

Appendix A

RF Test Data for BT V3.0(BDR/EDR) (Conducted Measurement)

Product Name: Mobile Phone

Trade Mark: KUMI

Test Model: Mi 1

Environmental Conditions

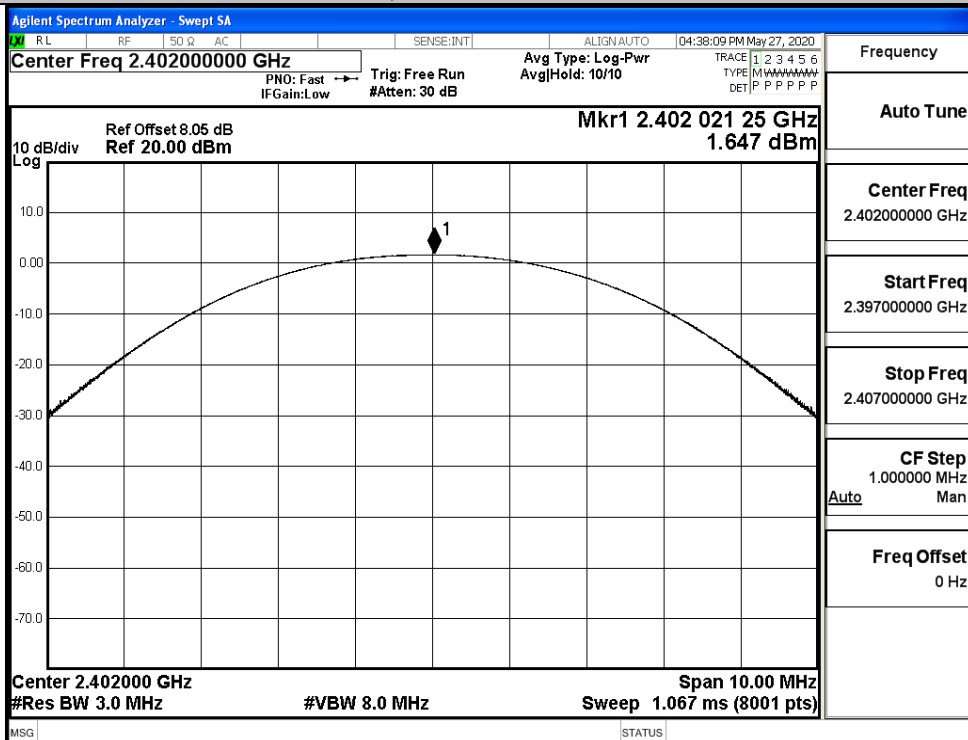
Temperature:	24.6° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

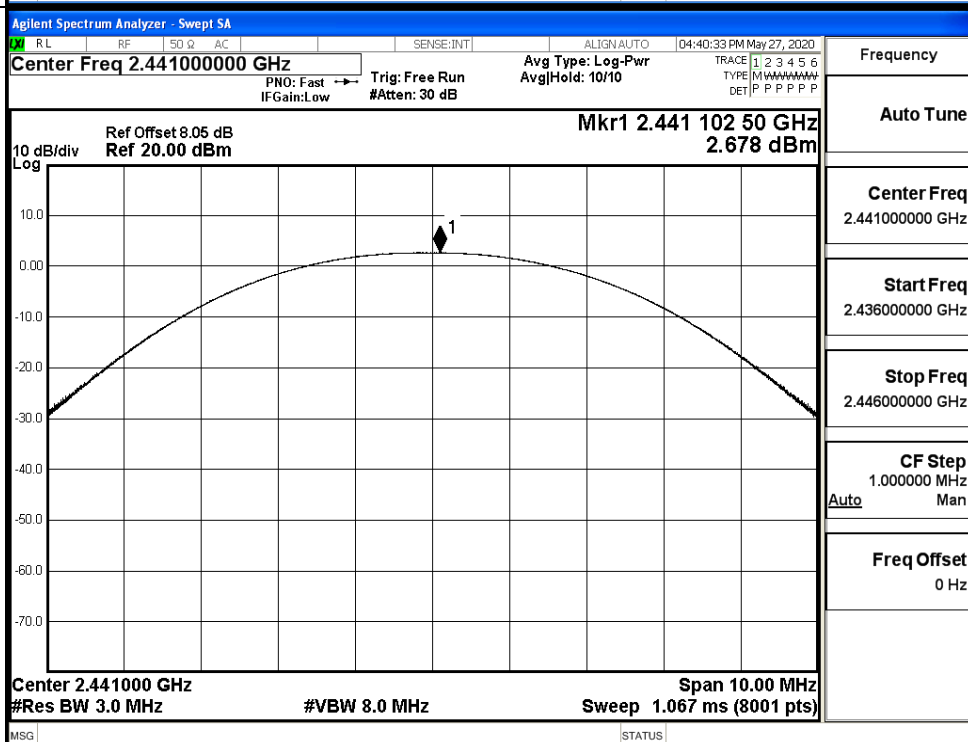
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	1.647	21	PASS
	MCH	2.678	21	PASS
	HCH	2.705	21	PASS
$\pi/4$ DQPSK	LCH	1.558	21	PASS
	MCH	2.556	21	PASS
	HCH	2.555	21	PASS
8DPSK	LCH	1.471	21	PASS
	MCH	2.473	21	PASS
	HCH	2.464	21	PASS

Test Graphs

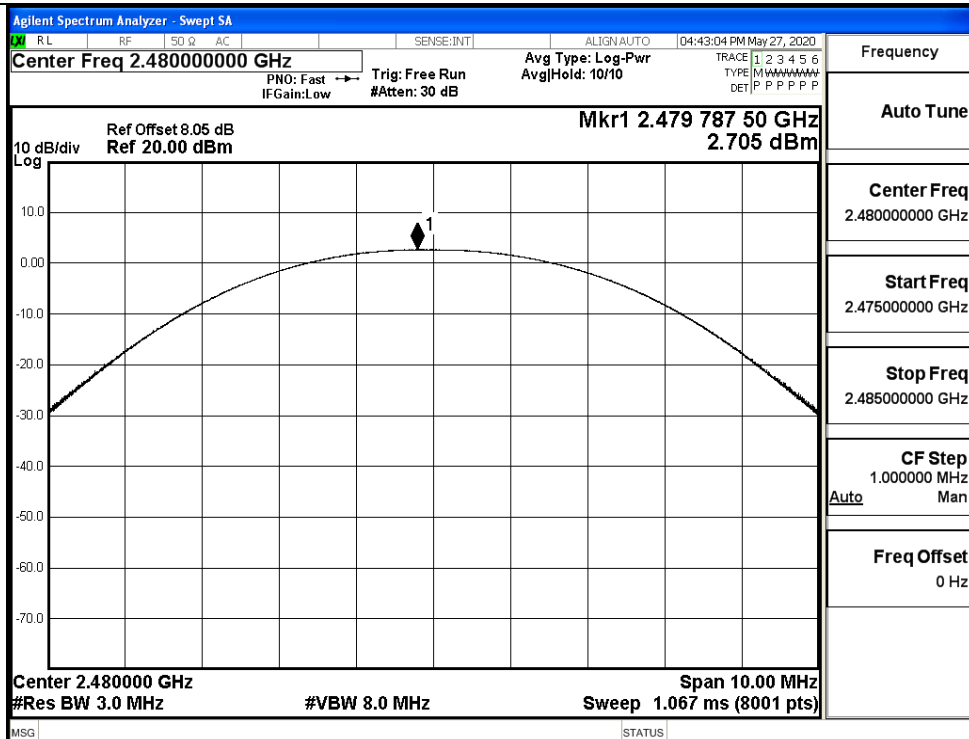
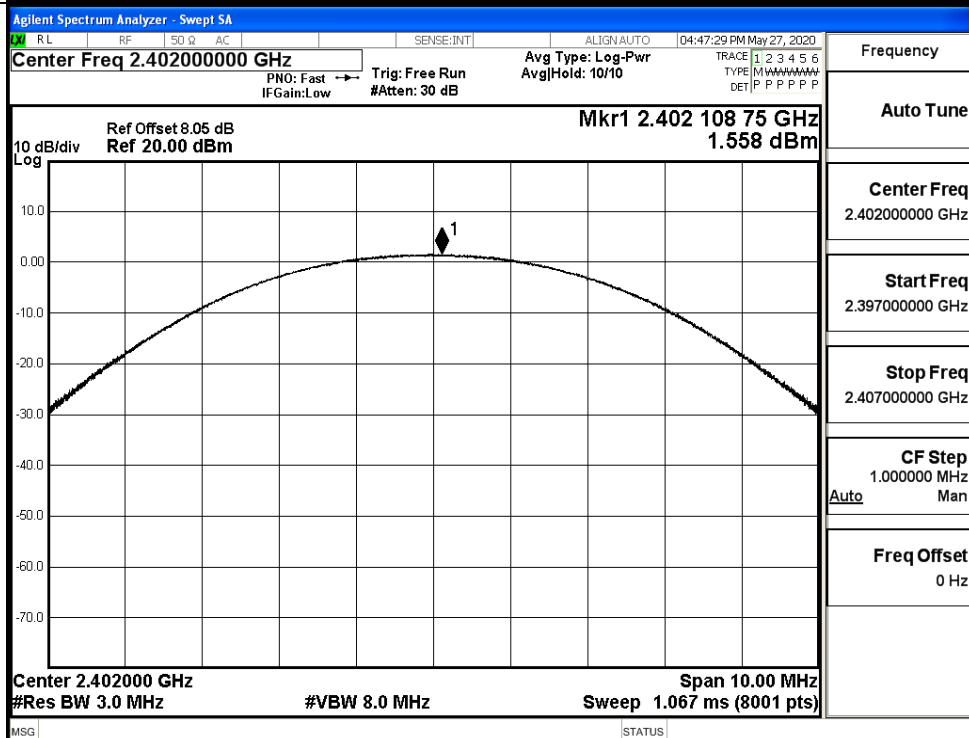
GFSK/LCH

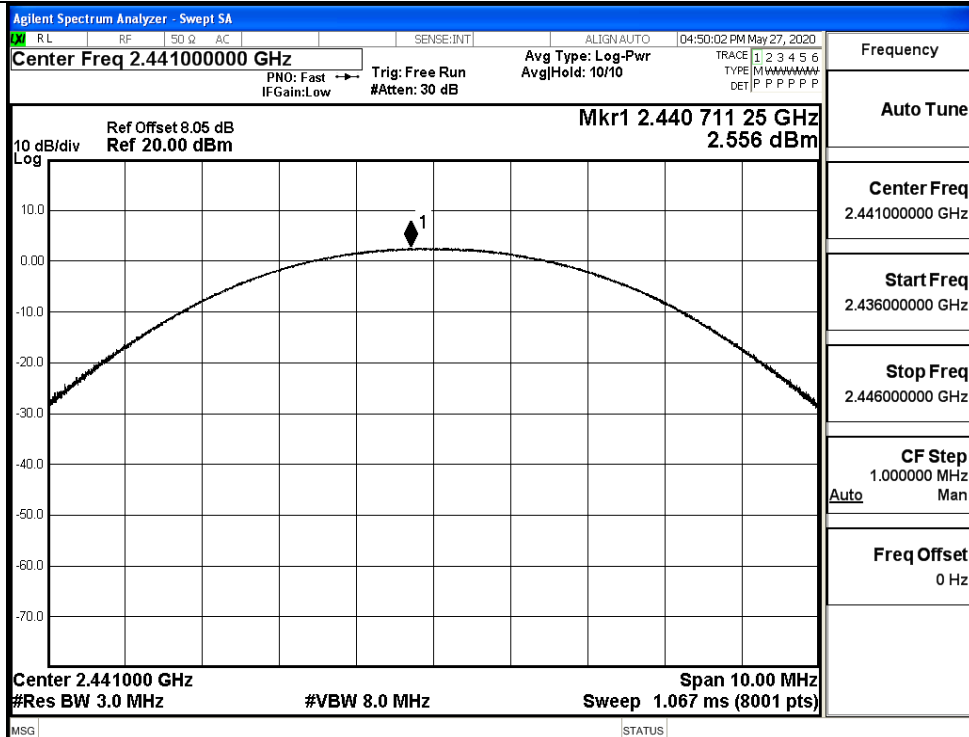
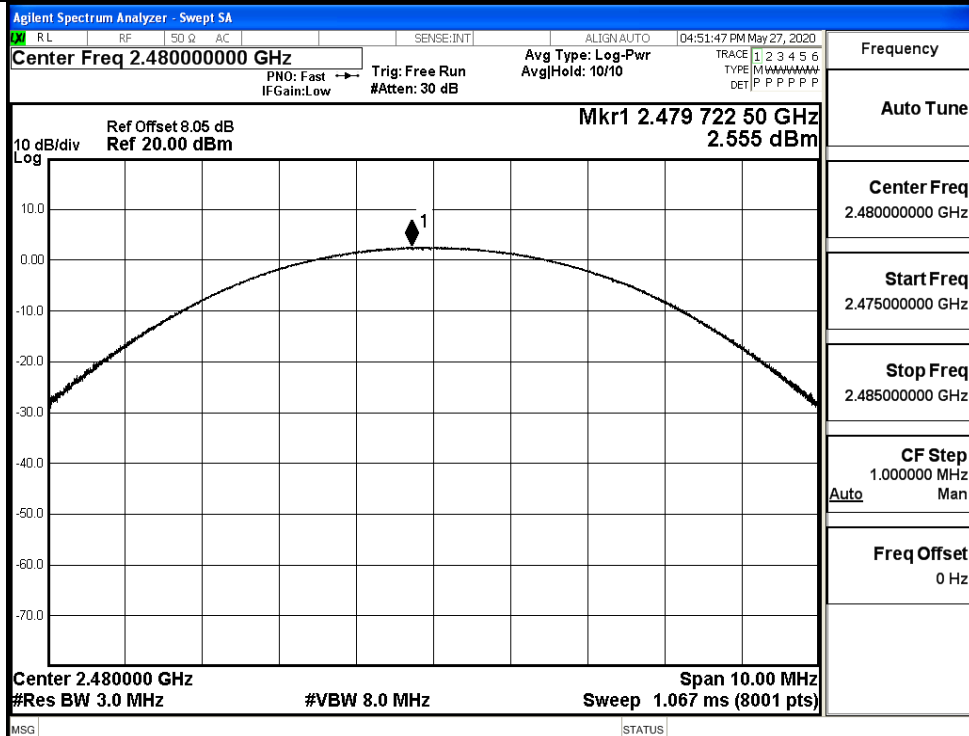


