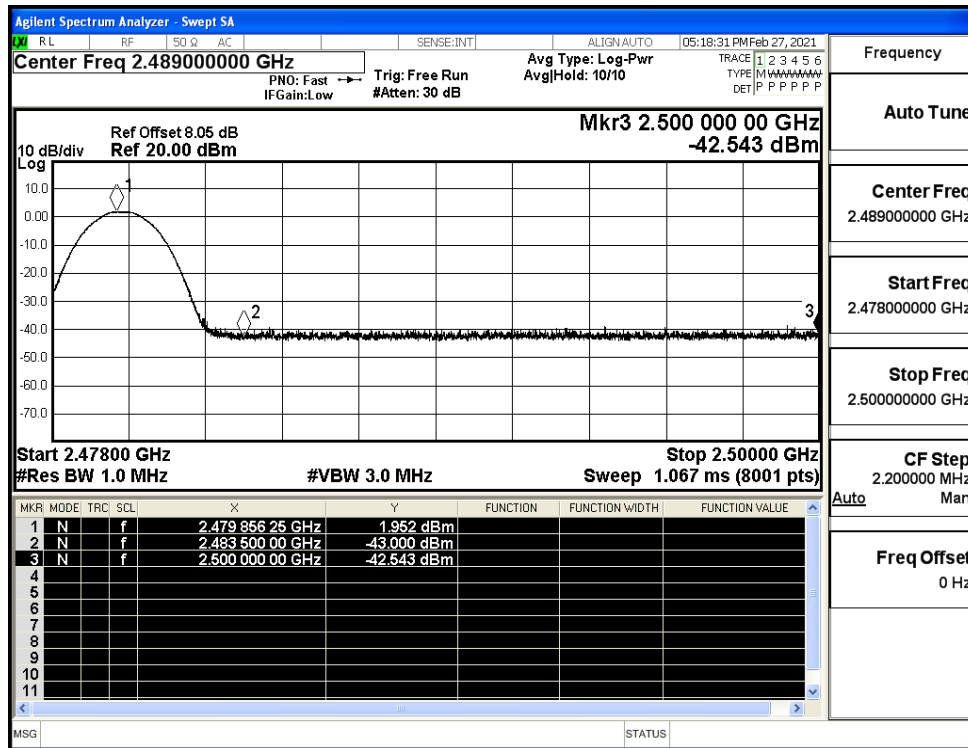
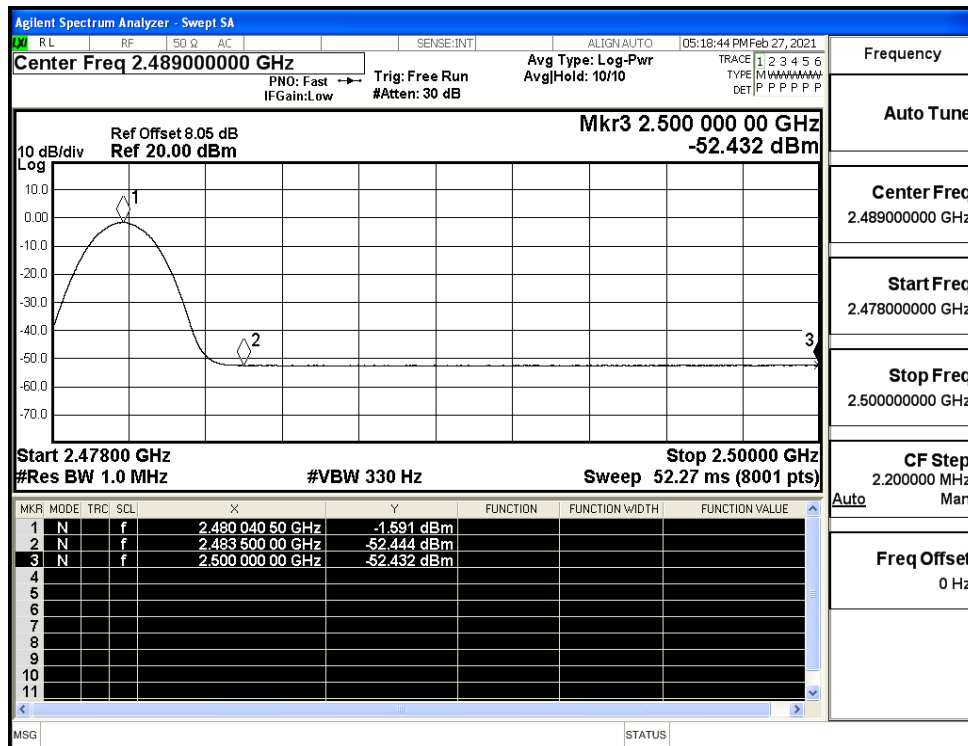
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



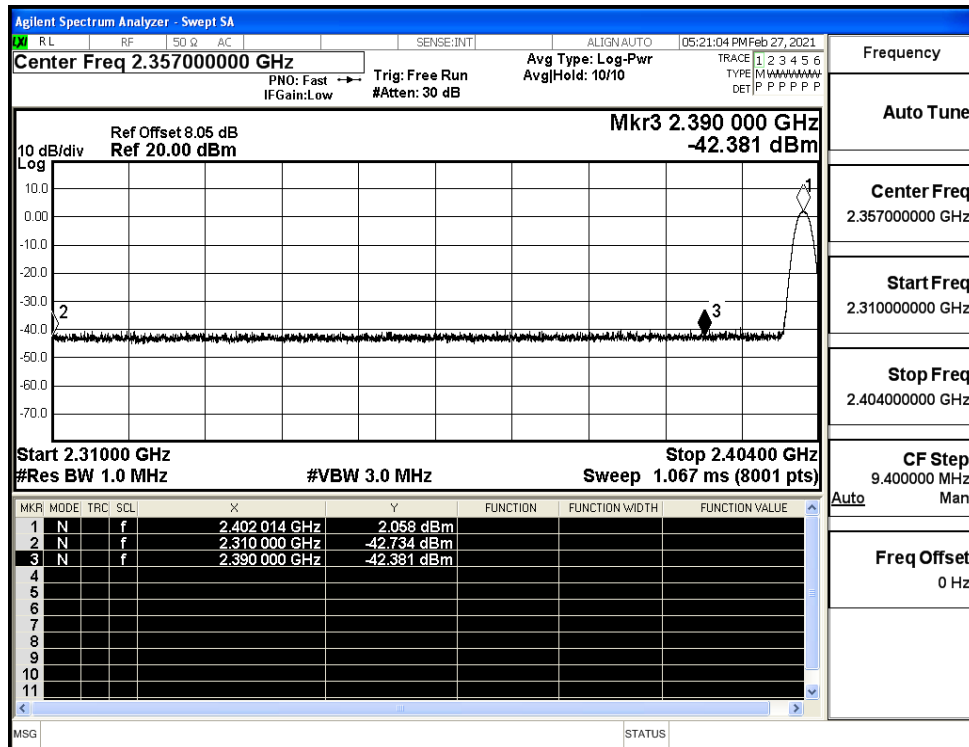
