

Appendix A

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

Product Name: m-Seven

Trade Mark: JAYS

Test Model: T00227

Environmental Conditions

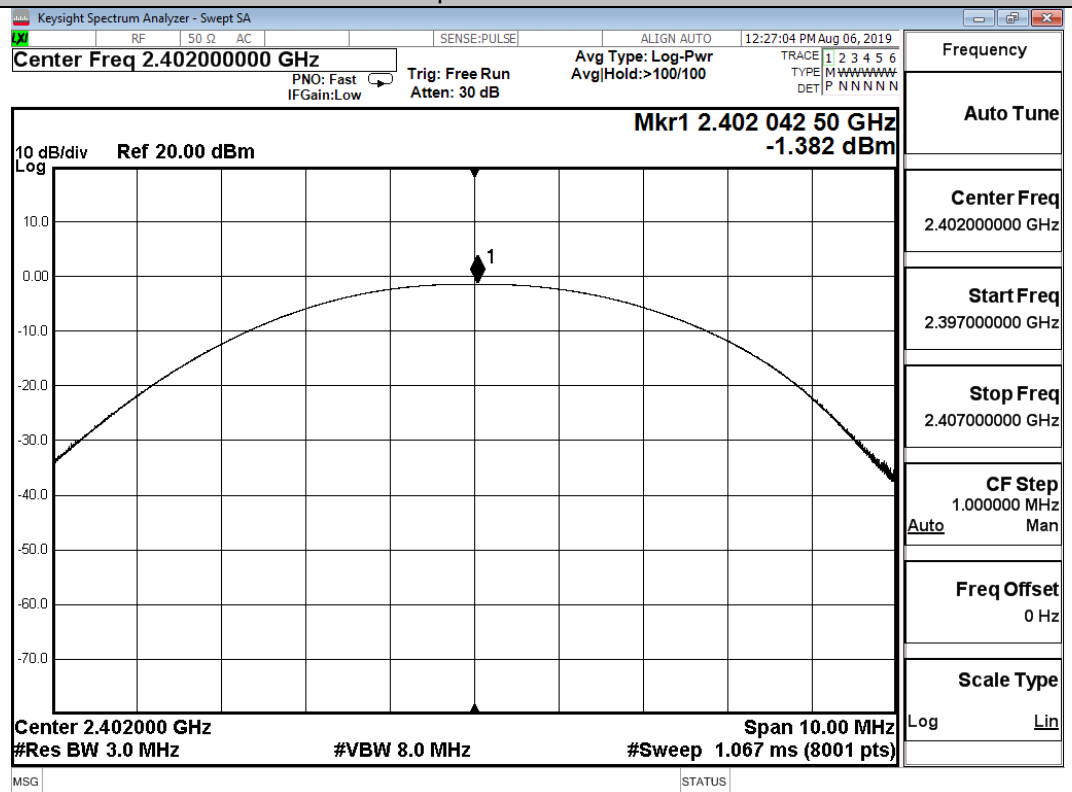
Temperature:	23.7 ° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	CHUANG WANG
Supervised by:	JAYDEN ZHUO

A.1 Maximum Conducted Peak Output Power

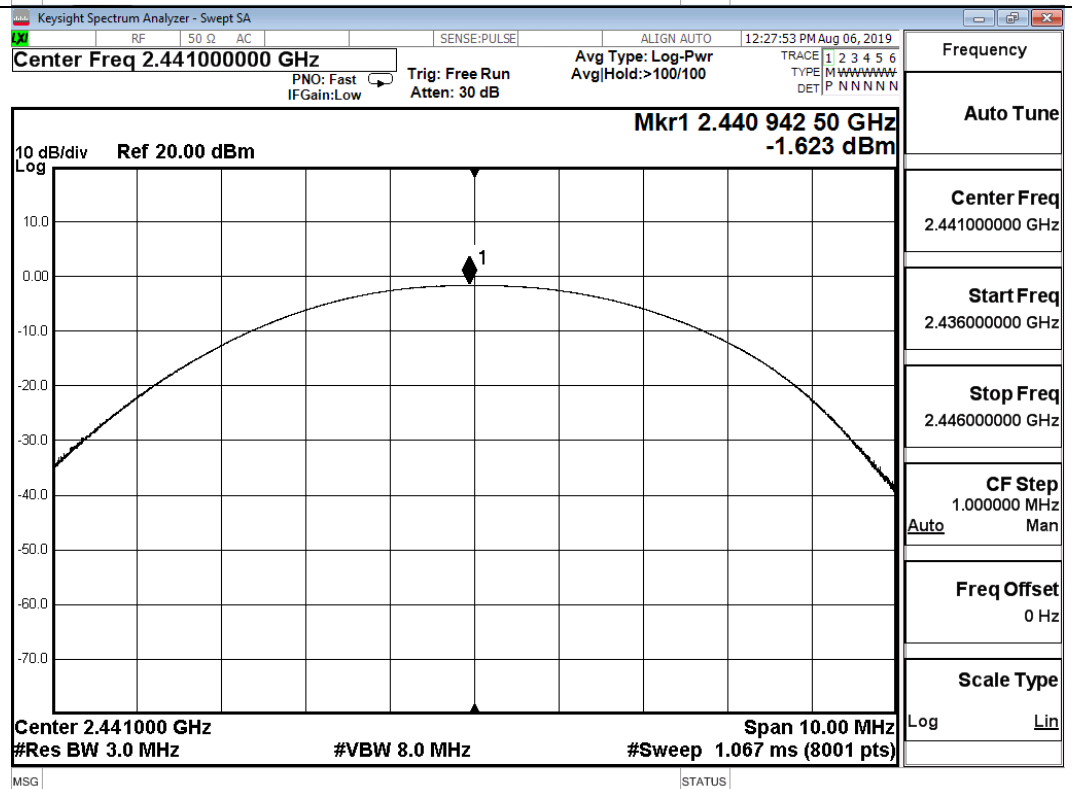
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.382	21	PASS
	MCH	-1.623	21	PASS
	HCH	-1.902	21	PASS
$\pi/4$ DQPSK	LCH	0.947	21	PASS
	MCH	0.585	21	PASS
	HCH	0.343	21	PASS
8-DPSK	LCH	1.341	21	PASS
	MCH	1.119	21	PASS
	HCH	0.838	21	PASS

Test Graphs

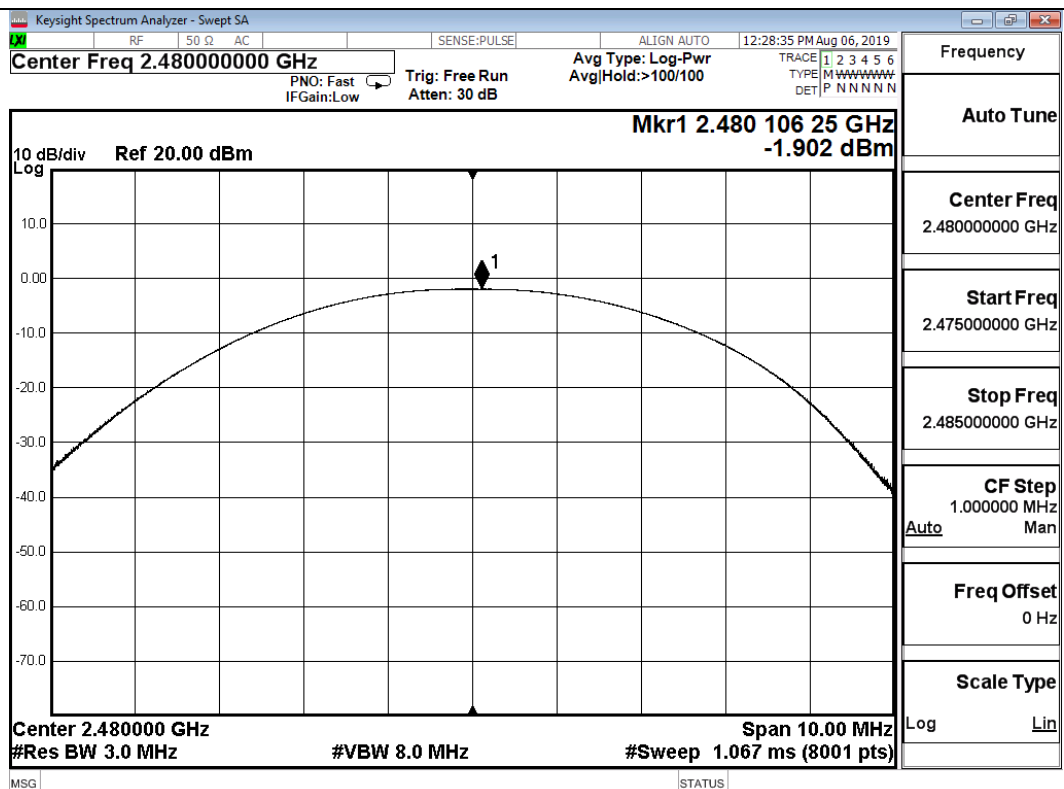
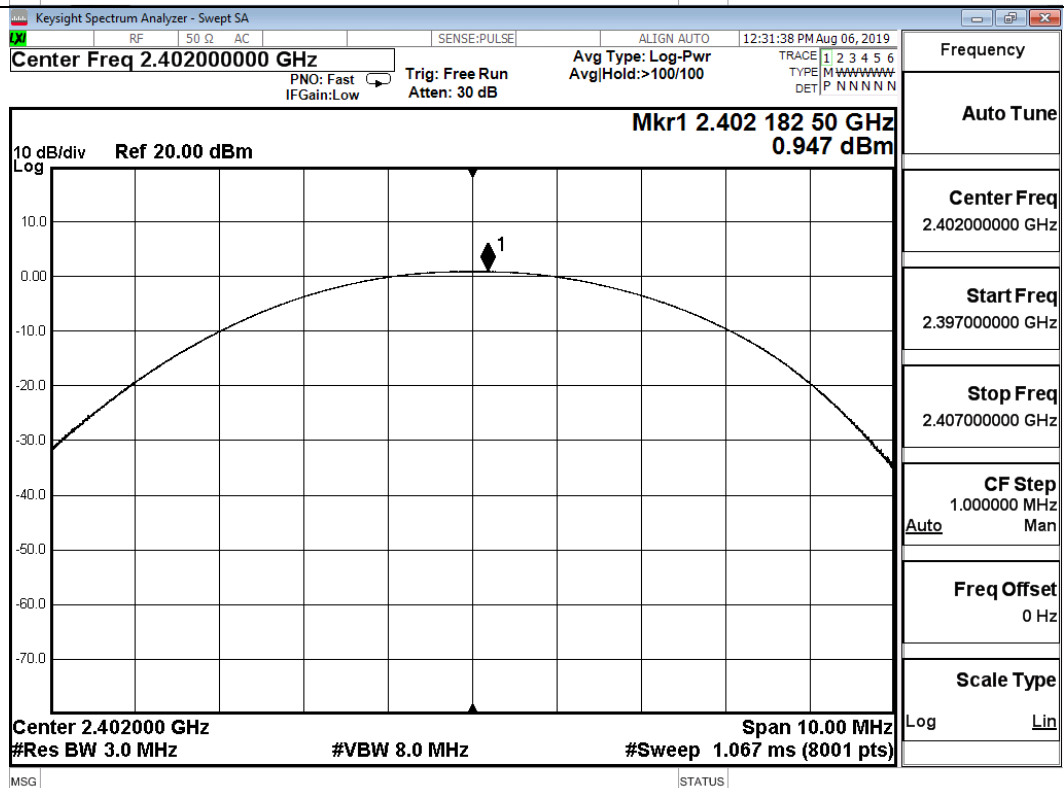
GFSK/LCH

