

Appendix A
RF Test Data for BT V5.0(BDR/EDR) (Conducted Measurement)
Product Name: Bluetooth Earphone
Trade Mark: N/A
Test Model: XY-8

Environmental Conditions

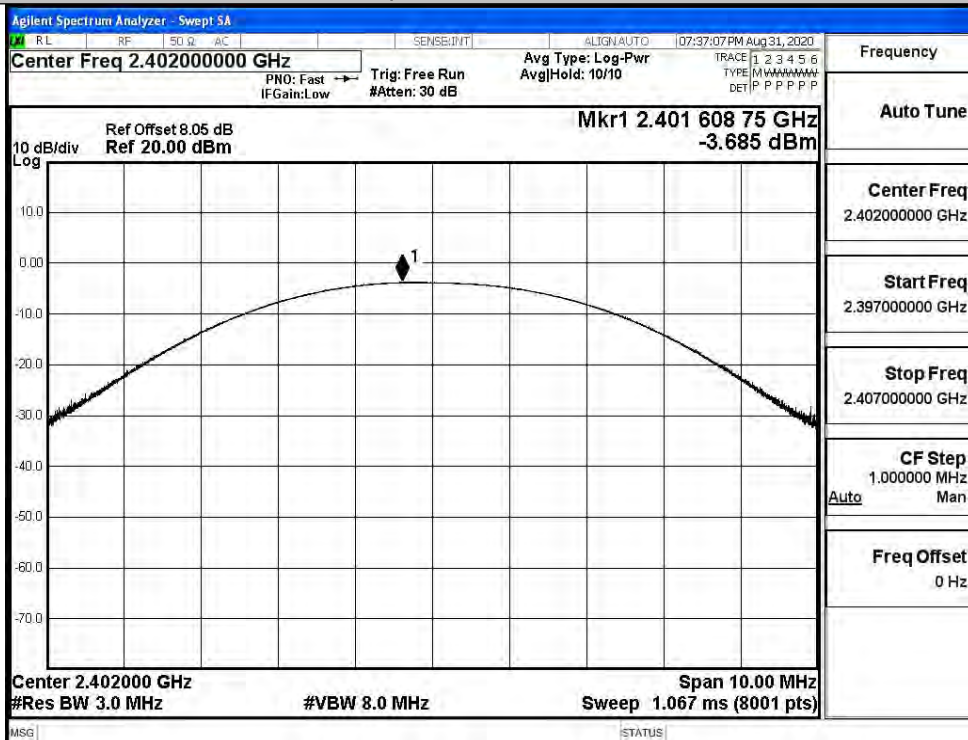
Temperature:	23.5 ° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

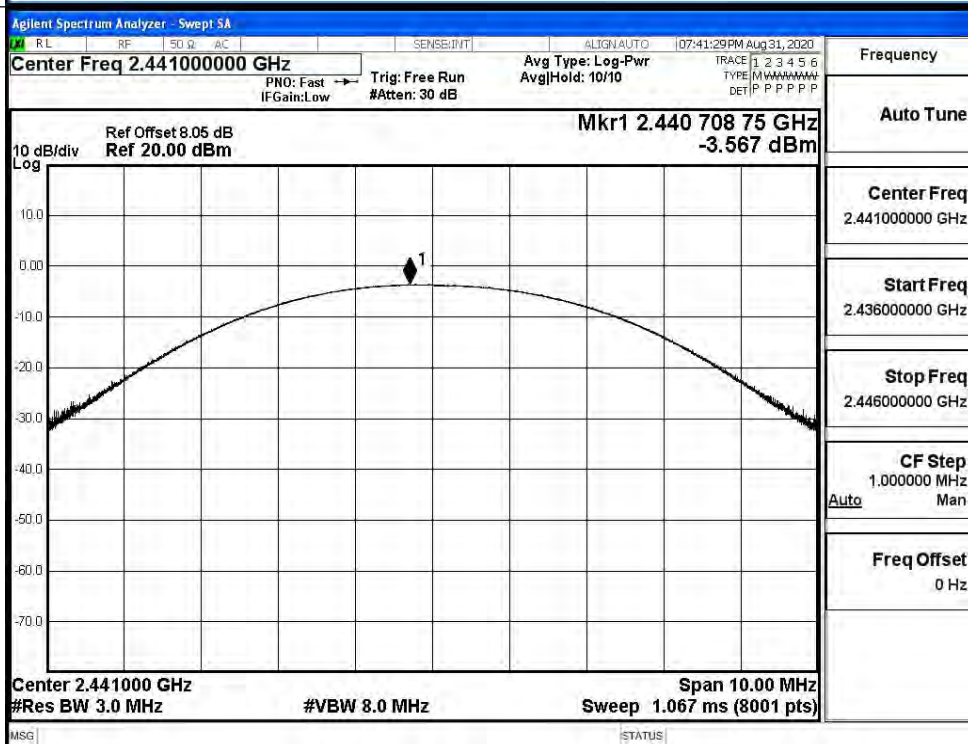
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-3.685	30	PASS
	MCH	-3.567	30	PASS
	HCH	-3.722	30	PASS
$\pi/4$ DQPSK	LCH	-2.742	30	PASS
	MCH	-2.822	30	PASS
	HCH	-3.083	30	PASS

Test Graphs

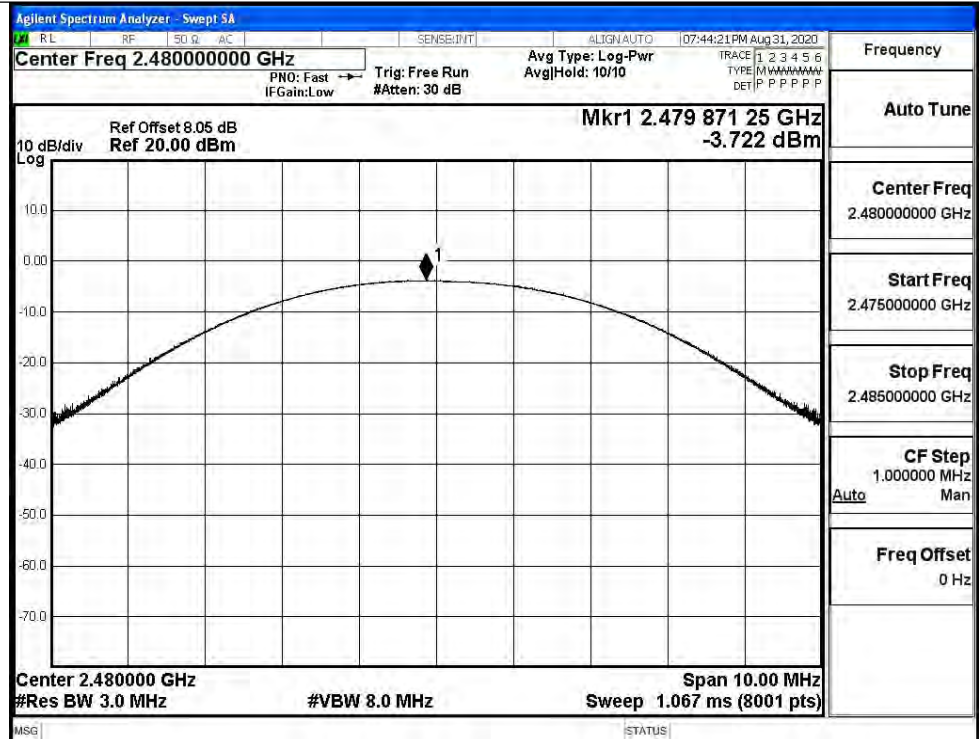
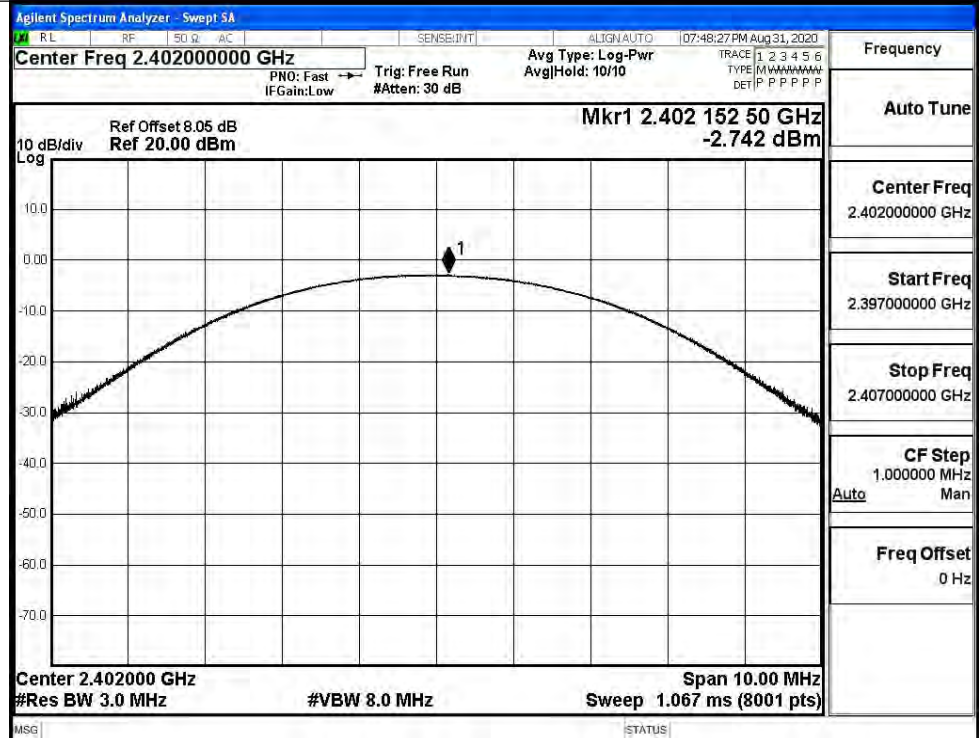
GFSK/LCH

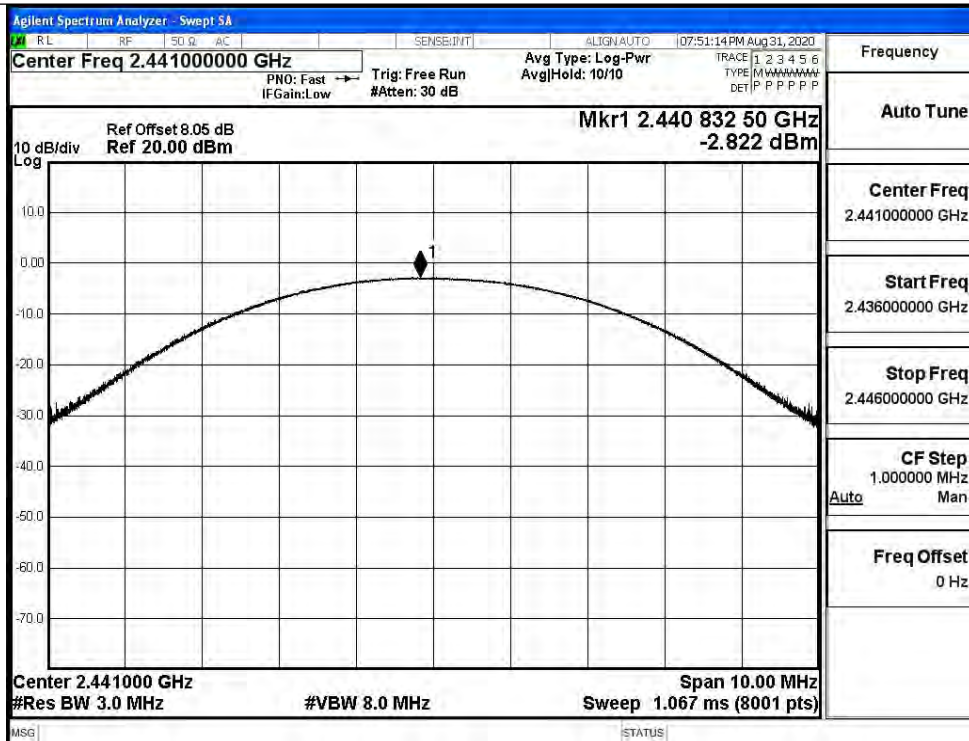
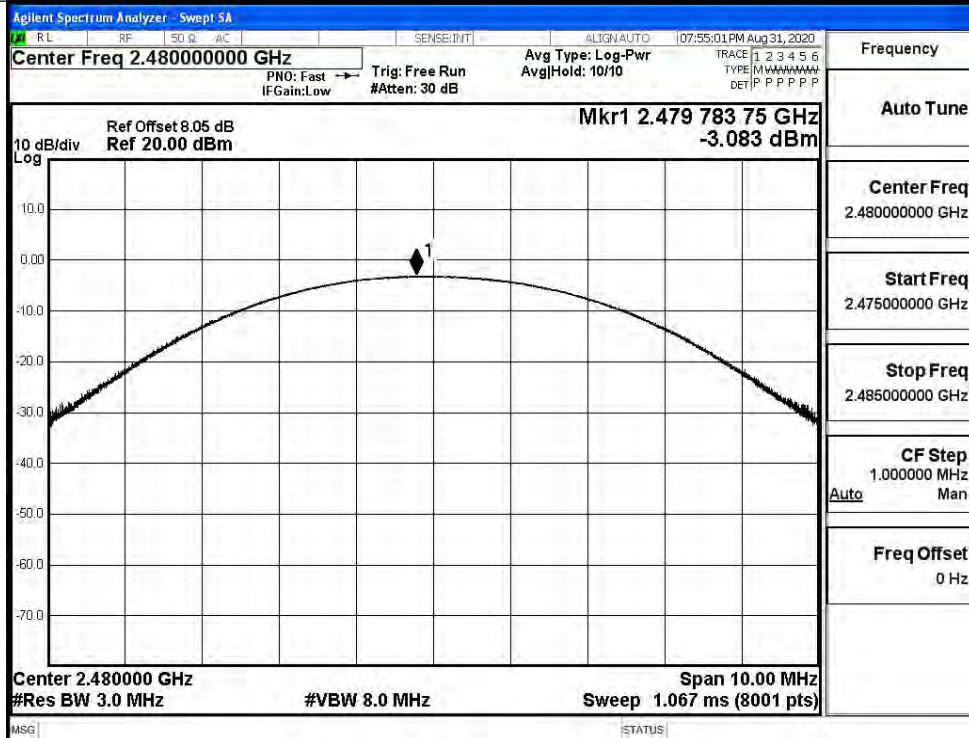


