

Appendix A

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

Product Name: SELPIC Handy Printer

Trade Mark: SELPIC

Test Model (HVIN): P1

Environmental Conditions

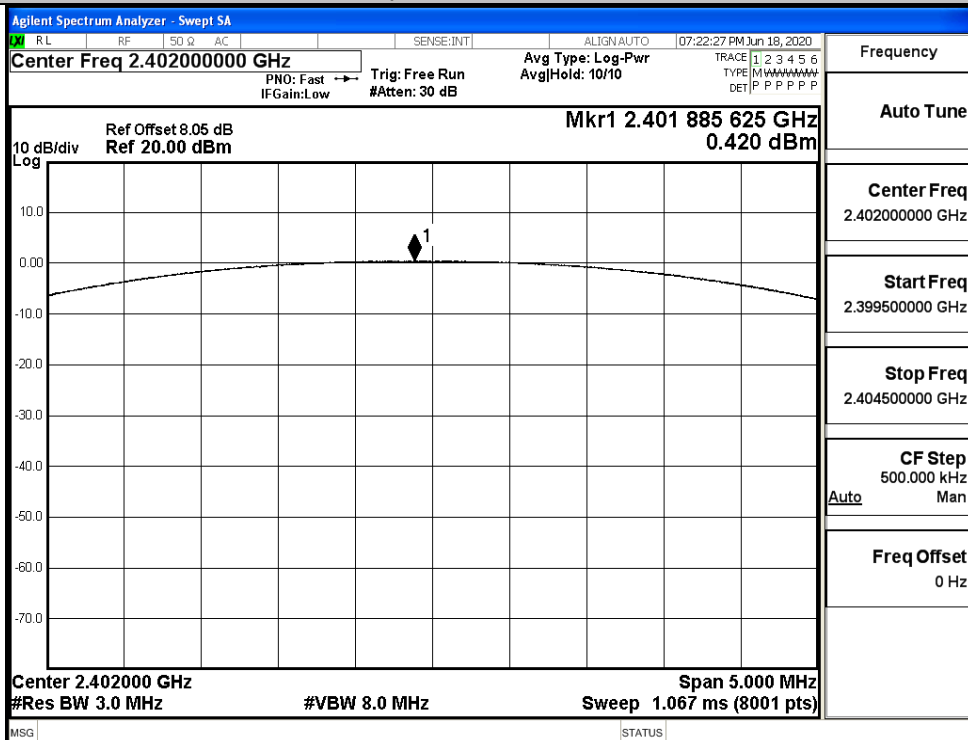
Temperature:	23.2 ° C
Relative Humidity:	54.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Qu Xin
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

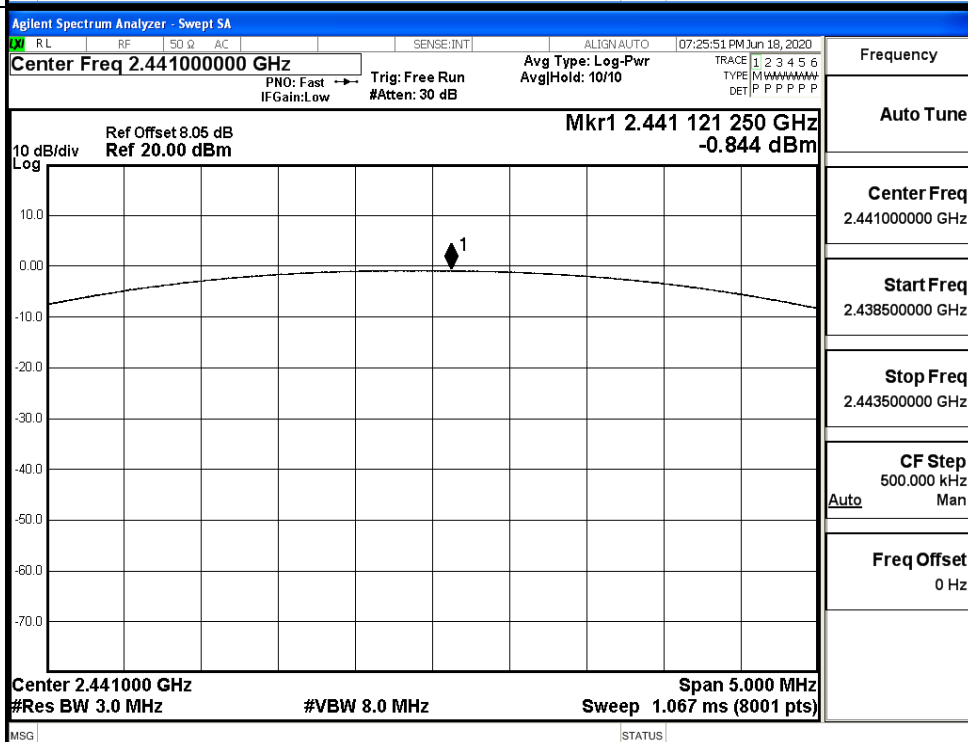
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.420	30	PASS
	MCH	-0.844	30	PASS
	HCH	-0.720	30	PASS
$\pi/4$ DQPSK	LCH	-1.257	30	PASS
	MCH	-0.707	30	PASS
	HCH	1.328	30	PASS
8DPSK	LCH	-0.781	30	PASS
	MCH	1.460	30	PASS
	HCH	1.547	30	PASS

Test Graphs

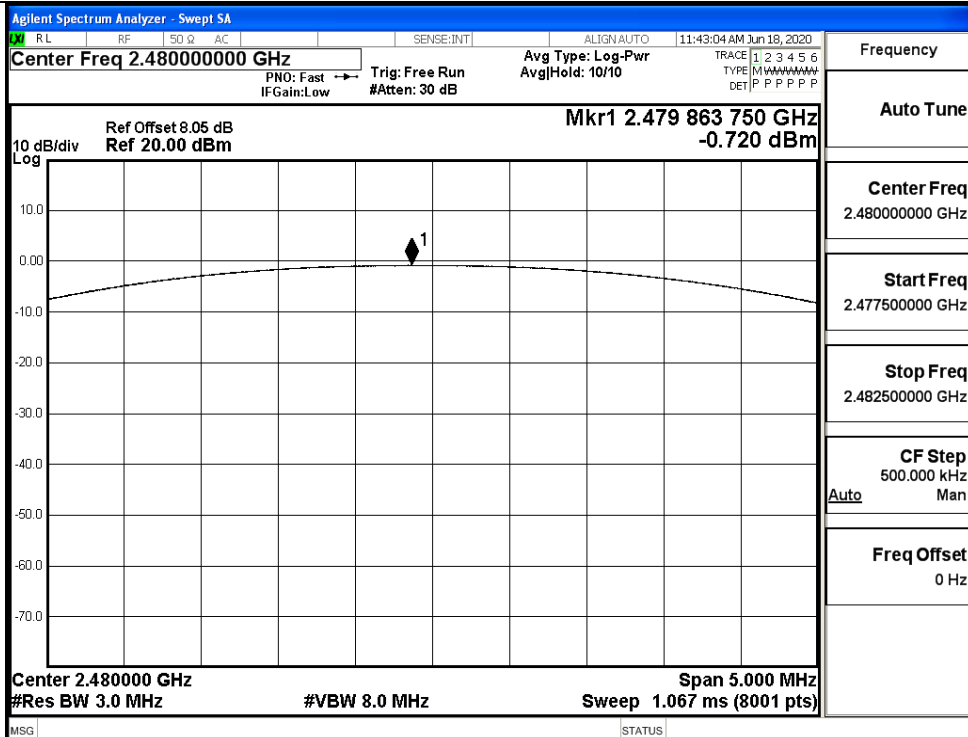
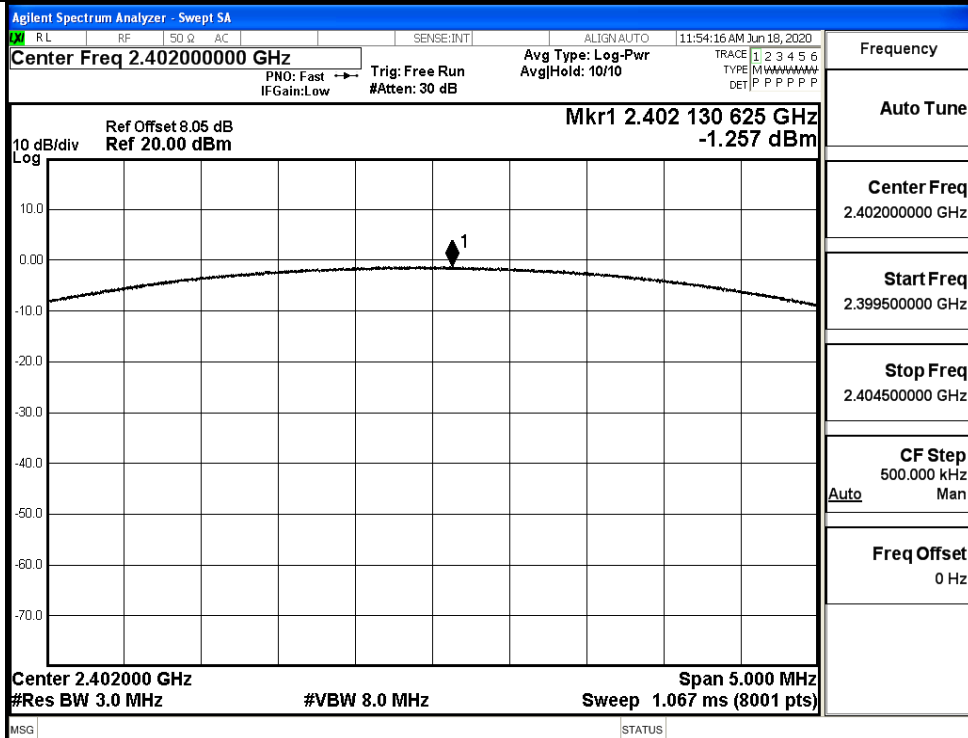
GFSK/LCH

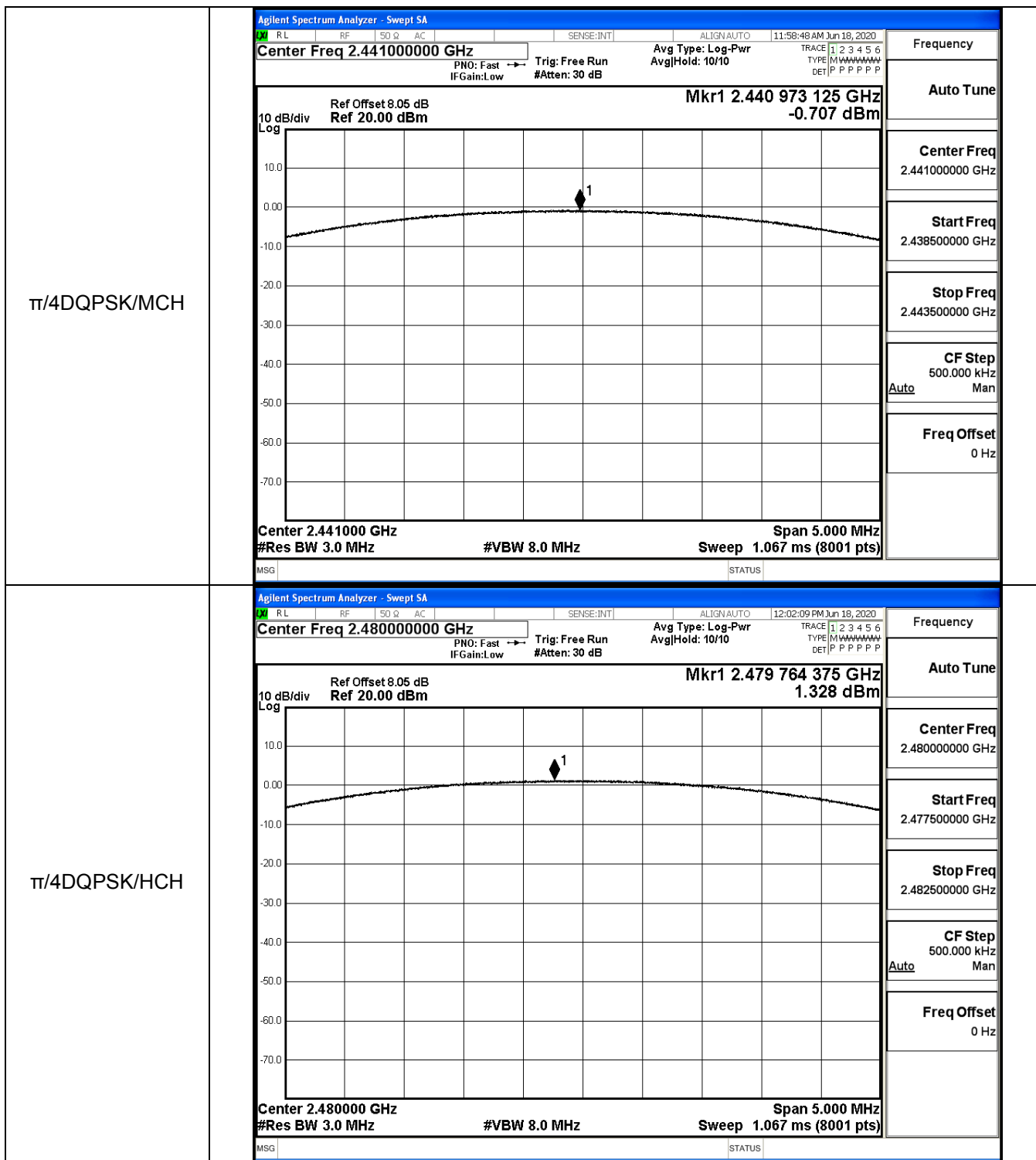


GFSK/MCH

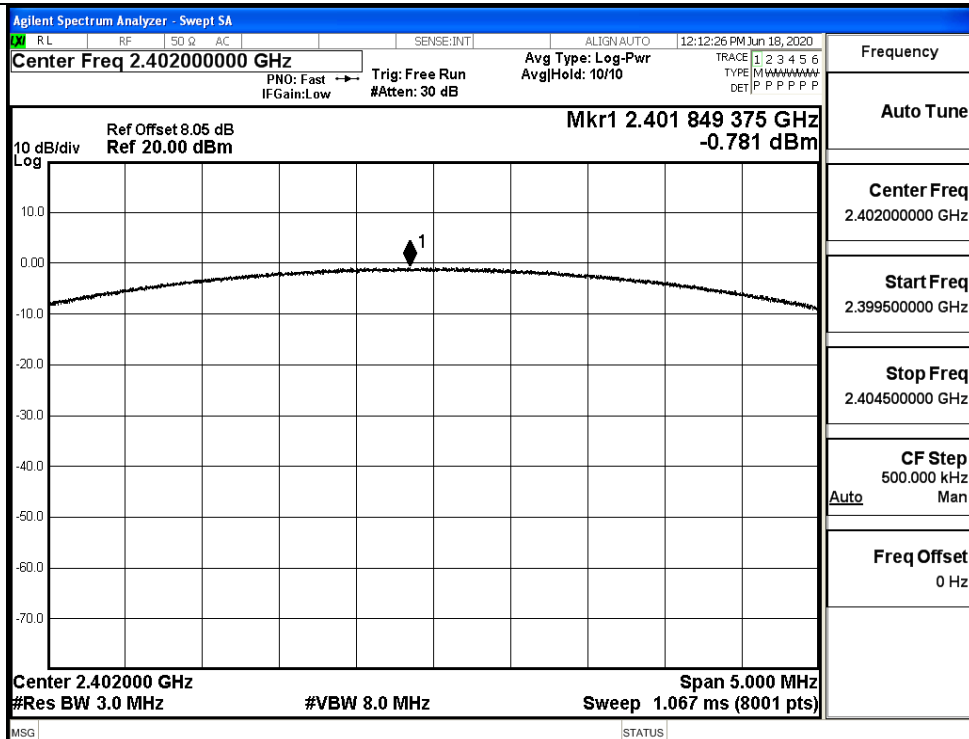


GFSK/HCH

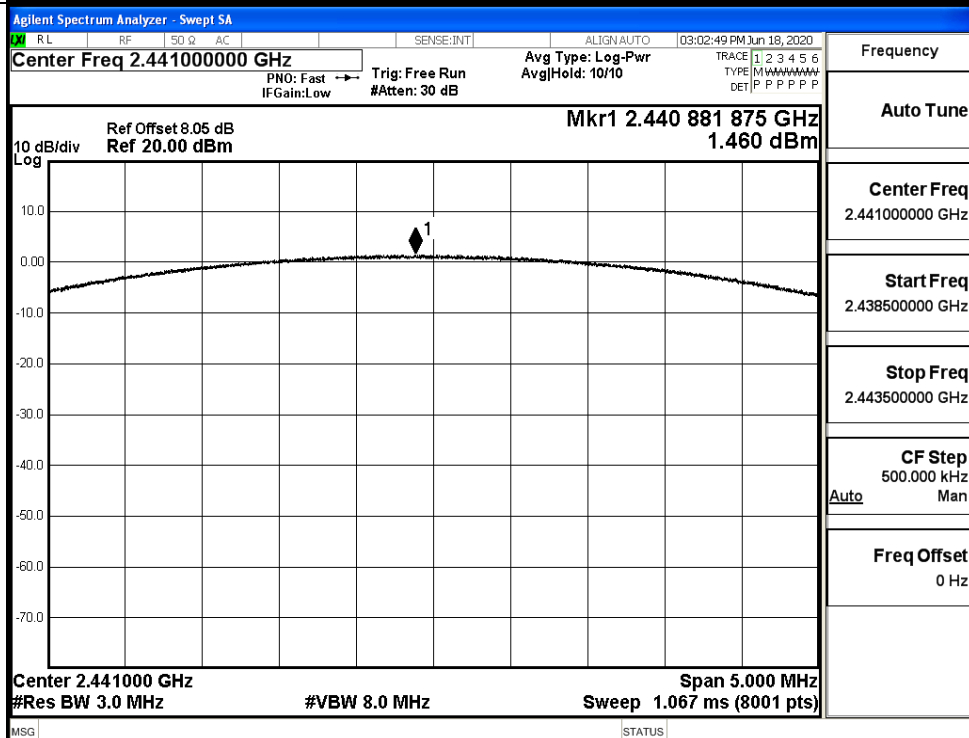
 $\pi/4$ DQPSK/LCH



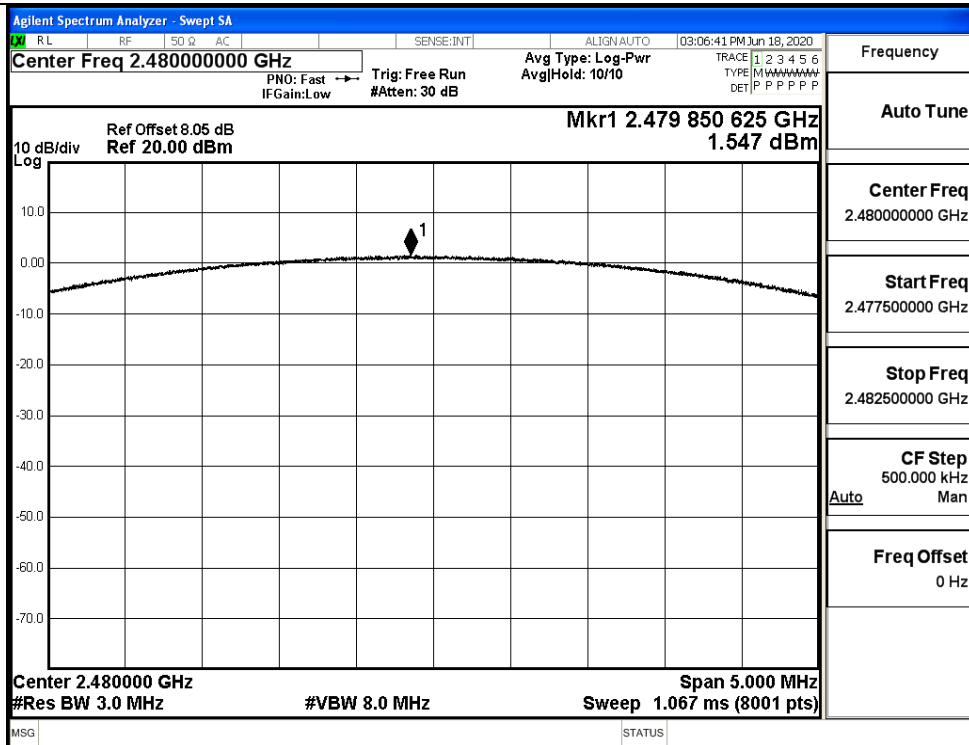
8DPSK/LCH



8DPSK/MCH



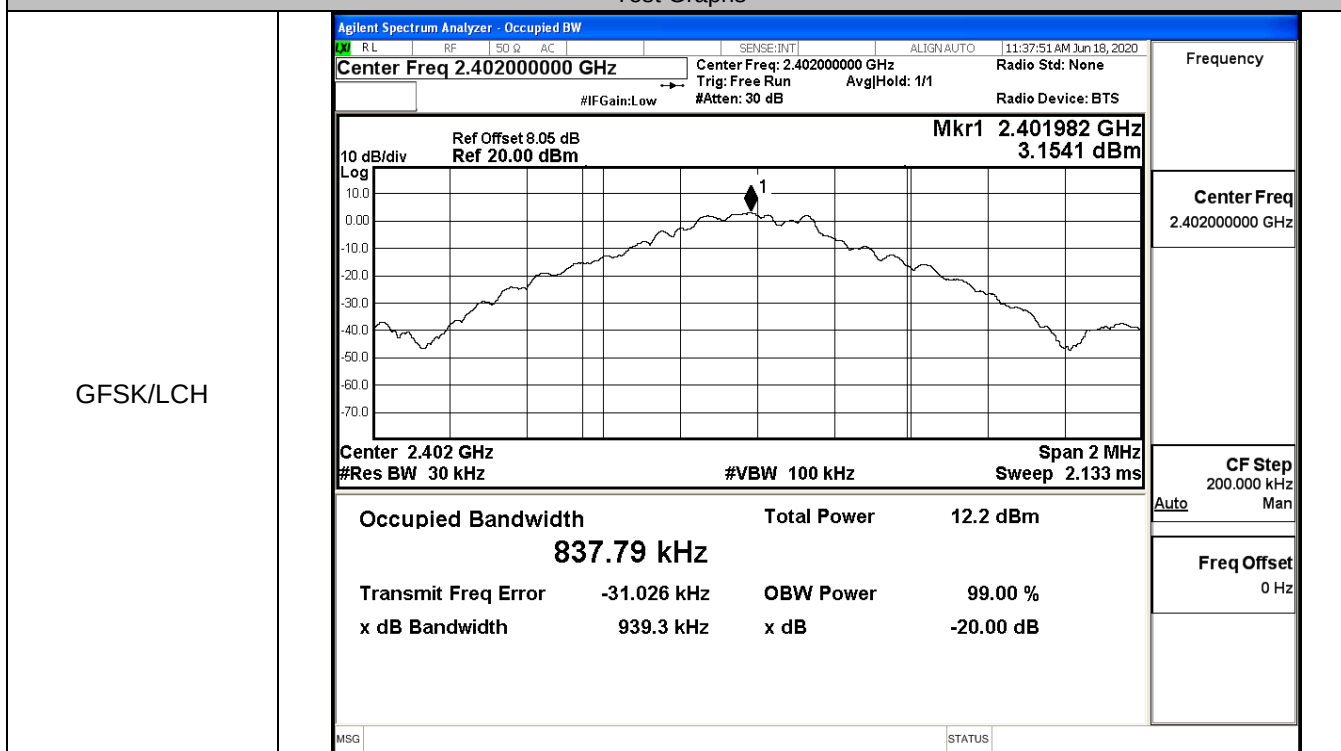
8DPSK/HCH



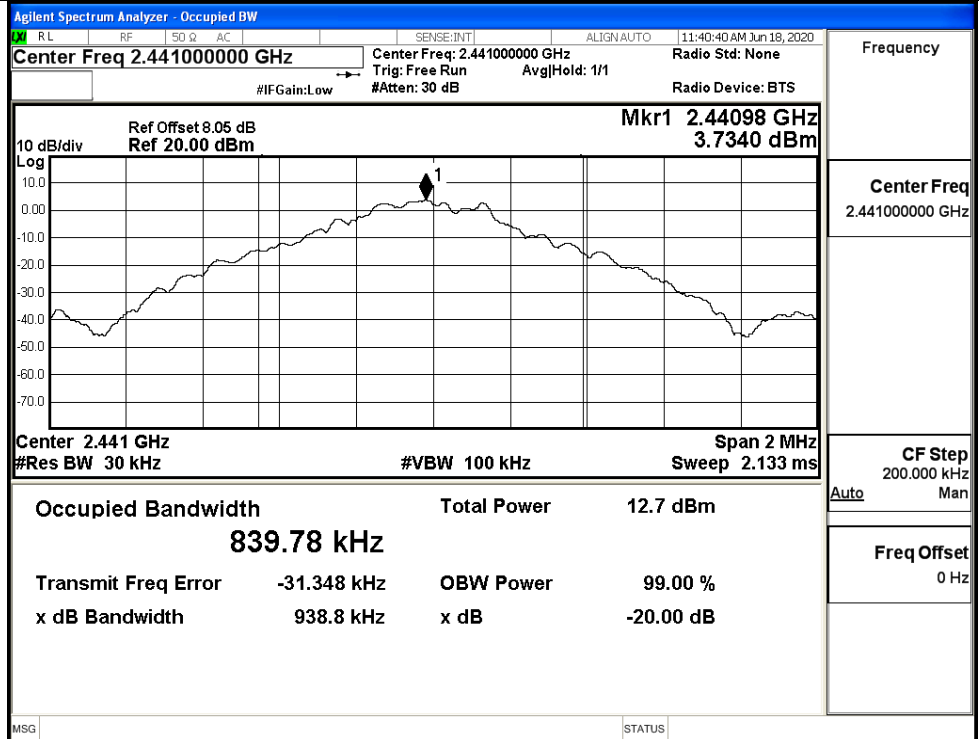
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9393	Not Specified	PASS
	MCH	0.9388	Not Specified	PASS
	HCH	0.9419	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.317	Not Specified	PASS
	MCH	1.315	Not Specified	PASS
	HCH	1.319	Not Specified	PASS
8DPSK	LCH	1.312	Not Specified	PASS
	MCH	1.309	Not Specified	PASS
	HCH	1.309	Not Specified	PASS

