

Appendix A

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

Product Name: Privo

Trade Mark: Privo

Test Model: Privo

Environmental Conditions

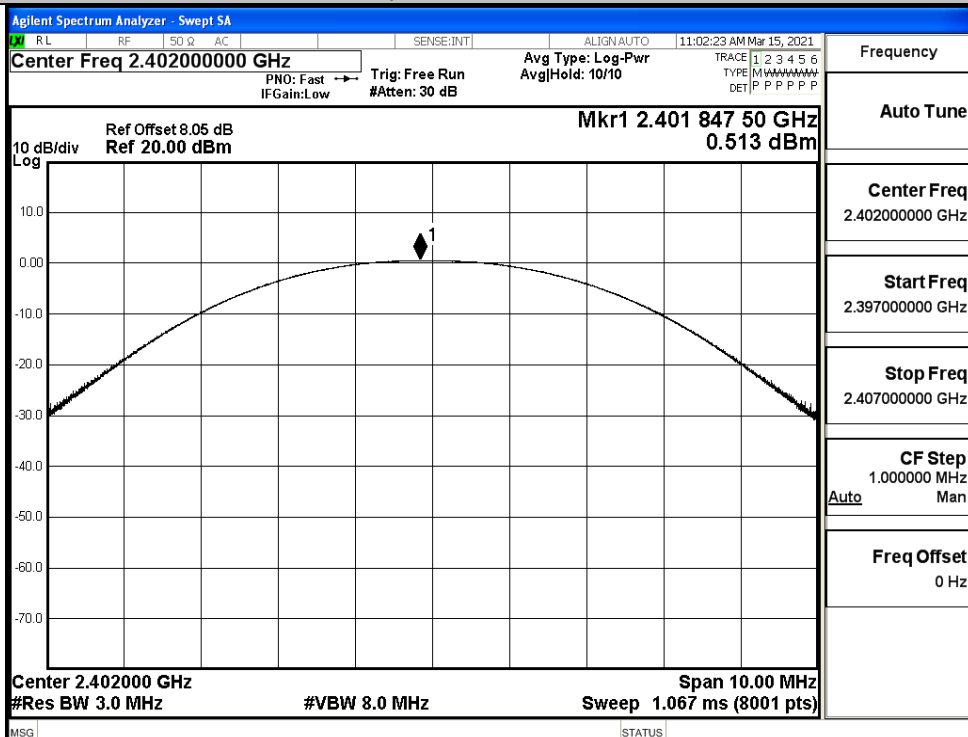
Temperature:	25.6° C
Relative Humidity:	55.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

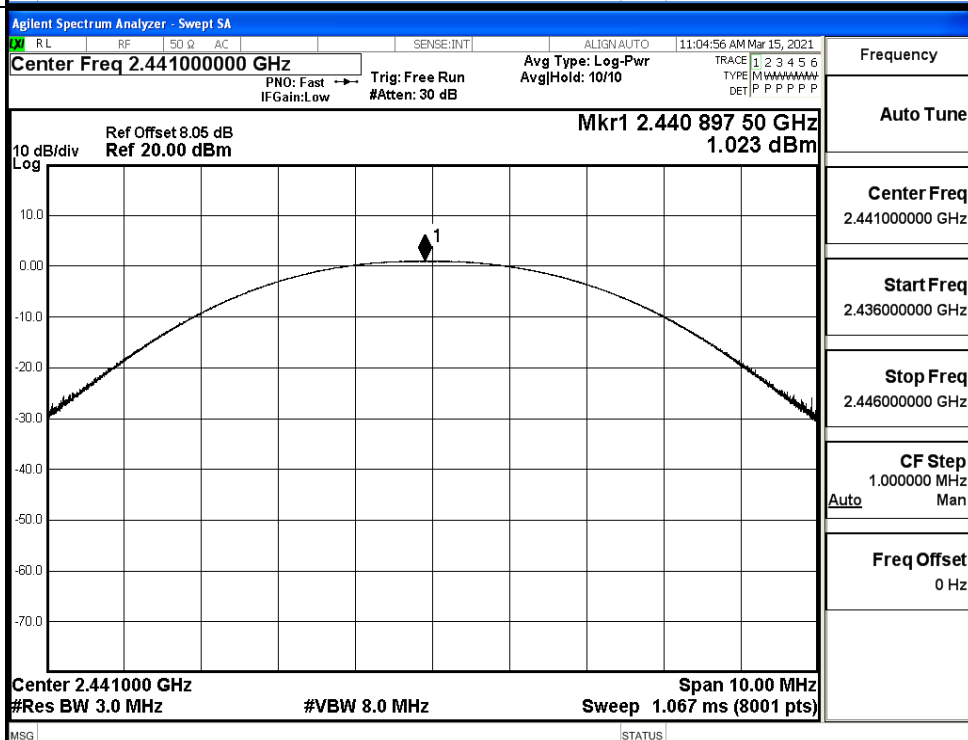
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.513	21	PASS
	MCH	1.023	21	PASS
	HCH	0.738	21	PASS
$\pi/4$ DQPSK	LCH	2.745	21	PASS
	MCH	3.443	21	PASS
	HCH	3.217	21	PASS
8DPSK	LCH	3.370	21	PASS
	MCH	3.808	21	PASS
	HCH	3.483	21	PASS

Test Graphs

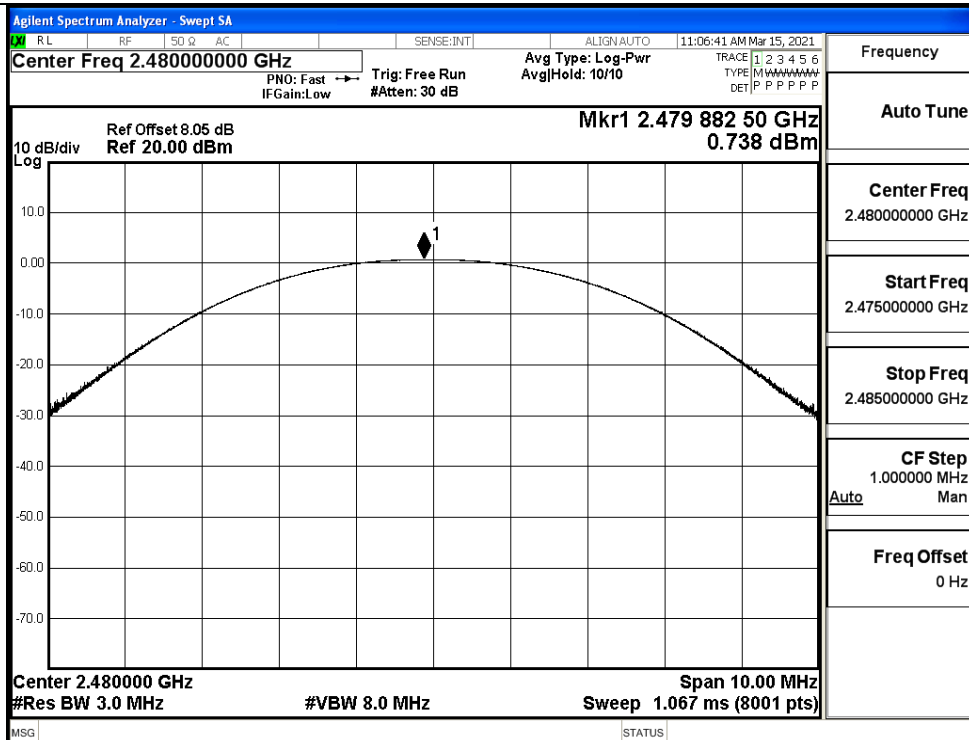
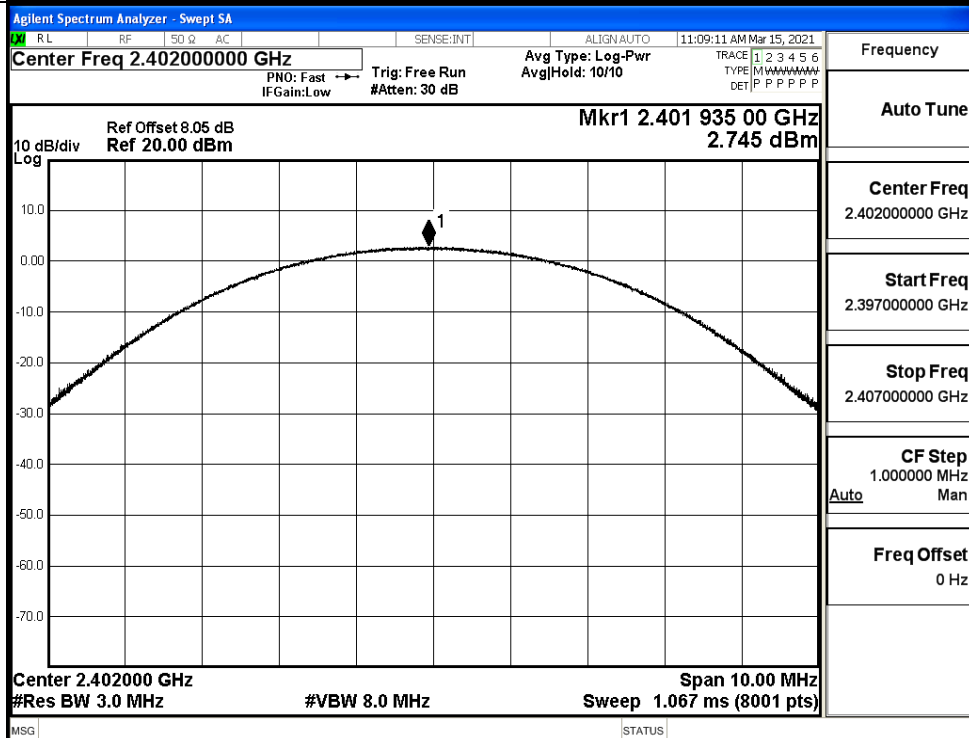
GFSK/LCH

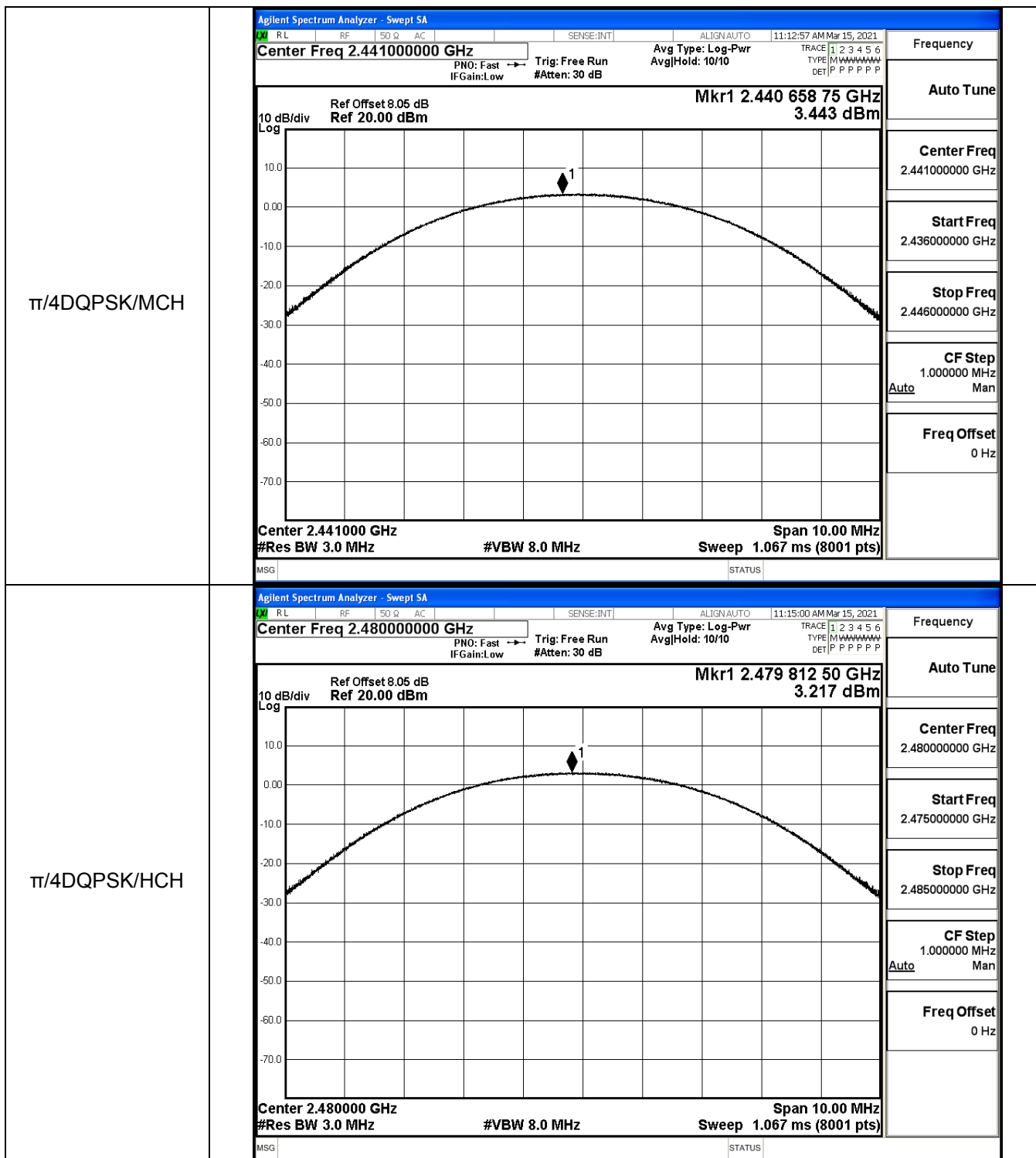


GFSK/MCH

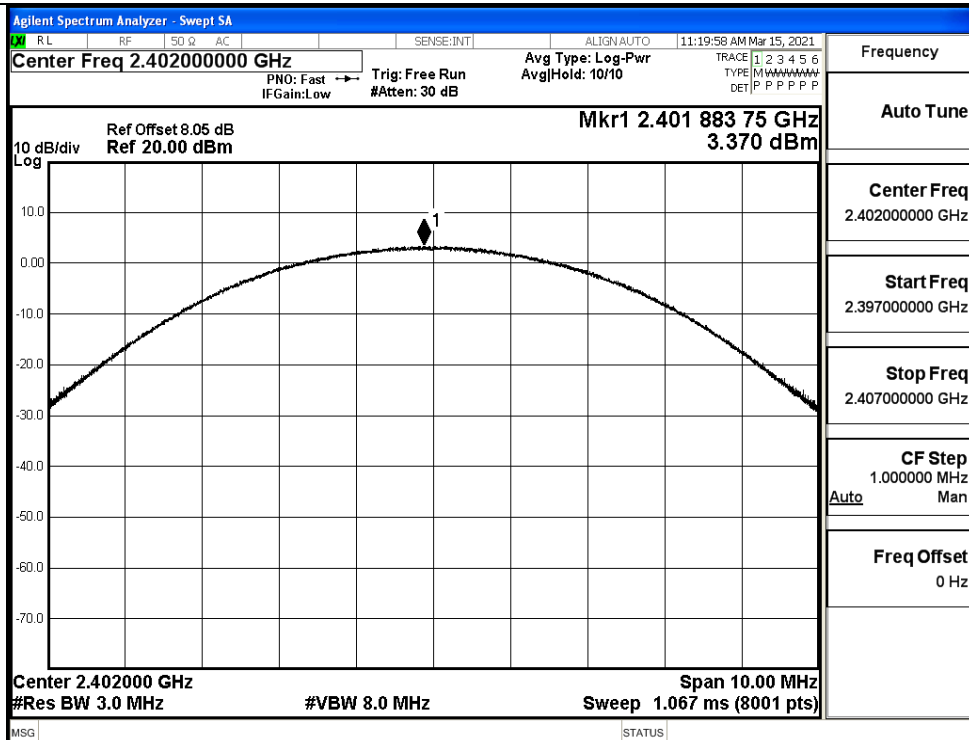


GFSK/HCH

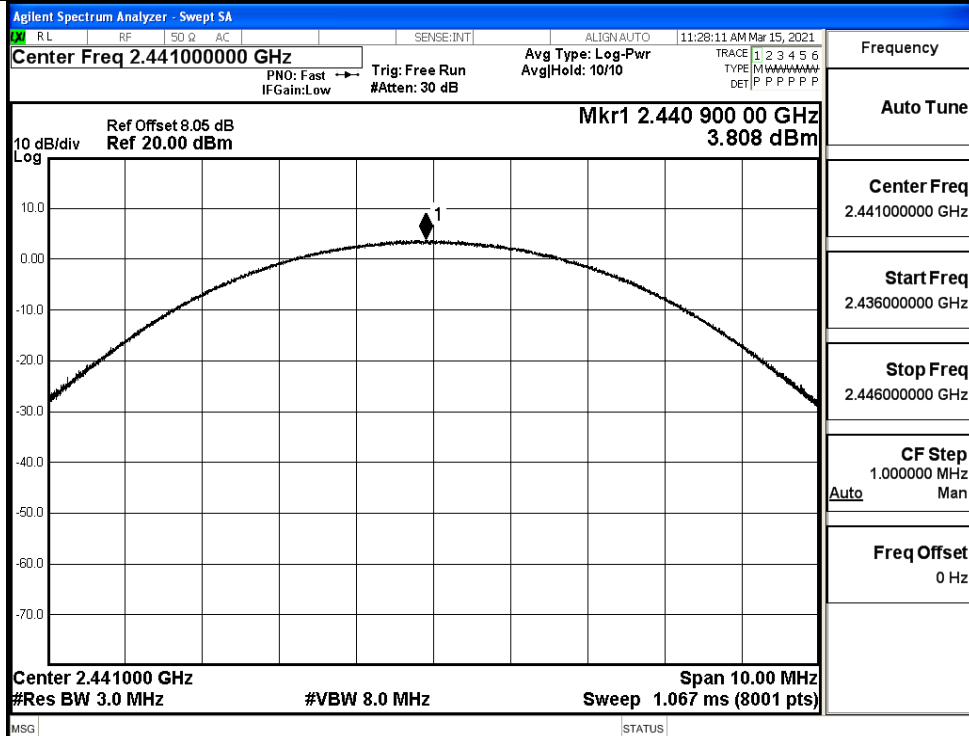
 $\pi/4$ DQPSK/LCH



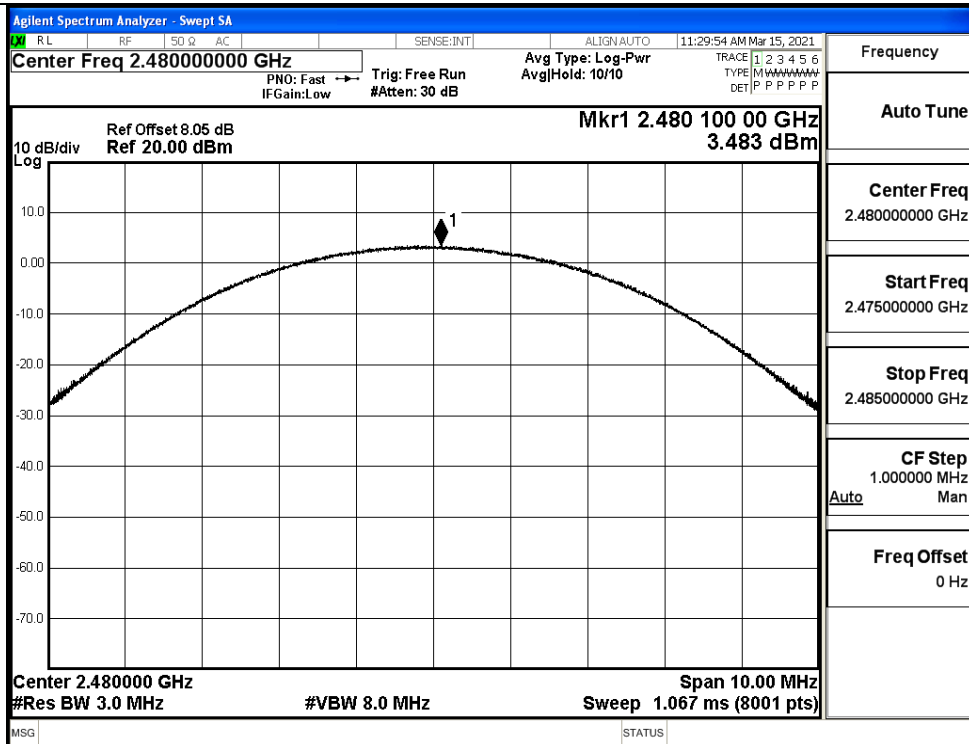
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

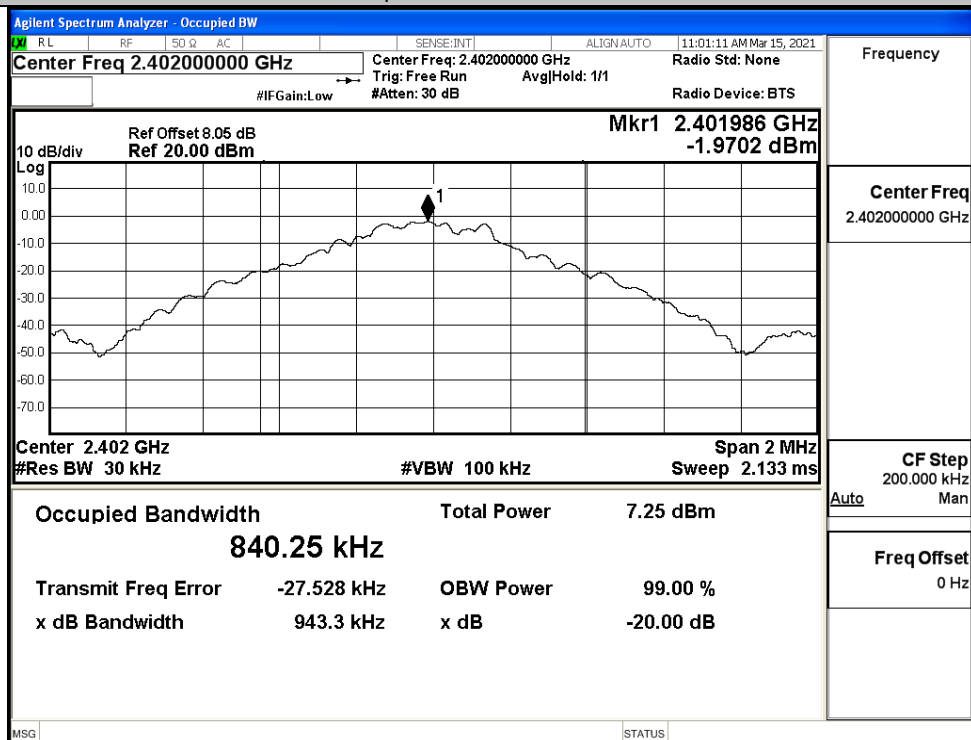


A.2 20dB Bandwidth

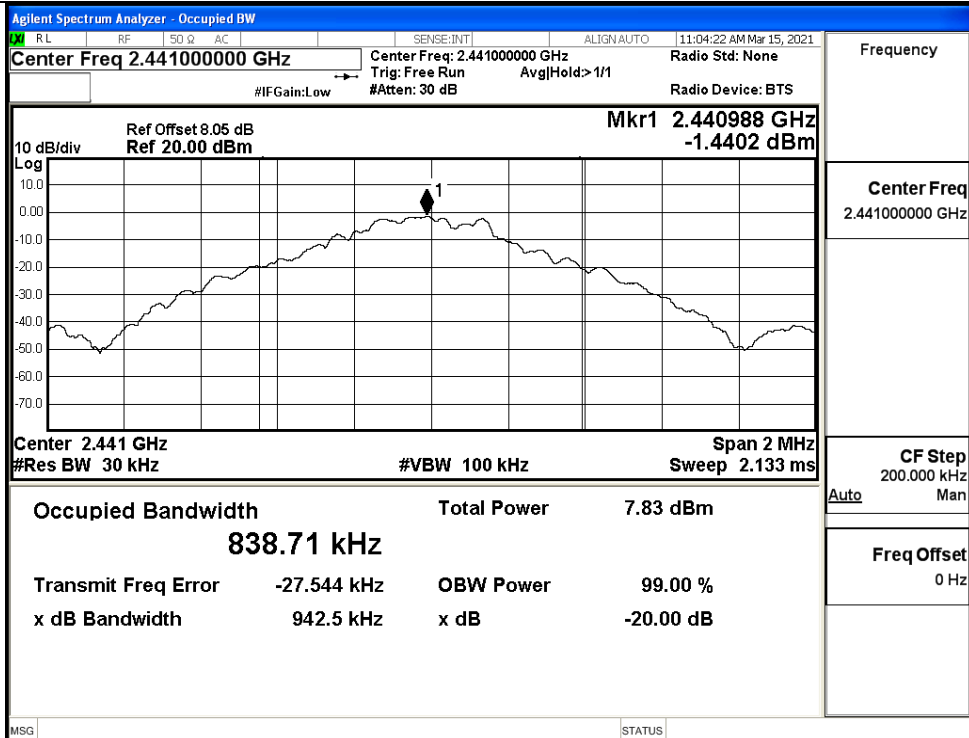
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9433	Not Specified	PASS
	MCH	0.9425	Not Specified	PASS
	HCH	0.9405	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.320	Not Specified	PASS
	MCH	1.317	Not Specified	PASS
	HCH	1.317	Not Specified	PASS
8DPSK	LCH	1.312	Not Specified	PASS
	MCH	1.312	Not Specified	PASS
	HCH	1.311	Not Specified	PASS