GFSK/MCH



GFSK/HCH

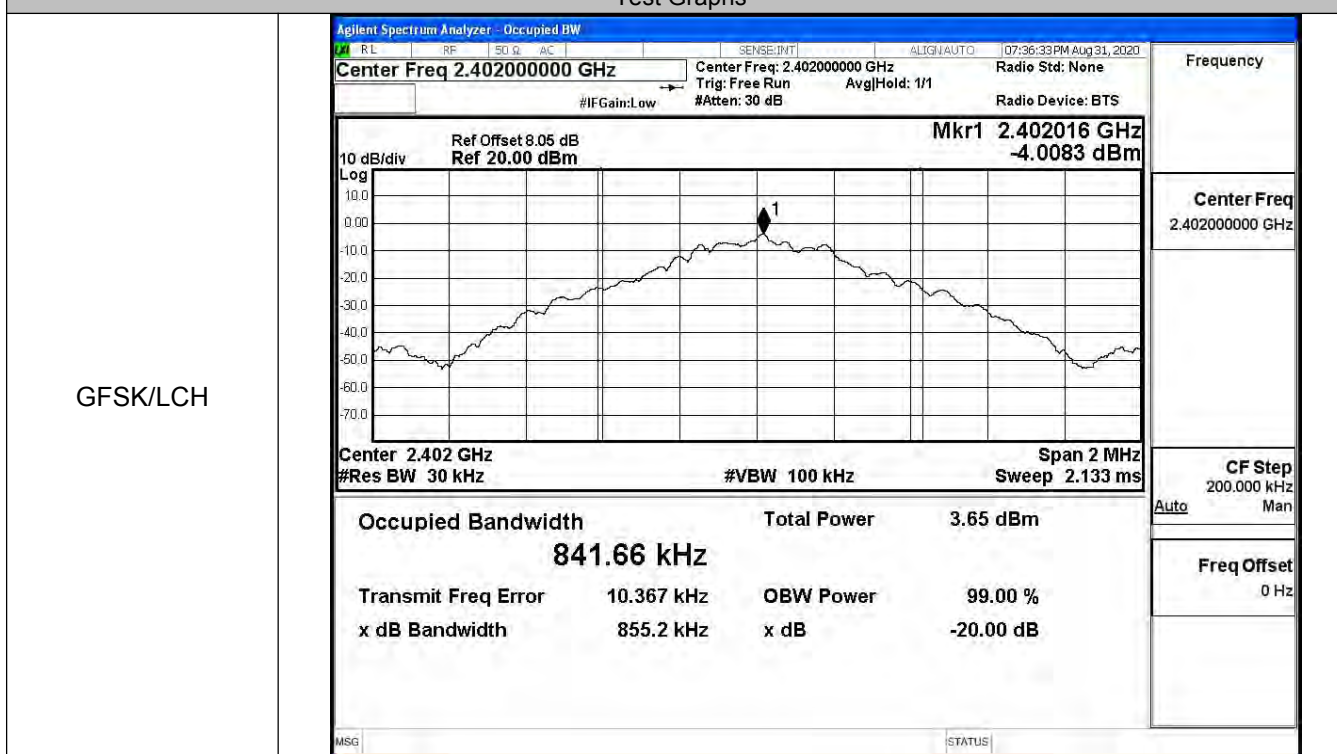
 π /4DQPSK/LCH

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

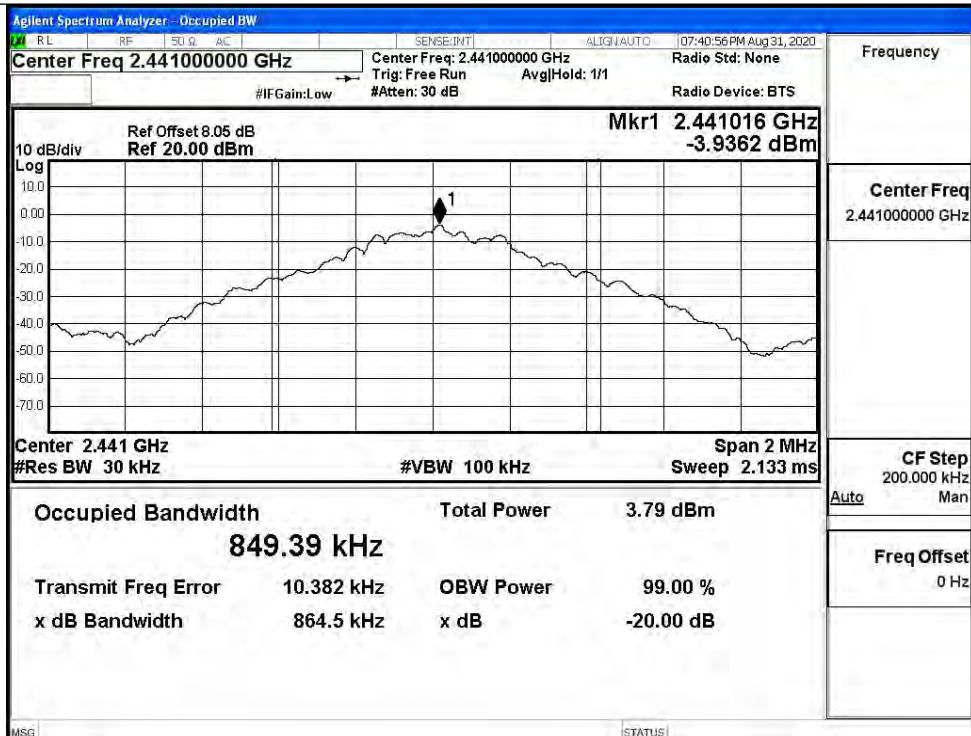
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.8552	Not Specified	PASS
	MCH	0.8645	Not Specified	PASS
	HCH	0.8622	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.244	Not Specified	PASS
	MCH	1.225	Not Specified	PASS
	HCH	1.237	Not Specified	PASS

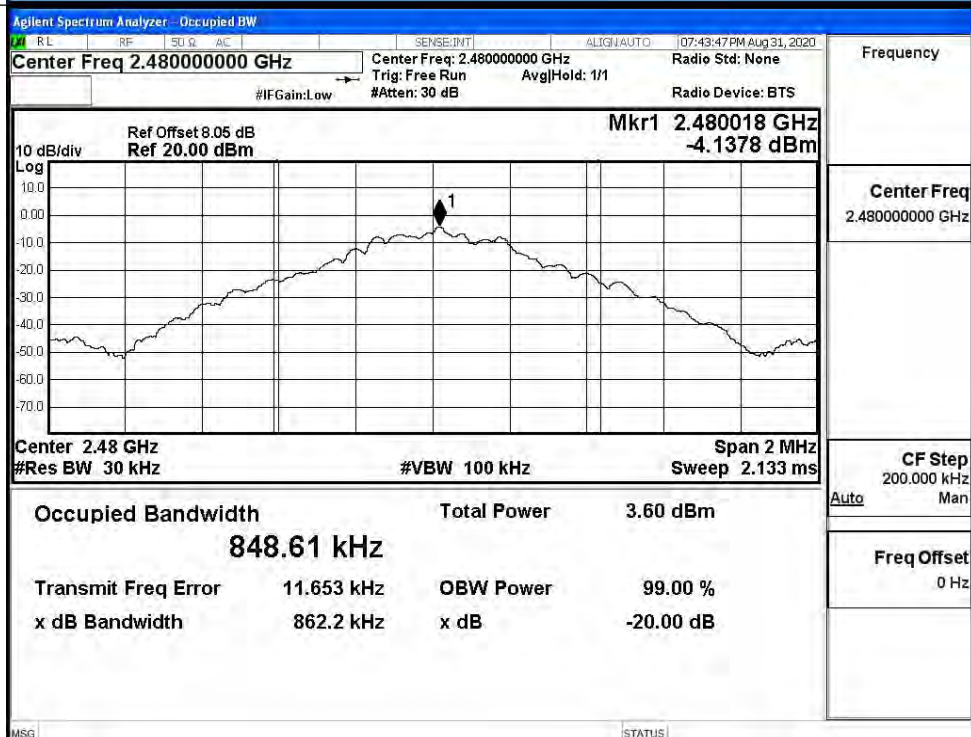
Test Graphs

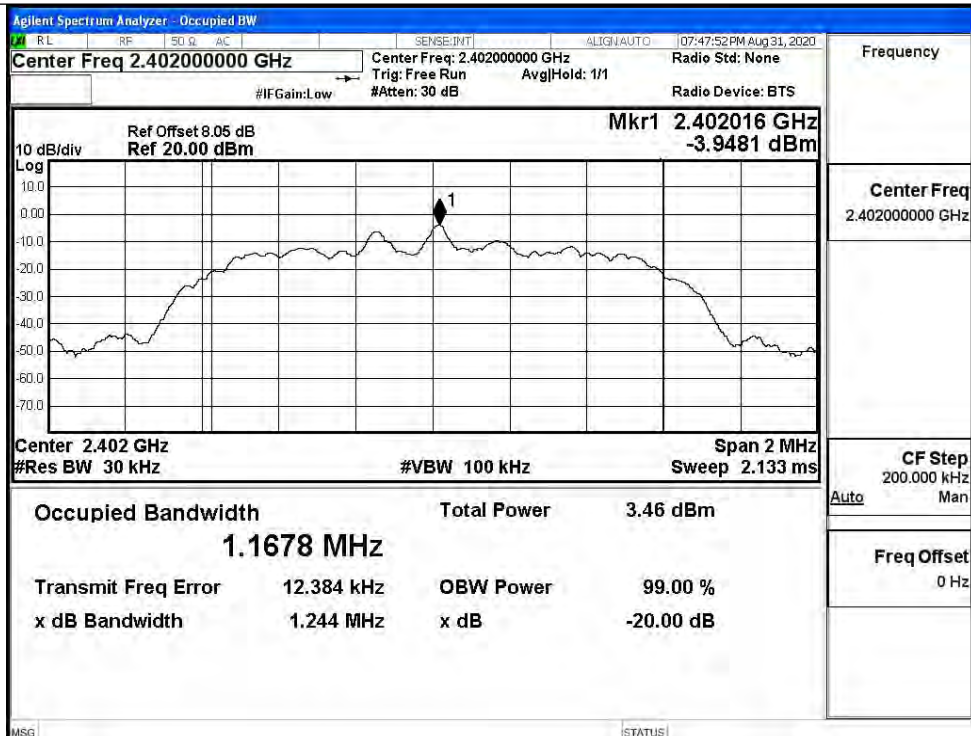
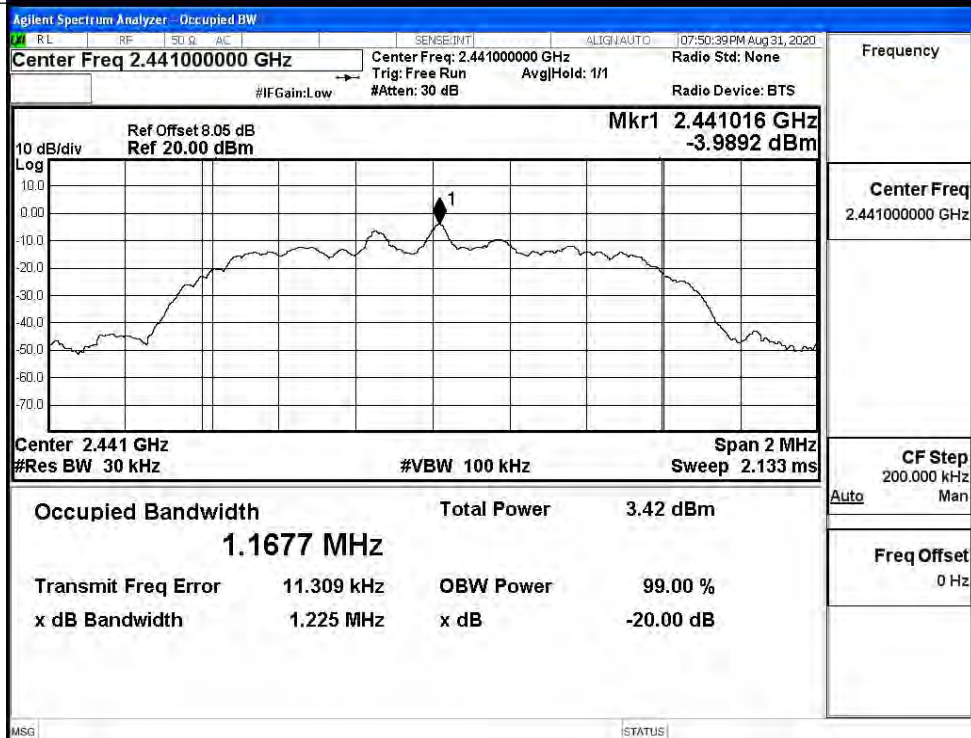