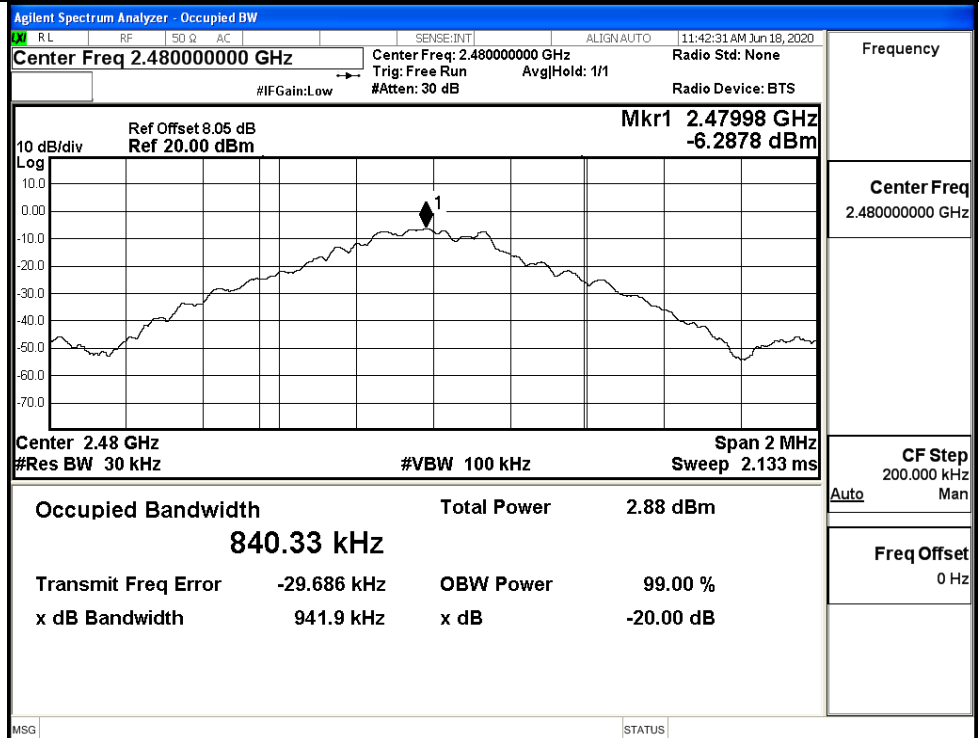
Test Graphs

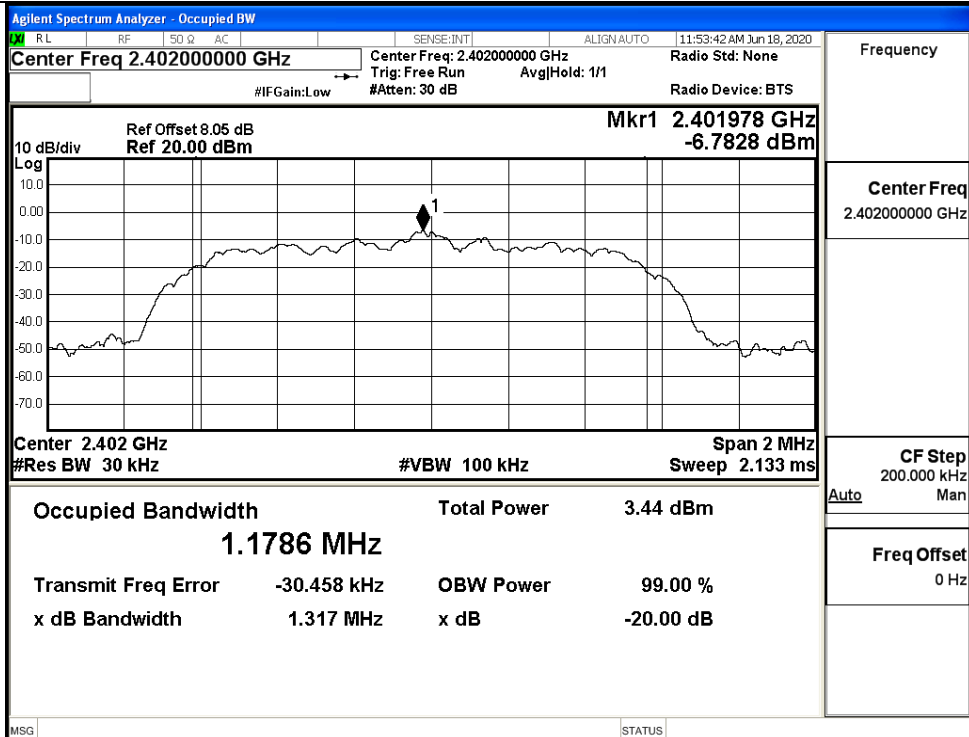
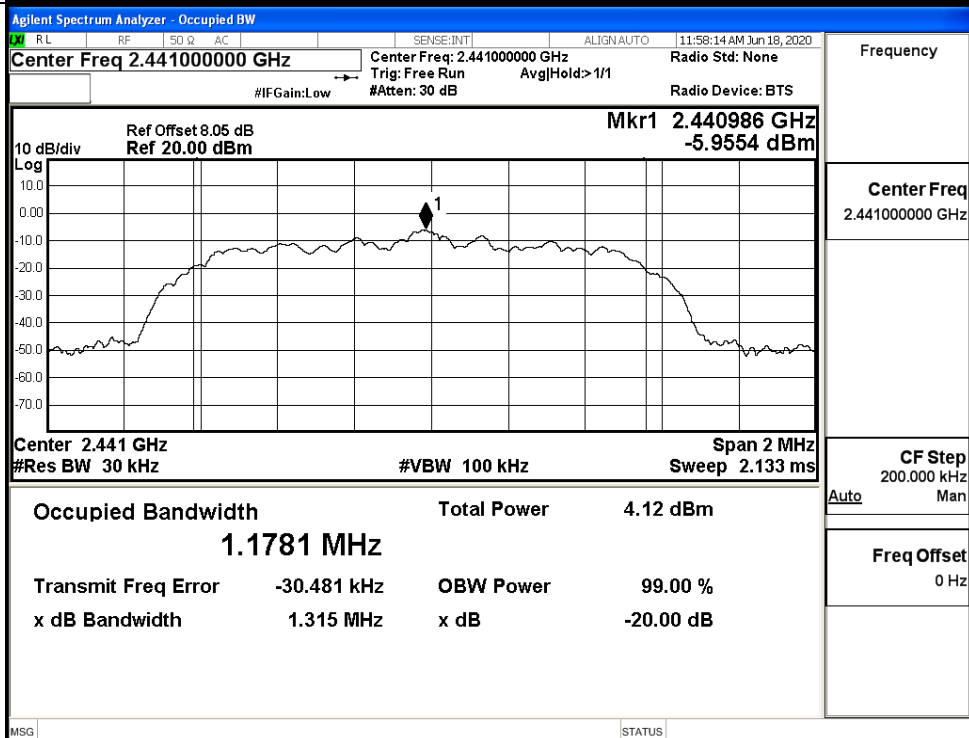


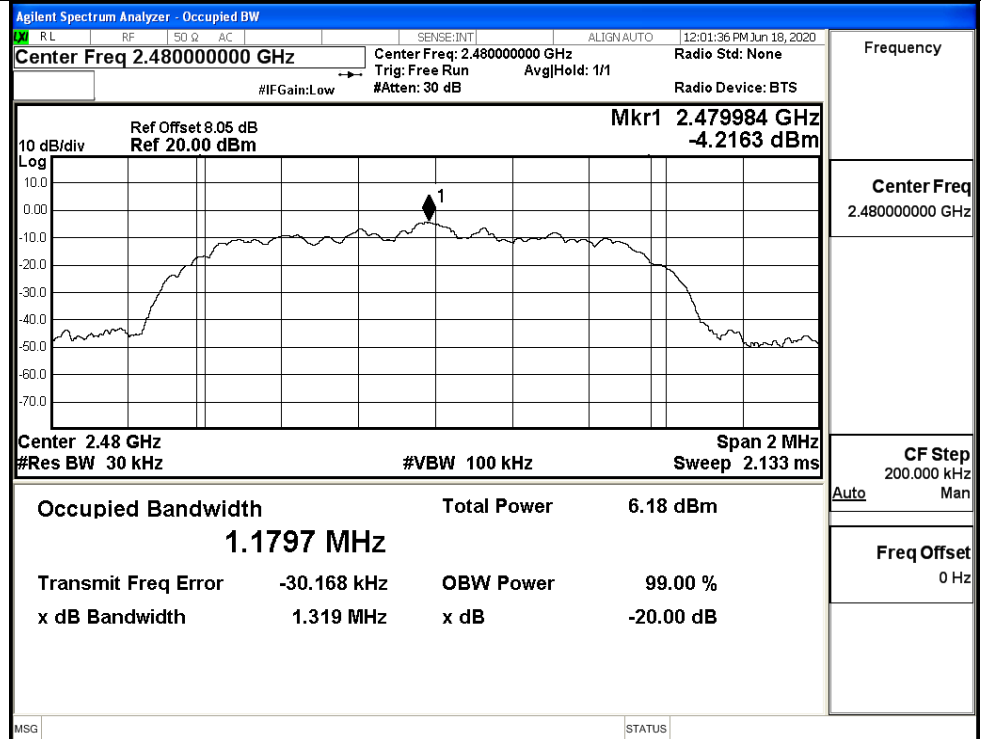
GFSK/MCH



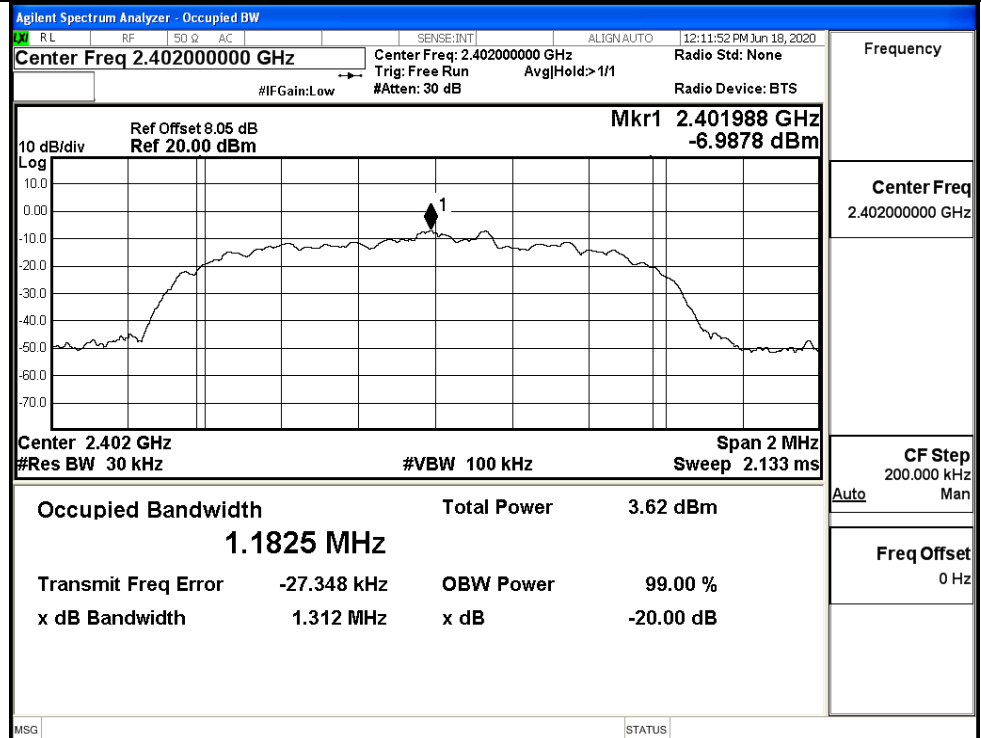
GFSK/HCH



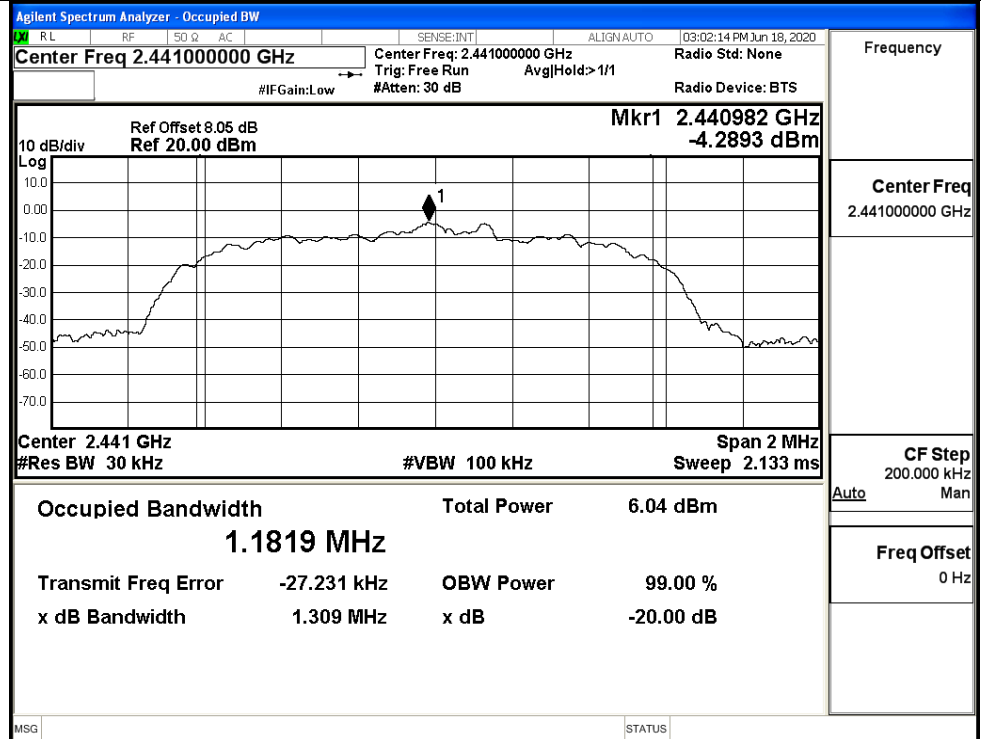
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

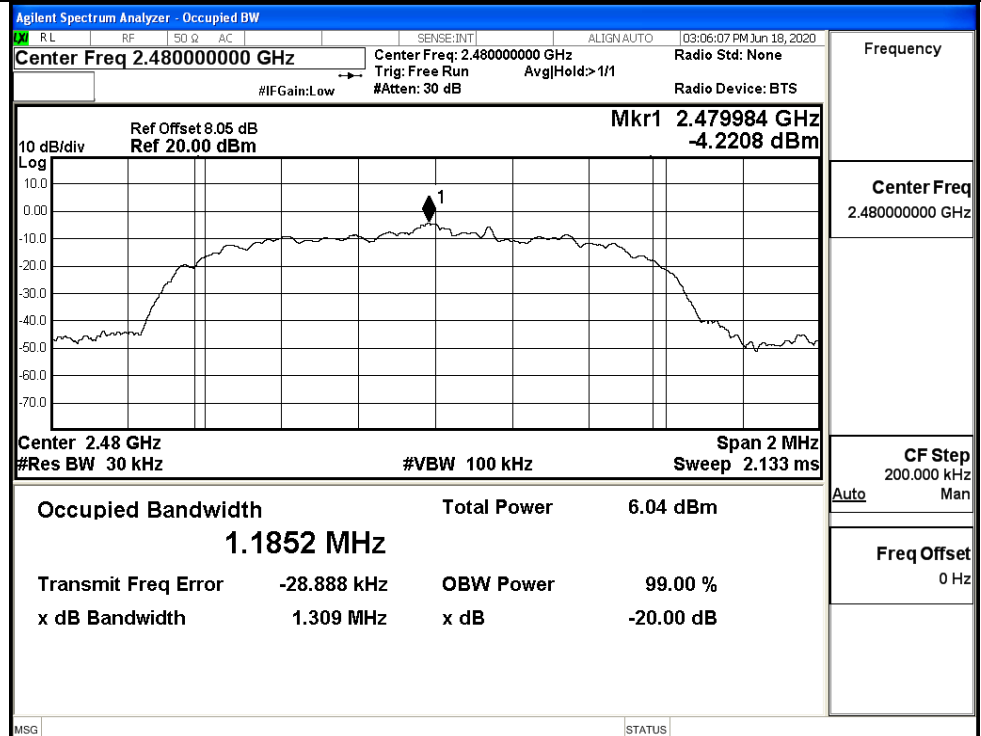
8DPSK/LCH



8DPSK/MCH



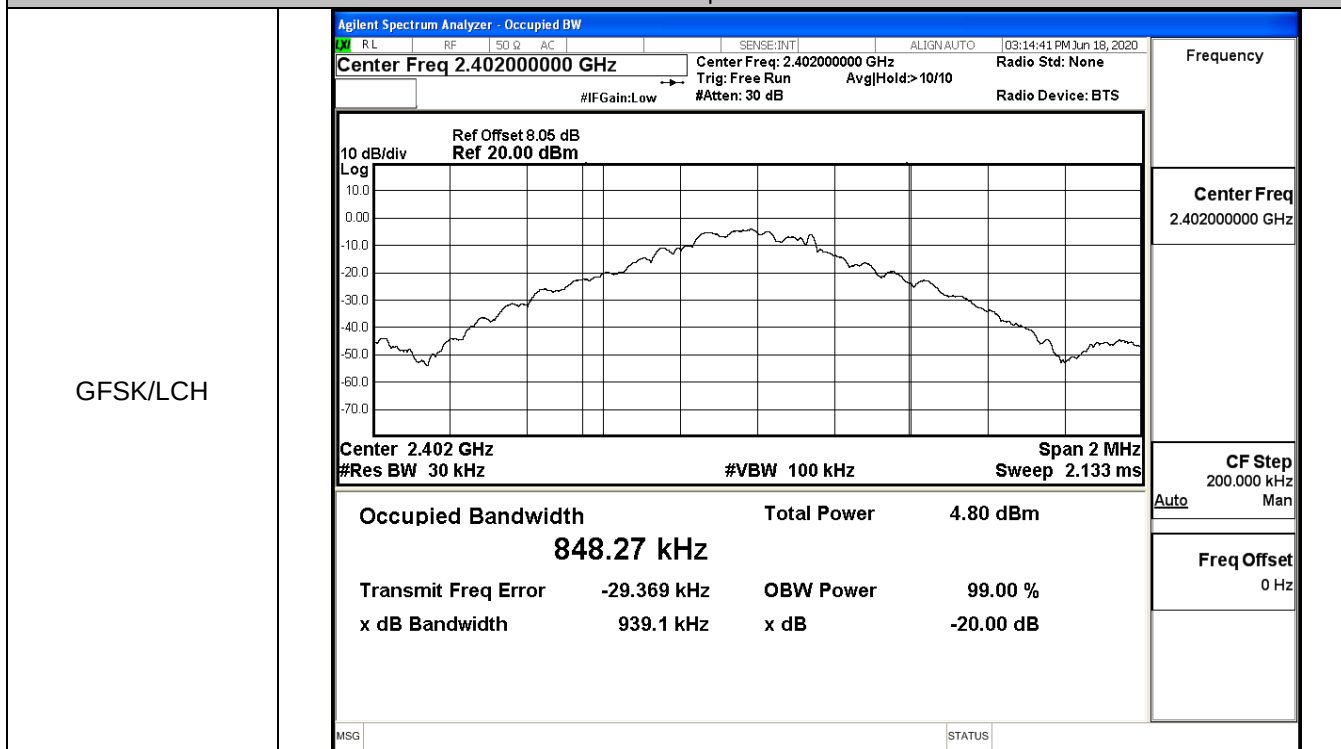
8DPSK/HCH



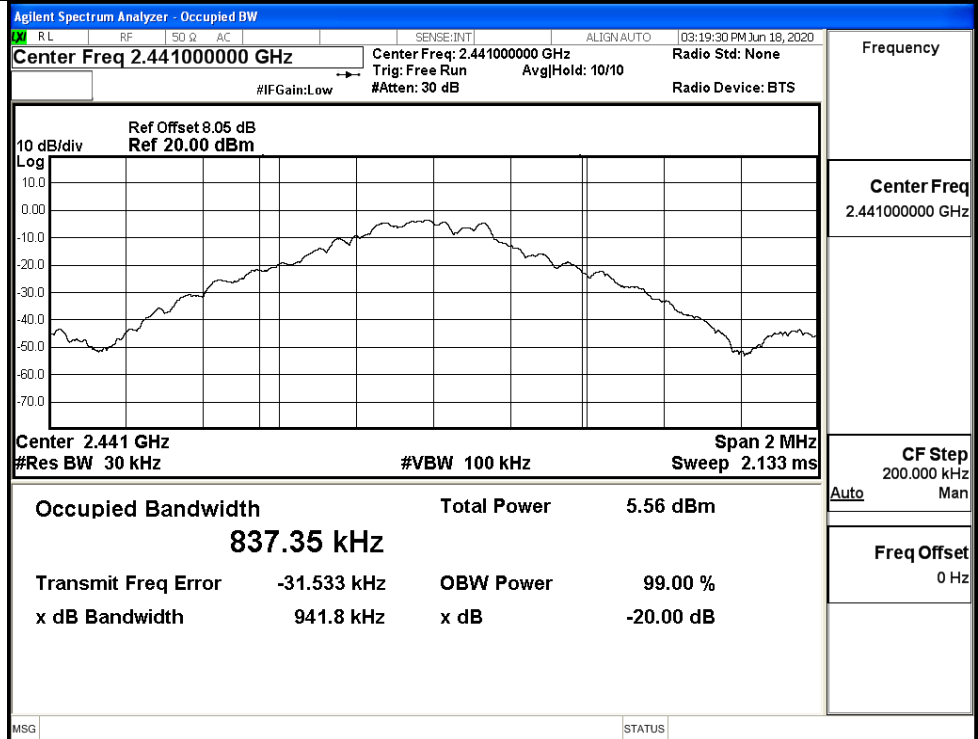
A.3 Occupied Bandwidth

Mode	Channel.	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.84827	Not Specified	PASS
	MCH	0.83735	Not Specified	PASS
	HCH	0.84028	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.1765	Not Specified	PASS
	MCH	1.1819	Not Specified	PASS
	HCH	1.1819	Not Specified	PASS
8DPSK	LCH	1.1832	Not Specified	PASS
	MCH	1.1832	Not Specified	PASS
	HCH	1.1825	Not Specified	PASS