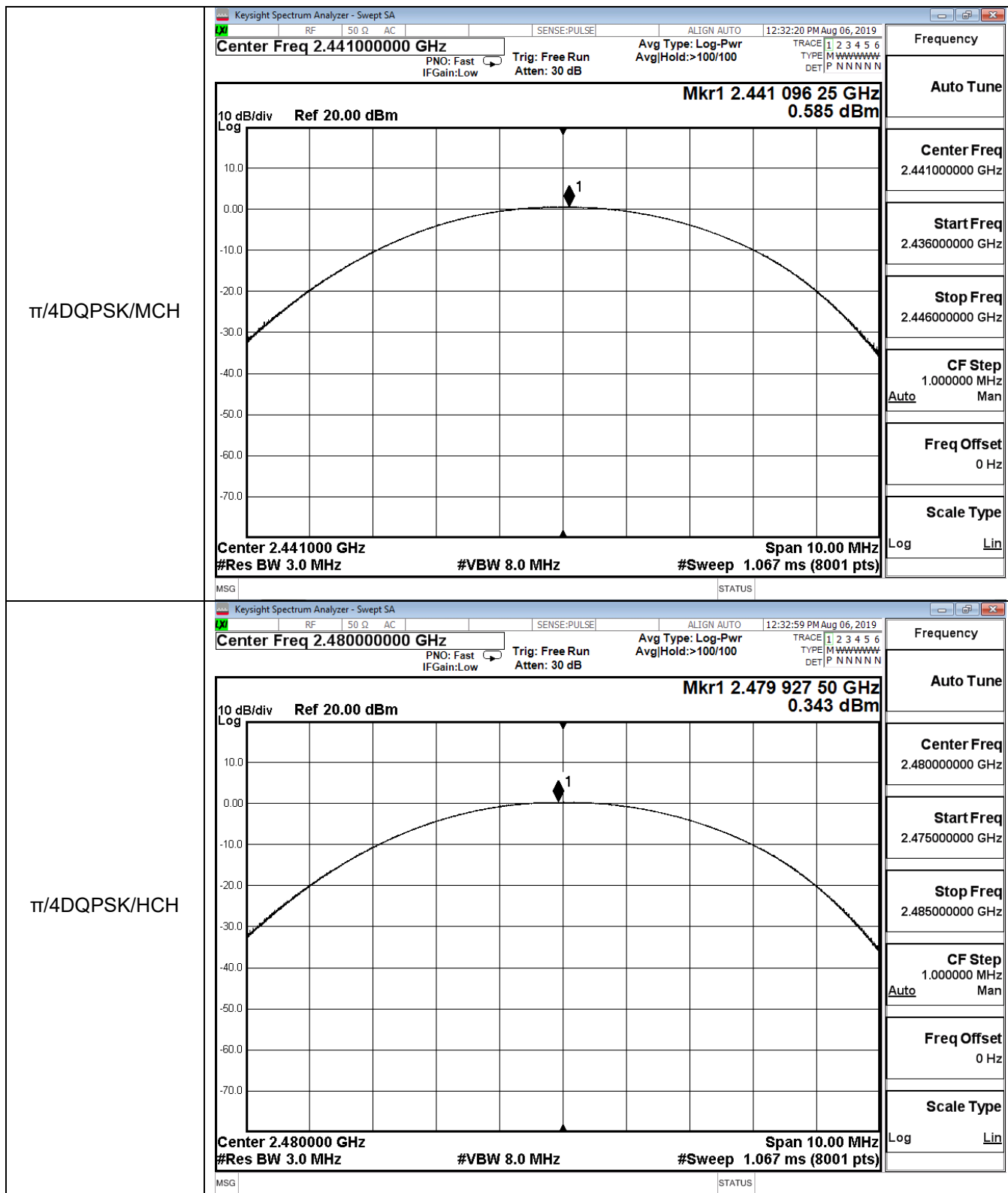


GFSK/MCH

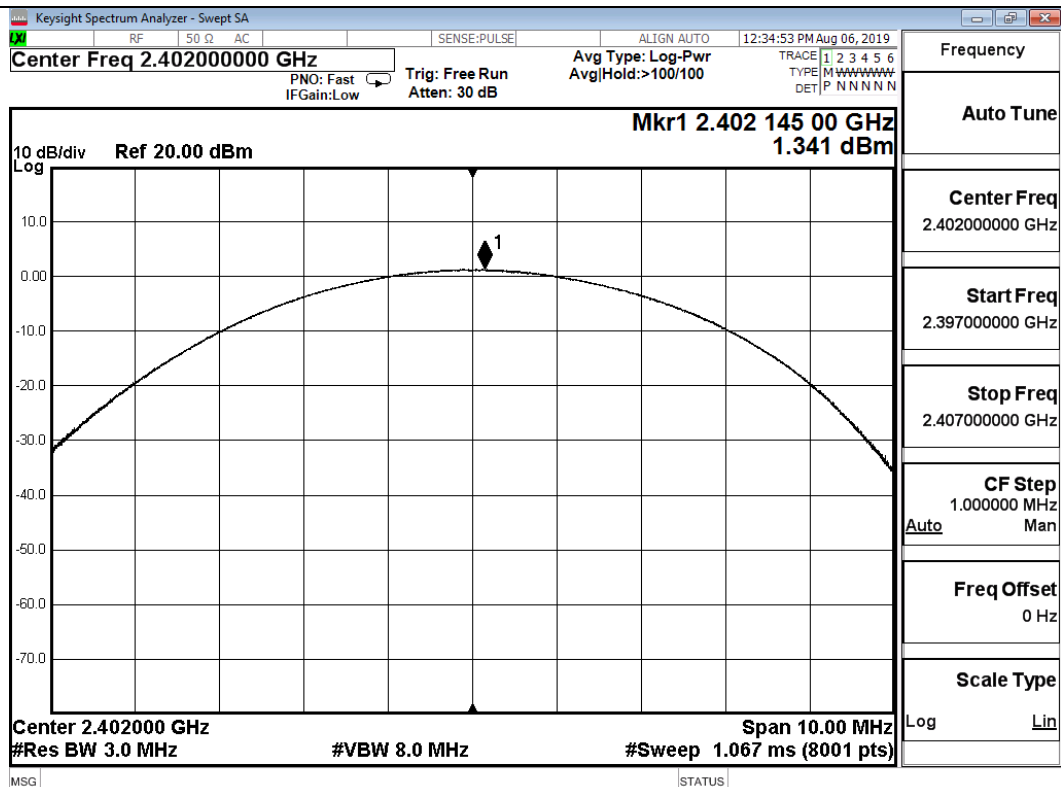


GFSK/HCH

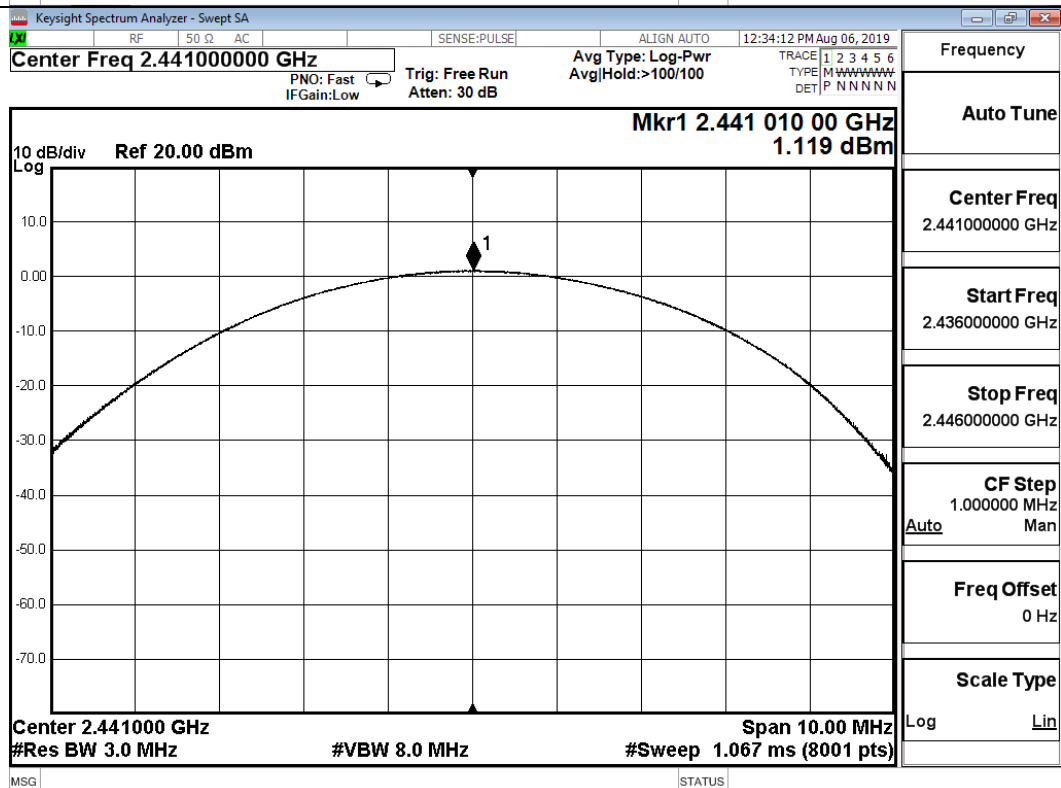
 π /4DQPSK/LCH



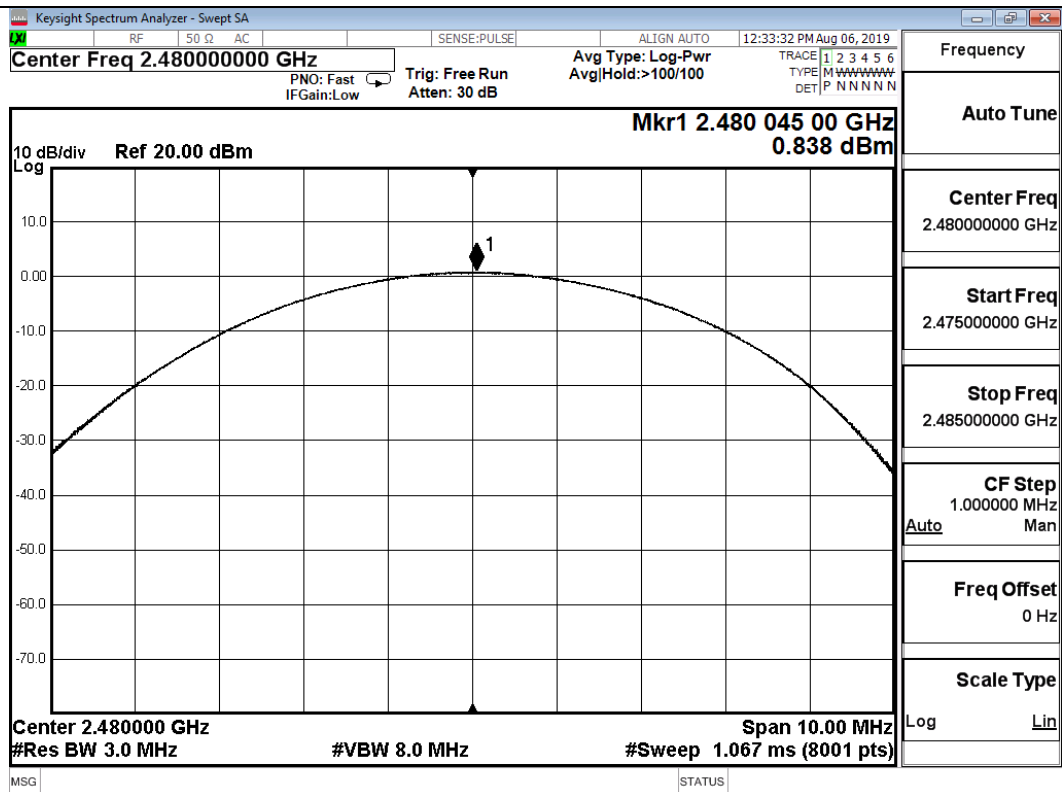
8-DPSK/LCH



8-DPSK/MCH

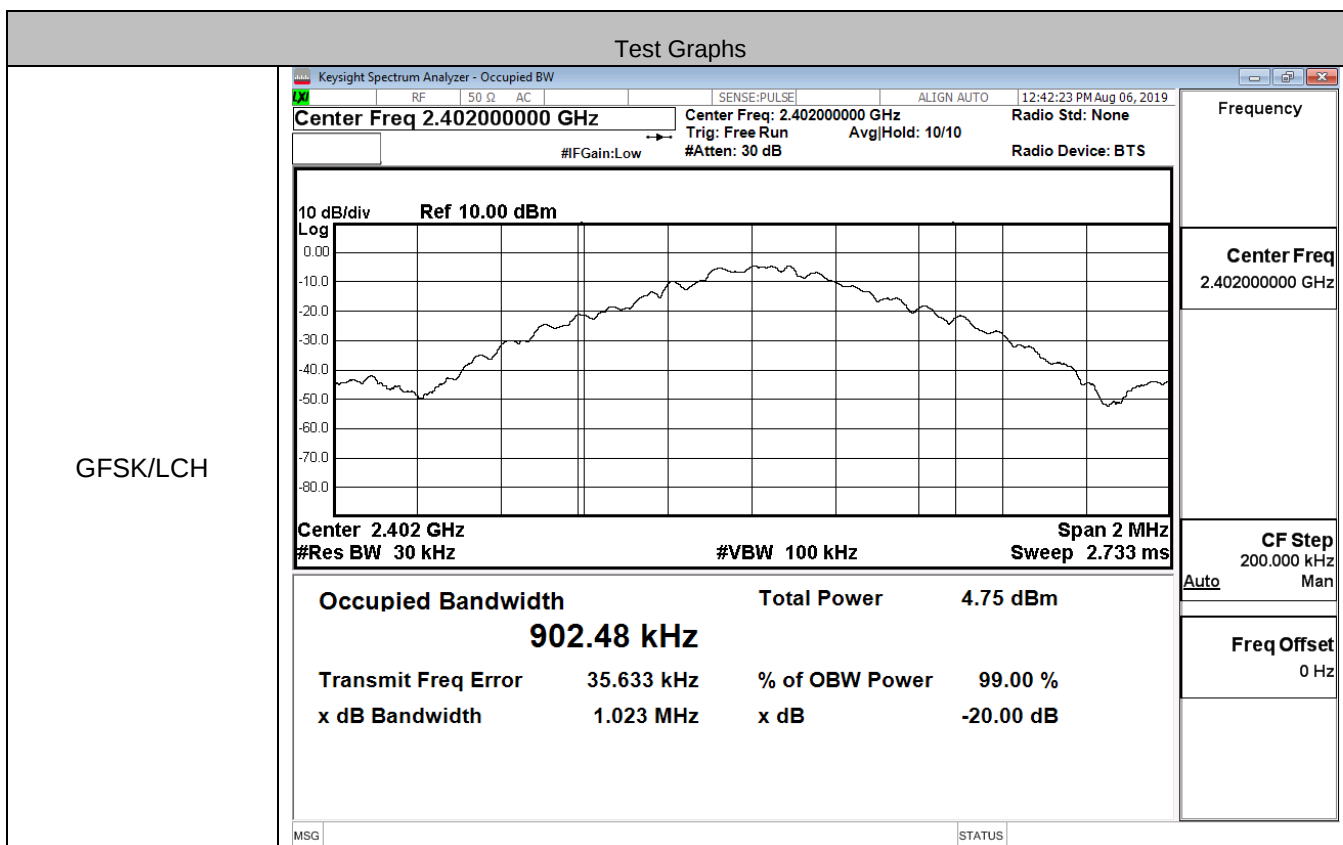


8-DPSK/HCH

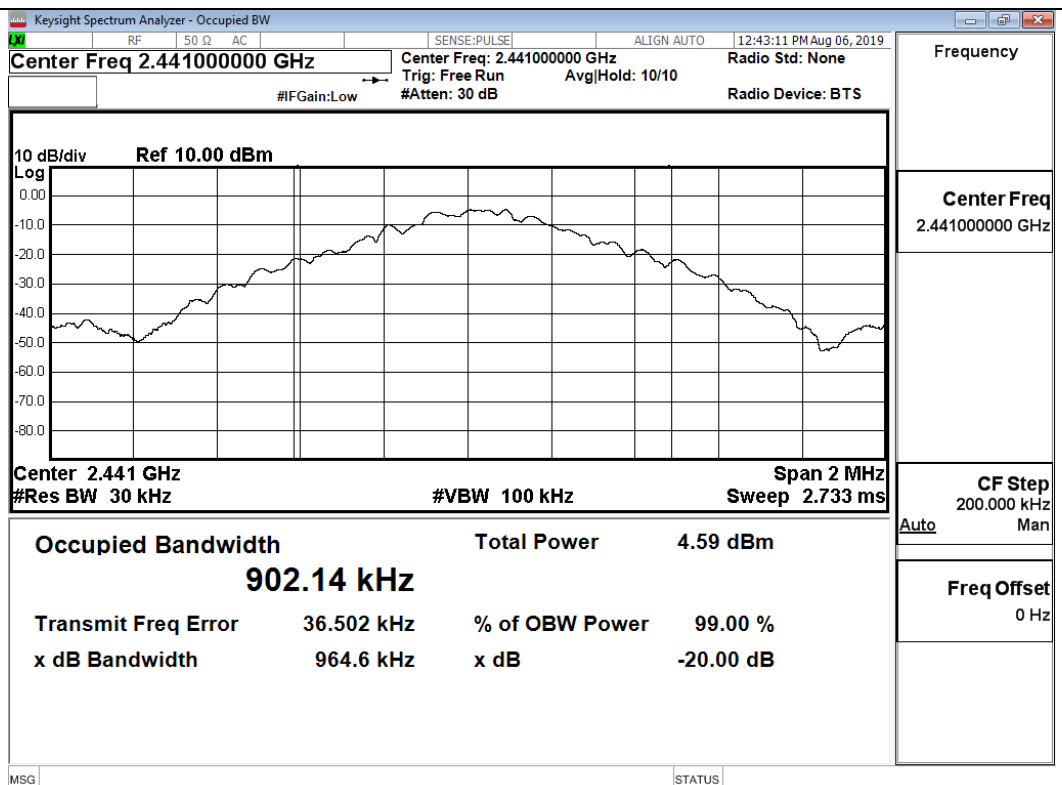


A.2 99% and 20dB Bandwidth

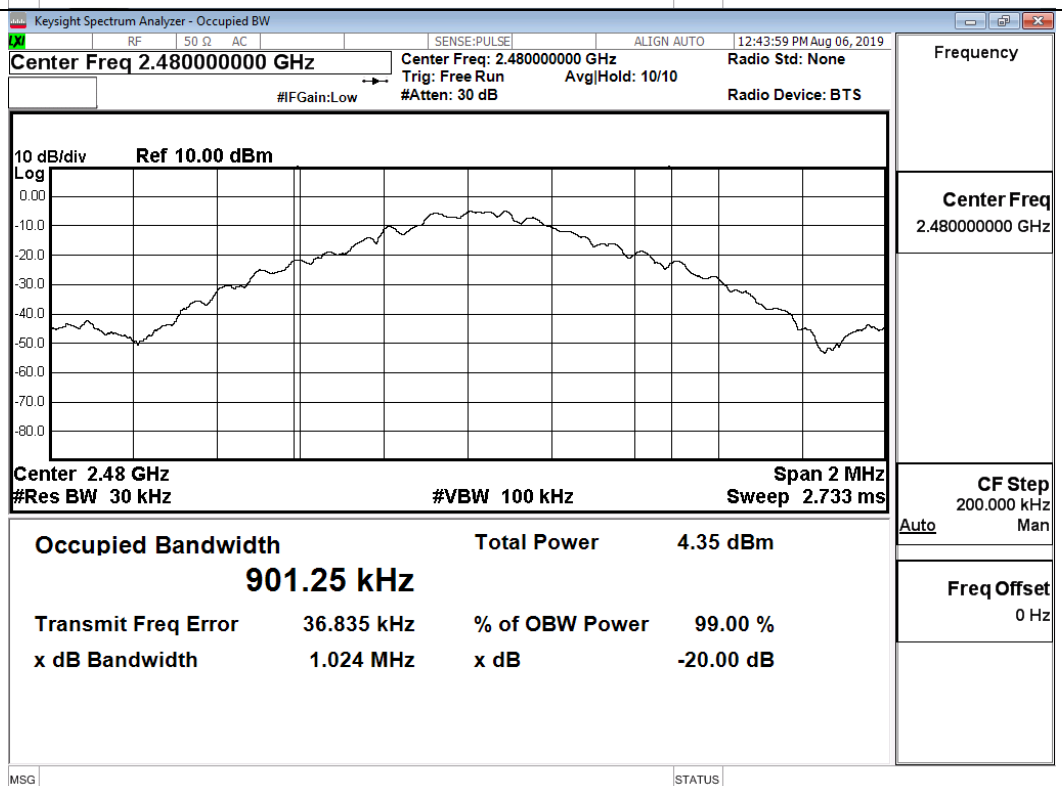
Mode	Channel.	99% Bandwidth [MHz]	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.90248	1.023	Not Specified	PASS
	MCH	0.90214	0.9646	Not Specified	PASS
	HCH	0.90125	1.024	Not Specified	PASS
π /4DQPSK	LCH	1.1993	1.369	Not Specified	PASS
	MCH	1.2002	1.371	Not Specified	PASS
	HCH	1.1990	1.369	Not Specified	PASS
8-DPSK	LCH	1.2080	1.351	Not Specified	PASS
	MCH	1.2076	1.351	Not Specified	PASS
	HCH	1.2075	1.350	Not Specified	PASS

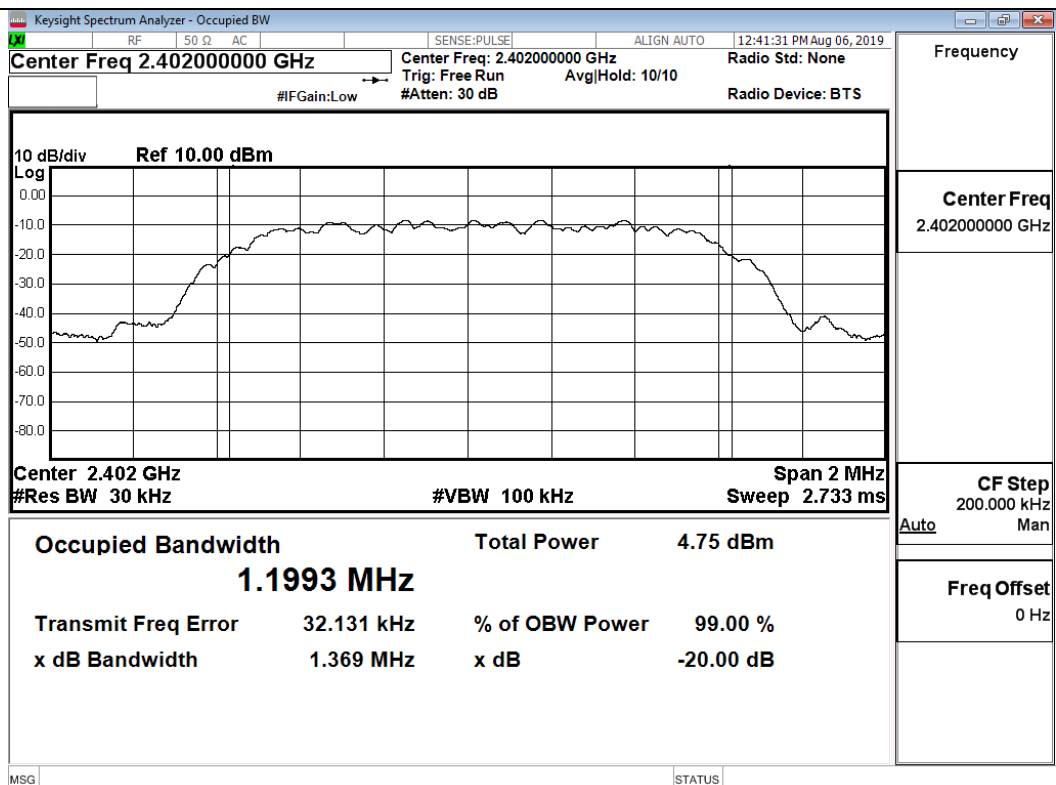
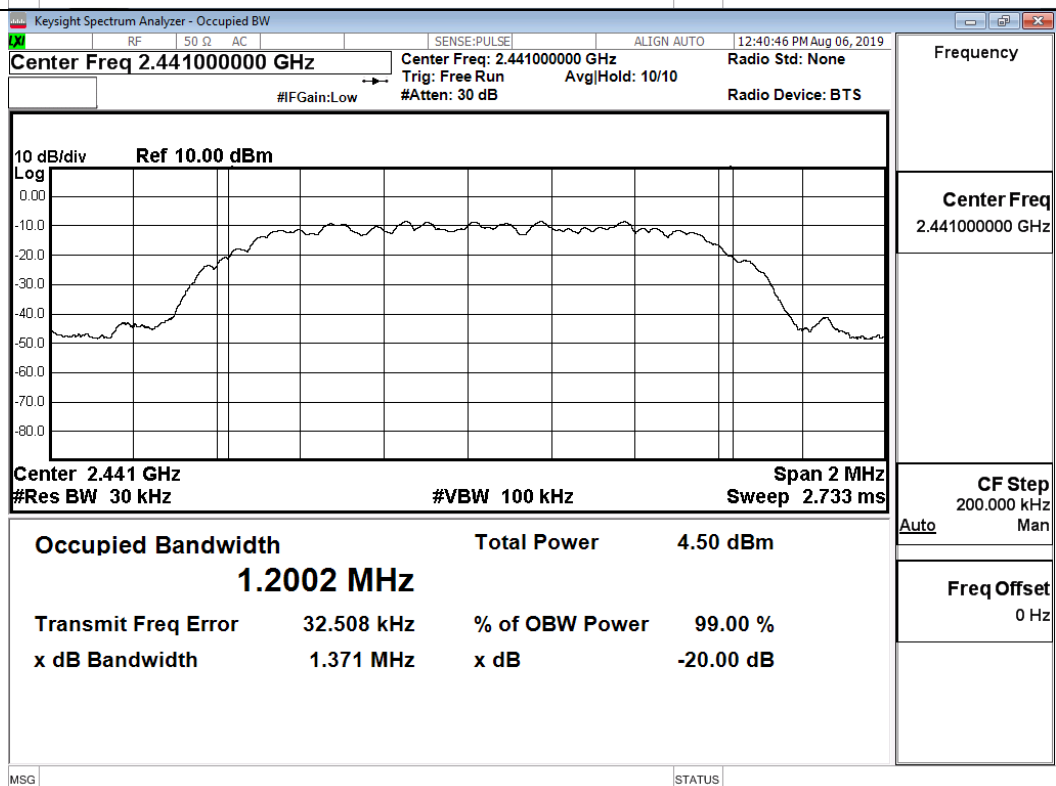


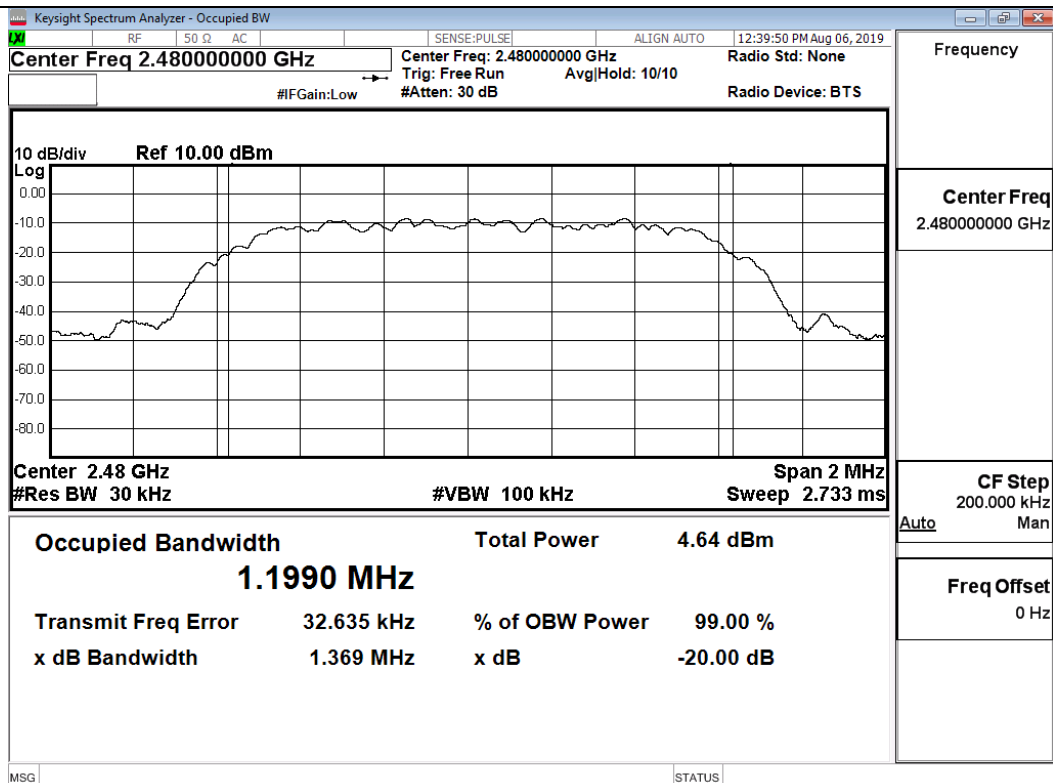
GFSK/MCH



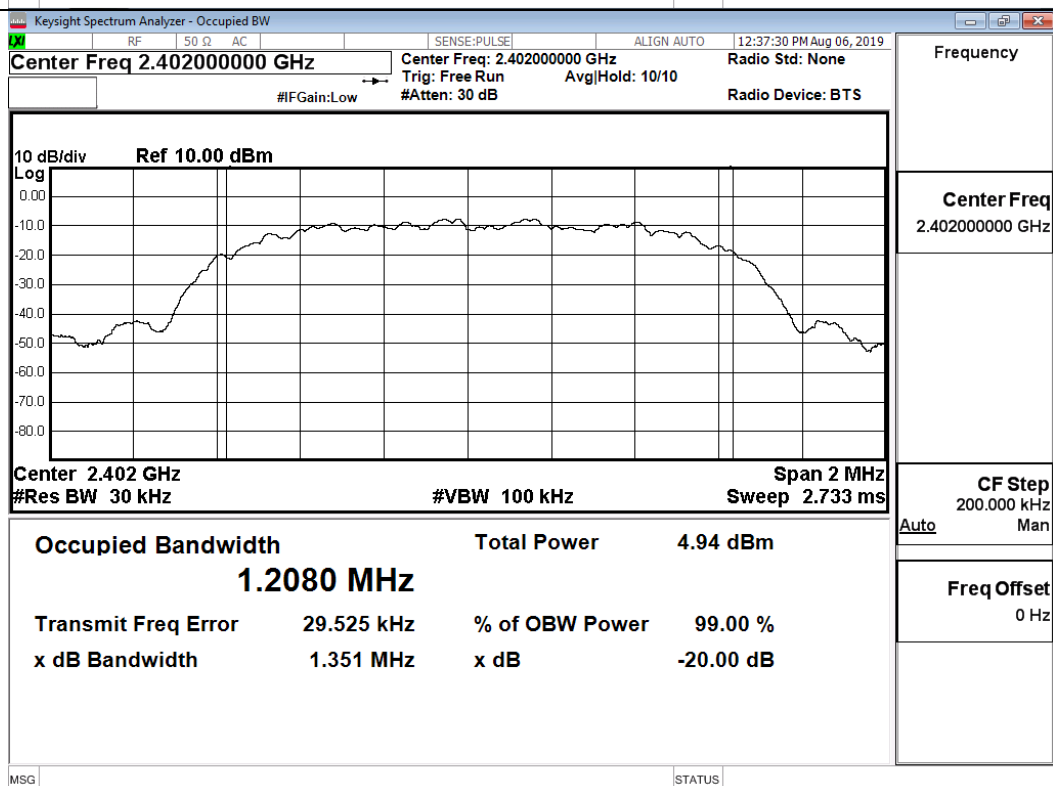
GFSK/HCH



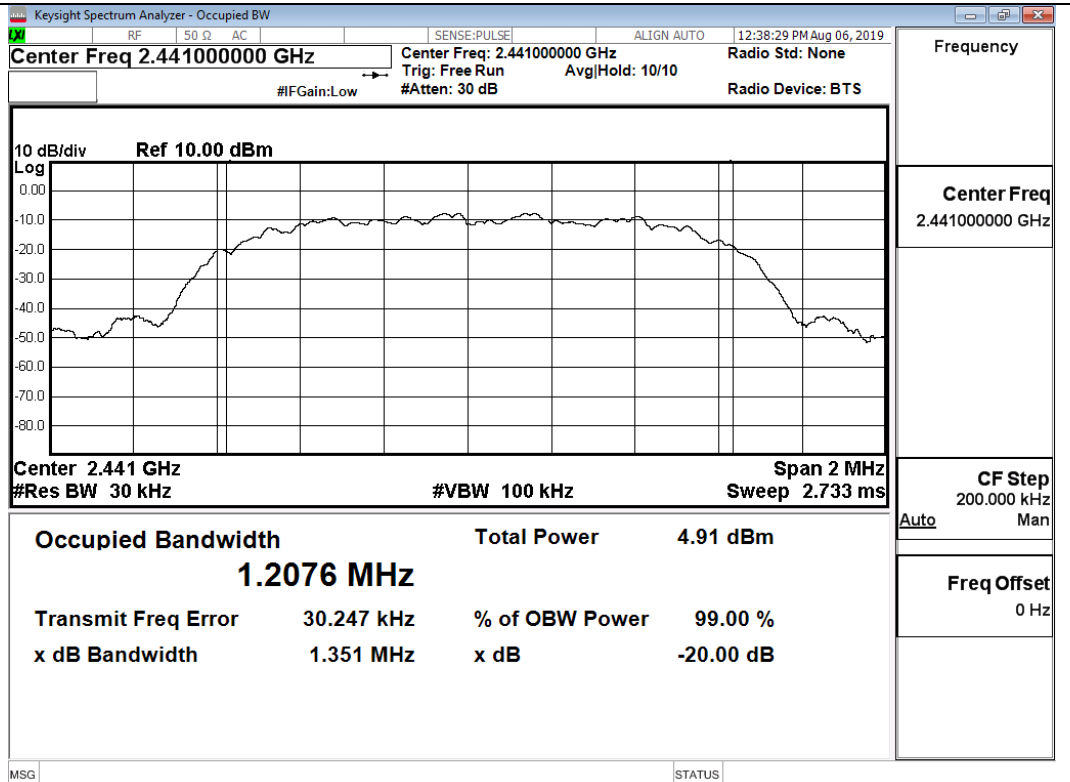
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

