

Appendix A

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

Product Name: T5

Trade Mark: AWEI

Test Model: T5

Environmental Conditions

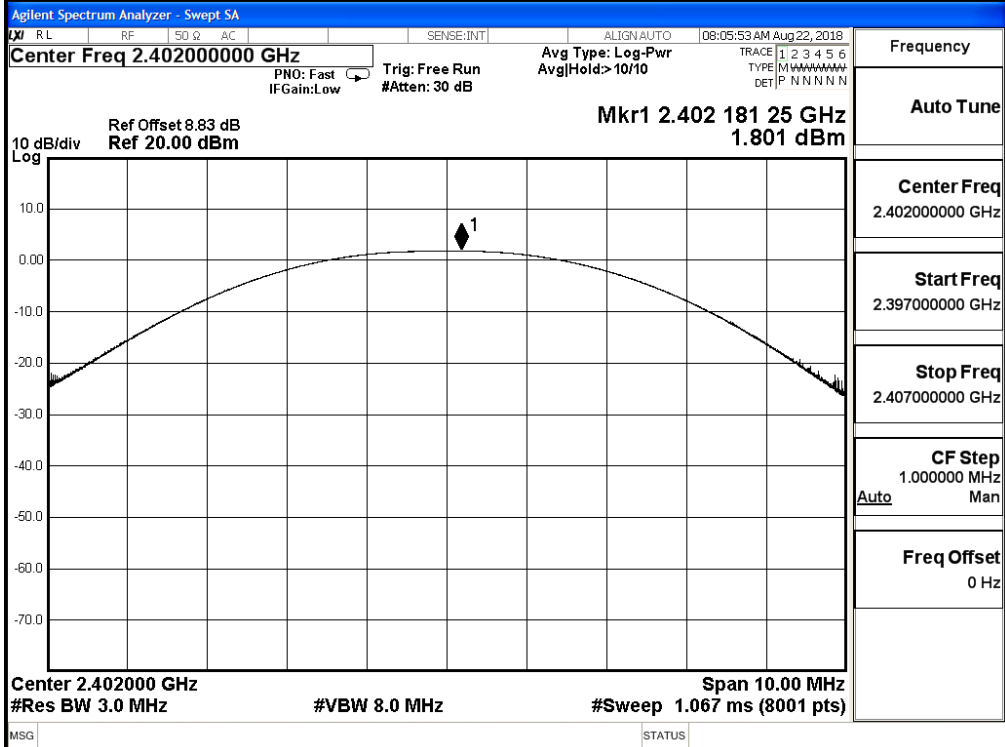
Temperature:	23.6 °C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Jayden.Zhuo

A.1 Maximum Conducted Peak Output Power

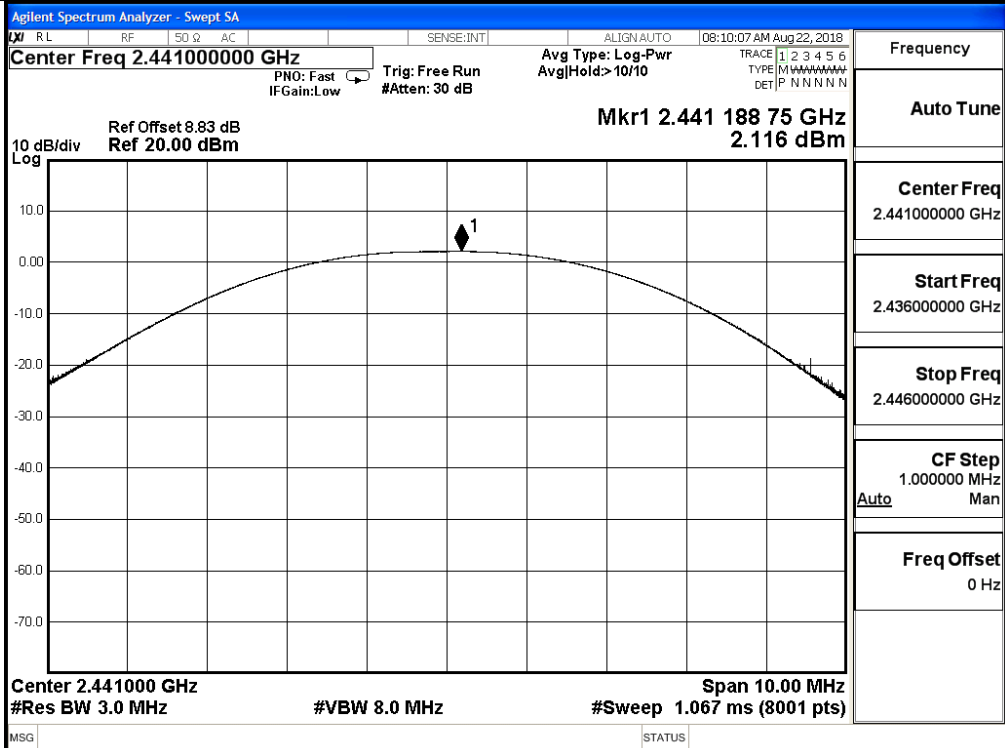
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	1.801	21	PASS
	MCH	2.116	21	PASS
	HCH	1.891	21	PASS
$\pi/4$ DQPSK	LCH	1.700	21	PASS
	MCH	2.055	21	PASS
	HCH	1.807	21	PASS
8DPSK	LCH	1.688	21	PASS
	MCH	2.041	21	PASS
	HCH	1.835	21	PASS

