

Appendix A

RF Test Data for BT V4.2(BDR/EDR) (Conducted Measurement)

Product Name: Cooler bag with wireless speaker

Trade Mark: N/A

Test Model: 00715

Environmental Conditions

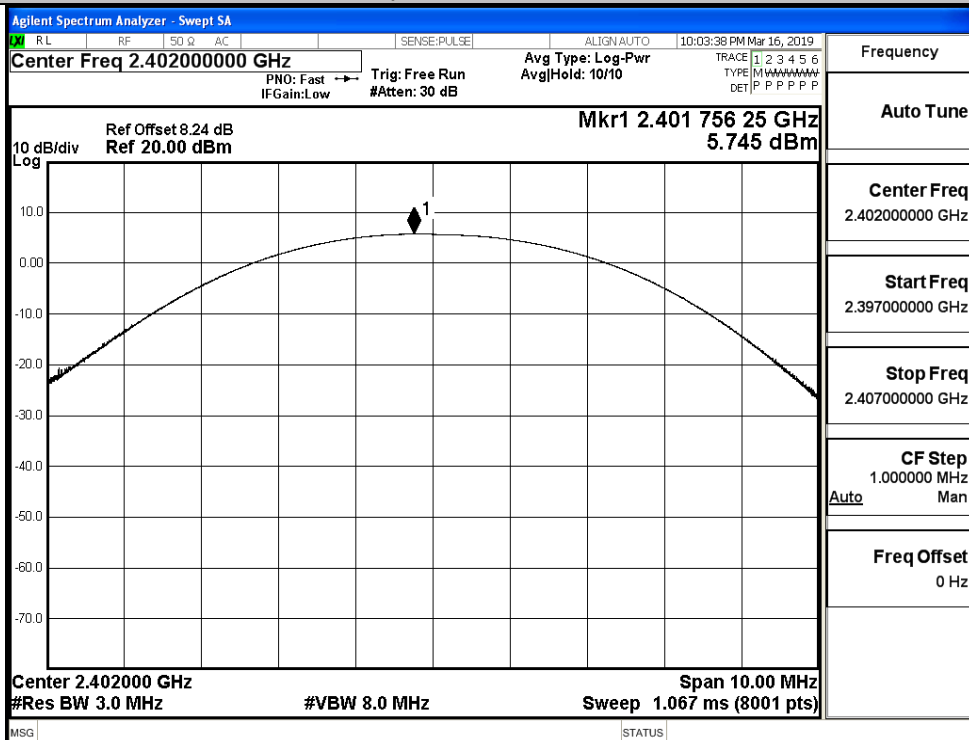
Temperature:	21.9 ° C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	David.Luo
Supervised by:	Jayden.Zhuo

A.1 Maximum Conducted Peak Output Power

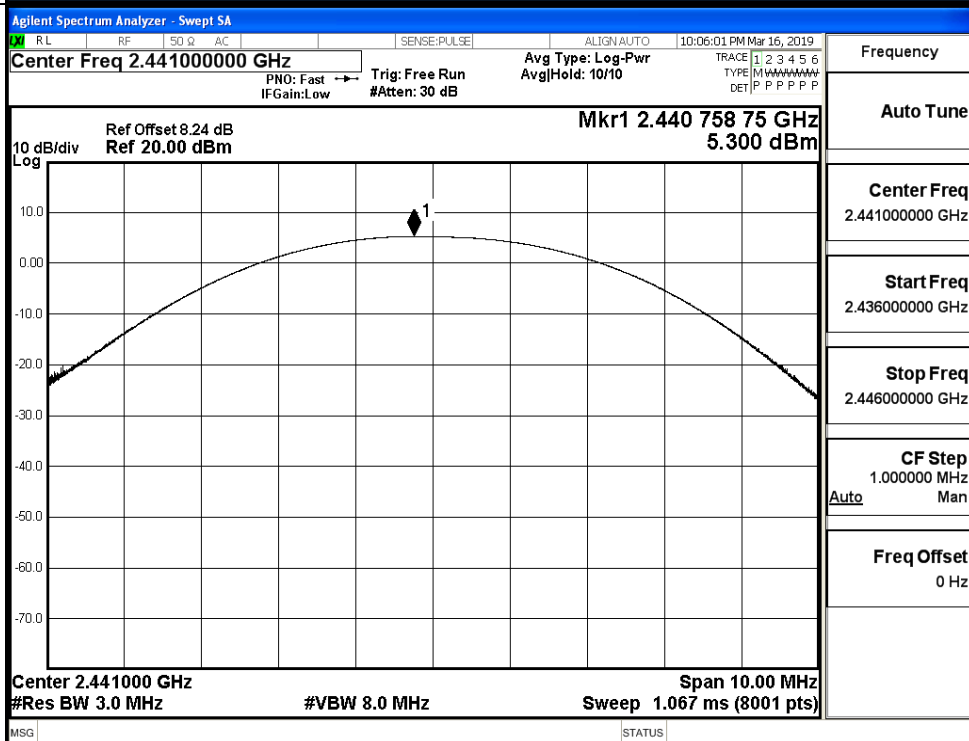
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	5.745	21	PASS
	MCH	5.300	21	PASS
	HCH	4.883	21	PASS
$\pi/4$ DQPSK	LCH	6.432	21	PASS
	MCH	5.971	21	PASS
	HCH	5.568	21	PASS

Test Graphs

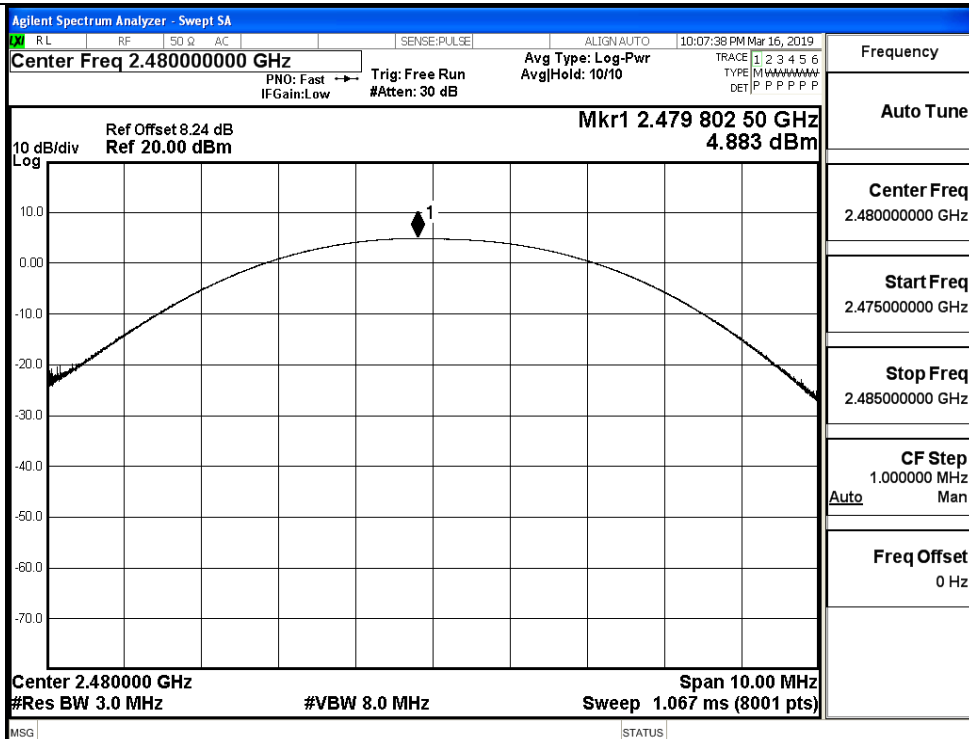
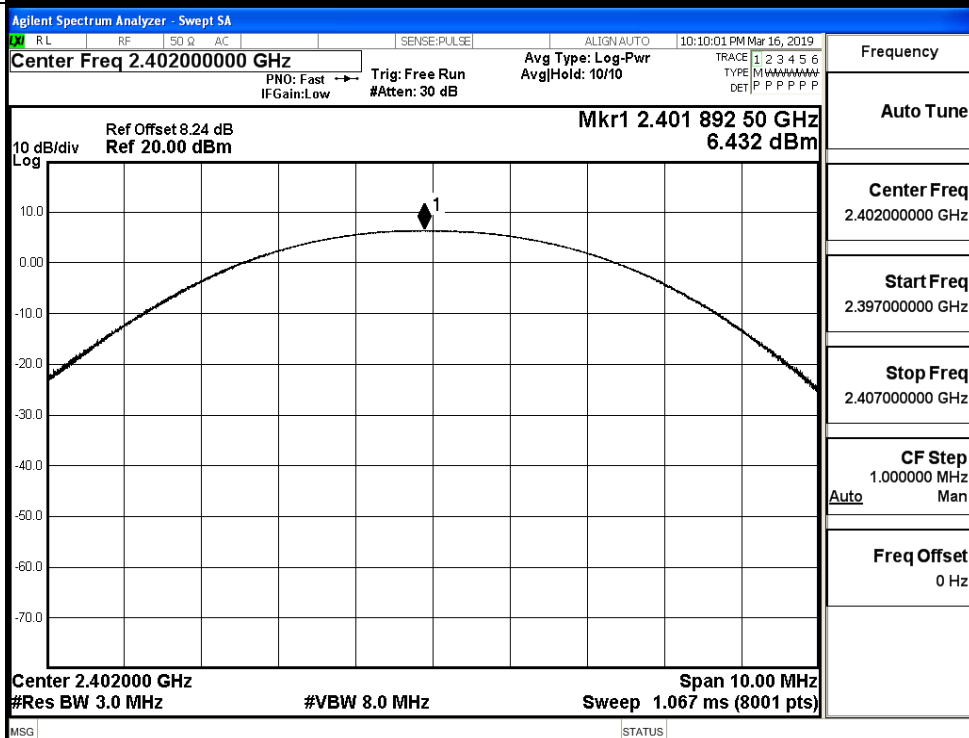
GFSK/LCH

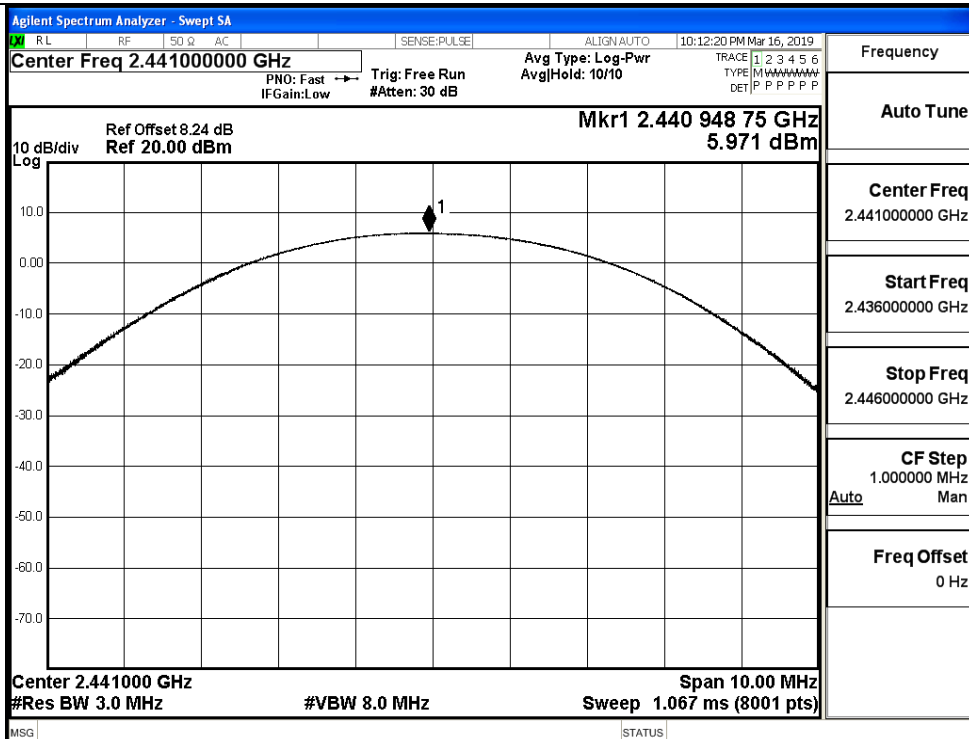
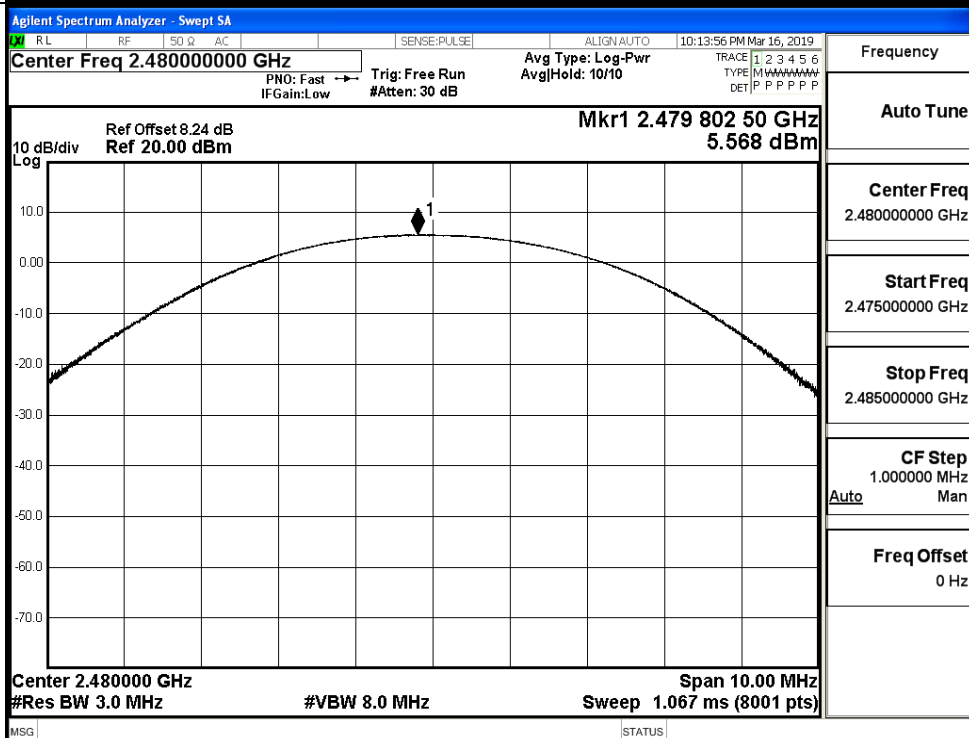