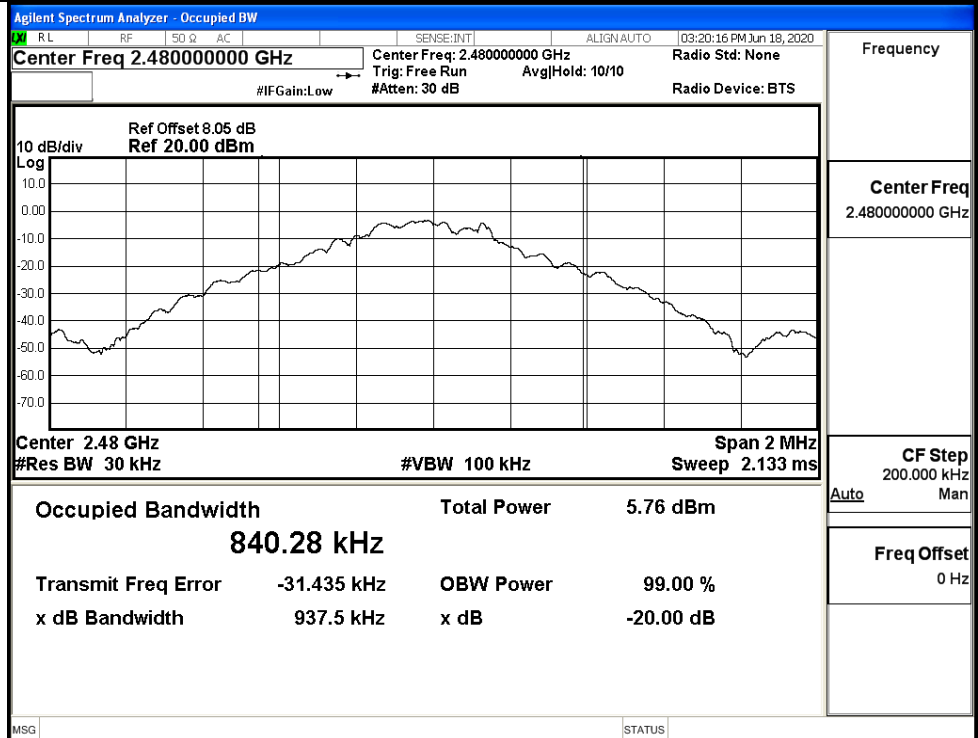
Test Graphs

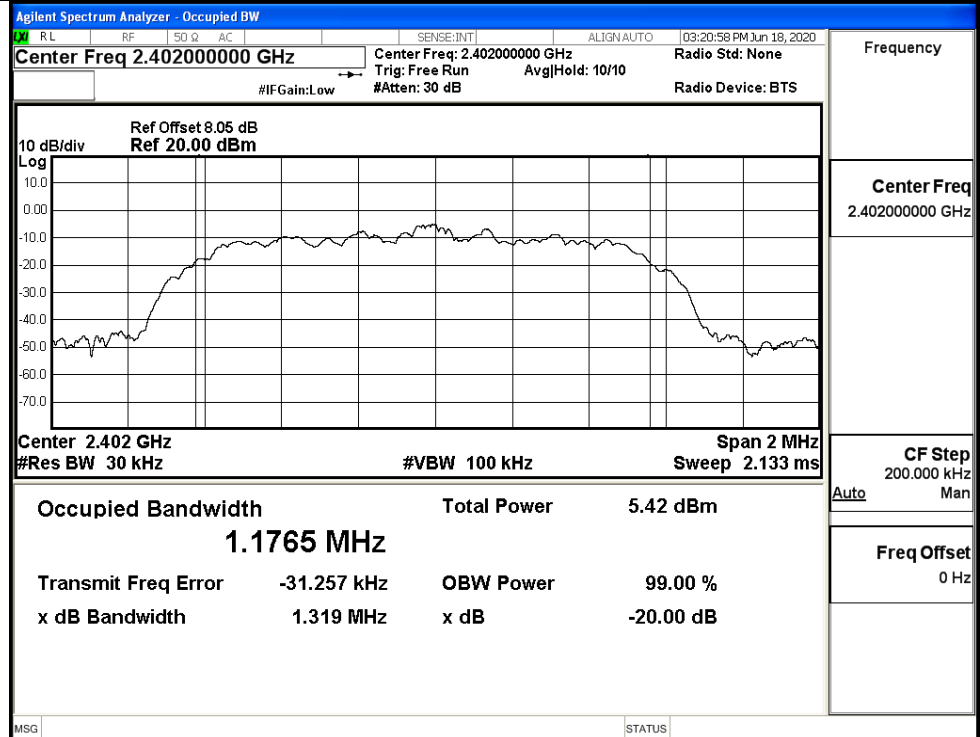
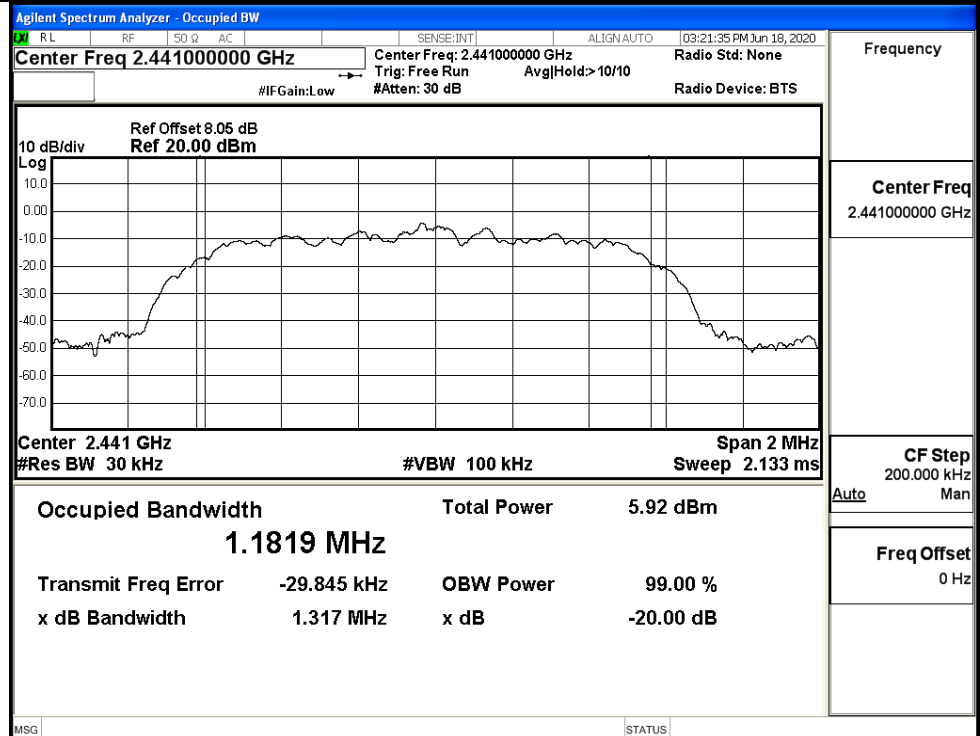


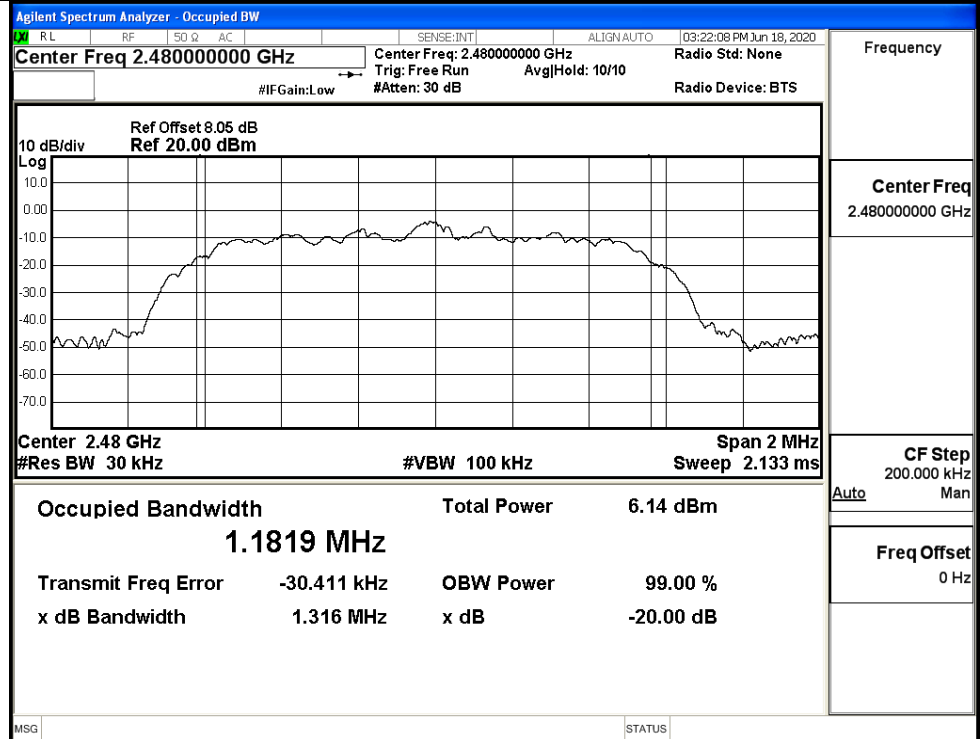
GFSK/MCH



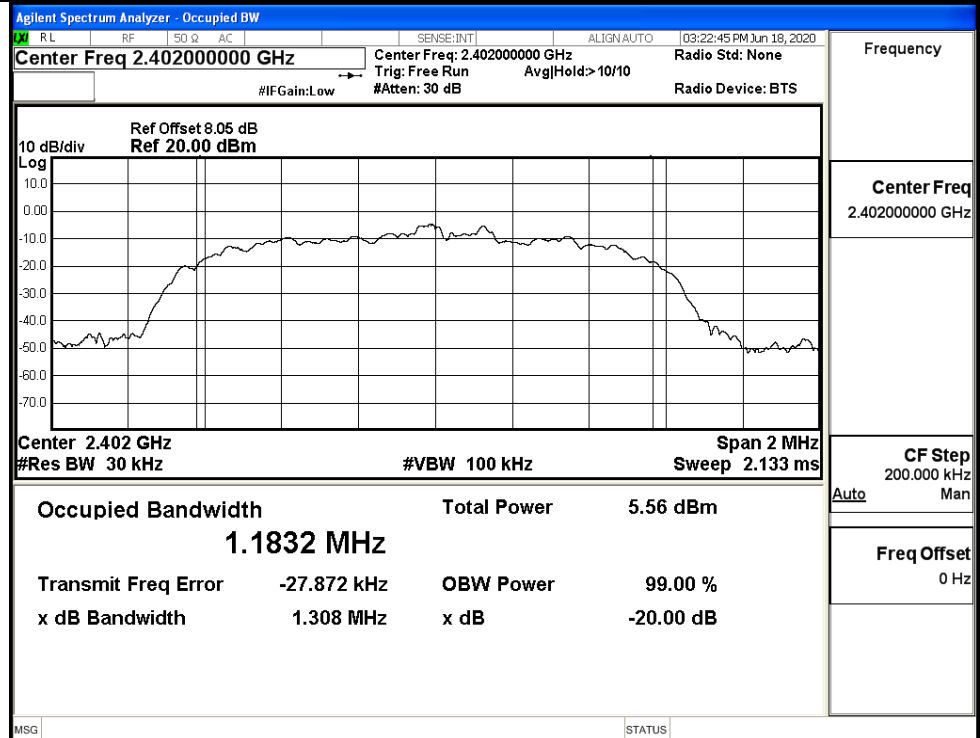
GFSK/HCH



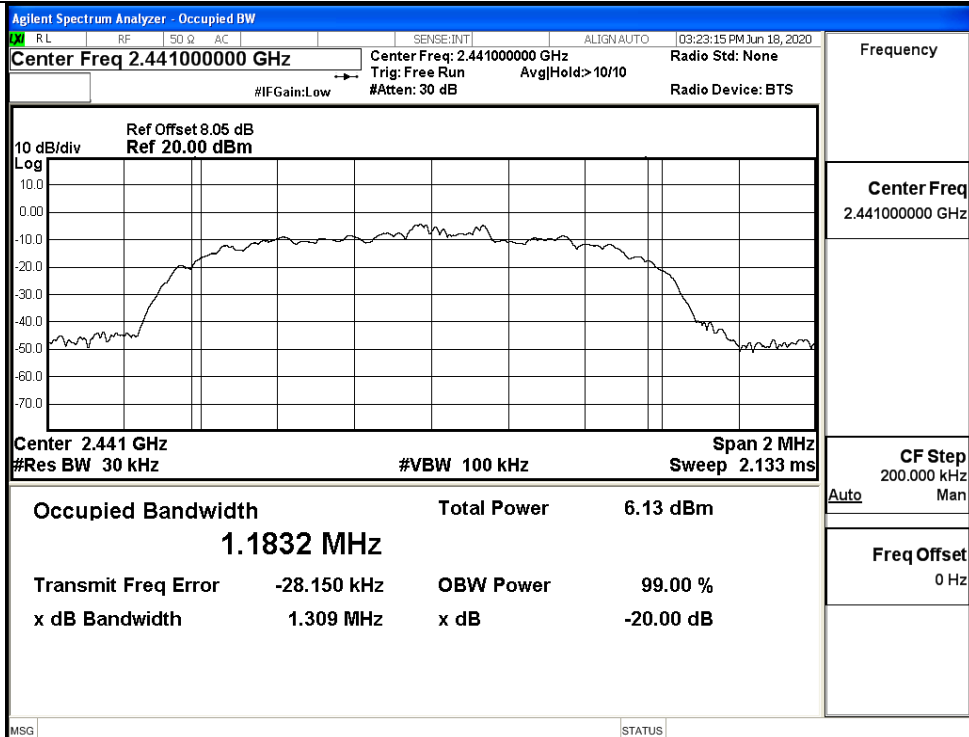
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

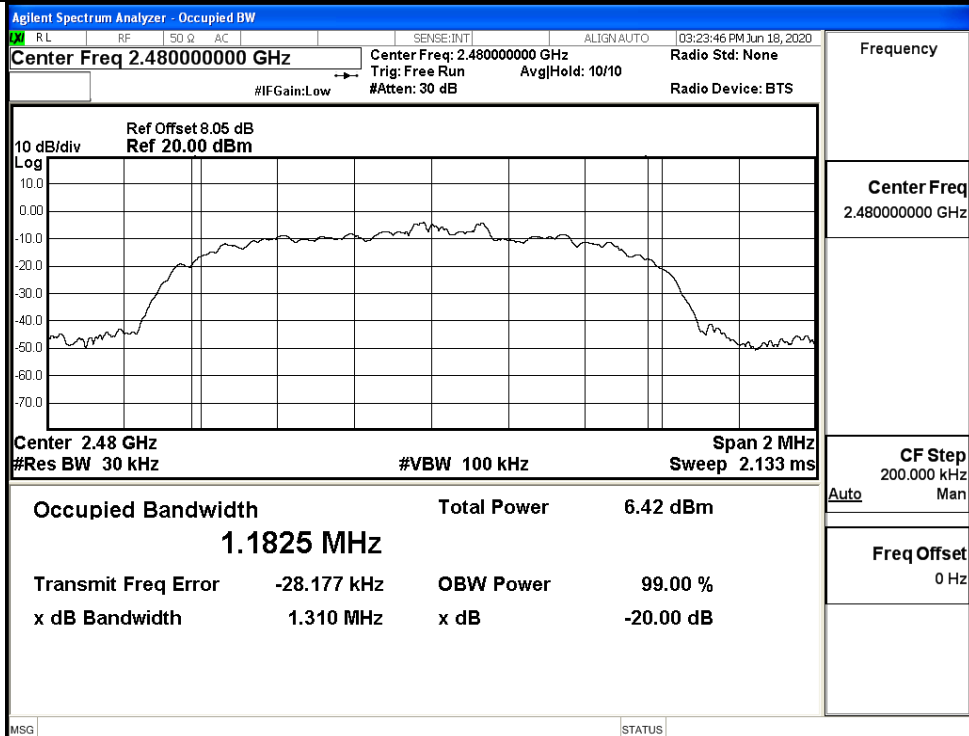
8DPSK/LCH



8DPSK/MCH



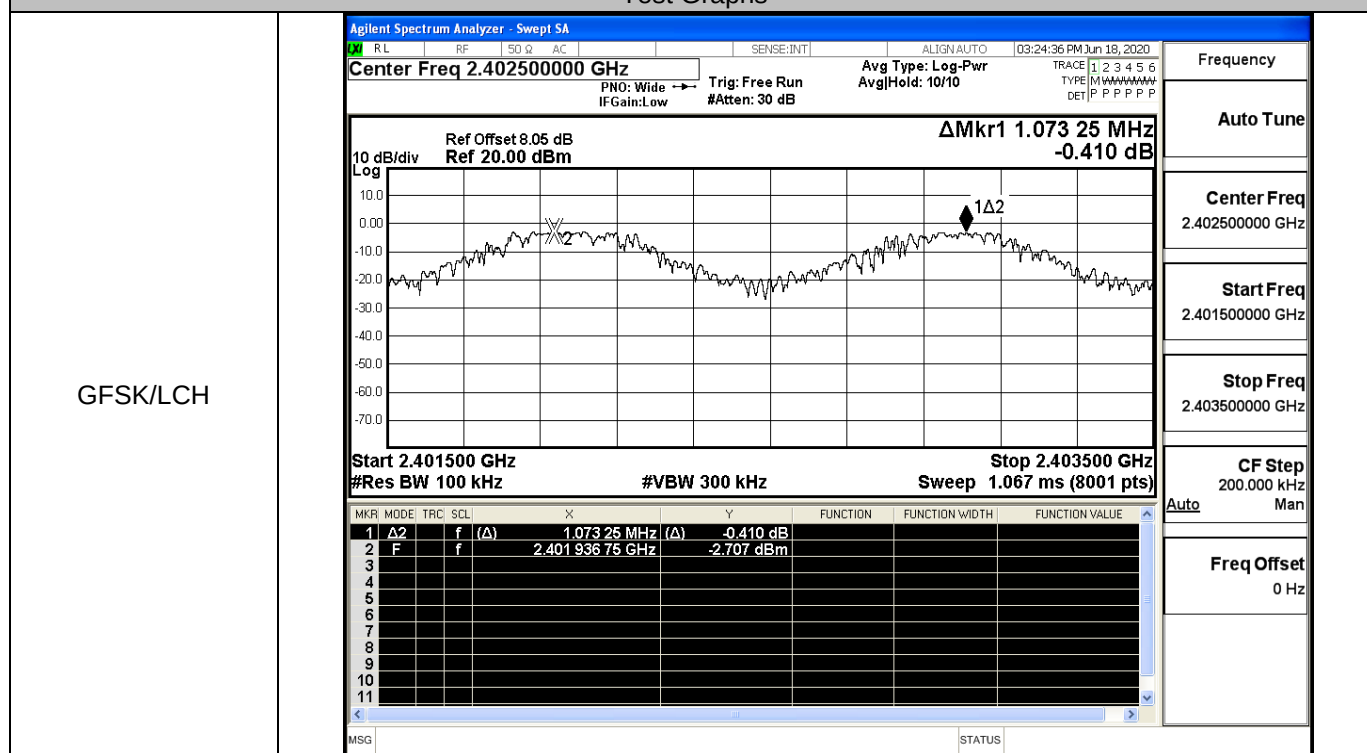
8DPSK/HCH



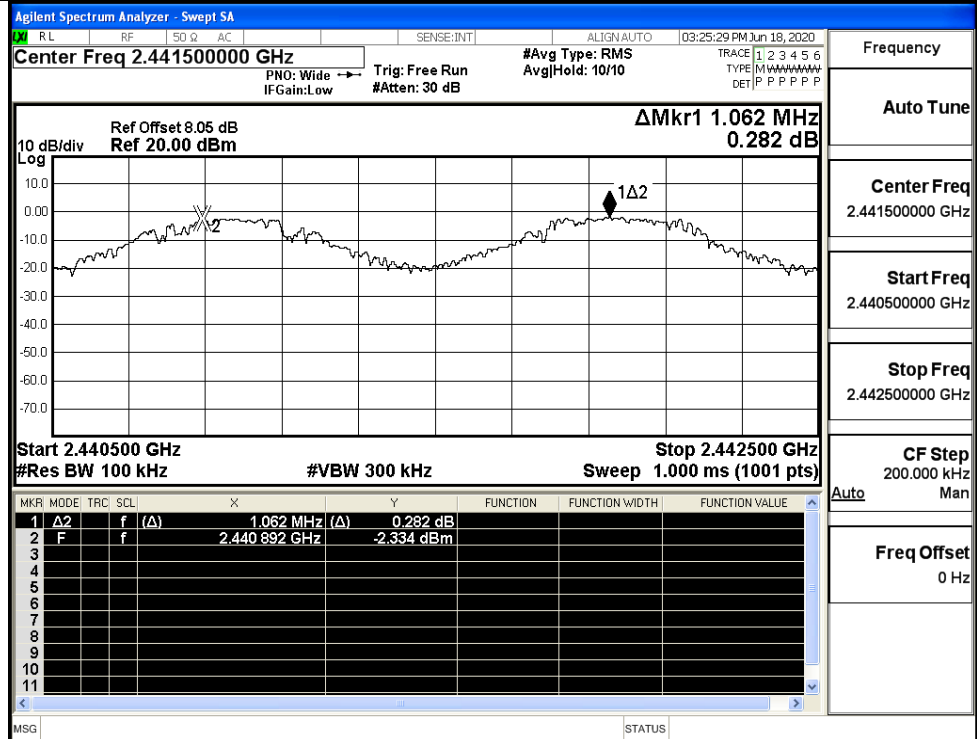
A.4 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.073	0.628	PASS
	MCH	1.062	0.628	PASS
	HCH	1.024	0.628	PASS
$\pi/4$ DQPSK	LCH	0.972	0.879	PASS
	MCH	0.966	0.879	PASS
	HCH	1.020	0.879	PASS
8DPSK	LCH	0.924	0.875	PASS
	MCH	0.932	0.875	PASS
	HCH	1.014	0.875	PASS

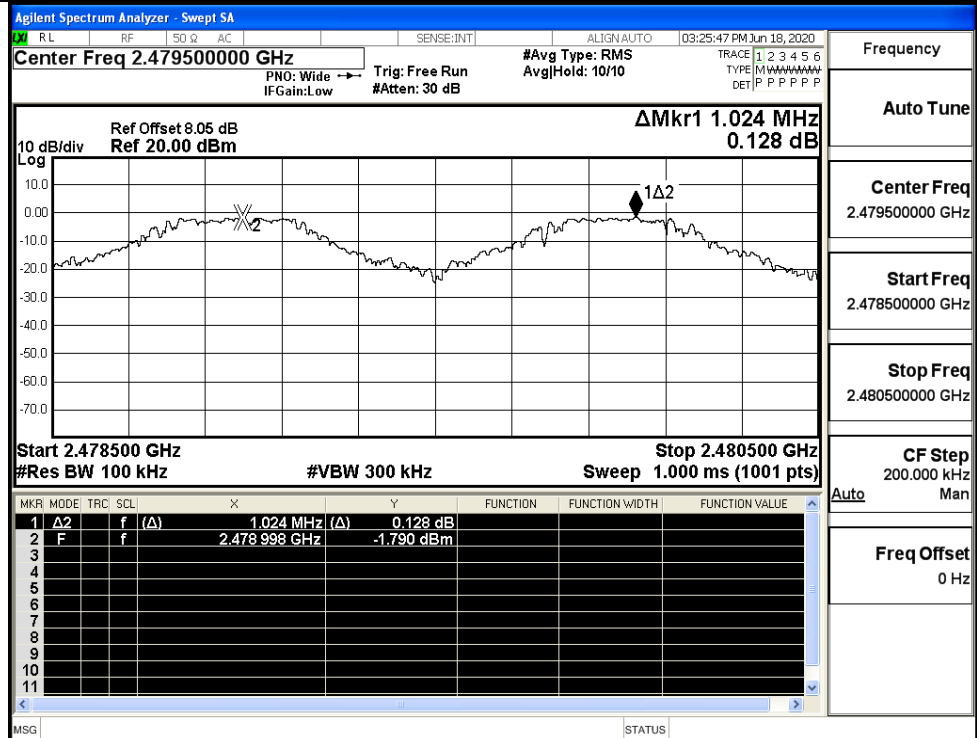
Test Graphs

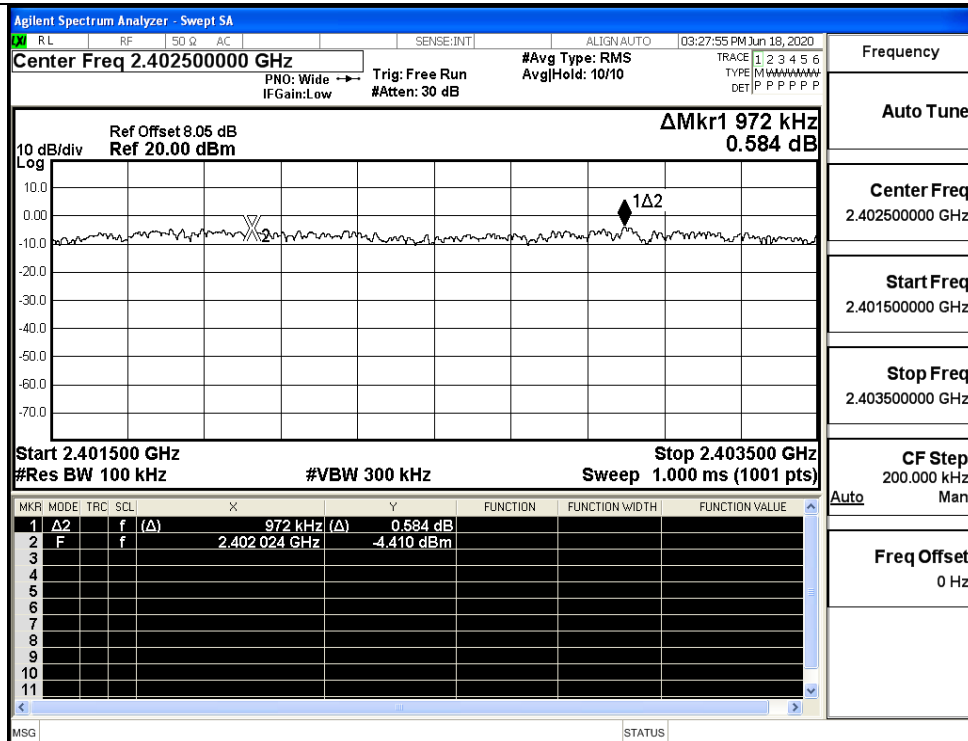
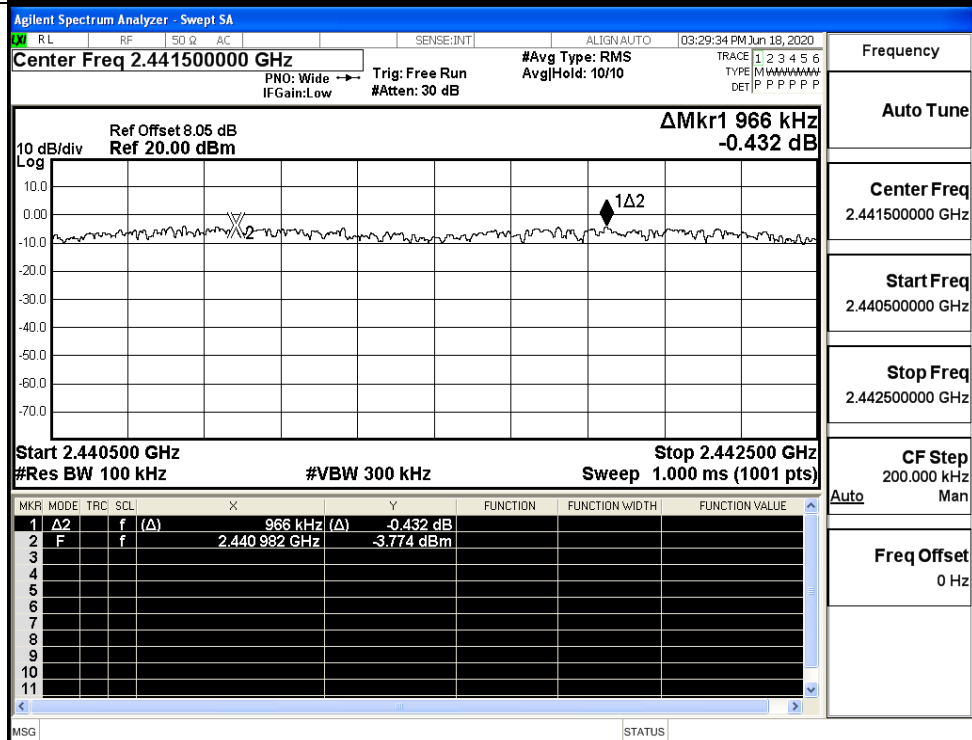