GFSK/MCH

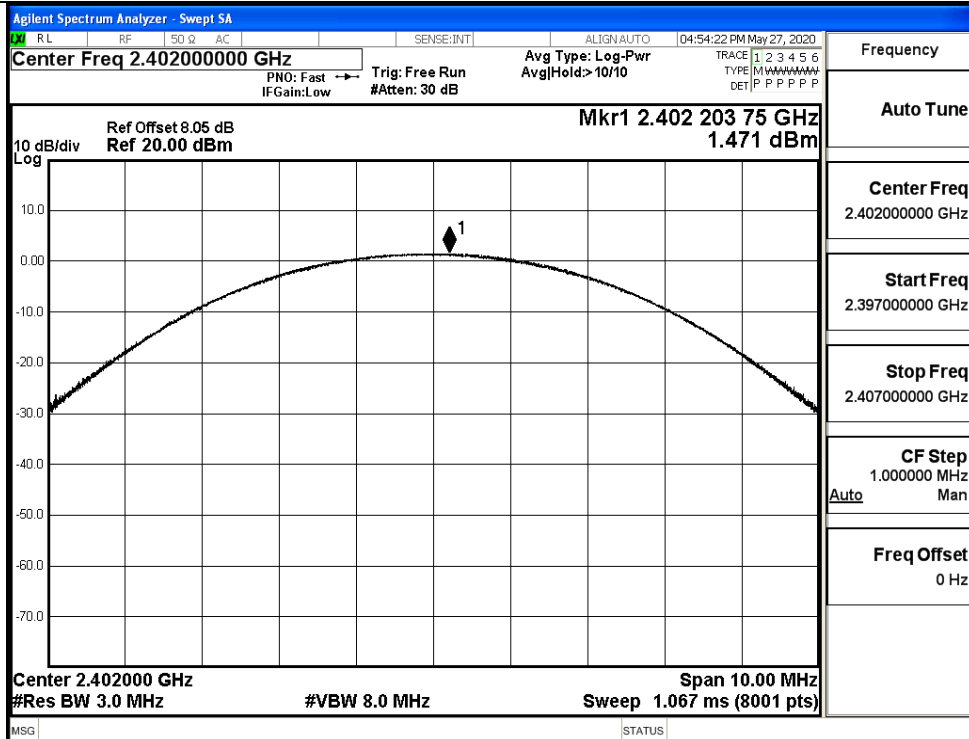


GFSK/HCH

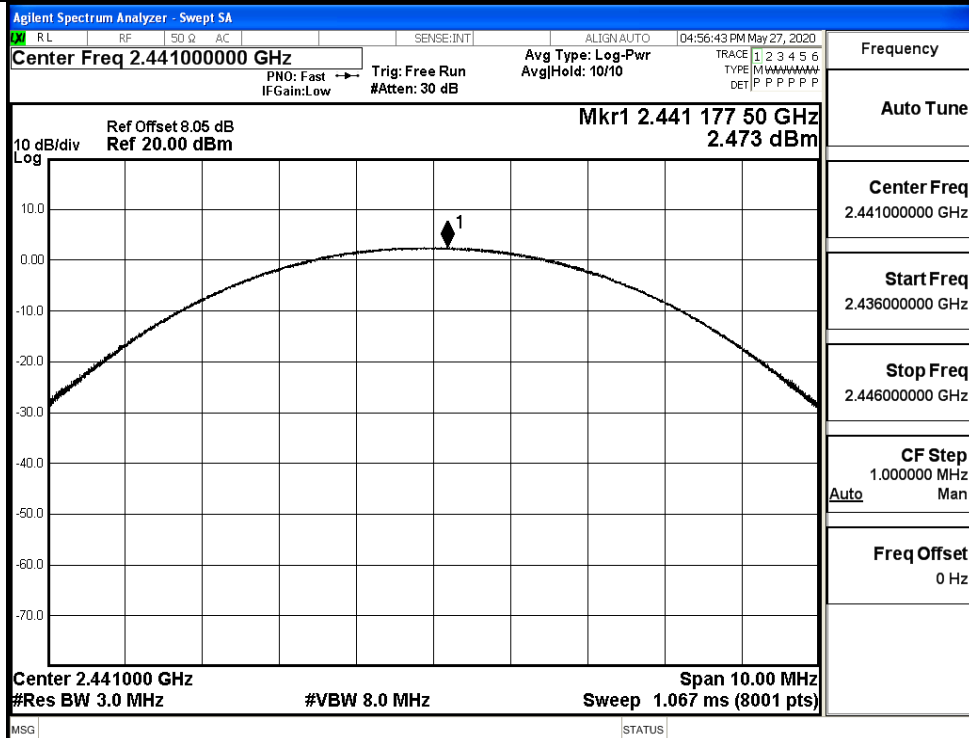
 $\pi/4$ DQPSK/LCH

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

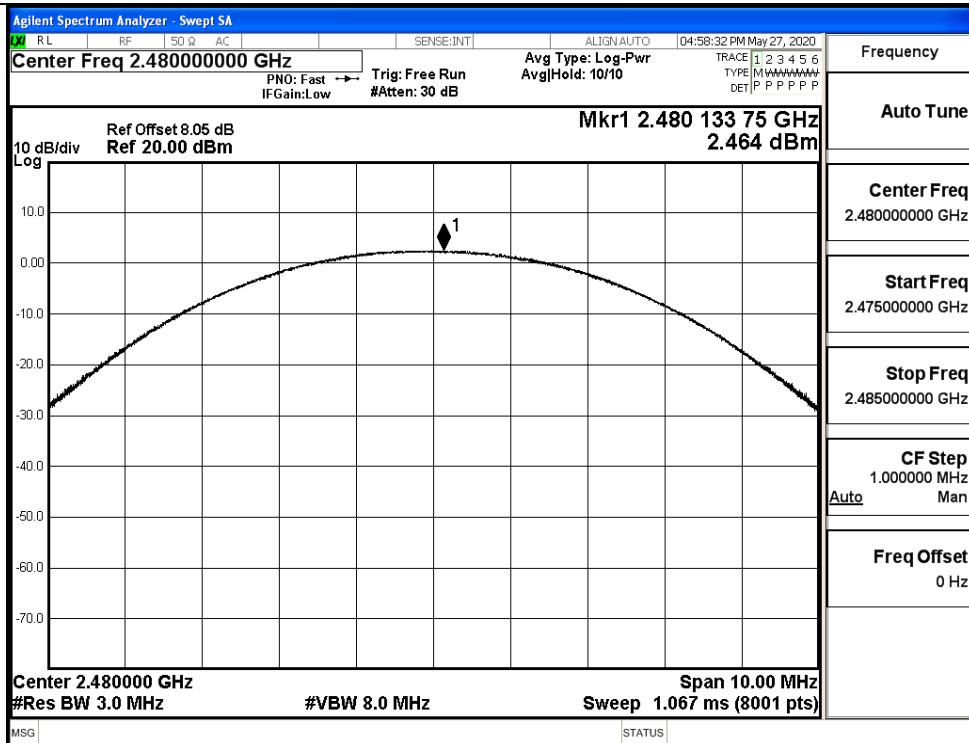
8DPSK/LCH



8DPSK/MCH



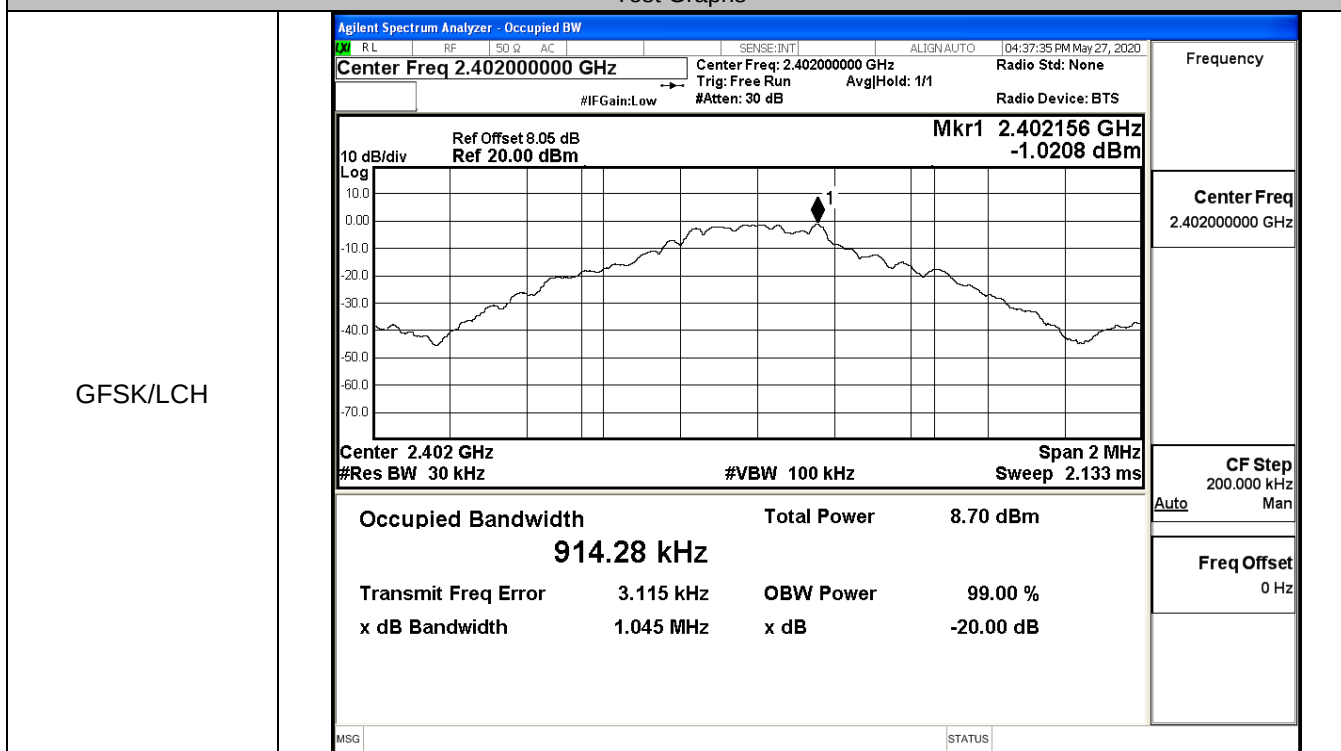
8DPSK/HCH



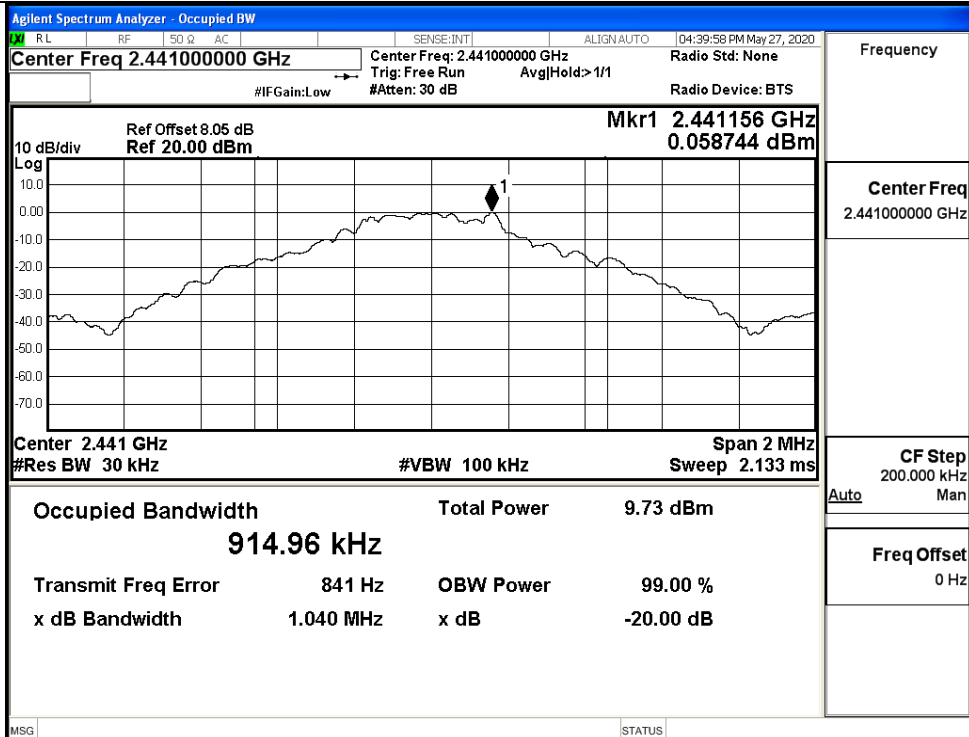
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.045	Not Specified	PASS
	MCH	1.040	Not Specified	PASS
	HCH	1.053	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.291	Not Specified	PASS
	MCH	1.309	Not Specified	PASS
	HCH	1.308	Not Specified	PASS
8DPSK	LCH	1.306	Not Specified	PASS
	MCH	1.299	Not Specified	PASS
	HCH	1.301	Not Specified	PASS

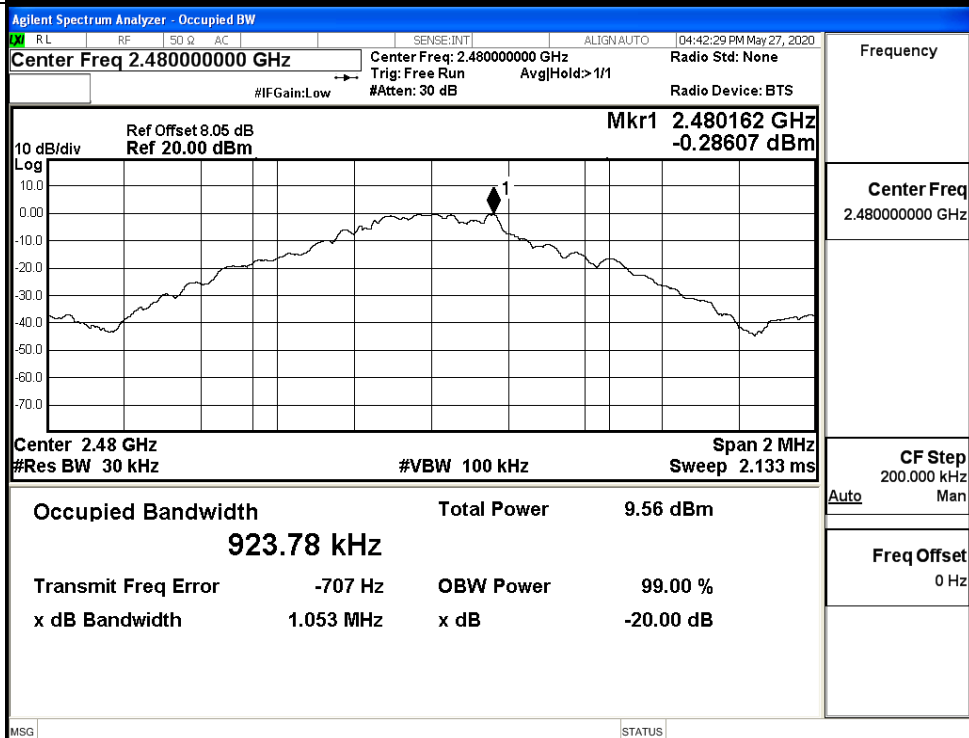
Test Graphs

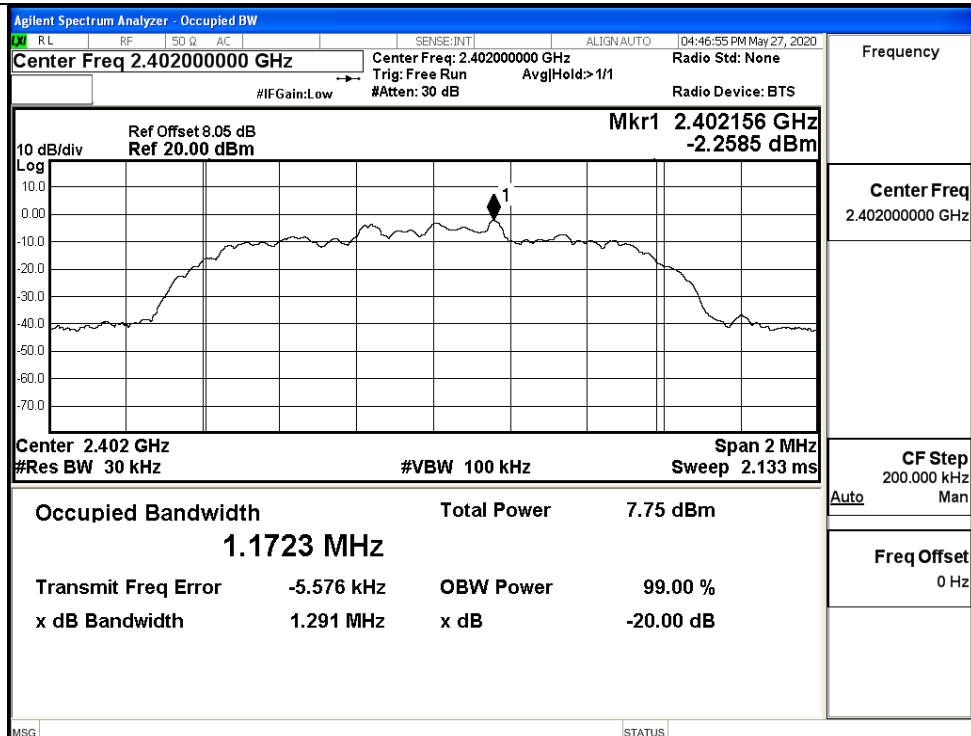
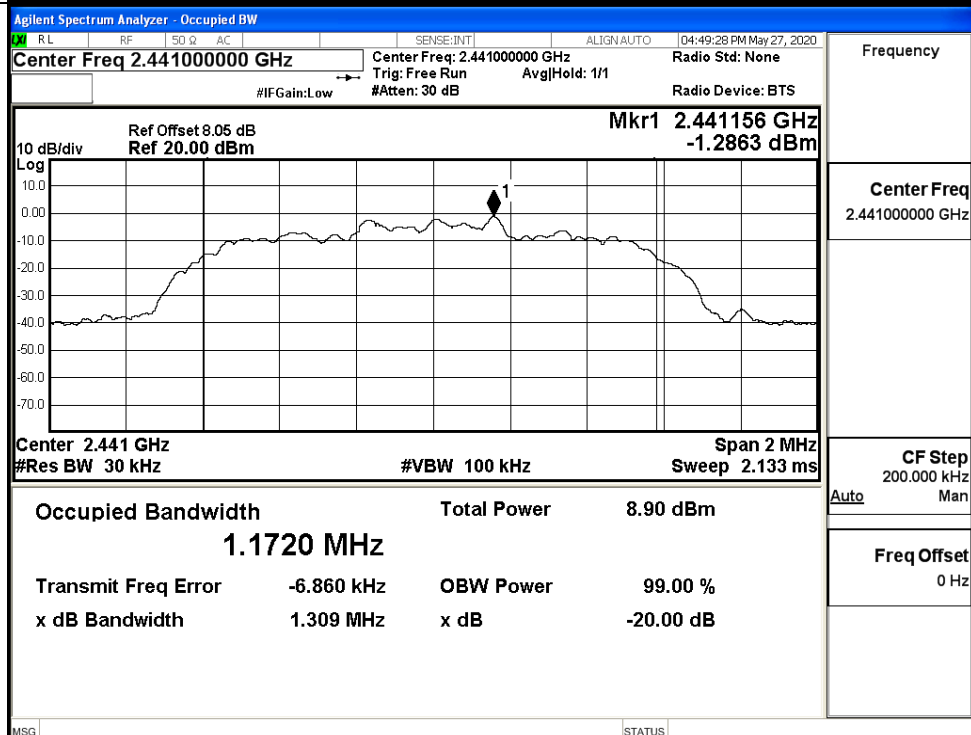


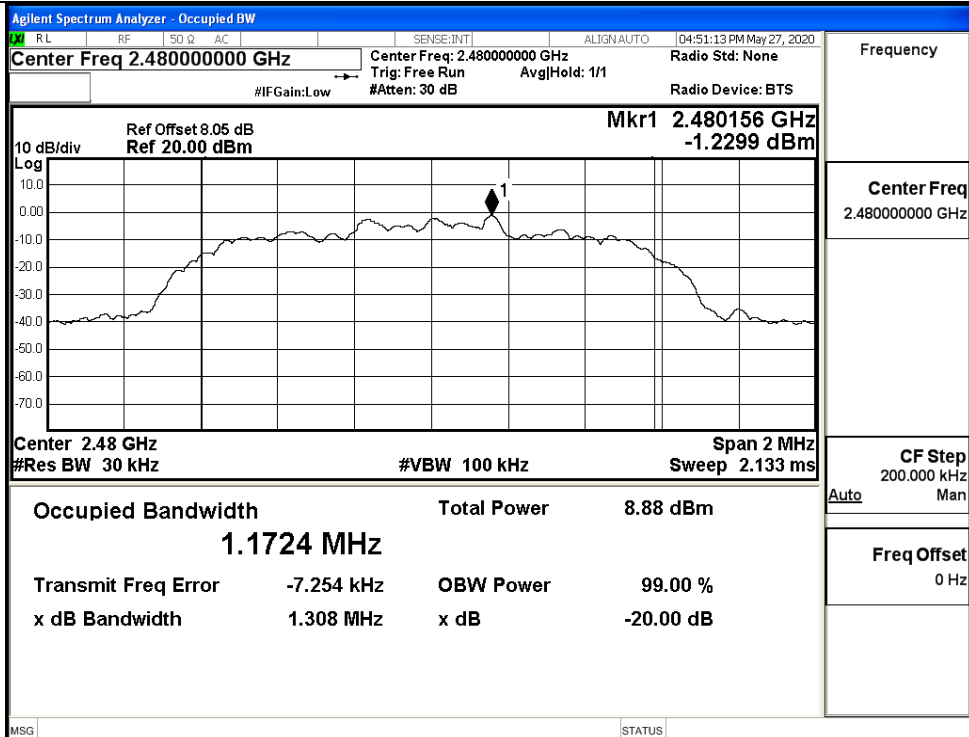
GFSK/MCH



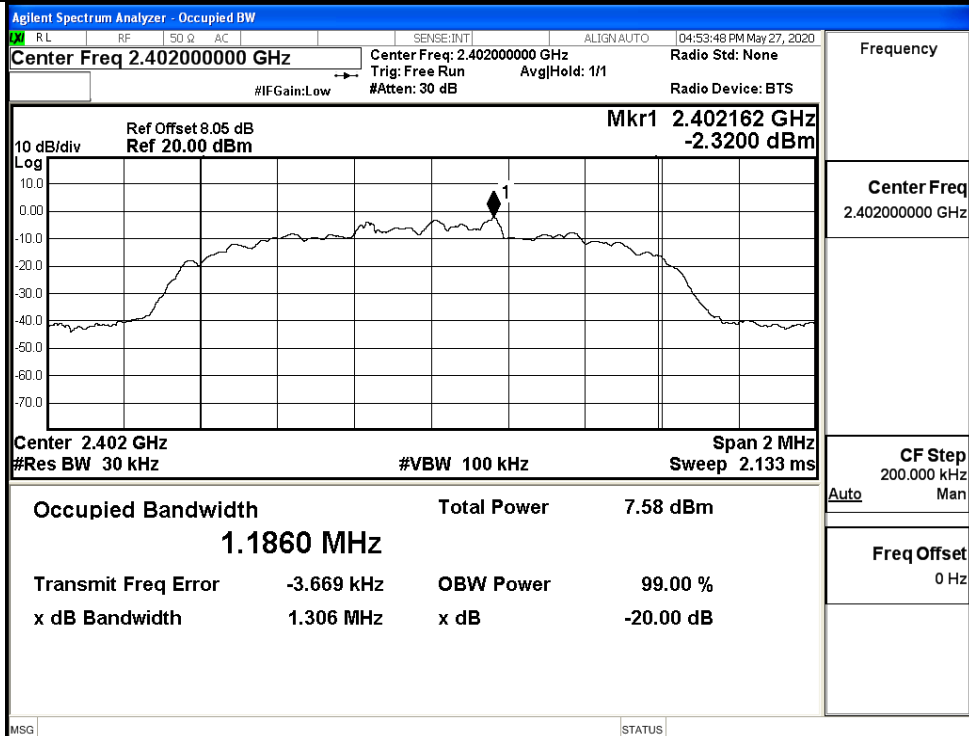
GFSK/HCH



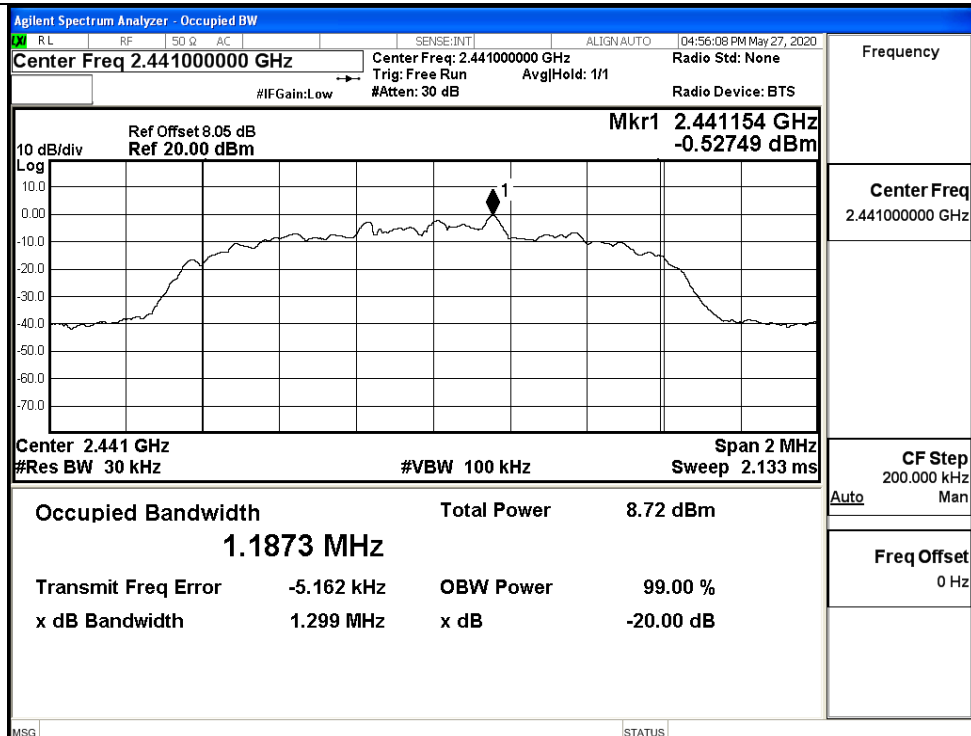
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

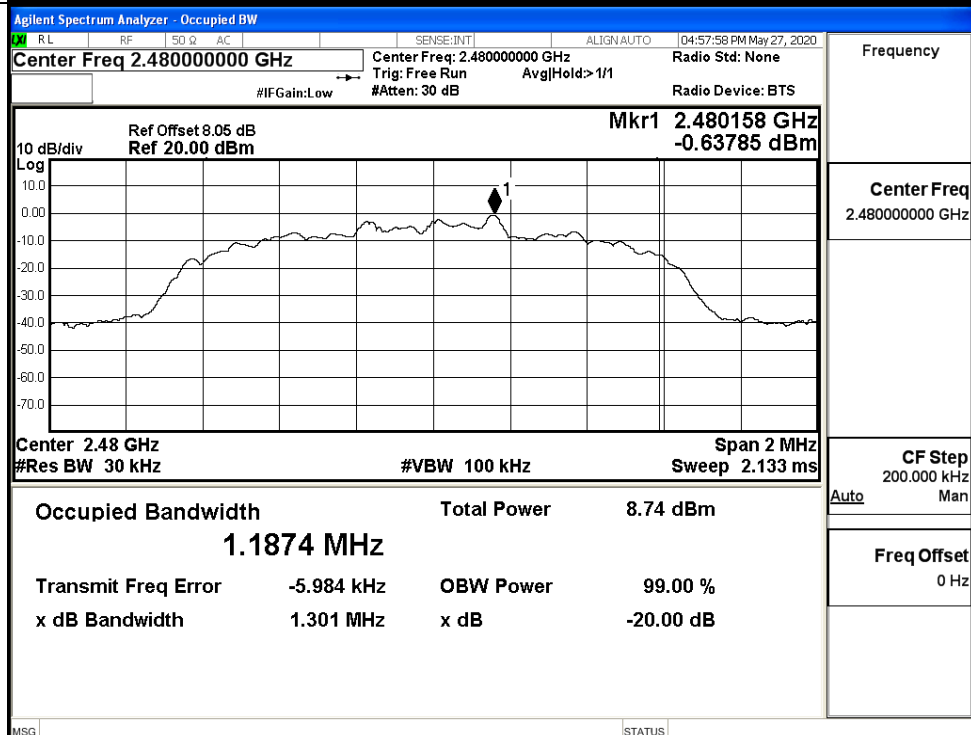
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

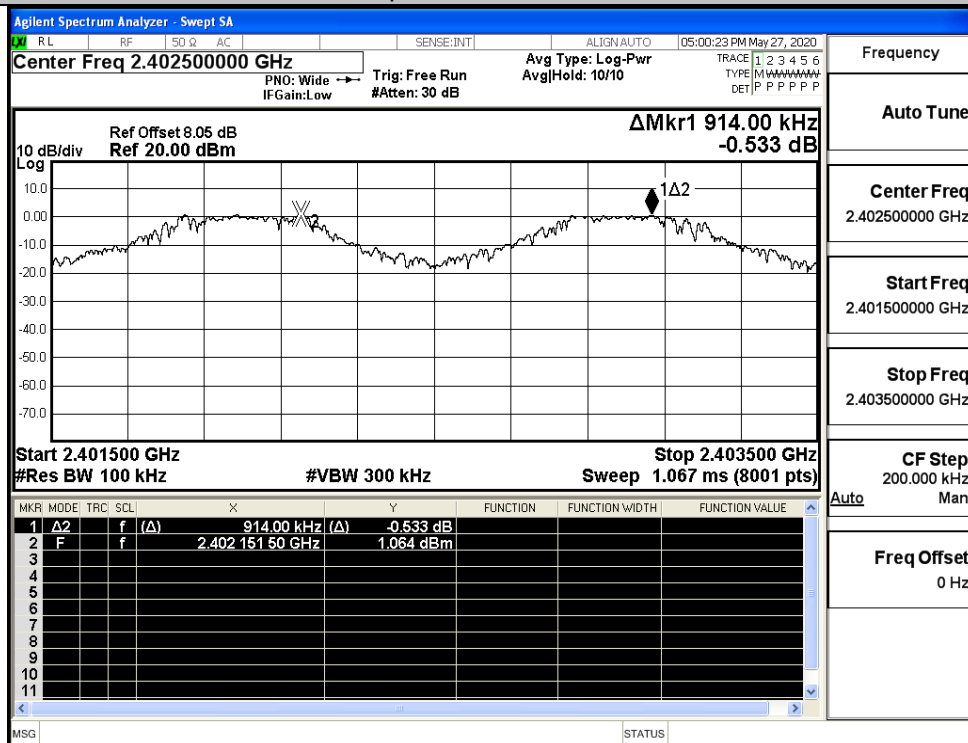


A.3 Carrier Frequency Separation

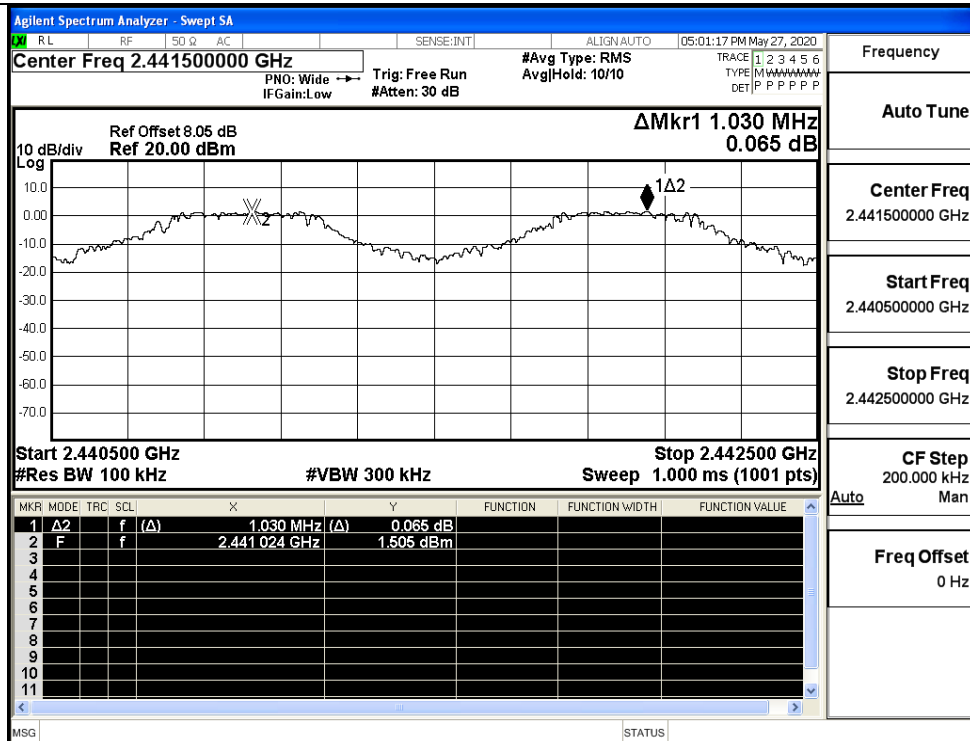
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.914	0.702	PASS
	MCH	1.030	0.702	PASS
	HCH	1.130	0.702	PASS
$\pi/4$ DQPSK	LCH	0.998	0.873	PASS
	MCH	1.028	0.873	PASS
	HCH	0.948	0.873	PASS
8DPSK	LCH	0.992	0.871	PASS
	MCH	1.014	0.871	PASS
	HCH	1.138	0.871	PASS