Test Graphs

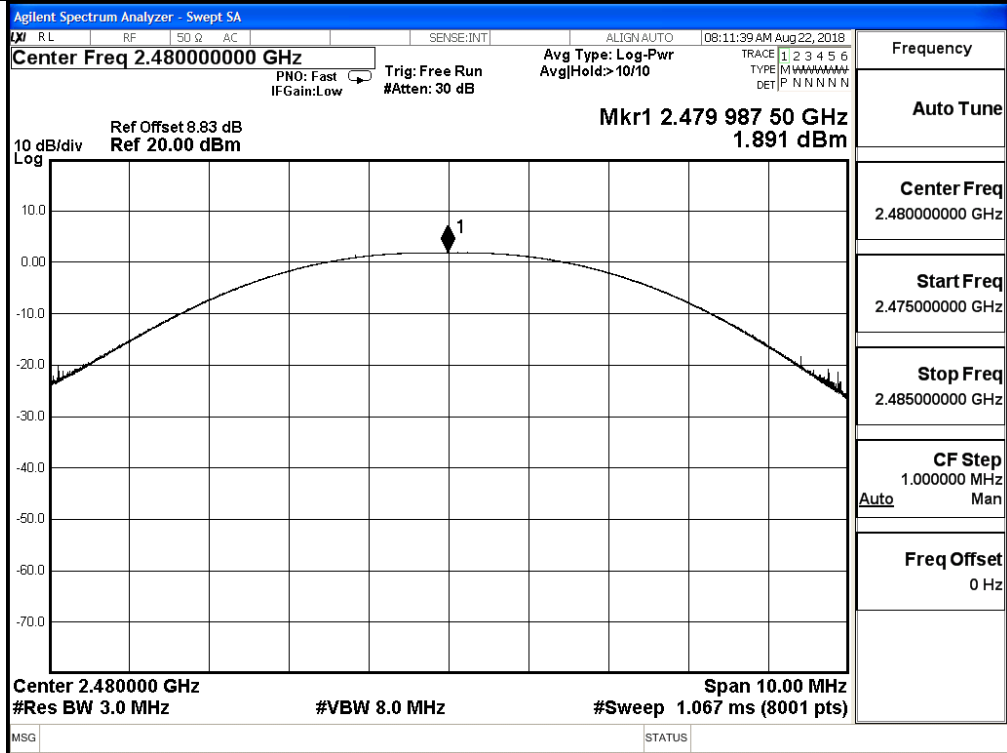
GFSK/LCH



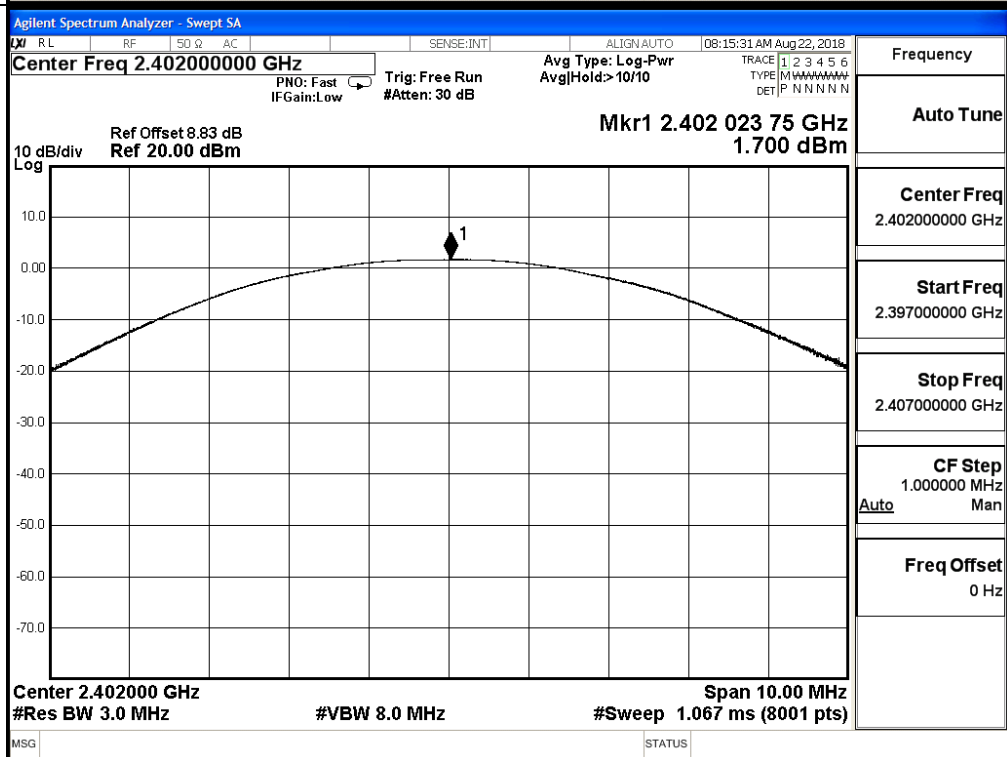
GFSK/MCH



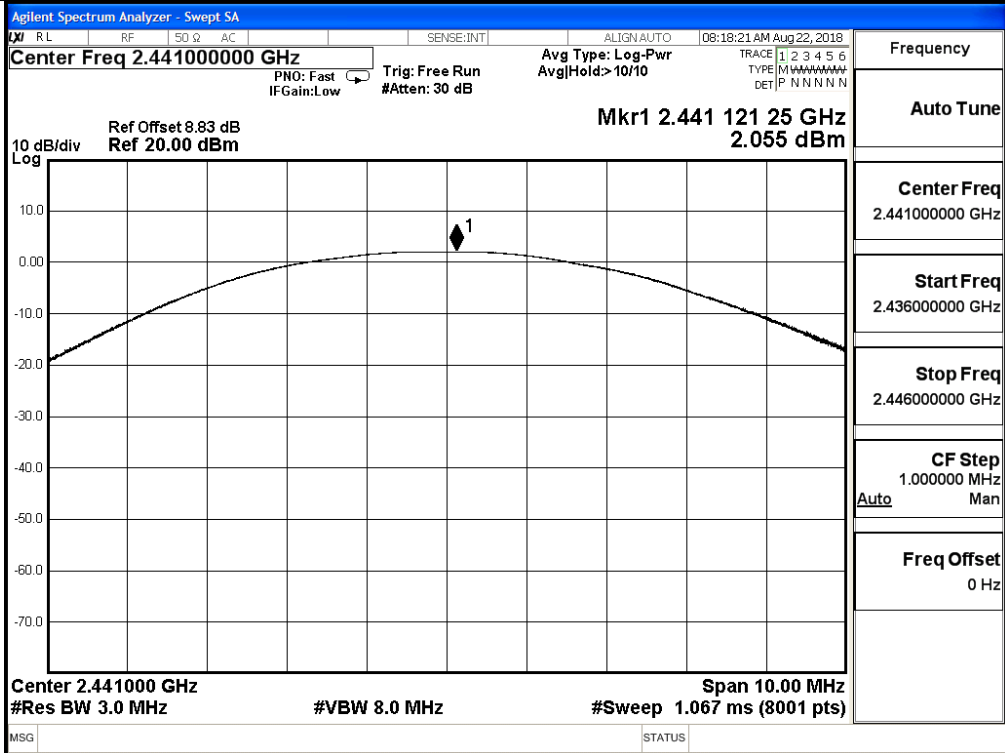
GFSK/HCH



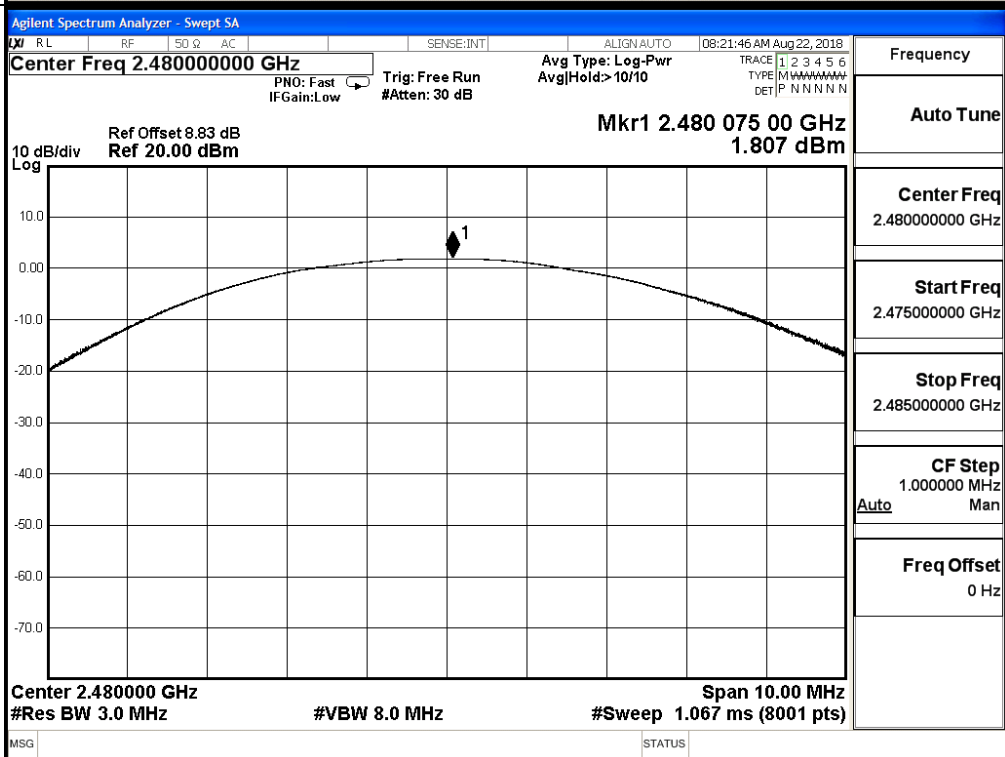
$\pi/4$ DQPSK/LCH



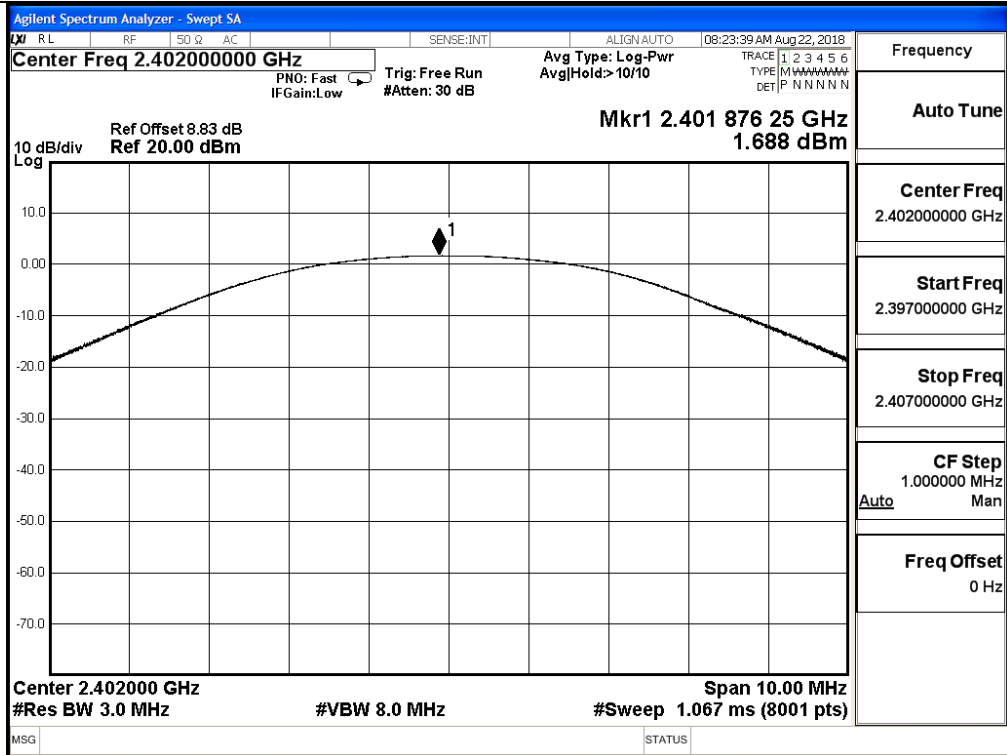
$\pi/4$ DQPSK/MCH



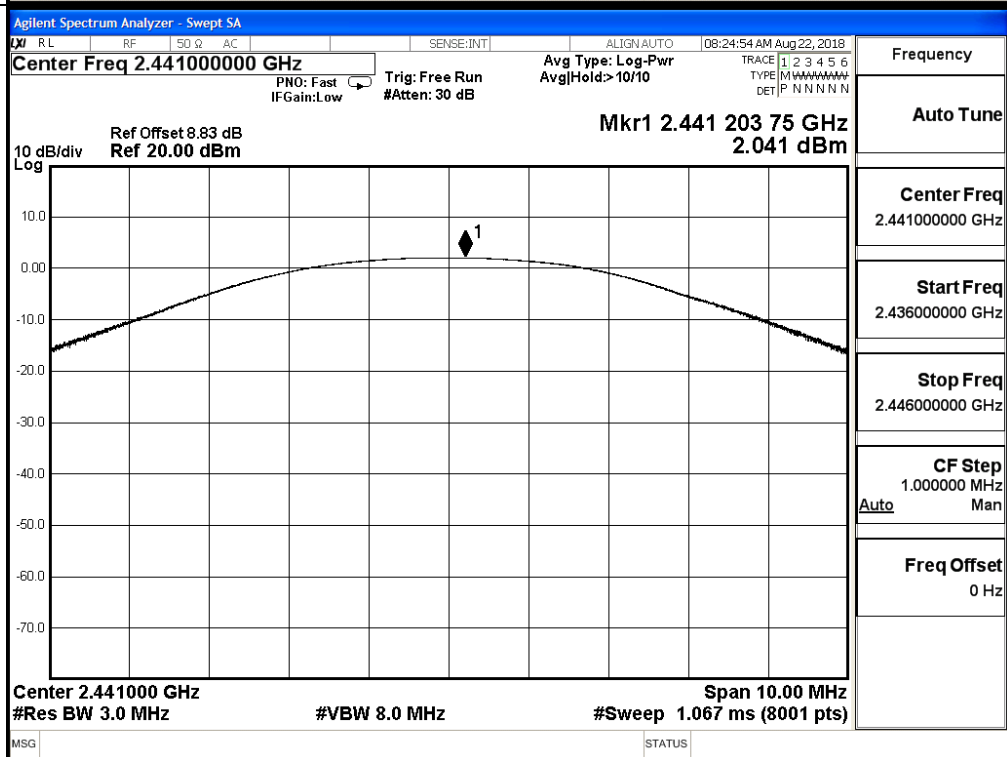
$\pi/4$ DQPSK/HCH

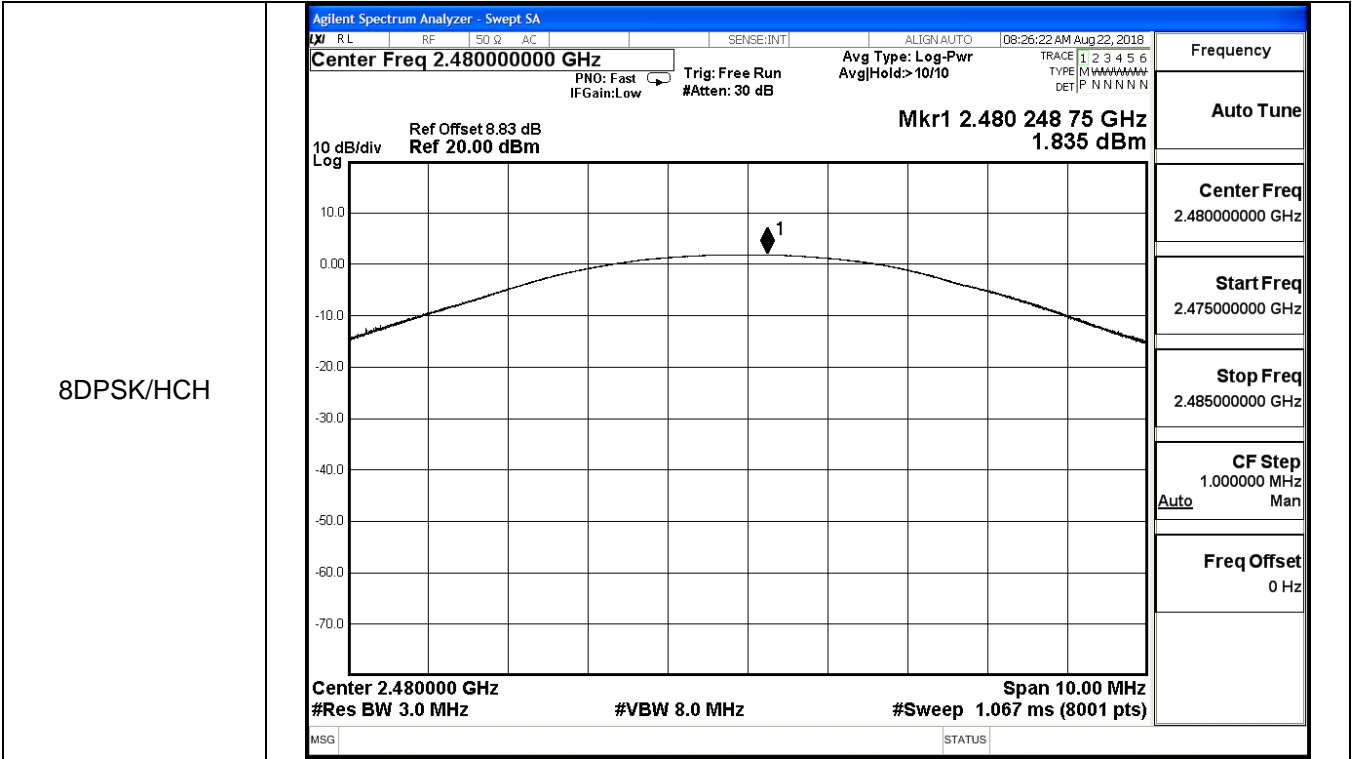


8DPSK/LCH



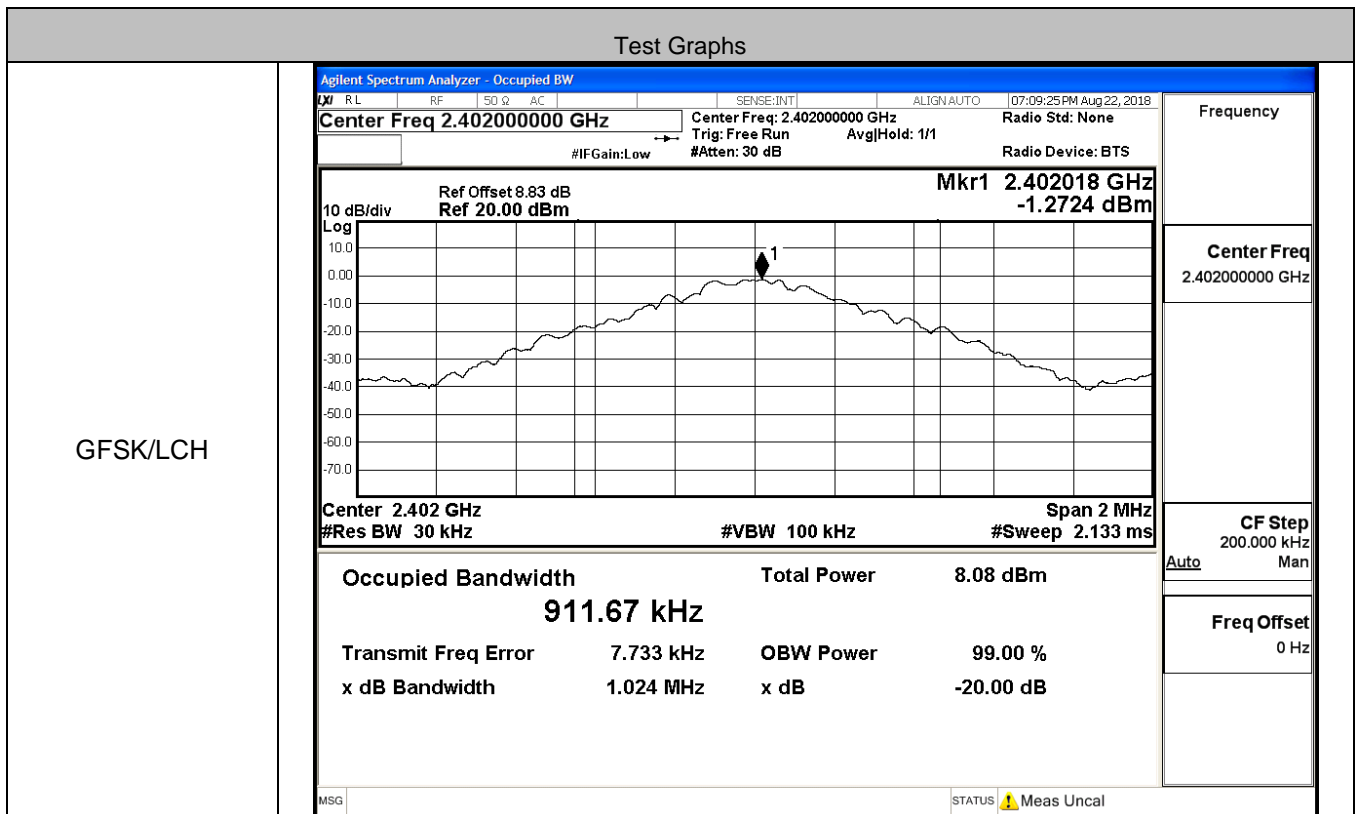
8DPSK/MCH



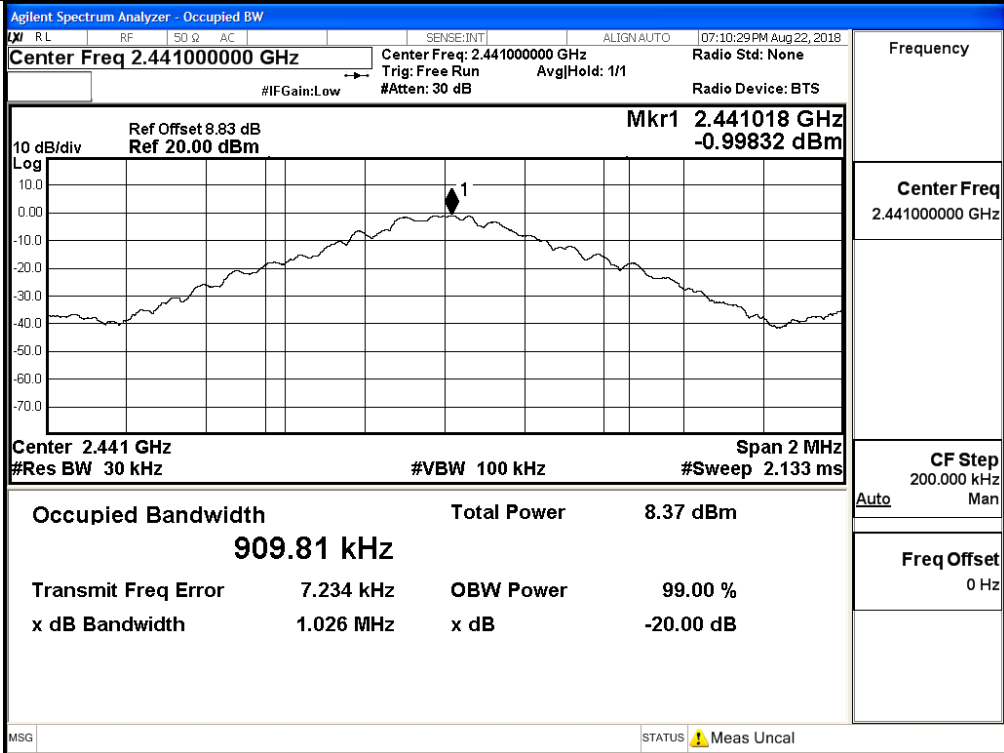


A.2 99% and 20dB Bandwidth

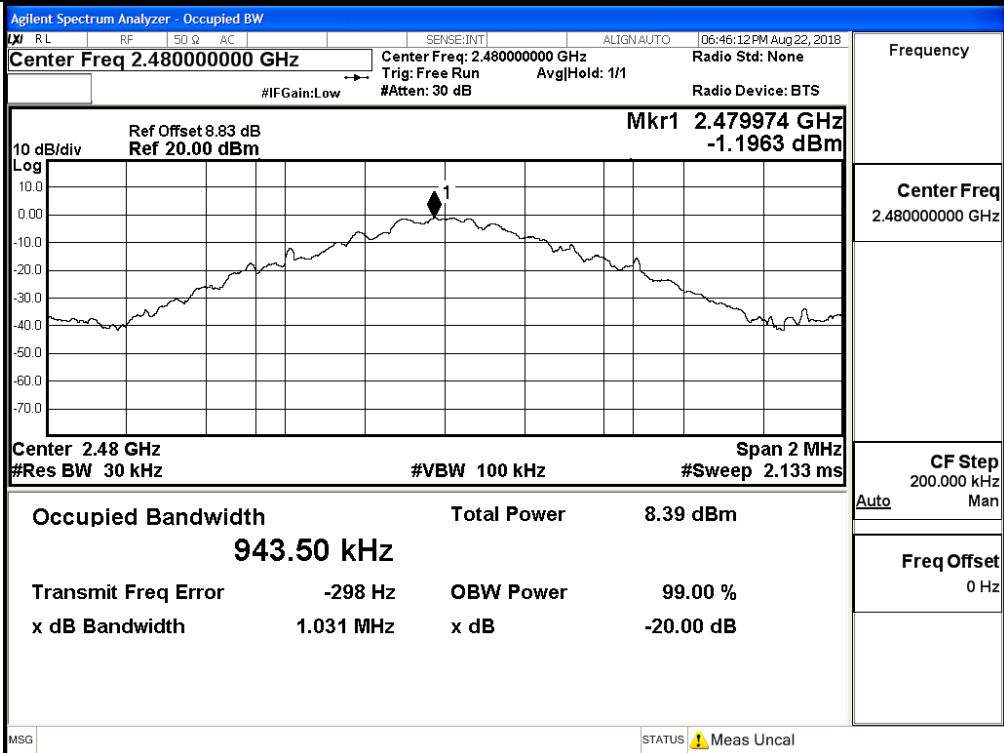
Mode	Channel.	99% Bandwidth [MHz]	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.91167	1.024	Not Specified	PASS
	MCH	0.90981	1.026	Not Specified	PASS
	HCH	0.94350	1.031	Not Specified	PASS
π/4DQPSK	LCH	1.2588	1.340	Not Specified	PASS
	MCH	1.3023	1.349	Not Specified	PASS
	HCH	1.3017	1.372	Not Specified	PASS
8DPSK	LCH	1.2105	1.307	Not Specified	PASS
	MCH	1.2224	1.301	Not Specified	PASS
	HCH	1.2410	1.313	Not Specified	PASS



