

Appendix A

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

Product Name: NEXS1 Single channel Camera

Trade Mark: SCOSCHE

Test Model: NEXS1

Environmental Conditions

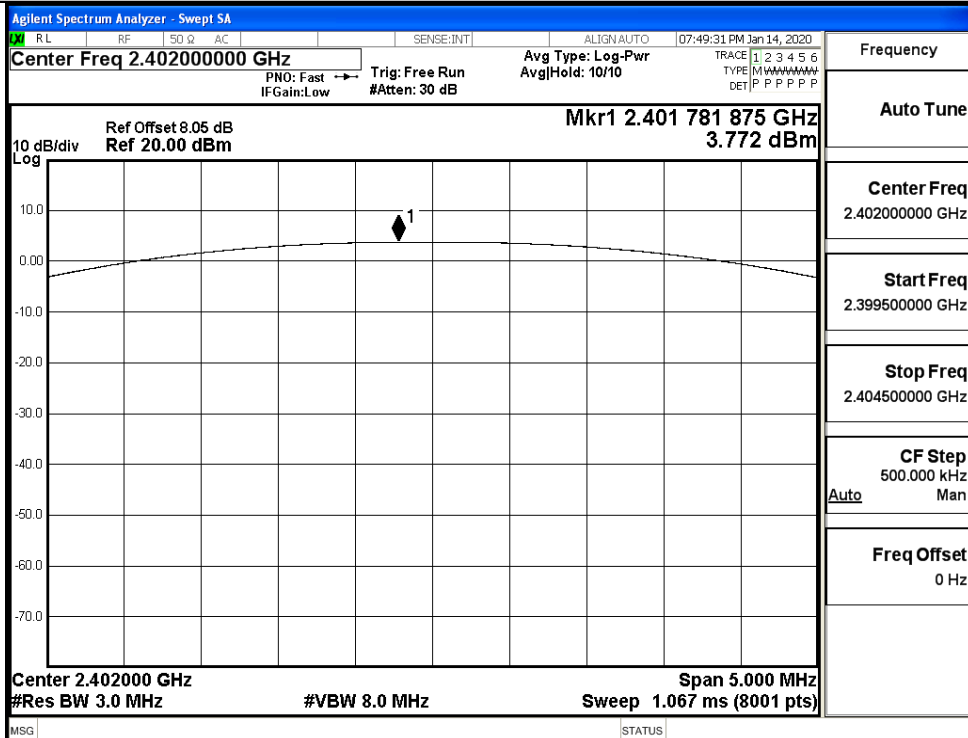
Temperature:	22.9 ° C
Relative Humidity:	54.2%
ATM Pressure:	100.0 kPa
Test Engineer:	David Luo
Supervised by:	Tom.Liu

A.1 Maximum Conducted Peak Output Power

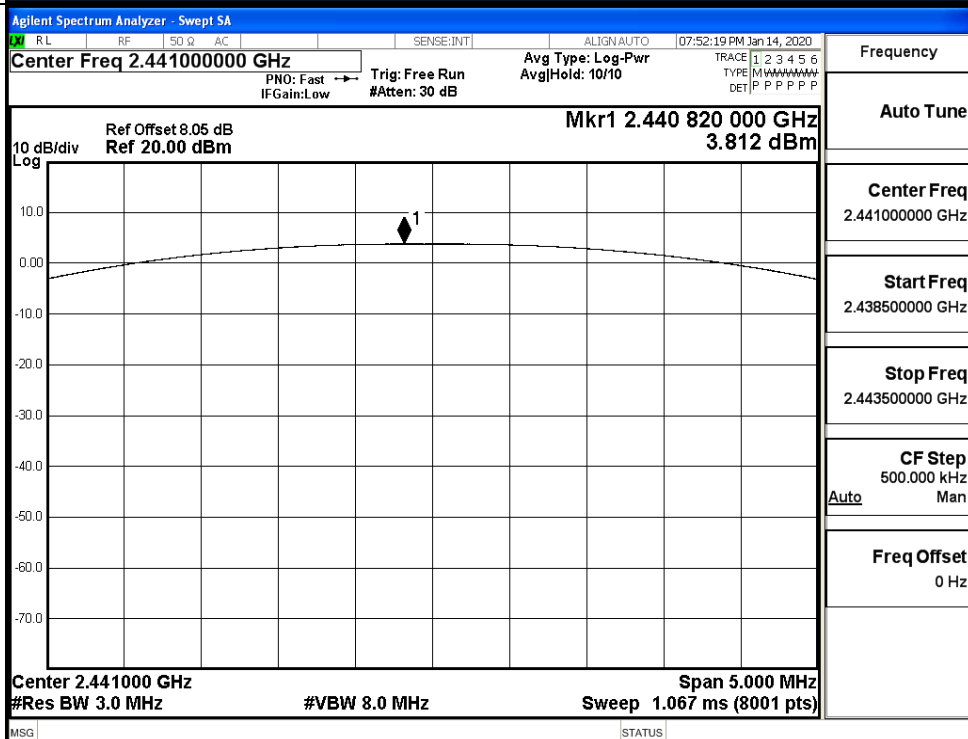
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.772	21	PASS
	MCH	3.812	21	PASS
	HCH	3.137	21	PASS
$\pi/4$ DQPSK	LCH	1.867	21	PASS
	MCH	2.222	21	PASS
	HCH	1.191	21	PASS
8DPSK	LCH	1.878	21	PASS
	MCH	2.489	21	PASS
	HCH	1.427	21	PASS

Test Graphs

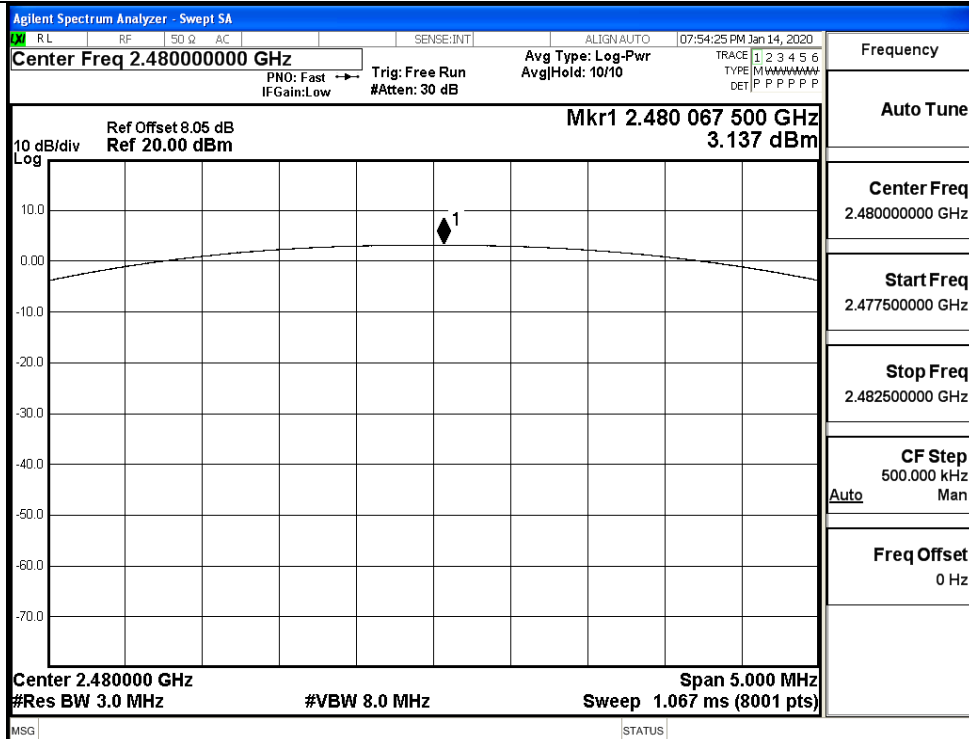
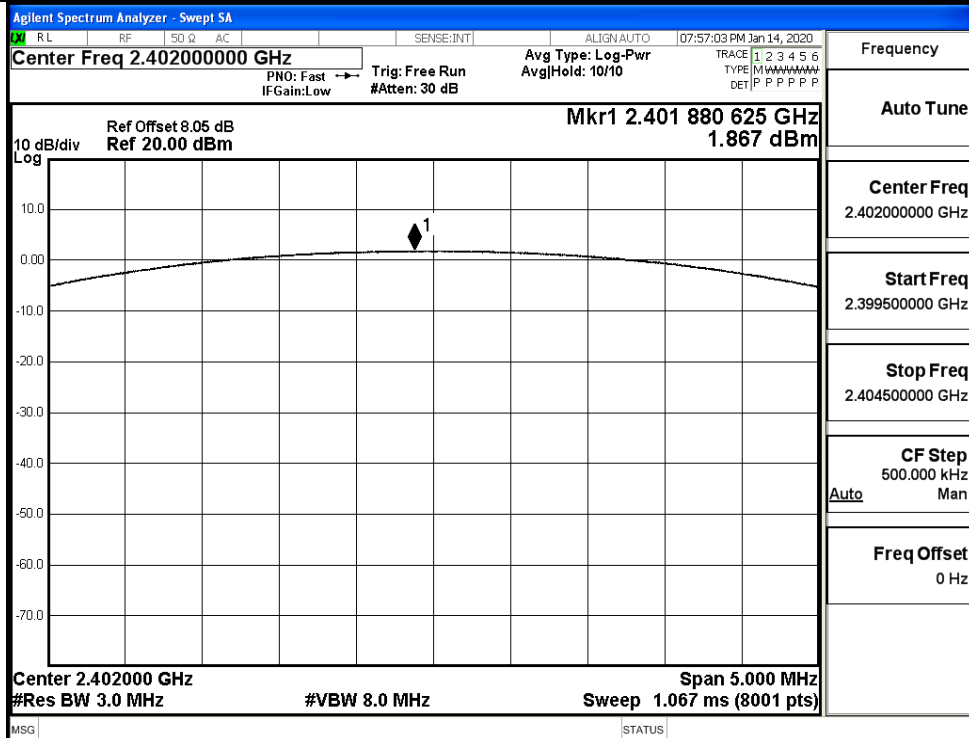
GFSK/LCH

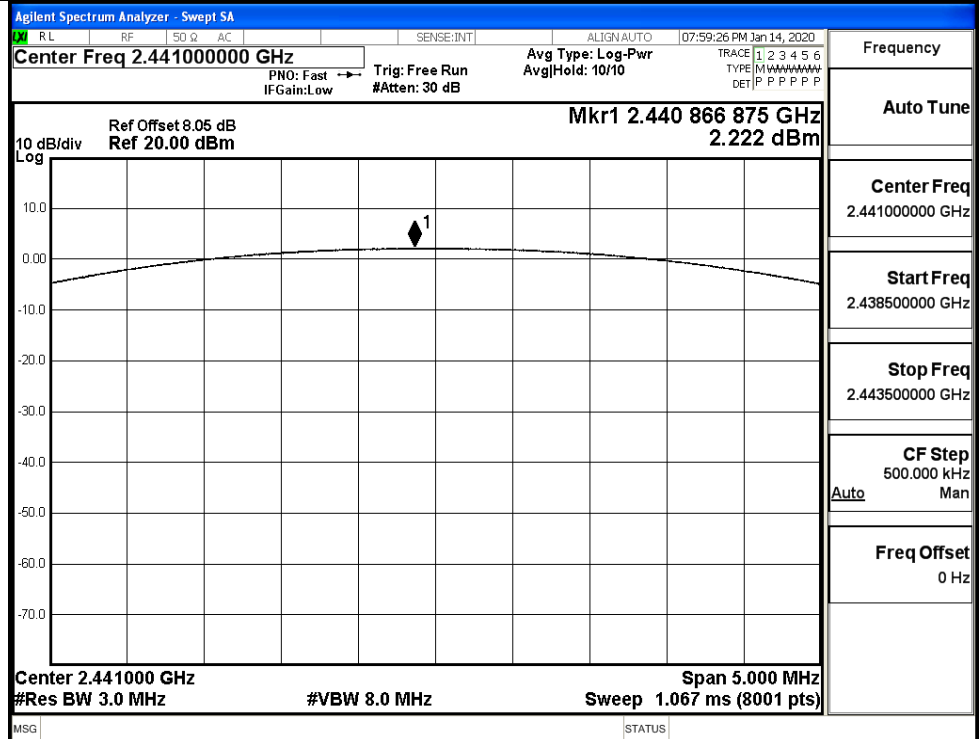
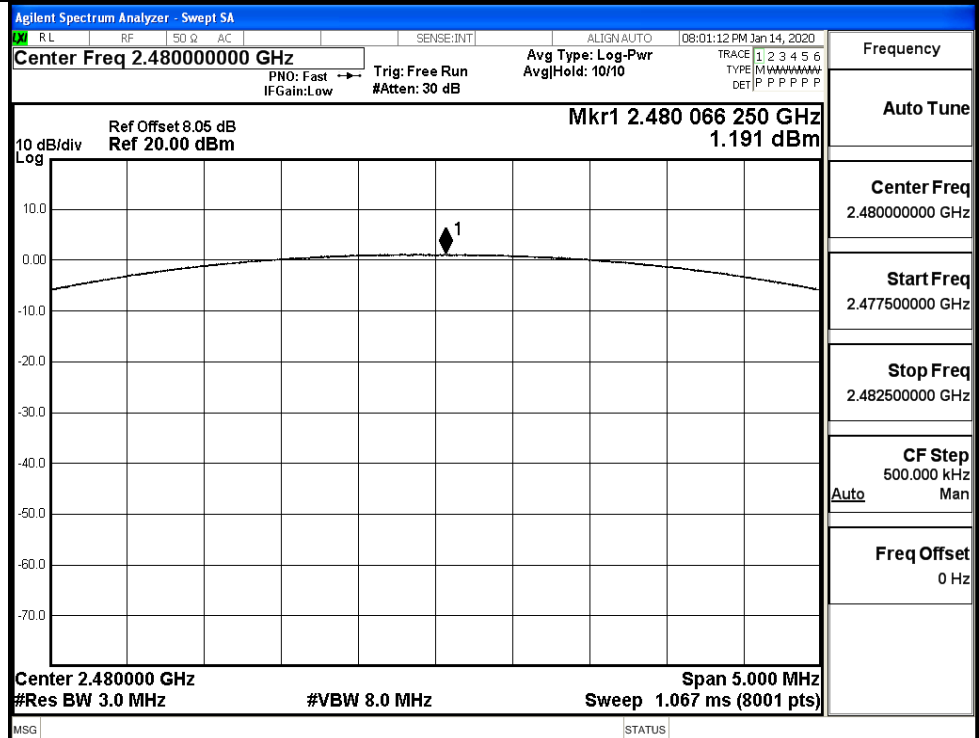


GFSK/MCH

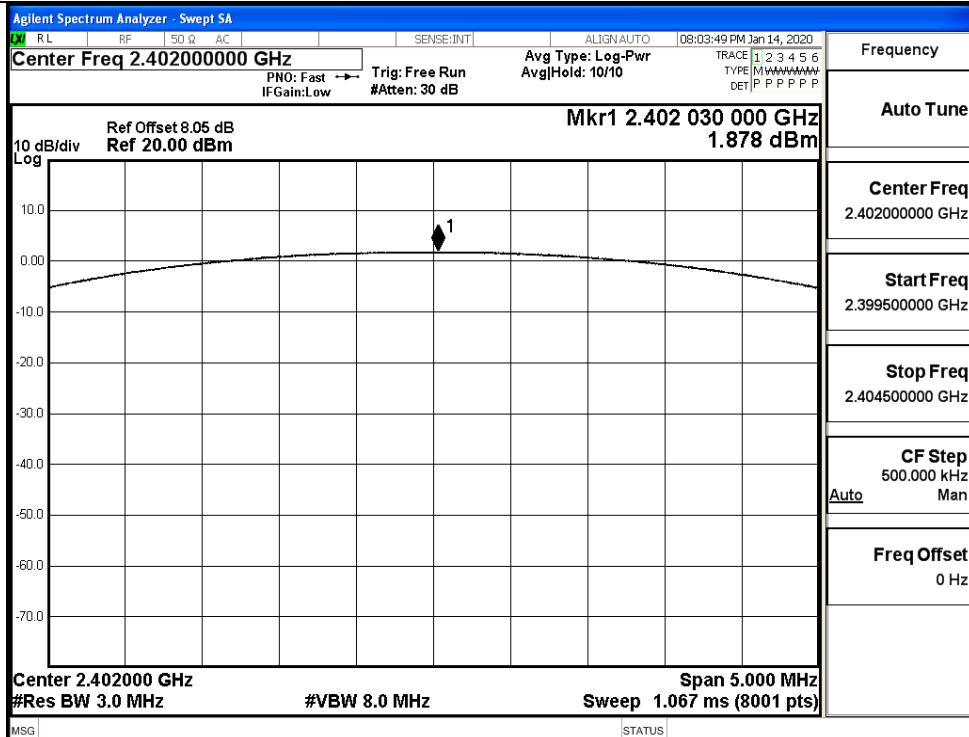


GFSK/HCH

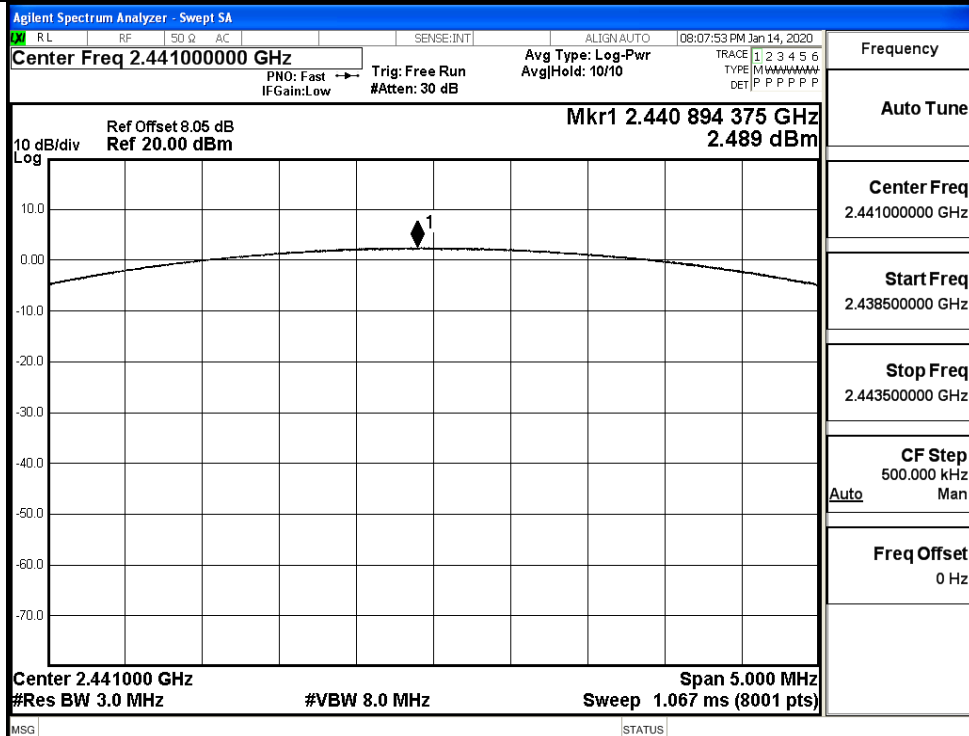
 $\pi/4$ DQPSK/LCH

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

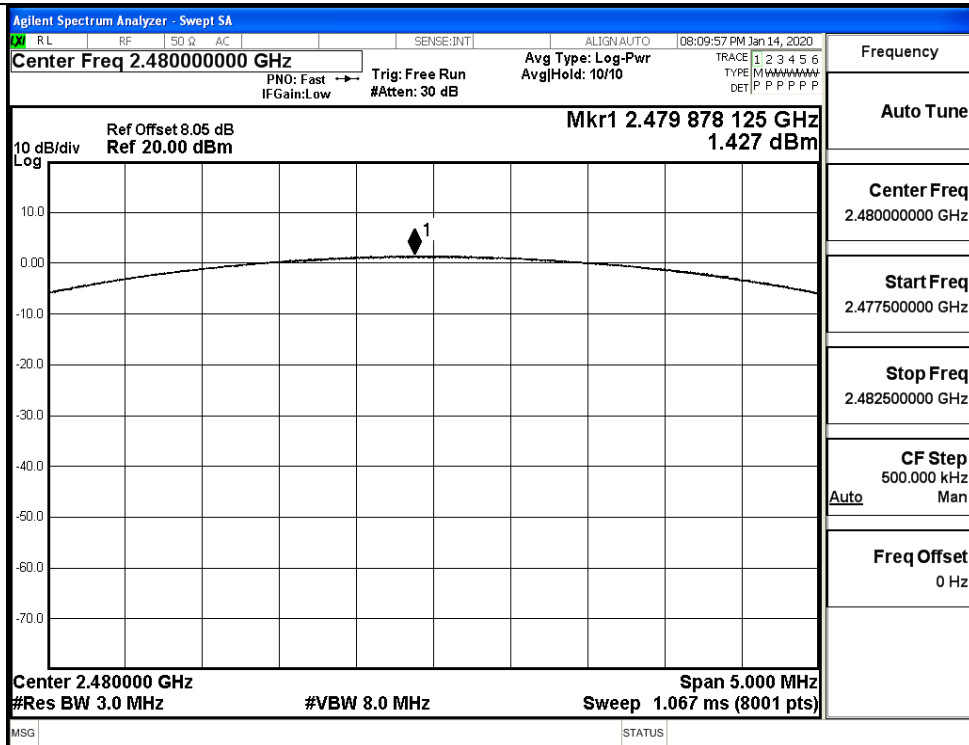
8DPSK/LCH



8DPSK/MCH



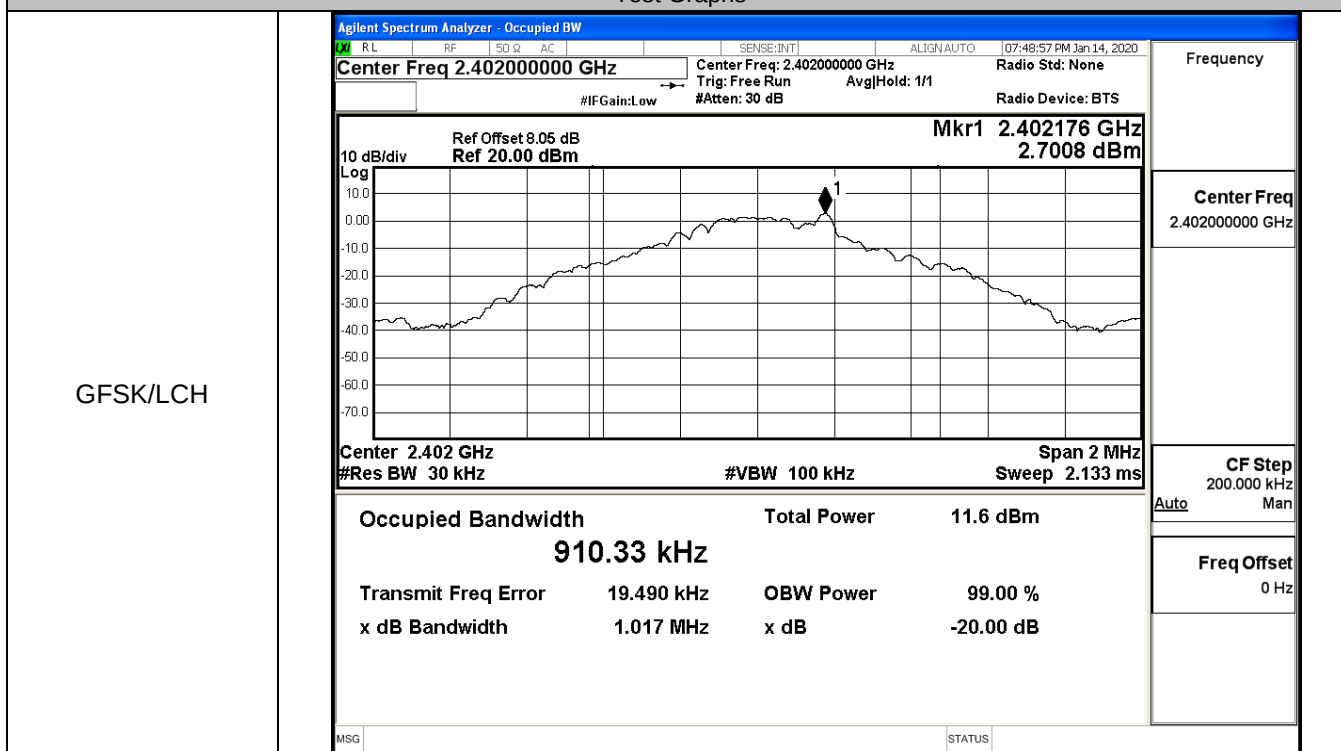
8DPSK/HCH



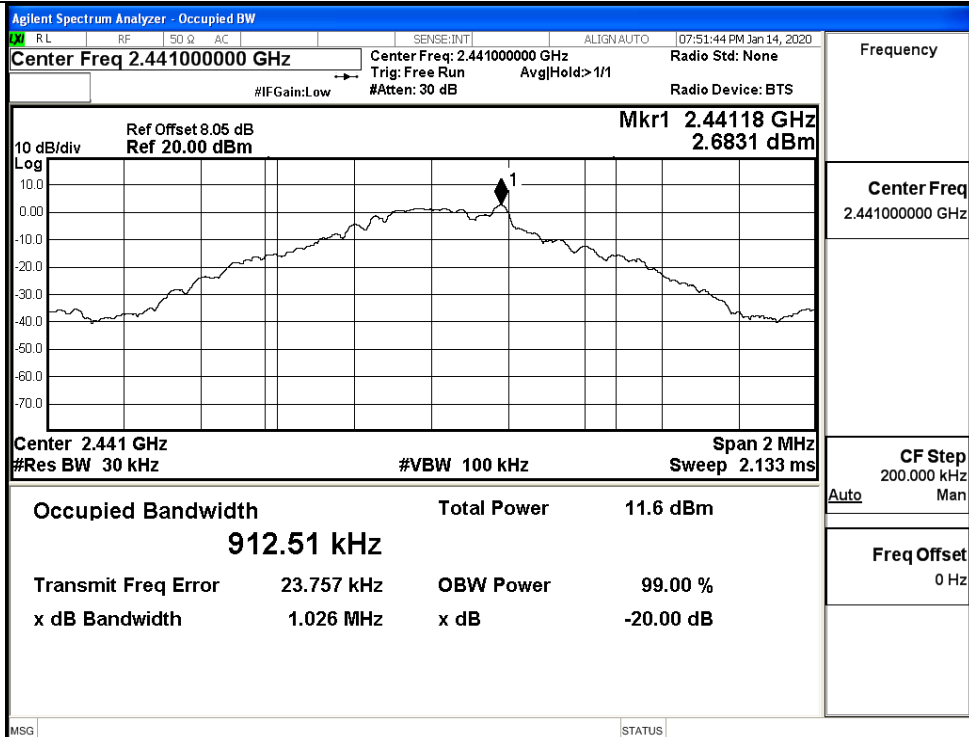
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.017	Not Specified	PASS
	MCH	1.026	Not Specified	PASS
	HCH	1.012	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.360	Not Specified	PASS
	MCH	1.361	Not Specified	PASS
	HCH	1.361	Not Specified	PASS
8DPSK	LCH	1.360	Not Specified	PASS
	MCH	1.317	Not Specified	PASS
	HCH	1.318	Not Specified	PASS