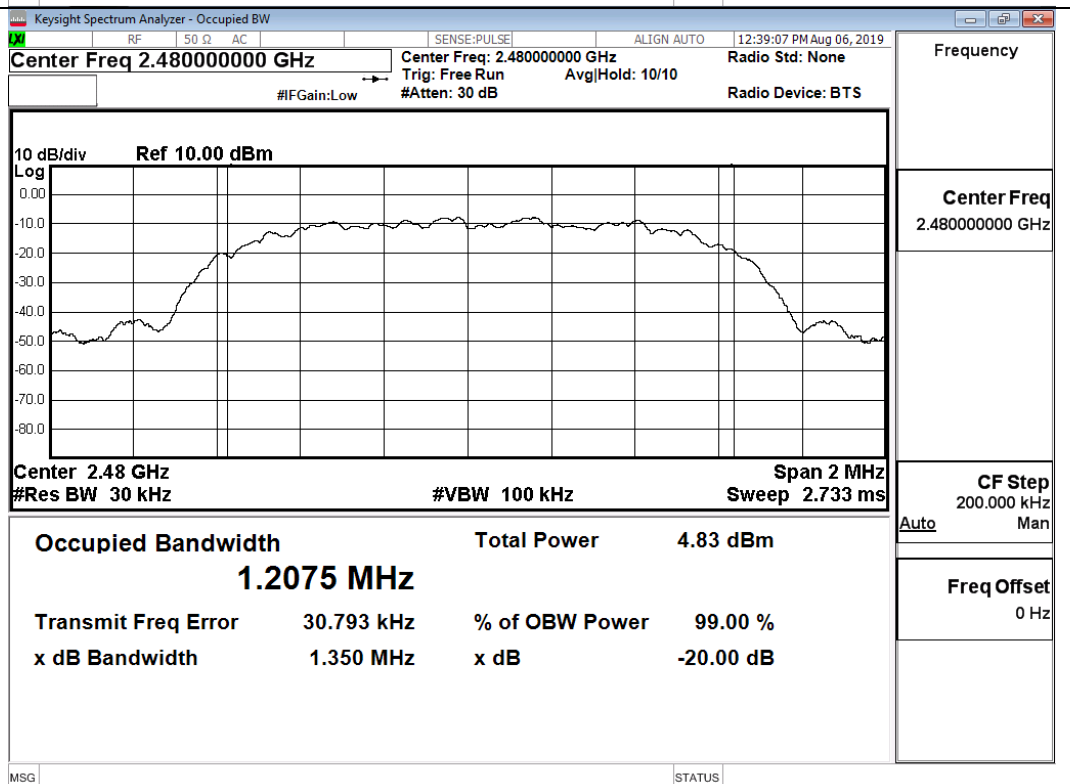
8-DPSK/LCH



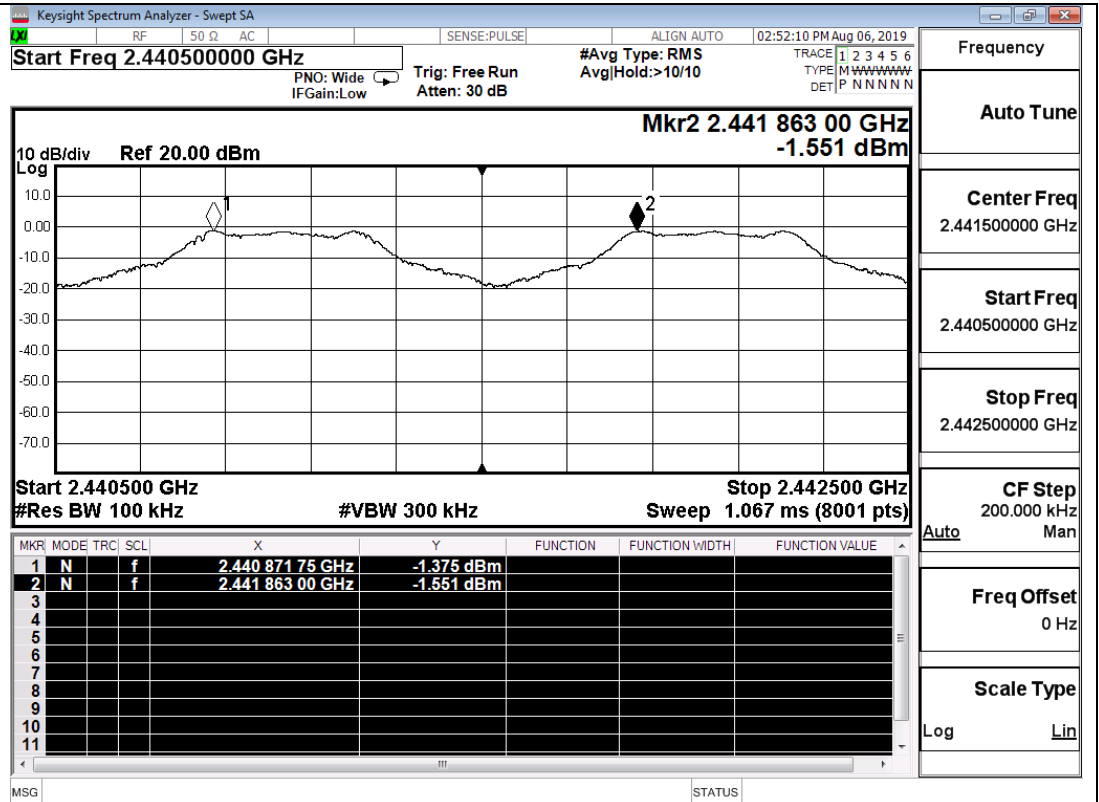
8-DPSK/MCH



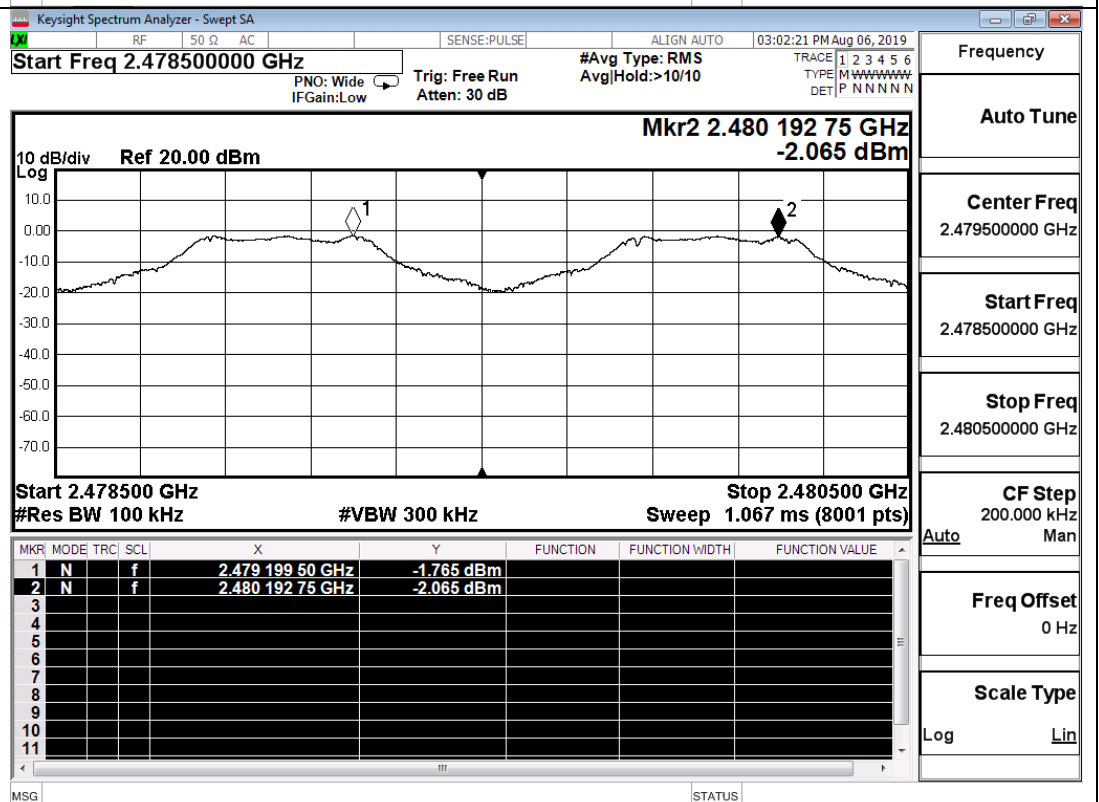
8-DPSK/HCH

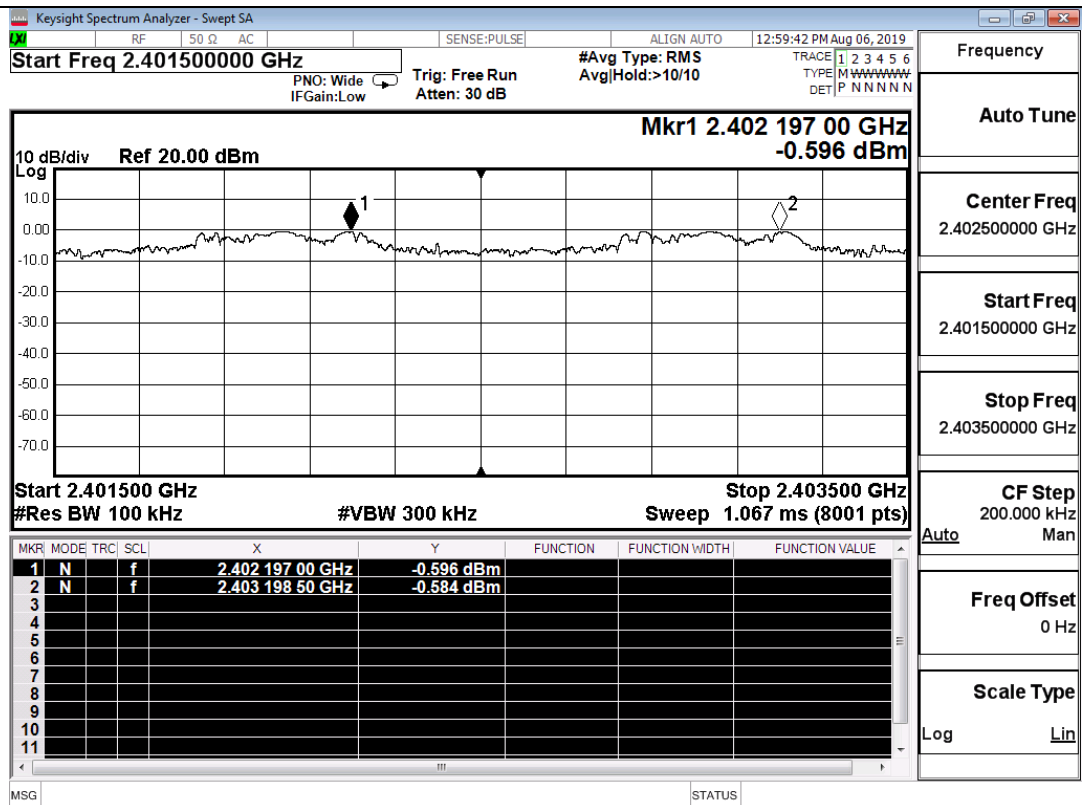
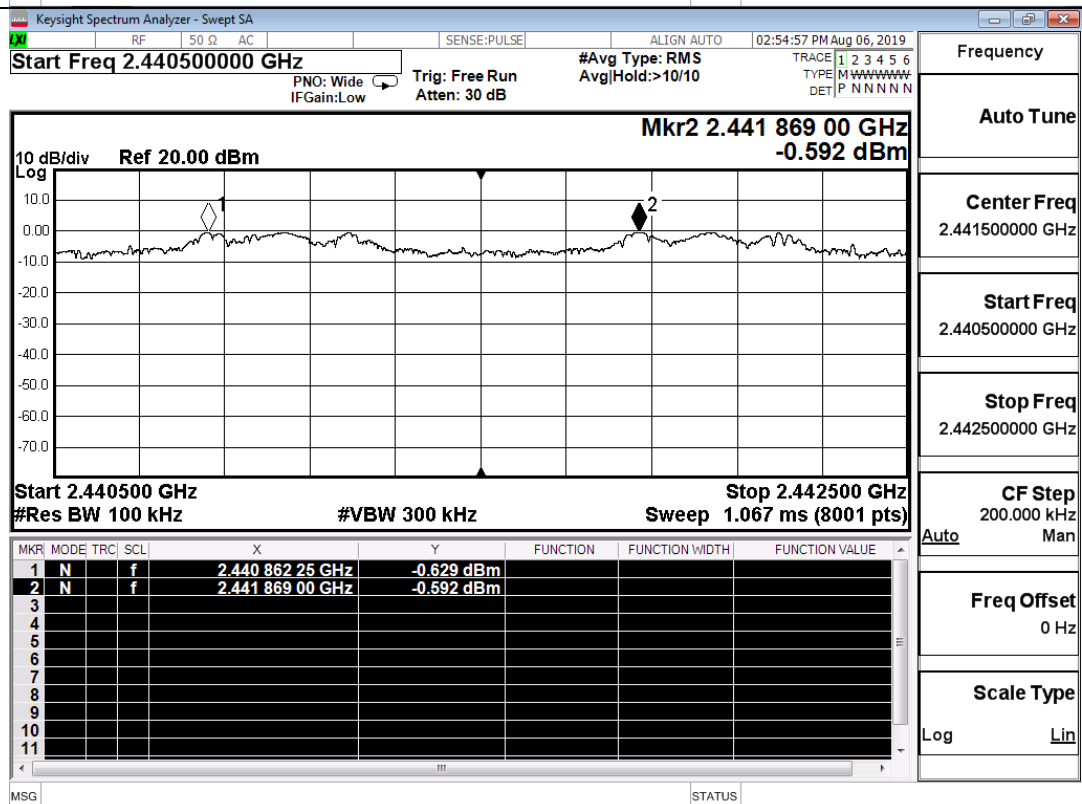


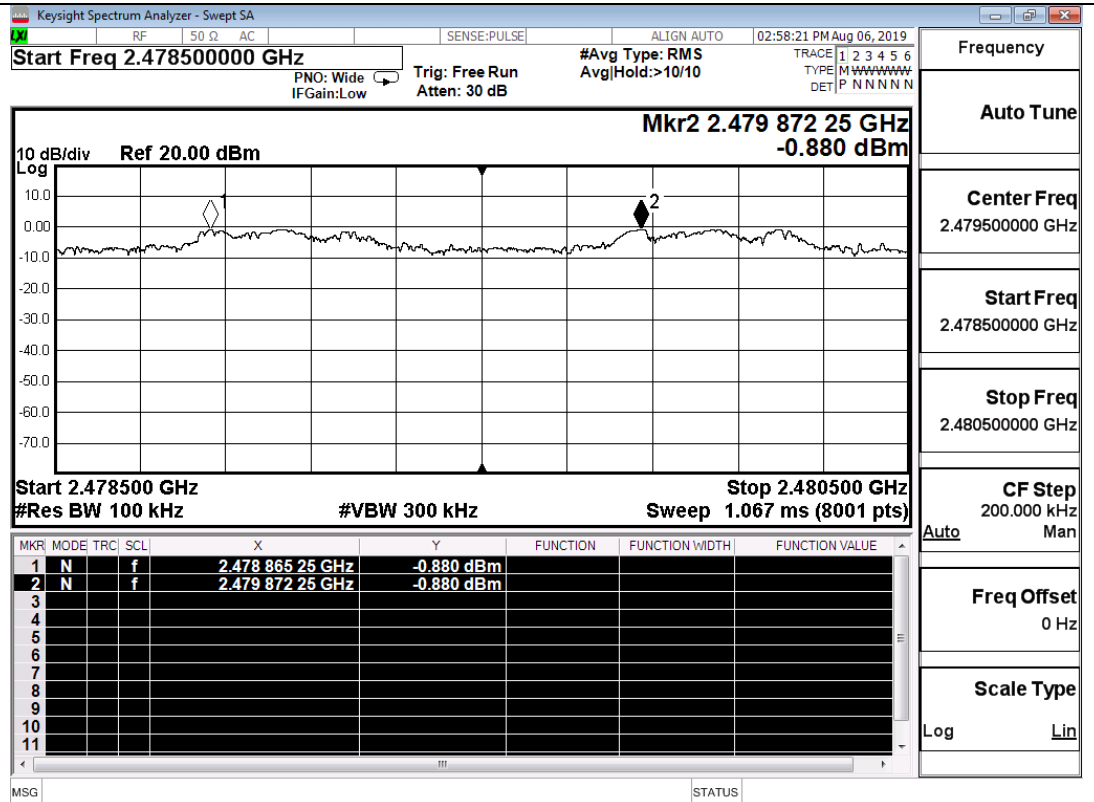
GFSK/MCH



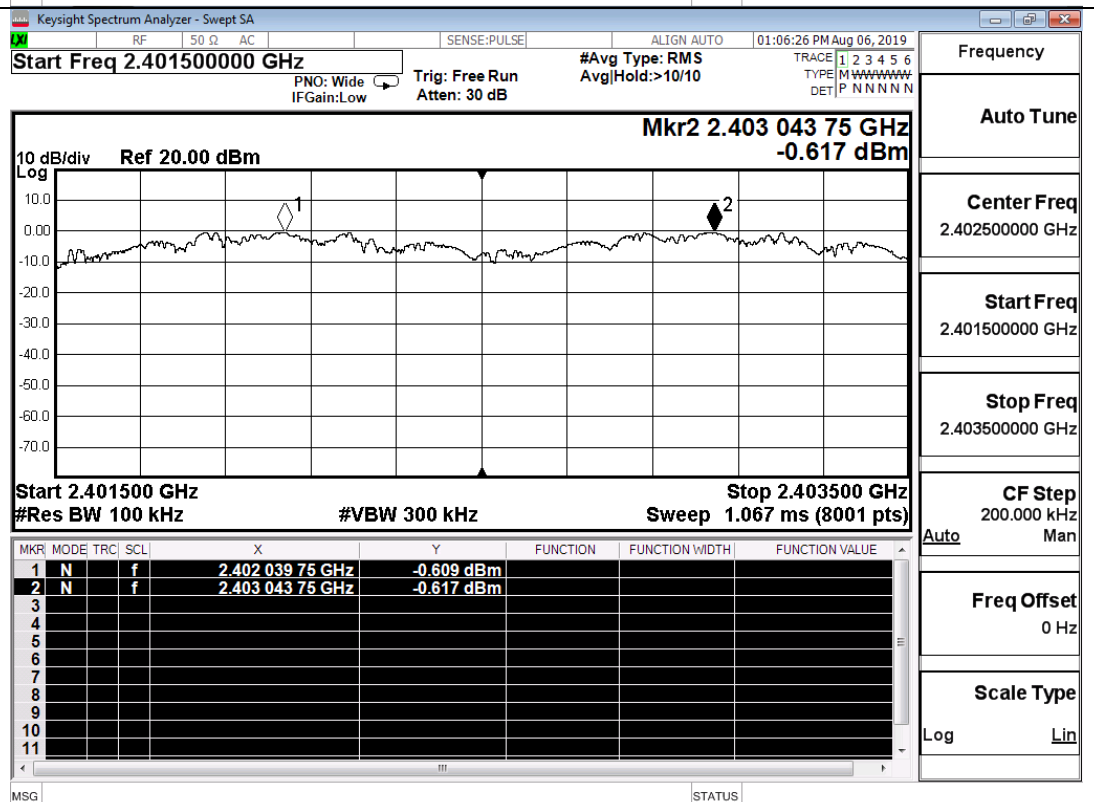
GFSK/HCH



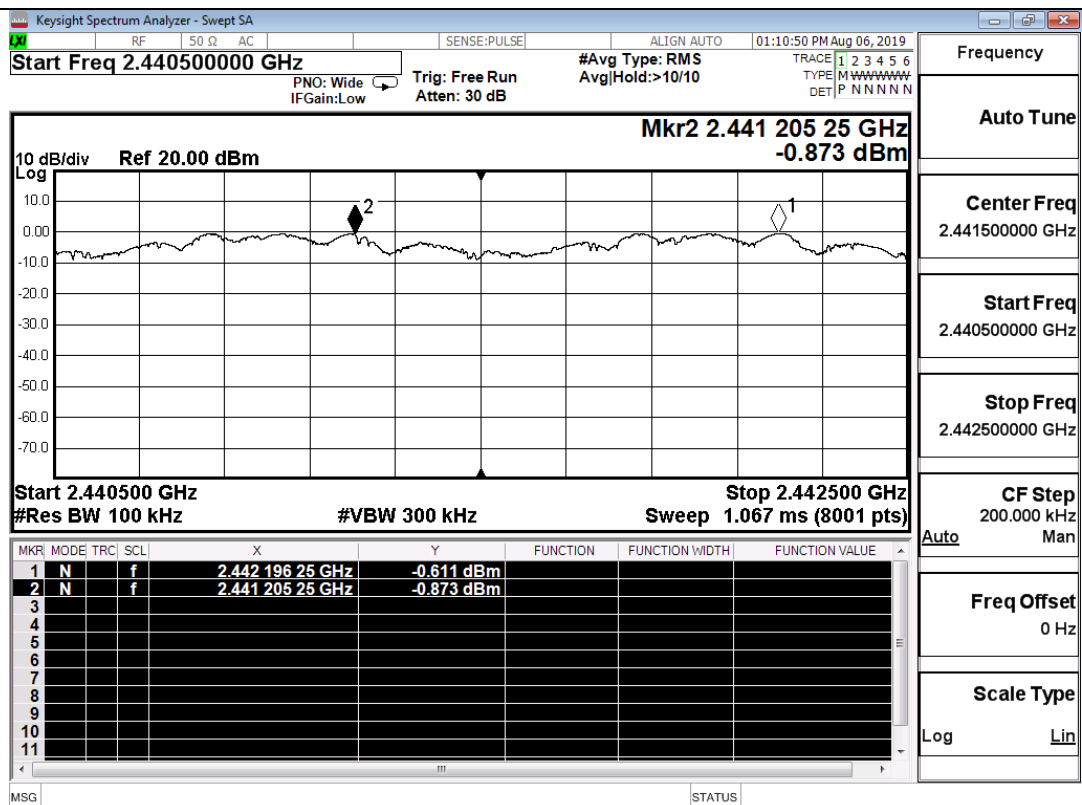
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

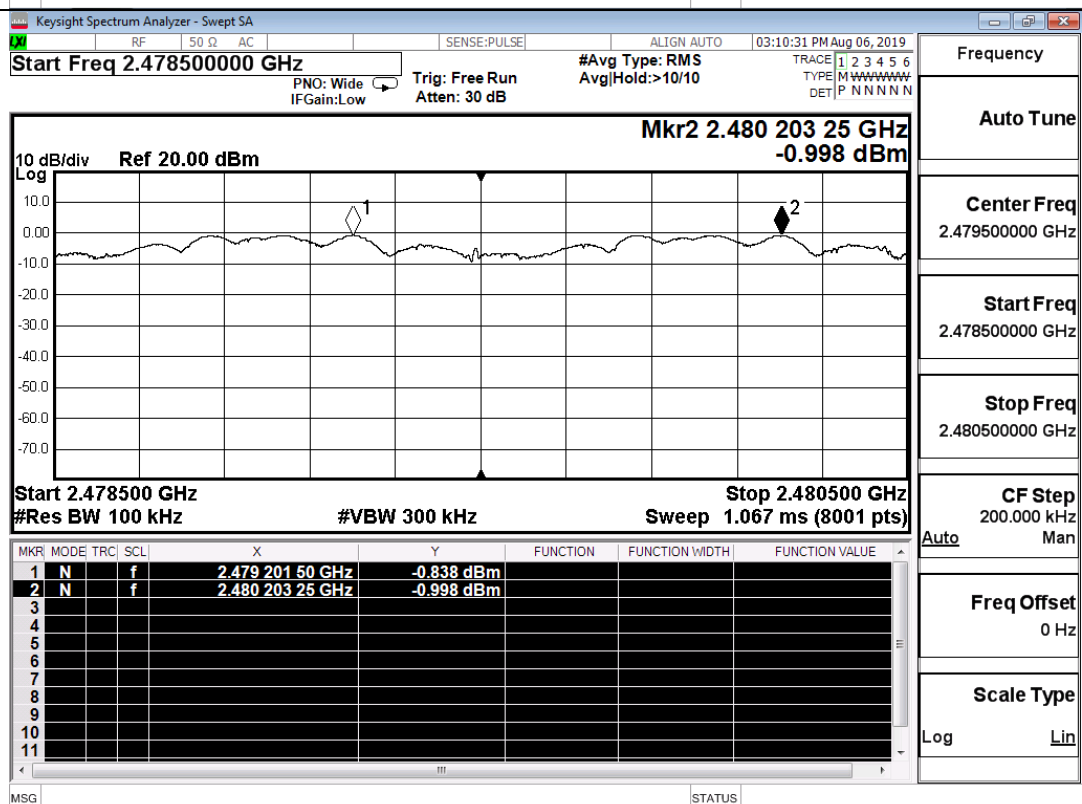
8-DPSK/LCH



8-DPSK/MCH

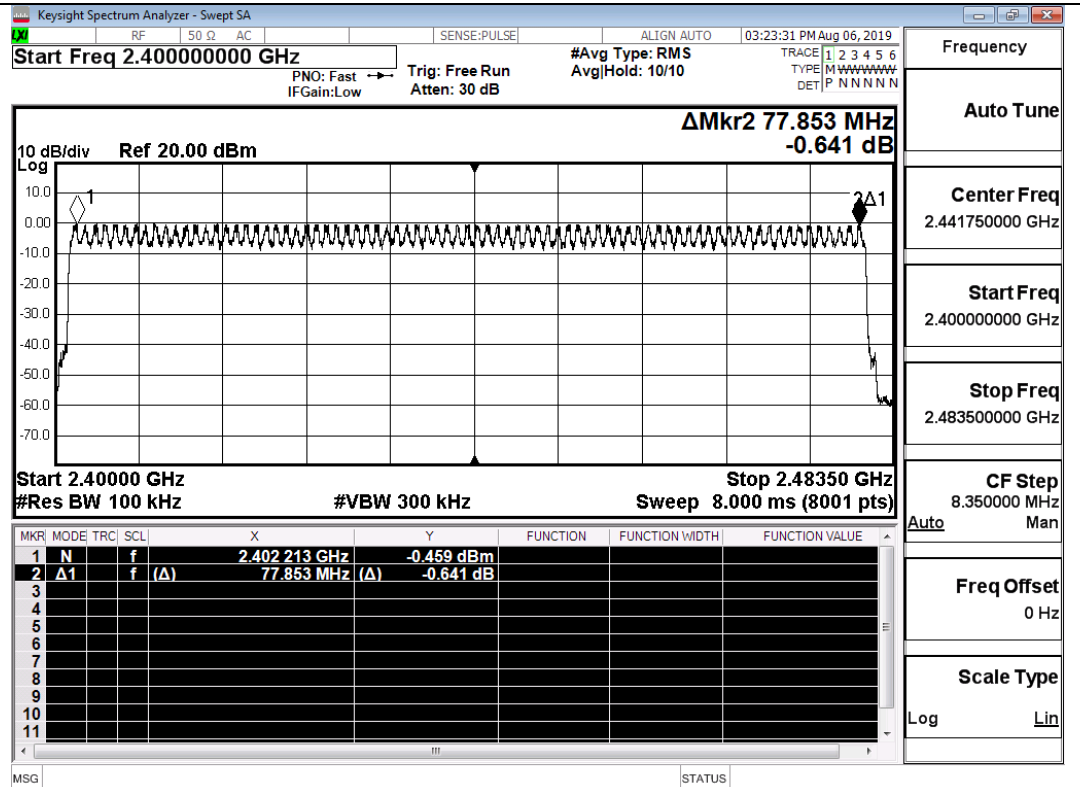


8-DPSK/HCH

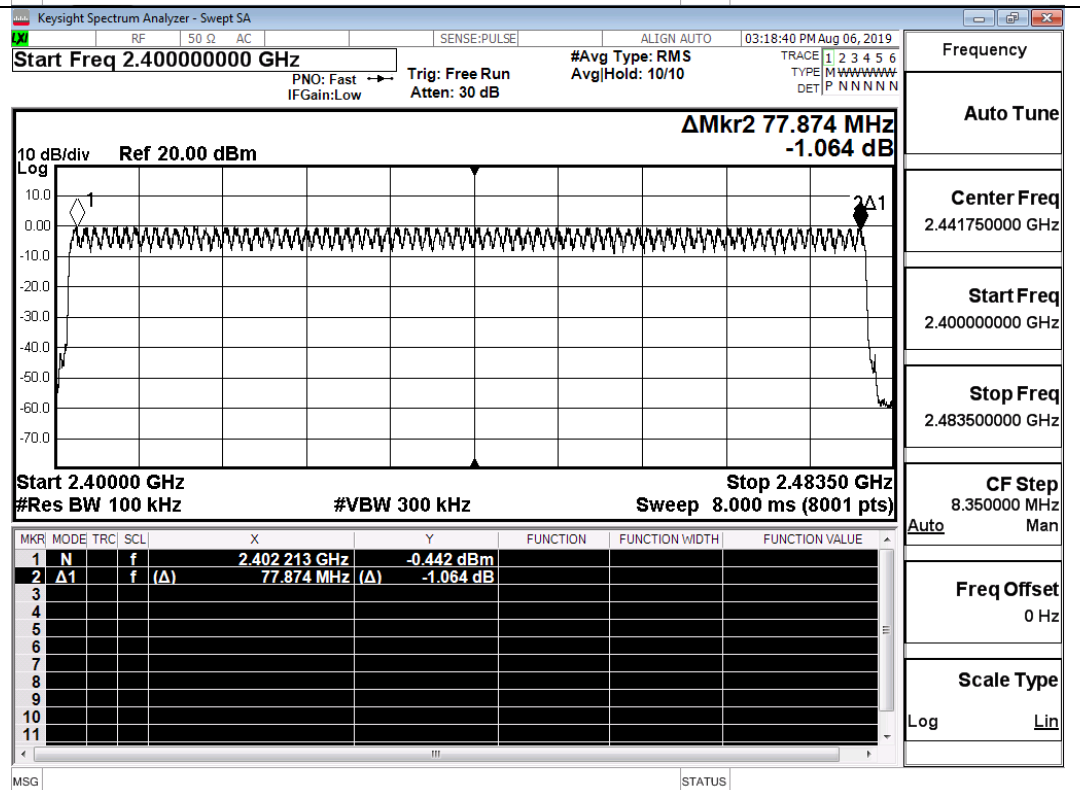


Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS
8-DPSK	Hop	79	≥ 15	PASS



$\pi/4$ DQPSK/Hop

8-DPSK/Hop

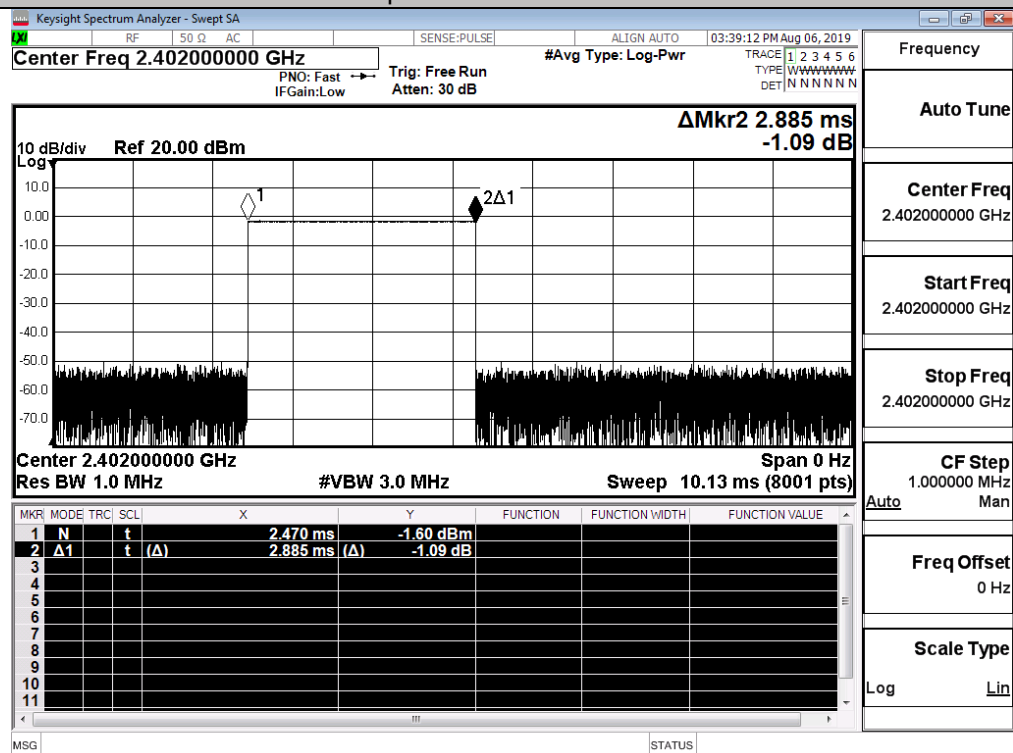


A.5 Dwell Time

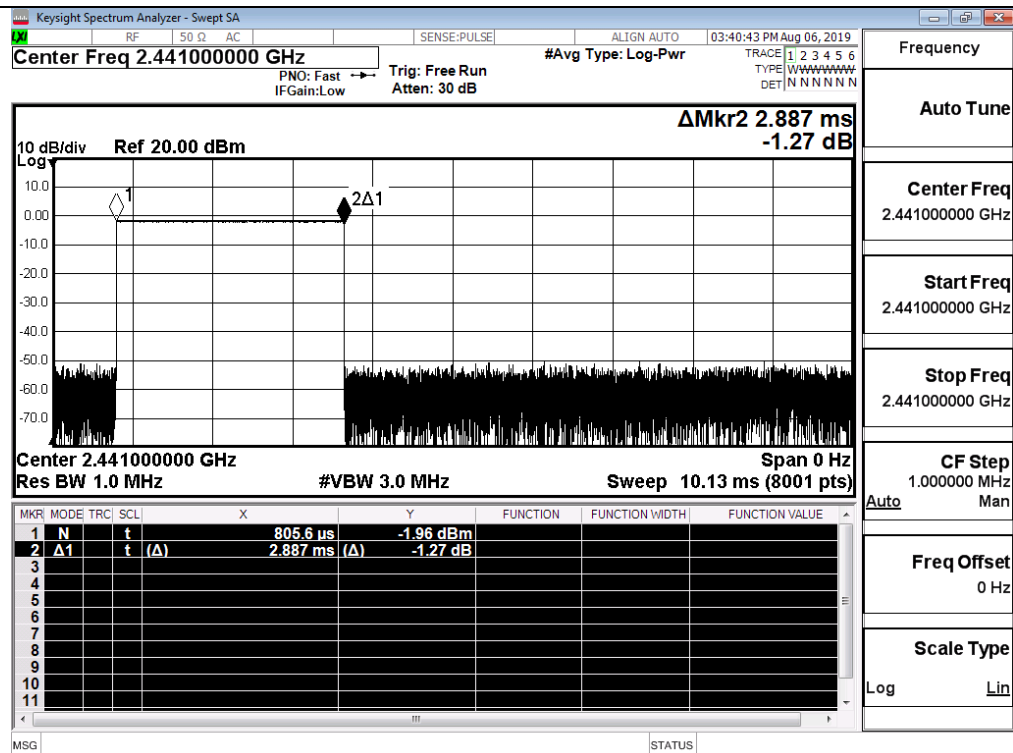
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.89	106.7	0.308	0.4	PASS
	DH5	MCH	2.89	106.7	0.308	0.4	PASS
	DH5	HCH	2.89	106.7	0.308	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.89	106.7	0.308	0.4	PASS
	2DH5	MCH	2.89	106.7	0.308	0.4	PASS
	2DH5	HCH	2.89	106.7	0.308	0.4	PASS
8-DPSK	3DH5	LCH	2.89	106.7	0.308	0.4	PASS
	3DH5	MCH	2.89	106.7	0.308	0.4	PASS
	3DH5	HCH	2.89	106.7	0.308	0.4	PASS

