

Appendix A

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

Product Name: CD Stereo System with Bluetooth

Trade Mark: **VICTROLA**™ /Innovative technology

Test Model: ITCDS-5001-SLV

Environmental Conditions

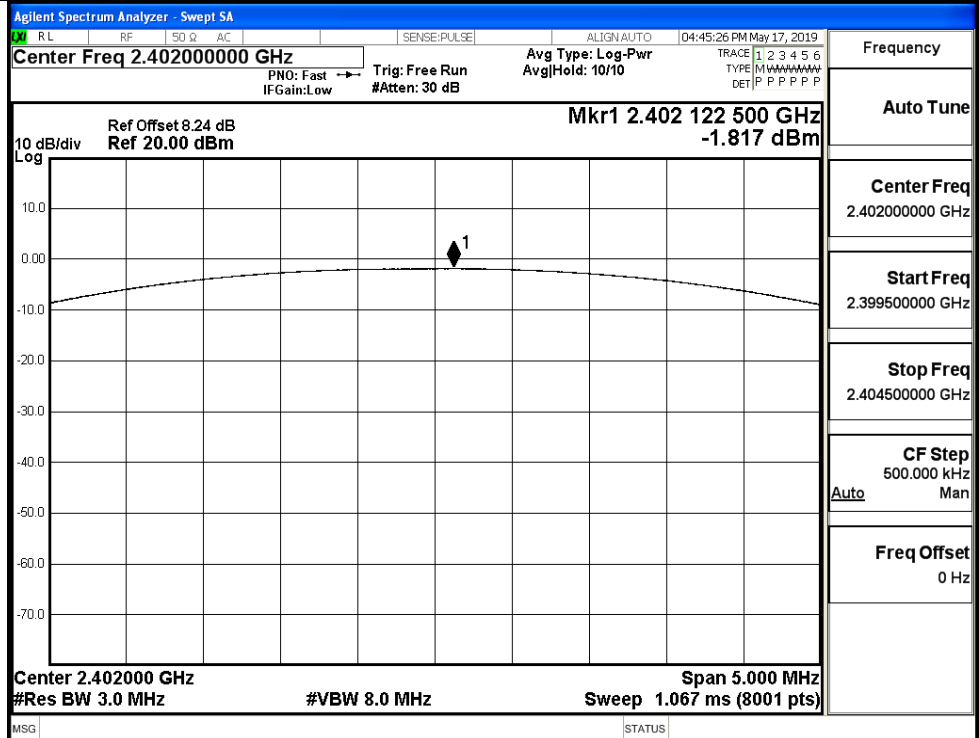
Temperature:	24.1 ° C
Relative Humidity:	53.4 %
ATM Pressure:	100.0 kPa
Test Engineer:	Scent Hu
Supervised by:	Tom.Liu

A.1 Maximum Conducted Peak Output Power

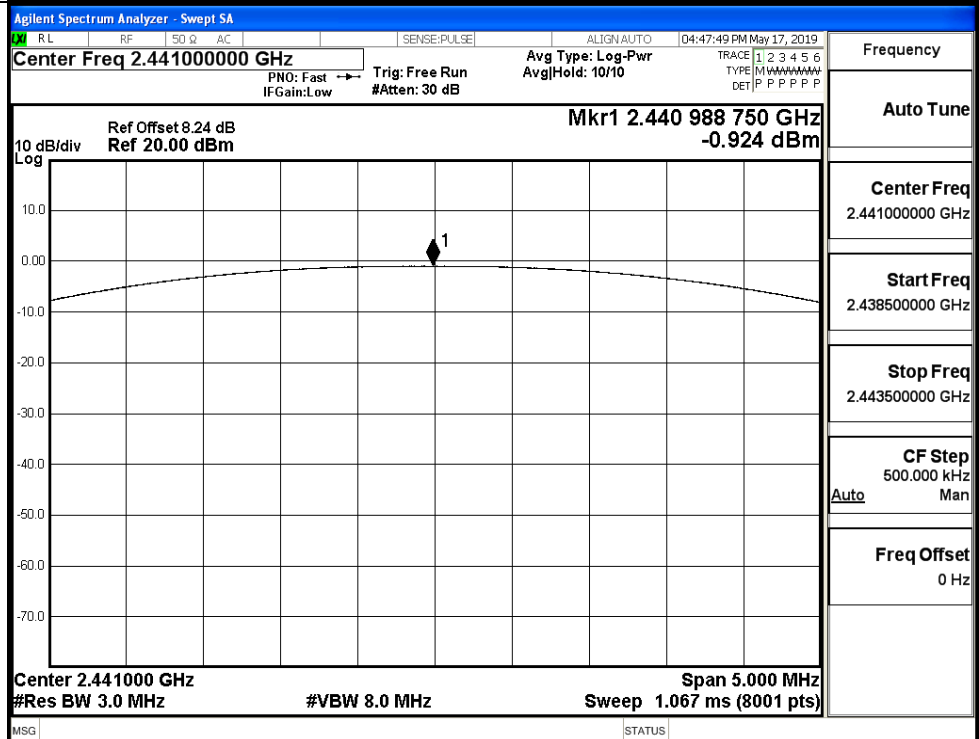
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.817	30	PASS
	MCH	-0.924	30	PASS
	HCH	-1.380	30	PASS
$\pi/4$ DQPSK	LCH	-2.657	21	PASS
	MCH	-1.353	21	PASS
	HCH	-2.093	21	PASS

Test Graphs

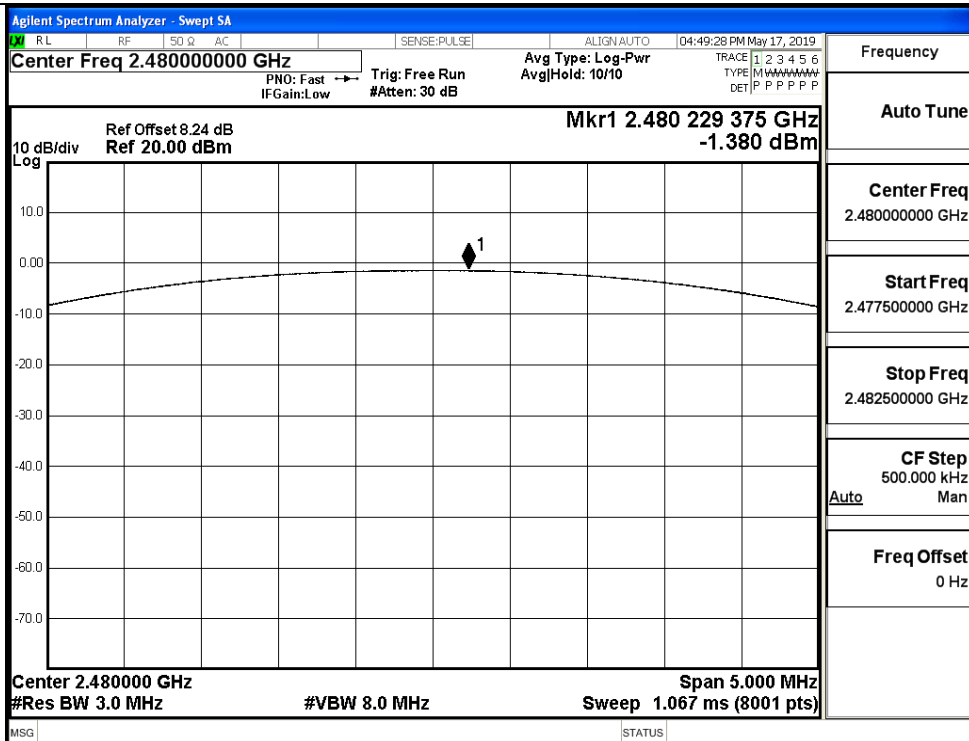
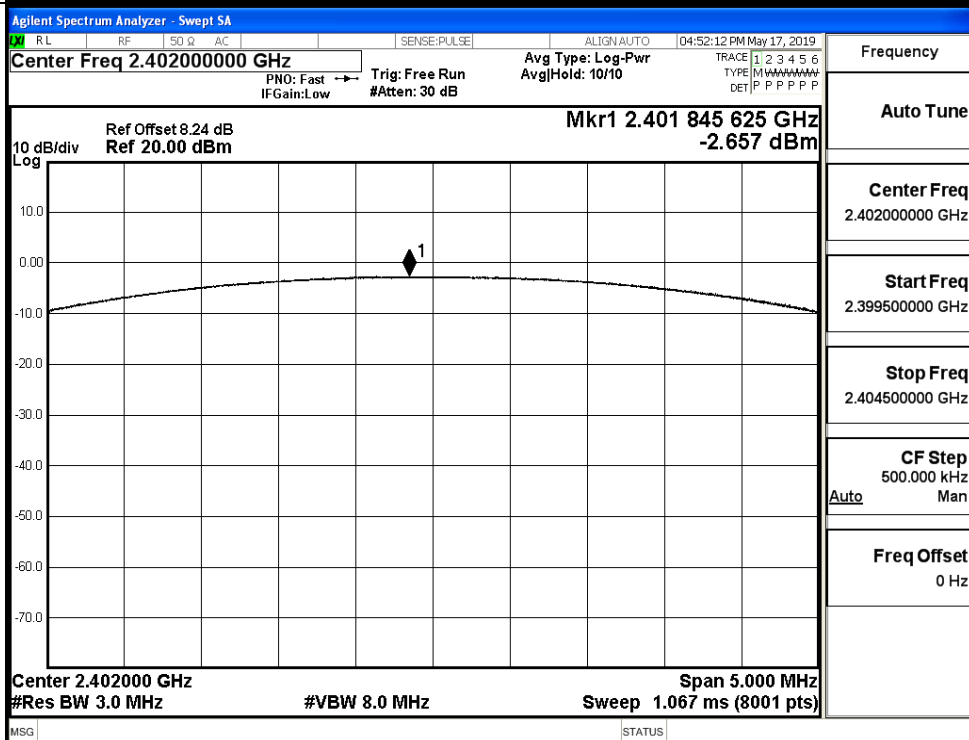
GFSK/LCH

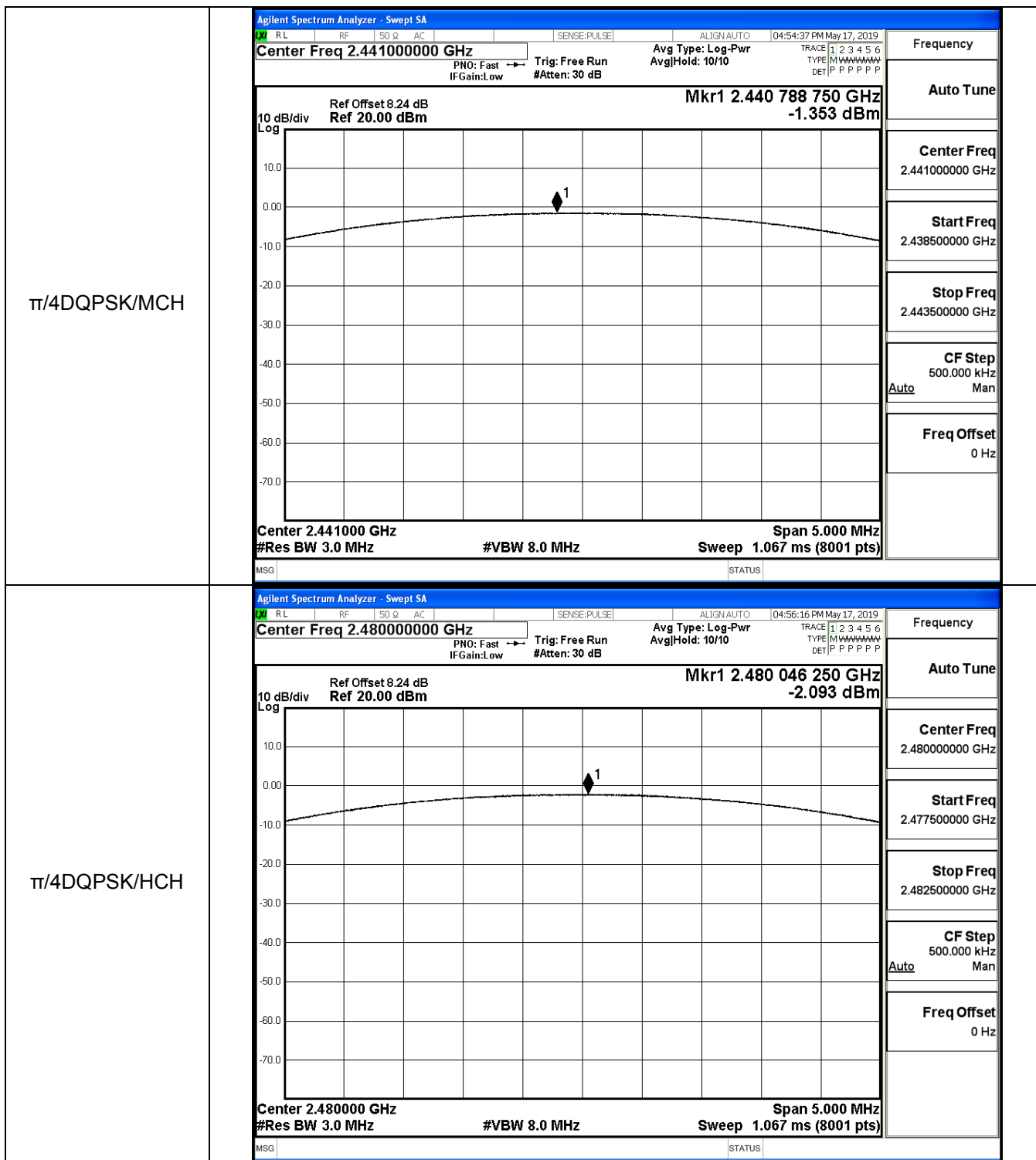


GFSK/MCH



GFSK/HCH

 π /4DQPSK/LCH

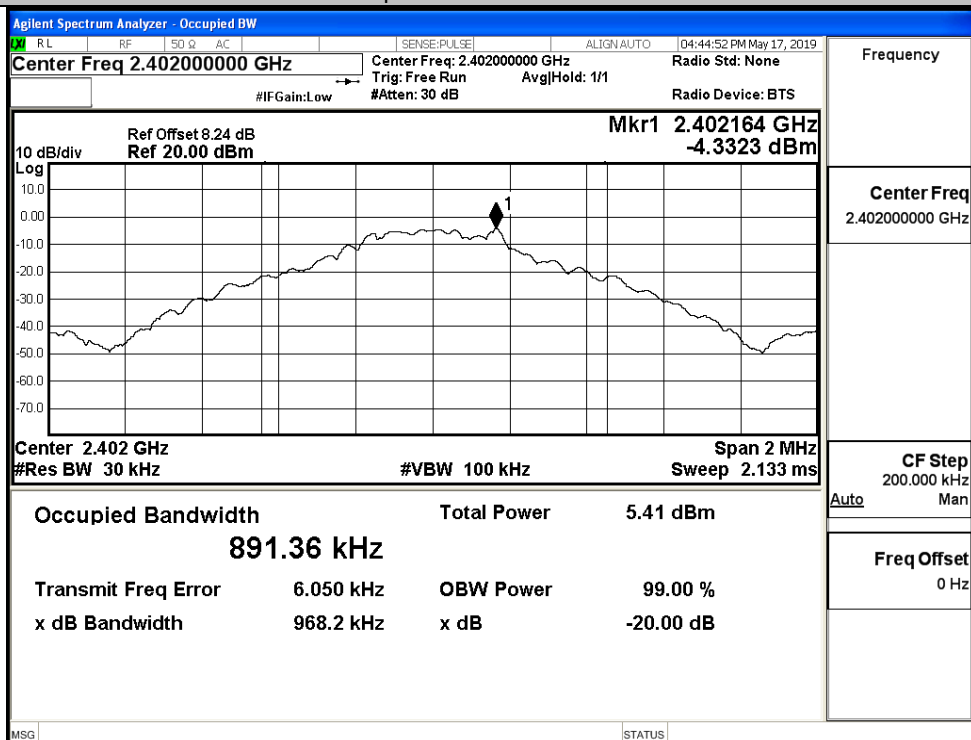


A.2 20dB Bandwidth

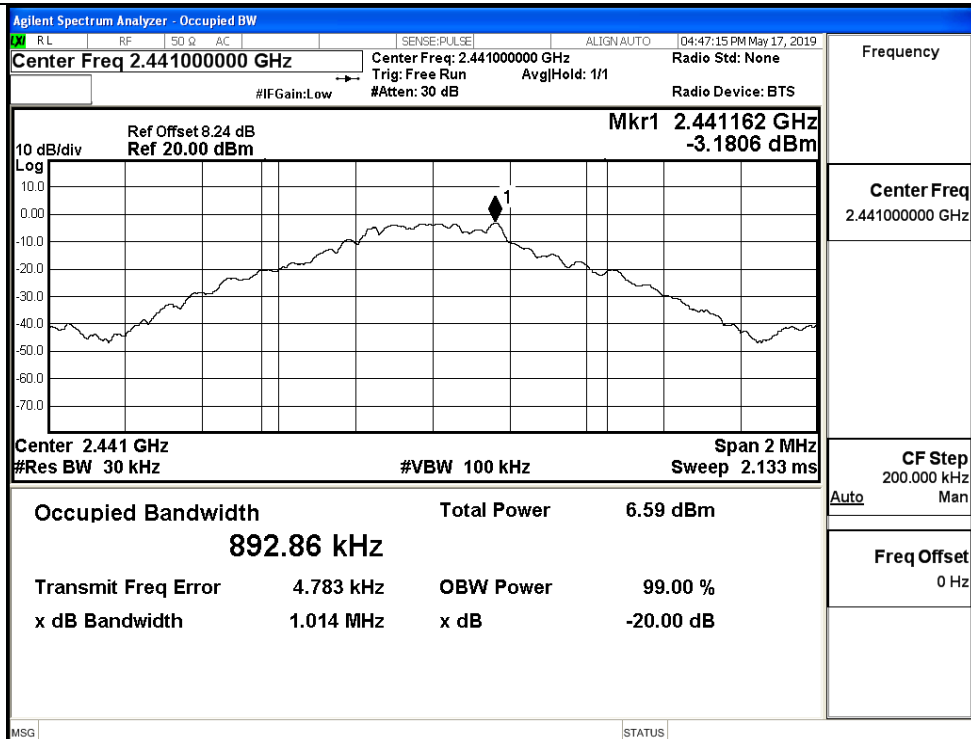
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9682	Not Specified	PASS
	MCH	1.014	Not Specified	PASS
	HCH	1.037	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.292	Not Specified	PASS
	MCH	1.292	Not Specified	PASS
	HCH	1.292	Not Specified	PASS

