

Appendix A

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

Product Name: White Noise Machine

Trade Mark: Mintal

Test Model: MW01

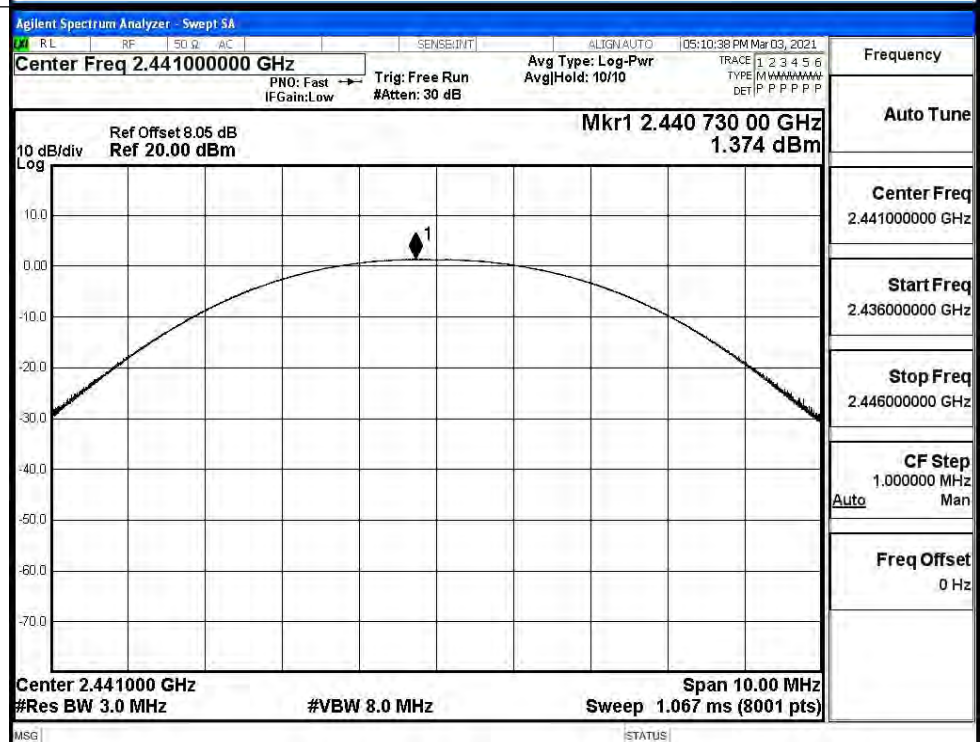
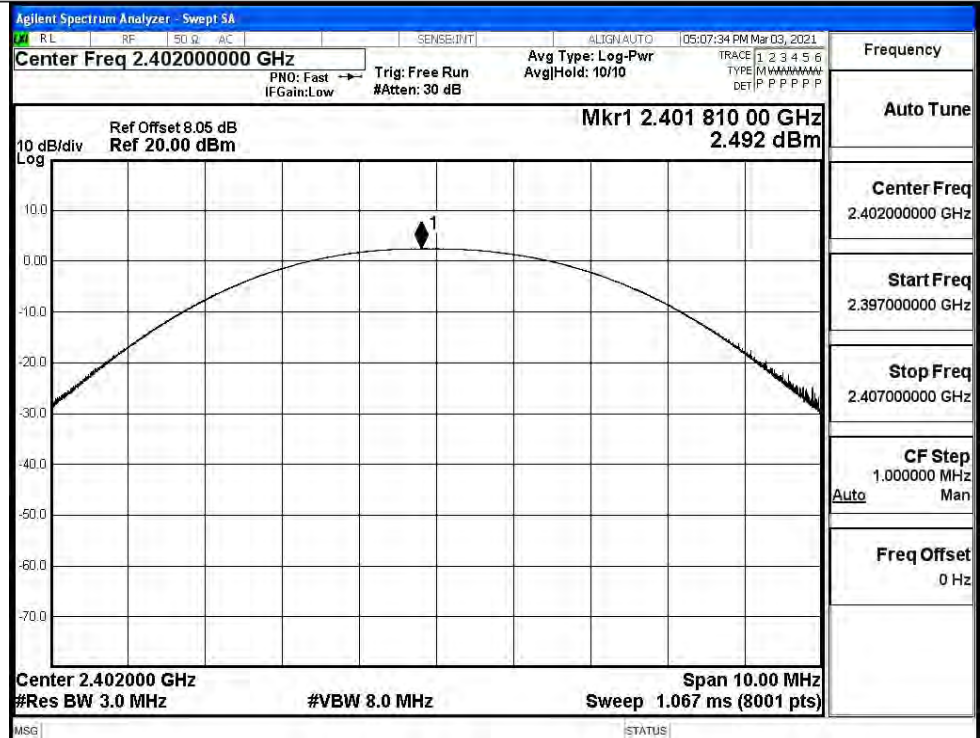
Environmental Conditions

Temperature:	24.2° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

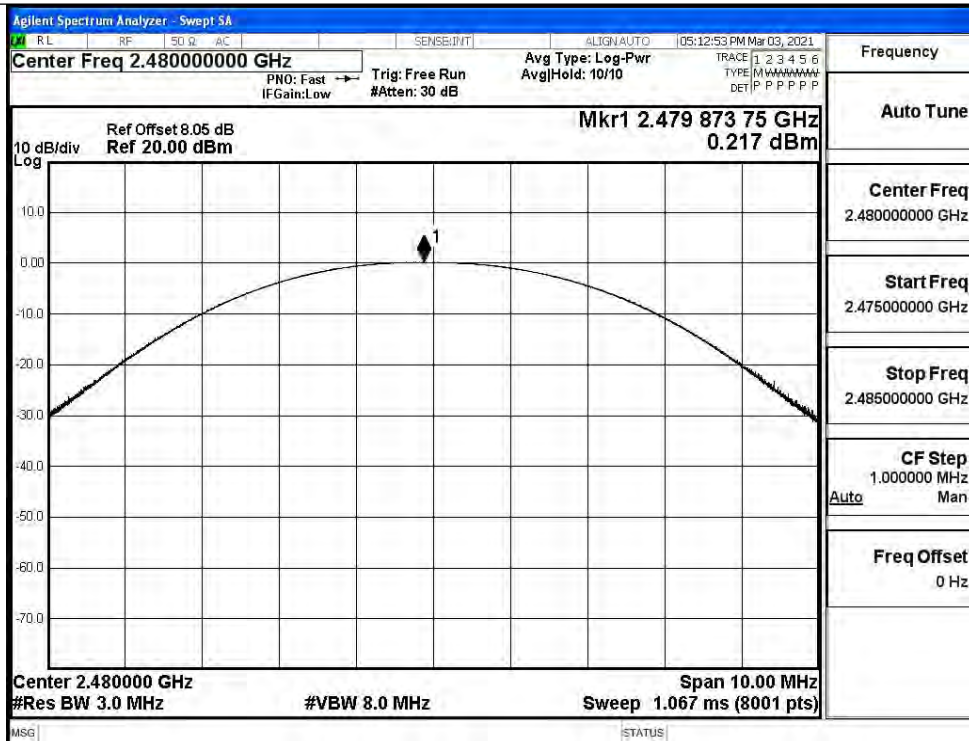
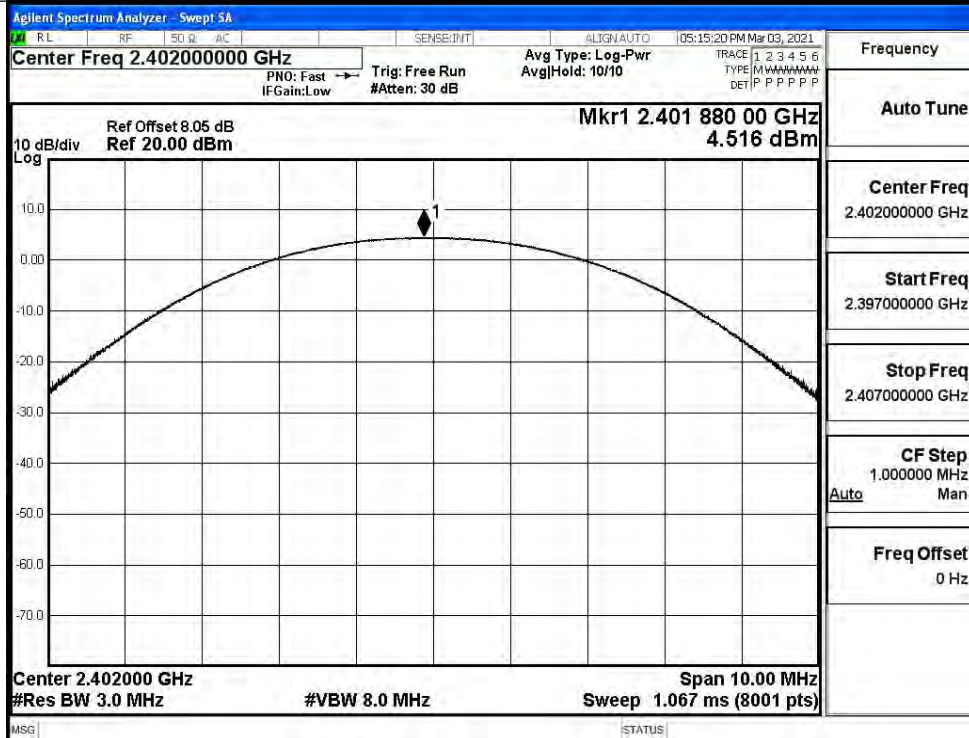
A.1 Maximum Conducted Peak Output Power

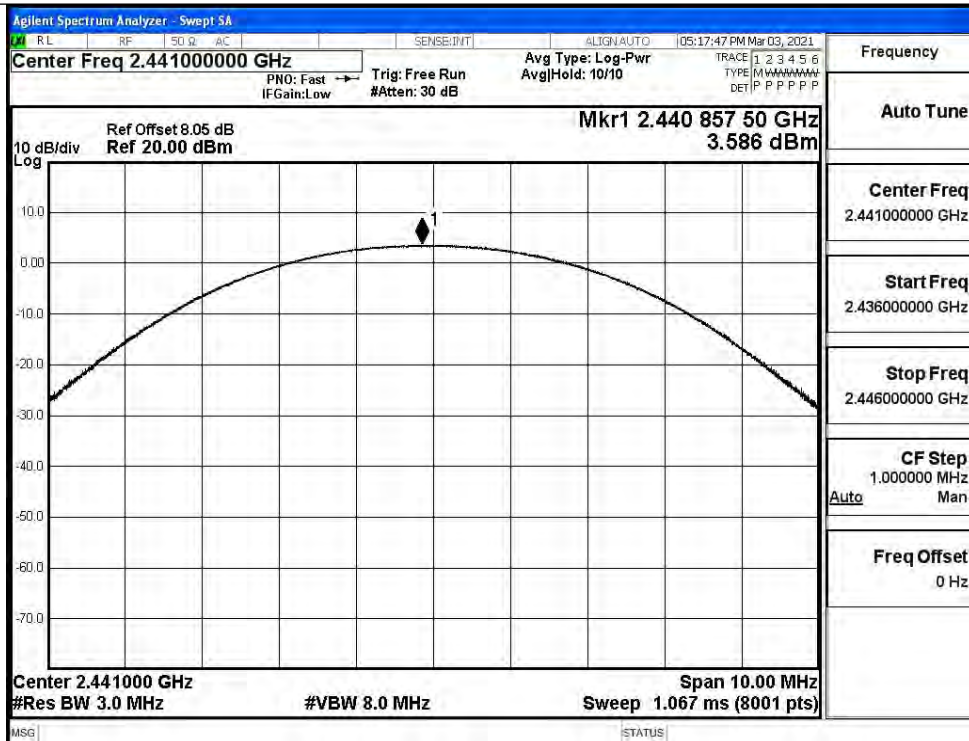
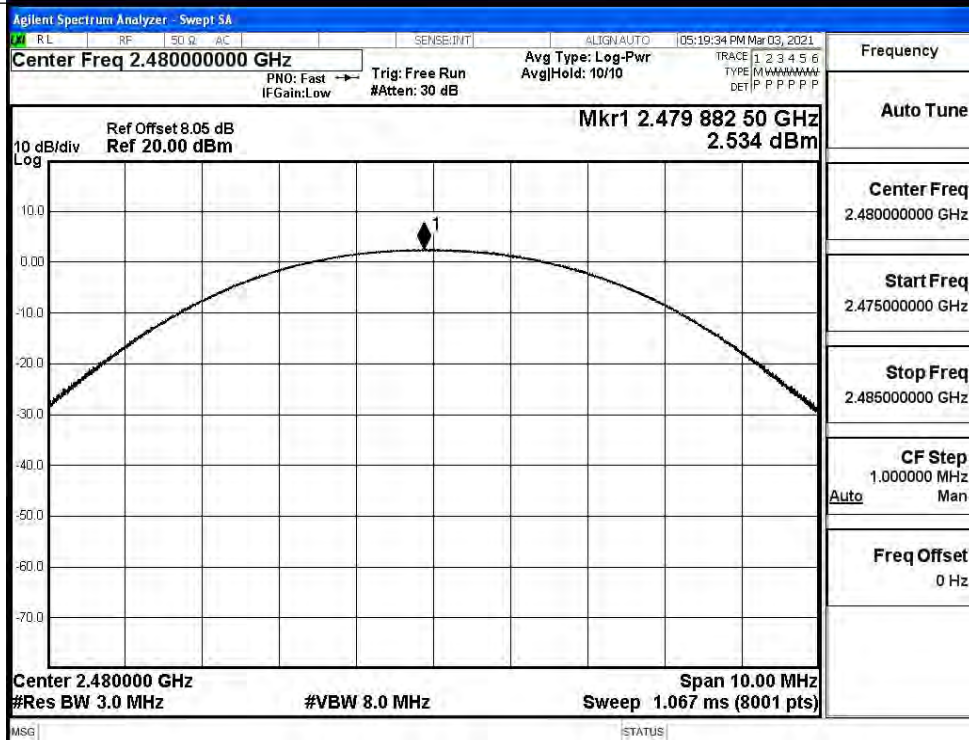
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.492	21	PASS
	MCH	1.374	21	PASS
	HCH	0.217	21	PASS
$\pi/4$ DQPSK	LCH	4.516	21	PASS
	MCH	3.586	21	PASS
	HCH	2.534	21	PASS
8DPSK	LCH	4.837	21	PASS
	MCH	4.225	21	PASS
	HCH	3.056	21	PASS

Test Graphs

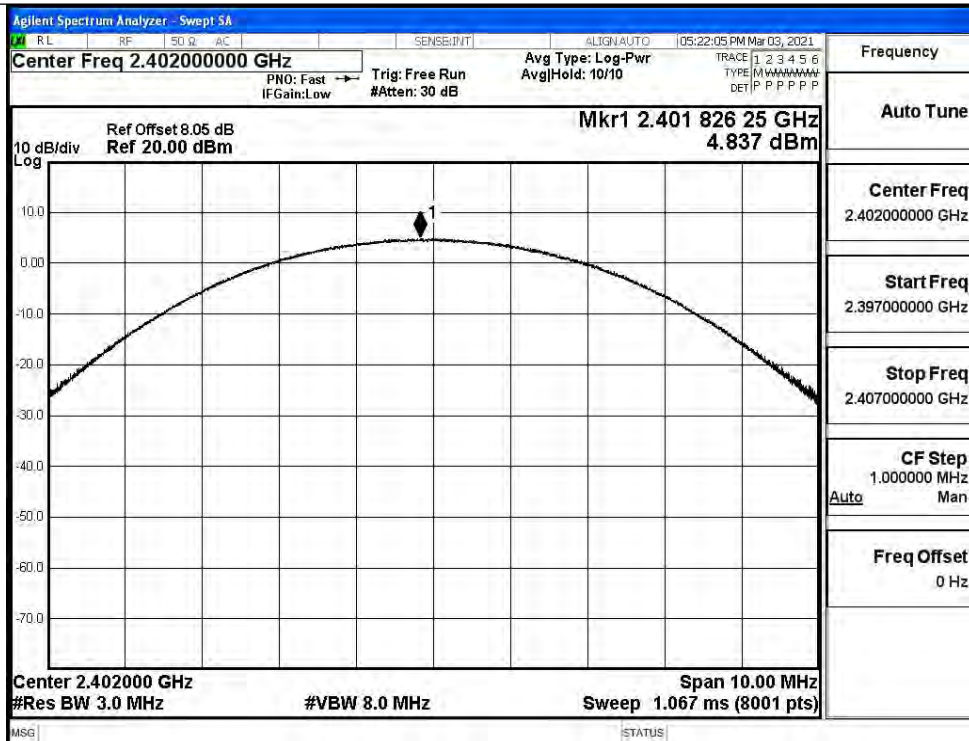


GFSK/HCH

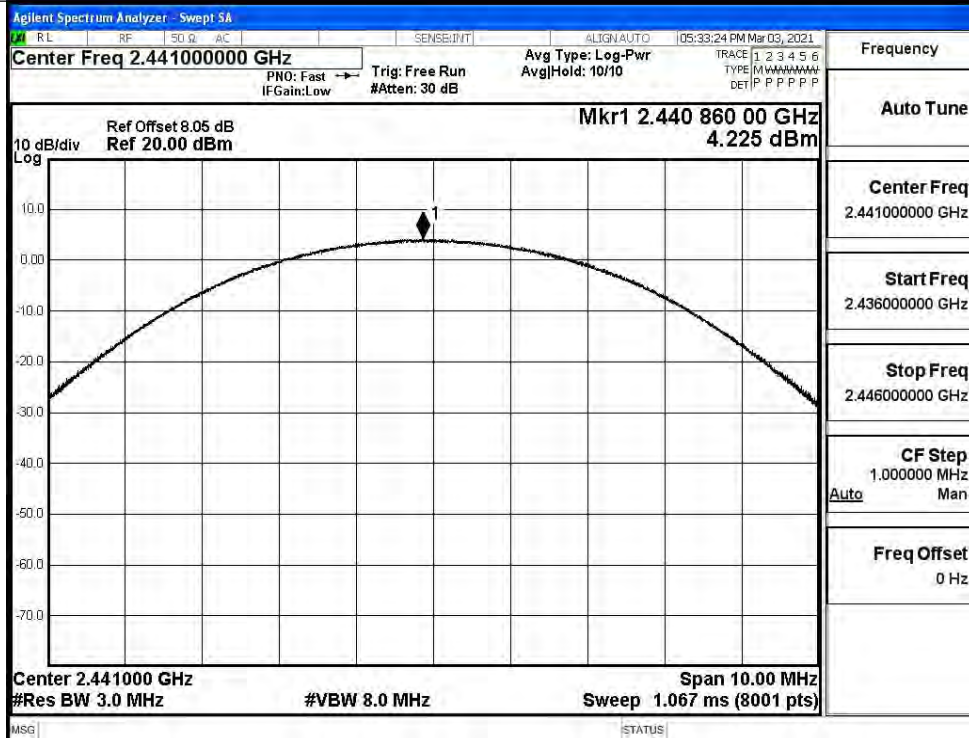
 π /4DQPSK/LCH

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

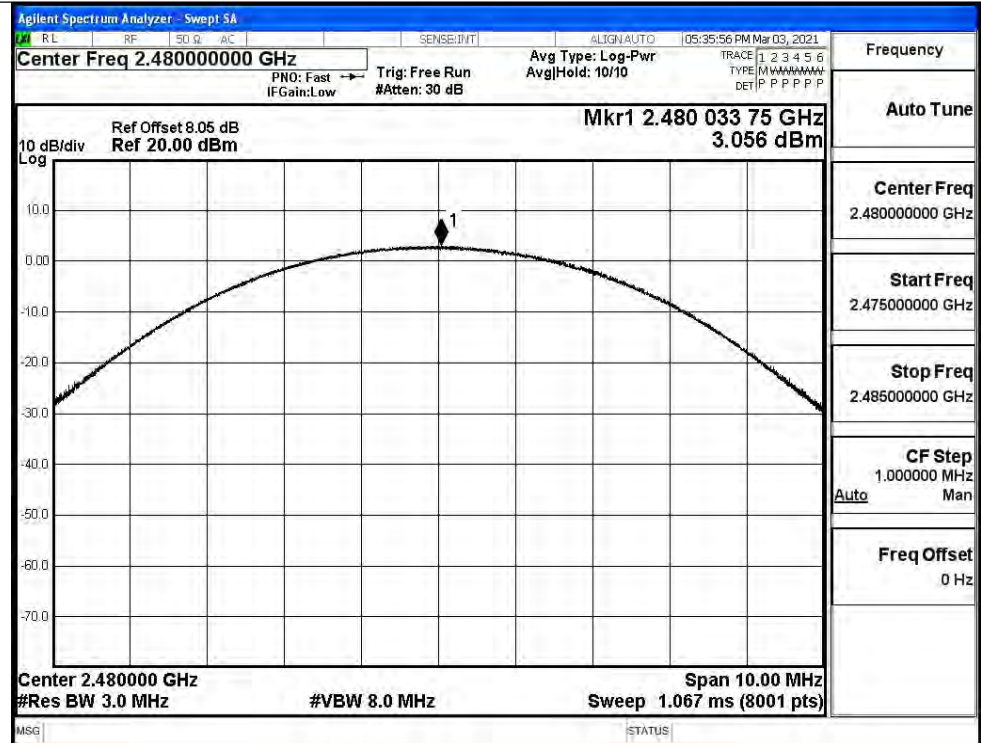
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