Test Graphs

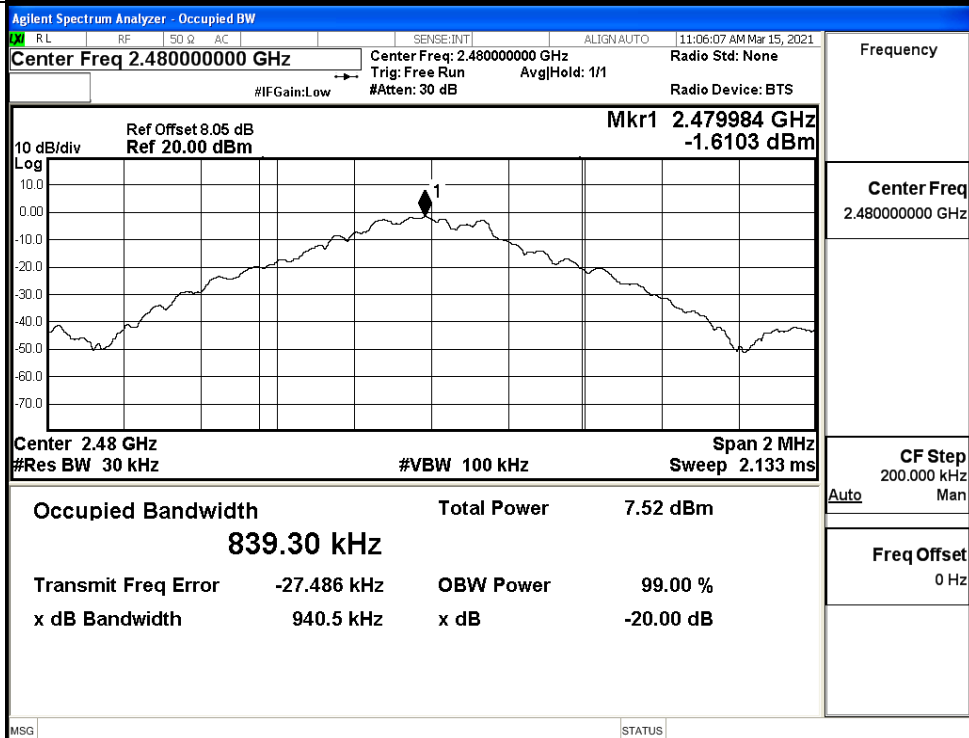
GFSK/LCH

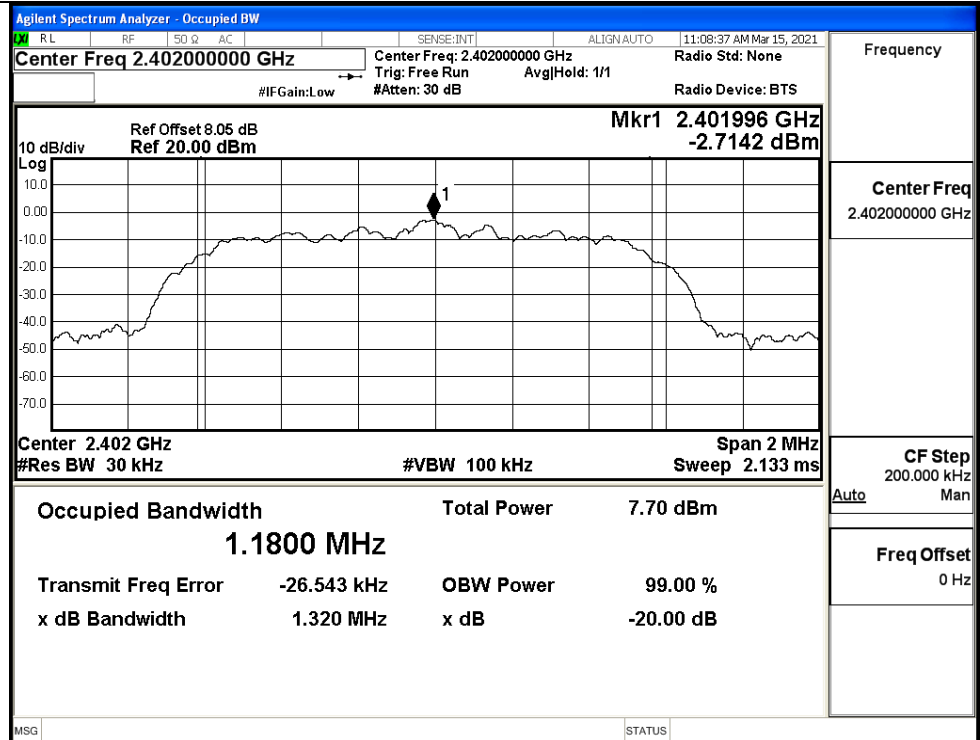
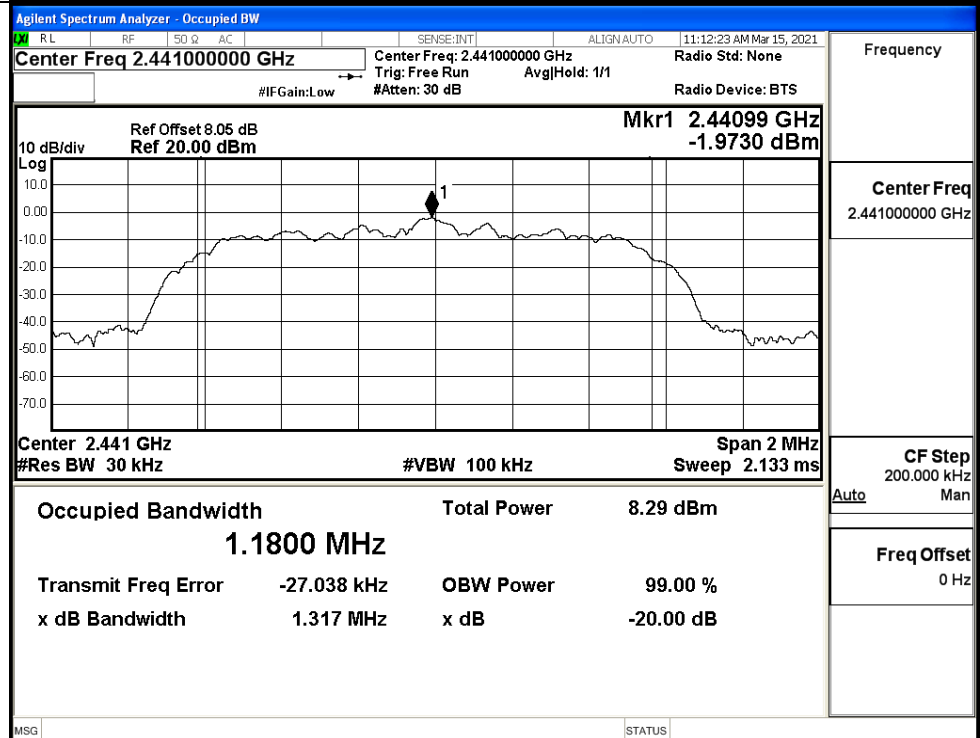


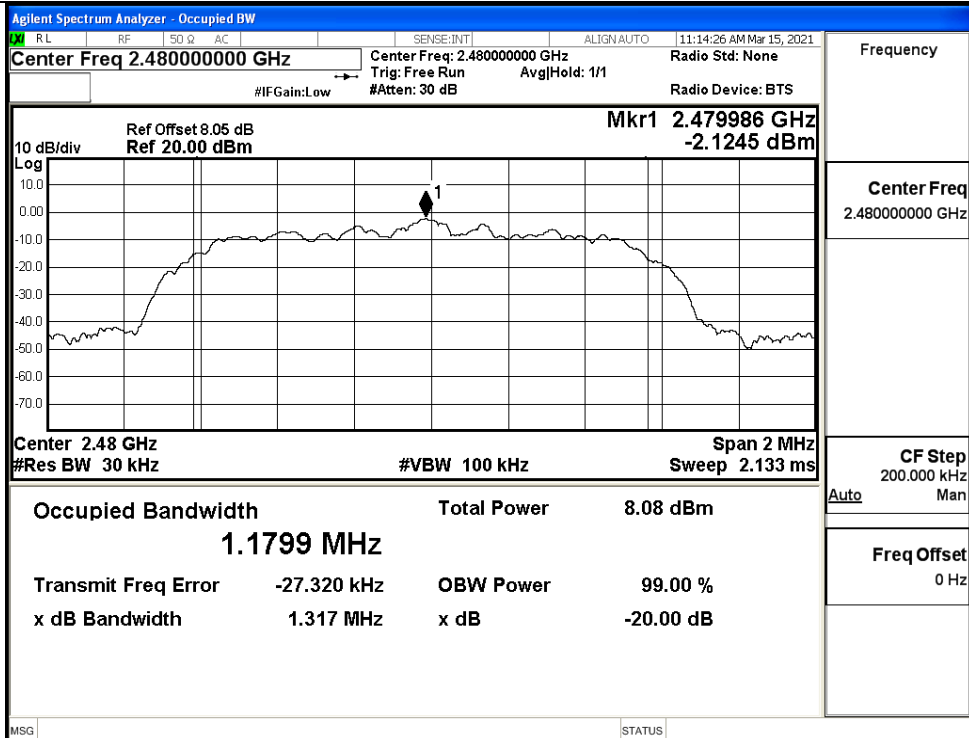
GFSK/MCH



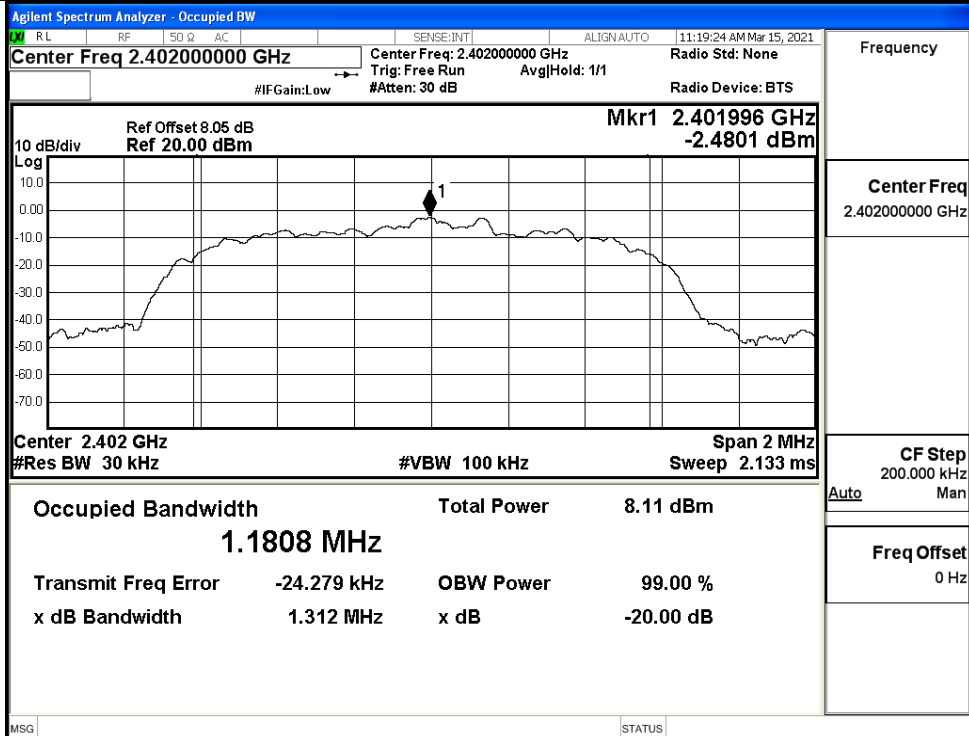
GFSK/HCH



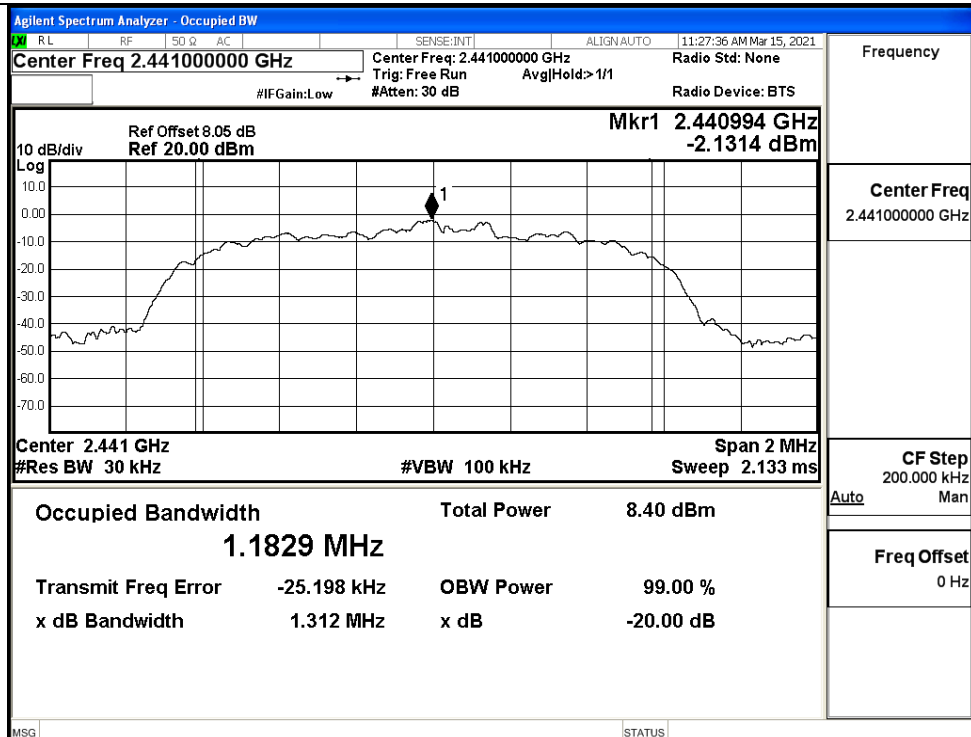
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

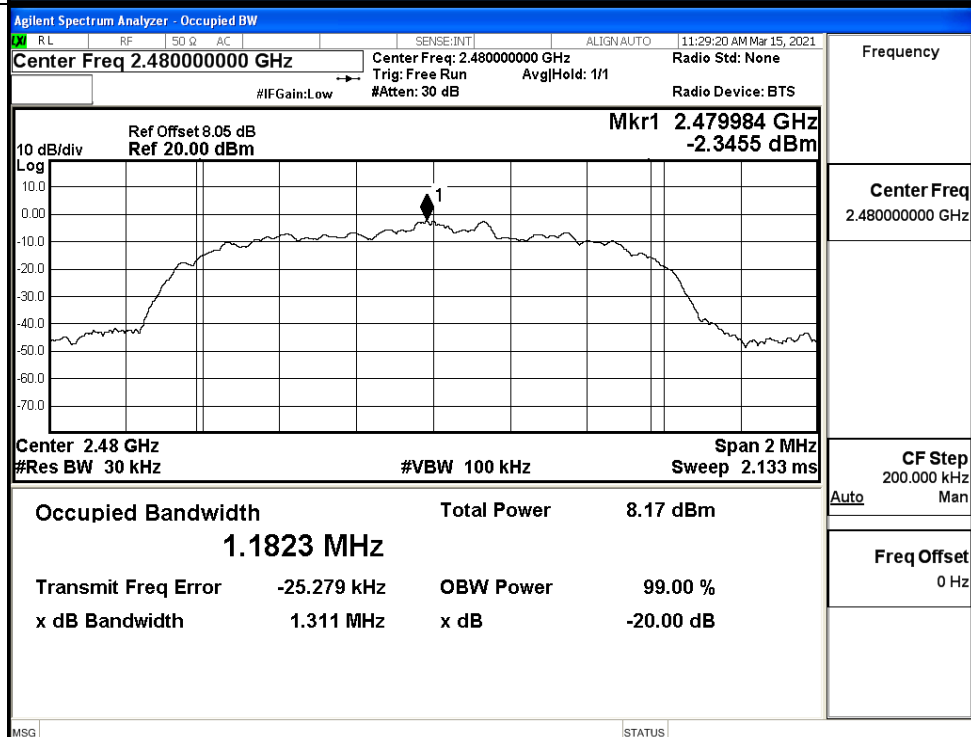
8DPSK/LCH



8DPSK/MCH



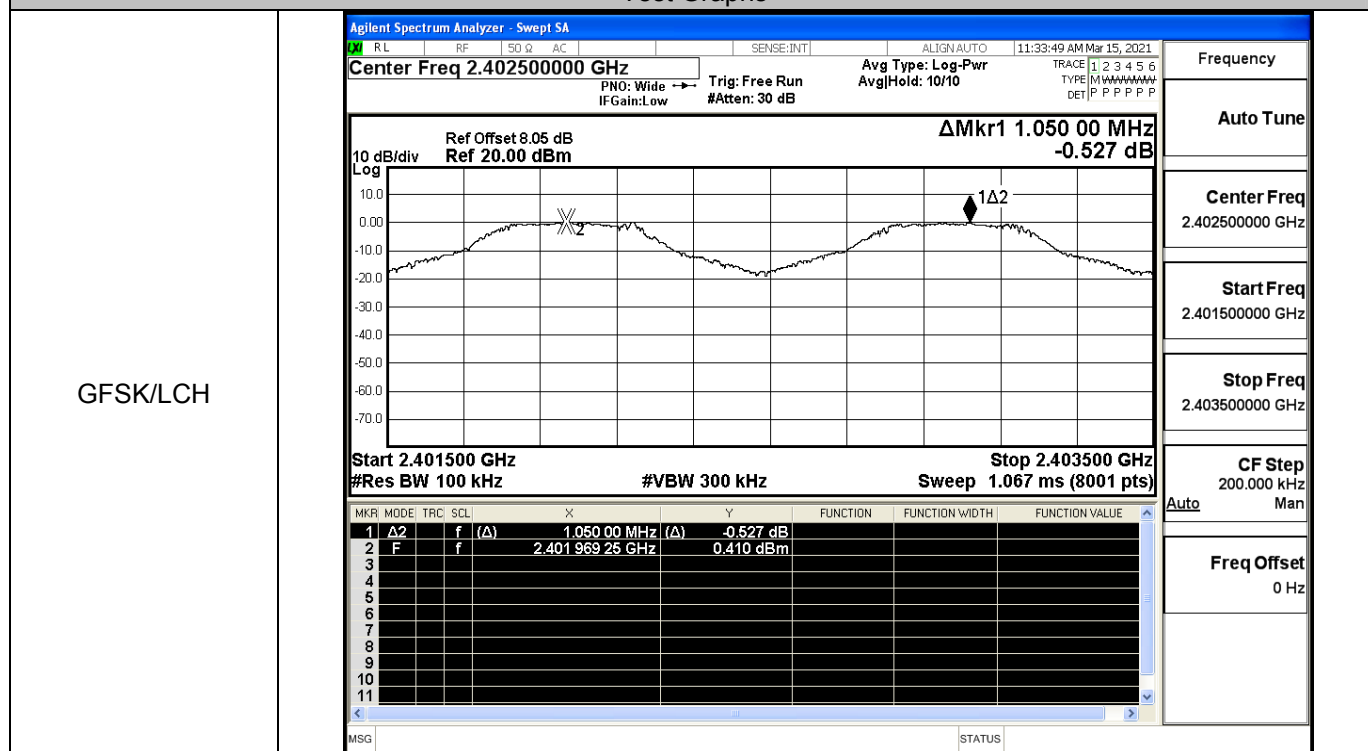
8DPSK/HCH



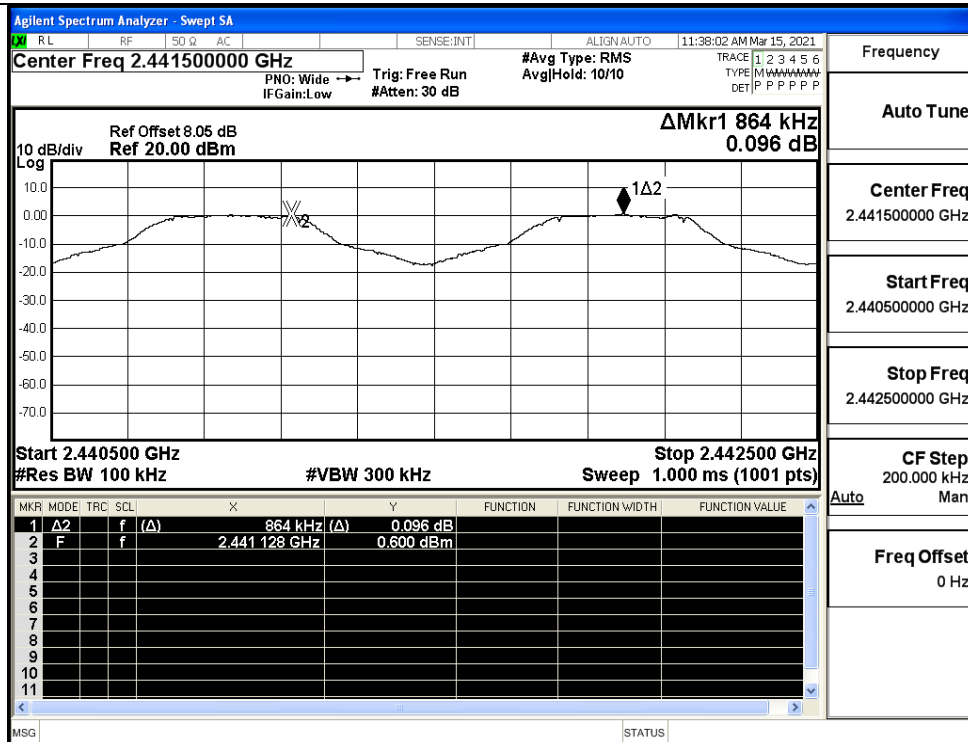
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.050	0.629	PASS
	MCH	0.864	0.629	PASS
	HCH	0.950	0.629	PASS
$\pi/4$ DQPSK	LCH	0.996	0.880	PASS
	MCH	0.904	0.880	PASS
	HCH	0.880	0.880	PASS
8DPSK	LCH	1.012	0.875	PASS
	MCH	0.996	0.875	PASS
	HCH	0.990	0.875	PASS

