

Appendix A

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

Product Name: Action Camera

Trade Mark: AKASO

Test Model: Brave 8 Lite

Environmental Conditions

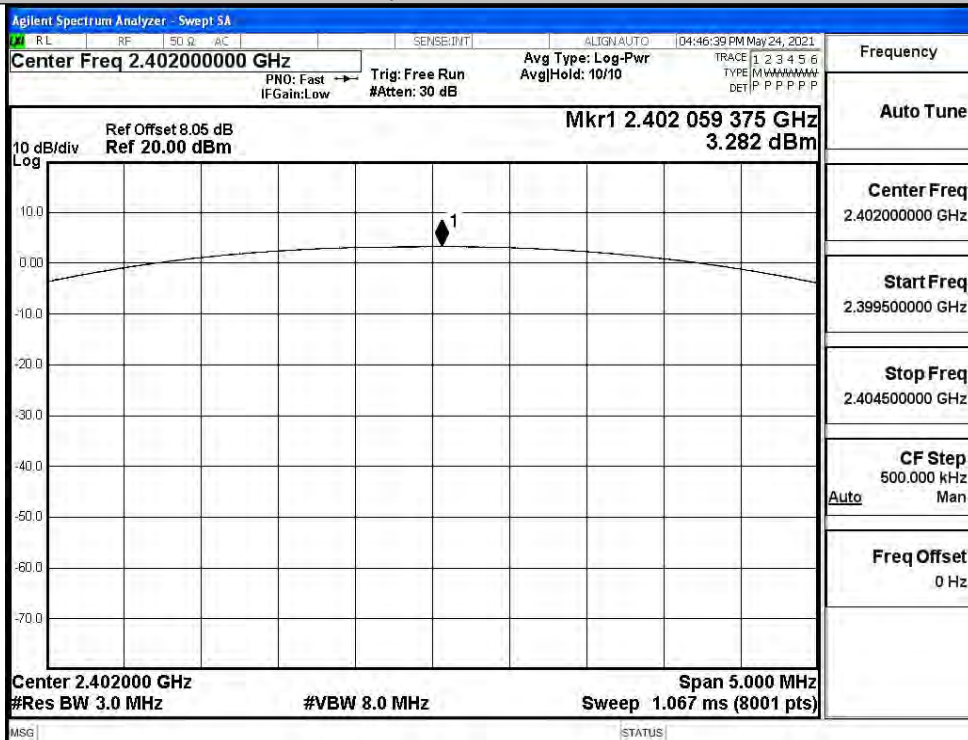
Temperature:	24.6°C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

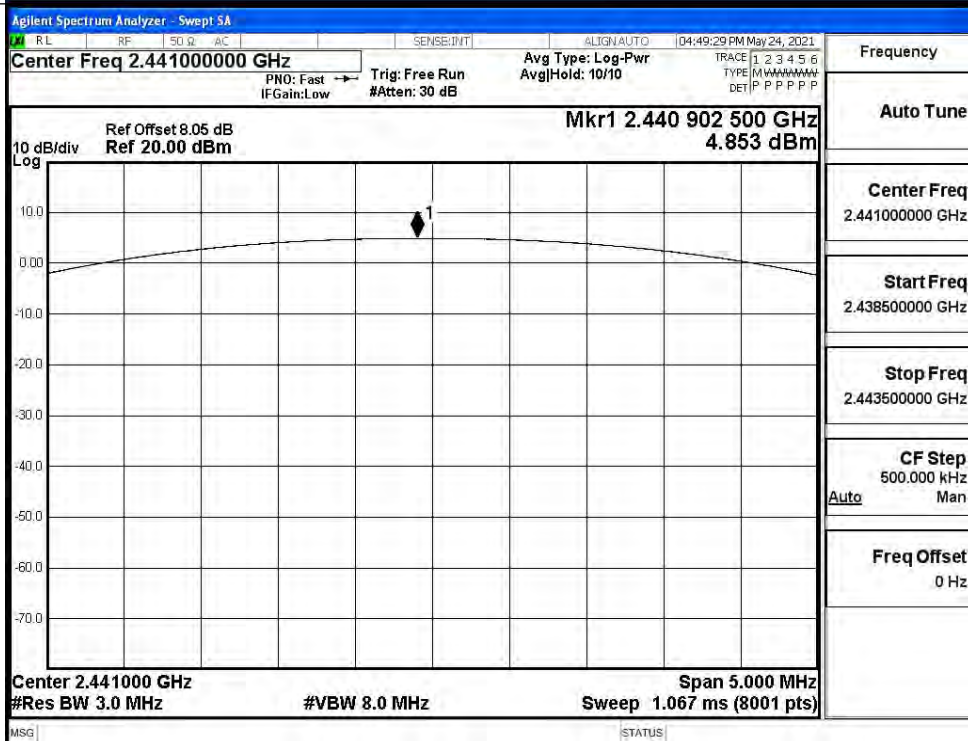
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.282	30	PASS
	MCH	4.853	30	PASS
	HCH	3.315	30	PASS
$\pi/4$ DQPSK	LCH	2.527	21	PASS
	MCH	4.058	21	PASS
	HCH	2.583	21	PASS
8DPSK	LCH	2.648	21	PASS
	MCH	4.203	21	PASS
	HCH	2.734	21	PASS

Test Graphs

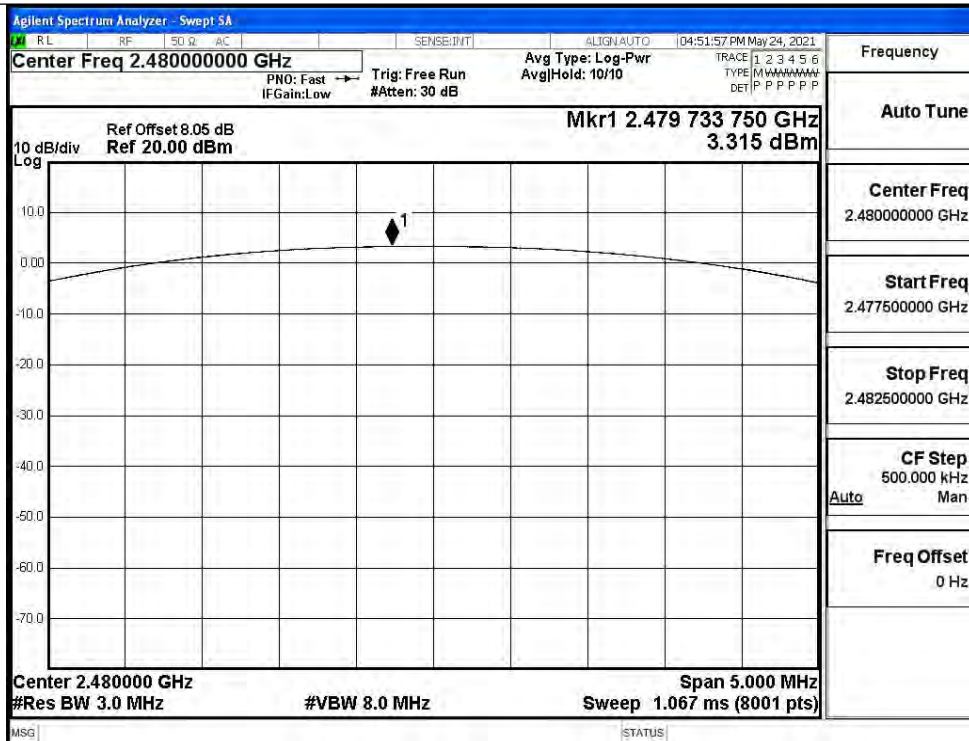
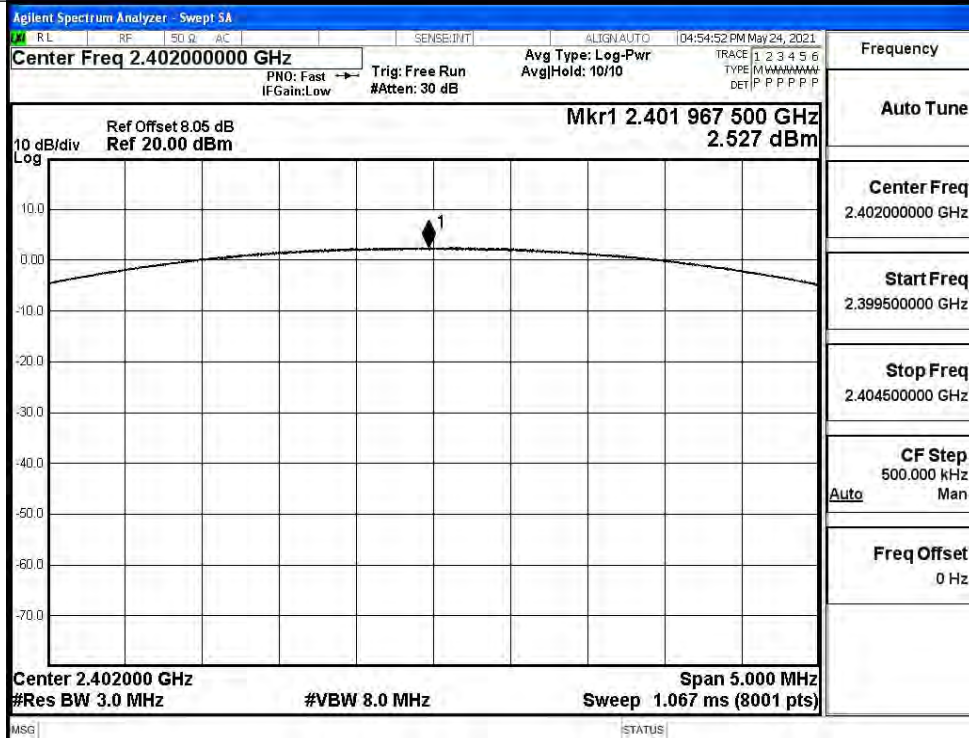
GFSK/LCH

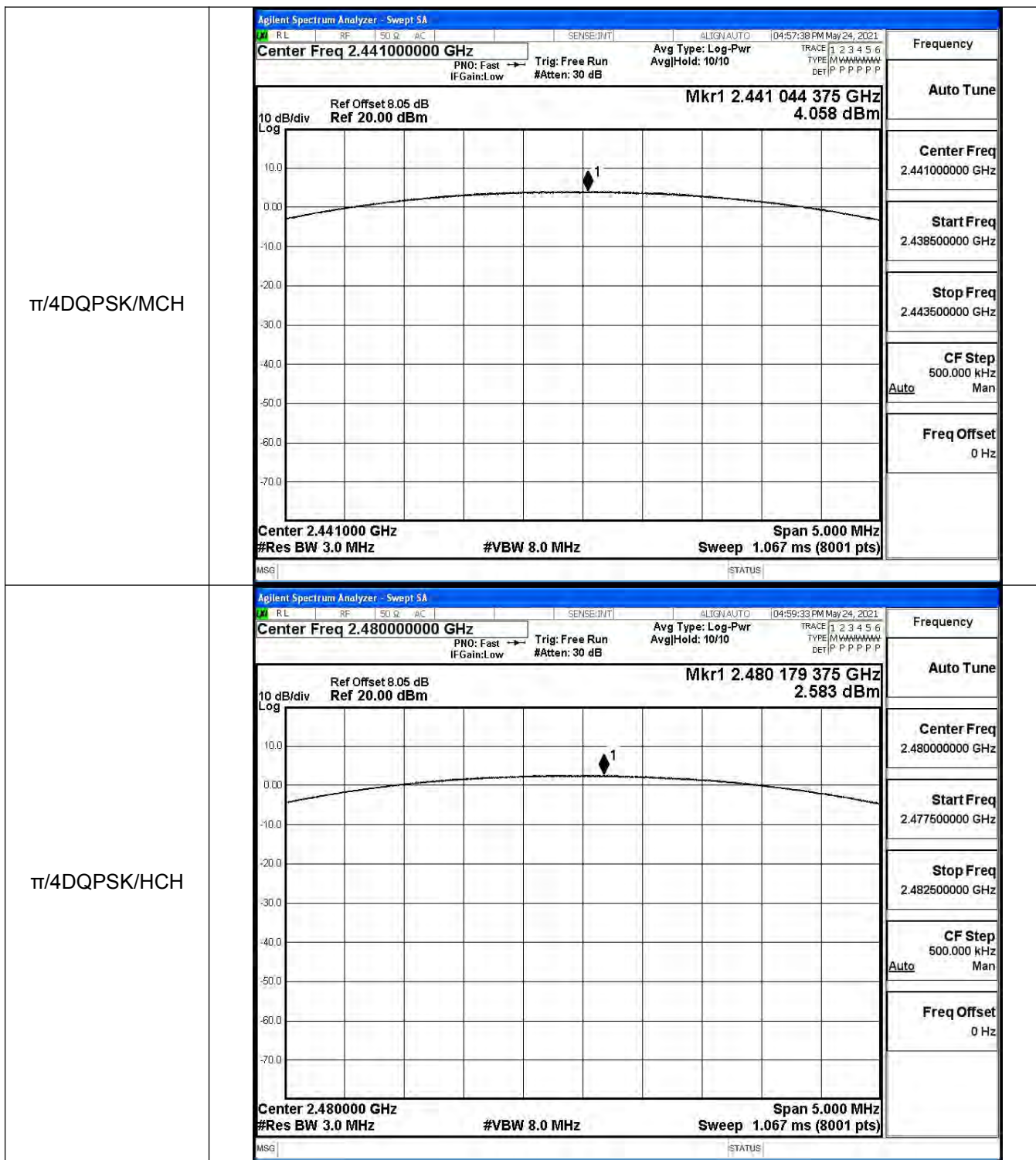


GFSK/MCH

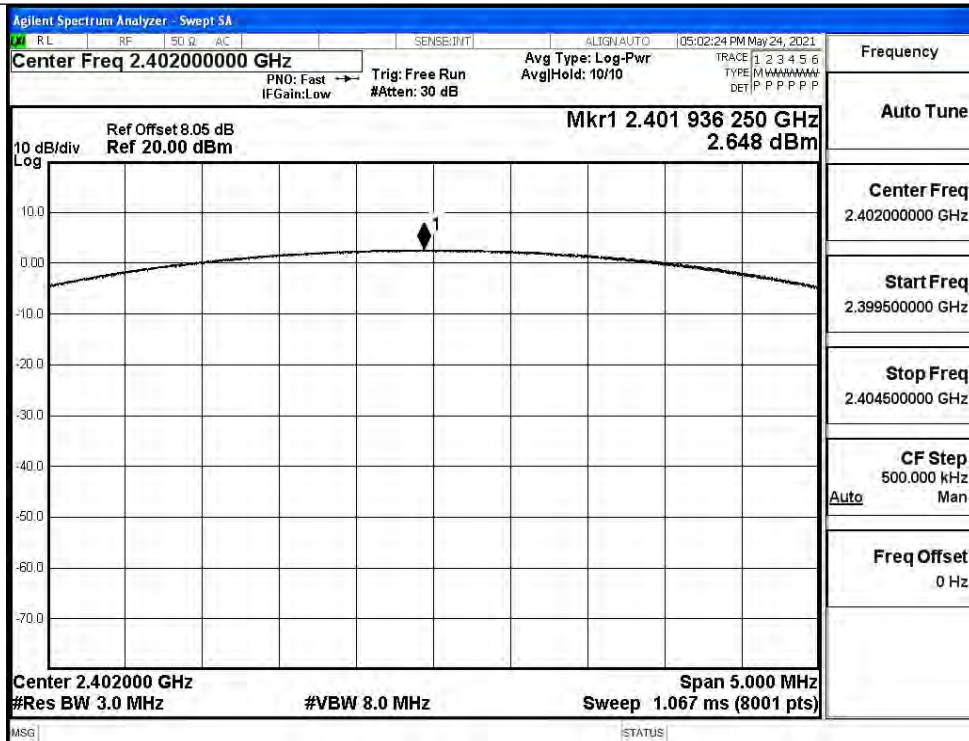


GFSK/HCH

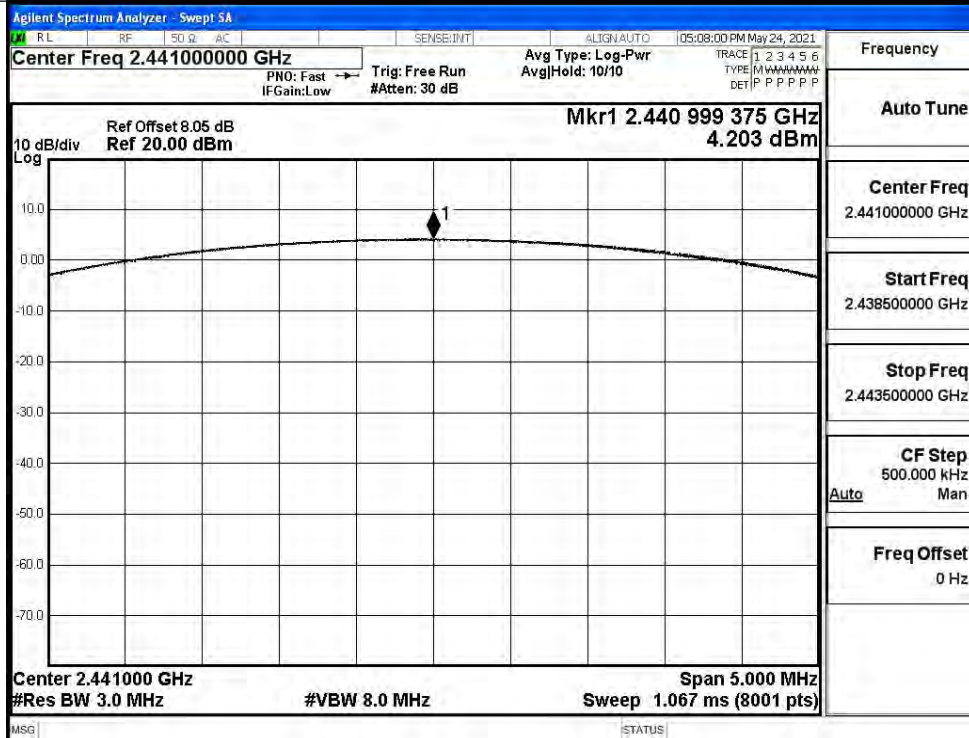
 π /4DQPSK/LCH



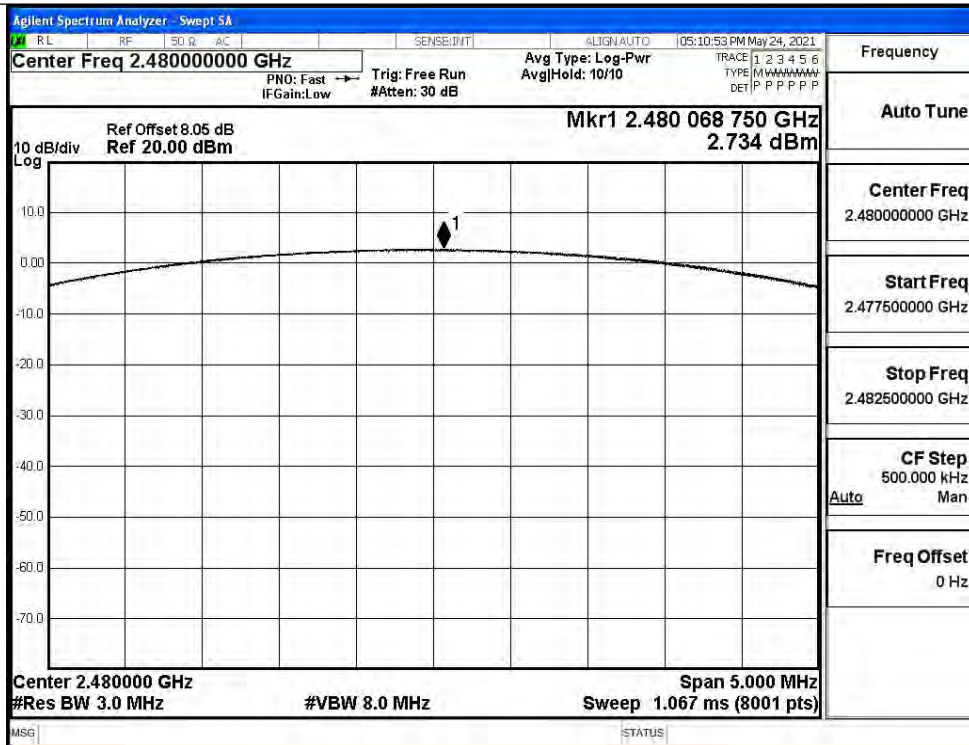
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

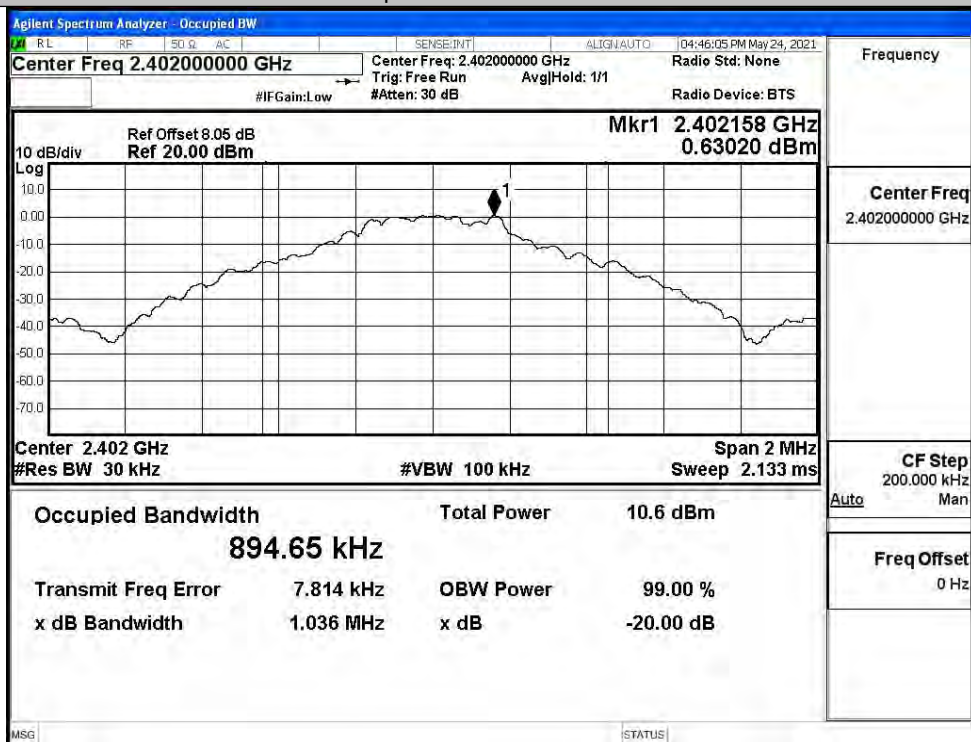


A.2 20dB Bandwidth

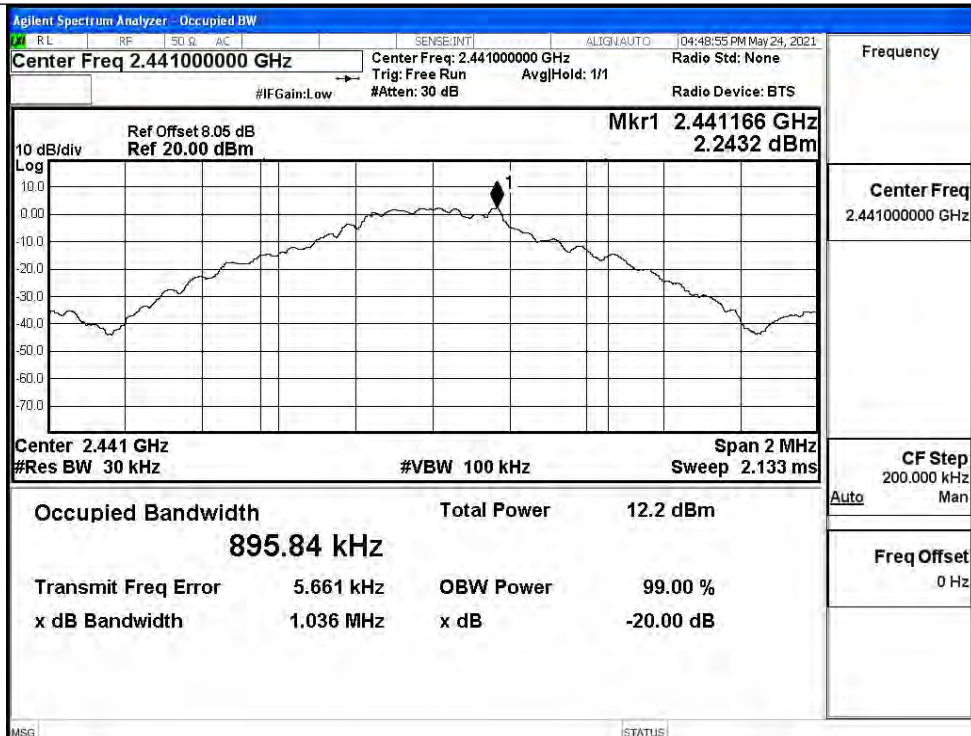
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.036	Not Specified	PASS
	MCH	1.036	Not Specified	PASS
	HCH	1.038	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.287	Not Specified	PASS
	MCH	1.288	Not Specified	PASS
	HCH	1.289	Not Specified	PASS
8DPSK	LCH	1.291	Not Specified	PASS
	MCH	1.290	Not Specified	PASS
	HCH	1.293	Not Specified	PASS