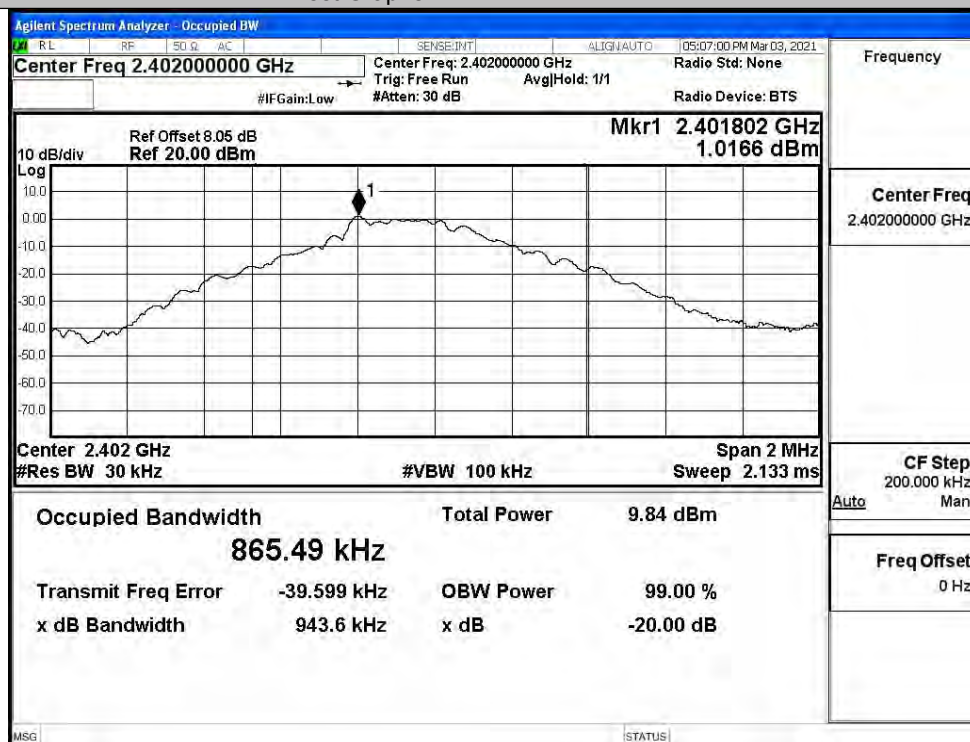


A.2 20dB Bandwidth

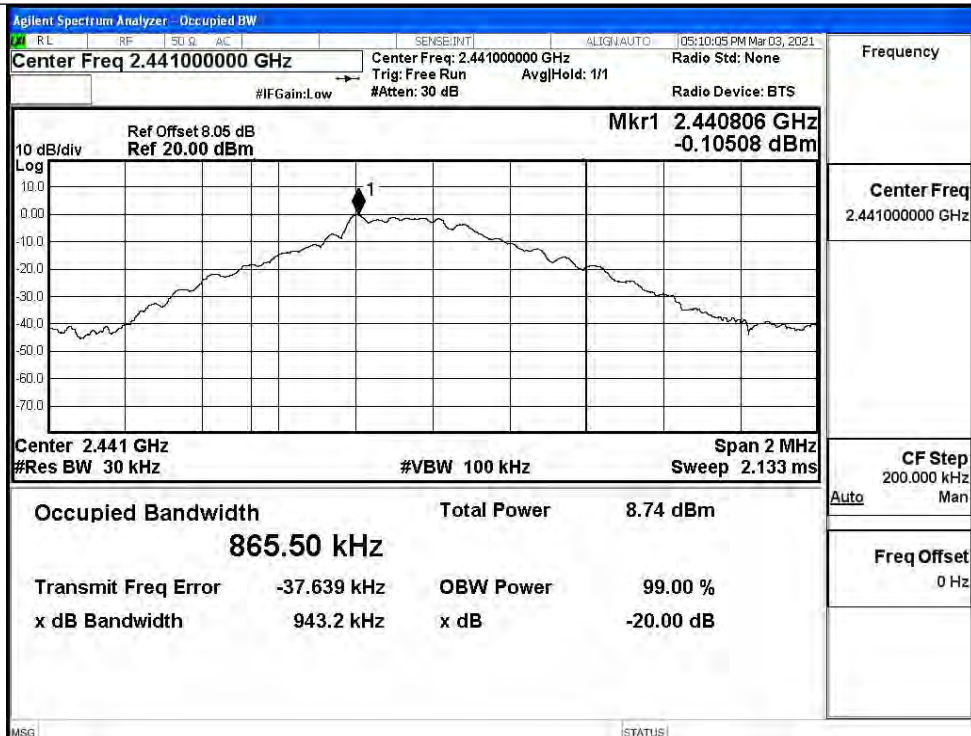
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9436	Not Specified	PASS
	MCH	0.9432	Not Specified	PASS
	HCH	0.9428	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.317	Not Specified	PASS
	MCH	1.316	Not Specified	PASS
	HCH	1.316	Not Specified	PASS
8DPSK	LCH	1.310	Not Specified	PASS
	MCH	1.309	Not Specified	PASS
	HCH	1.310	Not Specified	PASS

Test Graphs

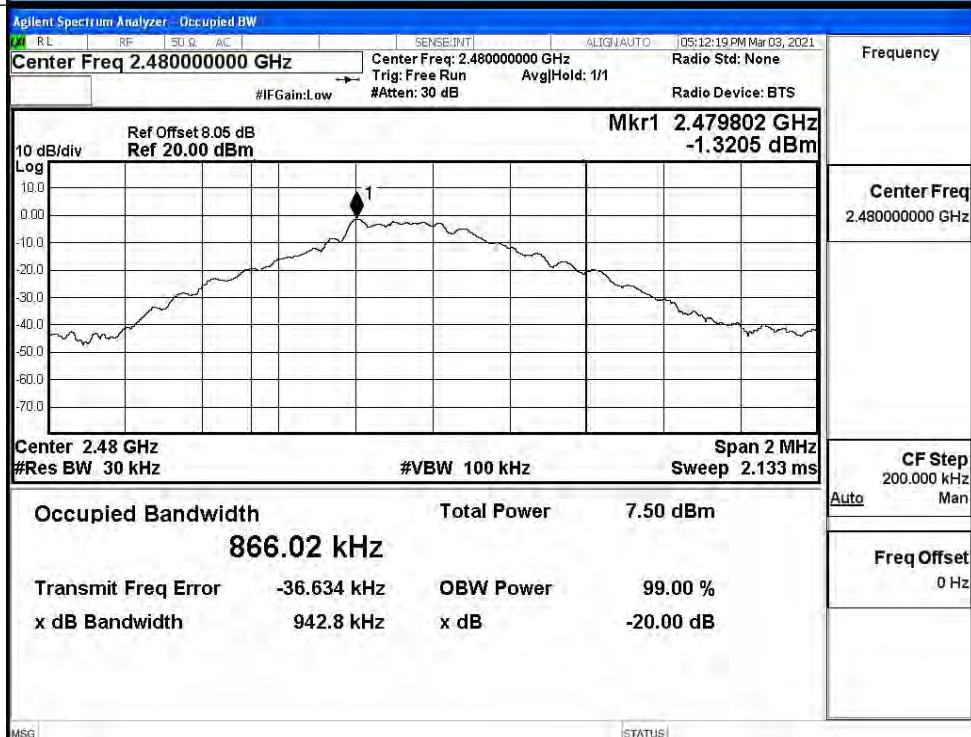
GFSK/LCH

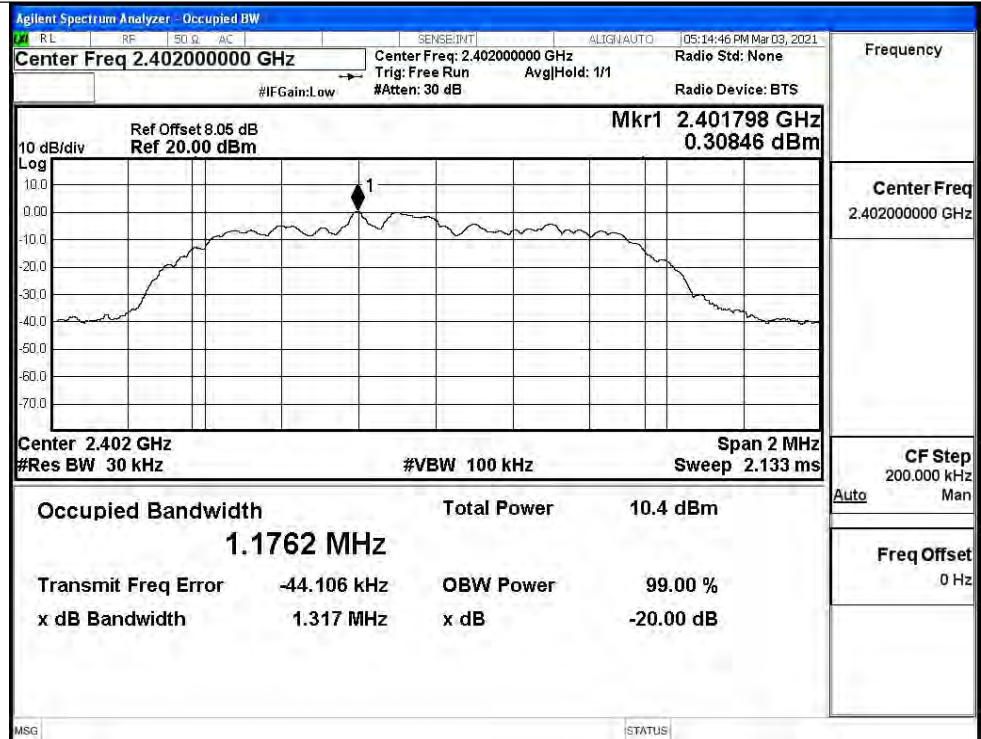
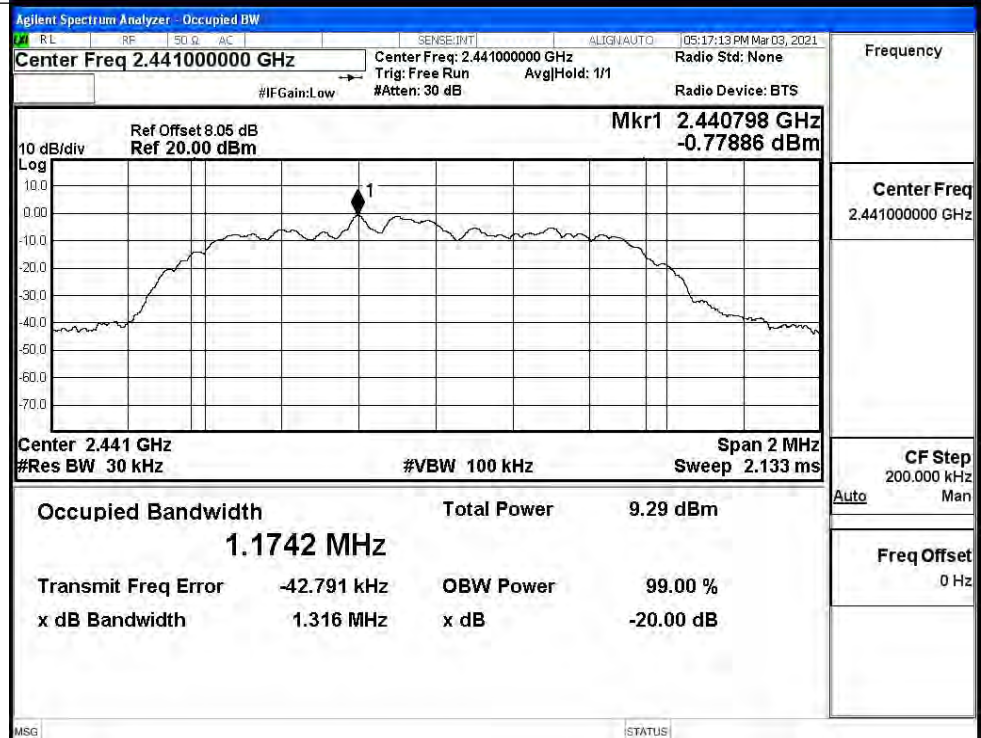


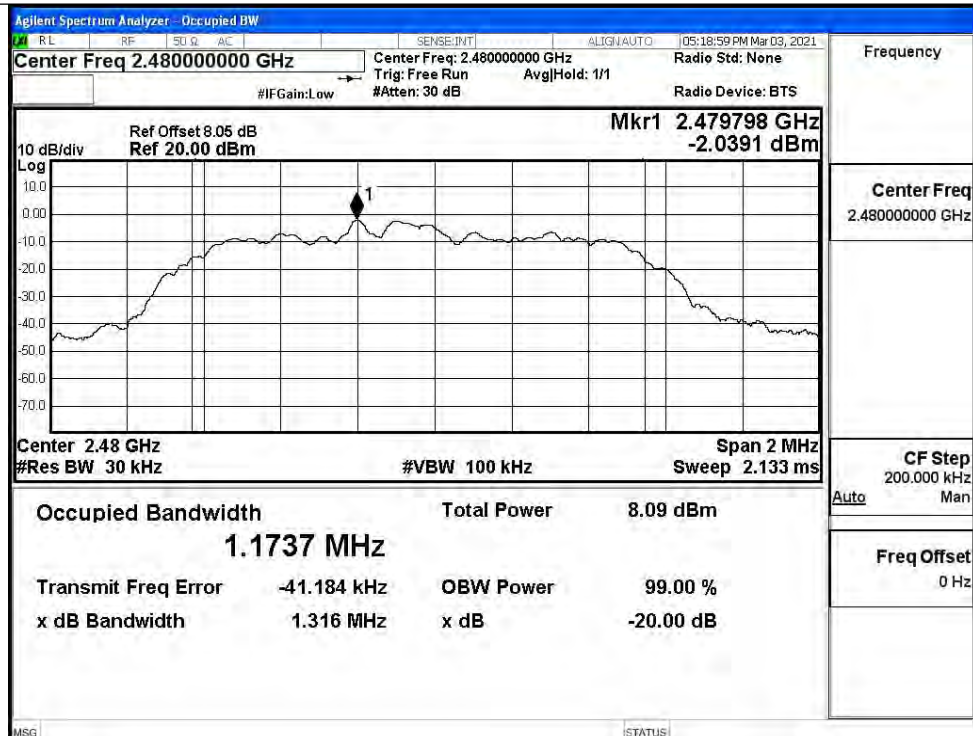
GFSK/MCH



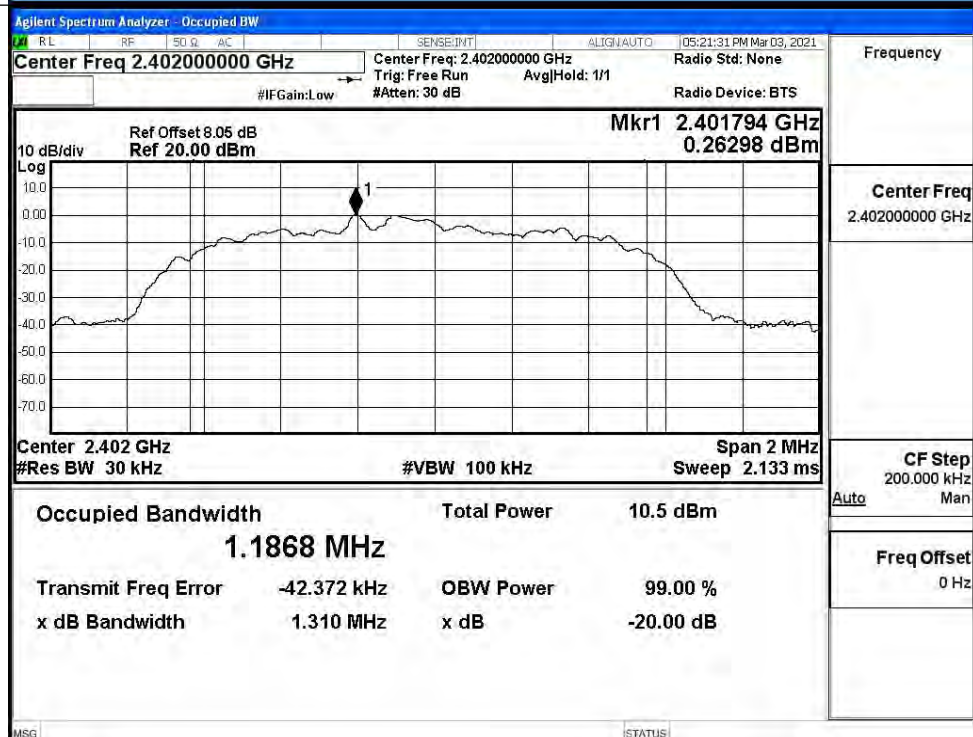
GFSK/HCH



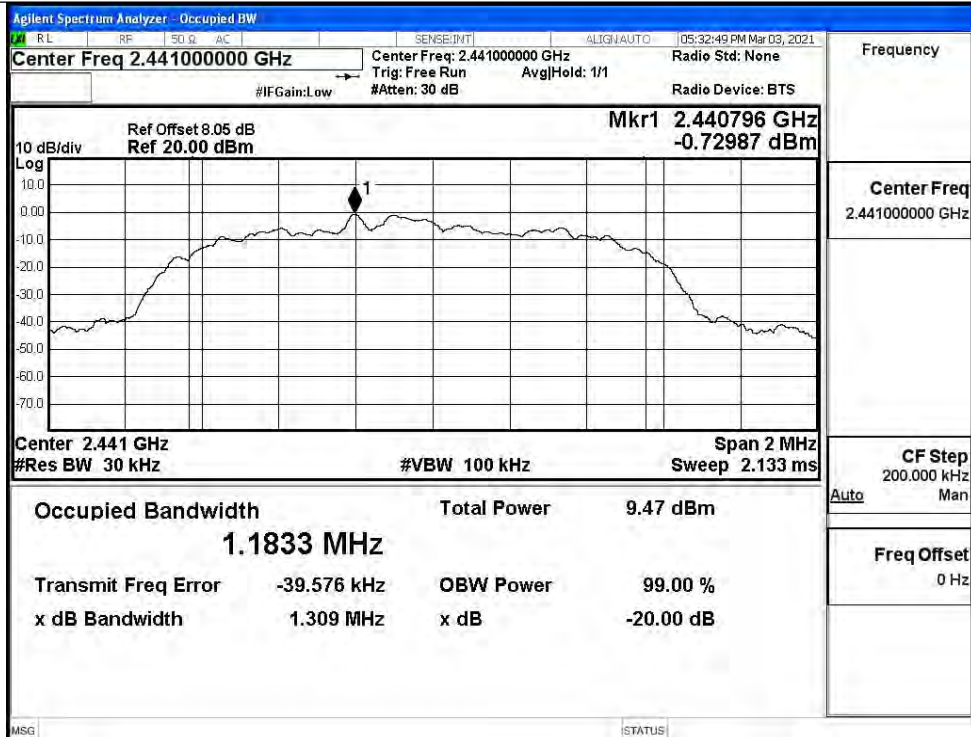
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

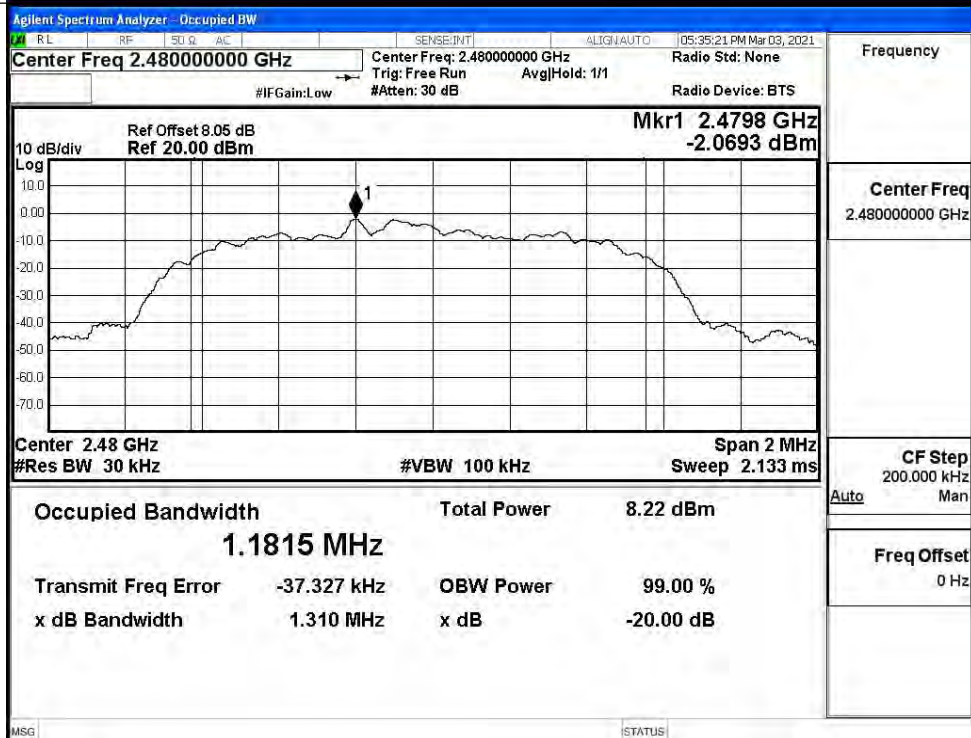
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

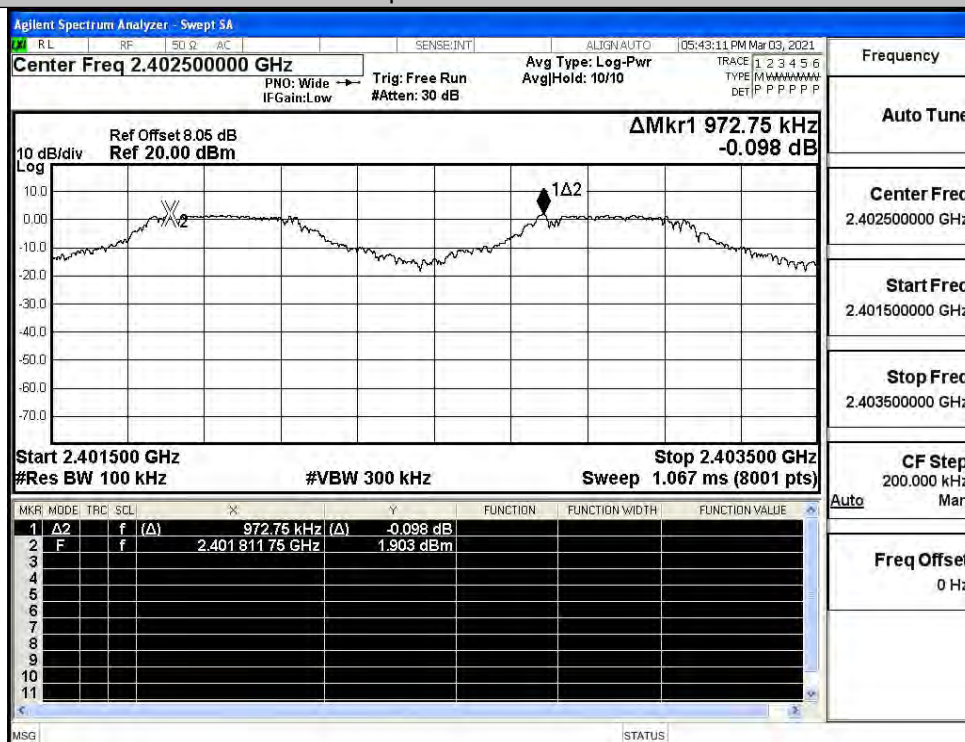


A.3 Carrier Frequency Separation

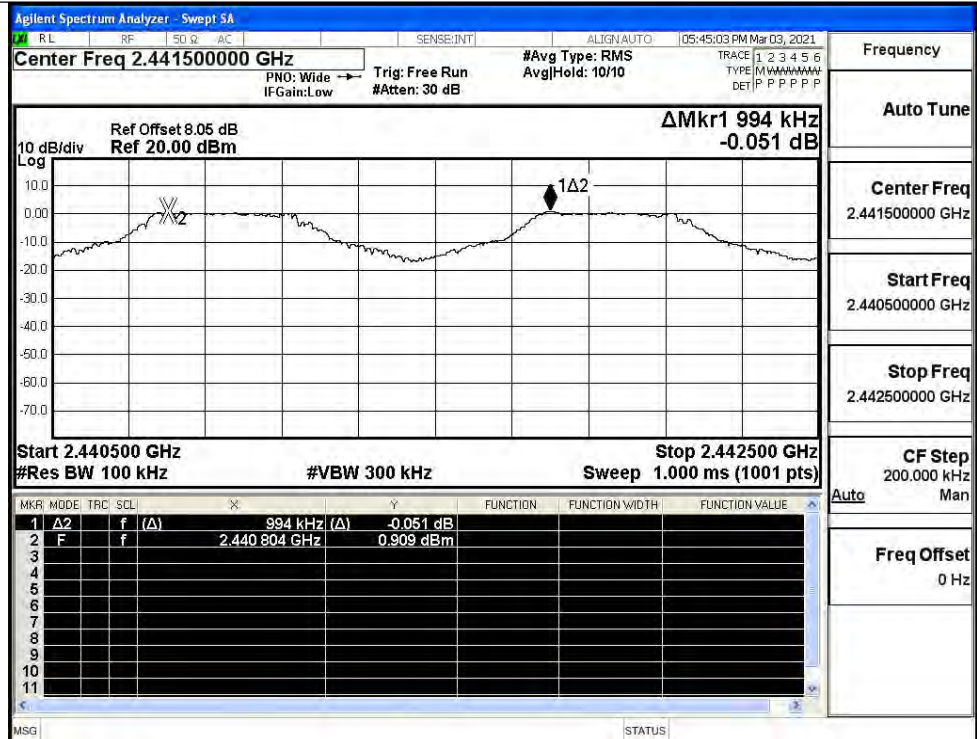
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.973	0.629	PASS
	MCH	0.994	0.629	PASS
	HCH	1.000	0.629	PASS
$\pi/4$ DQPSK	LCH	1.020	0.878	PASS
	MCH	0.972	0.877	PASS
	HCH	0.994	0.877	PASS
8DPSK	LCH	0.976	0.873	PASS
	MCH	1.004	0.873	PASS
	HCH	0.998	0.873	PASS