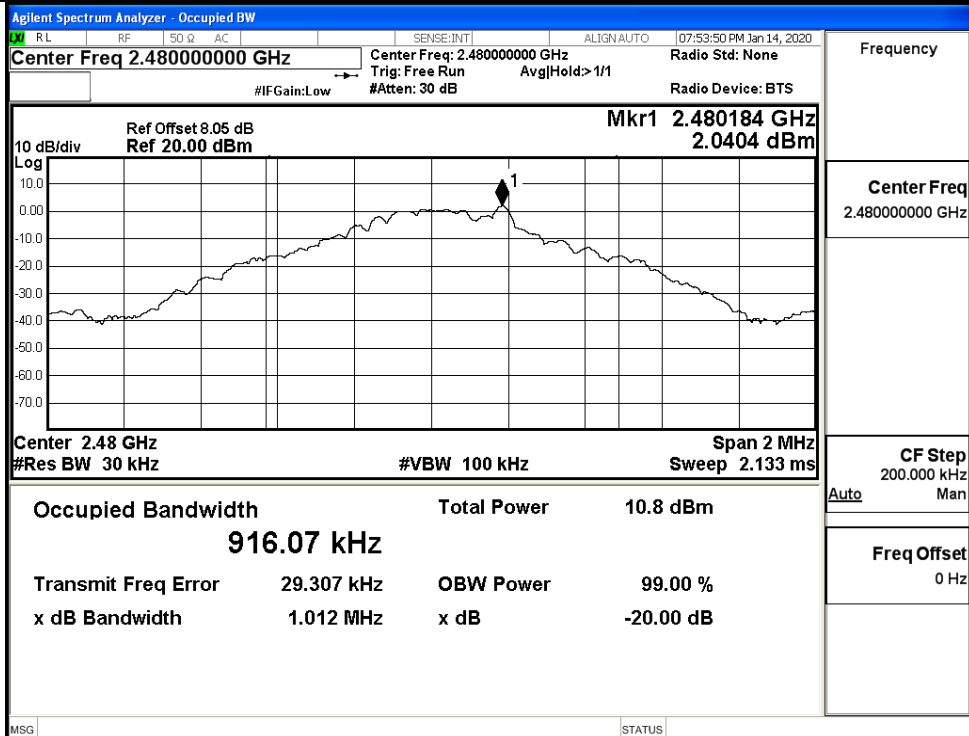
Test Graphs

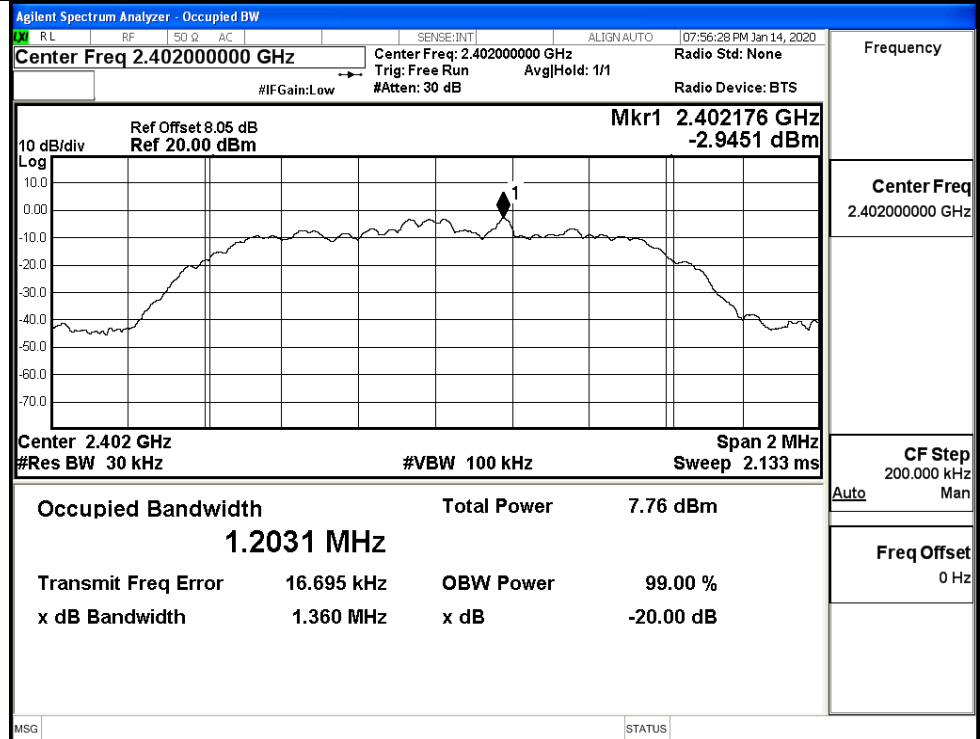
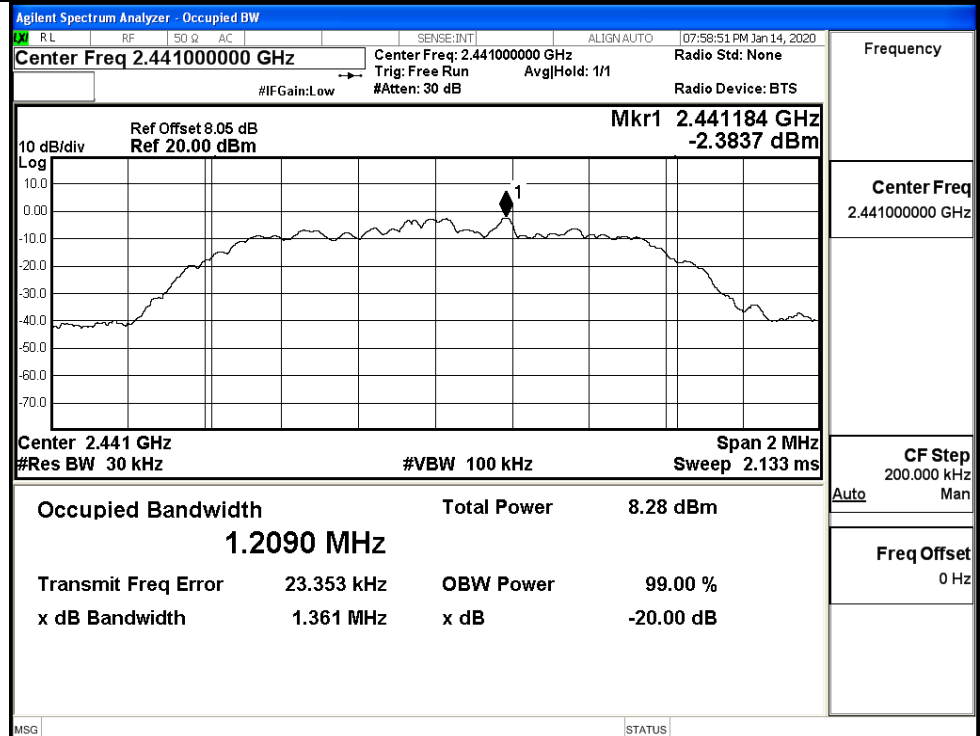


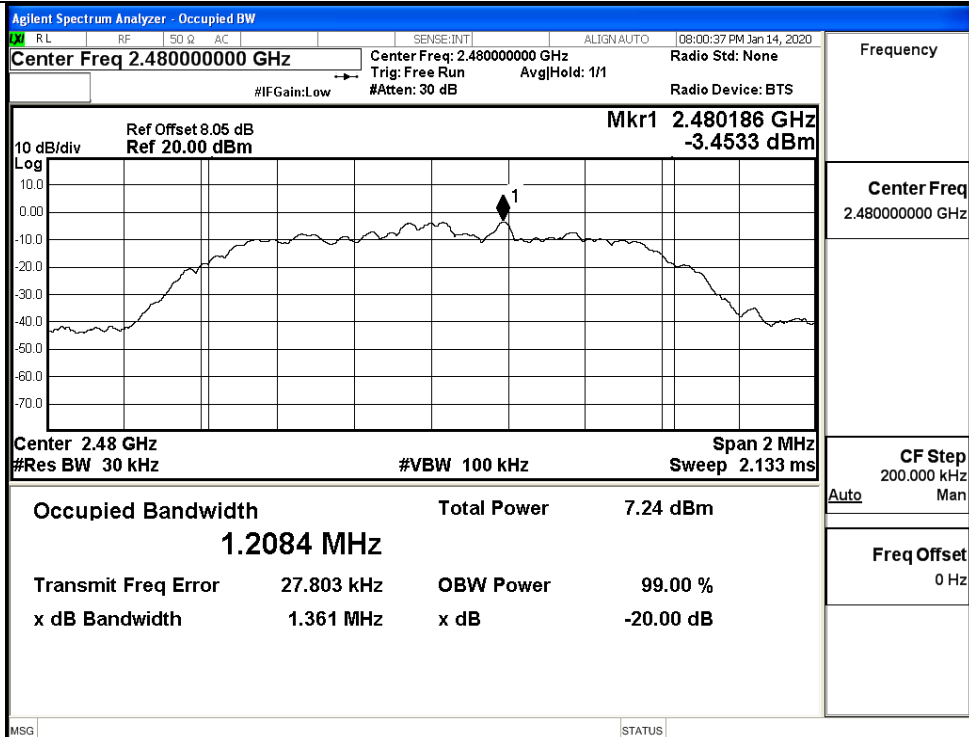
GFSK/MCH



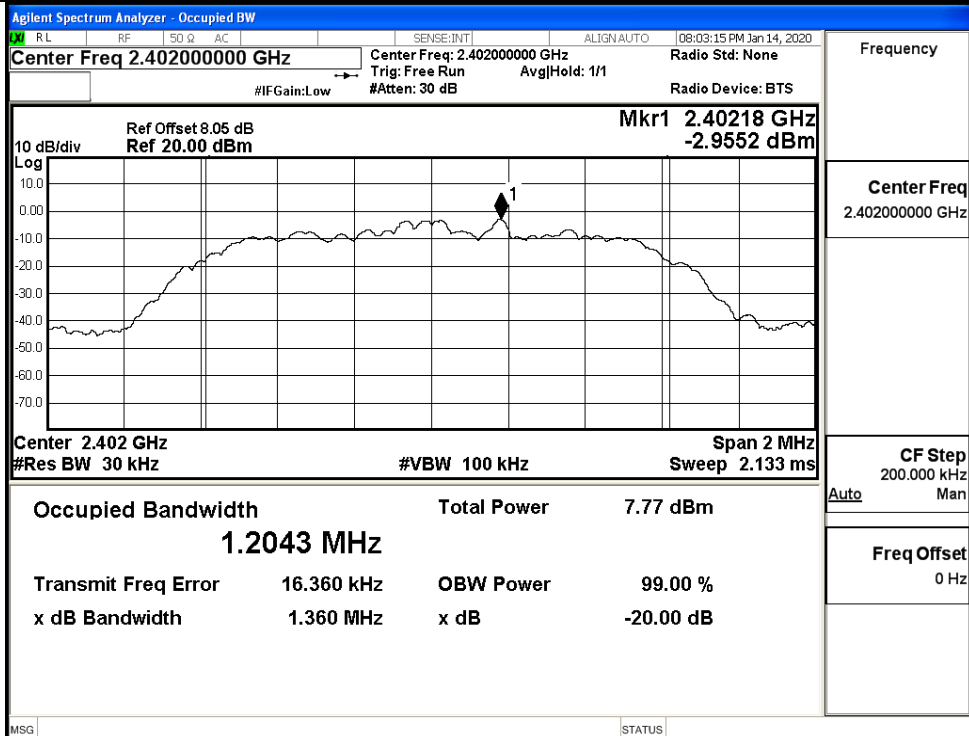
GFSK/HCH



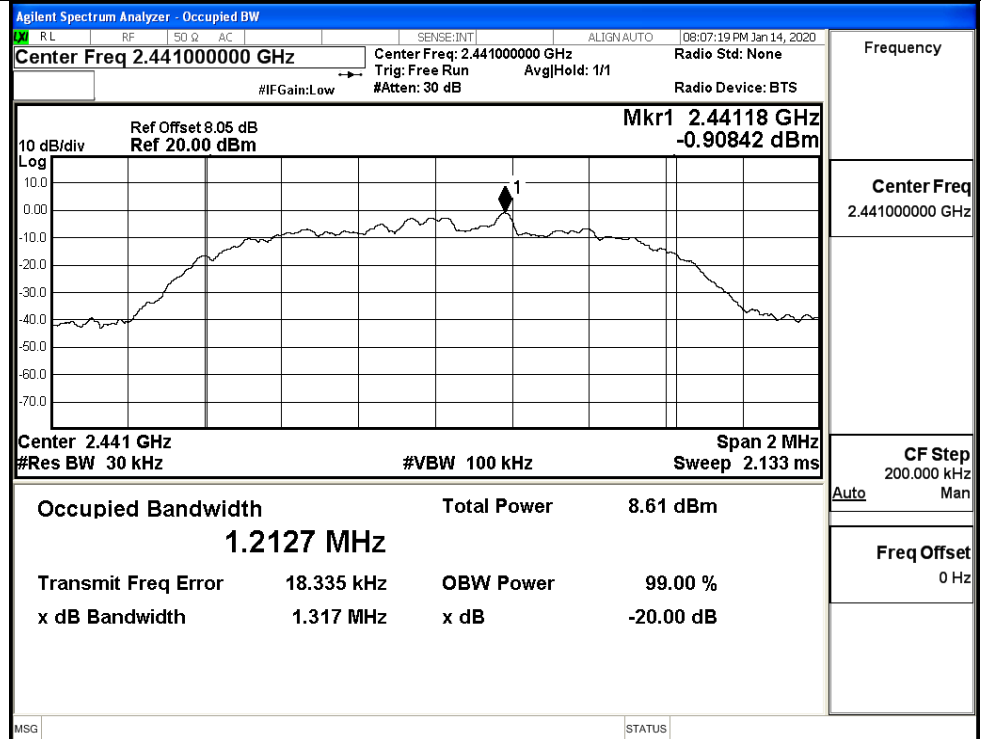
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

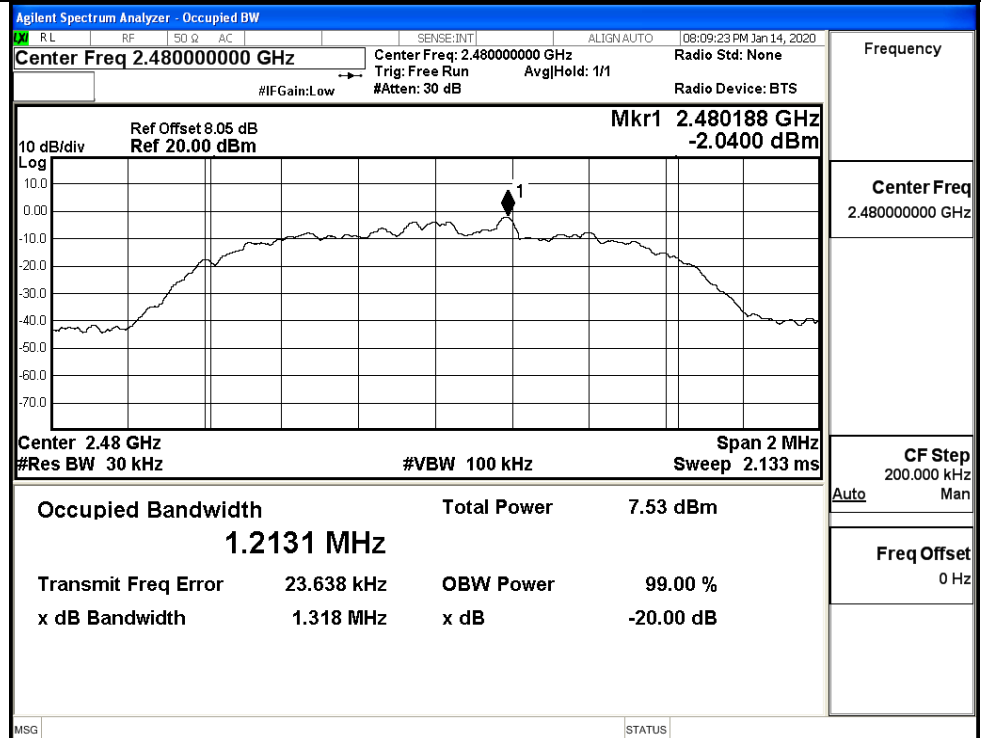
8DPSK/LCH



8DPSK/MCH



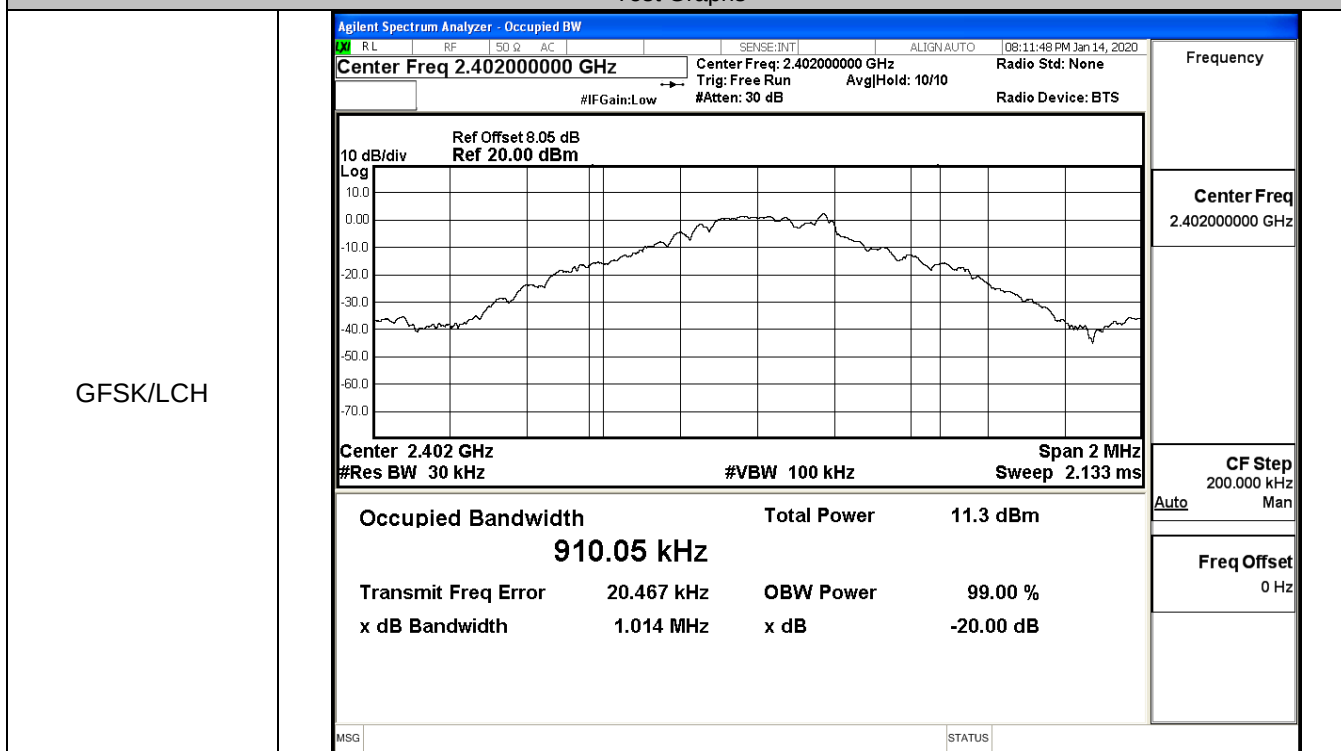
8DPSK/HCH



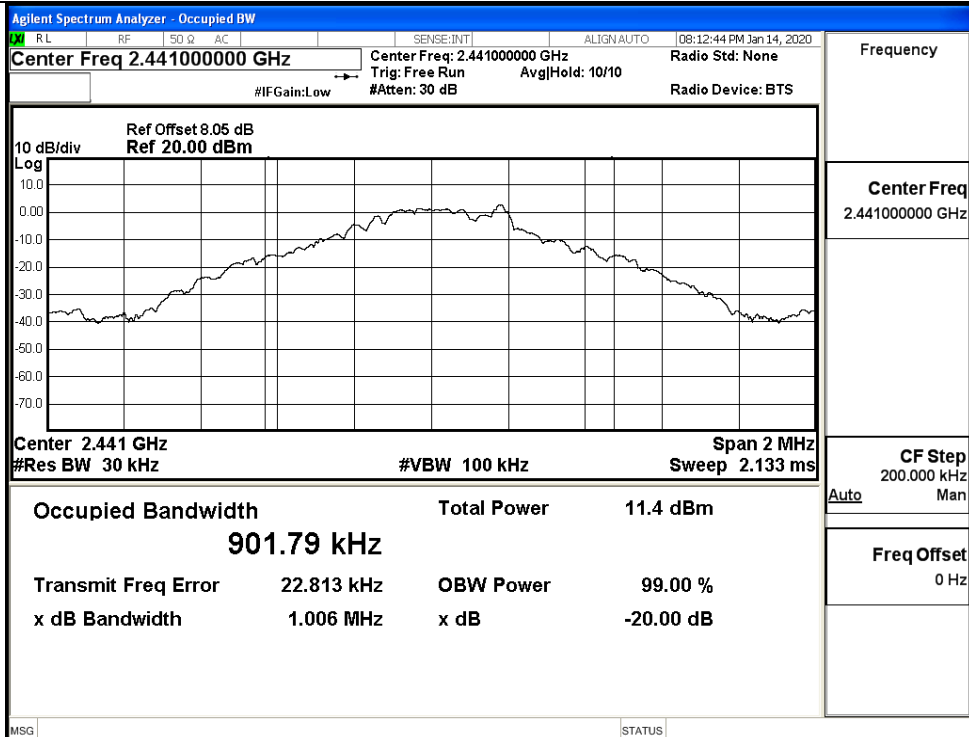
A.3 Occupied Bandwidth

Mode	Channel.	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.91005	Not Specified	PASS
	MCH	0.90179	Not Specified	PASS
	HCH	0.91427	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.2043	Not Specified	PASS
	MCH	1.2137	Not Specified	PASS
	HCH	1.2122	Not Specified	PASS
8DPSK	LCH	1.2051	Not Specified	PASS
	MCH	1.2153	Not Specified	PASS
	HCH	1.2129	Not Specified	PASS

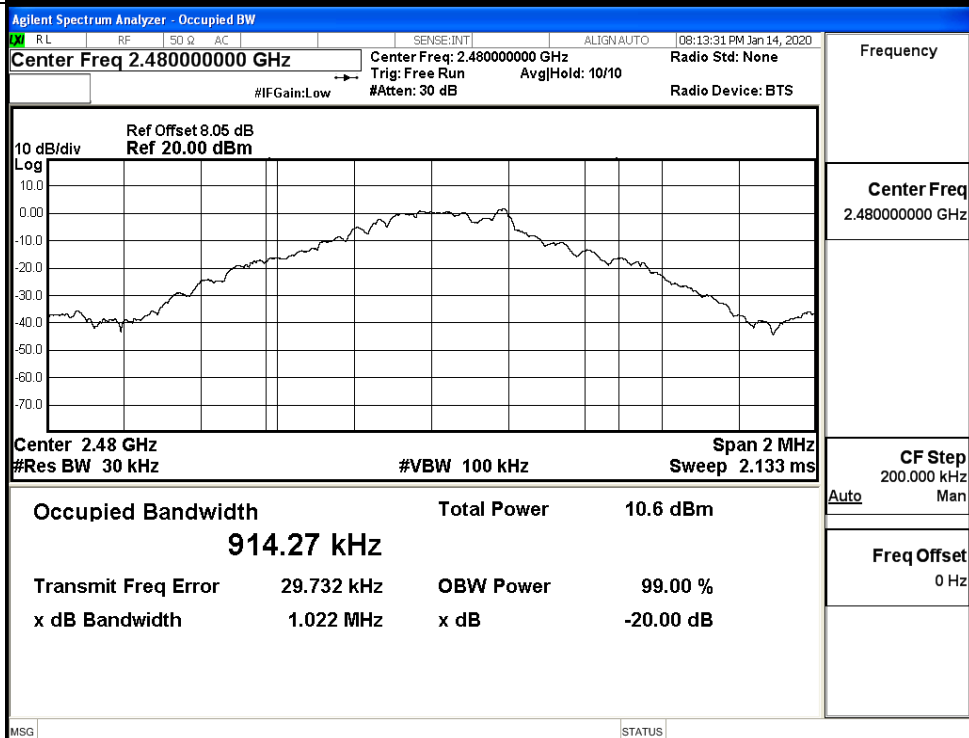
Test Graphs

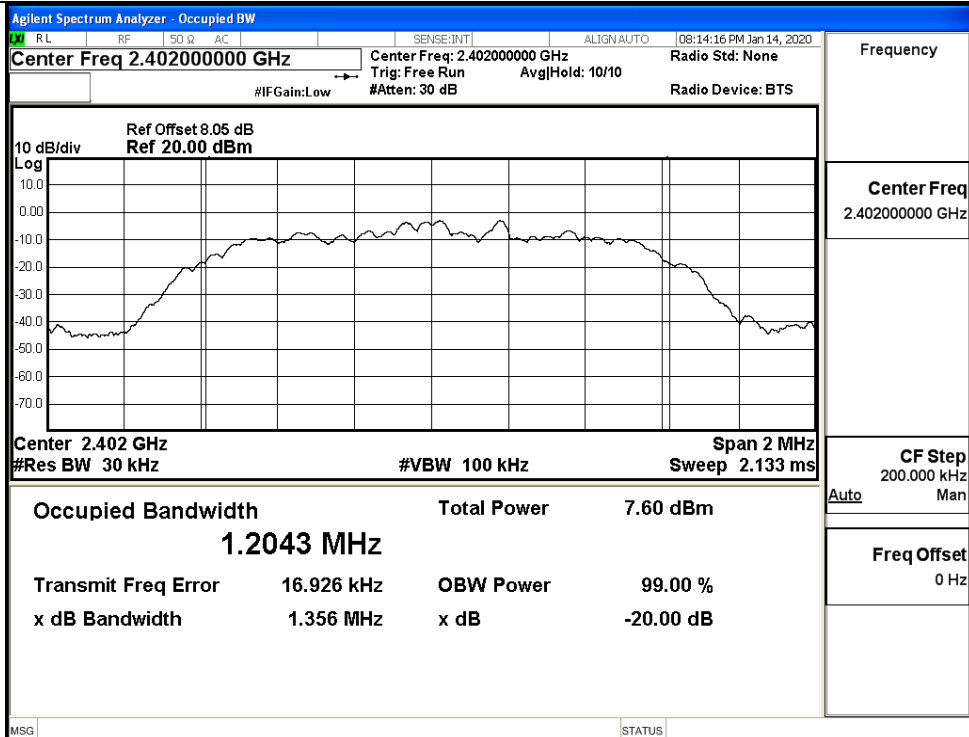
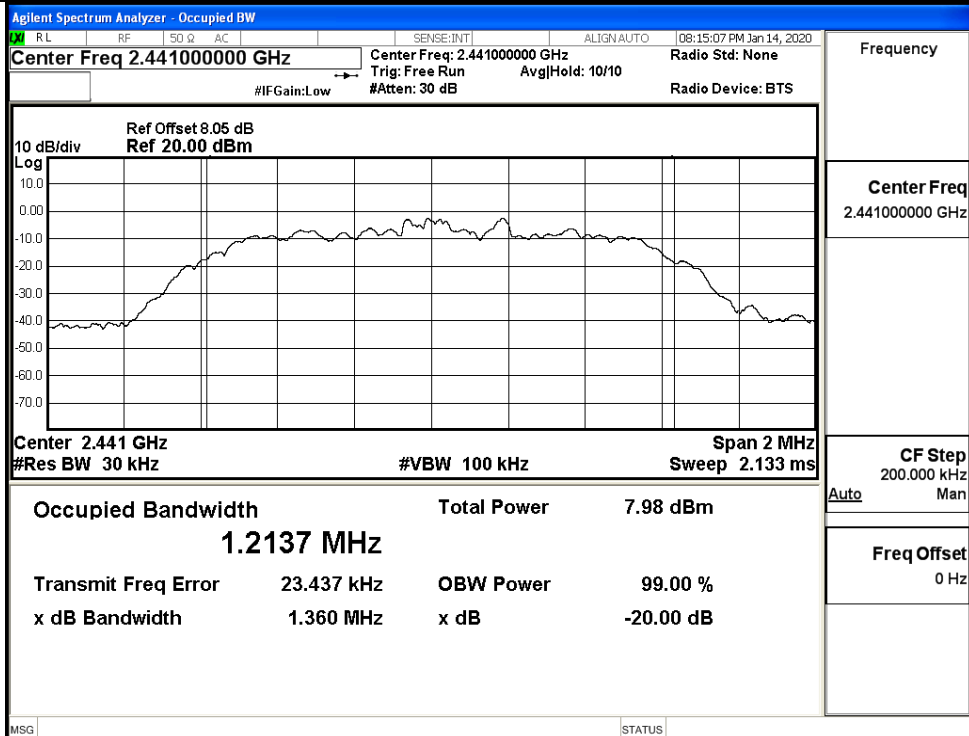