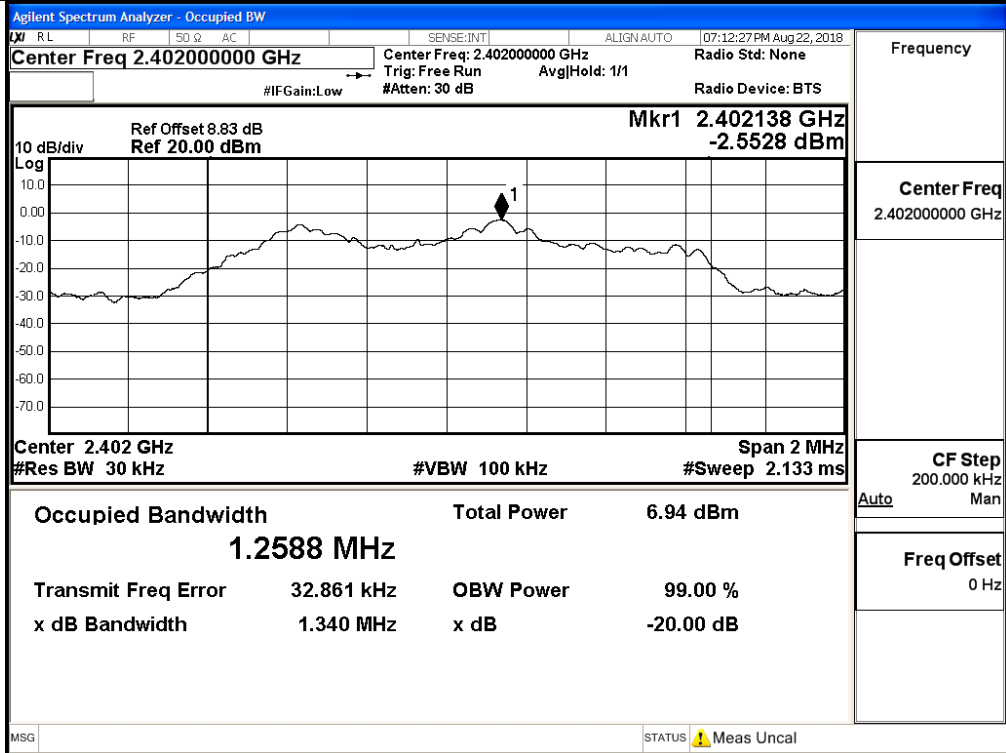
GFSK/MCH



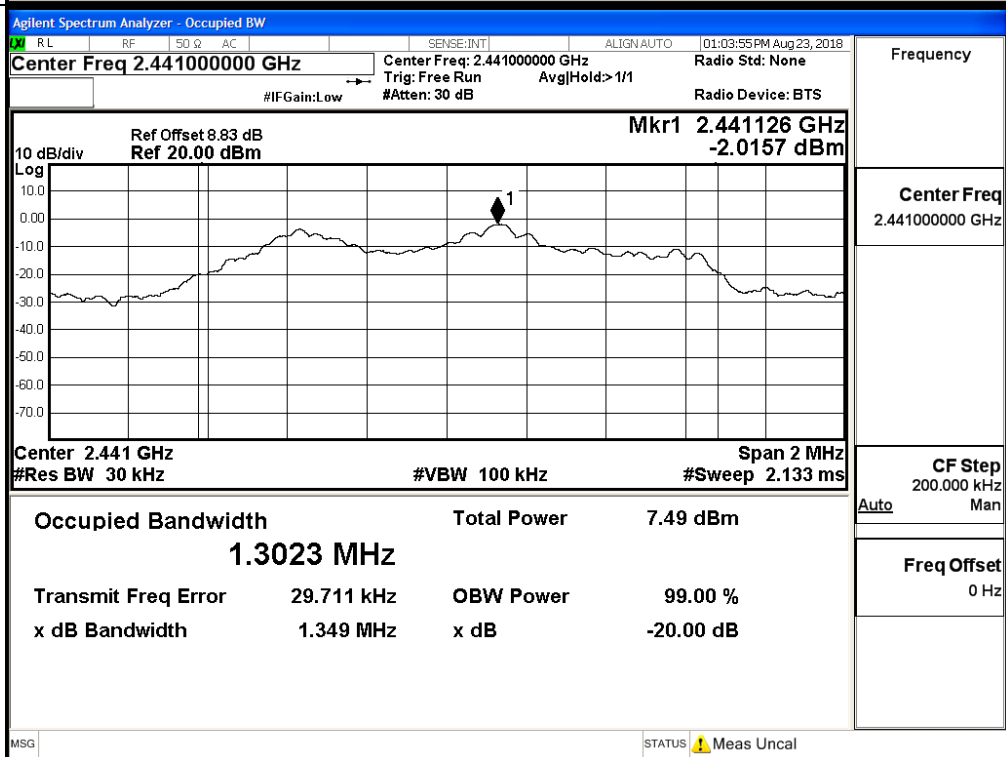
GFSK/HCH



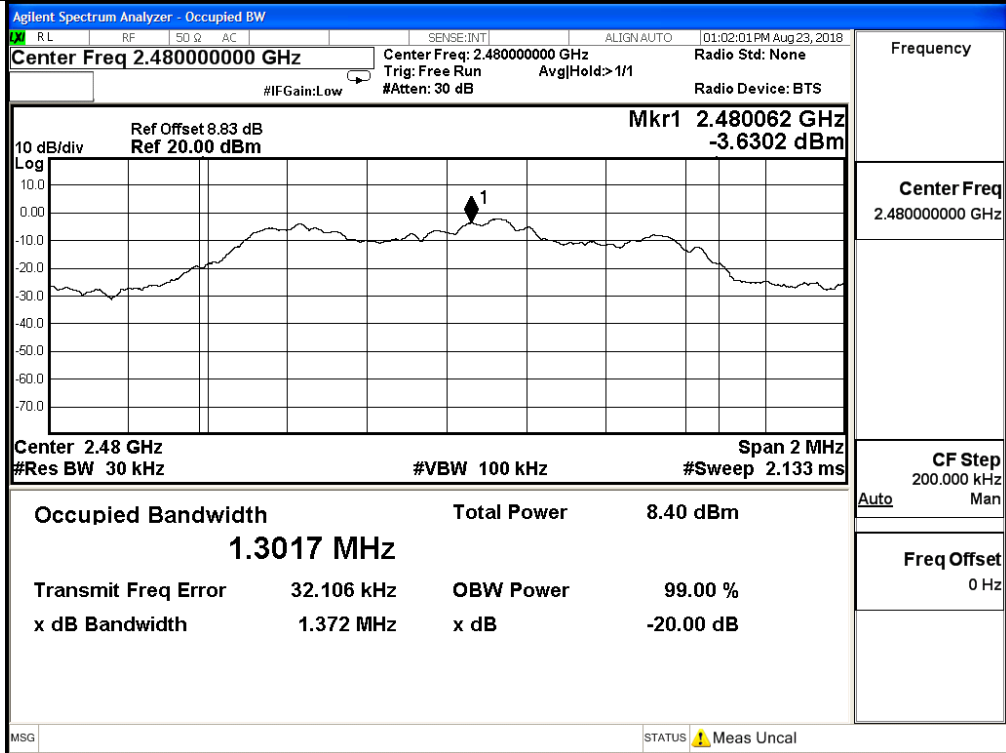
π/4DQPSK/LCH



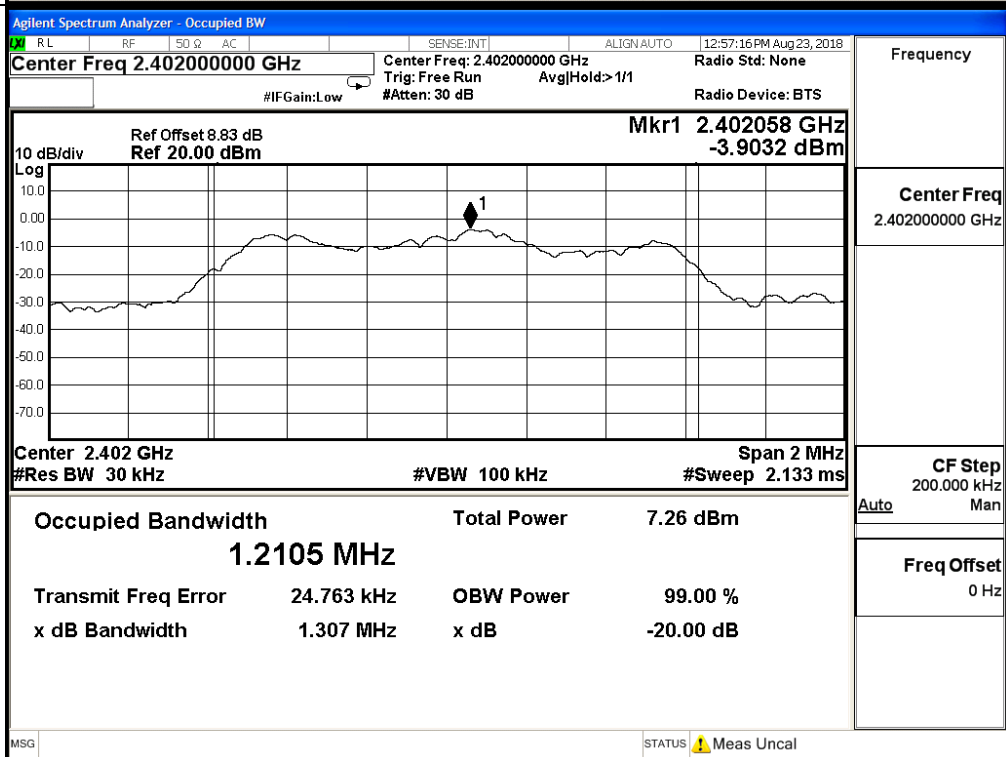
π/4DQPSK/MCH



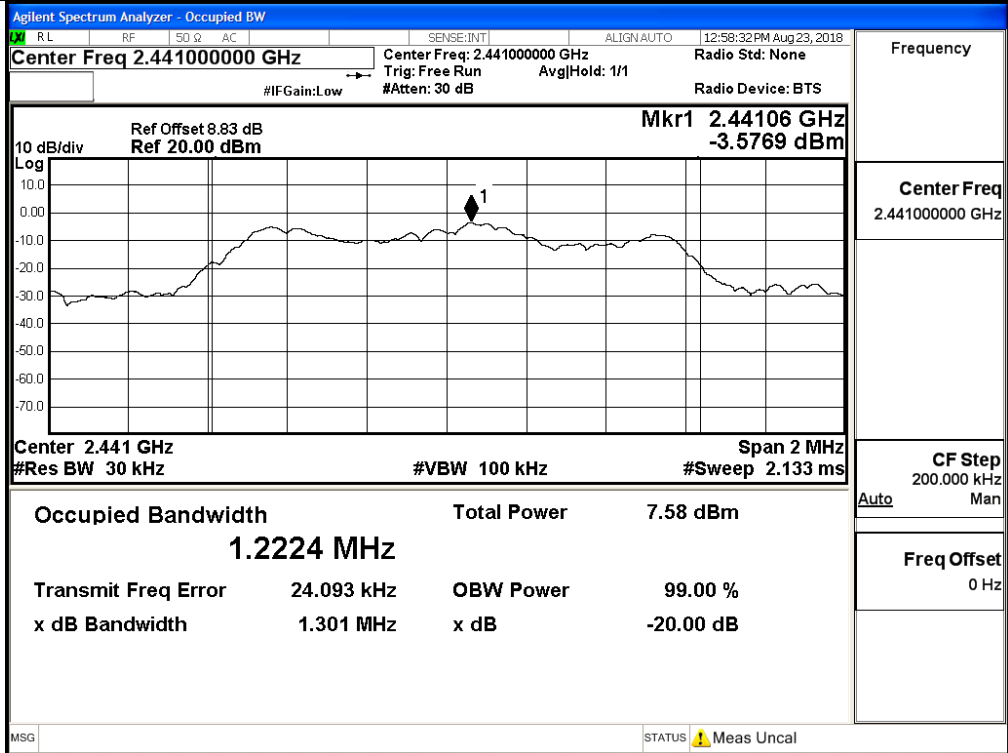
π/4DQPSK/HCH



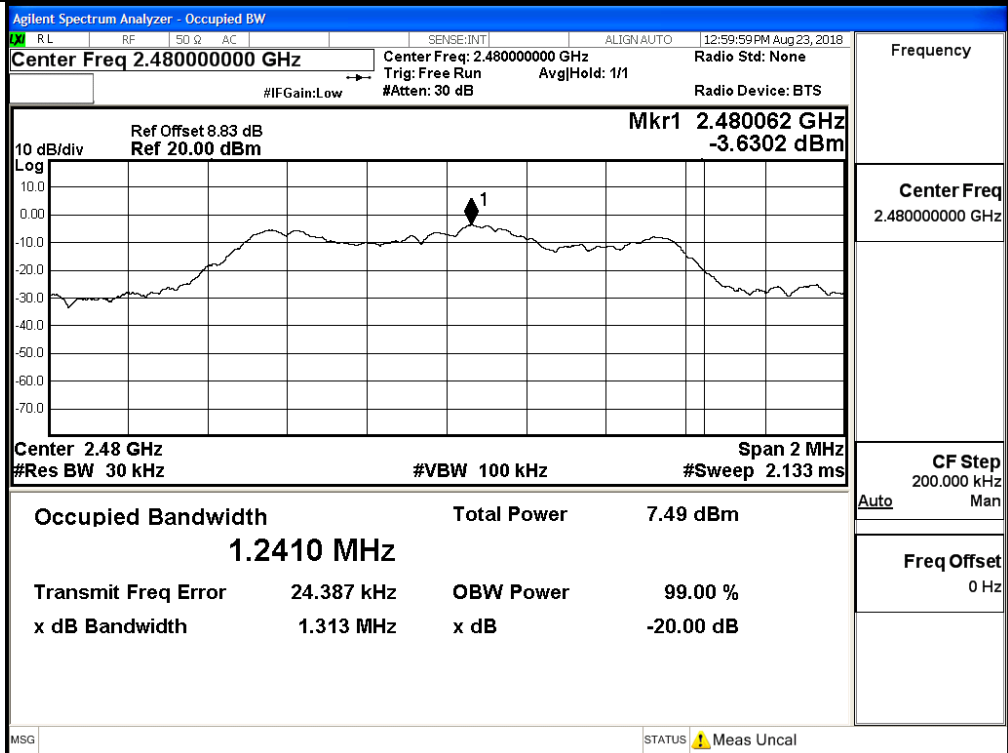
8DPSK/LCH



8DPSK/MCH

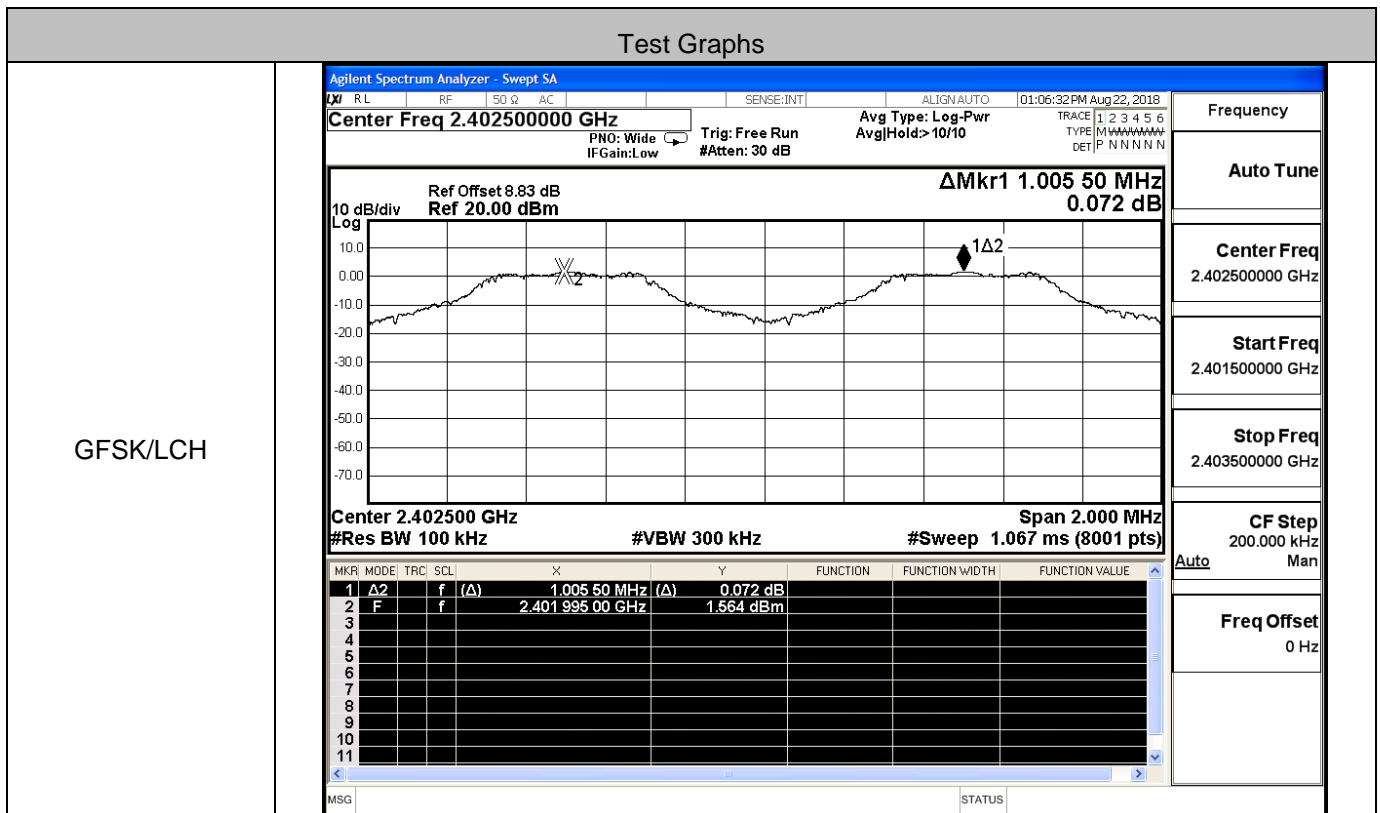


8DPSK/HCH

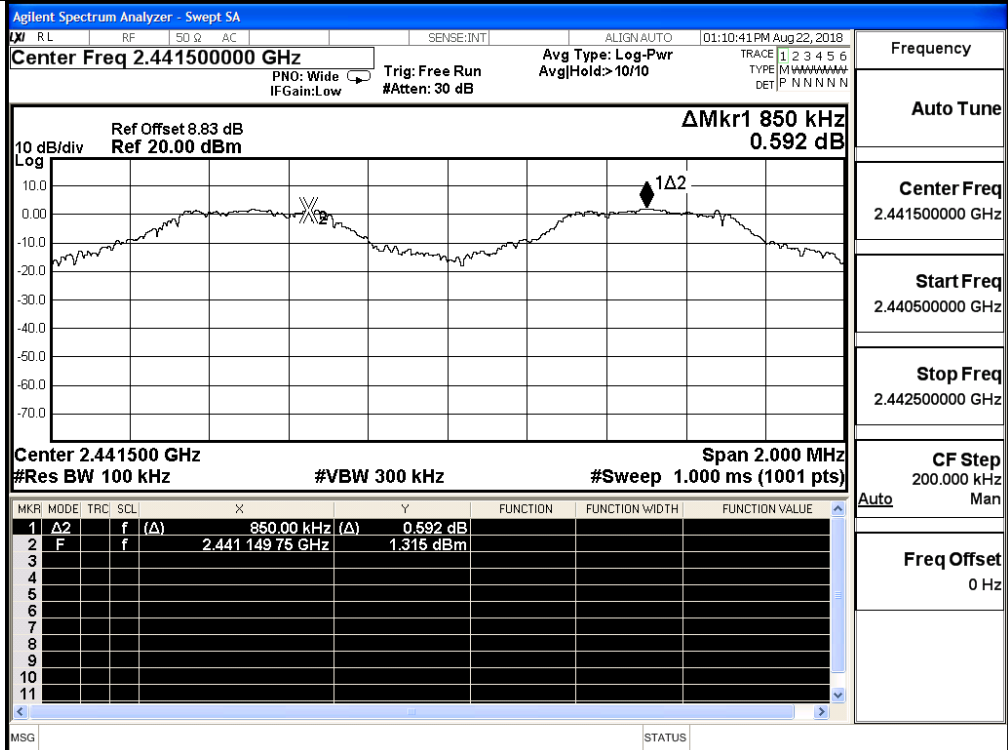


A.3 Carrier Frequency Separation

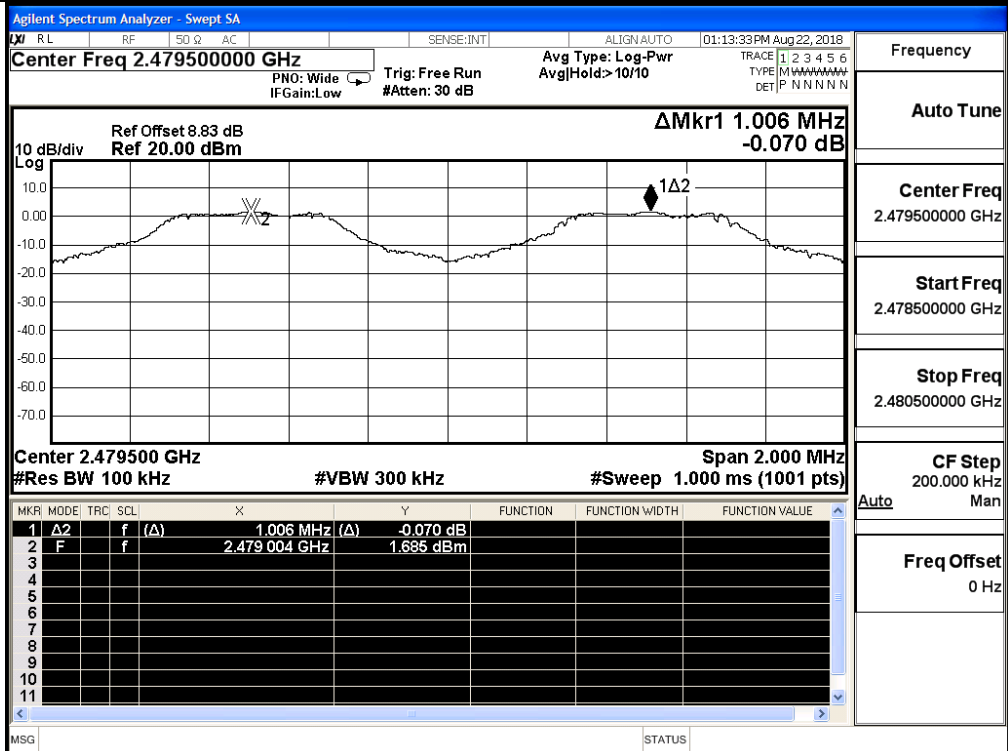
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.005	0.684	PASS
	MCH	0.850	0.684	PASS
	HCH	1.006	0.684	PASS
π/4DQPSK	LCH	0.994	0.915	PASS
	MCH	1.004	0.915	PASS
	HCH	1.006	0.915	PASS
8DPSK	LCH	0.994	0.875	PASS
	MCH	1.000	0.875	PASS
	HCH	1.004	0.875	PASS



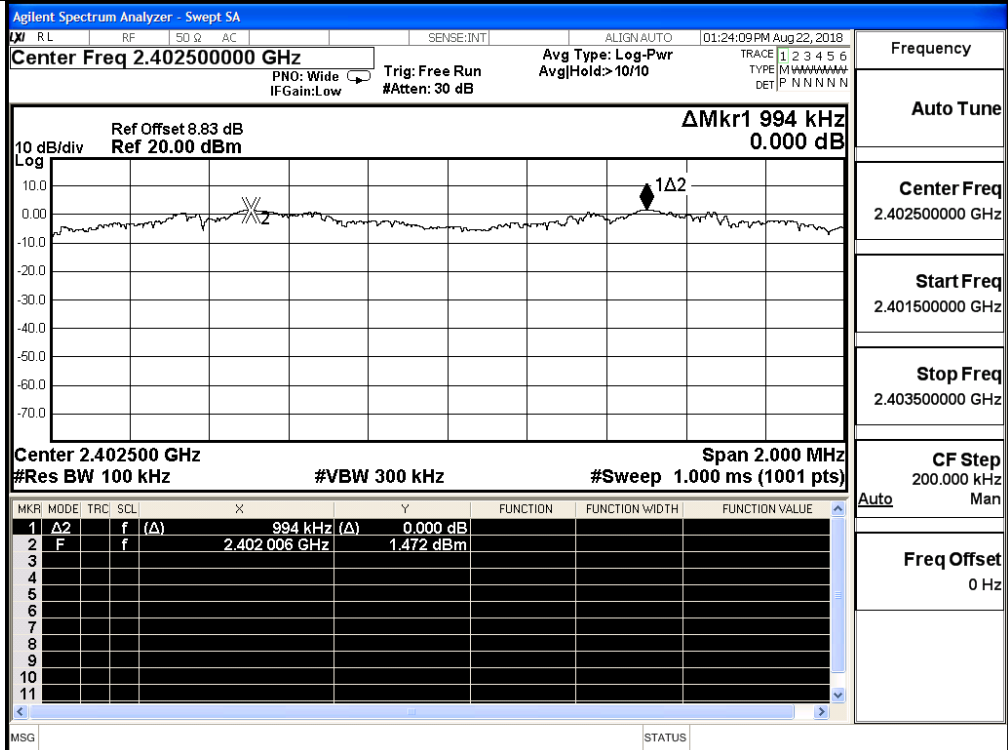
GFSK/MCH



GFSK/HCH

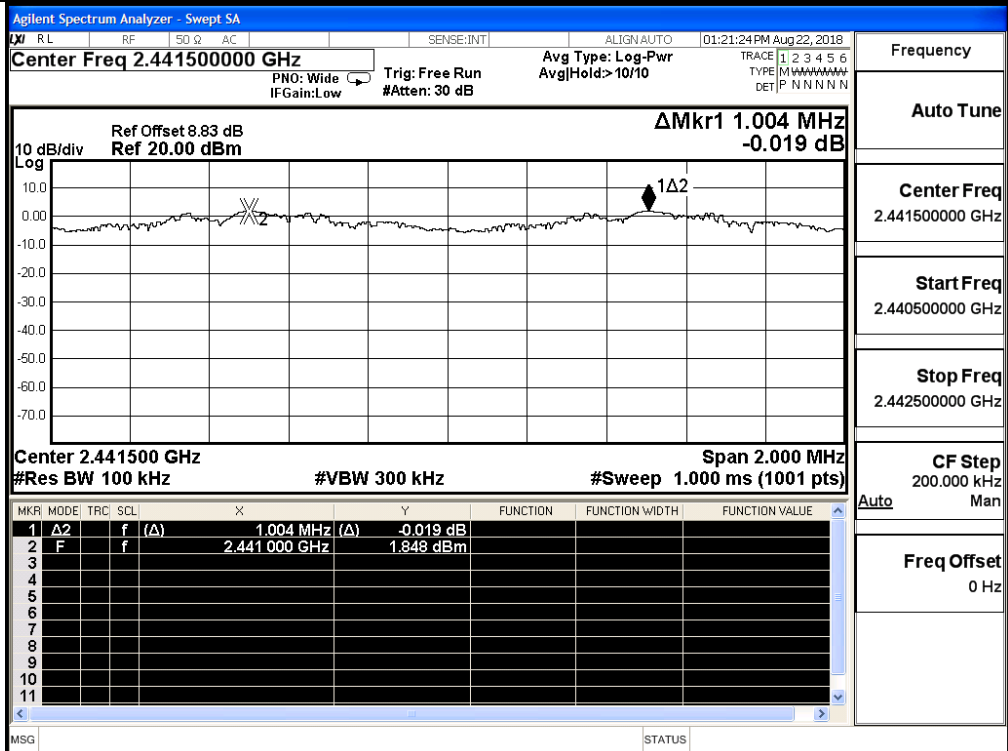


$\pi/4$ DQPSK/LCH



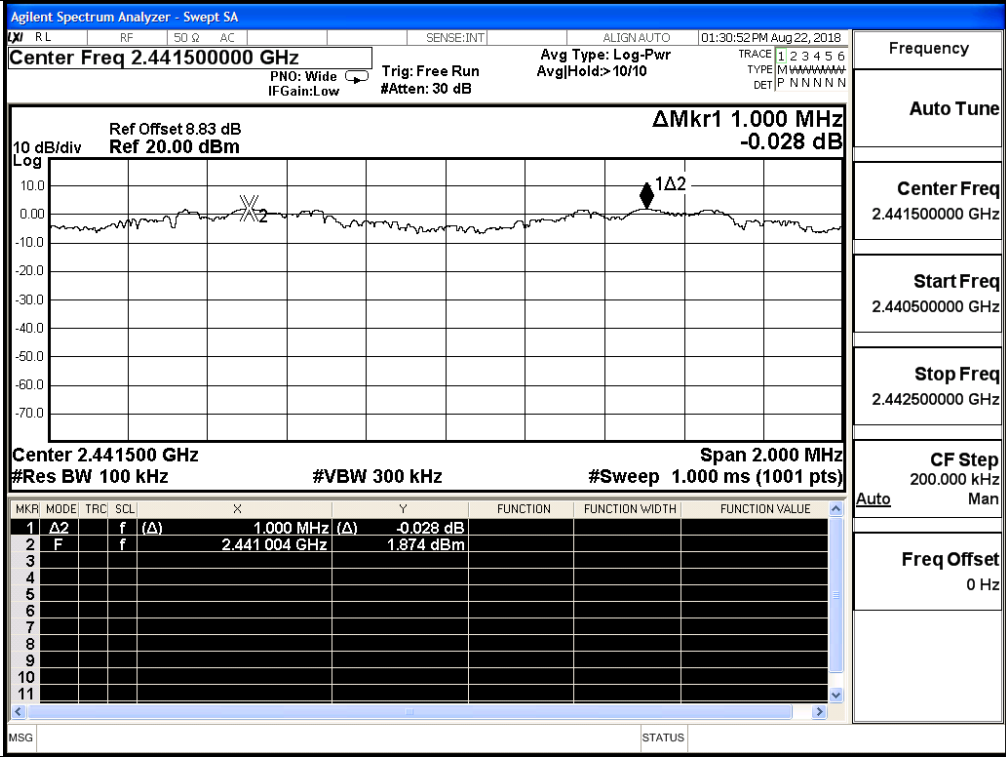
Frequency	
Auto Tune	
Center Freq	2.402500000 GHz
Start Freq	2.401500000 GHz
Stop Freq	2.403500000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

$\pi/4$ DQPSK/MCH

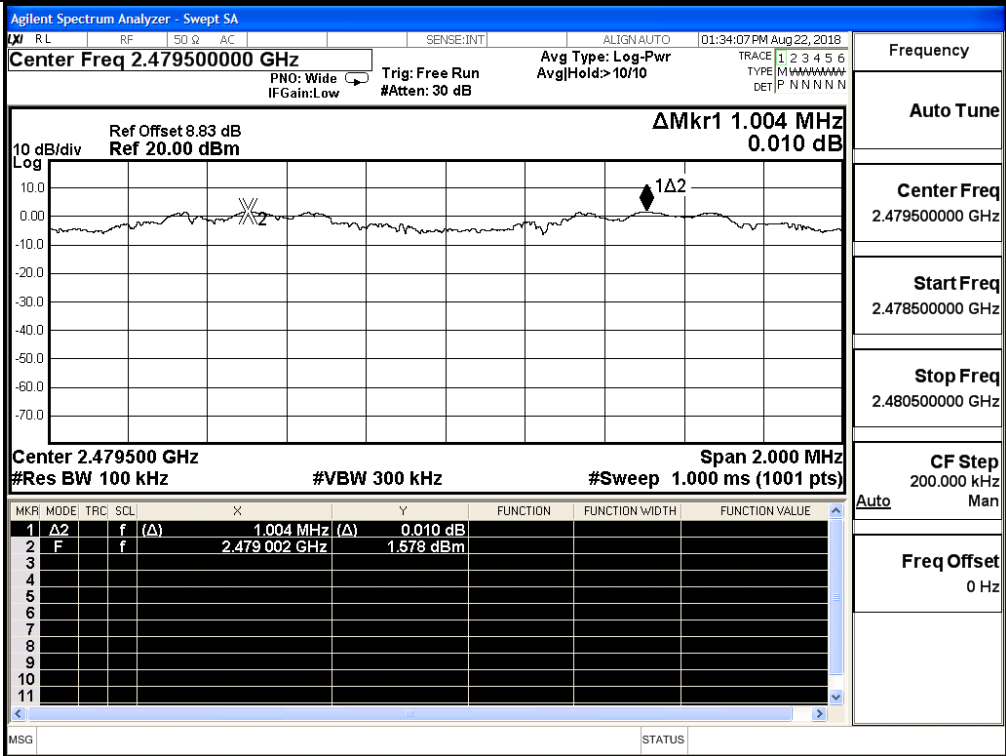


Frequency	
Auto Tune	
Center Freq	2.441500000 GHz
Start Freq	2.440500000 GHz
Stop Freq	2.442500000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

8DPSK/MCH

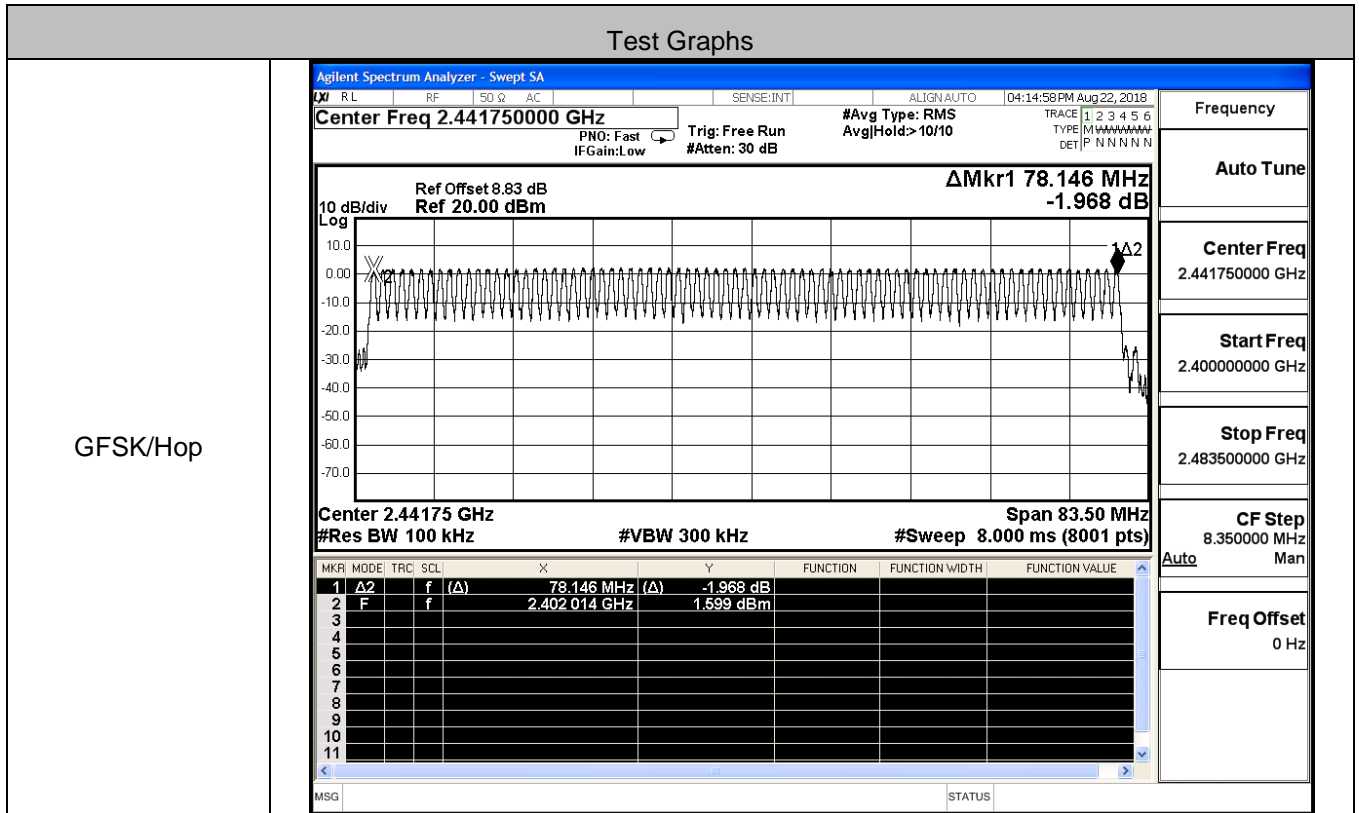


8DPSK/HCH

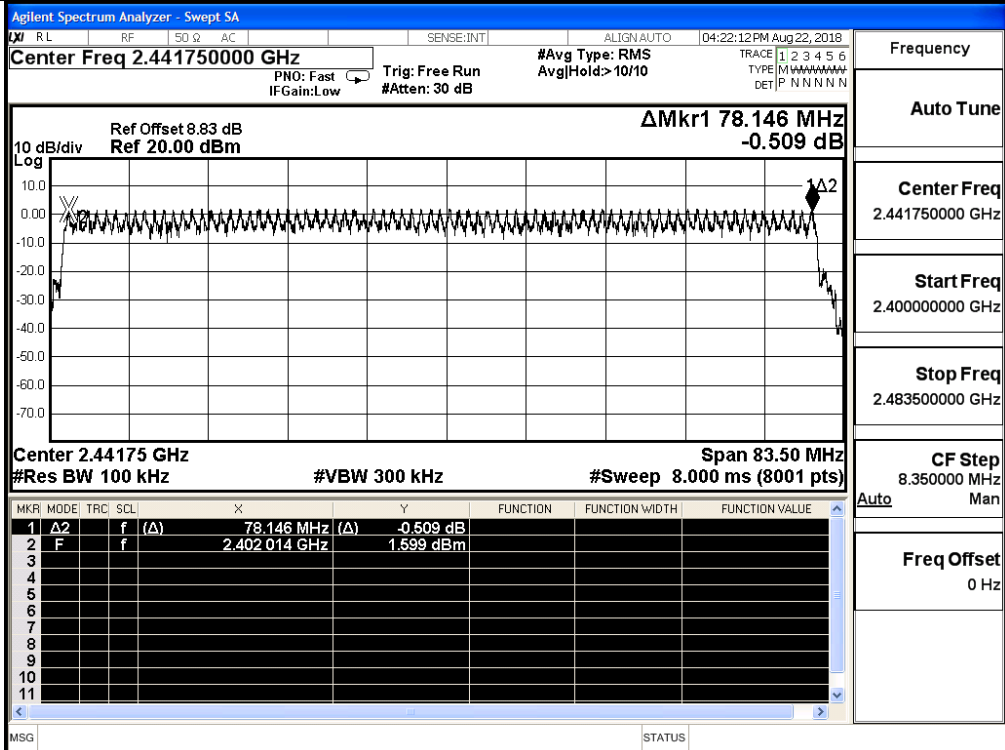


A.4 Hopping Channel Number

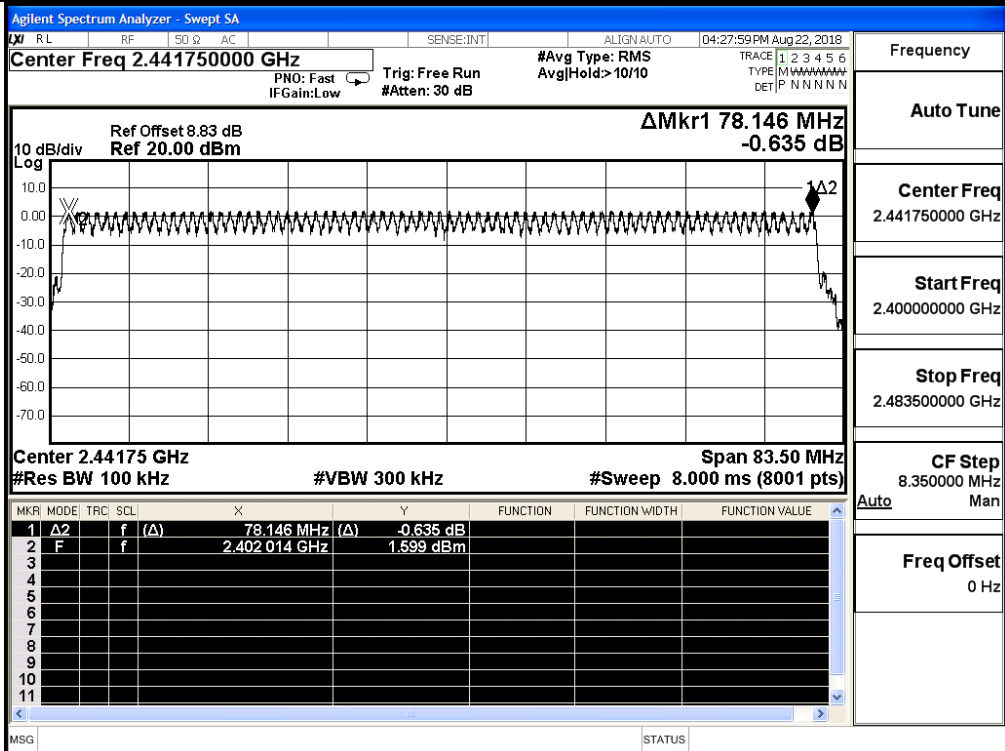
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS



