

Appendix A

RF Test Data for BT 2.1+EDR (Conducted Measurement)

Product Name: Bluetooth FM Transmitter

Trade Mark: N/A

Test Model: FMT900

Environmental Conditions

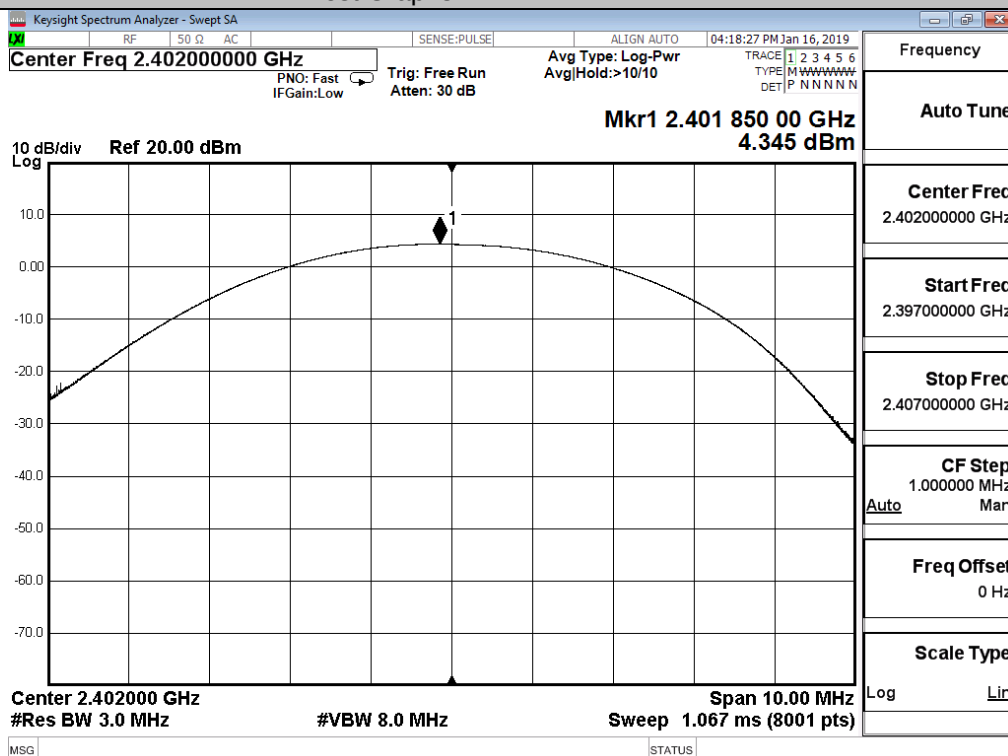
Temperature:	23.3 ° C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom Liu
Supervised by:	Jayden.Zhuo

A.1 Maximum Conducted Peak Output Power

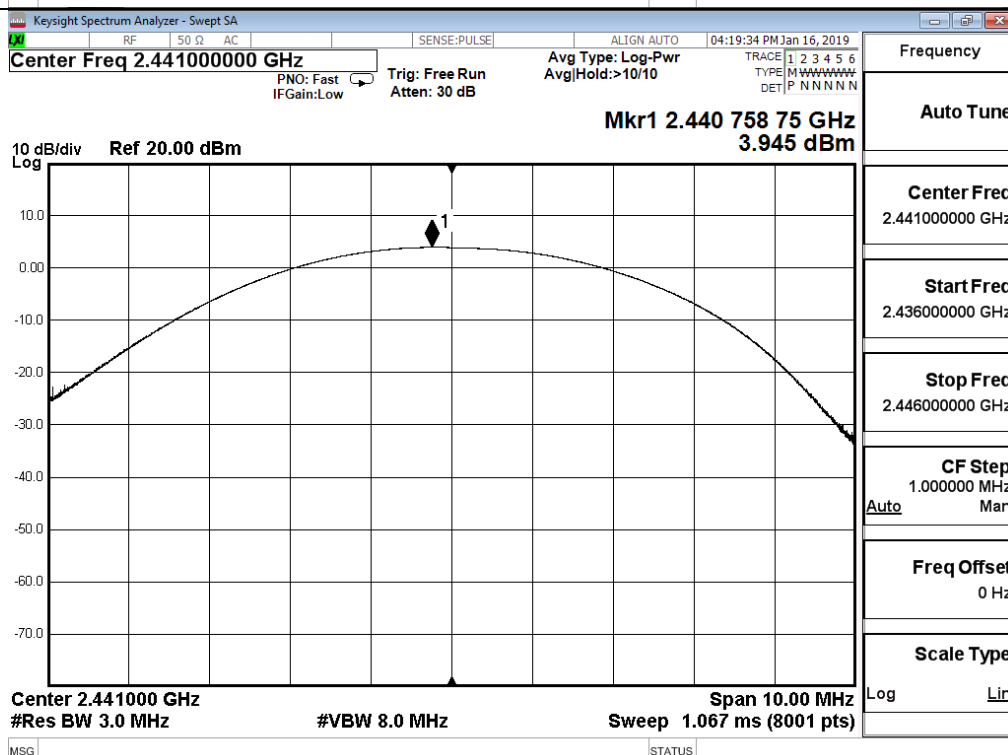
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	4.345	21	PASS
	MCH	3.945	21	PASS
	HCH	3.178	21	PASS
$\pi/4$ DQPSK	LCH	4.904	21	PASS
	MCH	4.501	21	PASS
	HCH	3.764	21	PASS

Test Graphs

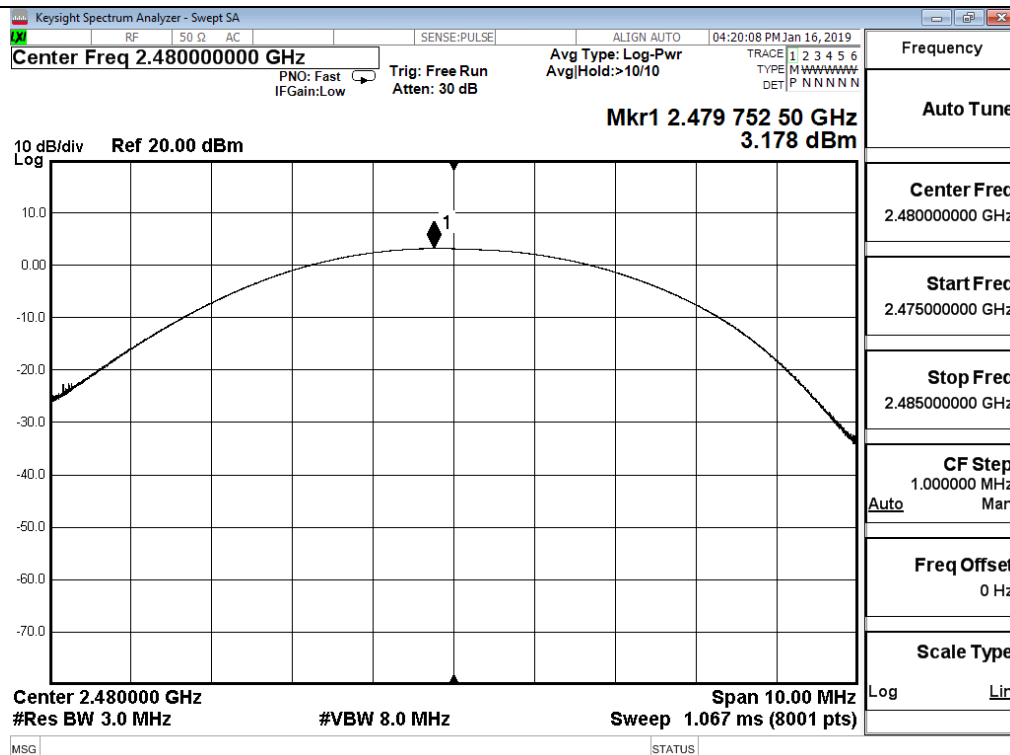
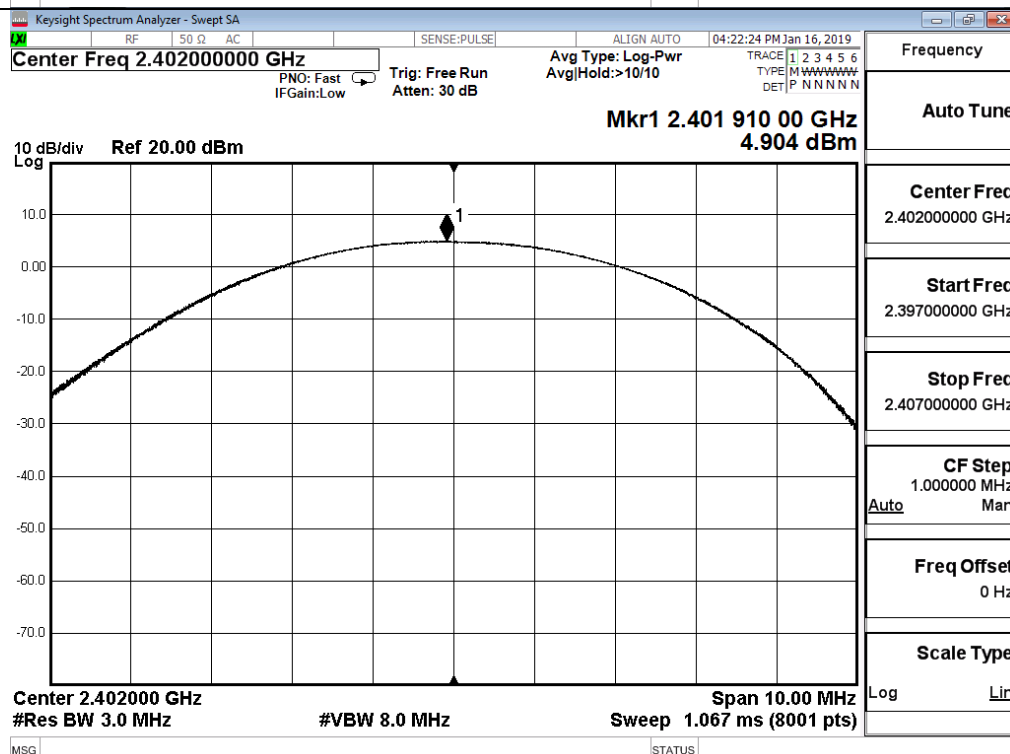
GFSK/LCH