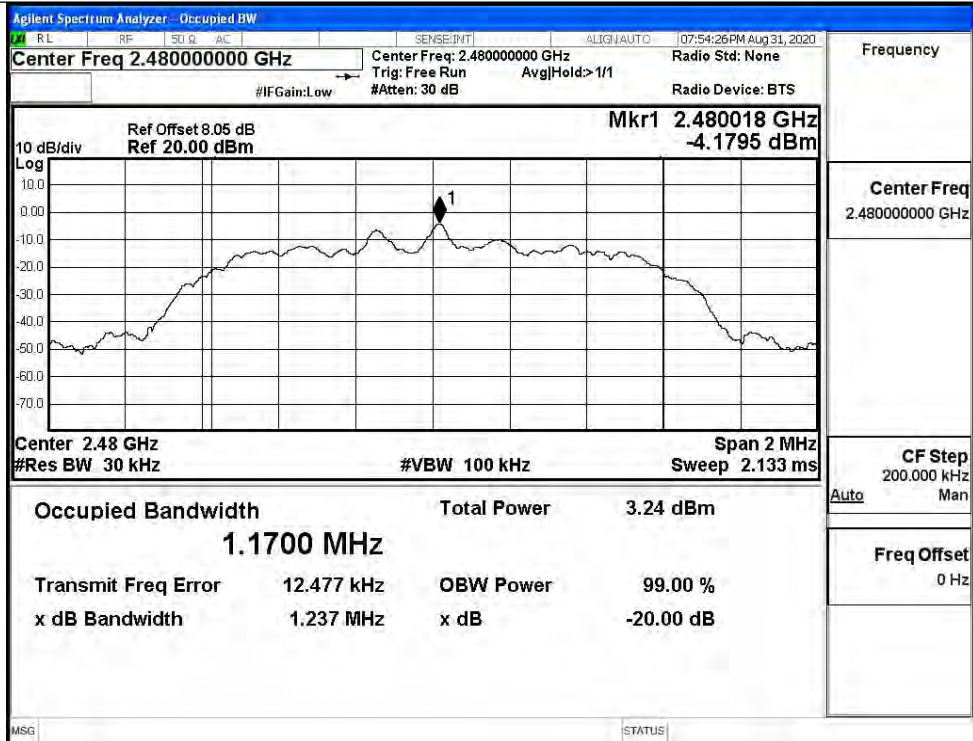
GFSK/MCH



GFSK/HCH



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

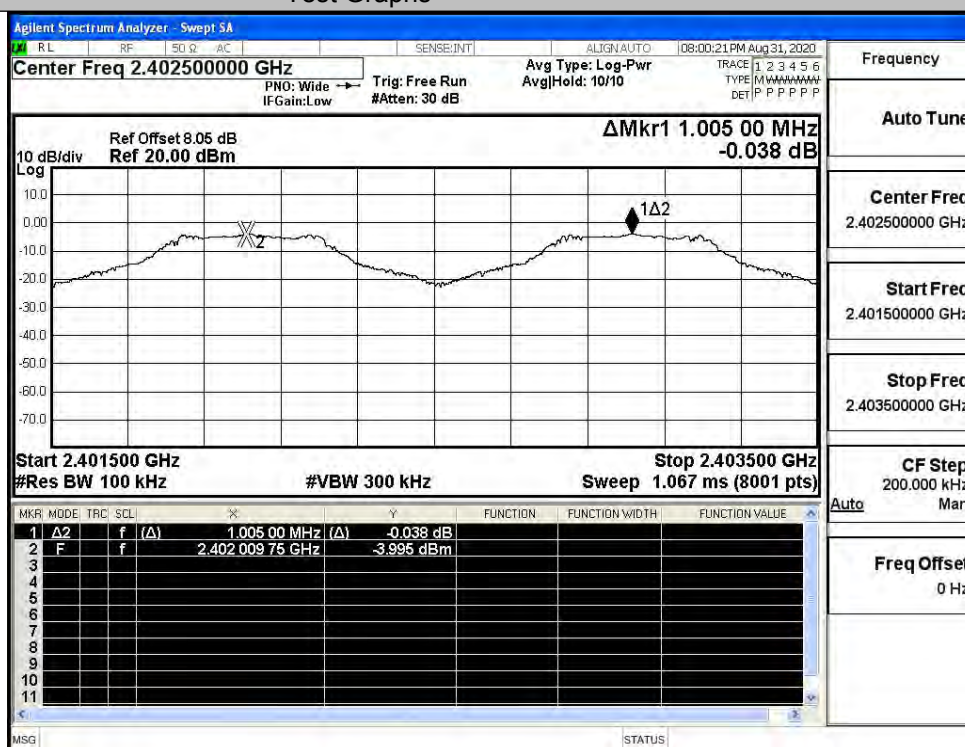
$\pi/4$ DQPSK/HCH

A.3 Carrier Frequency Separation

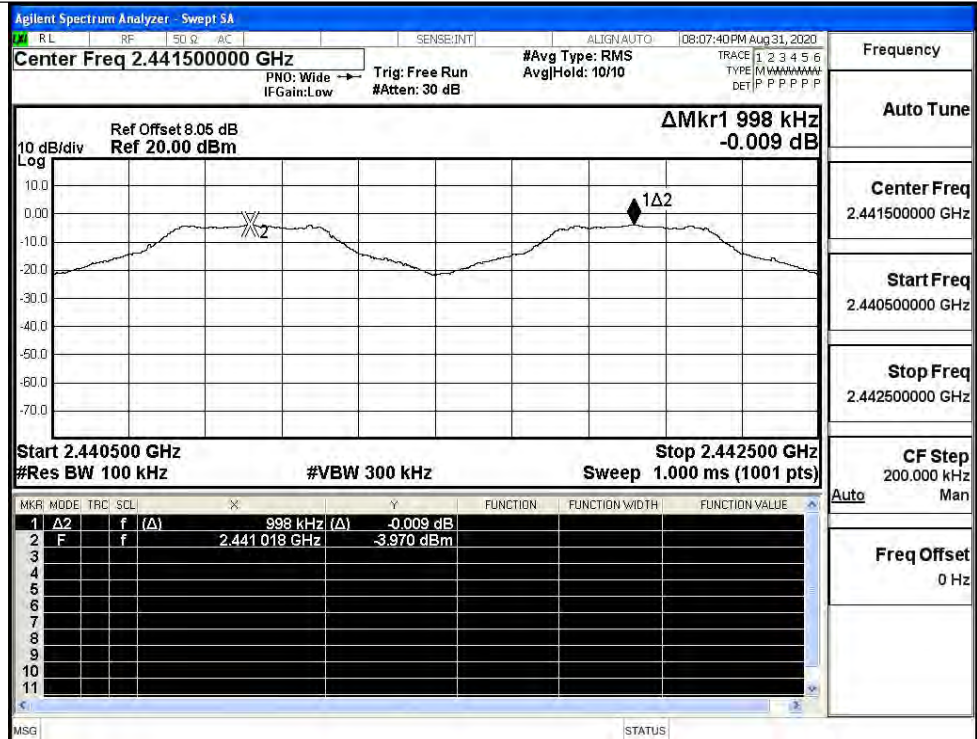
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.005	0.576	PASS
	MCH	0.998	0.576	PASS
	HCH	0.998	0.576	PASS
$\pi/4$ DQPSK	LCH	1.308	0.829	PASS
	MCH	0.998	0.829	PASS
	HCH	0.994	0.829	PASS

Test Graphs

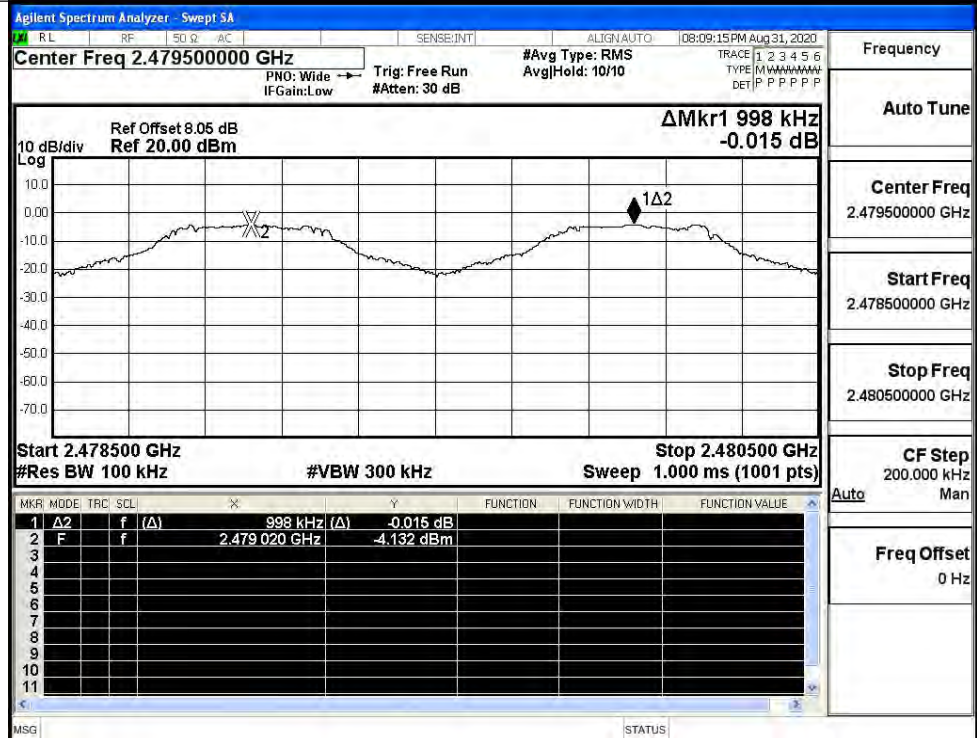
GFSK/LCH

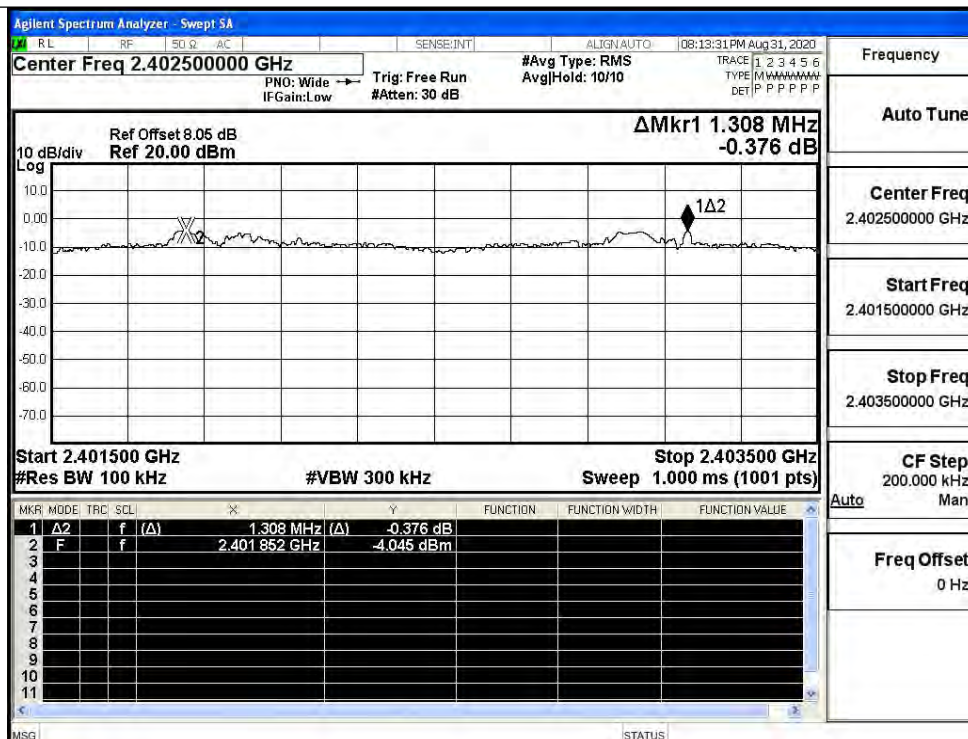


GFSK/MCH



GFSK/HCH



$\pi/4$ DQPSK/LCH

Frequency

Auto Tune

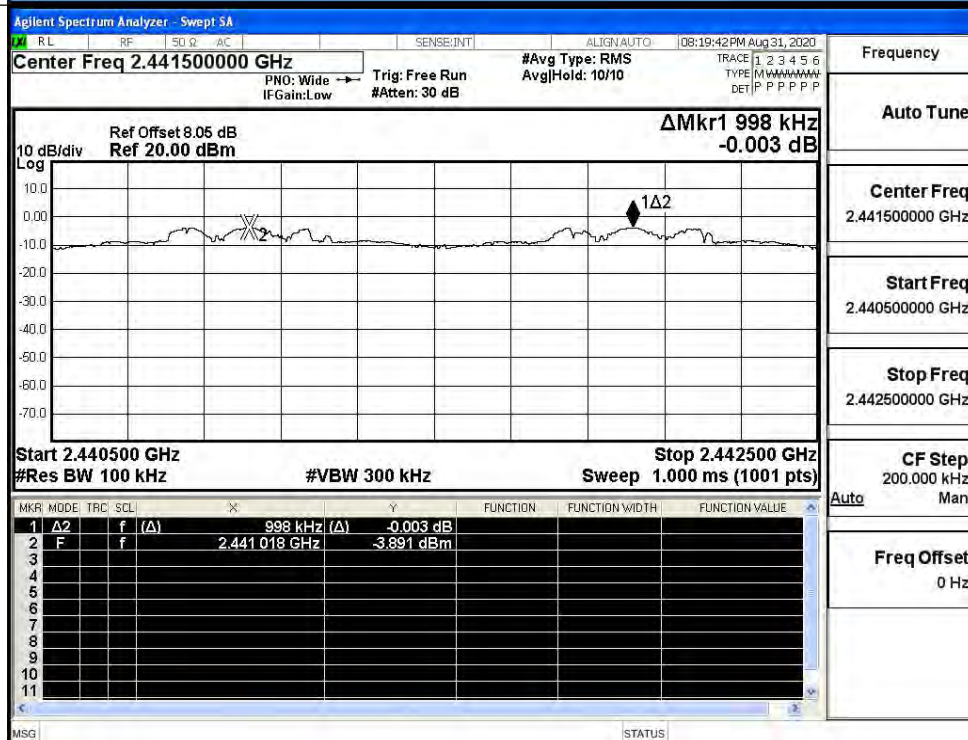
Center Freq
2.402500000 GHz

Start Freq
2.401500000 GHz

Stop Freq
2.403500000 GHz

CF Step
200.000 kHz
Man

Freq Offset
0 Hz

 $\pi/4$ DQPSK/MCH

Frequency

Auto Tune

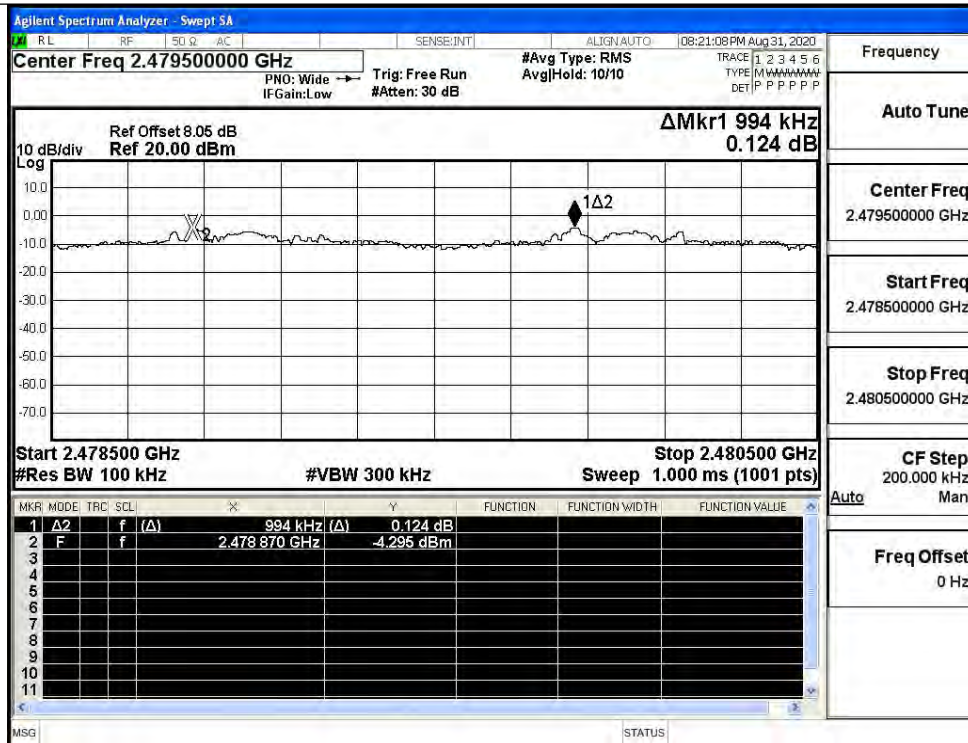
Center Freq
2.441500000 GHz

Start Freq
2.440500000 GHz

Stop Freq
2.442500000 GHz

CF Step
200.000 kHz
Man

Freq Offset
0 Hz

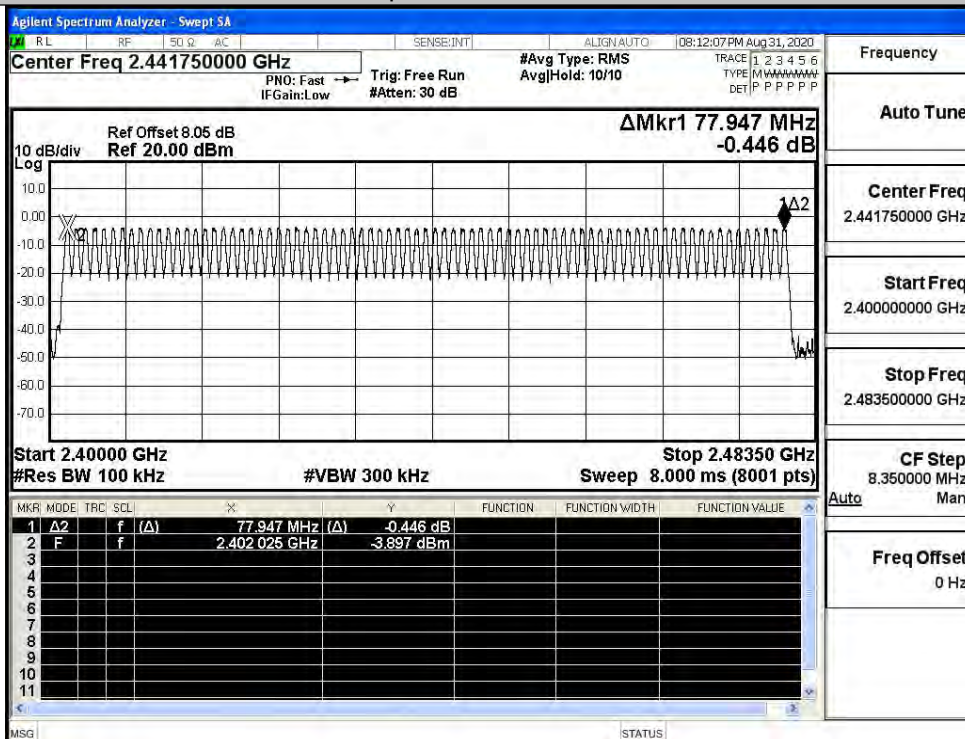
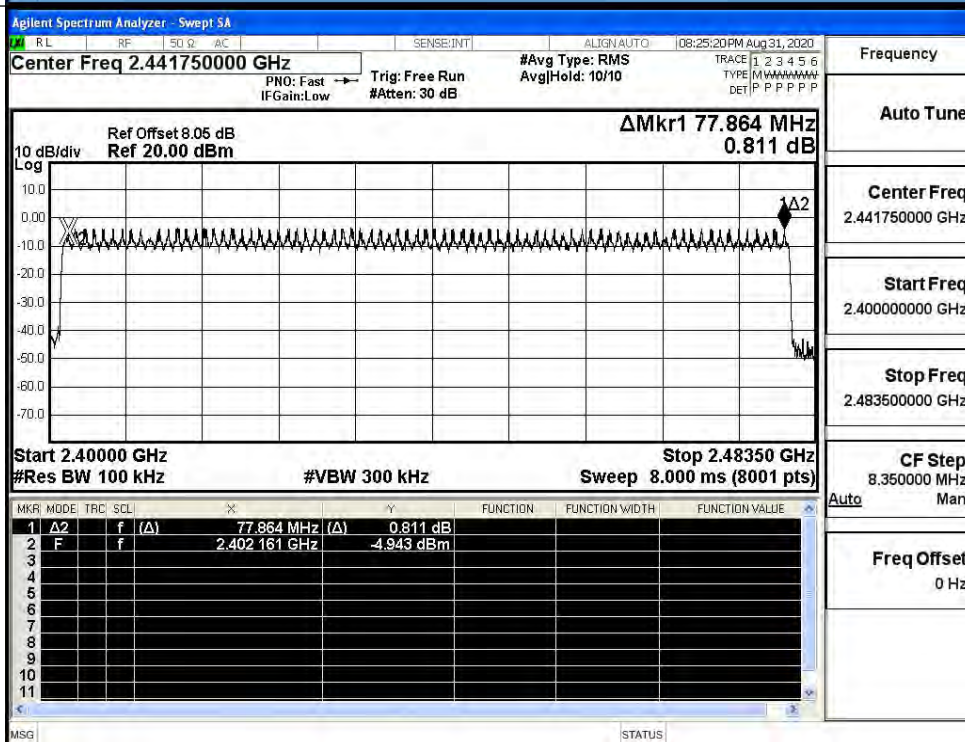
$\pi/4$ DQPSK/HCH

