

Appendix A

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

Product Name: Bluetooth Sport Headset

Trade Mark: AWEI

Test Model: N1

Environmental Conditions

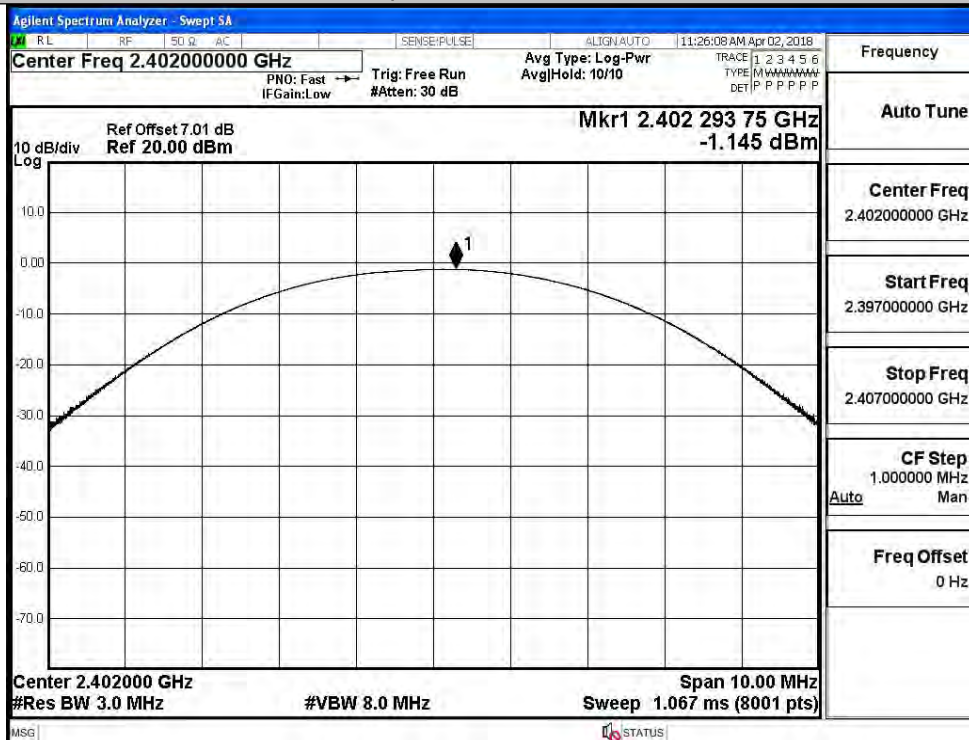
Temperature:	22.3 ° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Jayden.Zhuo
Supervised by:	Dick.Su

A.1 Maximum Conducted Peak Output Power

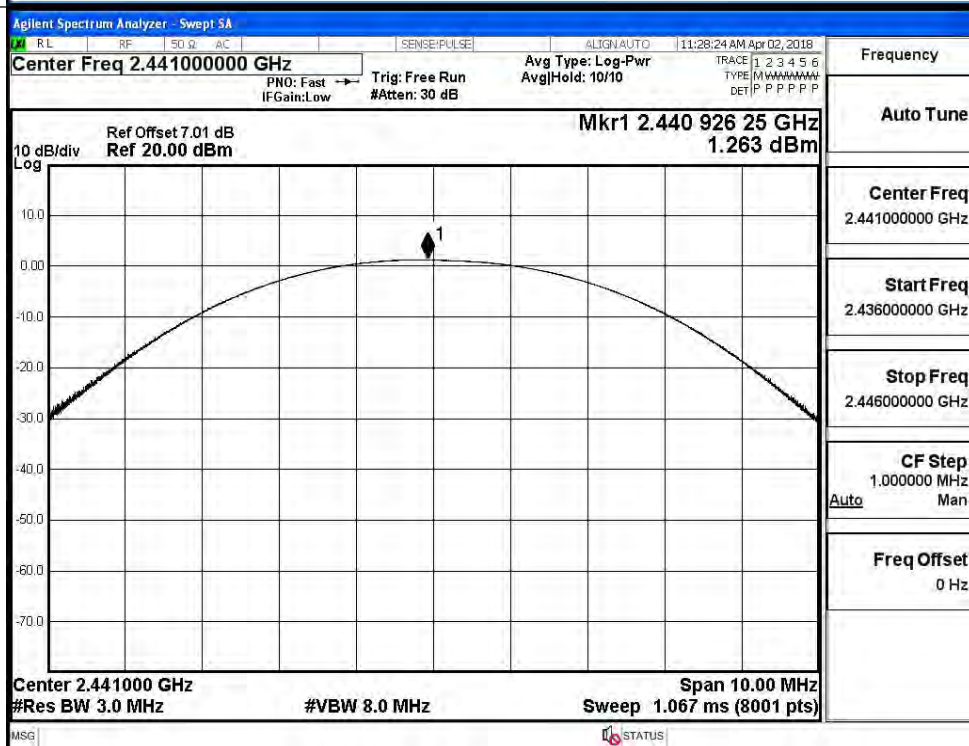
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.145	30	PASS
	MCH	1.263	30	PASS
	HCH	1.784	30	PASS
$\pi/4$ DQPSK	LCH	-3.397	21	PASS
	MCH	-0.599	21	PASS
	HCH	0.095	21	PASS
8DPSK	LCH	-3.128	21	PASS
	MCH	-0.235	21	PASS
	HCH	0.479	21	PASS

Test Graphs

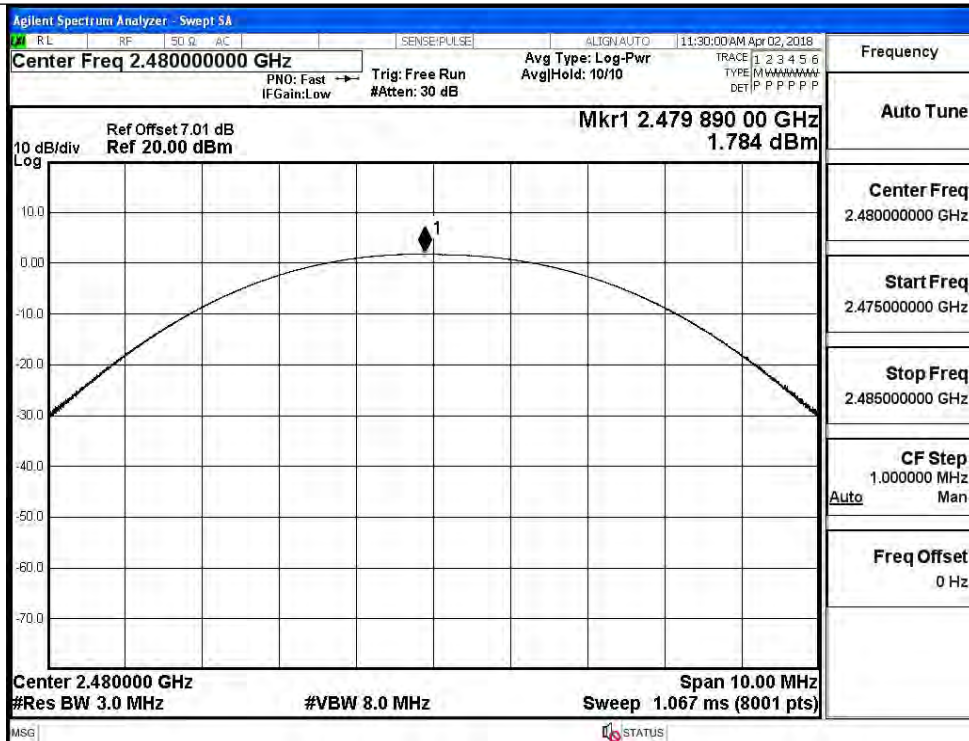
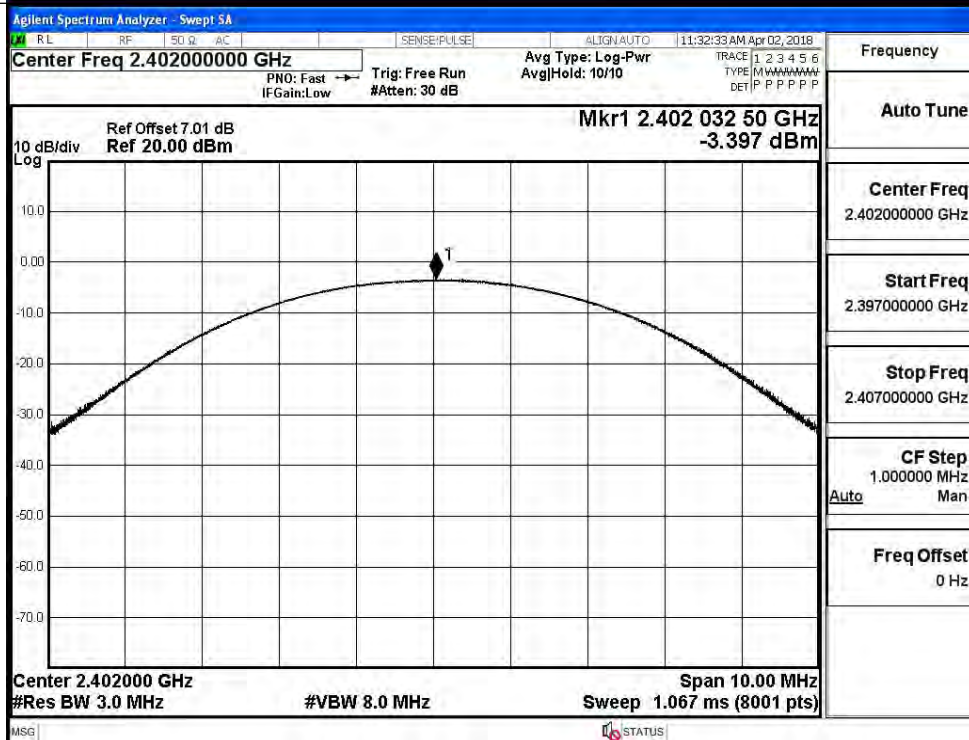
GFSK/LCH

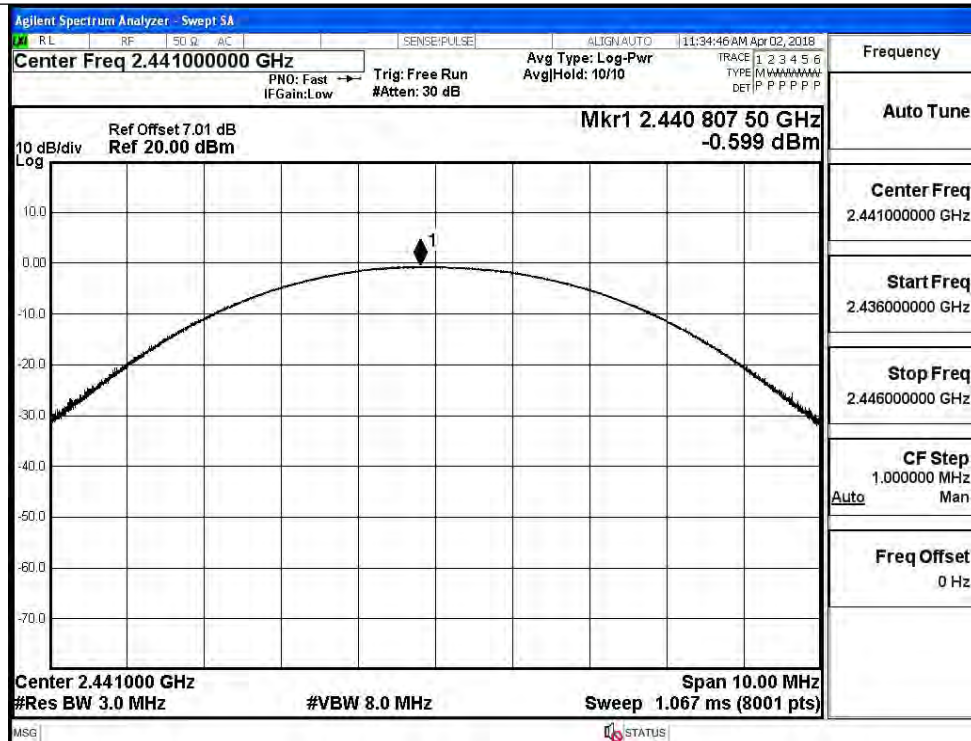
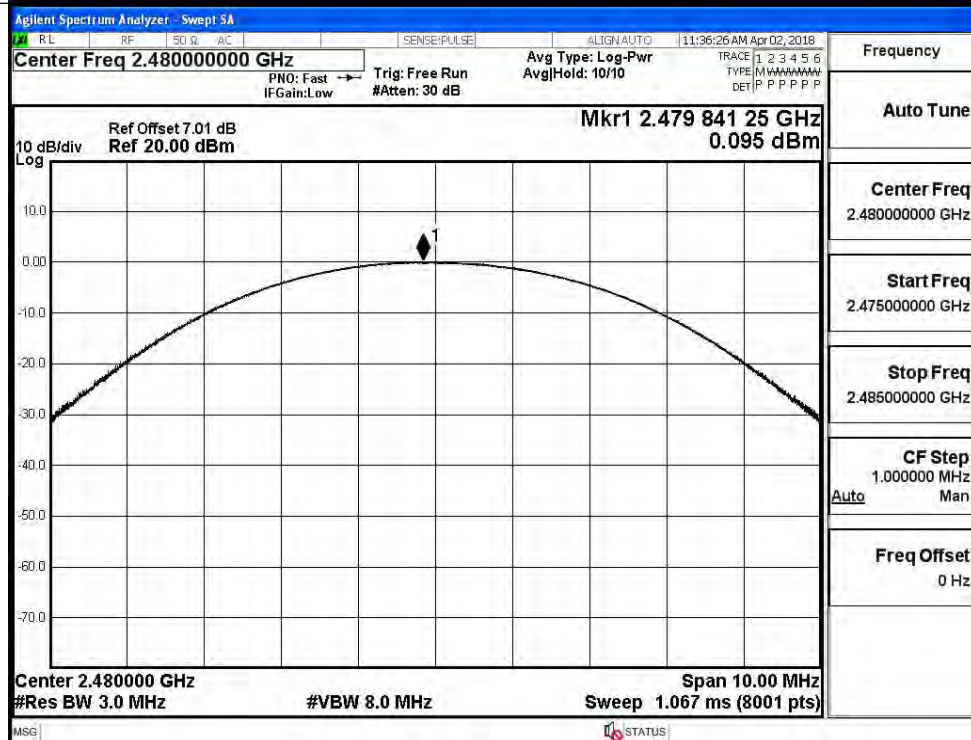


GFSK/MCH

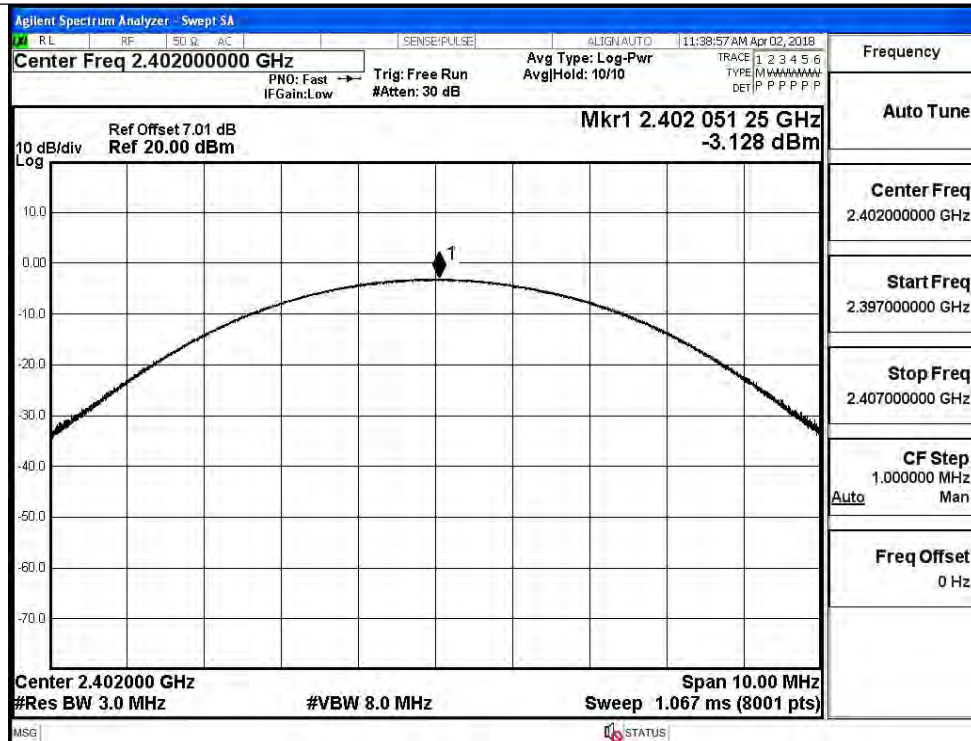


GFSK/HCH

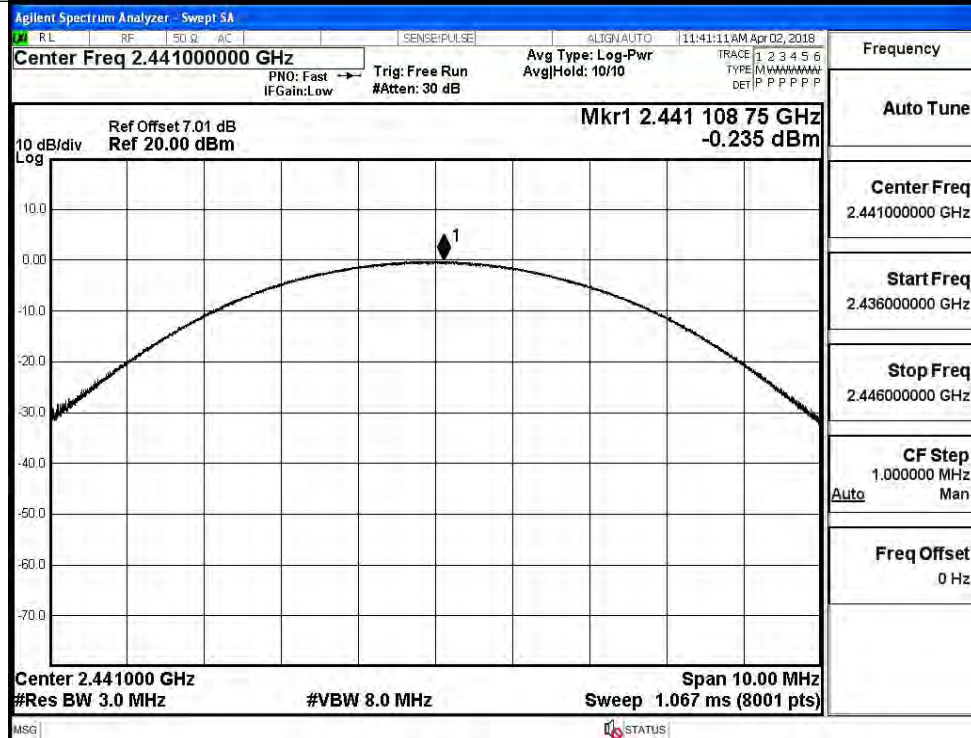
 $\pi/4$ DQPSK/LCH

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

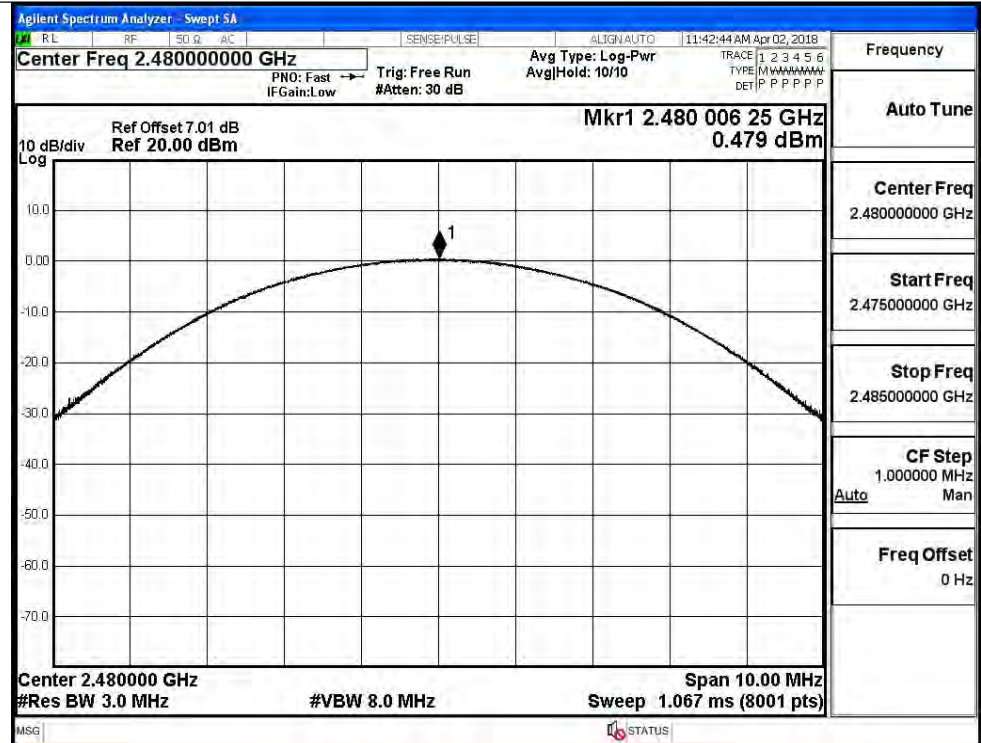
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