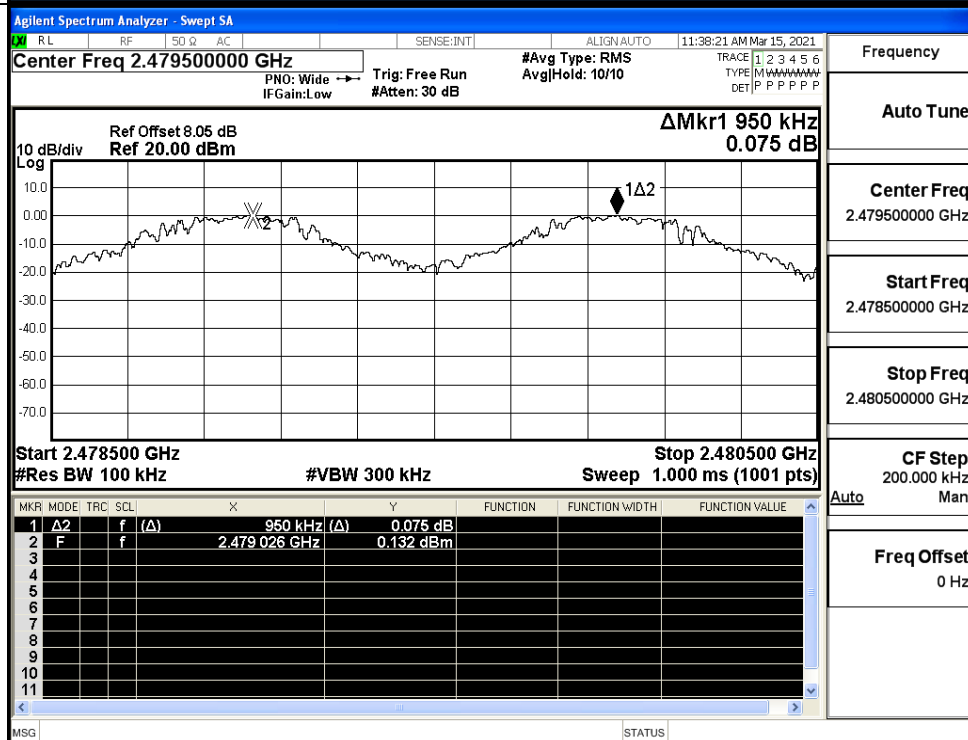
Test Graphs

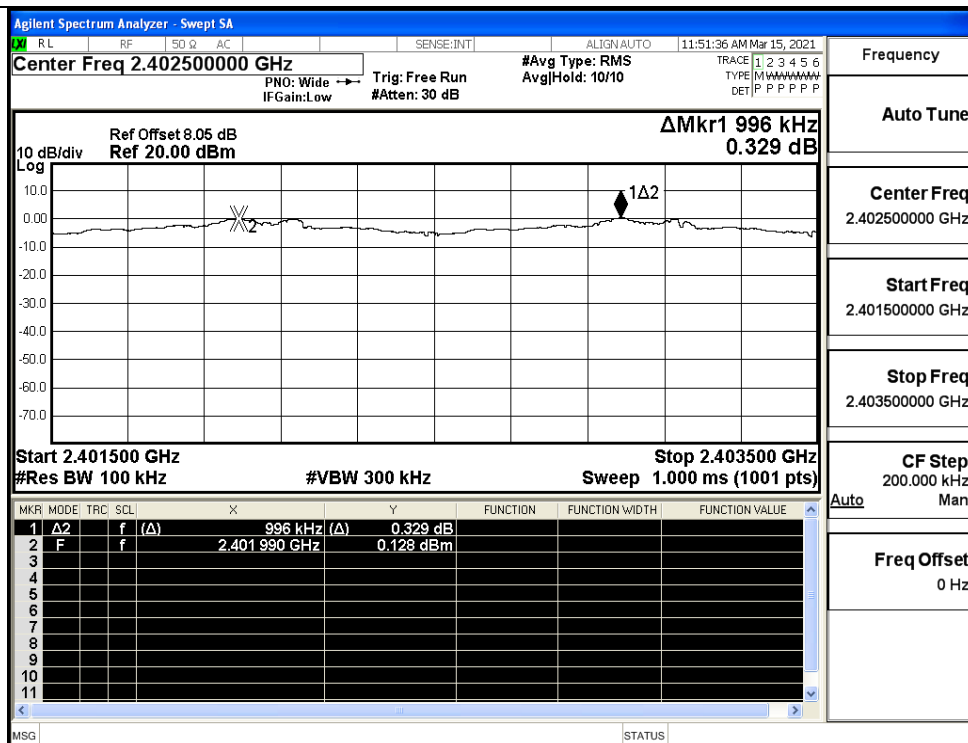
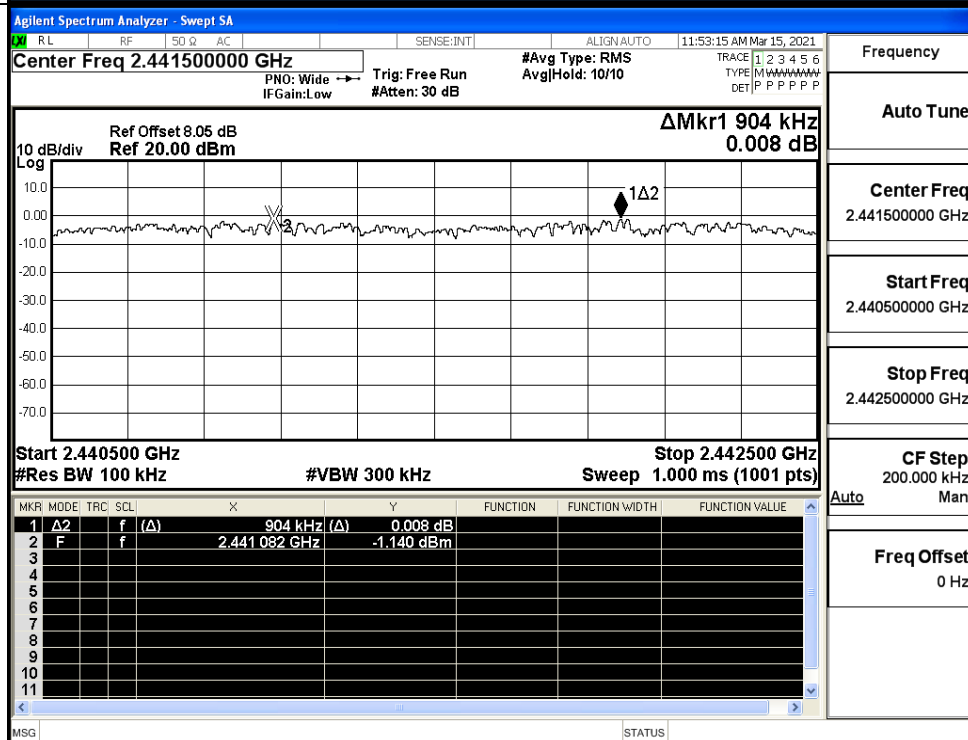


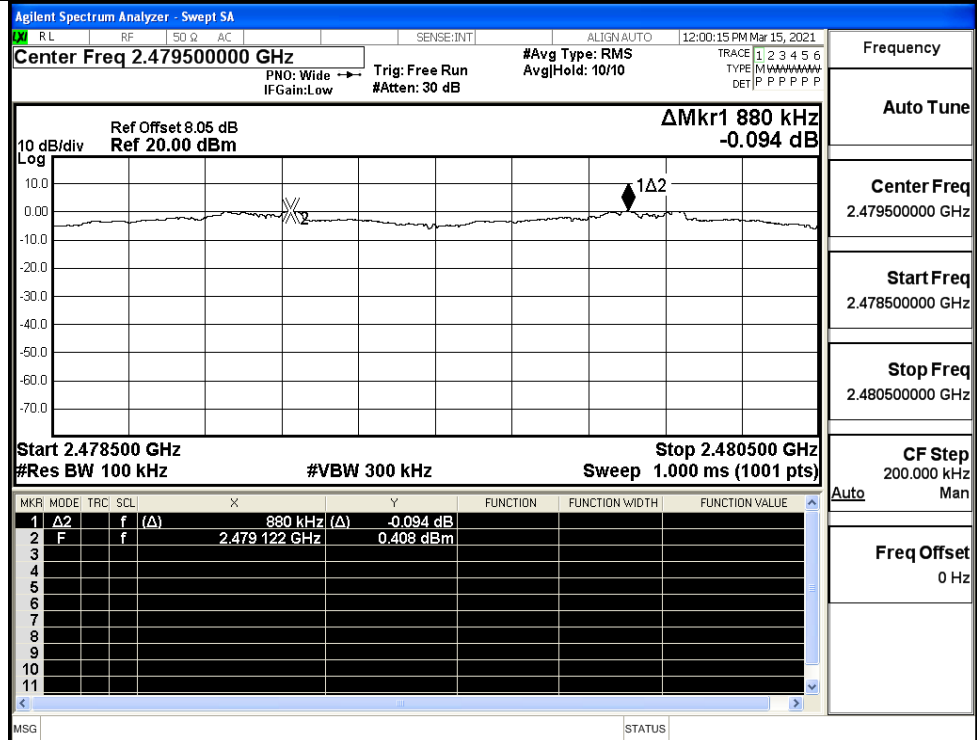
GFSK/MCH



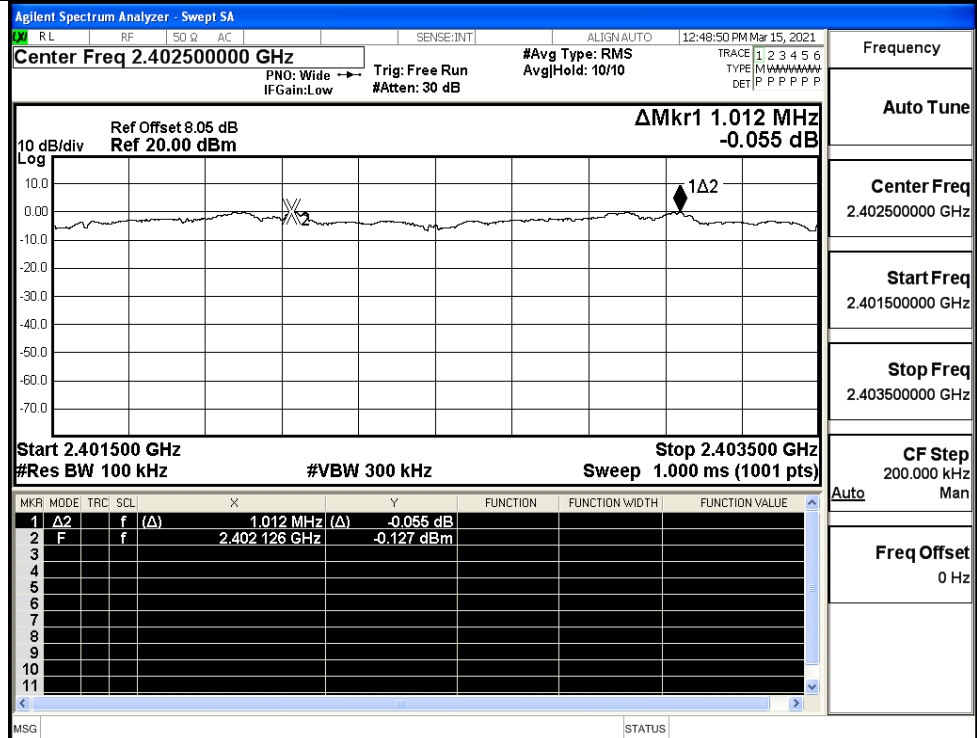
GFSK/HCH



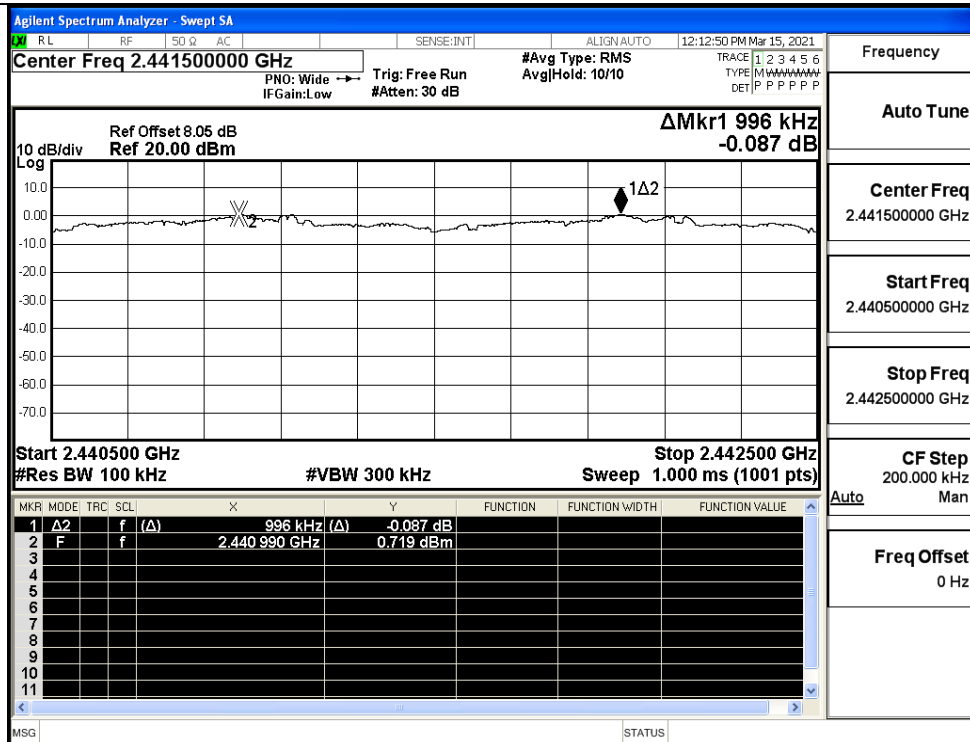
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

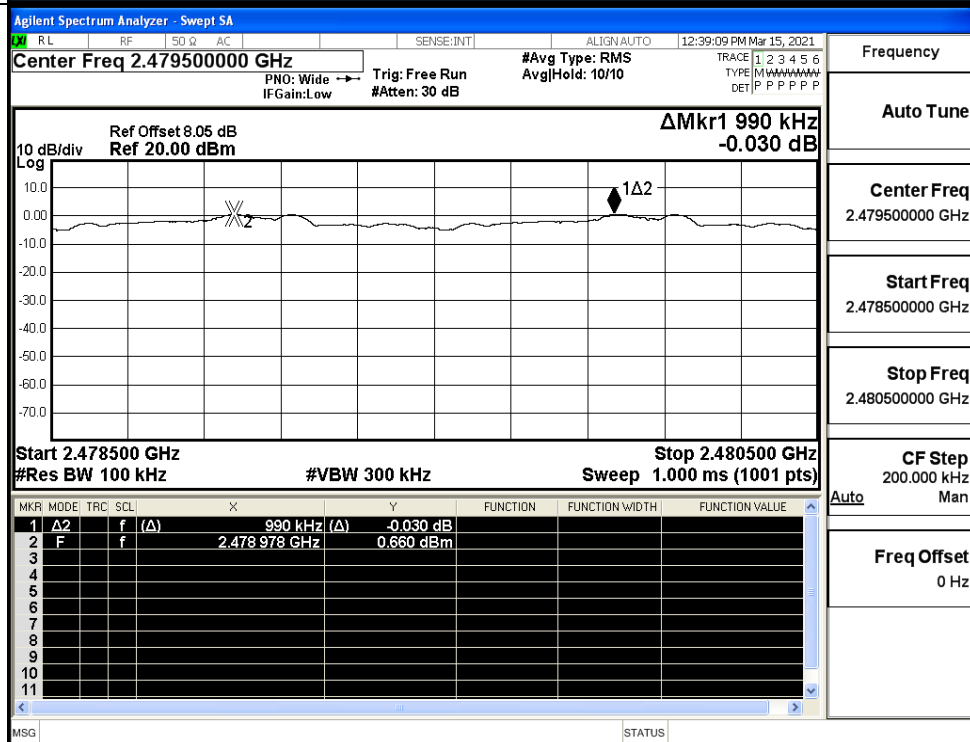
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

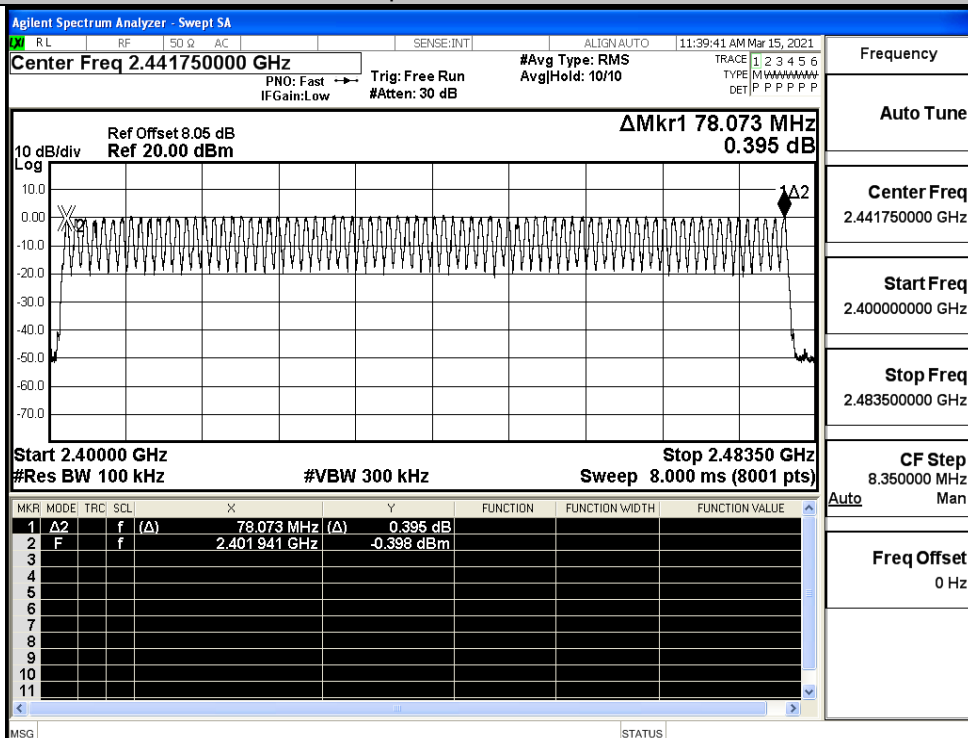


A.4 Hopping Channel Number

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

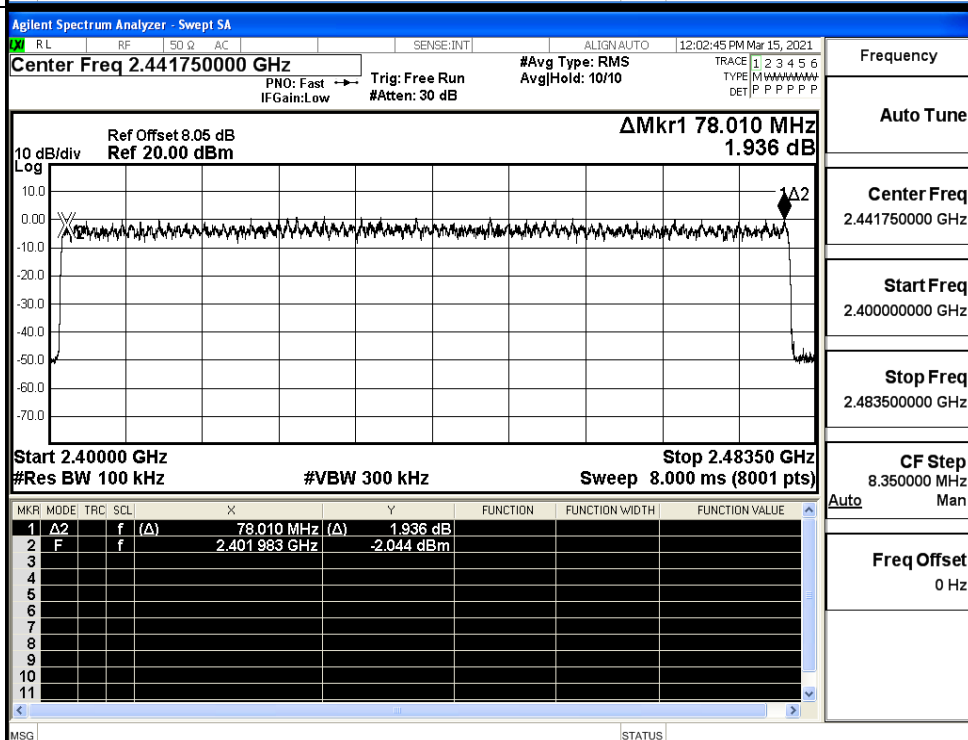
Test Graphs

GFSK/Hop



Frequency

Auto Tune

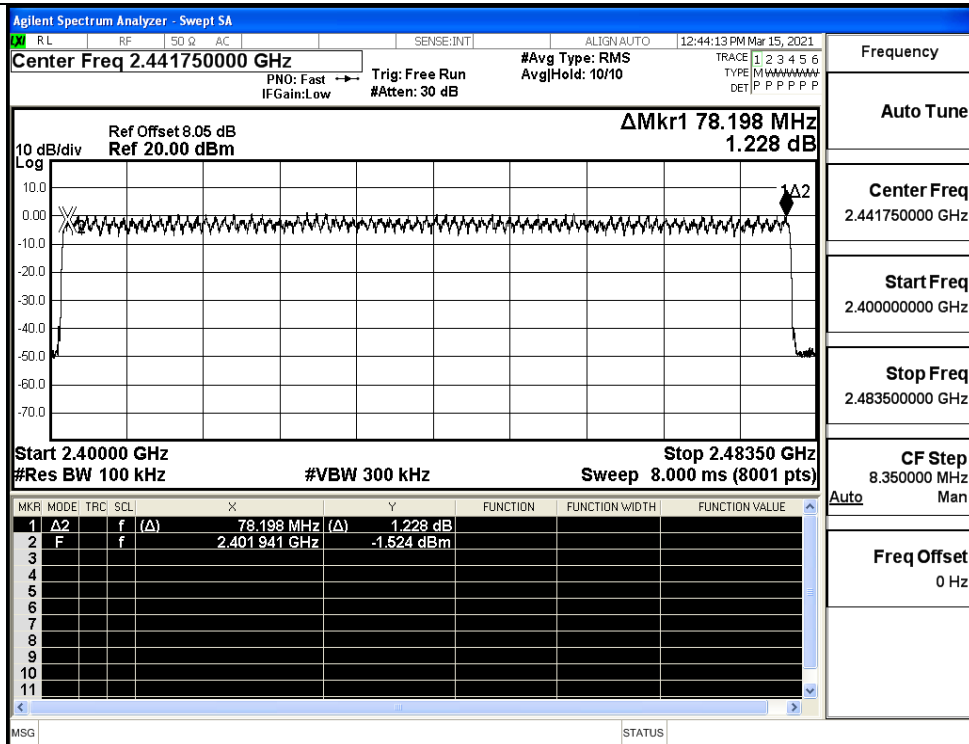
Center Freq
2.441750000 GHzStart Freq
2.400000000 GHzStop Freq
2.483500000 GHzCF Step
8.350000 MHz
ManFreq Offset
0 Hz $\pi/4$ DQPSK/Hop

Frequency

Auto Tune

Center Freq
2.441750000 GHzStart Freq
2.400000000 GHzStop Freq
2.483500000 GHzCF Step
8.350000 MHz
ManFreq Offset
0 Hz