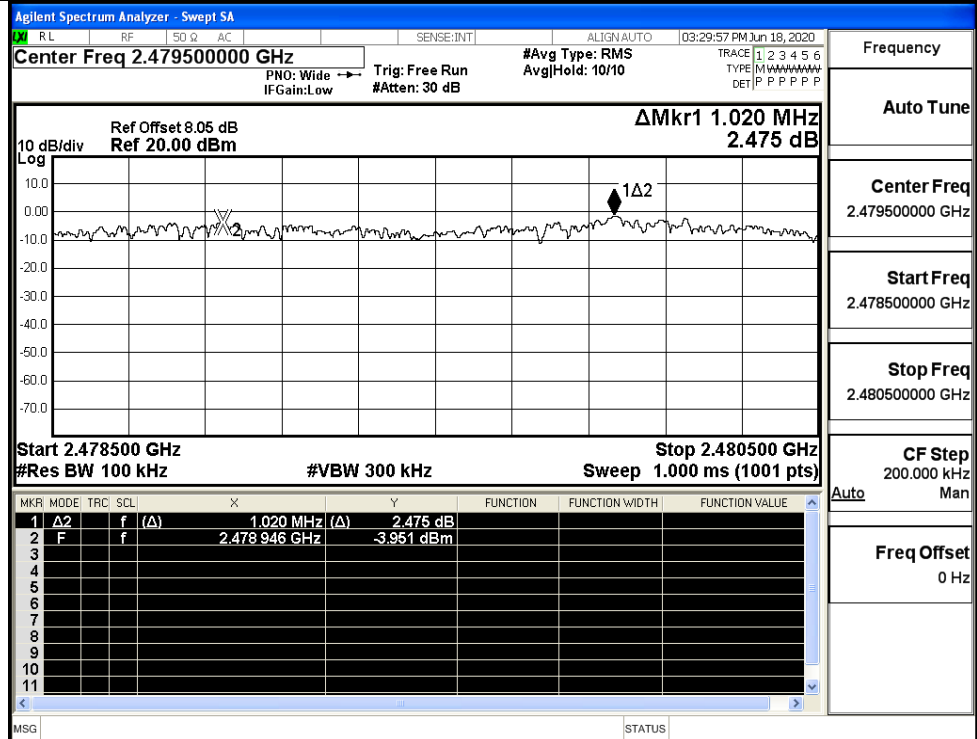
GFSK/MCH



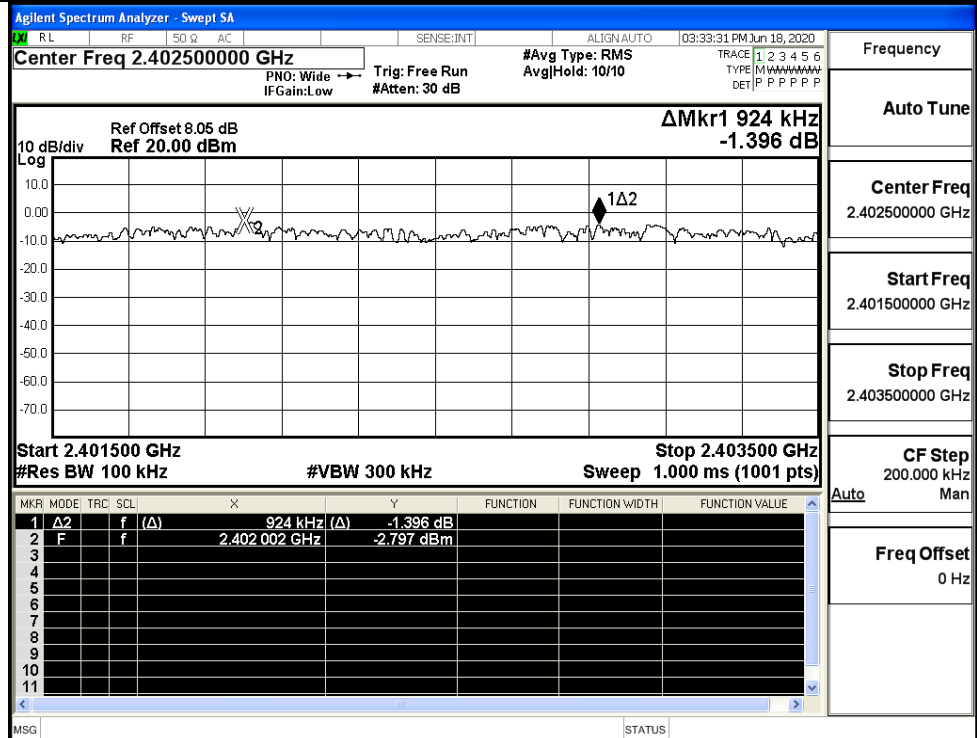
GFSK/HCH



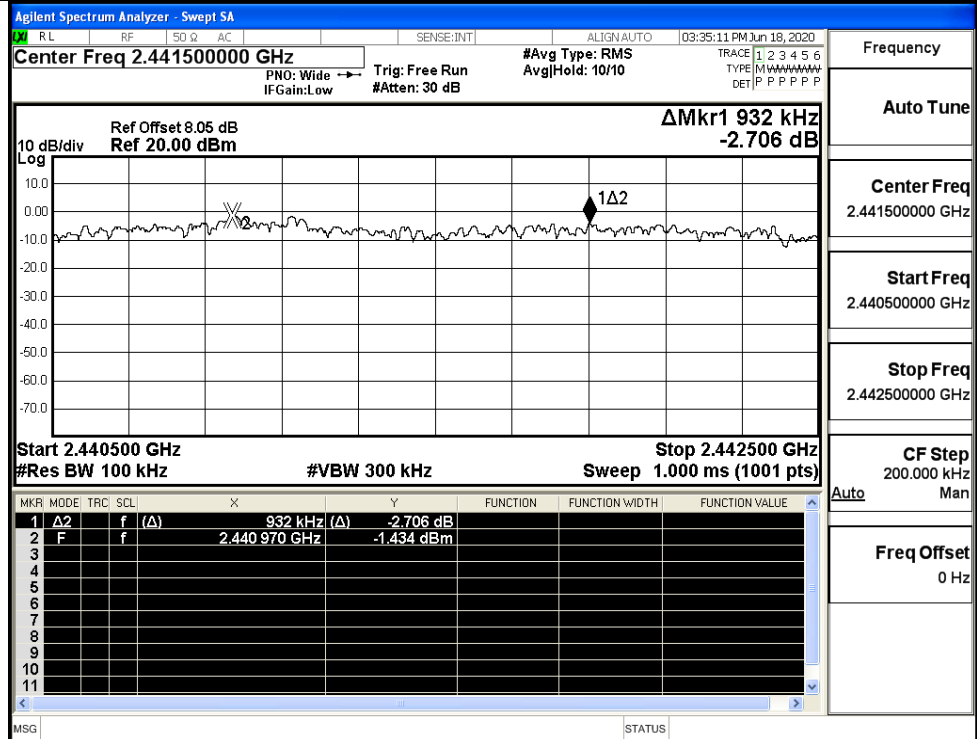
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

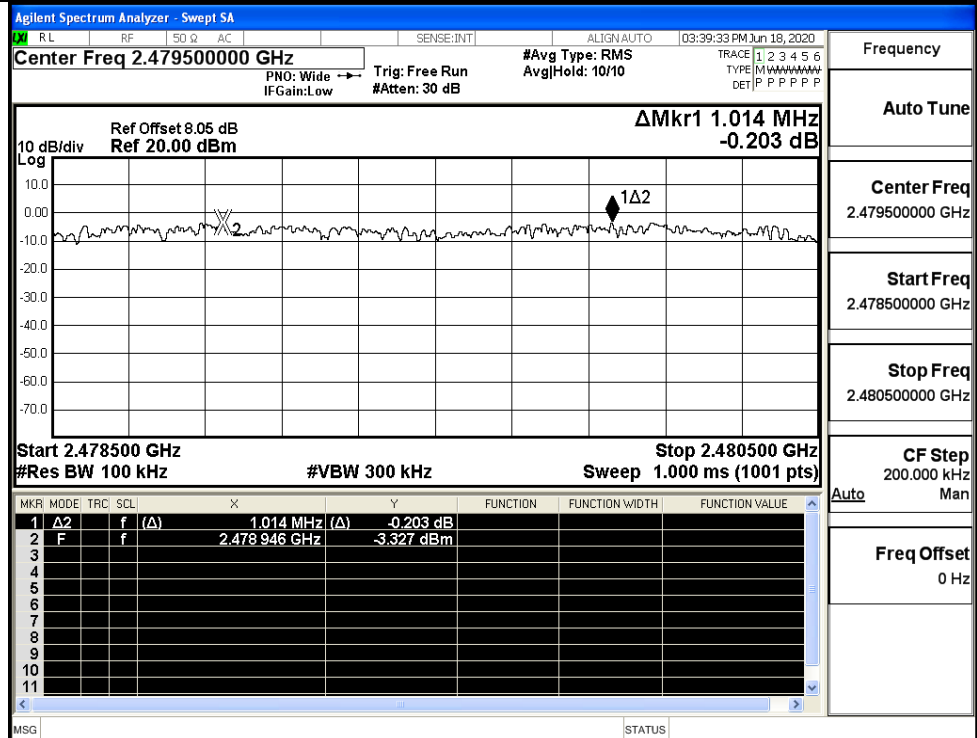
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

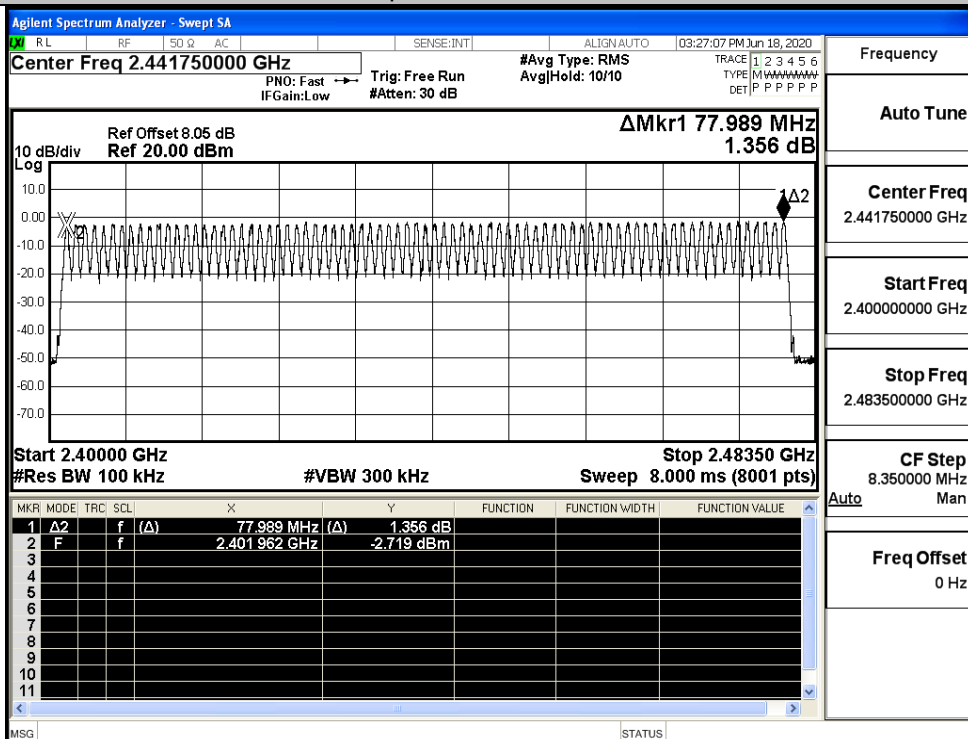
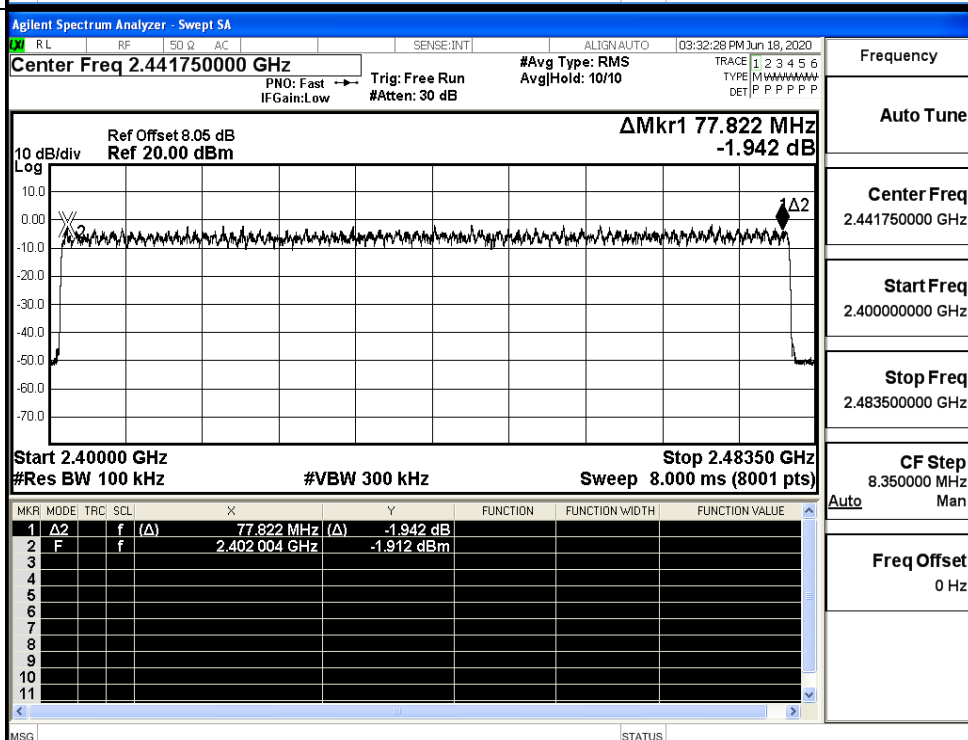


A.5 Hopping Channel Number

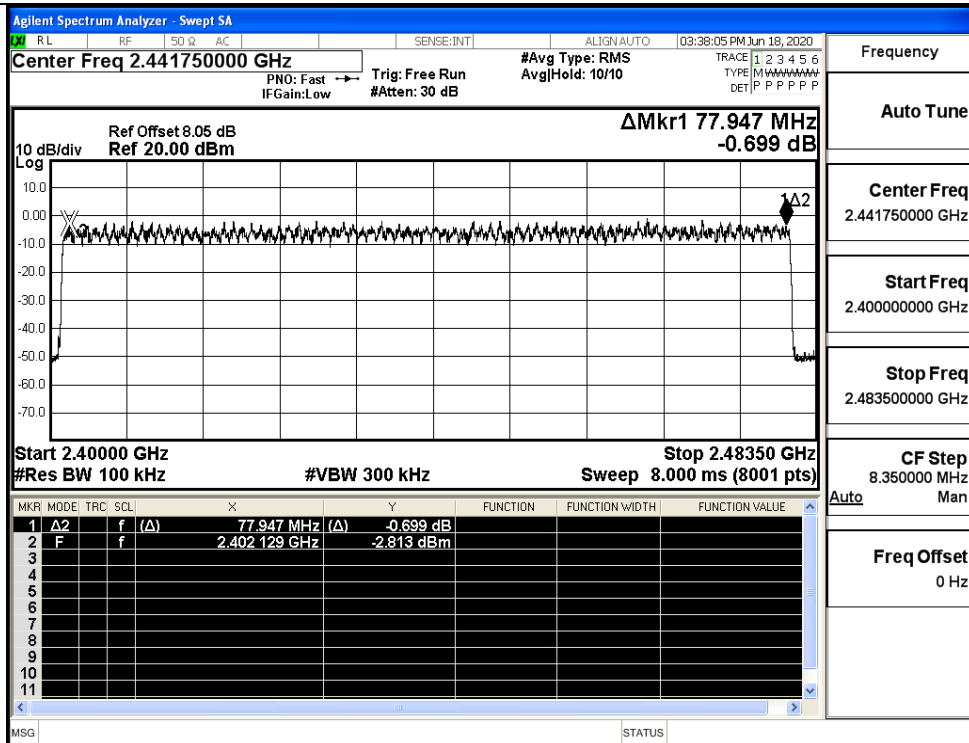
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS
8DPSK	Hop	79	≥ 15	PASS

Test Graphs

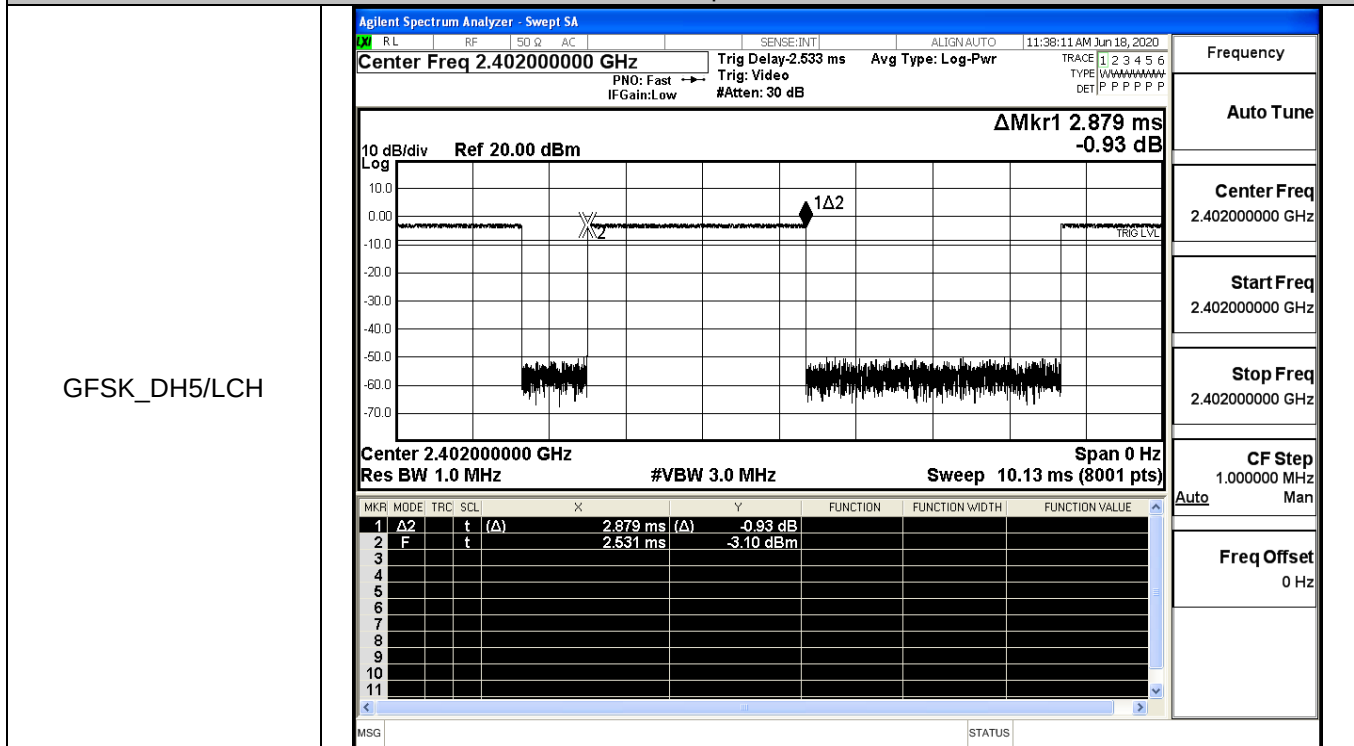
GFSK/Hop

 $\pi/4$ DQPSK/Hop

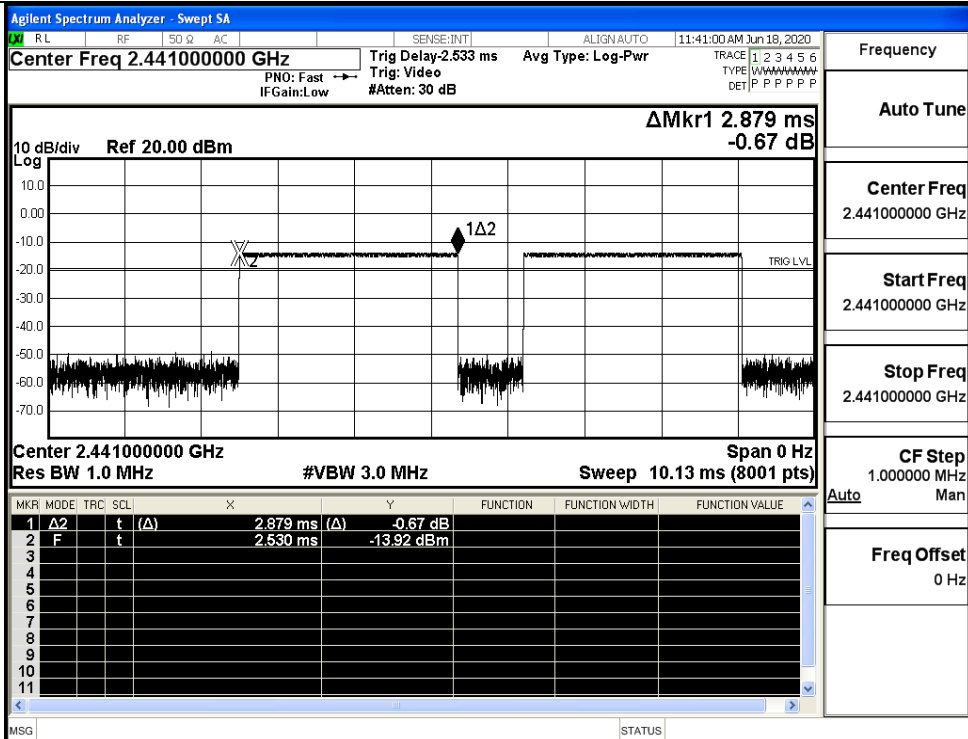
8DPSK/Hop



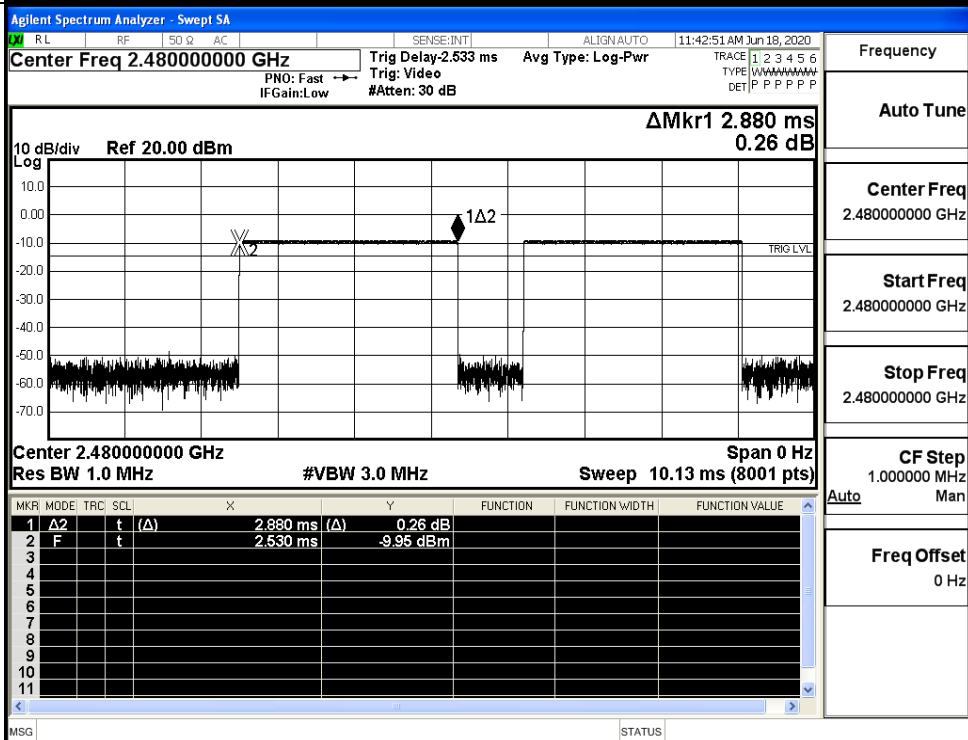
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.015	0.4	PASS
	2DH5	MCH	2.88	106.7	0.014	0.4	PASS
	2DH5	HCH	2.88	106.7	0.015	0.4	PASS
8DPSK	3DH5	LCH	2.88	106.7	0.015	0.4	PASS
	3DH5	MCH	2.88	106.7	0.015	0.4	PASS
	3DH5	HCH	2.88	106.7	0.015	0.4	PASS