Test Graphs

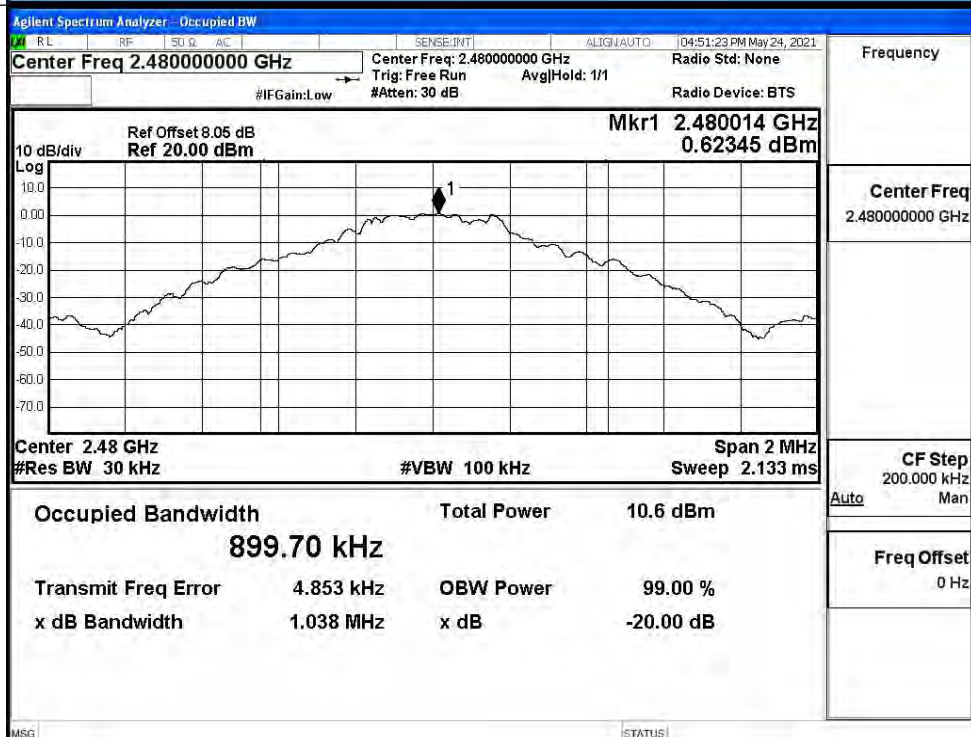
GFSK/LCH

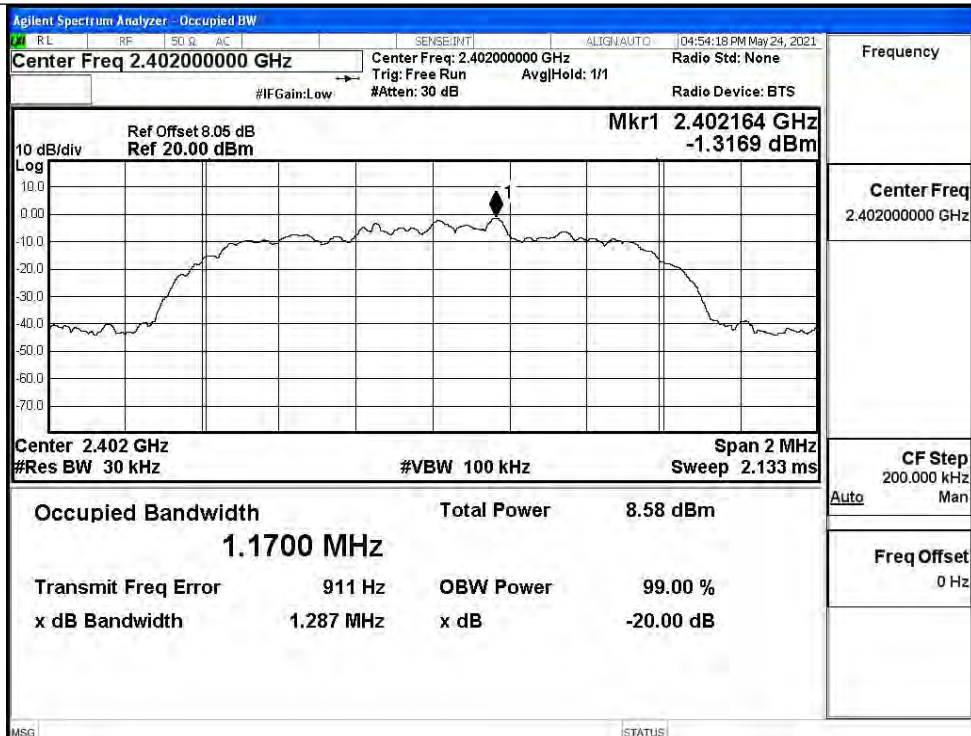
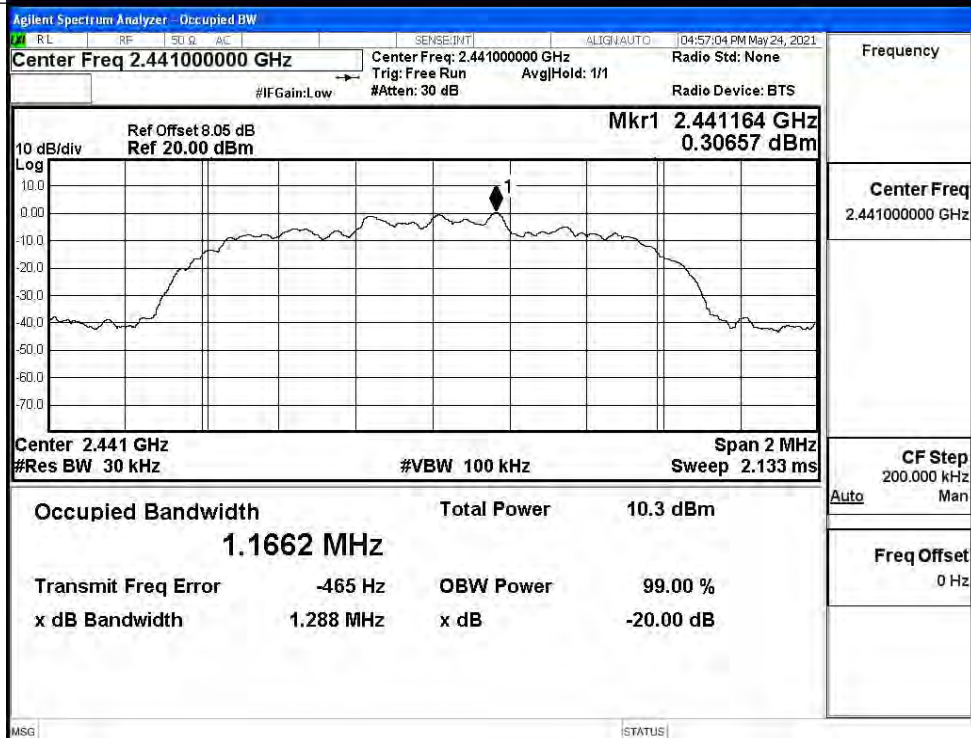


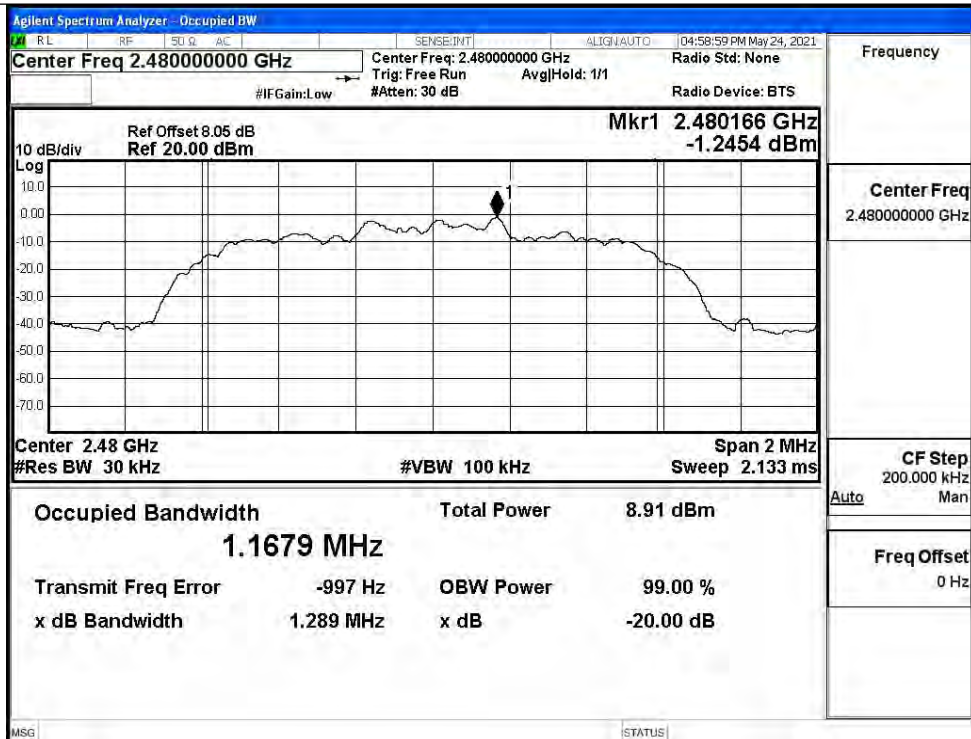
GFSK/MCH



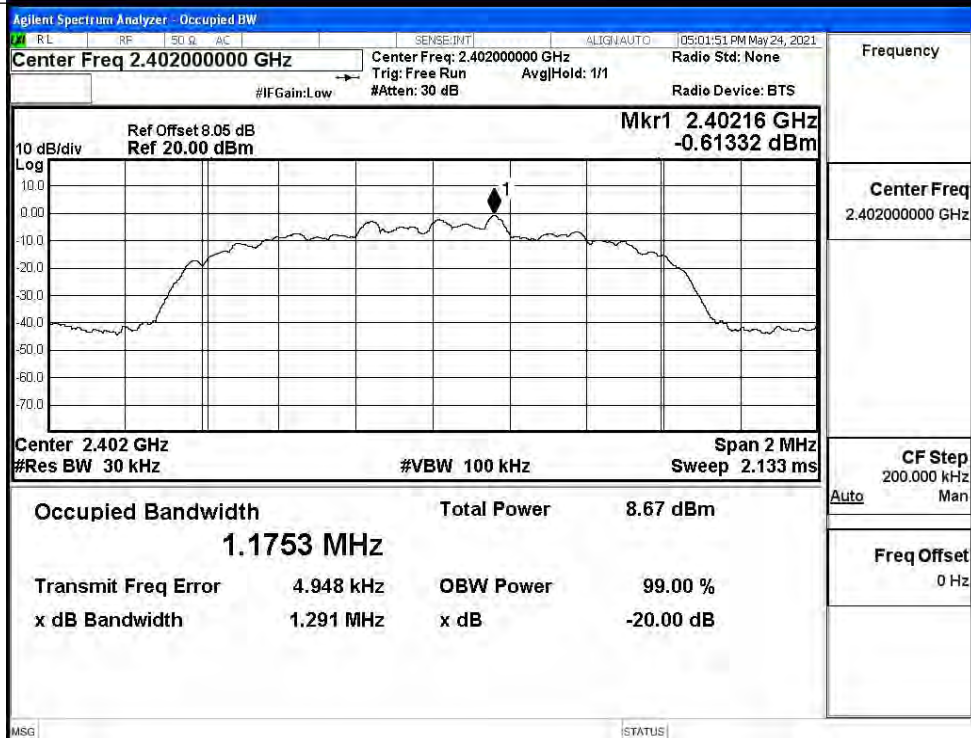
GFSK/HCH



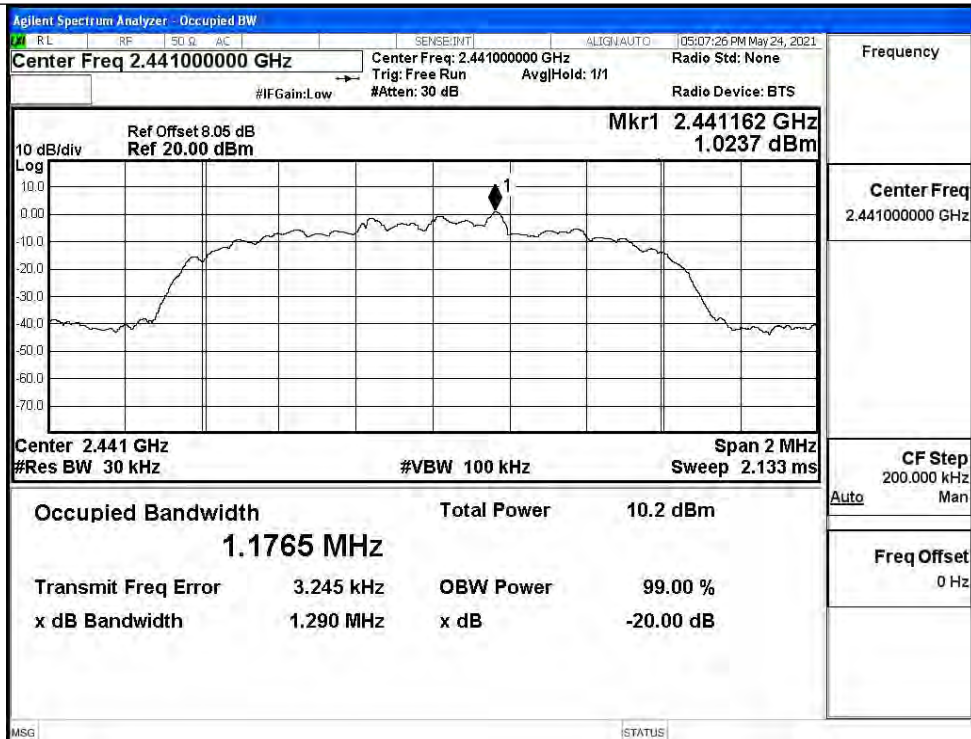
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

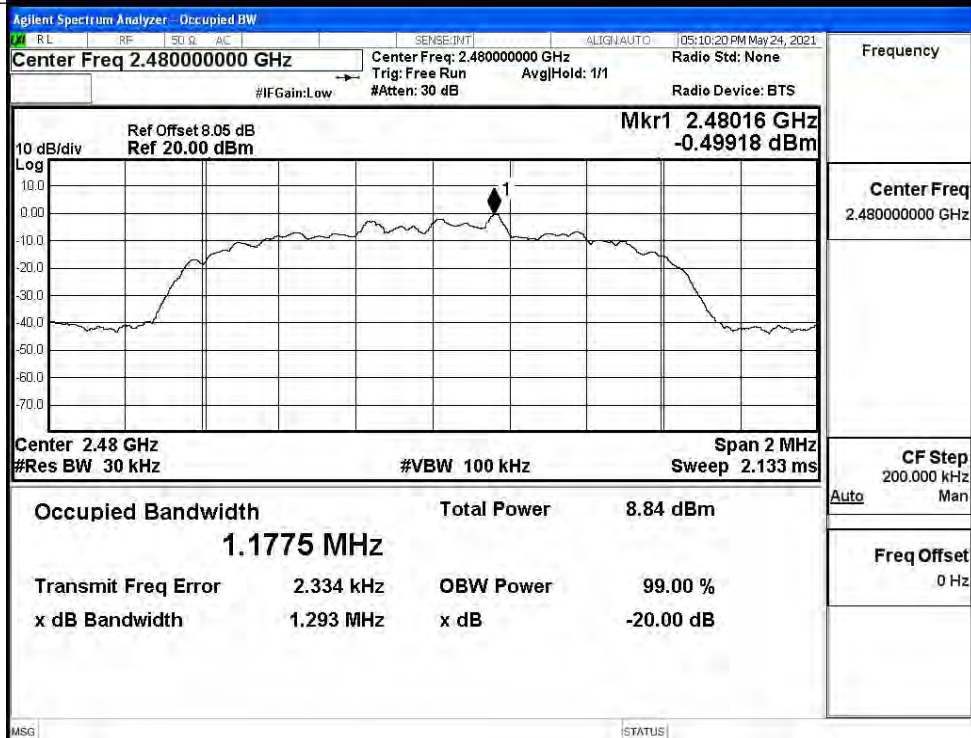
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

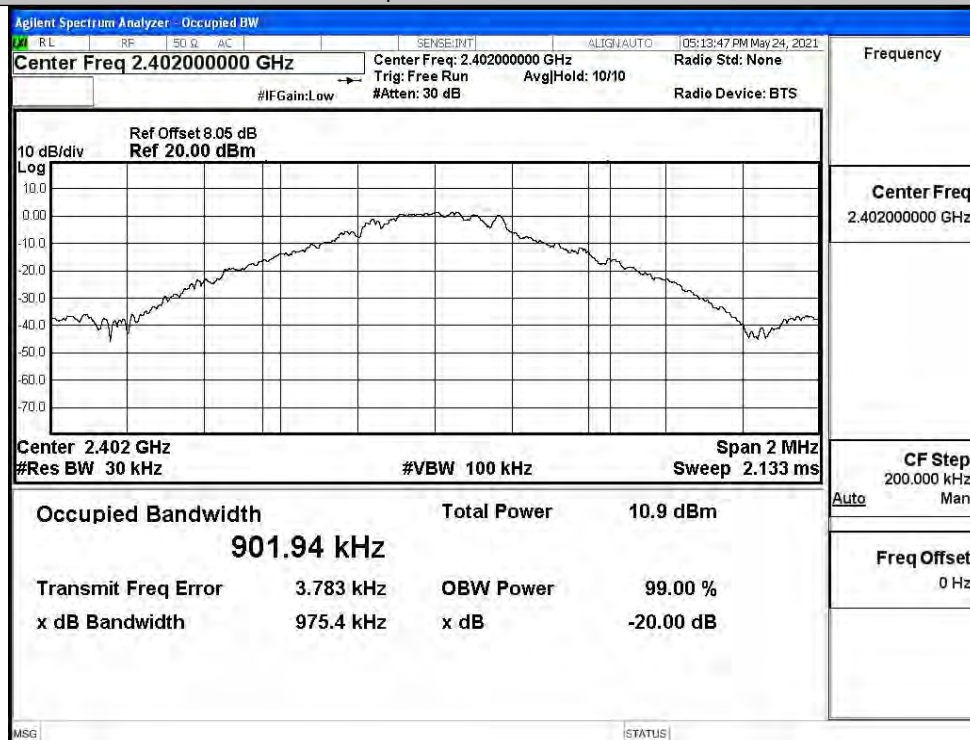


A.3 Occupied Bandwidth

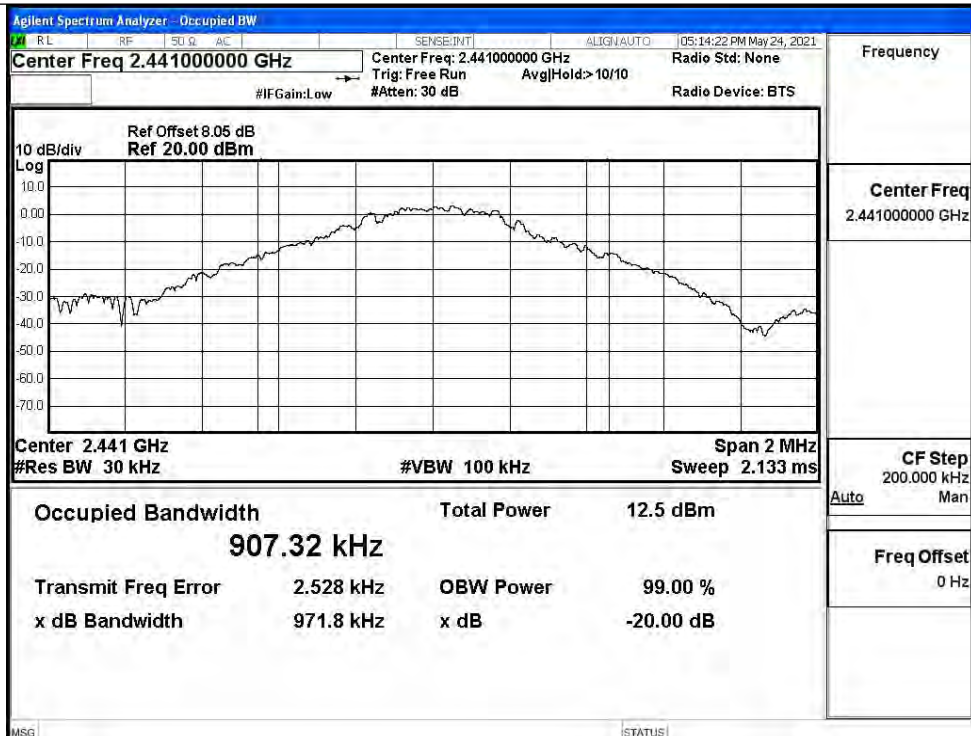
Mode	Channel.	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.90194	Not Specified	PASS
	MCH	0.90732	Not Specified	PASS
	HCH	0.91195	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.1675	Not Specified	PASS
	MCH	1.1707	Not Specified	PASS
	HCH	1.1711	Not Specified	PASS
8DPSK	LCH	1.1786	Not Specified	PASS
	MCH	1.1782	Not Specified	PASS
	HCH	1.1804	Not Specified	PASS

Test Graphs

GFSK/LCH



GFSK/MCH



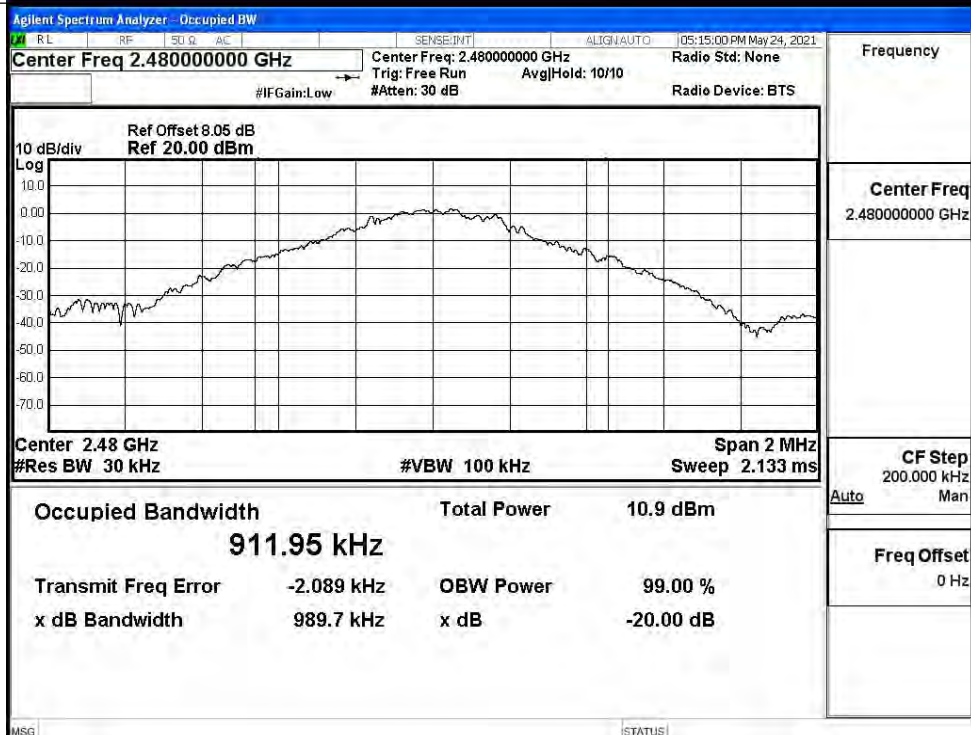
Frequency

Center Freq
2.441000000 GHzCF Step
200.000 kHz
Man

Auto

Freq Offset
0 Hz

GFSK/HCH

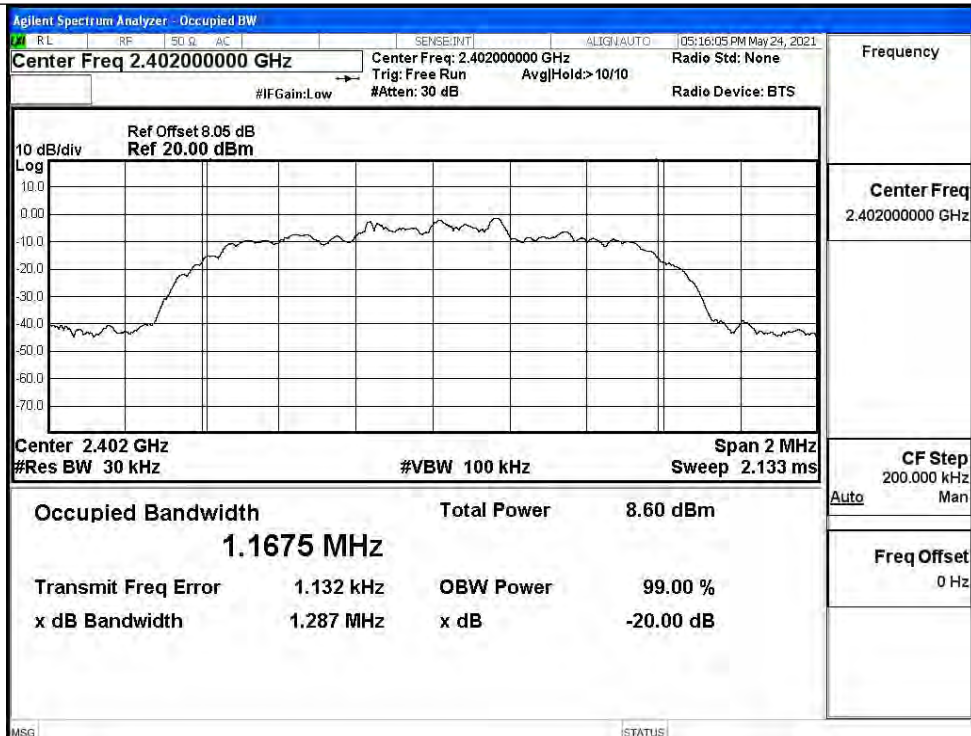
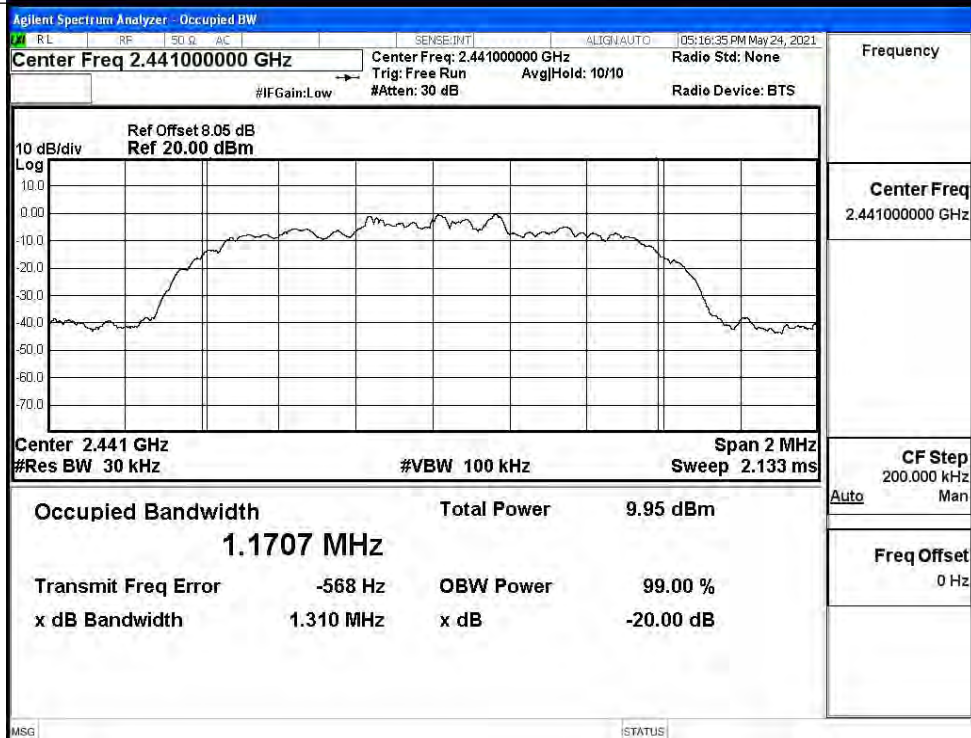


