

Appendix A

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

Product Name: Smartphone

Trade Mark: S Smooth

Test Model: Smooth 6.1

Environmental Conditions

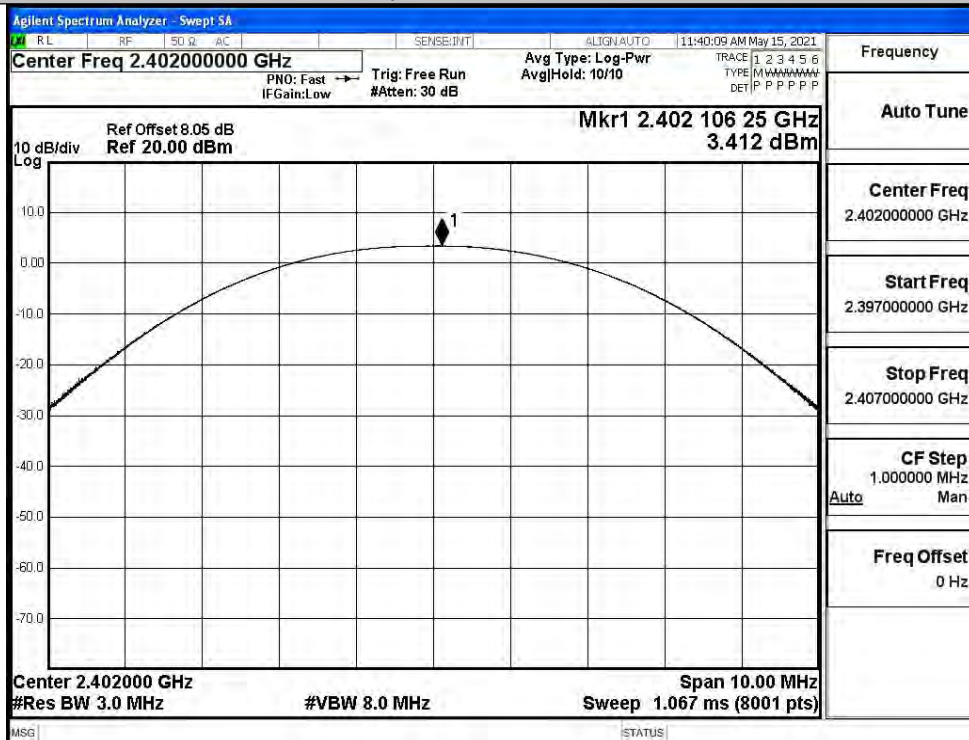
Temperature:	23.4° C
Relative Humidity:	51.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay He
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

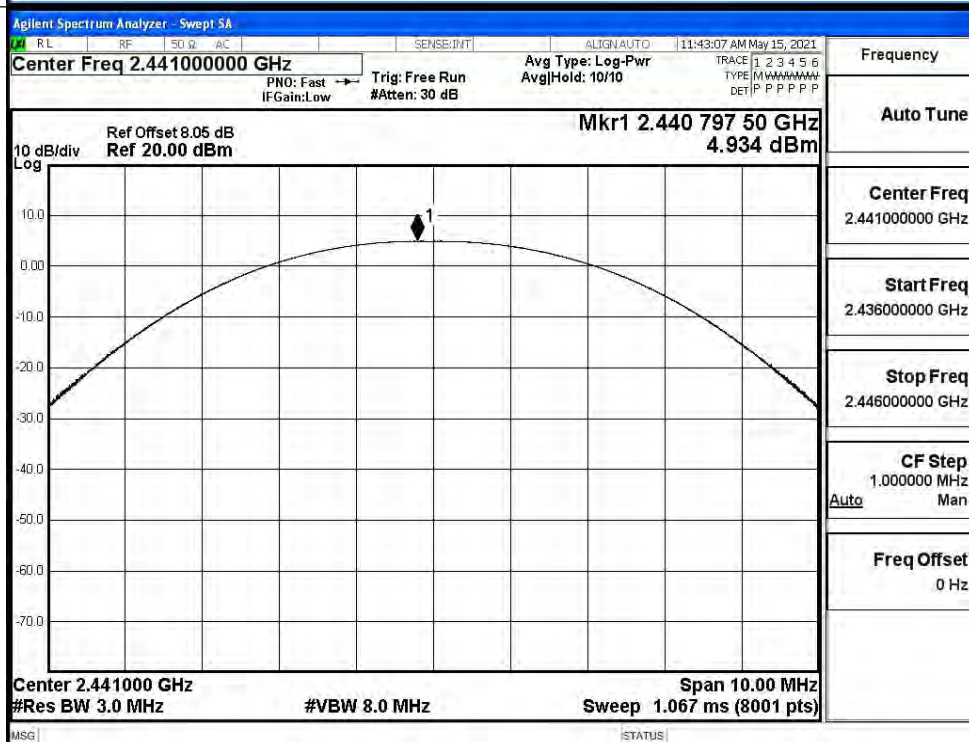
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.412	21	PASS
	MCH	4.934	21	PASS
	HCH	3.367	21	PASS
$\pi/4$ DQPSK	LCH	2.587	21	PASS
	MCH	4.036	21	PASS
	HCH	2.530	21	PASS
8DPSK	LCH	2.613	21	PASS
	MCH	4.167	21	PASS
	HCH	2.632	21	PASS

Test Graphs

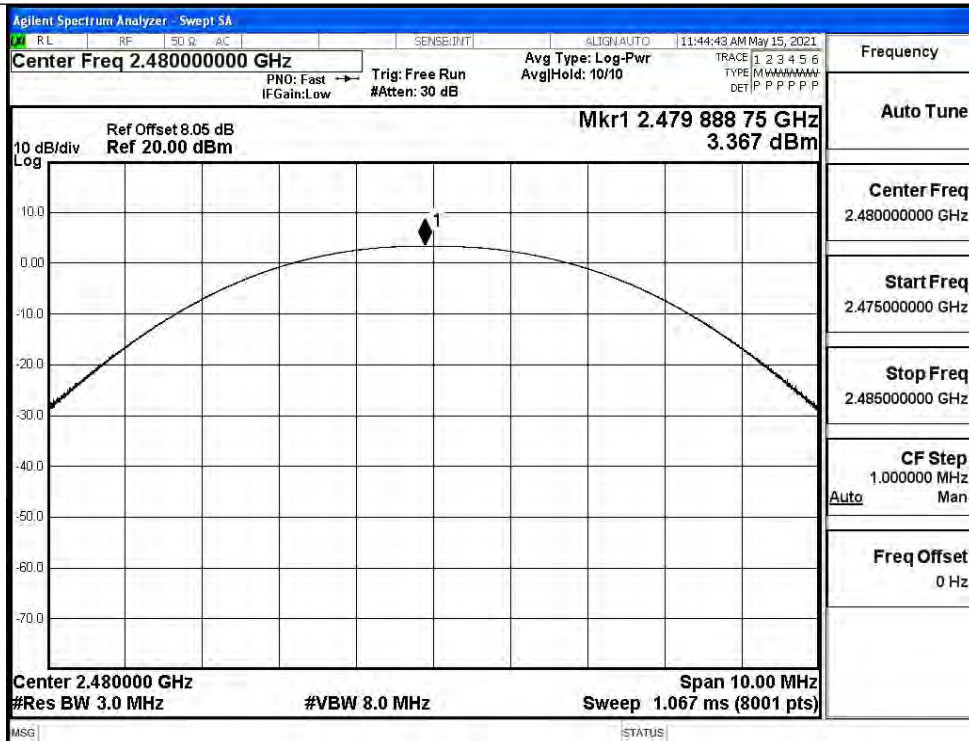
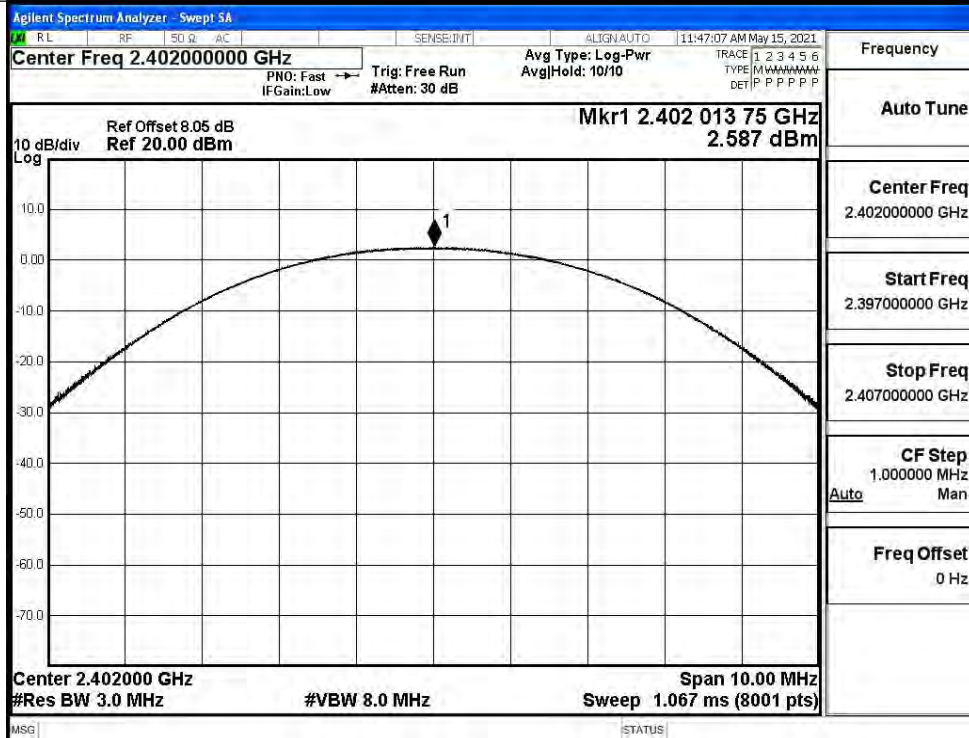
GFSK/LCH

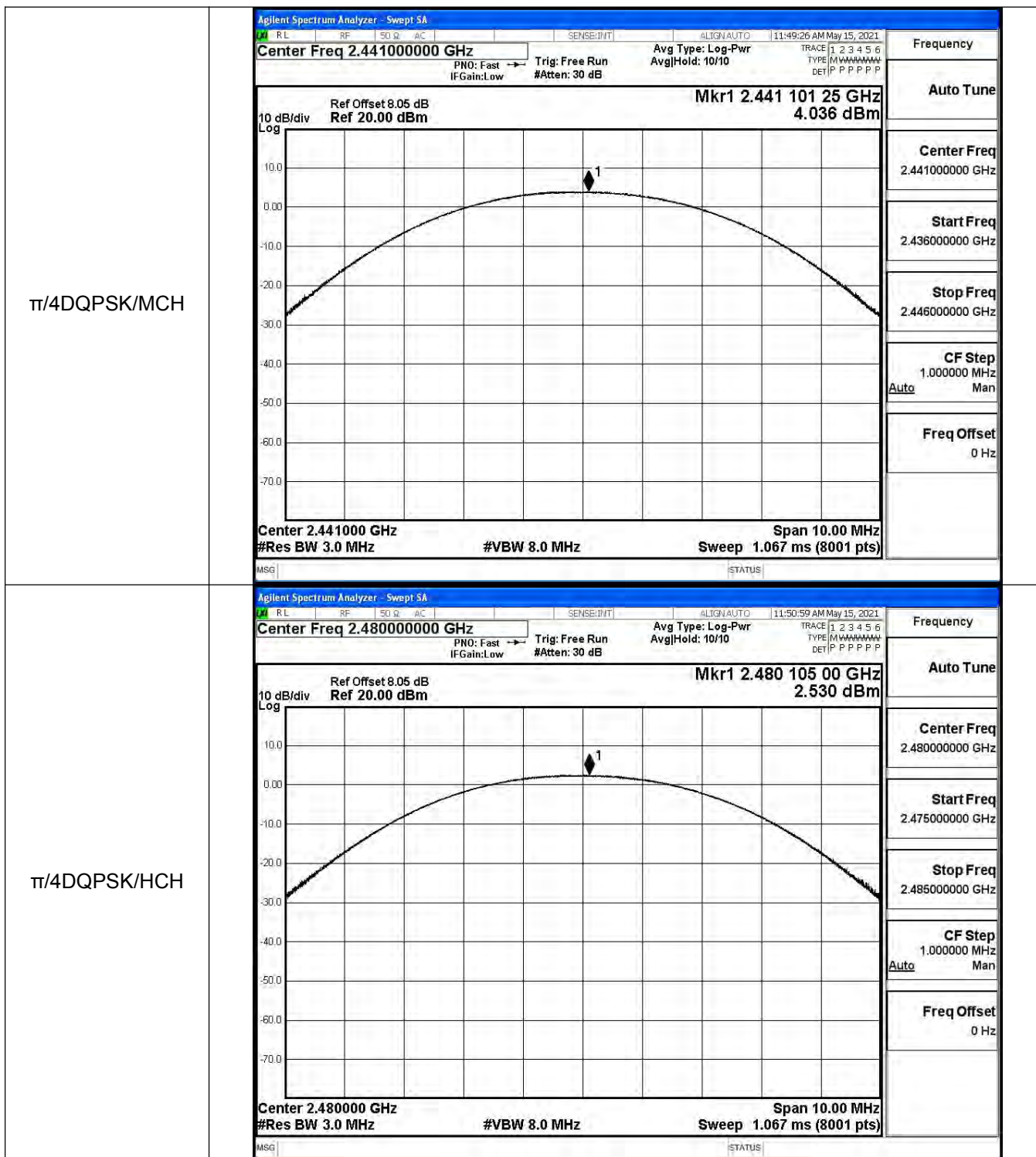


GFSK/MCH

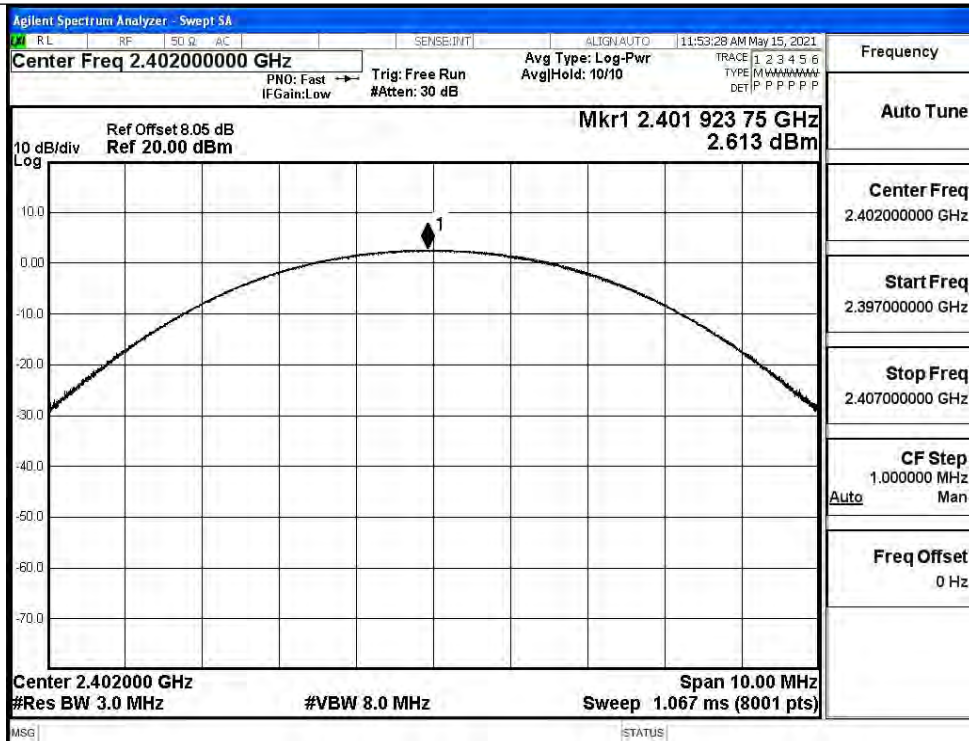


GFSK/HCH

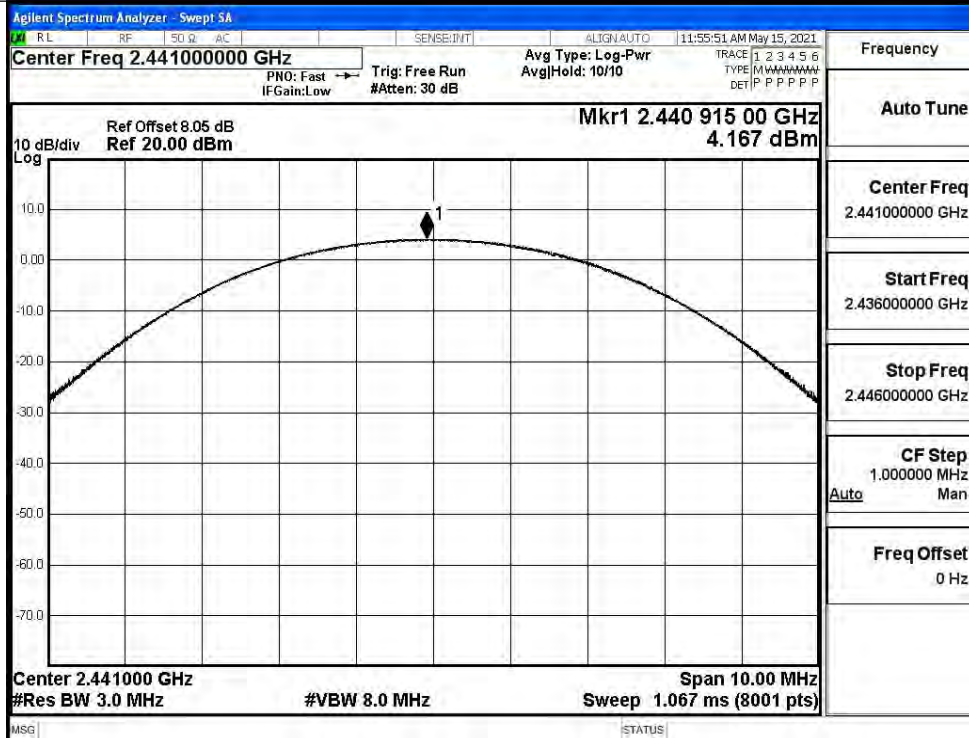
 π /4DQPSK/LCH



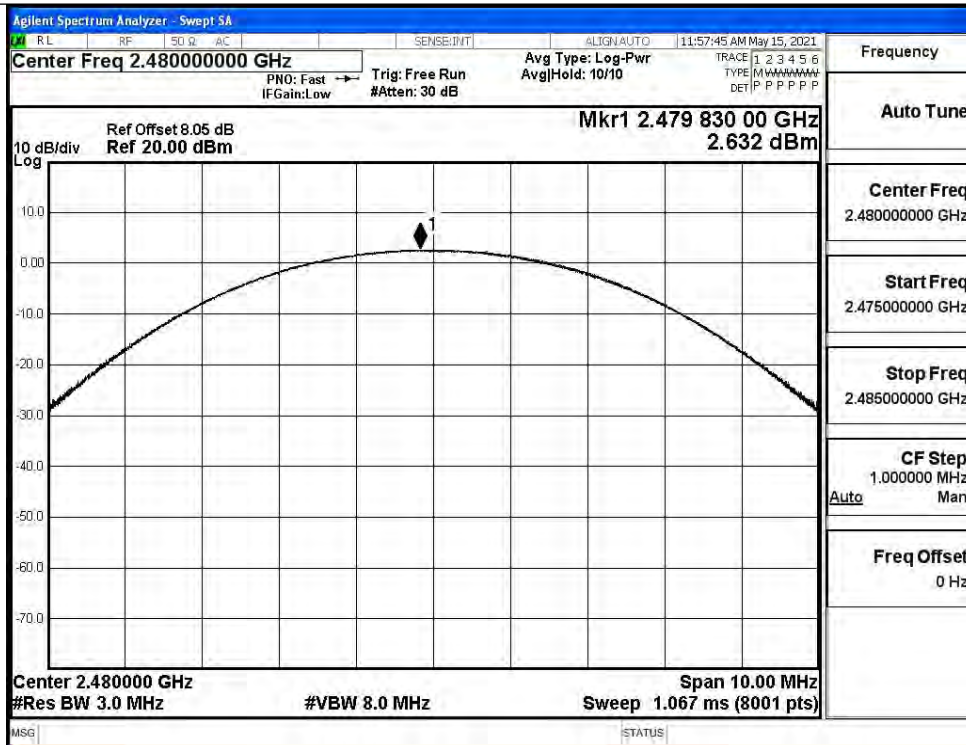
8DPSK/LCH



8DPSK/MCH



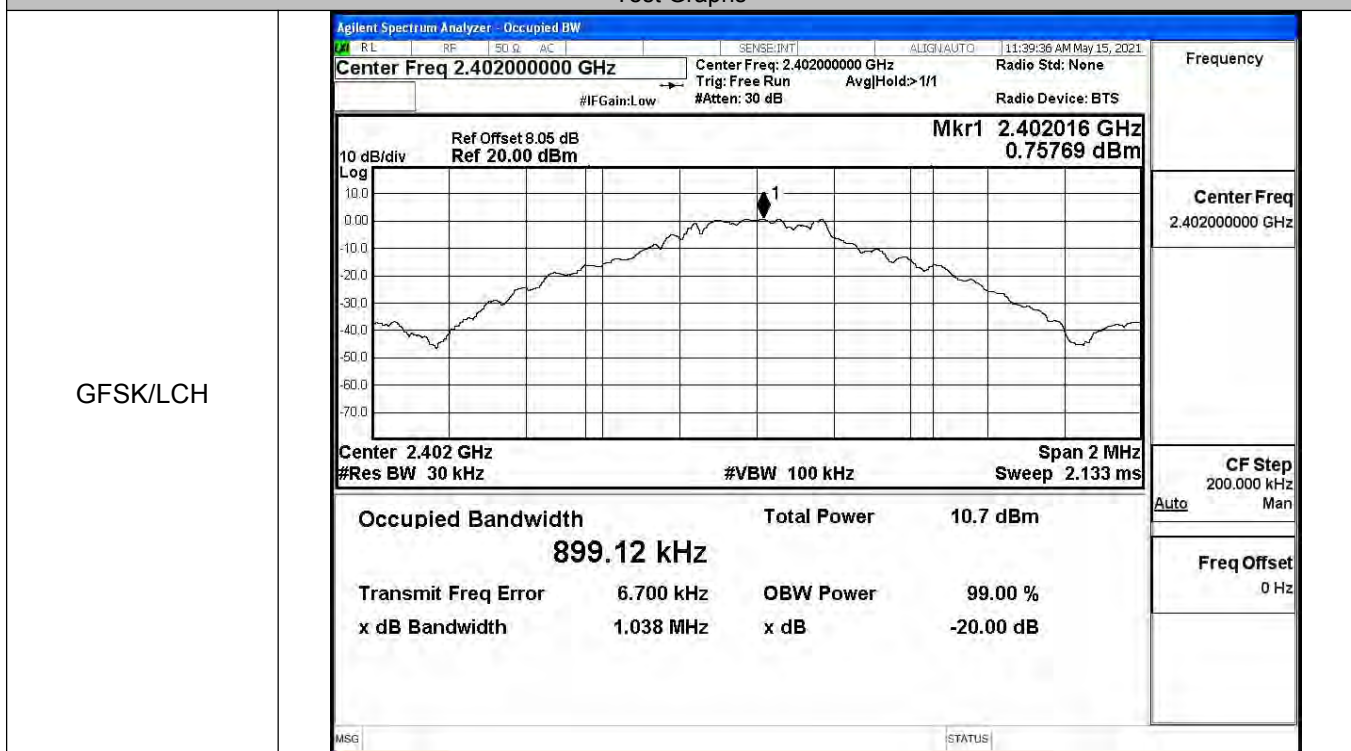
8DPSK/HCH



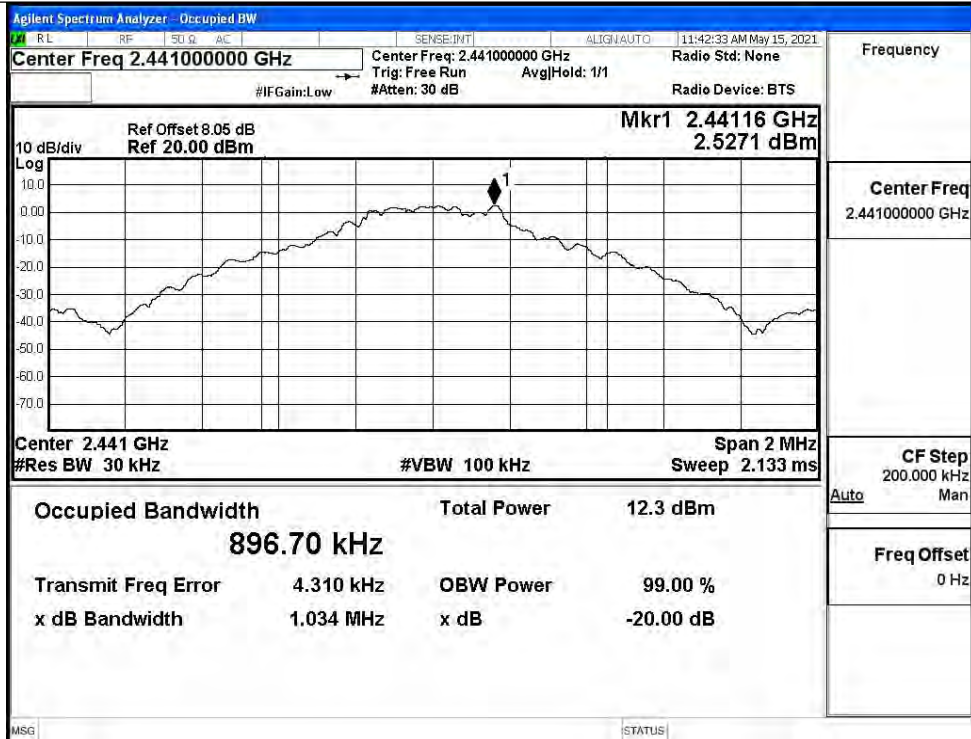
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.038	Not Specified	PASS
	MCH	1.034	Not Specified	PASS
	HCH	1.032	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.288	Not Specified	PASS
	MCH	1.289	Not Specified	PASS
	HCH	1.289	Not Specified	PASS
8DPSK	LCH	1.291	Not Specified	PASS
	MCH	1.291	Not Specified	PASS
	HCH	1.293	Not Specified	PASS