GFSK/MCH



GFSK/HCH

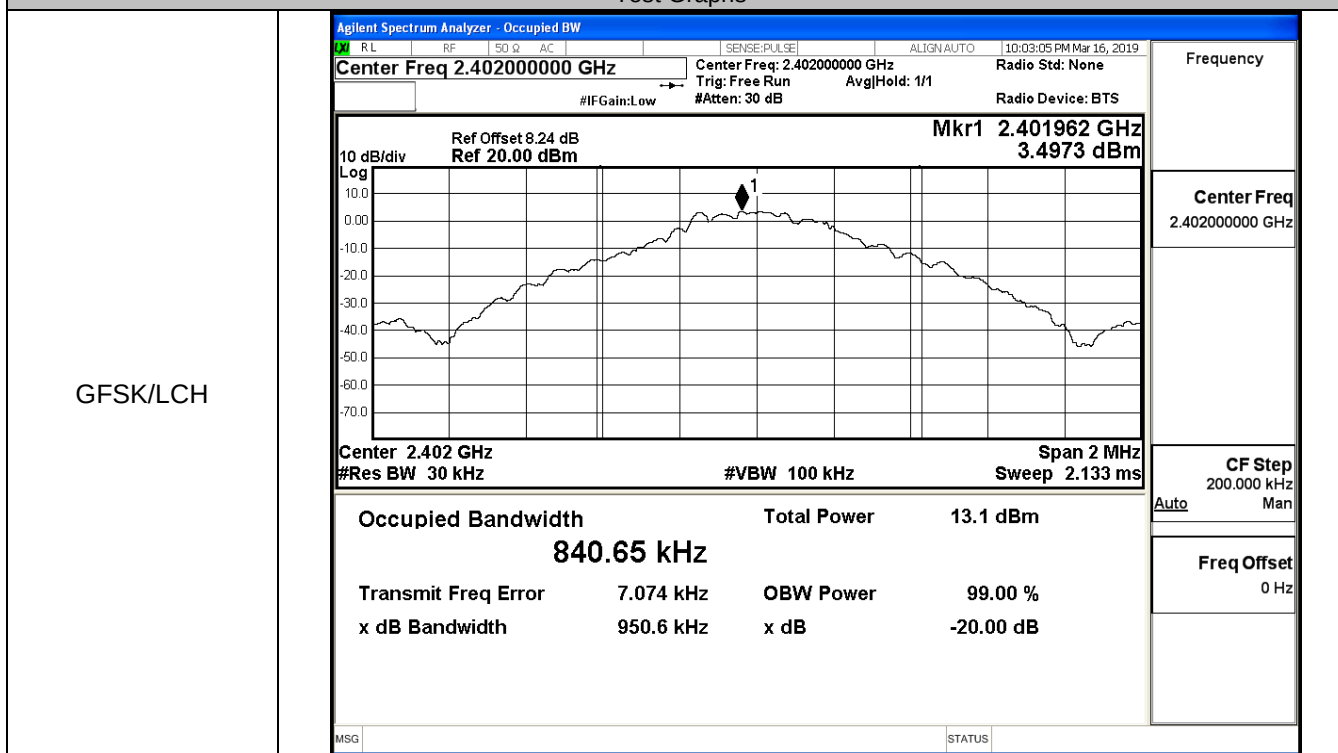
 π /4DQPSK/LCH

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

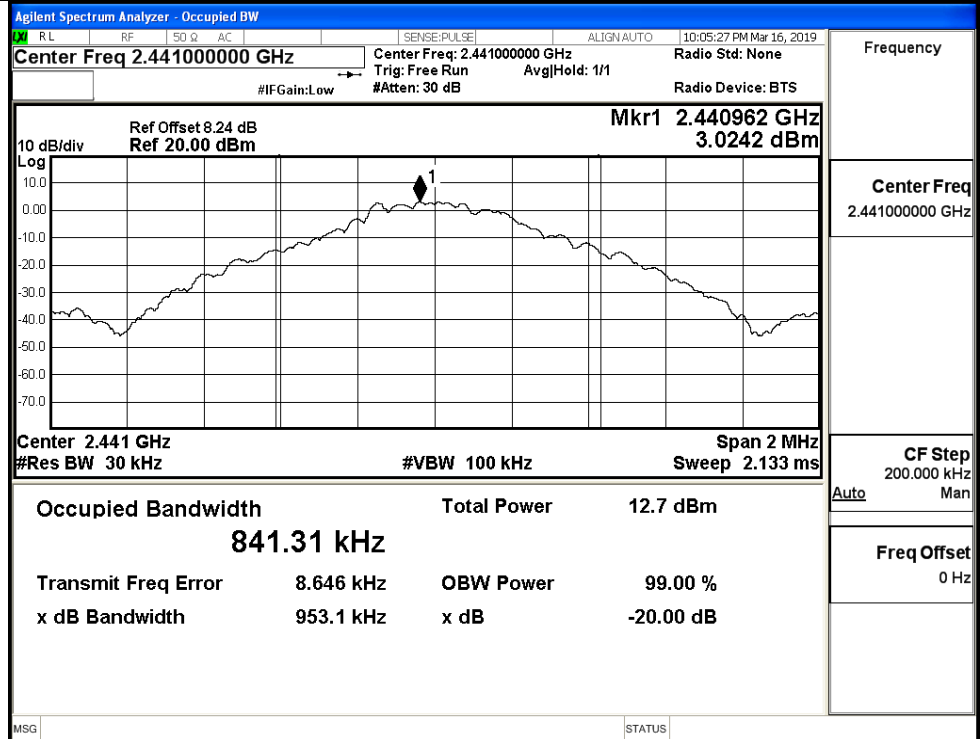
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9506	Not Specified	PASS
	MCH	0.9531	Not Specified	PASS
	HCH	0.9526	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.315	Not Specified	PASS
	MCH	1.314	Not Specified	PASS
	HCH	1.315	Not Specified	PASS

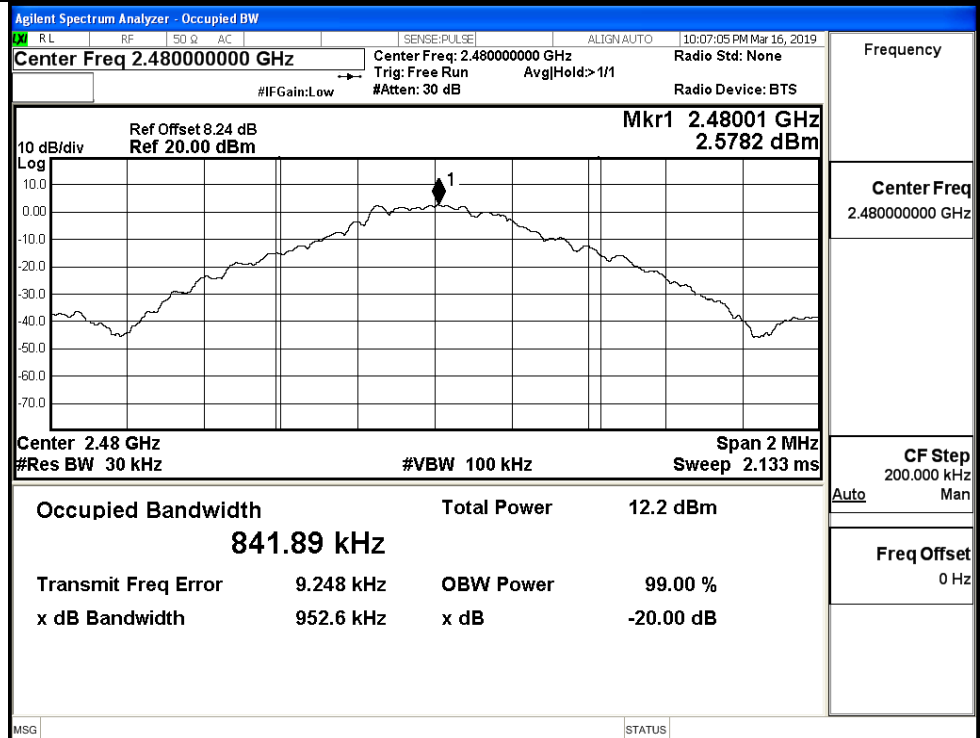
Test Graphs

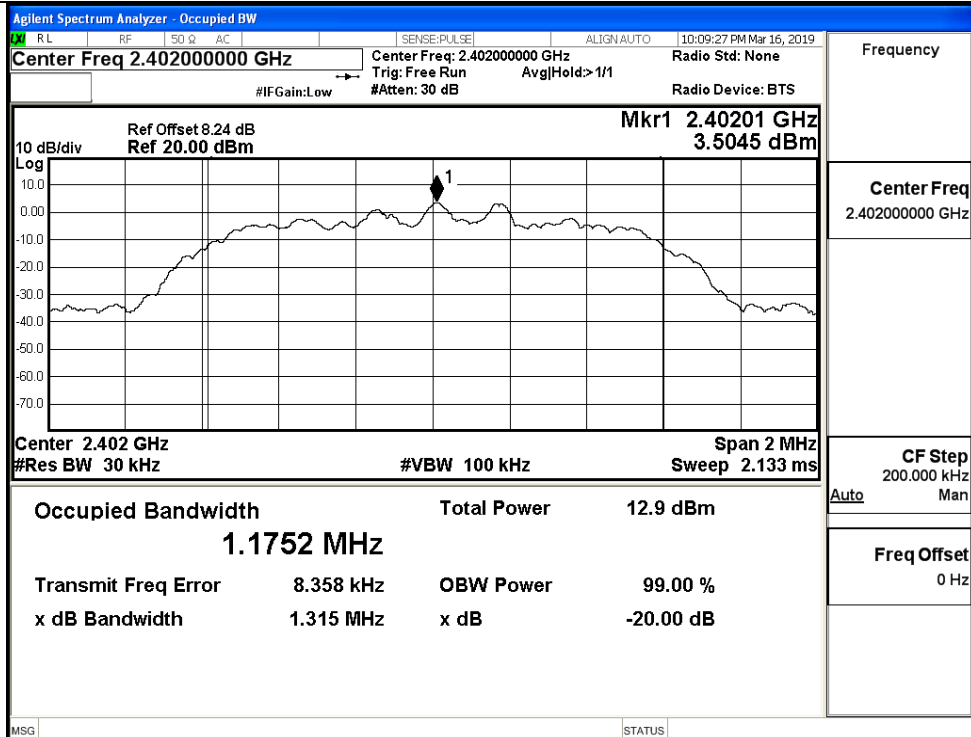
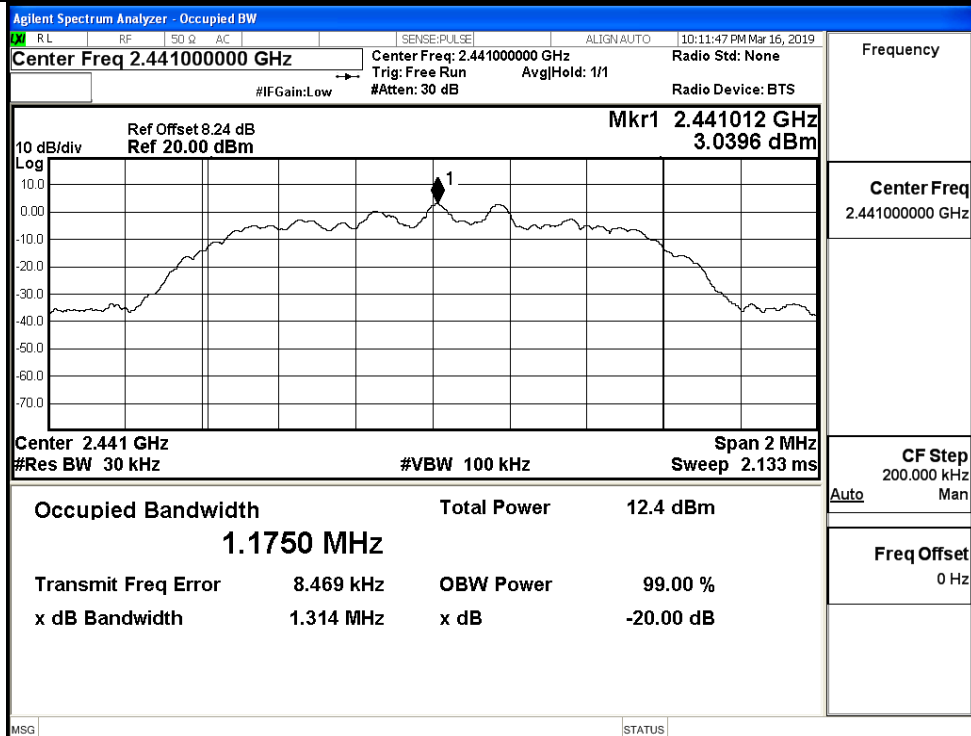


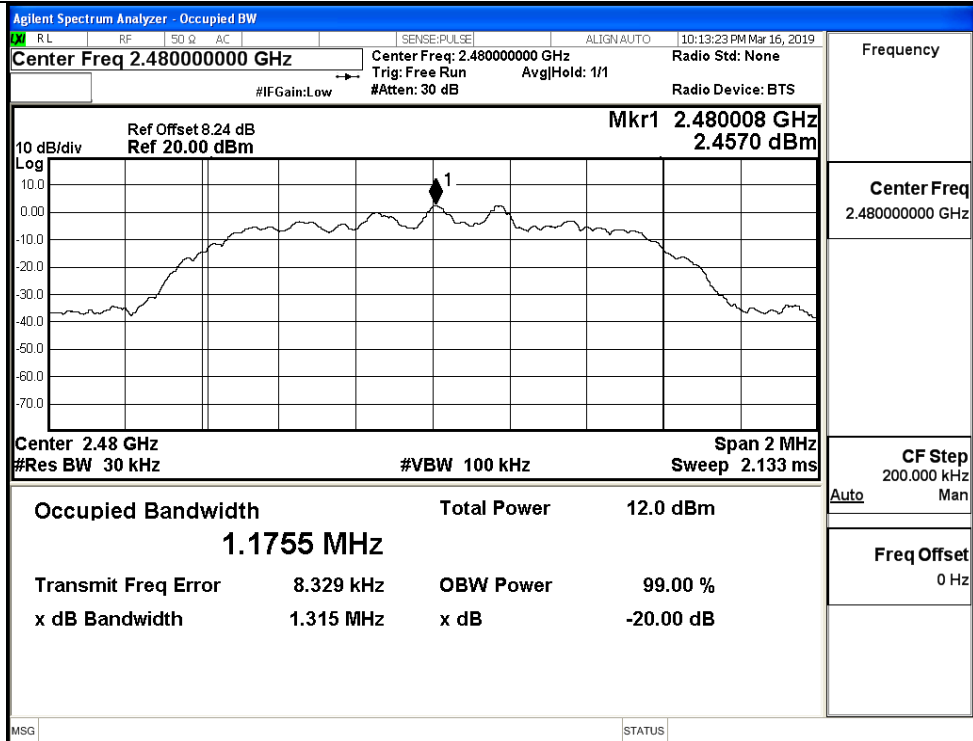
GFSK/MCH



GFSK/HCH



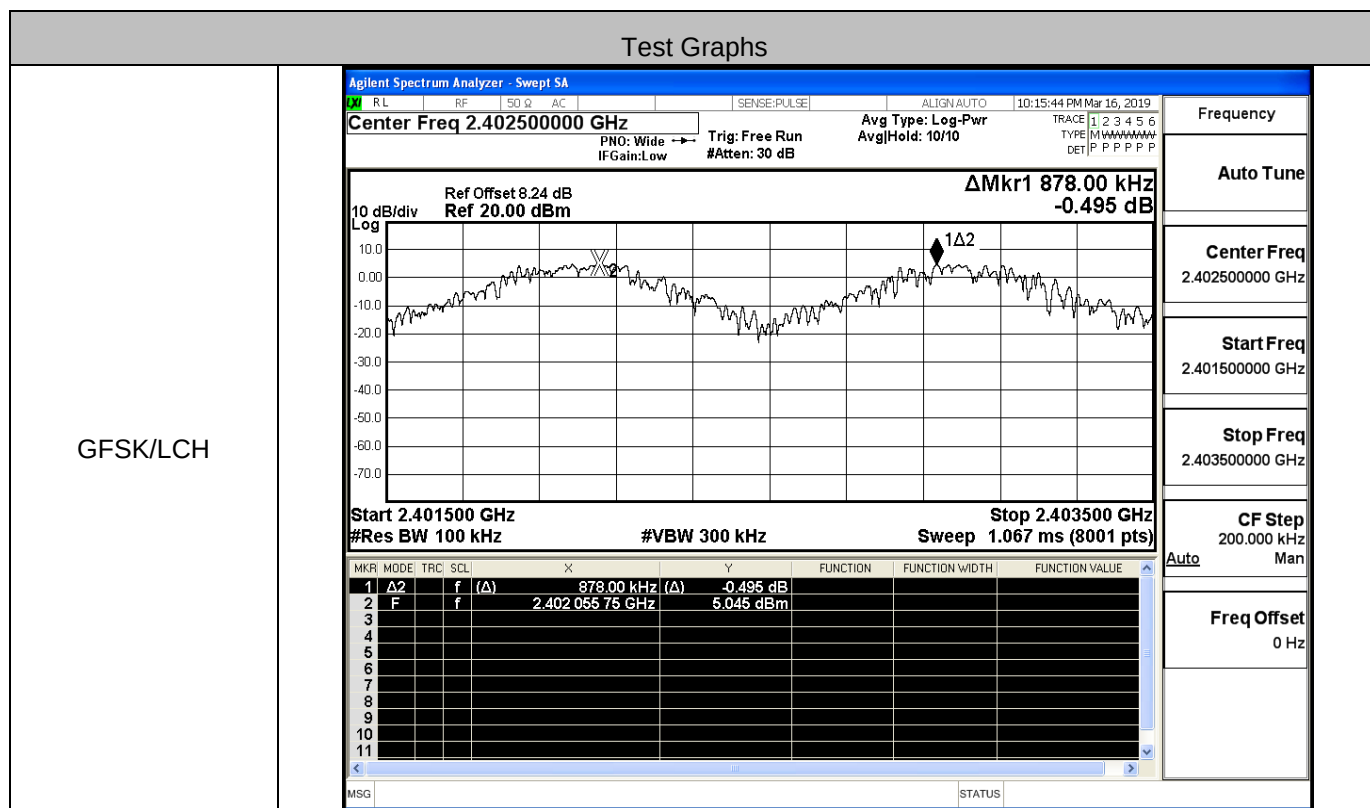
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