$\pi/4$ DQPSK/Hop

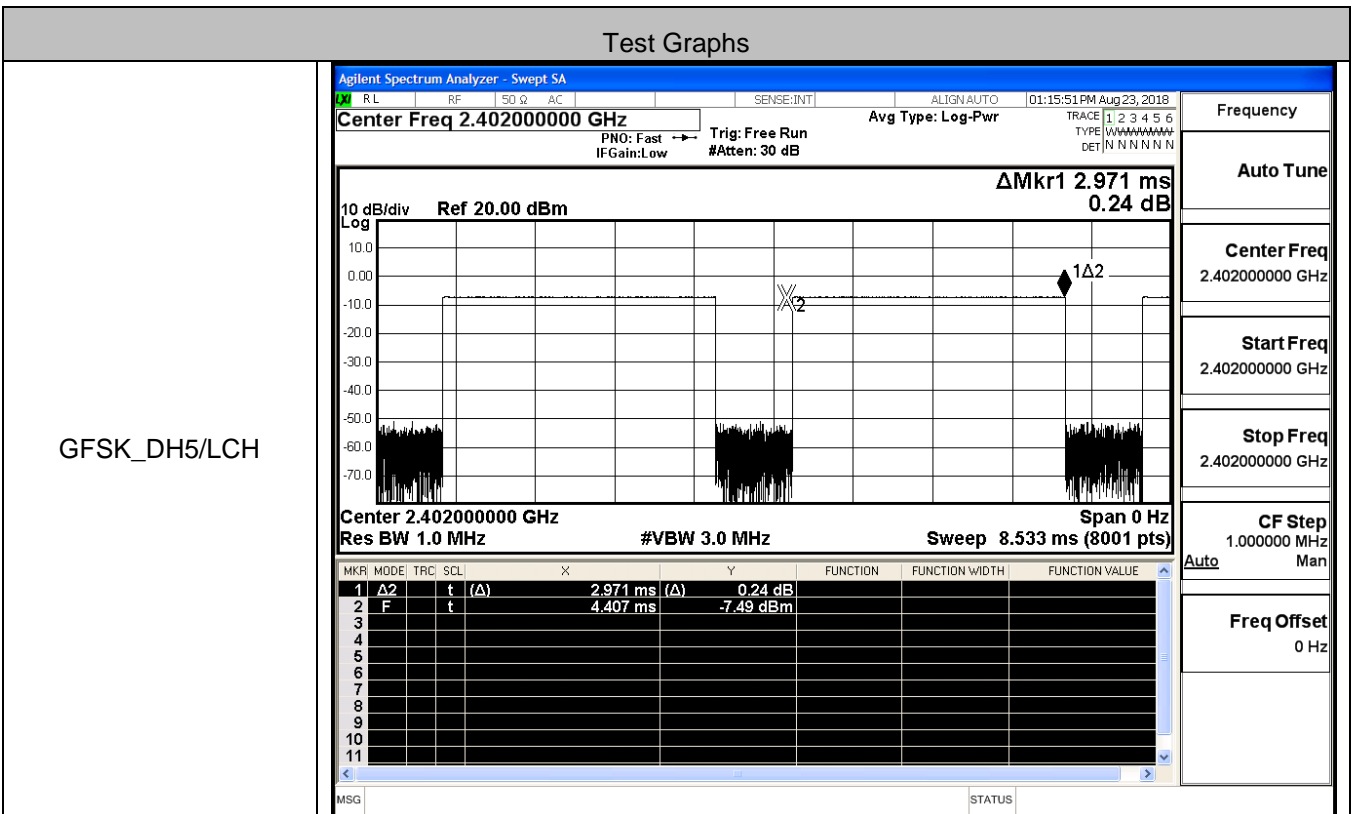


8DPSK/Hop

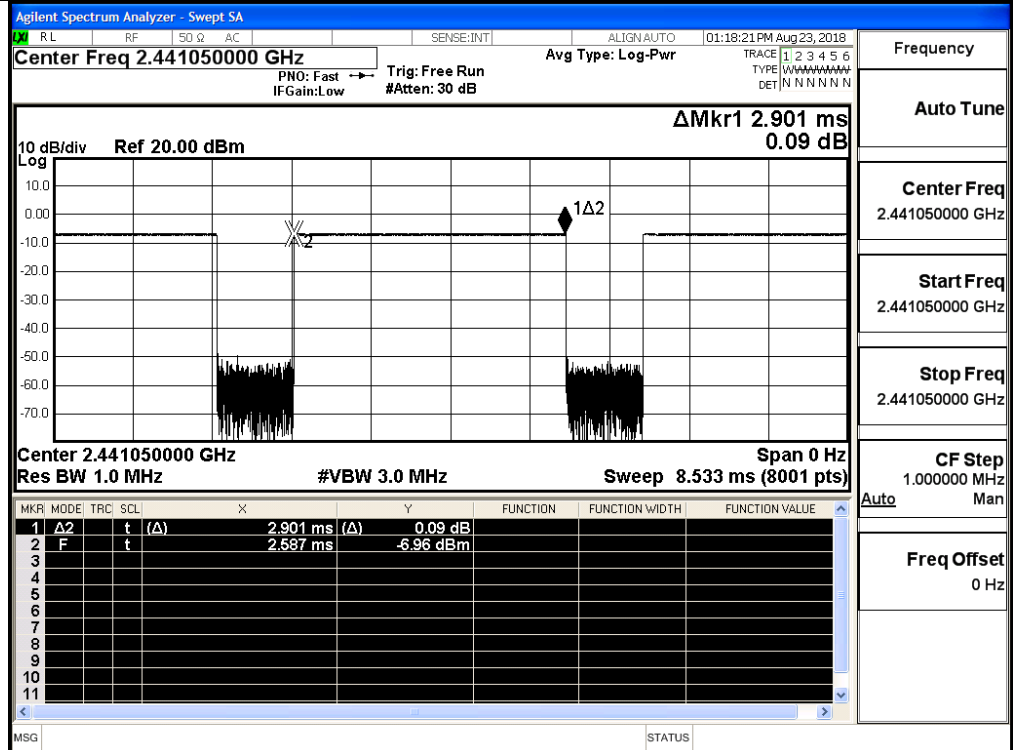


A.5 Dwell Time

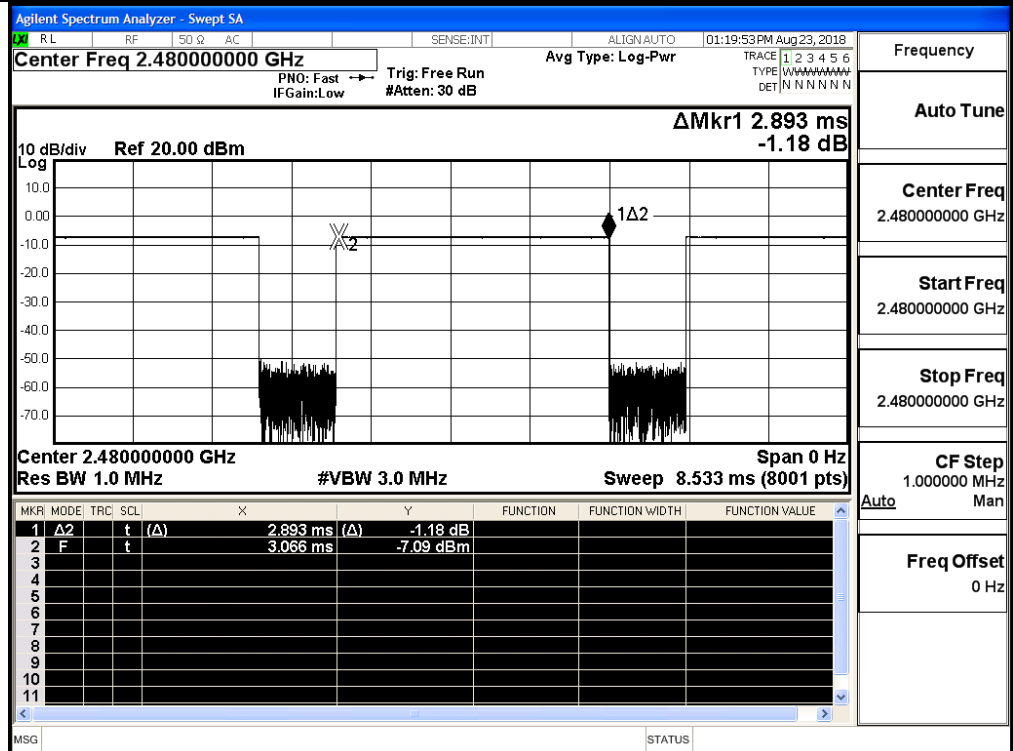
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.971	106.7	0.317	0.4	PASS
	DH5	MCH	2.901	106.7	0.310	0.4	PASS
	DH5	HCH	2.893	106.7	0.309	0.4	PASS
π/4DQPSK	2DH5	LCH	2.912	106.7	0.311	0.4	PASS
	2DH5	MCH	2.921	106.7	0.312	0.4	PASS
	2DH5	HCH	2.913	106.7	0.311	0.4	PASS
8DPSK	3DH5	LCH	2.913	106.7	0.311	0.4	PASS
	3DH5	MCH	2.934	106.7	0.313	0.4	PASS
	3DH5	HCH	2.960	106.7	0.316	0.4	PASS



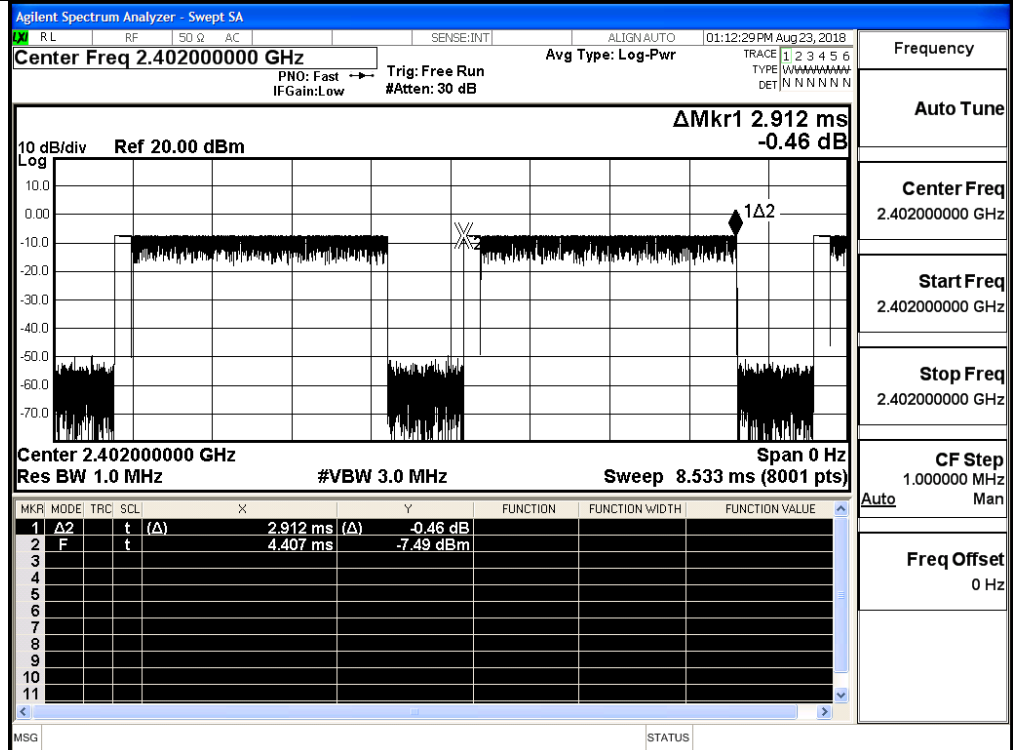
GFSK_DH5/MCH



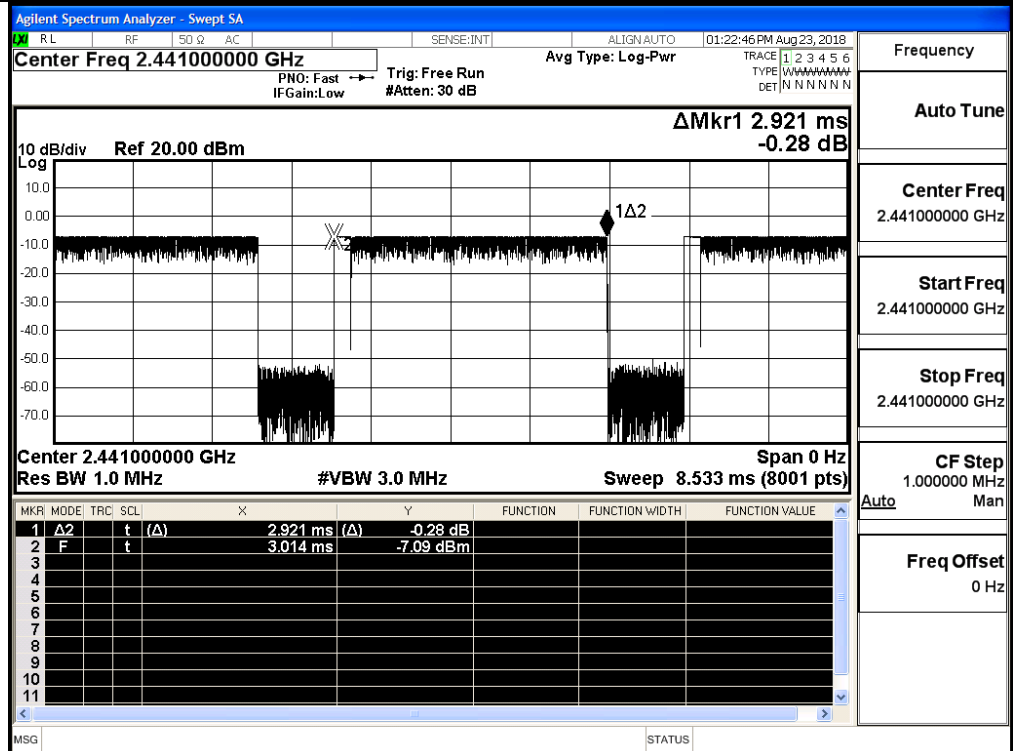
GFSK_DH5/HCH



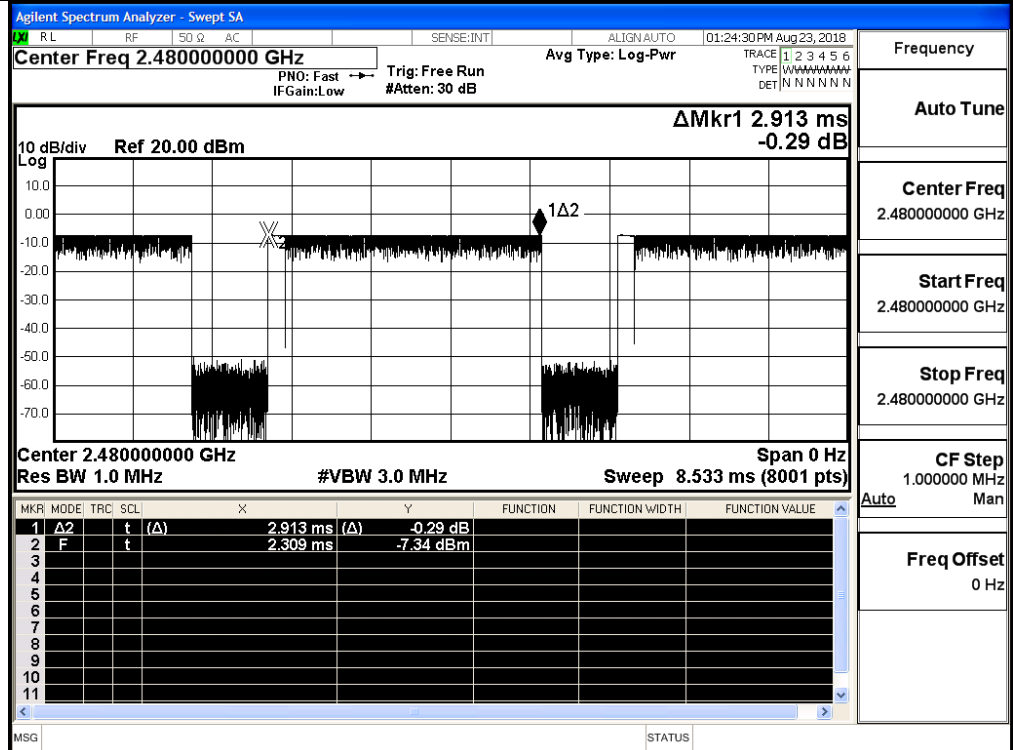
$\pi/4$ DQPSK
_2DH5/LCH



$\pi/4$ DQPSK
_2DH5/MCH

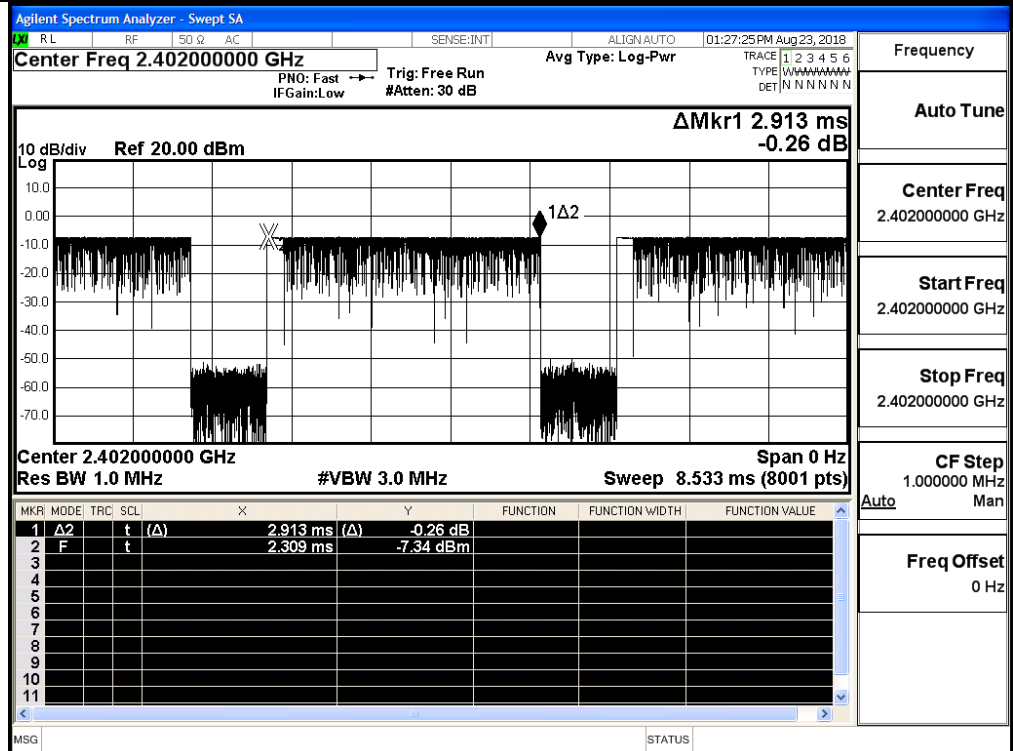


$\pi/4$ DQPSK
_2DH5/HCH



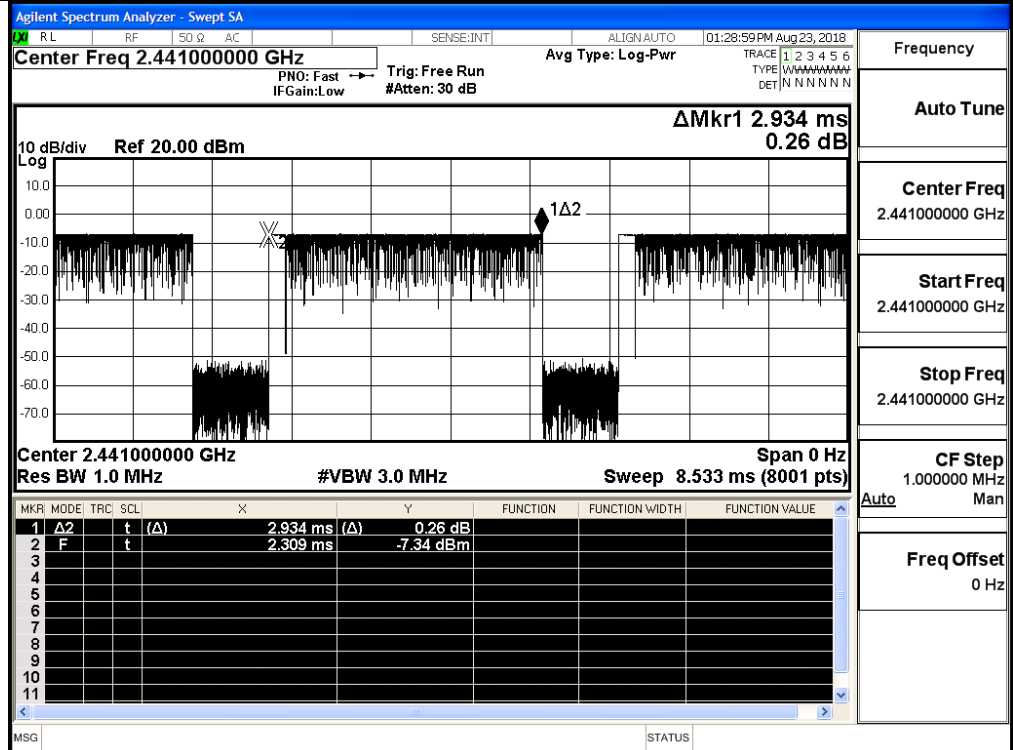
Frequency	
Auto Tune	
Center Freq	2.48000000 GHz
Start Freq	2.48000000 GHz
Stop Freq	2.48000000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK_3DH5/LCH

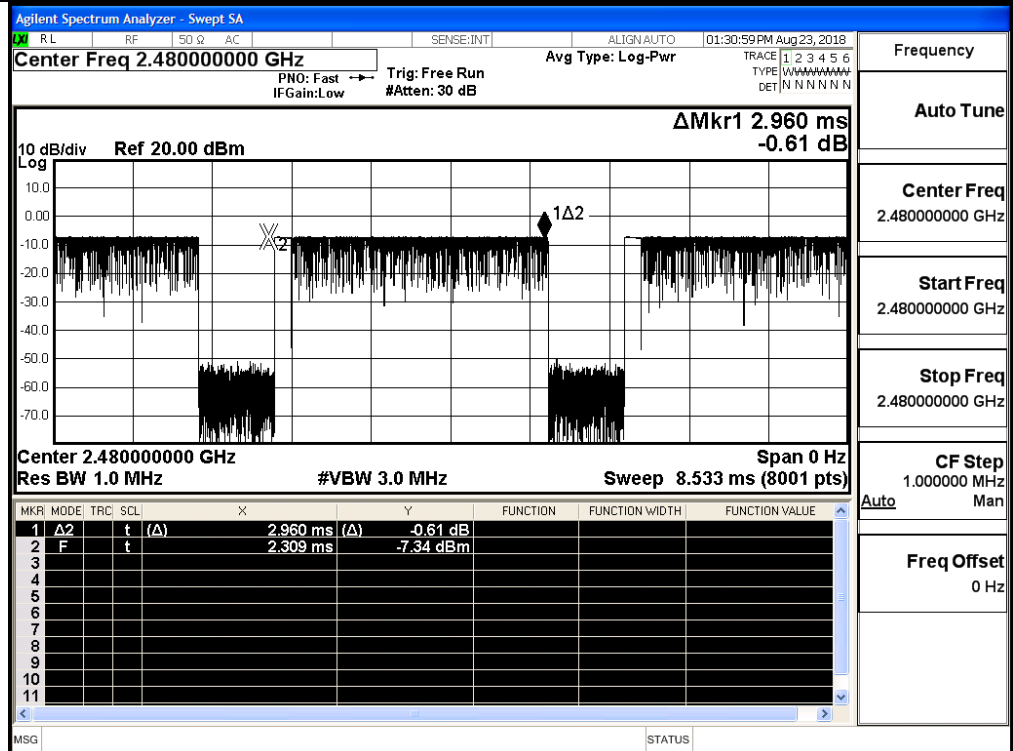


Frequency	
Auto Tune	
Center Freq	2.40200000 GHz
Start Freq	2.40200000 GHz
Stop Freq	2.40200000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

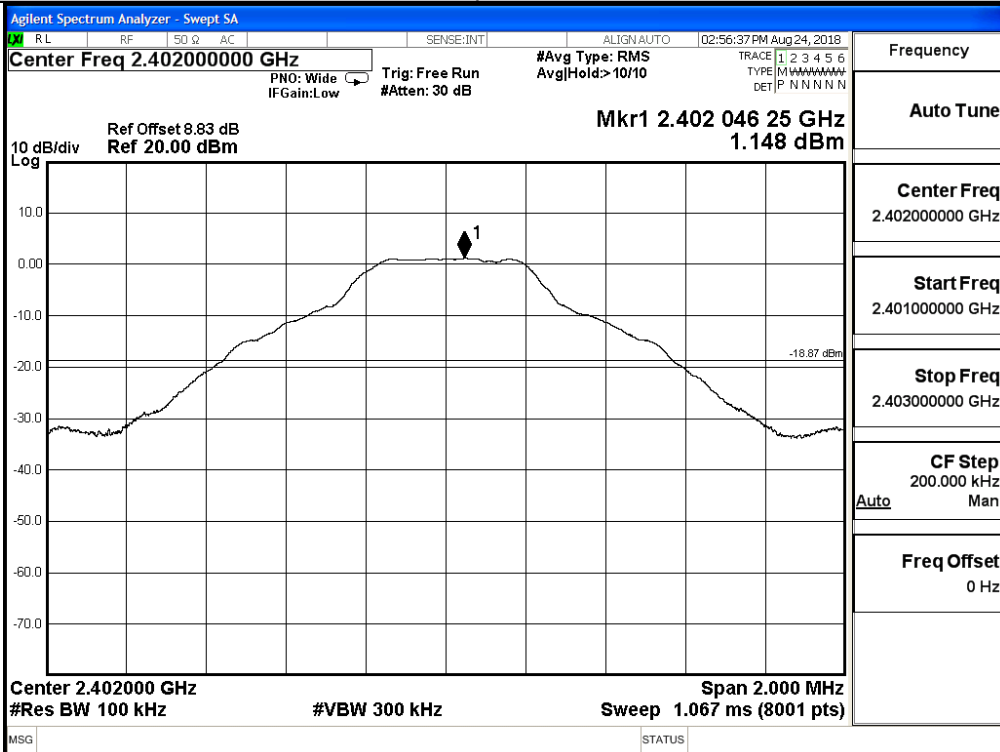


A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	1.148	-20.869	-18.852	PASS
	MCH	1.429	-20.242	-18.571	PASS
	HCH	1.042	-19.586	-18.958	PASS
$\pi/4$ DQPSK	LCH	0.646	-24.002	-19.354	PASS
	MCH	1.016	-22.782	-18.984	PASS
	HCH	0.843	-23.759	-19.157	PASS
8DPSK	LCH	-0.257	-23.898	-20.257	PASS
	MCH	0.231	-21.341	-19.769	PASS
	HCH	0.172	-24.237	-19.828	PASS

