

Appendix A

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

Product Name: Wireless network card

Trade Mark: DIEWU TXIC

Test Model: TXA083

Additional Model No.: TXA076

Environmental Conditions

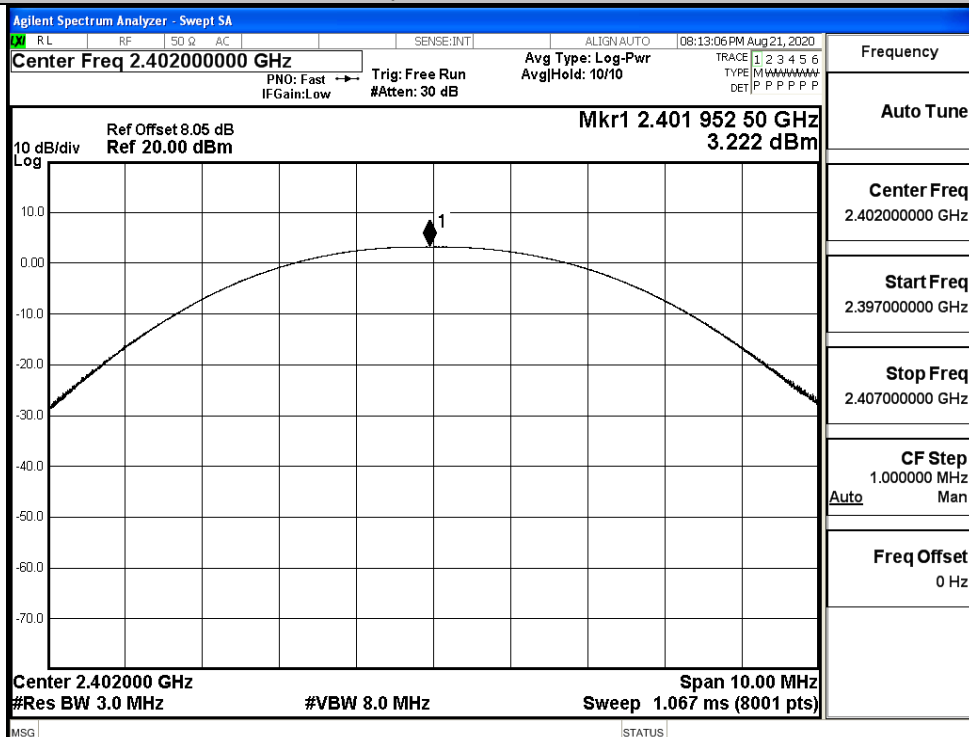
Temperature:	23.1 ° C
Relative Humidity:	54.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

A.1 Maxmum Conducted Peak Output Power

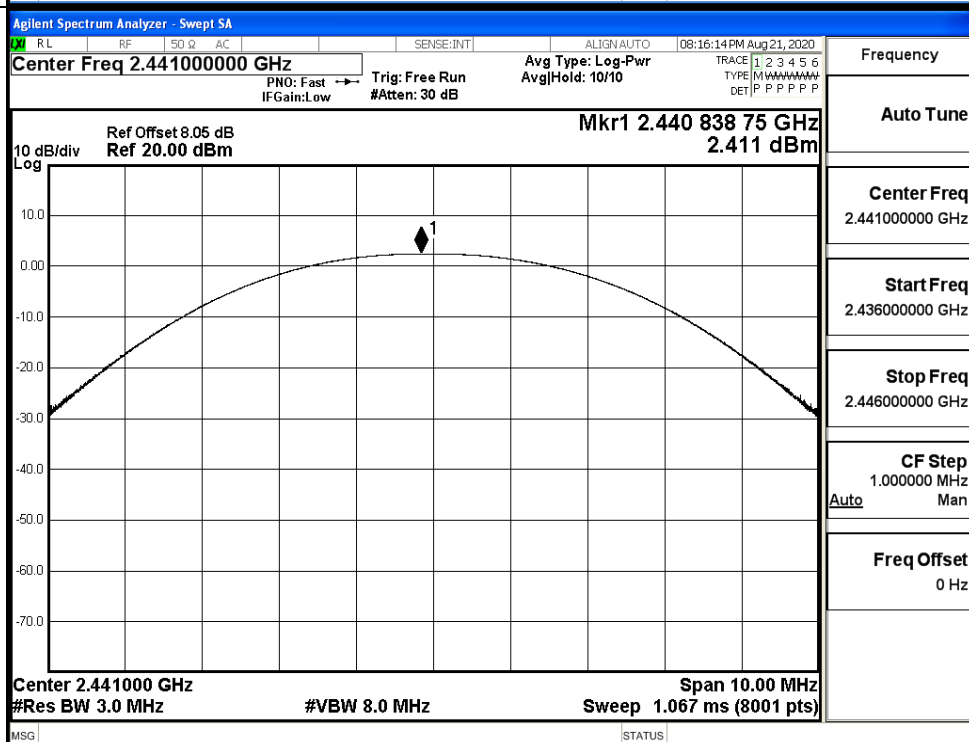
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.222	21	PASS
	MCH	2.411	21	PASS
	HCH	0.966	21	PASS
$\pi/4$ DQPSK	LCH	1.600	30	PASS
	MCH	2.240	30	PASS
	HCH	0.633	30	PASS
8DPSK	LCH	1.835	30	PASS
	MCH	2.500	30	PASS
	HCH	0.953	30	PASS

Test Graphs

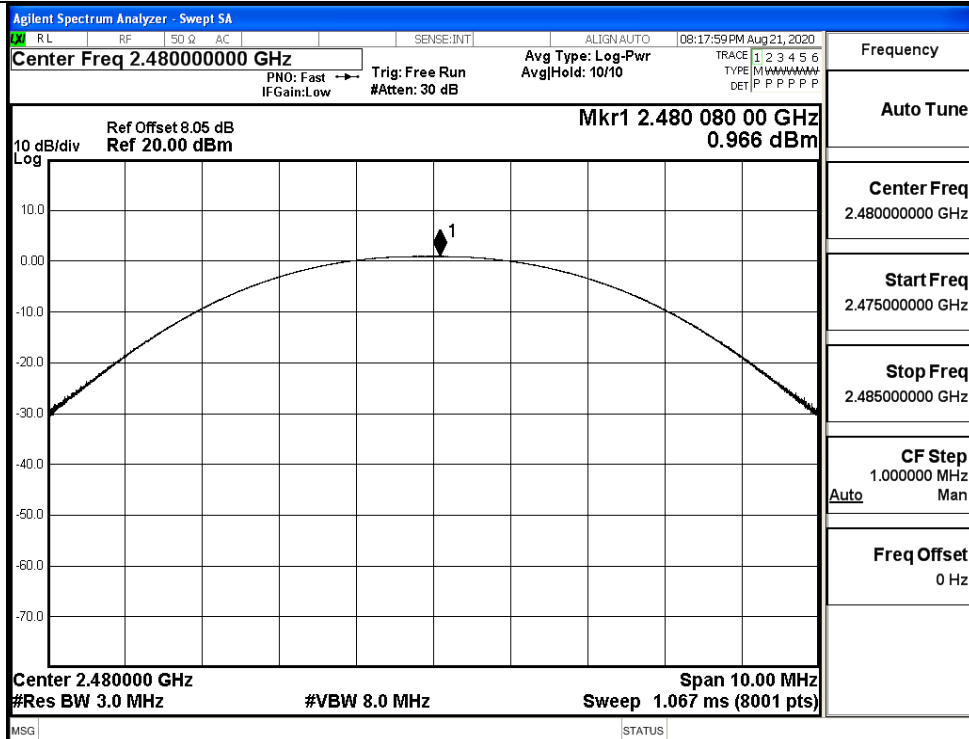
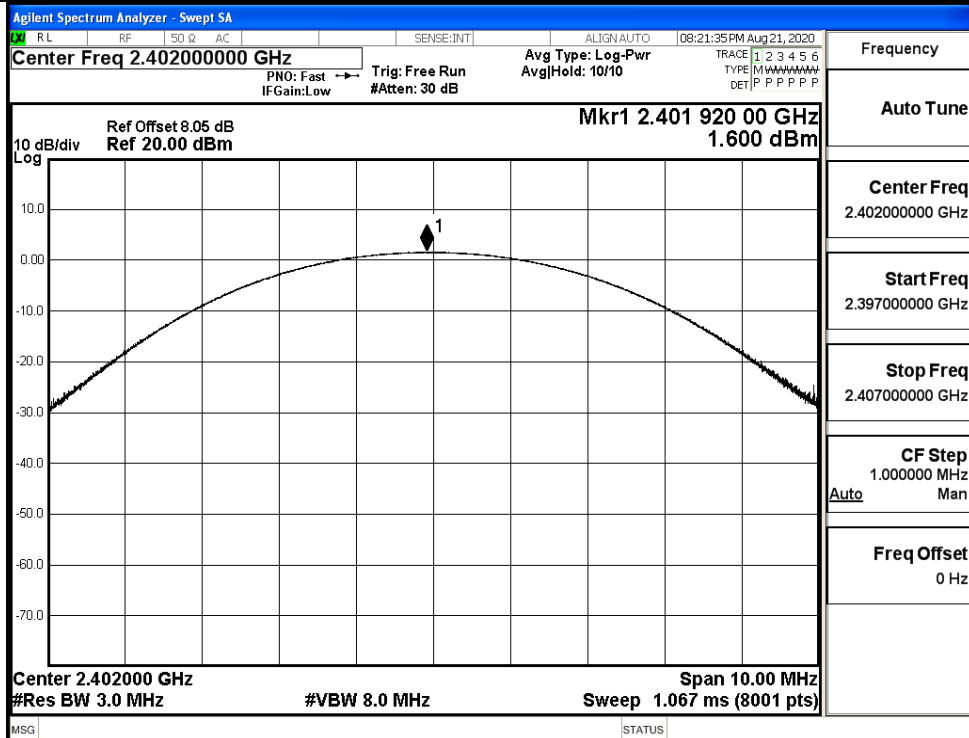
GFSK/LCH

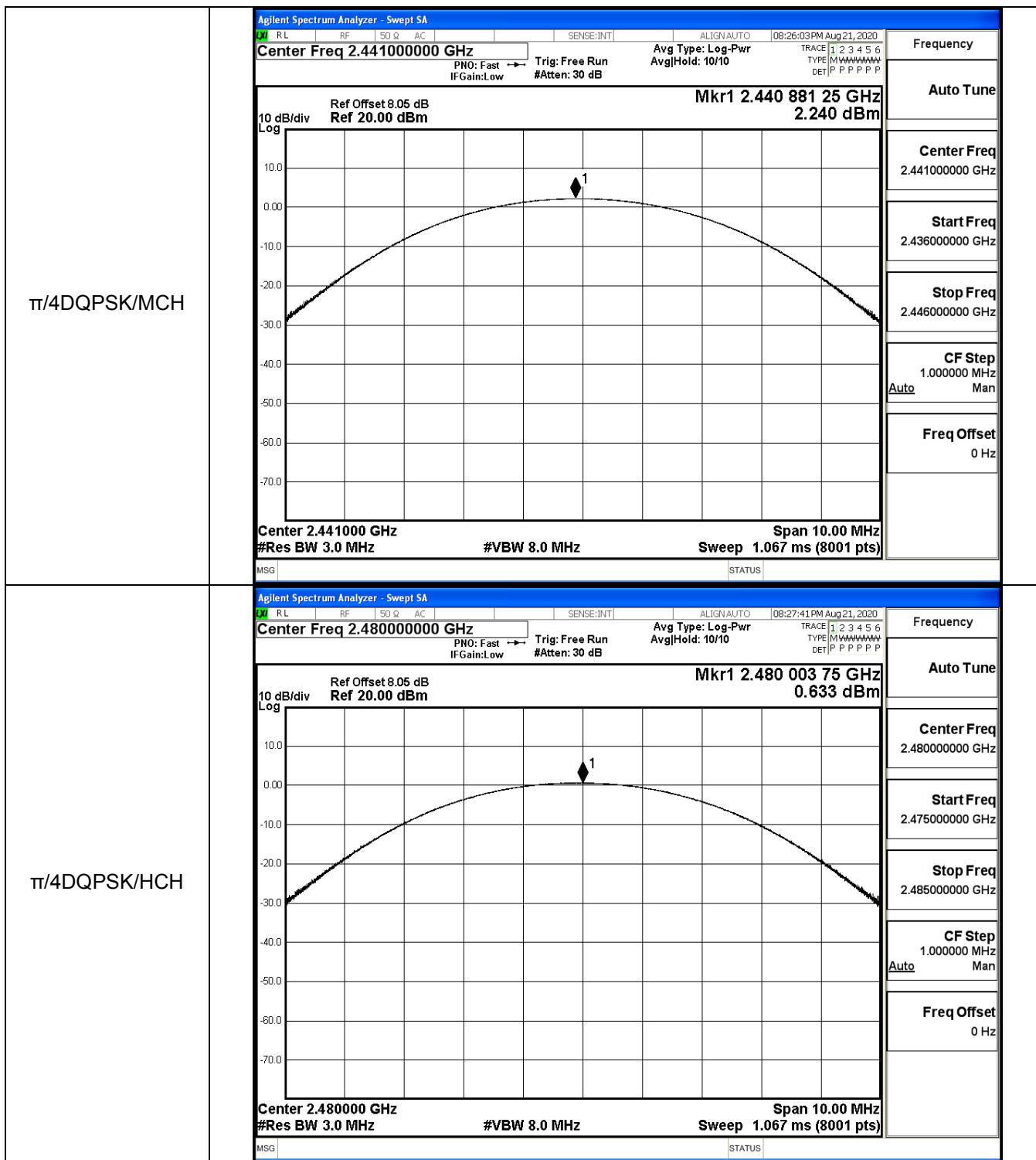


GFSK/MCH

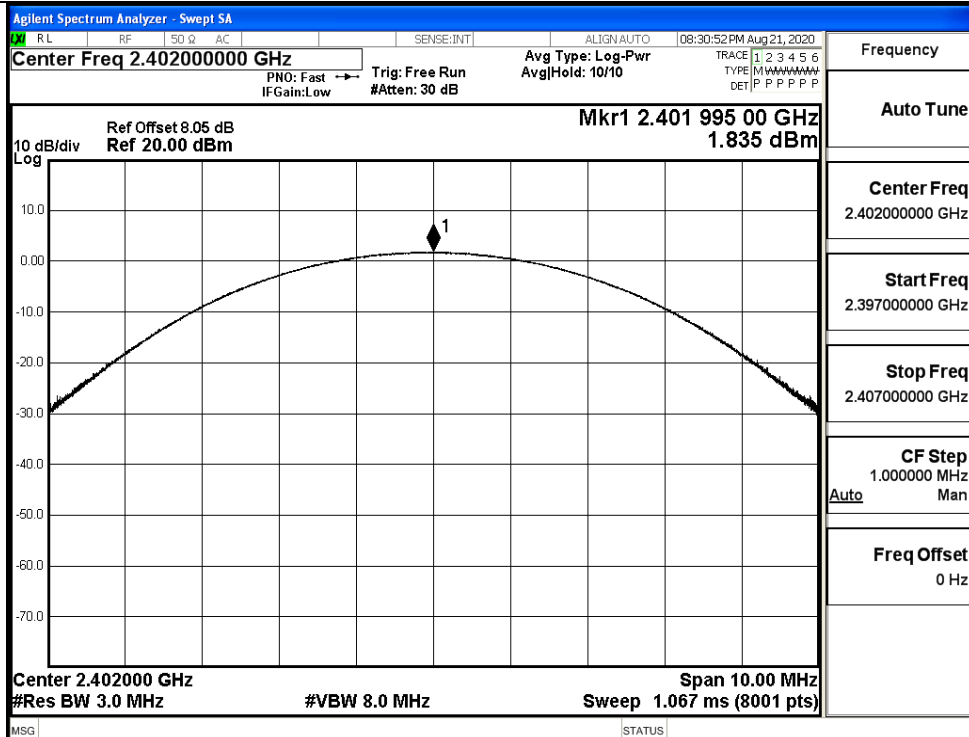


GFSK/HCH

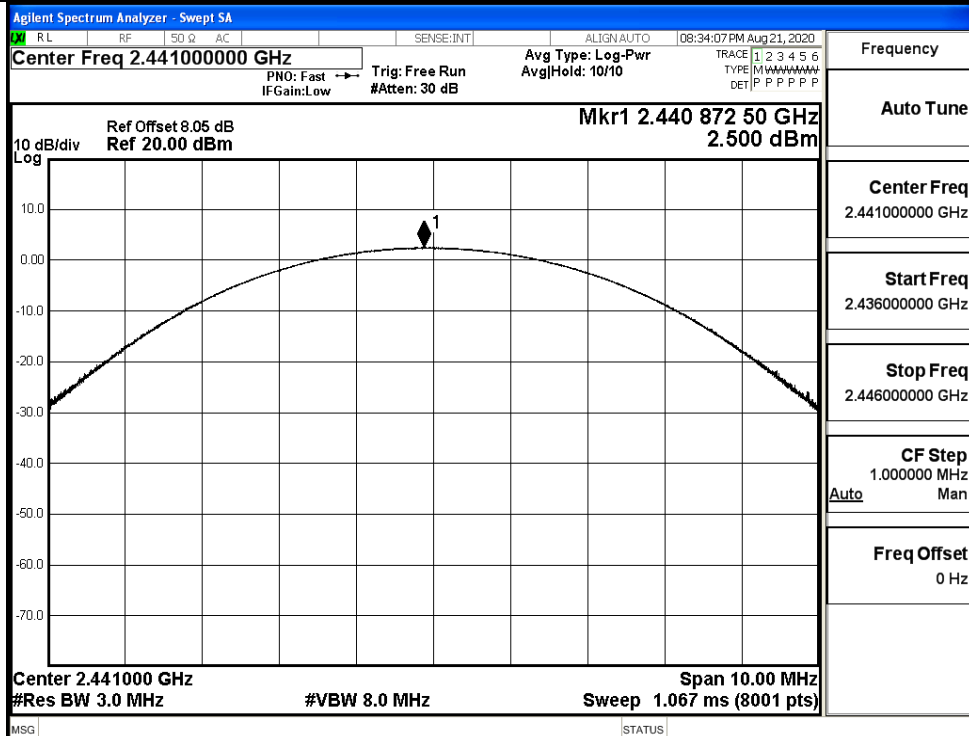
 π /4DQPSK/LCH



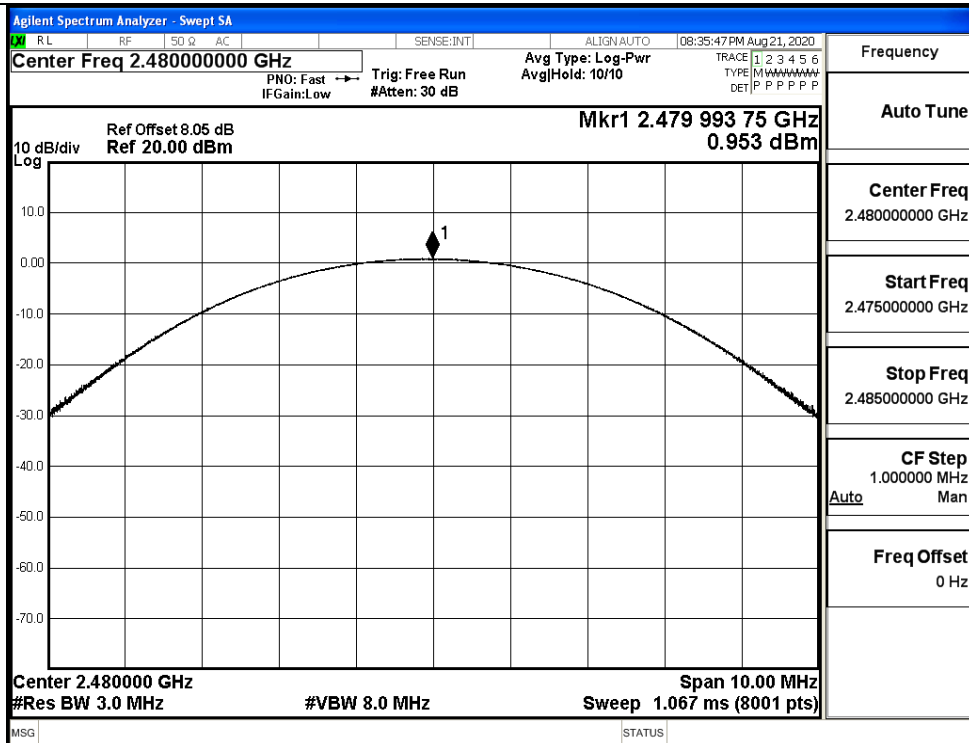
8DPSK/LCH



8DPSK/MCH



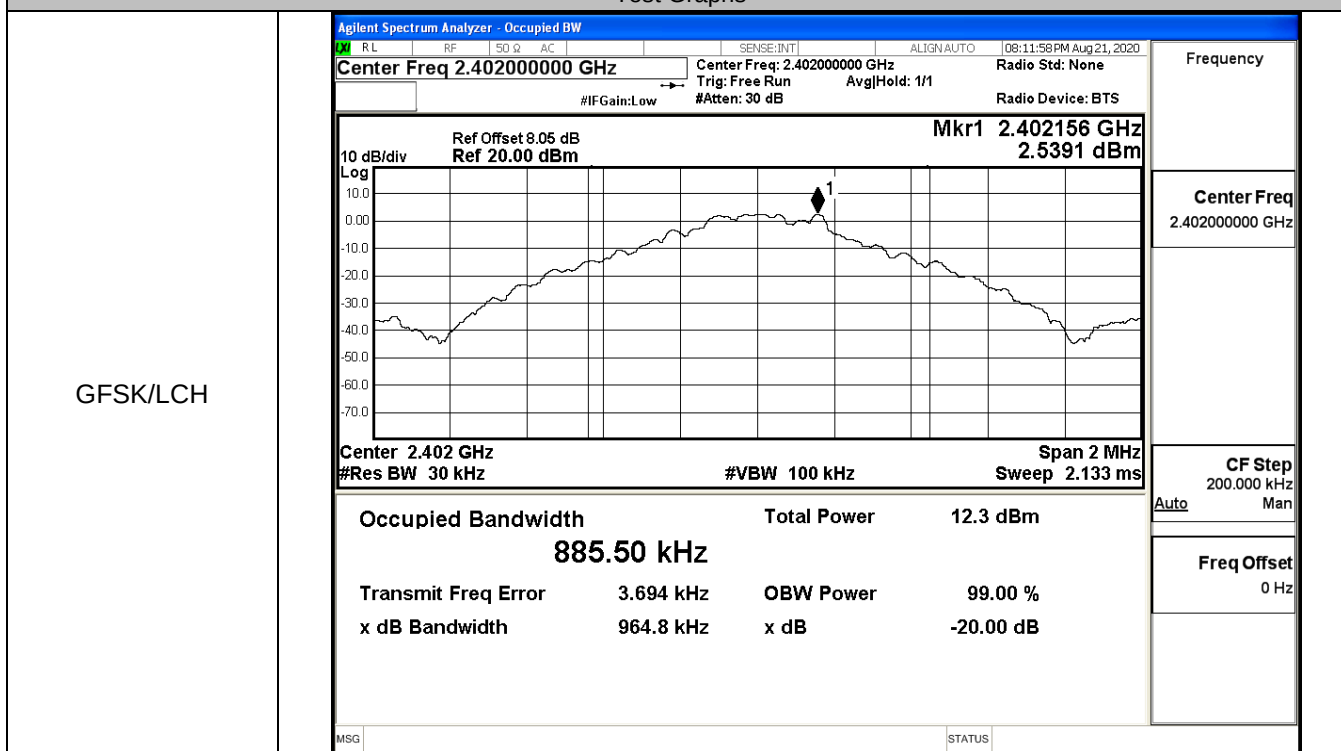
8DPSK/HCH



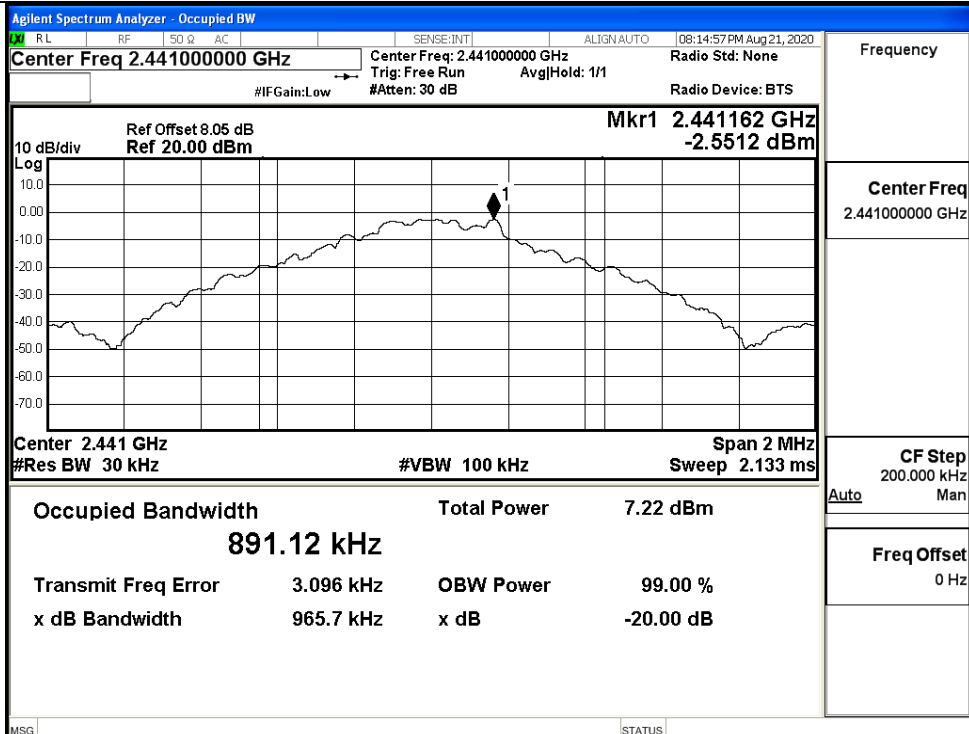
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9648	Not Specified	PASS
	MCH	0.9657	Not Specified	PASS
	HCH	0.9670	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.441	Not Specified	PASS
	MCH	1.493	Not Specified	PASS
	HCH	1.494	Not Specified	PASS
8DPSK	LCH	1.483	Not Specified	PASS
	MCH	1.488	Not Specified	PASS
	HCH	1.491	Not Specified	PASS