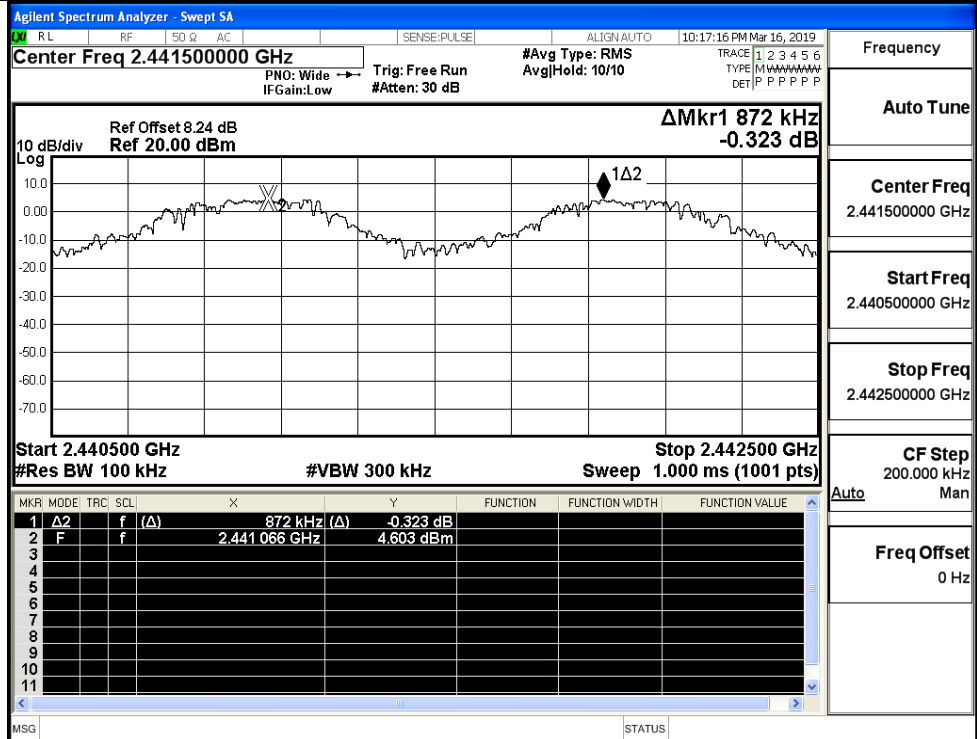
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.878	0.635	PASS
	MCH	0.872	0.635	PASS
	HCH	1.110	0.635	PASS
π /4DQPSK	LCH	1.172	0.877	PASS
	MCH	1.184	0.877	PASS
	HCH	1.014	0.877	PASS

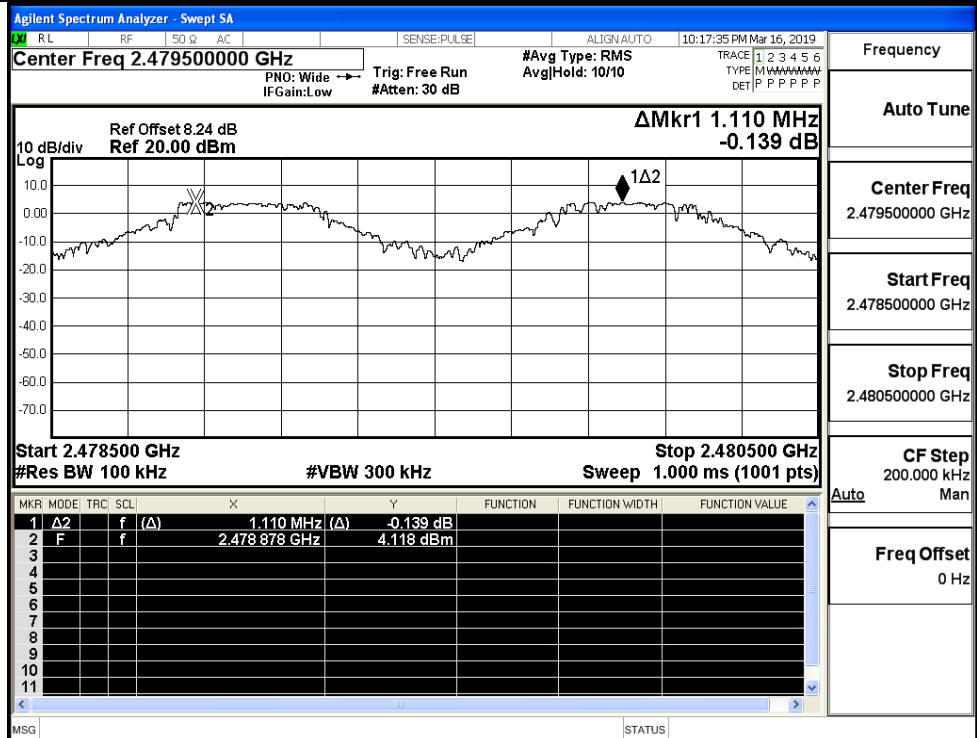
Test Graphs

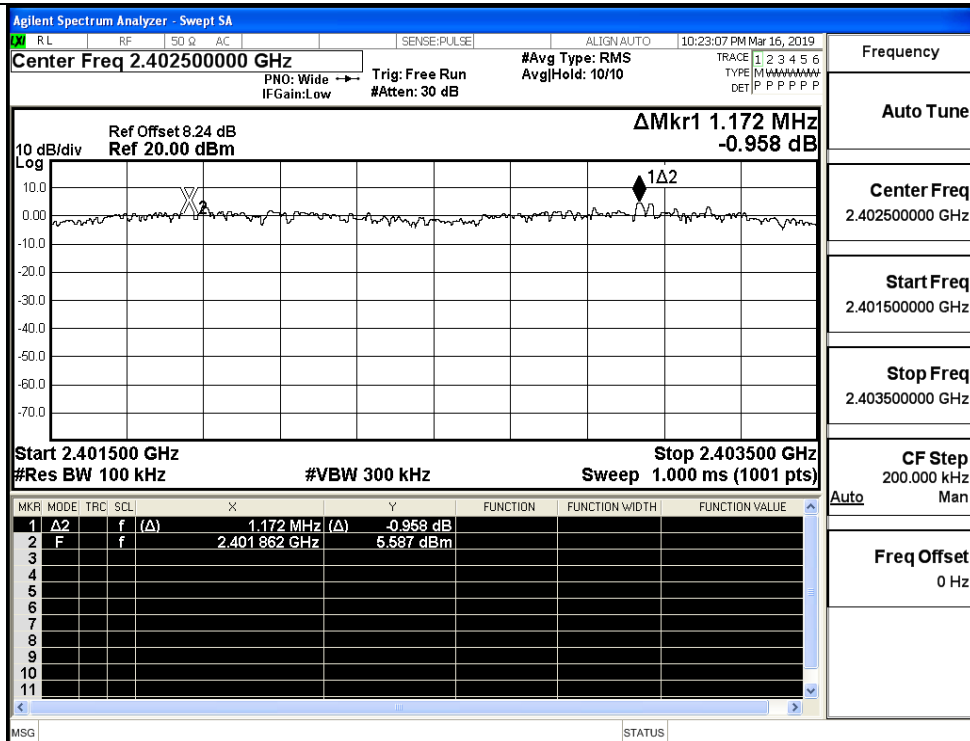


GFSK/MCH



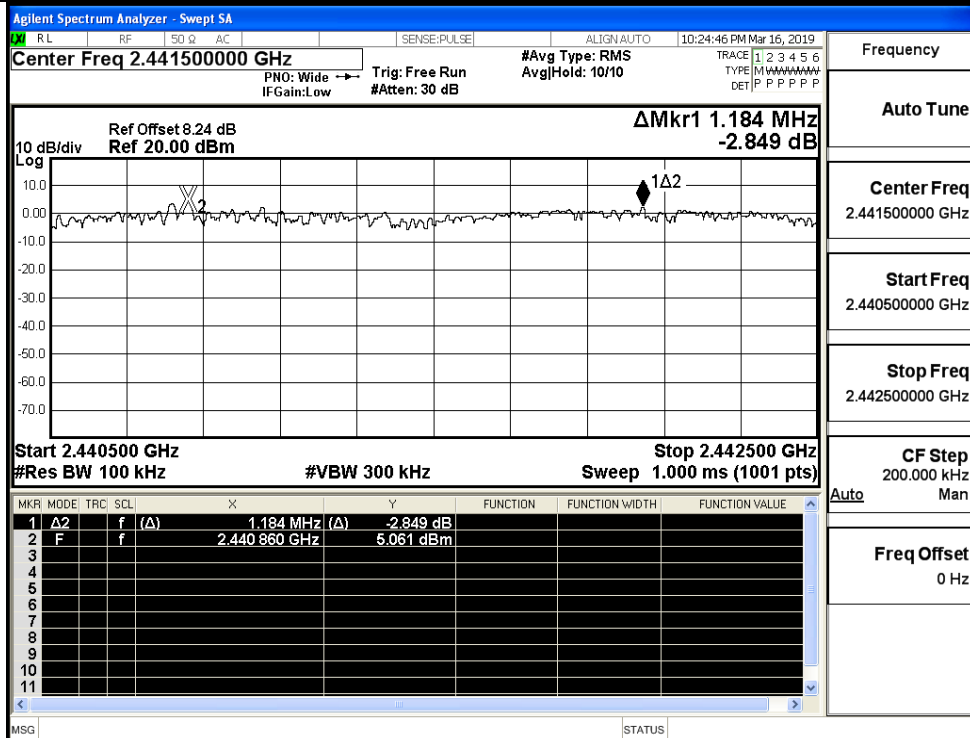
GFSK/HCH



$\pi/4$ DQPSK/LCH

Frequency

Auto Tune

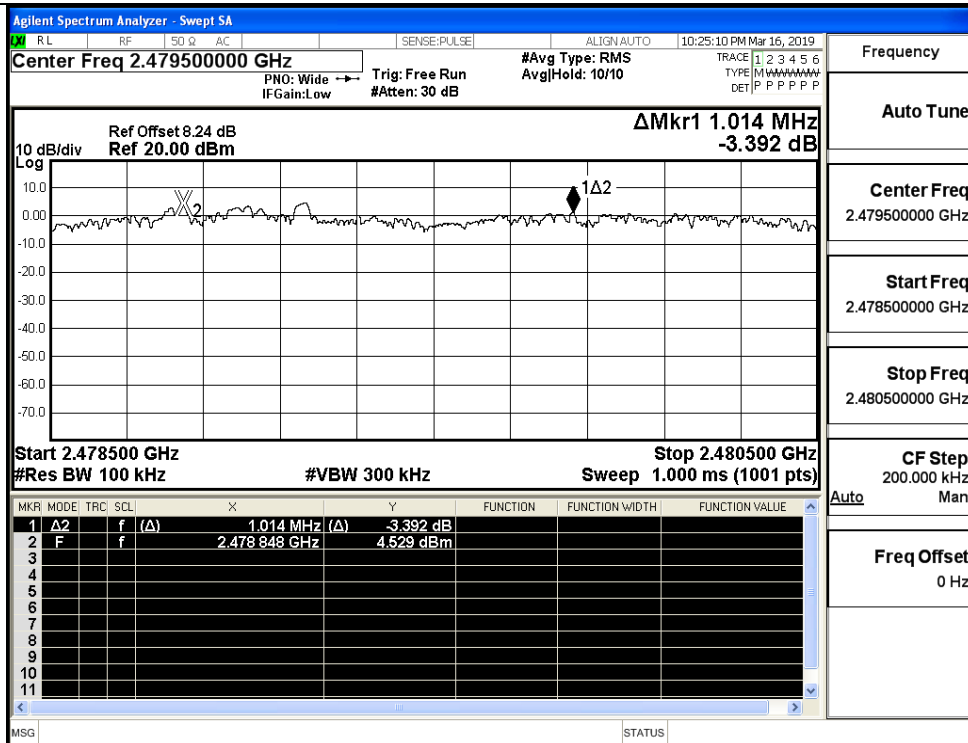
Center Freq
2.402500000 GHzStart Freq
2.401500000 GHzStop Freq
2.403500000 GHzCF Step
200.000 kHz
ManFreq Offset
0 Hz $\pi/4$ DQPSK/MCH

Frequency

Auto Tune

Center Freq
2.441500000 GHzStart Freq
2.440500000 GHzStop Freq
2.442500000 GHzCF Step
200.000 kHz
ManFreq Offset
0 Hz

$\pi/4$ DQPSK/HCH

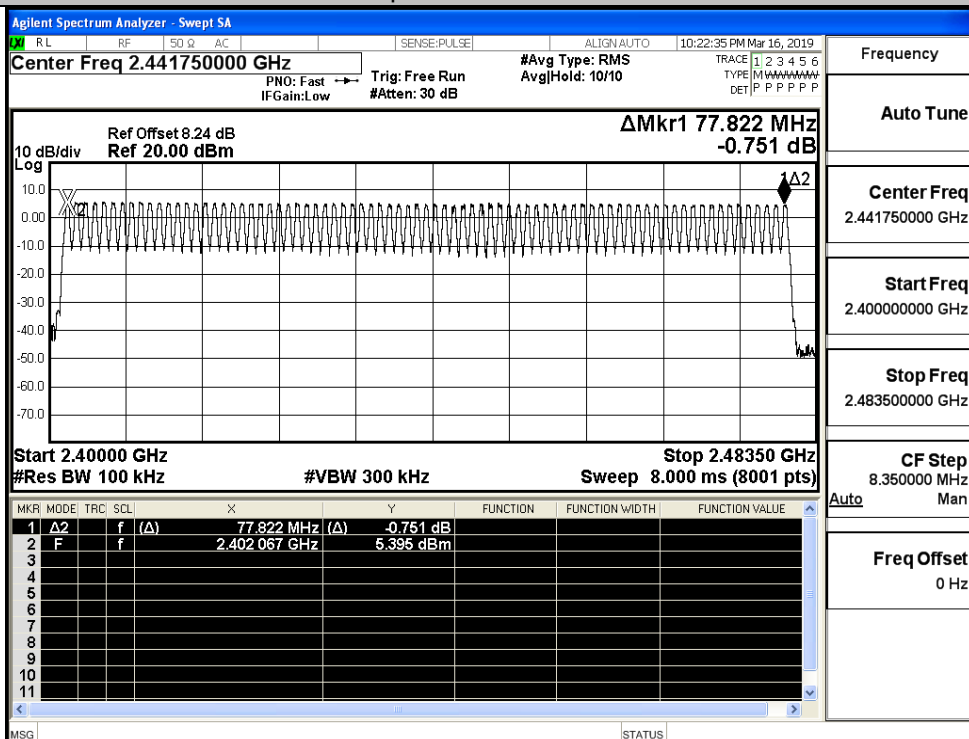
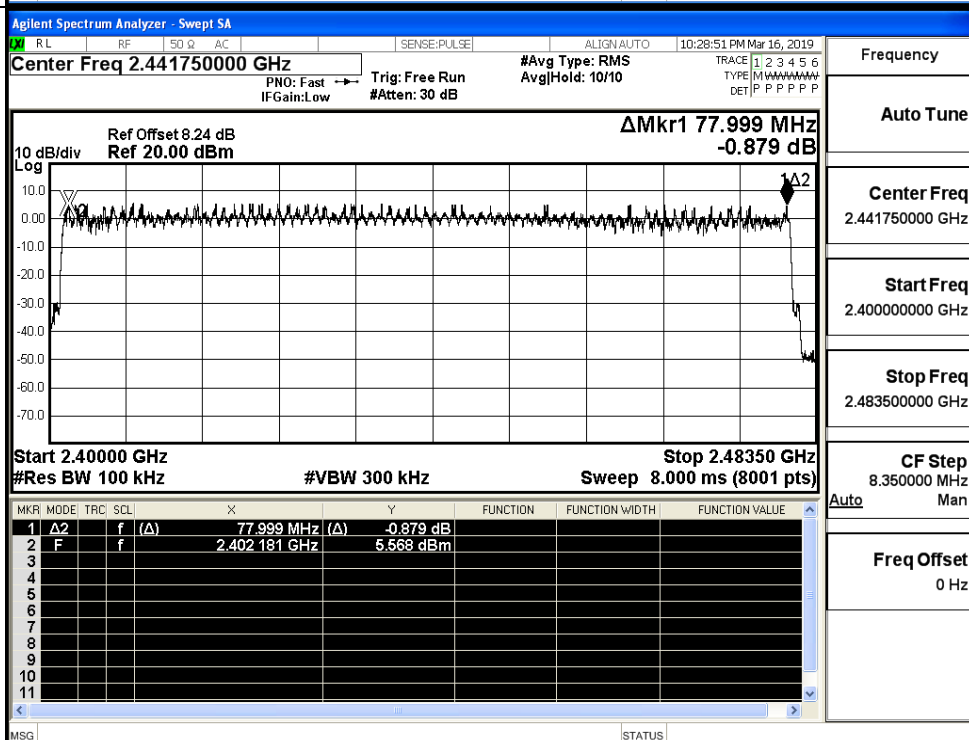