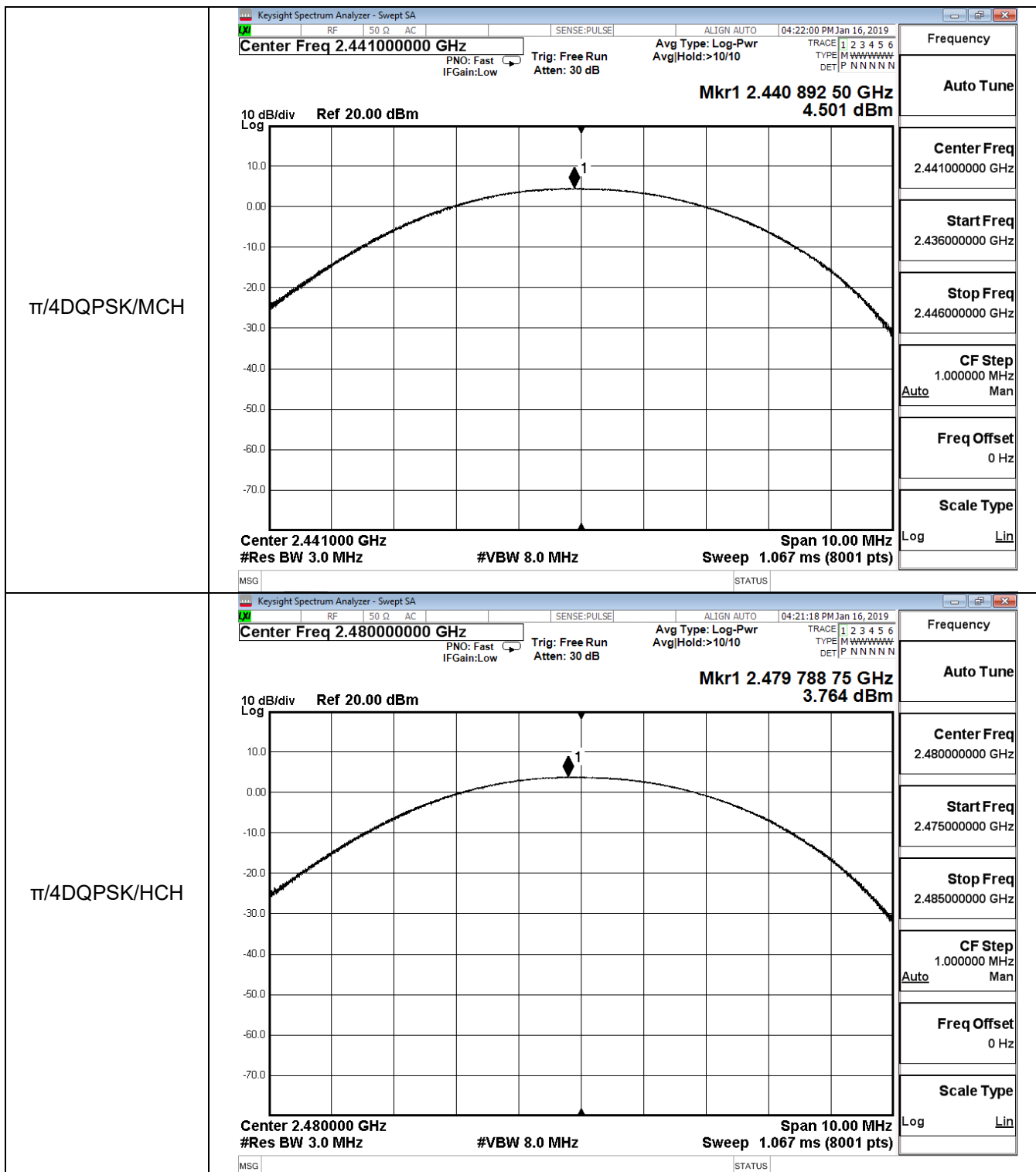


GFSK/MCH



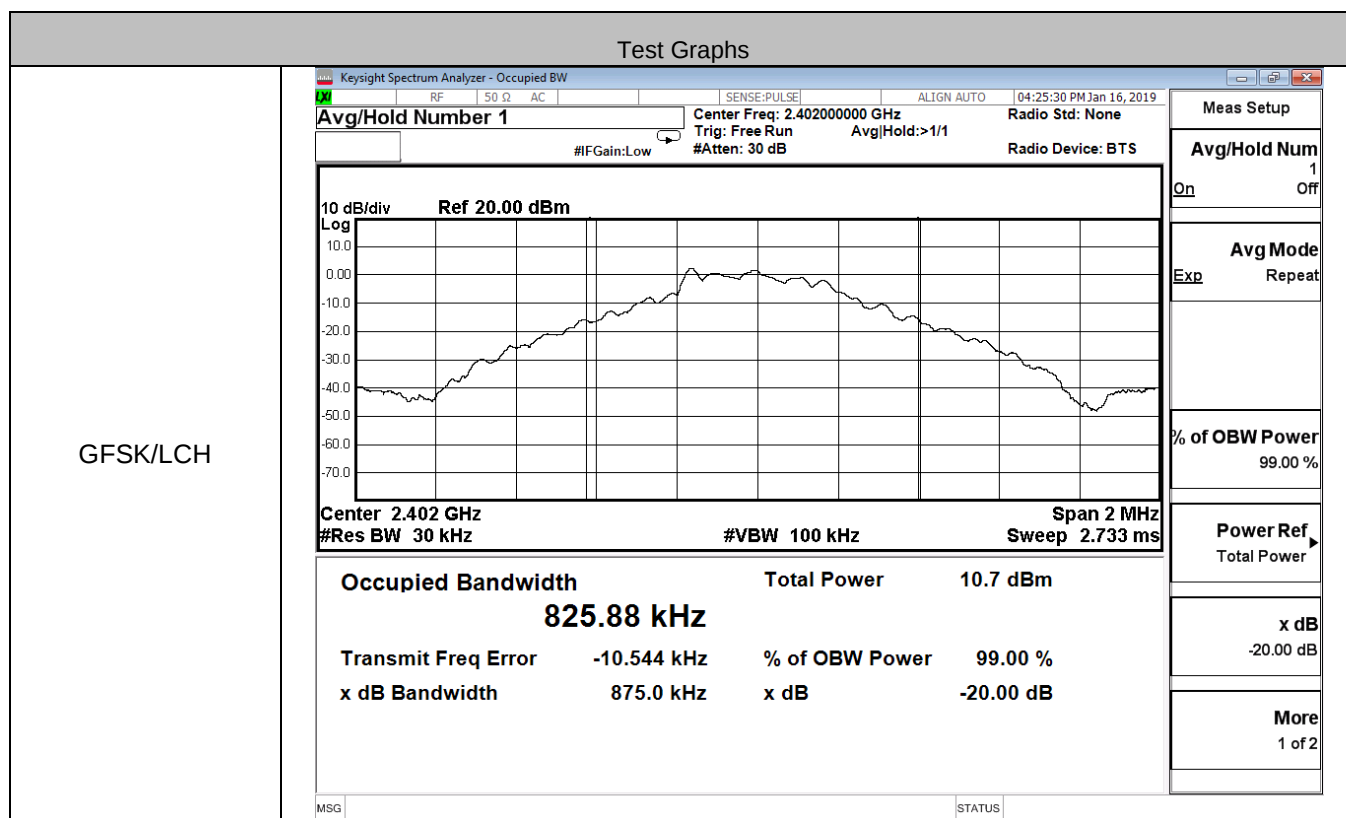
GFSK/HCH

 π /4DQPSK/LCH

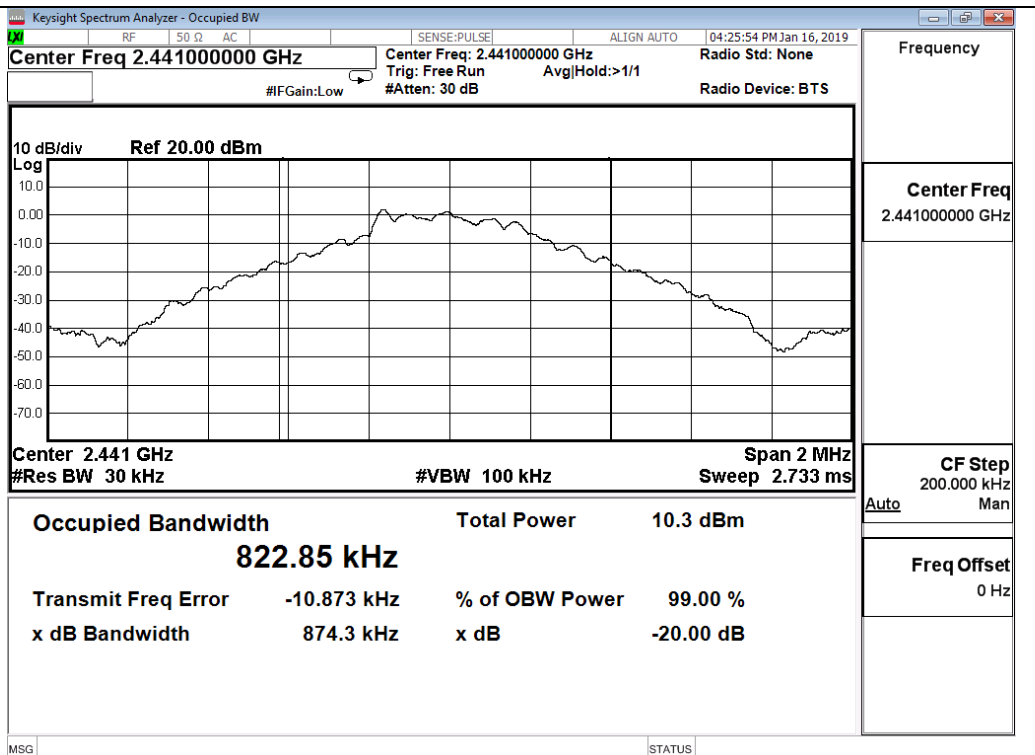


A.2 99% and 20dB Bandwidth

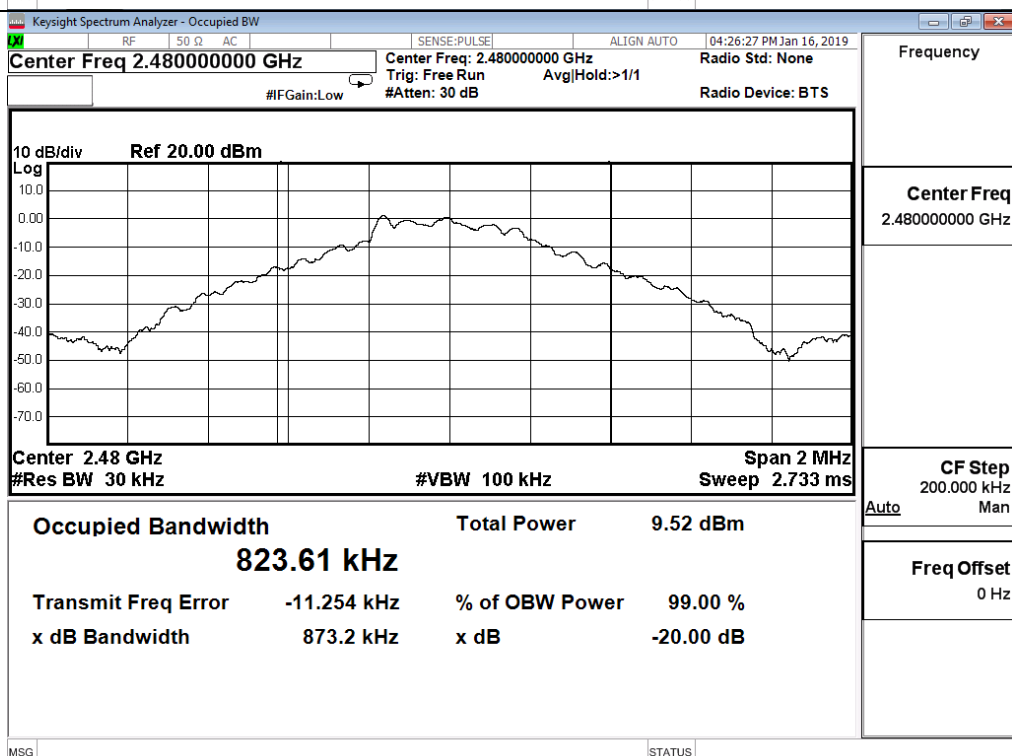
Mode	Channel.	99% Bandwidth [MHz]	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.82588	0.8750	Not Specified	PASS
