

Appendix A

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

Product Name: Music Planet

Trade Mark: Cosmic Island

Test Model: MP-1

Environmental Conditions

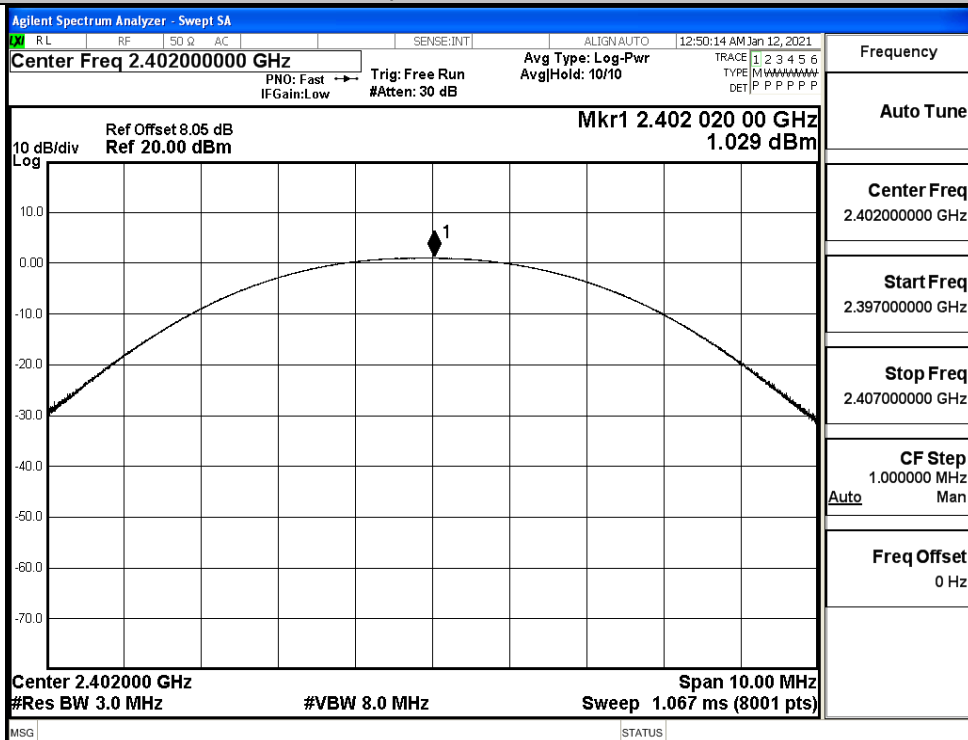
Temperature:	25.3 ° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

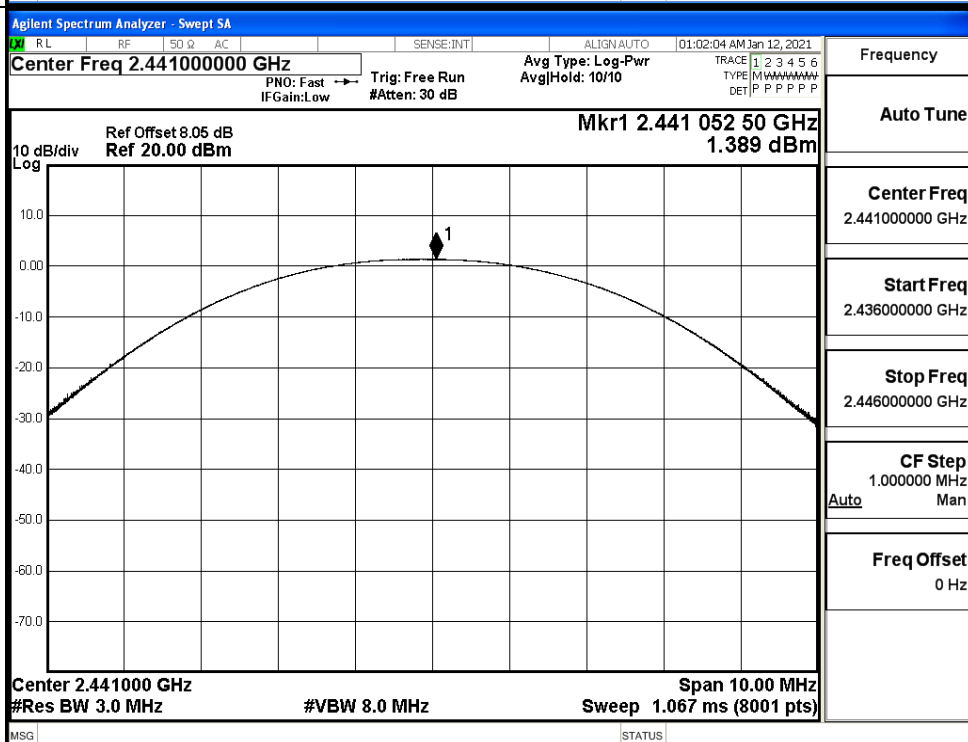
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	1.029	21	PASS
	MCH	1.389	21	PASS
	HCH	1.391	21	PASS
$\pi/4$ DQPSK	LCH	0.928	21	PASS
	MCH	1.313	21	PASS
	HCH	1.330	21	PASS
8DPSK	LCH	0.963	21	PASS
	MCH	1.283	21	PASS
	HCH	1.347	21	PASS

Test Graphs

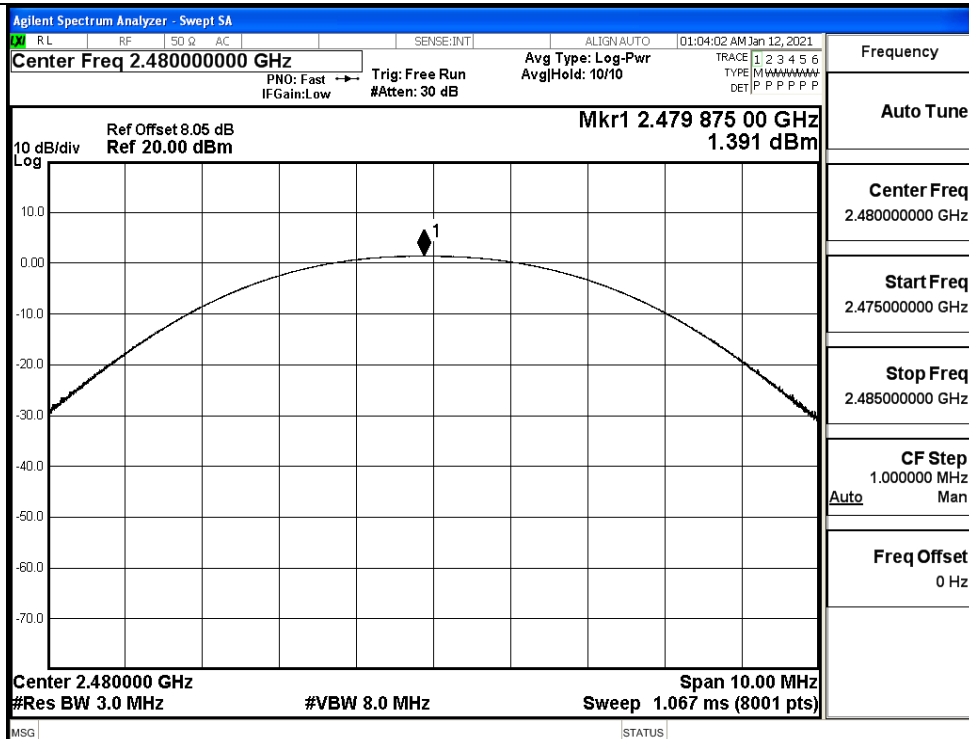
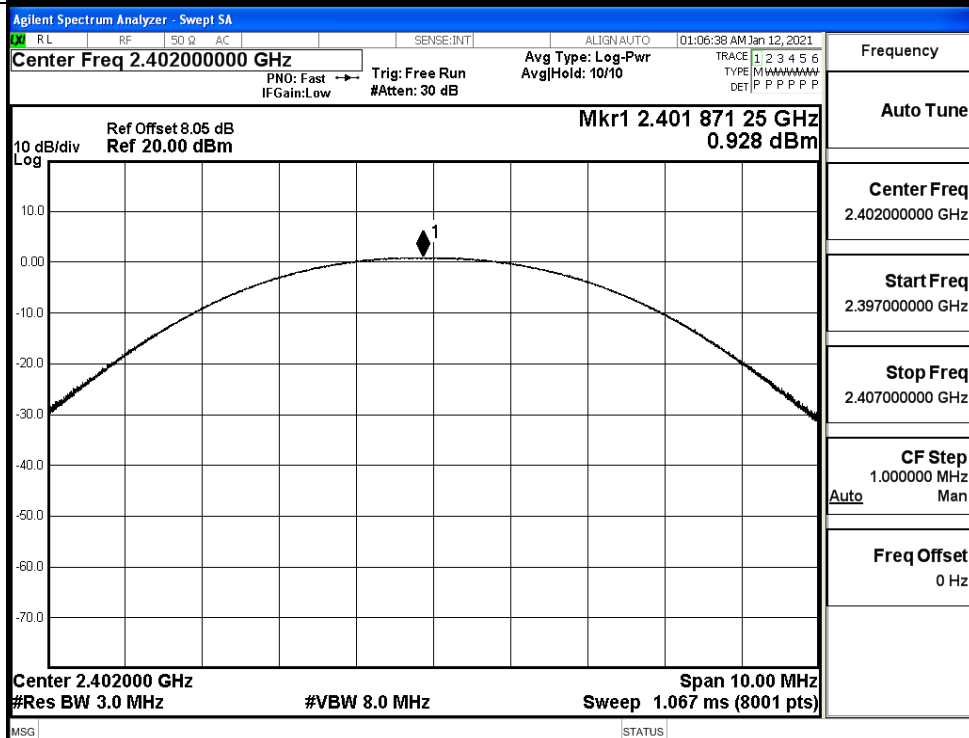
GFSK/LCH

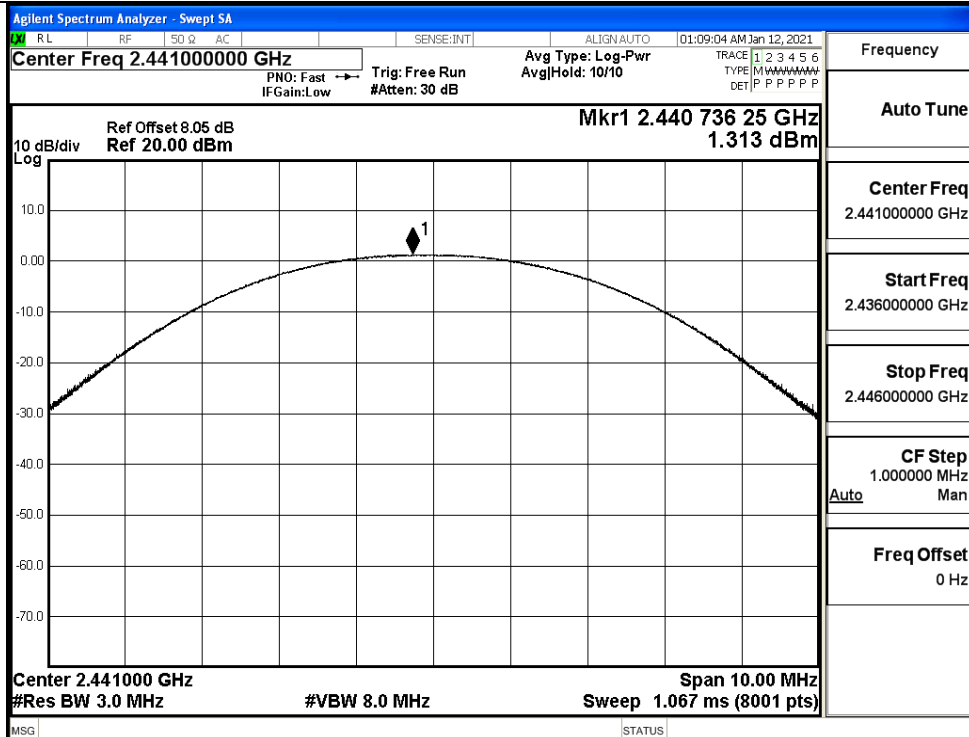
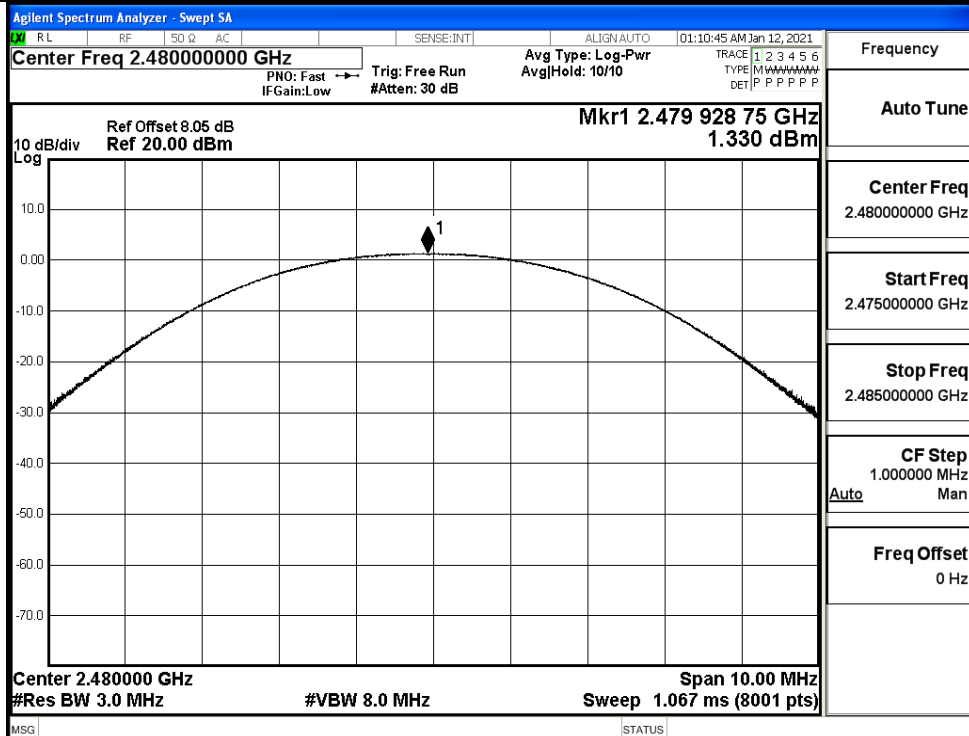