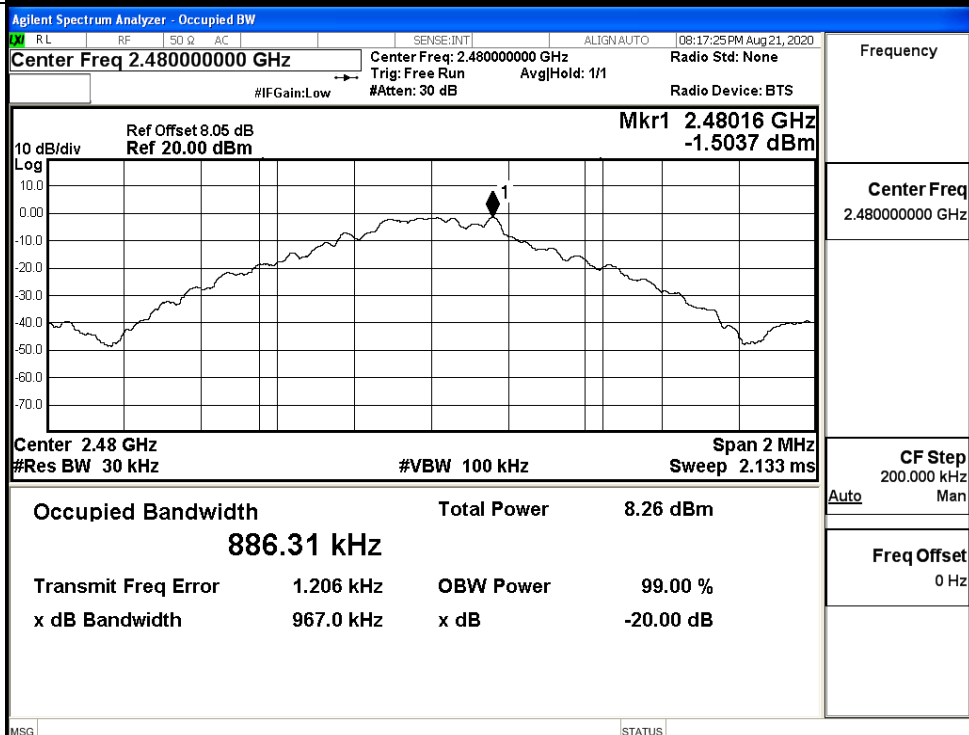
Test Graphs

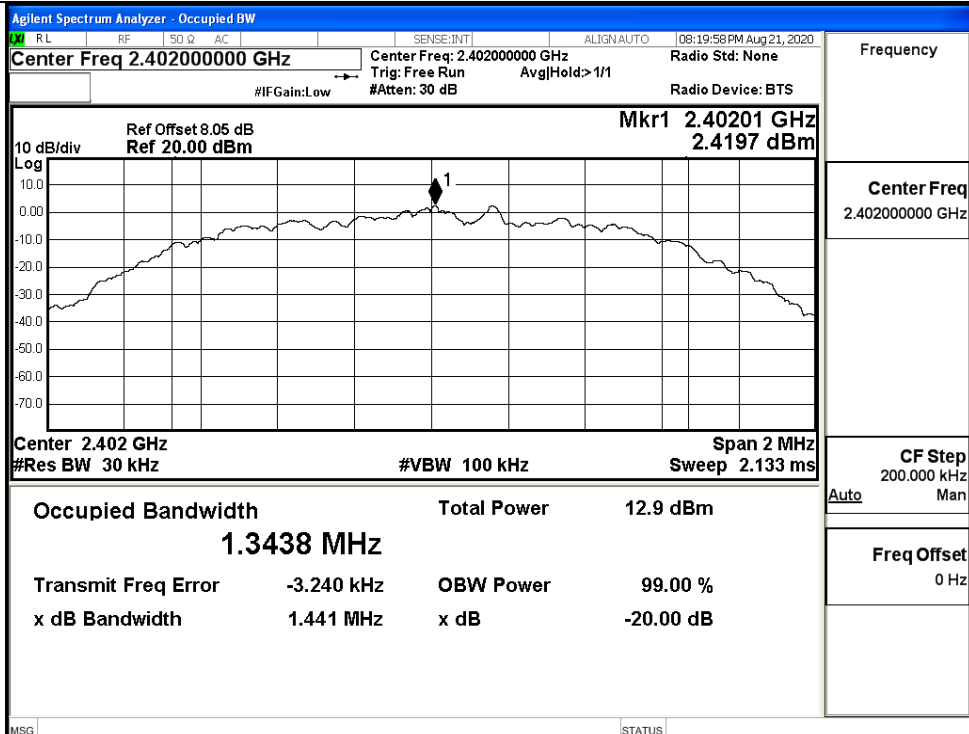
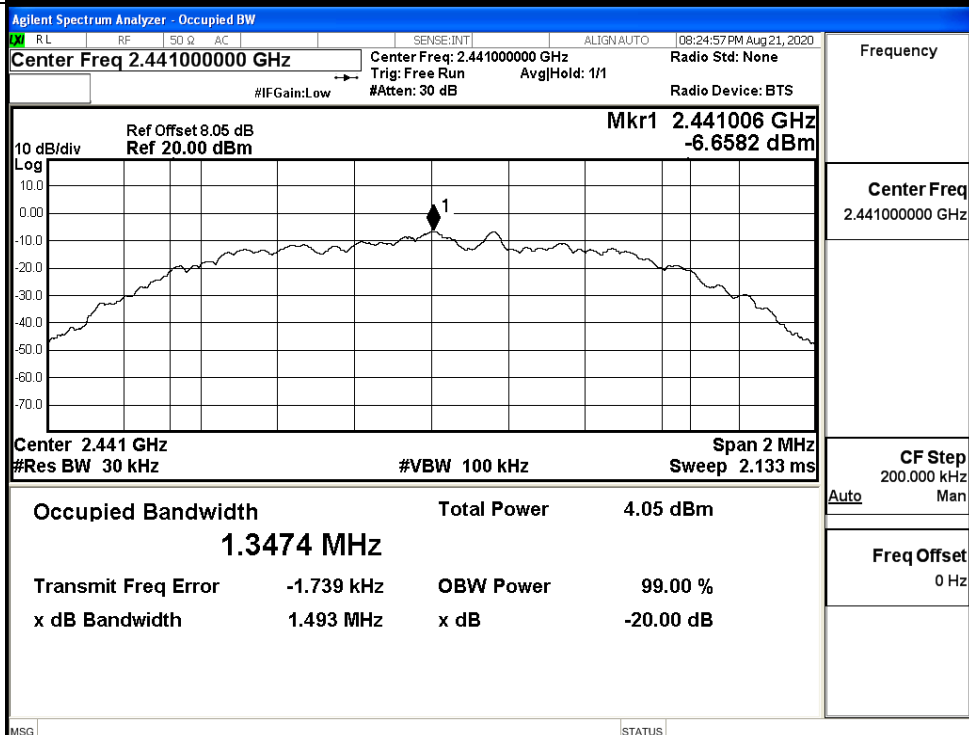


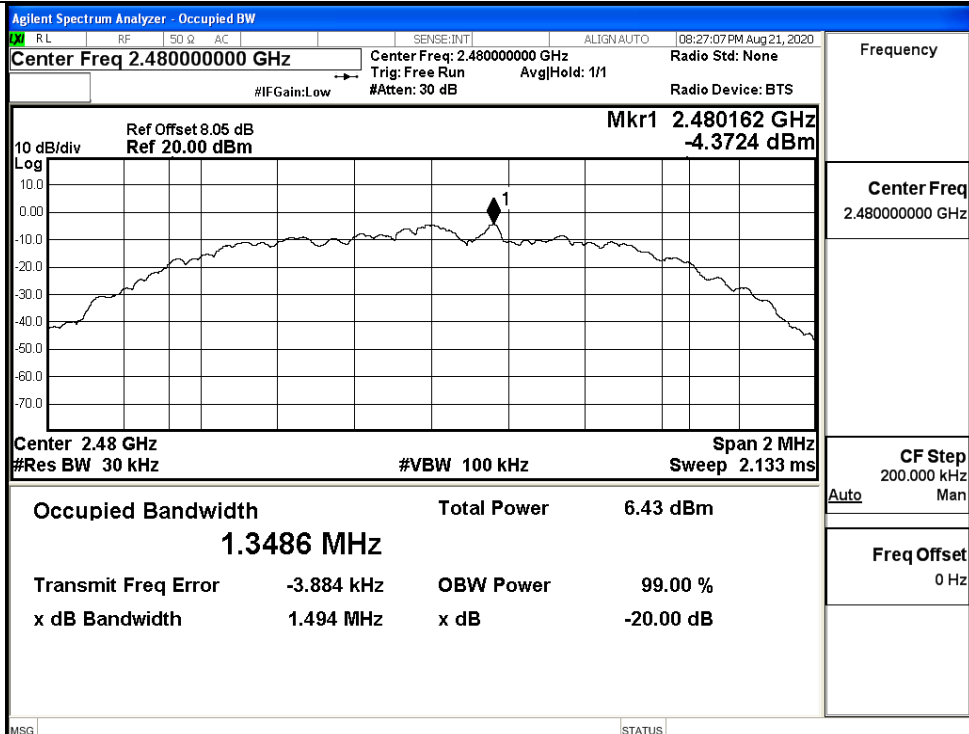
GFSK/MCH



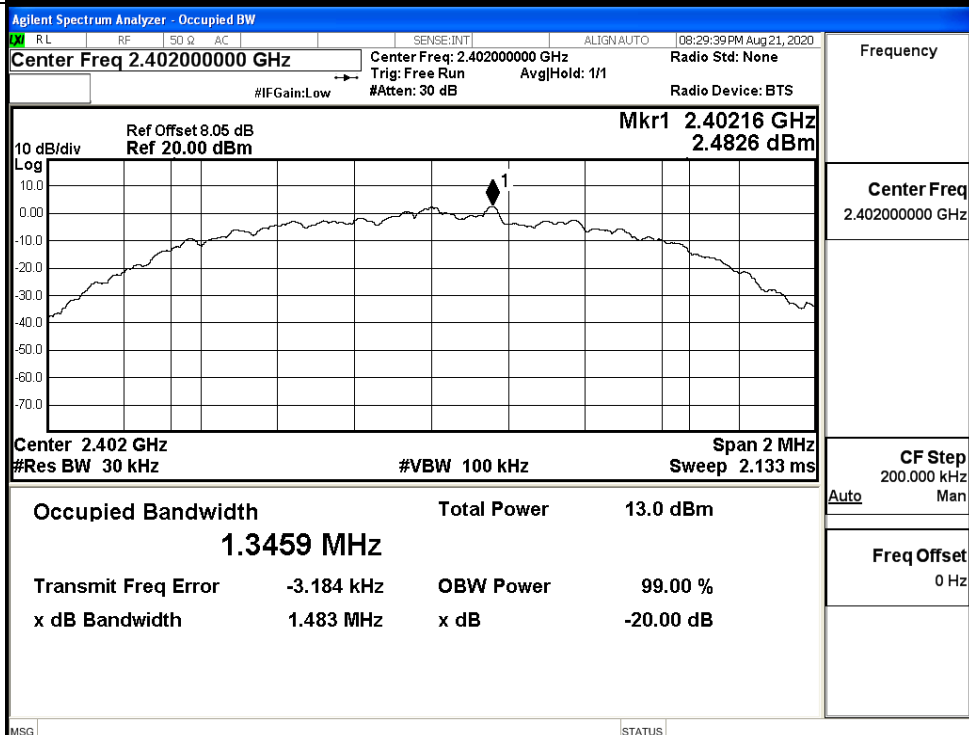
GFSK/HCH



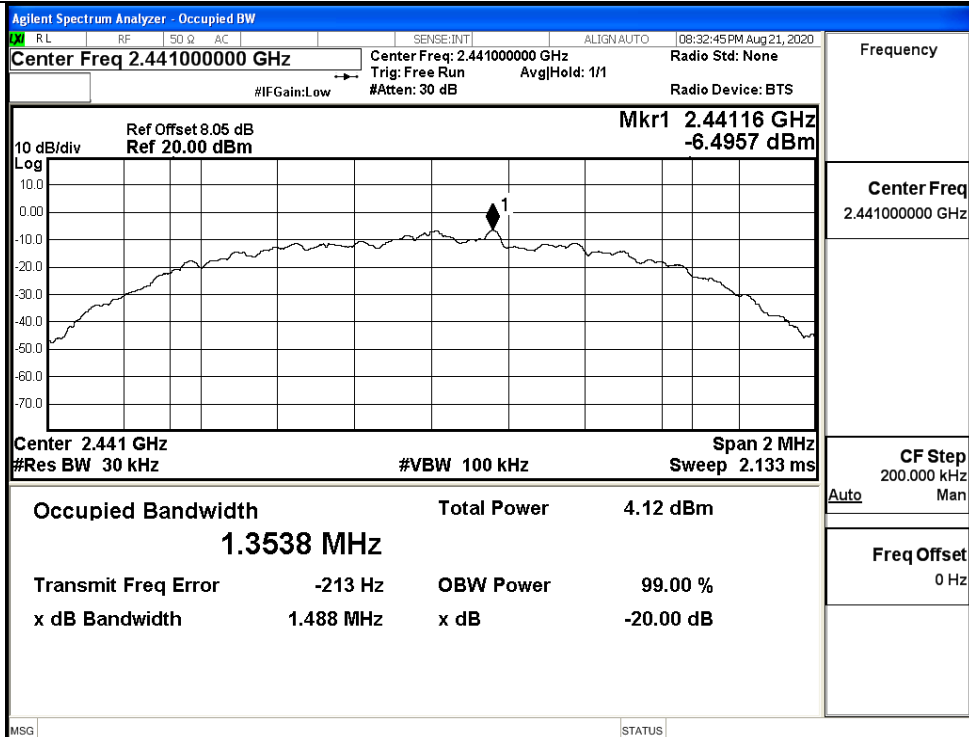
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

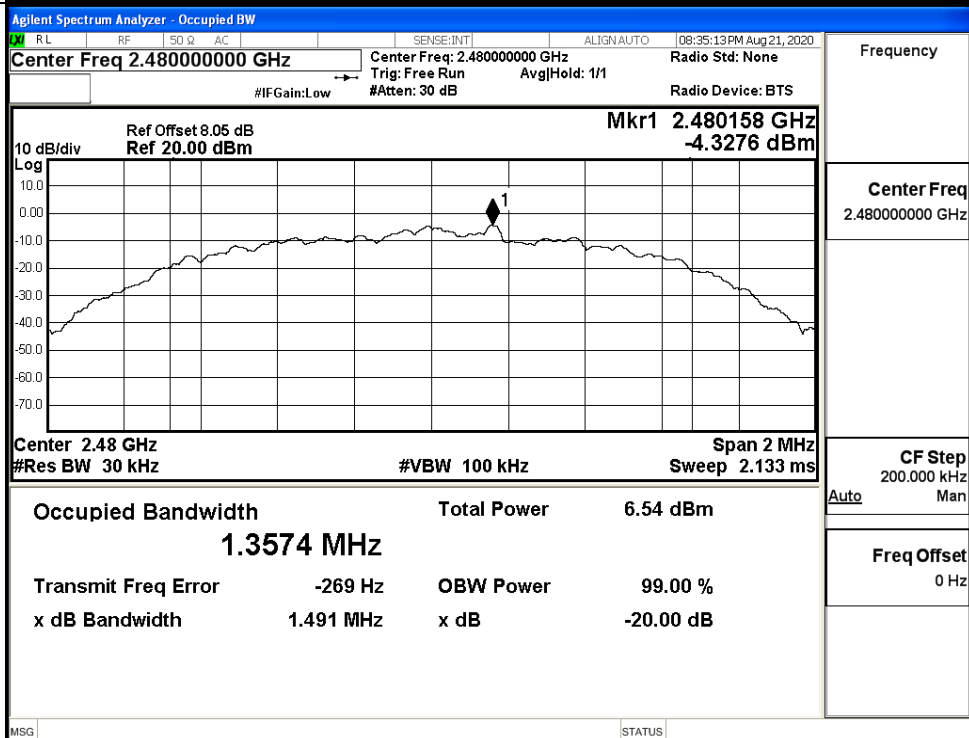
8DPSK/LCH



8DPSK/MCH



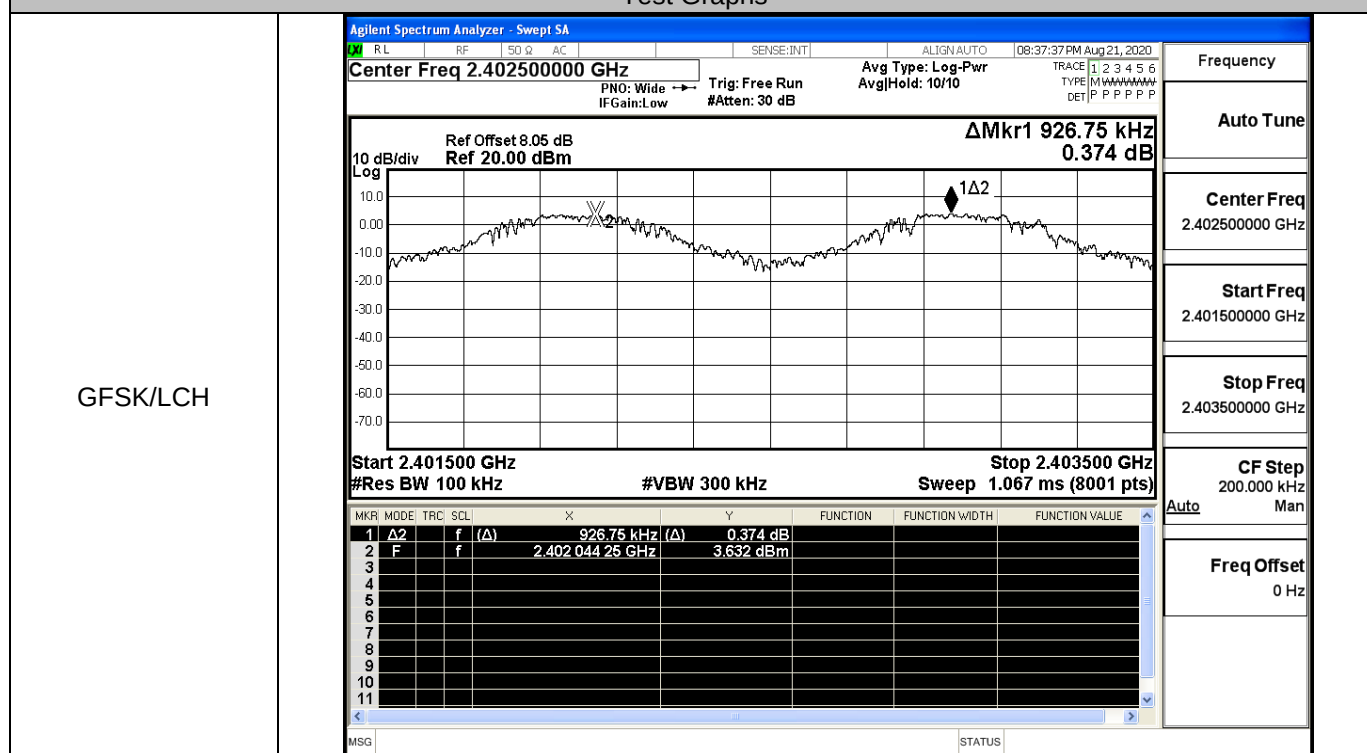
8DPSK/HCH



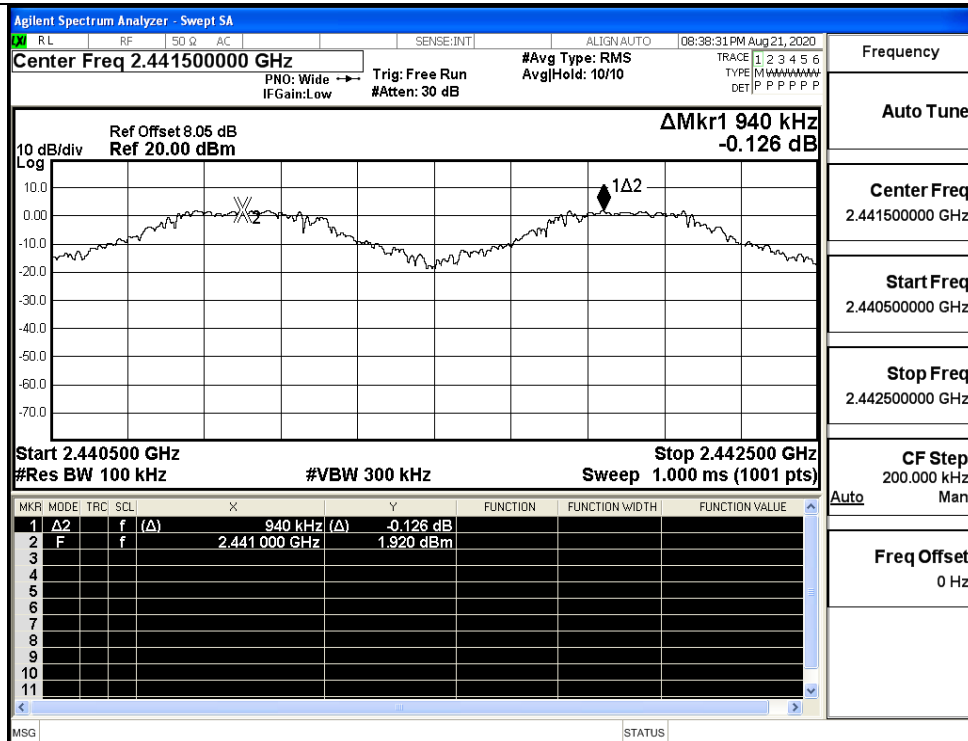
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.927	0.645	PASS
	MCH	0.940	0.645	PASS
	HCH	1.126	0.645	PASS
$\pi/4$ DQPSK	LCH	1.026	0.996	PASS
	MCH	1.004	0.996	PASS
	HCH	1.028	0.996	PASS
8DPSK	LCH	1.192	0.994	PASS
	MCH	1.042	0.994	PASS
	HCH	1.014	0.994	PASS

