

Appendix A

RF Test Data for BT V4.0 (BDR/EDR) (Conducted Measurement)

Product Name: All-in-One PC

Trade Mark: 

Test Model: EV-AIO-185-1

Environmental Conditions

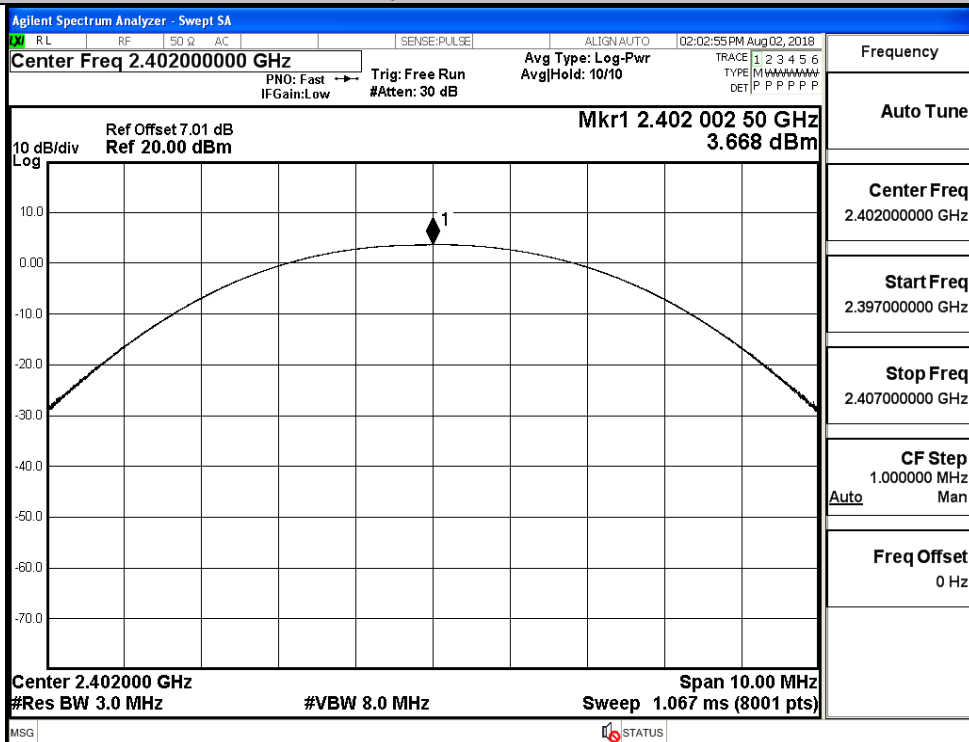
Temperature:	24.6 ° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Wilson.Hong
Supervised by:	Jayden.Zhuo

A.1 Maximum Conducted Peak Output Power

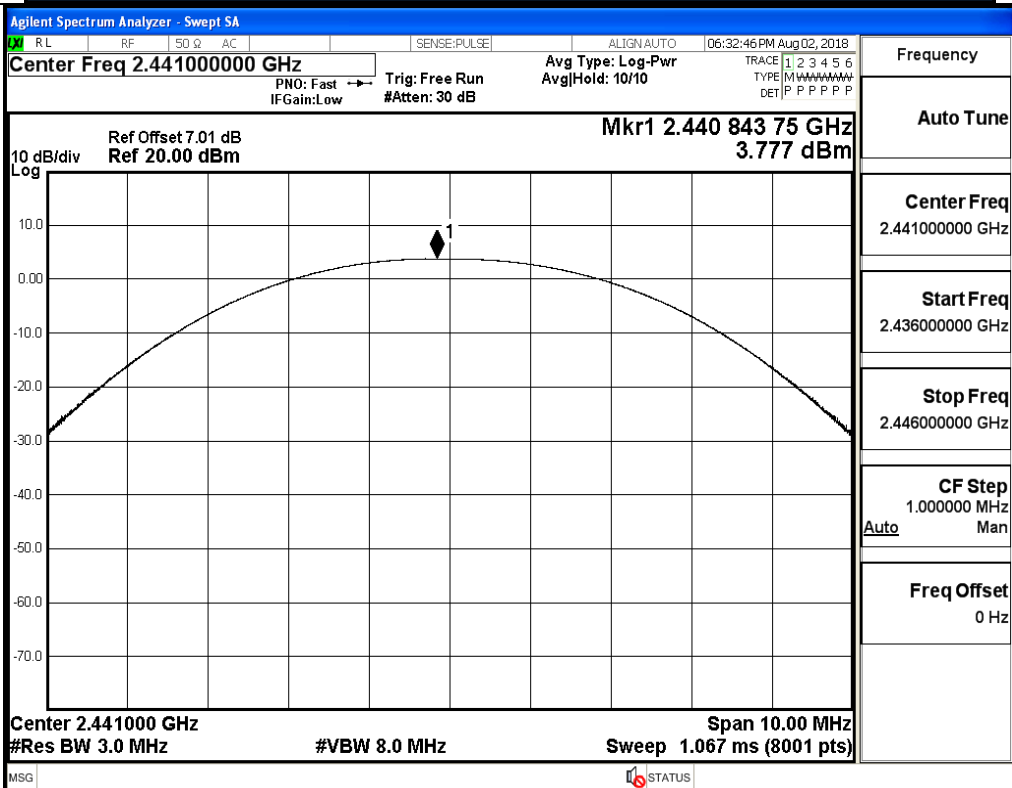
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.668	21	PASS
	MCH	3.777	21	PASS
	HCH	2.131	21	PASS
$\pi/4$ DQPSK	LCH	4.941	21	PASS
	MCH	3.427	21	PASS
	HCH	3.690	21	PASS
8DPSK	LCH	4.458	21	PASS
	MCH	2.811	21	PASS
	HCH	3.637	21	PASS

Test Graphs

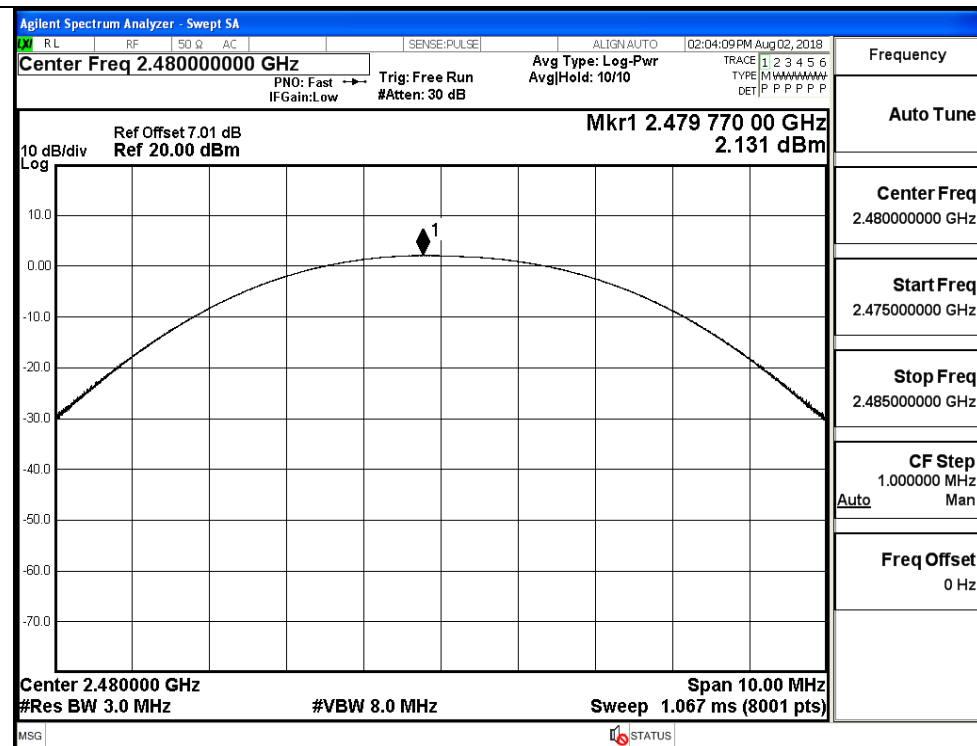
GFSK/LCH



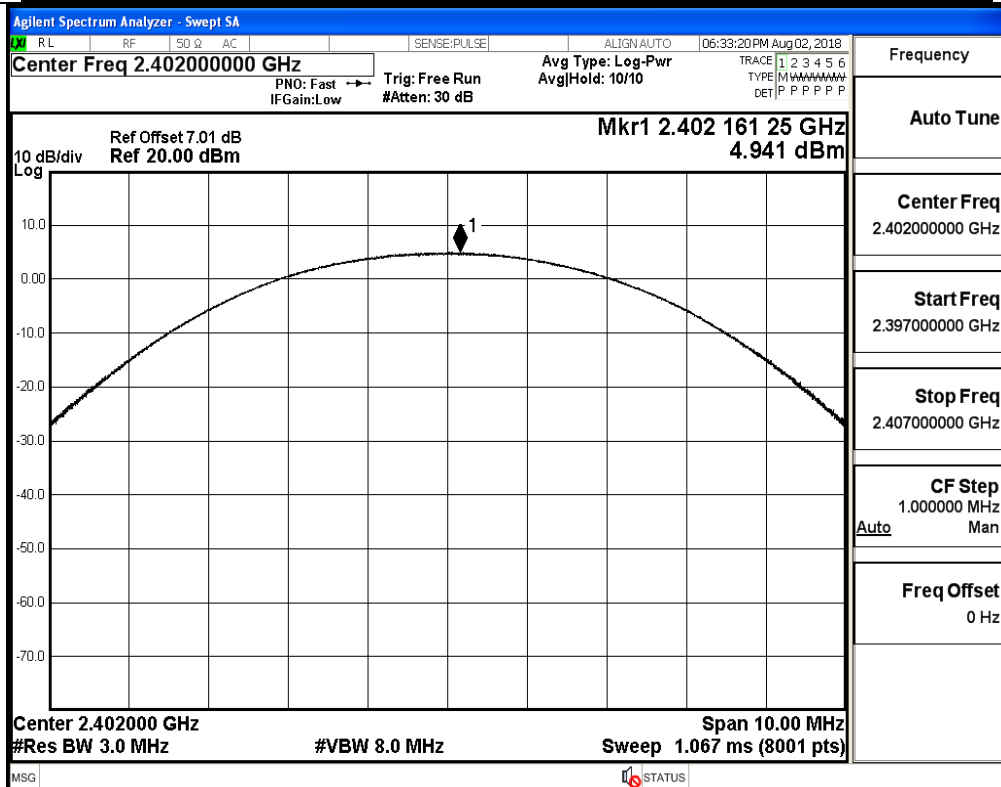
GFSK/MCH

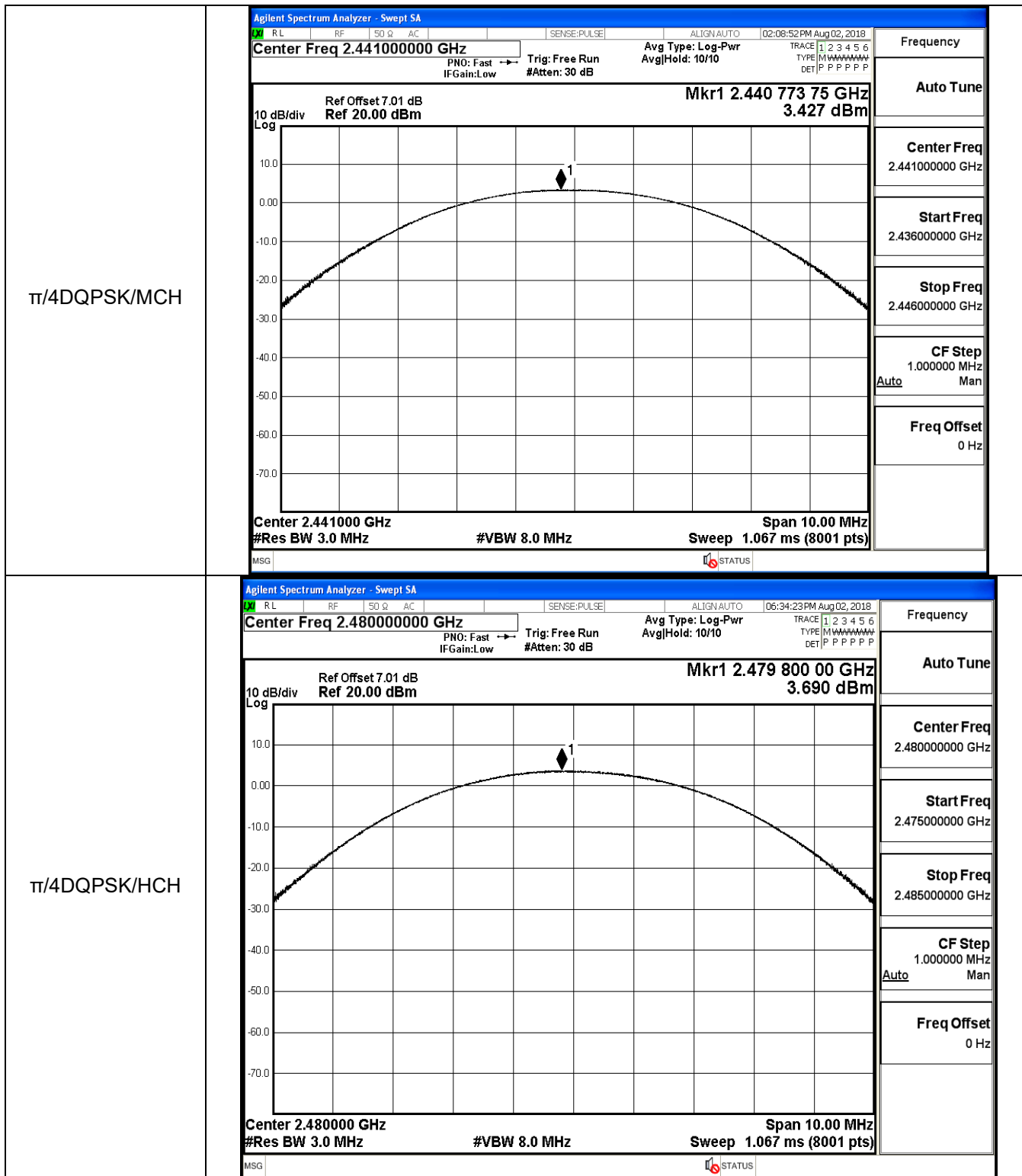


GFSK/HCH

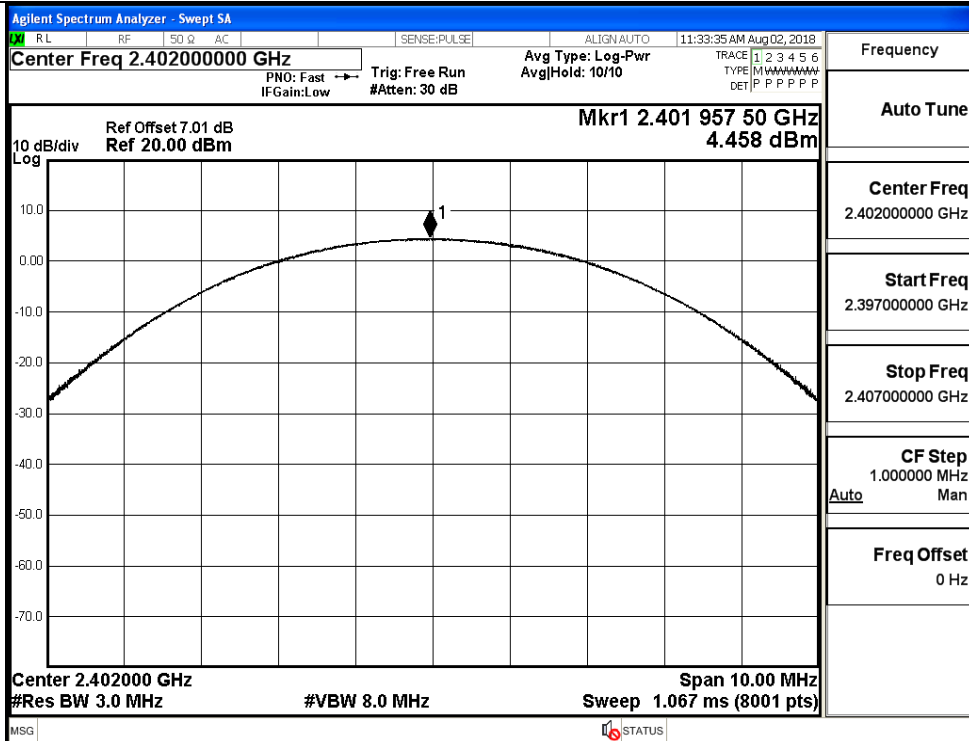


$\pi/4$ DQPSK/LCH

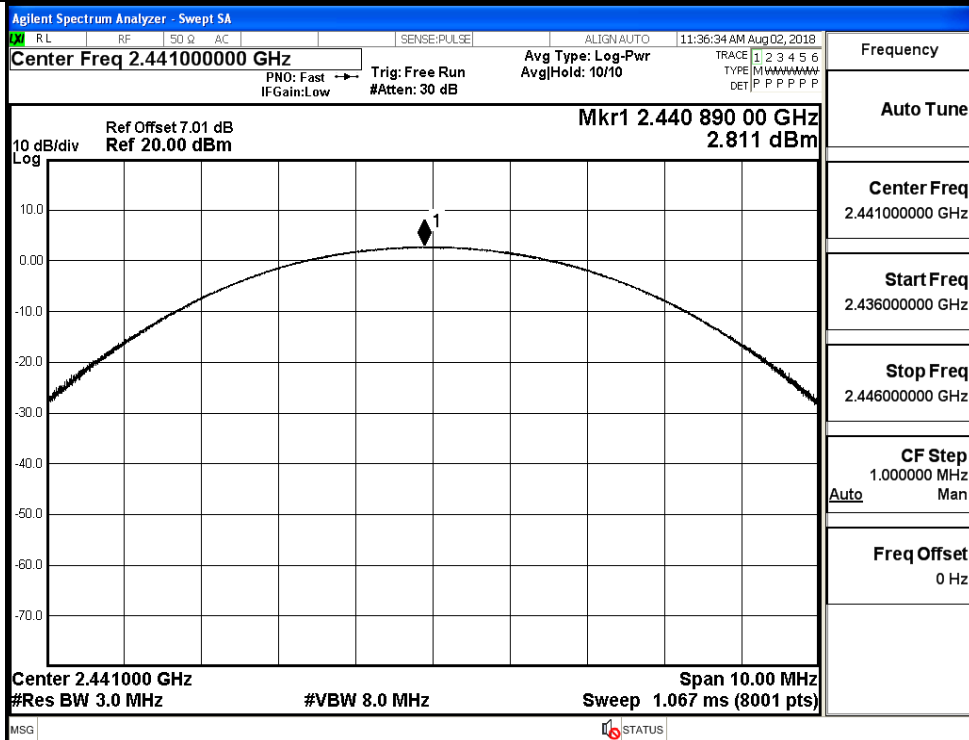




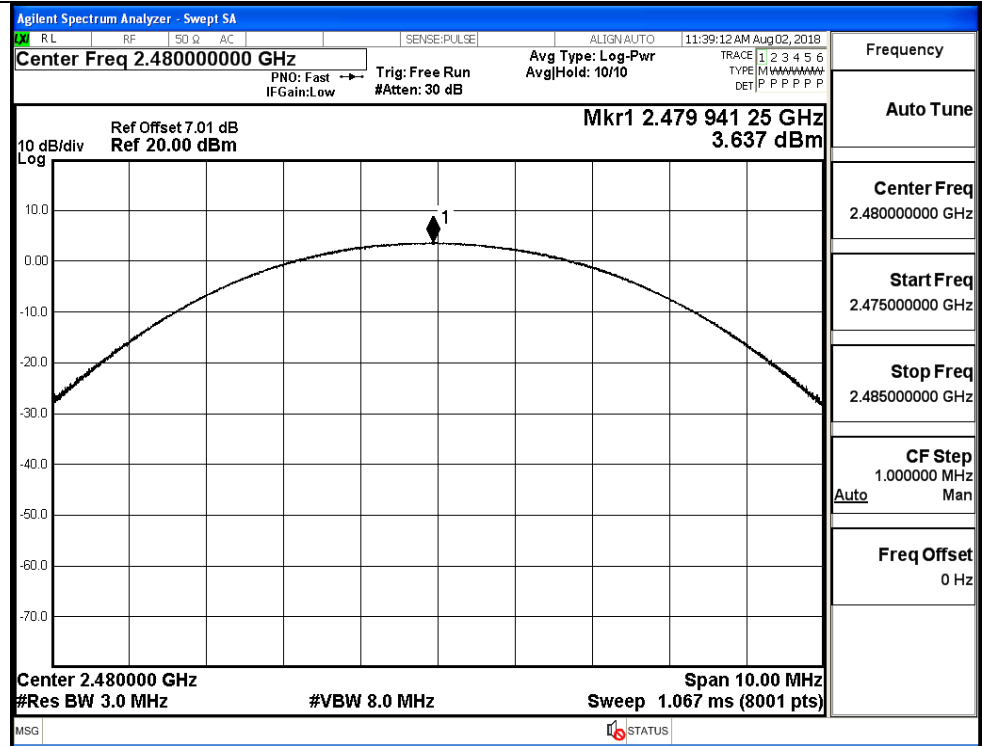
8DPSK/LCH



8DPSK/MCH



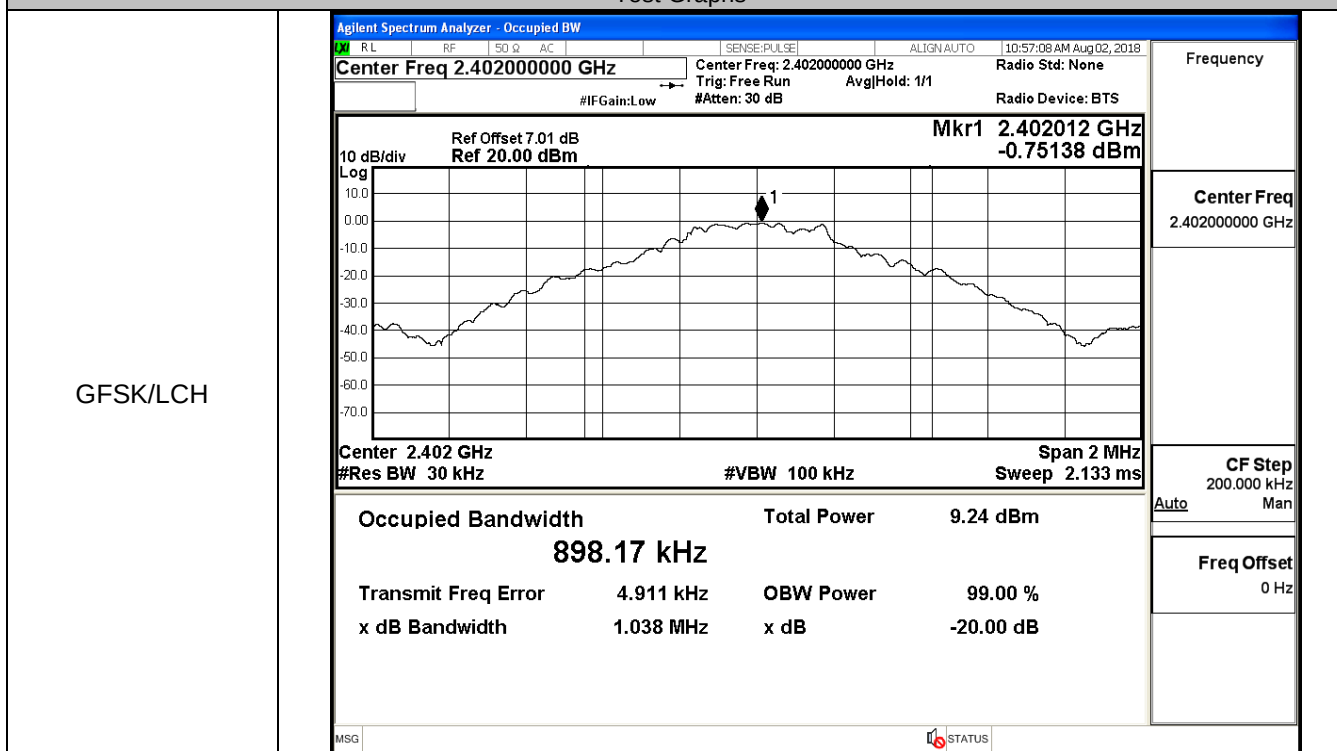
8DPSK/HCH



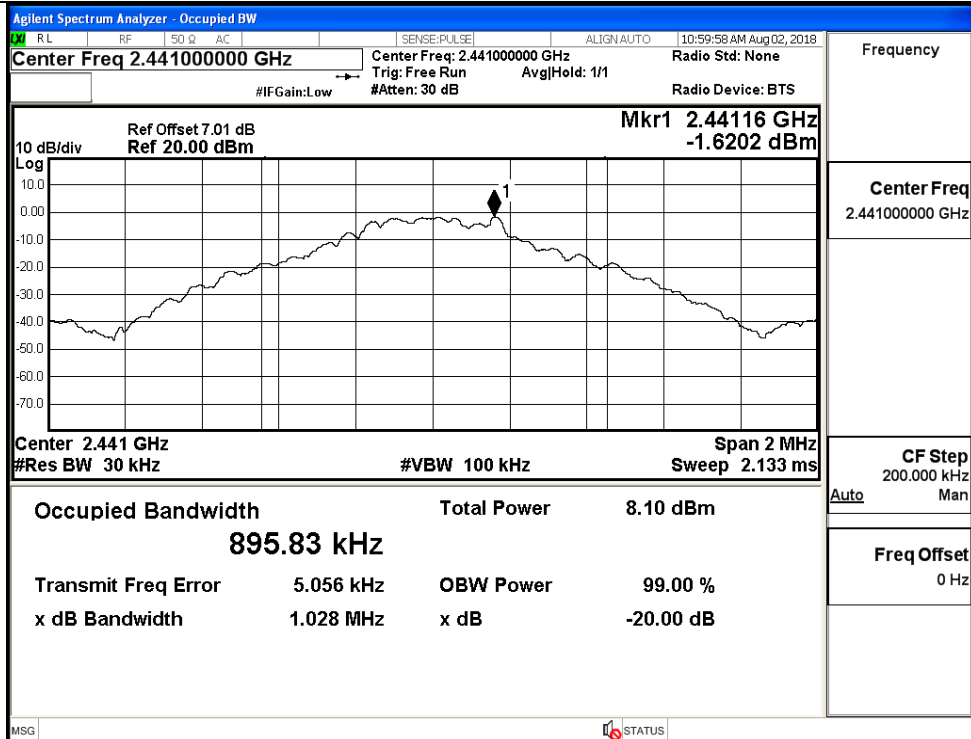
A.2 99% and 20dB Bandwidth

Mode	Channel.	99% Bandwidth [MHz]	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.89817	1.038	Not Specified	PASS
	MCH	0.89583	1.028	Not Specified	PASS
	HCH	0.85338	0.9377	Not Specified	PASS
π /4DQPSK	LCH	1.1695	1.291	Not Specified	PASS
	MCH	1.1839	1.315	Not Specified	PASS
	HCH	1.1727	1.313	Not Specified	PASS
8DPSK	LCH	1.1798	1.296	Not Specified	PASS
	MCH	1.1959	1.300	Not Specified	PASS
	HCH	1.1825	1.295	Not Specified	PASS