Test Graphs

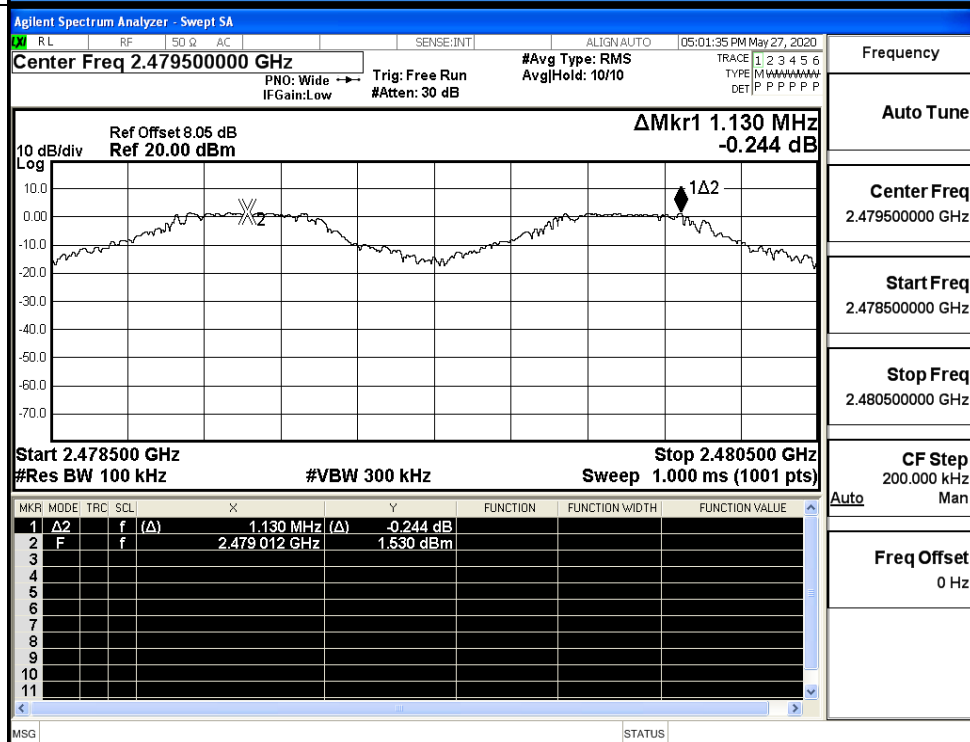
GFSK/LCH

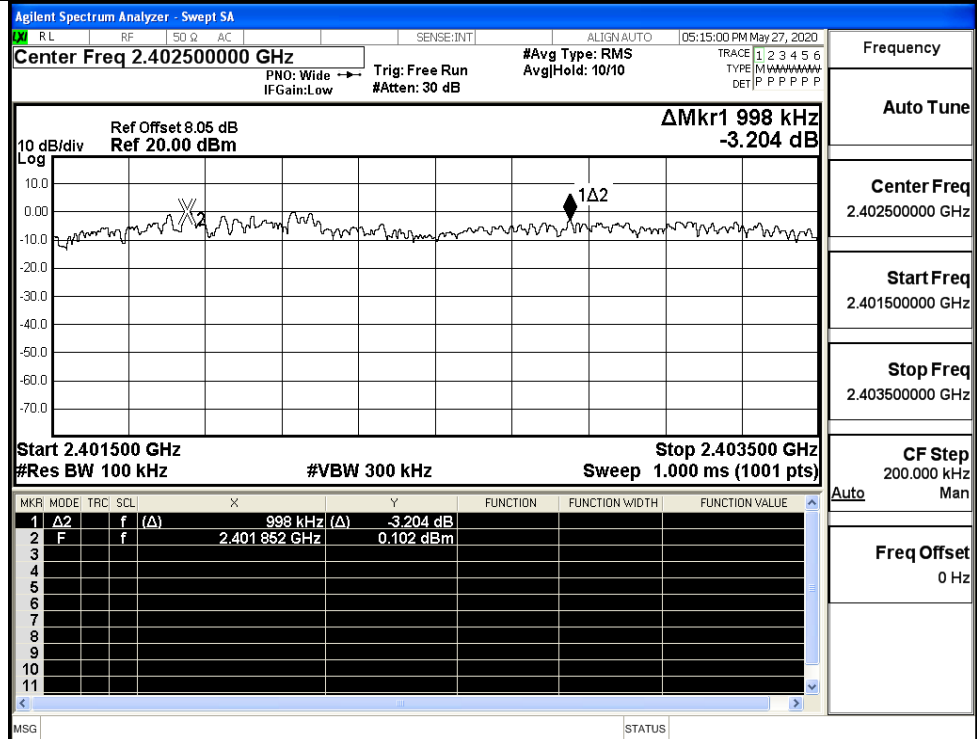
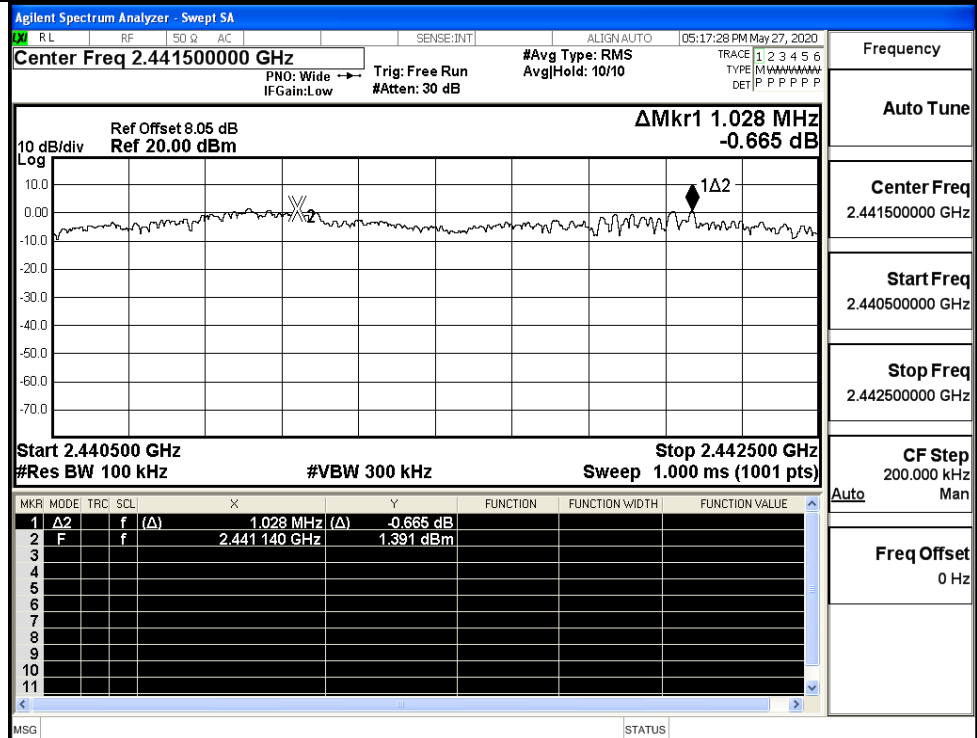


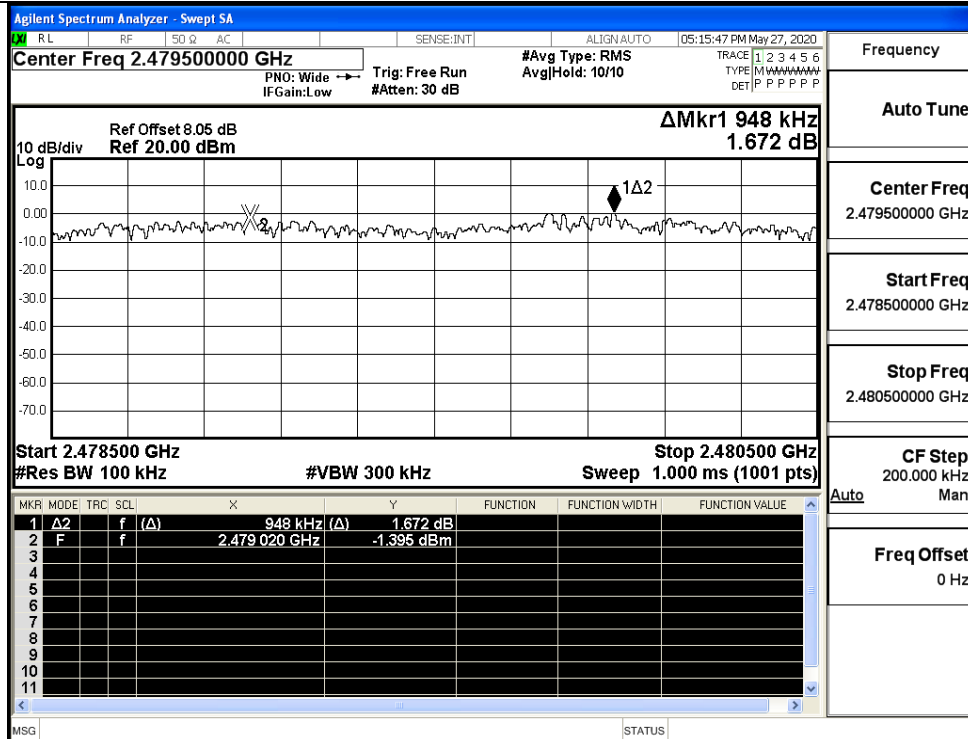
GFSK/MCH



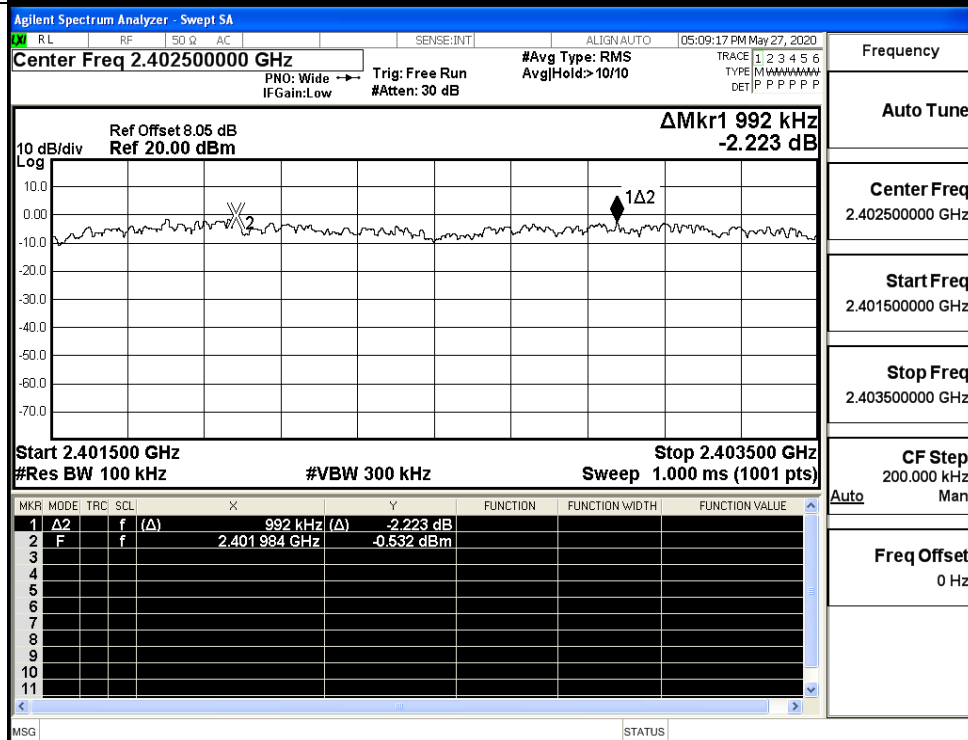
GFSK/HCH



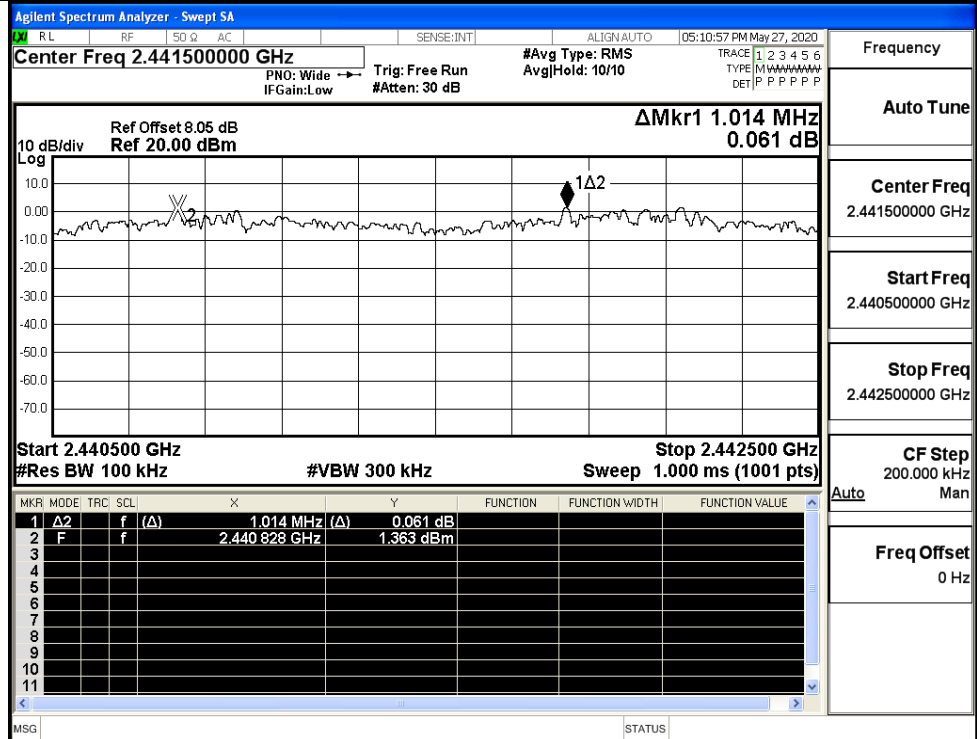
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

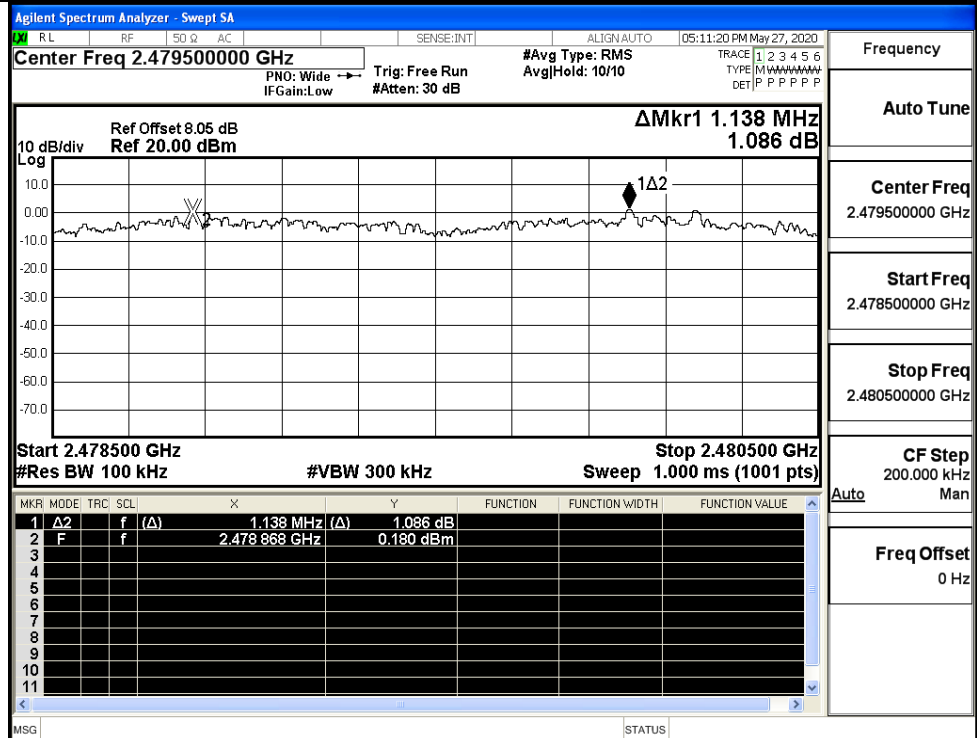
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

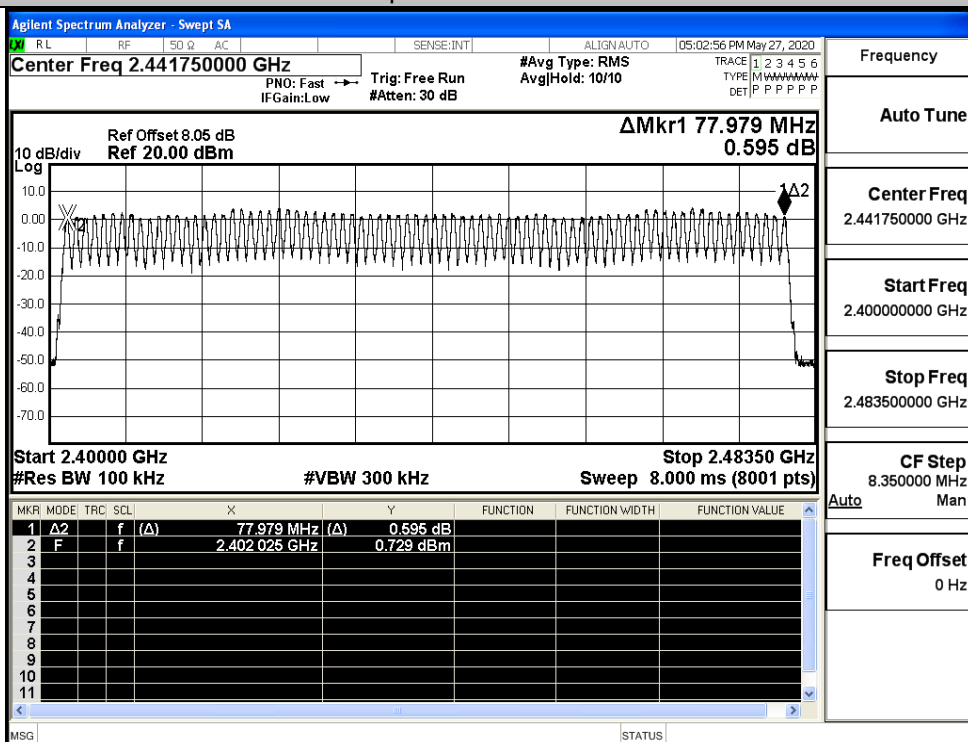


A.4 Hopping Channel Number

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

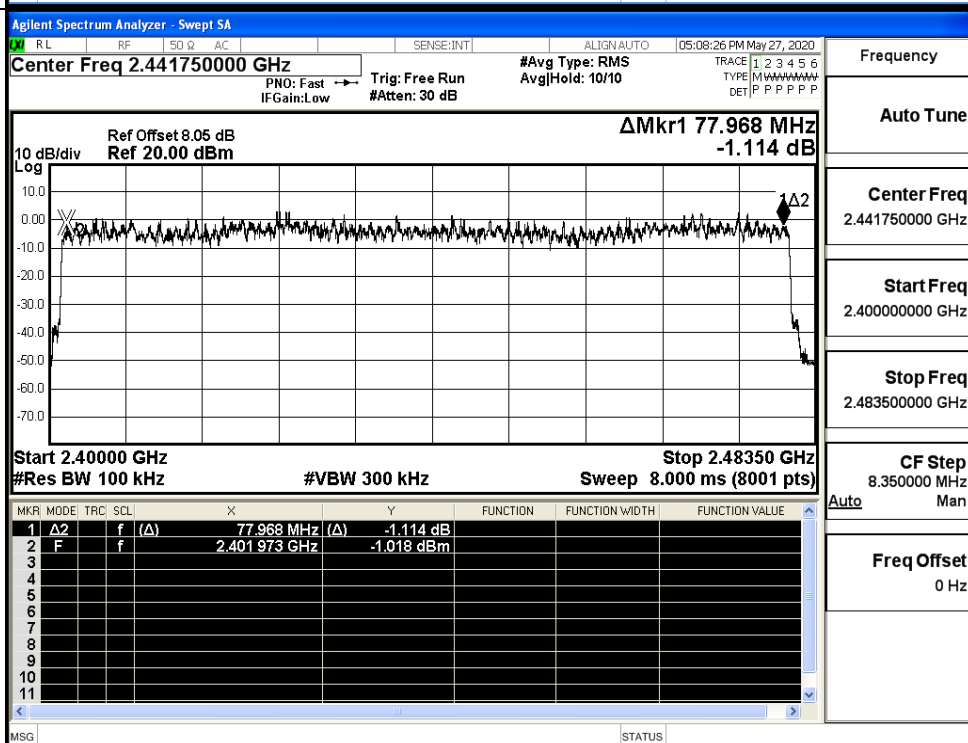
Test Graphs

GFSK/Hop



Frequency

Auto Tune

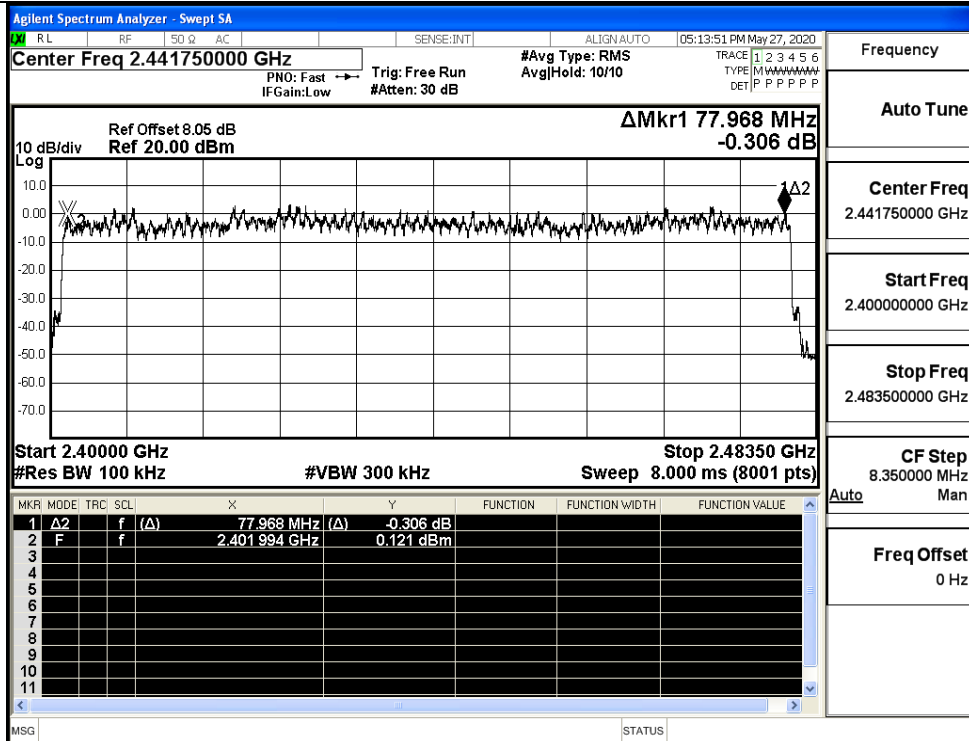
Center Freq
2.441750000 GHzStart Freq
2.400000000 GHzStop Freq
2.483500000 GHzCF Step
8.350000 MHz
ManFreq Offset
0 Hz $\pi/4$ DQPSK/Hop