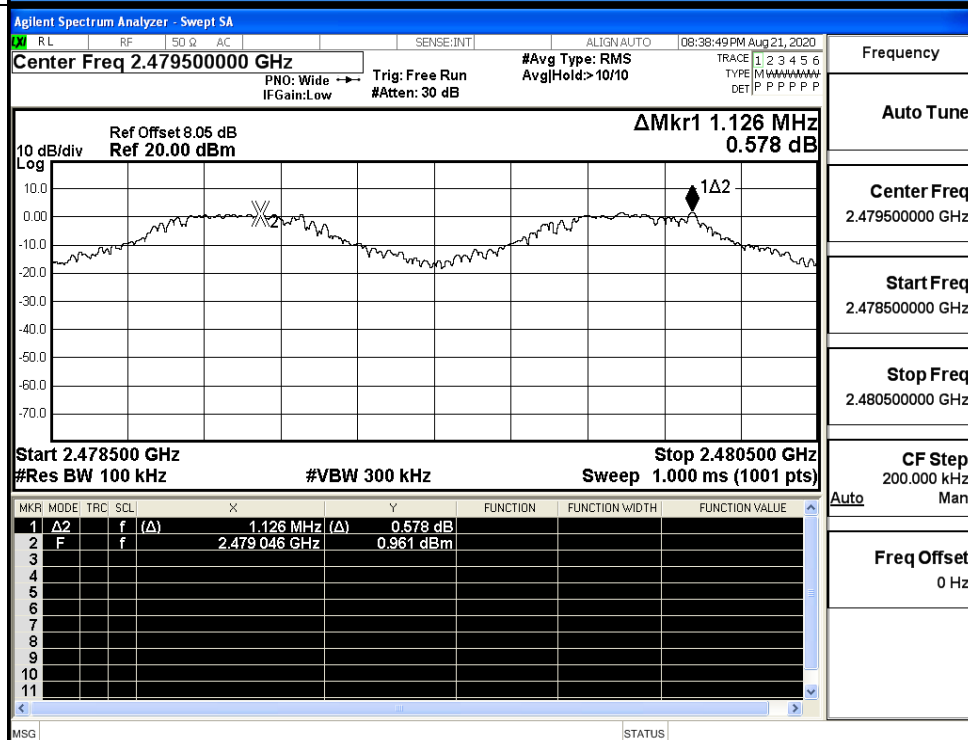
Test Graphs

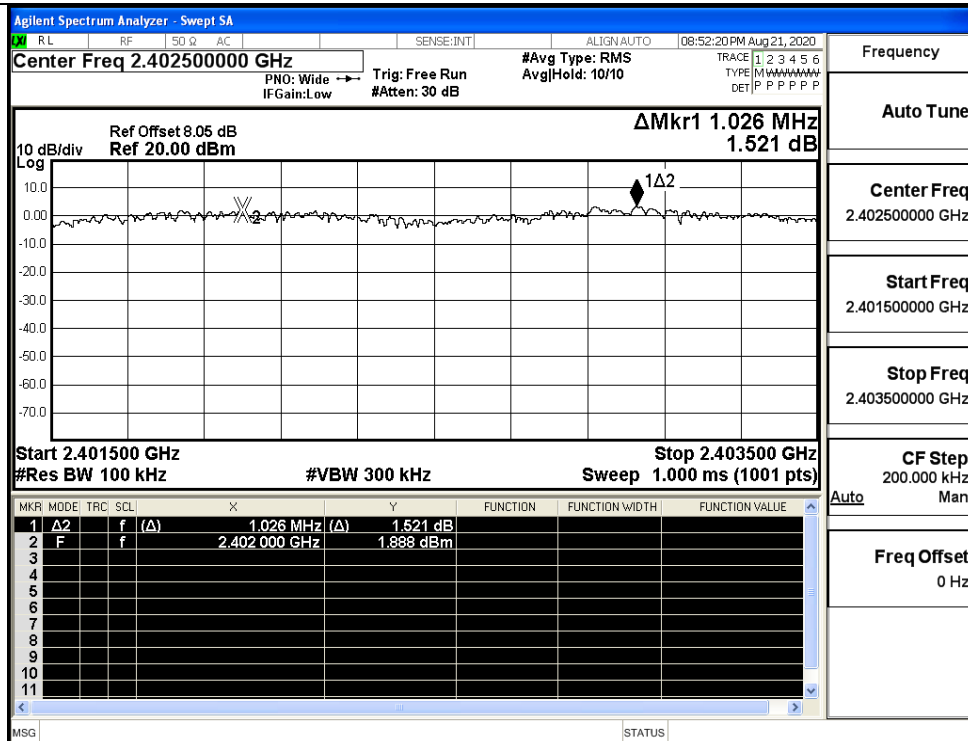
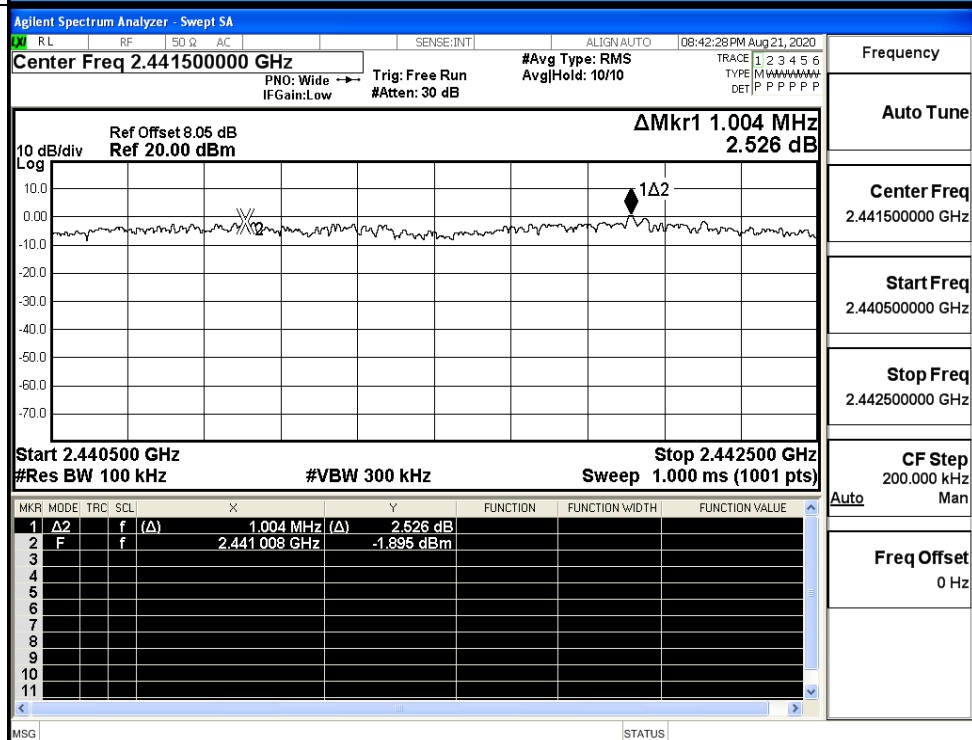


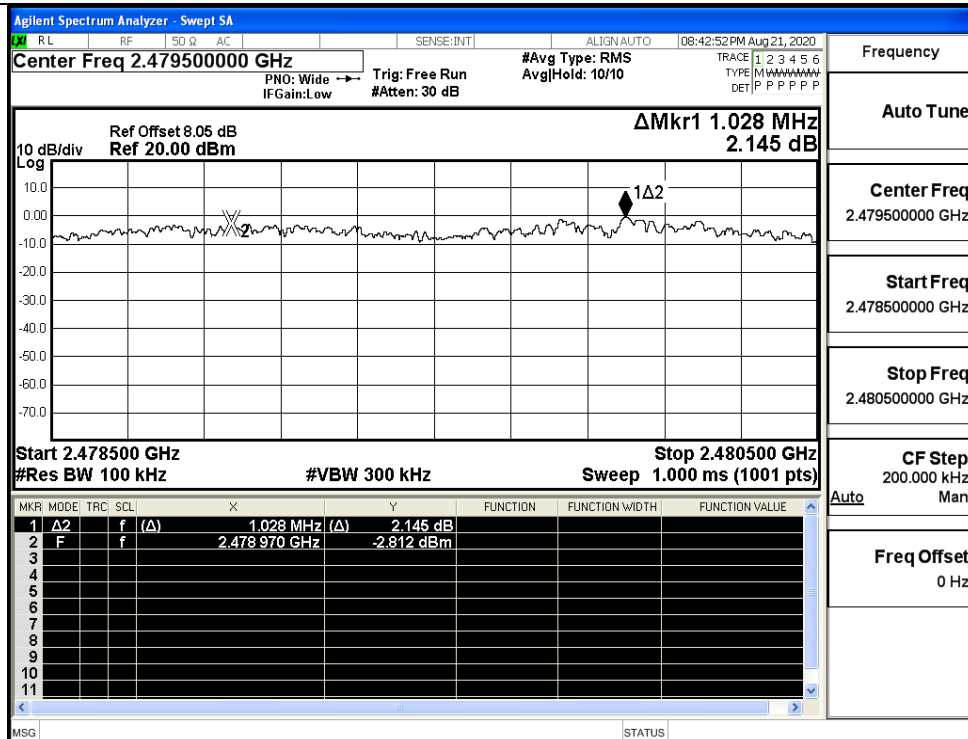
GFSK/MCH



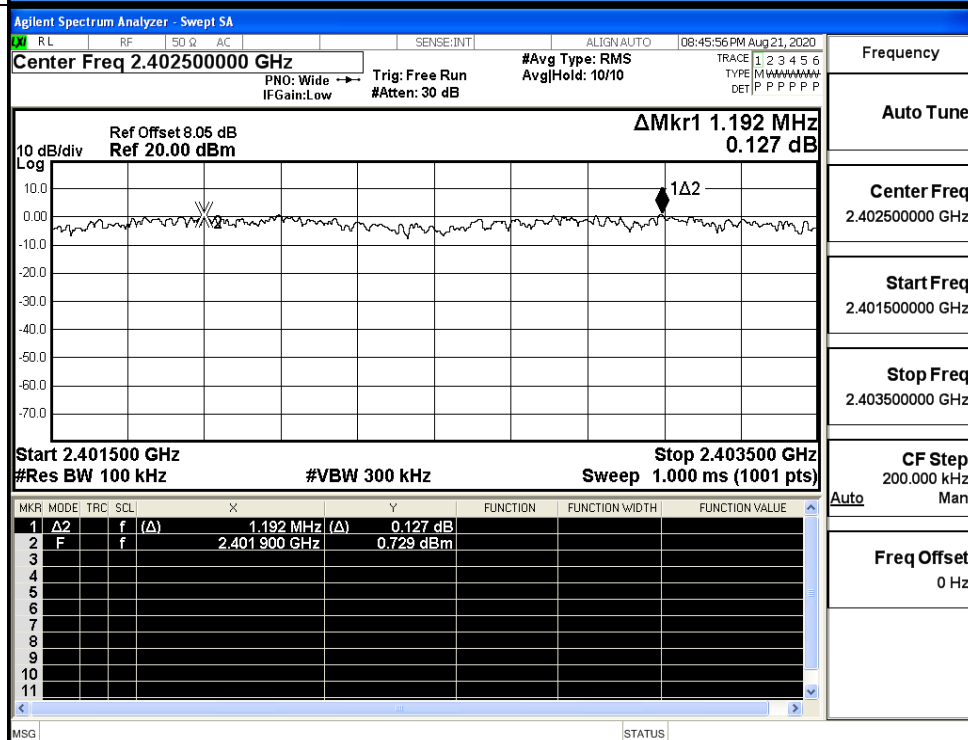
GFSK/HCH



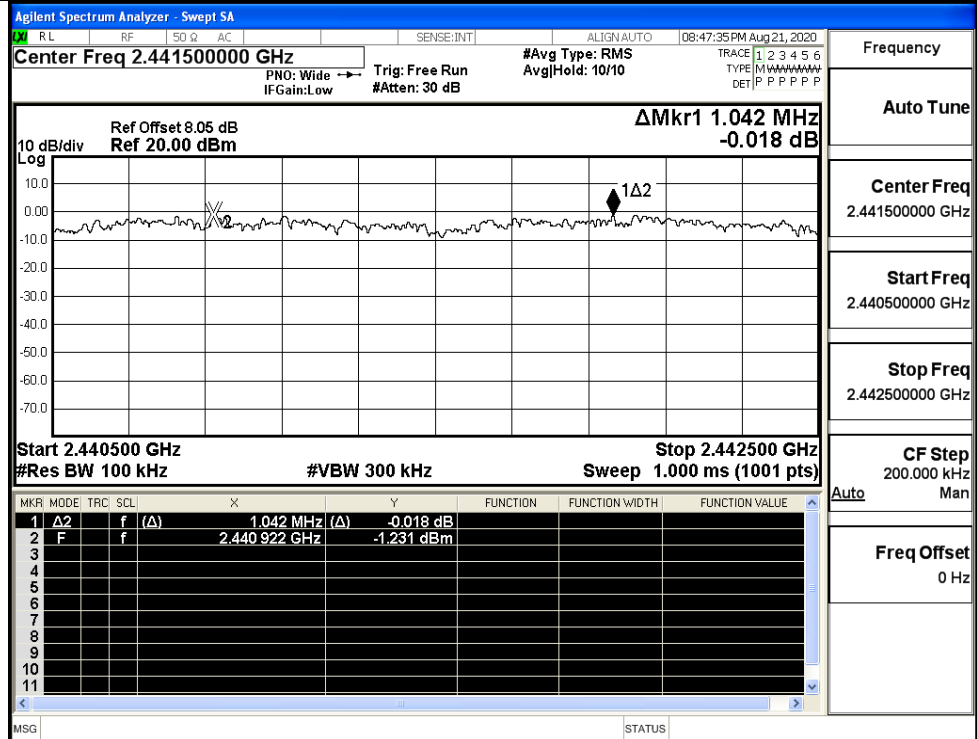
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

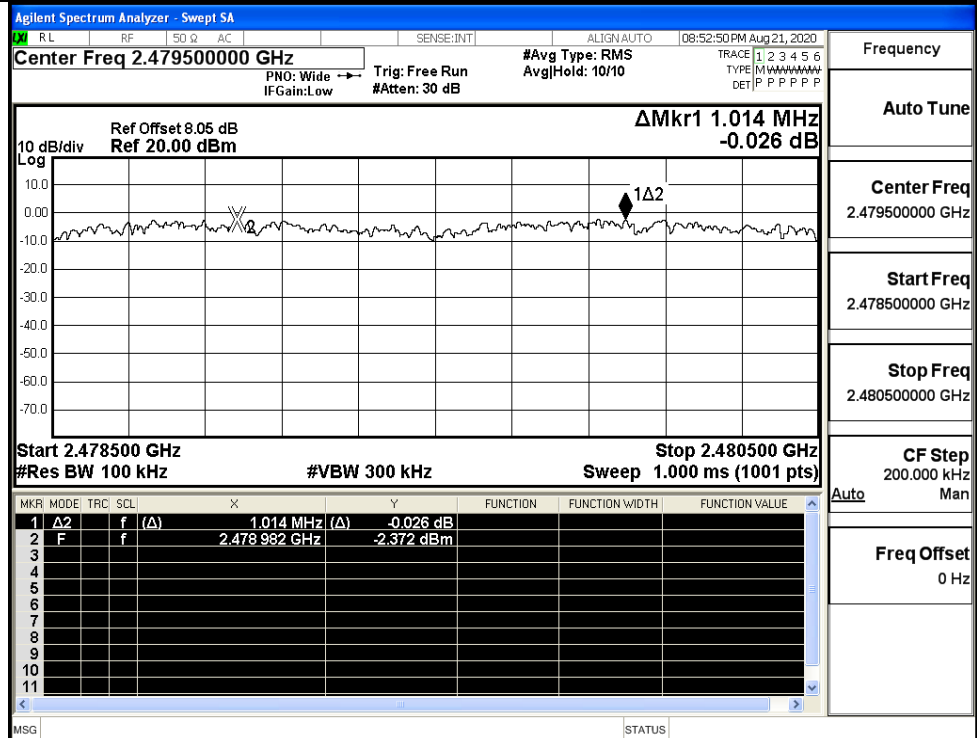
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