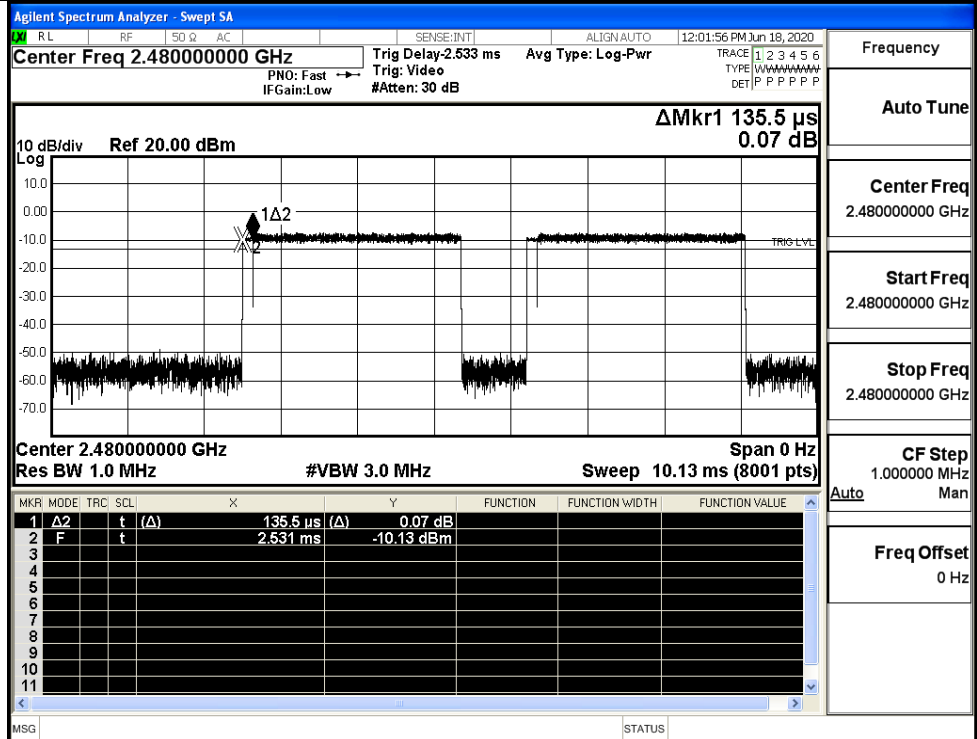
GFSK_DH5/MCH



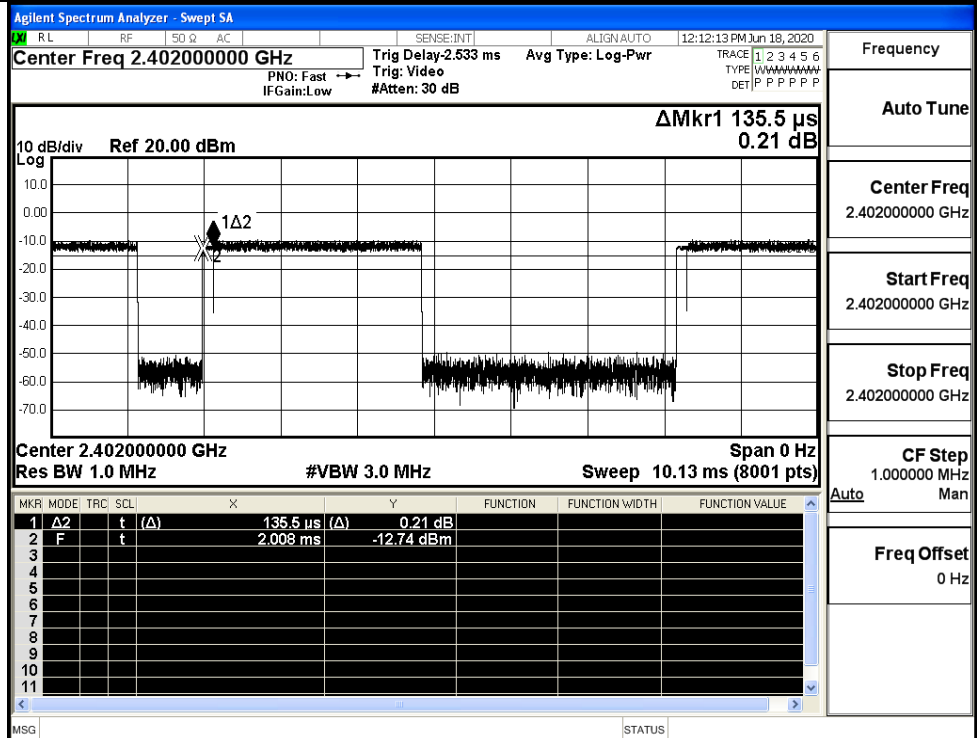
GFSK_DH5/HCH



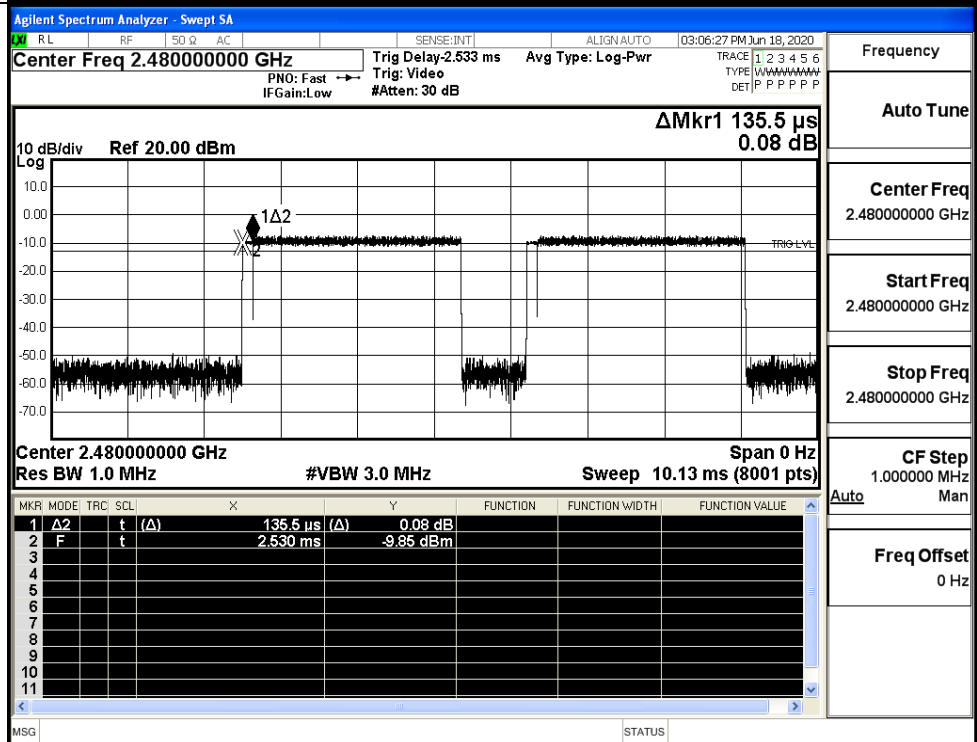
$\pi/4$ DQPSK
_2DH5/HCH



8DPSK _3DH5/LCH



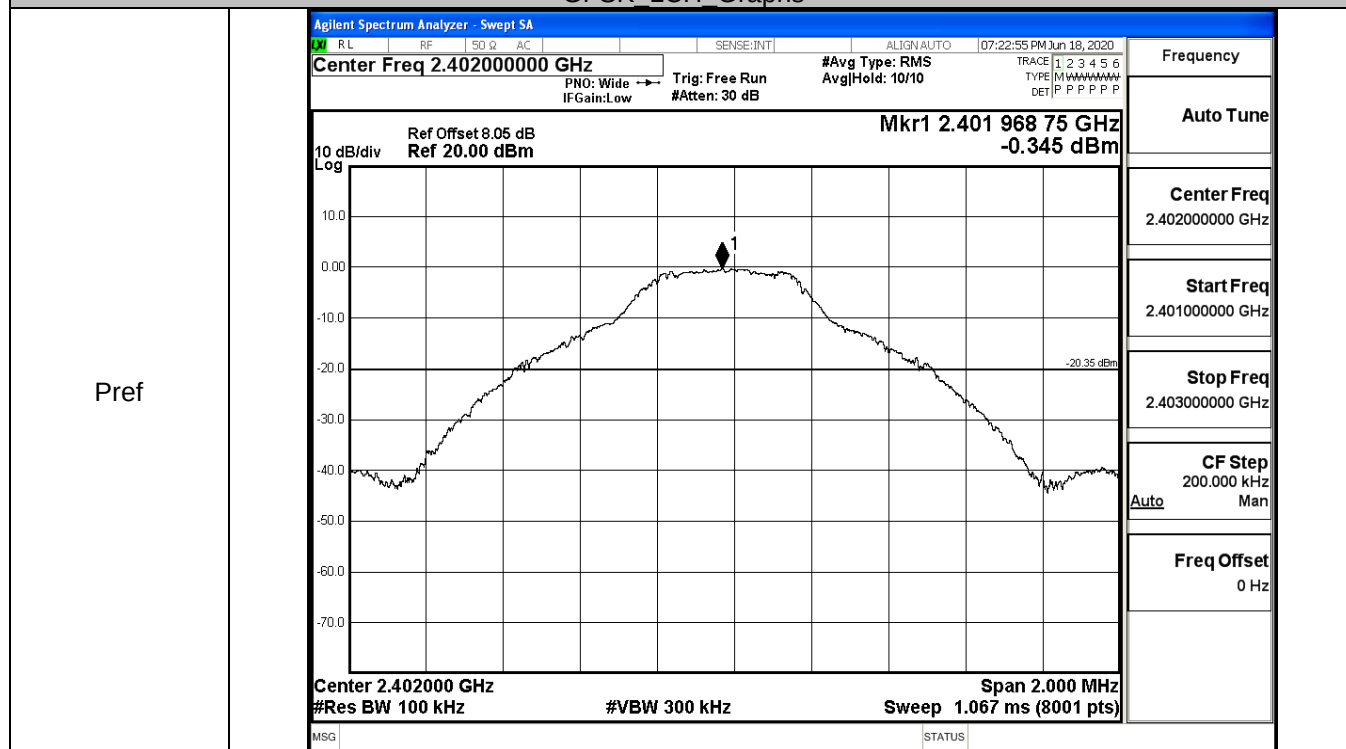
8DPSK_3DH5/HCH



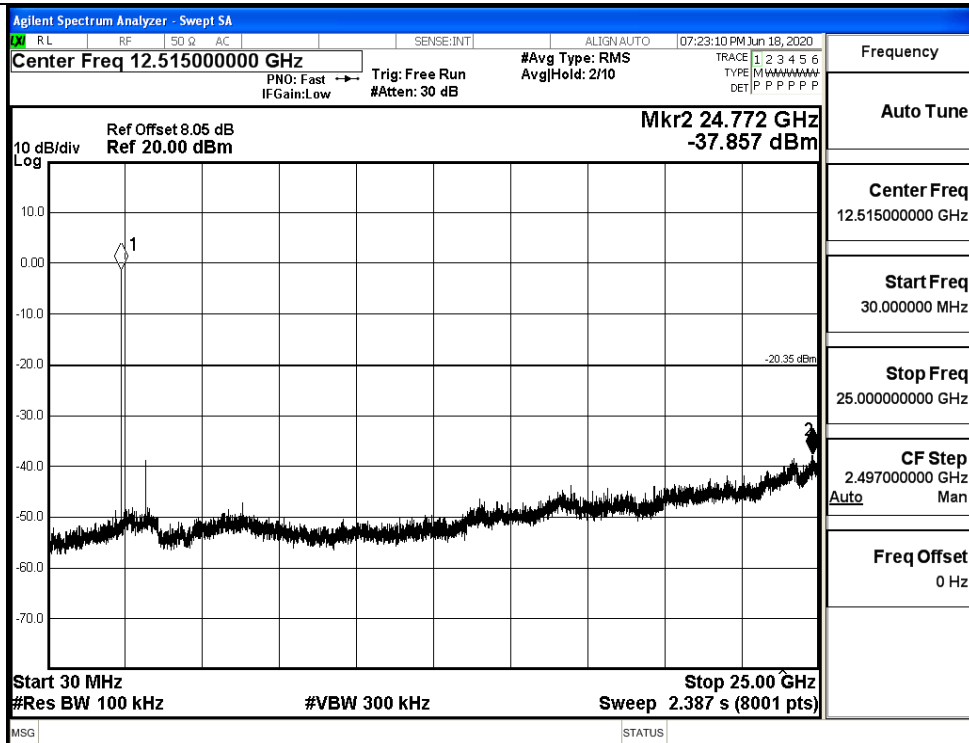
A.7 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.345	-37.857	-20.345	PASS
	MCH	-1.559	-37.269	-21.559	PASS
	HCH	-1.079	-38.538	-21.079	PASS
$\pi/4$ DQPSK	LCH	-4.359	-36.900	-24.359	PASS
	MCH	-3.557	-37.672	-23.557	PASS
	HCH	-1.351	-37.549	-21.351	PASS
8DPSK	LCH	-3.02	-37.877	-23.020	PASS
	MCH	-1.386	-38.433	-21.386	PASS
	HCH	-1.782	-37.849	-21.782	PASS