Test Graphs

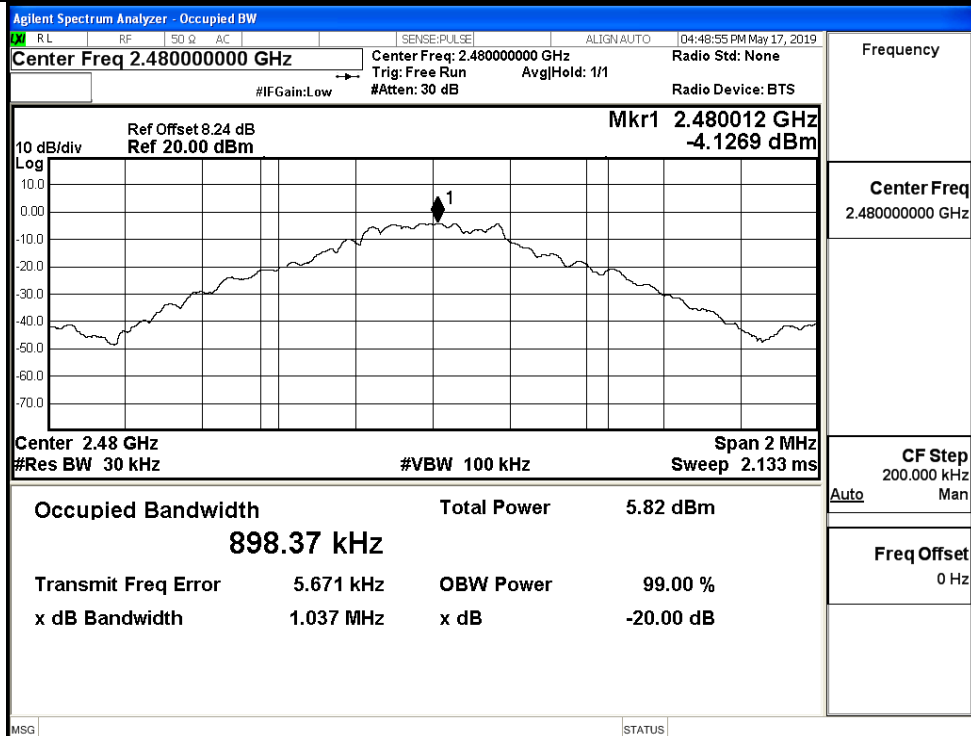
GFSK/LCH

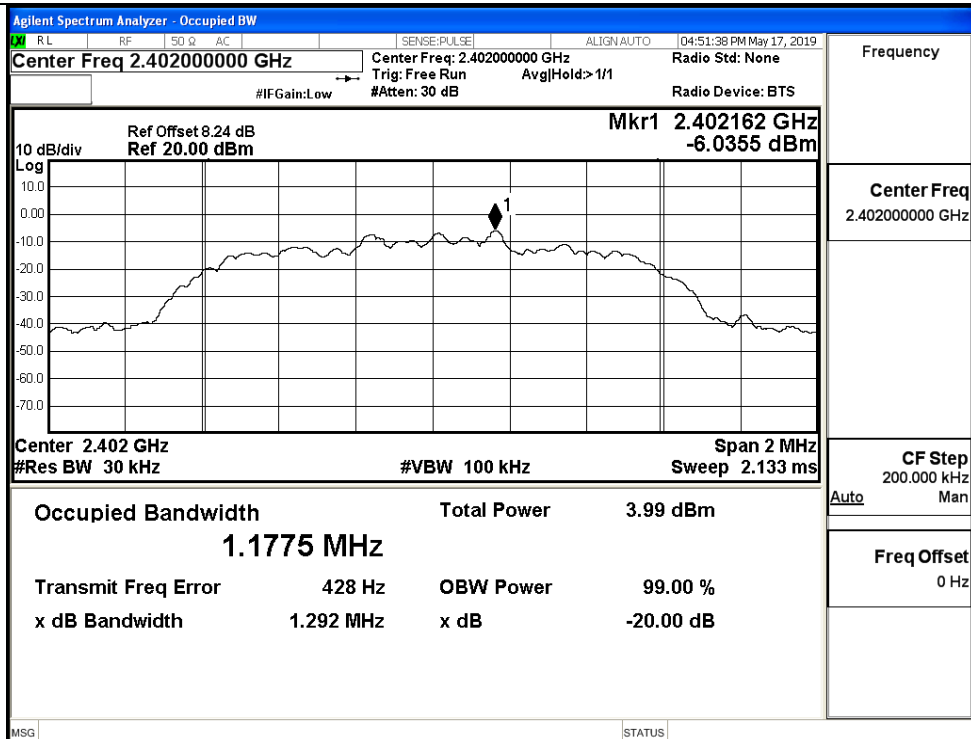
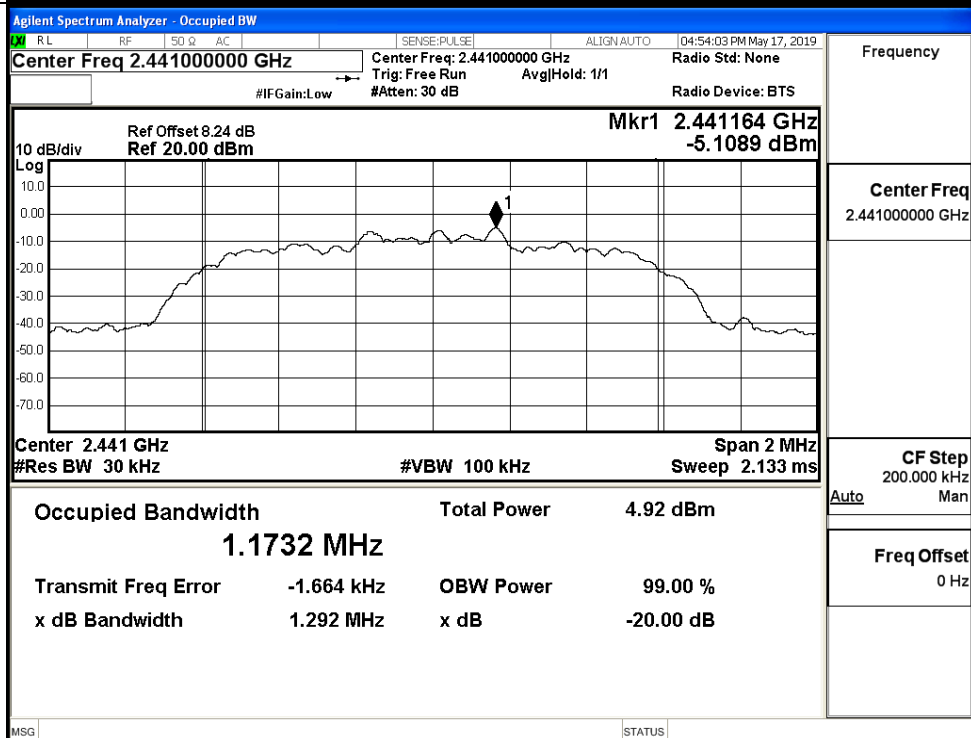


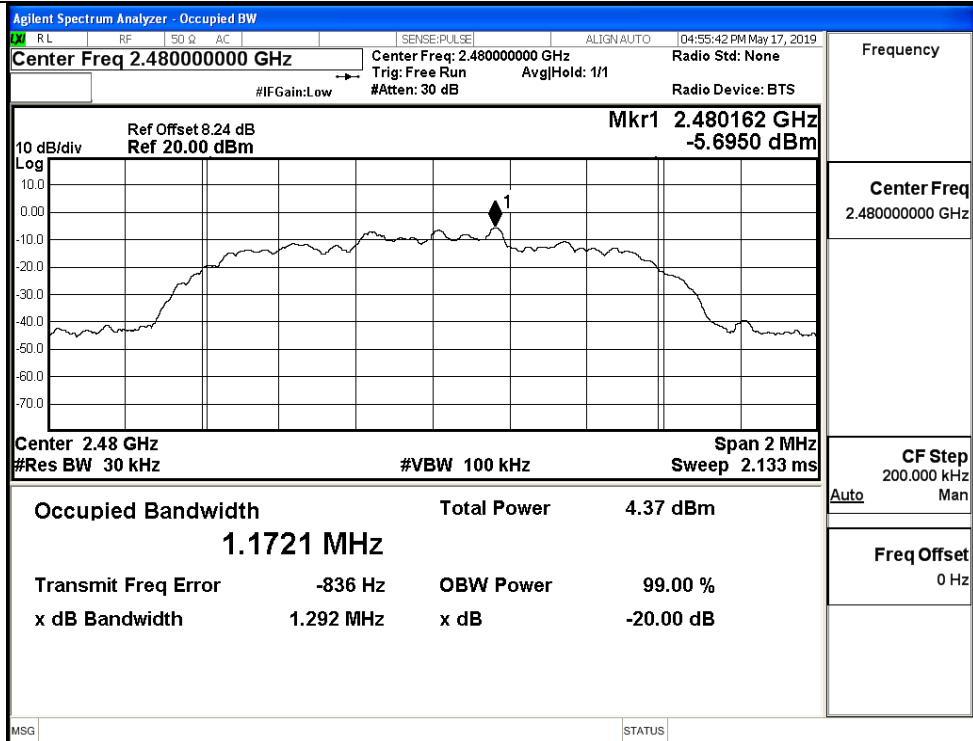
GFSK/MCH



GFSK/HCH



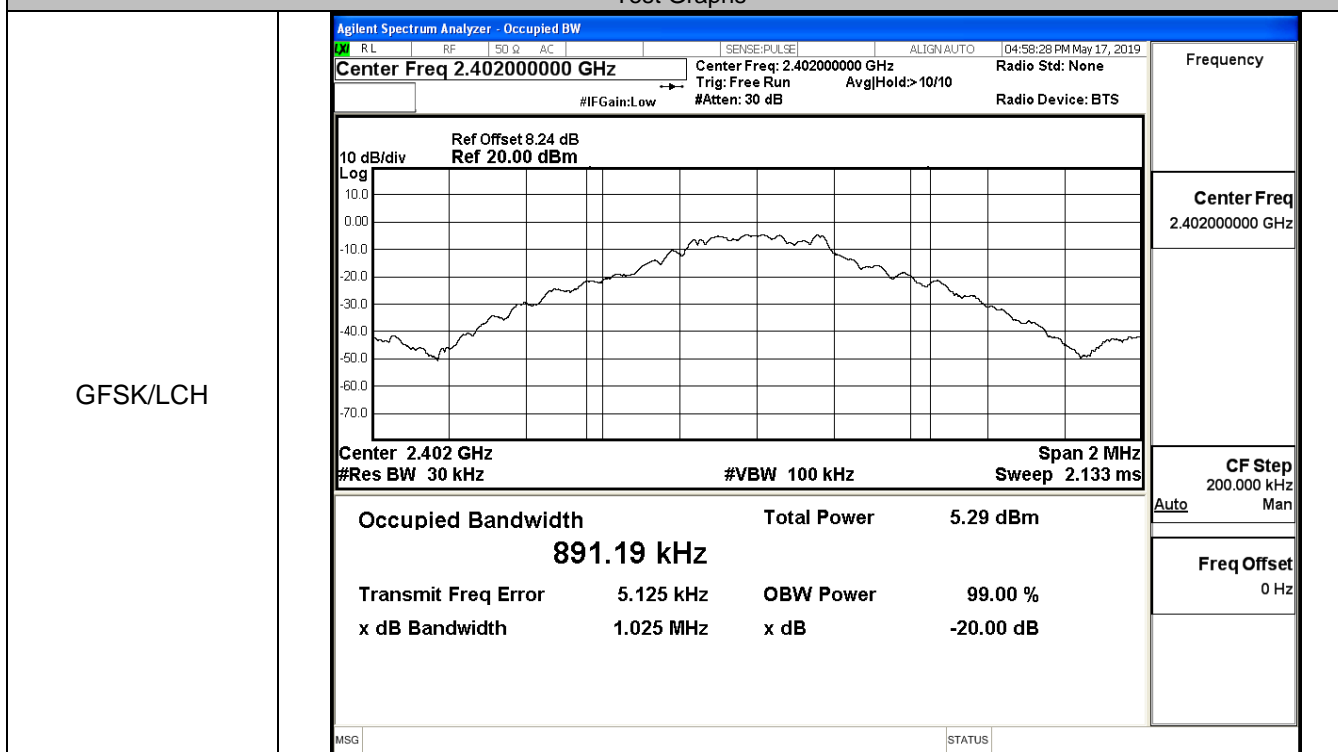
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

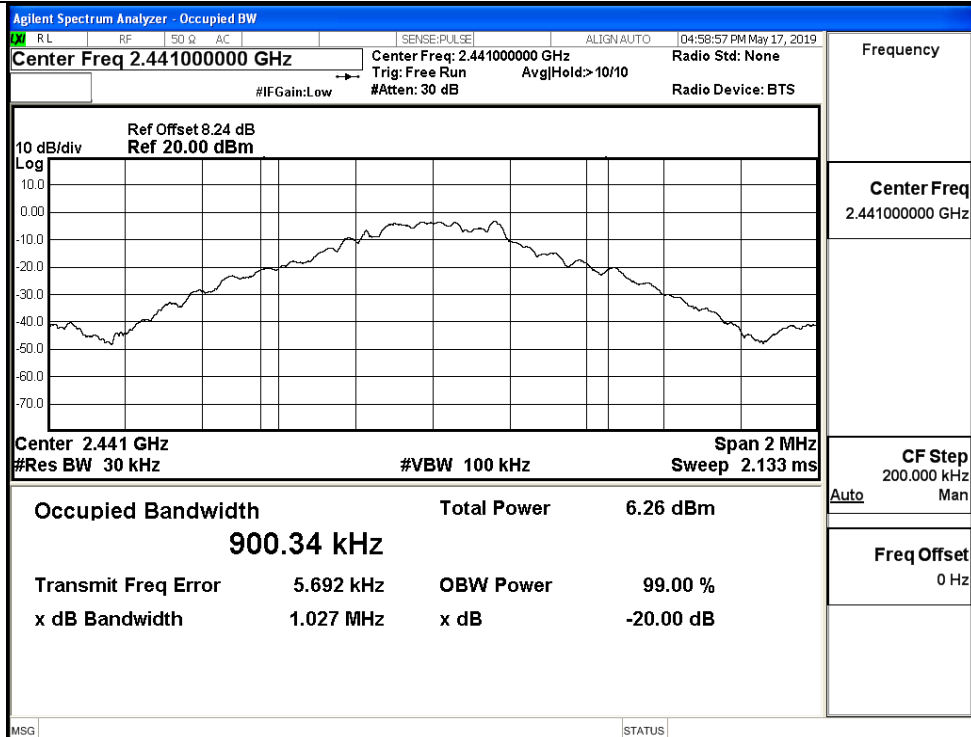
A.3 Occupied Bandwidth

Mode	Channel.	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.89119	Not Specified	PASS
	MCH	0.90034	Not Specified	PASS
	HCH	0.90001	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.1778	Not Specified	PASS
	MCH	1.1738	Not Specified	PASS
	HCH	1.1731	Not Specified	PASS