GFSK/MCH

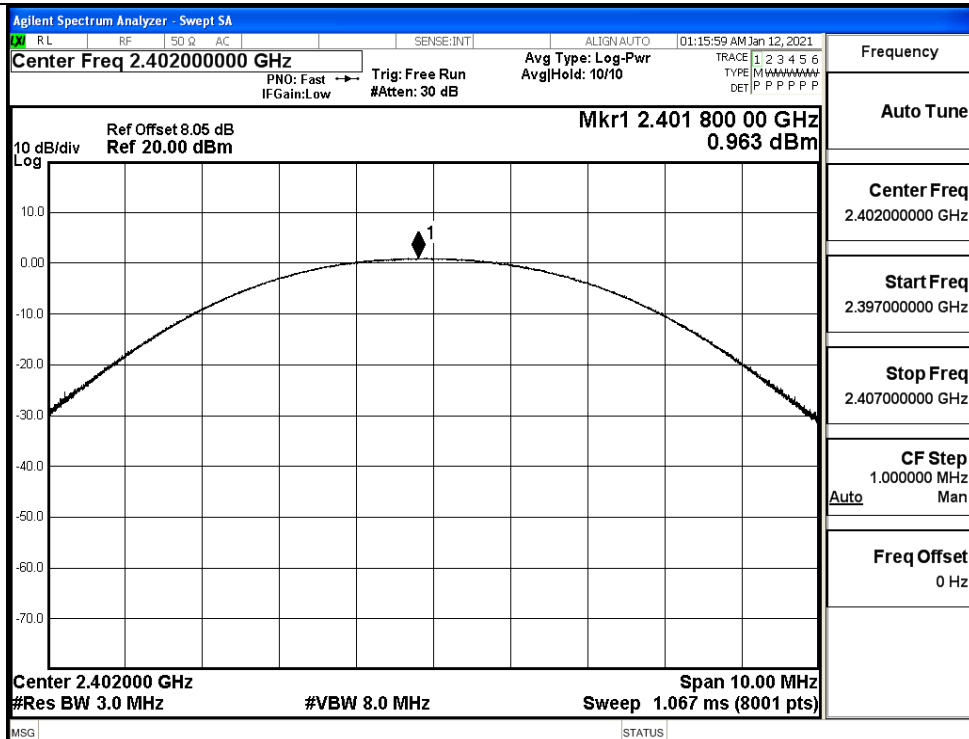


GFSK/HCH

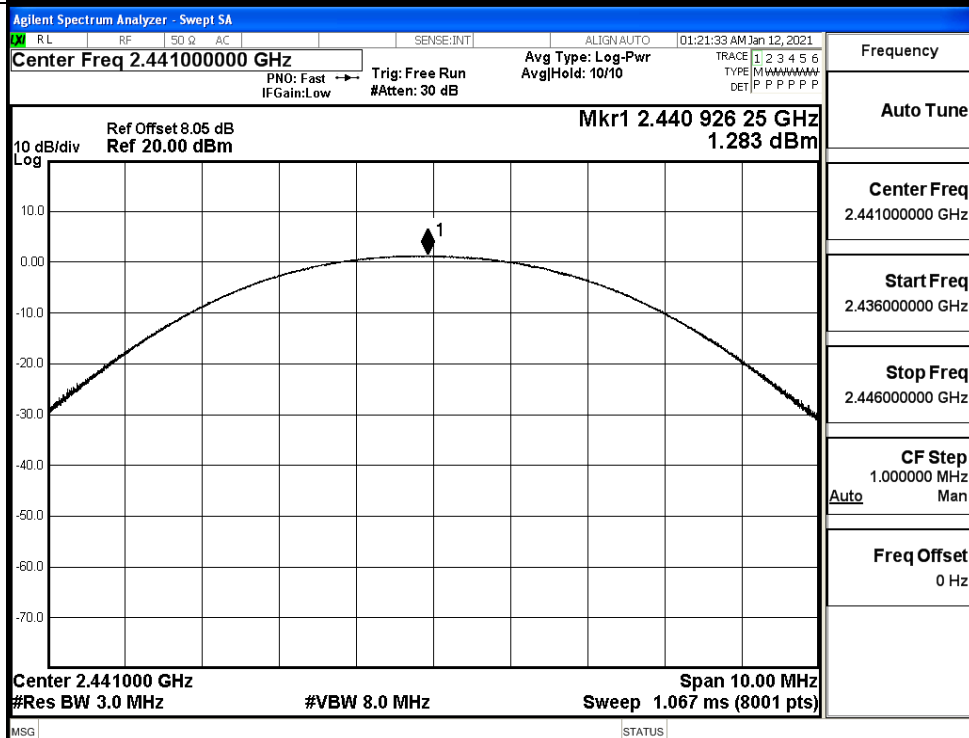
 $\pi/4$ DQPSK/LCH

π /4DQPSK/MCH π /4DQPSK/HCH

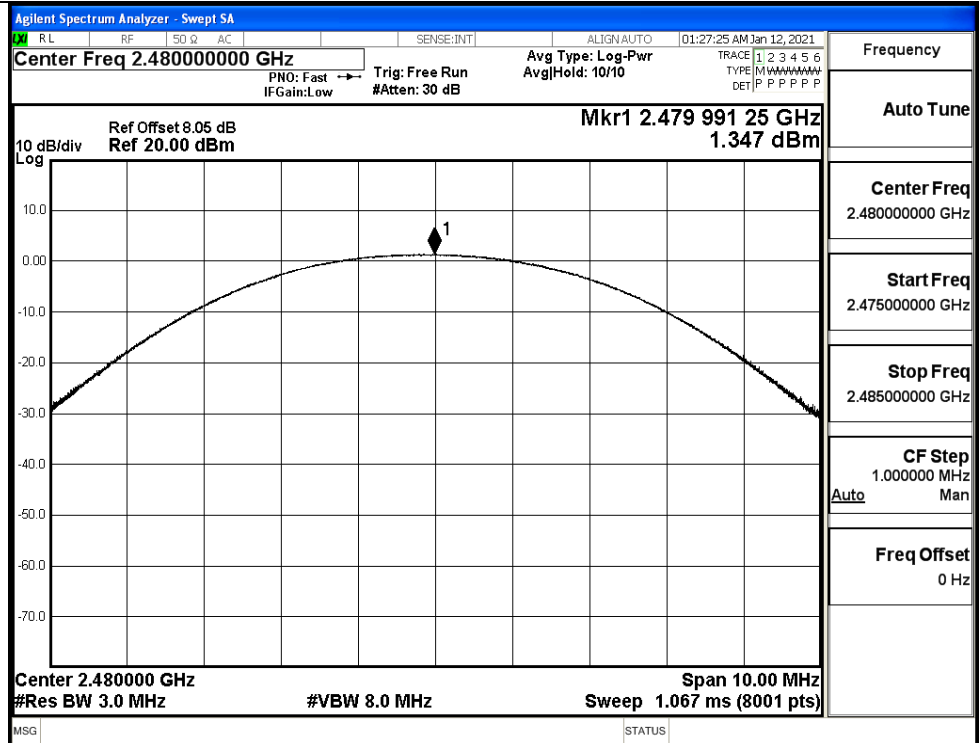
8DPSK/LCH



8DPSK/MCH



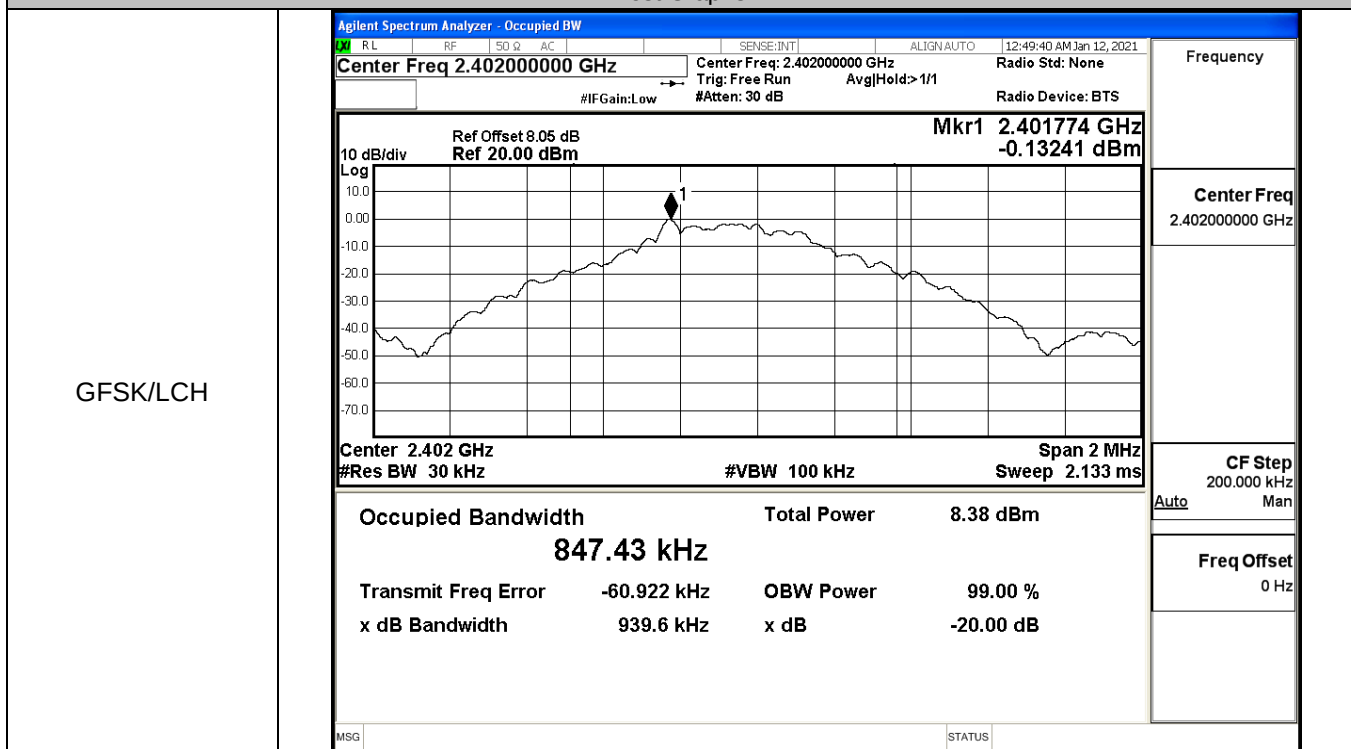
8DPSK/HCH



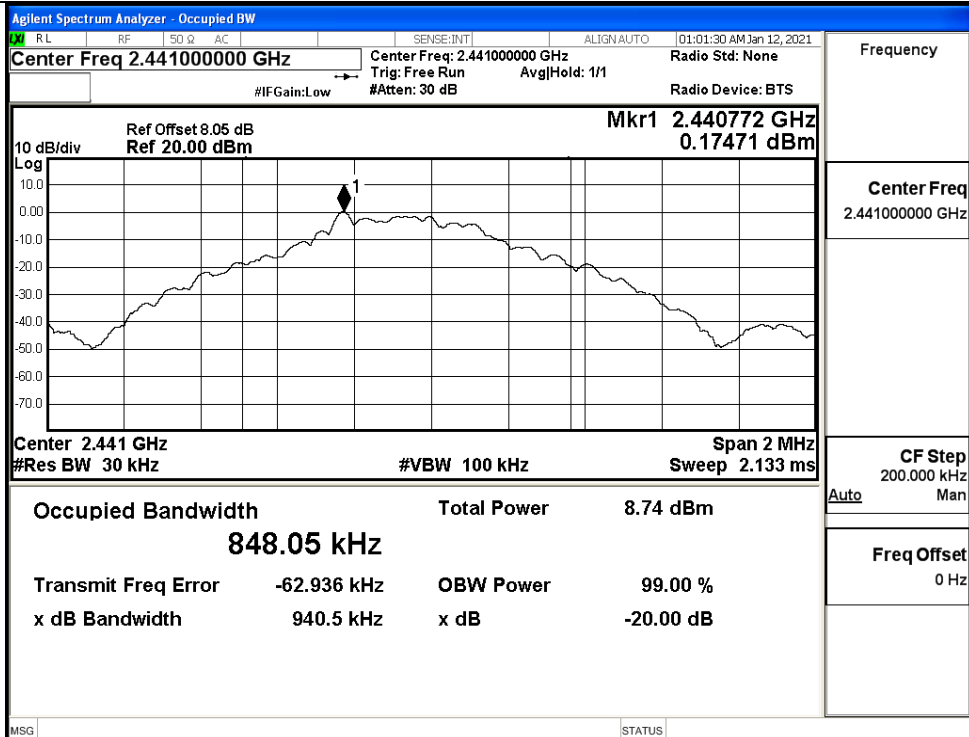
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9396	Not Specified	PASS
	MCH	0.9405	Not Specified	PASS
	HCH	0.9406	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.272	Not Specified	PASS
	MCH	1.275	Not Specified	PASS
	HCH	1.268	Not Specified	PASS
8DPSK	LCH	1.247	Not Specified	PASS
	MCH	1.248	Not Specified	PASS
	HCH	1.248	Not Specified	PASS

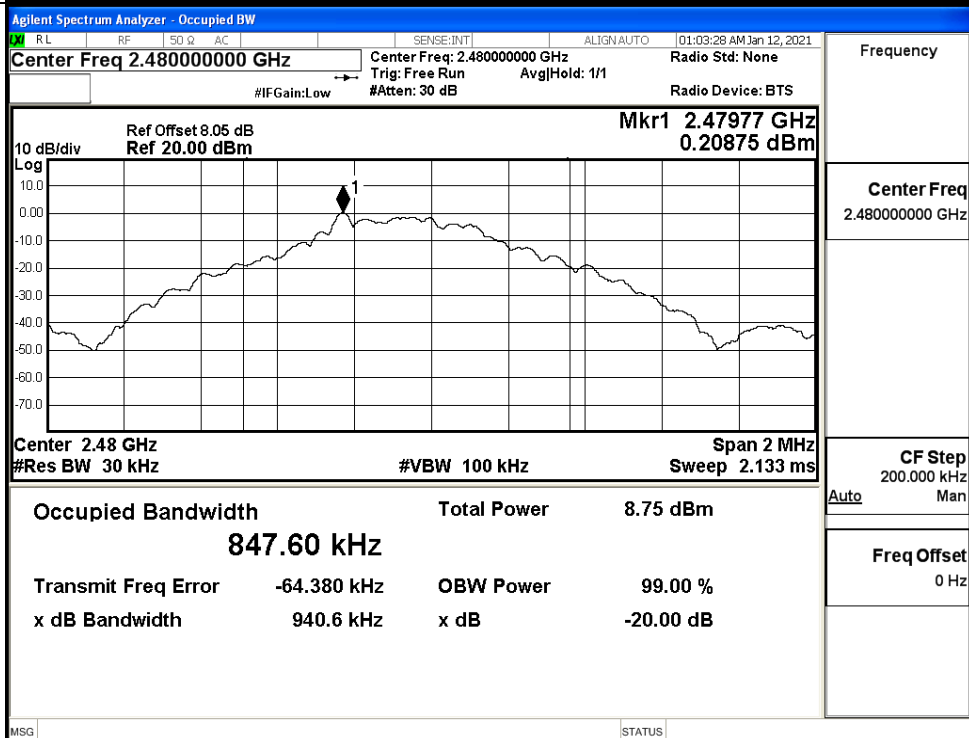
Test Graphs

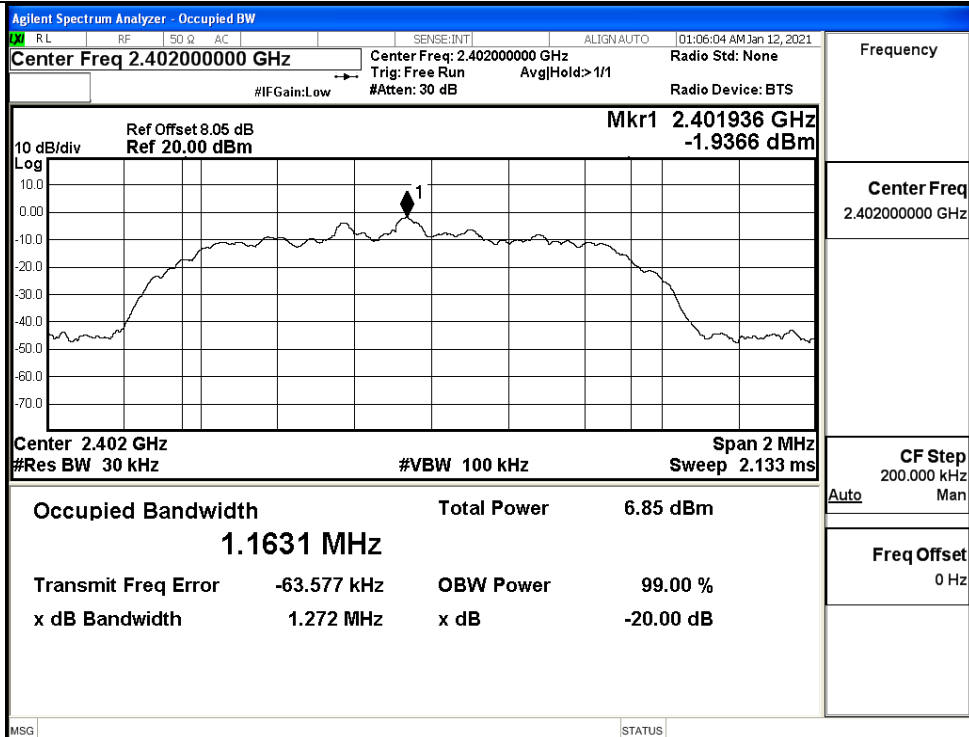
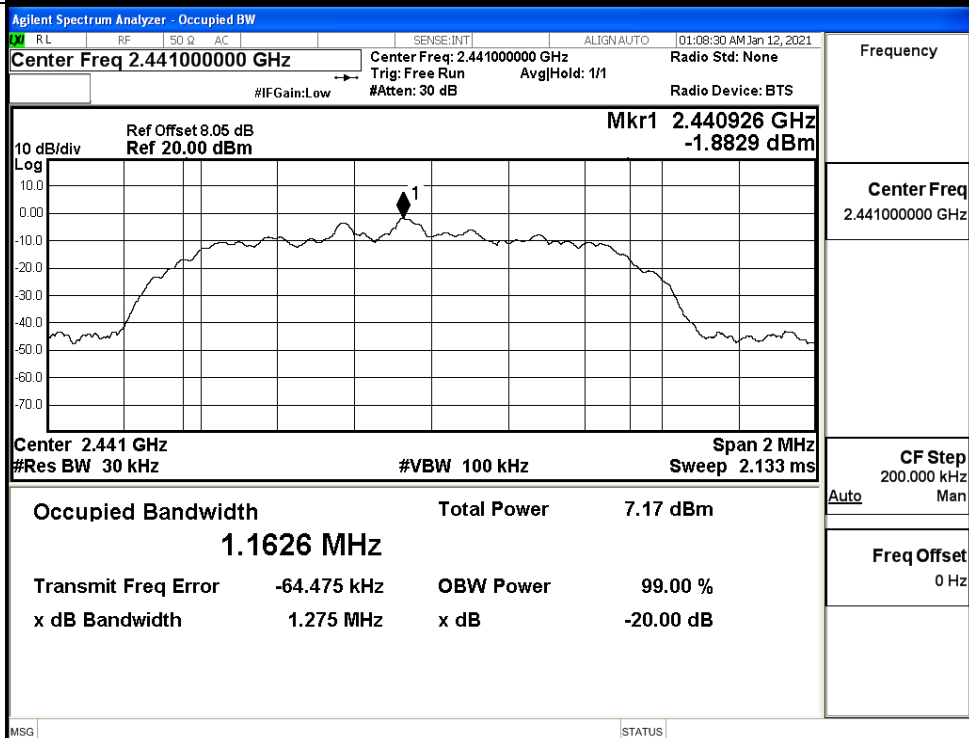


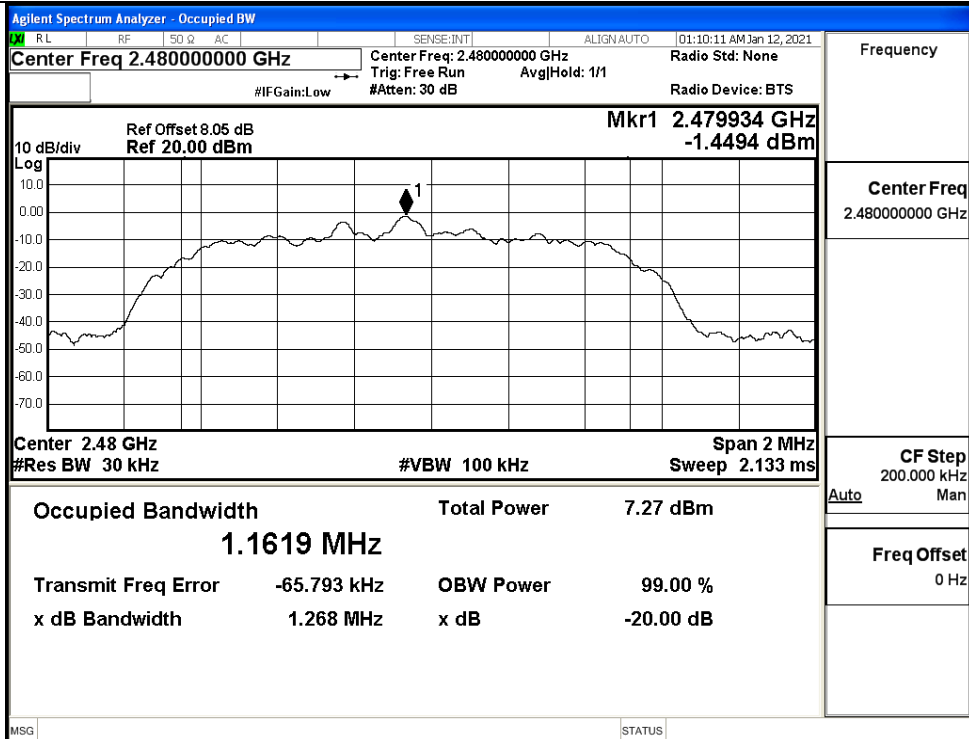
GFSK/MCH



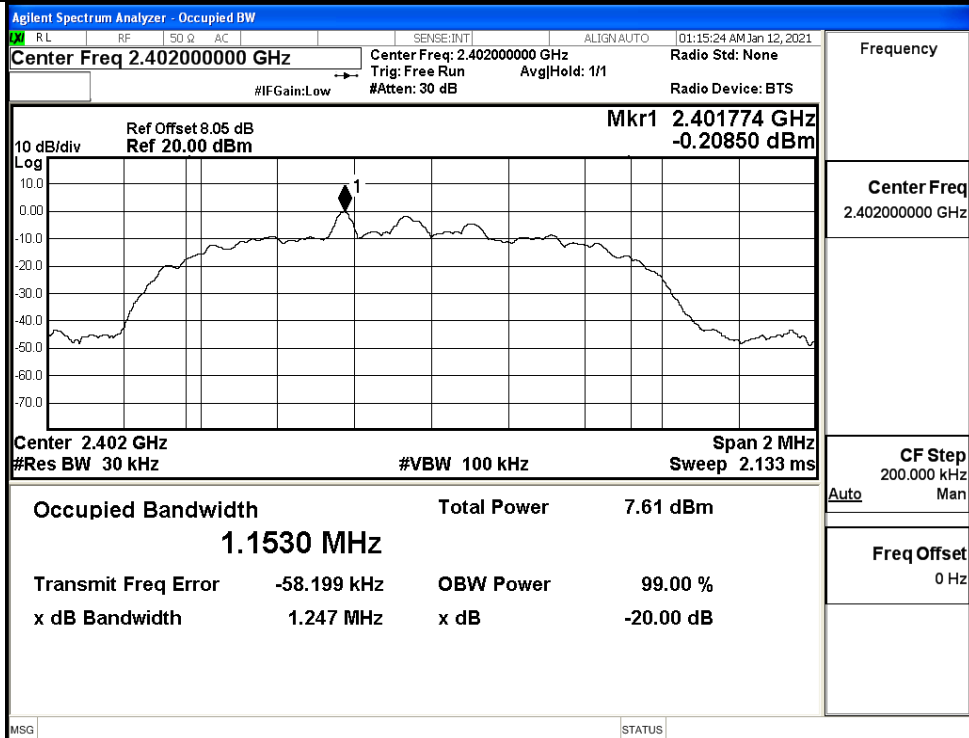
GFSK/HCH



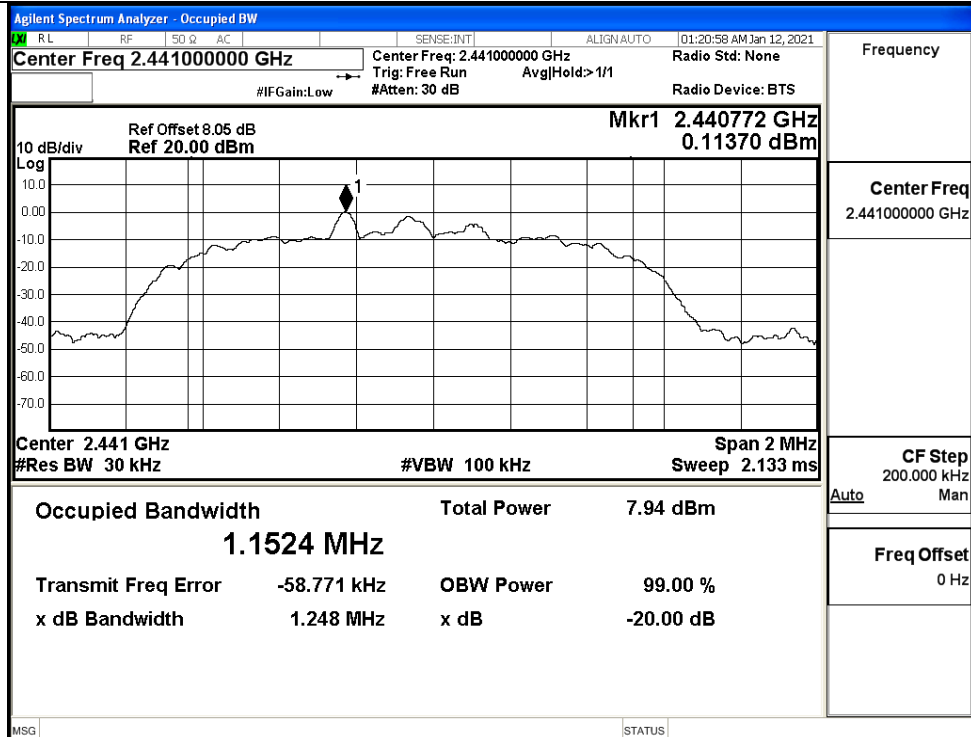
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

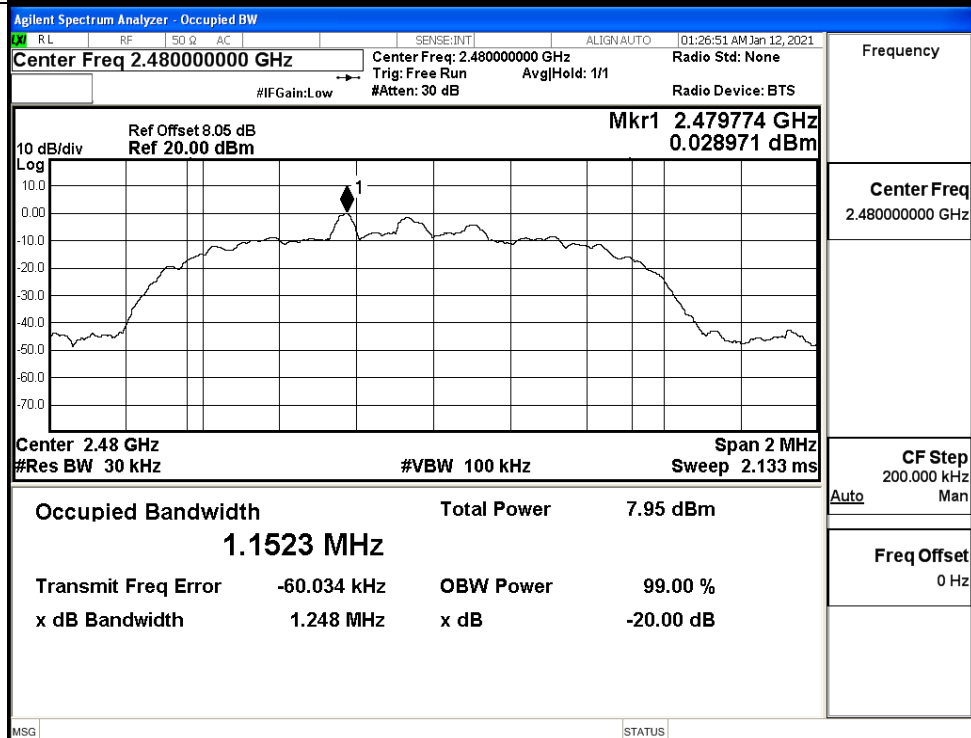
8DPSK/LCH



8DPSK/MCH



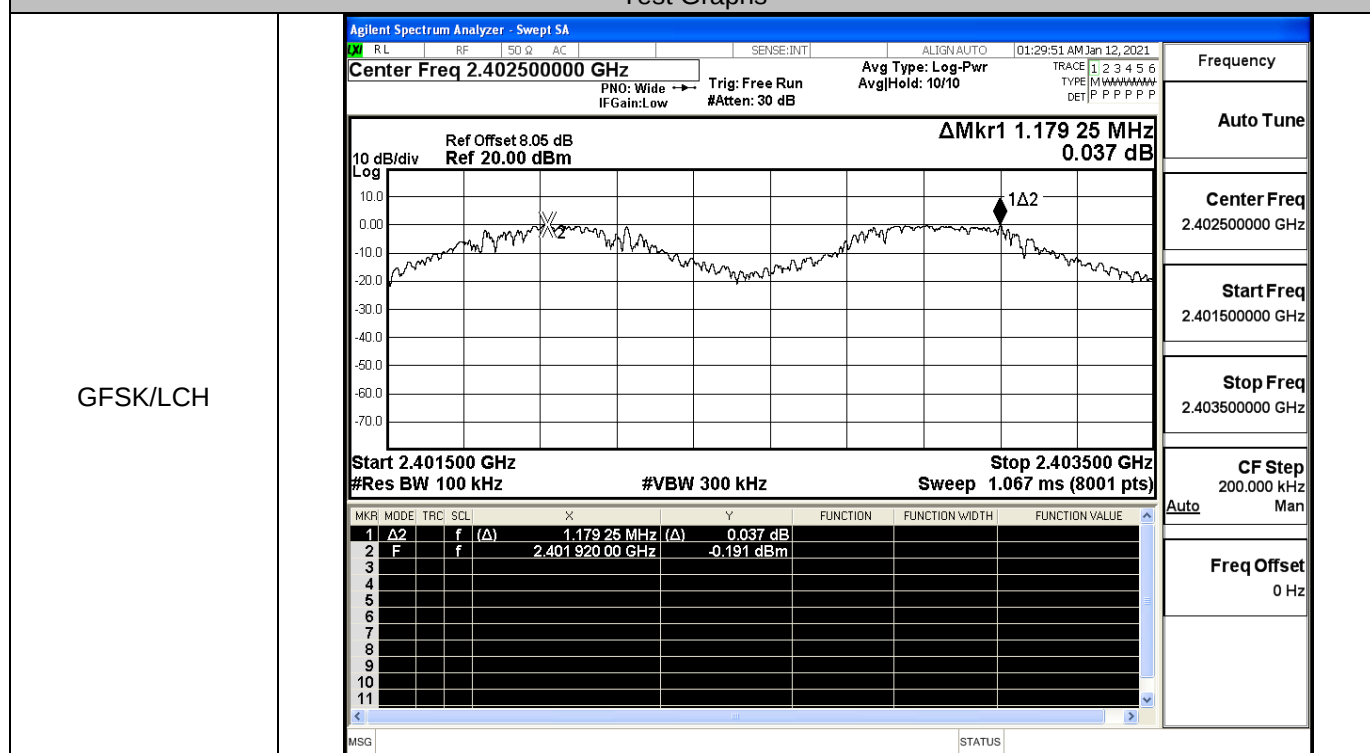
8DPSK/HCH



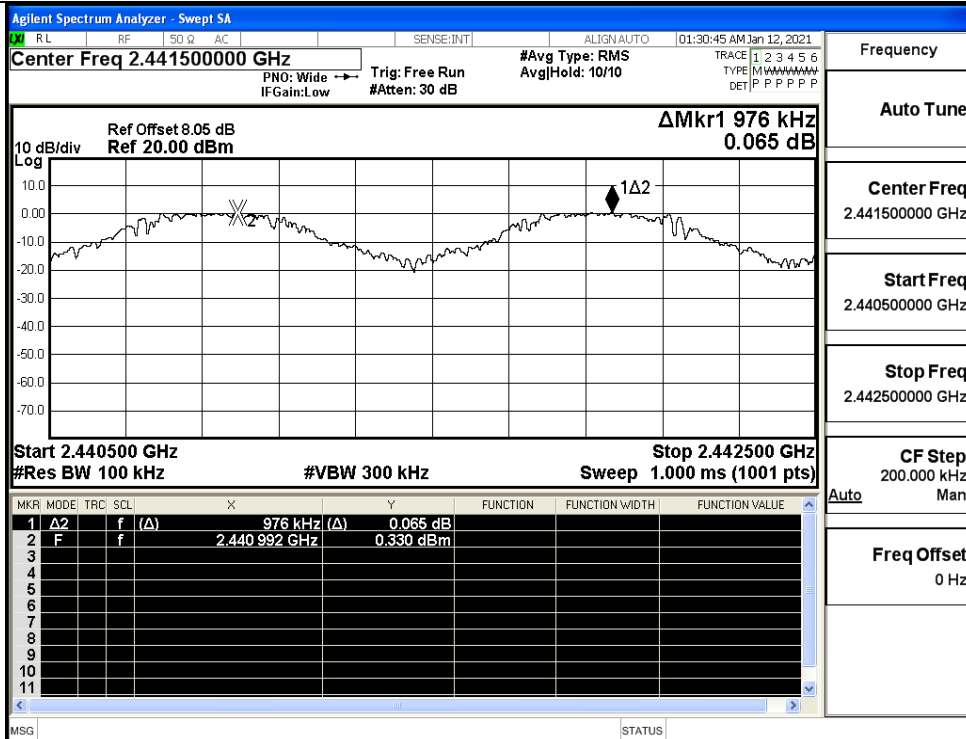
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.179	0.627	PASS
	MCH	0.976	0.627	PASS
	HCH	0.894	0.627	PASS
$\pi/4$ DQPSK	LCH	0.866	0.850	PASS
	MCH	1.136	0.850	PASS
	HCH	0.898	0.850	PASS
8DPSK	LCH	1.034	0.832	PASS
	MCH	1.054	0.832	PASS
	HCH	0.854	0.832	PASS