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

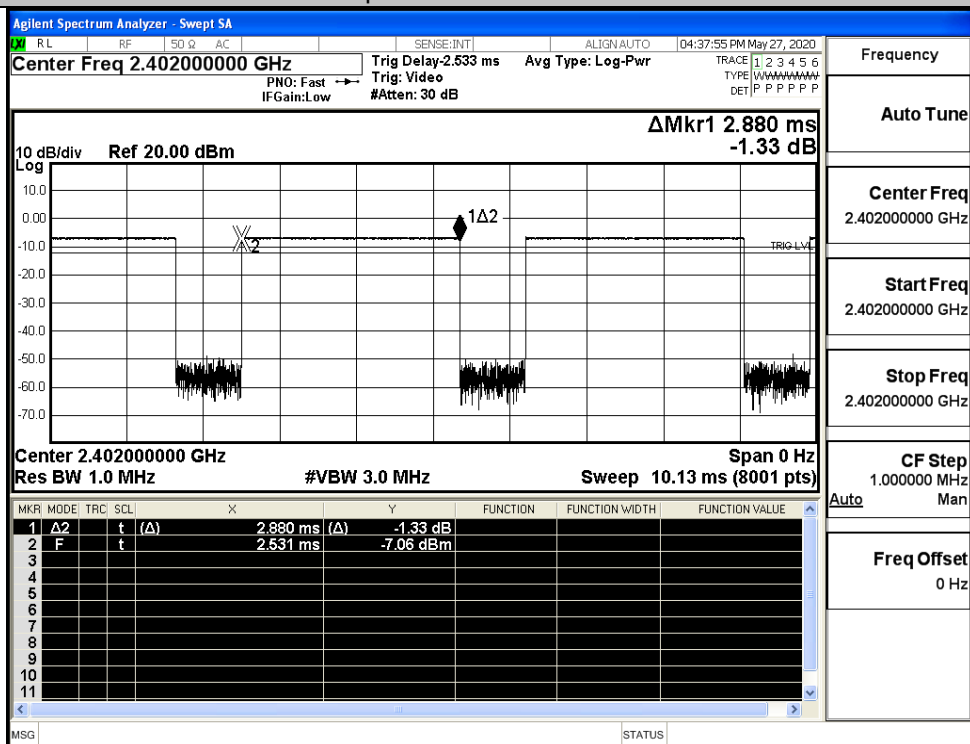


A.5 Dwell Time

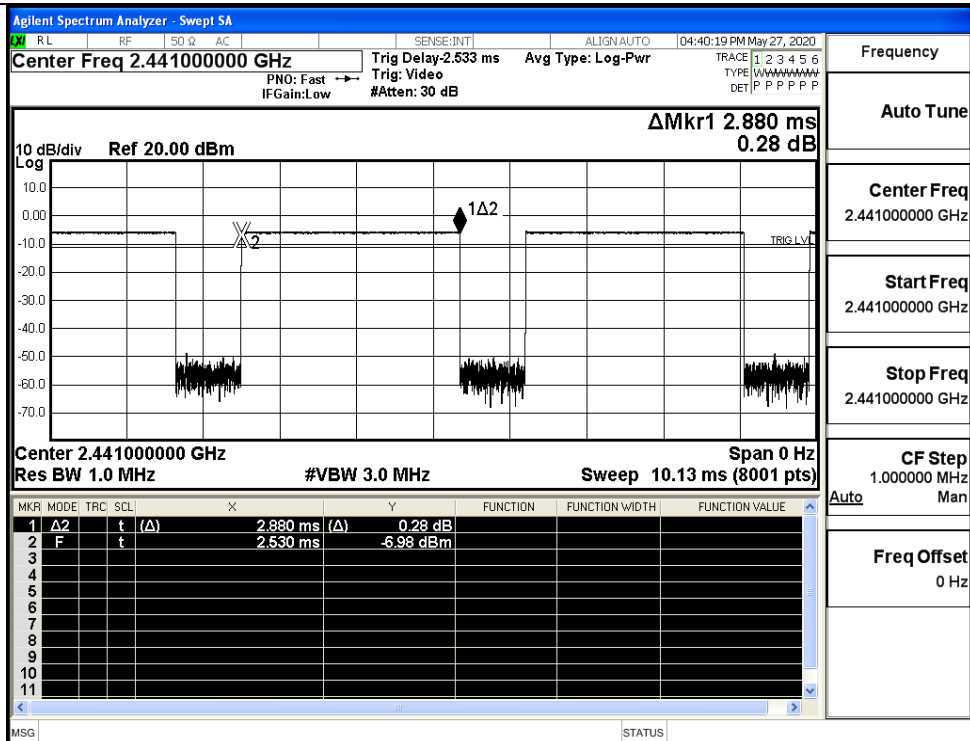
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88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

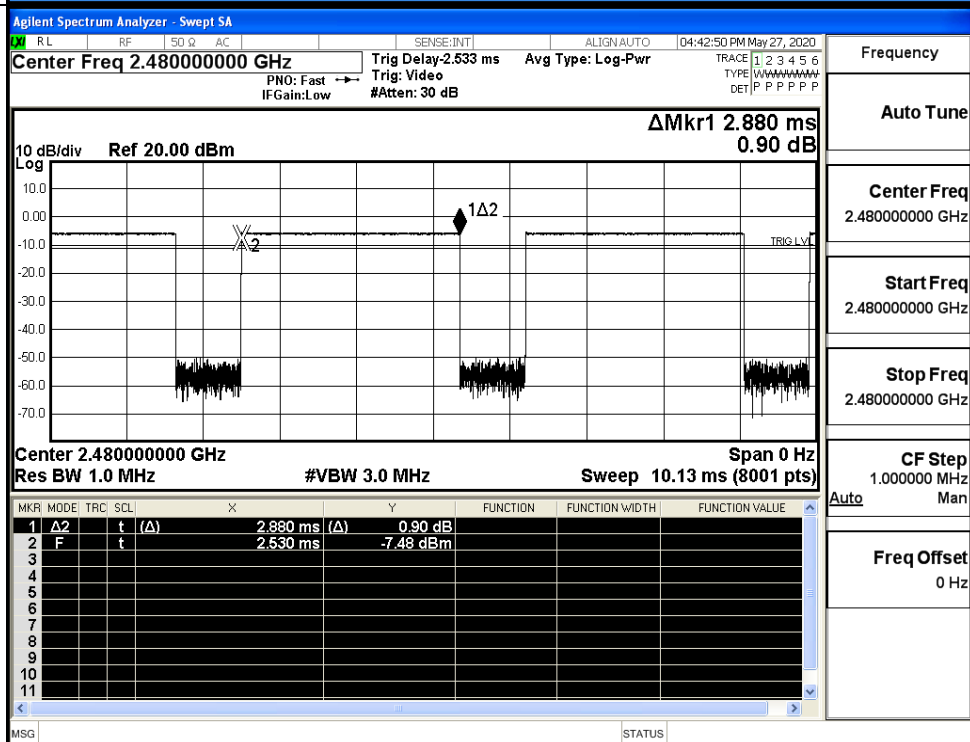
GFSK_DH5/LCH



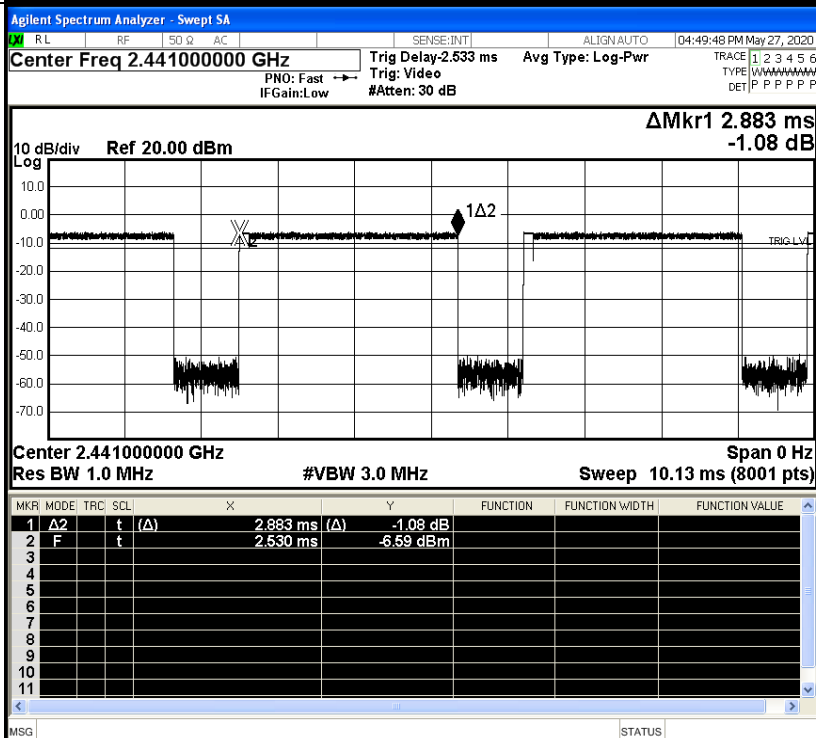
GFSK_DH5/MCH



GFSK_DH5/HCH



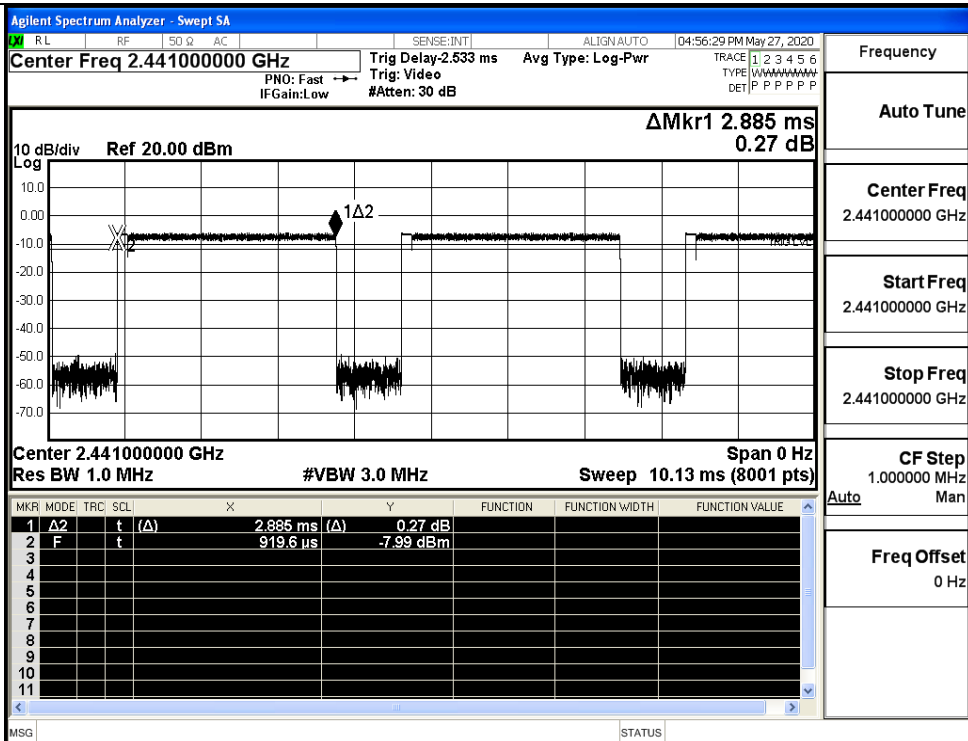
π/4DQPSK
2DH5/MCH



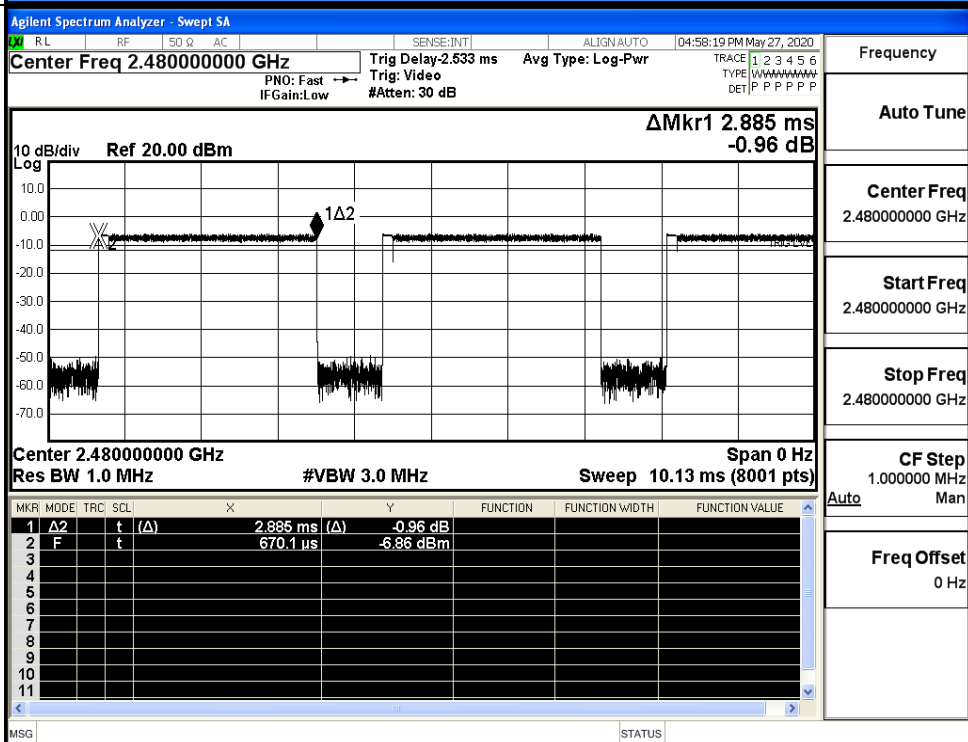
Frequency	
Auto Tune	
Center Freq	2.441000000 GHz
Start Freq	2.441000000 GHz
Stop Freq	2.441000000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

[illegible][illegible]

8DPSK_3DH5/MCH



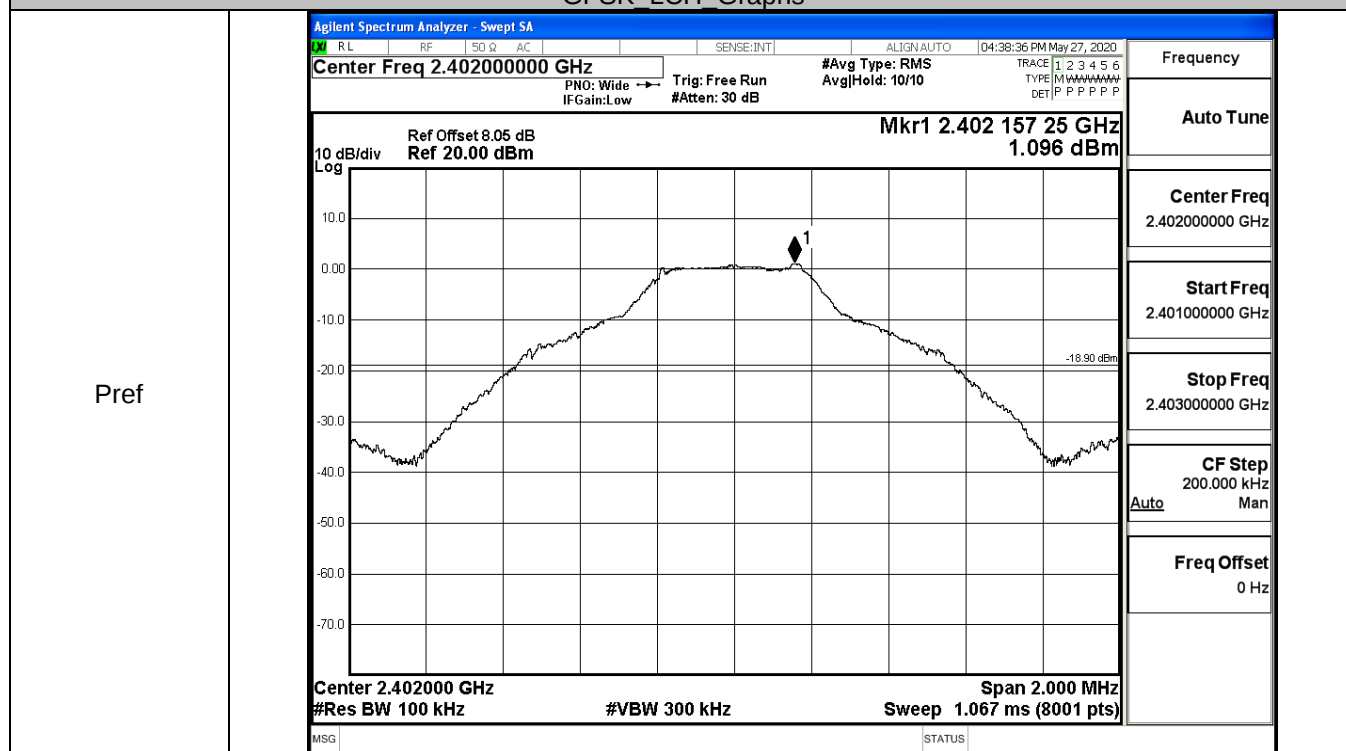
8DPSK_3DH5/HCH



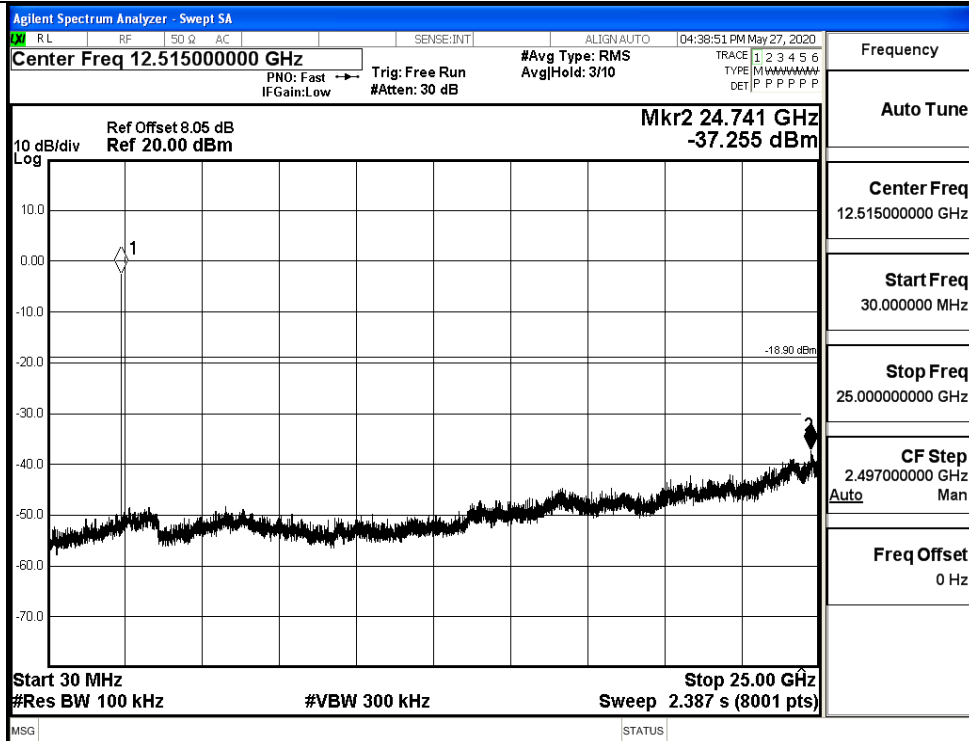
A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	1.096	-37.255	-18.904	PASS
	MCH	2.134	-38.052	-17.866	PASS
	HCH	2.05	-36.411	-17.950	PASS
$\pi/4$ DQPSK	LCH	-0.027	-37.738	-20.027	PASS
	MCH	1.447	-37.519	-18.553	PASS
	HCH	1.315	-36.986	-18.685	PASS
8DPSK	LCH	0.187	-37.449	-19.813	PASS
	MCH	1.556	-37.656	-18.444	PASS
	HCH	1.284	-37.666	-18.716	PASS