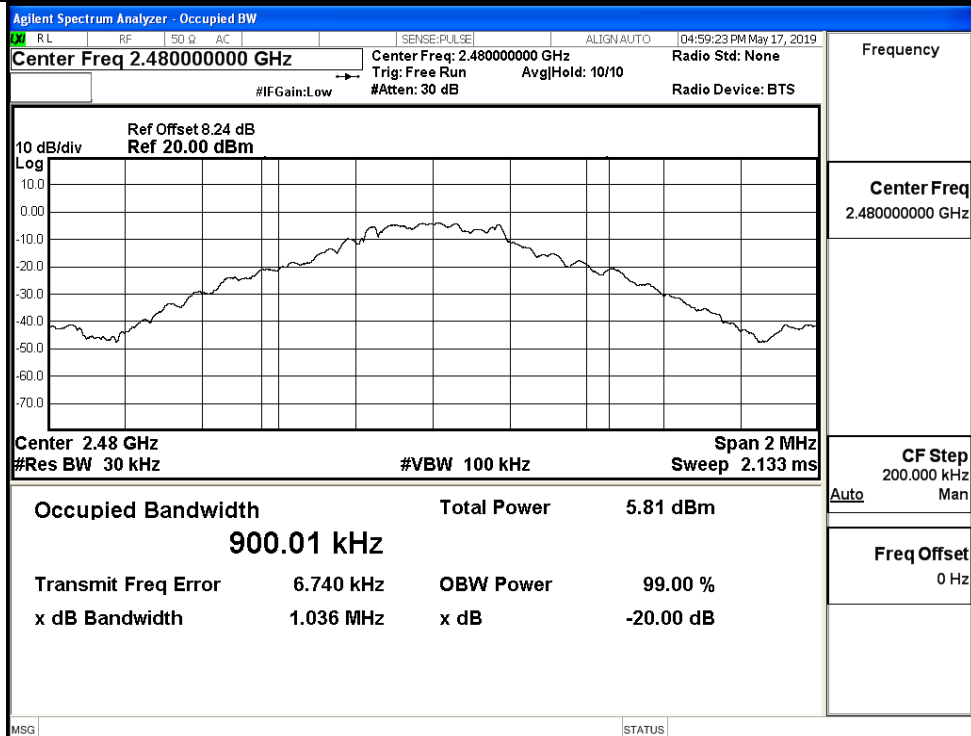
Test Graphs

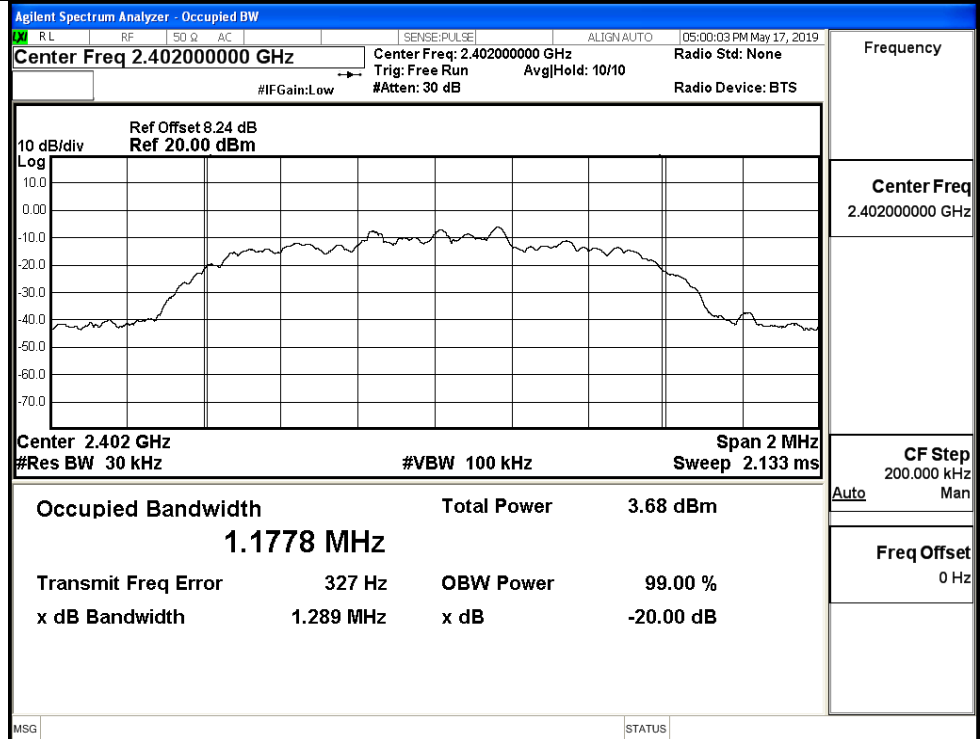
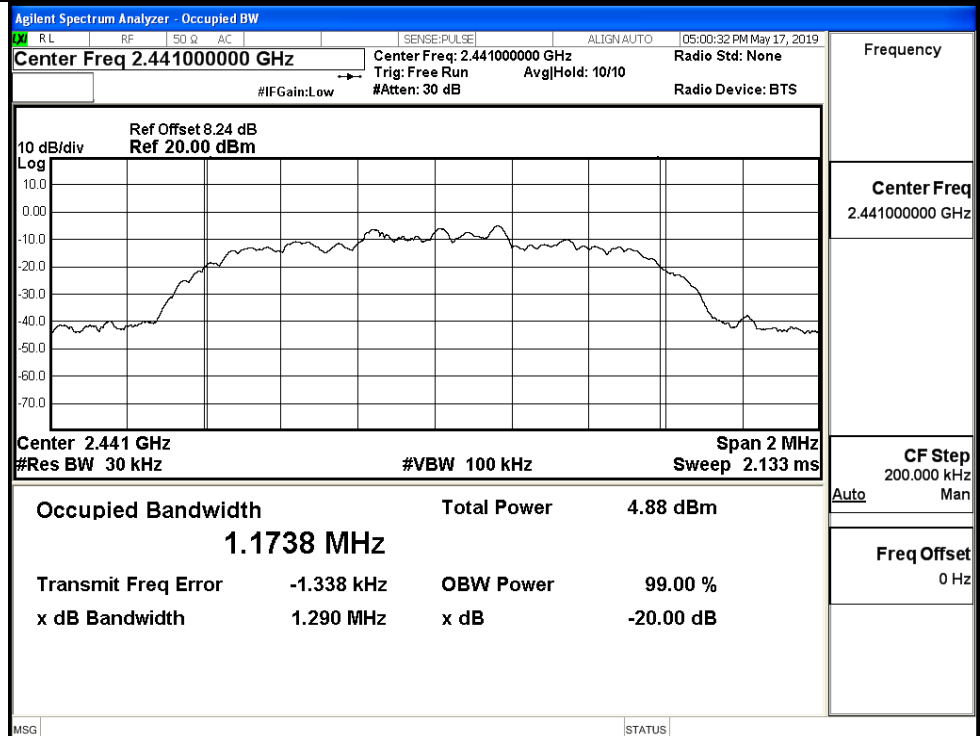


GFSK/MCH

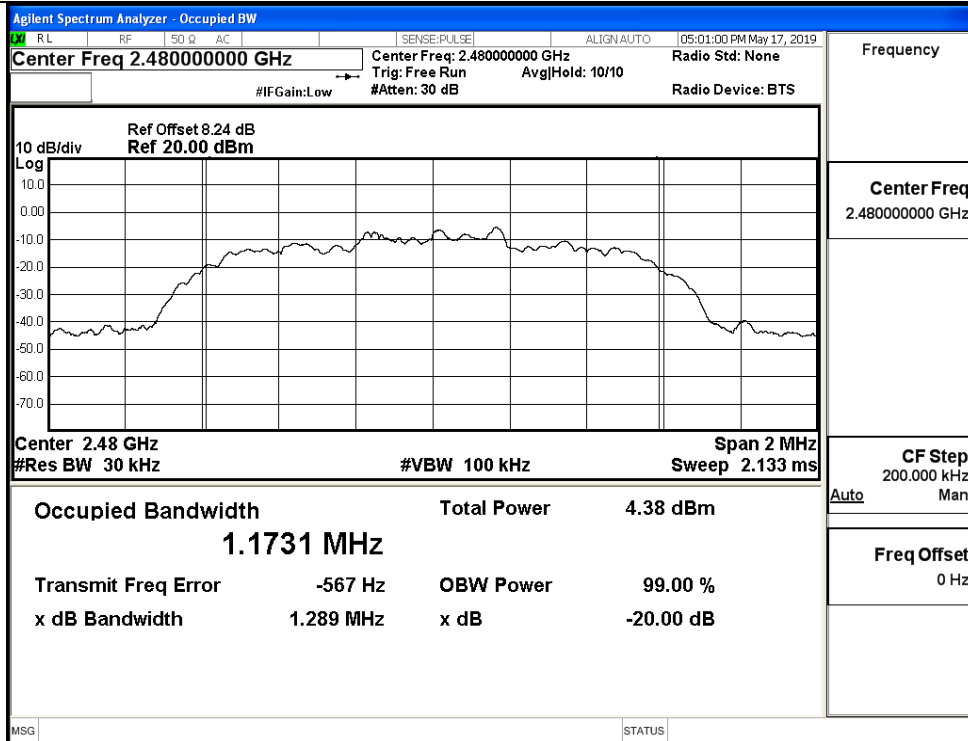


GFSK/HCH



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

$\pi/4$ DQPSK/HCH



Frequency

Center Freq
2.480000000 GHz

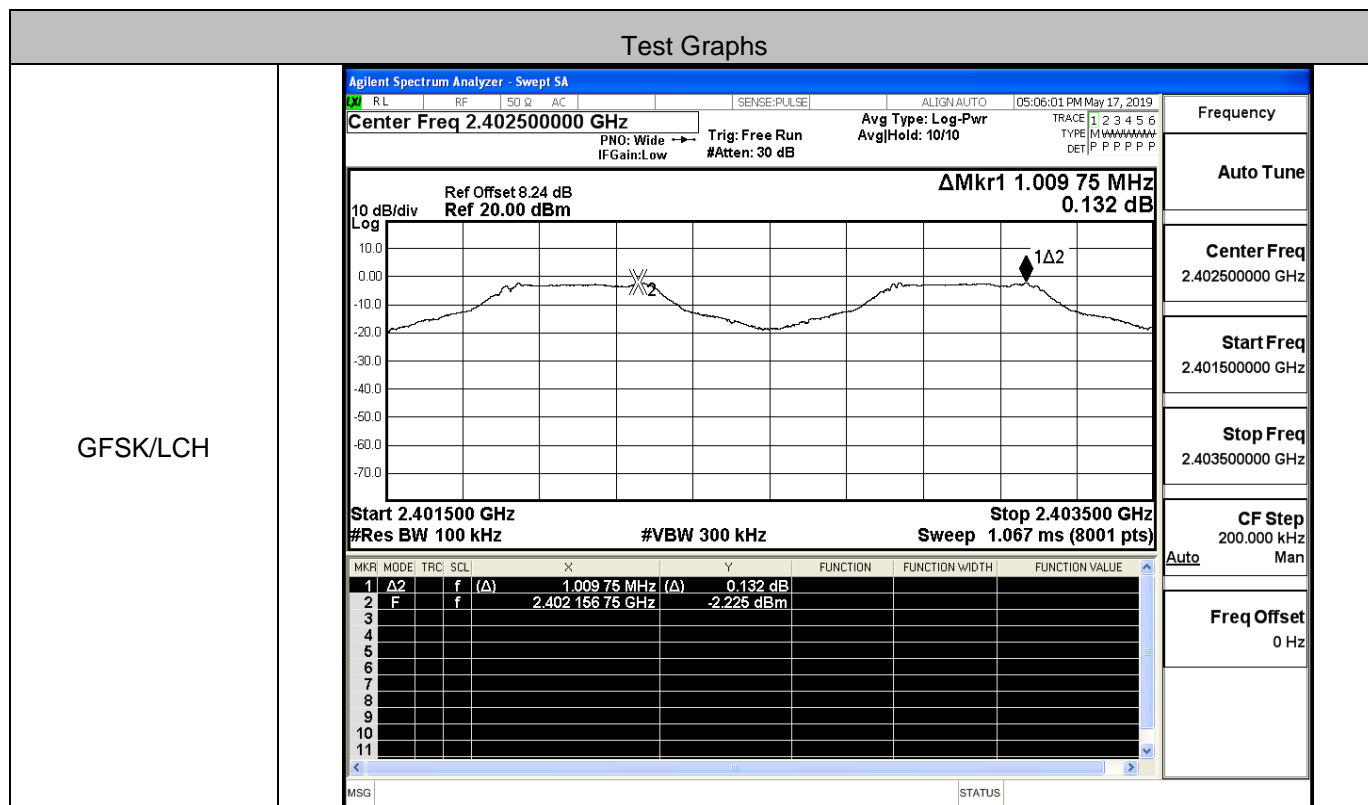
CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

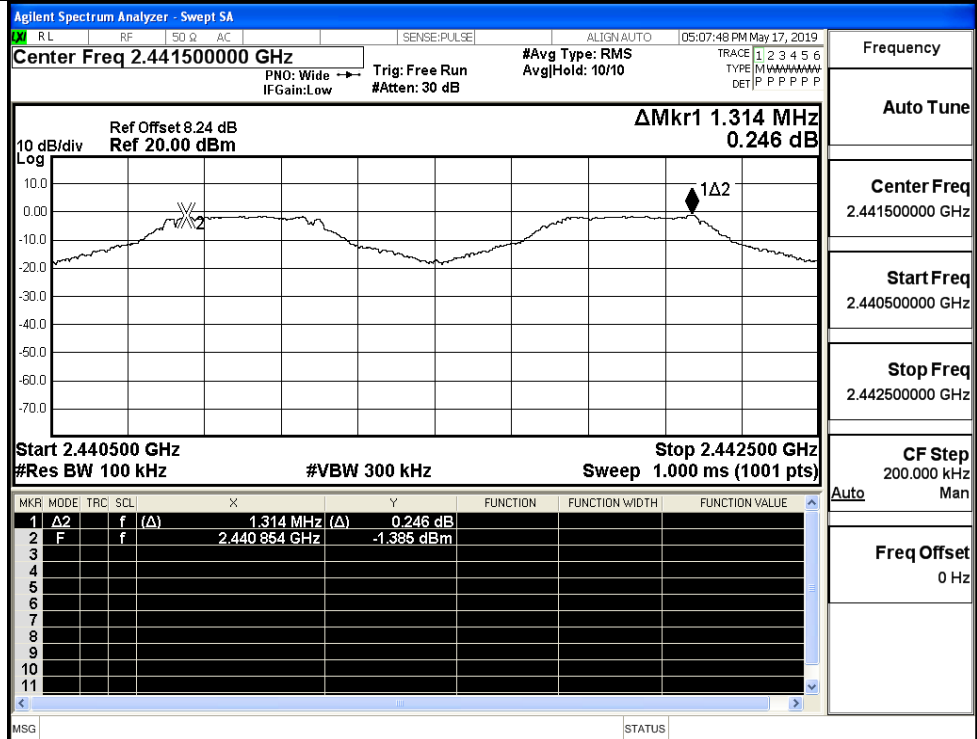
A.4 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.010	0.691	PASS
	MCH	1.314	0.691	PASS
	HCH	1.016	0.691	PASS
$\pi/4$ DQPSK	LCH	1.206	0.861	PASS
	MCH	1.012	0.861	PASS
	HCH	0.914	0.861	PASS