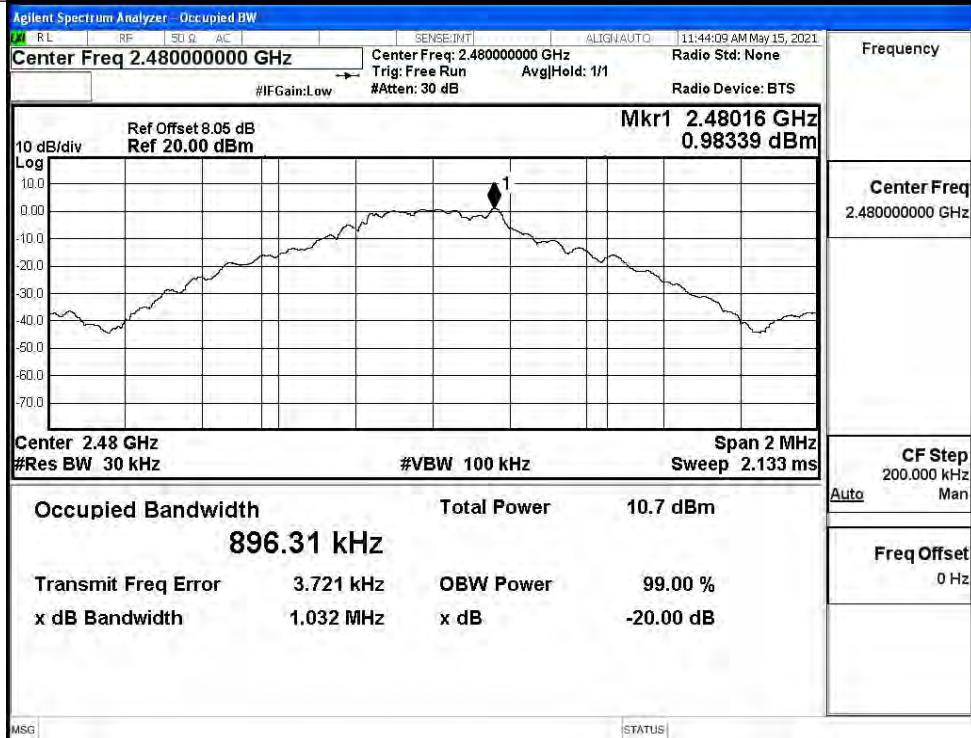
Test Graphs

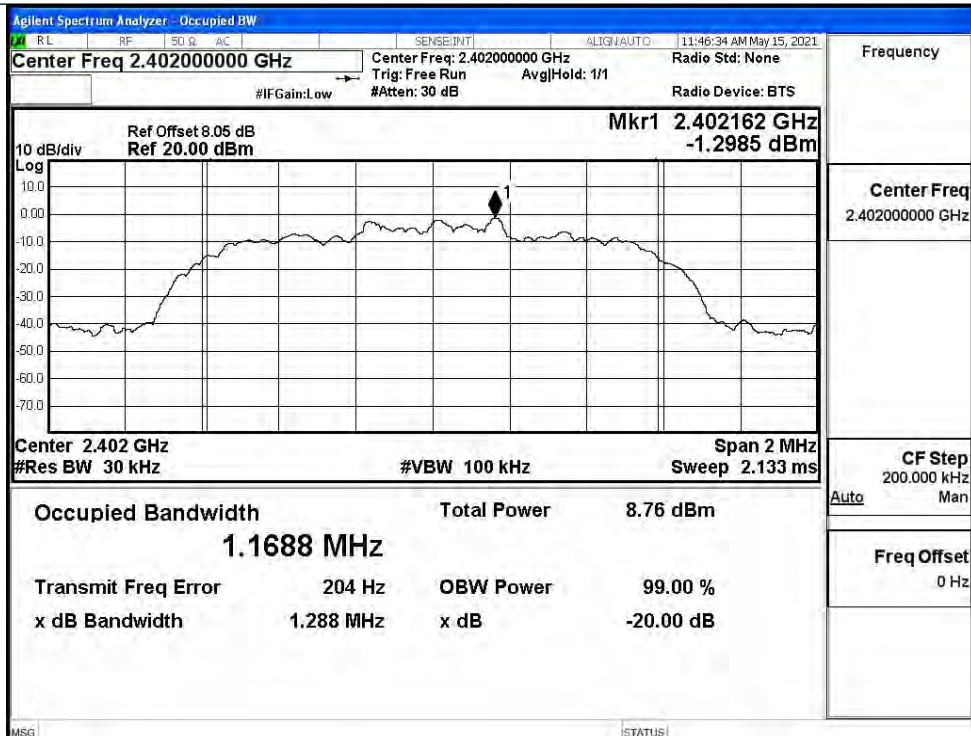
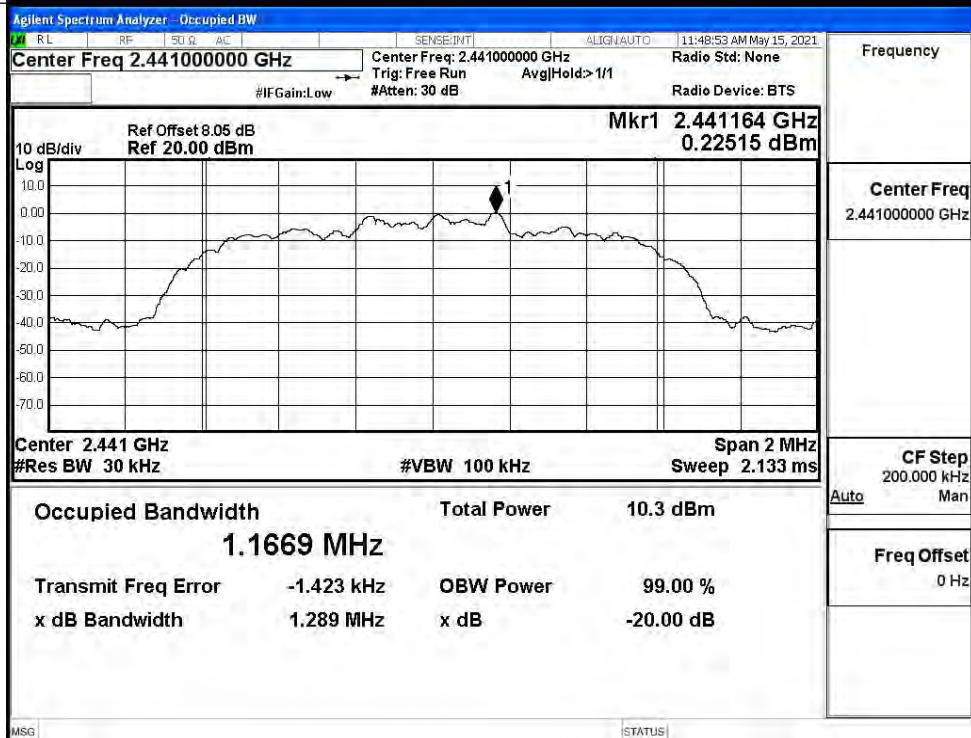


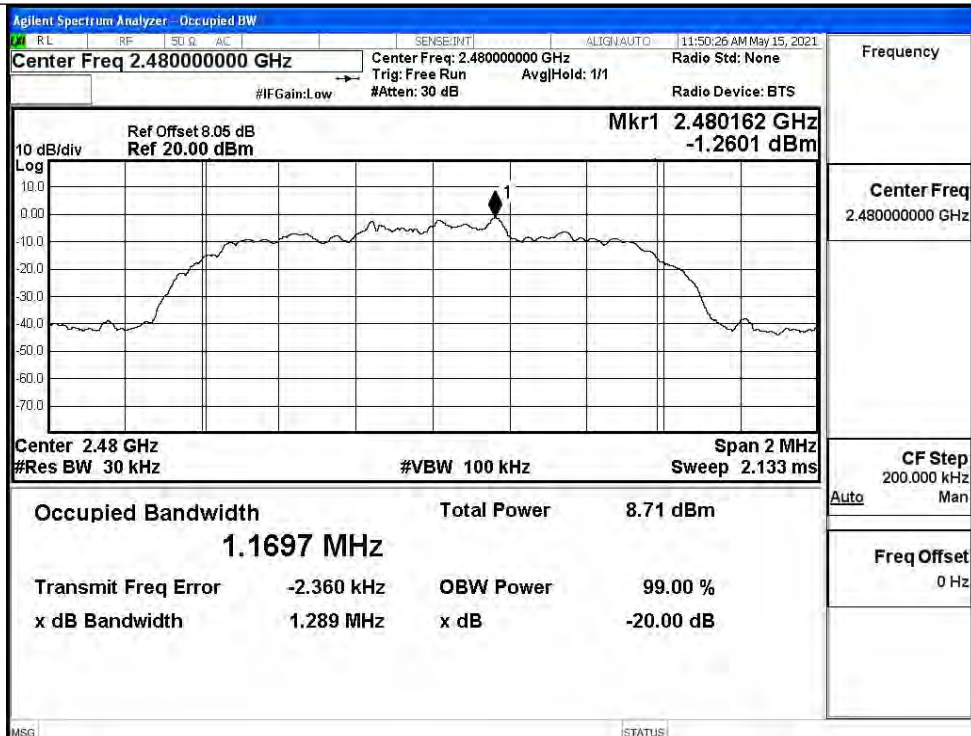
GFSK/MCH



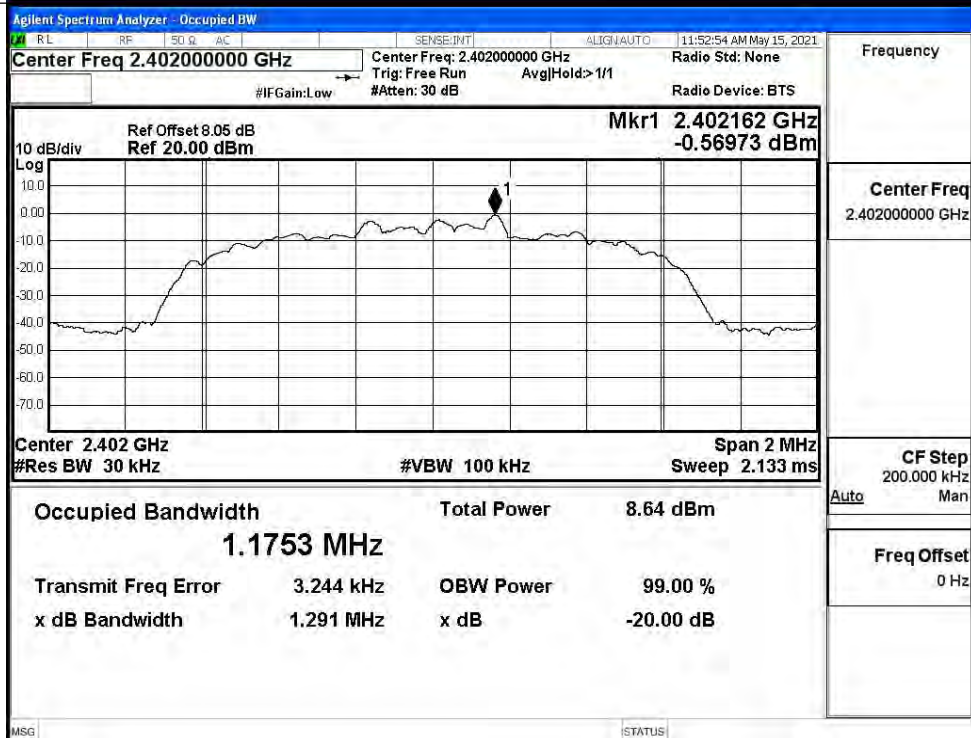
GFSK/HCH



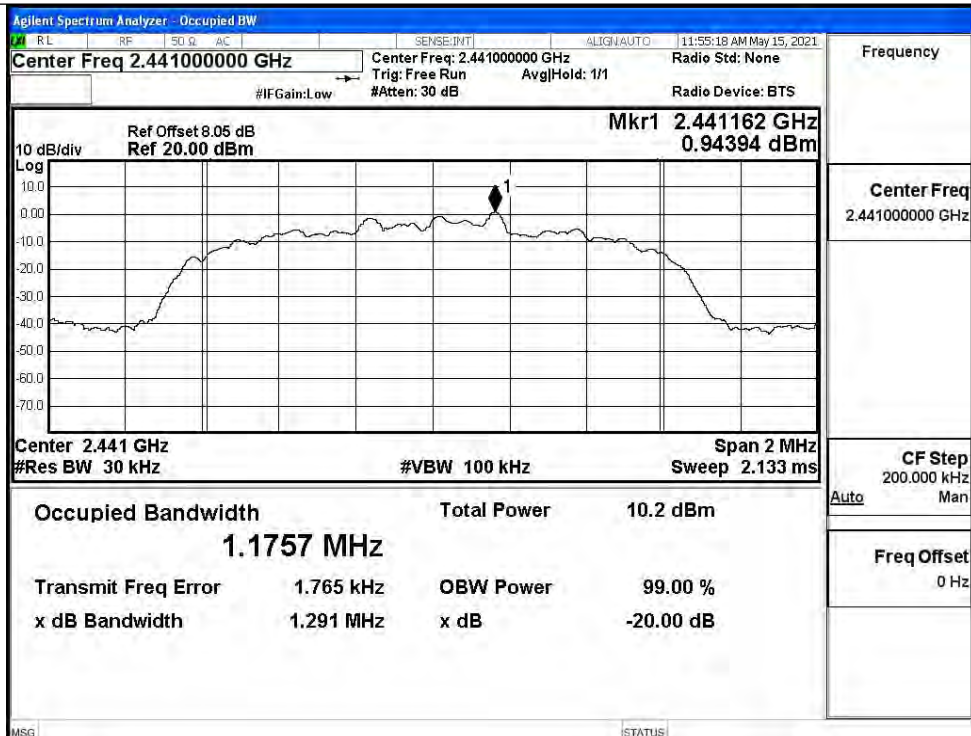
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

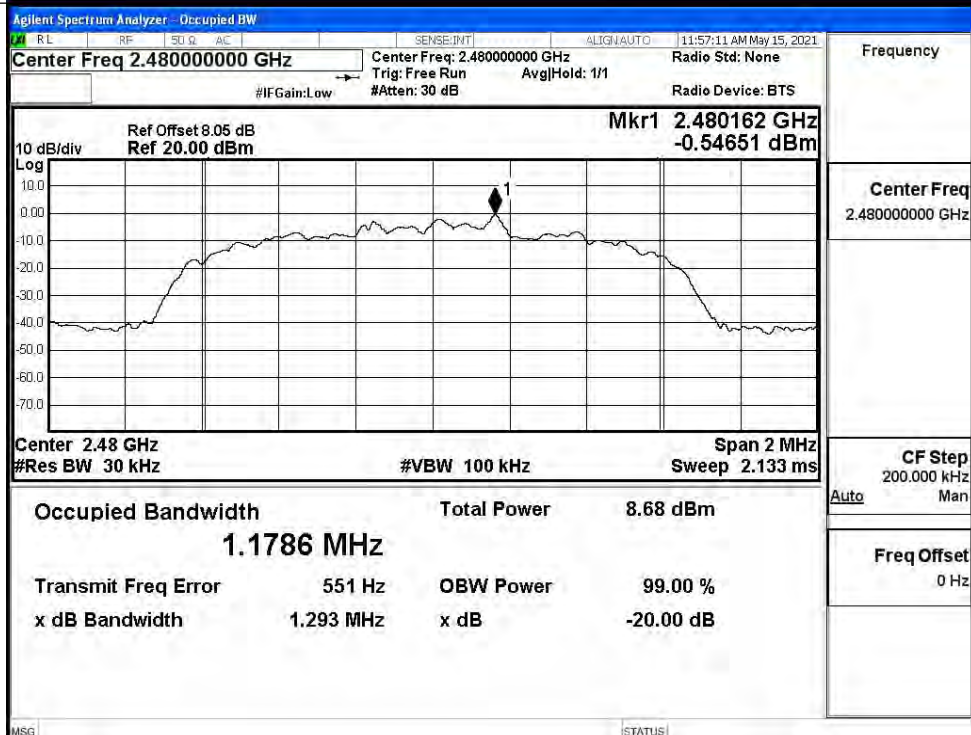
8DPSK/LCH



8DPSK/MCH



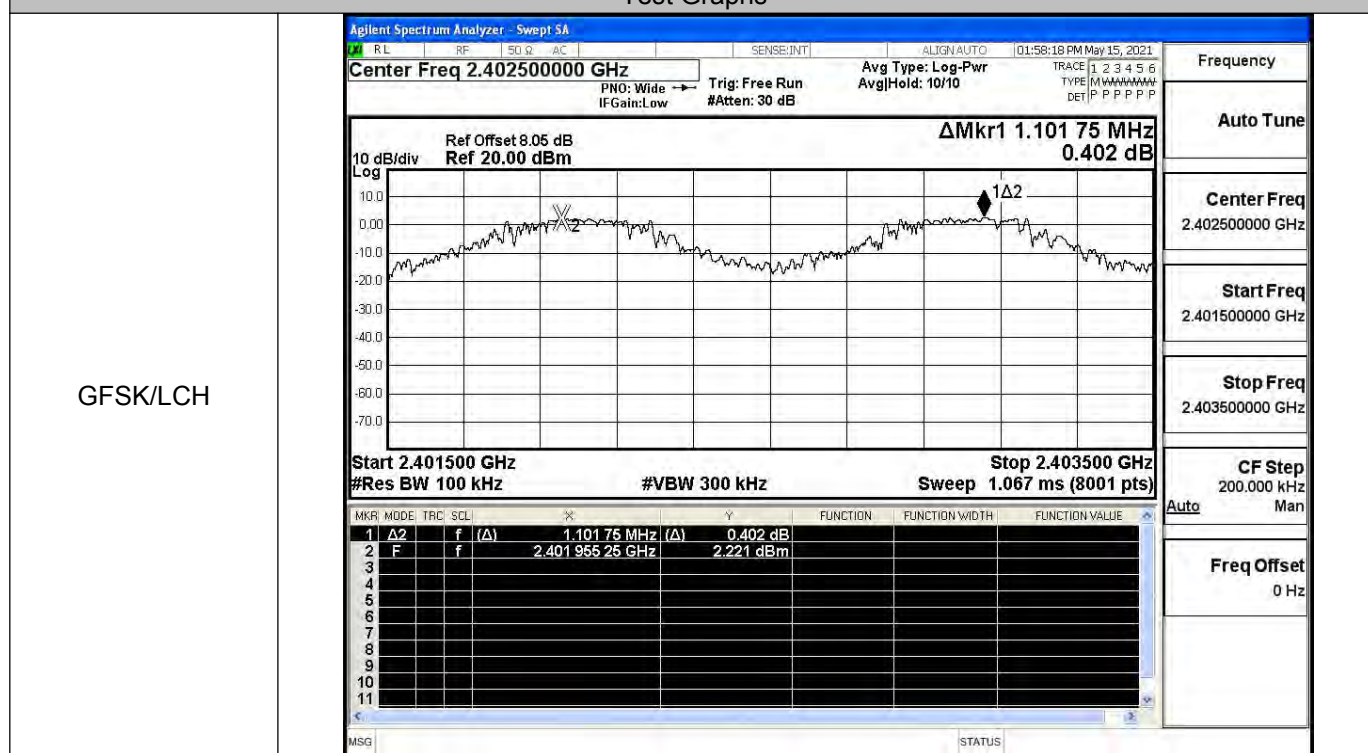
8DPSK/HCH



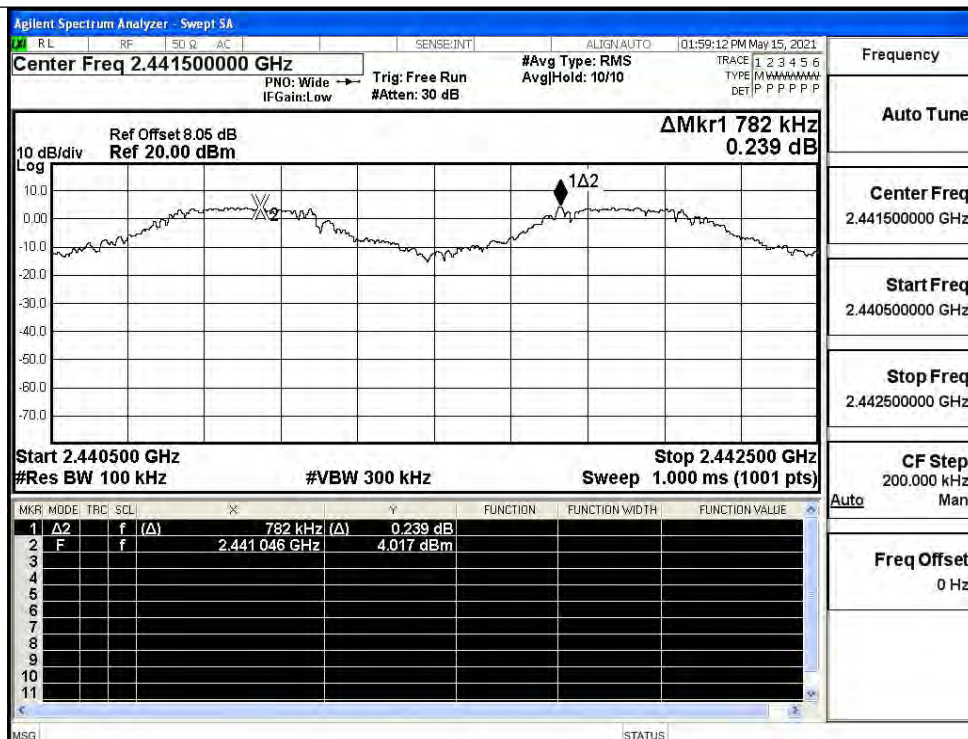
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.102	0.692	PASS
	MCH	0.782	0.689	PASS
	HCH	1.226	0.688	PASS
$\pi/4$ DQPSK	LCH	0.978	0.859	PASS
	MCH	0.984	0.859	PASS
	HCH	1.264	0.859	PASS
8DPSK	LCH	1.000	0.861	PASS
	MCH	1.184	0.861	PASS
	HCH	1.082	0.862	PASS