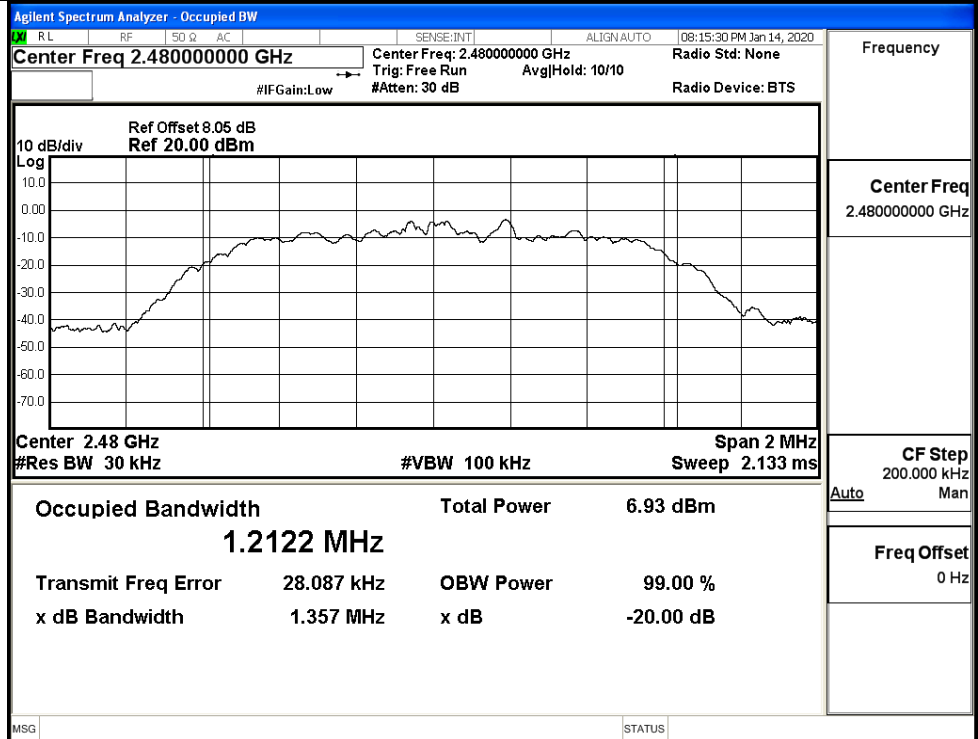
GFSK/MCH



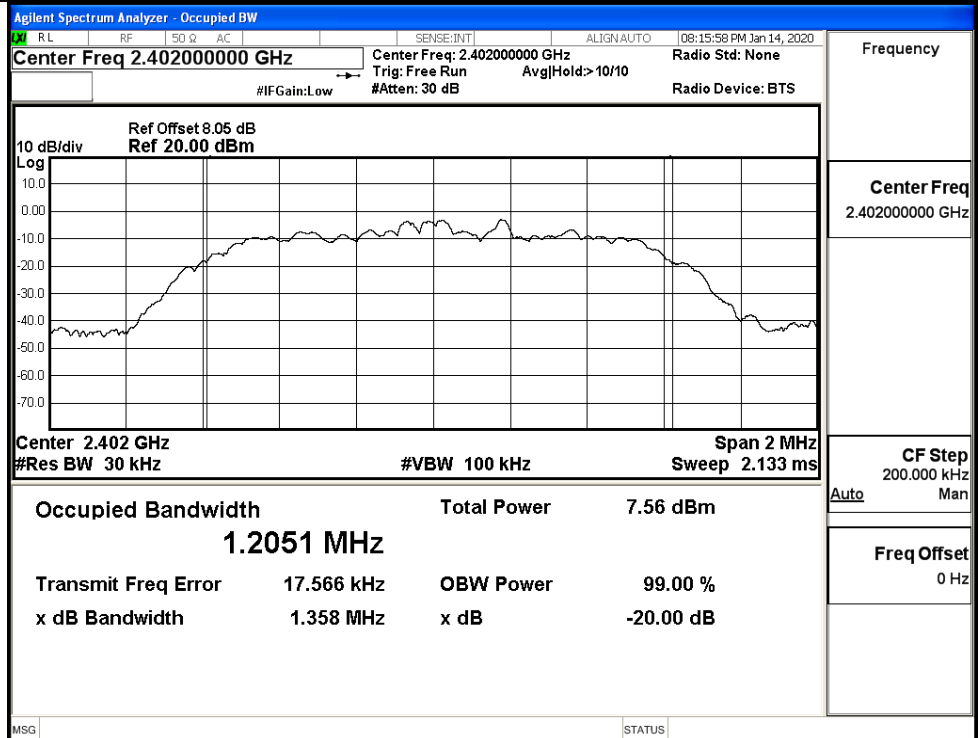
GFSK/HCH



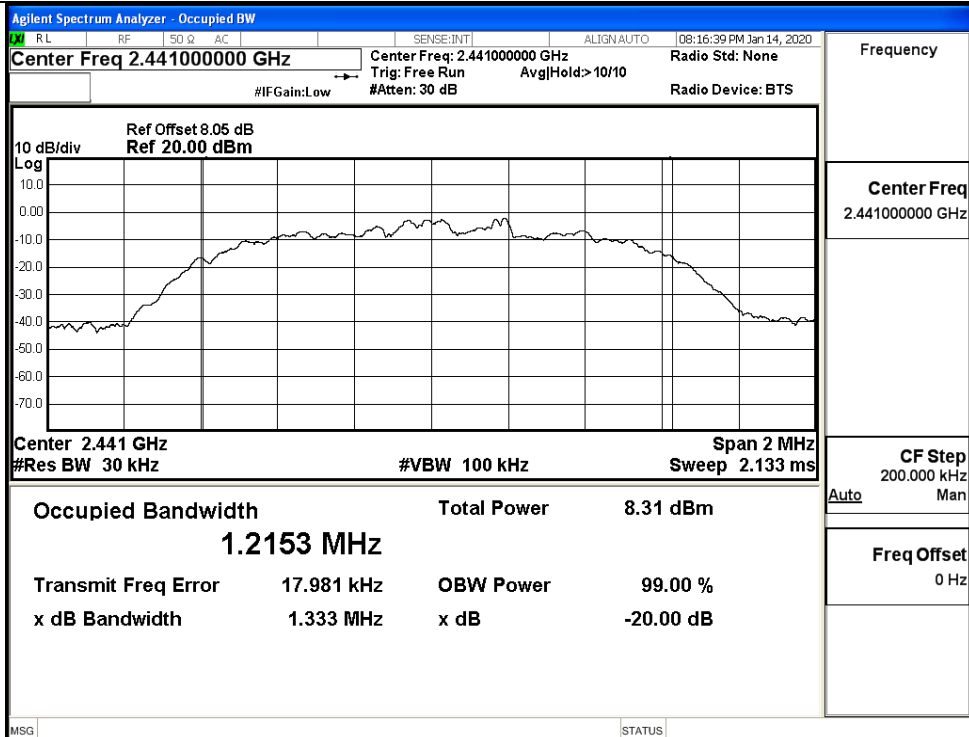
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

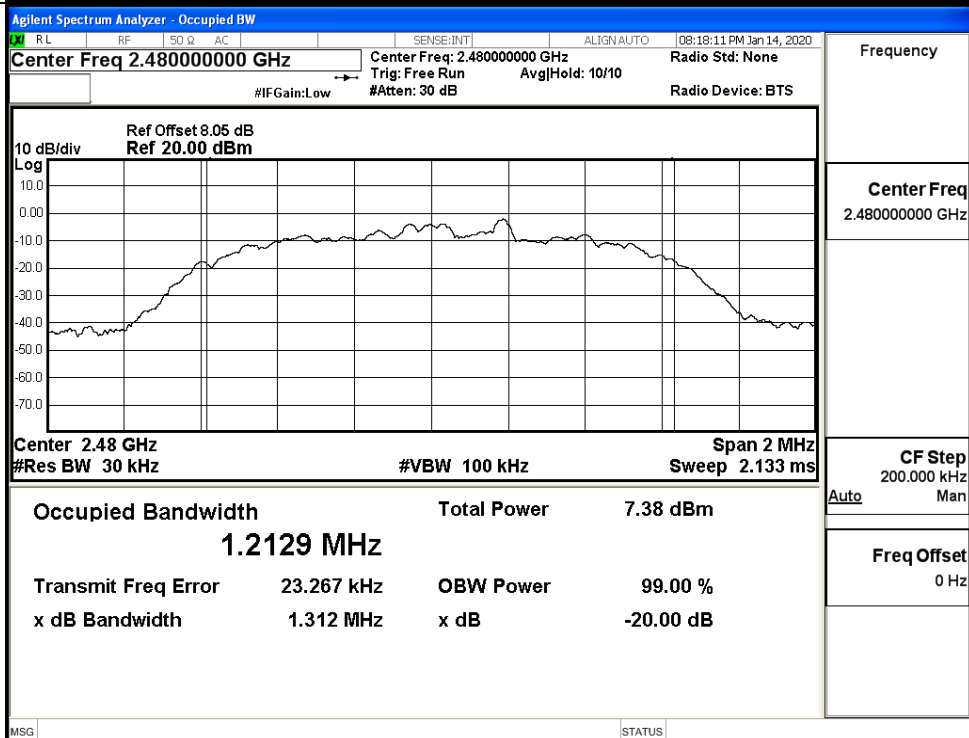
8DPSK/LCH



8DPSK/MCH



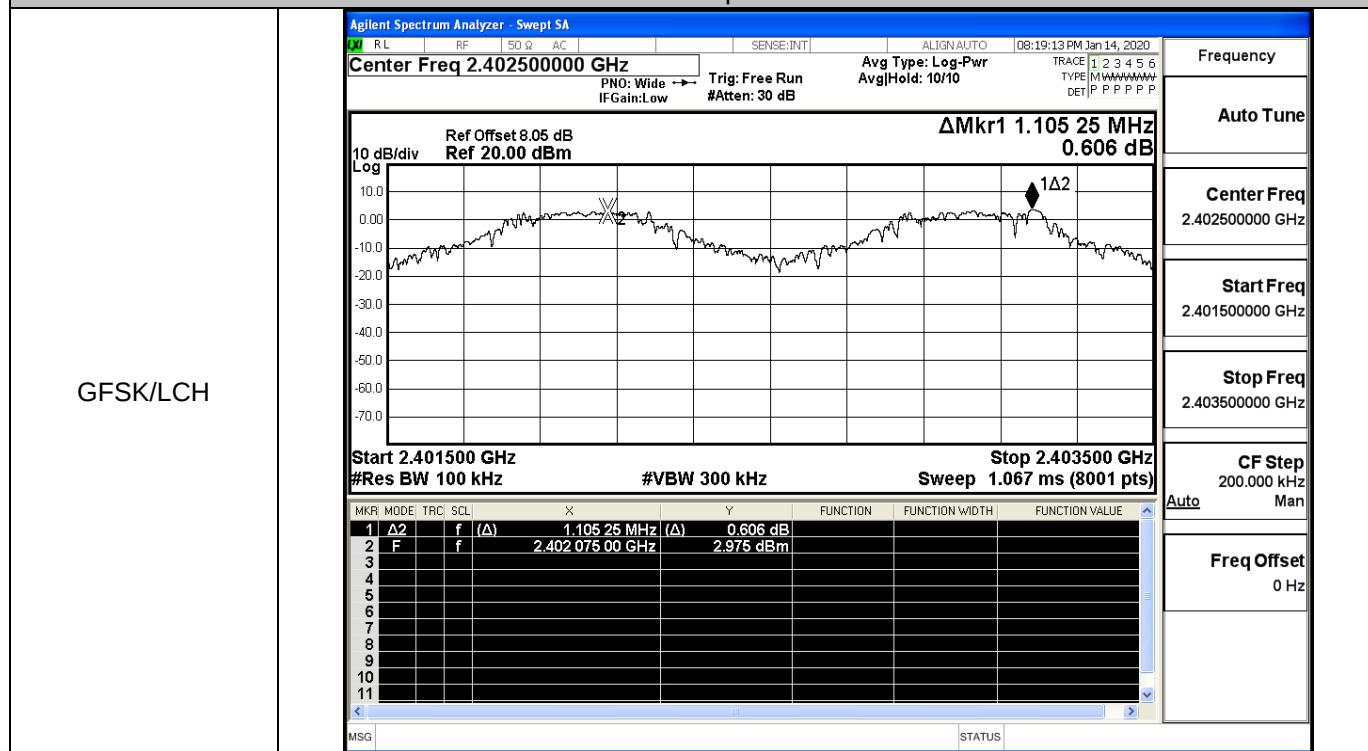
8DPSK/HCH



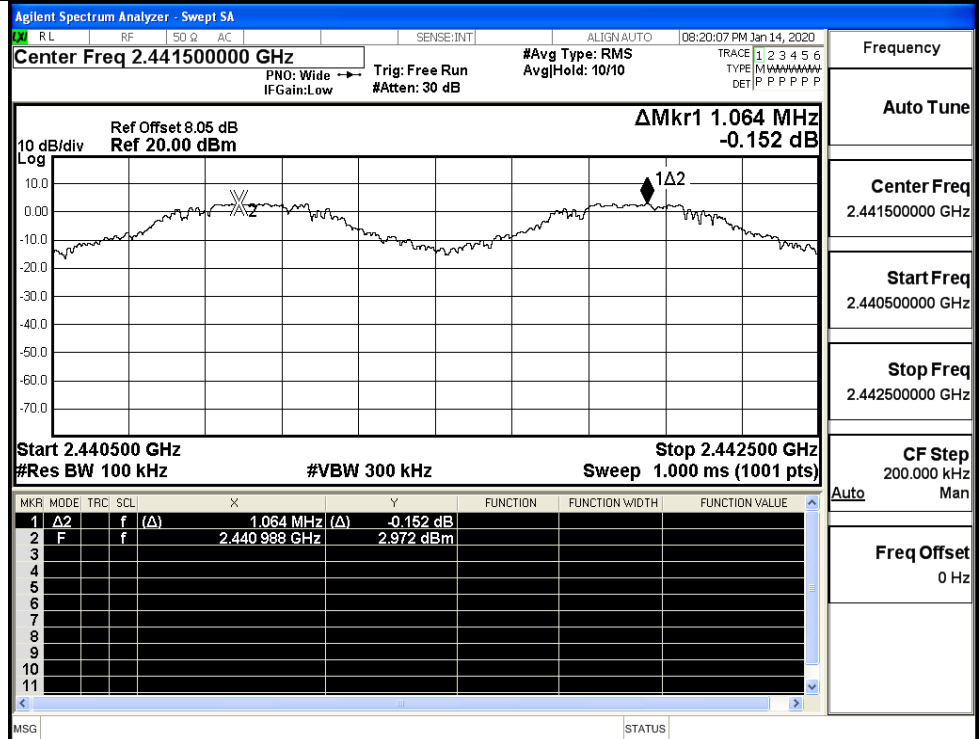
A.4 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.105	0.607	PASS
	MCH	1.064	0.601	PASS
	HCH	1.106	0.610	PASS
$\pi/4$ DQPSK	LCH	1.004	0.803	PASS
	MCH	0.990	0.809	PASS
	HCH	1.000	0.808	PASS
8DPSK	LCH	1.058	0.803	PASS
	MCH	1.192	0.810	PASS
	HCH	1.104	0.809	PASS

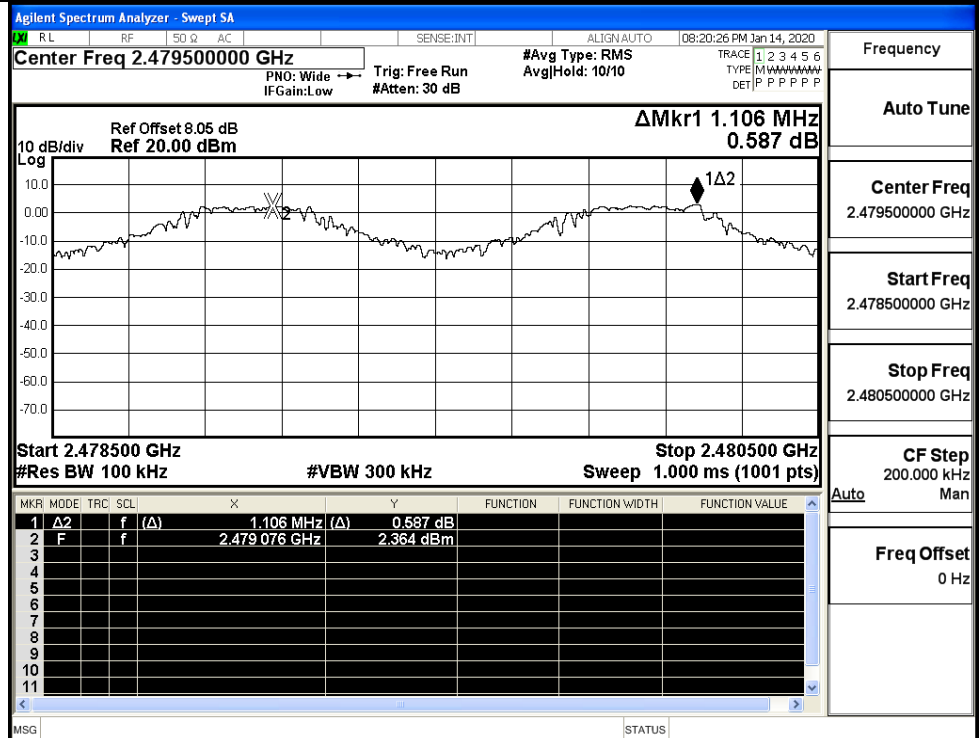
Test Graphs

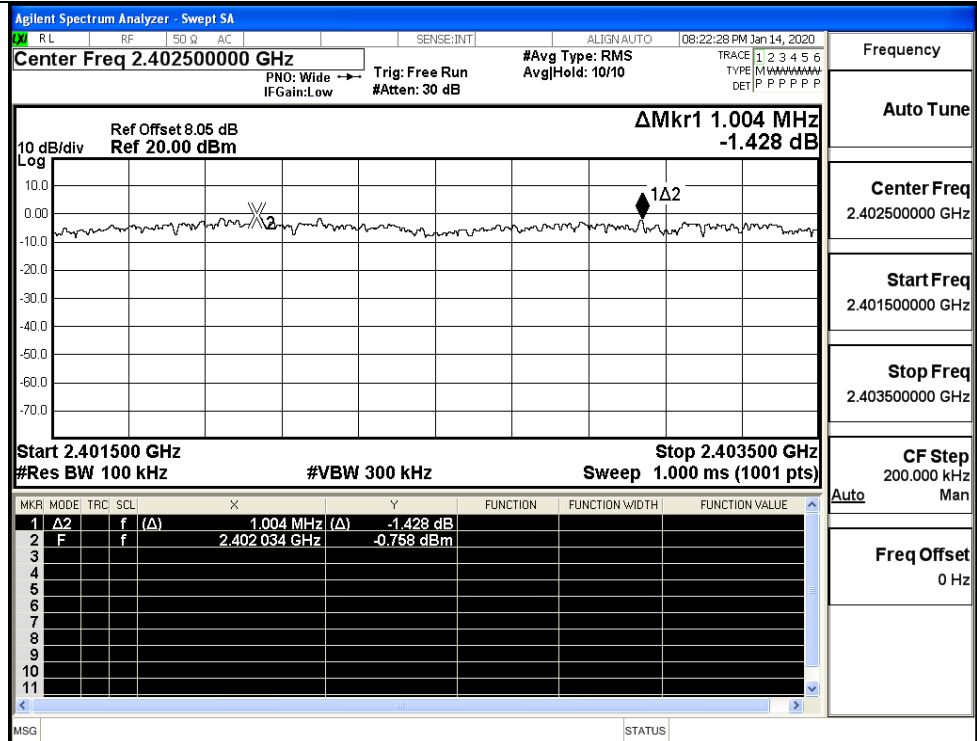
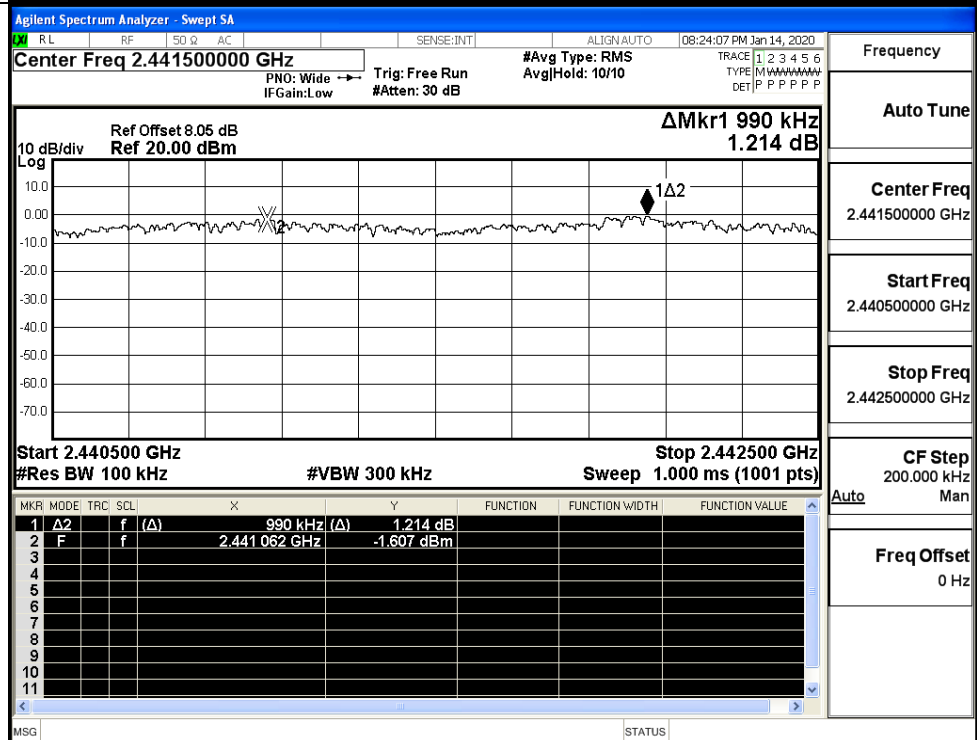