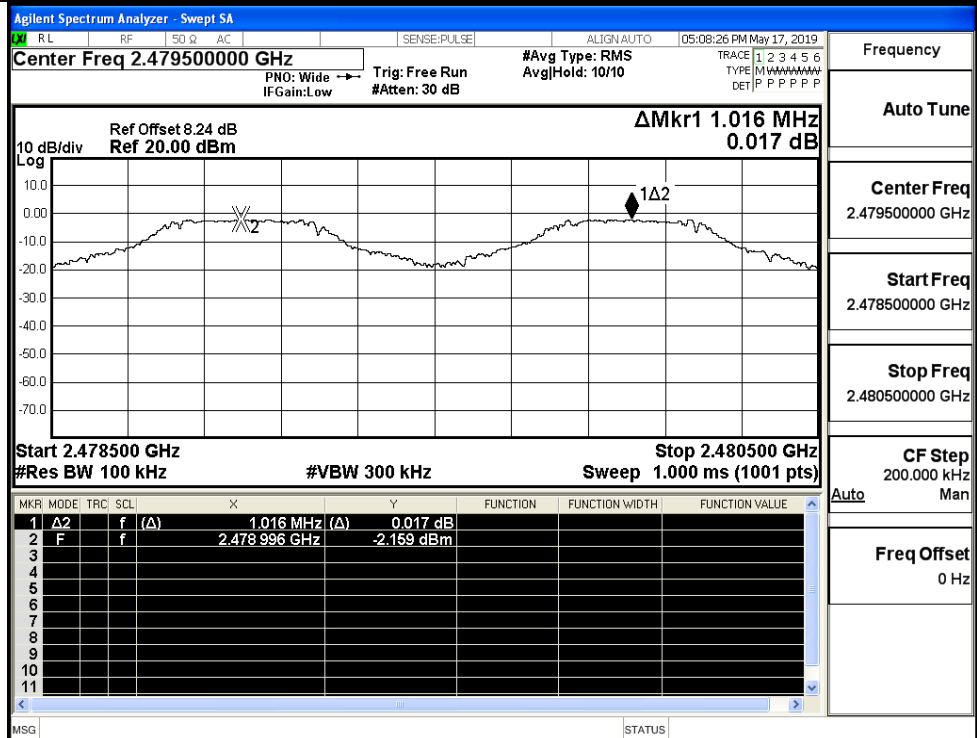
Test Graphs

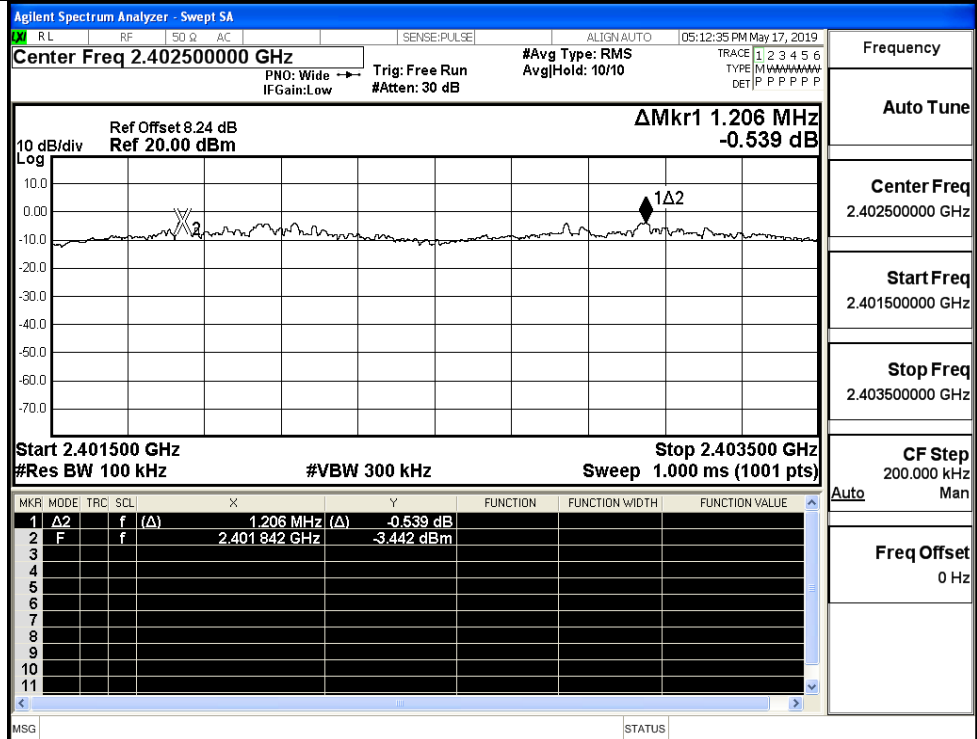
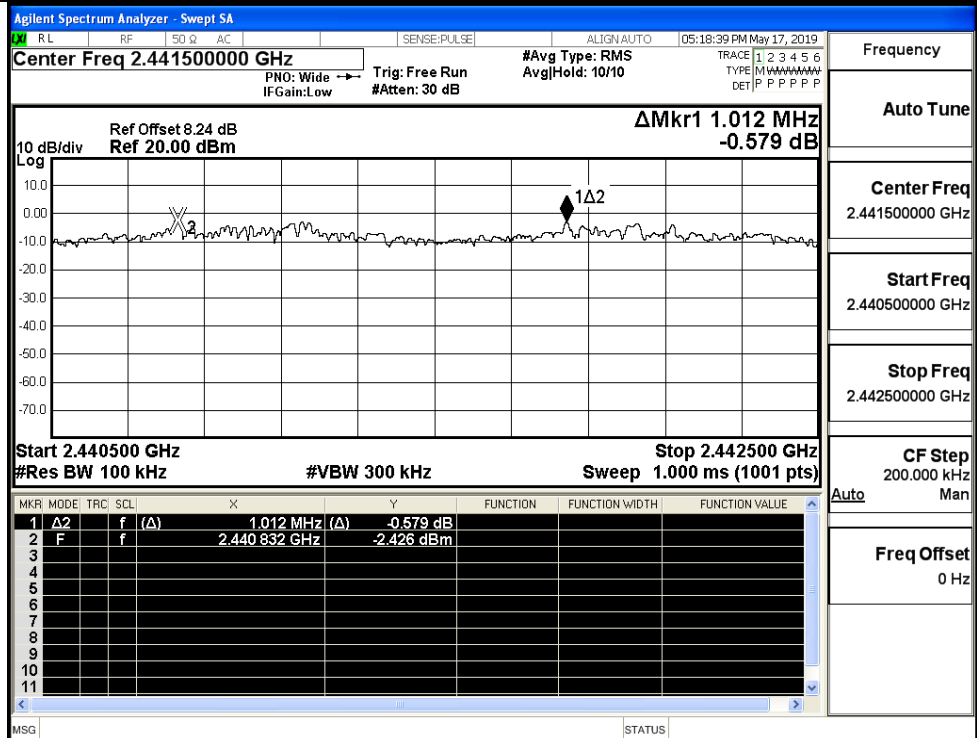


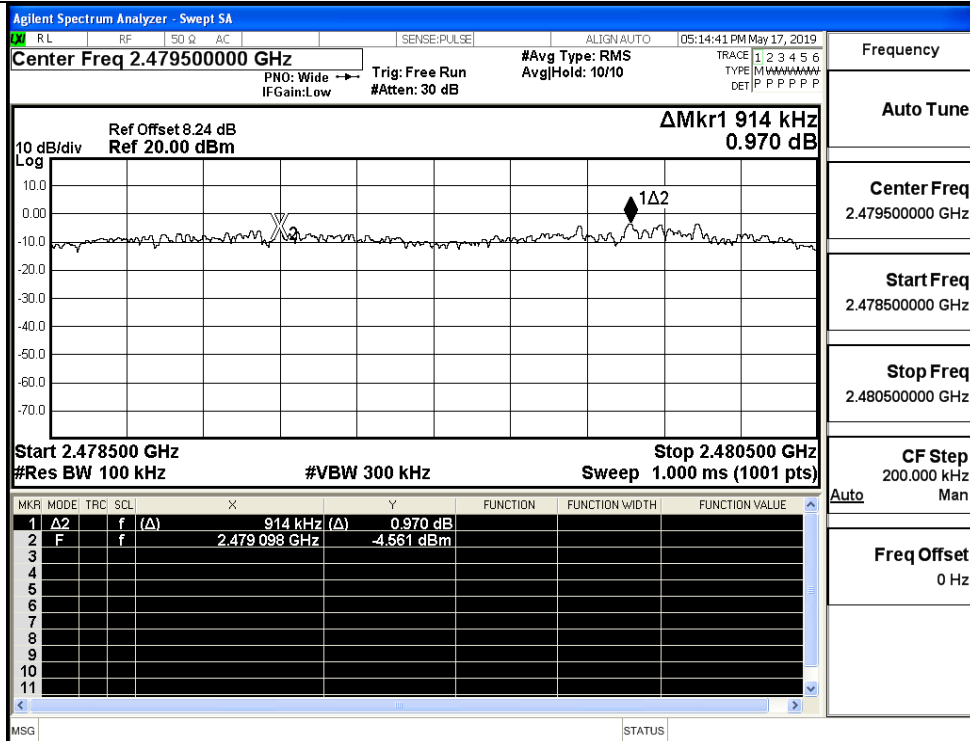
GFSK/MCH



GFSK/HCH



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

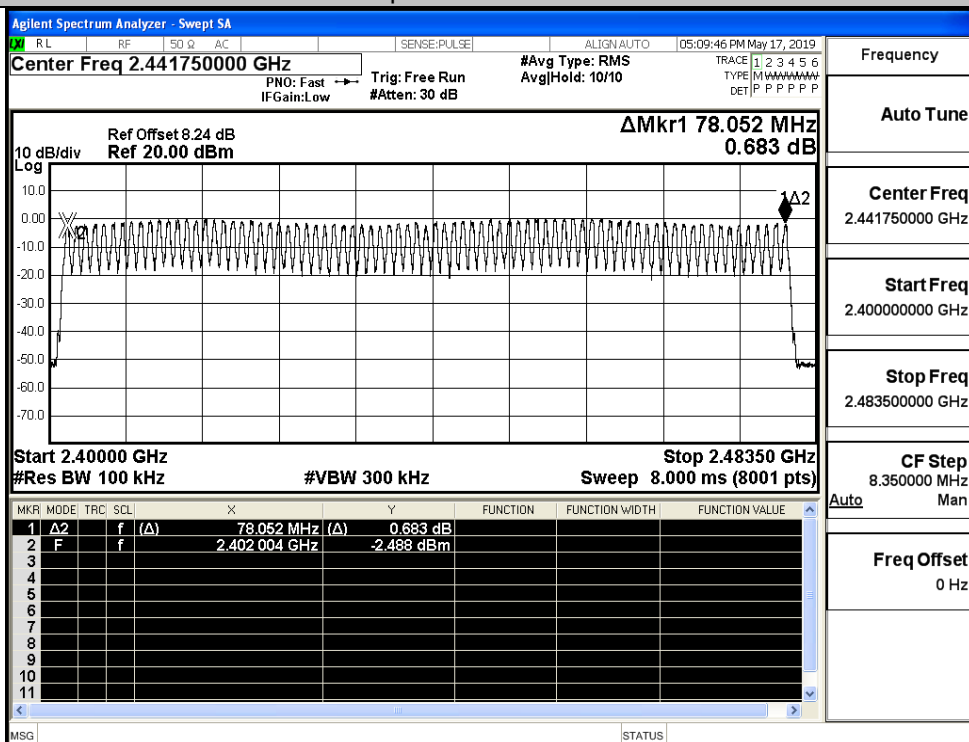
$\pi/4$ DQPSK/HCH

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

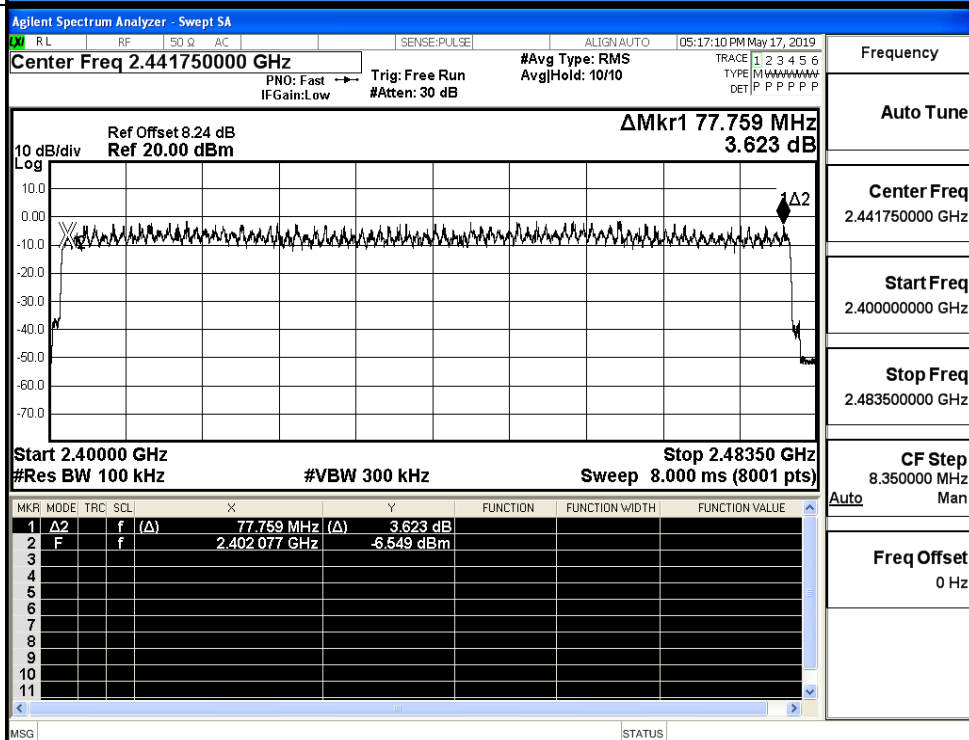
Test Graphs

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

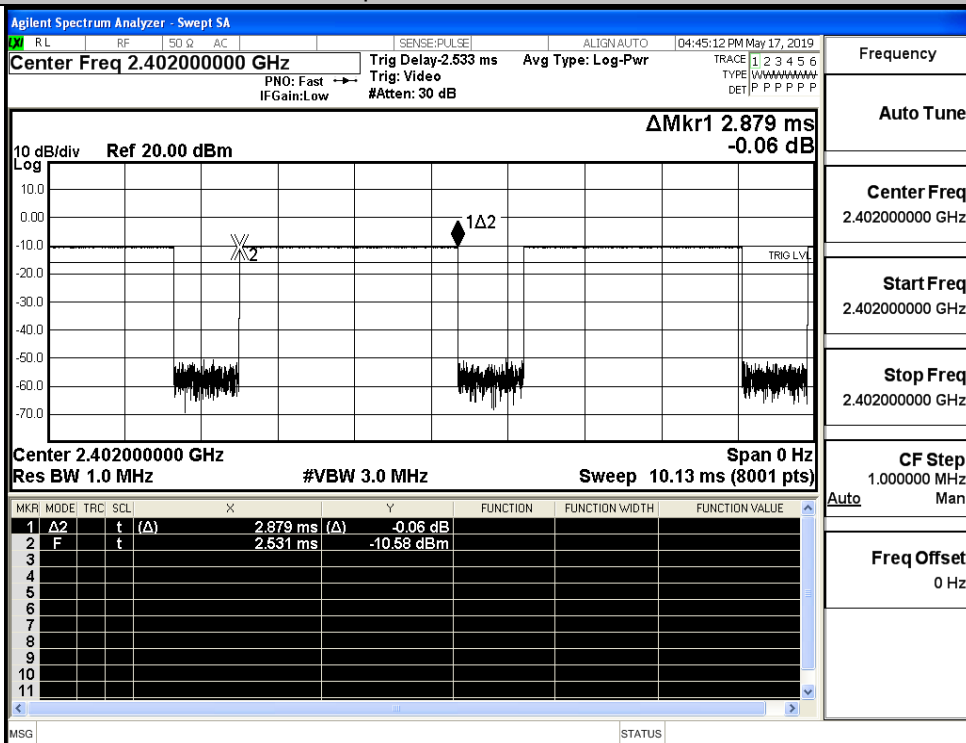
Center Freq
2.441750000 GHzStart Freq
2.400000000 GHzStop Freq
2.483500000 GHzCF Step
8.350000 MHz
ManFreq Offset
0 Hz

A.6 Dwell Time

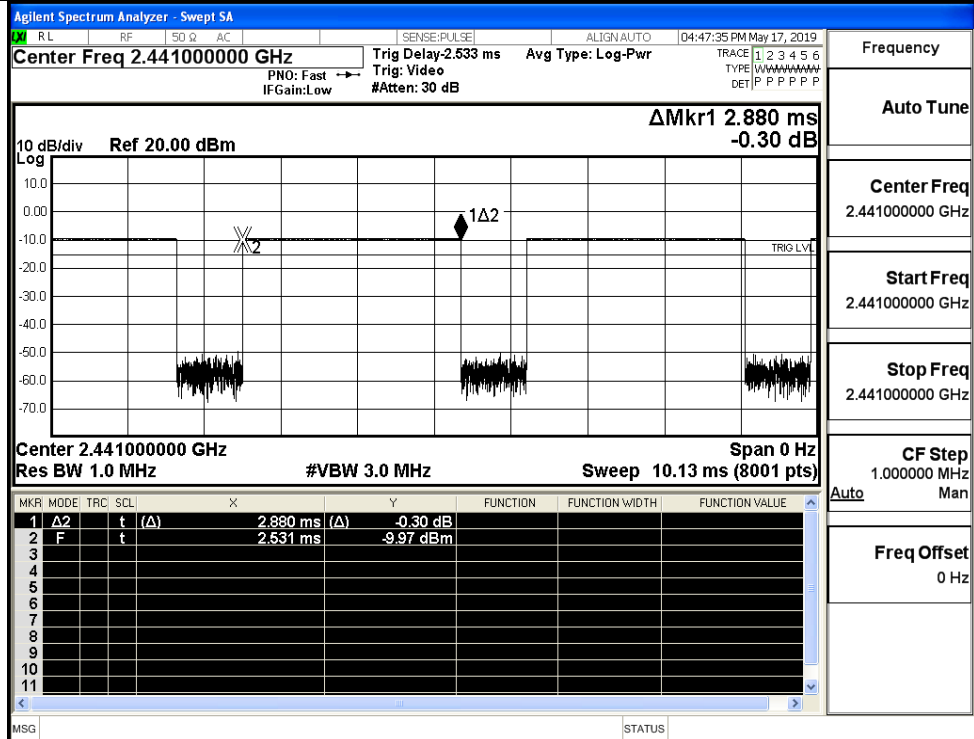
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88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

