

Appendix A

RF Test Data for BT V5.1(BDR/EDR) (Conducted Measurement)

Product Name: VIDEO PROJECTOR

Trade Mark: GROVIEW, TOPVISION, KJM

Test Model: G210

Environmental Conditions

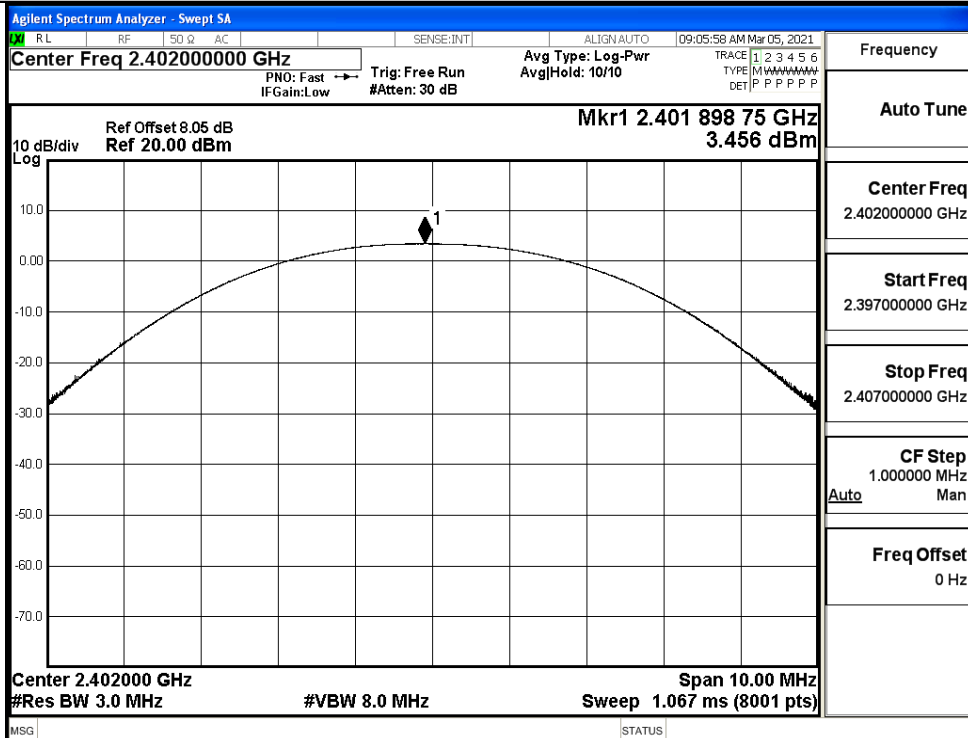
Temperature:	24.2° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ben Jin
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

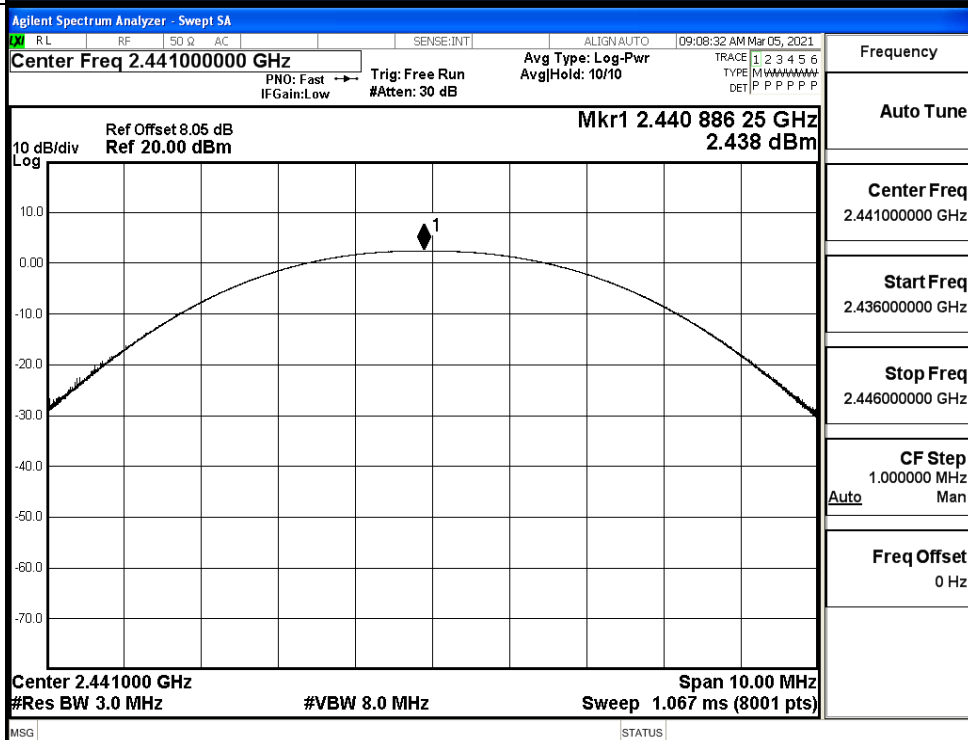
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.456	21	PASS
	MCH	2.438	21	PASS
	HCH	1.253	21	PASS
$\pi/4$ DQPSK	LCH	4.196	21	PASS
	MCH	3.273	21	PASS
	HCH	2.033	21	PASS

Test Graphs

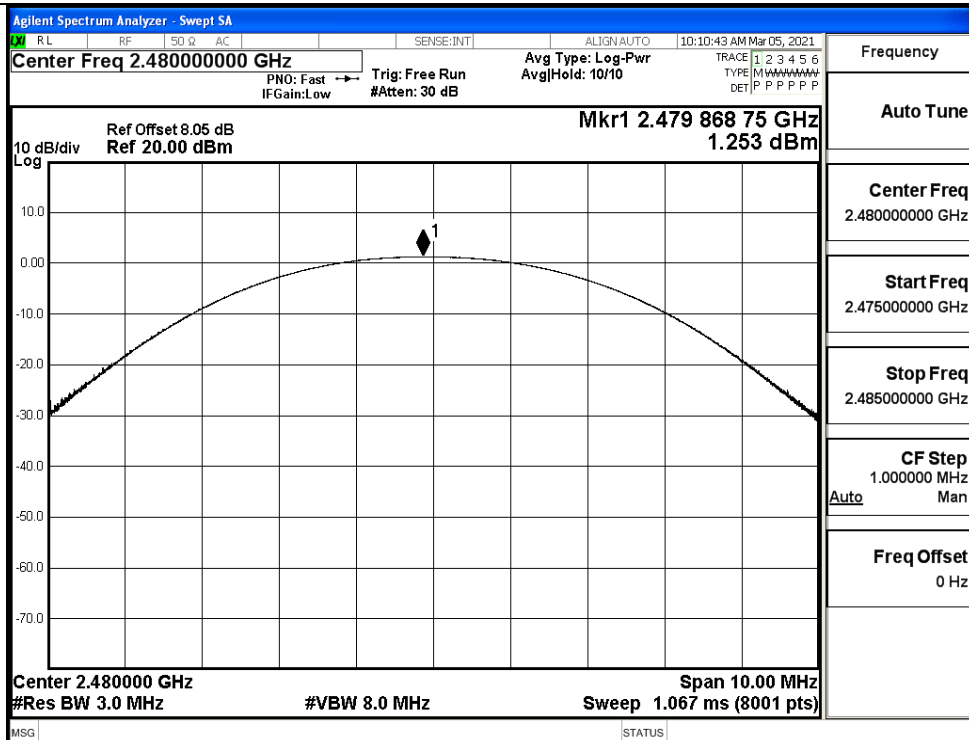
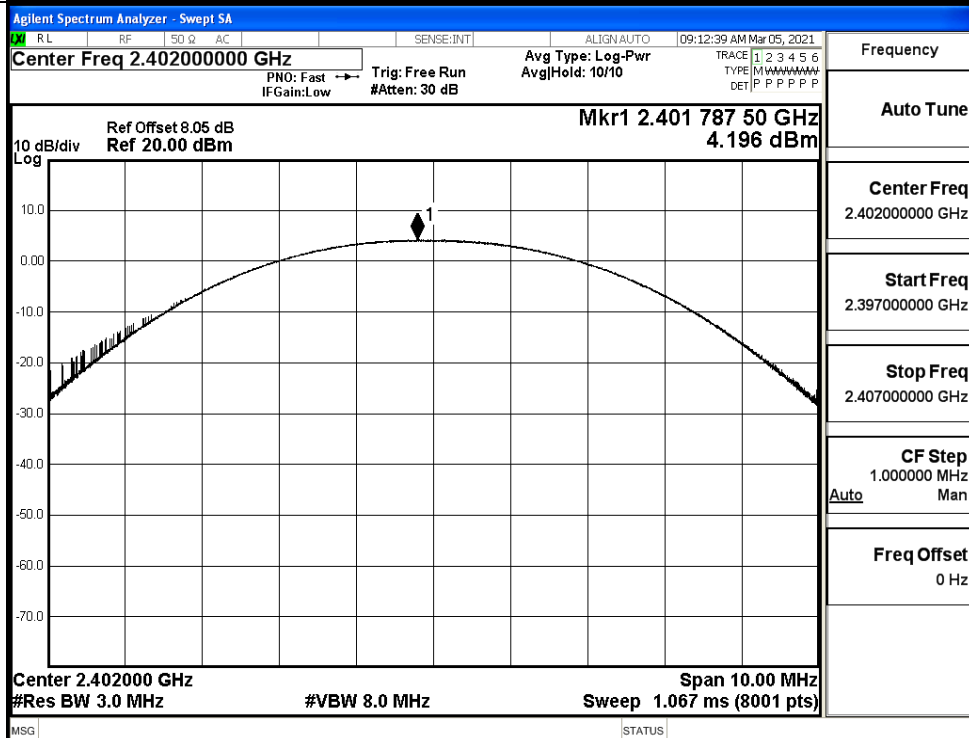
GFSK/LCH