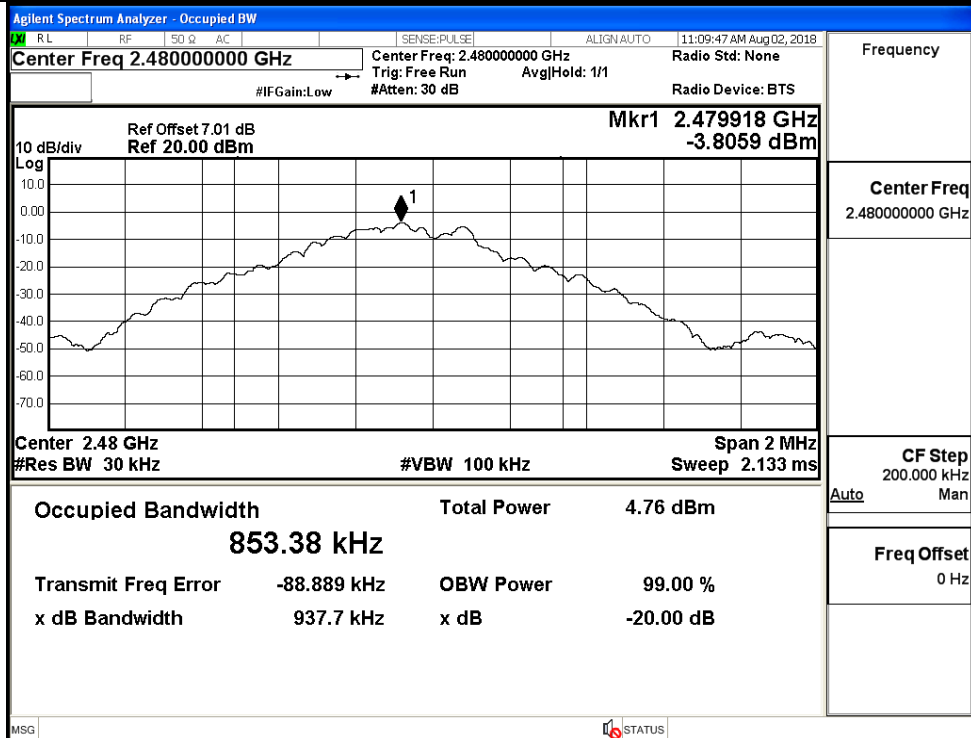
Test Graphs



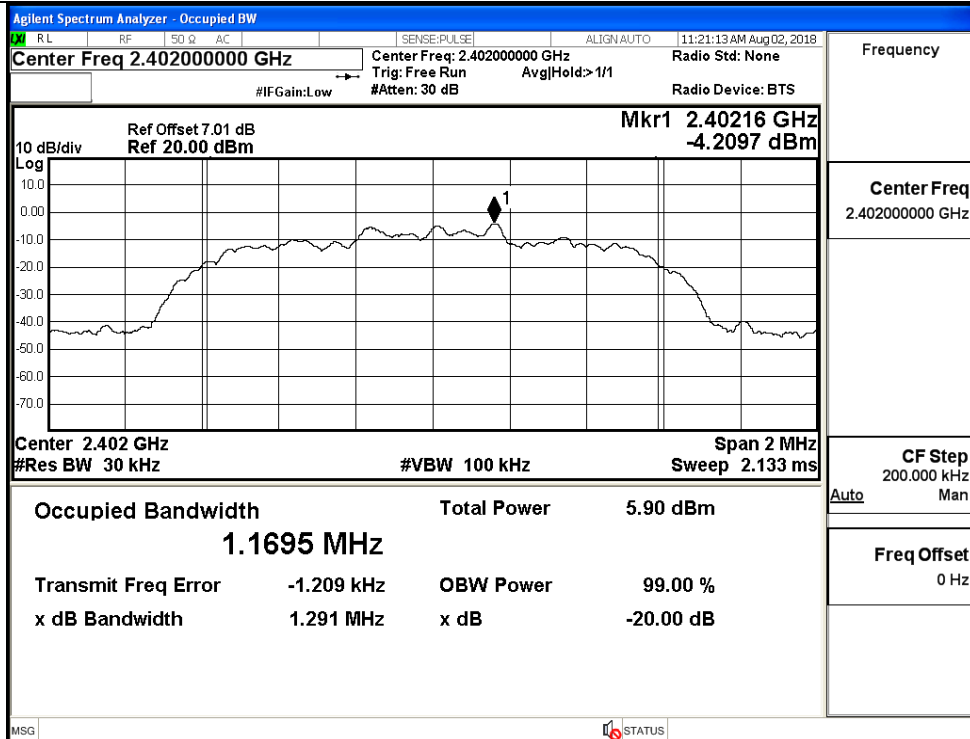
GFSK/MCH



GFSK/HCH



$\pi/4$ DQPSK/LCH



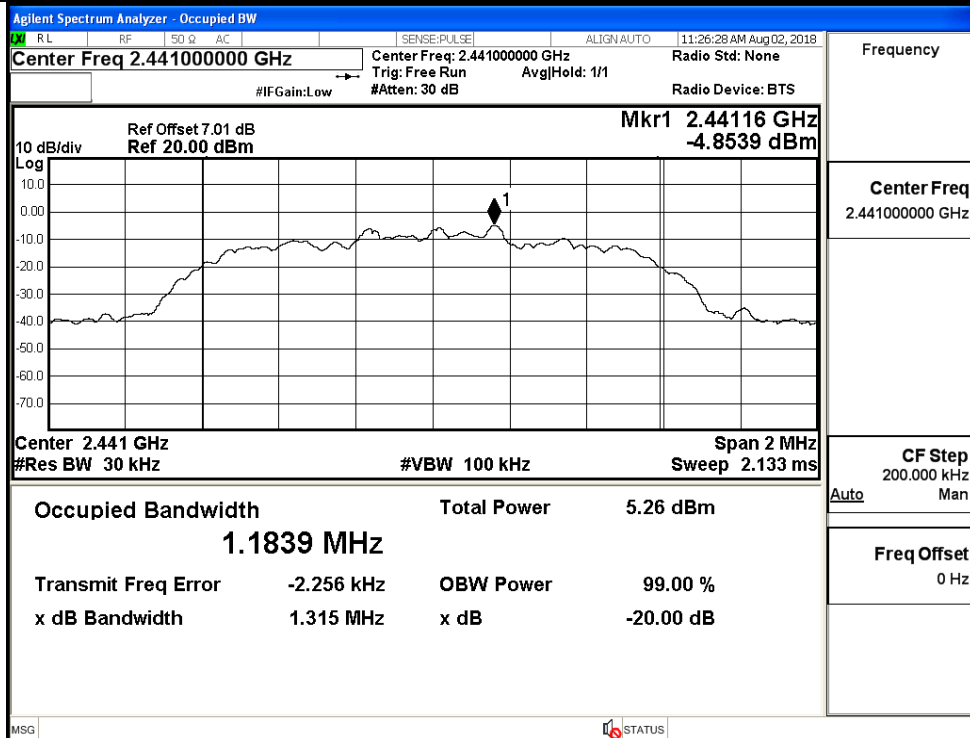
Frequency

Center Freq
2.40200000 GHz

CF Step
200.000 kHz
Man

Freq Offset
0 Hz

$\pi/4$ DQPSK/MCH

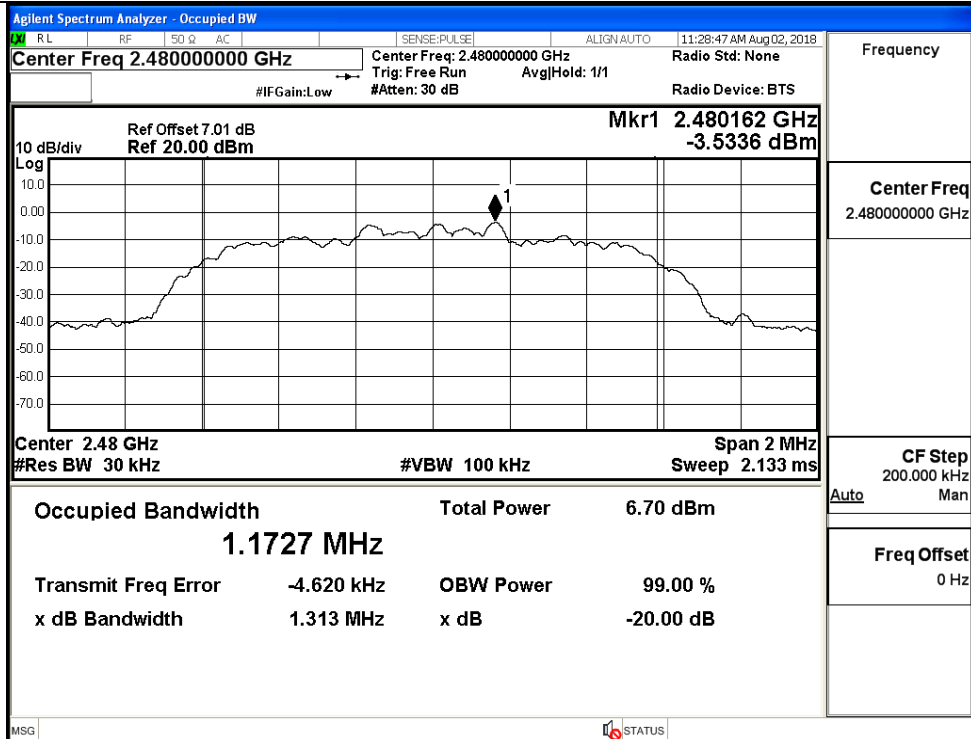


Frequency

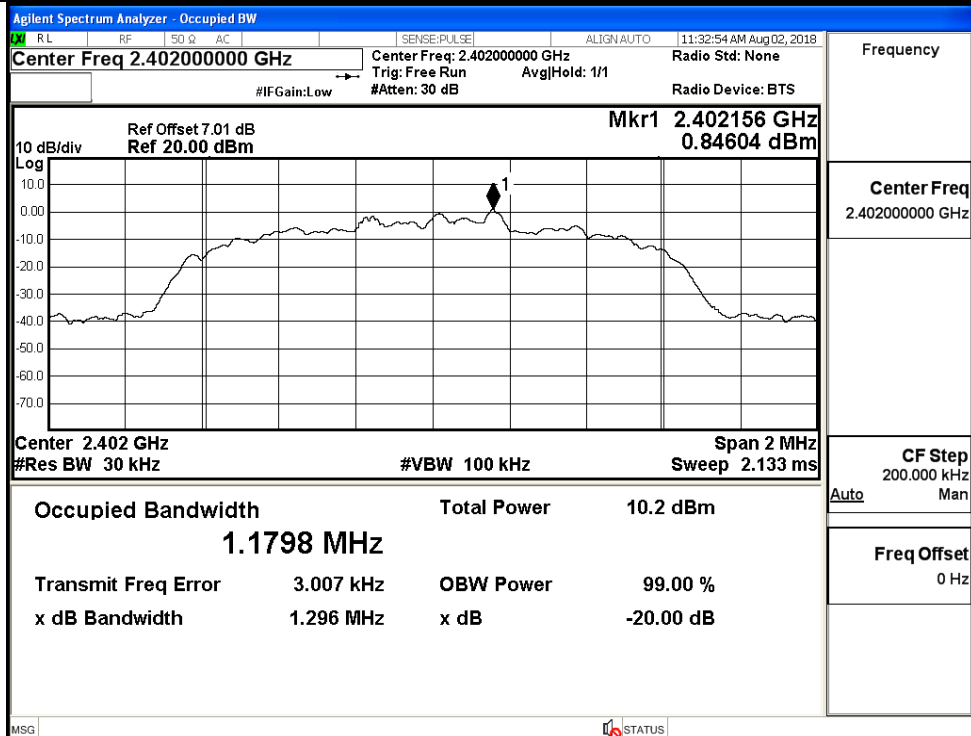
Center Freq
2.44100000 GHz

CF Step
200.000 kHz
Man

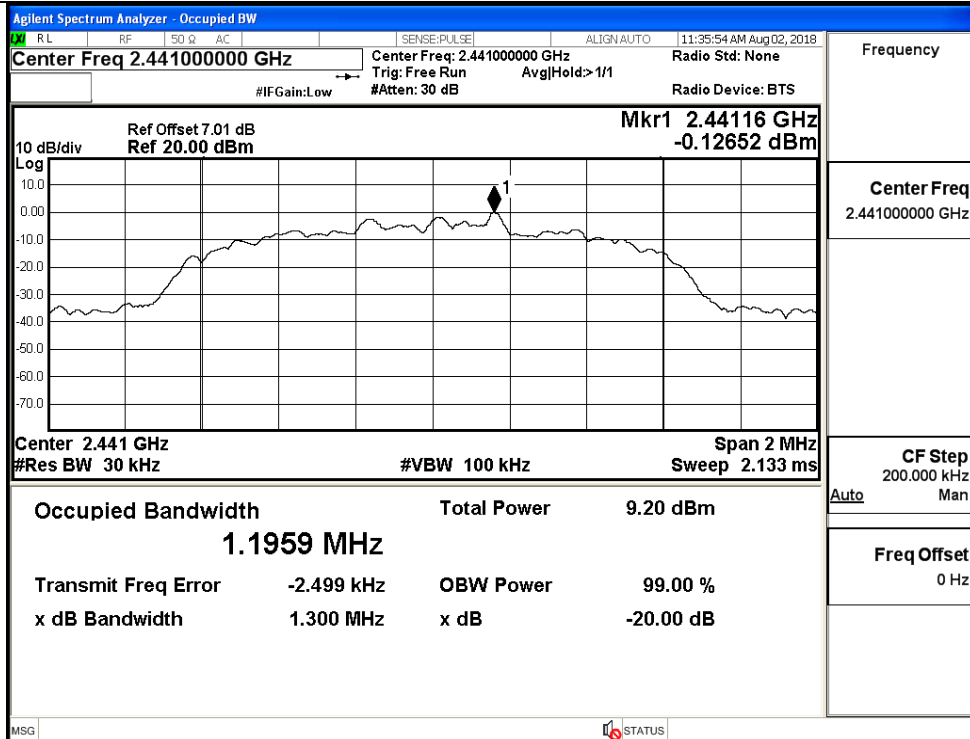
Freq Offset
0 Hz

$\pi/4$ DQPSK/HCH

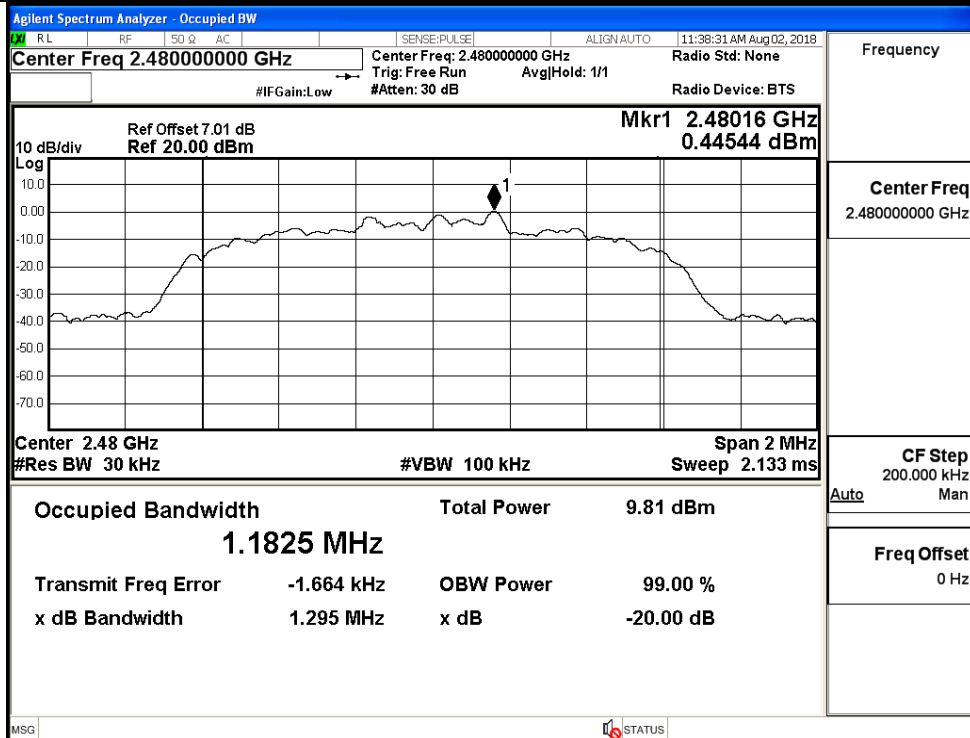
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

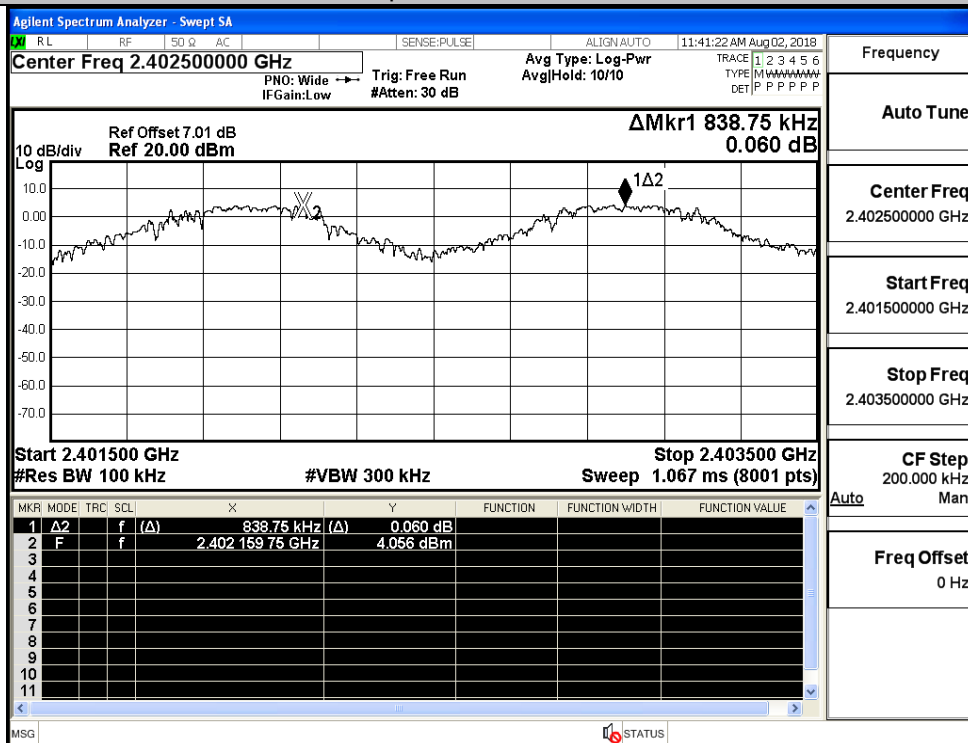


A.3 Carrier Frequency Separation

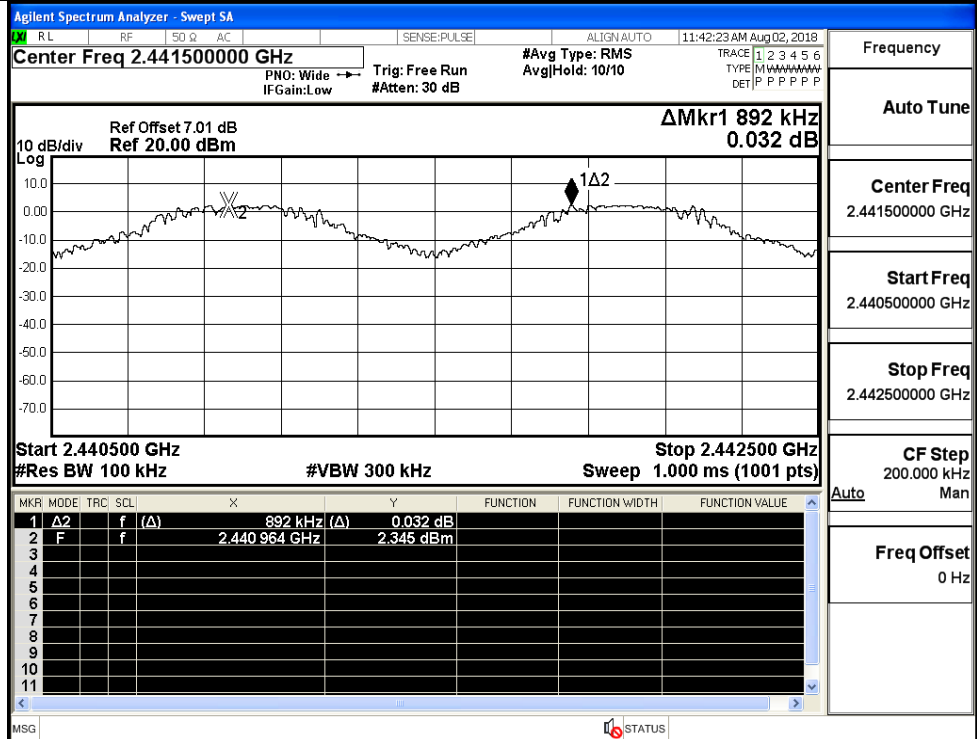
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.839	0.692	PASS
	MCH	0.892	0.692	PASS
	HCH	0.804	0.692	PASS
$\pi/4$ DQPSK	LCH	0.984	0.877	PASS
	MCH	0.996	0.877	PASS
	HCH	1.348	0.877	PASS
8DPSK	LCH	0.974	0.867	PASS
	MCH	1.160	0.867	PASS
	HCH	0.988	0.867	PASS

