

Appendix A

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

Product Name: Bluetooth Sport Headset

Trade Mark: AWEI

Test Model: N3

Environmental Conditions

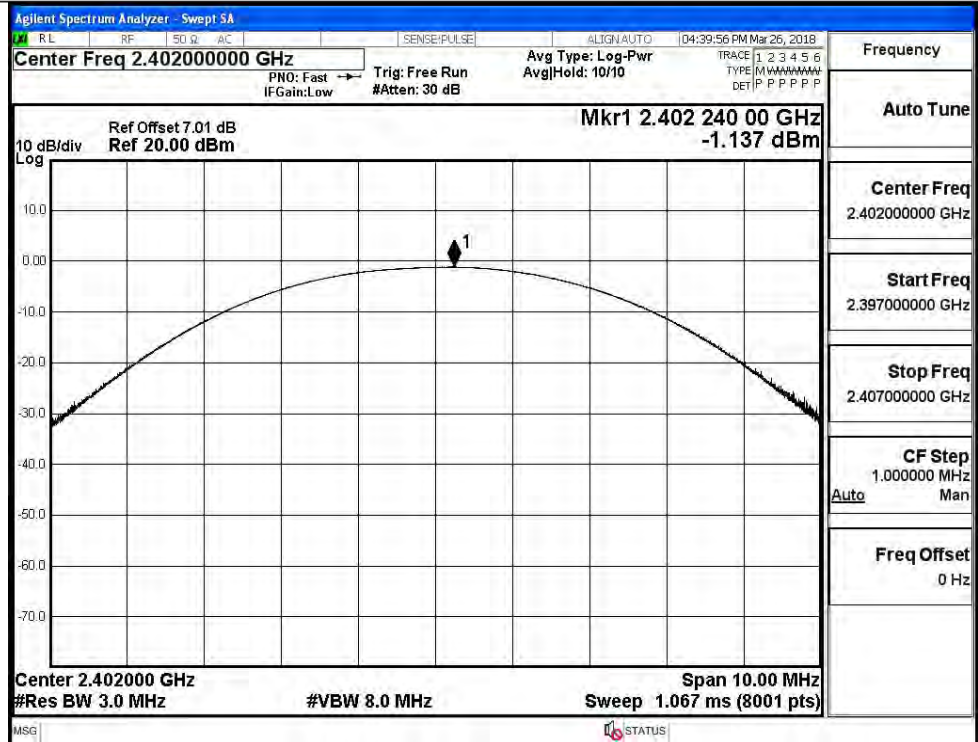
Temperature:	20.8 ° C
Relative Humidity:	50.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Jayden.Zhuo
Supervised by:	Dick.Su

A.1 Maximum Conducted Peak Output Power

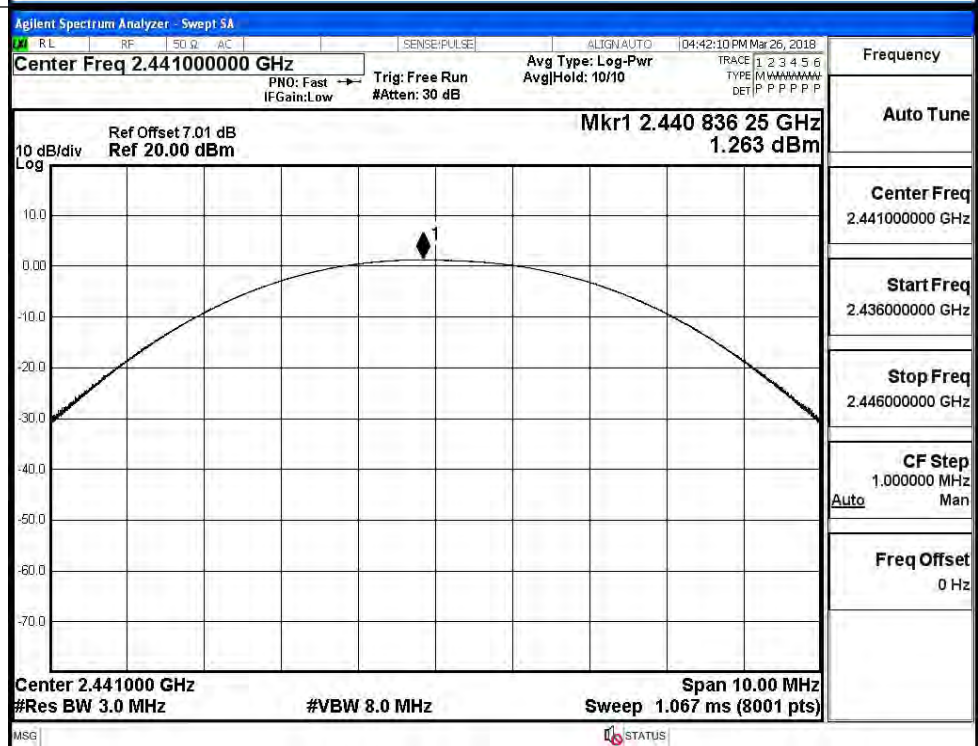
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.137	30	PASS
	MCH	1.263	30	PASS
	HCH	1.799	30	PASS
$\pi/4$ DQPSK	LCH	-3.403	21	PASS
	MCH	-0.543	21	PASS
	HCH	0.131	21	PASS
8DPSK	LCH	-3.058	21	PASS
	MCH	-0.158	21	PASS
	HCH	0.526	21	PASS

Test Graphs

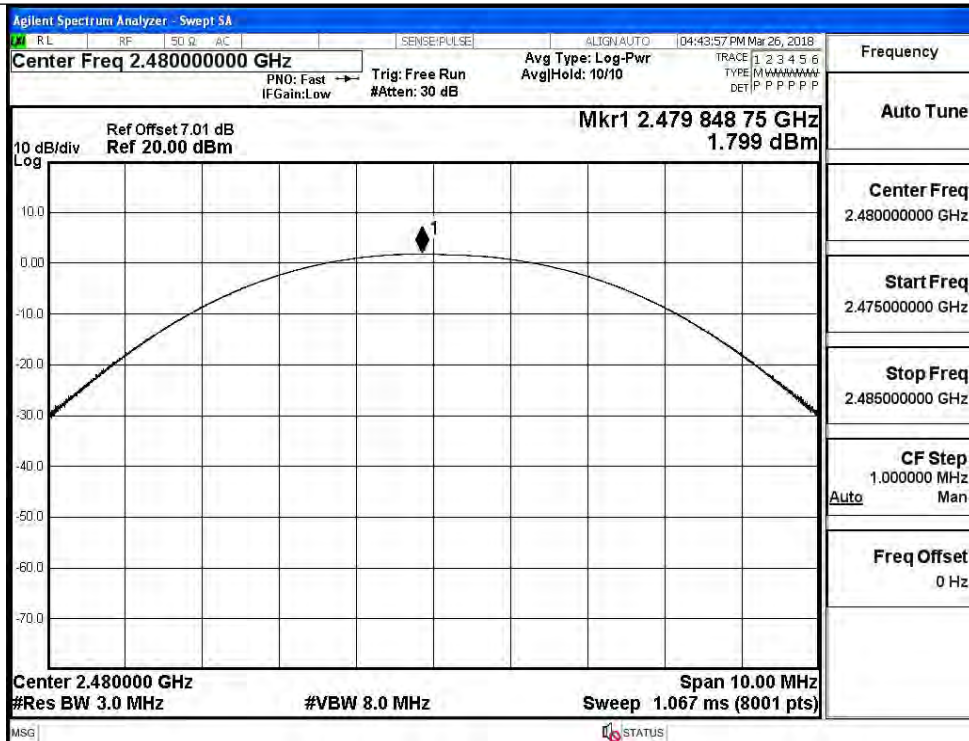
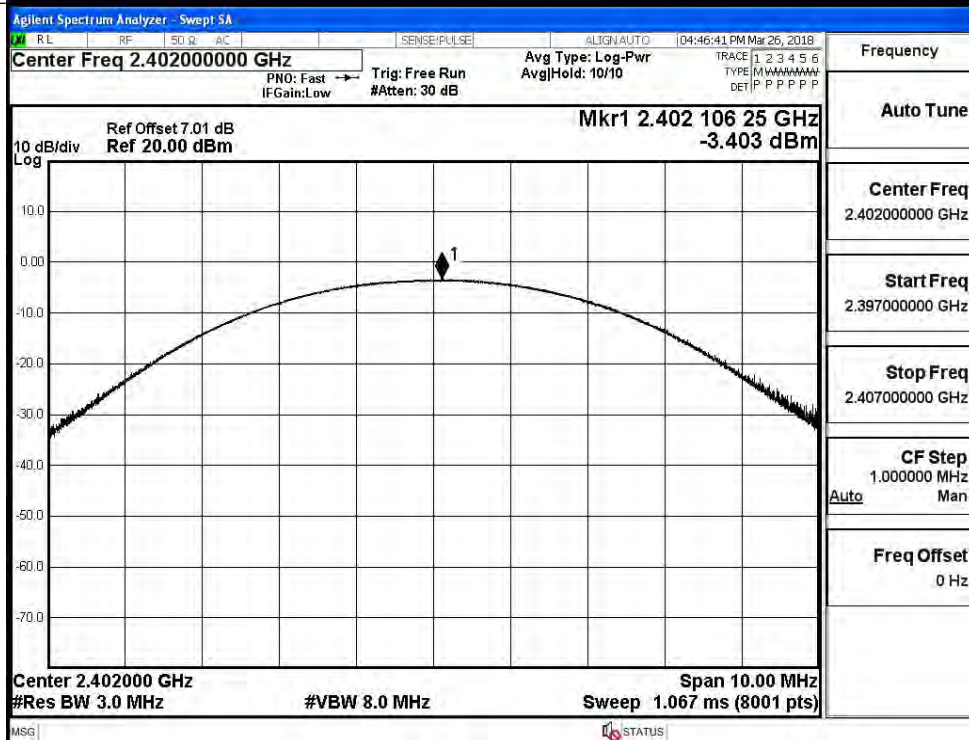
GFSK/LCH

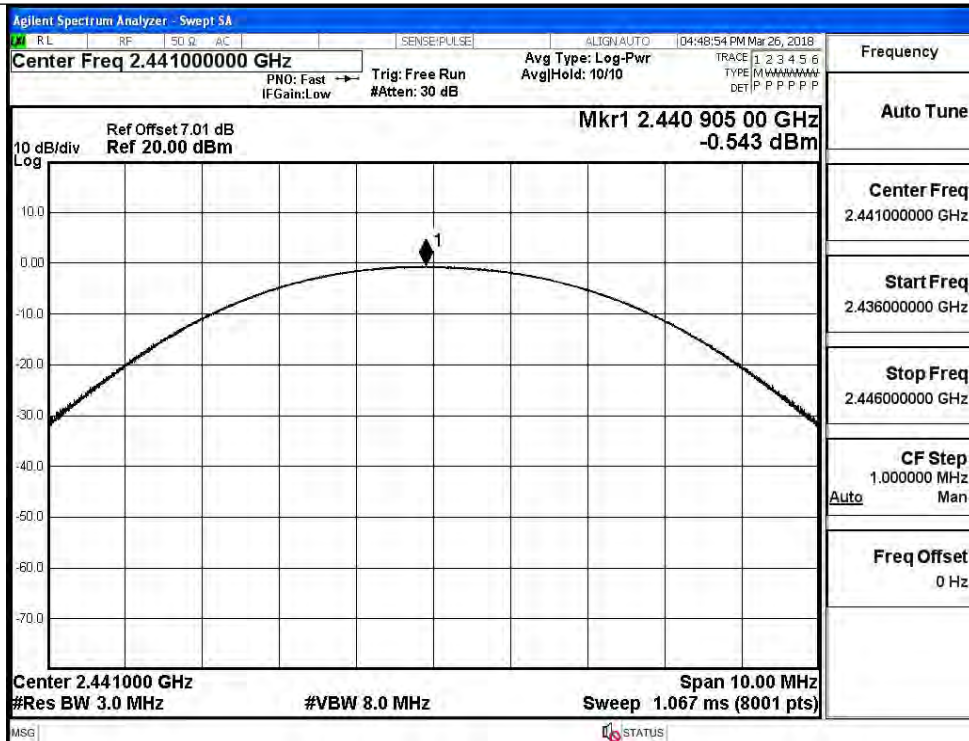
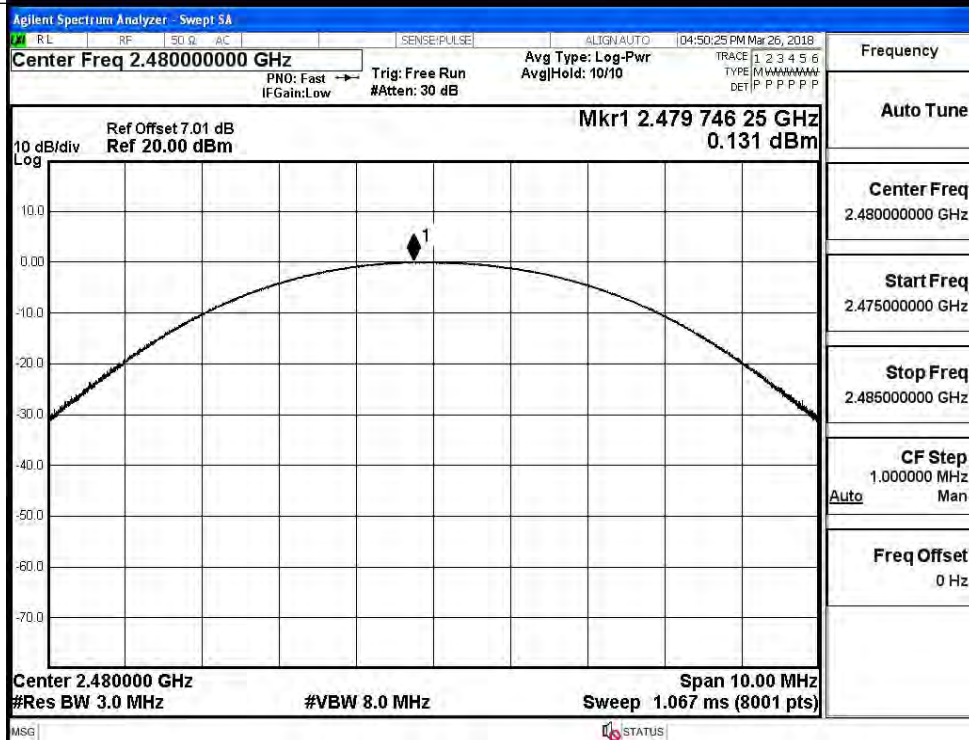


GFSK/MCH

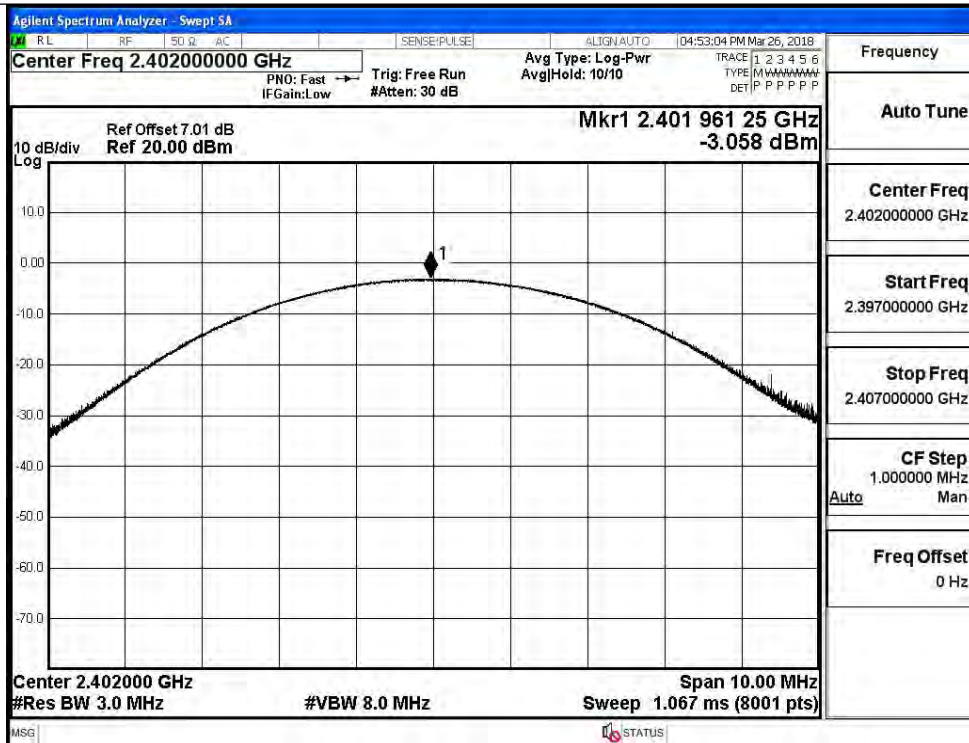


GFSK/HCH

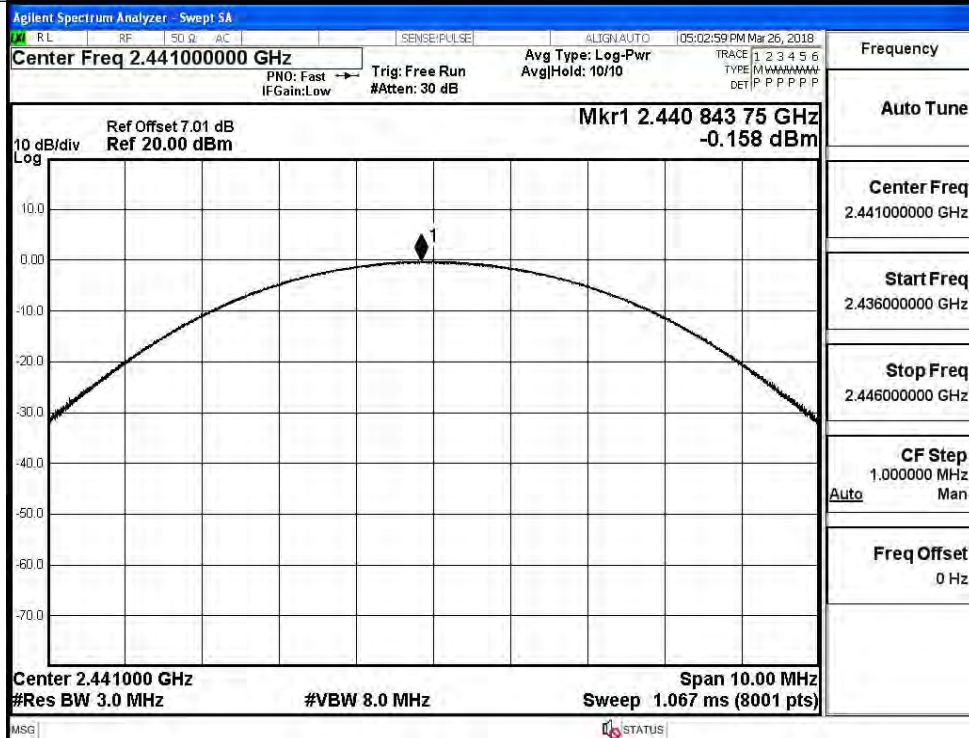
 π /4DQPSK/LCH

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

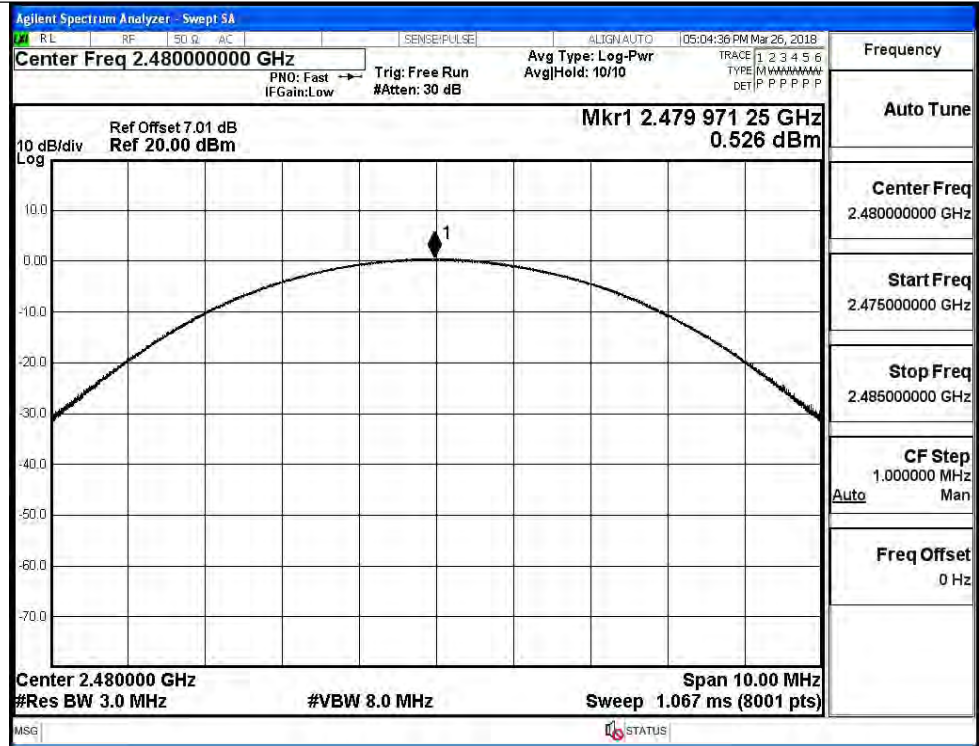
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