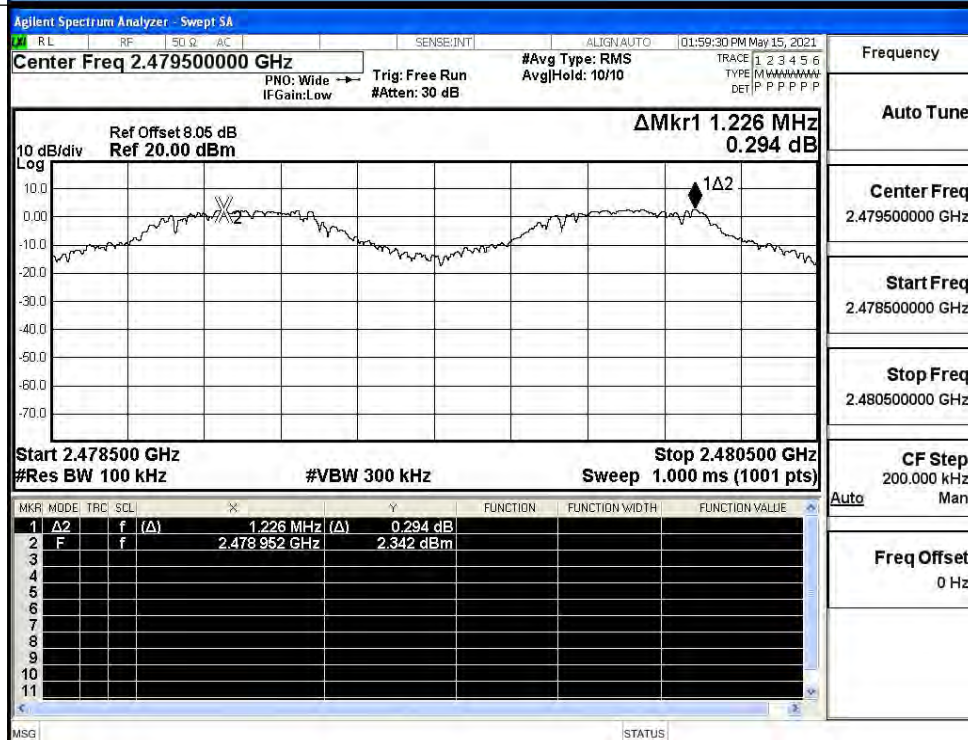
Test Graphs

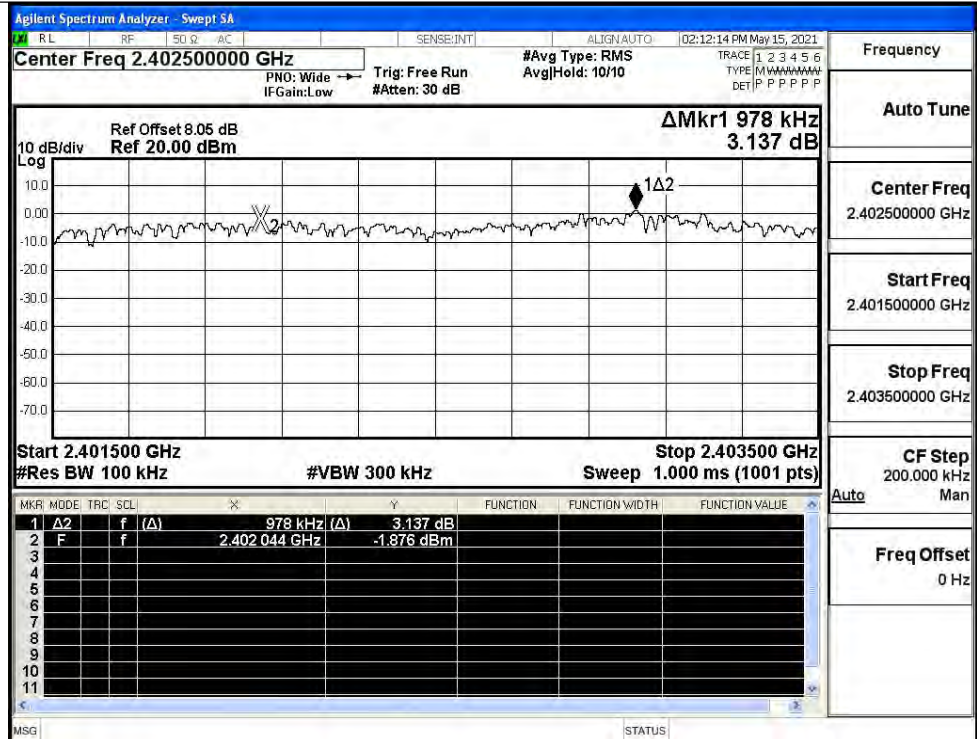
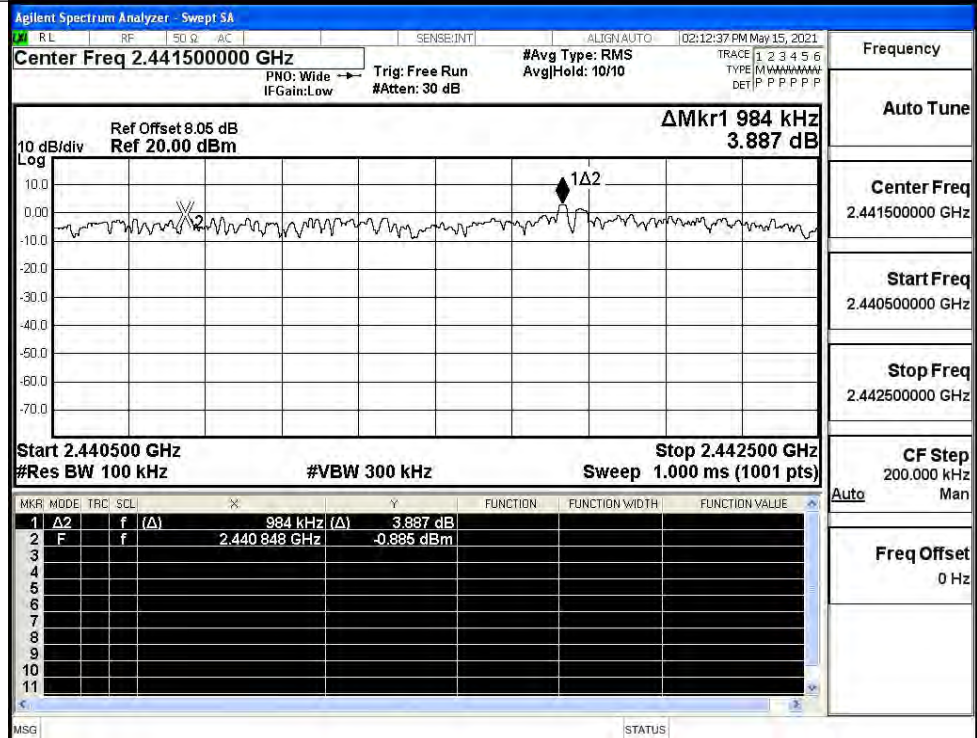


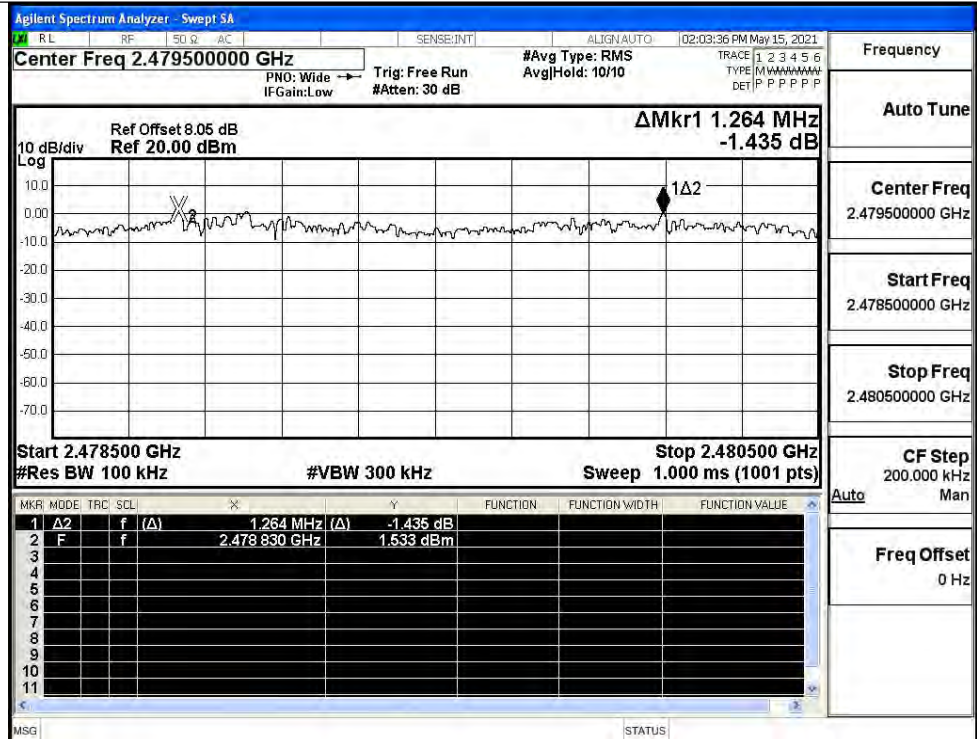
GFSK/MCH



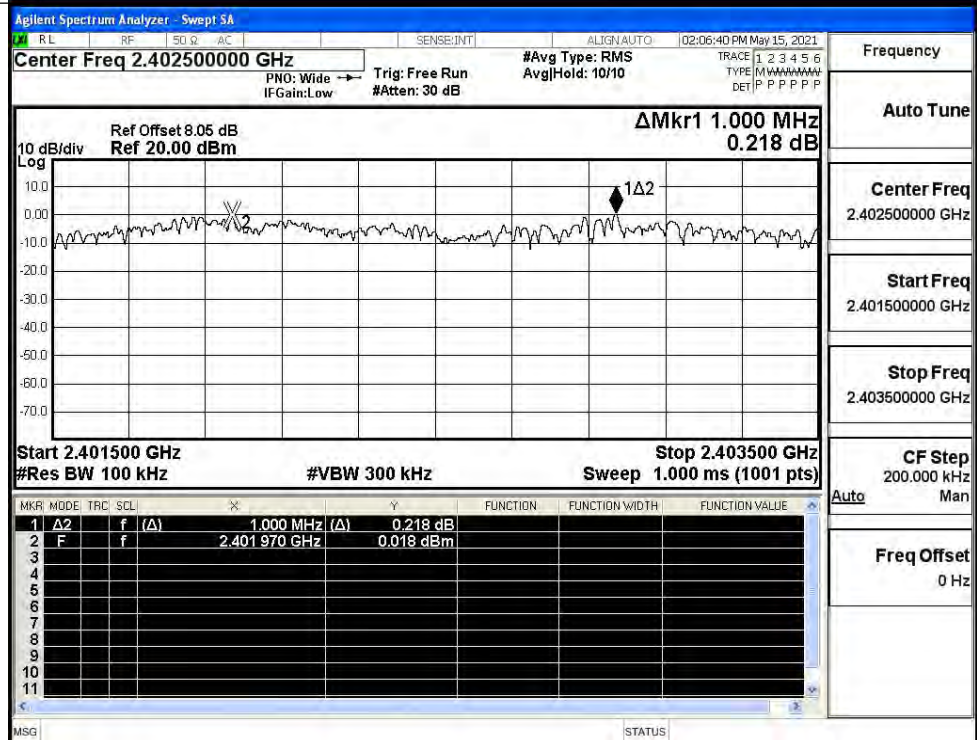
GFSK/HCH



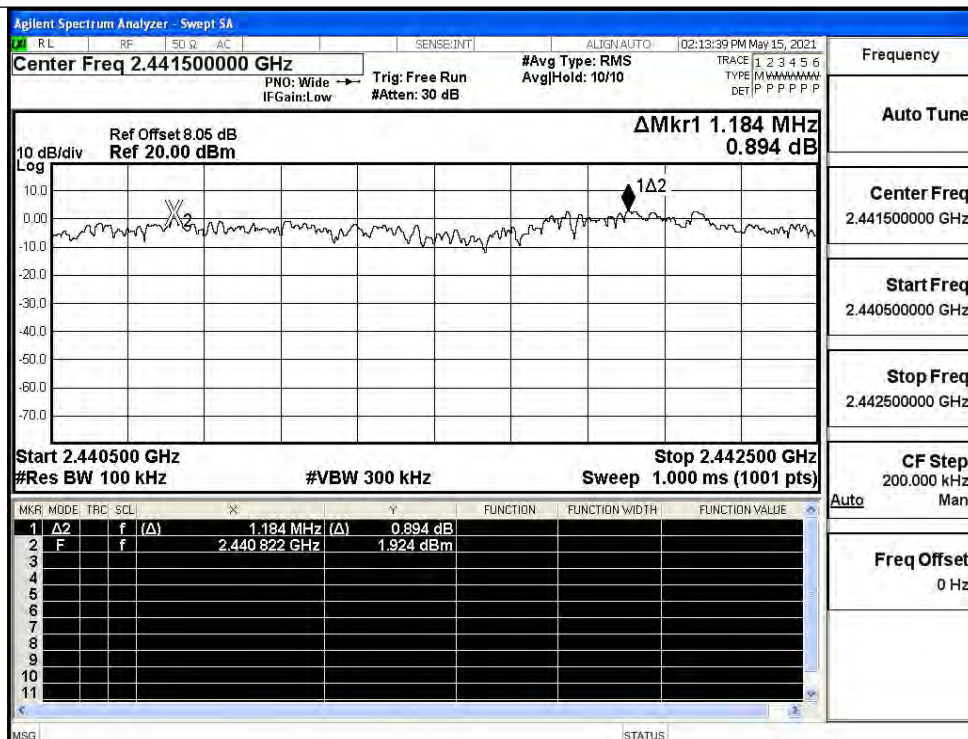
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

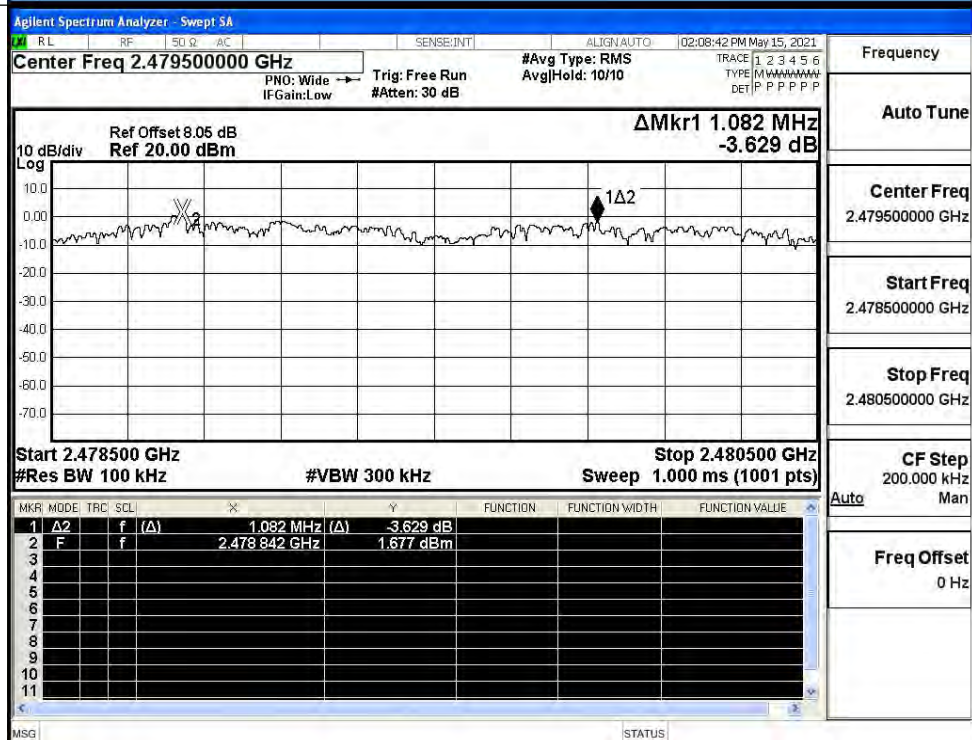
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

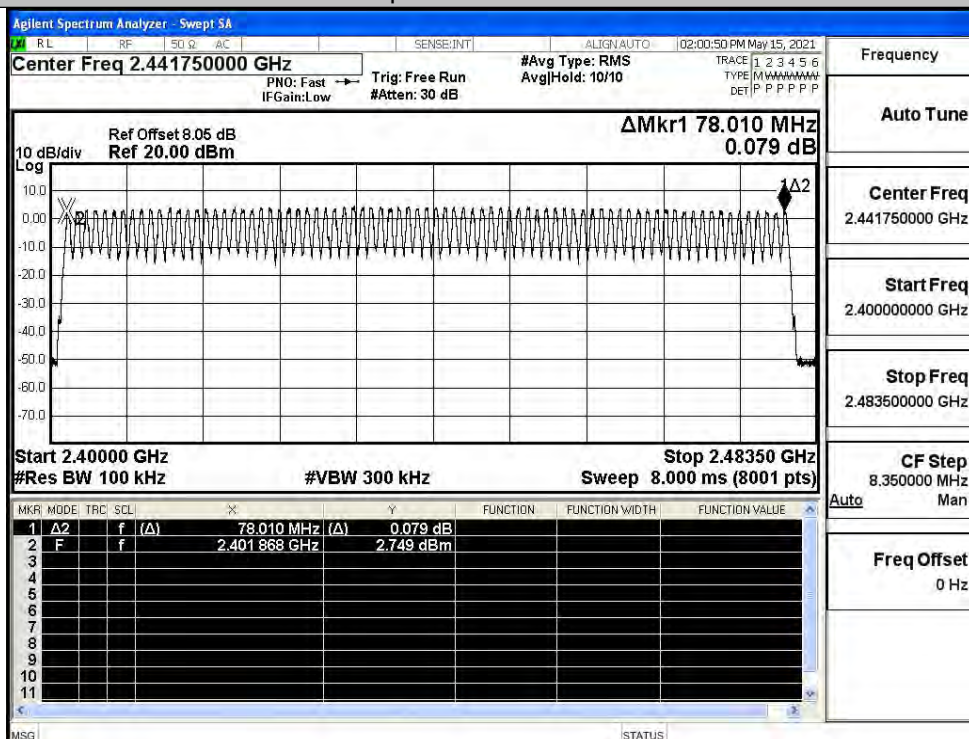
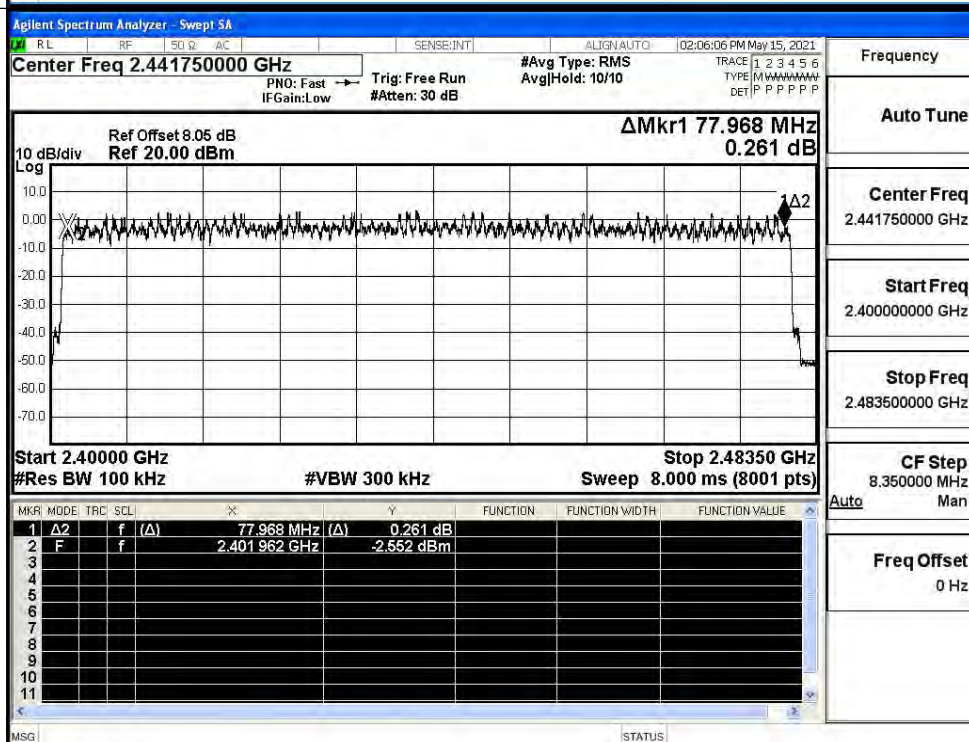


A.4 Hopping Channel Number

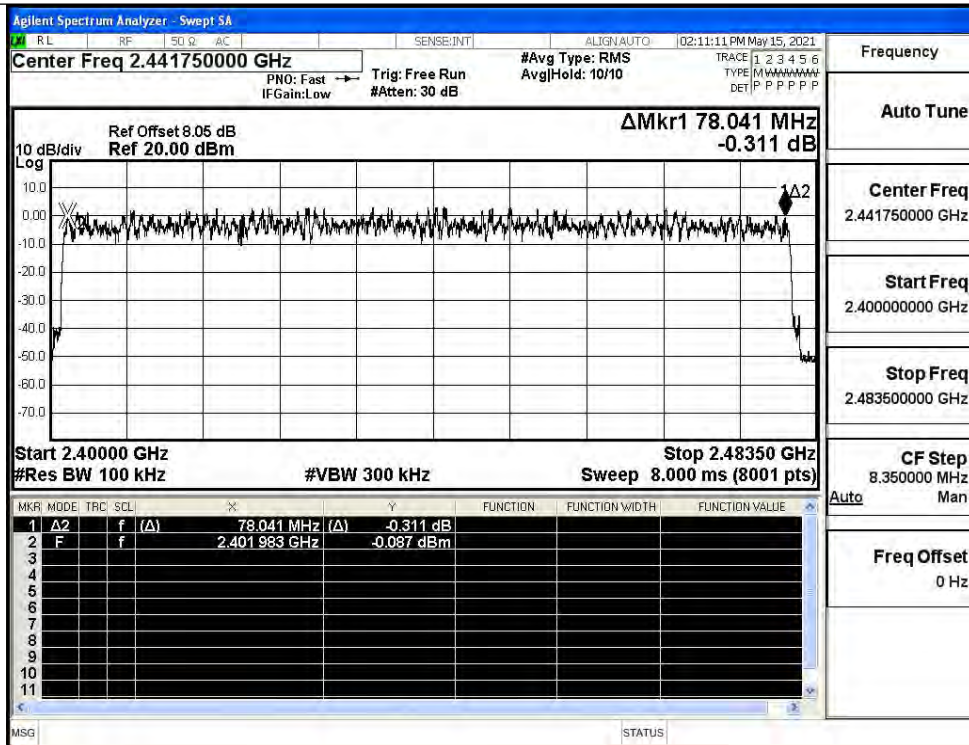
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