Test Graphs

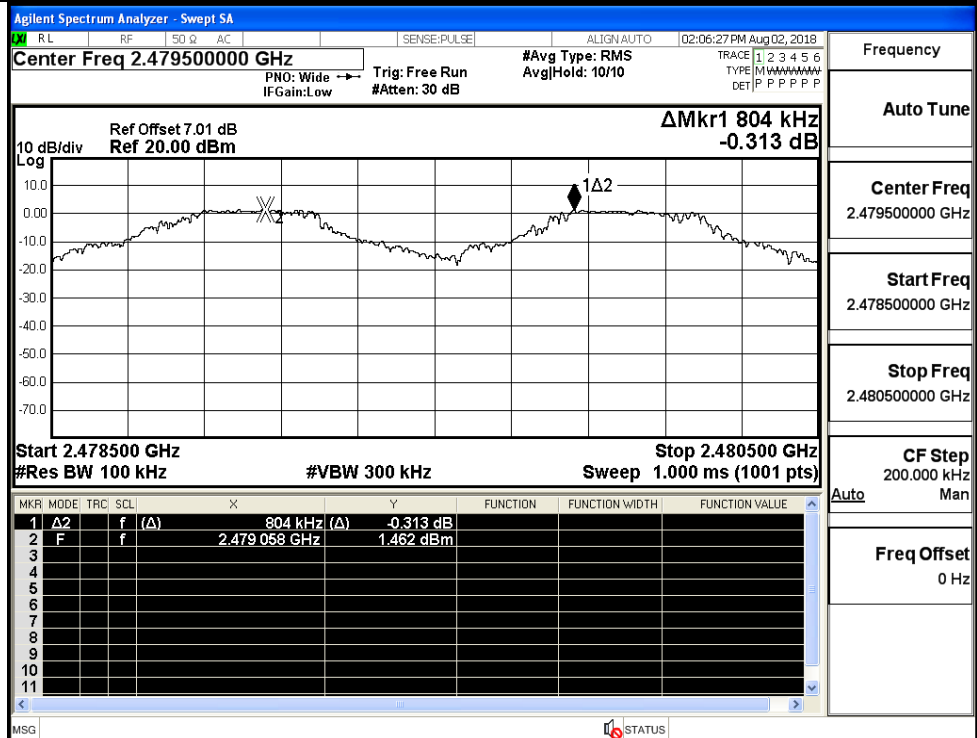
GFSK/LCH



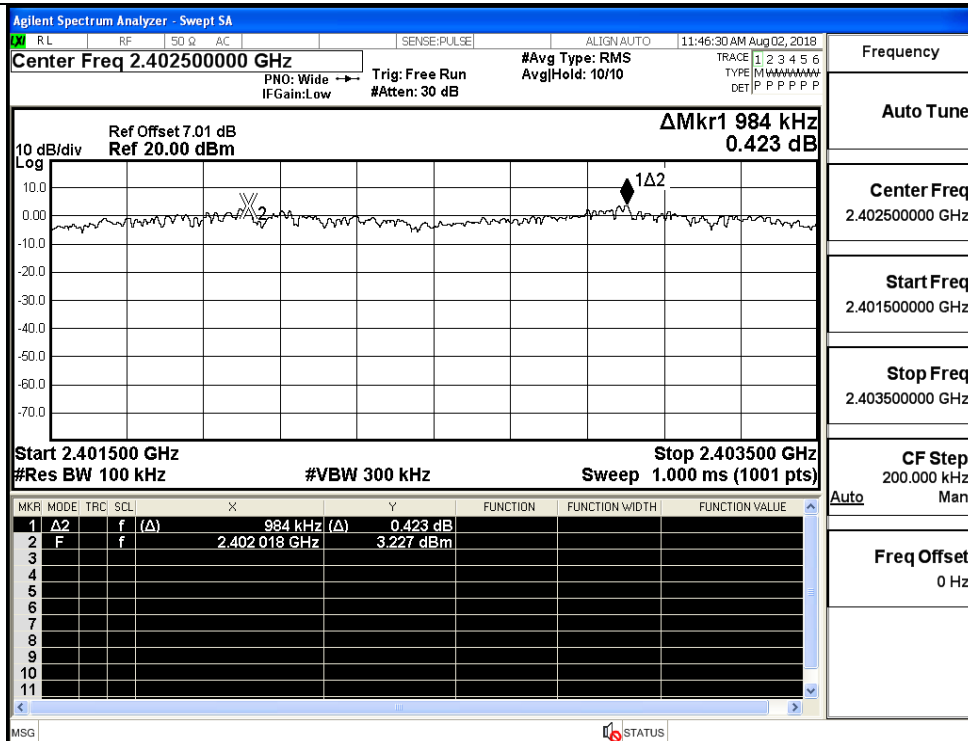
GFSK/MCH



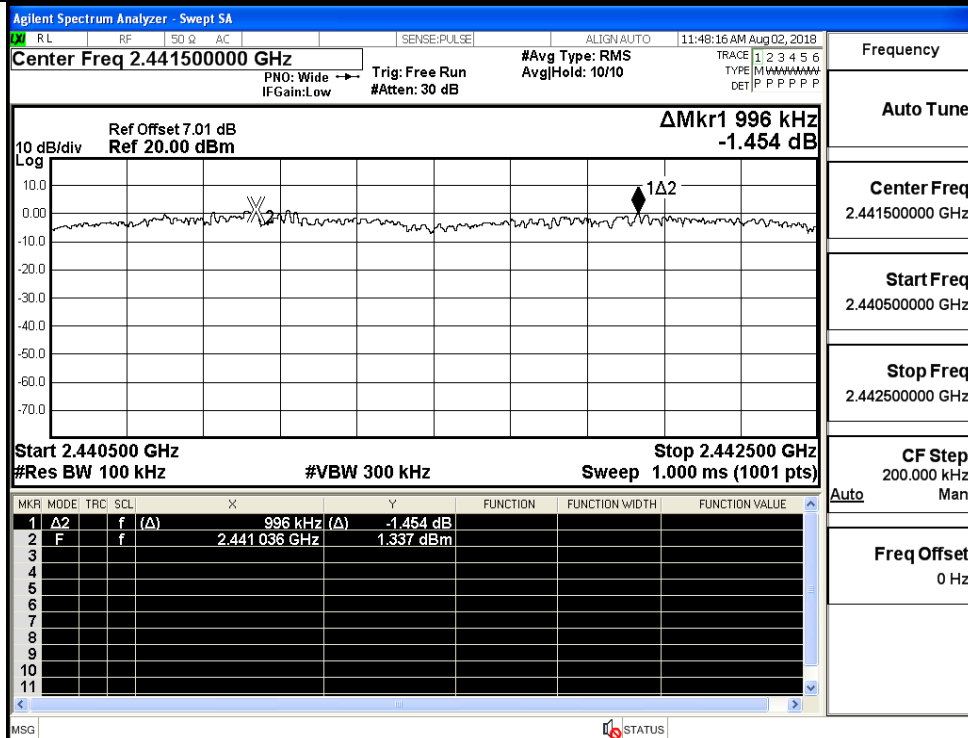
GFSK/HCH



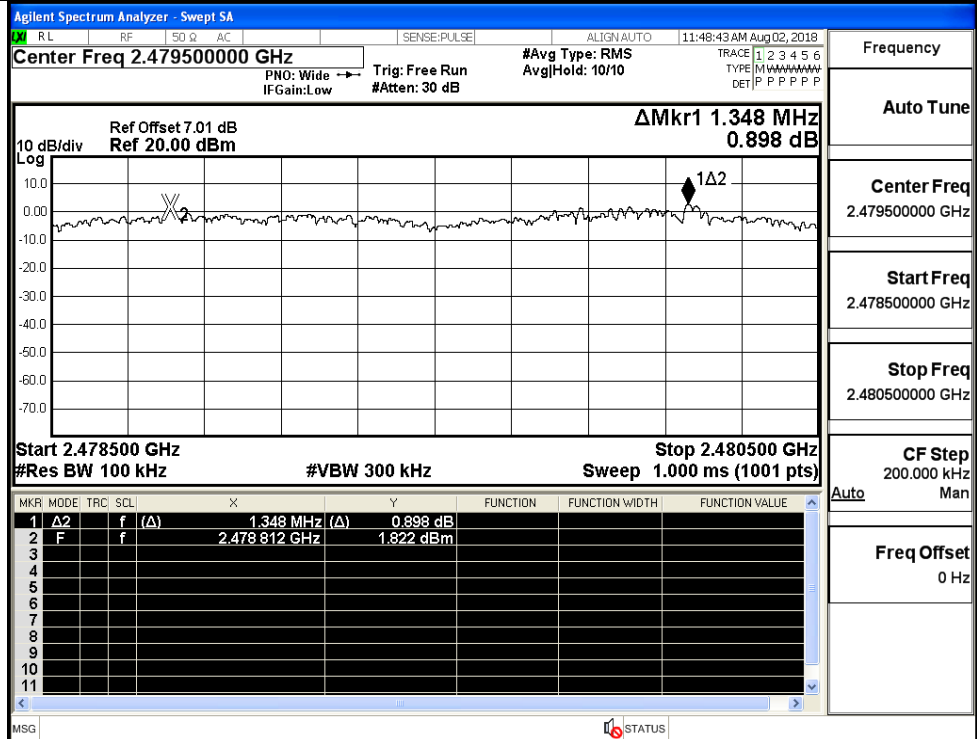
$\pi/4$ DQPSK/LCH



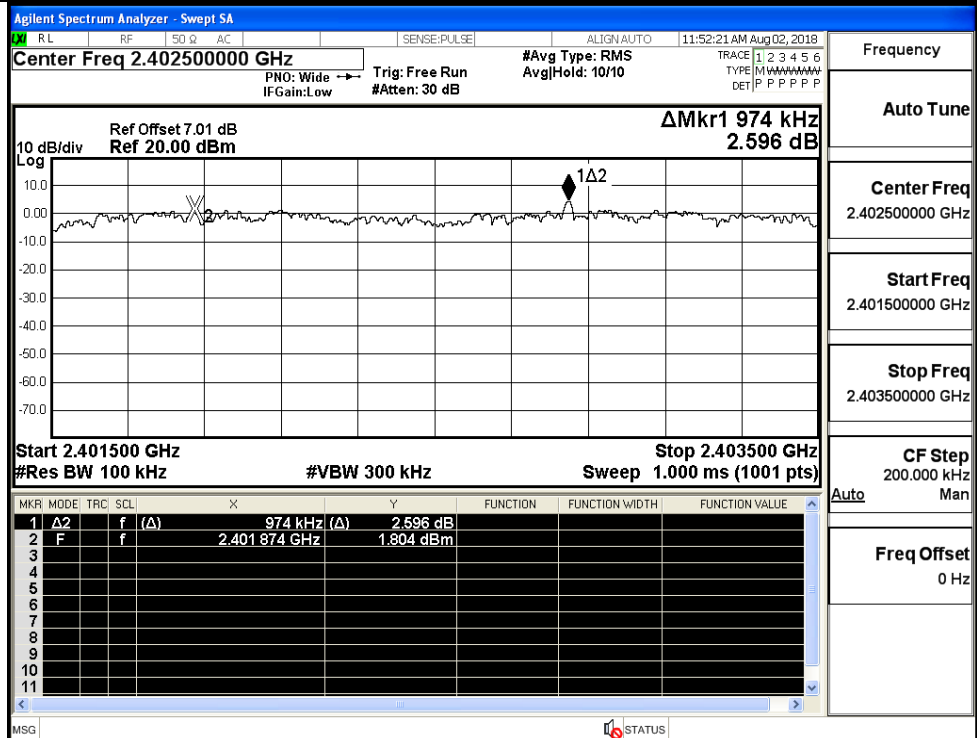
$\pi/4$ DQPSK/MCH



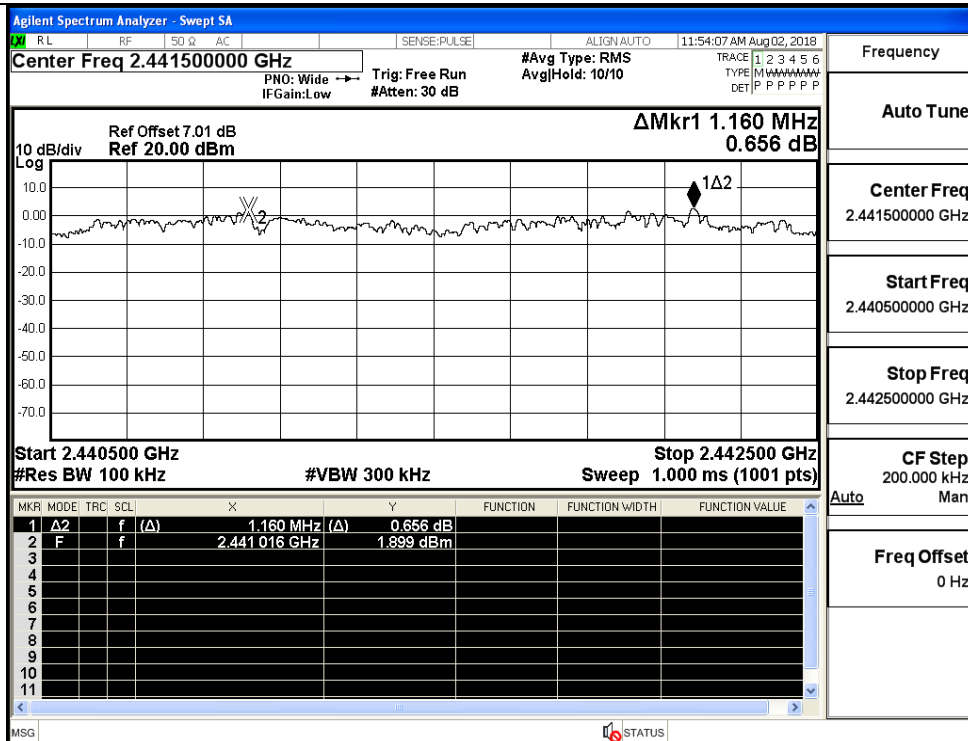
$\pi/4$ DQPSK/HCH



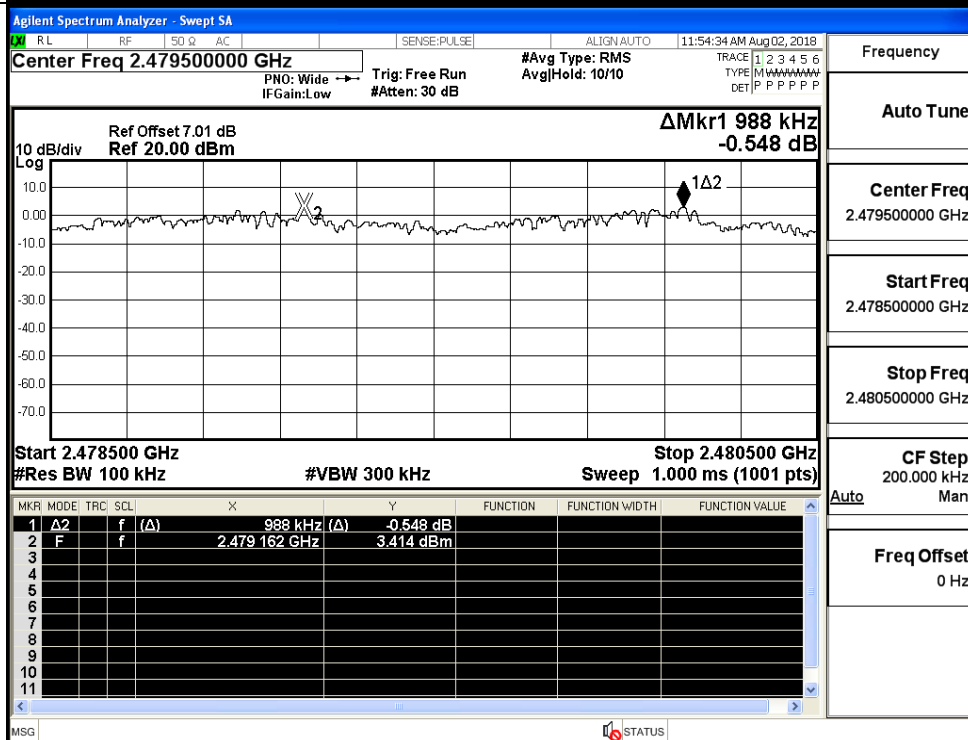
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

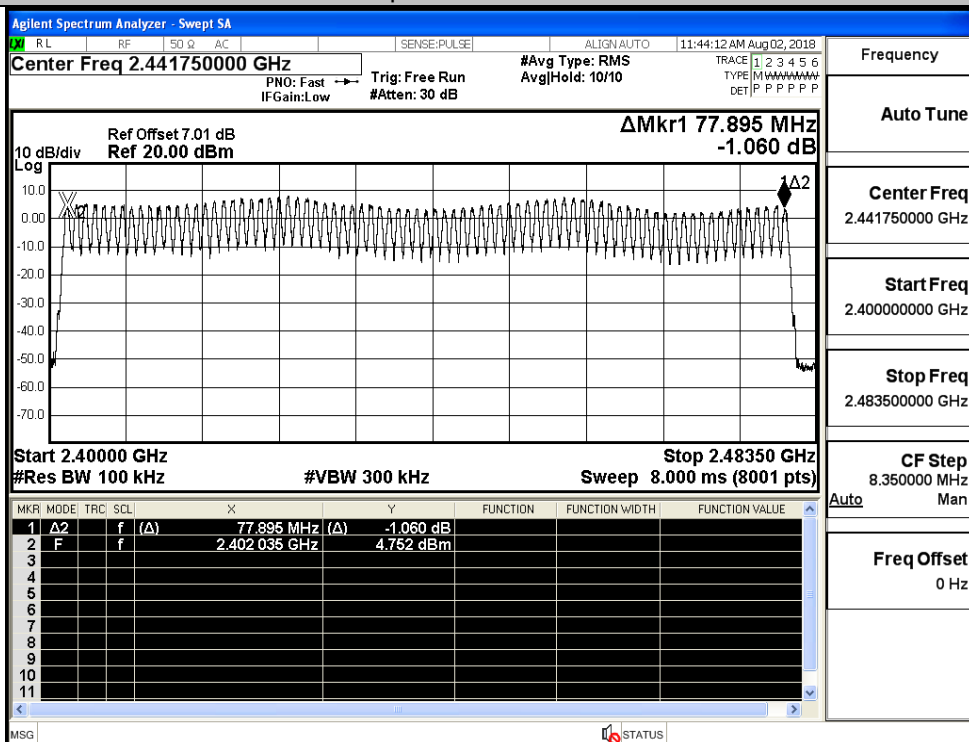
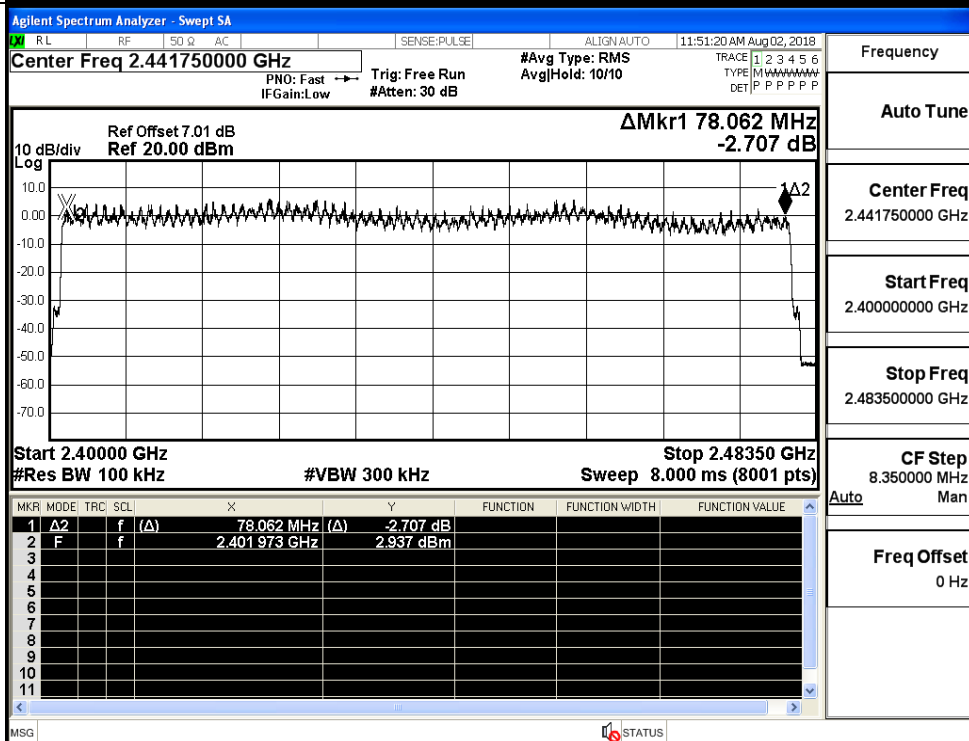


A.4 Hopping Channel Number

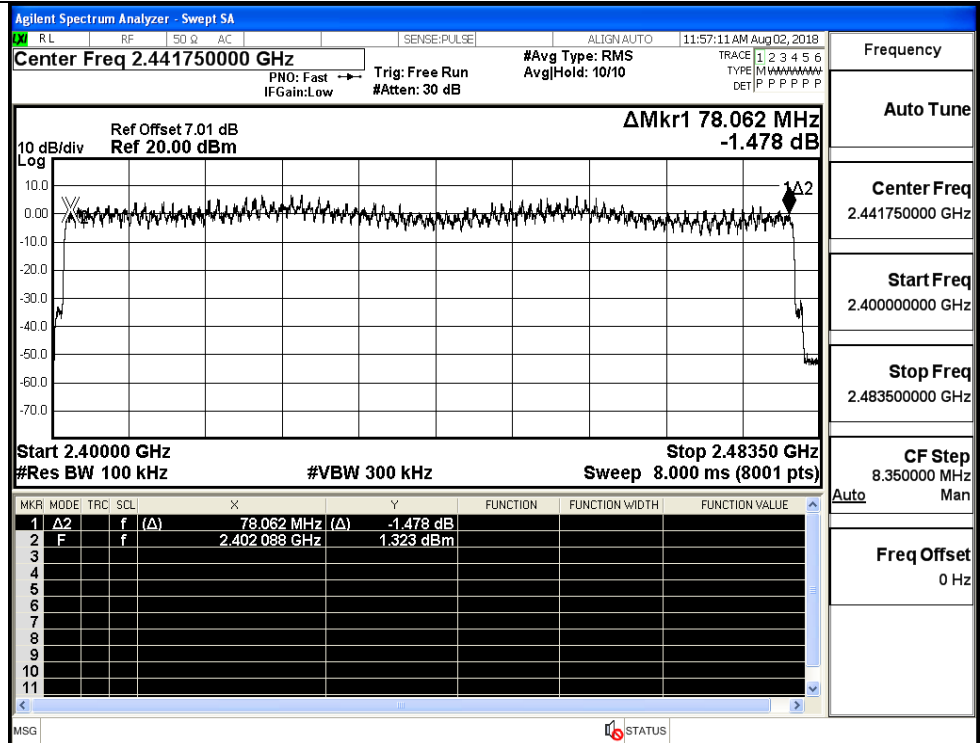
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS
8DPSK	Hop	79	≥ 15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