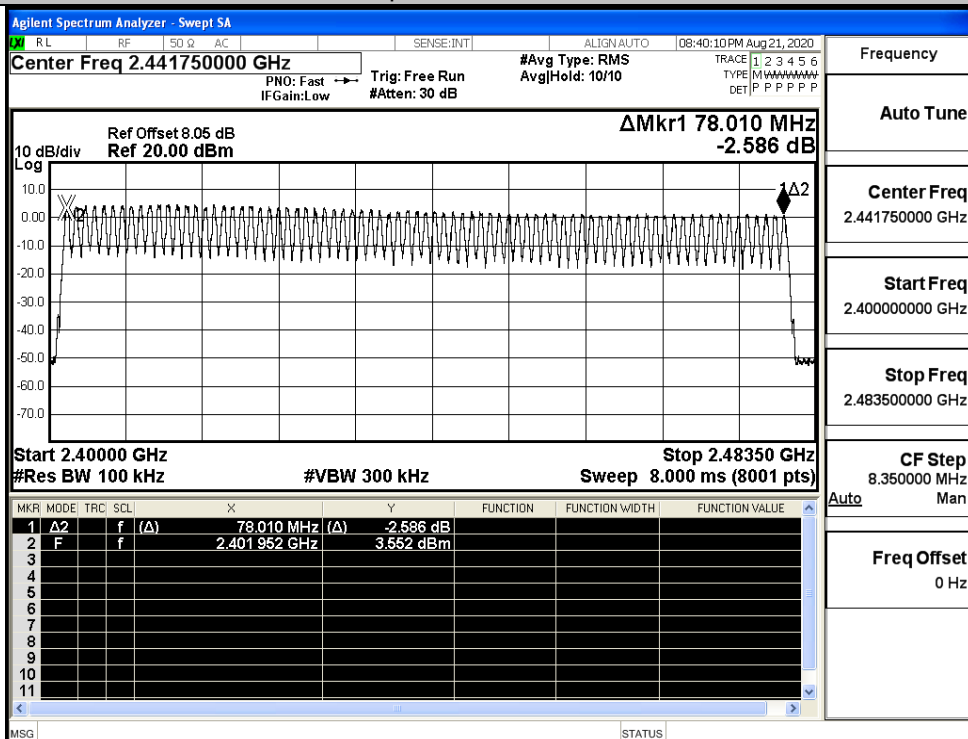


A.4 Hopping Channel Number

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

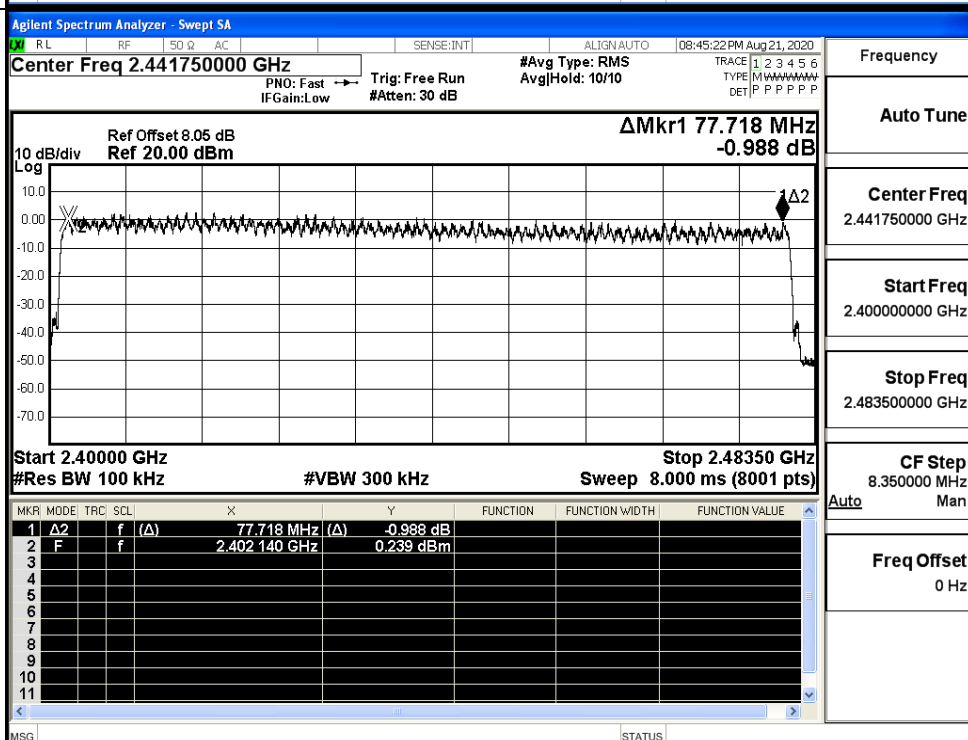
Center Freq
2.441750000 GHz

Start Freq
2.400000000 GHz

Stop Freq
2.483500000 GHz

CF Step
8.350000 MHz
Man

Freq Offset
0 Hz

 $\pi/4$ DQPSK/Hop

Frequency

Auto Tune

Center Freq
2.441750000 GHz

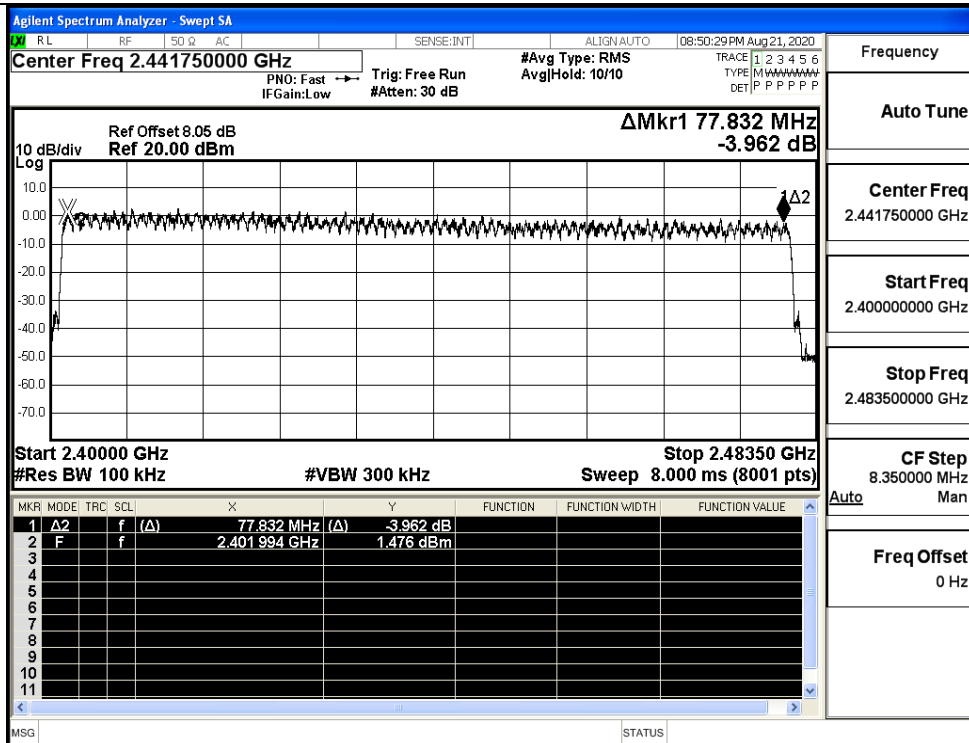
Start Freq
2.400000000 GHz

Stop Freq
2.483500000 GHz

CF Step
8.350000 MHz
Man

Freq Offset
0 Hz

8DPSK/Hop

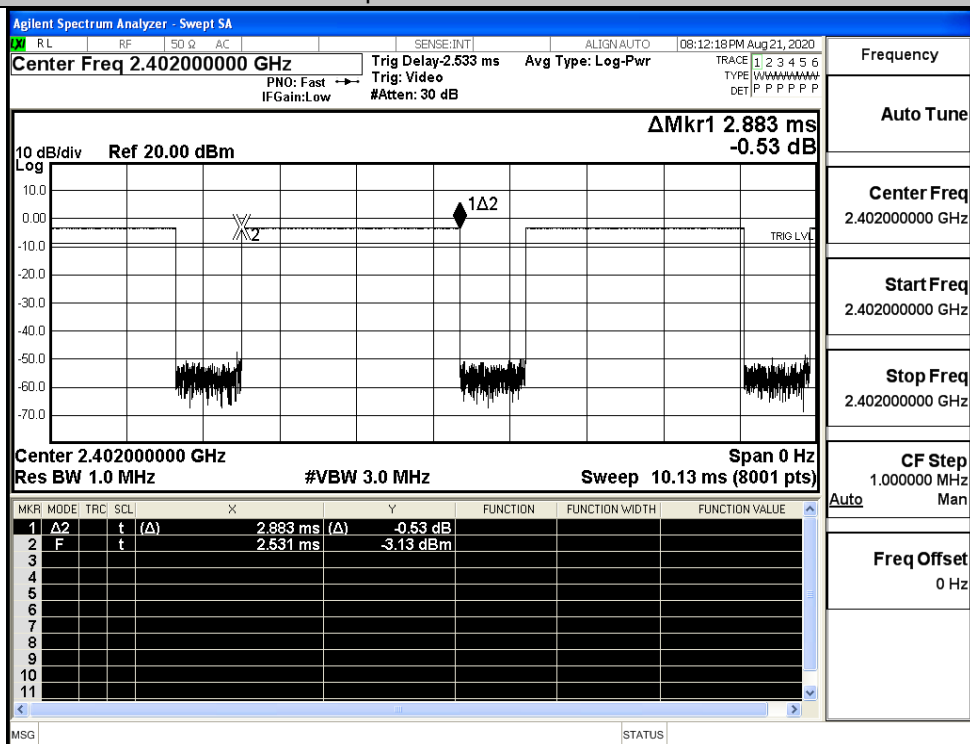


A.5 Dwell Time

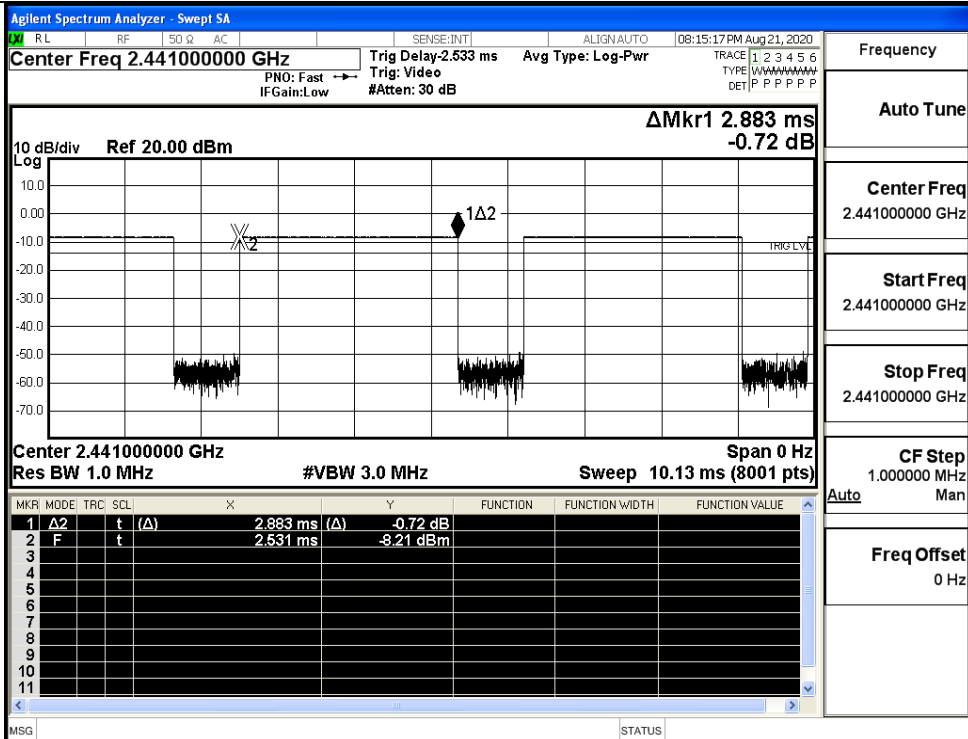
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.88	106.7	0.307	0.4	PASS
	3DH5	MCH	2.88	106.7	0.307	0.4	PASS
	3DH5	HCH	2.88	106.7	0.307	0.4	PASS

Test Graphs

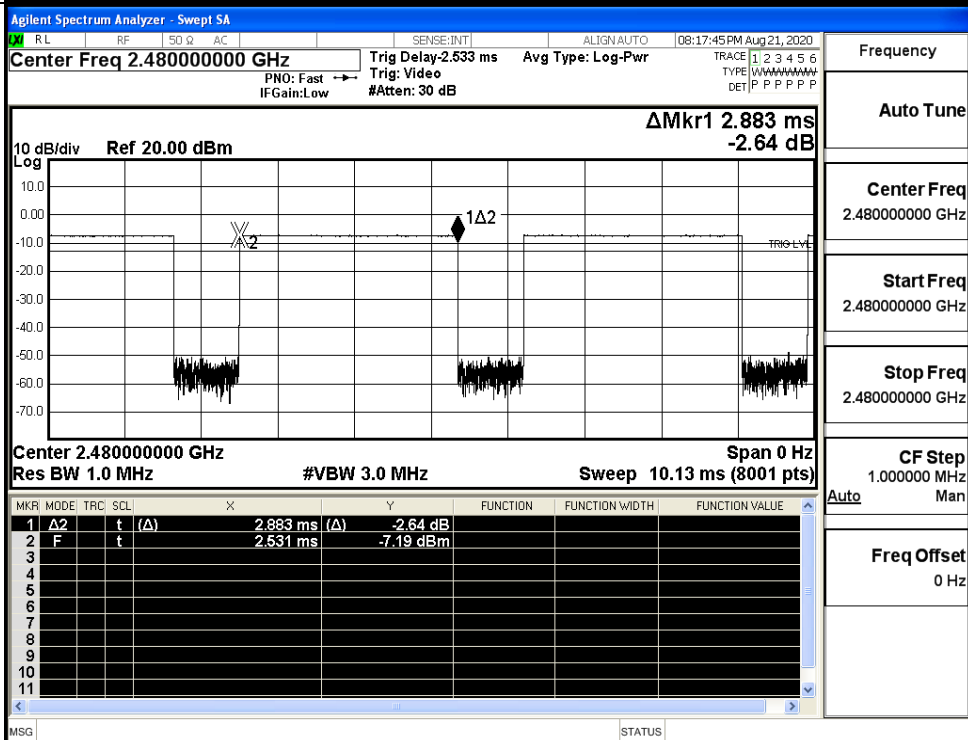
GFSK_DH5/LCH



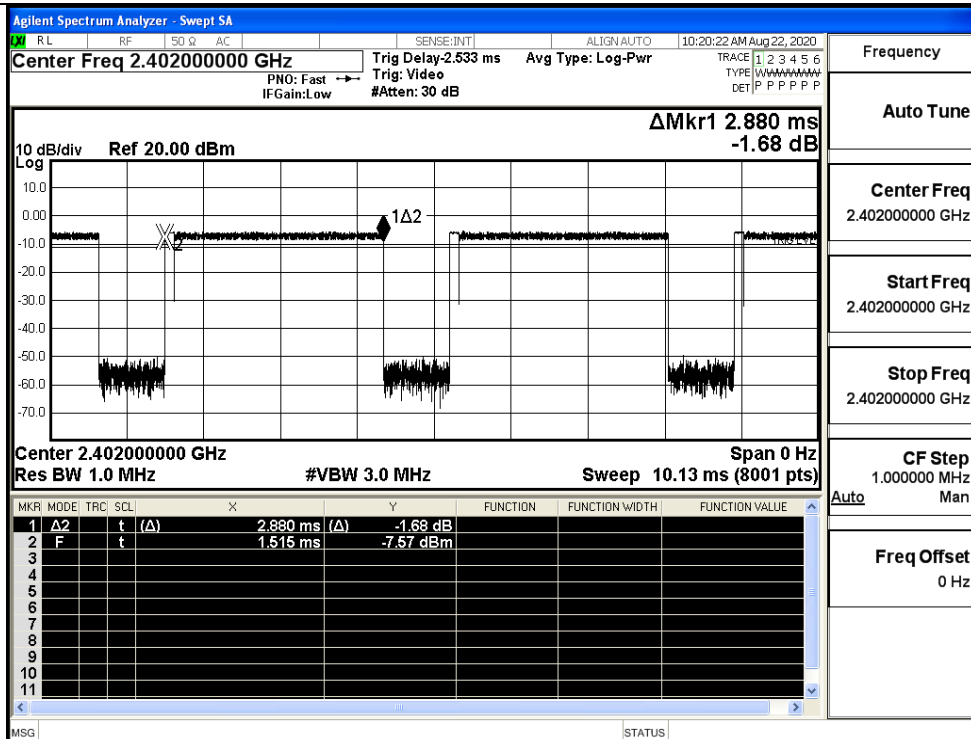
GFSK_DH5/MCH



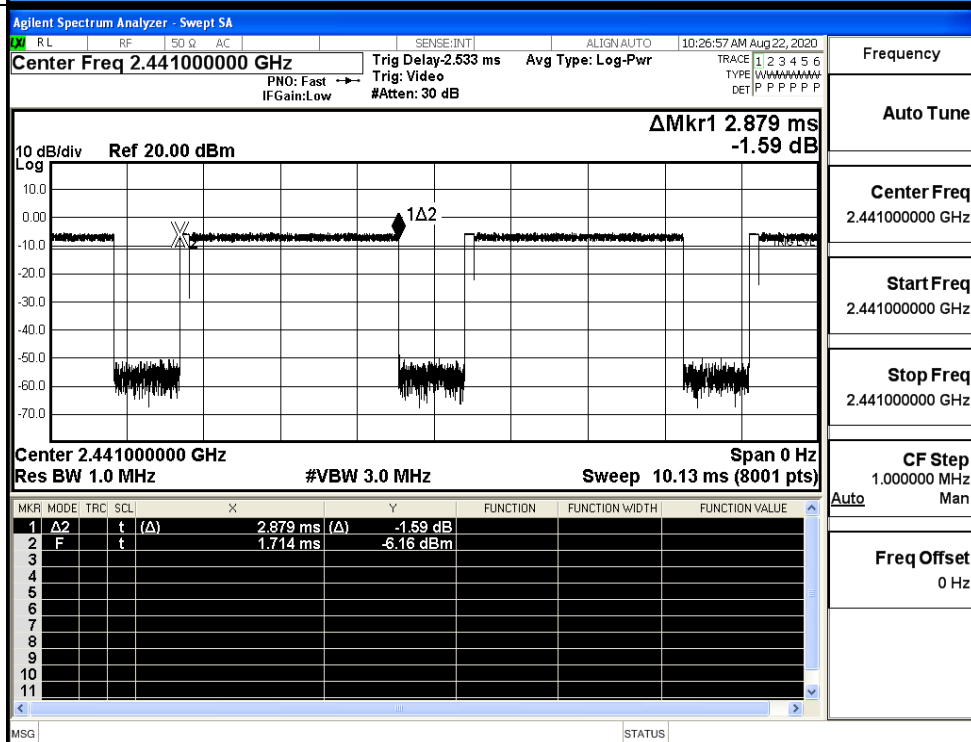
GFSK_DH5/HCH



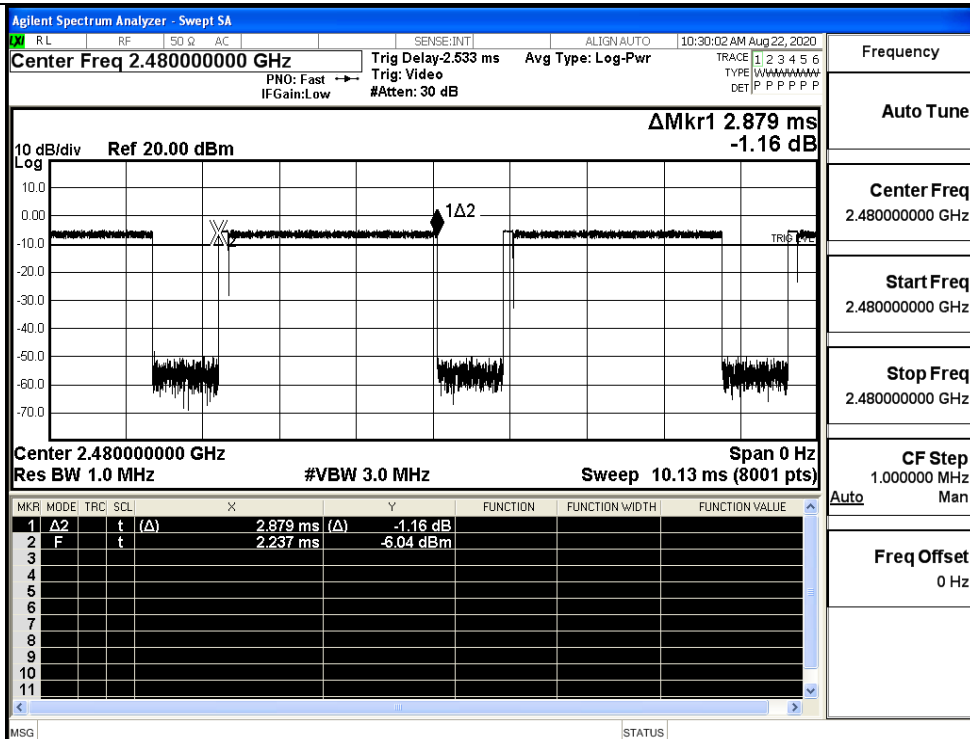
$\pi/4$ DQPSK
_2DH5/LCH



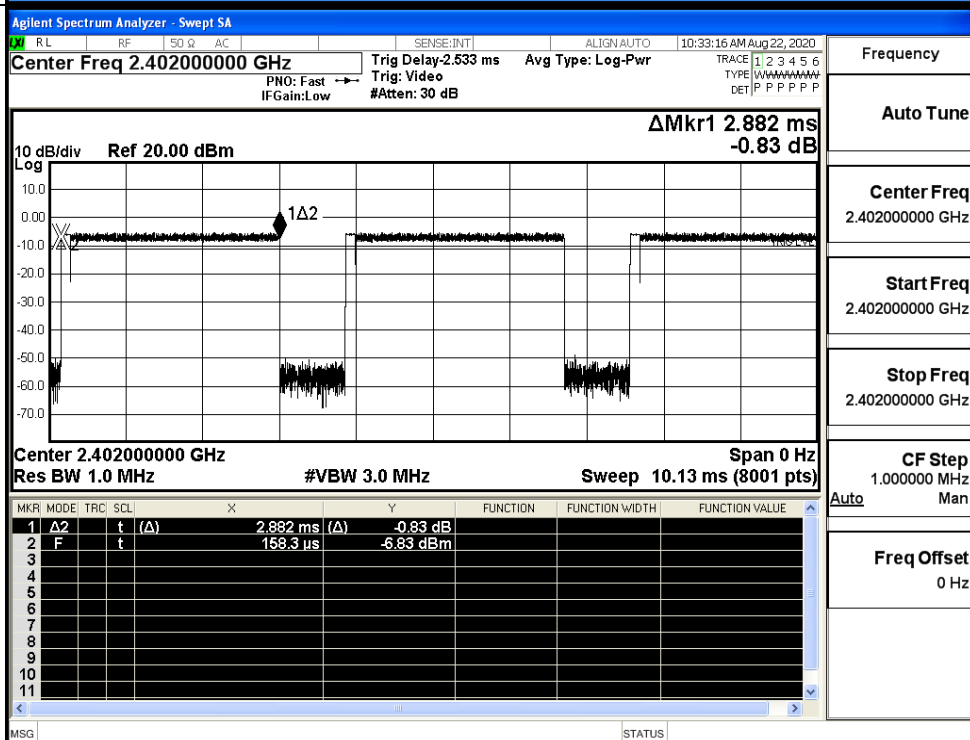
$\pi/4$ DQPSK
_2DH5/MCH



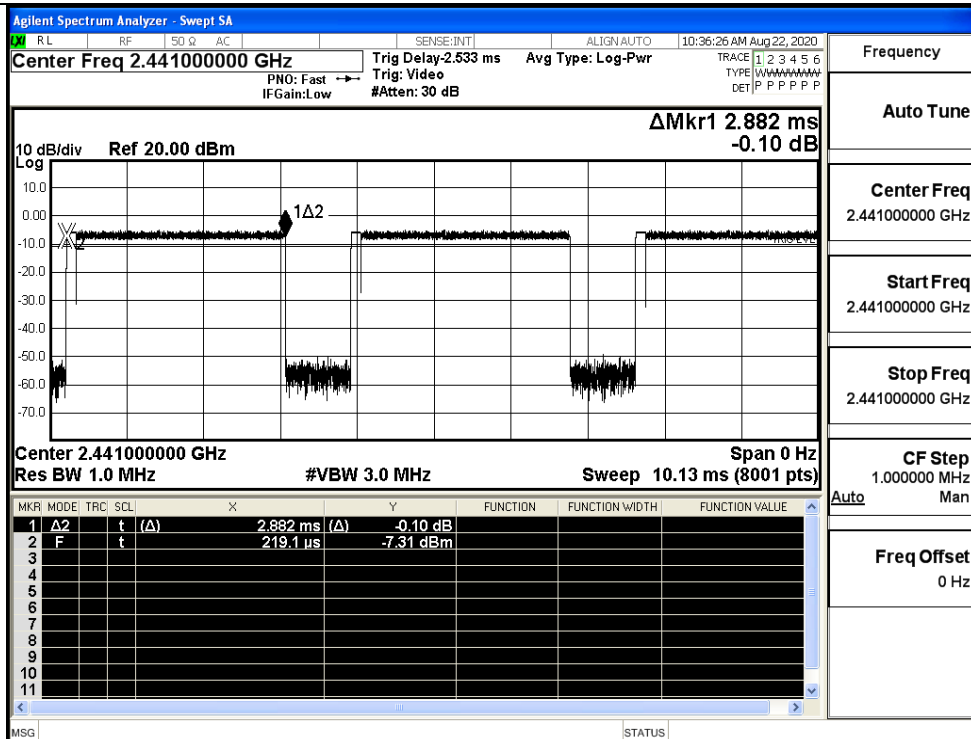
$\pi/4$ DQPSK
_2DH5/HCH



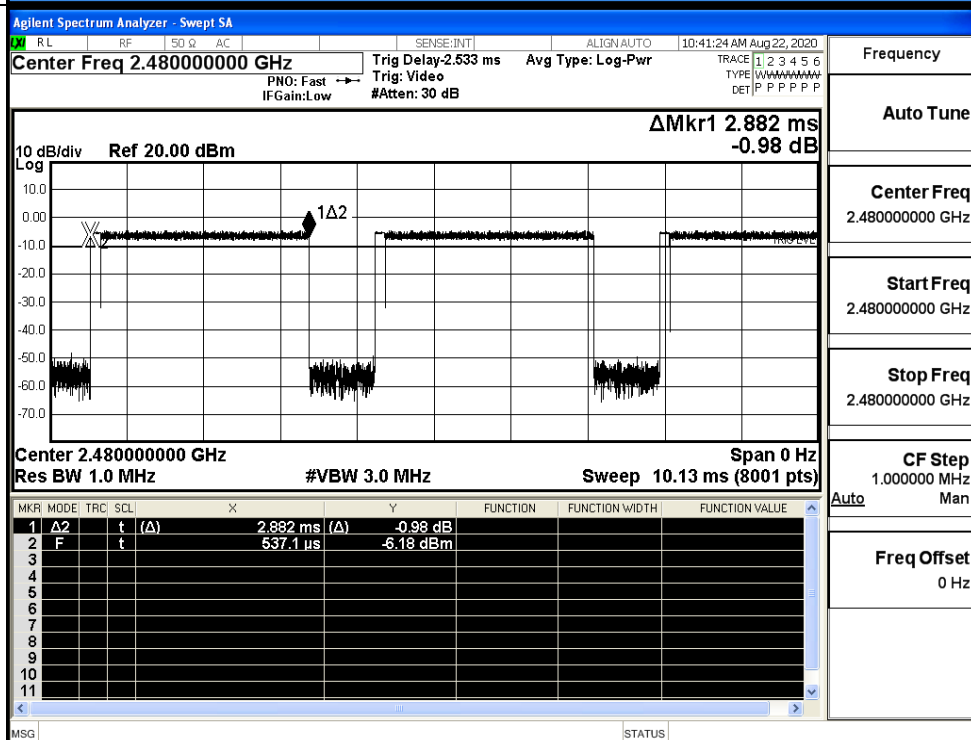
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