Test Graphs

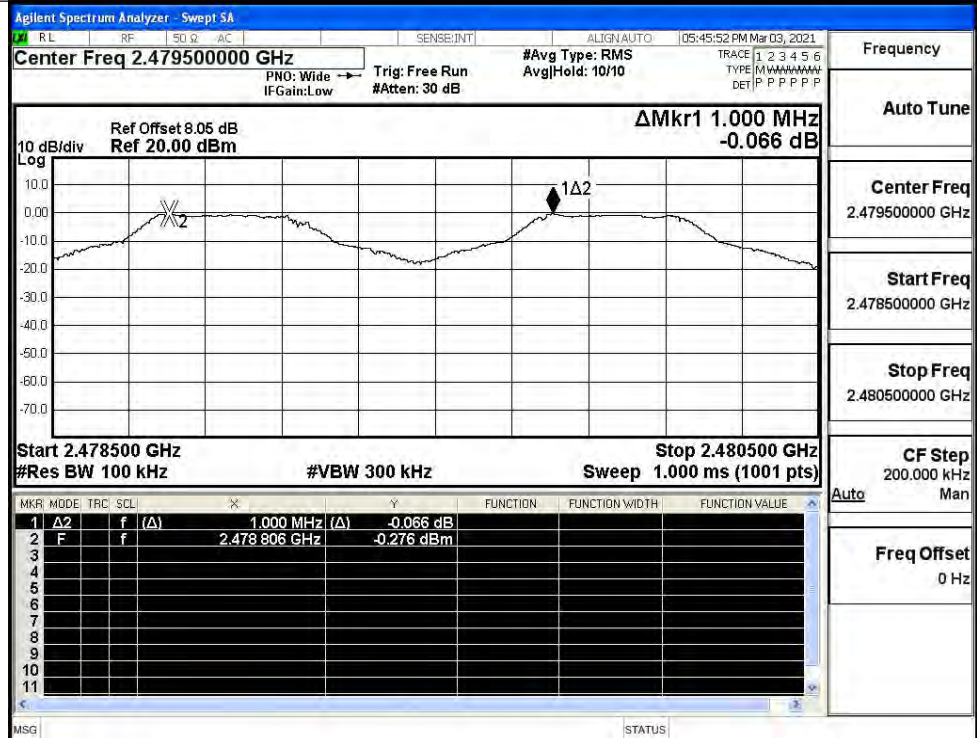
GFSK/LCH

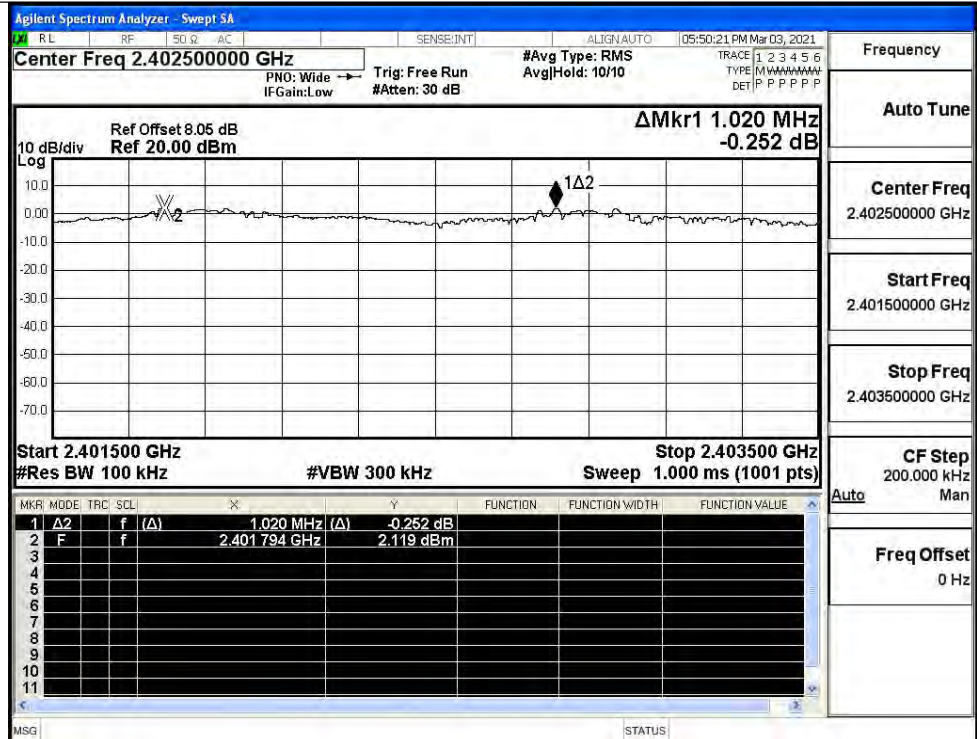
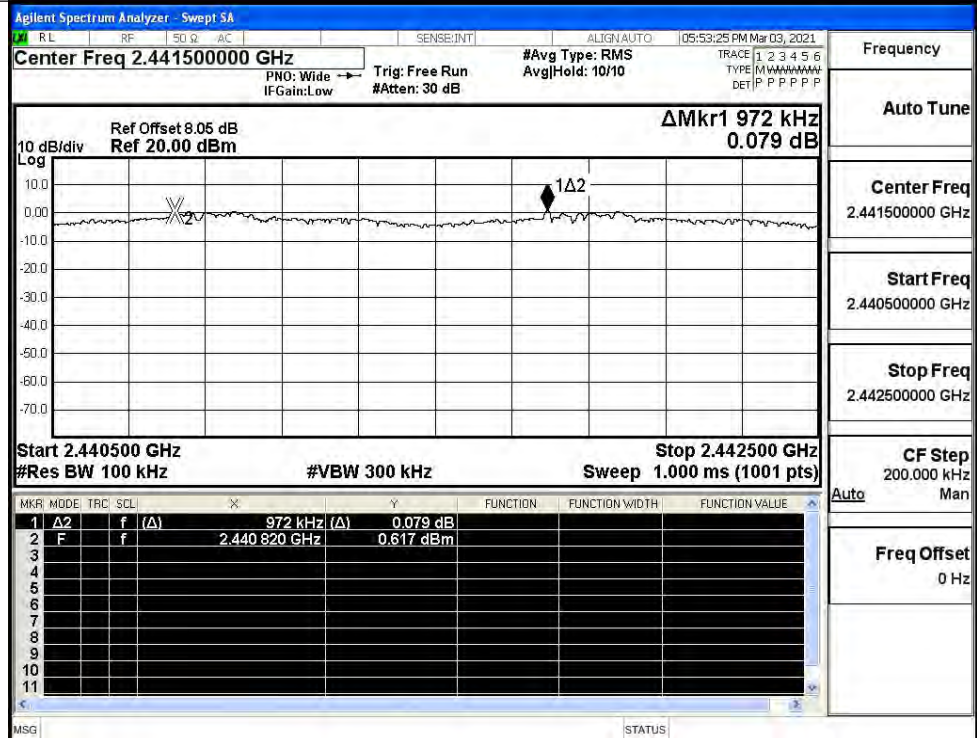


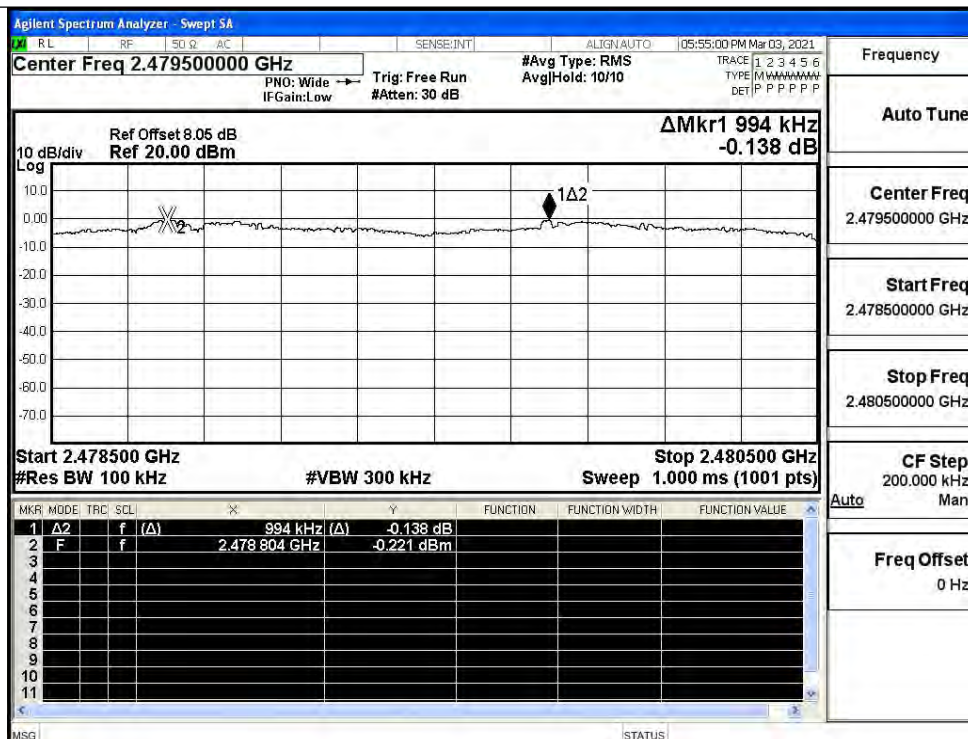
GFSK/MCH



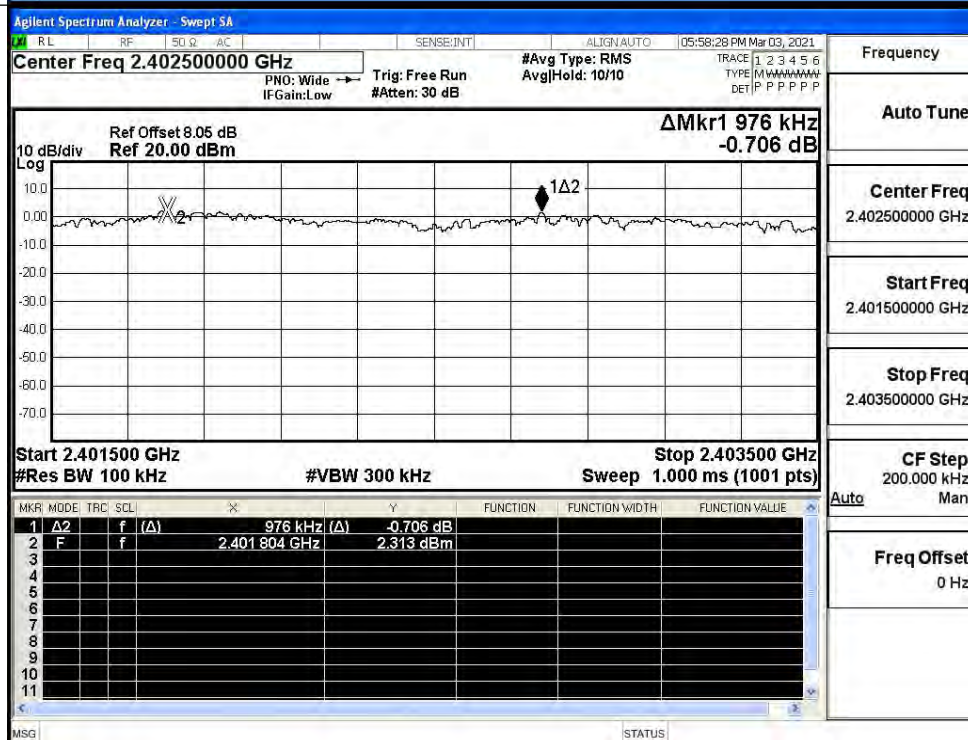
GFSK/HCH



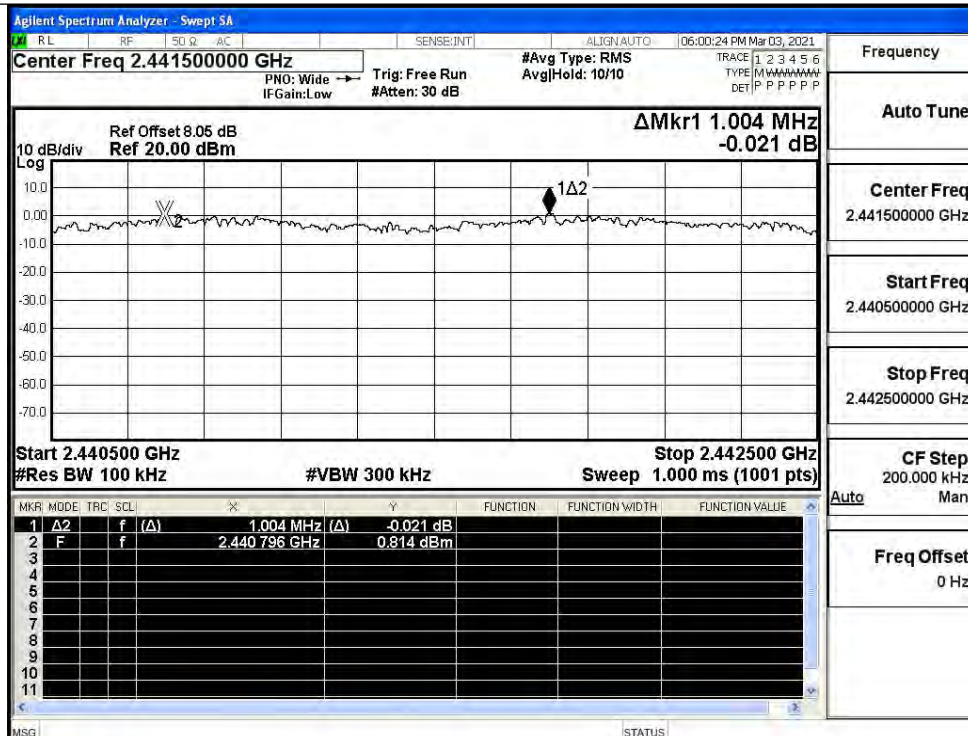
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

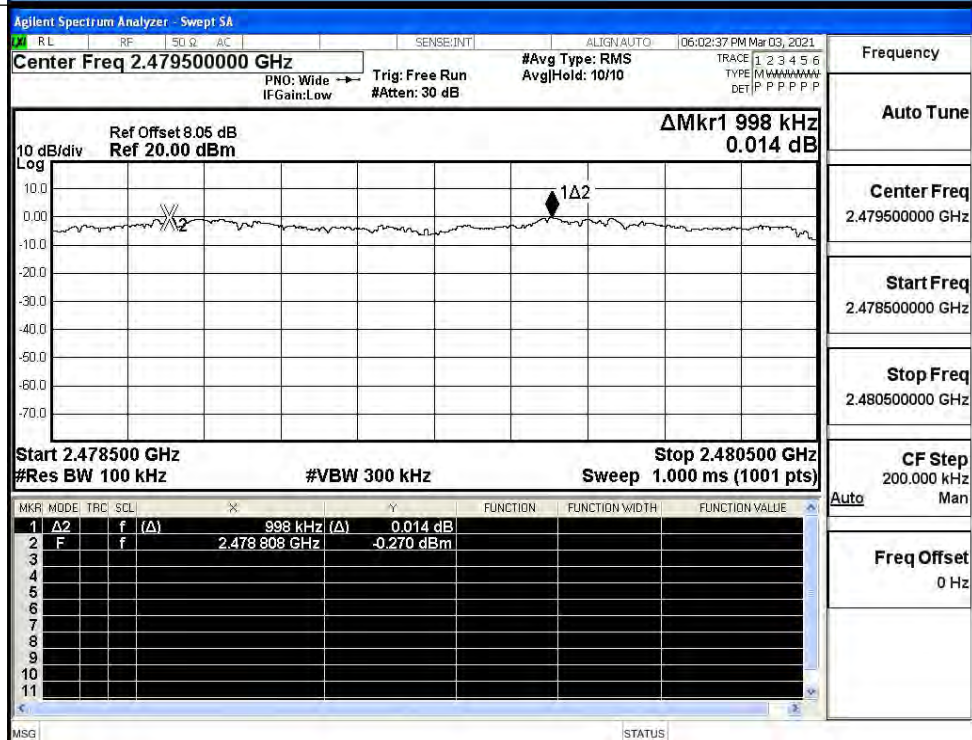
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

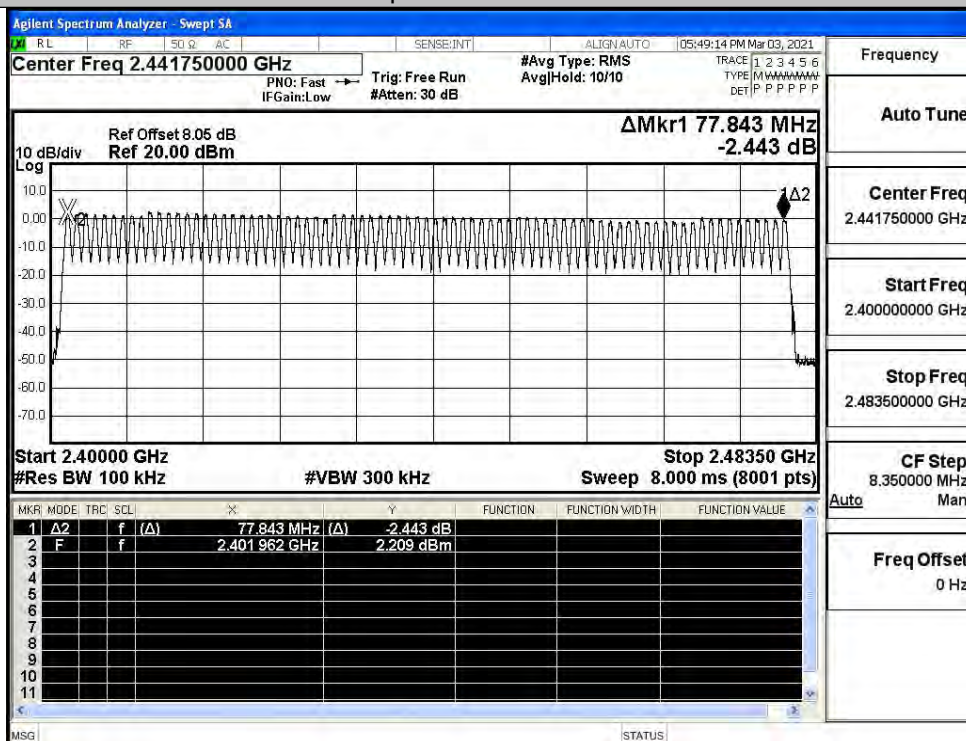
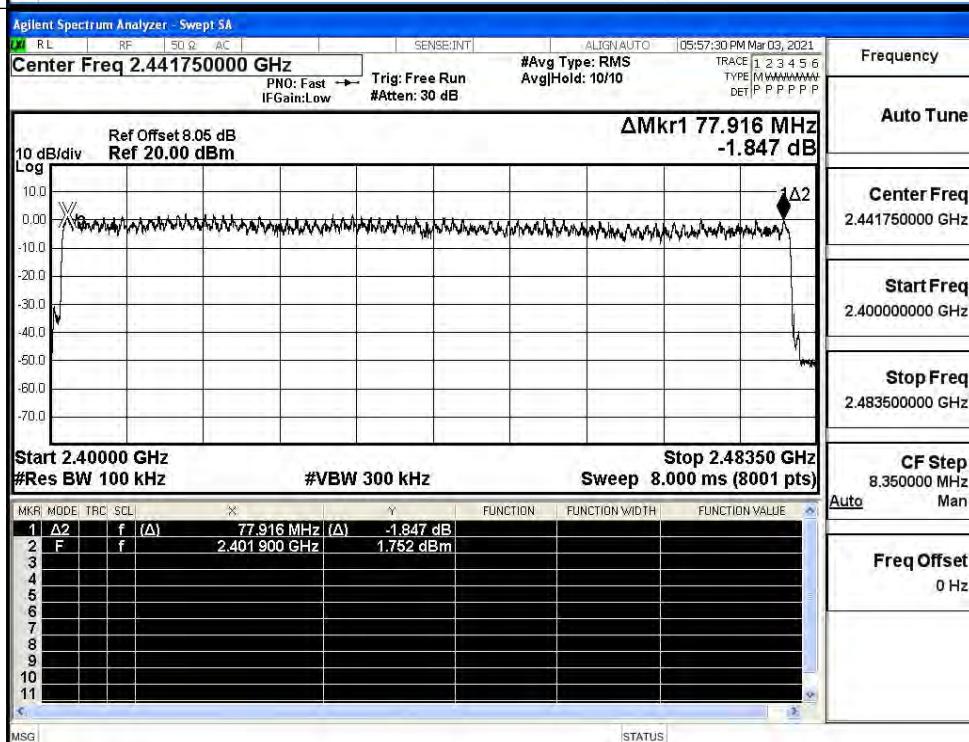


A.4 Hopping Channel Number

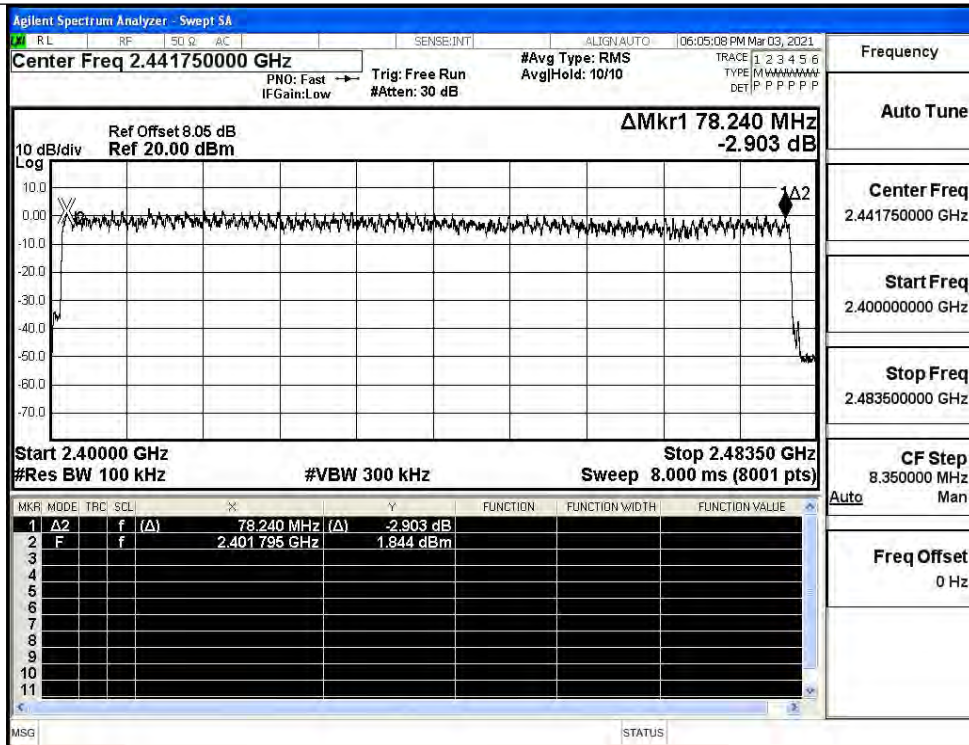
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS
8DPSK	Hop	79	≥ 15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