Test Graphs

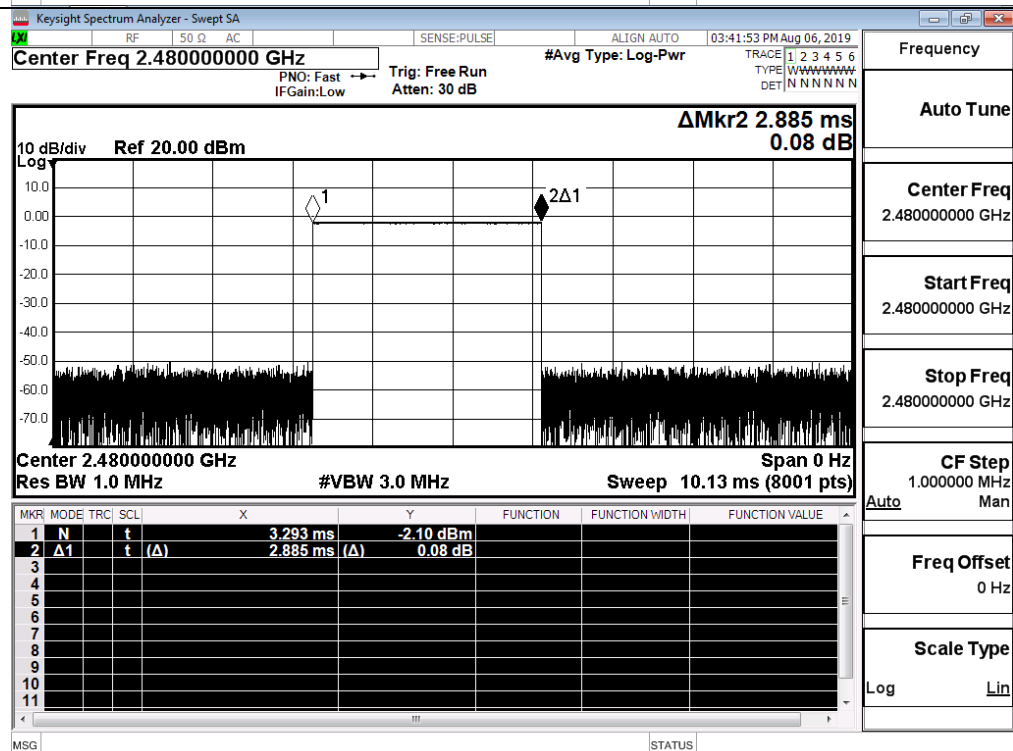
GFSK_DH5/LCH



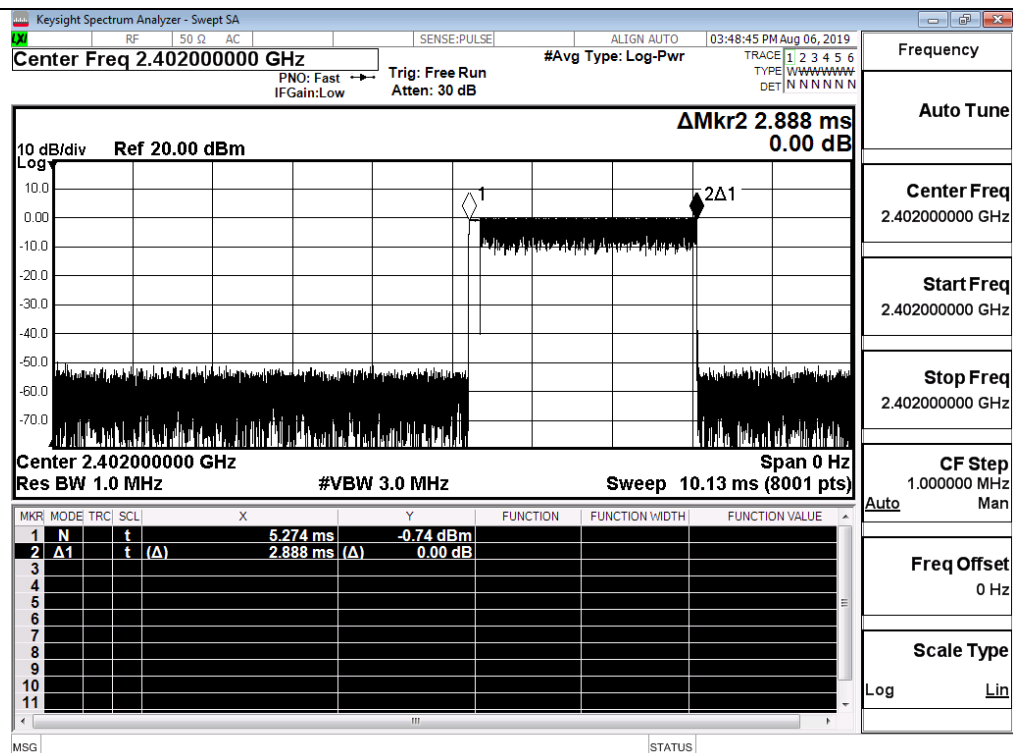
GFSK_DH5/MCH



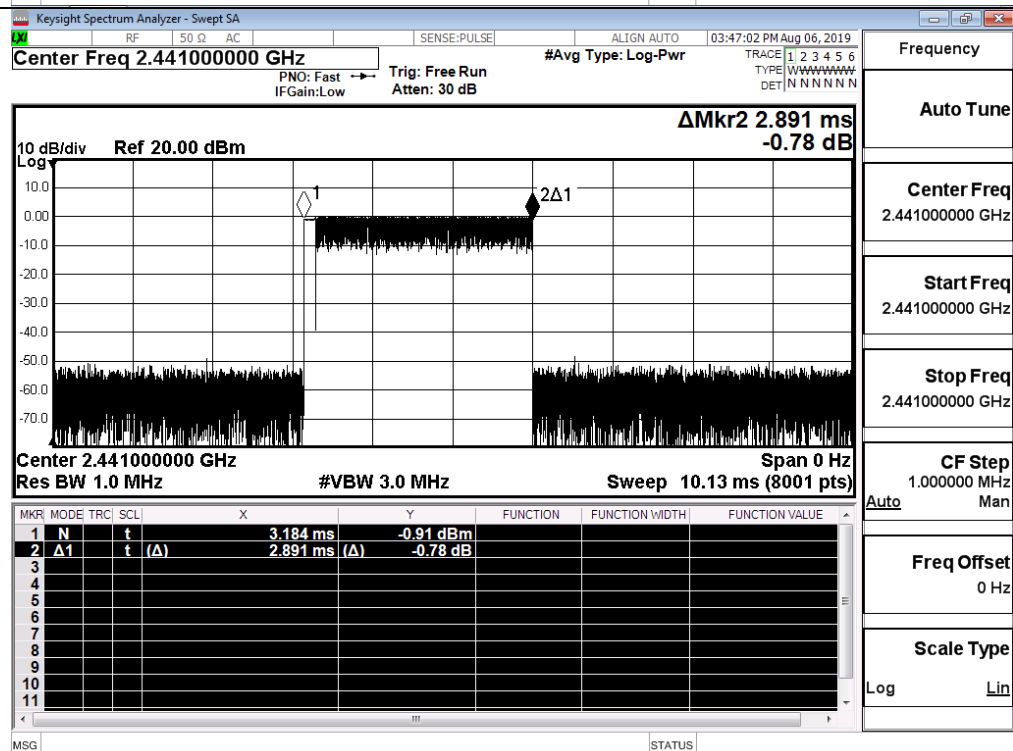
GFSK_DH5/HCH



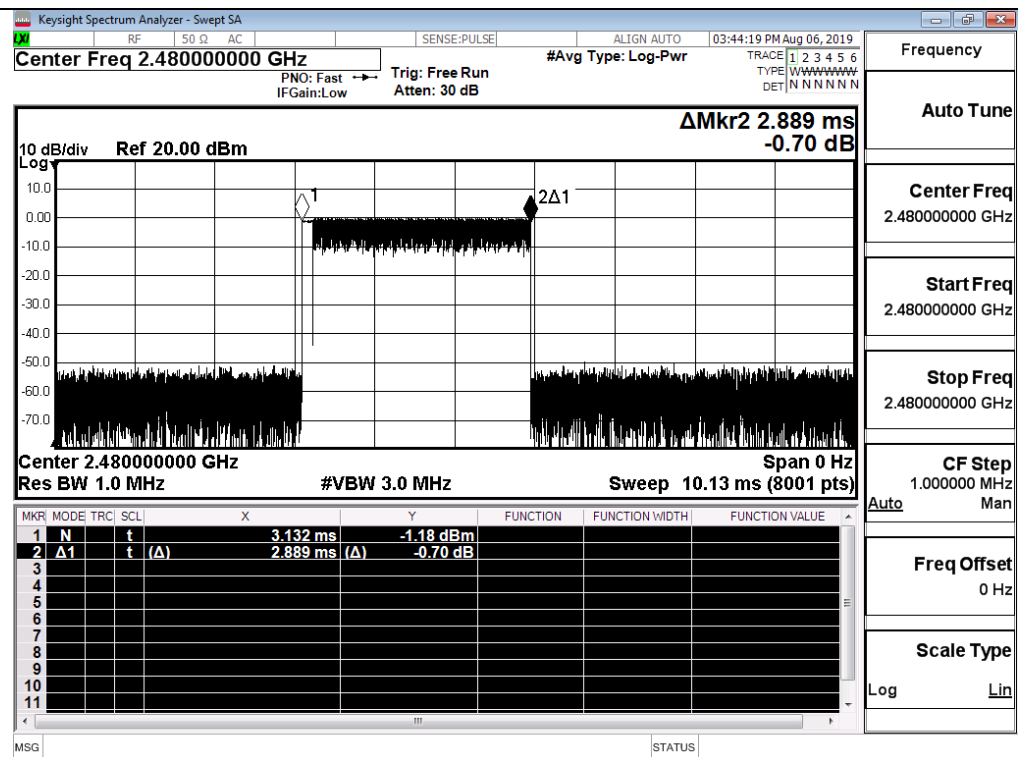
$\pi/4$ DQPSK
_2DH5/LCH



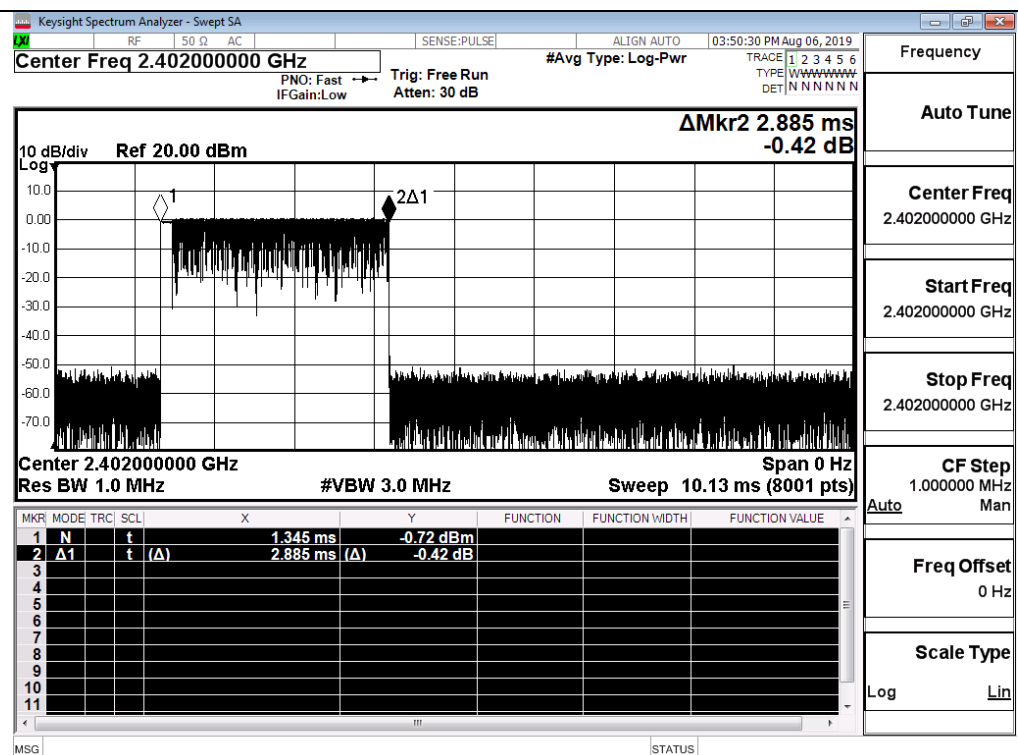
$\pi/4$ DQPSK
_2DH5/MCH



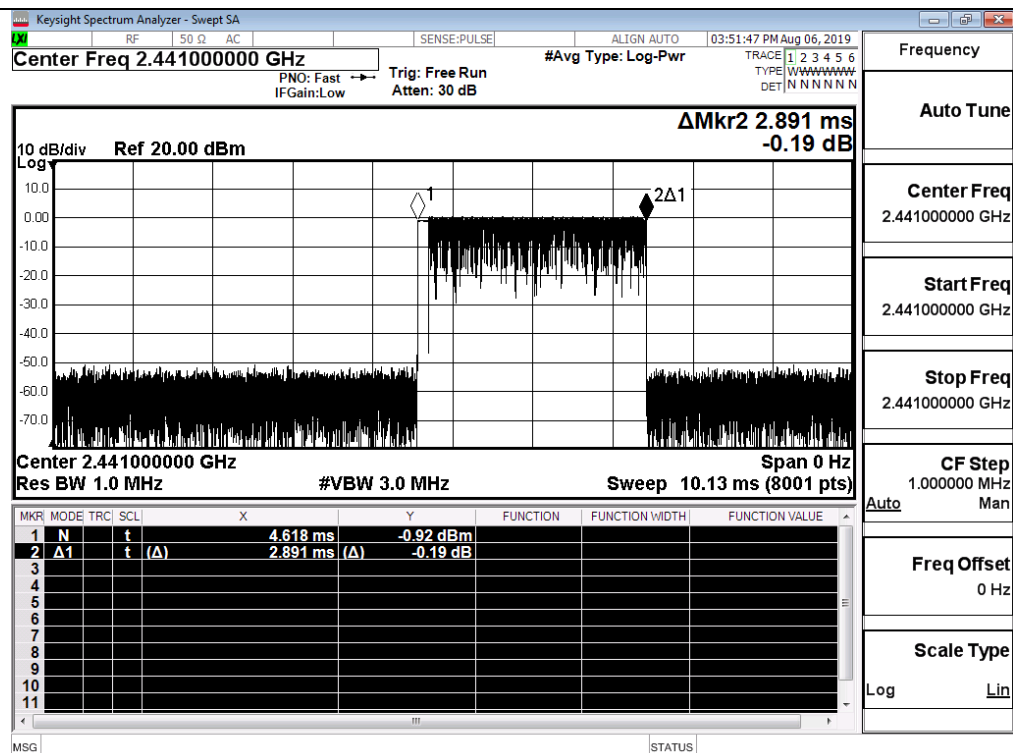
$\pi/4$ DQPSK
_2DH5/HCH



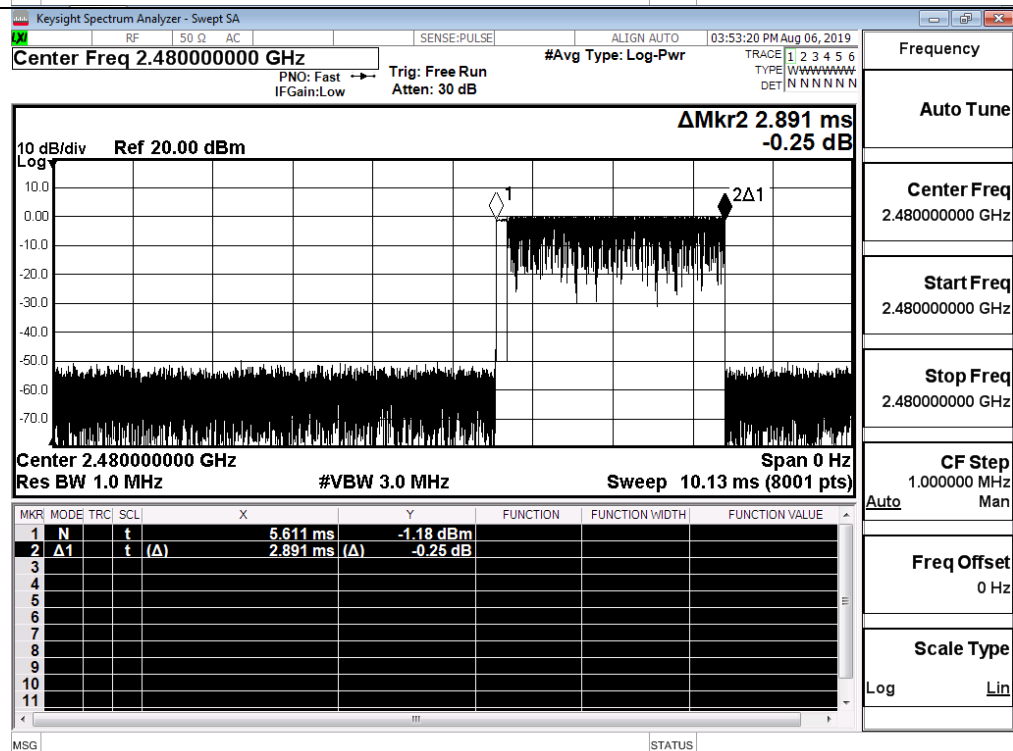
8-DPSK_3DH5/LCH



8-DPSK_3DH5/MCH



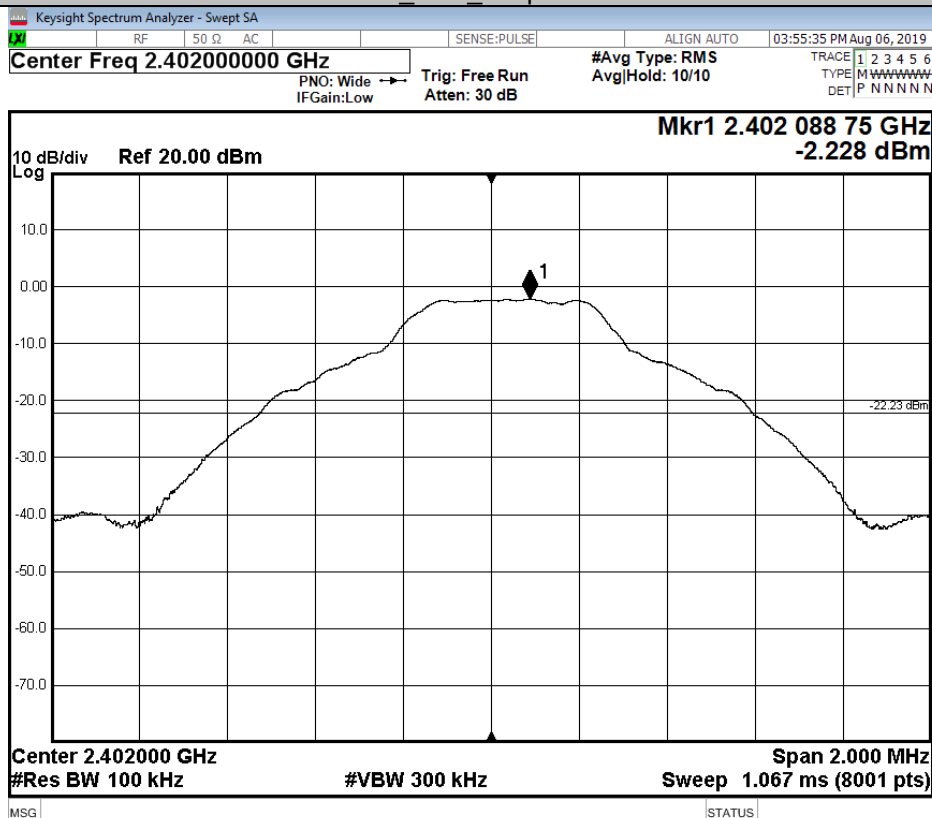
8-DPSK_3DH5/HCH



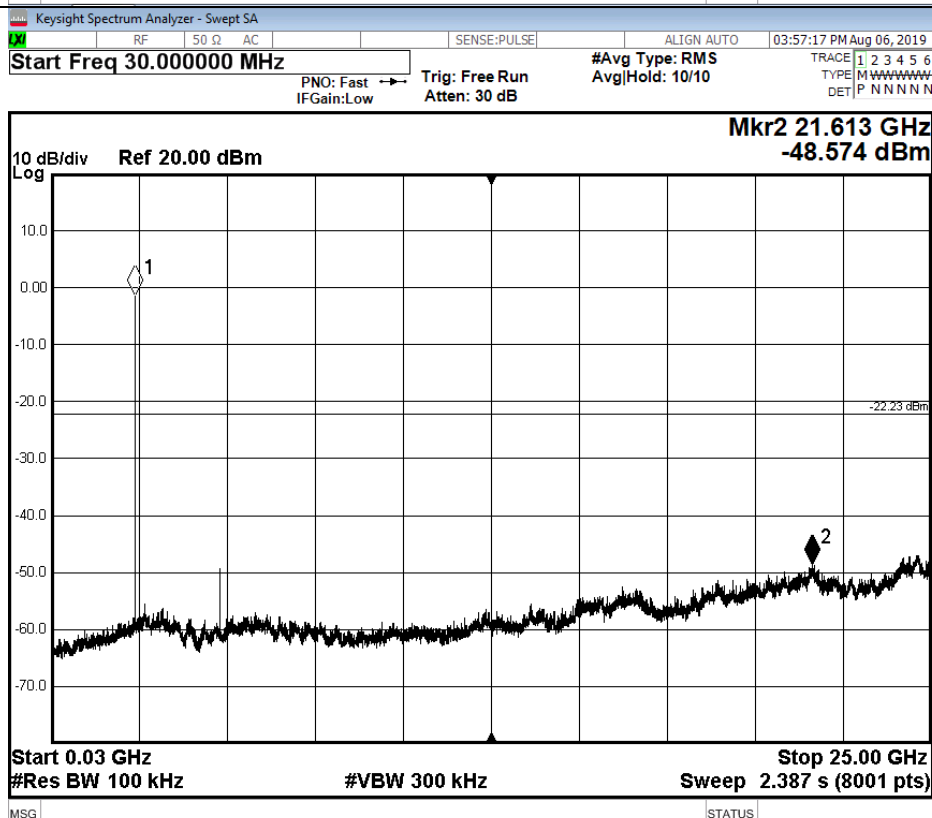
A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-2.228	-48.574	-22.23	PASS
	MCH	-1.546	-47.002	-21.55	PASS
	HCH	-1.855	-48.622	-21.86	PASS
$\pi/4$ DQPSK	LCH	-3.360	-48.542	-23.36	PASS
	MCH	-3.355	-48.555	-23.36	PASS
	HCH	-3.444	-48.782	-23.44	PASS
8-DPSK	LCH	-3.380	-48.481	-23.38	PASS
	MCH	-3.418	-48.682	-23.42	PASS
	HCH	-3.946	-49.065	-23.95	PASS