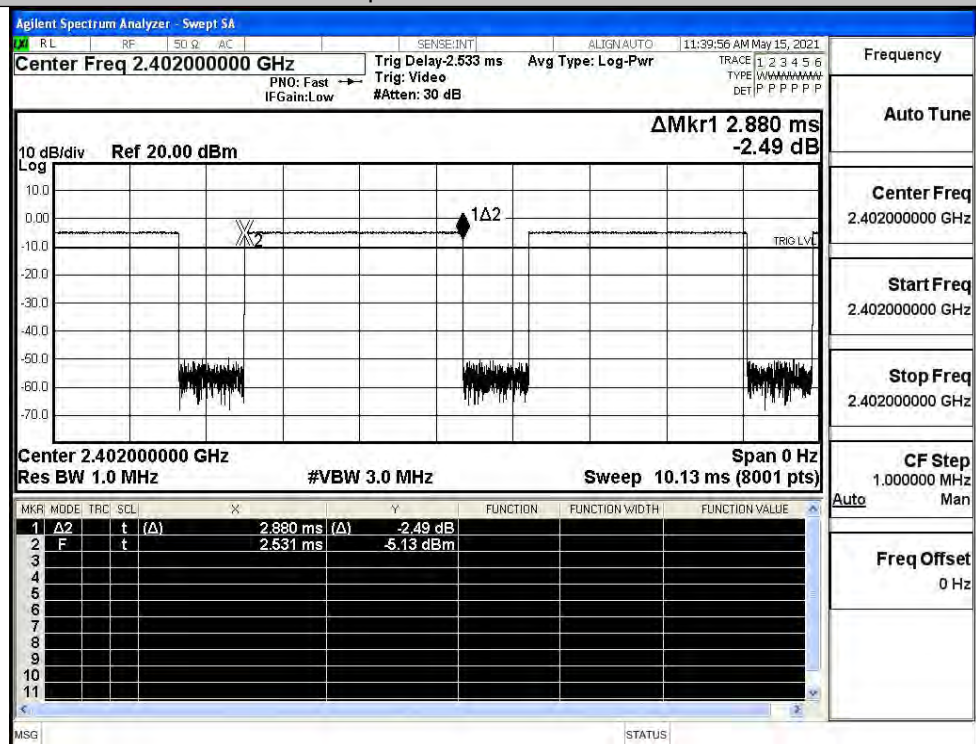


A.5 Dwell Time

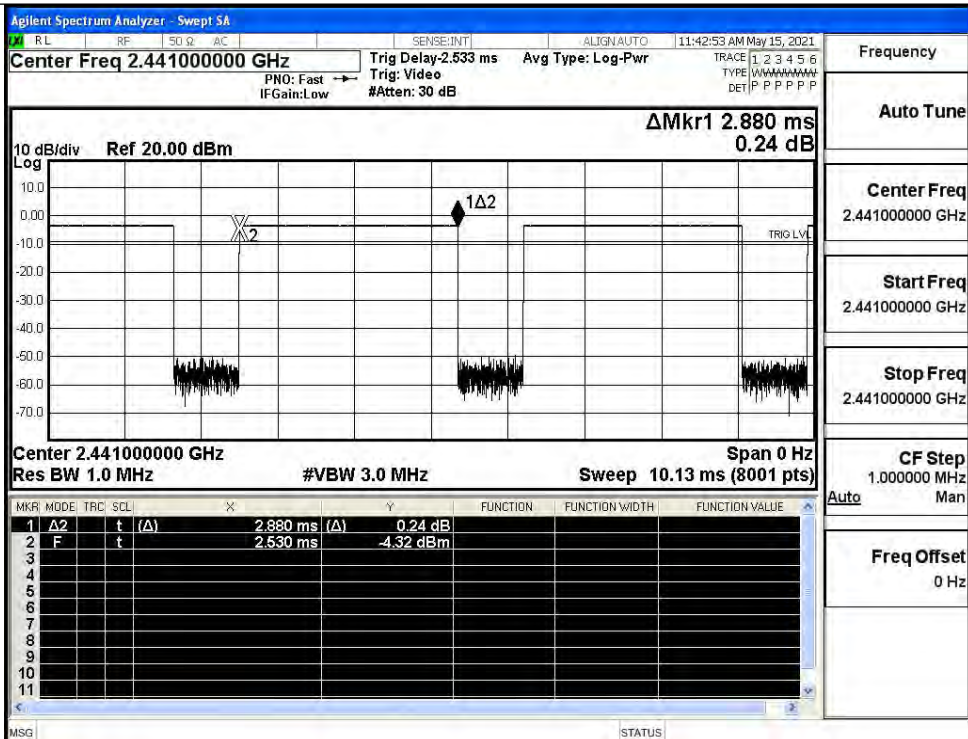
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.89	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

Test Graphs

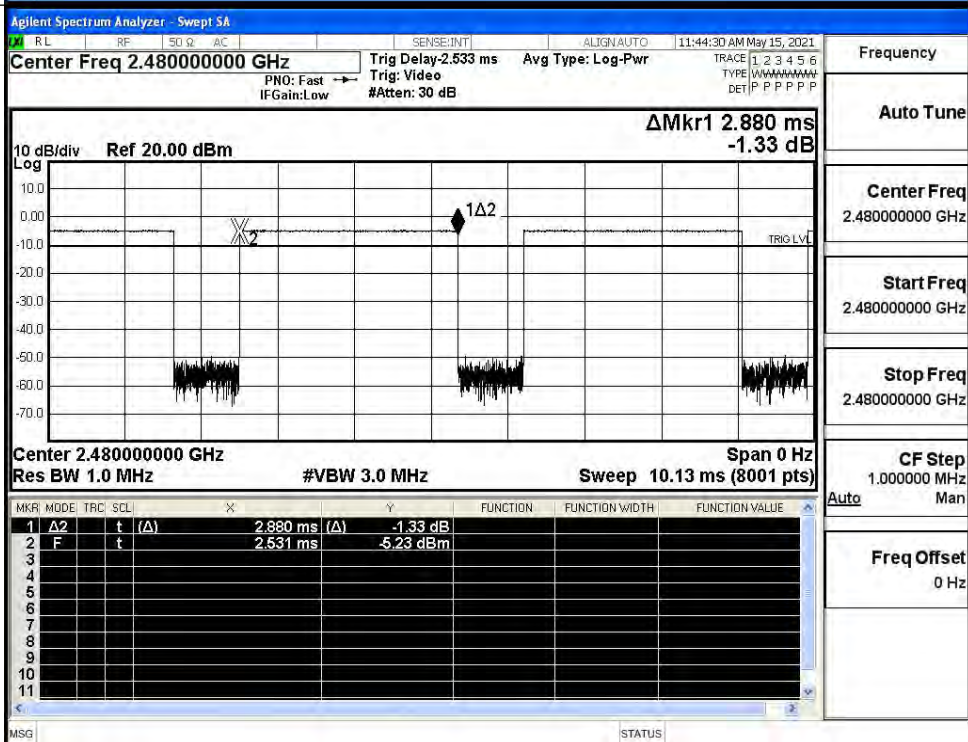
GFSK_DH5/LCH



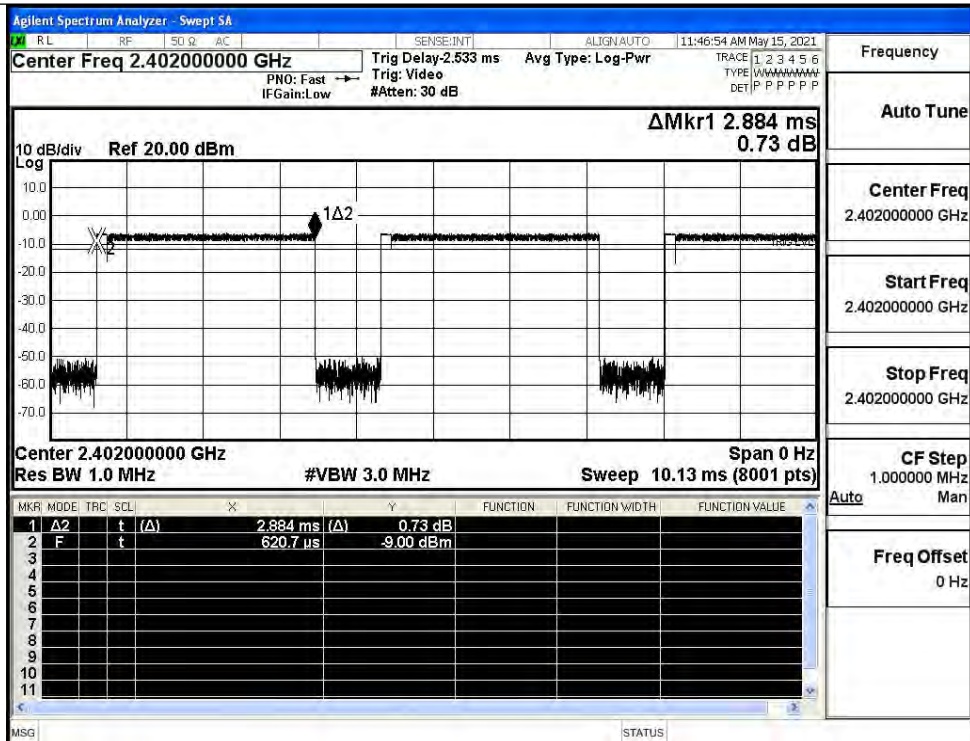
GFSK_DH5/MCH



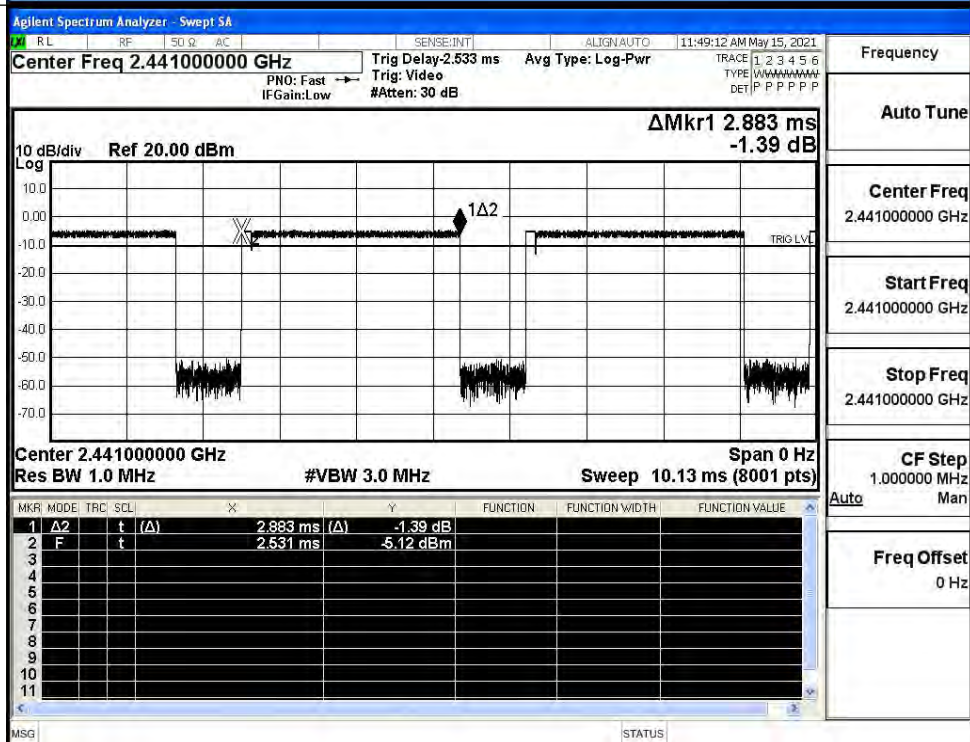
GFSK_DH5/HCH



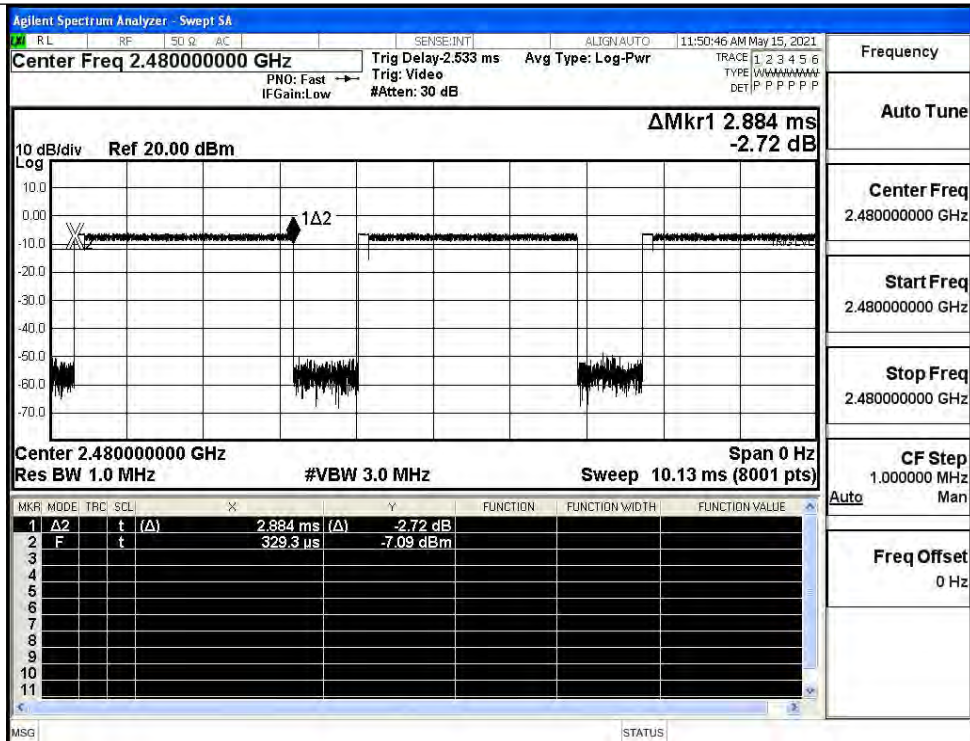
$\pi/4$ DQPSK
_2DH5/LCH



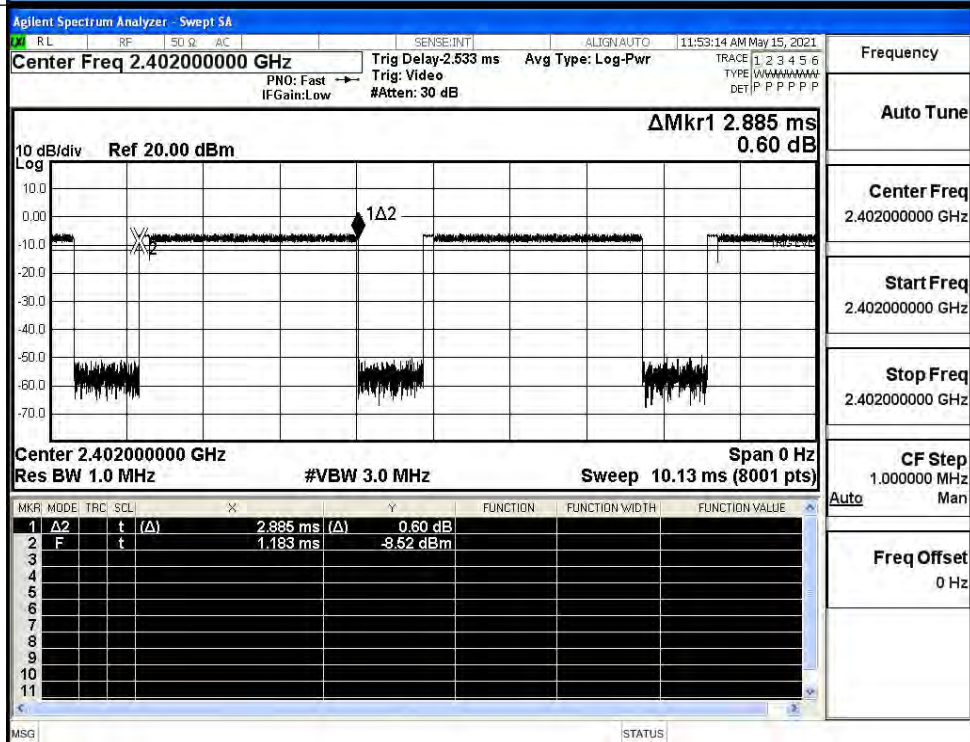
$\pi/4$ DQPSK
_2DH5/MCH



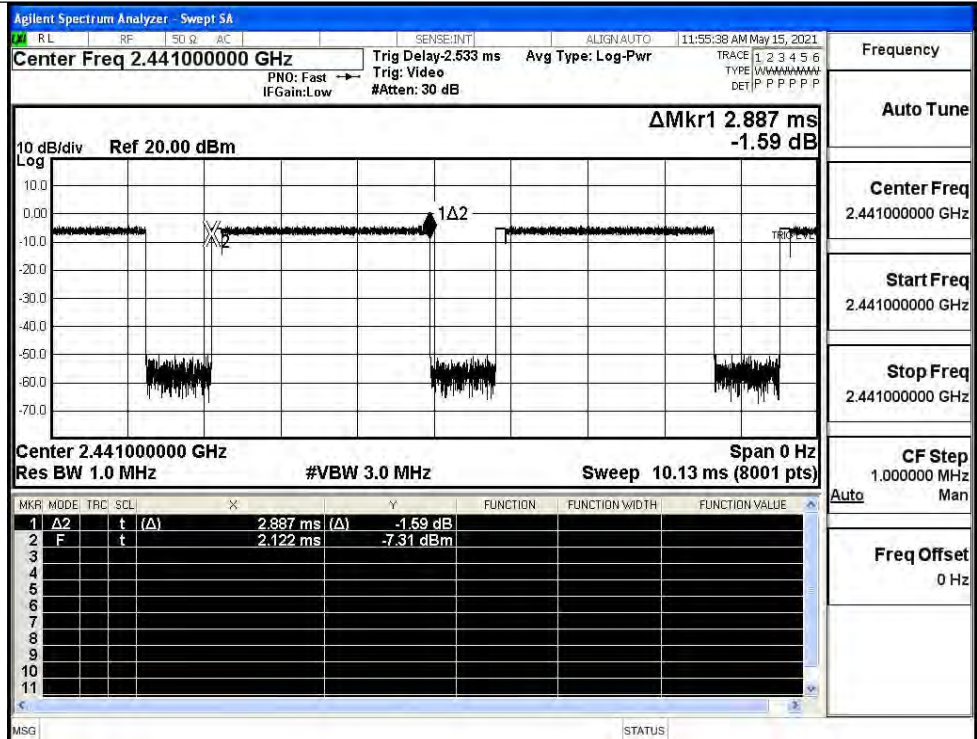
$\pi/4$ DQPSK
_2DH5/HCH



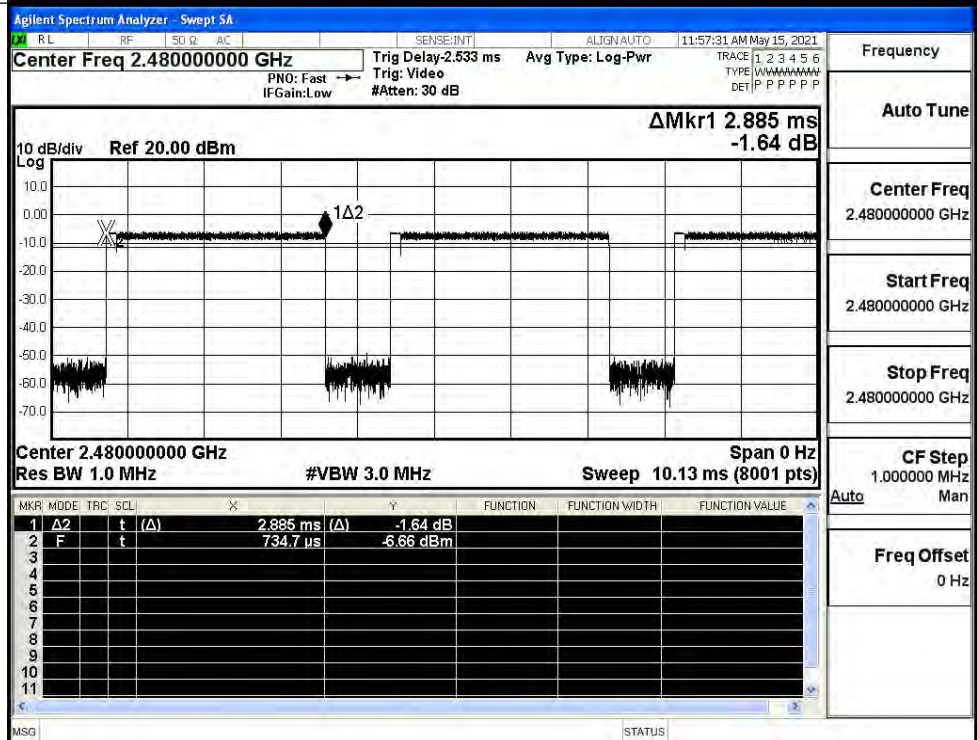
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