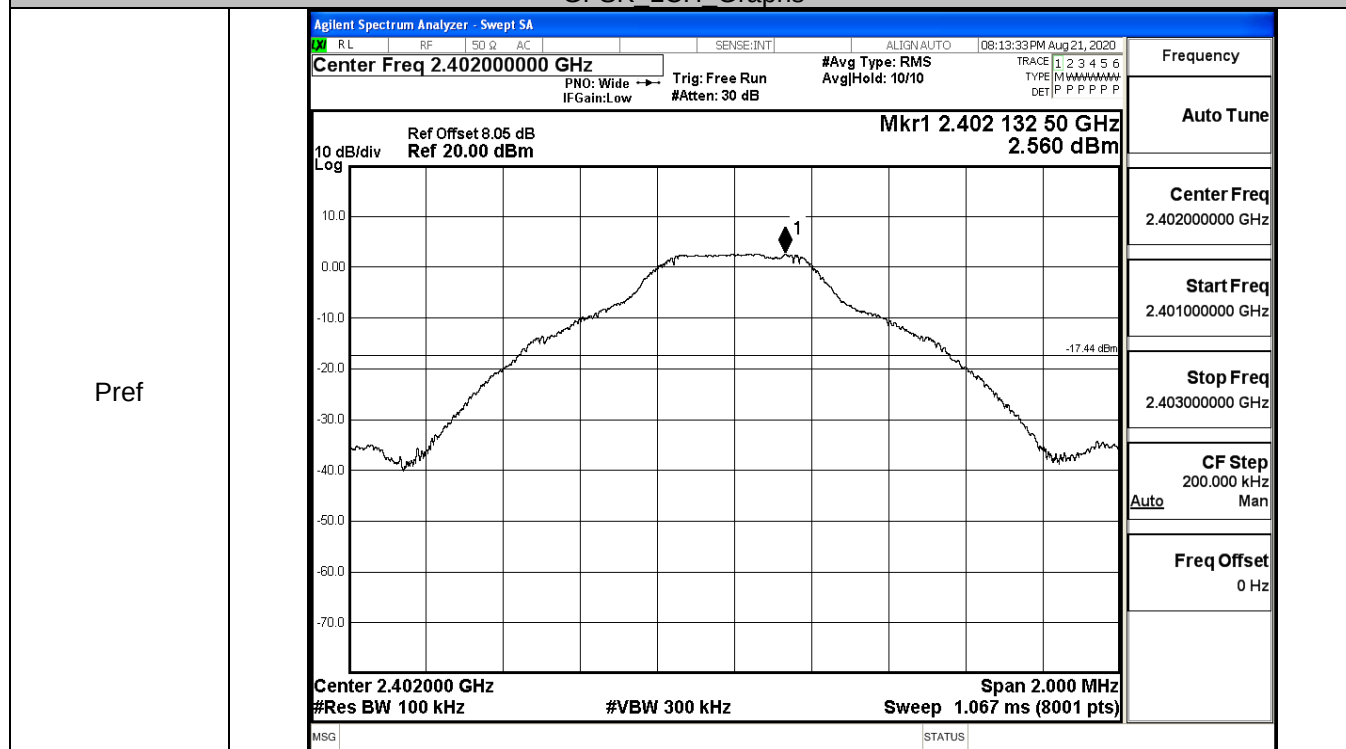
8DPSK_3DH5/HCH



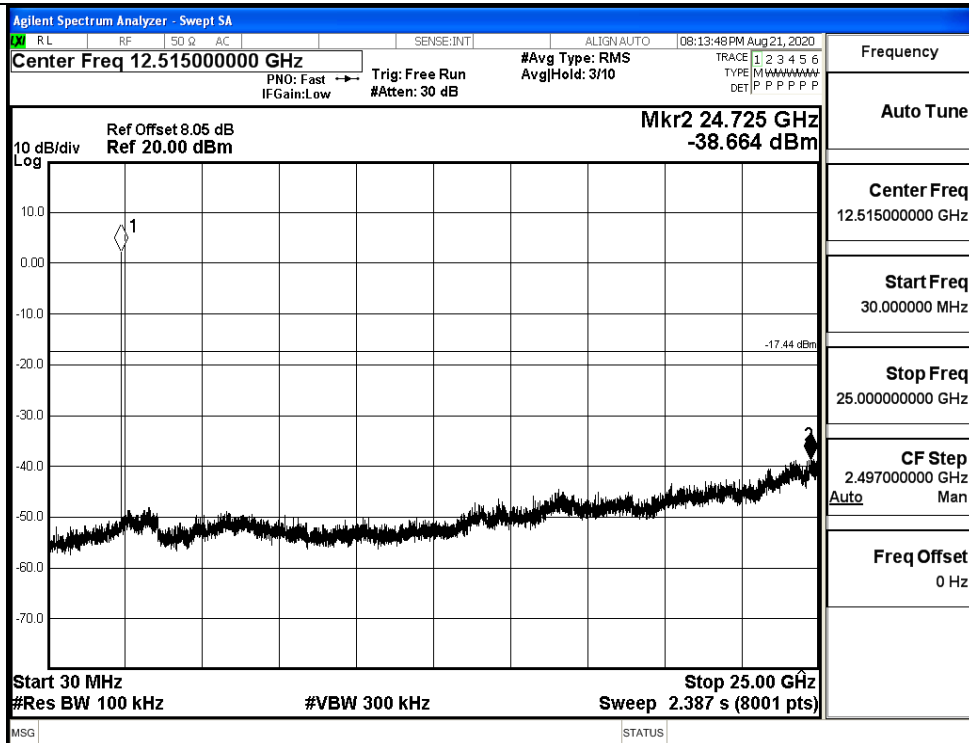
A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.56	-38.664	-17.440	PASS
	MCH	2.266	-37.930	-17.734	PASS
	HCH	0.769	-38.079	-19.231	PASS
$\pi/4$ DQPSK	LCH	-1.699	-38.037	-21.699	PASS
	MCH	-0.298	-37.431	-20.298	PASS
	HCH	-2.63	-37.745	-22.630	PASS
8DPSK	LCH	-1.033	-37.985	-21.033	PASS
	MCH	-0.222	-38.351	-20.222	PASS
	HCH	-1.813	-37.911	-21.813	PASS