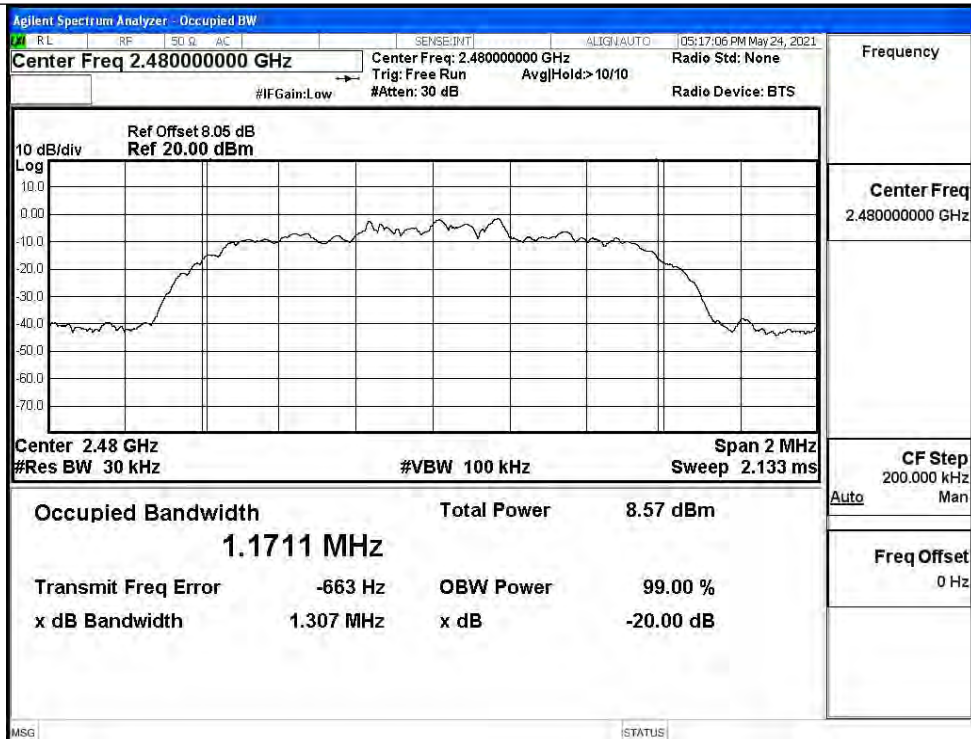
Frequency

Center Freq
2.480000000 GHzCF Step
200.000 kHz
Man

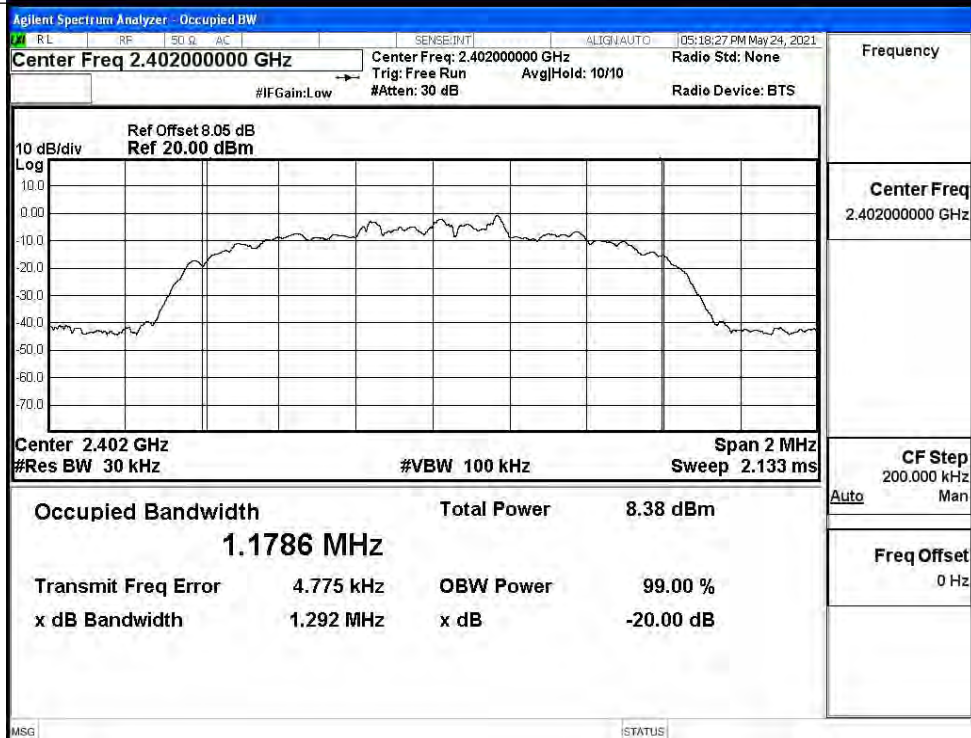
Auto

Freq Offset
0 Hz

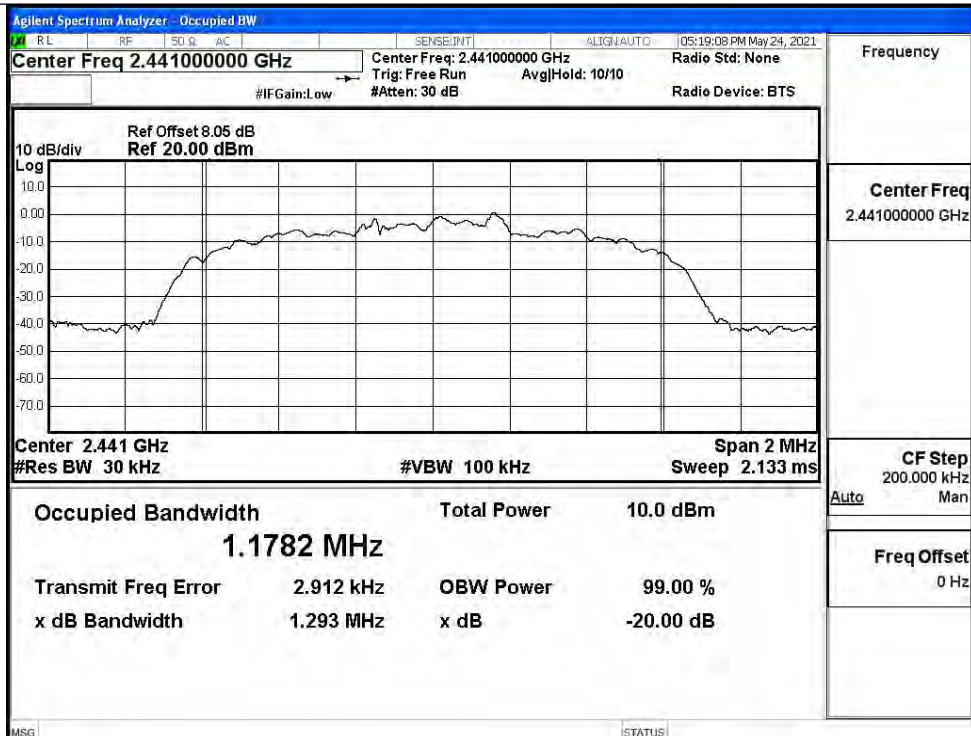
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

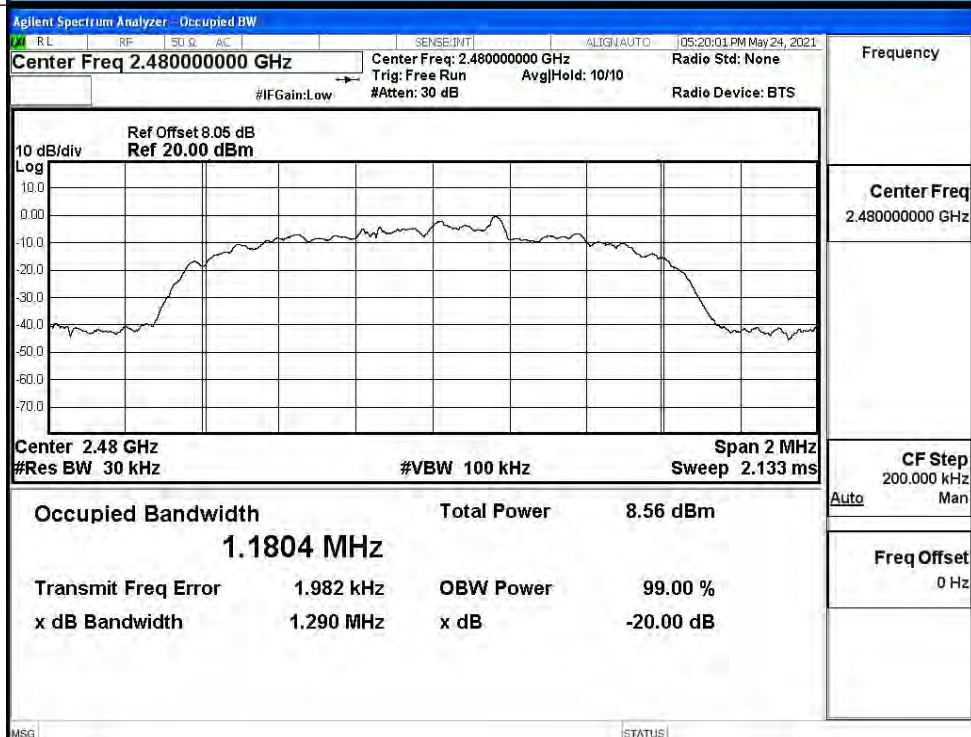
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

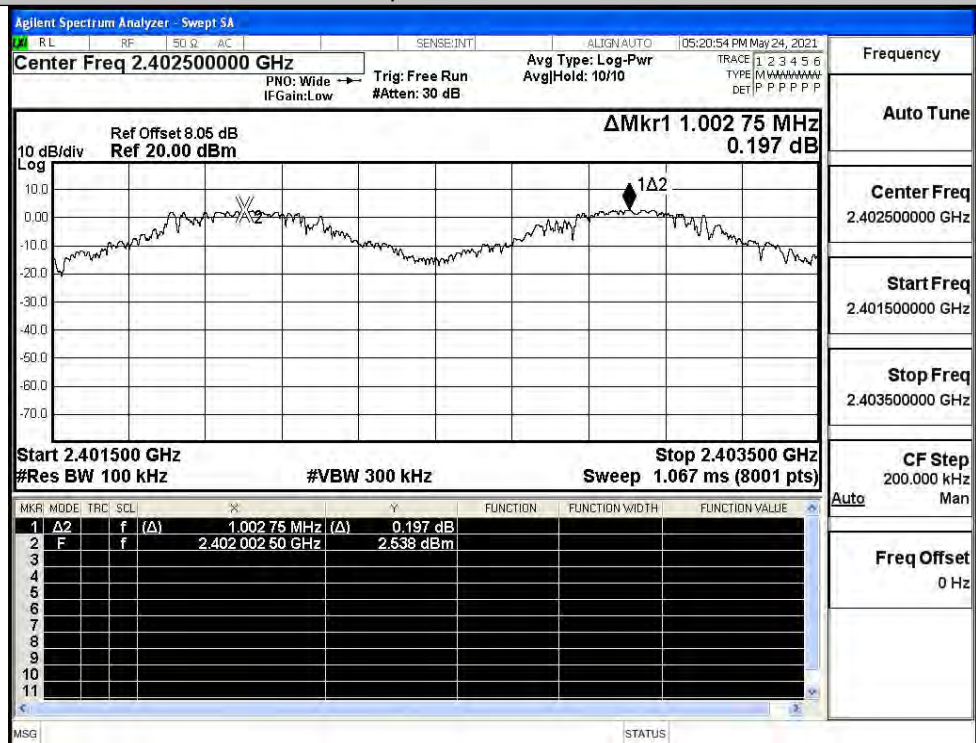


A.4 Carrier Frequency Separation

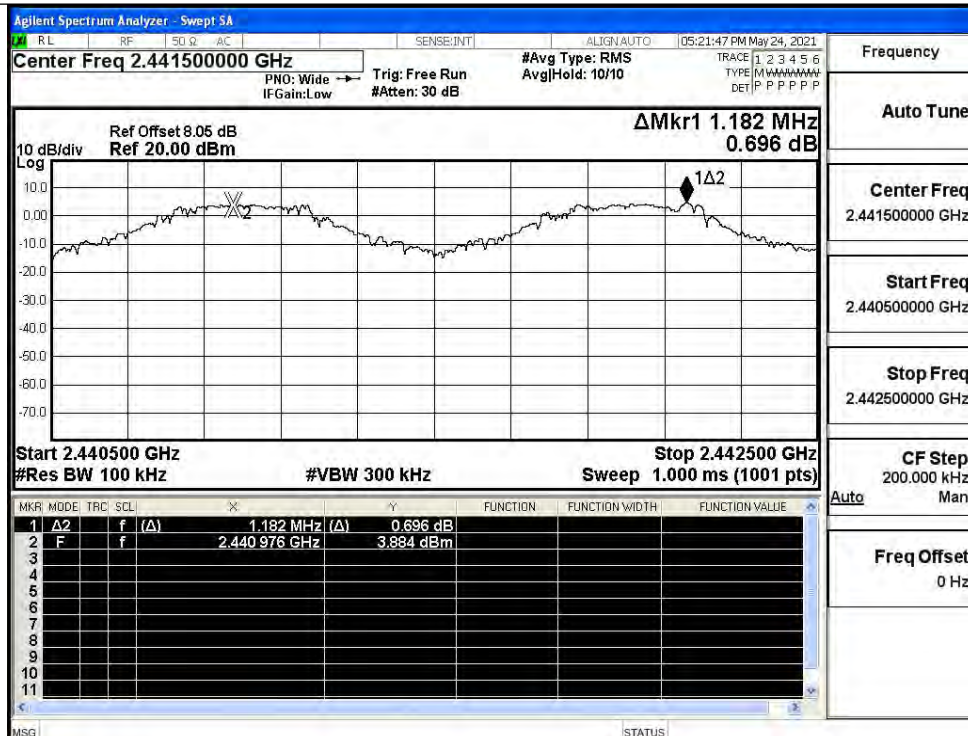
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.003	0.692	PASS
	MCH	1.182	0.692	PASS
	HCH	1.094	0.692	PASS
$\pi/4$ DQPSK	LCH	1.138	0.859	PASS
	MCH	1.340	0.859	PASS
	HCH	1.010	0.859	PASS
8DPSK	LCH	1.198	0.862	PASS
	MCH	1.010	0.862	PASS
	HCH	1.052	0.862	PASS

Test Graphs

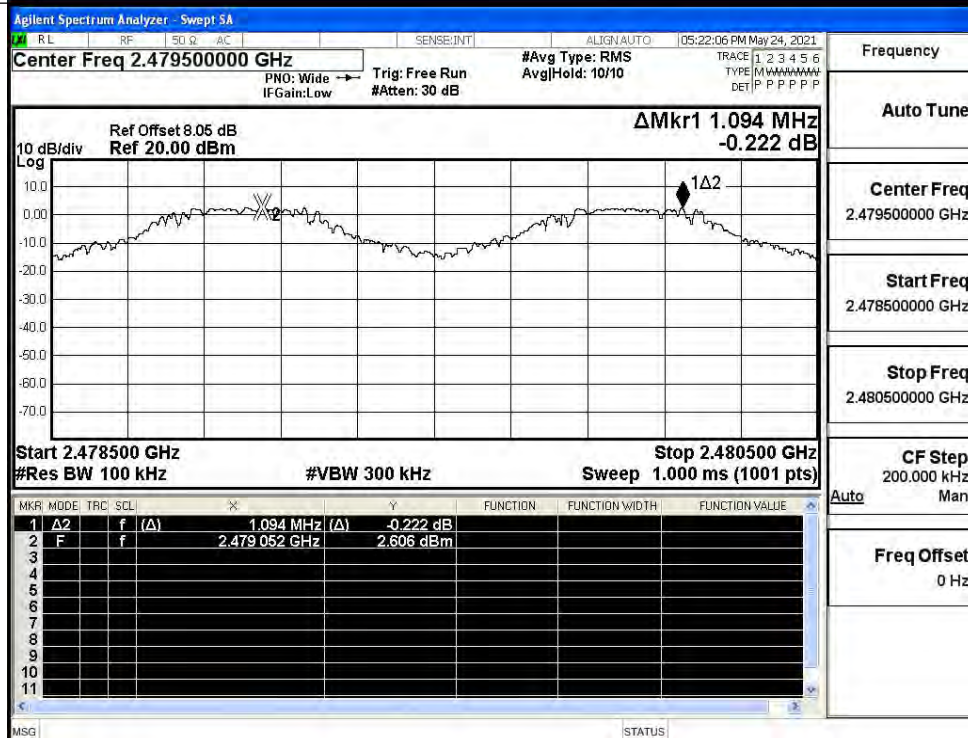
GFSK/LCH

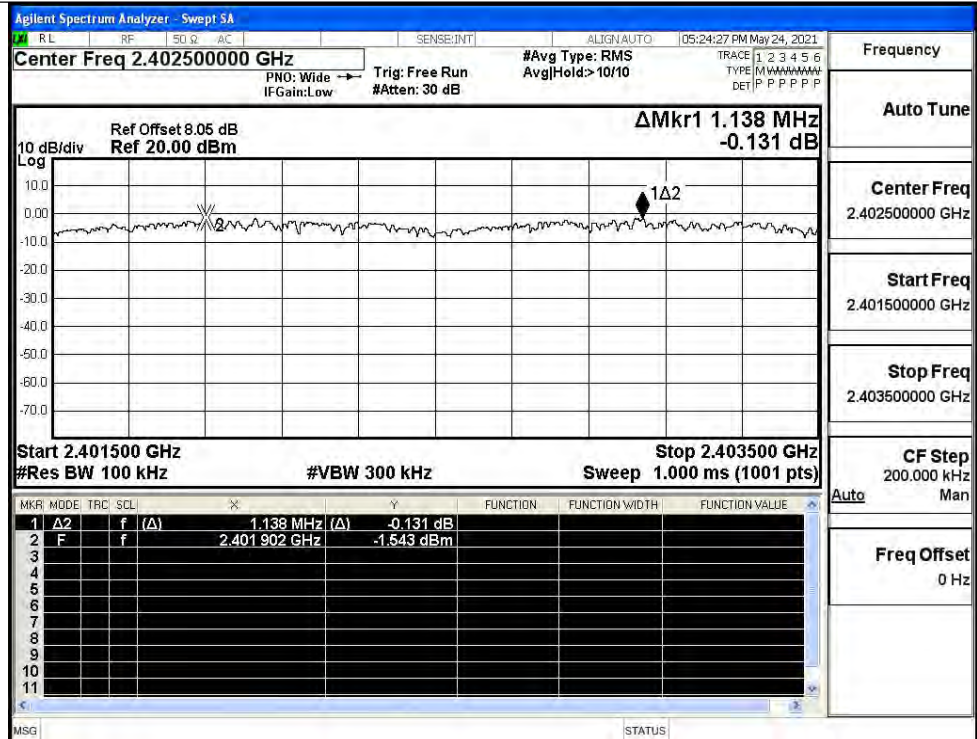
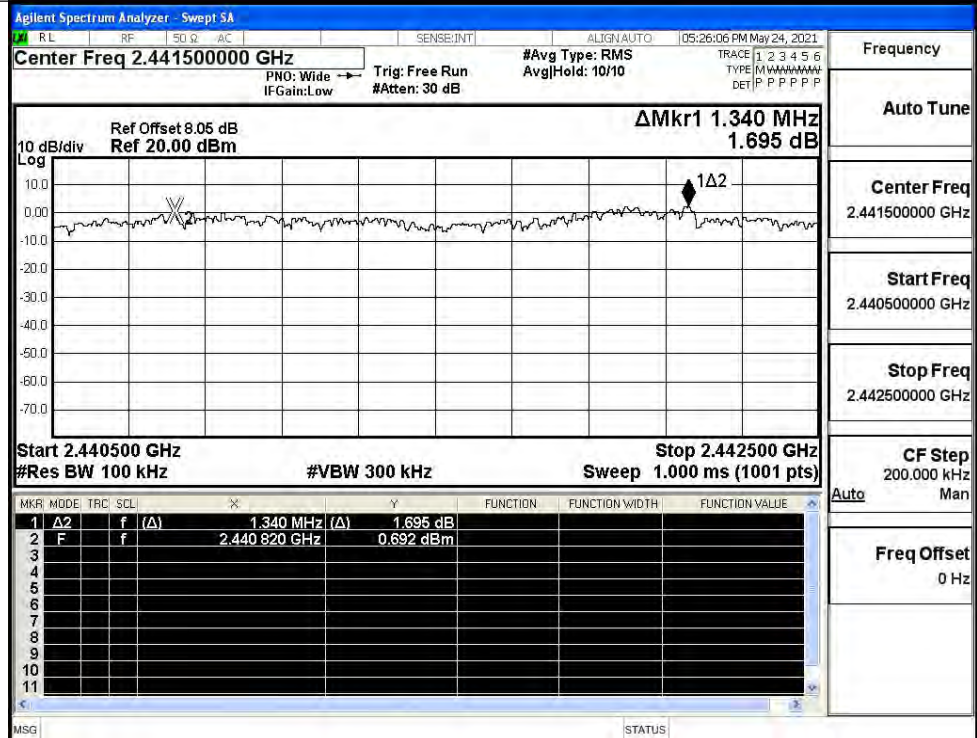