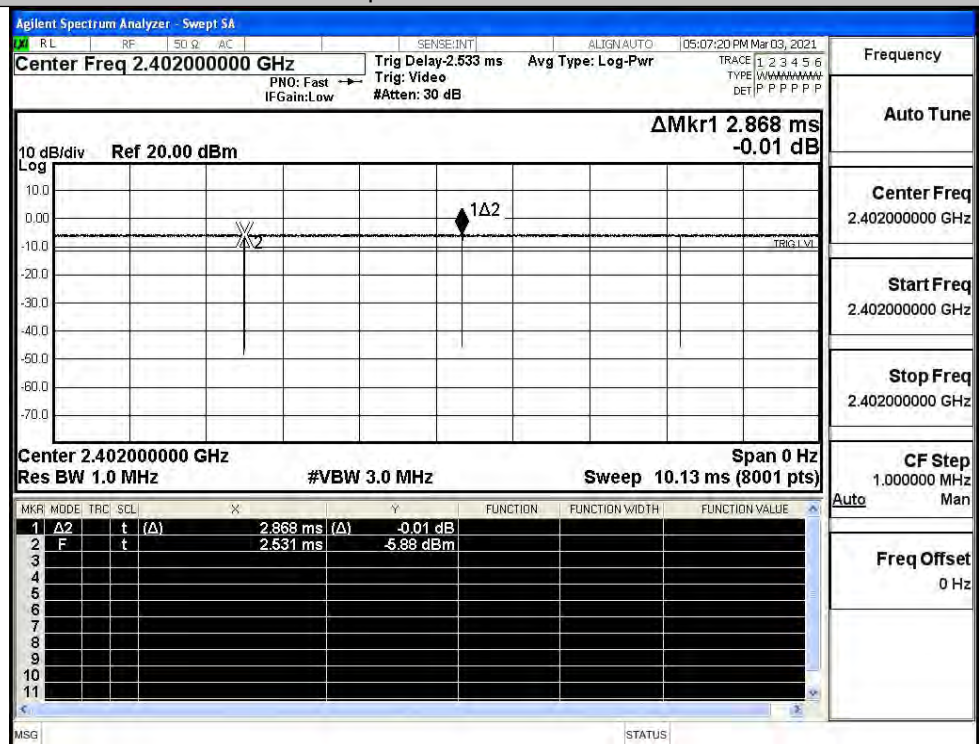


A.5 Dwell Time

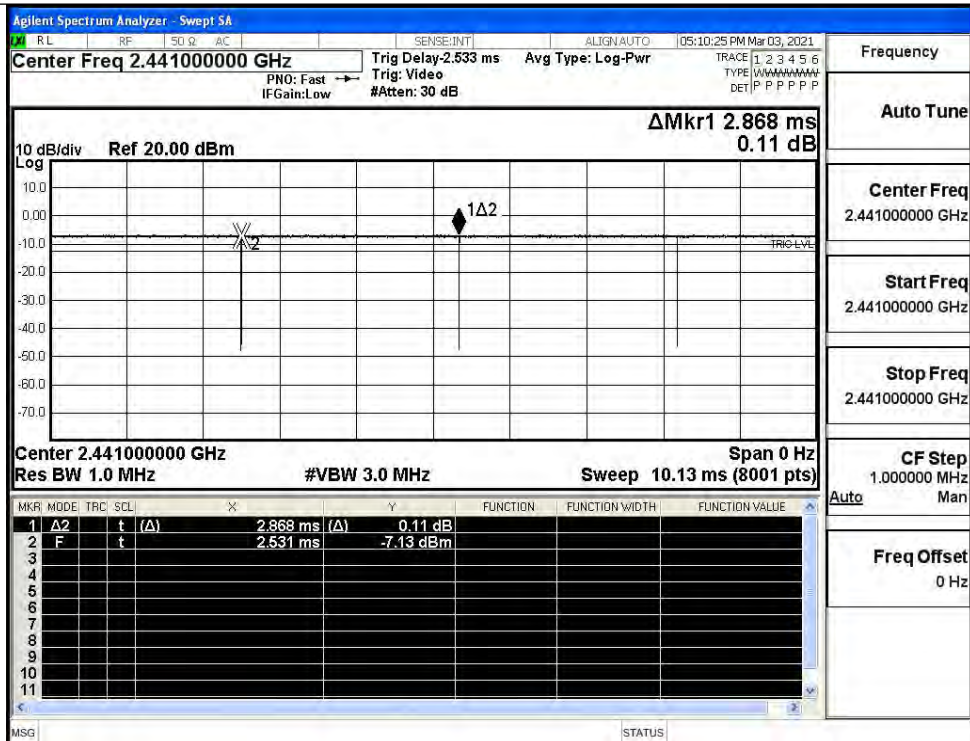
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.87	106.7	0.306	0.4	PASS
	DH5	MCH	2.87	106.7	0.306	0.4	PASS
	DH5	HCH	2.87	106.7	0.306	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.87	106.7	0.306	0.4	PASS
	2DH5	MCH	2.87	106.7	0.306	0.4	PASS
	2DH5	HCH	2.87	106.7	0.306	0.4	PASS
8DPSK	3DH5	LCH	2.87	106.7	0.306	0.4	PASS
	3DH5	MCH	2.87	106.7	0.306	0.4	PASS
	3DH5	HCH	2.87	106.7	0.306	0.4	PASS

Test Graphs

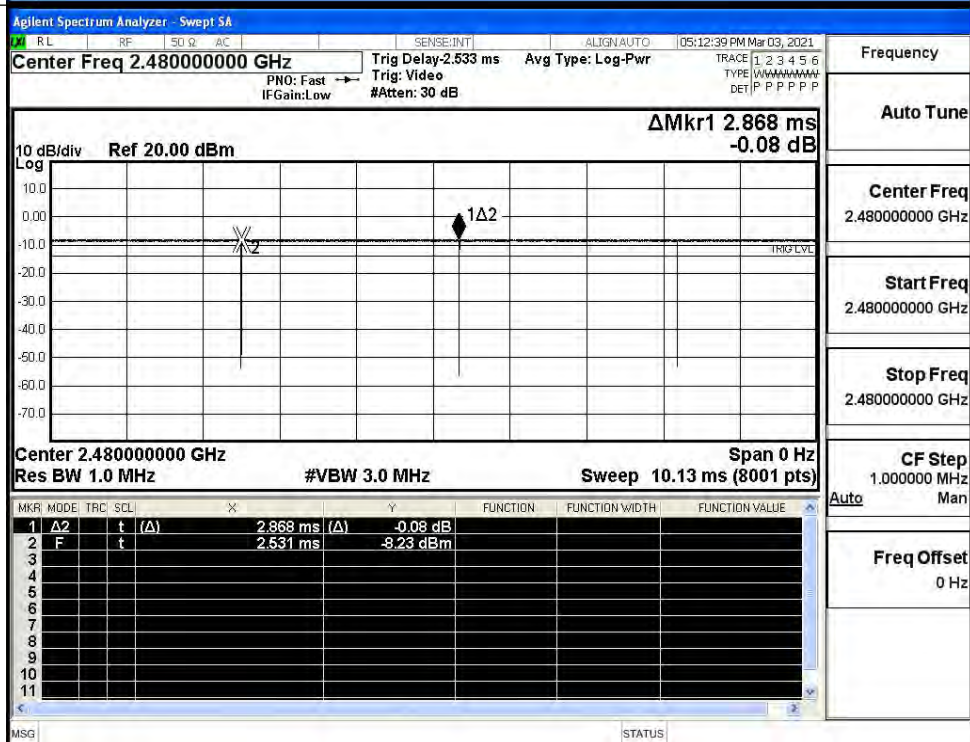
GFSK_DH5/LCH



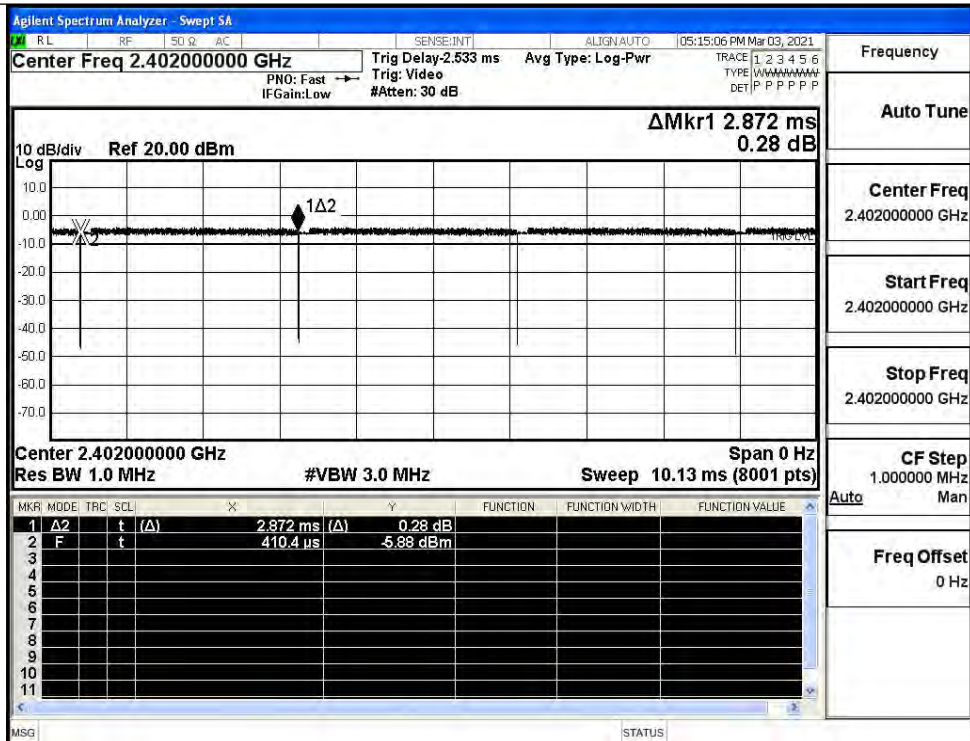
GFSK_DH5/MCH



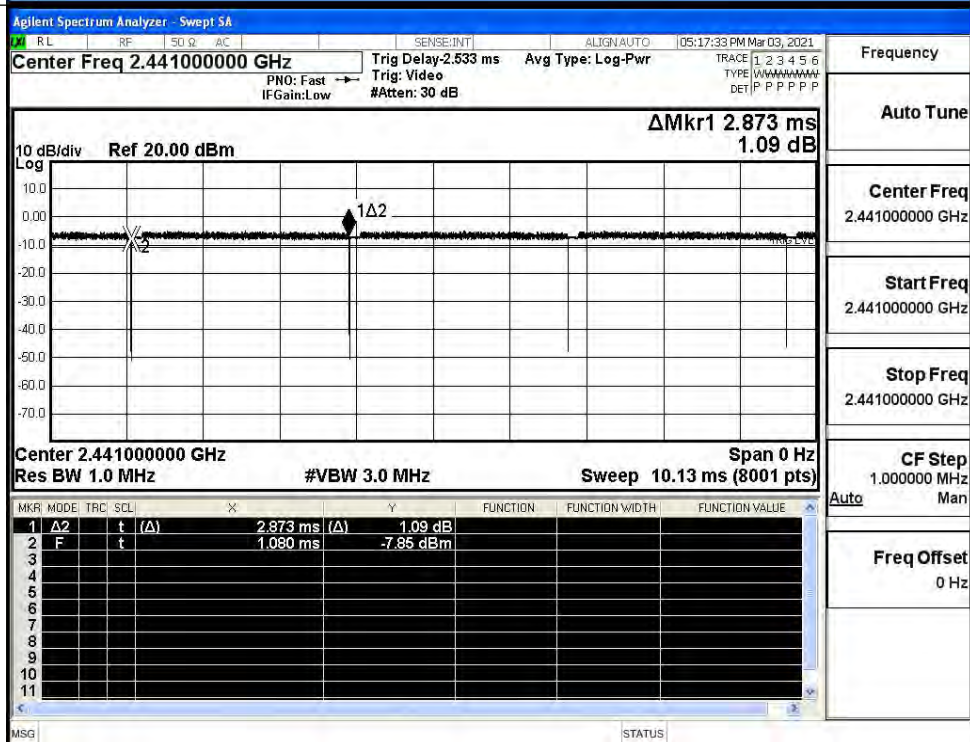
GFSK_DH5/HCH



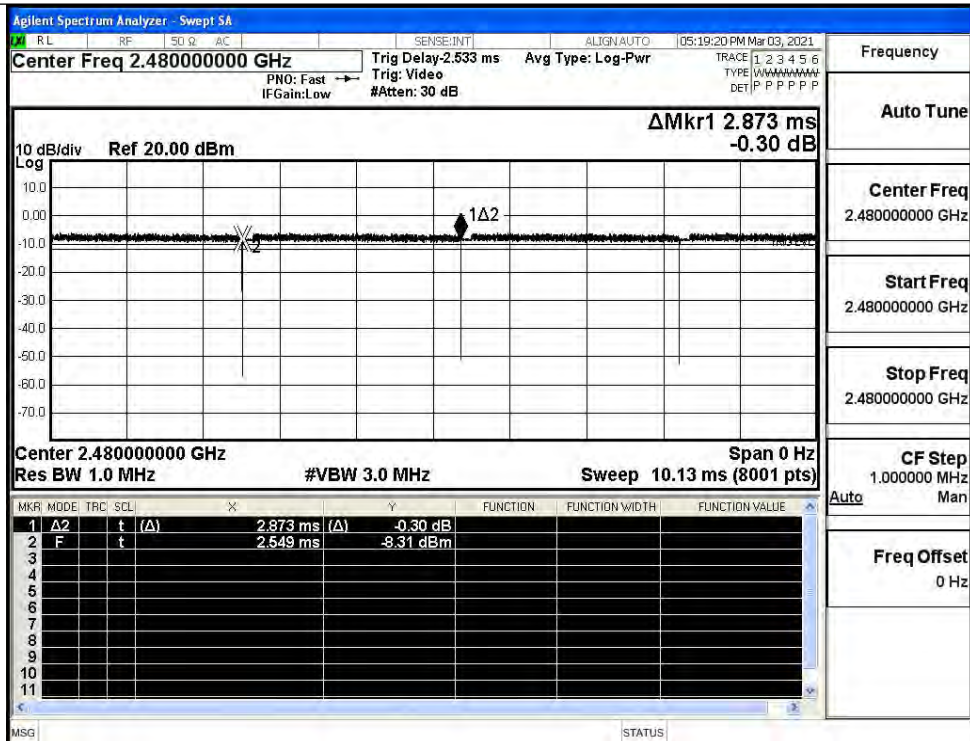
$\pi/4$ DQPSK
_2DH5/LCH



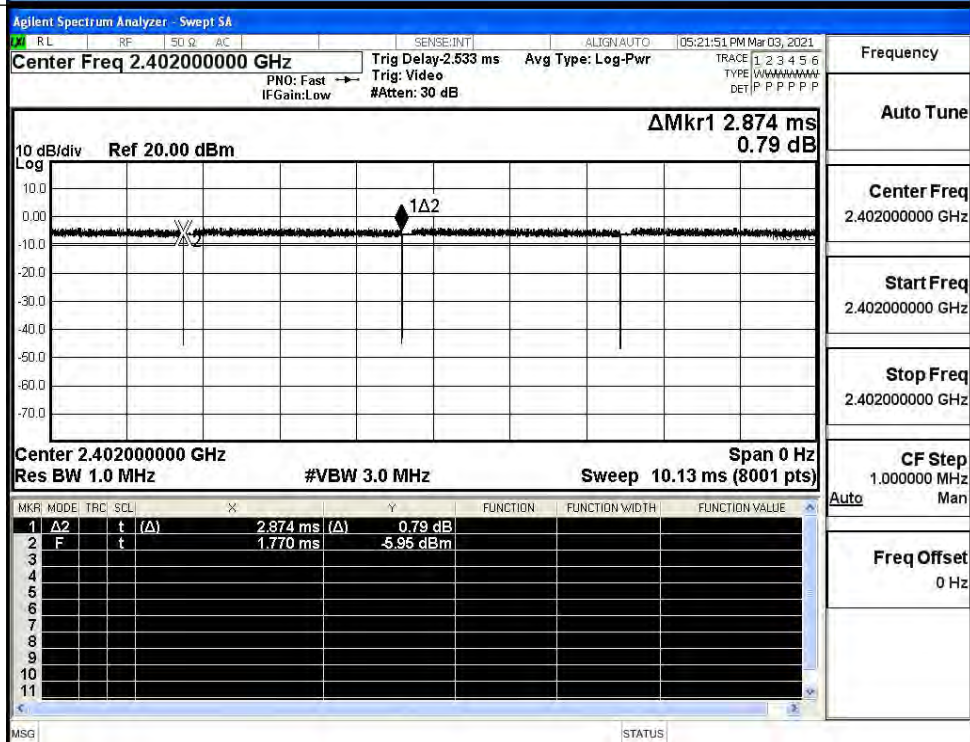
$\pi/4$ DQPSK
_2DH5/MCH



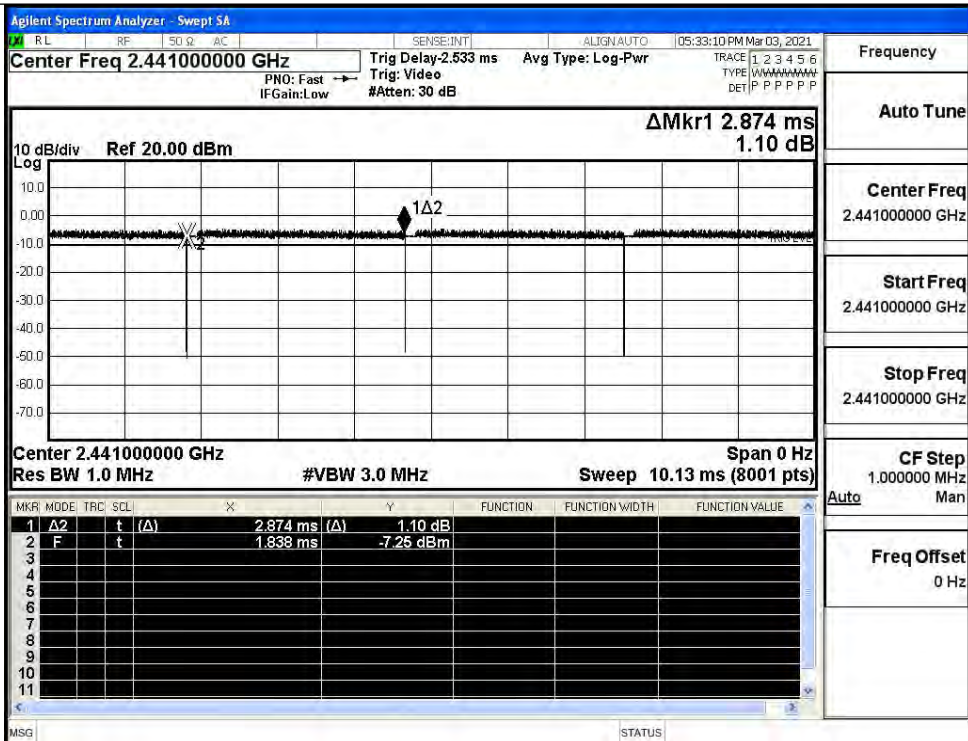
$\pi/4$ DQPSK
_2DH5/HCH



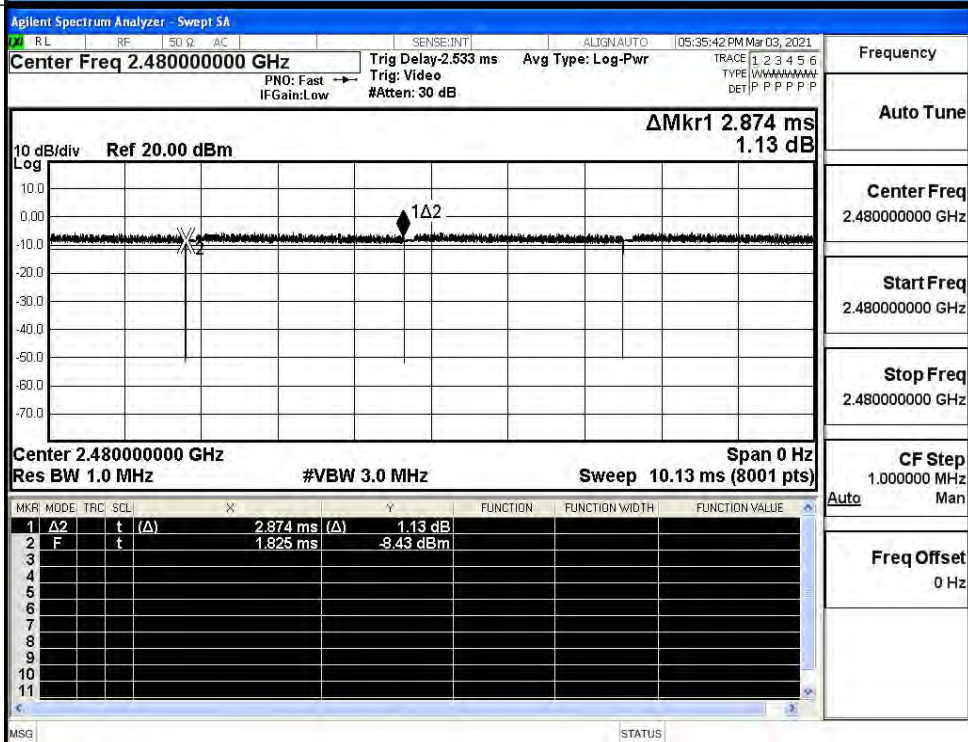
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