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

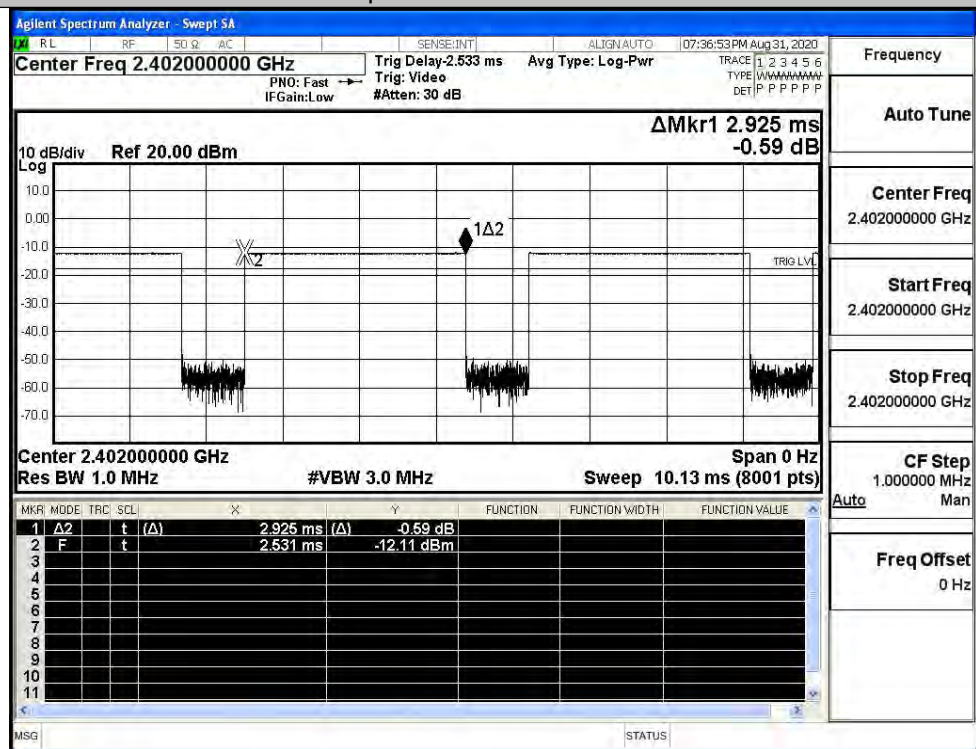
 $\pi/4$ DQPSK/Hop

A.5 Dwell Time

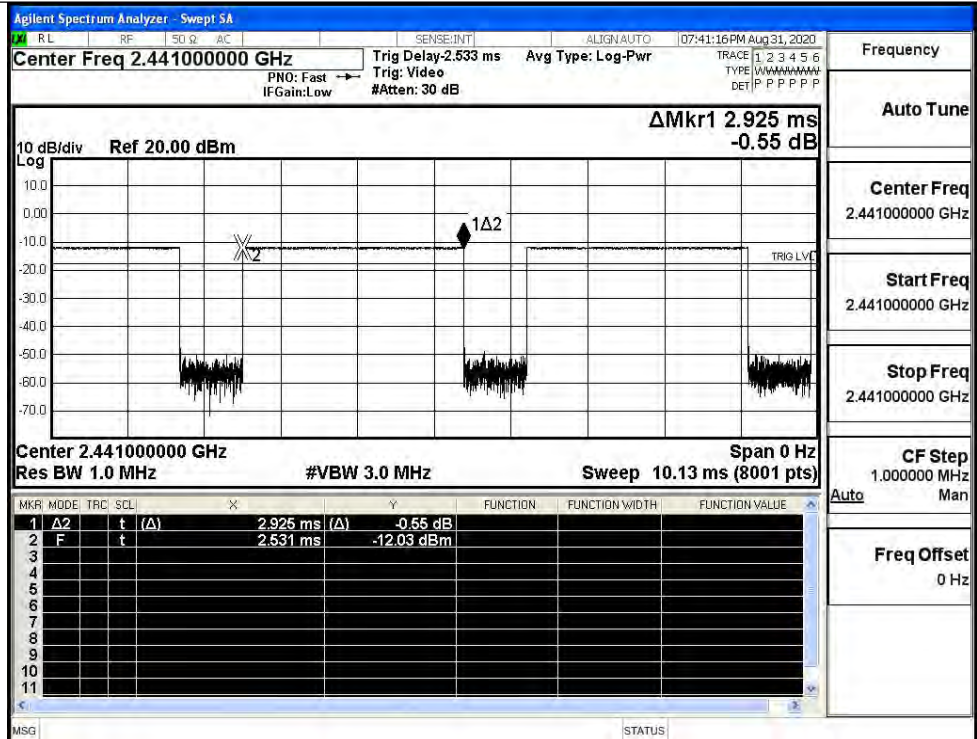
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.92	106.7	0.312	0.4	PASS
	DH5	MCH	2.92	106.7	0.312	0.4	PASS
	DH5	HCH	2.92	106.7	0.312	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.92	106.7	0.313	0.4	PASS
	2DH5	MCH	2.92	106.7	0.313	0.4	PASS
	2DH5	HCH	2.92	106.7	0.313	0.4	PASS