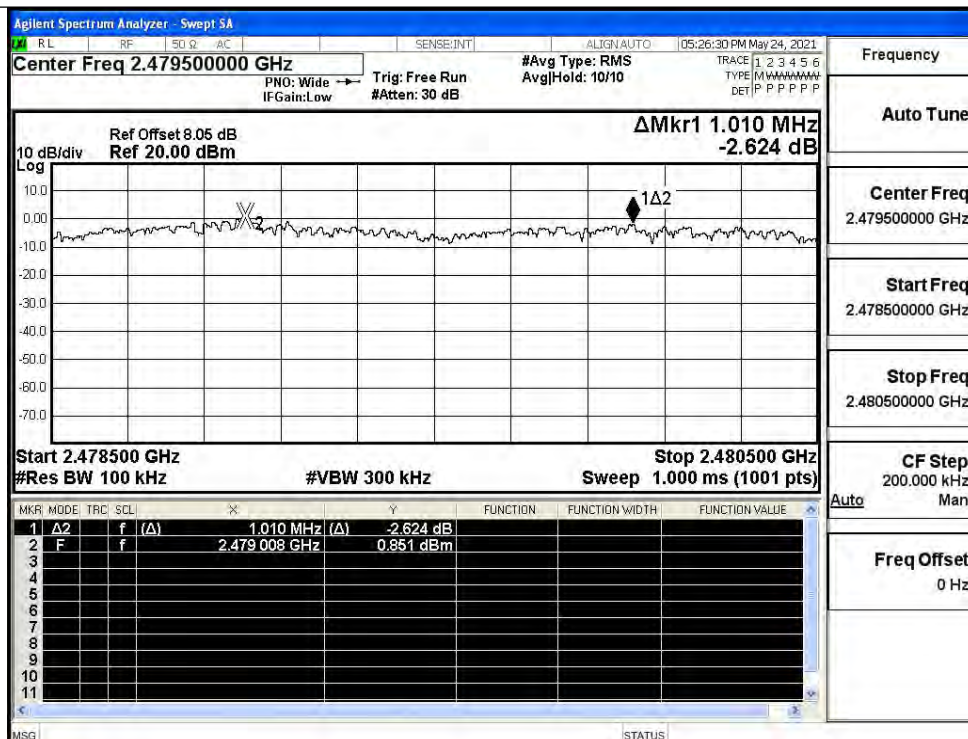
GFSK/MCH



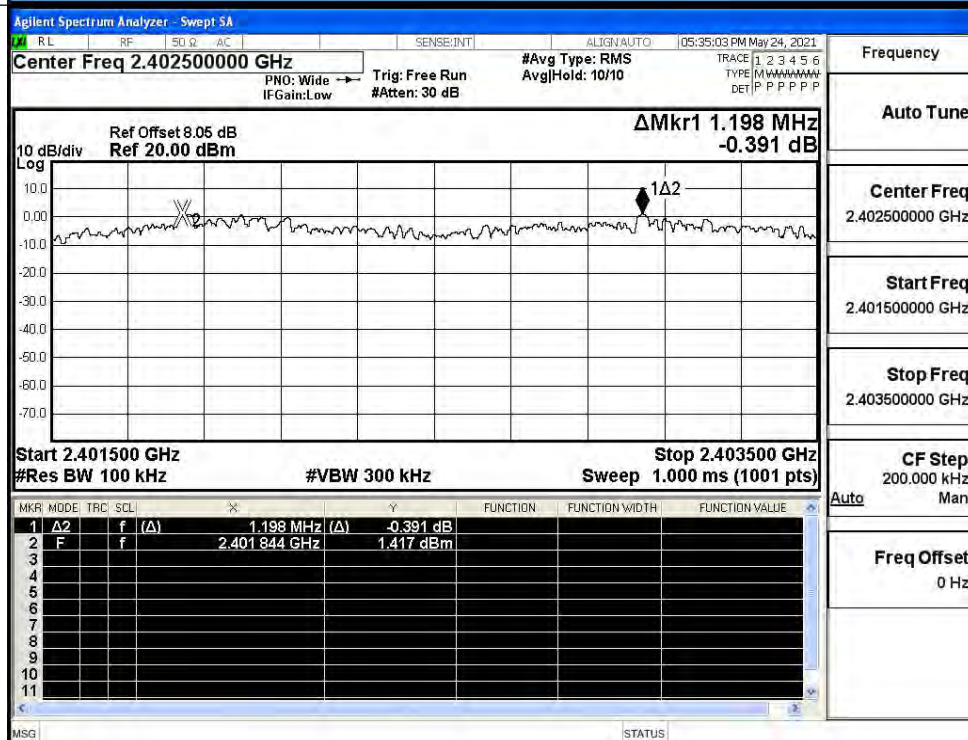
GFSK/HCH



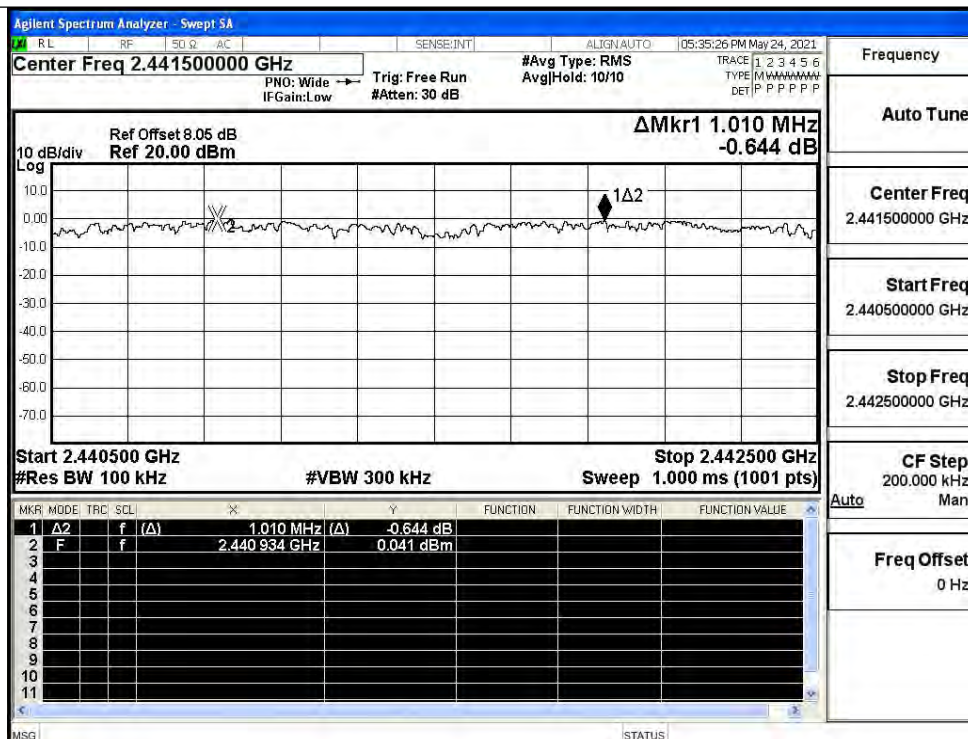
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

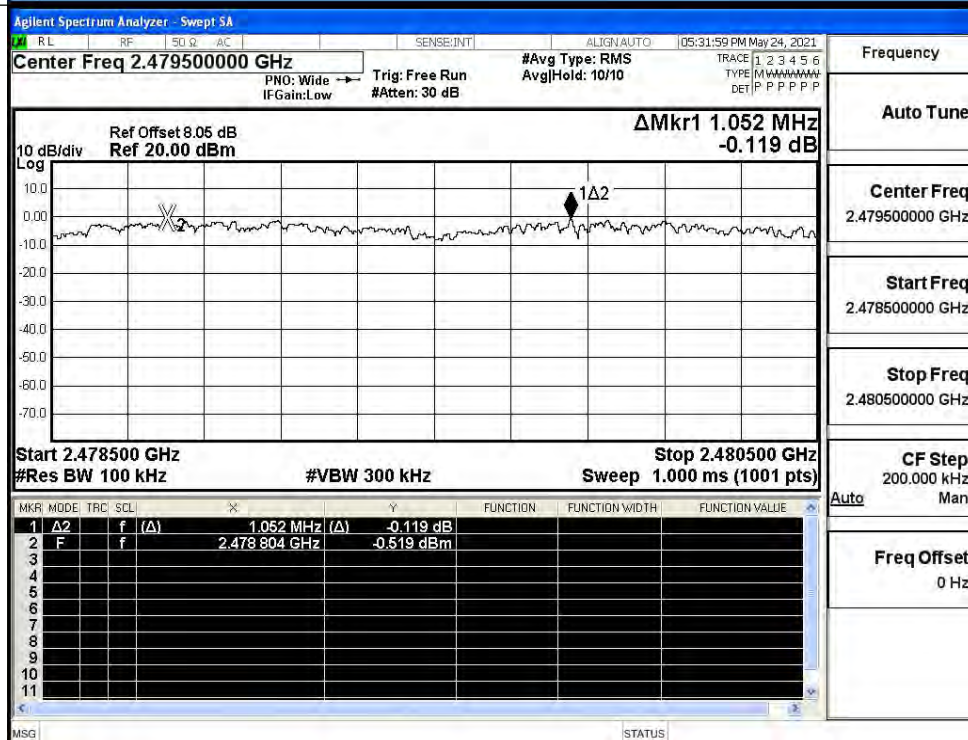
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

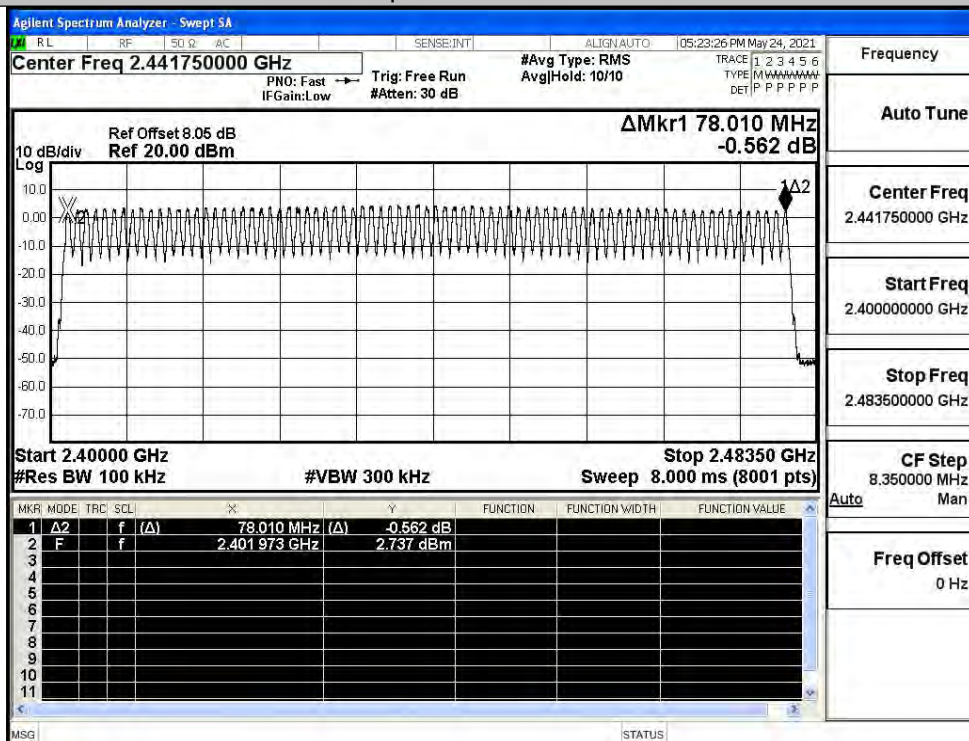


A.5 Hopping Channel Number

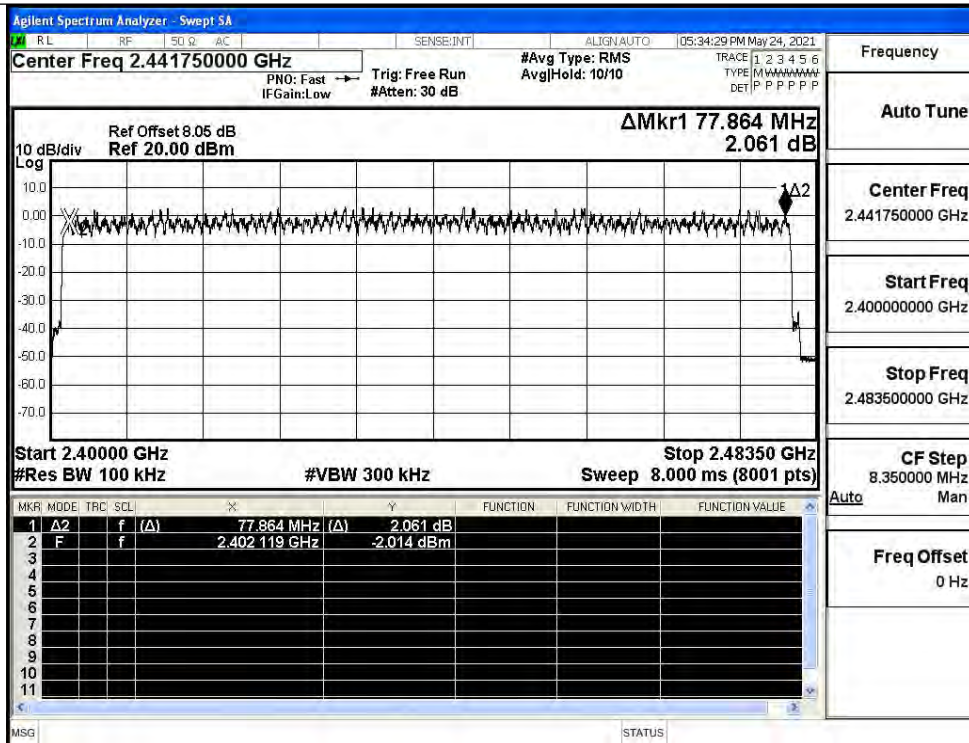
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

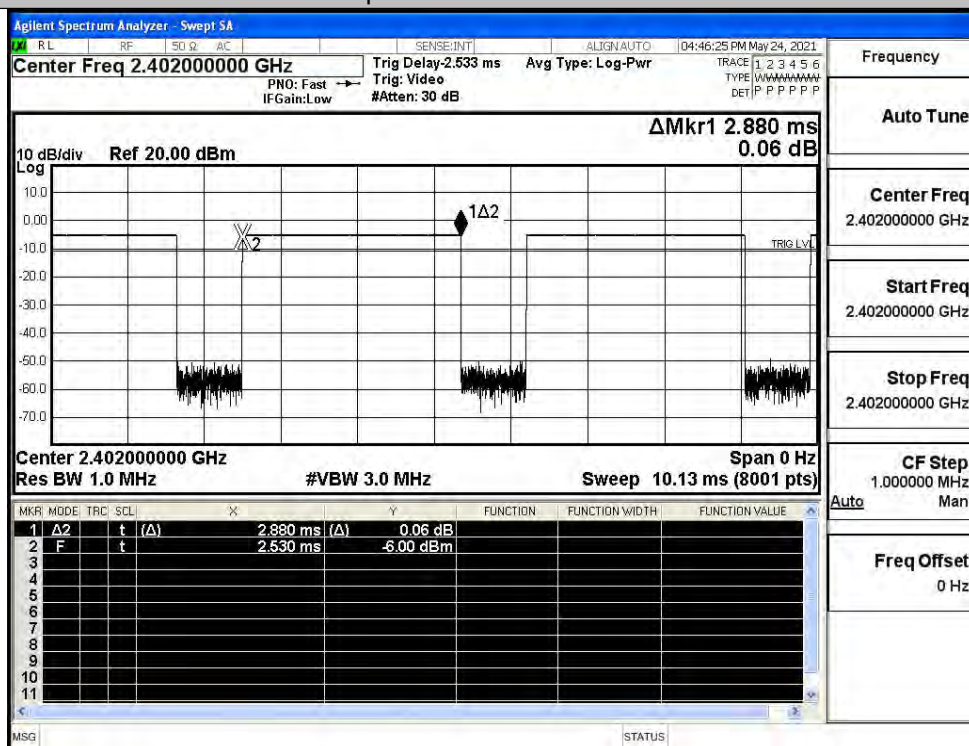


A.6 Dwell Time

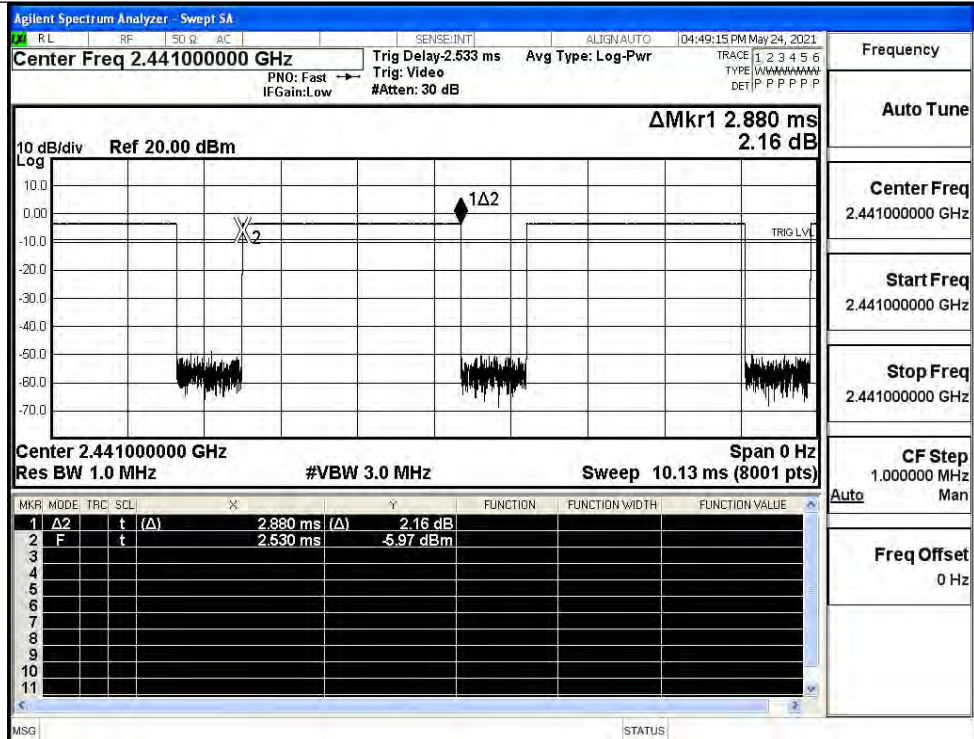
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.88	106.7	0.308	0.4	PASS
	3DH5	MCH	2.88	106.7	0.308	0.4	PASS
	3DH5	HCH	2.88	106.7	0.308	0.4	PASS