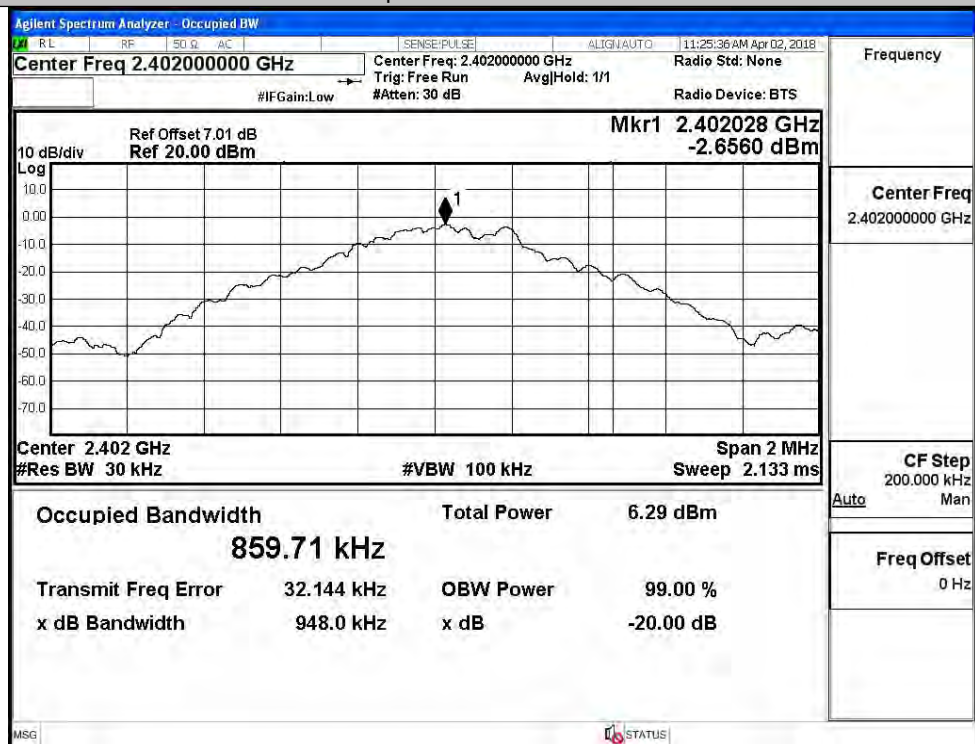


A.2 20dB Bandwidth

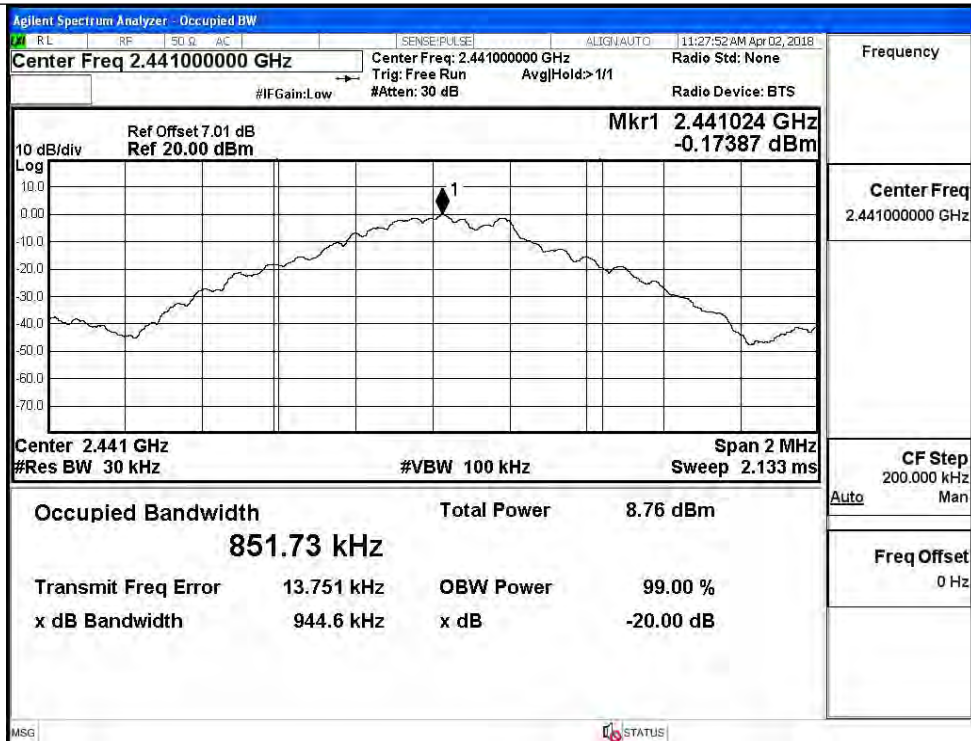
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9480	Not Specified	PASS
	MCH	0.9446	Not Specified	PASS
	HCH	0.9449	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.258	Not Specified	PASS
	MCH	1.229	Not Specified	PASS
	HCH	1.227	Not Specified	PASS
8DPSK	LCH	1.275	Not Specified	PASS
	MCH	1.261	Not Specified	PASS
	HCH	1.260	Not Specified	PASS

Test Graphs

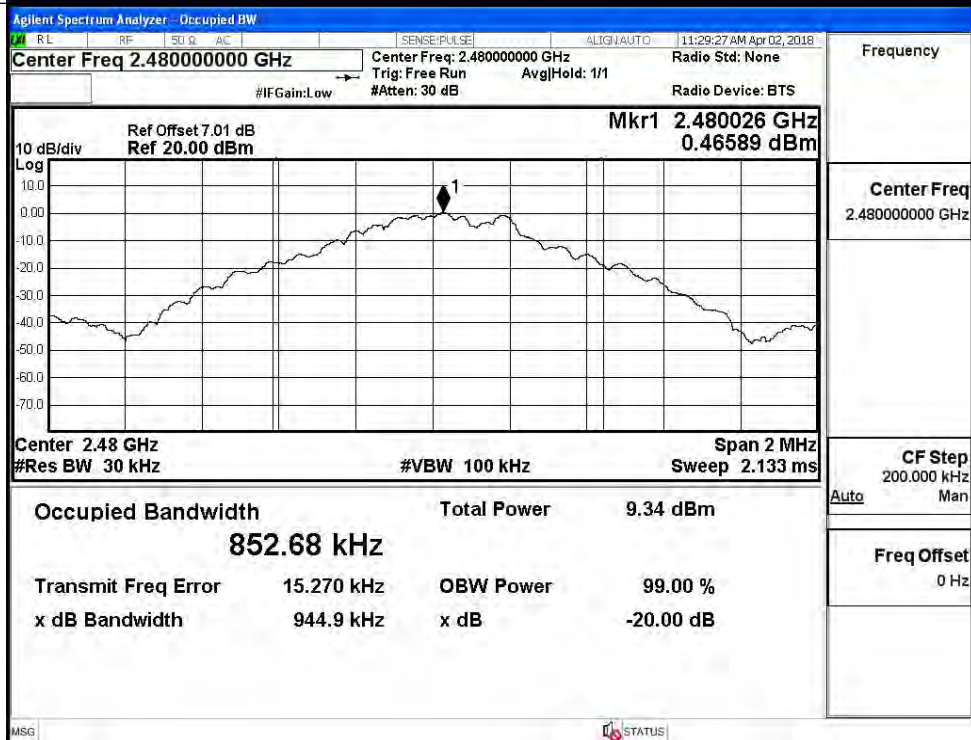
GFSK/LCH

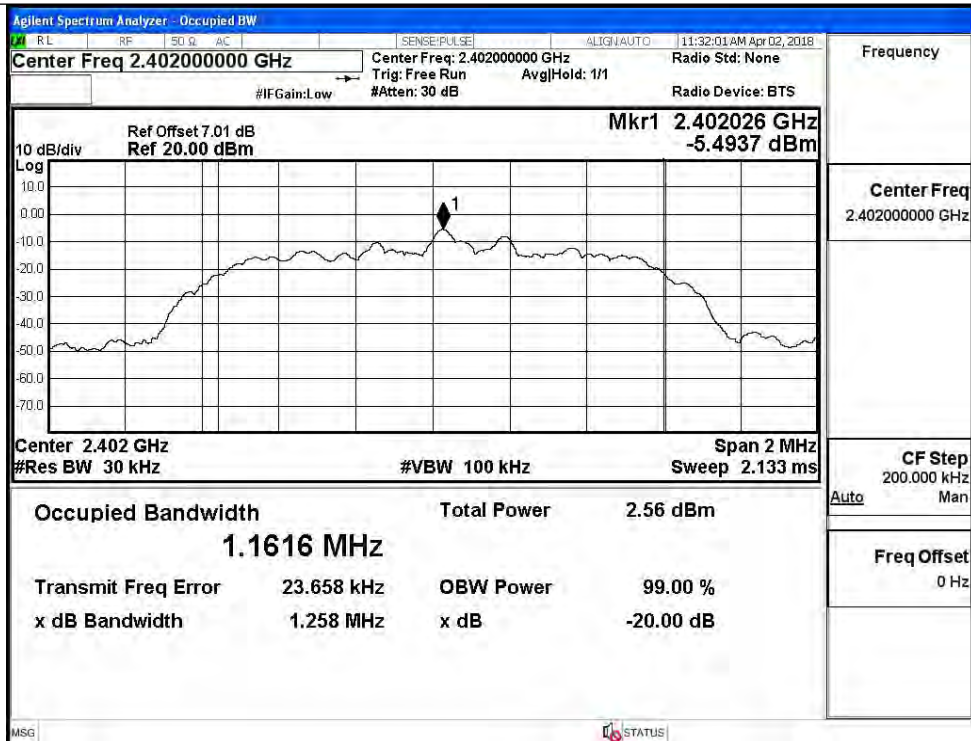
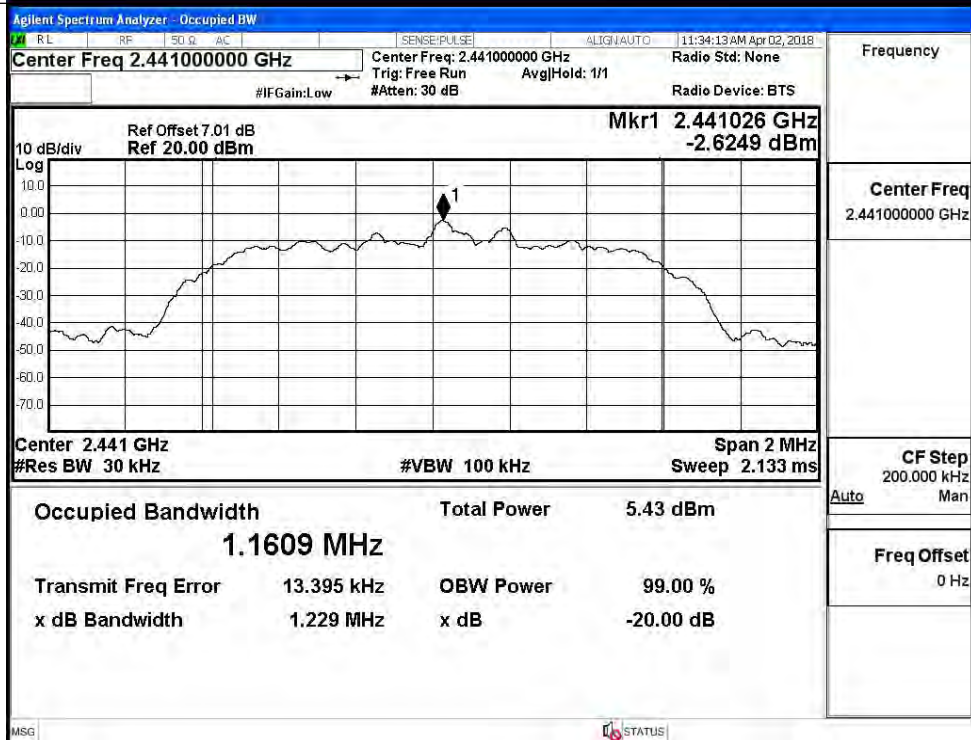


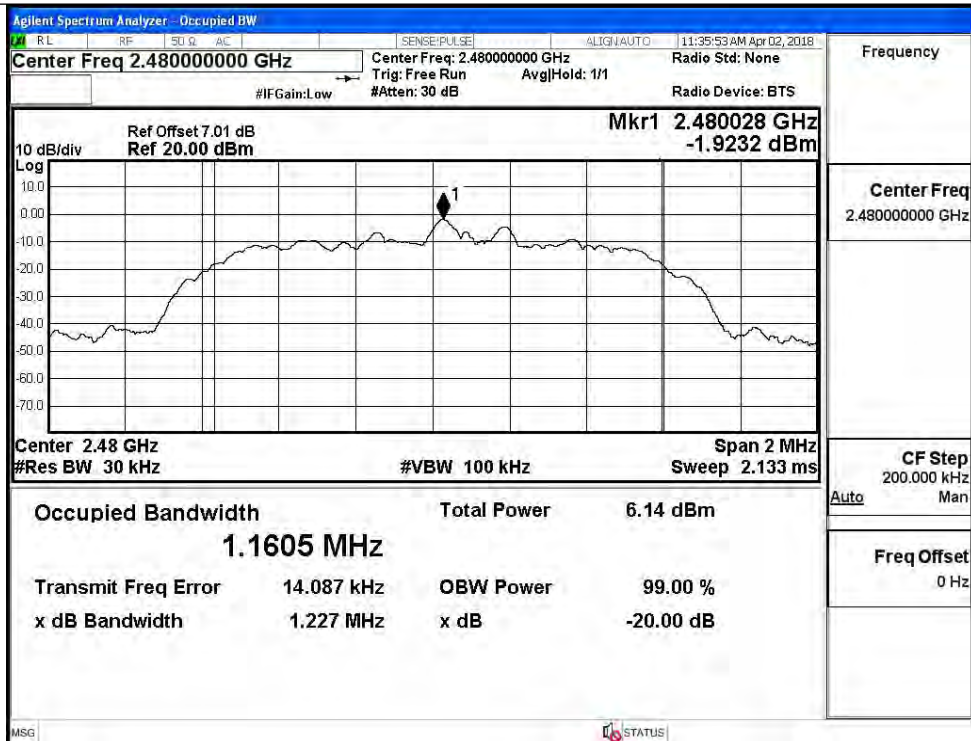
GFSK/MCH



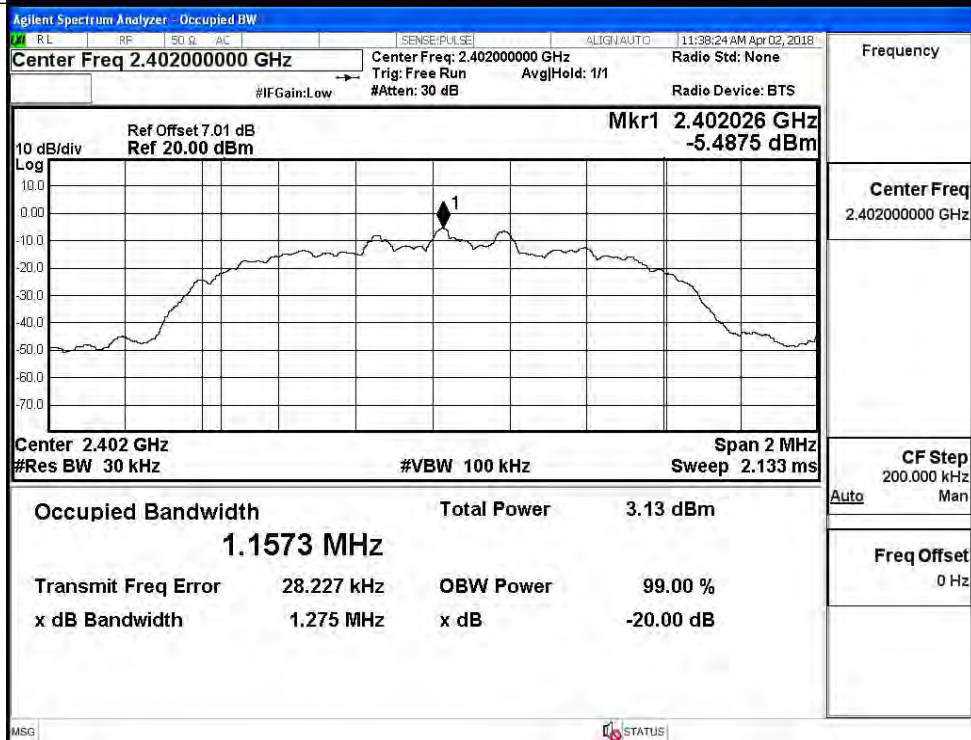
GFSK/HCH



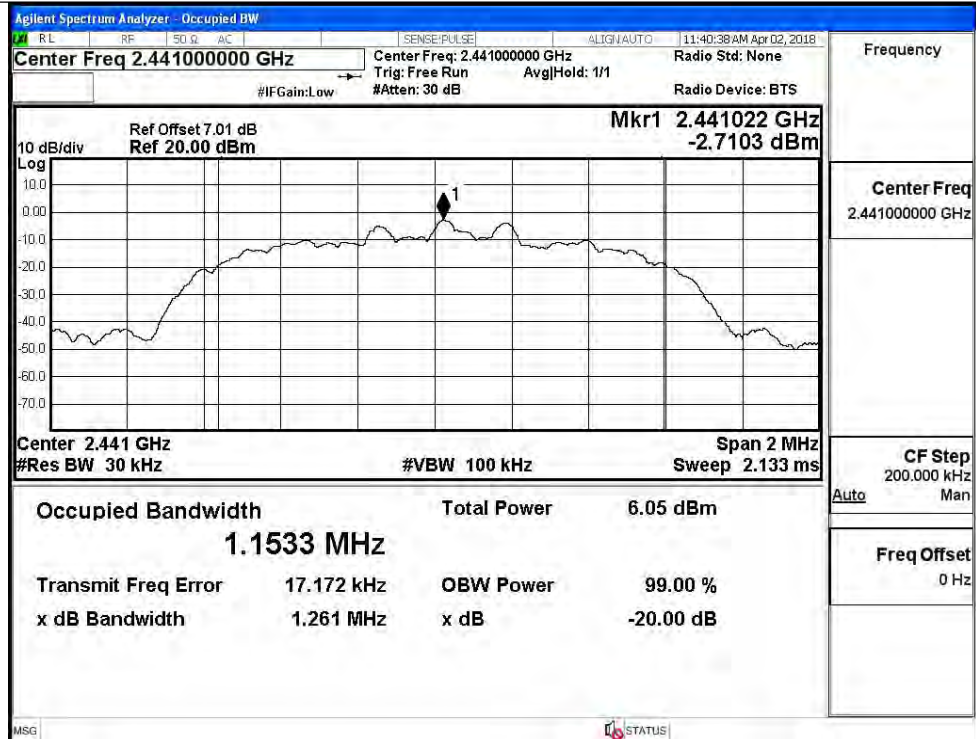
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

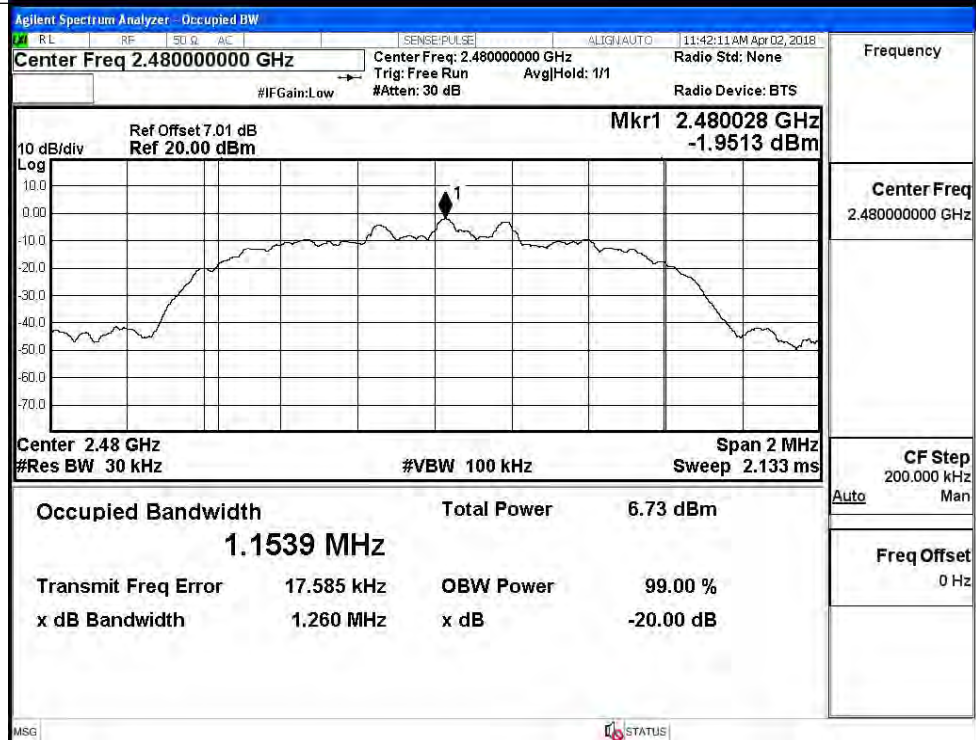
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

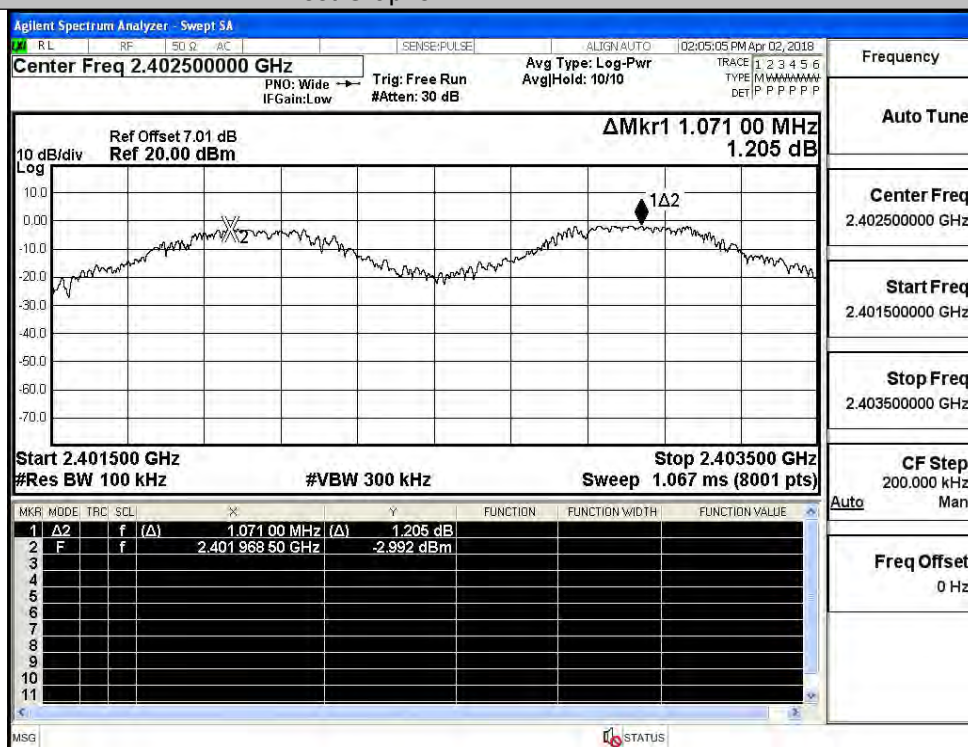


A.3 Carrier Frequency Separation

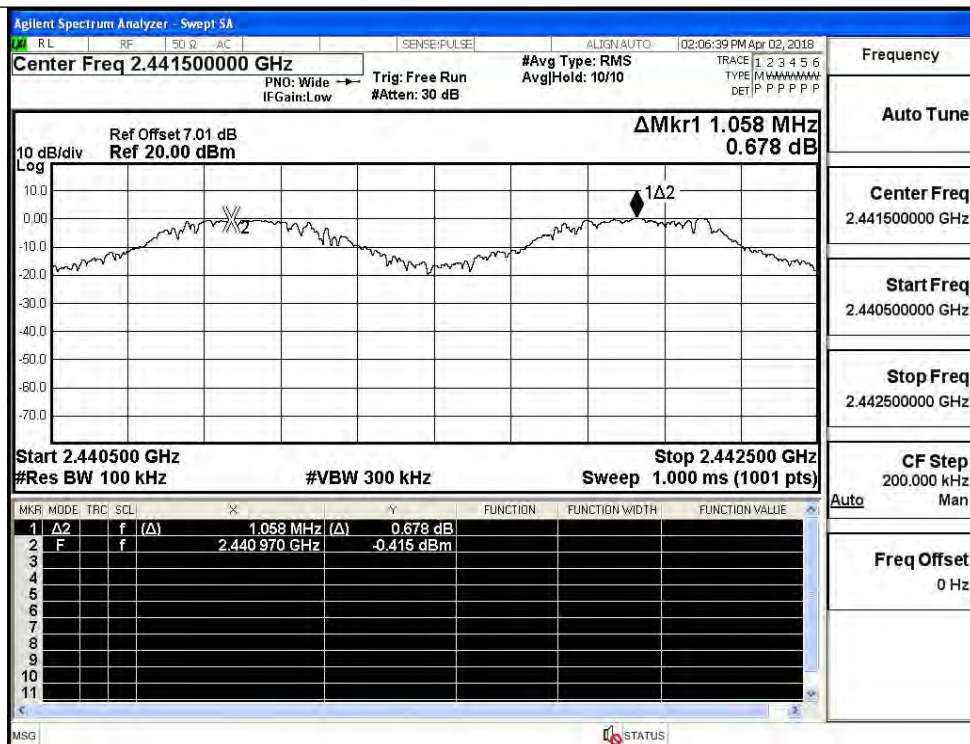
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.071	0.632	PASS
	MCH	1.058	0.629	PASS
	HCH	0.954	0.629	PASS
$\pi/4$ DQPSK	LCH	1.036	0.838	PASS
	MCH	0.900	0.819	PASS
	HCH	1.004	0.818	PASS
8DPSK	LCH	1.010	0.85	PASS
	MCH	1.012	0.84	PASS
	HCH	1.136	0.84	PASS