	MCH	0.82285	0.8743	Not Specified	PASS
	HCH	0.82361	0.8732	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.1690	1.252	Not Specified	PASS
	MCH	1.1684	1.251	Not Specified	PASS
	HCH	1.1693	1.257	Not Specified	PASS

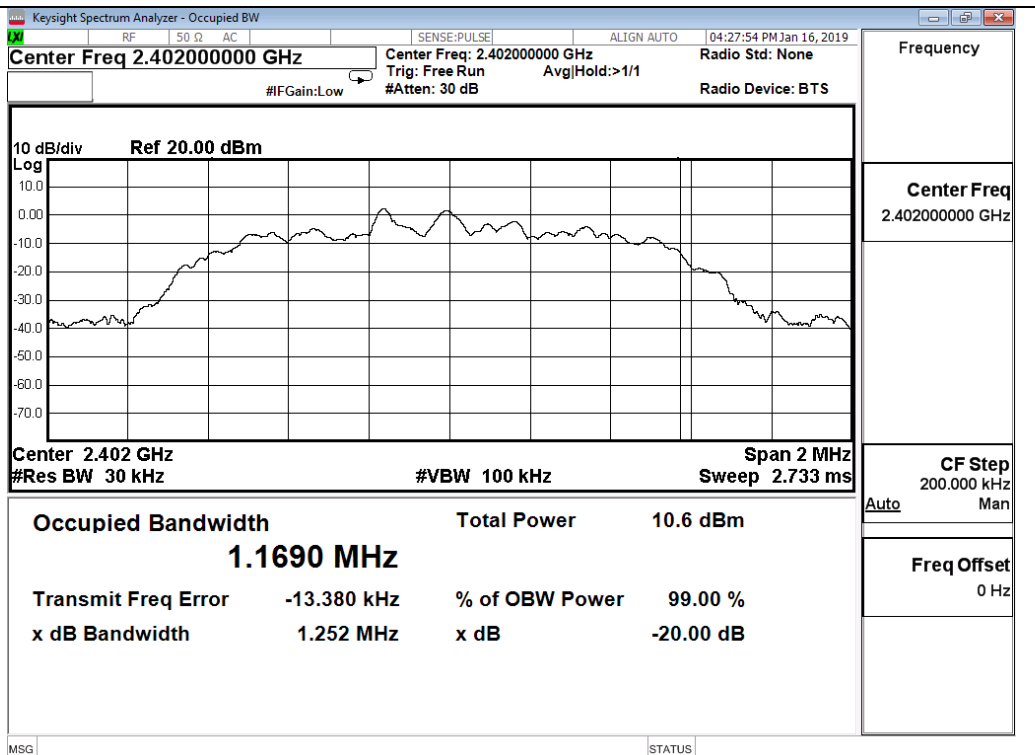
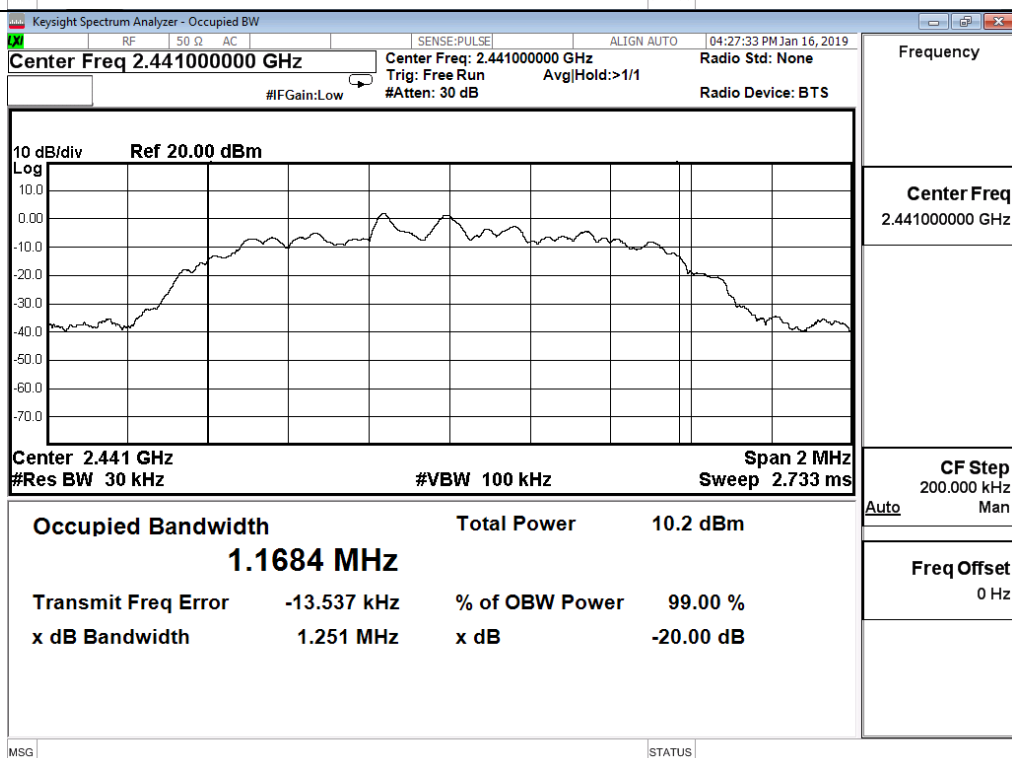