Test Graphs

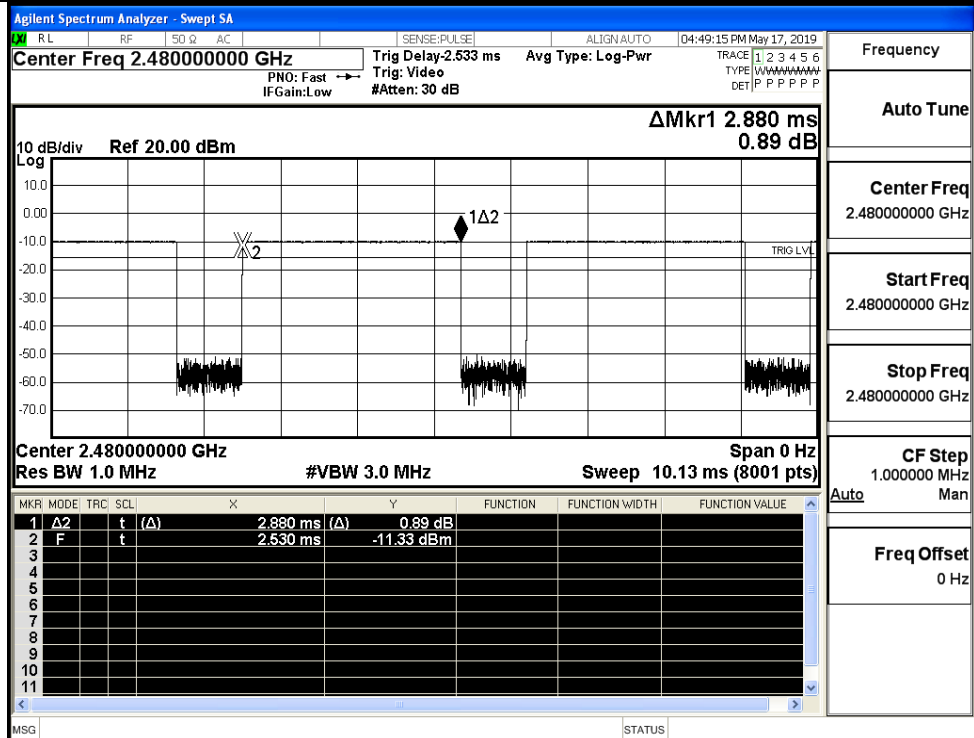
GFSK_DH5/LCH



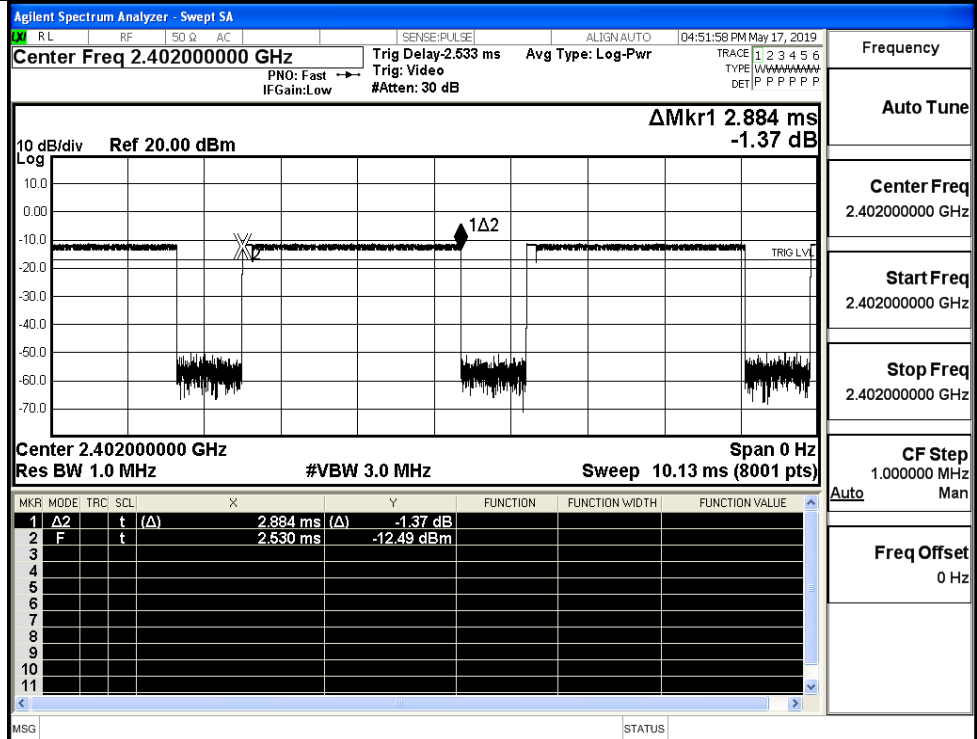
GFSK_DH5/MCH



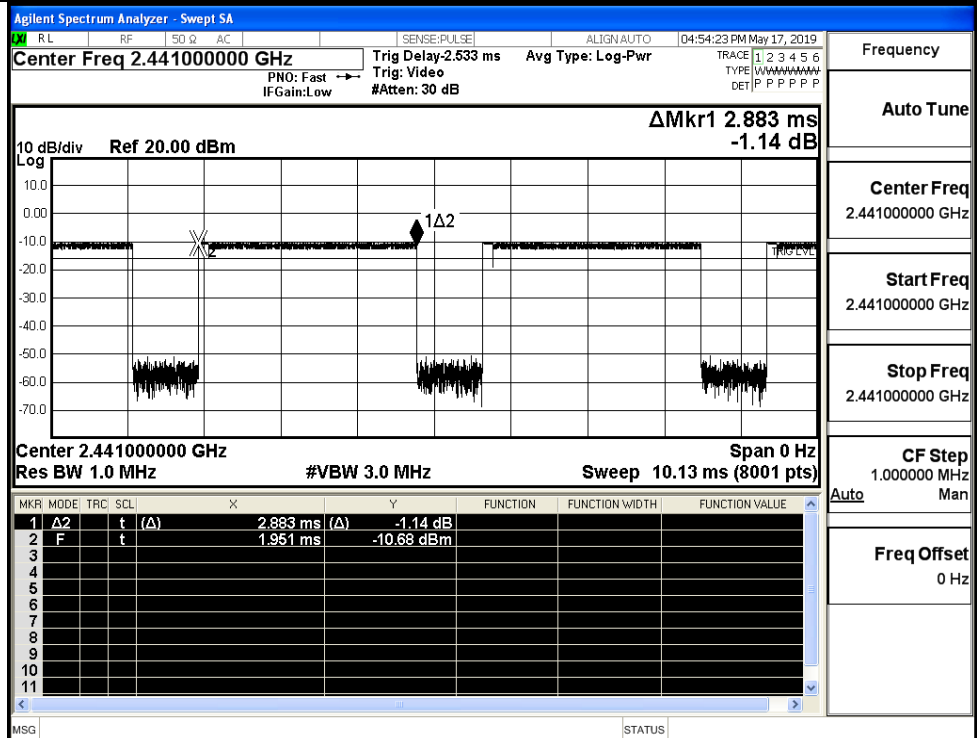
GFSK_DH5/HCH



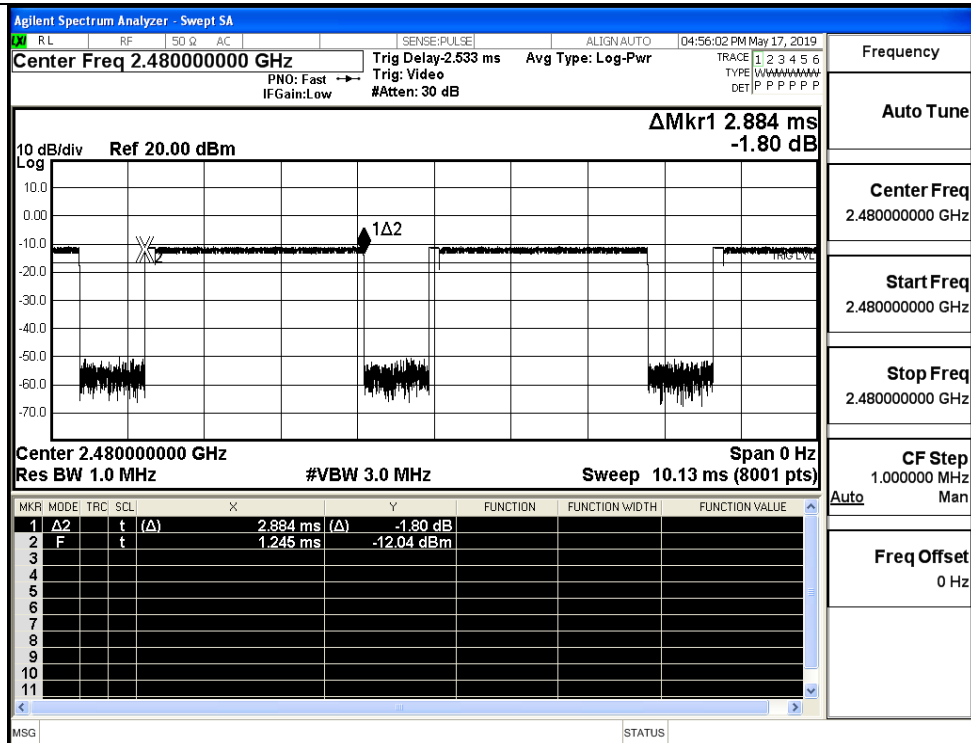
$\pi/4$ DQPSK
_2DH5/LCH



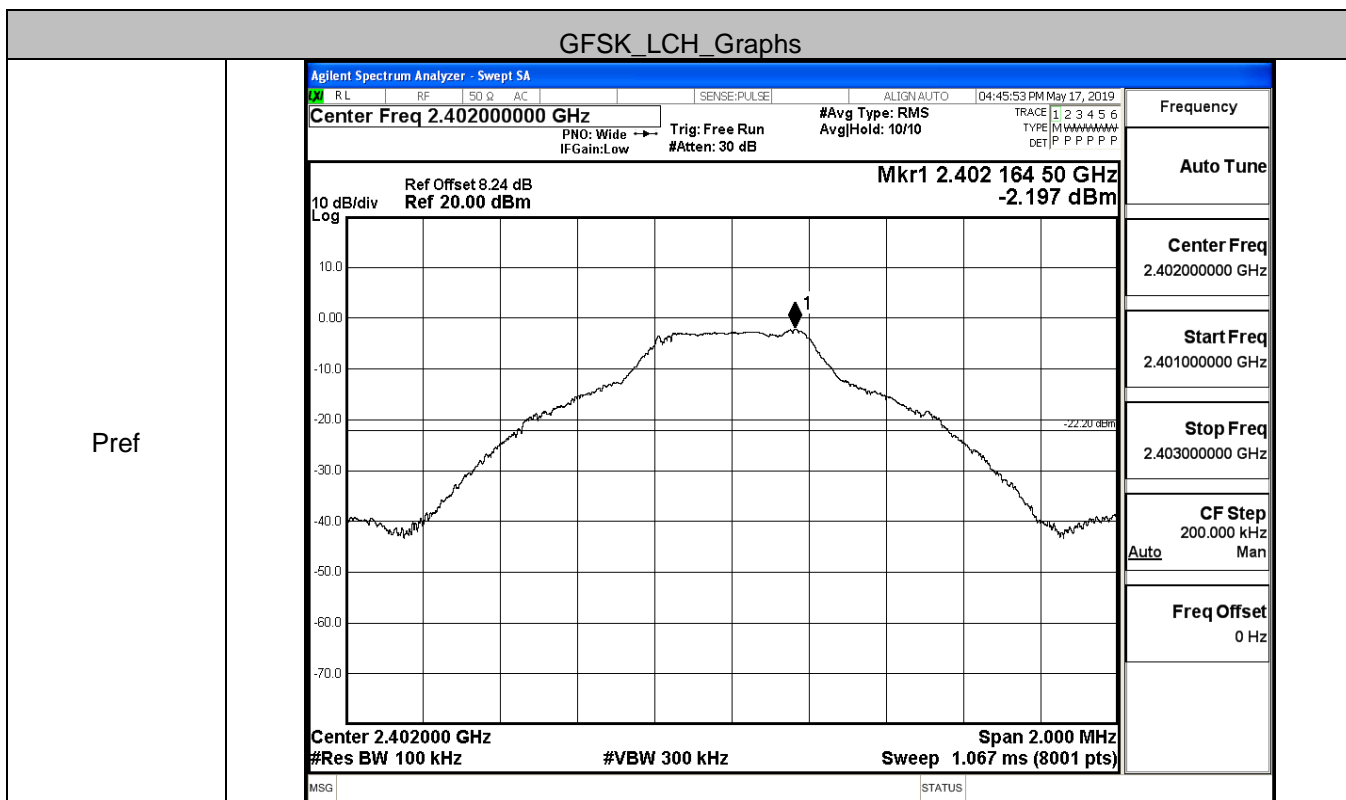
$\pi/4$ DQPSK
_2DH5/MCH



π/4DQPSK
_2DH5/HCH



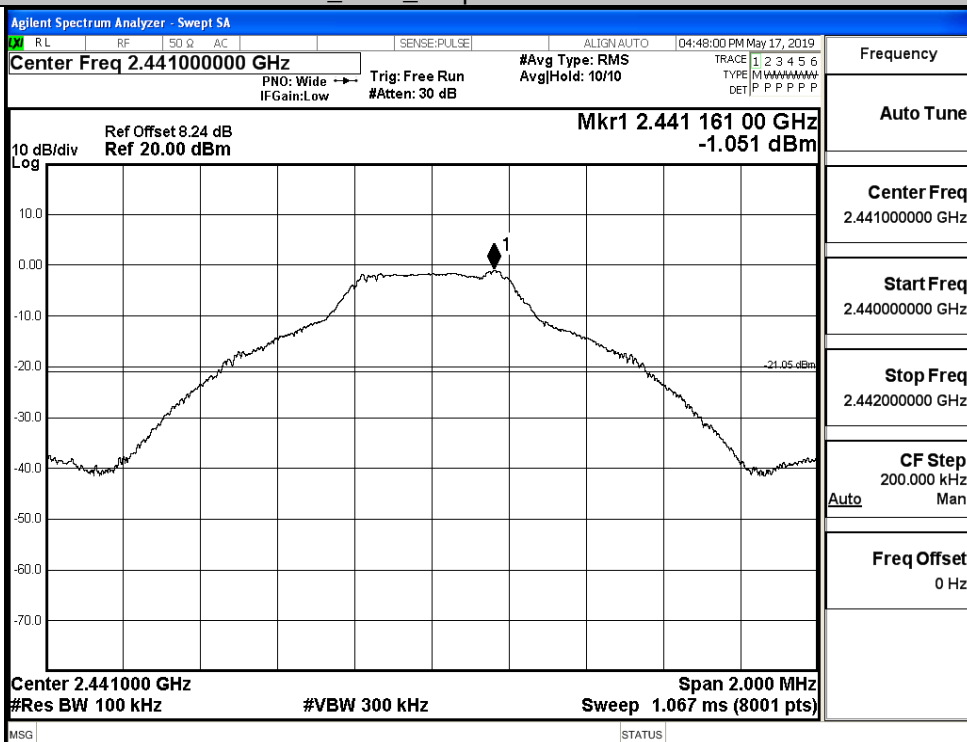
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-2.197	-44.631	-22.197	PASS
	MCH	-1.051	-44.509	-21.051	PASS
	HCH	-2.267	-44.916	-22.267	PASS
$\pi/4$ DQPSK	LCH	-3.57	-44.939	-23.570	PASS
	MCH	-2.297	-44.635	-22.297	PASS
	HCH	-3.45	-44.992	-23.450	PASS