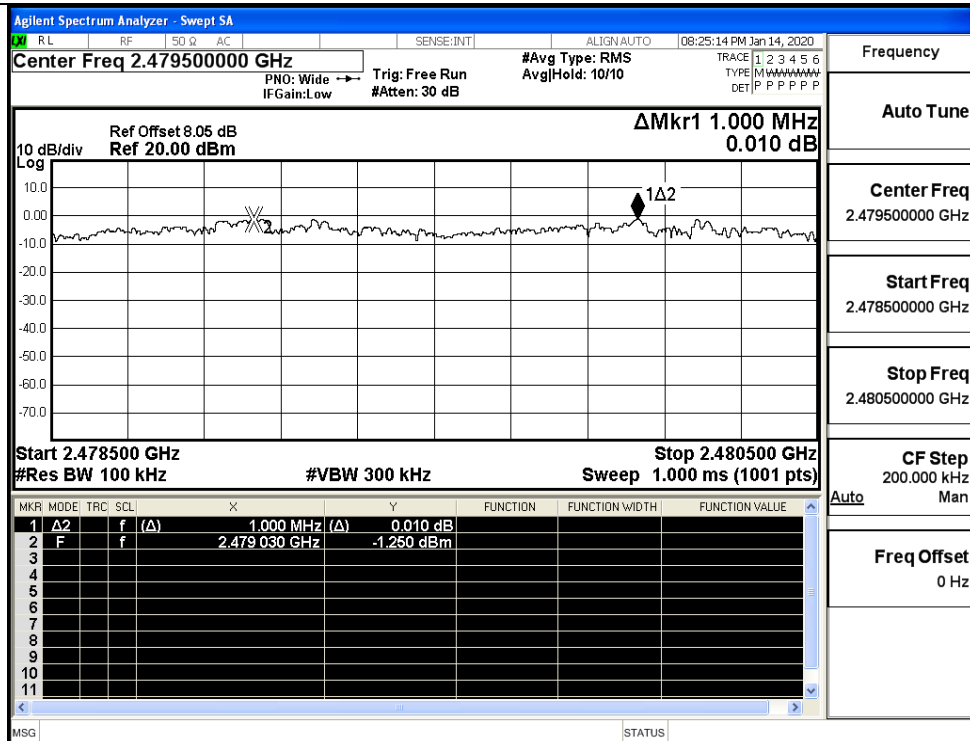
GFSK/MCH



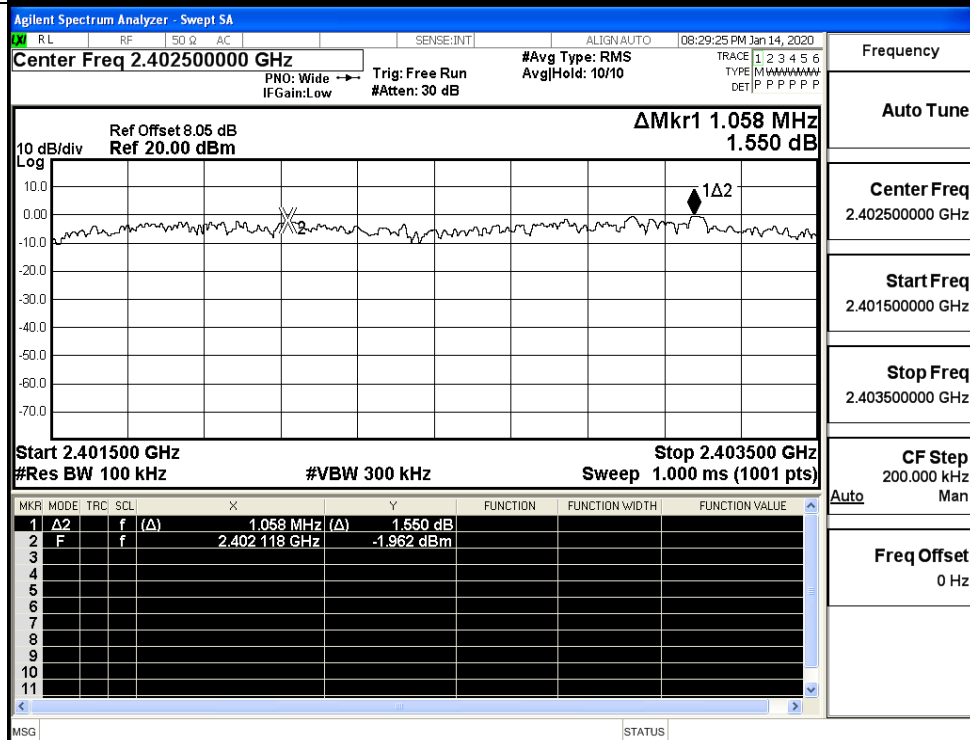
GFSK/HCH



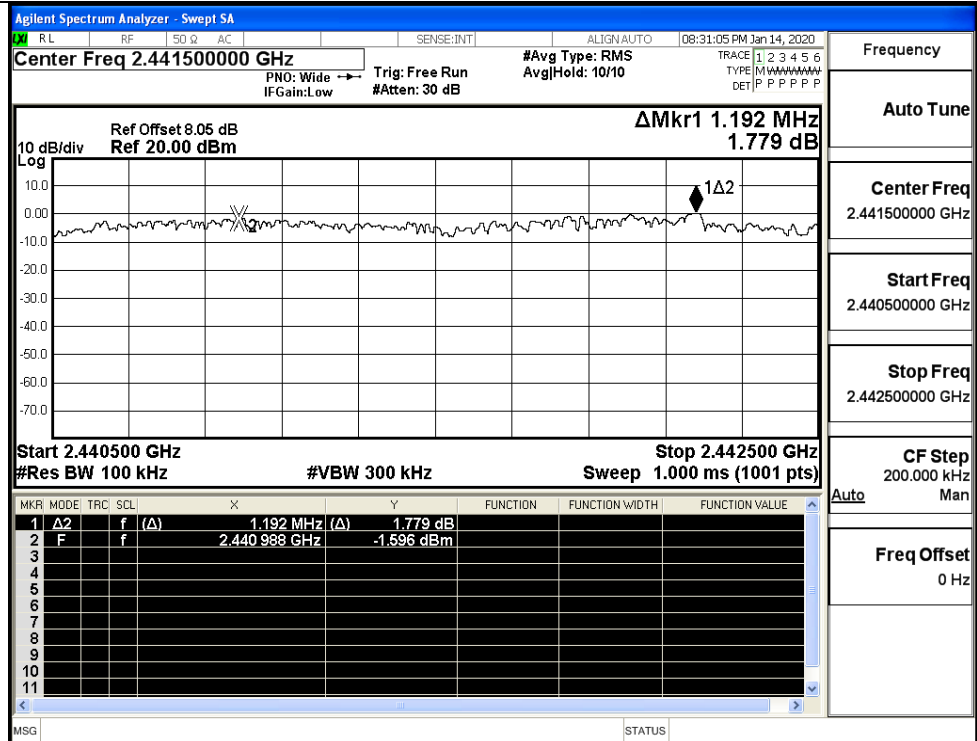
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

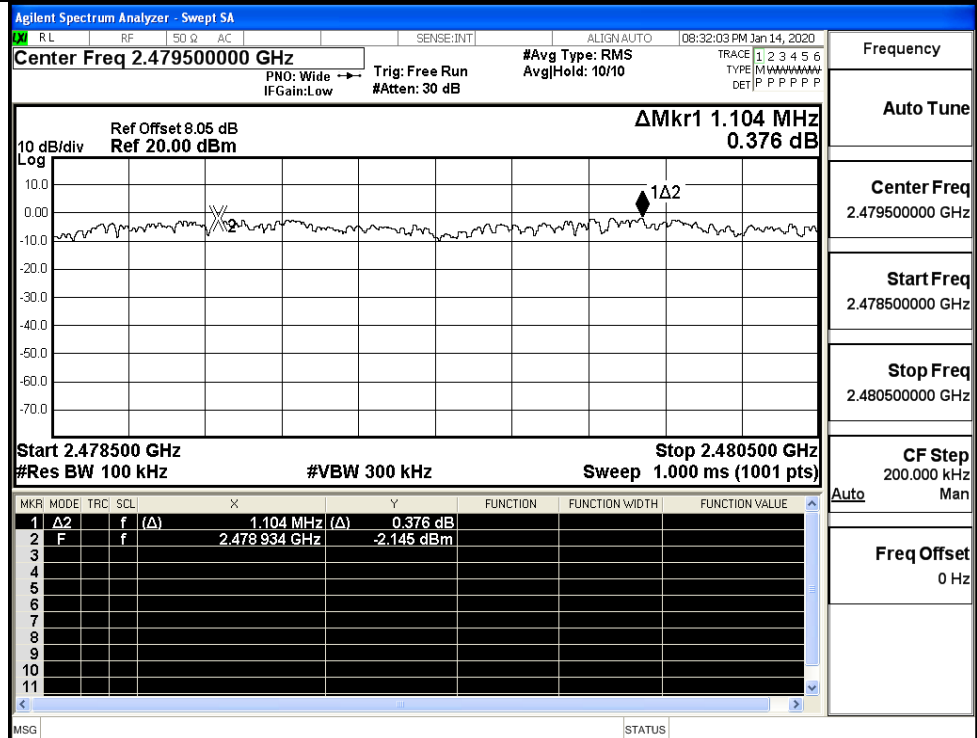
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

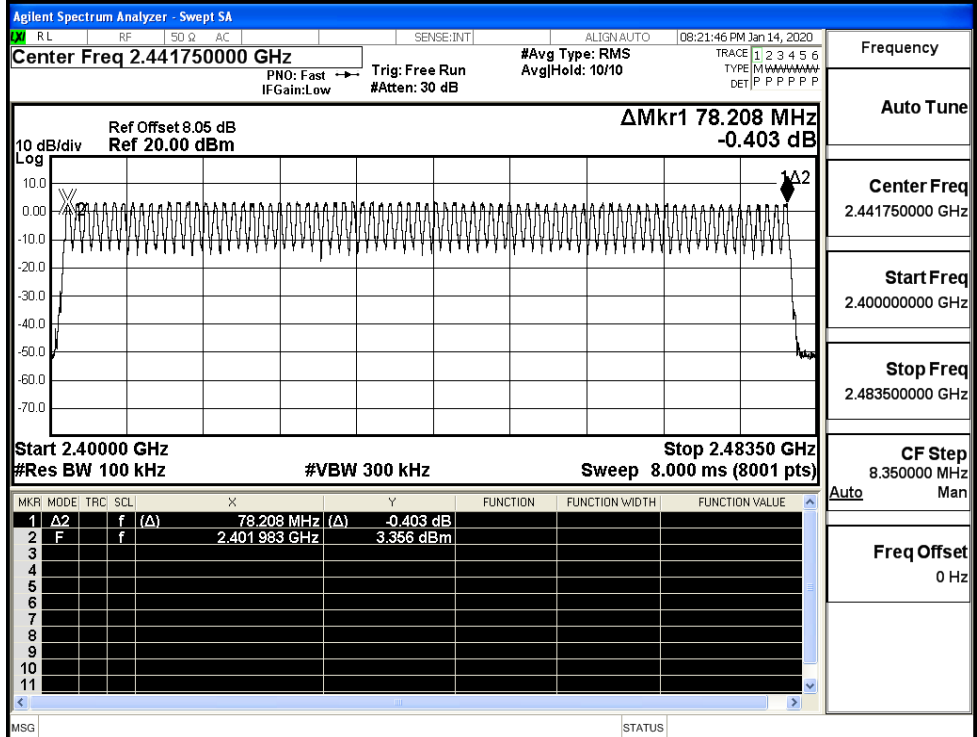
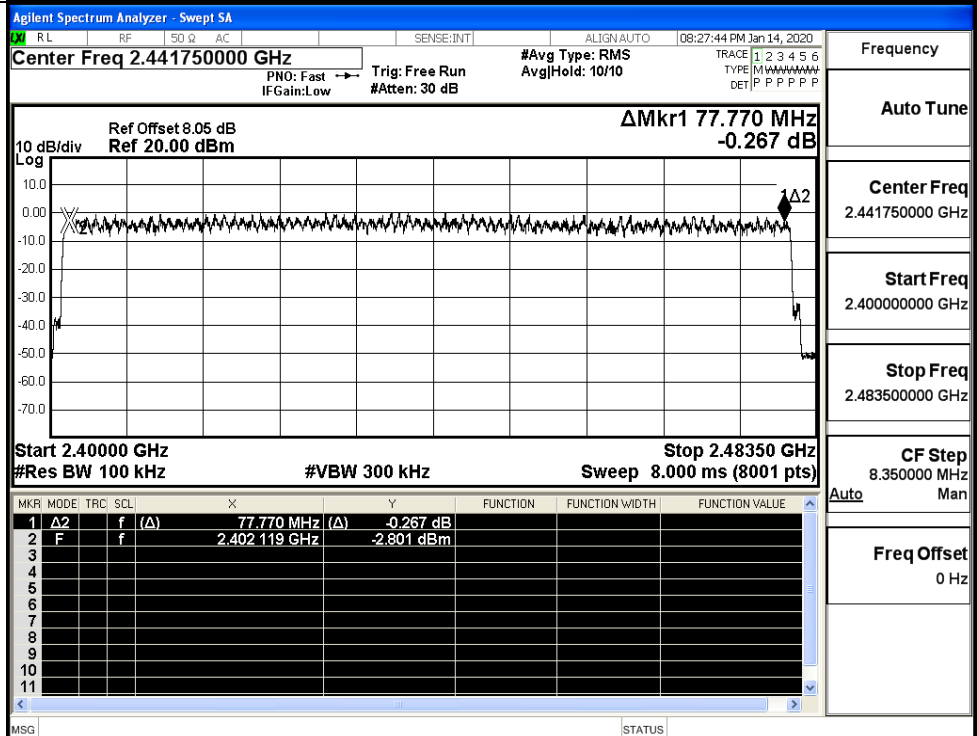


A.5 Hopping Channel Number

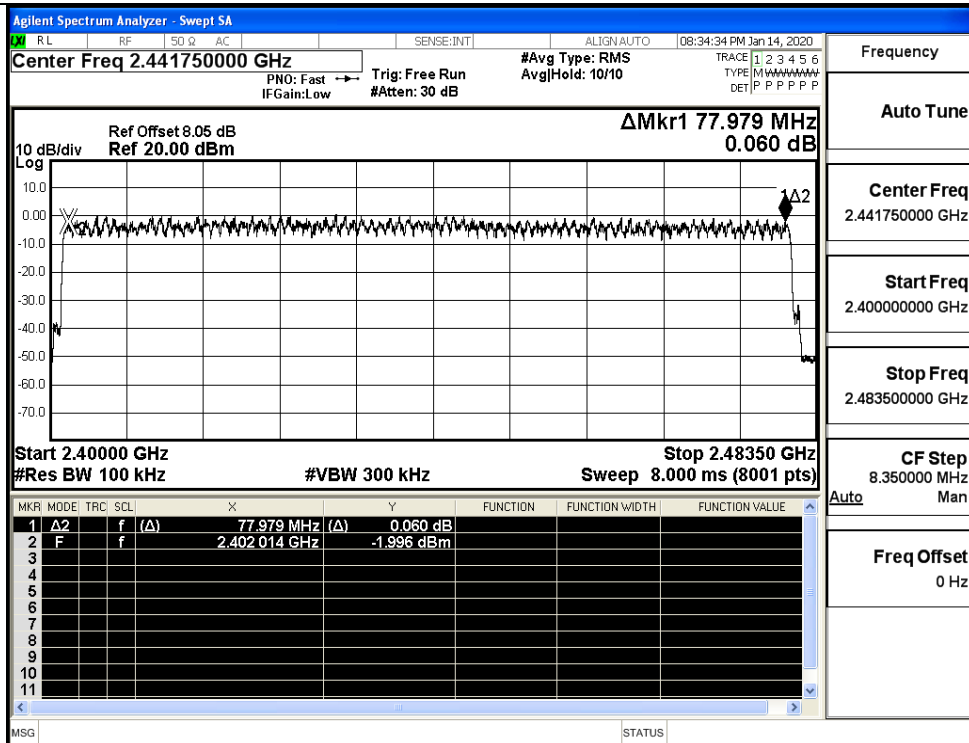
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graphs

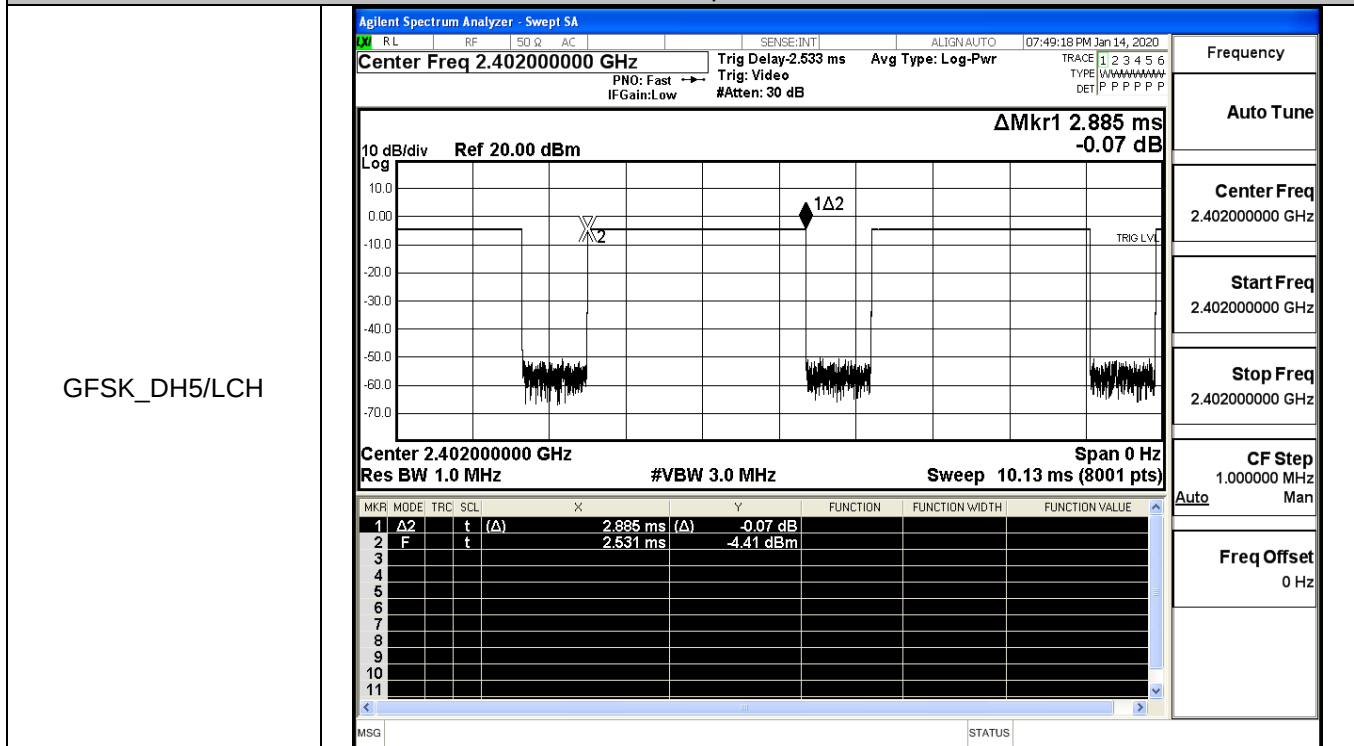
GFSK/Hop

 $\pi/4$ DQPSK/Hop

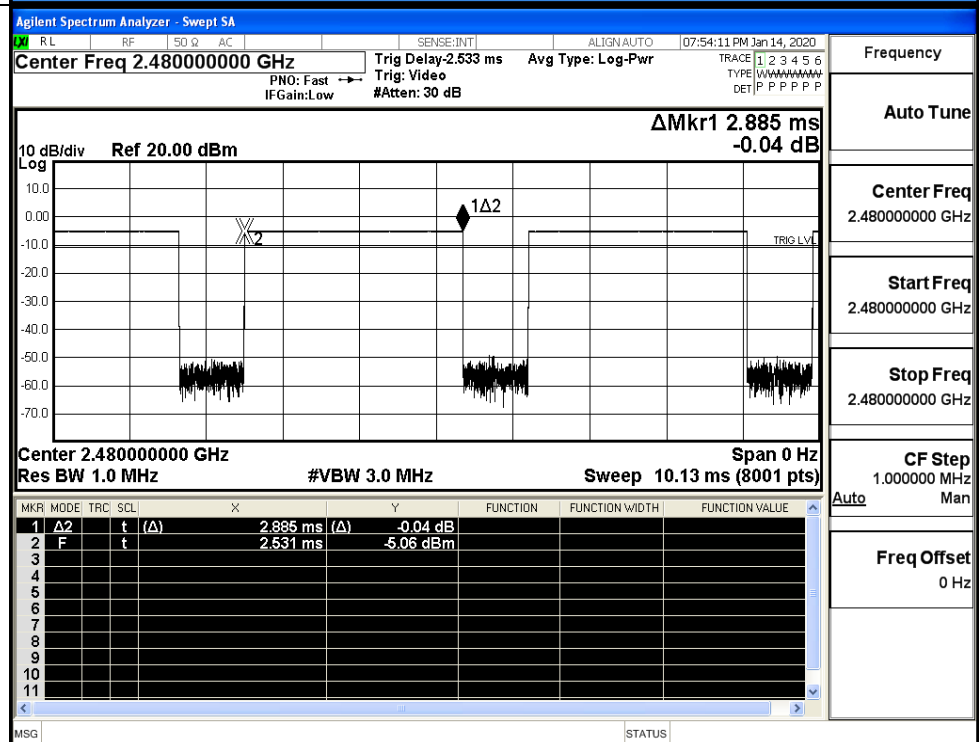
8DPSK/Hop



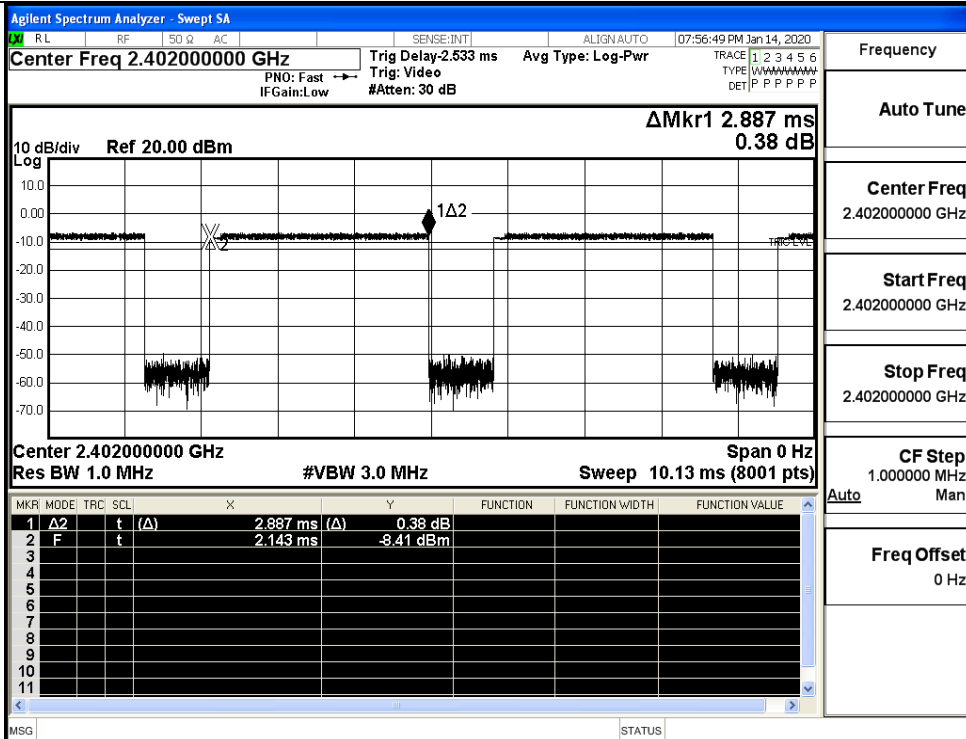
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.89	106.7	0.308	0.4	PASS
	DH5	MCH	2.89	106.7	0.308	0.4	PASS
	DH5	HCH	2.89	106.7	0.308	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.89	106.7	0.308	0.4	PASS
	2DH5	MCH	2.89	106.7	0.308	0.4	PASS
	2DH5	HCH	2.89	106.7	0.308	0.4	PASS
8DPSK	3DH5	LCH	2.89	106.7	0.308	0.4	PASS
	3DH5	MCH	2.89	106.7	0.308	0.4	PASS
	3DH5	HCH	2.89	106.7	0.308	0.4	PASS