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



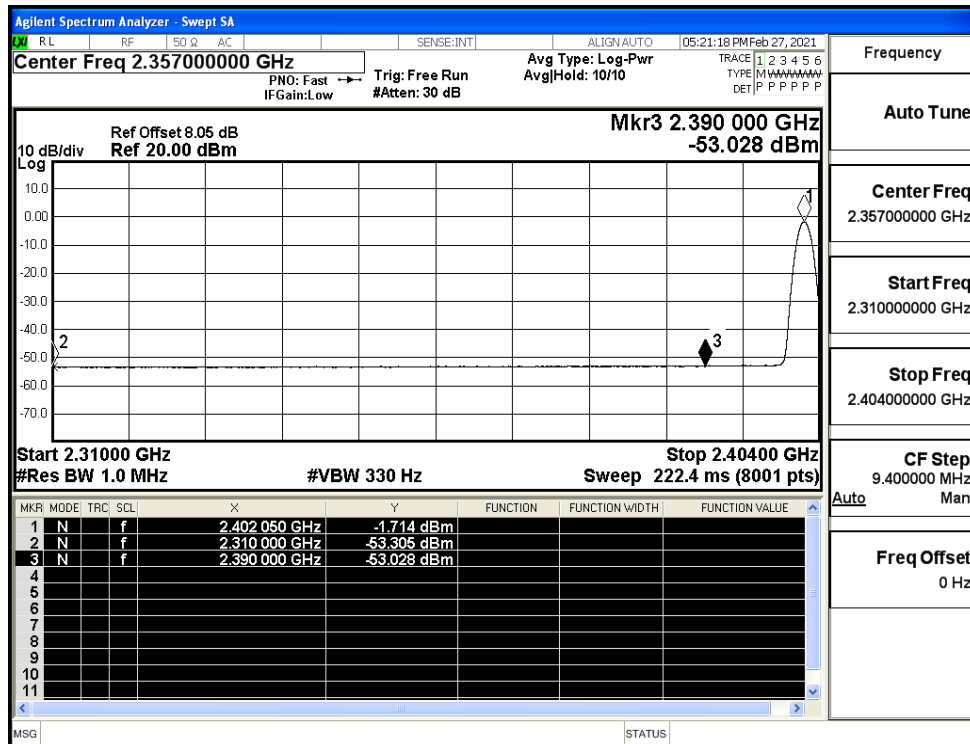
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

