

Appendix A

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

Product Name: Bluetooth Speaker

Trade Mark: N/A

Test Model: BT-1910

Environmental Conditions

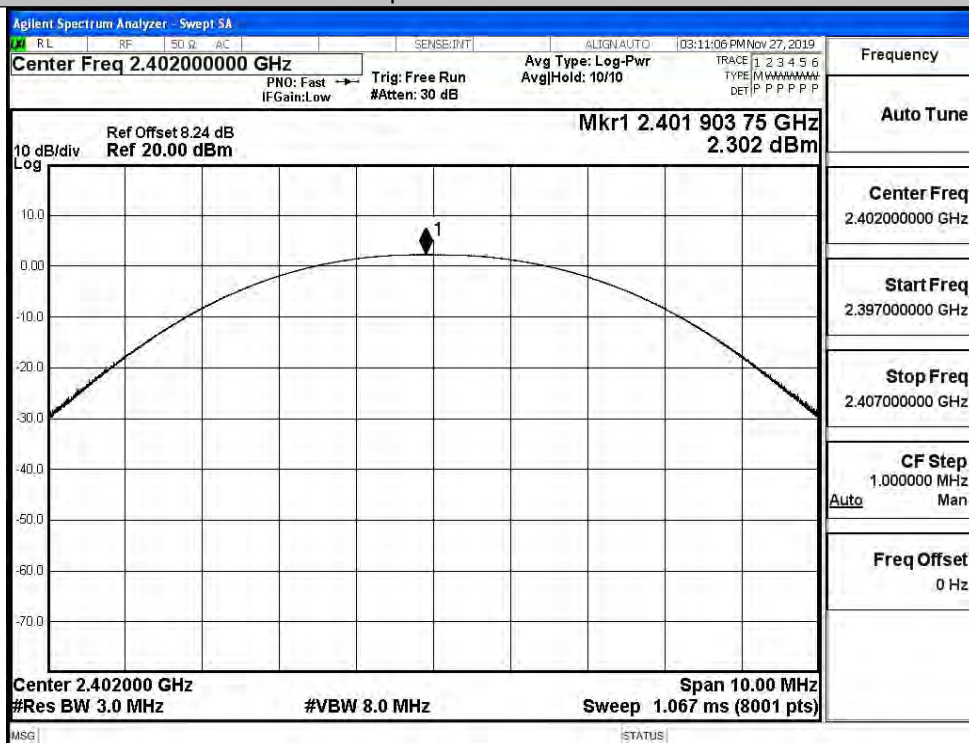
Temperature:	22.6° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Scout Wu
Supervised by:	Tom.Liu

A.1 Maximum Conducted Peak Output Power

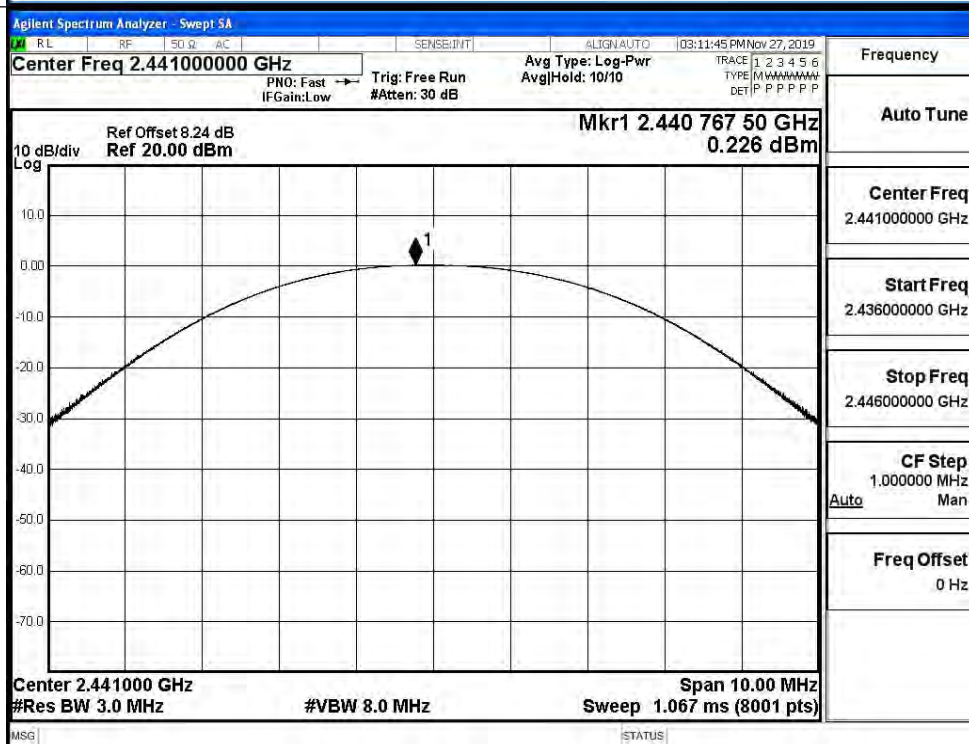
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.302	30	PASS
	MCH	0.226	30	PASS
	HCH	-1.428	30	PASS
$\pi/4$ DQPSK	LCH	1.456	21	PASS
	MCH	2.294	21	PASS
	HCH	0.617	21	PASS
8DPSK	LCH	1.934	21	PASS
	MCH	2.885	21	PASS
	HCH	1.141	21	PASS

Test Graphs

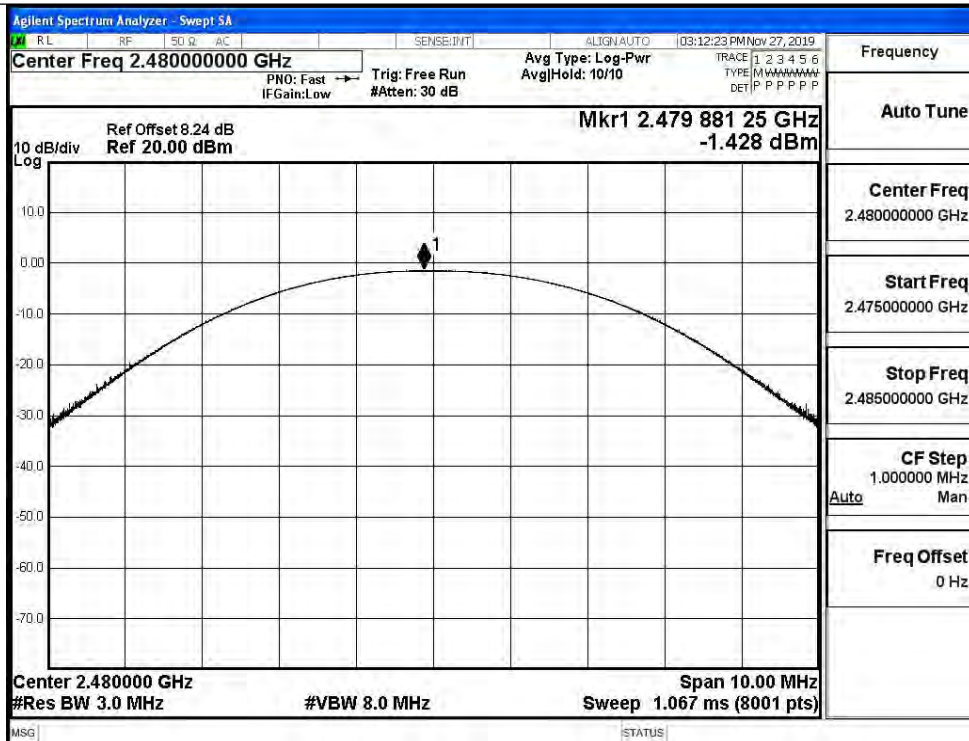
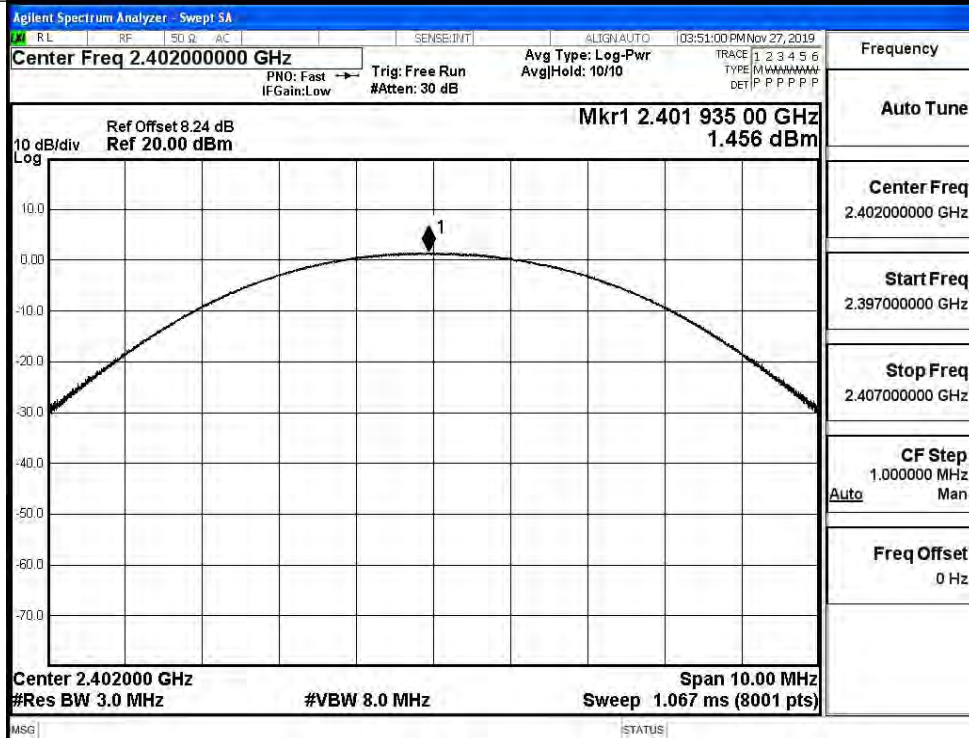
GFSK/LCH

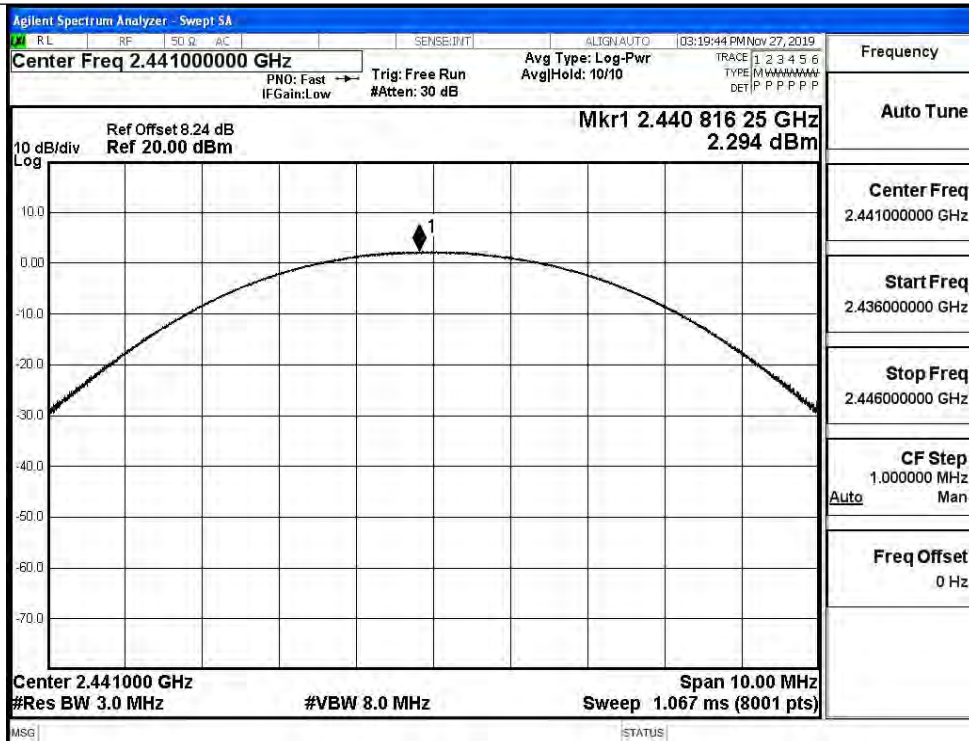
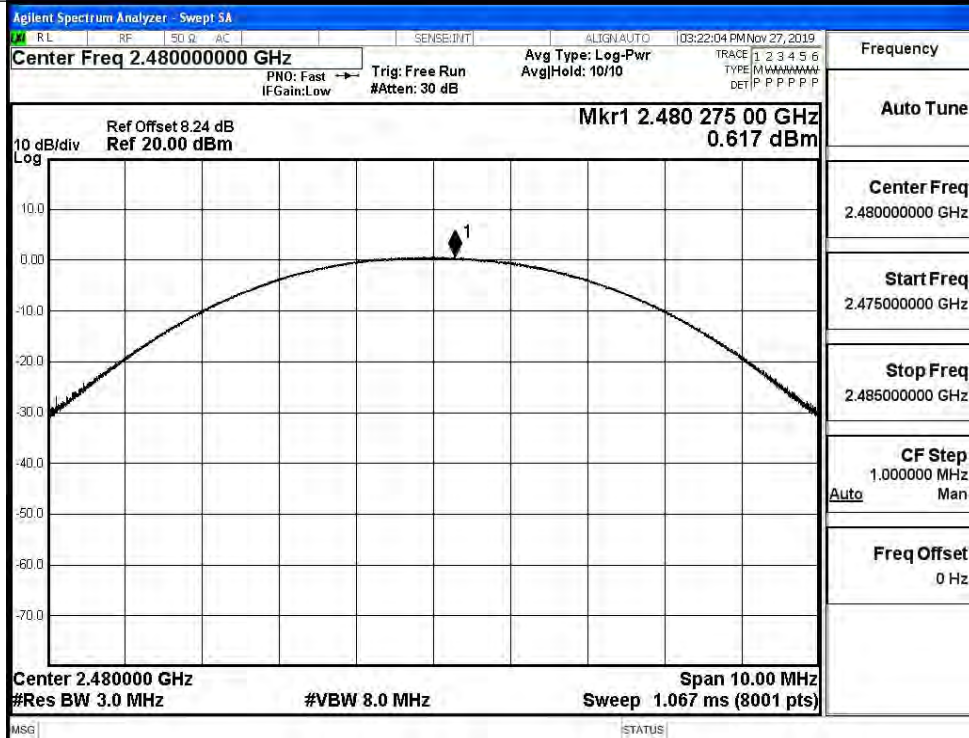


GFSK/MCH

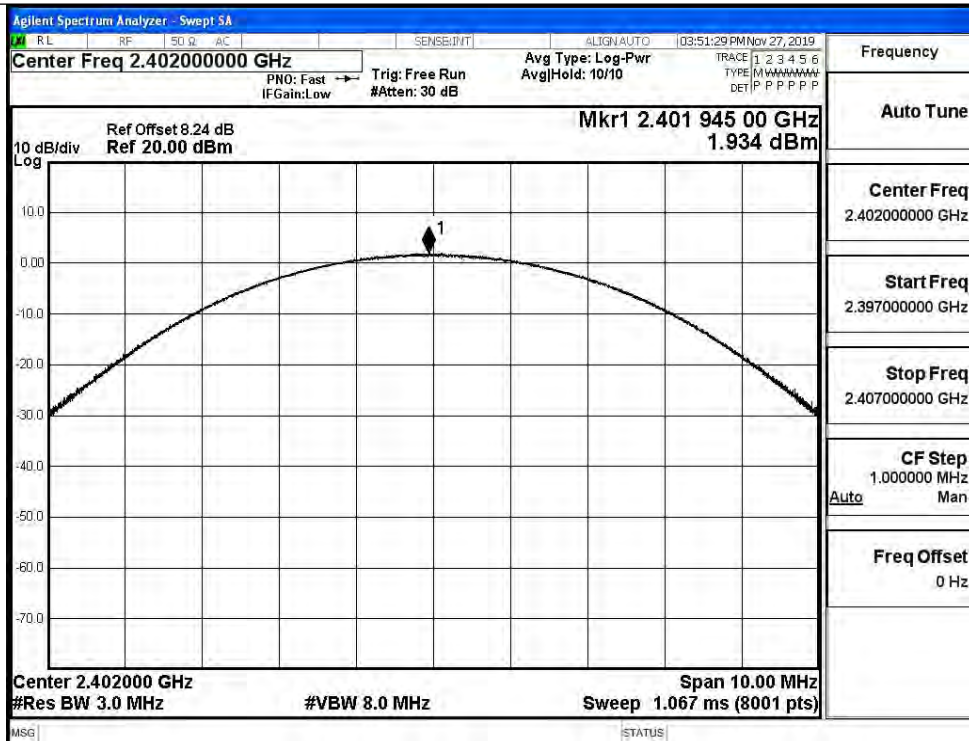


GFSK/HCH

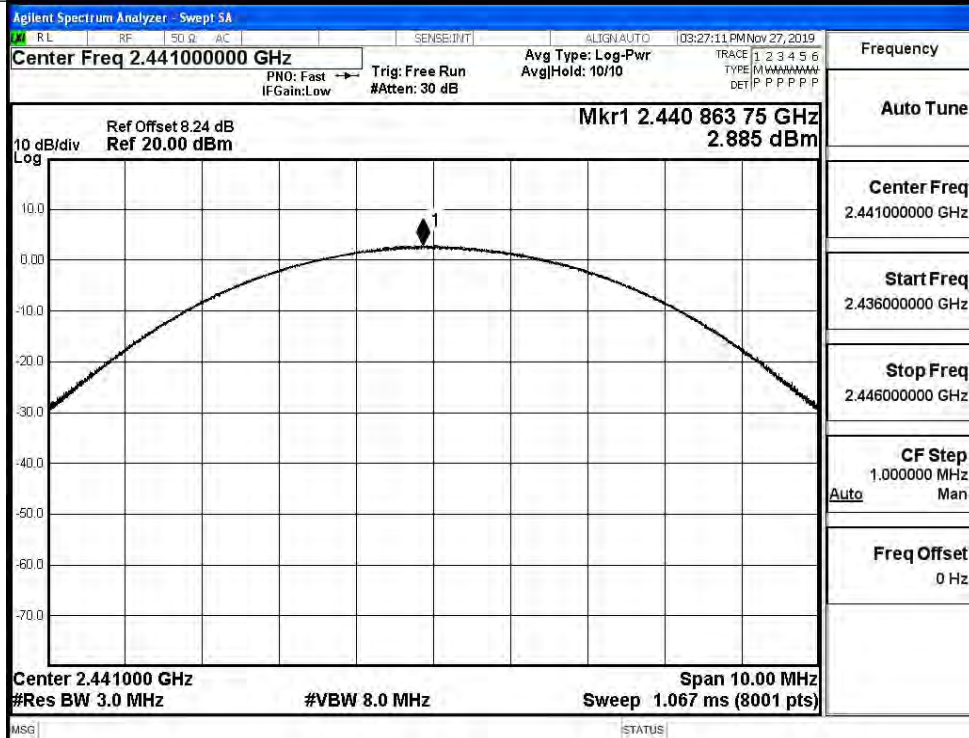
 π /4DQPSK/LCH

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

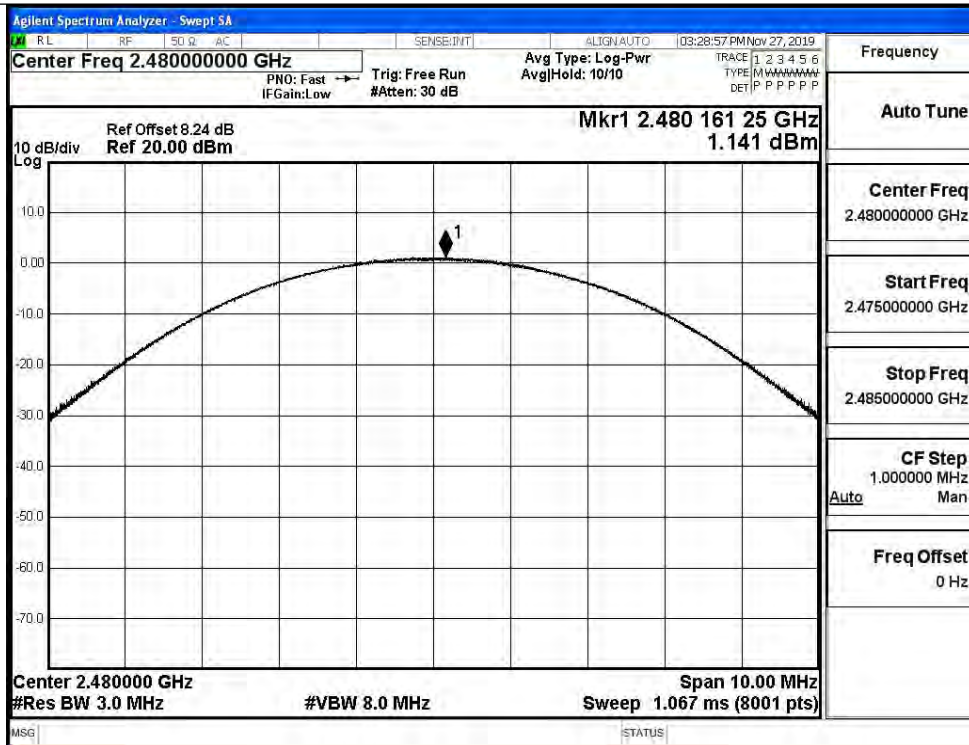
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