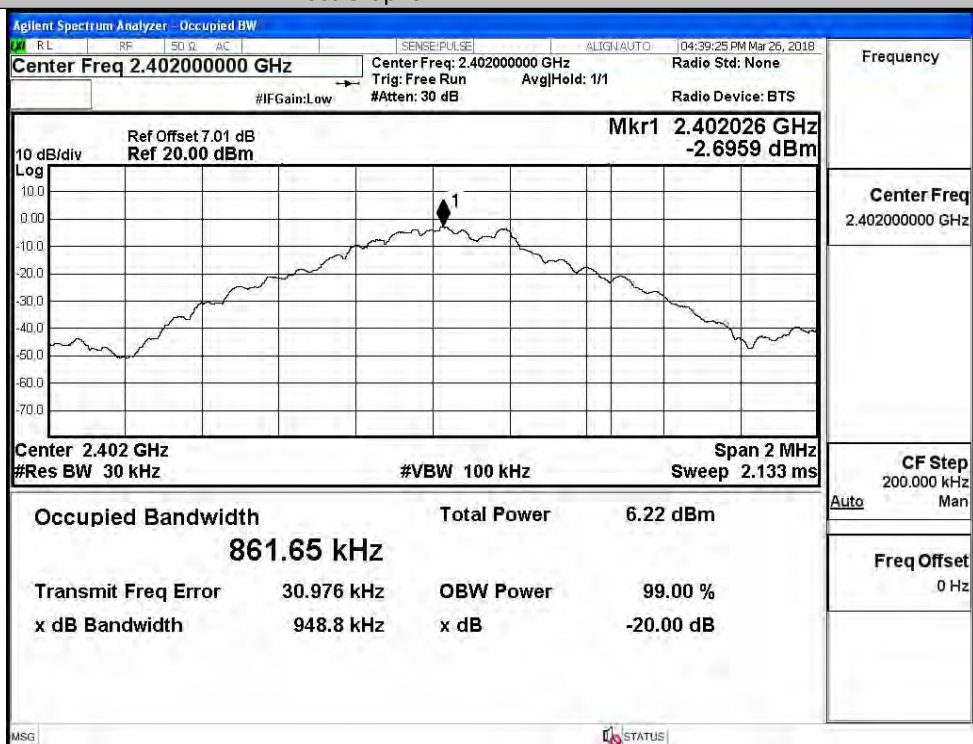


A.2 20dB Bandwidth

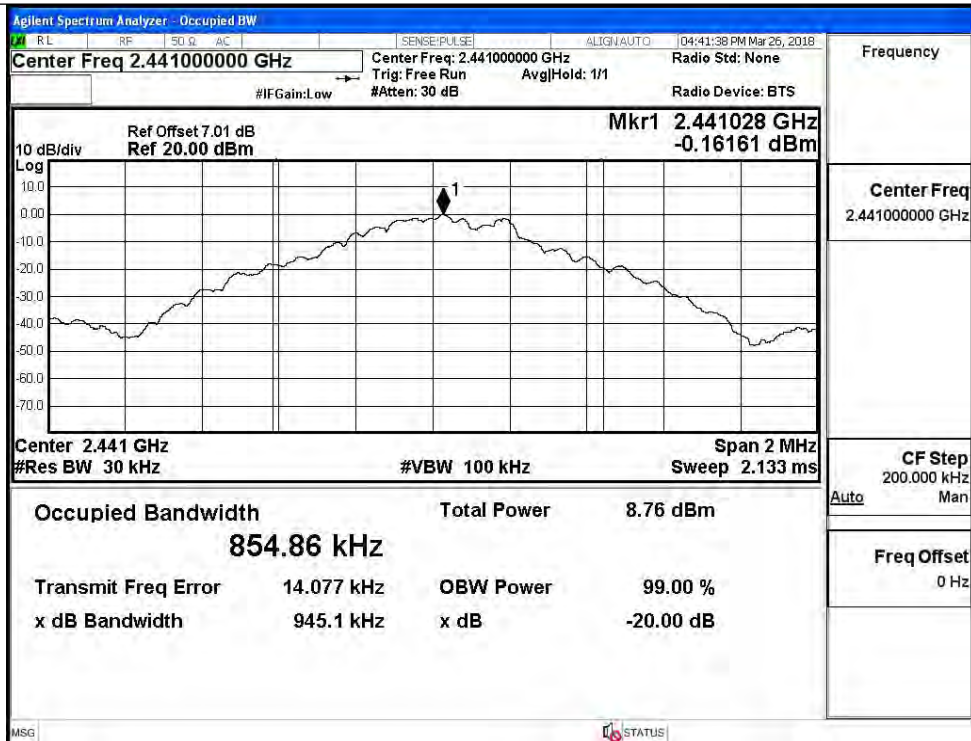
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.9488	Not Specified	PASS
	MCH	0.9451	Not Specified	PASS
	HCH	0.9450	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.259	Not Specified	PASS
	MCH	1.230	Not Specified	PASS
	HCH	1.229	Not Specified	PASS
8DPSK	LCH	1.275	Not Specified	PASS
	MCH	1.258	Not Specified	PASS
	HCH	1.259	Not Specified	PASS

Test Graphs

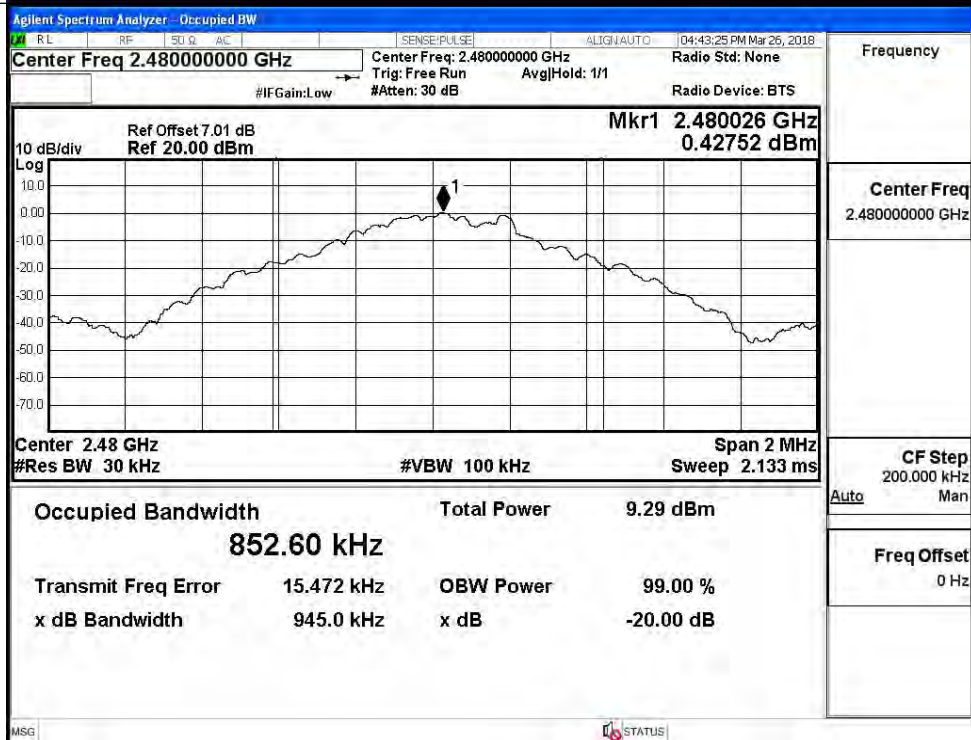
GFSK/LCH

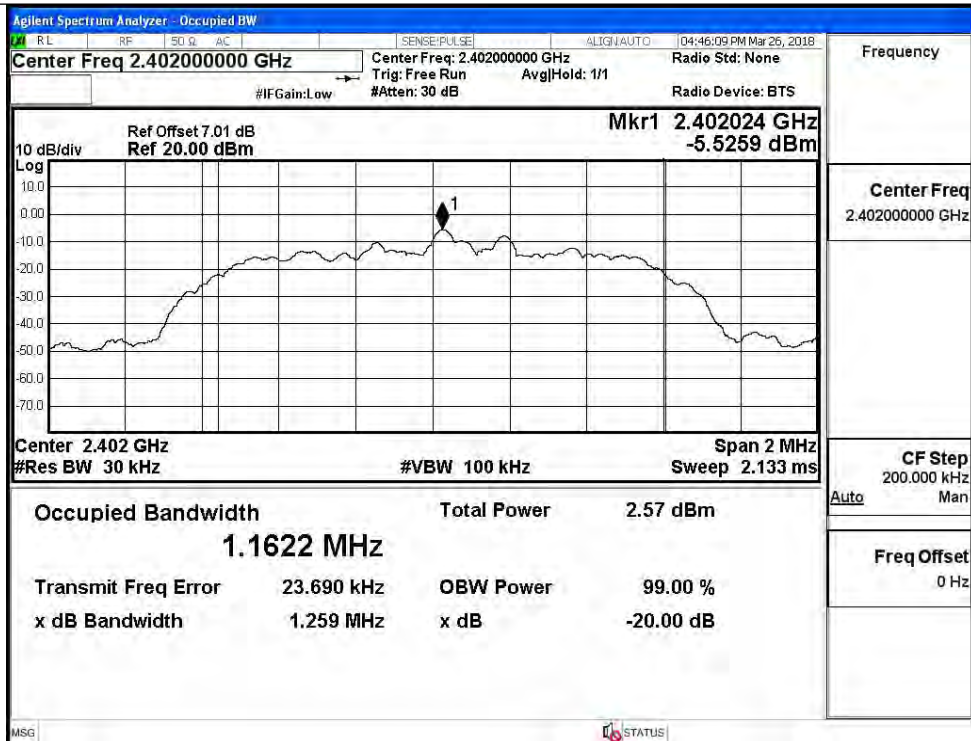
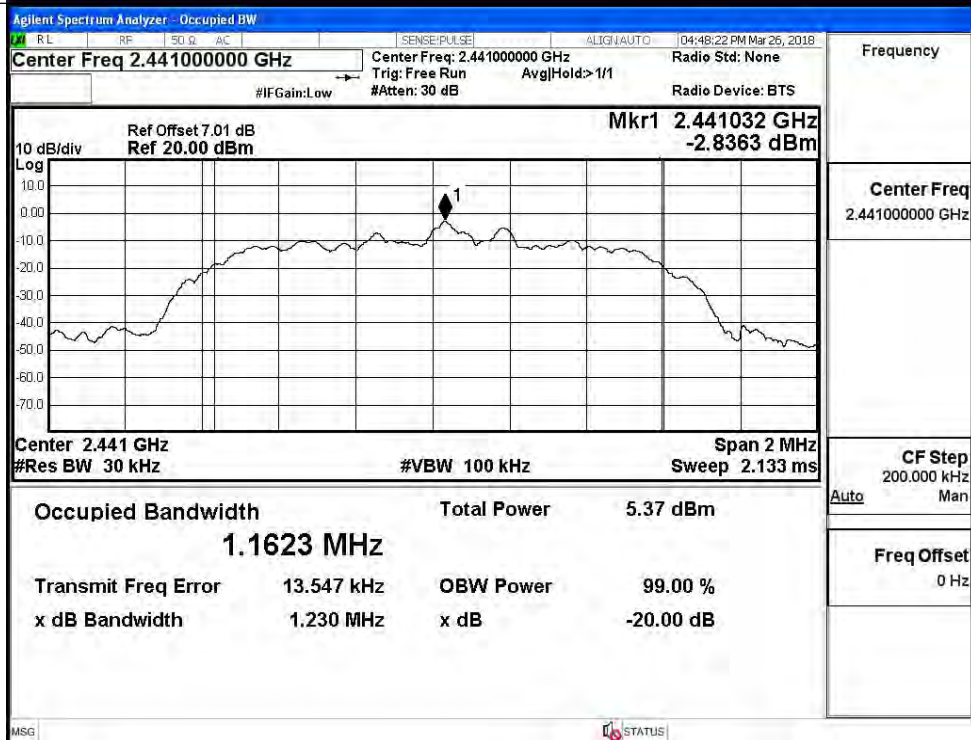


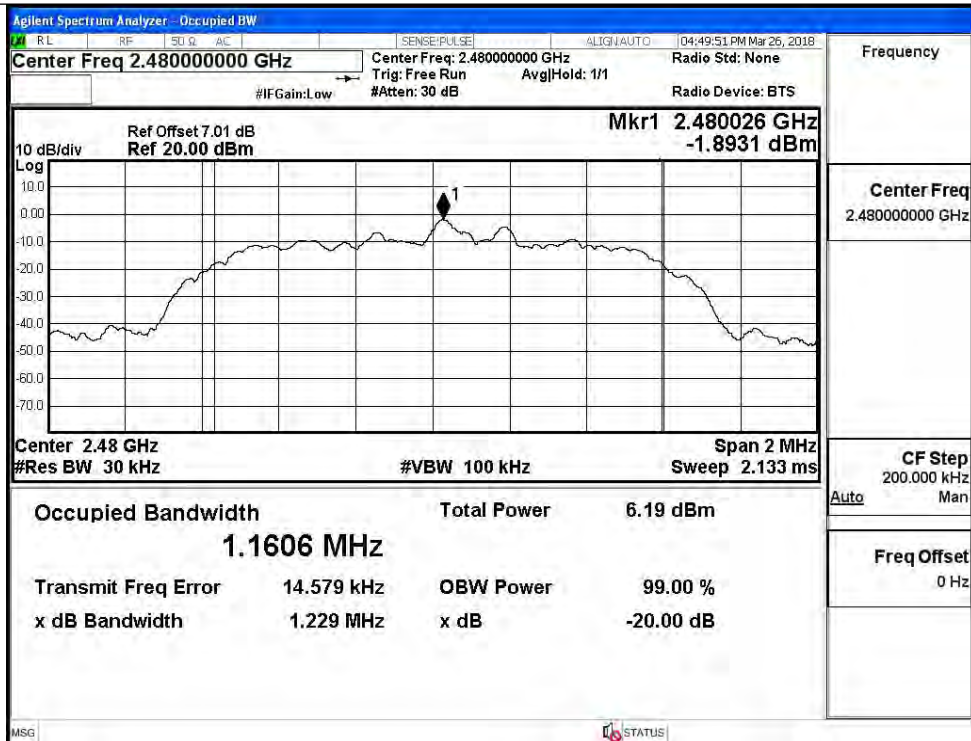
GFSK/MCH



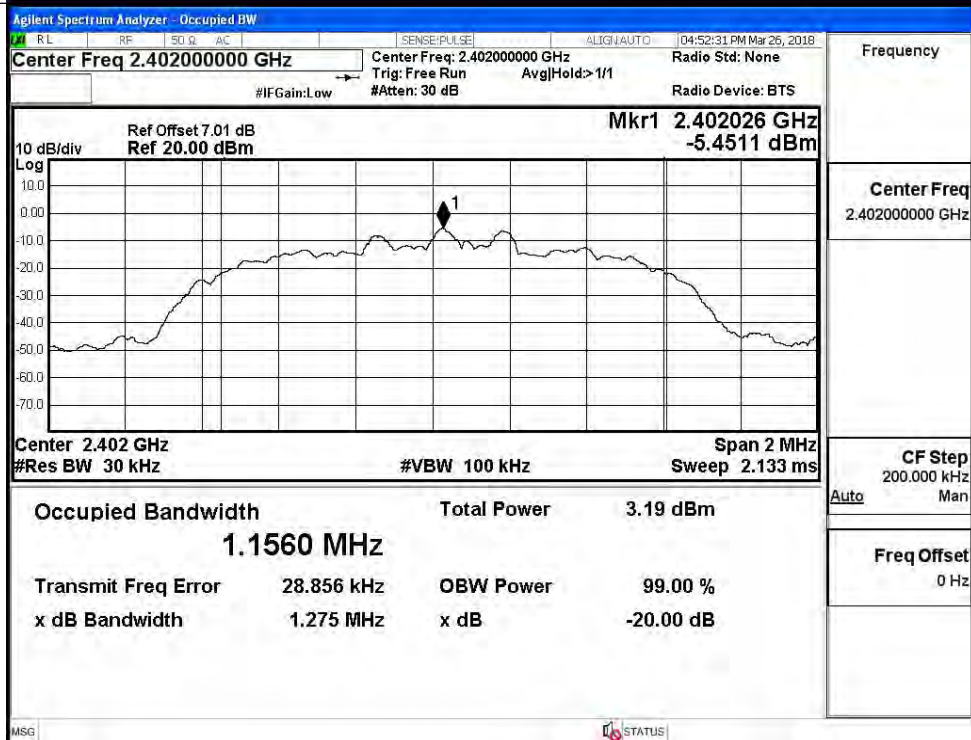
GFSK/HCH



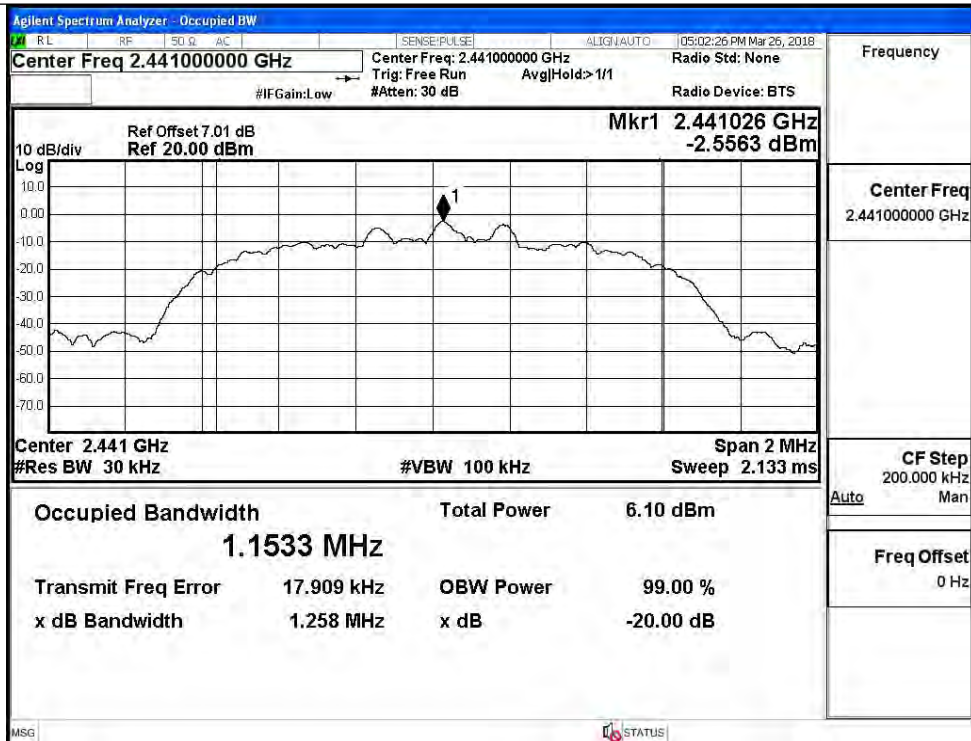
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

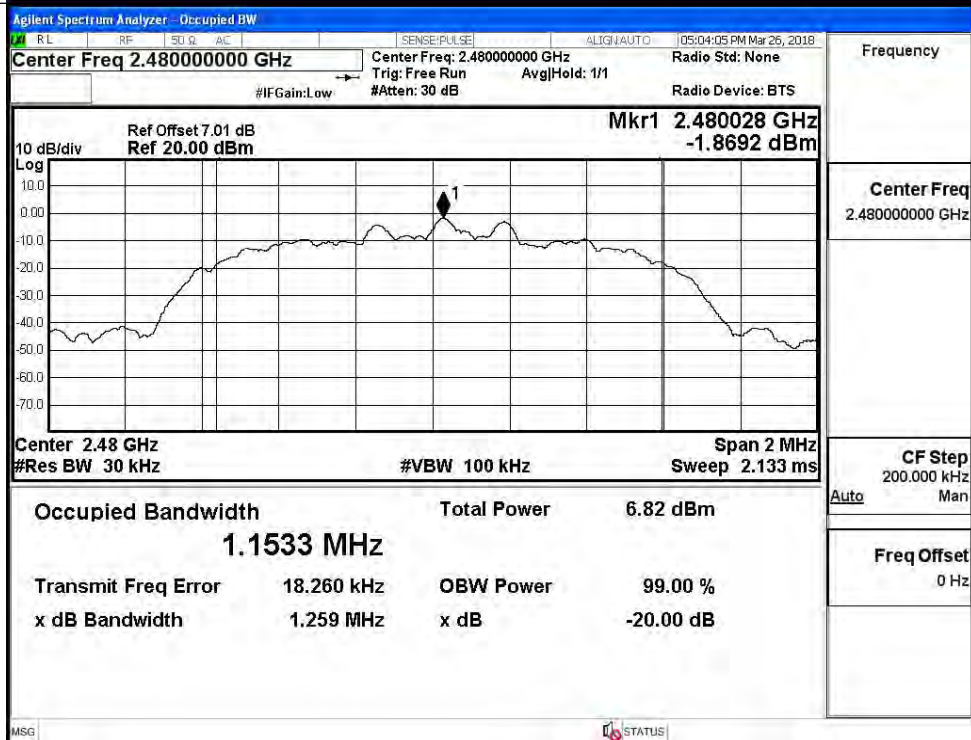
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

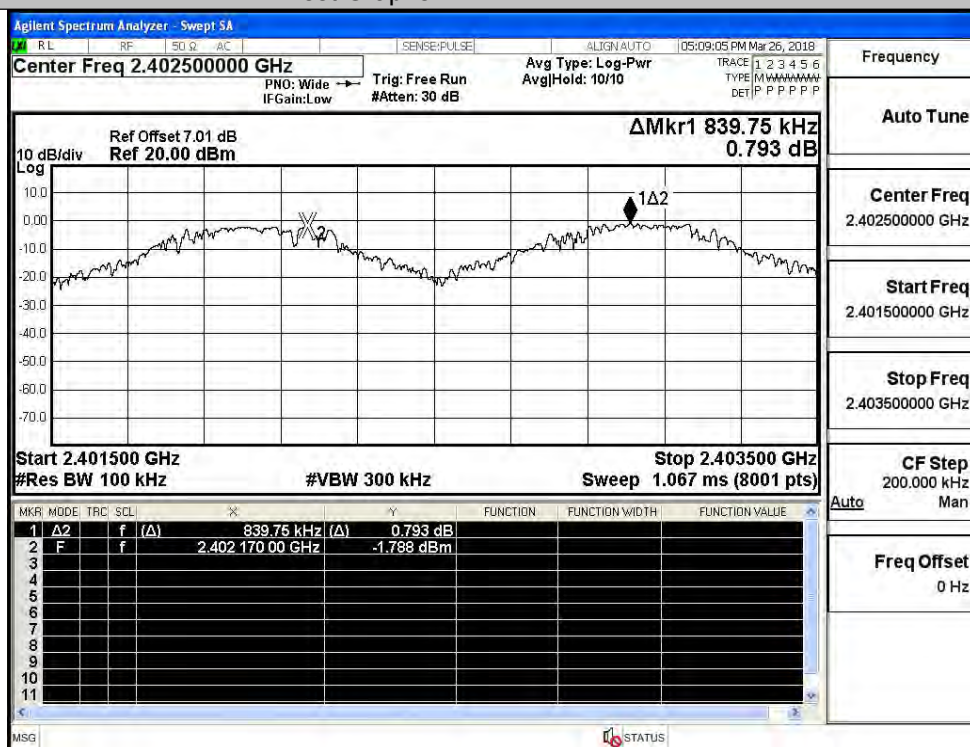


A.3 Carrier Frequency Separation

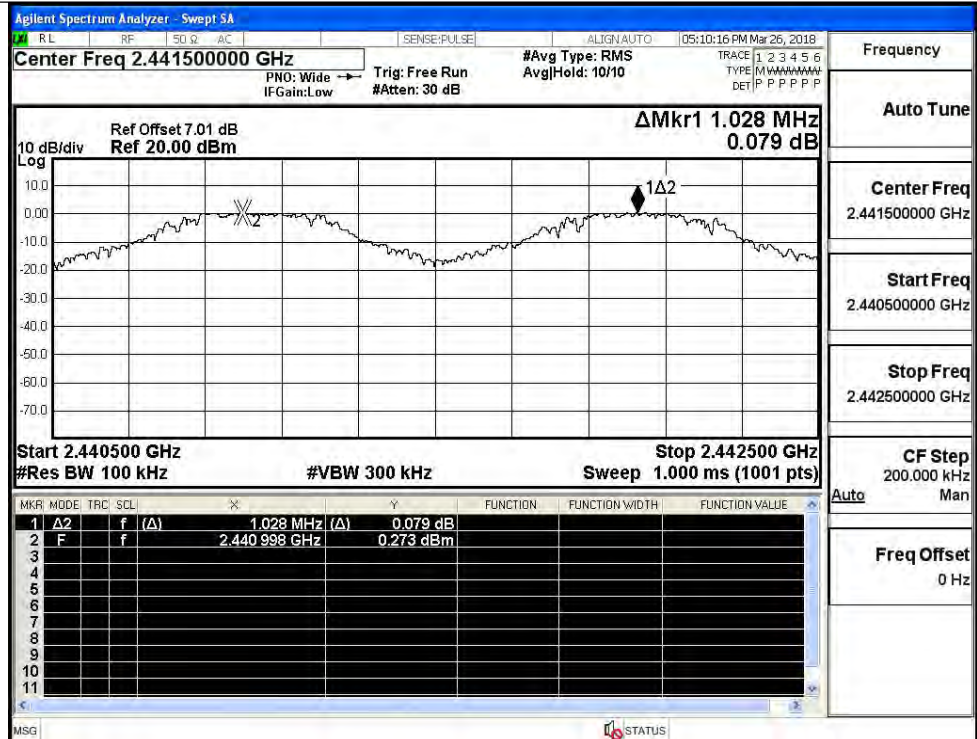
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.840	0.9488	PASS
	MCH	1.028	0.630	PASS
	HCH	1.174	0.630	PASS
$\pi/4$ DQPSK	LCH	0.960	1.259	PASS
	MCH	0.990	1.230	PASS
	HCH	1.004	0.819	PASS
8DPSK	LCH	1.000	0.85	PASS
	MCH	1.030	0.838	PASS
	HCH	1.172	0.839	PASS