Test Graphs

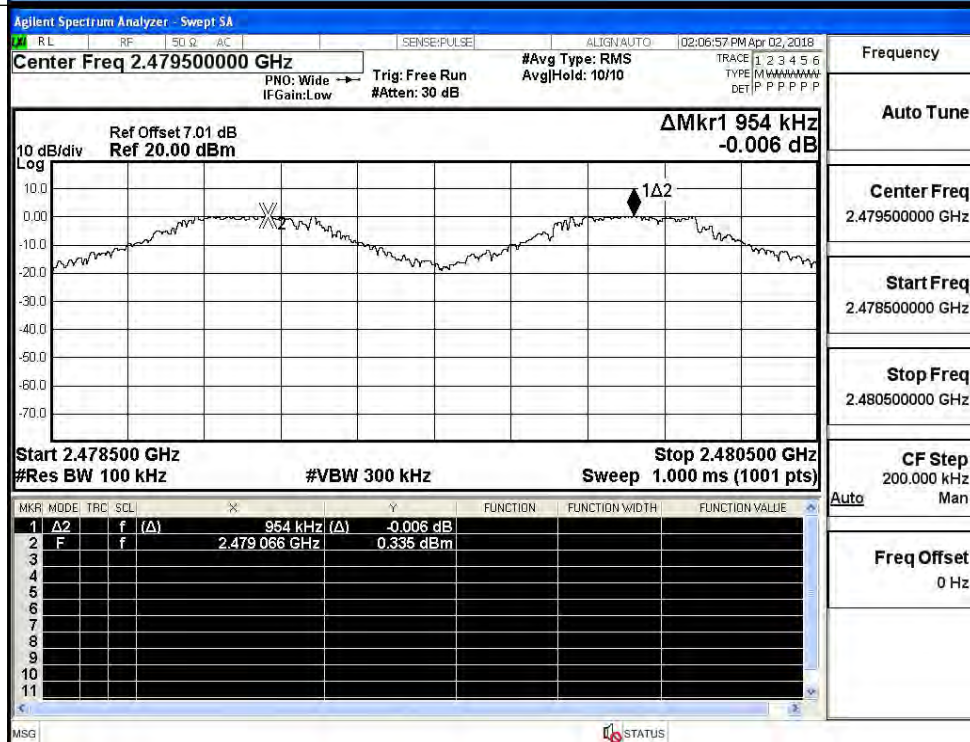
GFSK/LCH

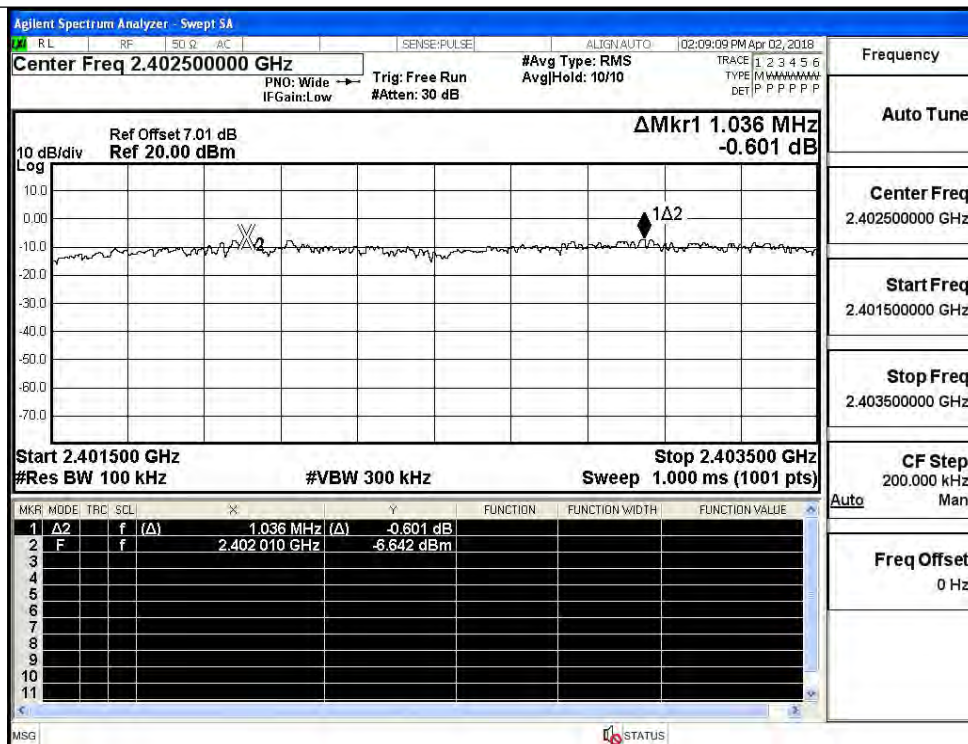
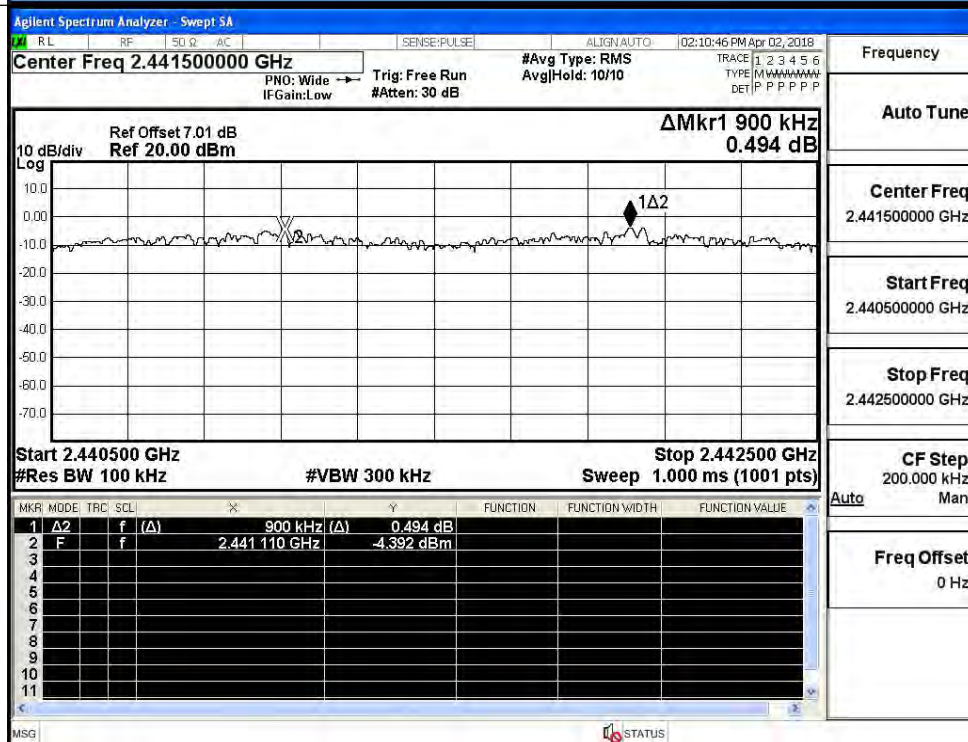


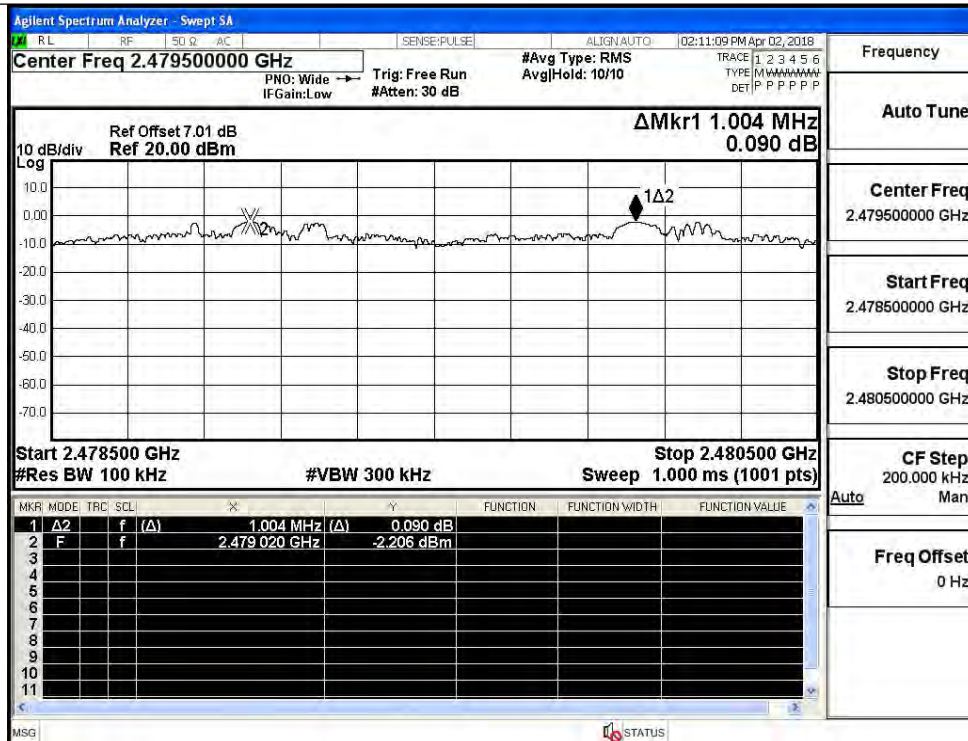
GFSK/MCH



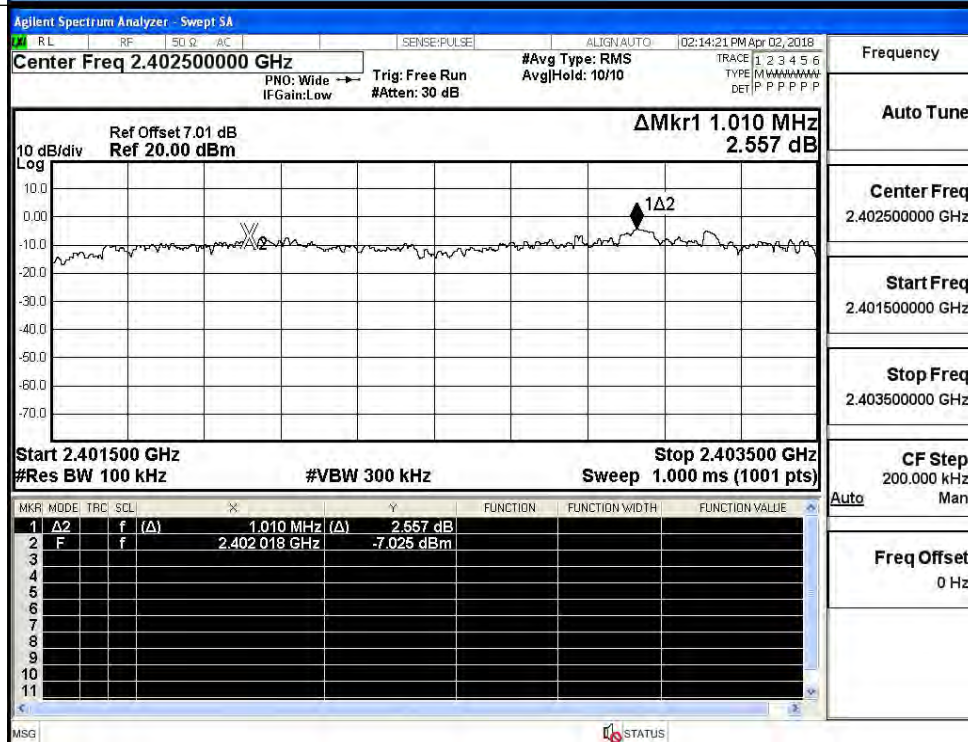
GFSK/HCH



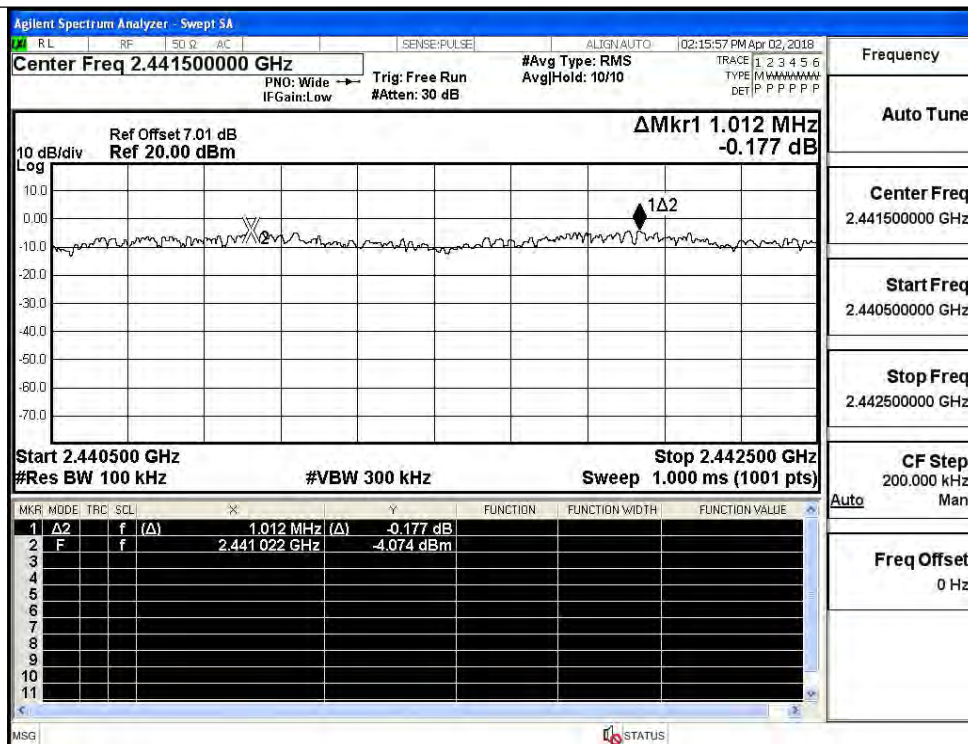
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

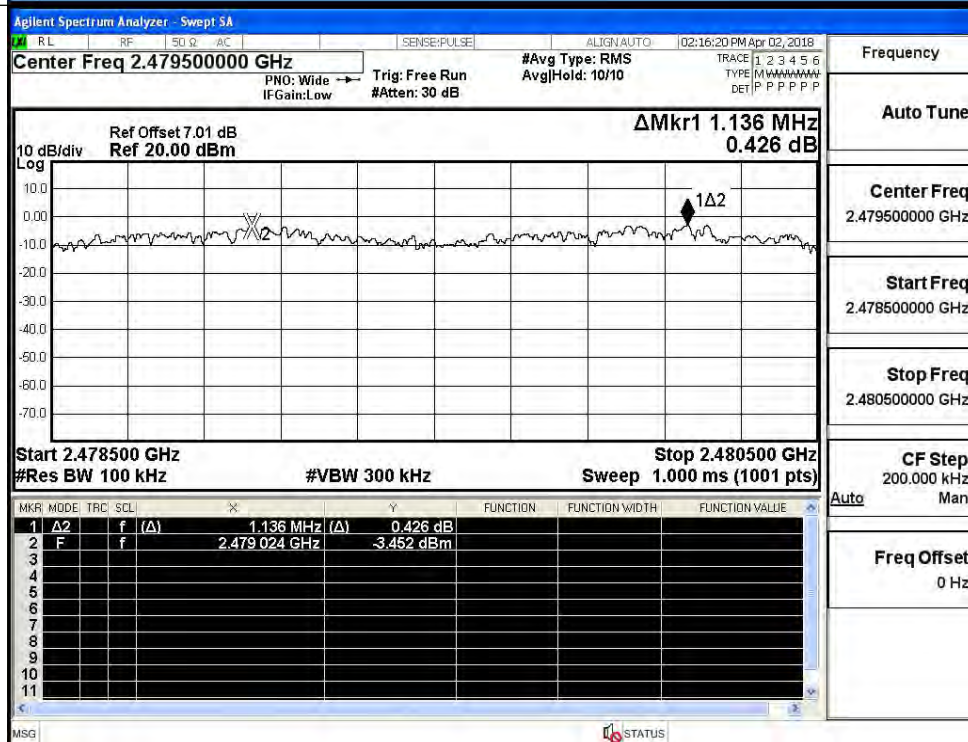
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

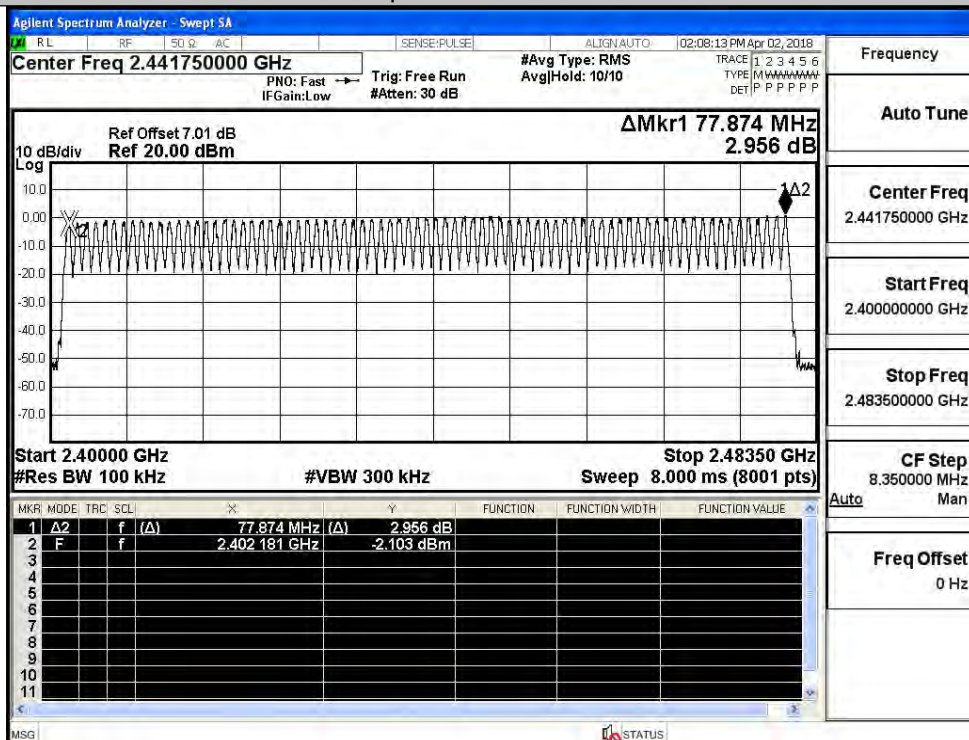


A.4 Hopping Channel Number

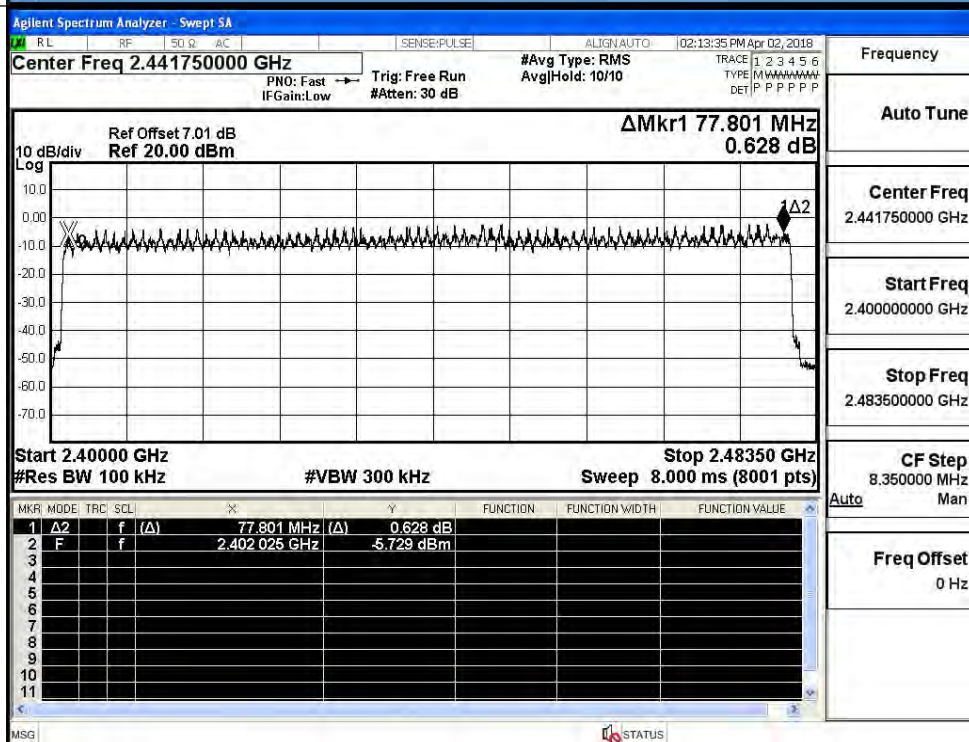
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graphs