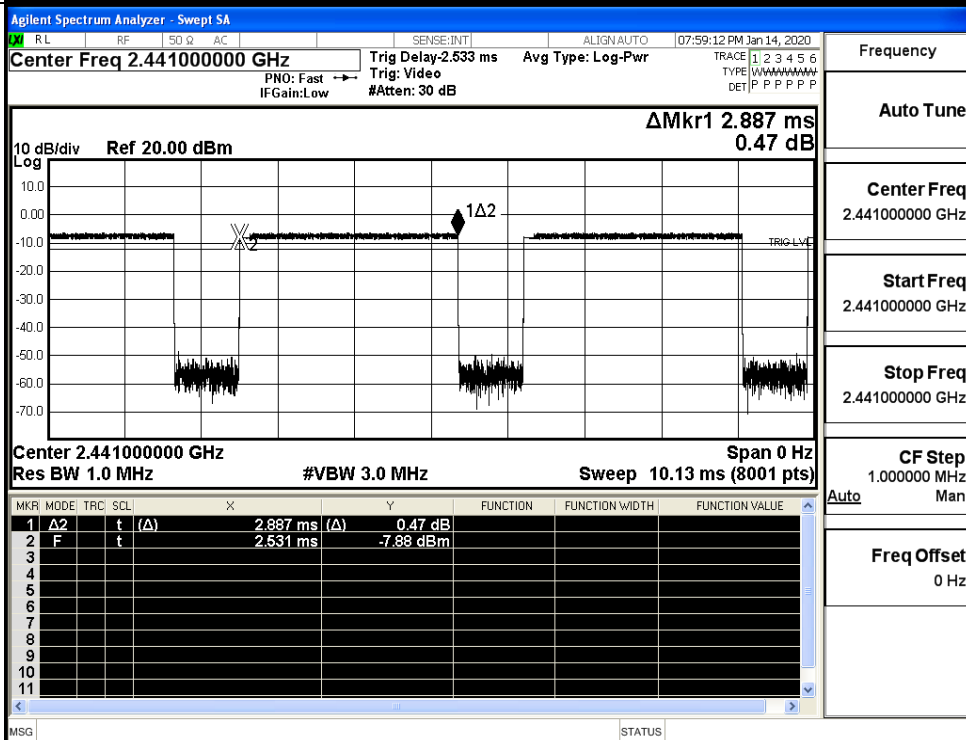
GFSK_DH5/HCH



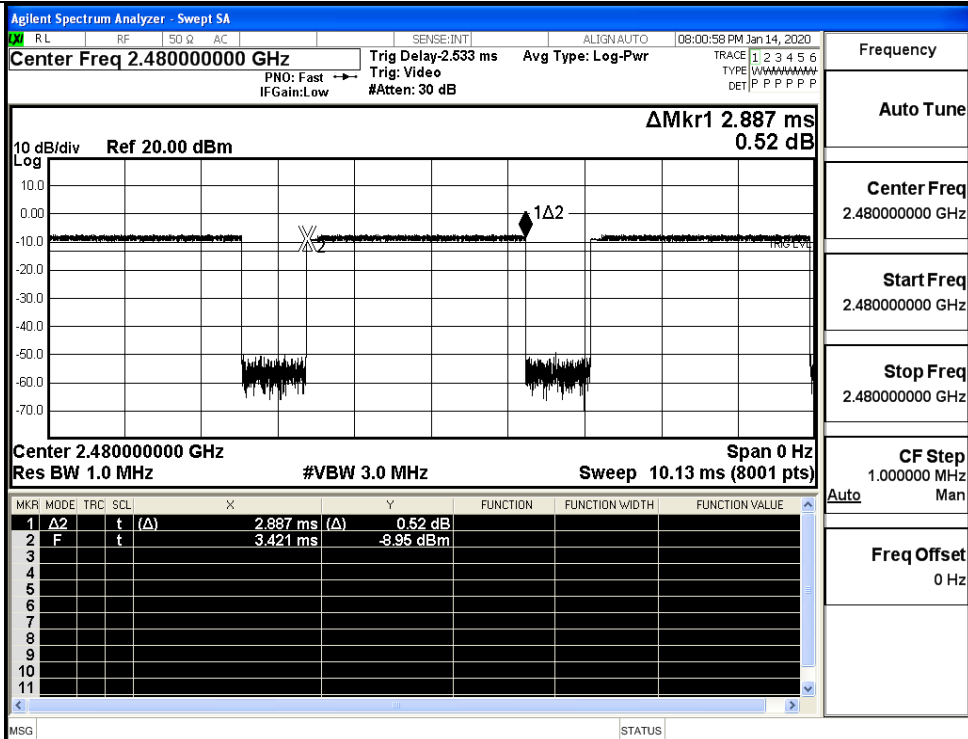
$\pi/4$ DQPSK
_2DH5/LCH



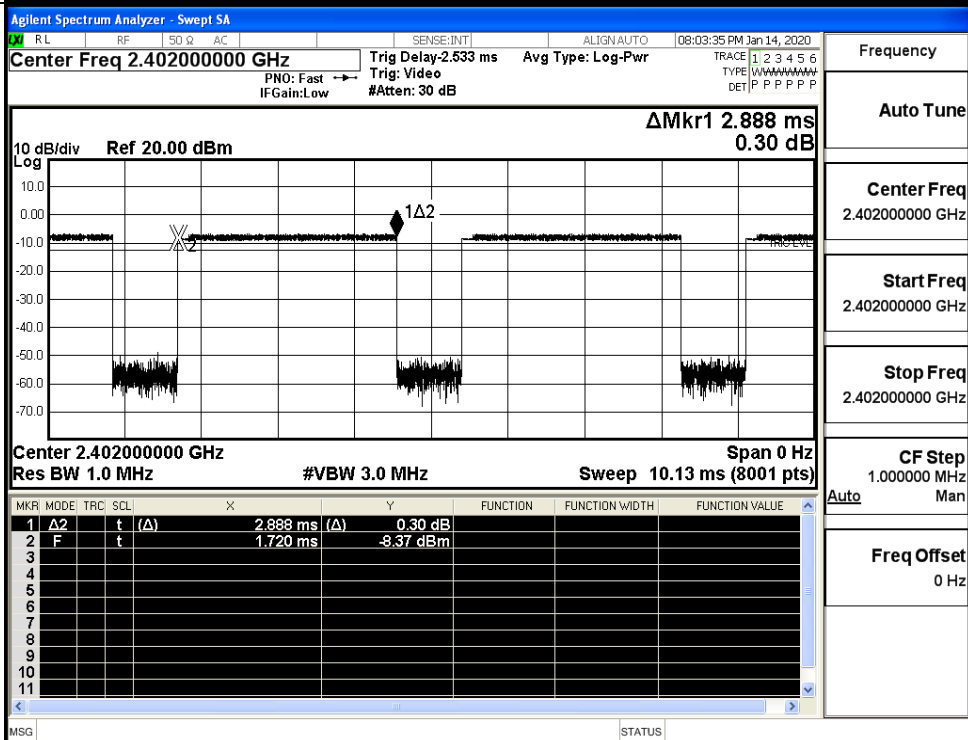
$\pi/4$ DQPSK
_2DH5/MCH



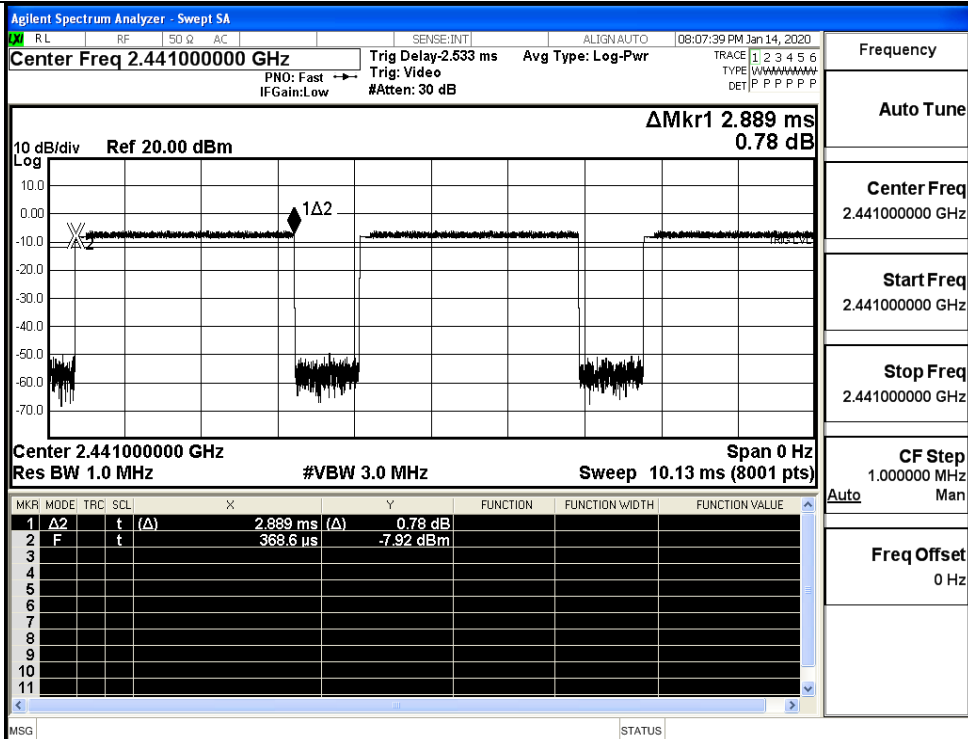
$\pi/4$ DQPSK
_2DH5/HCH



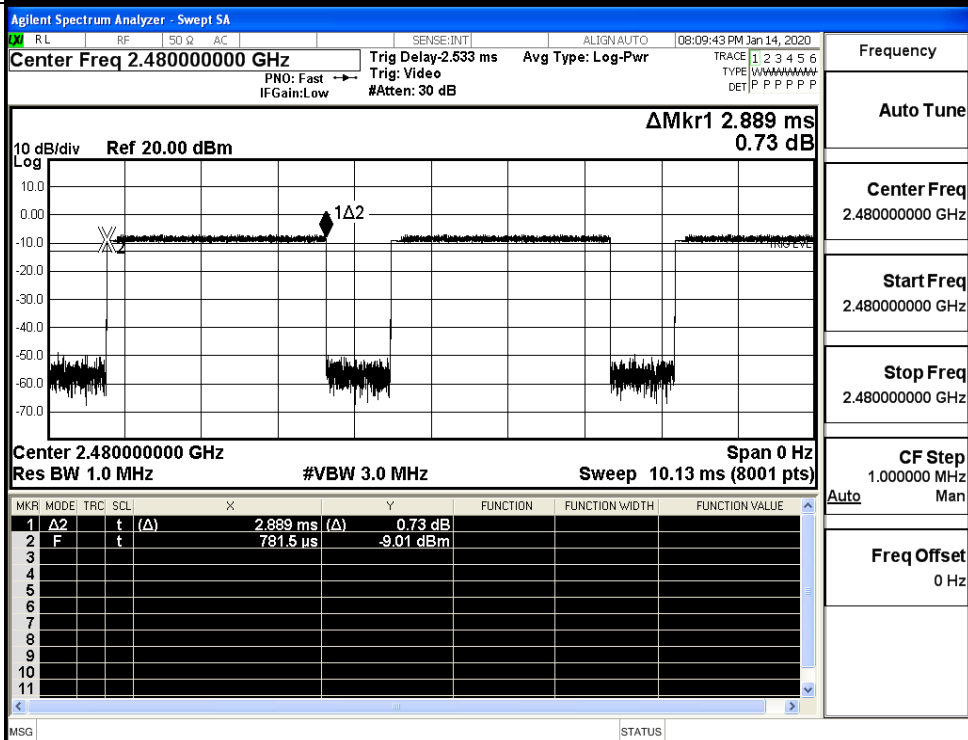
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

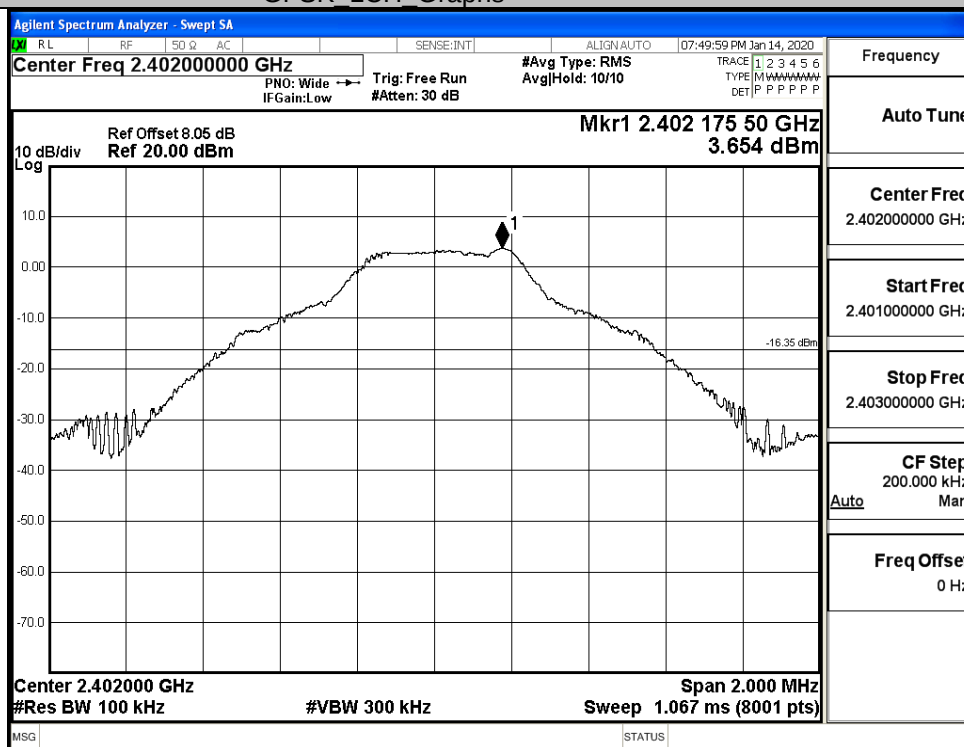


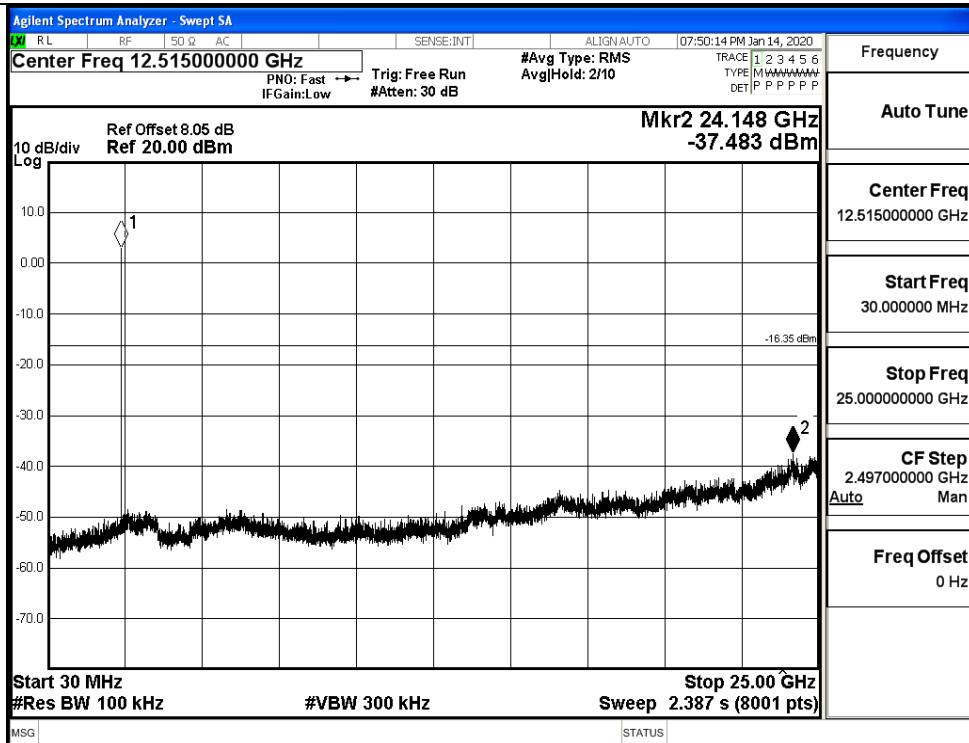
A.7 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.654	-37.483	-16.346	PASS
	MCH	3.681	-36.639	-16.319	PASS
	HCH	3.007	-38.047	-16.993	PASS
$\pi/4$ DQPSK	LCH	-0.641	-36.989	-20.641	PASS
	MCH	-0.097	-37.969	-20.097	PASS
	HCH	-1.1	-38.041	-21.100	PASS
8DPSK	LCH	-0.649	-37.502	-20.649	PASS
	MCH	0.058	-37.044	-19.942	PASS
	HCH	-0.981	-38.055	-20.981	PASS