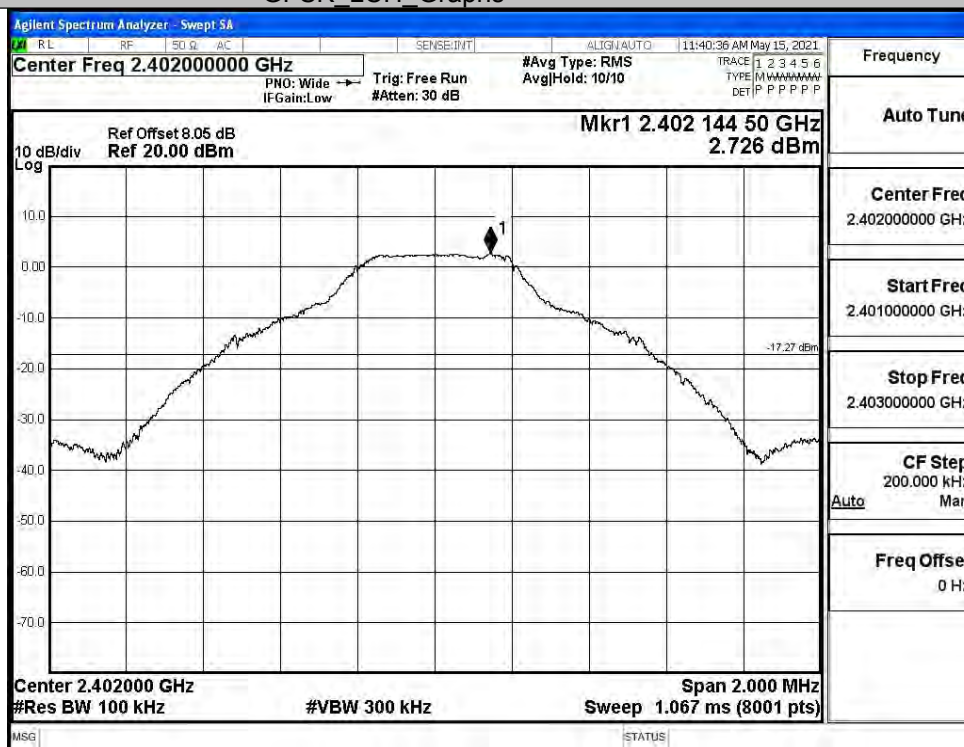


A.6 RF Conducted Spurious Emissions

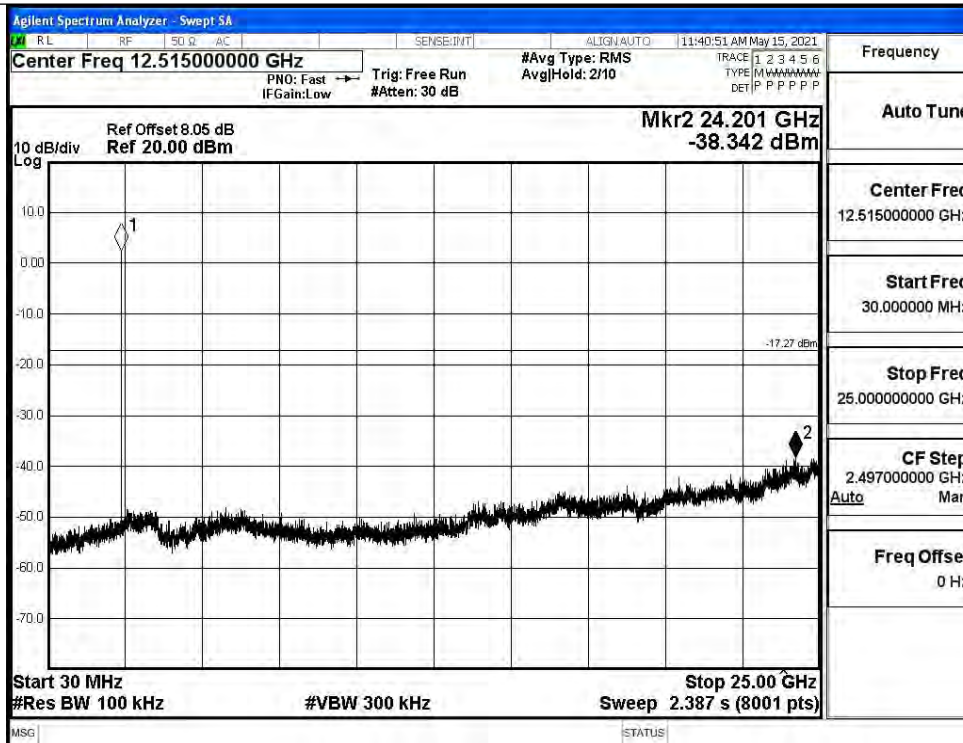
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.726	-38.342	-17.274	PASS
	MCH	4.372	-37.675	-15.628	PASS
	HCH	3.082	-37.835	-16.918	PASS
π /4DQPSK	LCH	1.356	-36.974	-18.644	PASS
	MCH	3.043	-38.294	-16.957	PASS
	HCH	1.378	-37.890	-18.622	PASS
8DPSK	LCH	1.541	-37.875	-18.459	PASS
	MCH	2.329	-37.513	-17.671	PASS
	HCH	1.265	-37.513	-18.735	PASS