GFSK LCH Graphs

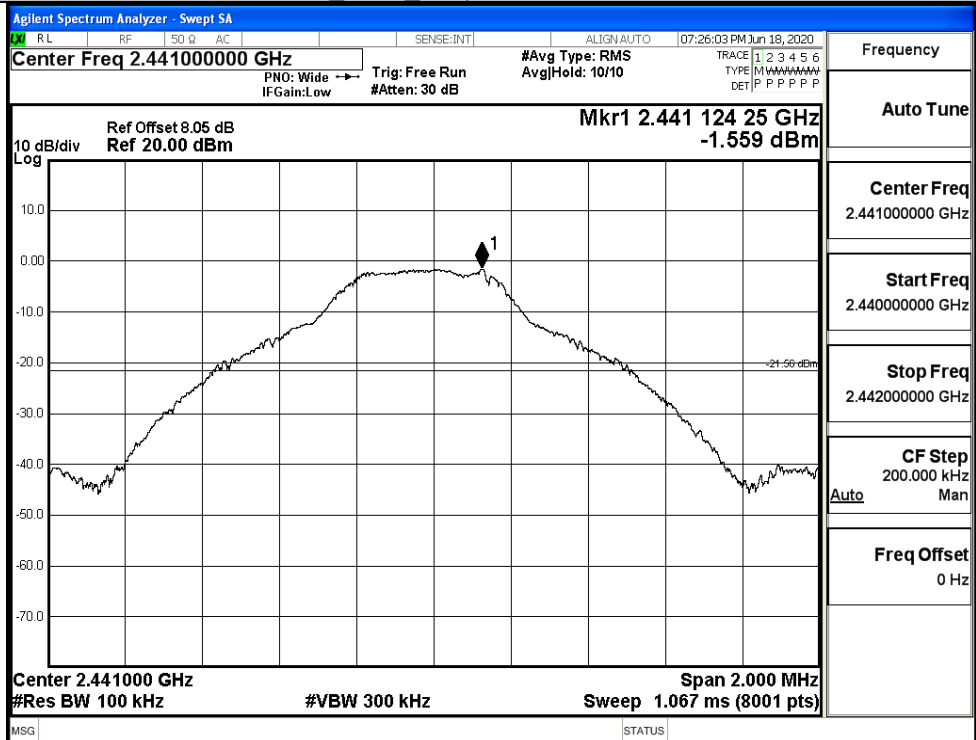


Puw

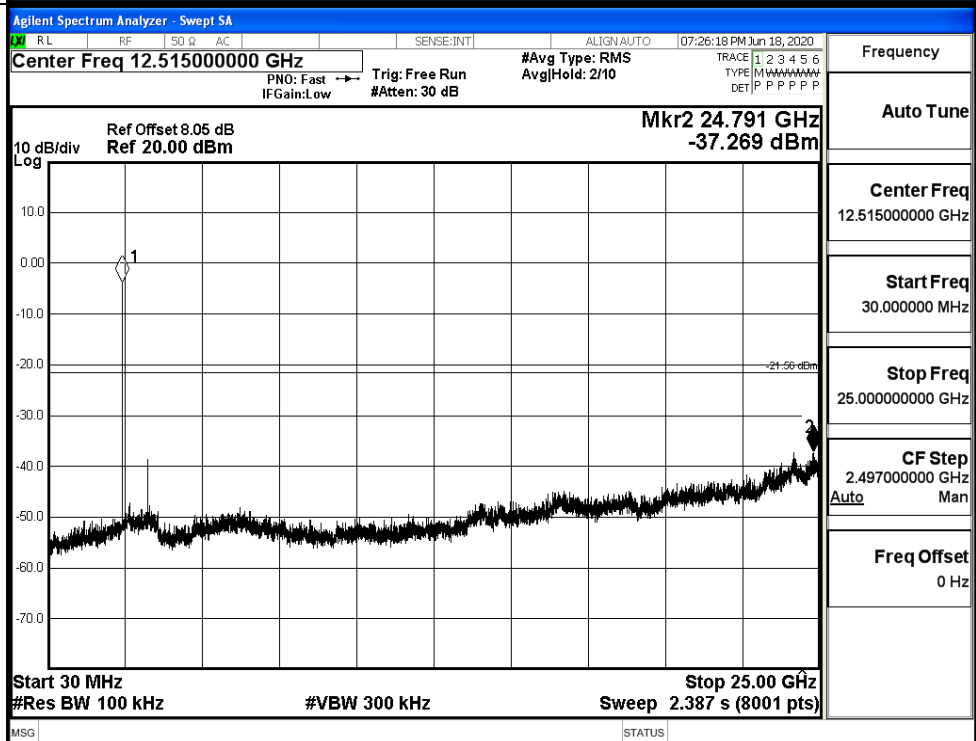


GFSK_MCH_Graphs

Pref

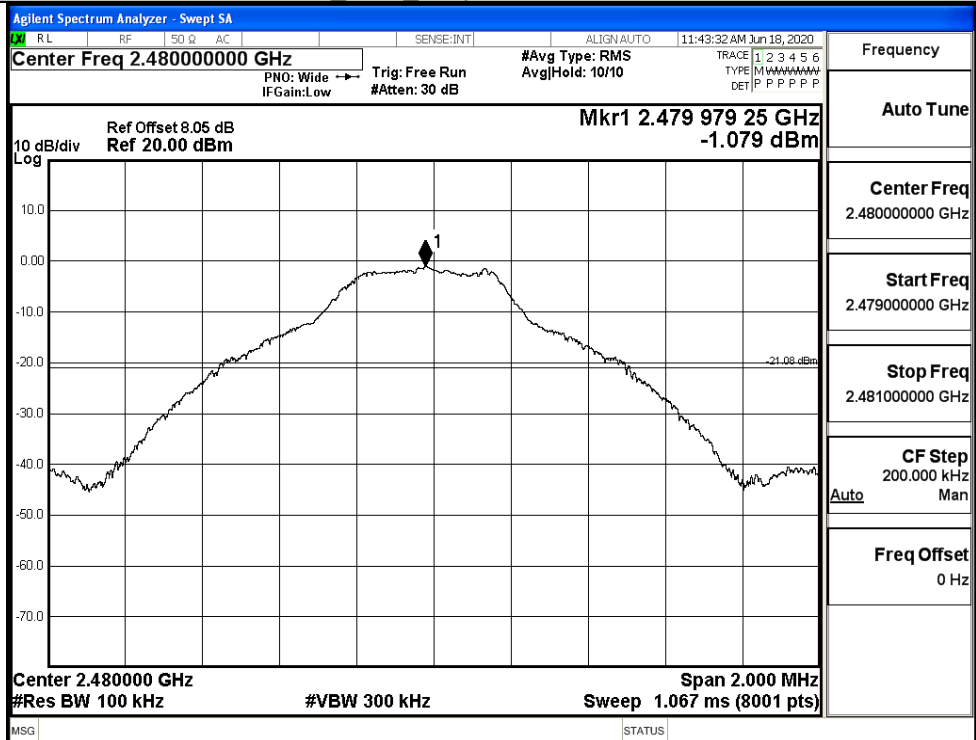


Puw

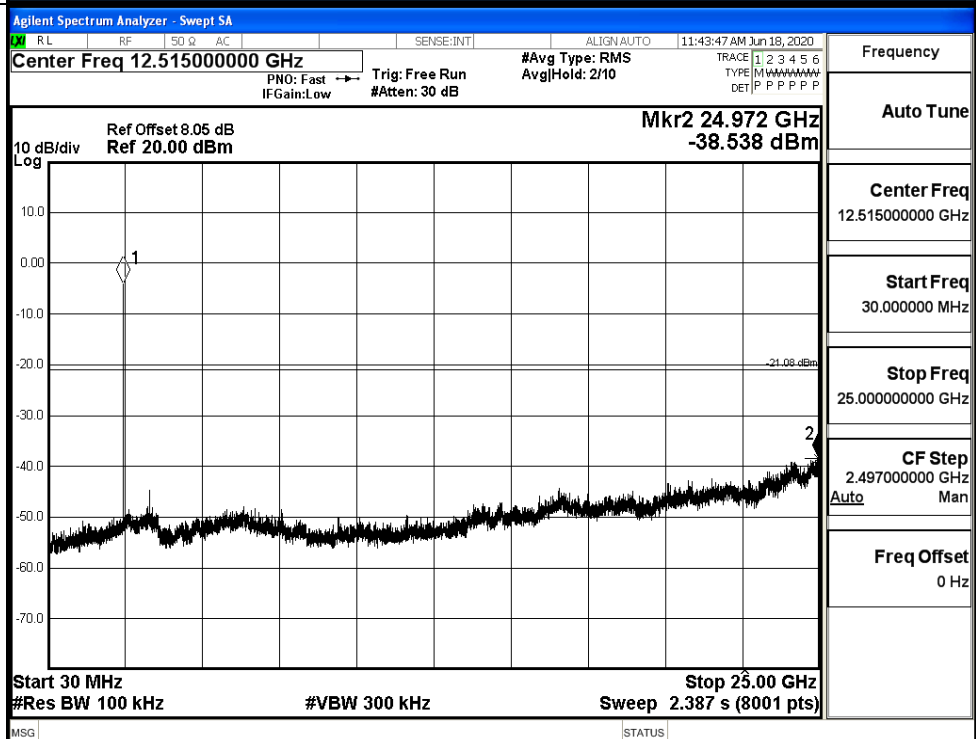


GFSK HCH_Graphs

Pref

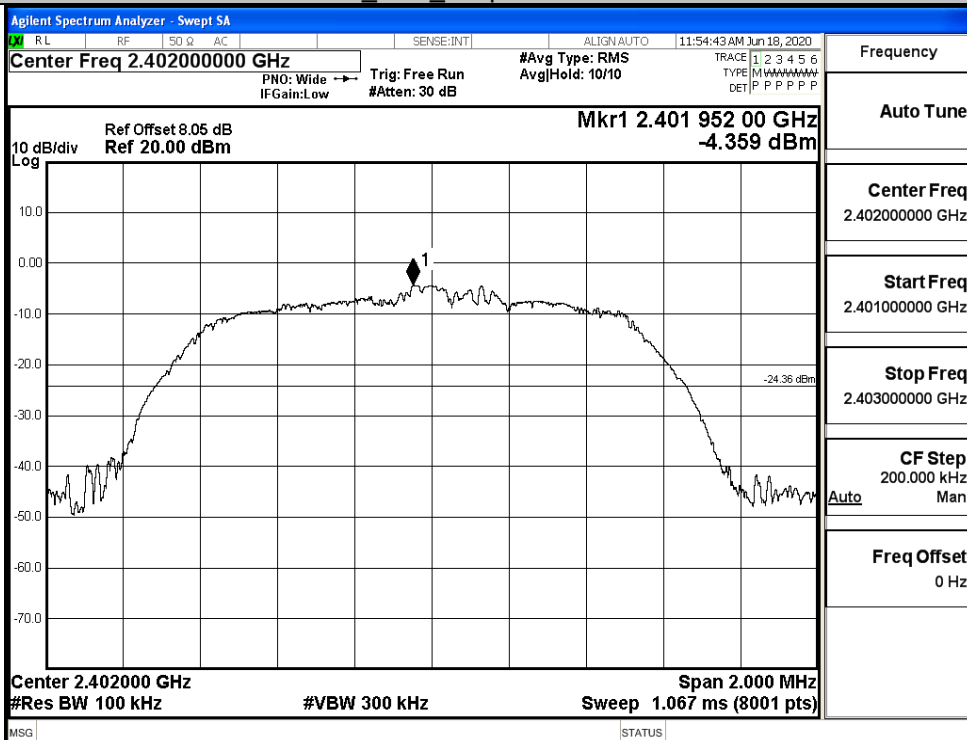


Puw

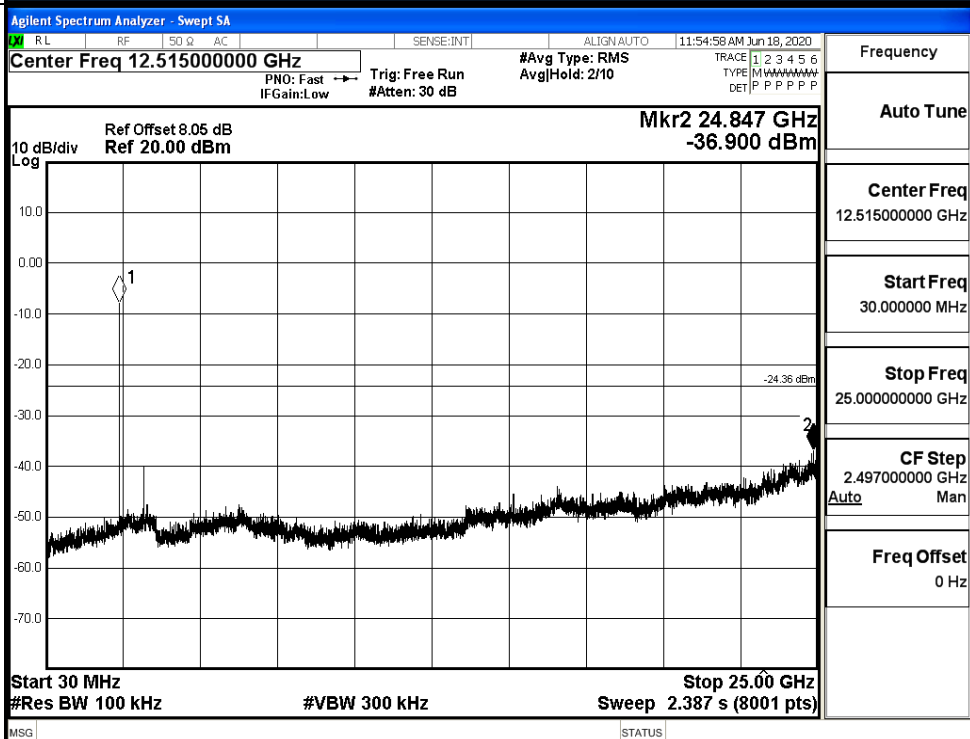


$\pi/4$ DQPSK_LCH_Graphs

Pref

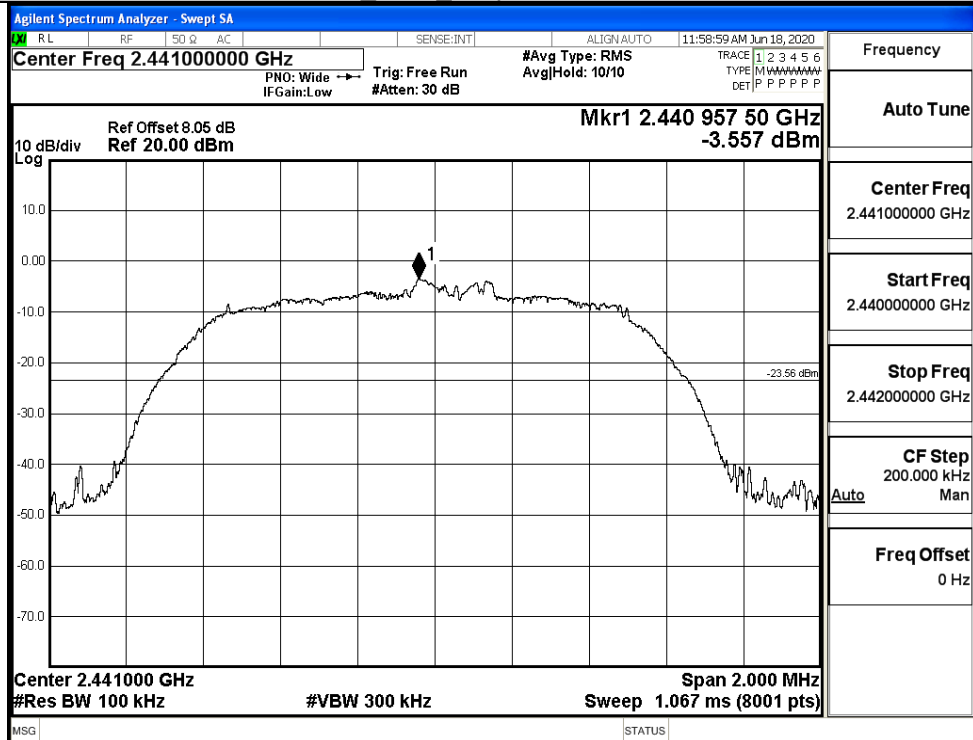


Puw

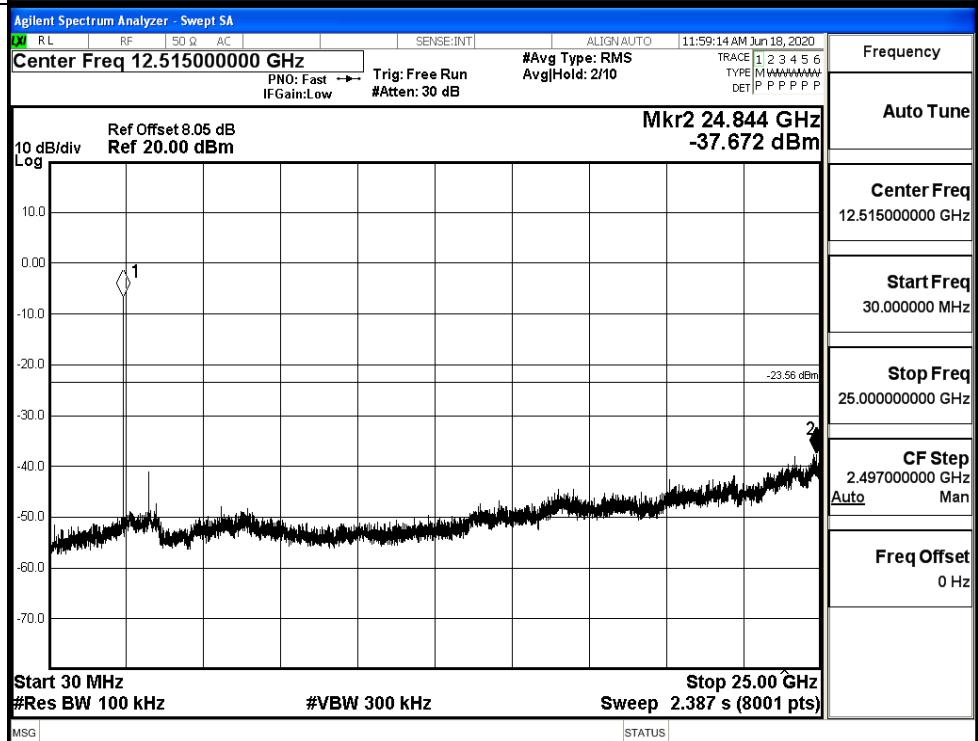


π /4DQPSK_MCH_Graphs

Pref

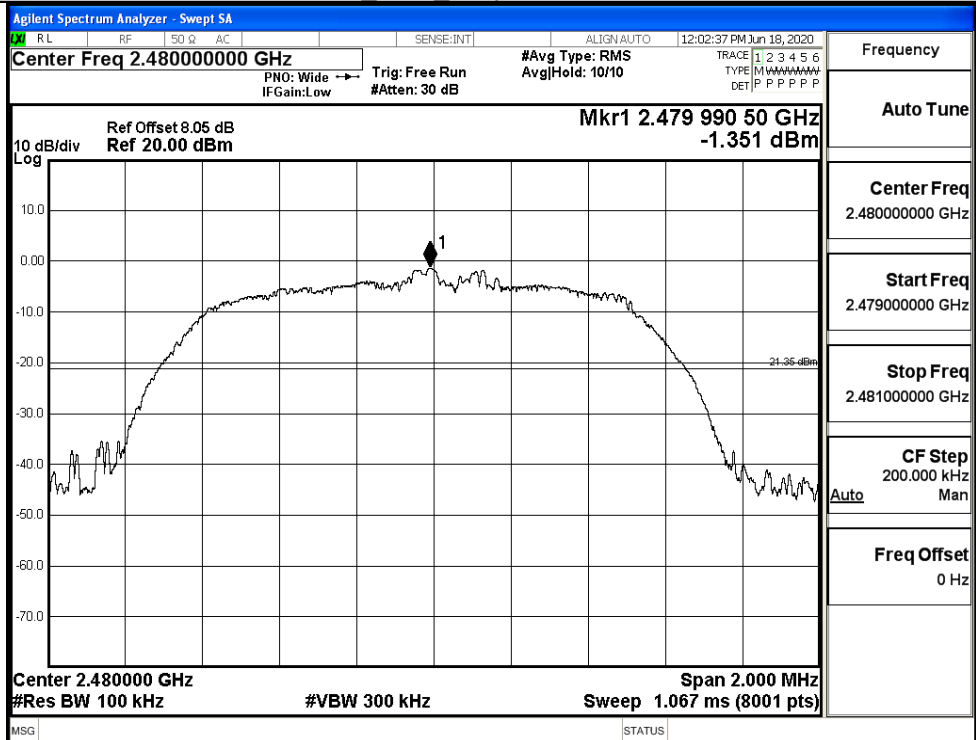


Puw

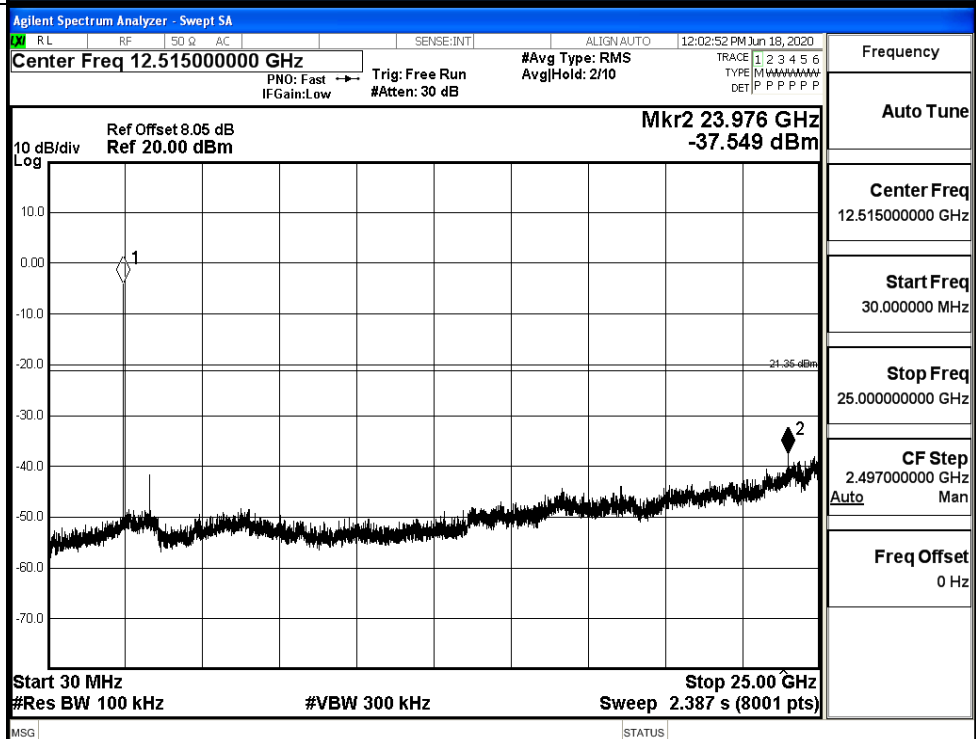


$\pi/4$ DQPSK_HCH_Graphs

Pref

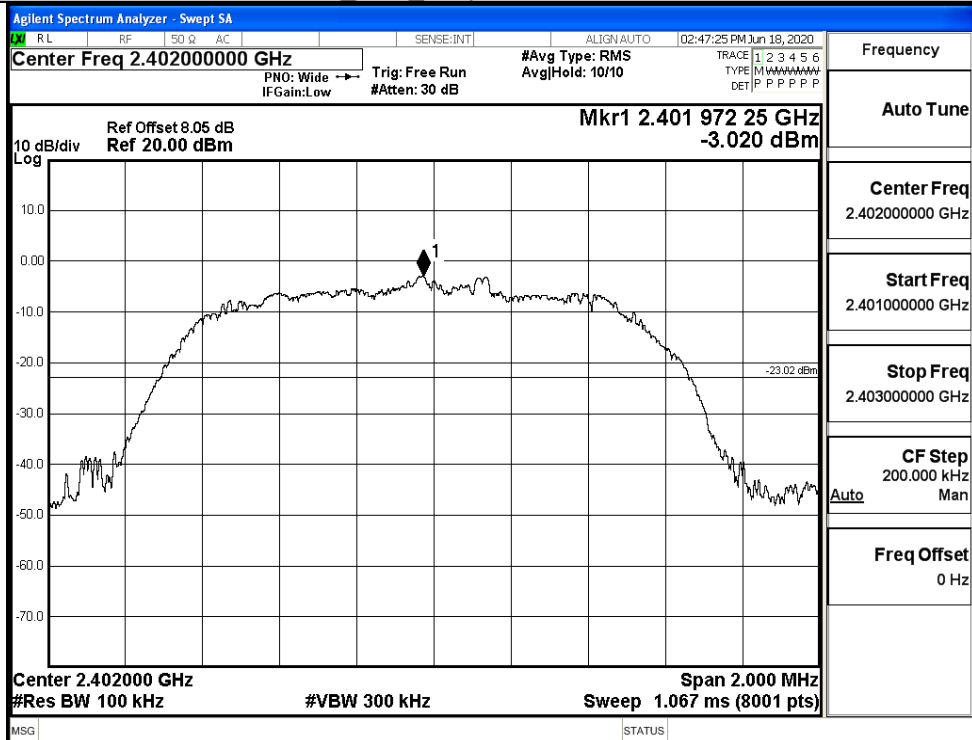


Puw

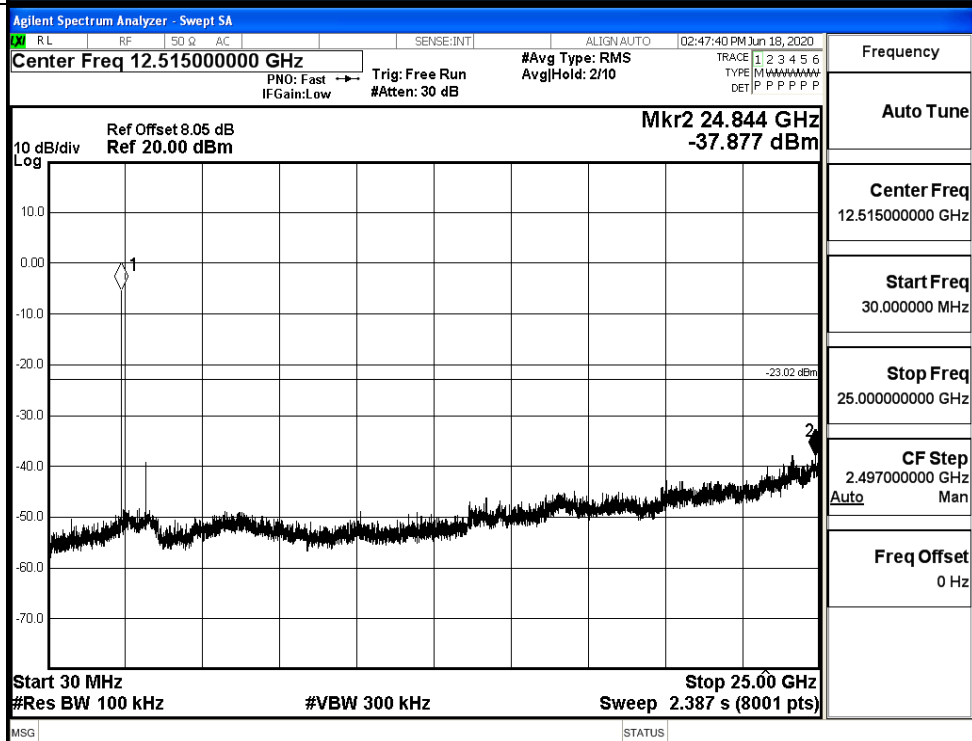


8DPSK_LCH_Graphs

Pref

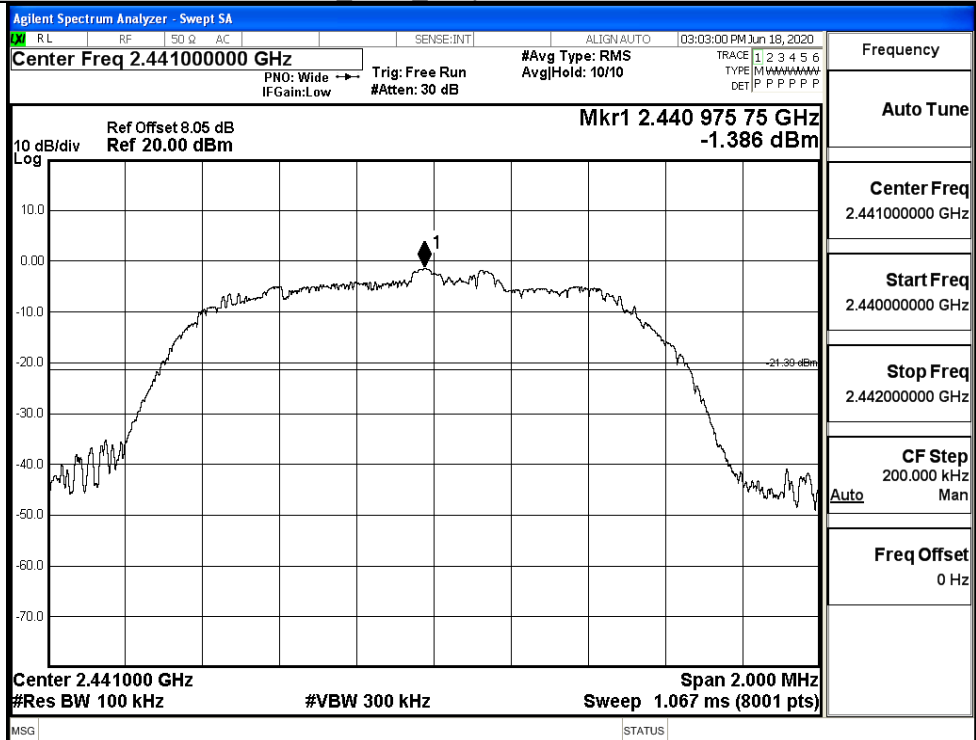


Puw

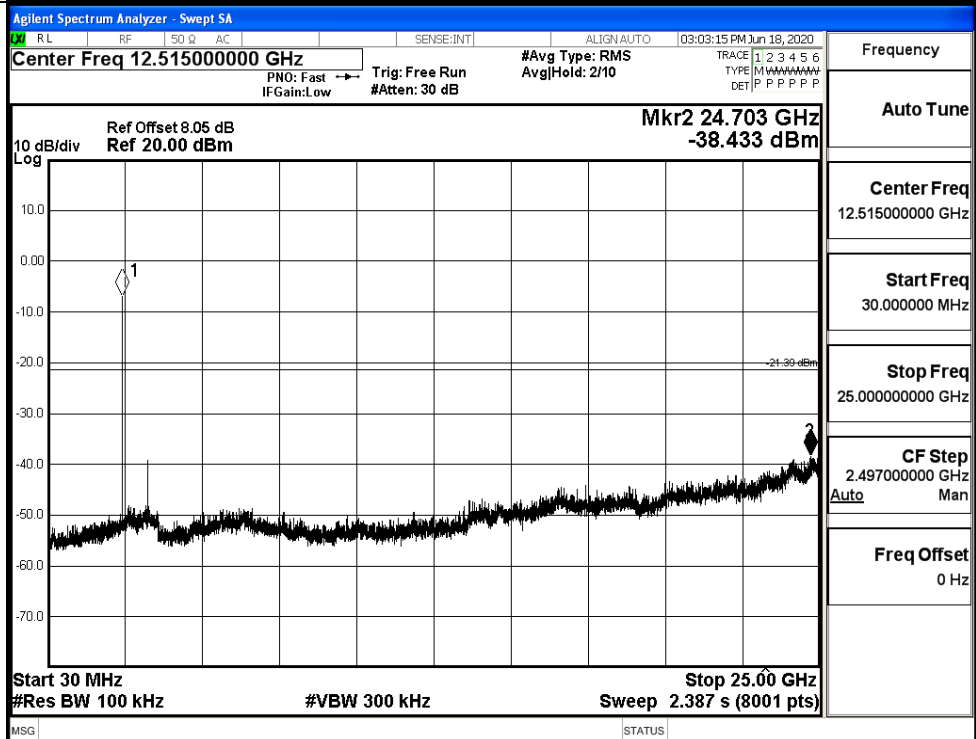


8DPSK_MCH_Graphs

Pref

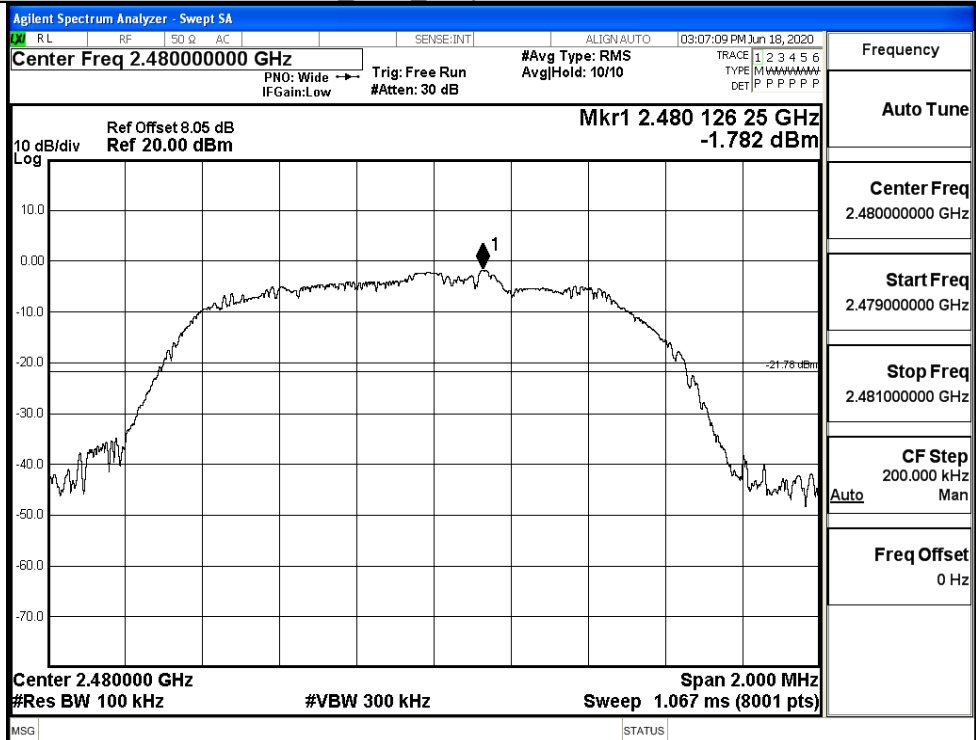


Puw

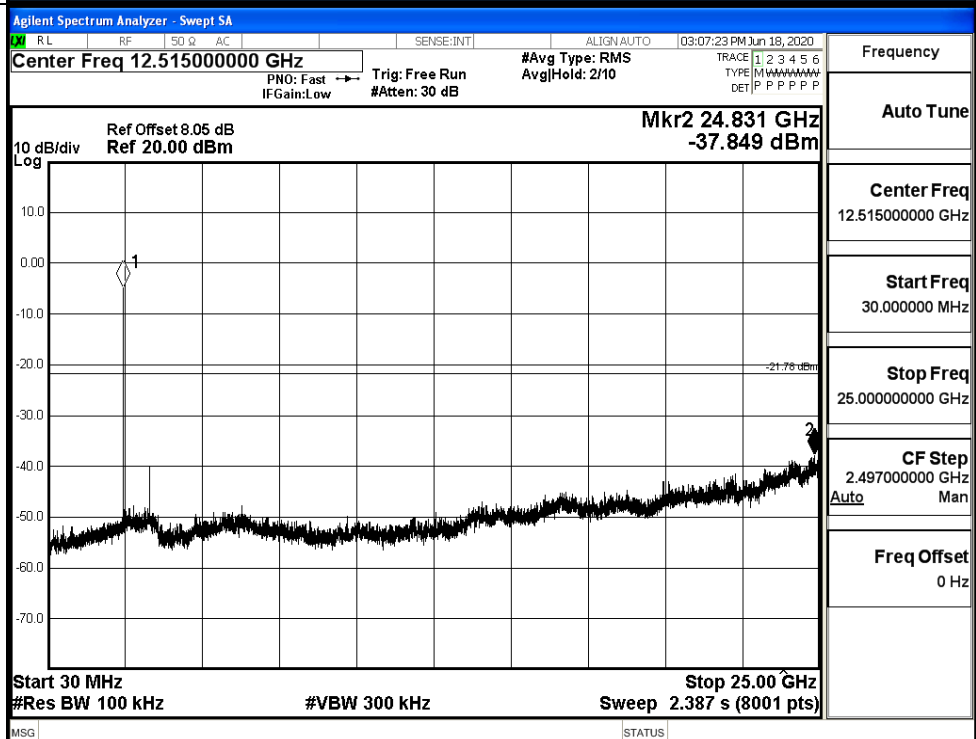


8DPSK_HCH_Graphs

Pref



Puw

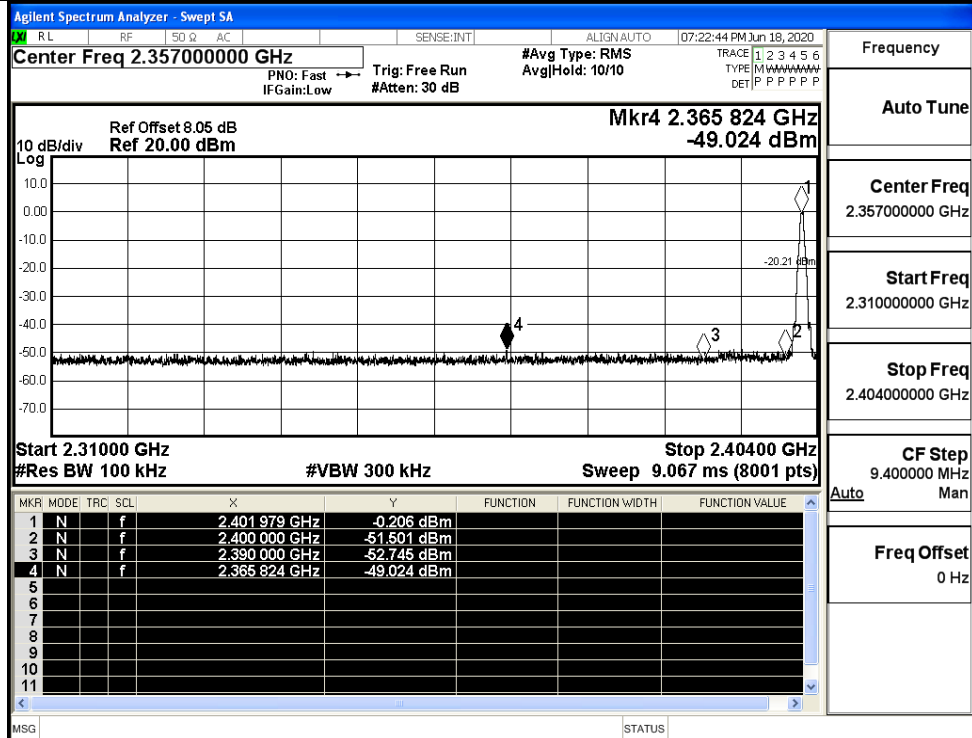


A.8 Band-edge for RF Conducted Emissions

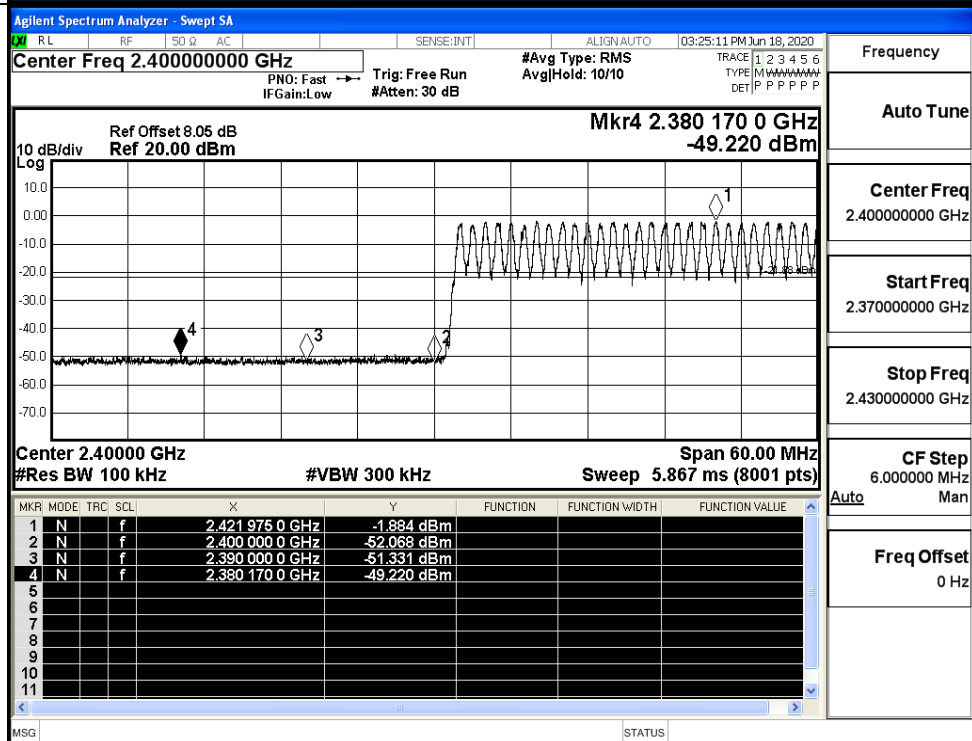
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-0.206	Off	-49.024	-20.21	PASS
			-1.884	On	-49.220	-21.88	PASS
	HCH	2480	-1.249	Off	-47.989	-21.25	PASS
			-1.412	On	-48.695	-21.41	PASS
$\pi/4$ DQPSK	LCH	2402	-4.150	Off	-49.727	-24.15	PASS
			-1.951	On	-48.642	-21.95	PASS
	HCH	2480	-1.659	Off	-48.714	-21.66	PASS
			-1.131	On	-48.647	-21.13	PASS
8DPSK	LCH	2402	-2.965	Off	-49.625	-22.97	PASS
			-1.874	On	-49.263	-21.87	PASS
	HCH	2480	-1.310	Off	-48.342	-21.31	PASS
			-1.260	On	-48.080	-21.26	PASS