Test Graphs

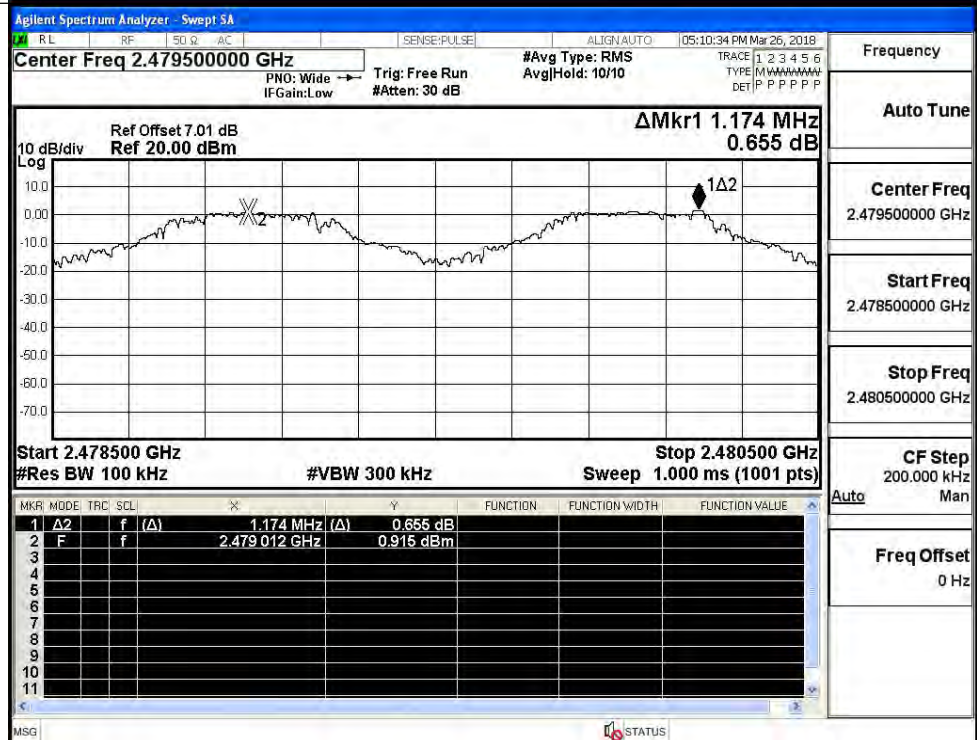
GFSK/LCH

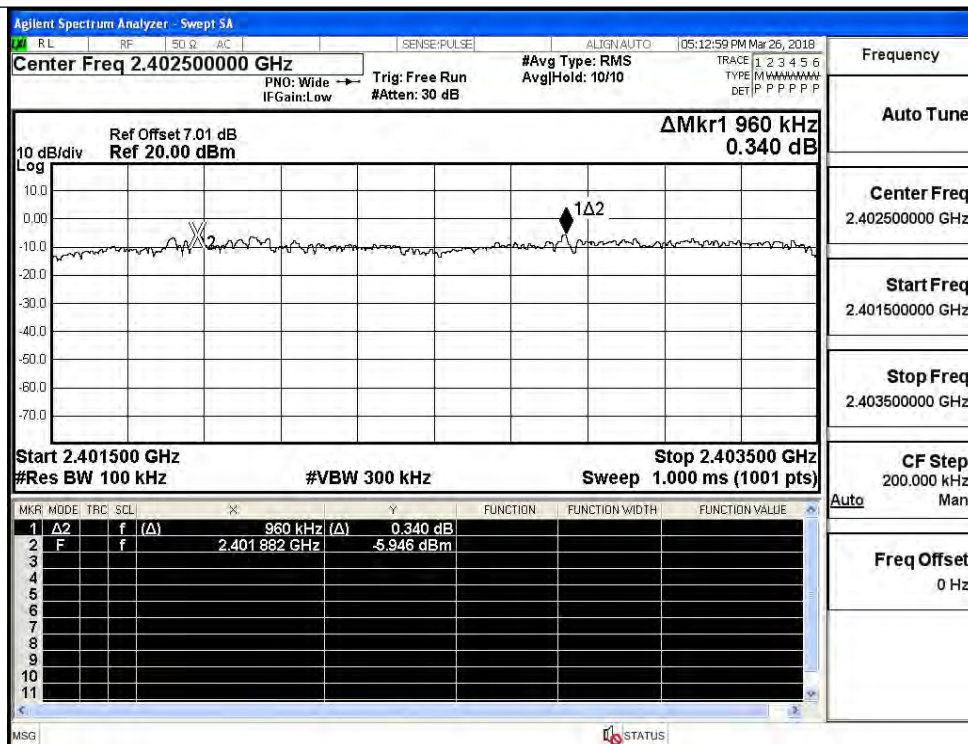
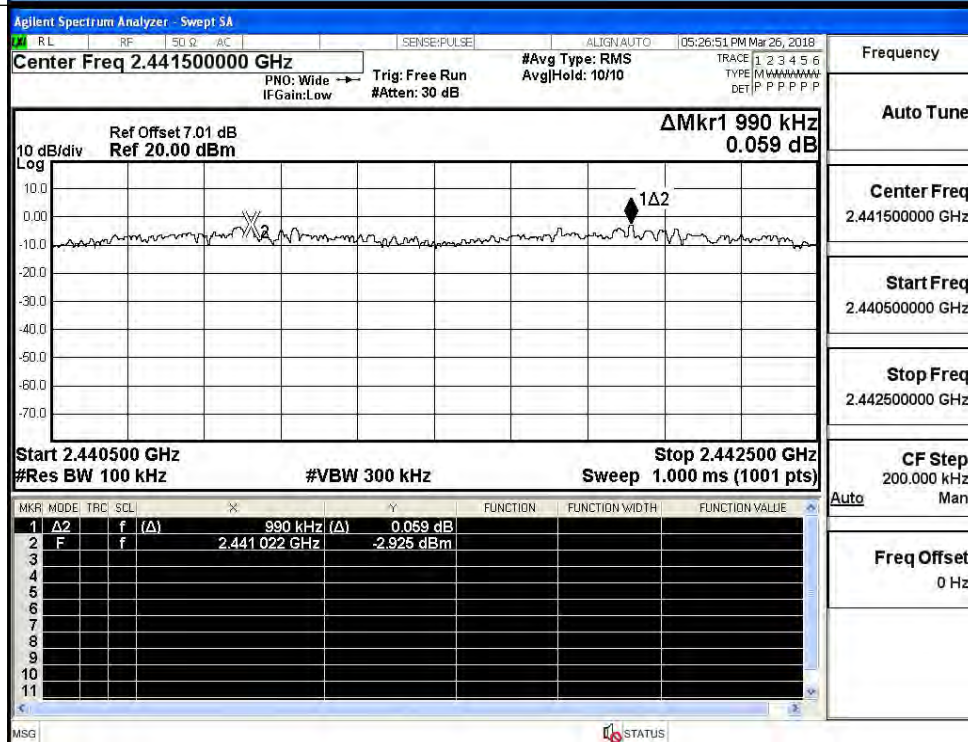


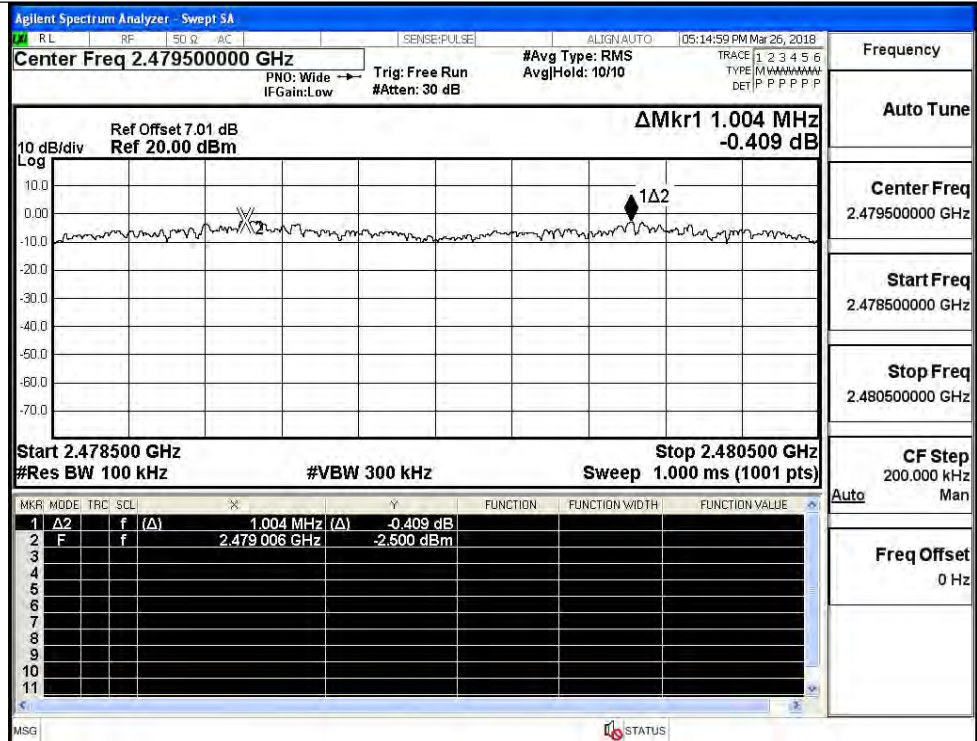
GFSK/MCH



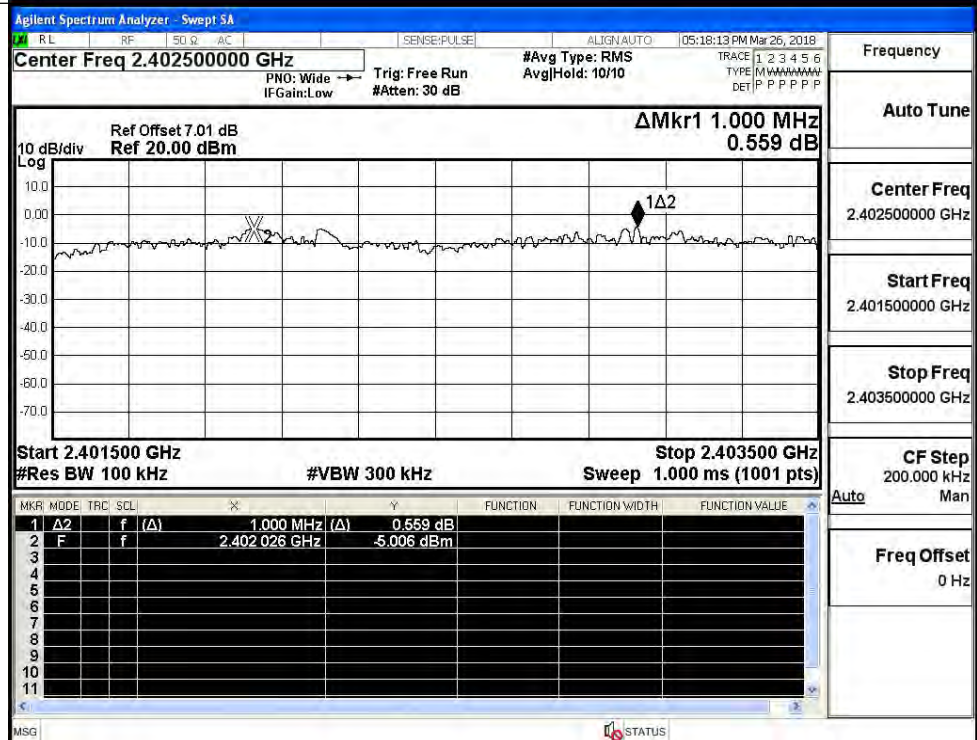
GFSK/HCH



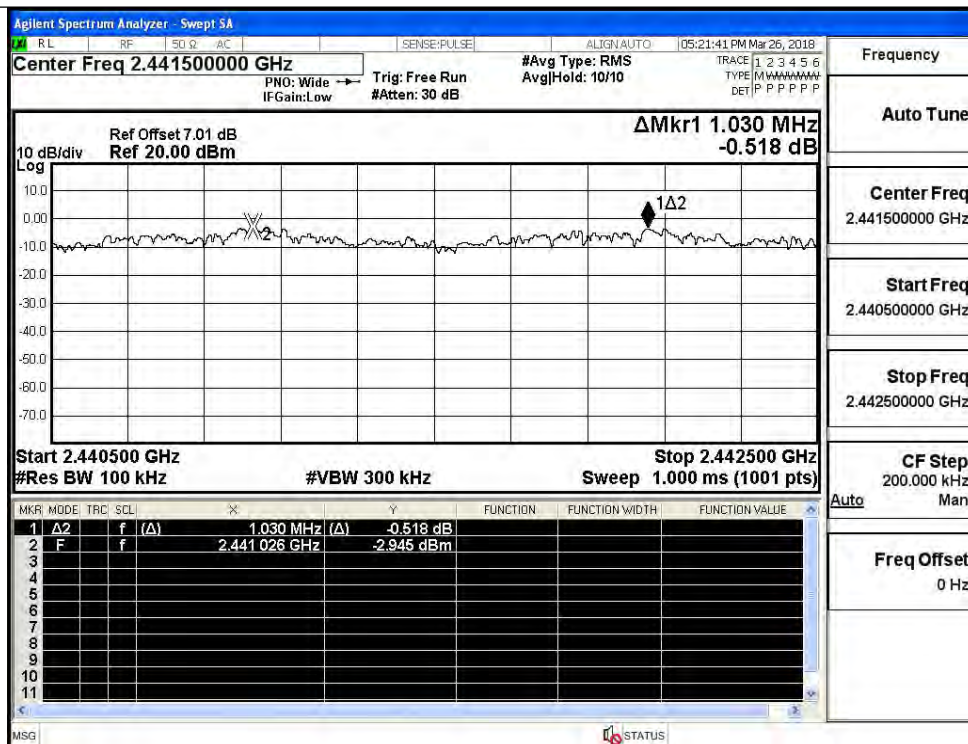
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

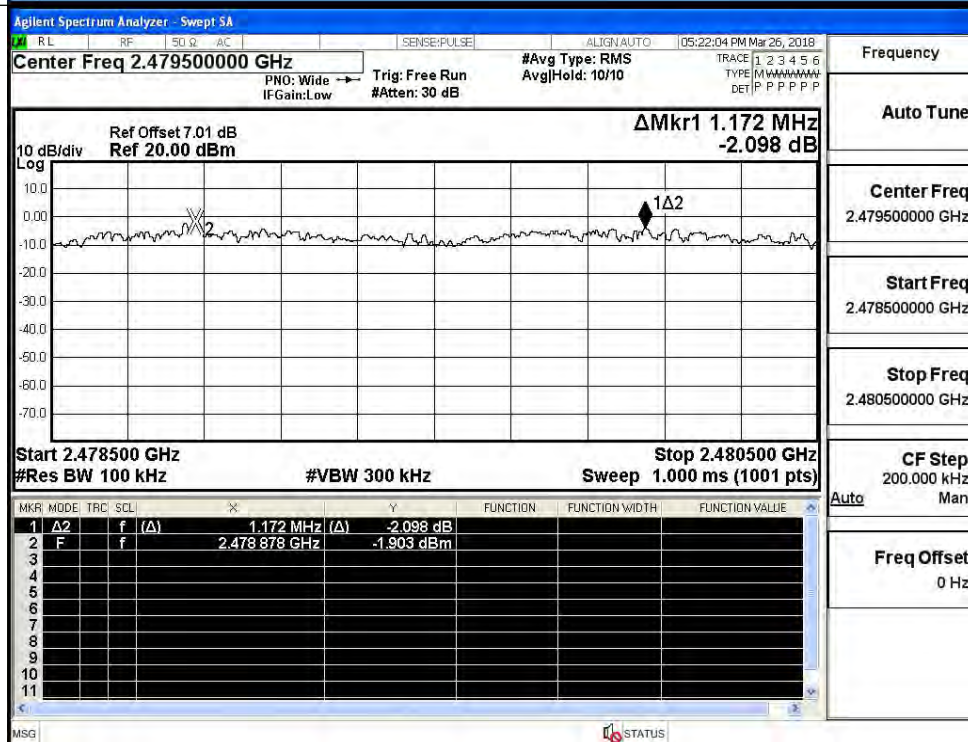
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

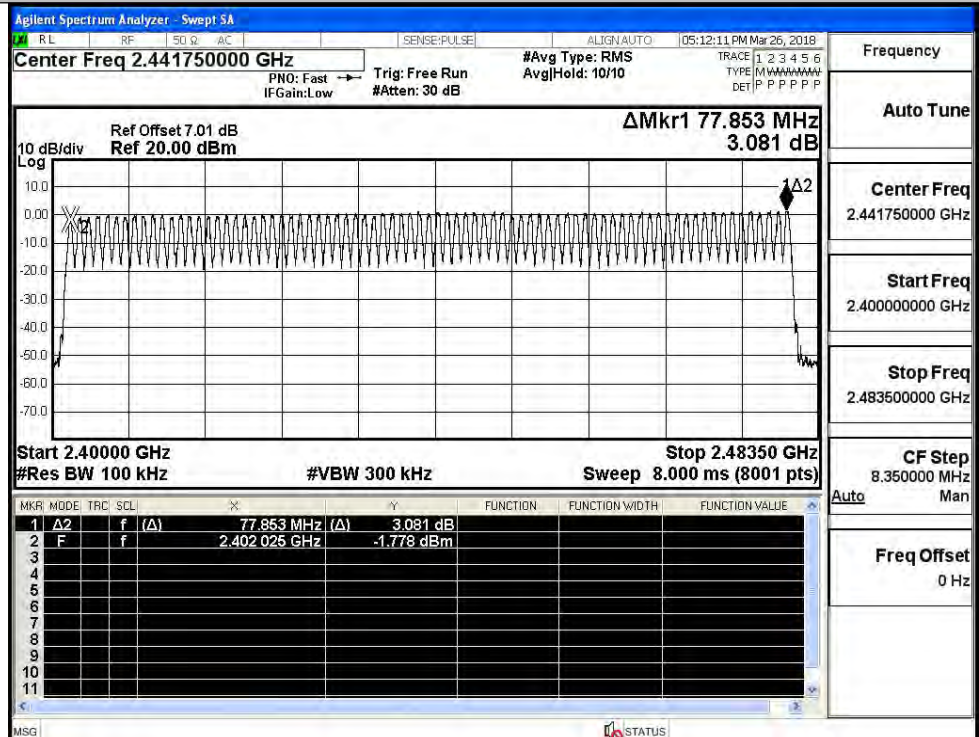
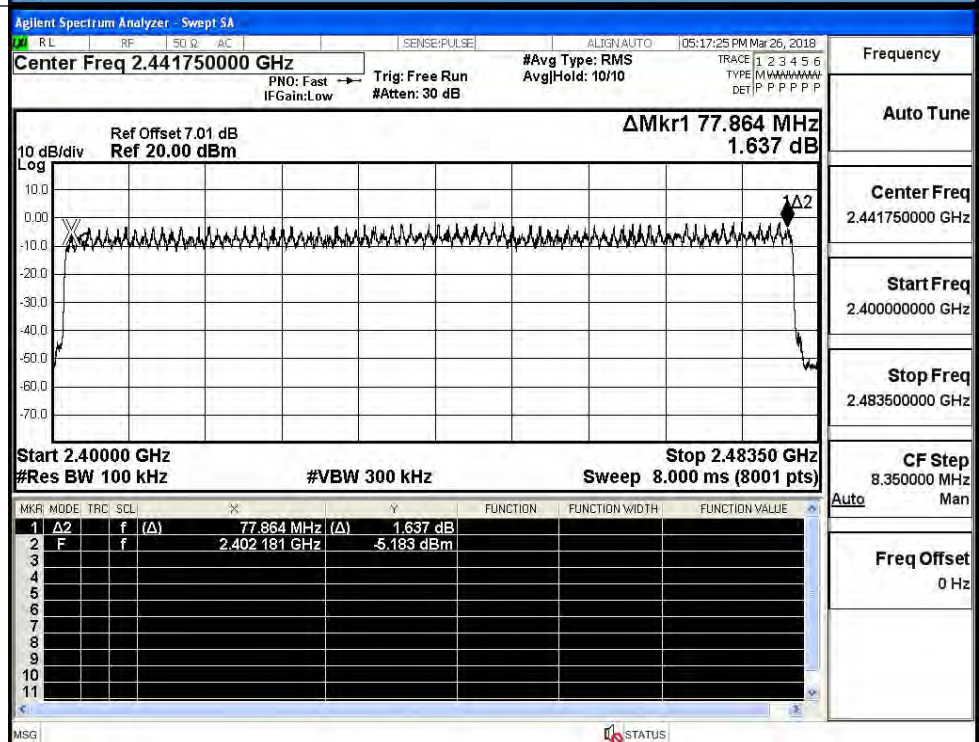


A.4 Hopping Channel Number

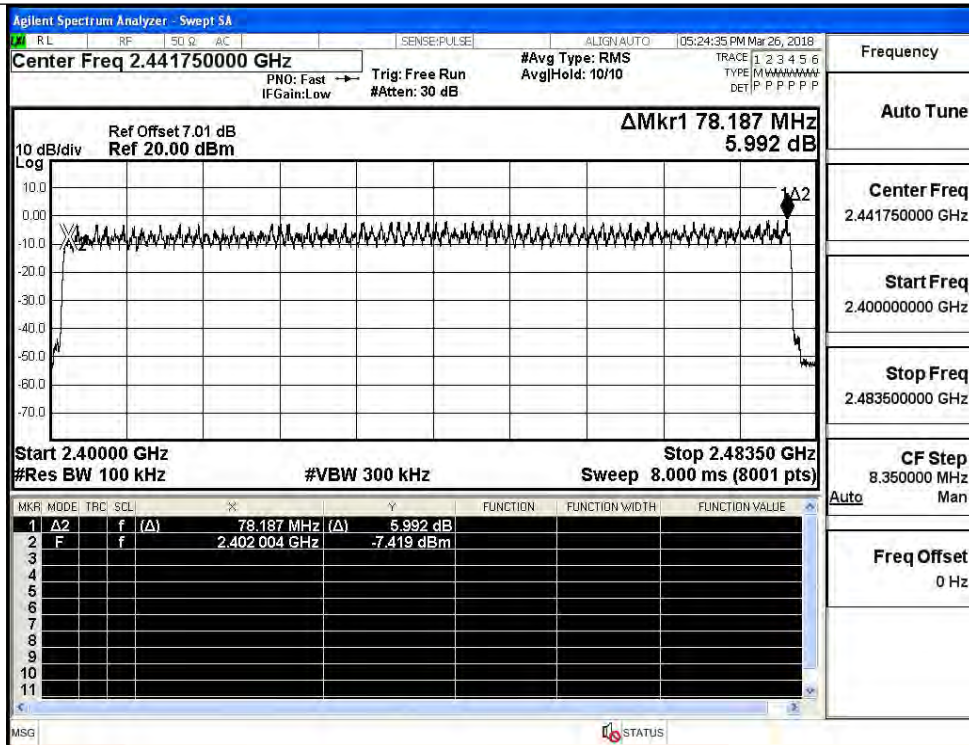
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