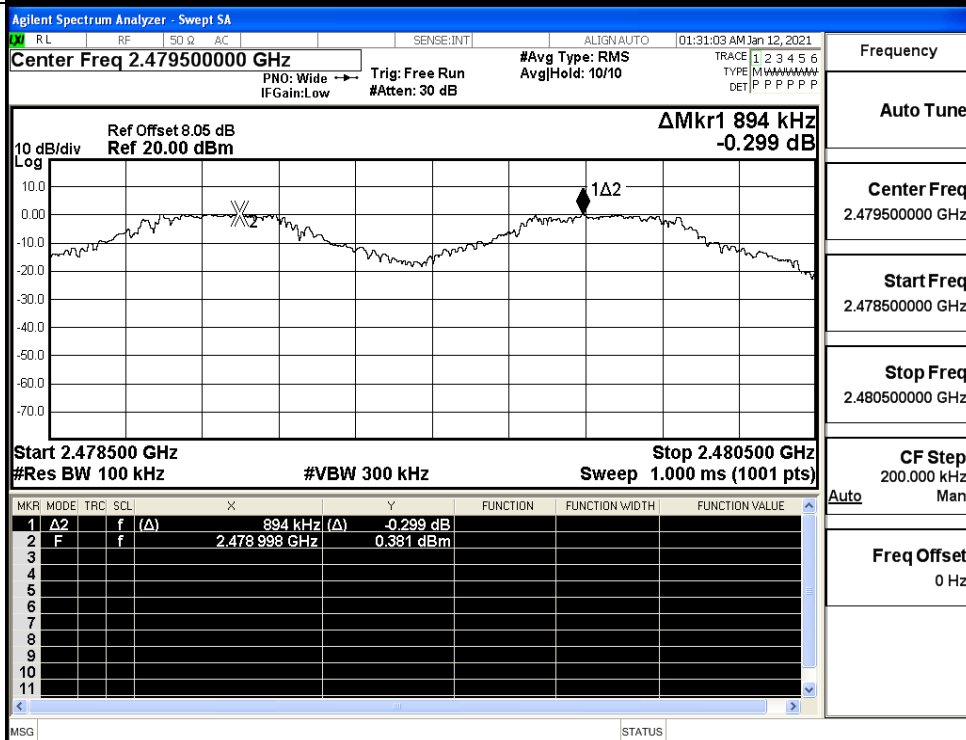
Test Graphs

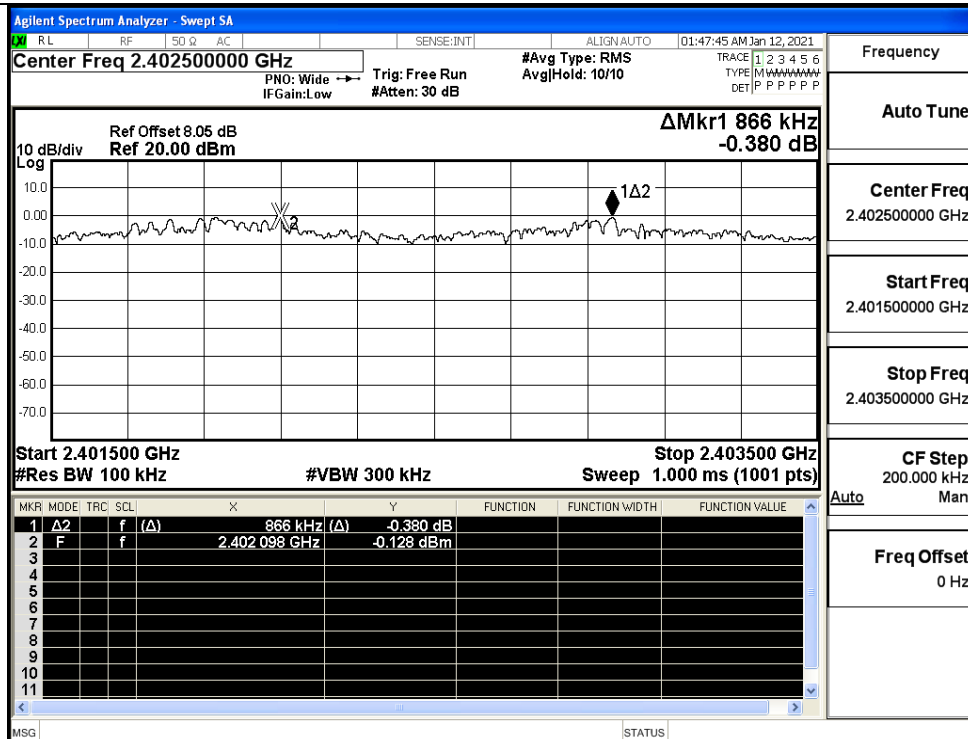
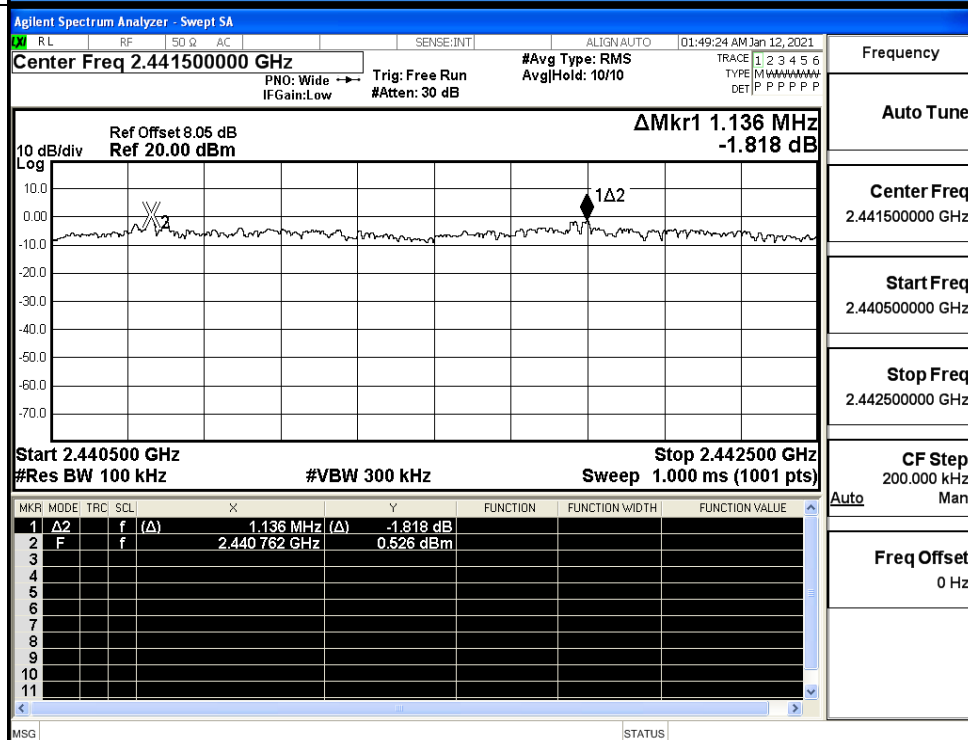


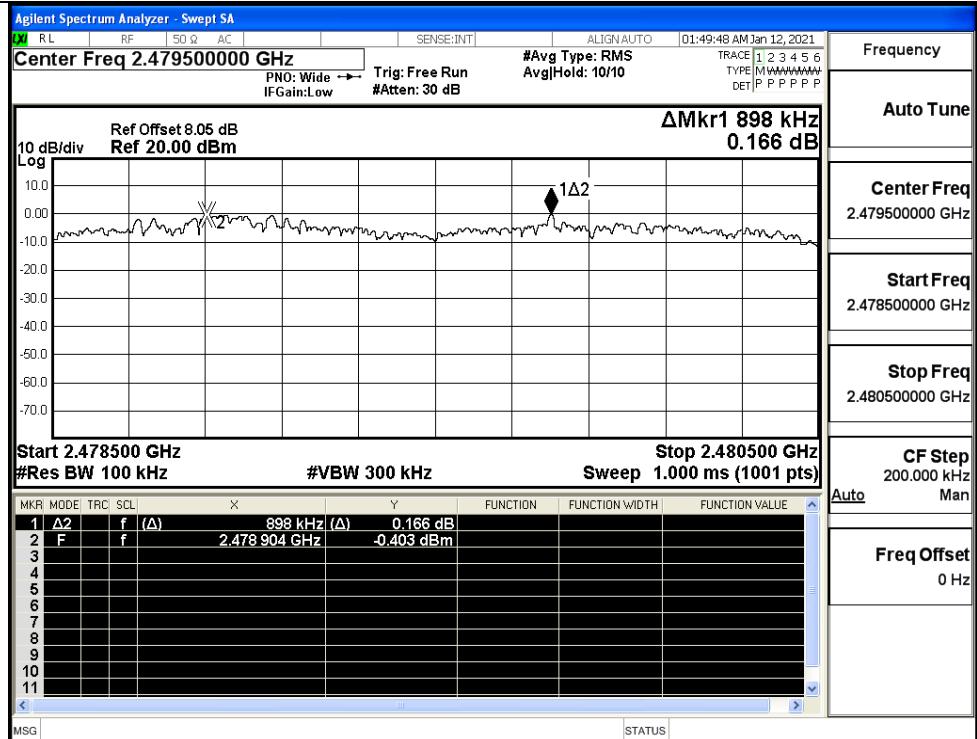
GFSK/MCH



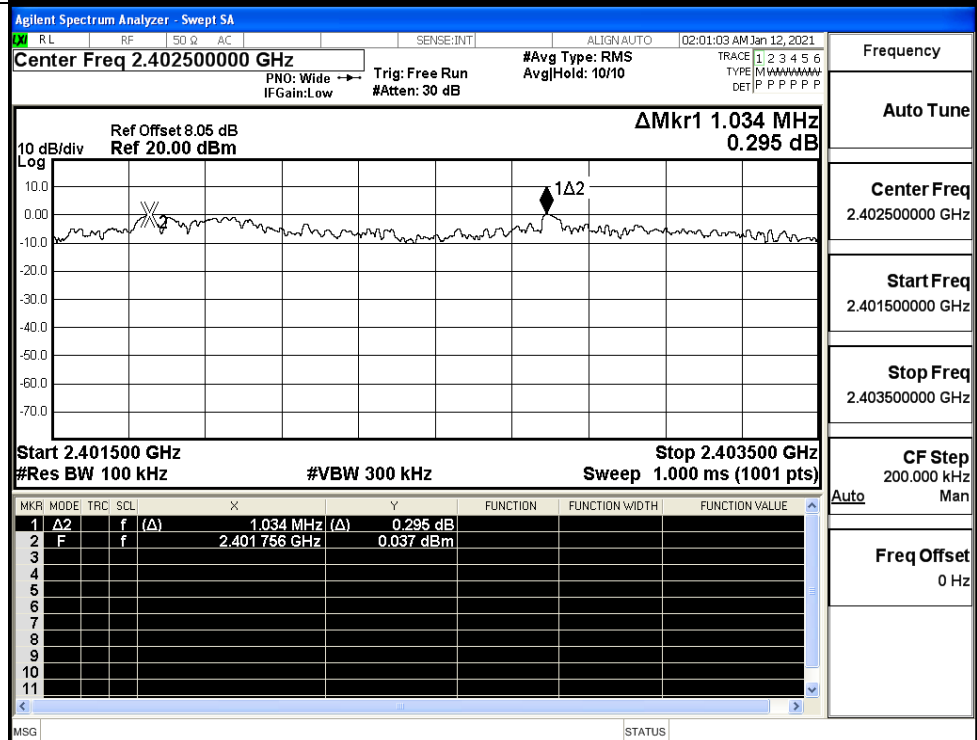
GFSK/HCH



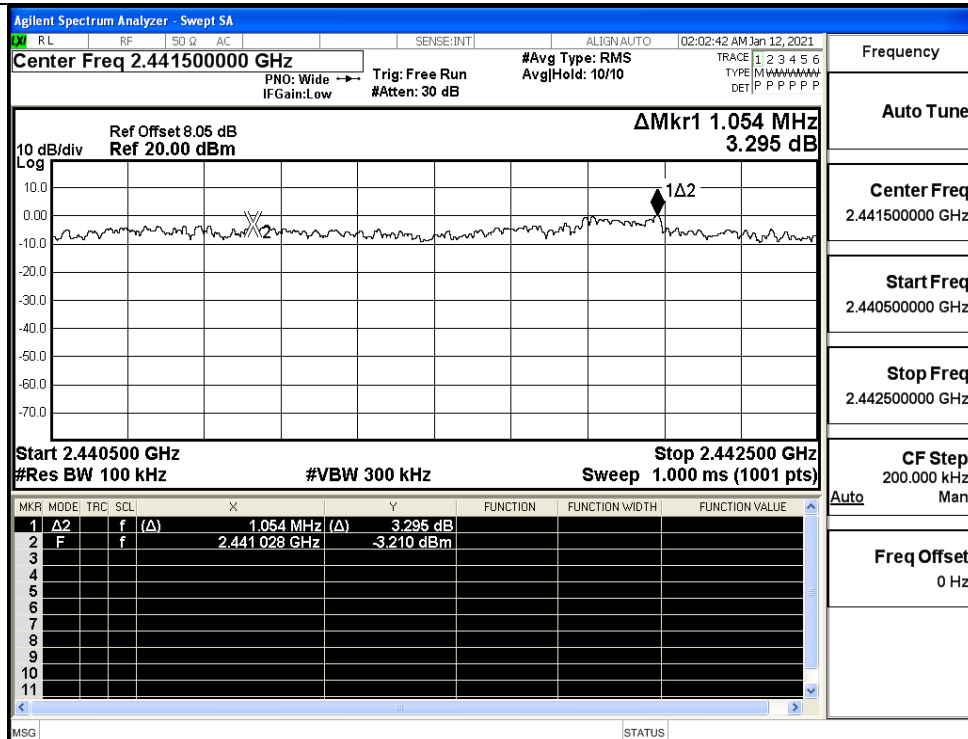
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

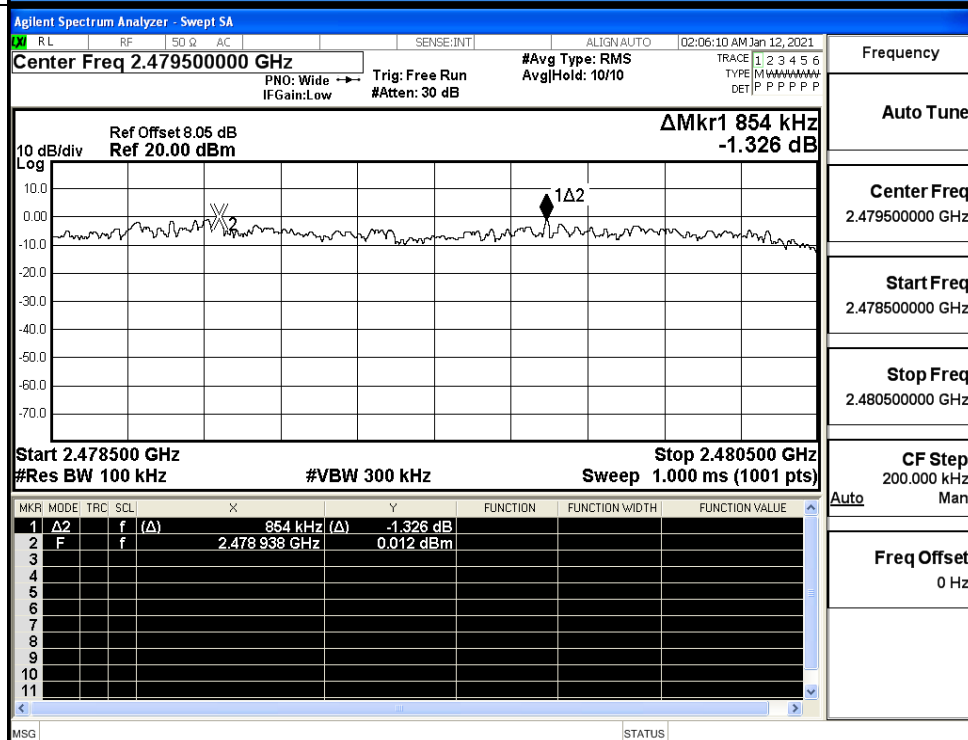
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

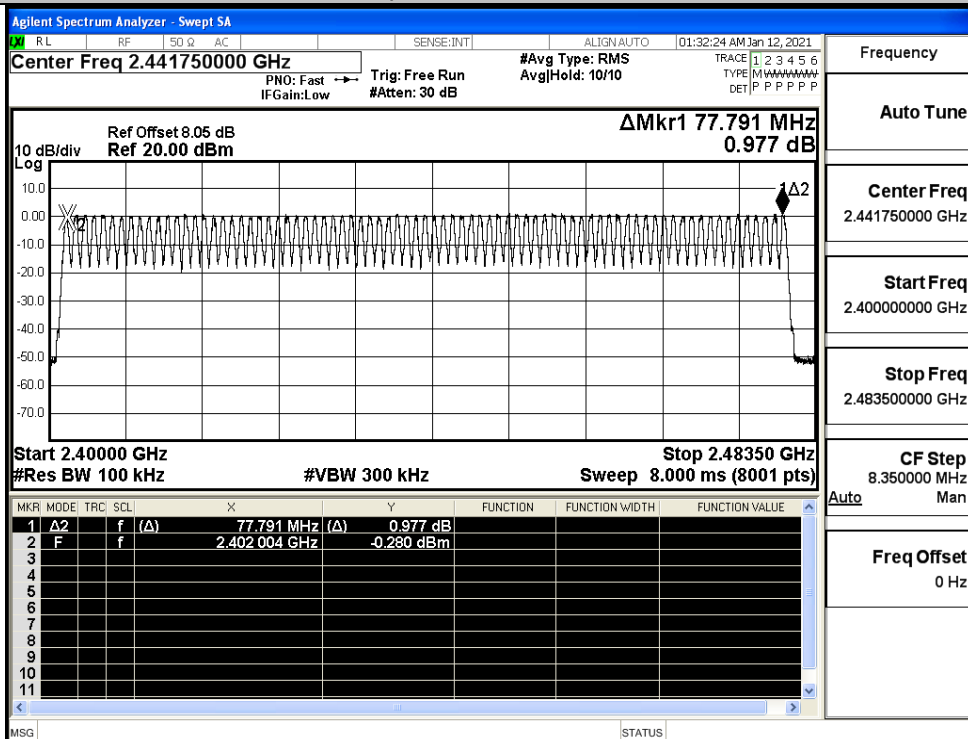


A.4 Hopping Channel Number

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

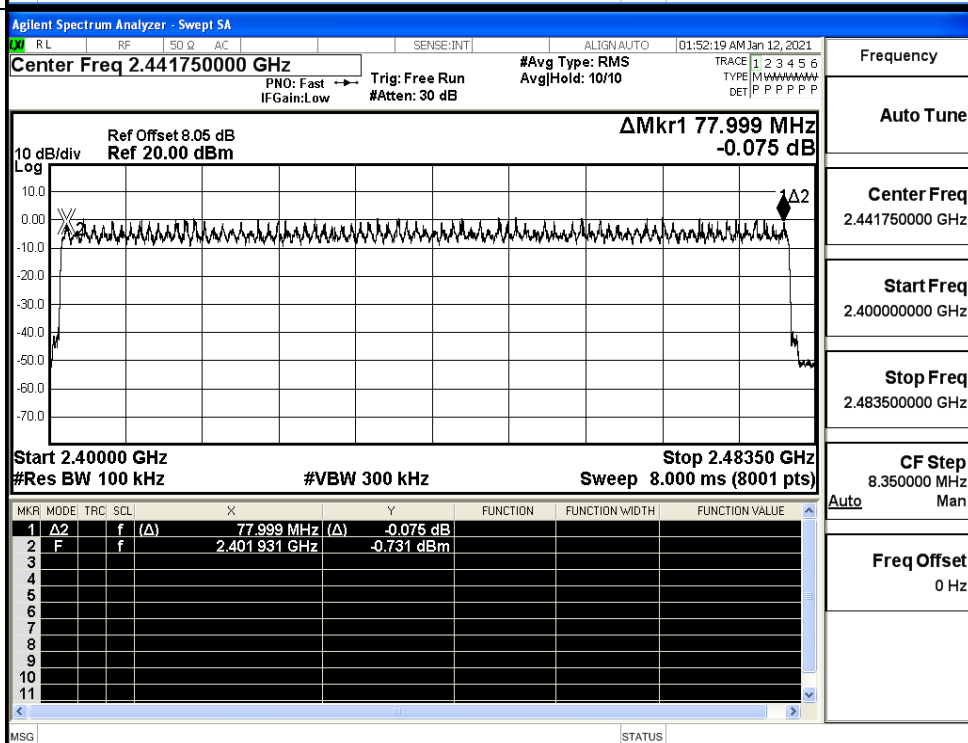
Test Graphs

GFSK/Hop



Frequency

Auto Tune

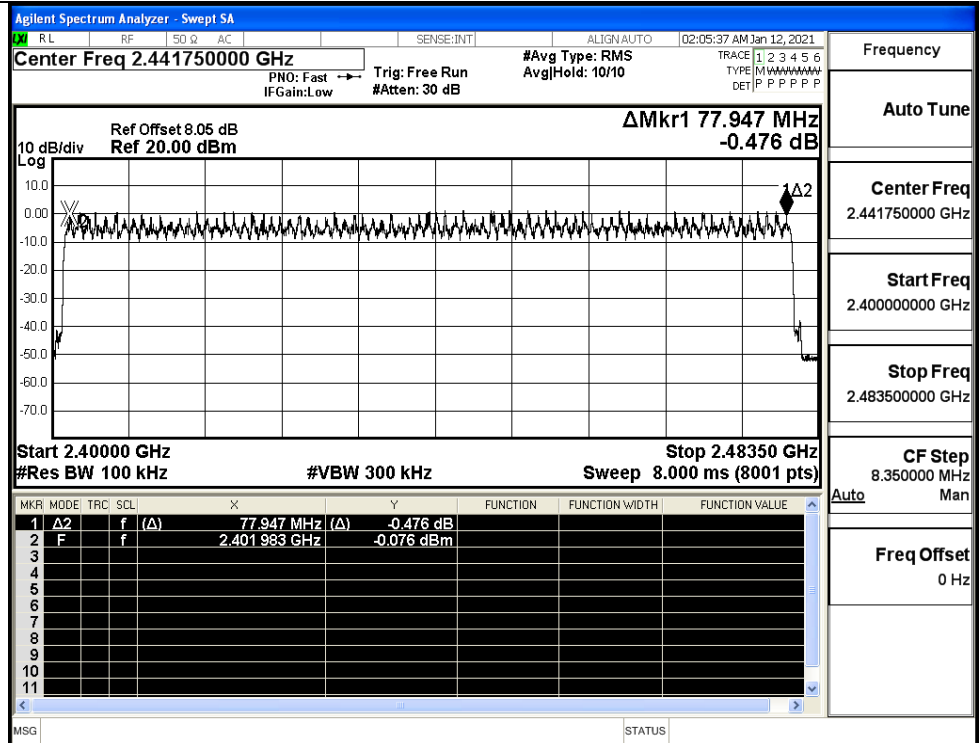
Center Freq
2.441750000 GHzStart Freq
2.400000000 GHzStop Freq
2.483500000 GHzCF Step
8.350000 MHz
ManFreq Offset
0 Hz $\pi/4$ DQPSK/Hop