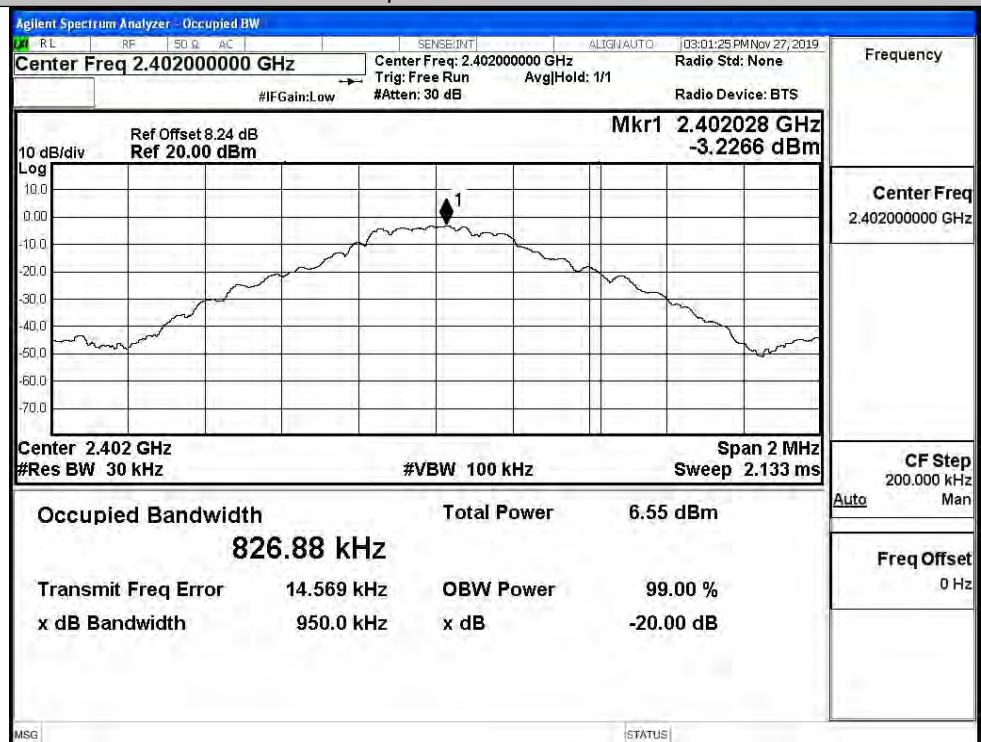


A.2 20dB Bandwidth

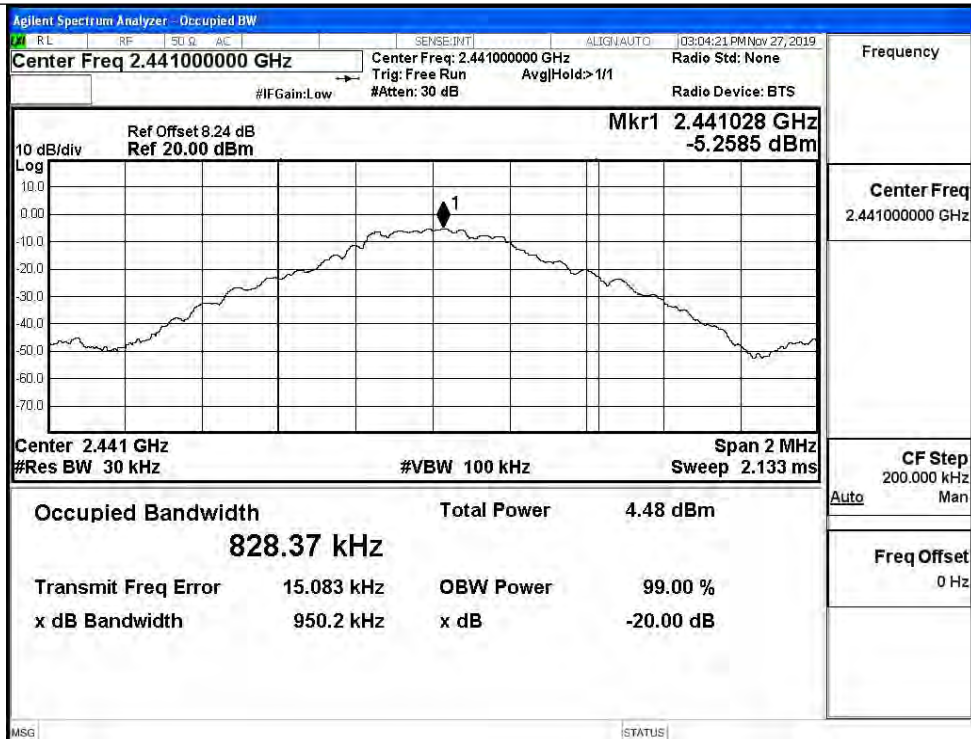
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9500	Not Specified	PASS
	MCH	0.9502	Not Specified	PASS
	HCH	0.9511	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.325	Not Specified	PASS
	MCH	1.325	Not Specified	PASS
	HCH	1.327	Not Specified	PASS
8DPSK	LCH	1.309	Not Specified	PASS
	MCH	1.307	Not Specified	PASS
	HCH	1.309	Not Specified	PASS

Test Graphs

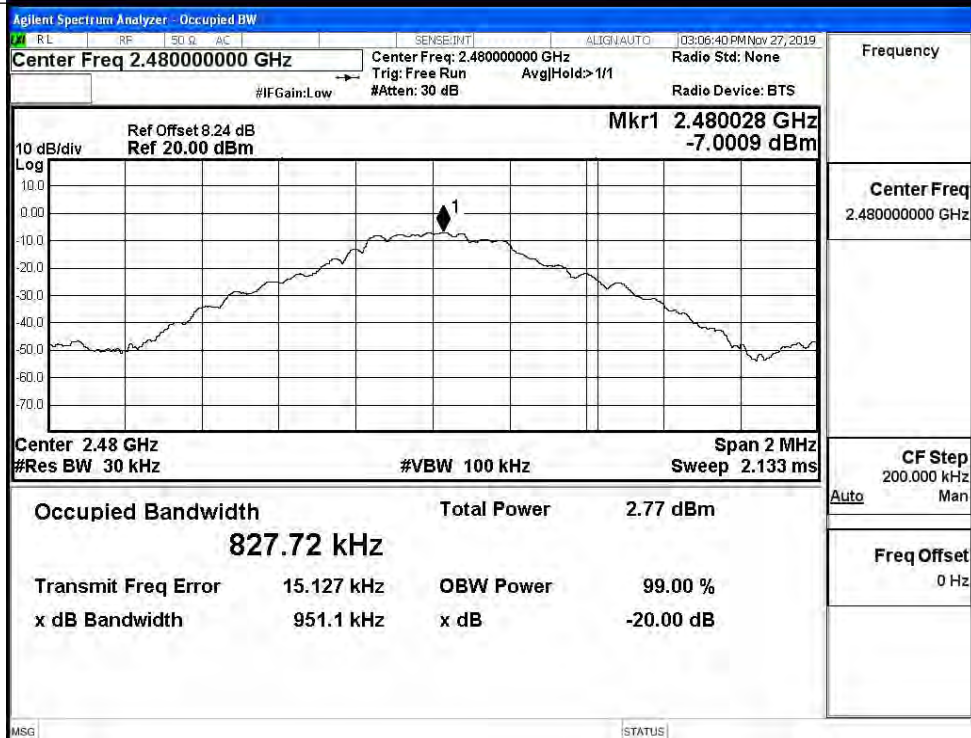
GFSK/LCH

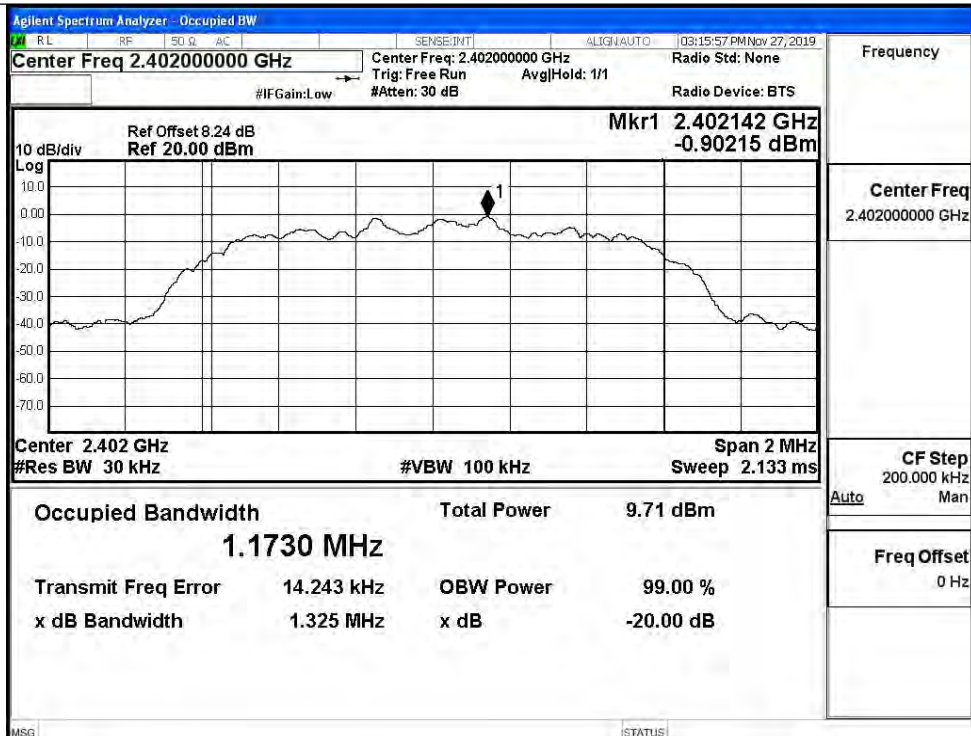
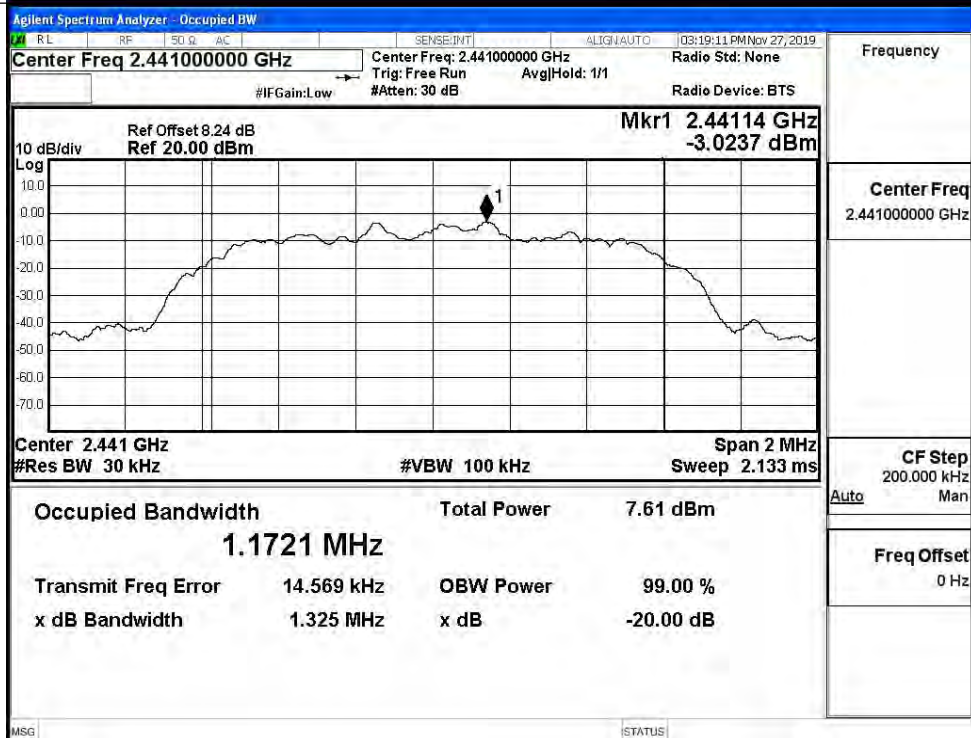


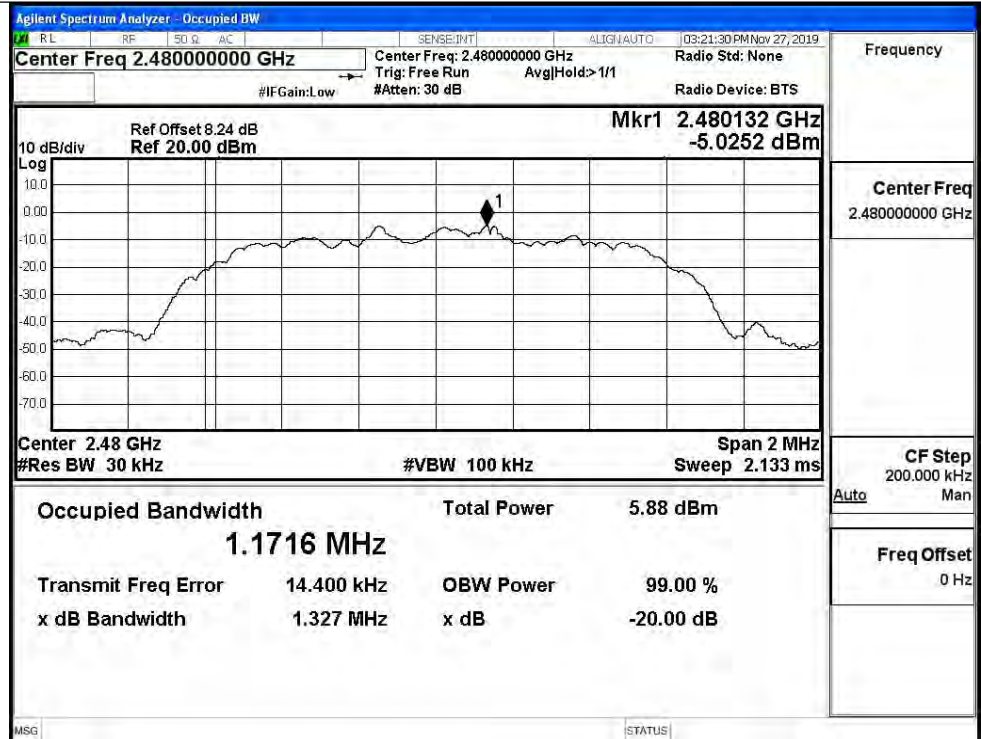
GFSK/MCH



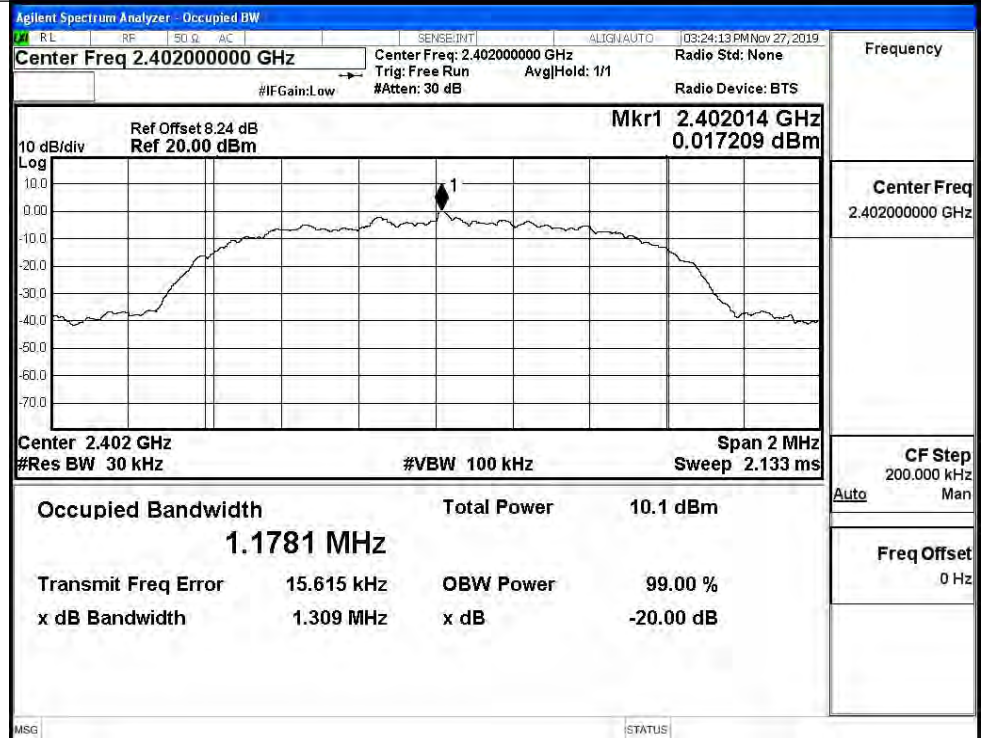
GFSK/HCH



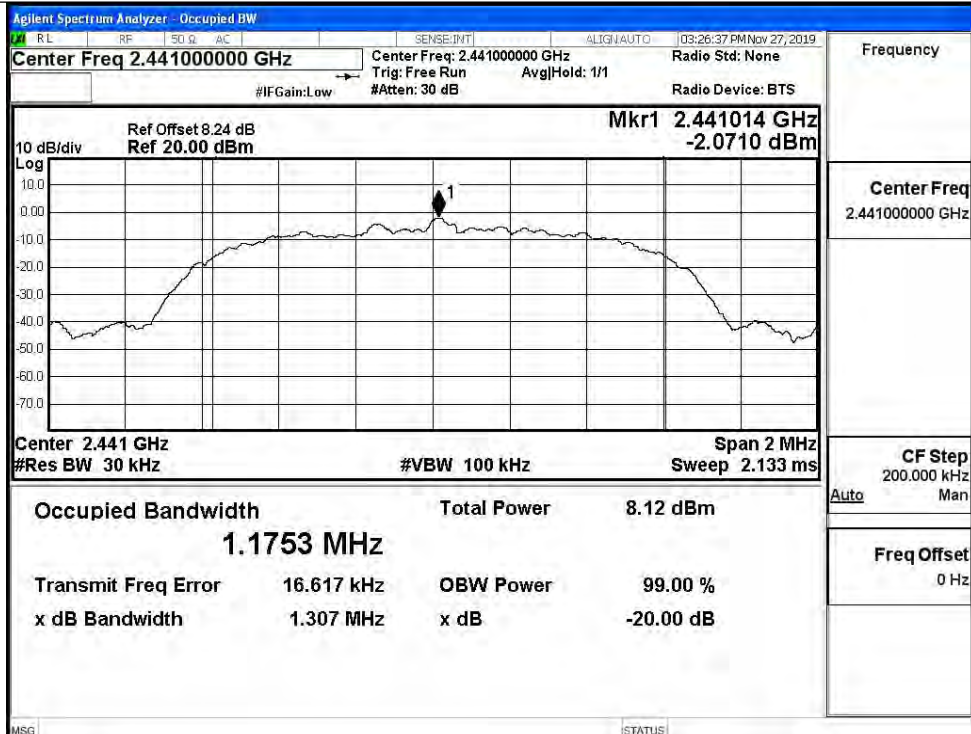
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

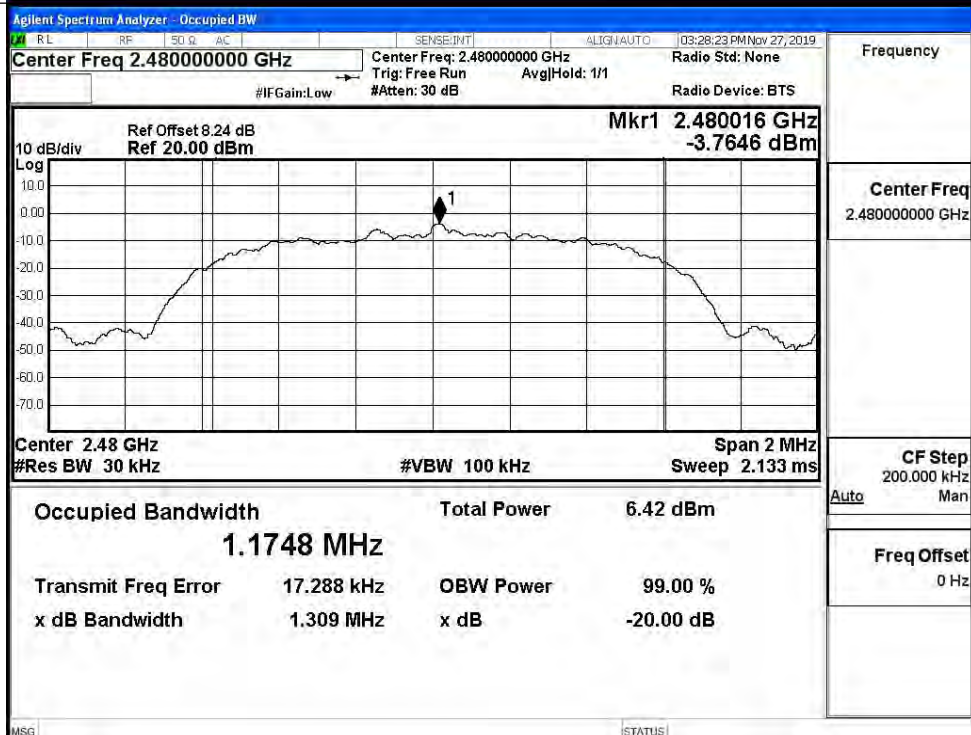
8DPSK/LCH



8DPSK/MCH



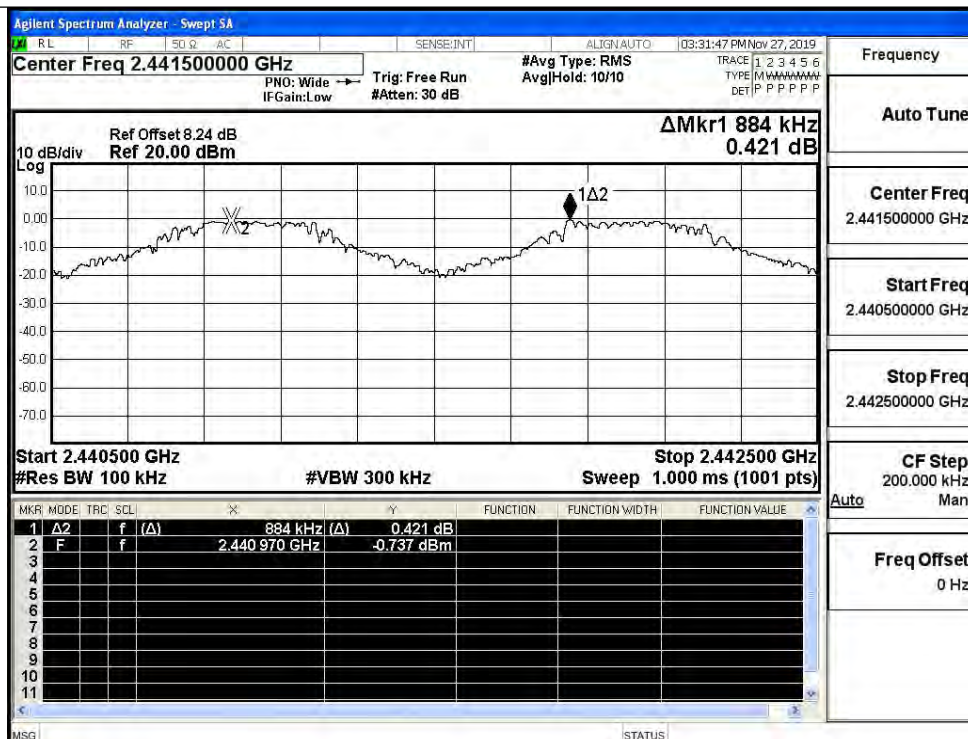
8DPSK/HCH



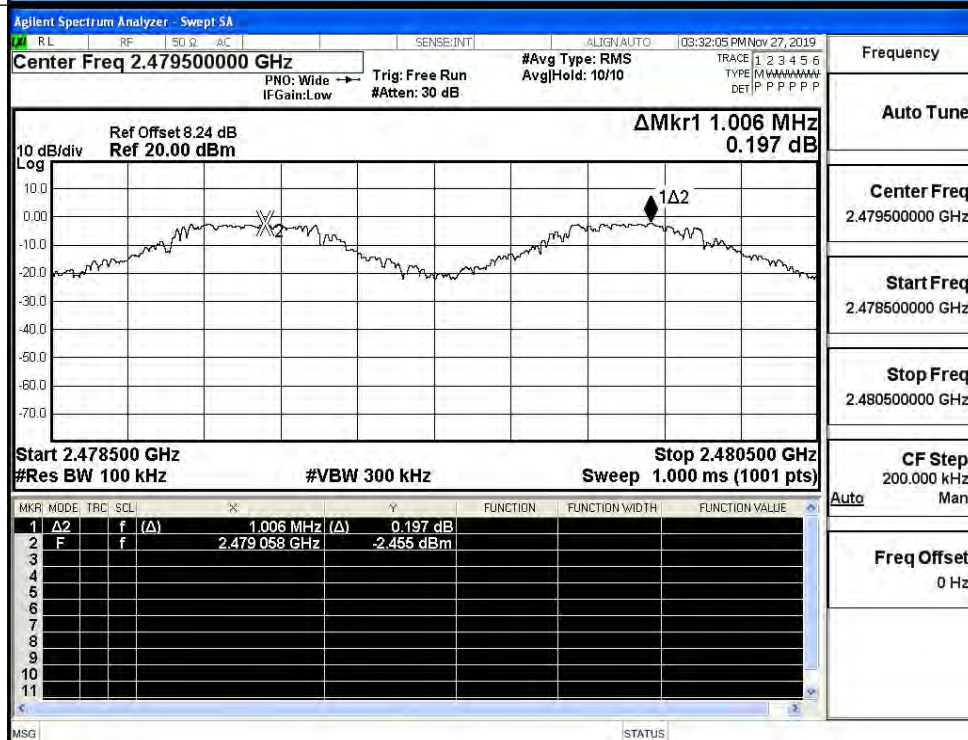
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.849	0.634	PASS
	MCH	0.884	0.634	PASS
	HCH	1.006	0.634	PASS
$\pi/4$ DQPSK	LCH	0.968	0.885	PASS
	MCH	1.034	0.885	PASS
	HCH	1.112	0.885	PASS
8DPSK	LCH	1.172	0.873	PASS
	MCH	1.130	0.873	PASS
	HCH	1.046	0.873	PASS