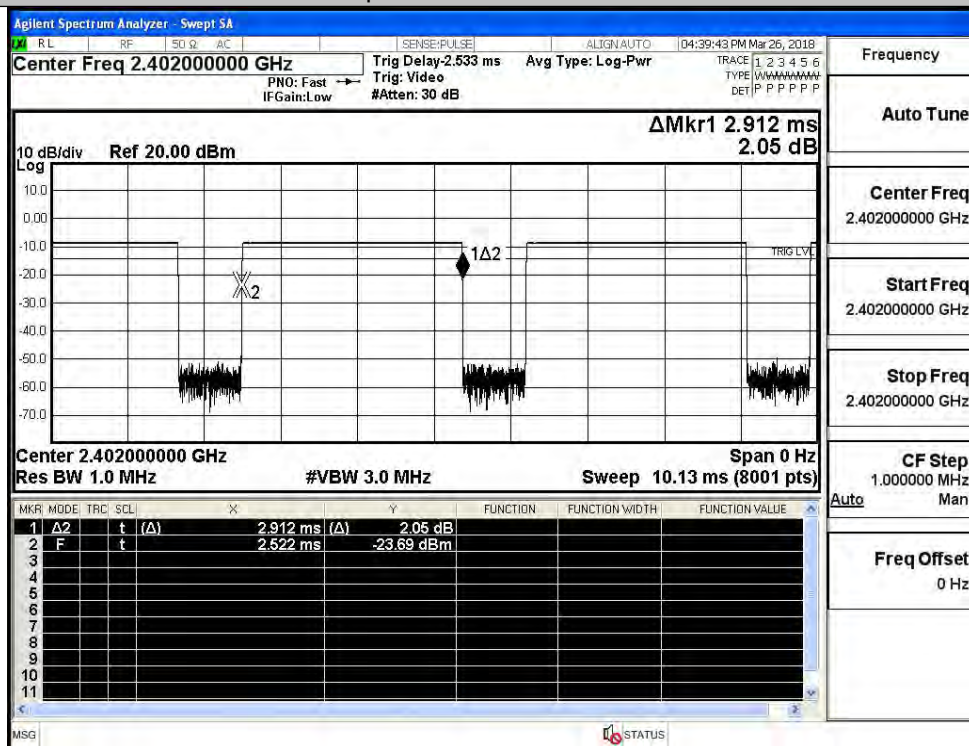


A.5 Dwell Time

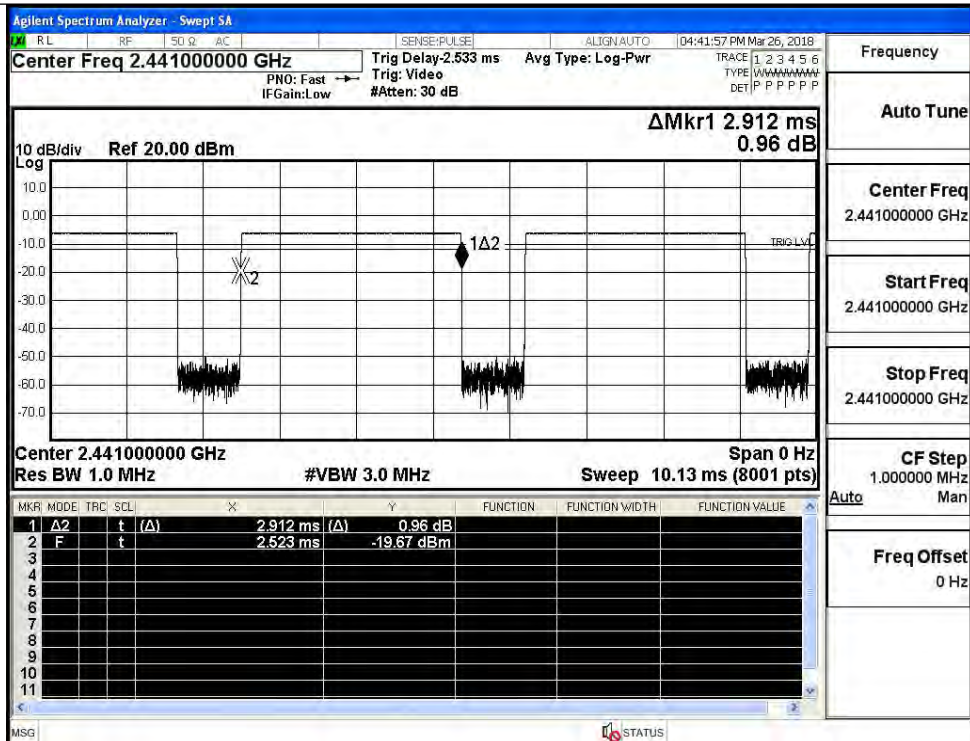
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.91	106.7	0.31	0.4	PASS
	DH5	MCH	2.91	106.7	0.31	0.4	PASS
	DH5	HCH	2.91	106.7	0.31	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.91	106.7	0.312	0.4	PASS
	2DH5	MCH	2.91	106.7	0.312	0.4	PASS
	2DH5	HCH	2.91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

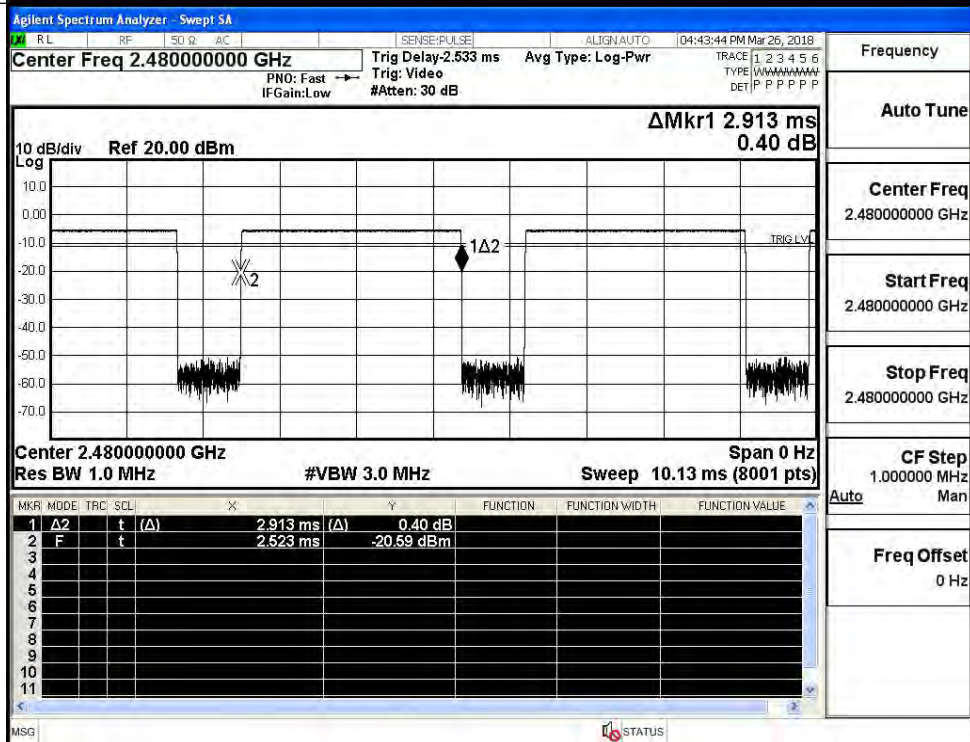
GFSK_DH5/LCH



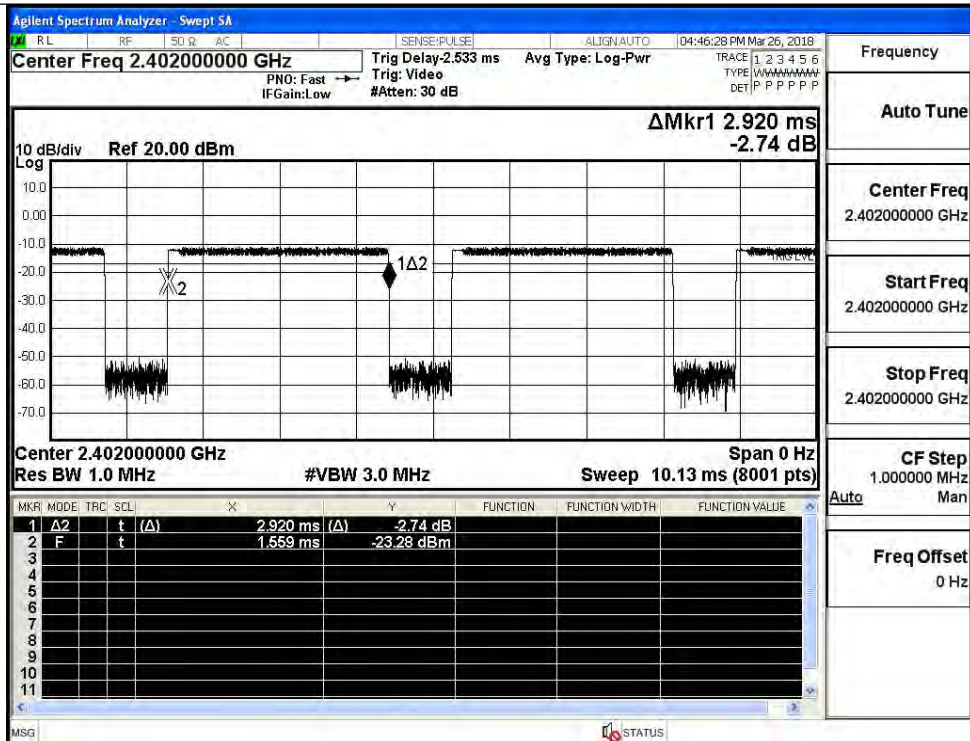
GFSK_DH5/MCH



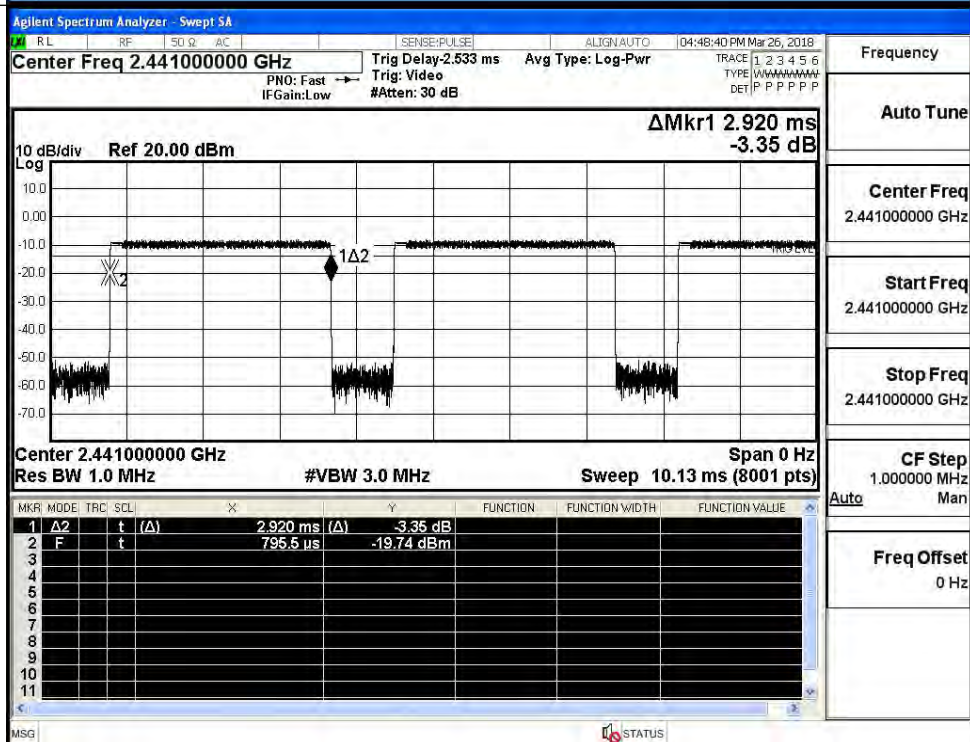
GFSK_DH5/HCH



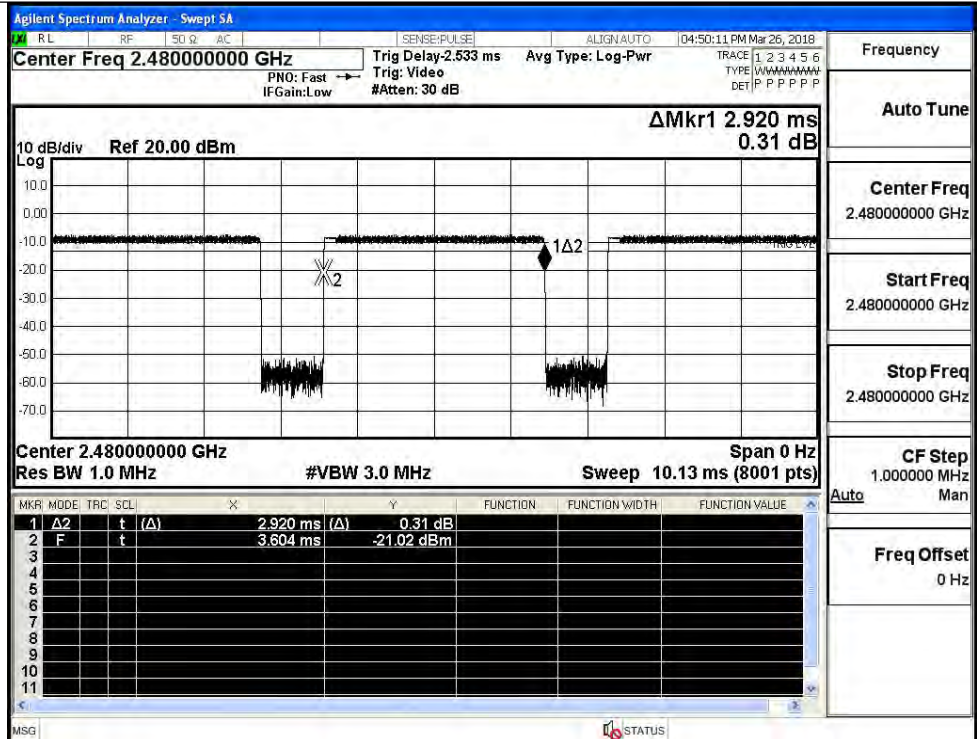
$\pi/4$ DQPSK
_2DH5/LCH



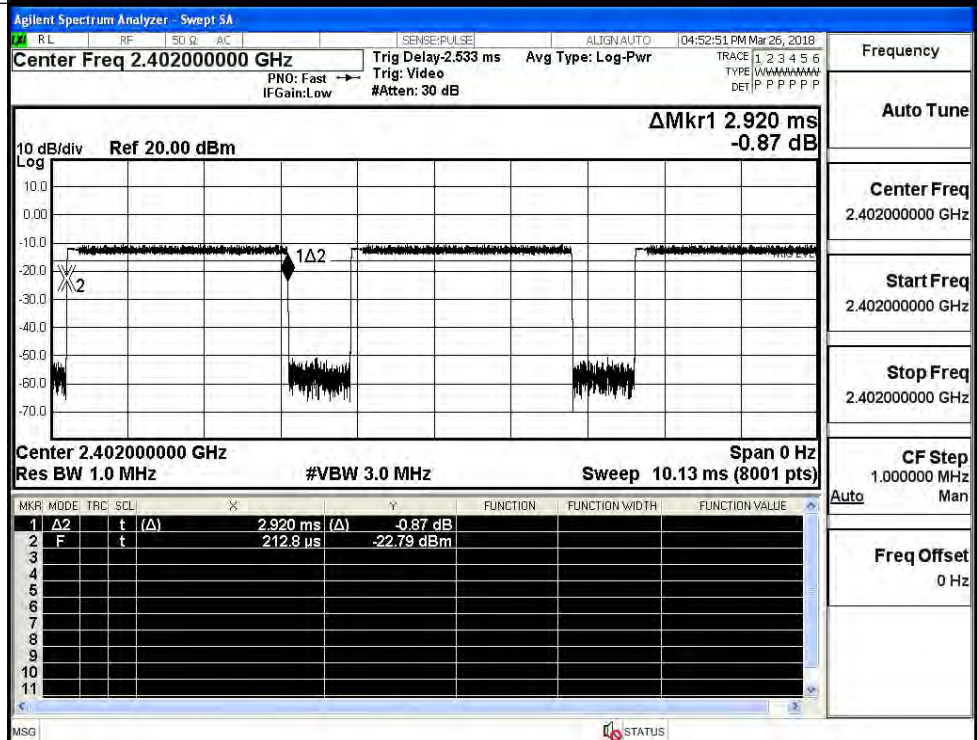
$\pi/4$ DQPSK
_2DH5/MCH



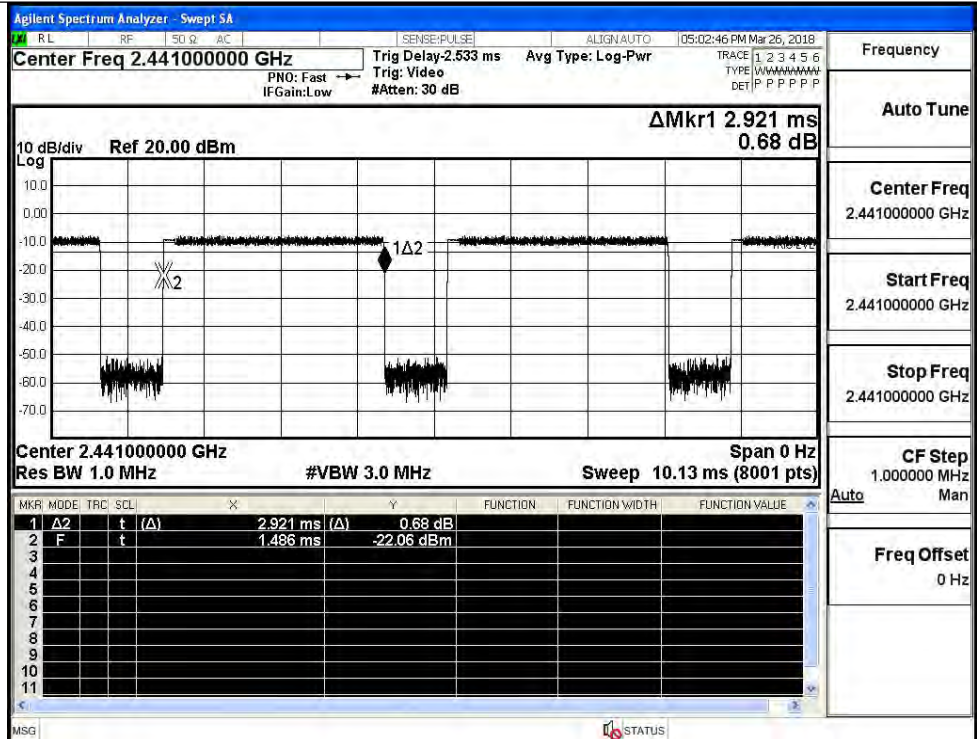
$\pi/4$ DQPSK
_2DH5/HCH



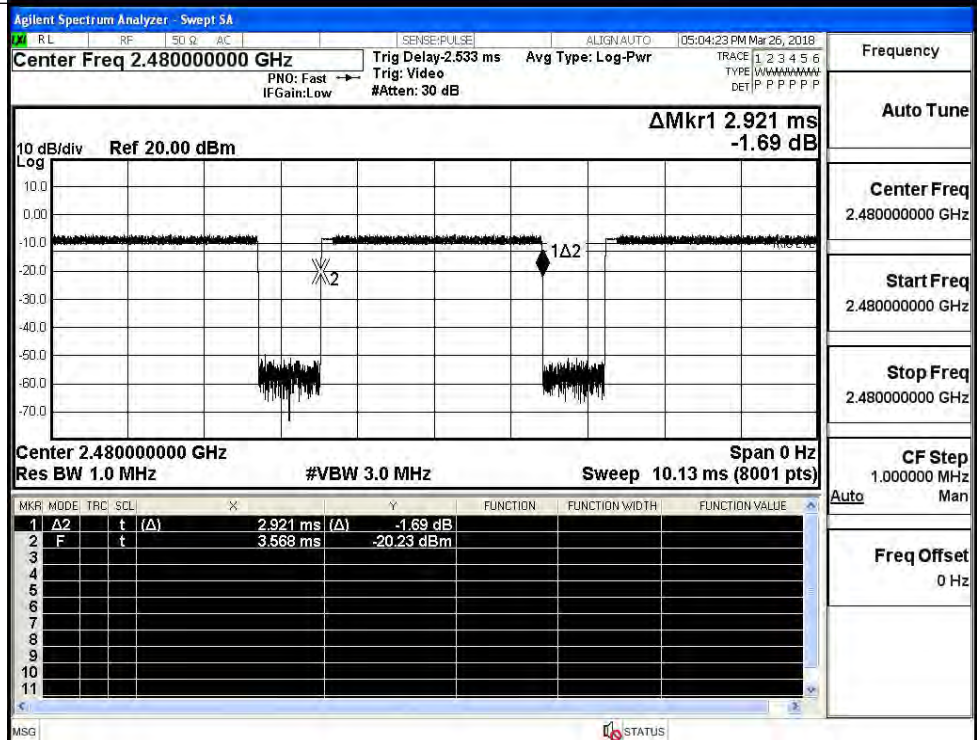
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

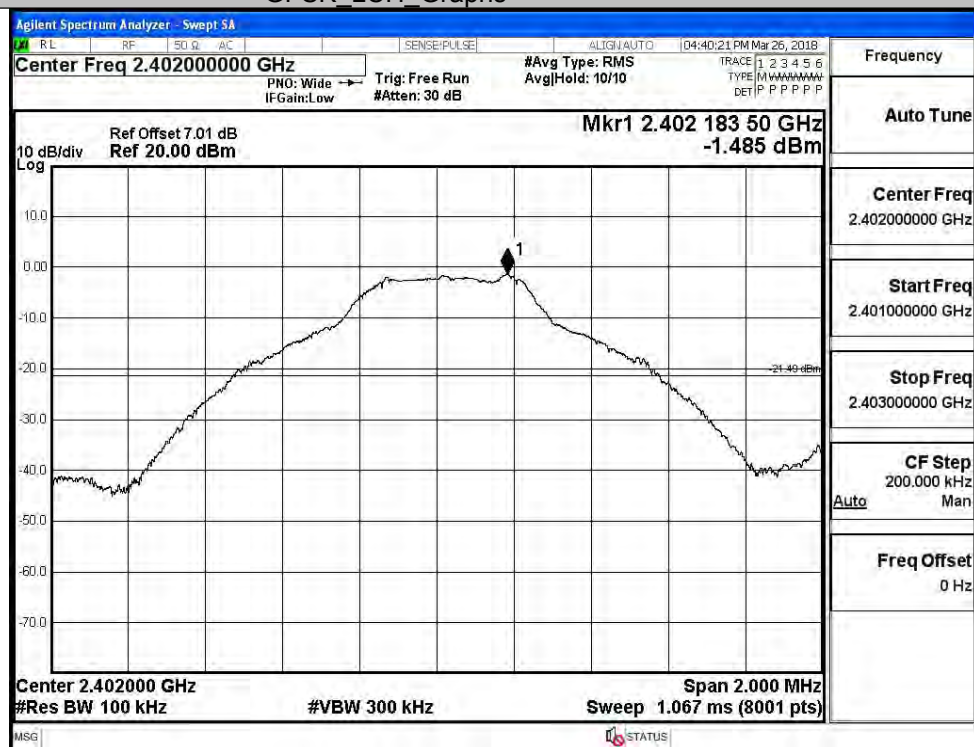


A.6 RF Conducted Spurious Emissions

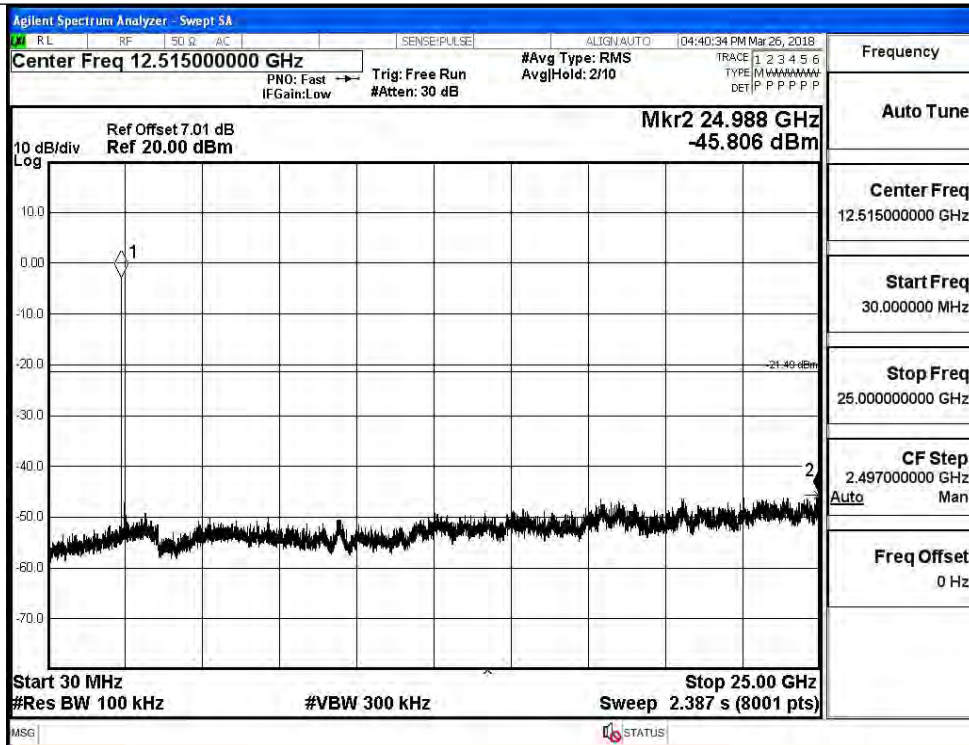
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.485	-45.806	-21.485	PASS
	MCH	0.813	-45.211	-19.187	PASS
	HCH	1.497	-45.683	-18.503	PASS
$\pi/4$ DQPSK	LCH	-5.076	-45.700	-25.076	PASS
	MCH	-2.265	-45.615	-22.265	PASS
	HCH	-1.472	-45.084	-21.472	PASS
8DPSK	LCH	-4.888	-45.304	-24.888	PASS
	MCH	-2.031	-45.184	-22.031	PASS
	HCH	-1.311	-45.979	-21.311	PASS