Test Graphs

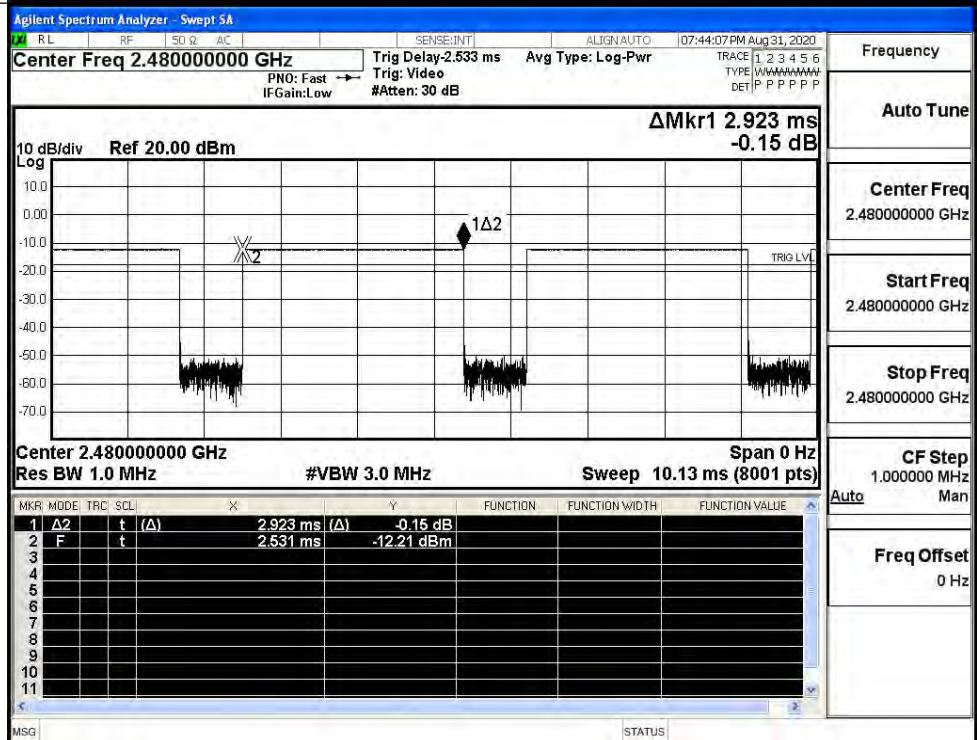
GFSK_DH5/LCH



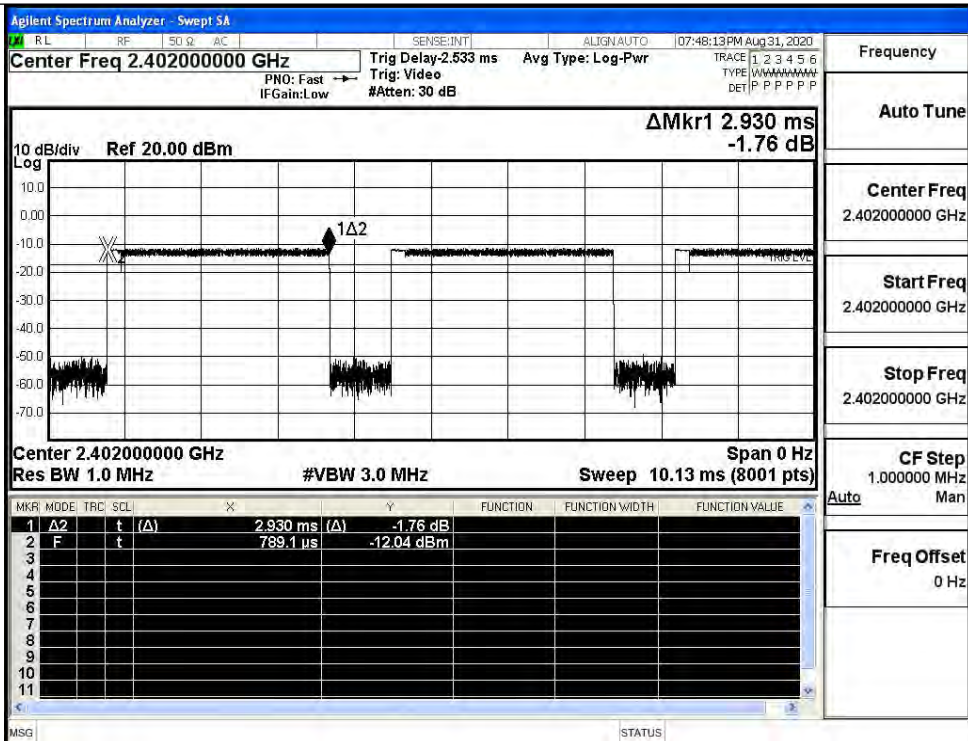
GFSK_DH5/MCH



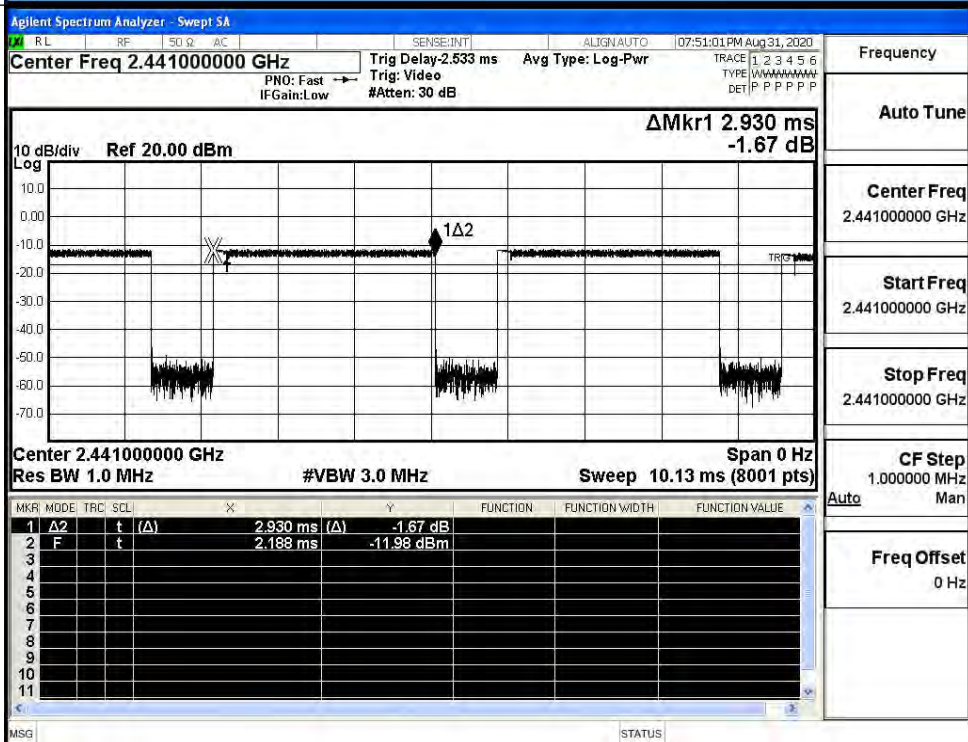
GFSK_DH5/HCH



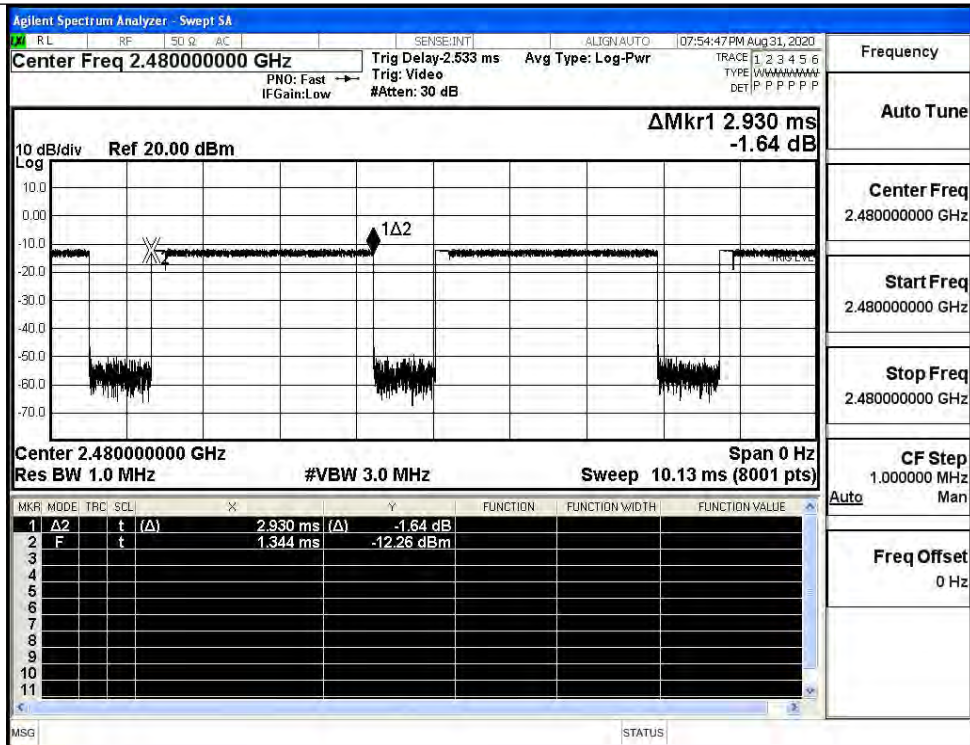
$\pi/4$ DQPSK
_2DH5/LCH



$\pi/4$ DQPSK
_2DH5/MCH



$\pi/4$ DQPSK
_2DH5/HCH

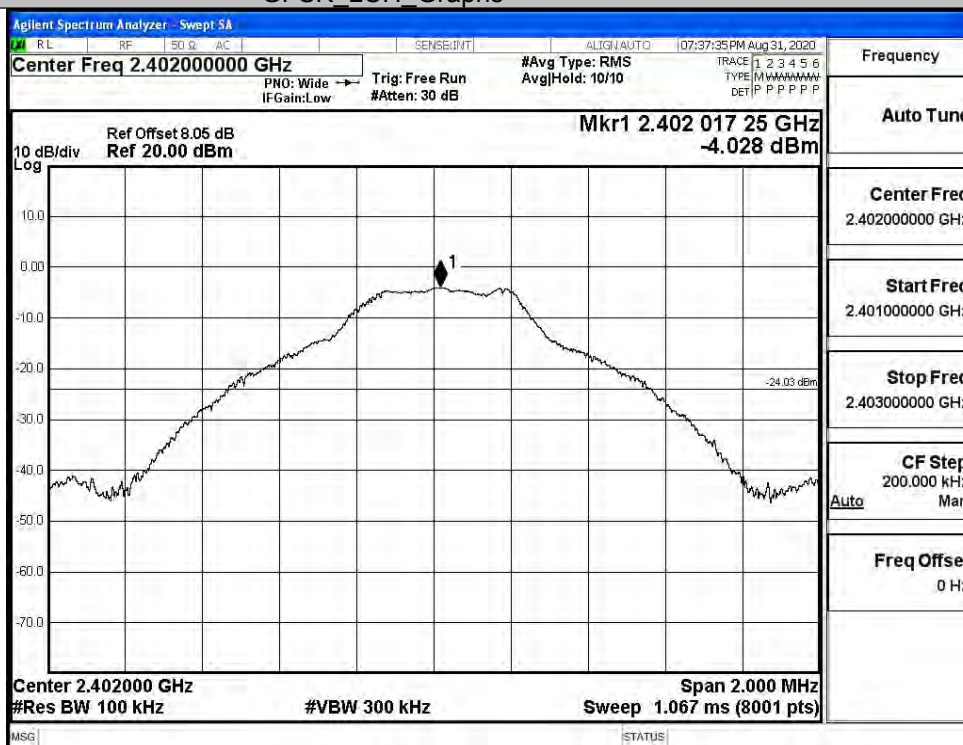


A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-4.028	-37.539	-24.028	PASS
	MCH	-3.932	-37.564	-23.932	PASS
	HCH	-4.127	-37.912	-24.127	PASS
$\pi/4$ DQPSK	LCH	-3.923	-37.522	-23.923	PASS
	MCH	-4.007	-37.176	-24.007	PASS
	HCH	-4.192	-37.825	-24.192	PASS