GFSK LCH Graphs

Pref

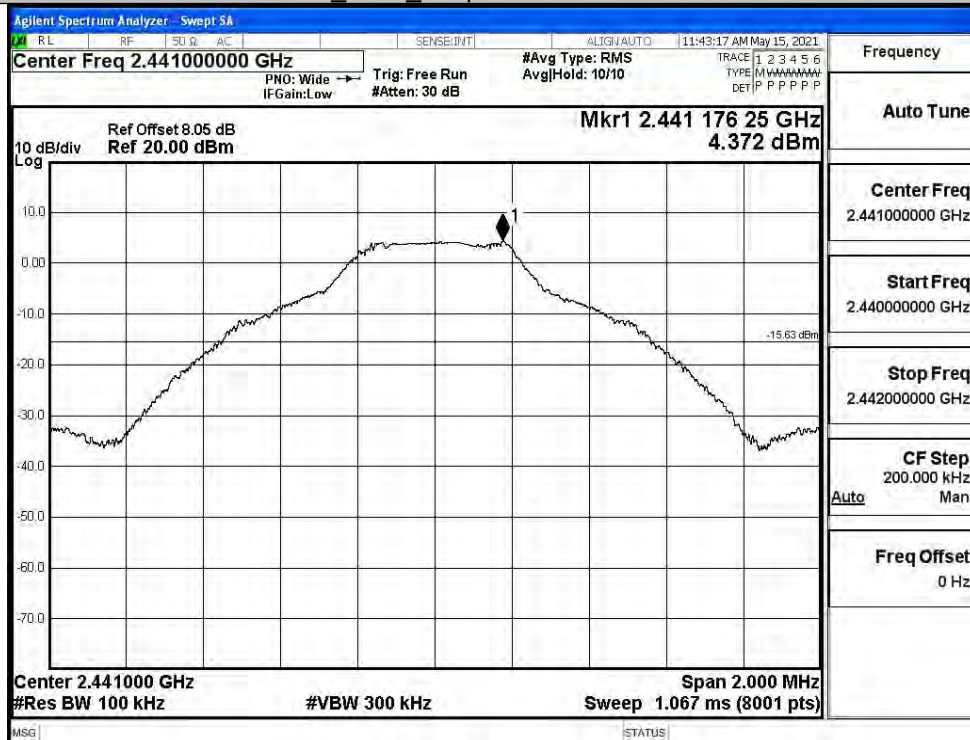


Puw

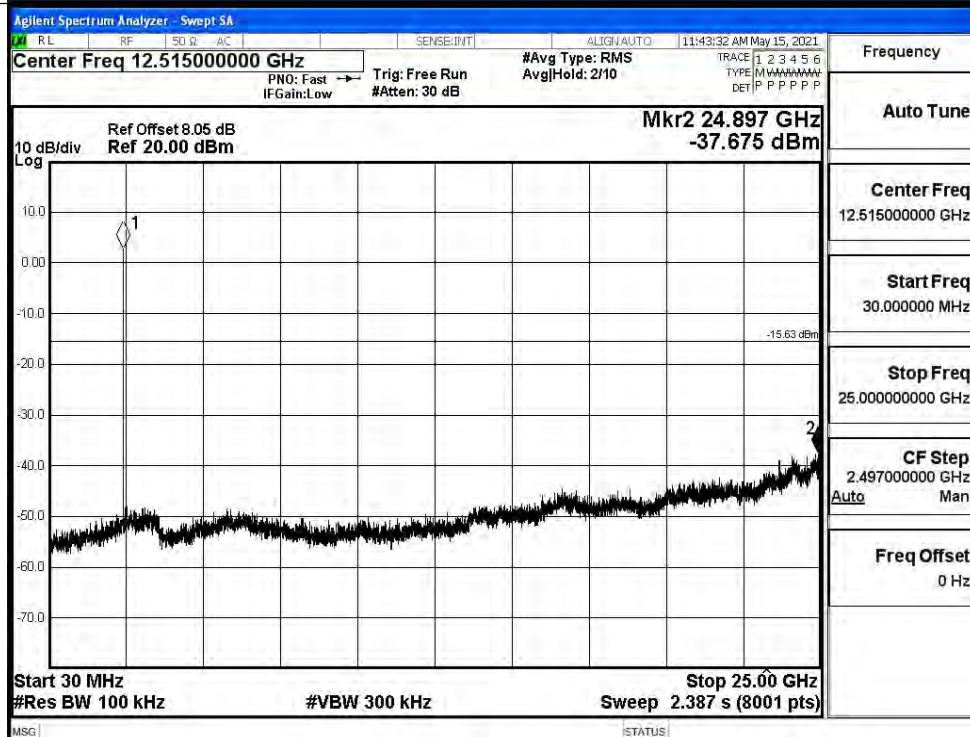


GFSK_MCH_Graphs

Pref

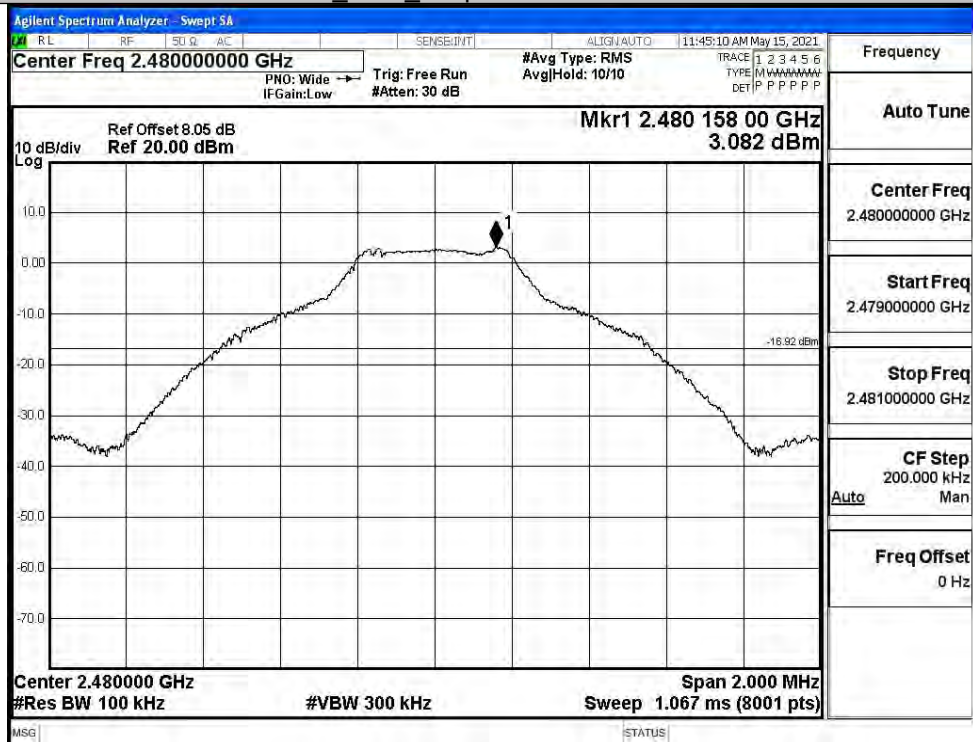


Puw

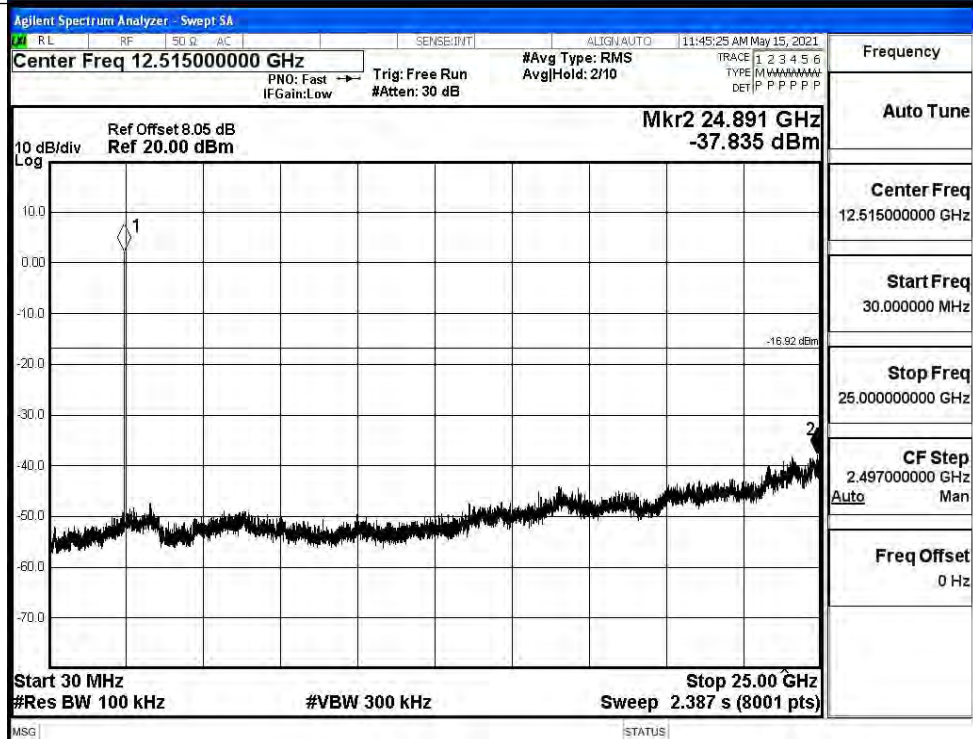


GFSK_HCH_Graphs

Pref

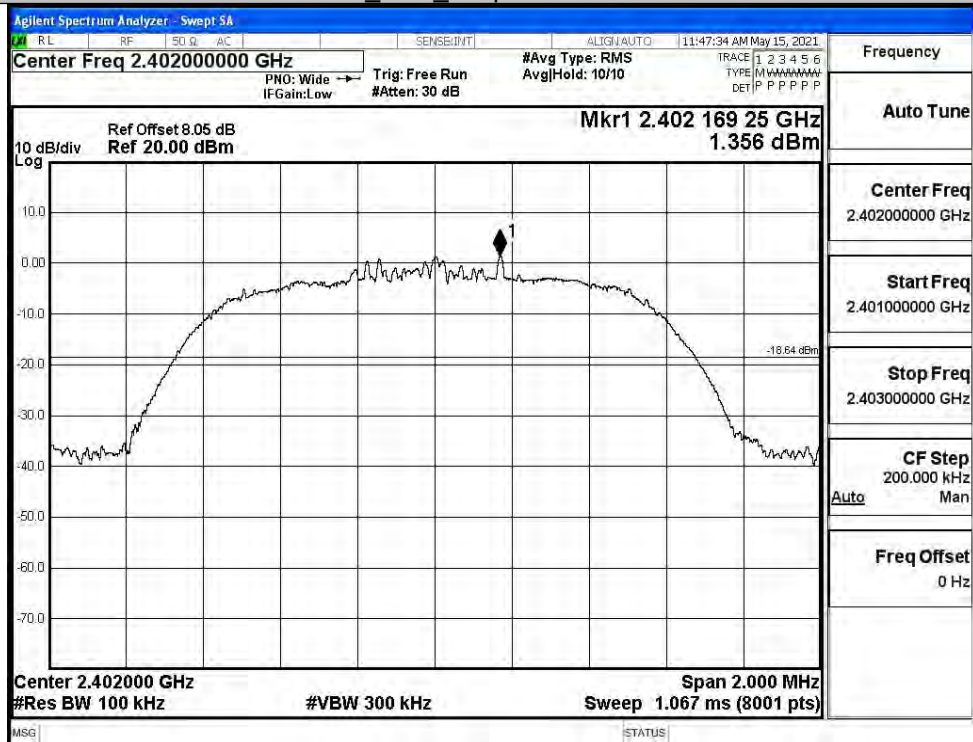


Puw

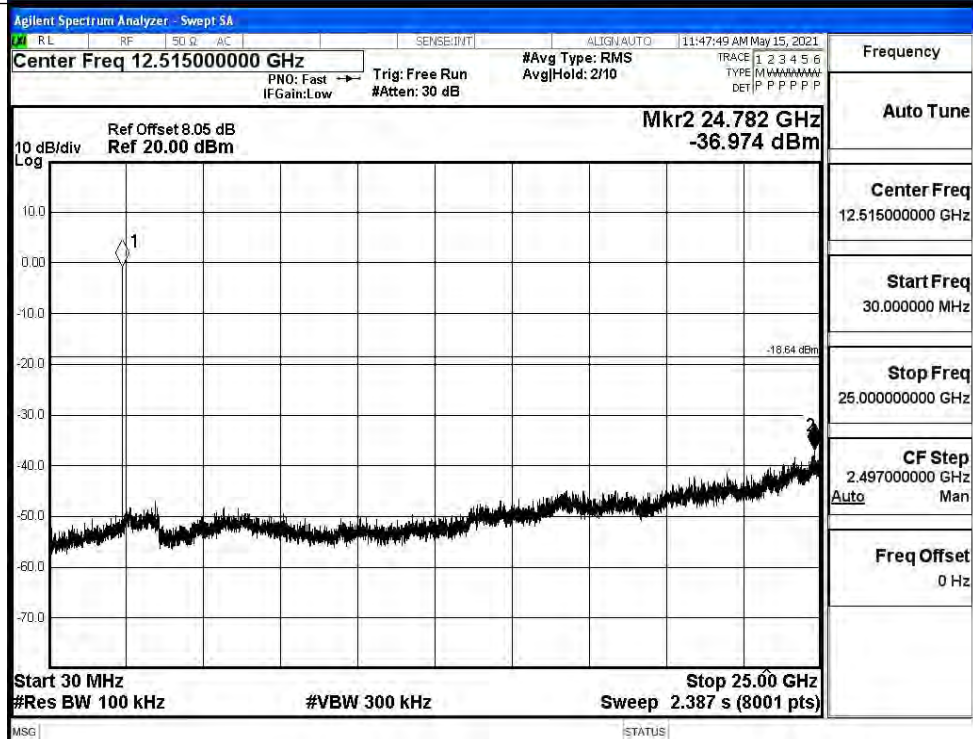


$\pi/4$ DQPSK_LCH_Graphs

Pref

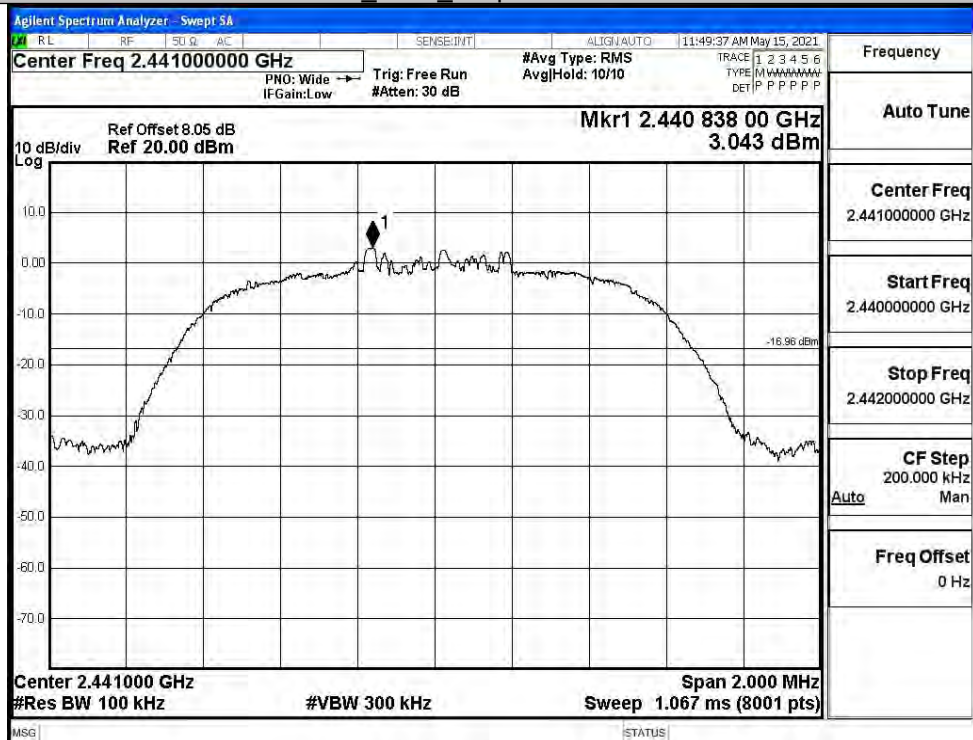


Puw

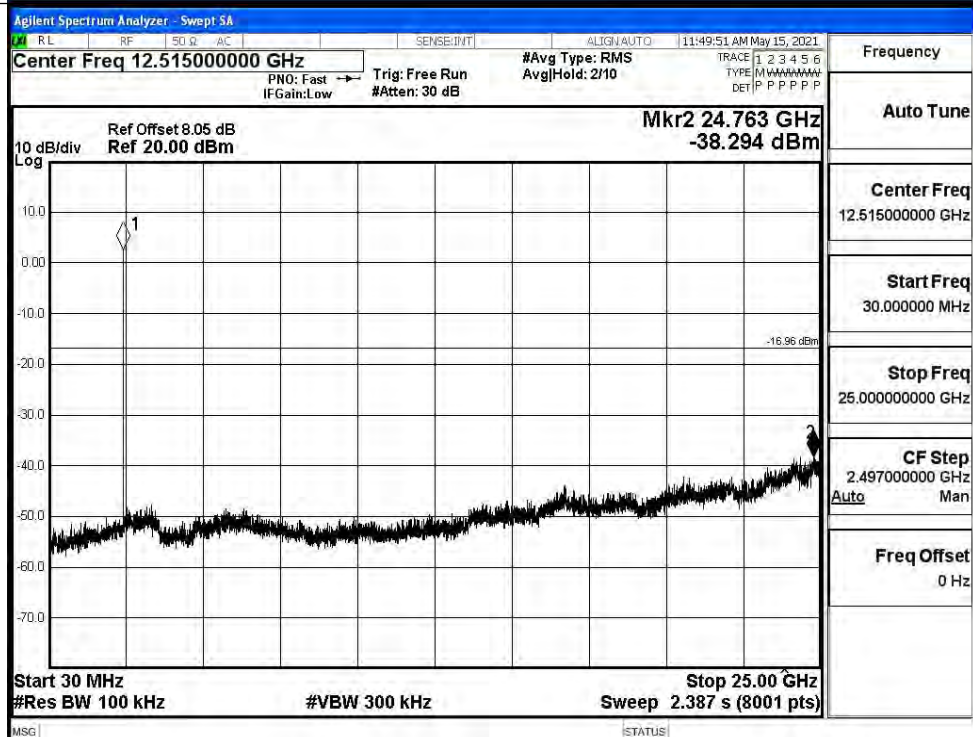


π /4DQPSK_MCH_Graphs

Pref

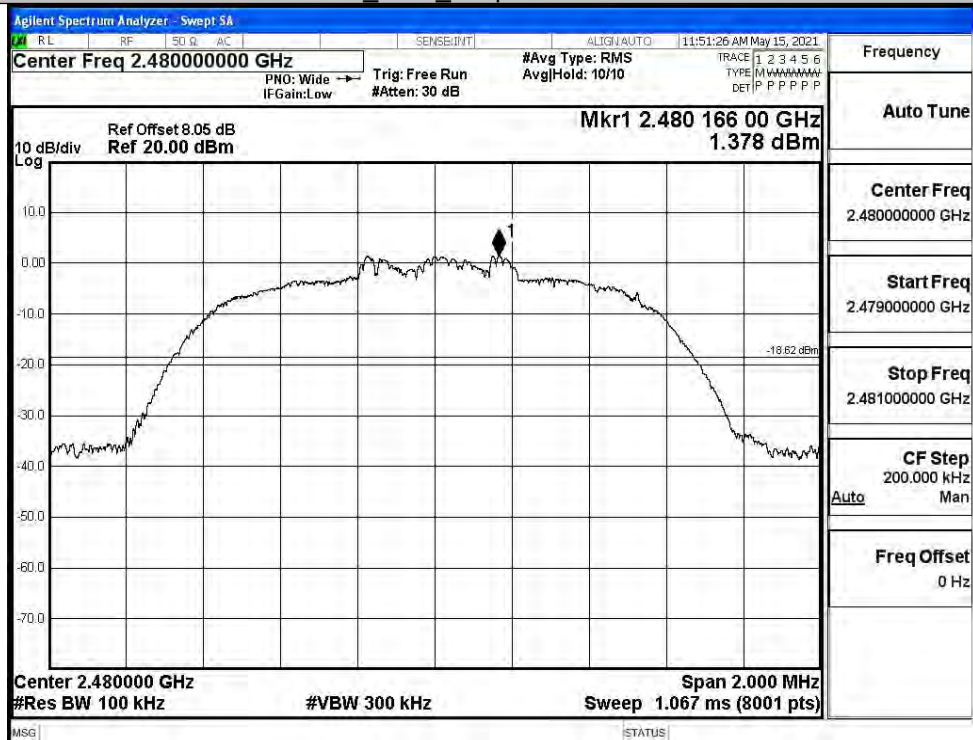


Puw

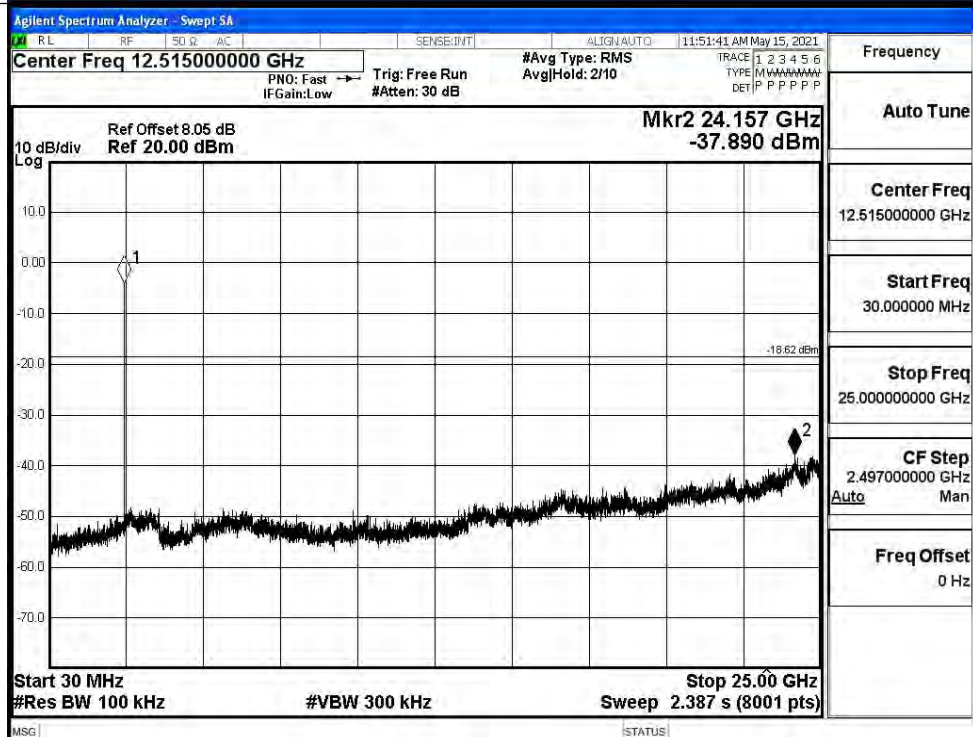


$\pi/4$ DQPSK_HCH_Graphs

Pref

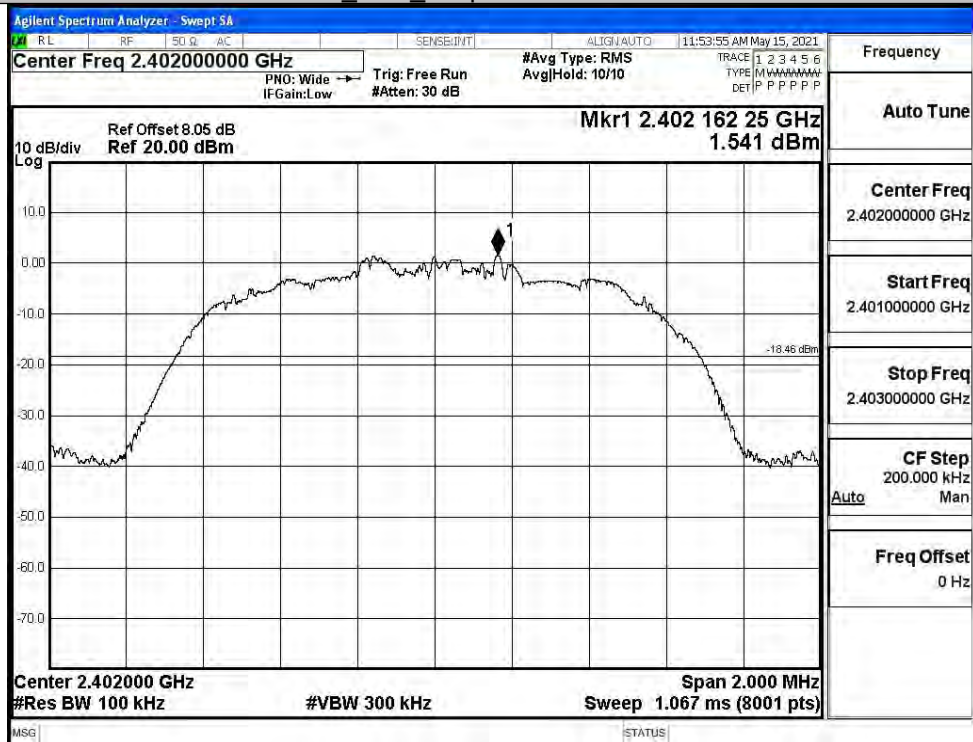


Puw

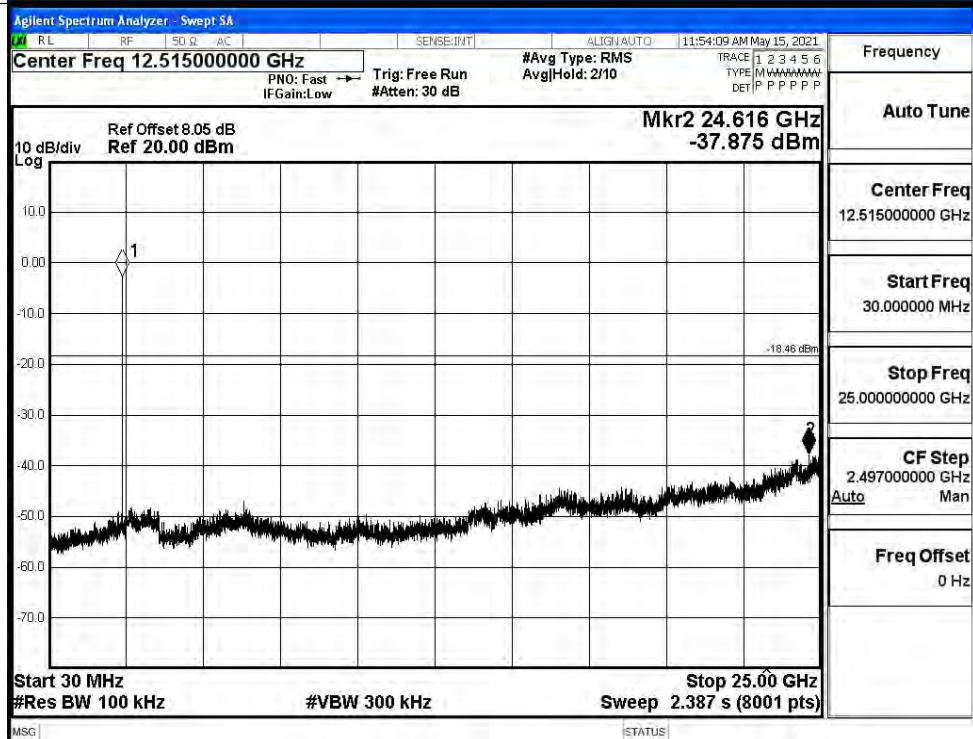


8DPSK_LCH_Graphs

Pref

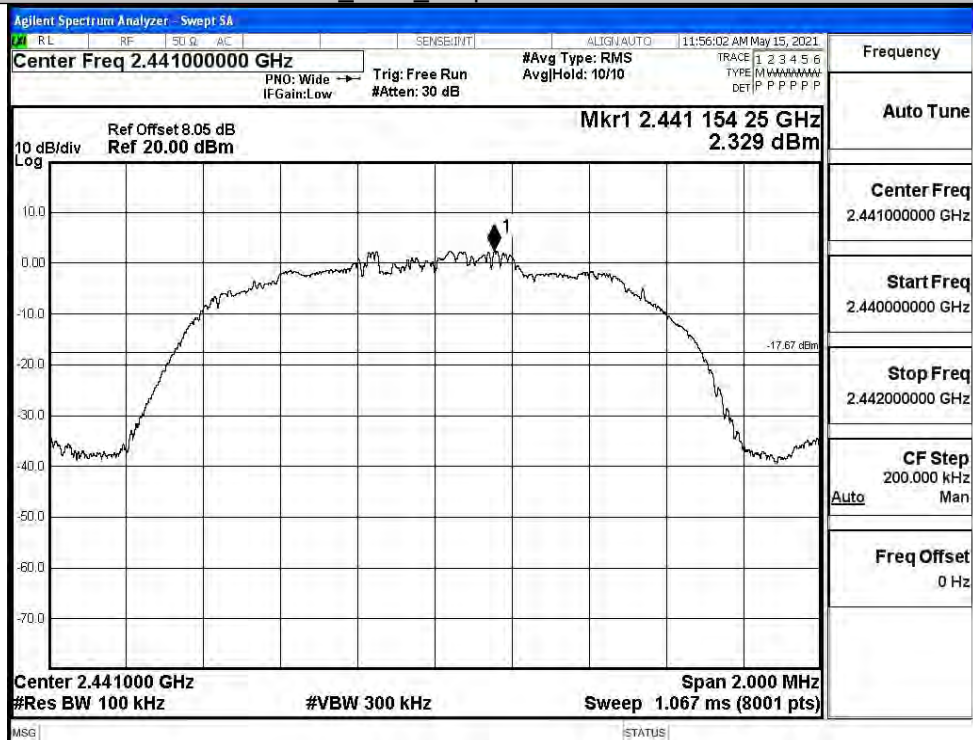


Puw

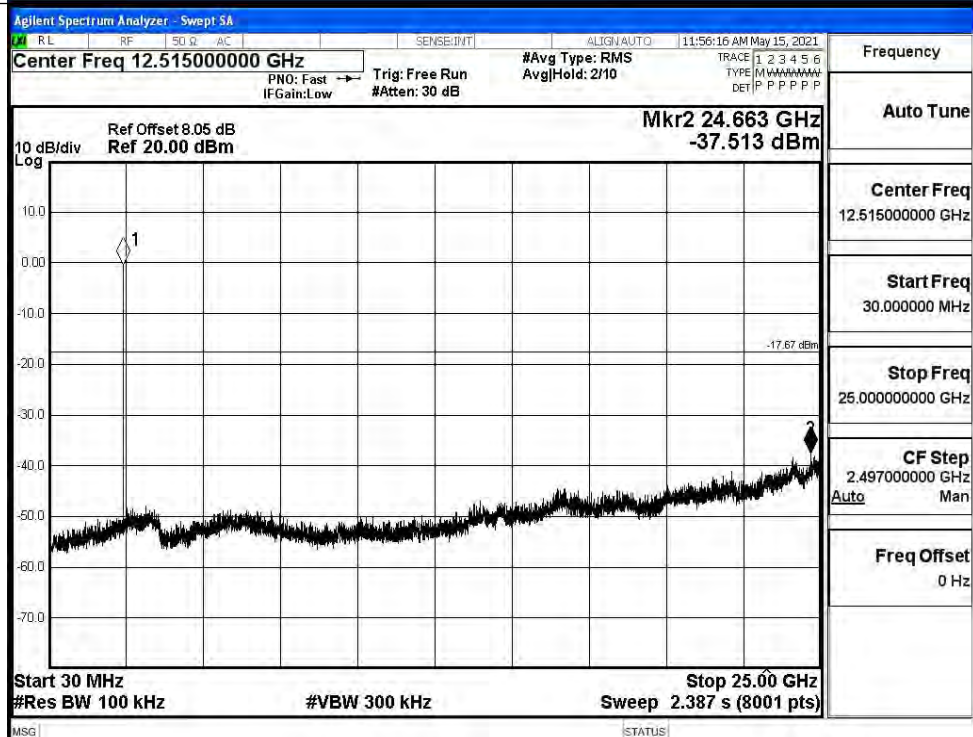


8DPSK_MCH_Graphs

Pref

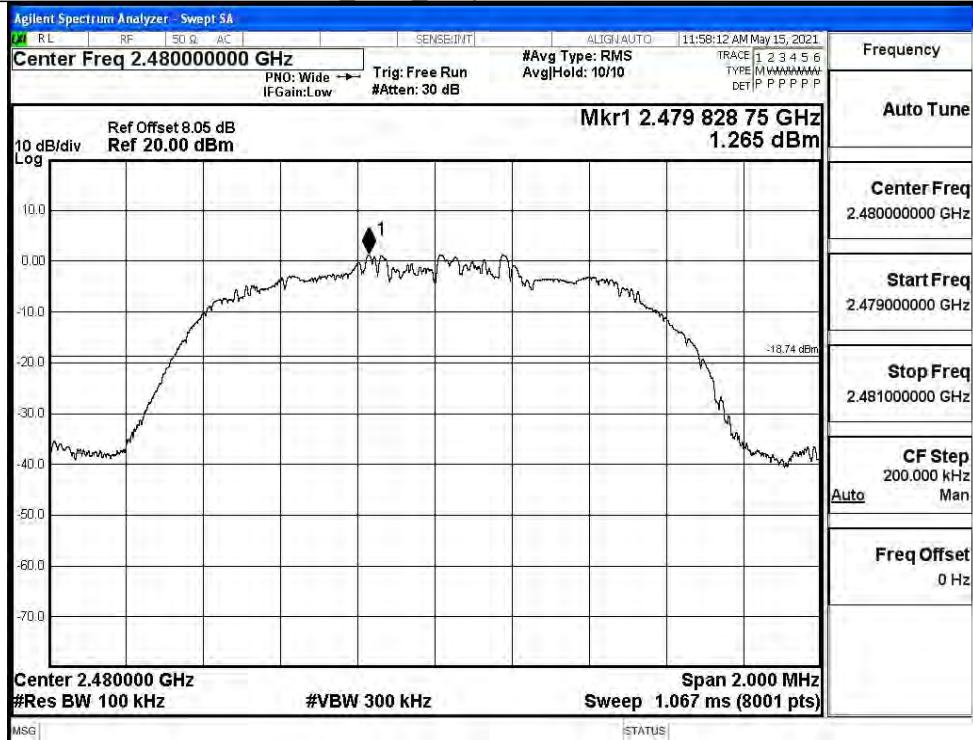


Puw

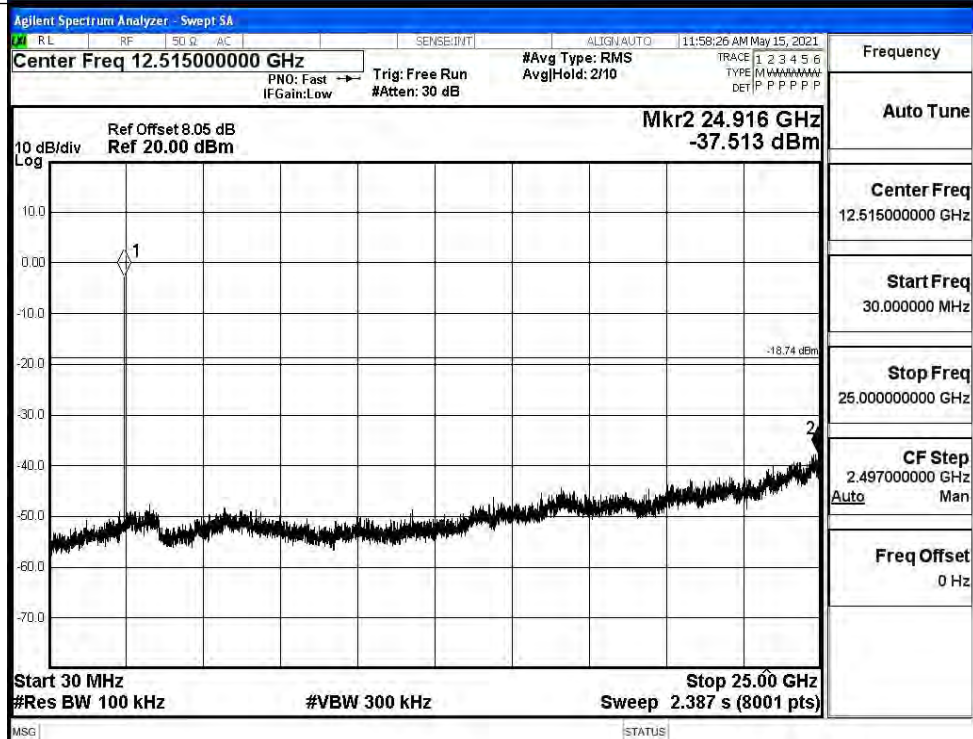


8DPSK_HCH_Graphs

Pref



Puw

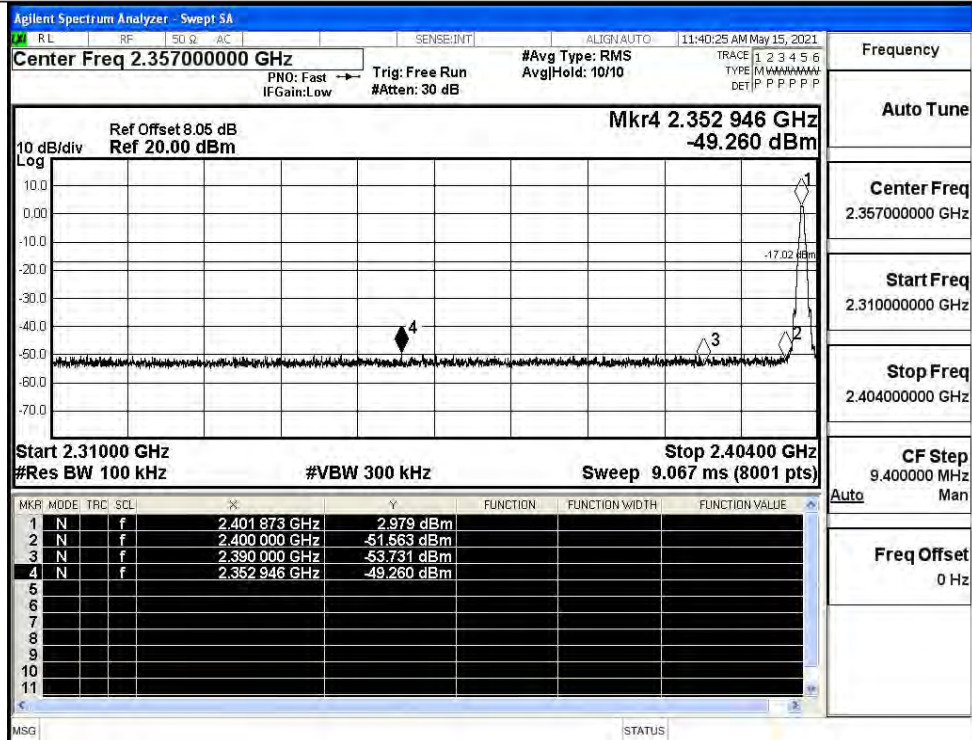


A.7 Band-edge for RF Conducted Emissions

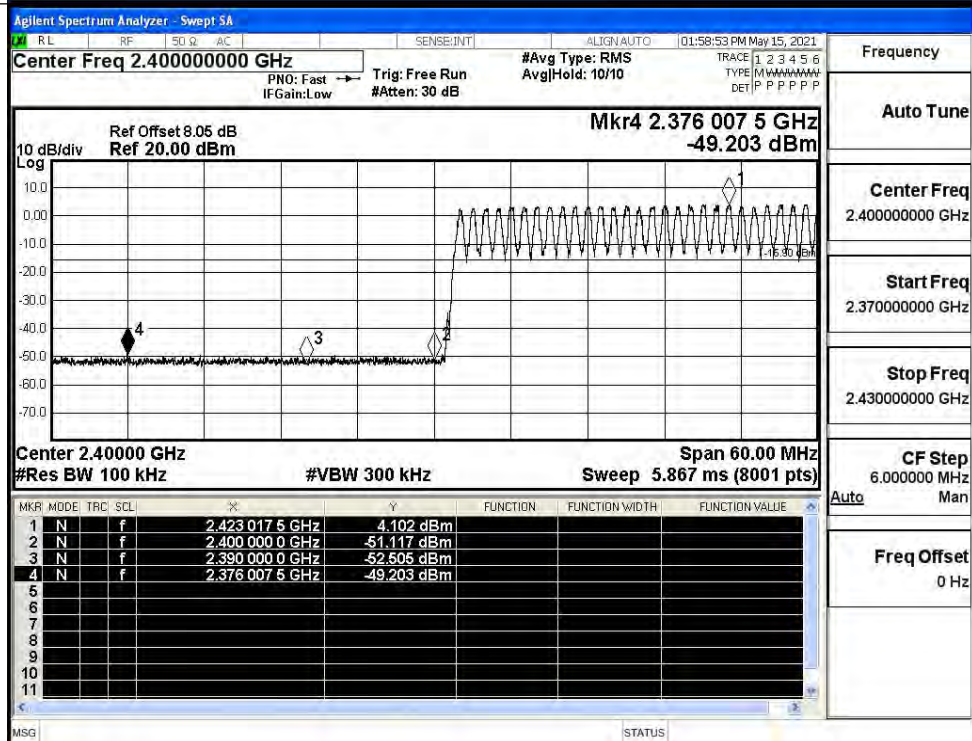
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	2.979	Off	-49.260	-17.02	PASS
			4.102	On	-49.203	-15.9	PASS
	HCH	2480	2.982	Off	-47.920	-17.02	PASS
			3.941	On	-48.189	-16.06	PASS
$\pi/4$ DQPSK	LCH	2402	1.483	Off	-49.537	-18.52	PASS
			2.885	On	-49.088	-17.12	PASS
	HCH	2480	1.645	Off	-49.561	-18.36	PASS
			2.383	On	-48.638	-17.62	PASS
8DPSK	LCH	2402	0.561	Off	-48.890	-19.44	PASS
			3.031	On	-48.739	-16.97	PASS
	HCH	2480	1.119	Off	-49.061	-18.88	PASS
			2.643	On	-48.757	-17.36	PASS