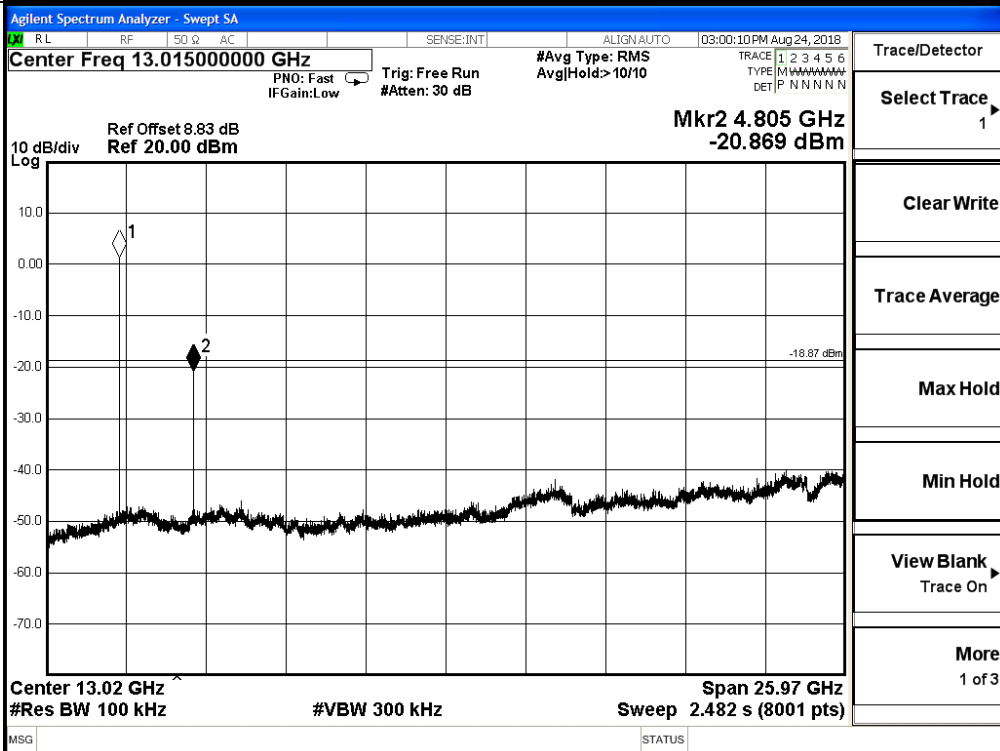
GFSK_LCH_Graphs

Pref



Frequency	
Auto Tune	
Center Freq	2.402000000 GHz
Start Freq	2.401000000 GHz
Stop Freq	2.403000000 GHz
CF Step	200.000 kHz
Auto	Man
Freq Offset	0 Hz

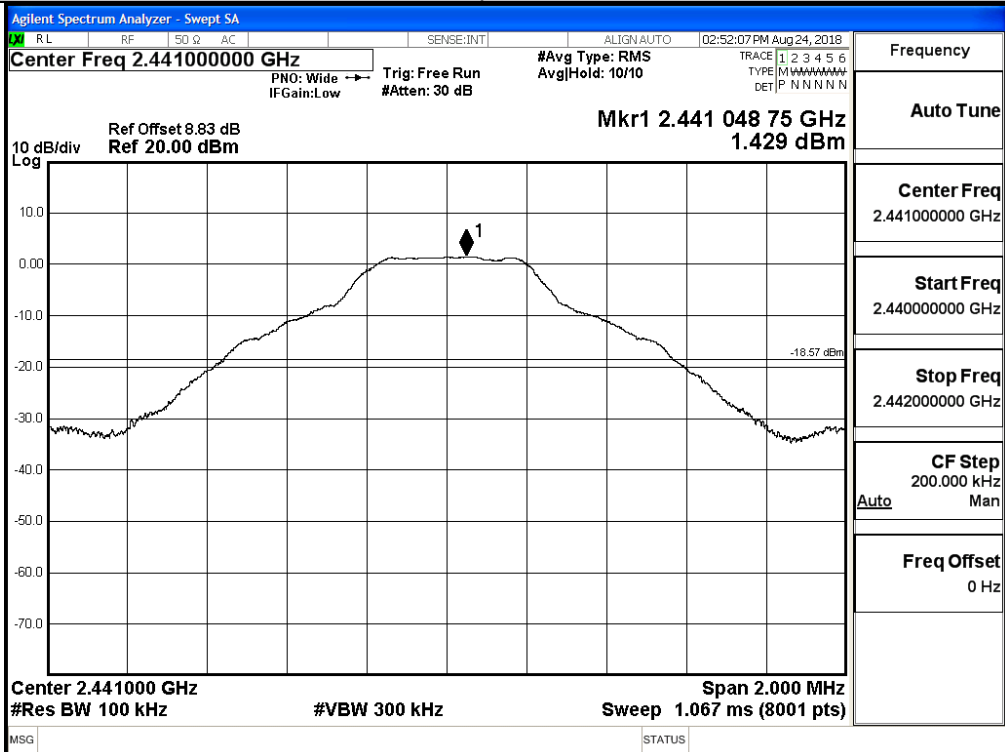
Puw



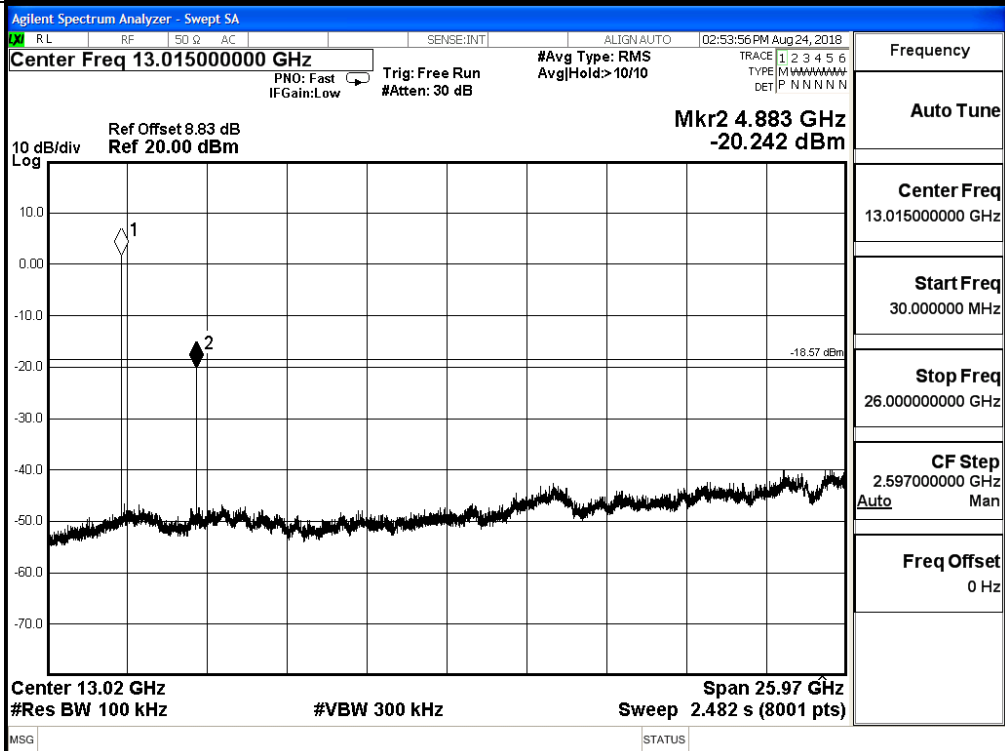
Trace/Detector	
Select Trace	1
Clear Write	
Trace Average	
Max Hold	
Min Hold	
View Blank	Trace On
More	1 of 3