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

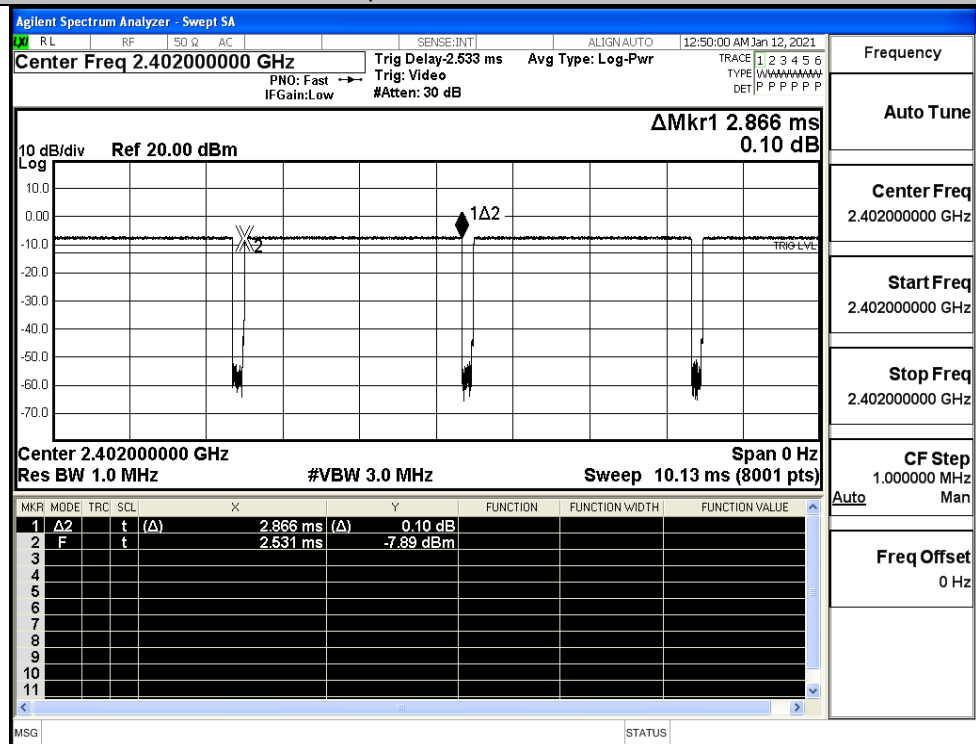


A.5 Dwell Time

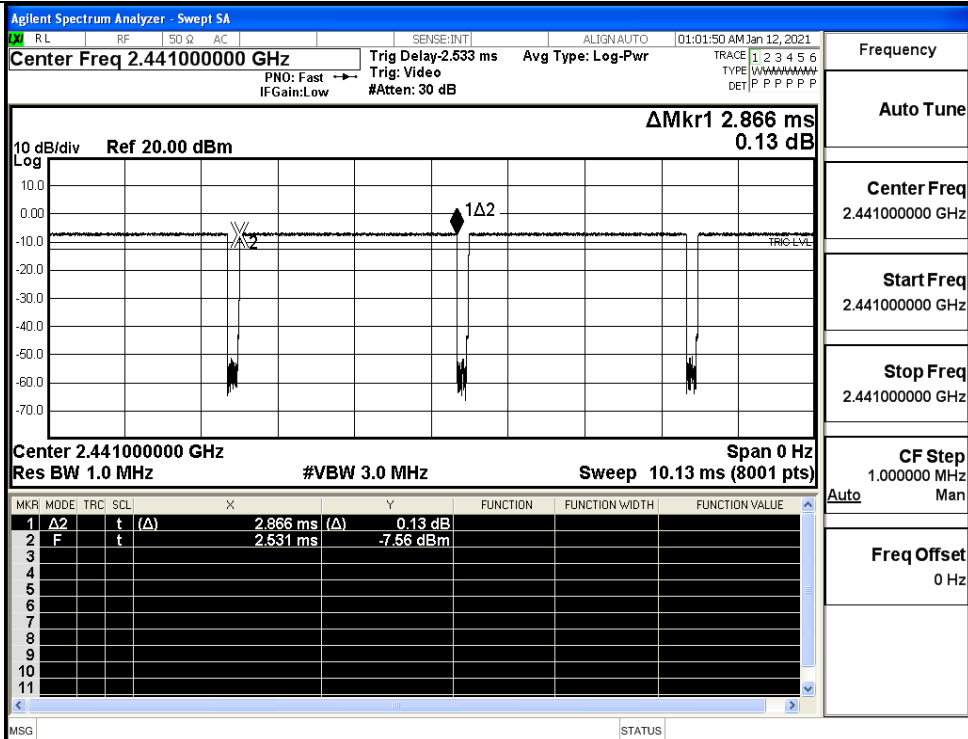
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.87	106.7	0.306	0.4	PASS
	DH5	MCH	2.87	106.7	0.306	0.4	PASS
	DH5	HCH	2.87	106.7	0.306	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.87	106.7	0.307	0.4	PASS
	2DH5	MCH	2.87	106.7	0.307	0.4	PASS
	2DH5	HCH	2.87	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.87	106.7	0.307	0.4	PASS
	3DH5	MCH	2.87	106.7	0.307	0.4	PASS
	3DH5	HCH	2.87	106.7	0.307	0.4	PASS

Test Graphs

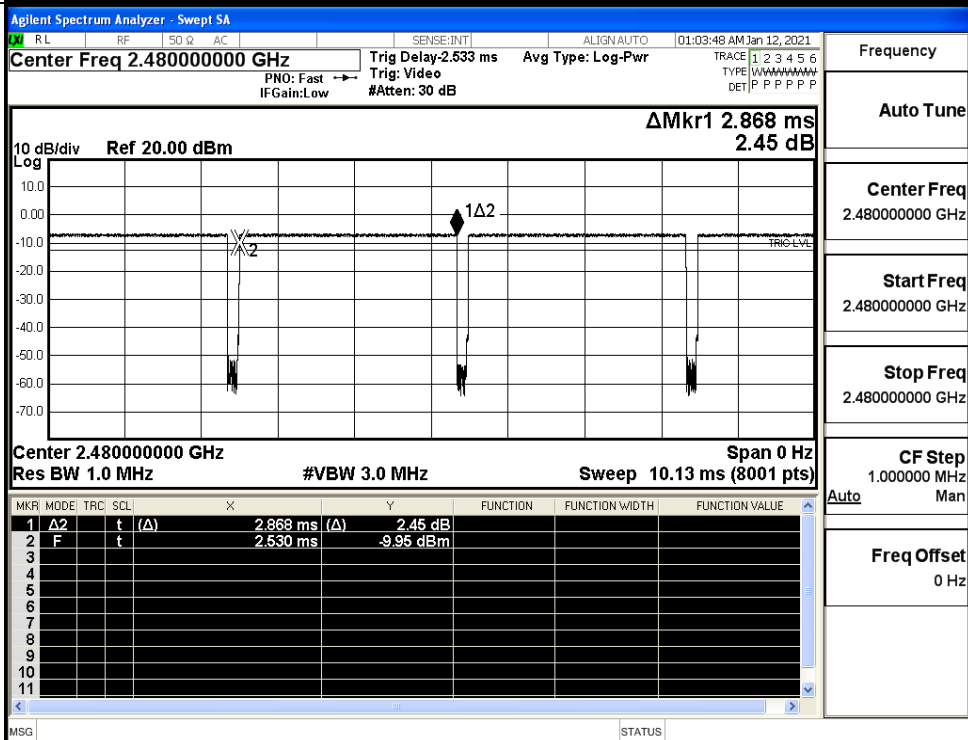
GFSK_DH5/LCH



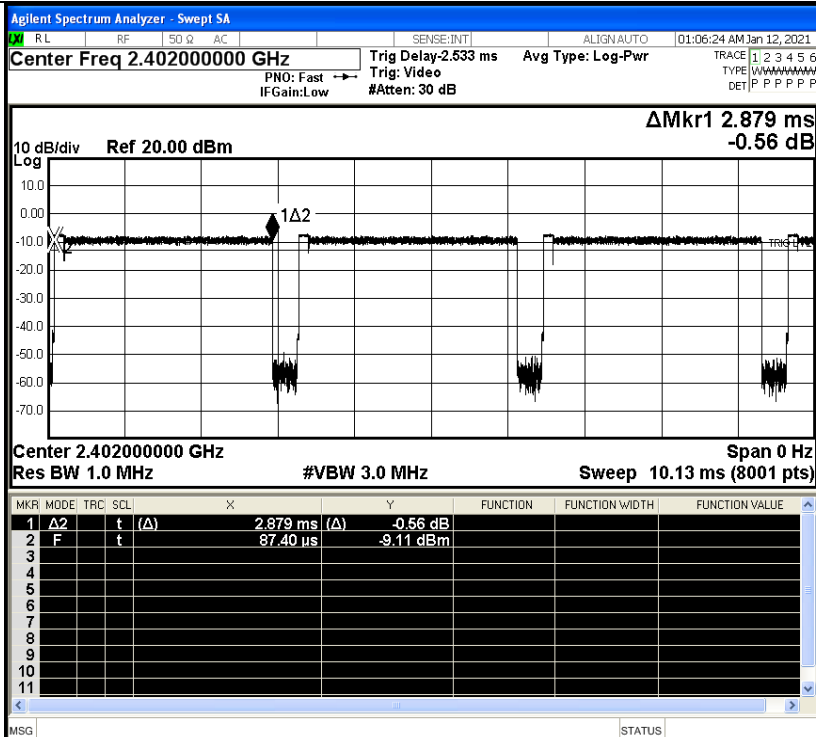
GFSK_DH5/MCH



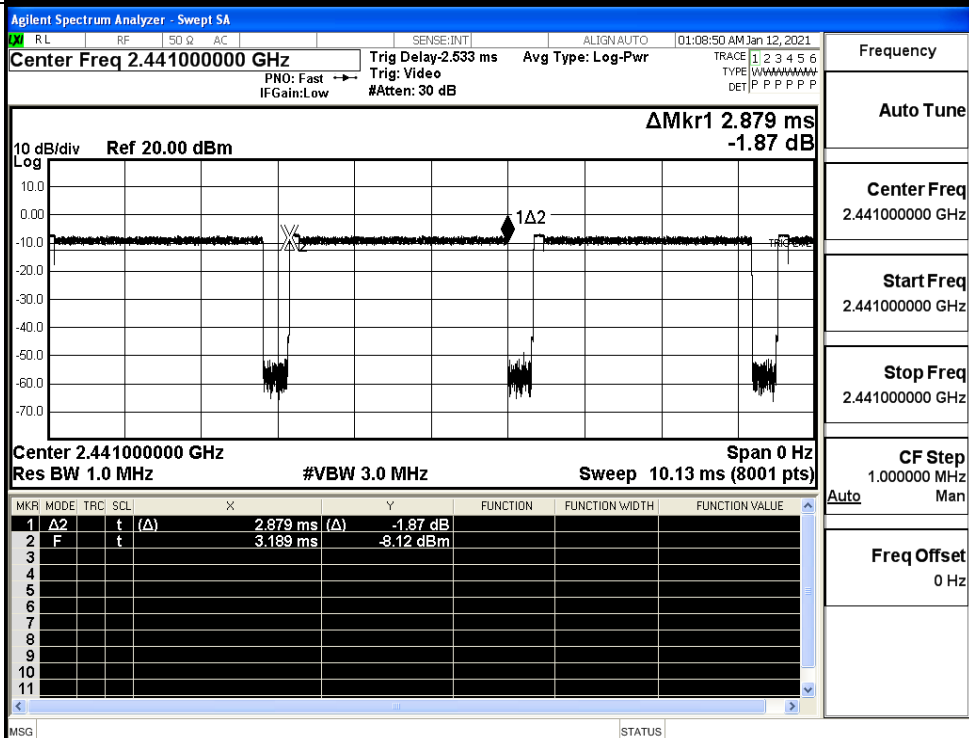
GFSK_DH5/HCH



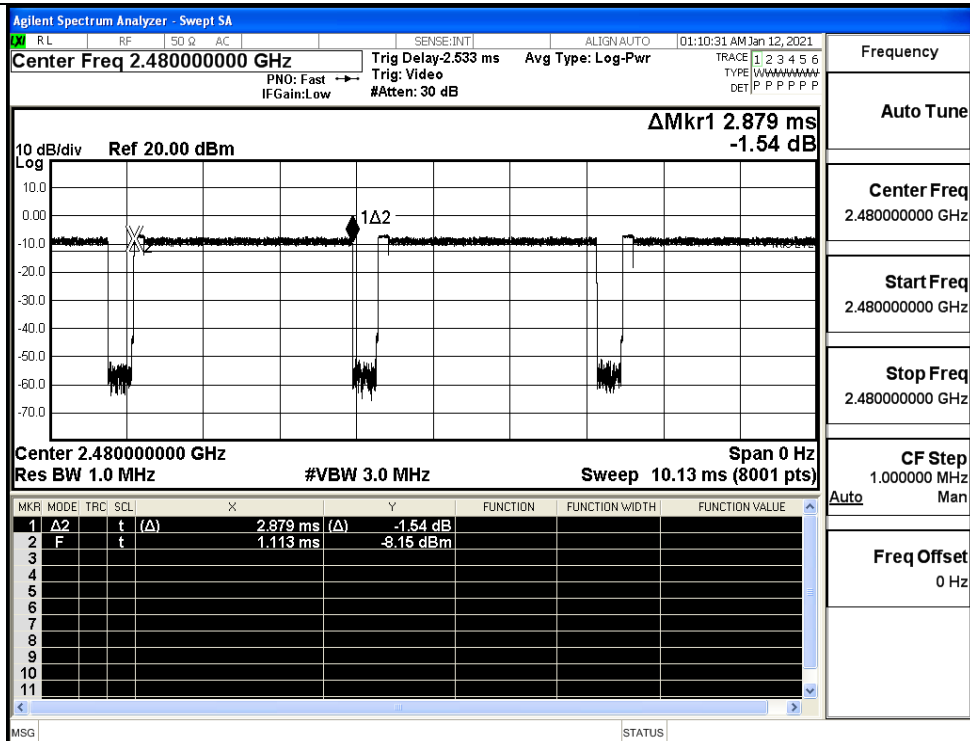
$\pi/4$ DQPSK
_2DH5/LCH



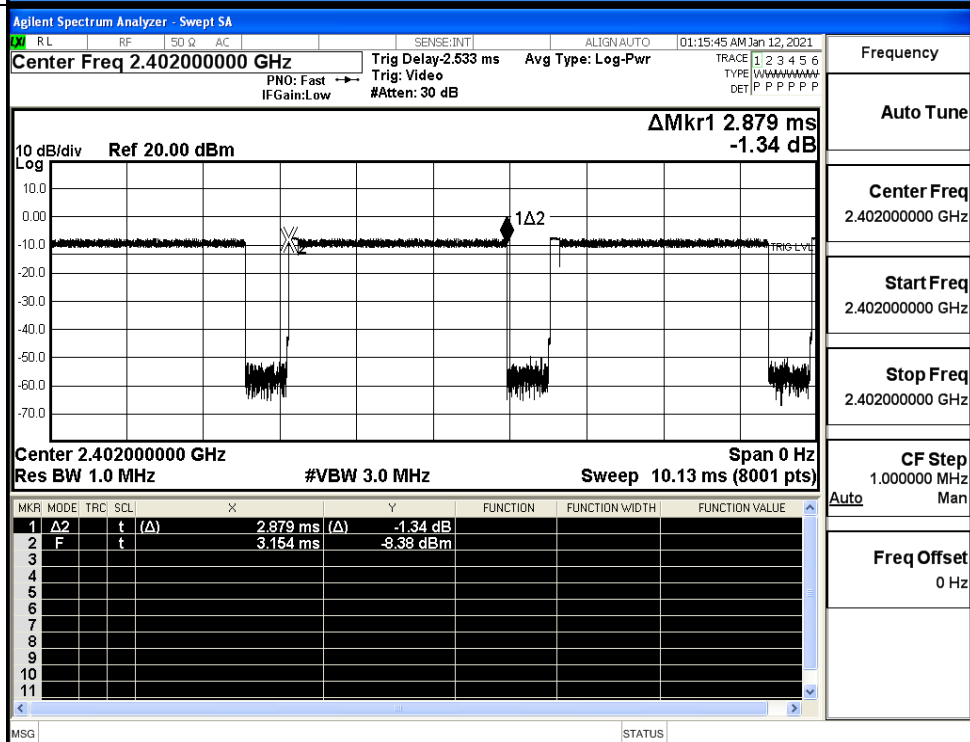
$\pi/4$ DQPSK
_2DH5/MCH



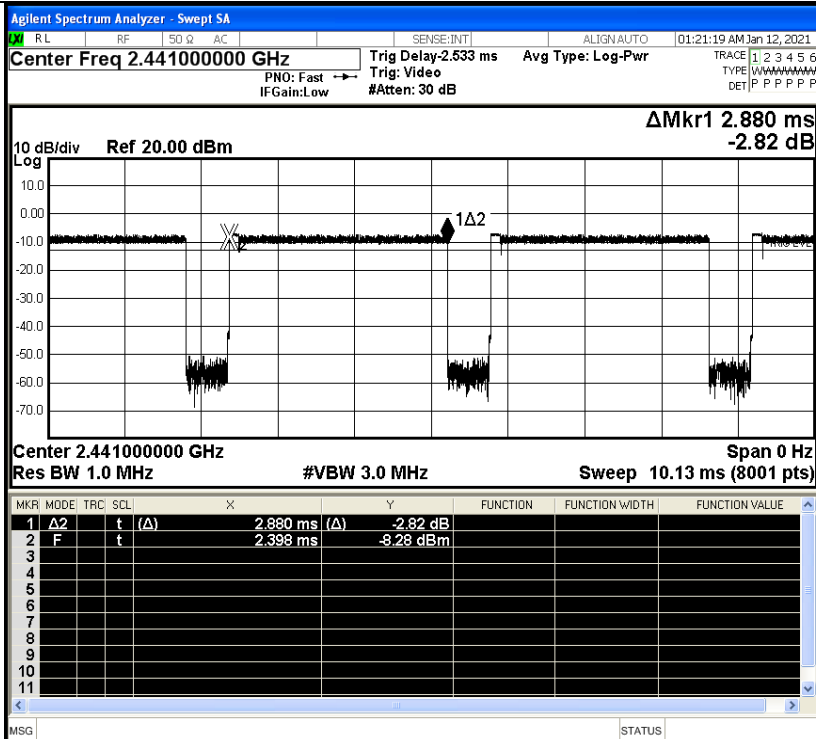
$\pi/4$ DQPSK
_2DH5/HCH



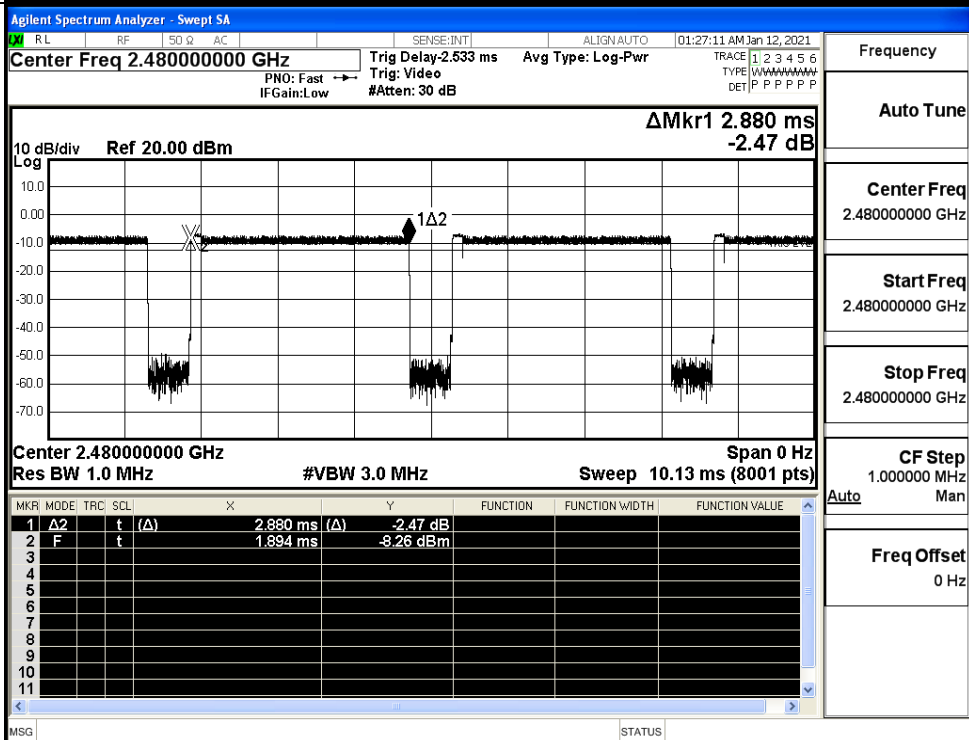
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