GFSK LCH Graphs

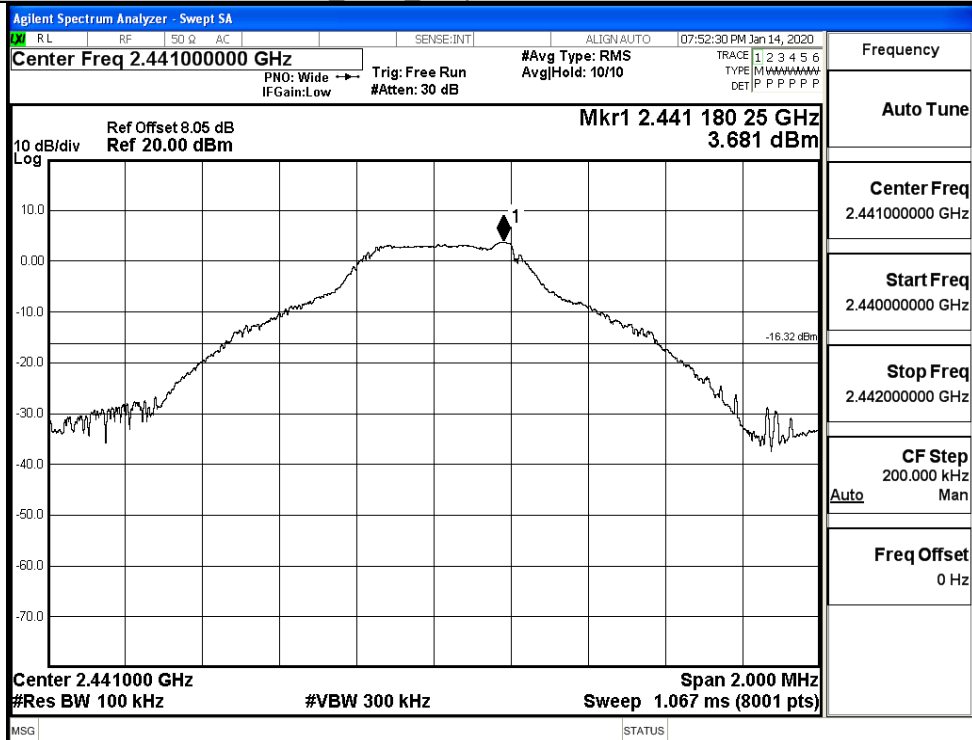
Pref



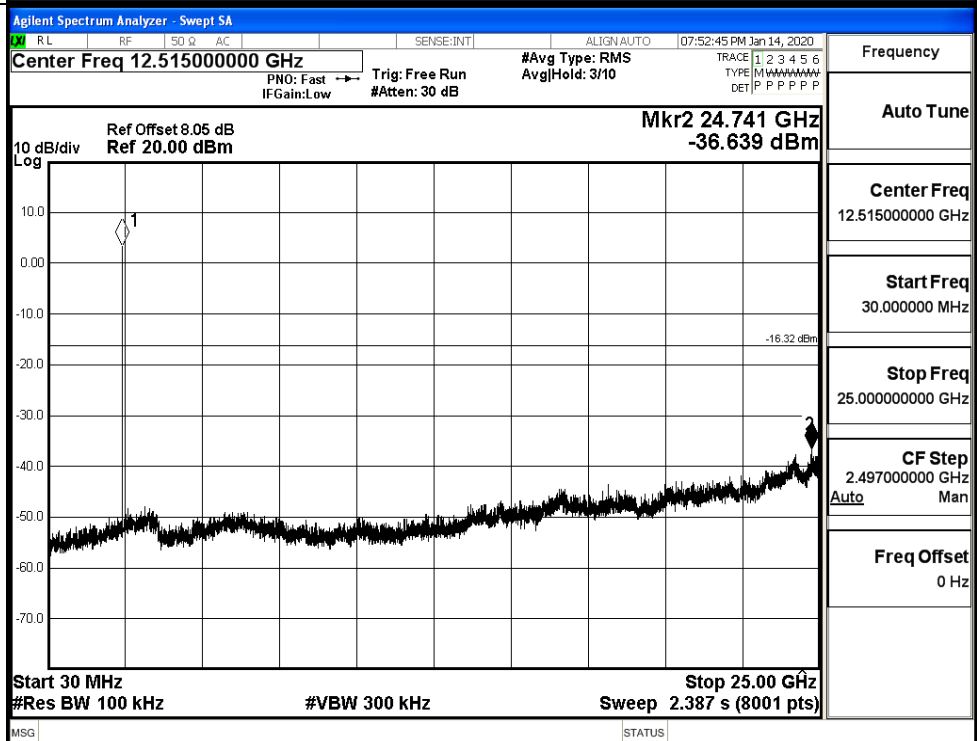
P_uw

GFSK_MCH_Graphs

Pref

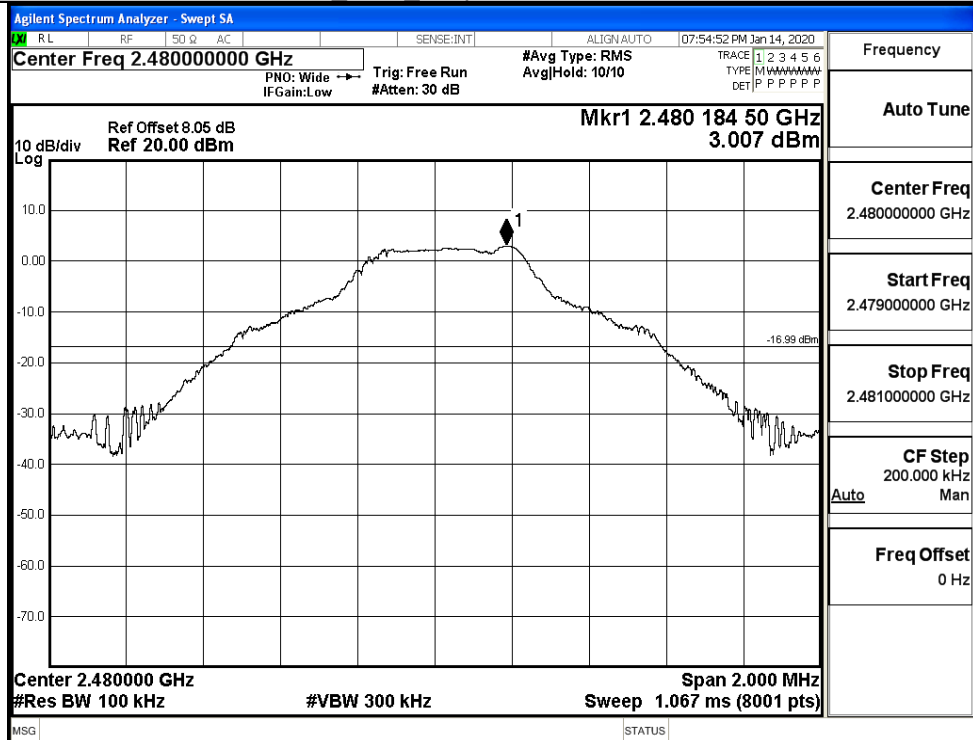


Puw

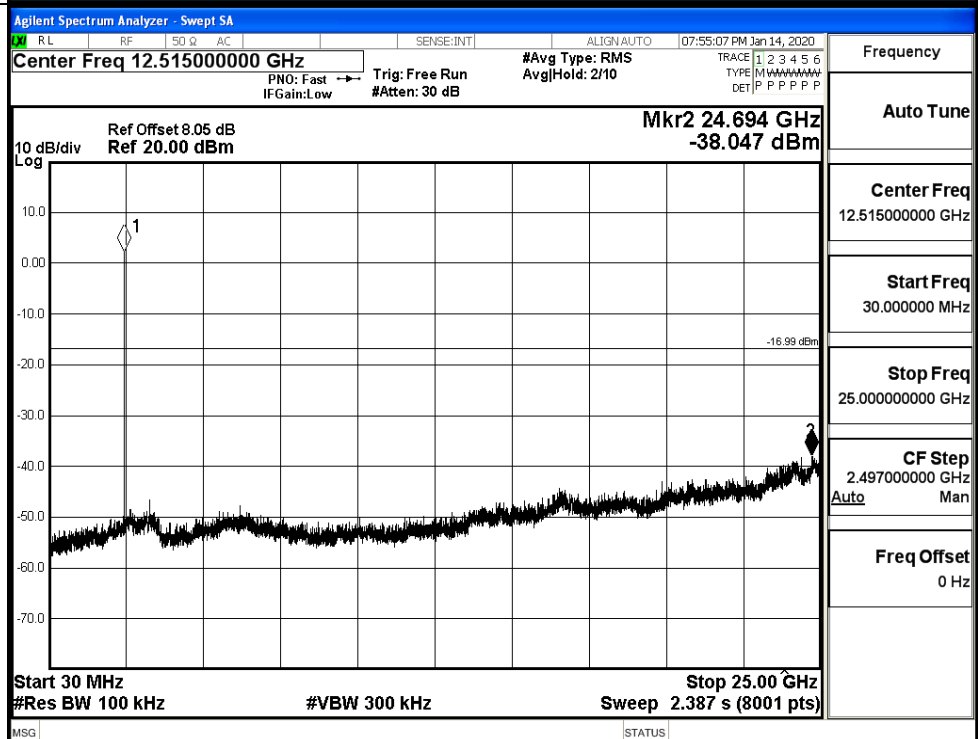


GFSK HCH_Graphs

Pref

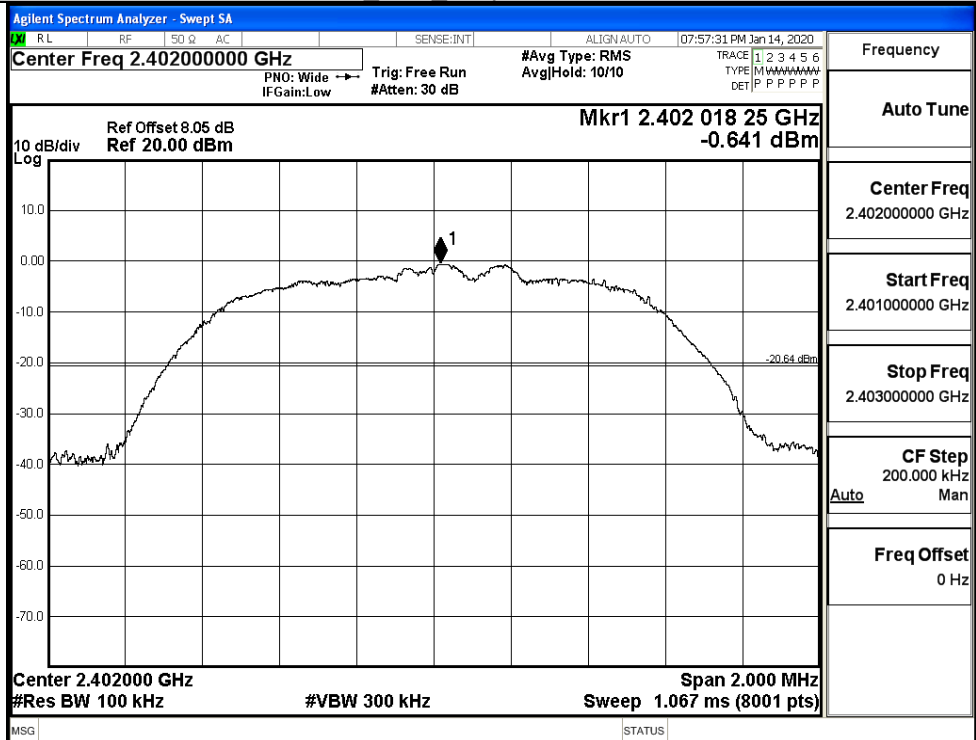


Puw

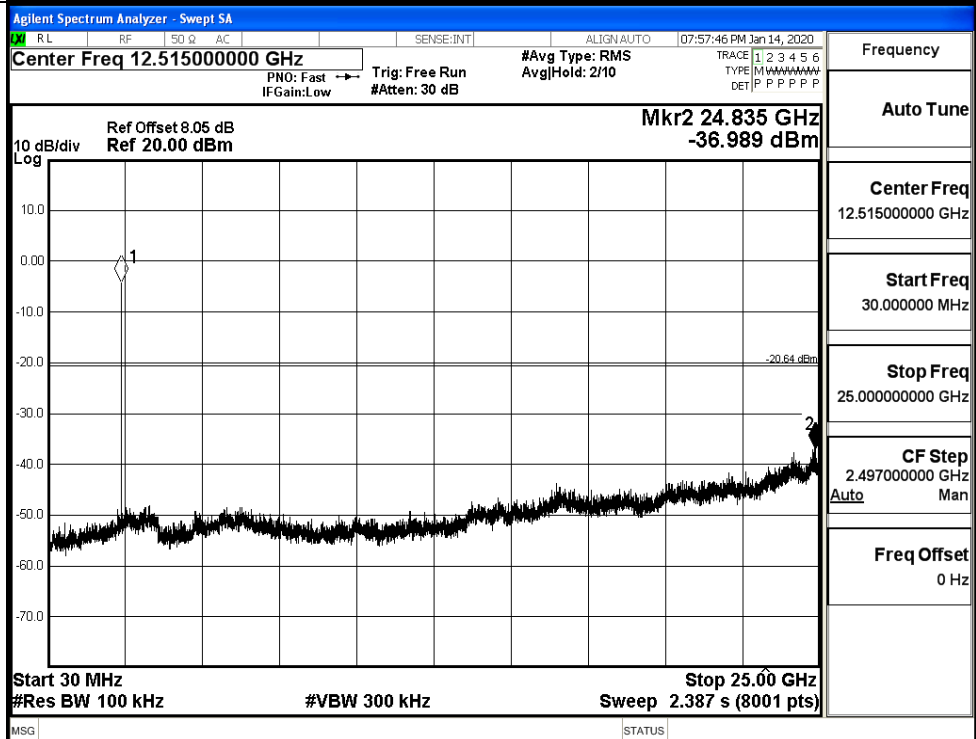


$\pi/4$ DQPSK_LCH_Graphs

Pref

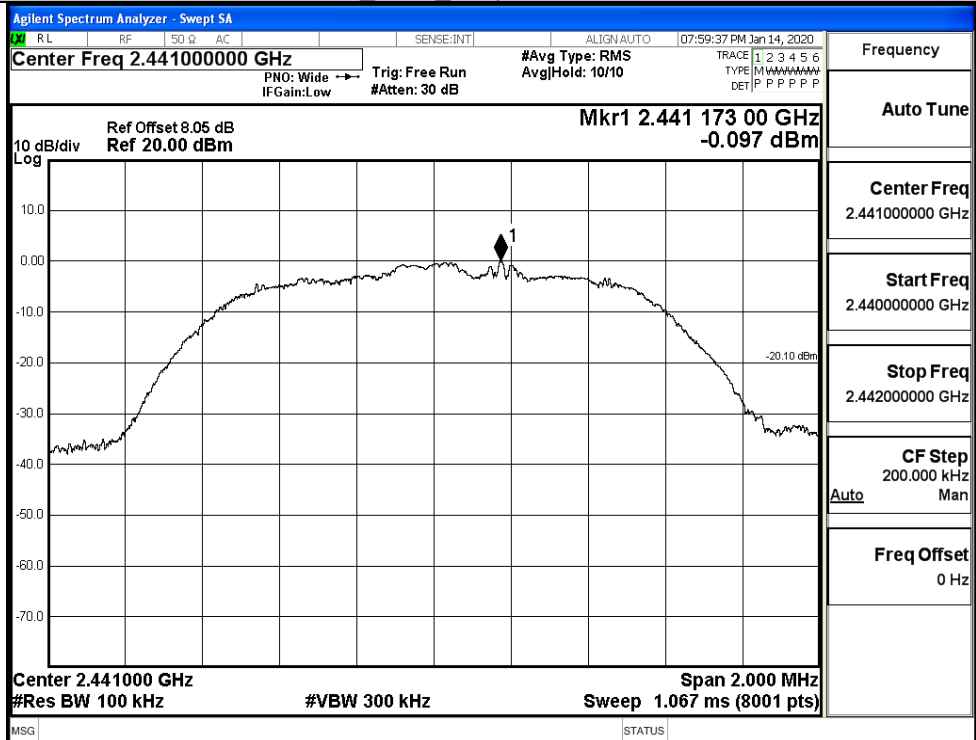


Puw

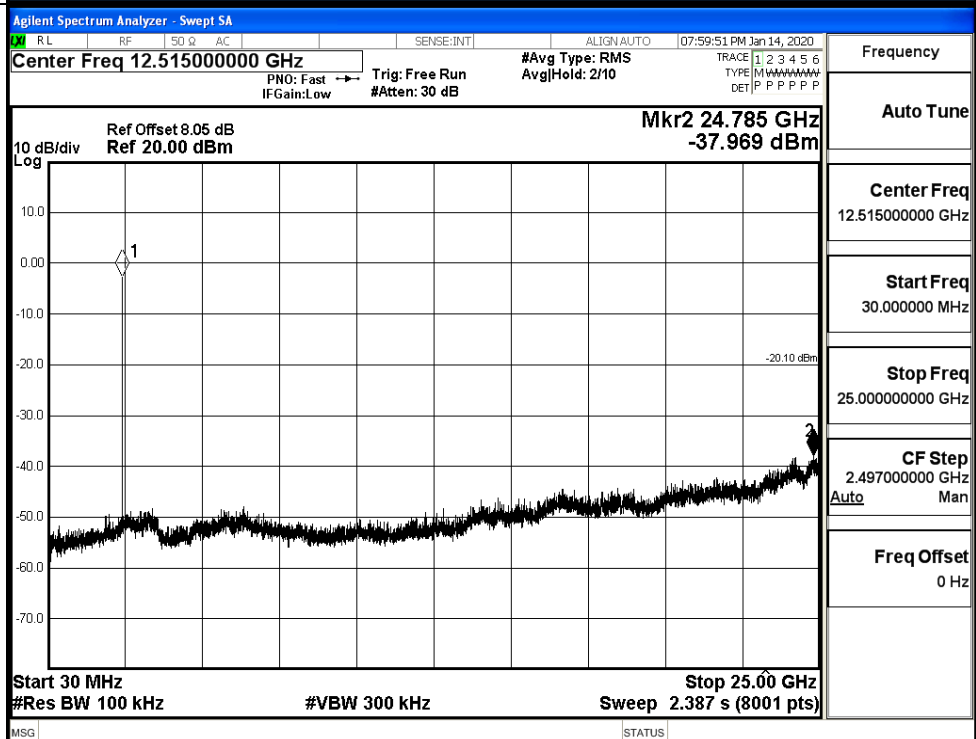


π /4DQPSK_MCH_Graphs

Pref

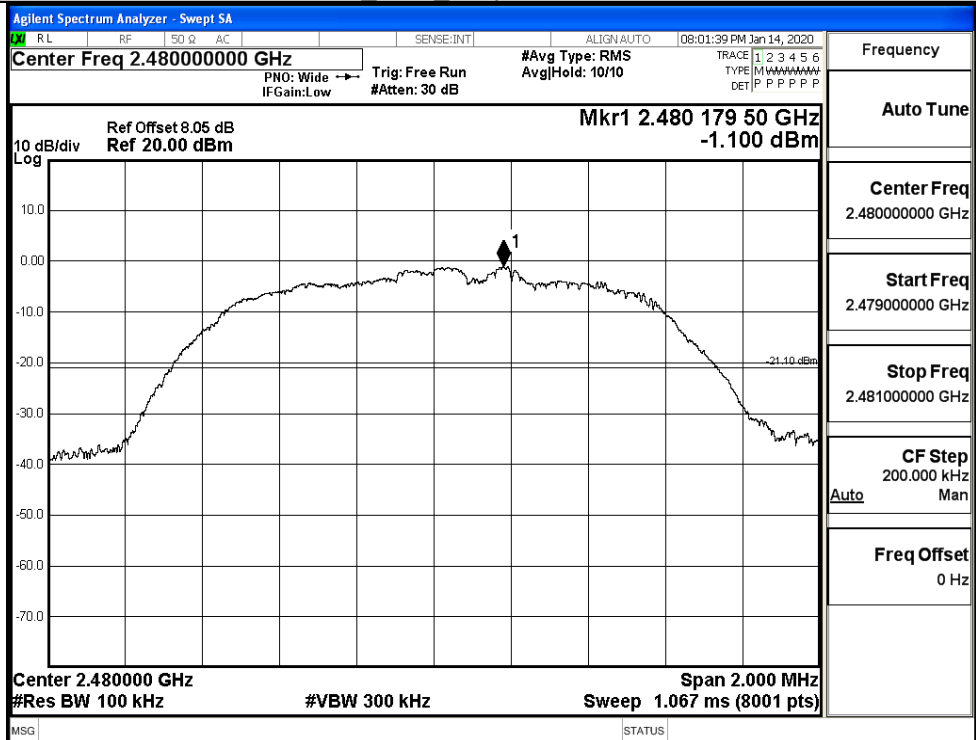


Puw

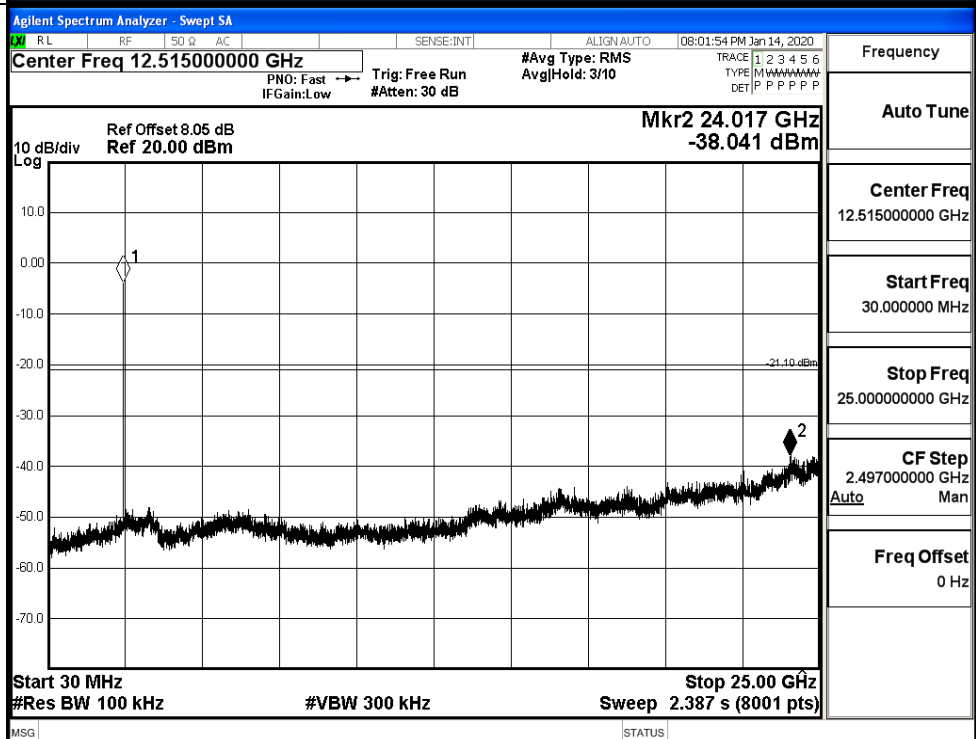


π /4DQPSK_HCH_Graphs

Pref

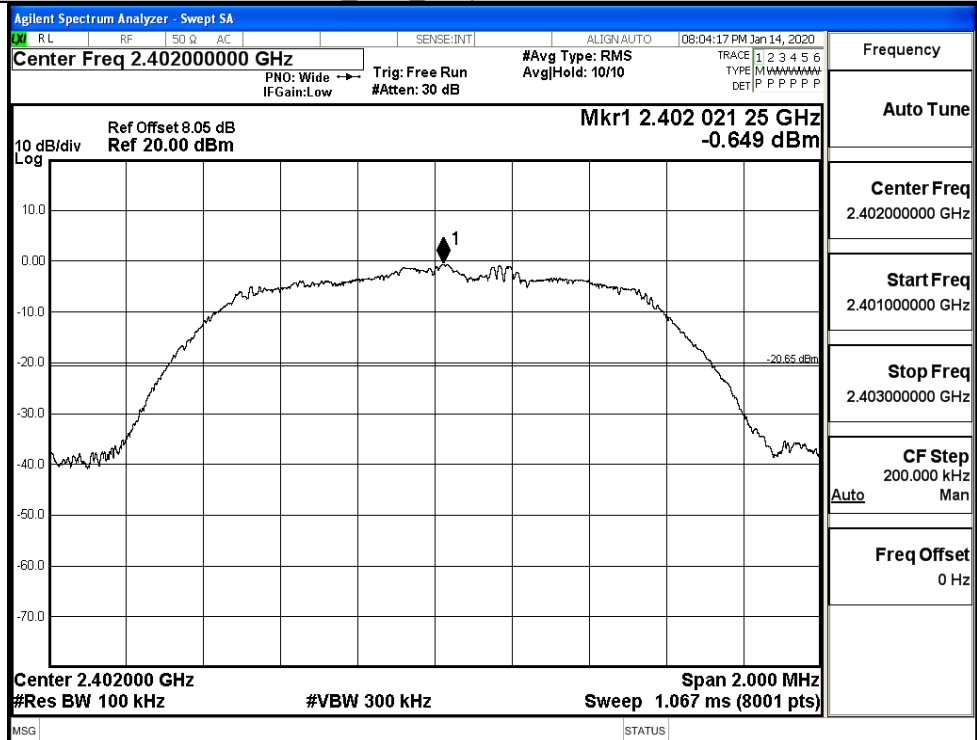


Puw

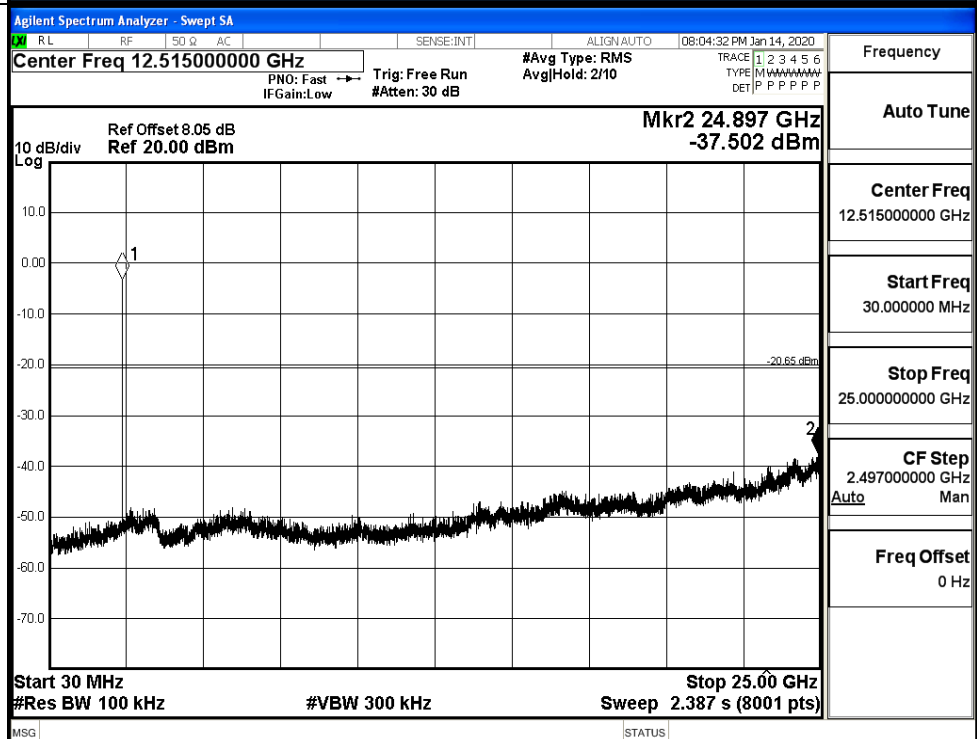


8DPSK_LCH_Graphs

Pref

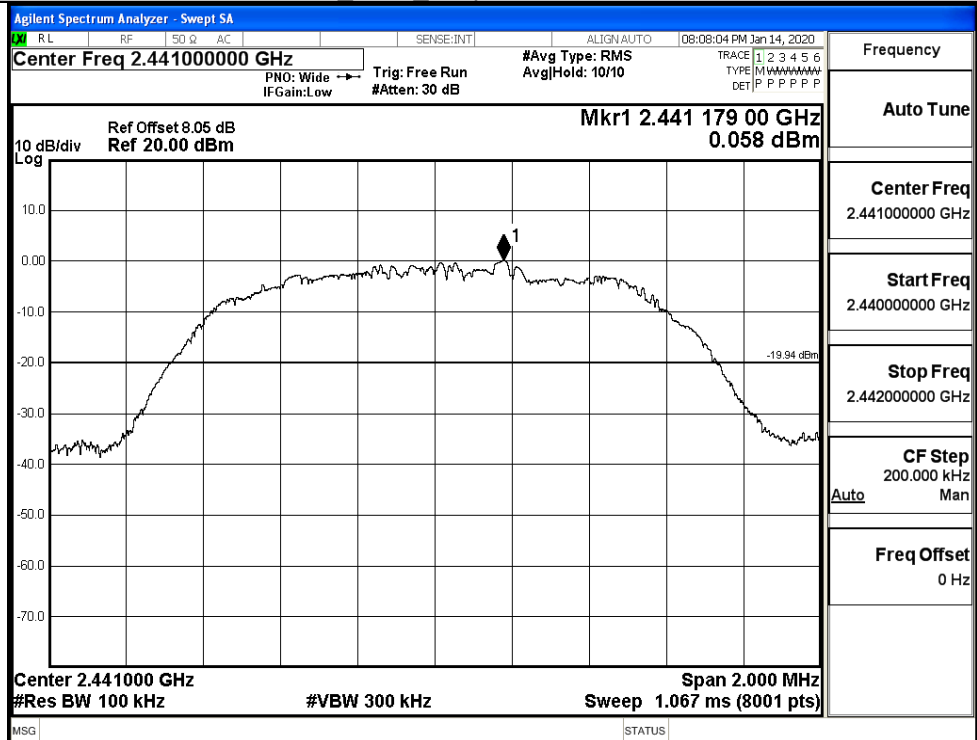


Puw

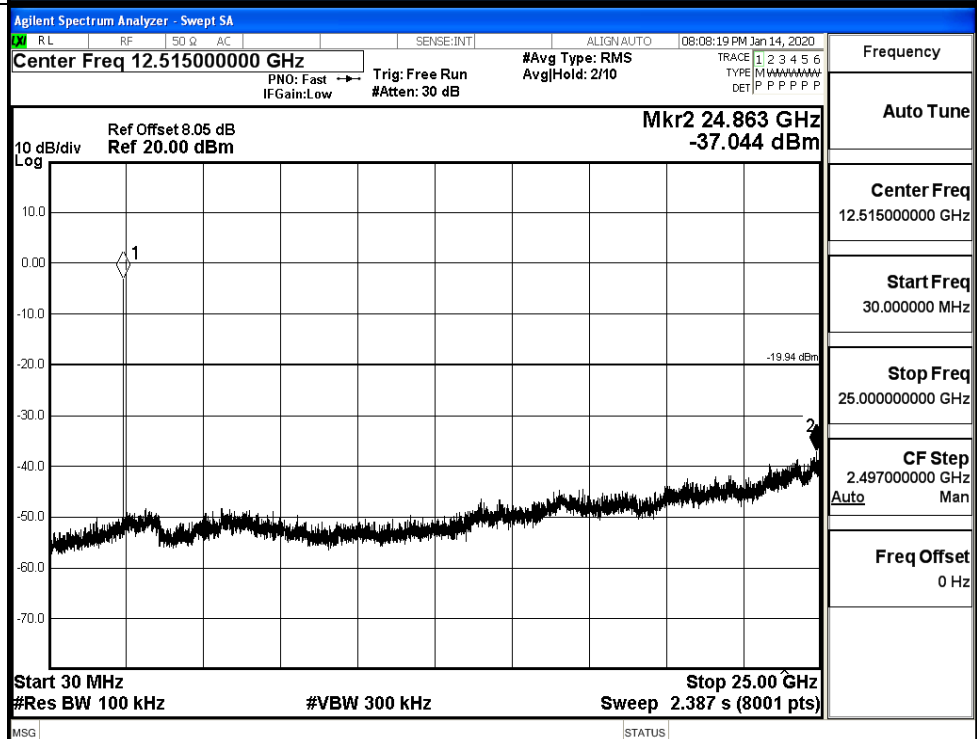


8DPSK_MCH_Graphs

Pref

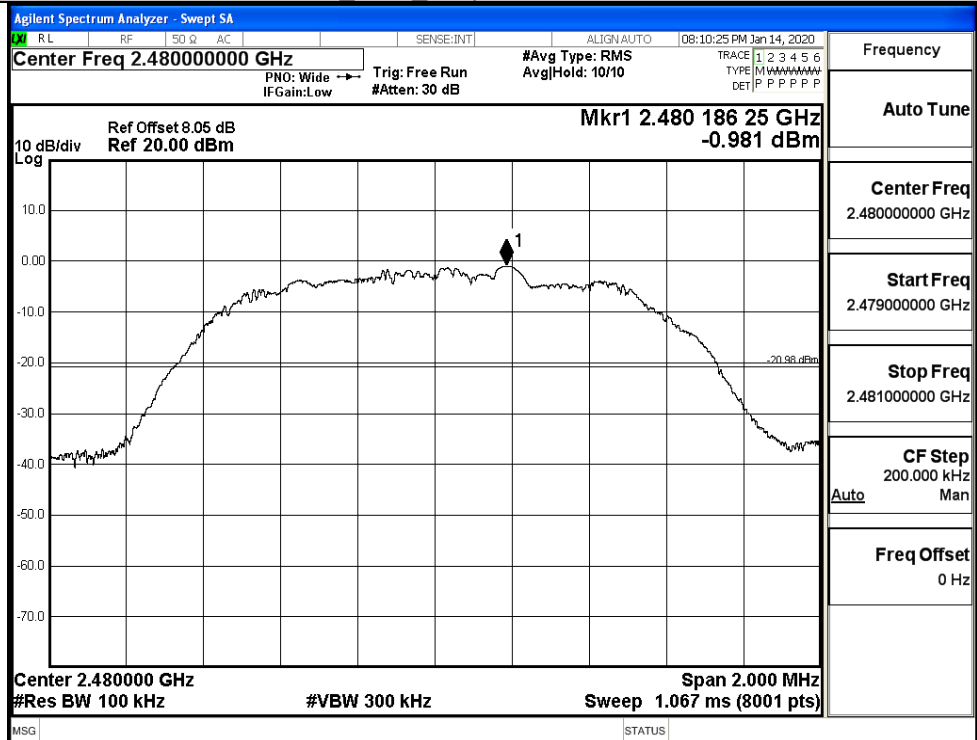


Puw

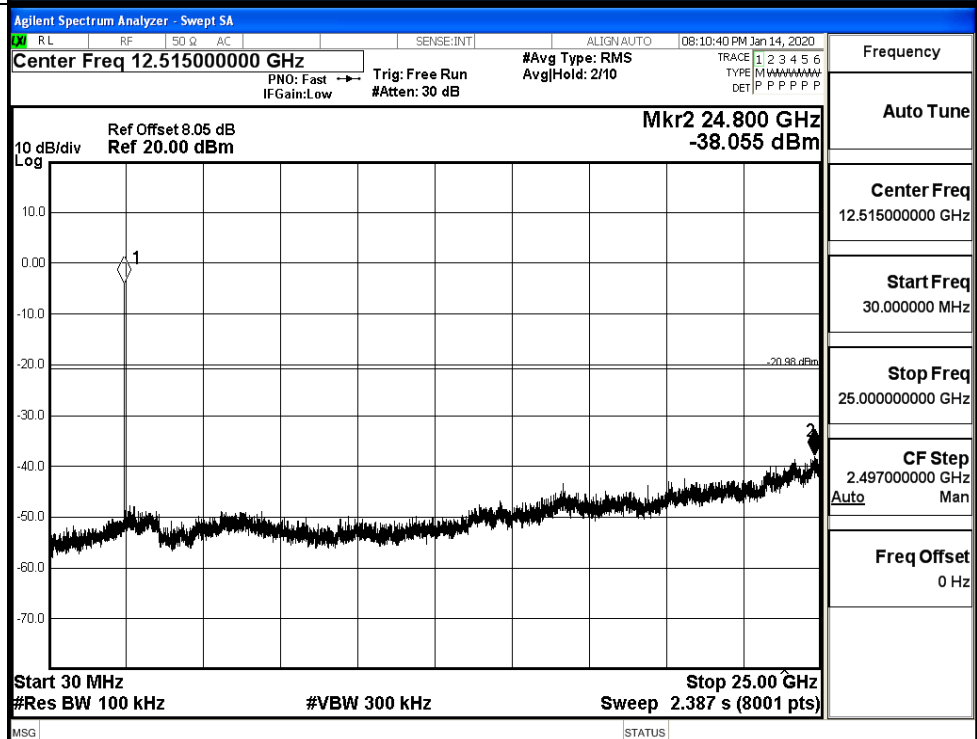


8DPSK_HCH_Graphs

Pref



Puw

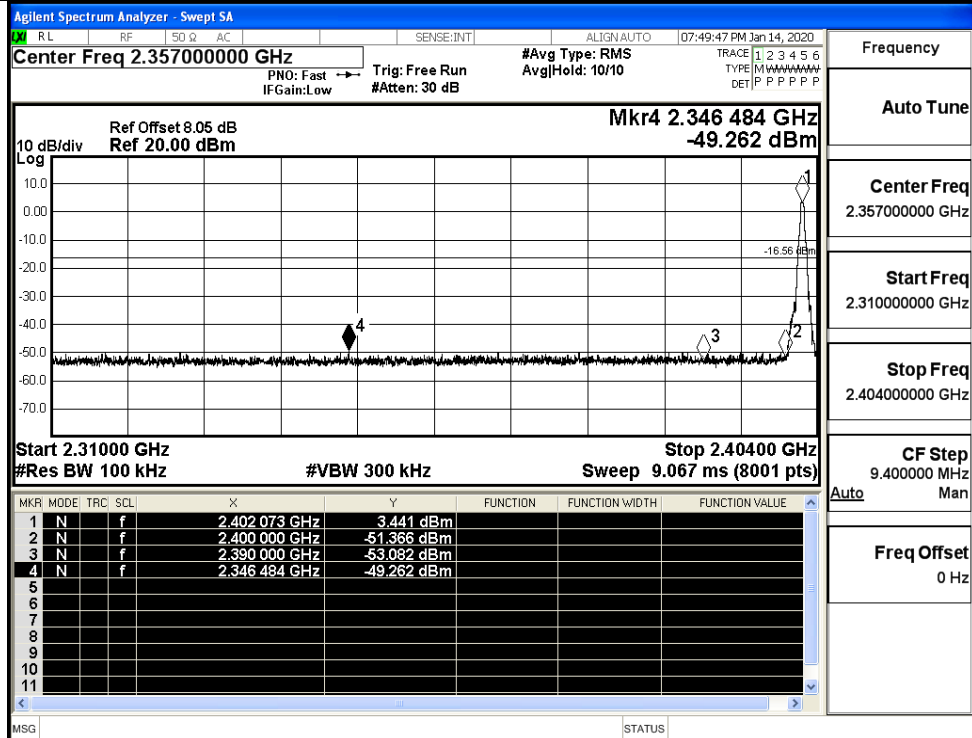


A.8 Band-edge for RF Conducted Emissions

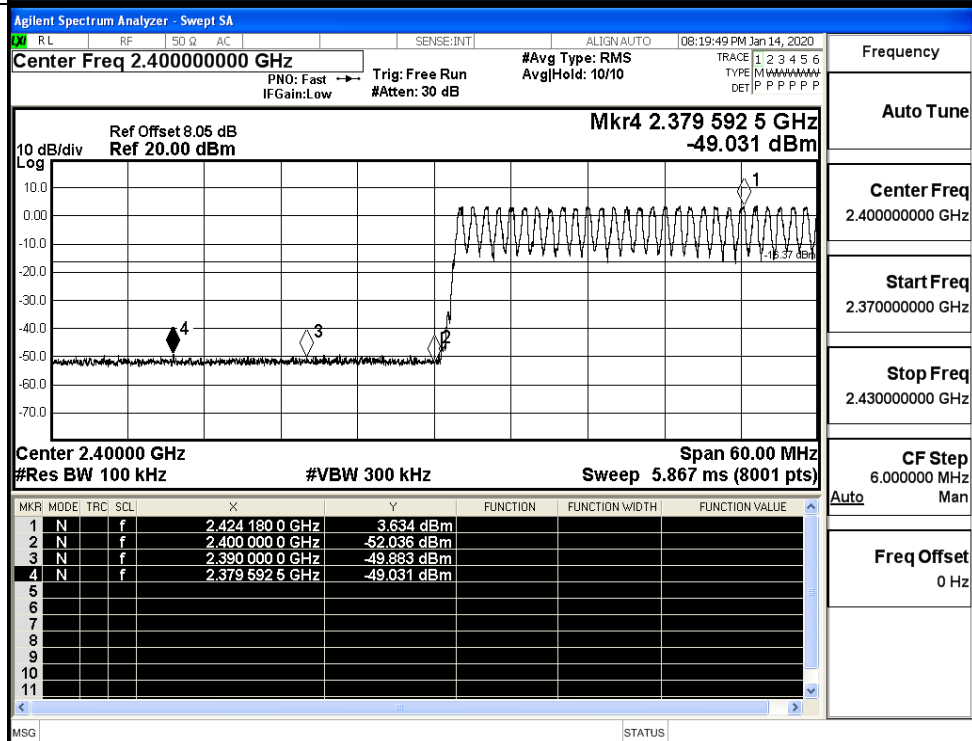
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	3.441	Off	-49.262	-16.56	PASS
			3.634	On	-49.031	-16.37	PASS
	HCH	2480	2.993	Off	-49.497	-17.01	PASS
			3.147	On	-48.585	-16.85	PASS
$\pi/4$ DQPSK	LCH	2402	-0.492	Off	-49.826	-20.49	PASS
			0.007	On	-48.706	-19.99	PASS
	HCH	2480	-1.021	Off	-48.933	-21.02	PASS
			-0.887	On	-48.372	-20.89	PASS
8DPSK	LCH	2402	-0.766	Off	-49.296	-20.77	PASS
			0.298	On	-49.293	-19.7	PASS
	HCH	2480	-0.935	Off	-49.233	-20.94	PASS
			-0.706	On	-48.664	-20.71	PASS