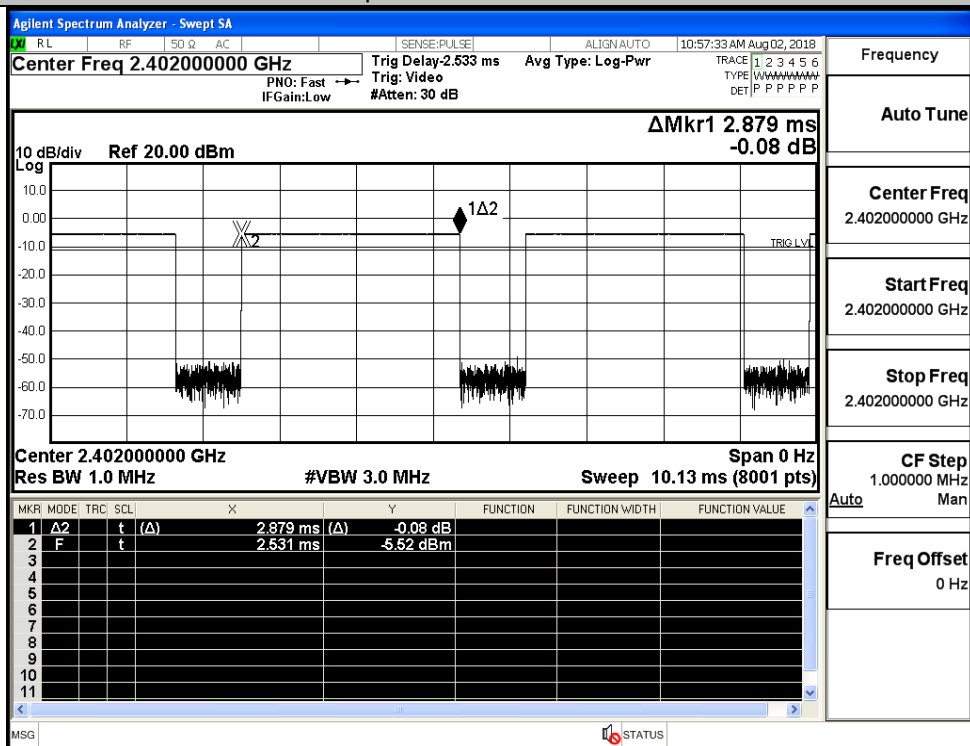


A.5 Dwell Time

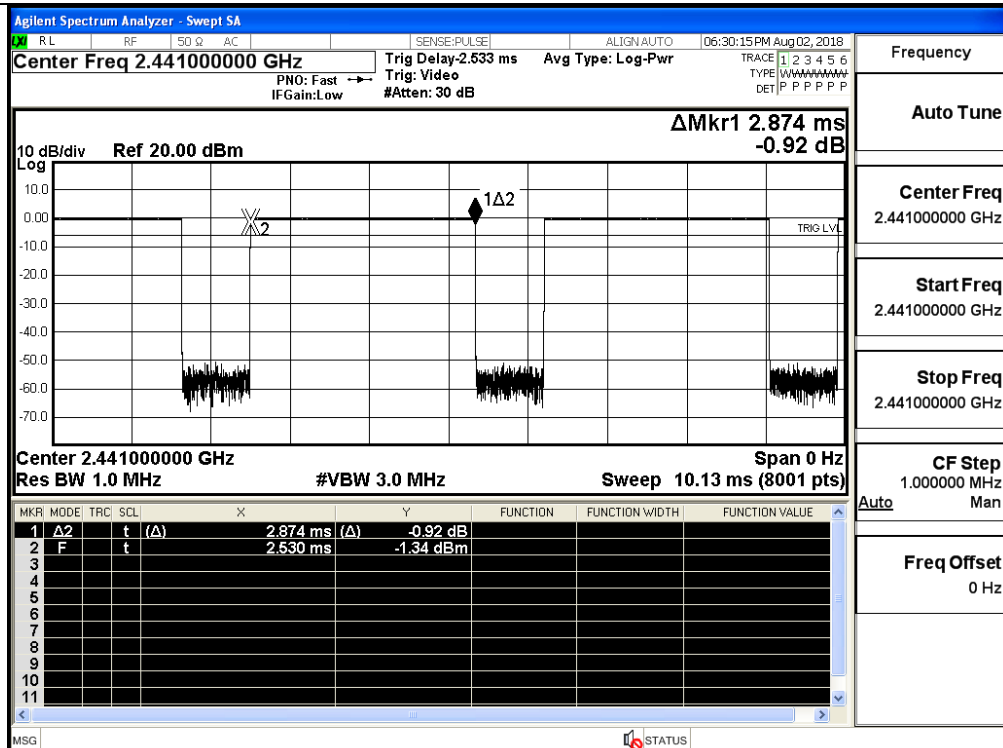
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.182	0.4	PASS
	DH5	HCH	2.91	106.7	0.31	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	1.71	106.7	0.307	0.4	PASS
	2DH5	HCH	2.91	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.88	106.7	0.307	0.4	PASS
	3DH5	MCH	1.71	106.7	0.307	0.4	PASS
	3DH5	HCH	2.91	106.7	0.307	0.4	PASS

Test Graphs

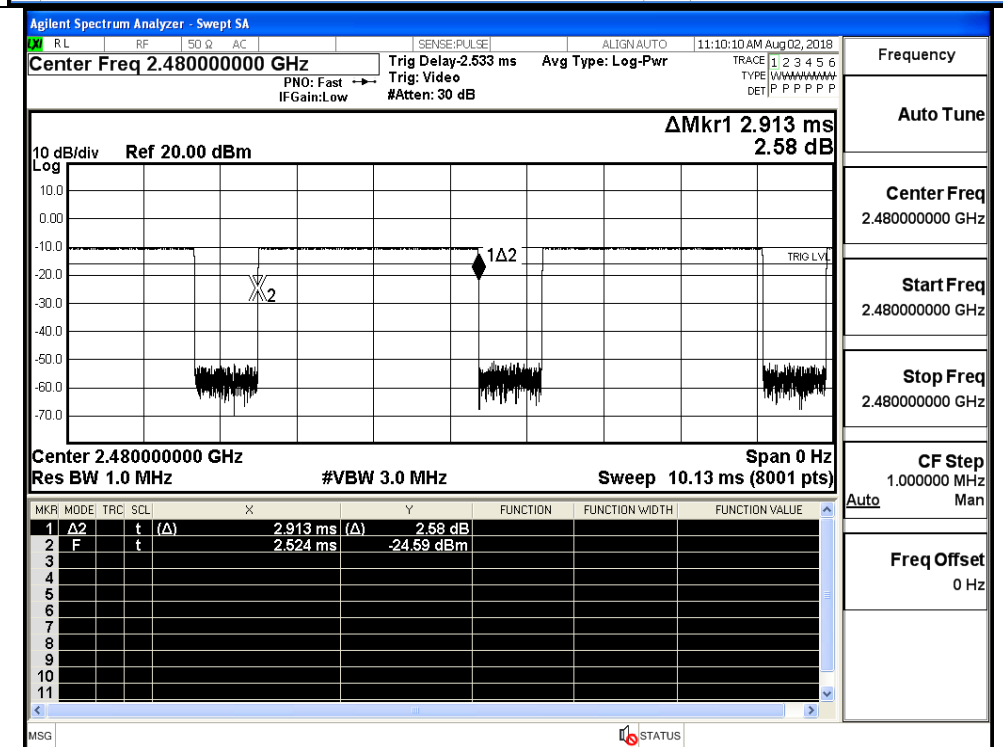
GFSK_DH5/LCH



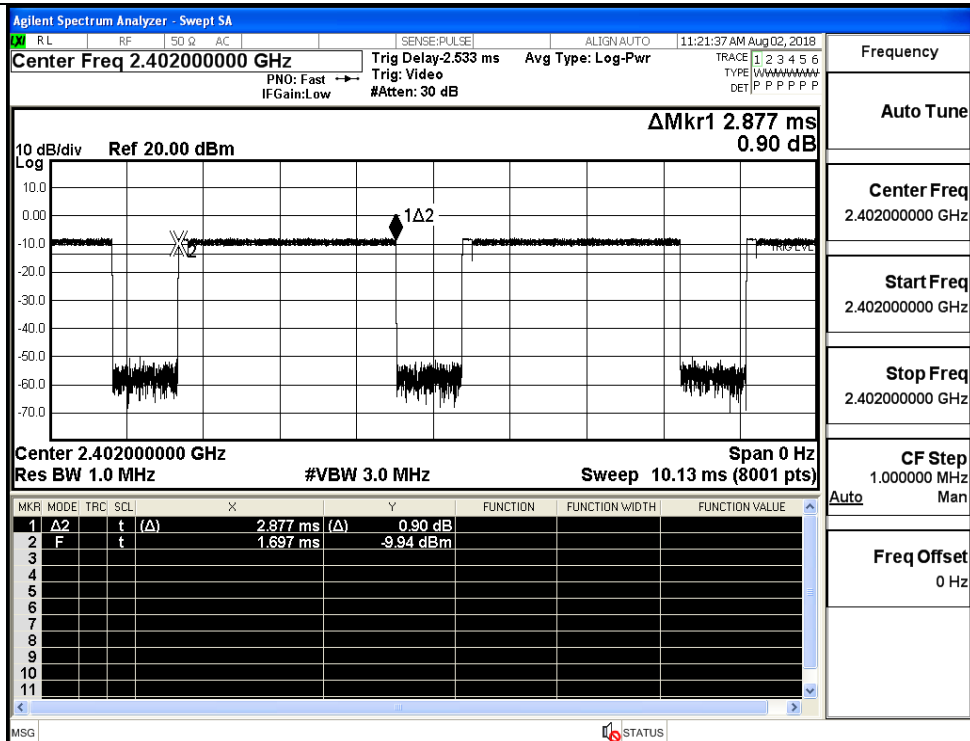
GFSK_DH5/MCH



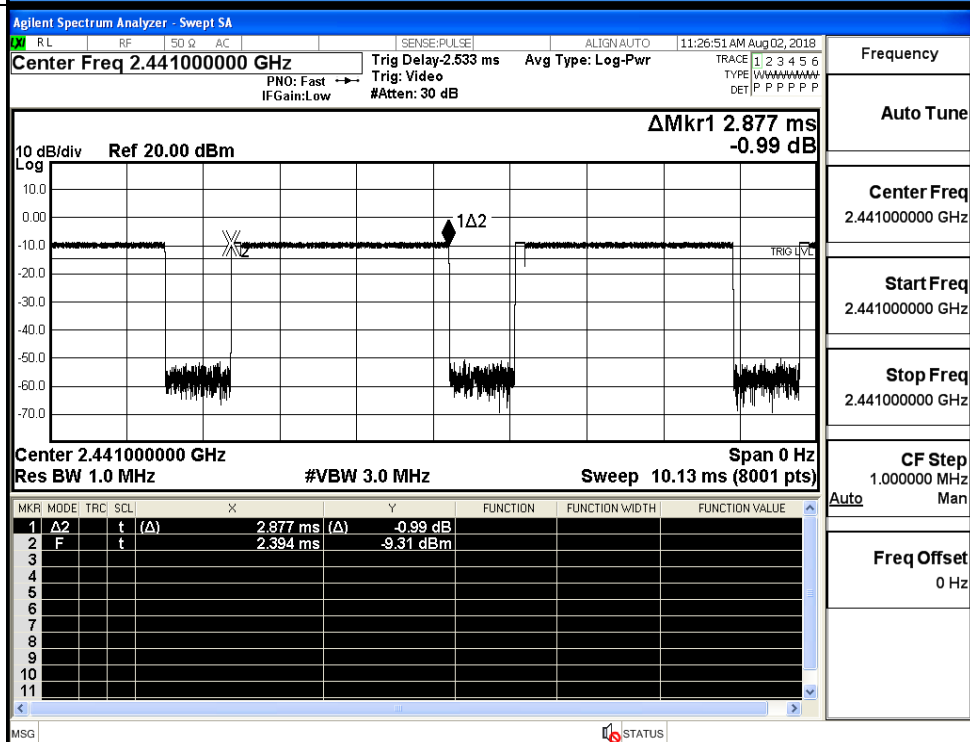
GFSK_DH5/HCH



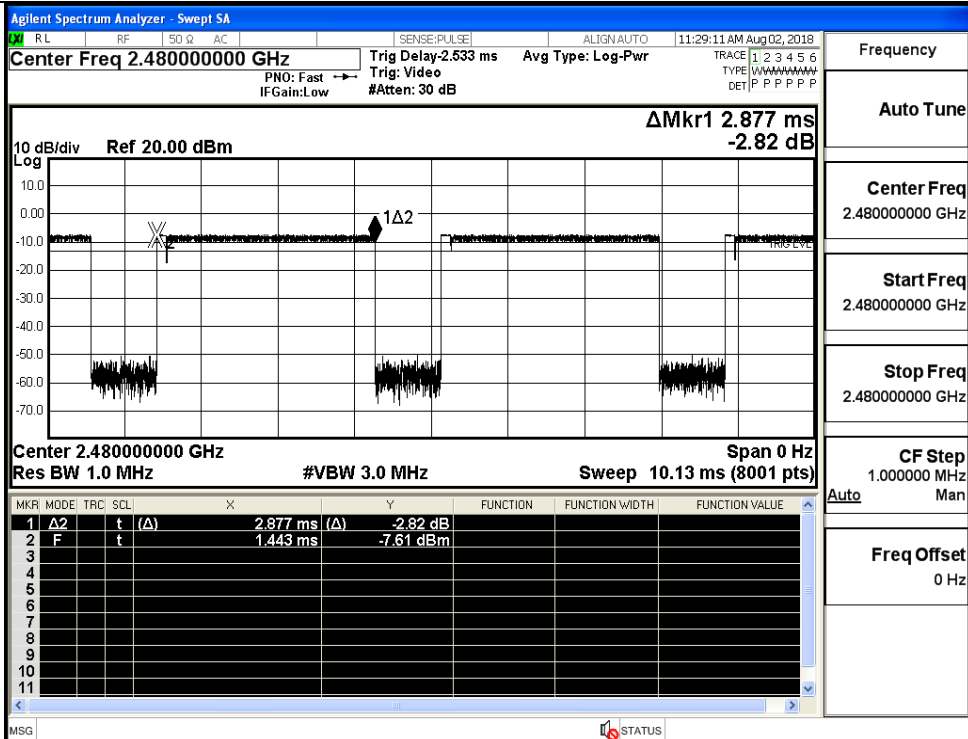
$\pi/4$ DQPSK
_2DH5/LCH



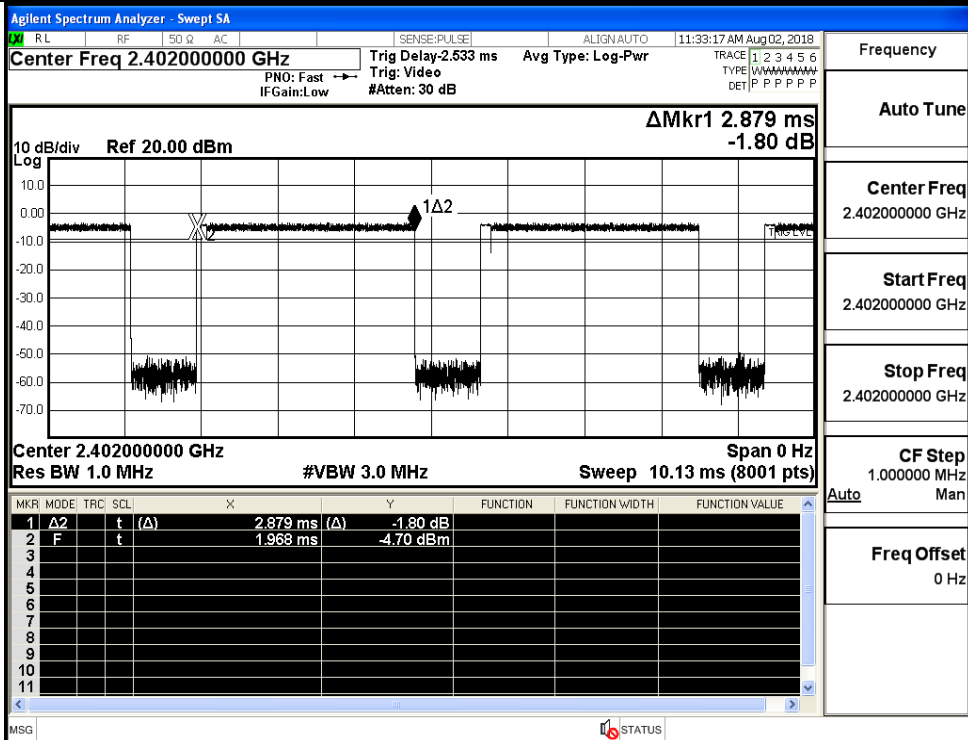
$\pi/4$ DQPSK
_2DH5/MCH



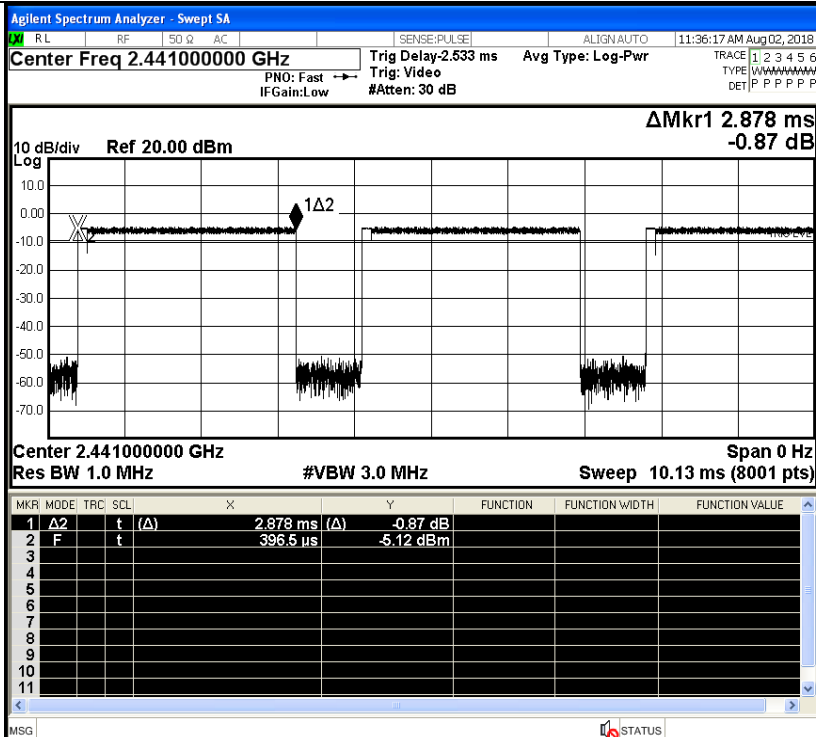
$\pi/4$ DQPSK
_2DH5/HCH



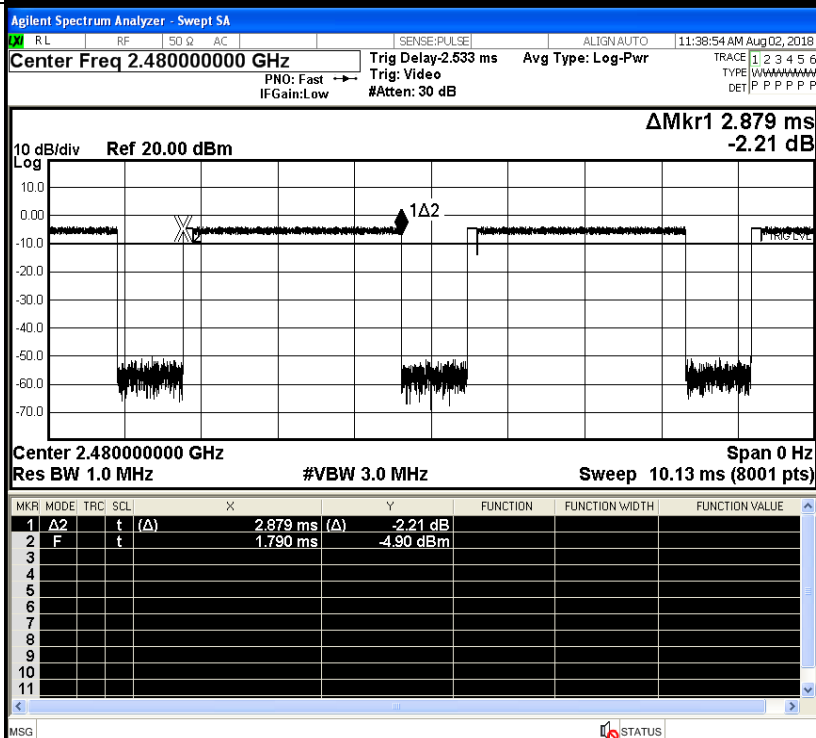
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

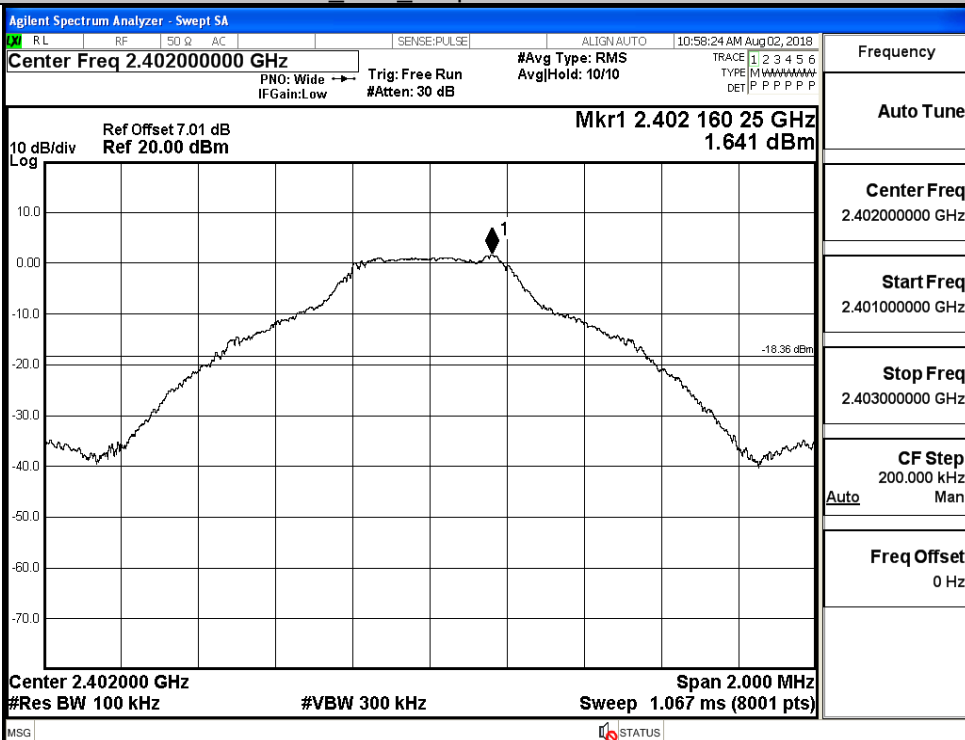


A.6 RF Conducted Spurious Emissions

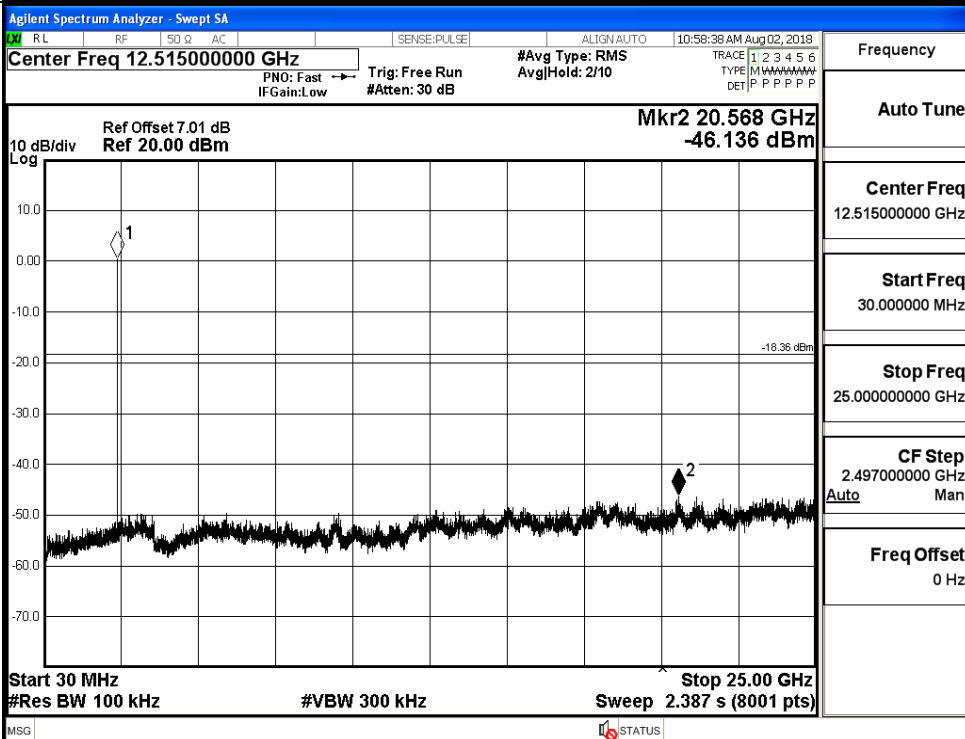
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	1.641	-46.136	-18.359	PASS
	MCH	-1.712	-33.698	-21.712	PASS
	HCH	-3.096	-34.218	-23.096	PASS
$\pi/4$ DQPSK	LCH	-2.188	-46.324	-22.188	PASS
	MCH	-1.75	-45.708	-21.750	PASS
	HCH	-0.87	-45.966	-20.870	PASS
8DPSK	LCH	3.083	-45.853	-16.917	PASS
	MCH	1.418	-45.758	-18.582	PASS
	HCH	2.46	-45.105	-17.540	PASS