GFSK LCH Graphs

Pref

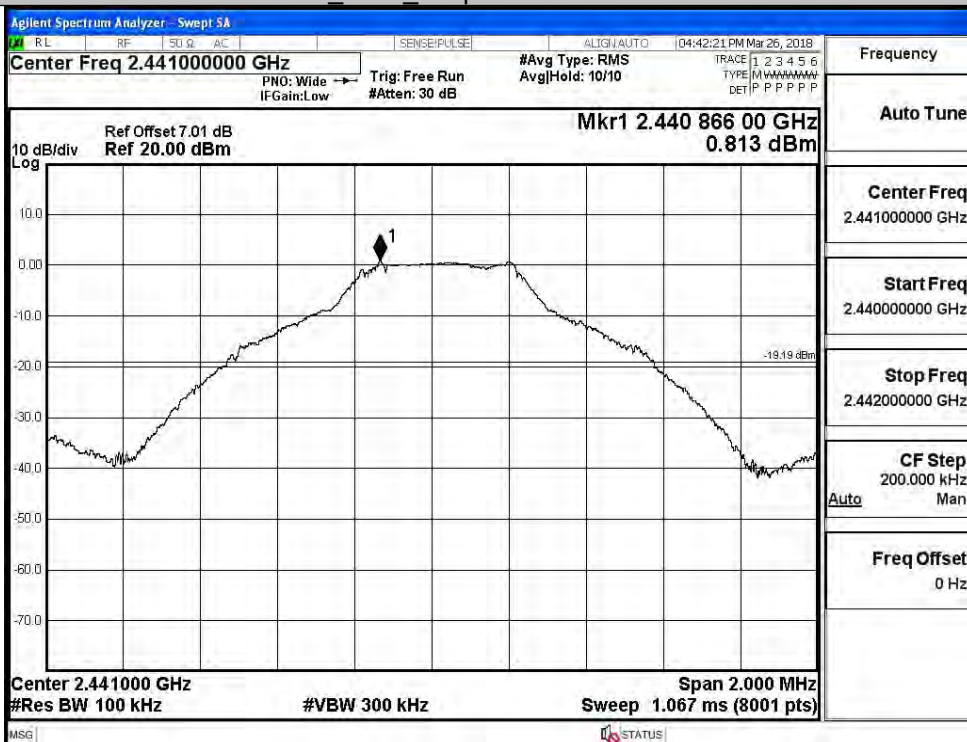


Puw

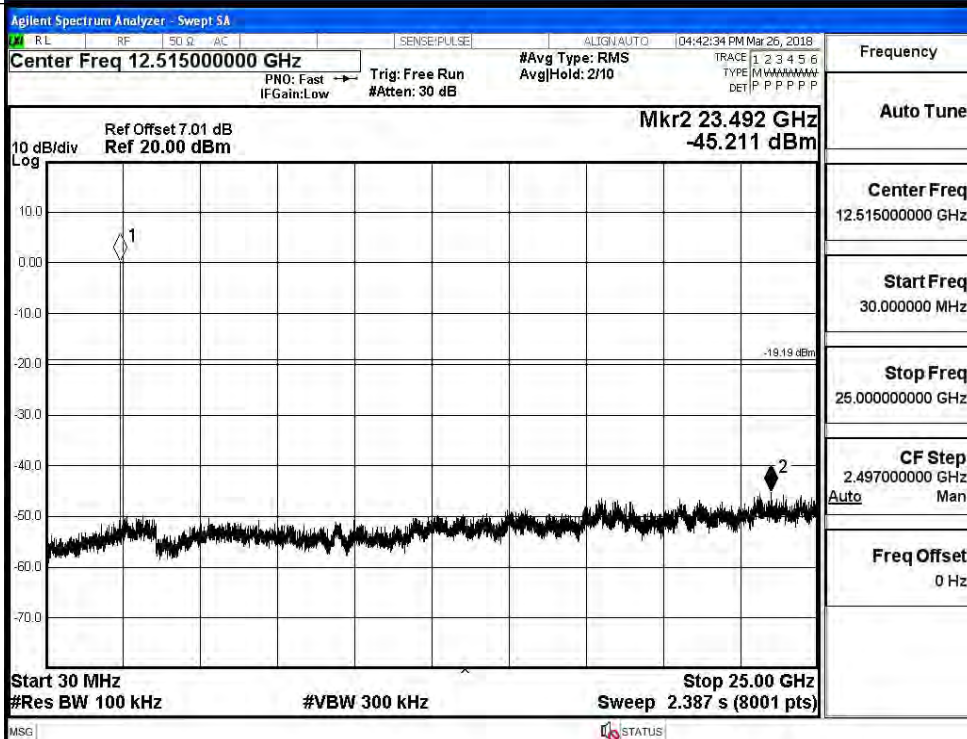


GFSK_MCH_Graphs

Pref

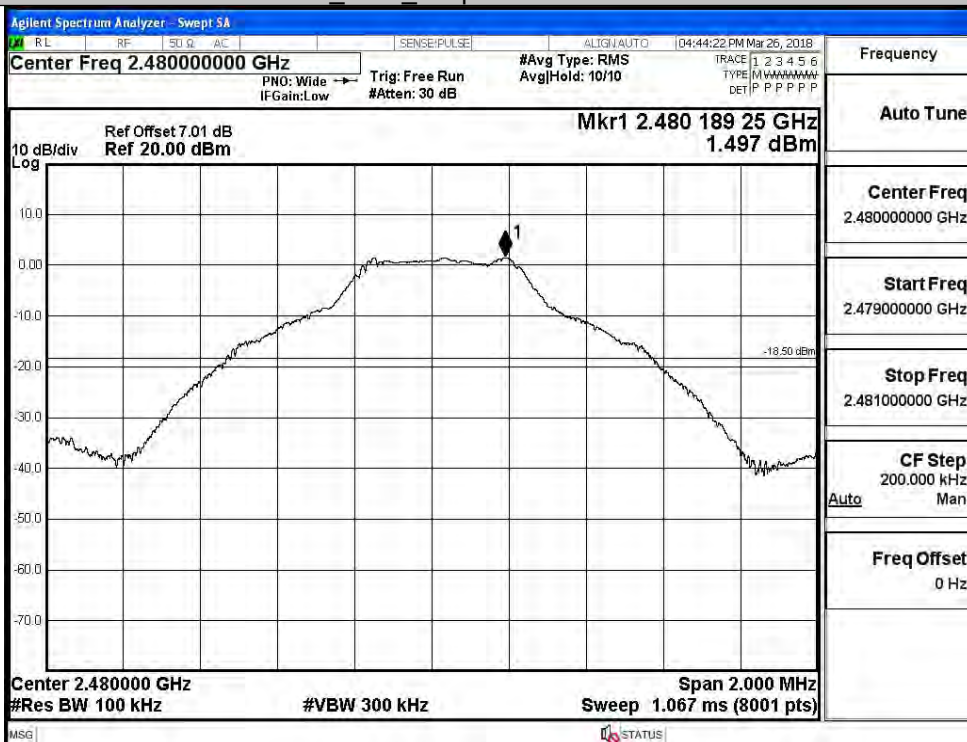


Puw

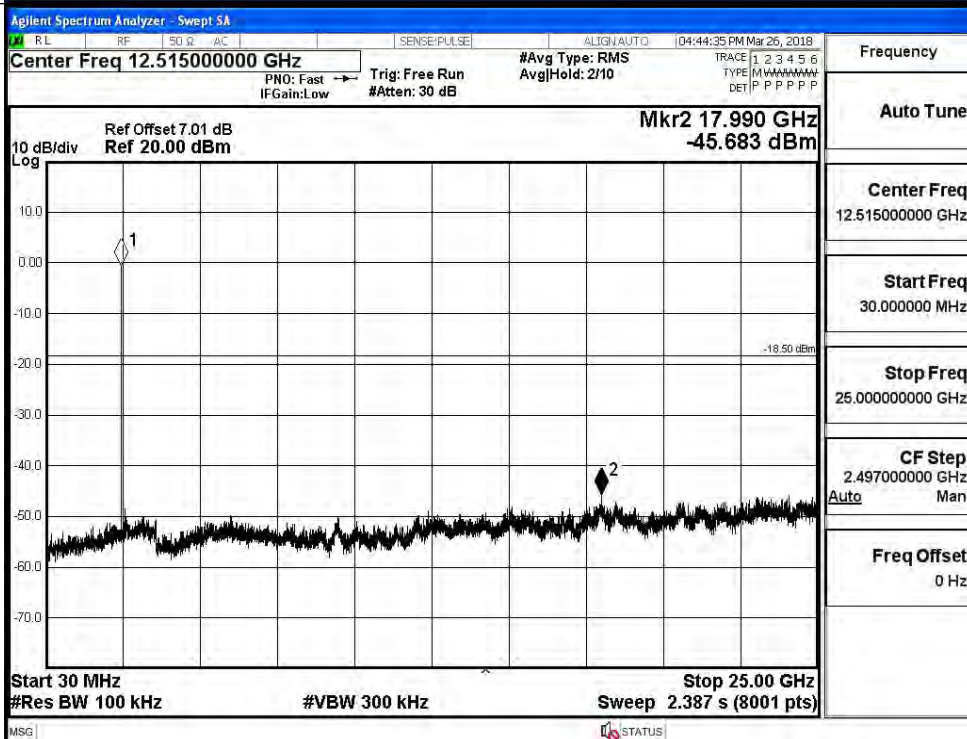


GFSK_HCH_Graphs

Pref

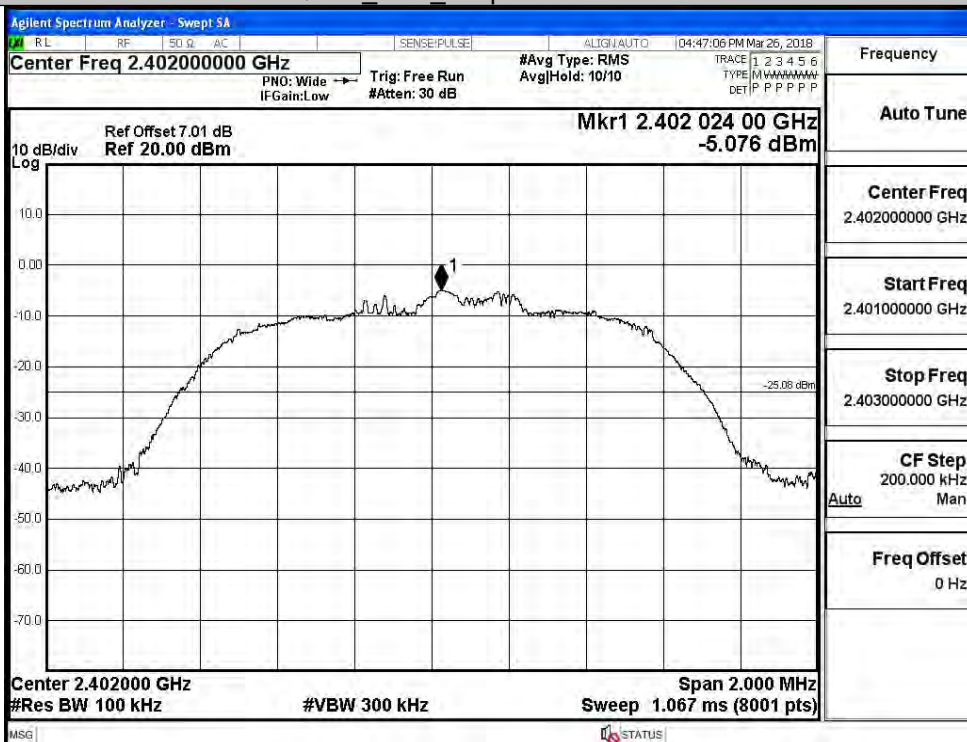


Puw

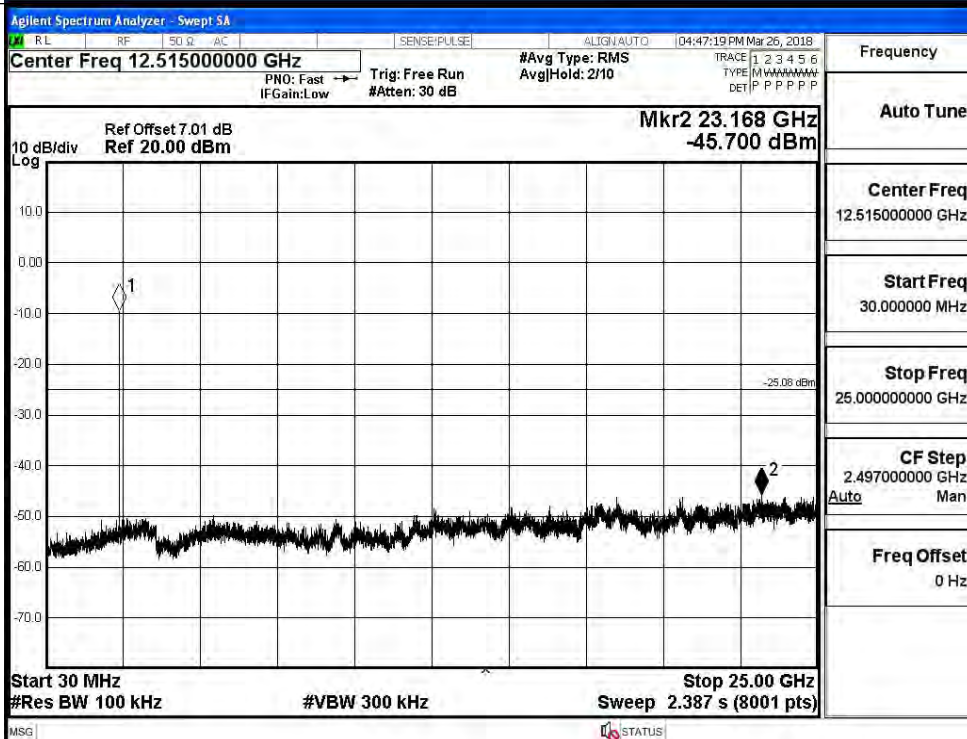


$\pi/4$ DQPSK_LCH_Graphs

Pref

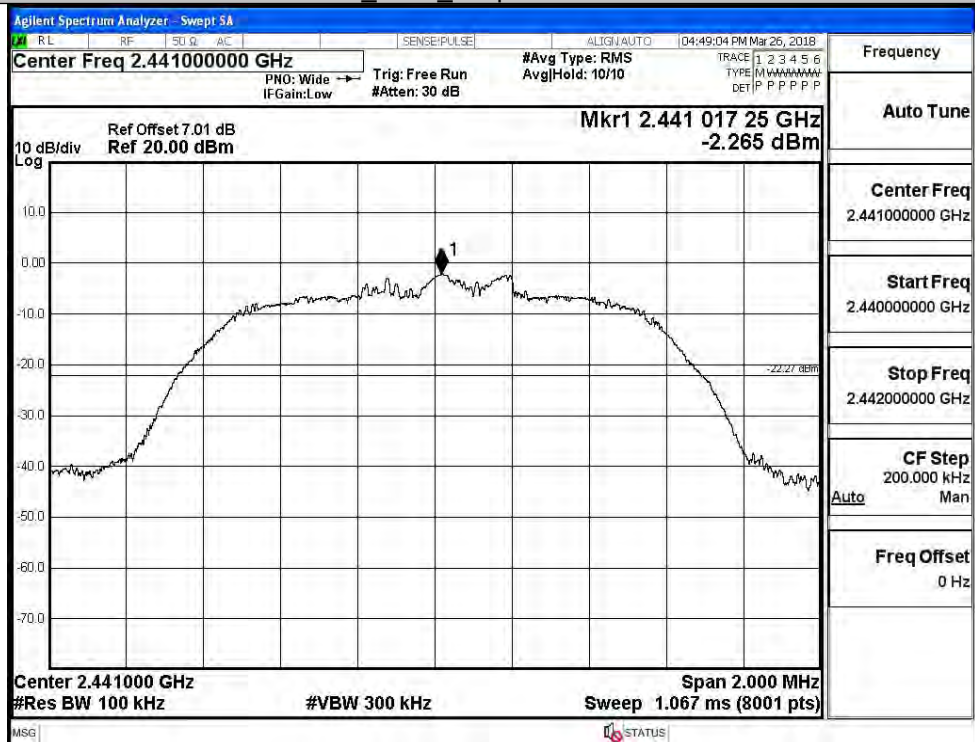


Puw

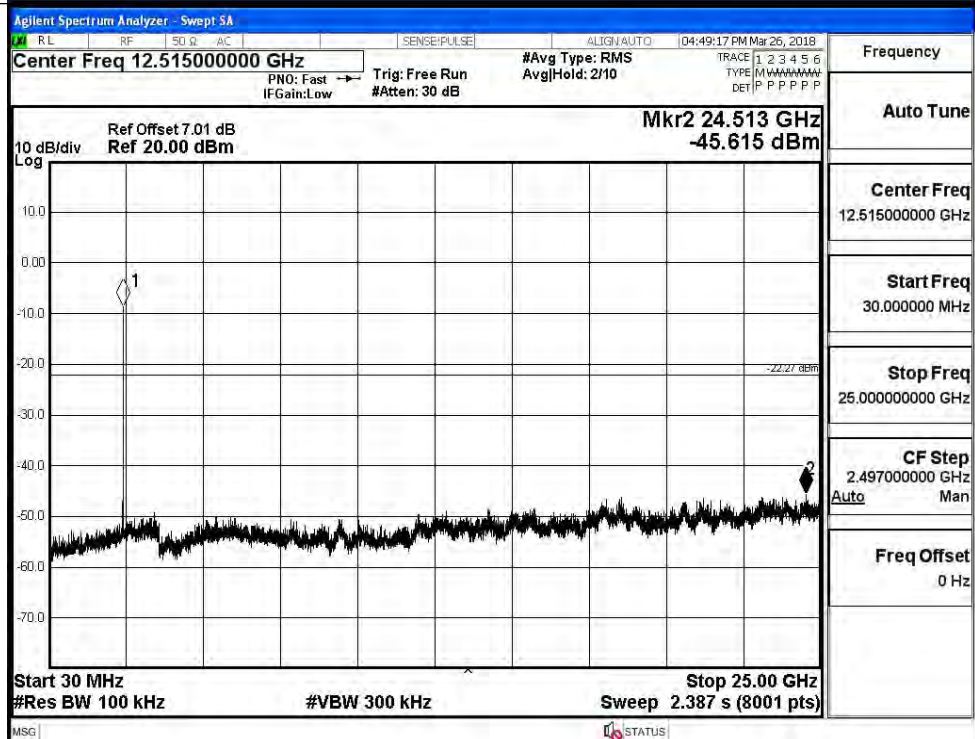


π /4DQPSK_MCH_Graphs

Pref

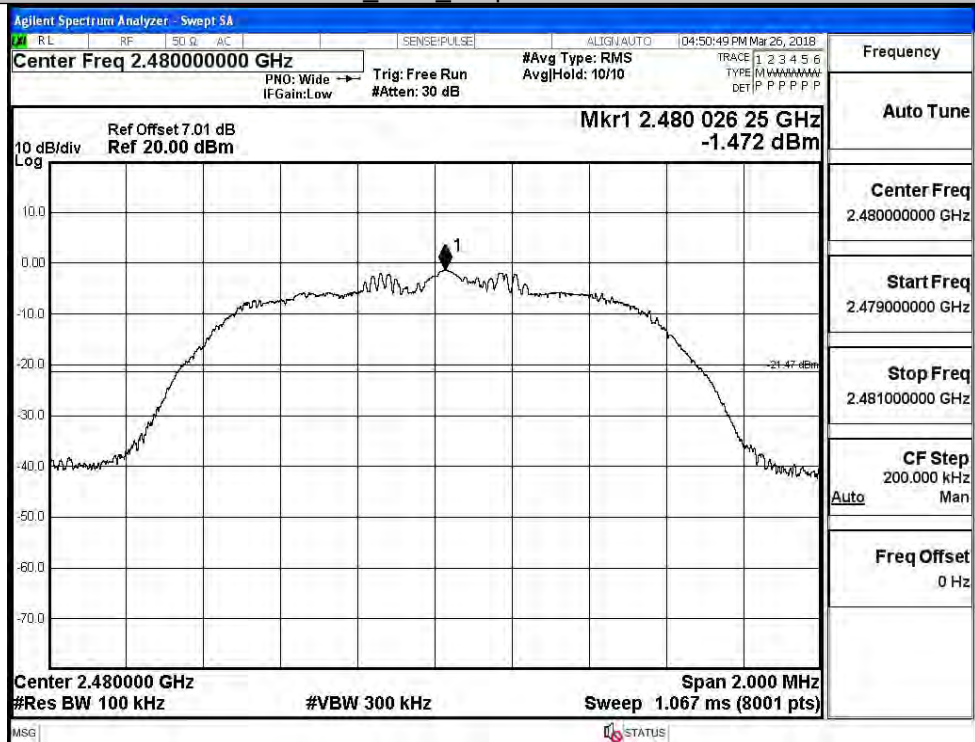


Puw

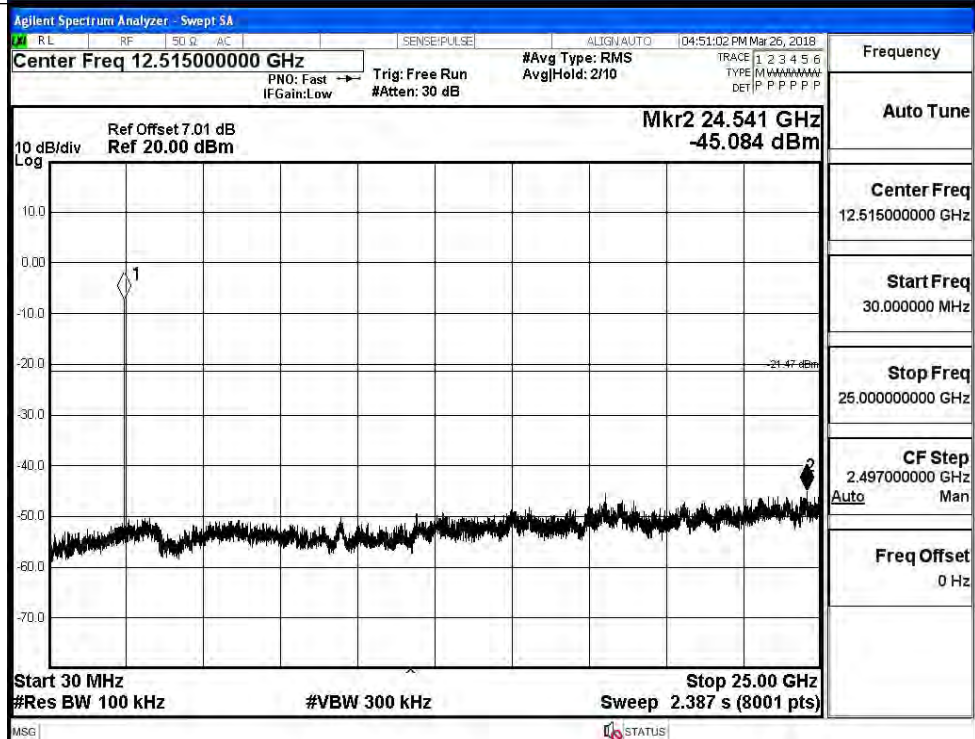


$\pi/4$ DQPSK_HCH_Graphs

Pref

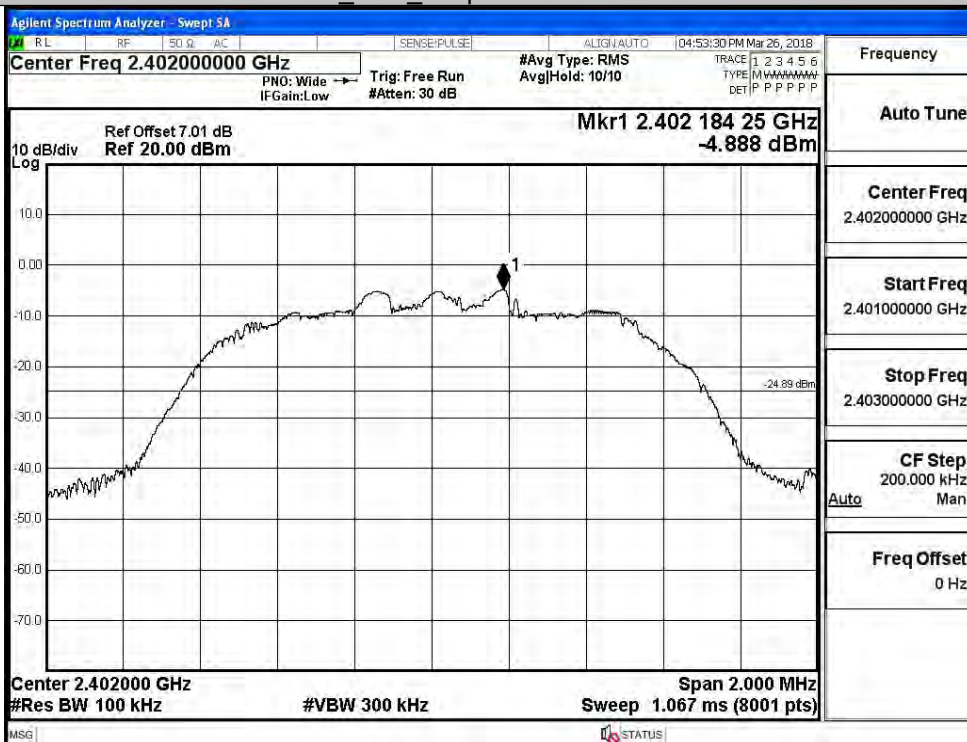


Puw

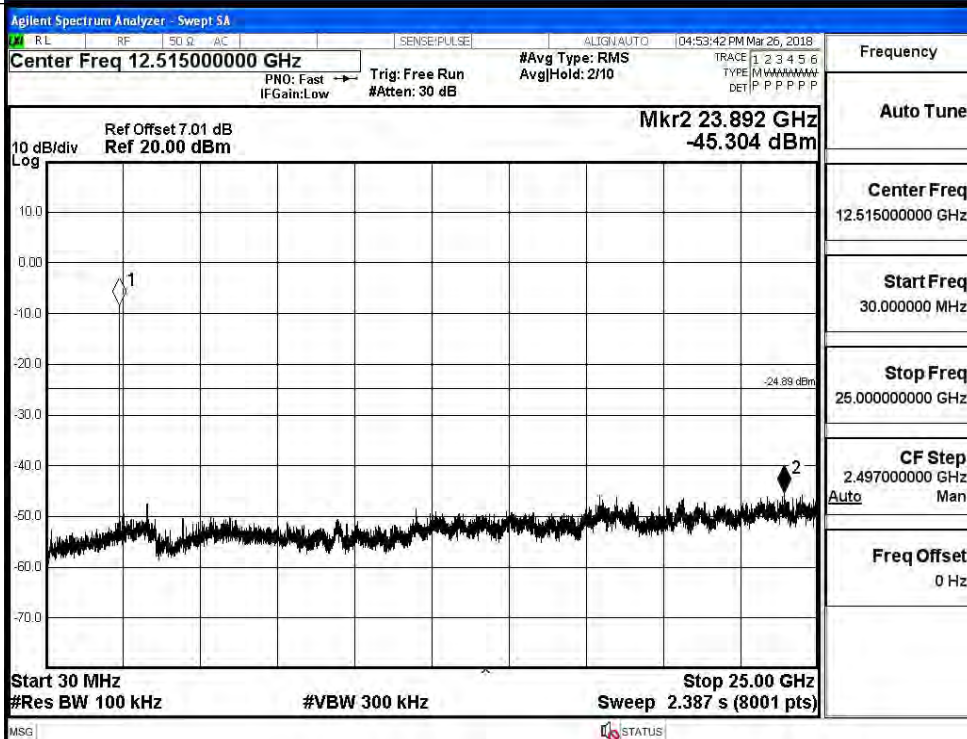


8DPSK_LCH_Graphs

Pref

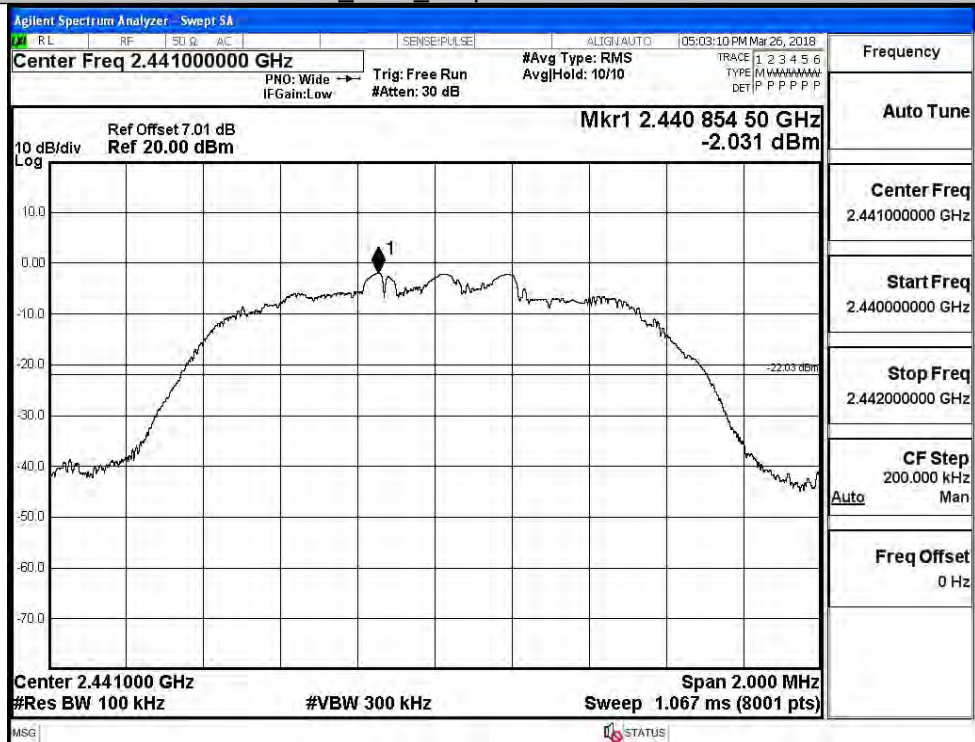


Puw