Pref

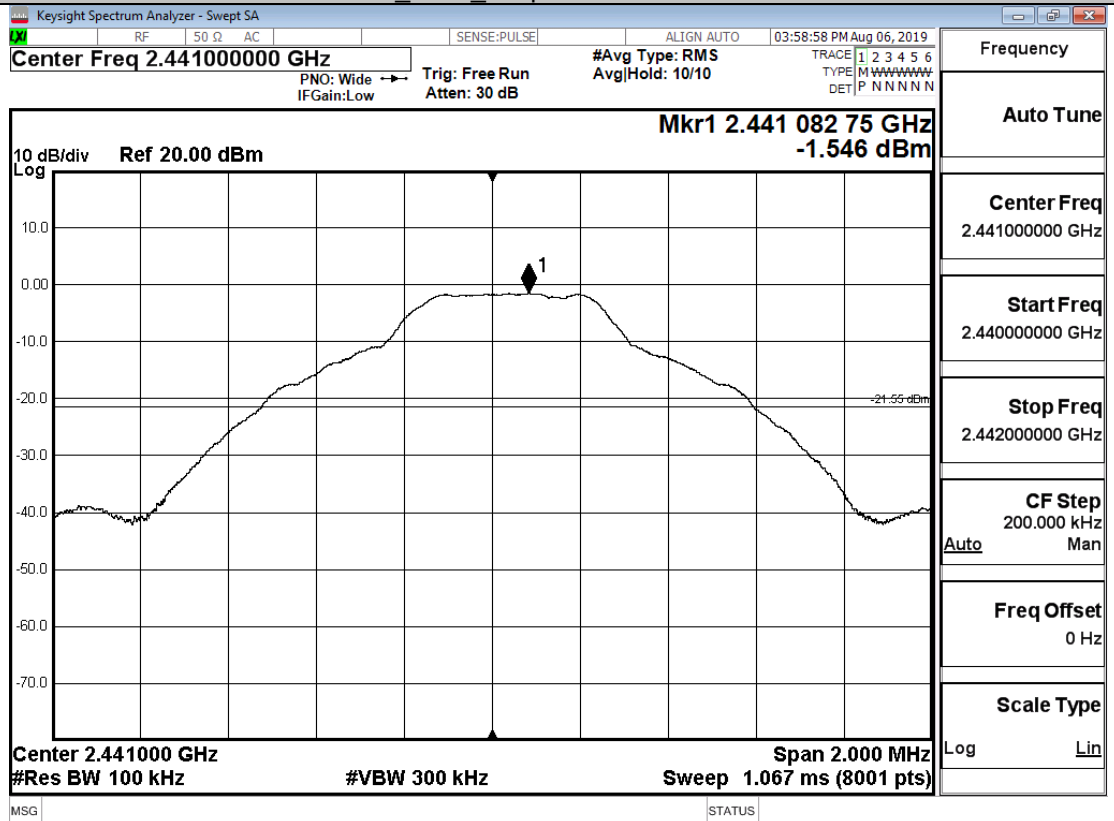


Puw

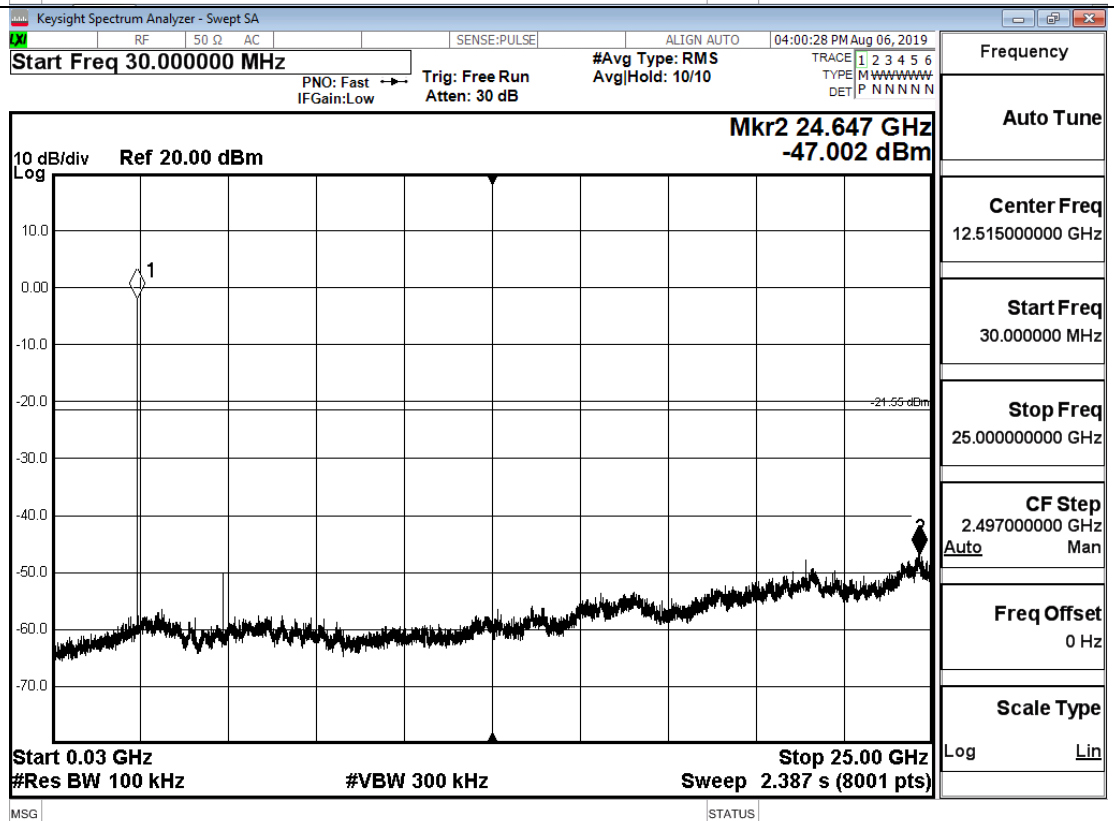


GFSK_MCH_Graphs

Pref

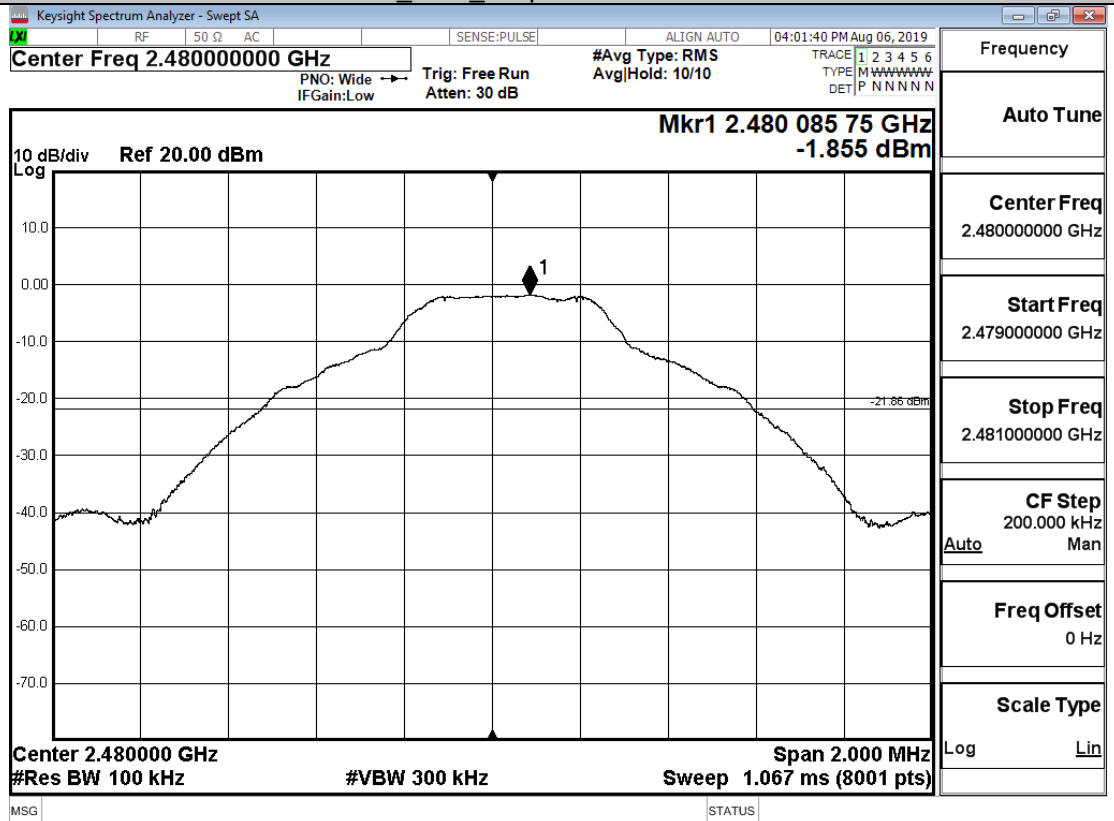


Puw

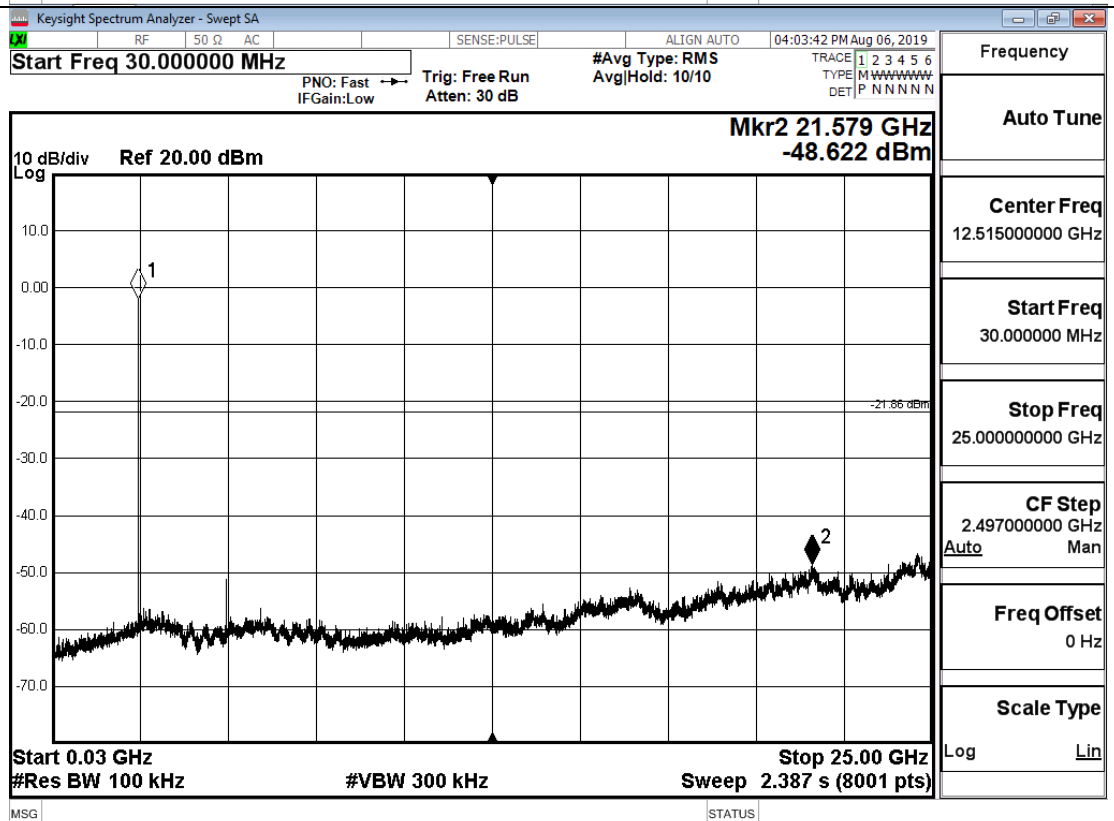


GFSK_HCH_Graphs

Pref

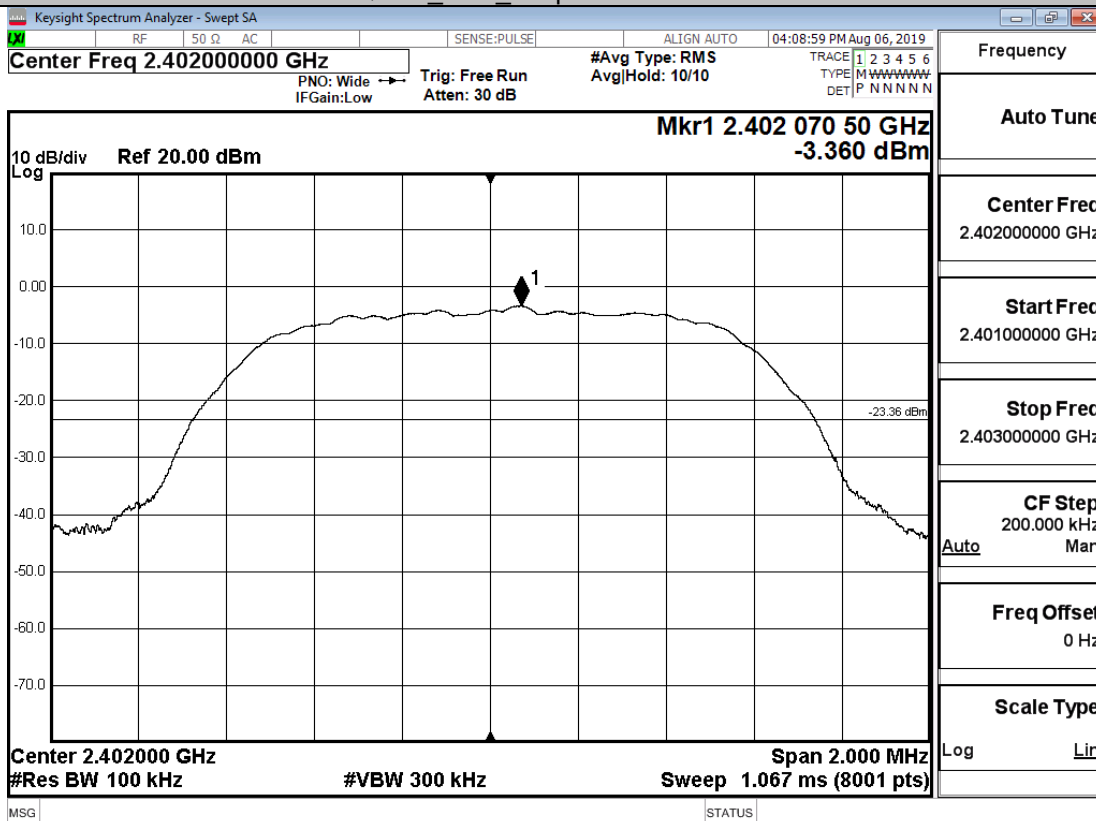


Puw

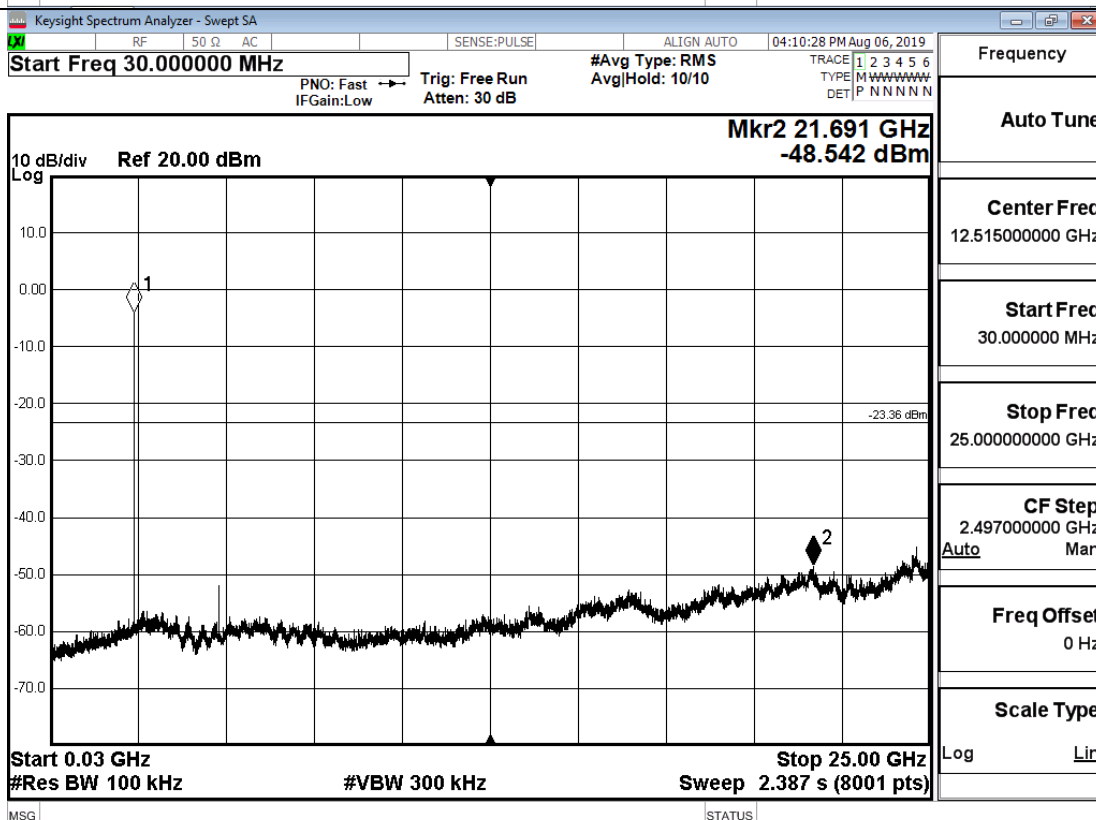


$\pi/4$ DQPSK_LCH_Graphs

Pref

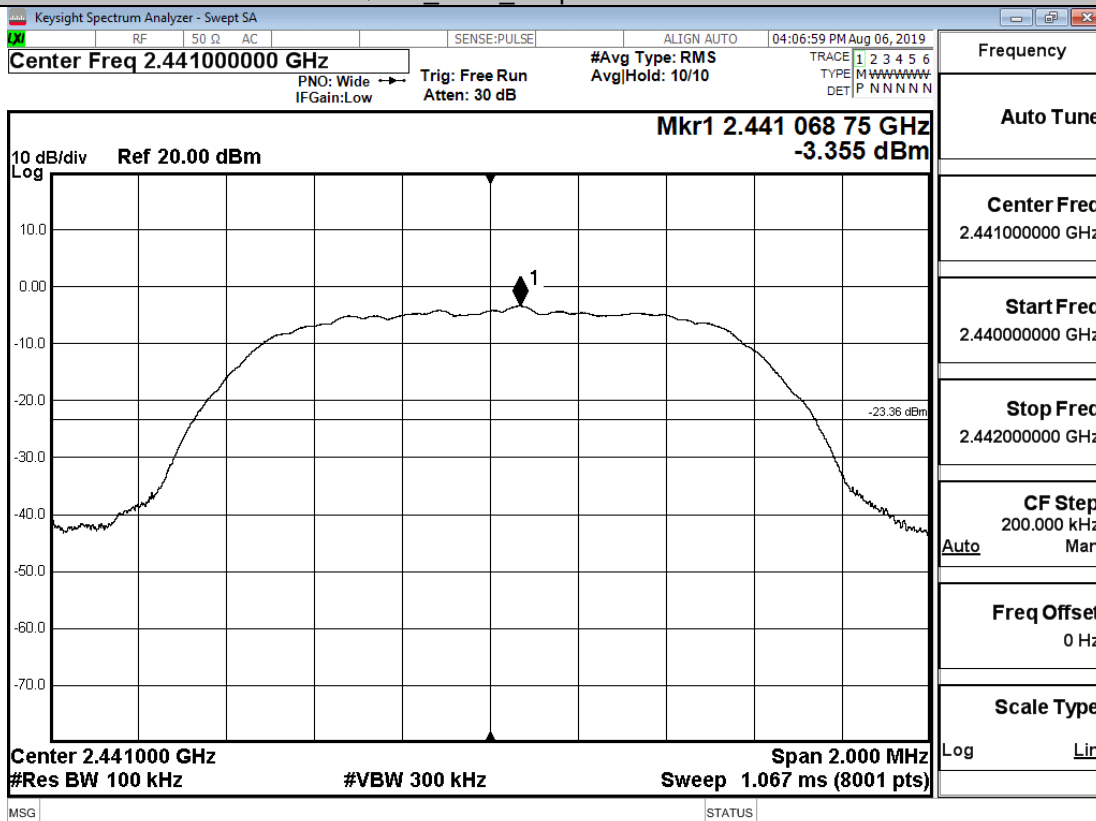


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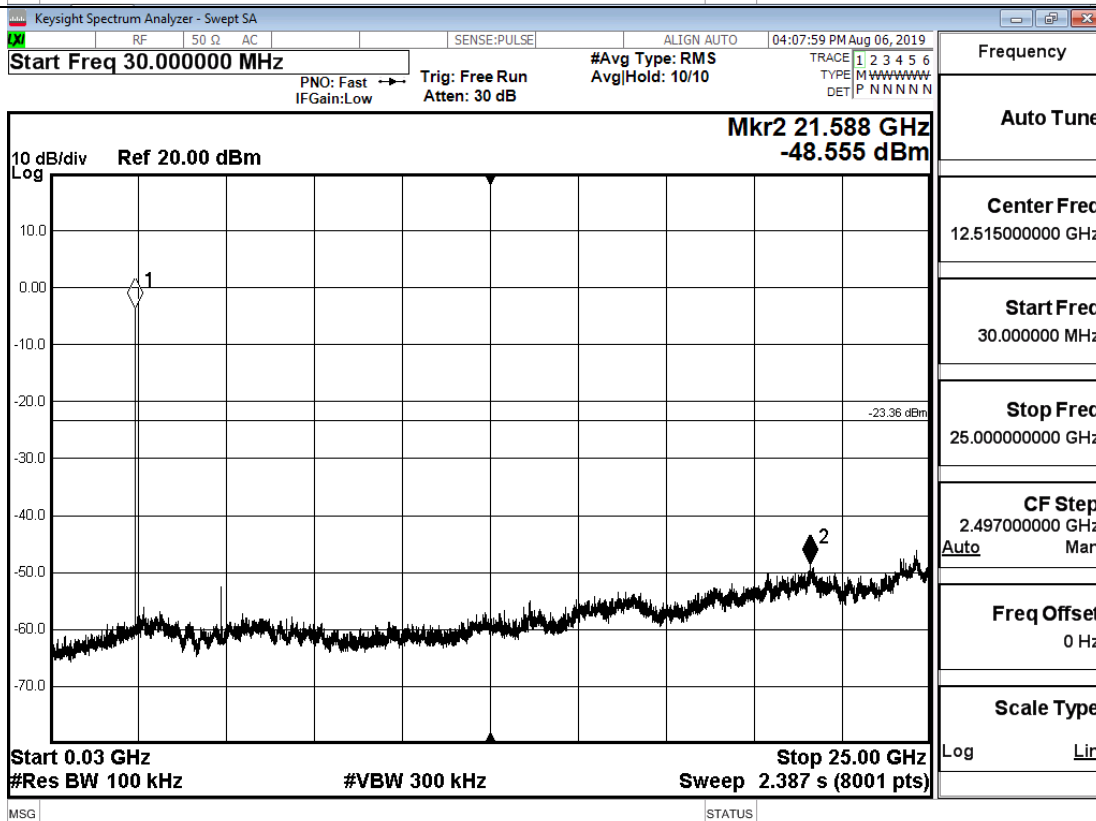