A.4 Hopping Channel Number

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

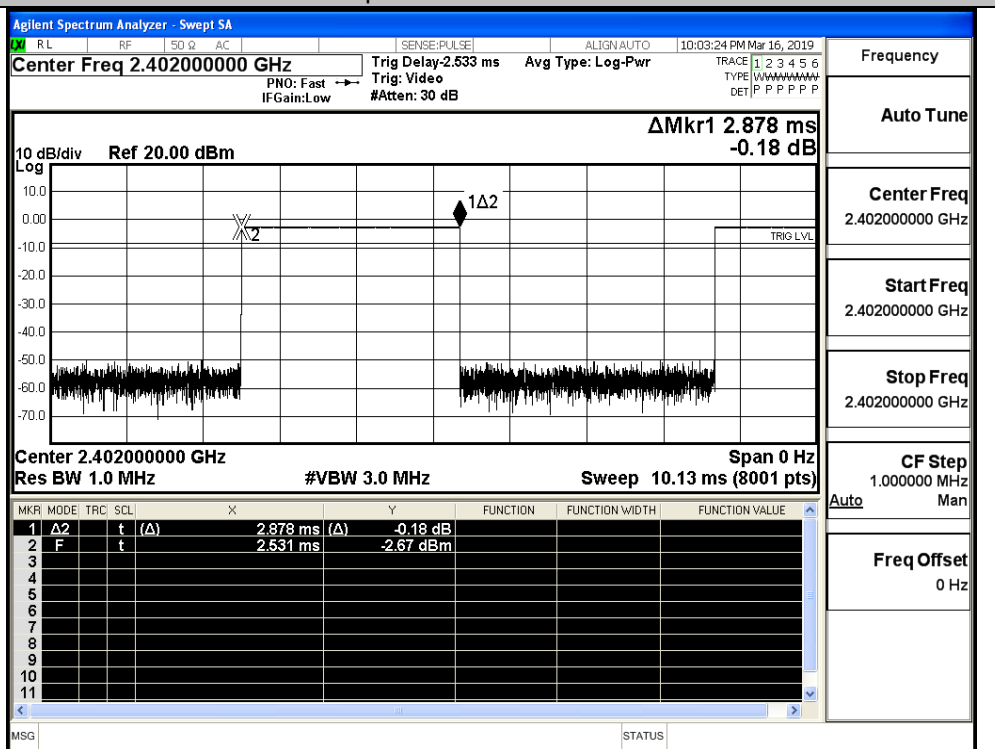
 $\pi/4$ DQPSK/Hop

A.5 Dwell Time

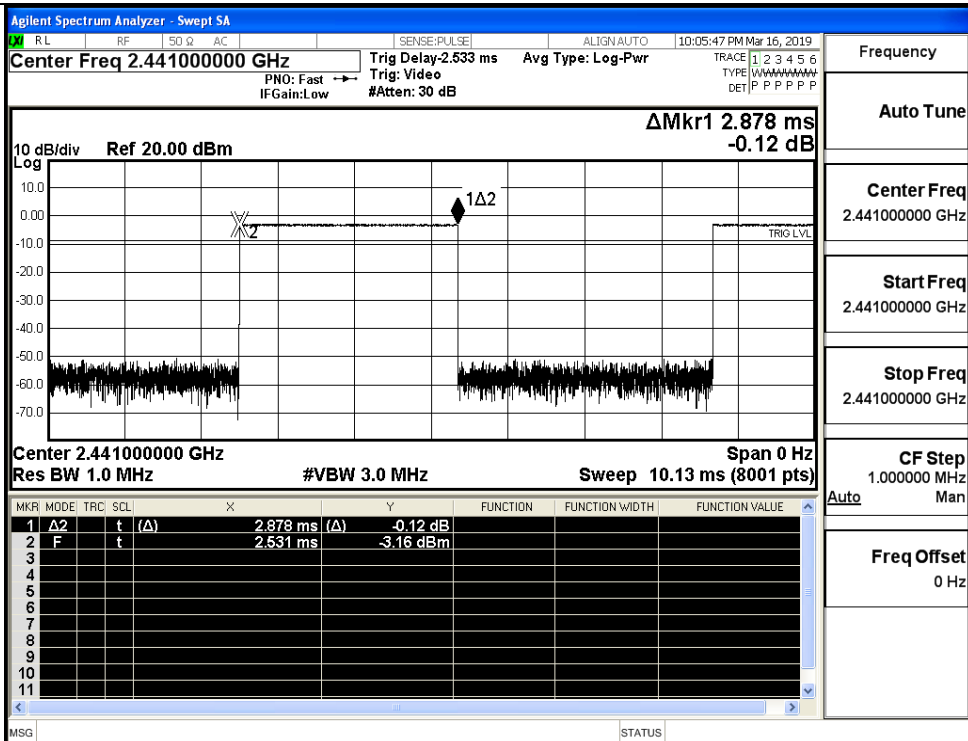
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.308	0.4	PASS
	2DH5	HCH	2.88	106.7	0.308	0.4	PASS