GFSK LCH Graphs

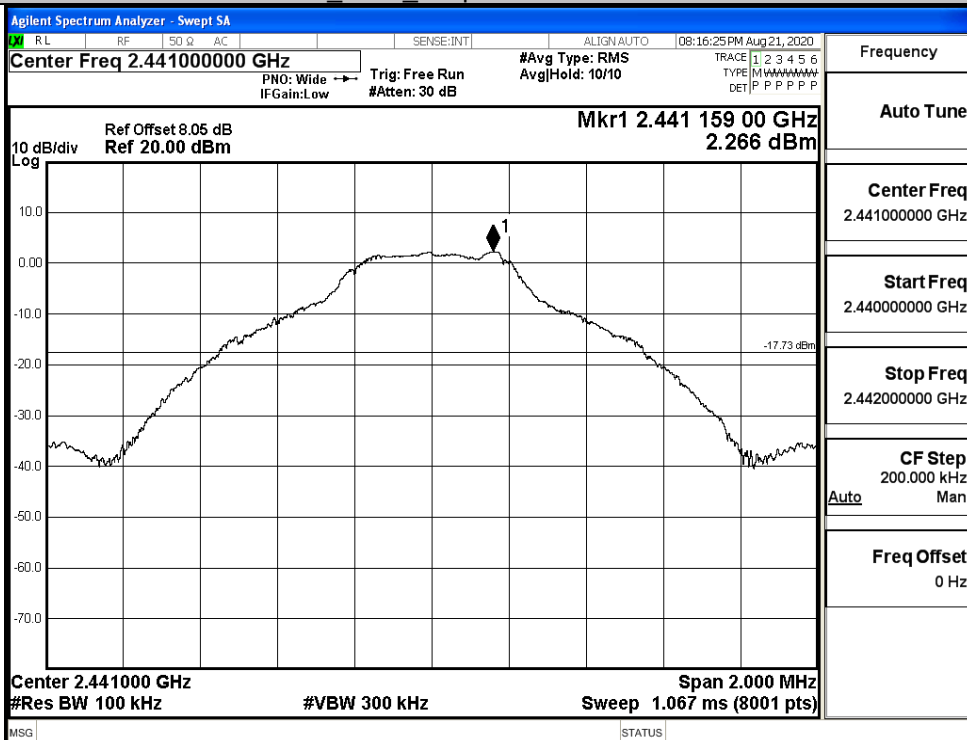


Puw

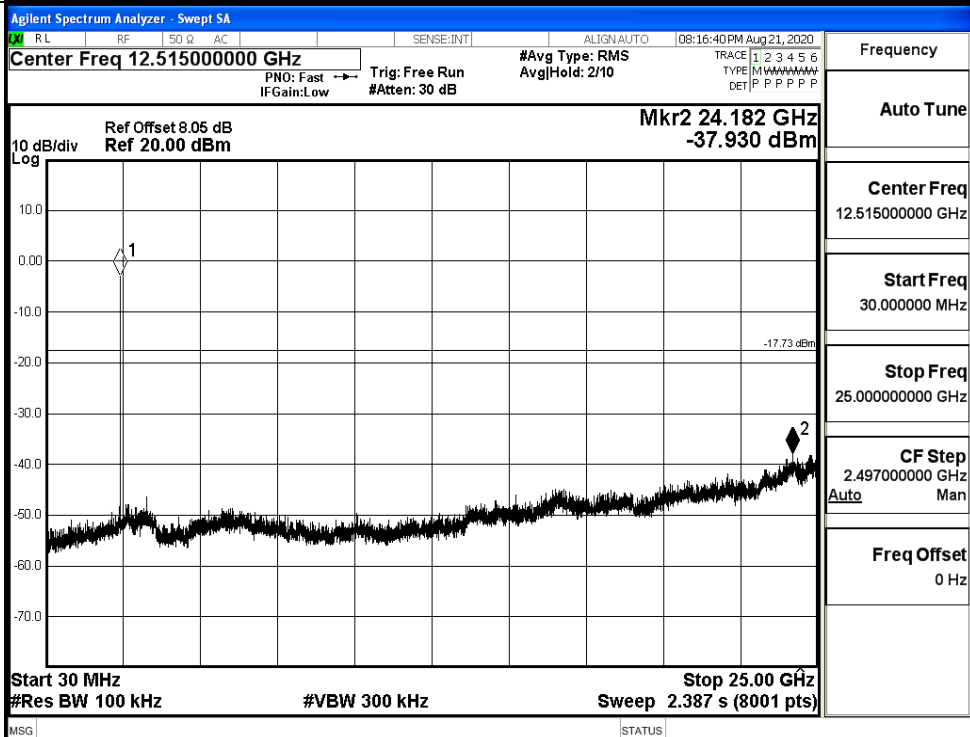


GFSK_MCH_Graphs

Pref

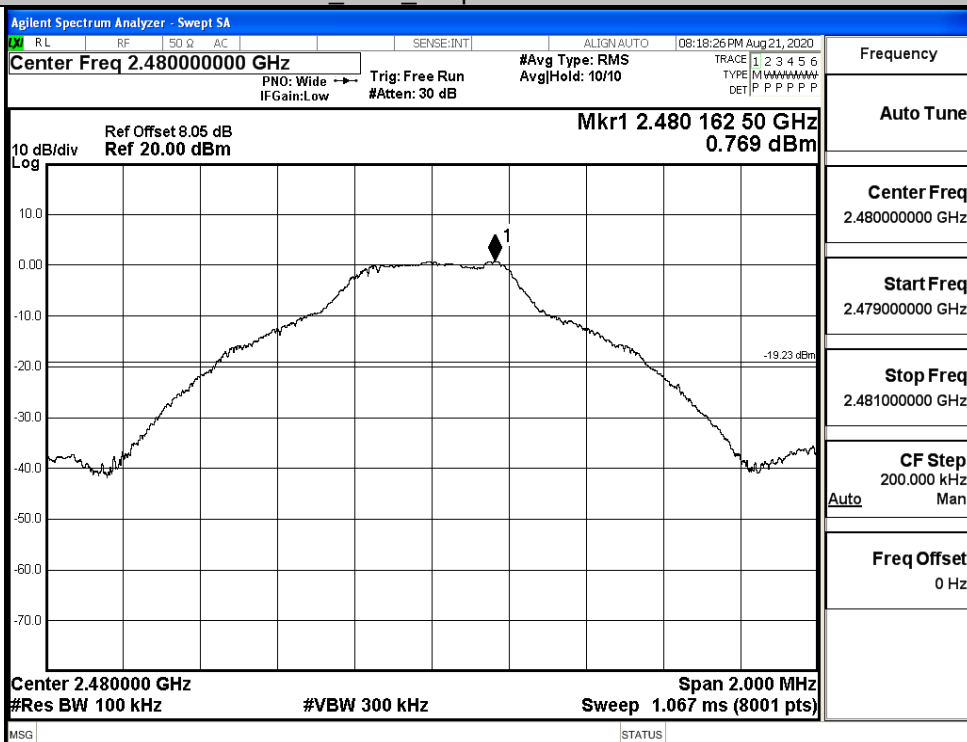


Puw

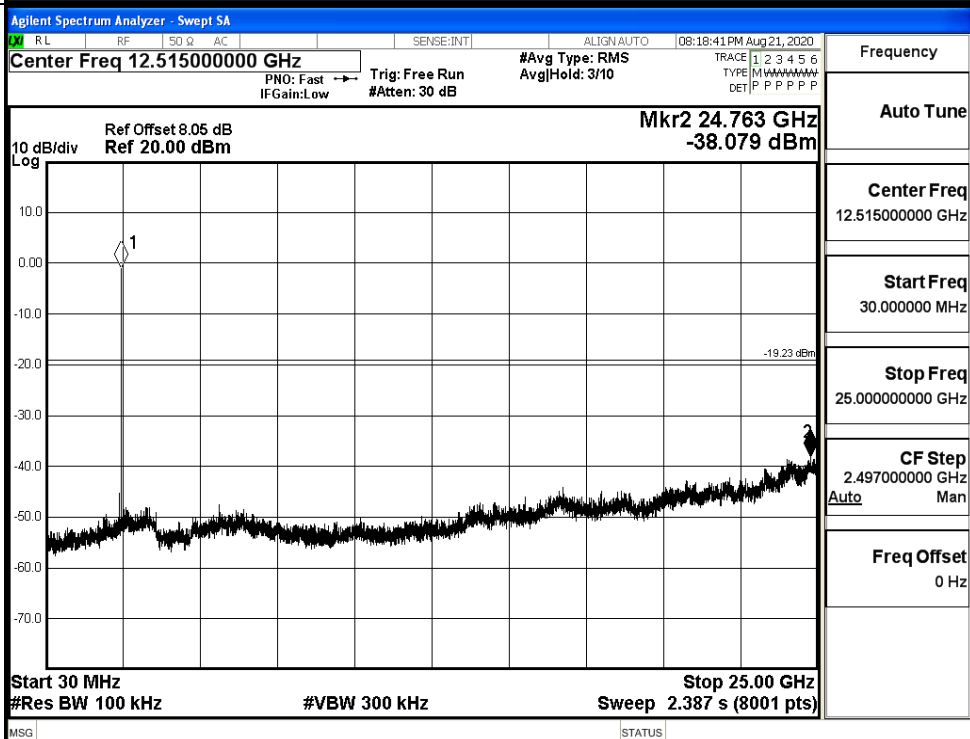


GFSK HCH Graphs

Pref

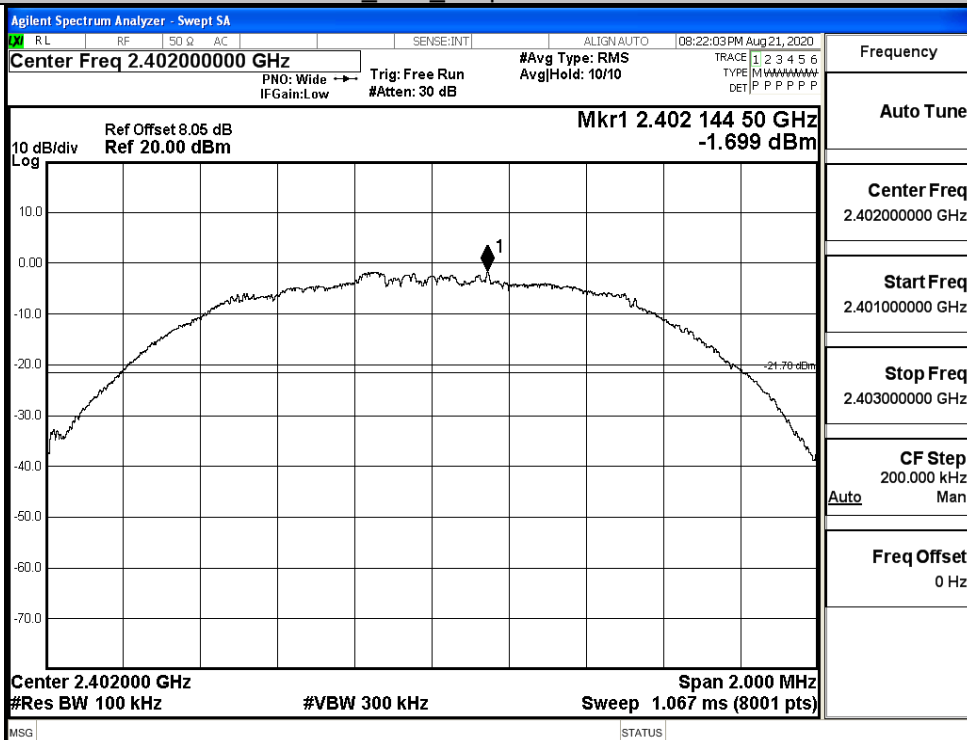


Puw

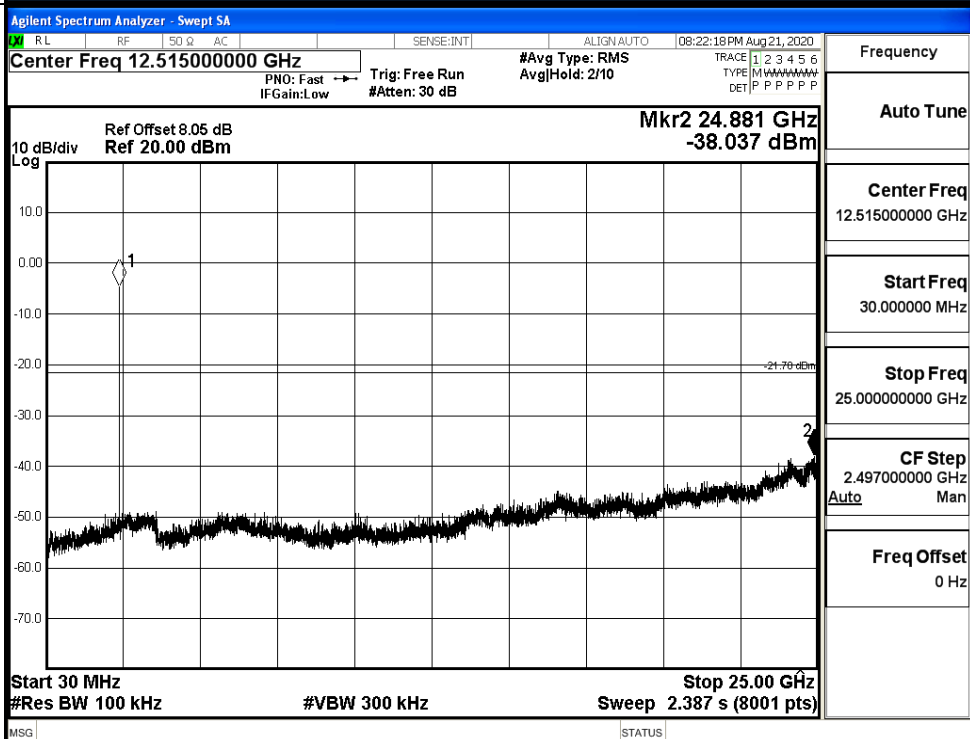


π /4DQPSK_LCH_Graphs

Pref

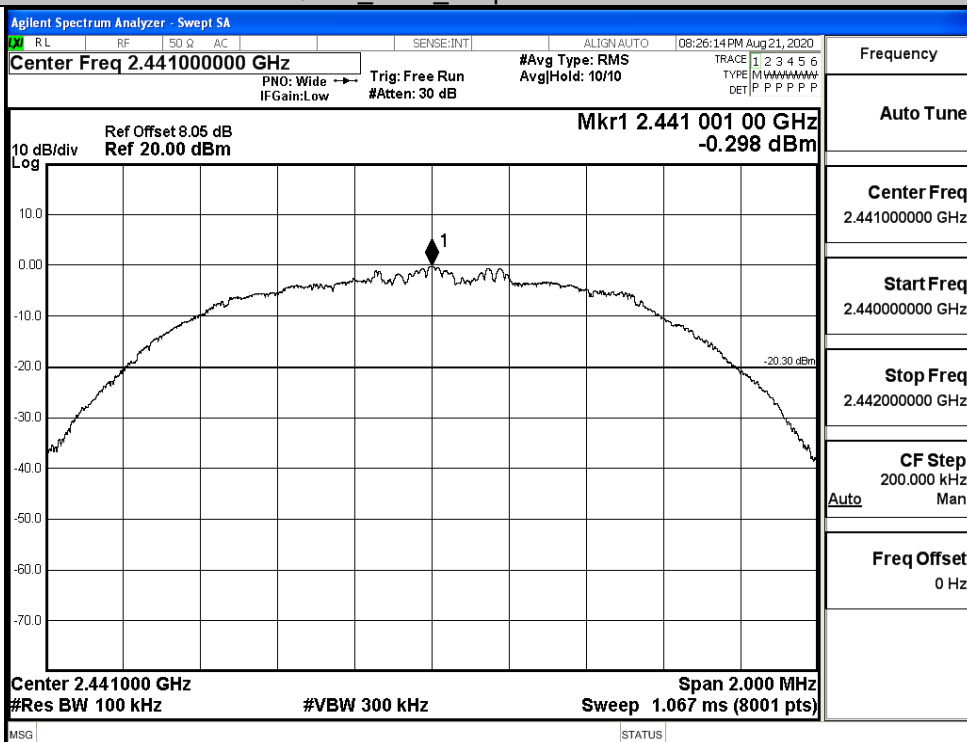


Puw

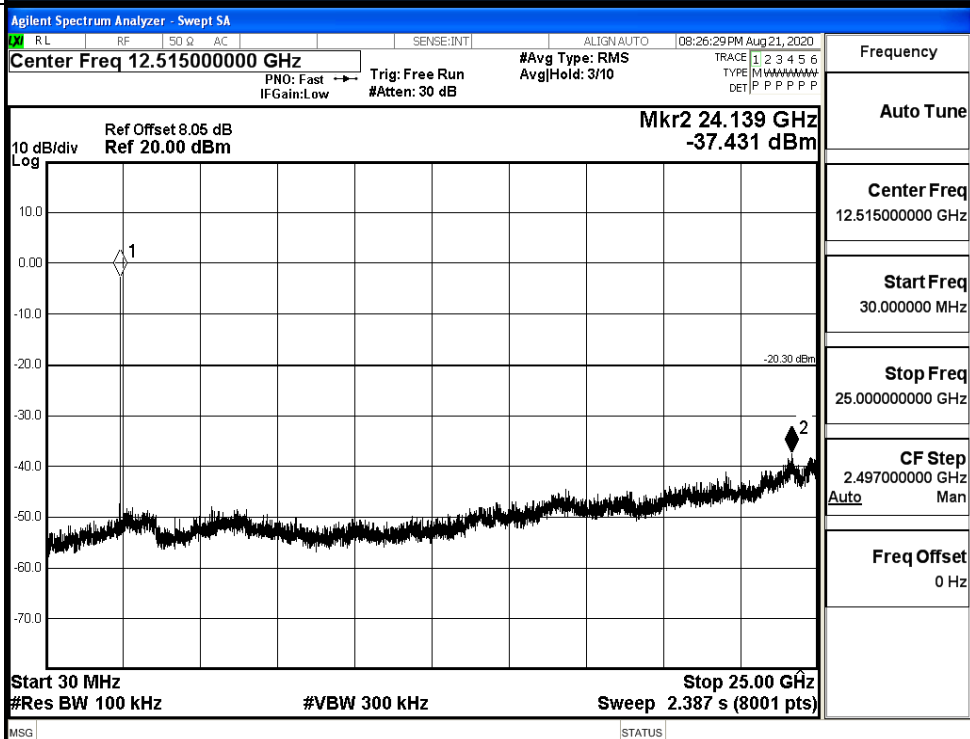


π /4DQPSK_MCH_Graphs

Pref

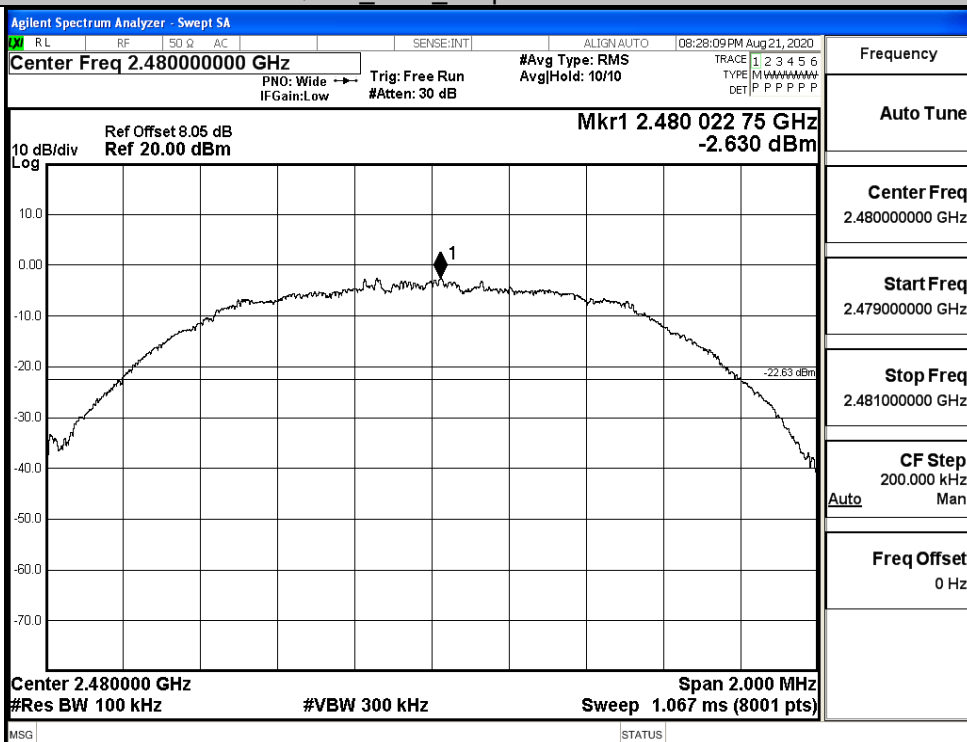


Puw

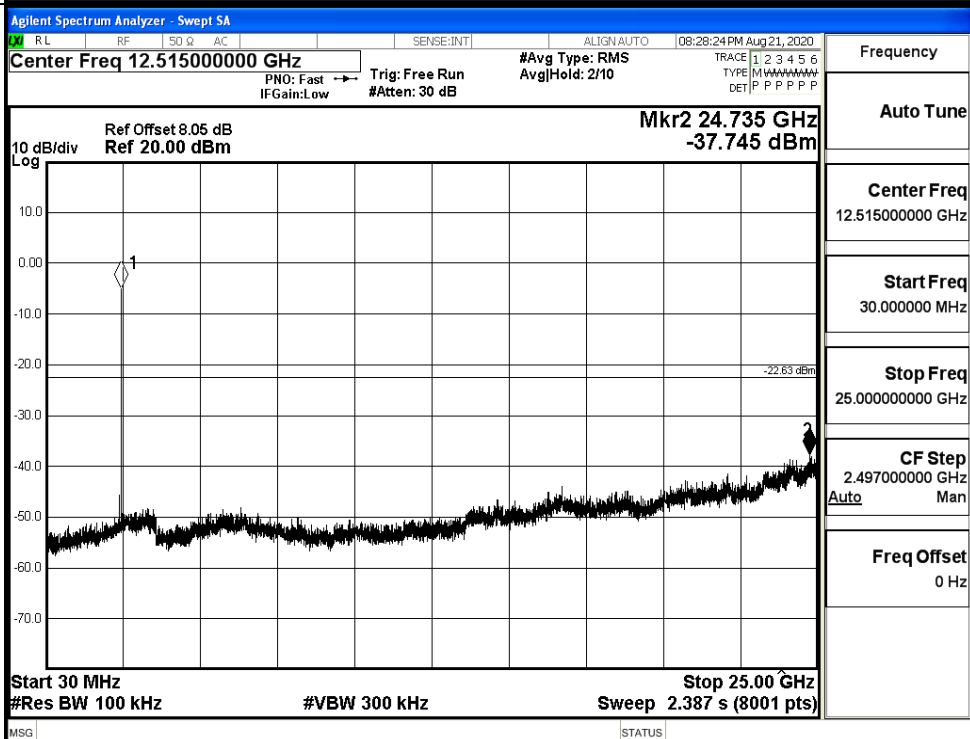


π /4DQPSK_HCH_Graphs

Pref

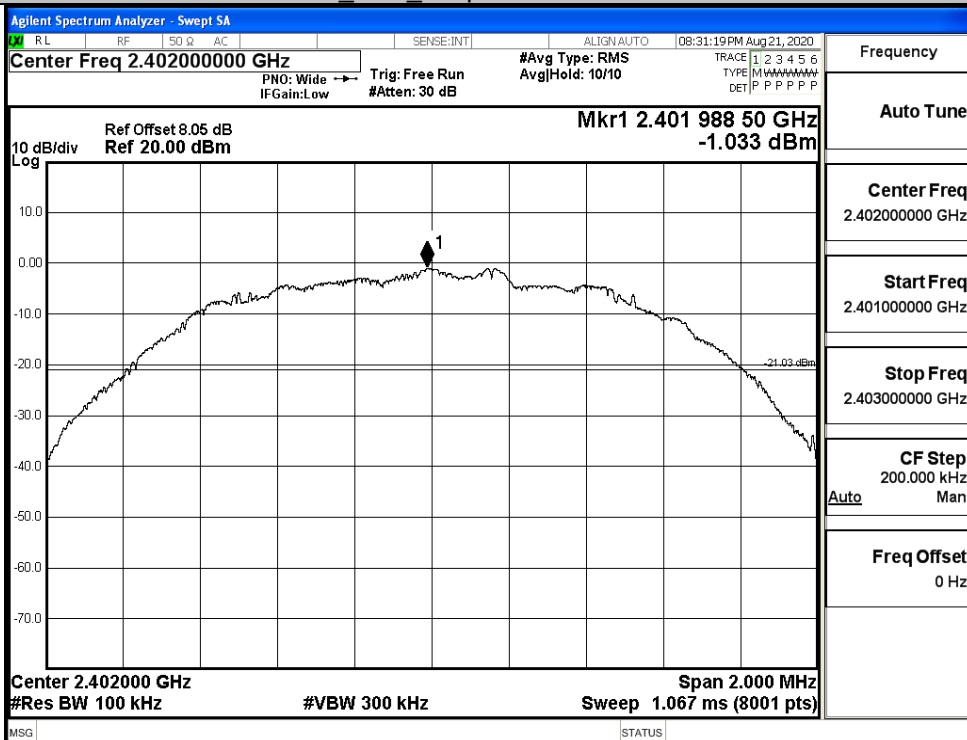


Puw

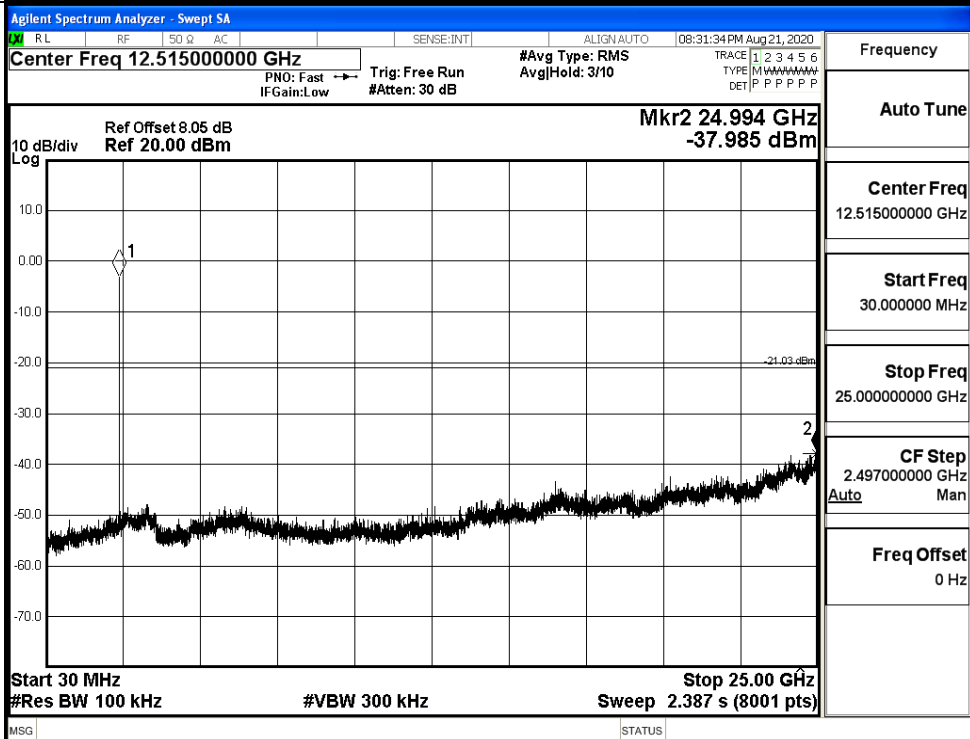


8DPSK_LCH_Graphs

Pref

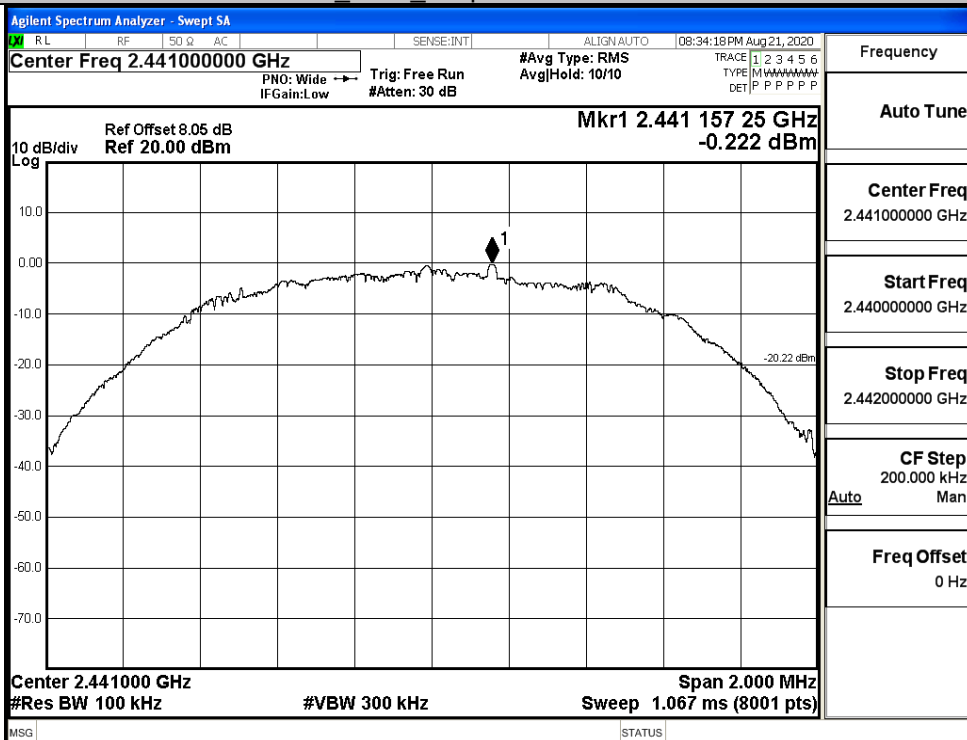


Puw

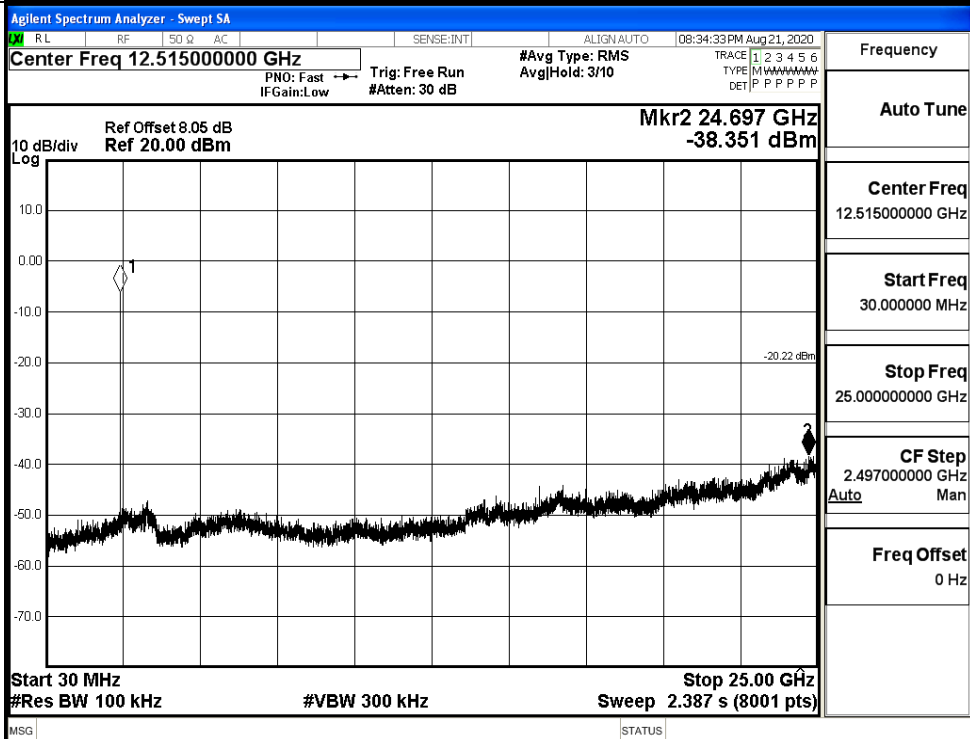


8DPSK_MCH_Graphs

Pref

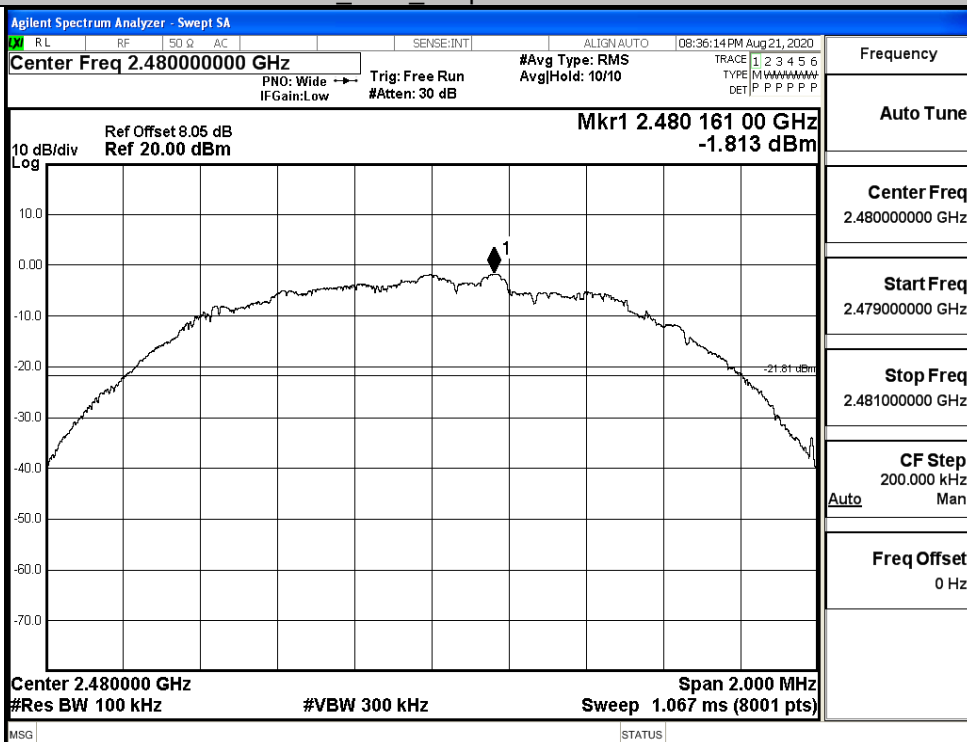


Puw

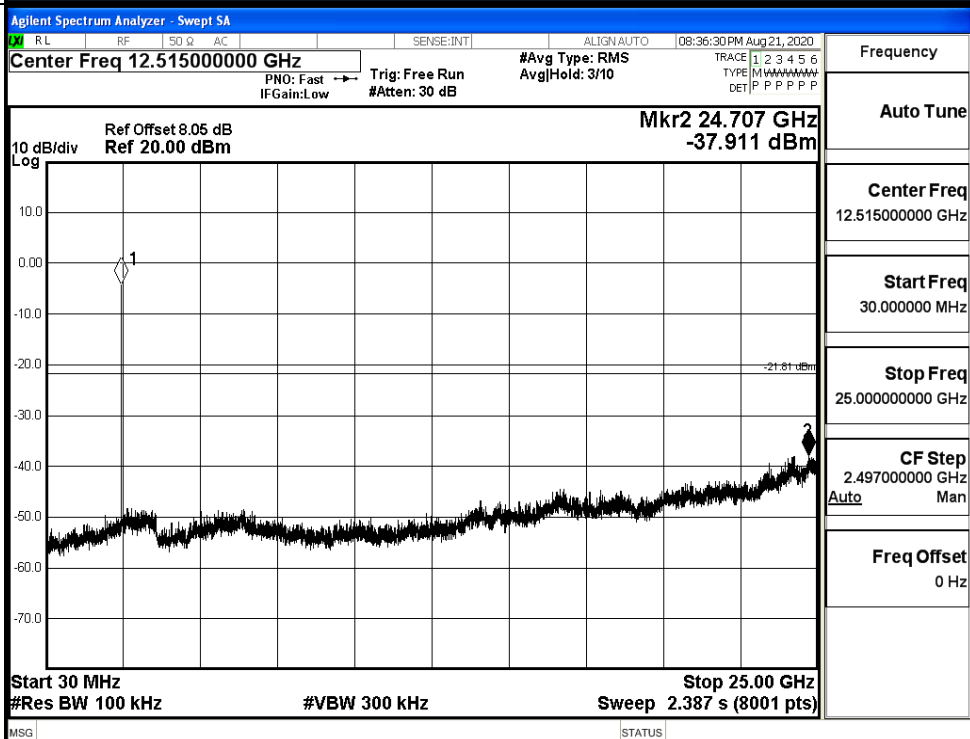


8DPSK_HCH_Graphs

Pref



Puw

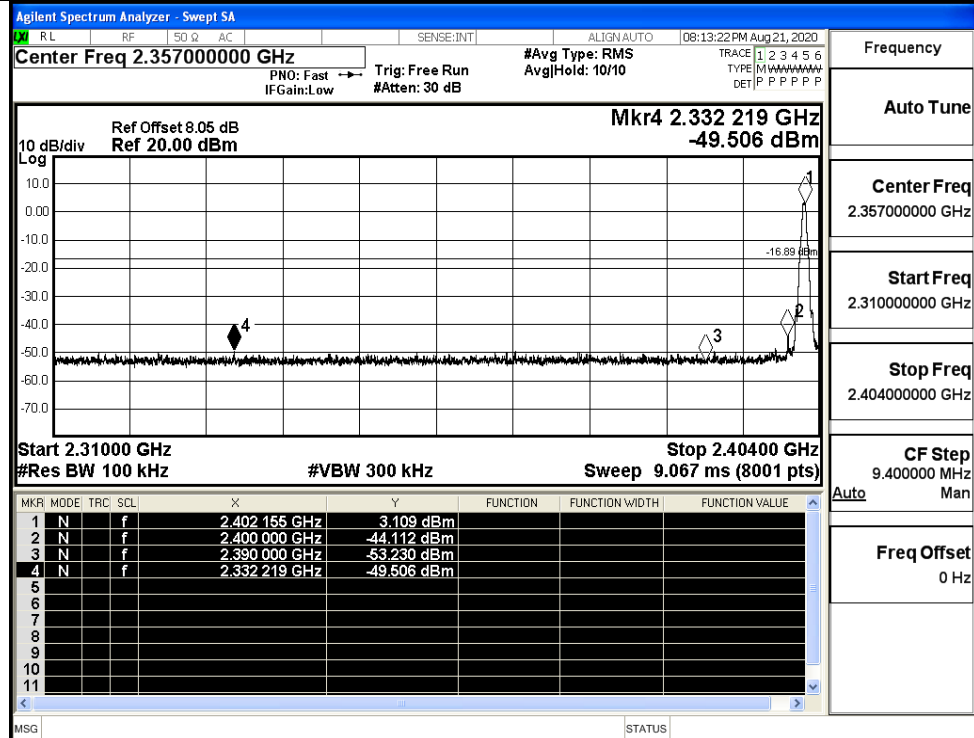


A.7 Band-edge for RF Conducted Emissions

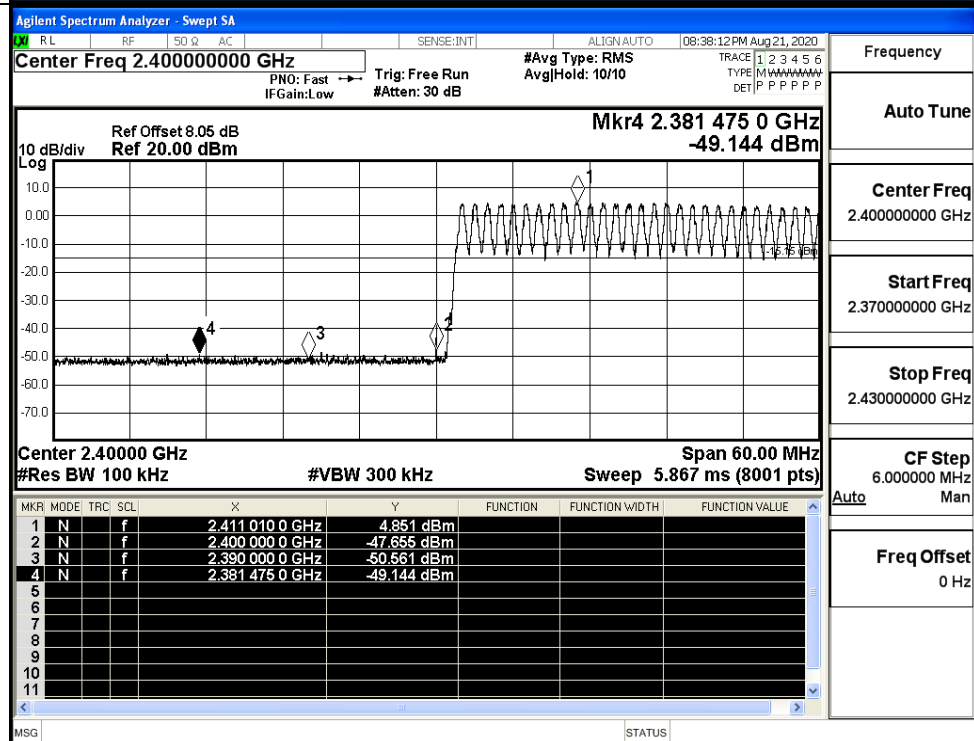
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	3.109	Off	-49.506	-16.89	PASS
			4.851	On	-49.144	-15.15	PASS
	HCH	2480	0.638	Off	-49.188	-19.36	PASS
			1.708	On	-48.079	-18.29	PASS
$\pi/4$ DQPSK	LCH	2402	-1.144	Off	-50.040	-21.14	PASS
			3.246	On	-48.901	-16.75	PASS
	HCH	2480	-2.055	Off	-48.950	-22.06	PASS
			-0.792	On	-48.416	-20.79	PASS
8DPSK	LCH	2402	-1.097	Off	-49.491	-21.1	PASS
			2.443	On	-48.906	-17.56	PASS
	HCH	2480	-1.747	Off	-49.123	-21.75	PASS
			-0.335	On	-48.321	-20.34	PASS