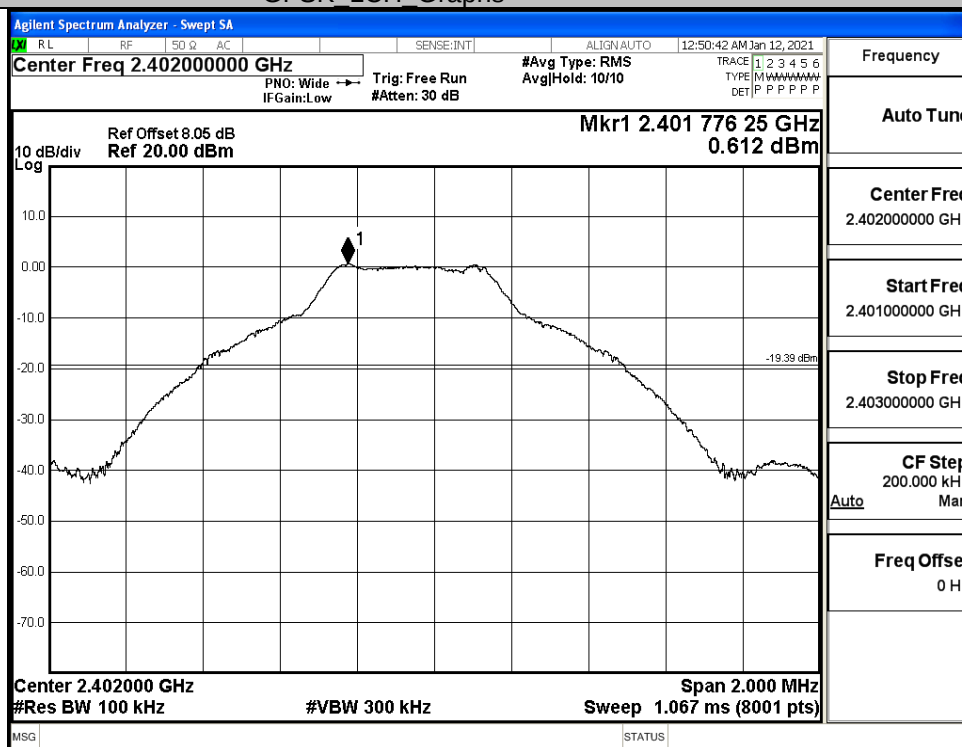
8DPSK_3DH5/HCH



A.6 RF Conducted Spurious Emissions

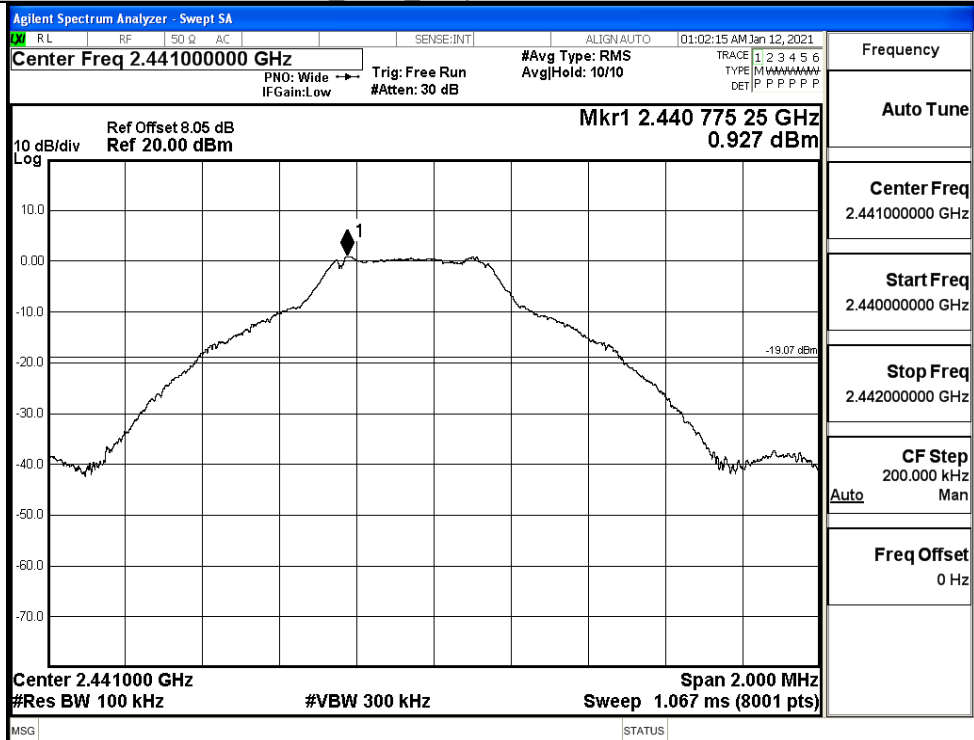
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.612	-37.267	-19.388	PASS
	MCH	0.927	-37.208	-19.073	PASS
	HCH	0.986	-37.706	-19.014	PASS
$\pi/4$ DQPSK	LCH	0.239	-37.772	-19.761	PASS
	MCH	0.747	-37.548	-19.253	PASS
	HCH	0.722	-36.753	-19.278	PASS
8DPSK	LCH	0.55	-37.812	-19.450	PASS
	MCH	0.886	-37.596	-19.114	PASS
	HCH	0.777	-37.809	-19.223	PASS