Test Graphs

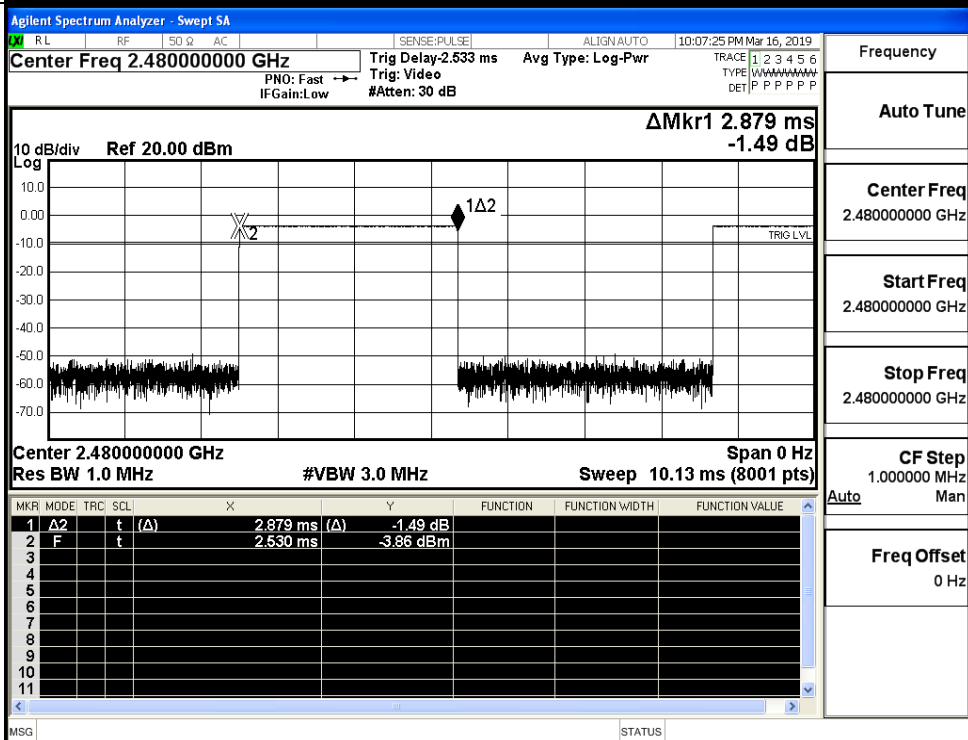
GFSK_DH5/LCH



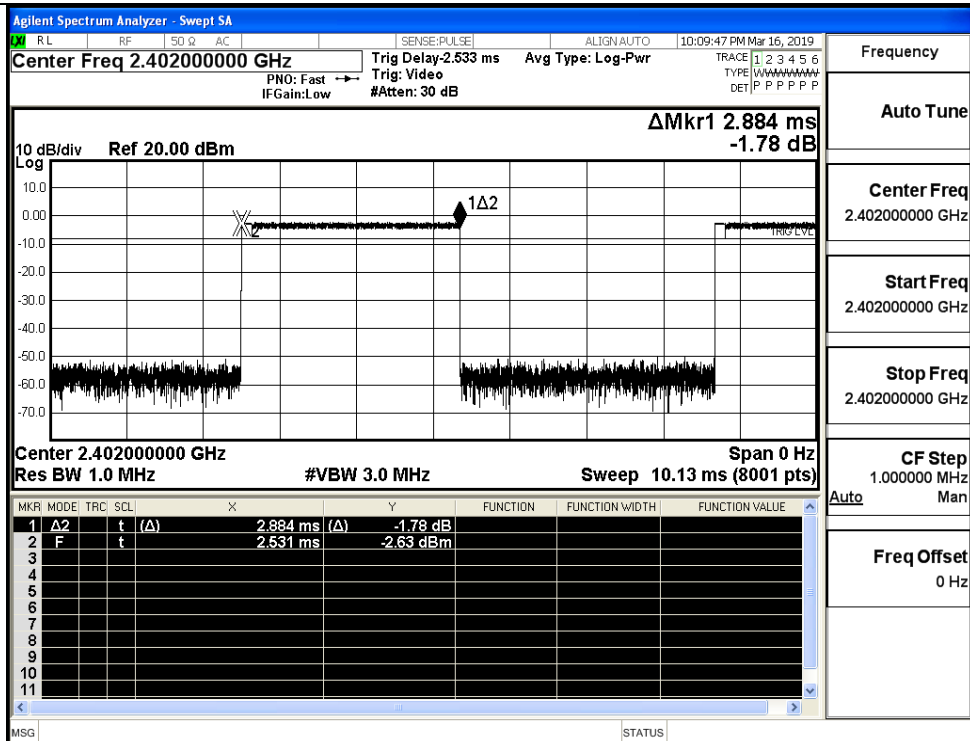
GFSK_DH5/MCH



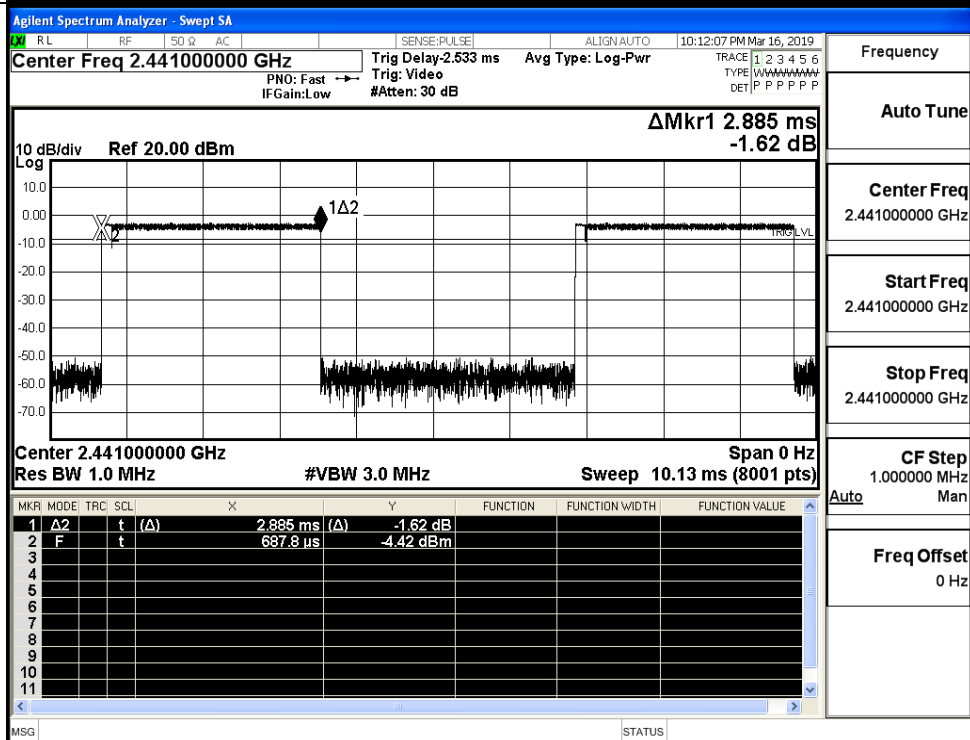
GFSK_DH5/HCH



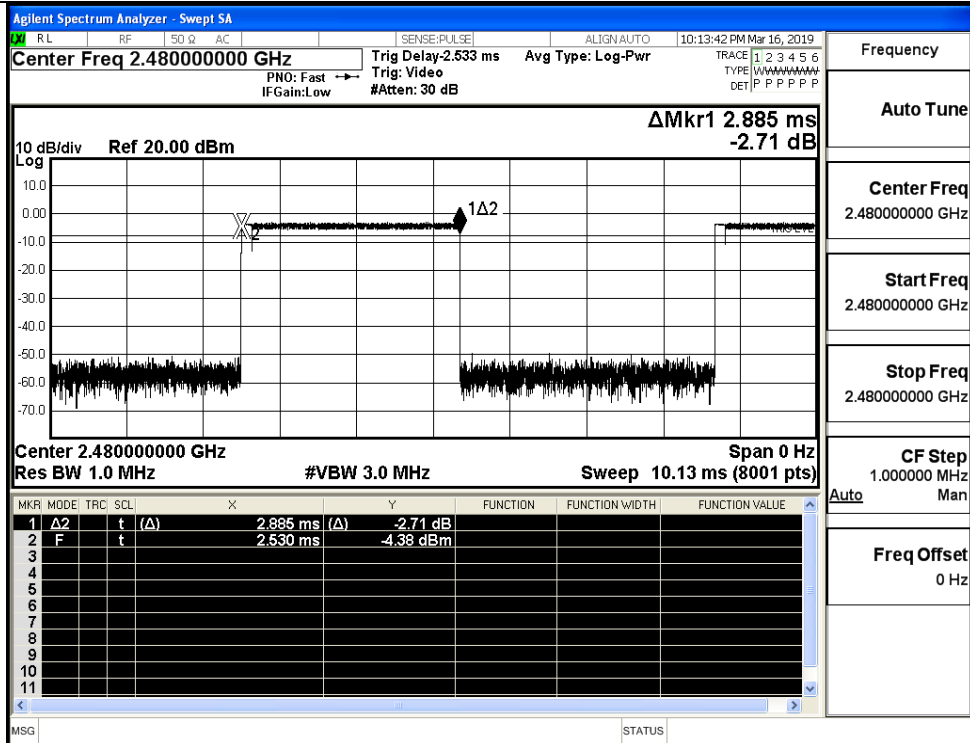
$\pi/4$ DQPSK
_2DH5/LCH



$\pi/4$ DQPSK
_2DH5/MCH



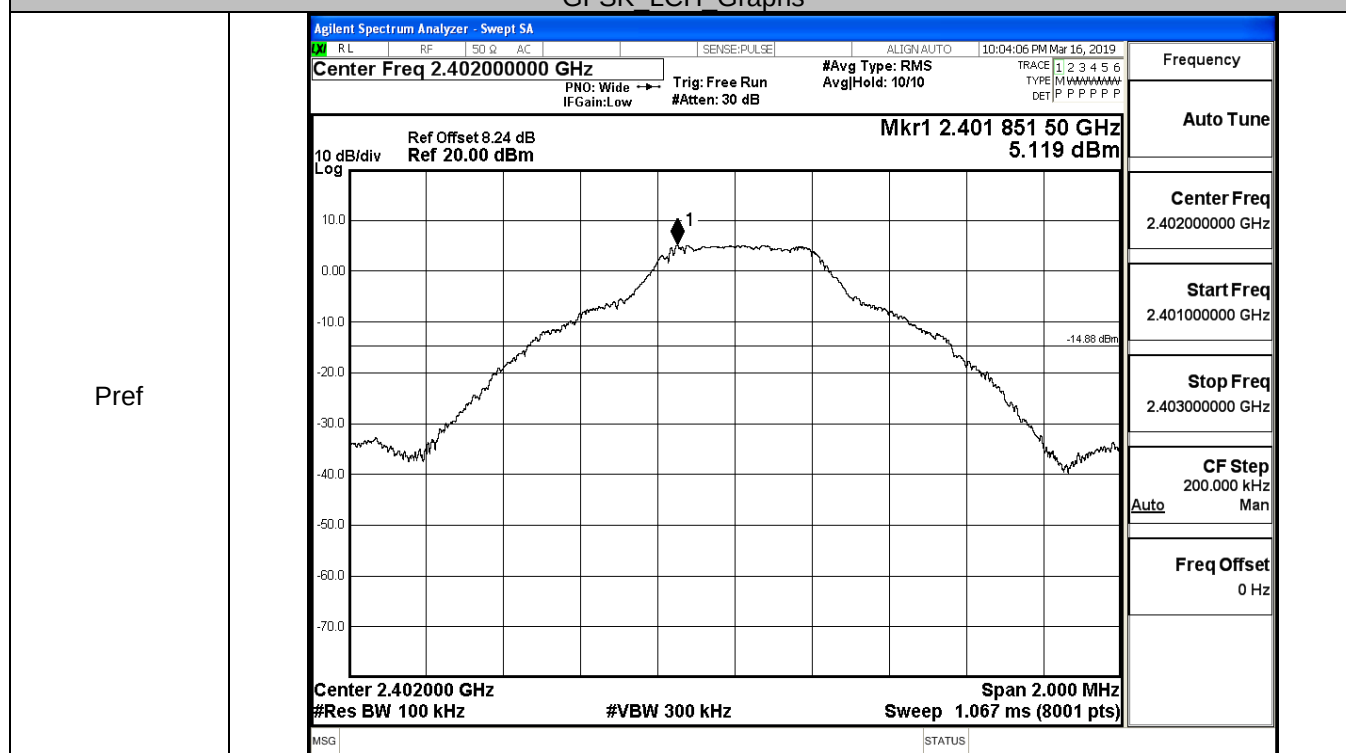
$\pi/4$ DQPSK
_2DH5/HCH

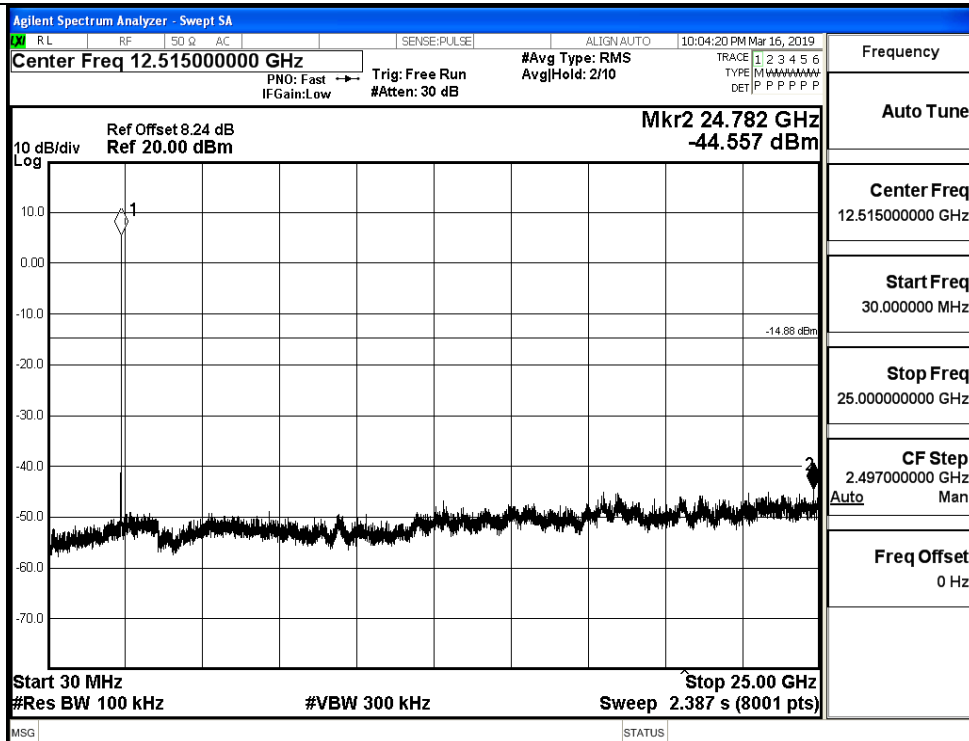


A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	5.119	-44.557	-14.881	PASS
	MCH	5.06	-40.624	-14.940	PASS
	HCH	4.144	-42.389	-15.856	PASS
$\pi/4$ DQPSK	LCH	5.609	-44.320	-14.391	PASS
	MCH	5.091	-43.836	-14.909	PASS
	HCH	3.354	-43.897	-16.646	PASS