GFSK_MCH_Graphs

Pref

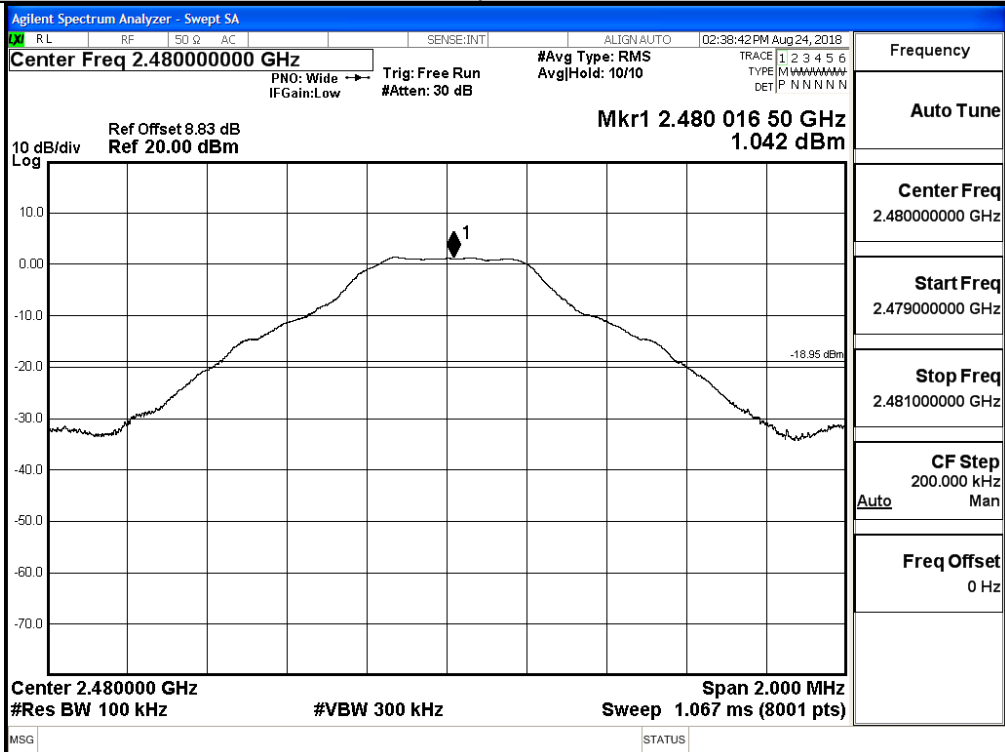


Puw

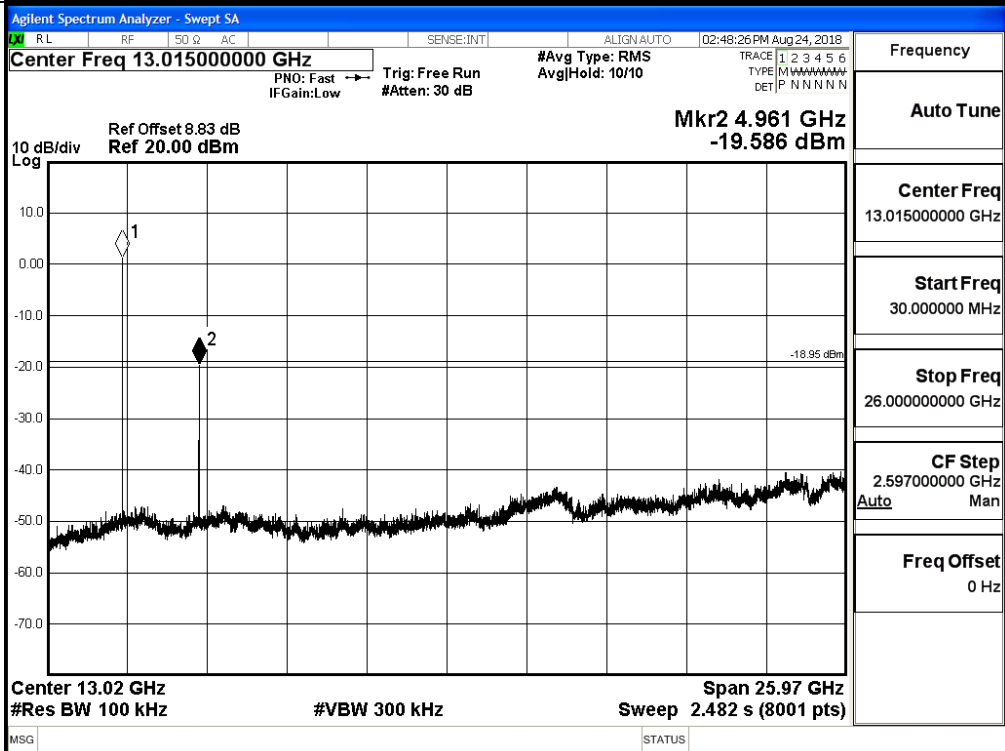


GFSK_HCH_Graphs

Pref

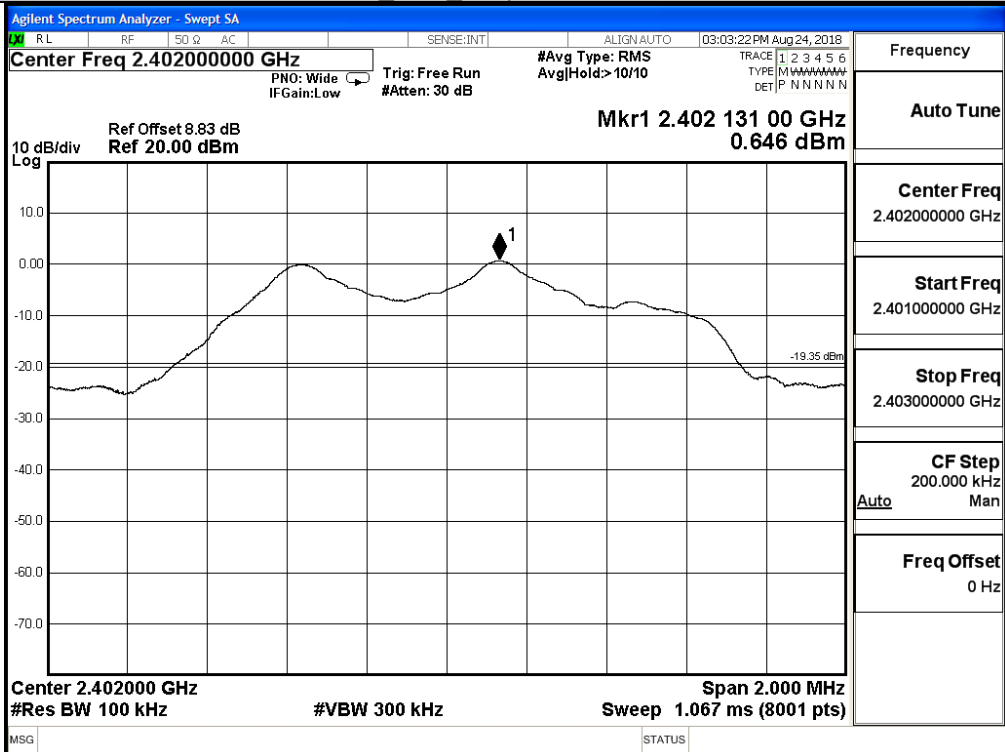


Puw

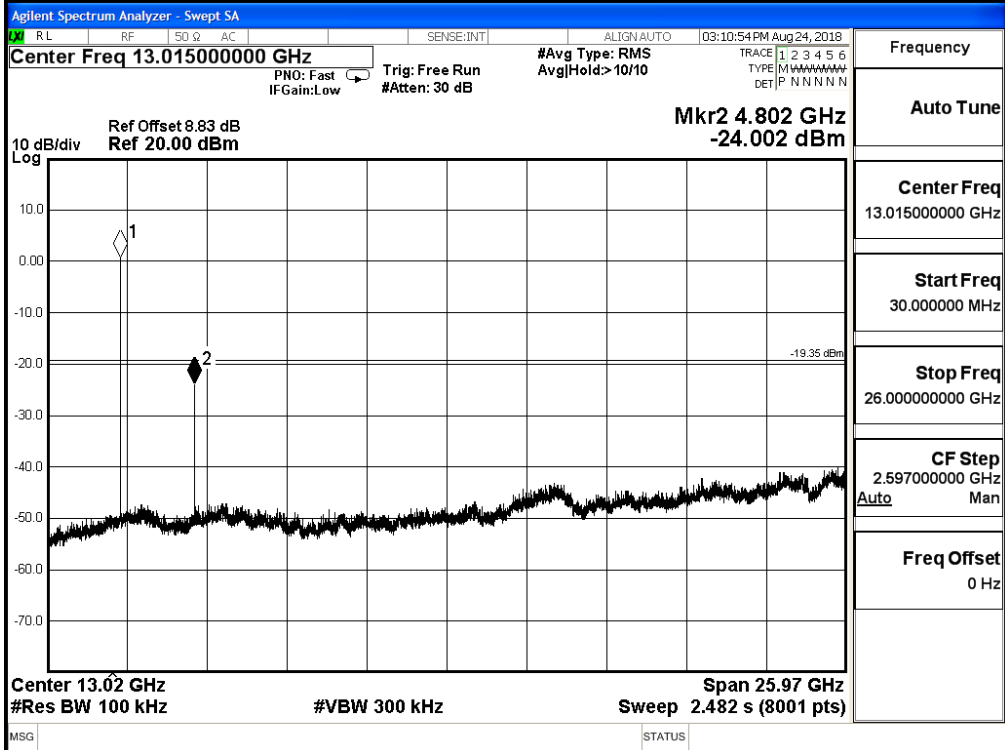


$\pi/4$ DQPSK_LCH_Graphs

Pref

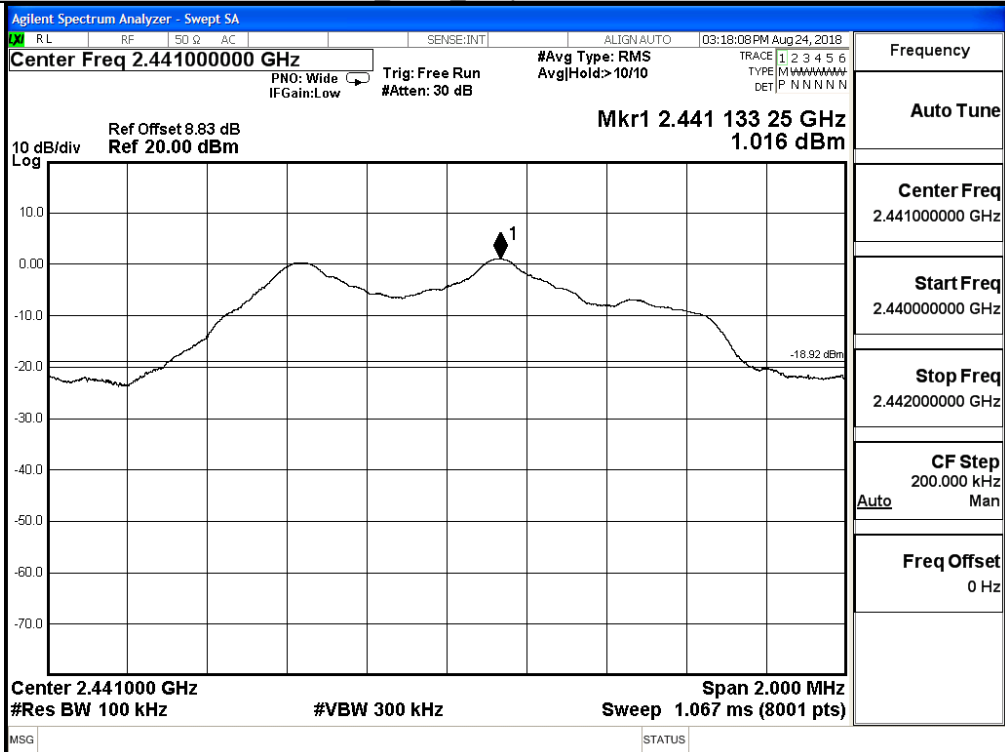


Puw

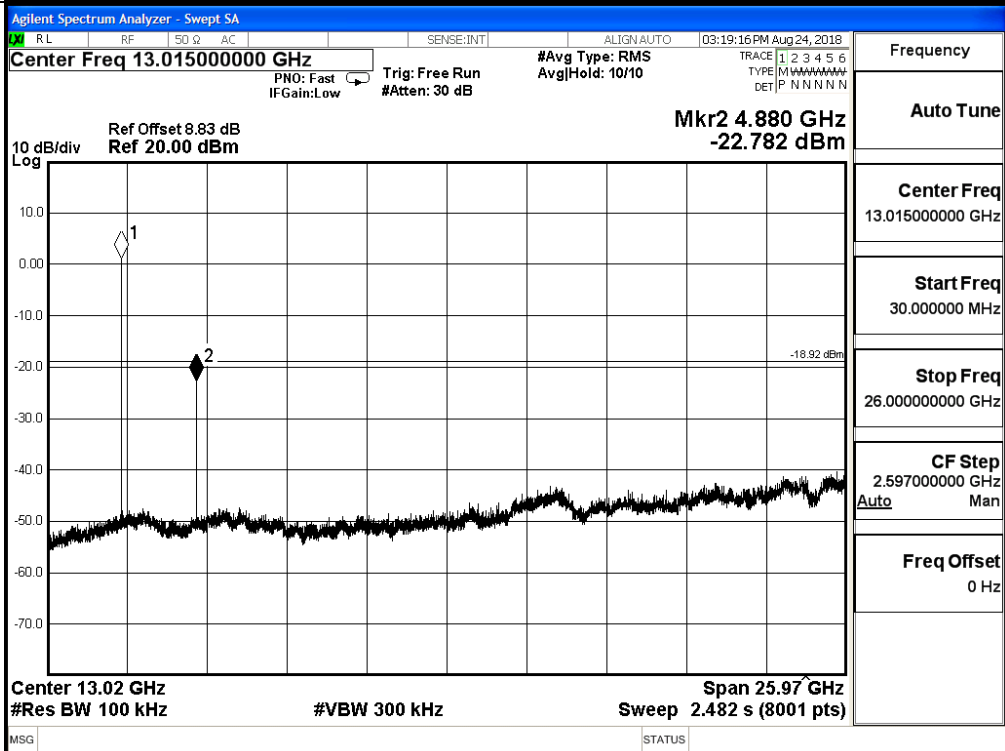


$\pi/4$ DQPSK_MCH_Graphs

Pref

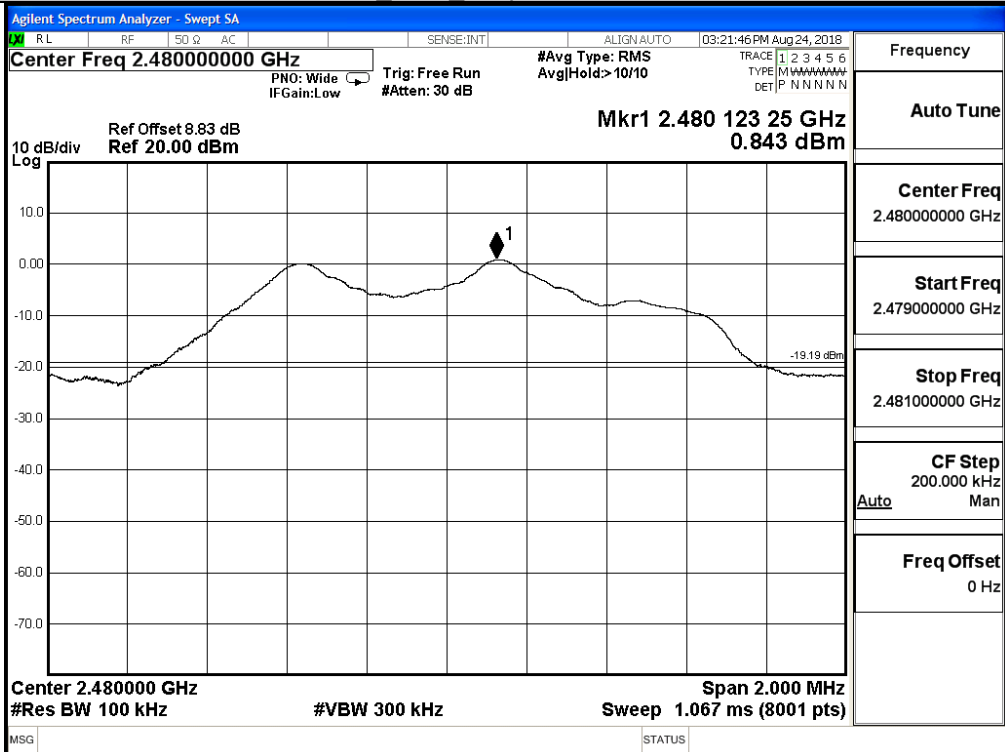


Puw

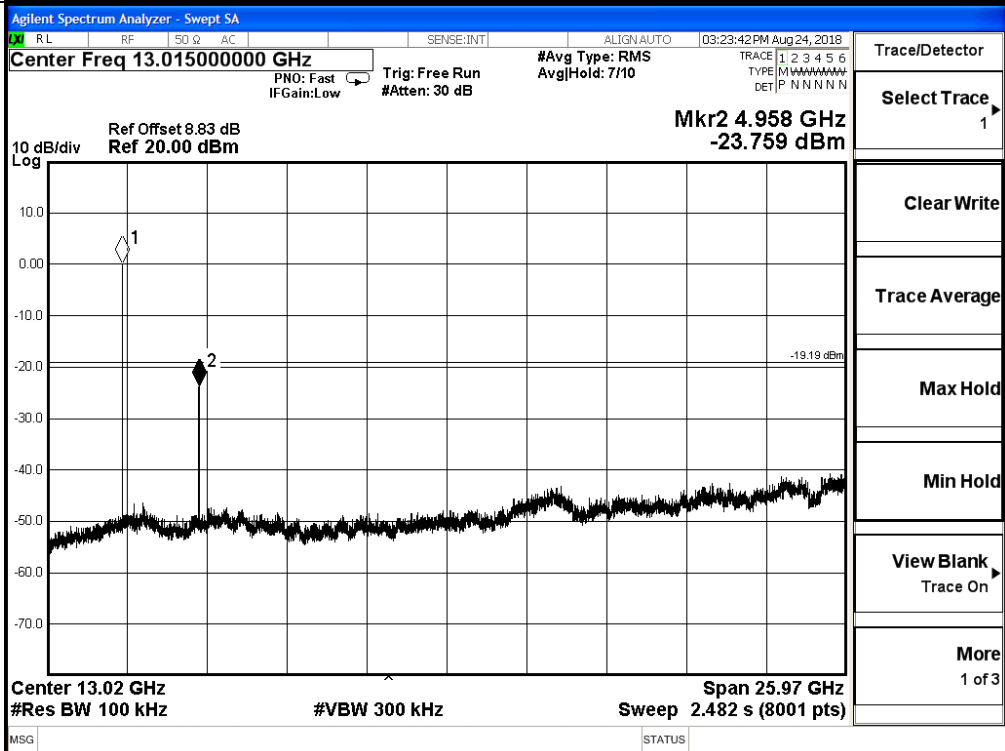


$\pi/4$ DQPSK_HCH_Graphs

Pref

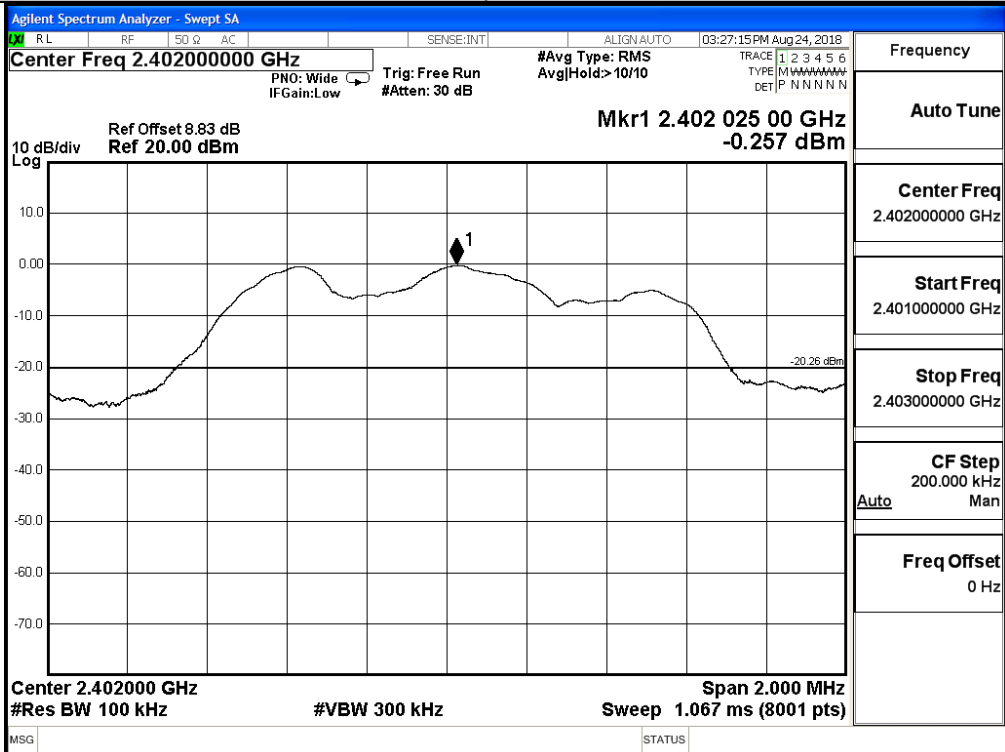


Puw

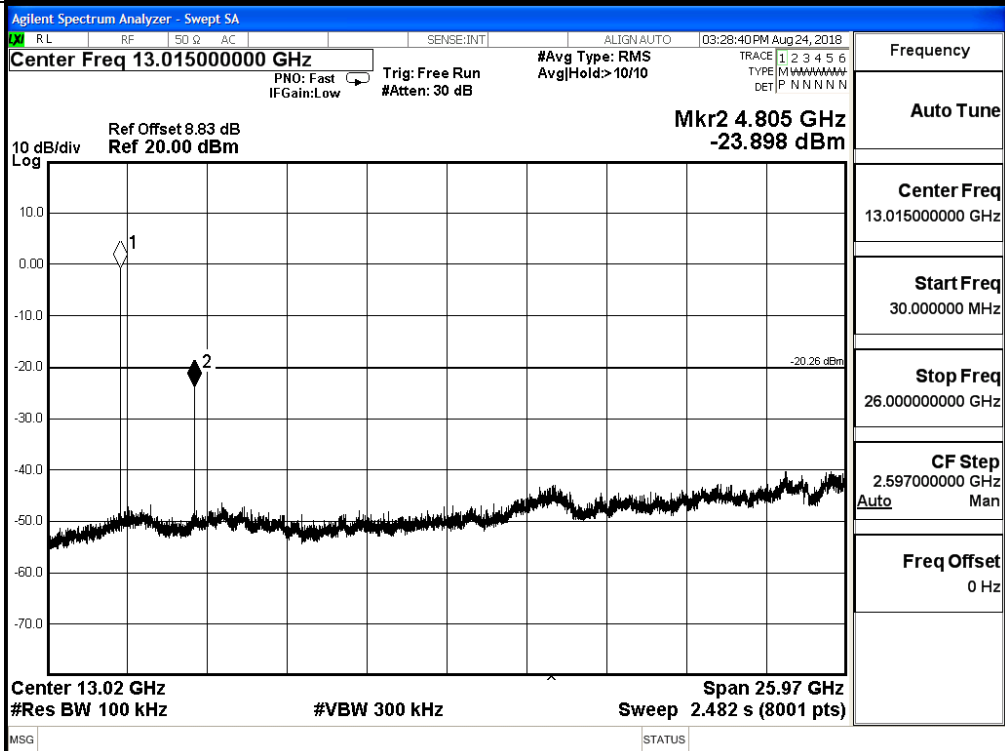


8DPSK_LCH_Graphs

Pref

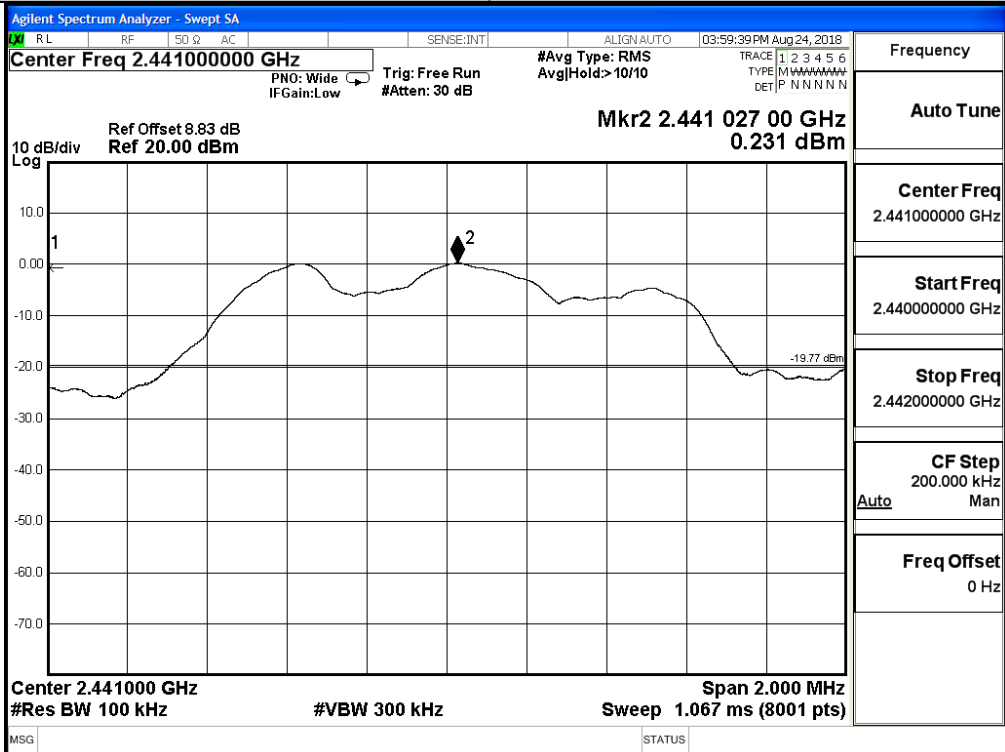


Puw

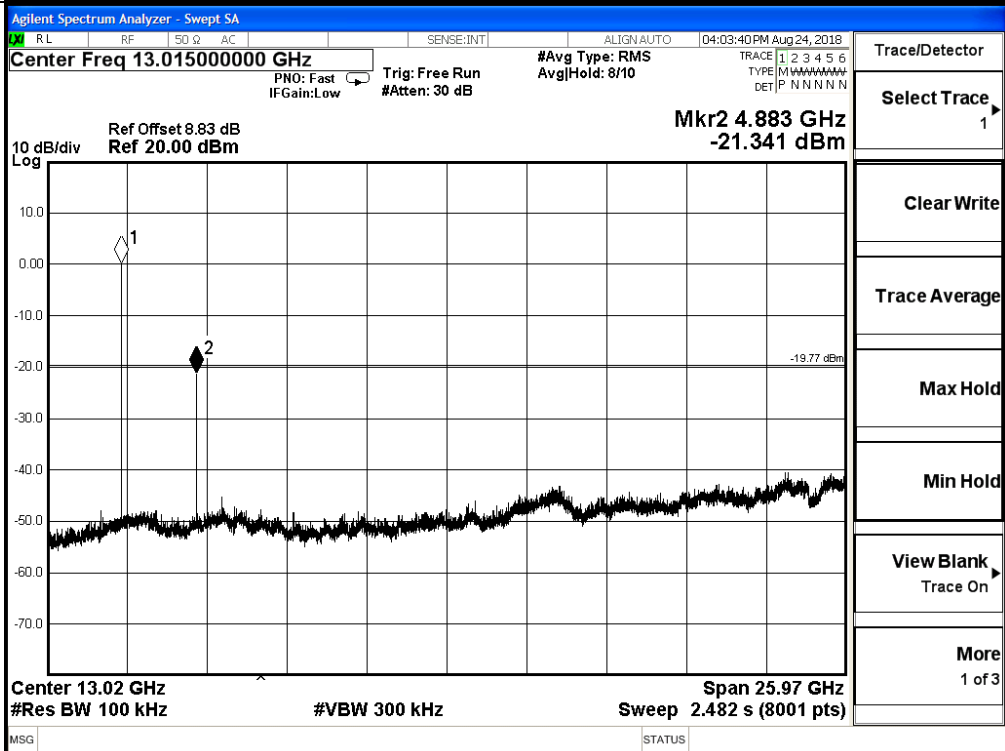


8DPSK_MCH_Graphs

Pref

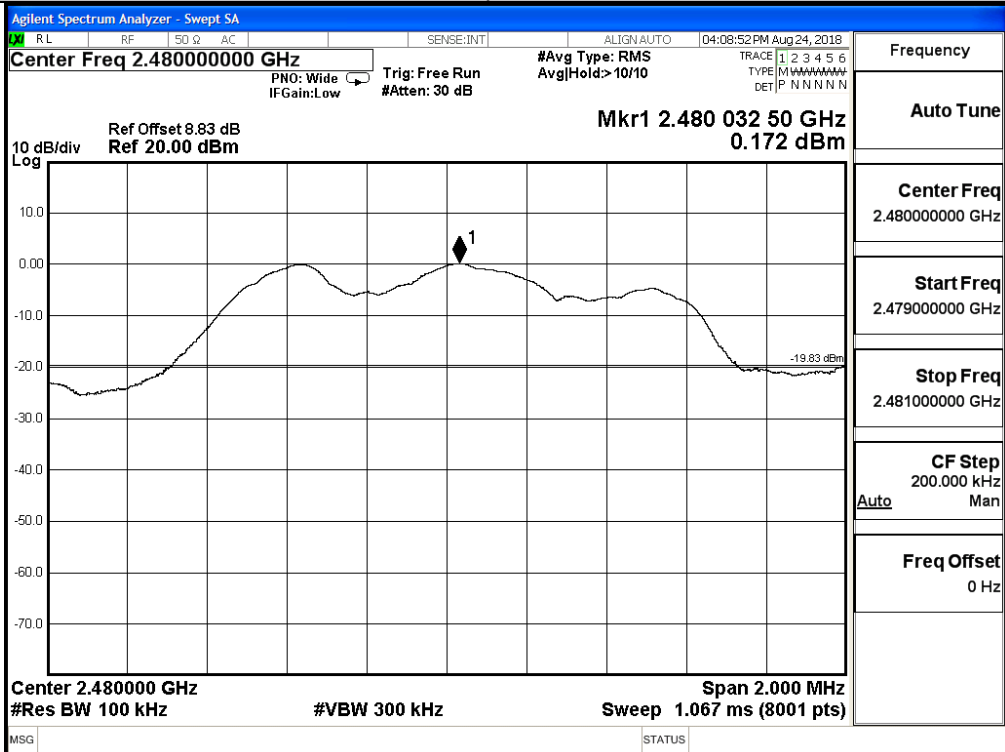


Puw

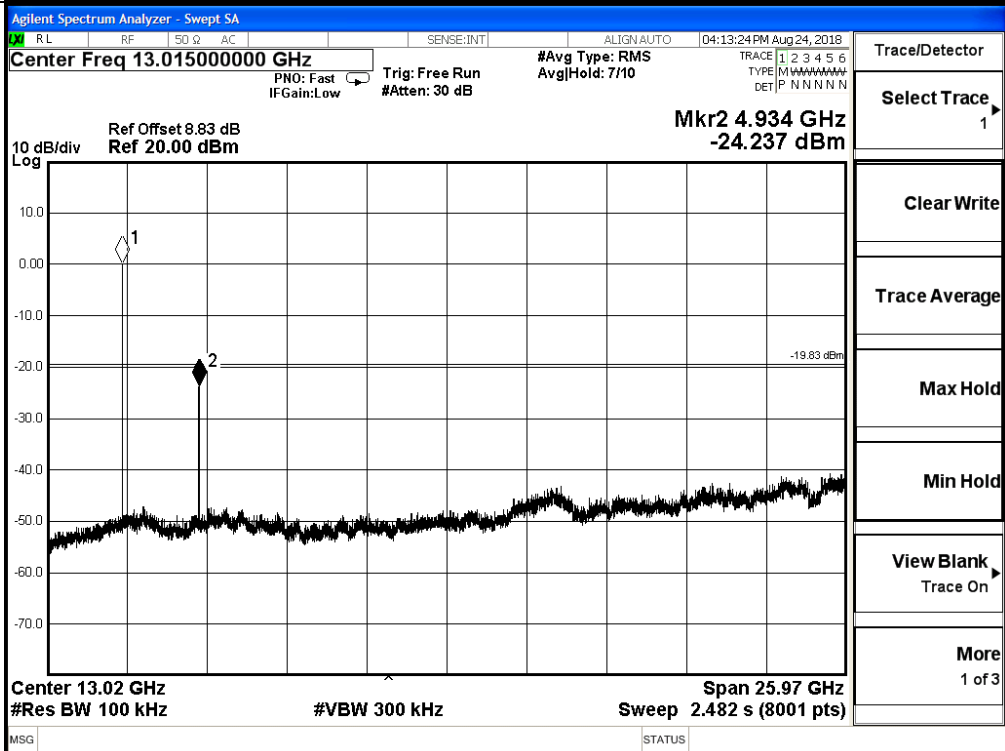


8DPSK_HCH_Graphs

Pref



Puw

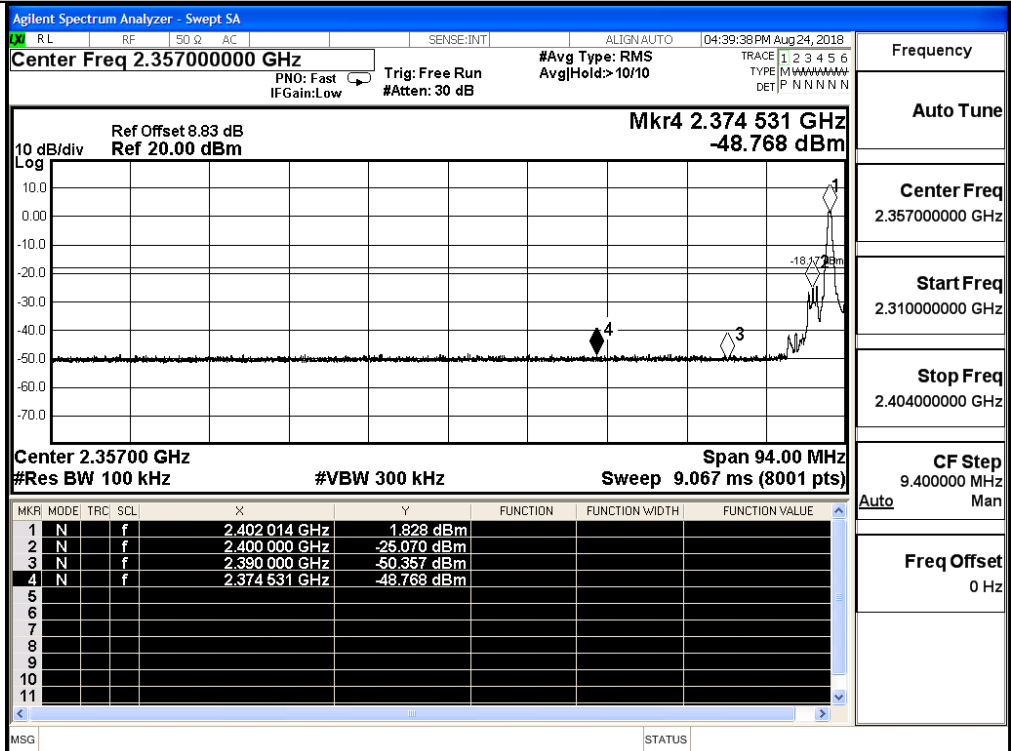


A.7 Band-edge for RF Conducted Emissions

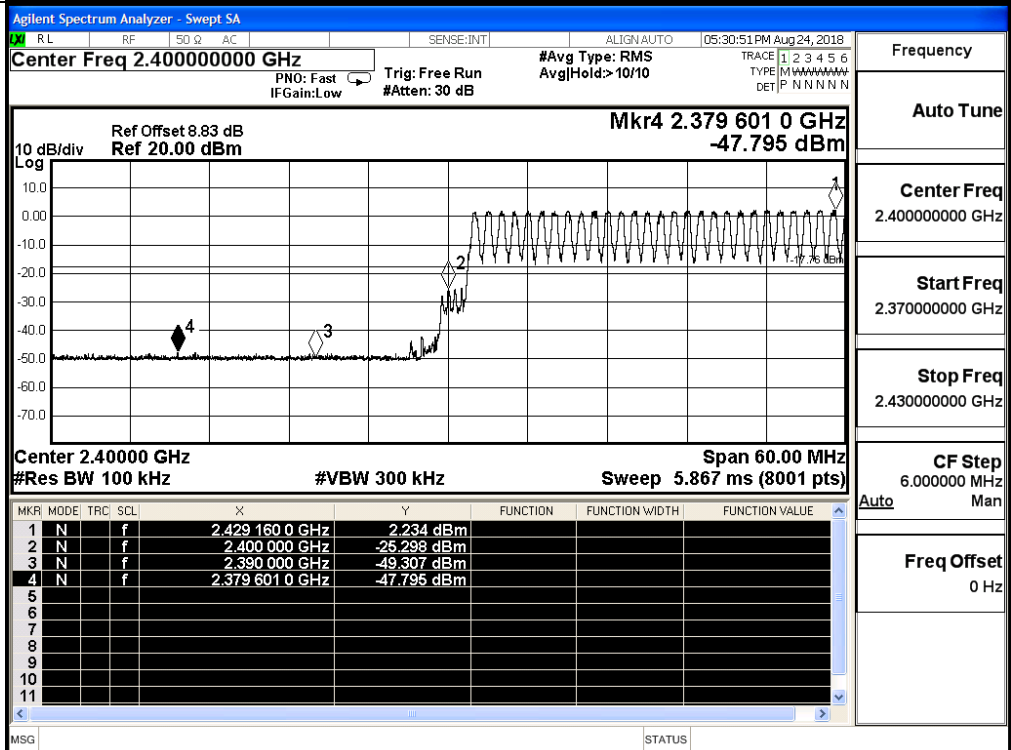
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	1.828	Off	-48.768	-18.172	PASS
			2.234	On	-47.795	-17.766	PASS
	HCH	2480	1.897	Off	-48.490	-18.103	PASS
			2.000	On	-48.404	-18.000	PASS
$\pi/4$ DQPSK	LCH	2402	1.613	Off	-50.676	-18.387	PASS
			2.136	On	-48.946	-17.864	PASS
	HCH	2480	1.701	Off	-48.660	-18.299	PASS
			1.848	On	-48.396	-18.152	PASS
8DPSK	LCH	2402	1.569	Off	-48.929	-18.431	PASS
			2.088	On	-48.852	-17.912	PASS
	HCH	2480	1.756	Off	-35.794	-18.244	PASS
			1.896	On	-38.315	-18.104	PASS