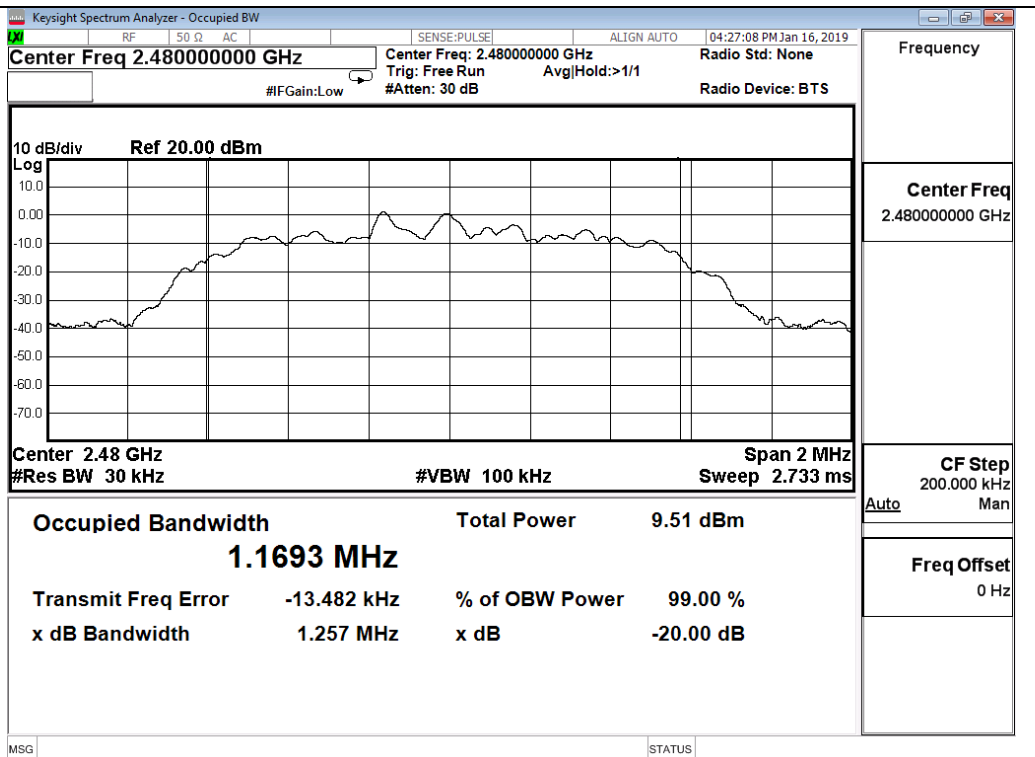
GFSK/MCH



GFSK/HCH



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

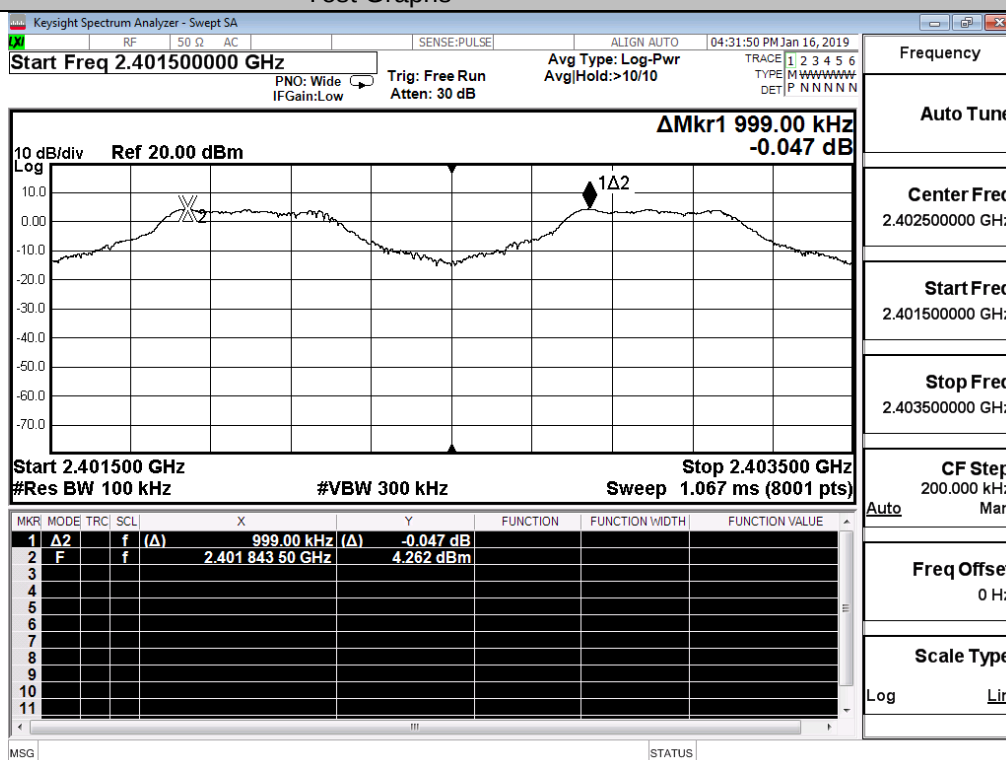
$\pi/4$ DQPSK/HCH

A.3 Carrier Frequency Separation

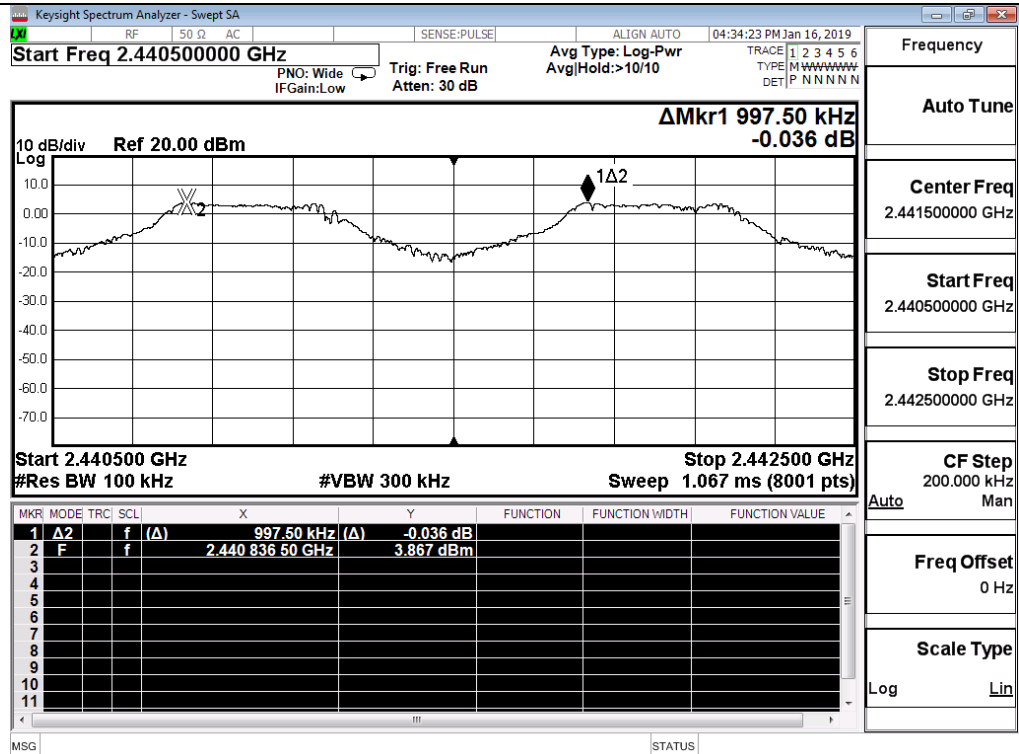
Mode	Channel	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.999	0.5833	PASS