8DPSK/Hop

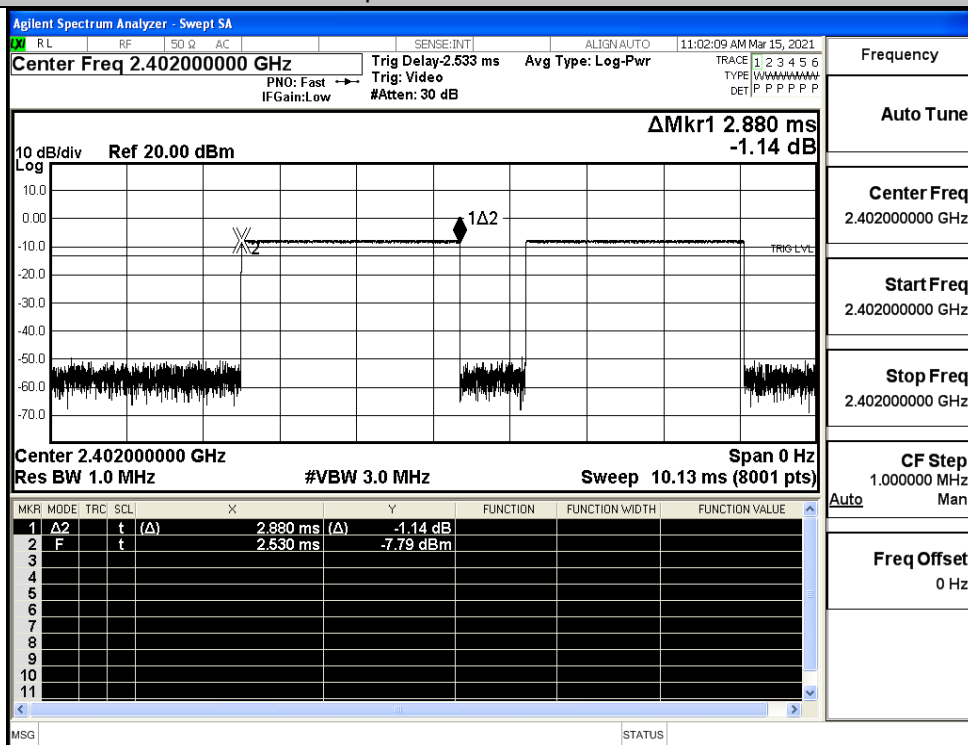


A.5 Dwell Time

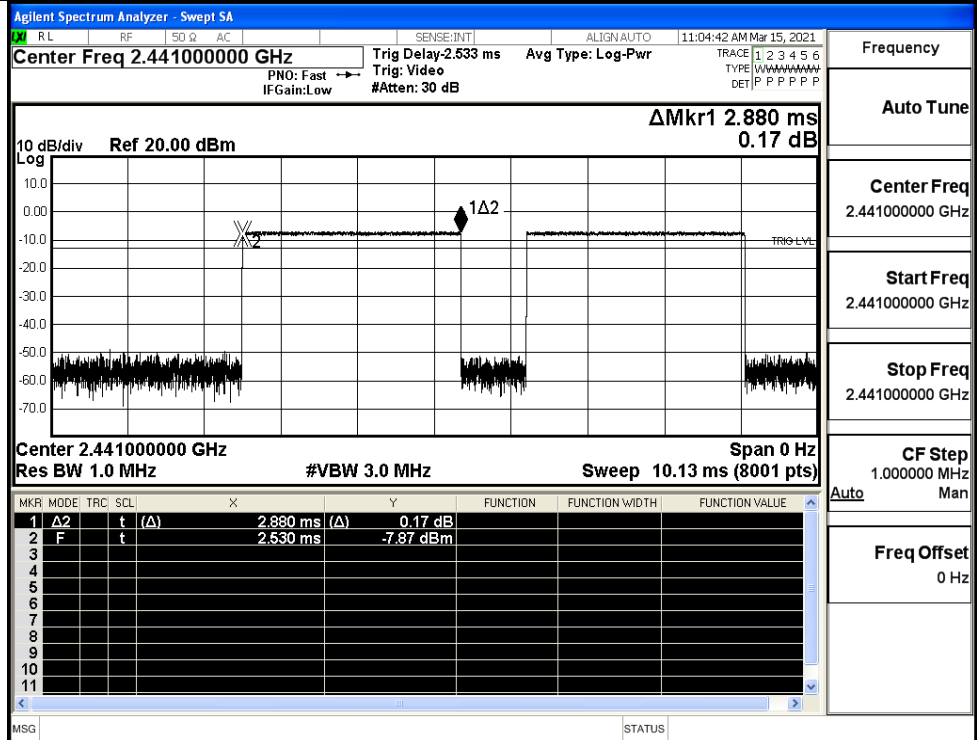
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.9	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

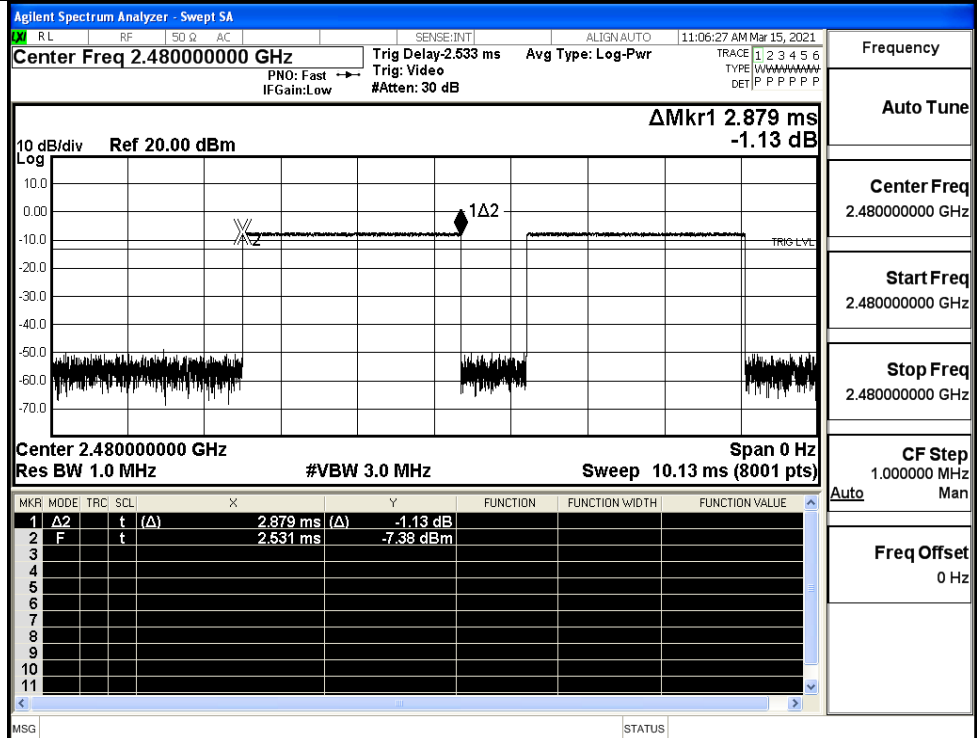
GFSK_DH5/LCH



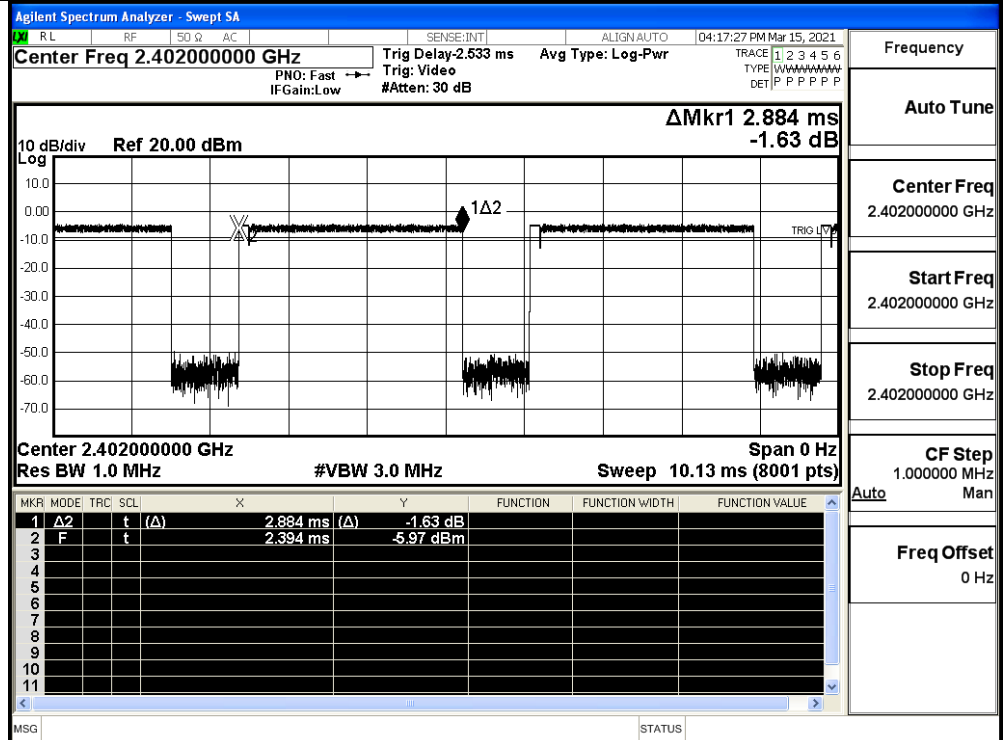
GFSK_DH5/MCH



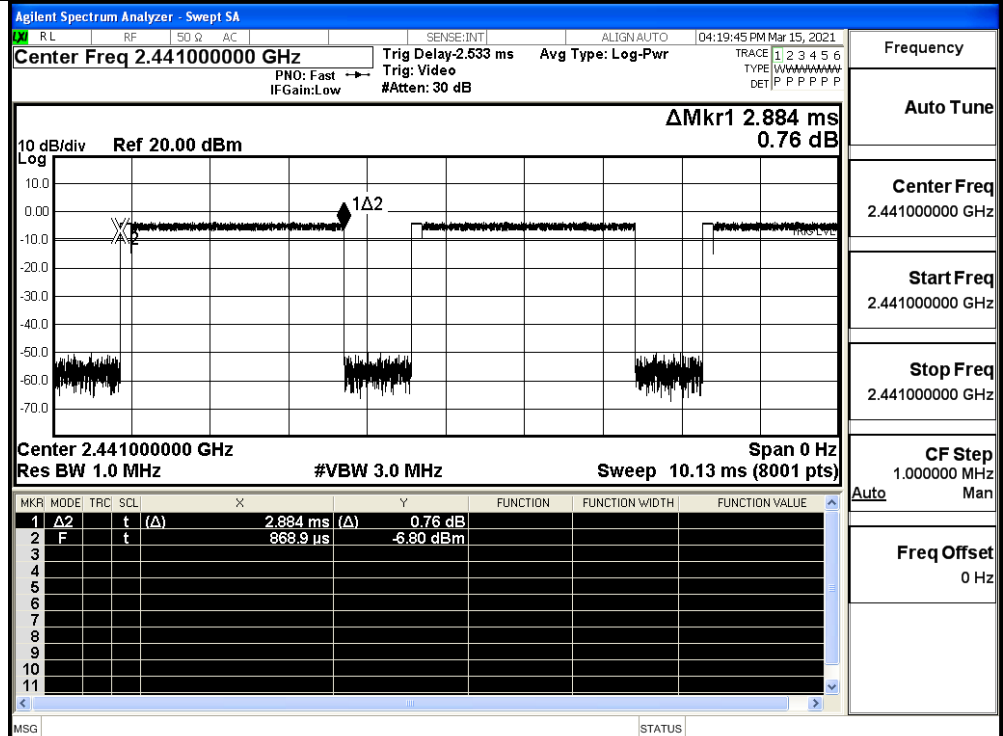
GFSK_DH5/HCH



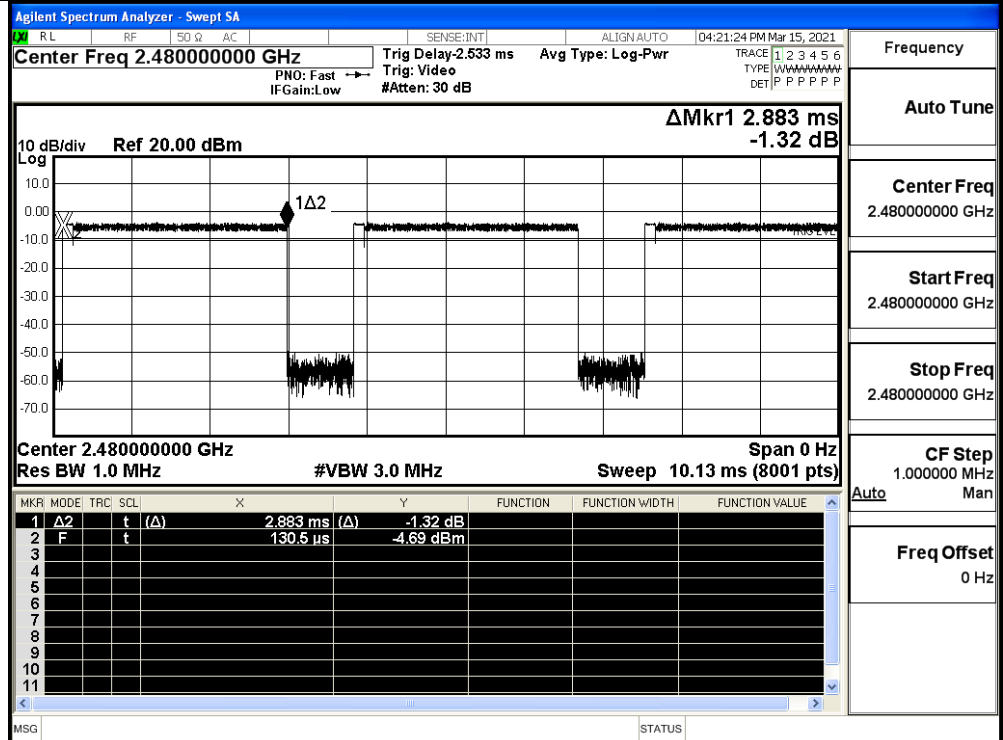
$\pi/4$ DQPSK
_2DH5/LCH



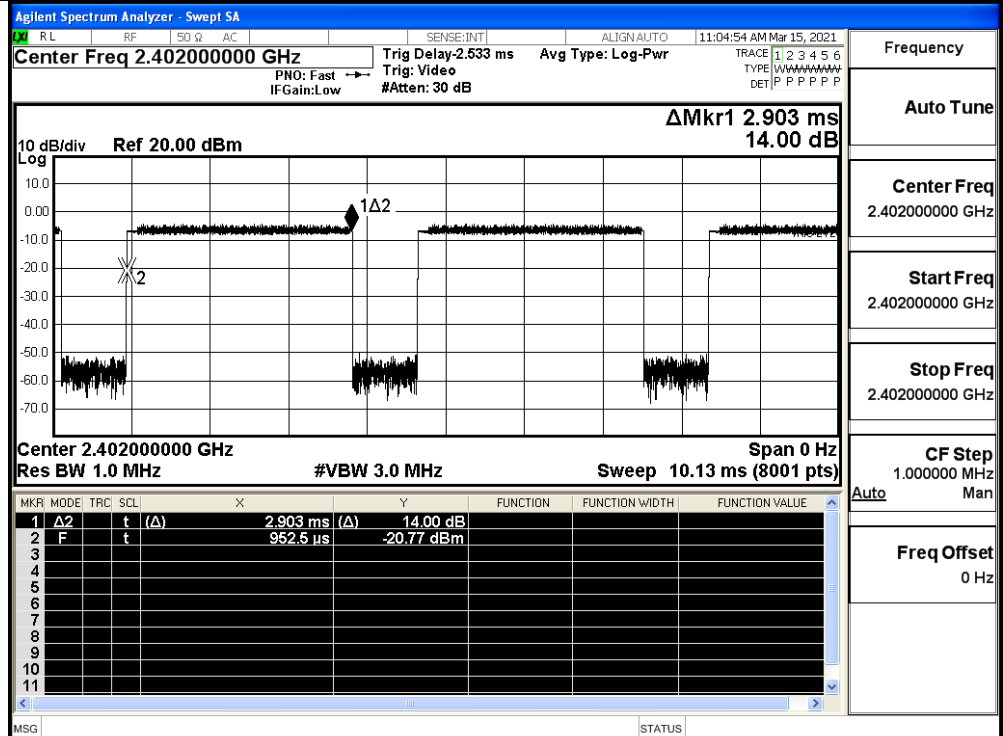
$\pi/4$ DQPSK
_2DH5/MCH



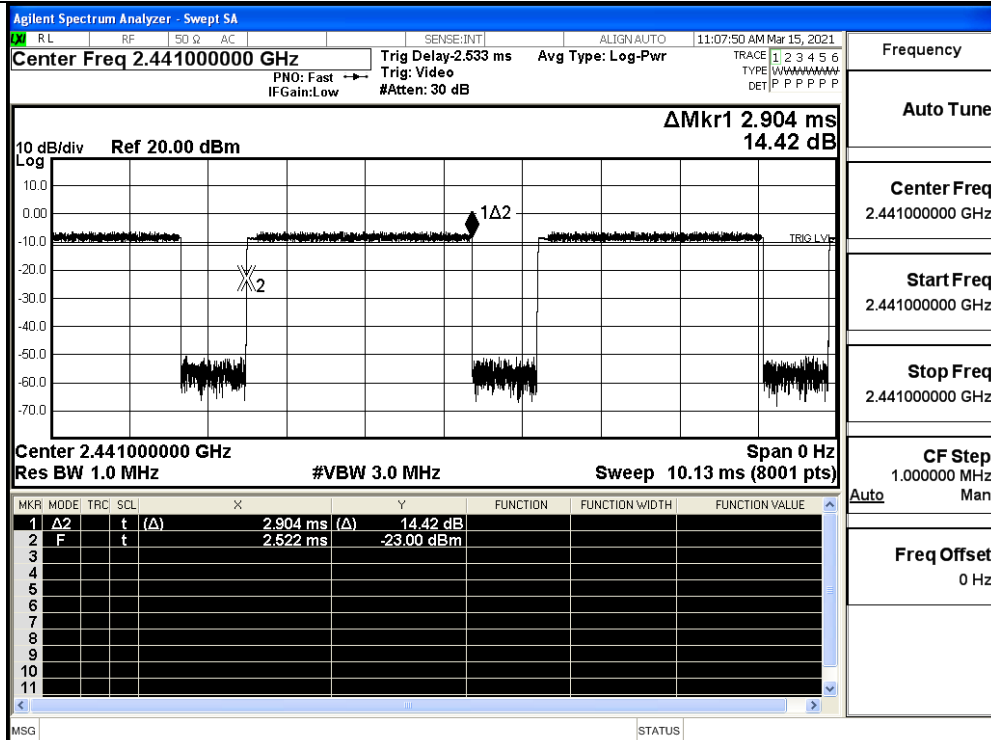
$\pi/4$ DQPSK
_2DH5/HCH



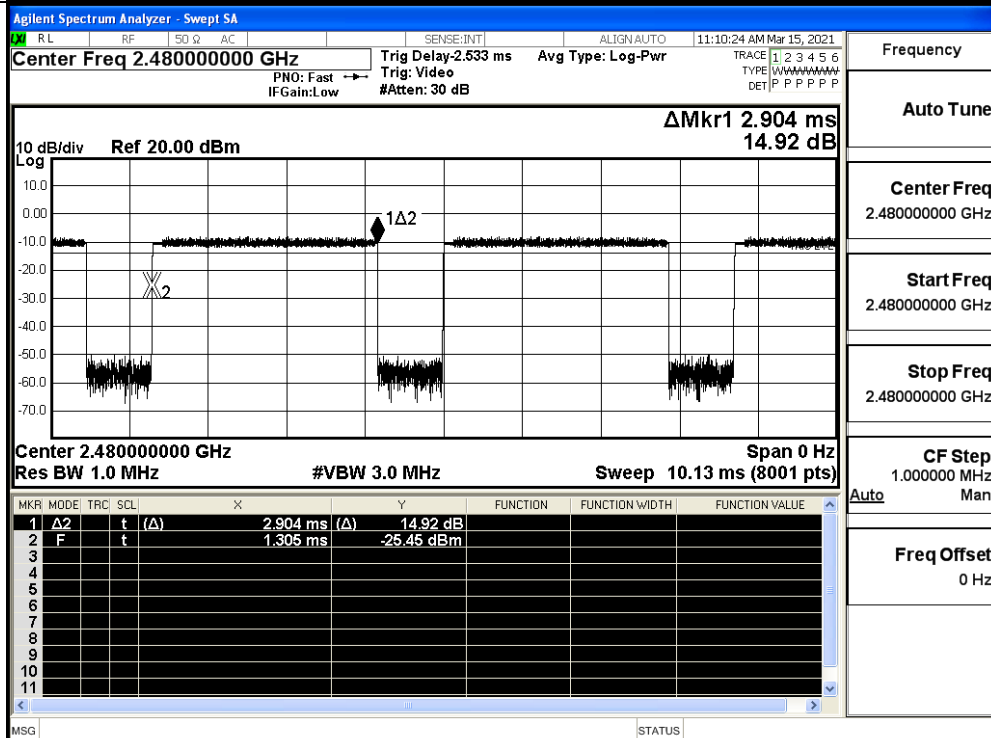
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



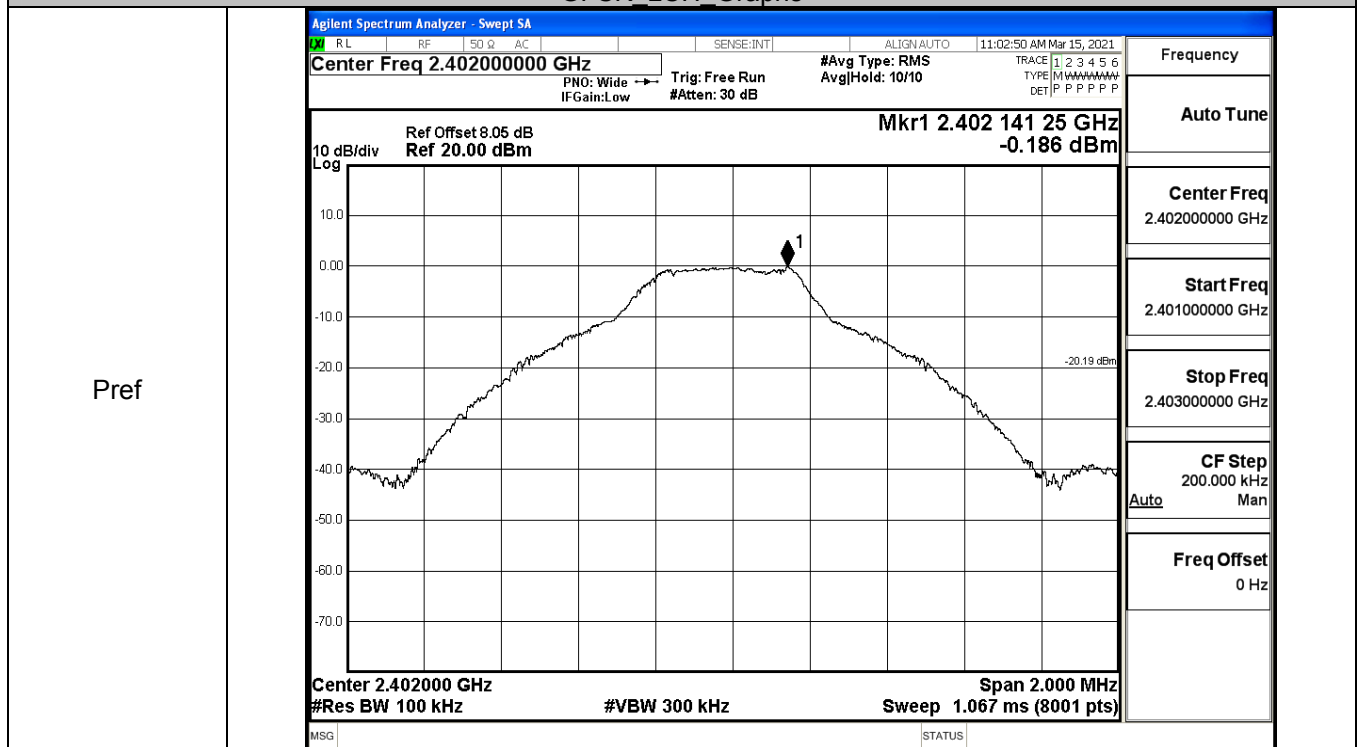
8DPSK_3DH5/HCH



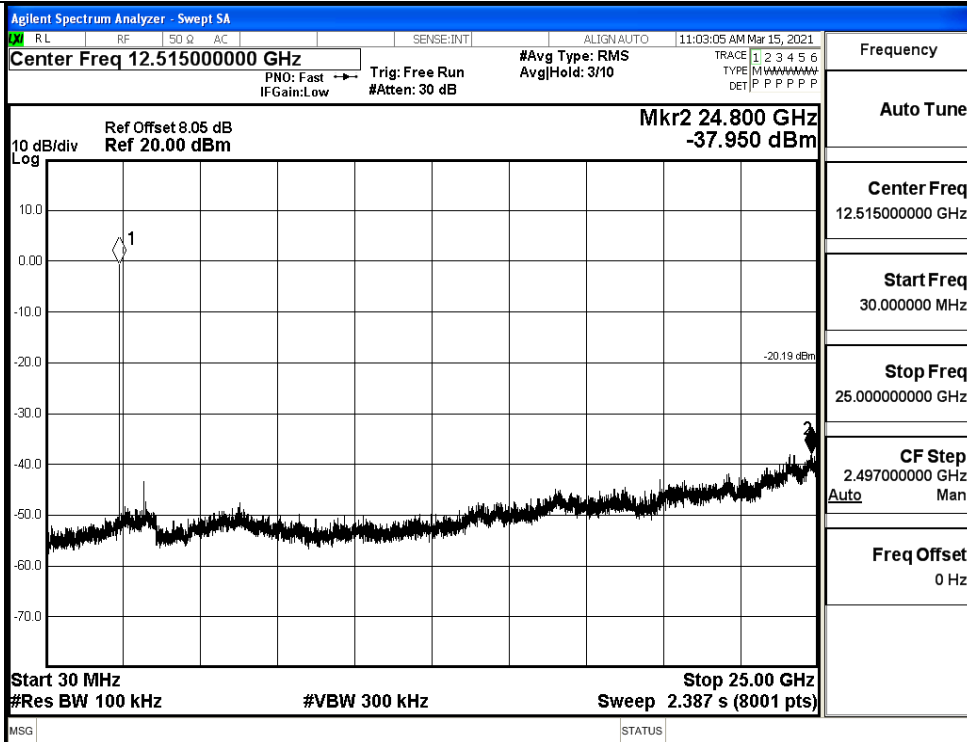
A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.186	-37.950	-20.186	PASS
	MCH	0.631	-36.817	-19.369	PASS
	HCH	0.266	-37.835	-19.734	PASS
$\pi/4$ DQPSK	LCH	0.075	-36.989	-19.925	PASS
	MCH	0.801	-38.078	-19.199	PASS
	HCH	0.479	-37.793	-19.521	PASS
8DPSK	LCH	-0.594	-37.856	-20.594	PASS
	MCH	-0.227	-37.508	-20.227	PASS
	HCH	0.232	-37.169	-19.768	PASS