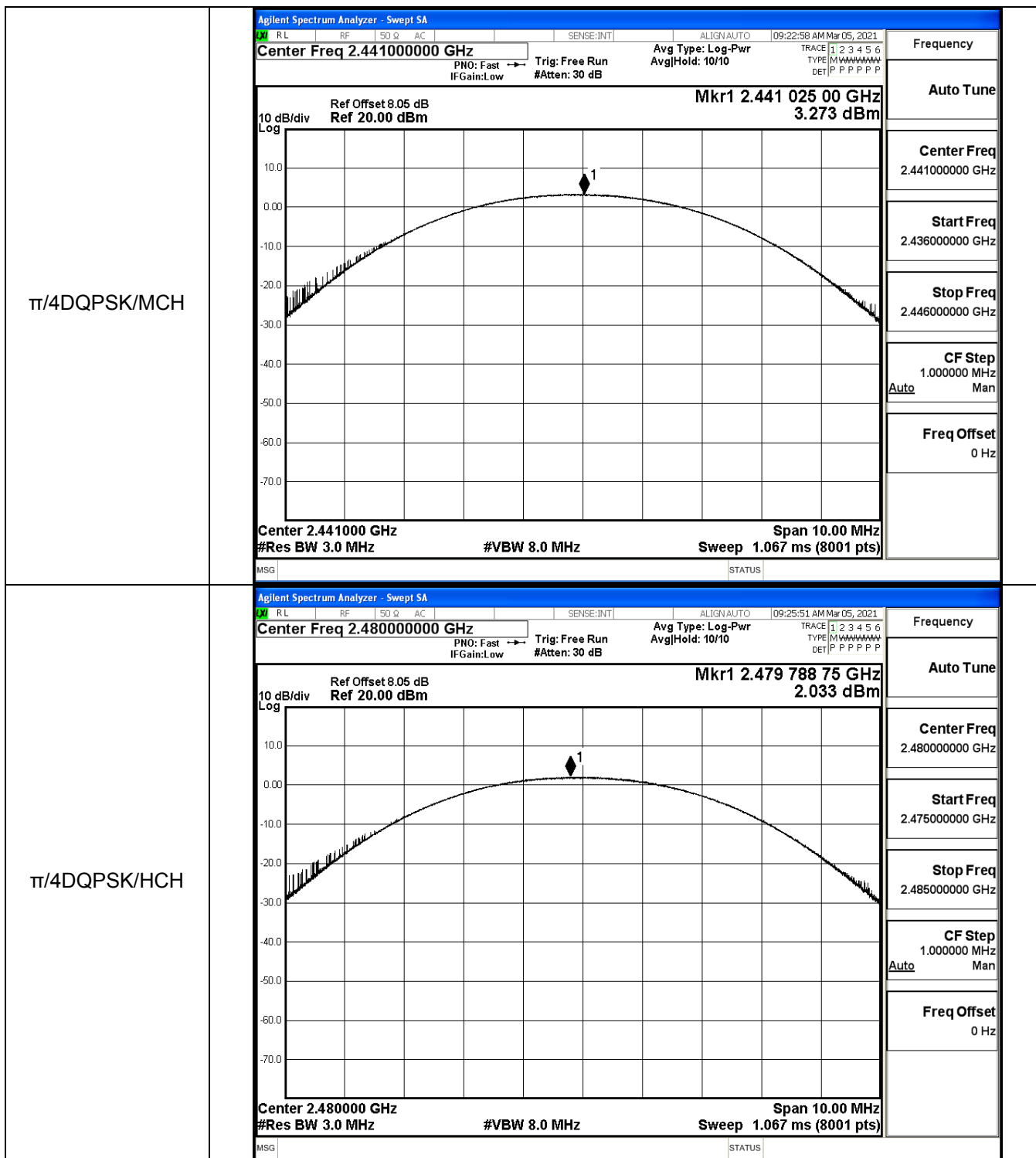


GFSK/MCH



GFSK/HCH

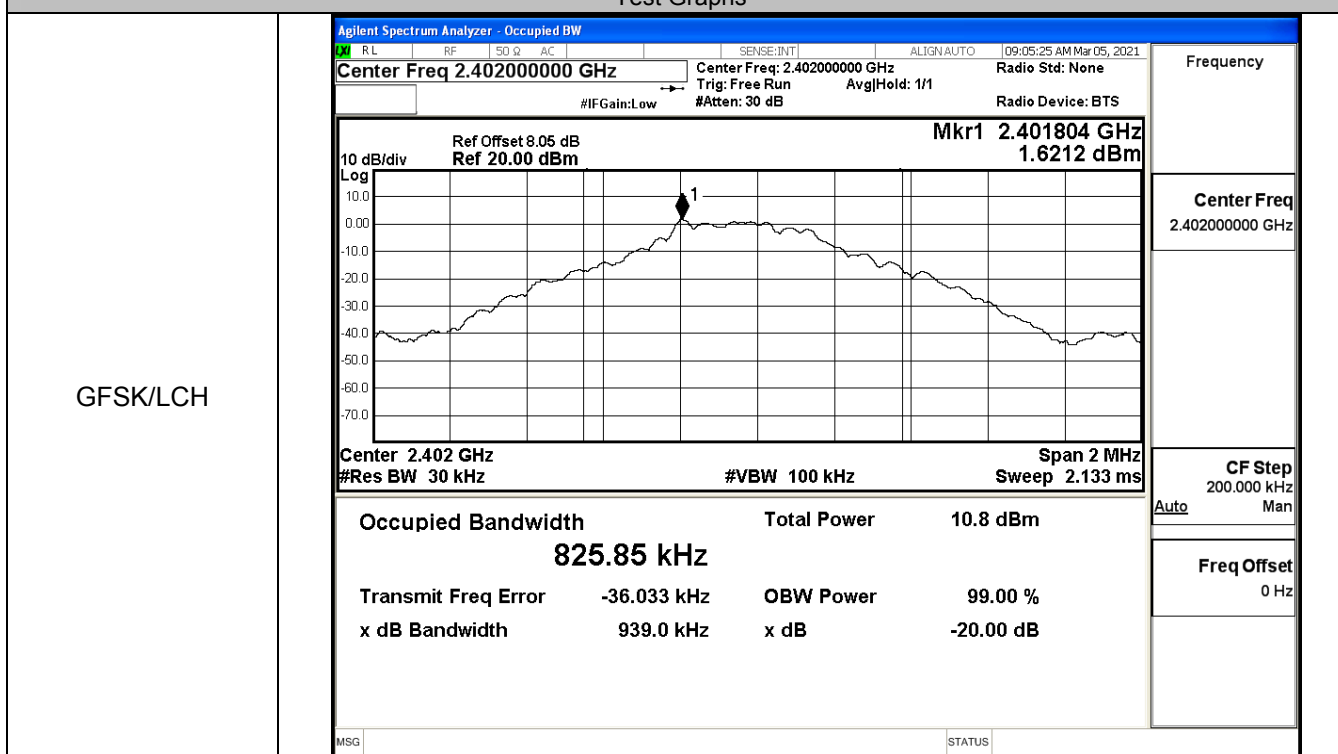
 $\pi/4$ DQPSK/LCH



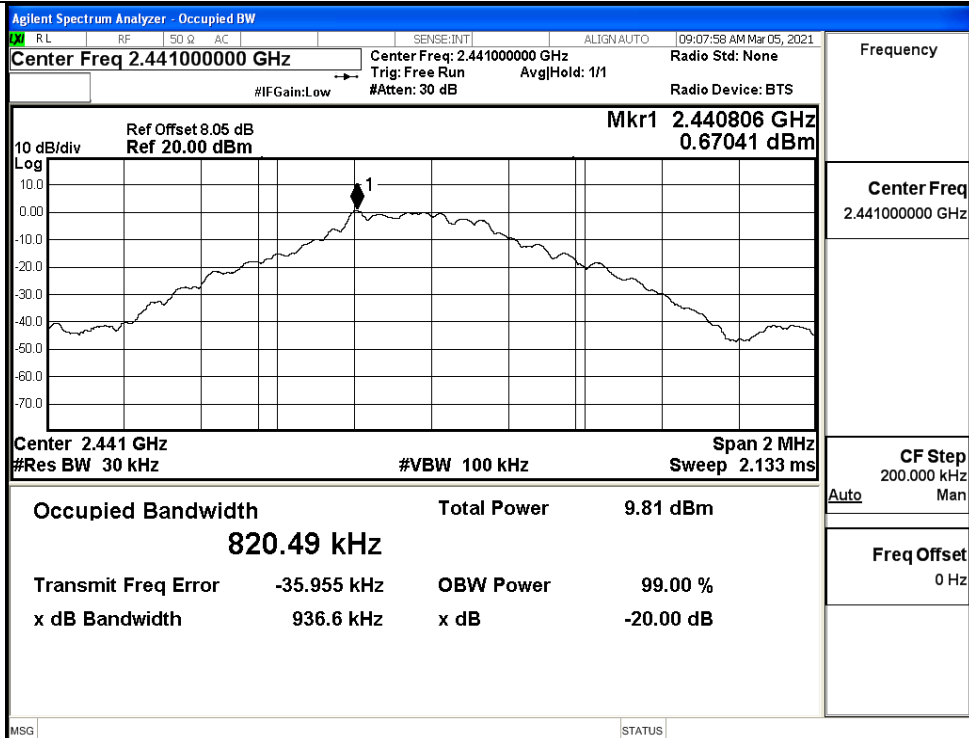
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9390	Not Specified	PASS
	MCH	0.9366	Not Specified	PASS
	HCH	0.9373	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.309	Not Specified	PASS
	MCH	1.288	Not Specified	PASS
	HCH	1.293	Not Specified	PASS

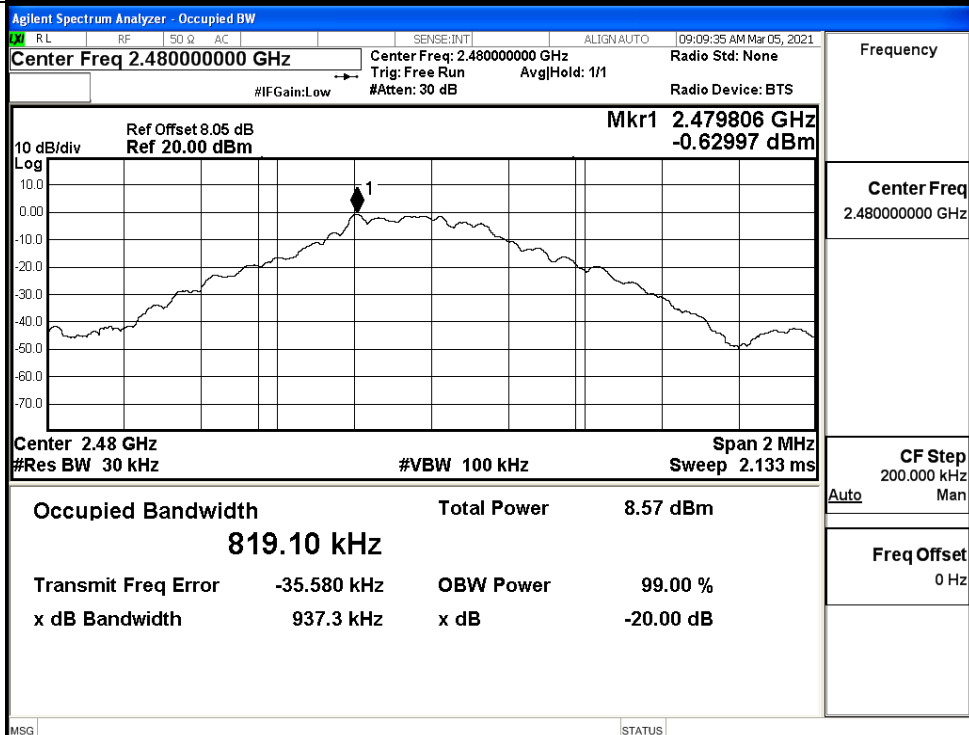
Test Graphs

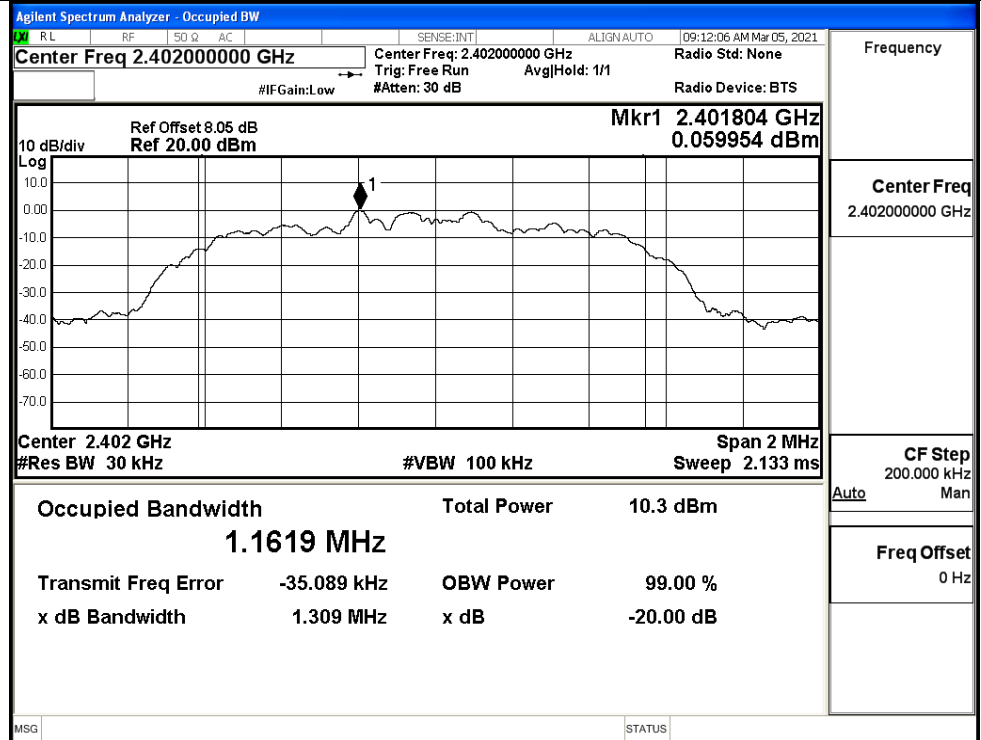
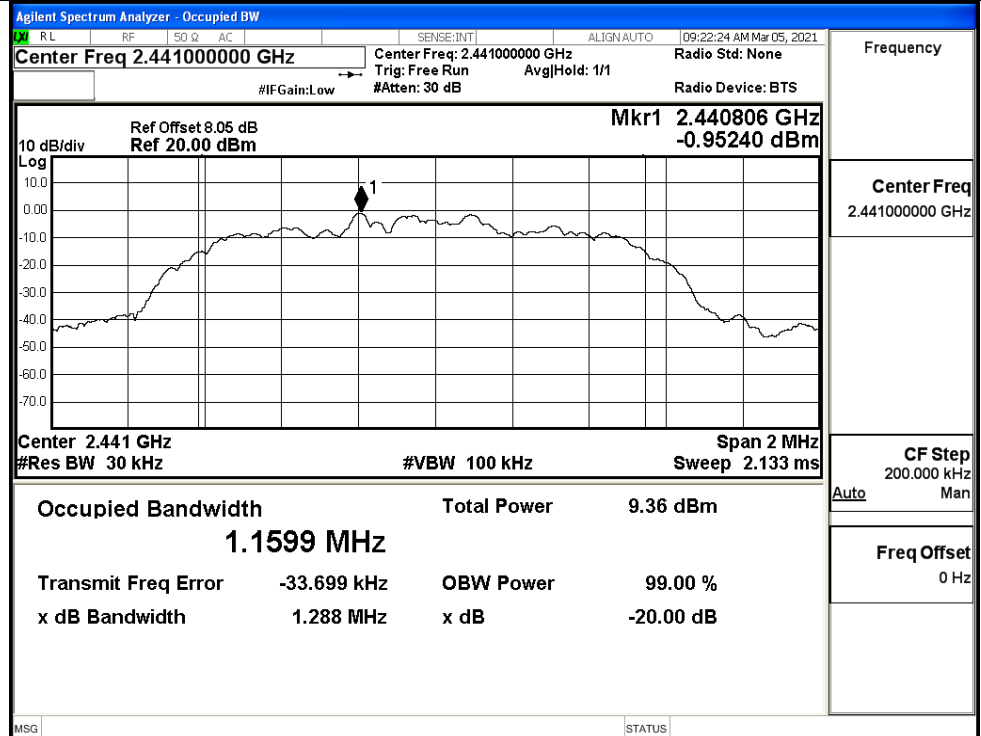


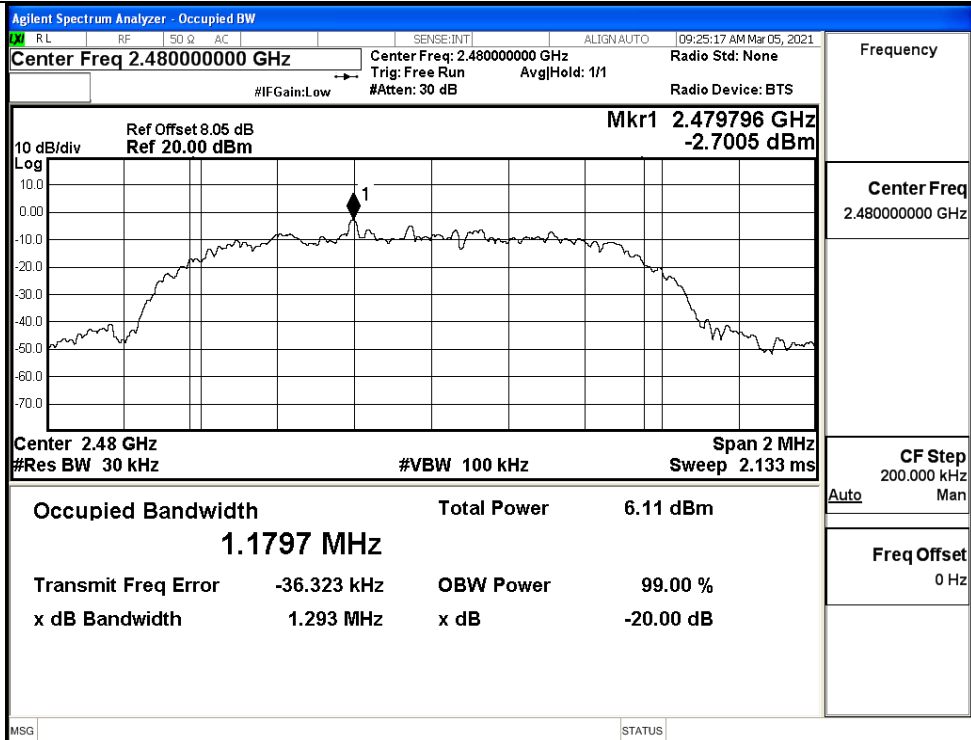
GFSK/MCH



GFSK/HCH



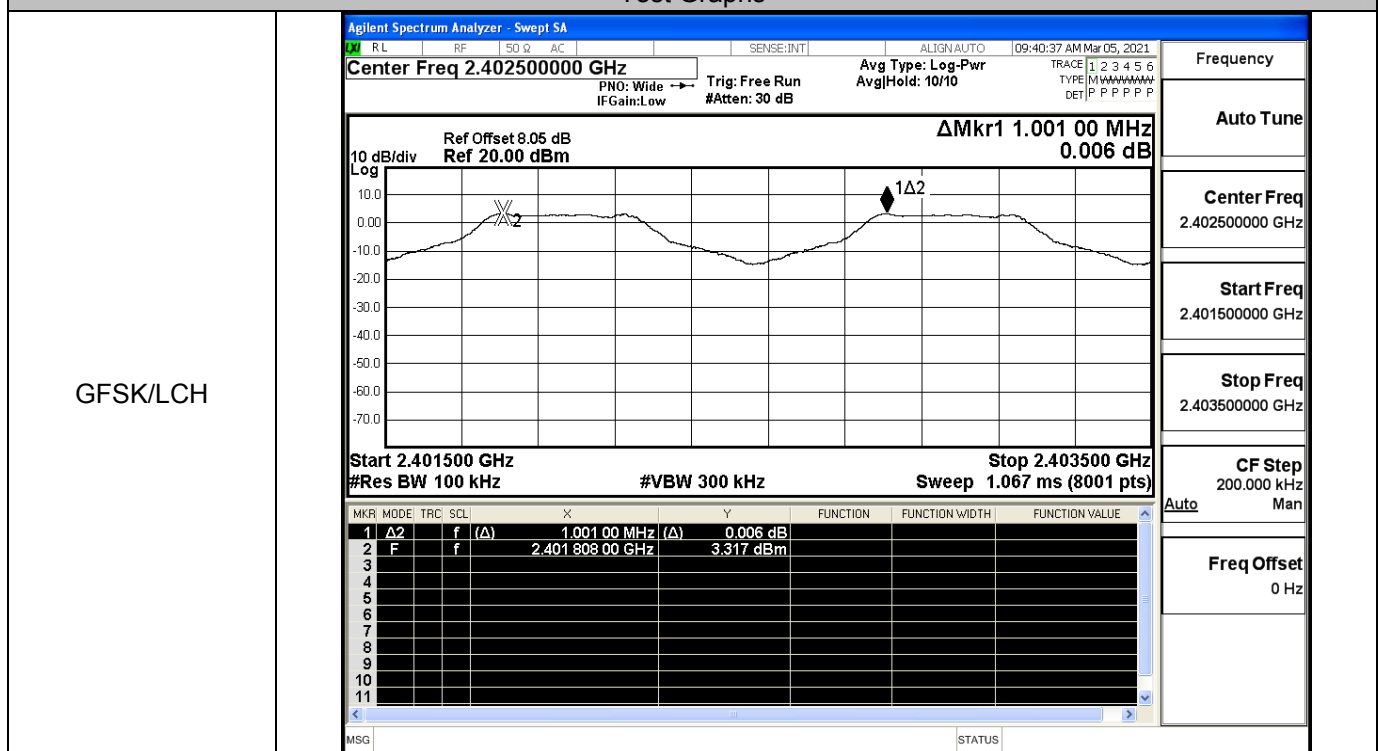
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