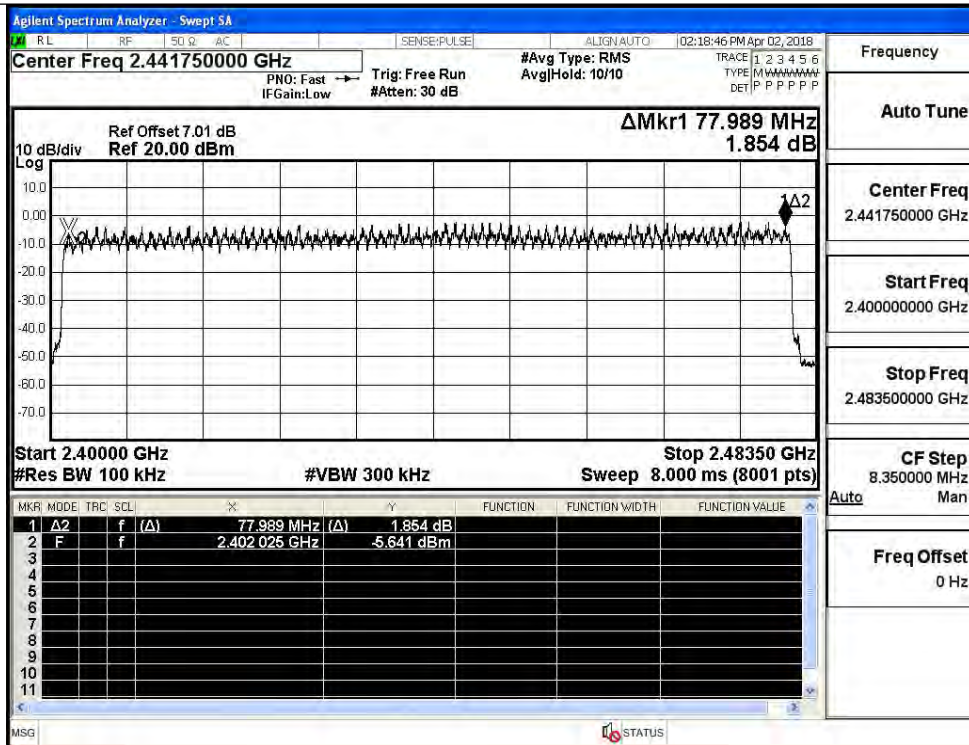
GFSK/Hop



π/4DQPSK/Hop



8DPSK/Hop

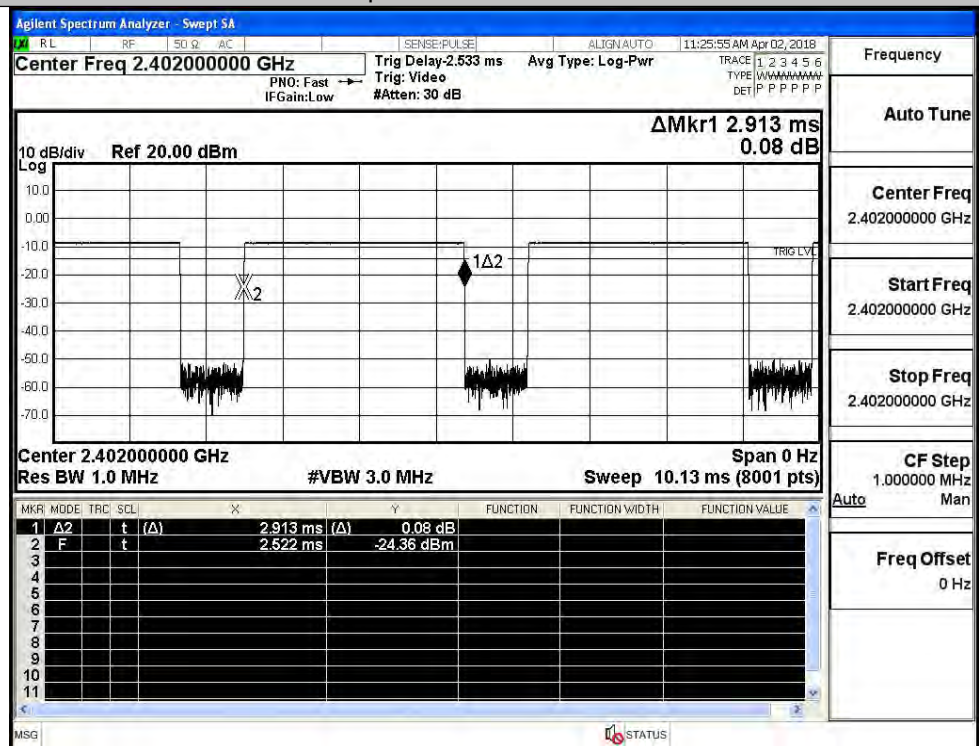


A.5 Dwell Time

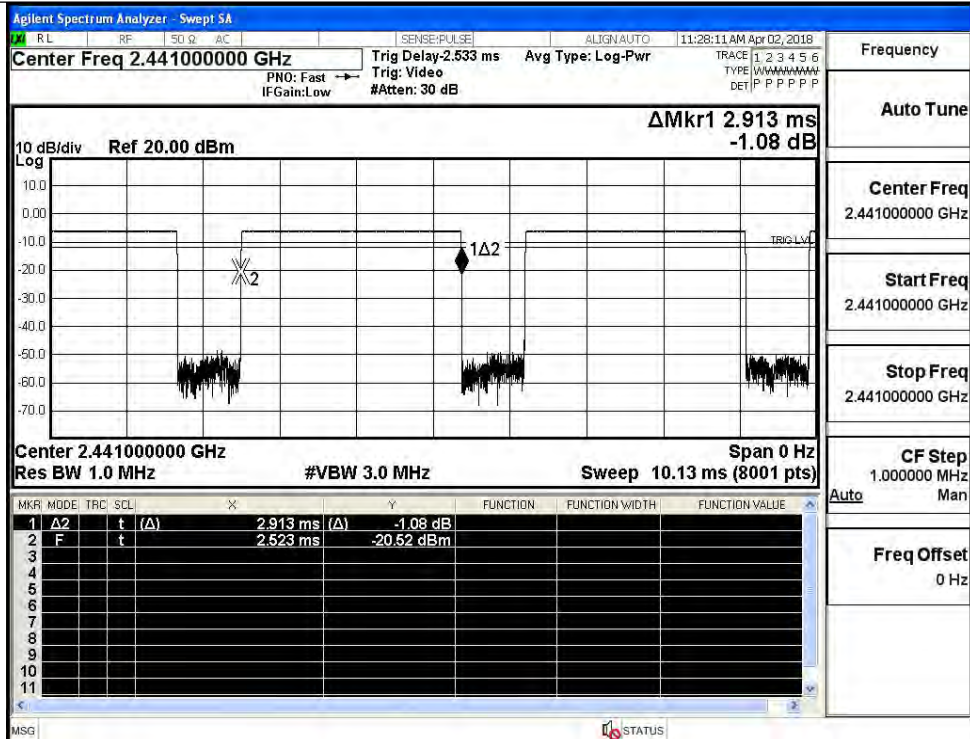
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.91	106.7	0.31	0.4	PASS
	DH5	MCH	2.91	106.7	0.31	0.4	PASS
	DH5	HCH	2.91	106.7	0.31	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.91	106.7	0.312	0.4	PASS
	2DH5	MCH	2.91	106.7	0.312	0.4	PASS
	2DH5	HCH	2.91	106.7	0.312	0.4	PASS
8DPSK	3DH5	LCH	2.91	106.7	0.312	0.4	PASS
	3DH5	MCH	2.91	106.7	0.312	0.4	PASS
	3DH5	HCH	2.91	106.7	0.312	0.4	PASS

Test Graphs

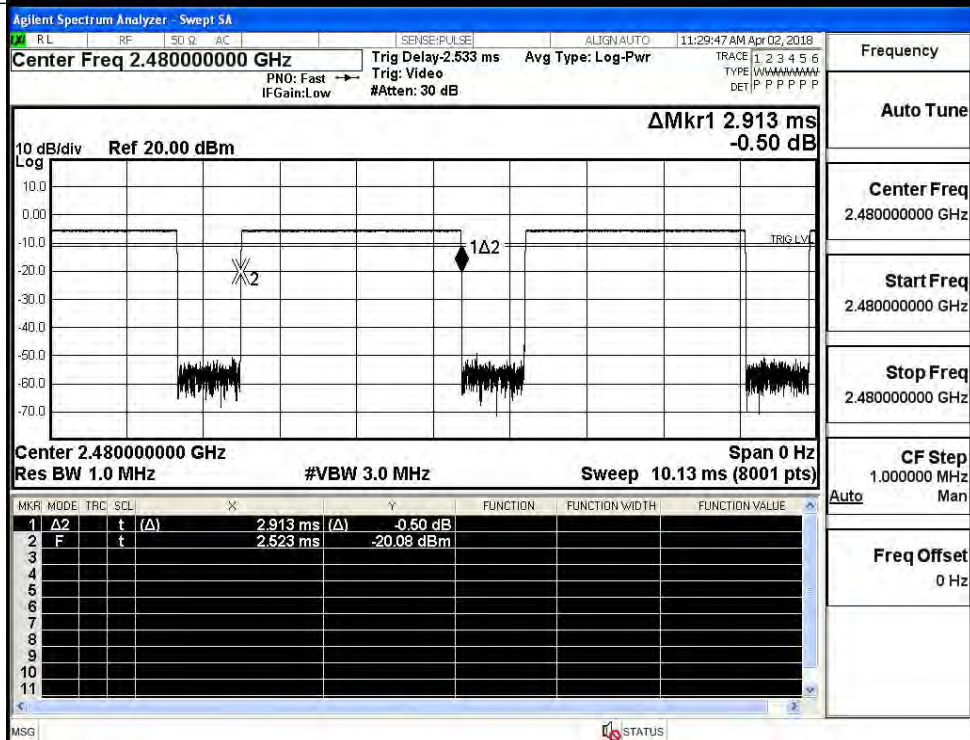
GFSK_DH5/LCH



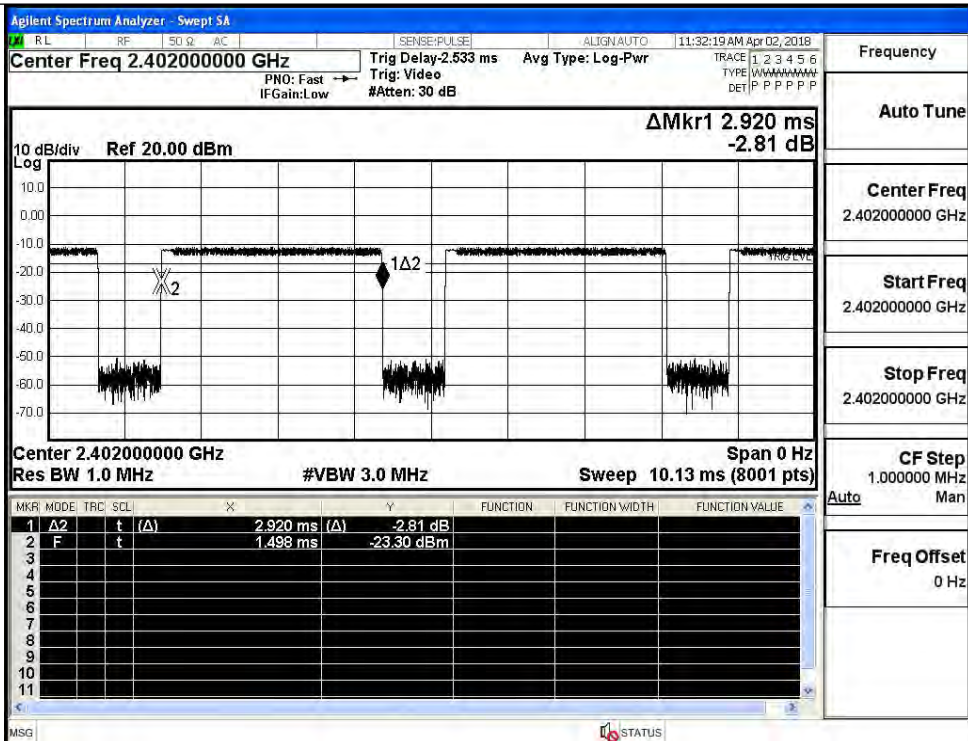
GFSK_DH5/MCH



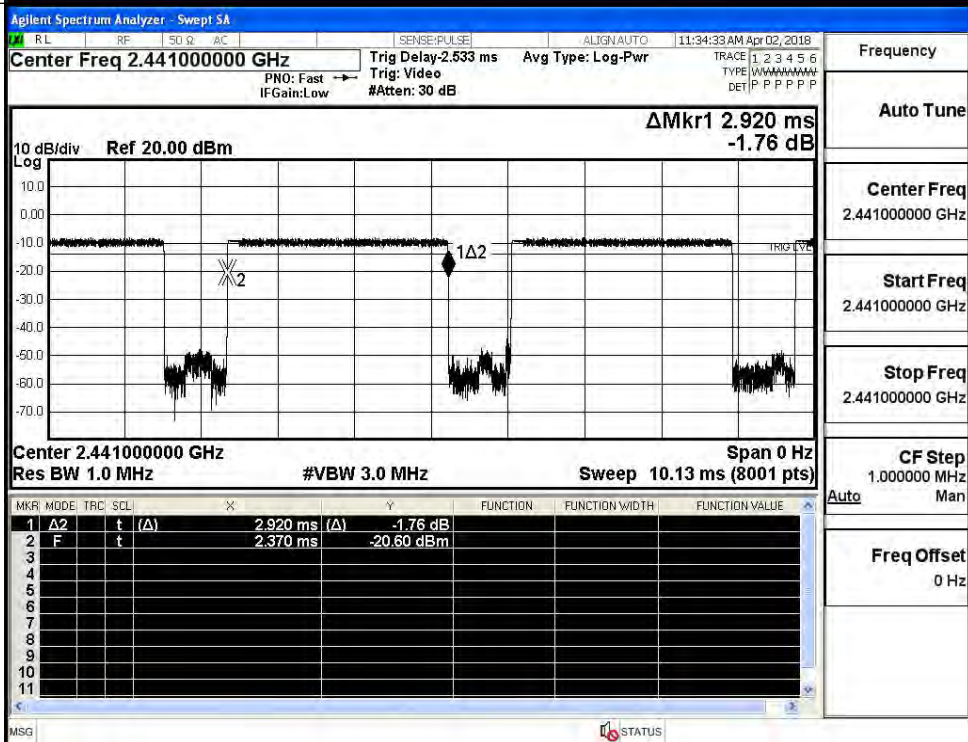
GFSK_DH5/HCH



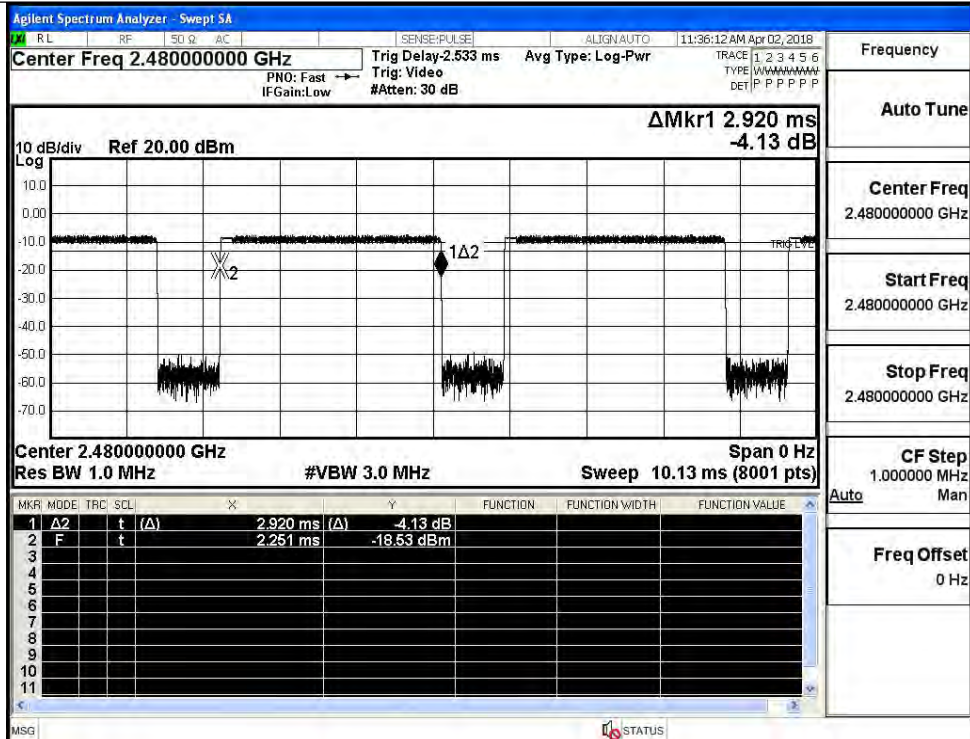
$\pi/4$ DQPSK
_2DH5/LCH



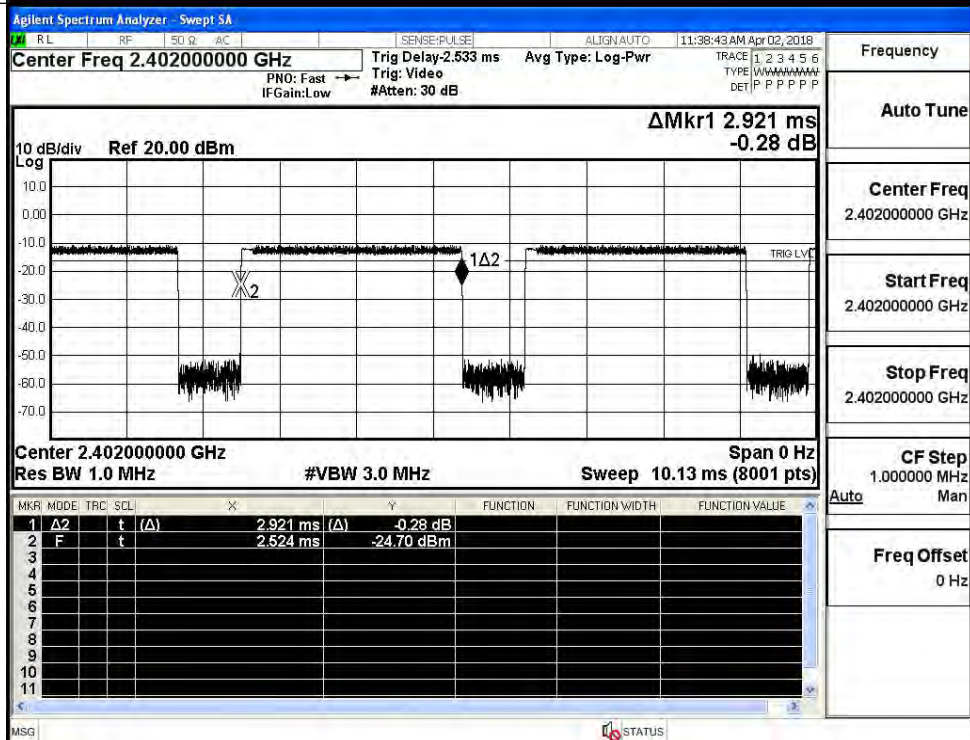
$\pi/4$ DQPSK
_2DH5/MCH



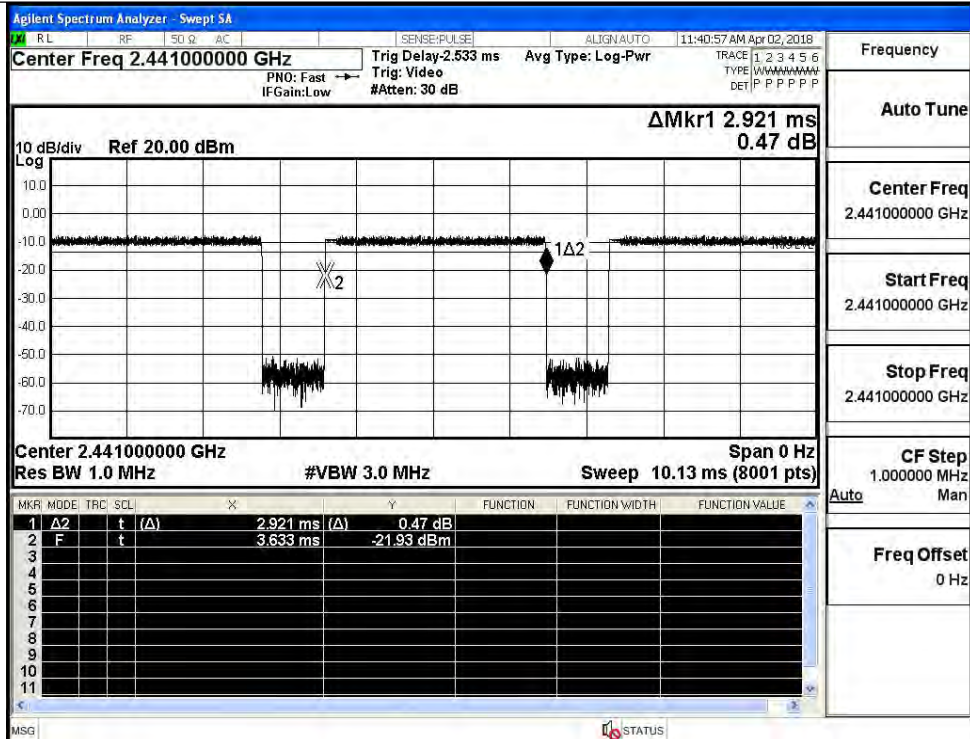
$\pi/4$ DQPSK
_2DH5/HCH



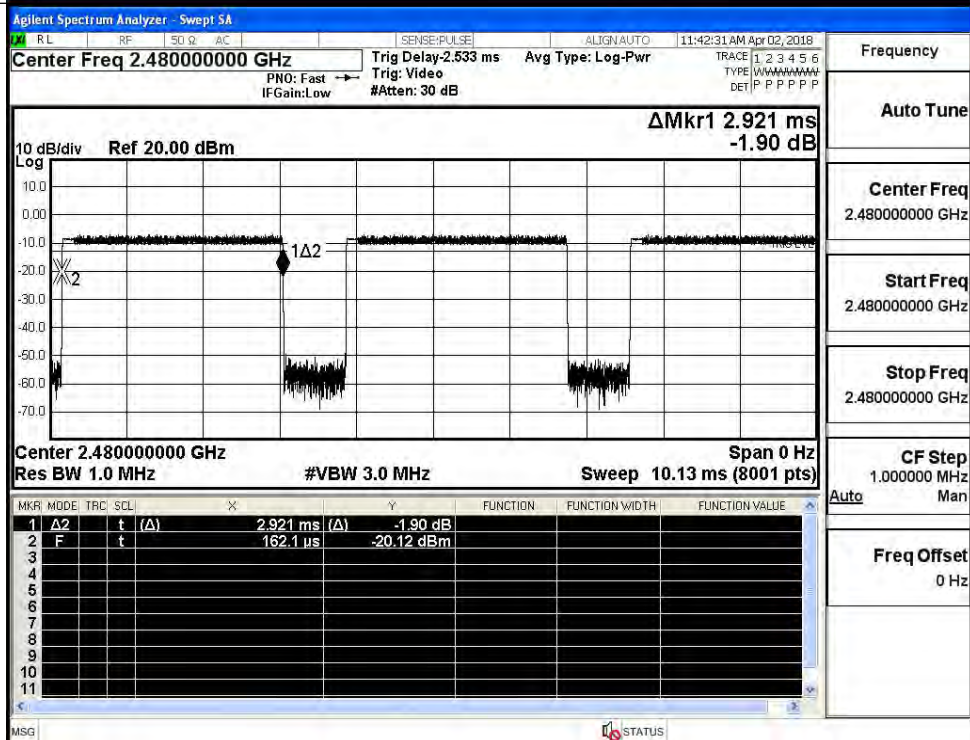
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

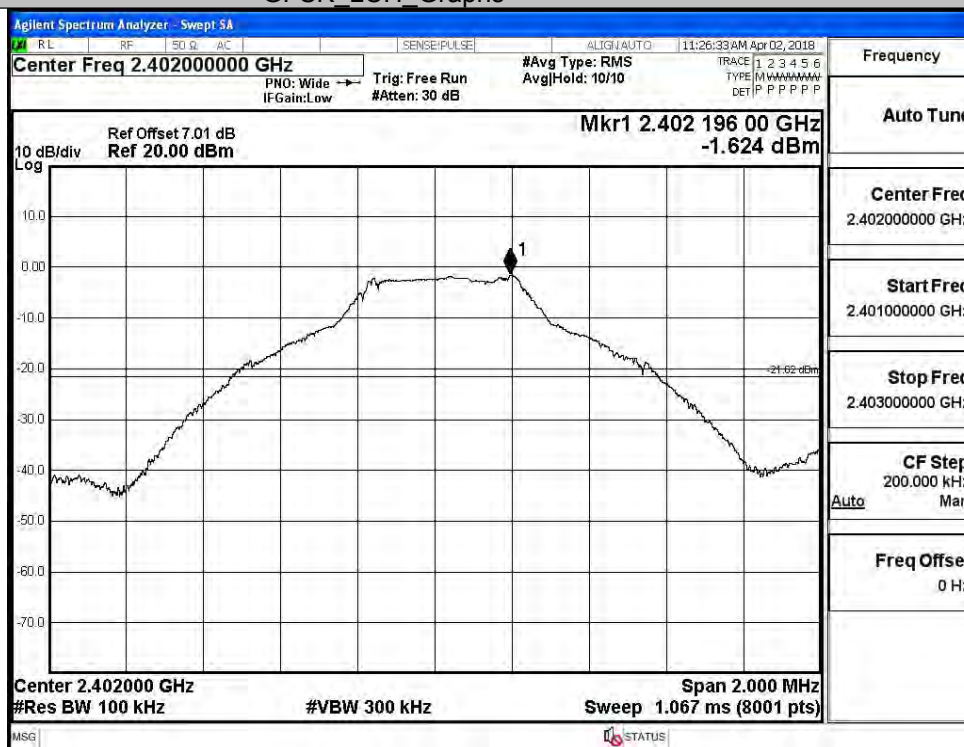


A.6 RF Conducted Spurious Emissions

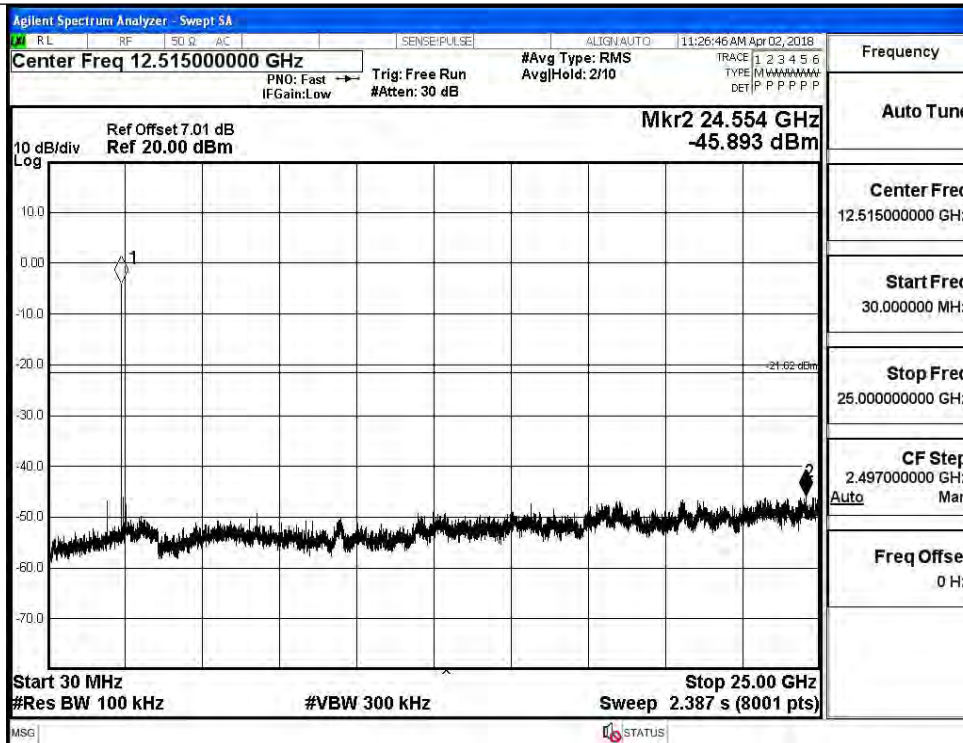
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.624	-45.893	-21.624	PASS
	MCH	0.877	-45.257	-19.123	PASS
	HCH	1.503	-45.047	-18.497	PASS
$\pi/4$ DQPSK	LCH	-5.646	-45.768	-25.646	PASS
	MCH	-2.182	-45.341	-22.182	PASS
	HCH	-1.685	-45.152	-21.685	PASS
8DPSK	LCH	-4.933	-44.968	-24.933	PASS
	MCH	-2.304	-45.213	-22.304	PASS
	HCH	-1.448	-45.171	-21.448	PASS