GFSK LCH Graphs

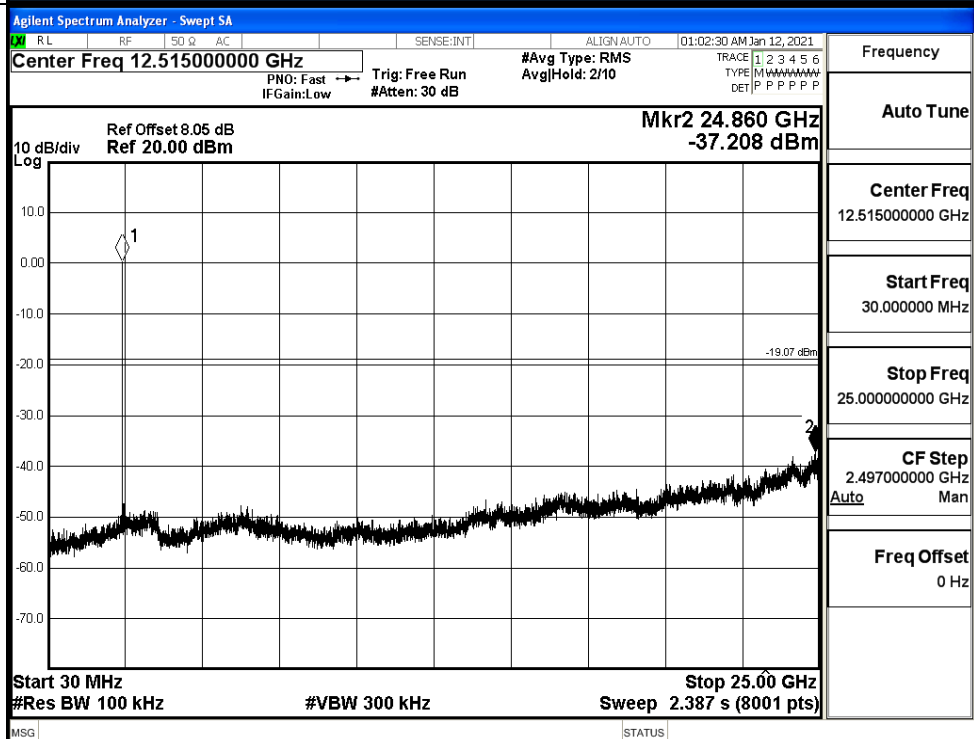


GFSK_MCH_Graphs

Pref

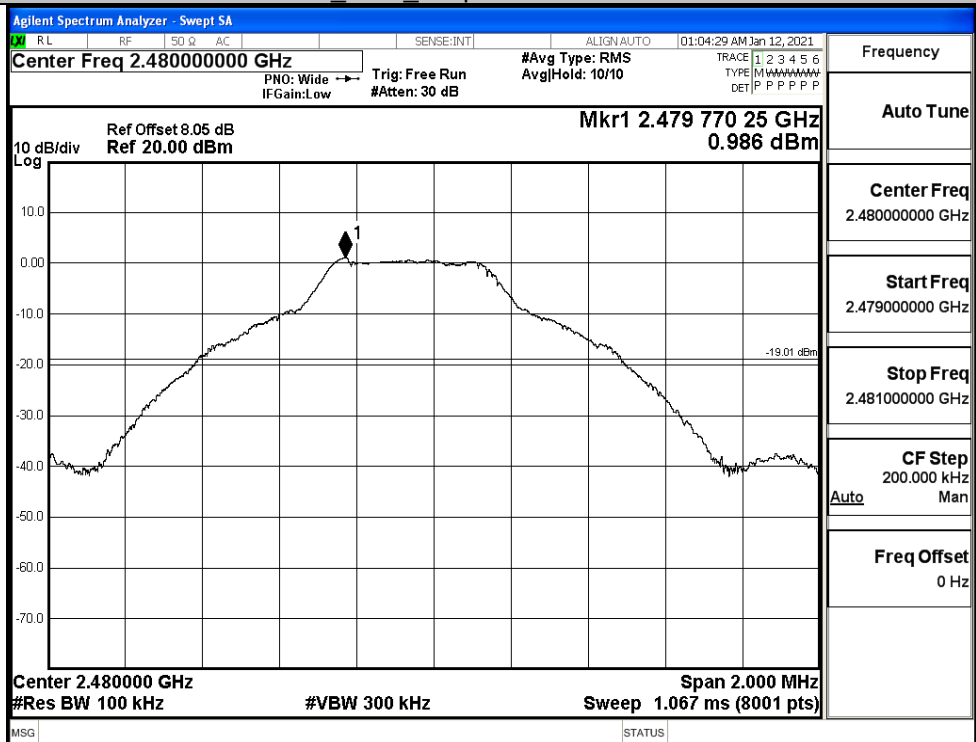


Puw

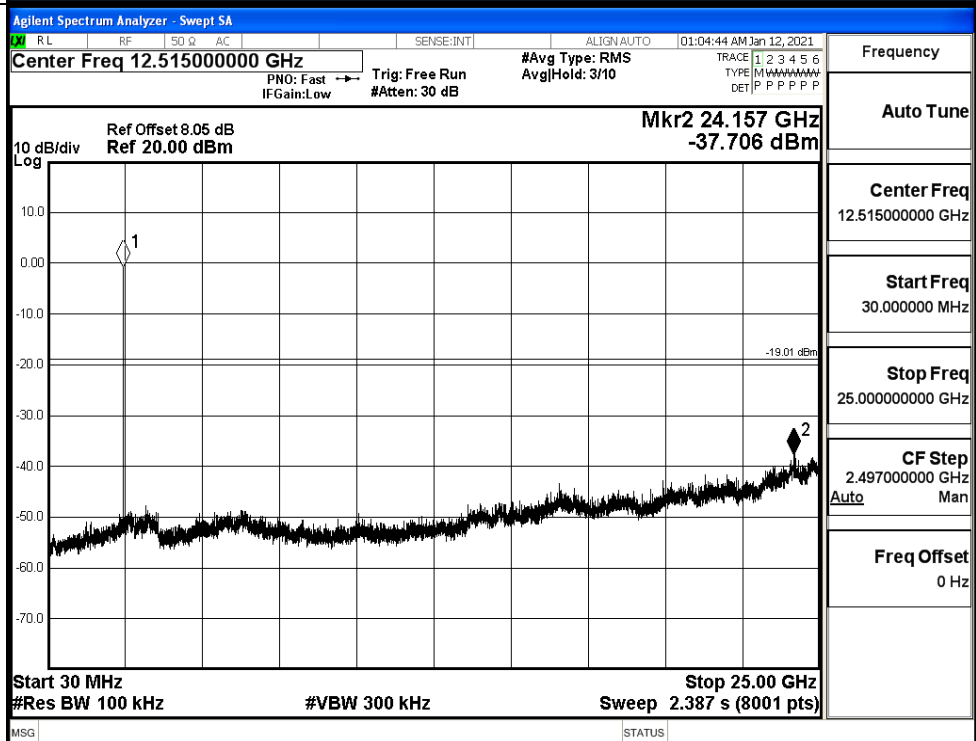


GFSK HCH Graphs

Pref

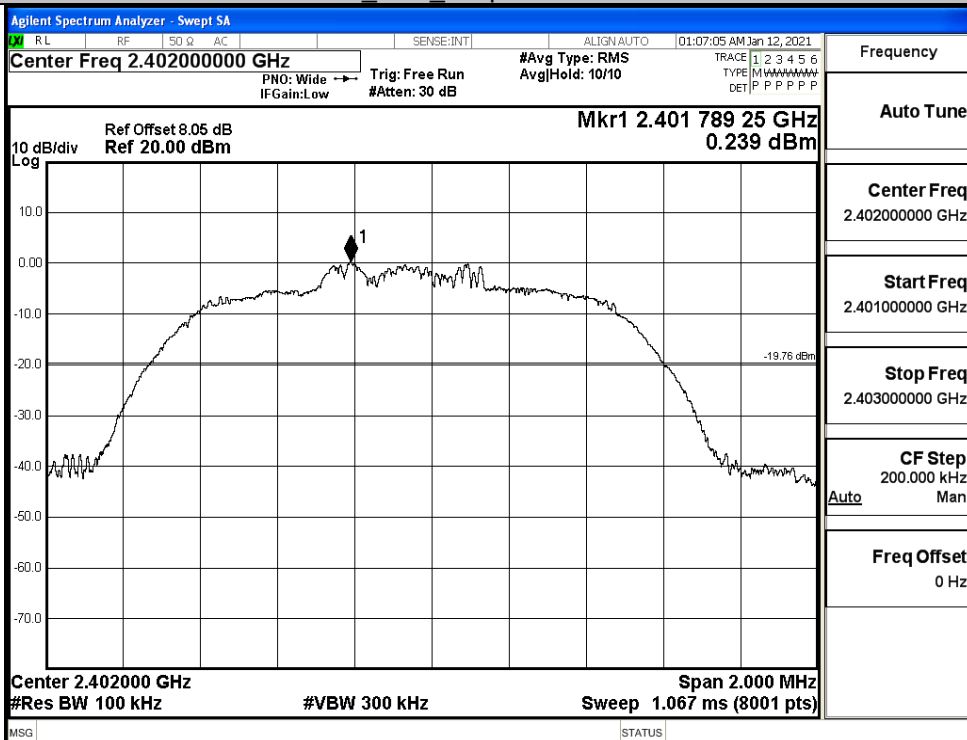


Puw

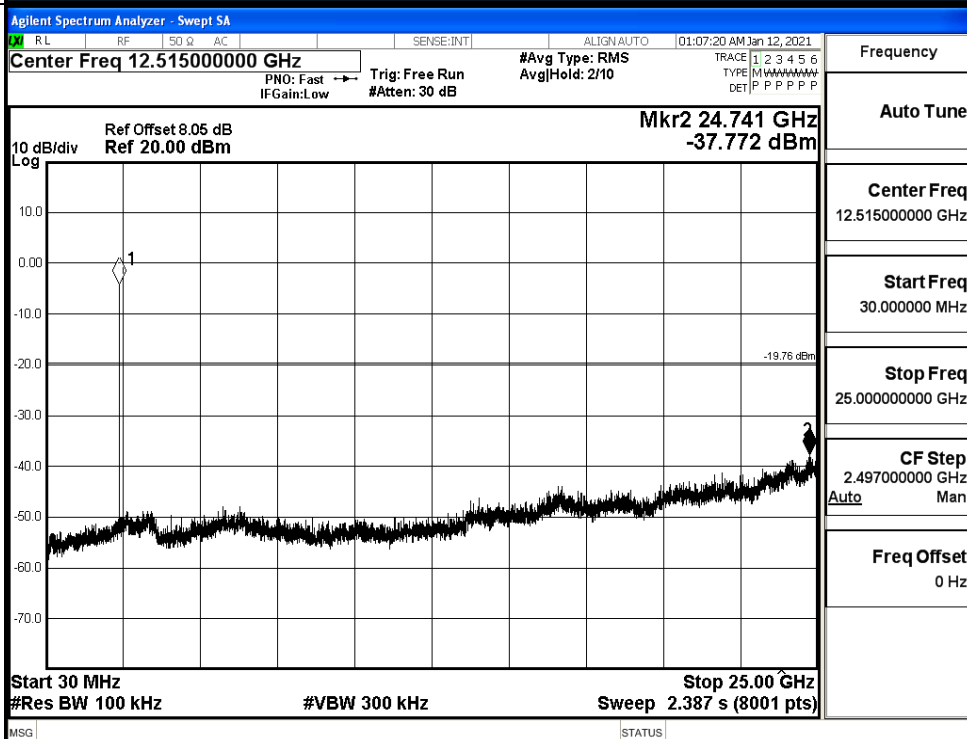


π /4DQPSK LCH_Graphs

Pref

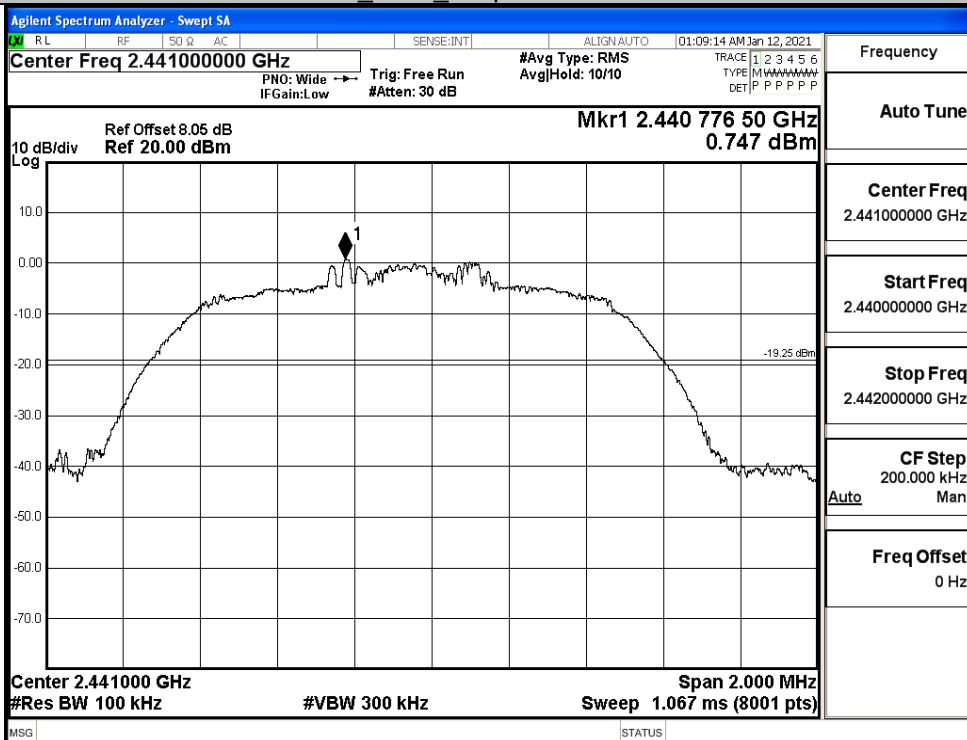


Puw

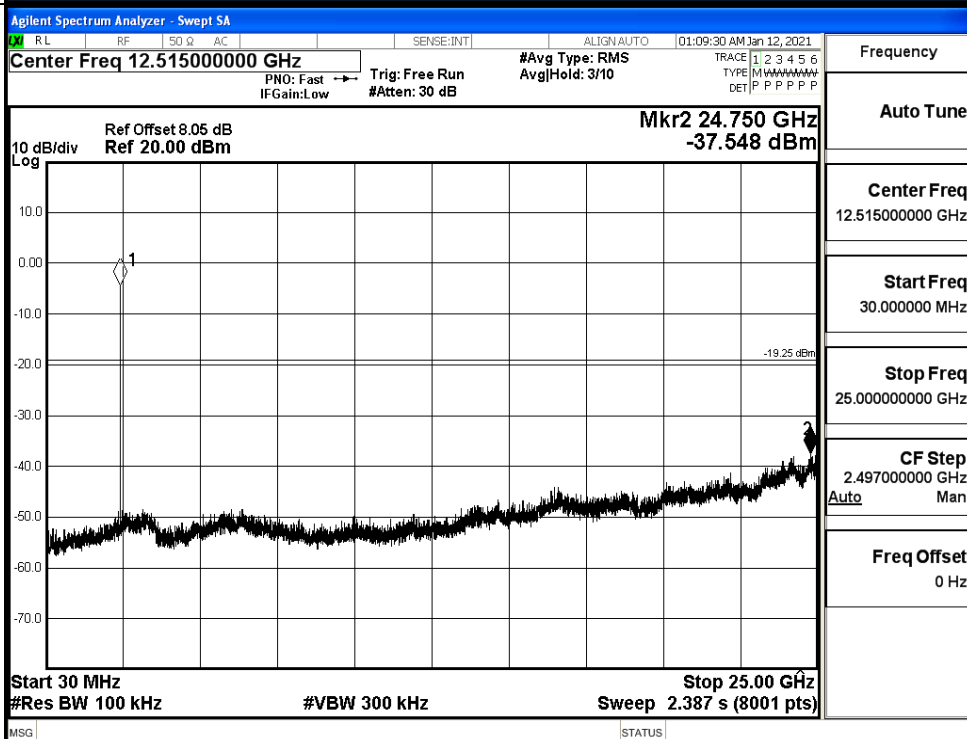


π /4DQPSK_MCH_Graphs

Pref

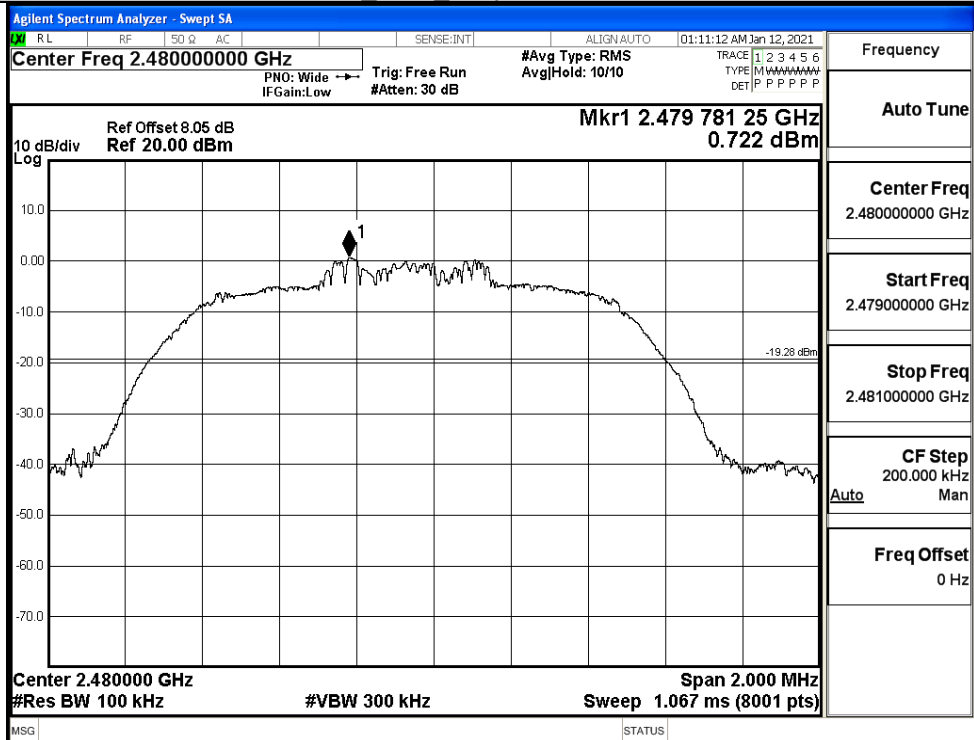


Puw

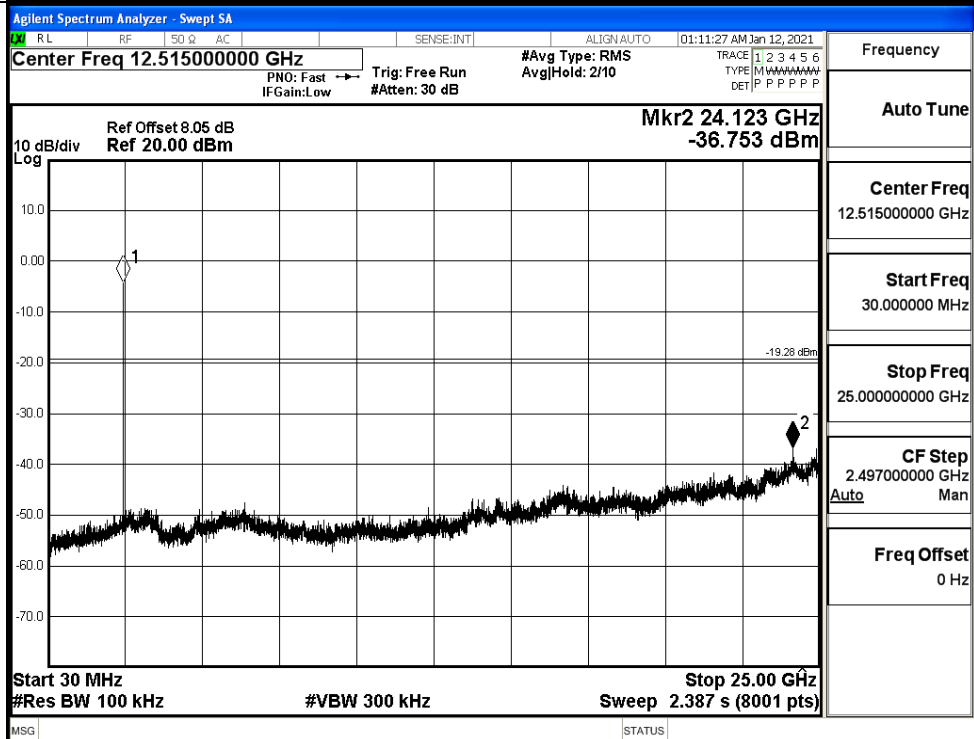


$\pi/4$ DQPSK_HCH_Graphs

Pref

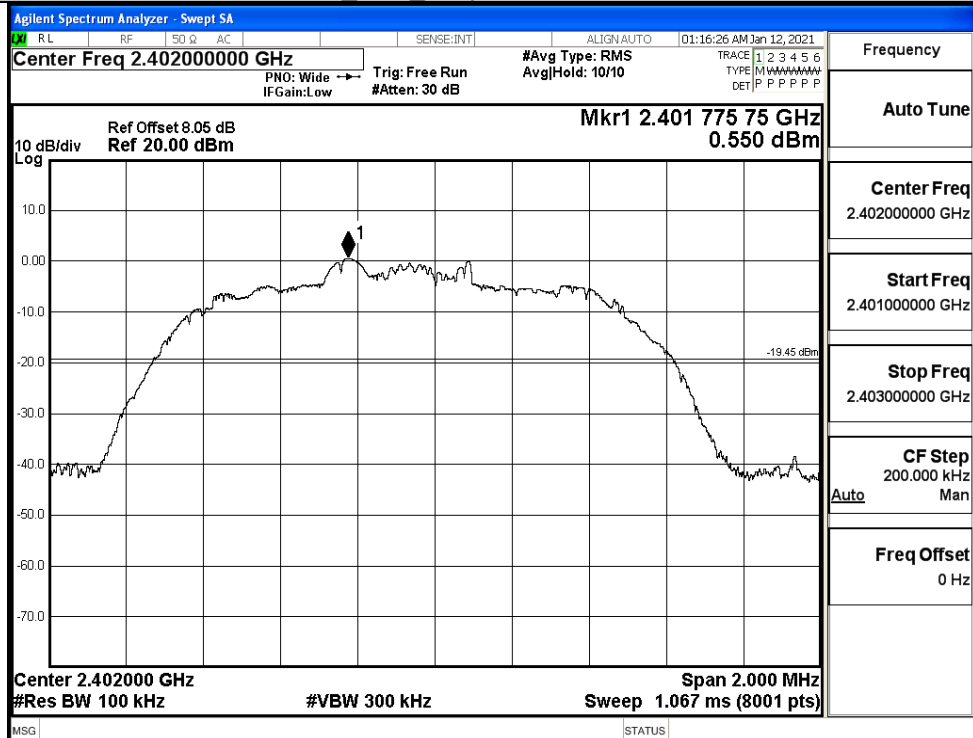


Puw

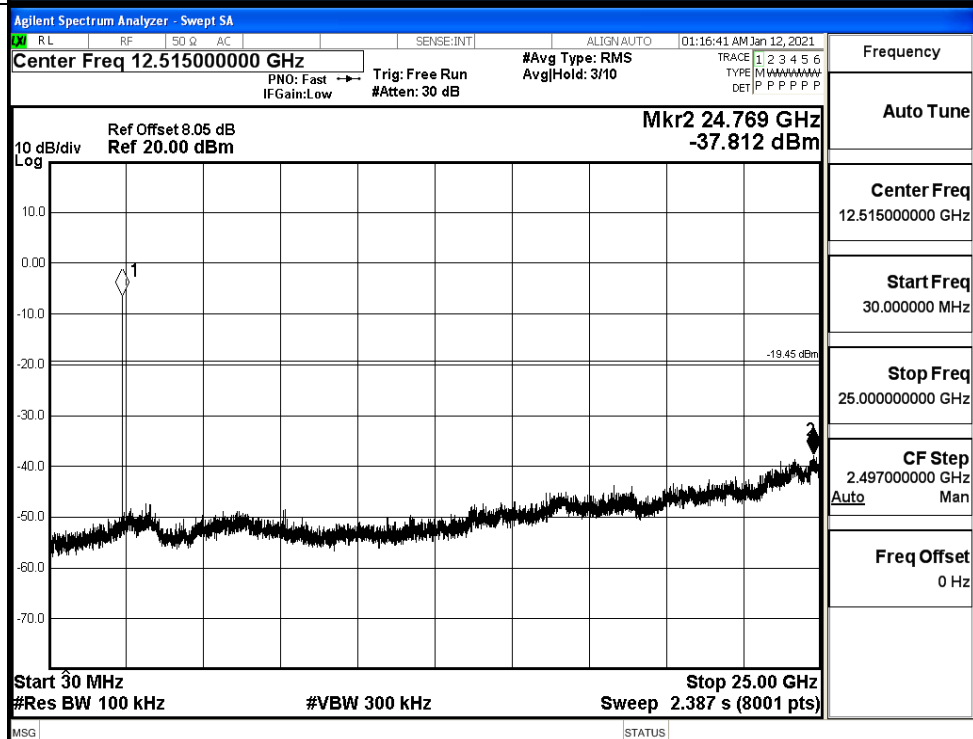


8DPSK_LCH_Graphs

Pref

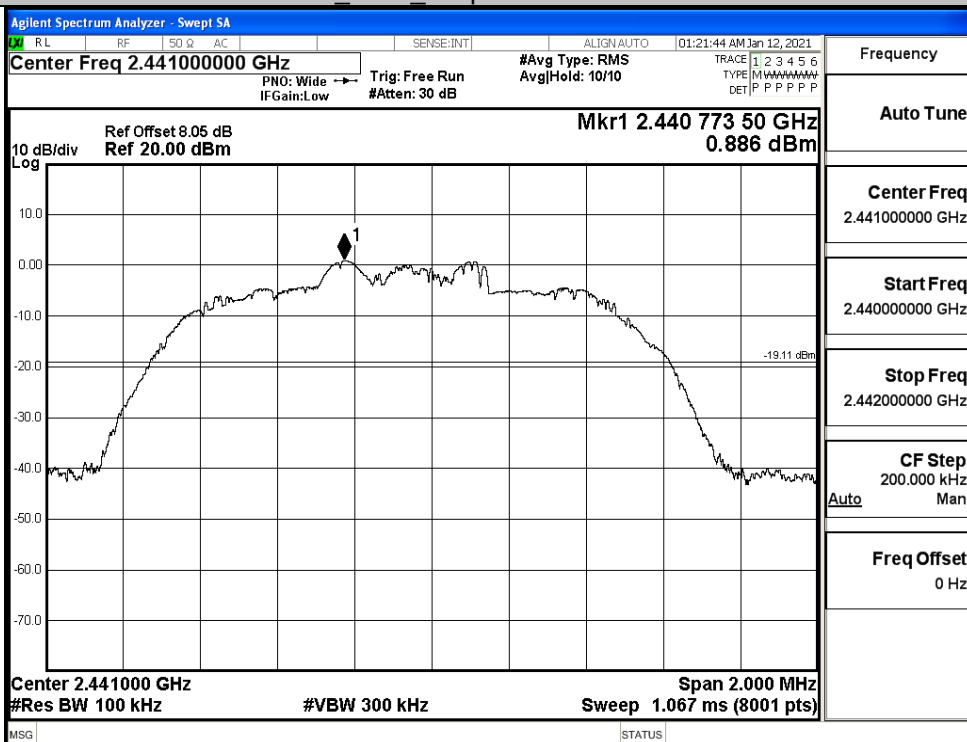


Puw

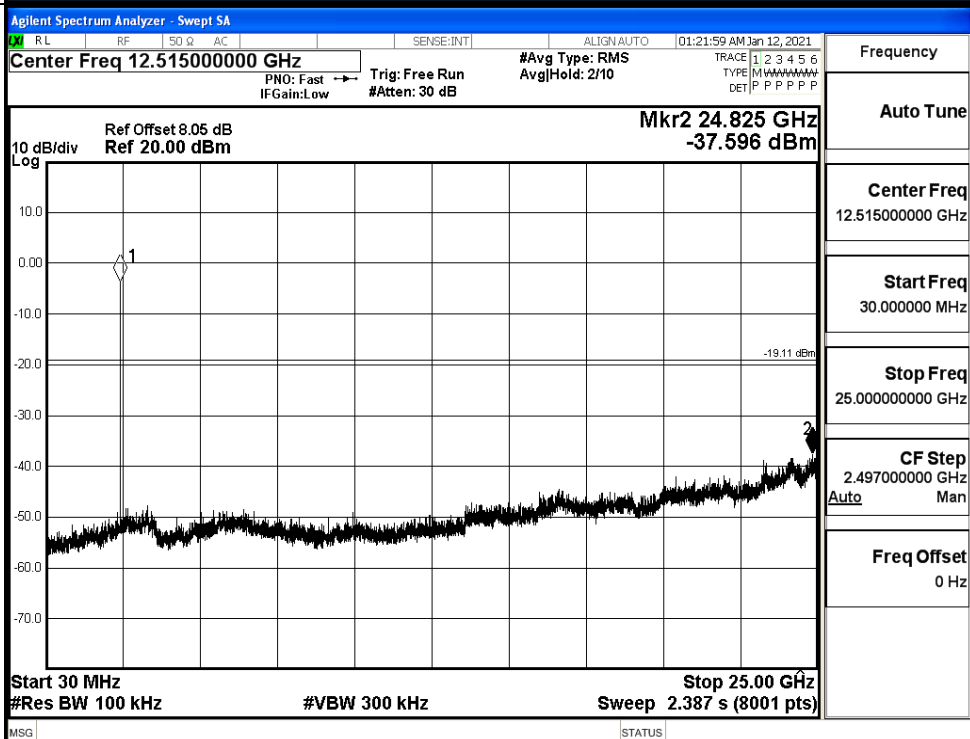


8DPSK_MCH_Graphs

Pref

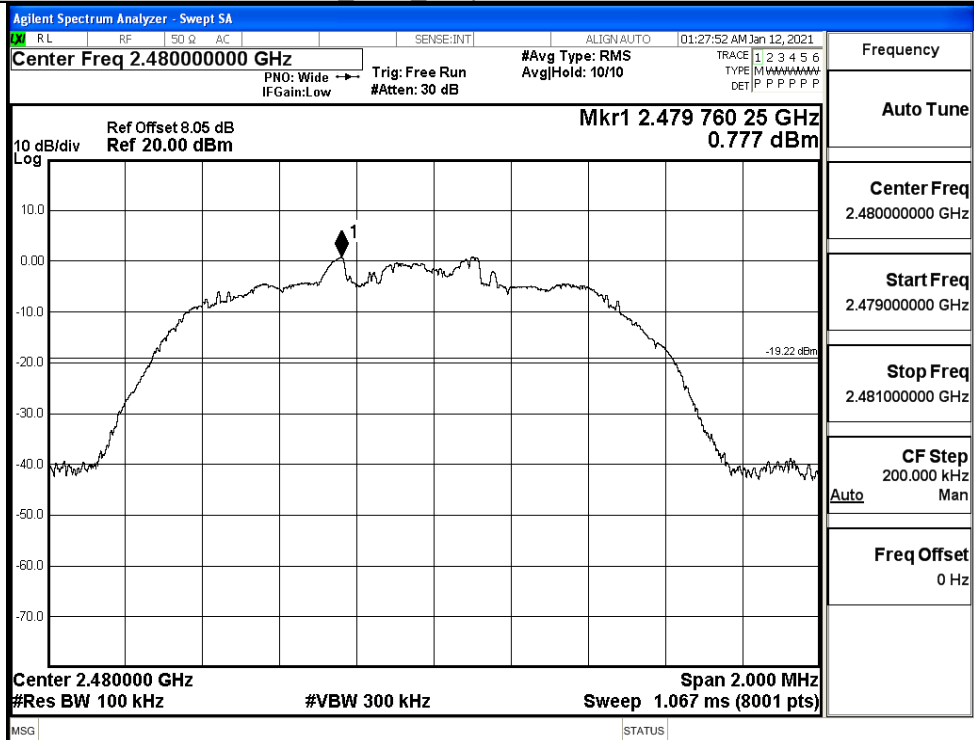


Puw

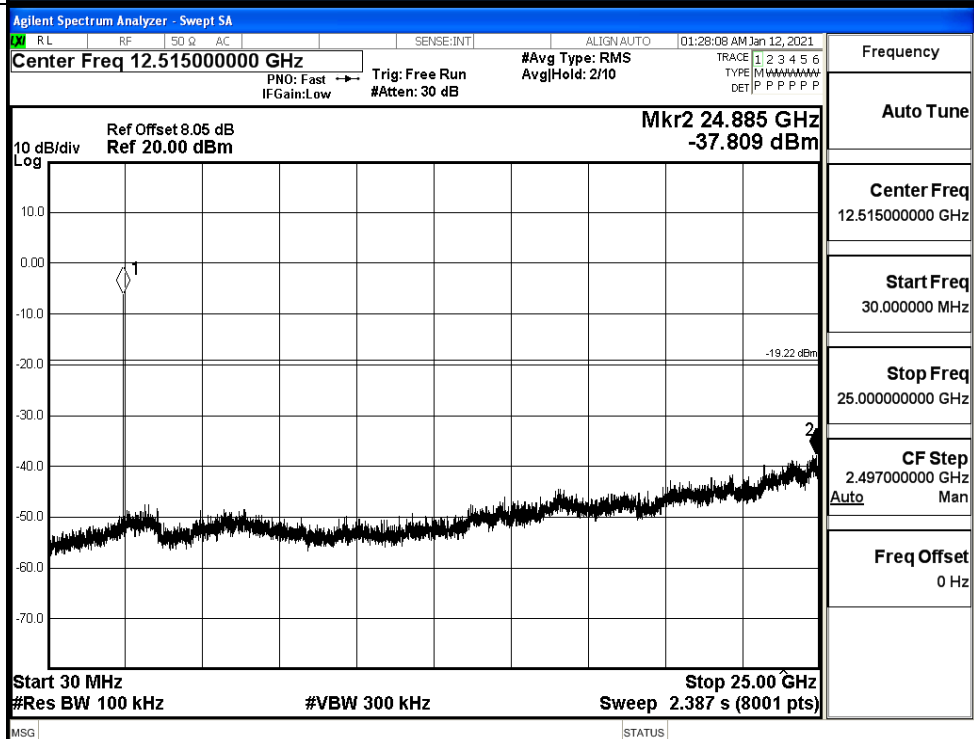


8DPSK_HCH_Graphs

Pref



Puw

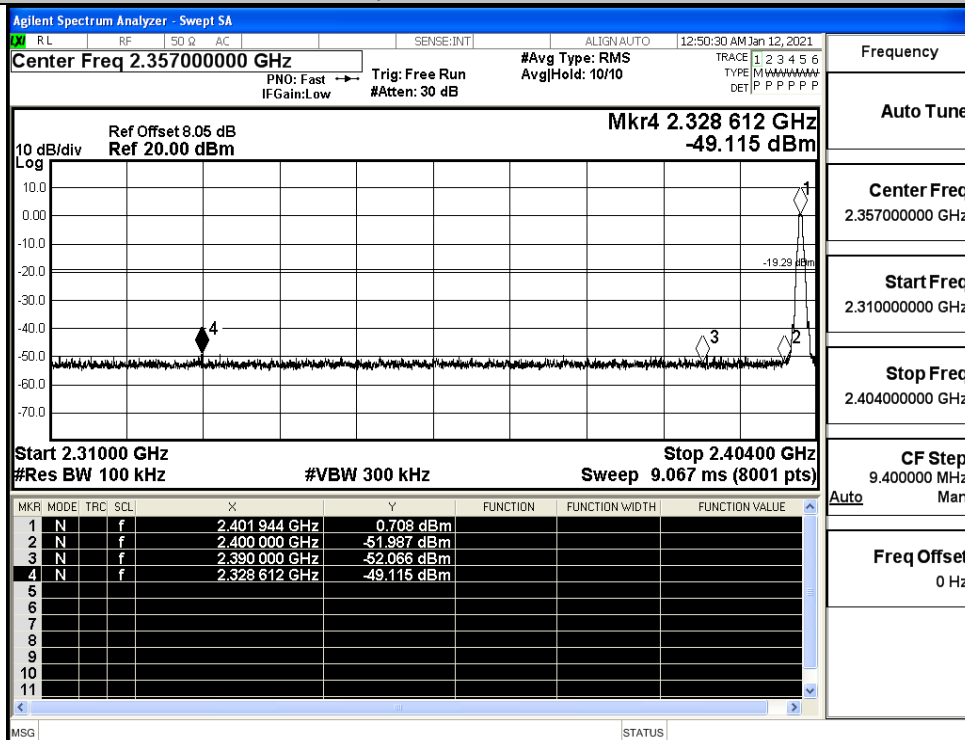


A.7 Band-edge for RF Conducted Emissions

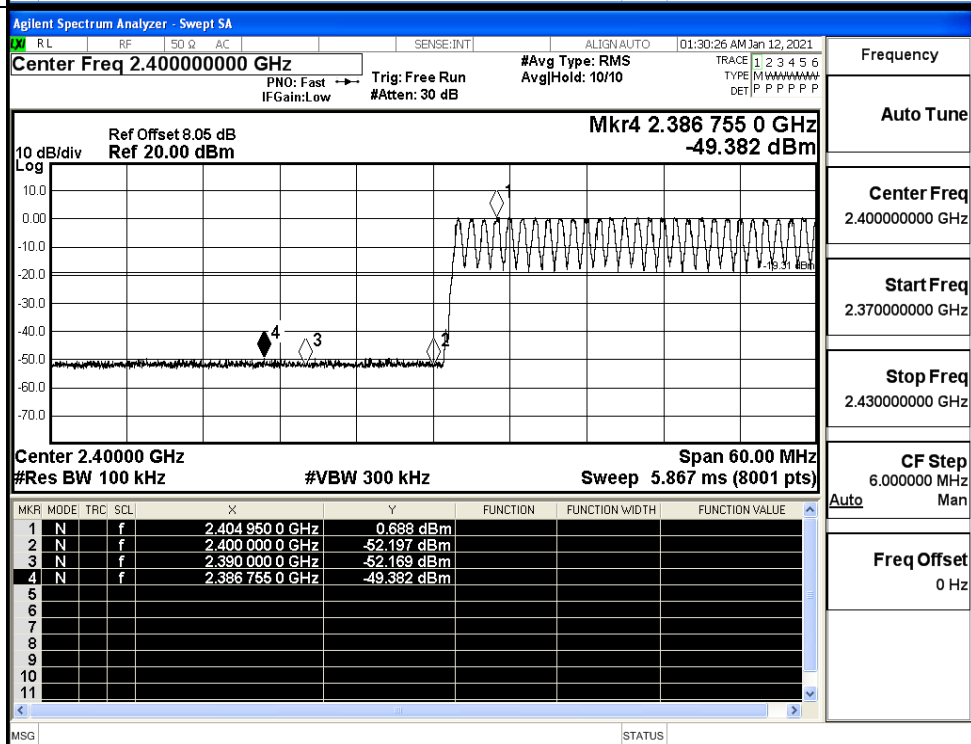
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	0.708	Off	-49.115	-19.29	PASS
			0.688	On	-49.382	-19.31	PASS
	HCH	2480	1.059	Off	-49.167	-18.94	PASS
			1.065	On	-48.854	-18.94	PASS
$\pi/4$ DQPSK	LCH	2402	-0.416	Off	-49.454	-20.42	PASS
			0.633	On	-49.500	-19.37	PASS
	HCH	2480	0.897	Off	-48.573	-19.1	PASS
			0.524	On	-48.139	-19.48	PASS
8DPSK	LCH	2402	0.563	Off	-48.984	-19.44	PASS
			0.695	On	-48.691	-19.31	PASS
	HCH	2480	0.966	Off	-49.181	-19.03	PASS
			1.002	On	-47.562	-19	PASS