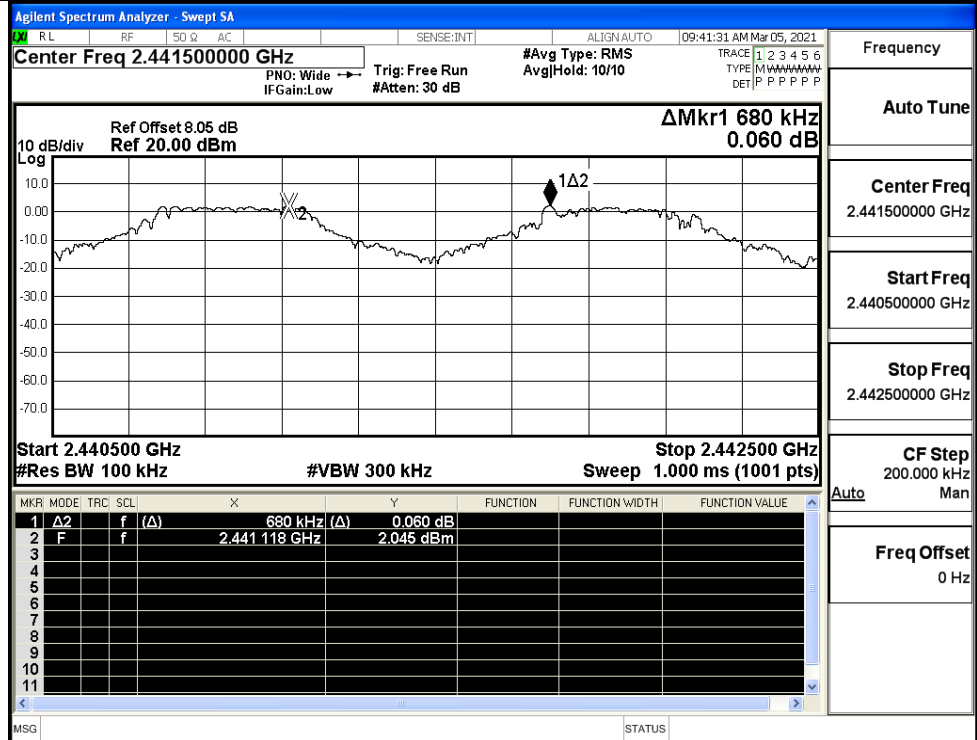
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.001	0.626	PASS
	MCH	0.680	0.626	PASS
	HCH	1.124	0.626	PASS
$\pi/4$ DQPSK	LCH	1.152	0.873	PASS
	MCH	0.984	0.873	PASS
	HCH	1.102	0.873	PASS

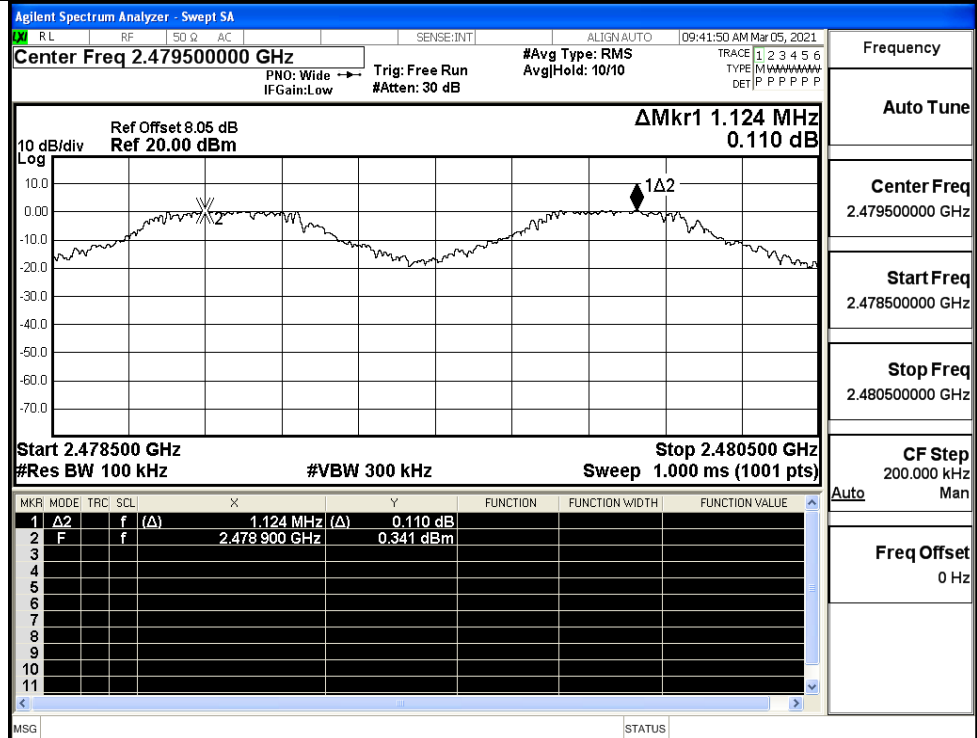
Test Graphs

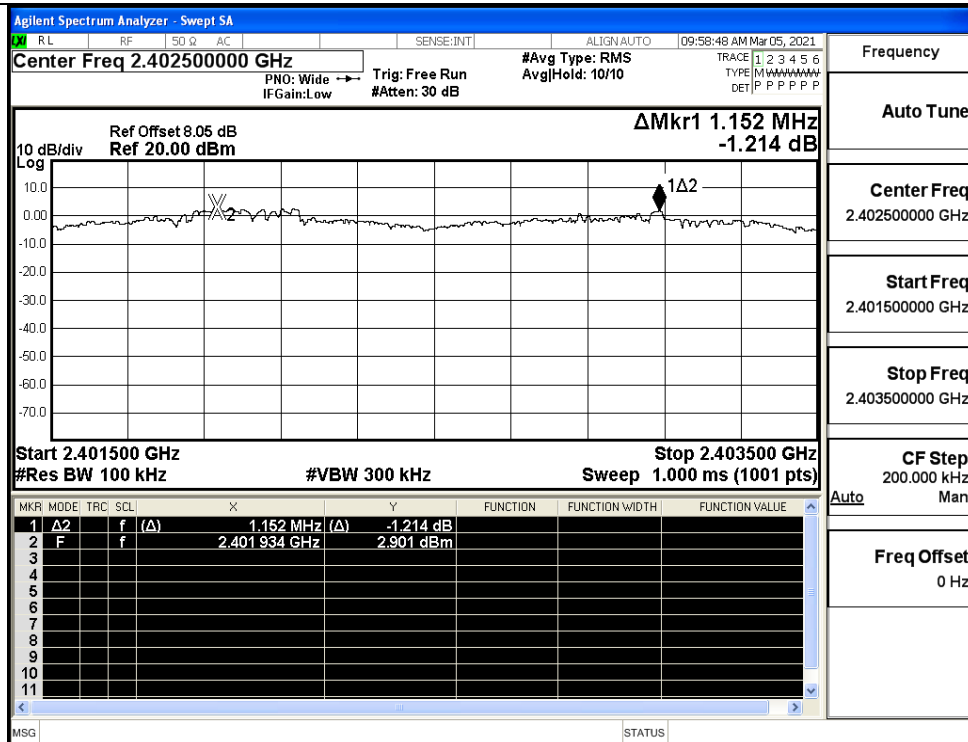
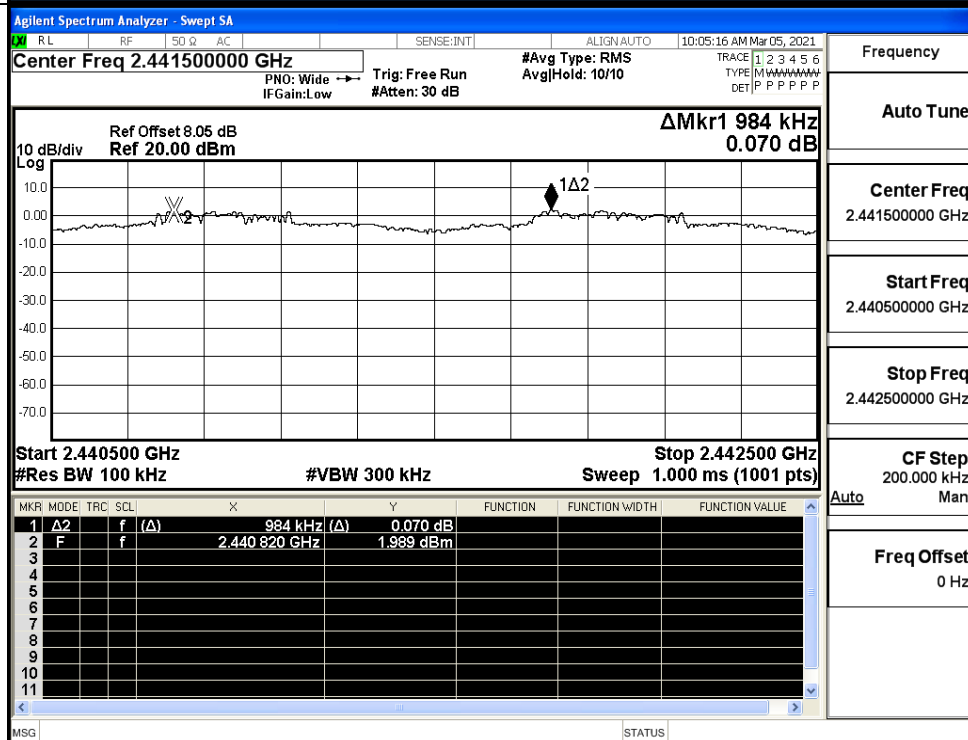


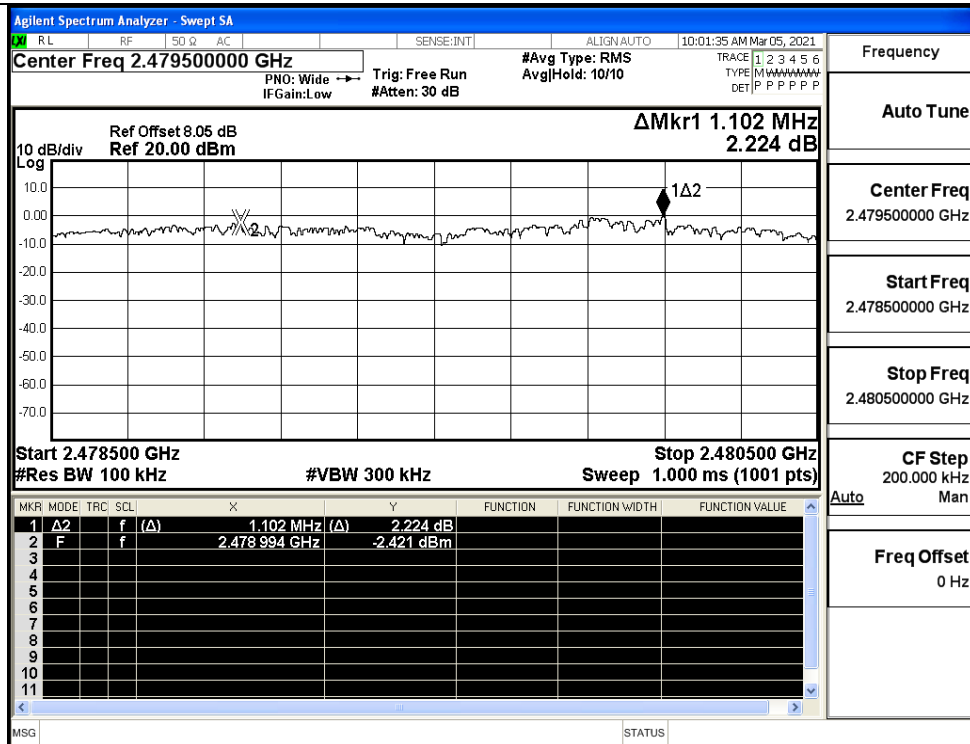
GFSK/MCH



GFSK/HCH



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

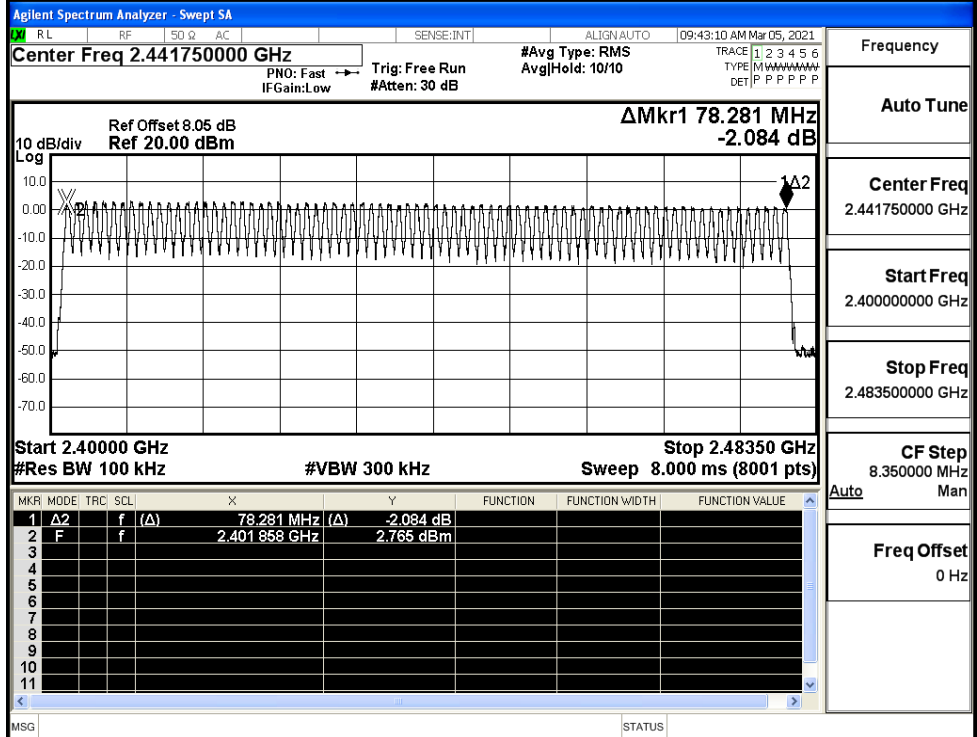
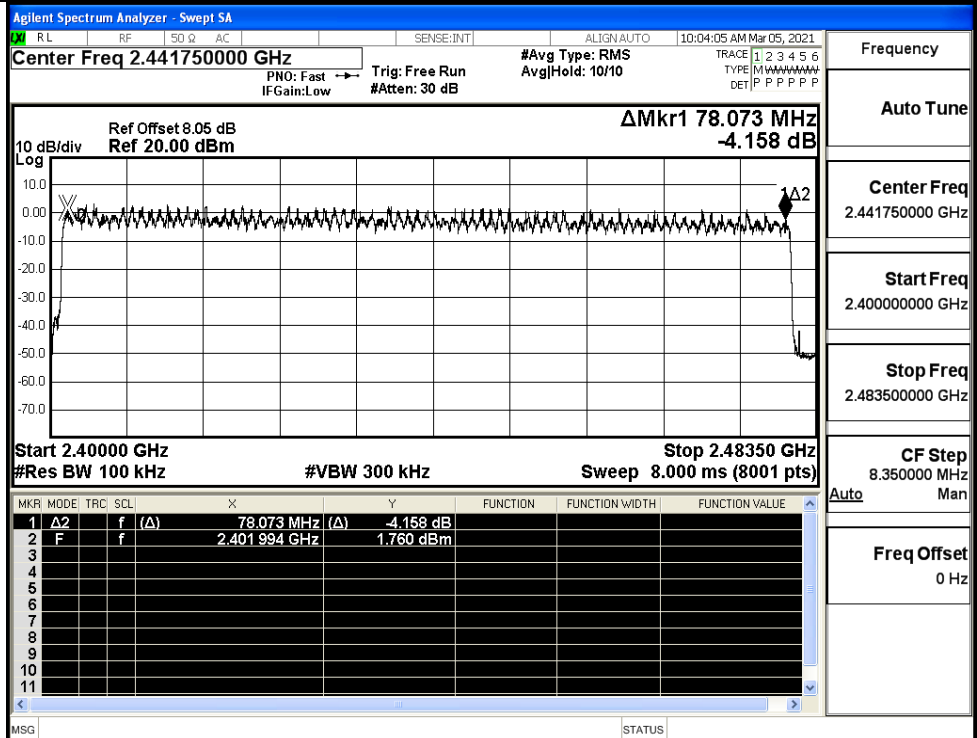
$\pi/4$ DQPSK/HCH