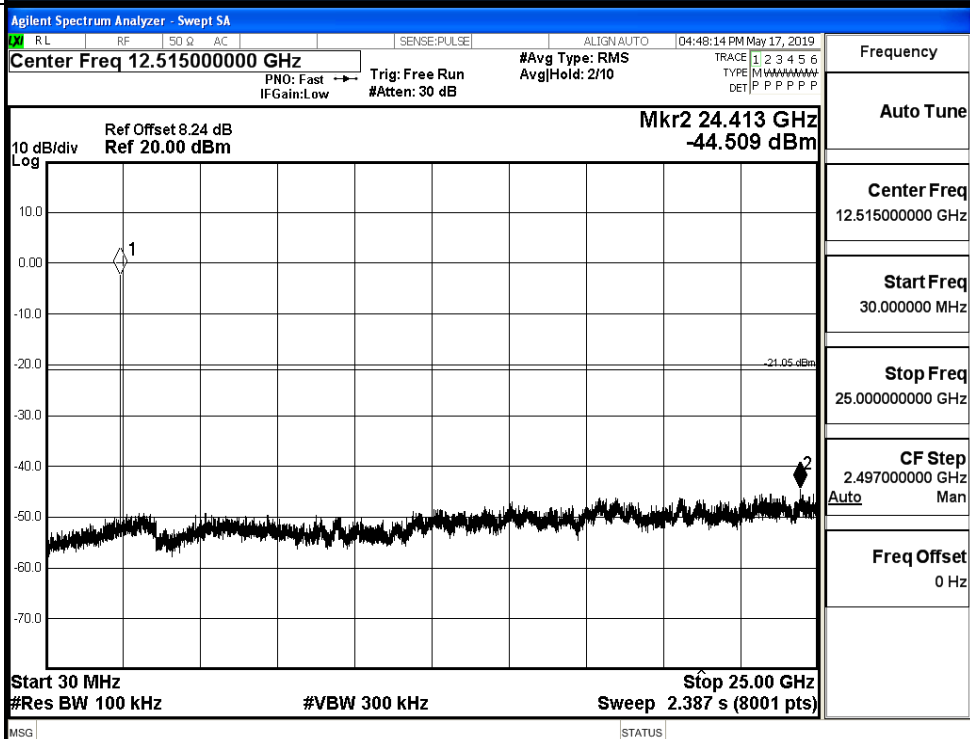


GFSK_MCH_Graphs

Pref

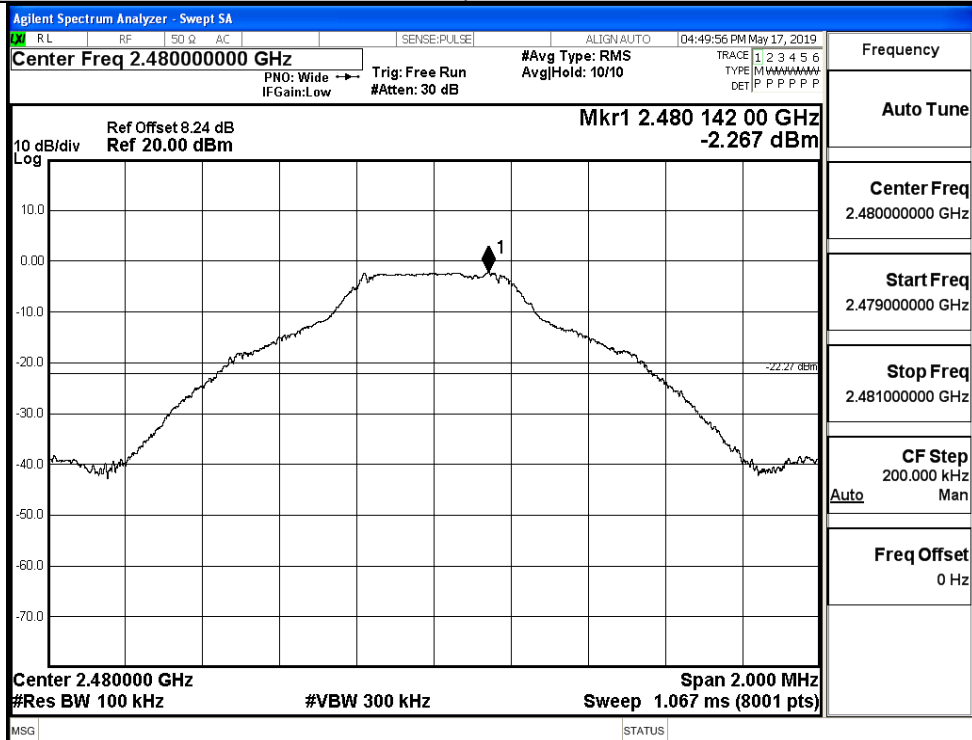


Puw

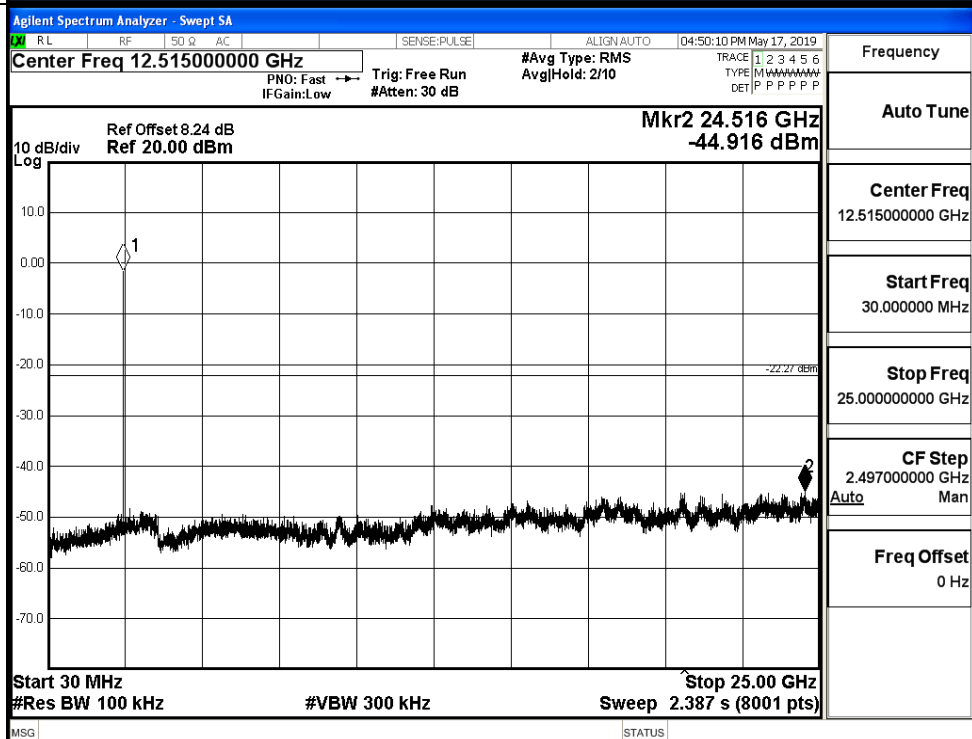


GFSK_HCH_Graphs

Pref

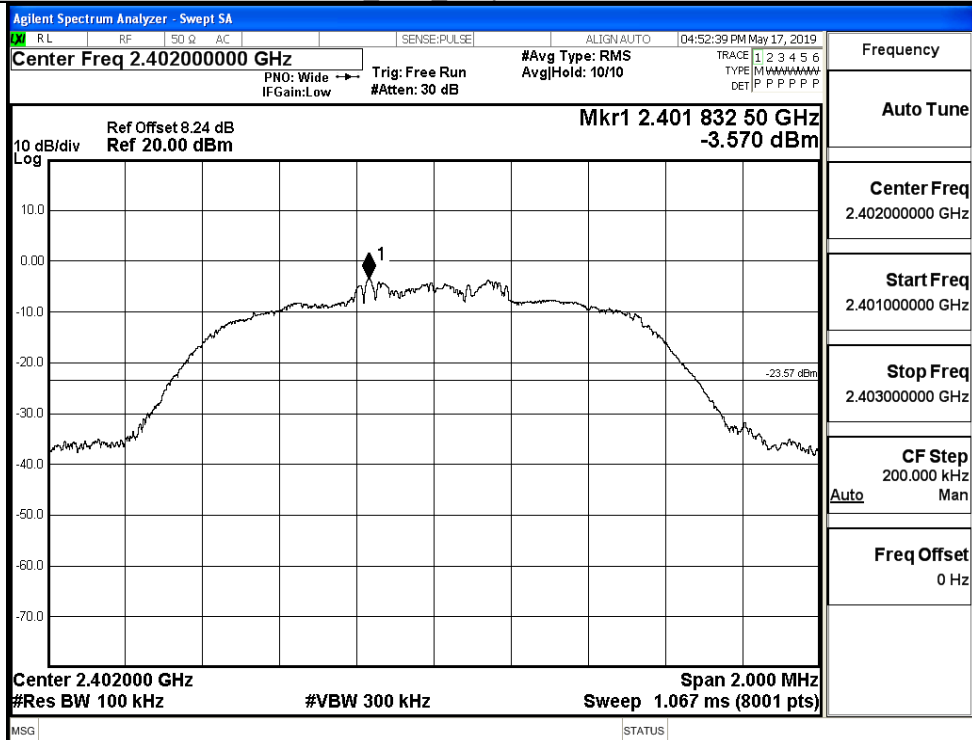


Puw

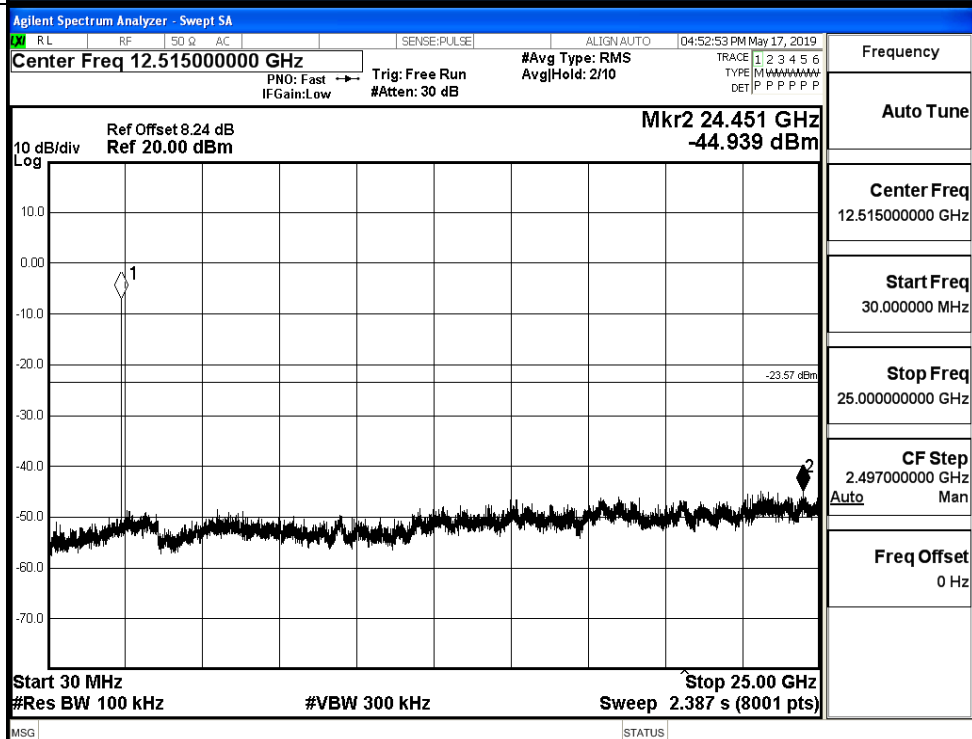


$\pi/4$ DQPSK_LCH_Graphs

Pref

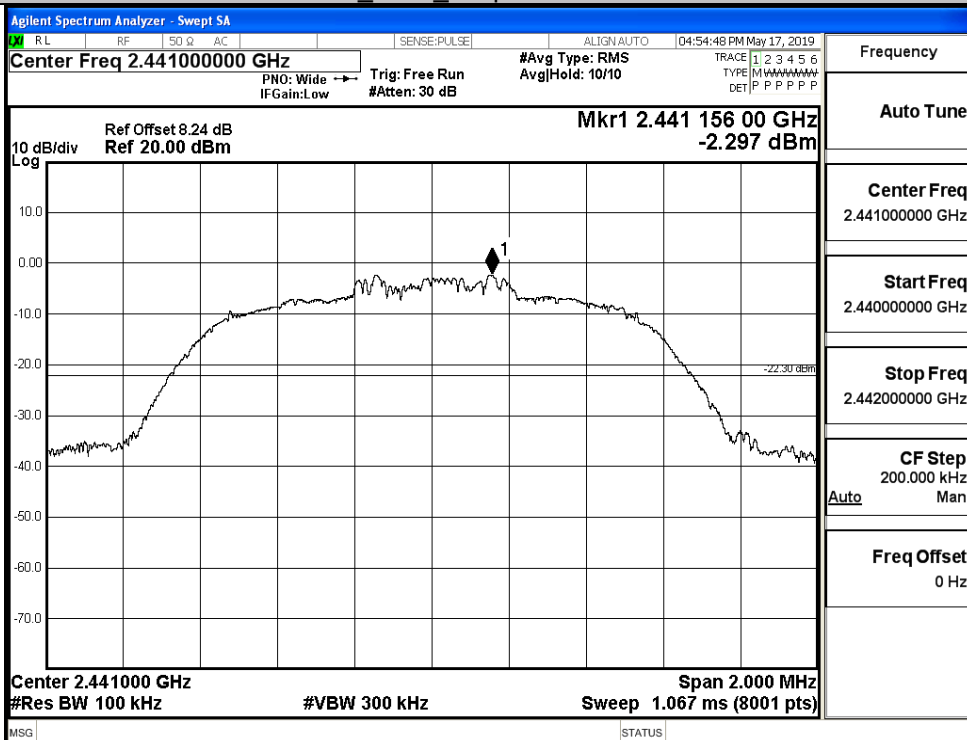


Puw

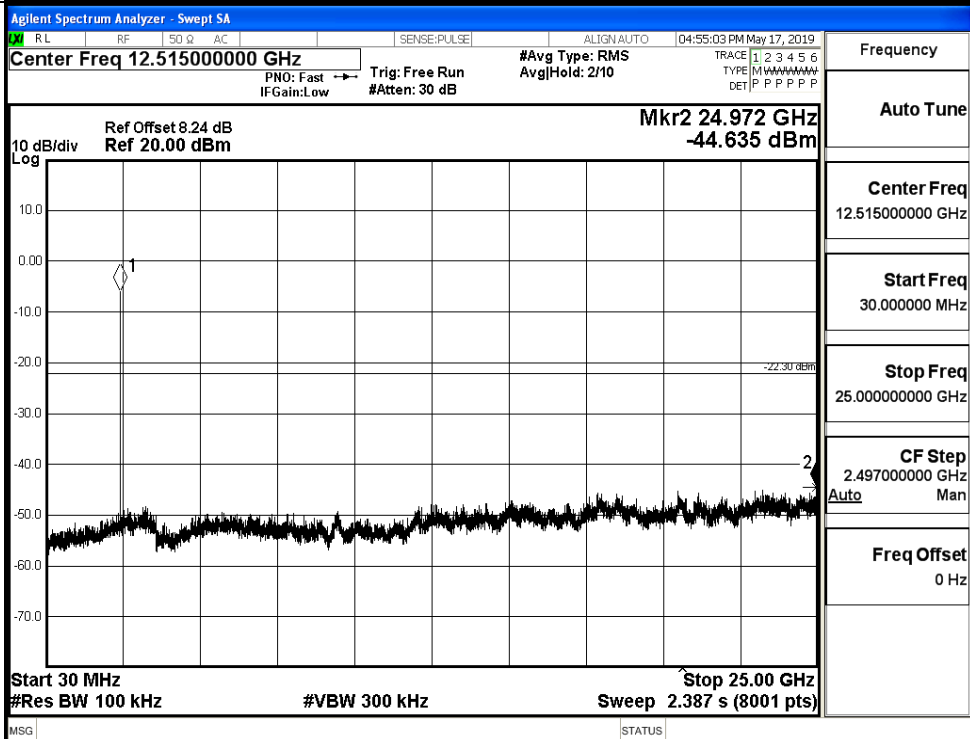


$\pi/4$ DQPSK_MCH_Graphs

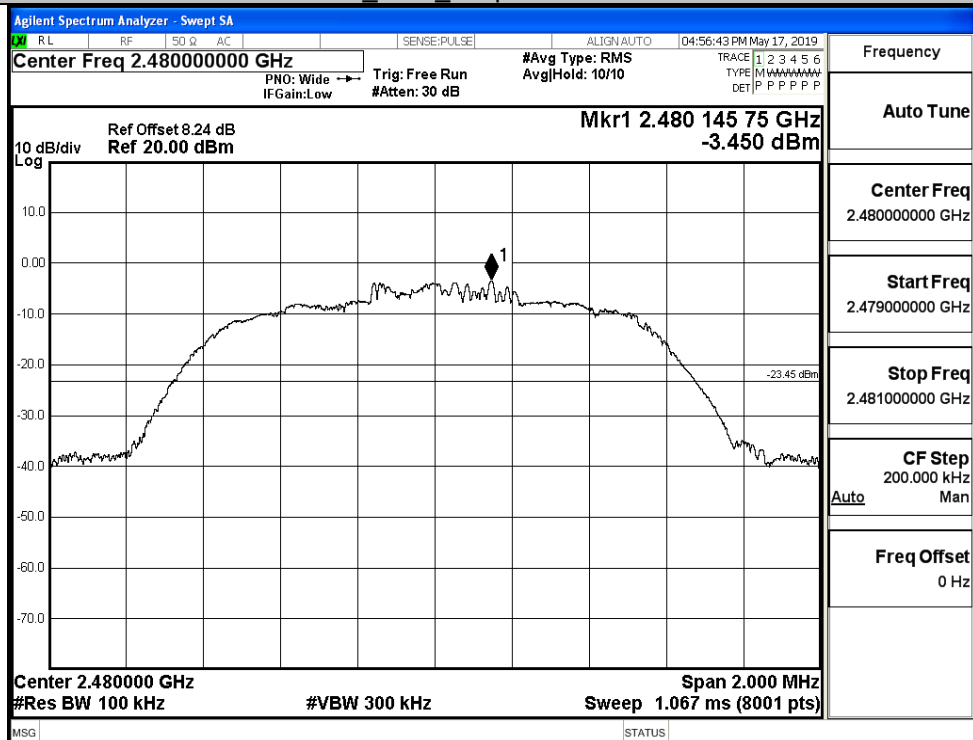
Pref



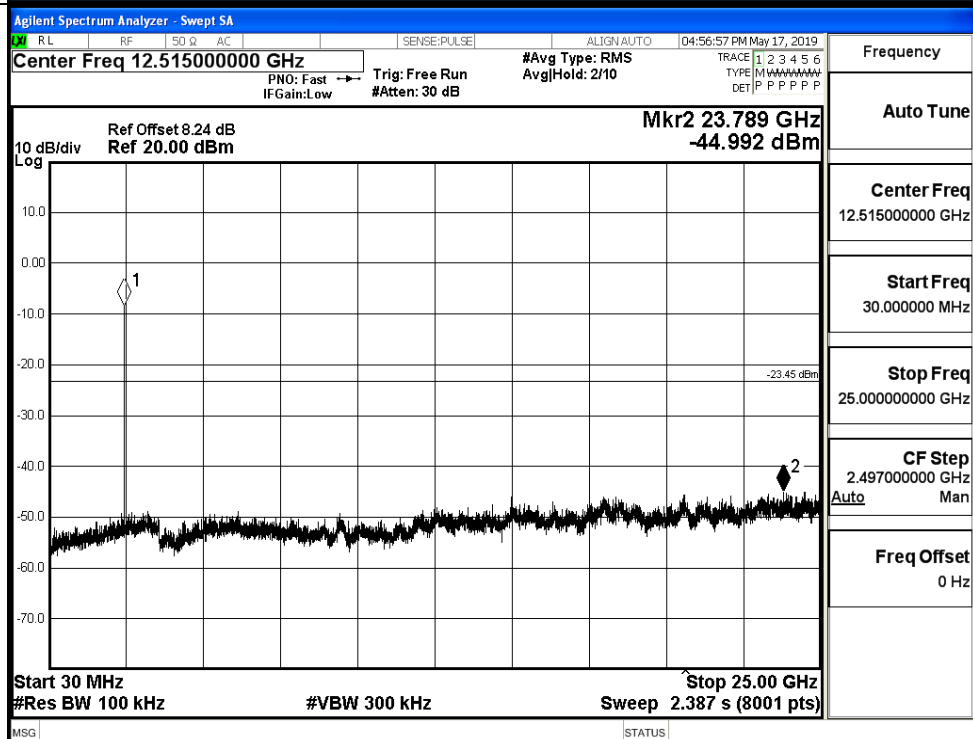
Puw



Pref



Puw

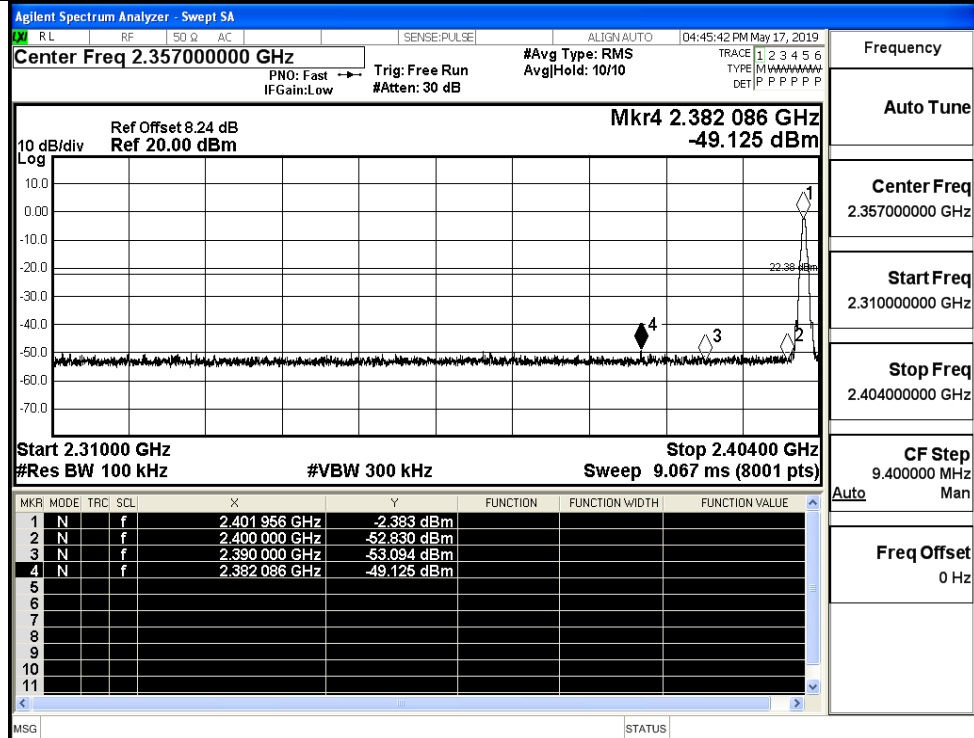


A.8 Band-edge for RF Conducted Emissions

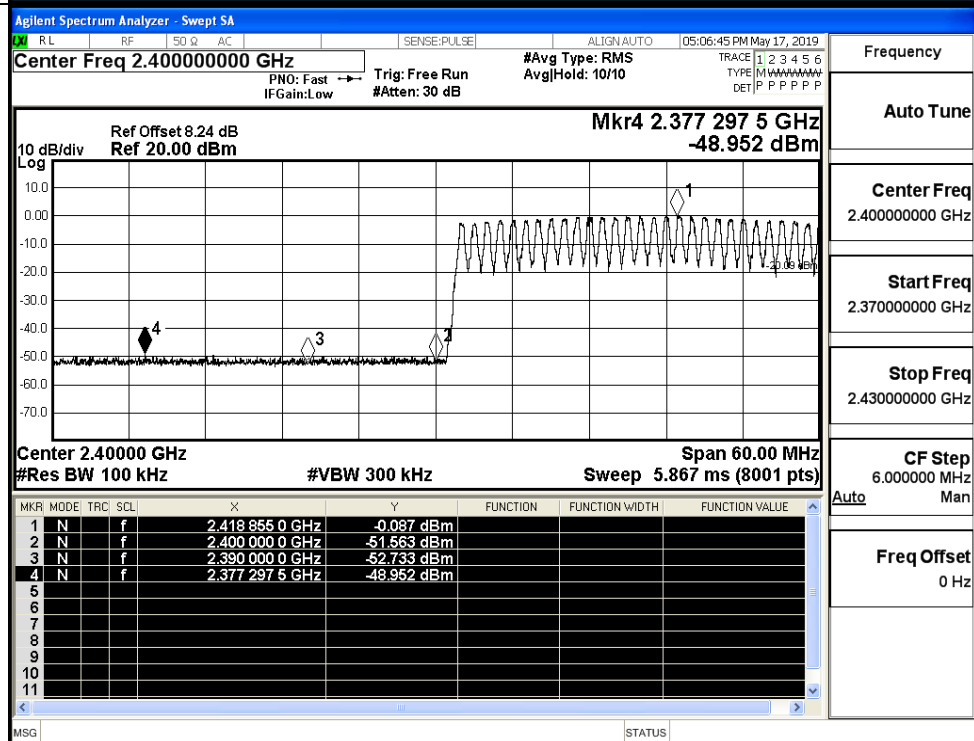
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-2.383	Off	-49.125	-22.38	PASS
			-0.087	On	-48.952	-20.09	PASS
	HCH	2480	-1.663	Off	-49.919	-21.66	PASS
			0.403	On	-49.291	-19.6	PASS
$\pi/4$ DQPSK	LCH	2402	-3.392	Off	-49.569	-23.39	PASS
			-1.424	On	-49.451	-21.42	PASS
	HCH	2480	-2.953	Off	-49.000	-22.95	PASS
			-1.064	On	-48.995	-21.06	PASS