Test Graphs

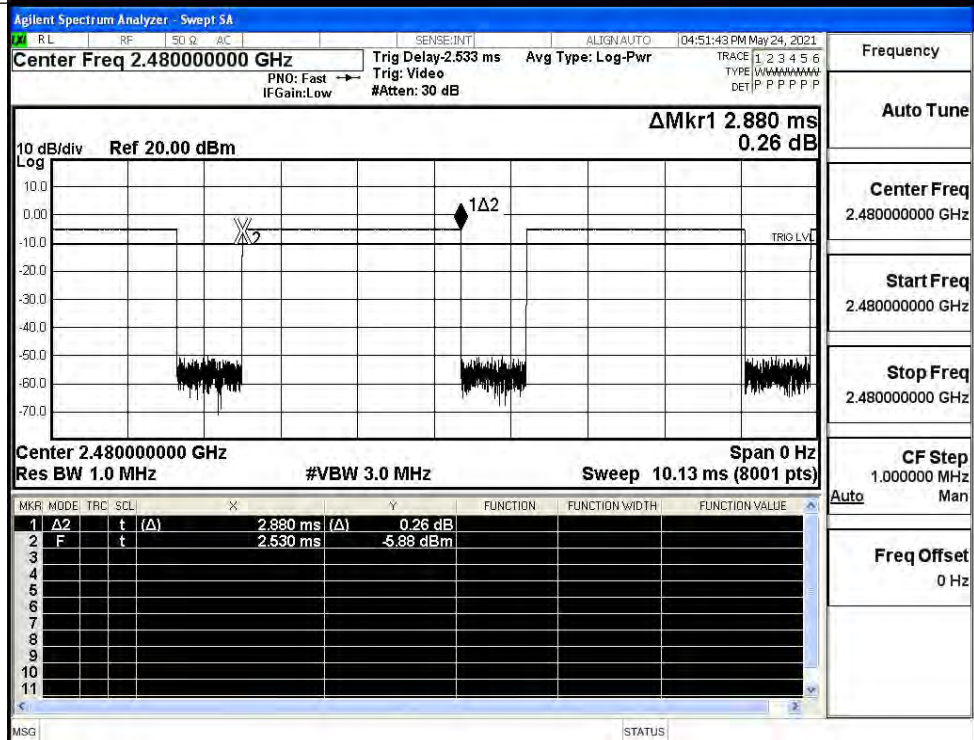
GFSK_DH5/LCH



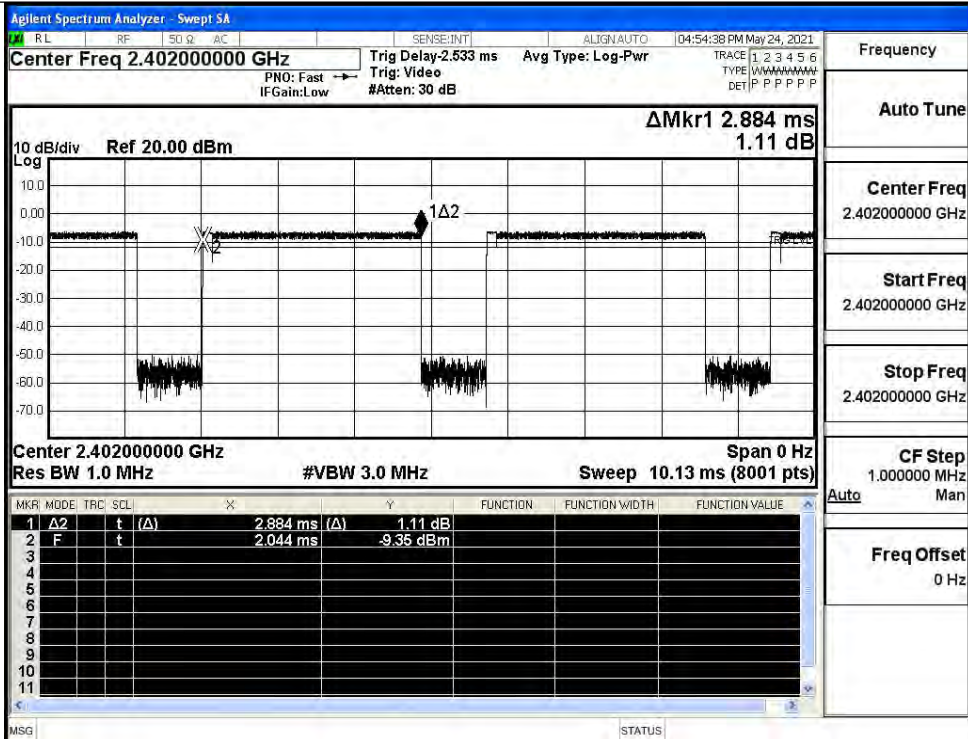
GFSK_DH5/MCH



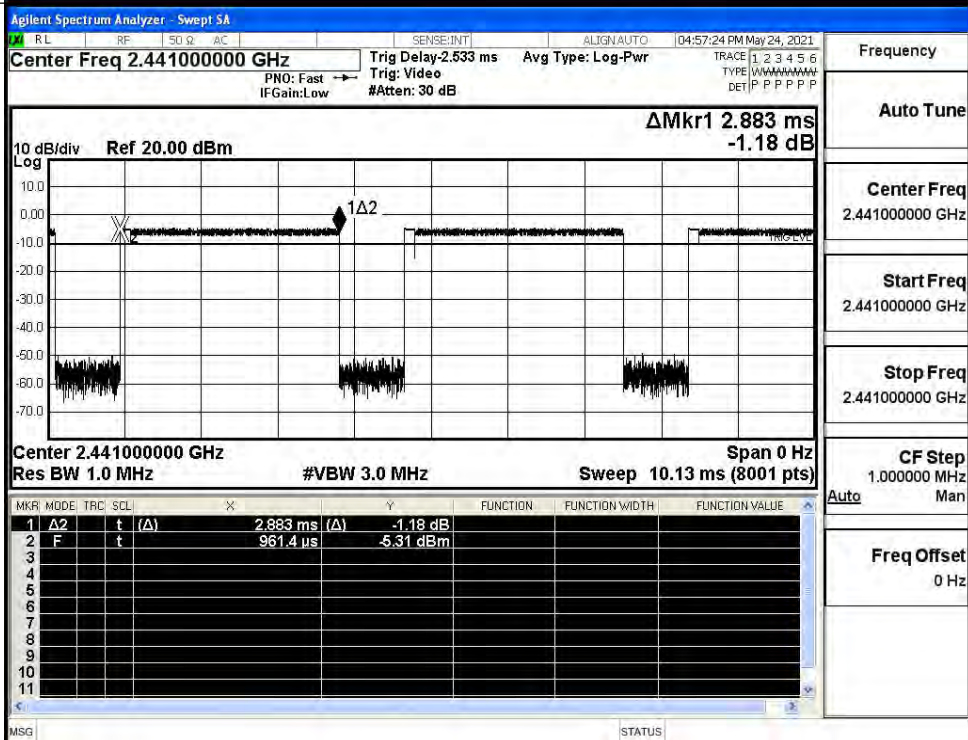
GFSK_DH5/HCH



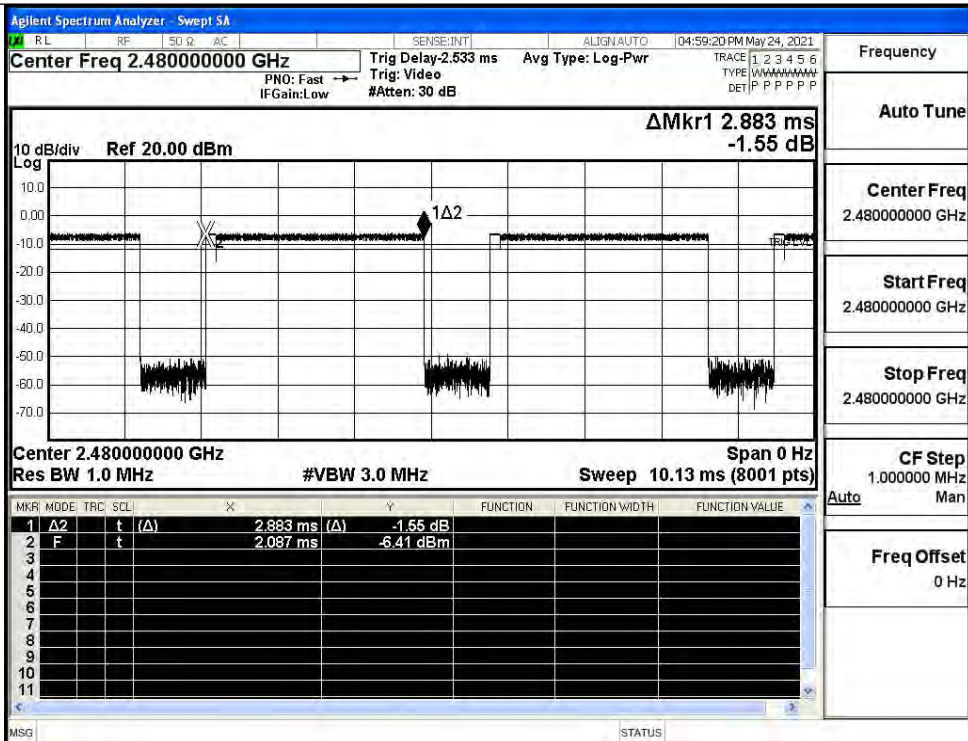
$\pi/4$ DQPSK
_2DH5/LCH



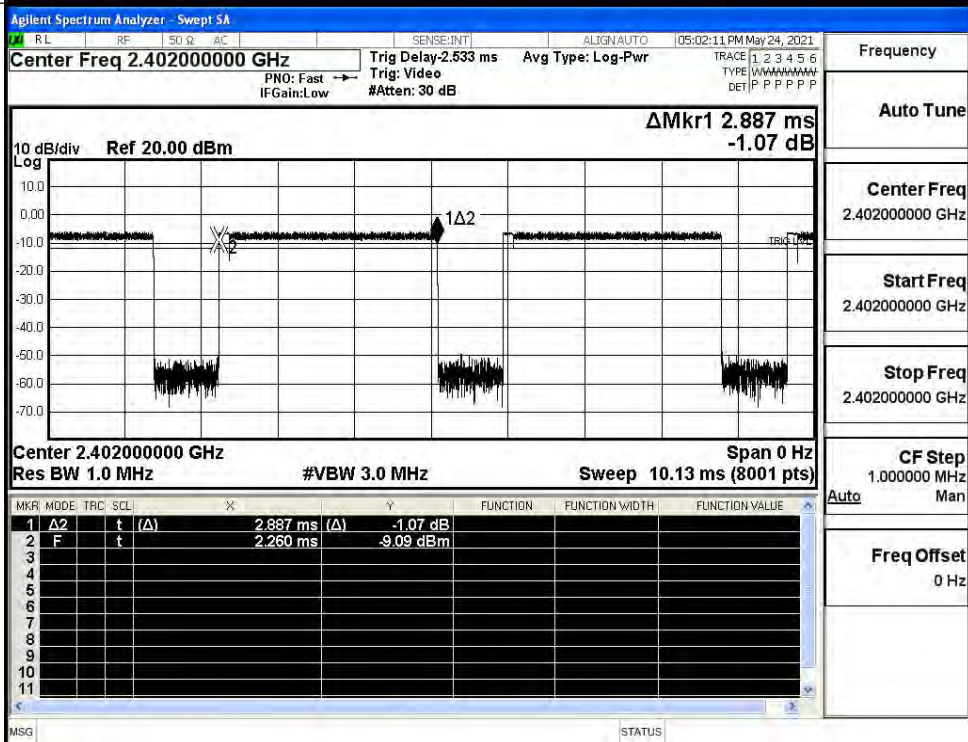
$\pi/4$ DQPSK
_2DH5/MCH



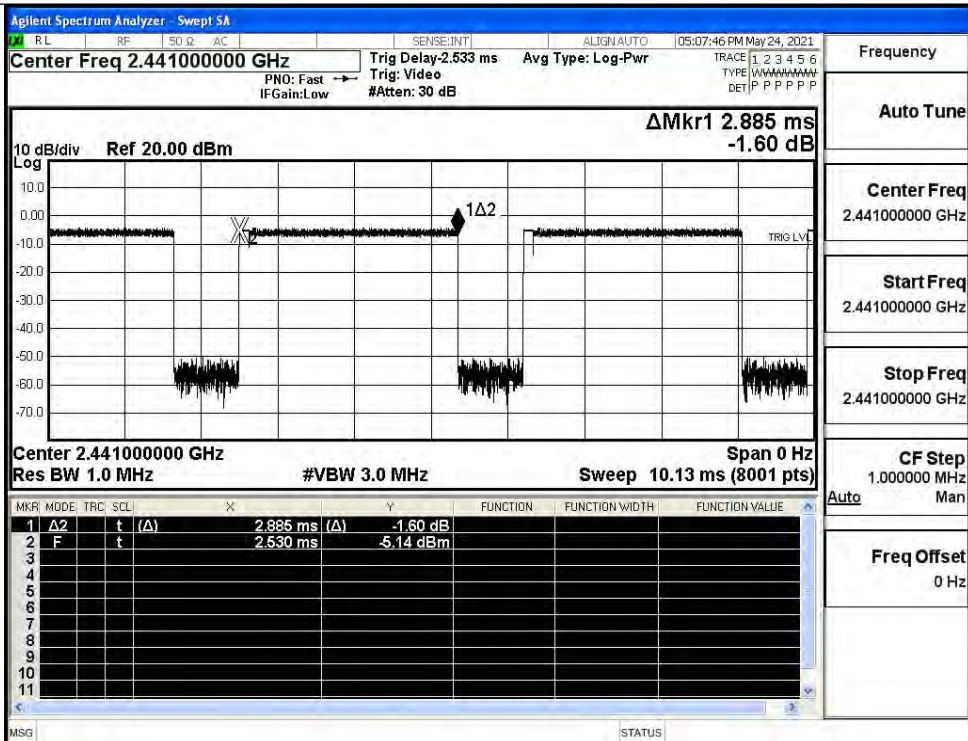
$\pi/4$ DQPSK
_2DH5/HCH



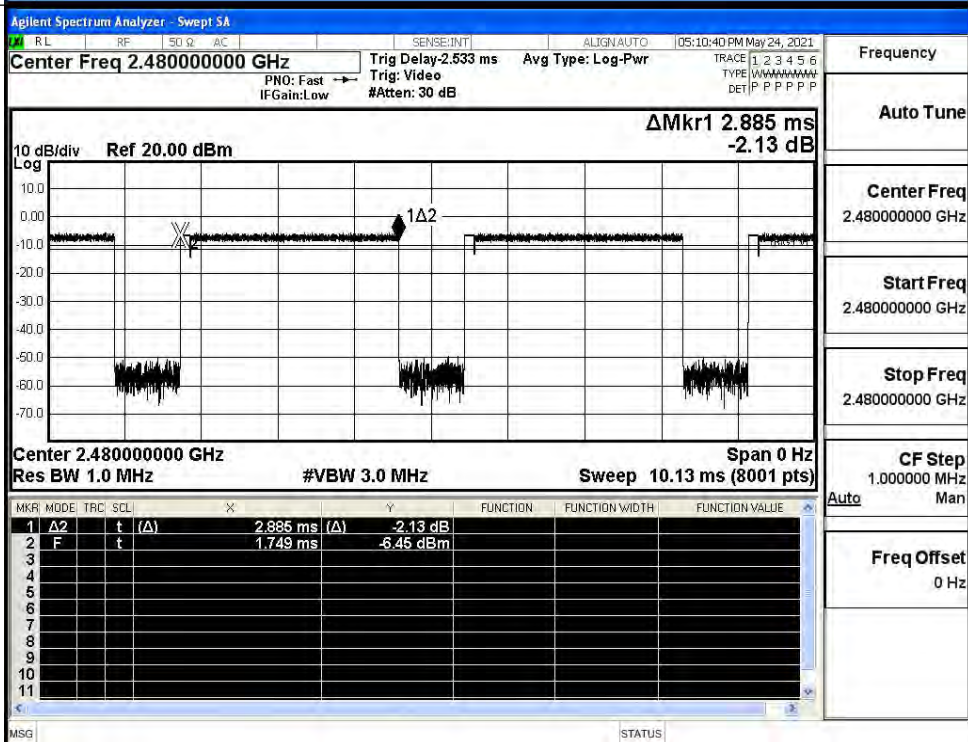
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



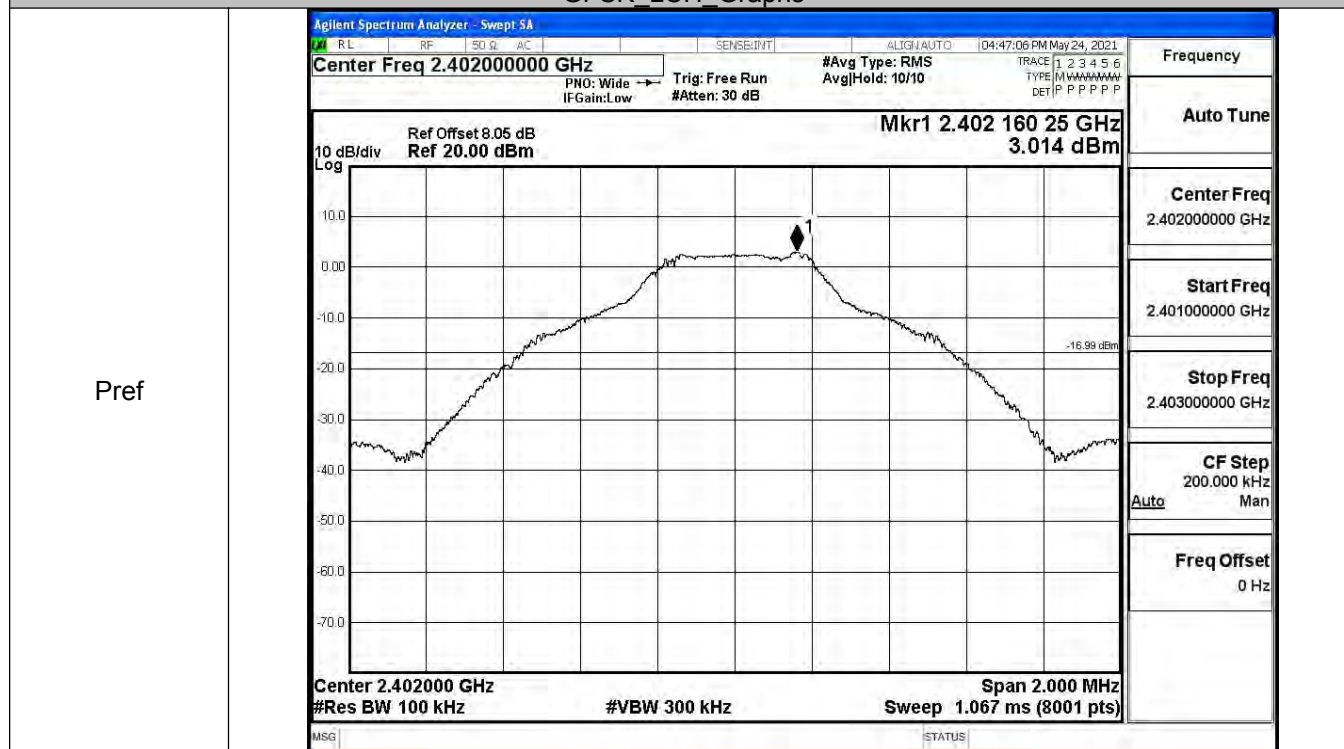
8DPSK_3DH5/HCH



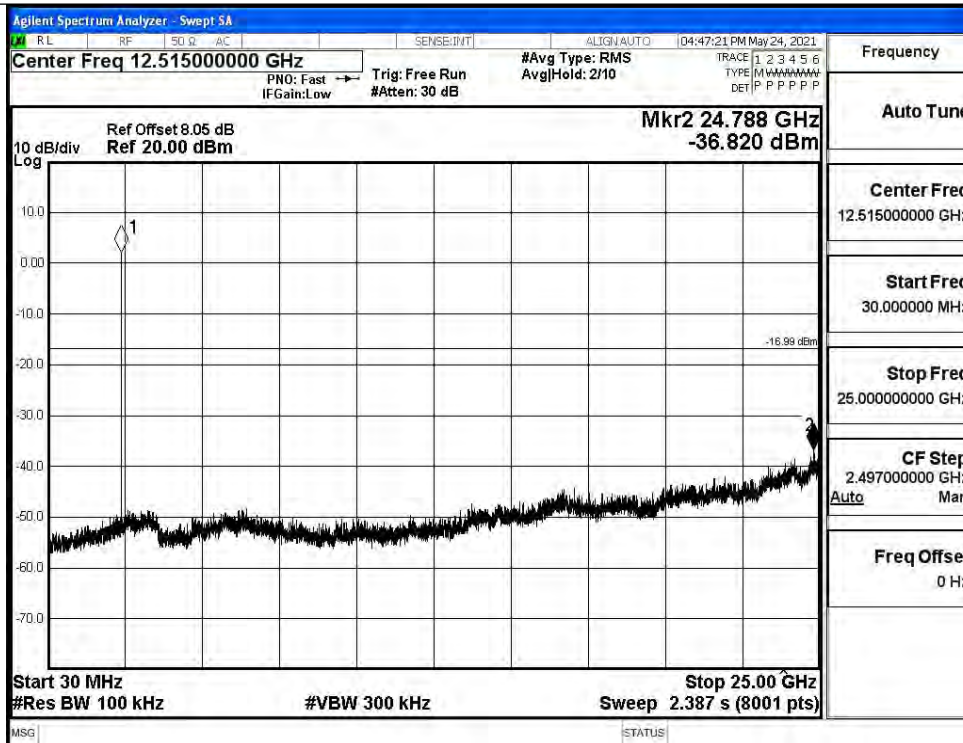
A.7 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.014	-36.820	-16.986	PASS
	MCH	4.472	-36.476	-15.528	PASS
	HCH	2.96	-37.512	-17.040	PASS
$\pi/4$ DQPSK	LCH	1.198	-38.671	-18.802	PASS
	MCH	2.535	-38.083	-17.465	PASS
	HCH	1.364	-38.076	-18.636	PASS
8DPSK	LCH	1.548	-37.163	-18.452	PASS
	MCH	2.863	-36.799	-17.137	PASS
	HCH	1.388	-37.198	-18.612	PASS