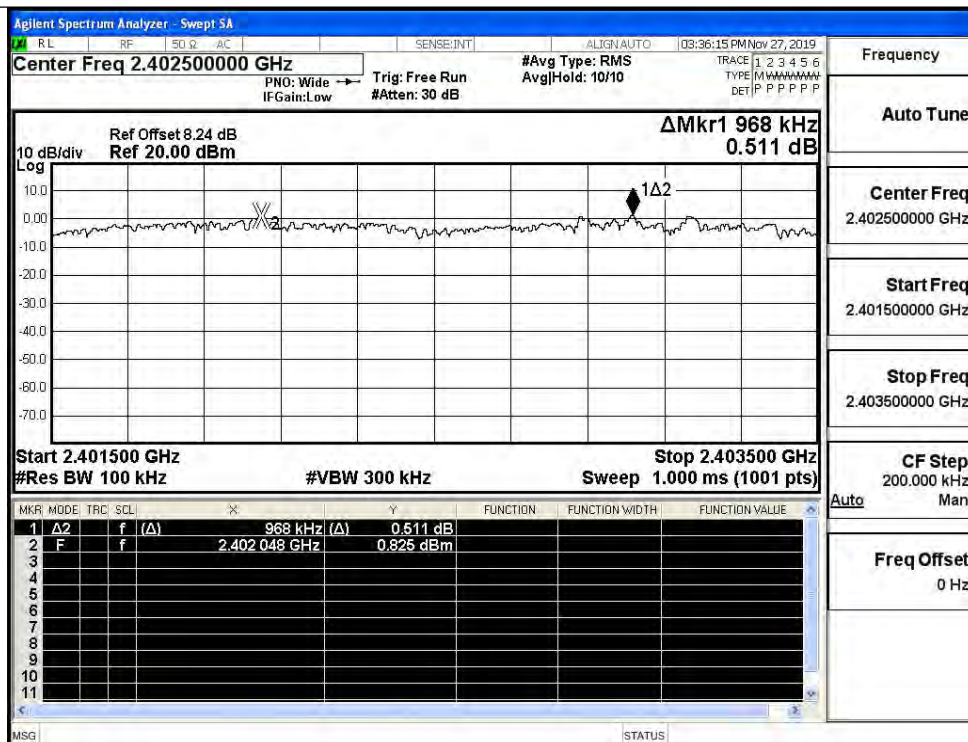
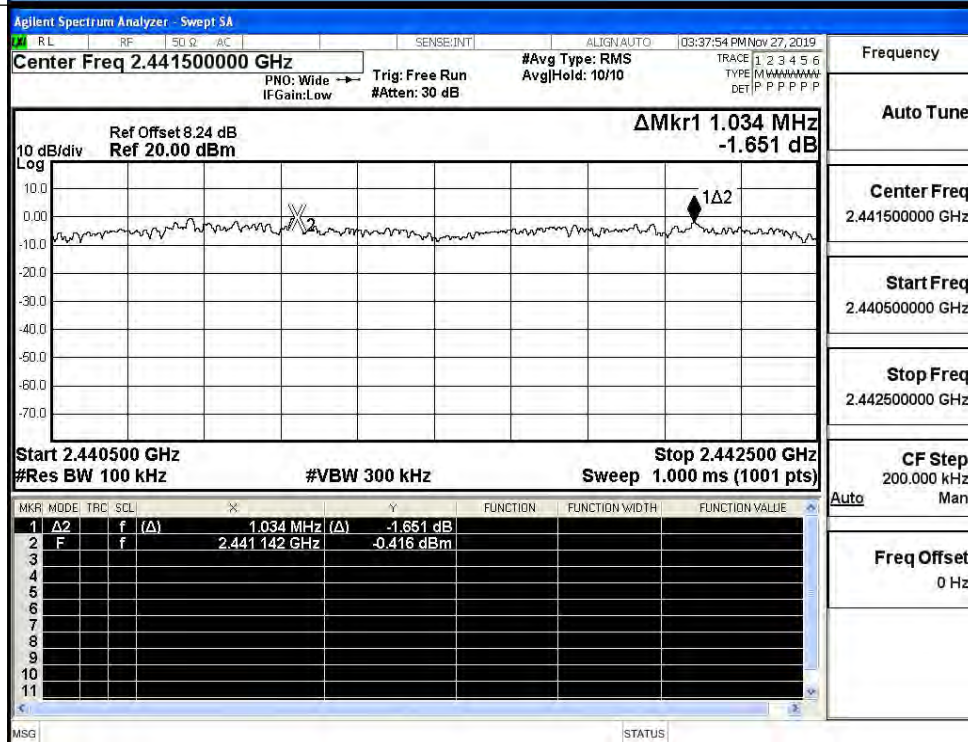
[illegible]

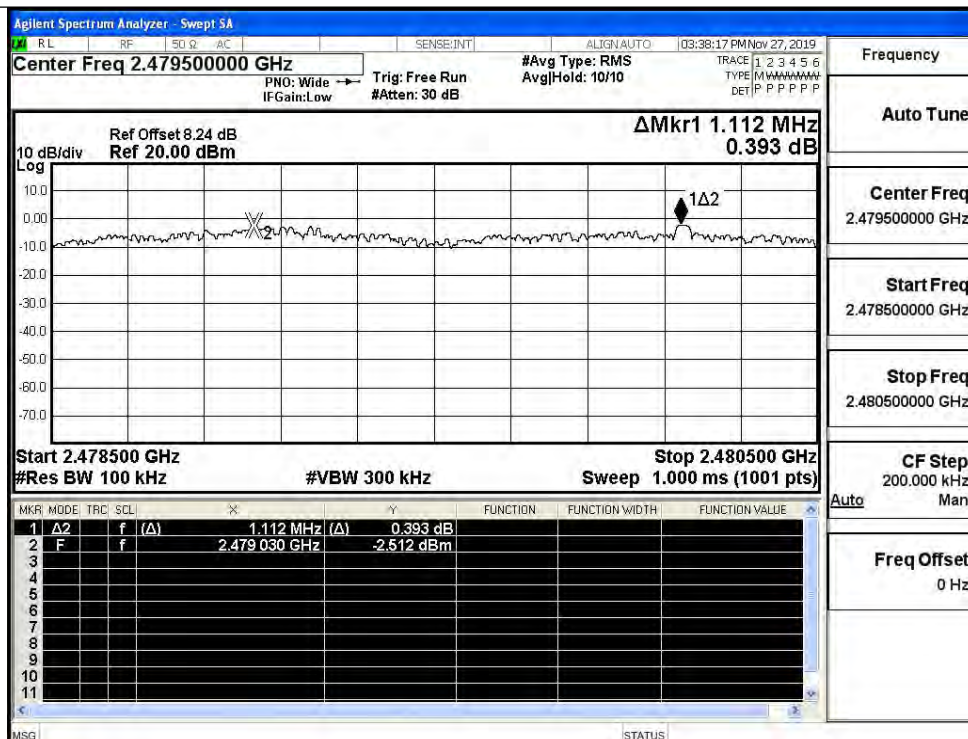
GFSK/MCH



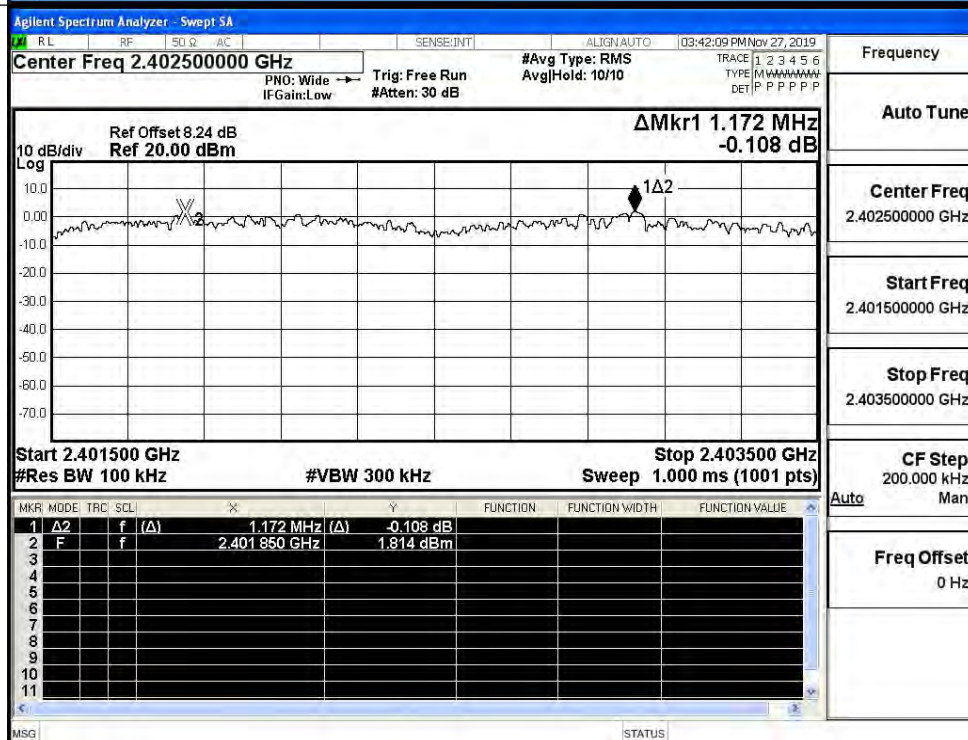
GFSK/HCH



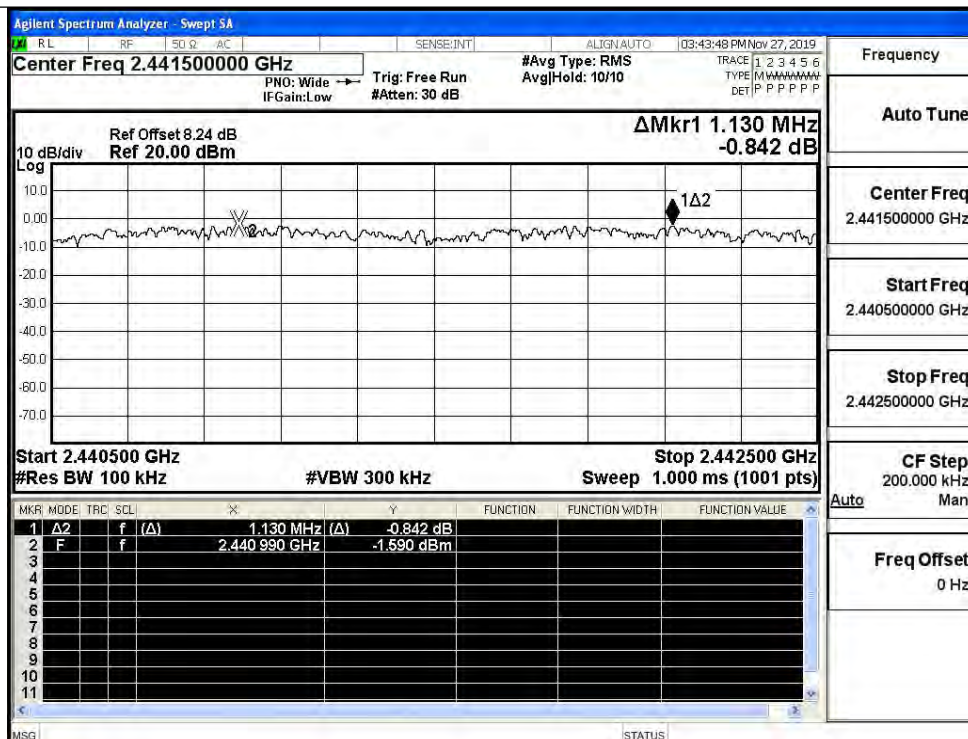
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

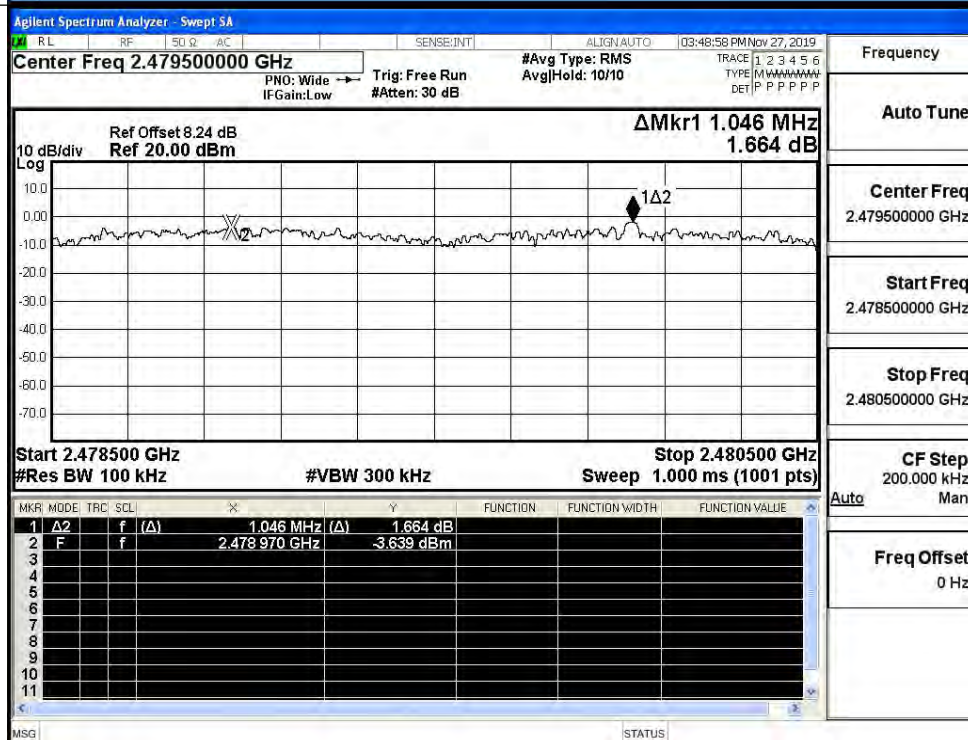
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

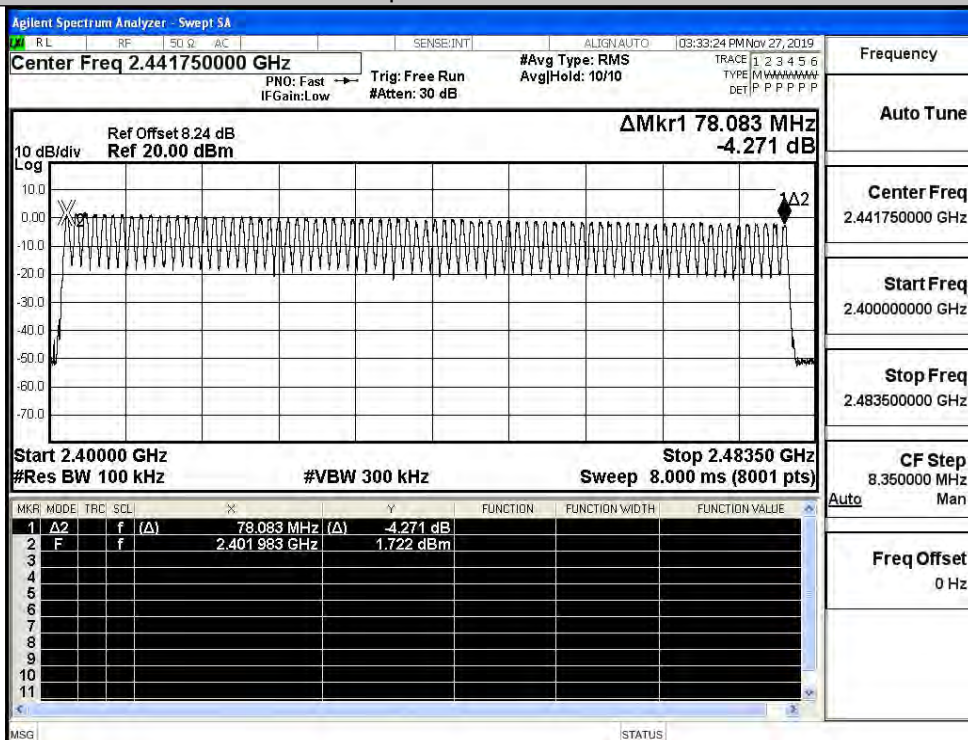
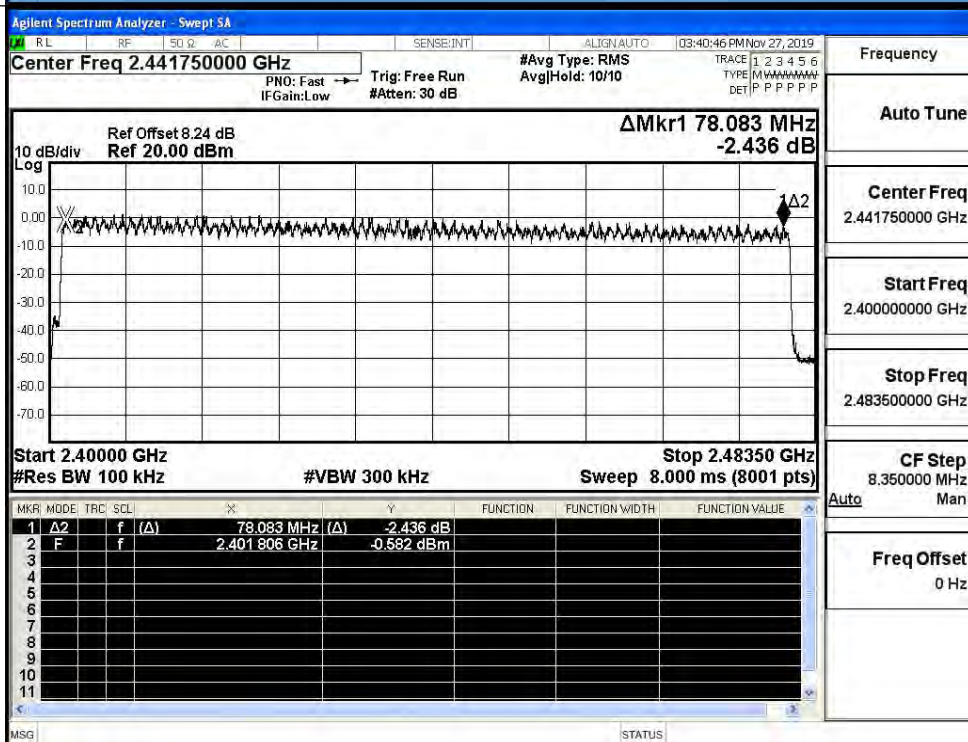


A.4 Hopping Channel Number

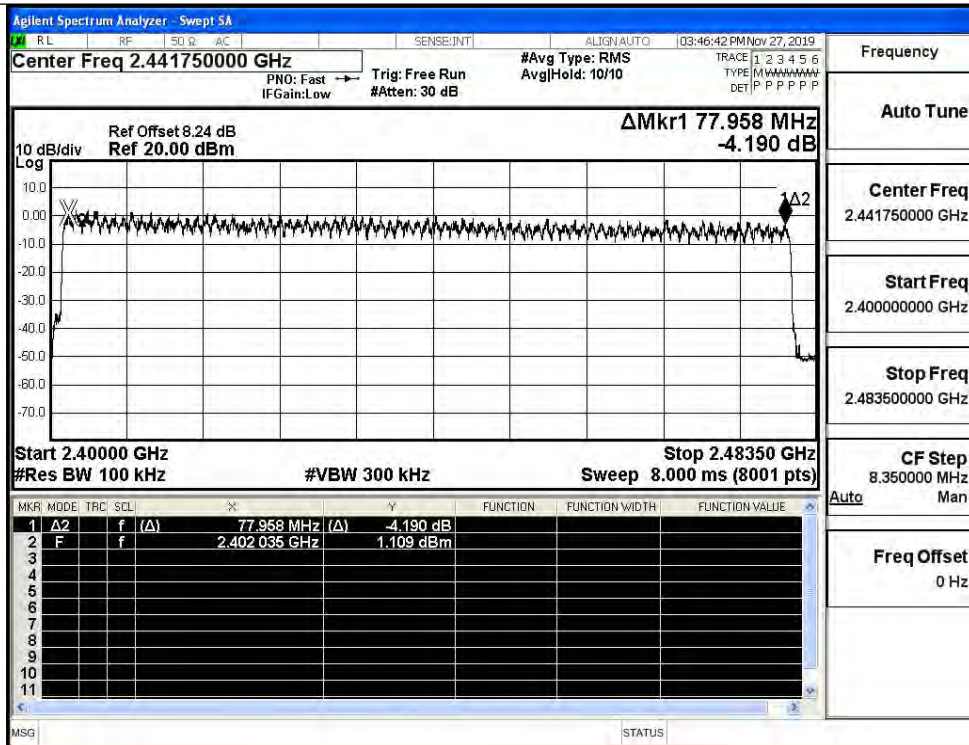
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