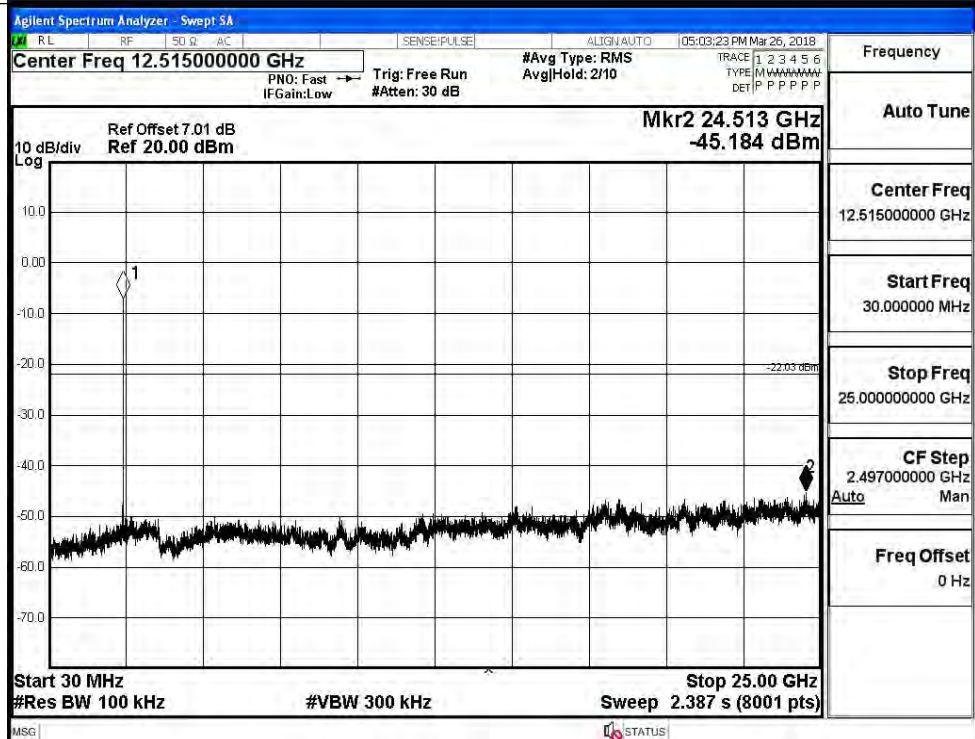


8DPSK_MCH_Graphs

Pref

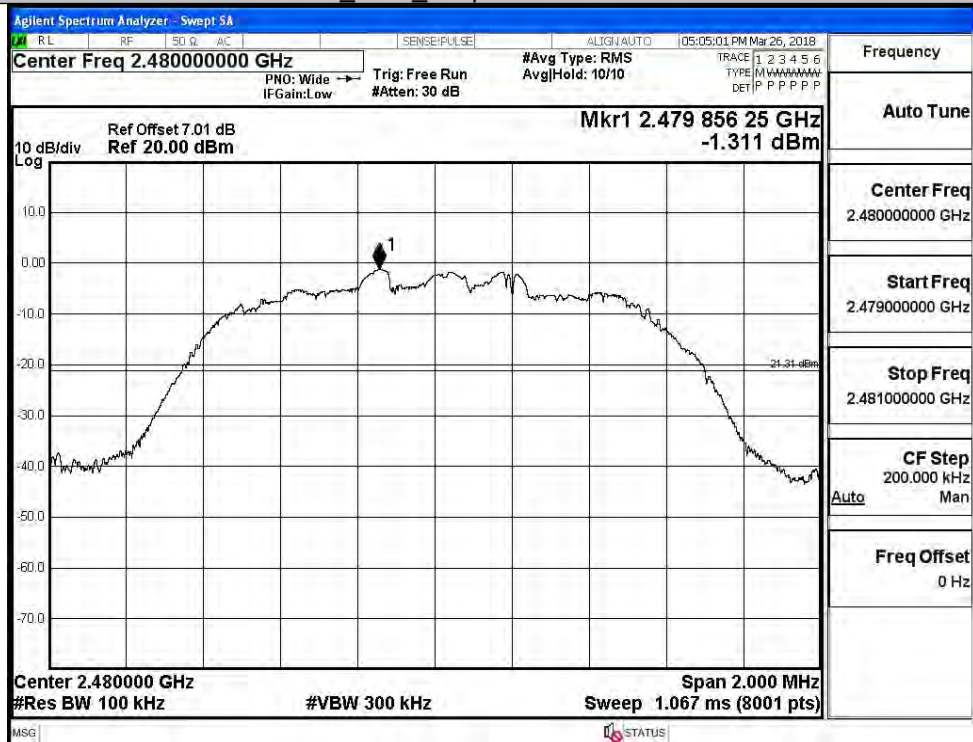


Puw

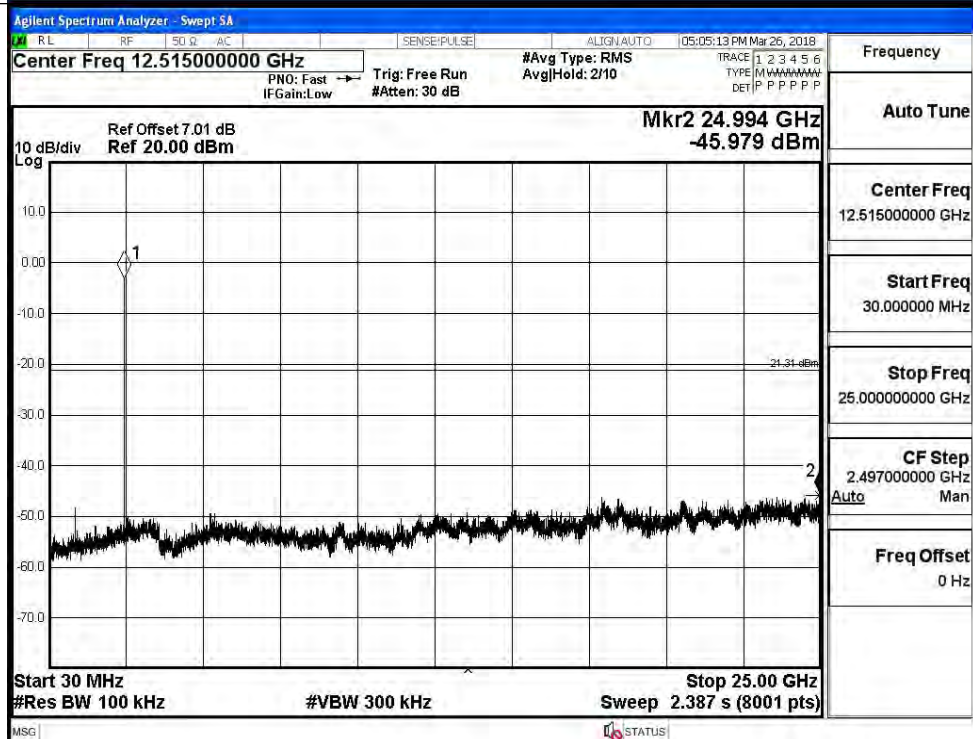


8DPSK_HCH_Graphs

Pref



Puw

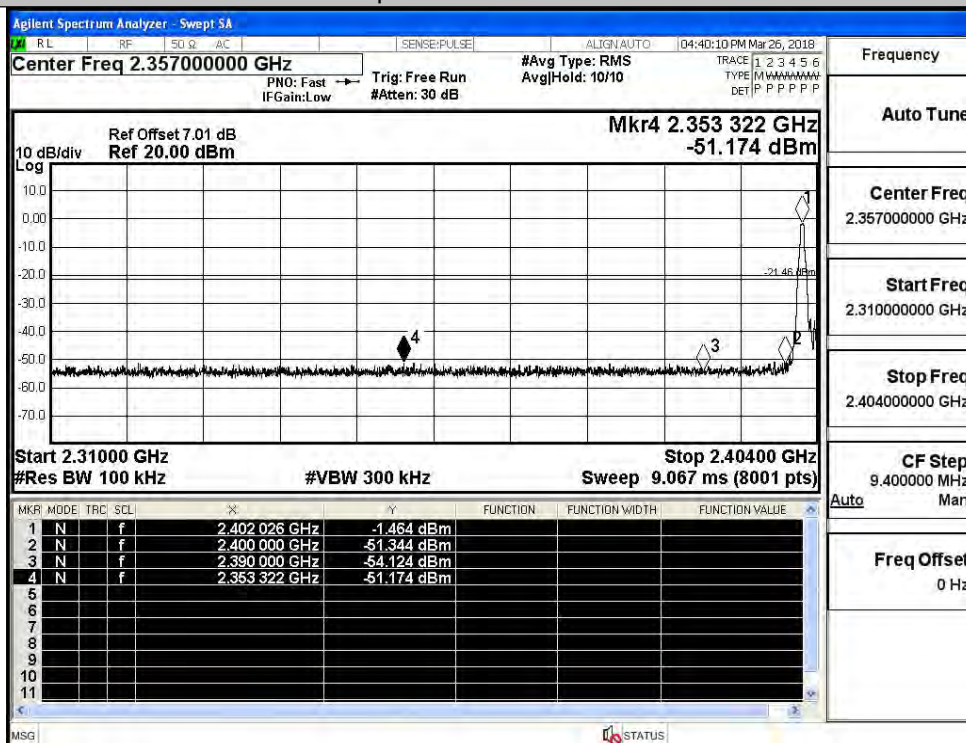


A.7 Band-edge for RF Conducted Emissions

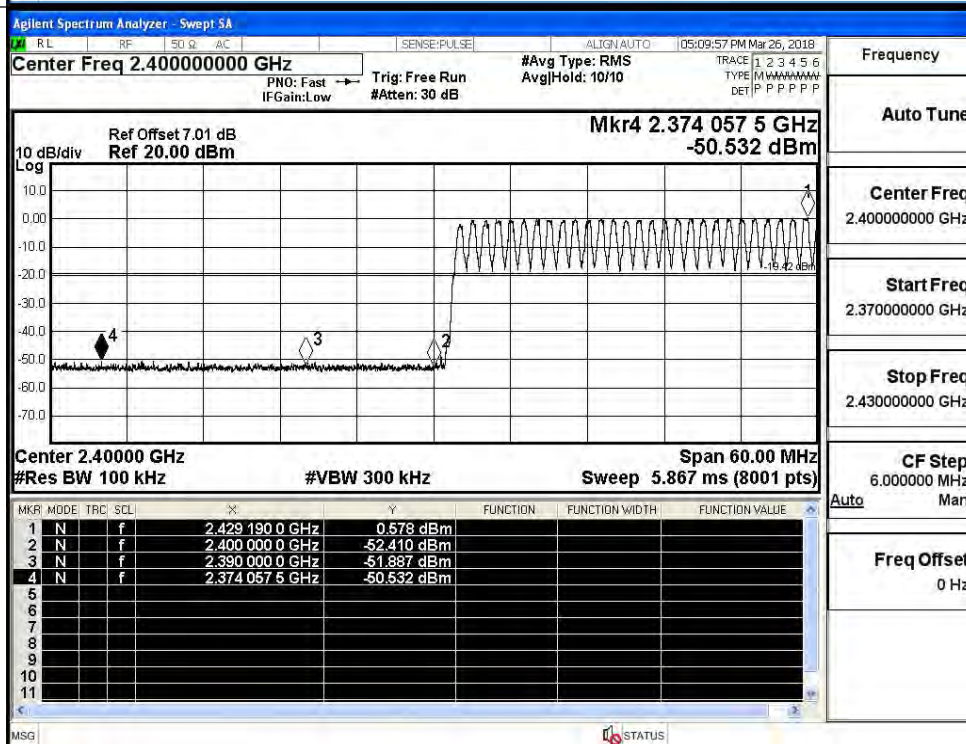
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-1.464	Off	-51.174	-21.46	PASS
			0.578	On	-50.532	-19.42	PASS
	HCH	2480	1.607	Off	-49.854	-18.39	PASS
			1.579	On	-49.730	-18.42	PASS
$\pi/4$ DQPSK	LCH	2402	-4.949	Off	-49.857	-24.95	PASS
			-2.961	On	-50.308	-22.96	PASS
	HCH	2480	-1.413	Off	-50.554	-21.41	PASS
			-1.491	On	-50.417	-21.49	PASS
8DPSK	LCH	2402	-4.886	Off	-50.880	-24.89	PASS
			-2.905	On	-50.402	-22.91	PASS
	HCH	2480	-1.334	Off	-50.137	-21.33	PASS
			-1.489	On	-50.638	-21.49	PASS