Test Graphs

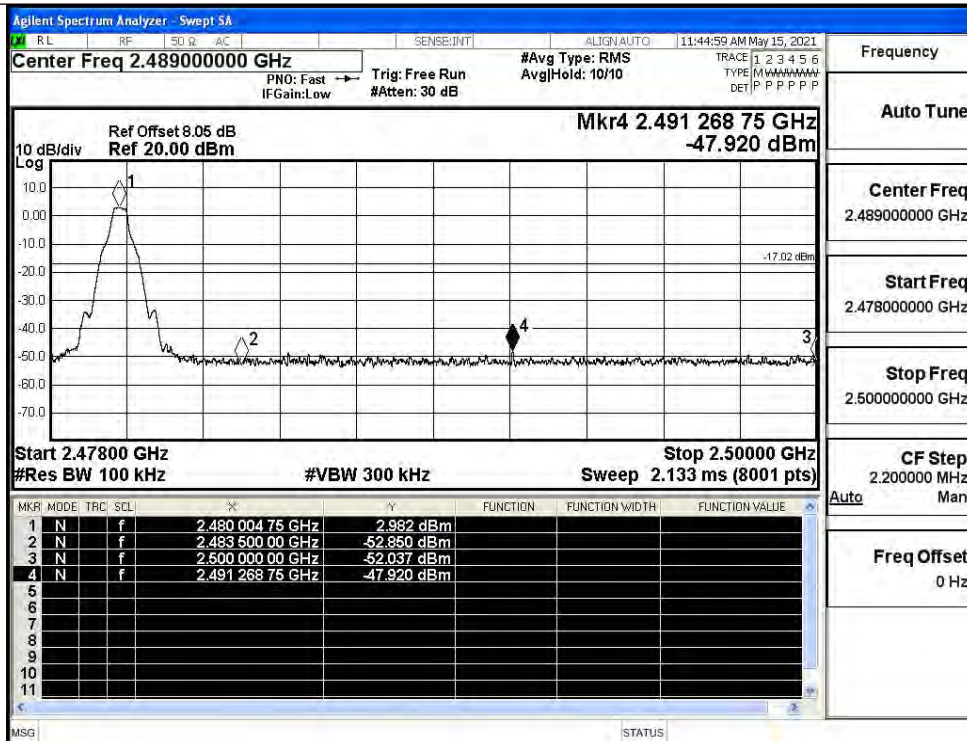
GFSK/LCH/No Hop



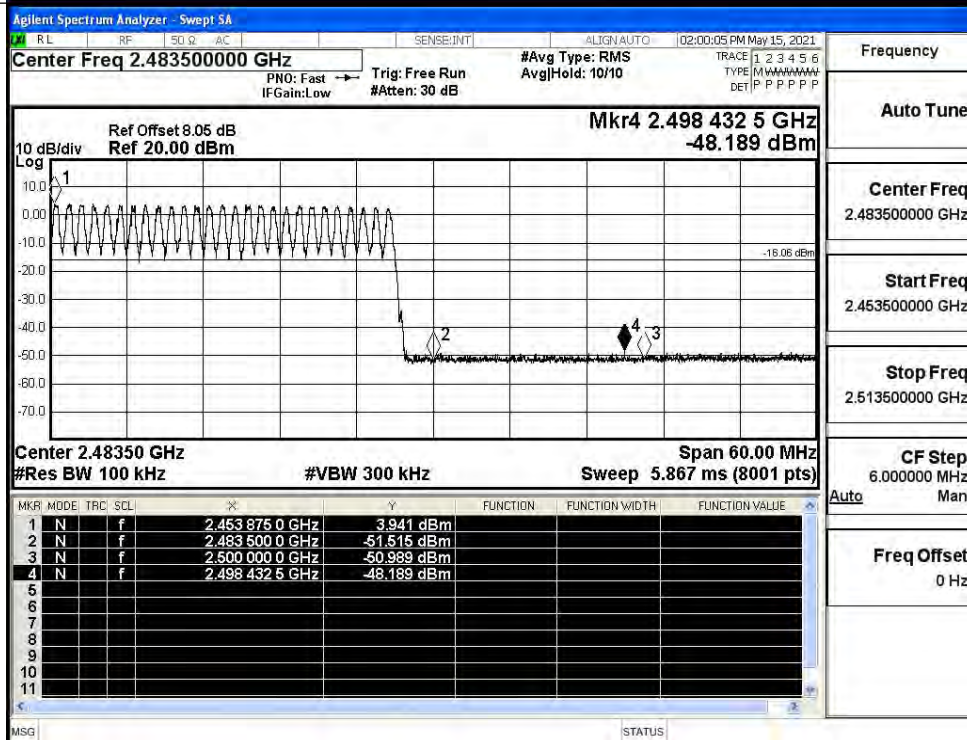
GFSK/LCH/Hop



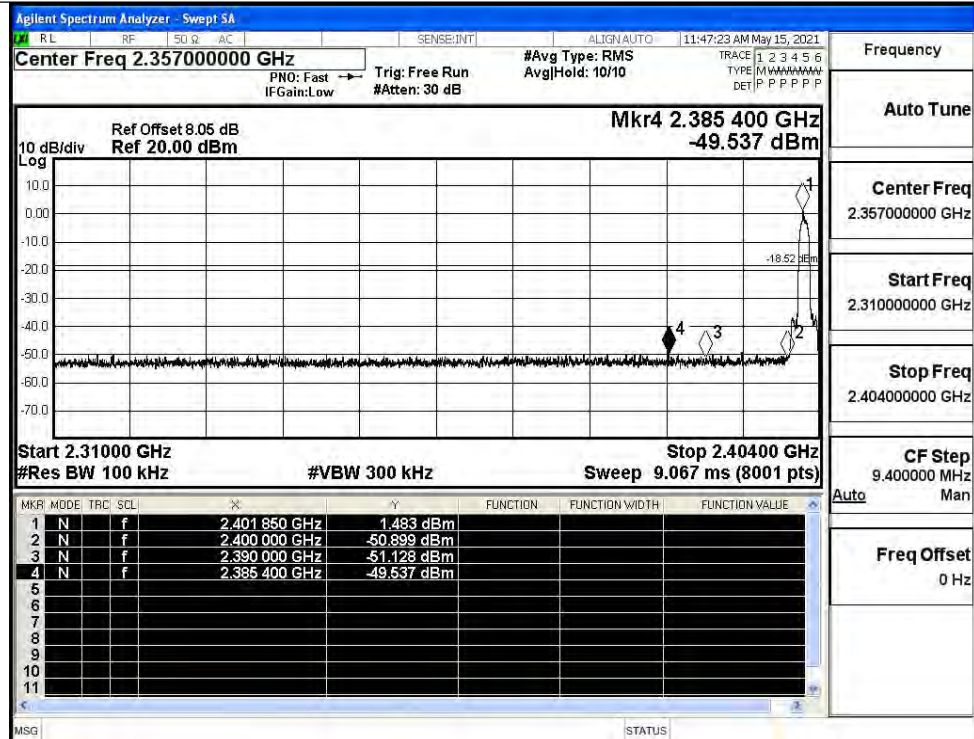
GFSK/HCH/No Hop



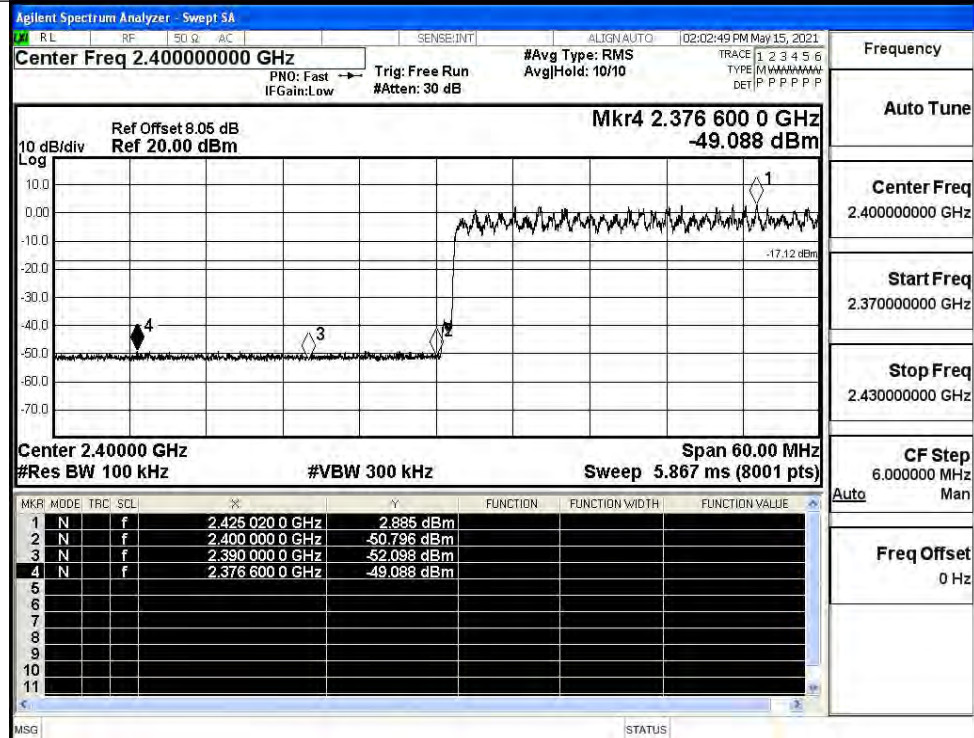
GFSK/HCH/Hop



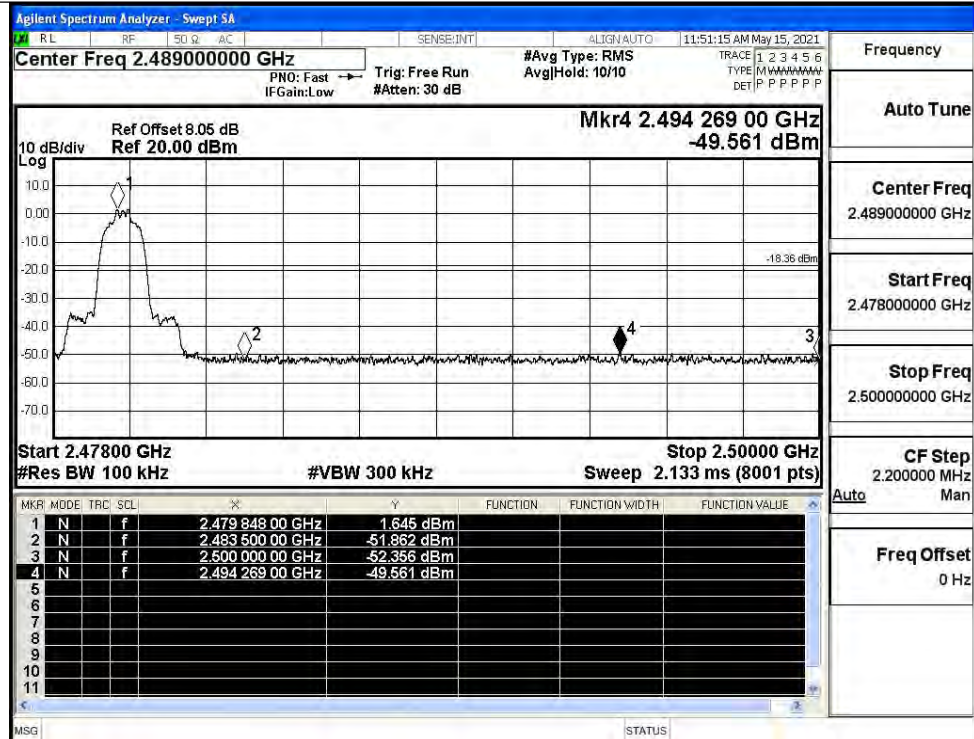
$\pi/4$ DQPSK/LCH/No
Hop



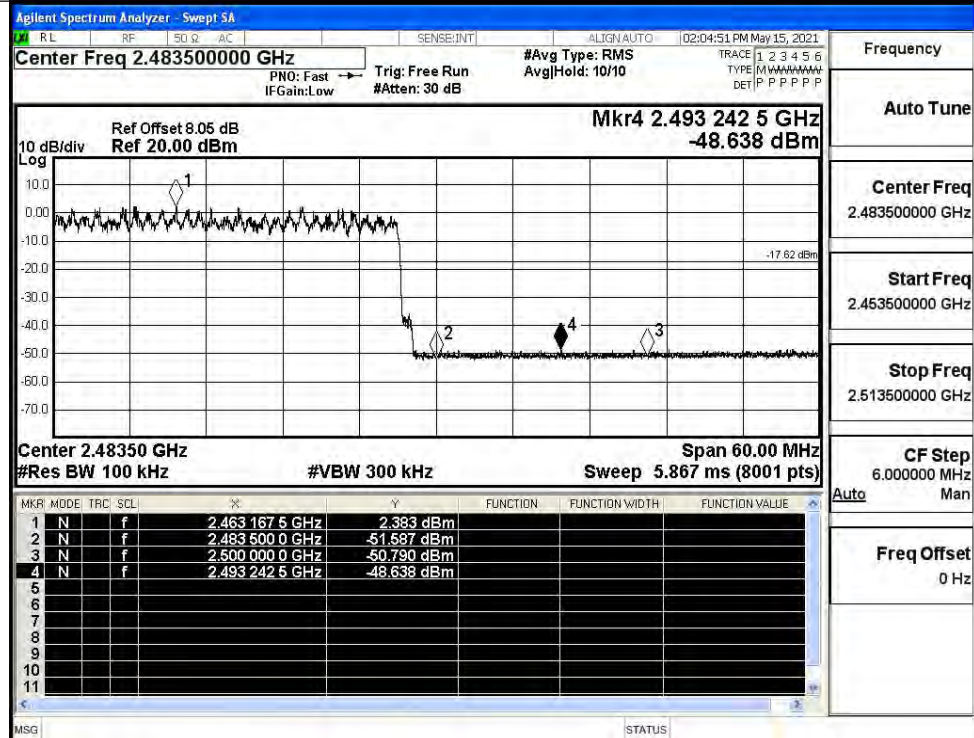
$\pi/4$ DQPSK/LCH/Hop



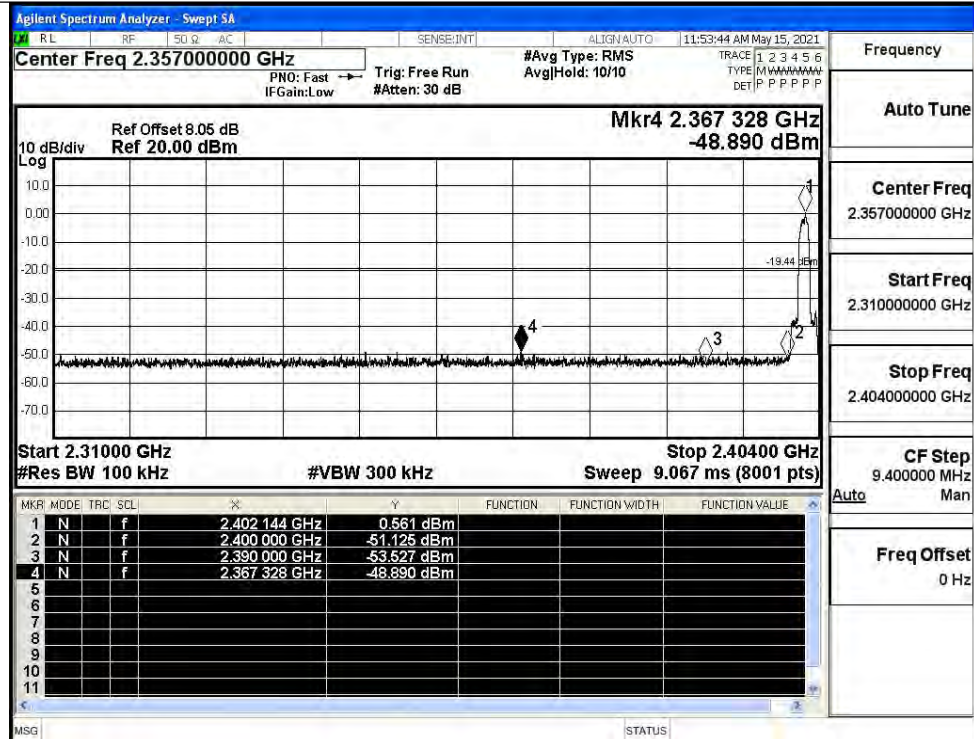
$\pi/4$ DQPSK/HCH/No
Hop



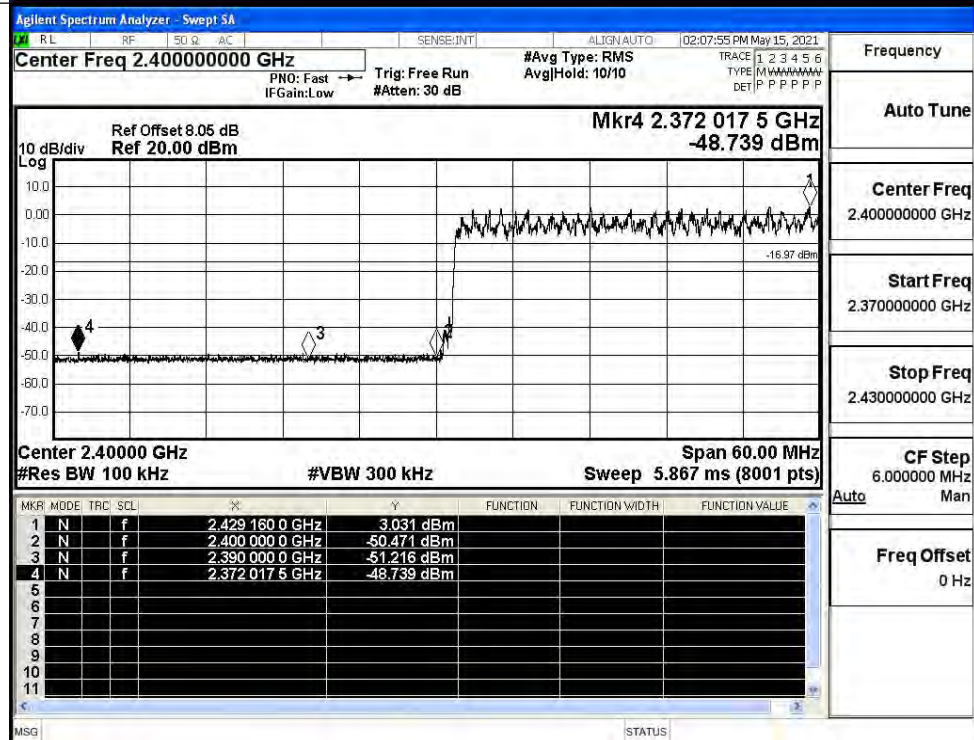
$\pi/4$ DQPSK/HCH/Hop



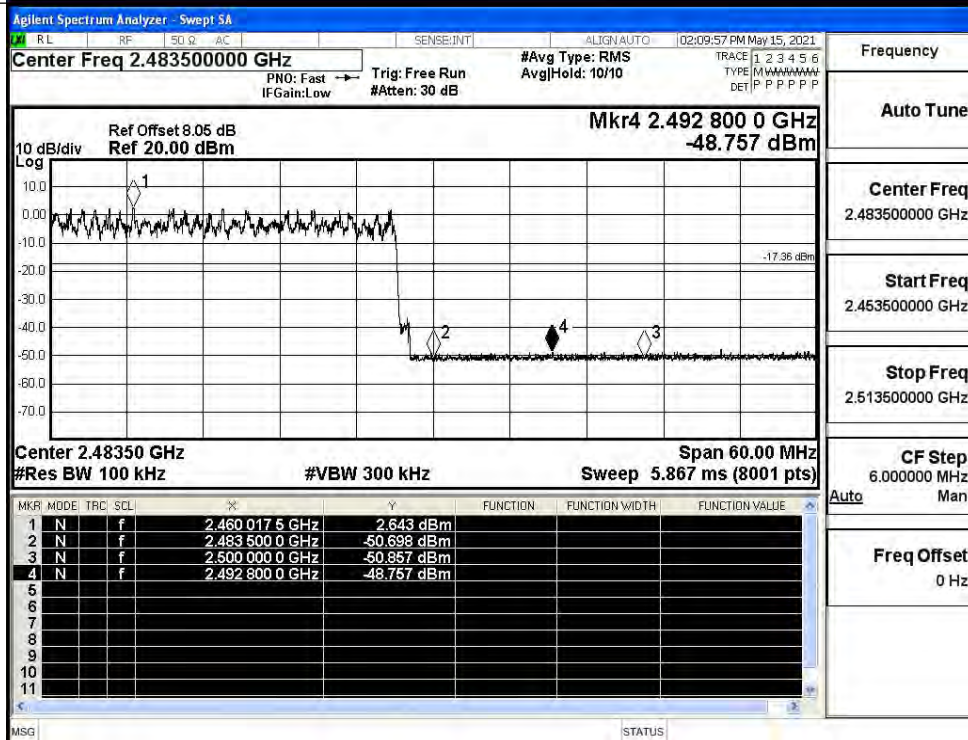
8DPSK/LCH/No Hop



8DPSK/LCH/Hop



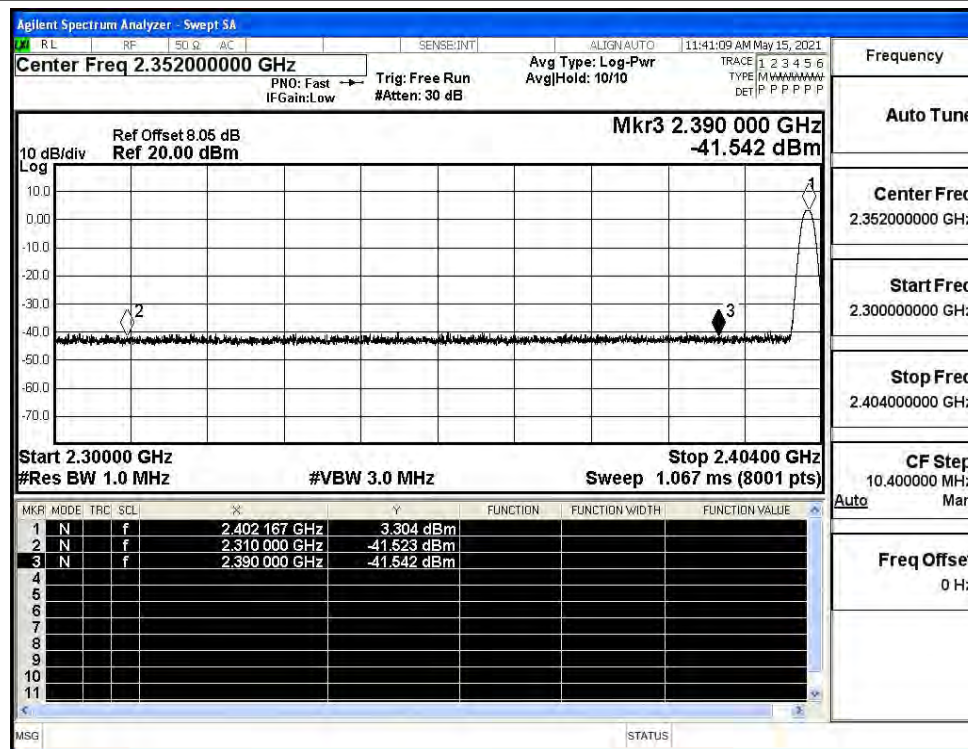
8DPSK/HCH/Hop



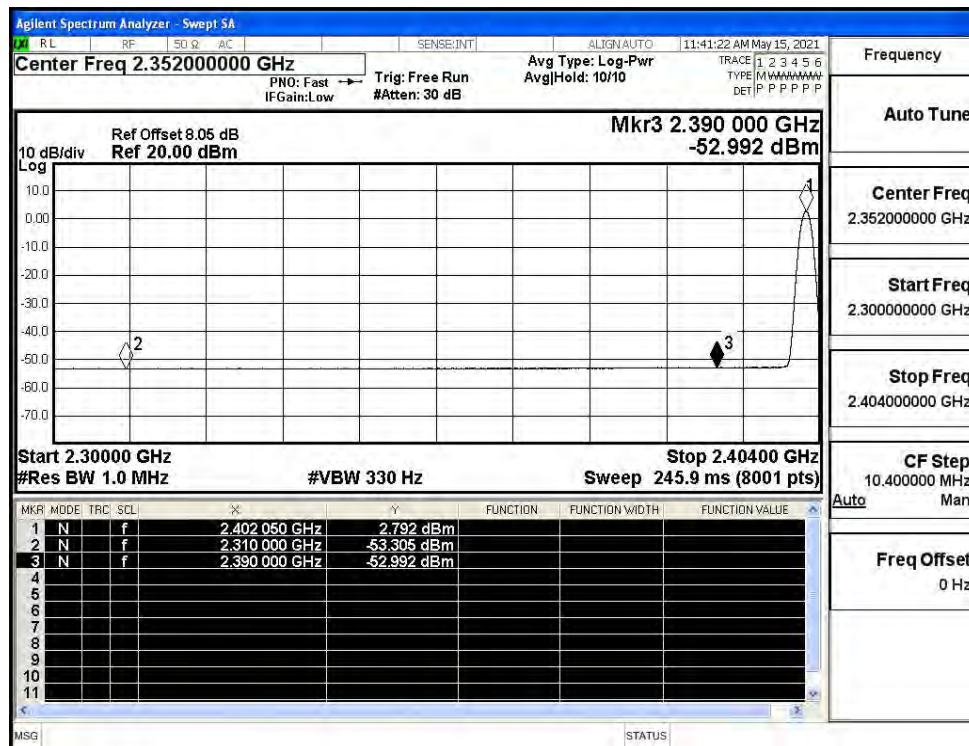
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-41.52	2.0	0	55.71	PEAK	74	PASS
	Off	2310.0	-53.31	2.0	0	43.92	AV	54	PASS
	Off	2390.0	-41.54	2.0	0	55.69	PEAK	74	PASS
	Off	2390.0	-52.99	2.0	0	44.24	AV	54	PASS
	Off	2483.5	-41.49	2.0	0	55.74	PEAK	74	PASS
	Off	2483.5	-52.33	2.0	0	44.90	AV	54	PASS
	Off	2500.0	-42.18	2.0	0	55.05	PEAK	74	PASS
	Off	2500.0	-52.24	2.0	0	44.99	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-44.16	2.0	0	53.07	PEAK	74	PASS
	Off	2310.0	-53.30	2.0	0	43.93	AV	54	PASS
	Off	2390.0	-42.71	2.0	0	54.52	PEAK	74	PASS
	Off	2390.0	-52.88	2.0	0	44.35	AV	54	PASS
	Off	2483.5	-41.29	2.0	0	55.94	PEAK	74	PASS
	Off	2483.5	-52.41	2.0	0	44.82	AV	54	PASS
	Off	2500.0	-41.90	2.0	0	55.33	PEAK	74	PASS
	Off	2500.0	-52.37	2.0	0	44.86	AV	54	PASS
8DPSK	Off	2310.0	-43.07	2.0	0	54.16	PEAK	74	PASS
	Off	2310.0	-53.31	2.0	0	43.92	AV	54	PASS
	Off	2390.0	-42.75	2.0	0	54.48	PEAK	74	PASS
	Off	2390.0	-52.85	2.0	0	44.38	AV	54	PASS
	Off	2483.5	-41.84	2.0	0	55.39	PEAK	74	PASS
	Off	2483.5	-52.36	2.0	0	44.87	AV	54	PASS
	Off	2500.0	-43.02	2.0	0	54.21	PEAK	74	PASS
	Off	2500.0	-52.29	2.0	0	44.94	AV	54	PASS