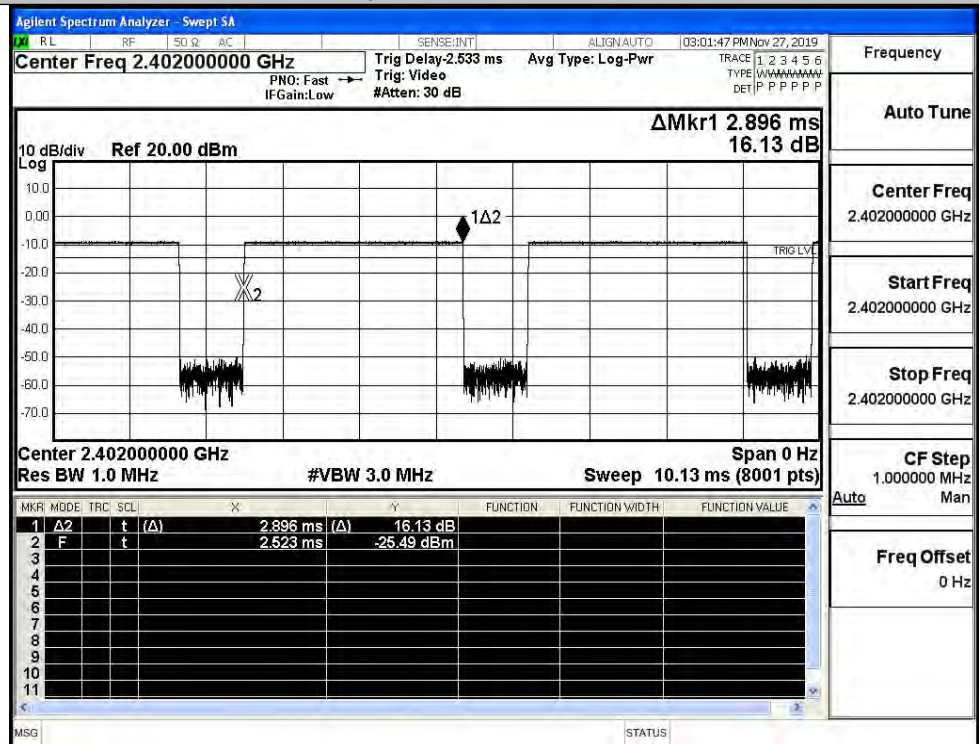


A.5 Dwell Time

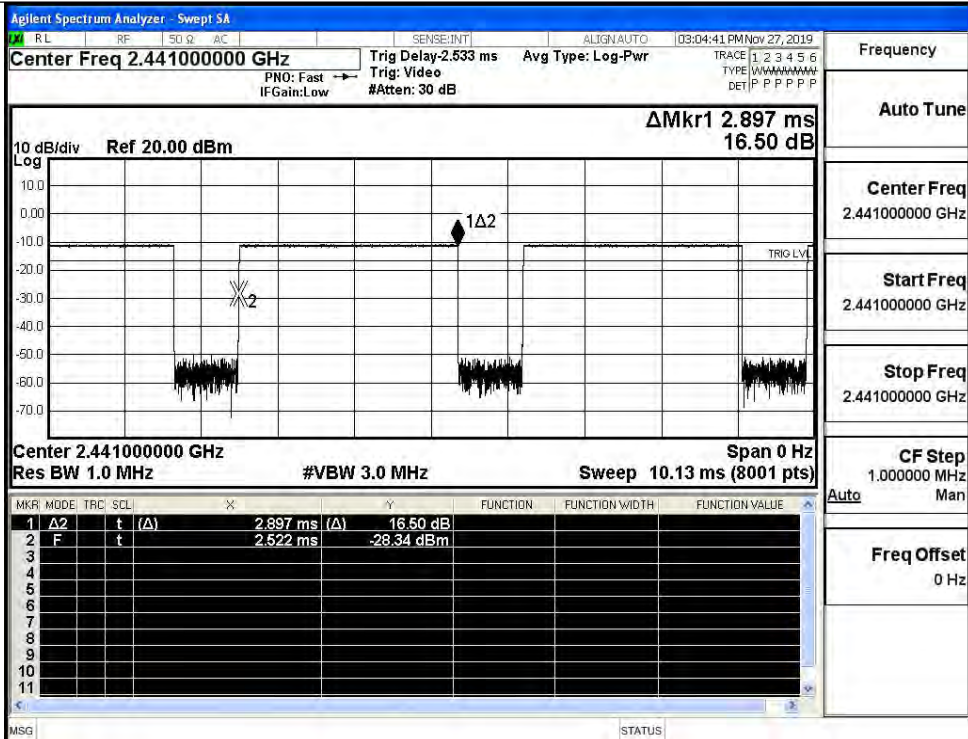
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.9	106.7	0.309	0.4	PASS
	DH5	MCH	2.9	106.7	0.309	0.4	PASS
	DH5	HCH	2.9	106.7	0.309	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.9	106.7	0.309	0.4	PASS
	2DH5	MCH	2.9	106.7	0.309	0.4	PASS
	2DH5	HCH	2.9	106.7	0.309	0.4	PASS
8DPSK	3DH5	LCH	2.9	106.7	0.309	0.4	PASS
	3DH5	MCH	2.9	106.7	0.309	0.4	PASS
	3DH5	HCH	2.9	106.7	0.309	0.4	PASS

Test Graphs

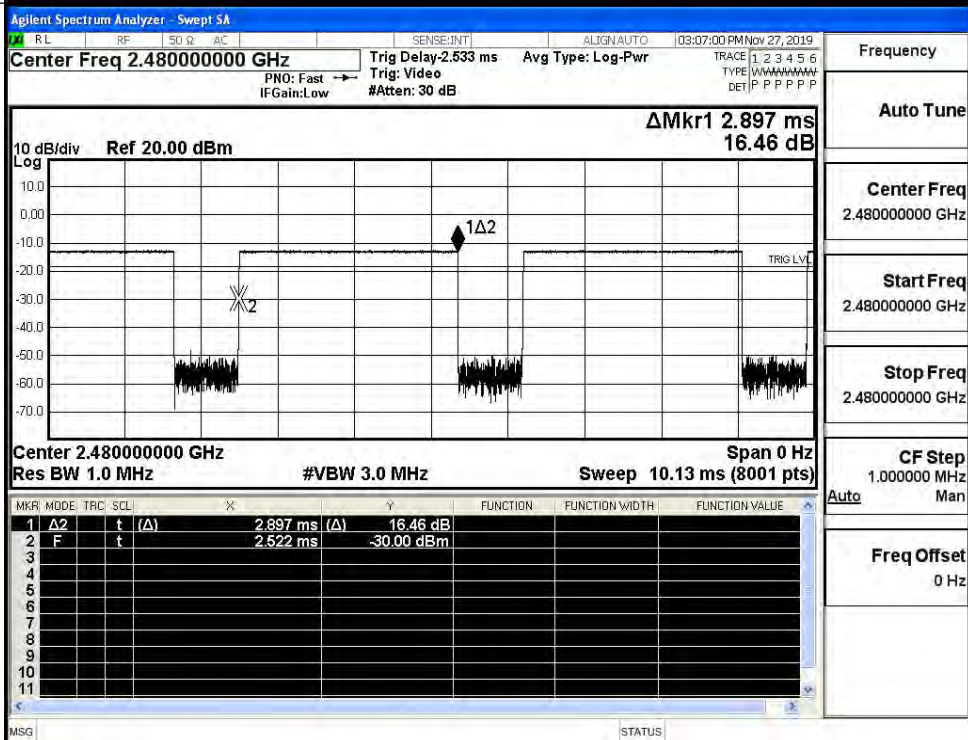
GFSK_DH5/LCH



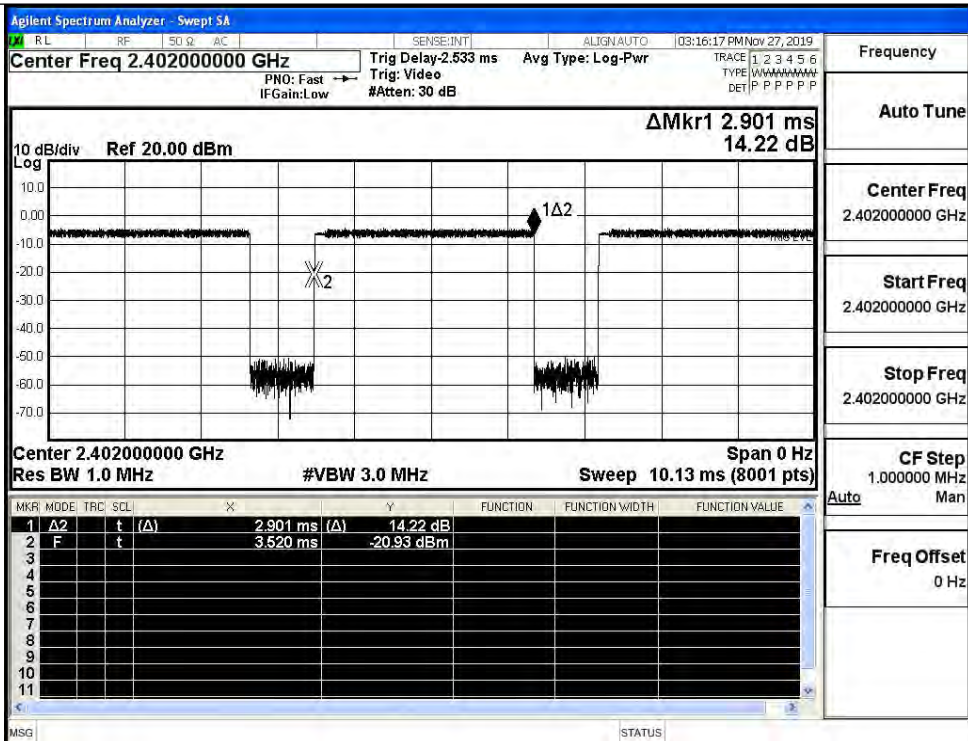
GFSK_DH5/MCH



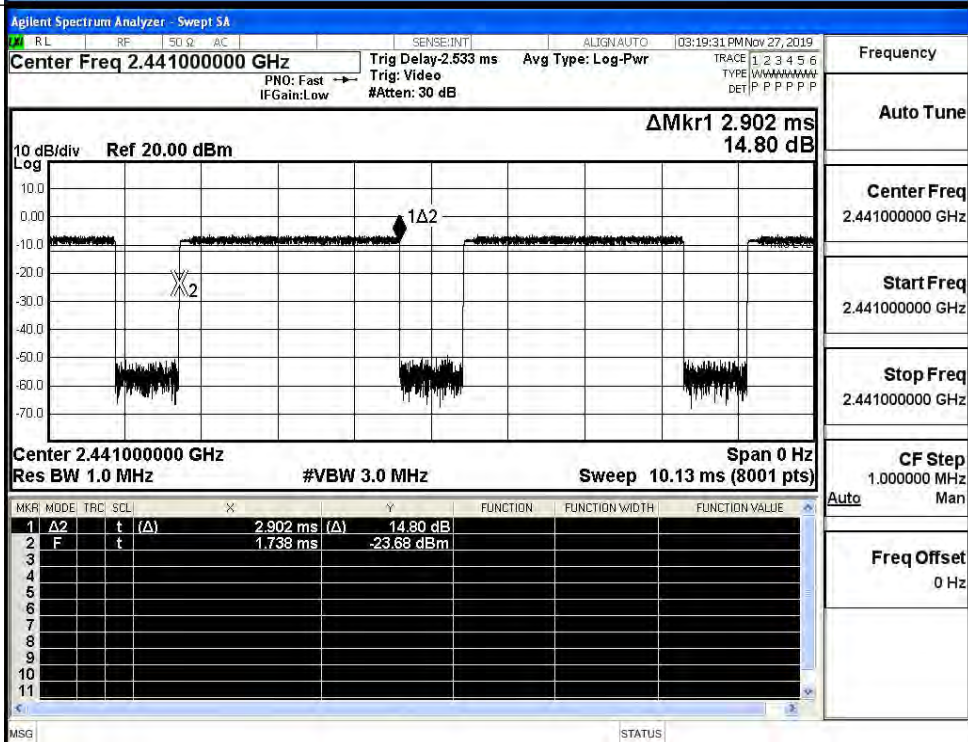
GFSK_DH5/HCH



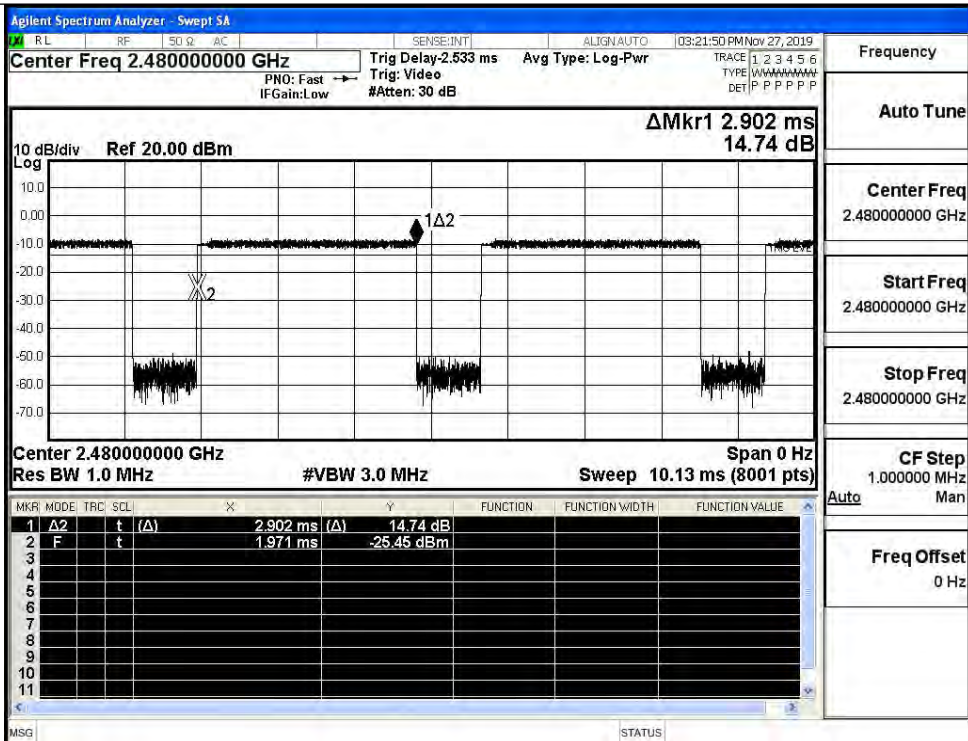
$\pi/4$ DQPSK
_2DH5/LCH



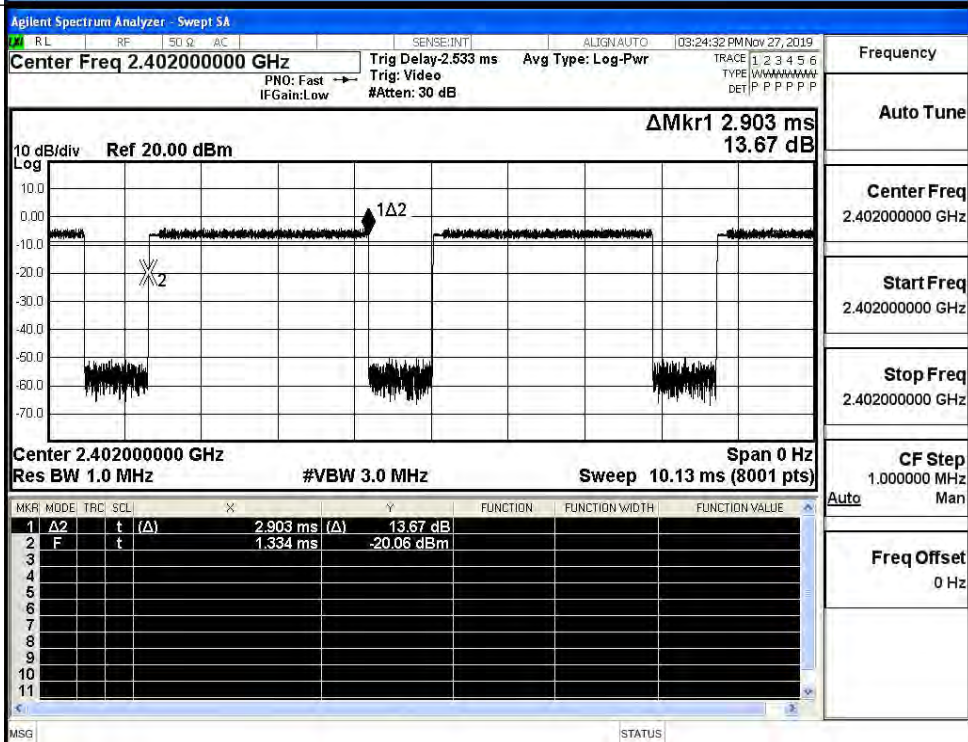
$\pi/4$ DQPSK
_2DH5/MCH



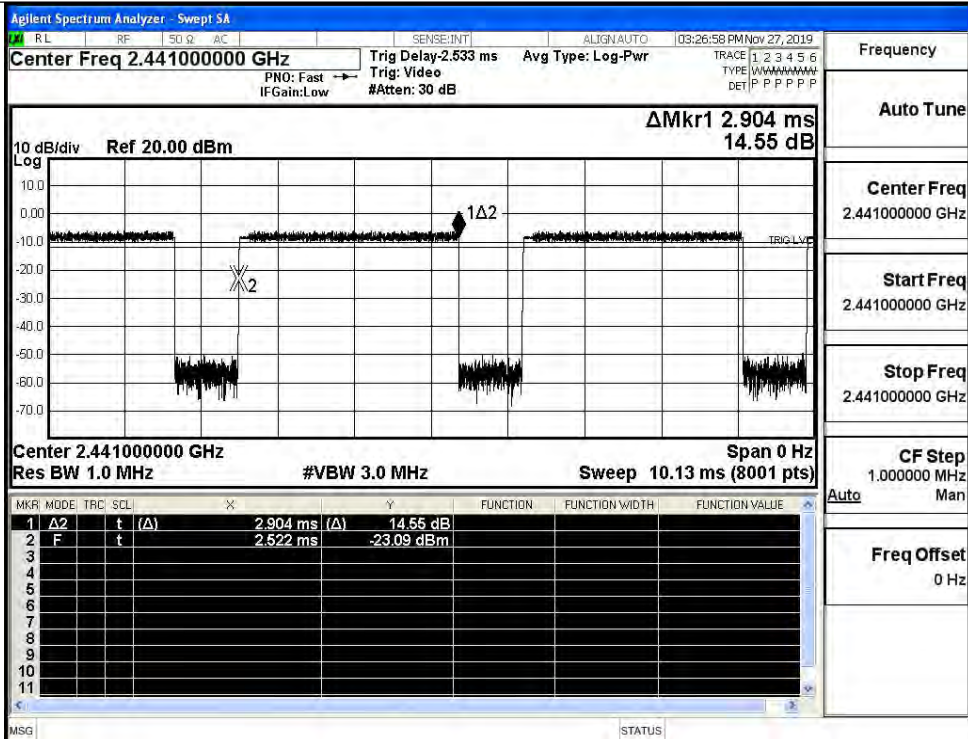
$\pi/4$ DQPSK
_2DH5/HCH



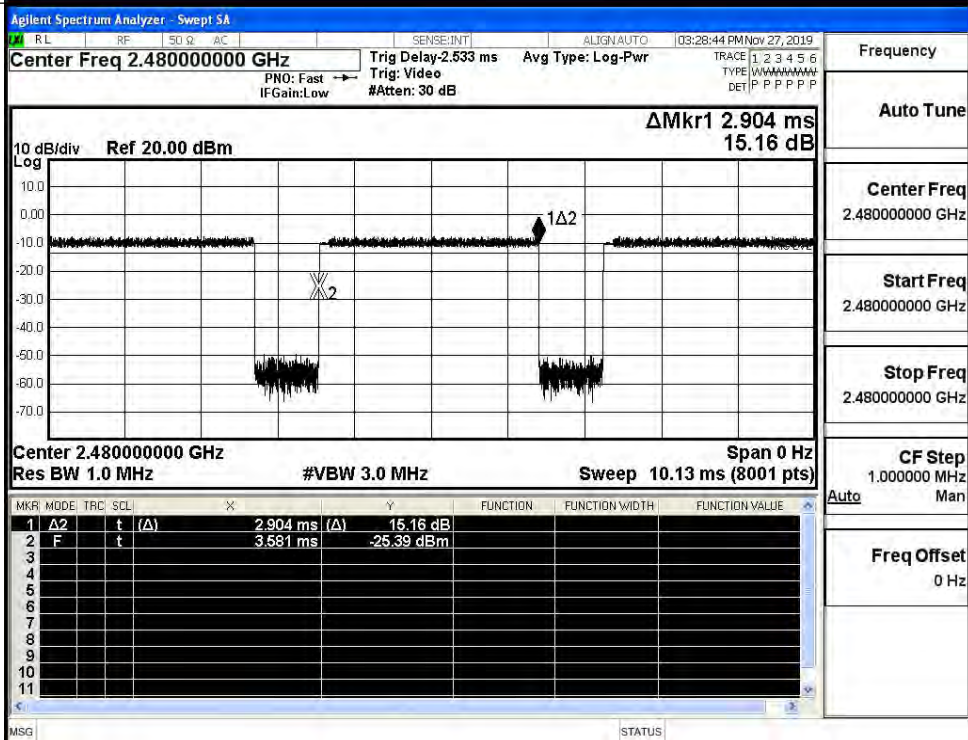
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

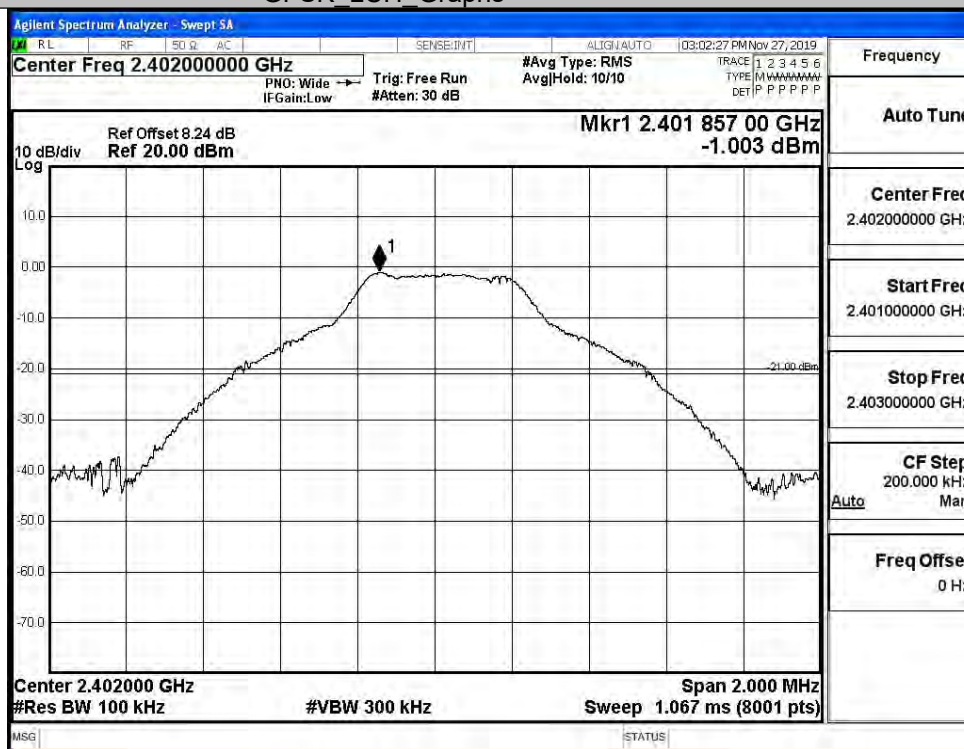


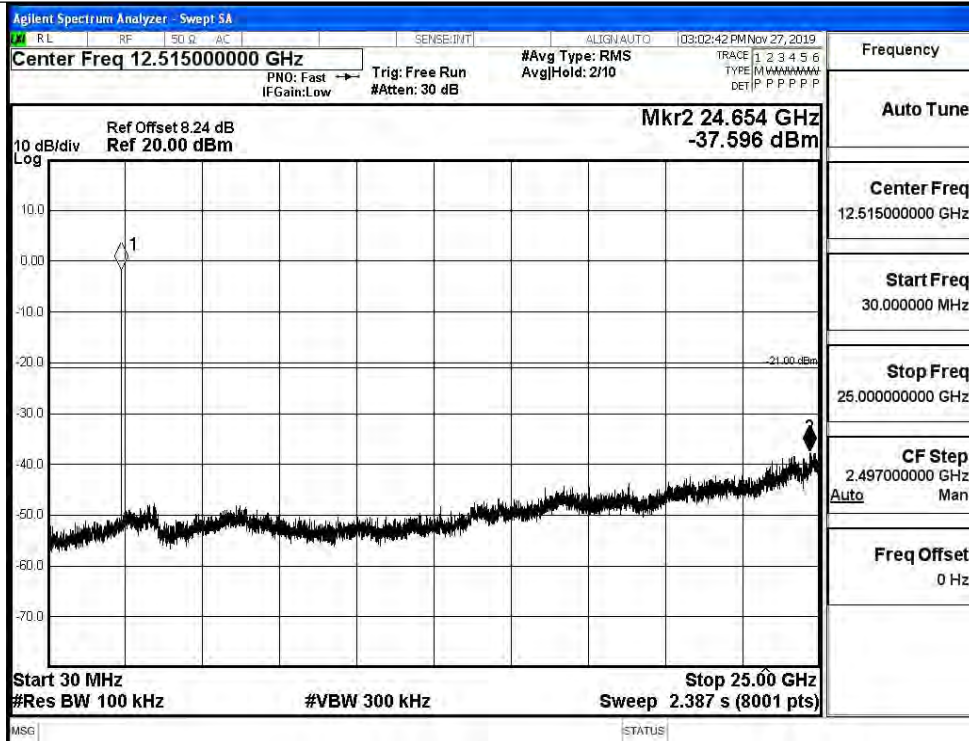
A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.003	-37.596	-21.003	PASS
	MCH	-3.114	-37.072	-23.114	PASS
	HCH	-4.817	-36.079	-24.817	PASS
$\pi/4$ DQPSK	LCH	1.703	-36.498	-18.297	PASS
	MCH	-0.438	-37.495	-20.438	PASS
	HCH	-2.14	-37.147	-22.140	PASS
8DPSK	LCH	1.814	-36.357	-18.186	PASS
	MCH	-0.436	-37.872	-20.436	PASS
	HCH	-1.958	-36.727	-21.958	PASS