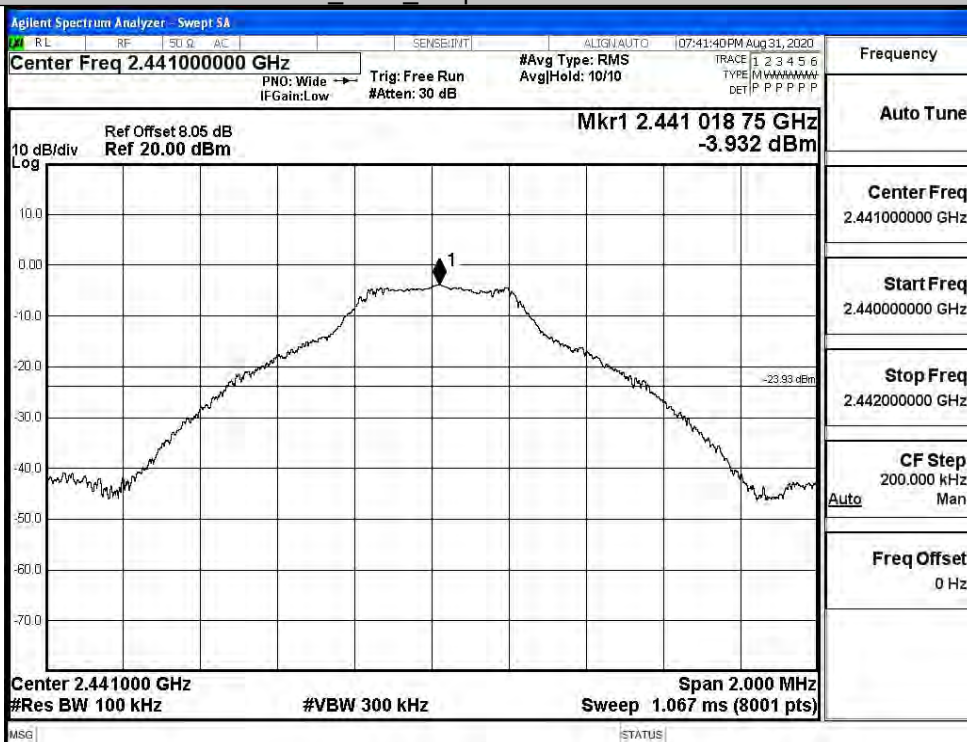
GFSK LCH Graphs

Pref

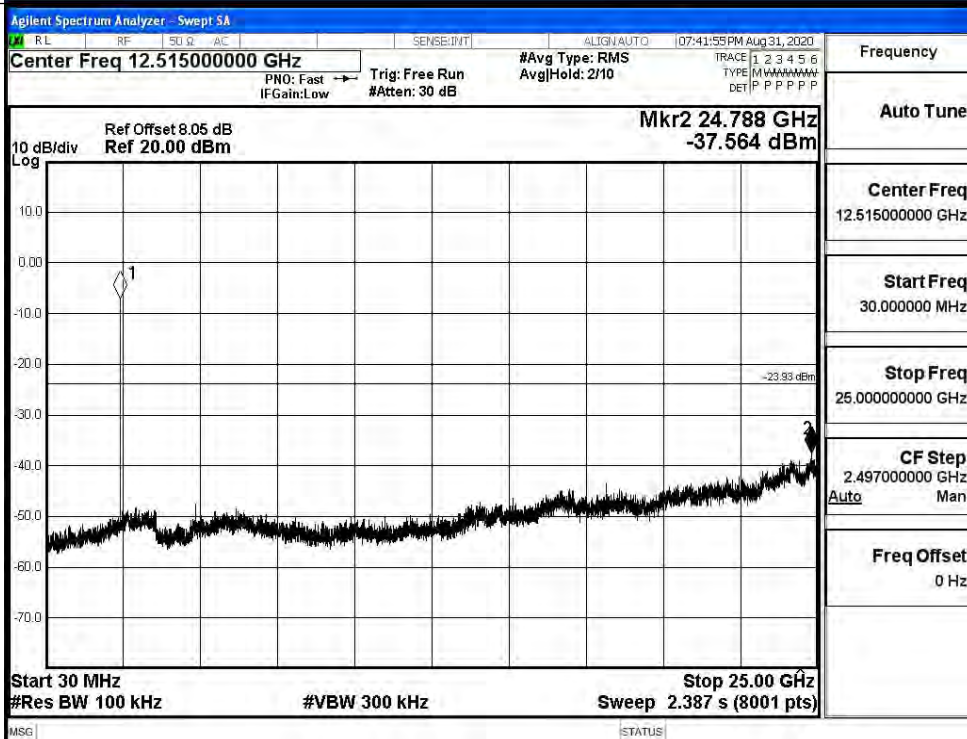


GFSK_MCH_Graphs

Pref

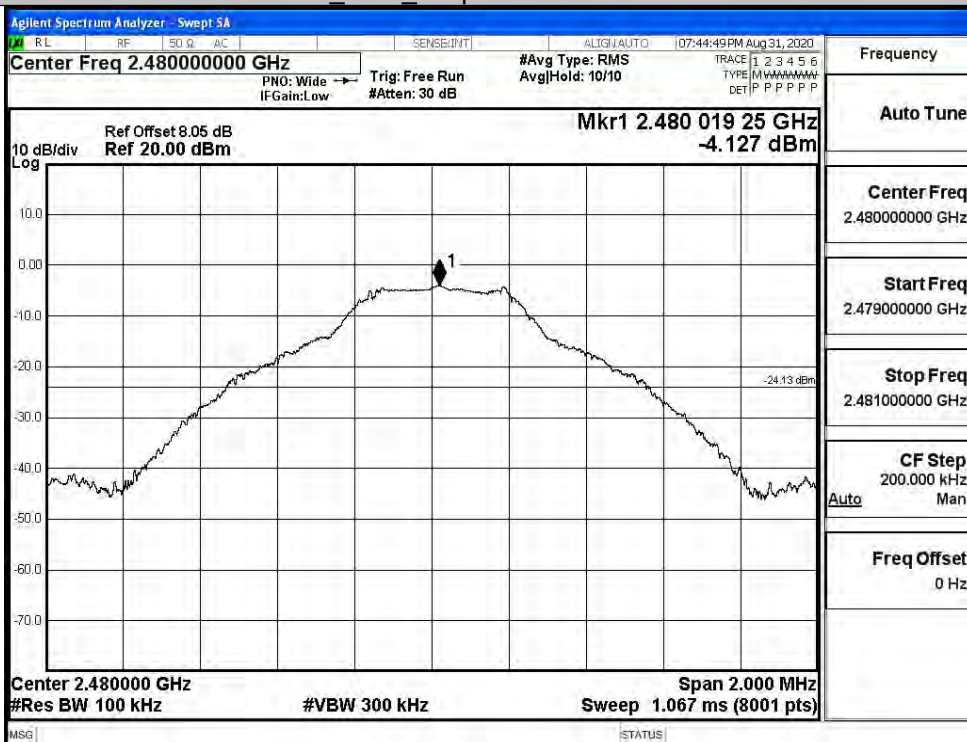


Puw

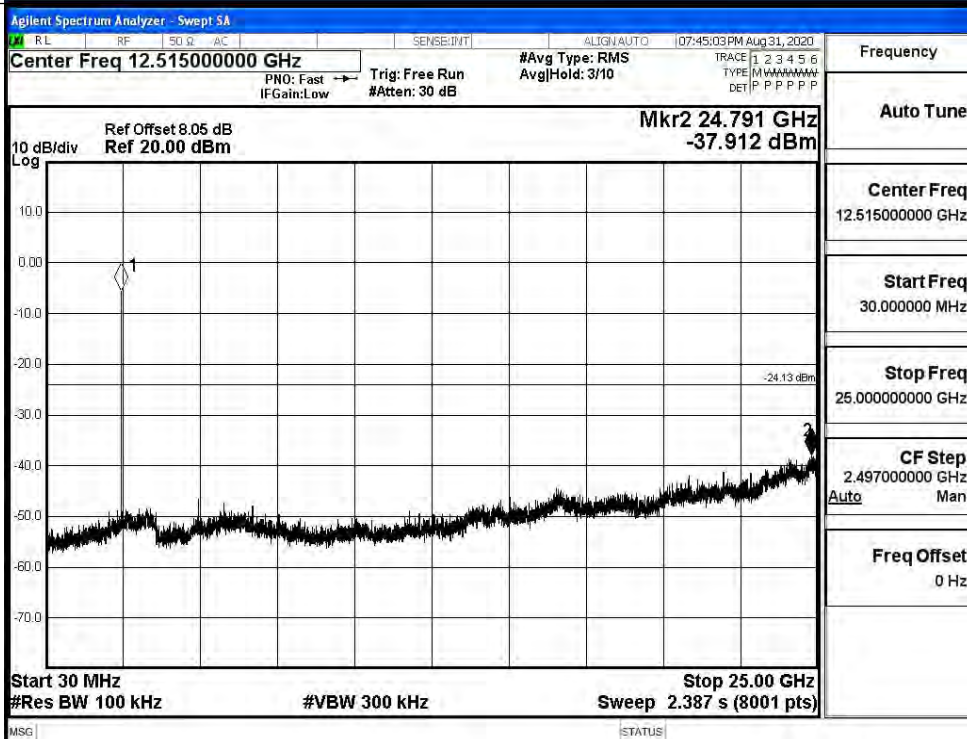


GFSK_HCH_Graphs

Pref

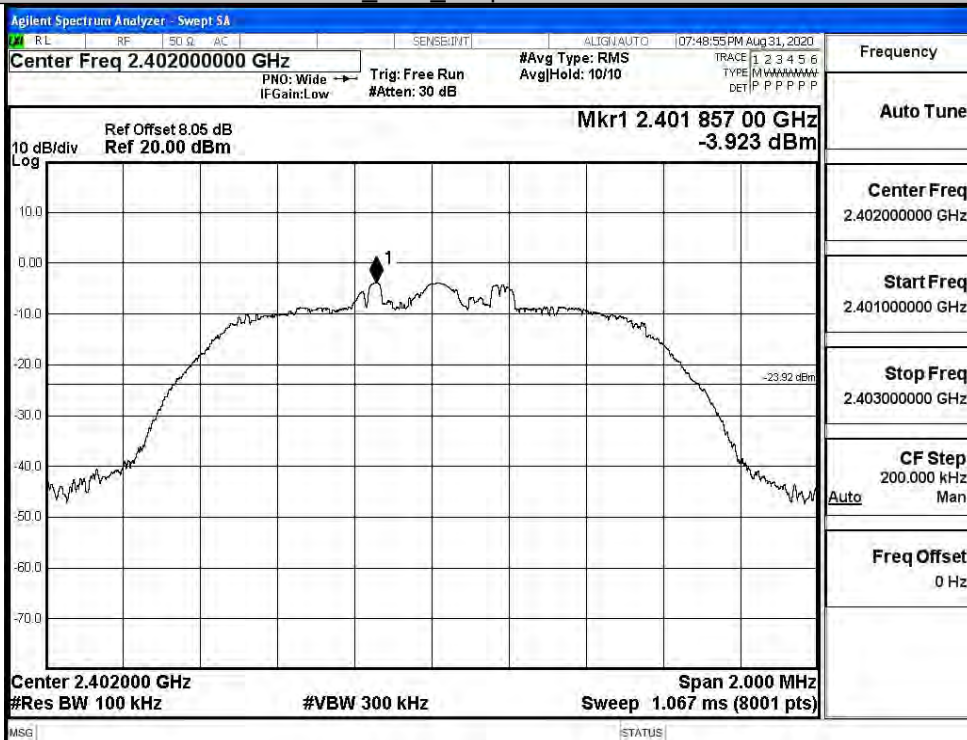


Puw

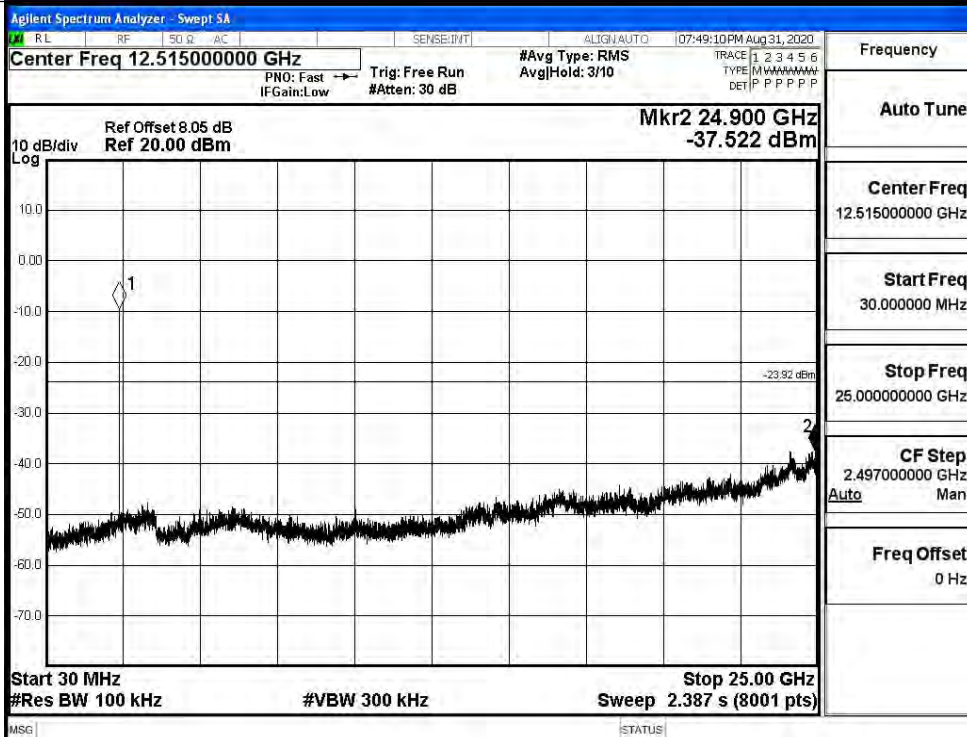


$\pi/4$ DQPSK_LCH_Graphs

Pref

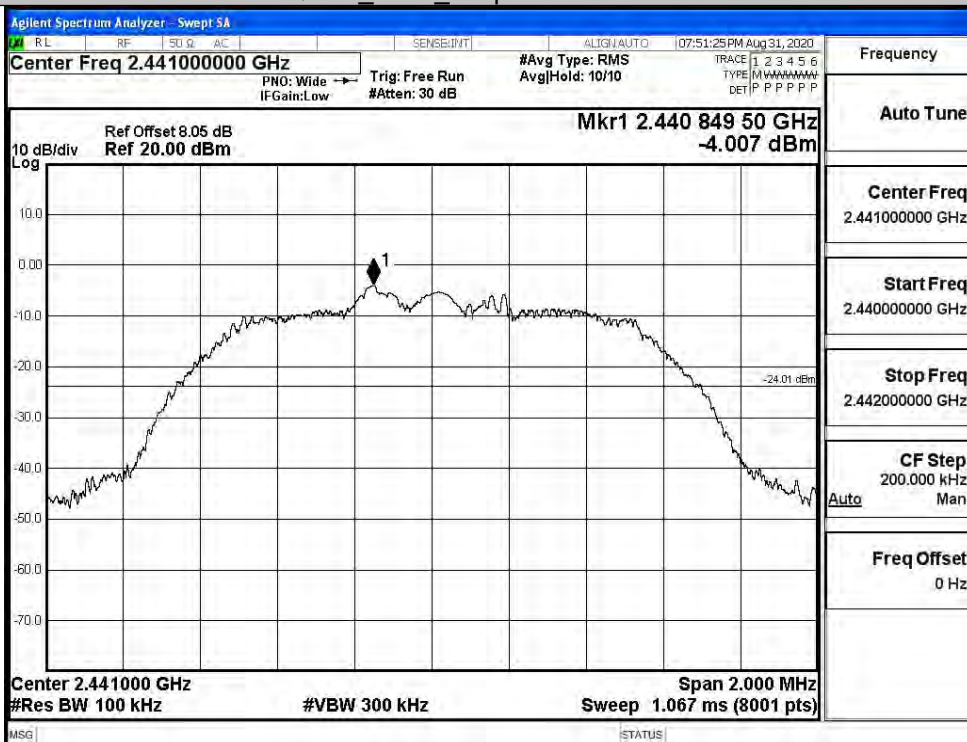


Puw

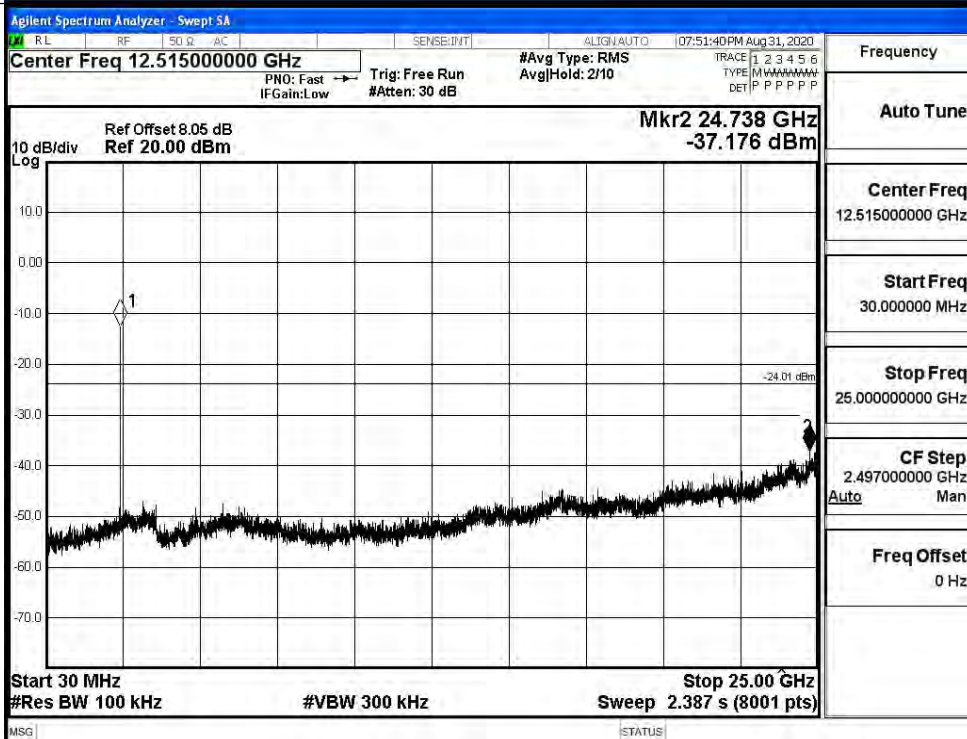


π /4DQPSK_MCH_Graphs

Pref

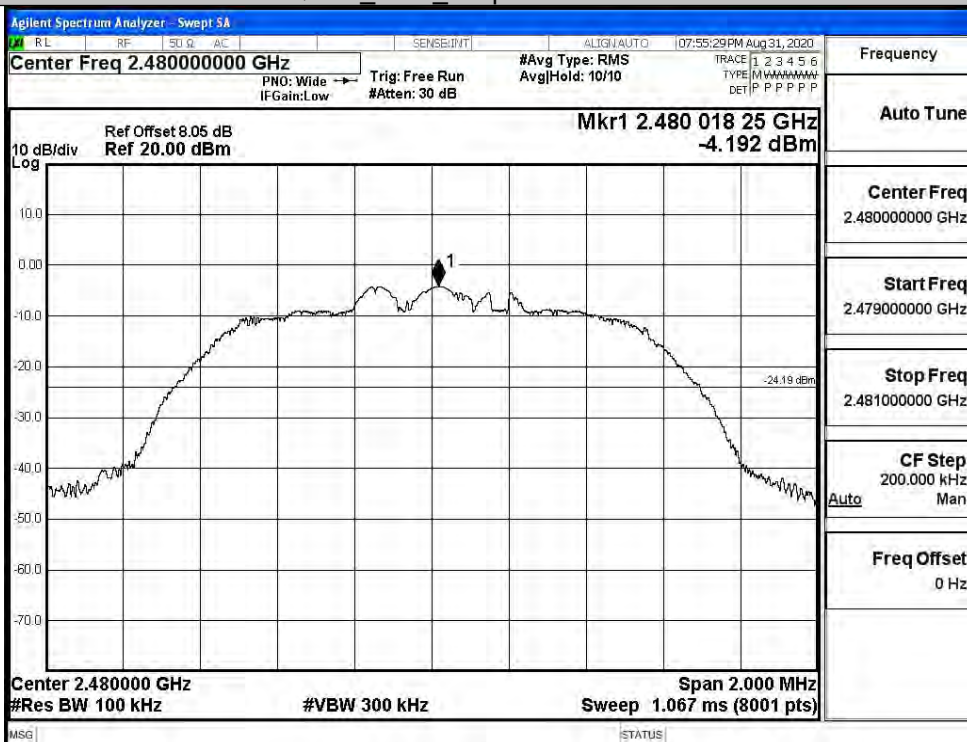


Puw

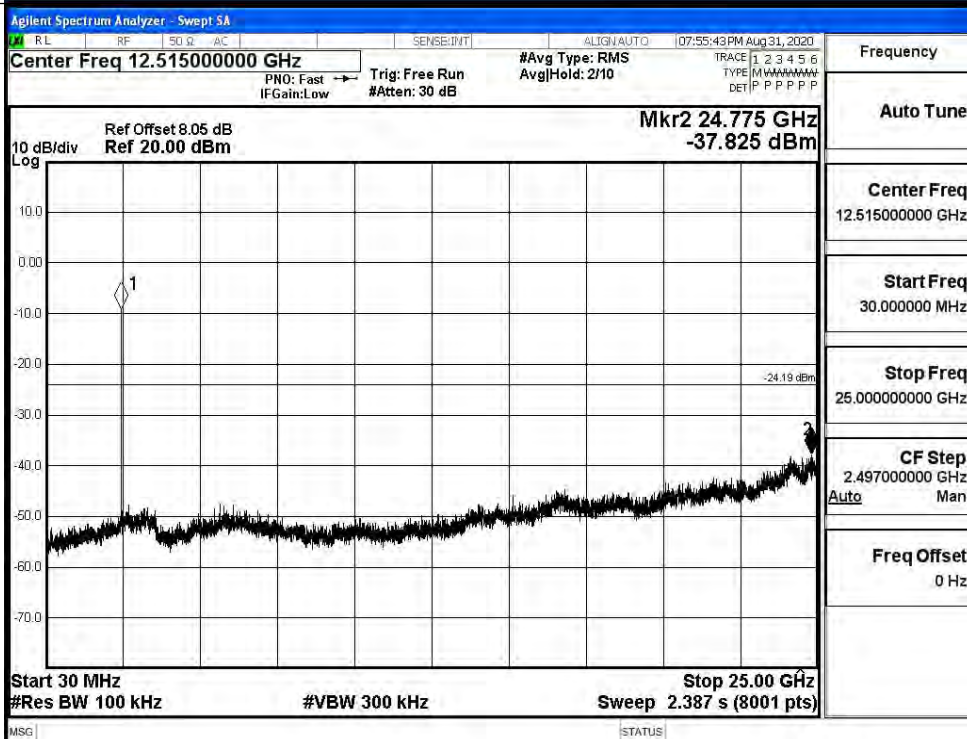


π /4DQPSK_HCH_Graphs

Pref



Puw

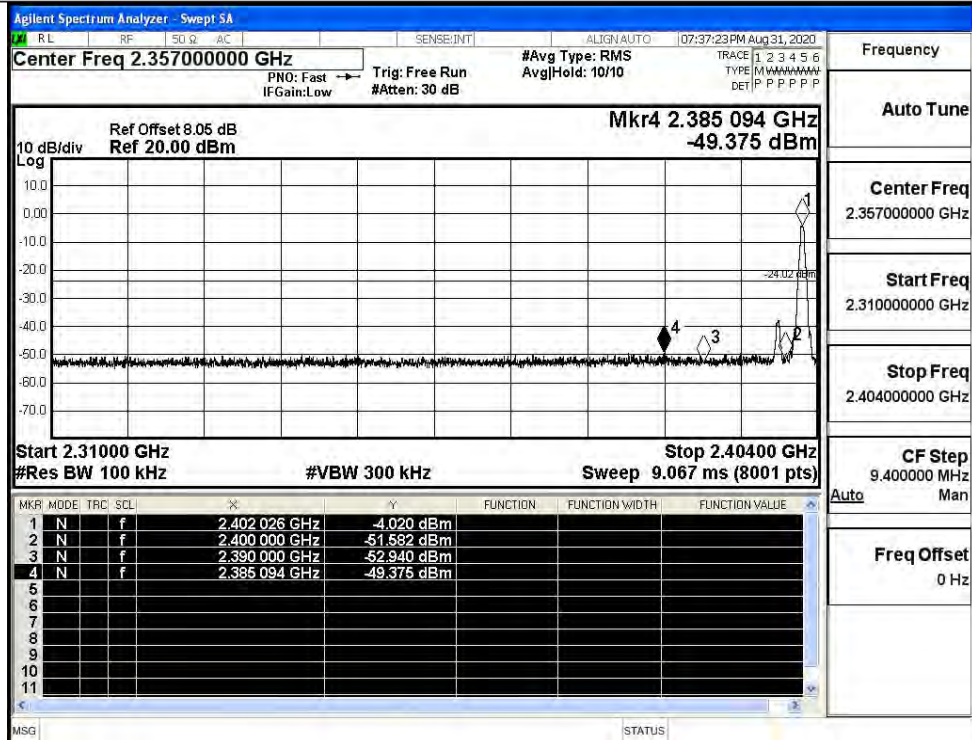


A.7 Band-edge for RF Conducted Emissions

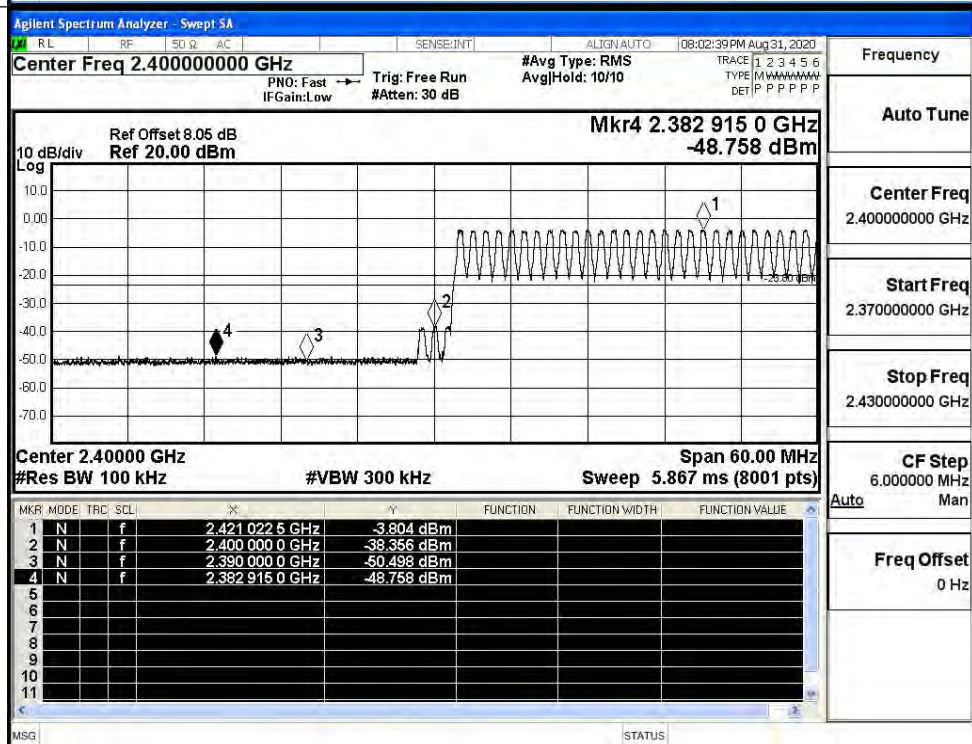
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-4.020	Off	-49.375	-24.02	PASS
			-3.804	On	-48.758	-23.8	PASS
	HCH	2480	-4.060	Off	-44.399	-24.06	PASS
			-3.792	On	-46.057	-23.79	PASS
$\pi/4$ DQPSK	LCH	2402	-3.988	Off	-49.479	-23.99	PASS
			-3.689	On	-48.243	-23.69	PASS
	HCH	2480	-4.060	Off	-44.597	-24.06	PASS
			-3.802	On	-47.930	-23.8	PASS