π /4DQPSK_MCH_Graphs

Pref

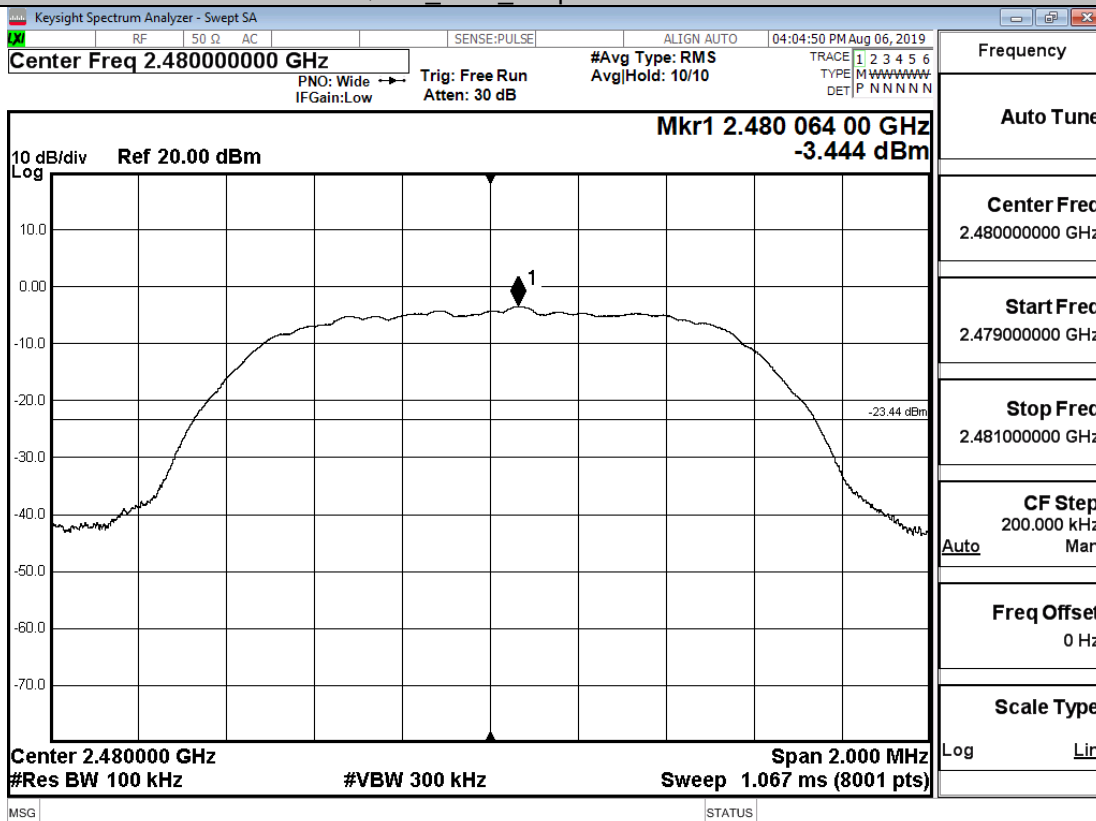


Puw

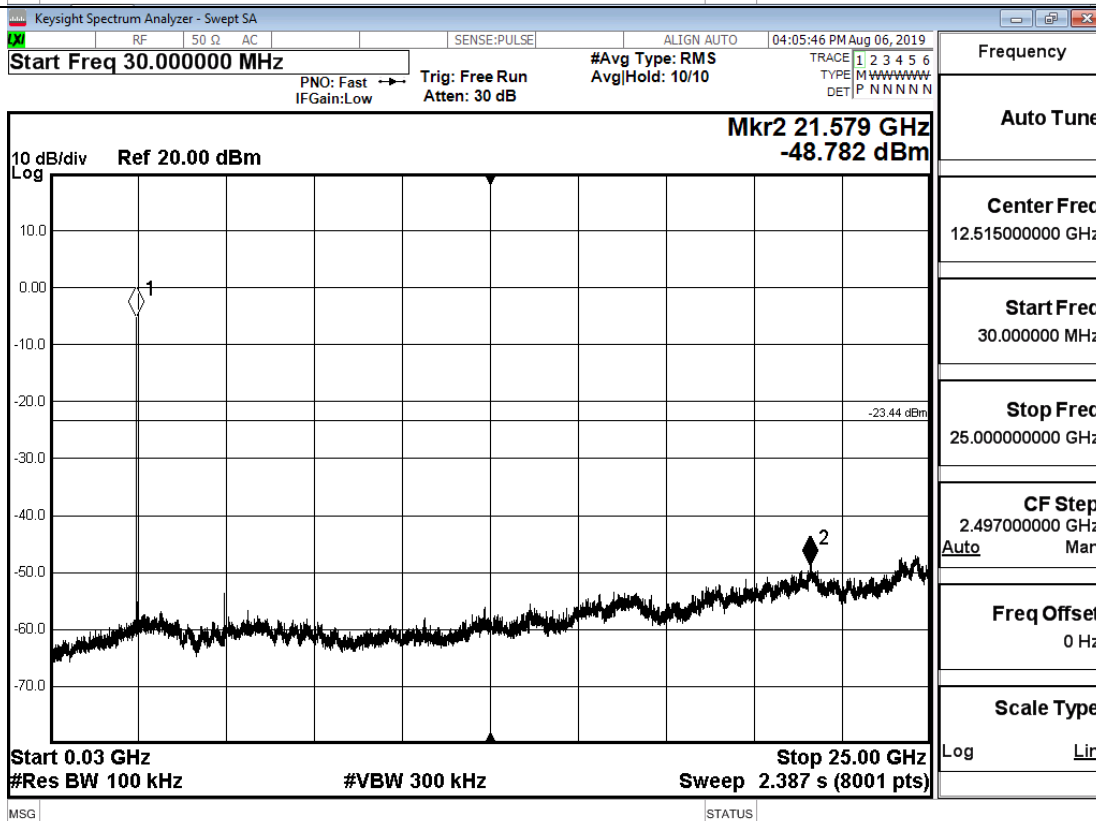


$\pi/4$ DQPSK_HCH_Graphs

Pref

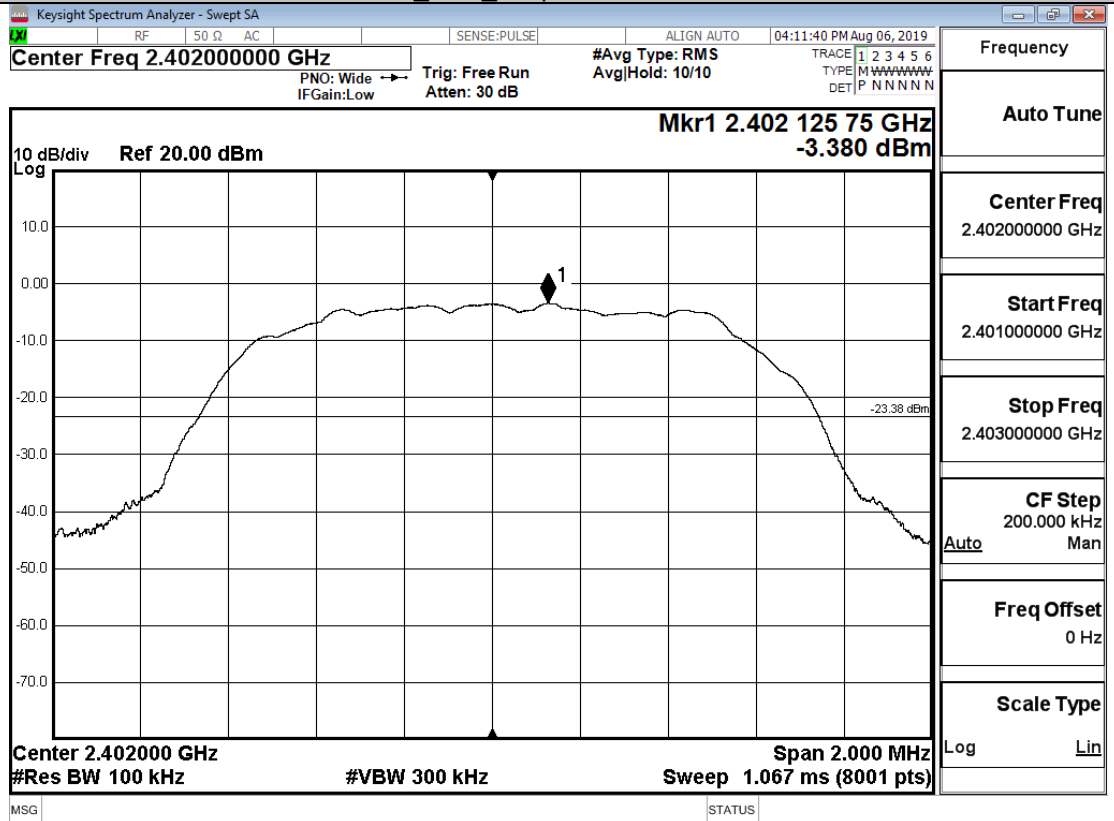


Puw

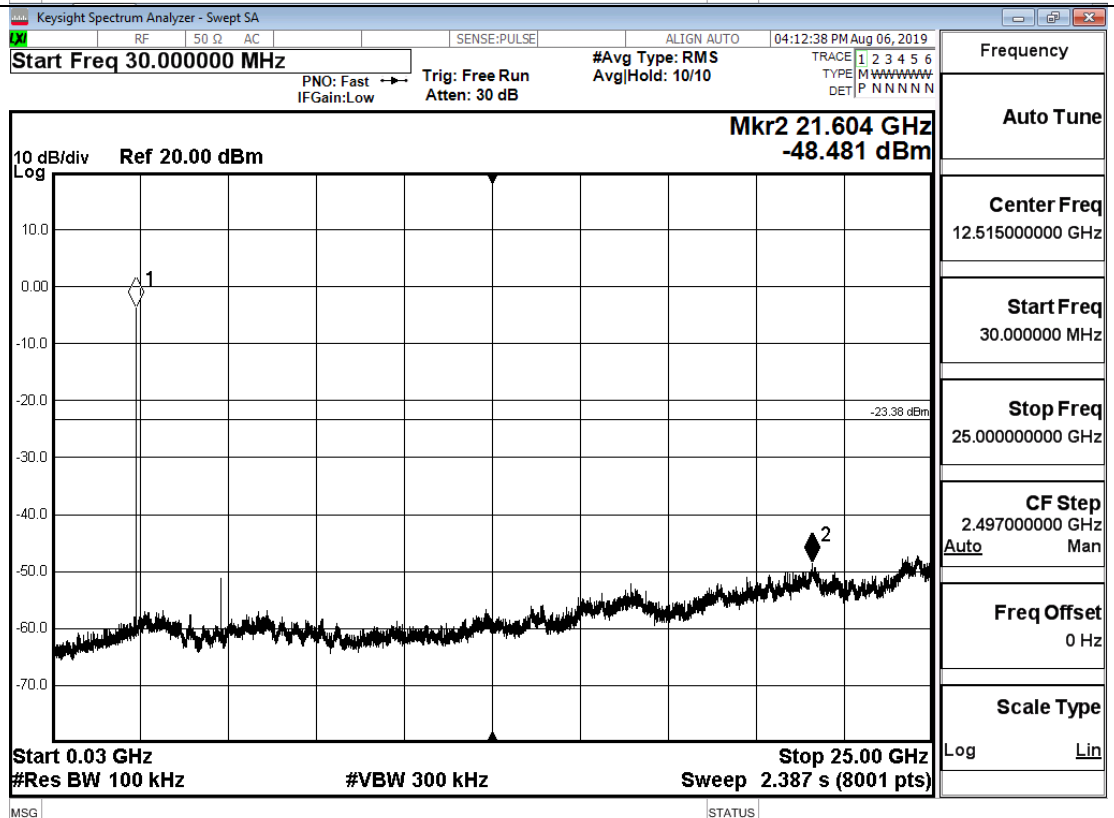


8-DPSK_LCH_Graphs

Pref

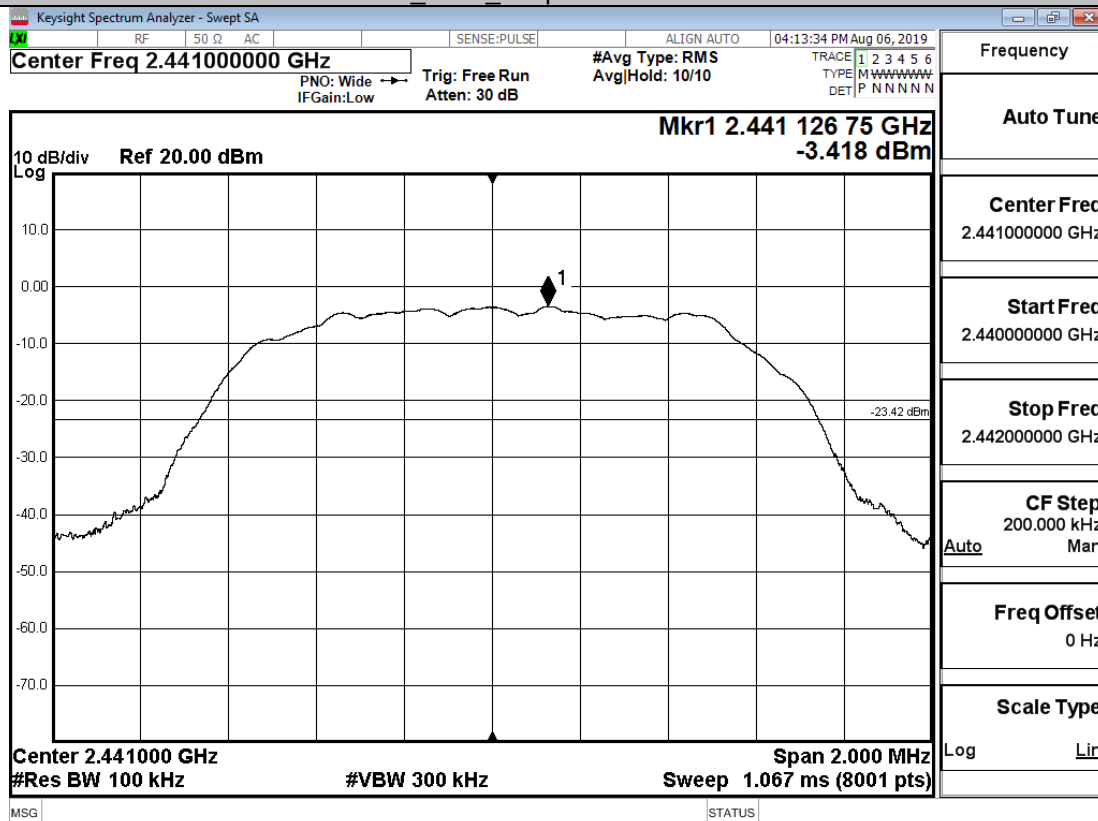


Puw

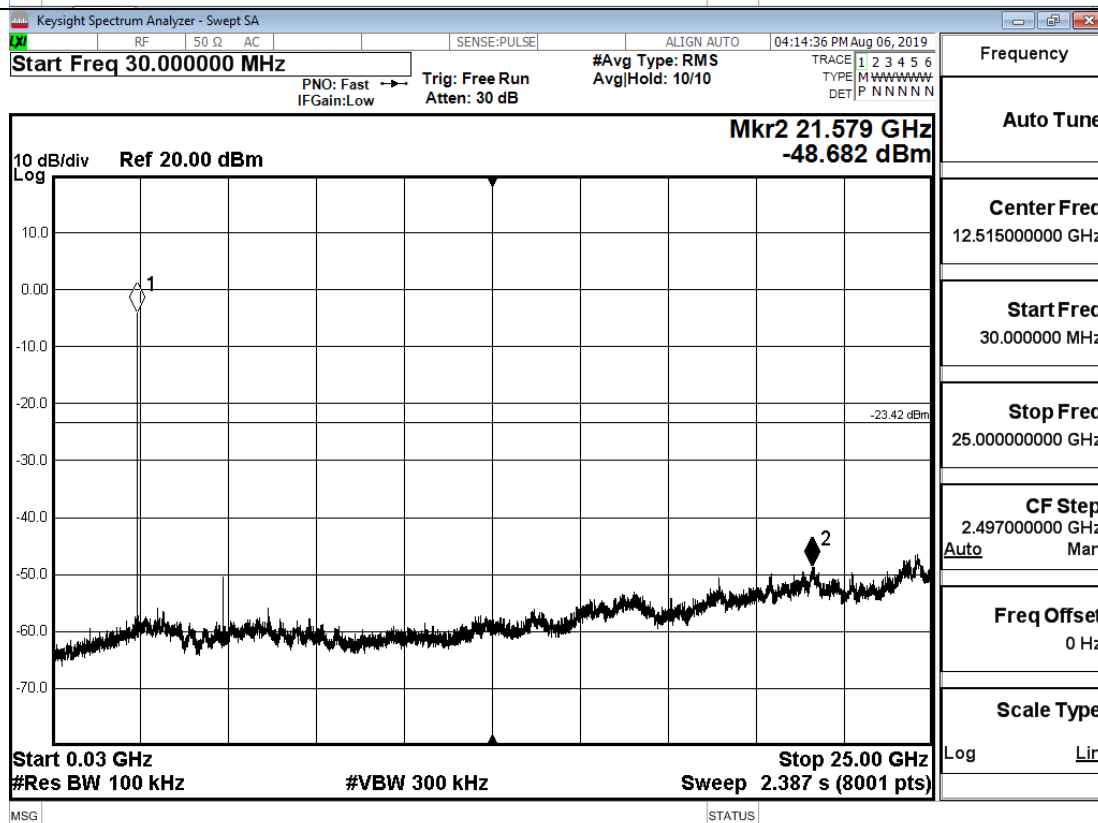


8-DPSK_MCH_Graphs

Pref

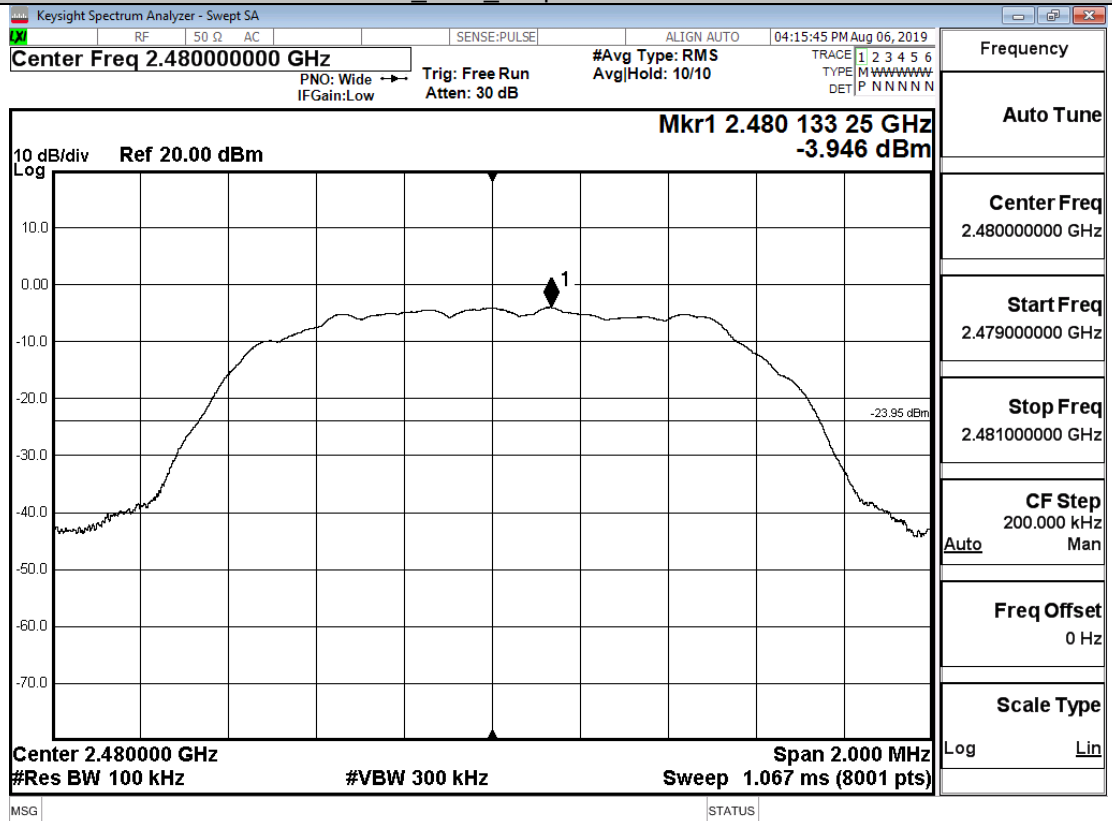


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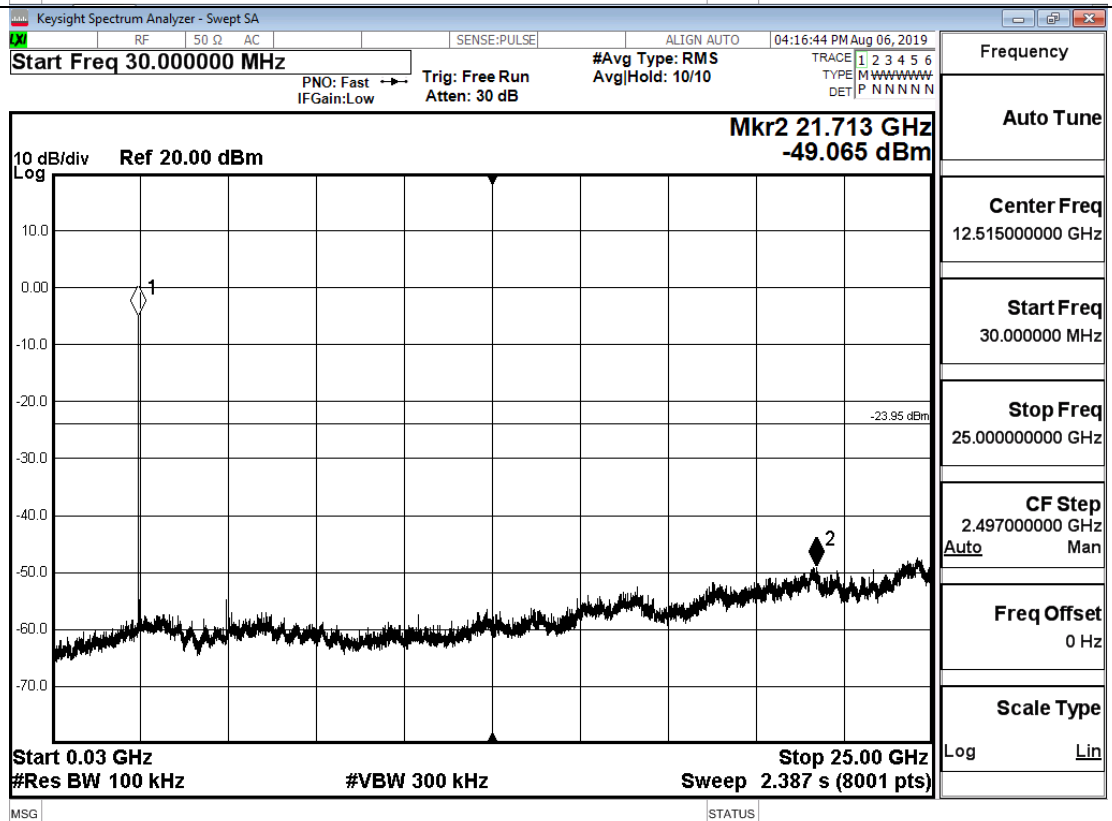


8-DPSK_HCH_Graphs

Pref



Puw

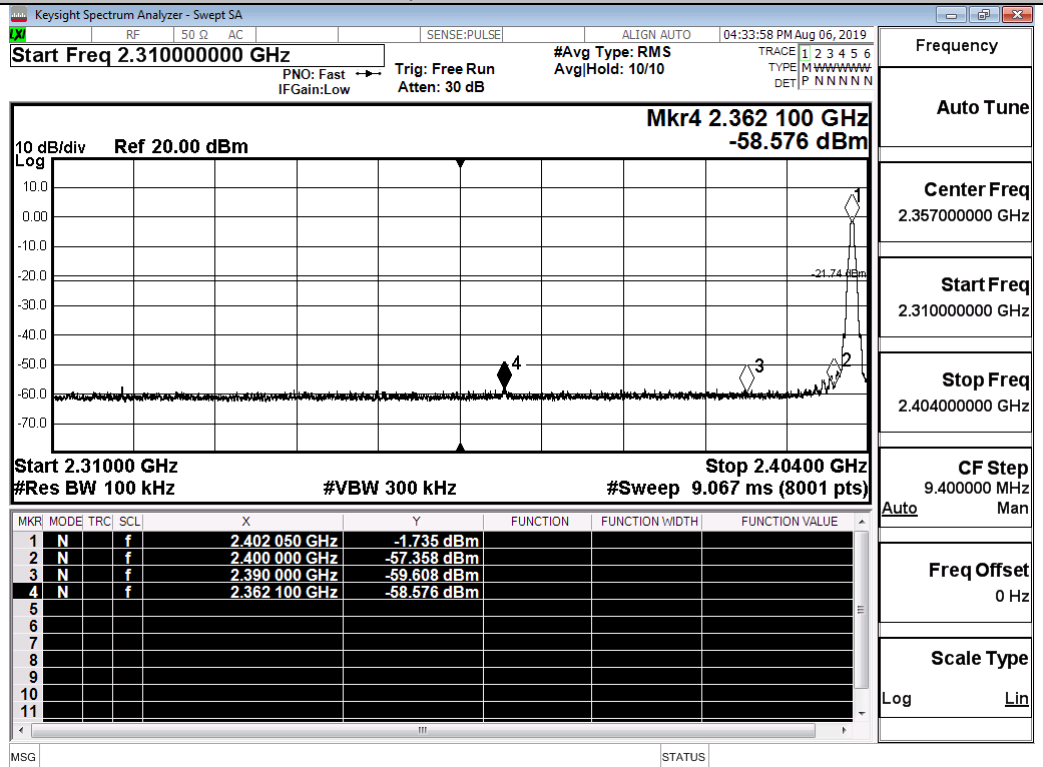


A.7 Band-edge for RF Conducted Emissions

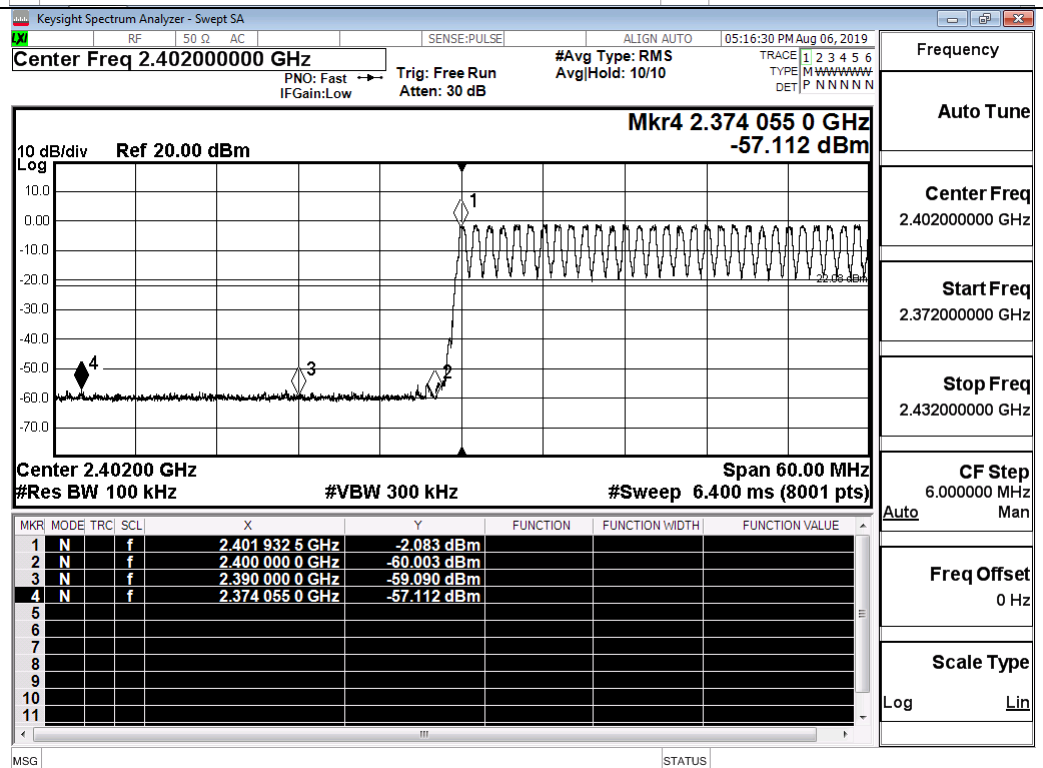
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-1.735	Off	-57.358	-21.74	PASS
			-2.083	On	-57.112	-22.08	PASS
	HCH	2480	-2.719	Off	-57.288	-22.72	PASS
			-2.368	On	-58.165	-22.37	PASS
$\pi/4$ DQPSK	LCH	2402	-3.016	Off	-54.139	-23.02	PASS
			-1.103	On	-57.181	-21.10	PASS
	HCH	2480	-3.462	Off	-59.542	-23.46	PASS
			-1.185	On	-59.260	-21.19	PASS
$\pi/4$ DQPSK	LCH	2402	-2.980	Off	-53.958	-22.98	PASS
			-0.406	On	-55.529	-20.41	PASS
	HCH	2480	-3.435	Off	-57.782	-23.44	PASS
			-1.787	On	-57.618	-21.79	PASS