GFSK LCH Graphs

Pref

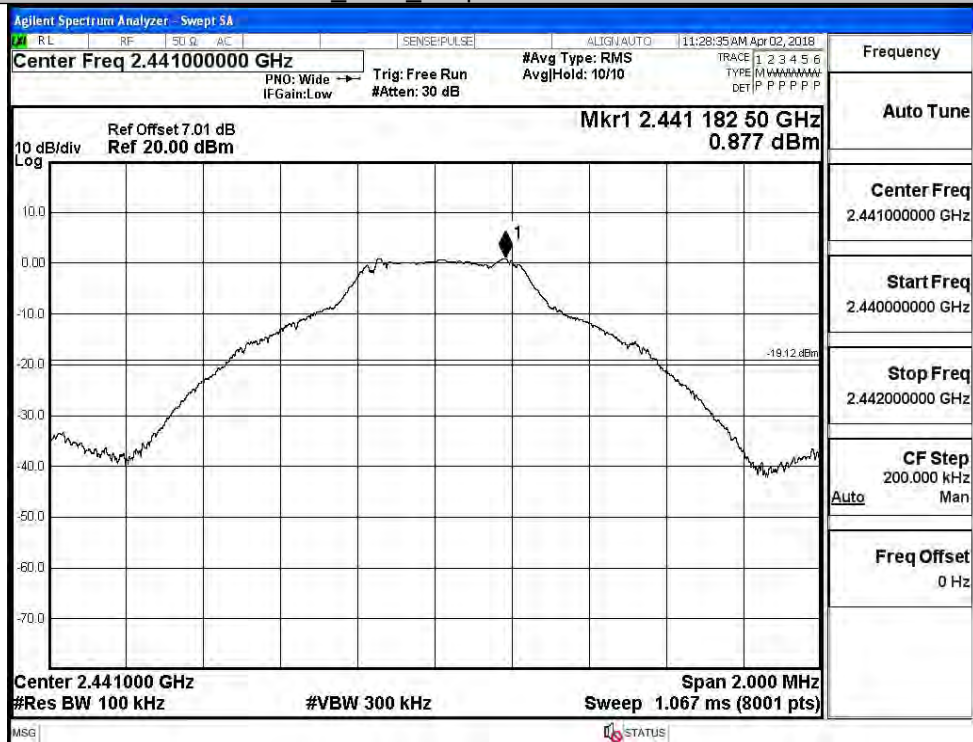


Puw

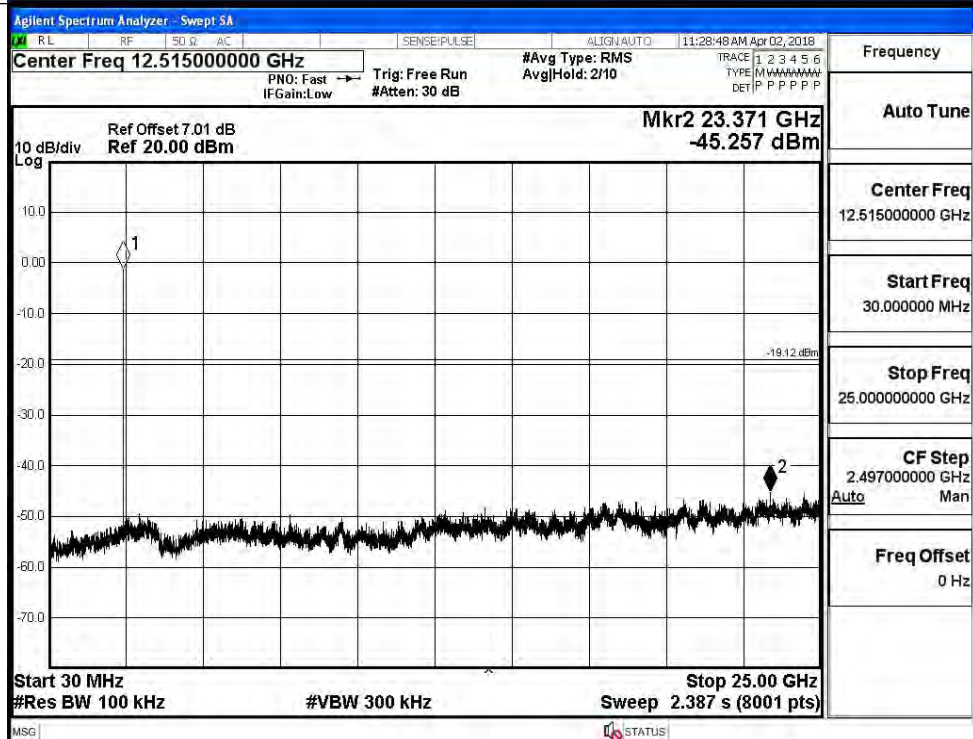


GFSK_MCH_Graphs

Pref

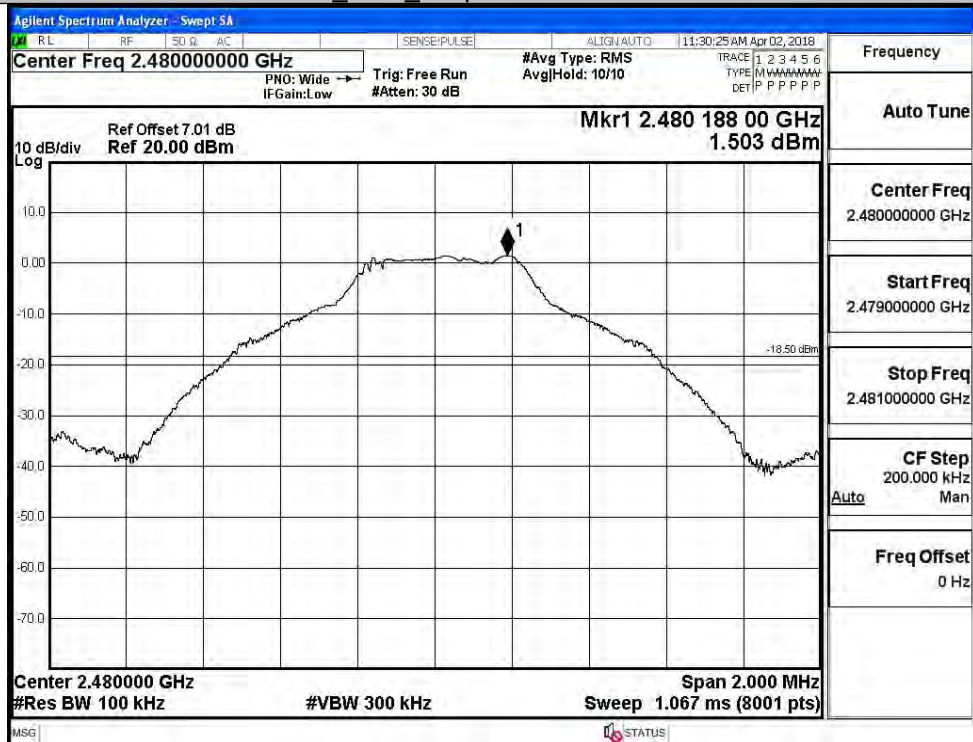


Puw

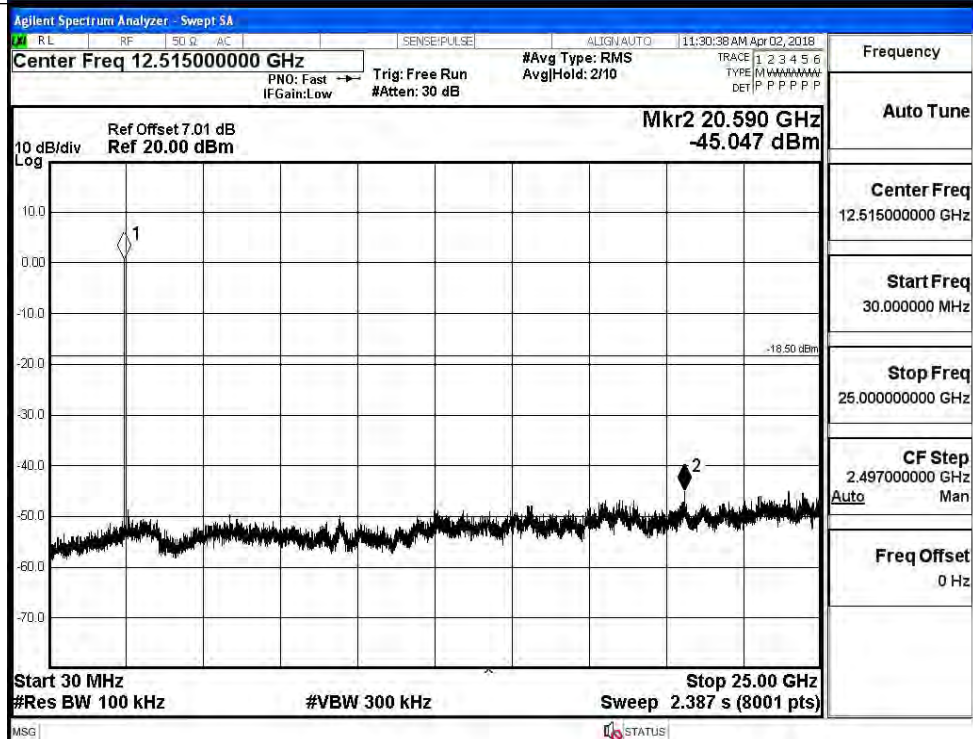


GFSK_HCH_Graphs

Pref

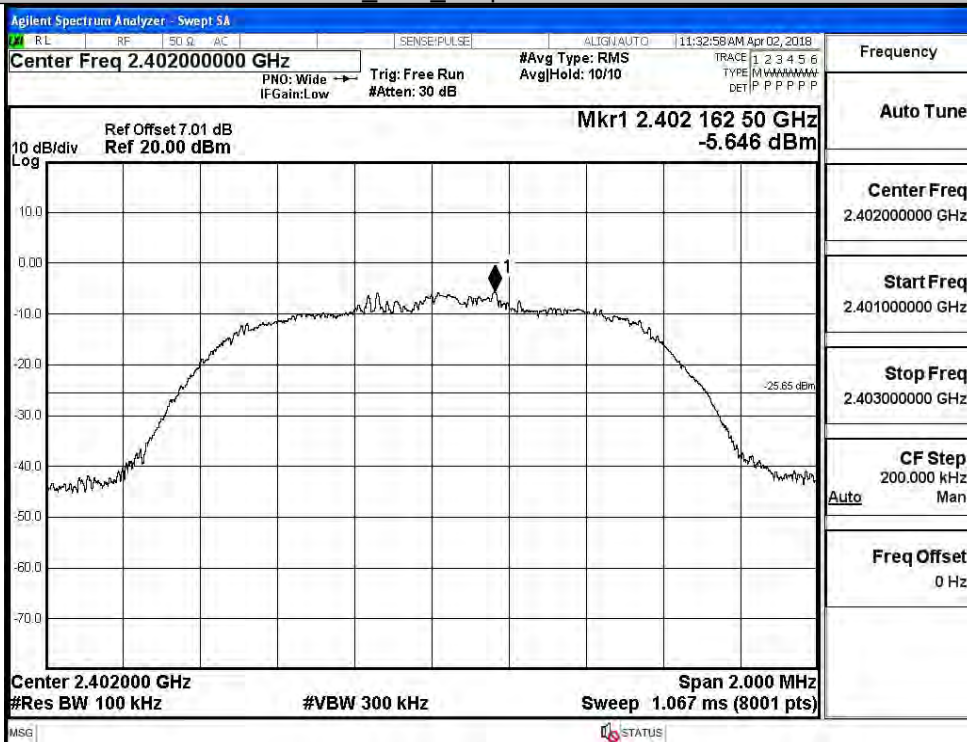


Puw

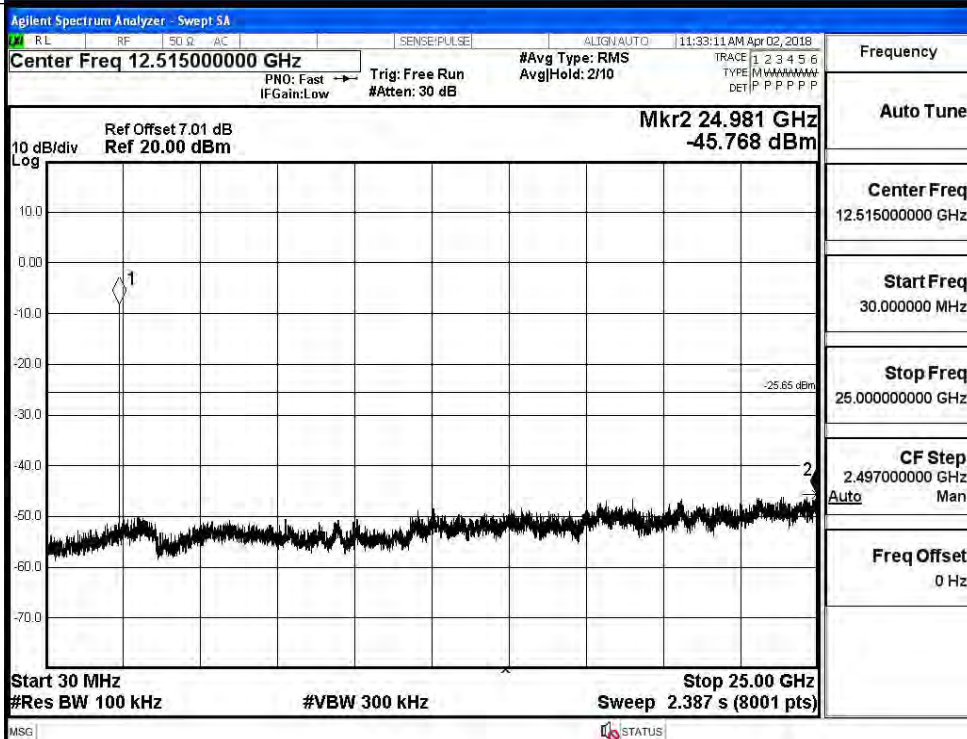


$\pi/4$ DQPSK_LCH_Graphs

Pref

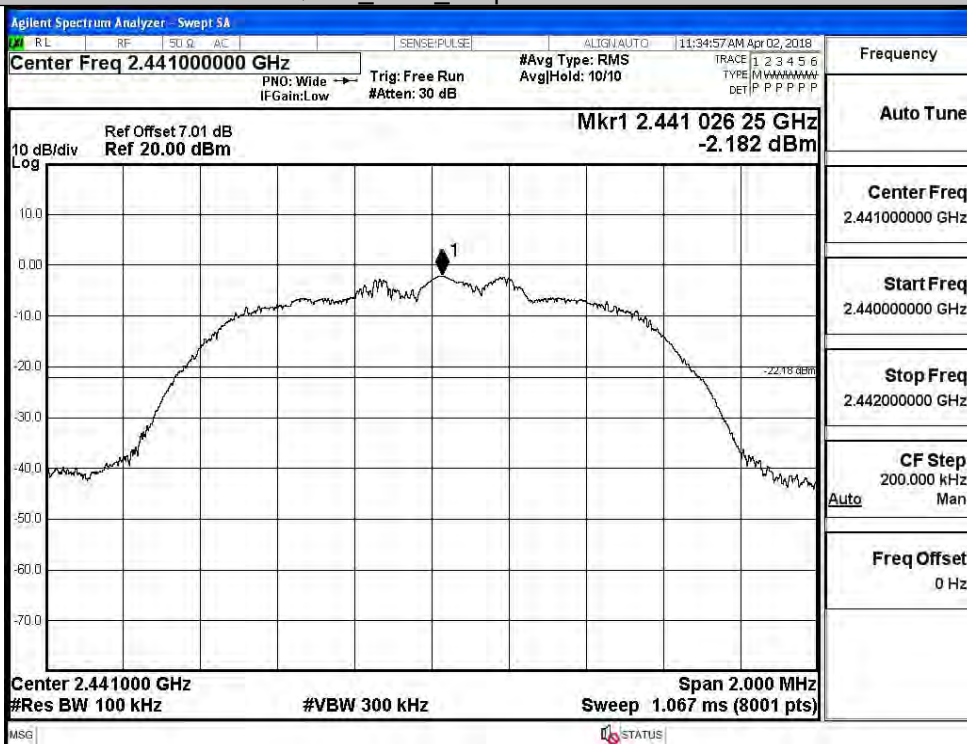


Puw

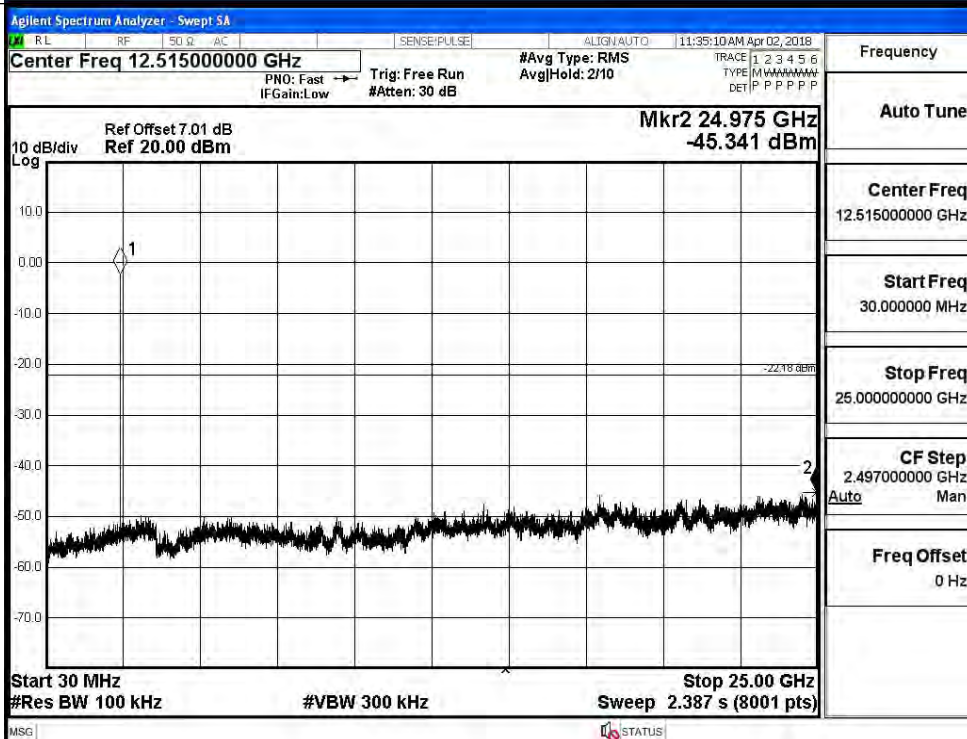


π /4DQPSK_MCH_Graphs

Pref

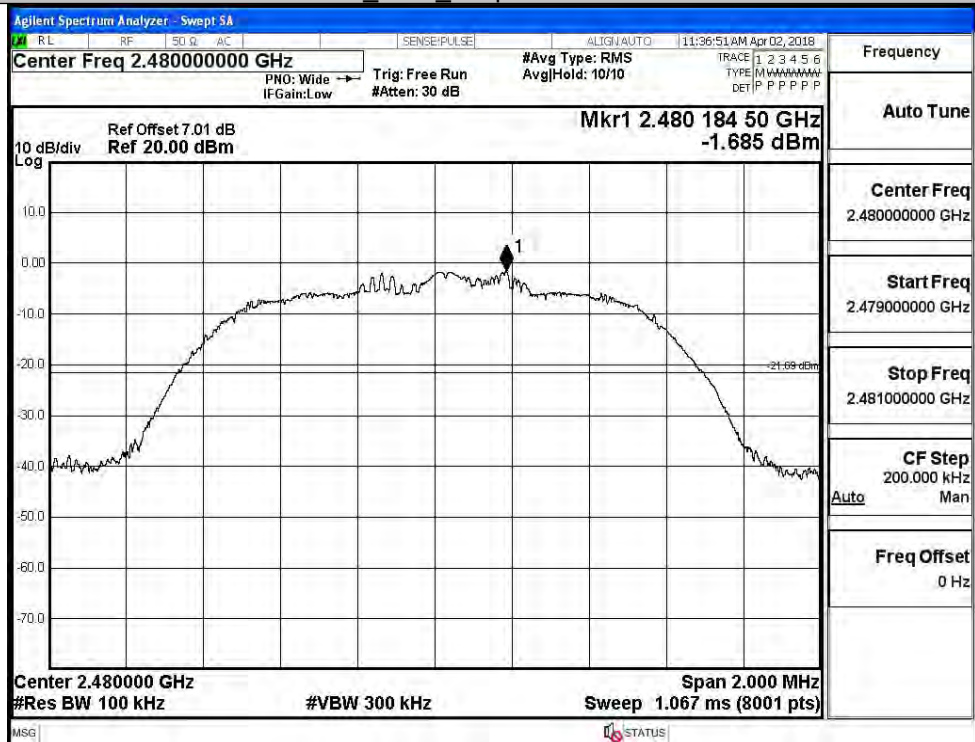


Puw

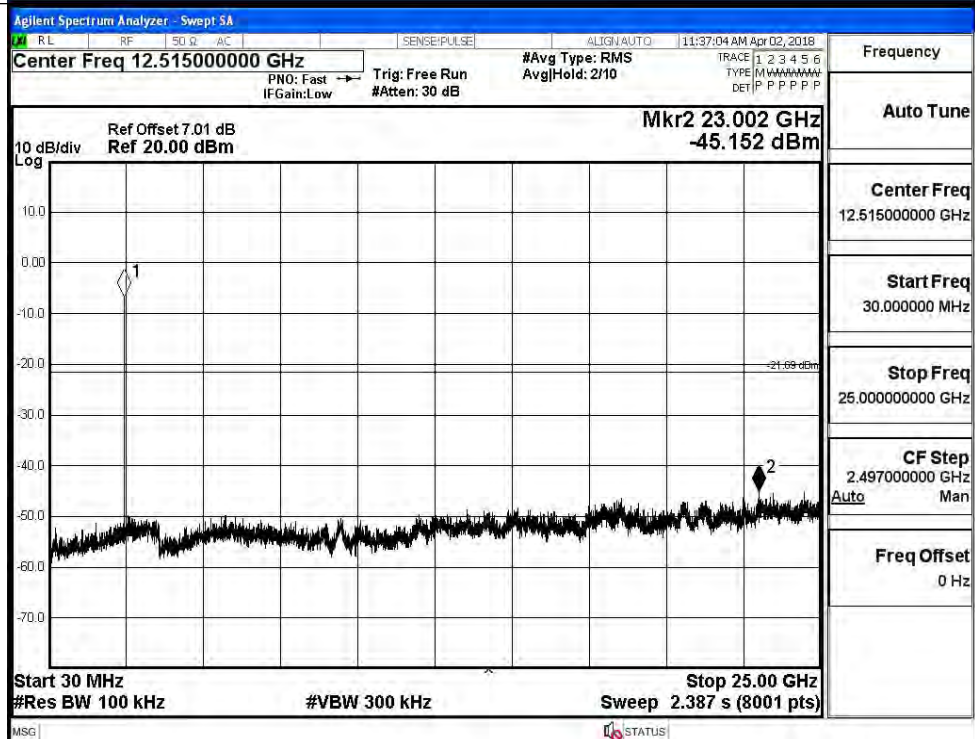


$\pi/4$ DQPSK_HCH_Graphs

Pref

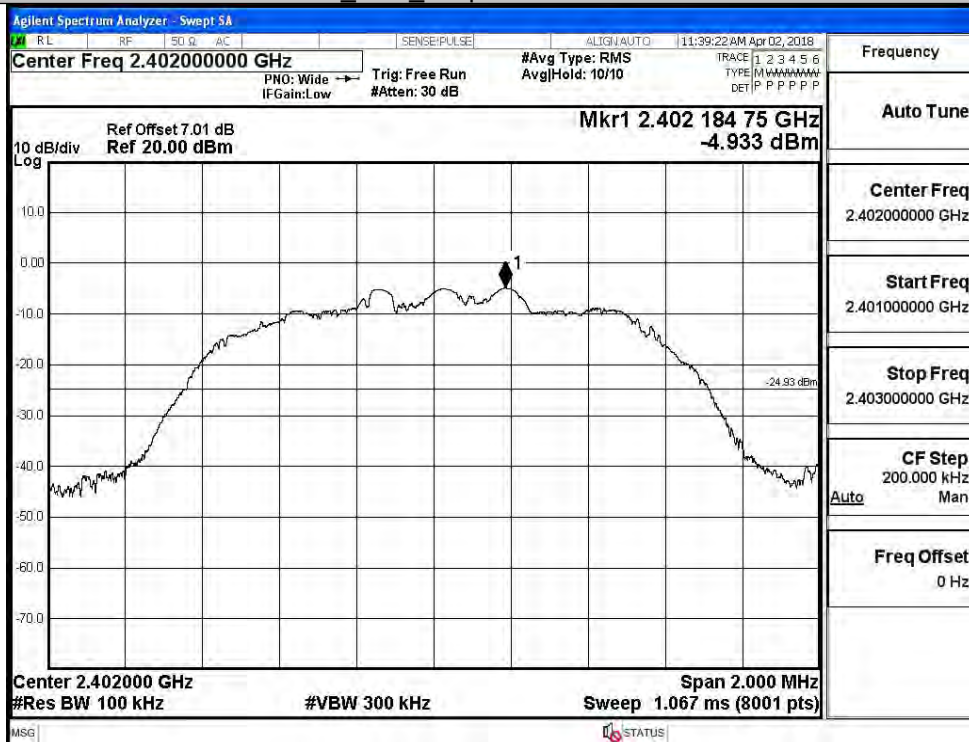


Puw

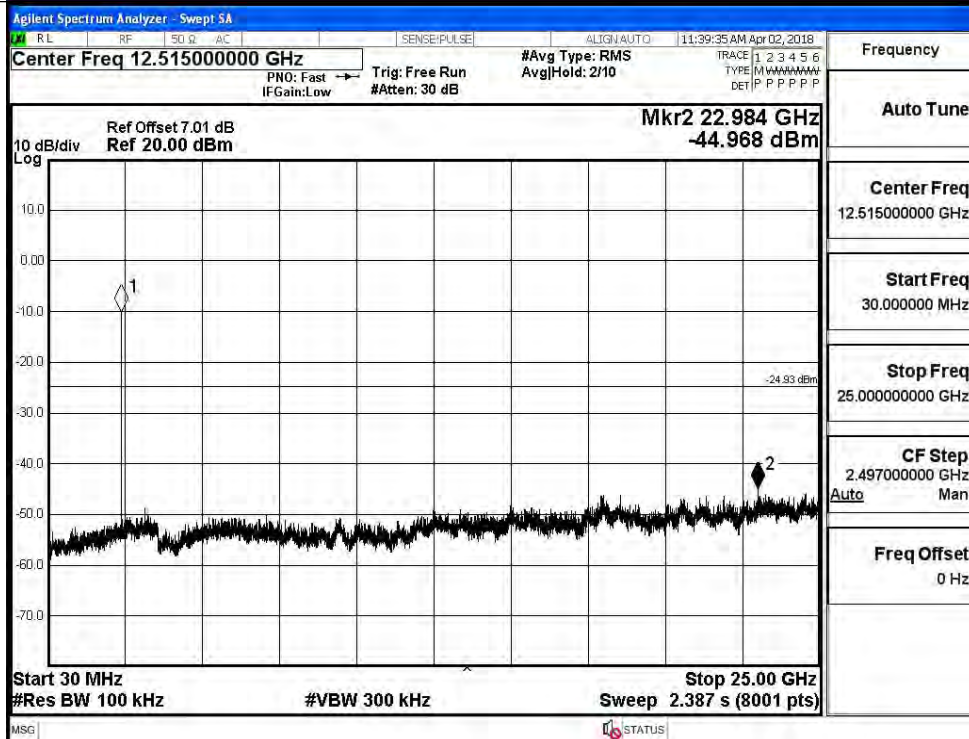


8DPSK_LCH_Graphs

Pref

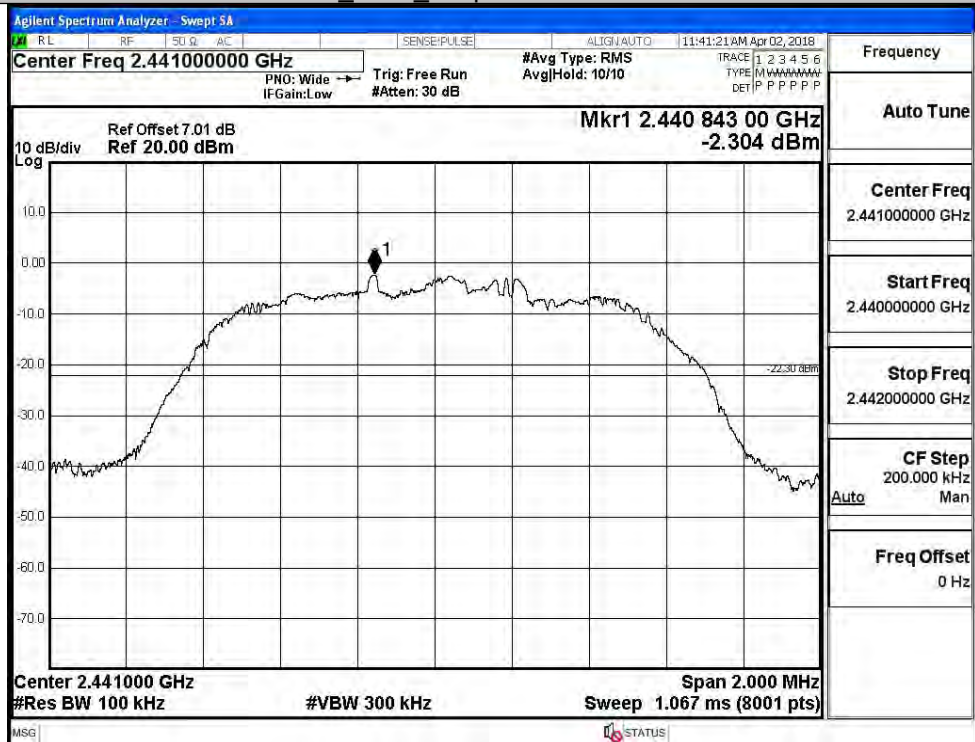


Puw