Test Graphs

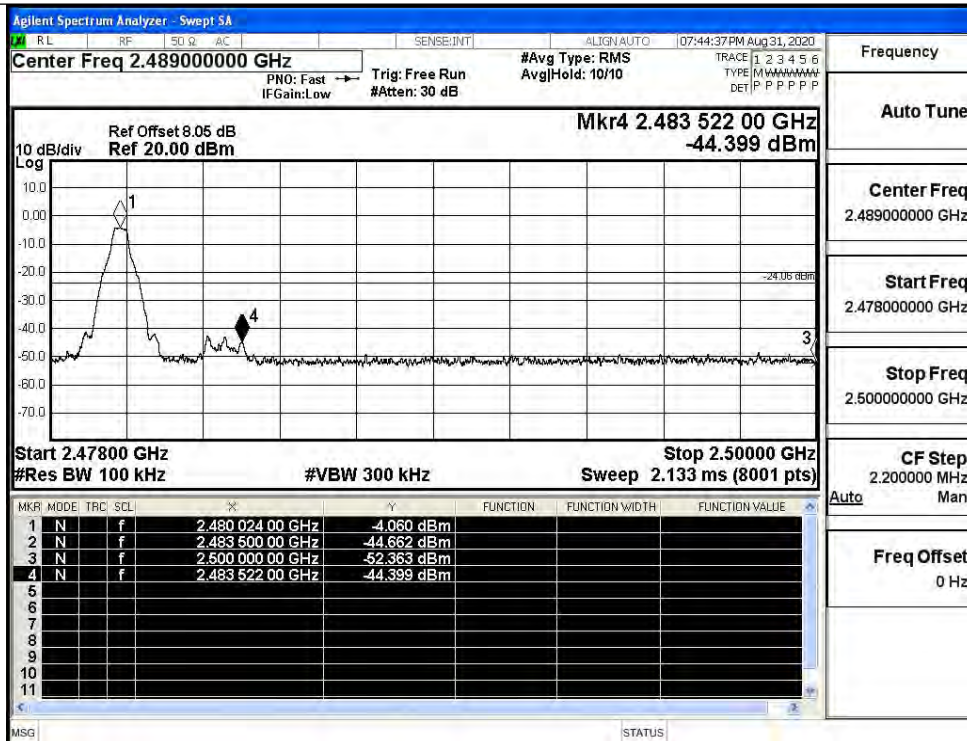
GFSK/LCH/No Hop



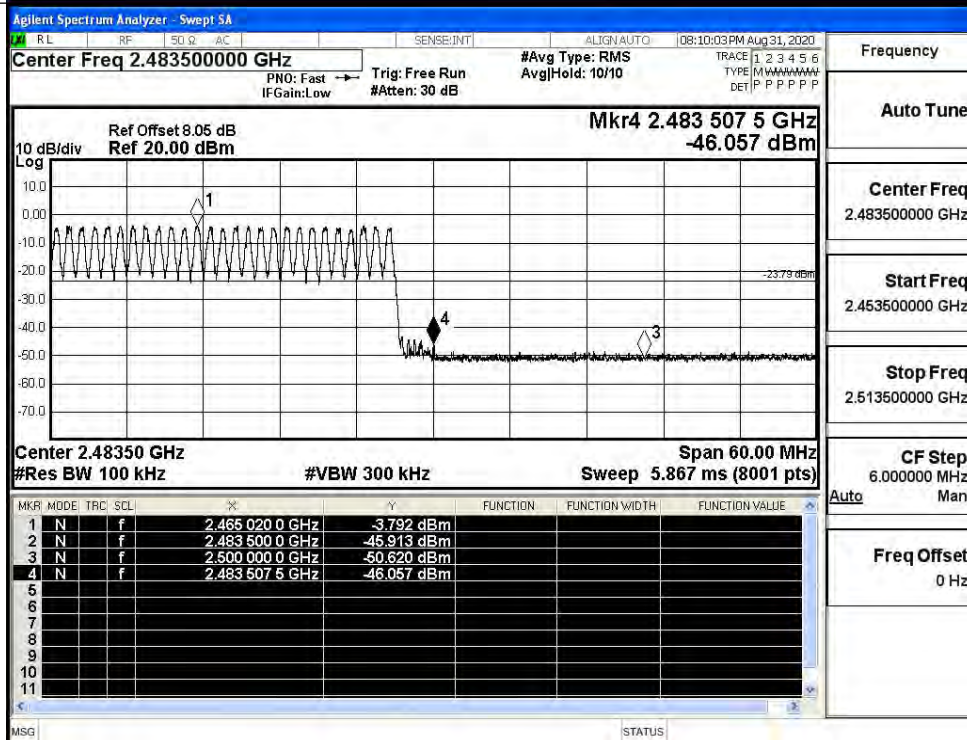
GFSK/LCH/Hop



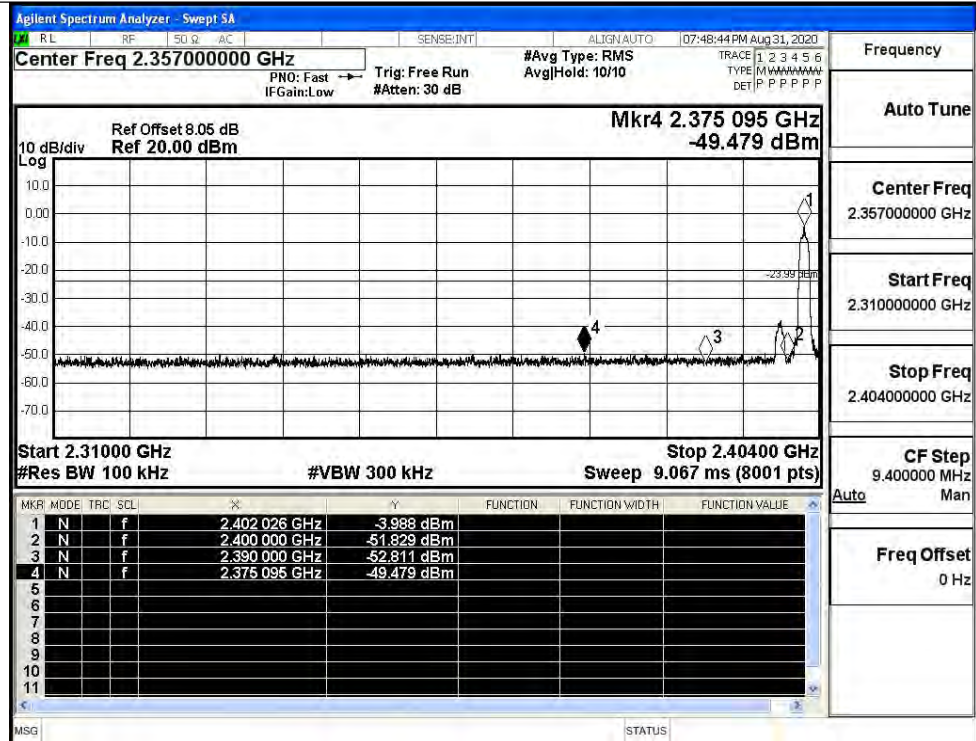
GFSK/HCH/No Hop



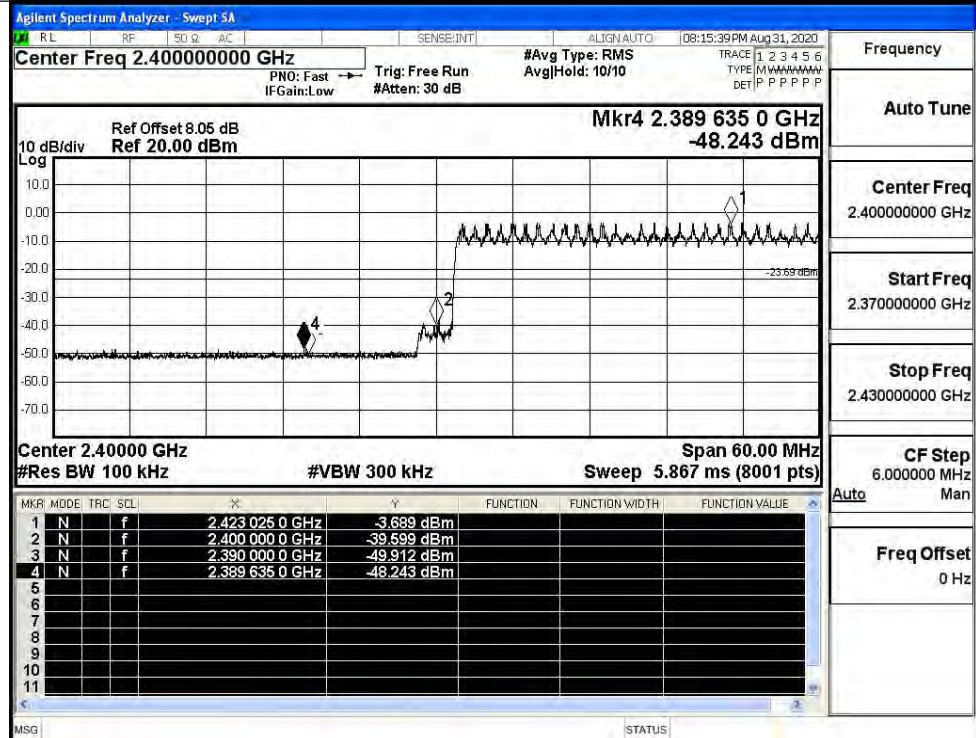
GFSK/HCH/Hop



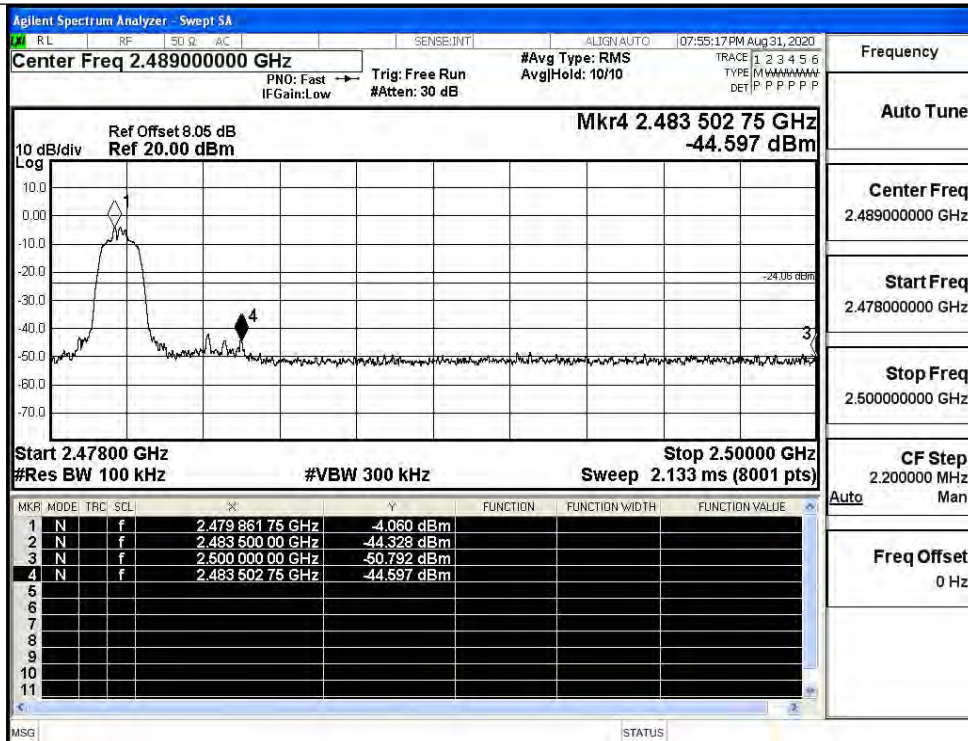
$\pi/4$ DQPSK/LCH/No
Hop



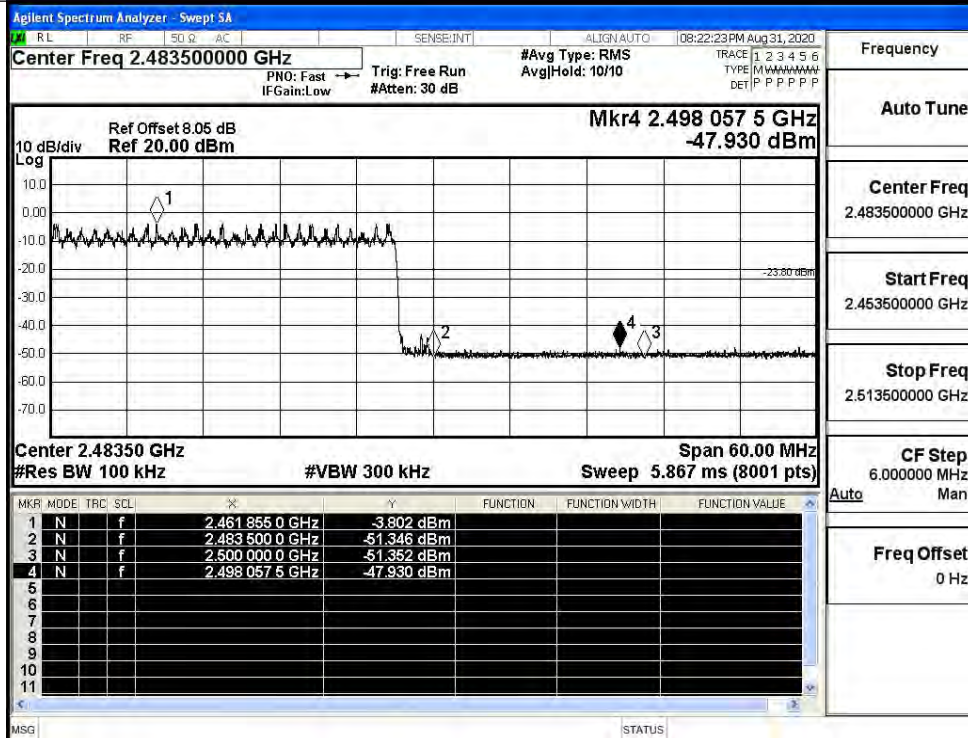
$\pi/4$ DQPSK/LCH/Hop



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



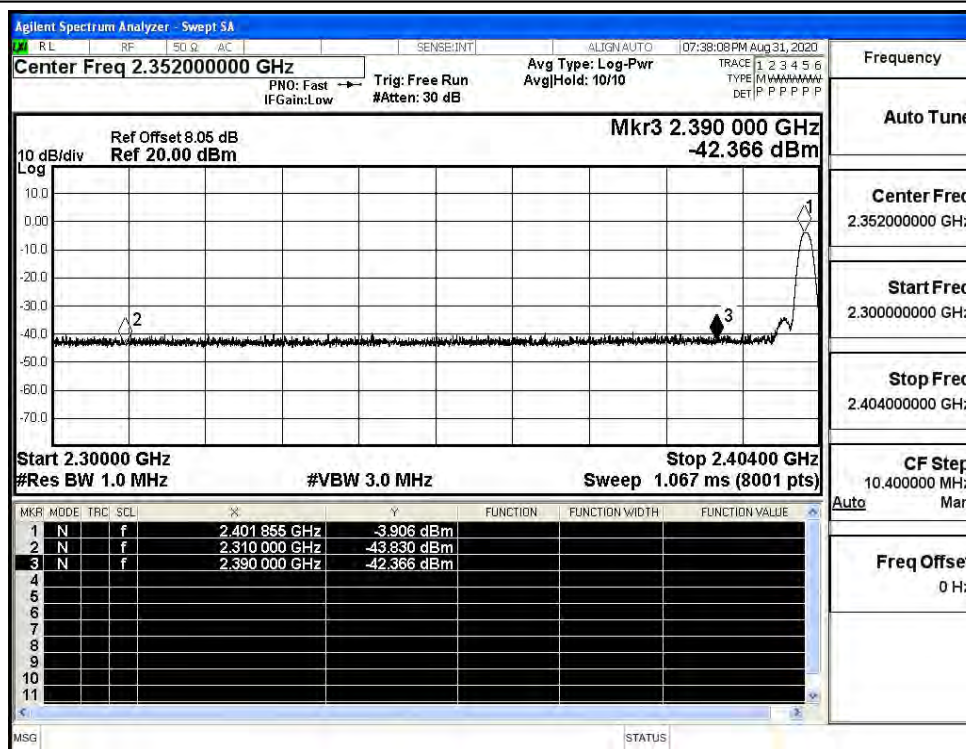
$\pi/4$ DQPSK/HCH/Hop



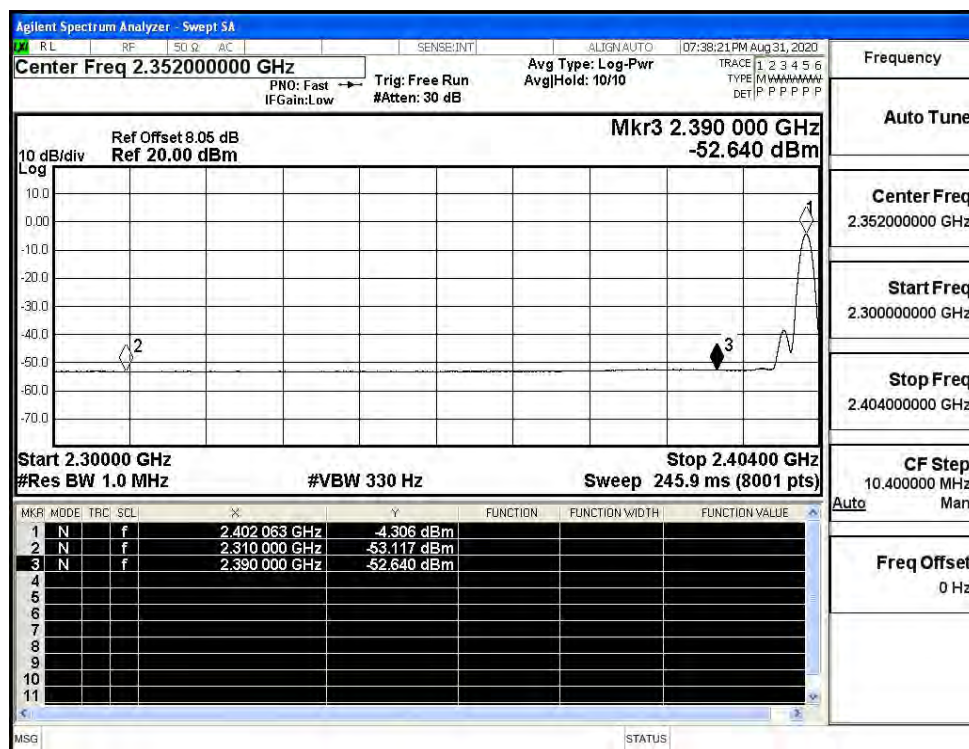
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.83	2.0	0	53.40	PEAK	74	PASS
	Off	2310.0	-53.12	2.0	0	44.11	AV	54	PASS
	Off	2390.0	-42.37	2.0	0	54.86	PEAK	74	PASS
	Off	2390.0	-52.64	2.0	0	44.59	AV	54	PASS
	Off	2483.5	-38.72	2.0	0	58.51	PEAK	74	PASS
	Off	2483.5	-47.32	2.0	0	49.91	AV	54	PASS
	Off	2500.0	-40.71	2.0	0	56.52	PEAK	74	PASS