GFSK LCH Graphs

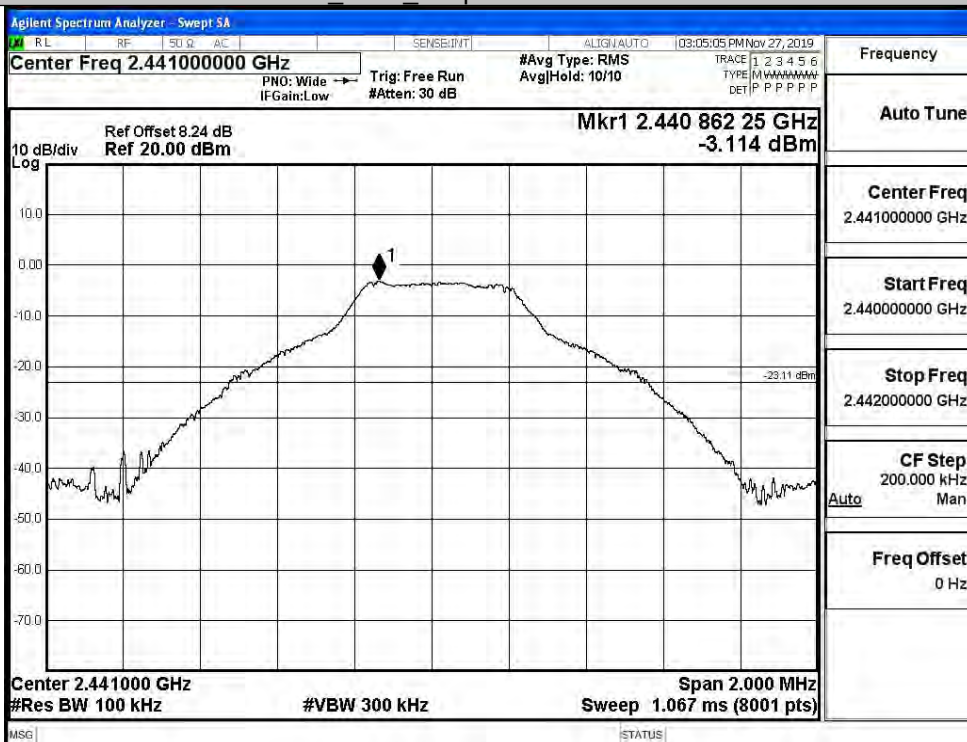
Pref



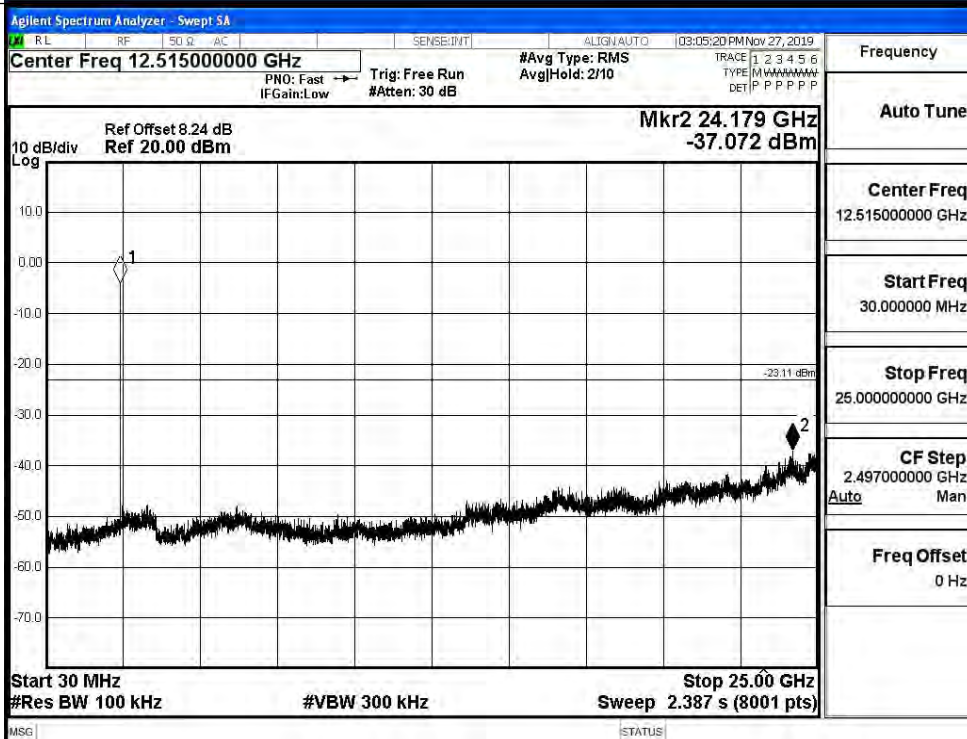
P_uw

GFSK MCH Graphs

Pref

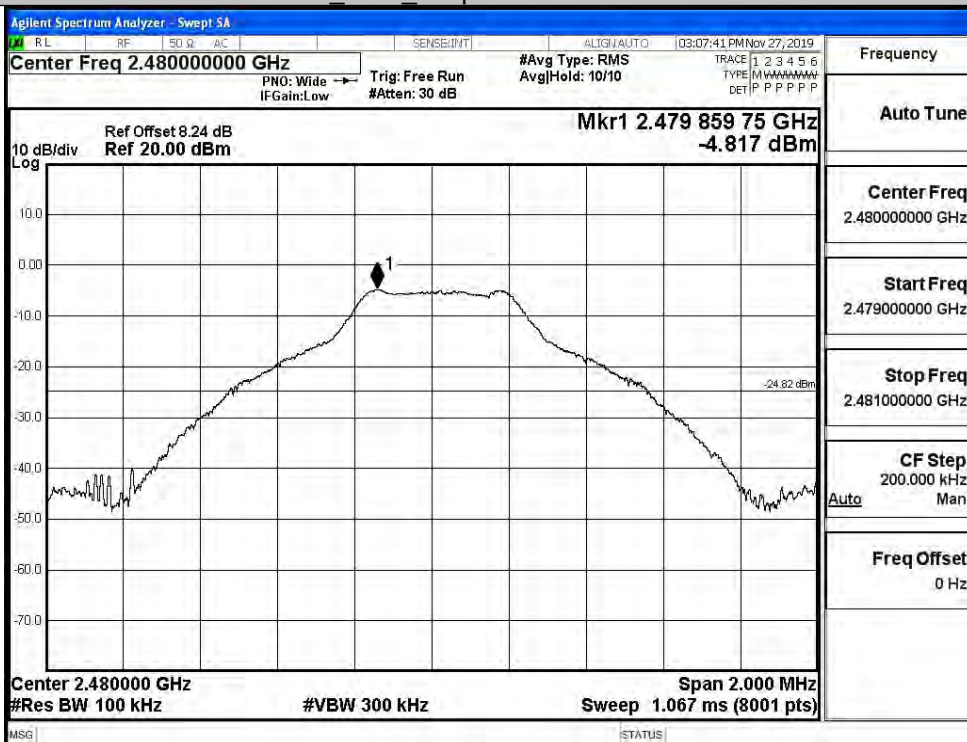


Puw

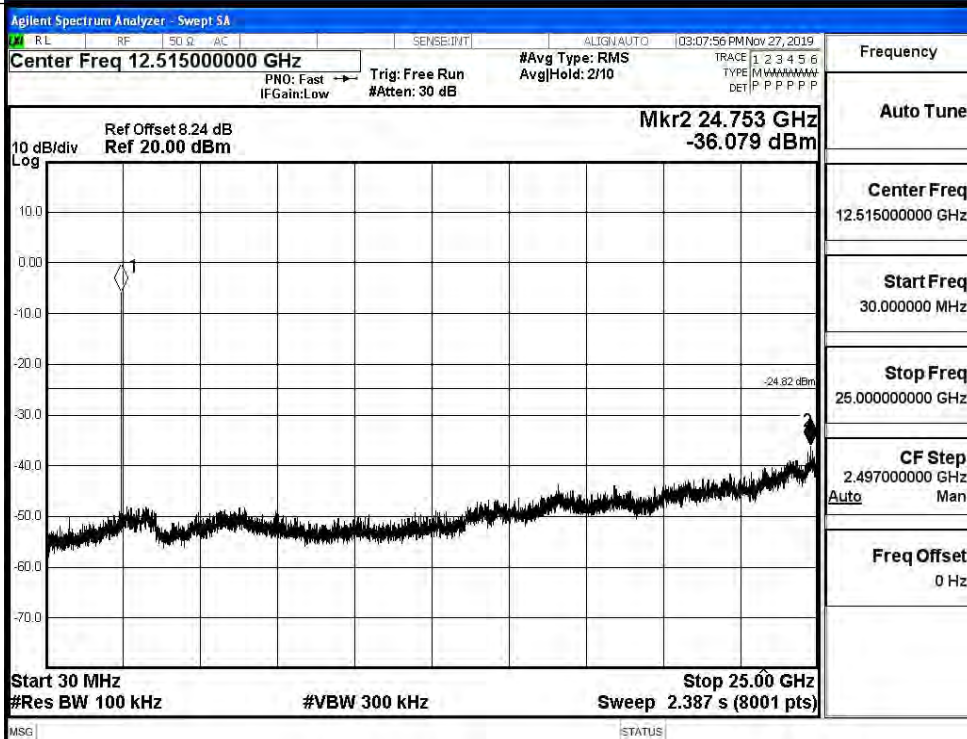


GFSK HCH_Graphs

Pref

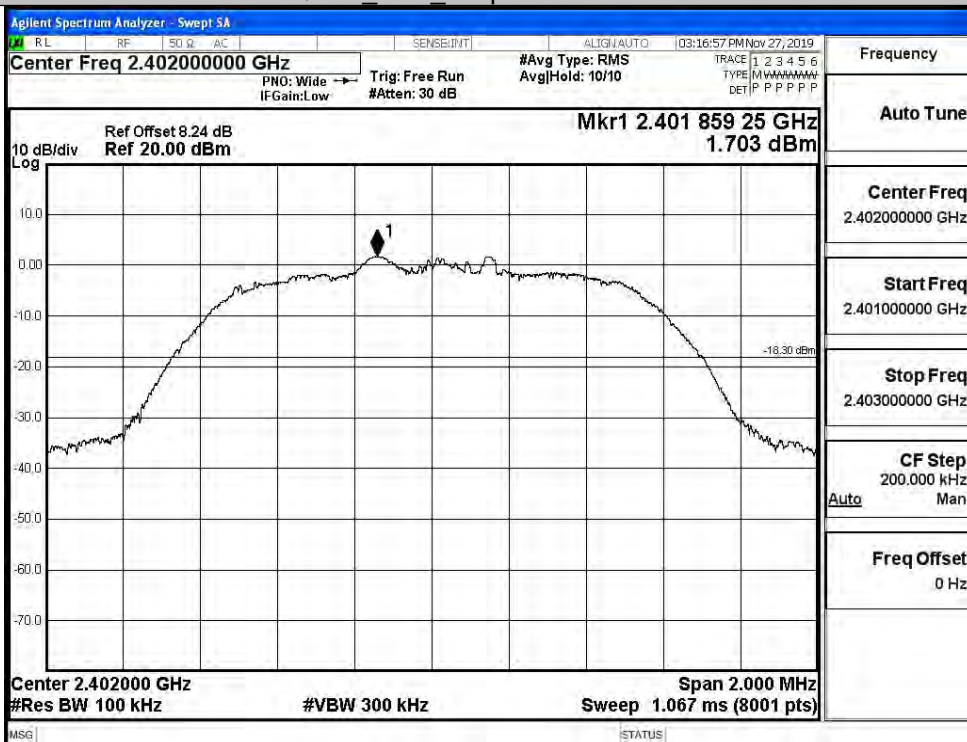


Puw

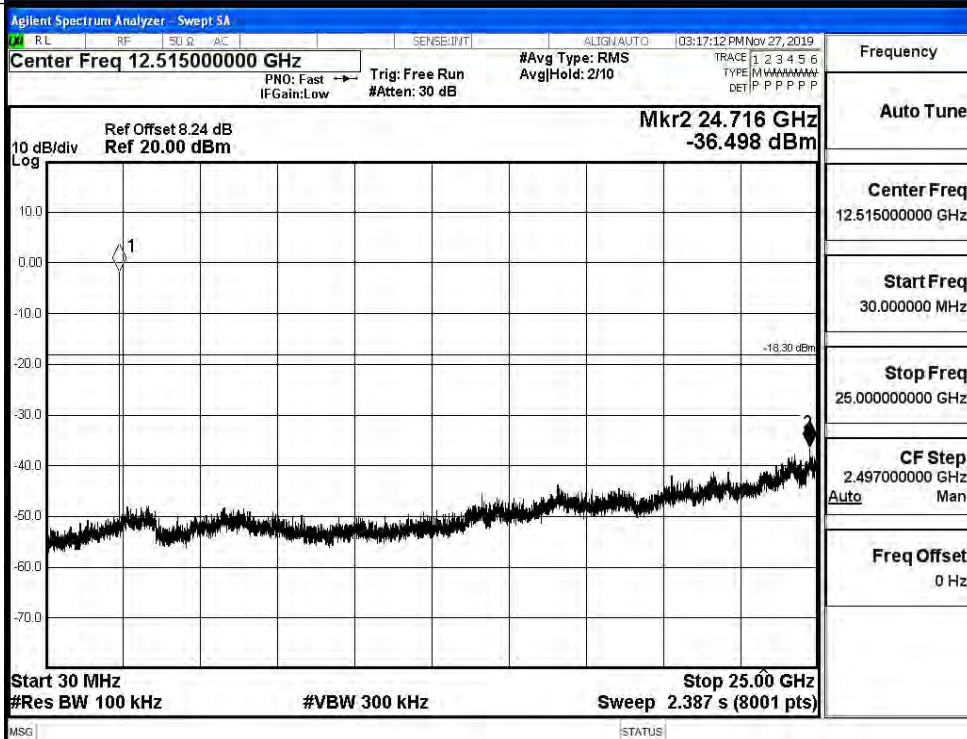


$\pi/4$ DQPSK LCH_Graphs

Pref

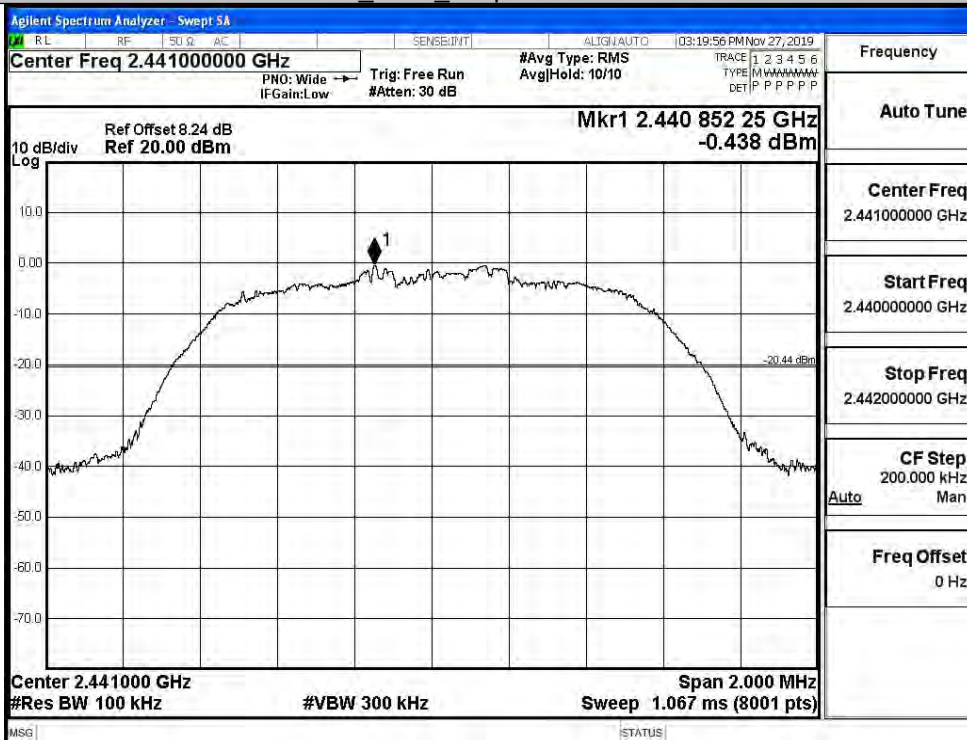


Puw

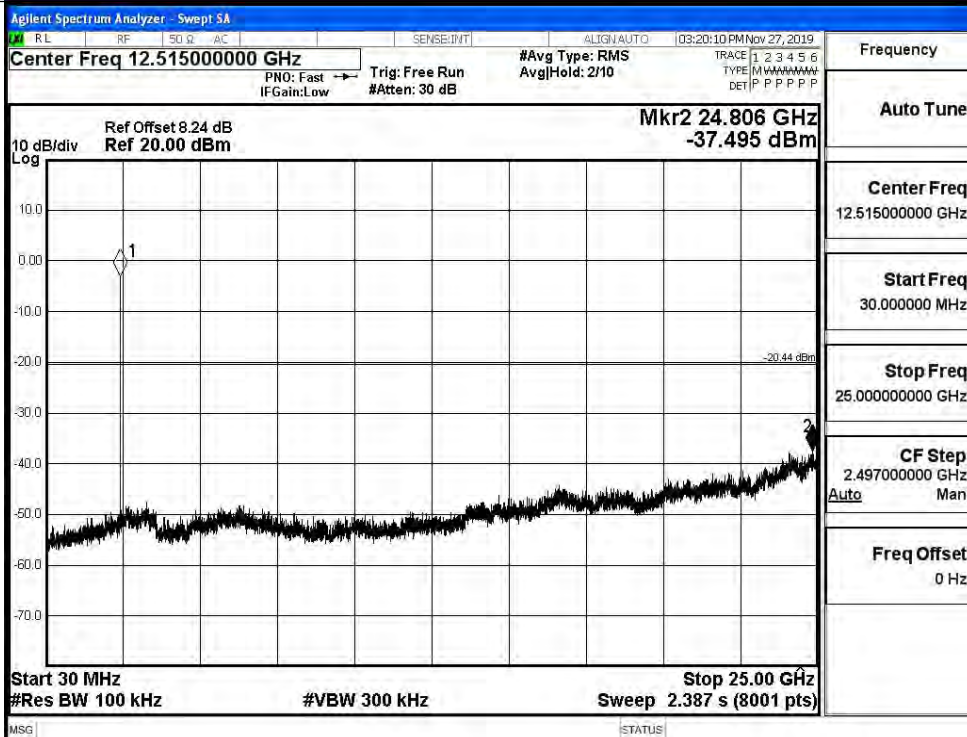


π /4DQPSK_MCH_Graphs

Pref

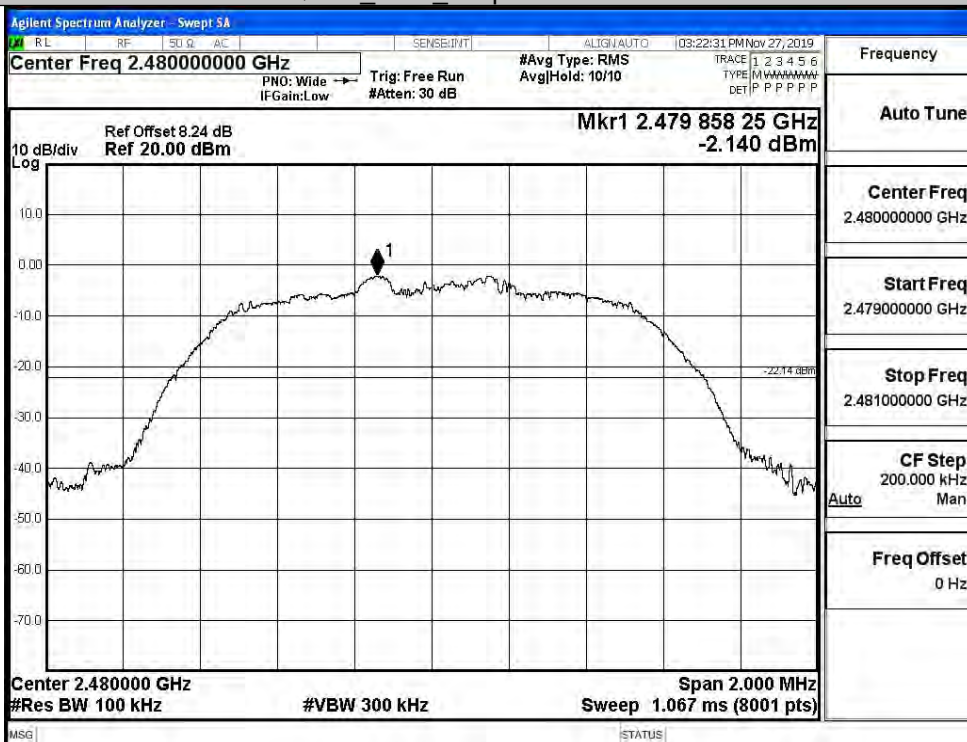


Puw

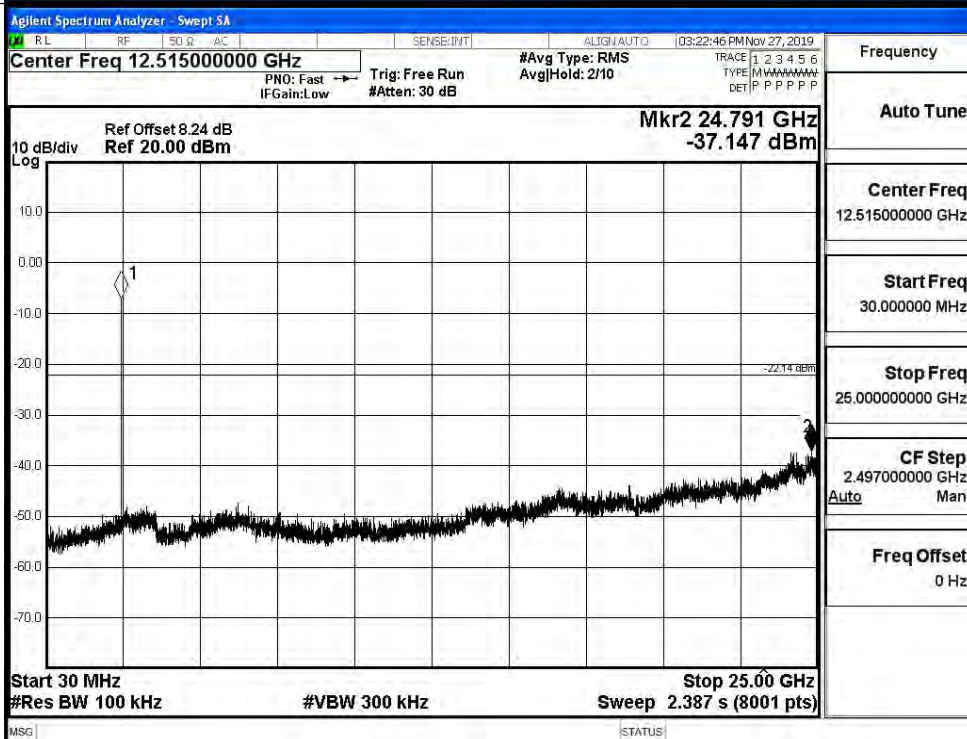


$\pi/4$ DQPSK HCH_Graphs

Pref

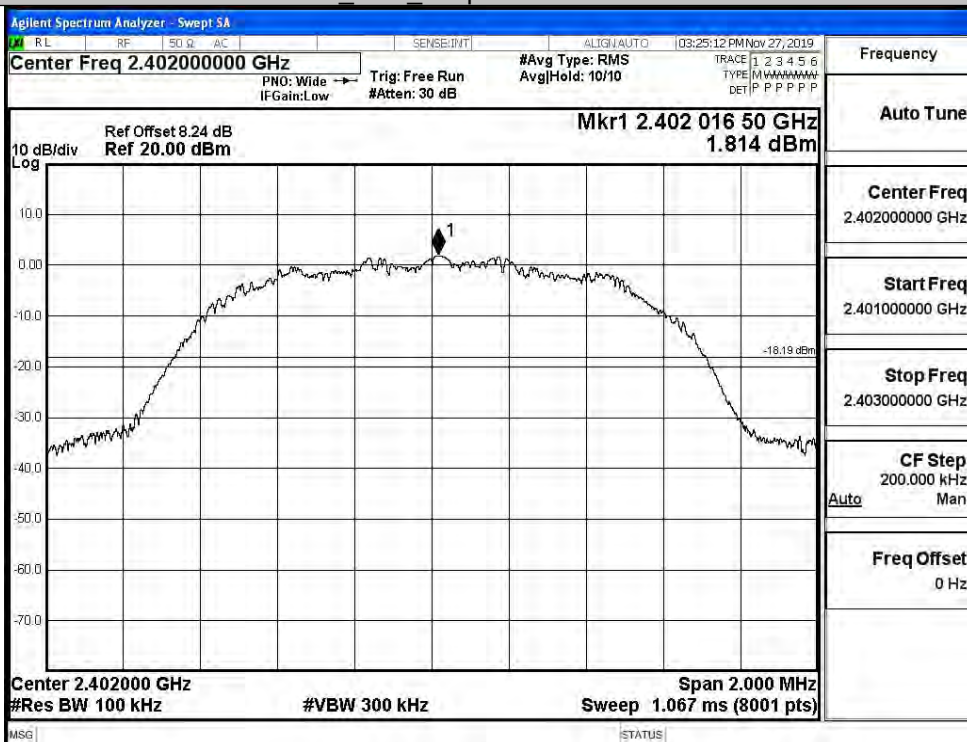


Puw

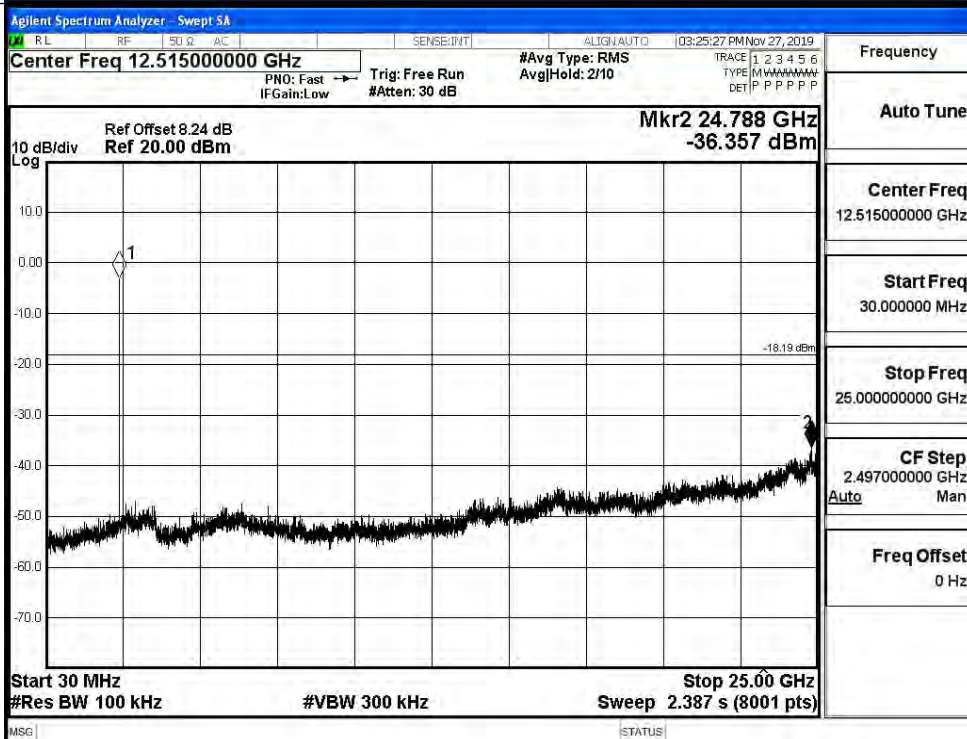


8DPSK_LCH_Graphs

Pref

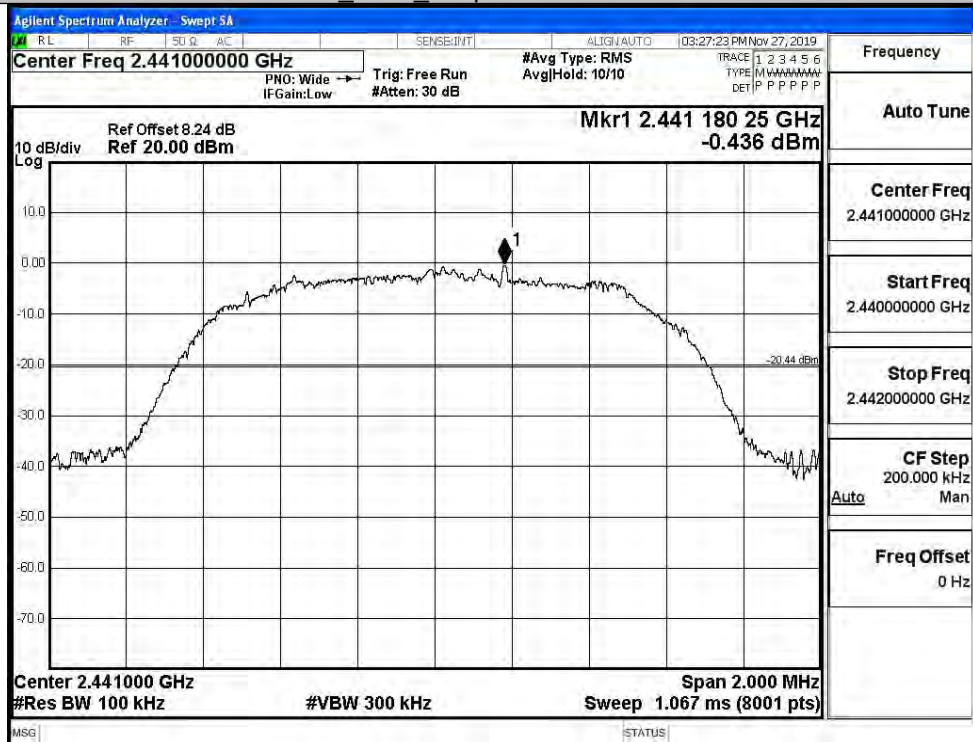


Puw