Test Graphs

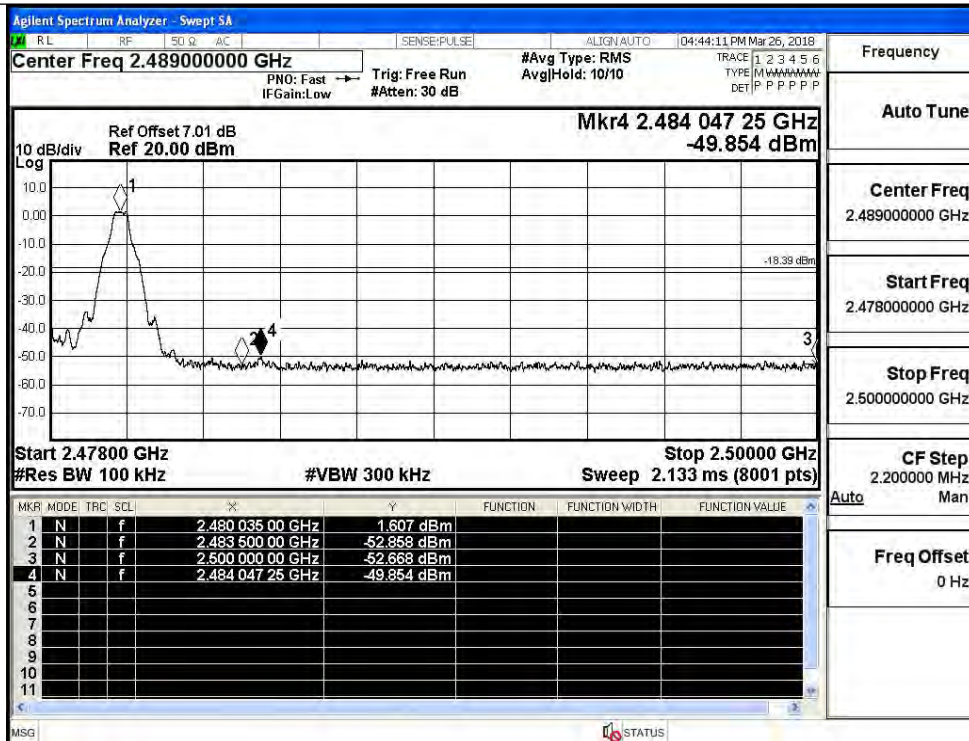
GFSK/LCH/No Hop



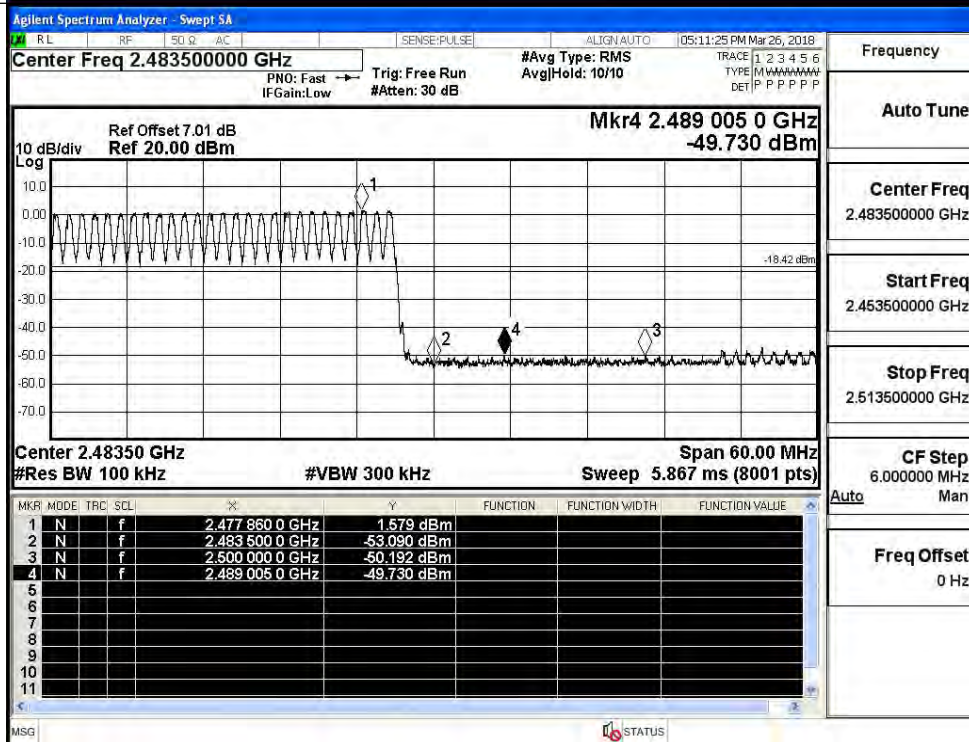
GFSK/LCH/Hop



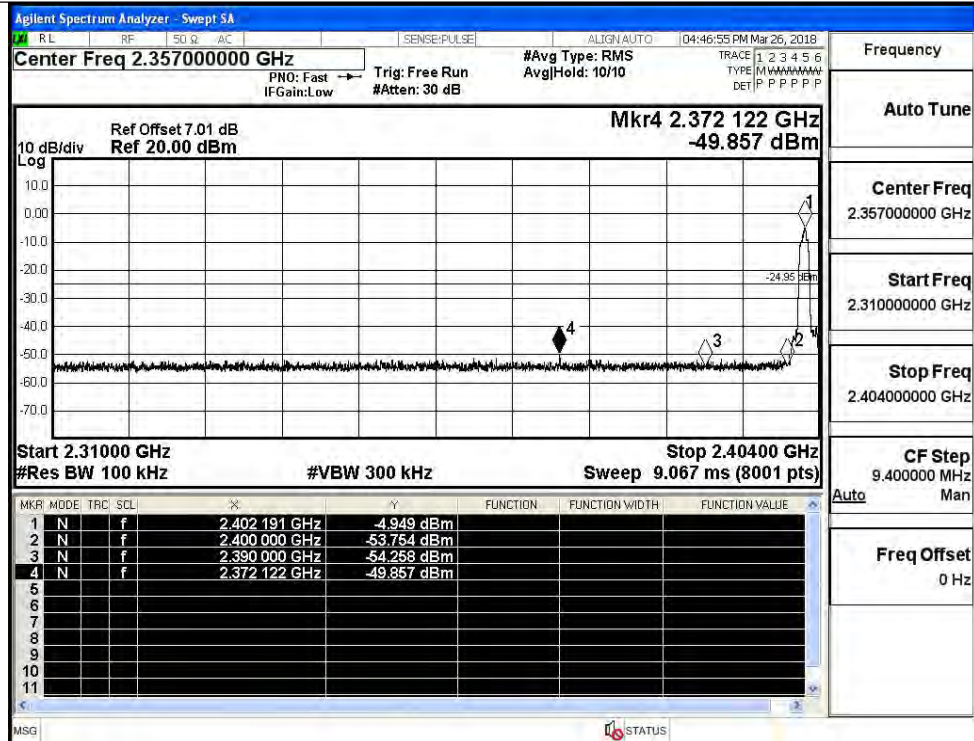
GFSK/HCH/No Hop



GFSK/HCH/Hop



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



Frequency

Auto Tune

Center Freq
2.357000000 GHz

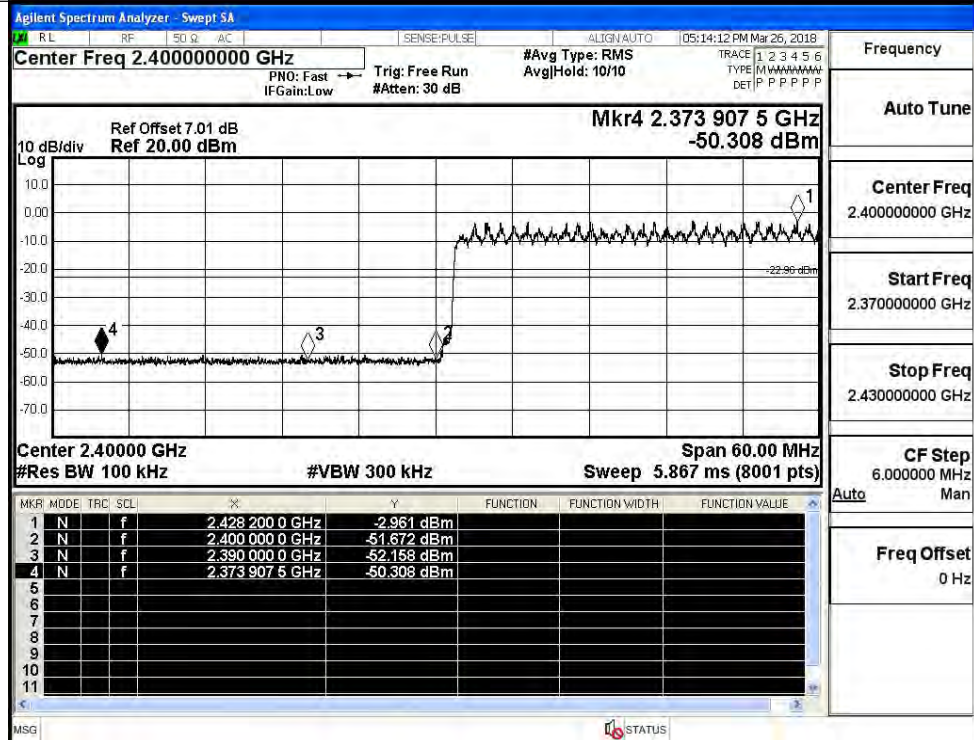
Start Freq
2.310000000 GHz

Stop Freq
2.404000000 GHz

CF Step
9.400000 MHz
Auto Man

Freq Offset
0 Hz

$\pi/4$ DQPSK/LCH/Hop



Frequency

Auto Tune

Center Freq
2.400000000 GHz

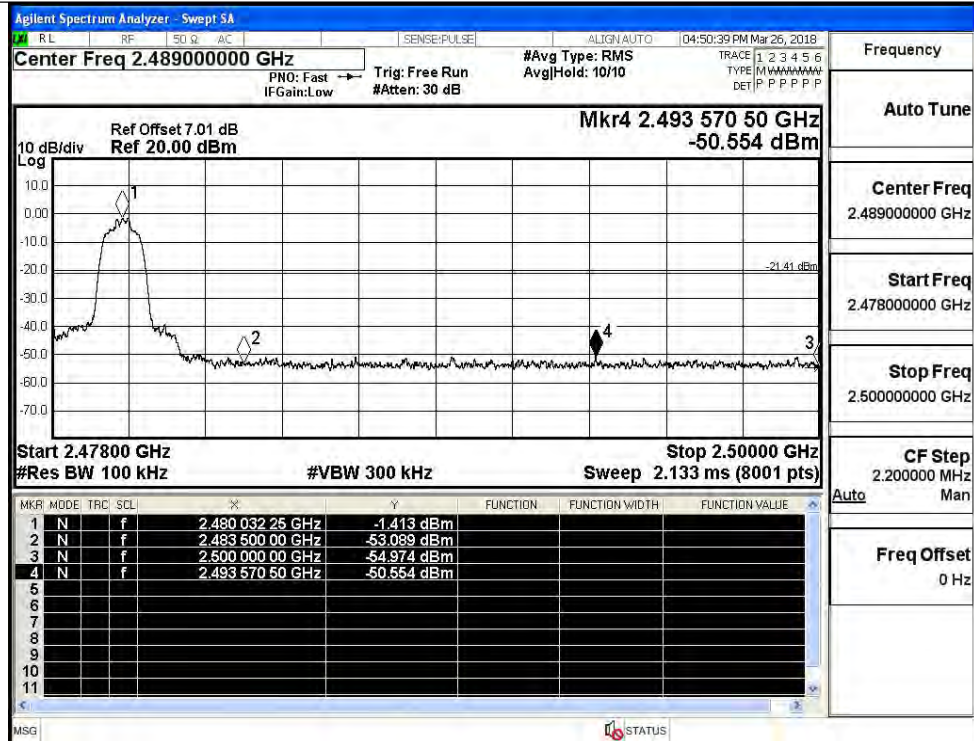
Start Freq
2.370000000 GHz

Stop Freq
2.430000000 GHz

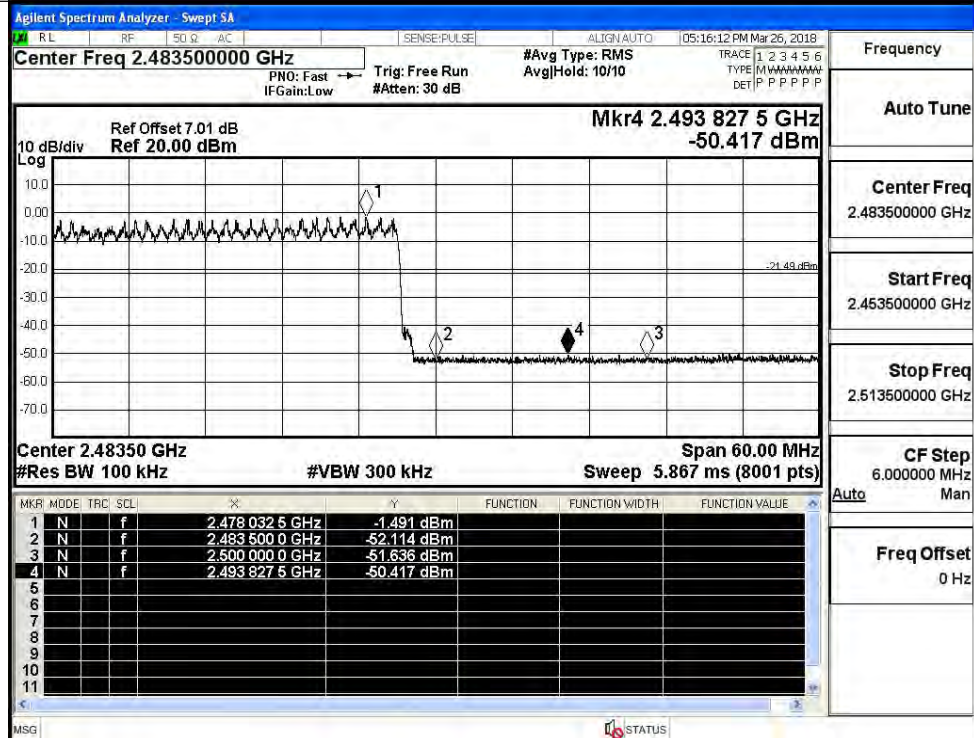
CF Step
6.000000 MHz
Auto Man

Freq Offset
0 Hz

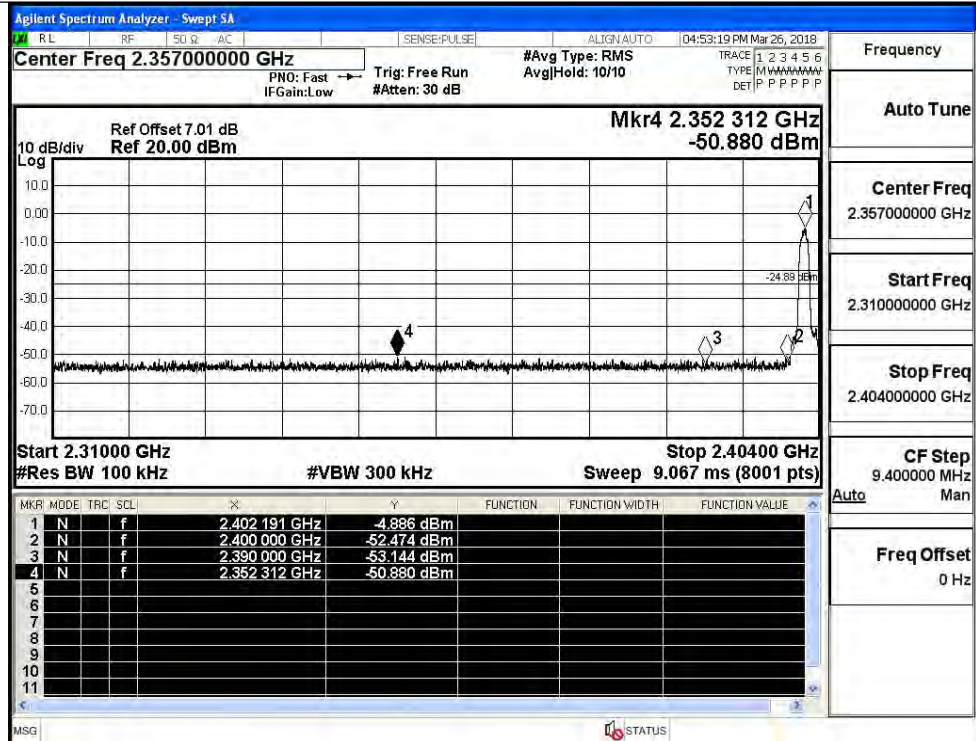
π /4DQPSK/HCH/No
Hop



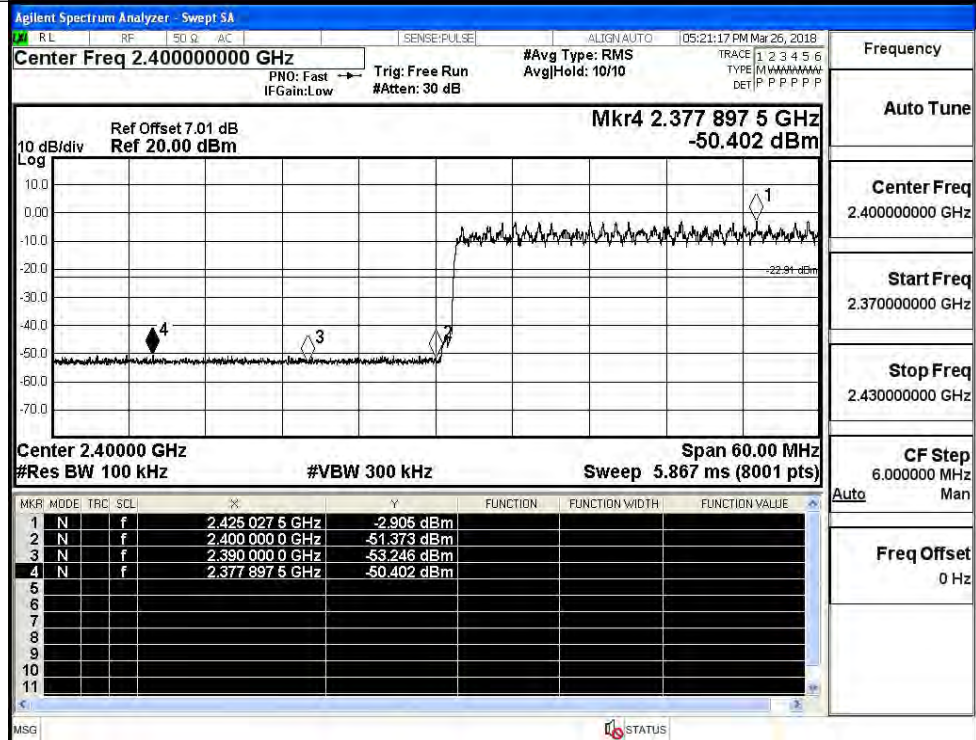
π /4DQPSK/HCH/Hop



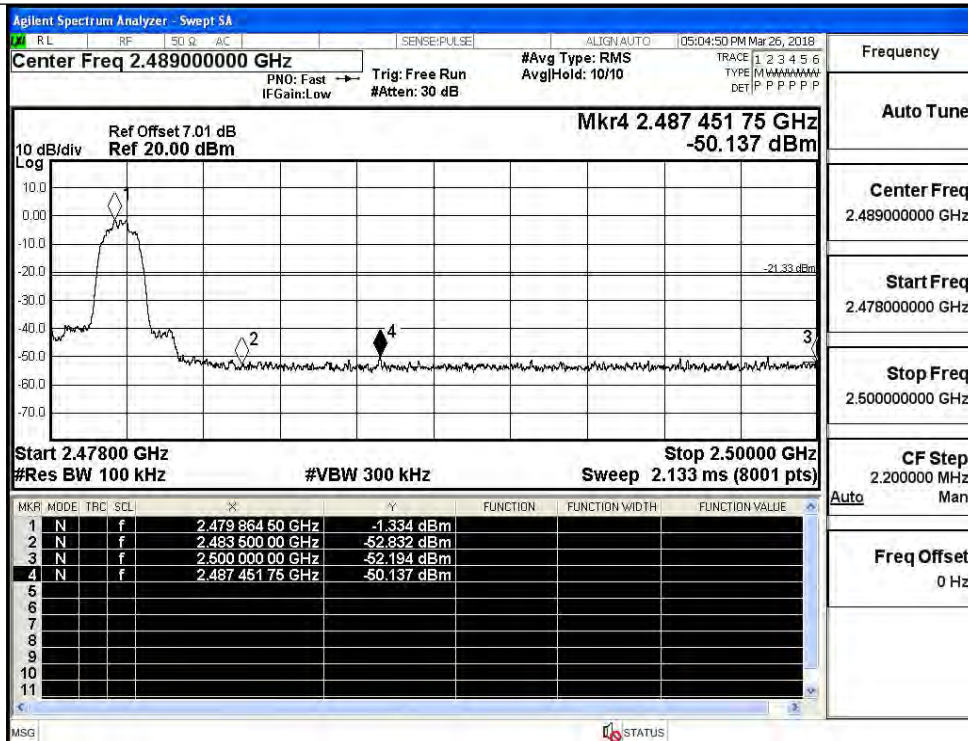
8DPSK/LCH/No Hop



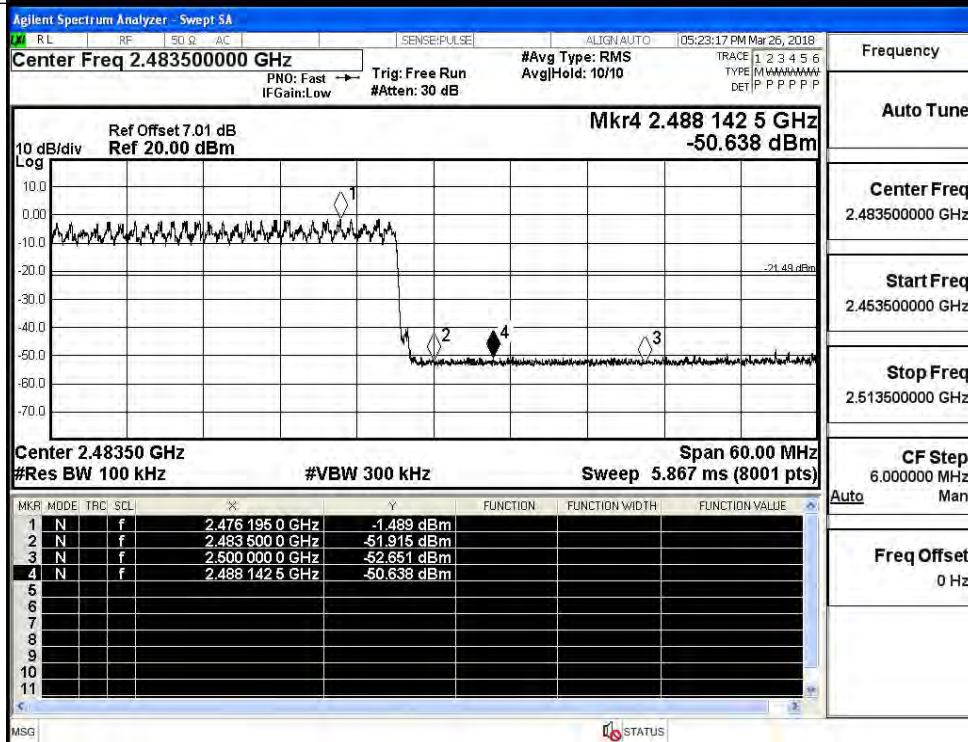
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



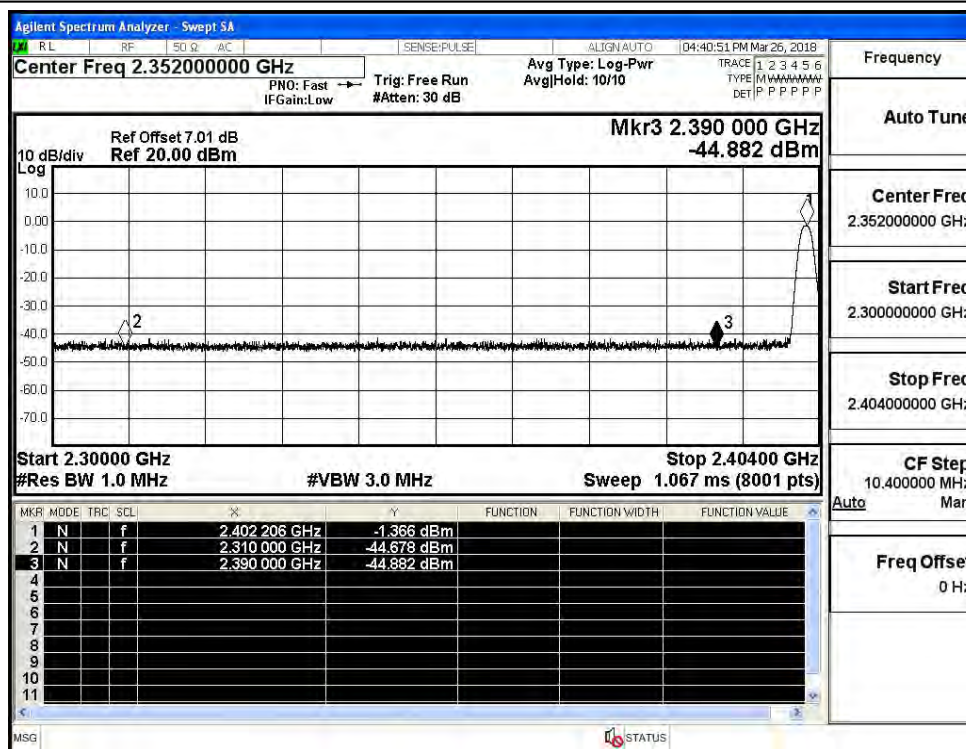
8DPSK/HCH/Hop



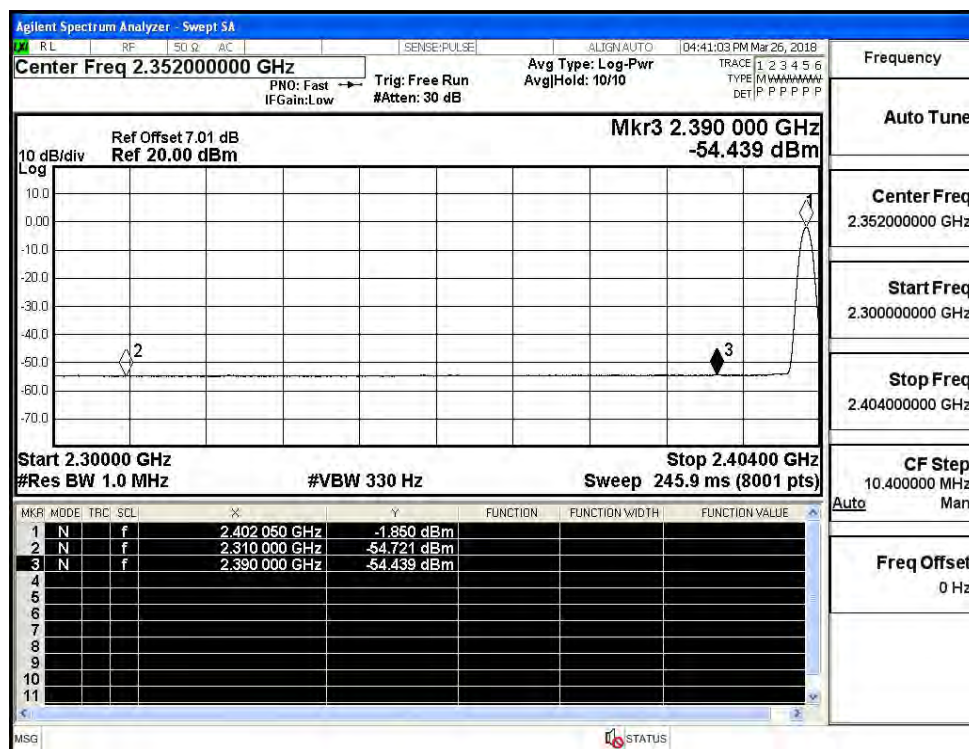
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-44.68	2.0	0	52.58	PEAK	74	PASS
	Off	2310.0	-54.72	2.0	0	42.54	AV	54	PASS
	Off	2390.0	-44.88	2.0	0	52.38	PEAK	74	PASS
	Off	2390.0	-54.44	2.0	0	42.82	AV	54	PASS
	Off	2483.5	-43.50	2.0	0	53.76	PEAK	74	PASS
	Off	2483.5	-53.34	2.0	0	43.92	AV	54	PASS
	Off	2500.0	-44.88	2.0	0	52.38	PEAK	74	PASS
	Off	2500.0	-53.99	2.0	0	43.27	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-44.15	2.0	0	53.11	PEAK	74	PASS
	Off	2310.0	-54.70	2.0	0	42.56	AV	54	PASS
	Off	2390.0	-44.54	2.0	0	52.72	PEAK	74	PASS
	Off	2390.0	-54.37	2.0	0	42.89	AV	54	PASS
	Off	2483.5	-42.98	2.0	0	54.28	PEAK	74	PASS
	Off	2483.5	-53.51	2.0	0	43.75	AV	54	PASS
	Off	2500.0	-43.14	2.0	0	54.12	PEAK	74	PASS
	Off	2500.0	-54.04	2.0	0	43.22	AV	54	PASS
8DPSK	Off	2310.0	-44.07	2.0	0	53.19	PEAK	74	PASS
	Off	2310.0	-54.72	2.0	0	42.54	AV	54	PASS
	Off	2390.0	-44.92	2.0	0	52.34	PEAK	74	PASS
	Off	2390.0	-54.45	2.0	0	42.81	AV	54	PASS
	Off	2483.5	-43.88	2.0	0	53.38	PEAK	74	PASS
	Off	2483.5	-53.72	2.0	0	43.54	AV	54	PASS
	Off	2500.0	-44.17	2.0	0	53.09	PEAK	74	PASS
	Off	2500.0	-54.06	2.0	0	43.2	AV	54	PASS