Test Graphs

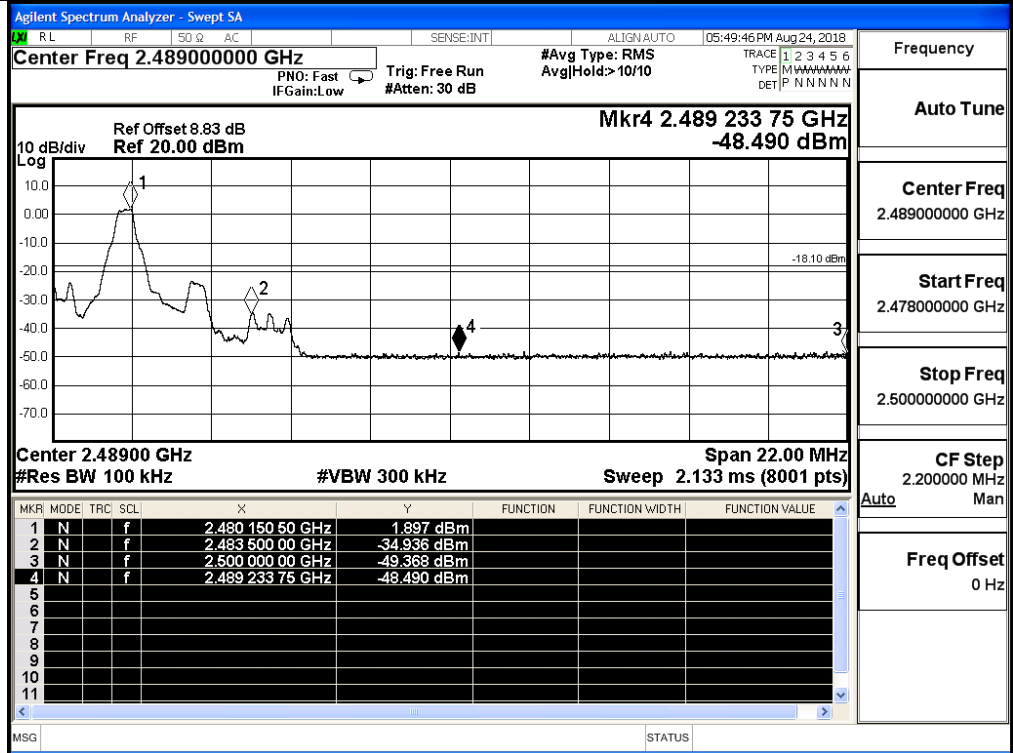
GFSK/LCH/No Hop



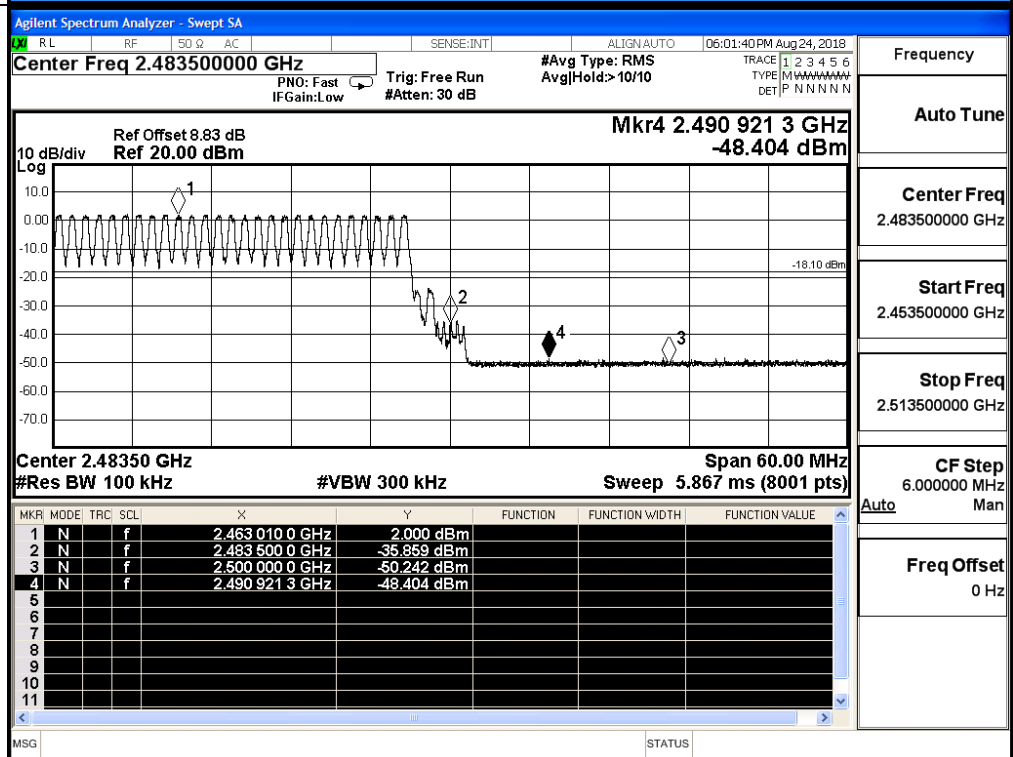
GFSK/LCH/Hop



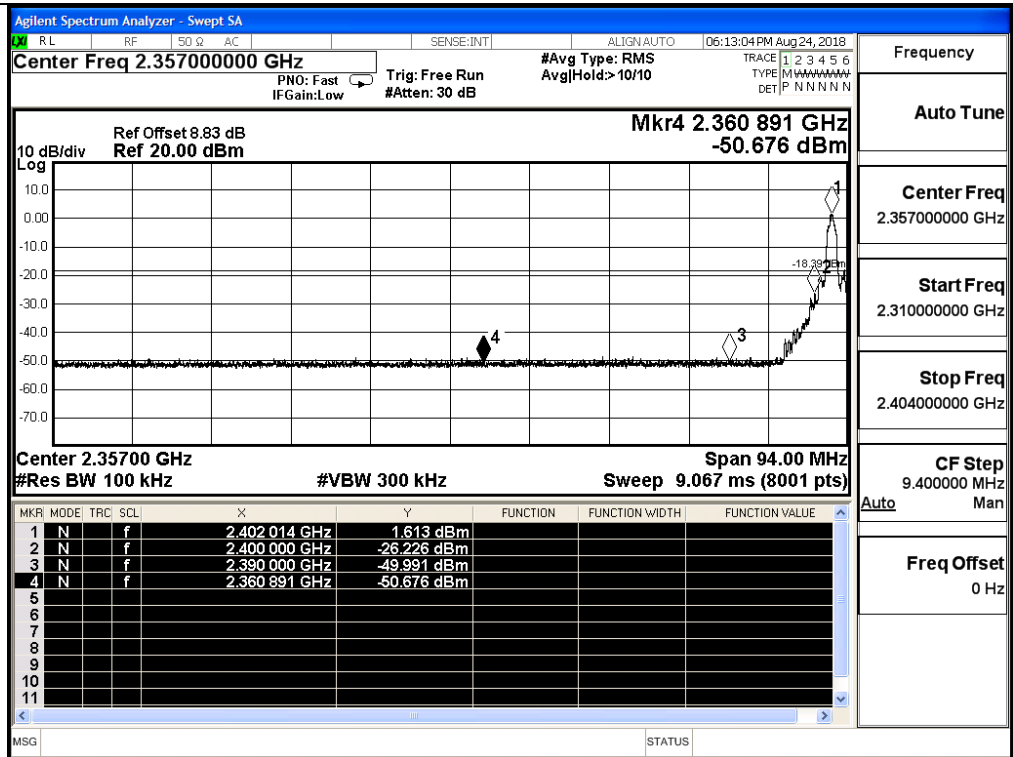
GFSK/HCH/No Hop



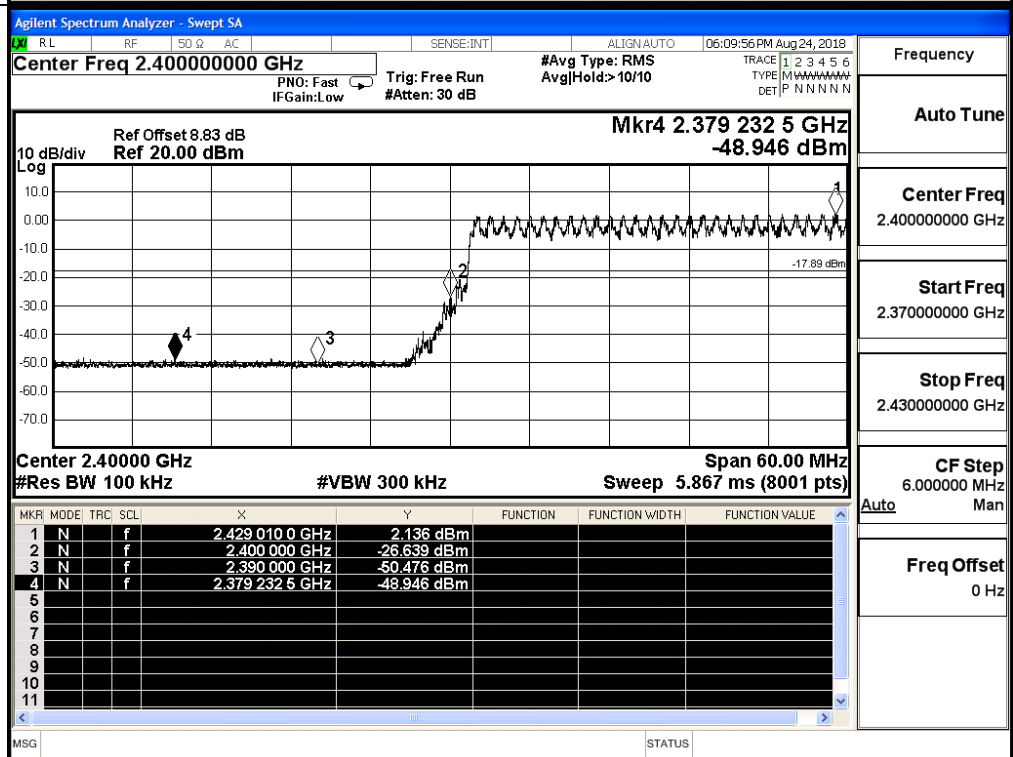
GFSK/HCH/Hop



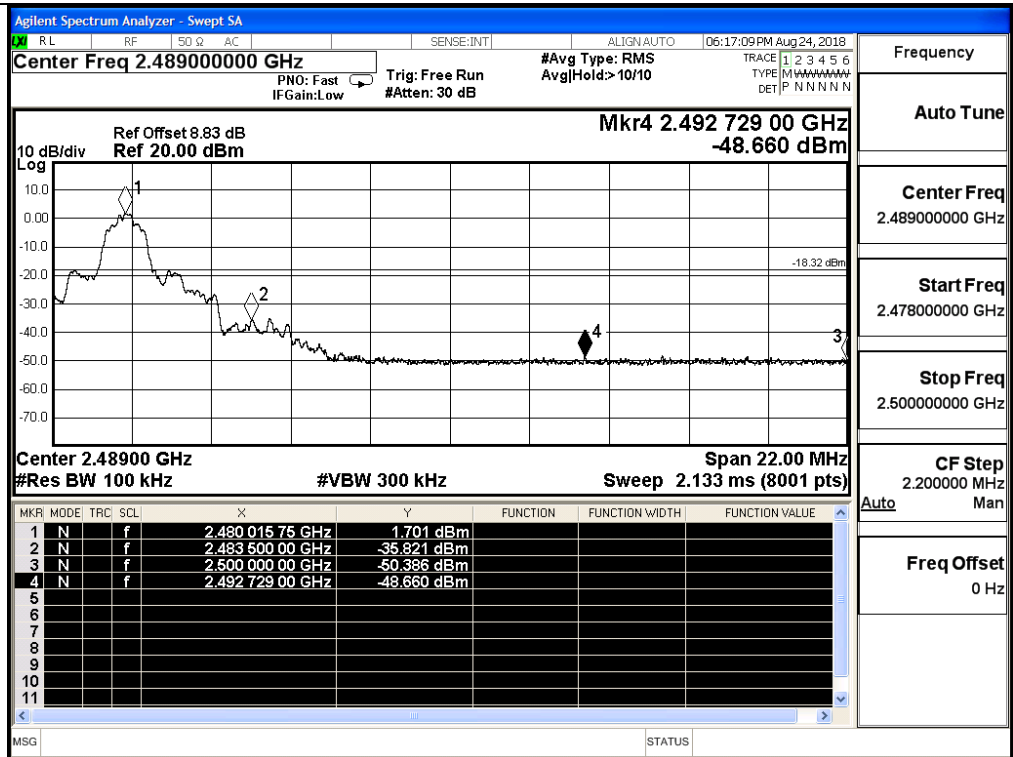
$\pi/4$ DQPSK/LCH/No Hop



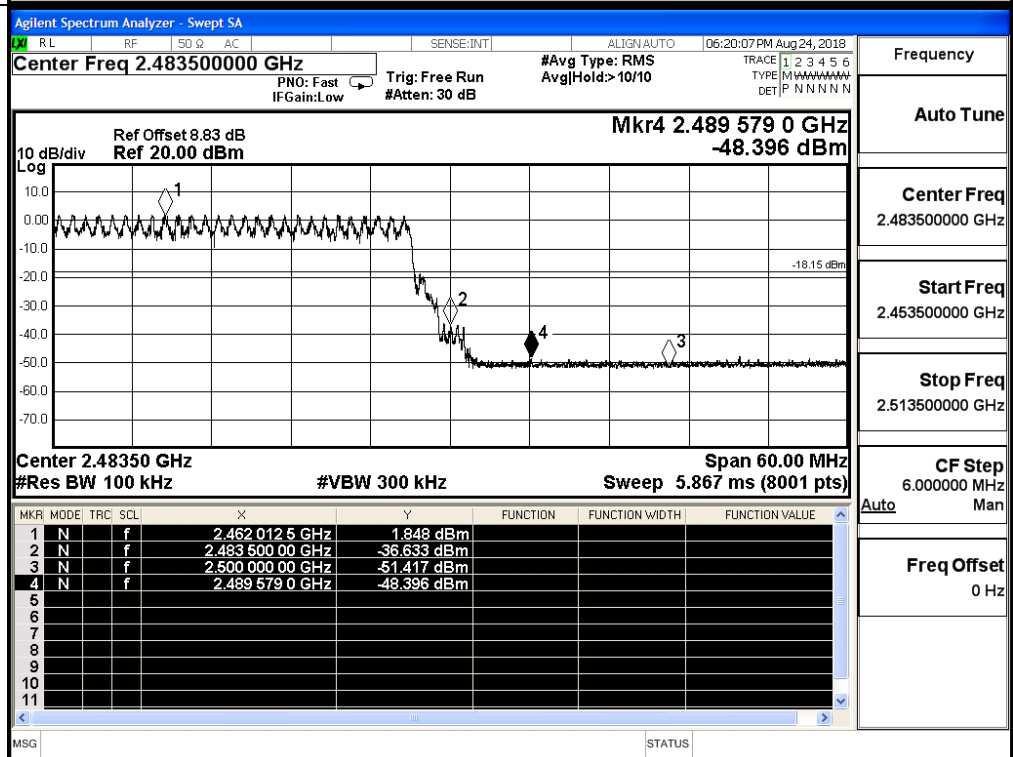
$\pi/4$ DQPSK/LCH/Hop



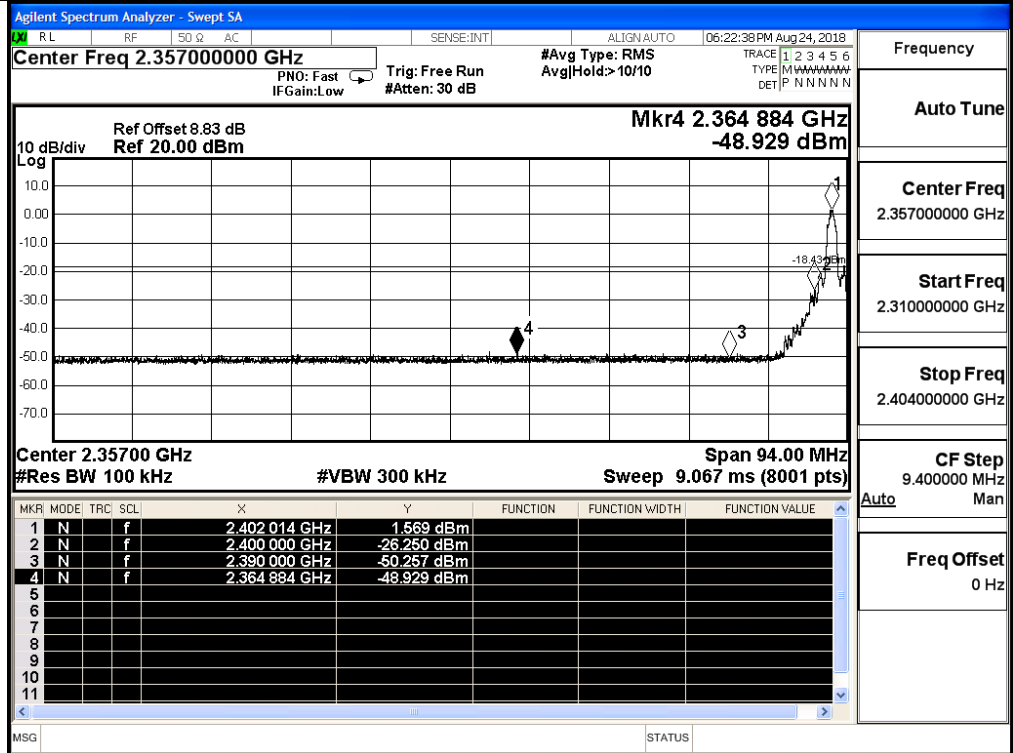
$\pi/4$ DQPSK/HCH/No Hop



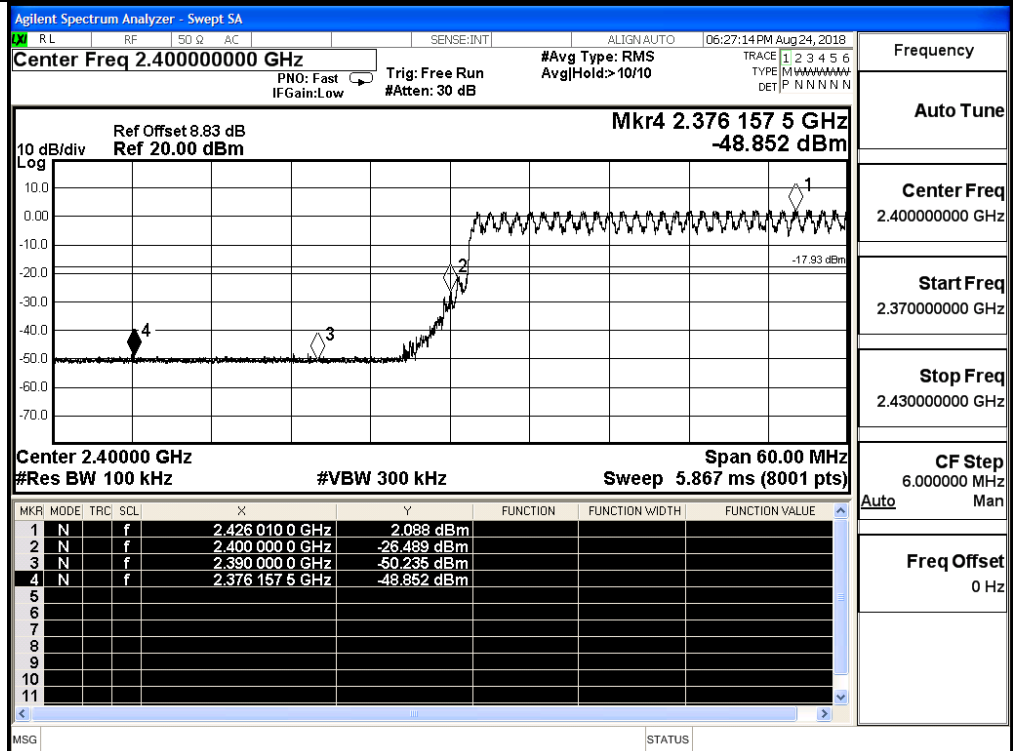
$\pi/4$ DQPSK/HCH/Hop



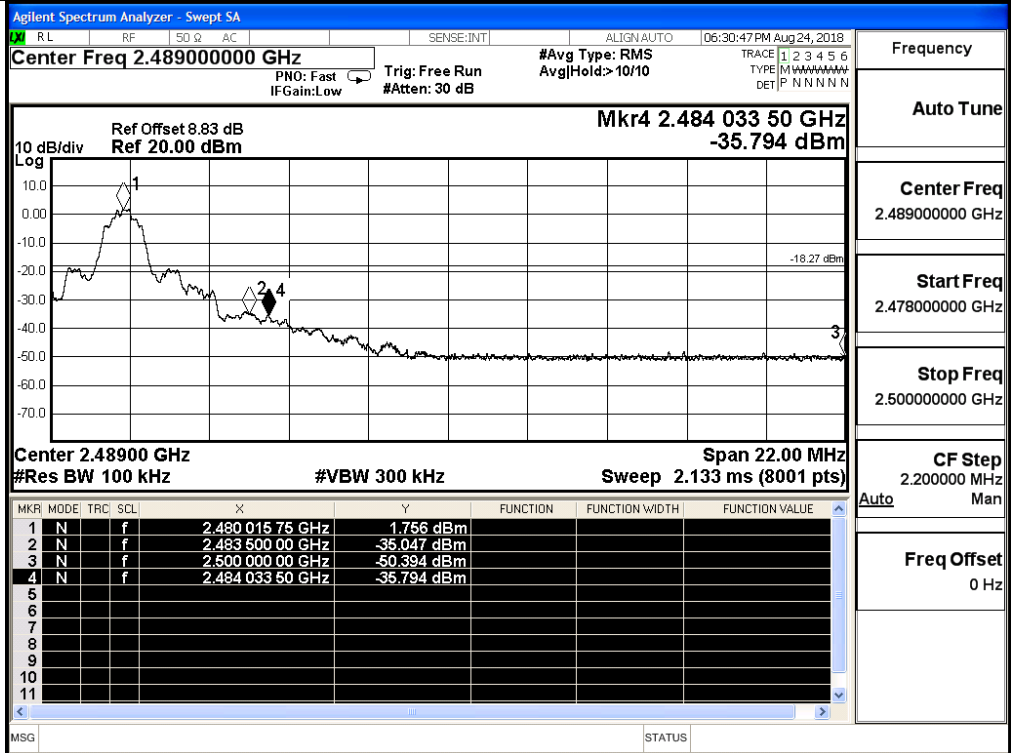
8DPSK/LCH/No Hop



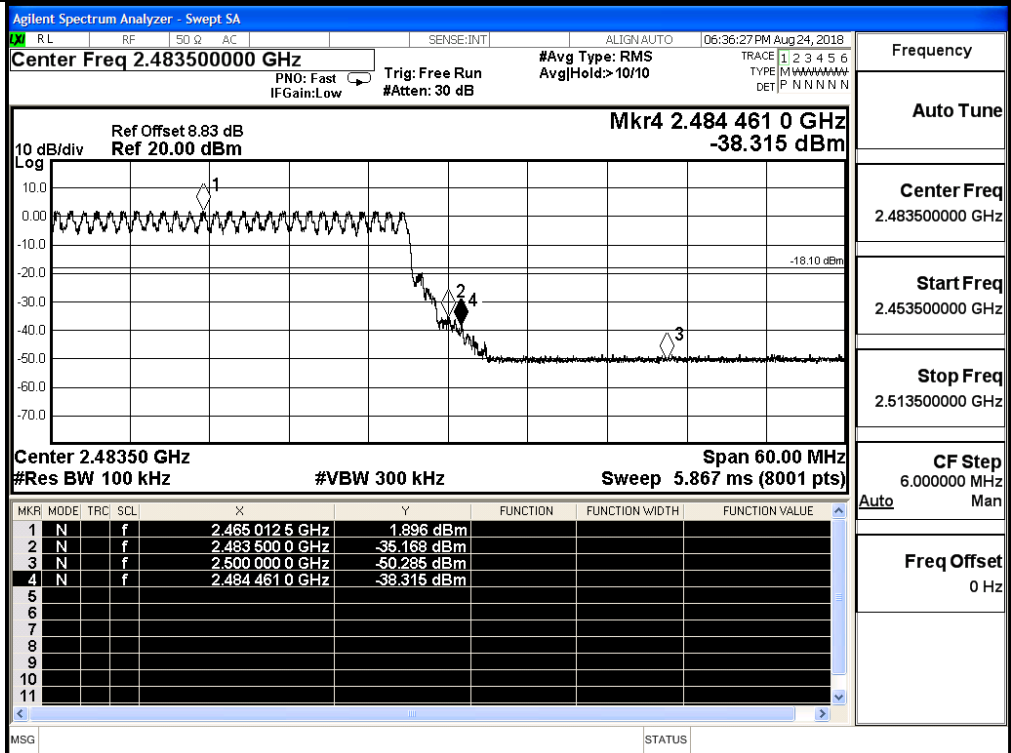
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



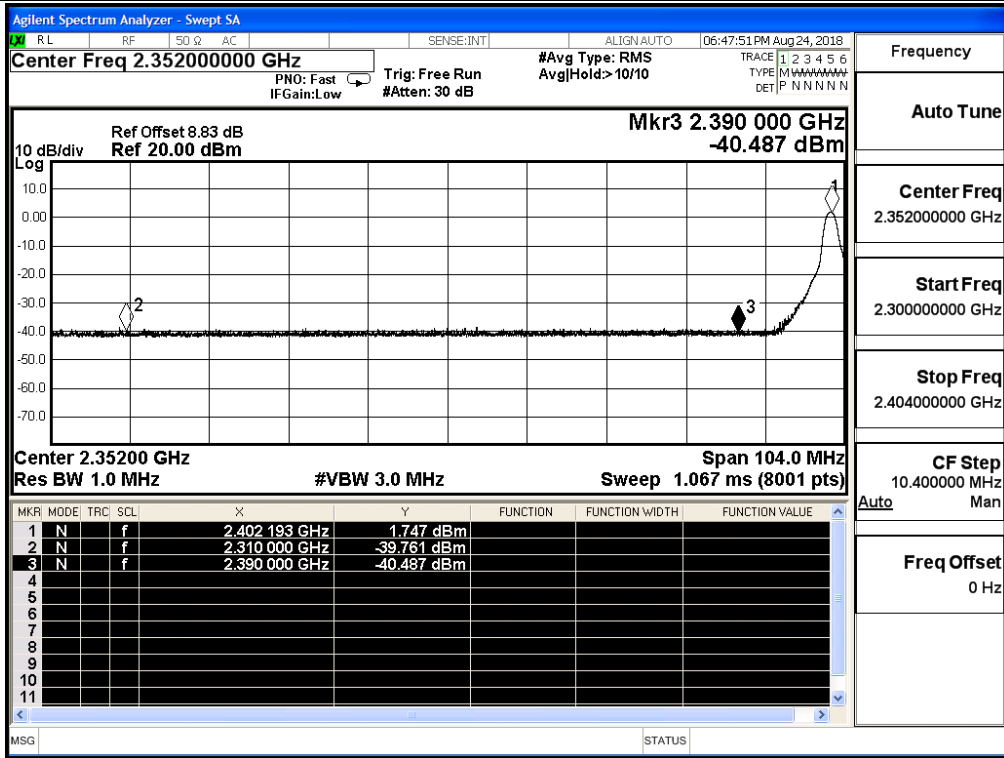
8DPSK/HCH/Hop



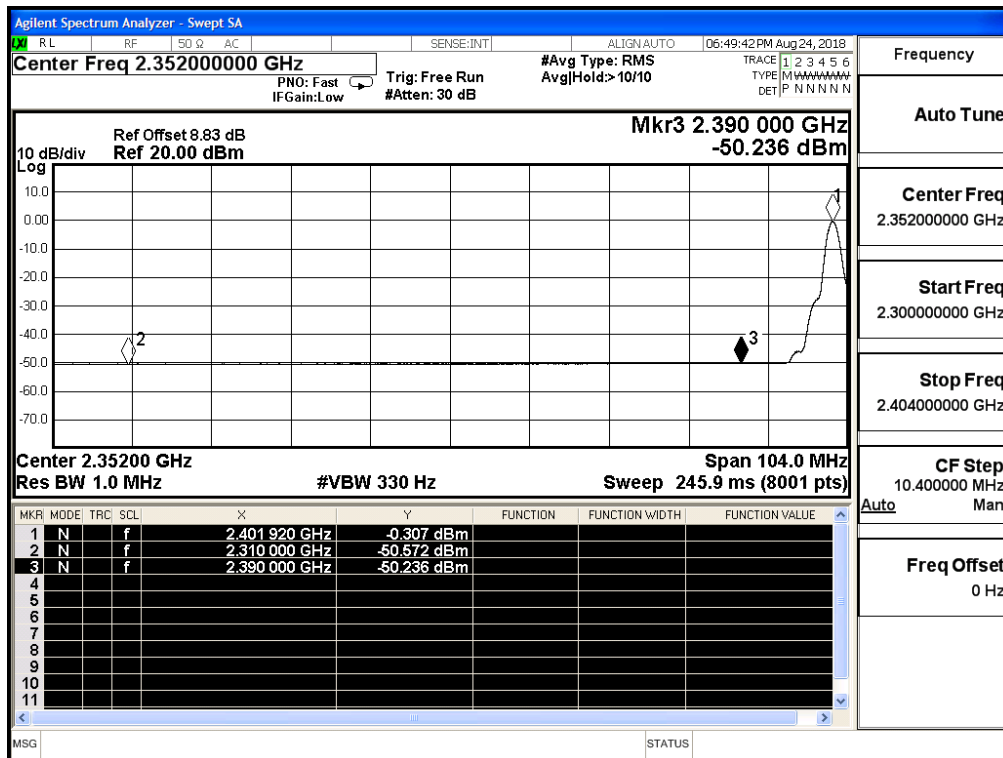
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-39.761	2.0	0	57.50	PEAK	74	PASS
	Off	2310.0	-50.572	2.0	0	46.69	AV	54	PASS
	Off	2390.0	-40.487	2.0	0	56.77	PEAK	74	PASS
	Off	2390.0	-50.236	2.0	0	47.02	AV	54	PASS
	Off	2483.5	-30.169	2.0	0	67.09	PEAK	74	PASS
	Off	2483.5	-48.577	2.0	0	48.68	AV	54	PASS
	Off	2500.0	-41.466	2.0	0	55.79	PEAK	74	PASS
	Off	2500.0	-50.121	2.0	0	47.14	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-41.957	2.0	0	55.30	PEAK	74	PASS
	Off	2310.0	-50.519	2.0	0	46.74	AV	54	PASS
	Off	2390.0	-41.391	2.0	0	55.87	PEAK	74	PASS
	Off	2390.0	-50.233	2.0	0	47.03	AV	54	PASS
	Off	2483.5	-23.522	2.0	0	73.74	PEAK	74	PASS
	Off	2483.5	-48.054	2.0	0	49.21	AV	54	PASS
	Off	2500.0	-41.734	2.0	0	55.53	PEAK	74	PASS
	Off	2500.0	-50.019	2.0	0	47.24	AV	54	PASS
8DPSK	Off	2310.0	-42.516	2.0	0	54.74	PEAK	74	PASS
	Off	2310.0	-50.565	2.0	0	46.70	AV	54	PASS
	Off	2390.0	-40.847	2.0	0	56.41	PEAK	74	PASS
	Off	2390.0	-50.189	2.0	0	47.07	AV	54	PASS
	Off	2483.5	-23.687	2.0	0	73.57	PEAK	74	PASS
	Off	2483.5	-48.463	2.0	0	48.80	AV	54	PASS
	Off	2500.0	-41.935	2.0	0	55.33	PEAK	74	PASS
	Off	2500.0	-50.133	2.0	0	47.13	AV	54	PASS