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

Test Graphs

GFSK/Hop

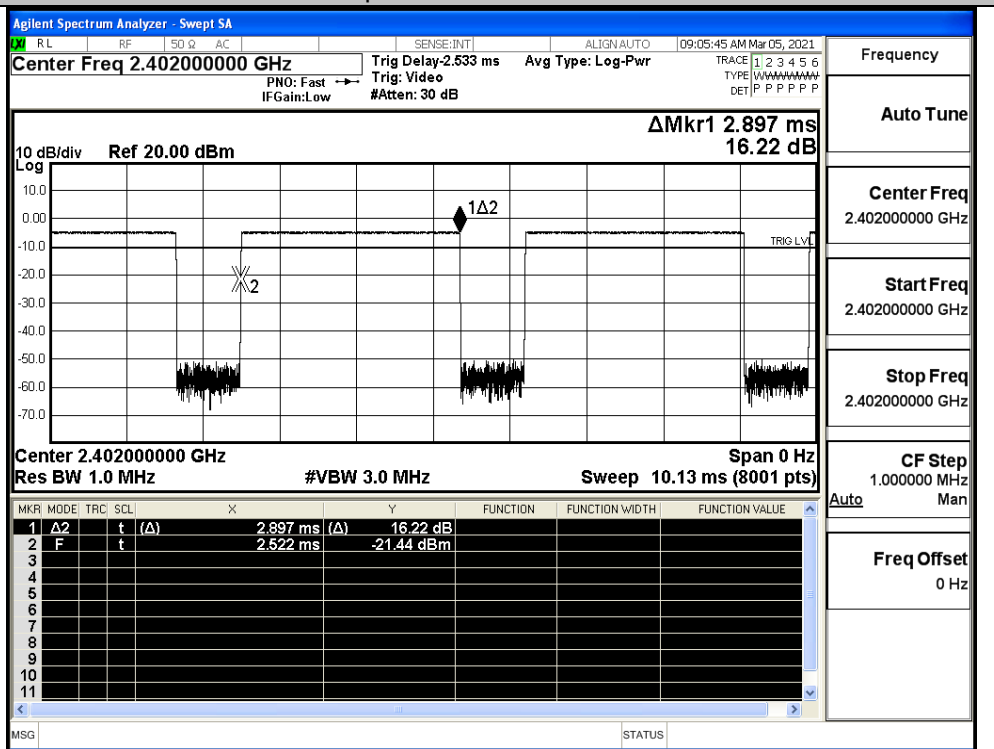
 $\pi/4$ DQPSK/Hop

A.5 Dwell Time

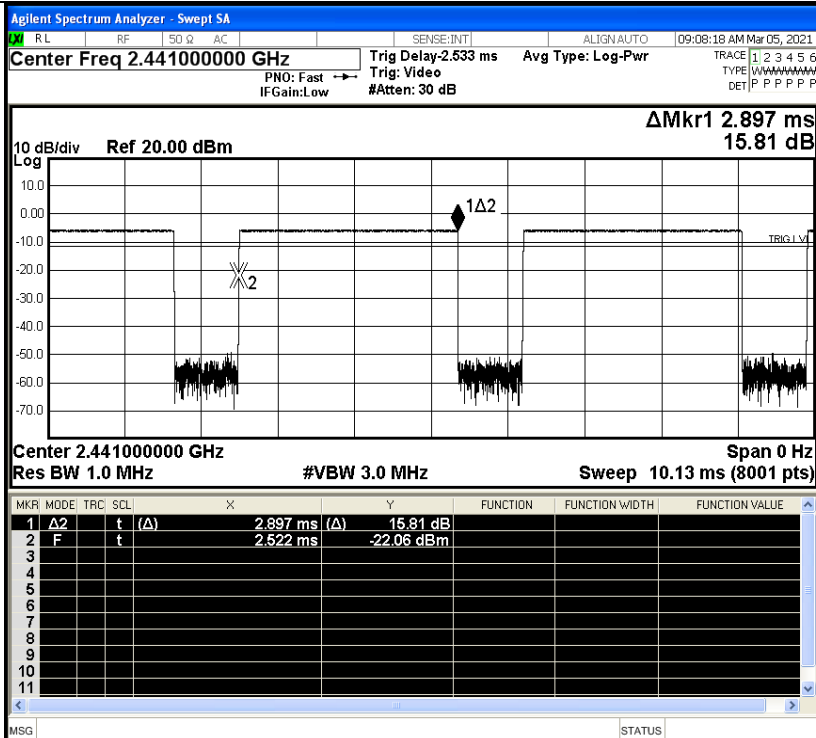
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.9	106.7	0.309	0.4	PASS
	DH5	MCH	2.9	106.7	0.309	0.4	PASS
	DH5	HCH	2.9	106.7	0.309	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.9	106.7	0.309	0.4	PASS
	2DH5	MCH	2.9	106.7	0.309	0.4	PASS
	2DH5	HCH	2.9	106.7	0.309	0.4	PASS

Test Graphs

GFSK_DH5/LCH



GFSK_DH5/MCH

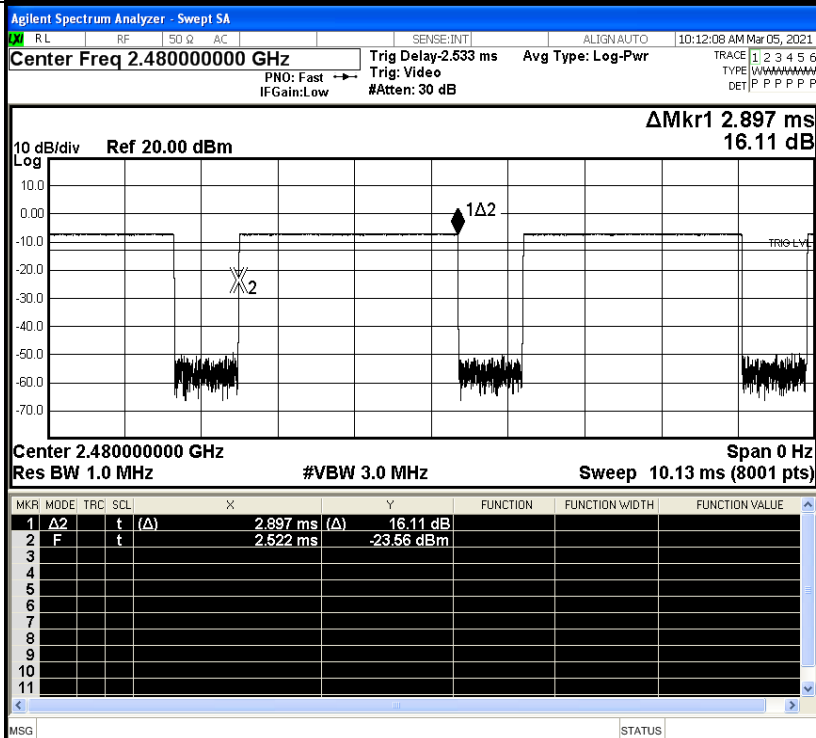


Frequency

Auto Tune

Center Freq
2.441000000 GHzStart Freq
2.441000000 GHzStop Freq
2.441000000 GHzCF Step
1.000000 MHz
Auto ManFreq Offset
0 Hz

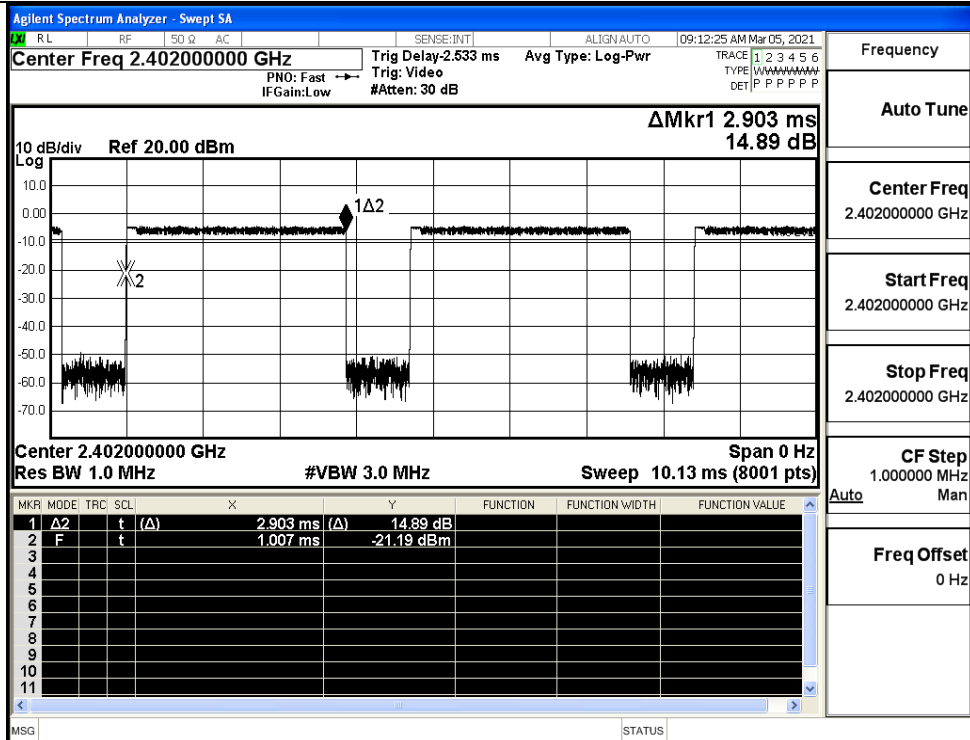
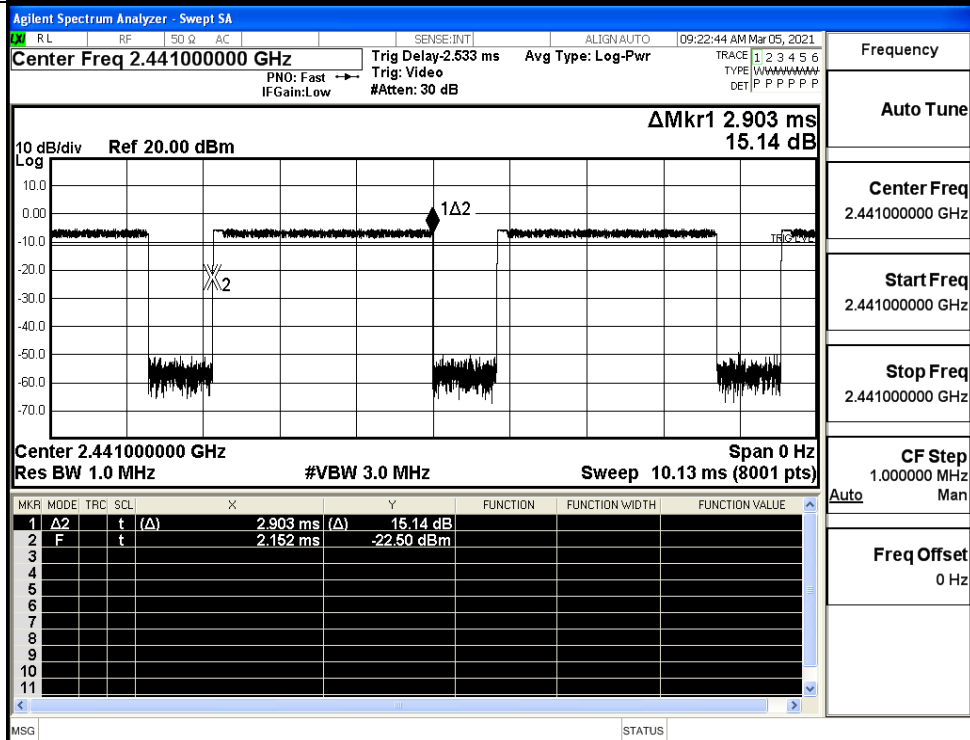
GFSK_DH5/HCH



Frequency

Auto Tune

Center Freq
2.480000000 GHzStart Freq
2.480000000 GHzStop Freq
2.480000000 GHzCF Step
1.000000 MHz
Auto ManFreq Offset
0 Hz

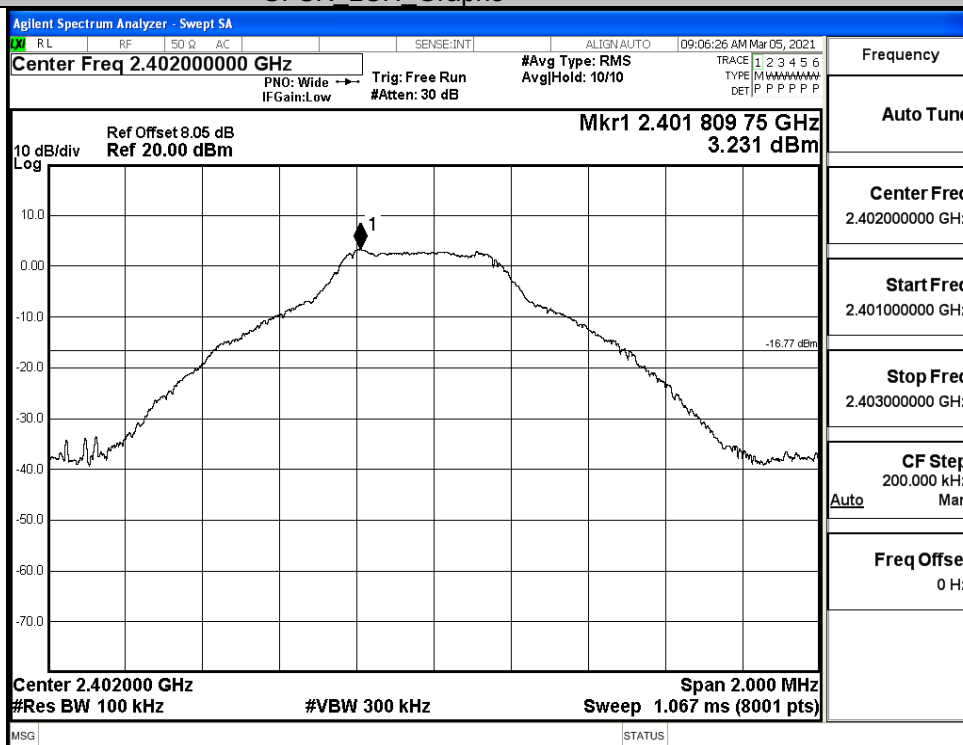
$\pi/4$ DQPSK
_2DH5/LCH $\pi/4$ DQPSK
_2DH5/MCH