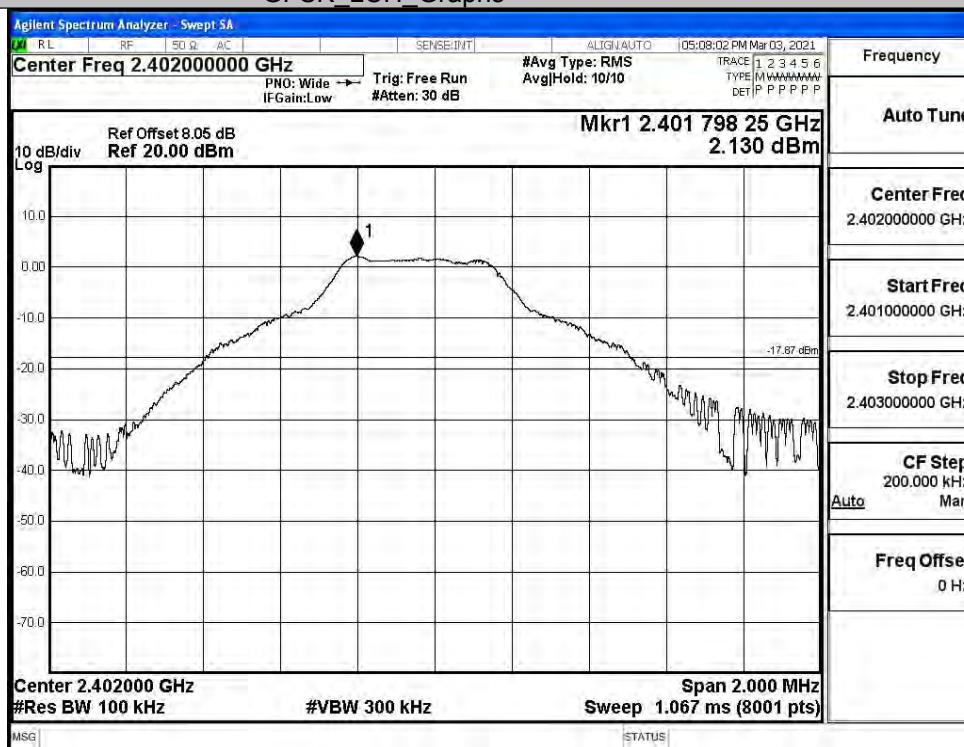


A.6 RF Conducted Spurious Emissions

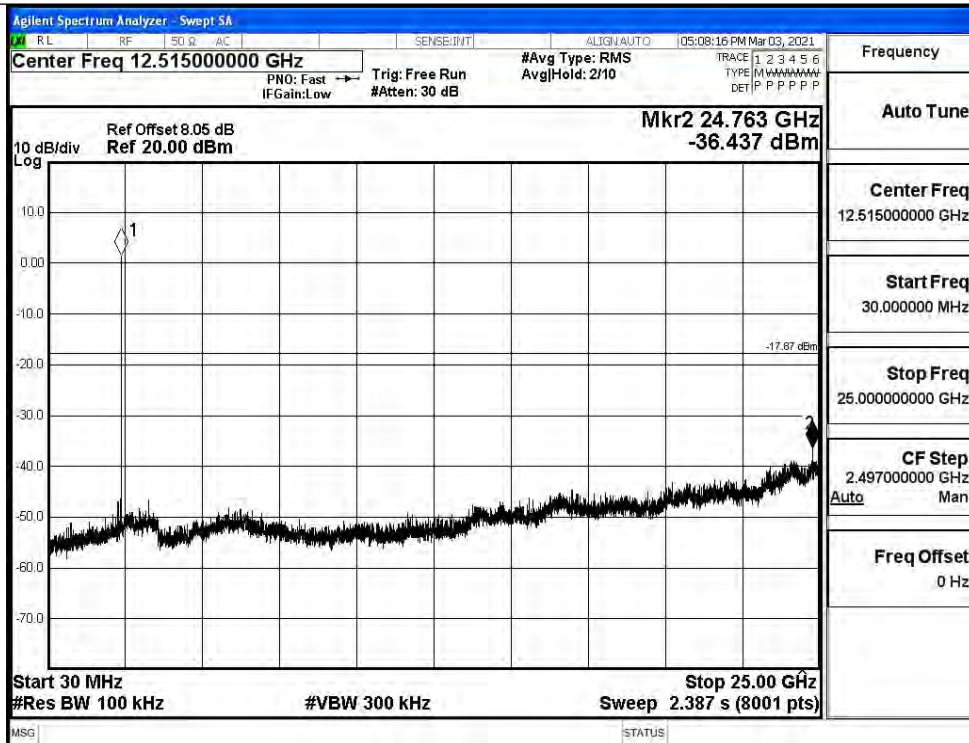
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.13	-36.437	-17.870	PASS
	MCH	0.957	-38.100	-19.043	PASS
	HCH	-0.209	-37.257	-20.209	PASS
$\pi/4$ DQPSK	LCH	2.081	-37.316	-17.919	PASS
	MCH	0.895	-37.708	-19.105	PASS
	HCH	-0.264	-37.571	-20.264	PASS
8DPSK	LCH	2.034	-36.184	-17.966	PASS
	MCH	0.984	-38.073	-19.016	PASS
	HCH	-0.328	-33.524	-20.328	PASS