GFSK LCH Graphs

Pref

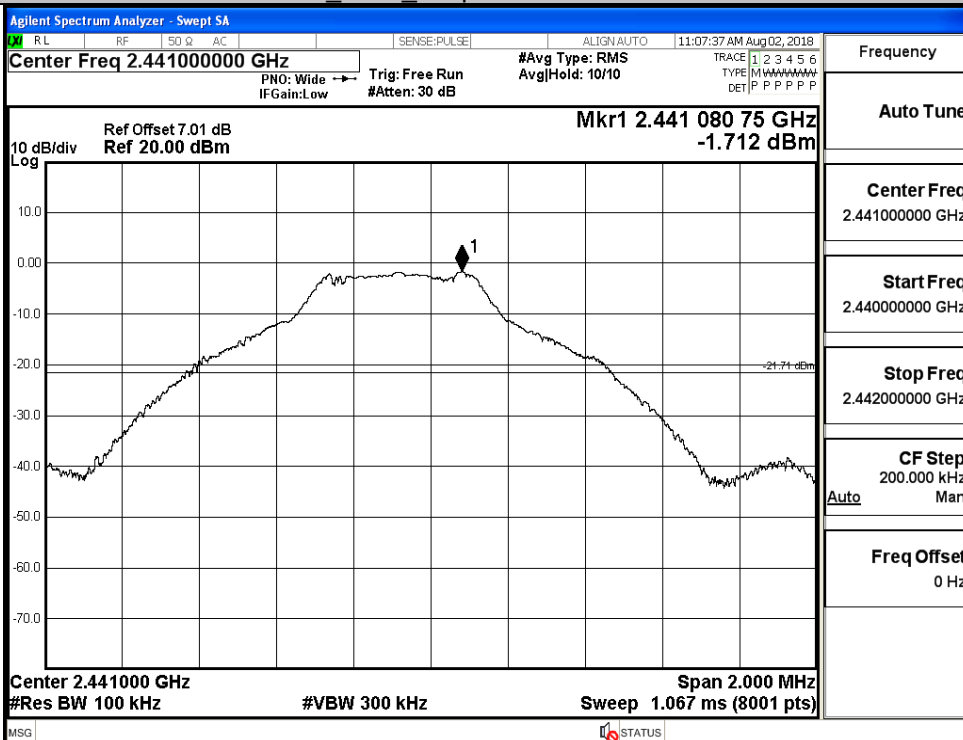


Puw

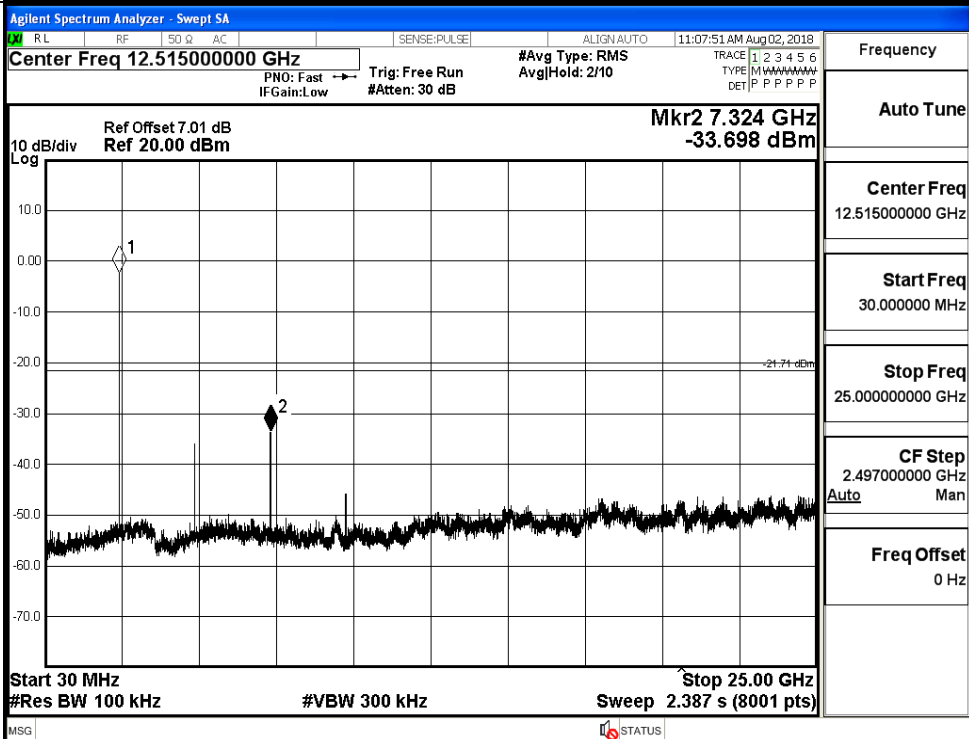


GFSK_MCH_Graphs

Pref

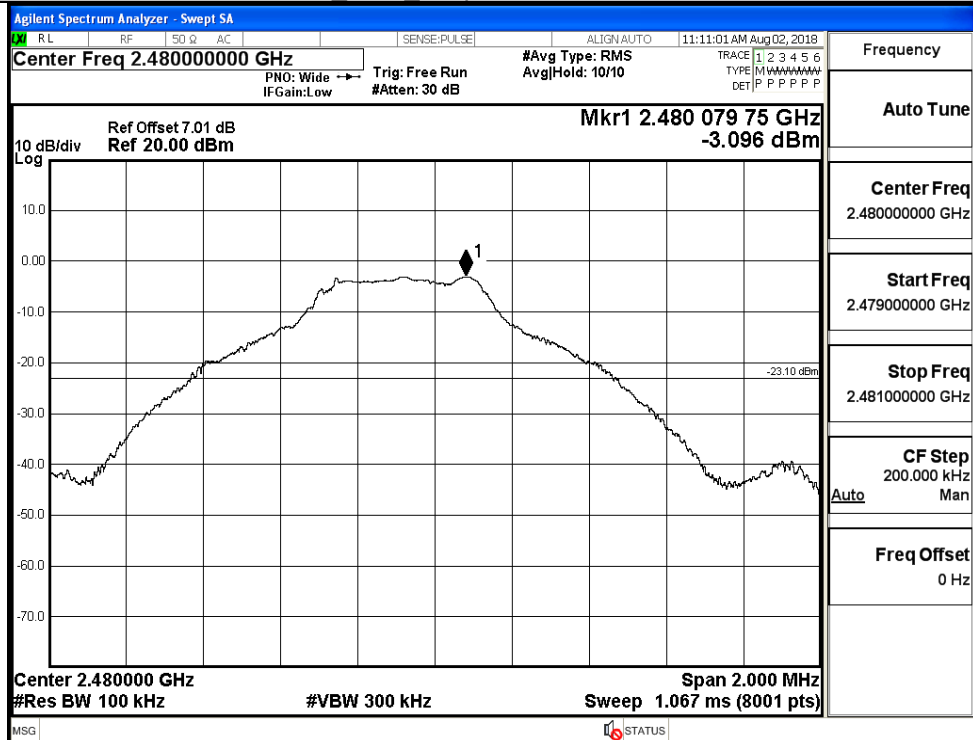


Puw

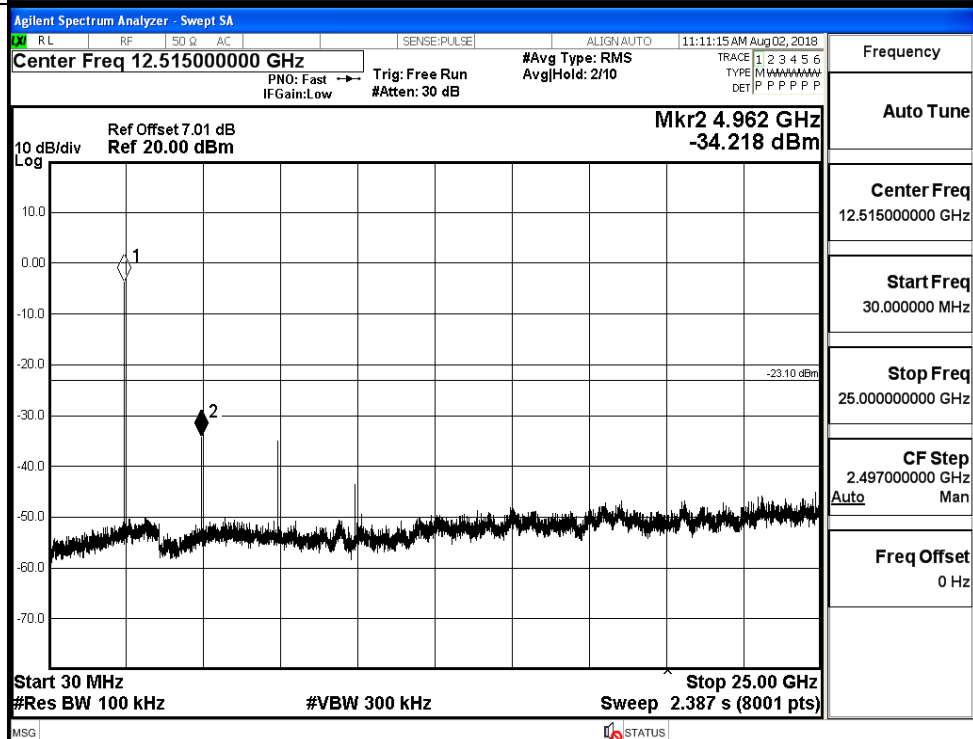


GFSK HCH Graphs

Pref

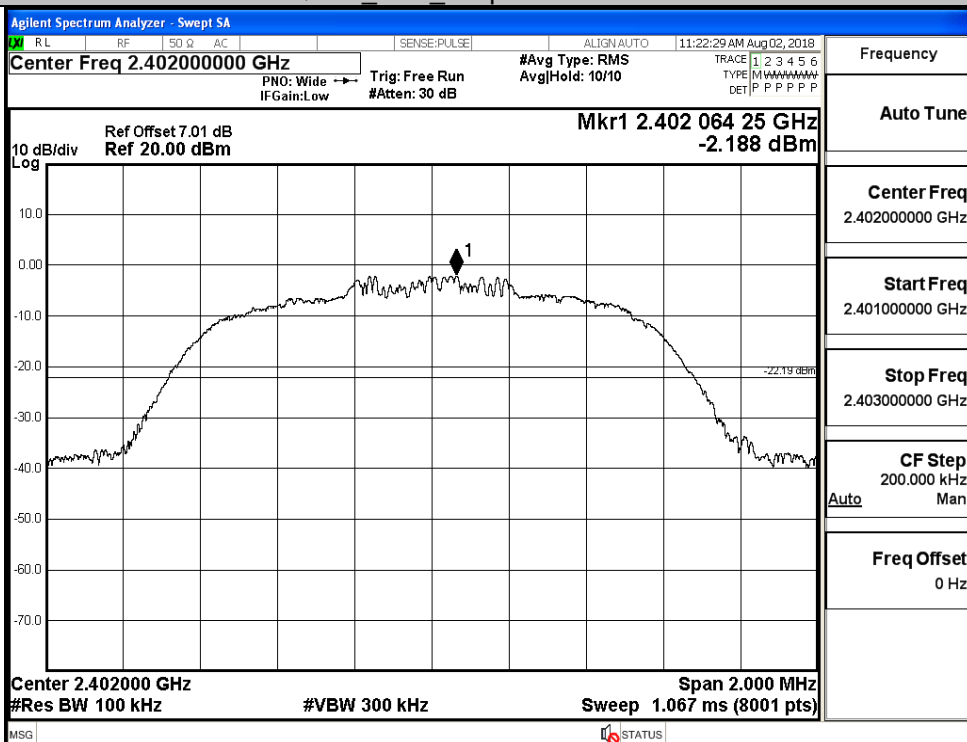


Puw

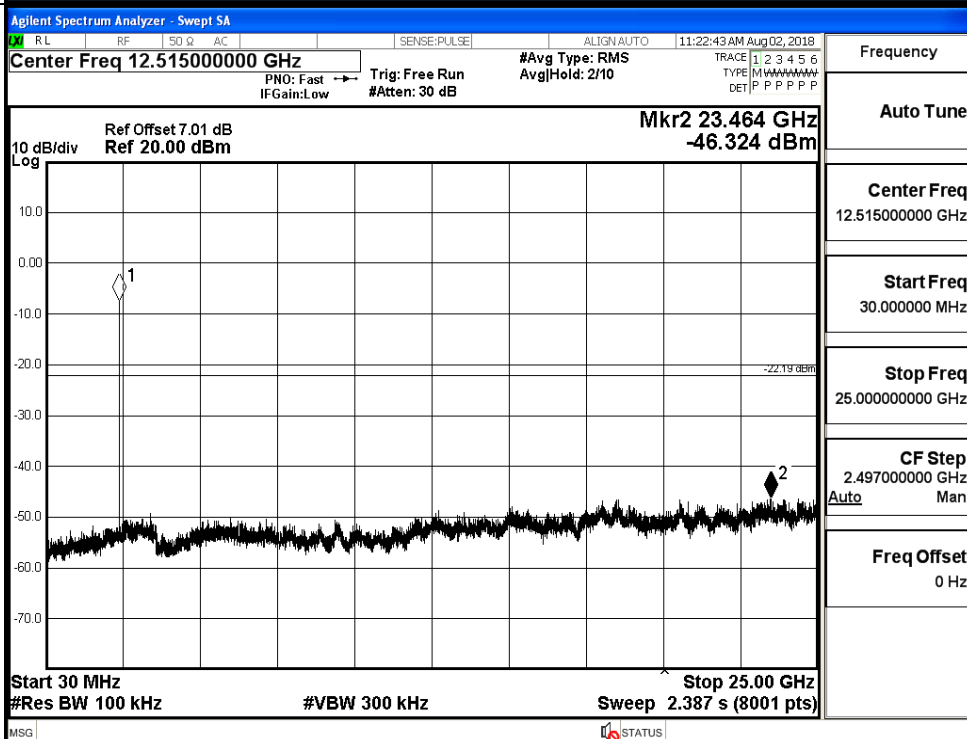


$\pi/4$ DQPSK LCH_Graphs

Pref

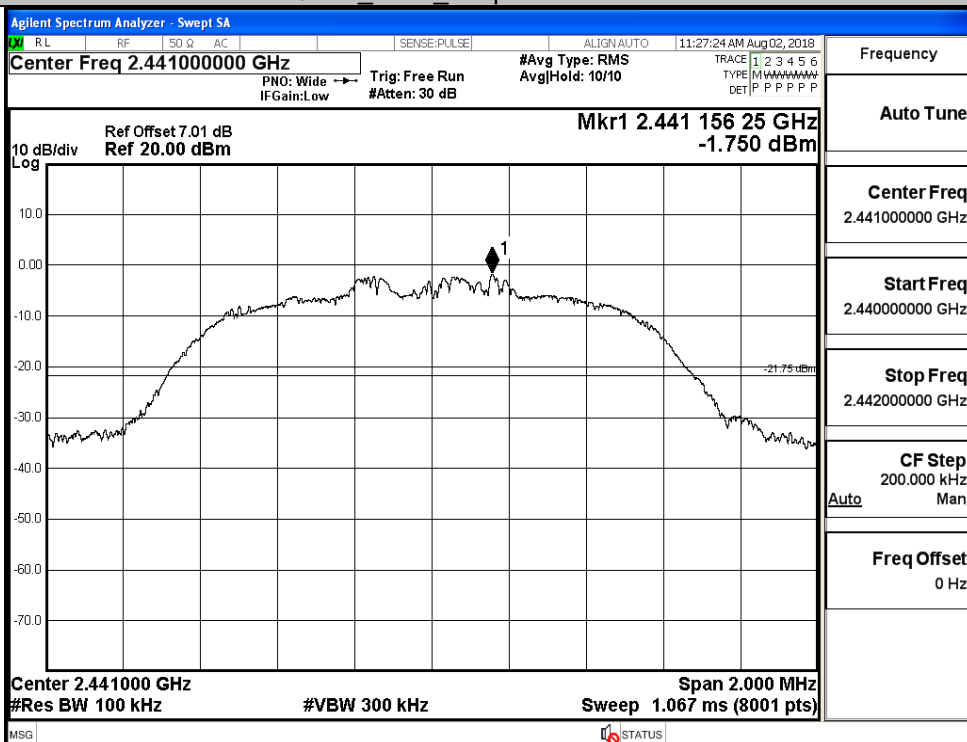


Puw

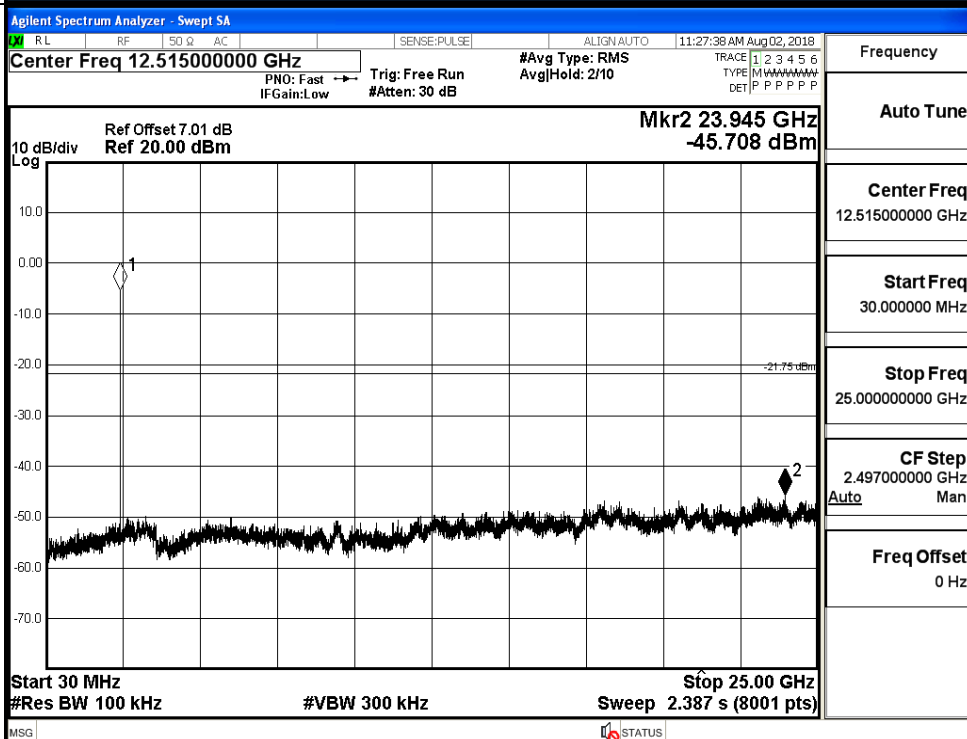


$\pi/4$ DQPSK_MCH_Graphs

Pref

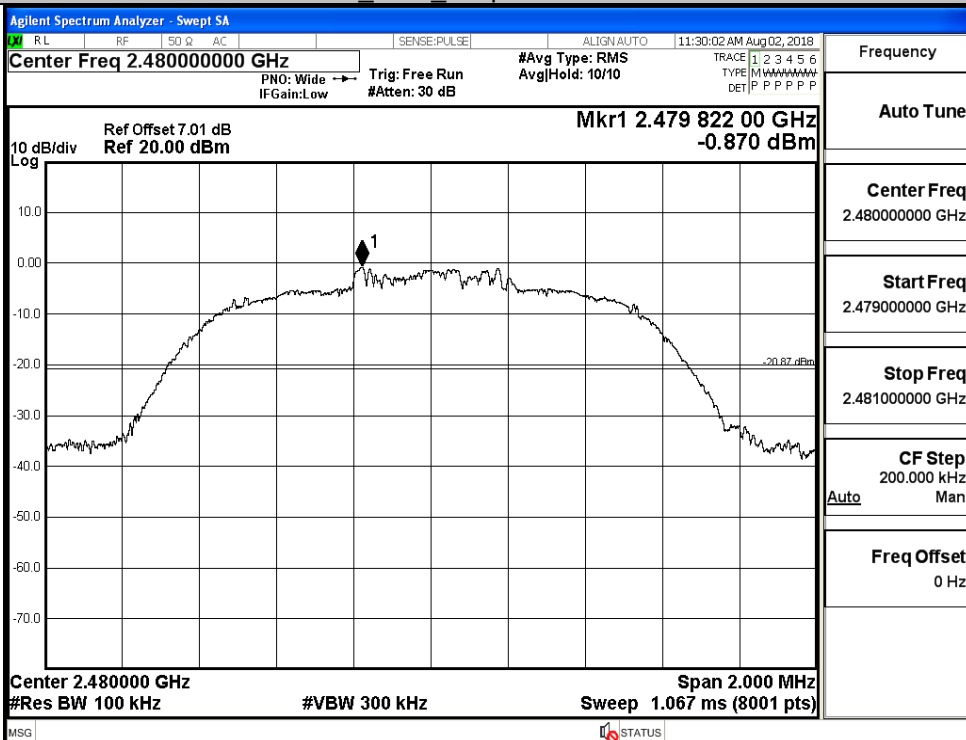


Puw

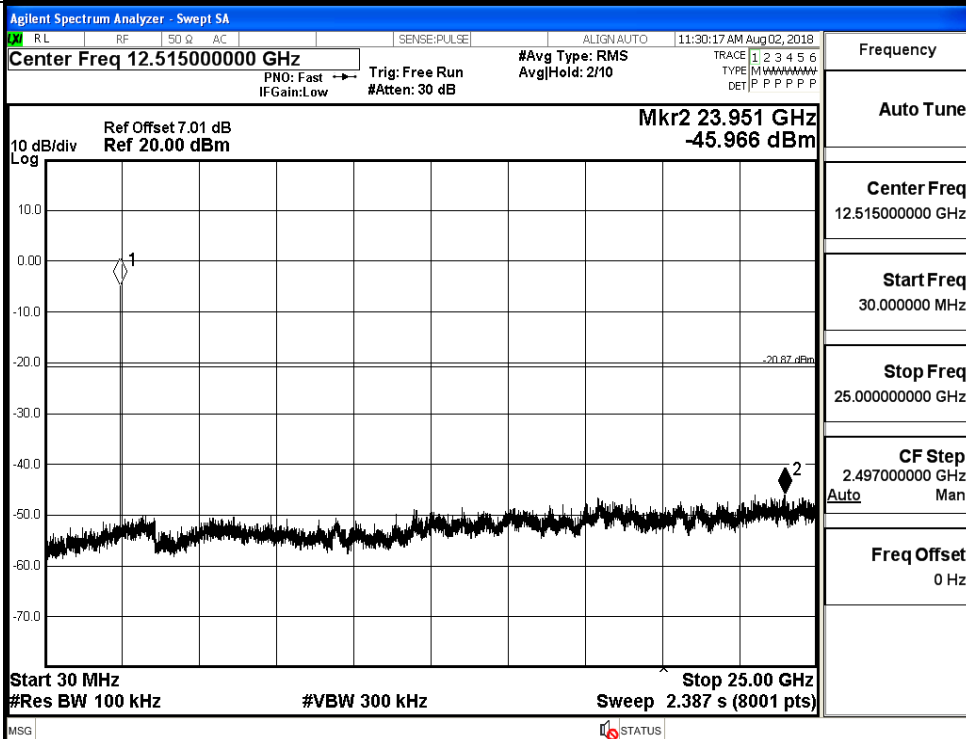


$\pi/4$ DQPSK_HCH_Graphs

Pref

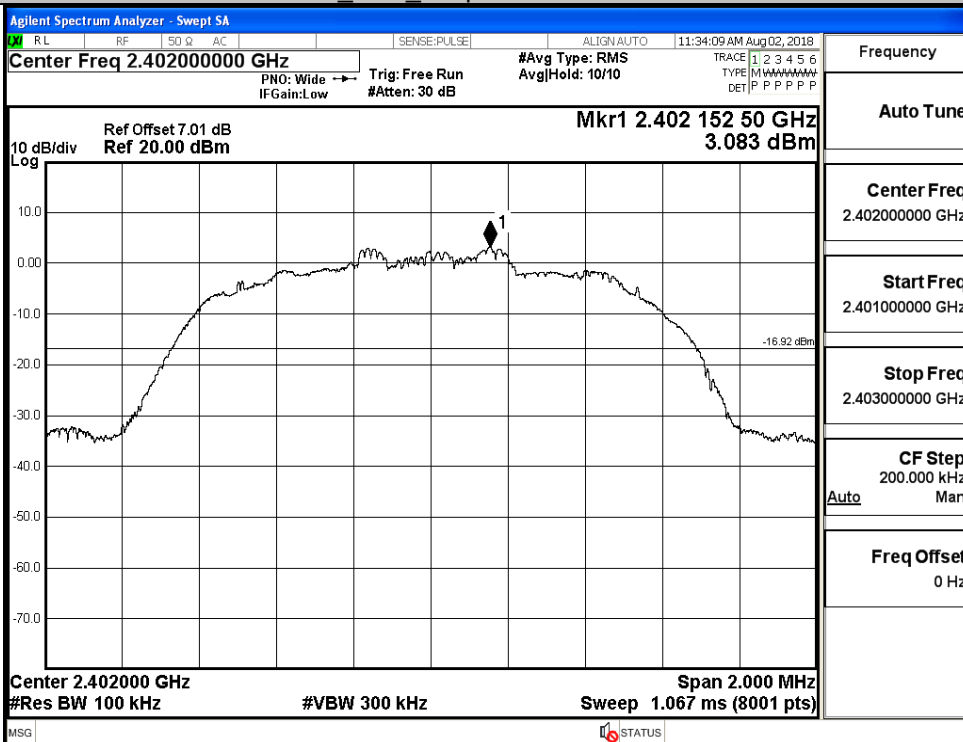


Puw

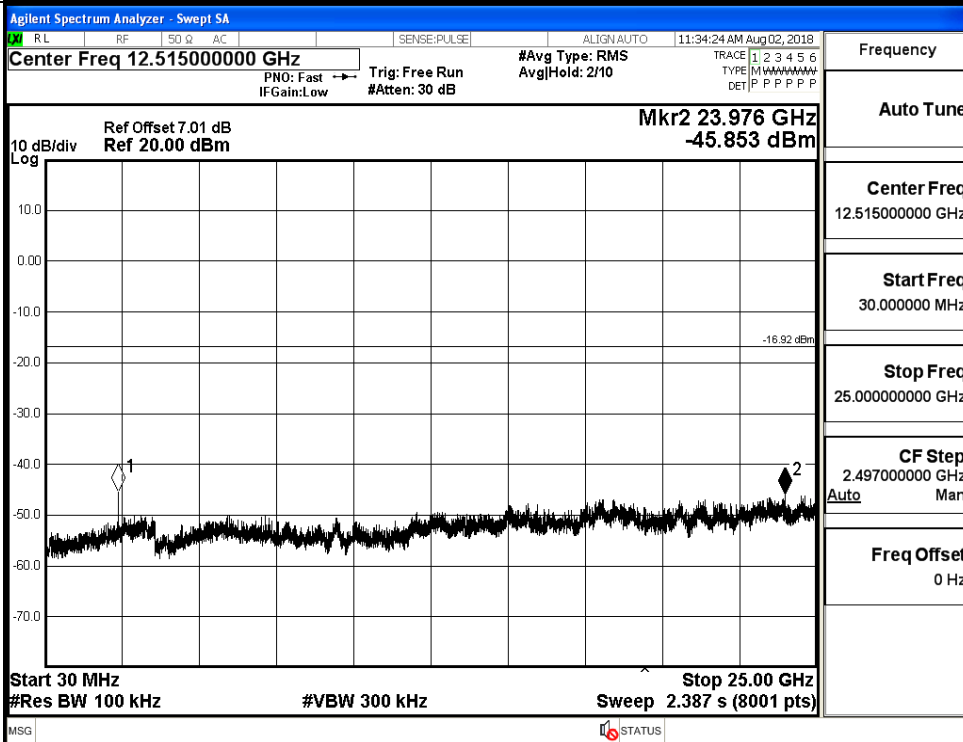


8DPSK_LCH_Graphs

Pref

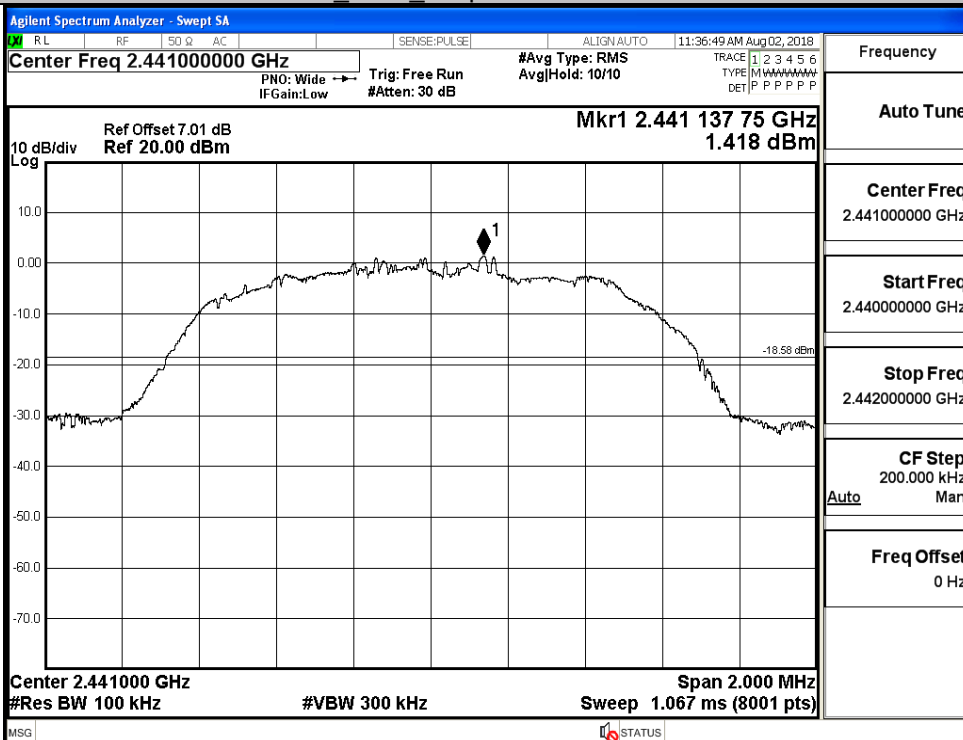


Puw