A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.231	-37.855	-16.769	PASS
	MCH	2.314	-37.775	-17.686	PASS
	HCH	0.985	-37.511	-19.015	PASS
$\pi/4$ DQPSK	LCH	3.154	-38.094	-16.846	PASS
	MCH	1.673	-36.920	-18.327	PASS
	HCH	0.88	-38.088	-19.120	PASS

GFSK LCH Graphs

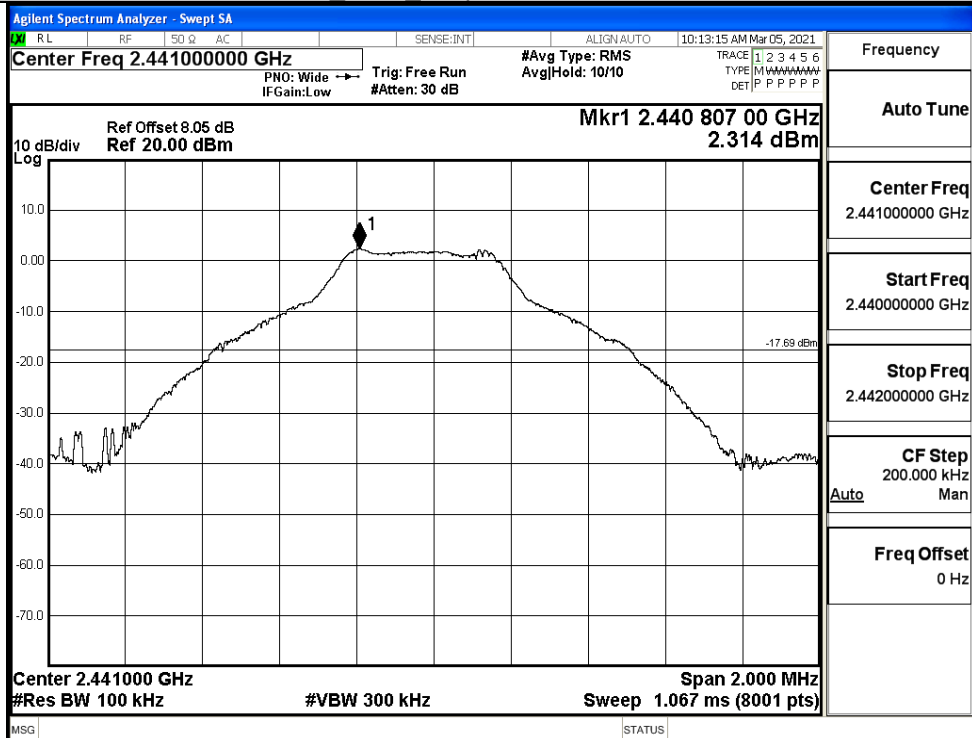
Pref



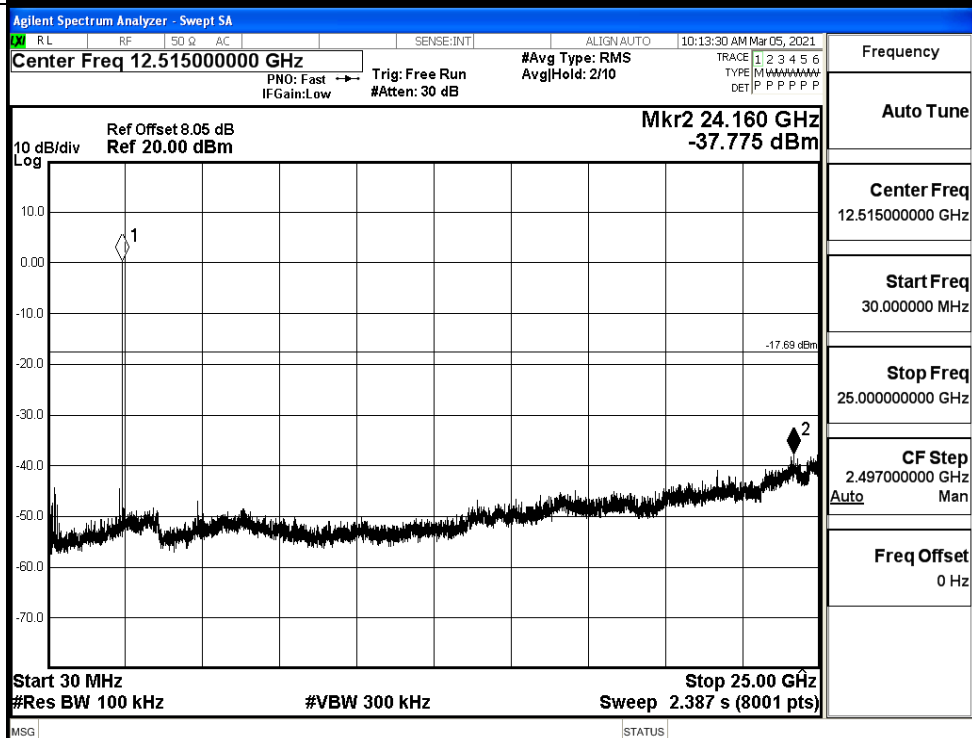


GFSK_MCH_Graphs

Pref

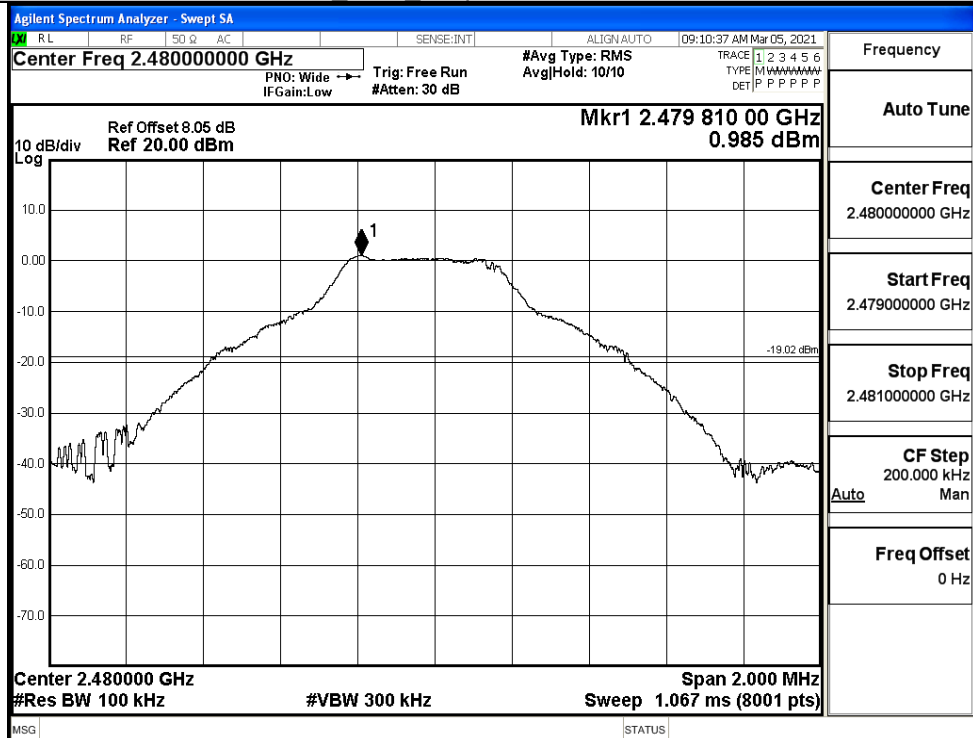


Puw

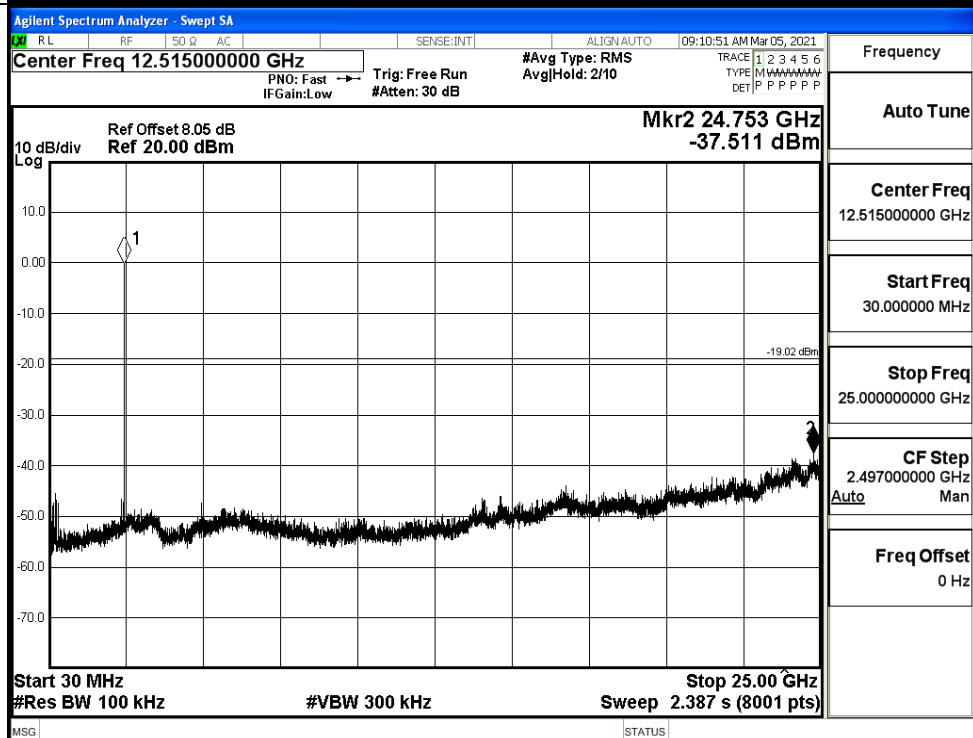


GFSK_HCH_Graphs

Pref

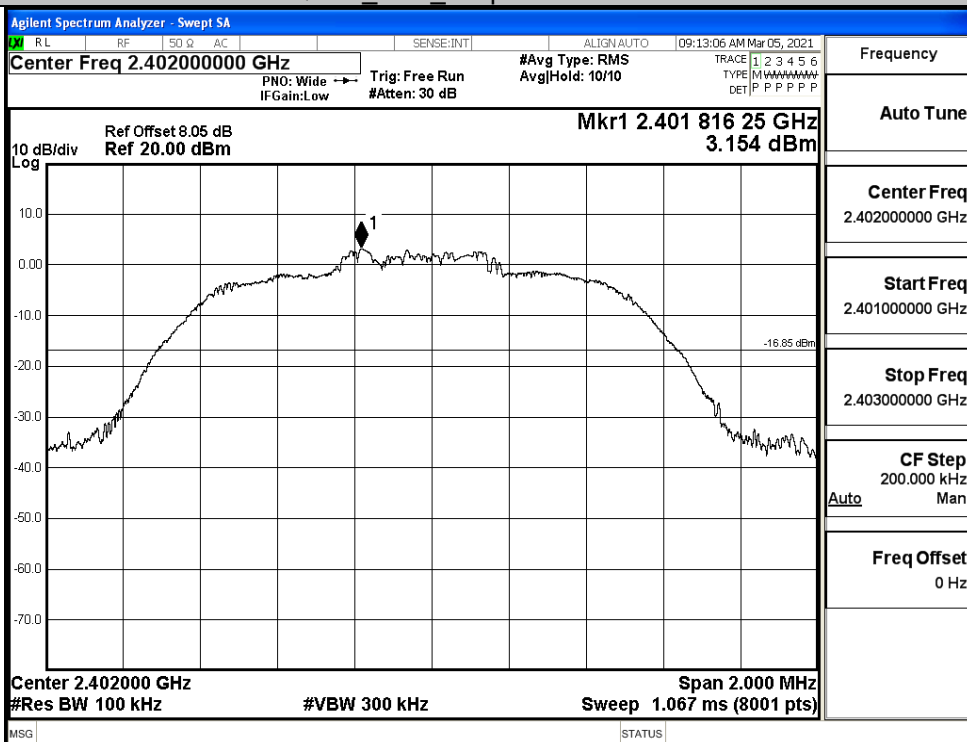


Puw

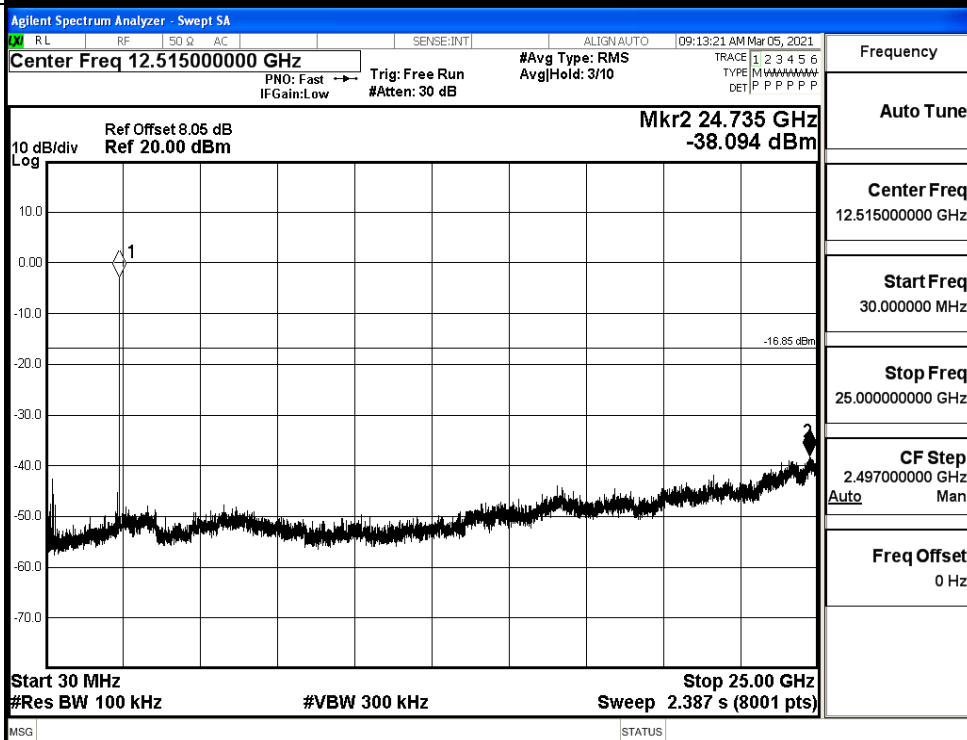


$\pi/4$ DQPSK_LCH_Graphs

Pref

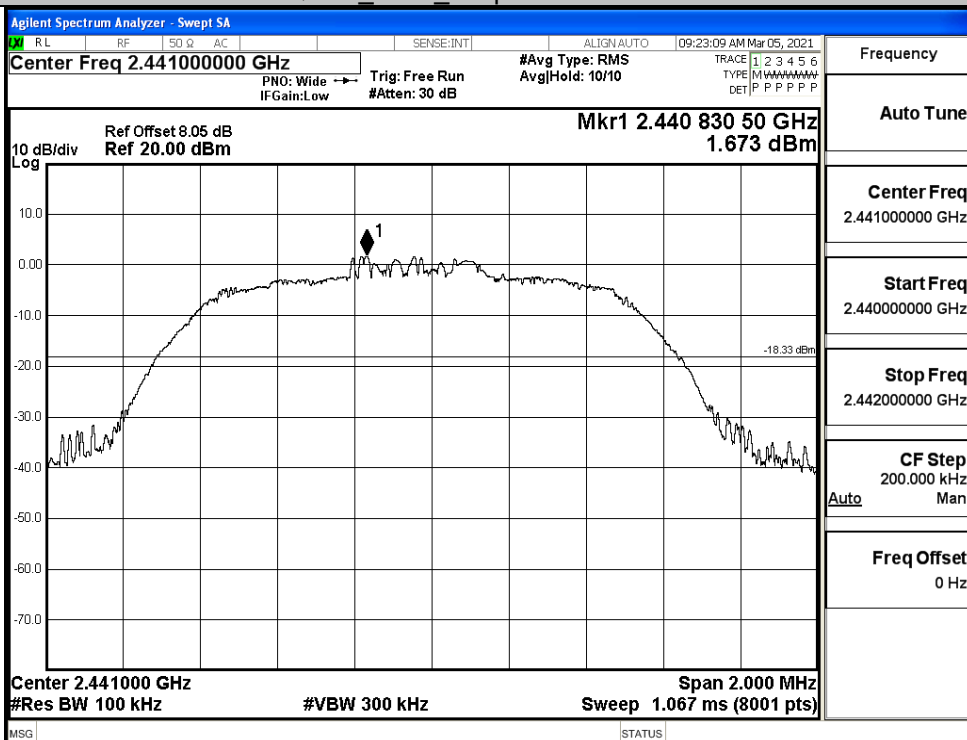


Puw