	MCH	0.998	0.5829	PASS
	HCH	1.001	0.5821	PASS
π /4DQPSK	LCH	1.003	0.835	PASS
	MCH	1.000	0.834	PASS
	HCH	1.004	0.838	PASS

Test Graphs

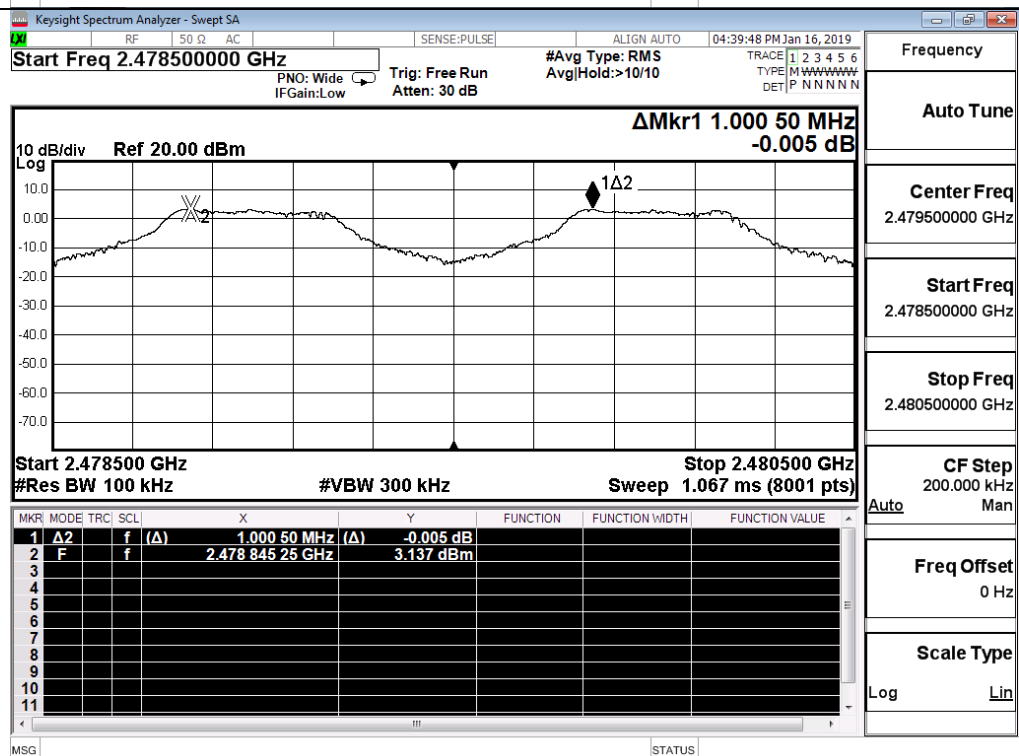
GFSK/LCH

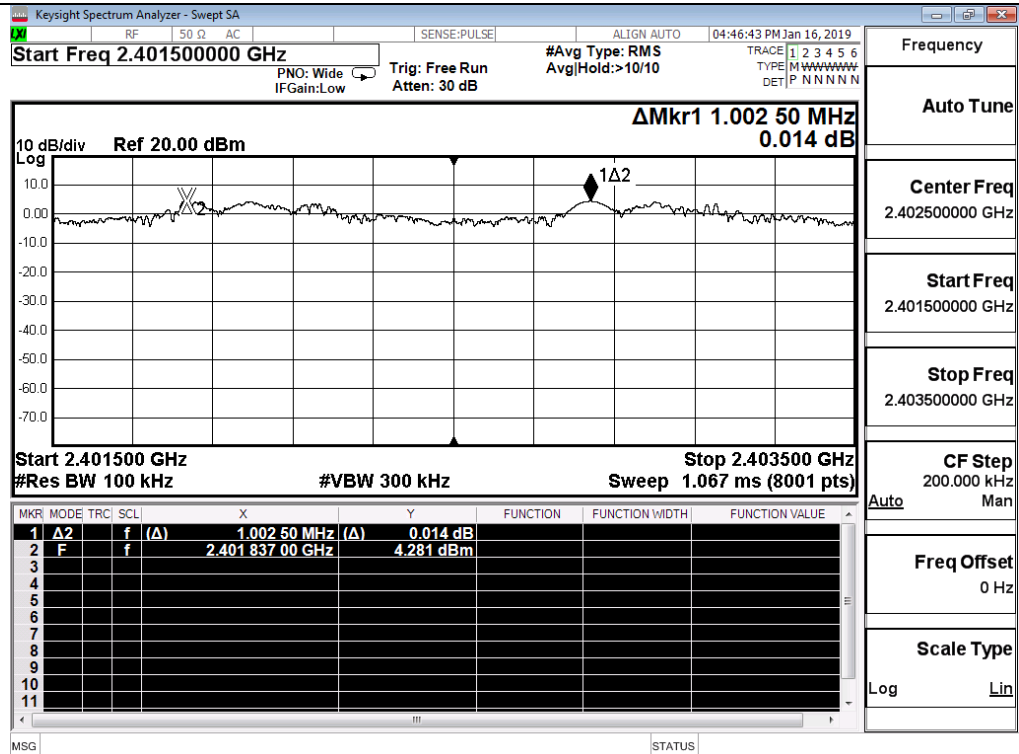
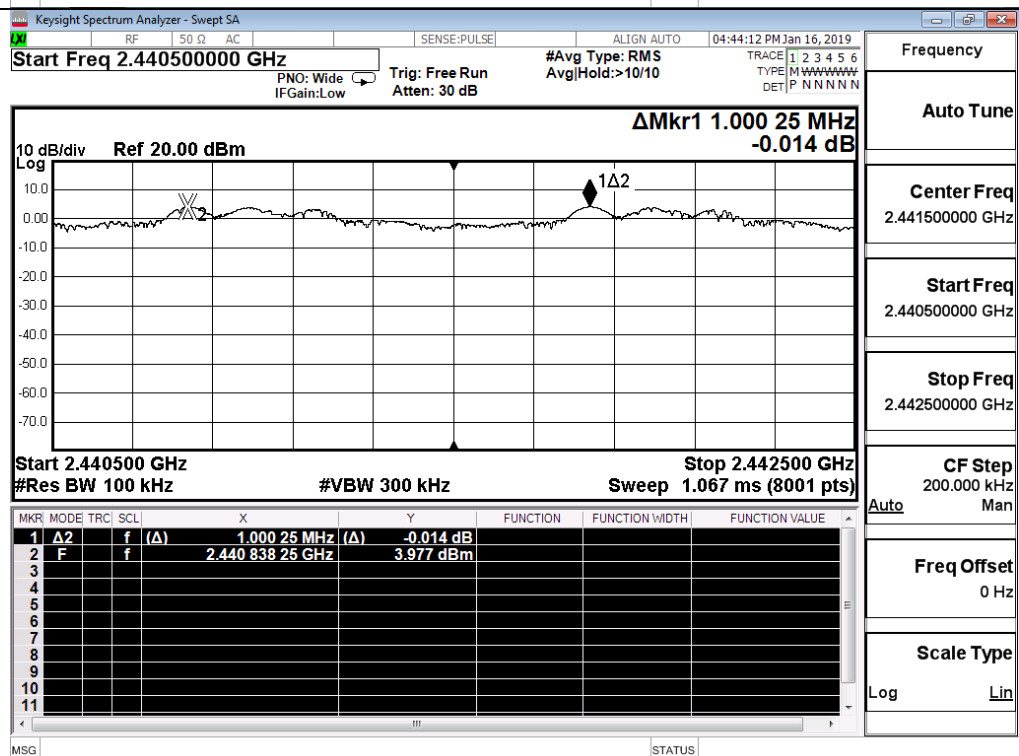