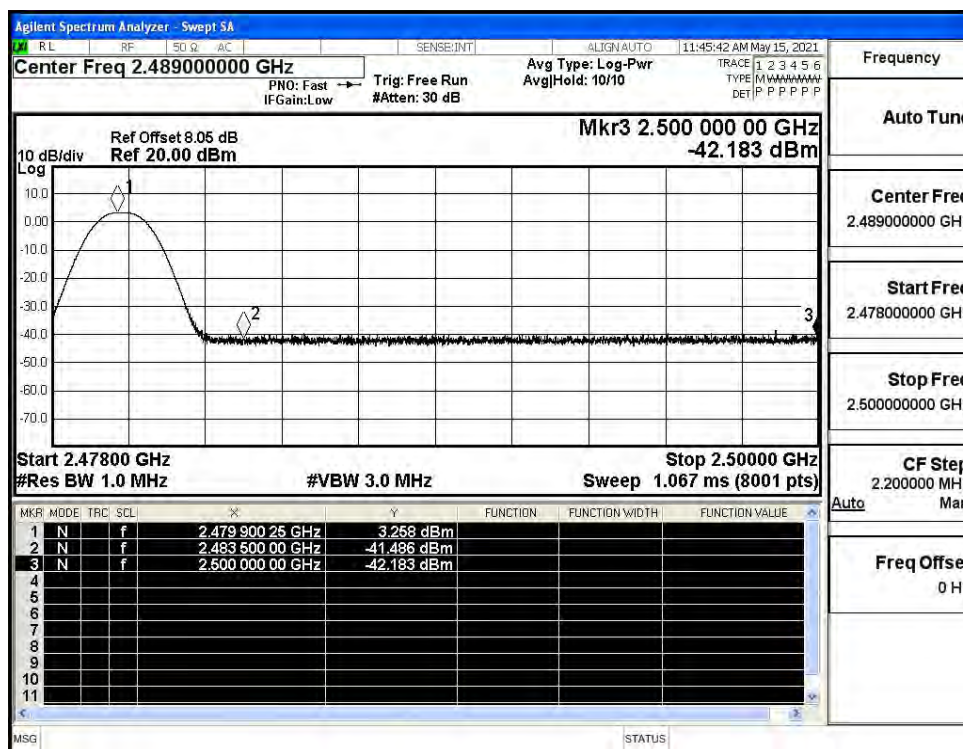
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



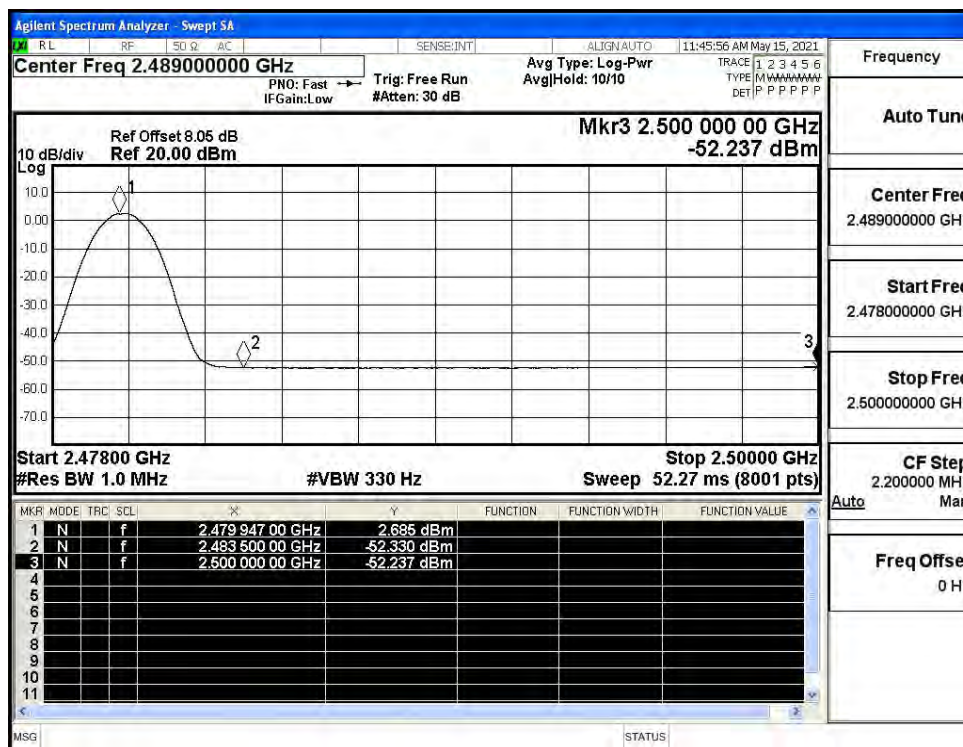
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

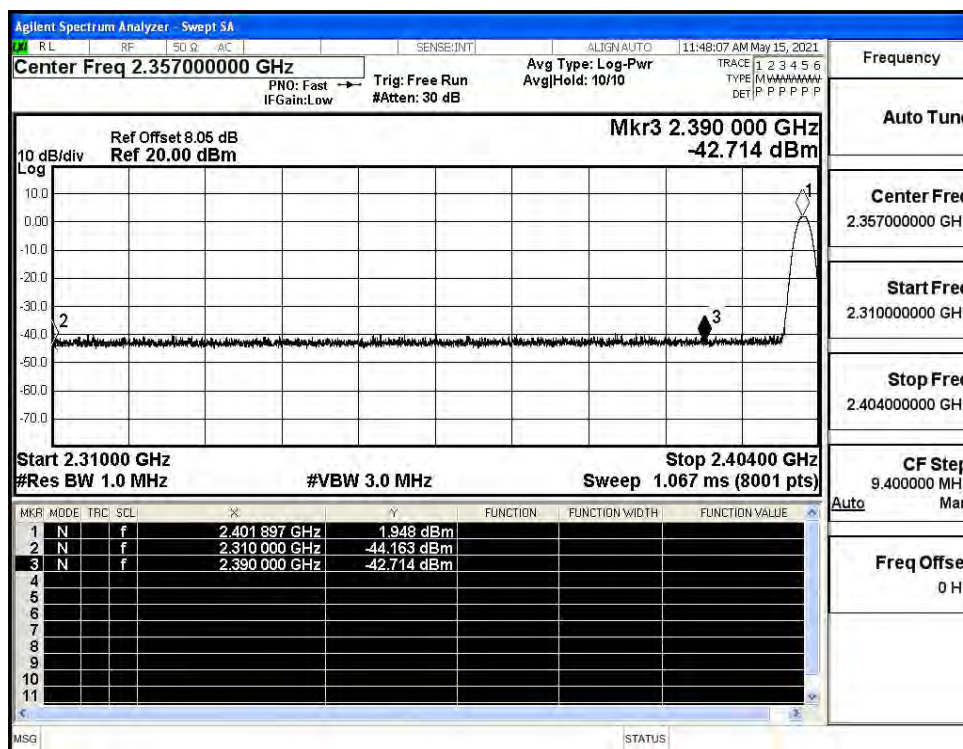
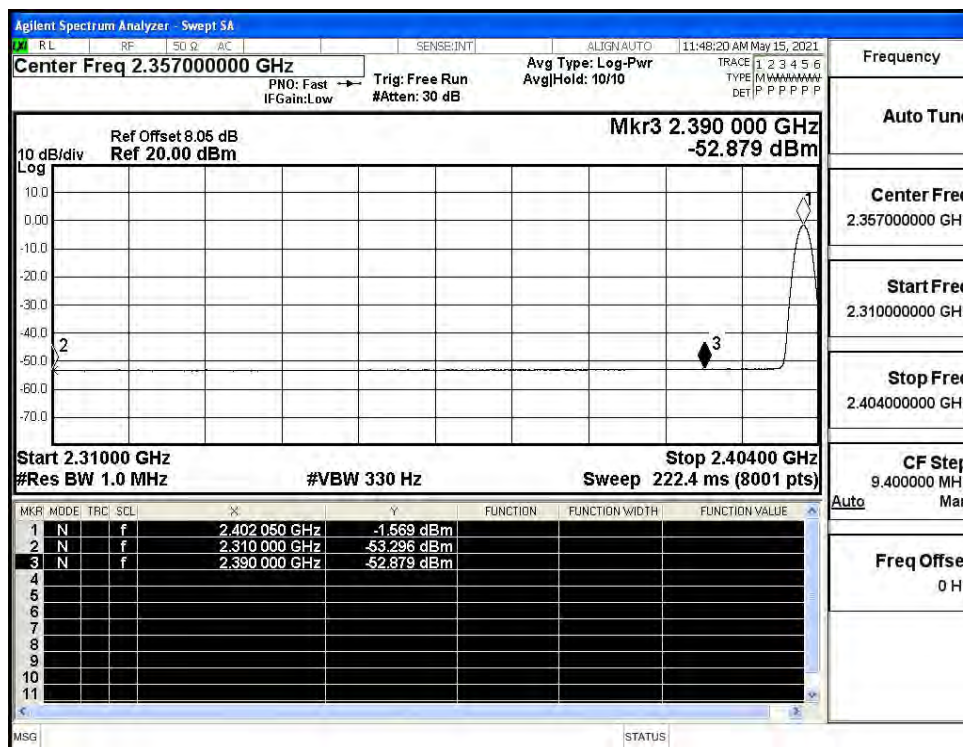


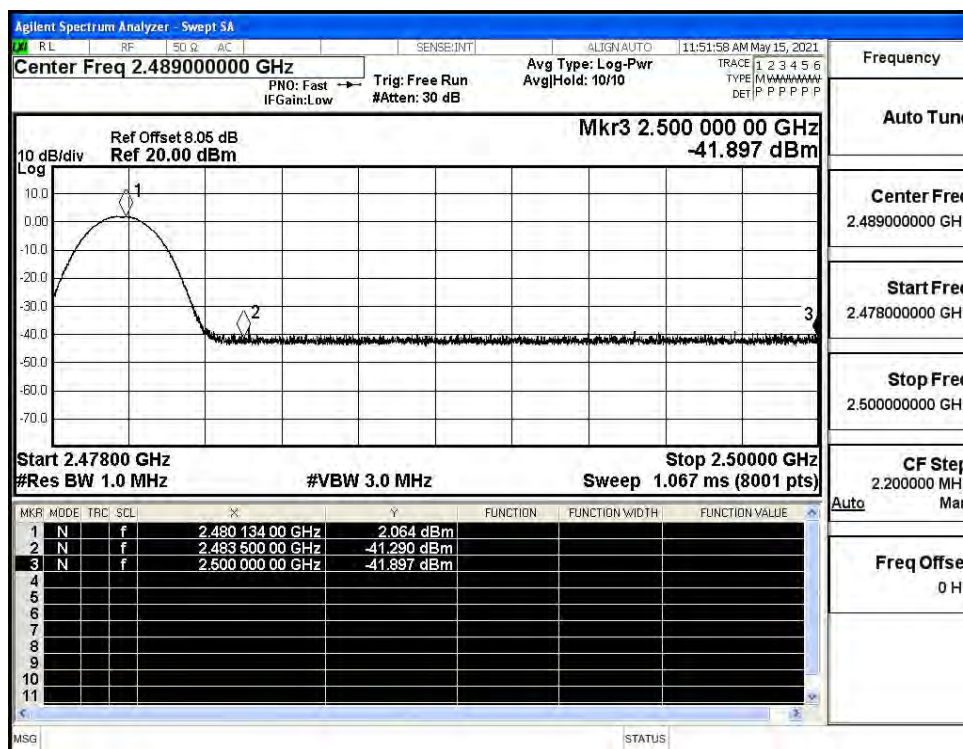
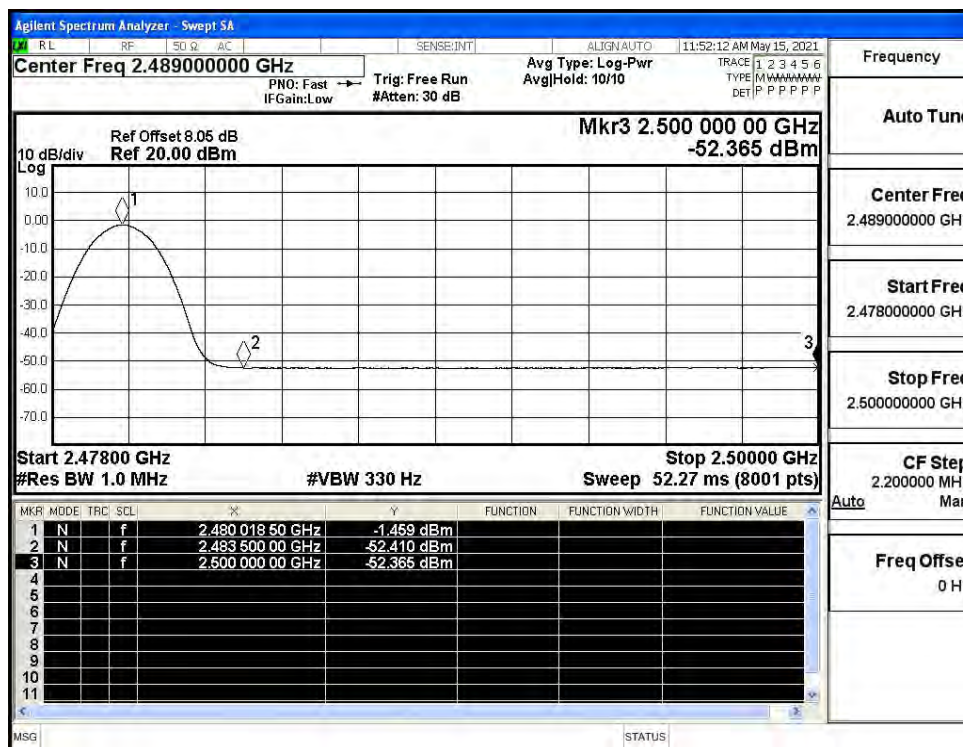
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



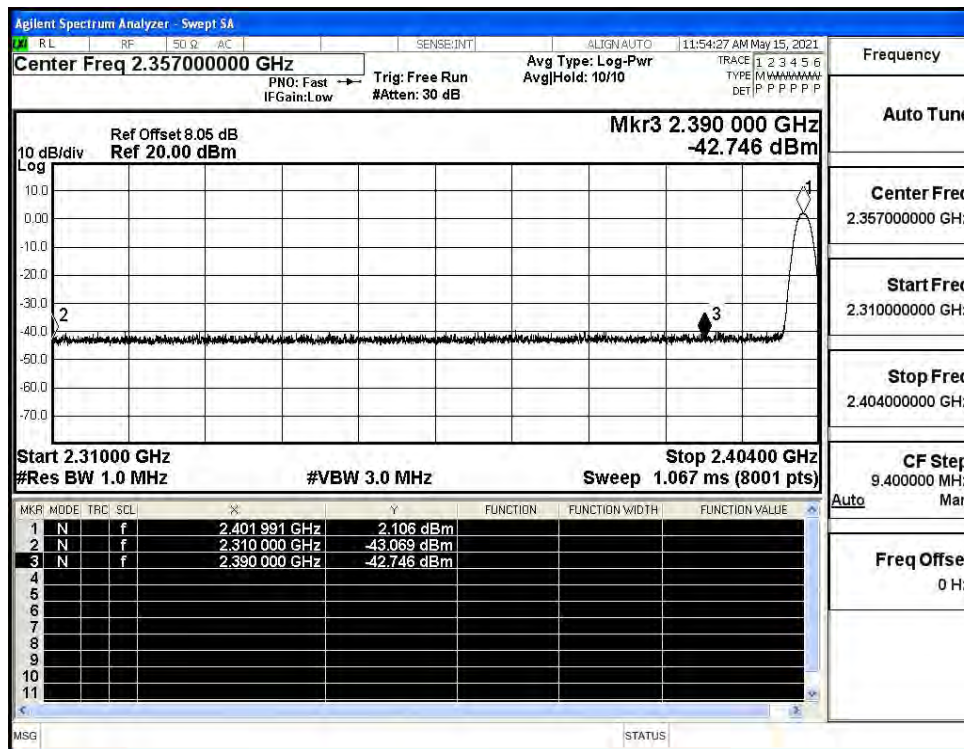
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



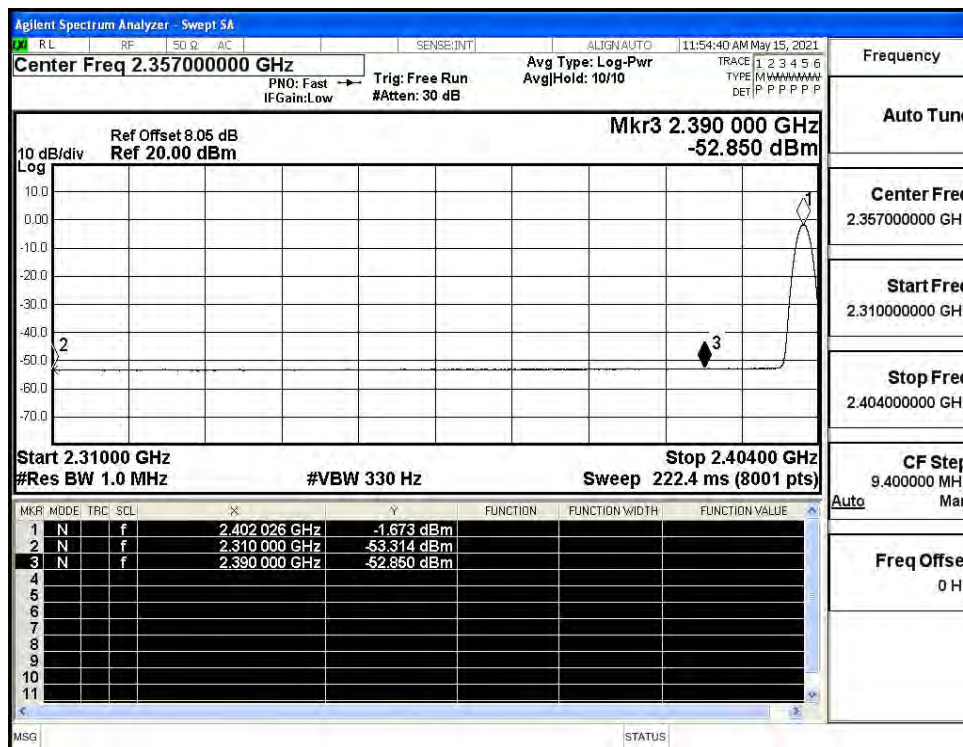
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

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)

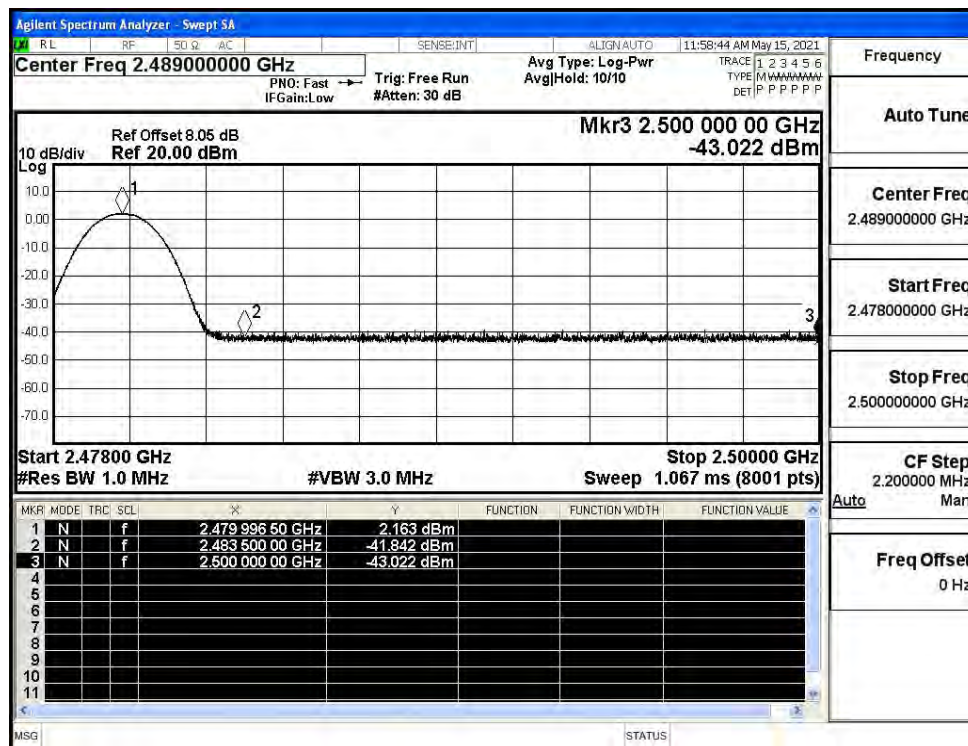
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