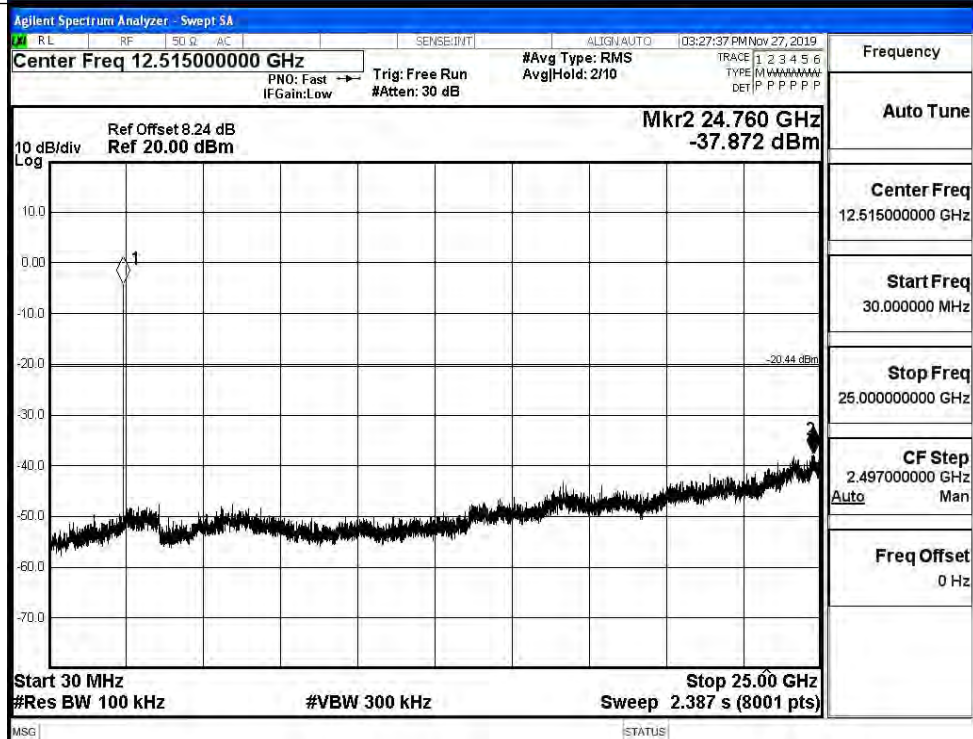


8DPSK_MCH_Graphs

Pref

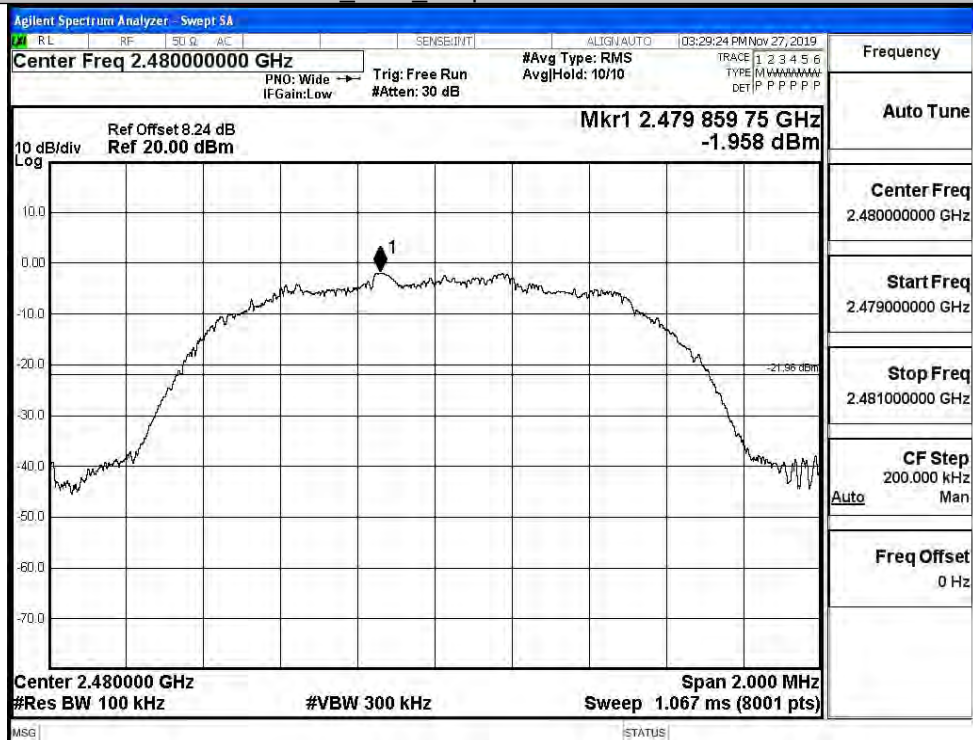


Puw

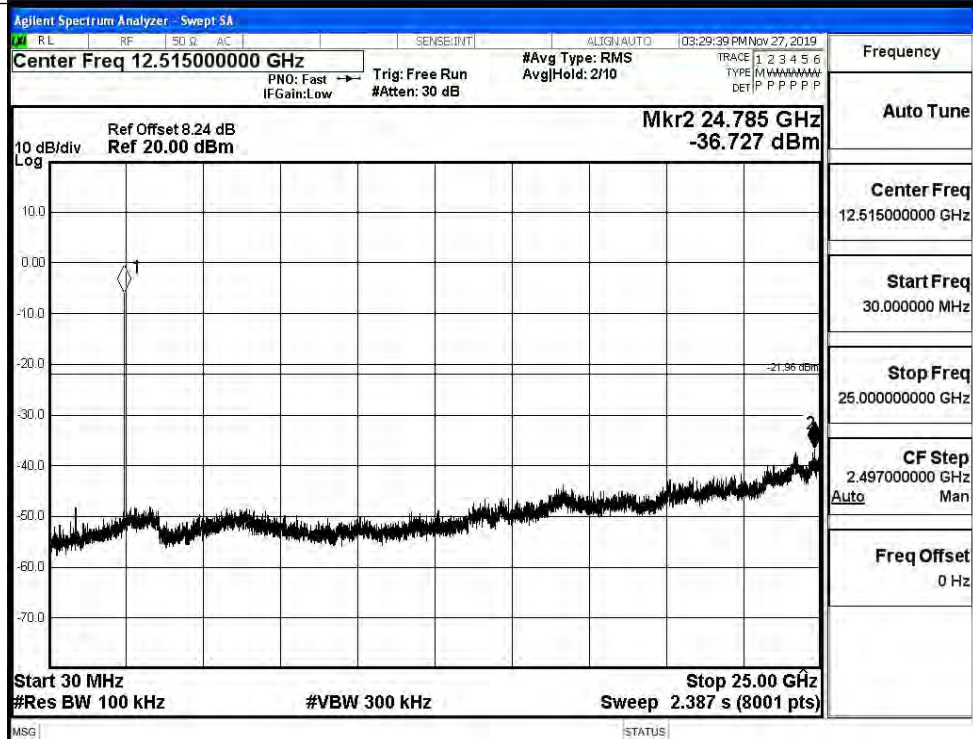


8DPSK_HCH_Graphs

Pref



Puw

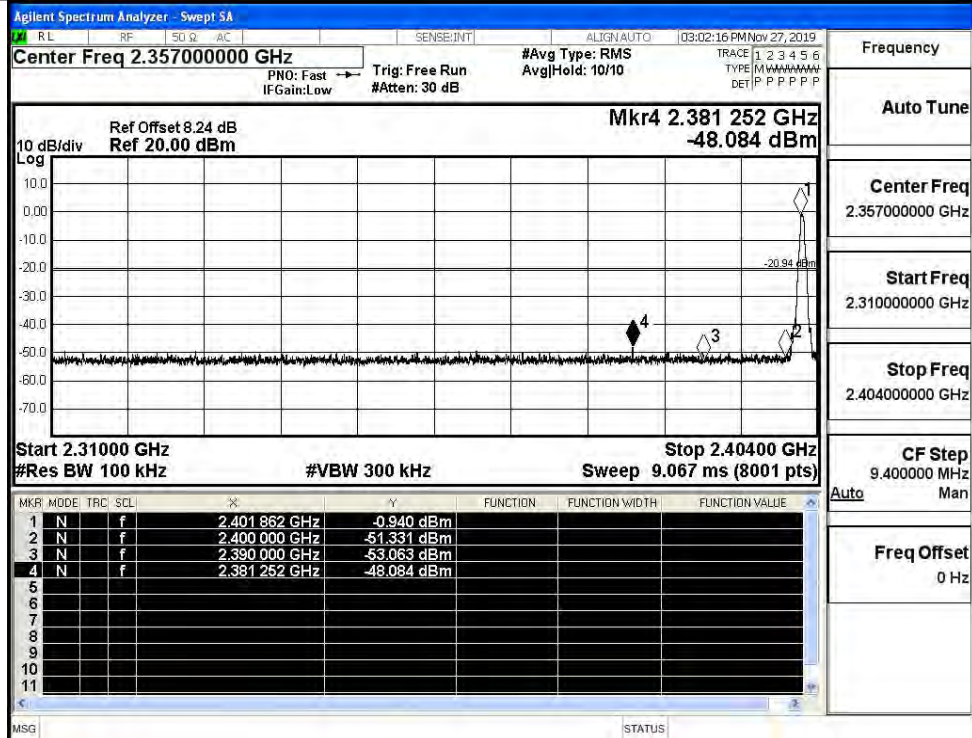


A.7 Band-edge for RF Conducted Emissions

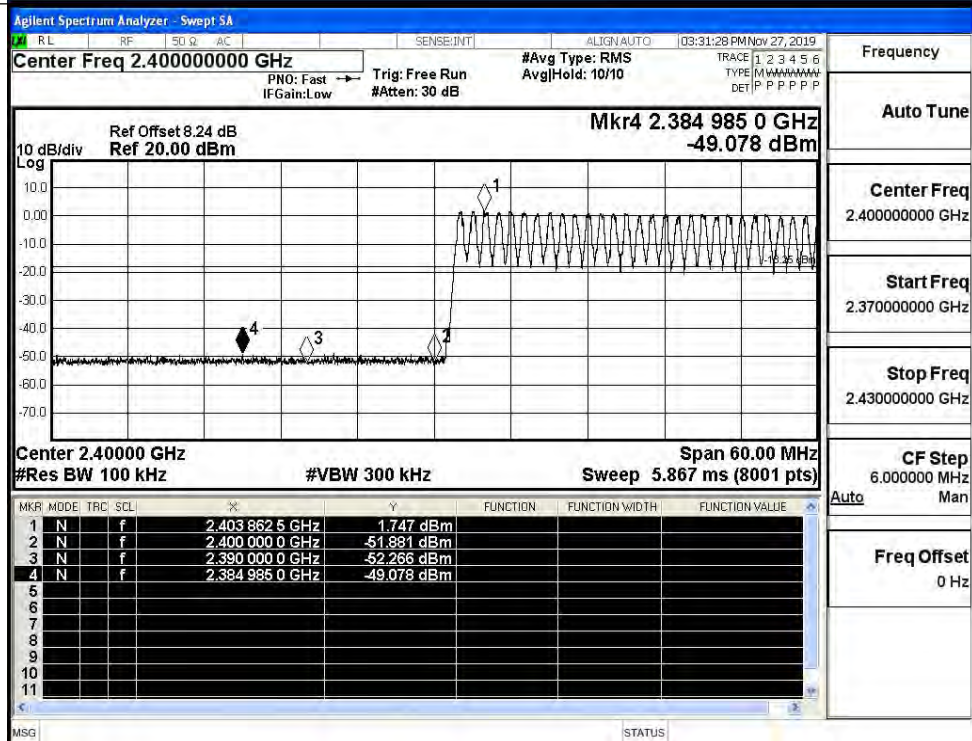
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-0.940	Off	-48.084	-20.94	PASS
			1.747	On	-49.078	-18.25	PASS
	HCH	2480	-4.760	Off	-49.123	-24.76	PASS
			-1.110	On	-48.673	-21.11	PASS
$\pi/4$ DQPSK	LCH	2402	1.860	Off	-49.476	-18.14	PASS
			1.740	On	-49.342	-18.26	PASS
	HCH	2480	-2.092	Off	-48.818	-22.09	PASS
			-1.212	On	-47.408	-21.21	PASS
8DPSK	LCH	2402	1.833	Off	-49.099	-18.17	PASS
			1.852	On	-49.211	-18.15	PASS
	HCH	2480	-1.909	Off	-48.943	-21.91	PASS
			-0.983	On	-48.318	-20.98	PASS