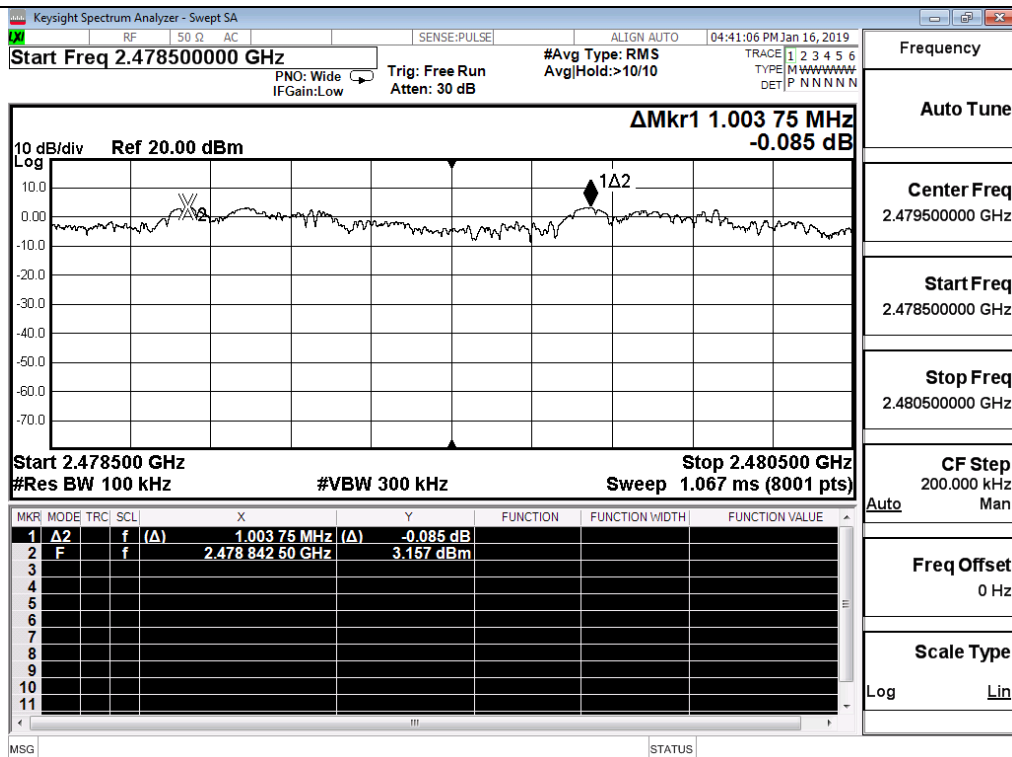
GFSK/MCH



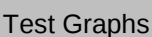
GFSK/HCH



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

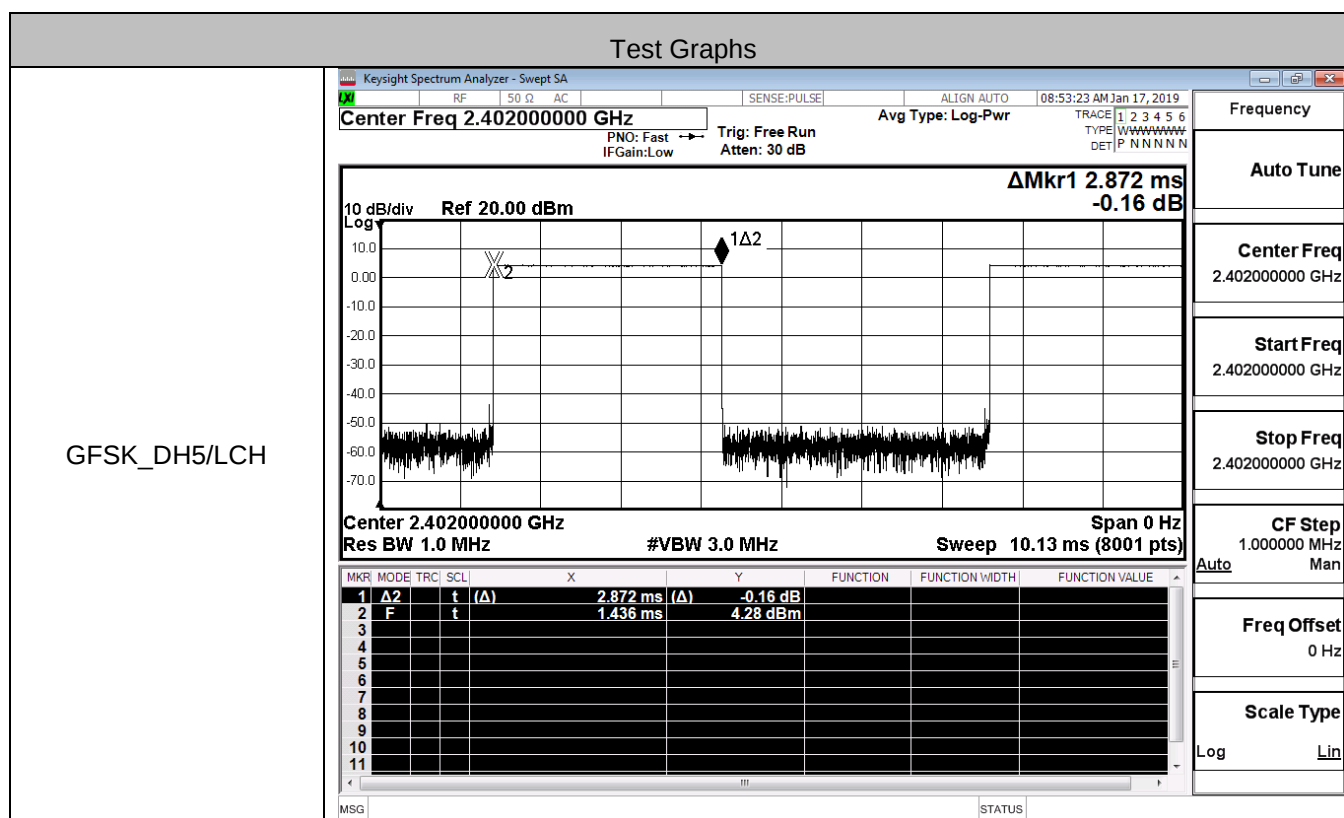
$\pi/4$ DQPSK/HCH

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

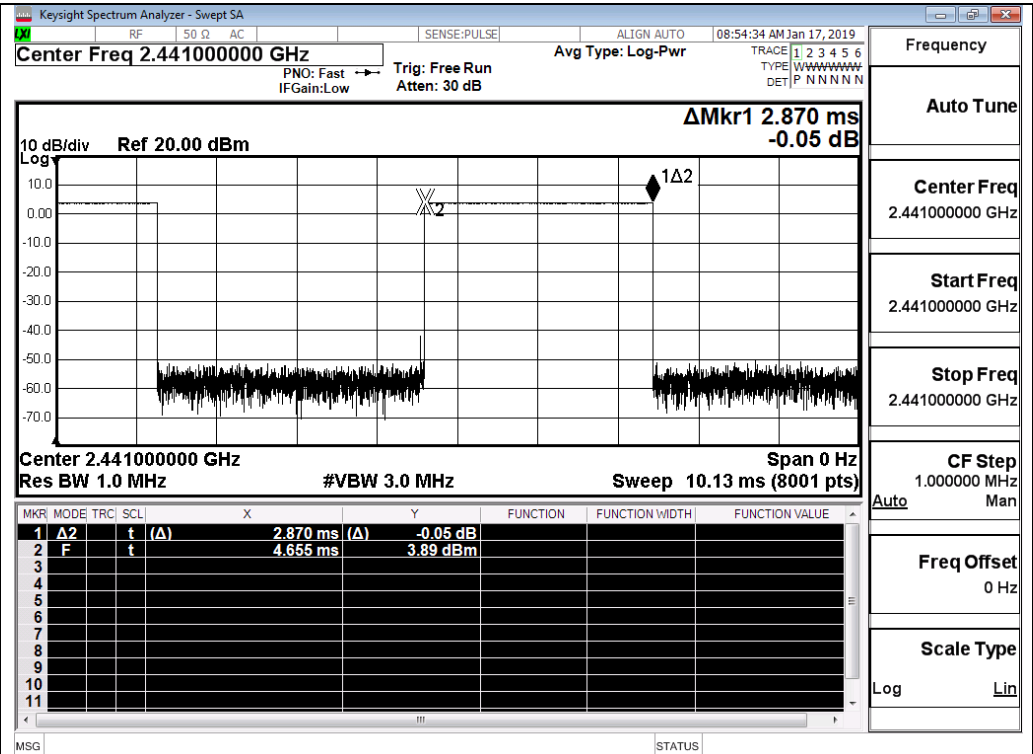


A.5 Dwell Time

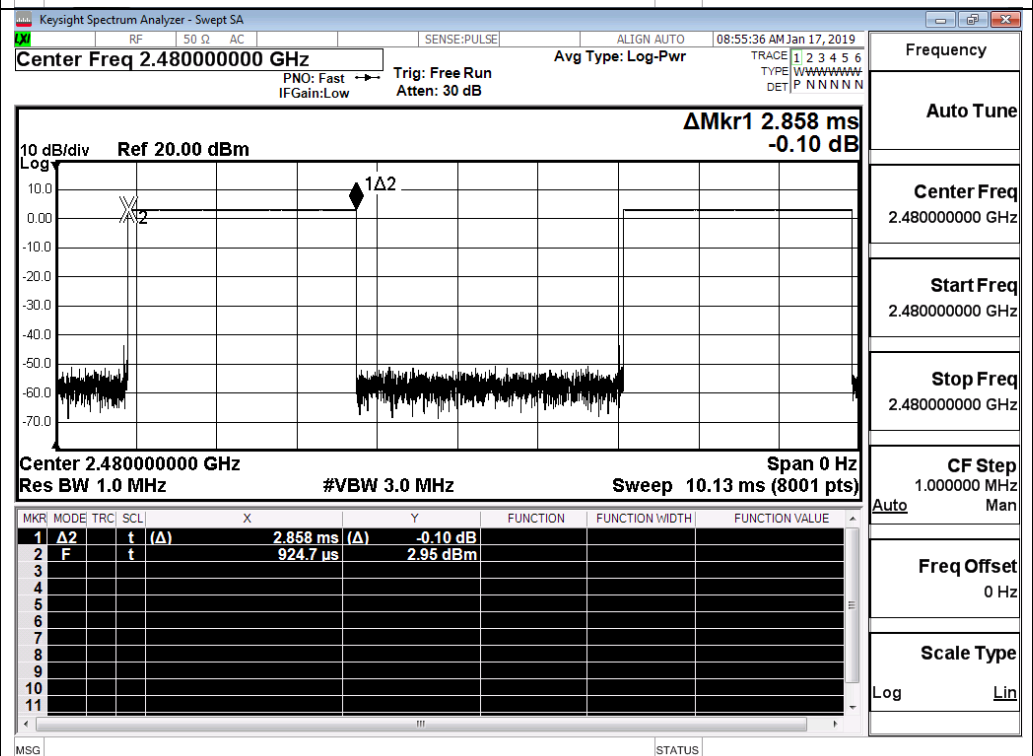
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.87	106.7	0.306	0.4	PASS
	DH5	MCH	2.87	106.7	0.306	0.4	PASS
	DH5	HCH	2.86	106.7	0.305	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.85	106.7	0.304	0.4	PASS
	2DH5	MCH	2.87	106.7	0.306	0.4	PASS
	2DH5	HCH	2.87	106.7	0.306	0.4	PASS