GFSK LCH Graphs

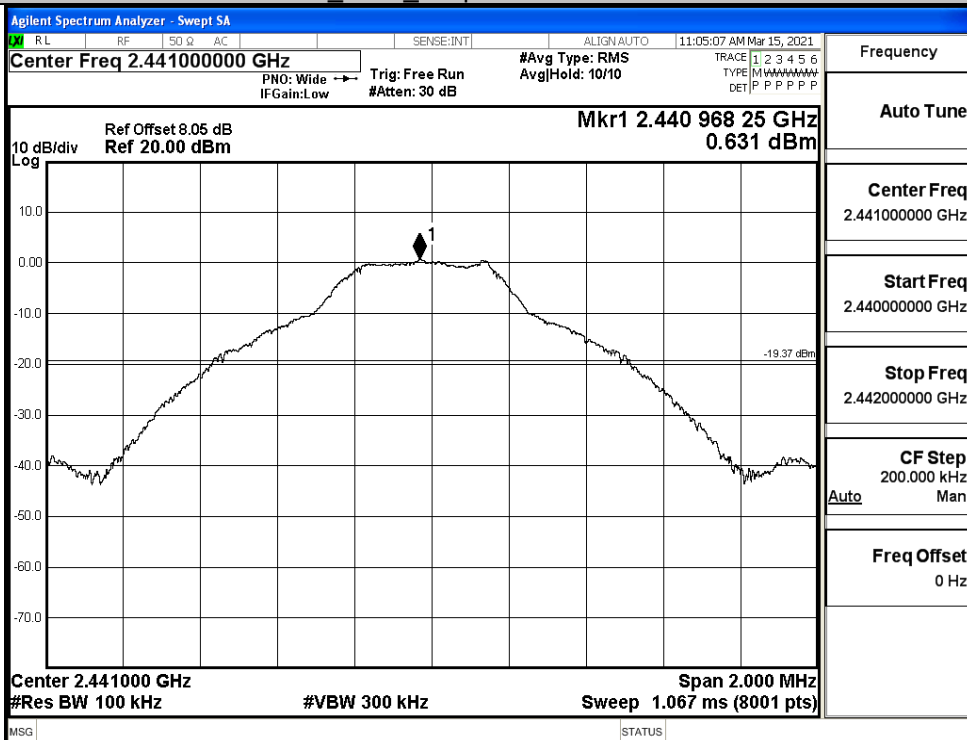


Puw

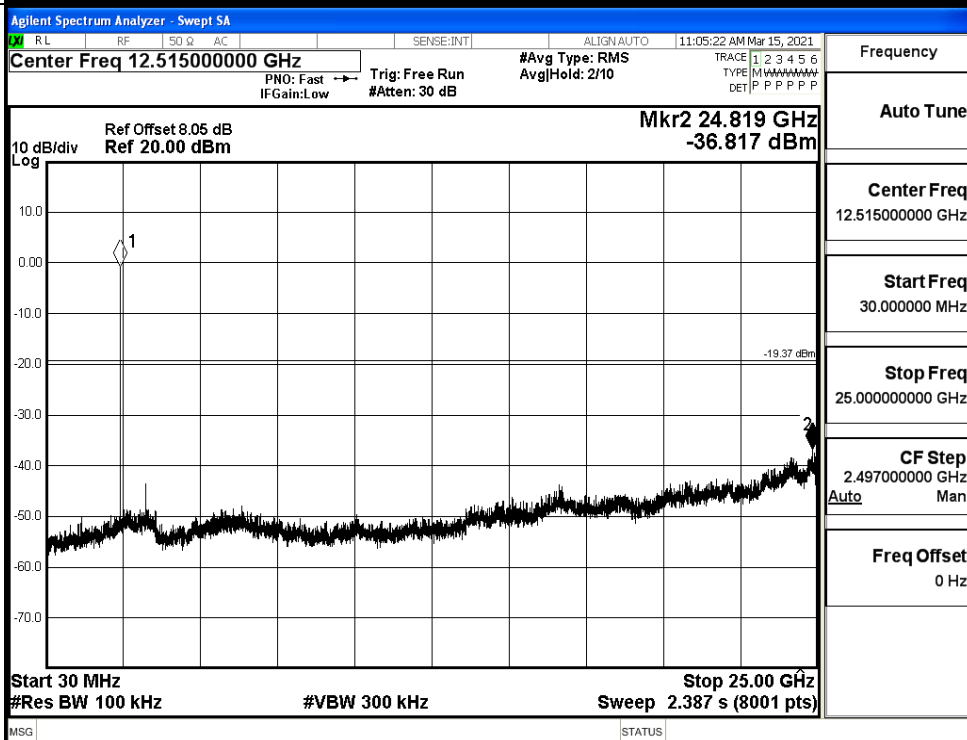


GFSK_MCH_Graphs

Pref

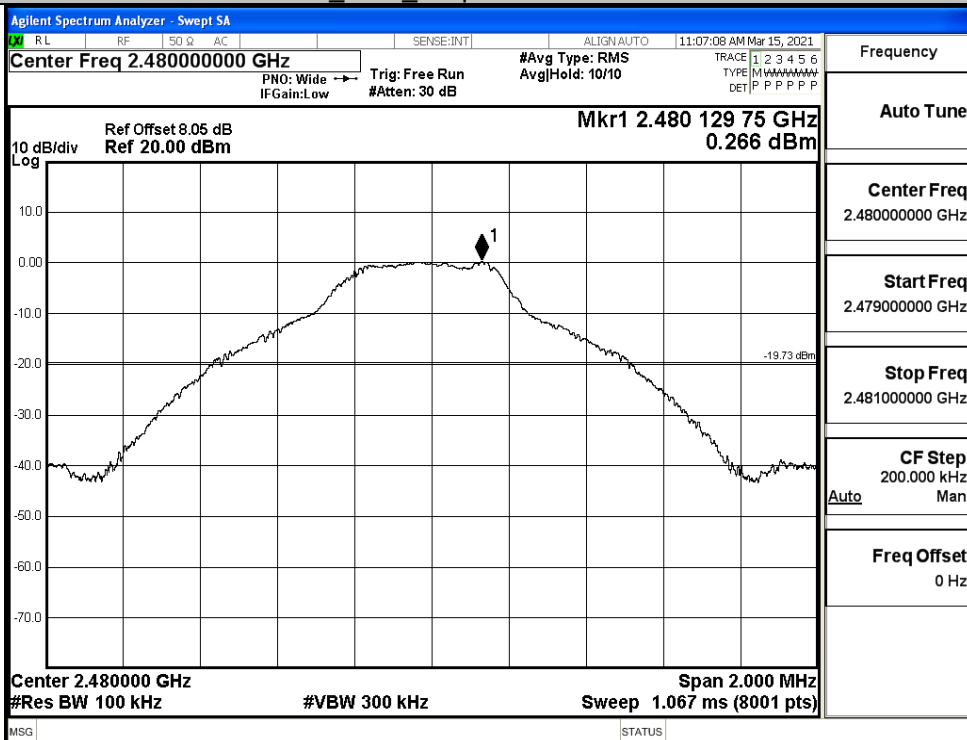


Puw

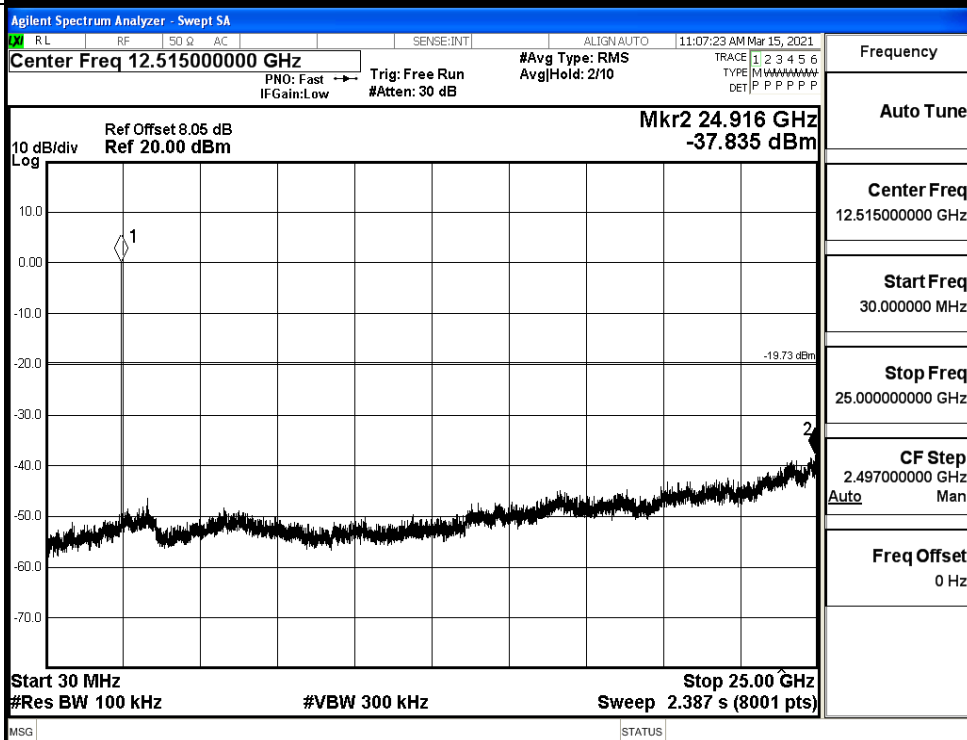


GFSK_HCH_Graphs

Pref

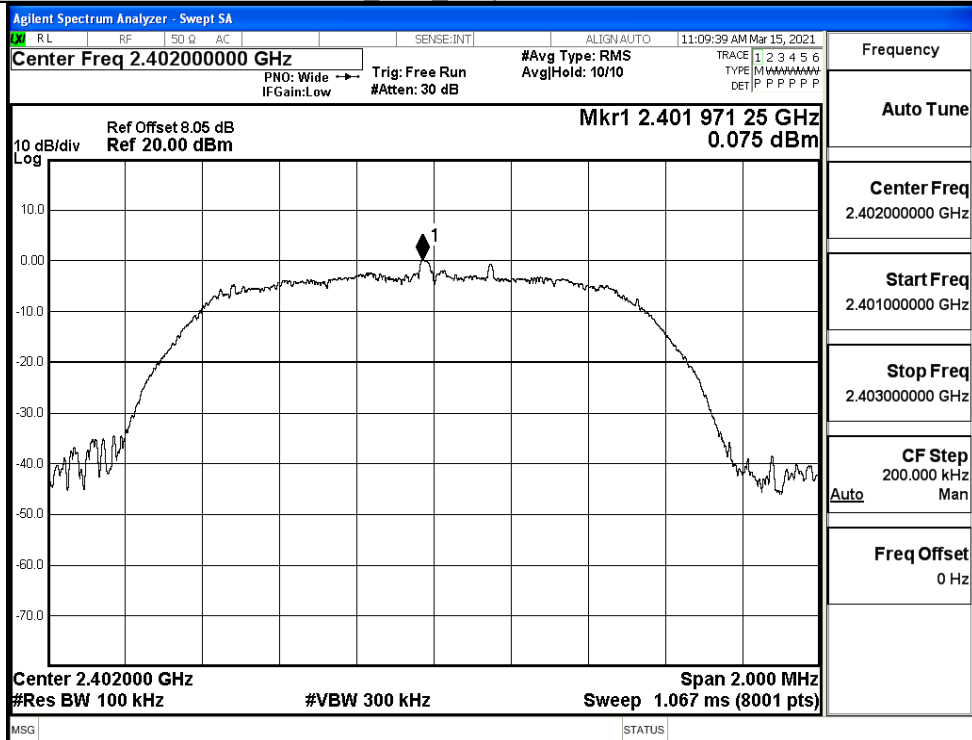


Puw

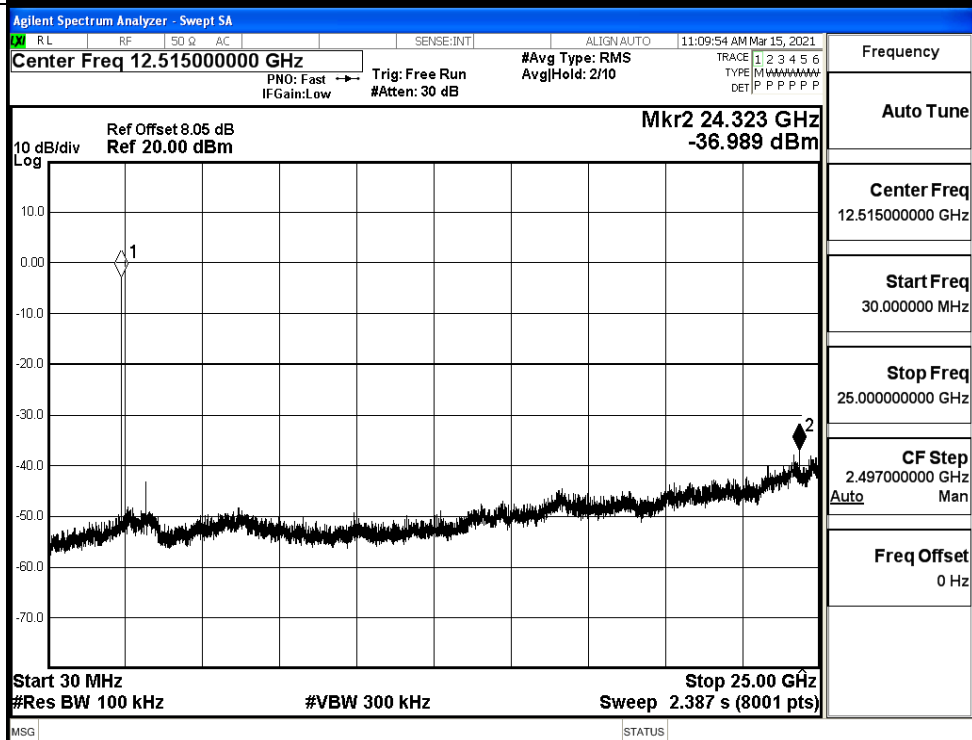


$\pi/4$ DQPSK_LCH_Graphs

Pref

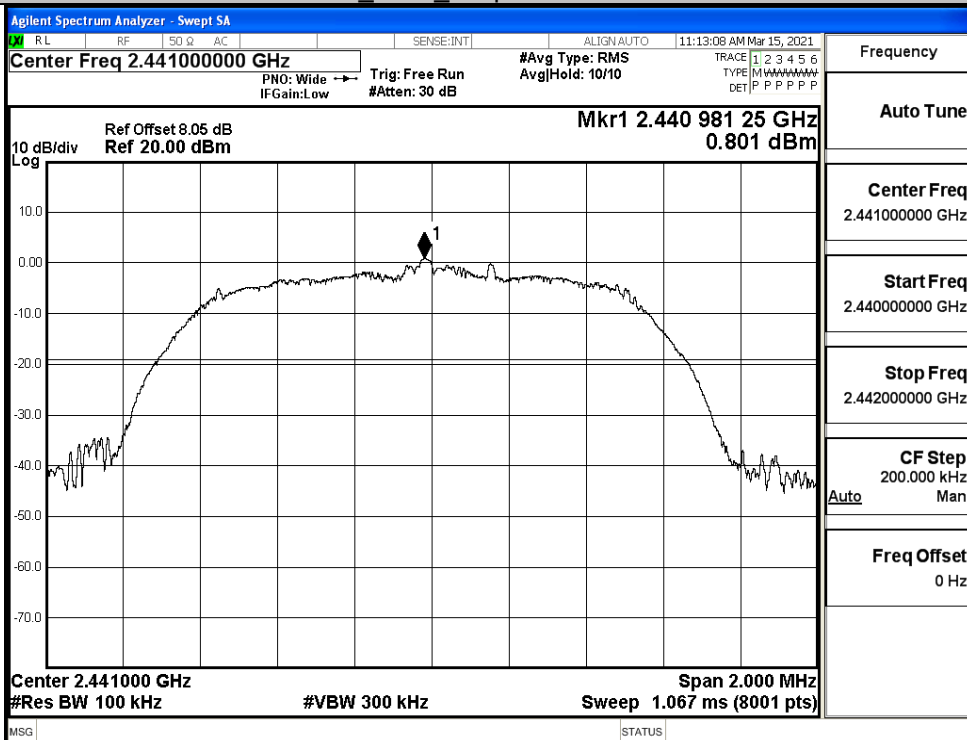


Puw

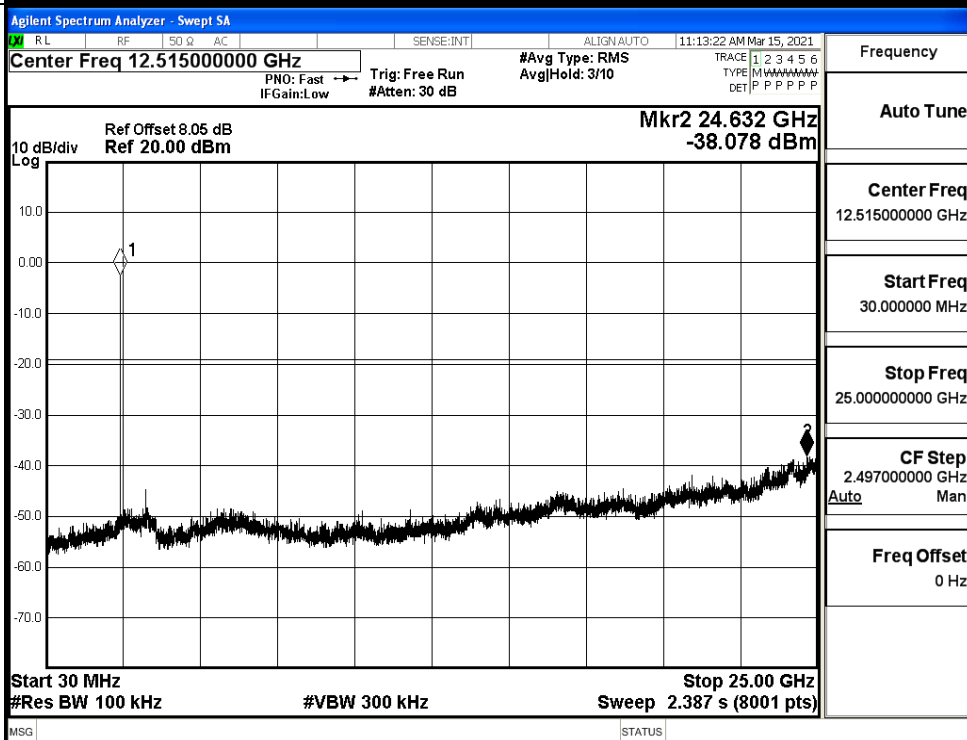


$\pi/4$ DQPSK_MCH_Graphs

Pref

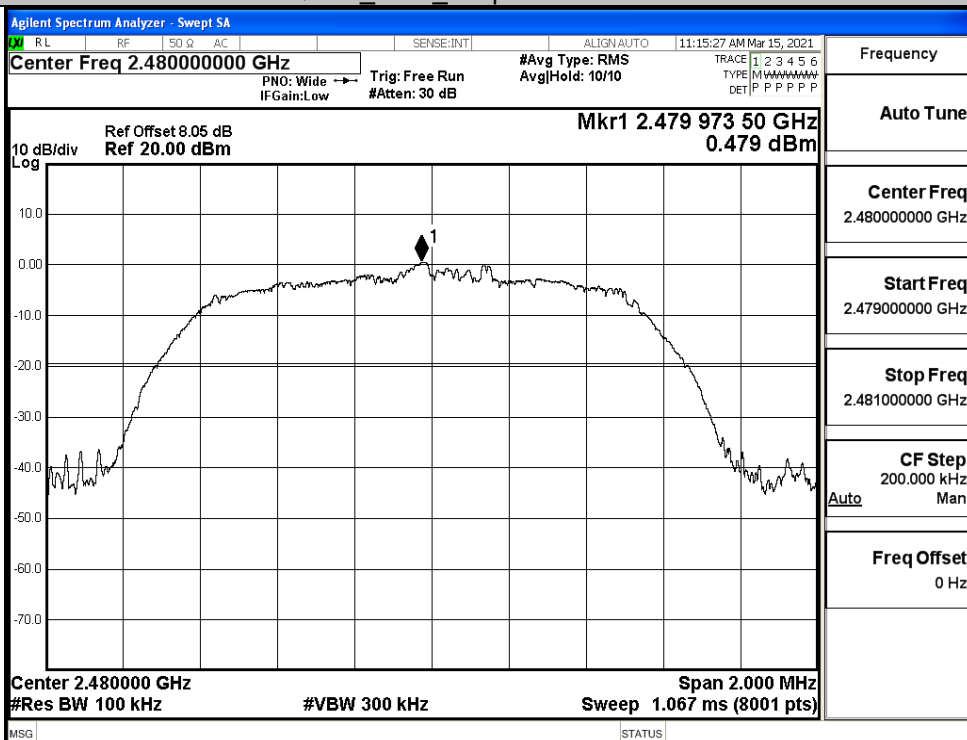


Puw

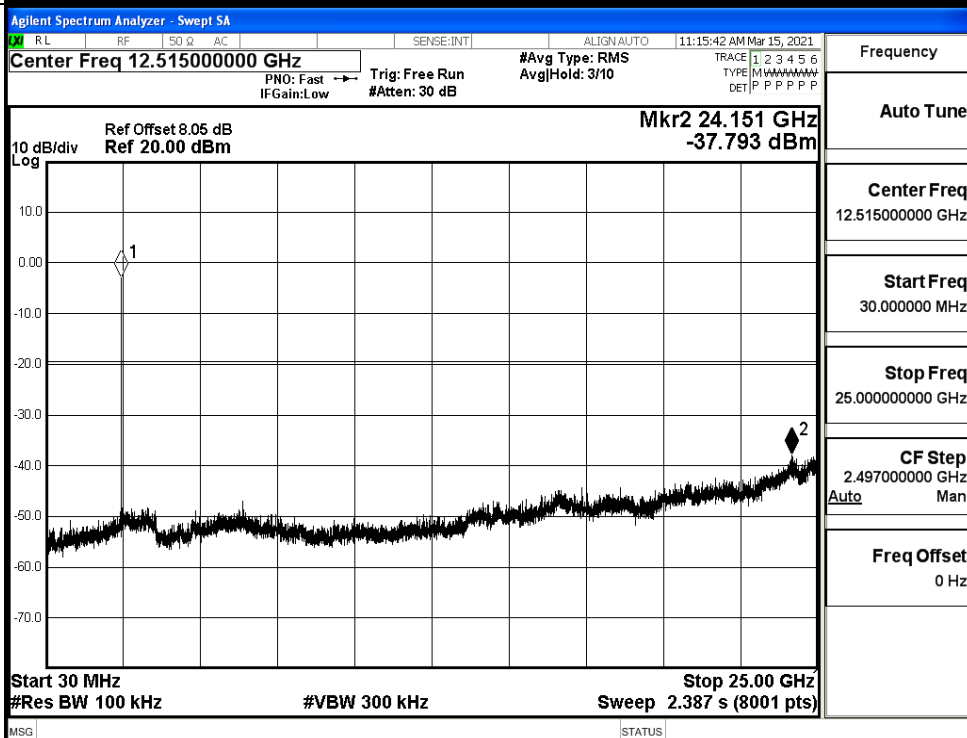


$\pi/4$ DQPSK_HCH_Graphs

Pref

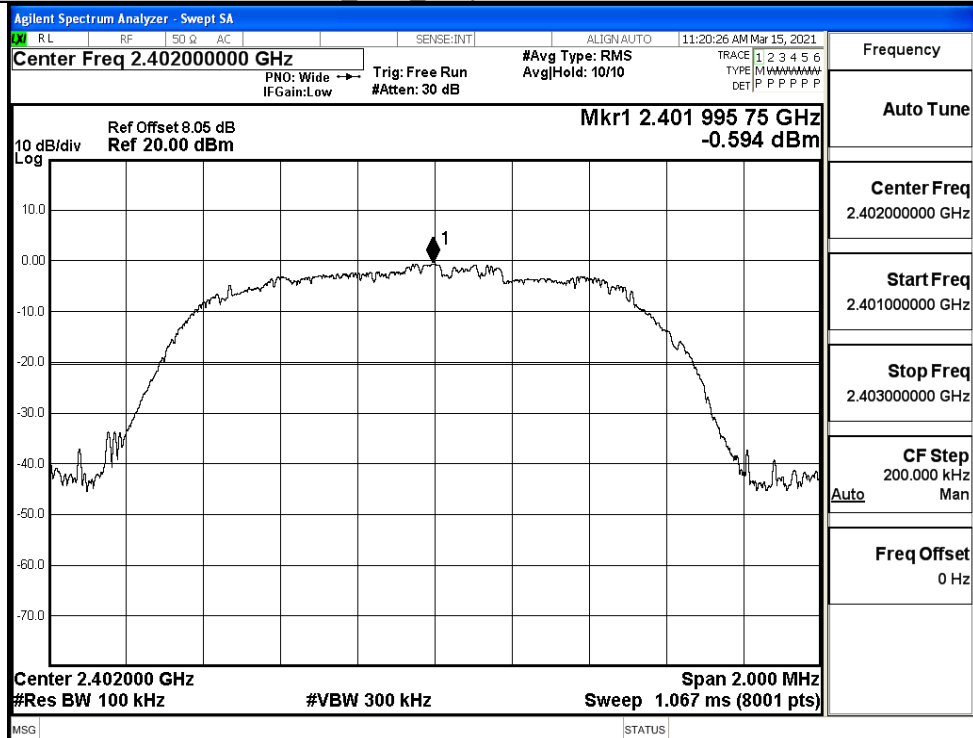


Puw

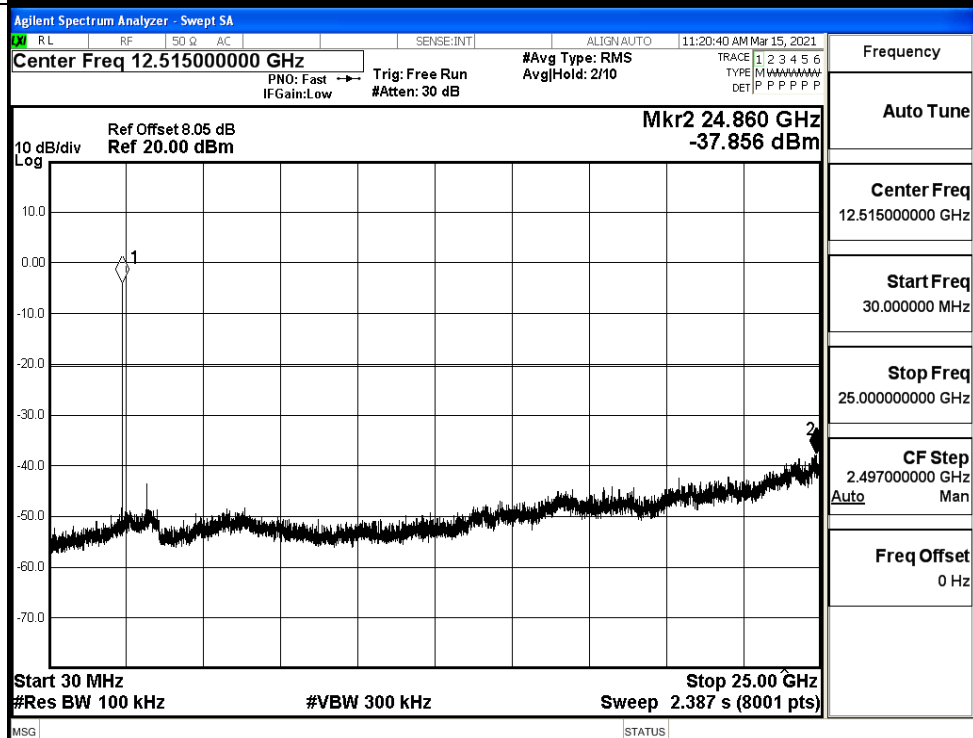


8DPSK_LCH_Graphs

Pref

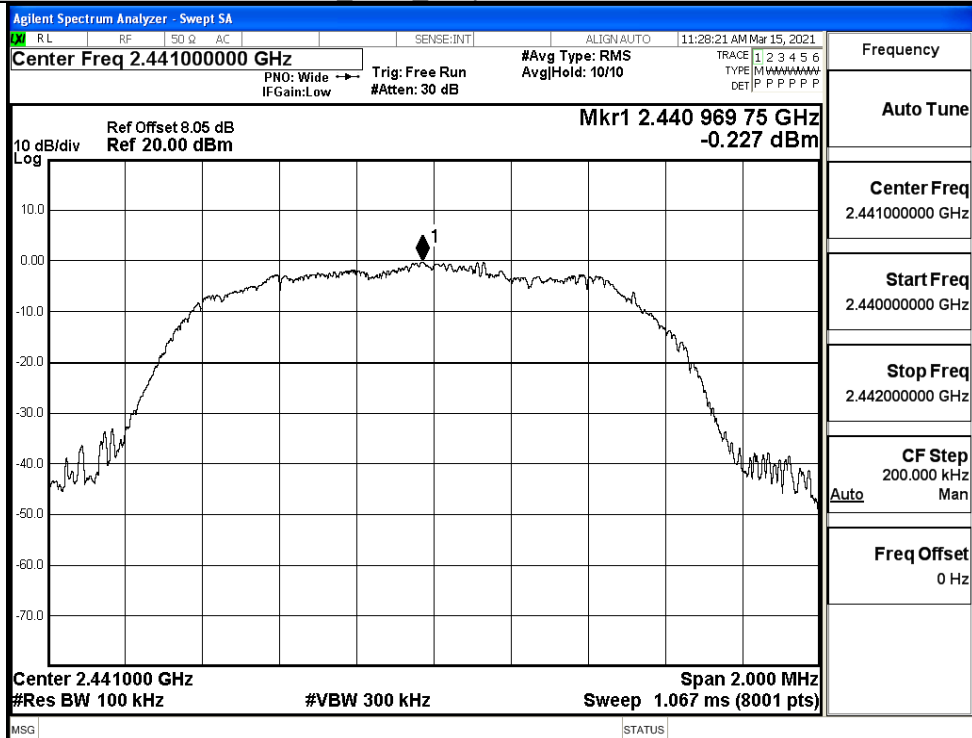


Puw