GFSK LCH Graphs

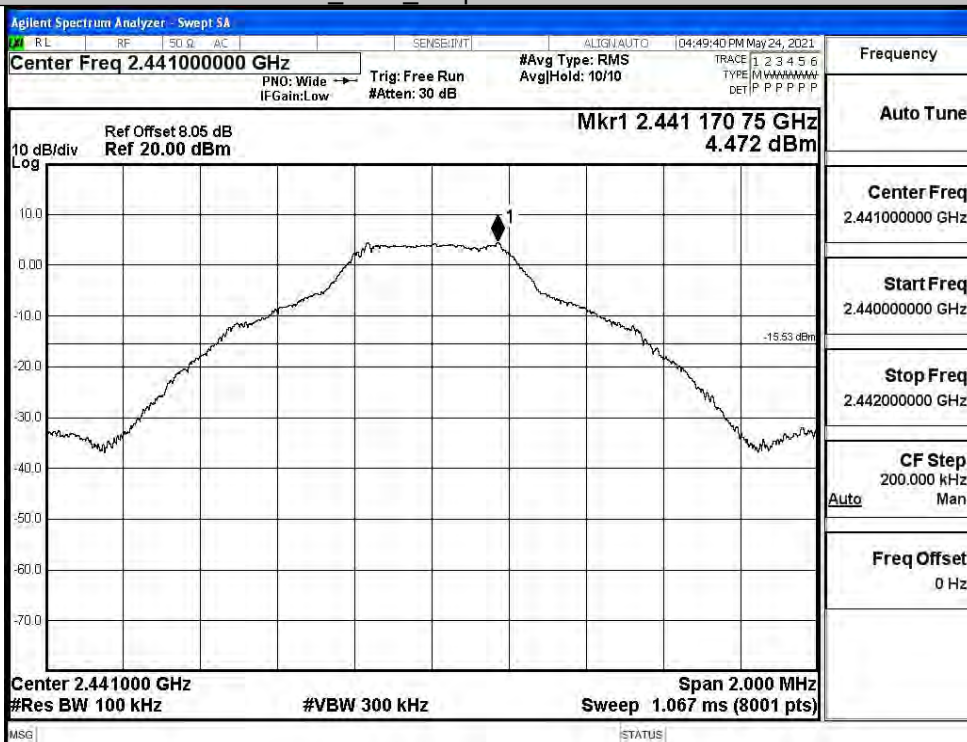


Puw

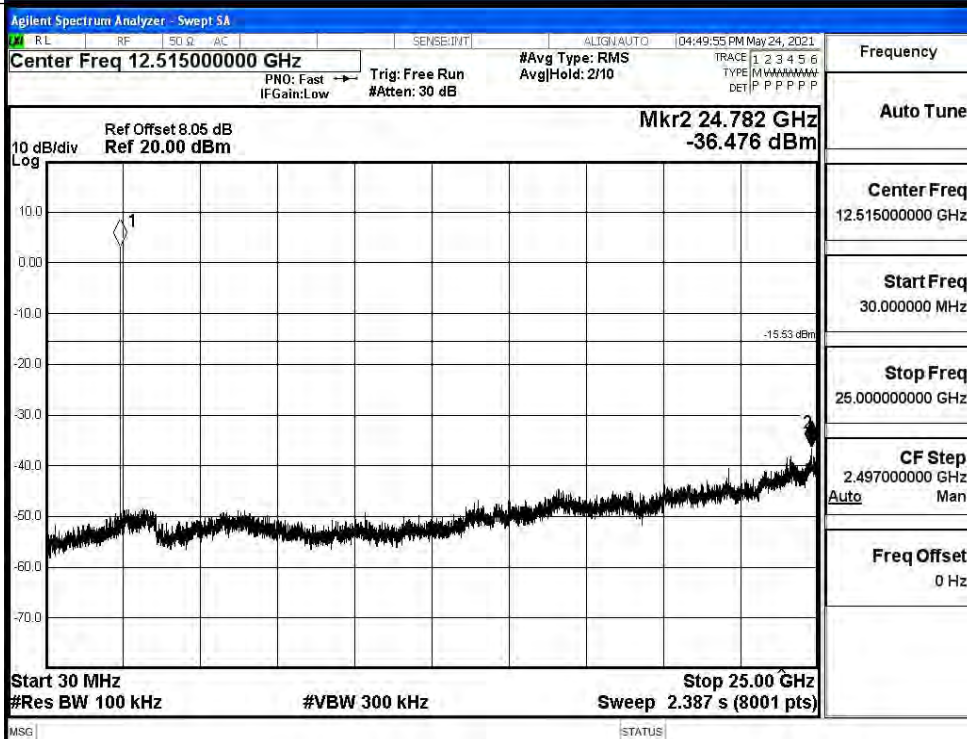


GFSK_MCH_Graphs

Pref

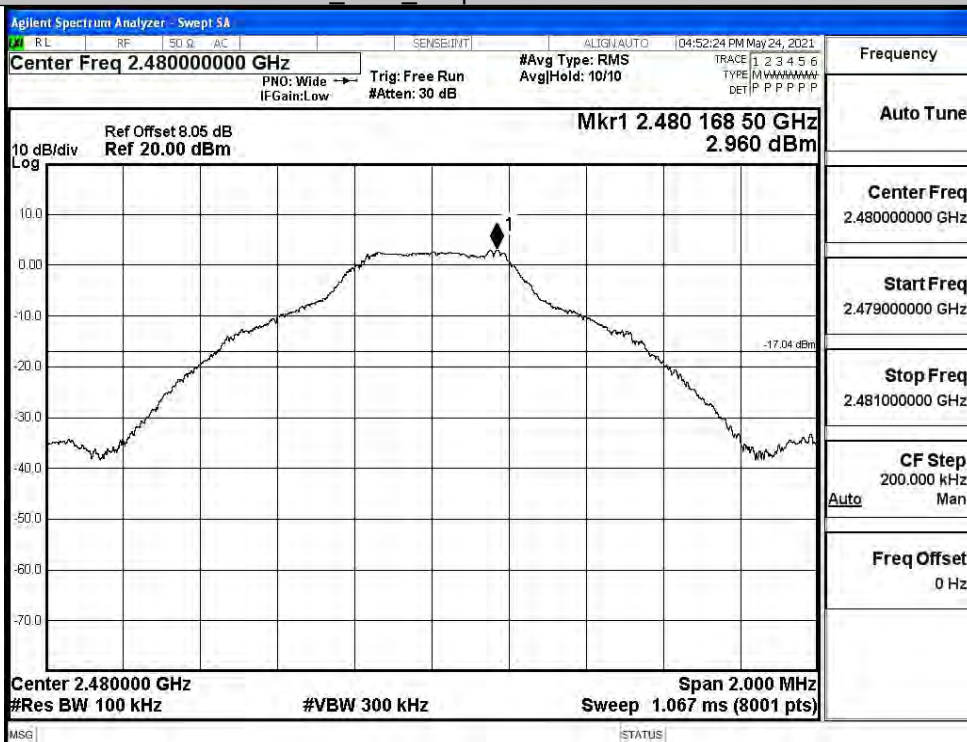


Puw

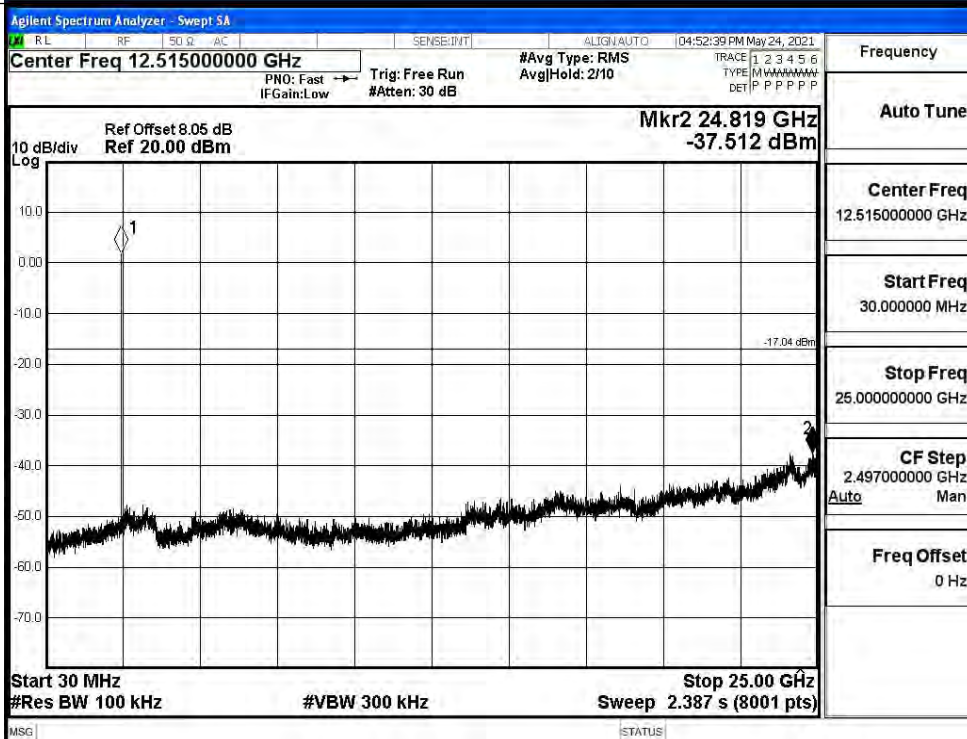


GFSK_HCH_Graphs

Pref

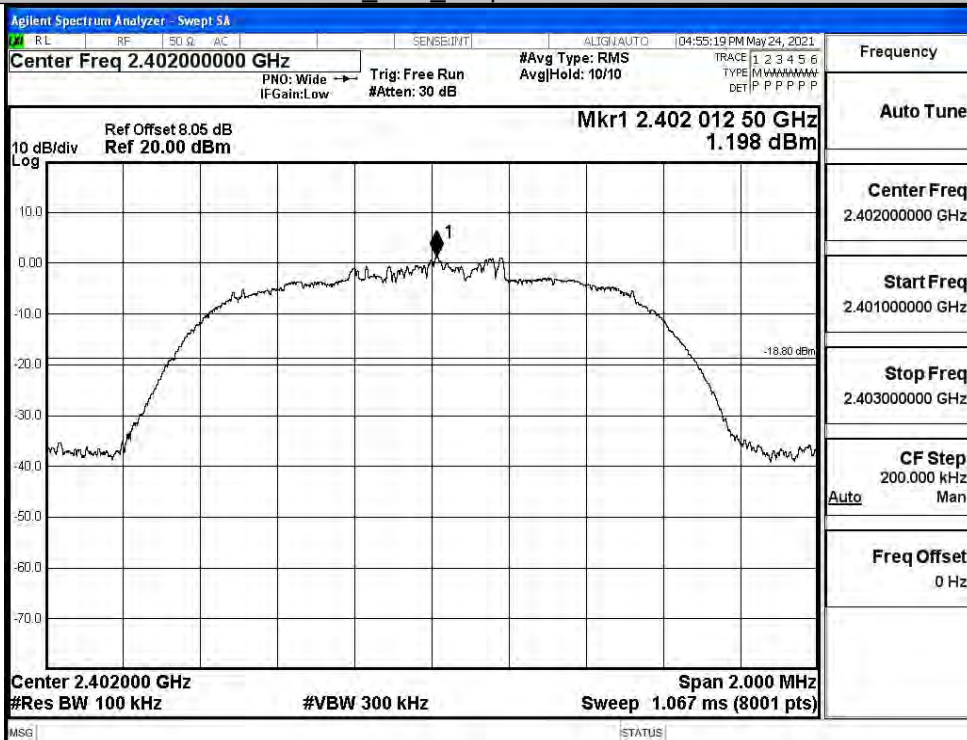


Puw

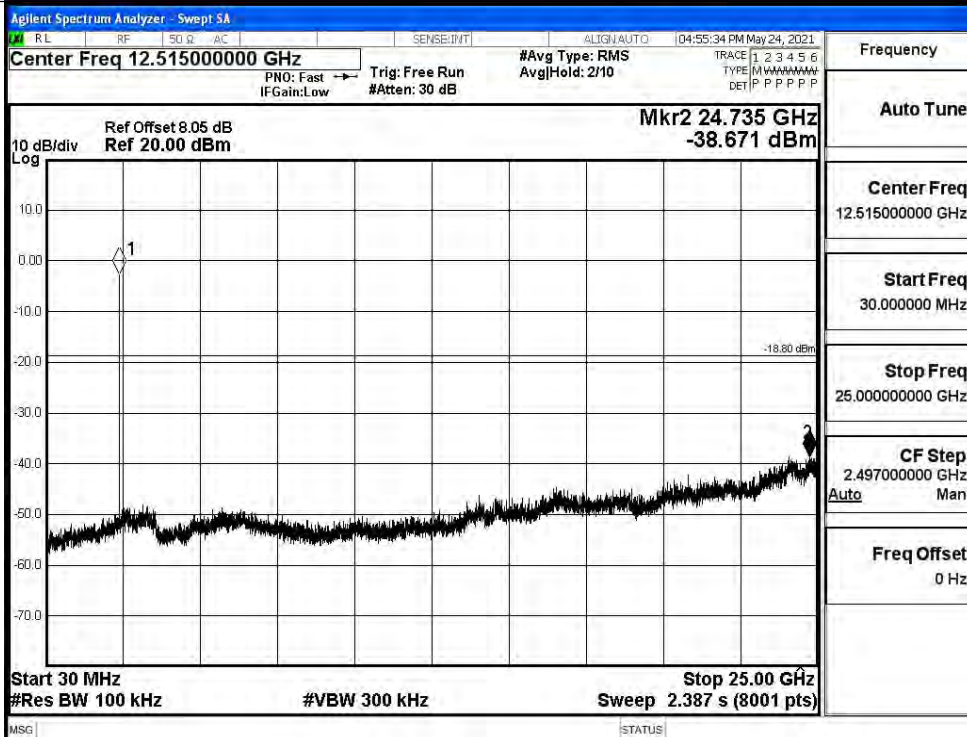


$\pi/4$ DQPSK_LCH_Graphs

Pref

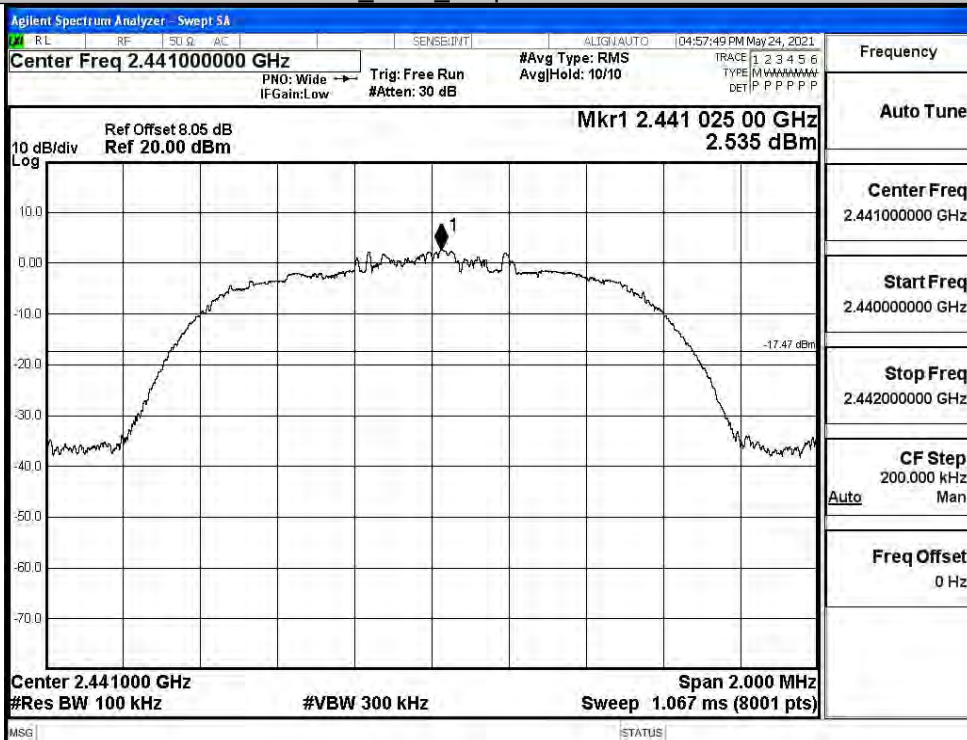


Puw

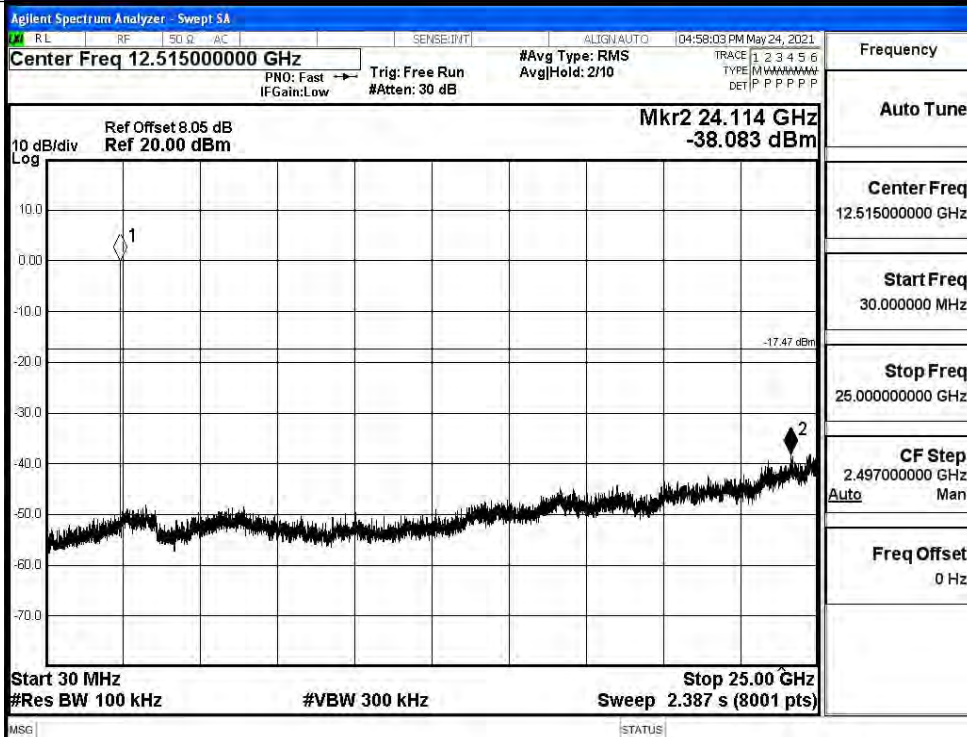


$\pi/4$ DQPSK_MCH_Graphs

Pref

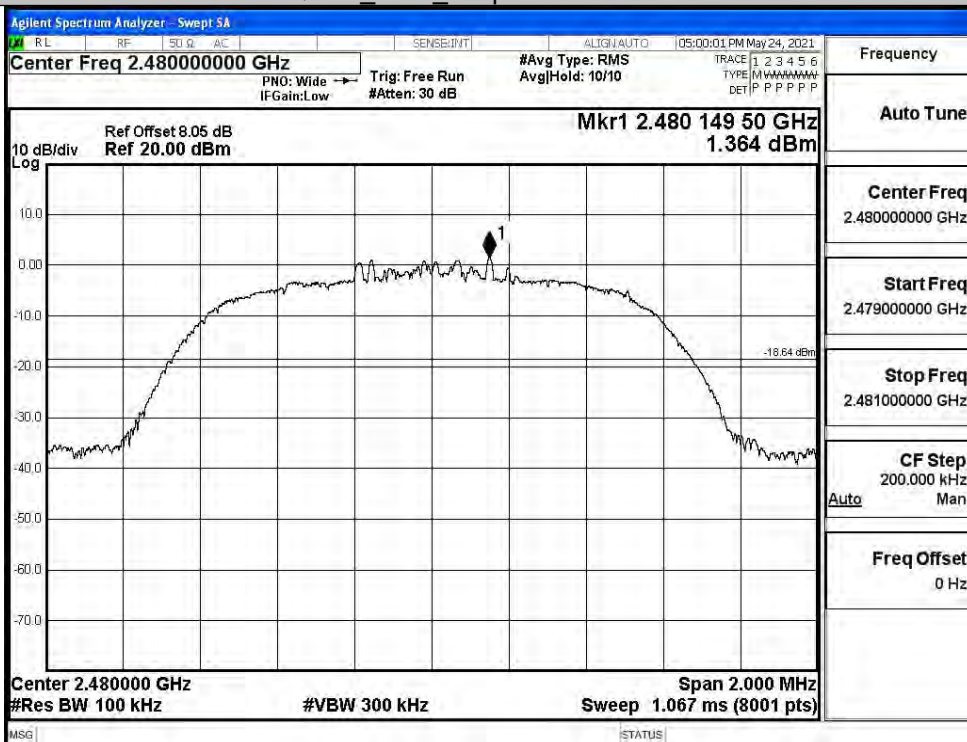


Puw

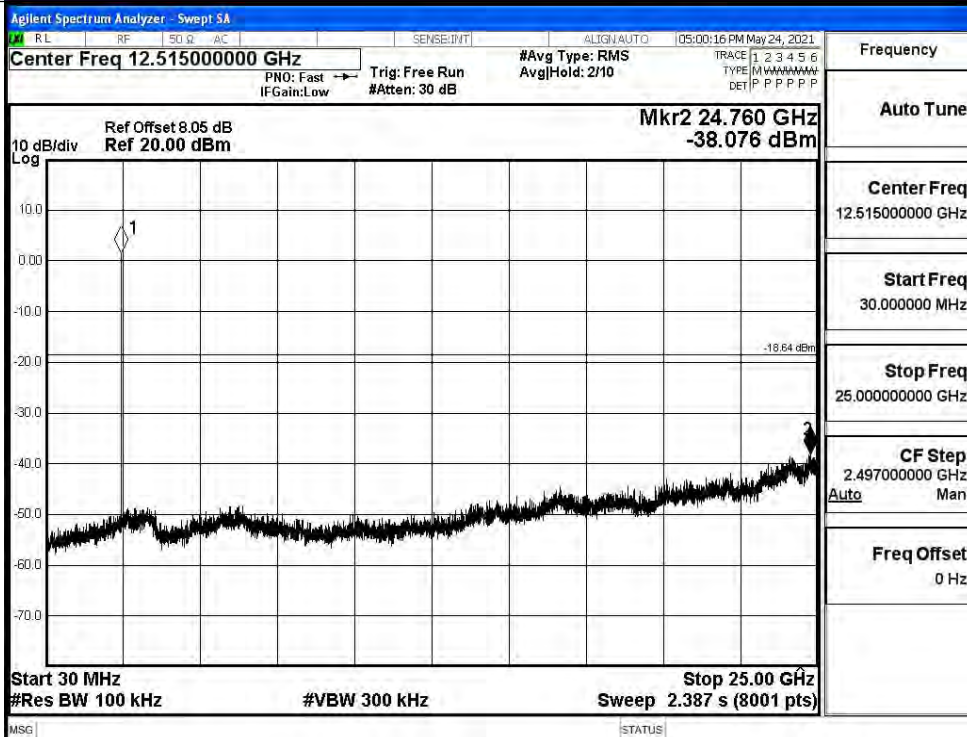


π /4DQPSK_HCH_Graphs

Pref

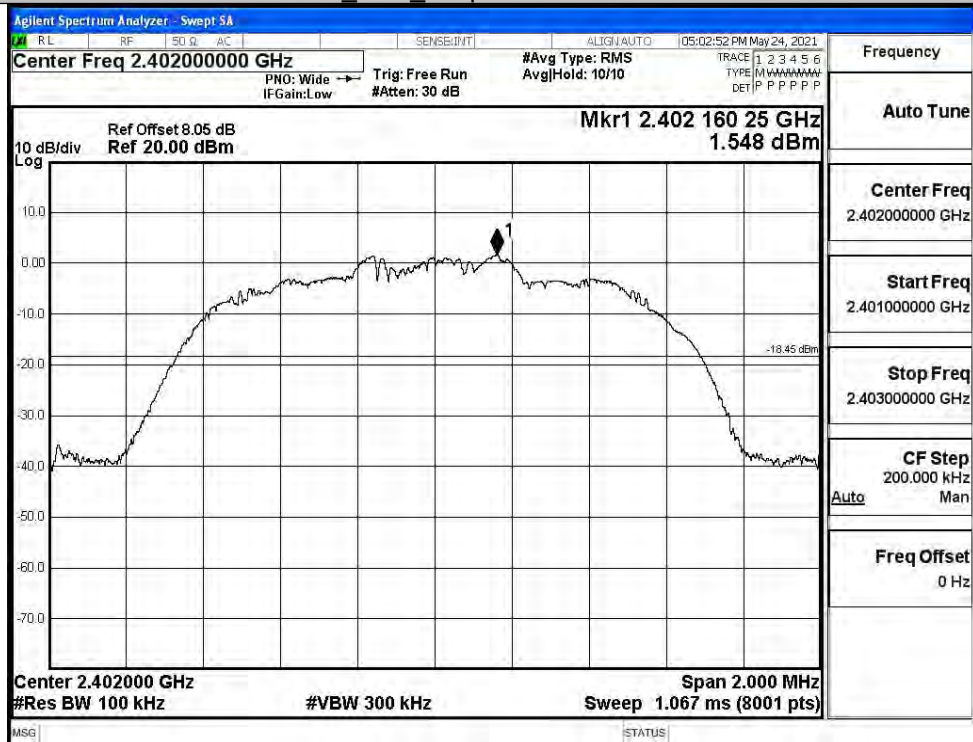


Puw

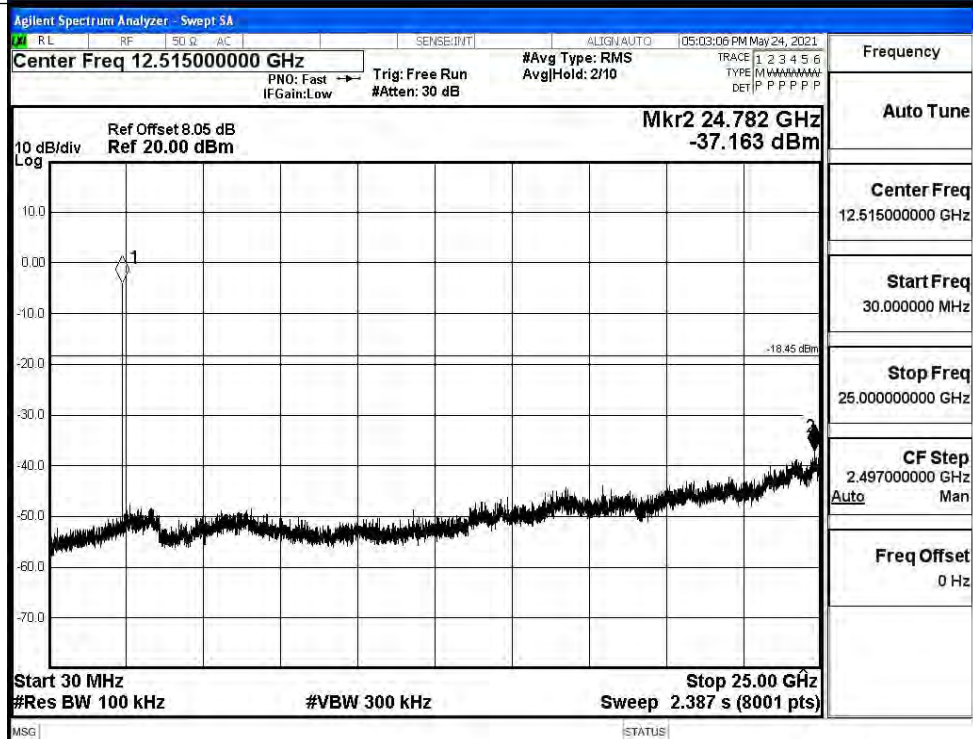


8DPSK_LCH_Graphs

Pref

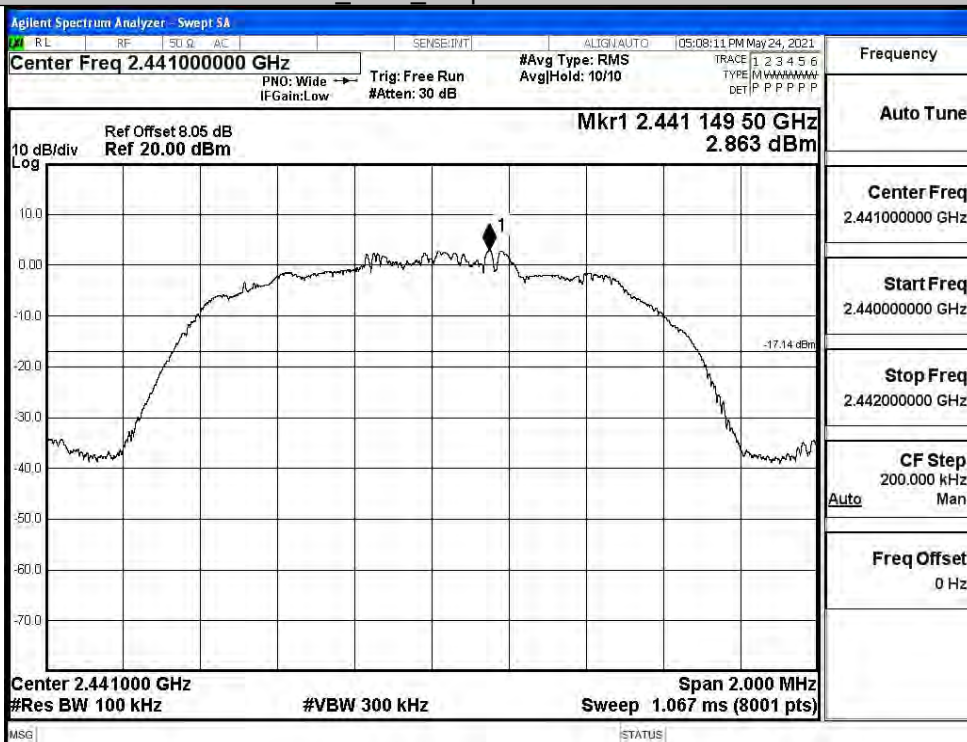


Puw

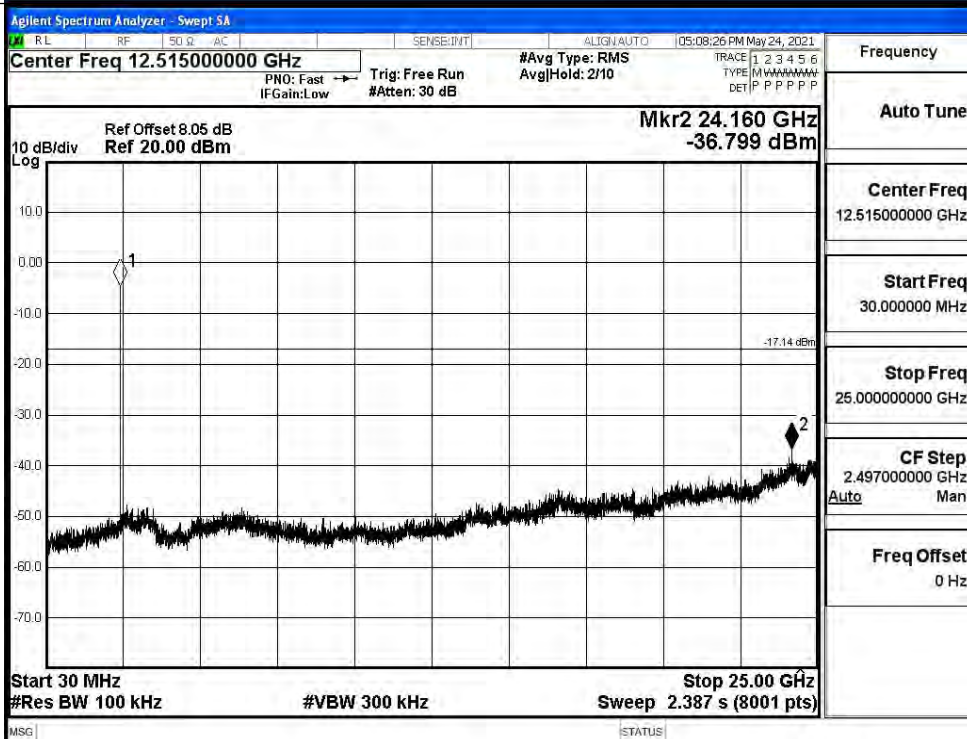


8DPSK_MCH_Graphs

Pref

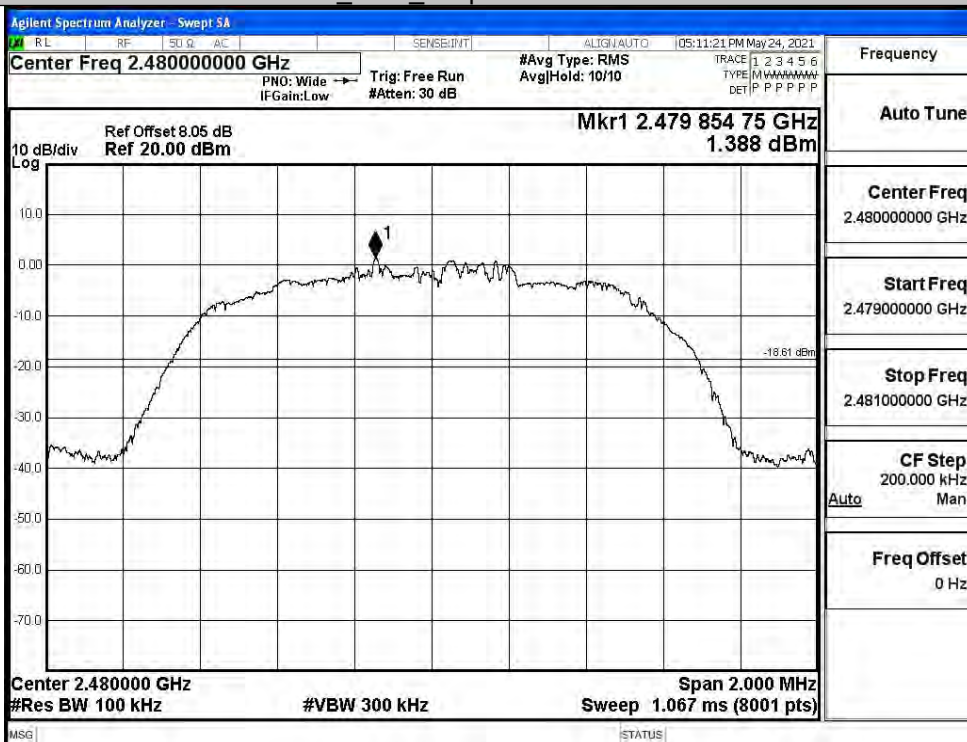


Puw

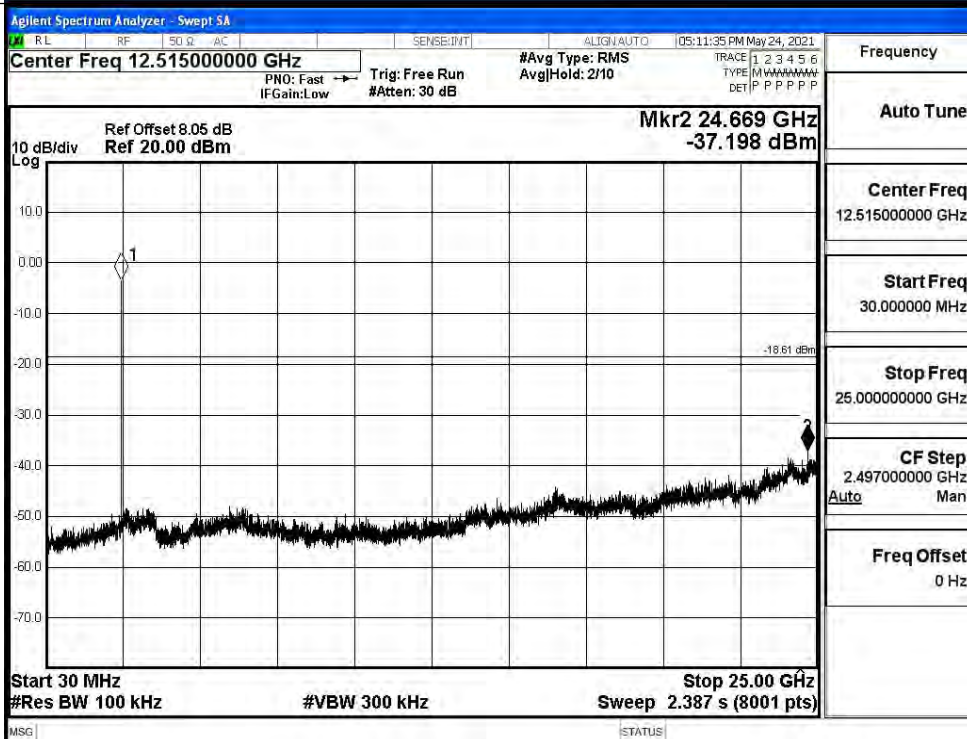


8DPSK_HCH_Graphs

Pref



Puw

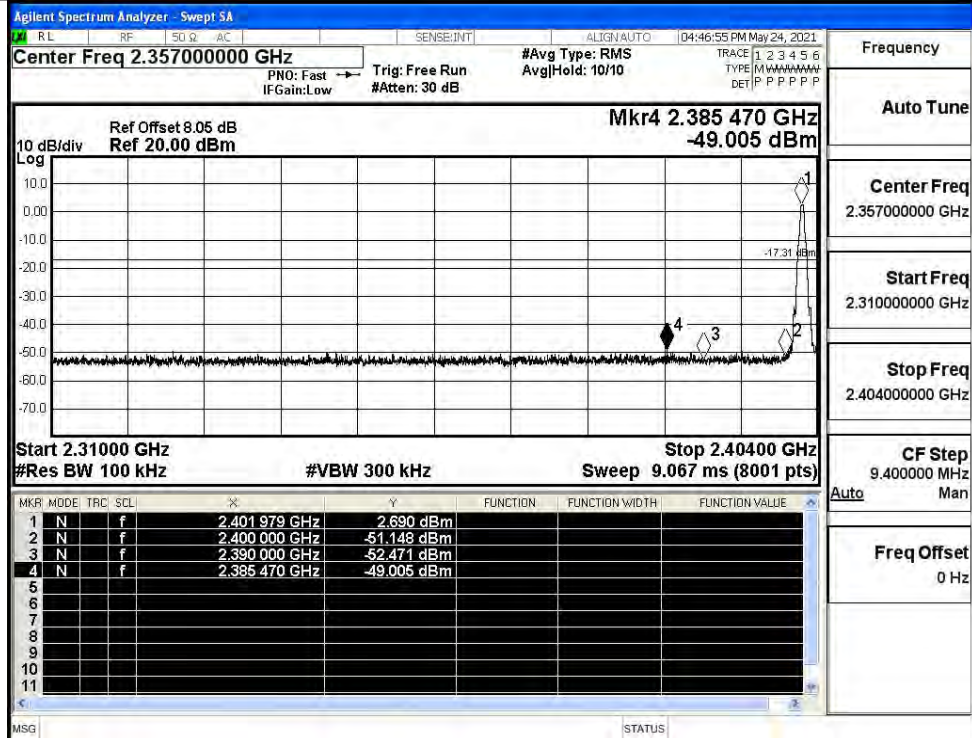


A.8 Band-edge for RF Conducted Emissions

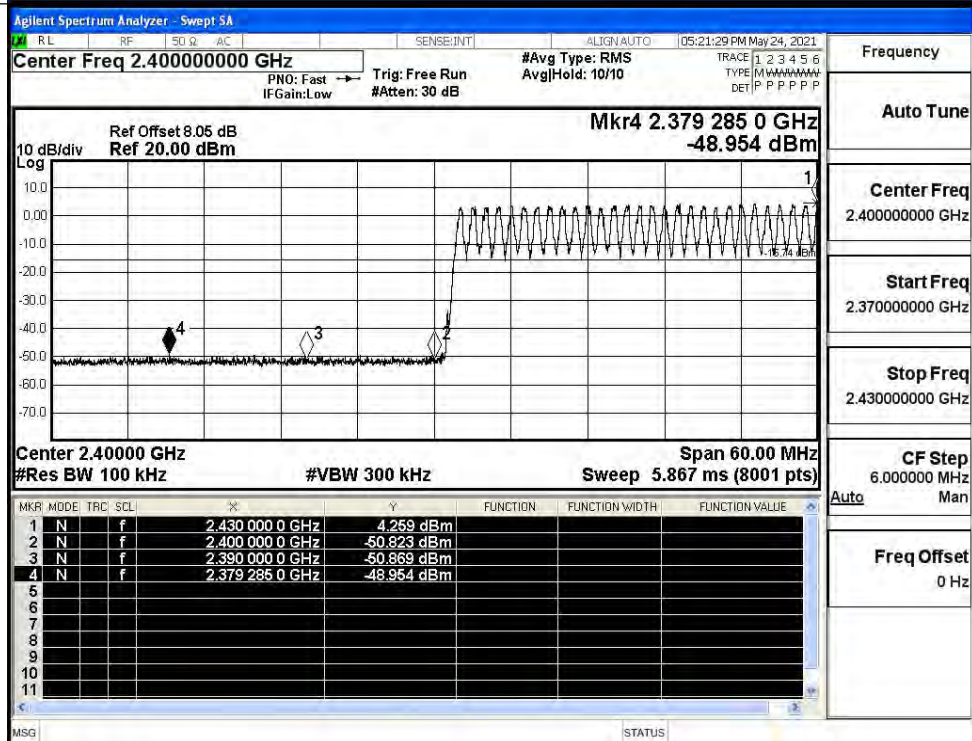
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	2.690	Off	-49.005	-17.31	PASS
			4.259	On	-48.954	-15.74	PASS
	HCH	2480	3.138	Off	-49.061	-16.86	PASS
			4.289	On	-48.463	-15.71	PASS
$\pi/4$ DQPSK	LCH	2402	1.157	Off	-49.754	-18.84	PASS
			2.886	On	-48.894	-17.11	PASS
	HCH	2480	1.678	Off	-48.884	-18.32	PASS
			2.683	On	-48.094	-17.32	PASS
8DPSK	LCH	2402	-0.964	Off	-48.689	-20.96	PASS
			2.936	On	-48.827	-17.06	PASS
	HCH	2480	1.720	Off	-48.888	-18.28	PASS
			2.310	On	-48.193	-17.69	PASS