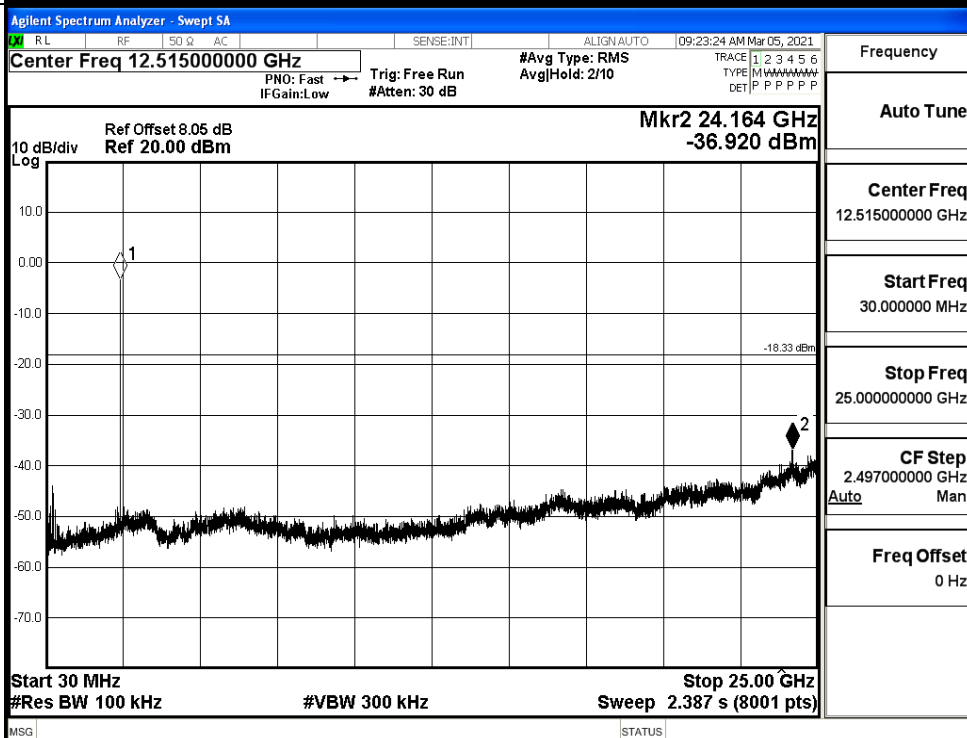


π /4DQPSK_MCH_Graphs

Pref

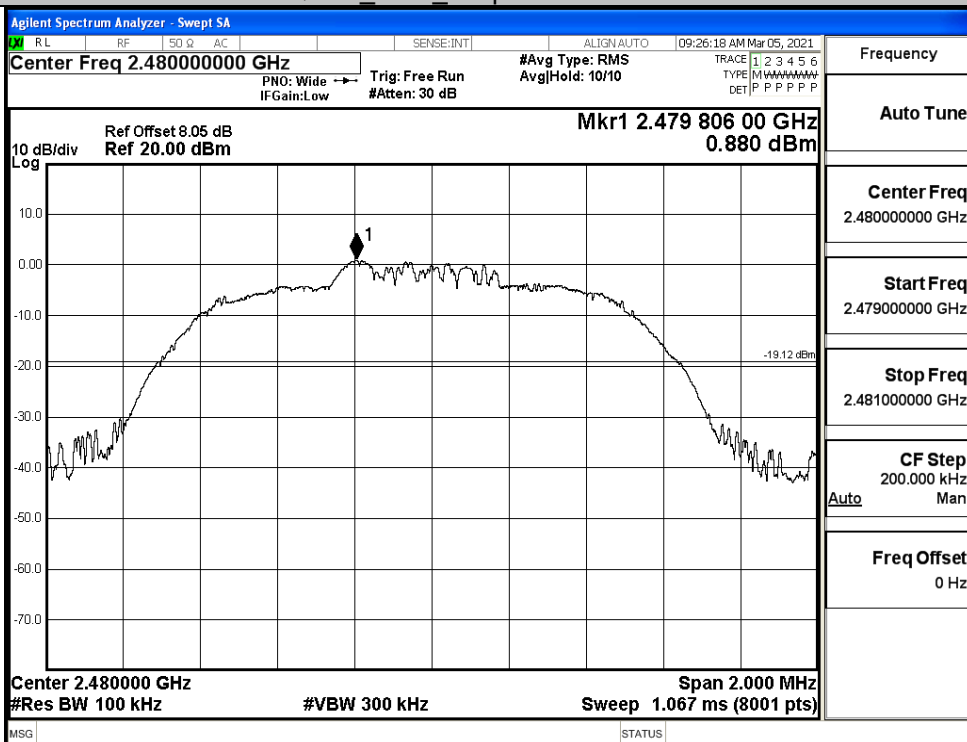


Puw

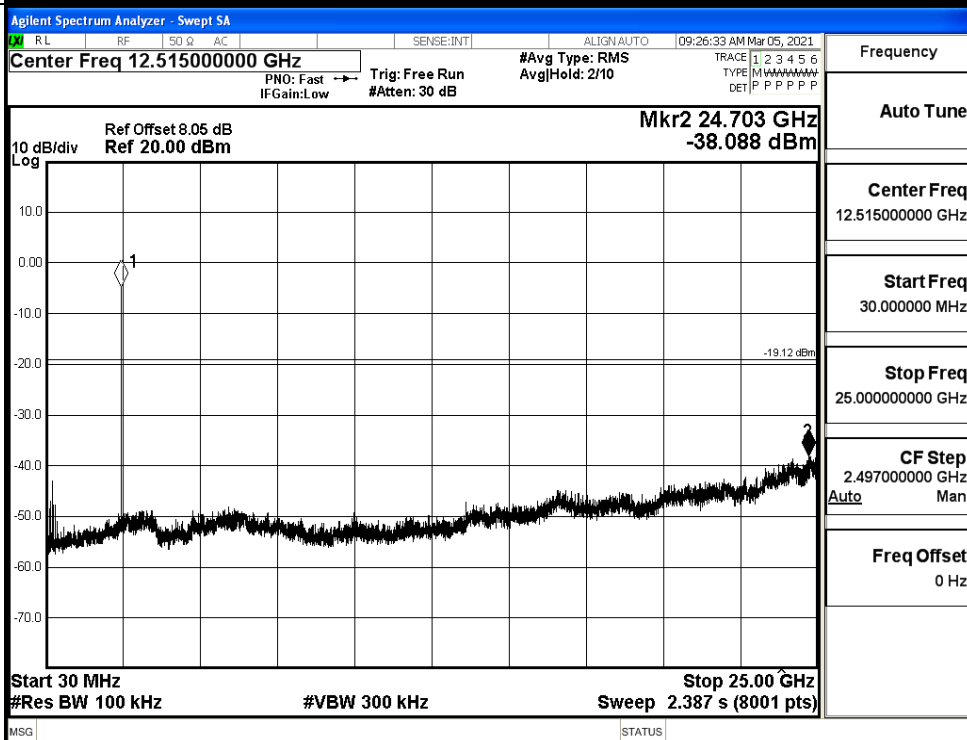


$\pi/4$ DQPSK_HCH_Graphs

Pref



Puw

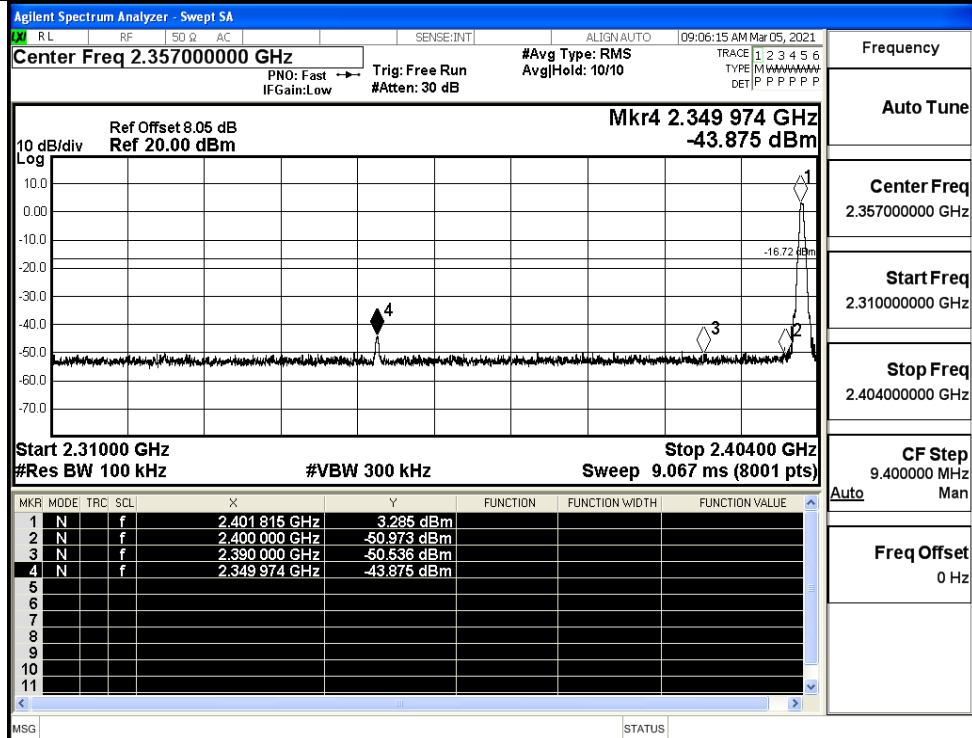


A.7 Band-edge for RF Conducted Emissions

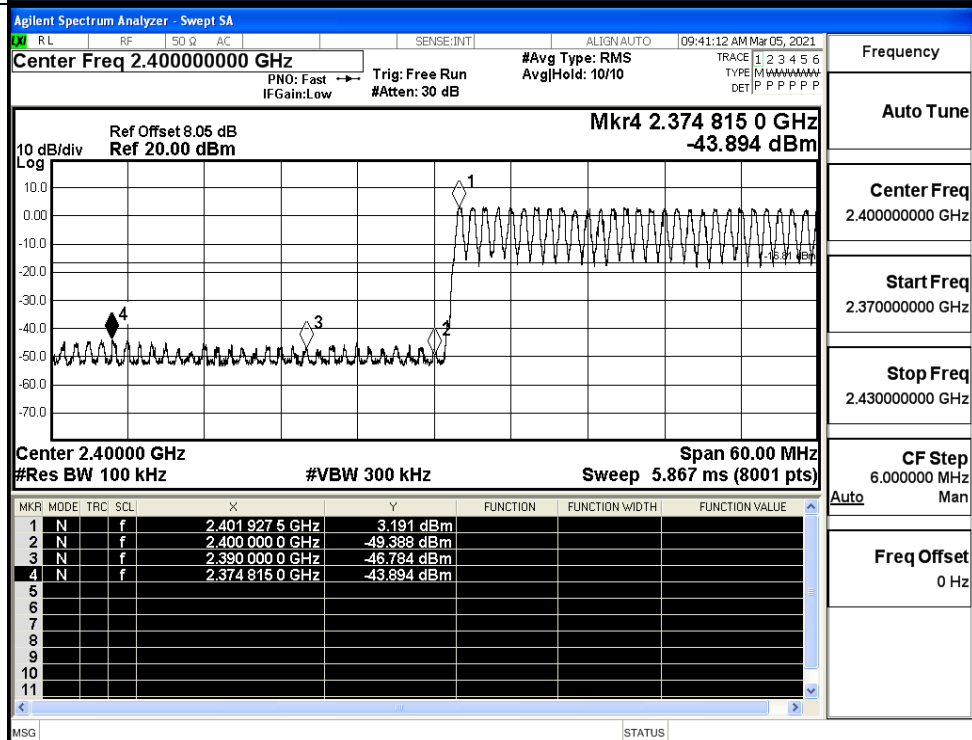
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	3.285	Off	-43.875	-16.72	PASS
			3.191	On	-43.894	-16.81	PASS
	HCH	2480	0.974	Off	-49.480	-19.03	PASS
			1.704	On	-46.938	-18.3	PASS
$\pi/4$ DQPSK	LCH	2402	1.824	Off	-46.727	-18.18	PASS
			2.992	On	-44.501	-17.01	PASS
	HCH	2480	1.012	Off	-49.524	-18.99	PASS
			1.661	On	-47.432	-18.34	PASS