Test Graphs

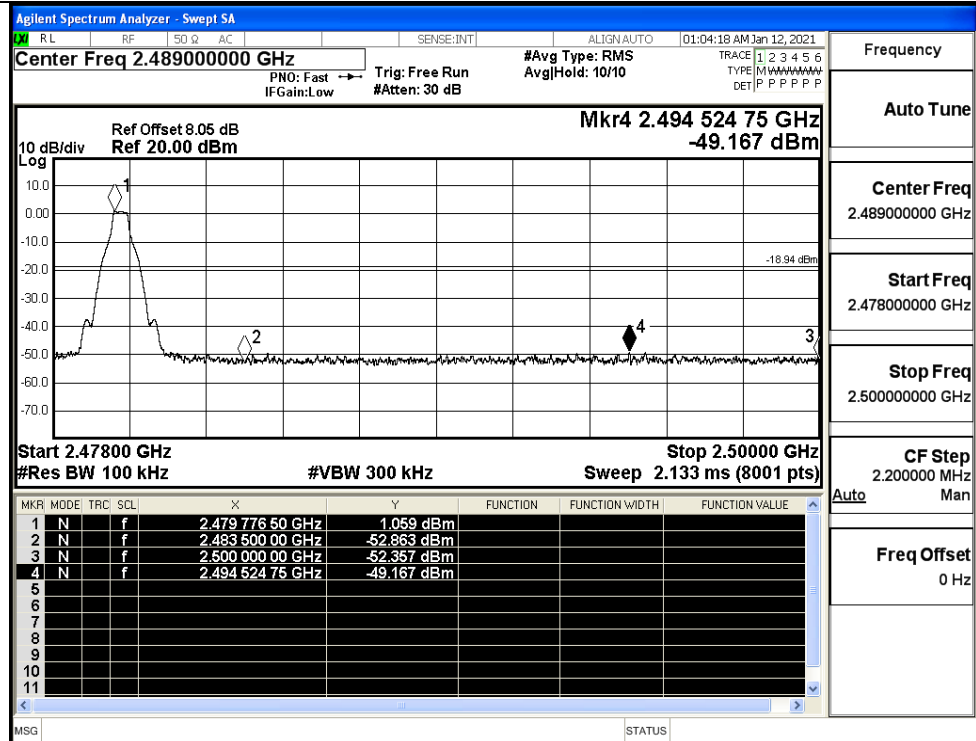
GFSK/LCH/No Hop



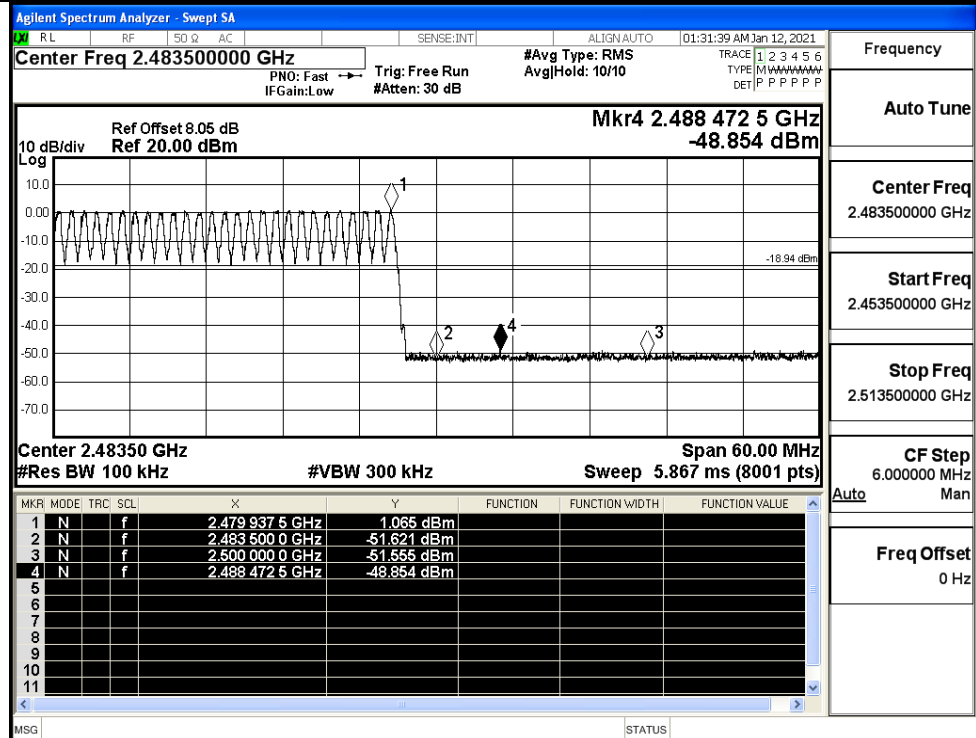
GFSK/LCH/Hop



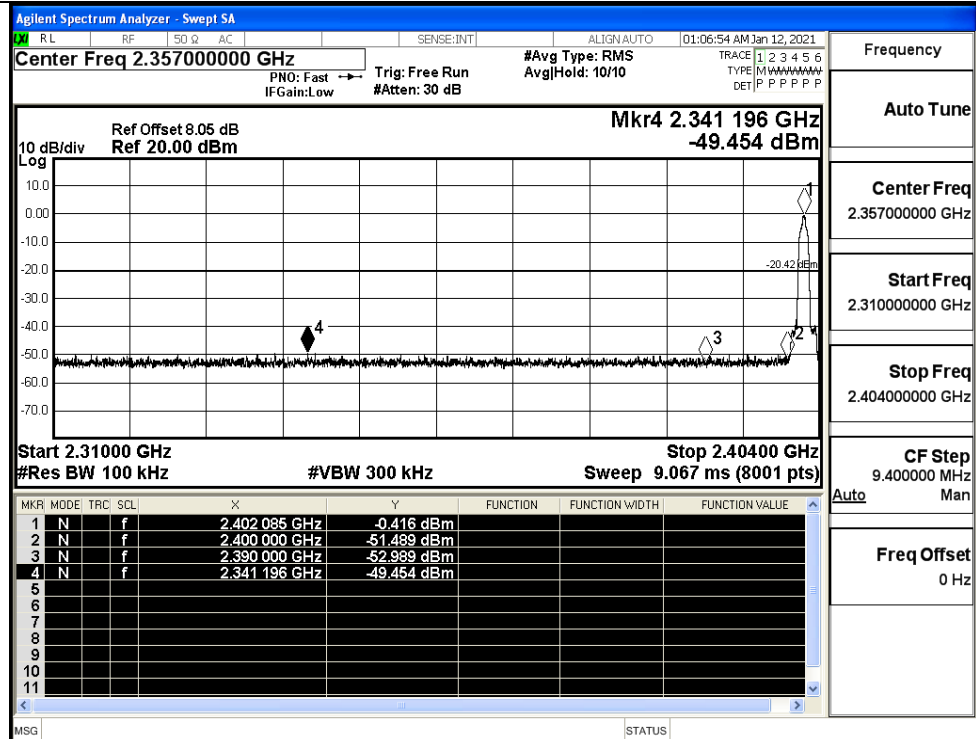
GFSK/HCH/No Hop



GFSK/HCH/Hop



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



Frequency

Auto Tune

Center Freq
2.357000000 GHz

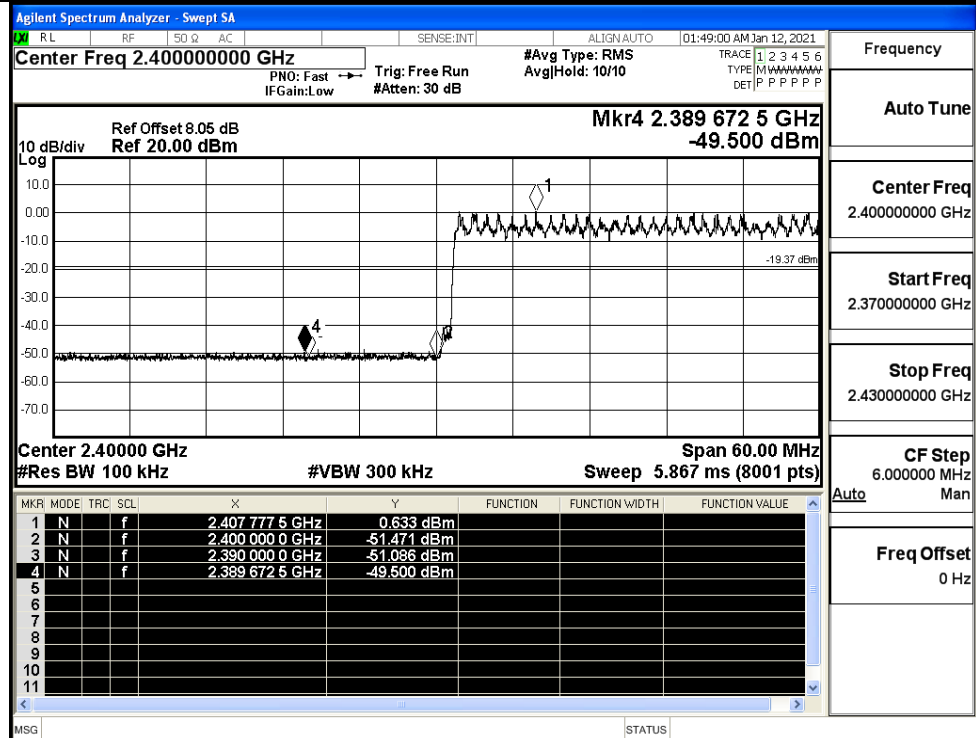
Start Freq
2.310000000 GHz

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

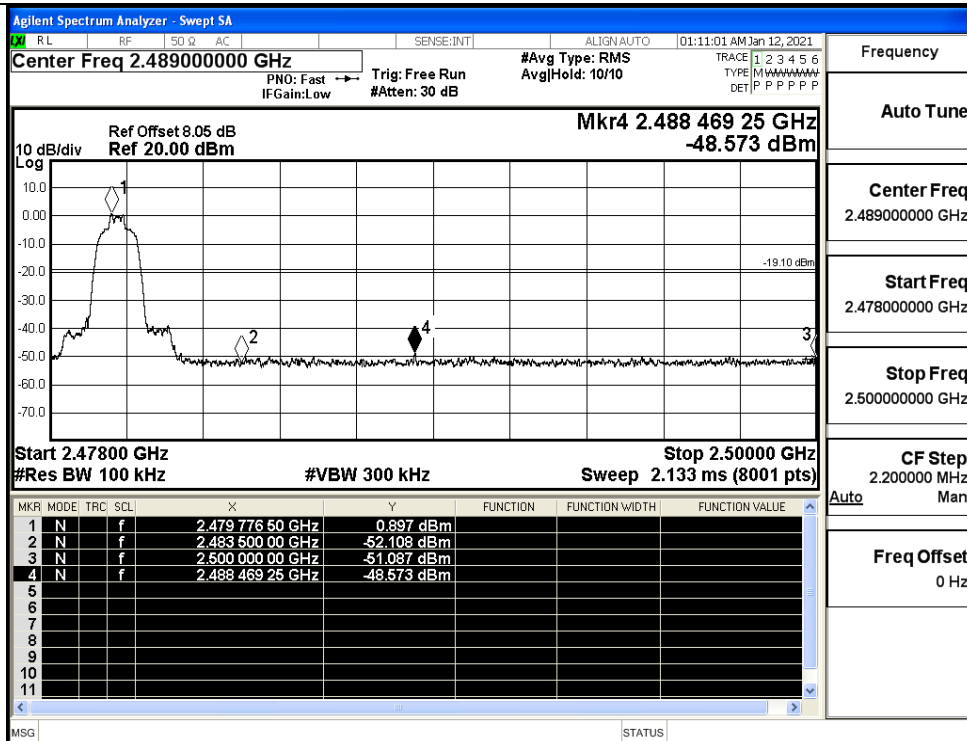
Start Freq
2.370000000 GHz

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

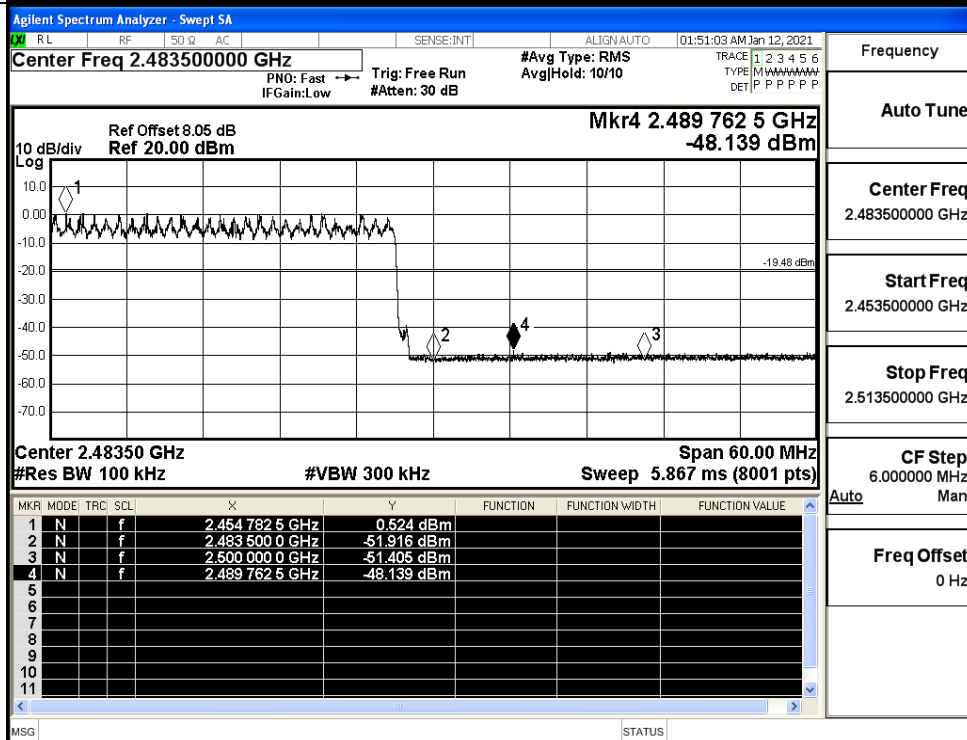
Stop Freq
2.500000000 GHz

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

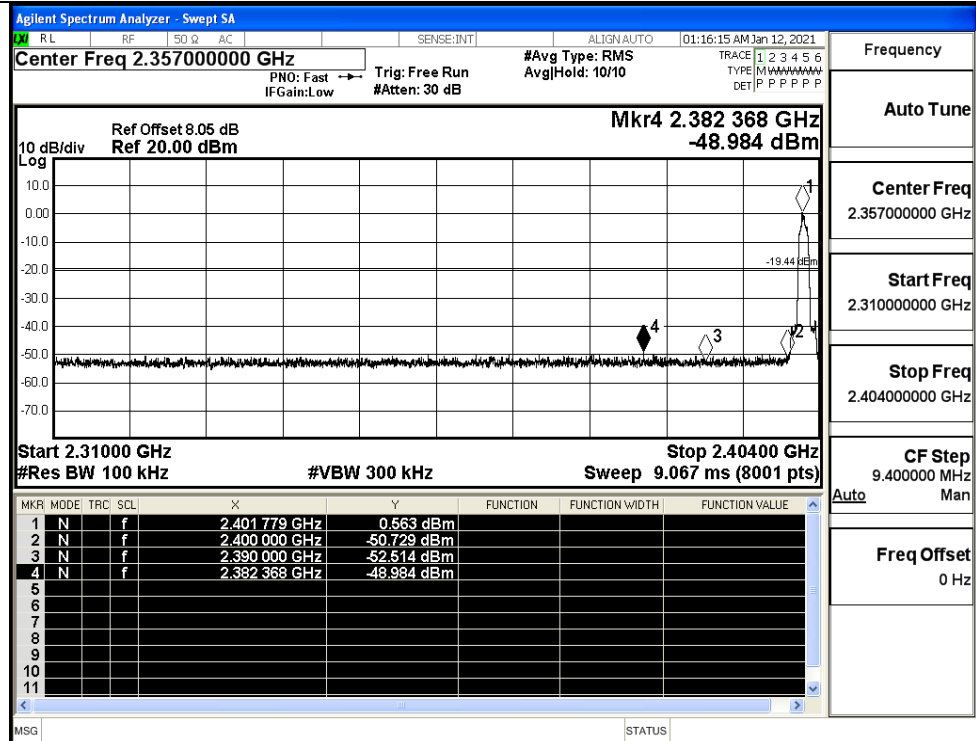
Stop Freq
2.513500000 GHz

CF Step
6.000000 MHz

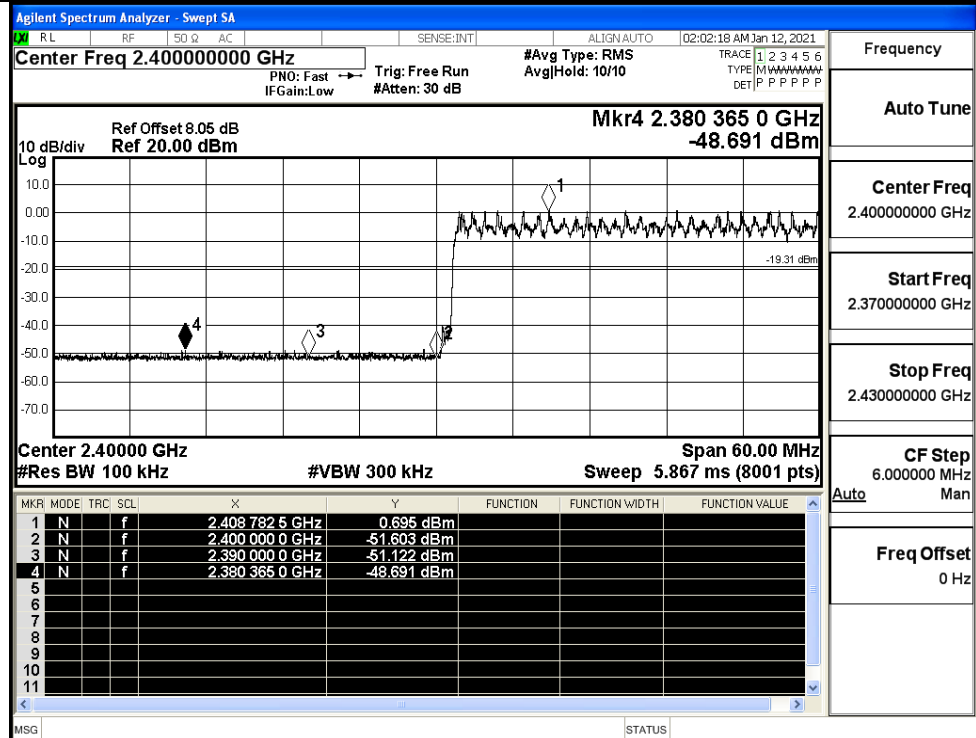
Auto Man

Freq Offset
0 Hz

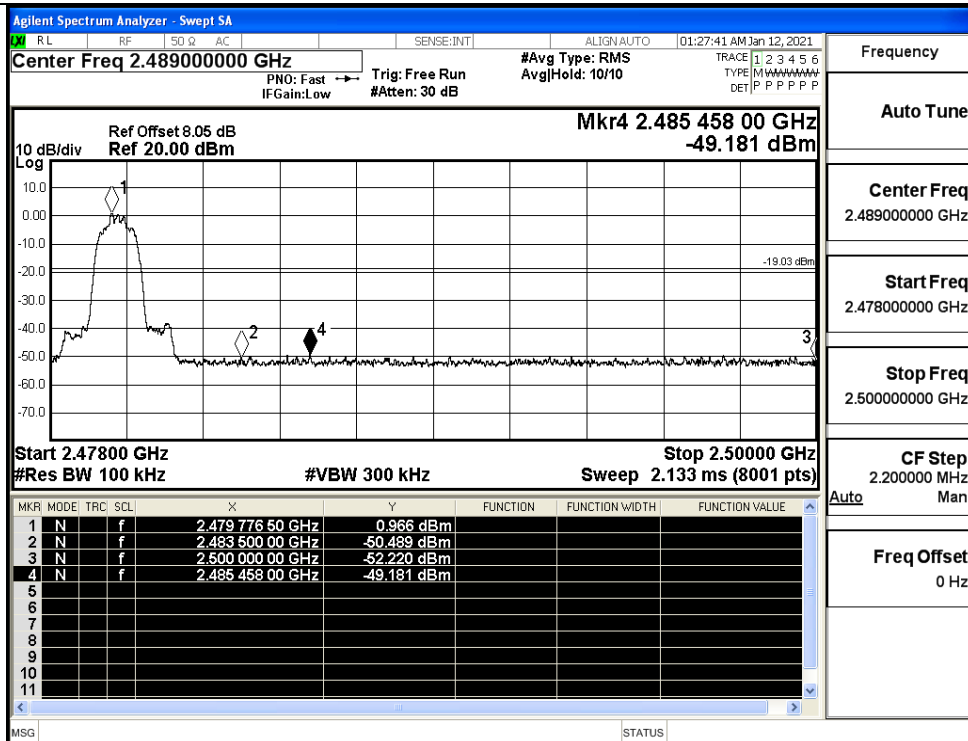
8DPSK/LCH/No Hop



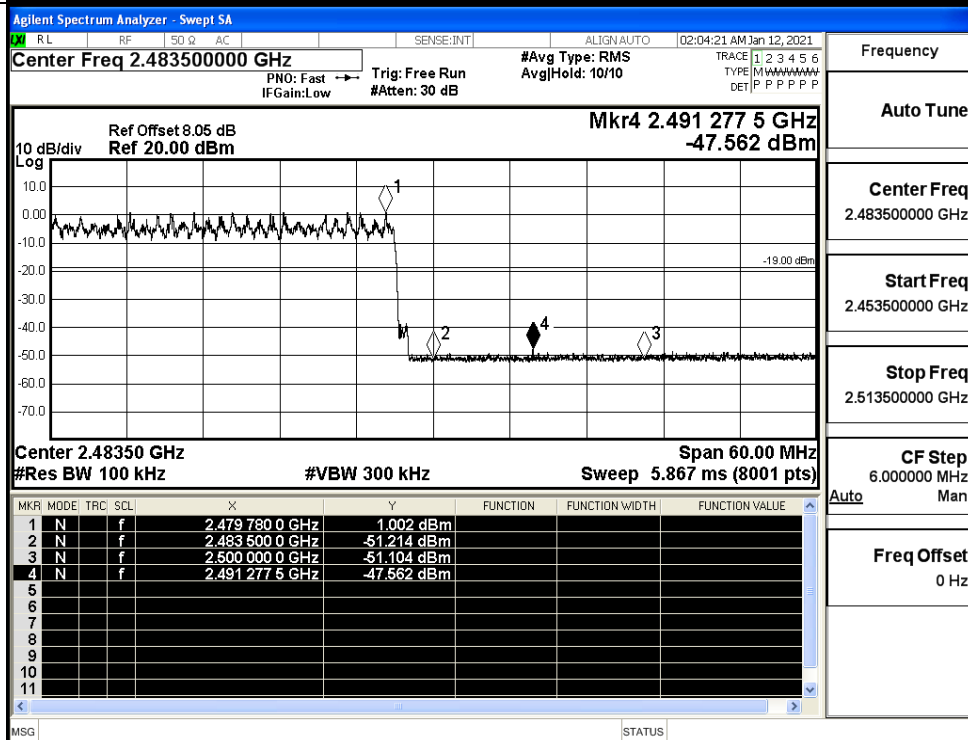
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



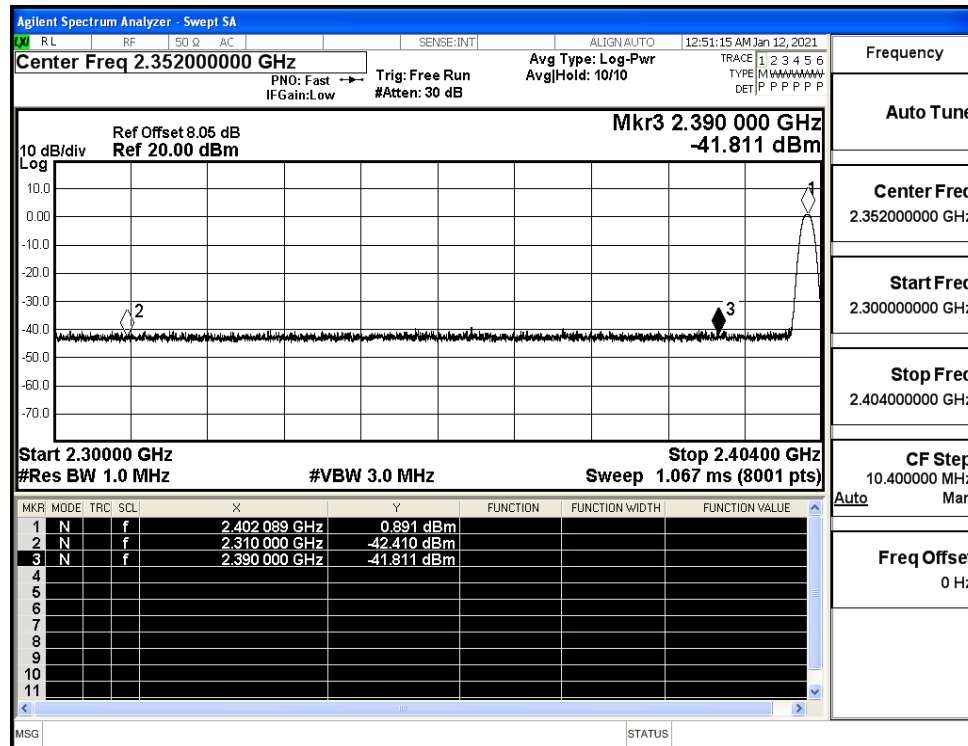
8DPSK/HCH/Hop



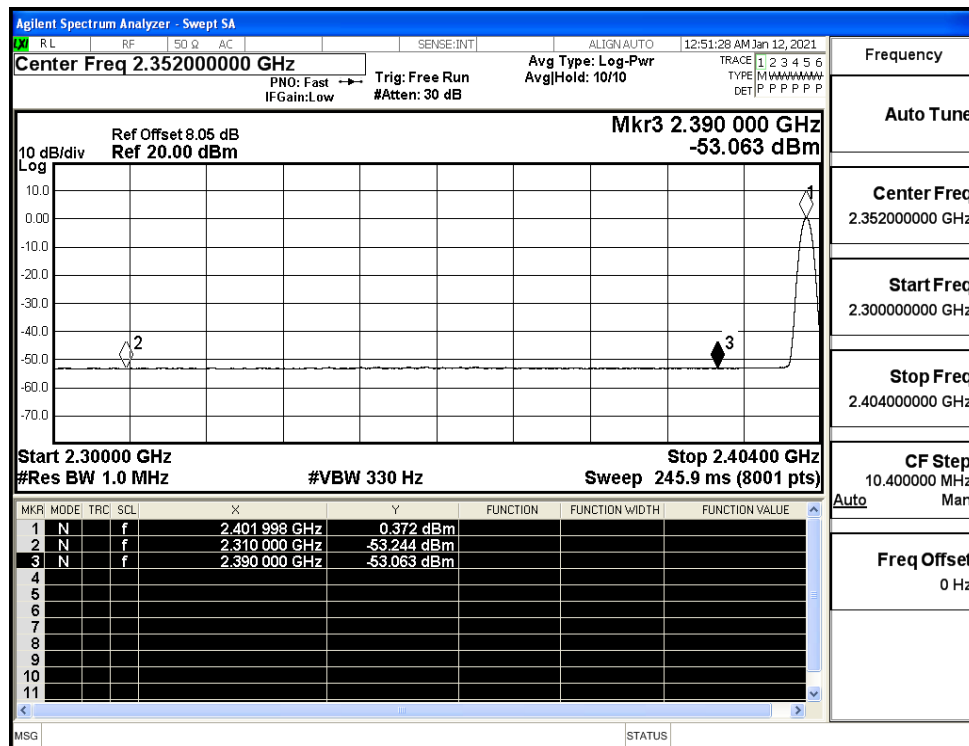
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-42.41	2.0	0	54.85	PEAK	74	PASS
	Off	2310.0	-53.24	2.0	0	44.02	AV	54	PASS
	Off	2390.0	-41.81	2.0	0	55.45	PEAK	74	PASS
	Off	2390.0	-53.06	2.0	0	44.20	AV	54	PASS
	Off	2483.5	-42.08	2.0	0	55.18	PEAK	74	PASS
	Off	2483.5	-52.47	2.0	0	44.79	AV	54	PASS
	Off	2500.0	-41.91	2.0	0	55.35	PEAK	74	PASS
	Off	2500.0	-52.50	2.0	0	44.76	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.22	2.0	0	54.04	PEAK	74	PASS
	Off	2310.0	-53.23	2.0	0	44.03	AV	54	PASS
	Off	2390.0	-40.83	2.0	0	56.43	PEAK	74	PASS
	Off	2390.0	-53.14	2.0	0	44.12	AV	54	PASS
	Off	2483.5	-41.93	2.0	0	55.33	PEAK	74	PASS
	Off	2483.5	-52.41	2.0	0	44.85	AV	54	PASS
	Off	2500.0	-42.85	2.0	0	54.41	PEAK	74	PASS
	Off	2500.0	-52.55	2.0	0	44.71	AV	54	PASS
8DPSK	Off	2310.0	-43.46	2.0	0	53.80	PEAK	74	PASS
	Off	2310.0	-53.30	2.0	0	43.96	AV	54	PASS
	Off	2390.0	-42.95	2.0	0	54.31	PEAK	74	PASS
	Off	2390.0	-53.11	2.0	0	44.15	AV	54	PASS
	Off	2483.5	-41.47	2.0	0	55.79	PEAK	74	PASS
	Off	2483.5	-52.49	2.0	0	44.77	AV	54	PASS
	Off	2500.0	-43.17	2.0	0	54.09	PEAK	74	PASS
	Off	2500.0	-52.39	2.0	0	44.87	AV	54	PASS