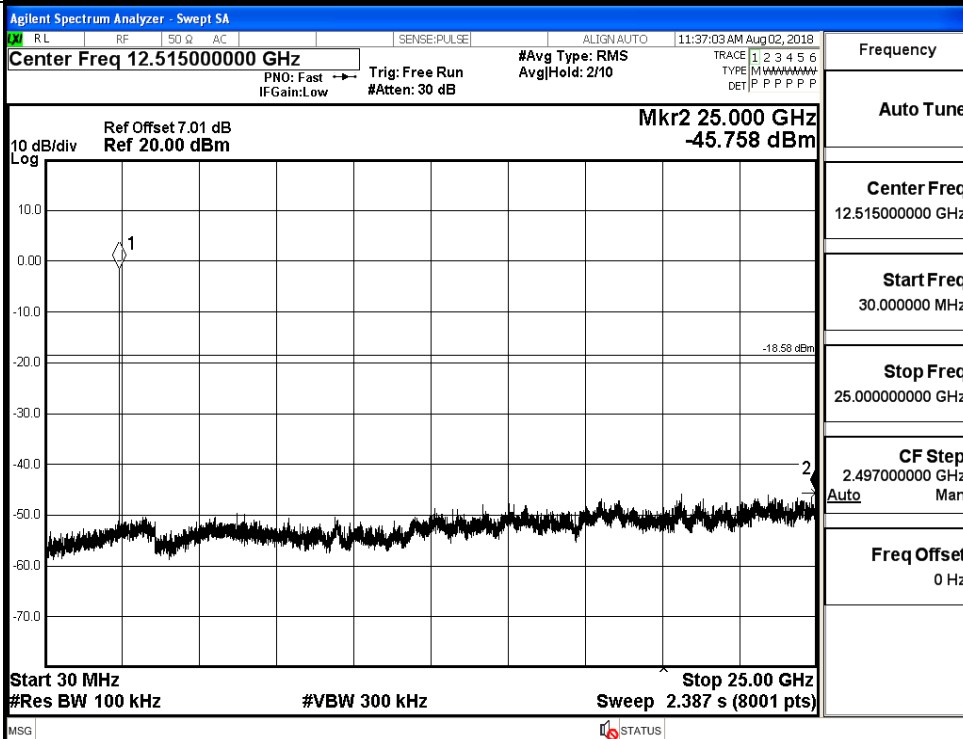


8DPSK_MCH_Graphs

Pref

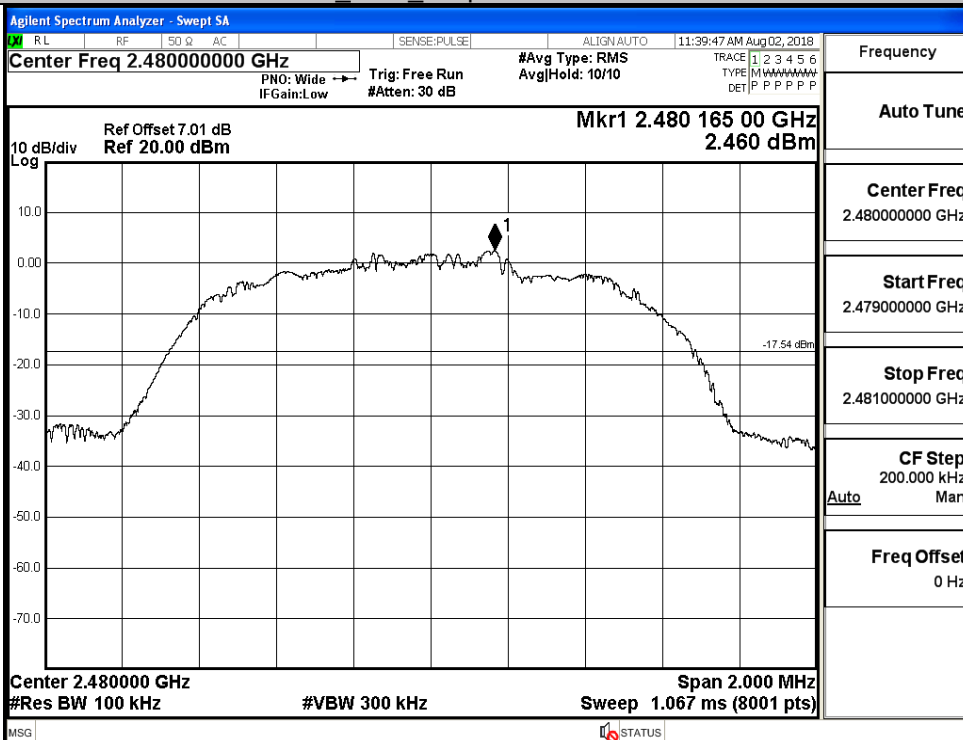


Puw

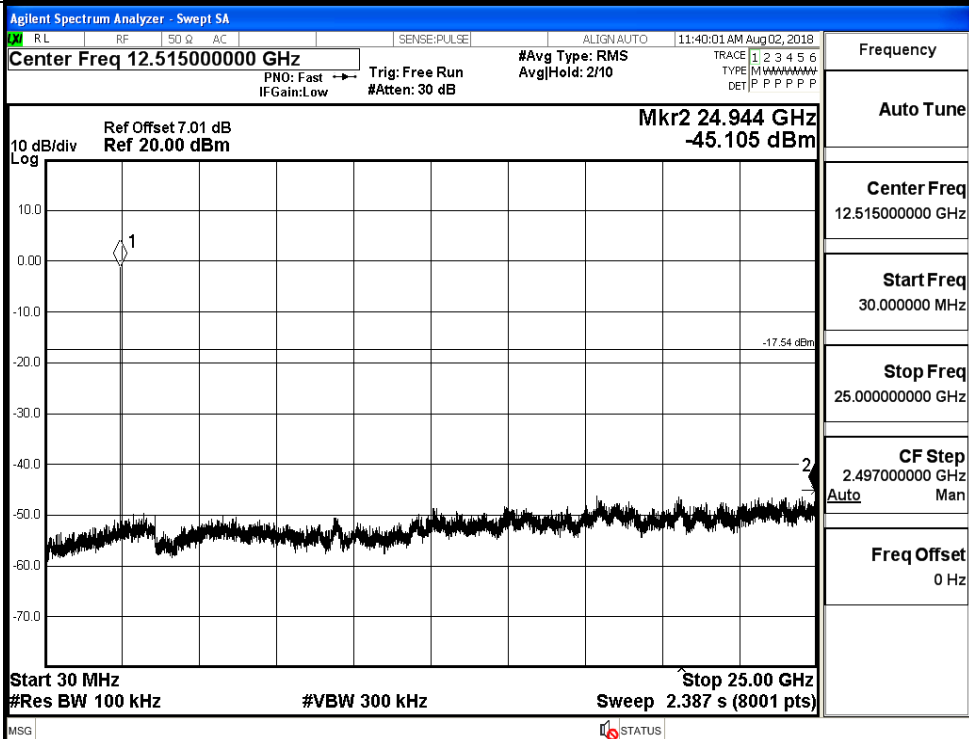


8DPSK_HCH_Graphs

Pref



Puw

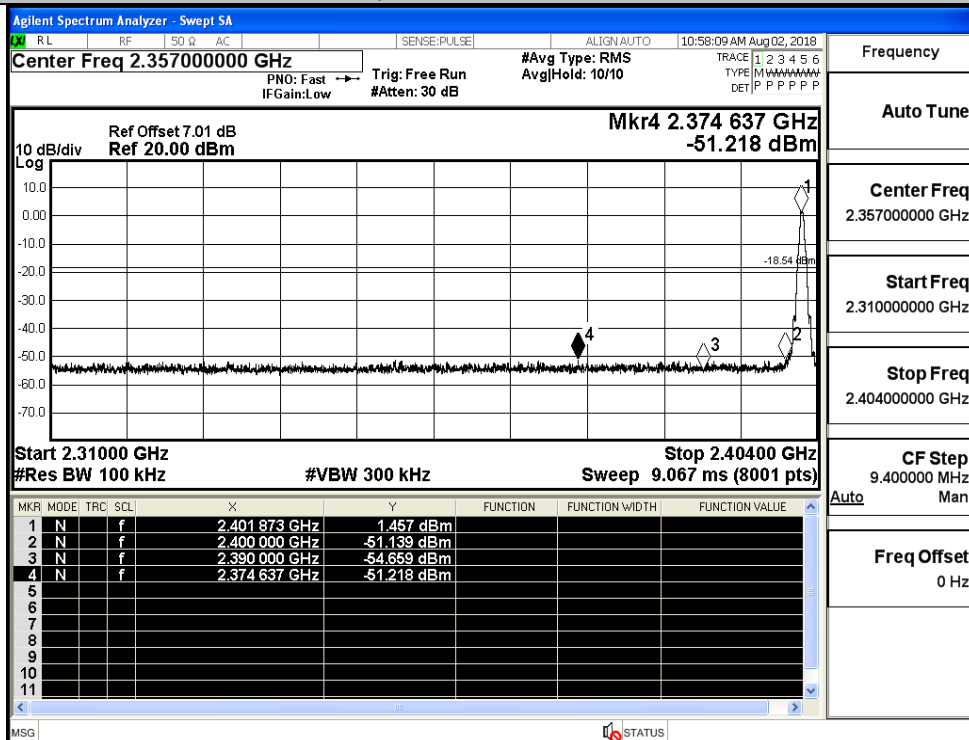


A.7 Band-edge for RF Conducted Emissions

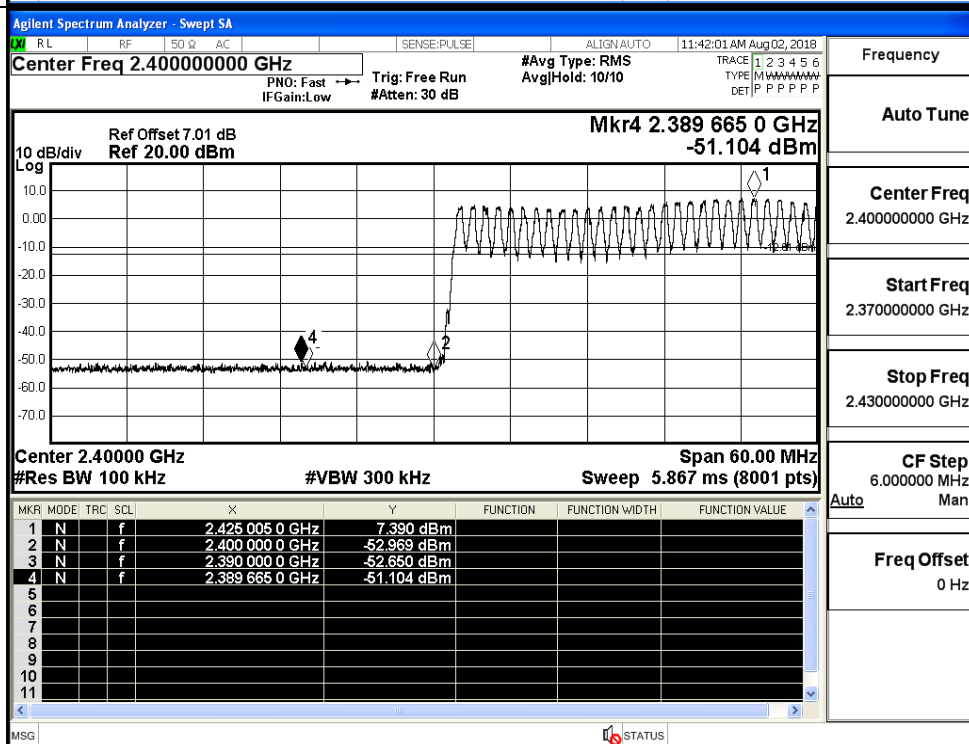
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	1.457	Off	-51.218	-18.54	PASS
			7.390	On	-51.104	-12.61	PASS
	HCH	2480	-3.107	Off	-50.720	-23.11	PASS
			7.432	On	-50.292	-12.57	PASS
$\pi/4$ DQPSK	LCH	2402	-2.242	Off	-50.434	-22.24	PASS
			6.252	On	-50.032	-13.75	PASS
	HCH	2480	-0.371	Off	-51.198	-20.37	PASS
			5.710	On	-49.794	-14.29	PASS
8DPSK	LCH	2402	3.232	Off	-50.678	-16.77	PASS
			6.790	On	-49.380	-13.21	PASS
	HCH	2480	2.744	Off	-50.352	-17.26	PASS
			6.234	On	-50.391	-13.77	PASS