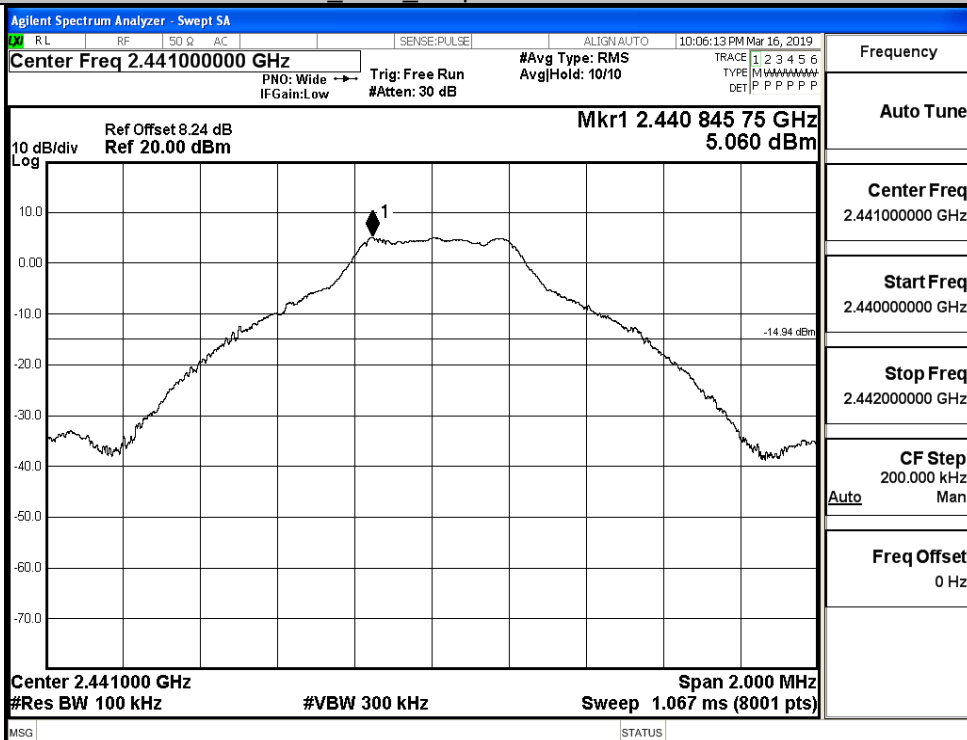
GFSK LCH Graphs



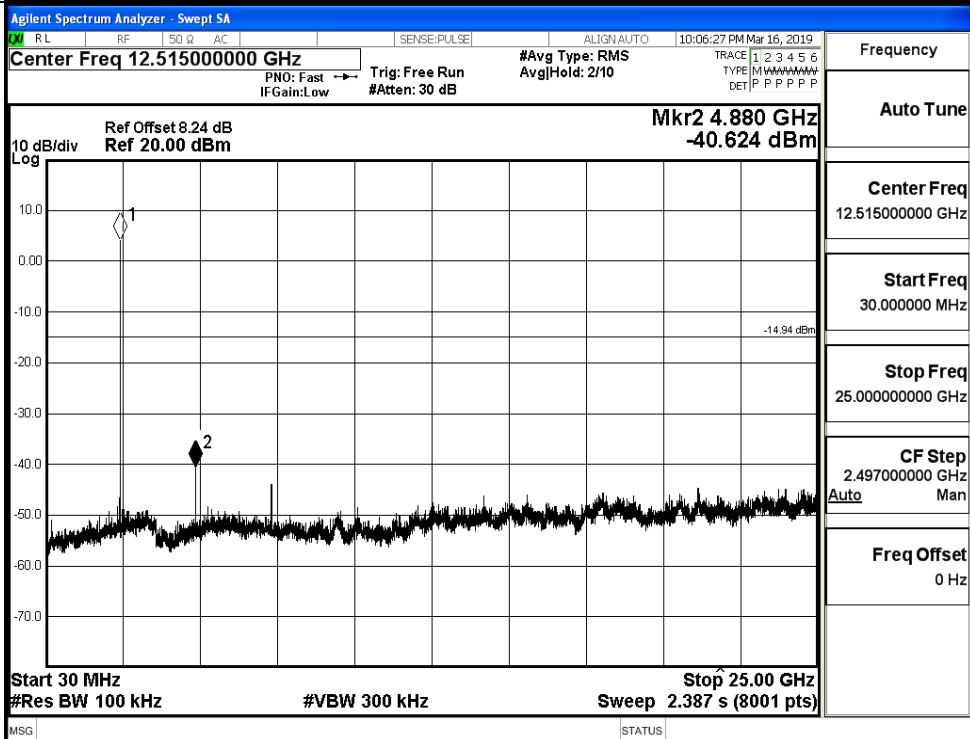


GFSK_MCH_Graphs

Pref

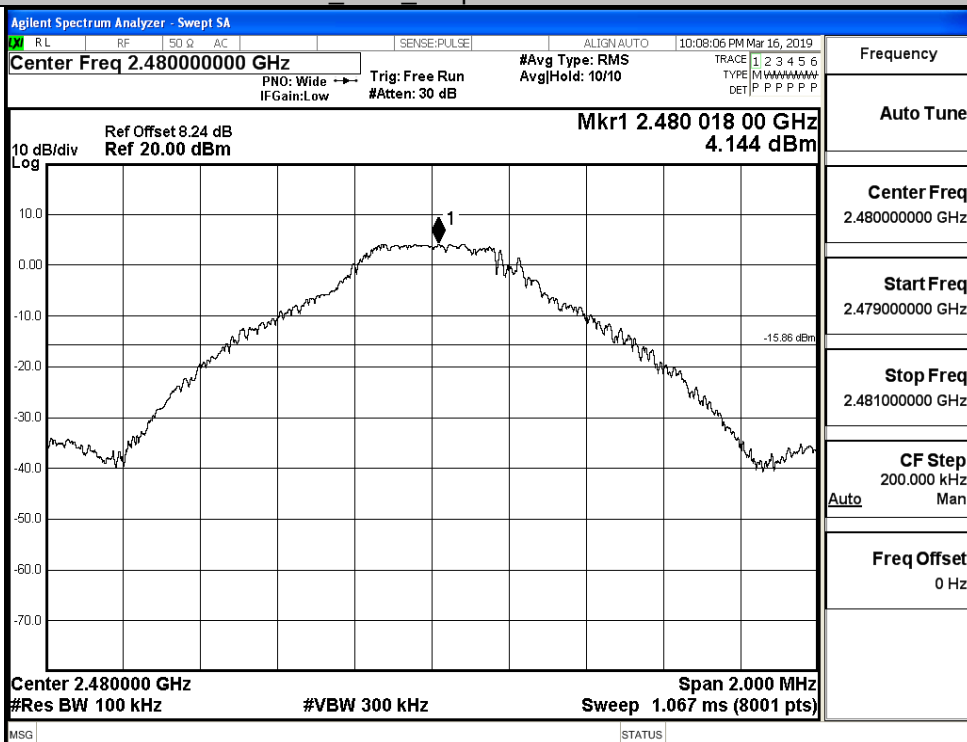


Puw

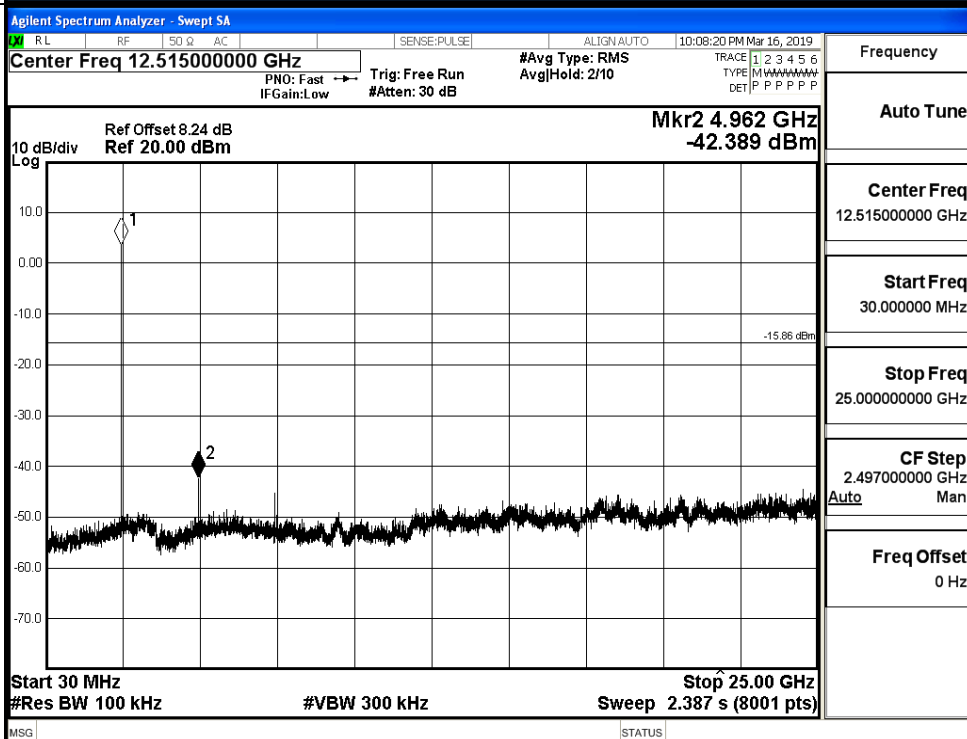


GFSK_HCH_Graphs

Pref

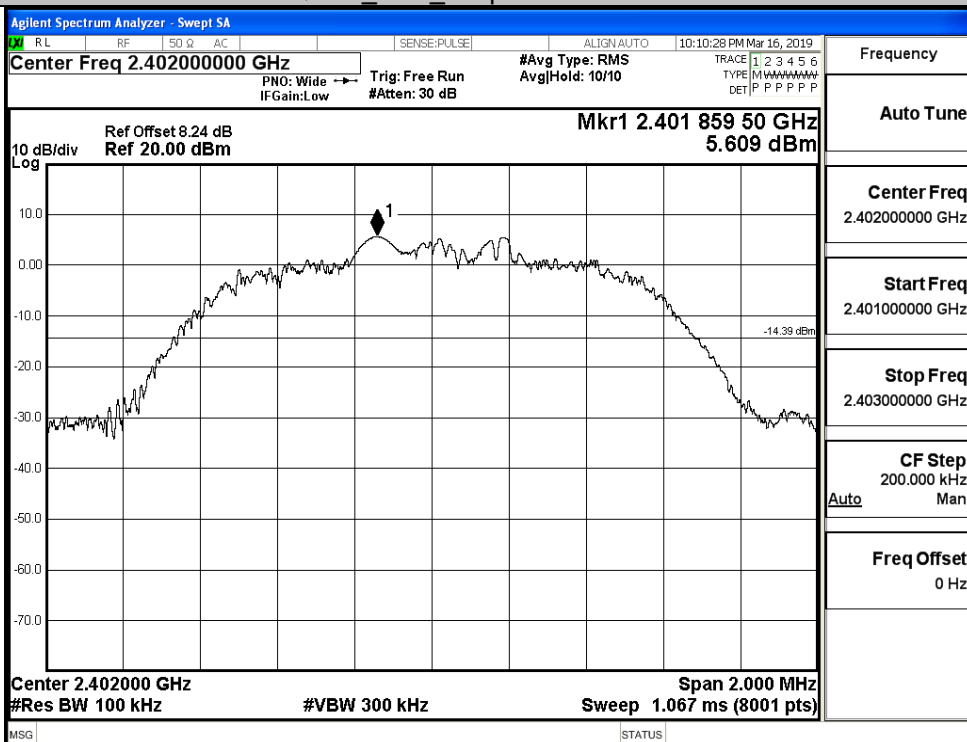


Puw

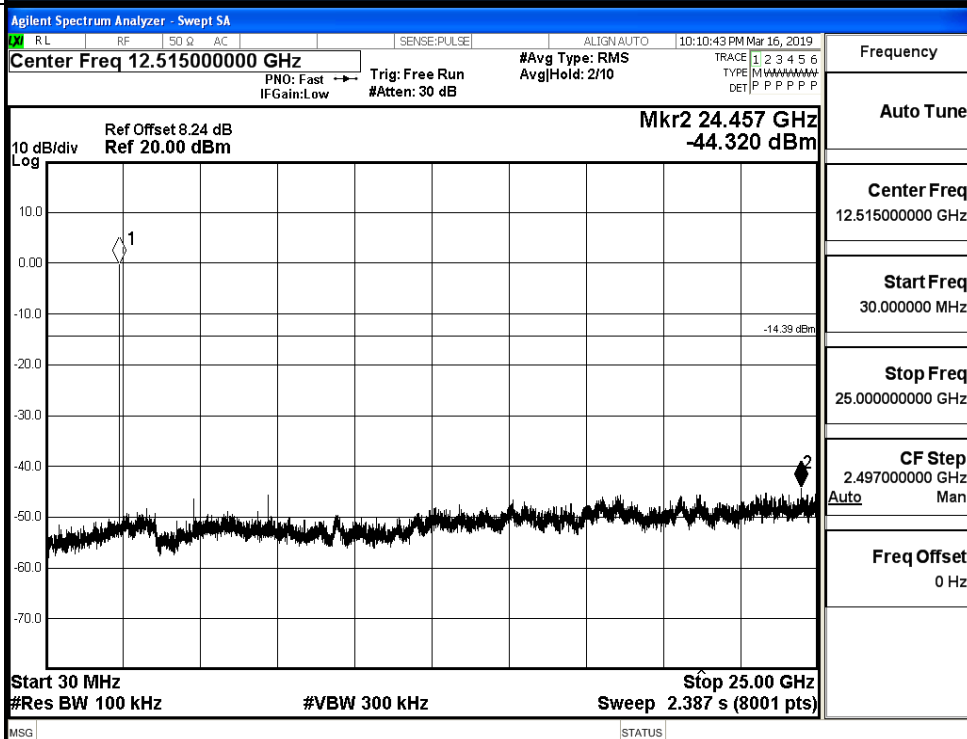


$\pi/4$ DQPSK_LCH_Graphs

Pref

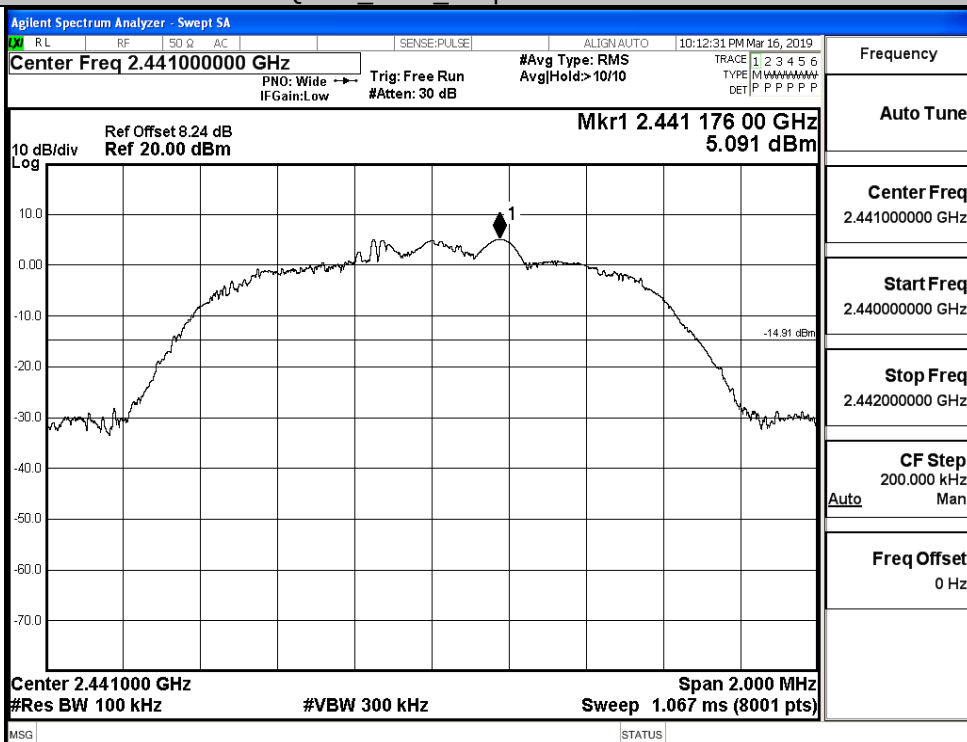


Puw

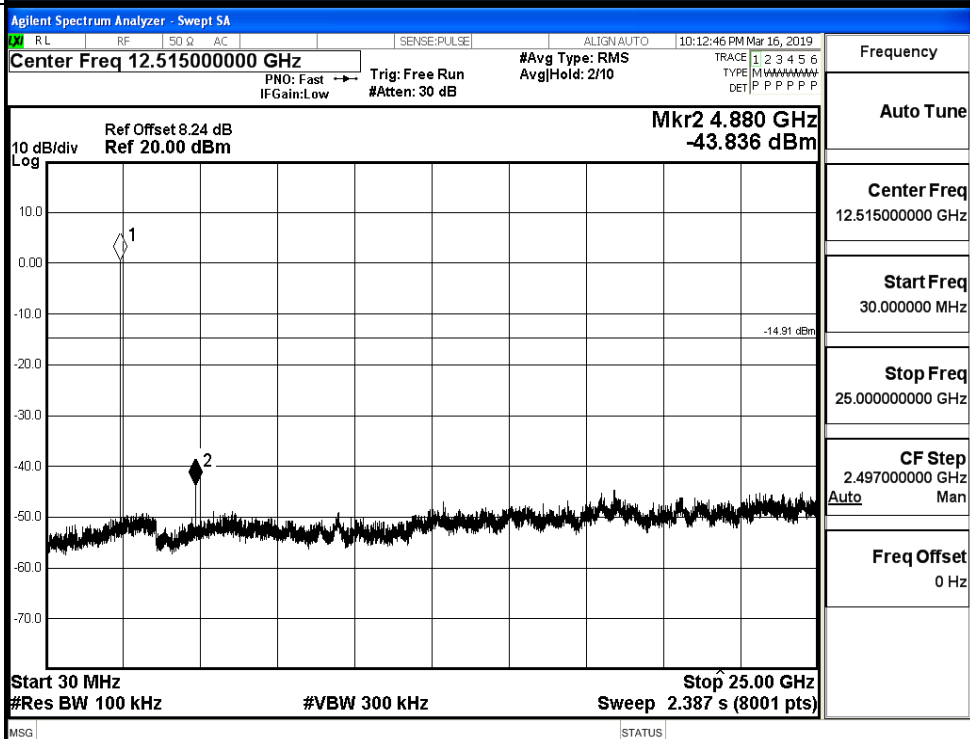


π /4DQPSK_MCH_Graphs

Pref

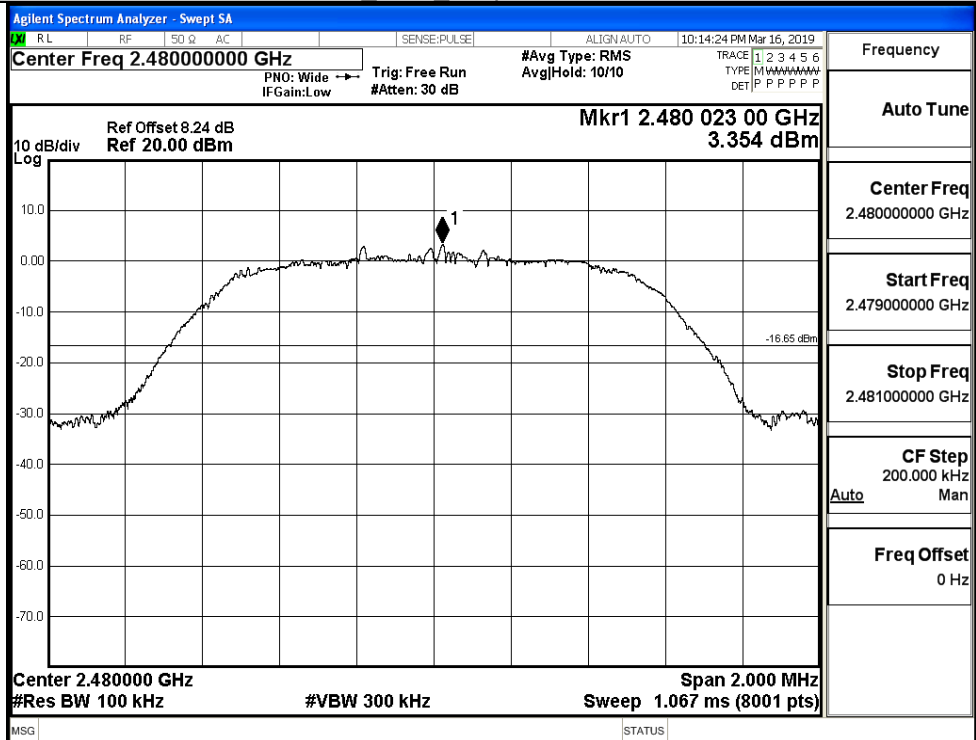


Puw

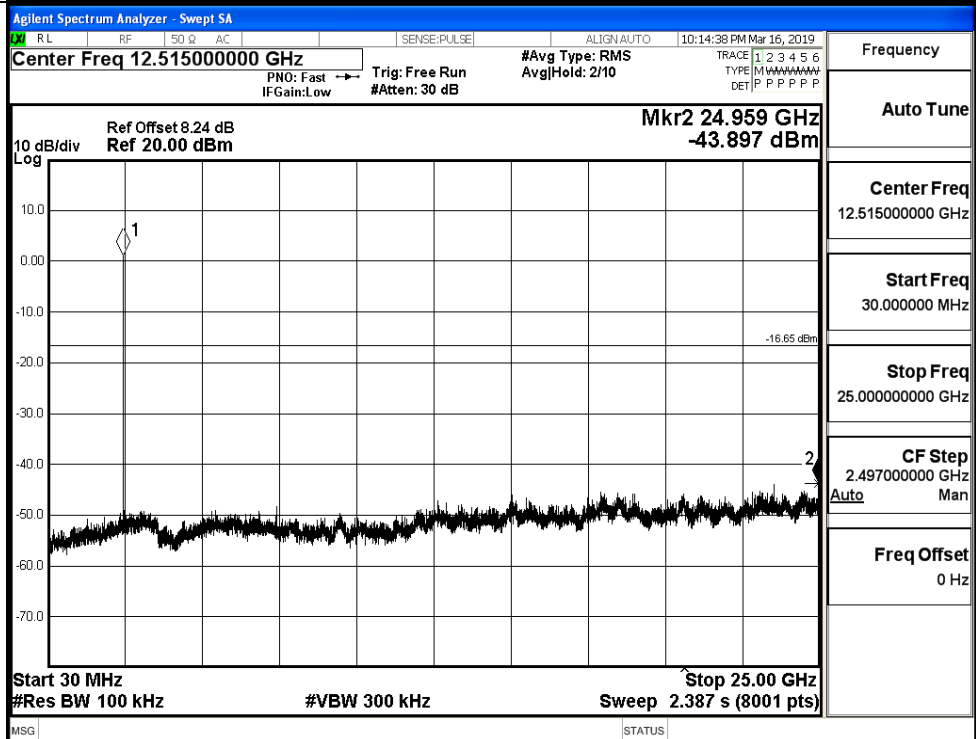


π /4DQPSK_HCH_Graphs

Pref



Puw

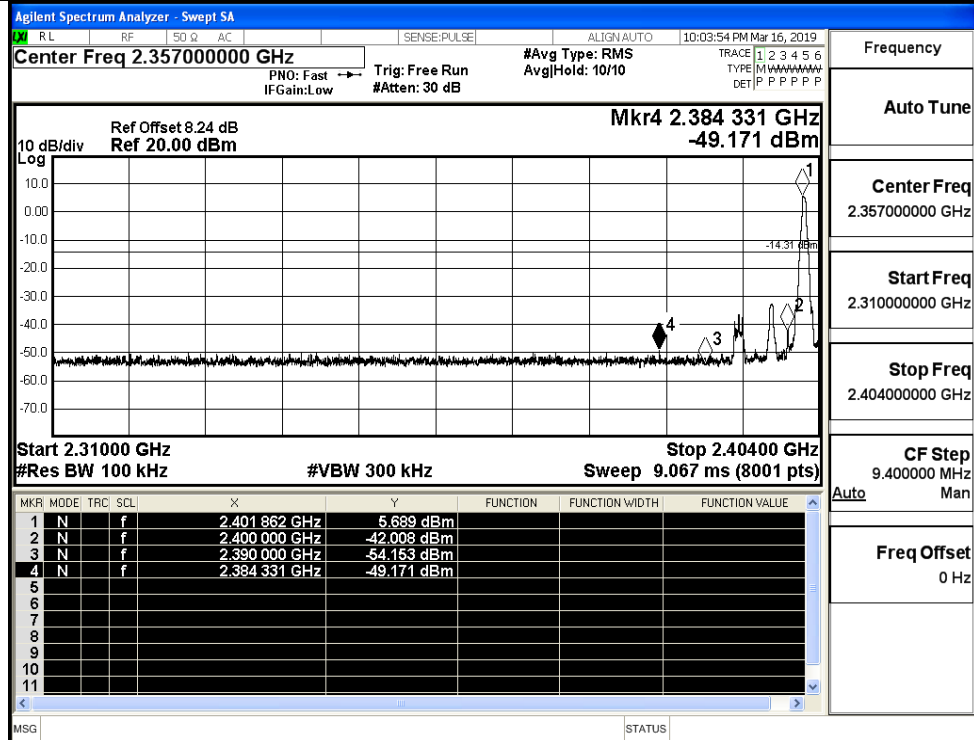


A.7 Band-edge for RF Conducted Emissions

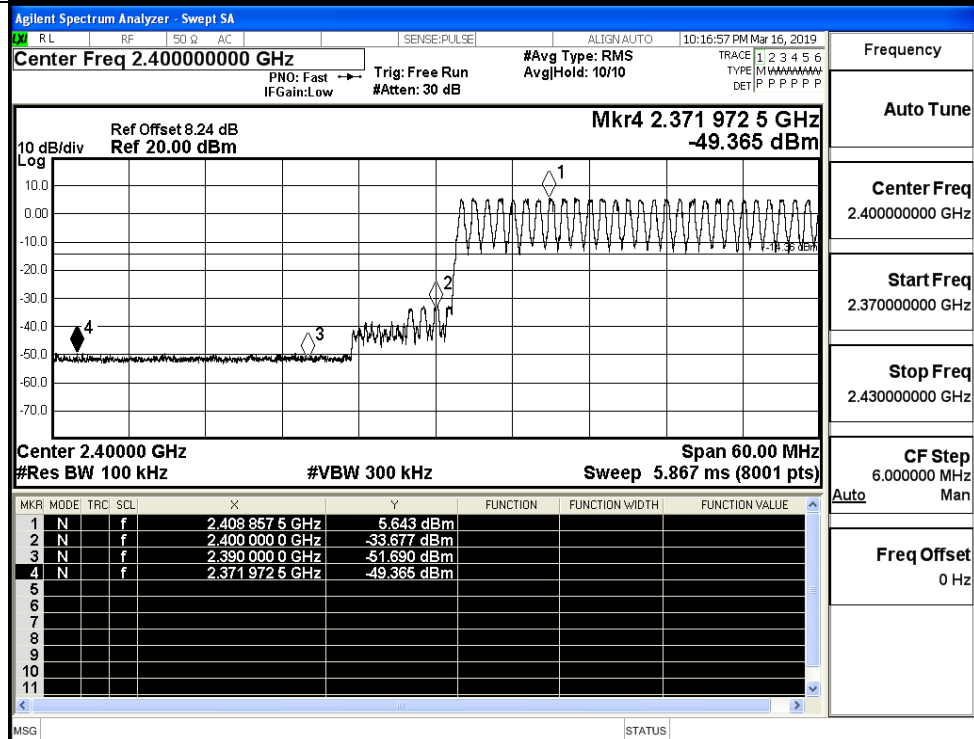
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	5.689	Off	-49.171	-14.31	PASS
			5.643	On	-49.365	-14.36	PASS
	HCH	2480	4.692	Off	-44.575	-15.31	PASS
			5.021	On	-45.187	-14.98	PASS
$\pi/4$ DQPSK	LCH	2402	2.896	Off	-49.964	-17.1	PASS
			5.476	On	-48.794	-14.52	PASS
	HCH	2480	4.771	Off	-44.921	-15.23	PASS
			5.109	On	-48.059	-14.89	PASS