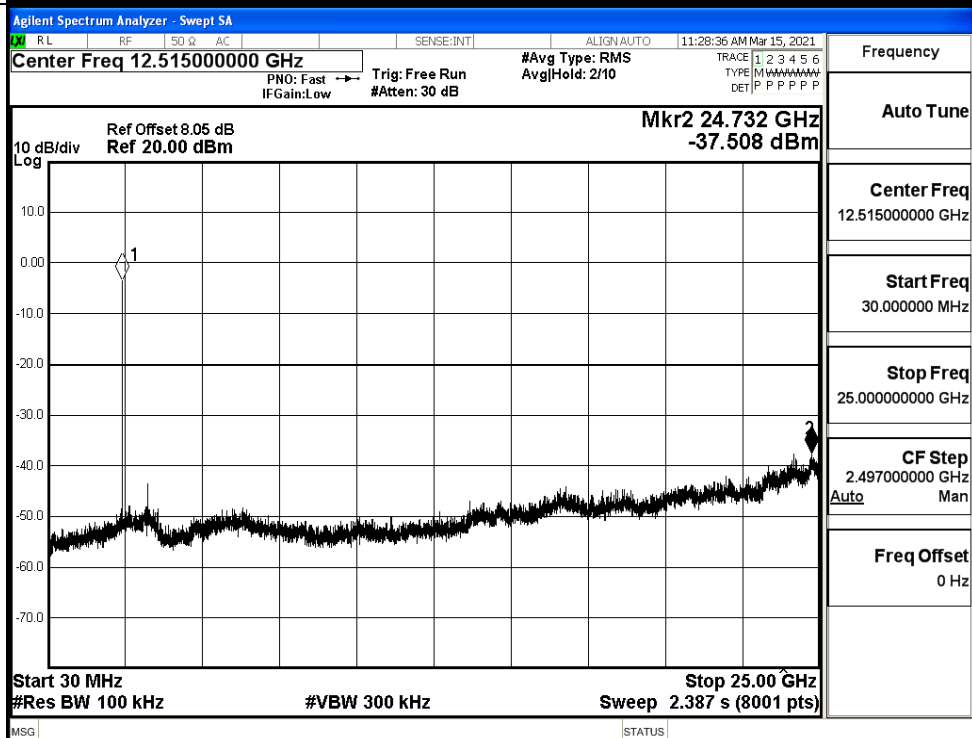


8DPSK_MCH_Graphs

Pref

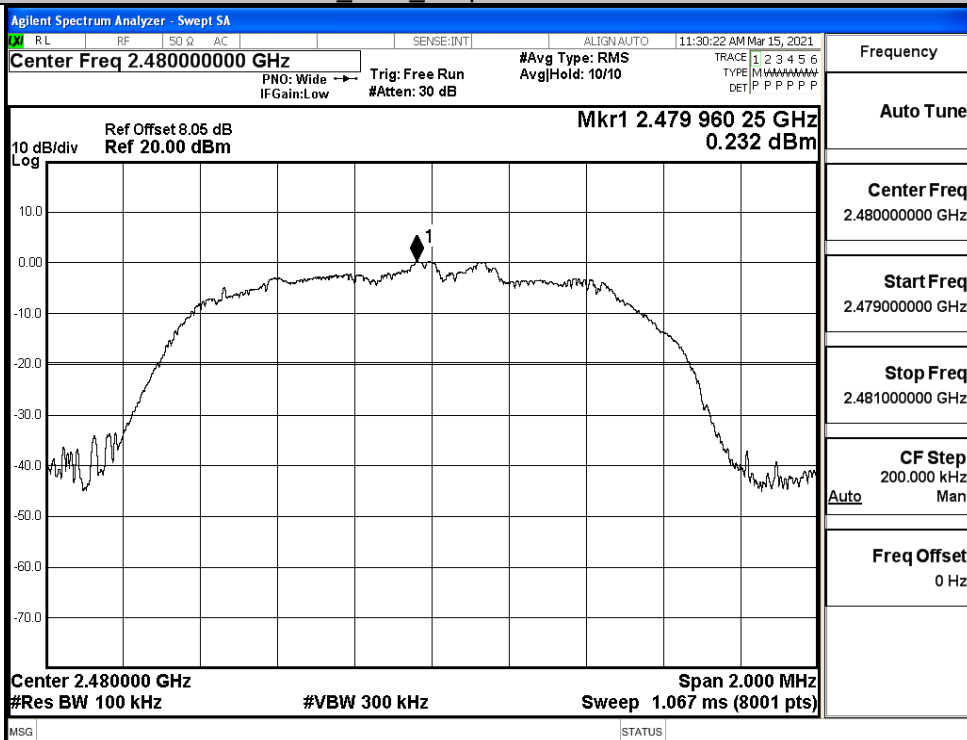


Puw

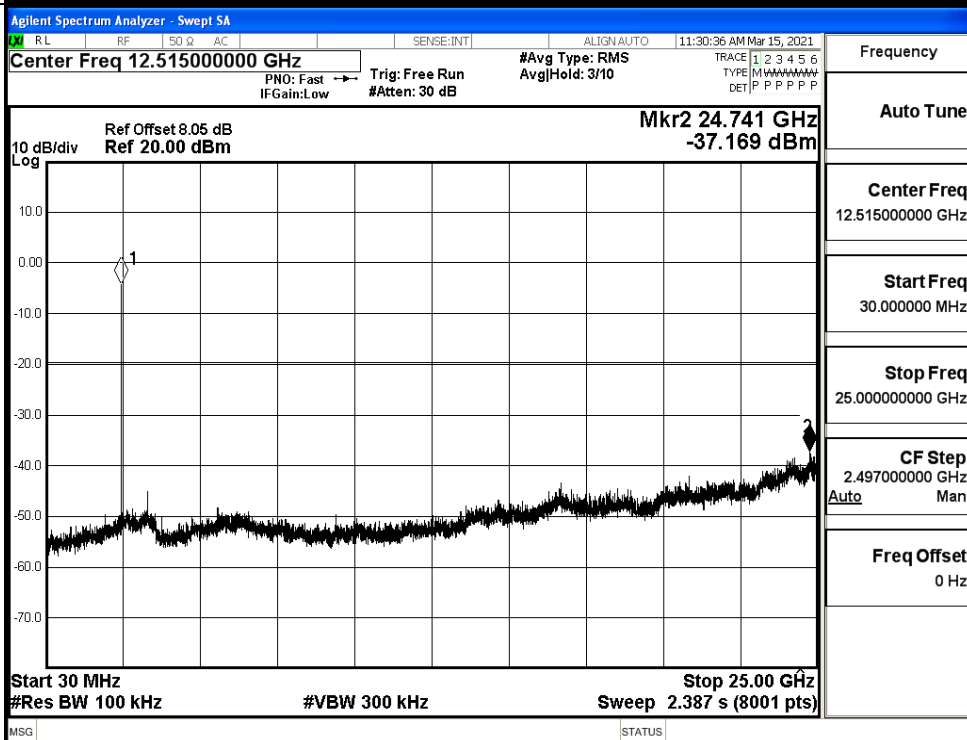


8DPSK_HCH_Graphs

Pref



Puw

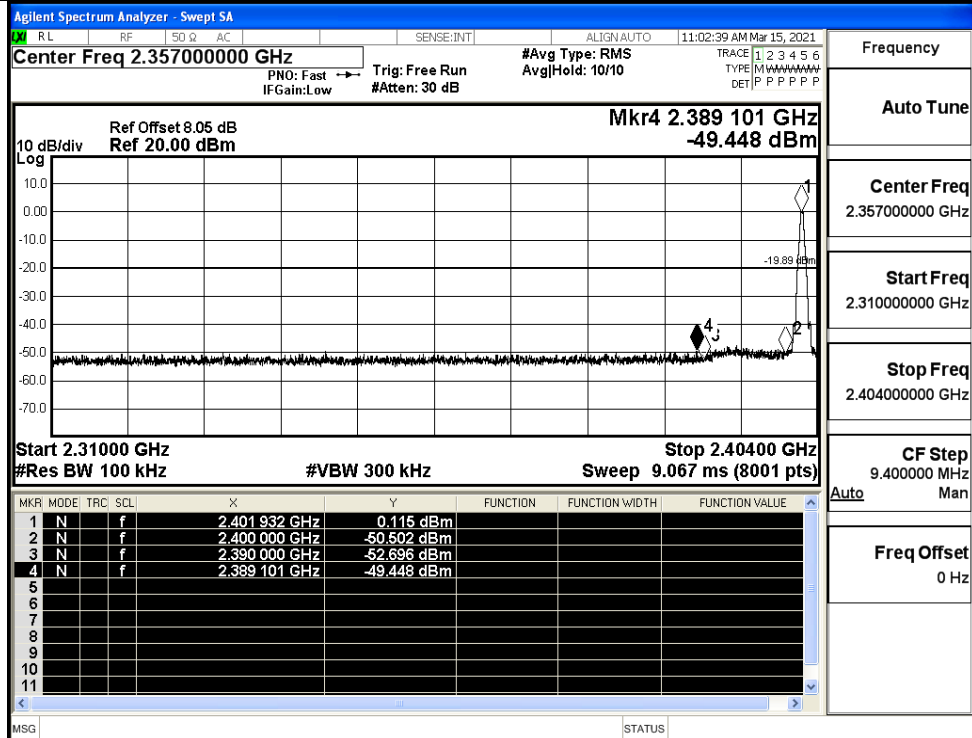


A.7 Band-edge for RF Conducted Emissions

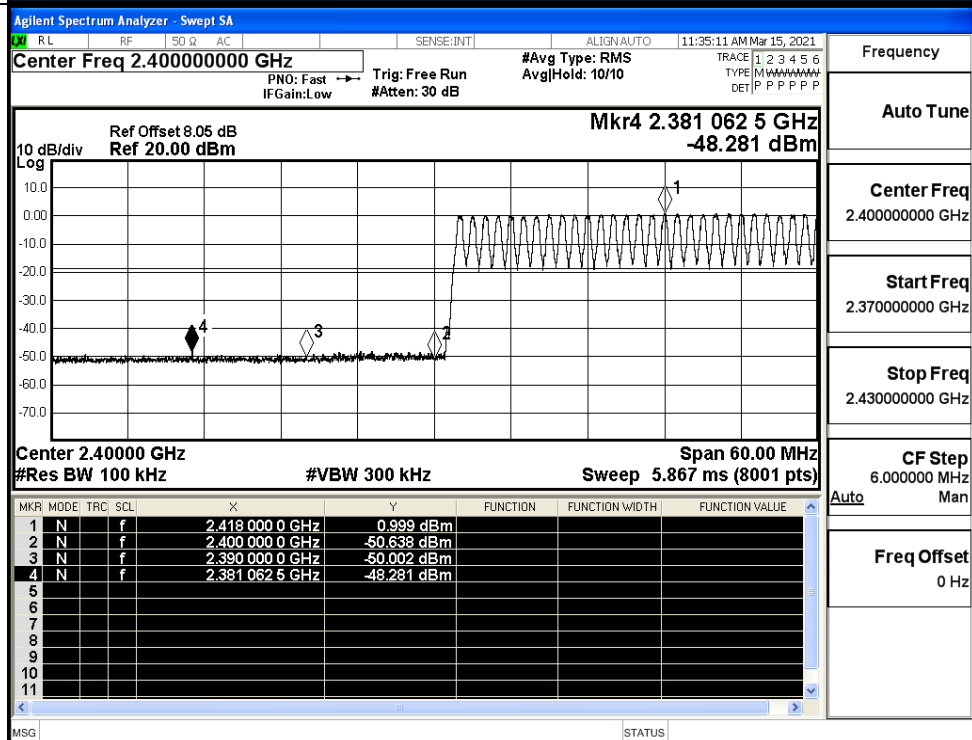
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	0.115	Off	-49.448	-19.89	PASS
			0.999	On	-48.281	-19	PASS
	HCH	2480	0.346	Off	-47.203	-19.65	PASS
			0.729	On	-47.001	-19.27	PASS
$\pi/4$ DQPSK	LCH	2402	-0.481	Off	-48.944	-20.48	PASS
			0.627	On	-48.720	-19.37	PASS
	HCH	2480	0.019	Off	-46.726	-19.98	PASS
			0.678	On	-45.964	-19.32	PASS
8DPSK	LCH	2402	-1.262	Off	-49.430	-21.26	PASS
			0.693	On	-48.557	-19.31	PASS
	HCH	2480	-0.322	Off	-46.273	-20.32	PASS
			0.755	On	-47.044	-19.25	PASS