Test Graphs

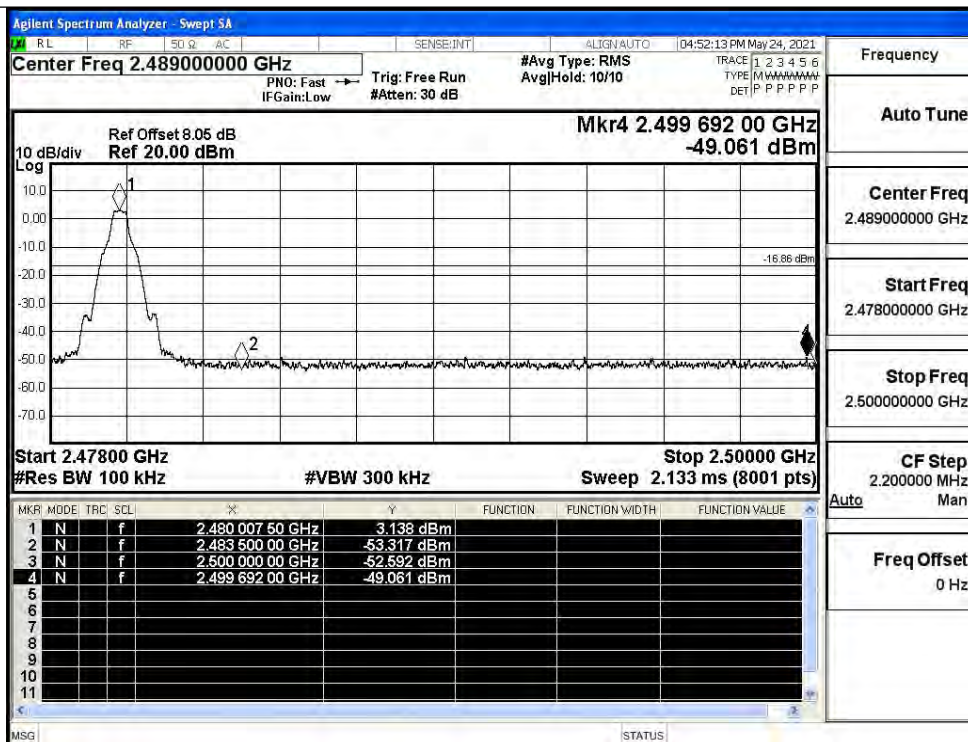
GFSK/LCH/No Hop



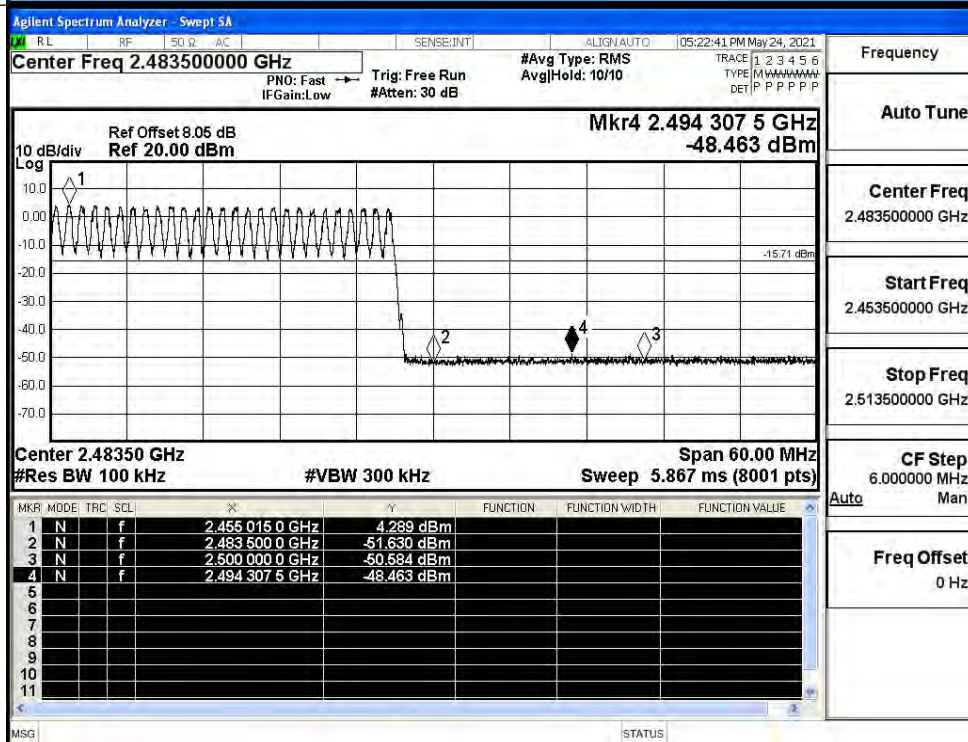
GFSK/LCH/Hop



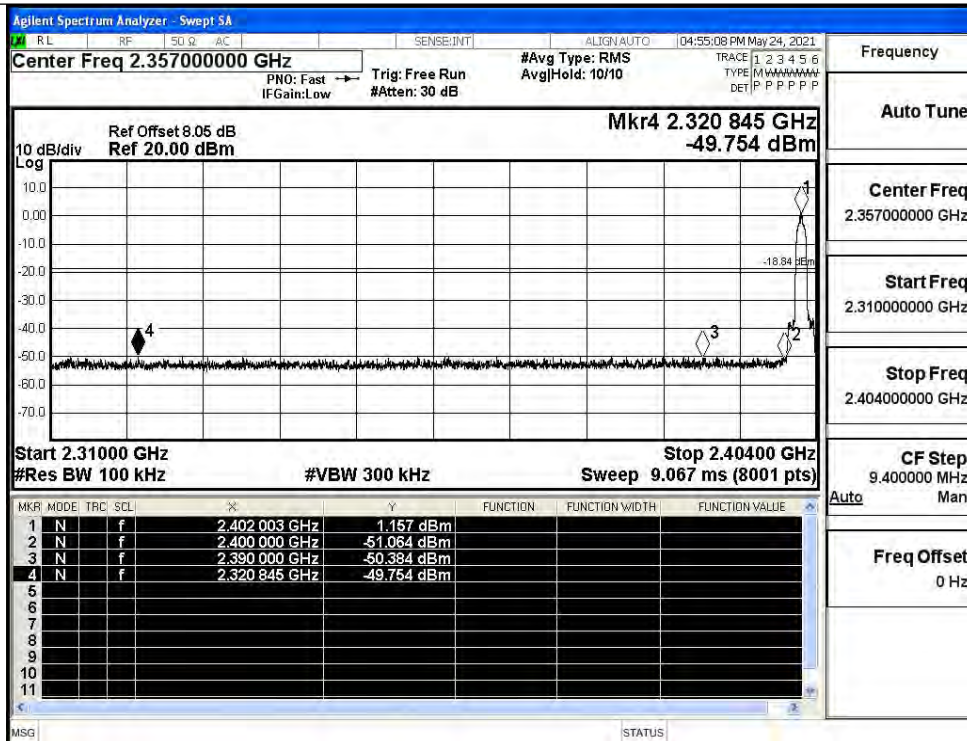
GFSK/HCH/No Hop



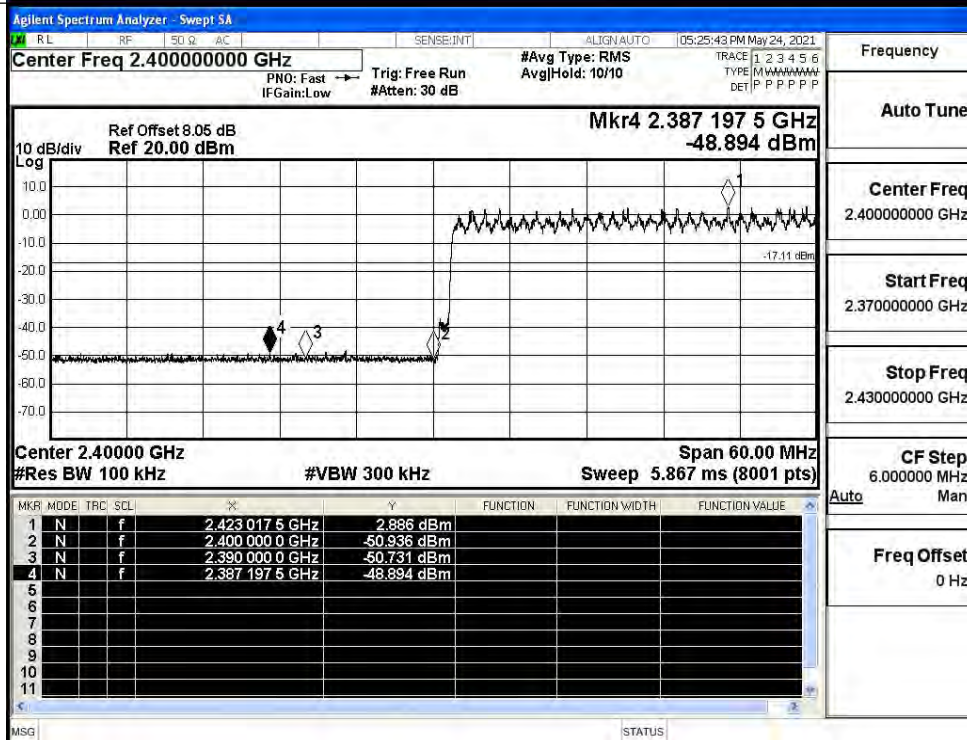
GFSK/HCH/Hop



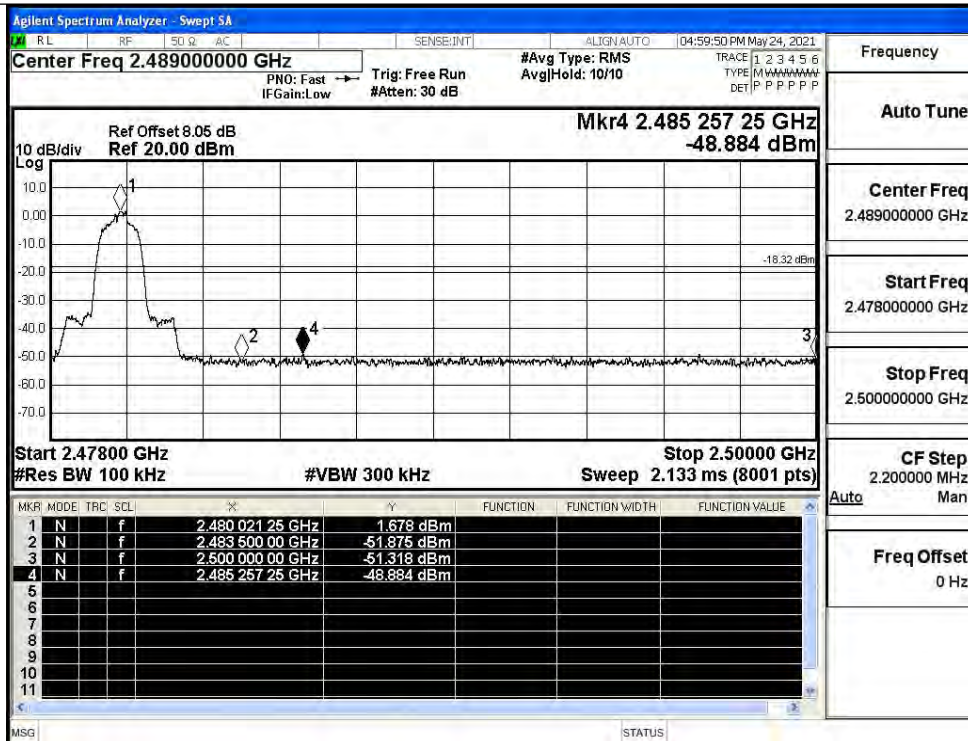
$\pi/4$ DQPSK/LCH/No
Hop



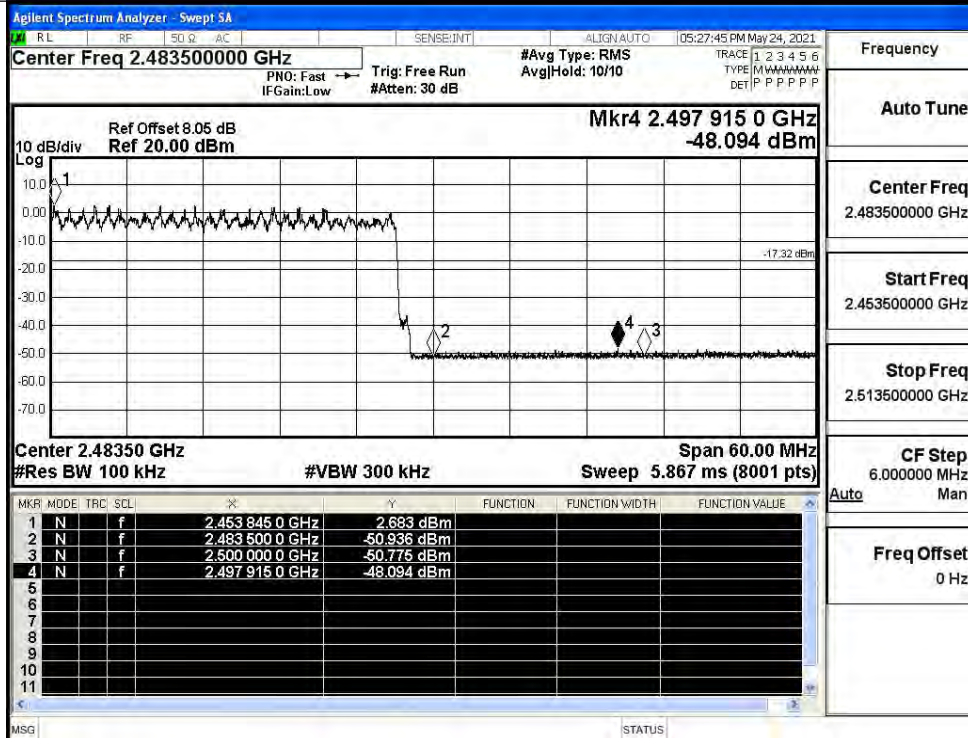
$\pi/4$ DQPSK/LCH/Hop



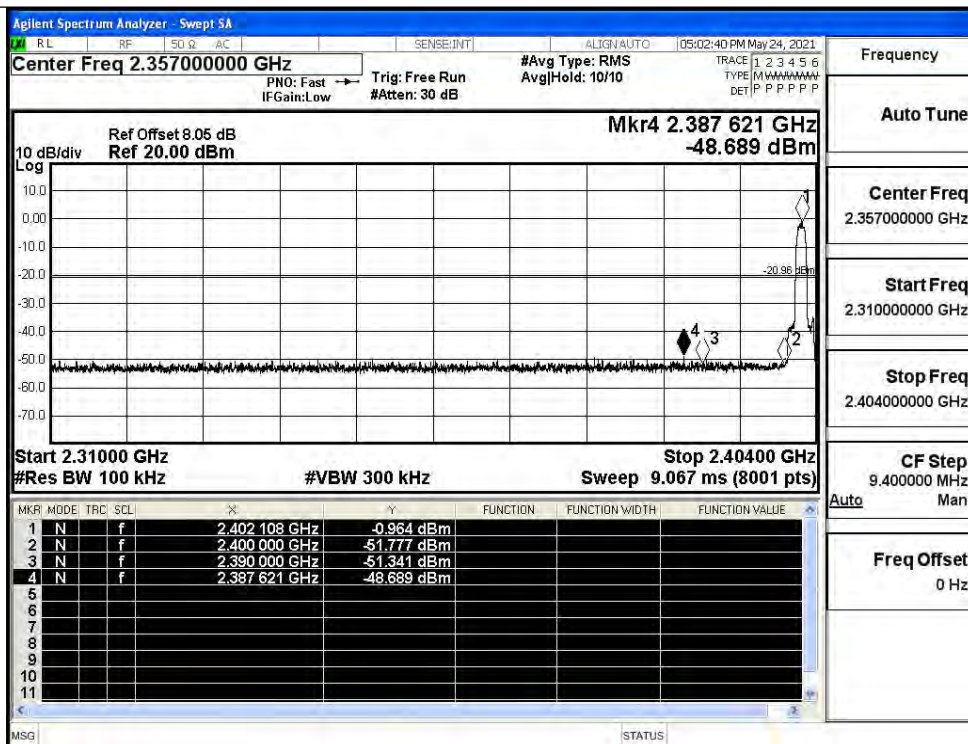
$\pi/4$ DQPSK/HCH/No
Hop



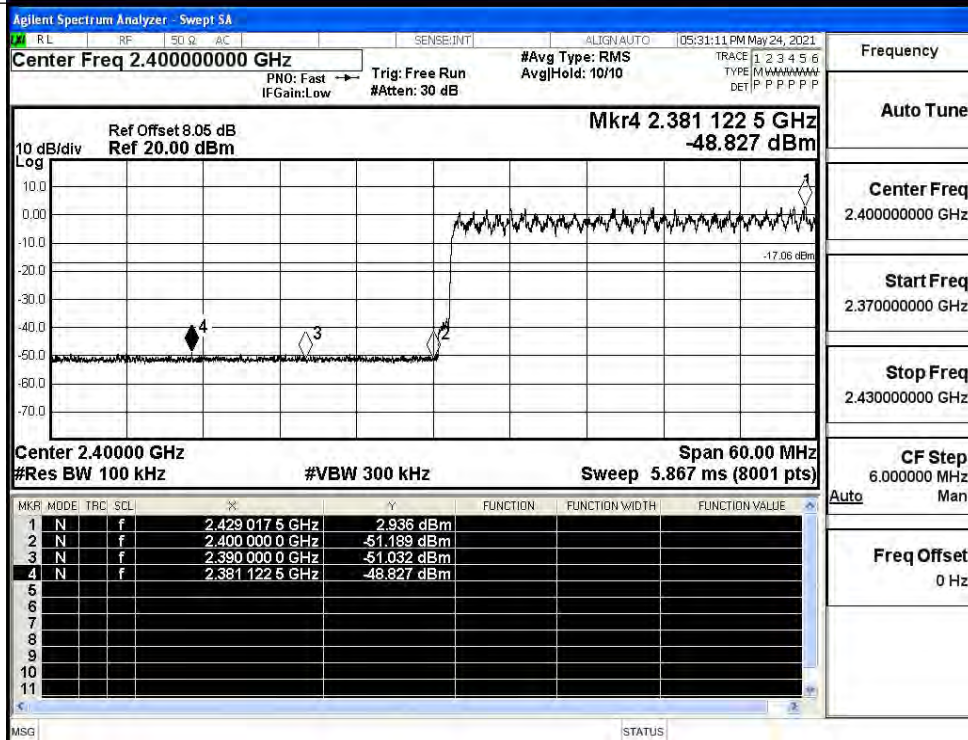
$\pi/4$ DQPSK/HCH/Hop



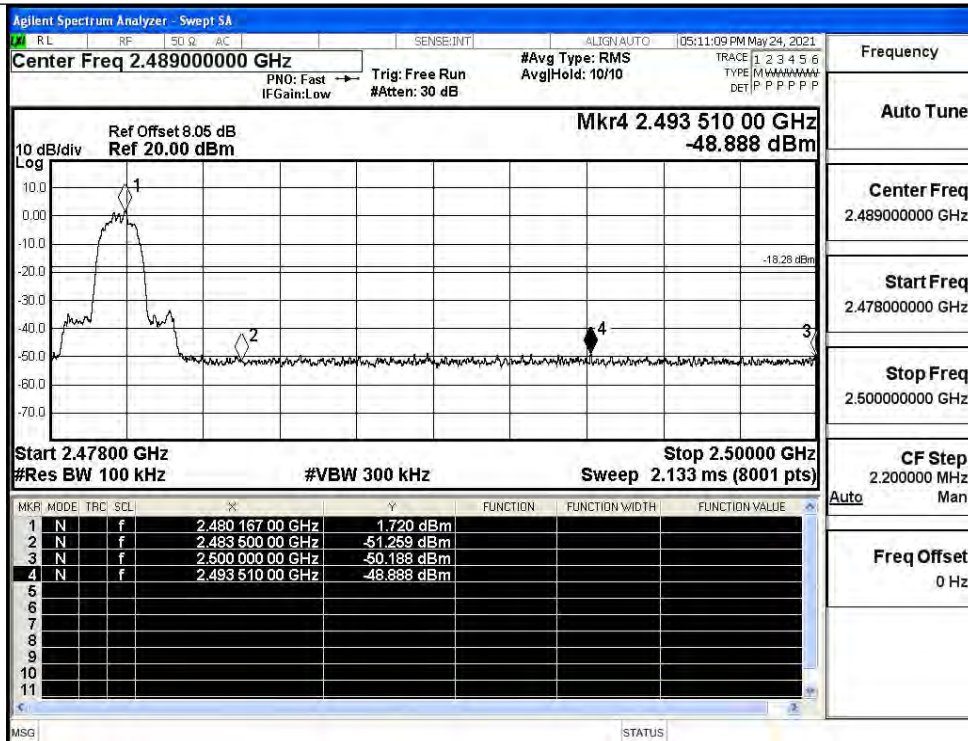
8DPSK/LCH/No Hop



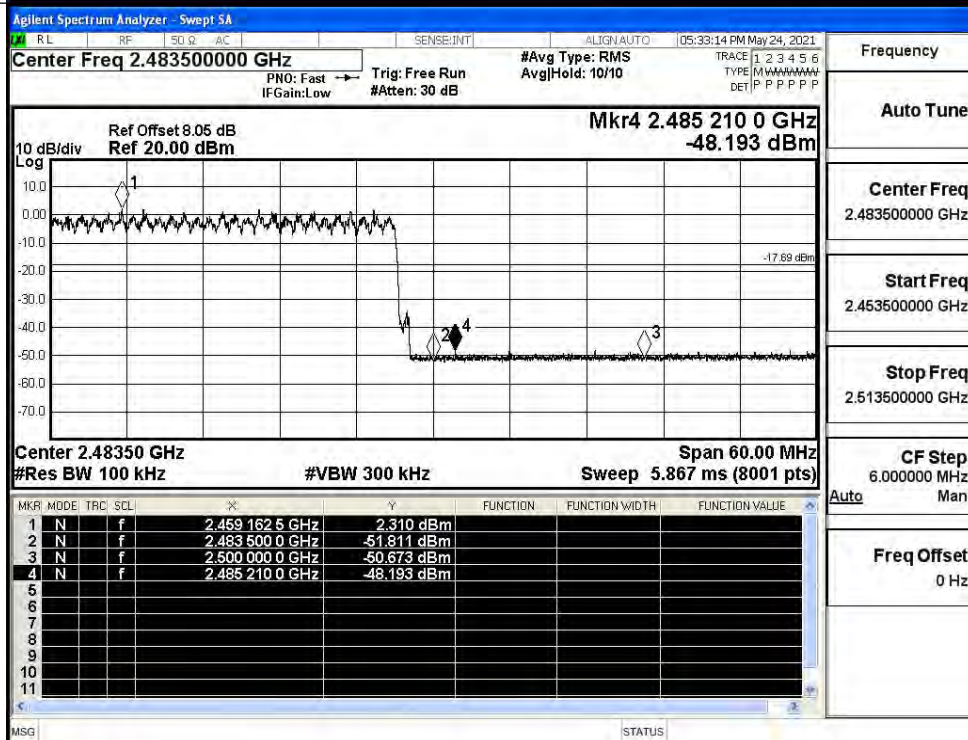
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