Test Graphs

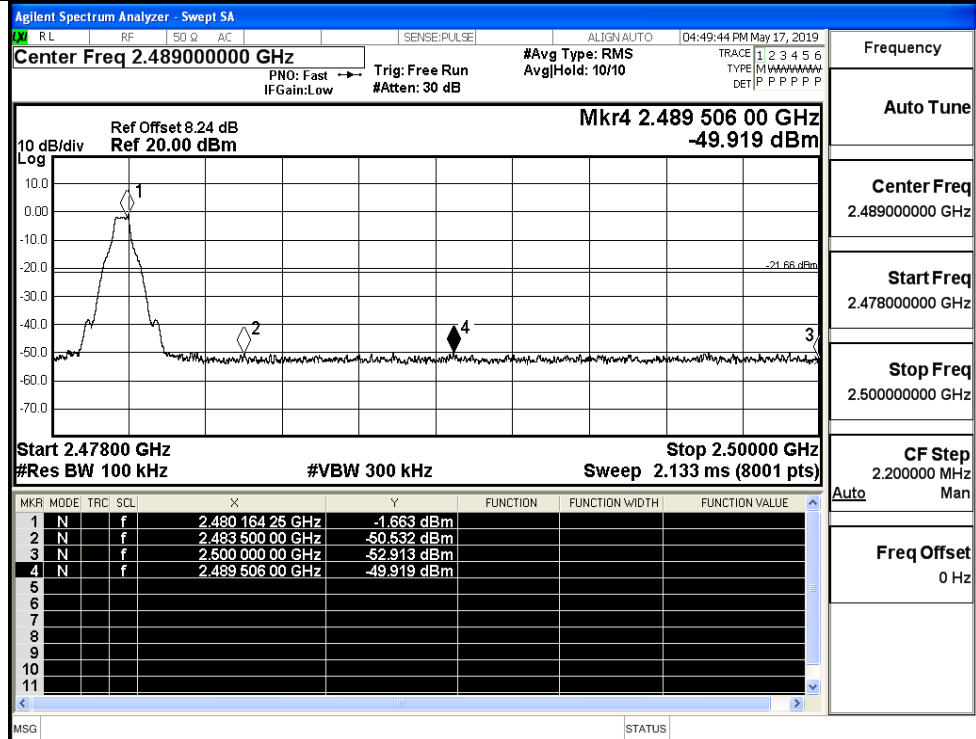
GFSK/LCH/No Hop



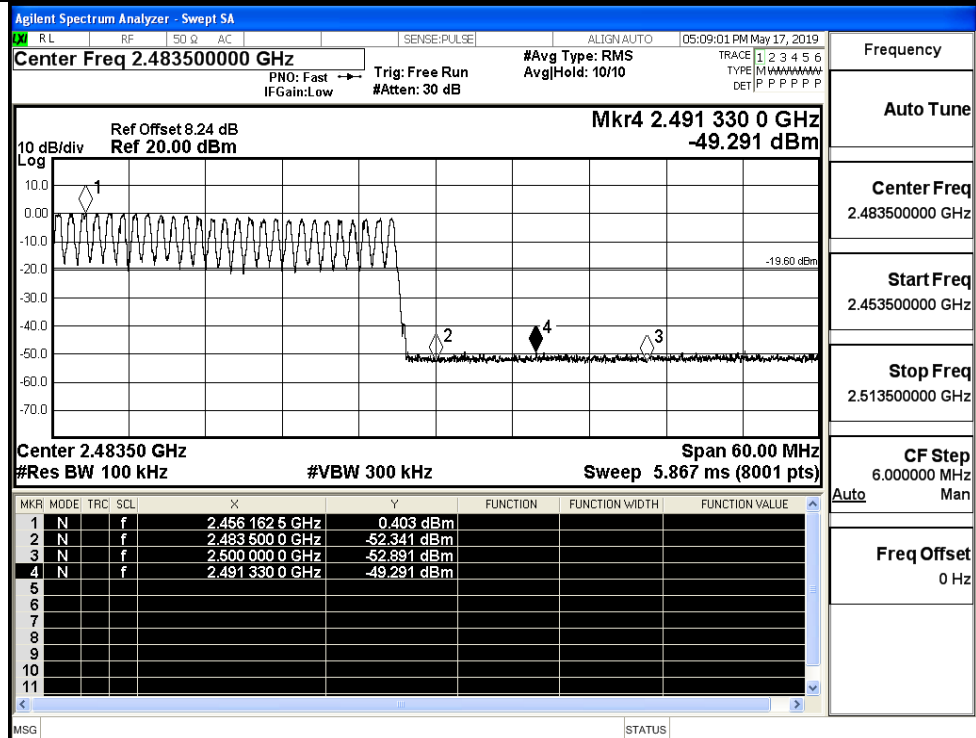
GFSK/LCH/Hop



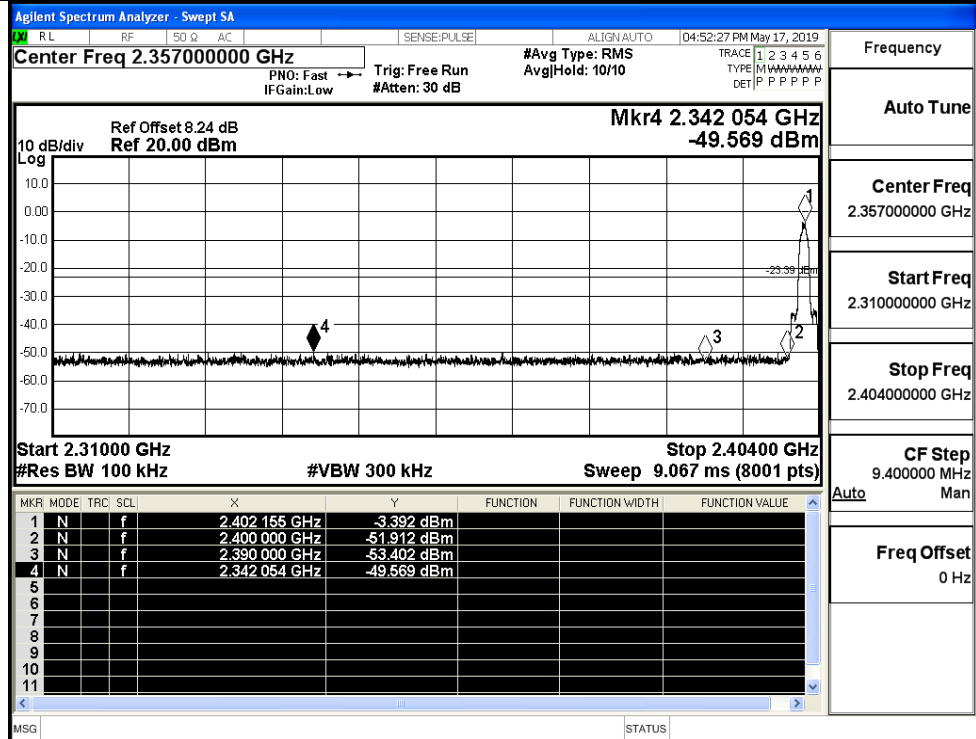
GFSK/HCH/No Hop



GFSK/HCH/Hop



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



Frequency

Auto Tune

Center Freq
2.357000000 GHz

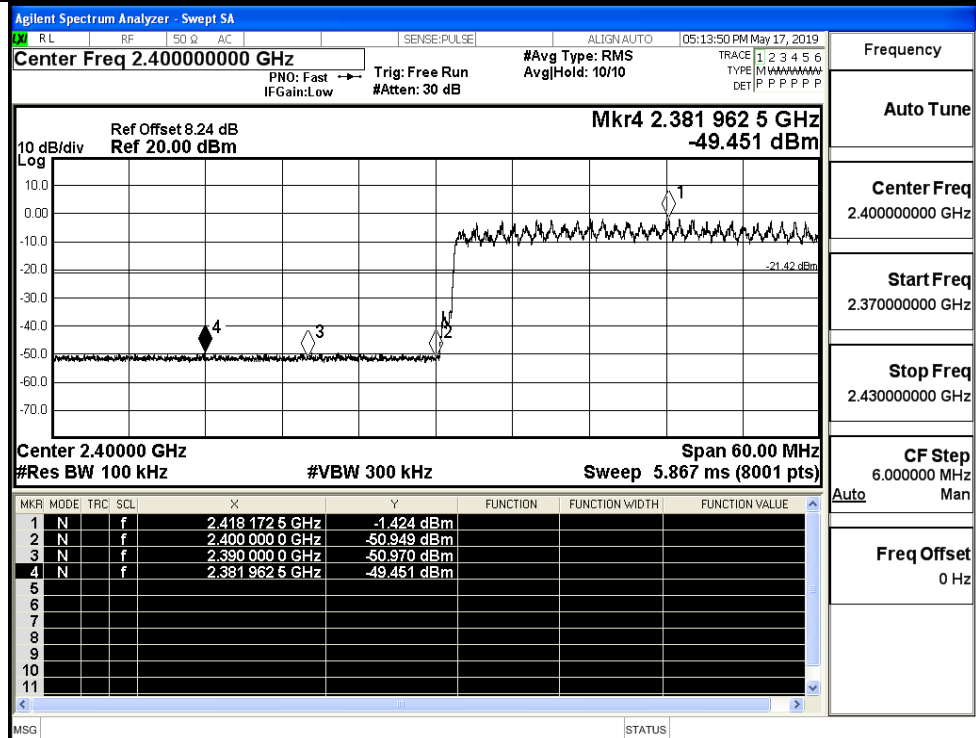
Start Freq
2.310000000 GHz

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

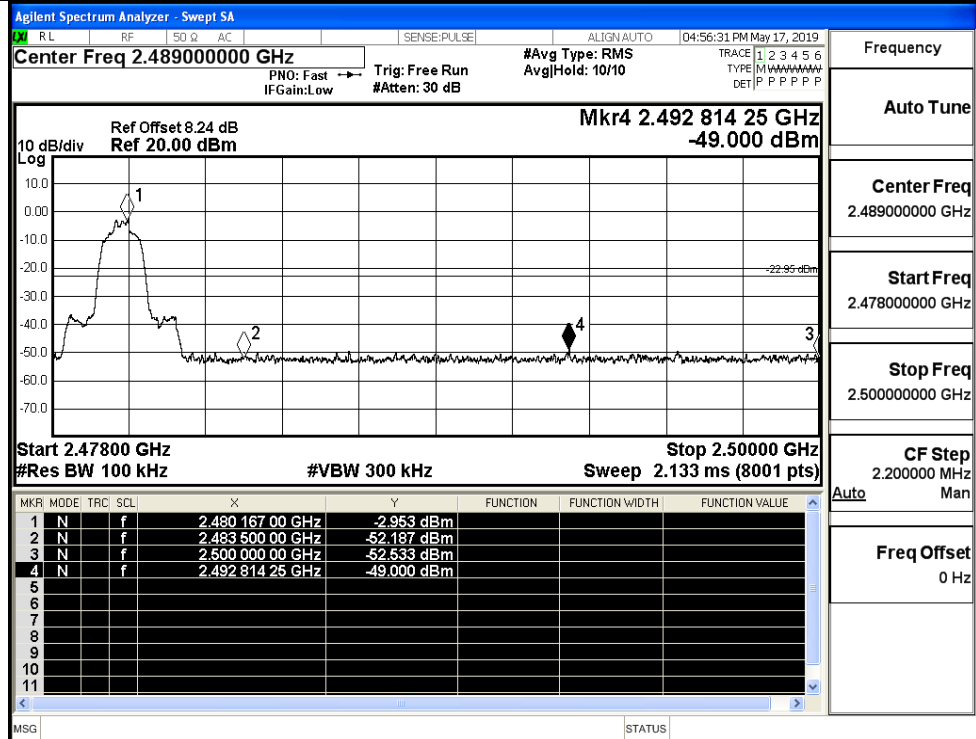
Start Freq
2.370000000 GHz

Stop Freq
2.430000000 GHz

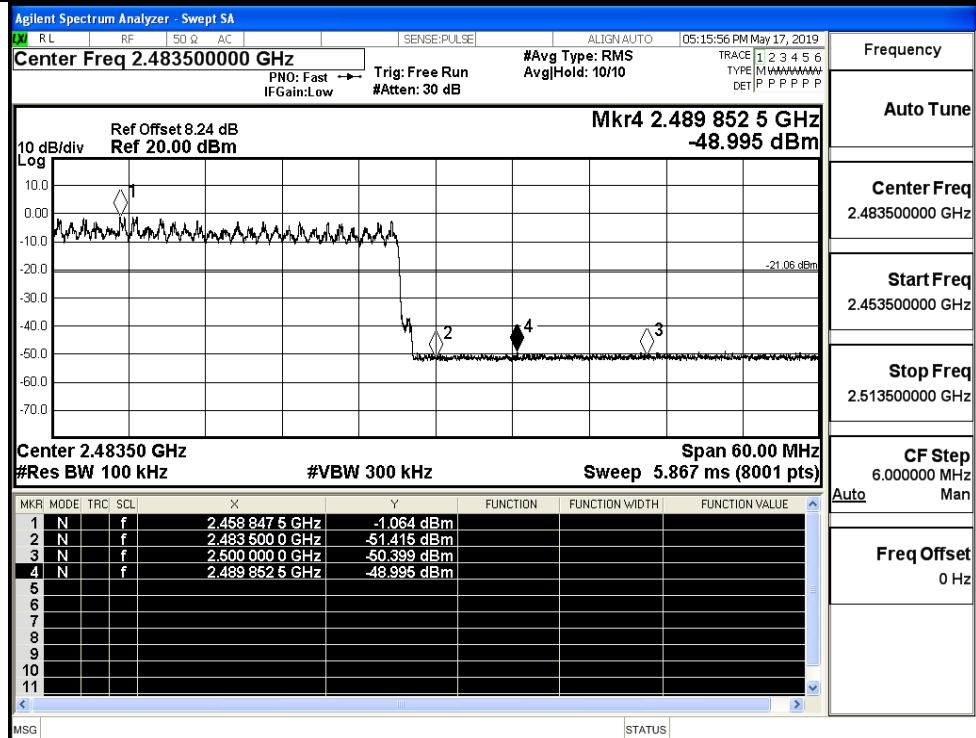
CF Step
6.000000 MHz
Auto Man

Freq Offset
0 Hz

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



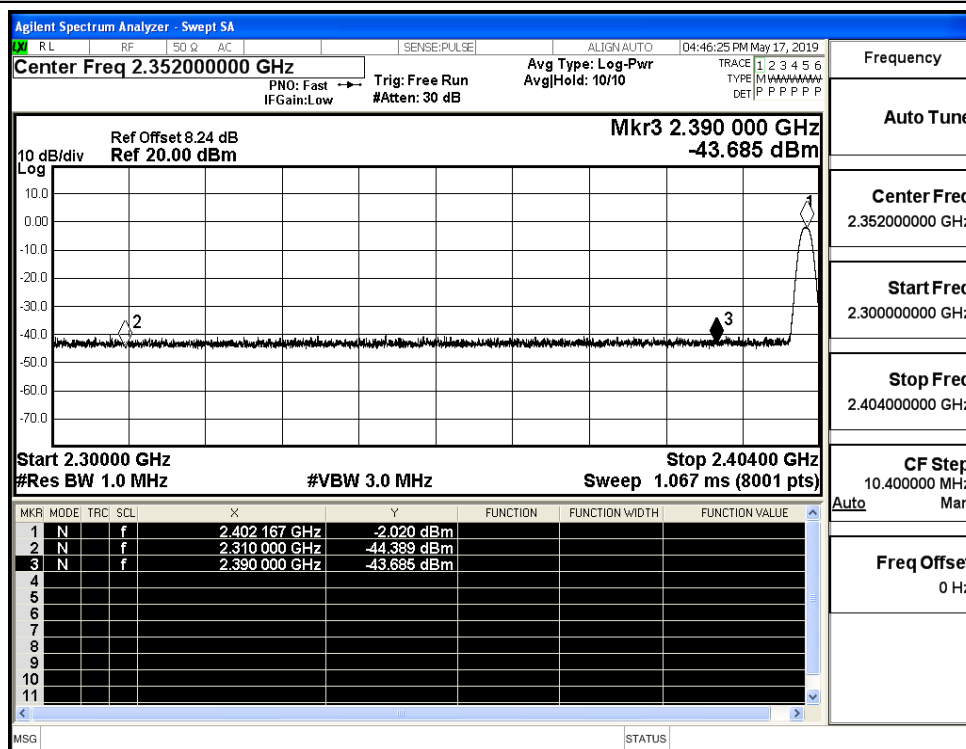
$\pi/4$ DQPSK/HCH/Hop



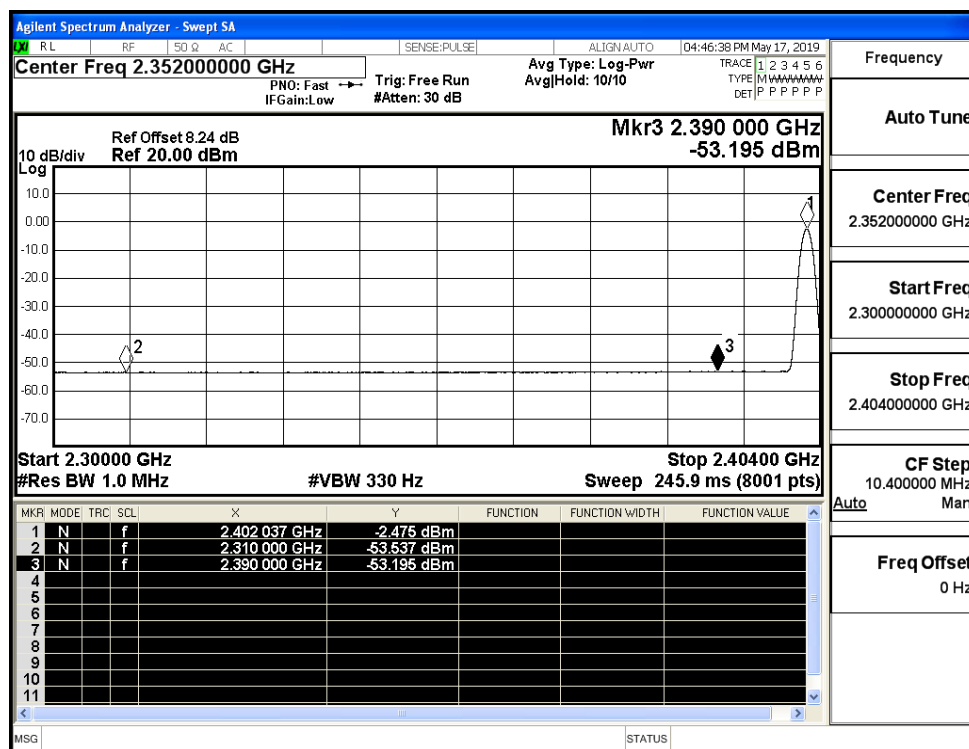
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-44.39	2.0	0	52.87	PEAK	74	PASS
	Off	2310.0	-53.54	2.0	0	43.72	AV	54	PASS
	Off	2390.0	-43.69	2.0	0	53.57	PEAK	74	PASS
	Off	2390.0	-53.20	2.0	0	44.06	AV	54	PASS