GFSK LCH Graphs

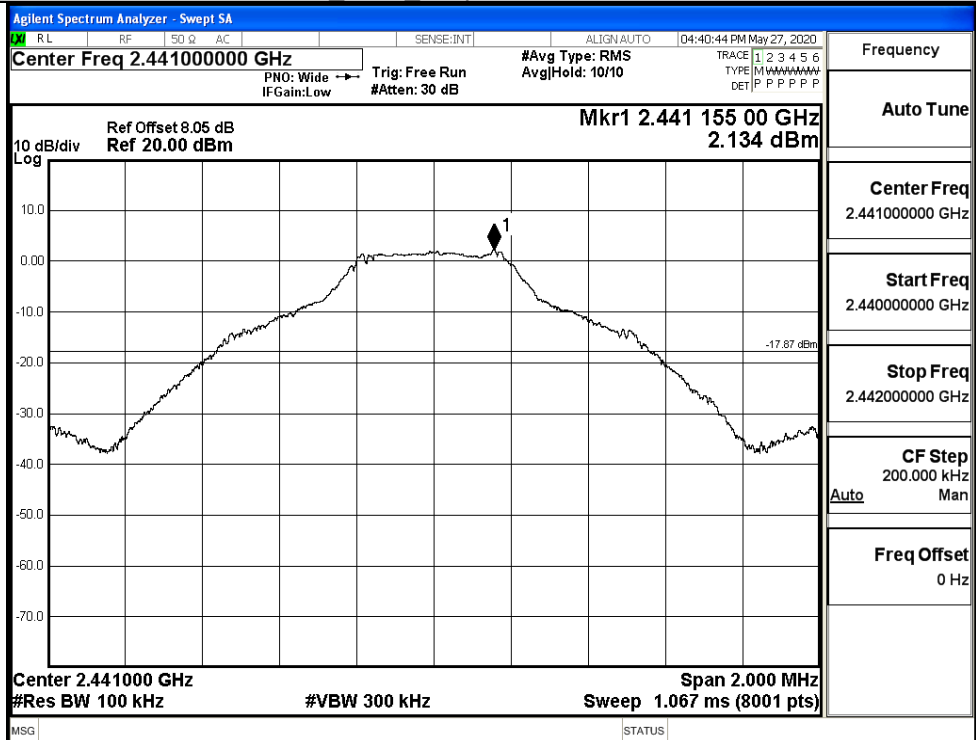


Puw

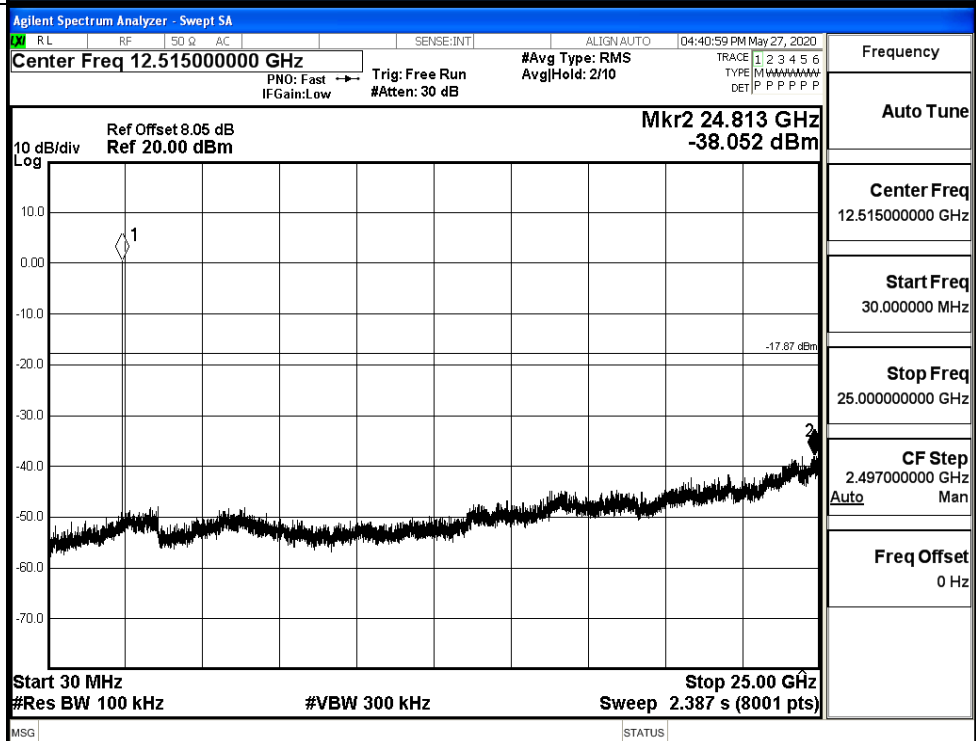


GFSK_MCH_Graphs

Pref

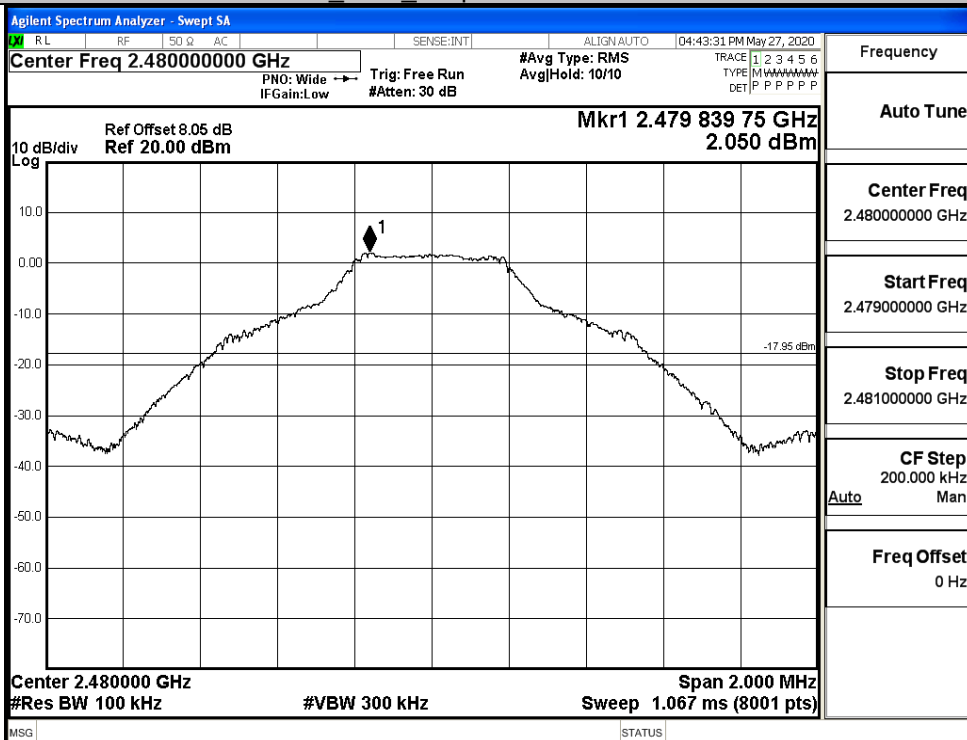


Puw

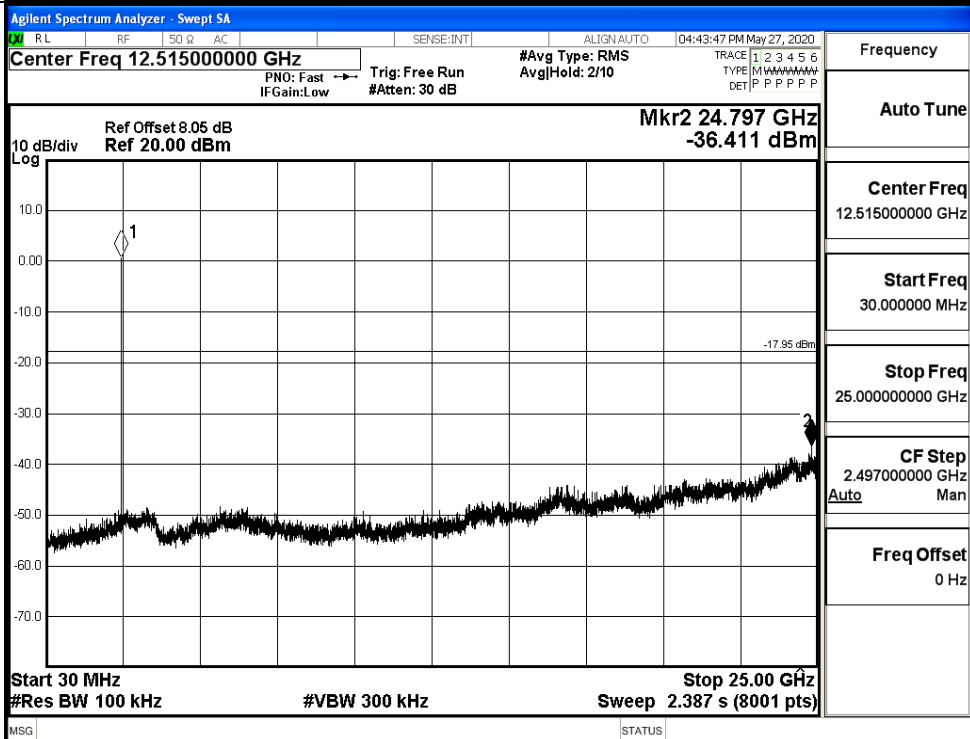


GFSK HCH_Graphs

Pref

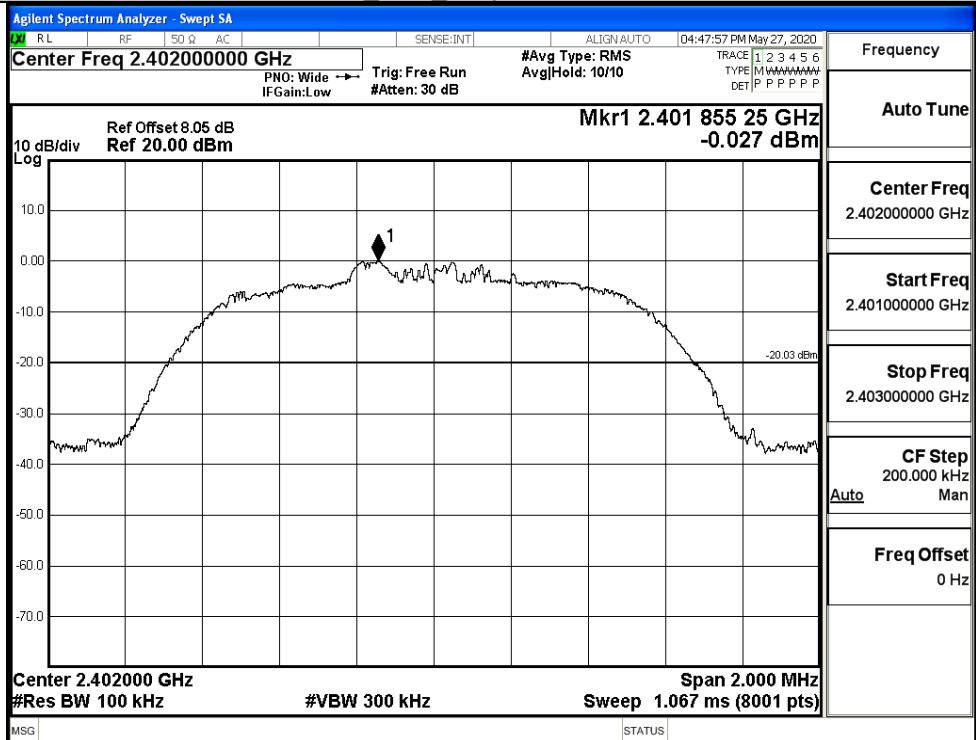


Puw

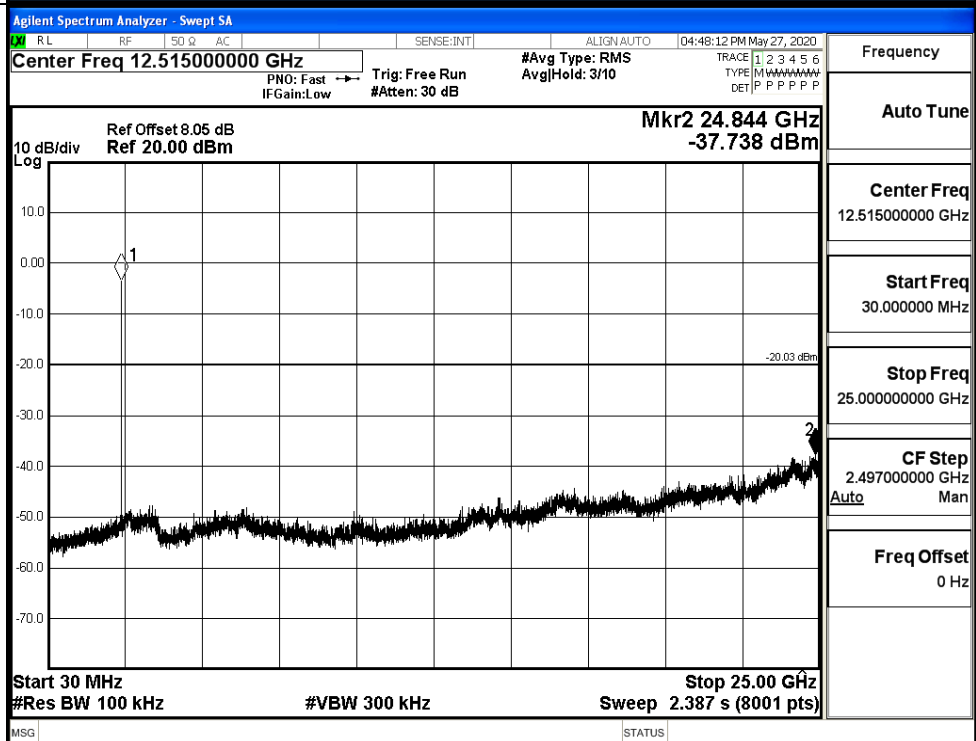


$\pi/4$ DQPSK_LCH_Graphs

Pref

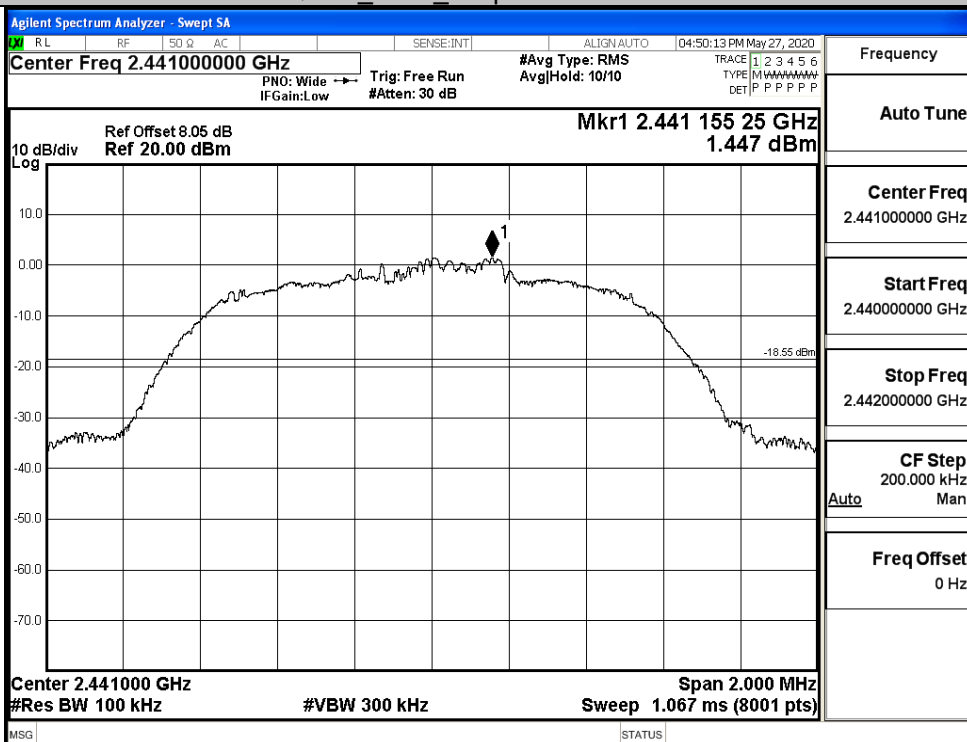


Puw

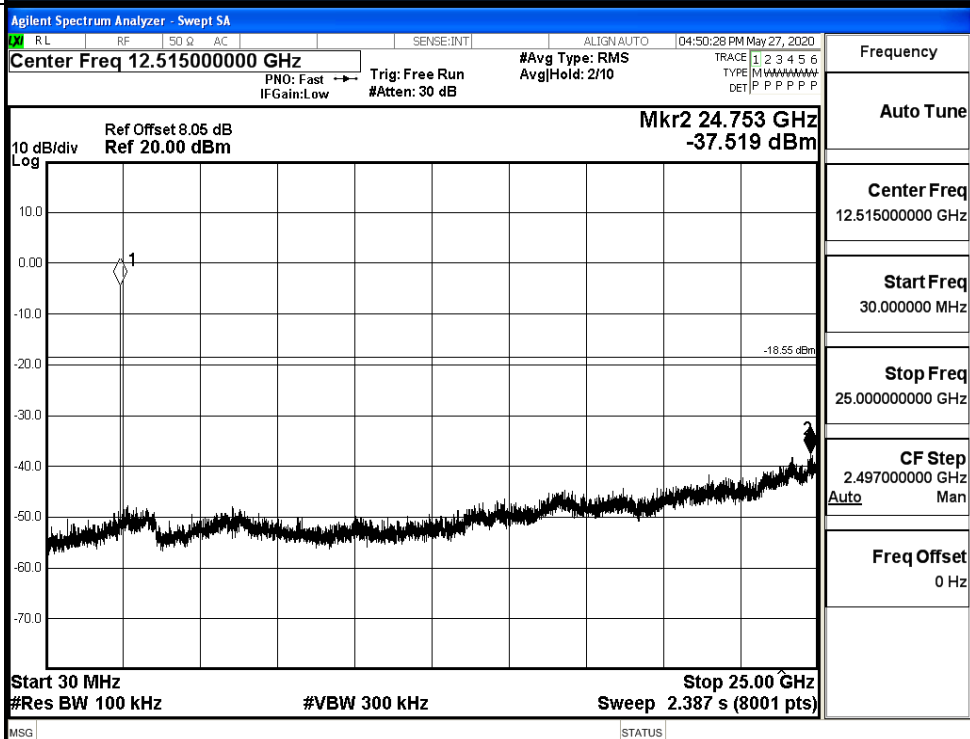


π /4DQPSK_MCH_Graphs

Pref

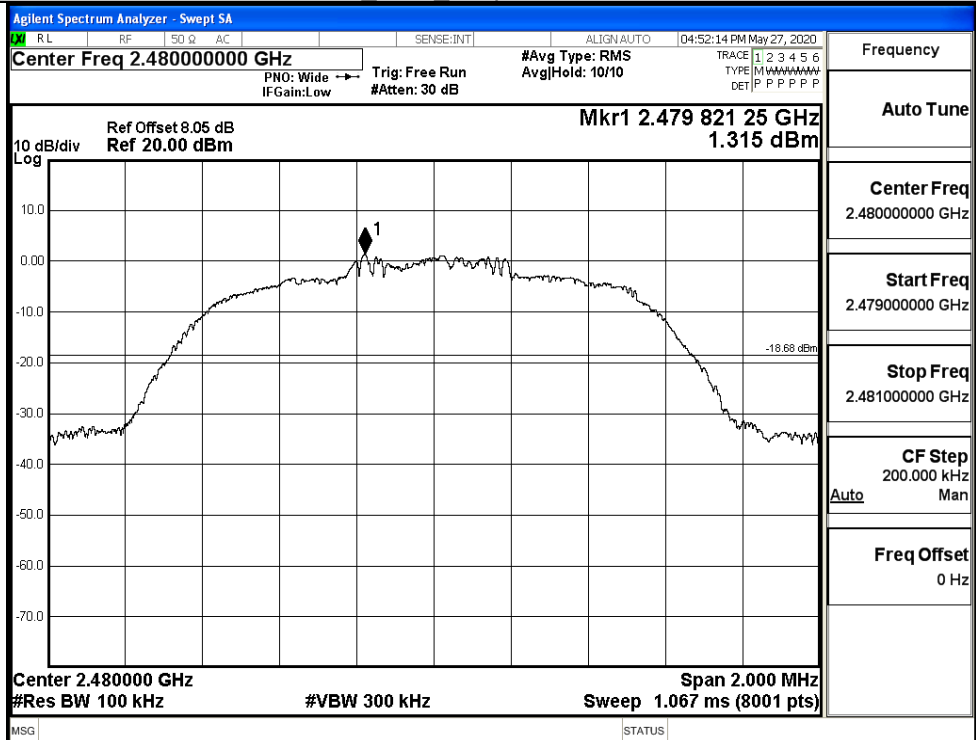


Puw

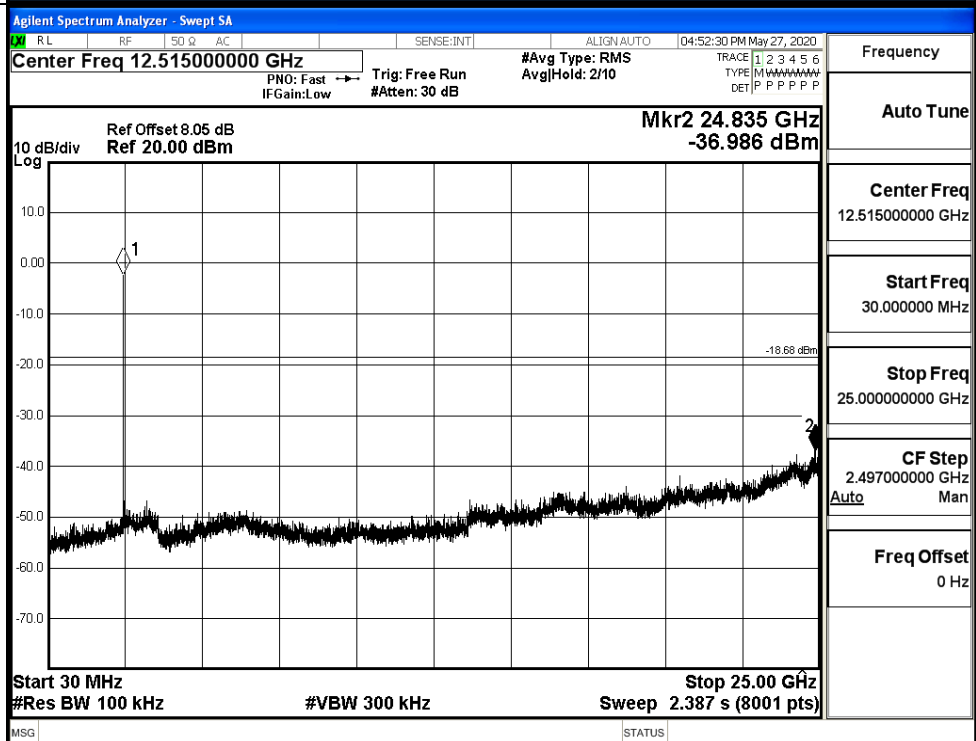


π /4DQPSK_HCH_Graphs

Pref

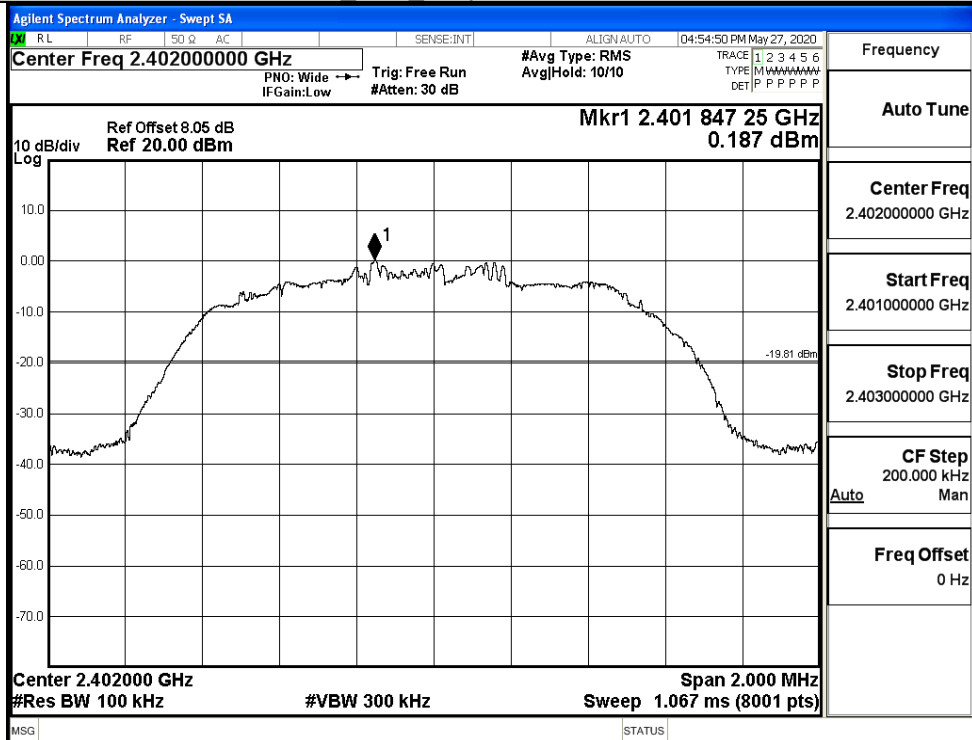


Puw

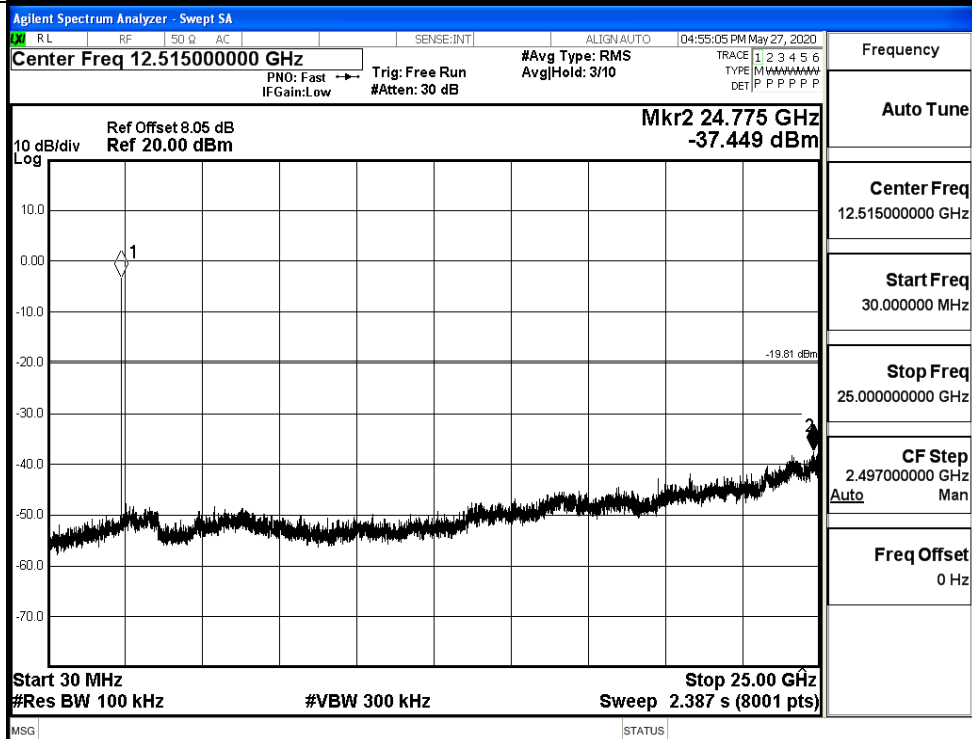


8DPSK_LCH_Graphs

Pref

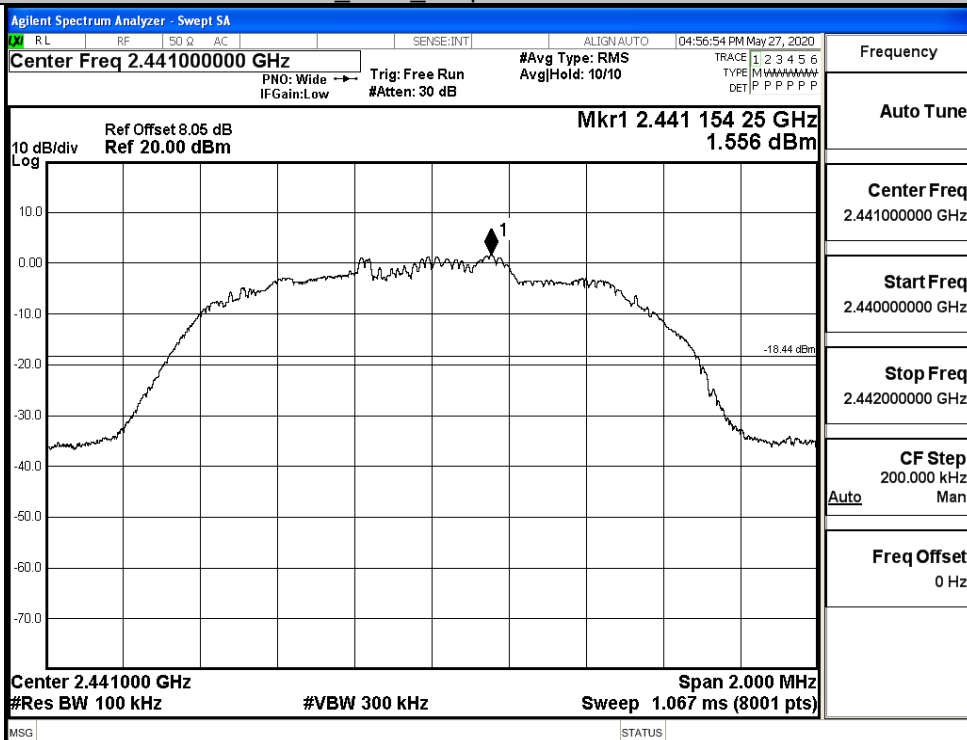


Puw