Test Graphs

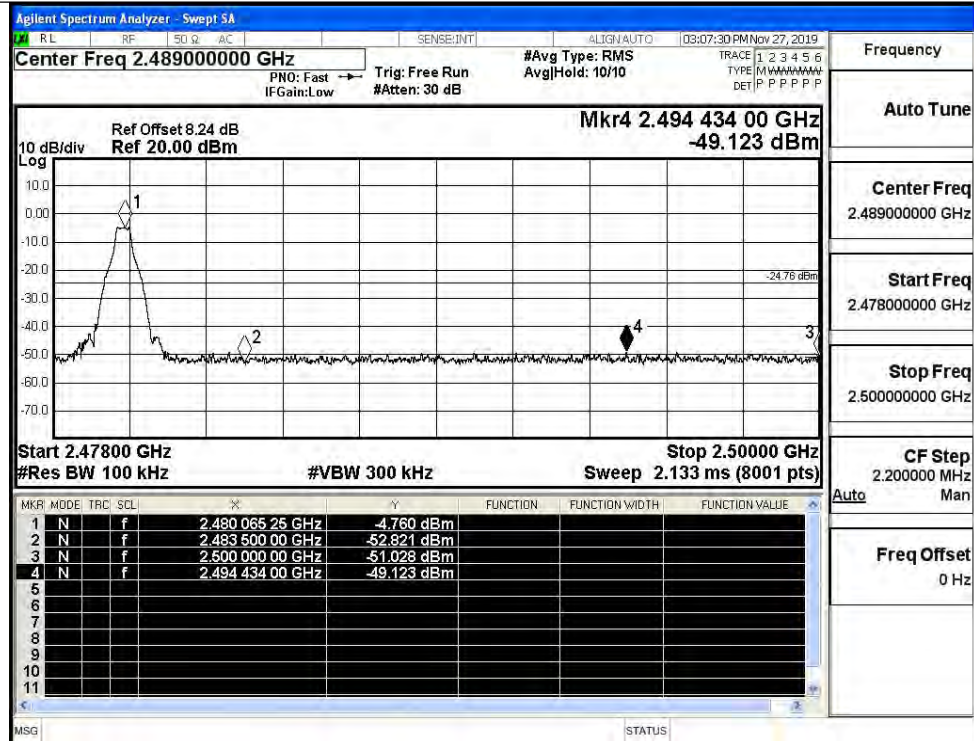
GFSK/LCH/No Hop



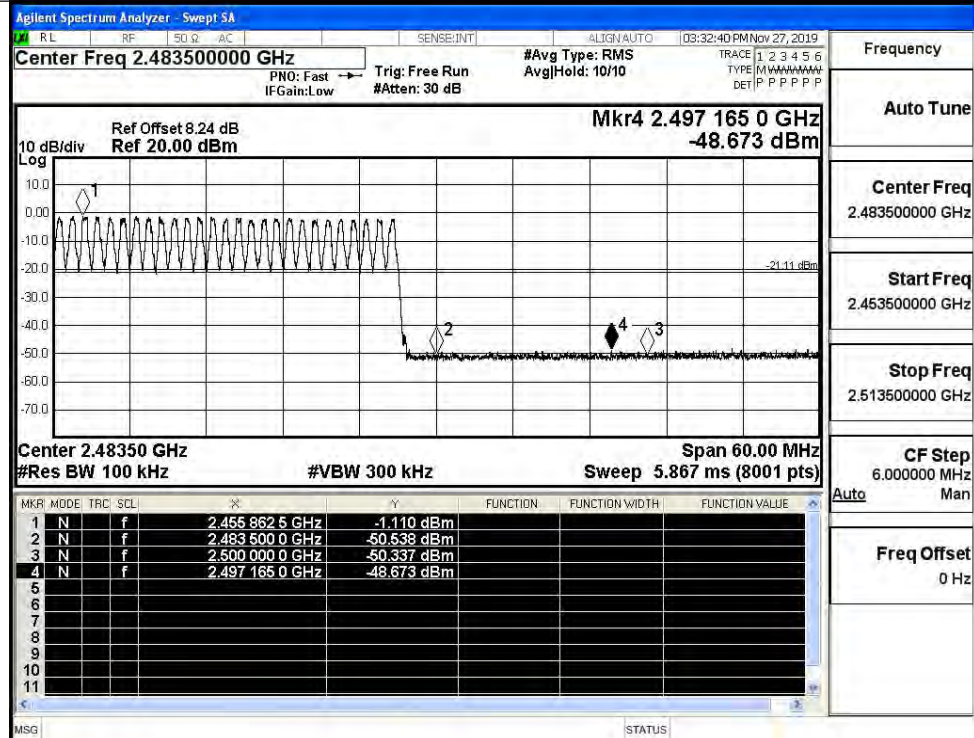
GFSK/LCH/Hop



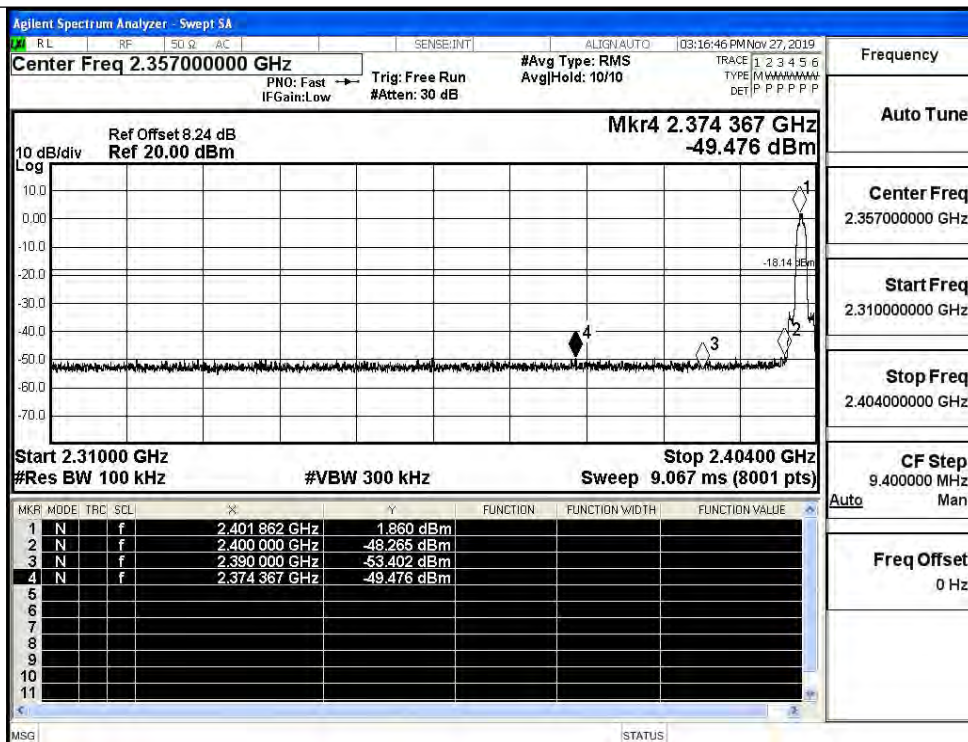
GFSK/HCH/No Hop



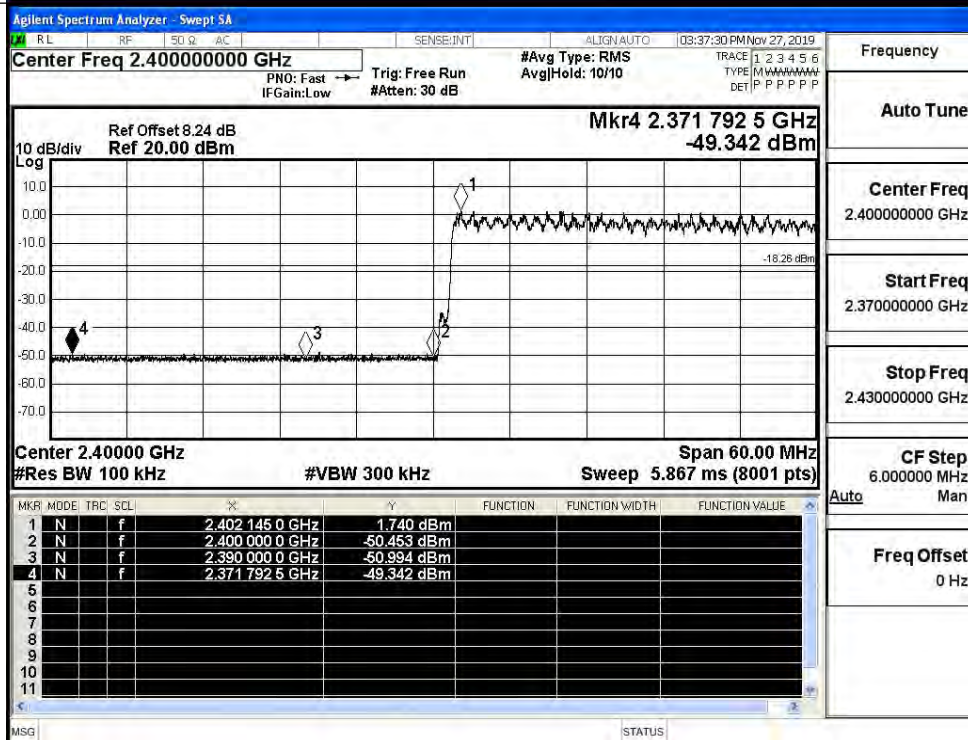
GFSK/HCH/Hop



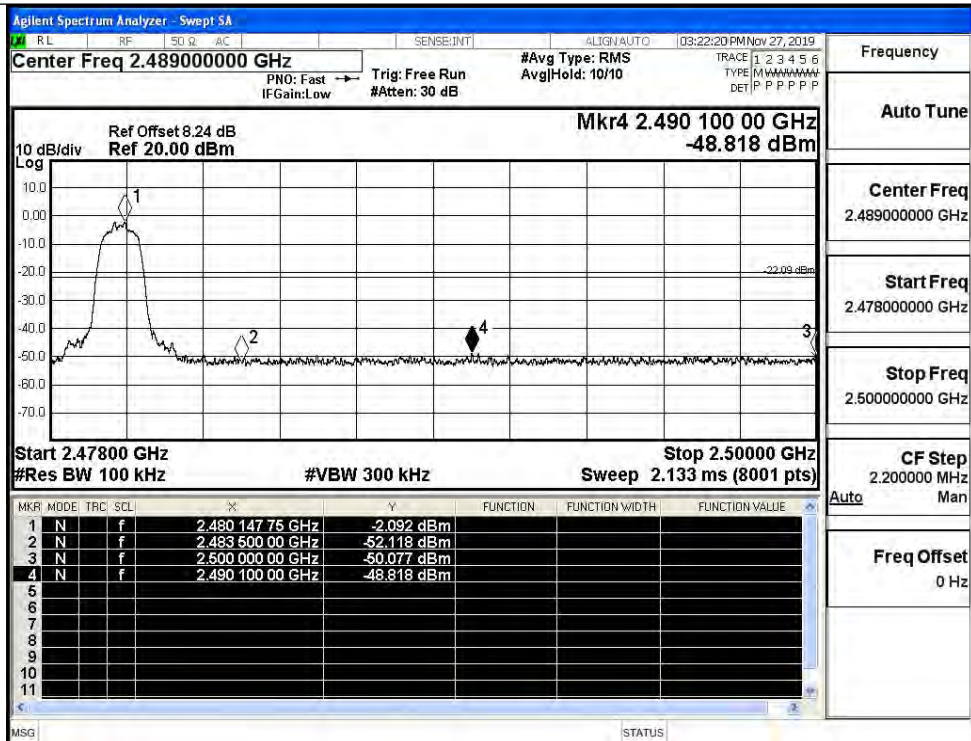
$\pi/4$ DQPSK/LCH/No
Hop



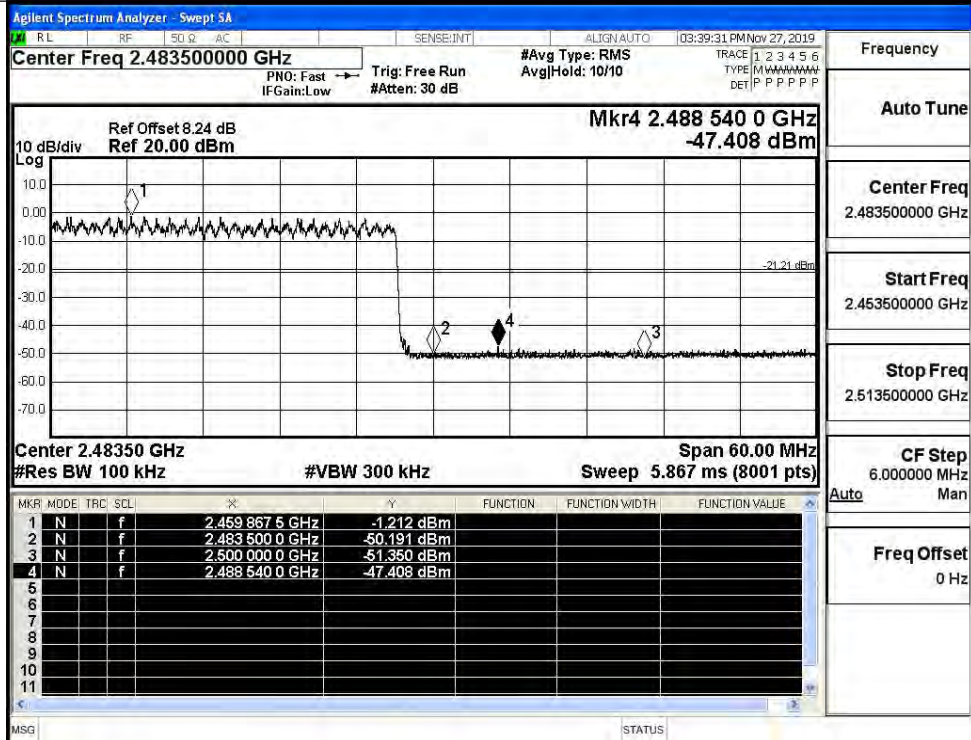
$\pi/4$ DQPSK/LCH/Hop



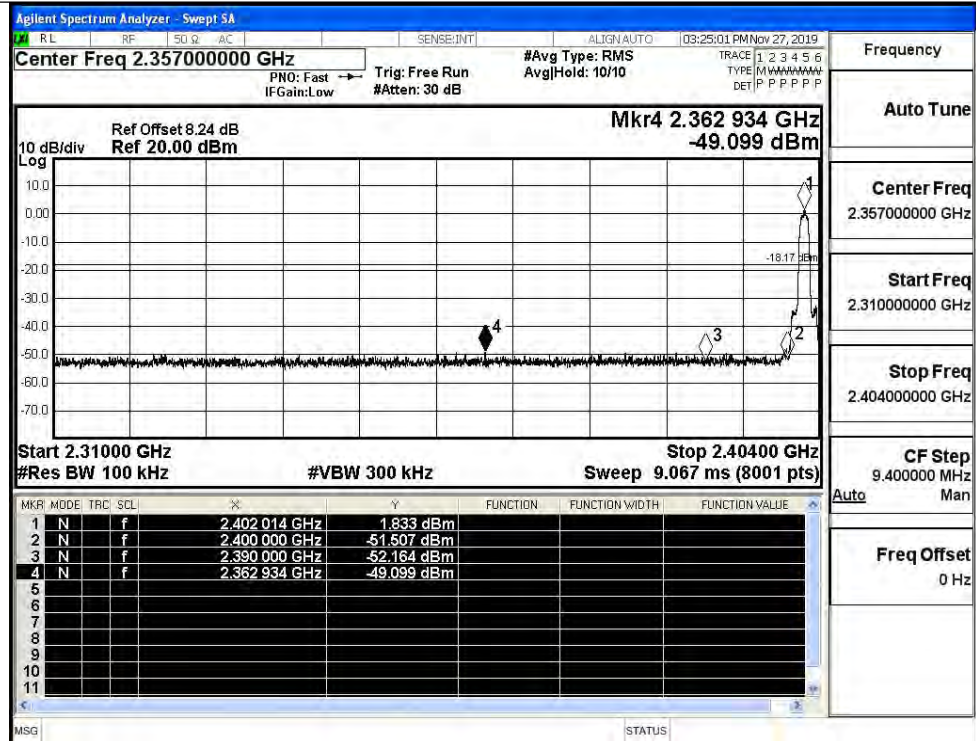
$\pi/4$ DQPSK/HCH/No
Hop



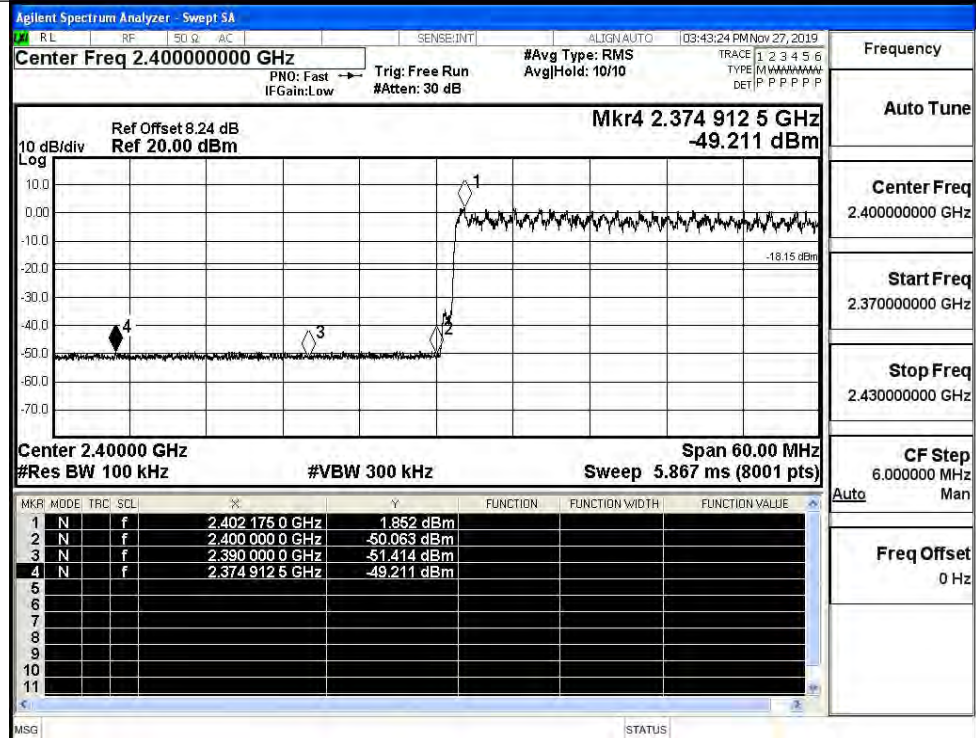
$\pi/4$ DQPSK/HCH/Hop



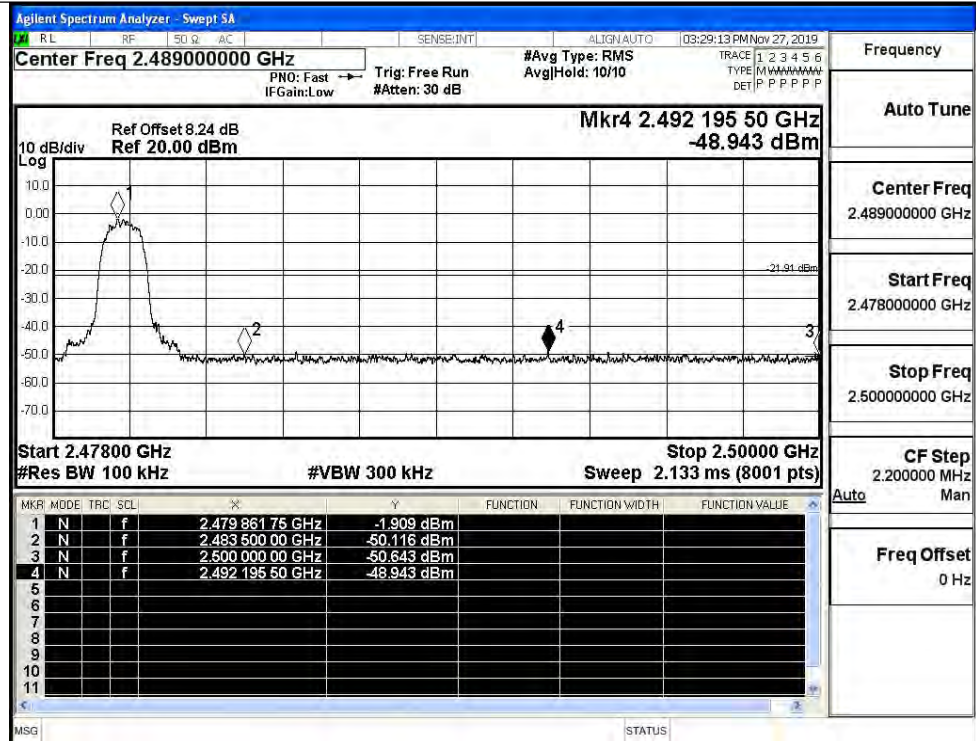
8DPSK/LCH/No Hop



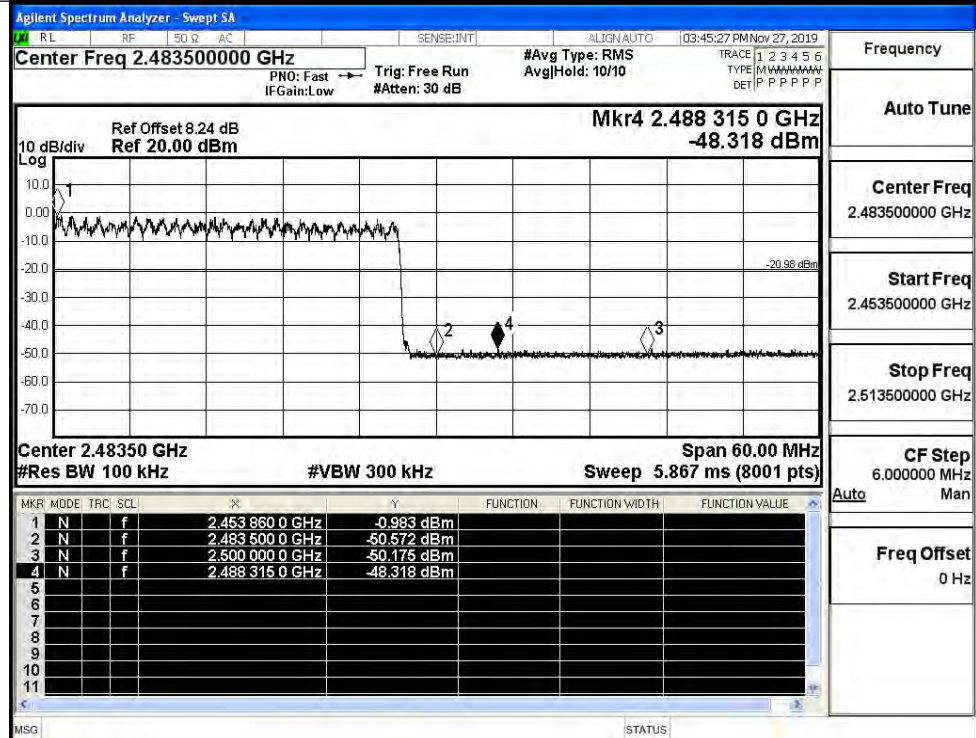
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



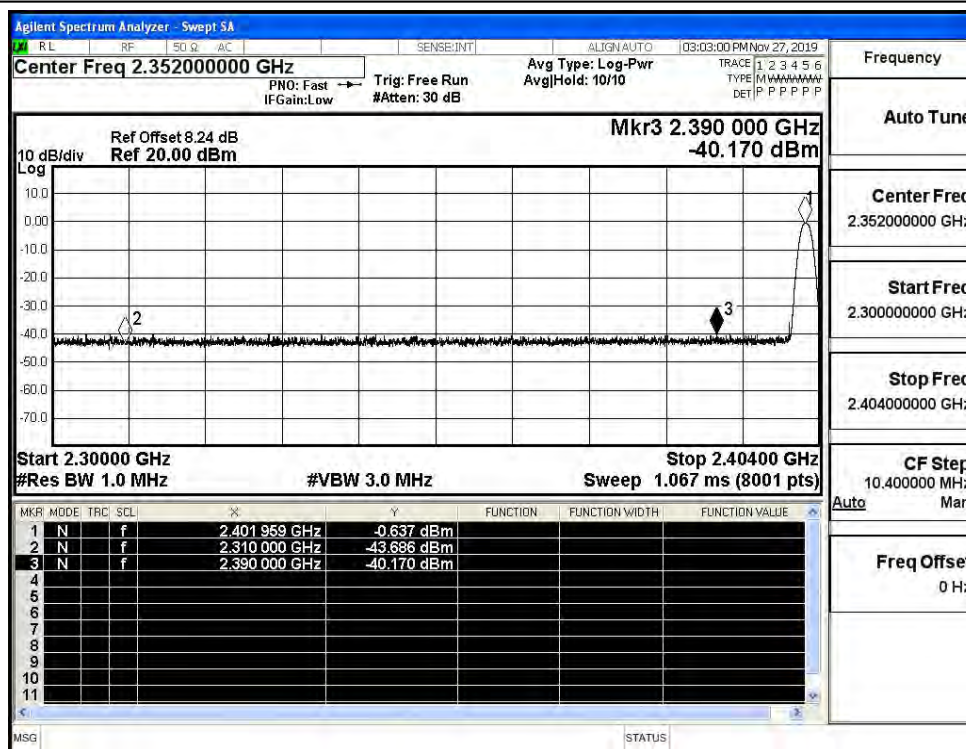
8DPSK/HCH/Hop



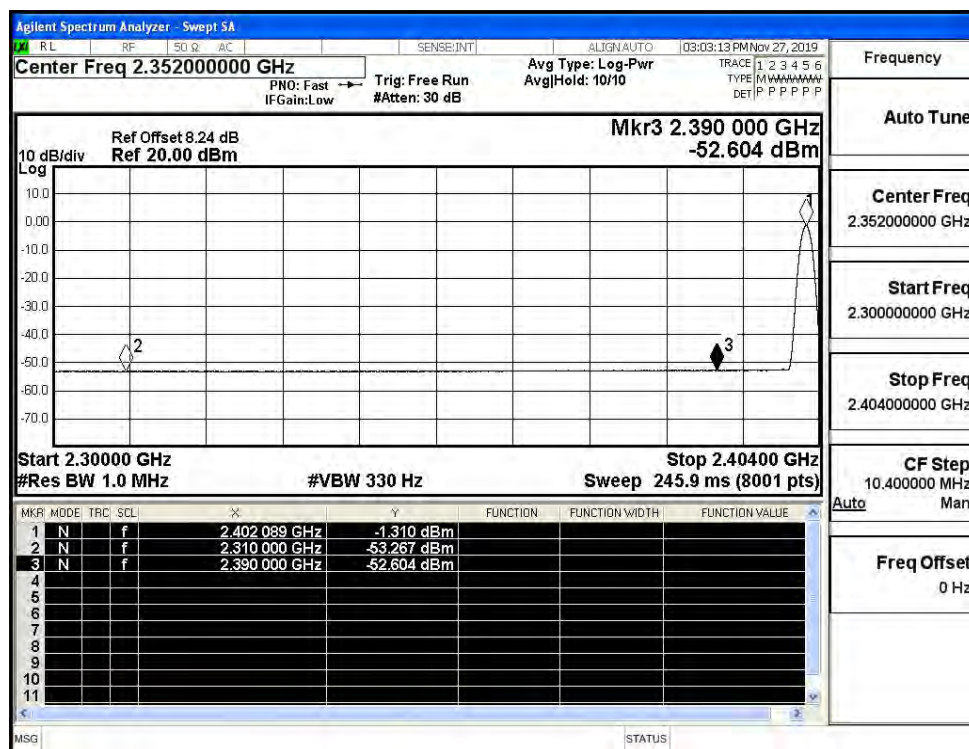
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.69	2.0	0	51.57	PEAK	74	PASS
	Off	2310.0	-53.27	2.0	0	41.99	AV	54	PASS
	Off	2390.0	-40.17	2.0	0	55.09	PEAK	74	PASS
	Off	2390.0	-52.60	2.0	0	42.65	AV	54	PASS
	Off	2483.5	-42.02	2.0	0	53.24	PEAK	74	PASS
	Off	2483.5	-52.24	2.0	0	43.02	AV	54	PASS
	Off	2500.0	-41.27	2.0	0	53.99	PEAK	74	PASS
	Off	2500.0	-52.09	2.0	0	43.17	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.48	2.0	0	51.77	PEAK	74	PASS
	Off	2310.0	-53.06	2.0	0	42.19	AV	54	PASS
	Off	2390.0	-42.11	2.0	0	53.14	PEAK	74	PASS
	Off	2390.0	-52.72	2.0	0	42.53	AV	54	PASS
	Off	2483.5	-42.92	2.0	0	52.34	PEAK	74	PASS
	Off	2483.5	-52.28	2.0	0	42.98	AV	54	PASS
	Off	2500.0	-41.85	2.0	0	53.41	PEAK	74	PASS
	Off	2500.0	-52.08	2.0	0	43.17	AV	54	PASS
8DPSK	Off	2310.0	-42.37	2.0	0	52.89	PEAK	74	PASS
	Off	2310.0	-53.13	2.0	0	42.13	AV	54	PASS
	Off	2390.0	-42.19	2.0	0	53.07	PEAK	74	PASS
	Off	2390.0	-52.68	2.0	0	42.58	AV	54	PASS
	Off	2483.5	-42.54	2.0	0	52.71	PEAK	74	PASS
	Off	2483.5	-52.14	2.0	0	43.12	AV	54	PASS
	Off	2500.0	-42.21	2.0	0	53.05	PEAK	74	PASS
	Off	2500.0	-52.11	2.0	0	43.15	AV	54	PASS