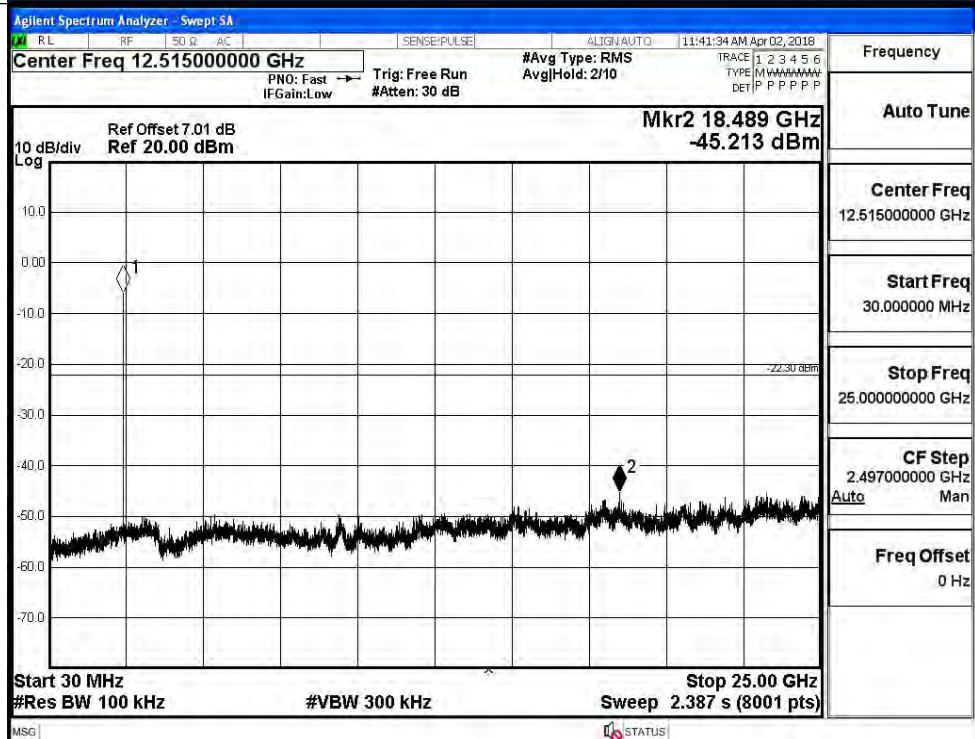


8DPSK_MCH_Graphs

Pref

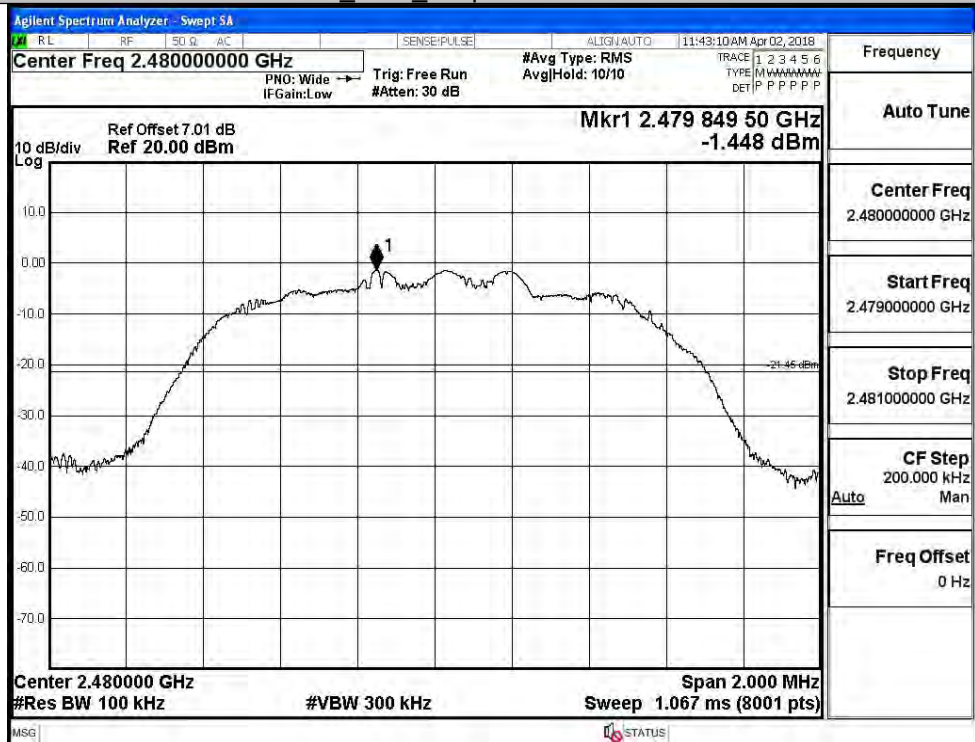


Puw

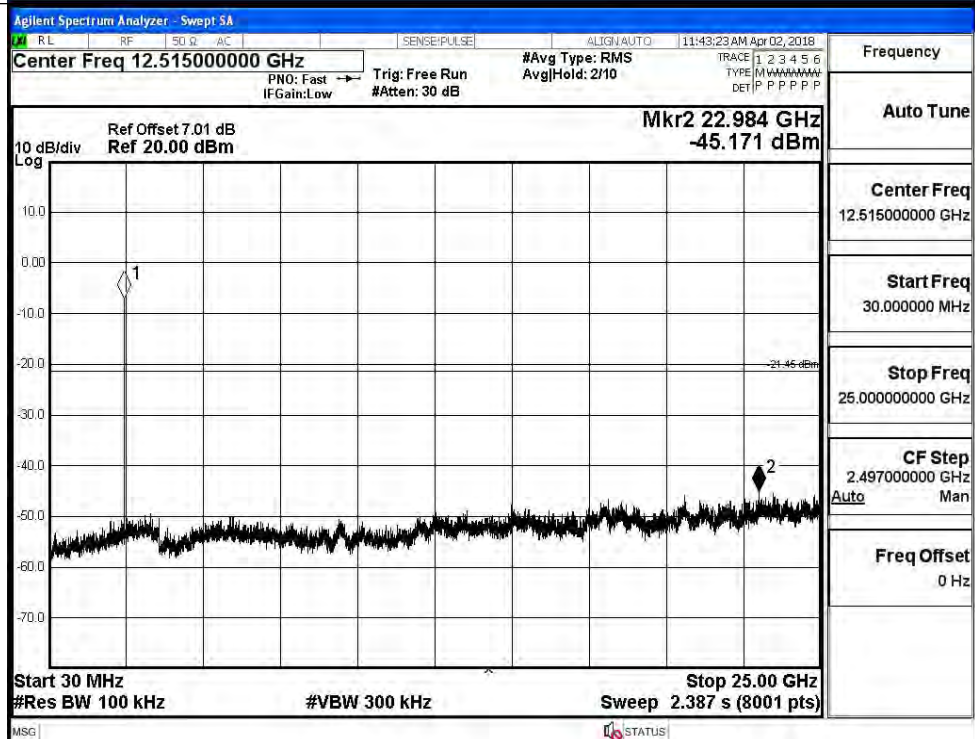


8DPSK_HCH_Graphs

Pref



Puw

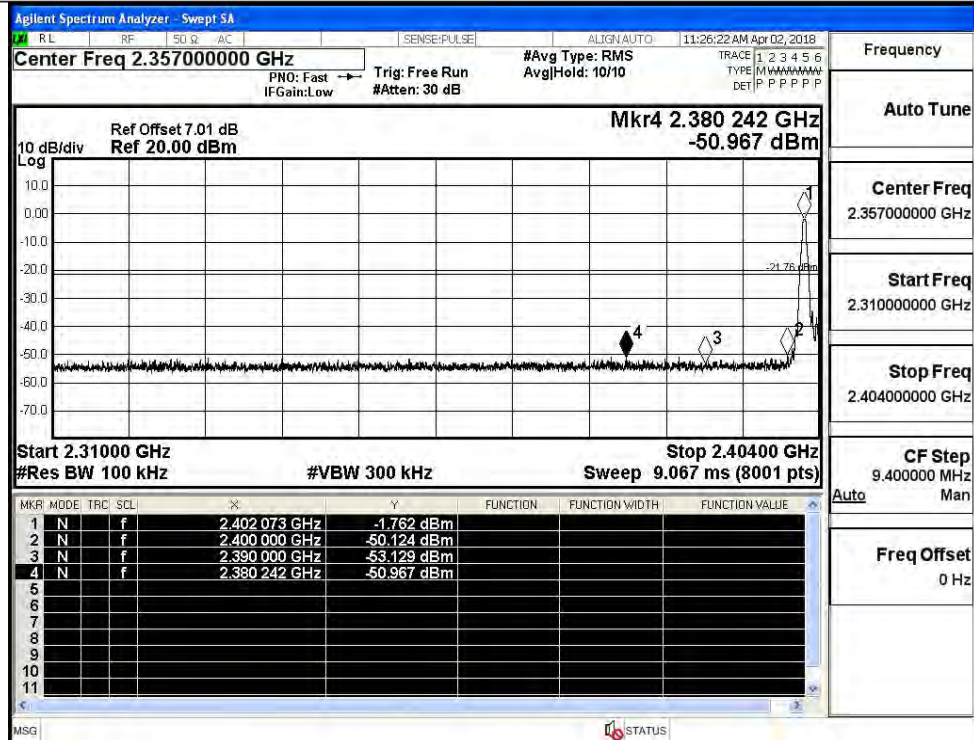


A.7 Band-edge for RF Conducted Emissions

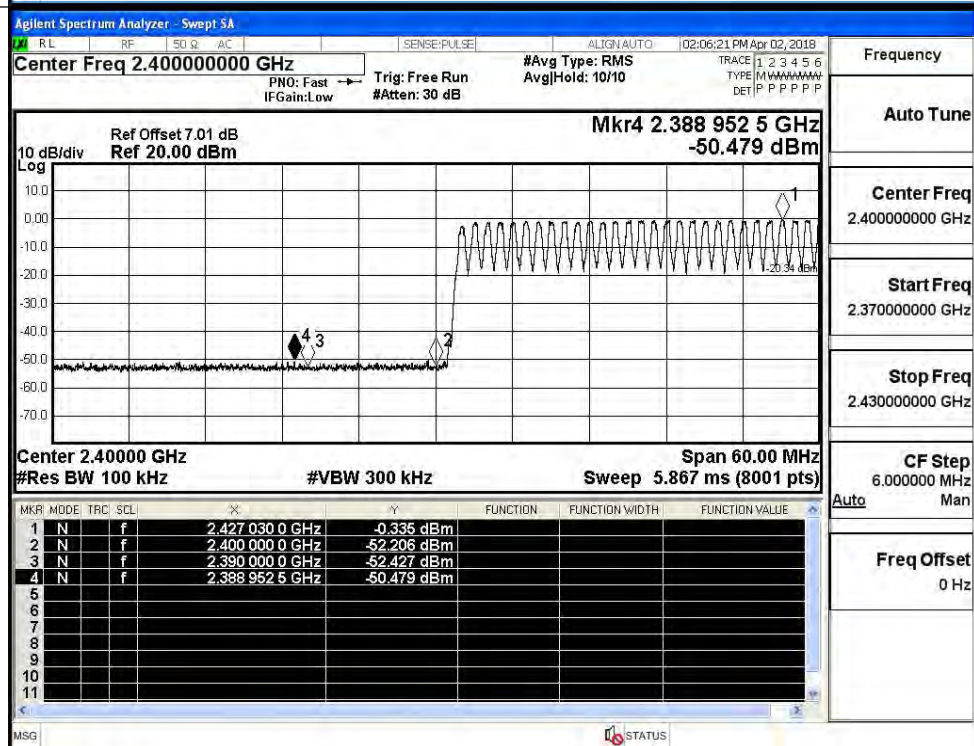
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-1.762	Off	-50.967	-21.76	PASS
			-0.335	On	-50.479	-20.34	PASS
	HCH	2480	1.486	Off	-50.738	-18.51	PASS
			0.632	On	-49.794	-19.37	PASS
$\pi/4$ DQPSK	LCH	2402	-4.988	Off	-50.823	-24.99	PASS
			-3.769	On	-50.018	-23.77	PASS
	HCH	2480	-1.692	Off	-51.288	-21.69	PASS
			-2.268	On	-49.750	-22.27	PASS
8DPSK	LCH	2402	-4.925	Off	-50.825	-24.93	PASS
			-3.523	On	-50.644	-23.52	PASS
	HCH	2480	-1.415	Off	-50.473	-21.42	PASS
			-2.056	On	-50.686	-22.06	PASS