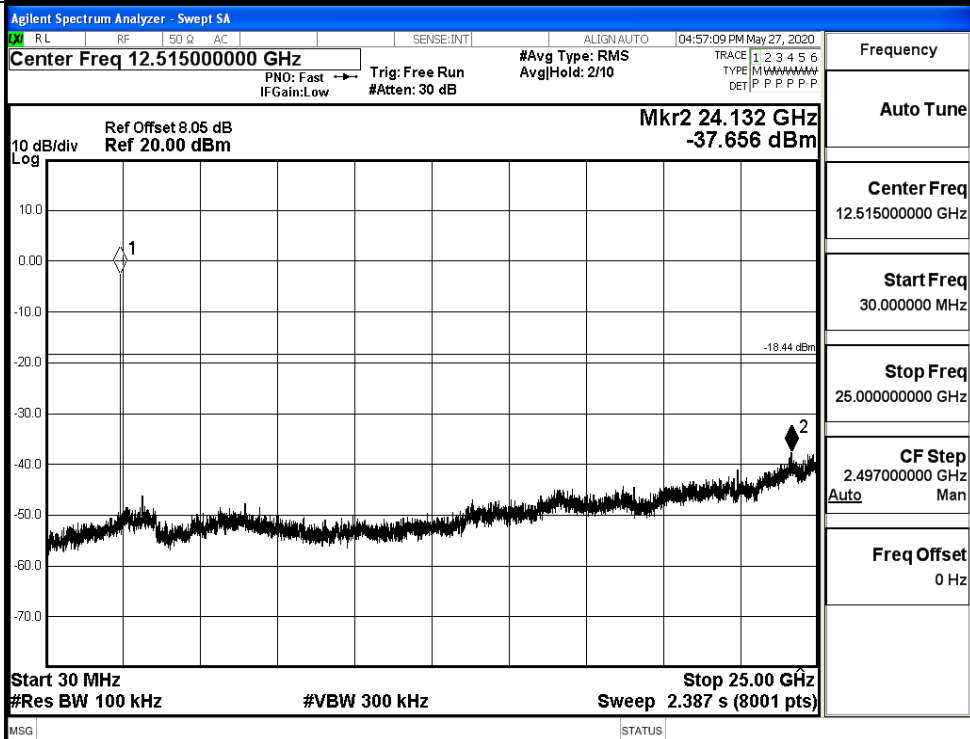


8DPSK_MCH_Graphs

Pref

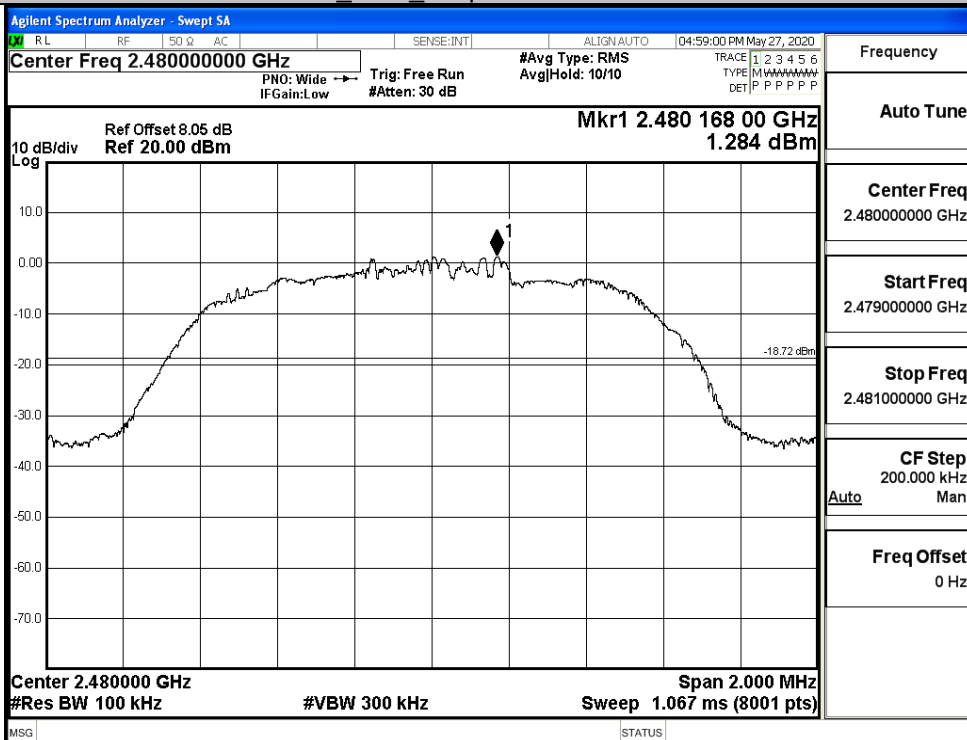


Puw

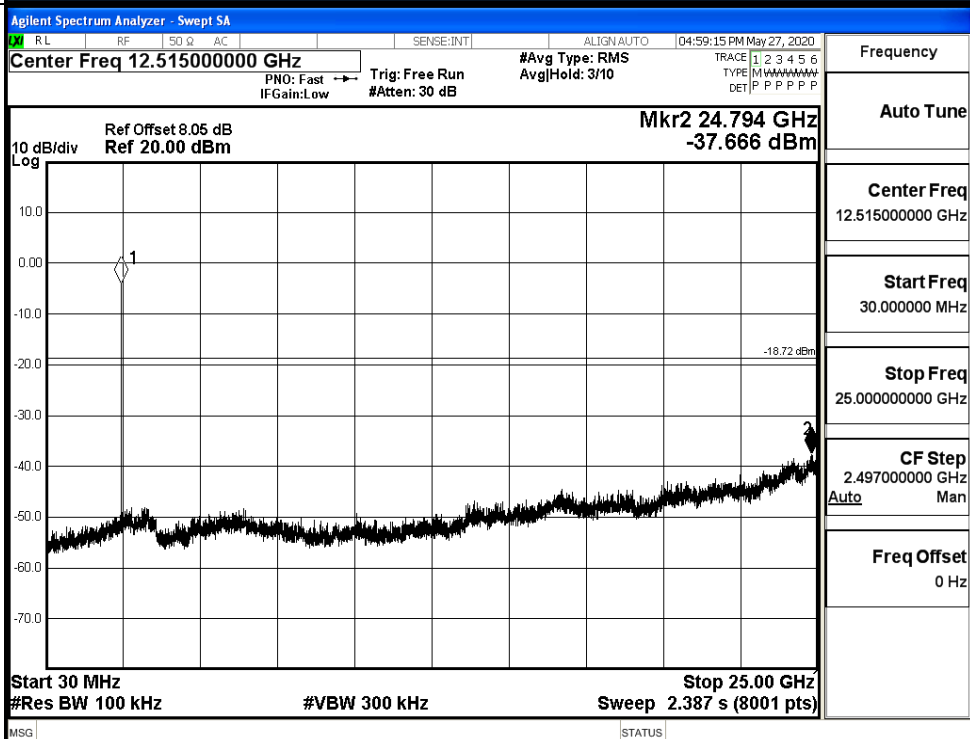


8DPSK_HCH_Graphs

Pref



Puw

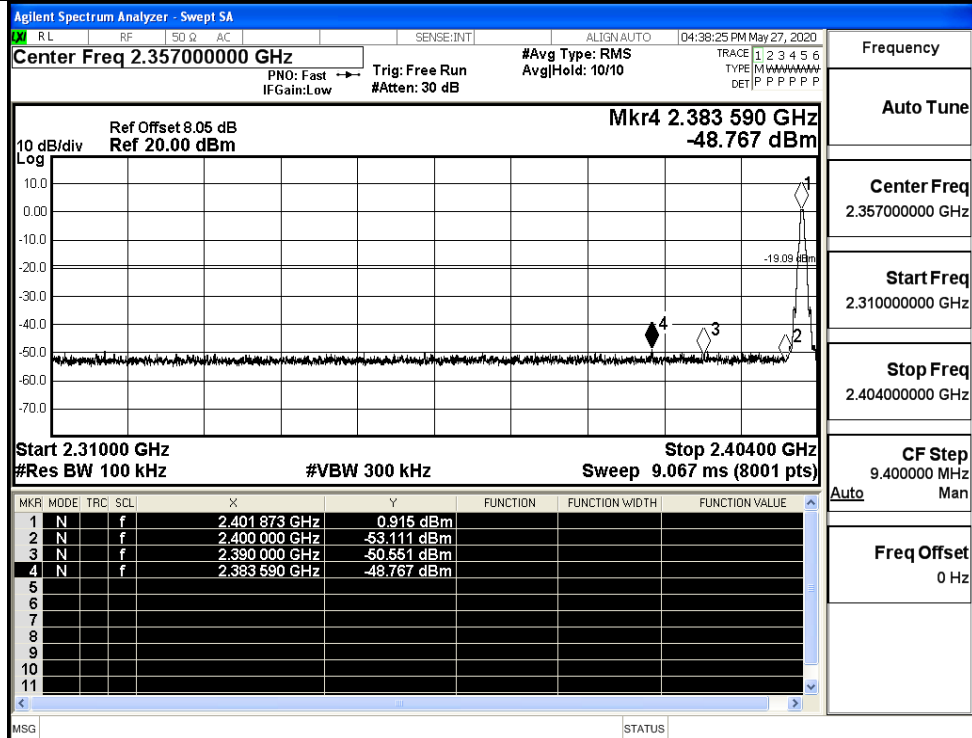


A.7 Band-edge for RF Conducted Emissions

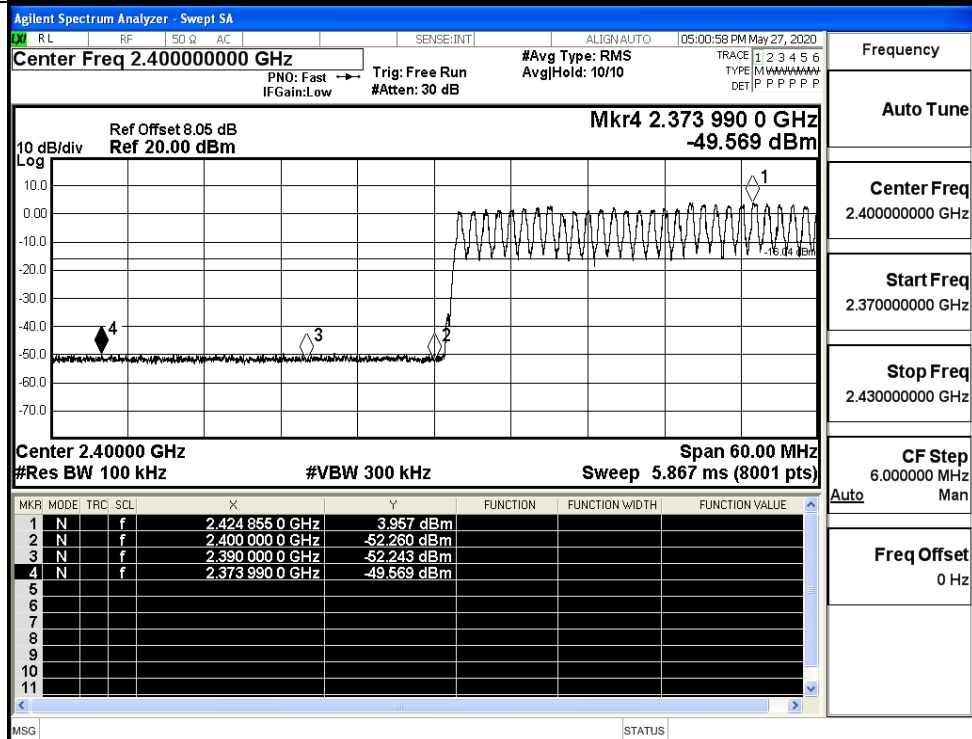
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	0.915	Off	-48.767	-19.09	PASS
			3.957	On	-49.569	-16.04	PASS
	HCH	2480	2.114	Off	-48.733	-17.89	PASS
			3.706	On	-48.368	-16.29	PASS
$\pi/4$ DQPSK	LCH	2402	0.589	Off	-49.211	-19.41	PASS
			2.349	On	-48.569	-17.65	PASS
	HCH	2480	1.587	Off	-48.530	-18.41	PASS
			3.433	On	-48.321	-16.57	PASS
8DPSK	LCH	2402	0.690	Off	-49.208	-19.31	PASS
			3.175	On	-48.973	-16.83	PASS
	HCH	2480	1.525	Off	-48.833	-18.48	PASS
			3.487	On	-47.996	-16.51	PASS