Test Graphs

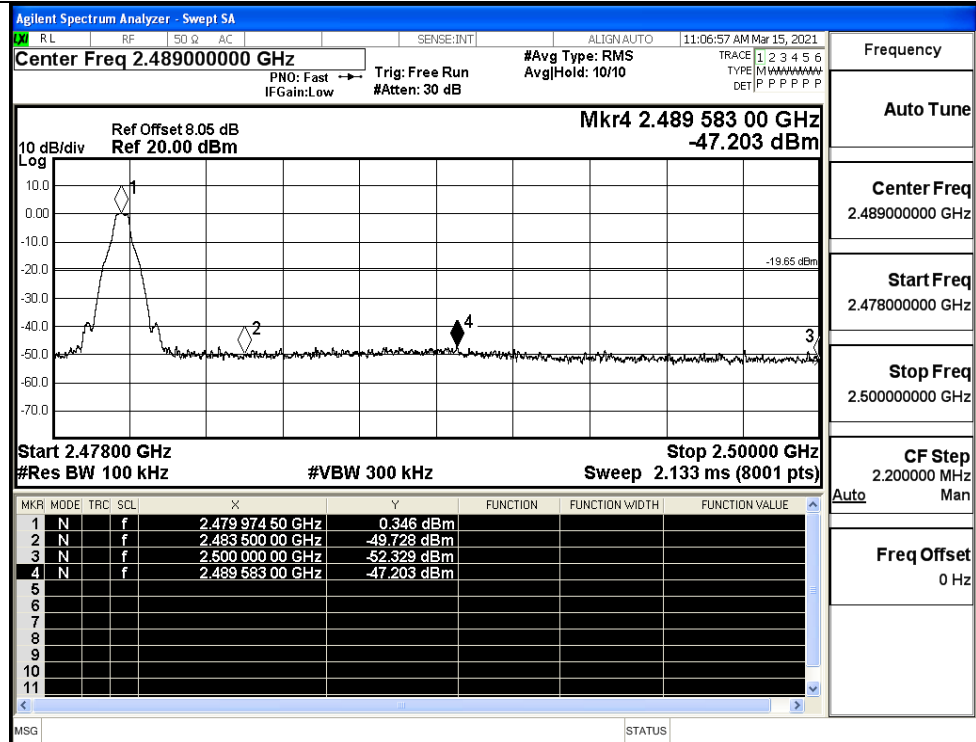
GFSK/LCH/No Hop



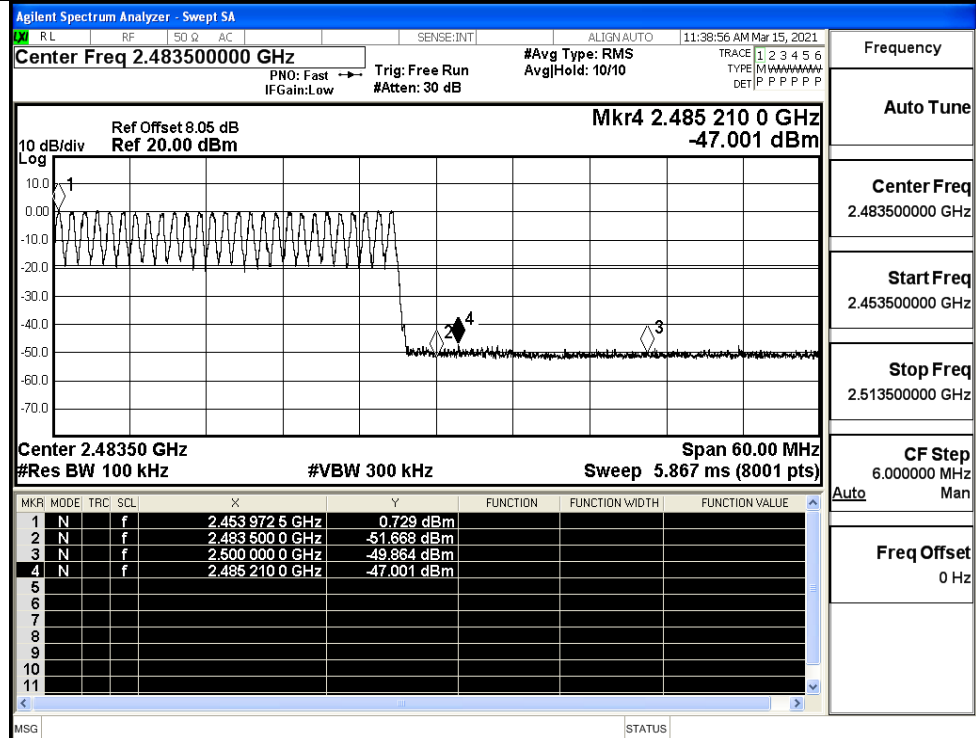
GFSK/LCH/Hop



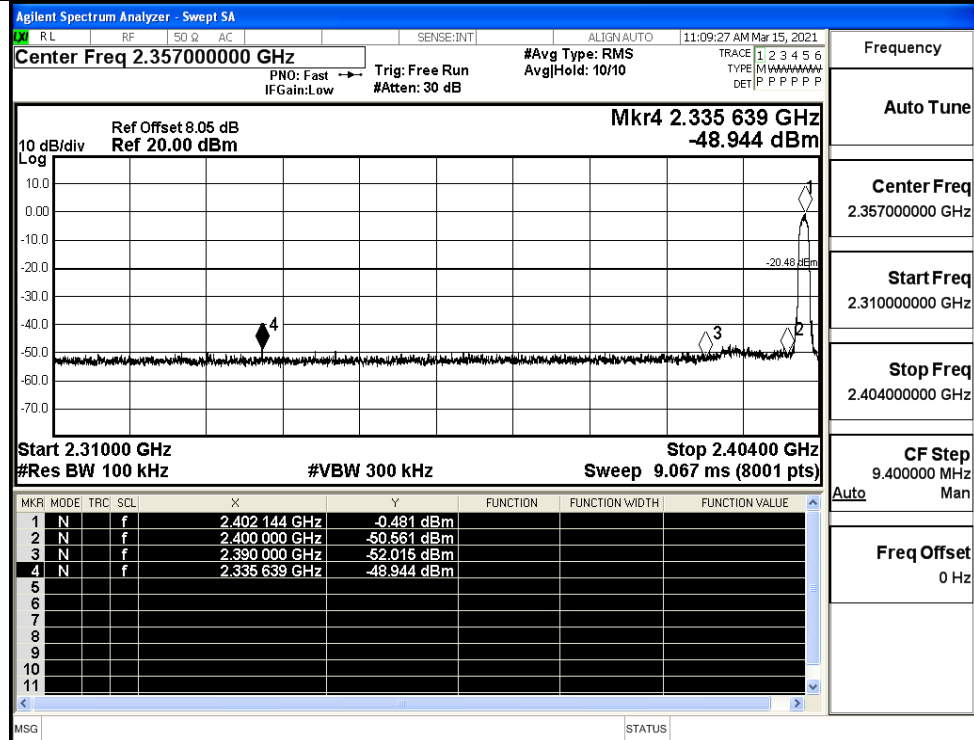
GFSK/HCH/No Hop



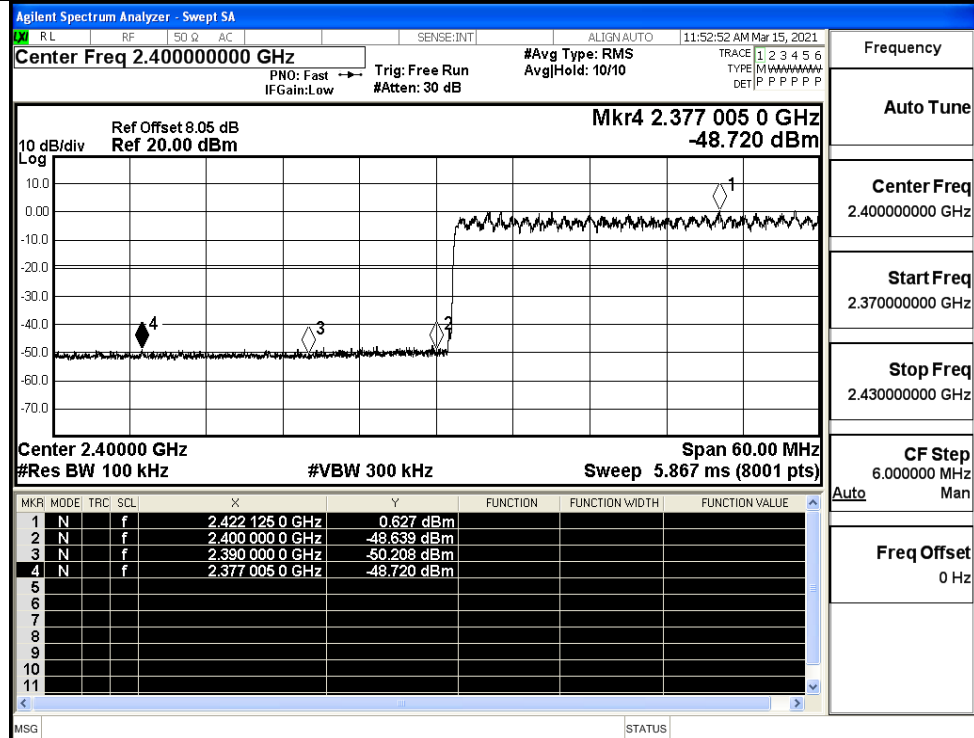
GFSK/HCH/Hop



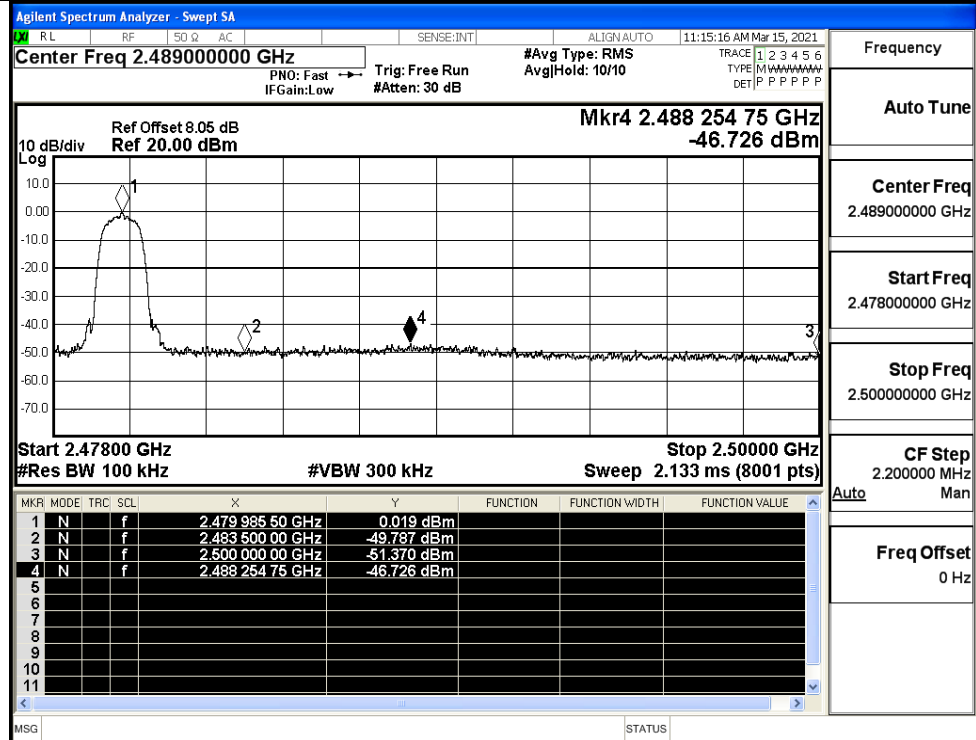
$\pi/4$ DQPSK/LCH/No
Hop



$\pi/4$ DQPSK/LCH/Hop



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



Frequency

Auto Tune

Center Freq
2.489000000 GHz

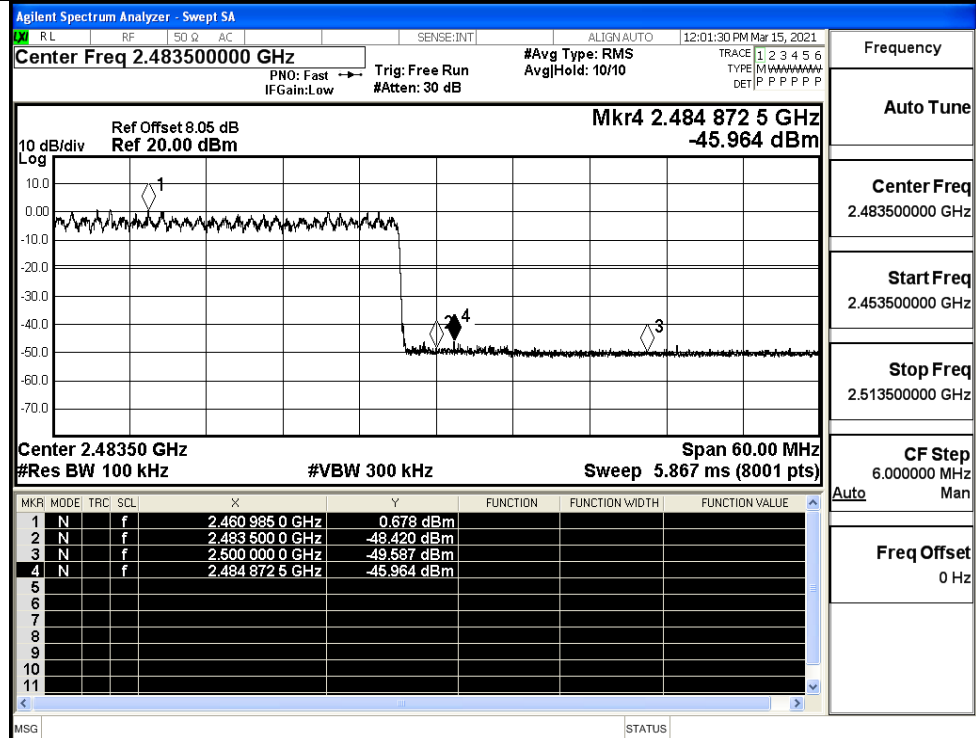
Start Freq
2.478000000 GHz

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

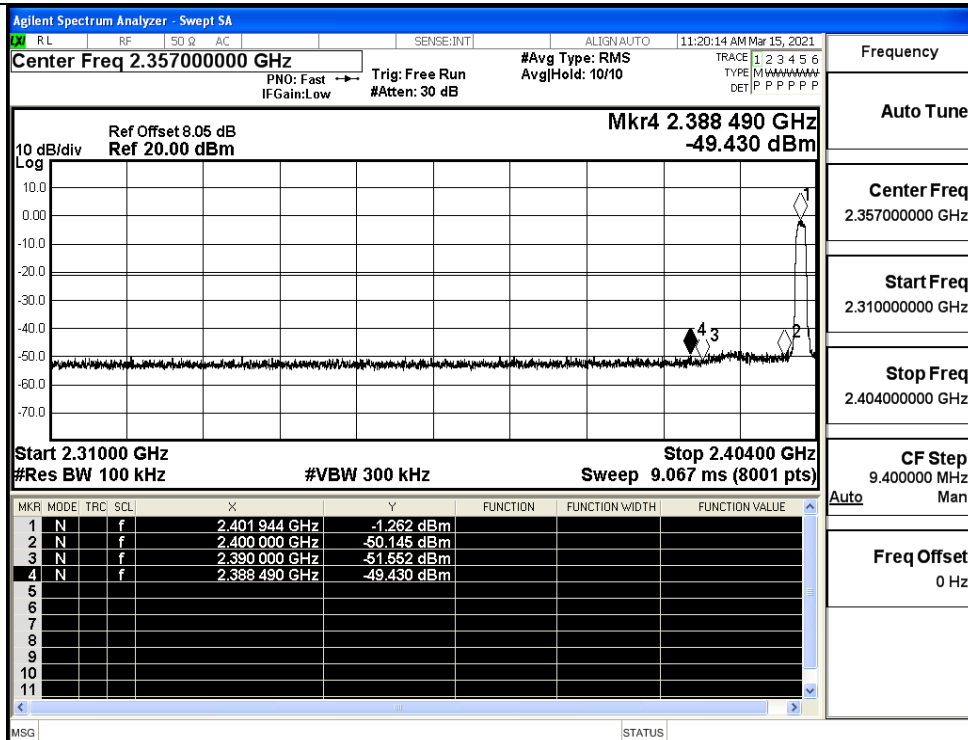
Start Freq
2.453500000 GHz

Stop Freq
2.513500000 GHz

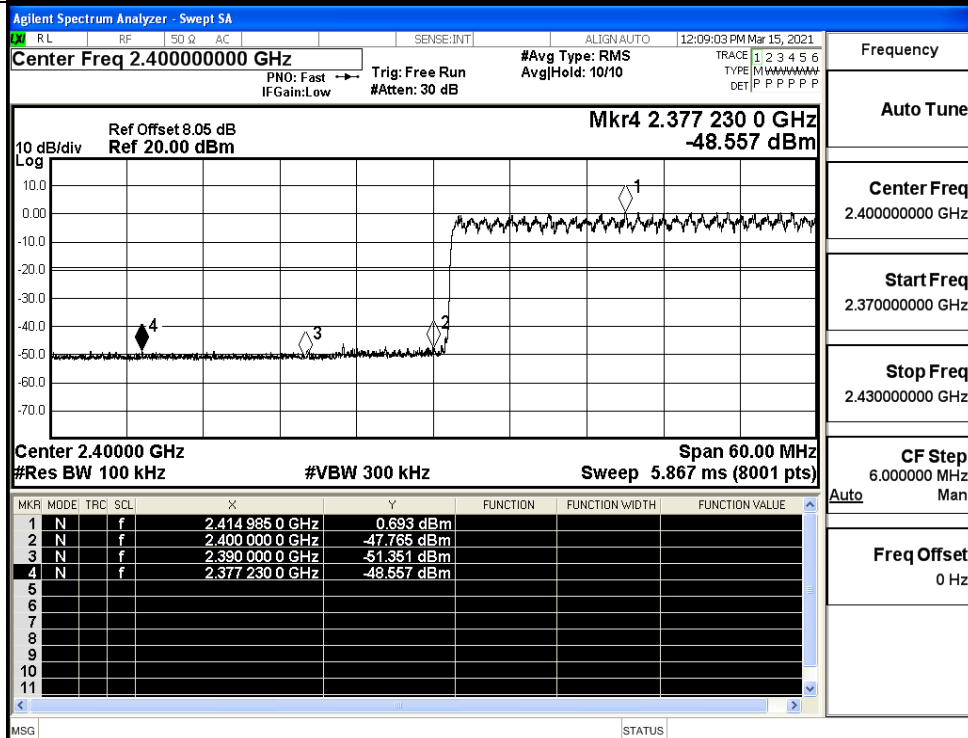
CF Step
6.000000 MHz
Auto Man

Freq Offset
0 Hz

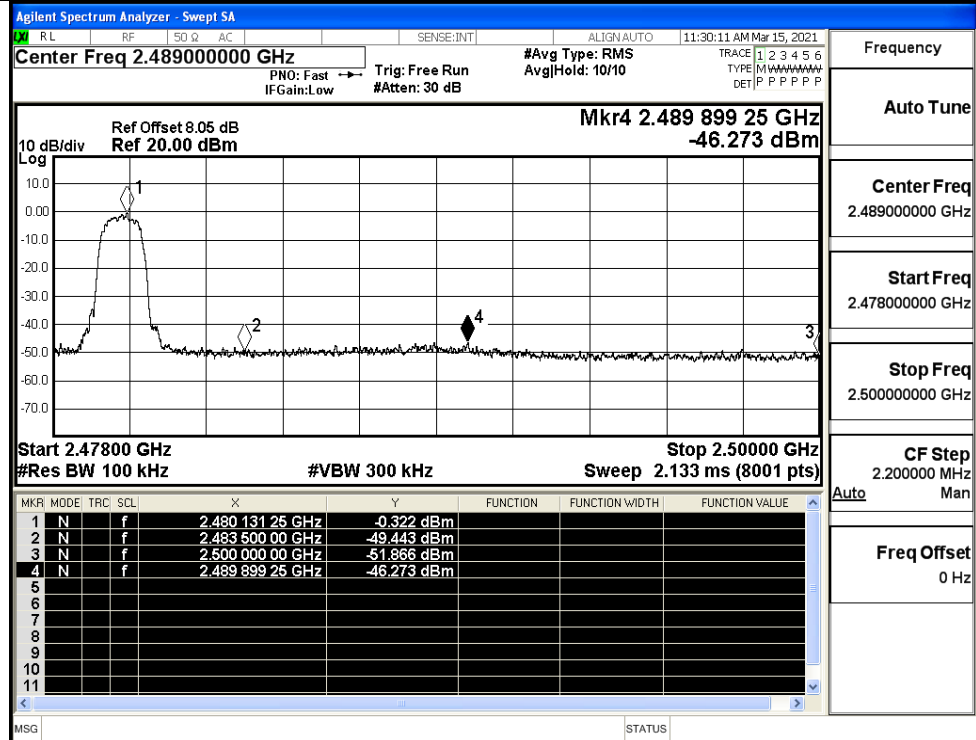
8DPSK/LCH/No Hop



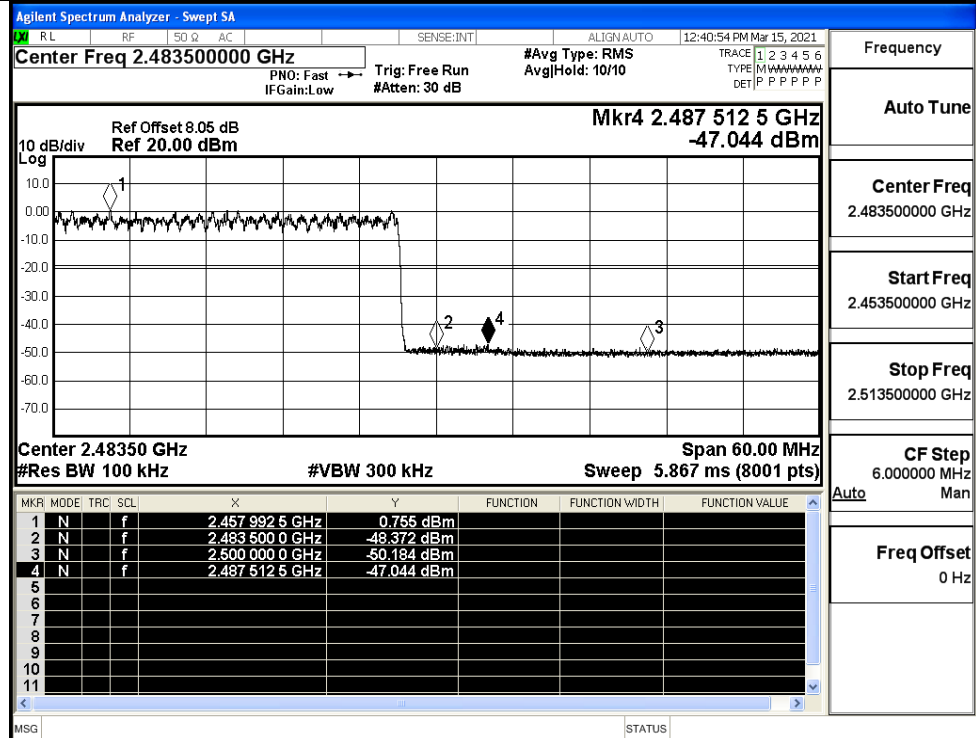
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