Test Graphs

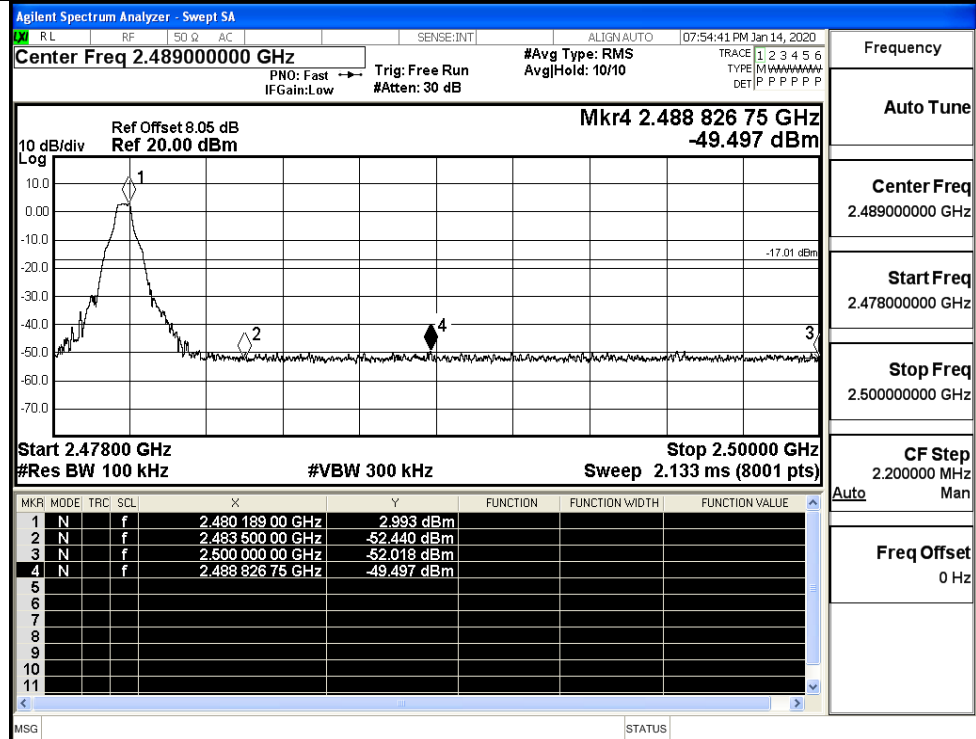
GFSK/LCH/No Hop



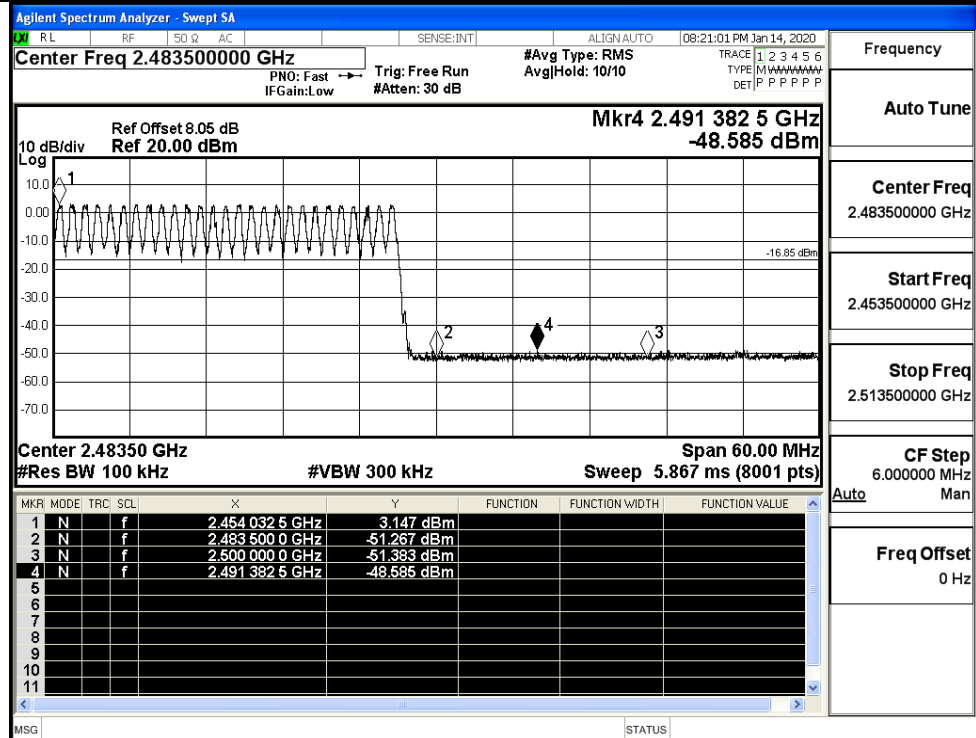
GFSK/LCH/Hop



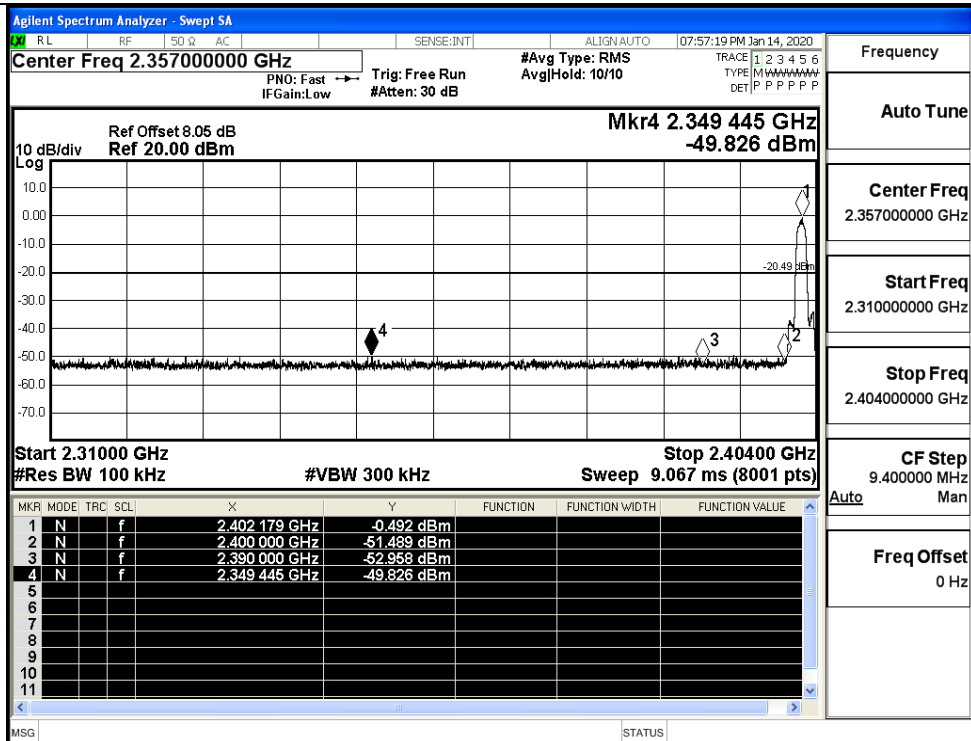
GFSK/HCH/No Hop



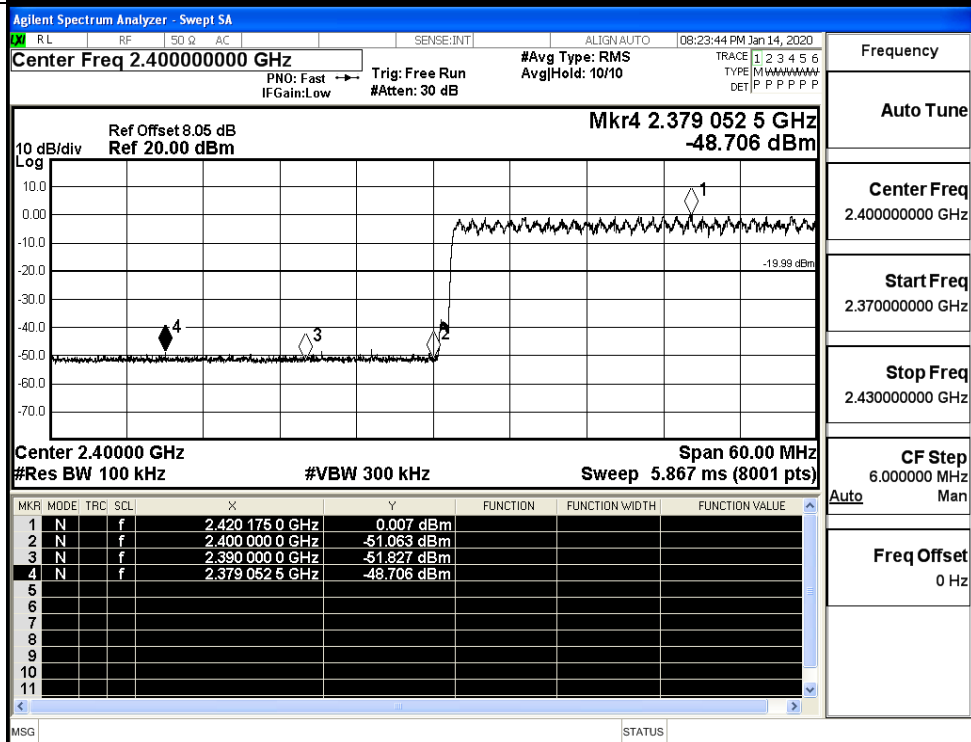
GFSK/HCH/Hop



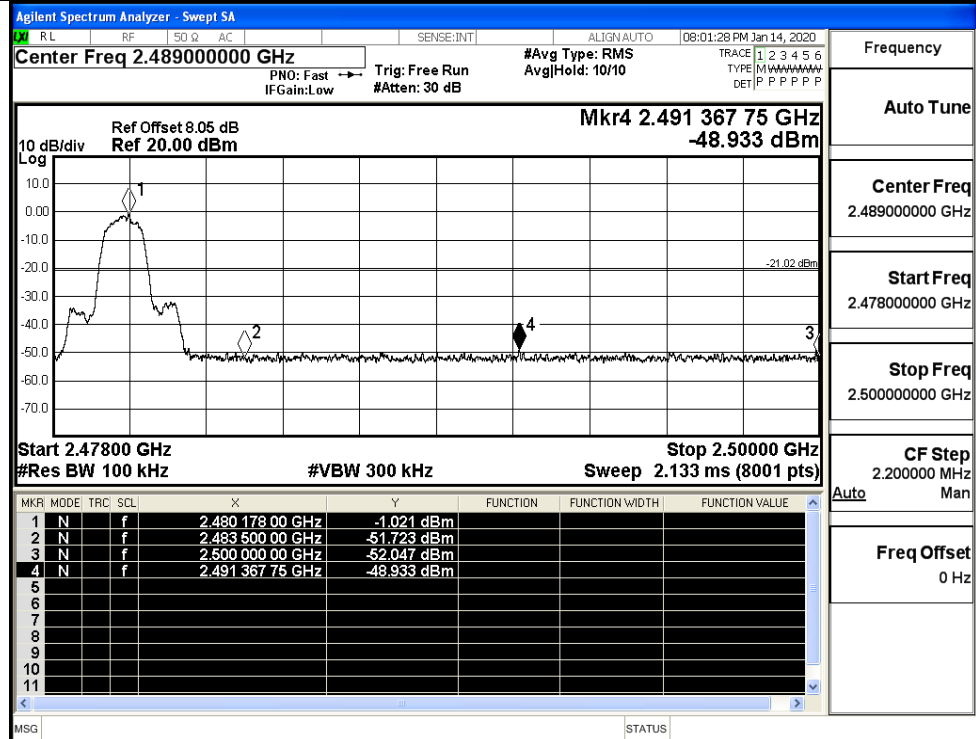
$\pi/4$ DQPSK/LCH/No
Hop



$\pi/4$ DQPSK/LCH/Hop



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

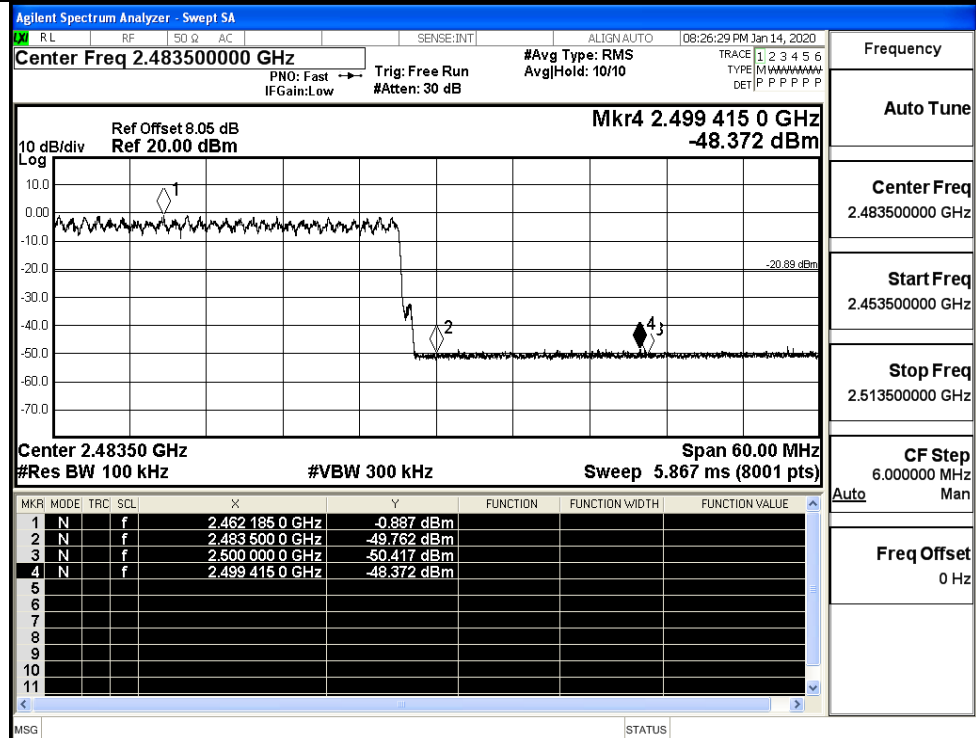


Frequency

Auto Tune

Center Freq
2.489000000 GHzStart Freq
2.478000000 GHzStop Freq
2.500000000 GHzCF Step
2.200000 MHz
Auto ManFreq Offset
0 Hz

$\pi/4$ DQPSK/HCH/Hop

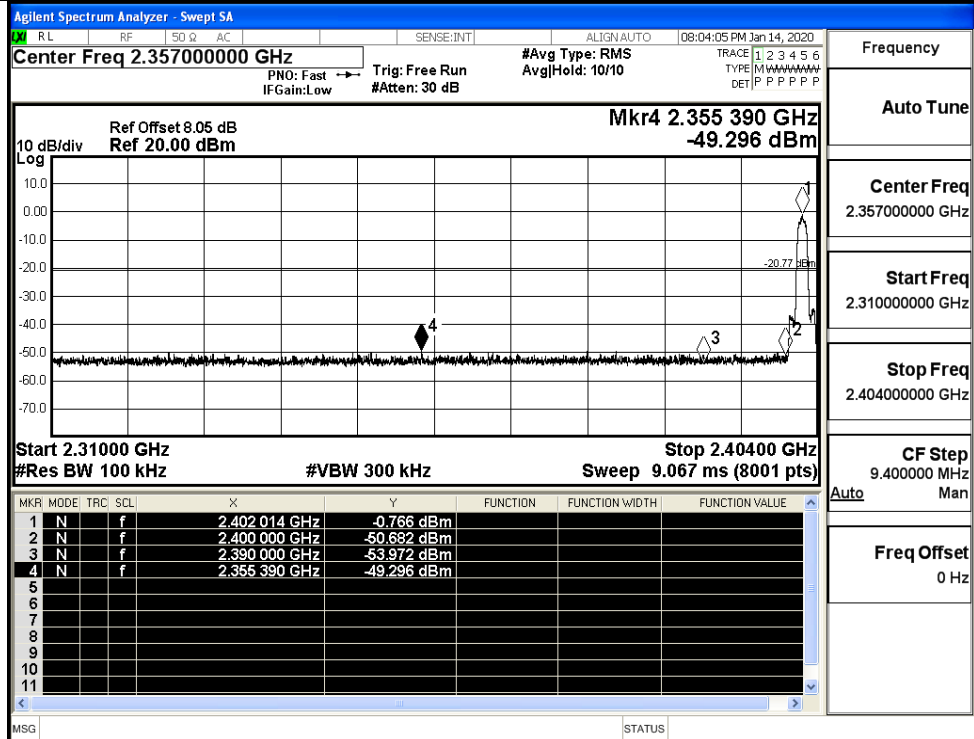


Frequency

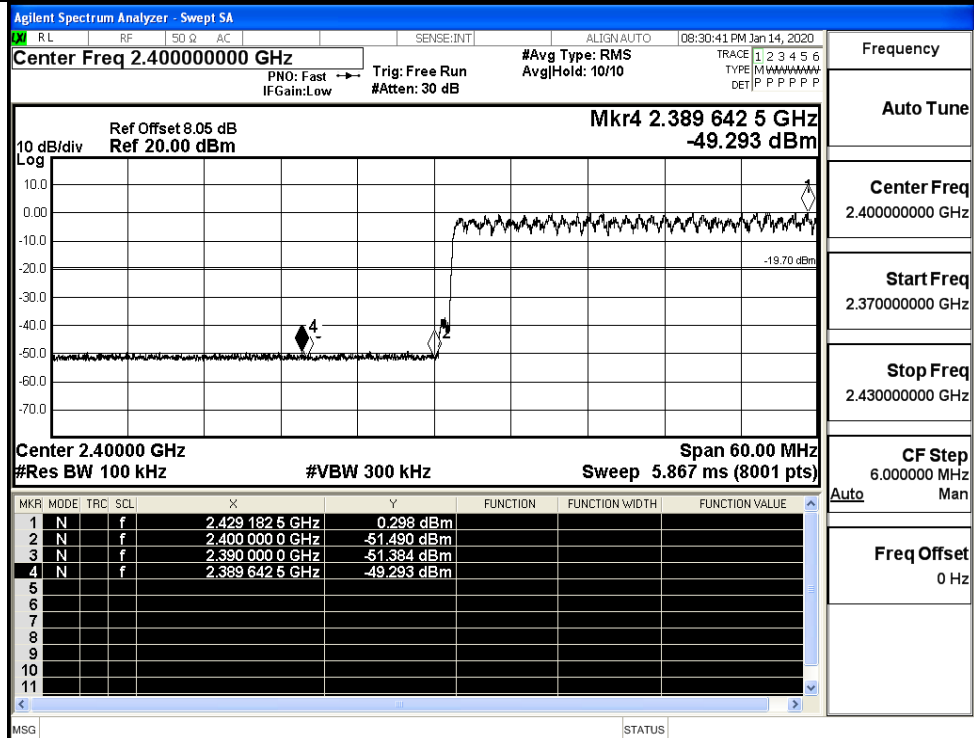
Auto Tune

Center Freq
2.483500000 GHzStart Freq
2.453500000 GHzStop Freq
2.513500000 GHzCF Step
6.000000 MHz
Auto ManFreq Offset
0 Hz

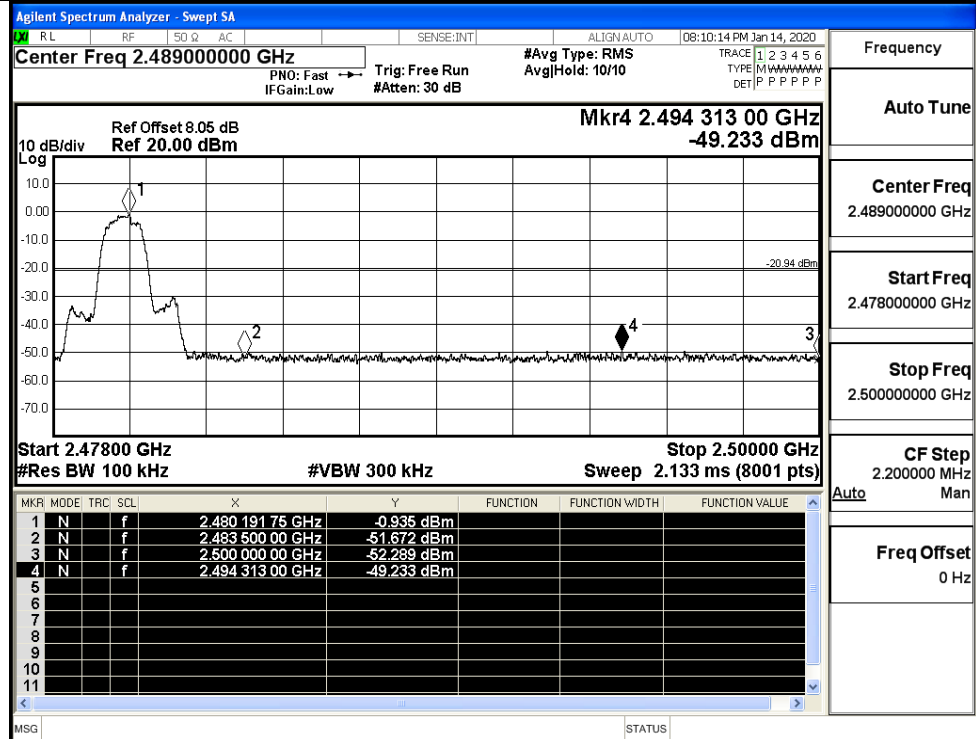
8DPSK/LCH/No Hop



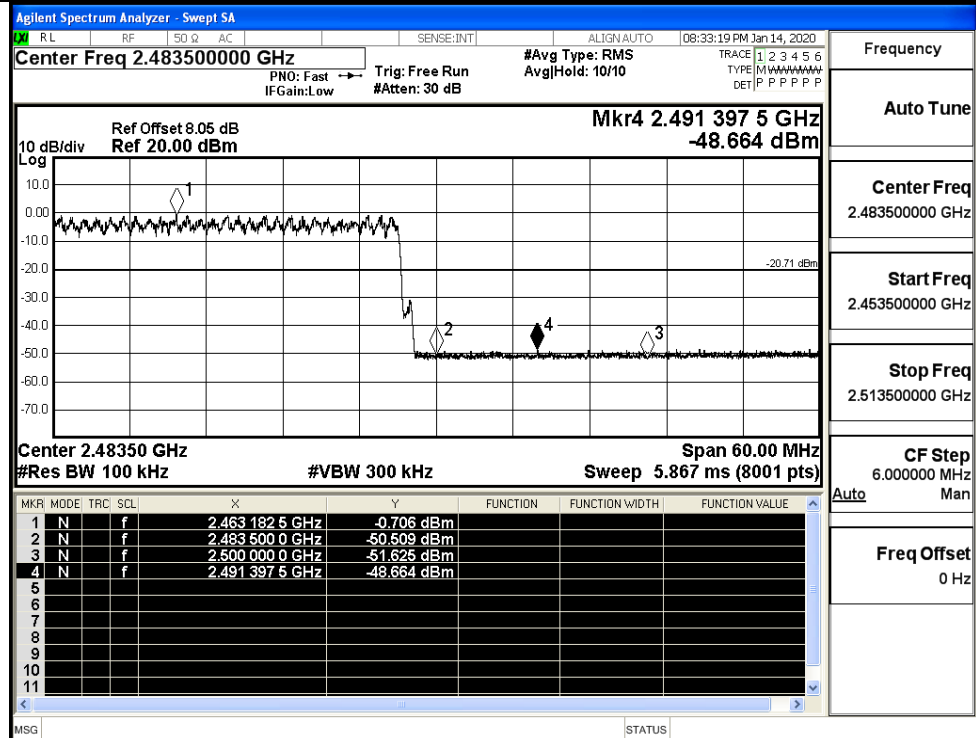
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