Test Graphs

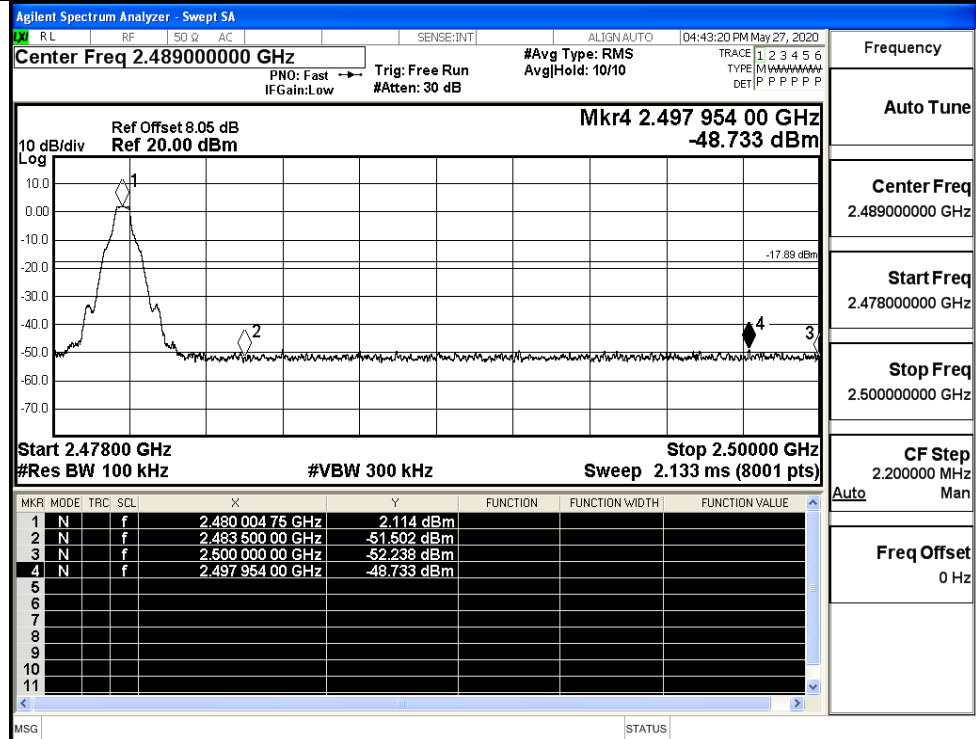
GFSK/LCH/No Hop



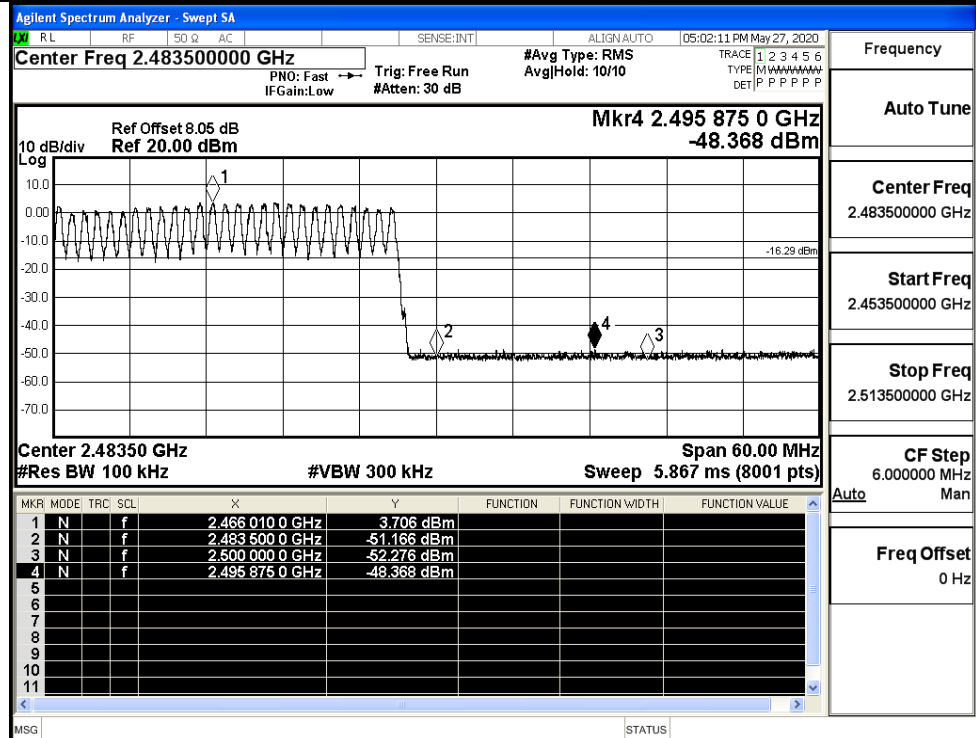
GFSK/LCH/Hop



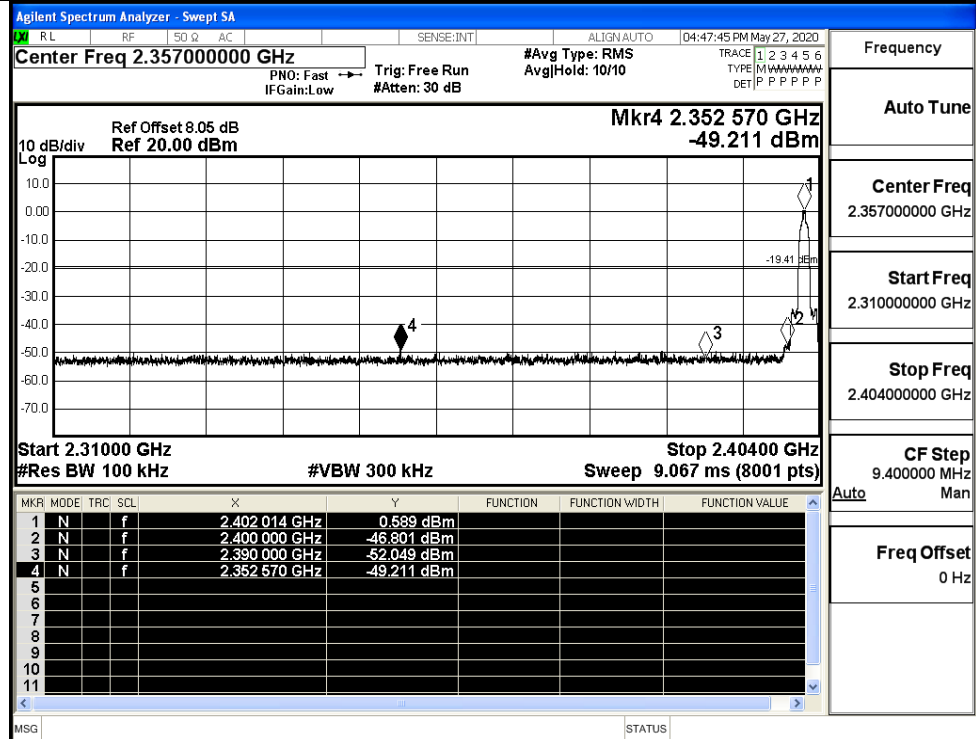
GFSK/HCH/No Hop



GFSK/HCH/Hop



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



Frequency

Auto Tune

Center Freq
2.357000000 GHz

Start Freq
2.310000000 GHz

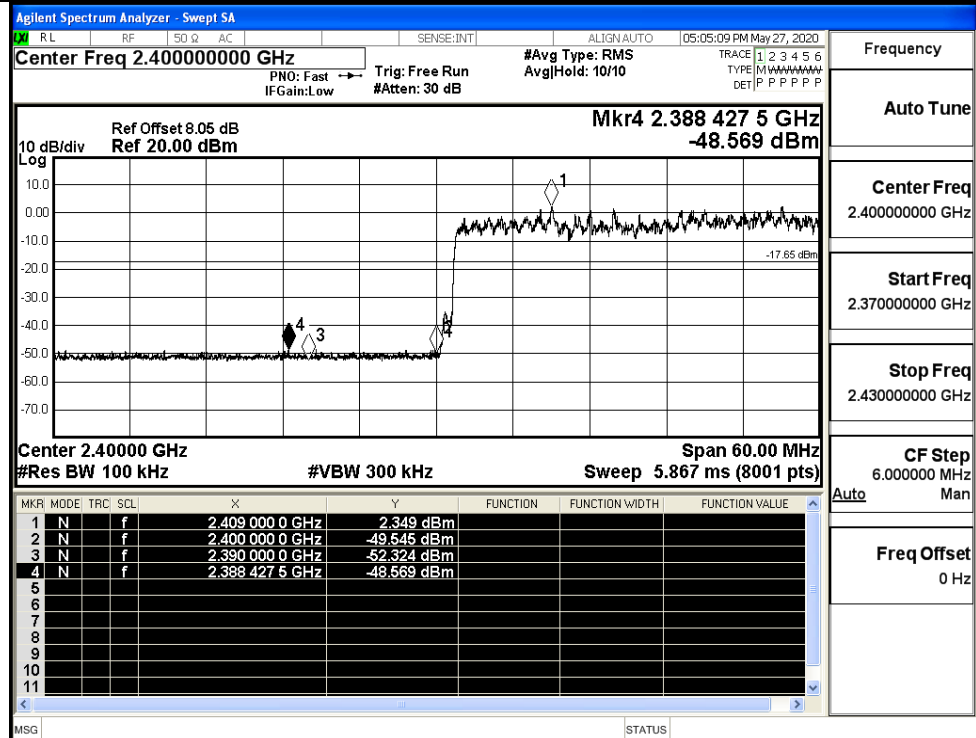
Stop Freq
2.404000000 GHz

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

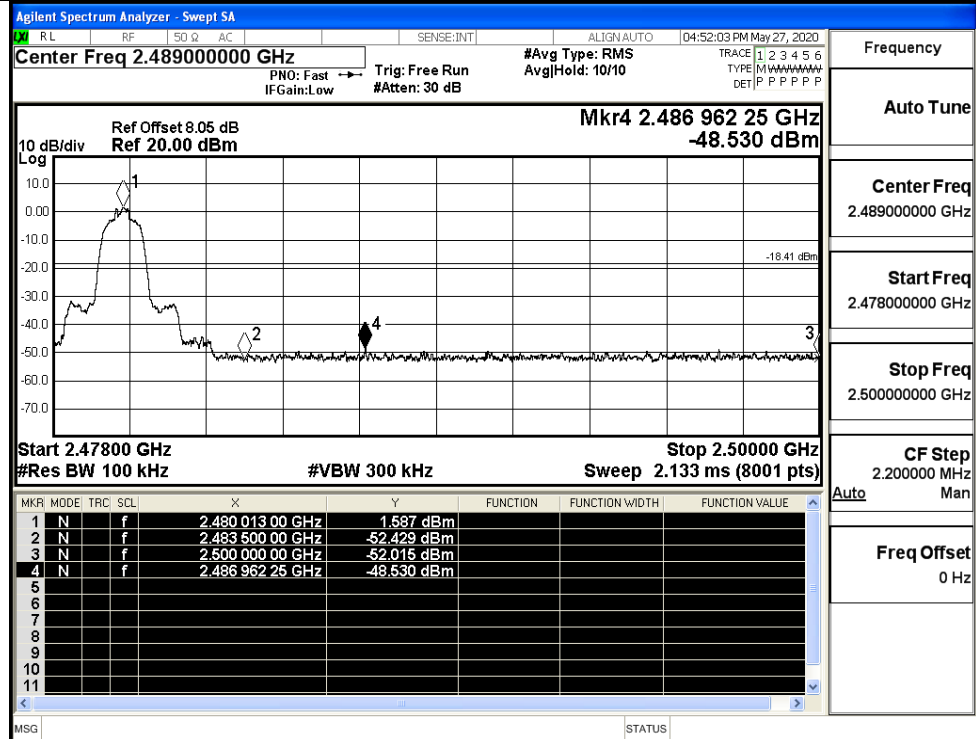
Stop Freq
2.430000000 GHz

CF Step
6.000000 MHz

Auto Man

Freq Offset
0 Hz

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



Frequency

Auto Tune

Center Freq
2.489000000 GHz

Start Freq
2.478000000 GHz

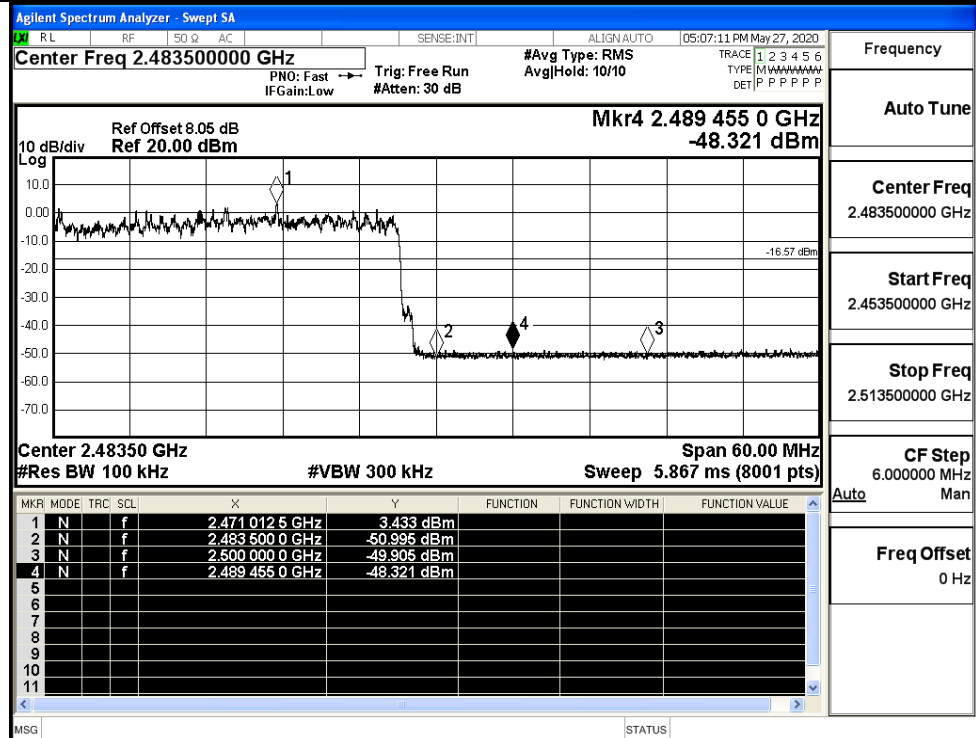
Stop Freq
2.500000000 GHz

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

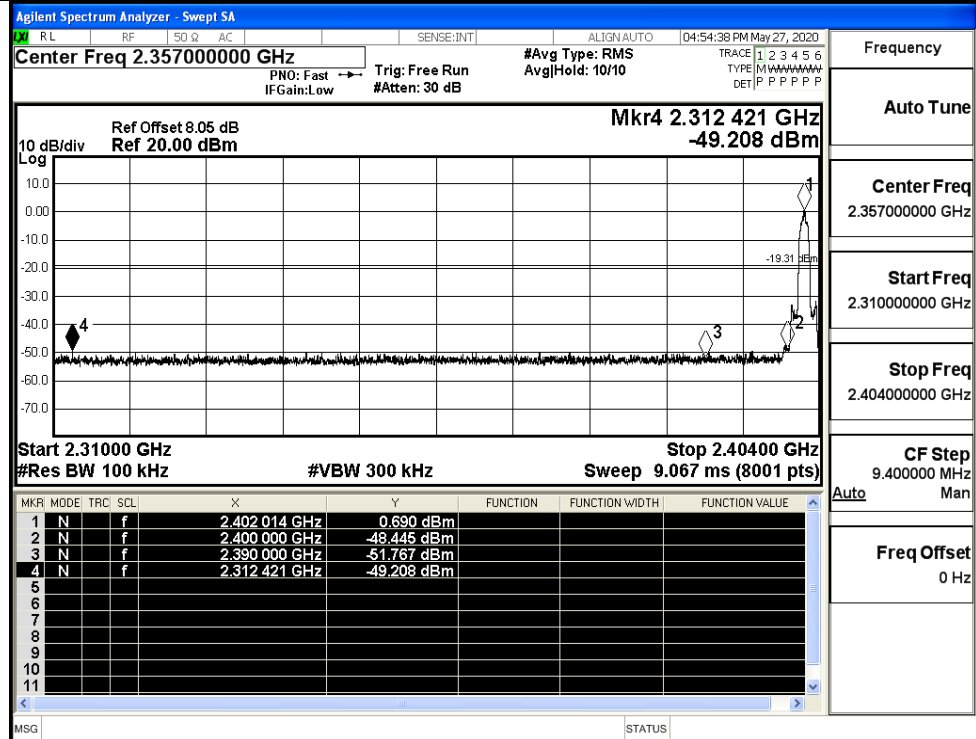
Stop Freq
2.513500000 GHz

CF Step
6.000000 MHz

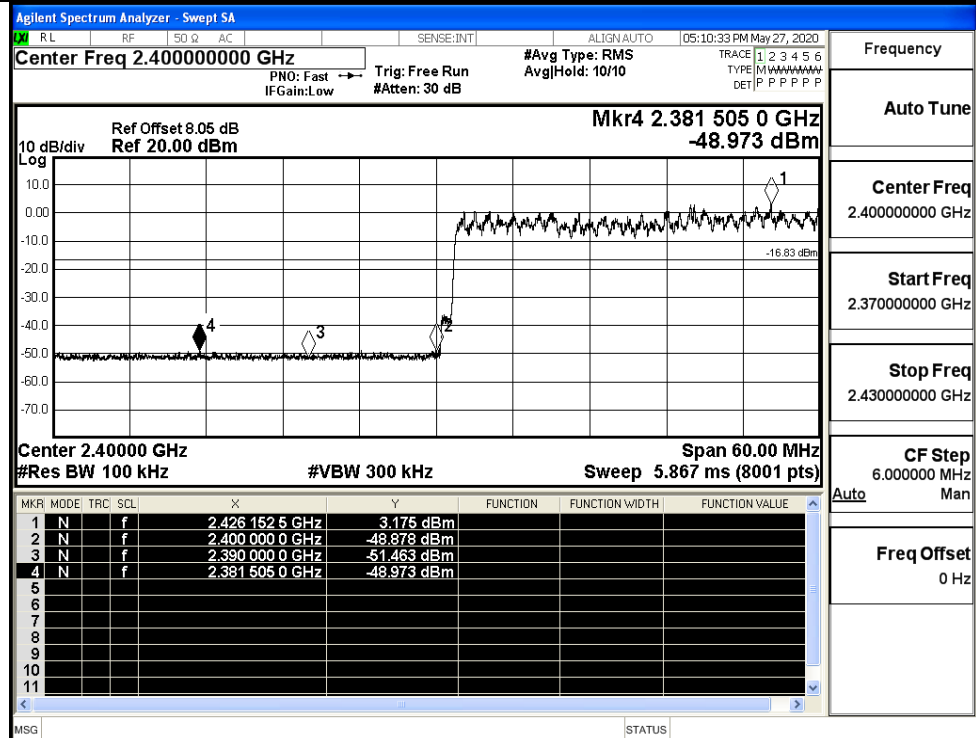
Auto Man

Freq Offset
0 Hz

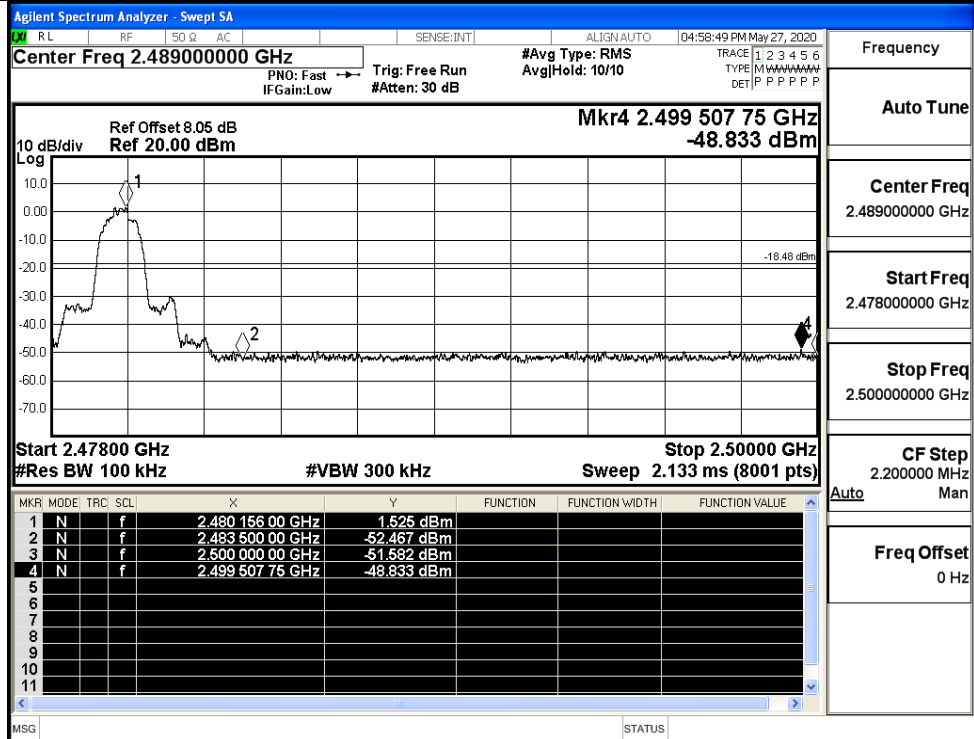
8DPSK/LCH/No Hop



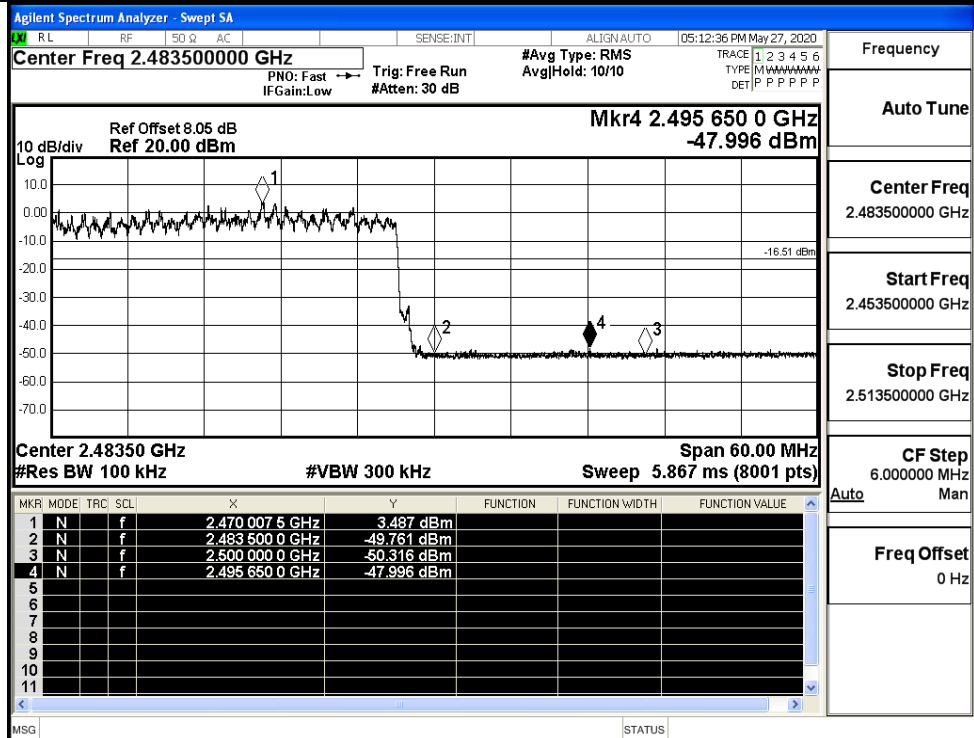
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



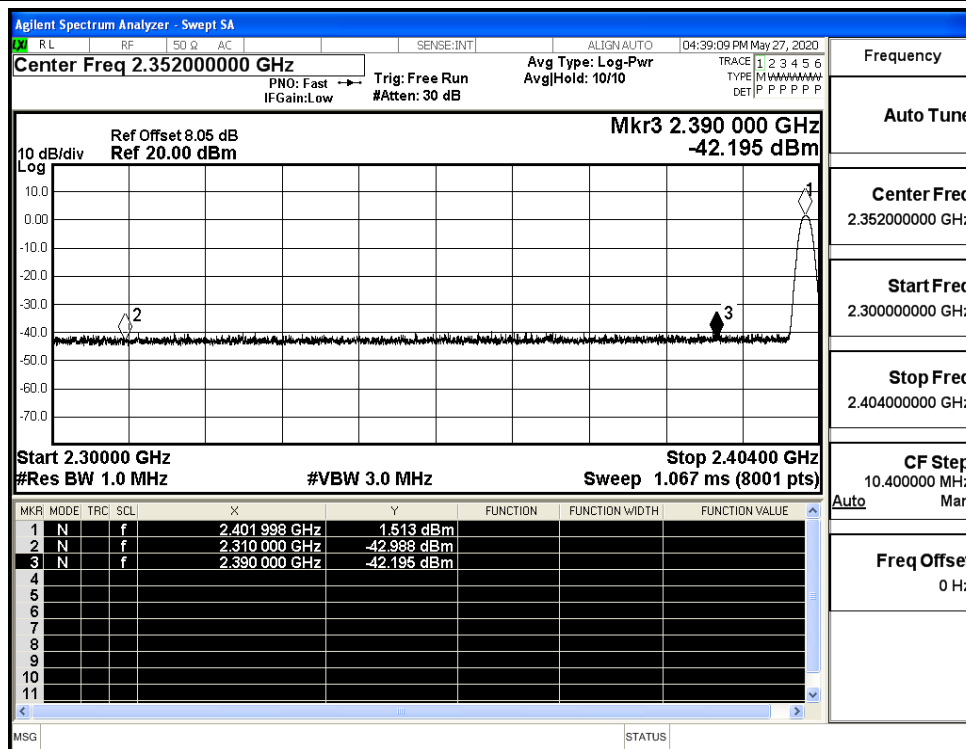
8DPSK/HCH/Hop



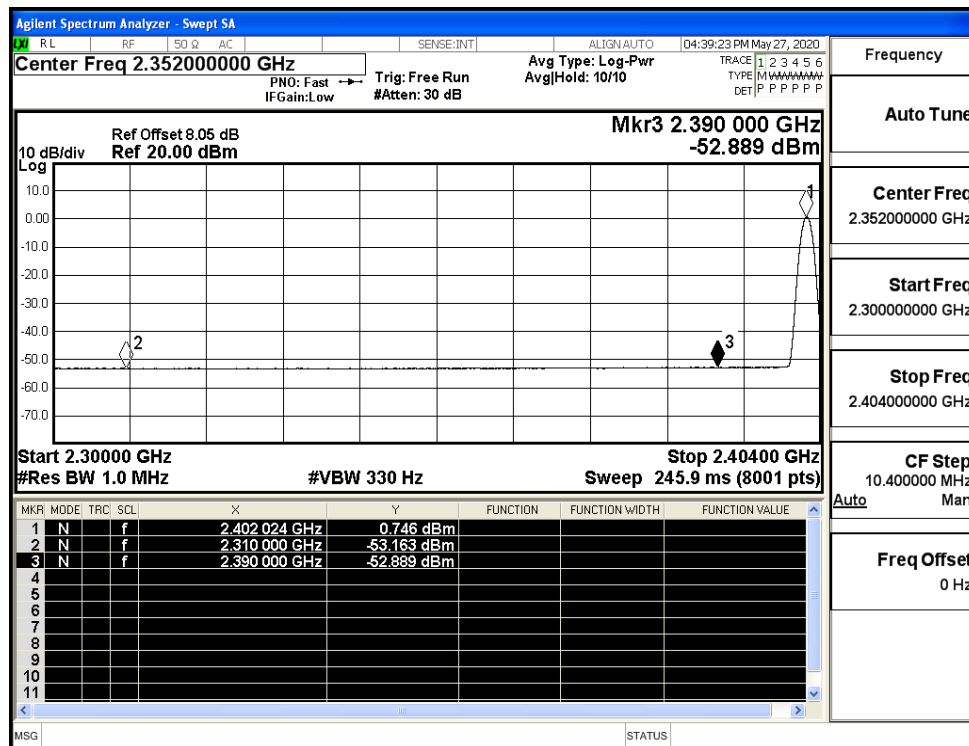
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-42.99	2.0	0	54.27	PEAK	74	PASS
	Off	2310.0	-53.16	2.0	0	44.1	AV	54	PASS
	Off	2390.0	-42.20	2.0	0	55.06	PEAK	74	PASS
	Off	2390.0	-52.89	2.0	0	44.37	AV	54	PASS
	Off	2483.5	-41.28	2.0	0	55.98	PEAK	74	PASS
	Off	2483.5	-52.22	2.0	0	45.04	AV	54	PASS
	Off	2500.0	-41.53	2.0	0	55.73	PEAK	74	PASS
	Off	2500.0	-52.19	2.0	0	45.07	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.06	2.0	0	54.2	PEAK	74	PASS
	Off	2310.0	-53.18	2.0	0	44.08	AV	54	PASS
	Off	2390.0	-42.06	2.0	0	55.2	PEAK	74	PASS
	Off	2390.0	-52.72	2.0	0	44.54	AV	54	PASS
	Off	2483.5	-42.50	2.0	0	54.76	PEAK	74	PASS
	Off	2483.5	-52.10	2.0	0	45.16	AV	54	PASS
	Off	2500.0	-41.27	2.0	0	55.99	PEAK	74	PASS
	Off	2500.0	-52.18	2.0	0	45.08	AV	54	PASS
8DPSK	Off	2310.0	-43.42	2.0	0	53.84	PEAK	74	PASS
	Off	2310.0	-53.28	2.0	0	43.98	AV	54	PASS
	Off	2390.0	-41.75	2.0	0	55.51	PEAK	74	PASS
	Off	2390.0	-52.85	2.0	0	44.41	AV	54	PASS
	Off	2483.5	-42.31	2.0	0	54.95	PEAK	74	PASS
	Off	2483.5	-52.05	2.0	0	45.21	AV	54	PASS
	Off	2500.0	-41.83	2.0	0	55.43	PEAK	74	PASS
	Off	2500.0	-52.12	2.0	0	45.14	AV	54	PASS