Test Graphs

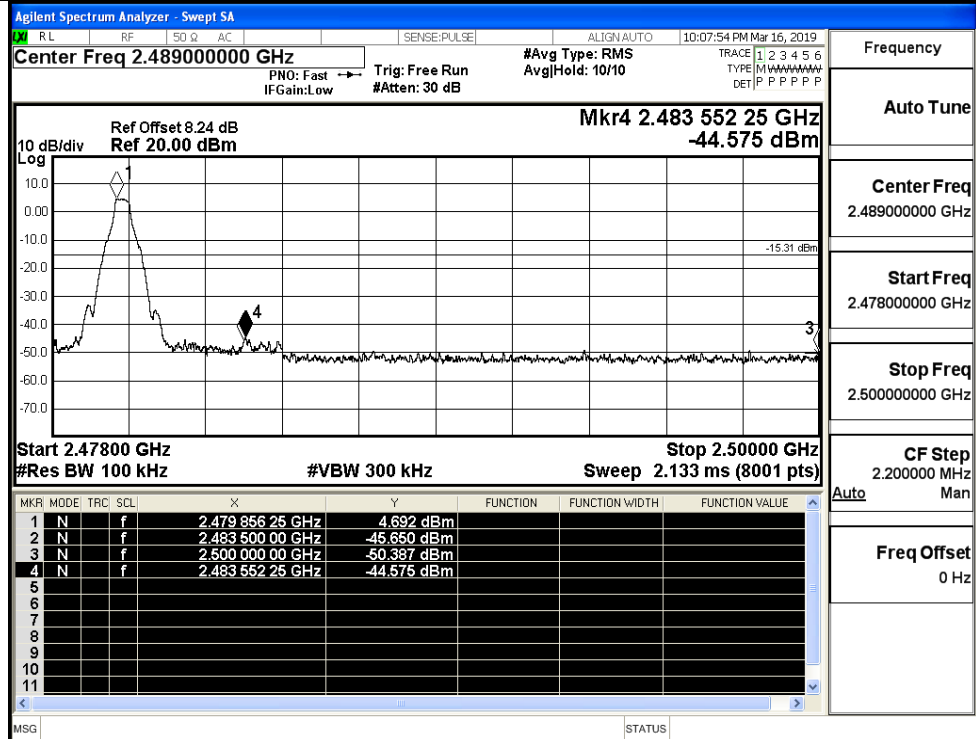
GFSK/LCH/No Hop



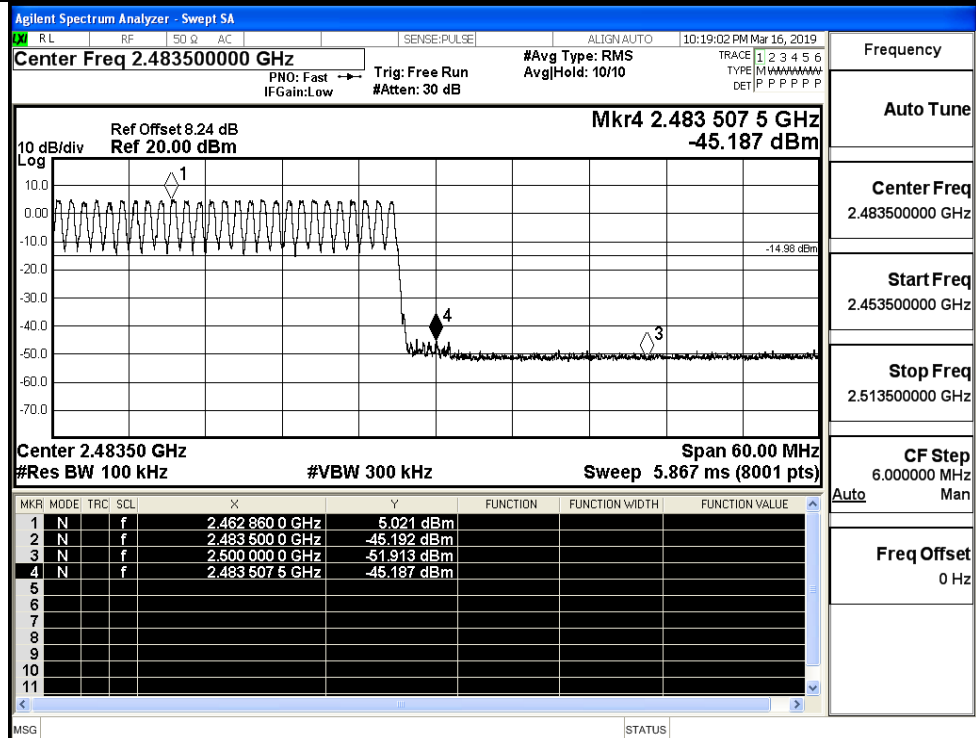
GFSK/LCH/Hop



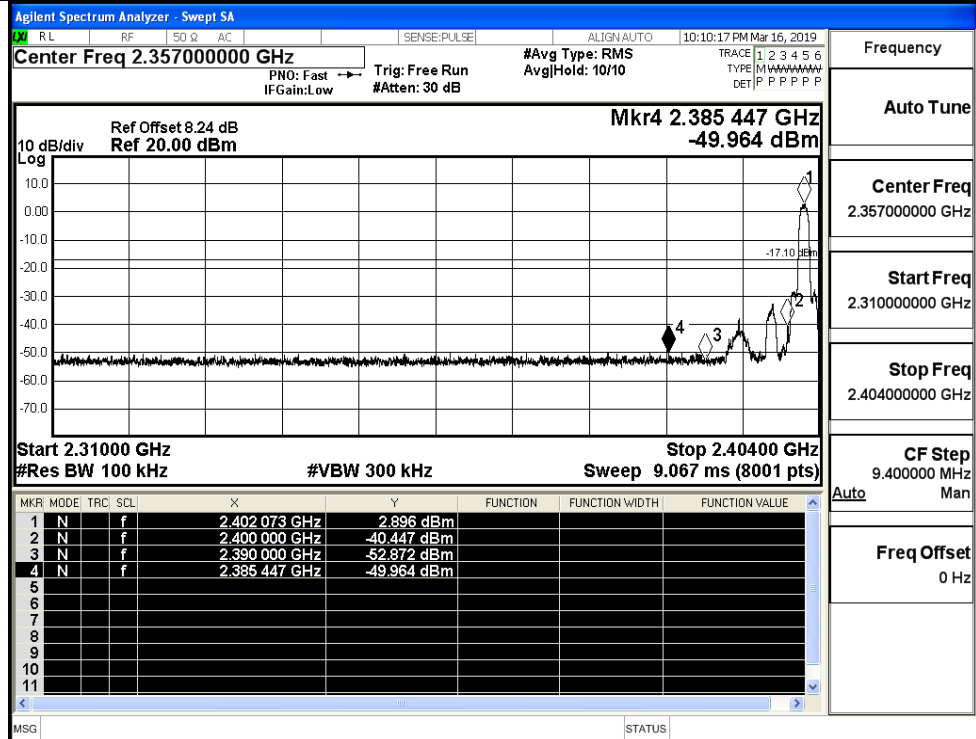
GFSK/HCH/No Hop



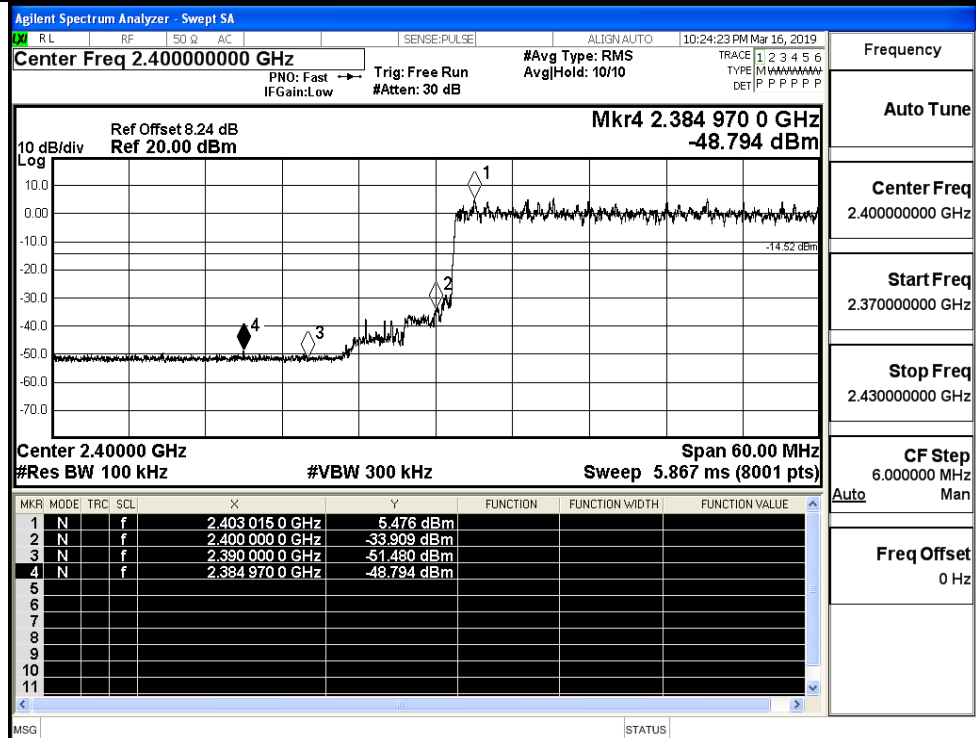
GFSK/HCH/Hop



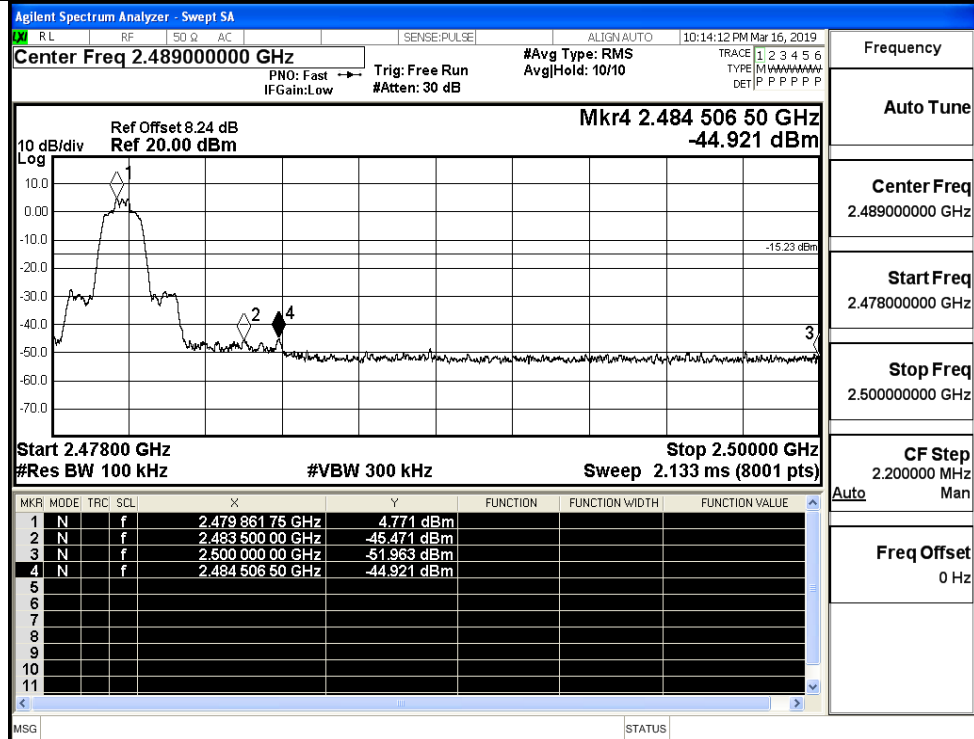
$\pi/4$ DQPSK/LCH/No
Hop



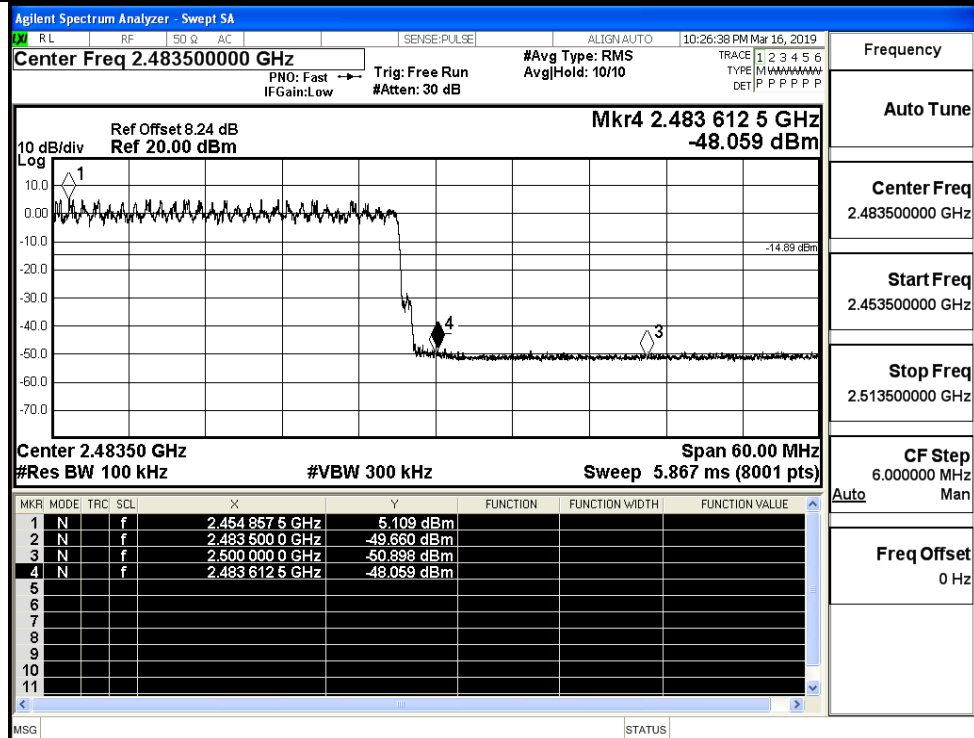
$\pi/4$ DQPSK/LCH/Hop



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



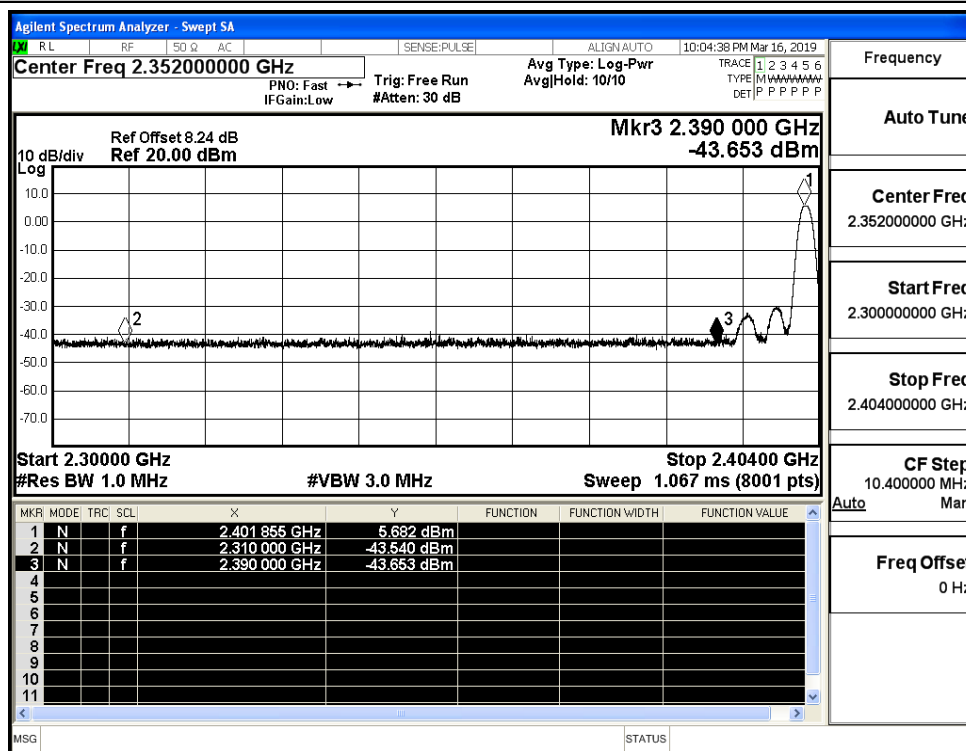
$\pi/4$ DQPSK/HCH/Hop



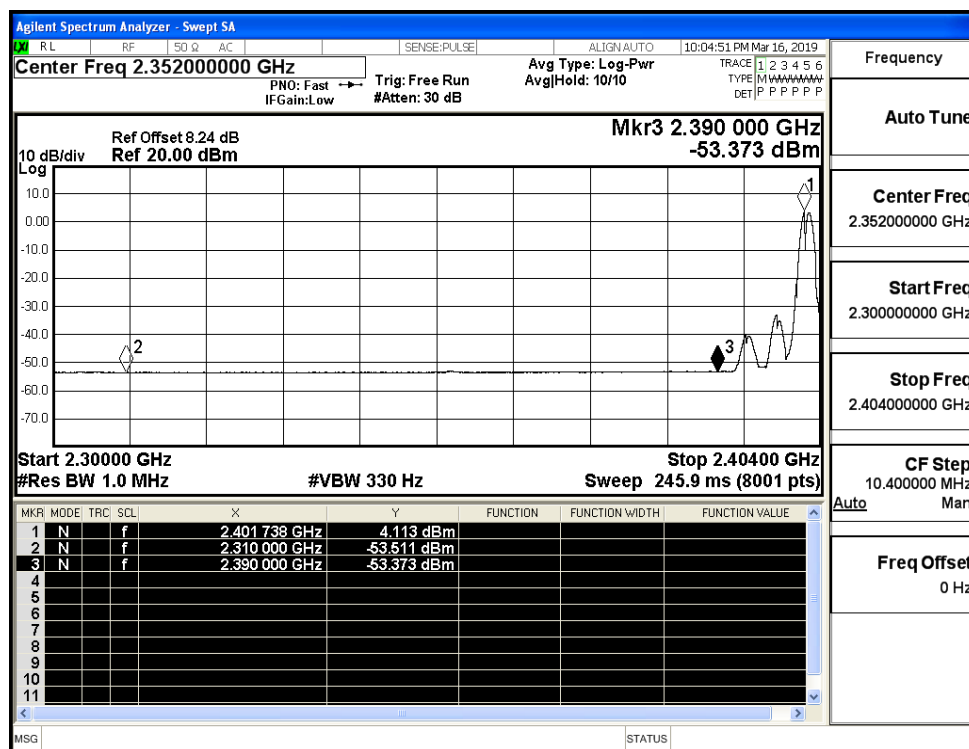
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.54	2.0	0	53.72	PEAK	74	PASS
	Off	2310.0	-53.51	2.0	0	43.75	AV	54	PASS
	Off	2390.0	-43.65	2.0	0	53.60	PEAK	74	PASS
	Off	2390.0	-53.37	2.0	0	43.88	AV	54	PASS
	Off	2483.5	-39.00	2.0	0	58.26	PEAK	74	PASS
	Off	2483.5	-47.88	2.0	0	49.38	AV	54	PASS
	Off	2500.0	-42.47	2.0	0	54.79	PEAK	74	PASS