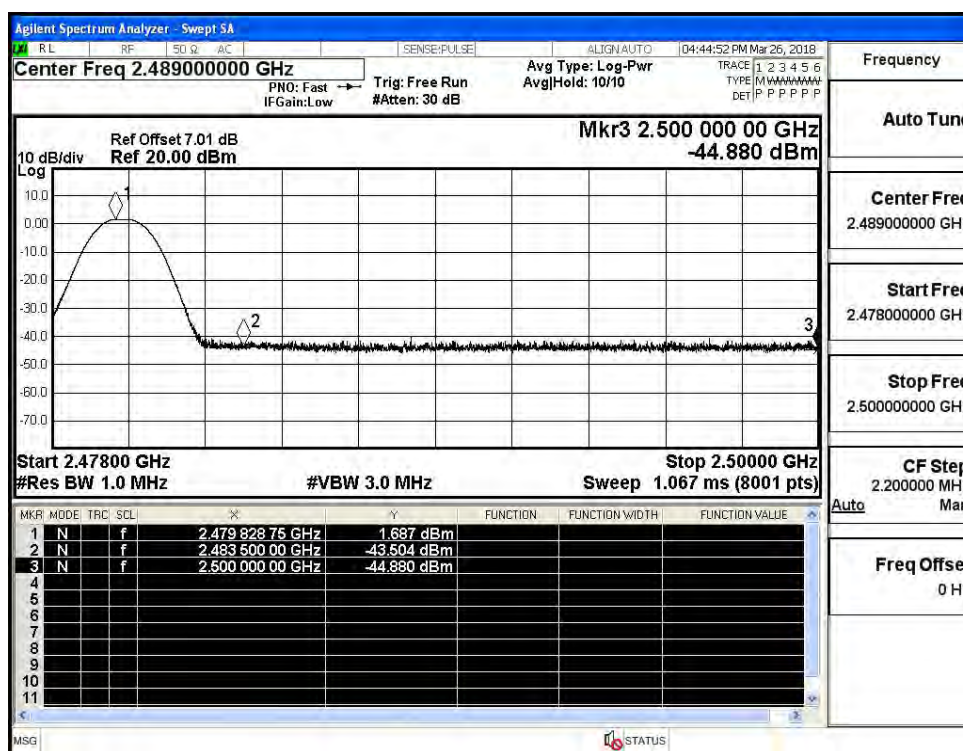
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



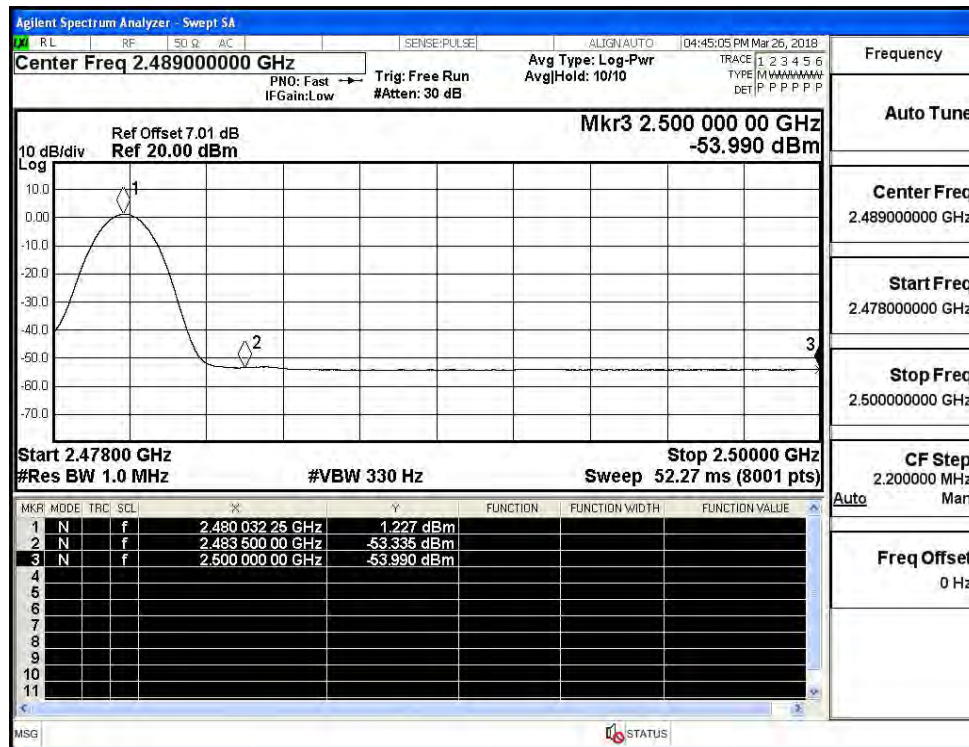
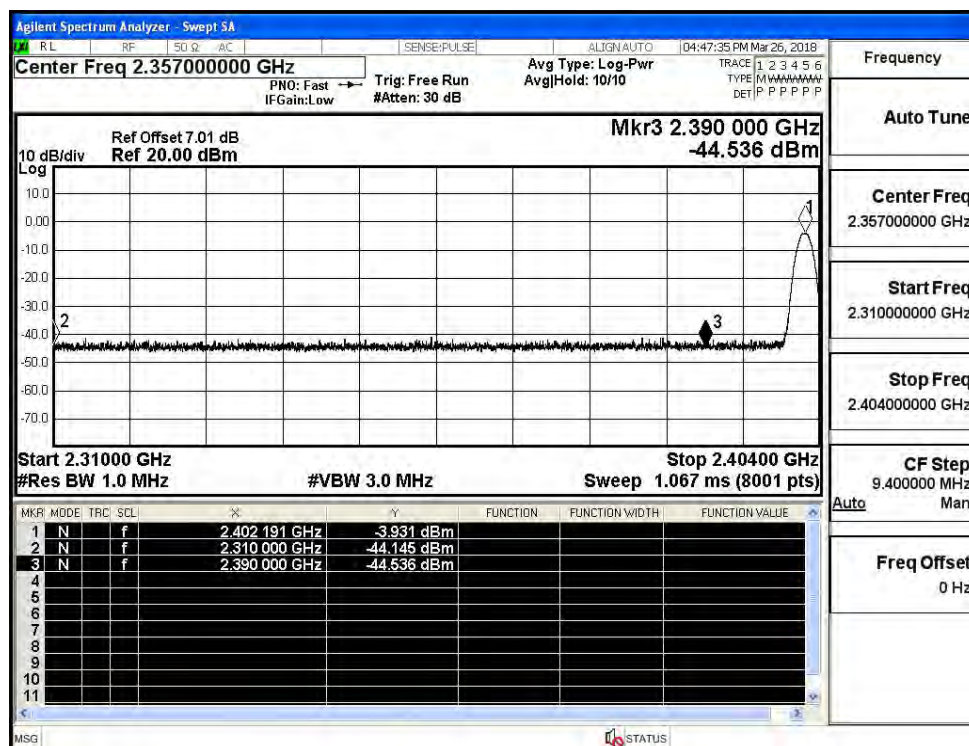
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)

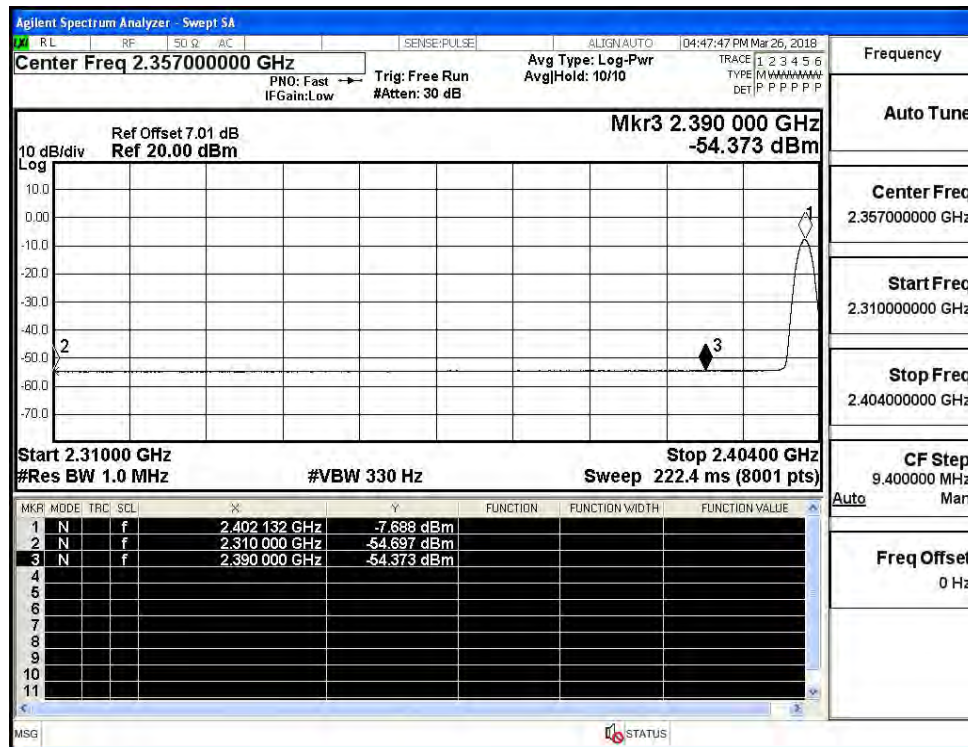
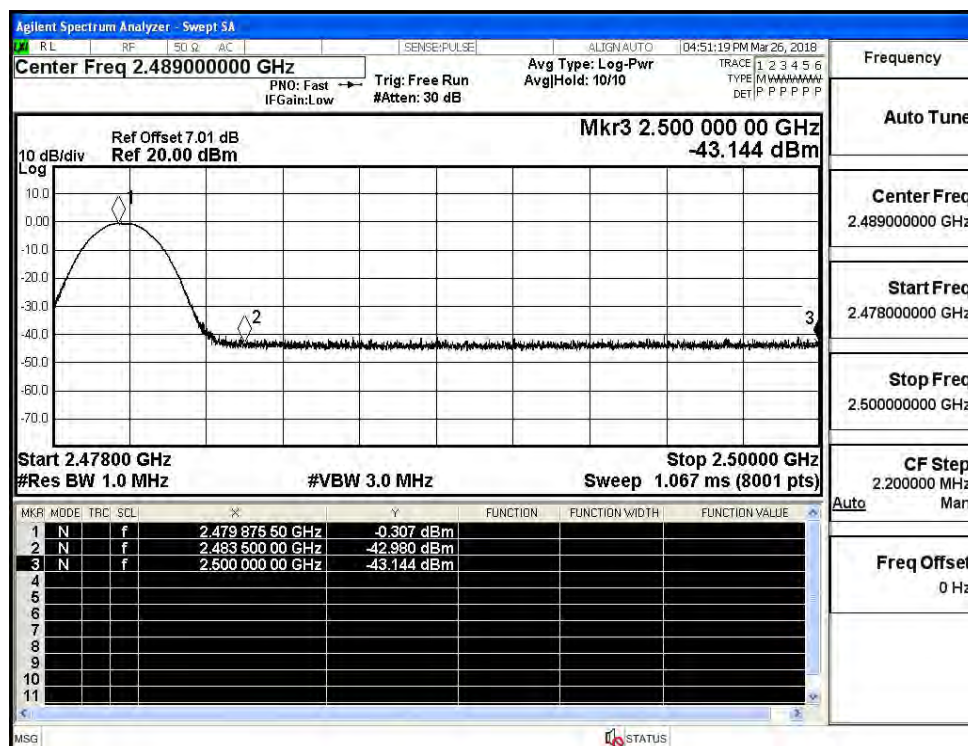


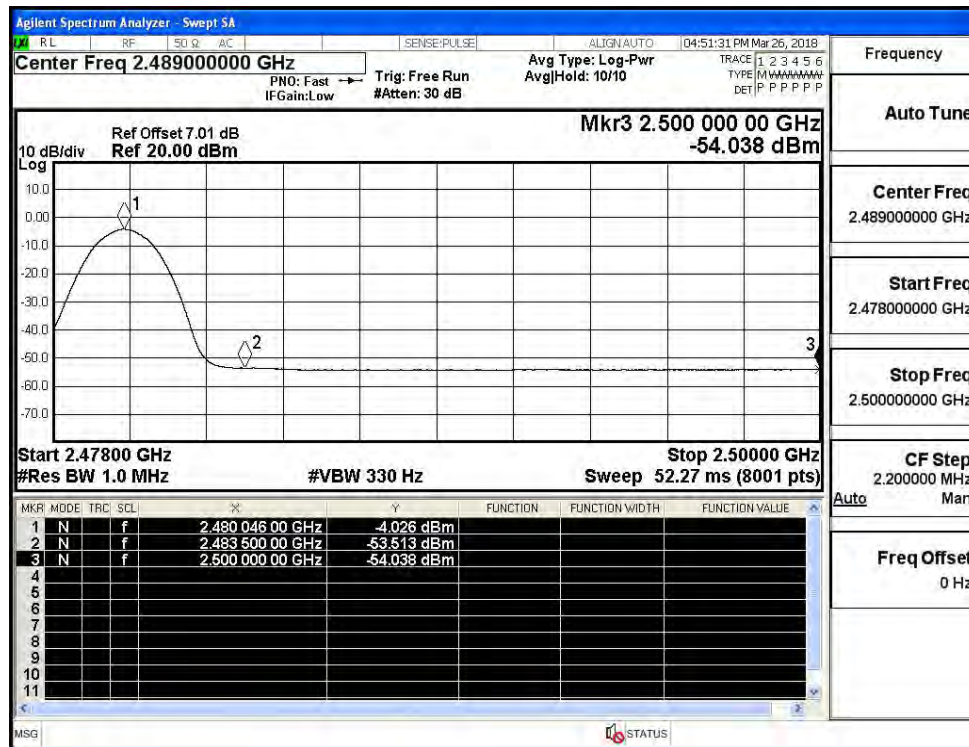
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



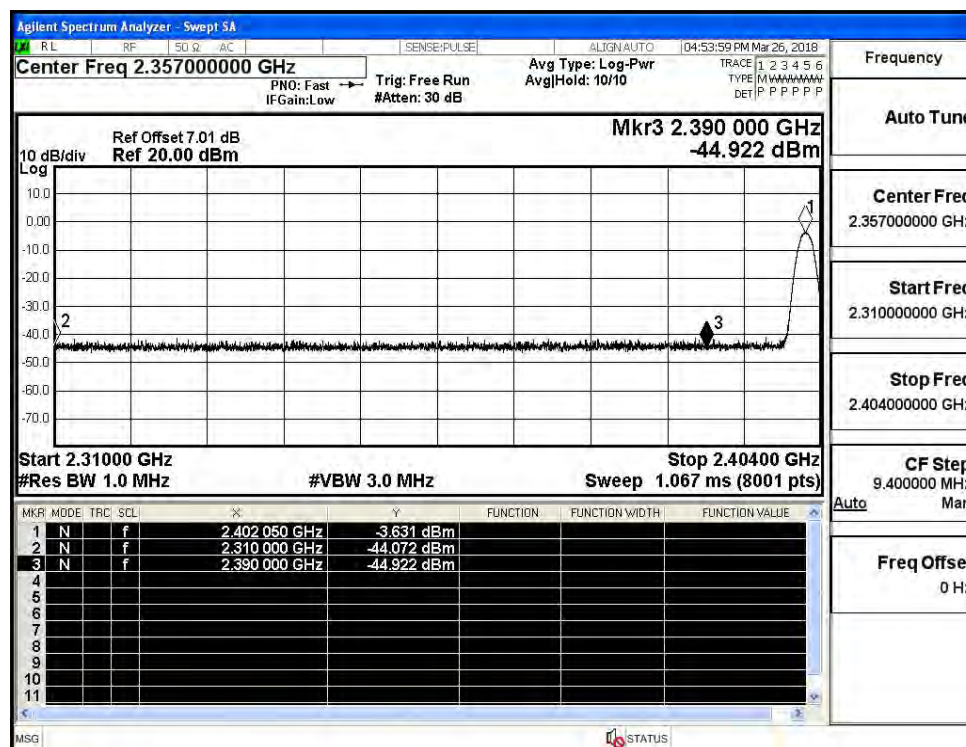
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)

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)

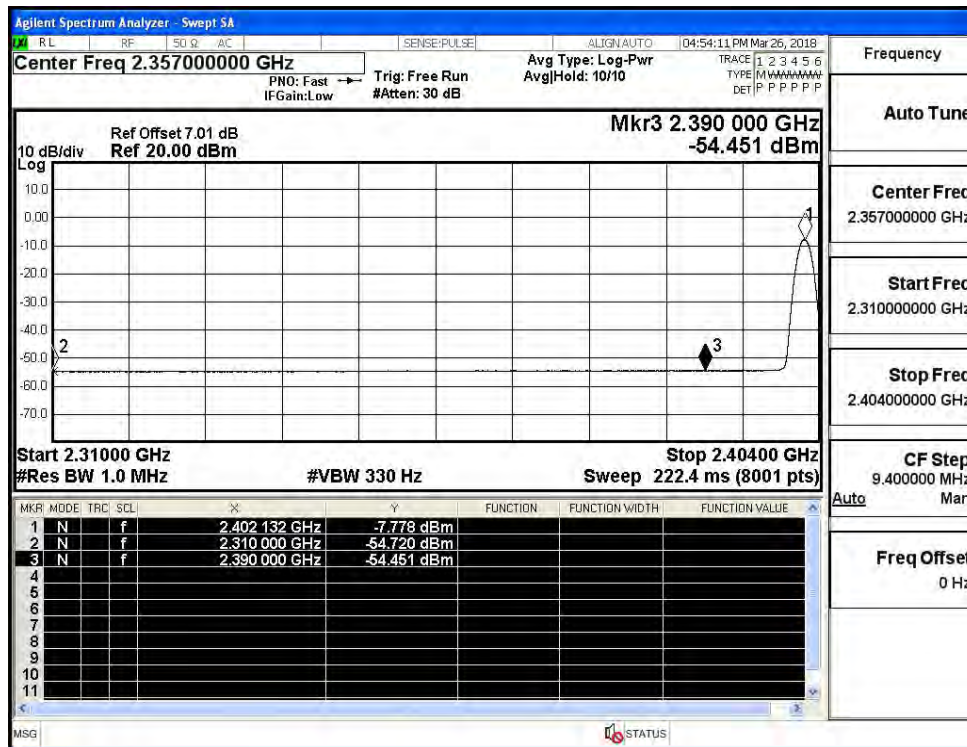
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (High Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (High Channel)



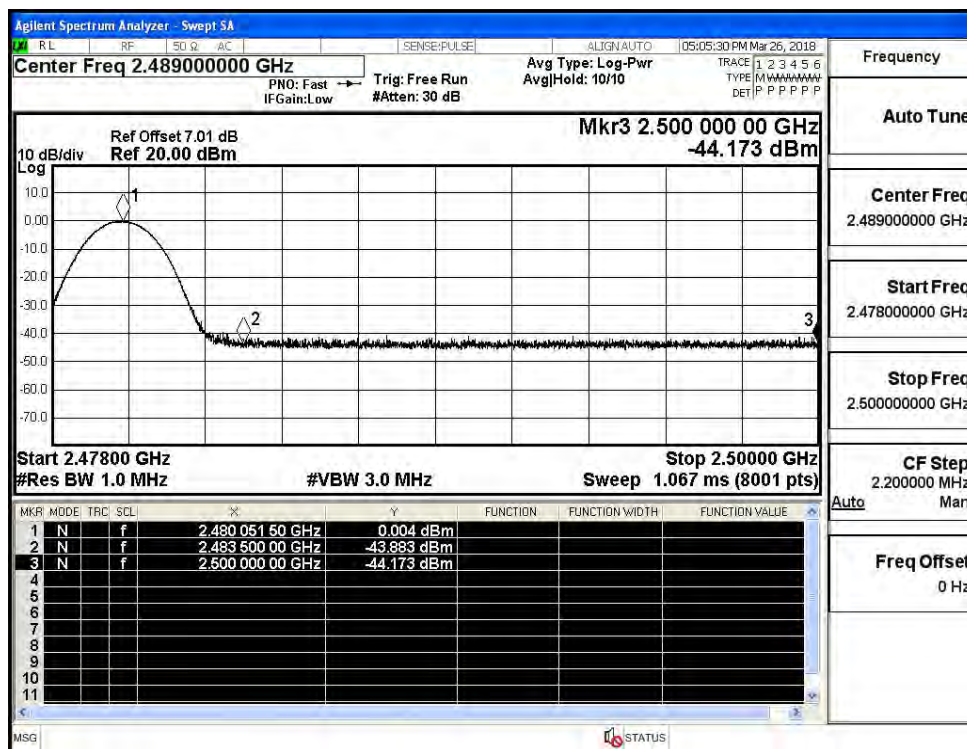
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