Test Graphs

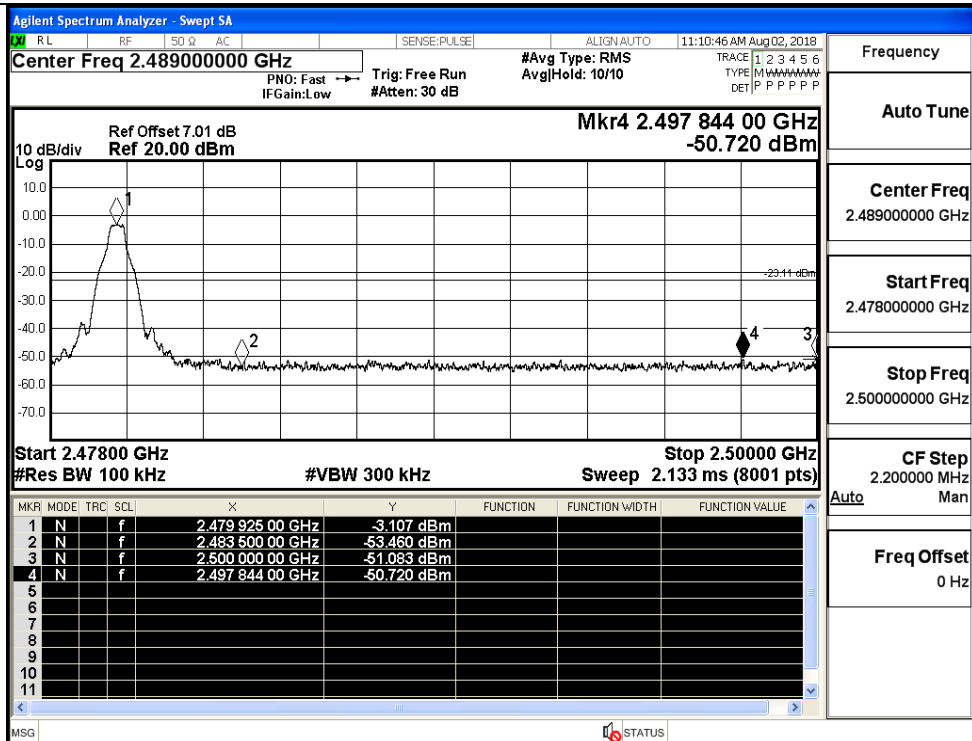
GFSK/LCH/No Hop



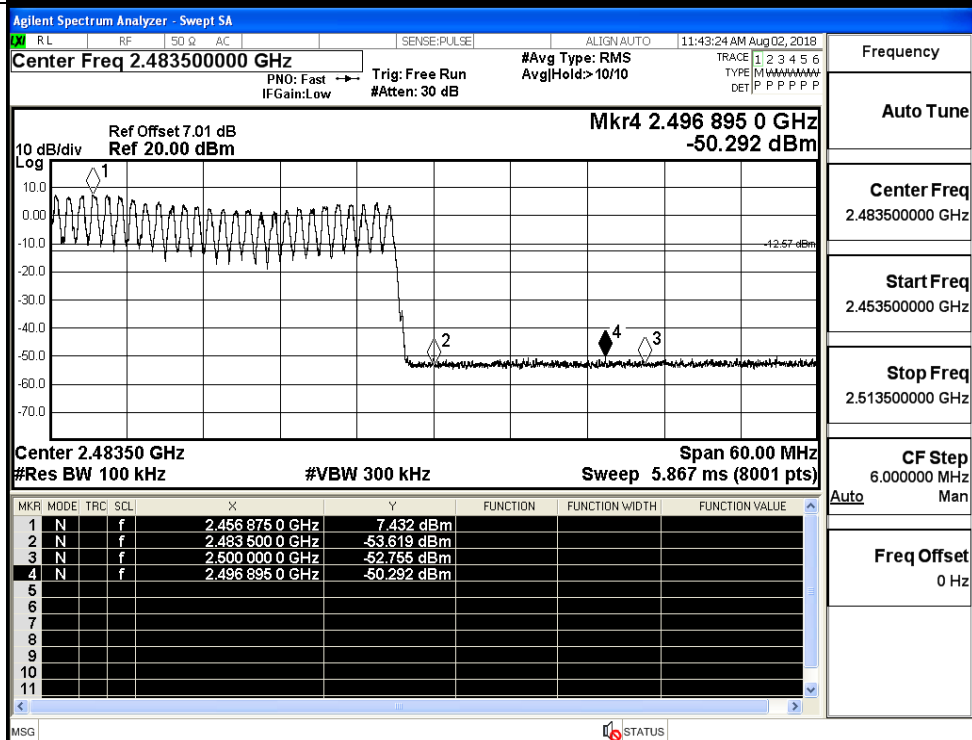
GFSK/LCH/Hop



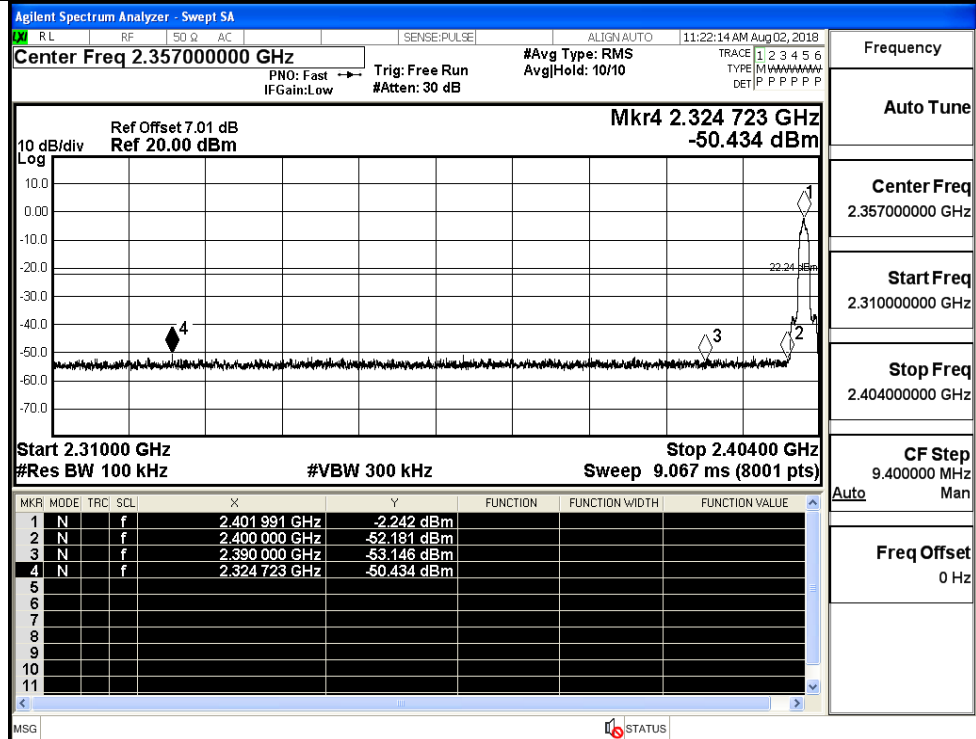
GFSK/HCH/No Hop



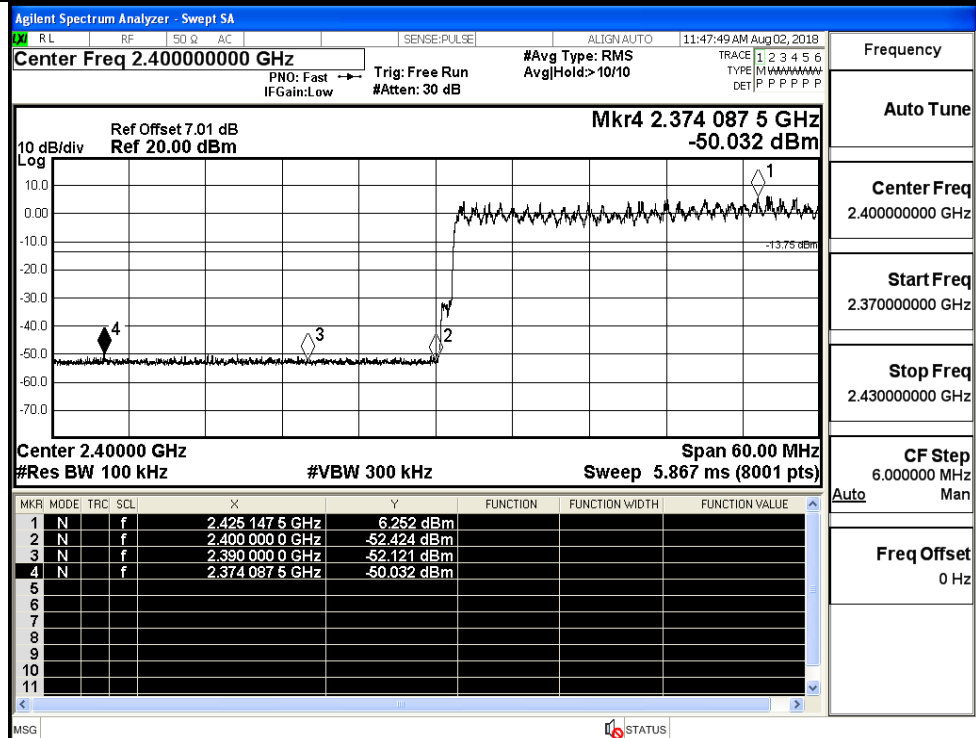
GFSK/HCH/Hop



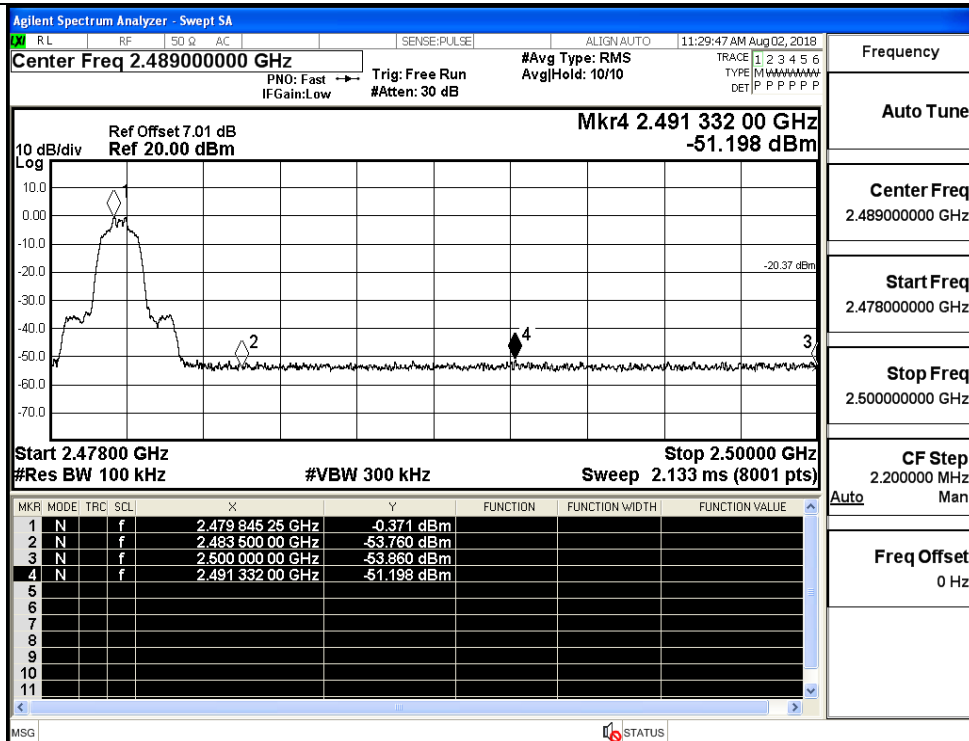
$\pi/4$ DQPSK/LCH/No
Hop



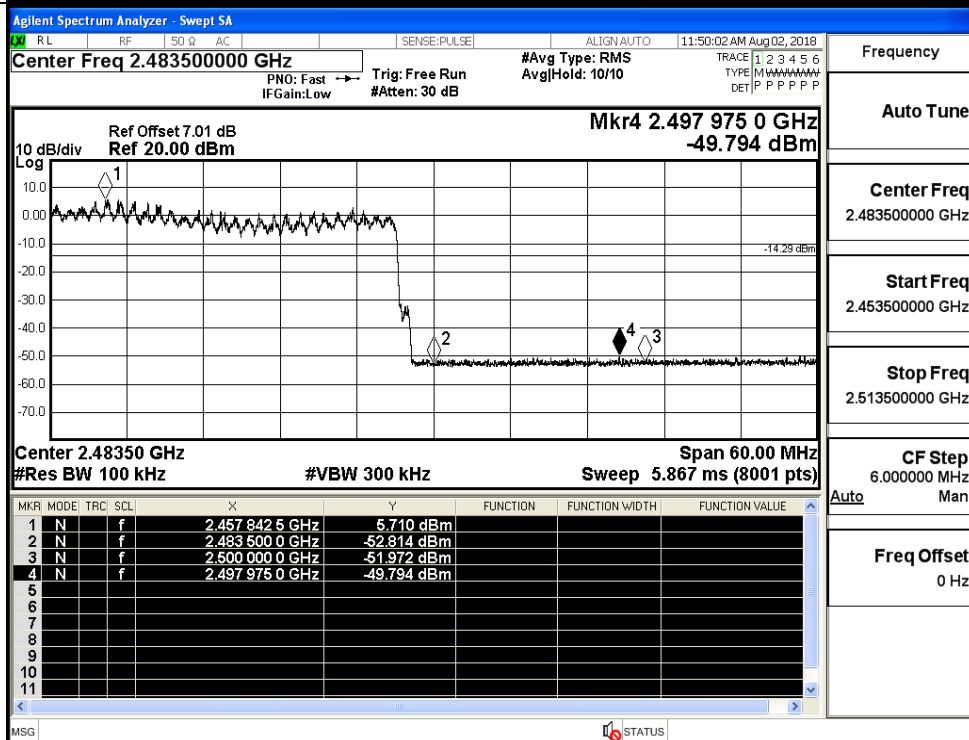
$\pi/4$ DQPSK/LCH/Hop



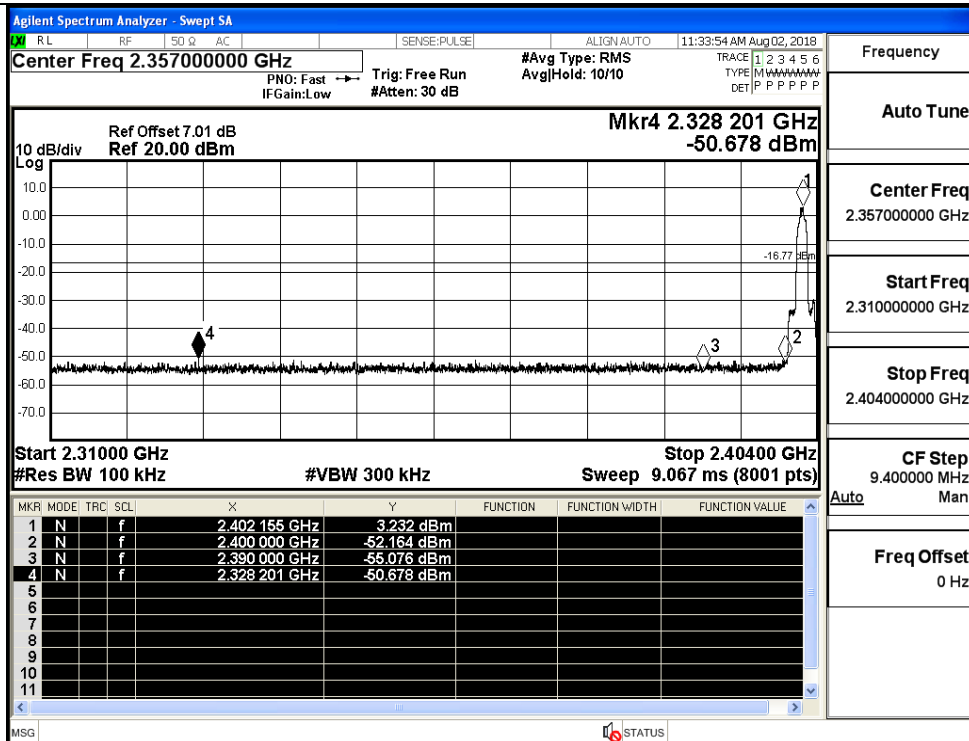
$\pi/4$ DQPSK/HCH/No
Hop



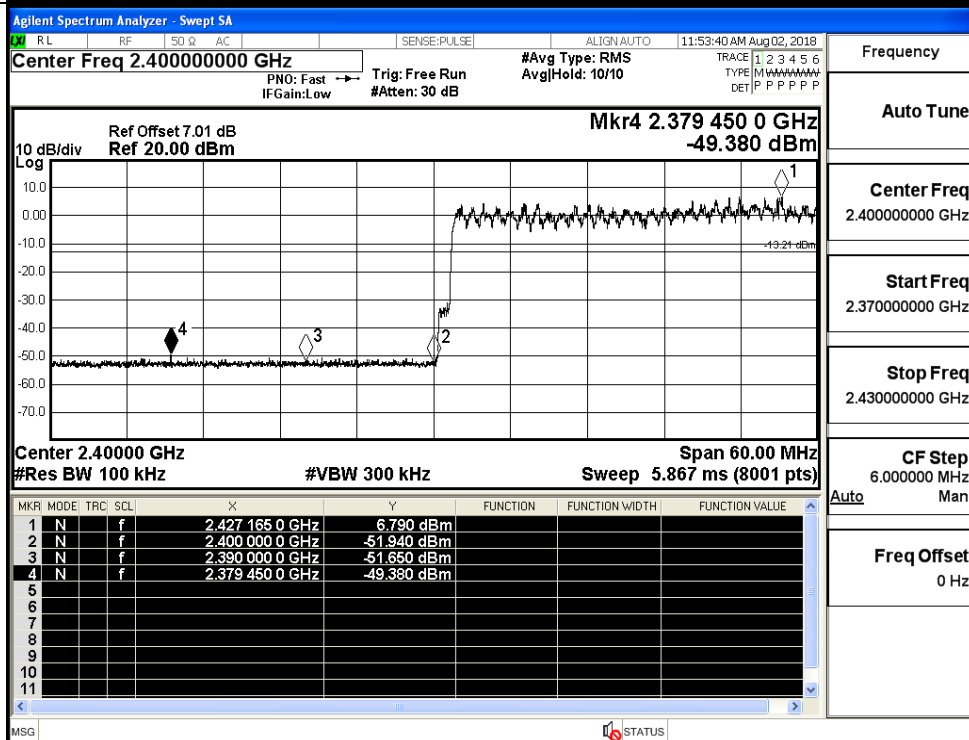
$\pi/4$ DQPSK/HCH/Hop



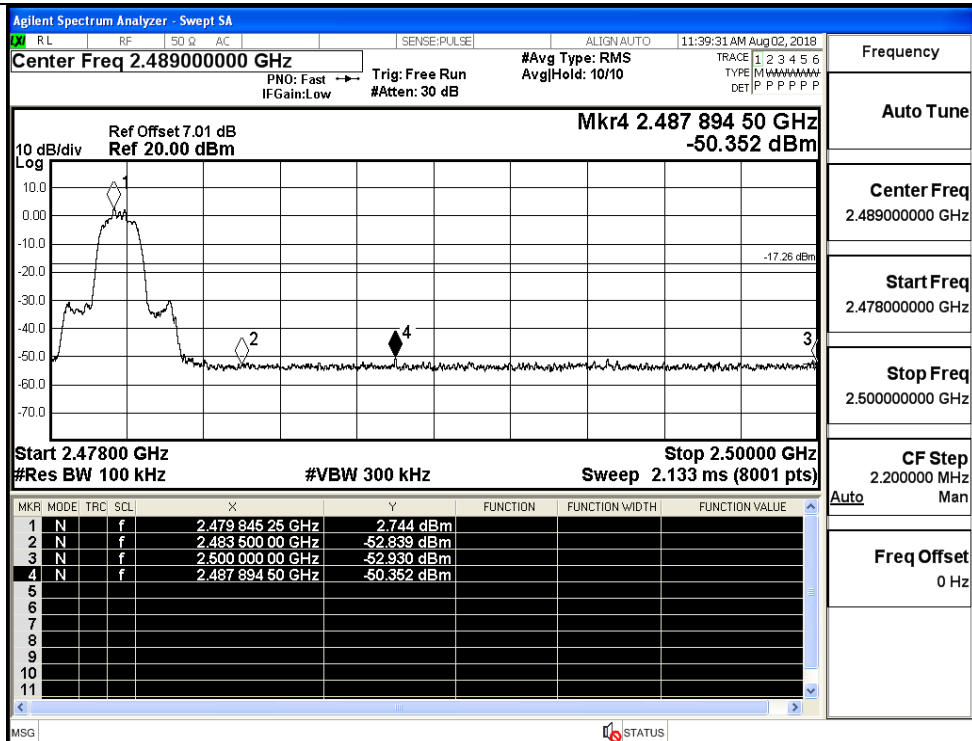
8DPSK/LCH/No Hop



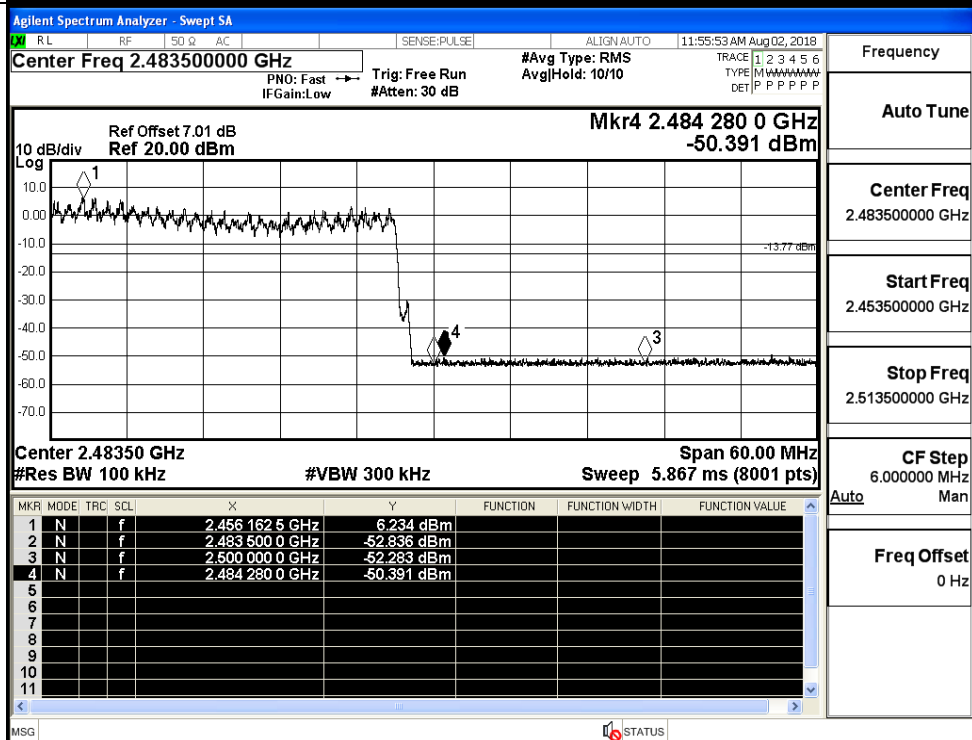
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



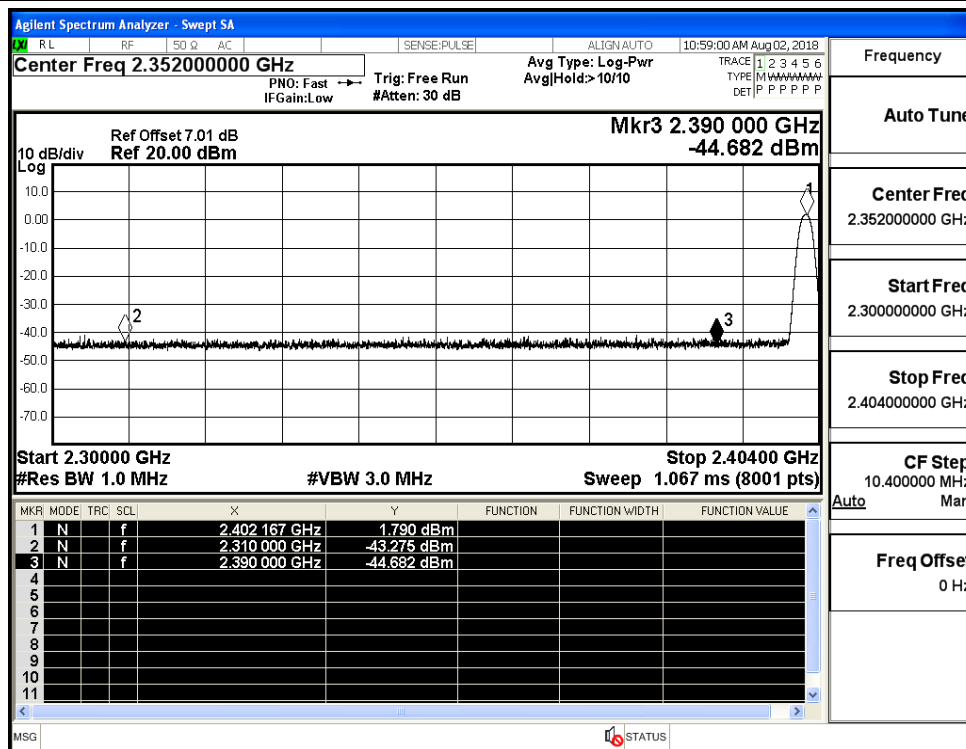
8DPSK/HCH/Hop



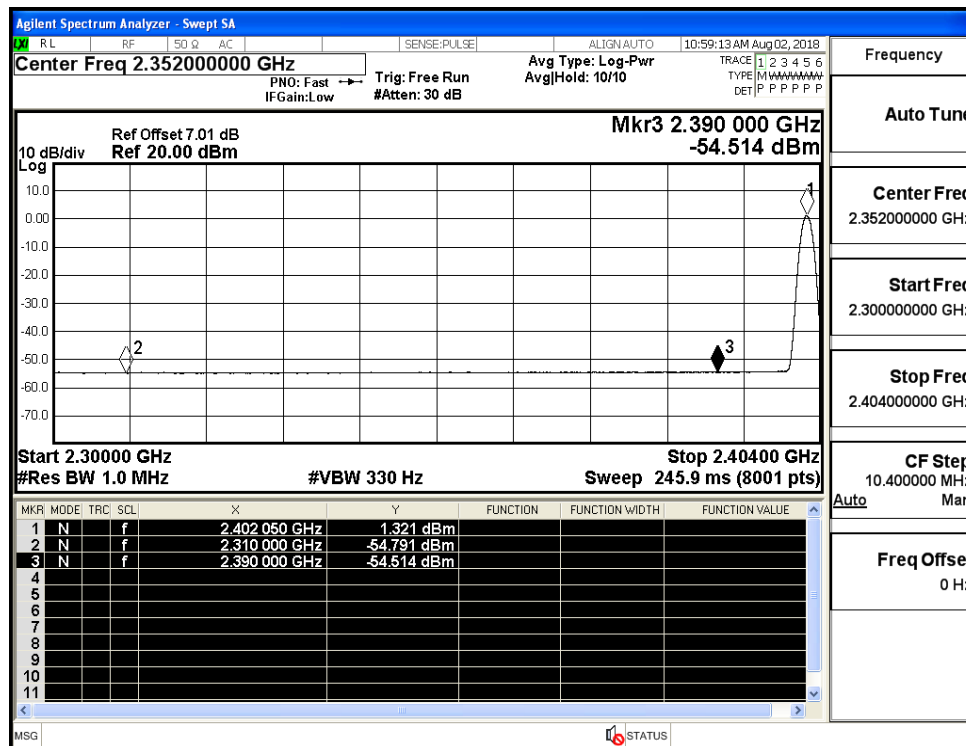
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.28	2.0	0	53.98	PEAK	74	PASS
	Off	2310.0	-54.79	2.0	0	42.47	AV	54	PASS
	Off	2390.0	-44.68	2.0	0	52.58	PEAK	74	PASS
	Off	2390.0	-54.51	2.0	0	42.74	AV	54	PASS
	Off	2483.5	-44.03	2.0	0	53.23	PEAK	74	PASS
	Off	2483.5	-53.95	2.0	0	43.30	AV	54	PASS
	Off	2500.0	-43.67	2.0	0	53.59	PEAK	74	PASS
	Off	2500.0	-54.05	2.0	0	43.21	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-45.10	2.0	0	52.16	PEAK	74	PASS
	Off	2310.0	-54.80	2.0	0	42.46	AV	54	PASS
	Off	2390.0	-44.25	2.0	0	53.01	PEAK	74	PASS
	Off	2390.0	-54.39	2.0	0	42.87	AV	54	PASS
	Off	2483.5	-43.84	2.0	0	53.42	PEAK	74	PASS
	Off	2483.5	-54.13	2.0	0	43.13	AV	54	PASS
	Off	2500.0	-43.71	2.0	0	53.54	PEAK	74	PASS
	Off	2500.0	-54.14	2.0	0	43.12	AV	54	PASS
8DPSK	Off	2310.0	-44.78	2.0	0	52.48	PEAK	74	PASS
	Off	2310.0	-54.72	2.0	0	42.54	AV	54	PASS
	Off	2390.0	-44.22	2.0	0	53.04	PEAK	74	PASS
	Off	2390.0	-54.42	2.0	0	42.84	AV	54	PASS
	Off	2483.5	-44.22	2.0	0	53.04	PEAK	74	PASS
	Off	2483.5	-53.99	2.0	0	43.27	AV	54	PASS
	Off	2500.0	-43.69	2.0	0	53.57	PEAK	74	PASS
	Off	2500.0	-54.05	2.0	0	43.21	AV	54	PASS