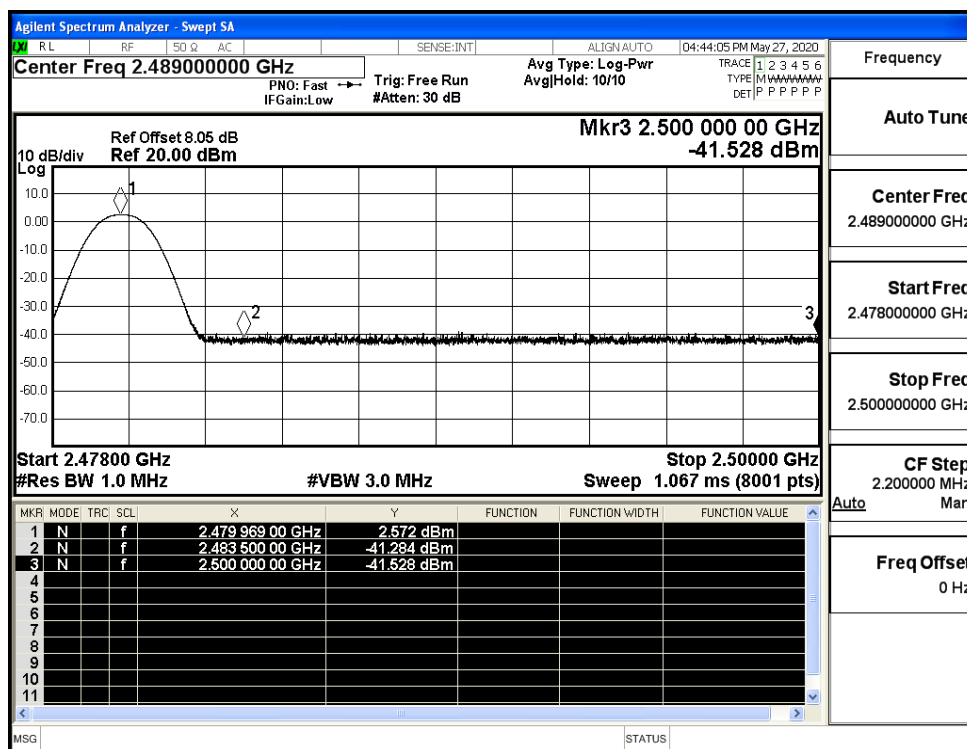
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



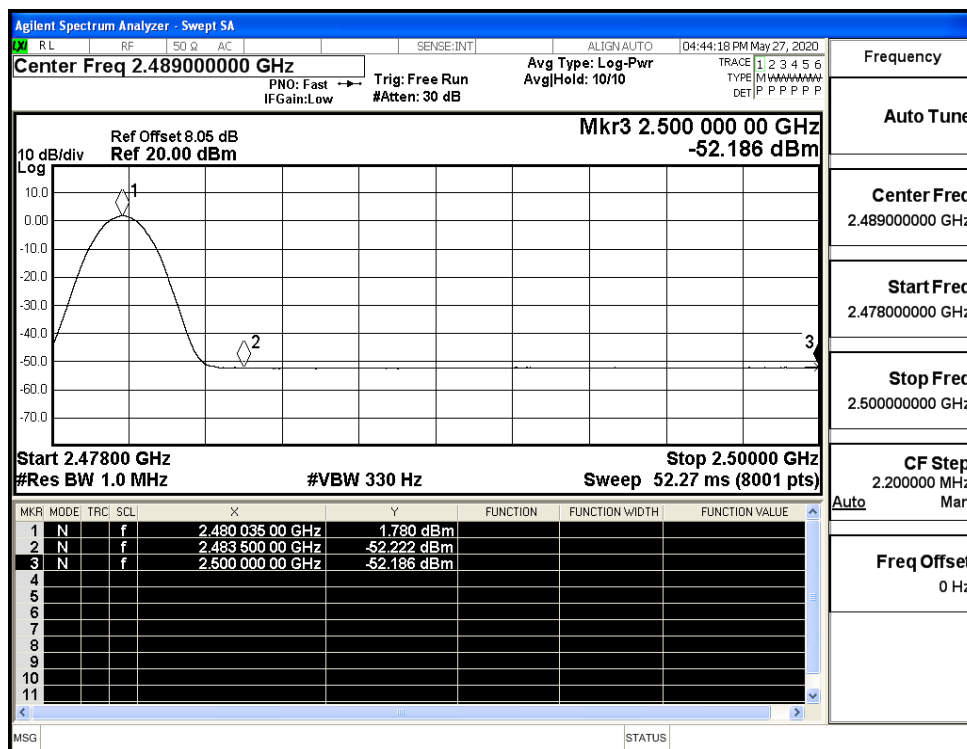
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

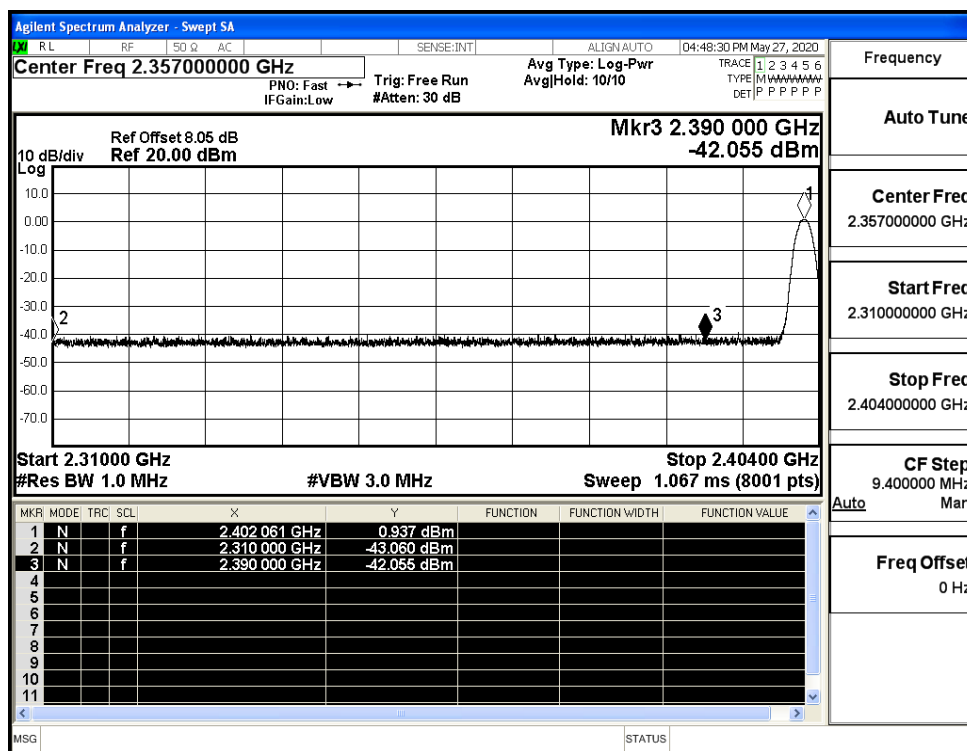
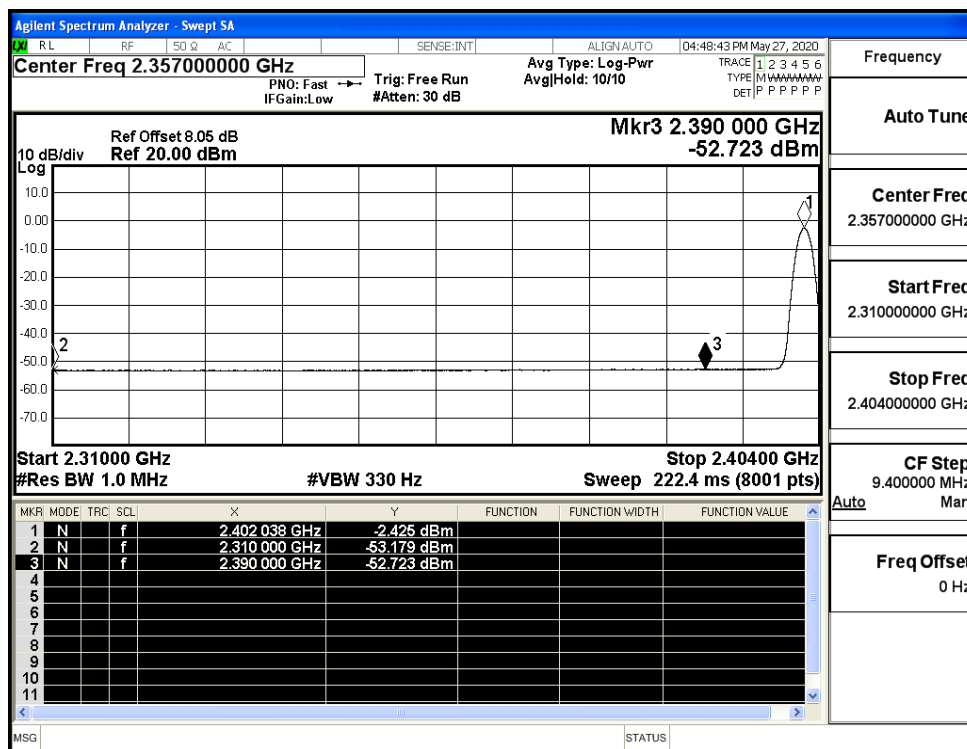


Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)

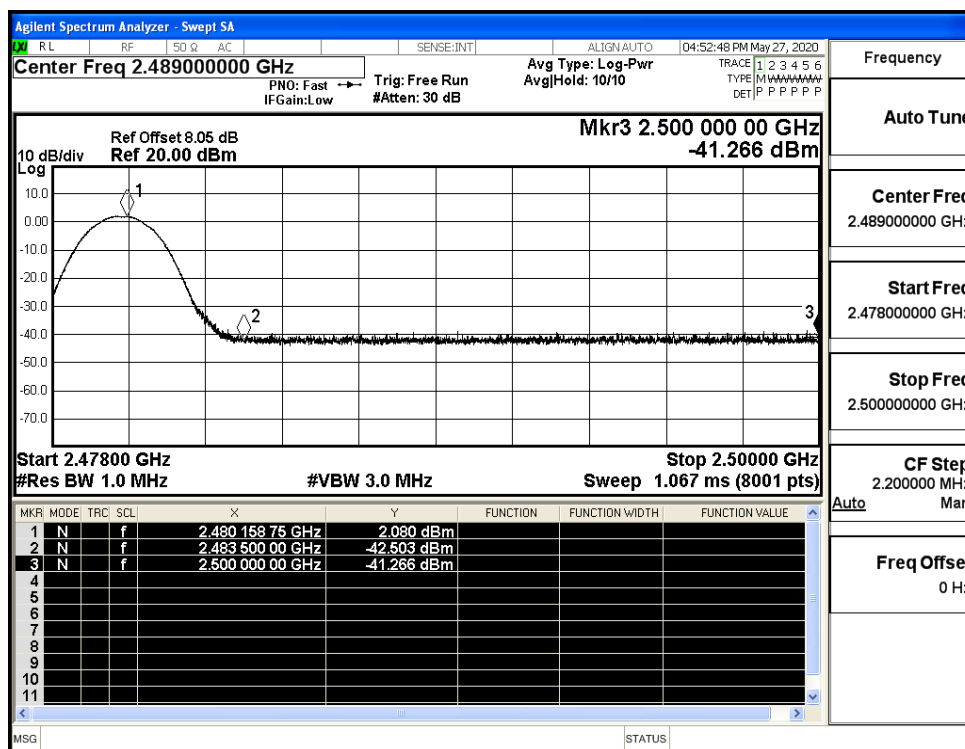


Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)

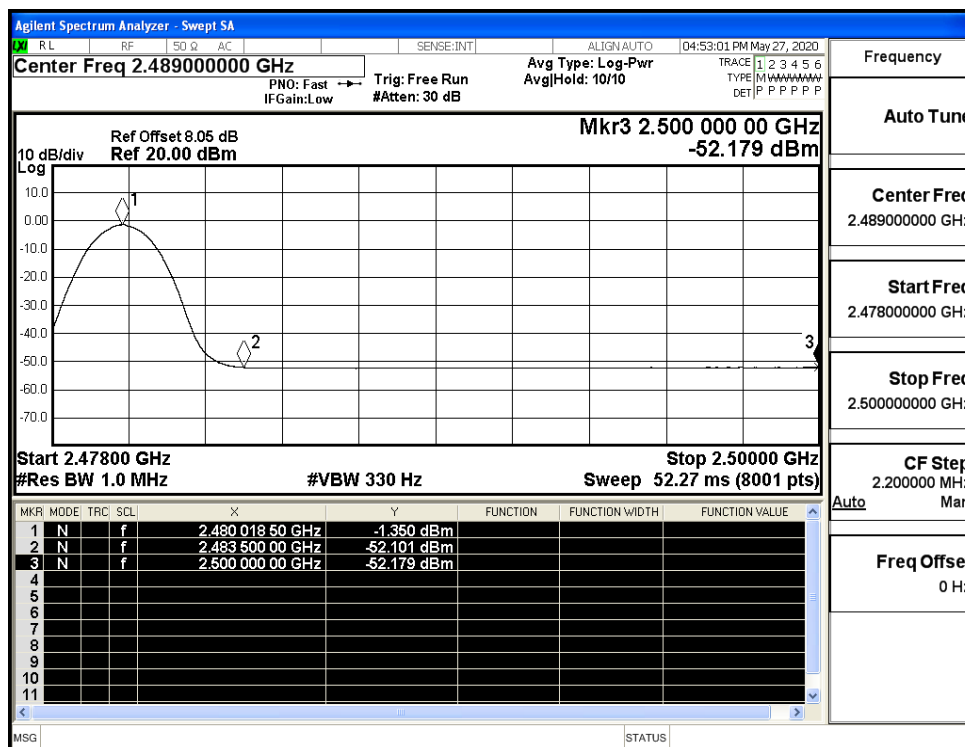


Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

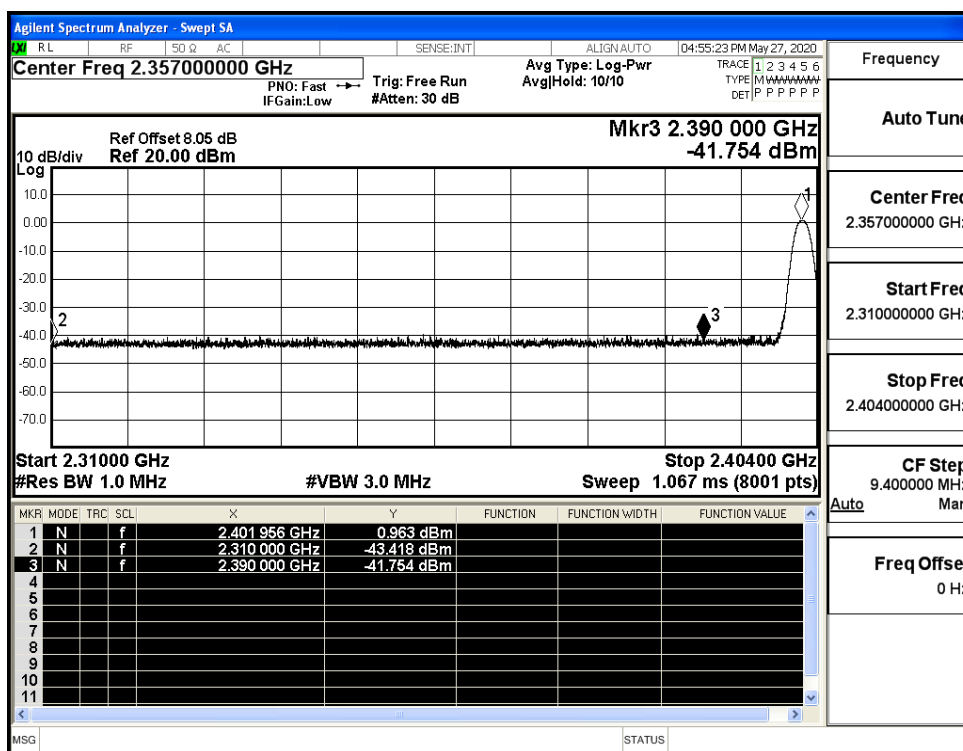
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



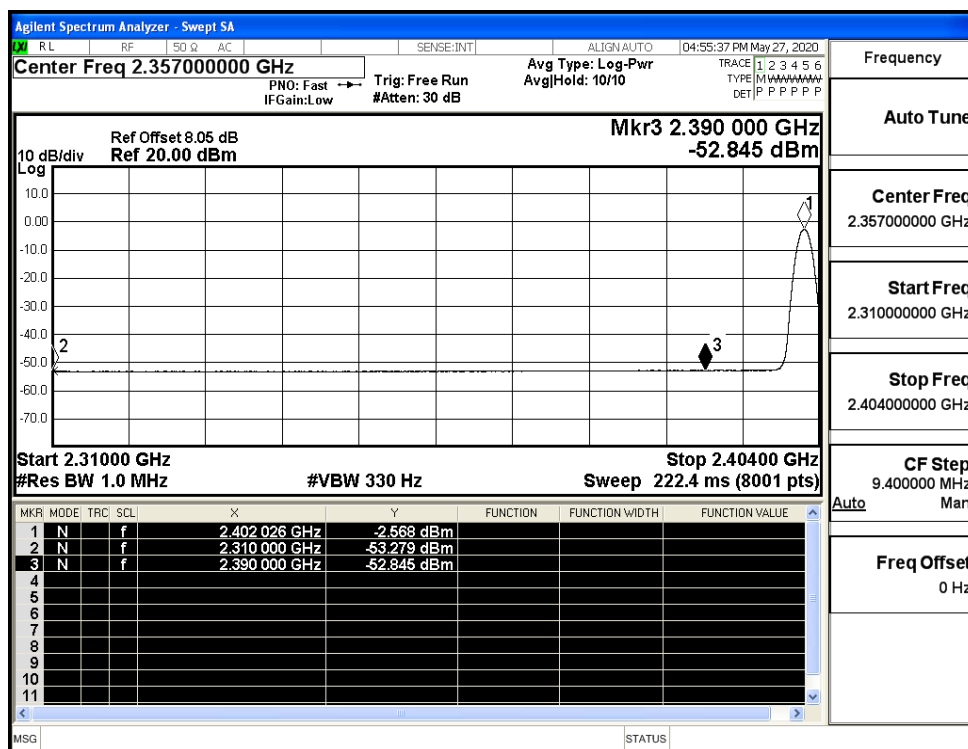
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



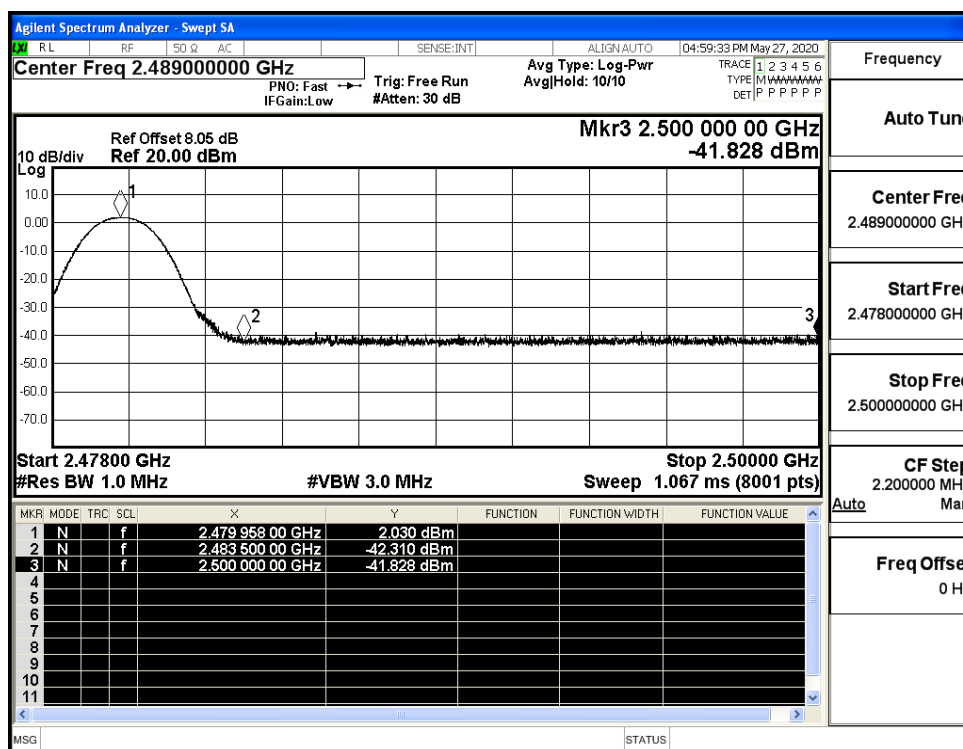
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