Test Graphs

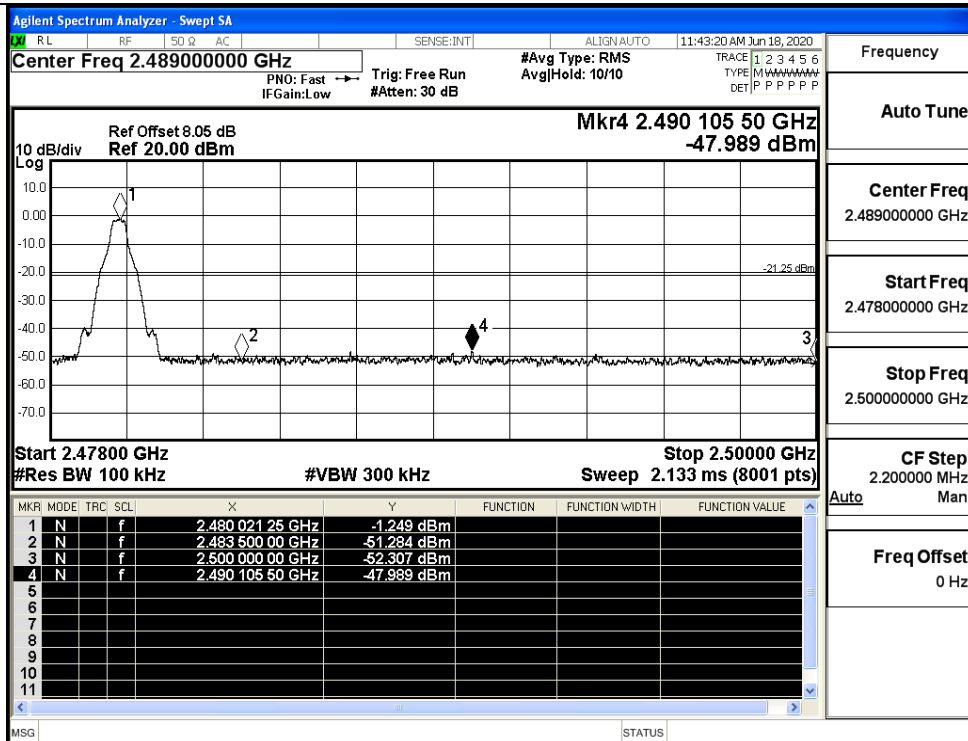
GFSK/LCH/No Hop



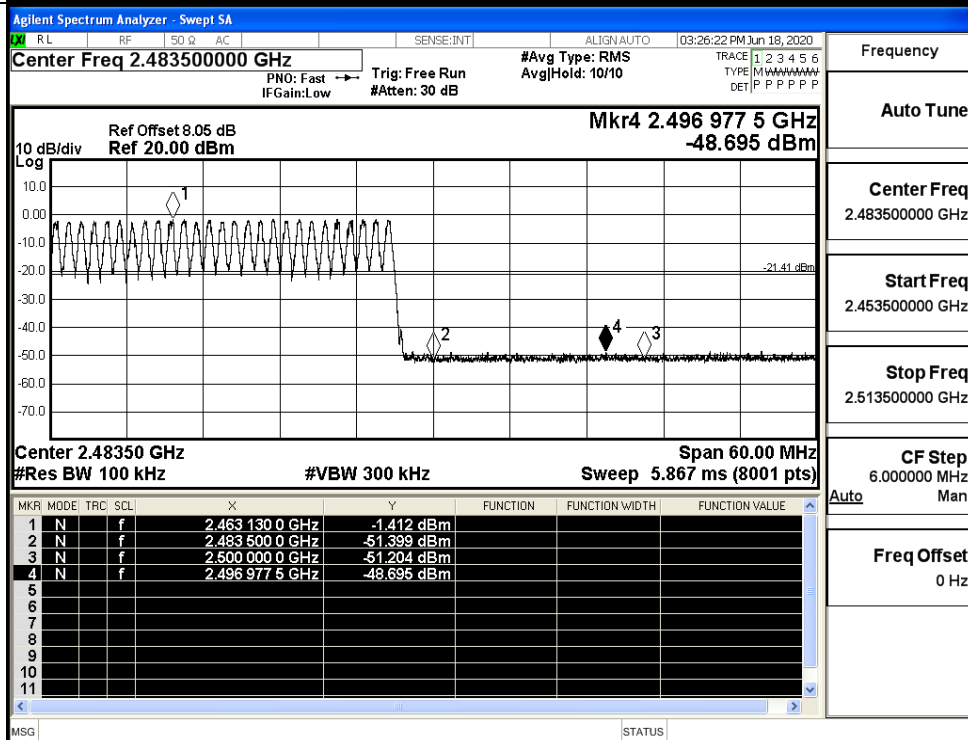
GFSK/LCH/Hop



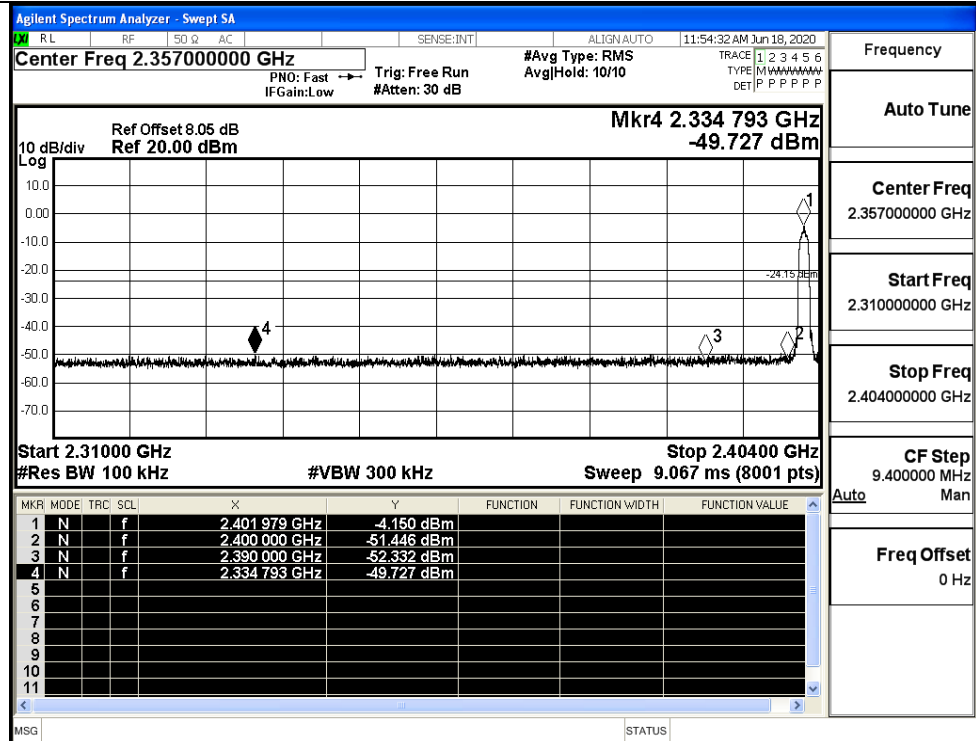
GFSK/HCH/No Hop



GFSK/HCH/Hop



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

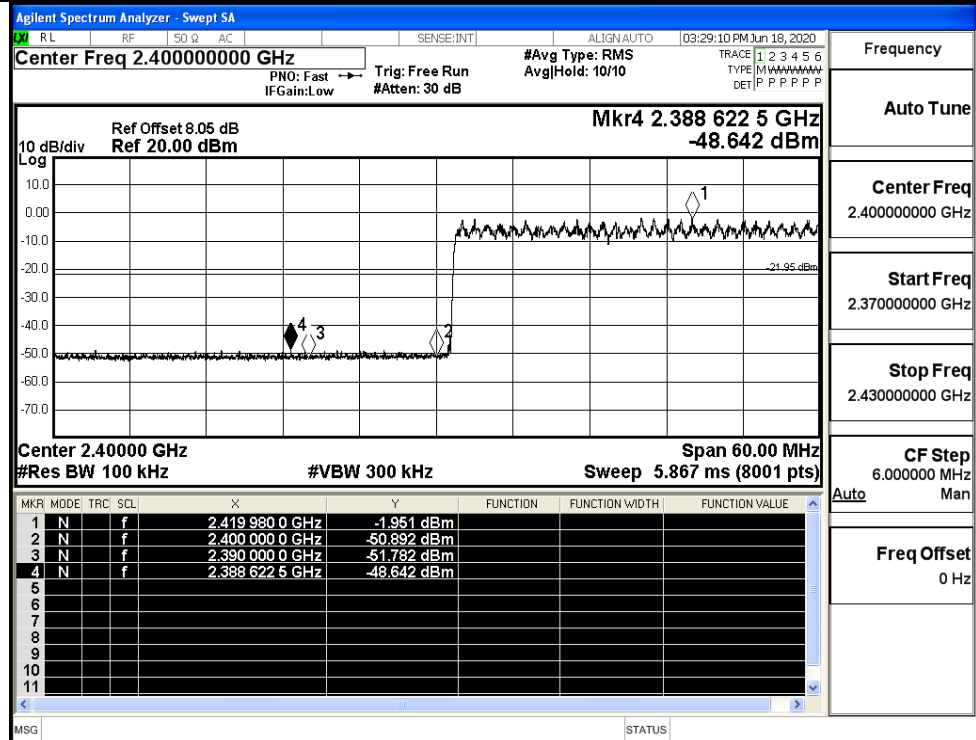


Frequency

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

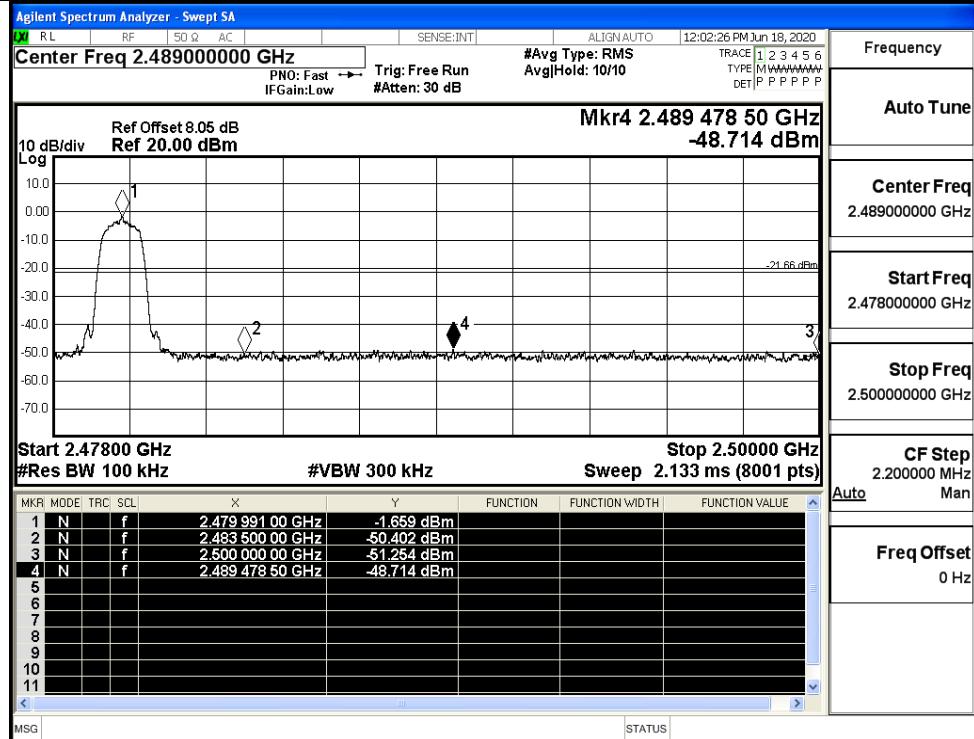


Frequency

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 GHz

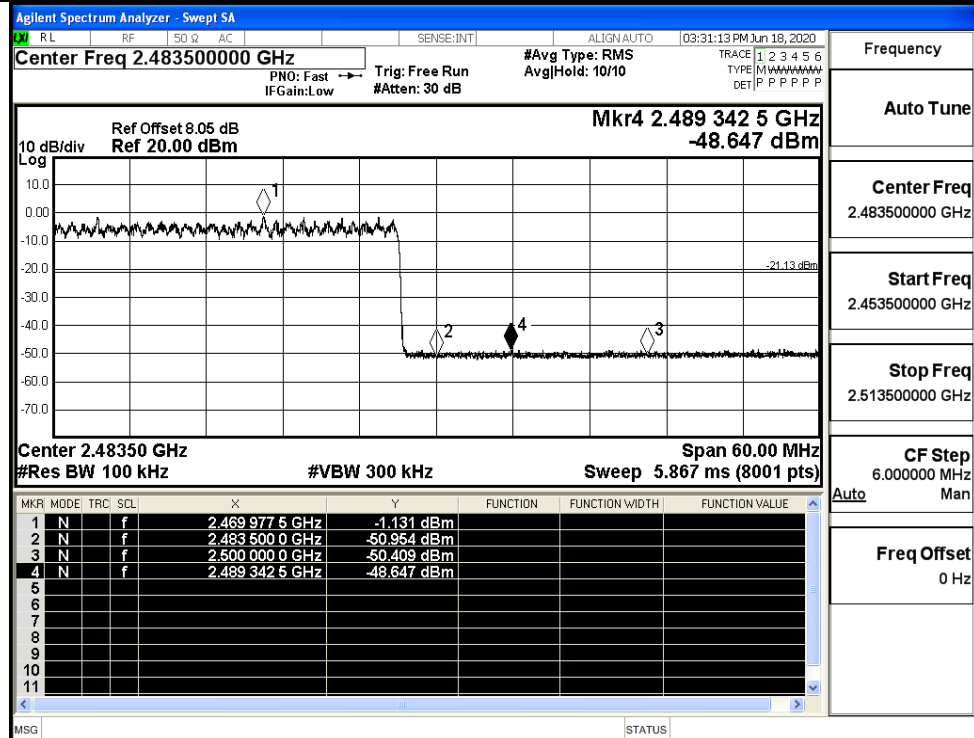
Start Freq
2.478000000 GHz

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

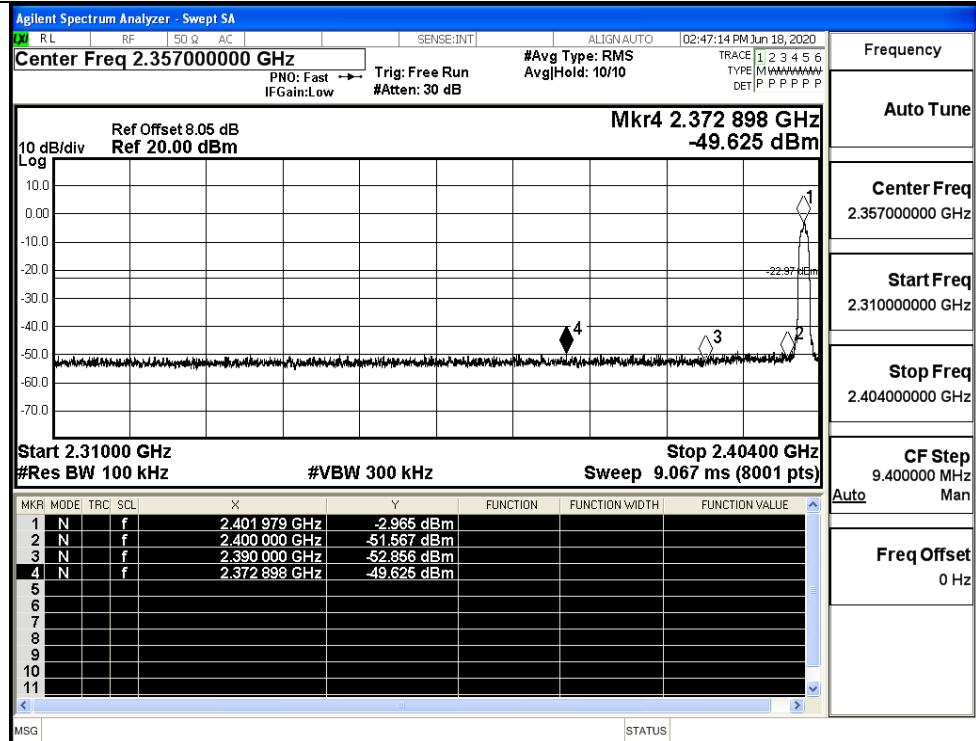
Start Freq
2.453500000 GHz

Stop Freq
2.513500000 GHz

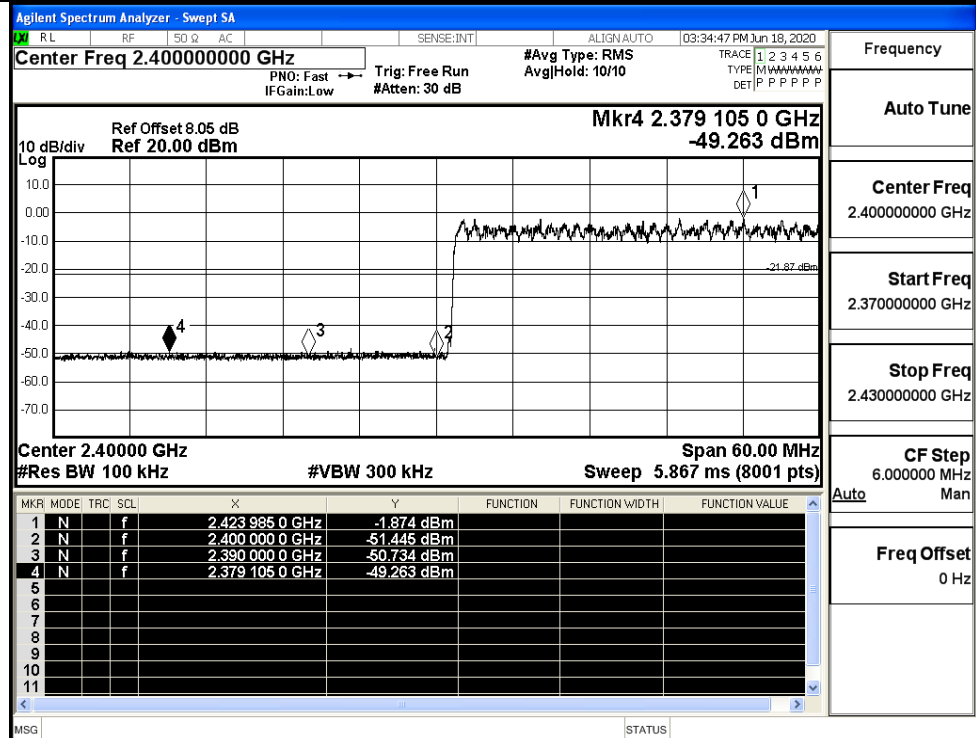
CF Step
6.000000 MHz
Auto Man

Freq Offset
0 Hz

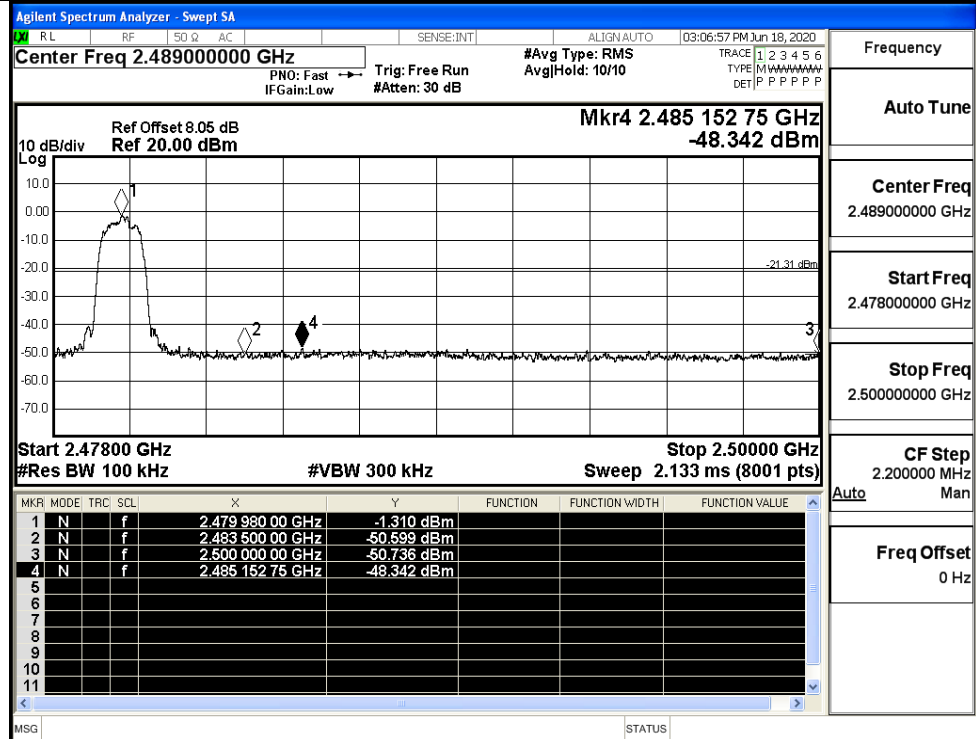
8DPSK/LCH/No Hop



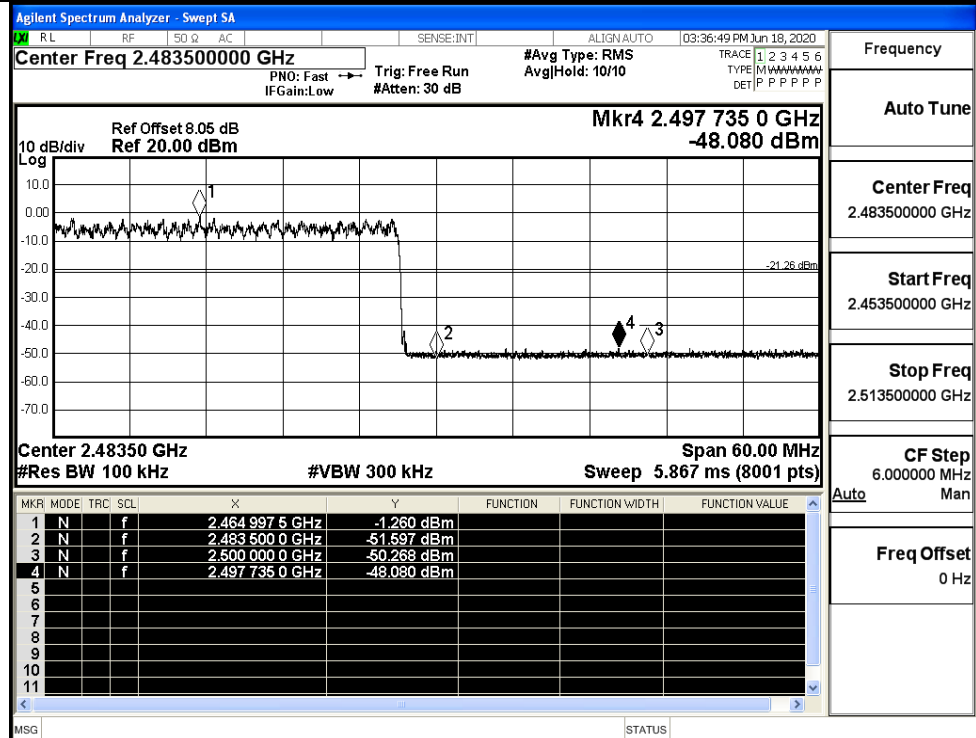
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