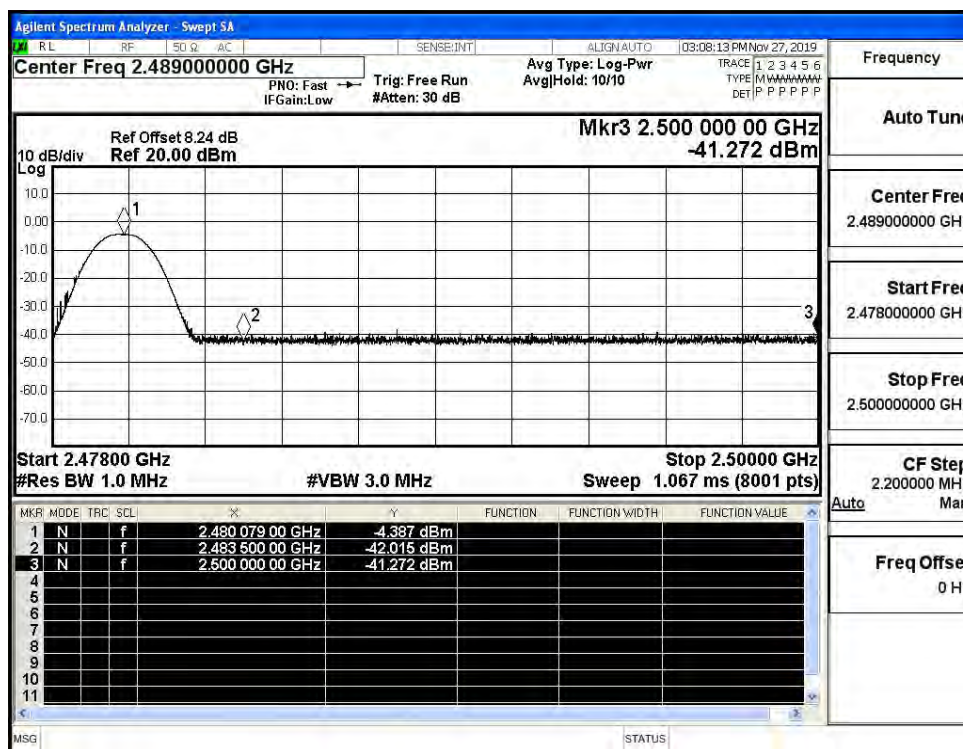
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



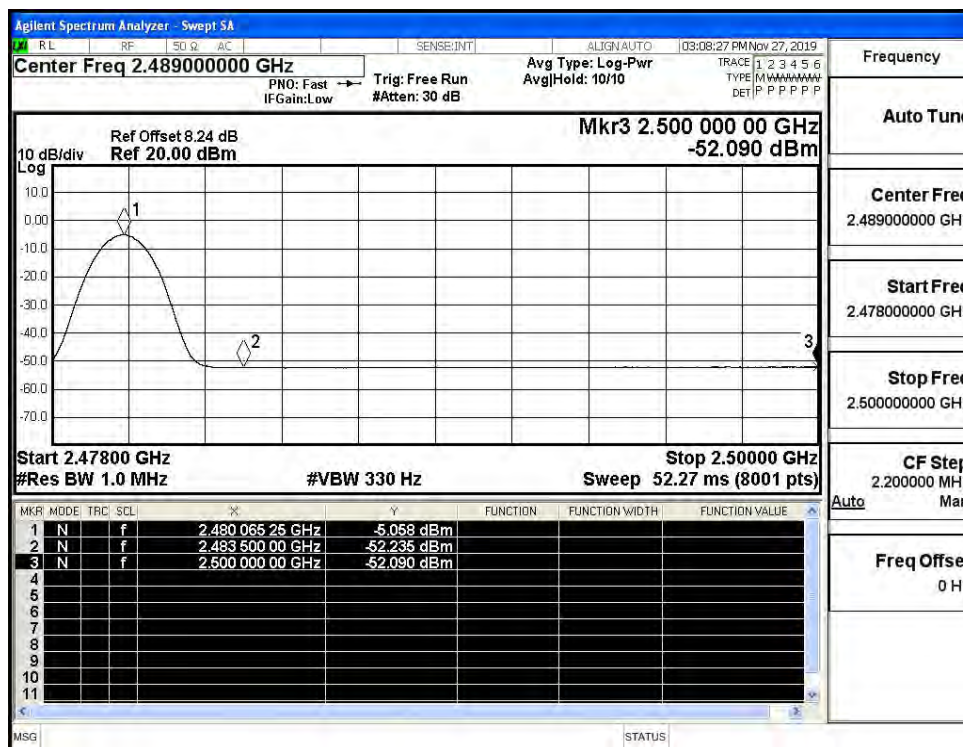
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

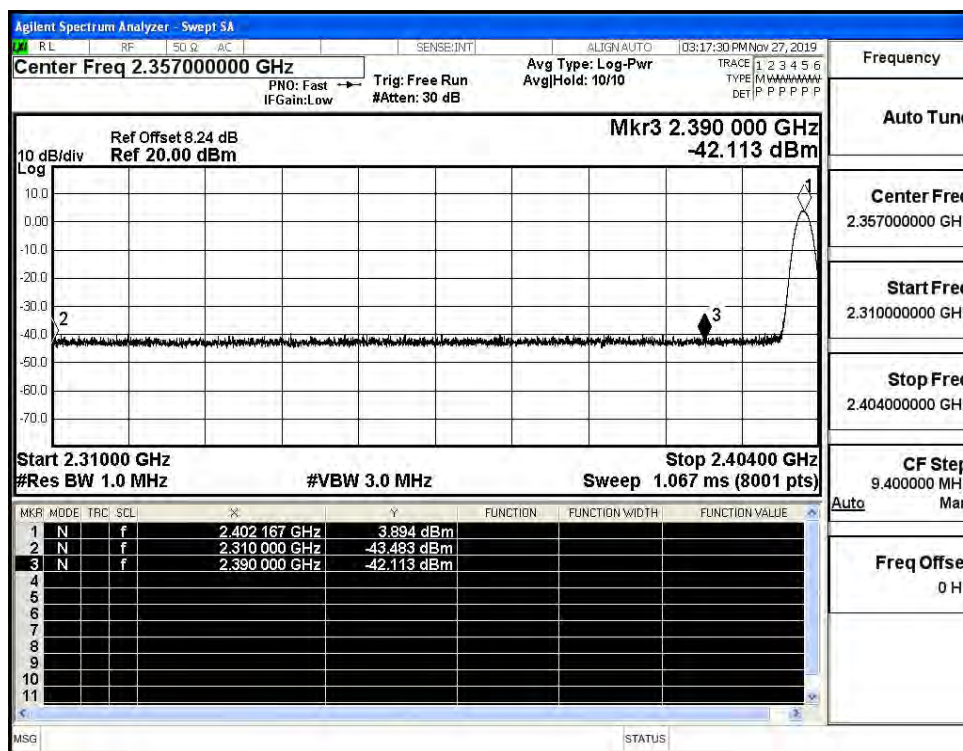
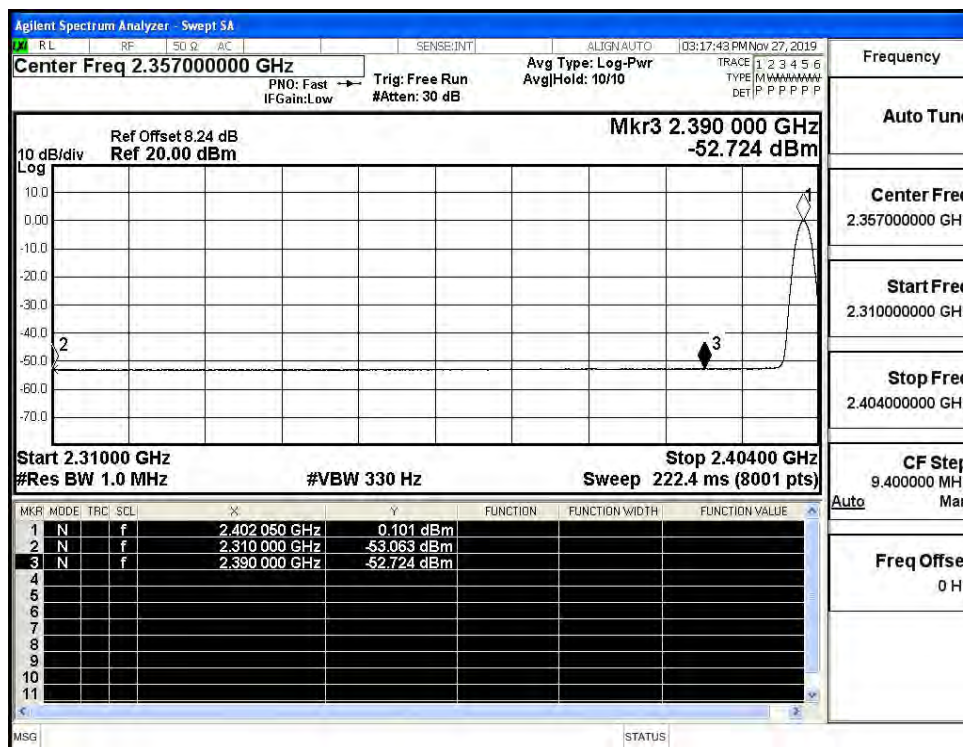


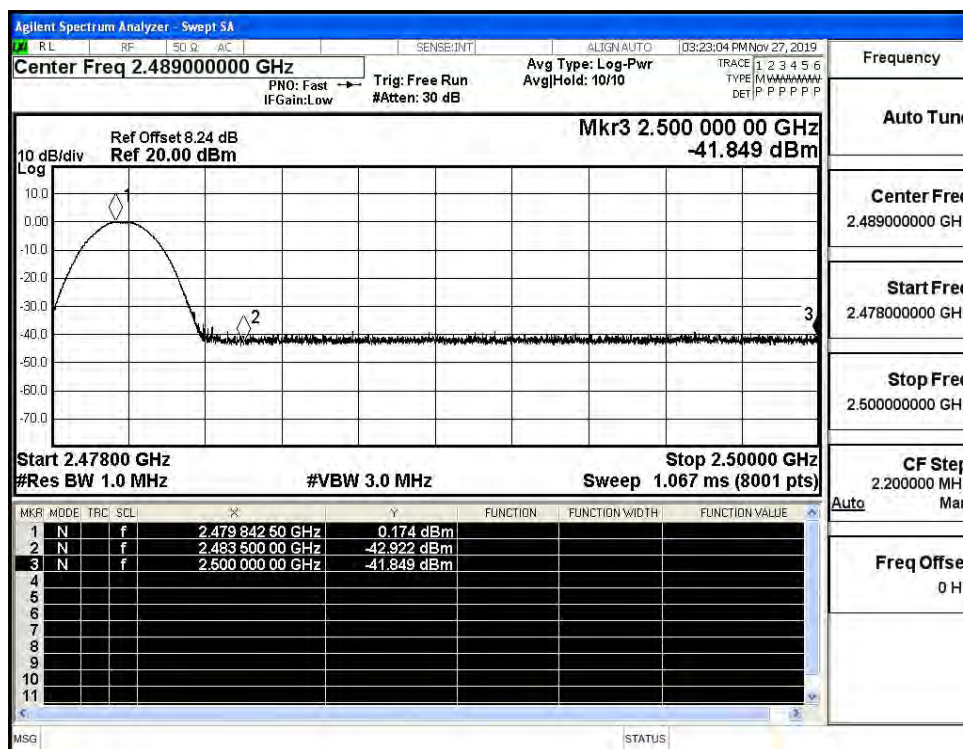
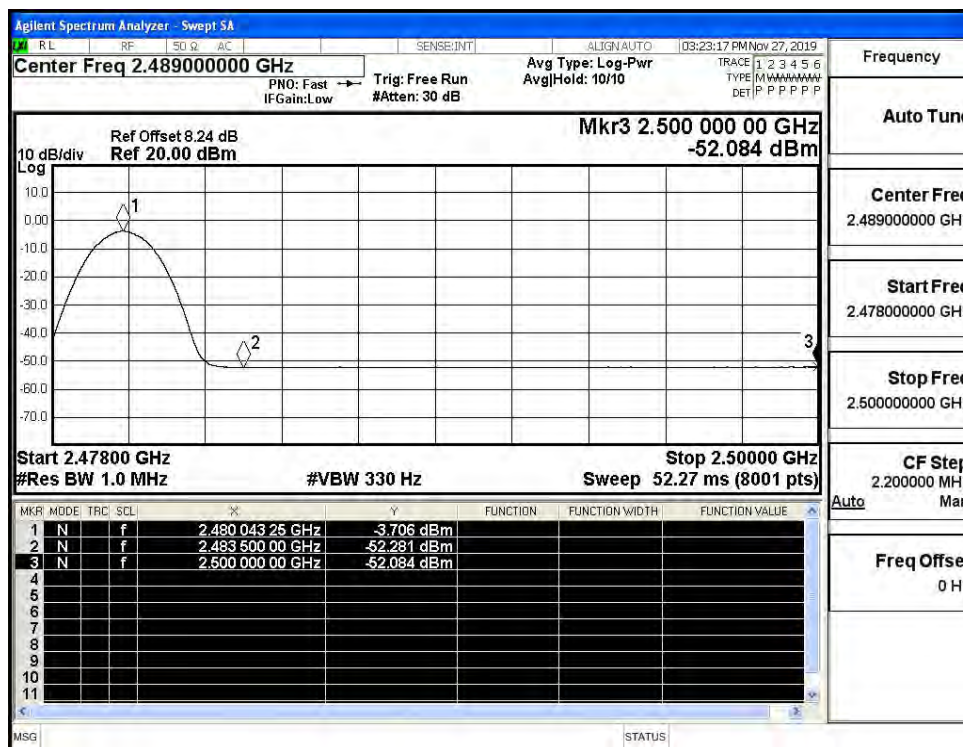
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



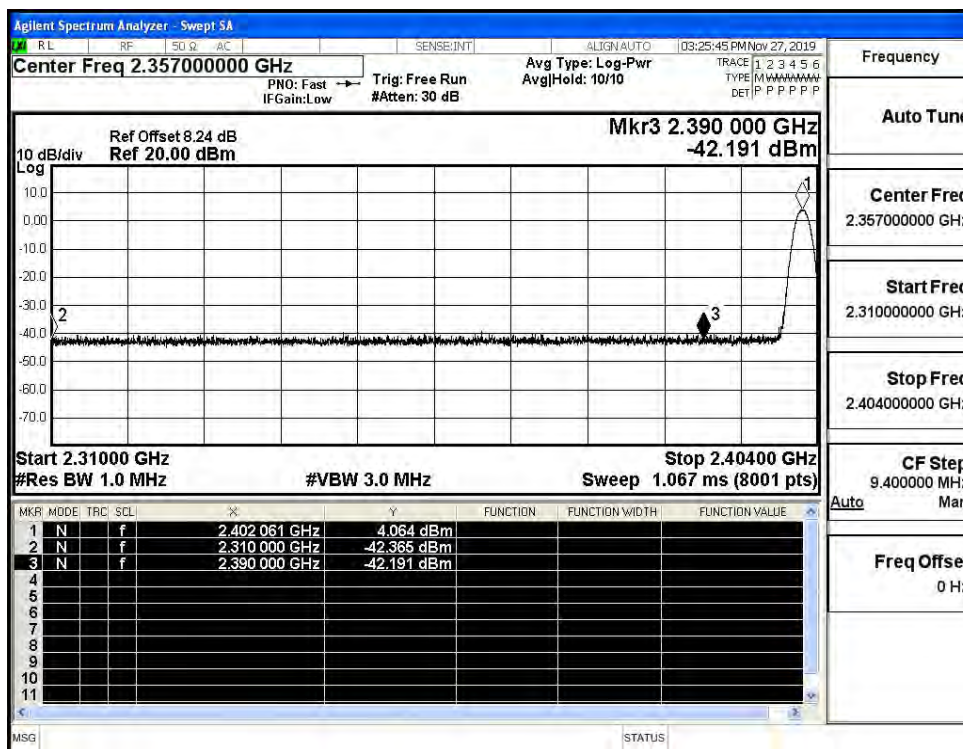
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



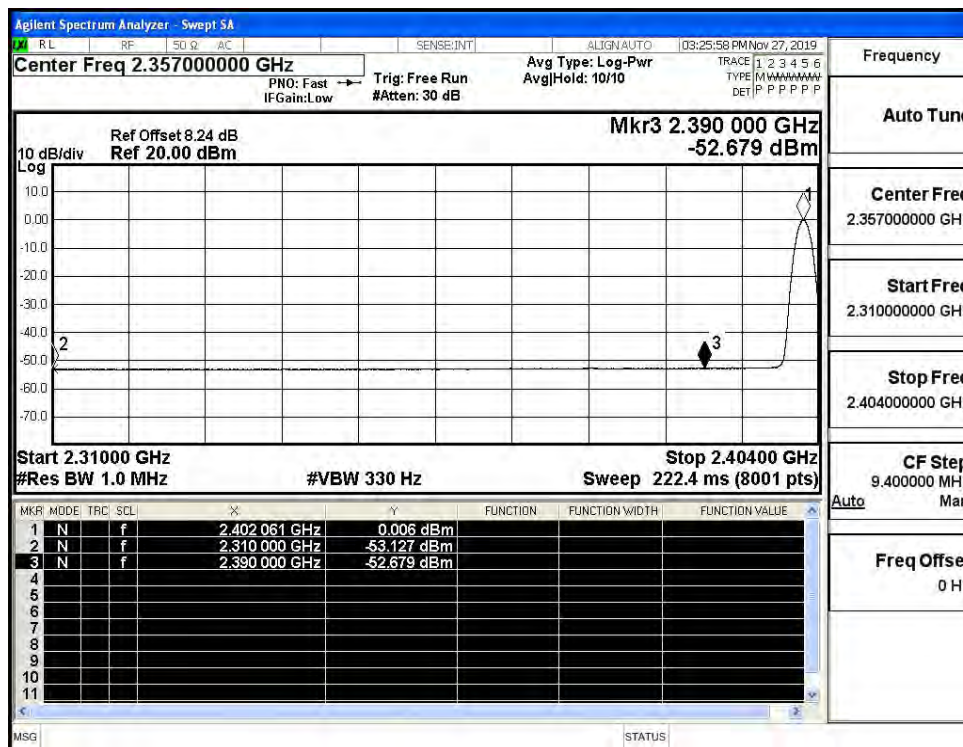
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

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)

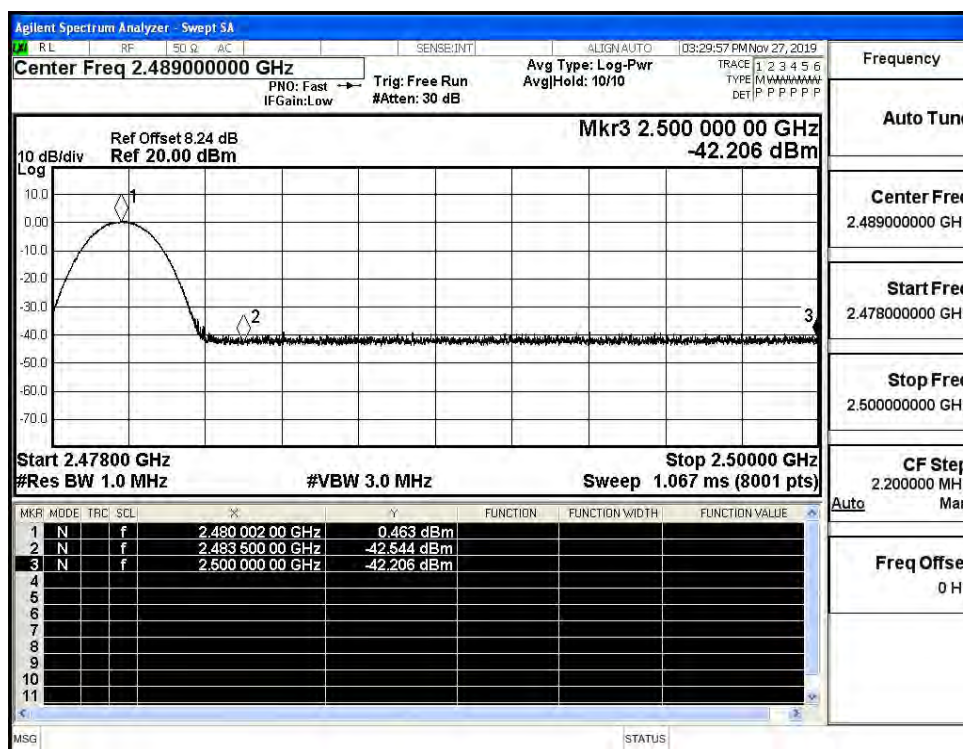
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