	Off	2500.0	-52.75	2.0	0	44.51	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-42.63	2.0	0	54.63	PEAK	74	PASS
	Off	2310.0	-53.49	2.0	0	43.76	AV	54	PASS
	Off	2390.0	-41.81	2.0	0	55.45	PEAK	74	PASS
	Off	2390.0	-53.13	2.0	0	44.13	AV	54	PASS
	Off	2483.5	-38.05	2.0	0	59.20	PEAK	74	PASS
	Off	2483.5	-48.73	2.0	0	48.53	AV	54	PASS
	Off	2500.0	-42.72	2.0	0	54.54	PEAK	74	PASS
	Off	2500.0	-52.95	2.0	0	44.31	AV	54	PASS

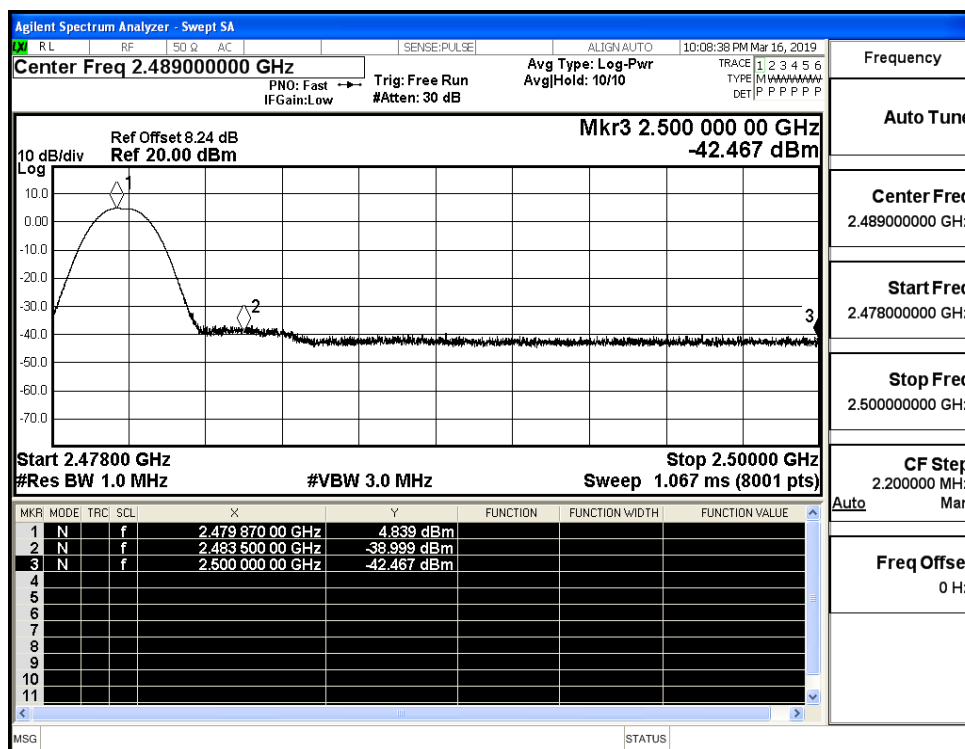
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



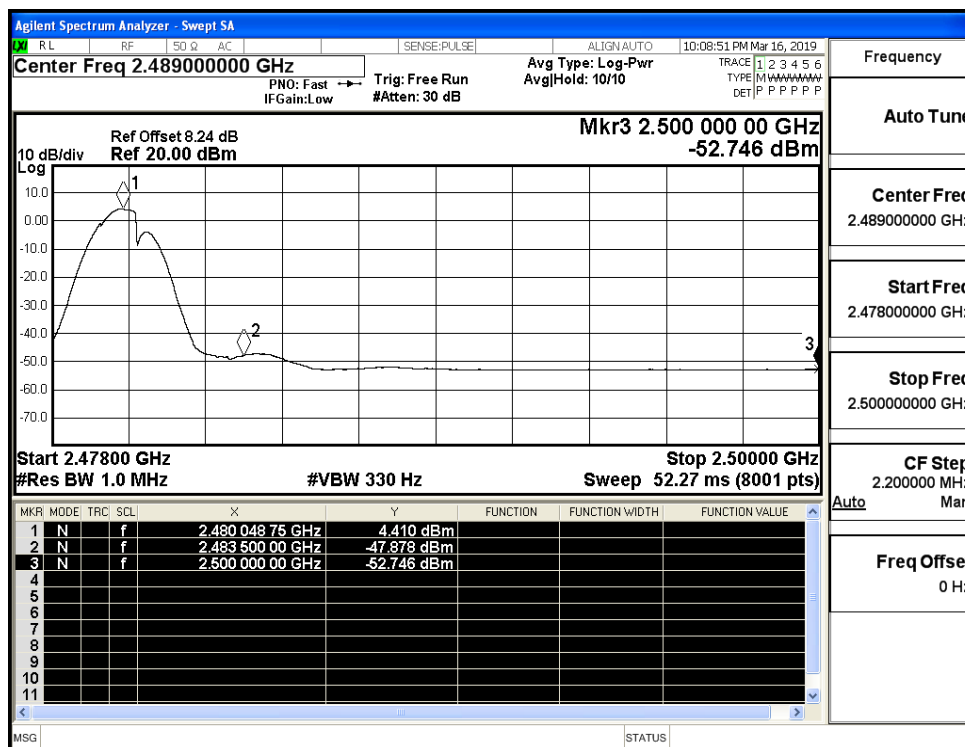
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

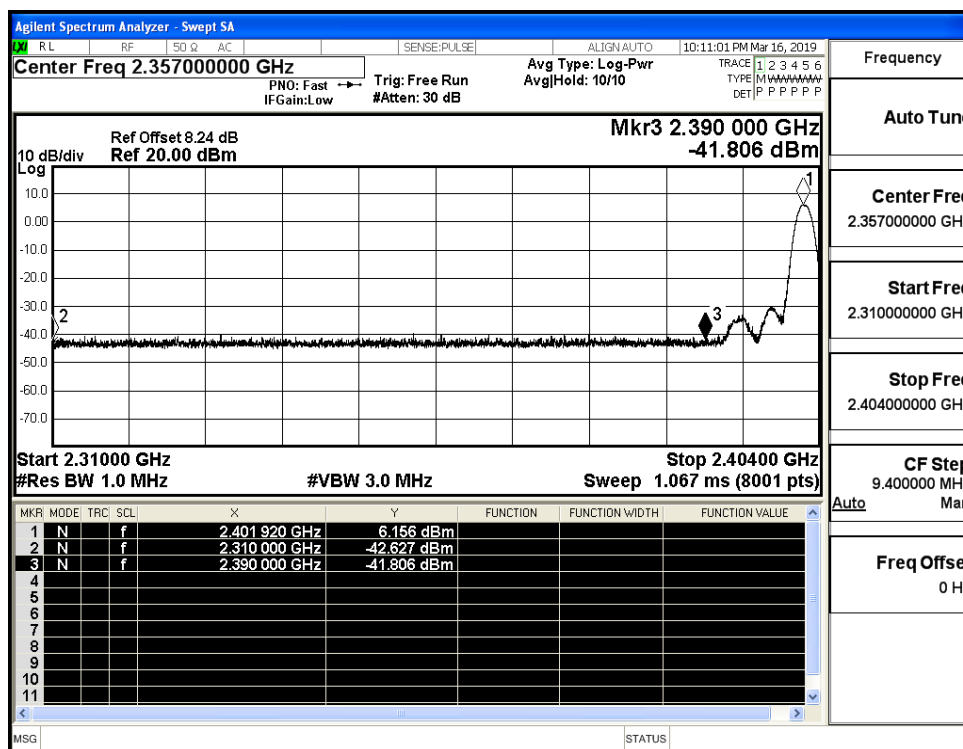
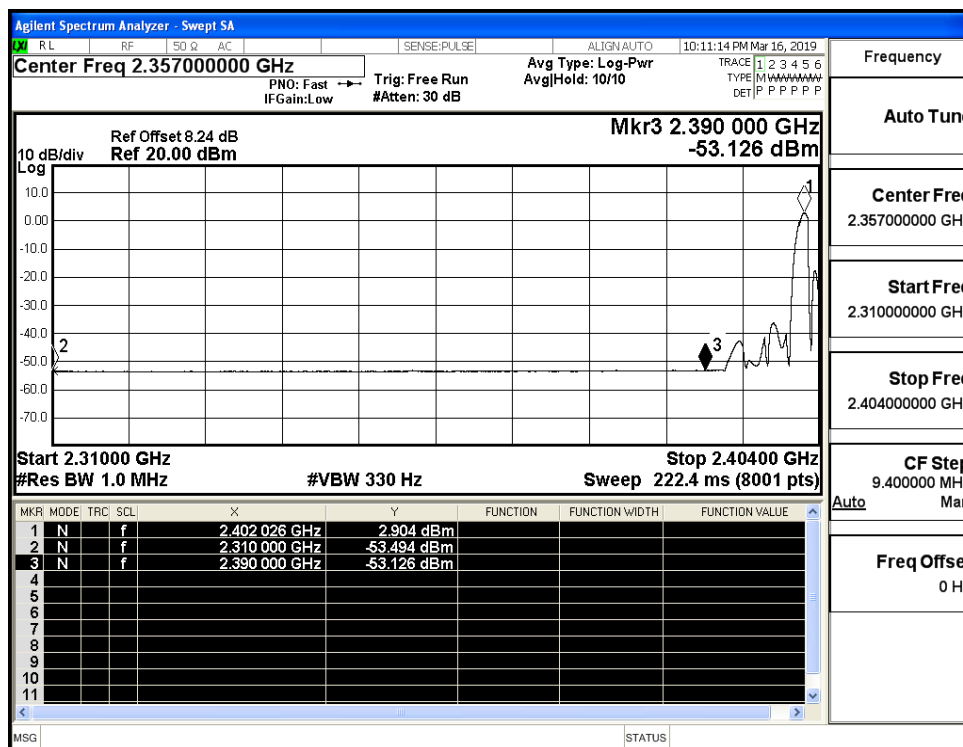


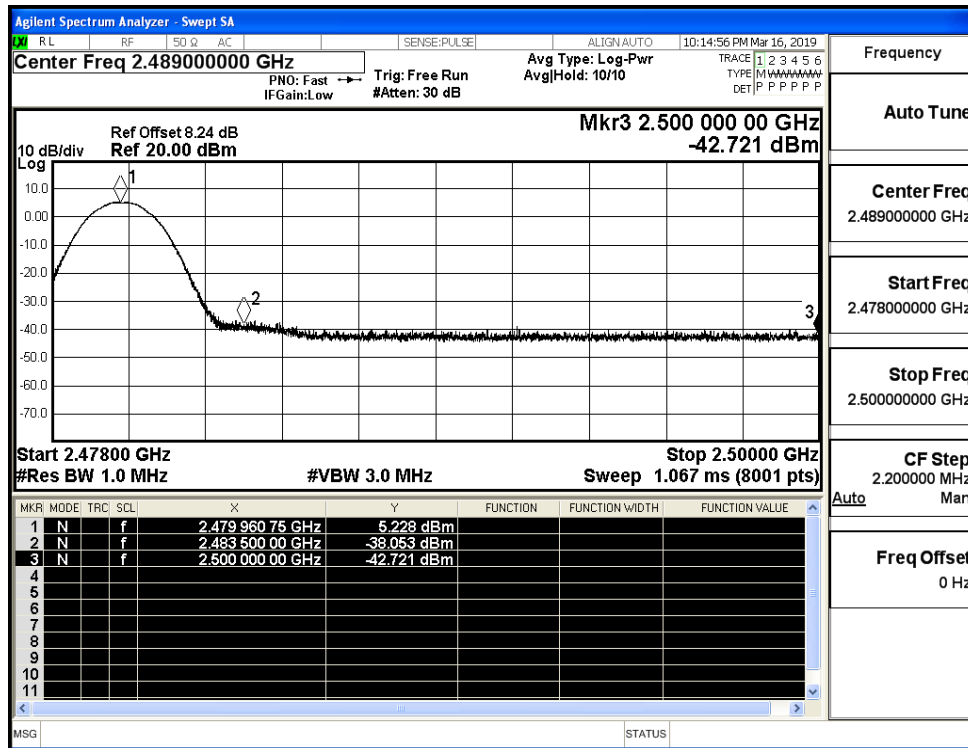
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



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