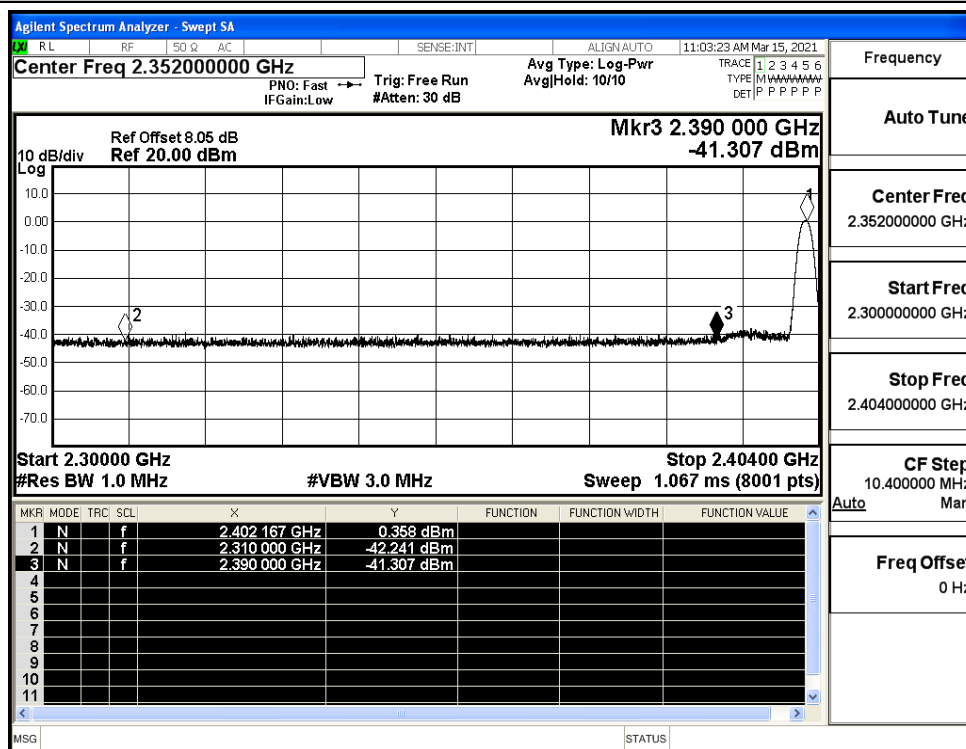
8DPSK/HCH/Hop



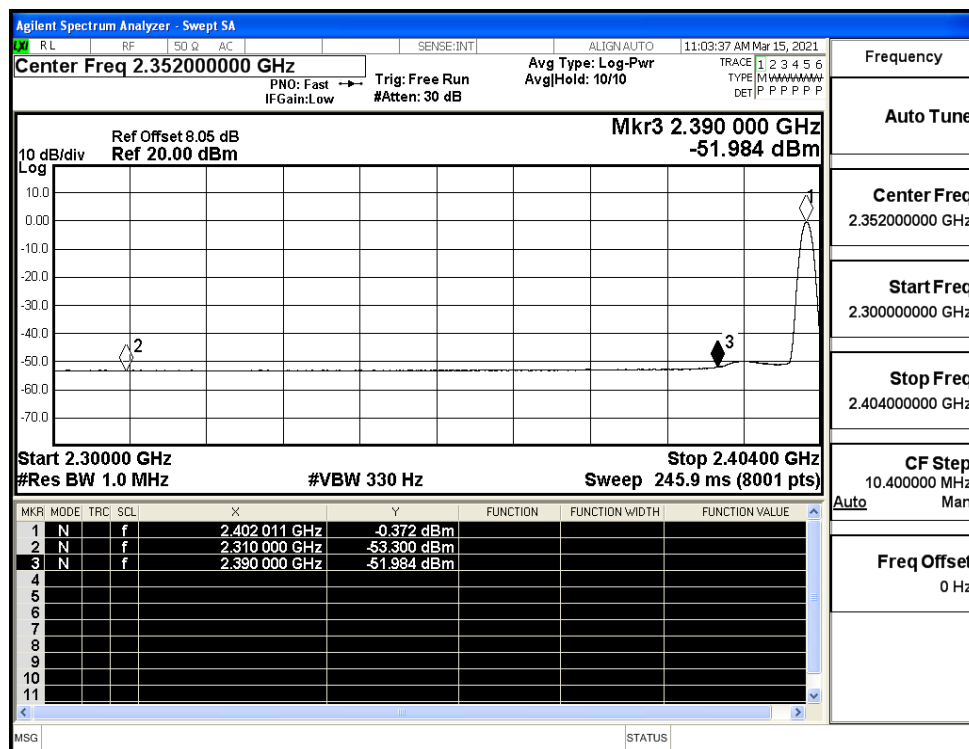
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-42.24	2.0	0	55.02	PEAK	74	PASS
	Off	2310.0	-53.30	2.0	0	43.96	AV	54	PASS
	Off	2390.0	-41.31	2.0	0	55.95	PEAK	74	PASS
	Off	2390.0	-51.98	2.0	0	45.28	AV	54	PASS
	Off	2483.5	-40.21	2.0	0	57.05	PEAK	74	PASS
	Off	2483.5	-50.45	2.0	0	46.81	AV	54	PASS
	Off	2500.0	-42.19	2.0	0	55.07	PEAK	74	PASS
	Off	2500.0	-51.90	2.0	0	45.36	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.04	2.0	0	54.22	PEAK	74	PASS
	Off	2310.0	-53.28	2.0	0	43.98	AV	54	PASS
	Off	2390.0	-42.14	2.0	0	55.12	PEAK	74	PASS
	Off	2390.0	-51.85	2.0	0	45.41	AV	54	PASS
	Off	2483.5	-39.65	2.0	0	57.61	PEAK	74	PASS
	Off	2483.5	-50.25	2.0	0	47.01	AV	54	PASS
	Off	2500.0	-42.31	2.0	0	54.95	PEAK	74	PASS
	Off	2500.0	-52.10	2.0	0	45.16	AV	54	PASS
8DPSK	Off	2310.0	-43.40	2.0	0	53.86	PEAK	74	PASS
	Off	2310.0	-53.28	2.0	0	43.98	AV	54	PASS
	Off	2390.0	-43.05	2.0	0	54.21	PEAK	74	PASS
	Off	2390.0	-52.04	2.0	0	45.22	AV	54	PASS
	Off	2483.5	-40.41	2.0	0	56.85	PEAK	74	PASS
	Off	2483.5	-50.43	2.0	0	46.83	AV	54	PASS
	Off	2500.0	-41.42	2.0	0	55.84	PEAK	74	PASS
	Off	2500.0	-52.13	2.0	0	45.13	AV	54	PASS

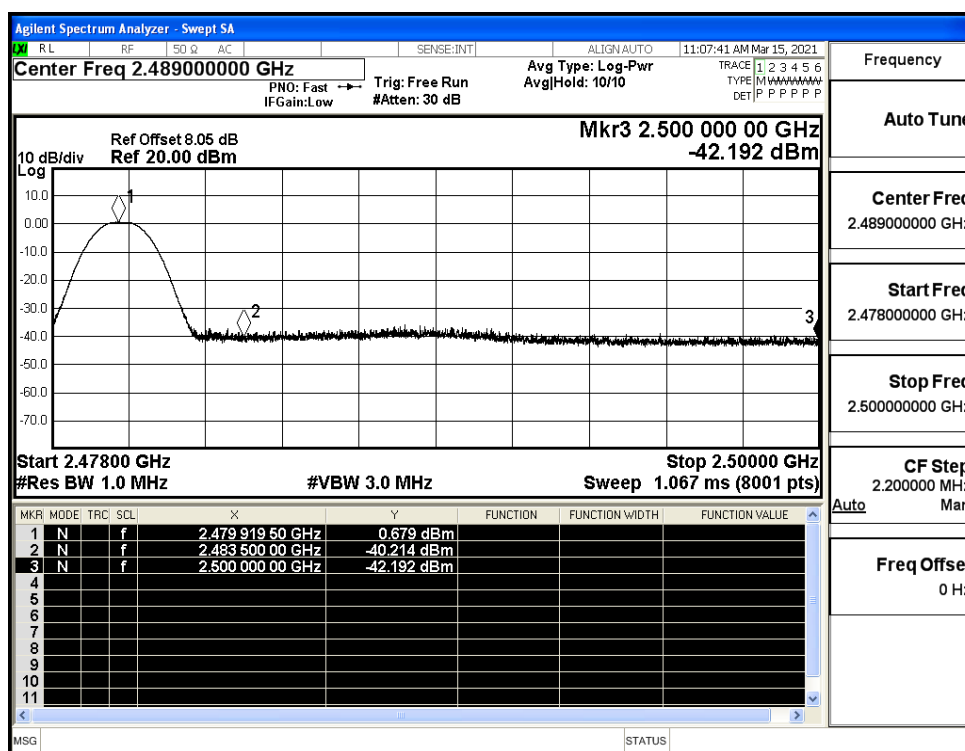
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



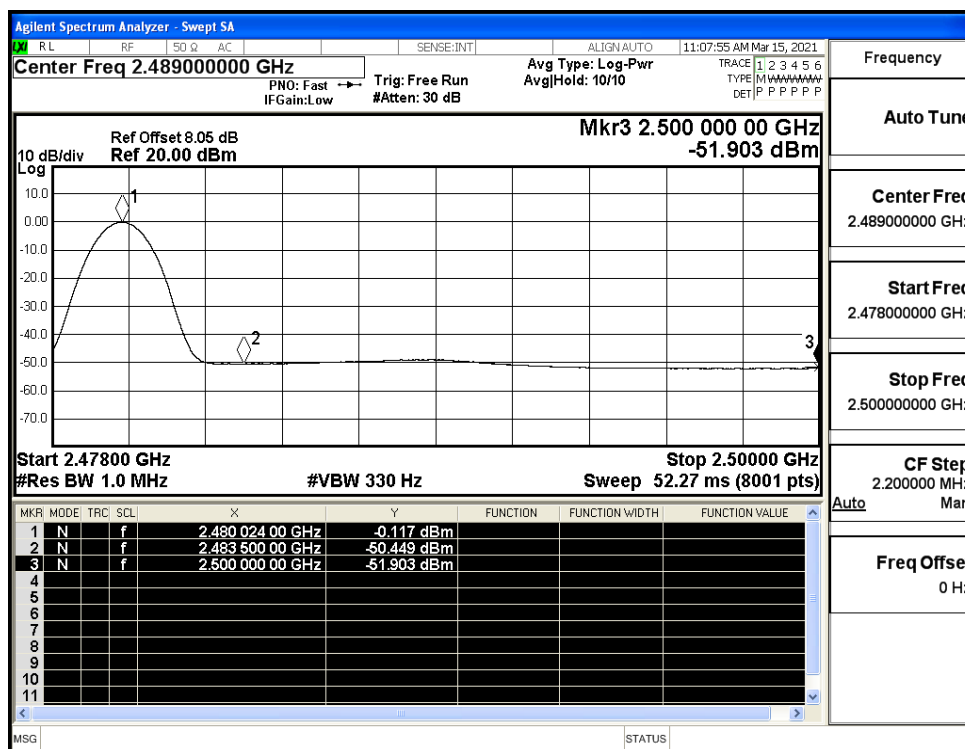
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

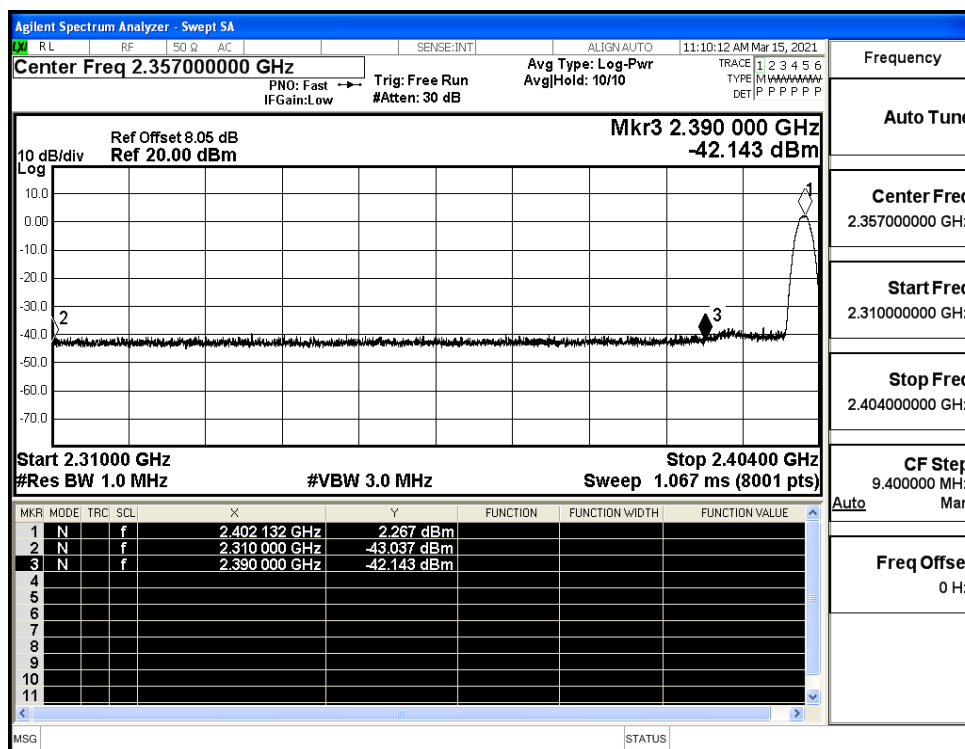
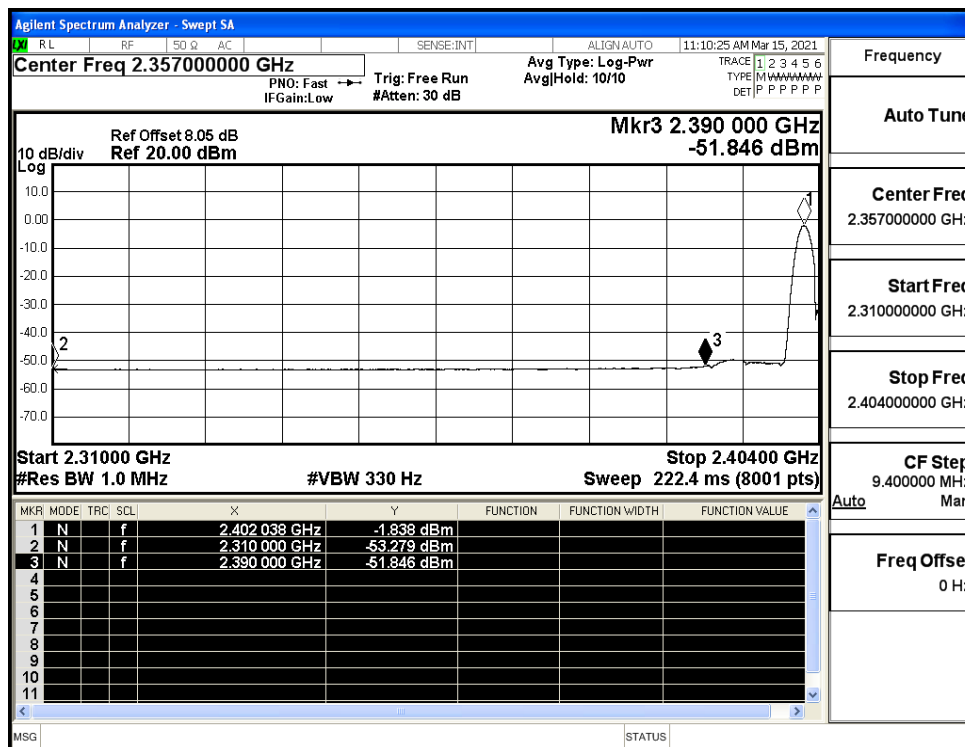


Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)

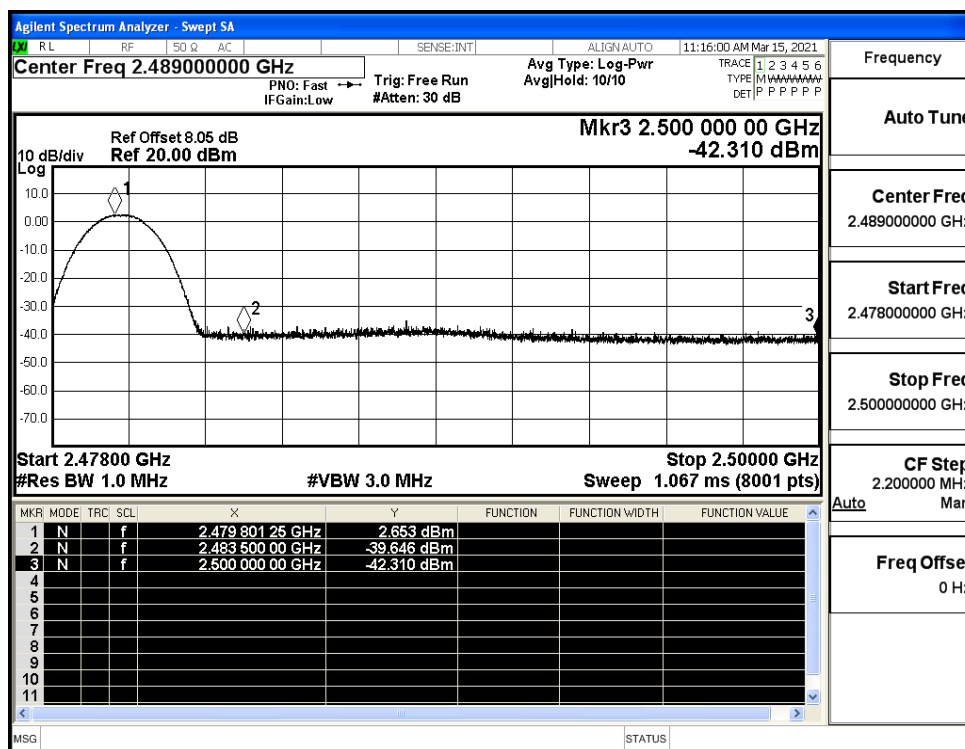


Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)

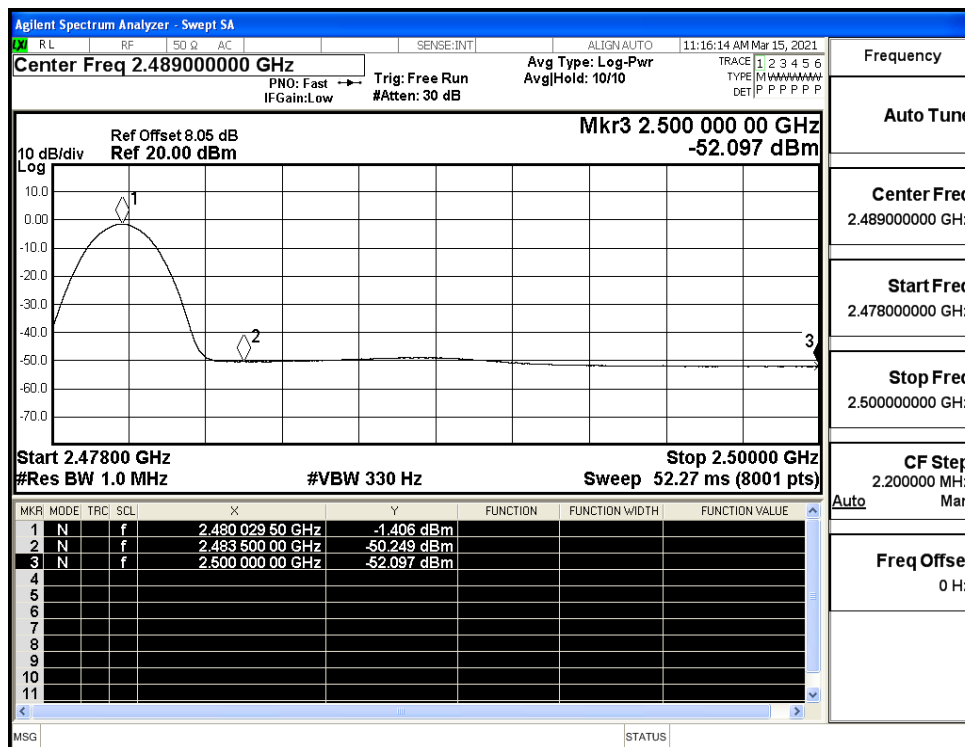


Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

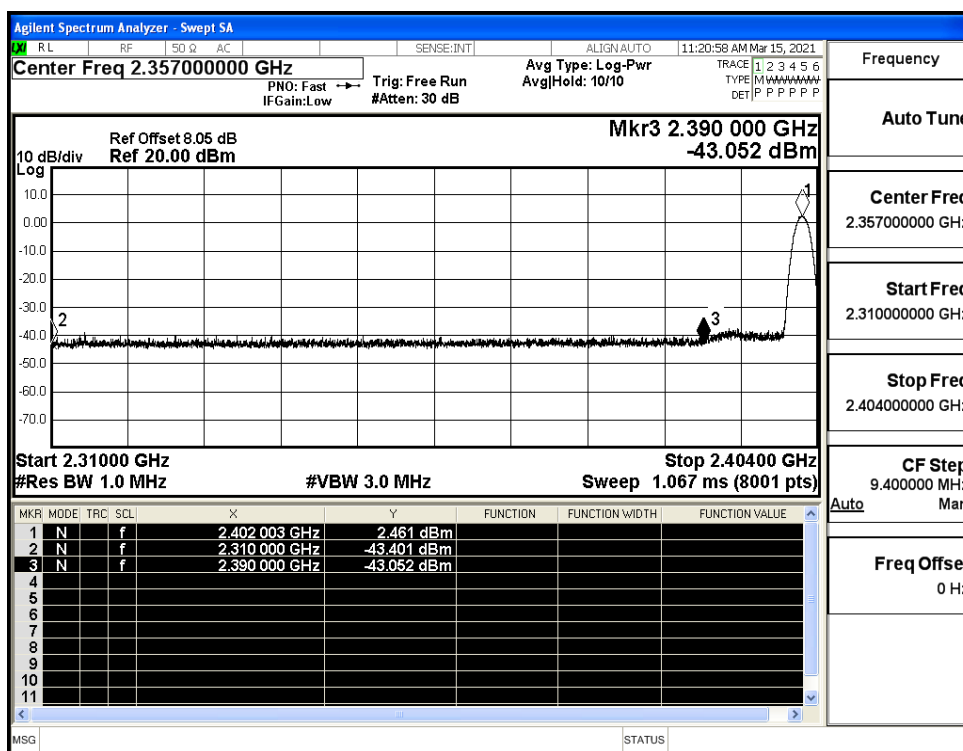
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



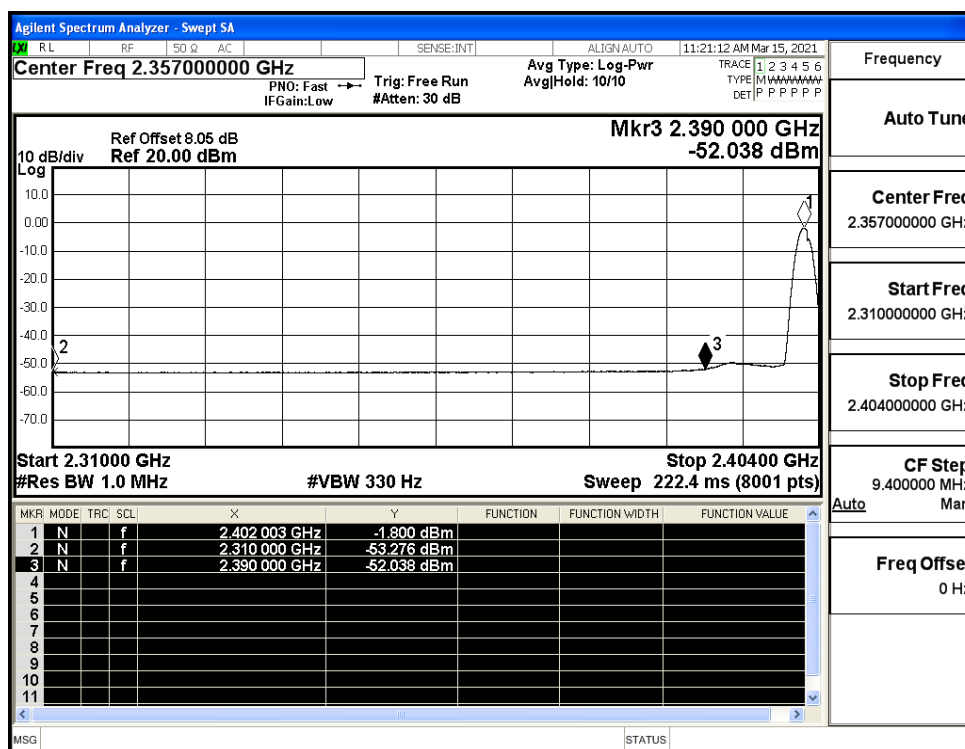
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



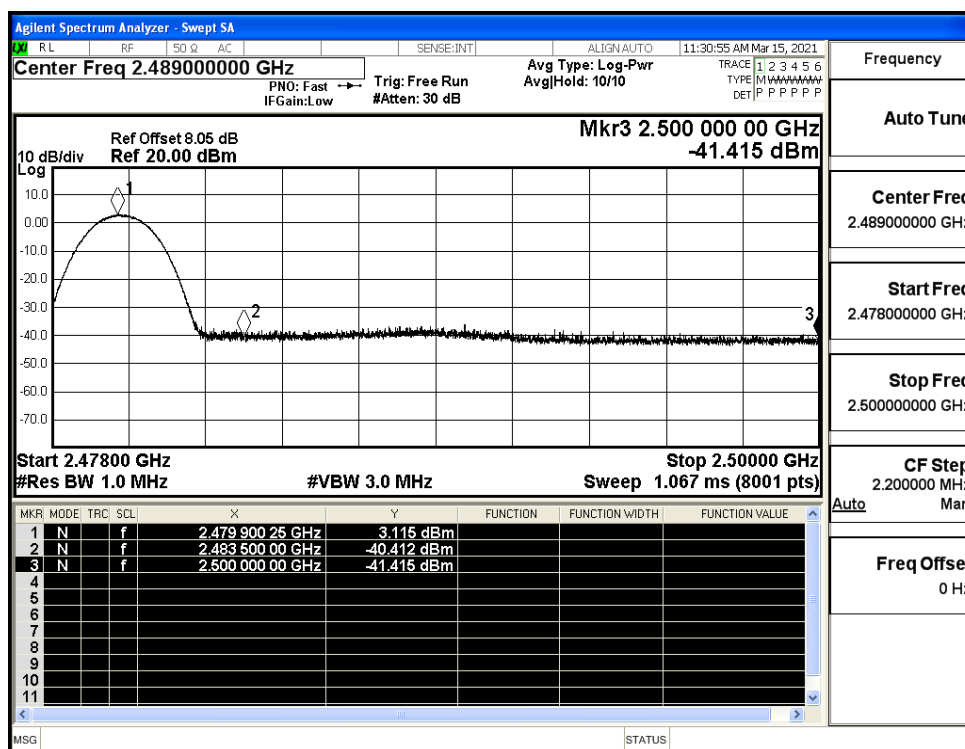
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