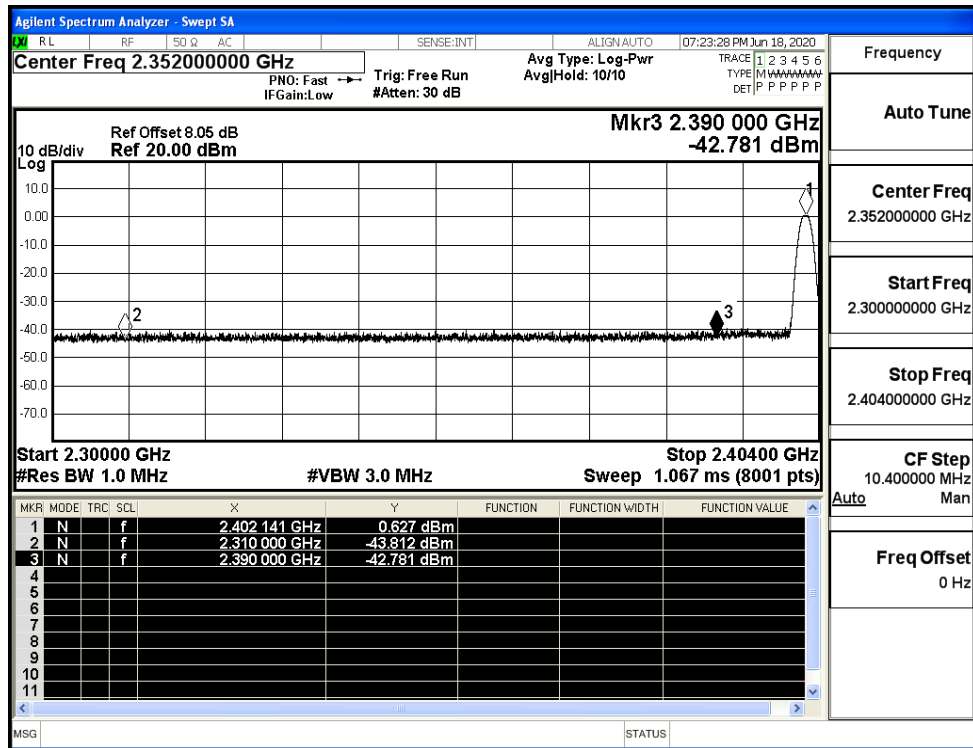
8DPSK/HCH/Hop



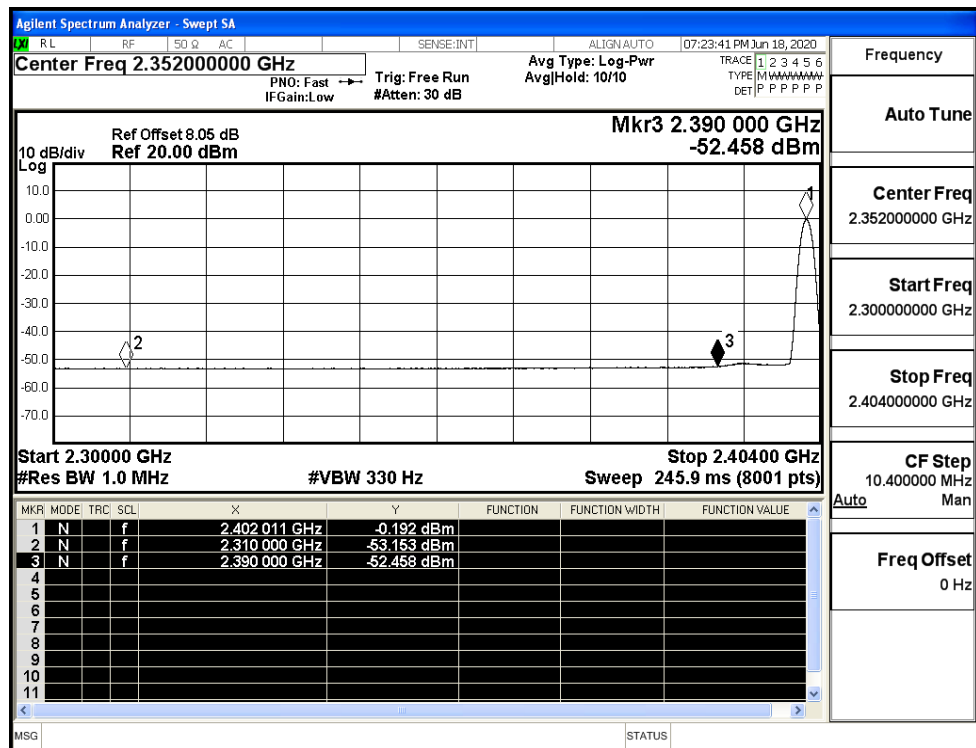
A.9 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.81	2.0	0	53.42	PEAK	74	PASS
	Off	2310.0	-53.15	2.0	0	44.08	AV	54	PASS
	Off	2390.0	-42.78	2.0	0	54.45	PEAK	74	PASS
	Off	2390.0	-52.46	2.0	0	44.77	AV	54	PASS
	Off	2483.5	-40.70	2.0	0	56.53	PEAK	74	PASS
	Off	2483.5	-51.91	2.0	0	45.32	AV	54	PASS
	Off	2500.0	-42.14	2.0	0	55.09	PEAK	74	PASS
	Off	2500.0	-52.29	2.0	0	44.94	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.95	2.0	0	53.28	PEAK	74	PASS
	Off	2310.0	-53.28	2.0	0	43.95	AV	54	PASS
	Off	2390.0	-40.98	2.0	0	56.25	PEAK	74	PASS
	Off	2390.0	-52.65	2.0	0	44.58	AV	54	PASS
	Off	2483.5	-41.82	2.0	0	55.41	PEAK	74	PASS
	Off	2483.5	-51.69	2.0	0	45.54	AV	54	PASS
	Off	2500.0	-41.61	2.0	0	55.62	PEAK	74	PASS
	Off	2500.0	-52.31	2.0	0	44.92	AV	54	PASS
8DPSK	Off	2310.0	-43.46	2.0	0	53.77	PEAK	74	PASS
	Off	2310.0	-53.35	2.0	0	43.88	AV	54	PASS
	Off	2390.0	-42.75	2.0	0	54.48	PEAK	74	PASS
	Off	2390.0	-52.68	2.0	0	44.55	AV	54	PASS
	Off	2483.5	-41.16	2.0	0	56.07	PEAK	74	PASS
	Off	2483.5	-51.39	2.0	0	45.84	AV	54	PASS
	Off	2500.0	-41.79	2.0	0	55.44	PEAK	74	PASS
	Off	2500.0	-52.16	2.0	0	45.07	AV	54	PASS

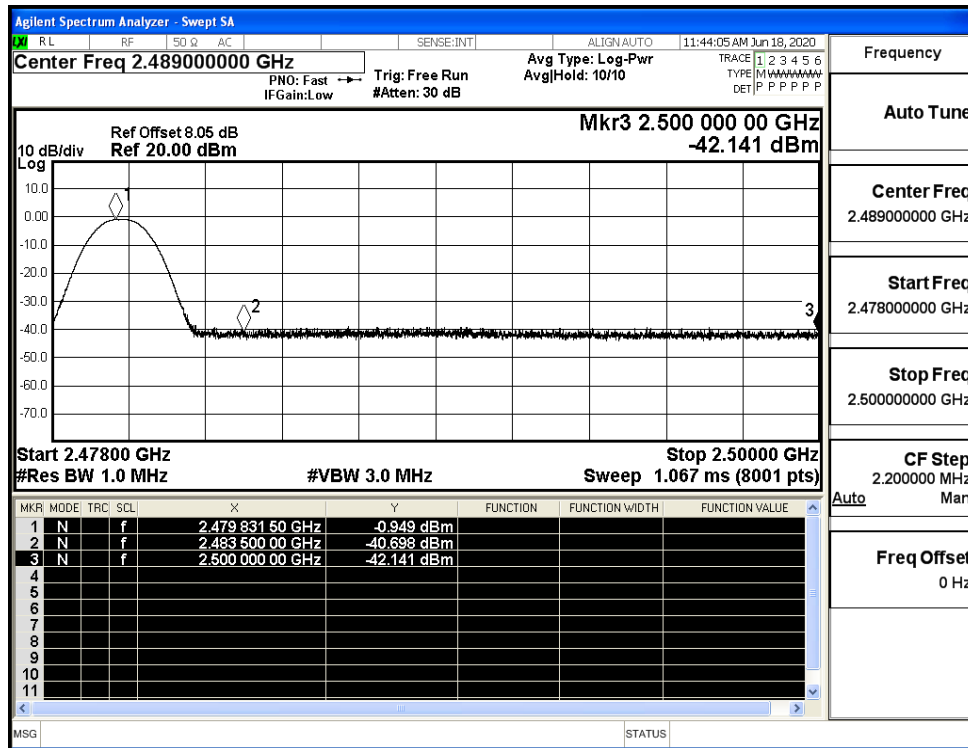
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



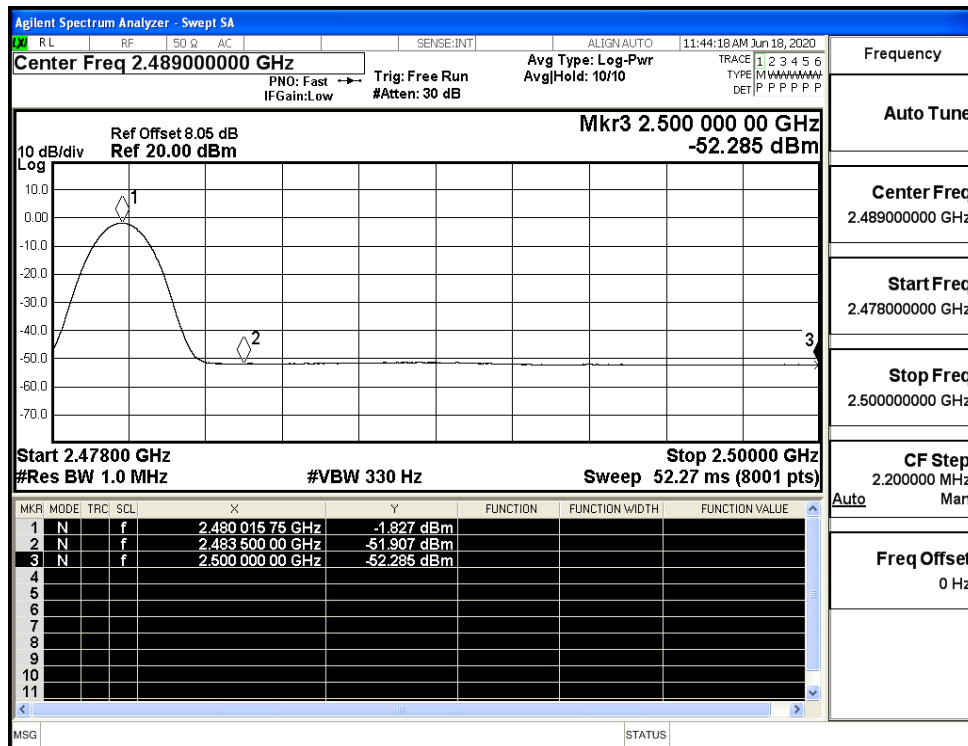
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

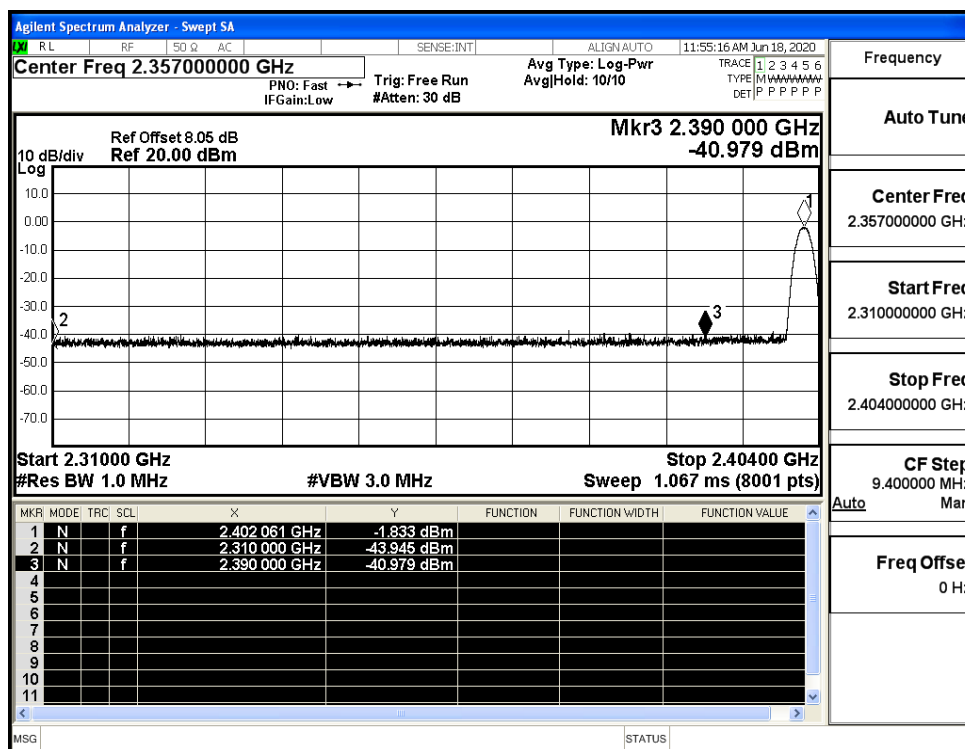
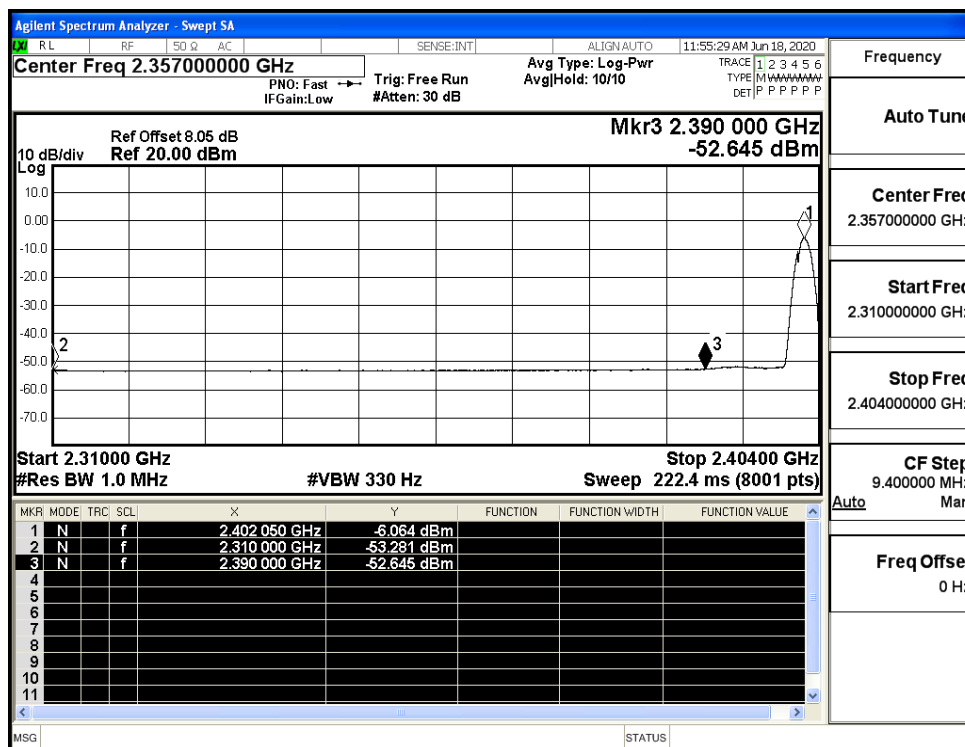


Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)

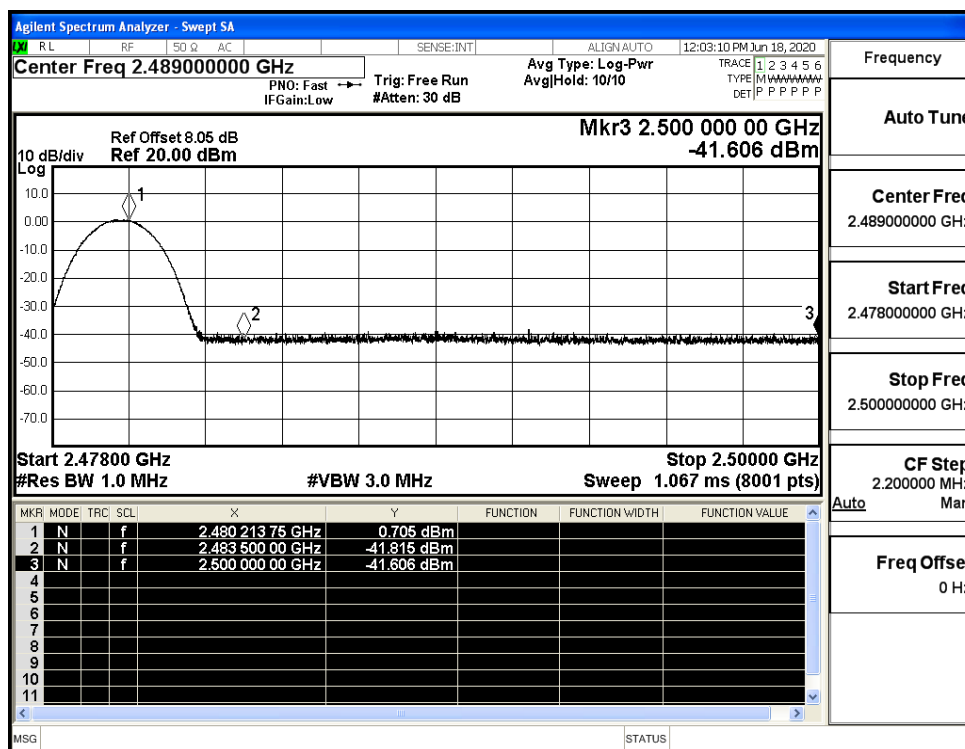


Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)

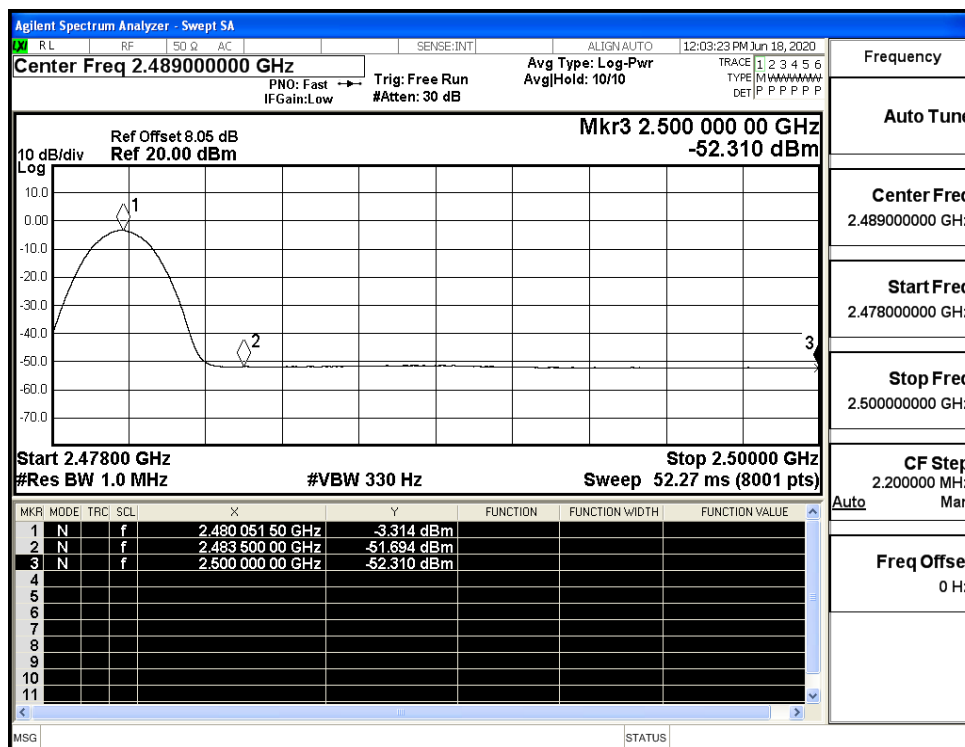


Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

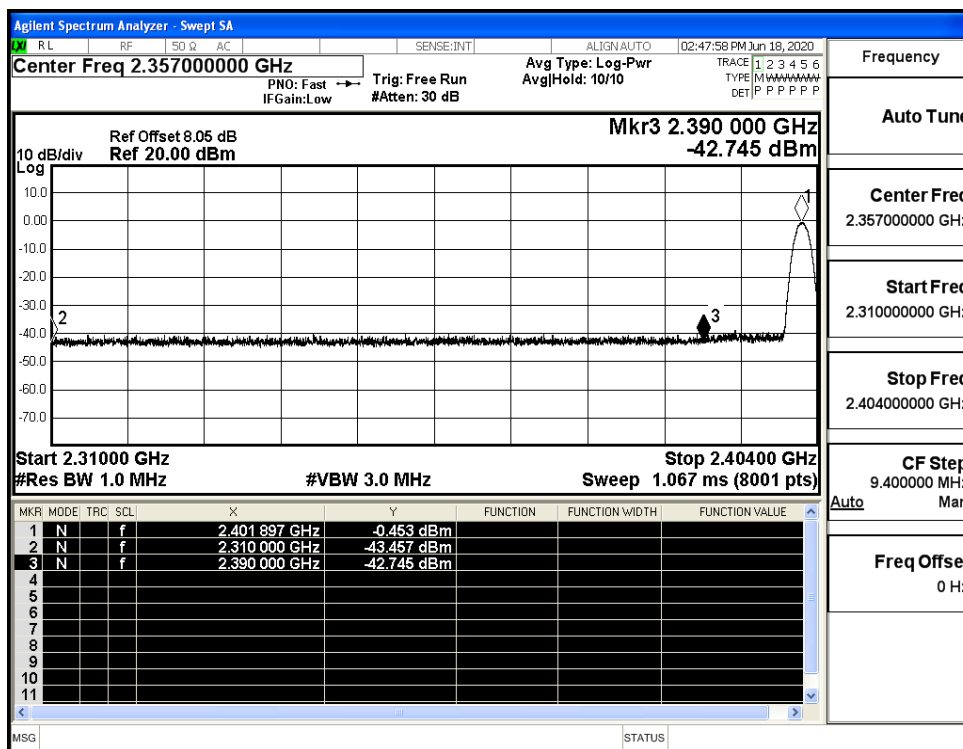
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



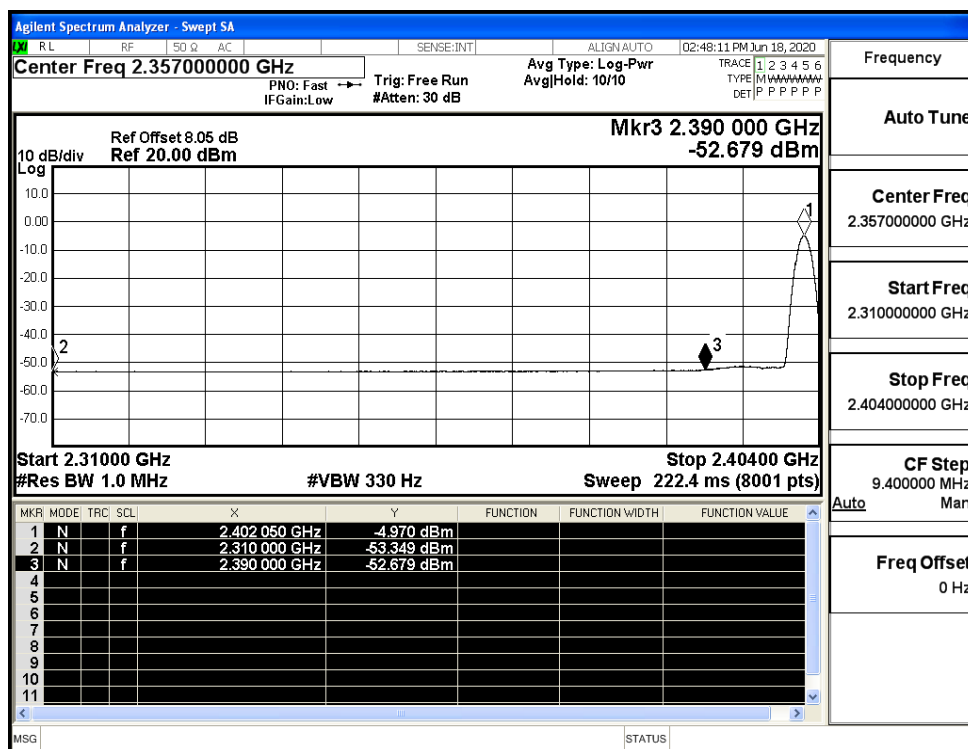
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



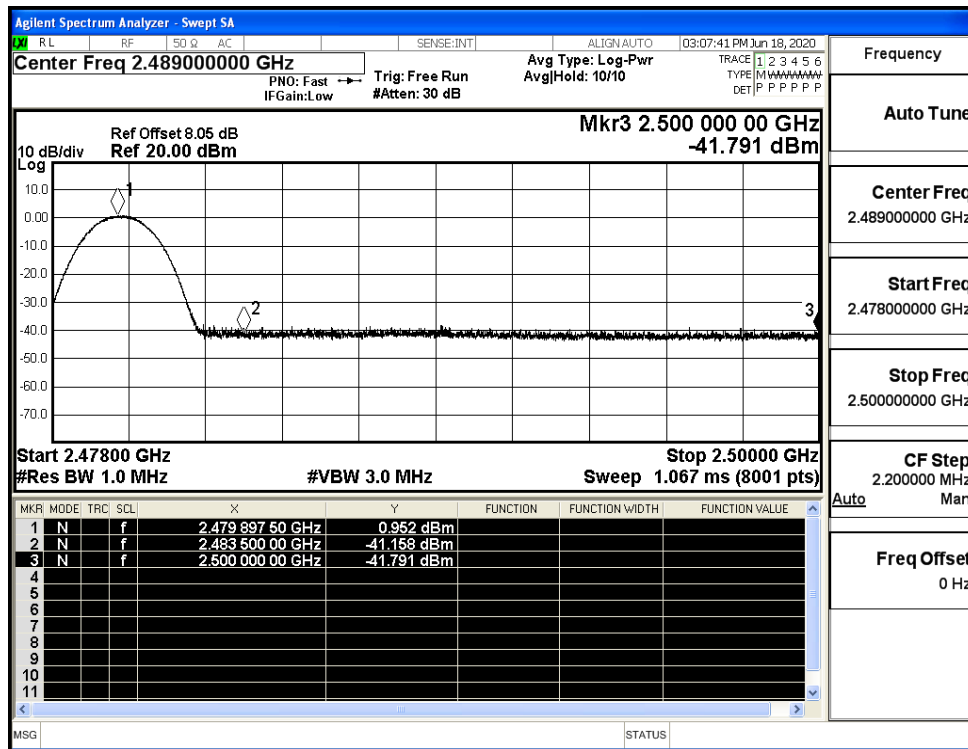
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