Test Graphs

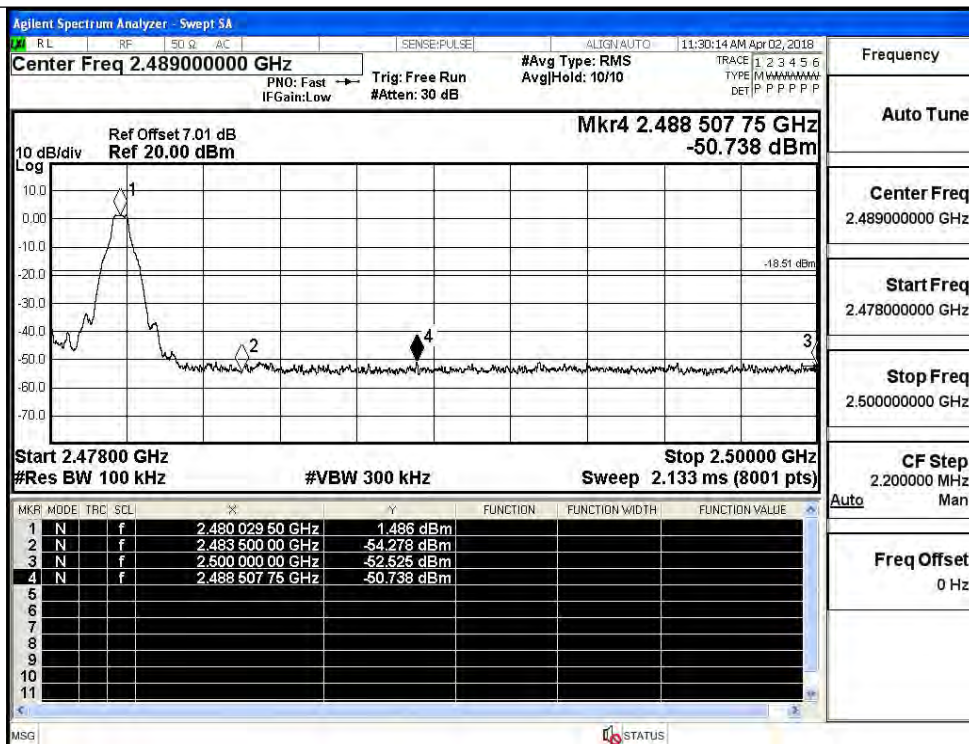
GFSK/LCH/No Hop



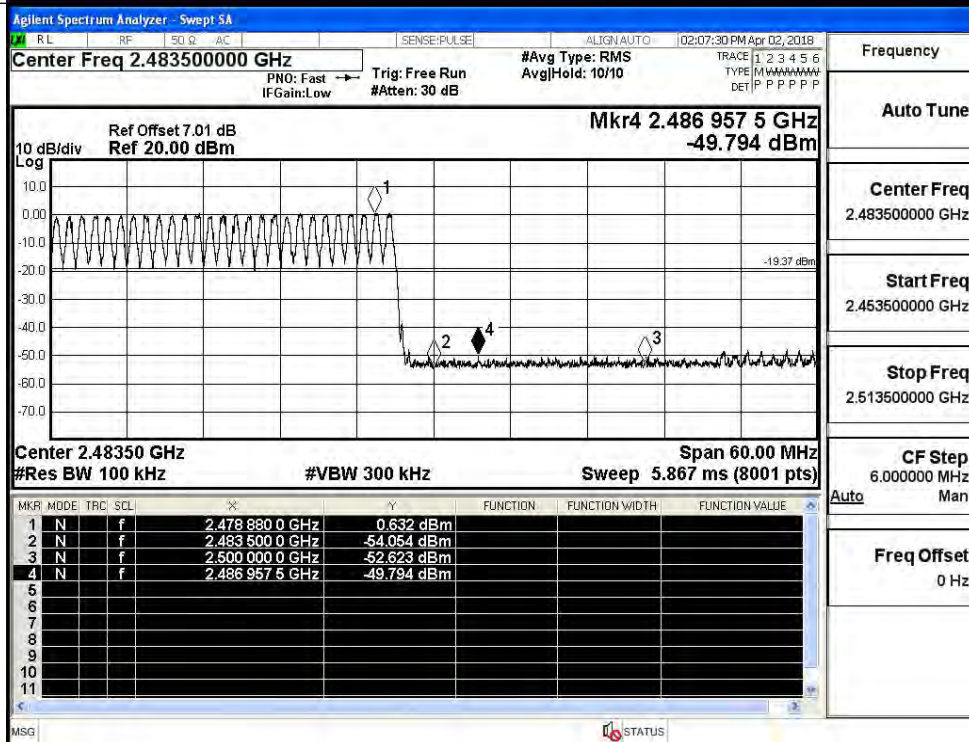
GFSK/LCH/Hop



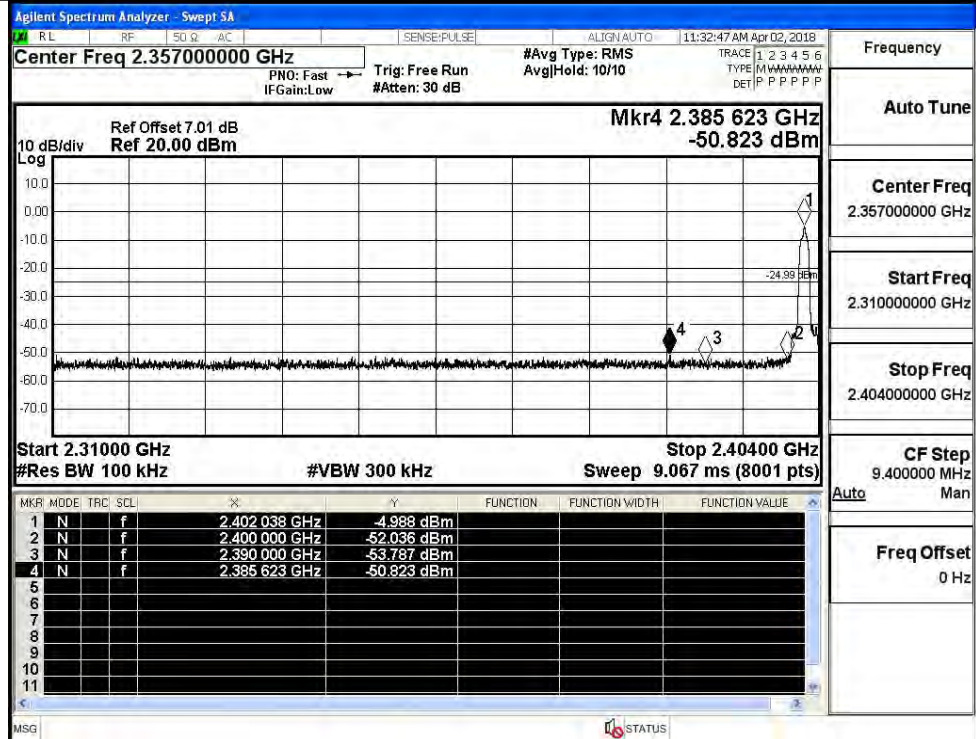
GFSK/HCH/No Hop



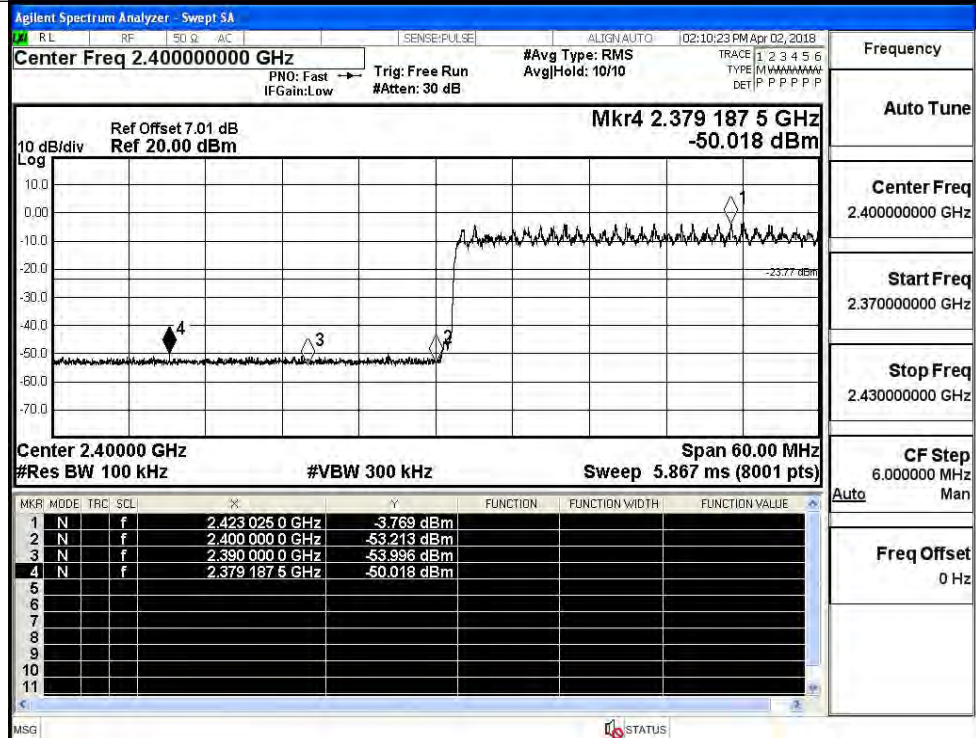
GFSK/HCH/Hop



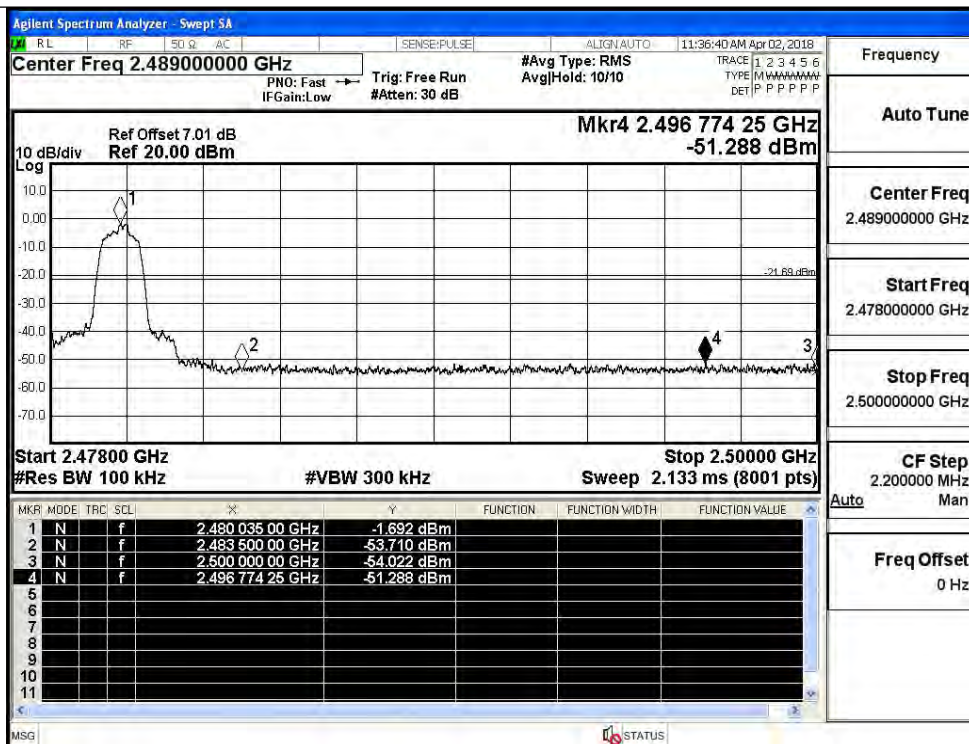
$\pi/4$ DQPSK/LCH/No
Hop



$\pi/4$ DQPSK/LCH/Hop



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

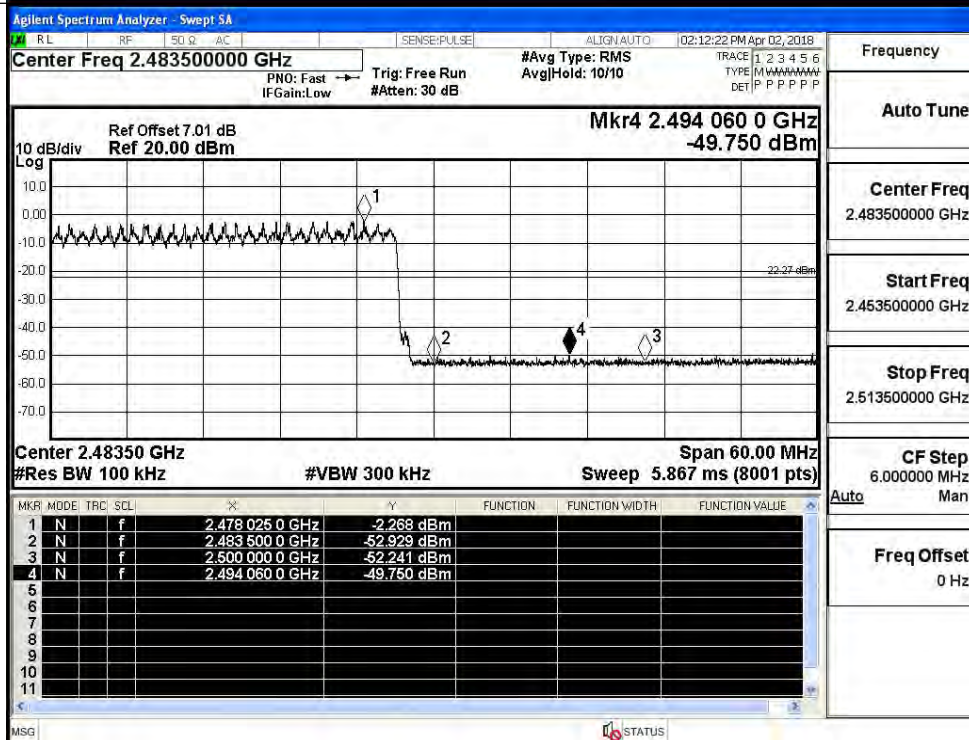


Frequency

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

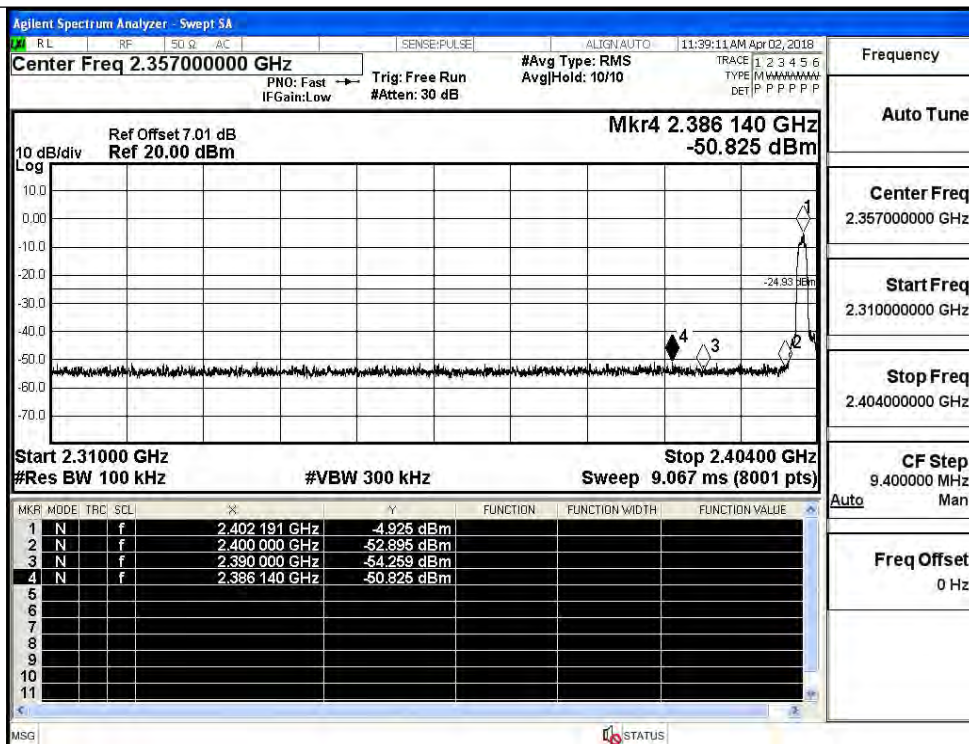


Frequency

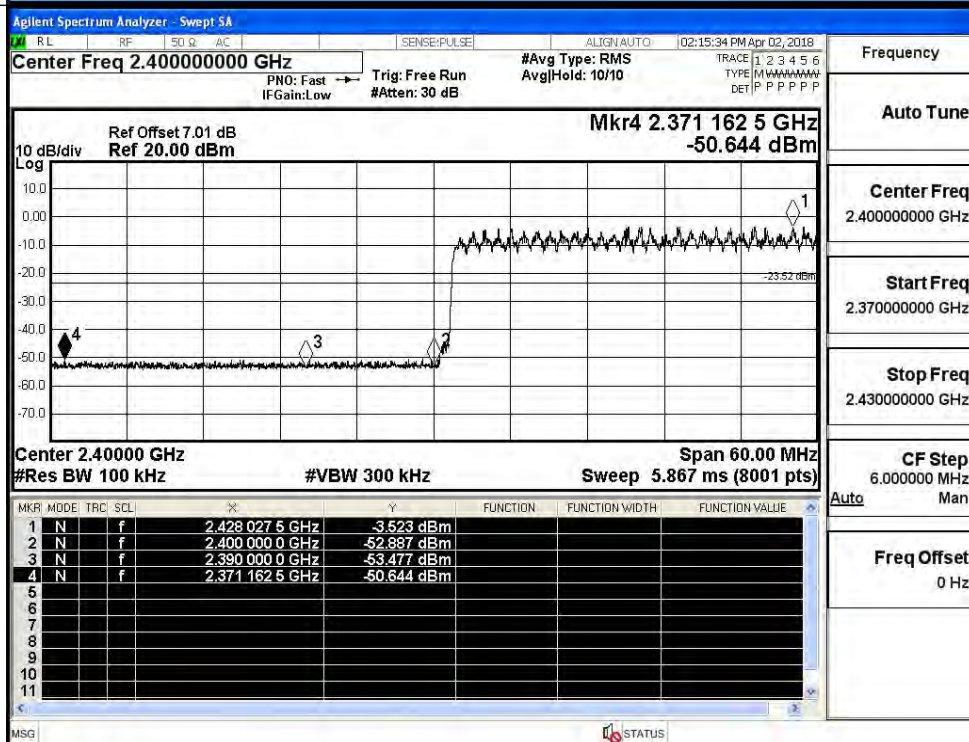
Auto Tune

Center Freq
2.483500000 GHzStart Freq
2.463500000 GHzStop Freq
2.513500000 GHzCF Step
6.000000 MHz
Auto ManFreq Offset
0 Hz

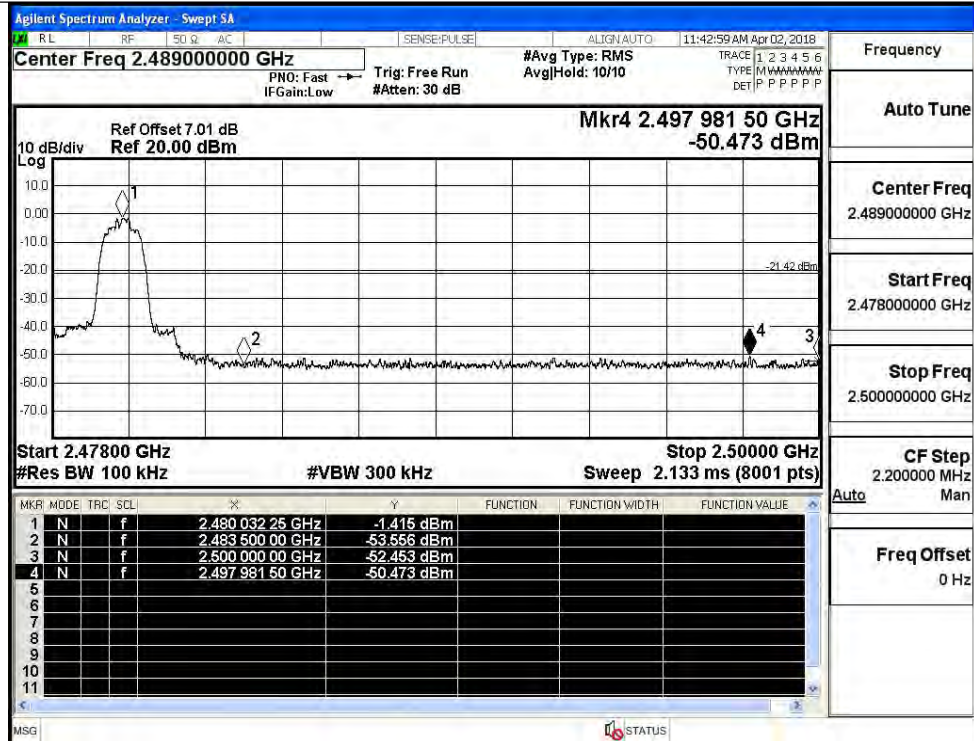
8DPSK/LCH/No Hop



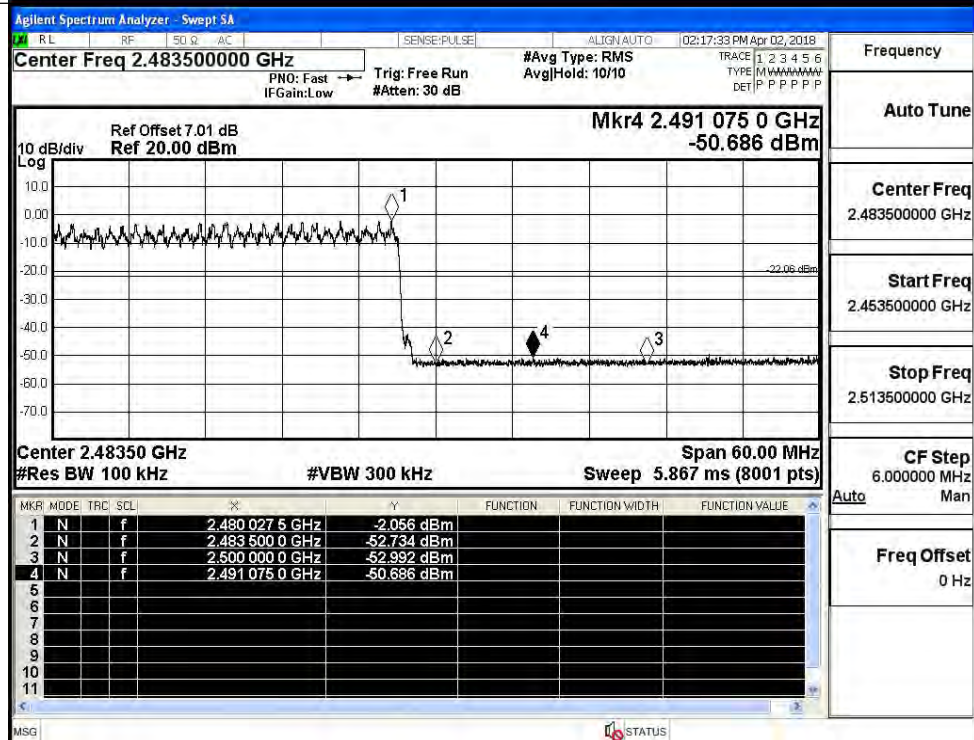
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



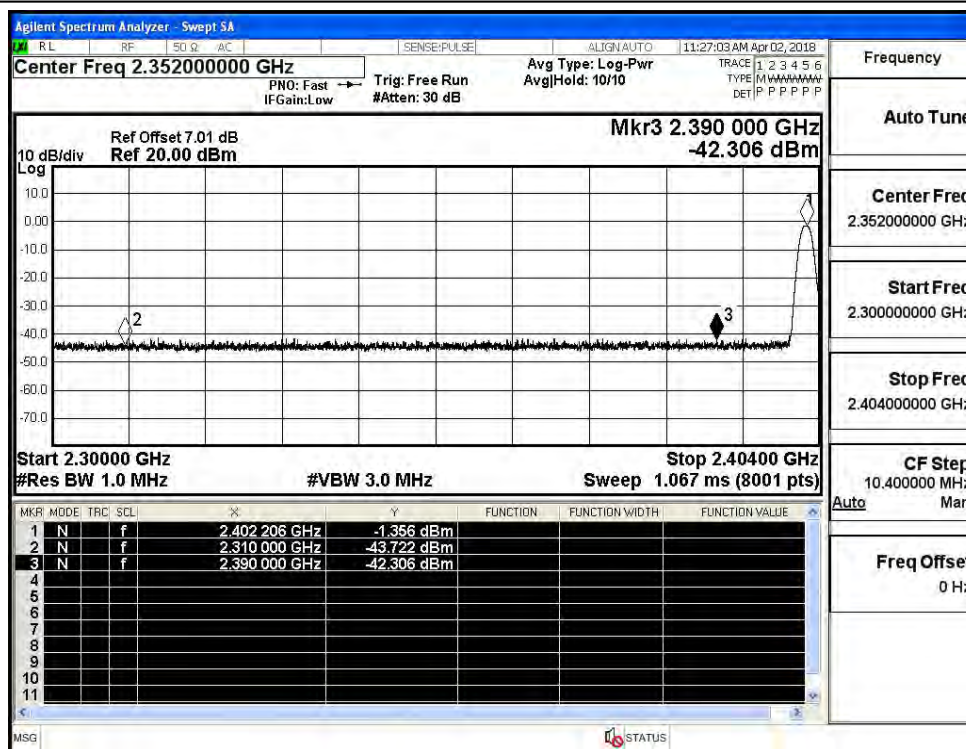
8DPSK/HCH/Hop



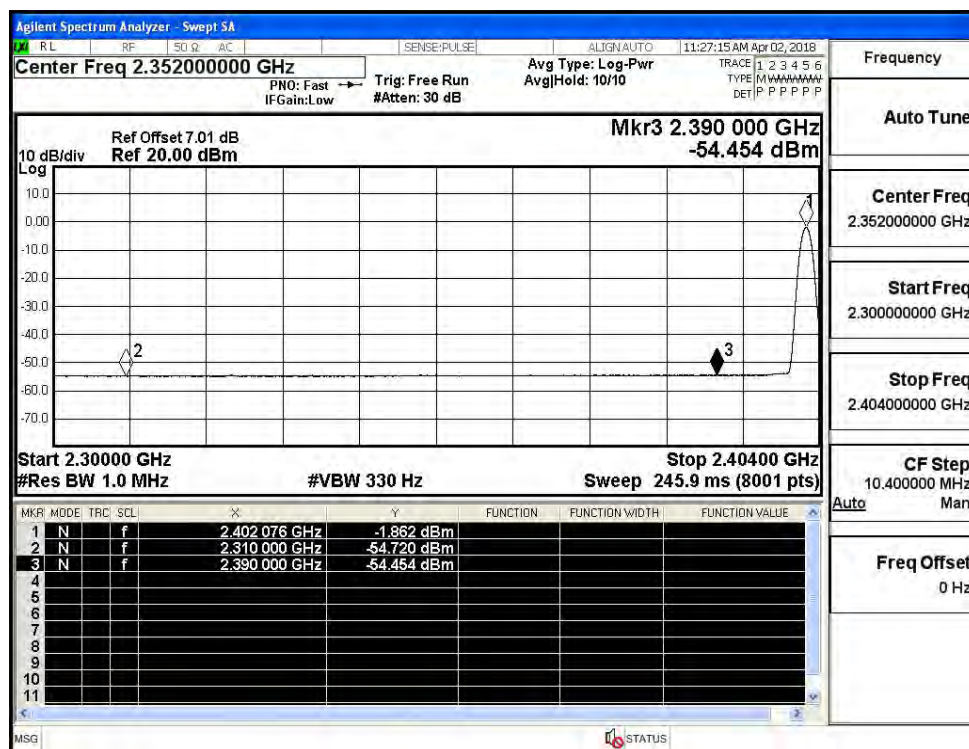
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.72	2.0	0	53.54	PEAK	74	PASS
	Off	2310.0	-54.72	2.0	0	42.54	AV	54	PASS
	Off	2390.0	-42.31	2.0	0	54.95	PEAK	74	PASS
	Off	2390.0	-54.45	2.0	0	42.81	AV	54	PASS
	Off	2483.5	-43.34	2.0	0	53.92	PEAK	74	PASS
	Off	2483.5	-53.37	2.0	0	43.89	AV	54	PASS
	Off	2500.0	-43.98	2.0	0	53.28	PEAK	74	PASS
	Off	2500.0	-54.09	2.0	0	43.17	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-44.16	2.0	0	53.1	PEAK	74	PASS
	Off	2310.0	-54.86	2.0	0	42.4	AV	54	PASS
	Off	2390.0	-45.42	2.0	0	51.84	PEAK	74	PASS
	Off	2390.0	-54.44	2.0	0	42.82	AV	54	PASS
	Off	2483.5	-42.63	2.0	0	54.63	PEAK	74	PASS
	Off	2483.5	-53.69	2.0	0	43.57	AV	54	PASS
	Off	2500.0	-43.11	2.0	0	54.15	PEAK	74	PASS
	Off	2500.0	-54.03	2.0	0	43.23	AV	54	PASS
8DPSK	Off	2310.0	-44.53	2.0	0	52.73	PEAK	74	PASS
	Off	2310.0	-54.71	2.0	0	42.55	AV	54	PASS
	Off	2390.0	-44.01	2.0	0	53.25	PEAK	74	PASS
	Off	2390.0	-54.47	2.0	0	42.79	AV	54	PASS
	Off	2483.5	-43.01	2.0	0	54.25	PEAK	74	PASS
	Off	2483.5	-53.73	2.0	0	43.53	AV	54	PASS
	Off	2500.0	-42.90	2.0	0	54.36	PEAK	74	PASS
	Off	2500.0	-54.10	2.0	0	43.16	AV	54	PASS