Test Graphs

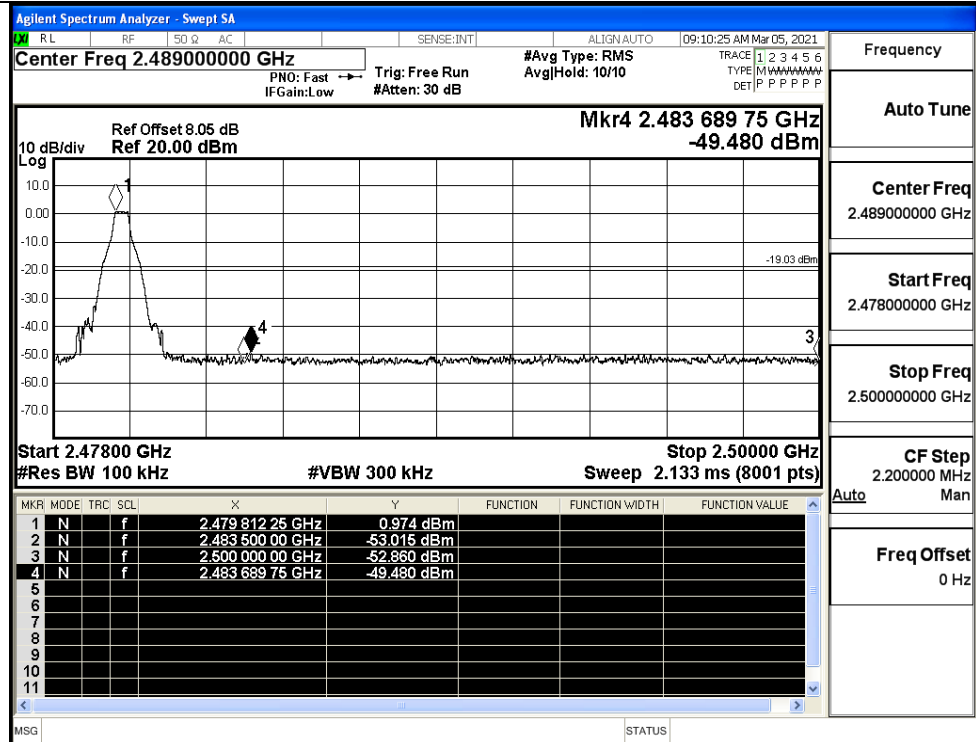
GFSK/LCH/No Hop



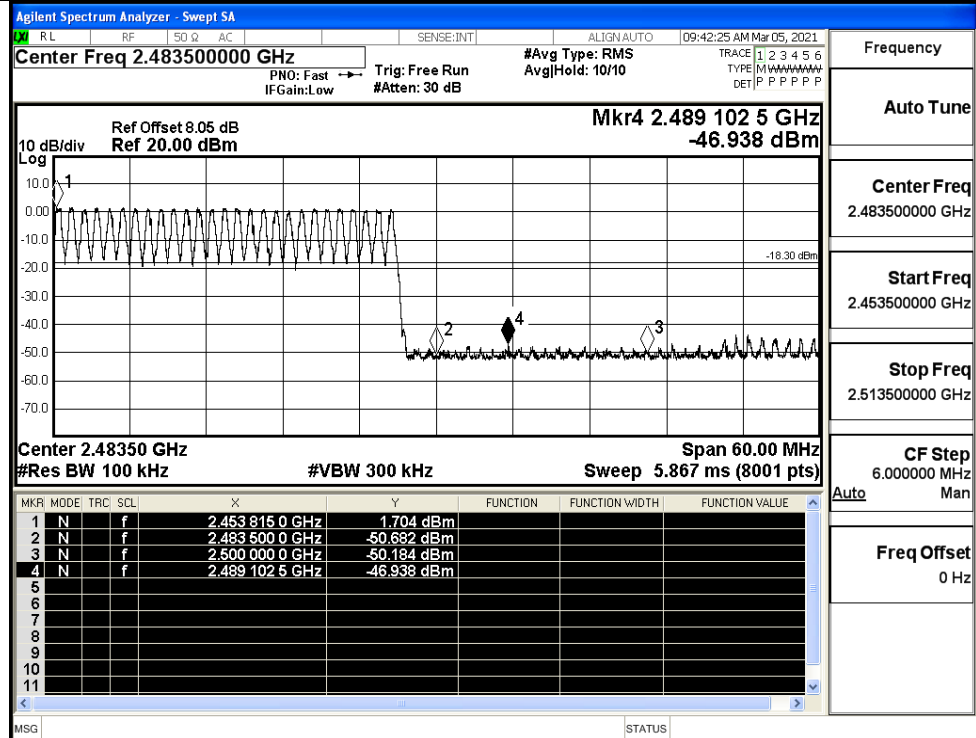
GFSK/LCH/Hop



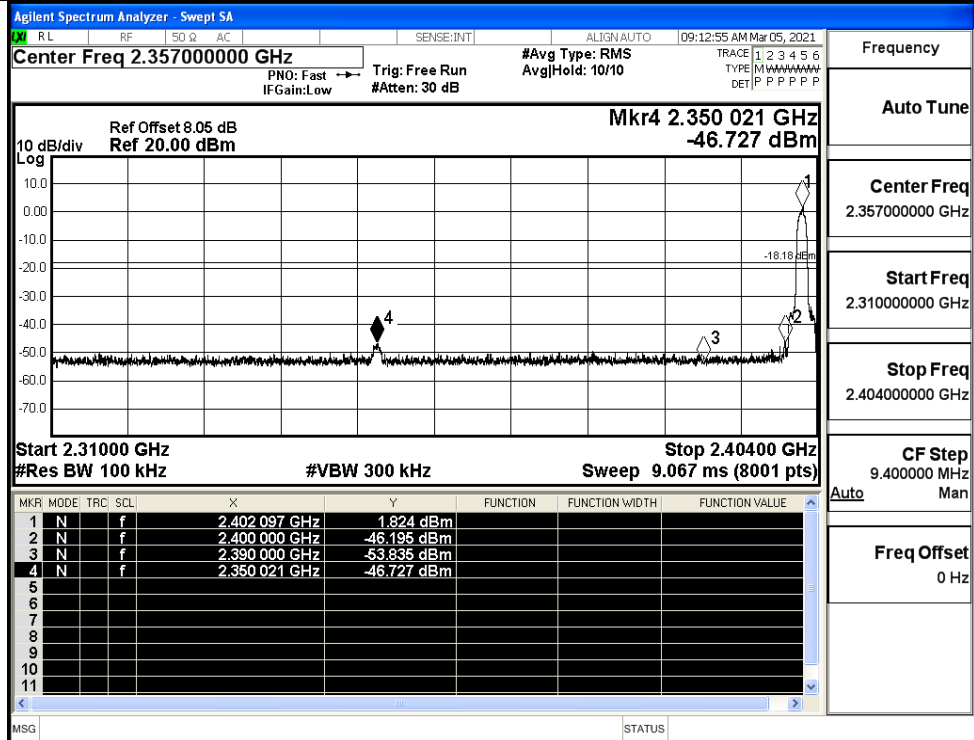
GFSK/HCH/No Hop



GFSK/HCH/Hop



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



Frequency

Auto Tune

Center Freq
2.357000000 GHz

Start Freq
2.310000000 GHz

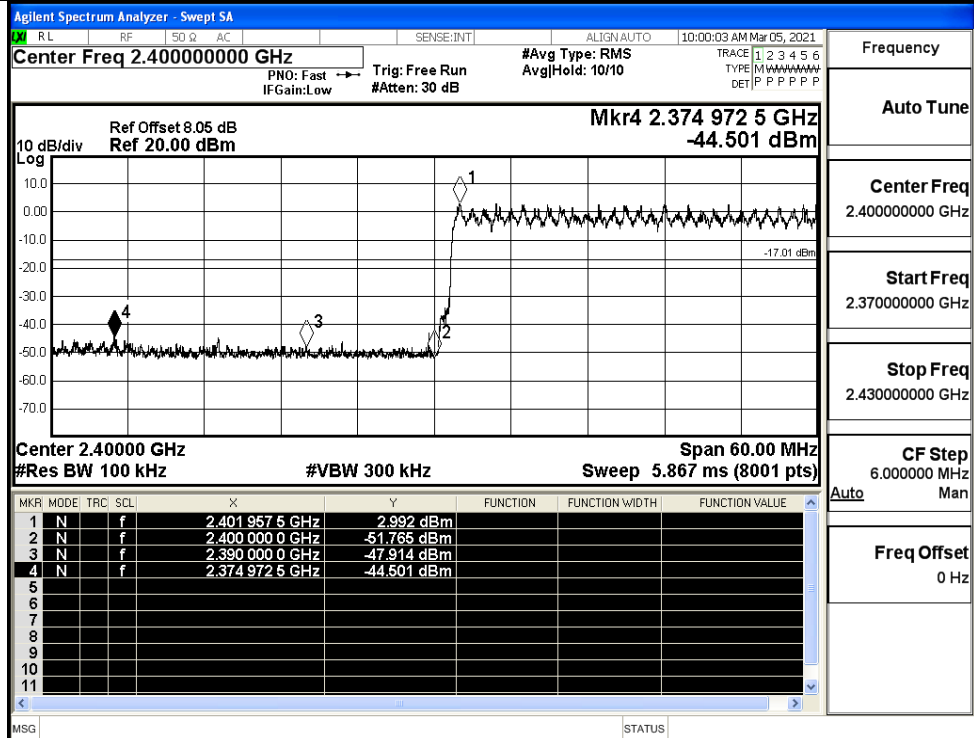
Stop Freq
2.404000000 GHz

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

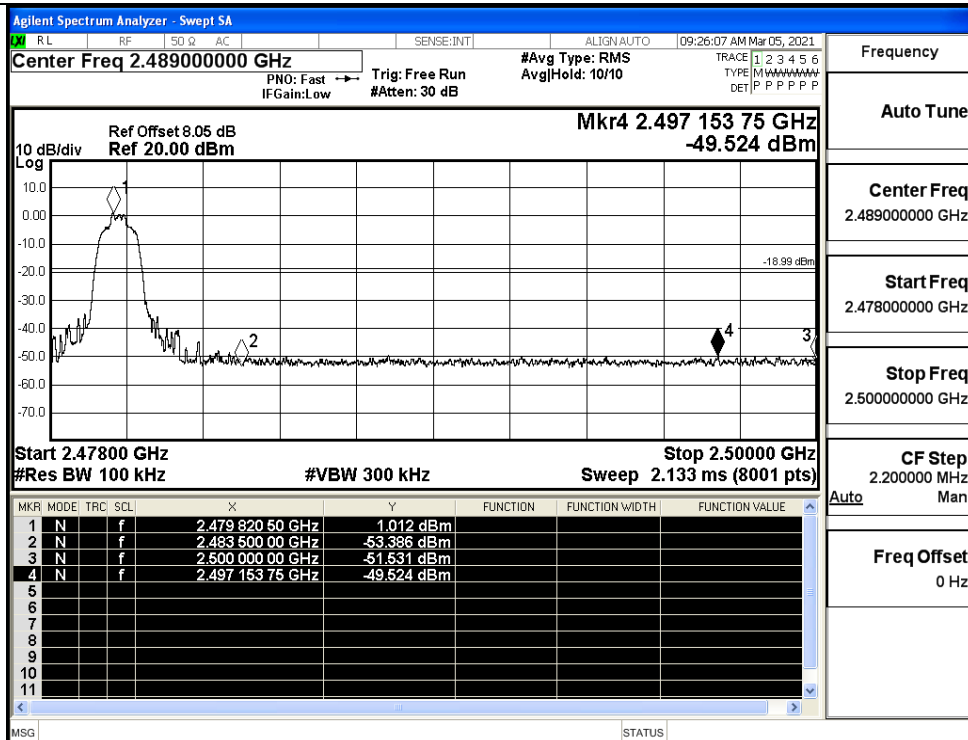
Stop Freq
2.430000000 GHz

CF Step
6.000000 MHz

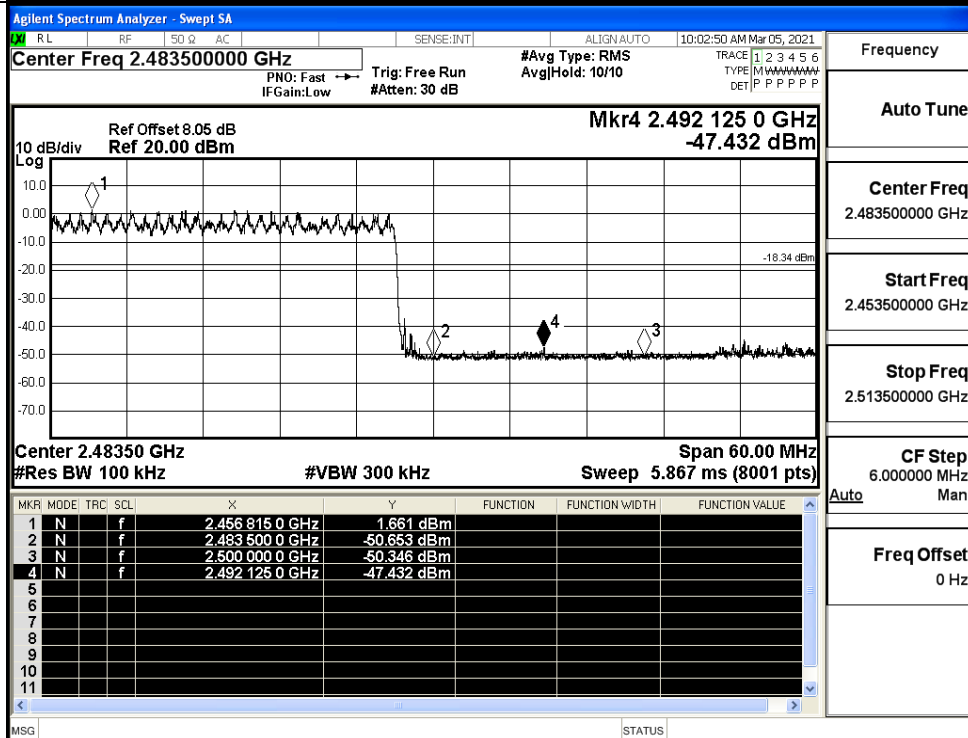
Auto Man

Freq Offset
0 Hz

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



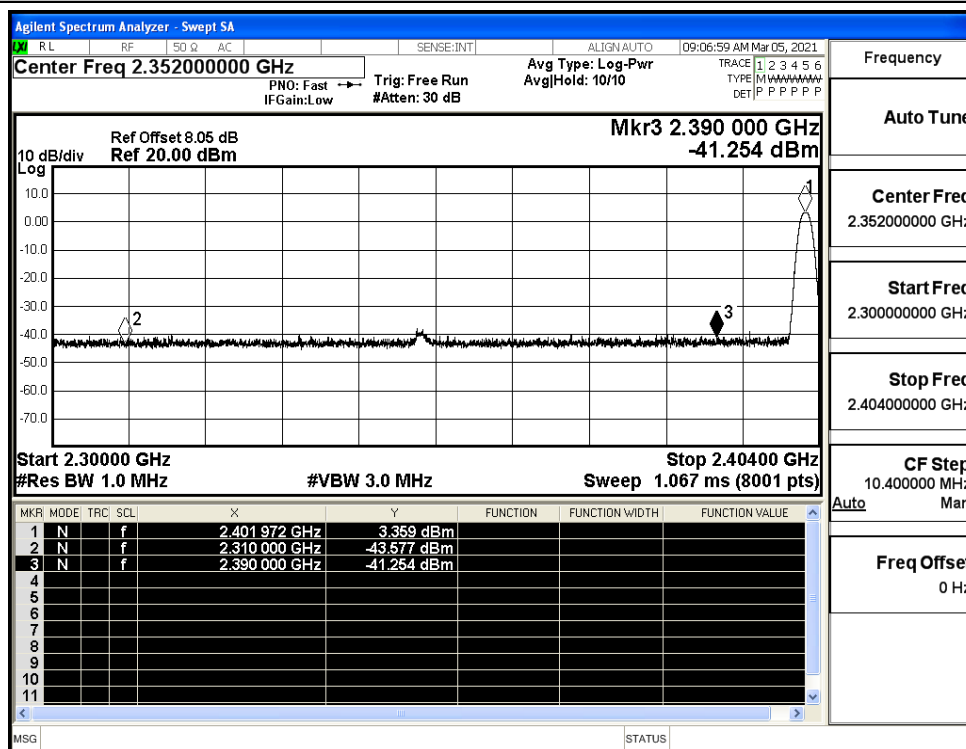
$\pi/4$ DQPSK/HCH/Hop



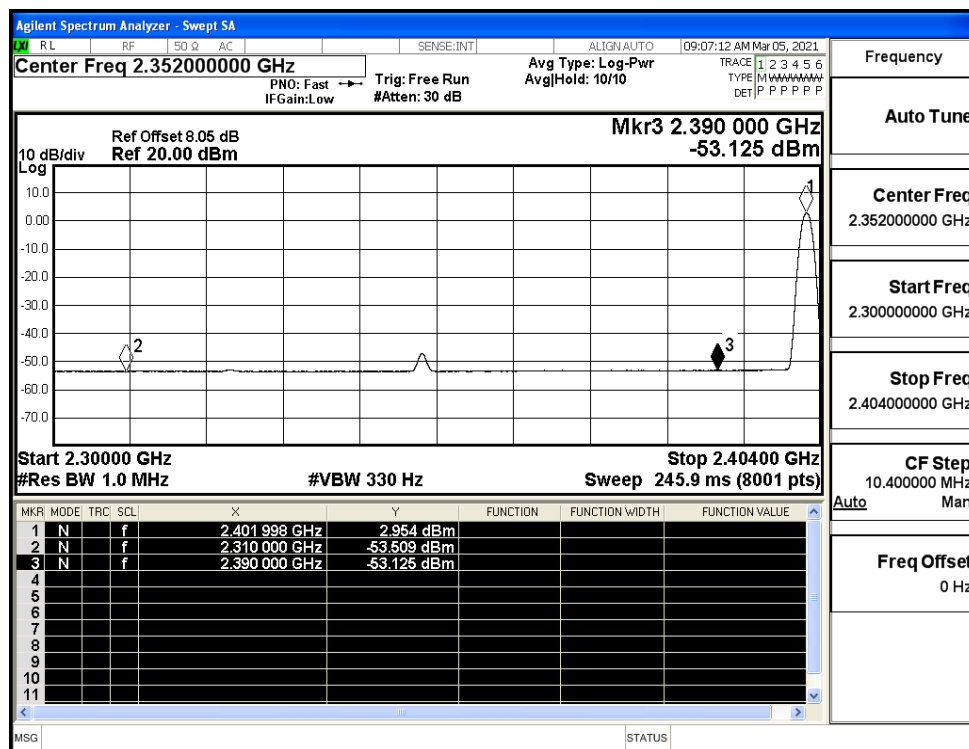
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.58	2.0	0	53.65	PEAK	74	PASS
	Off	2310.0	-53.51	2.0	0	43.72	AV	54	PASS
	Off	2390.0	-41.25	2.0	0	55.98	PEAK	74	PASS
	Off	2390.0	-53.13	2.0	0	44.10	AV	54	PASS