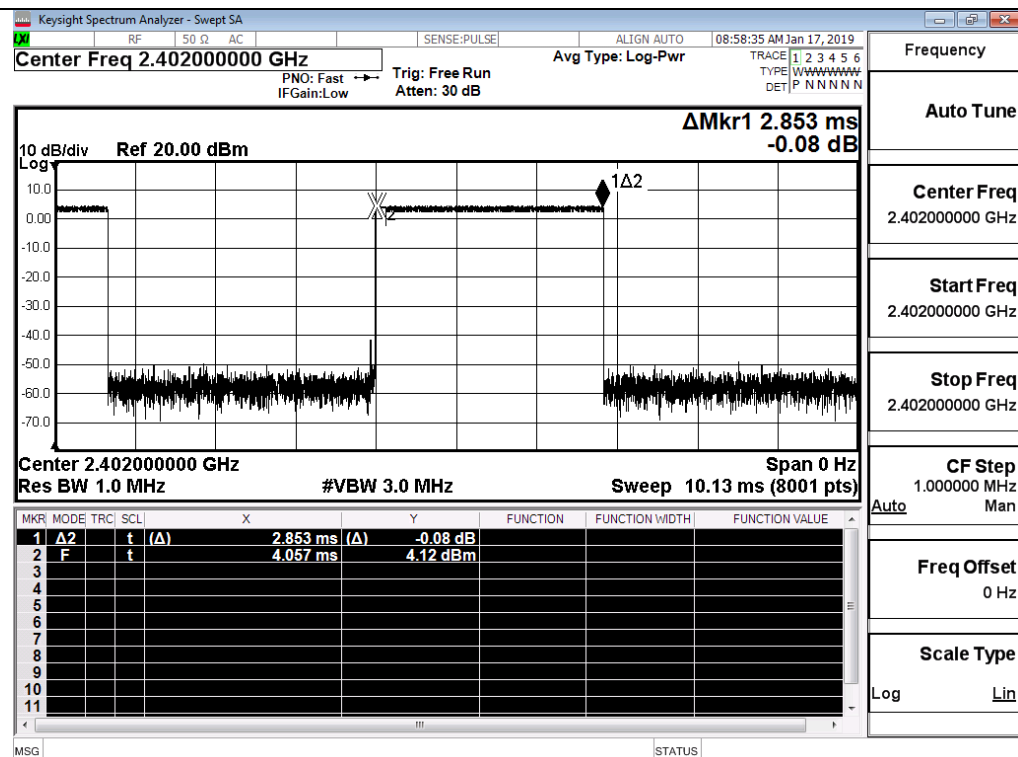
GFSK_DH5/MCH



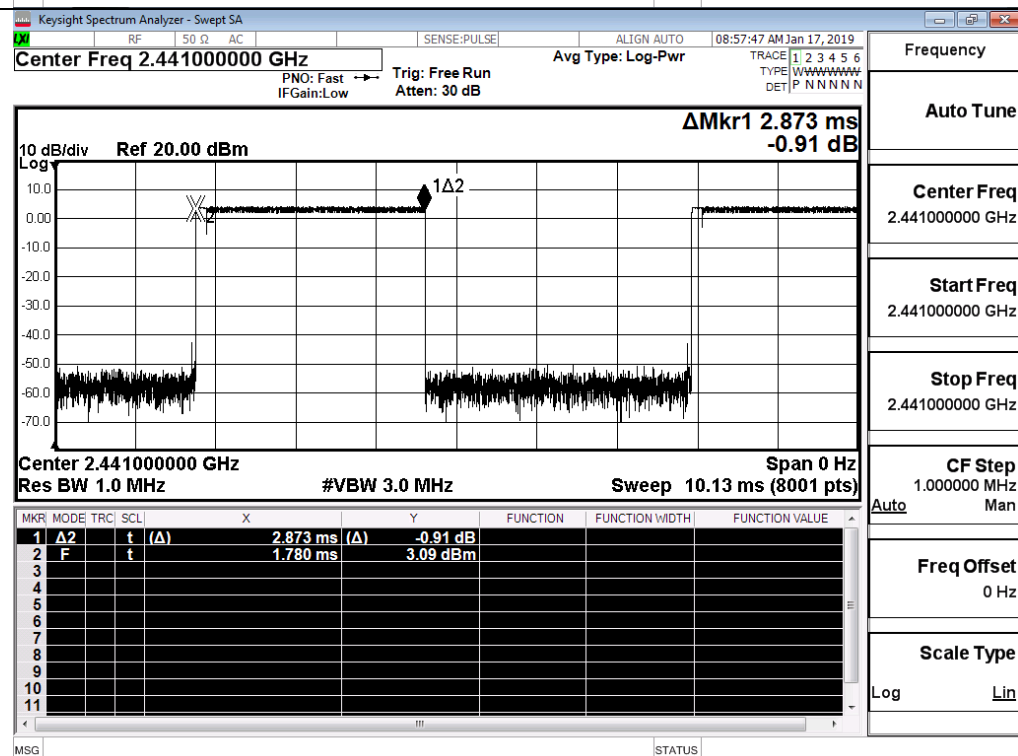
GFSK_DH5/HCH



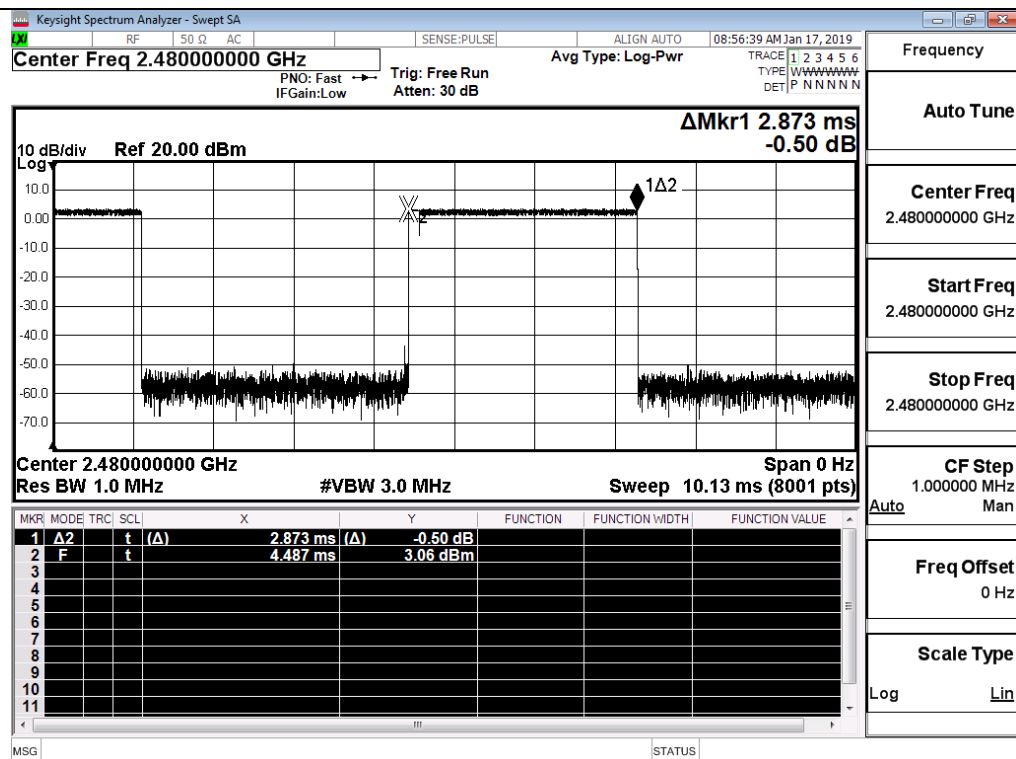
$\pi/4$ DQPSK
_2DH5/LCH



$\pi/4$ DQPSK
_2DH5/MCH



$\pi/4$ DQPSK
_2DH5/HCH

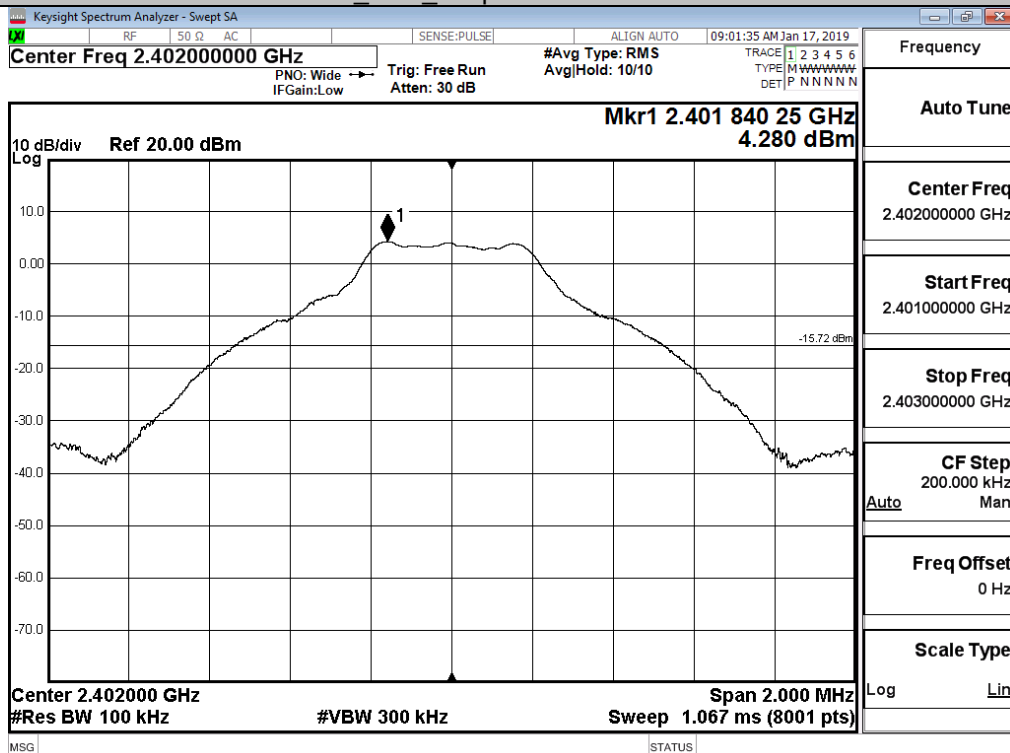


A.6 RF Conducted Spurious Emissions

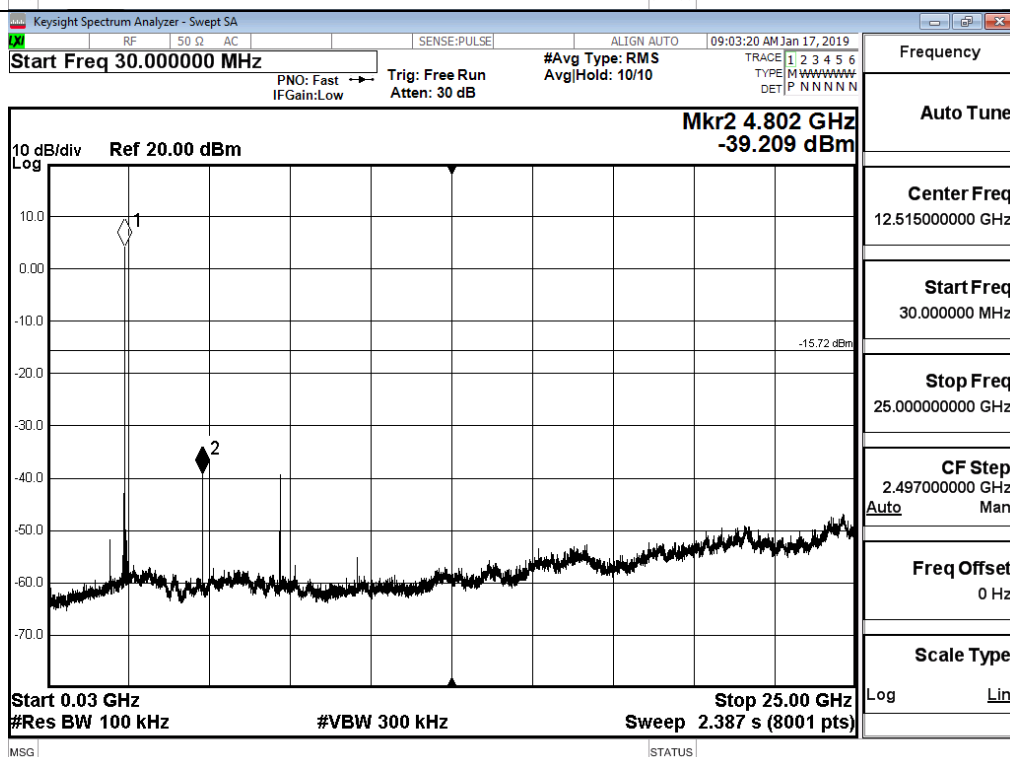
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	4.280	-39.209	-15.72	PASS
	MCH	3.963	-43.143	-16.04	PASS
	HCH	3.138	-44.138	-16.86	PASS
$\pi/4$ DQPSK	LCH	4.319	-38.177	-15.68	PASS
	MCH	3.953	-40.782	-16.05	PASS
	HCH	3.088	-45.443	-16.91	PASS