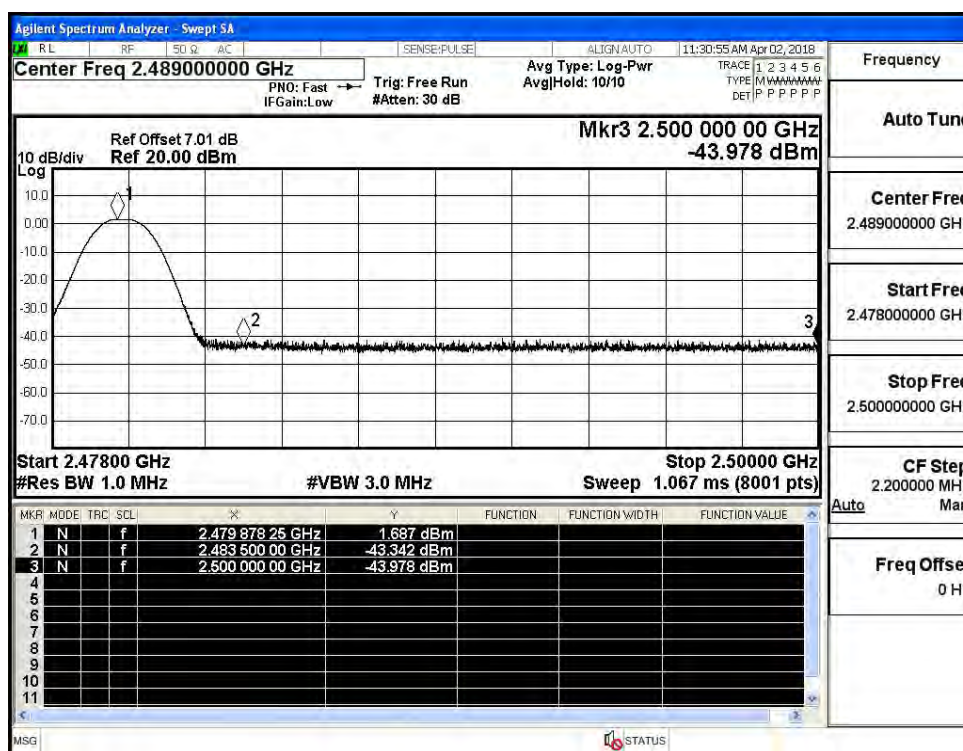
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



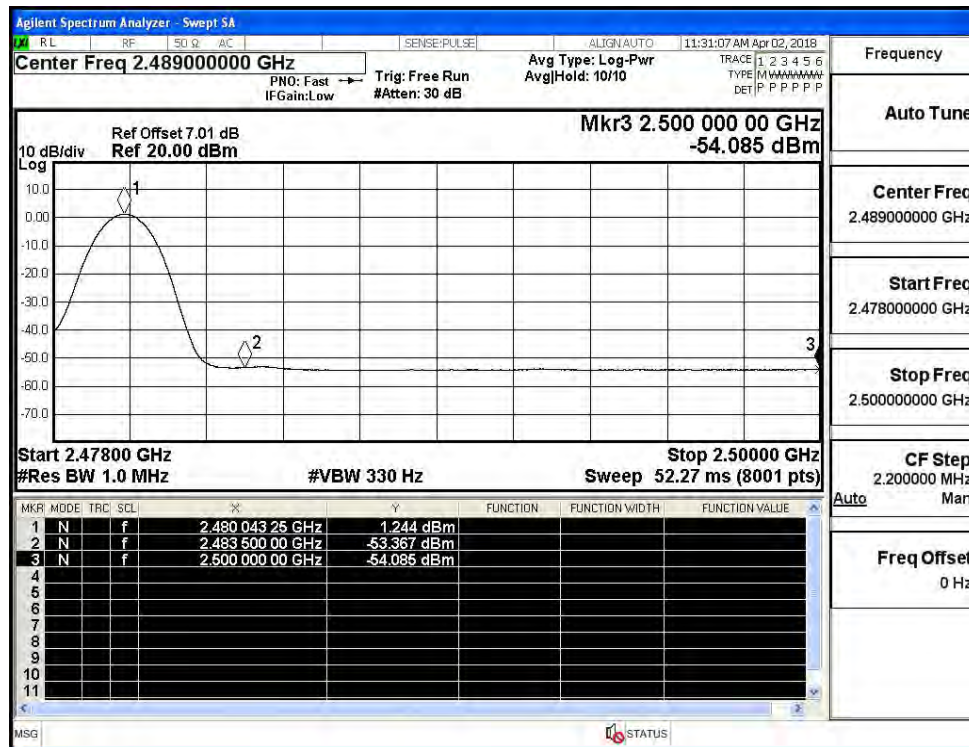
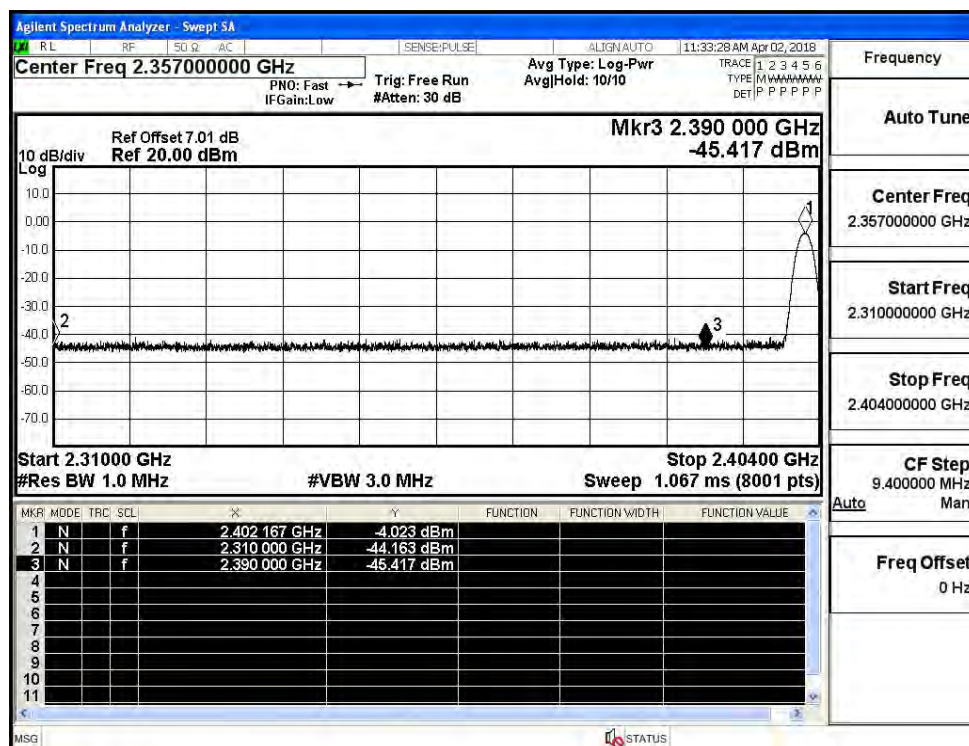
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

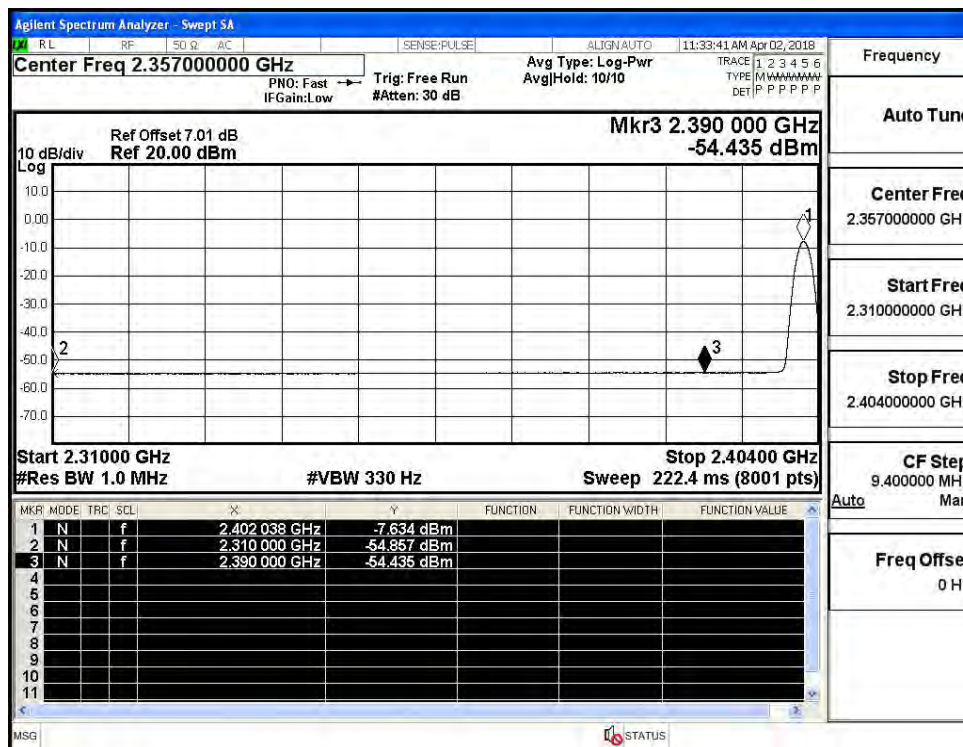
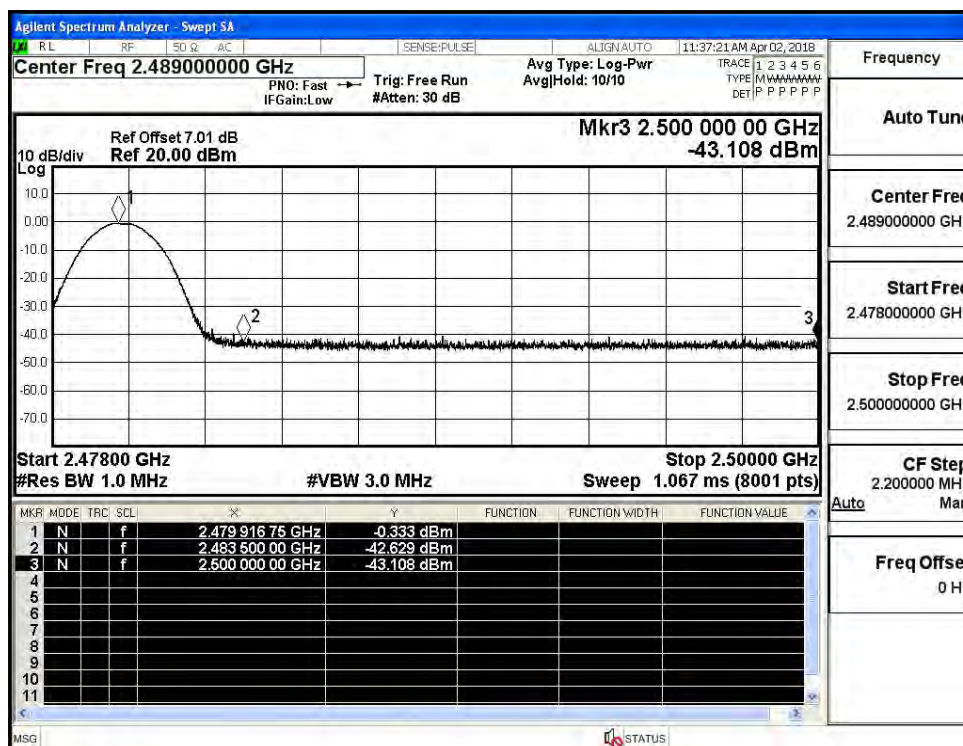


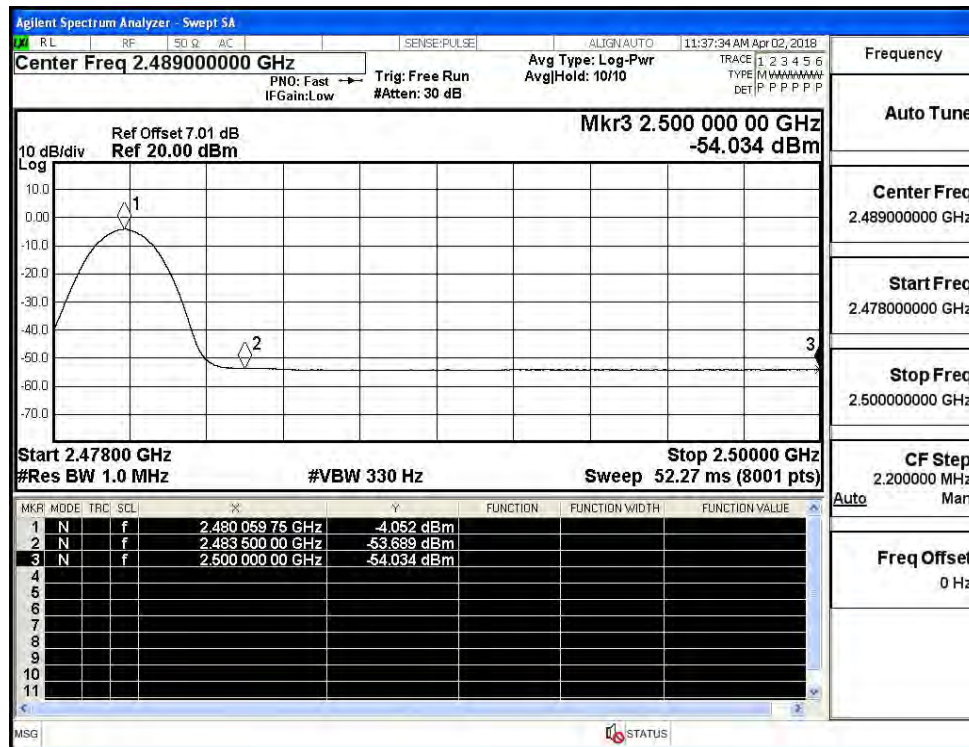
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



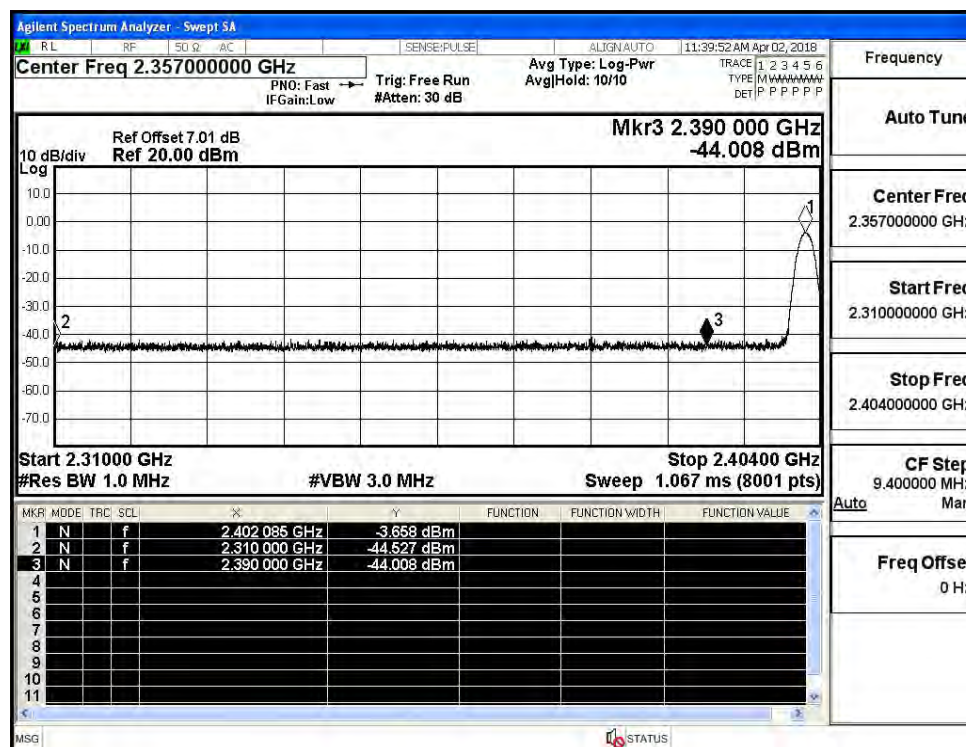
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)

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)

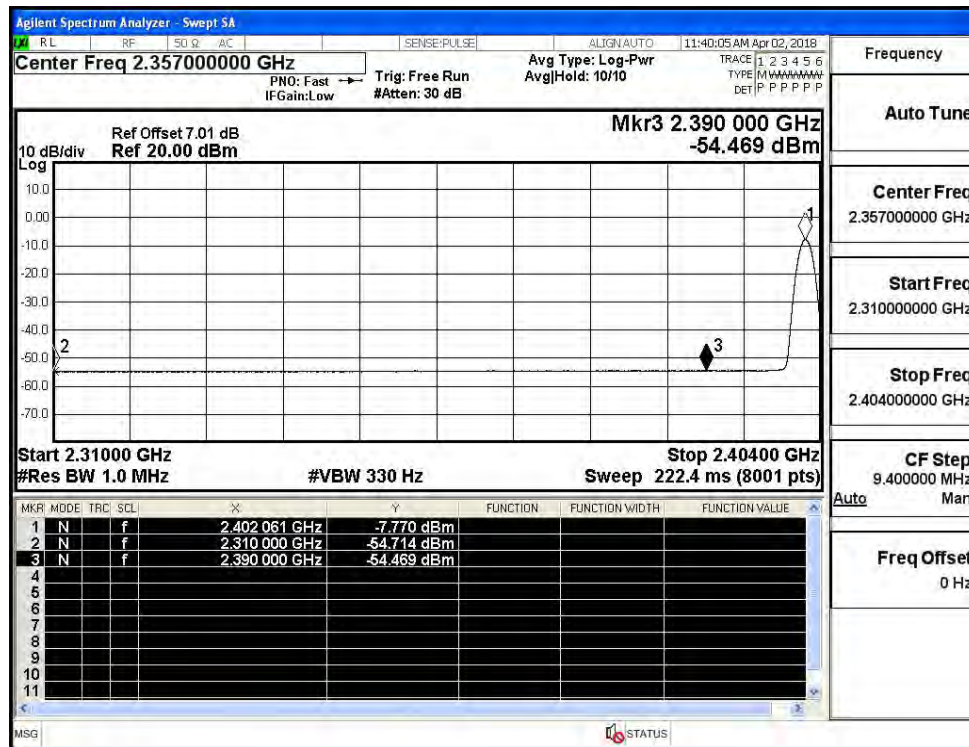
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (High Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (High Channel)



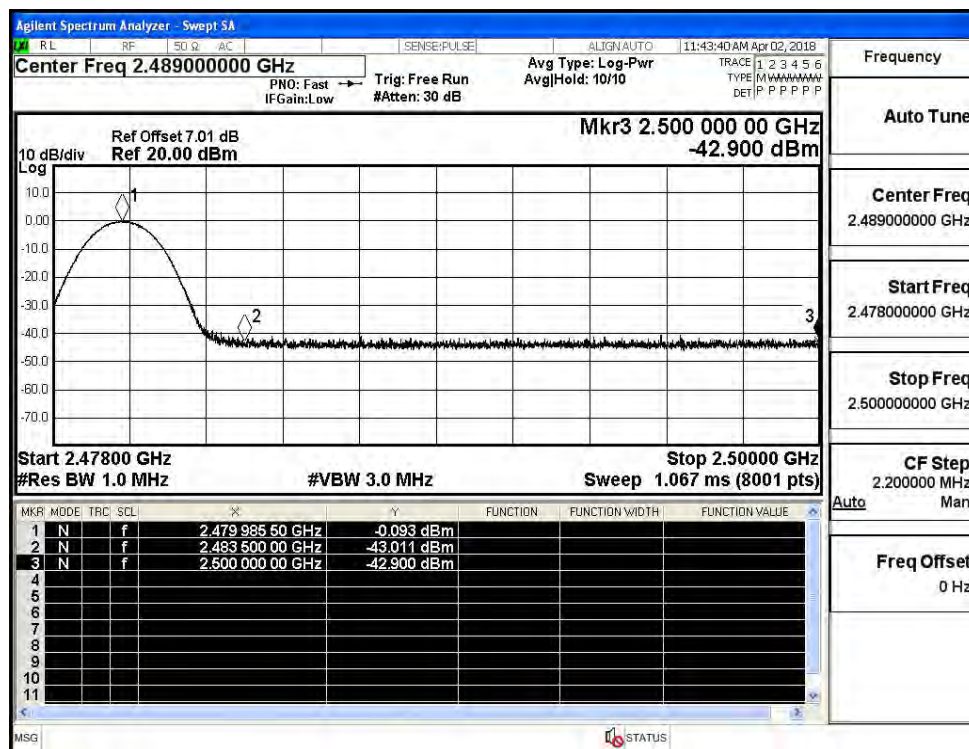
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