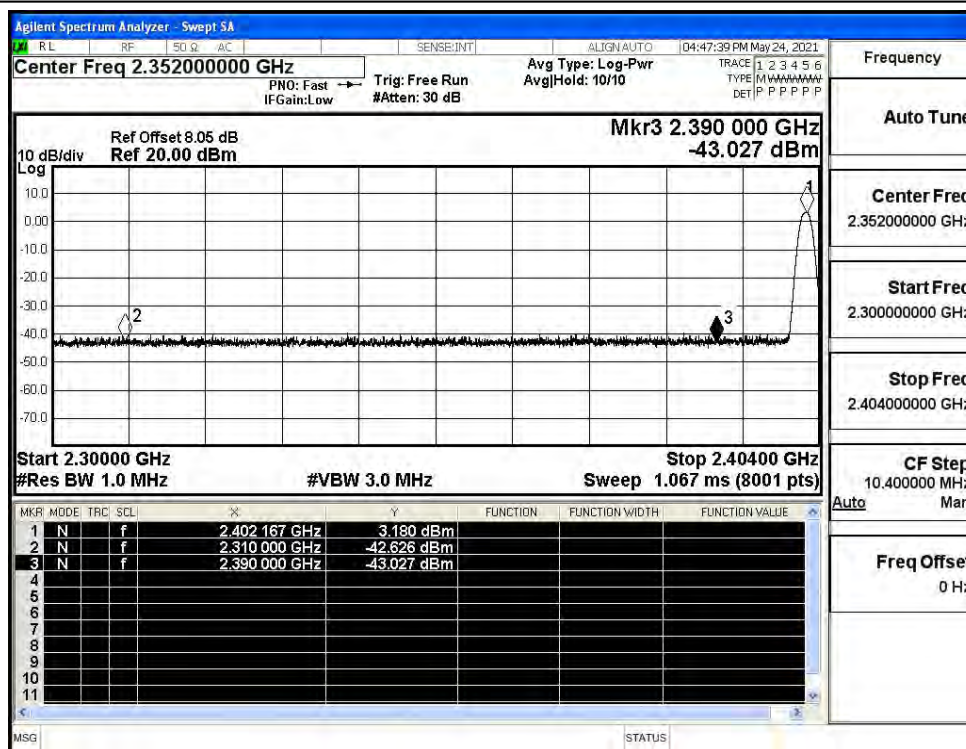
8DPSK/HCH/Hop



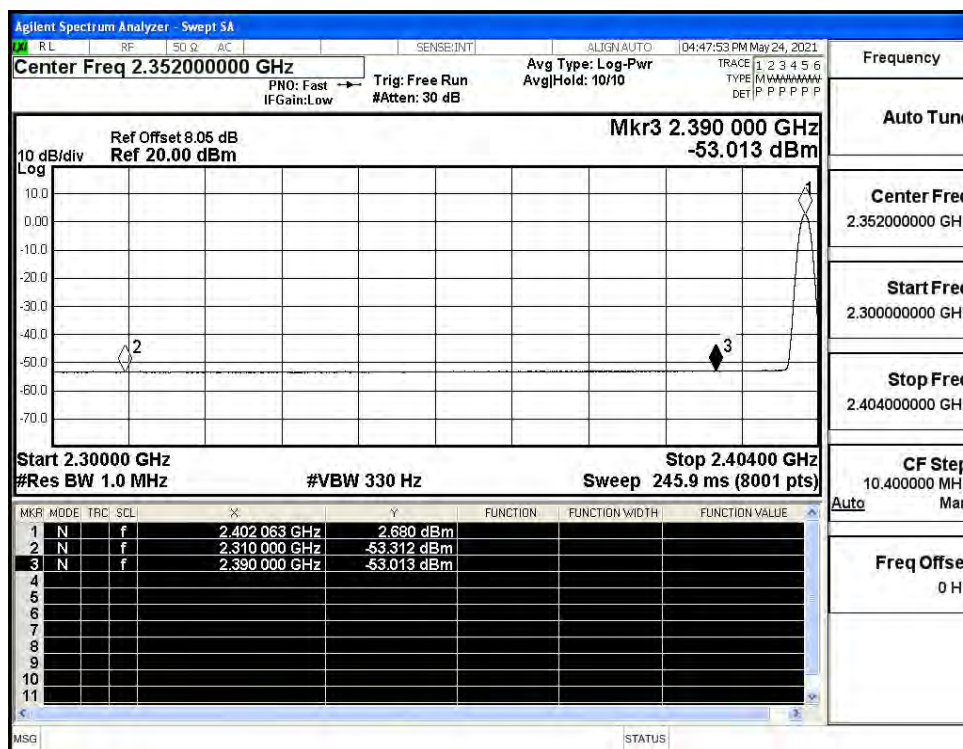
A.9 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-42.63	2.0	0	52.63	PEAK	74	PASS
	Off	2310.0	-53.31	2.0	0	41.95	AV	54	PASS
	Off	2390.0	-43.03	2.0	0	52.23	PEAK	74	PASS
	Off	2390.0	-53.01	2.0	0	42.24	AV	54	PASS
	Off	2483.5	-43.18	2.0	0	52.07	PEAK	74	PASS
	Off	2483.5	-52.45	2.0	0	42.81	AV	54	PASS
	Off	2500.0	-42.24	2.0	0	53.02	PEAK	74	PASS
	Off	2500.0	-52.36	2.0	0	42.90	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.58	2.0	0	51.68	PEAK	74	PASS
	Off	2310.0	-53.36	2.0	0	41.89	AV	54	PASS
	Off	2390.0	-43.54	2.0	0	51.72	PEAK	74	PASS
	Off	2390.0	-53.07	2.0	0	42.19	AV	54	PASS
	Off	2483.5	-42.33	2.0	0	52.93	PEAK	74	PASS
	Off	2483.5	-52.32	2.0	0	42.93	AV	54	PASS
	Off	2500.0	-43.05	2.0	0	52.21	PEAK	74	PASS
	Off	2500.0	-52.39	2.0	0	42.87	AV	54	PASS
8DPSK	Off	2310.0	-43.61	2.0	0	51.64	PEAK	74	PASS
	Off	2310.0	-53.37	2.0	0	41.89	AV	54	PASS
	Off	2390.0	-43.82	2.0	0	51.44	PEAK	74	PASS
	Off	2390.0	-52.91	2.0	0	42.35	AV	54	PASS
	Off	2483.5	-41.93	2.0	0	53.33	PEAK	74	PASS
	Off	2483.5	-52.39	2.0	0	42.87	AV	54	PASS
	Off	2500.0	-42.03	2.0	0	53.23	PEAK	74	PASS
	Off	2500.0	-52.30	2.0	0	42.96	AV	54	PASS

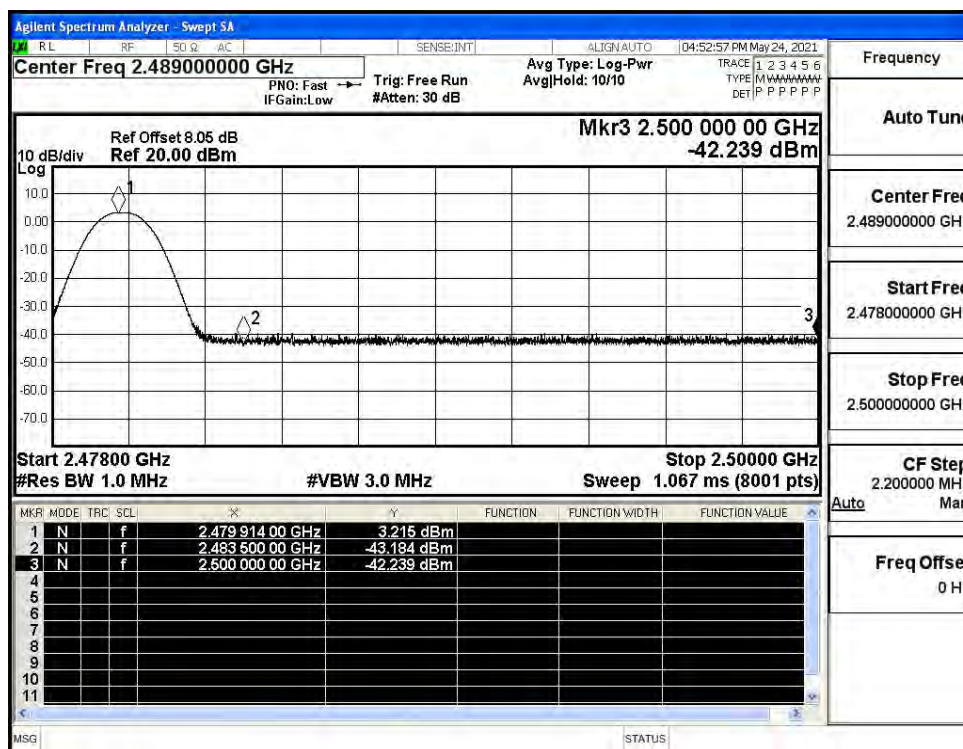
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



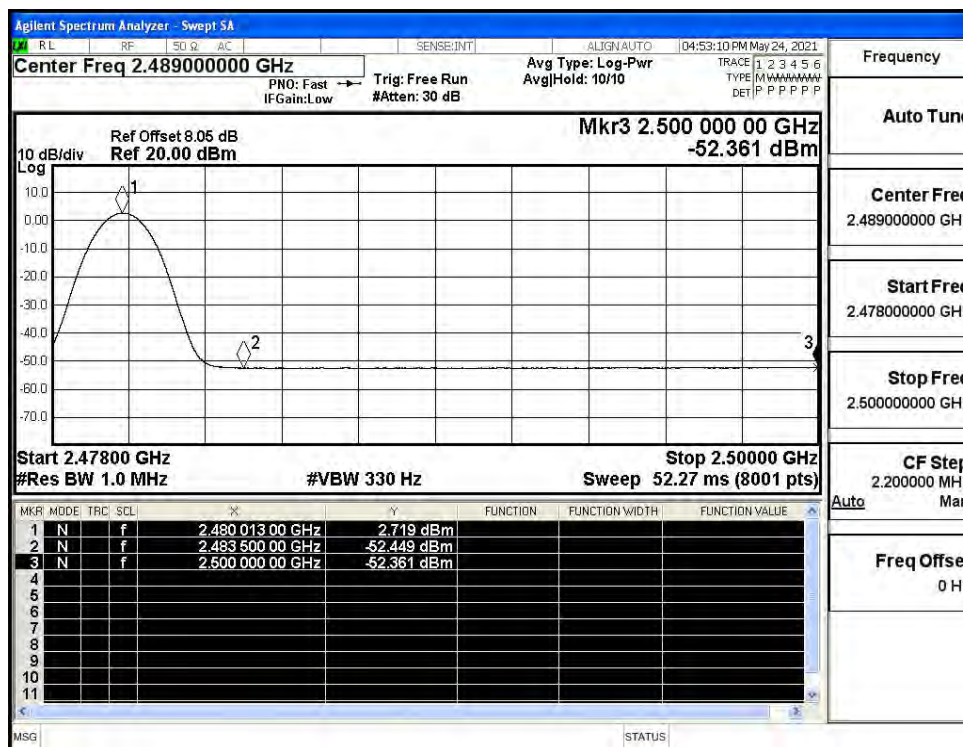
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

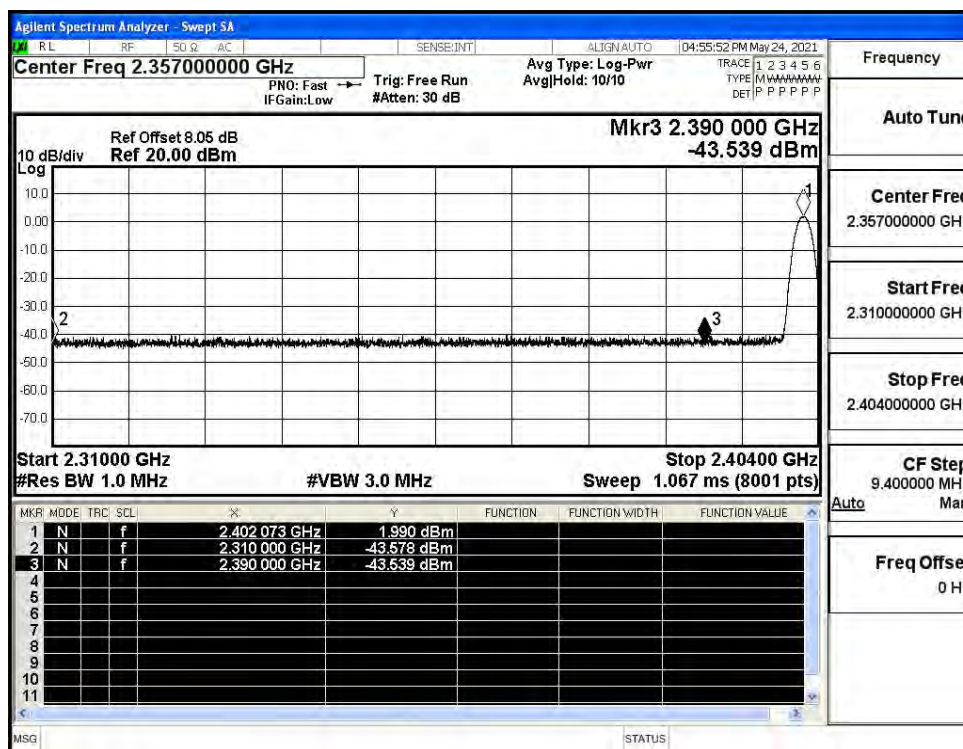
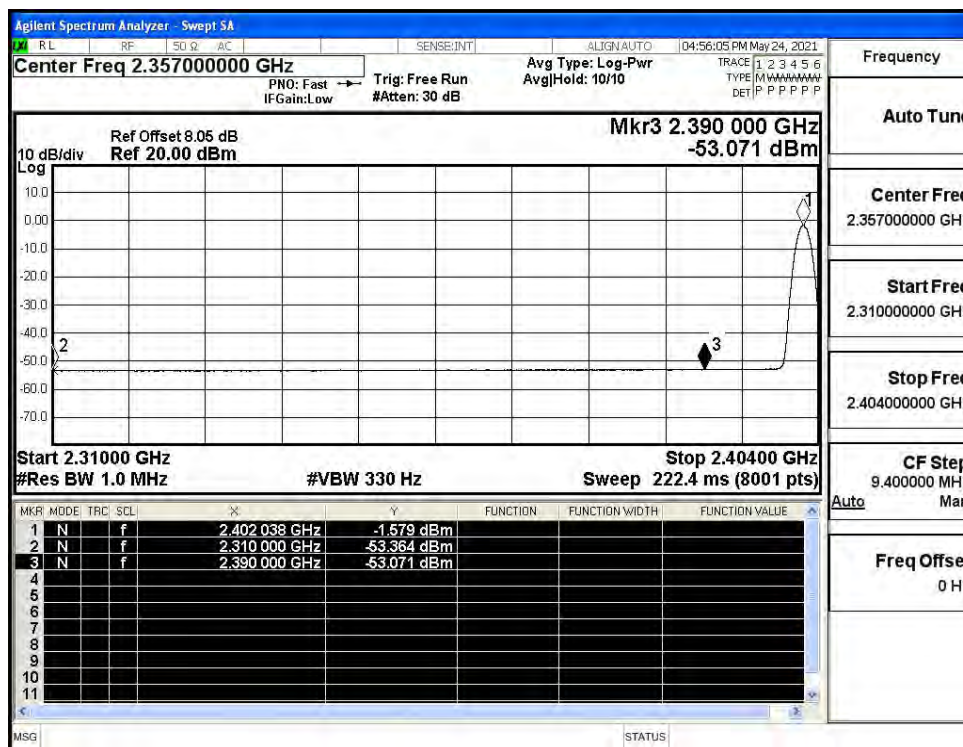


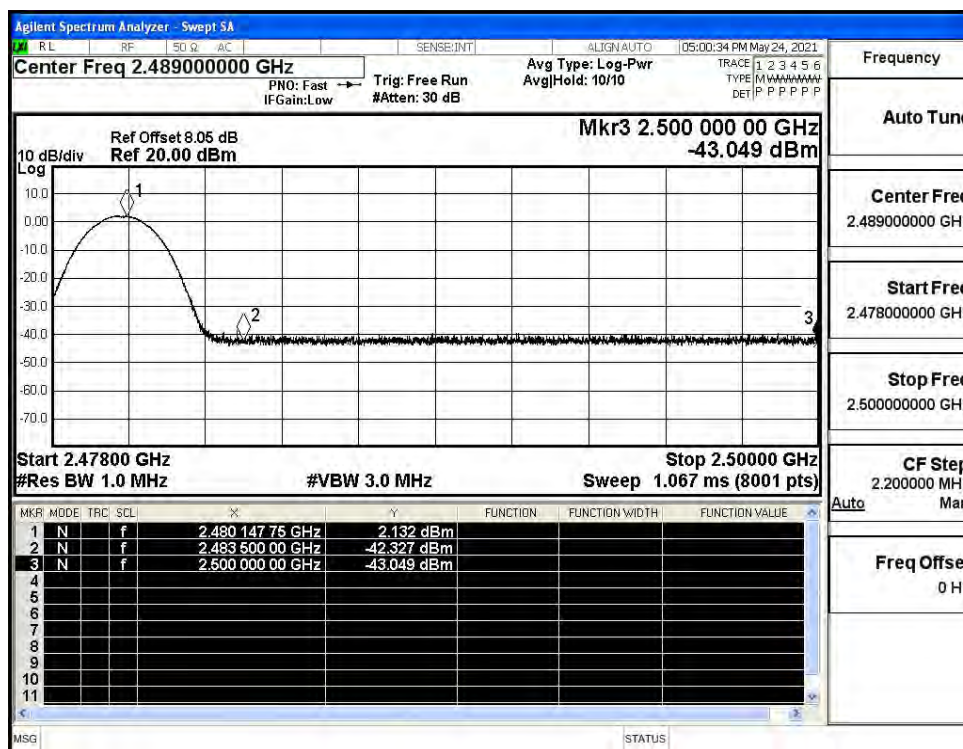
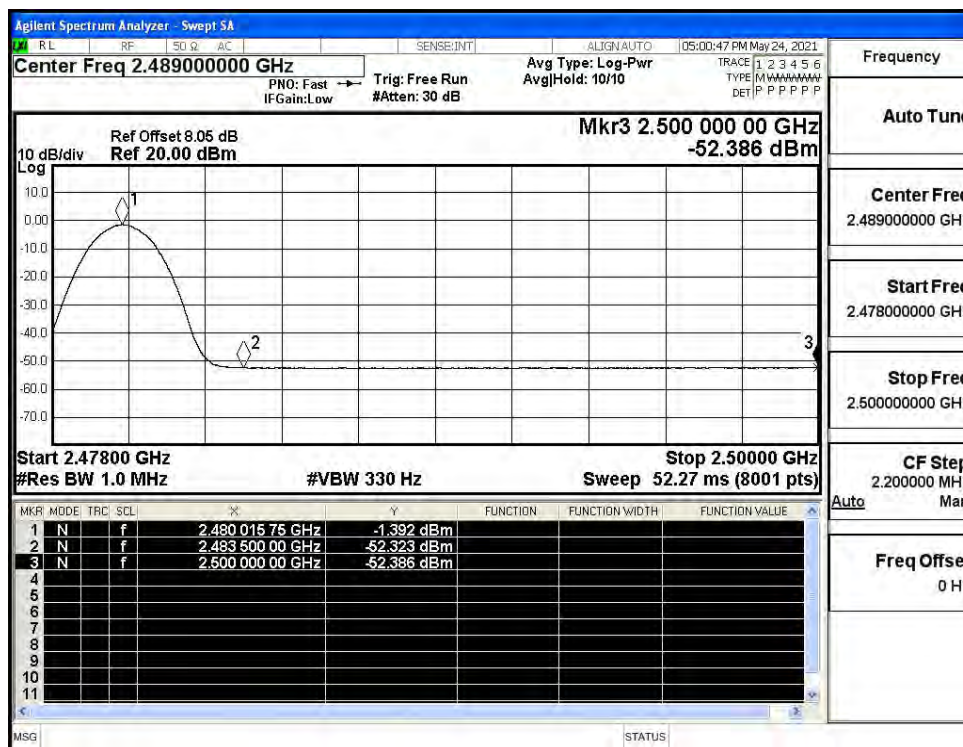
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



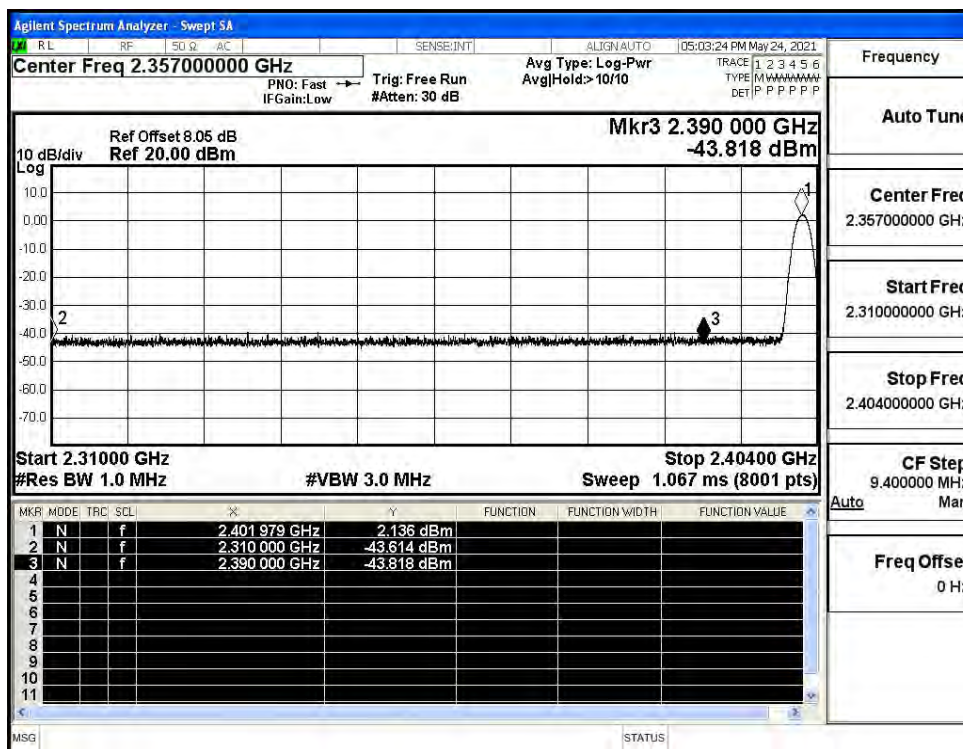
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



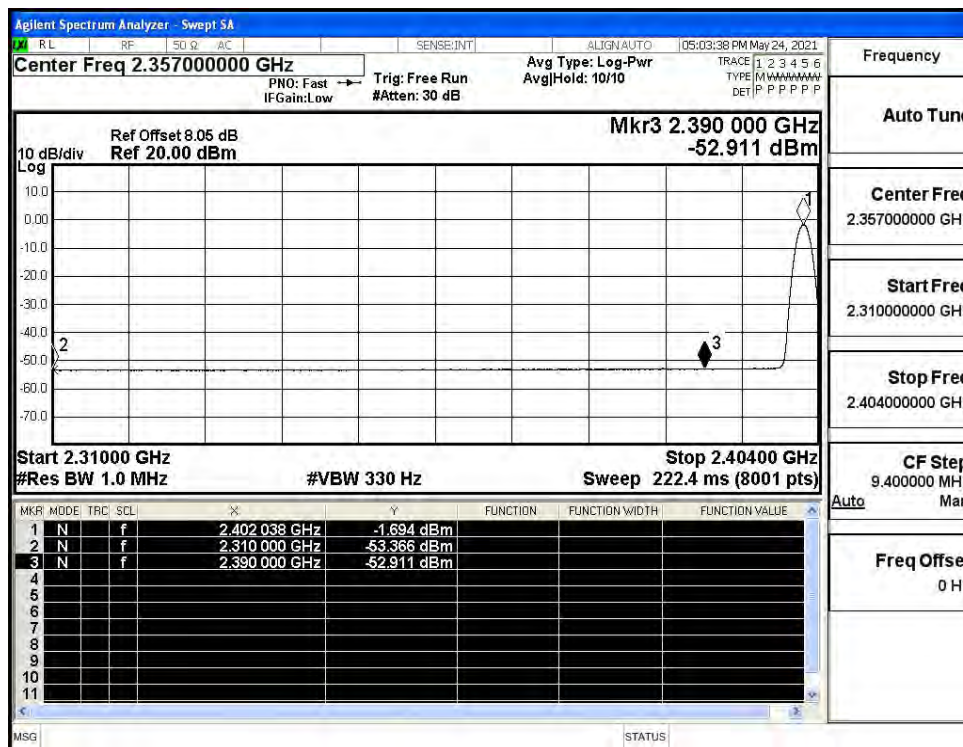
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

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)

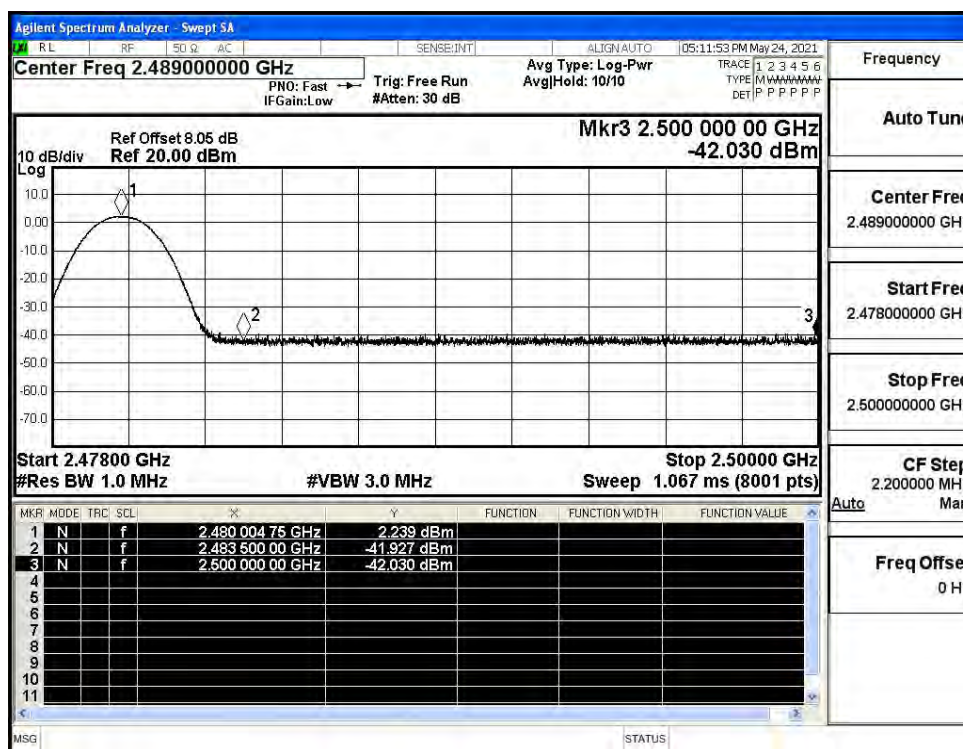
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