GFSK LCH Graphs

Pref

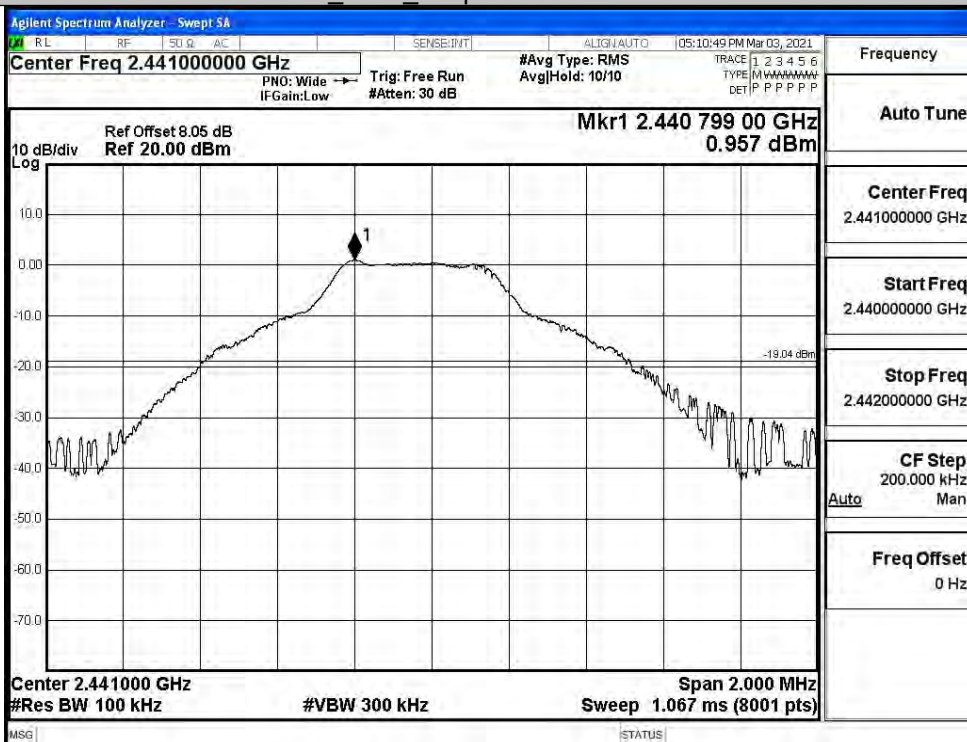


Puw

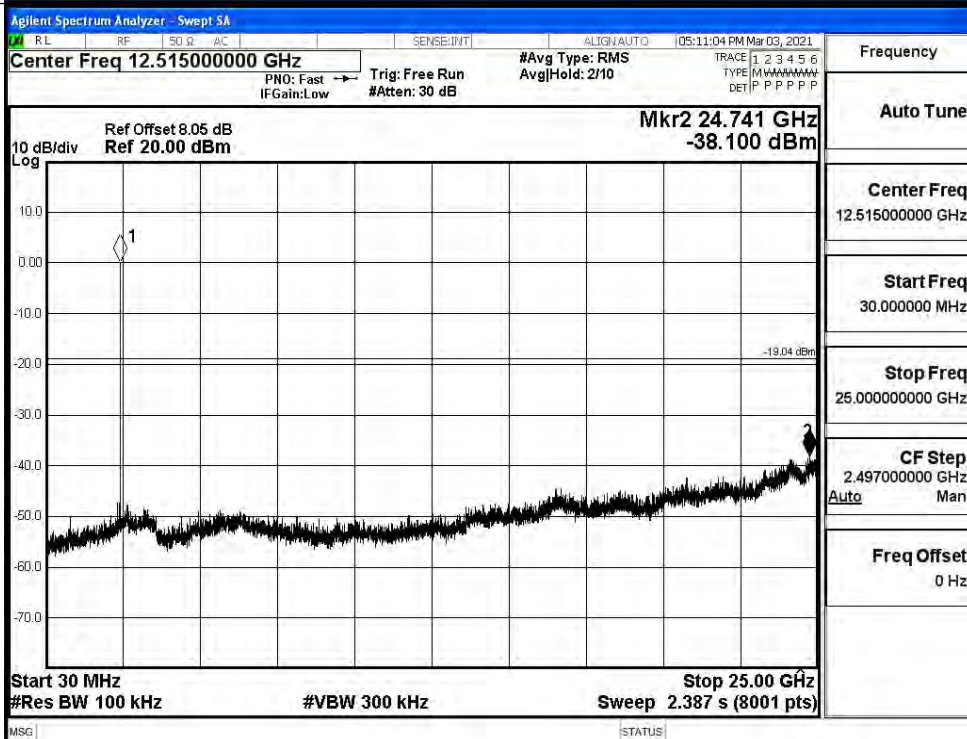


GFSK_MCH_Graphs

Pref

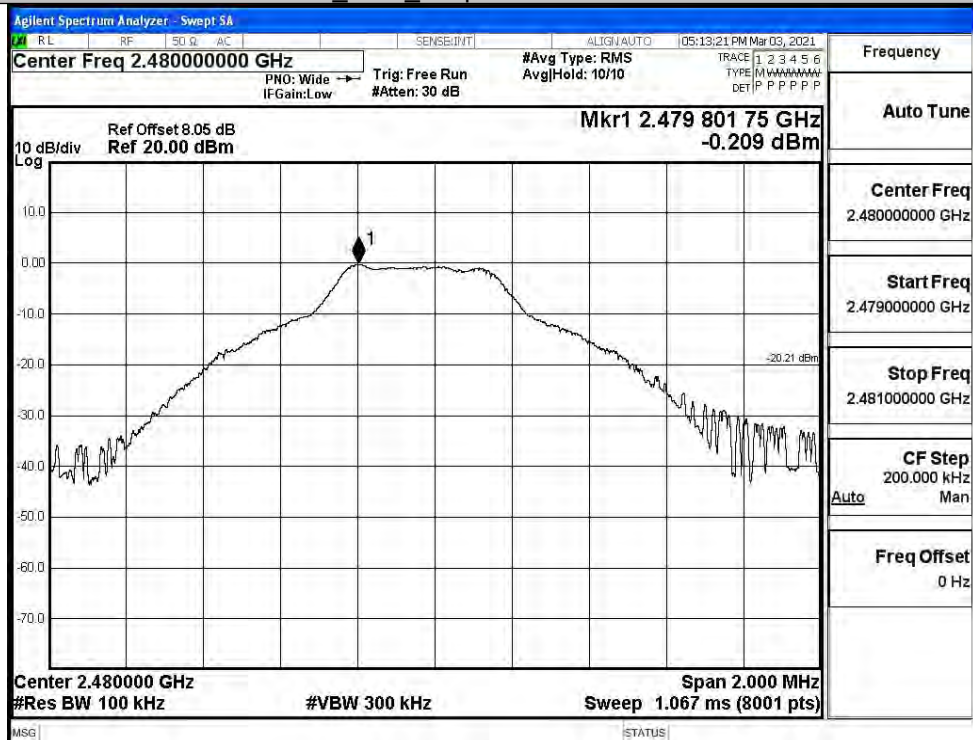


Puw

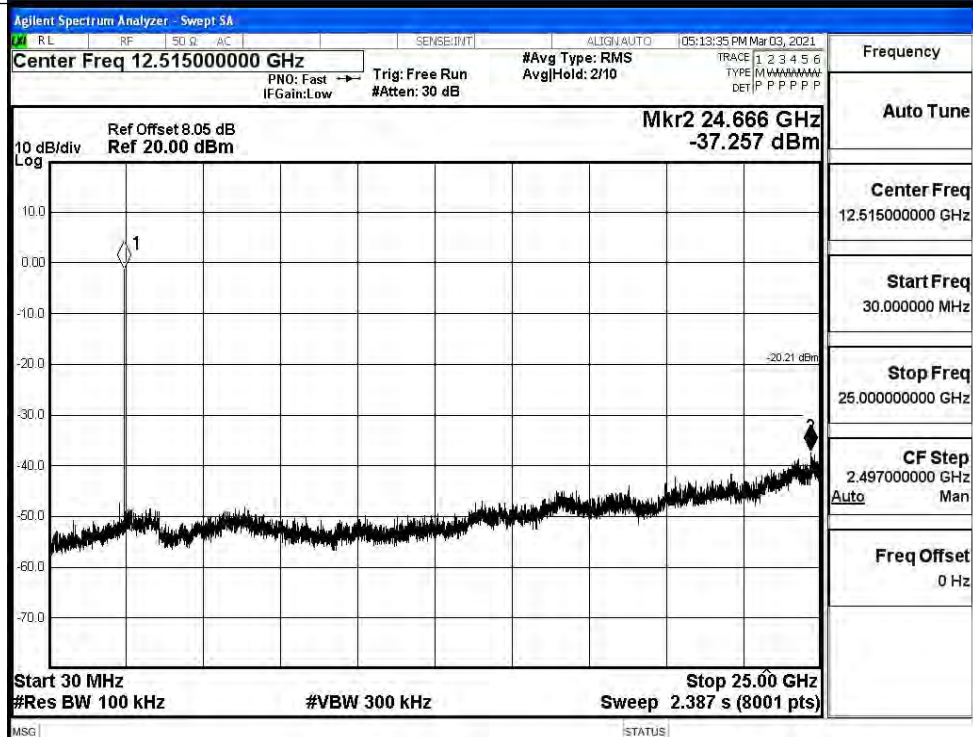


GFSK_HCH_Graphs

Pref

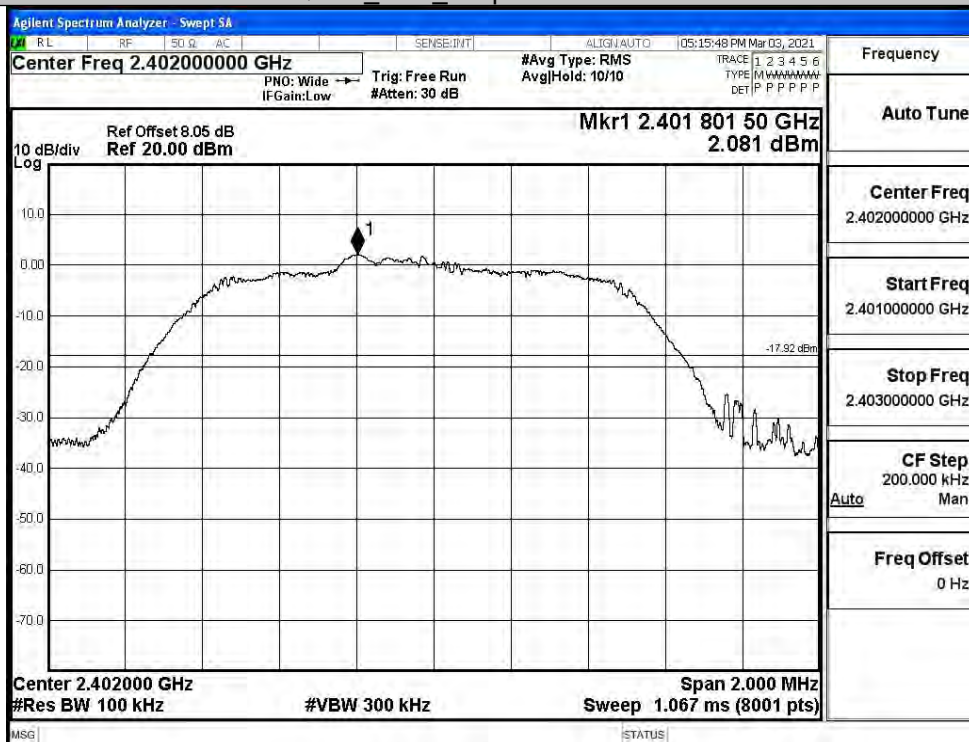


Puw

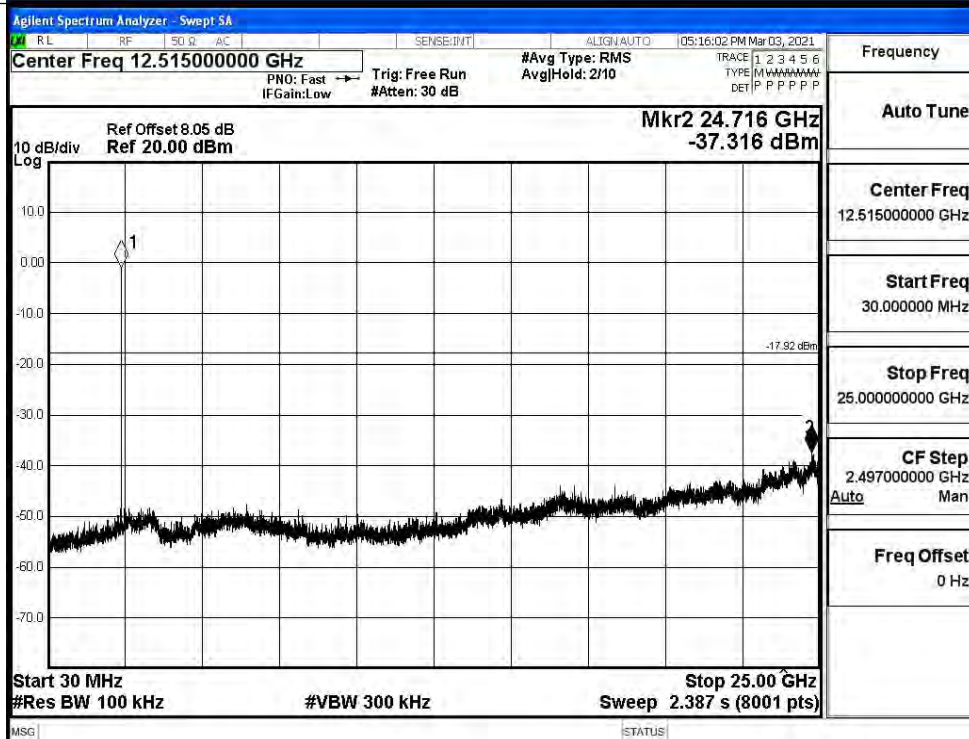


$\pi/4$ DQPSK_LCH_Graphs

Pref

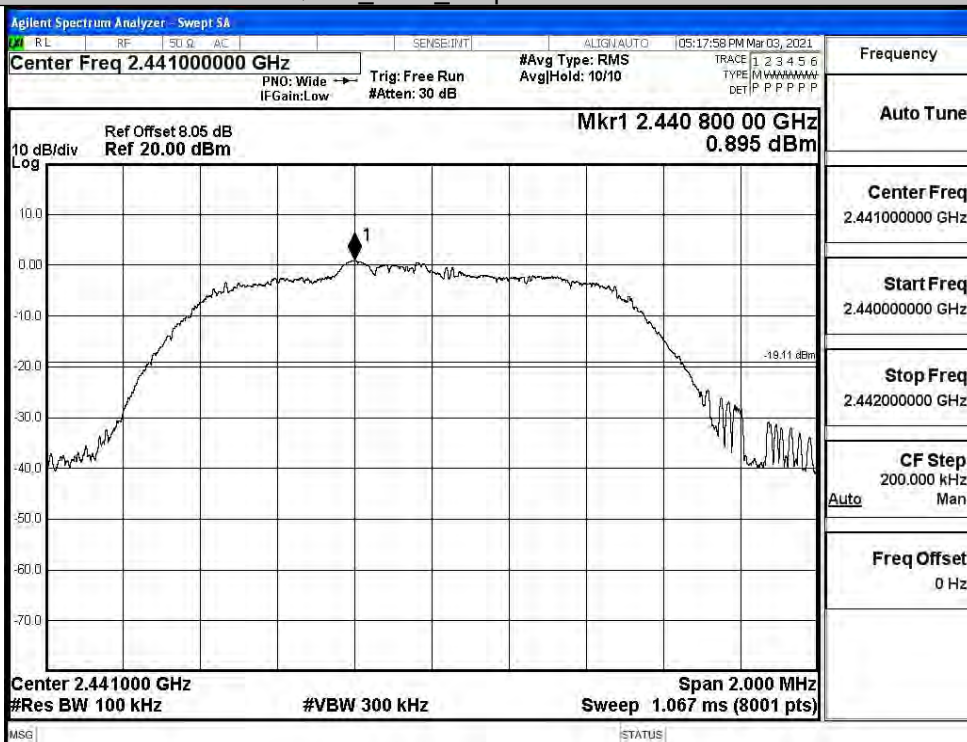


Puw

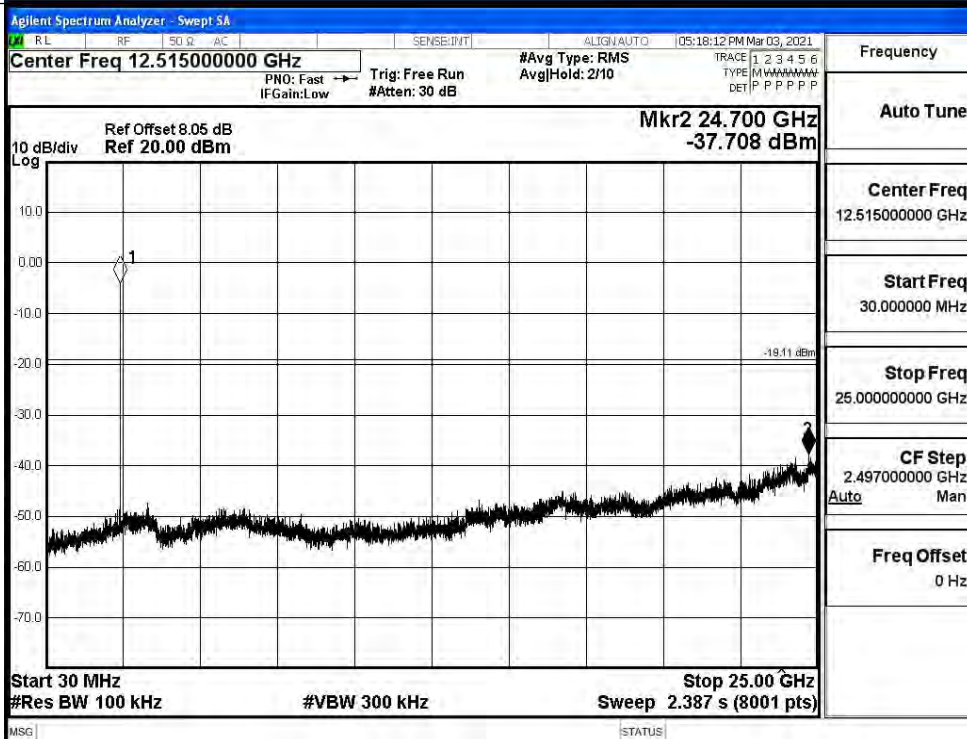


π /4DQPSK_MCH_Graphs

Pref

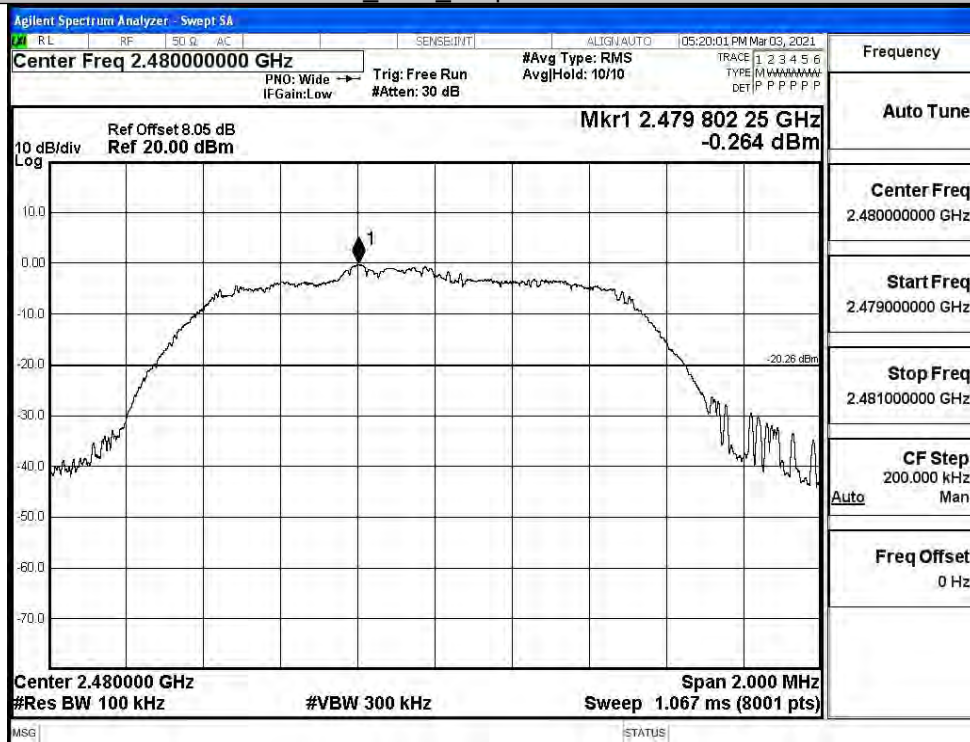


Puw

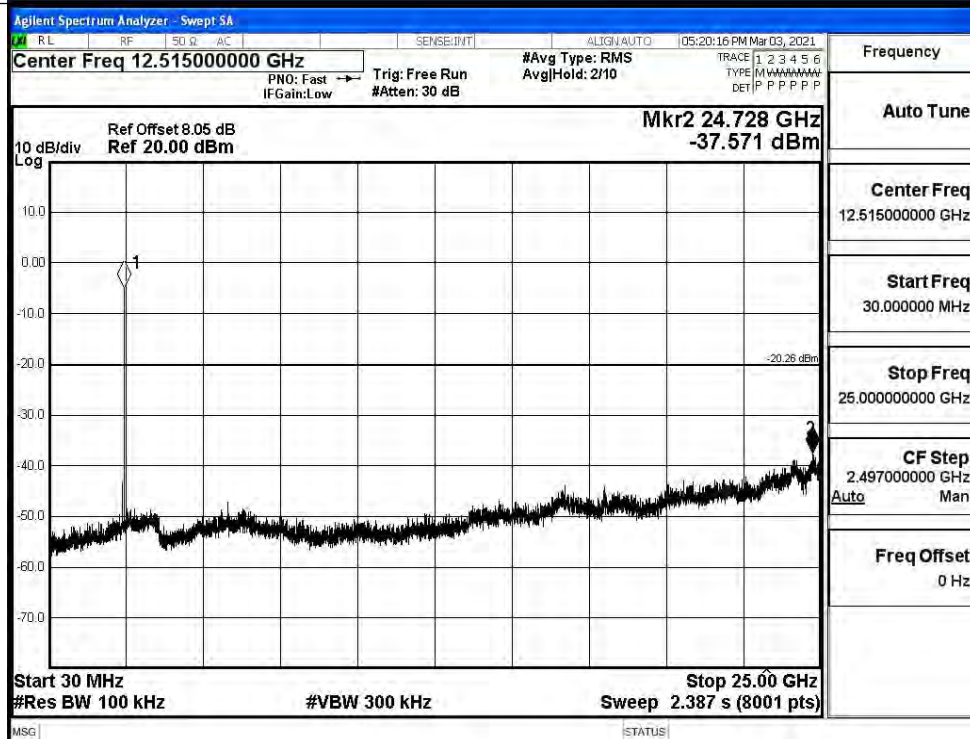


$\pi/4$ DQPSK_HCH_Graphs

Pref

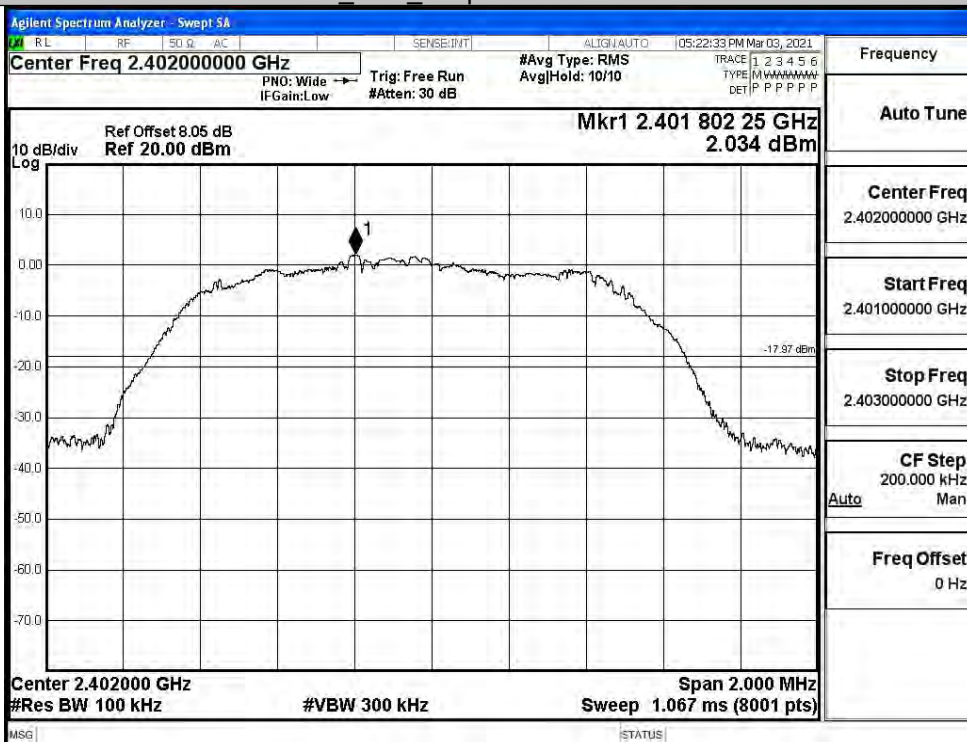


Puw

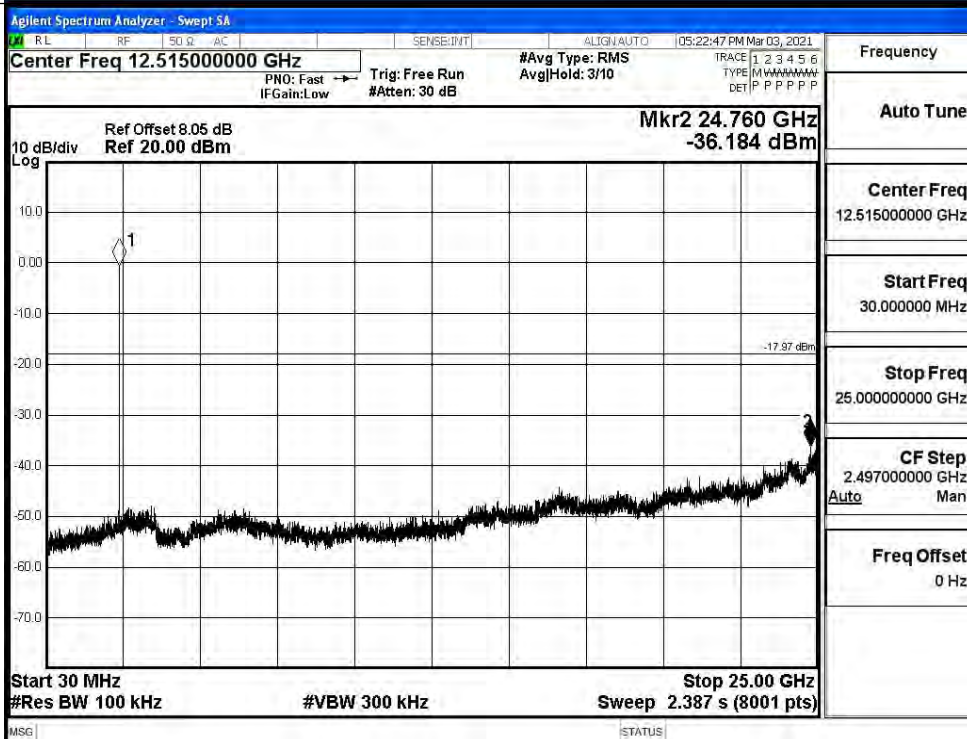


8DPSK_LCH_Graphs

Pref

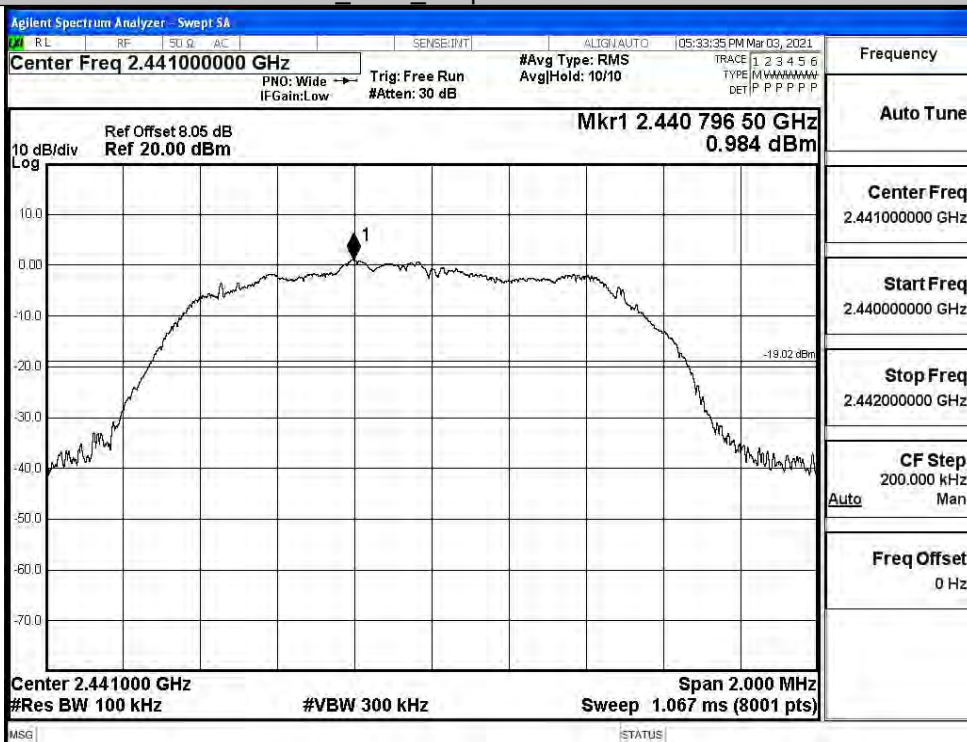


Puw

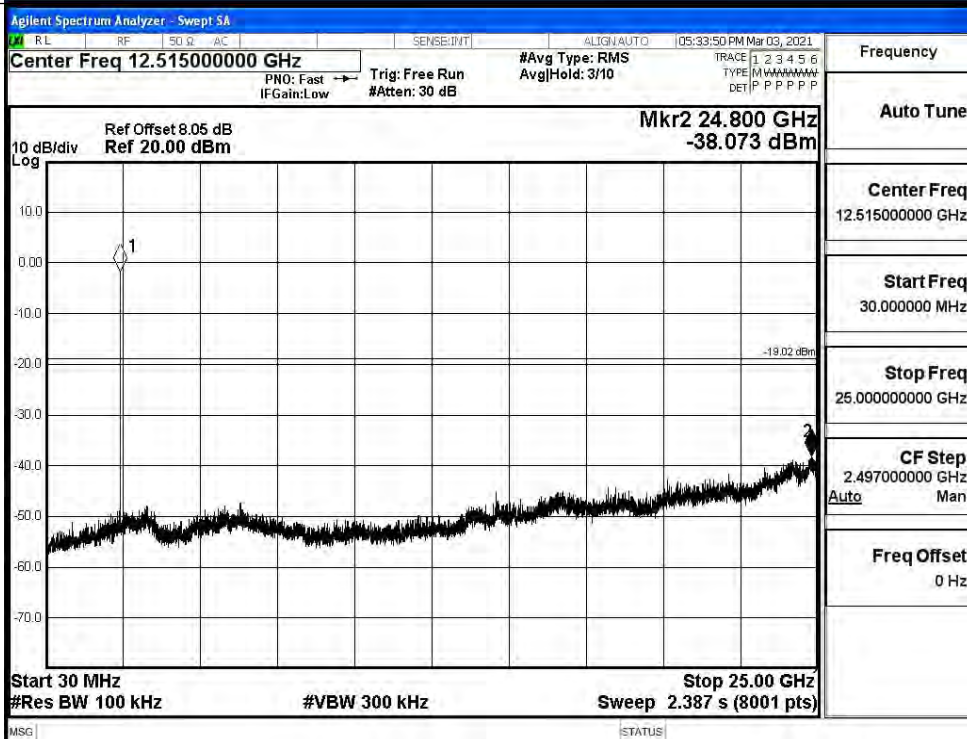


8DPSK_MCH_Graphs

Pref

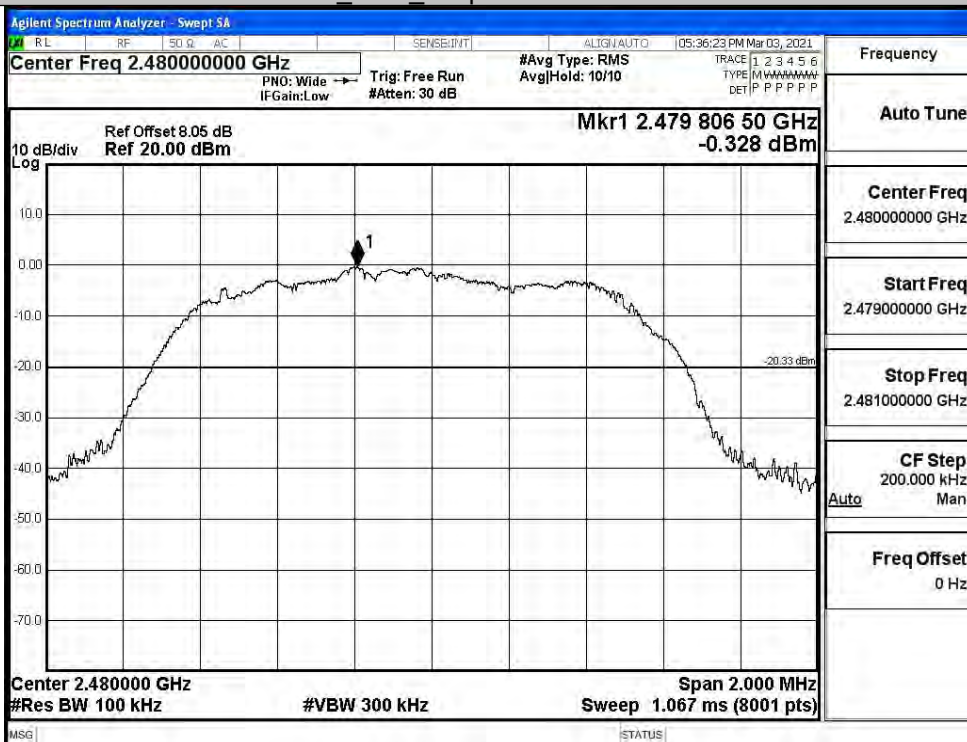


Puw

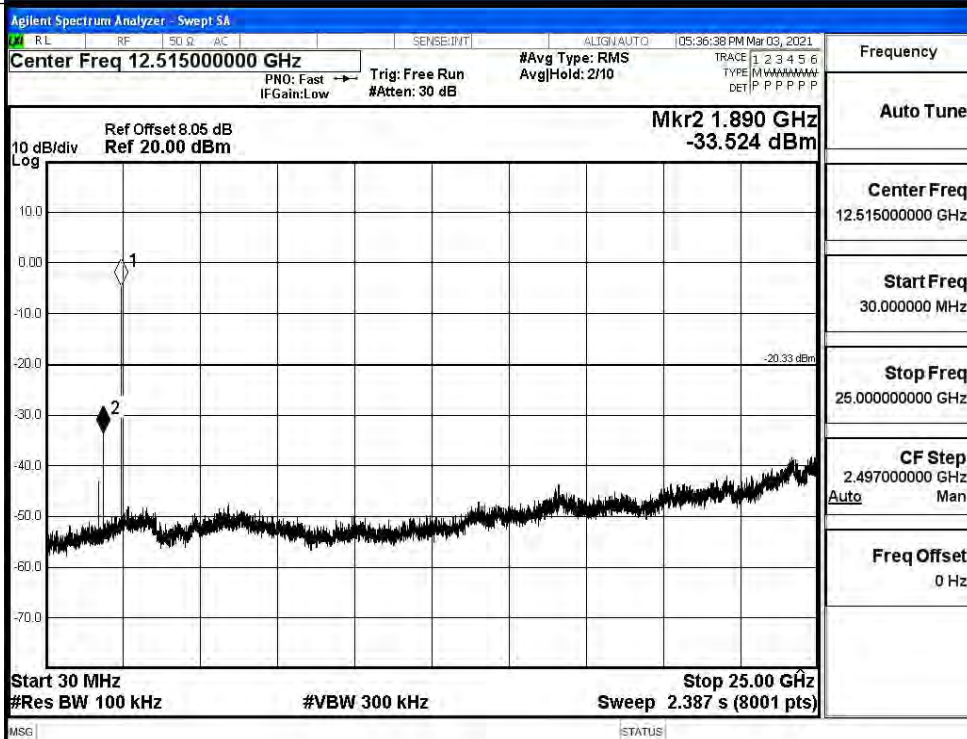


8DPSK_HCH_Graphs

Pref



Puw

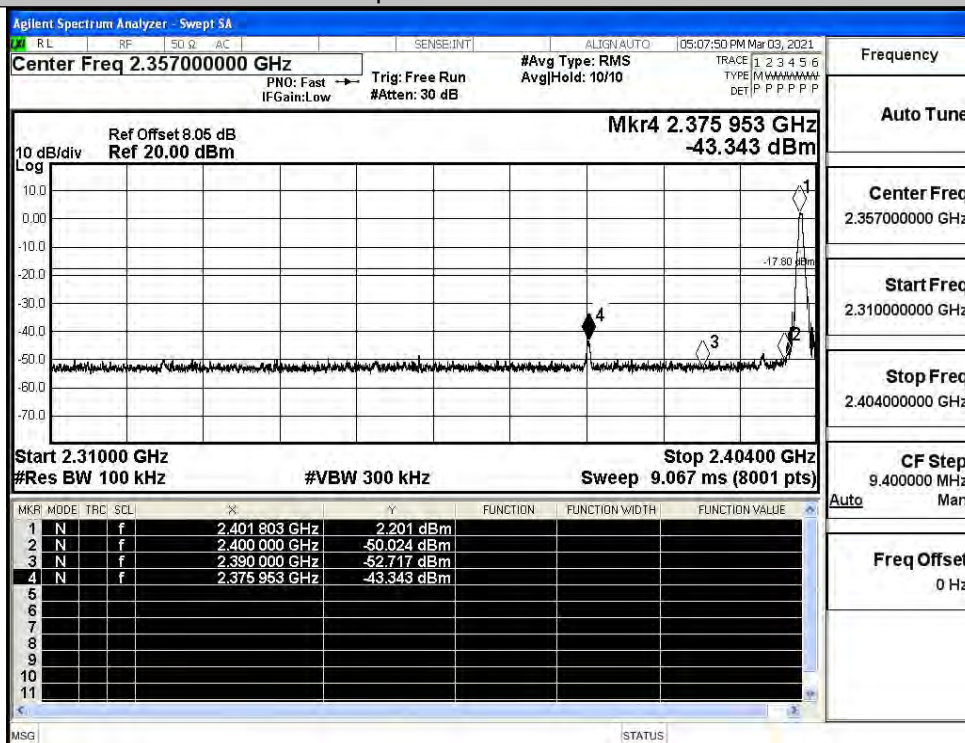


A.7 Band-edge for RF Conducted Emissions

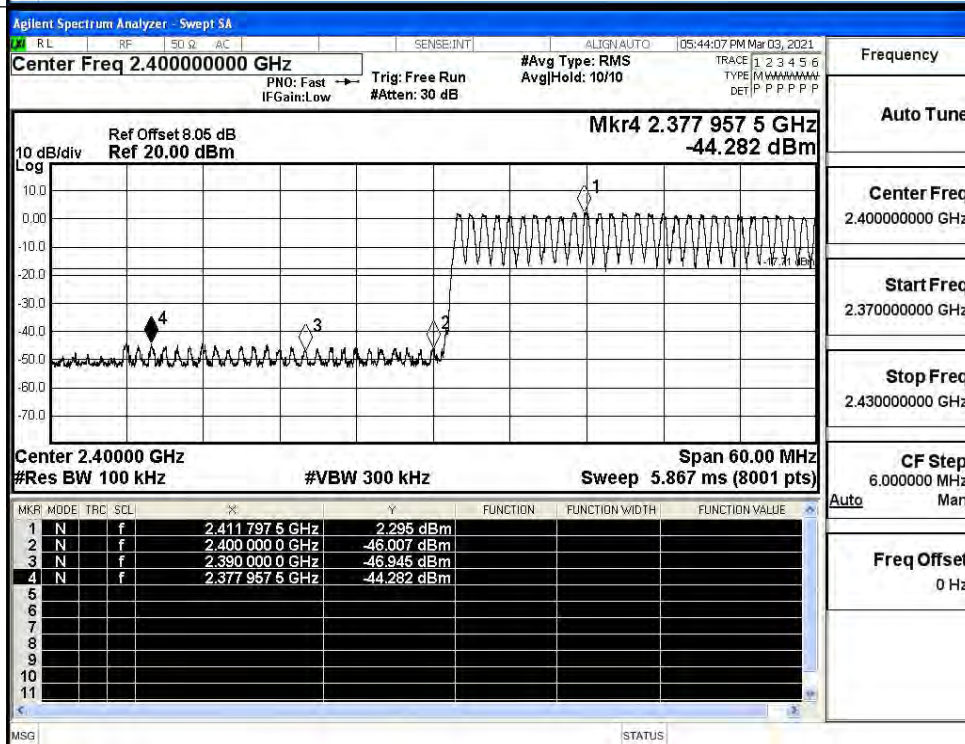
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	2.201	Off	-43.343	-17.8	PASS
			2.295	On	-44.282	-17.71	PASS
	HCH	2480	-0.111	Off	-48.571	-20.11	PASS
			0.391	On	-47.807	-19.61	PASS
$\pi/4$ DQPSK	LCH	2402	2.182	Off	-43.508	-17.82	PASS
			2.308	On	-44.043	-17.69	PASS
	HCH	2480	-0.323	Off	-48.253	-20.32	PASS
			0.507	On	-48.534	-19.49	PASS
8DPSK	LCH	2402	2.085	Off	-44.316	-17.92	PASS
			2.660	On	-44.235	-17.34	PASS
	HCH	2480	-0.245	Off	-49.073	-20.25	PASS
			0.316	On	-48.852	-19.68	PASS