	Off	2500.0	-51.81	2.0	0	45.42	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.98	2.0	0	53.25	PEAK	74	PASS
	Off	2310.0	-53.17	2.0	0	44.06	AV	54	PASS
	Off	2390.0	-40.98	2.0	0	56.25	PEAK	74	PASS
	Off	2390.0	-52.73	2.0	0	44.50	AV	54	PASS
	Off	2483.5	-39.88	2.0	0	57.35	PEAK	74	PASS
	Off	2483.5	-49.42	2.0	0	47.81	AV	54	PASS
	Off	2500.0	-41.81	2.0	0	55.42	PEAK	74	PASS
	Off	2500.0	-51.92	2.0	0	45.31	AV	54	PASS

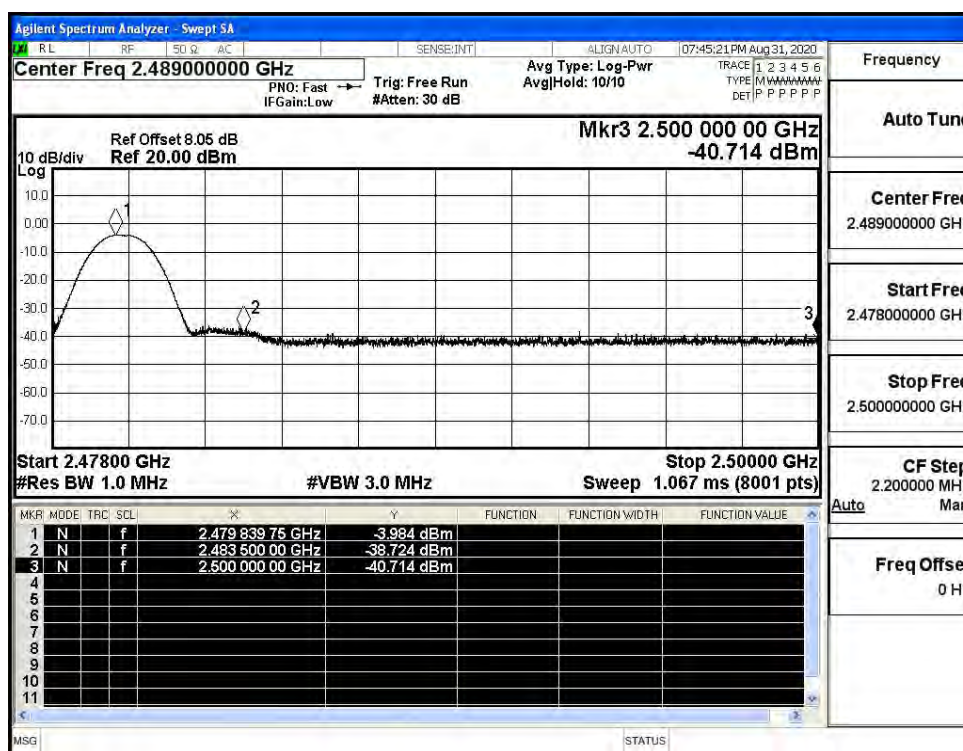
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



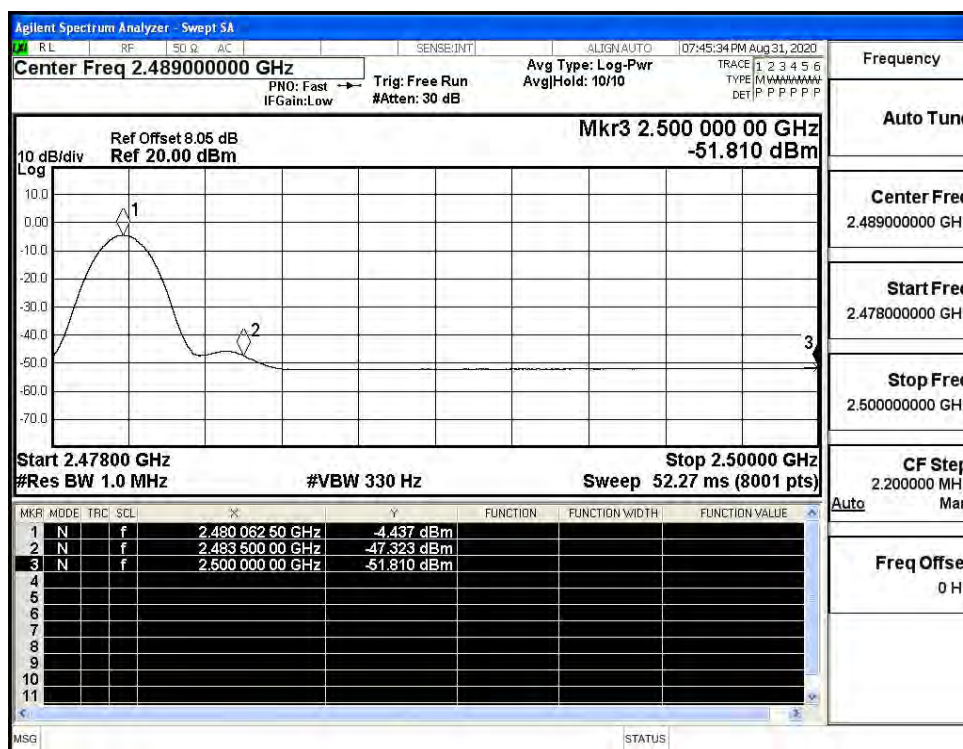
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

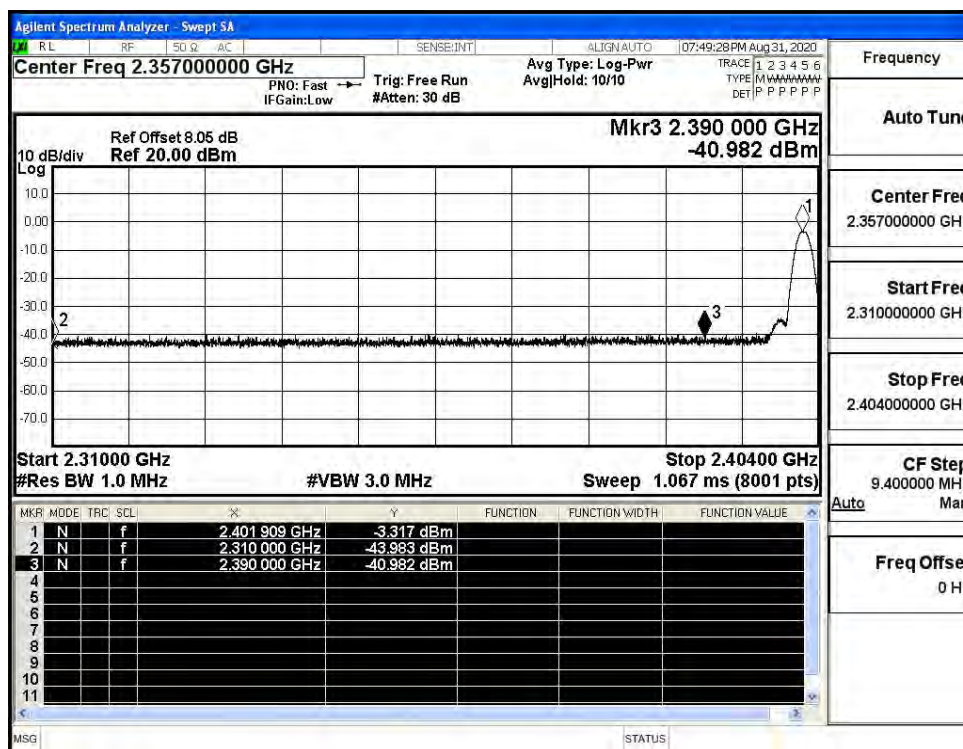
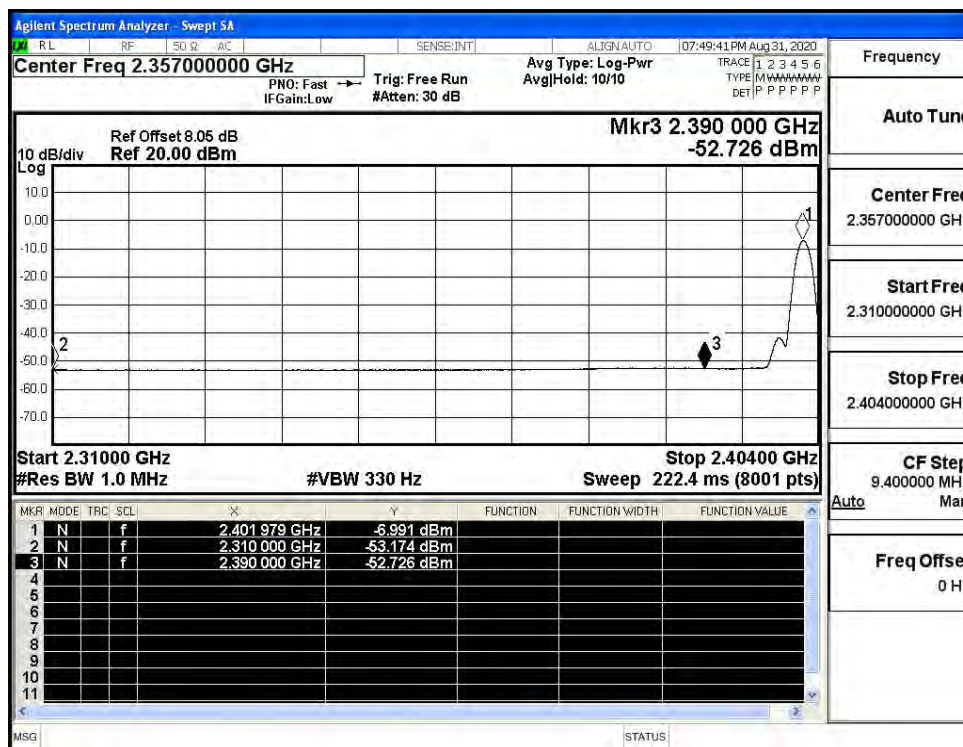


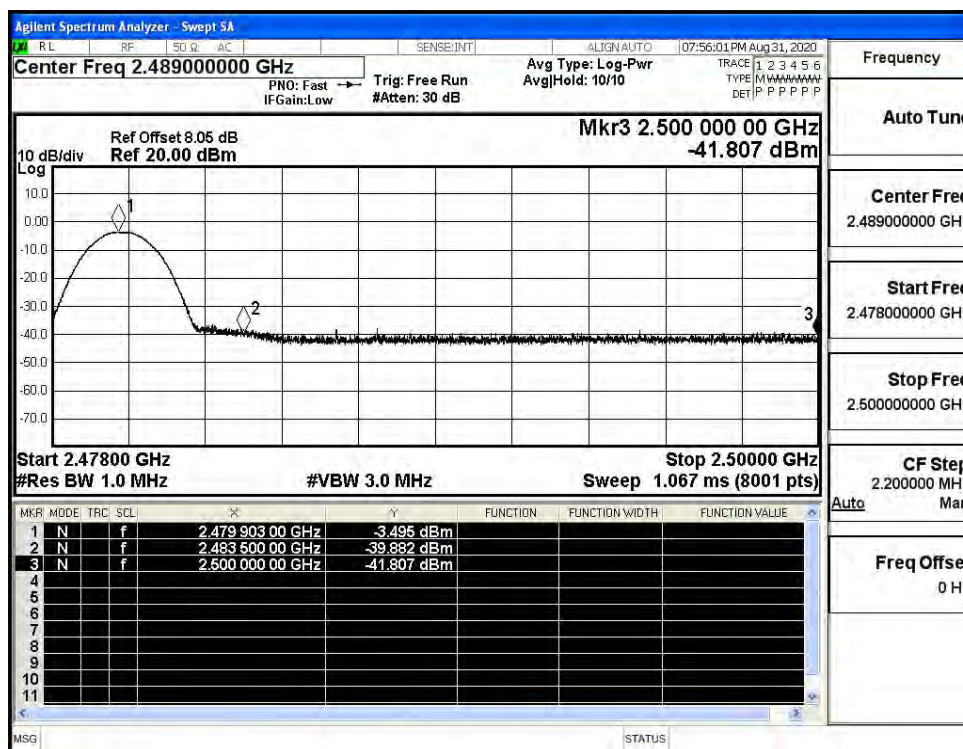
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



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)