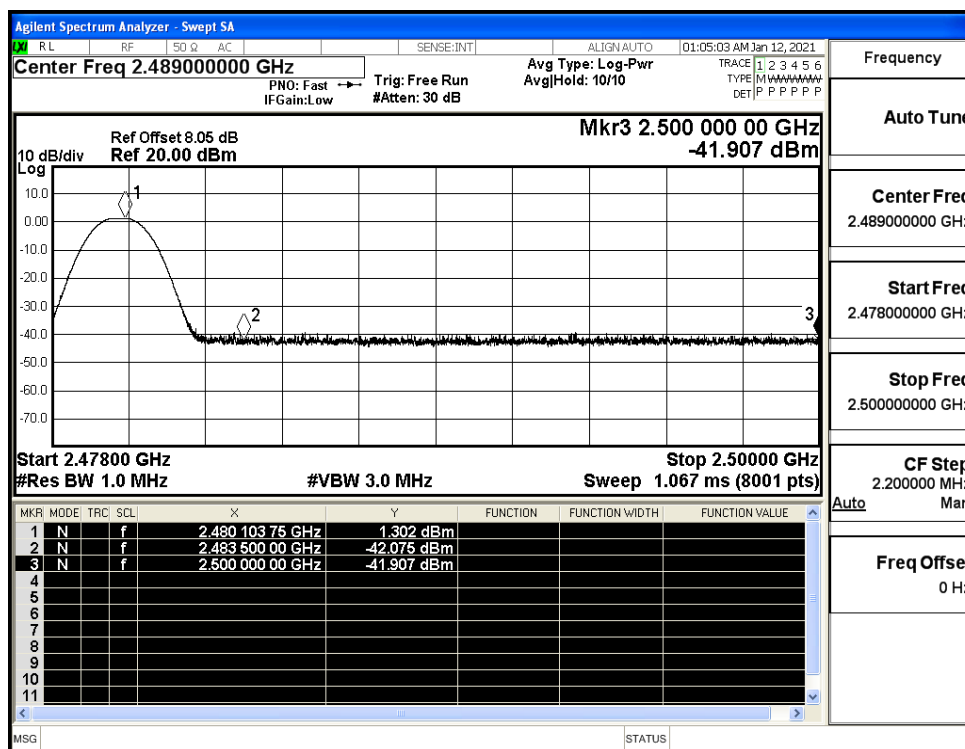
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



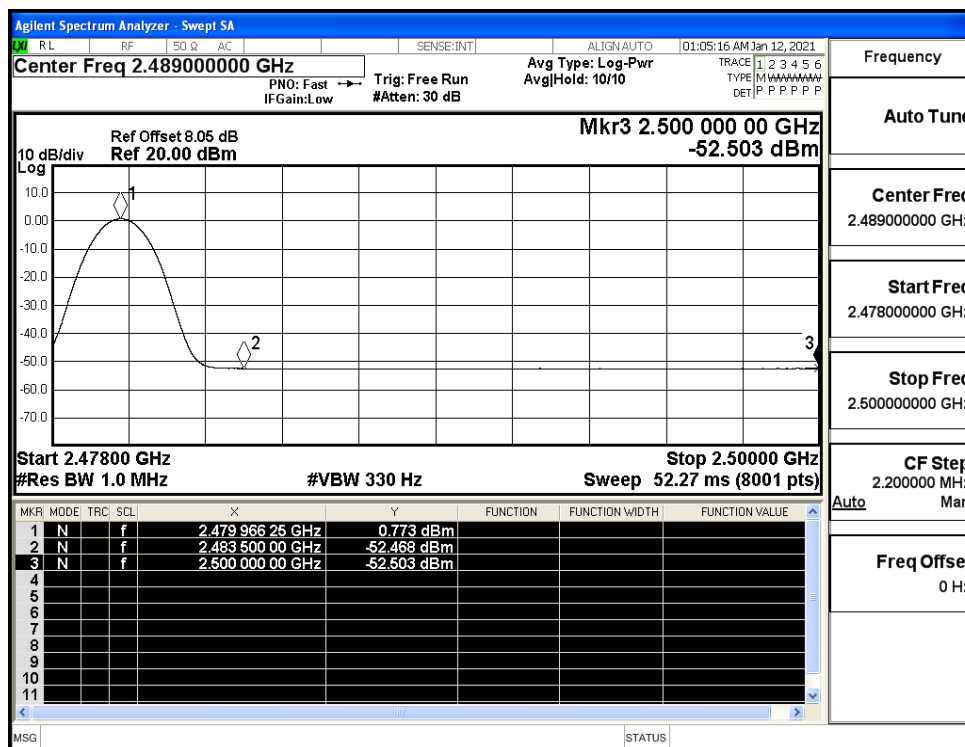
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

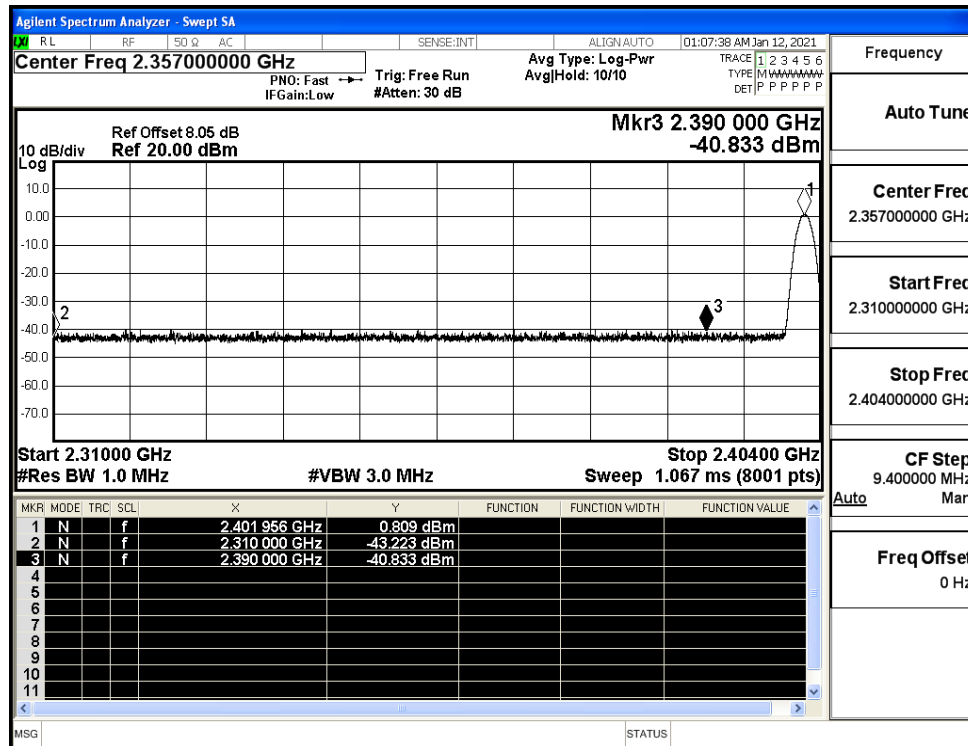
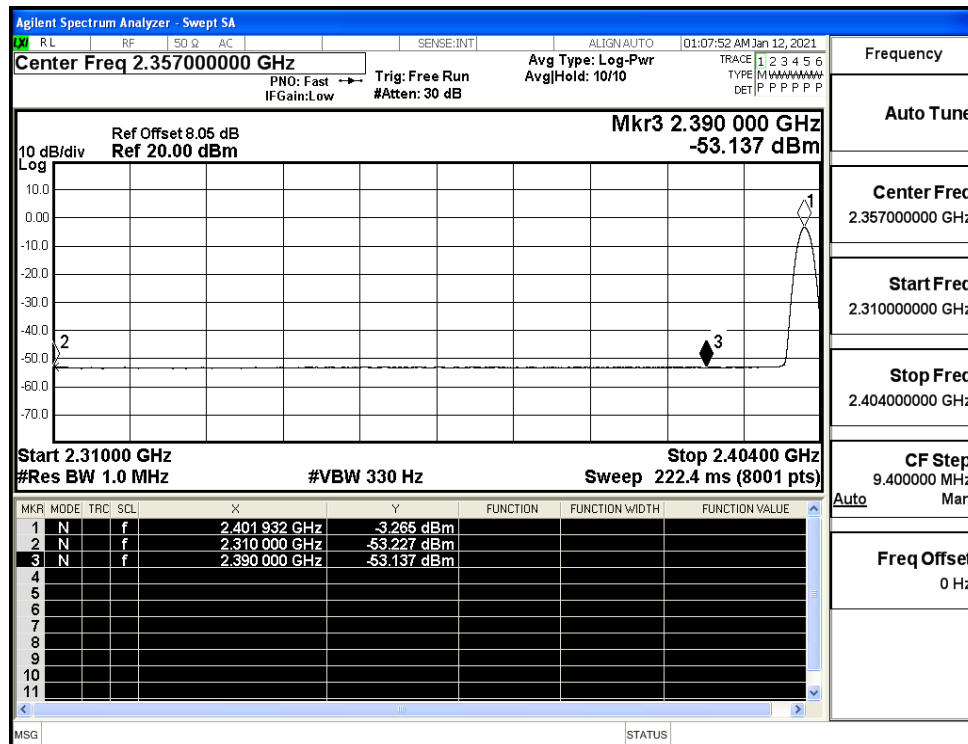


Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)

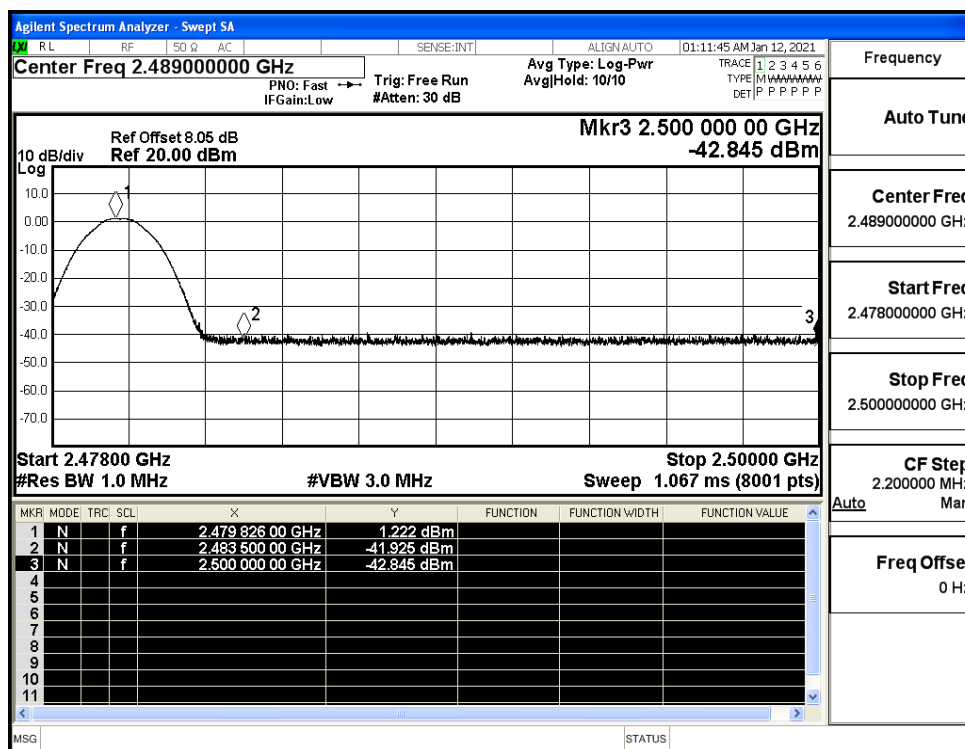


Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)

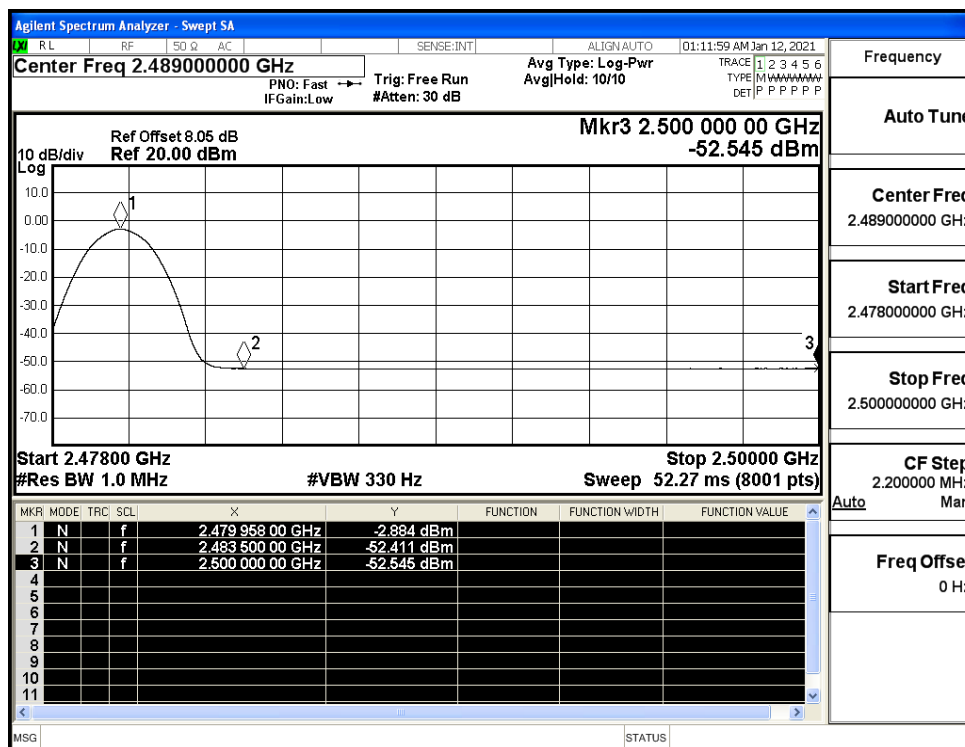


Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

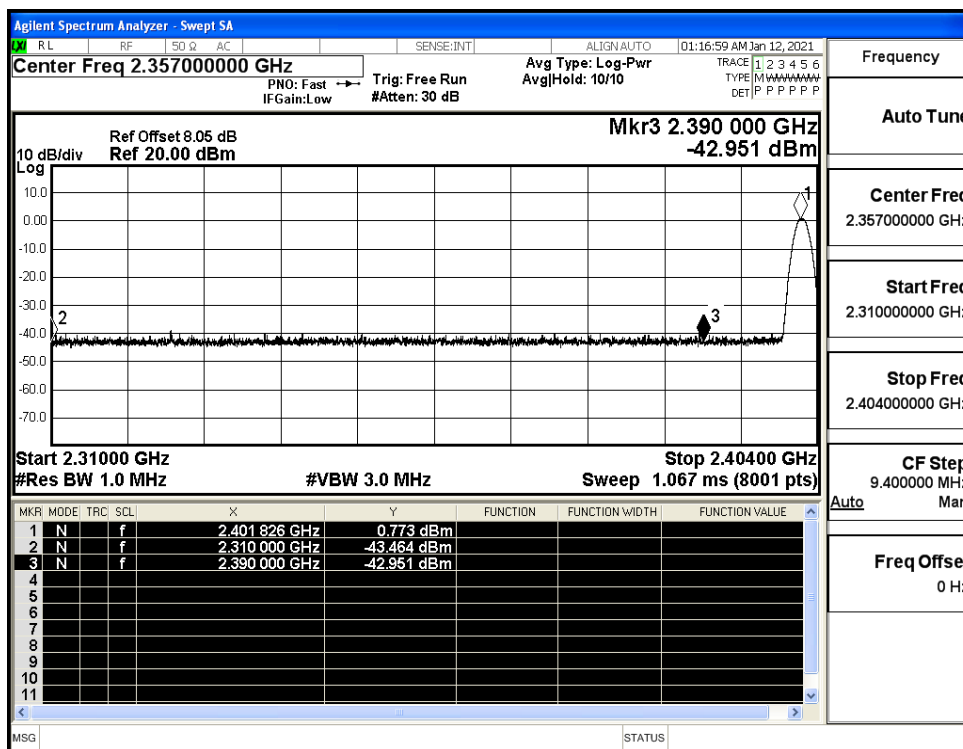
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



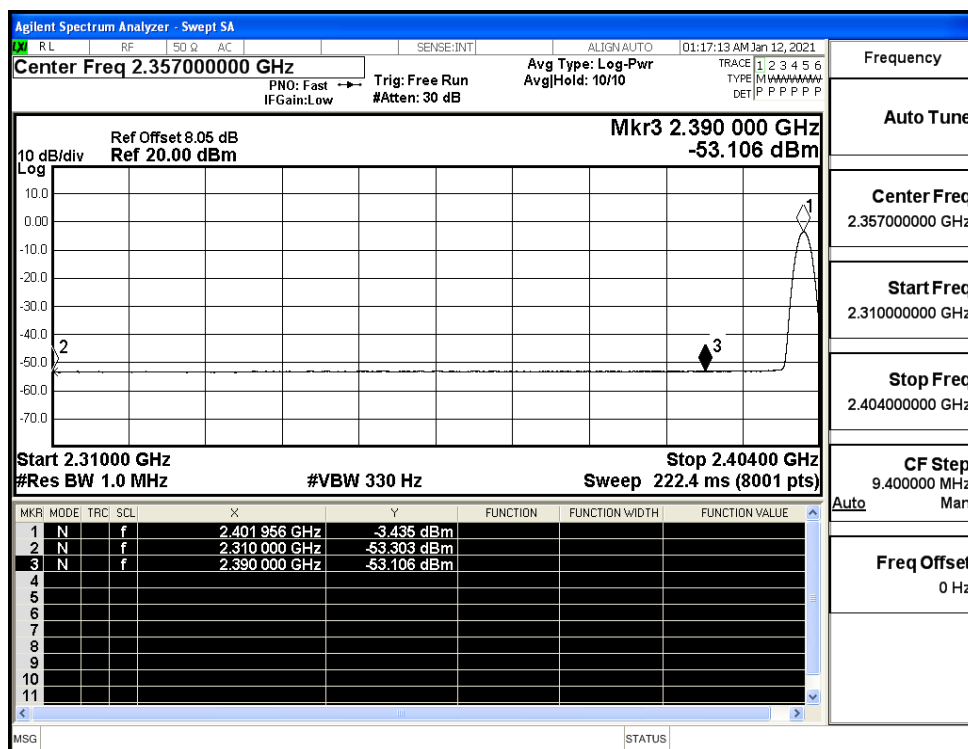
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



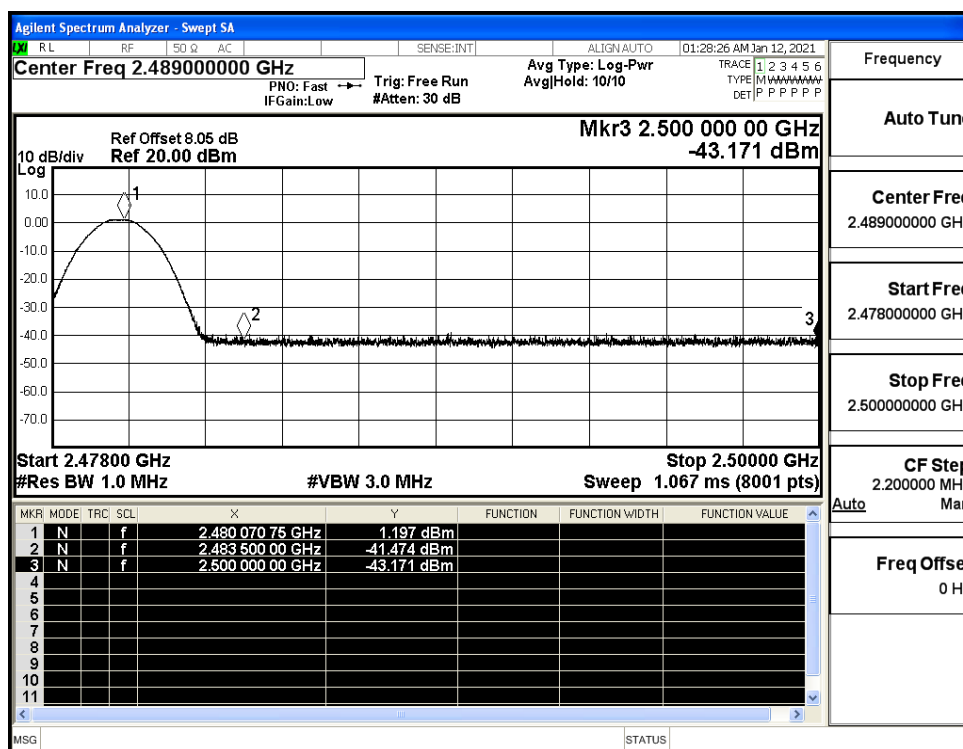
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