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)

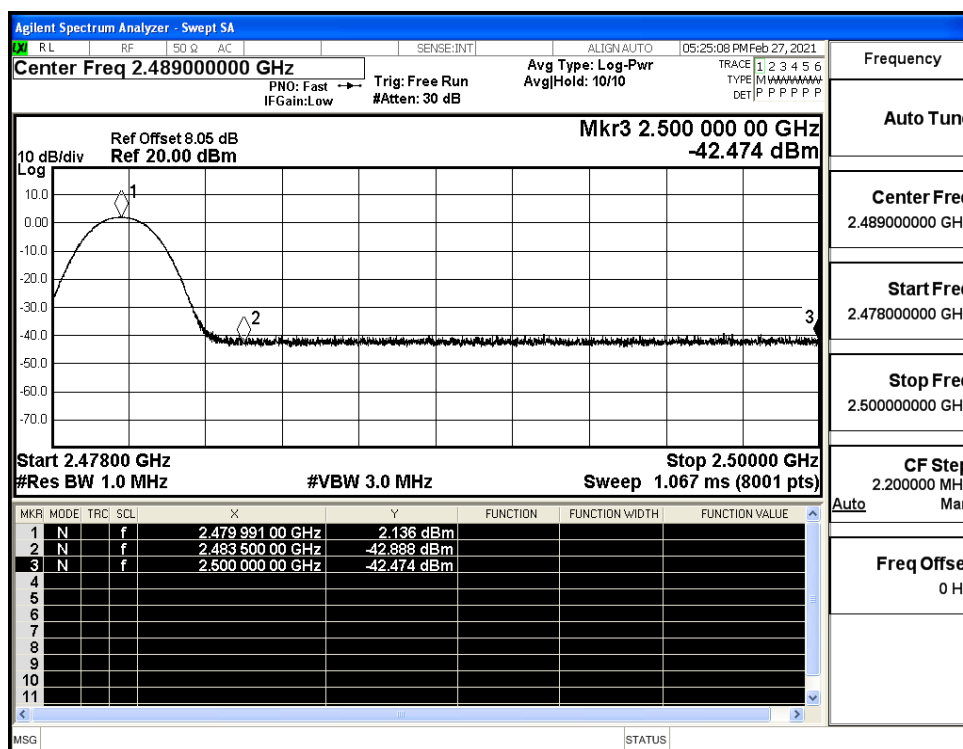
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