Test Graphs

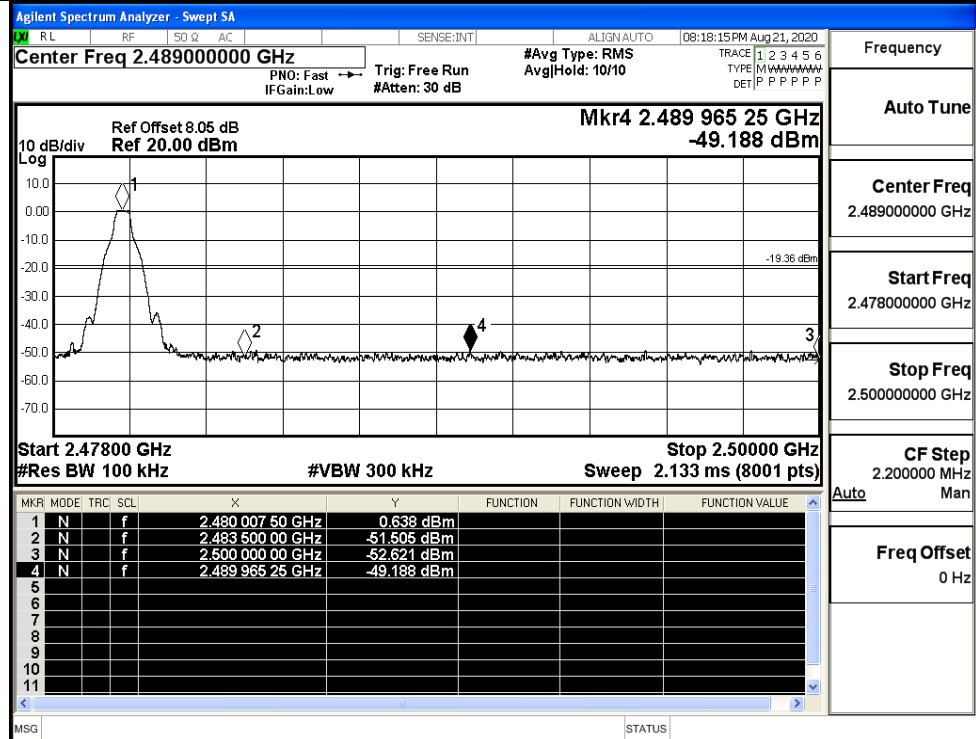
GFSK/LCH/No Hop



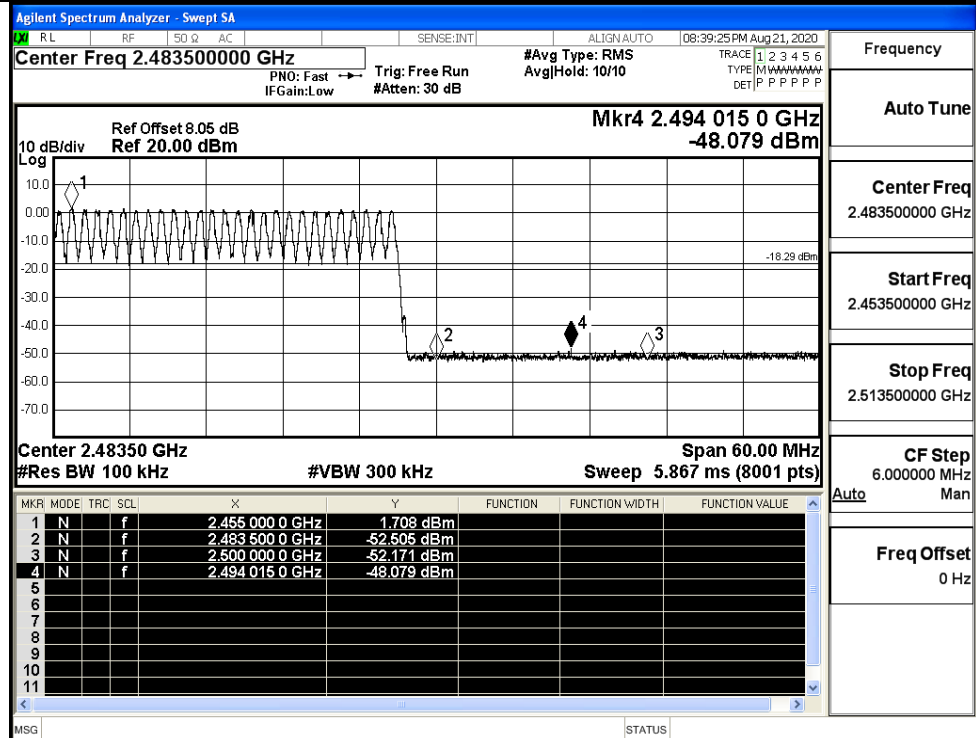
GFSK/LCH/Hop



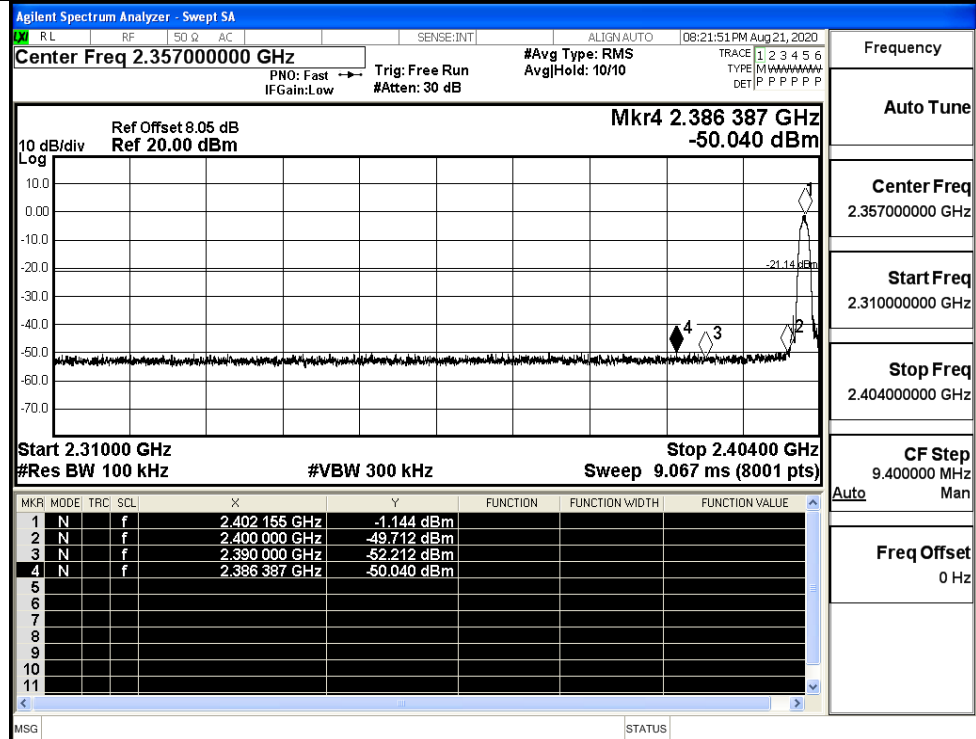
GFSK/HCH/No Hop



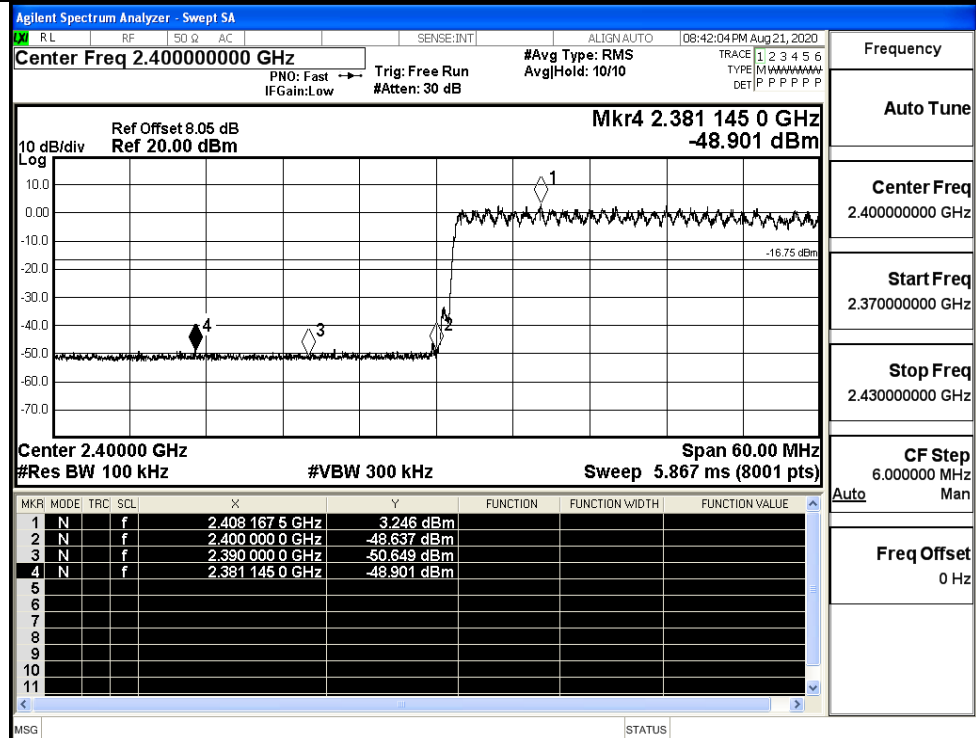
GFSK/HCH/Hop



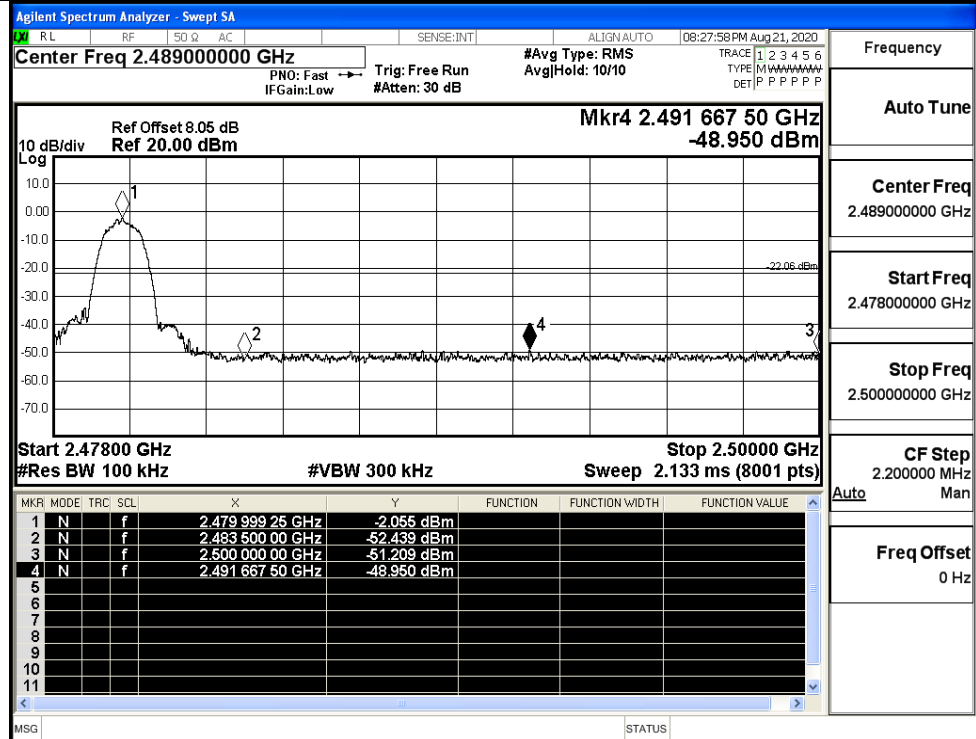
$\pi/4$ DQPSK/LCH/No
Hop



$\pi/4$ DQPSK/LCH/Hop



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



Frequency

Auto Tune

Center Freq
2.489000000 GHz

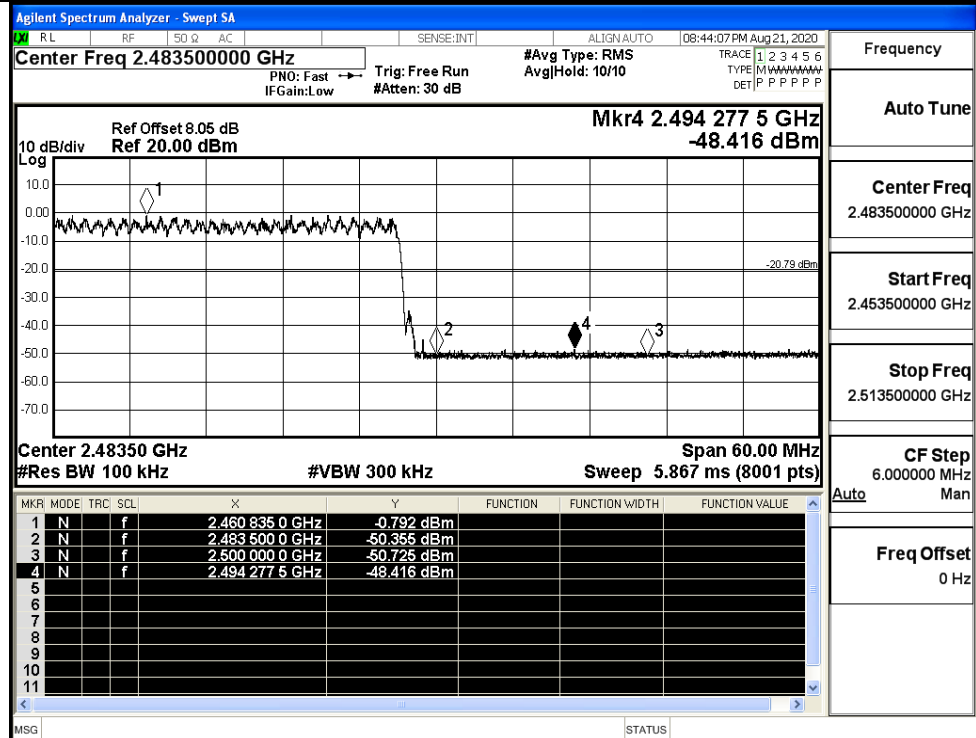
Start Freq
2.478000000 GHz

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

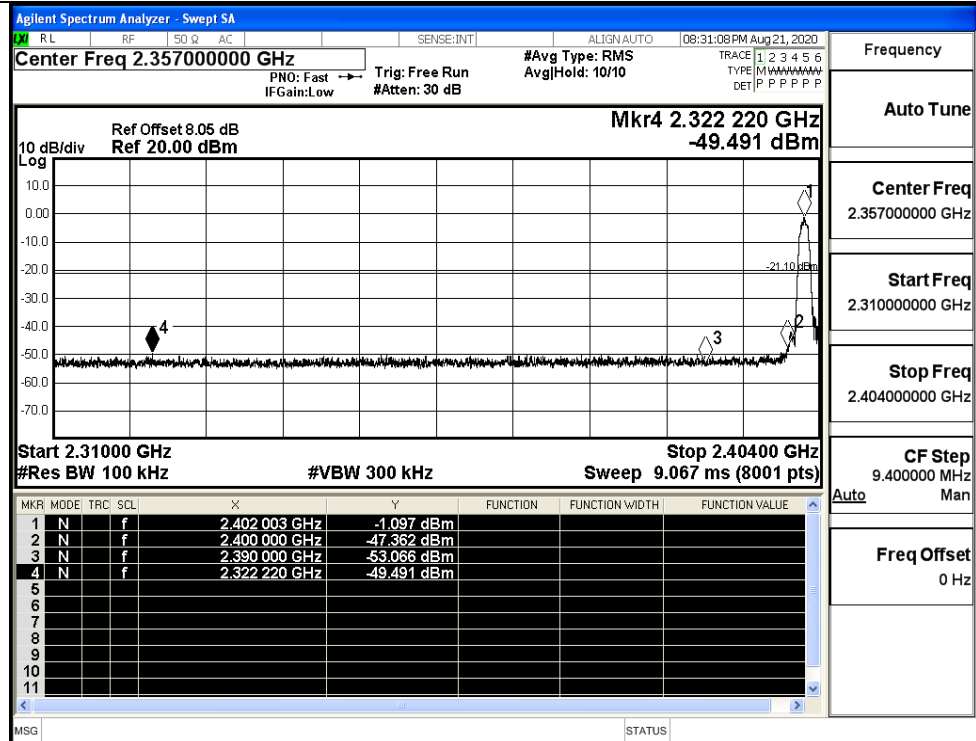
Start Freq
2.453500000 GHz

Stop Freq
2.513500000 GHz

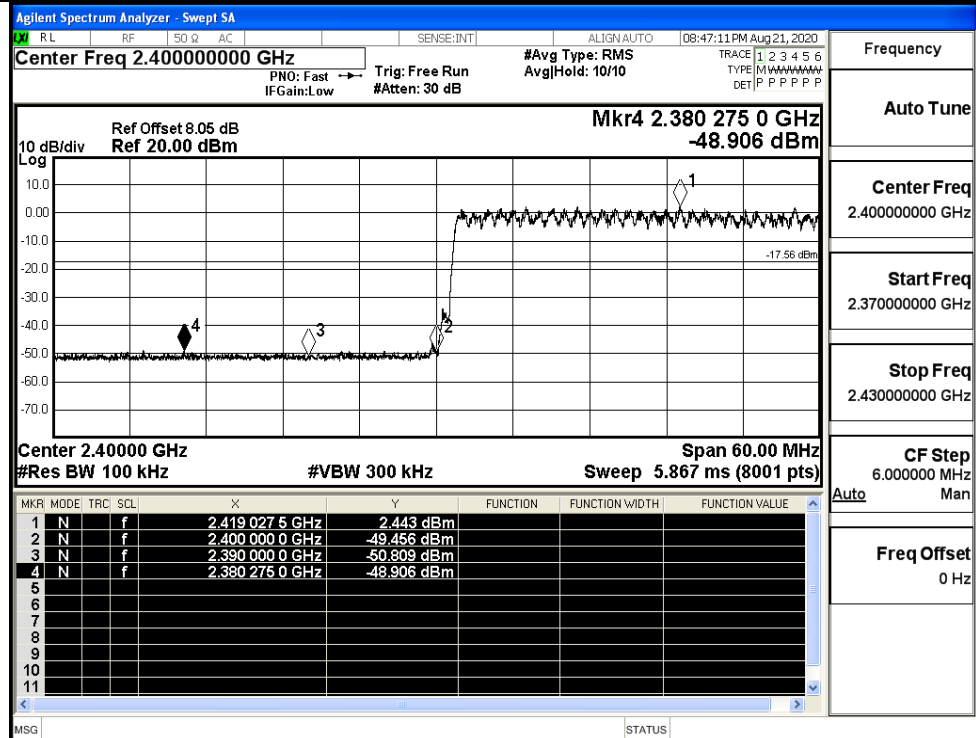
CF Step
6.000000 MHz
Auto Man

Freq Offset
0 Hz

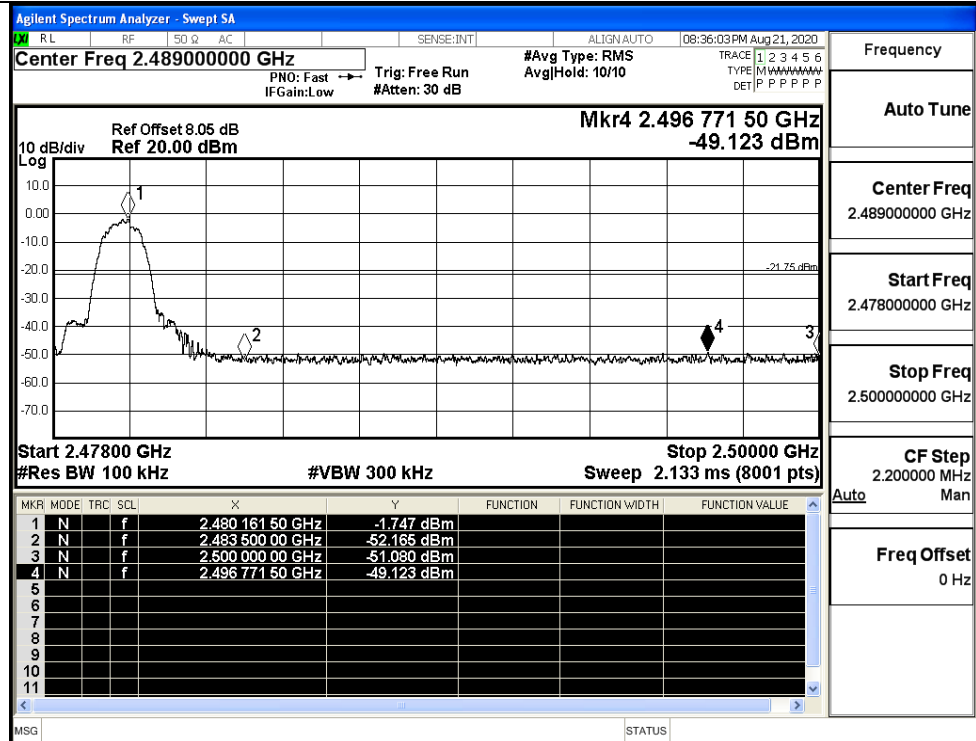
8DPSK/LCH/No Hop



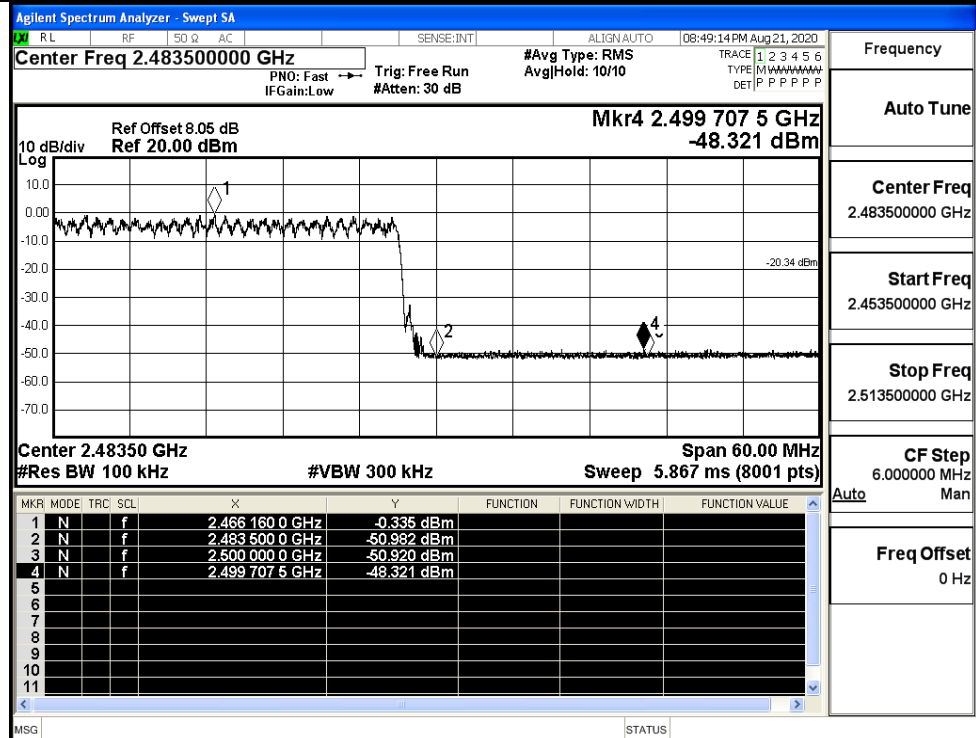
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