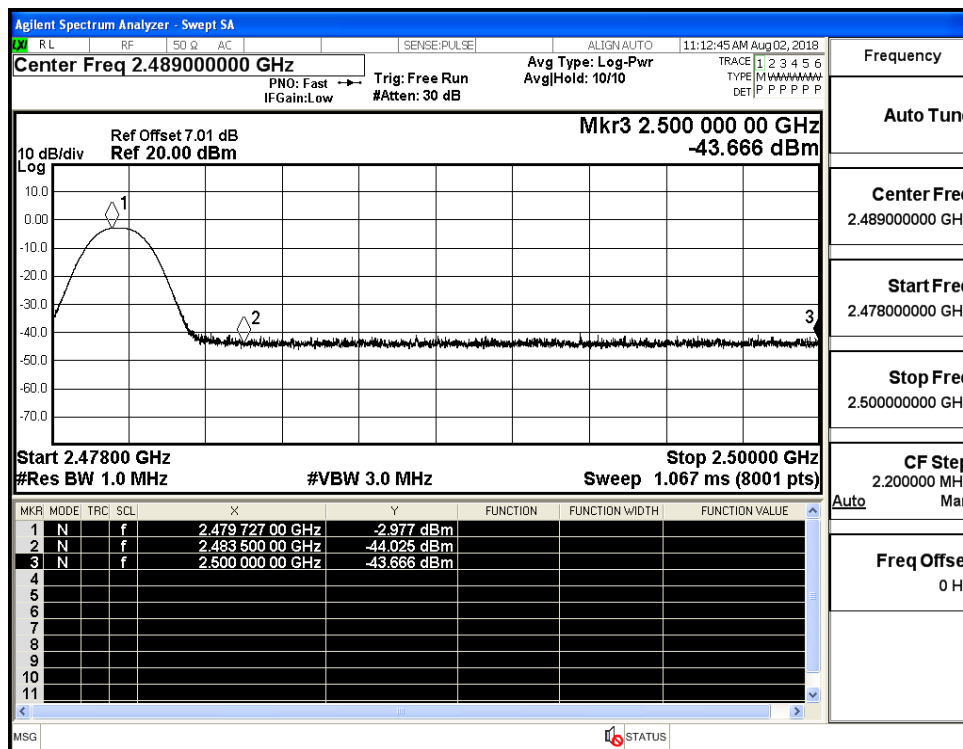
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



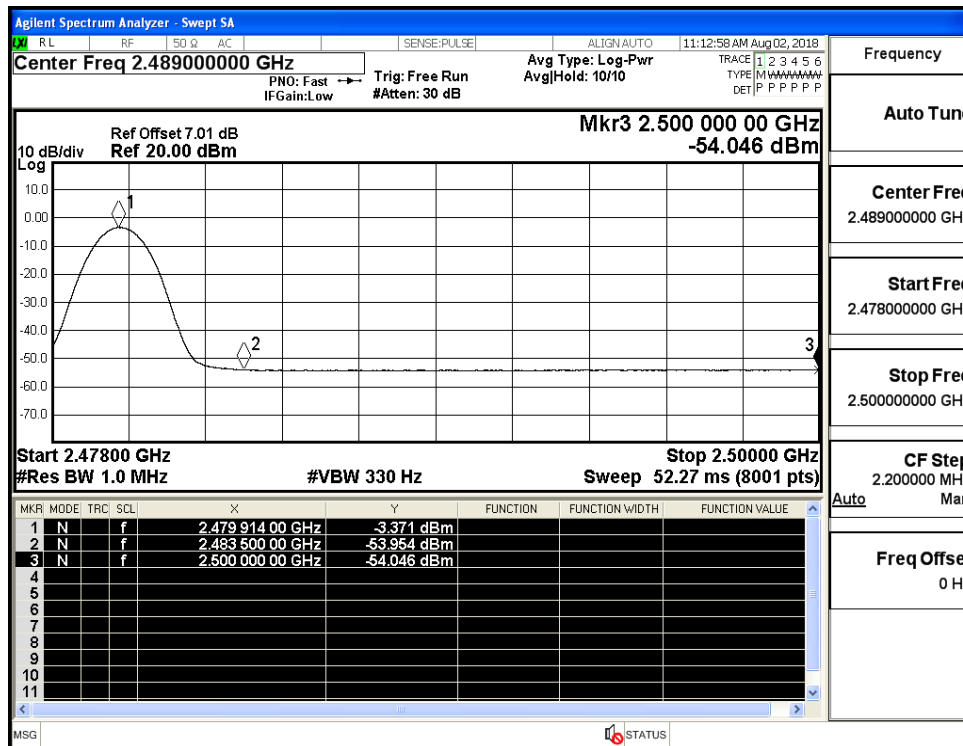
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)



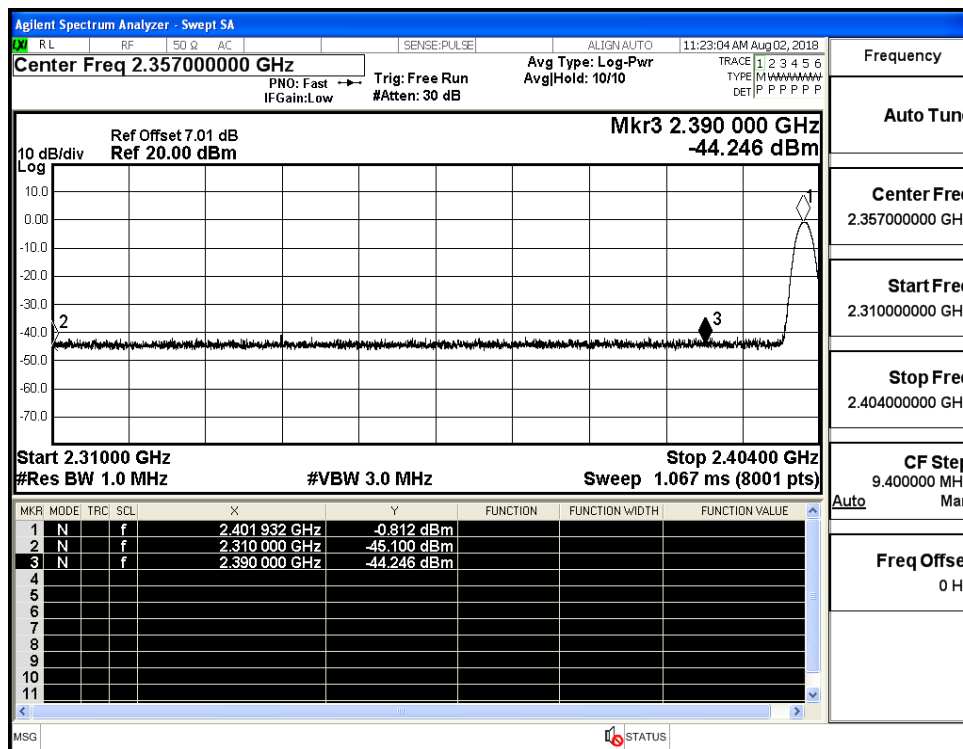
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



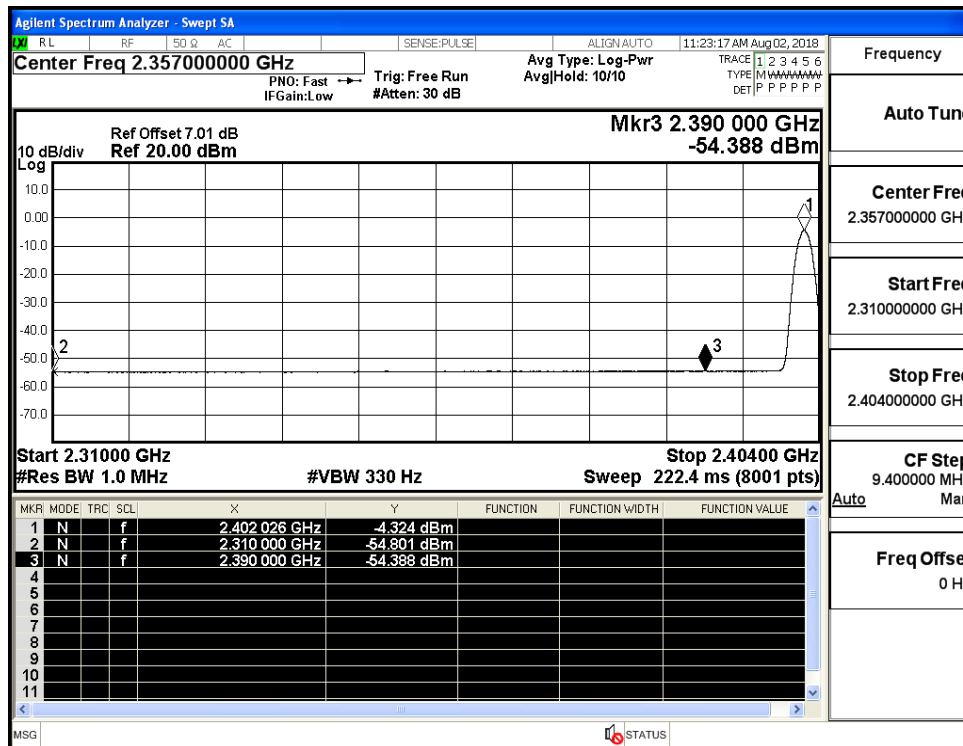
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



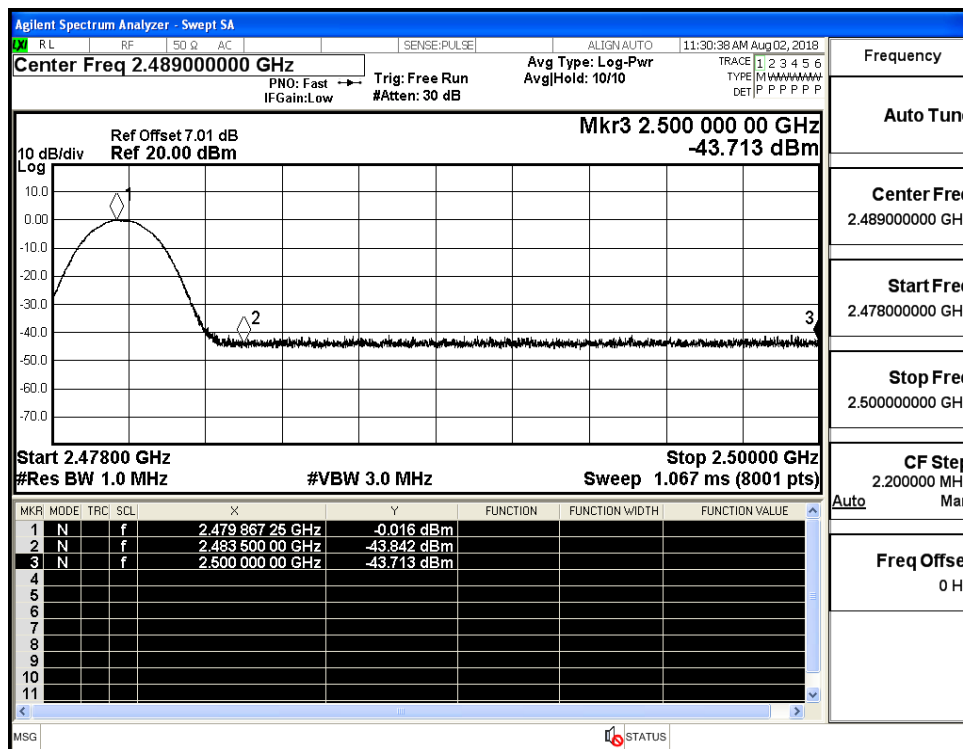
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)



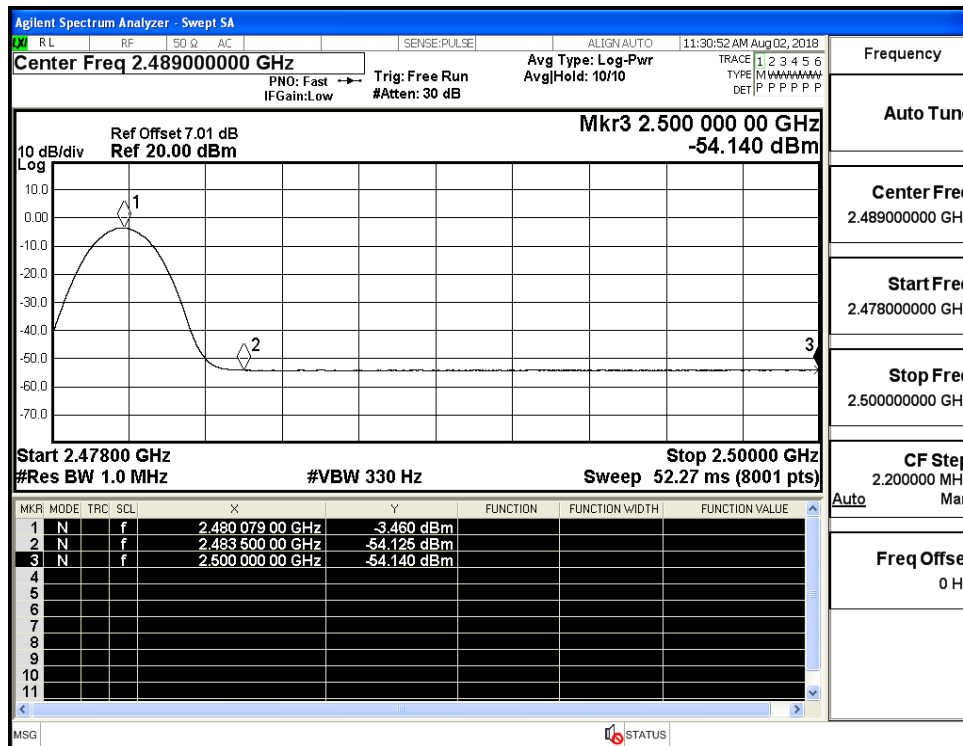
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)



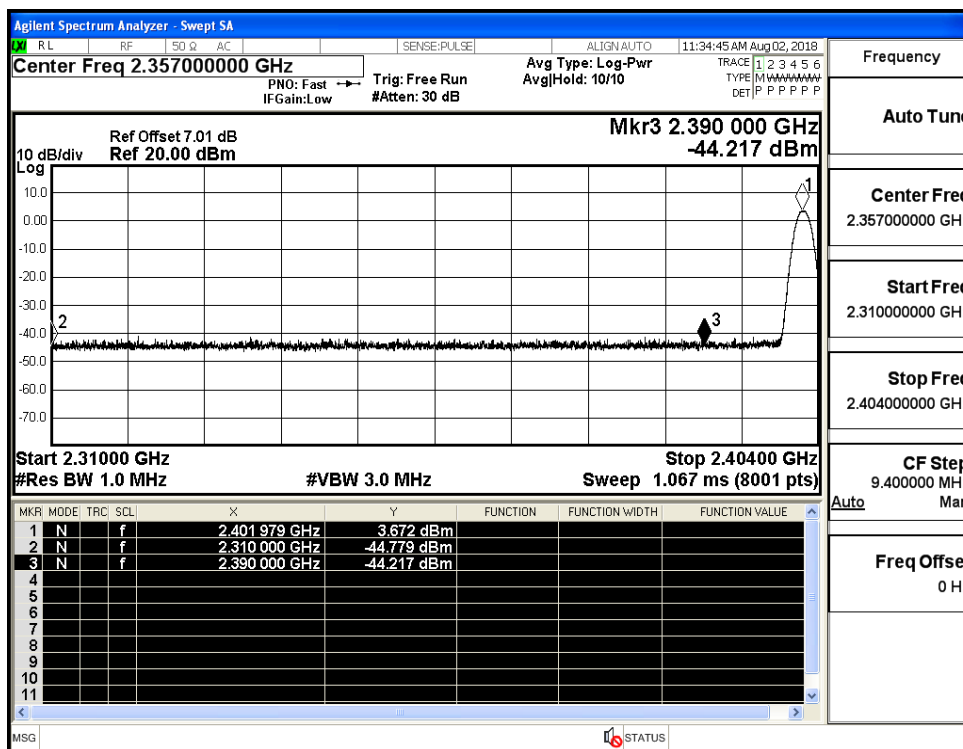
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (High Channel)



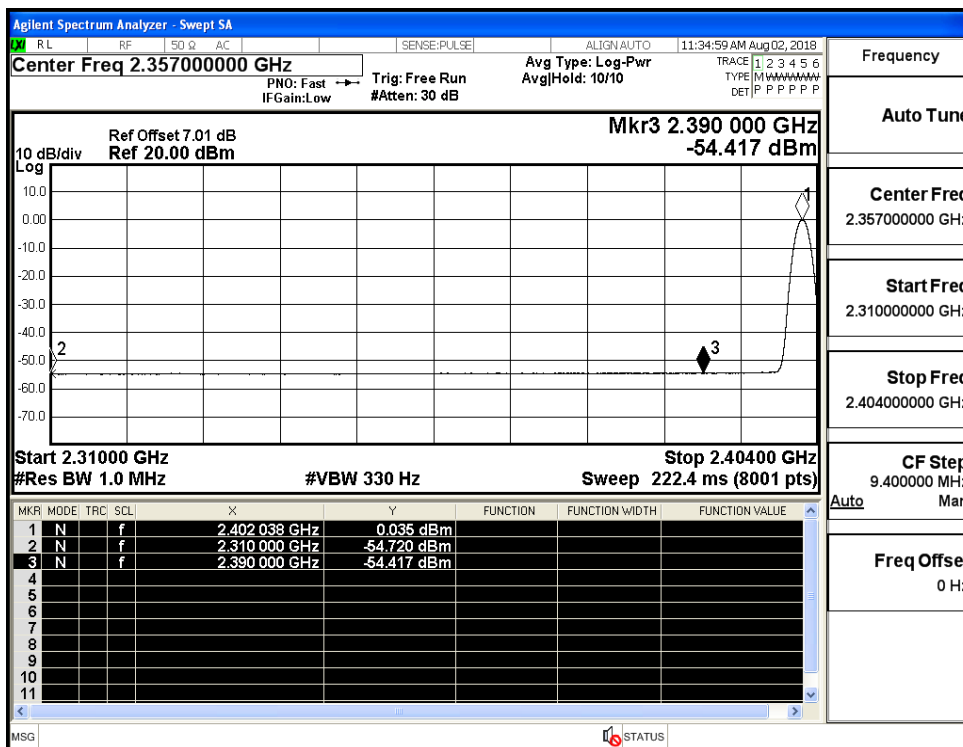
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (High Channel)



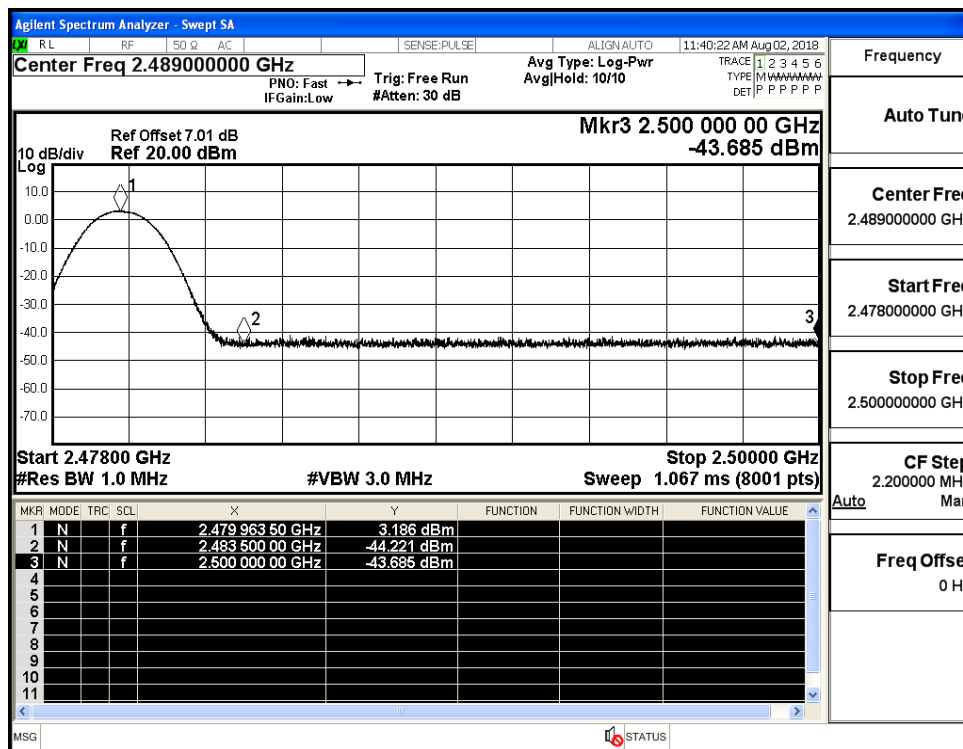
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