Test Graphs

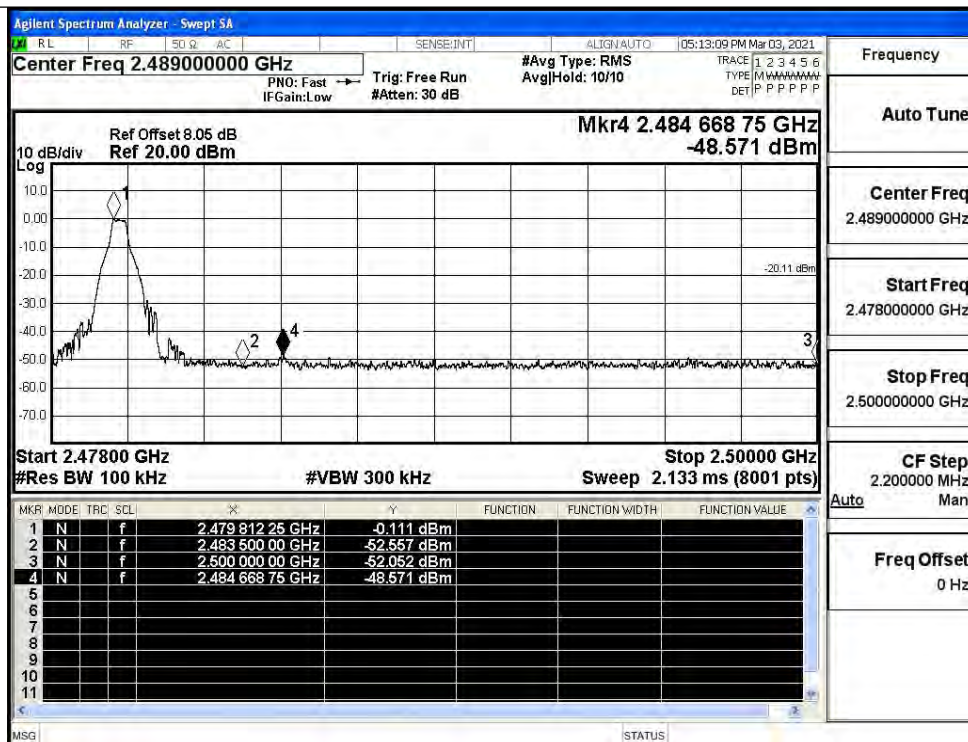
GFSK/LCH/No Hop



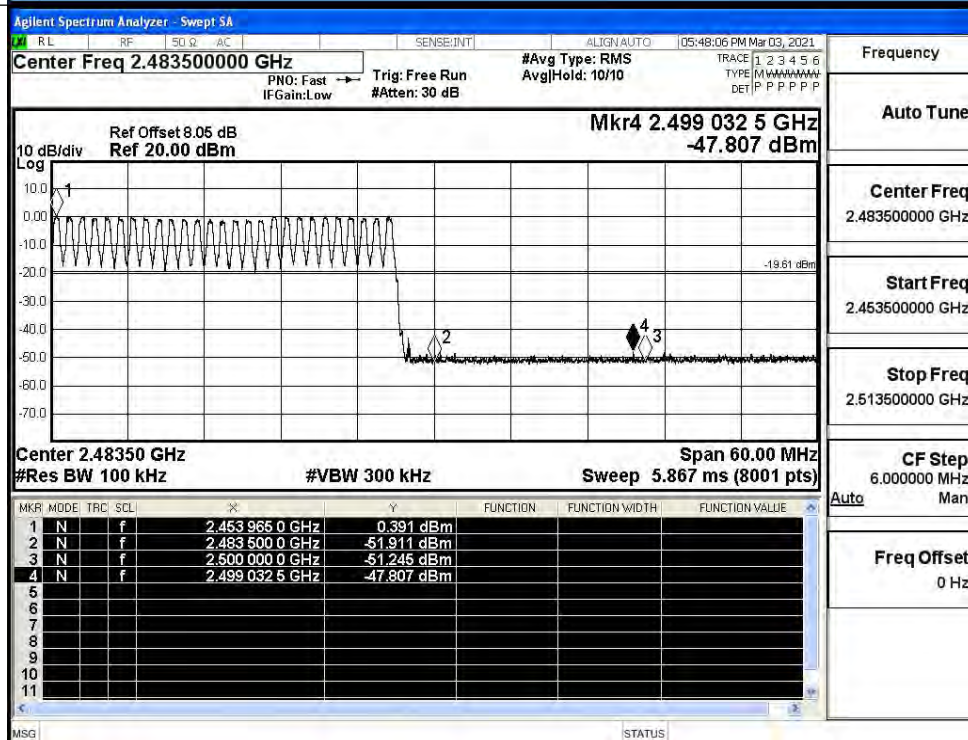
GFSK/LCH/Hop



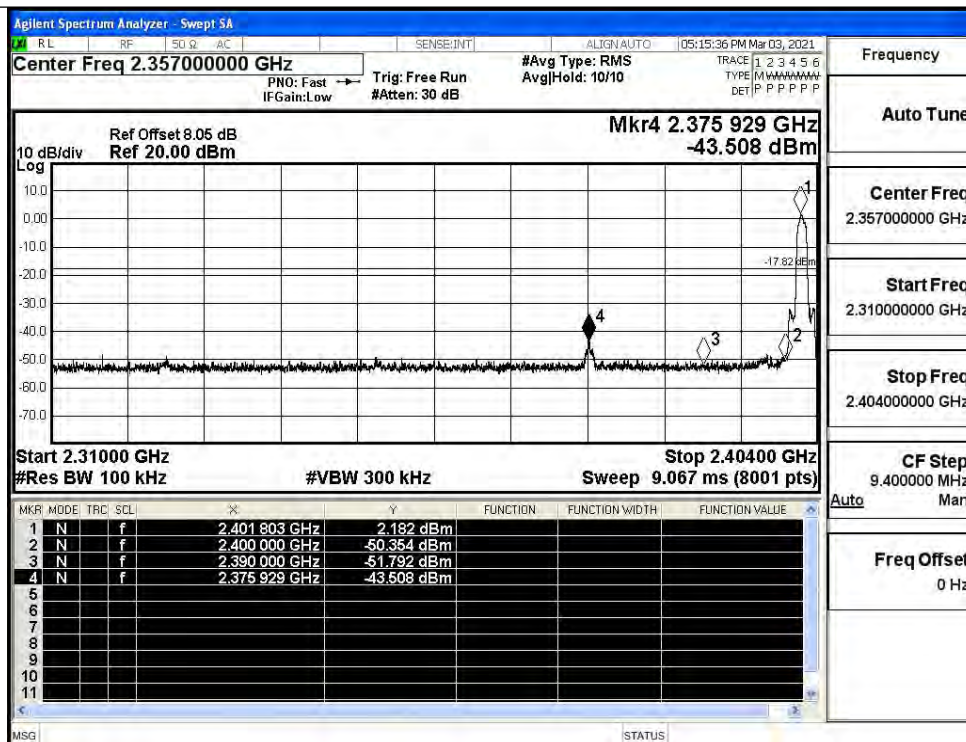
GFSK/HCH/No Hop



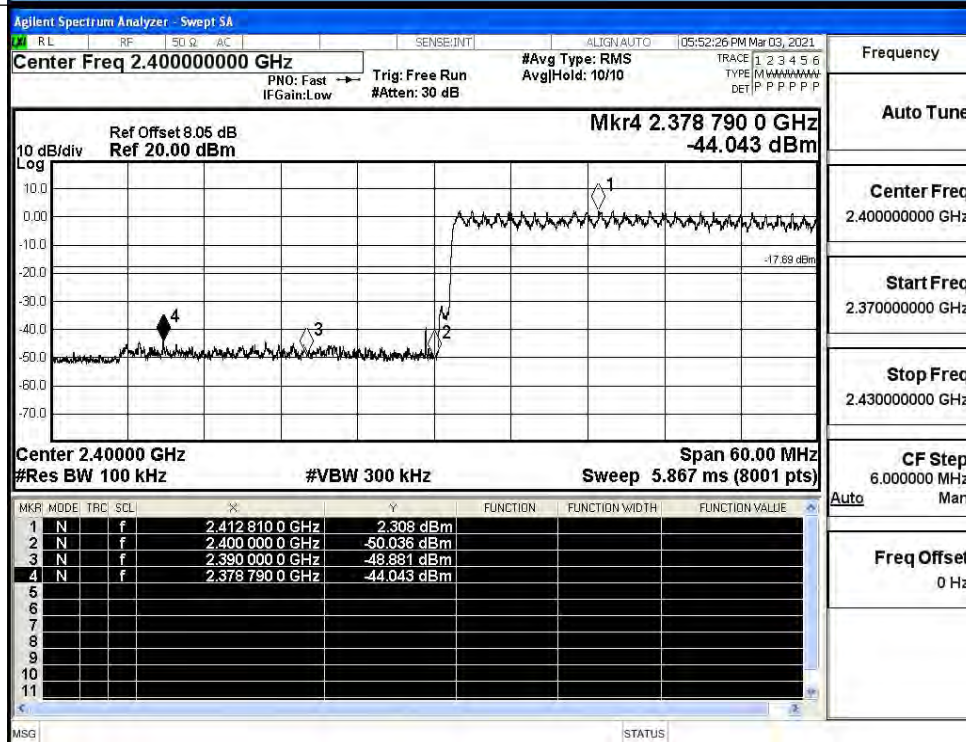
GFSK/HCH/Hop



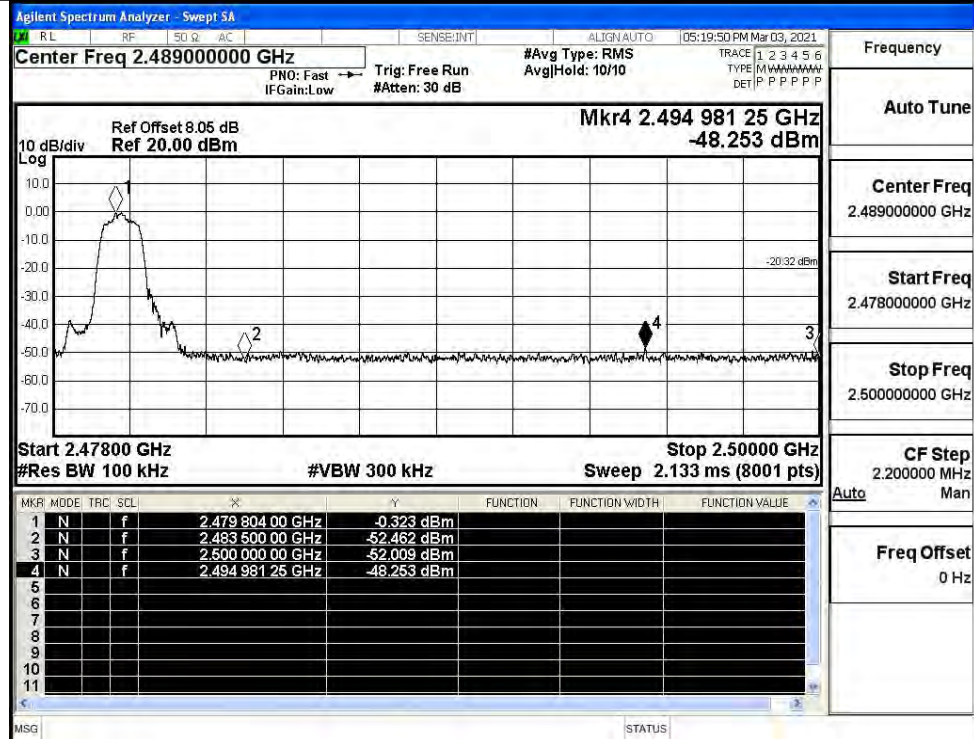
$\pi/4$ DQPSK/LCH/No
Hop



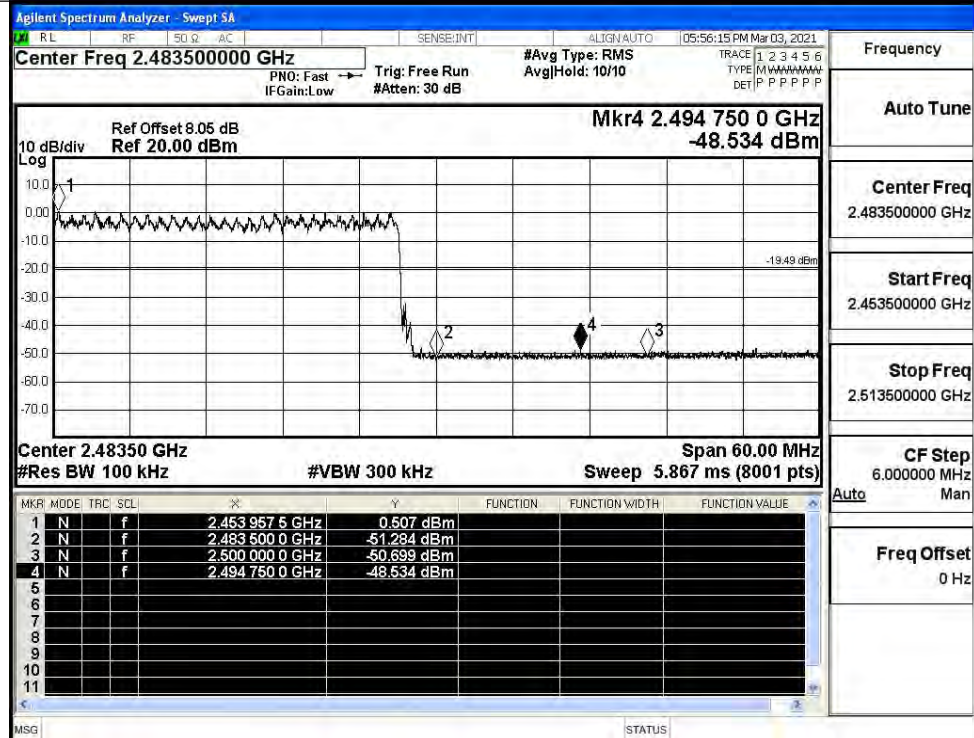
$\pi/4$ DQPSK/LCH/Hop



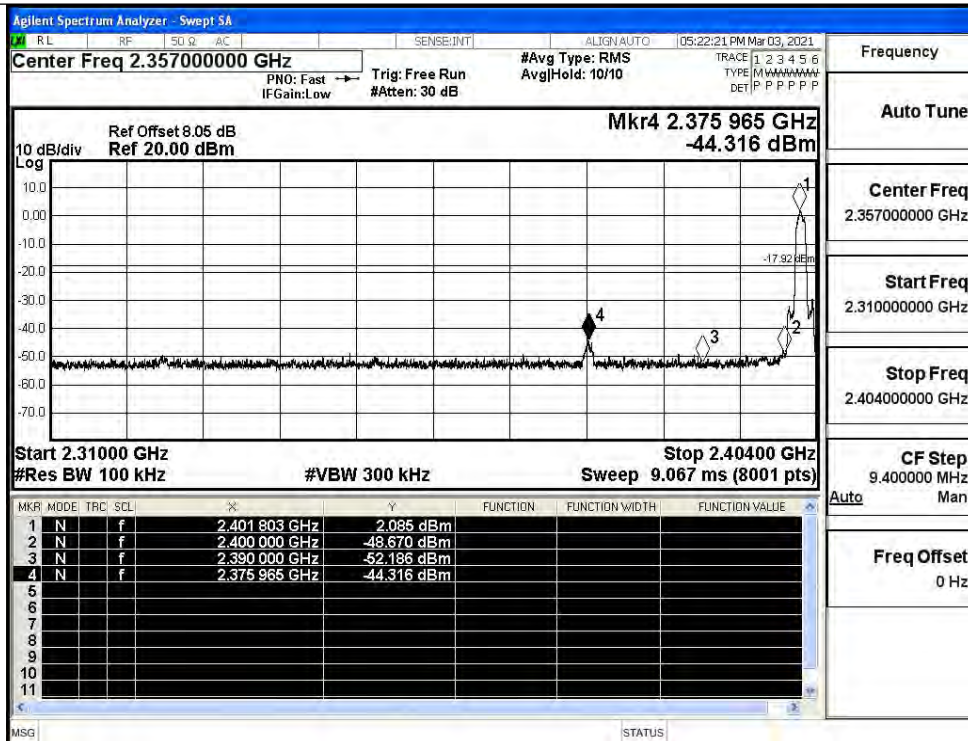
π /4DQPSK/HCH/No
Hop



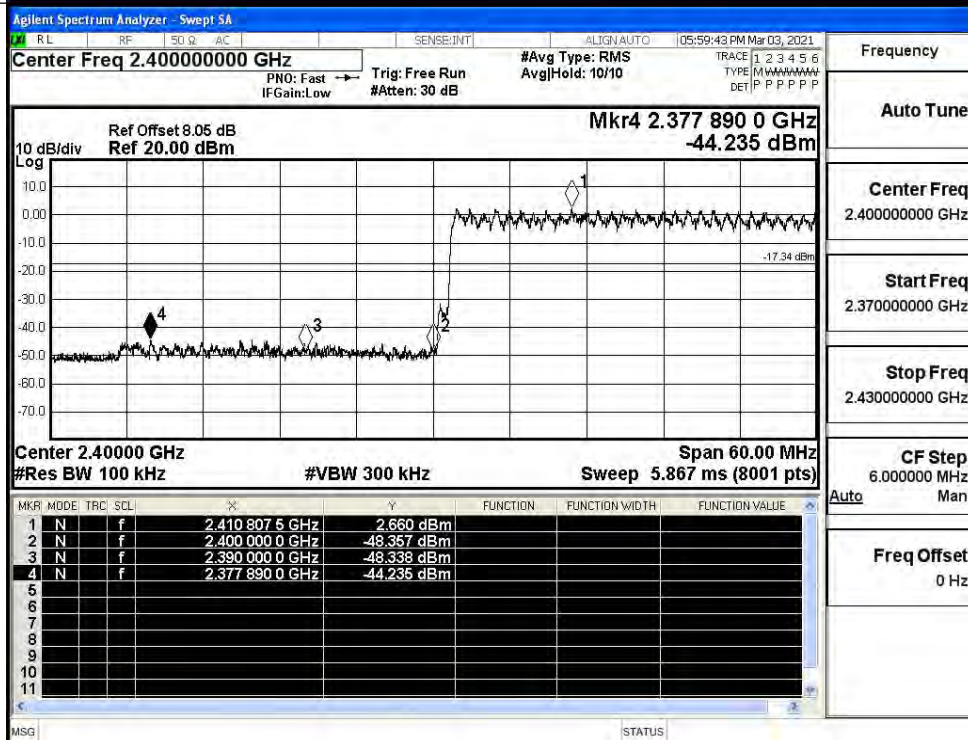
π /4DQPSK/HCH/Hop



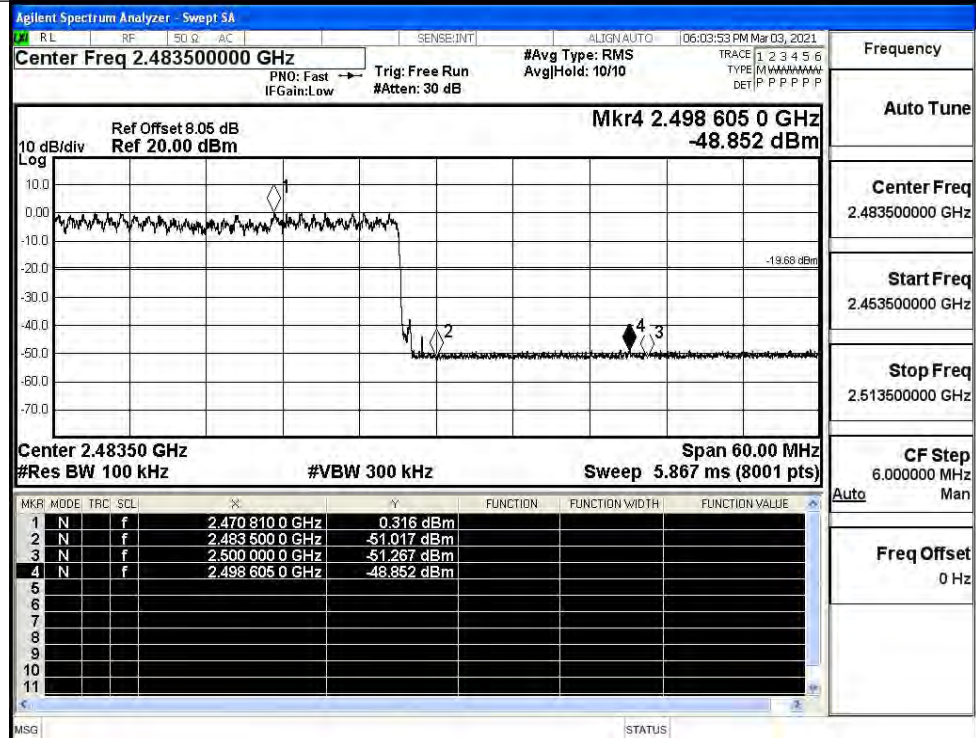
8DPSK/LCH/No Hop



8DPSK/LCH/Hop



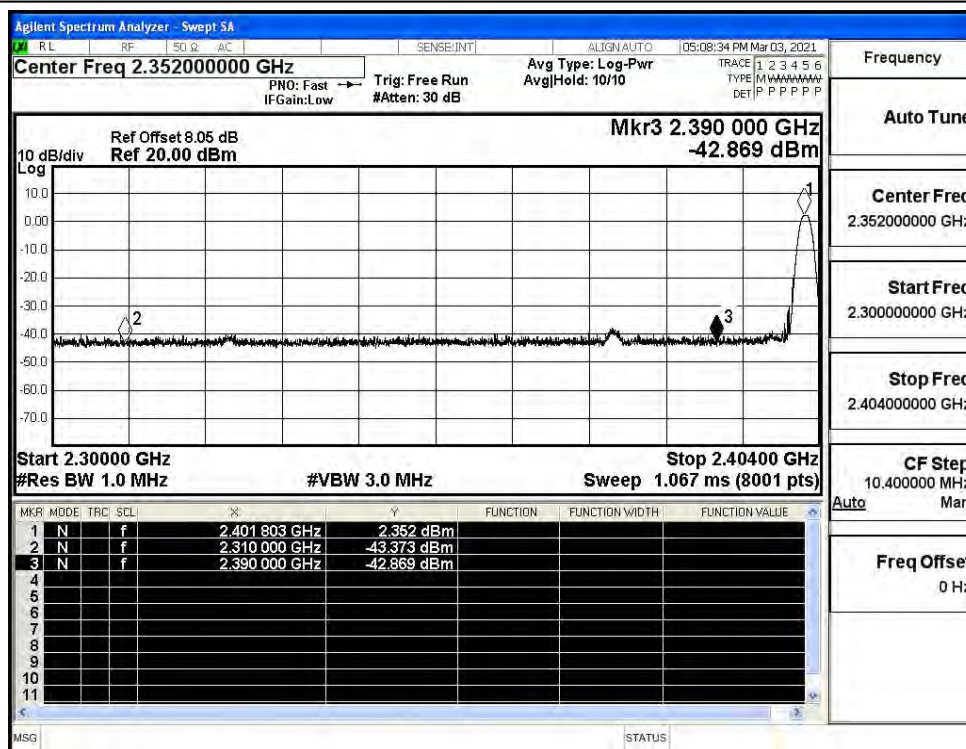
8DPSK/HCH/Hop



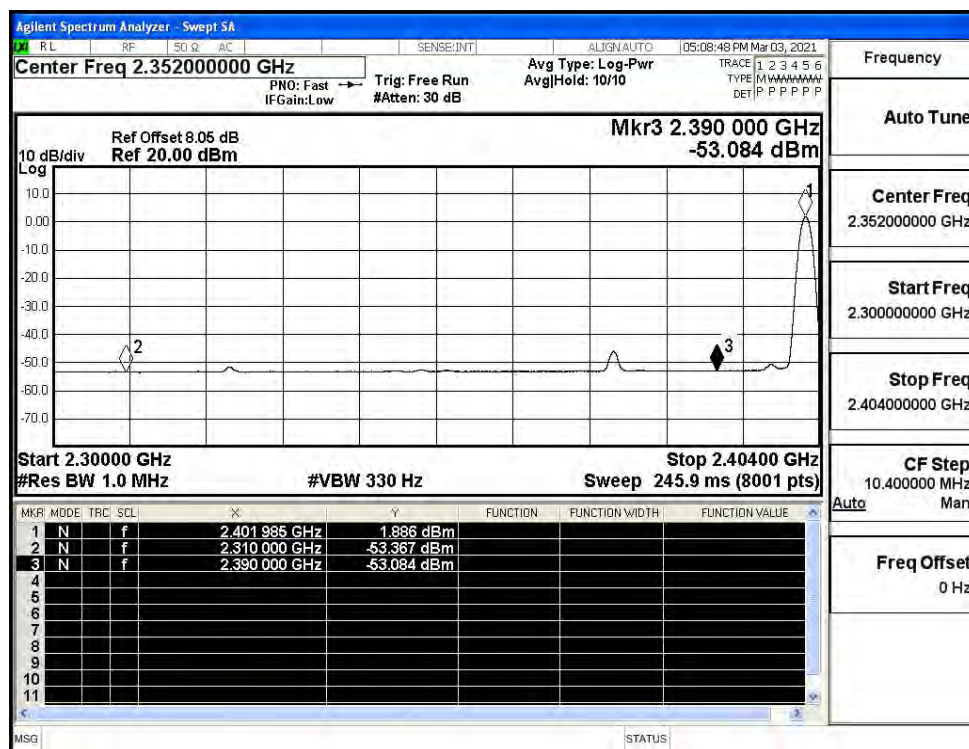
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.37	2.0	0	53.86	PEAK	74	PASS
	Off	2310.0	-53.37	2.0	0	43.86	AV	54	PASS
	Off	2390.0	-42.87	2.0	0	54.36	PEAK	74	PASS
	Off	2390.0	-53.08	2.0	0	44.15	AV	54	PASS
	Off	2483.5	-42.08	2.0	0	55.15	PEAK	74	PASS
	Off	2483.5	-52.26	2.0	0	44.97	AV	54	PASS
	Off	2500.0	-41.90	2.0	0	55.33	PEAK	74	PASS
	Off	2500.0	-52.48	2.0	0	44.75	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.82	2.0	0	53.41	PEAK	74	PASS
	Off	2310.0	-53.41	2.0	0	43.82	AV	54	PASS
	Off	2390.0	-41.84	2.0	0	55.39	PEAK	74	PASS
	Off	2390.0	-52.98	2.0	0	44.25	AV	54	PASS
	Off	2483.5	-40.91	2.0	0	56.32	PEAK	74	PASS
	Off	2483.5	-52.17	2.0	0	45.06	AV	54	PASS
	Off	2500.0	-41.96	2.0	0	55.27	PEAK	74	PASS
	Off	2500.0	-52.50	2.0	0	44.73	AV	54	PASS
8DPSK	Off	2310.0	-42.62	2.0	0	54.61	PEAK	74	PASS
	Off	2310.0	-53.28	2.0	0	43.95	AV	54	PASS
	Off	2390.0	-42.39	2.0	0	54.84	PEAK	74	PASS
	Off	2390.0	-52.94	2.0	0	44.29	AV	54	PASS
	Off	2483.5	-42.77	2.0	0	54.46	PEAK	74	PASS
	Off	2483.5	-52.27	2.0	0	44.96	AV	54	PASS
	Off	2500.0	-42.73	2.0	0	54.50	PEAK	74	PASS
	Off	2500.0	-52.39	2.0	0	44.84	AV	54	PASS