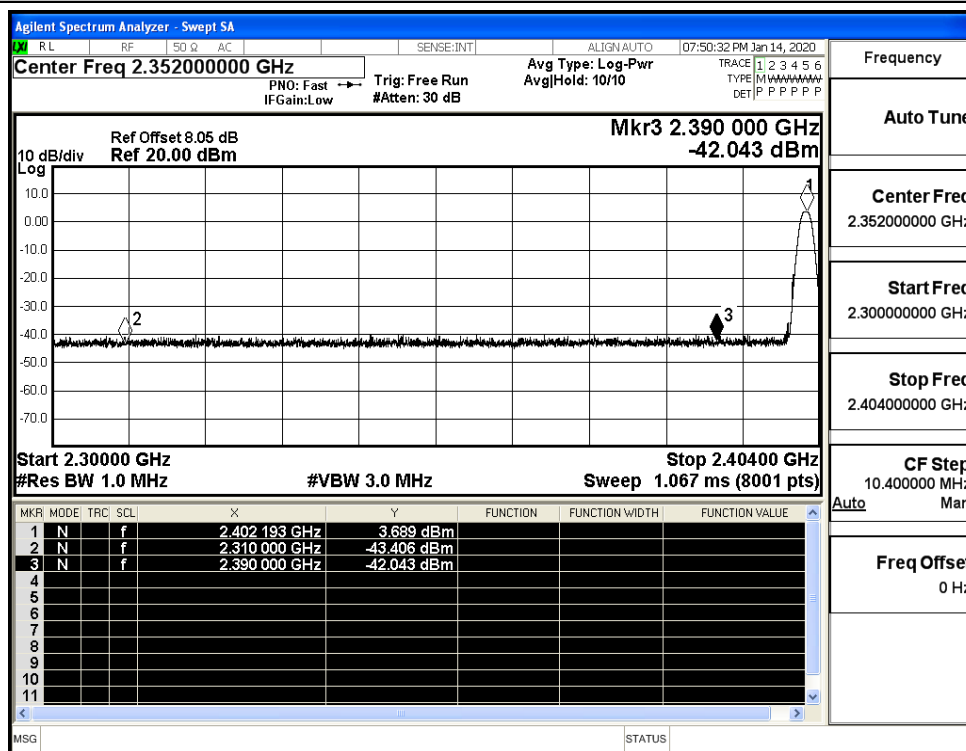
8DPSK/HCH/Hop



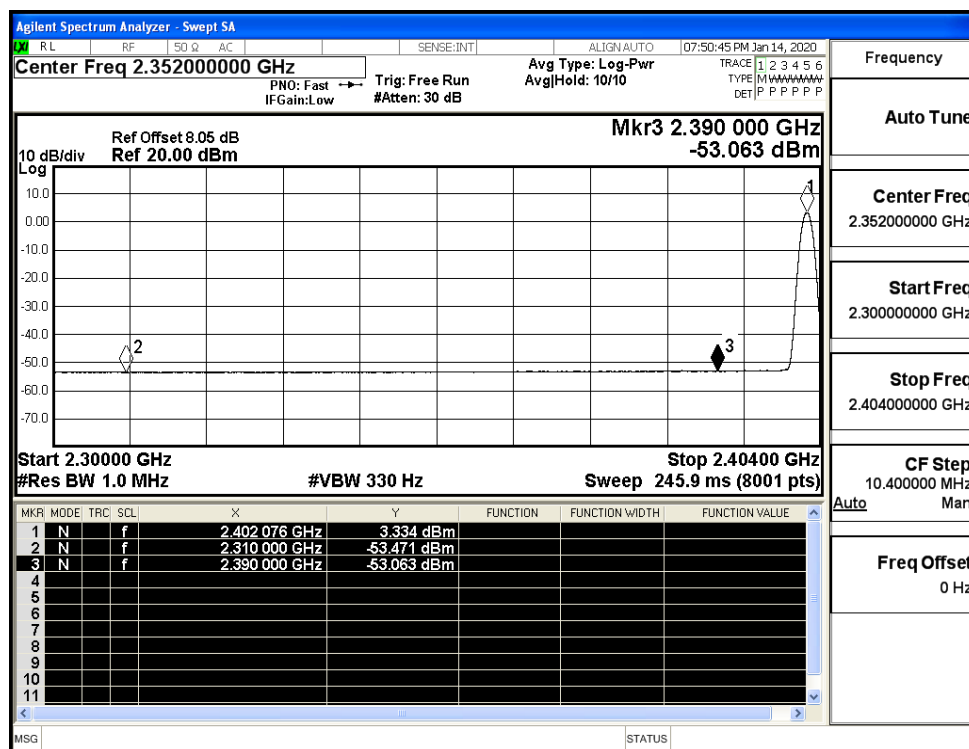
A.9 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.41	2.0	0	53.85	PEAK	74	PASS
	Off	2310.0	-53.47	2.0	0	43.79	AV	54	PASS
	Off	2390.0	-42.04	2.0	0	55.21	PEAK	74	PASS
	Off	2390.0	-53.06	2.0	0	44.19	AV	54	PASS
	Off	2483.5	-42.89	2.0	0	54.37	PEAK	74	PASS
	Off	2483.5	-52.29	2.0	0	44.97	AV	54	PASS
	Off	2500.0	-42.74	2.0	0	54.52	PEAK	74	PASS
	Off	2500.0	-52.43	2.0	0	44.83	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-42.72	2.0	0	54.54	PEAK	74	PASS
	Off	2310.0	-53.51	2.0	0	43.75	AV	54	PASS
	Off	2390.0	-41.56	2.0	0	55.69	PEAK	74	PASS
	Off	2390.0	-53.05	2.0	0	44.20	AV	54	PASS
	Off	2483.5	-41.40	2.0	0	55.86	PEAK	74	PASS
	Off	2483.5	-52.44	2.0	0	44.82	AV	54	PASS
	Off	2500.0	-41.88	2.0	0	55.38	PEAK	74	PASS
	Off	2500.0	-52.26	2.0	0	45.00	AV	54	PASS
8DPSK	Off	2310.0	-43.12	2.0	0	54.14	PEAK	74	PASS
	Off	2310.0	-53.21	2.0	0	44.05	AV	54	PASS
	Off	2390.0	-43.53	2.0	0	53.73	PEAK	74	PASS
	Off	2390.0	-53.07	2.0	0	44.19	AV	54	PASS
	Off	2483.5	-43.67	2.0	0	53.59	PEAK	74	PASS
	Off	2483.5	-52.49	2.0	0	44.77	AV	54	PASS
	Off	2500.0	-42.25	2.0	0	55.01	PEAK	74	PASS
	Off	2500.0	-52.46	2.0	0	44.80	AV	54	PASS

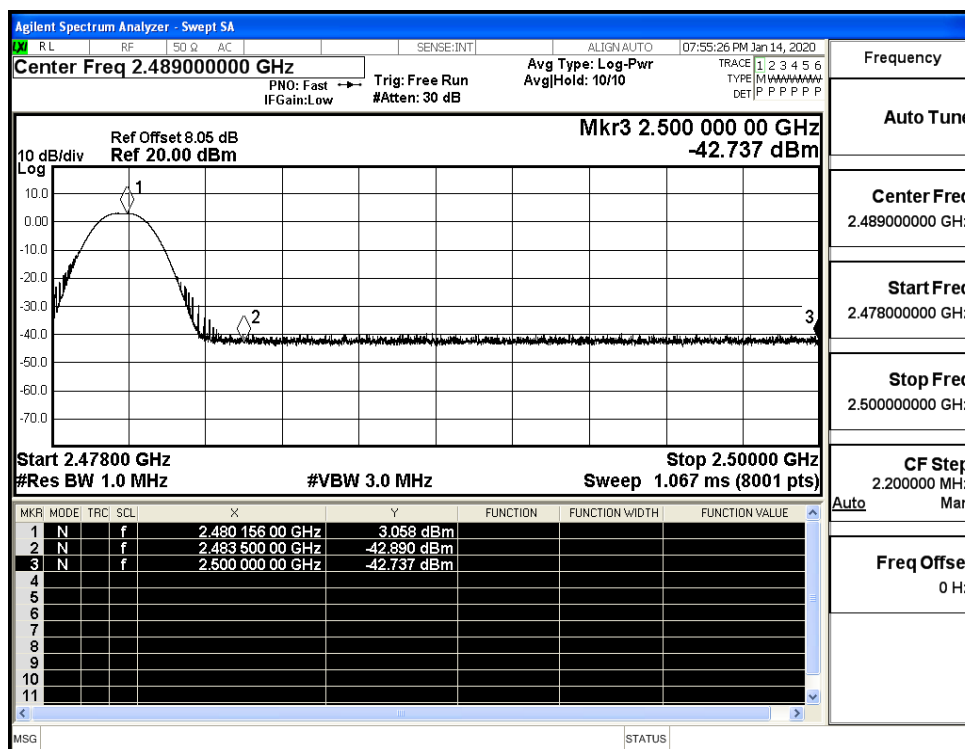
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



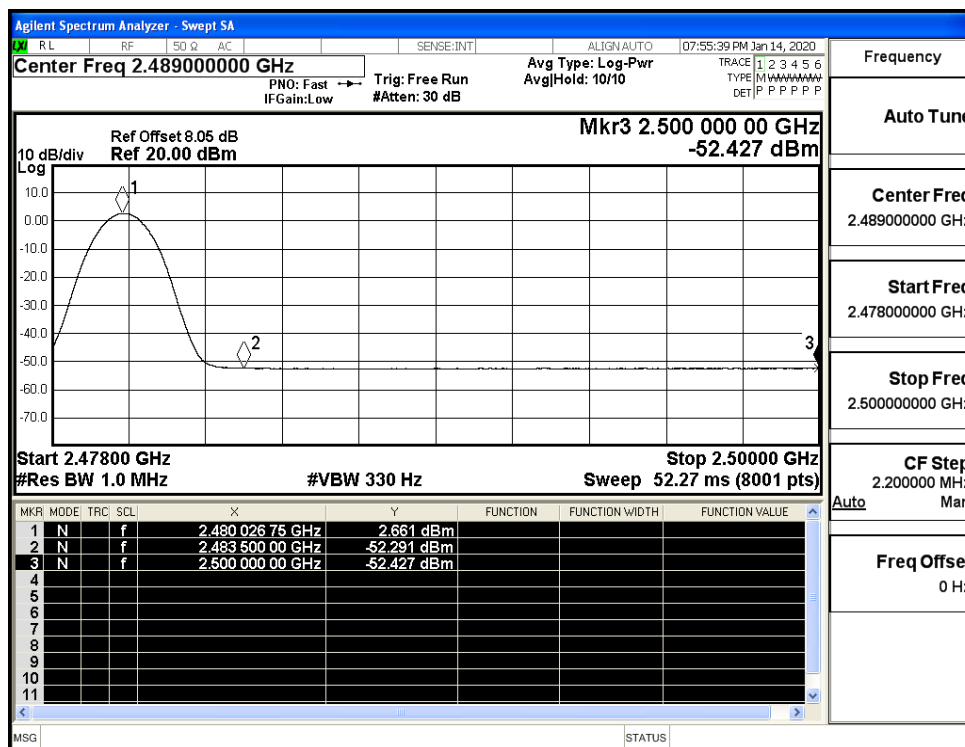
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

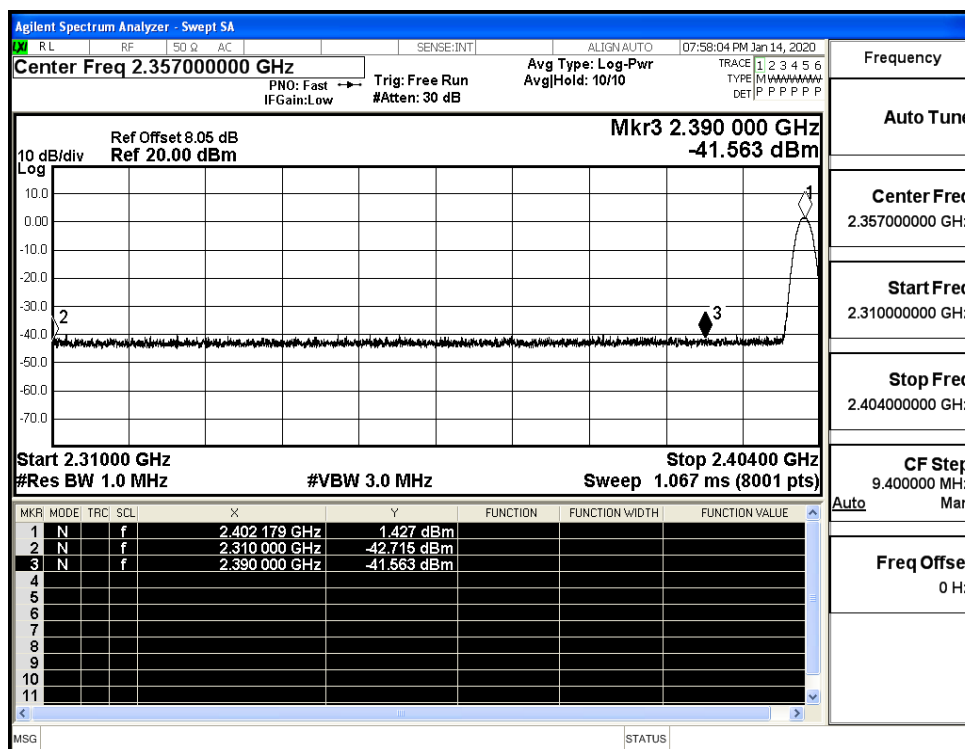
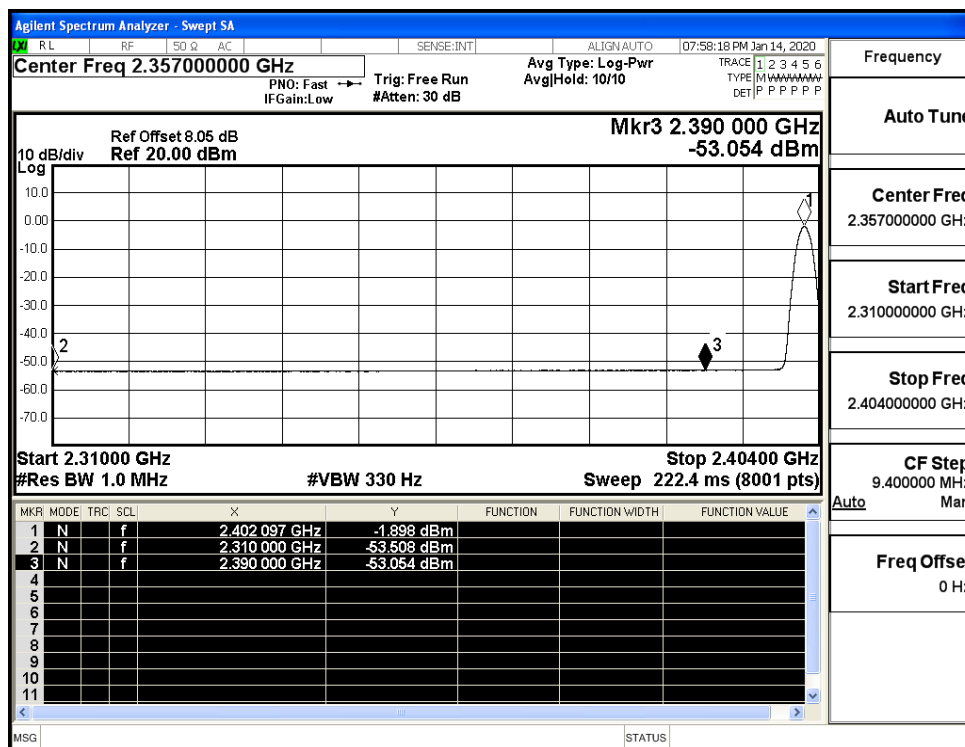


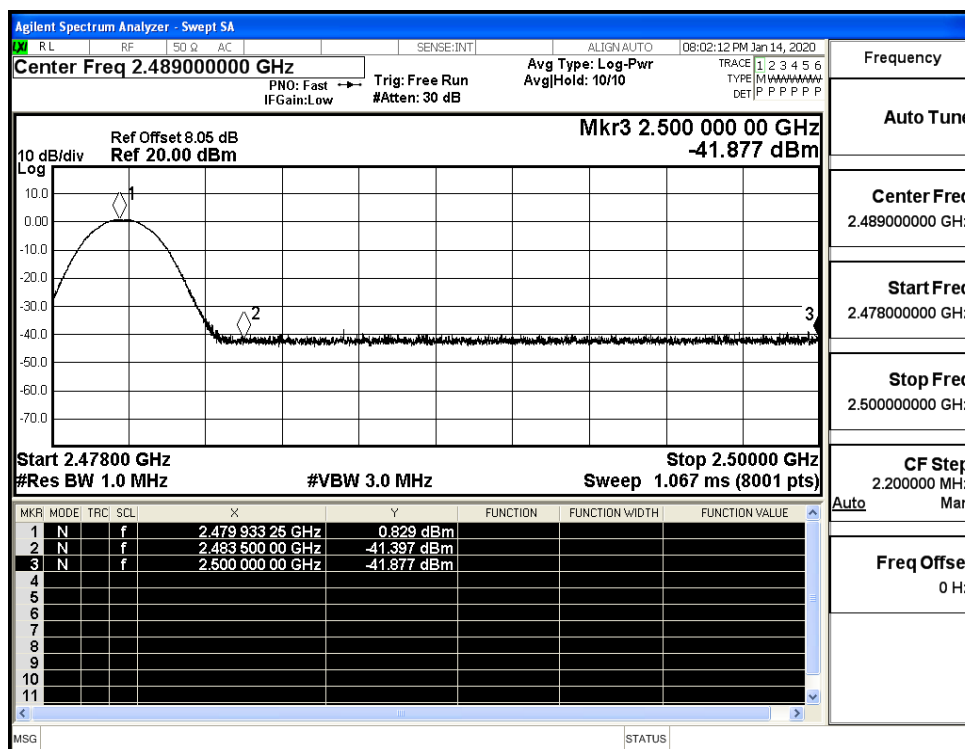
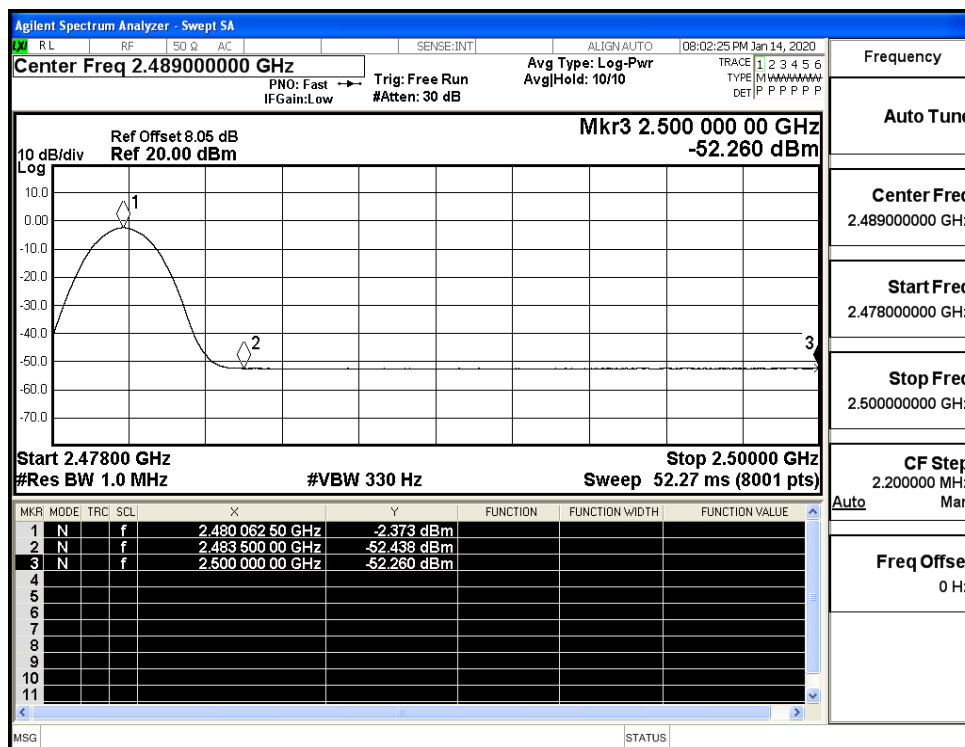
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



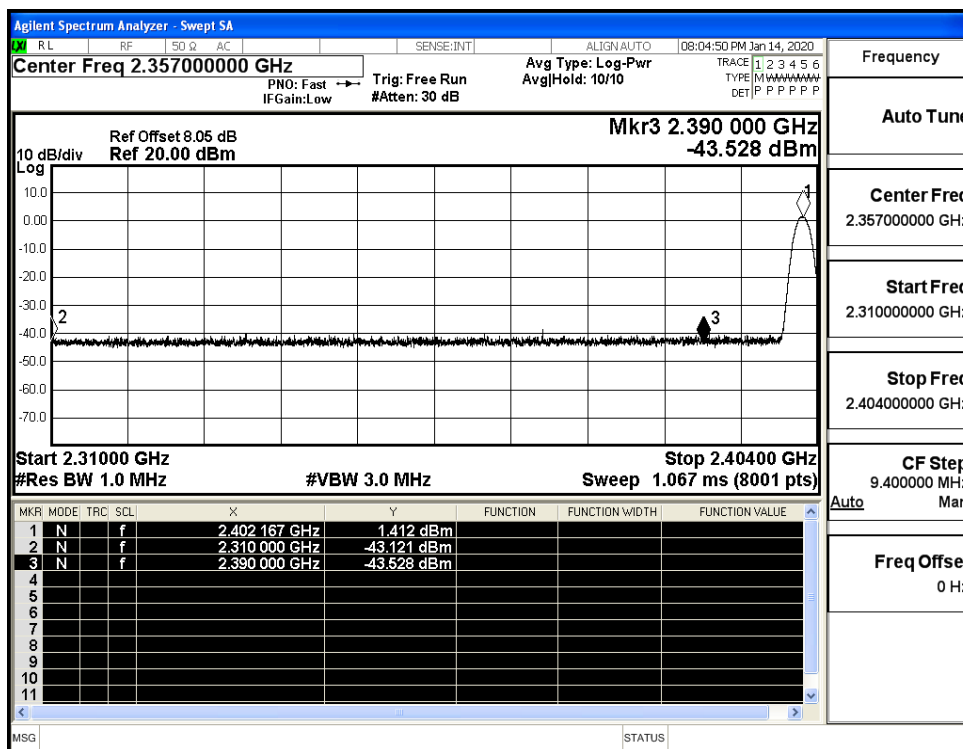
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



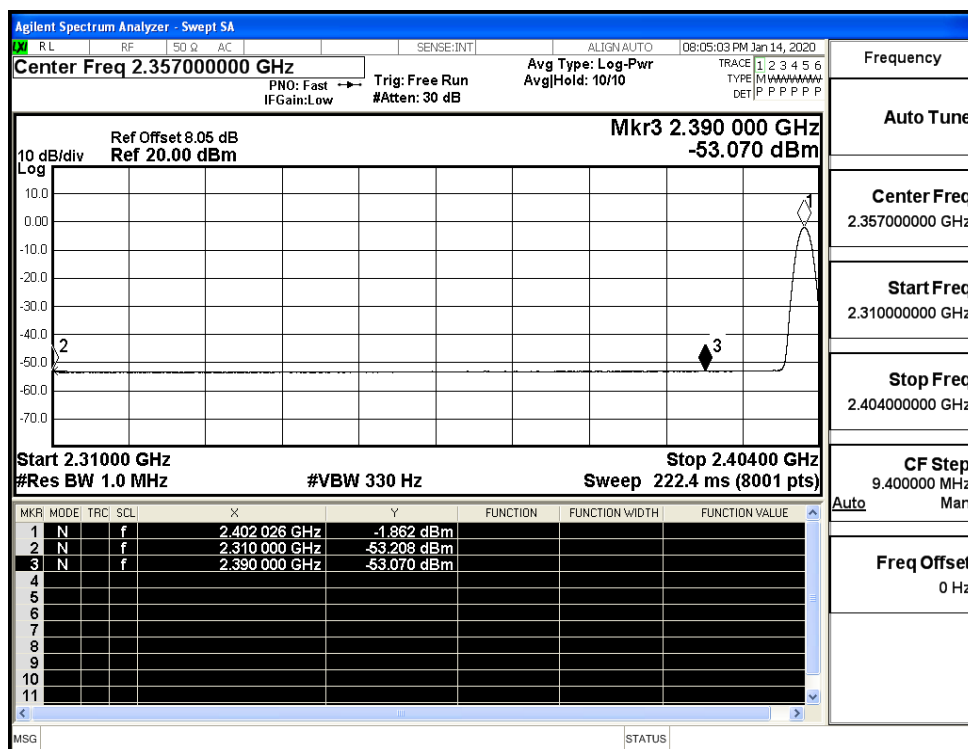
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

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)

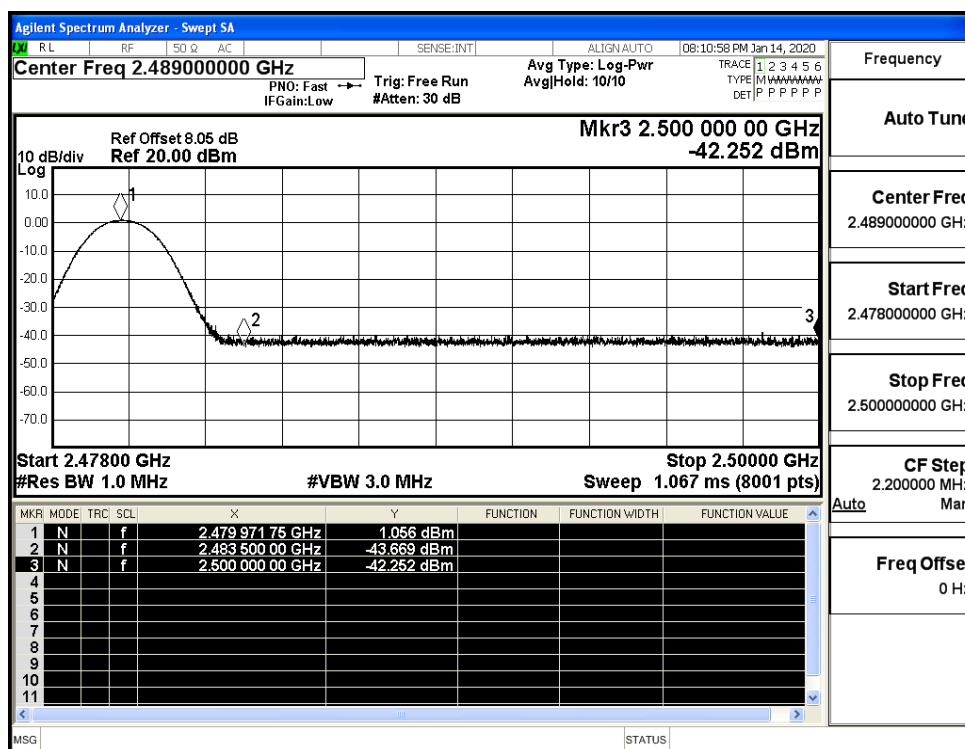
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