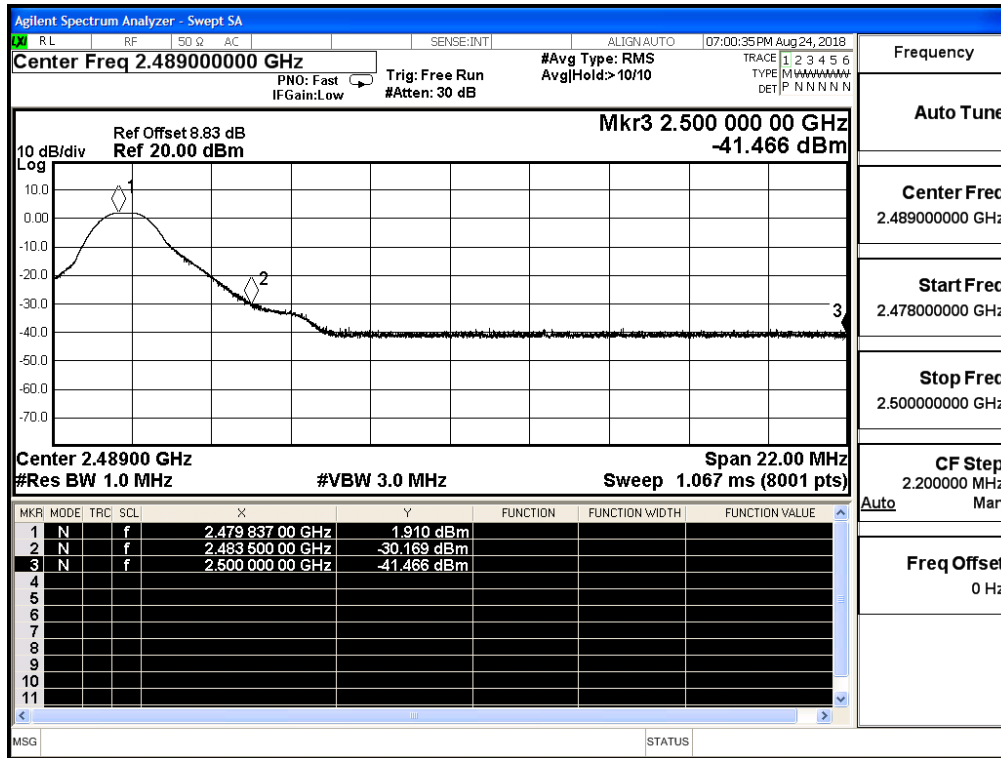
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



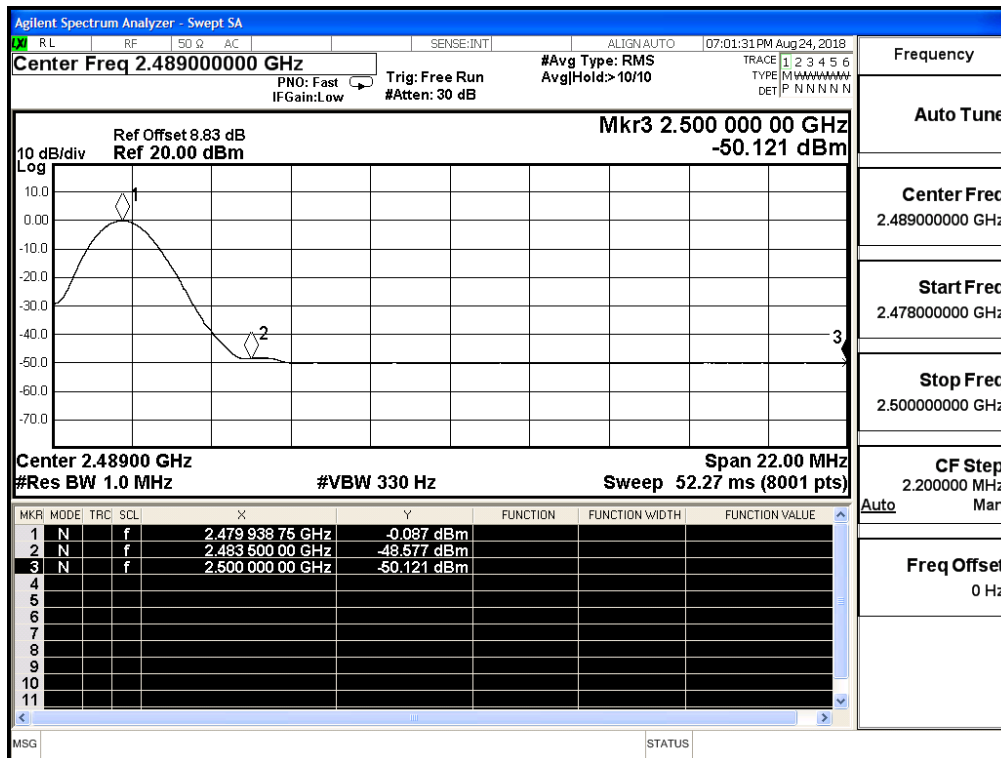
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)



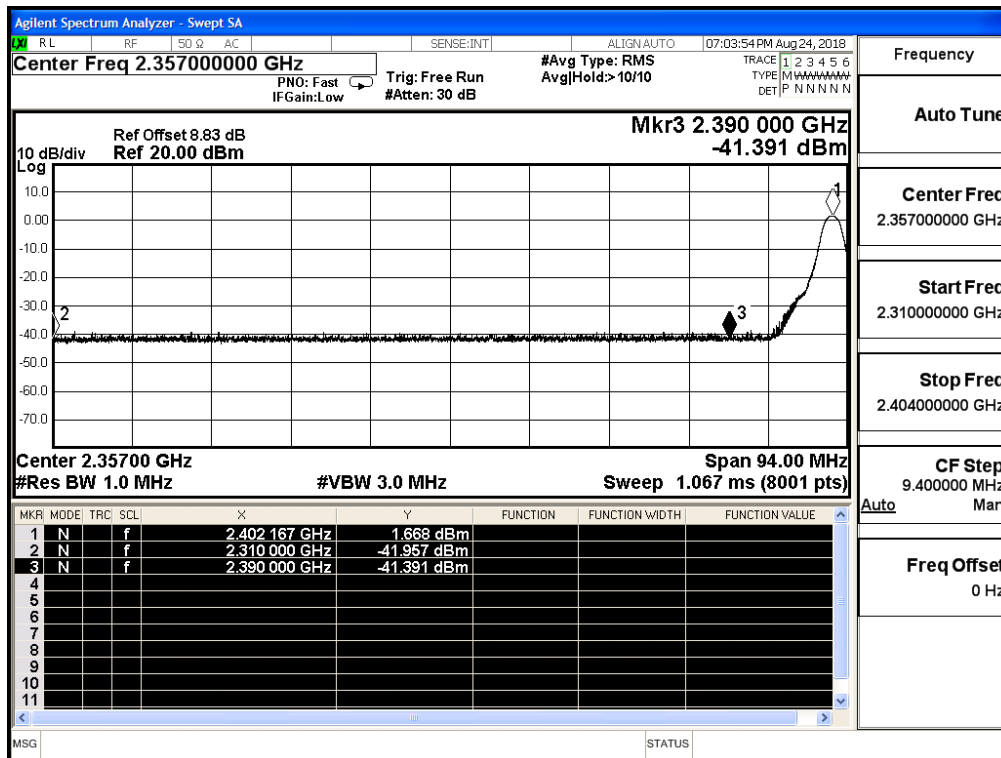
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



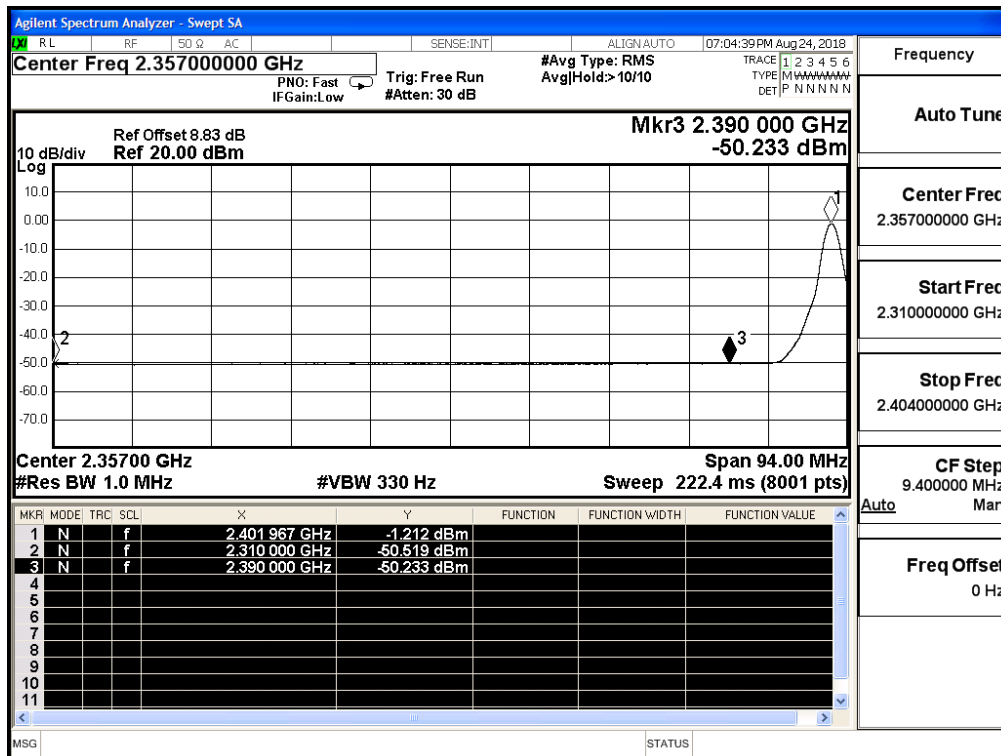
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



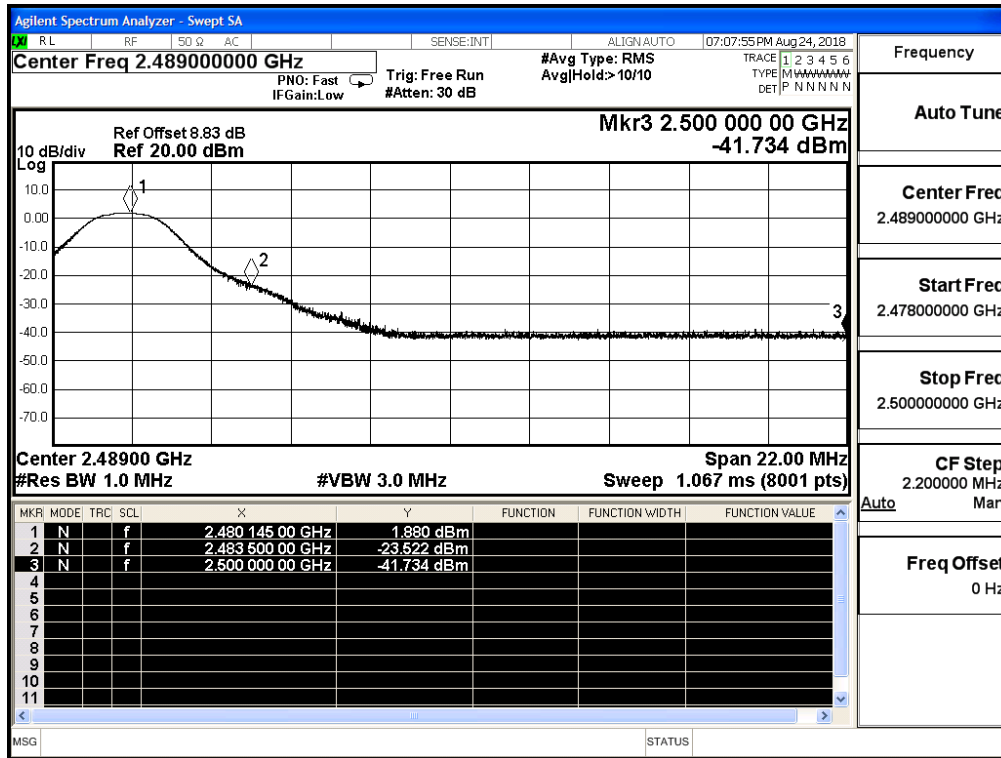
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)



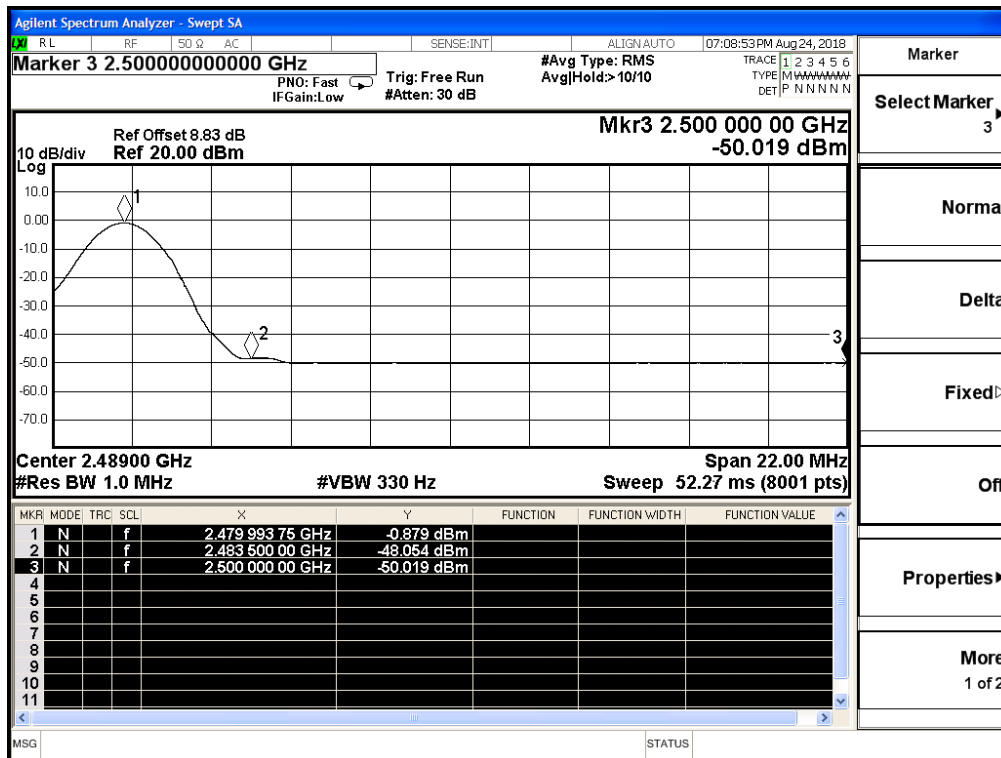
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)



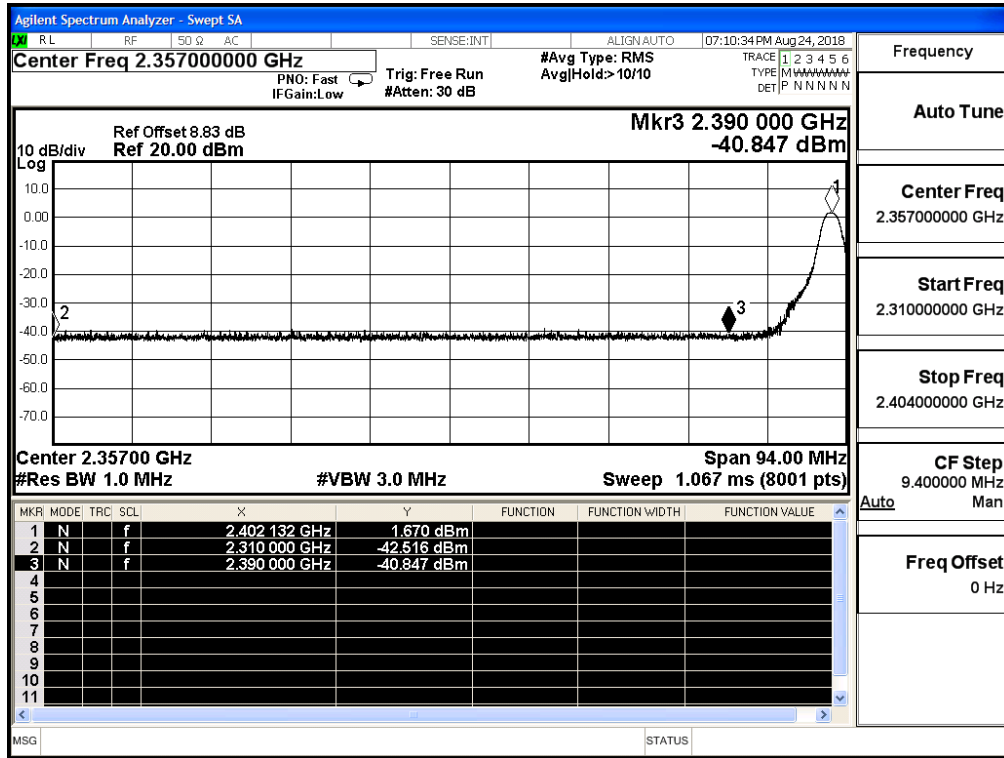
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



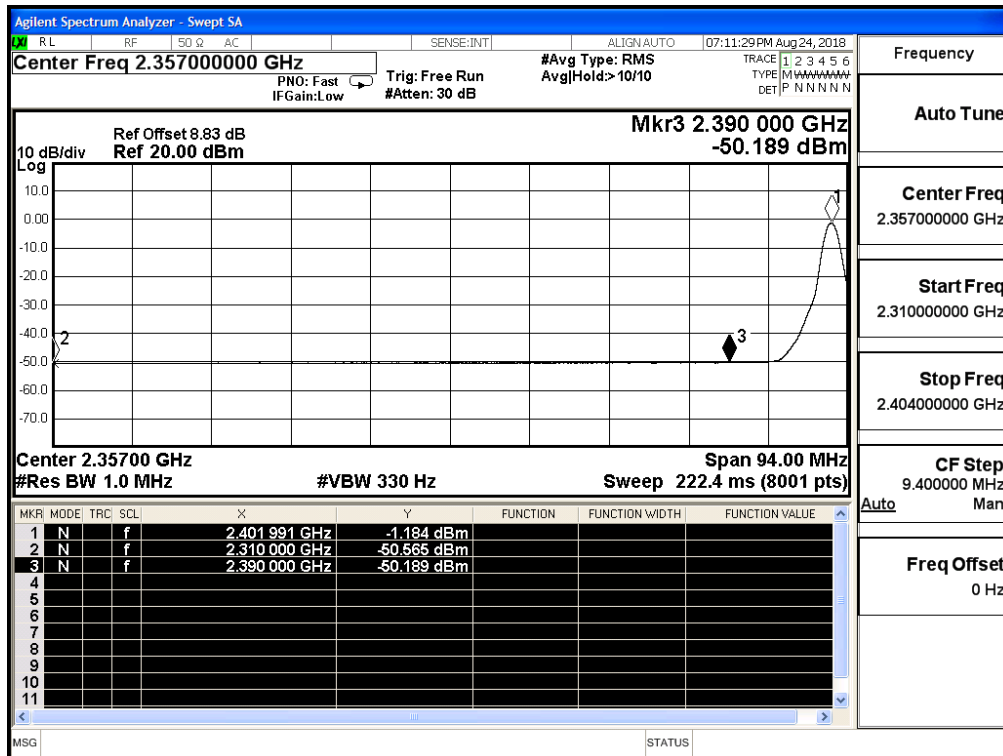
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



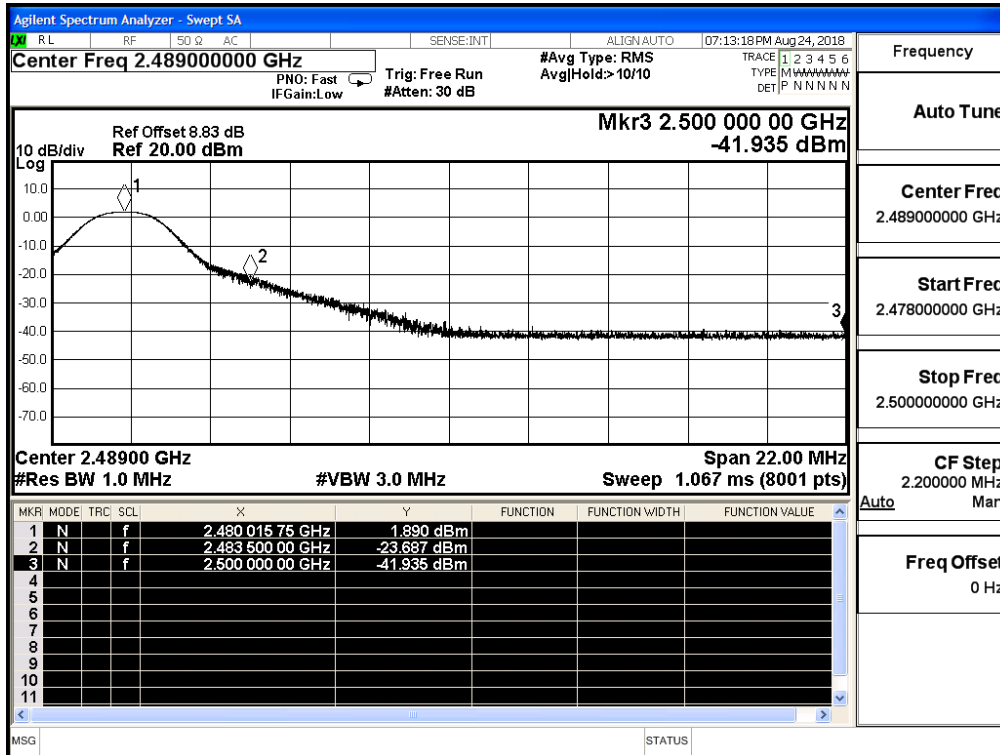
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