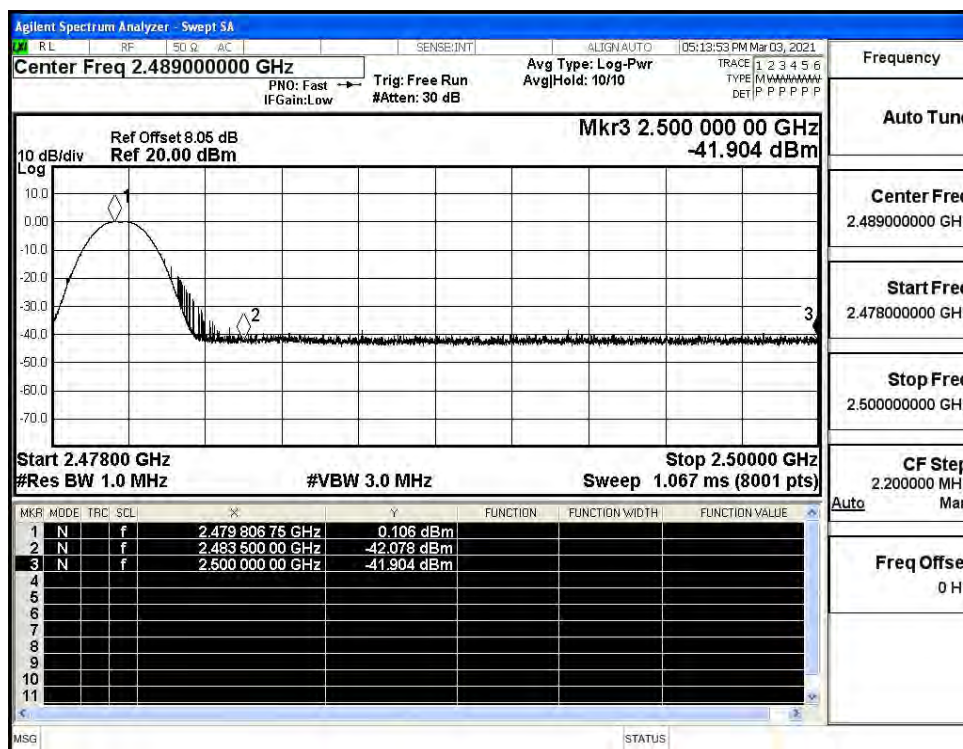
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



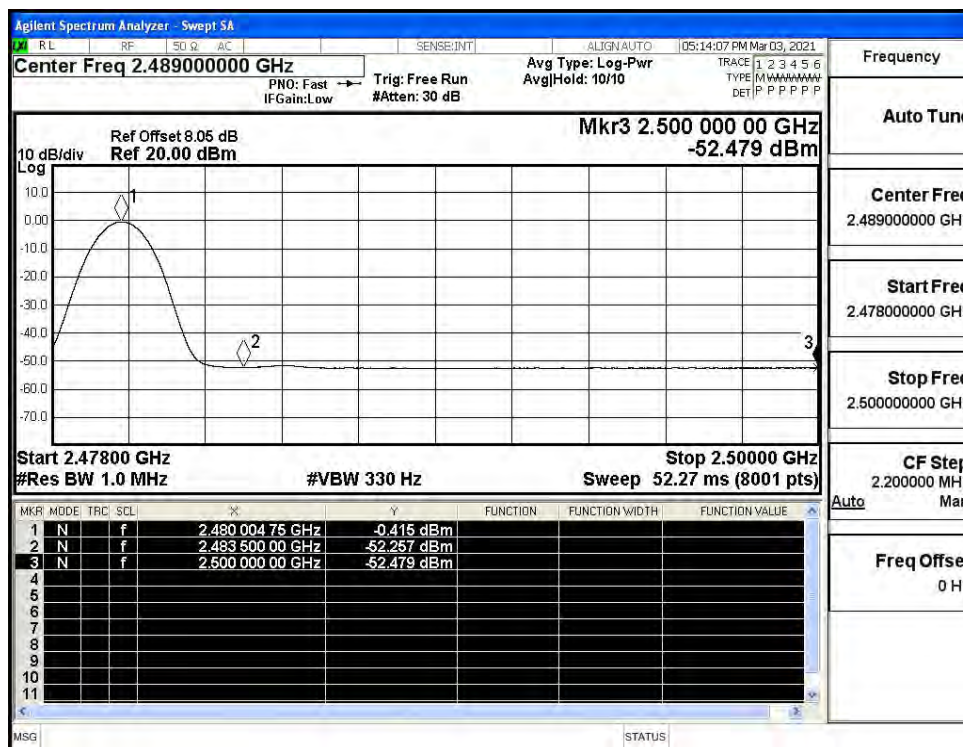
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

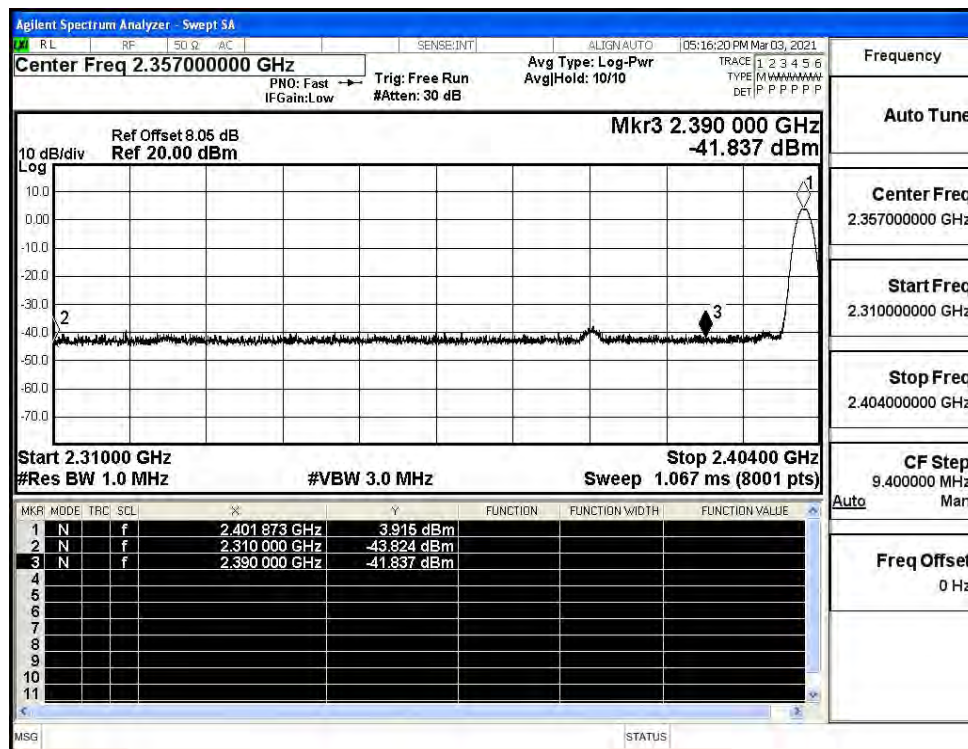
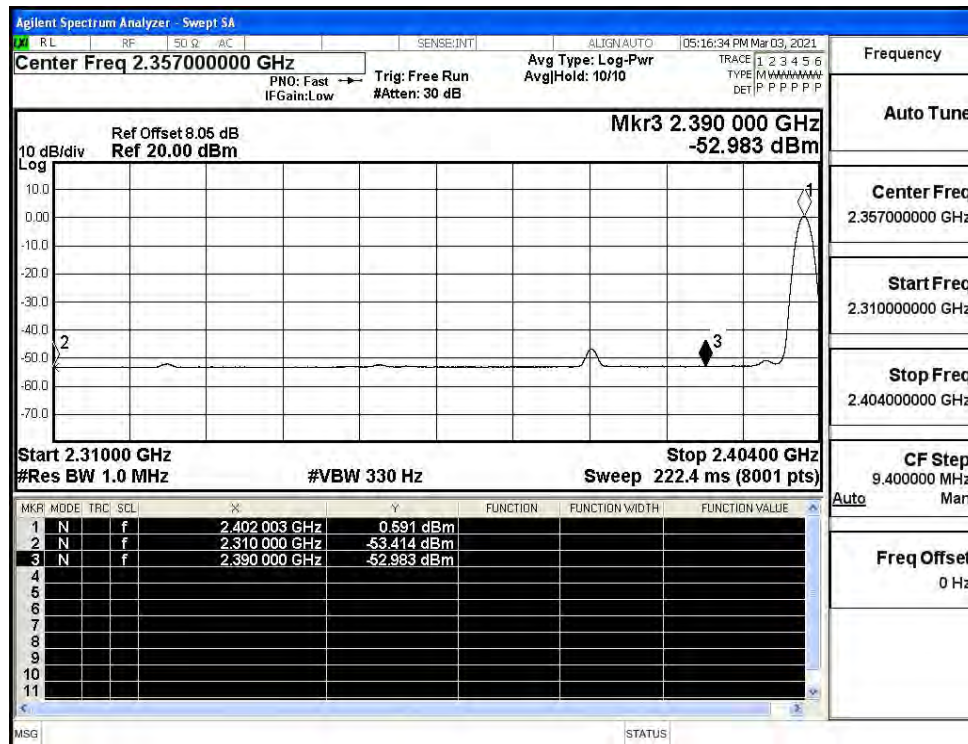


Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)

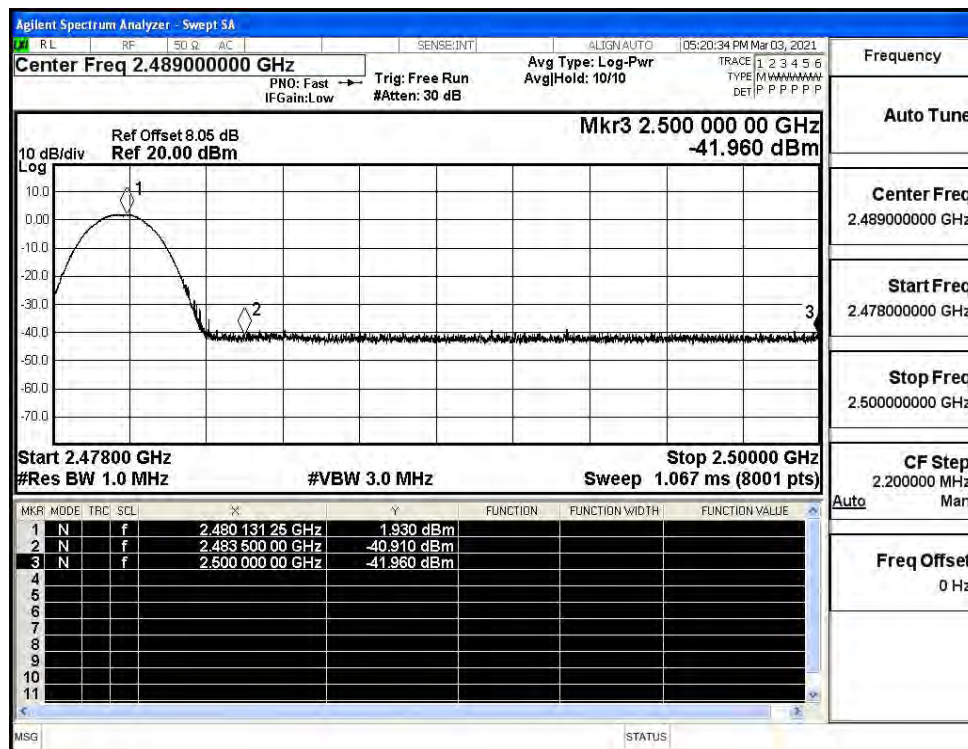


Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)

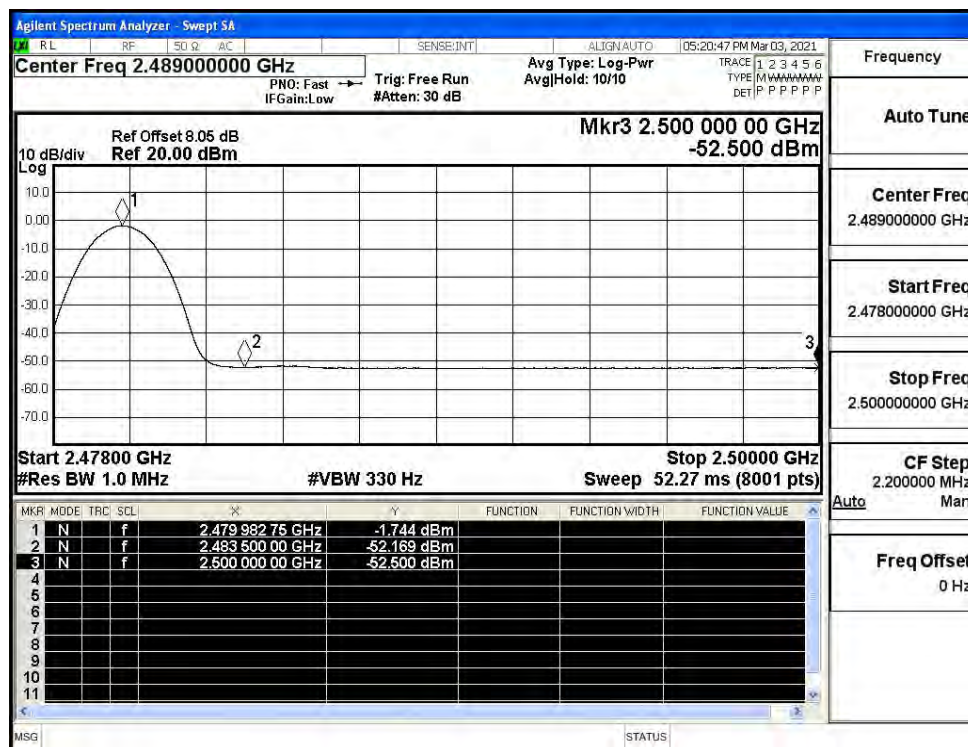


Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

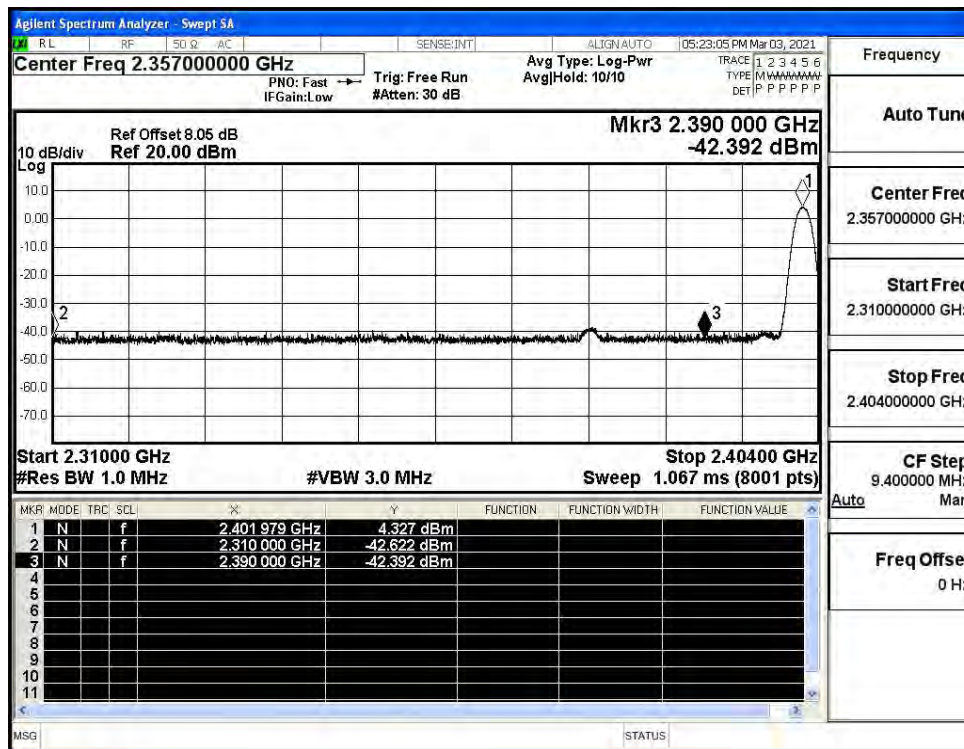
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



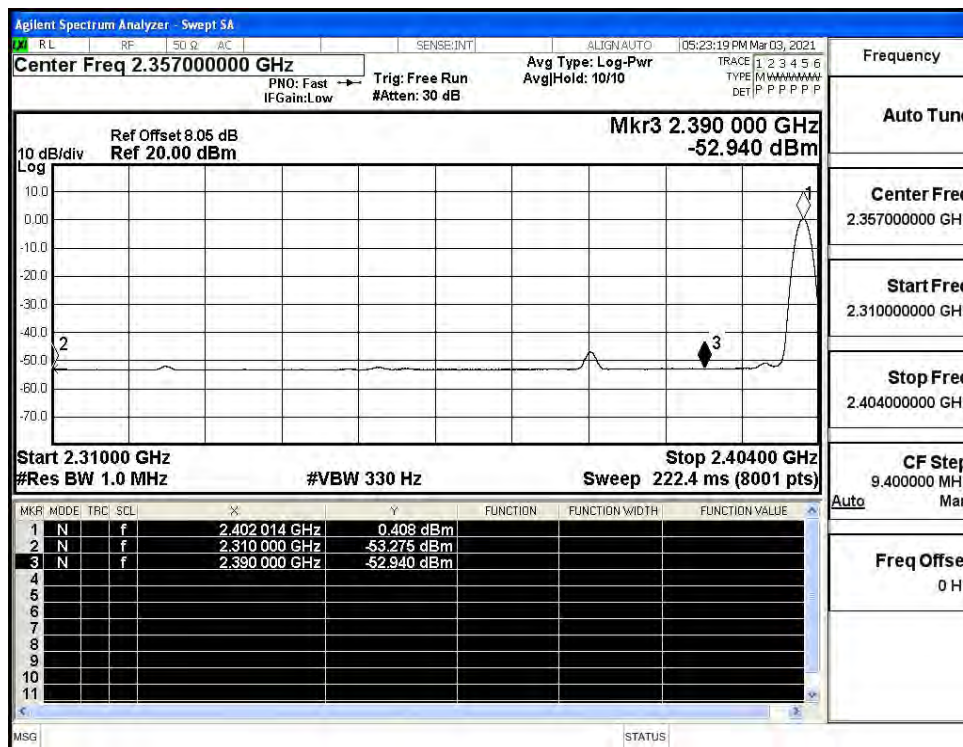
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



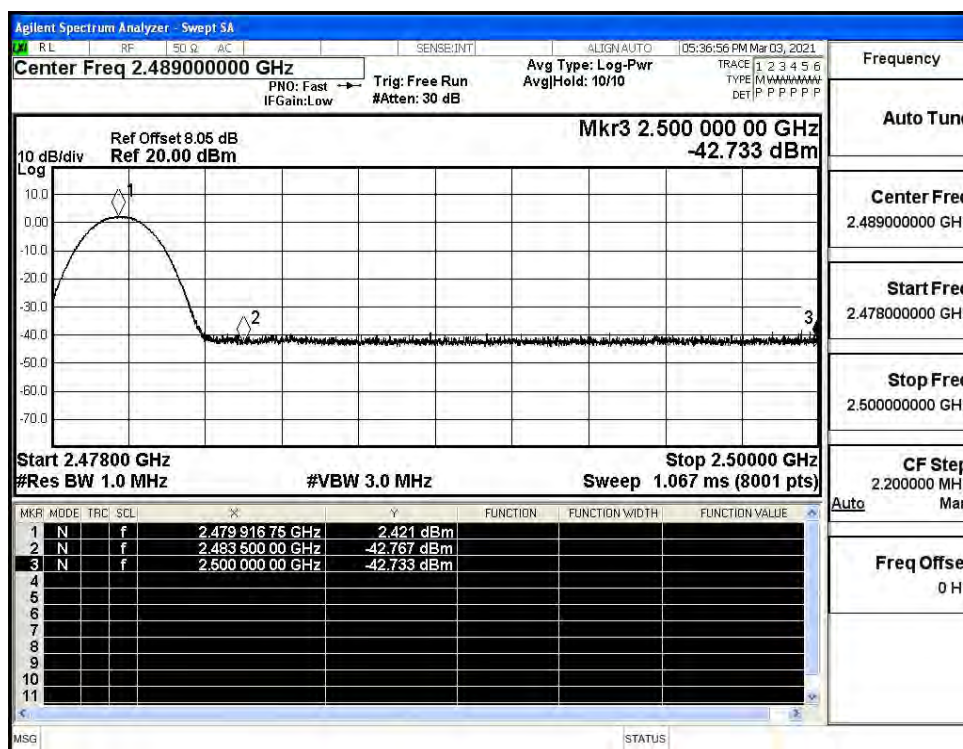
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