	Off	2483.5	-42.93	2.0	0	54.33	PEAK	74	PASS
	Off	2483.5	-52.88	2.0	0	44.38	AV	54	PASS
	Off	2500.0	-42.28	2.0	0	54.97	PEAK	74	PASS
	Off	2500.0	-52.82	2.0	0	44.43	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.90	2.0	0	53.36	PEAK	74	PASS
	Off	2310.0	-53.54	2.0	0	43.71	AV	54	PASS
	Off	2390.0	-42.23	2.0	0	55.03	PEAK	74	PASS
	Off	2390.0	-53.19	2.0	0	44.07	AV	54	PASS
	Off	2483.5	-42.26	2.0	0	55.00	PEAK	74	PASS
	Off	2483.5	-52.91	2.0	0	44.35	AV	54	PASS
	Off	2500.0	-42.93	2.0	0	54.33	PEAK	74	PASS
	Off	2500.0	-52.81	2.0	0	44.44	AV	54	PASS

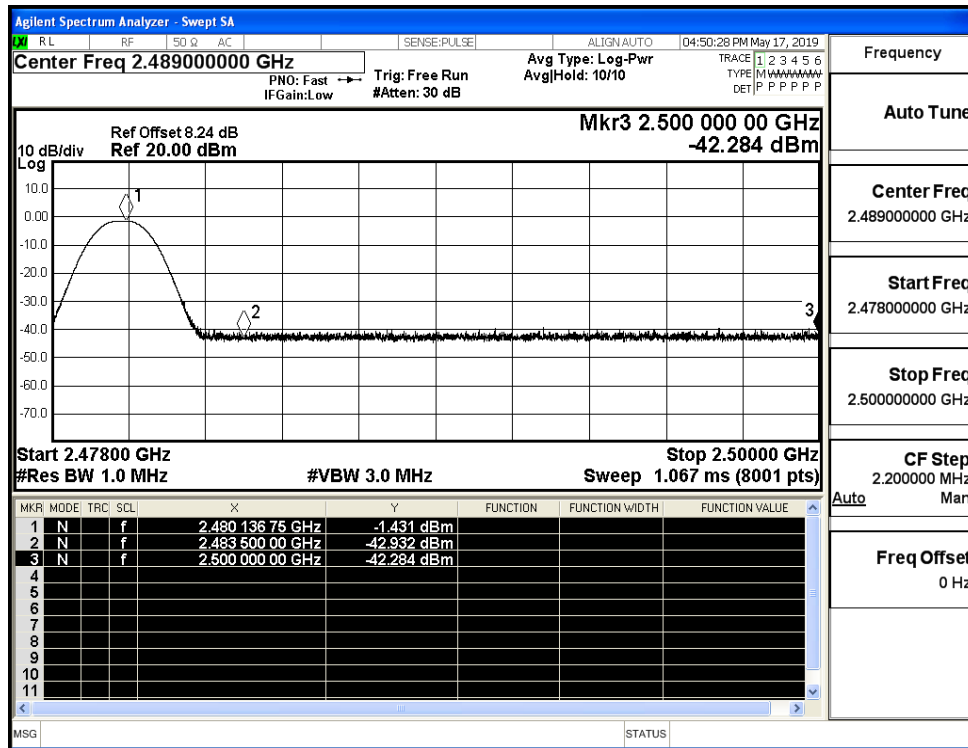
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



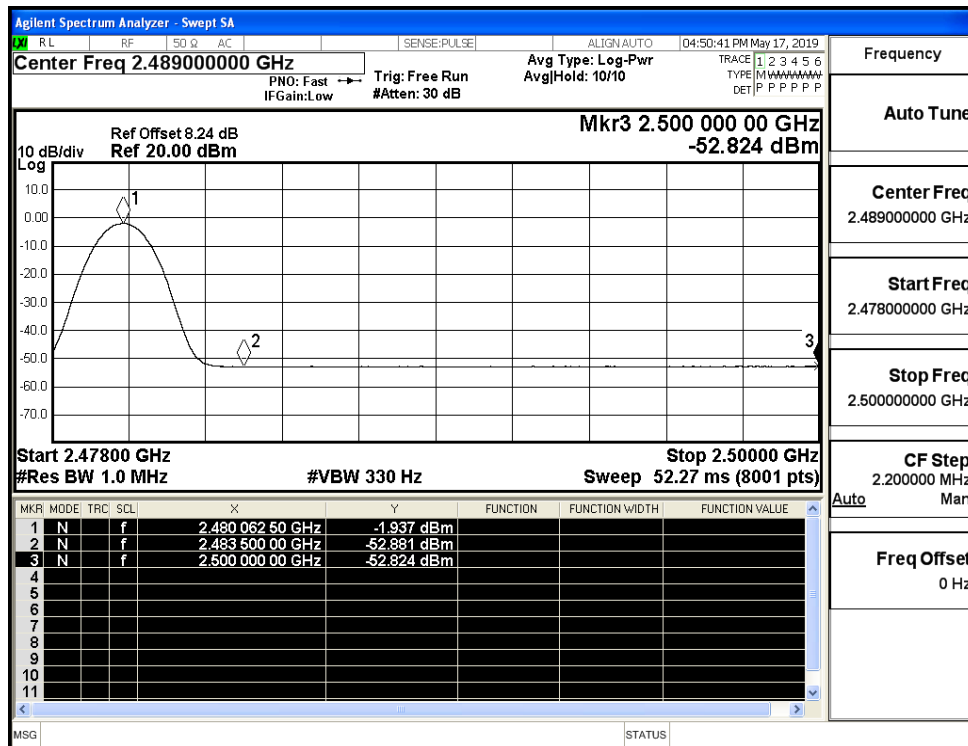
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

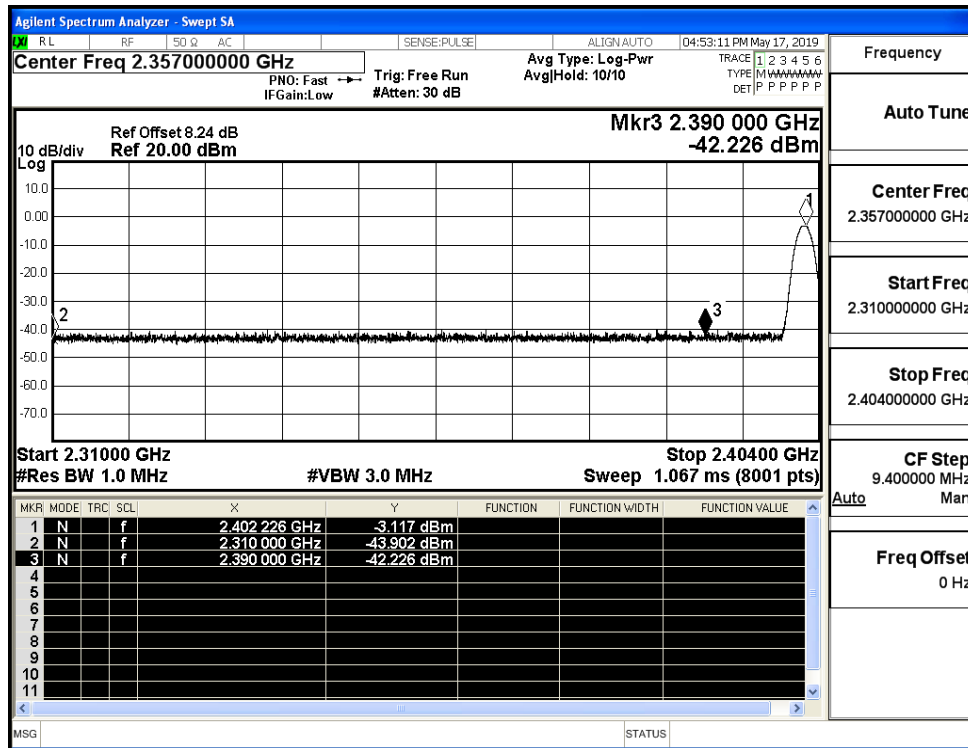
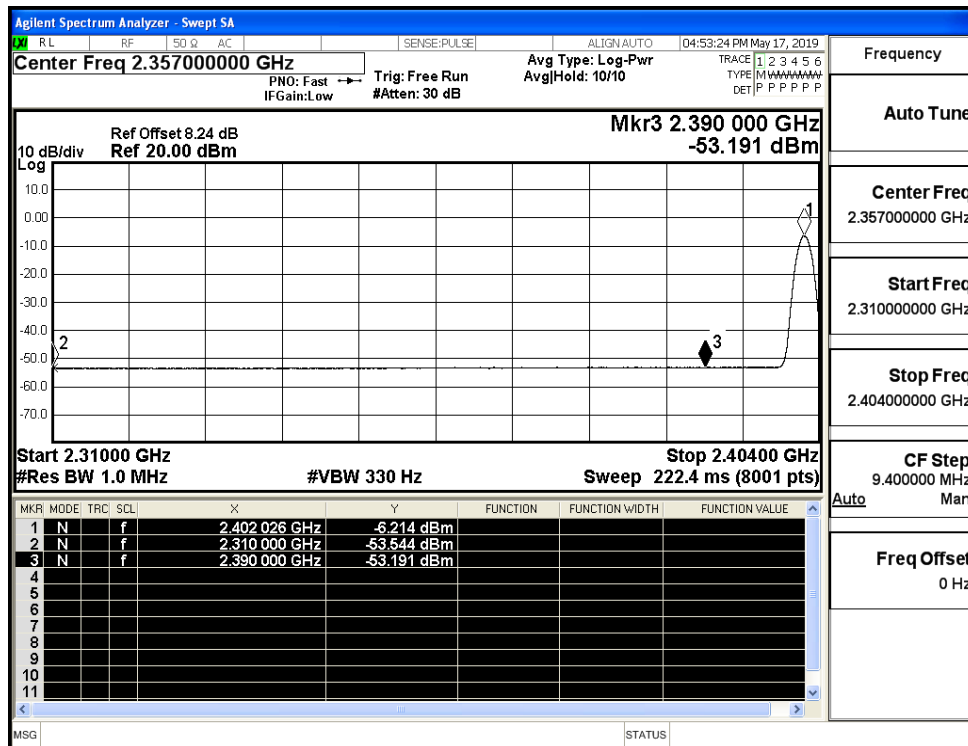


Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)

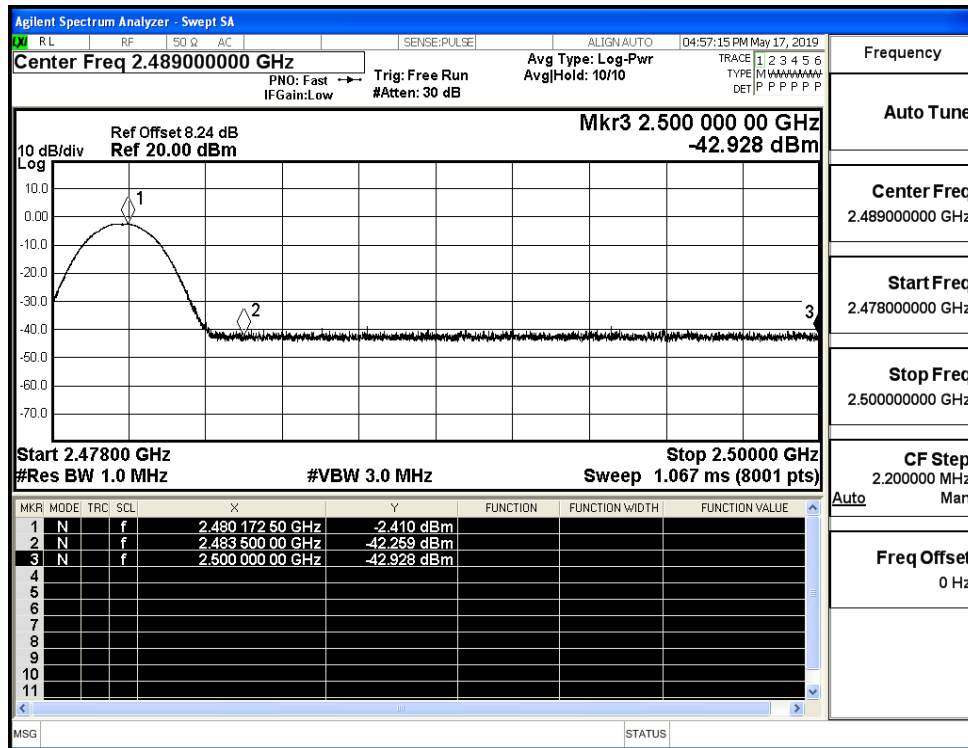


Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



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)