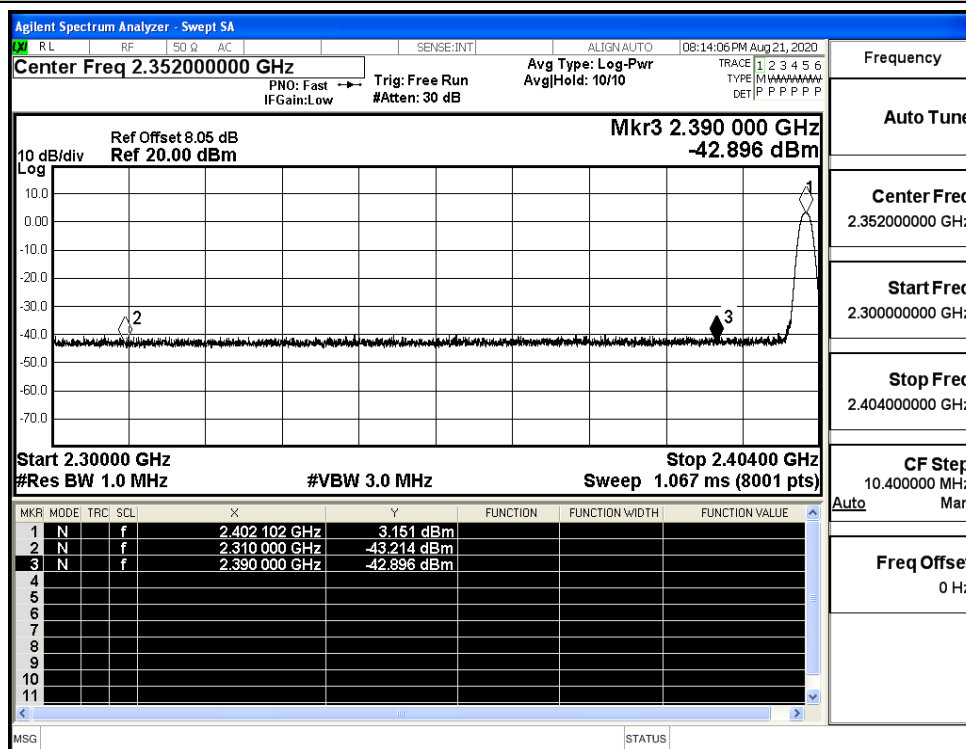
8DPSK/HCH/Hop



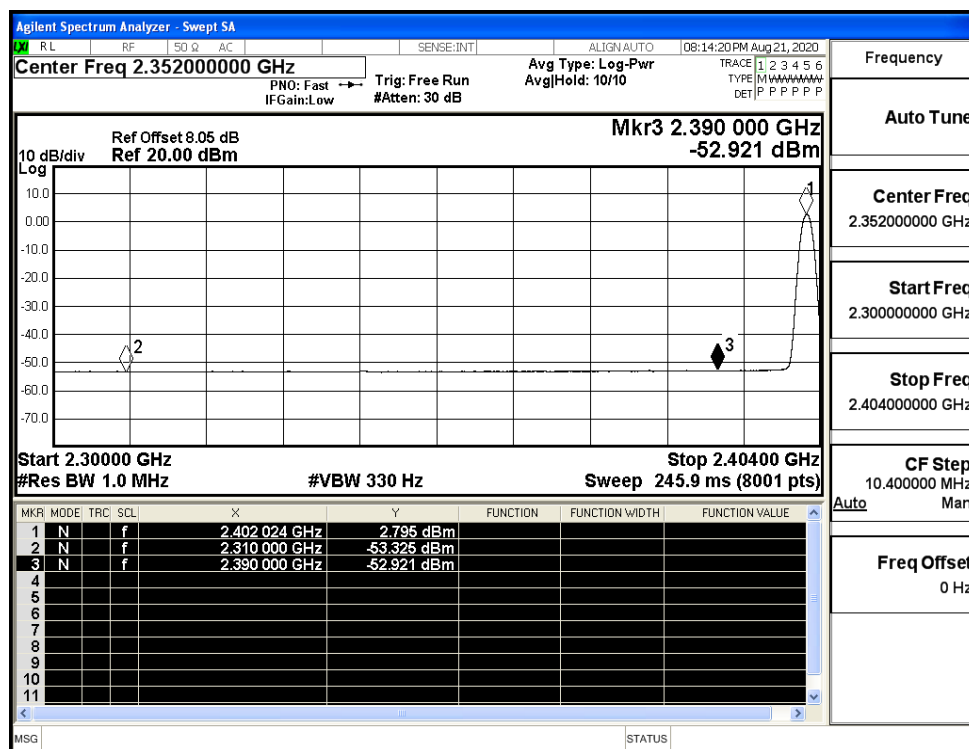
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.21	5	0	57.02	PEAK	74	PASS
	Off	2310.0	-53.33	5	0	46.90	AV	54	PASS
	Off	2390.0	-42.90	5	0	57.33	PEAK	74	PASS
	Off	2390.0	-52.92	5	0	47.31	AV	54	PASS
	Off	2483.5	-40.44	5	0	59.79	PEAK	74	PASS
	Off	2483.5	-52.24	5	0	47.99	AV	54	PASS
	Off	2500.0	-41.92	5	0	58.31	PEAK	74	PASS
	Off	2500.0	-52.24	5	0	47.99	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-42.86	5	0	57.37	PEAK	74	PASS
	Off	2310.0	-53.33	5	0	46.90	AV	54	PASS
	Off	2390.0	-43.47	5	0	56.76	PEAK	74	PASS
	Off	2390.0	-52.83	5	0	47.40	AV	54	PASS
	Off	2483.5	-40.44	5	0	59.79	PEAK	74	PASS
	Off	2483.5	-52.09	5	0	48.14	AV	54	PASS
	Off	2500.0	-42.66	5	0	57.57	PEAK	74	PASS
	Off	2500.0	-52.21	5	0	48.02	AV	54	PASS
8DPSK	Off	2310.0	-43.59	5	0	56.64	PEAK	74	PASS
	Off	2310.0	-53.21	5	0	47.02	AV	54	PASS
	Off	2390.0	-43.15	5	0	57.08	PEAK	74	PASS
	Off	2390.0	-52.88	5	0	47.35	AV	54	PASS
	Off	2483.5	-40.27	5	0	59.96	PEAK	74	PASS
	Off	2483.5	-51.99	5	0	48.24	AV	54	PASS
	Off	2500.0	-42.36	5	0	57.87	PEAK	74	PASS
	Off	2500.0	-52.27	5	0	47.96	AV	54	PASS

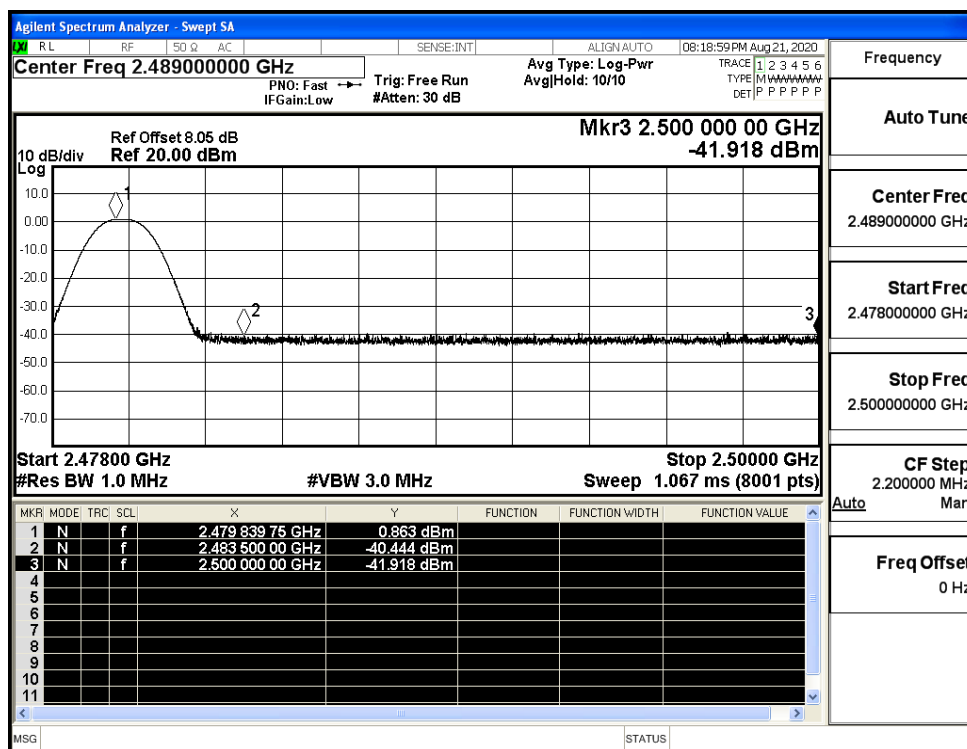
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



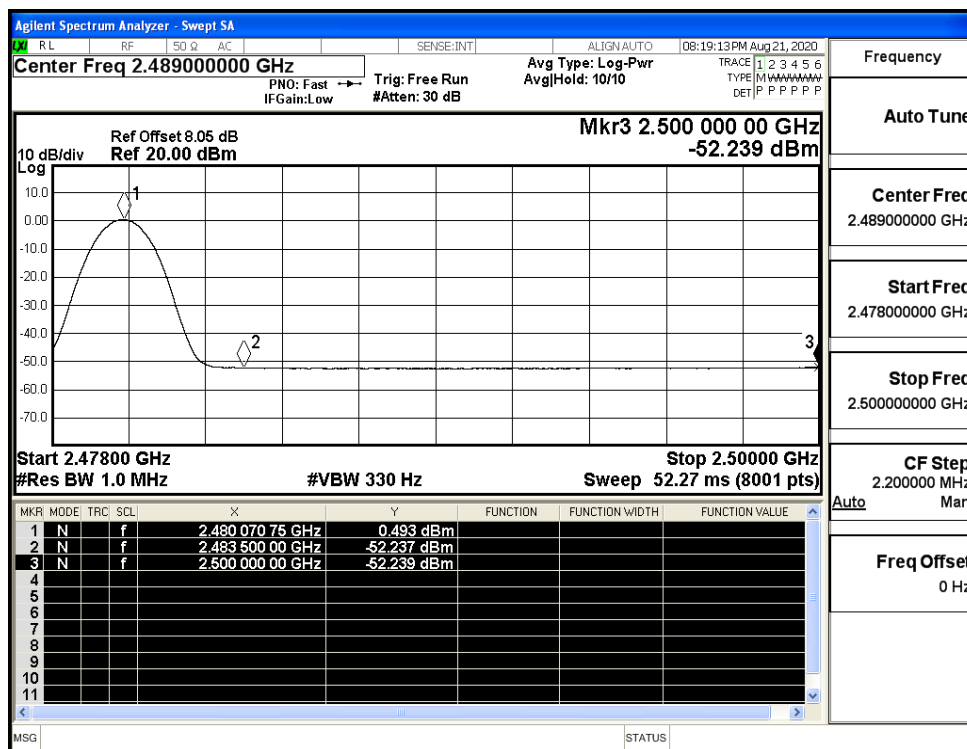
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

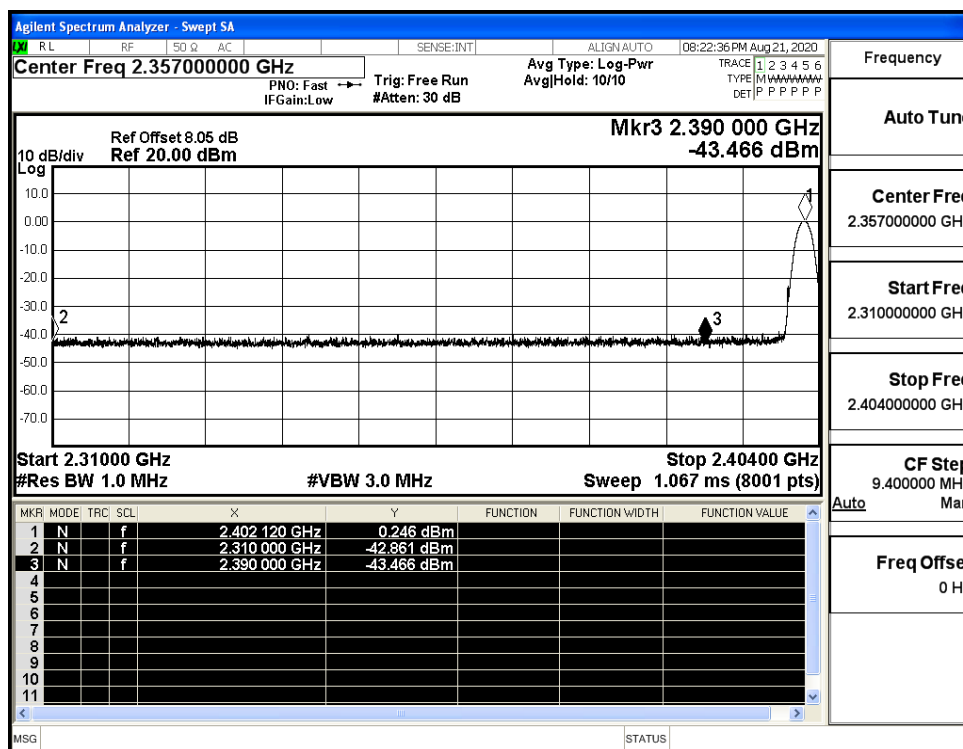
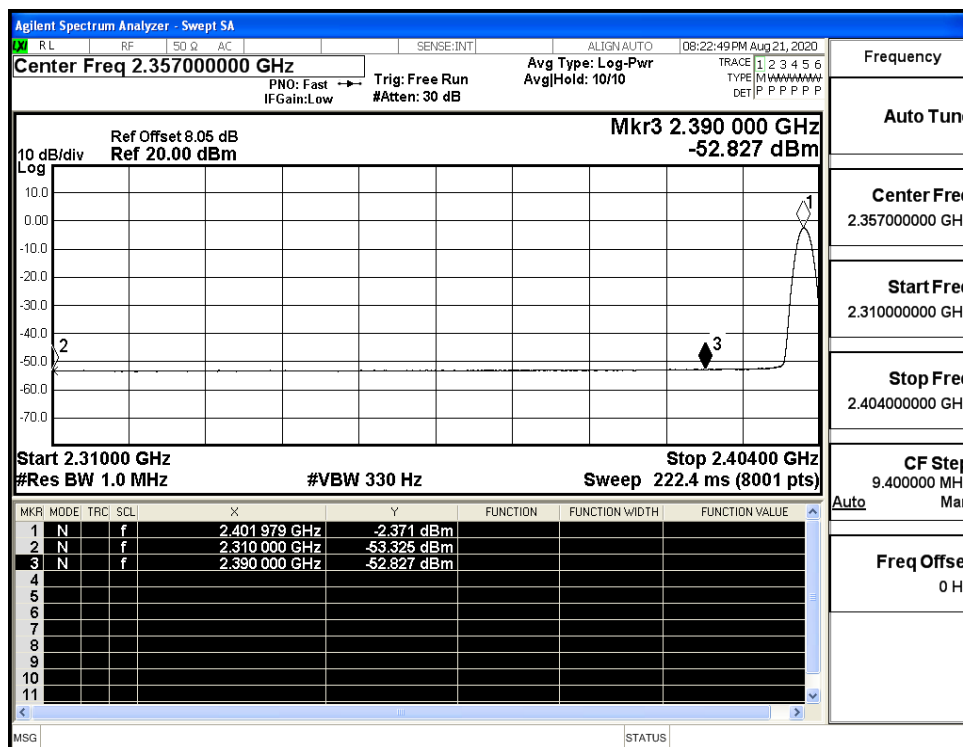


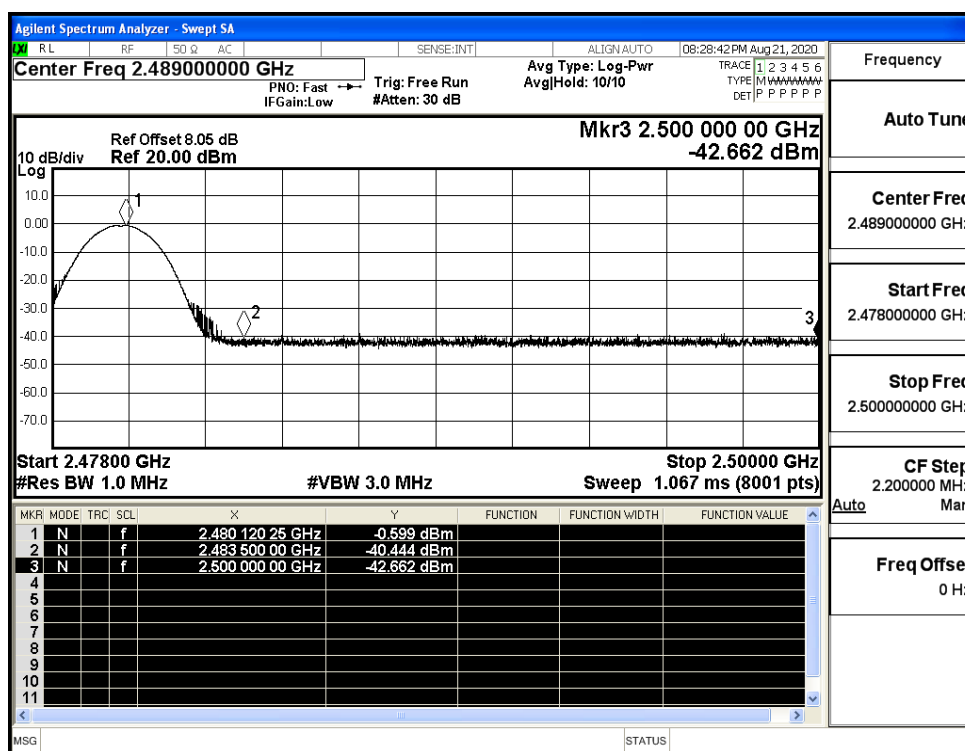
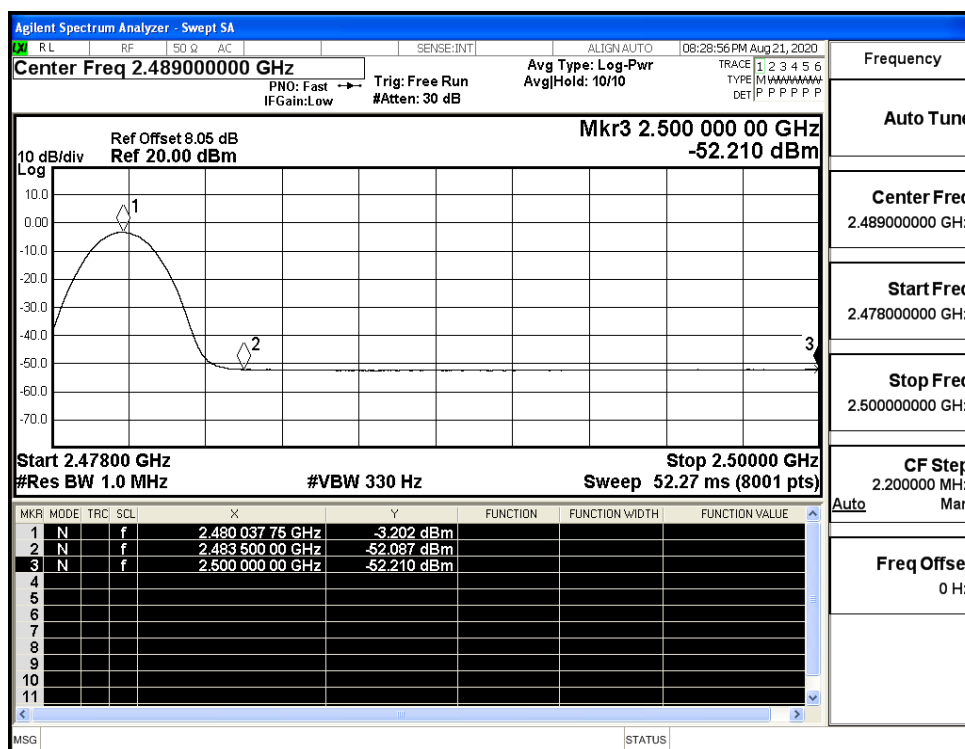
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



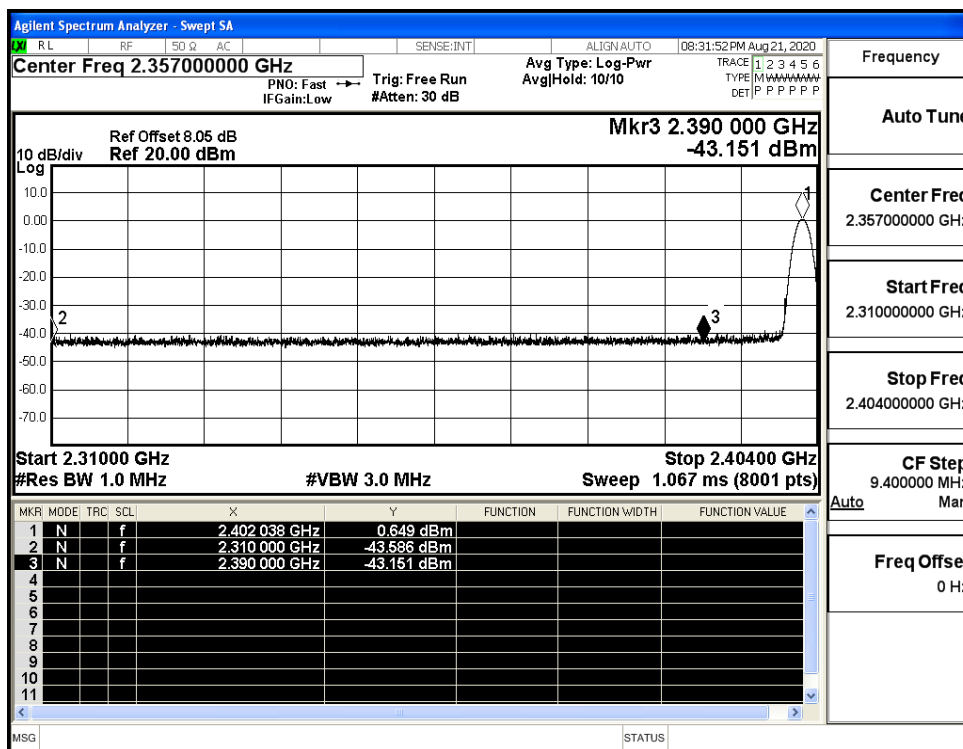
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



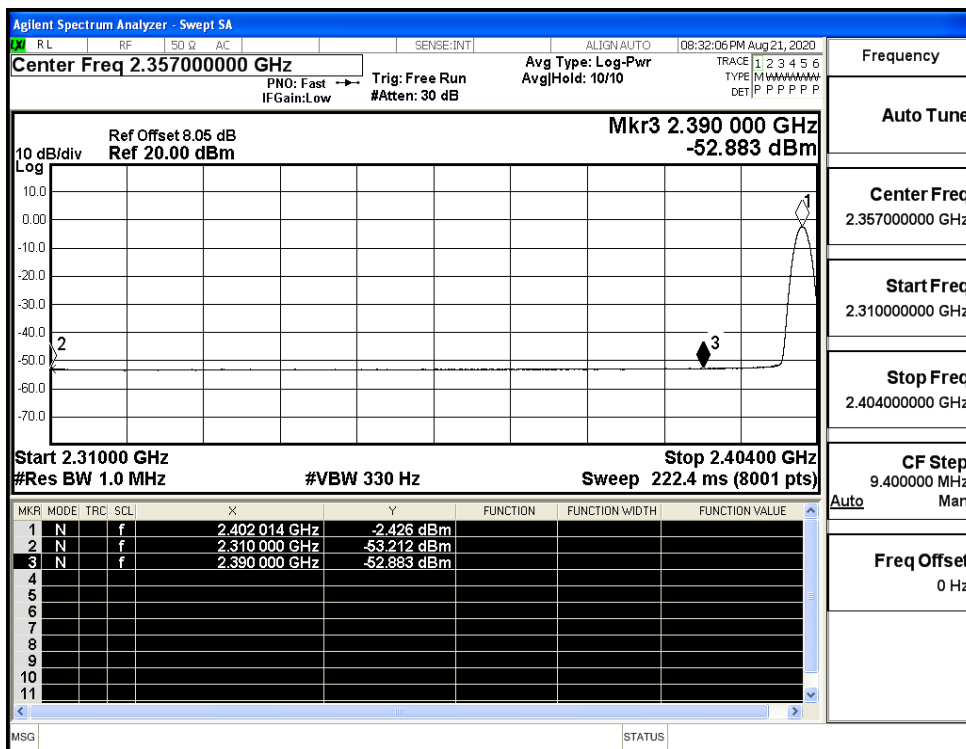
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

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)

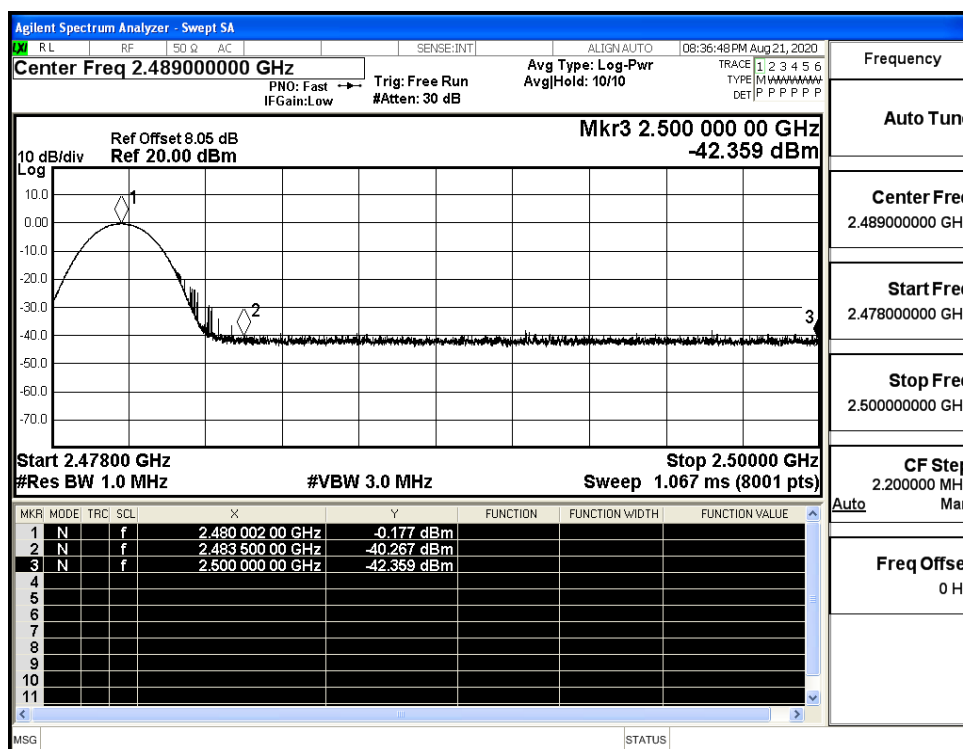
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