Test Graphs

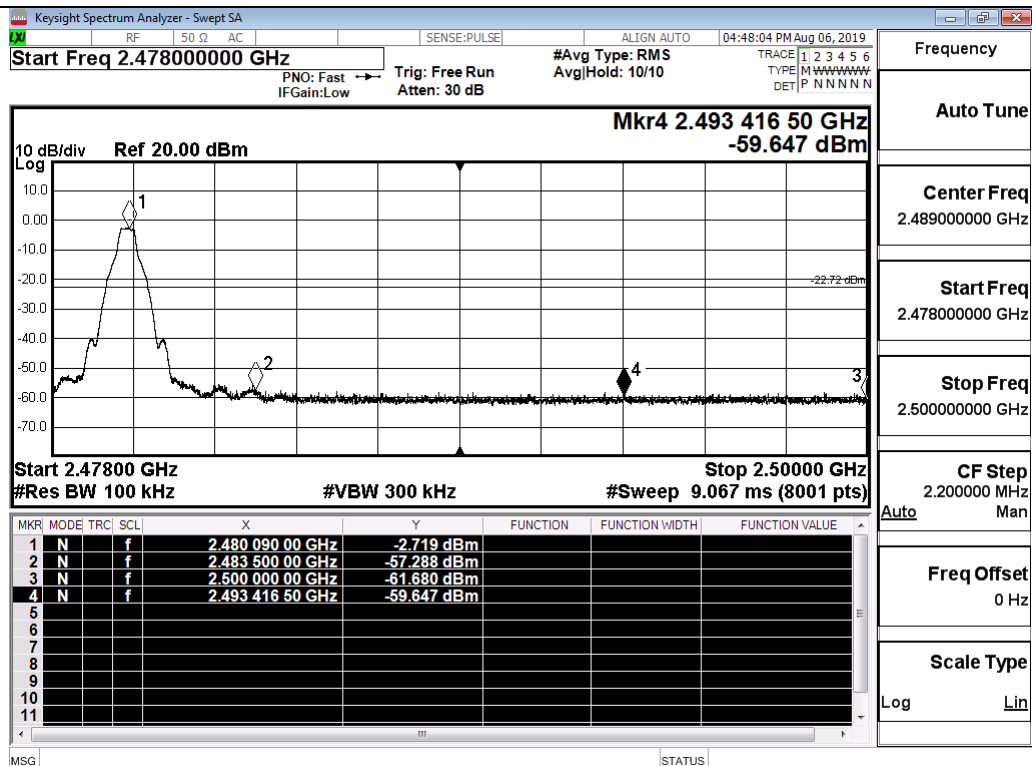
GFSK/LCH/No Hop



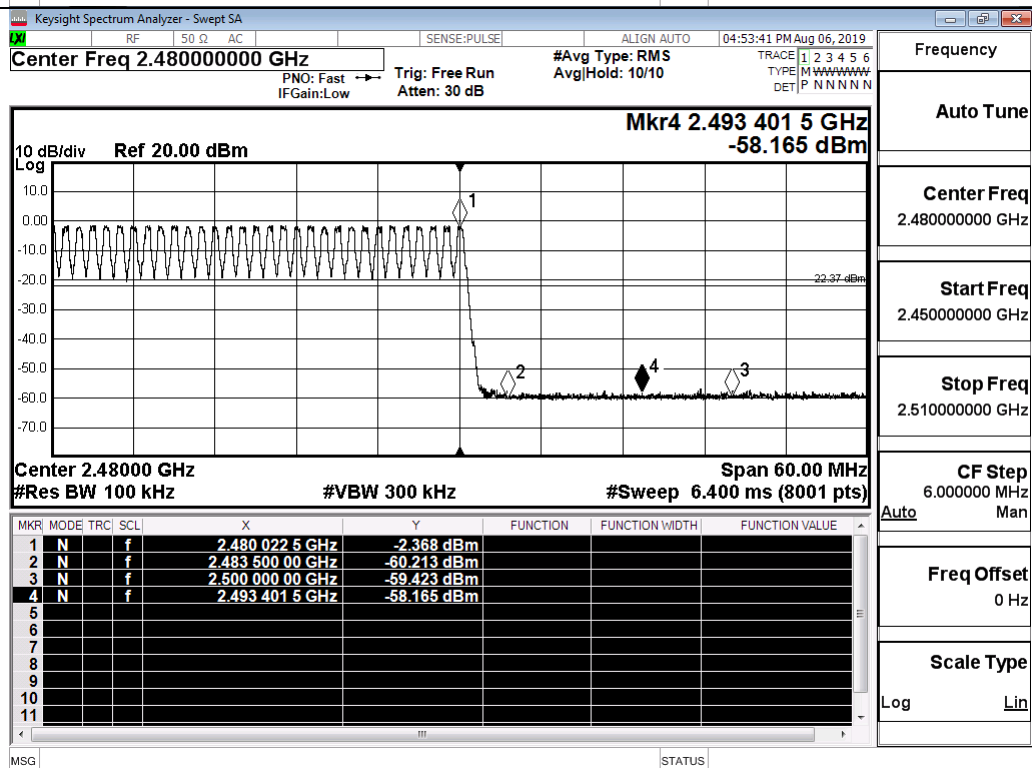
GFSK/LCH/Hop



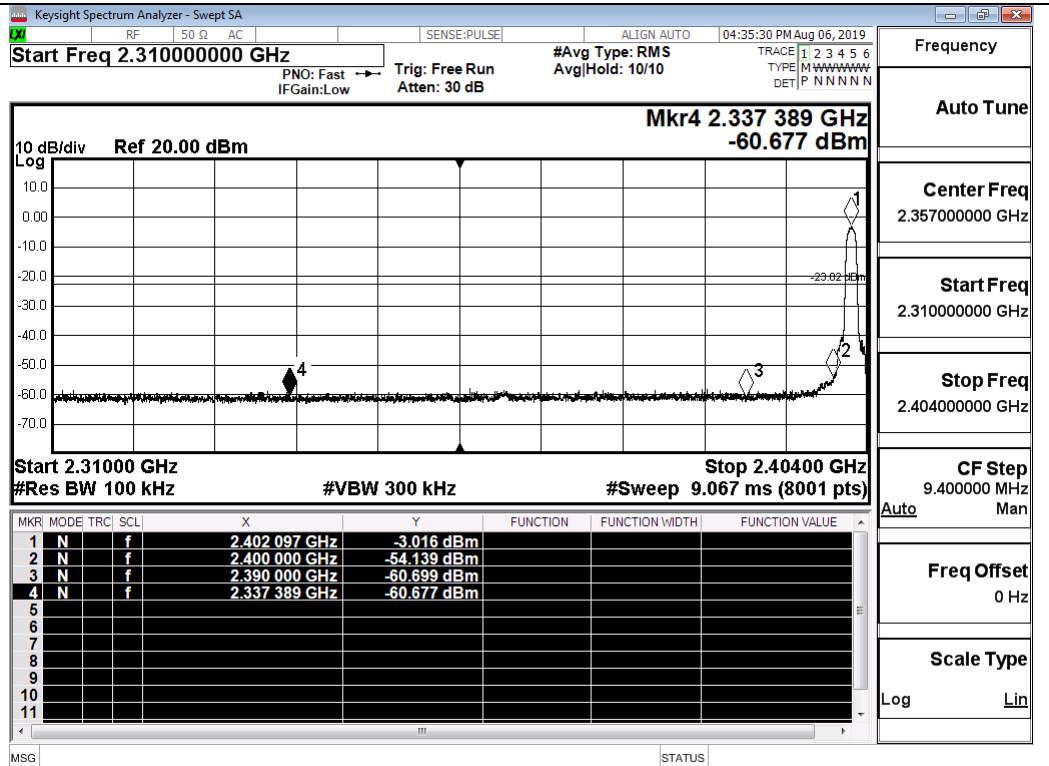
GFSK/HCH/No Hop



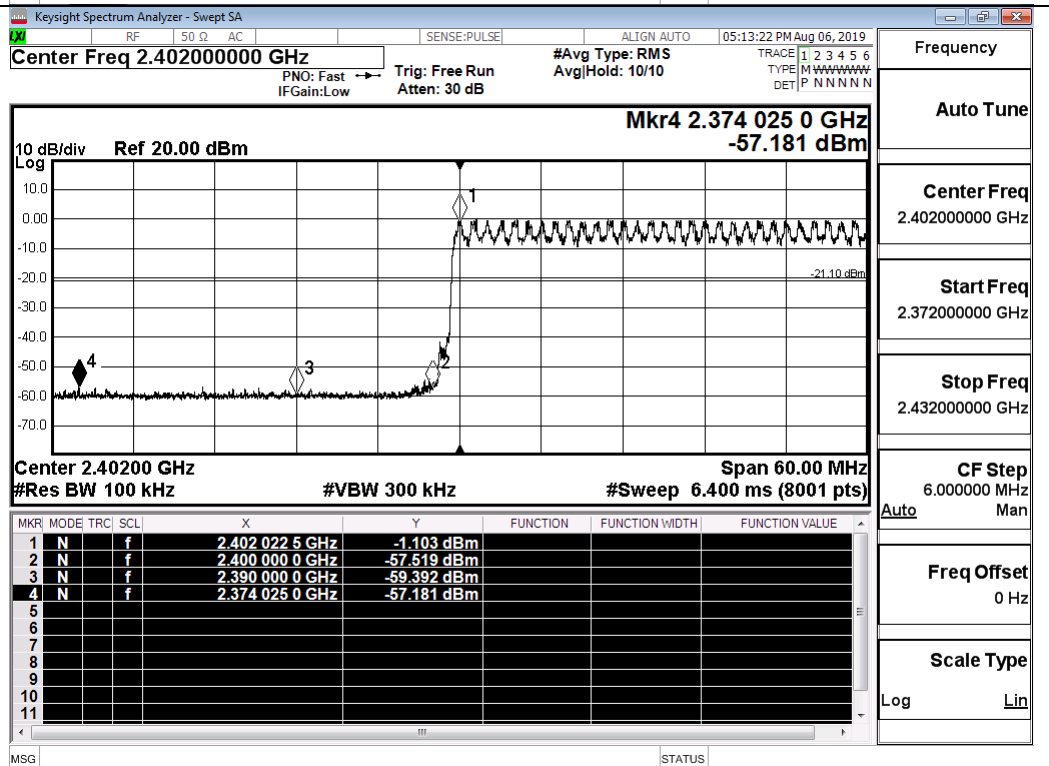
GFSK/HCH/Hop



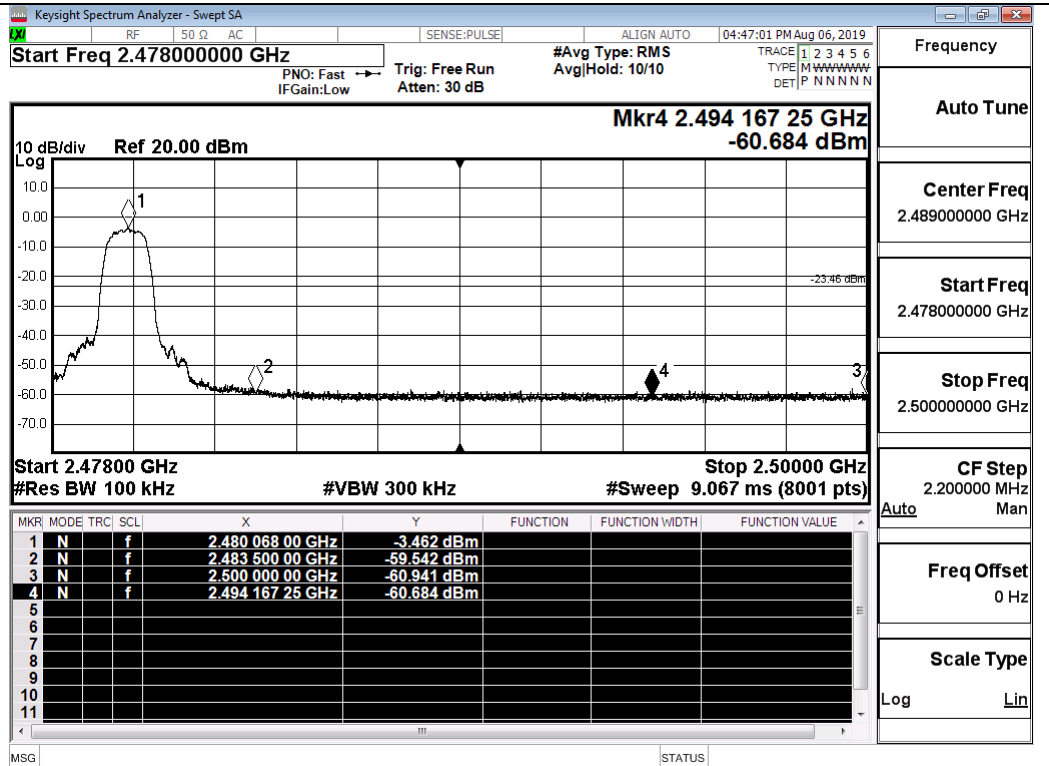
$\pi/4$ DQPSK/LCH/No
Hop



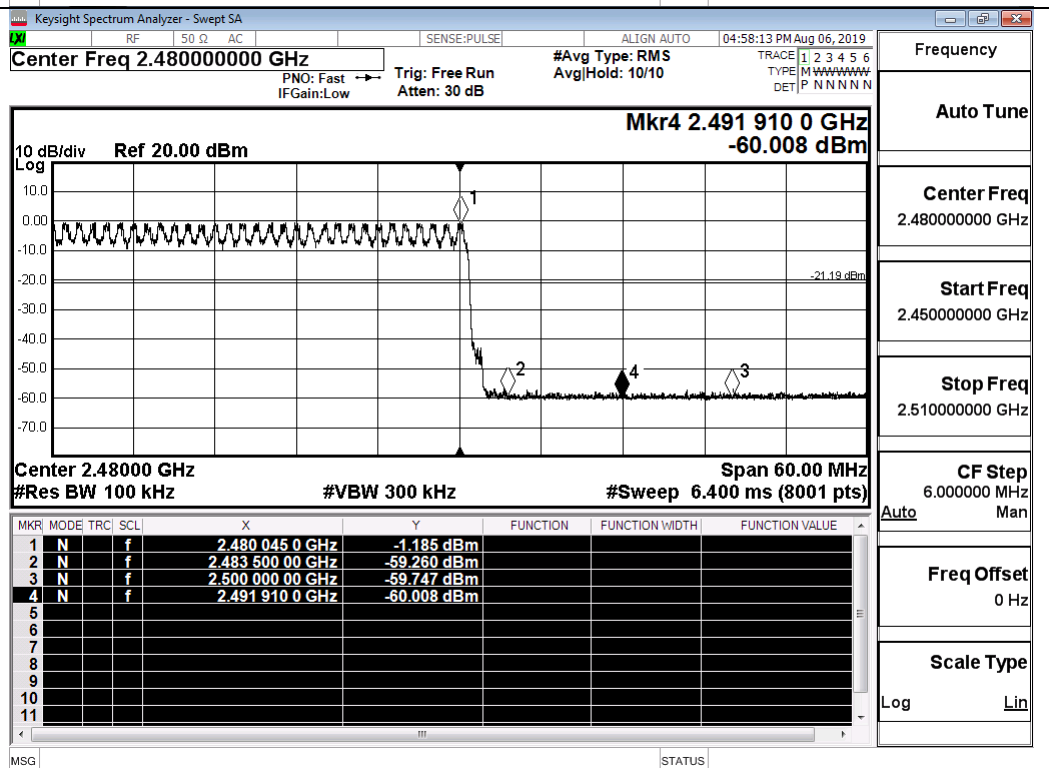
$\pi/4$ DQPSK/LCH/Hop



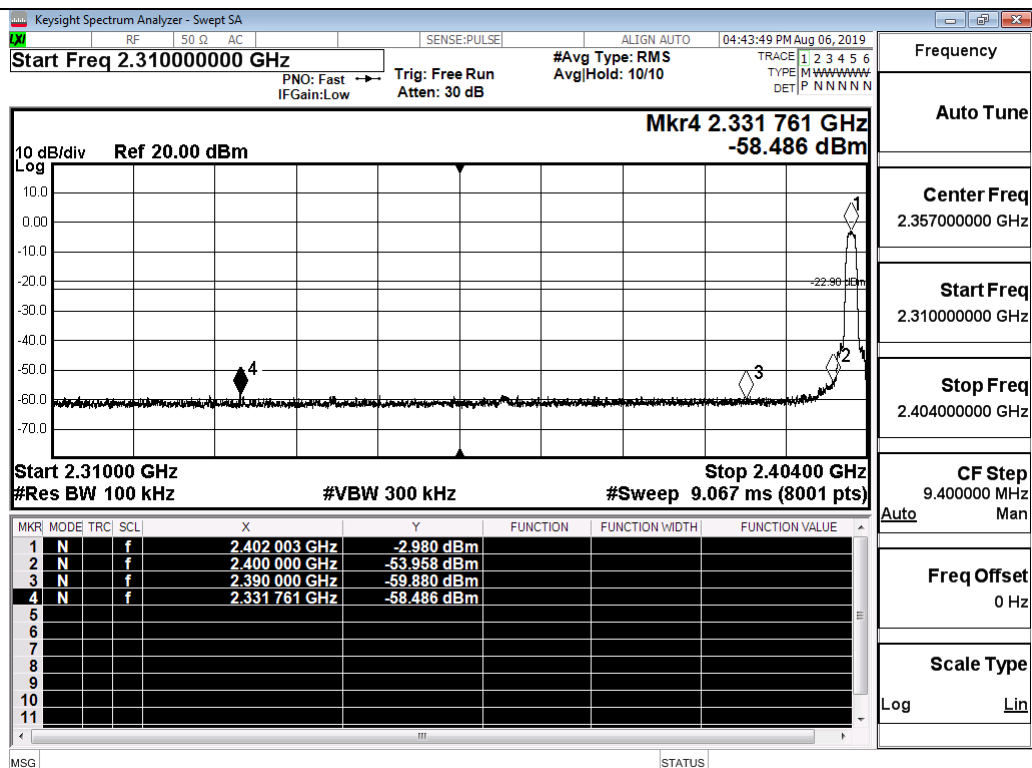
$\pi/4$ DQPSK/HCH/No
Hop



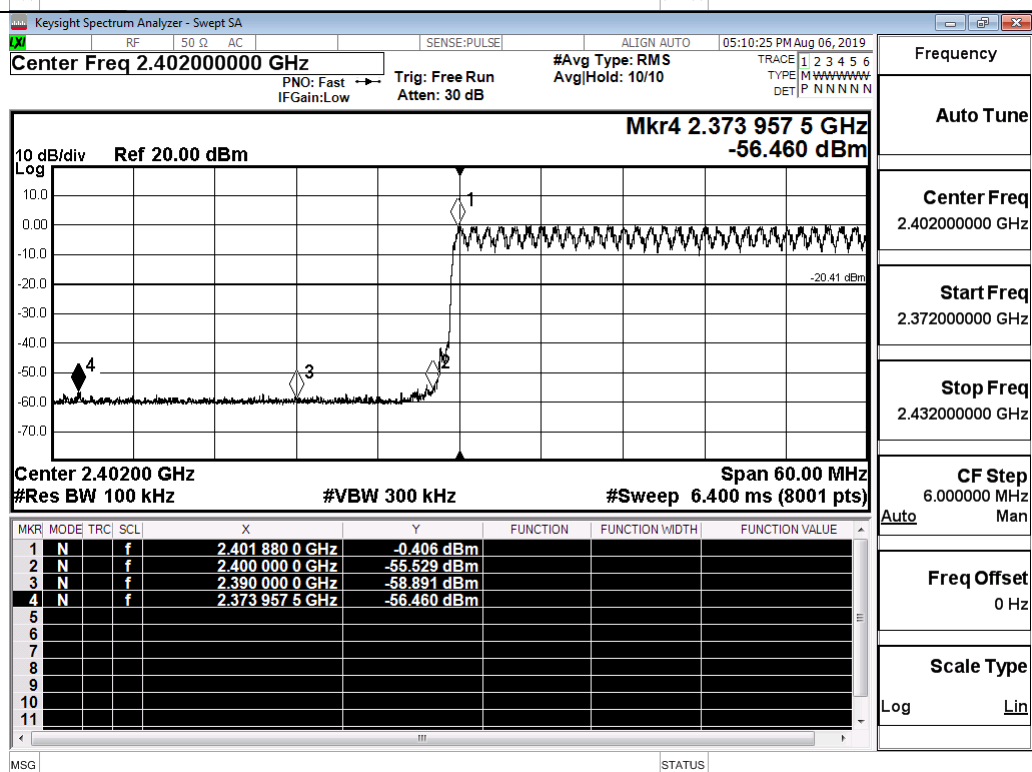
$\pi/4$ DQPSK/HCH/Hop



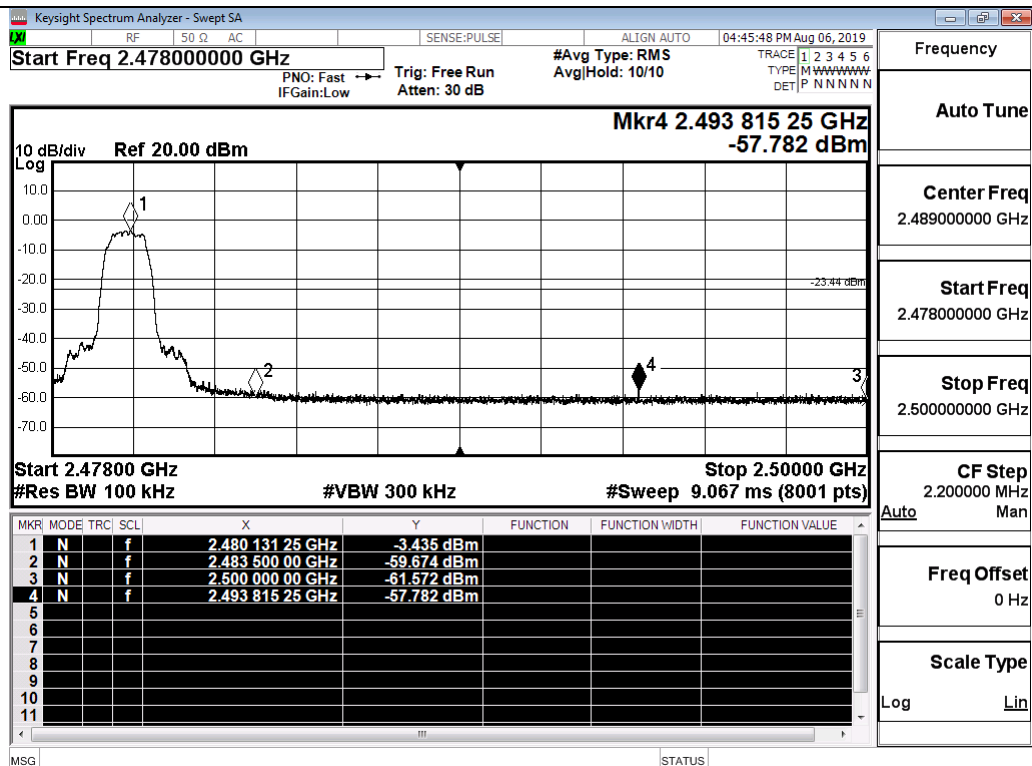
8-DPSK/LCH/No Hop



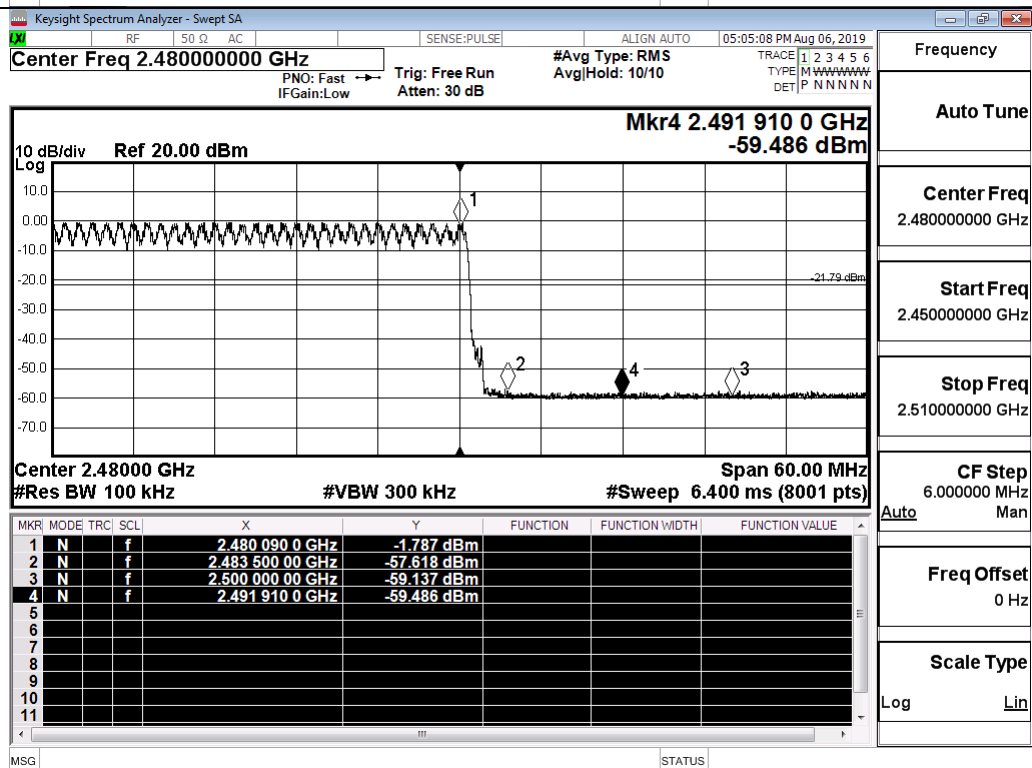
8-DPSK/LCH/Hop



8-DPSK/HCH/No
Hop



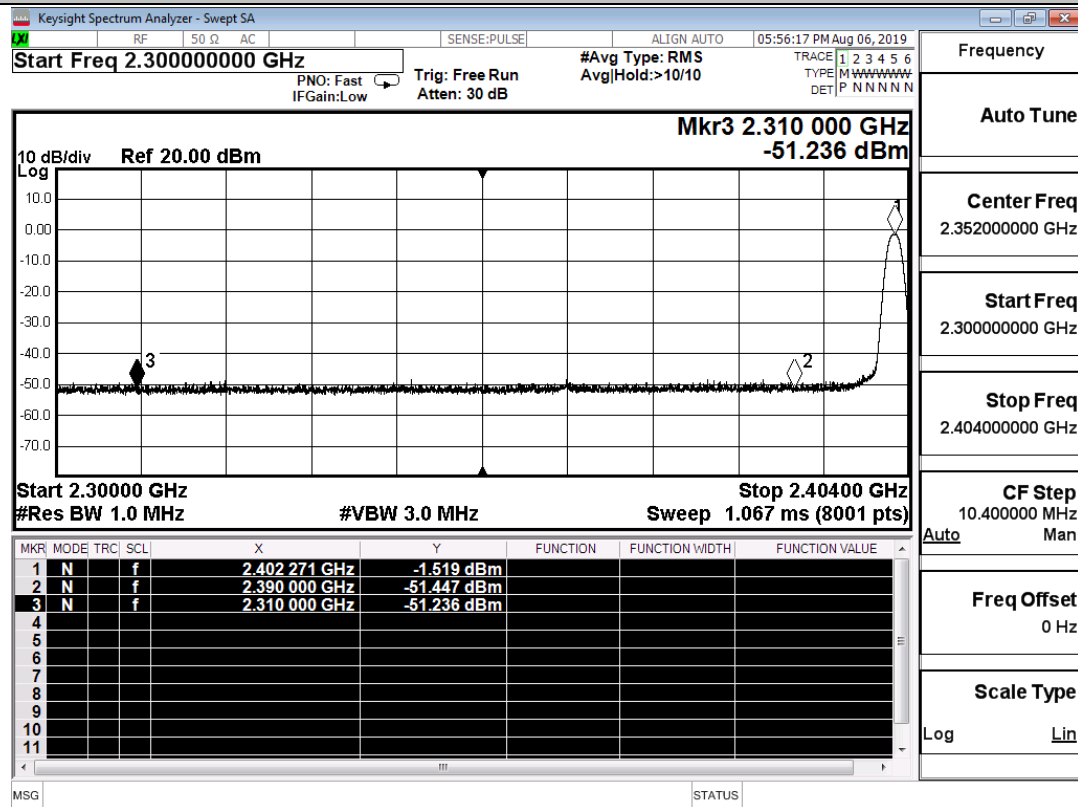
8-DPSK/HCH/Hop



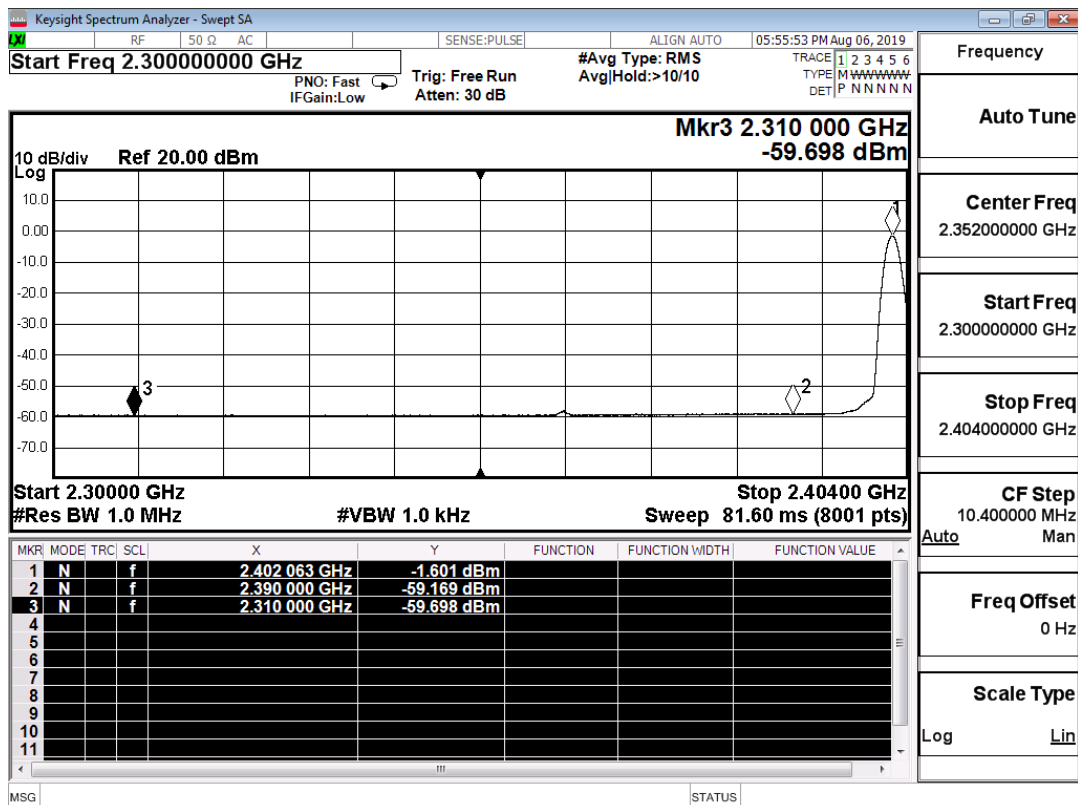
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-51.236	2.000	0	45.99	PEAK	74	PASS
	Off	2310.0	-59.698	2.000	0	37.53	AV	54	PASS
	Off	2390.0	-51.447	2.000	0	45.78	PEAK	74	PASS
	Off	2390.0	-59.169	2.000	0	38.06	AV	54	PASS
	Off	2483.5	-48.903	2.000	0	48.33	PEAK	74	PASS
	Off	2483.5	-56.031	2.000	0	41.20	AV	54	PASS
	Off	2500.0	-50.311	2.000	0	46.92	PEAK	74	PASS
	Off	2500.0	-58.945	2.000	0	38.29	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-51.630	2.000	0	45.60	PEAK	74	PASS
	Off	2310.0	-59.886	2.000	0	37.34	AV	54	PASS
	Off	2390.0	-51.381	2.000	0	45.85	PEAK	74	PASS
	Off	2390.0	-59.177	2.000	0	38.05	AV	54	PASS
	Off	2483.5	-48.344	2.000	0	48.89	PEAK	74	PASS
	Off	2483.5	-55.378	2.000	0	41.85	AV	54	PASS
	Off	2500.0	-51.295	2.000	0	45.94	PEAK	74	PASS
	Off	2500.0	-58.839	2.000	0	38.39	AV	54	PASS
8-DPSK	Off	2310.0	-52.077	2.000	0	45.15	PEAK	74	PASS
	Off	2310.0	-59.710	2.000	0	37.52	AV	54	PASS
	Off	2390.0	-49.901	2.000	0	47.33	PEAK	74	PASS
	Off	2390.0	-59.248	2.000	0	37.98	AV	54	PASS
	Off	2483.5	-48.226	2.000	0	49.00	PEAK	74	PASS
	Off	2483.5	-55.401	2.000	0	41.83	AV	54	PASS
	Off	2500.0	-49.601	2.000	0	47.63	PEAK	74	PASS
	Off	2500.0	-58.833	2.000	0	38.40	AV	54	PASS