	Off	2483.5	-43.08	2.0	0	54.15	PEAK	74	PASS
	Off	2483.5	-52.49	2.0	0	44.74	AV	54	PASS
	Off	2500.0	-42.30	2.0	0	54.93	PEAK	74	PASS
	Off	2500.0	-52.49	2.0	0	44.74	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-42.98	2.0	0	54.25	PEAK	74	PASS
	Off	2310.0	-53.36	2.0	0	43.87	AV	54	PASS
	Off	2390.0	-42.90	2.0	0	54.33	PEAK	74	PASS
	Off	2390.0	-53.10	2.0	0	44.13	AV	54	PASS
	Off	2483.5	-41.38	2.0	0	55.85	PEAK	74	PASS
	Off	2483.5	-52.49	2.0	0	44.74	AV	54	PASS
	Off	2500.0	-42.26	2.0	0	54.97	PEAK	74	PASS
	Off	2500.0	-52.41	2.0	0	44.82	AV	54	PASS

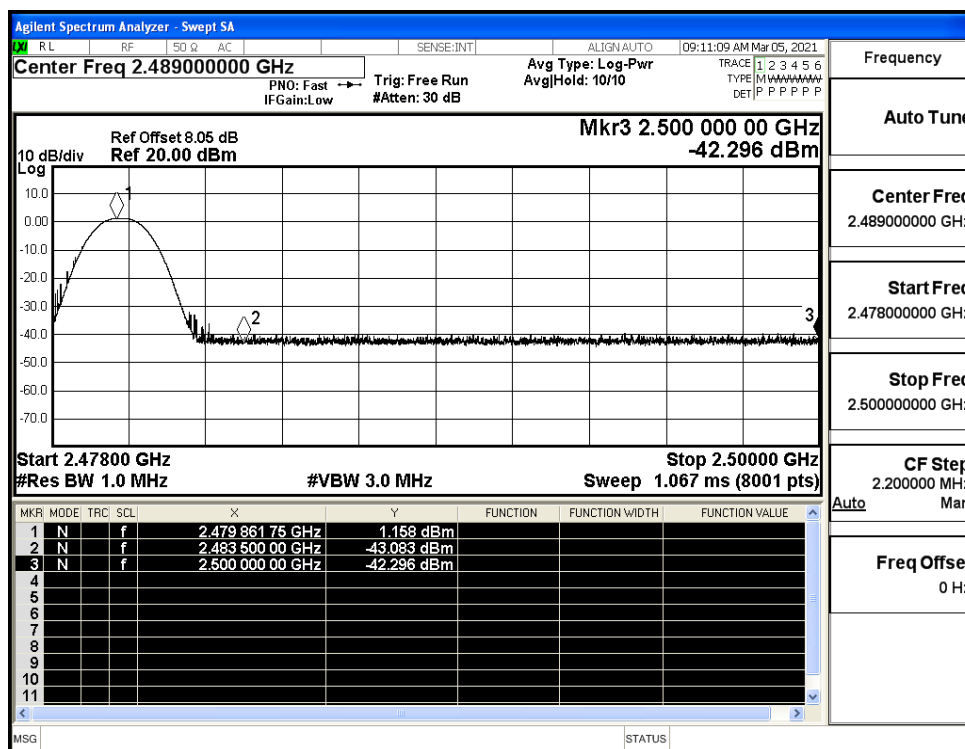
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



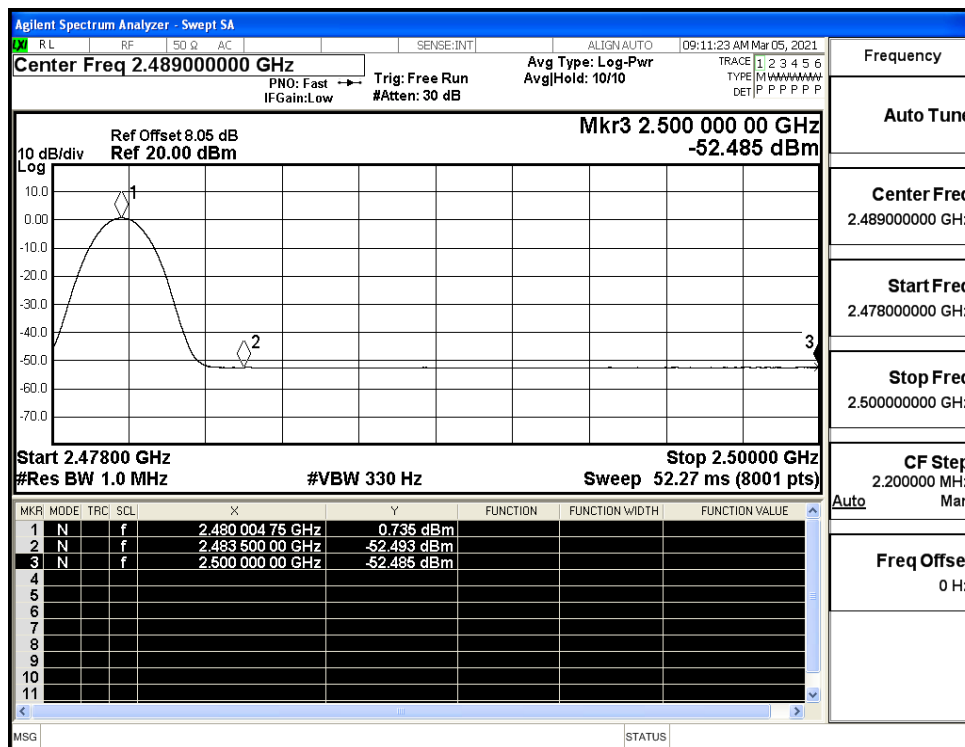
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

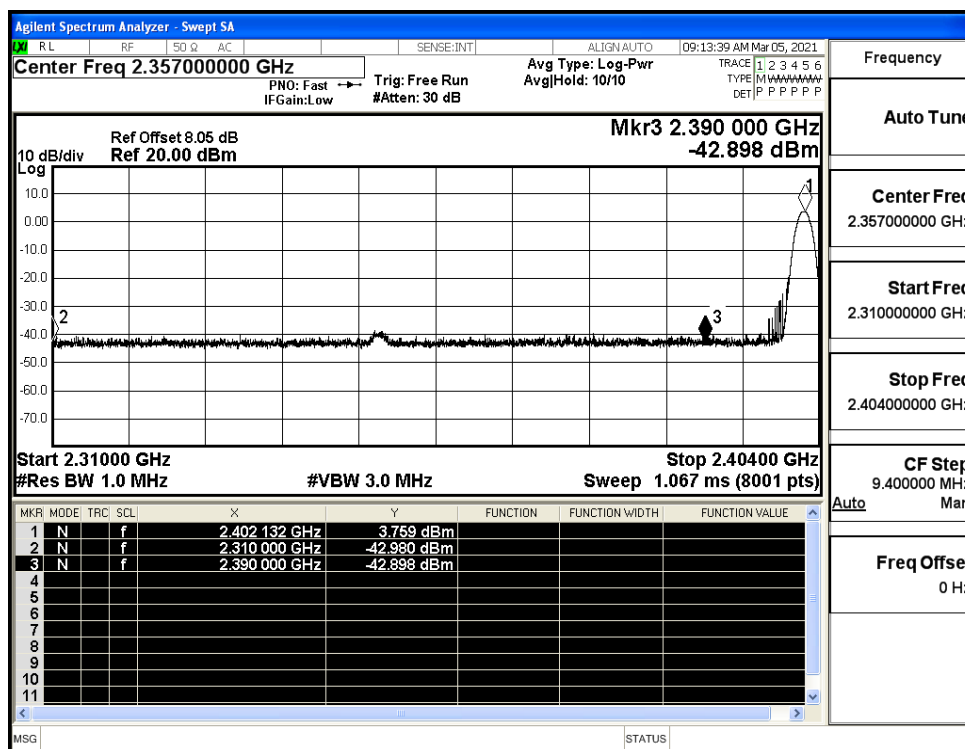
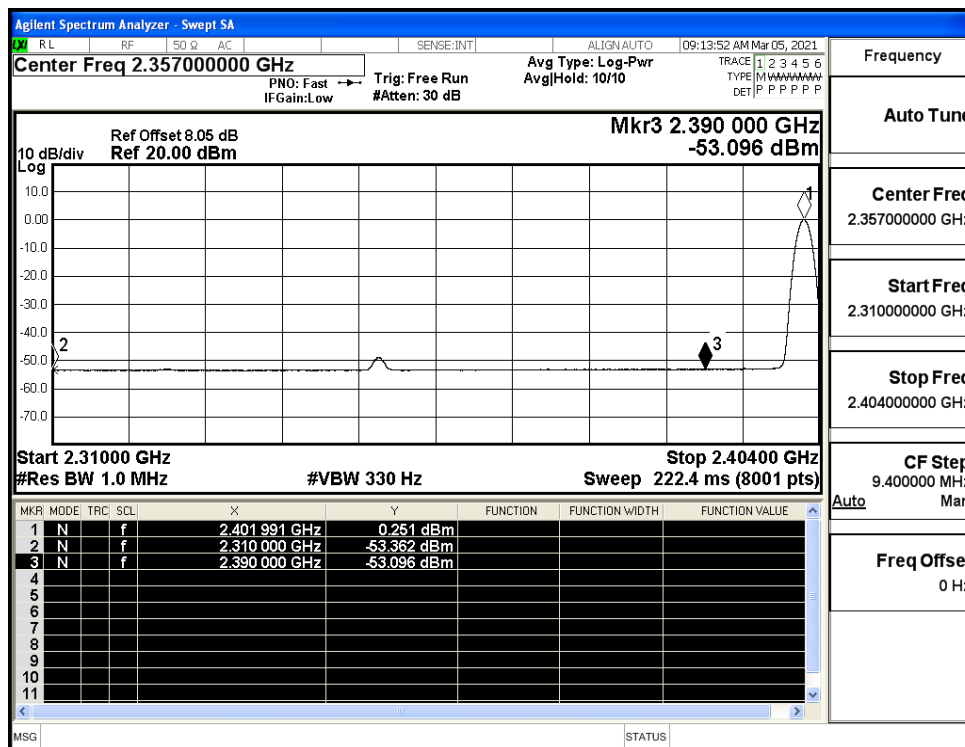


Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)

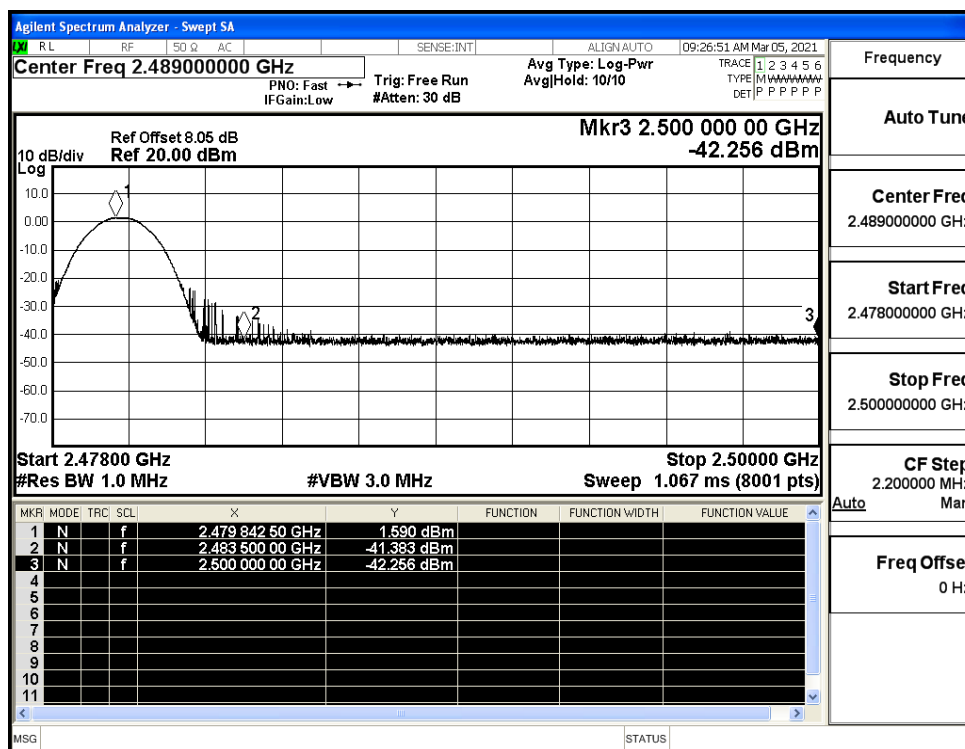


Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



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)