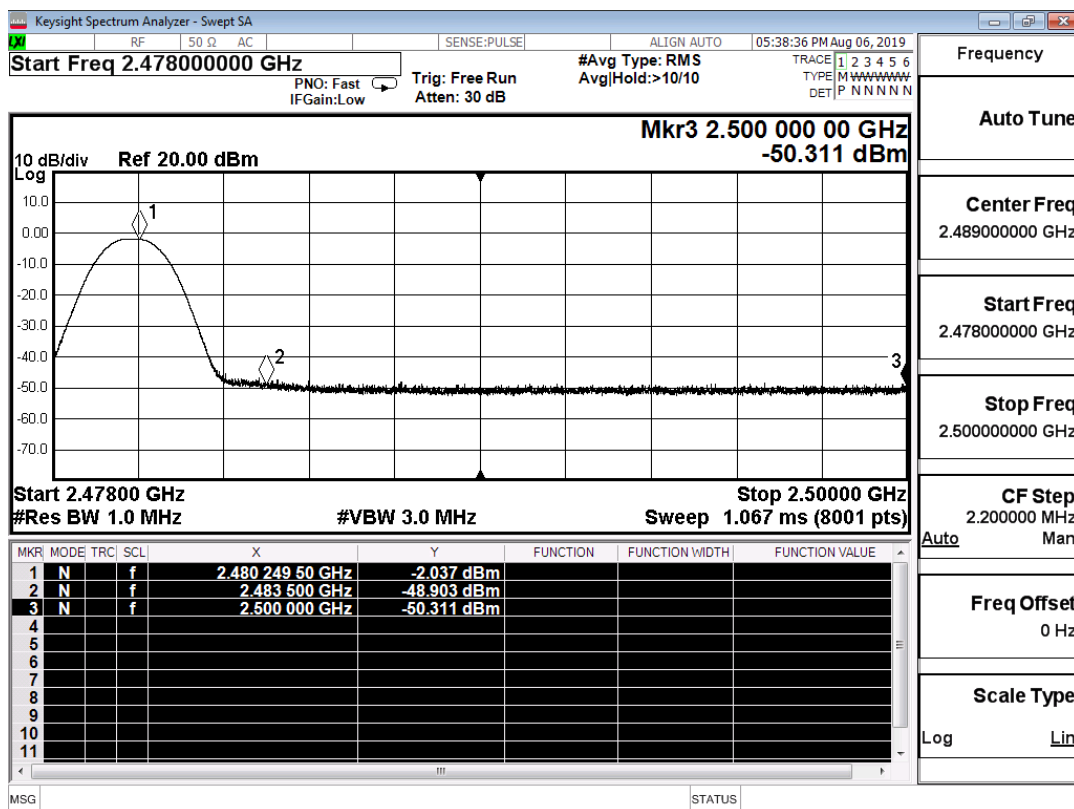
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



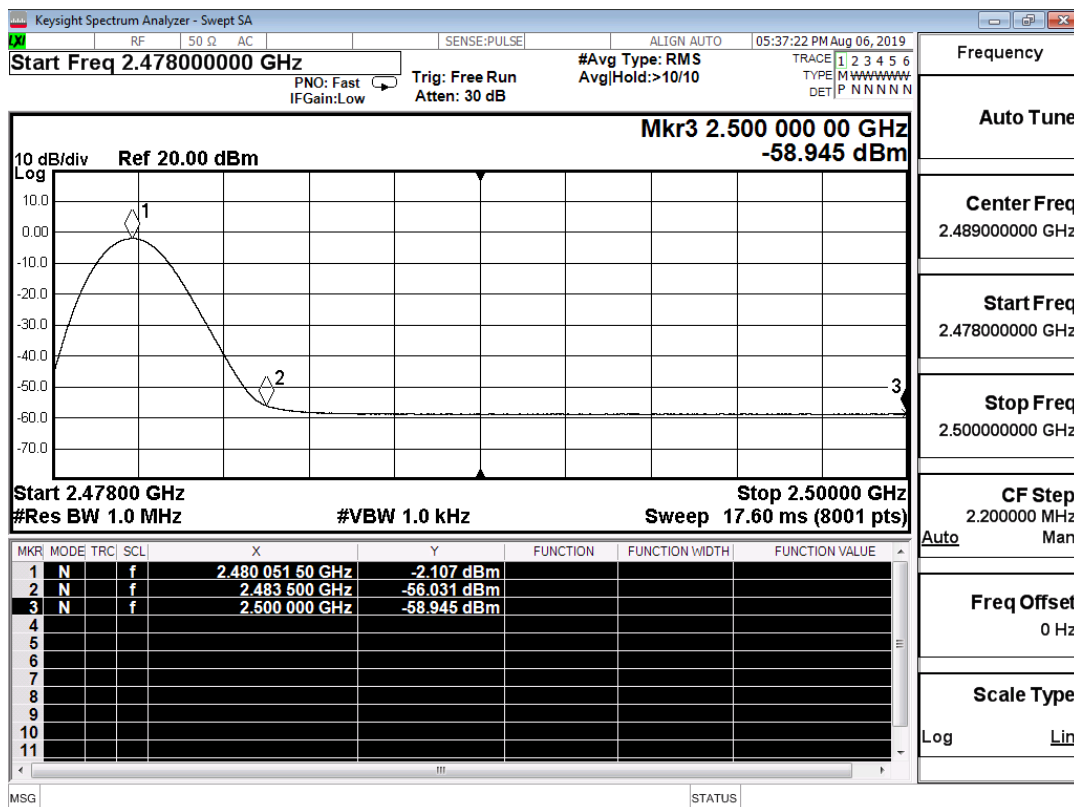
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

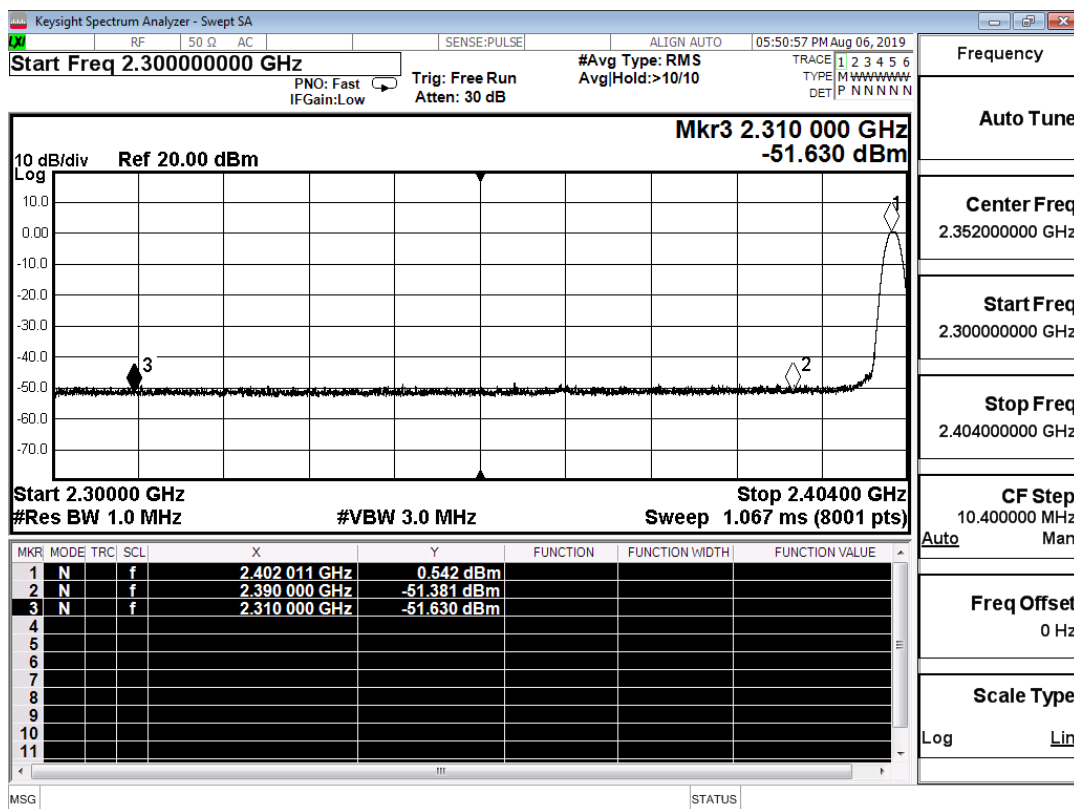
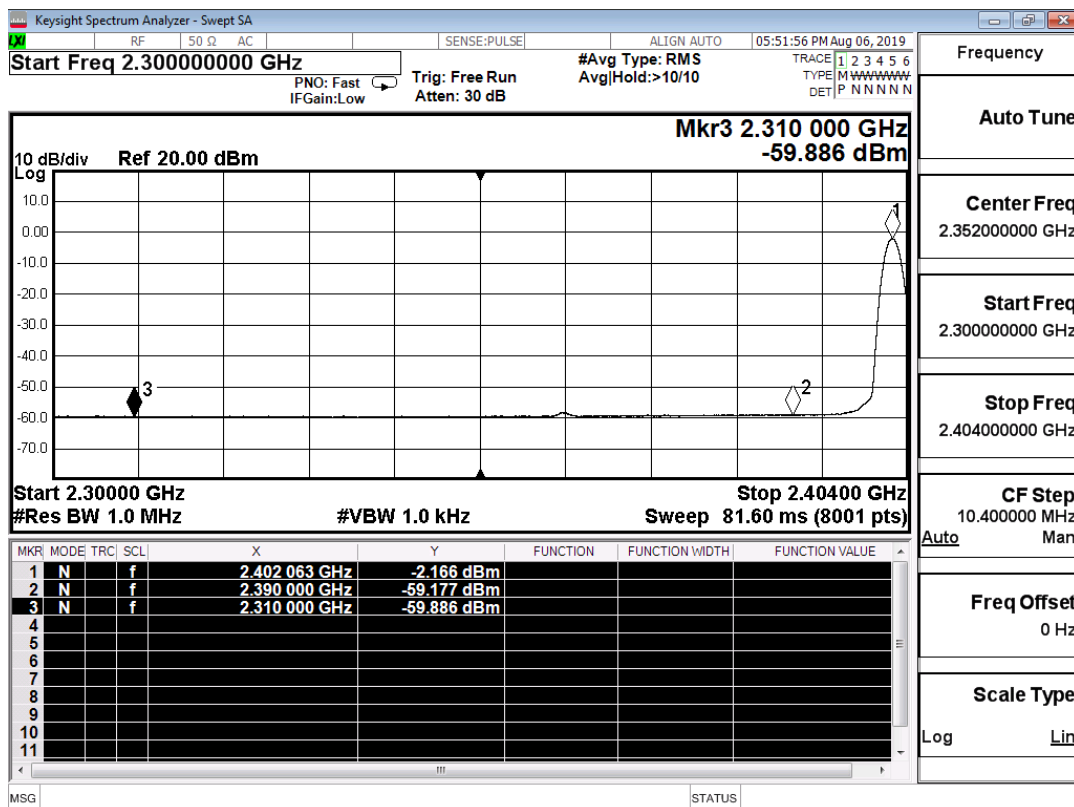


Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)

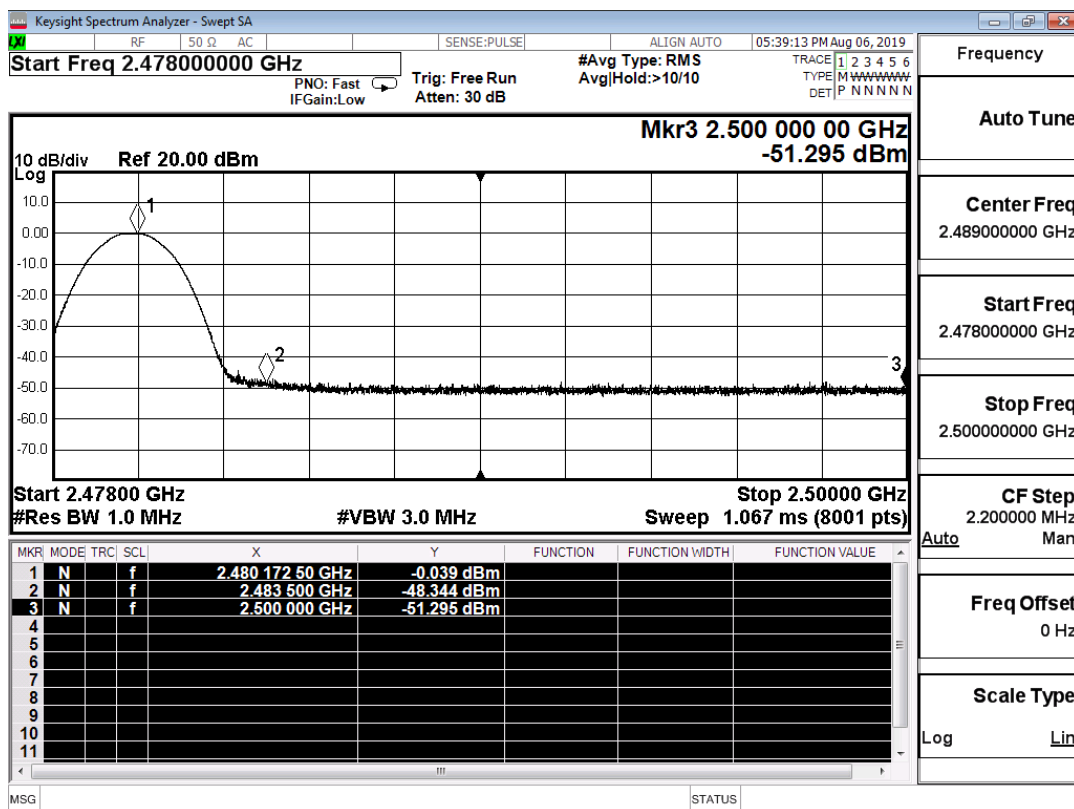


Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)

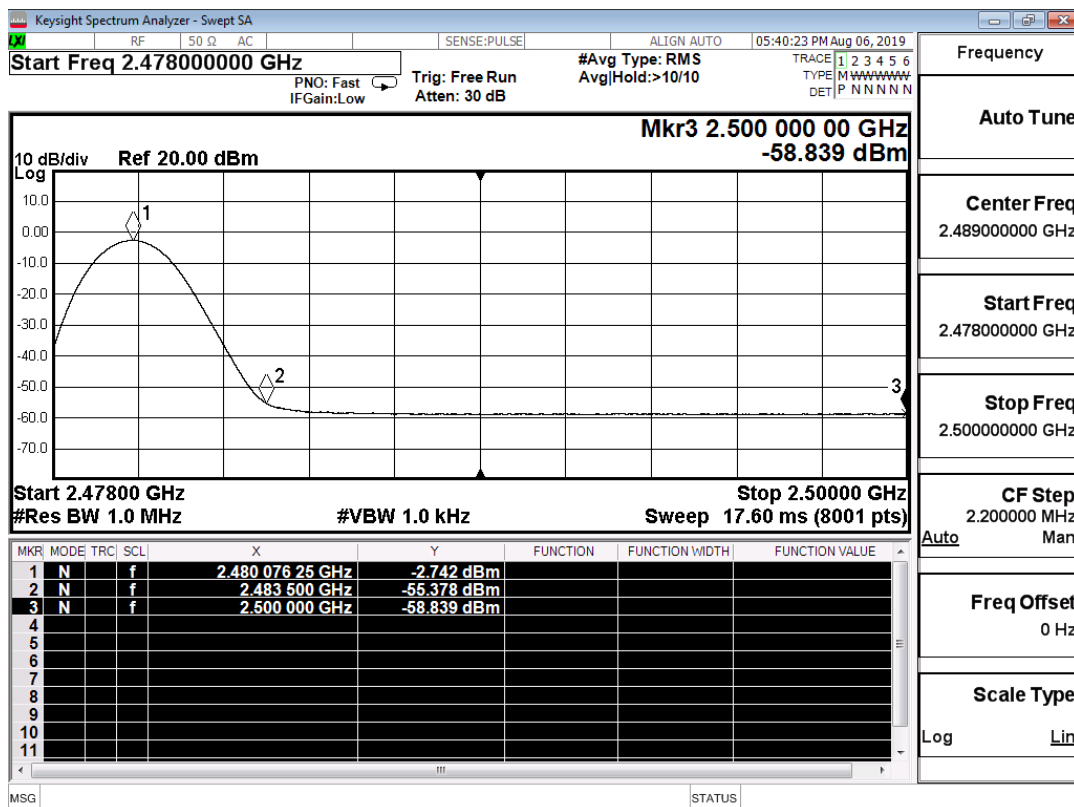


Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

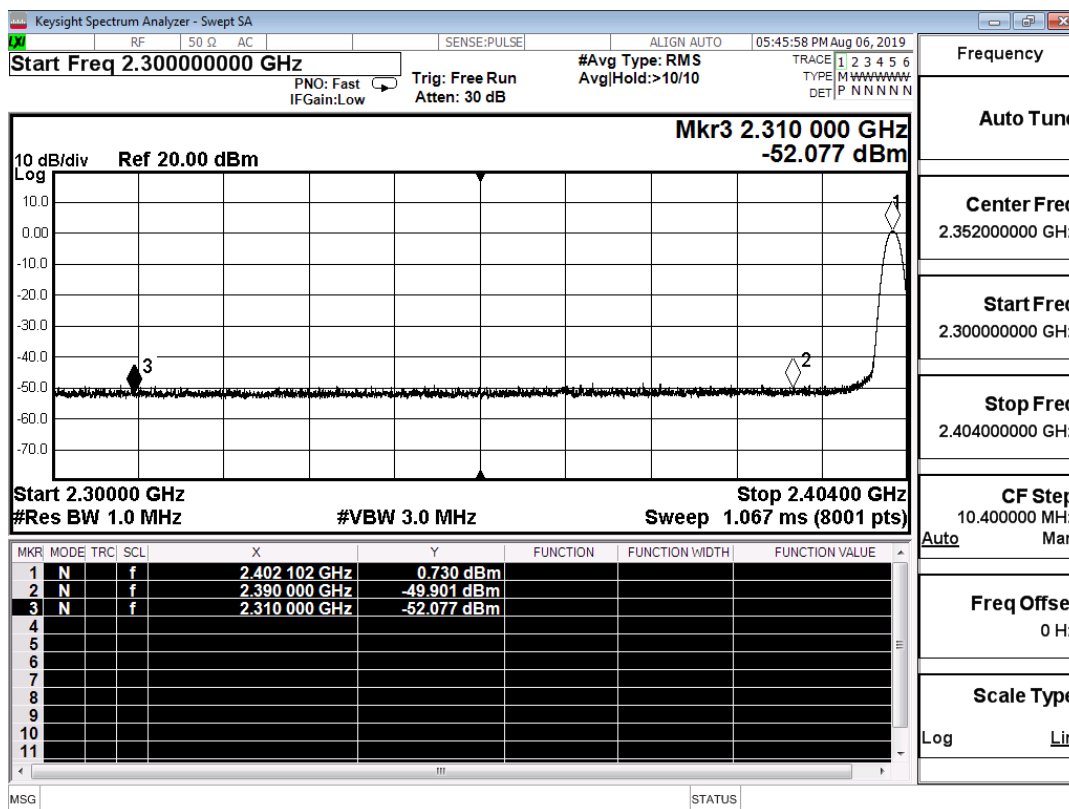
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



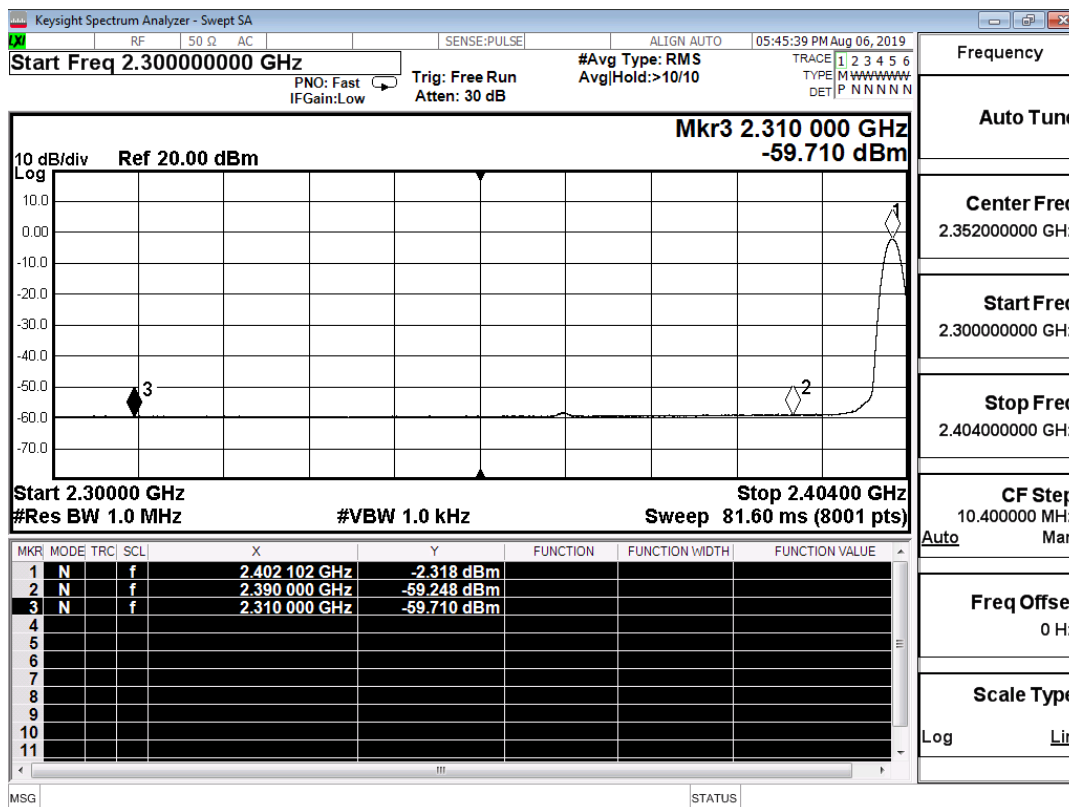
Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



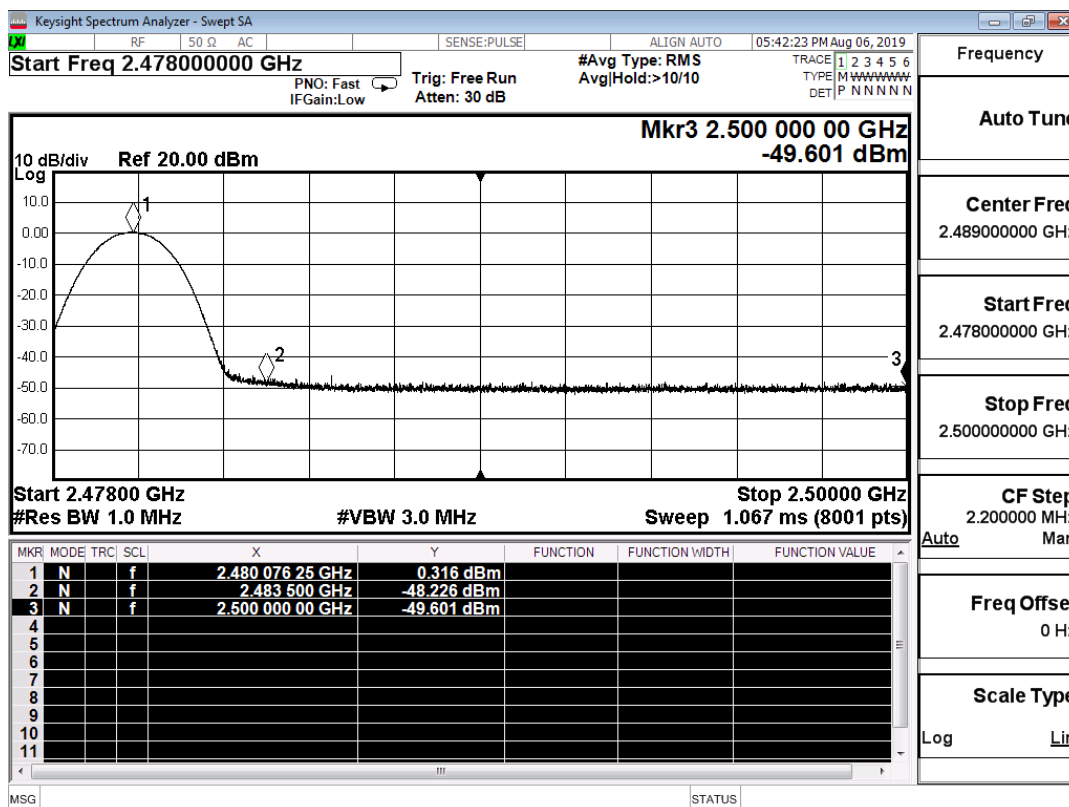
Restrict-band band-edge measurements_Hopping Off_8-DPSK_PEAK (Low Channel)



Restrict-band band-edge measurements_Hopping Off_8-DPSK_Average (Low Channel)



Restrict-band band-edge measurements_Hopping Off_8-DPSK_PEAK (High Channel)



Restrict-band band-edge measurements_Hopping Off_8-DPSK_Average (High Channel)