GFSK_LCH_Graphs

Pref

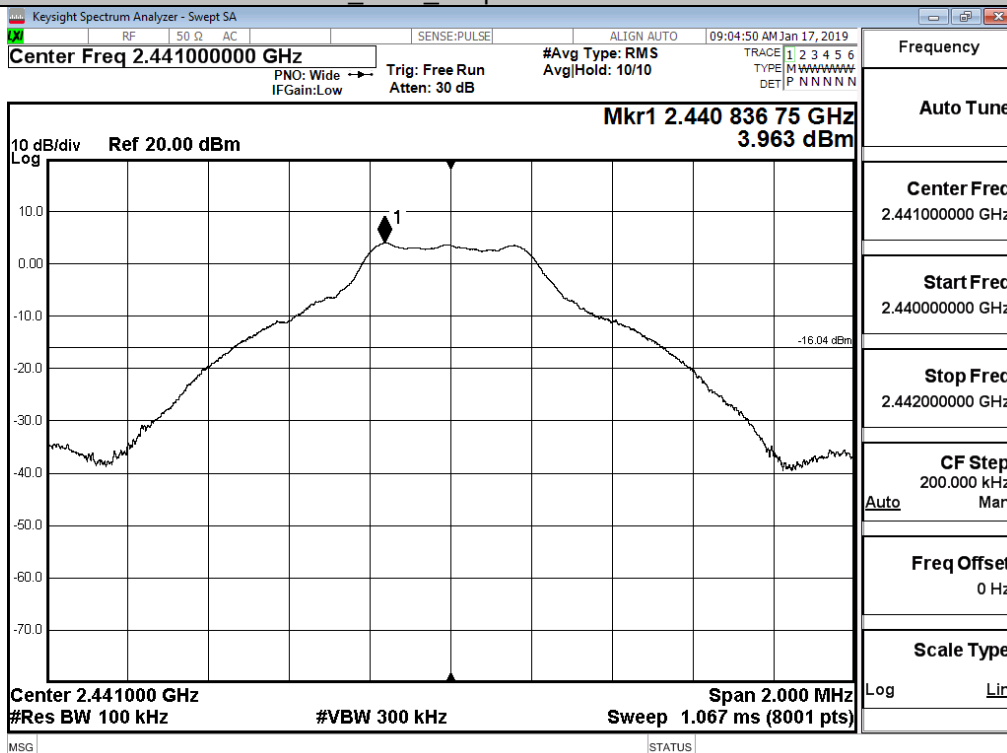


Puw

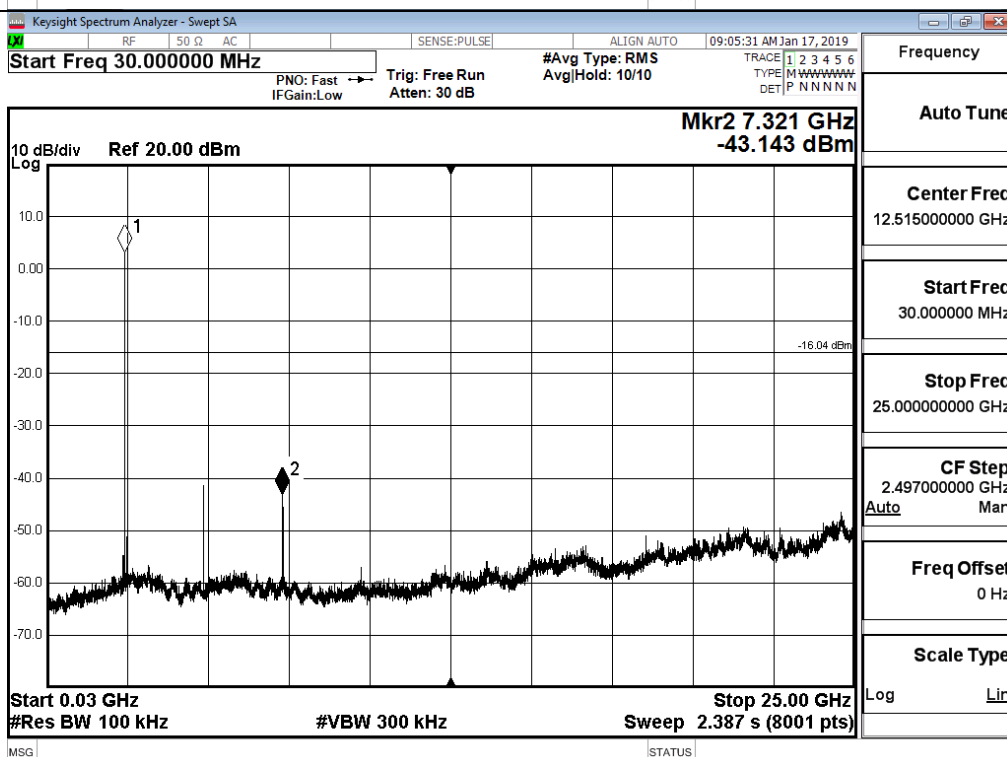


GFSK_MCH_Graphs

Pref

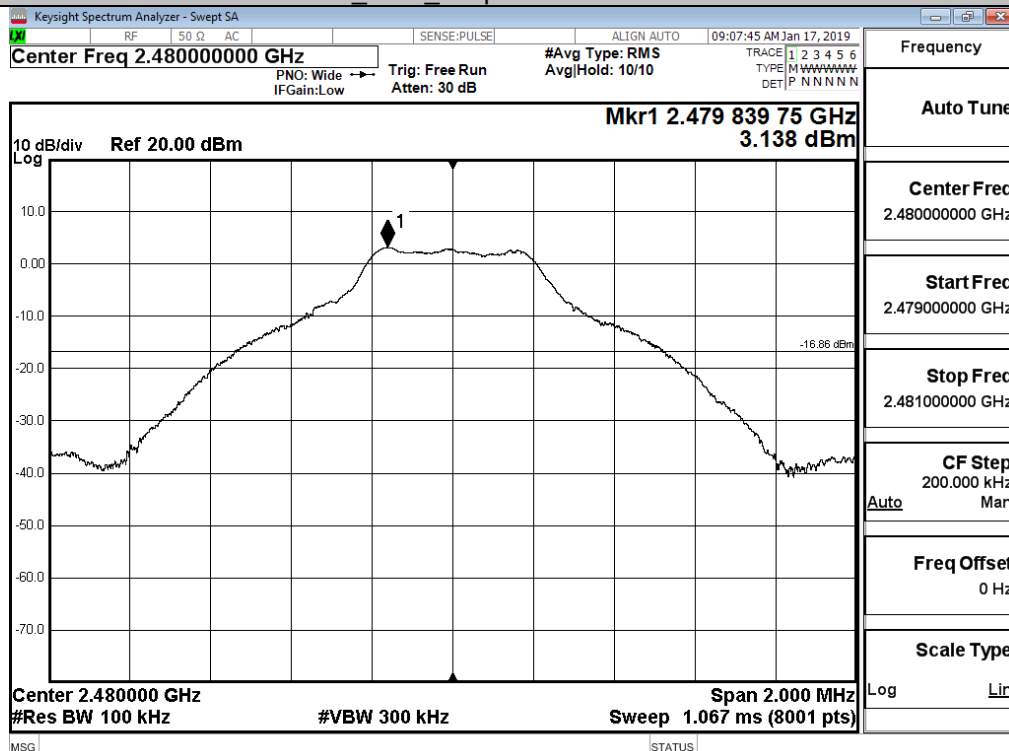


Puw

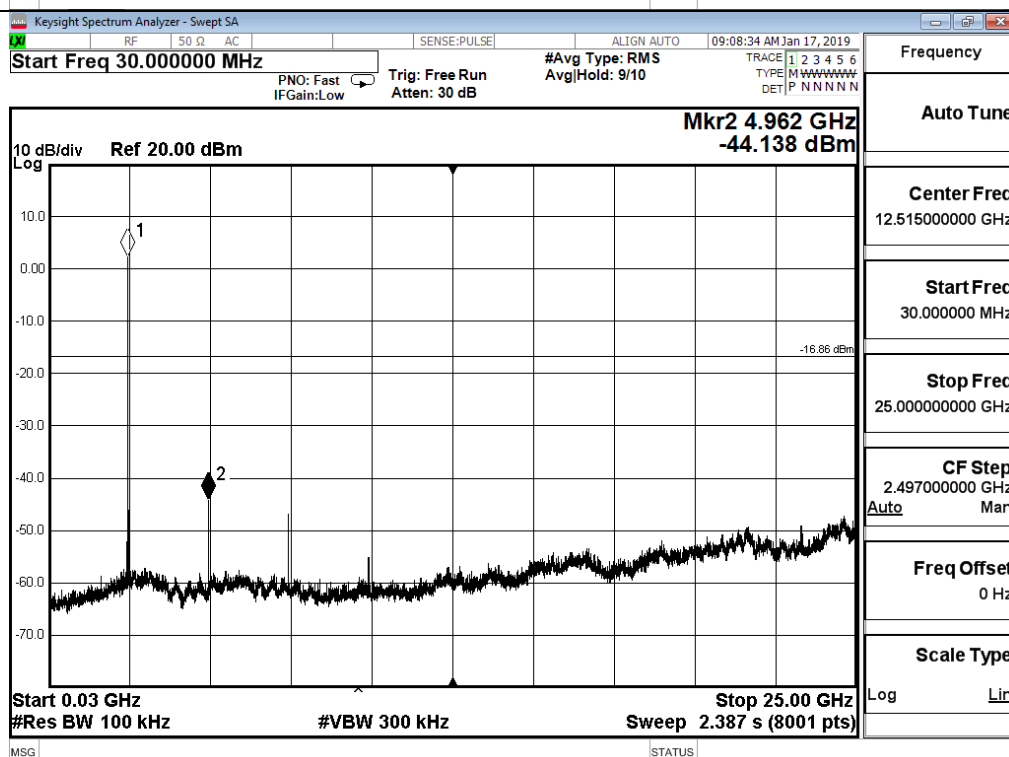


GFSK_HCH_Graphs

Pref

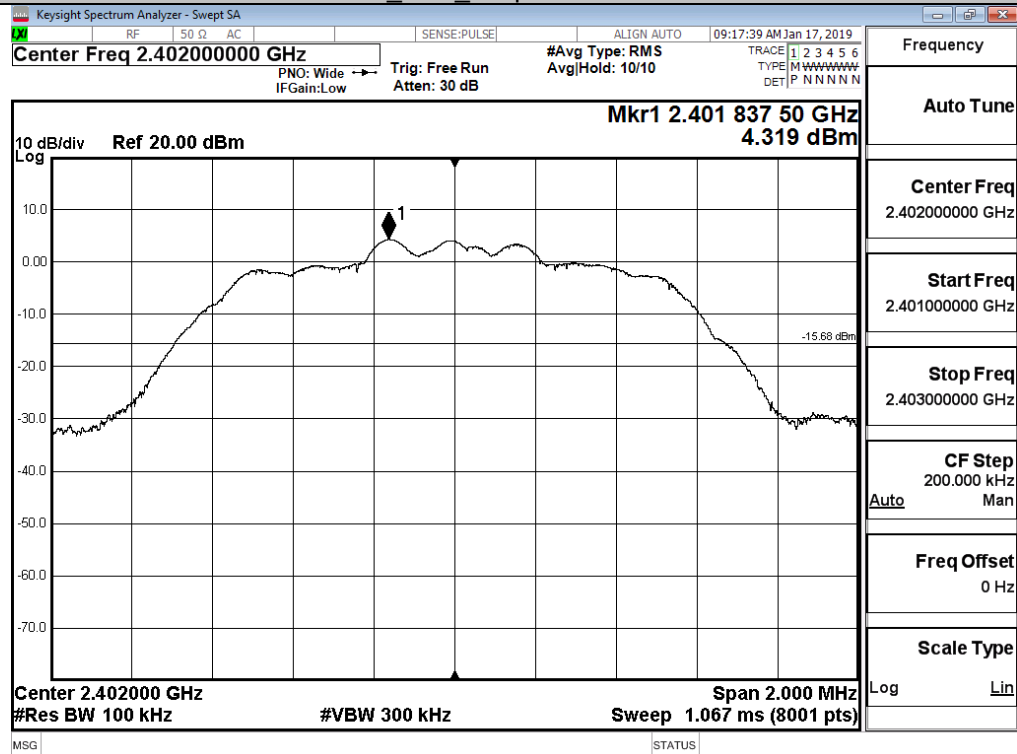


Puw

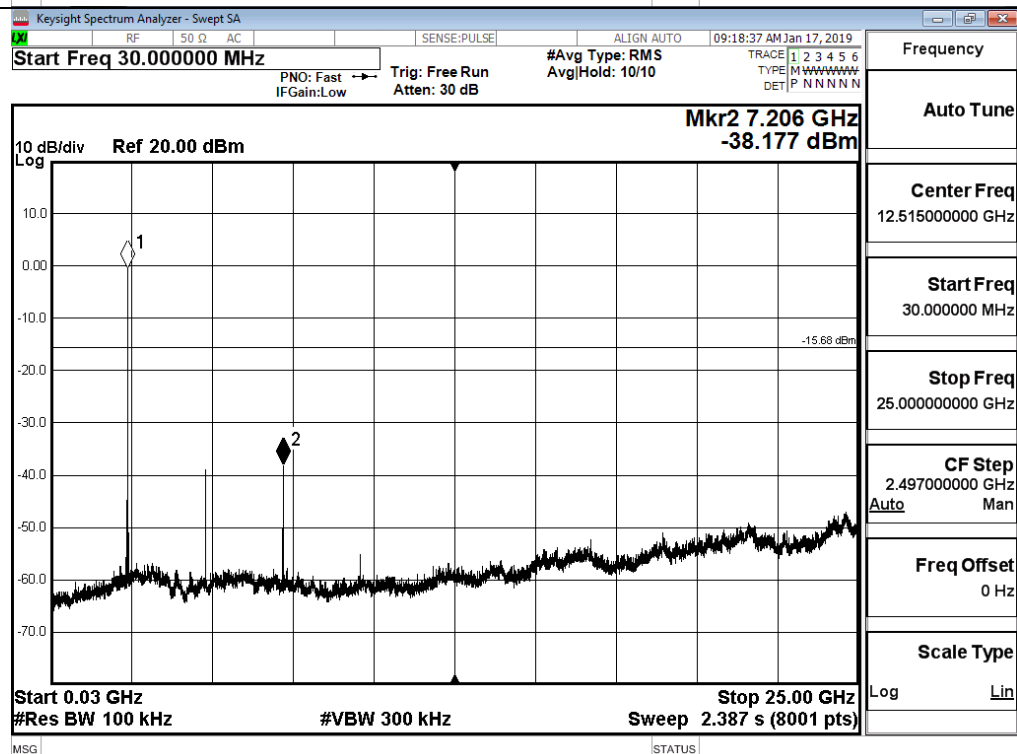


$\pi/4$ DQPSK_LCH_Graphs

Pref

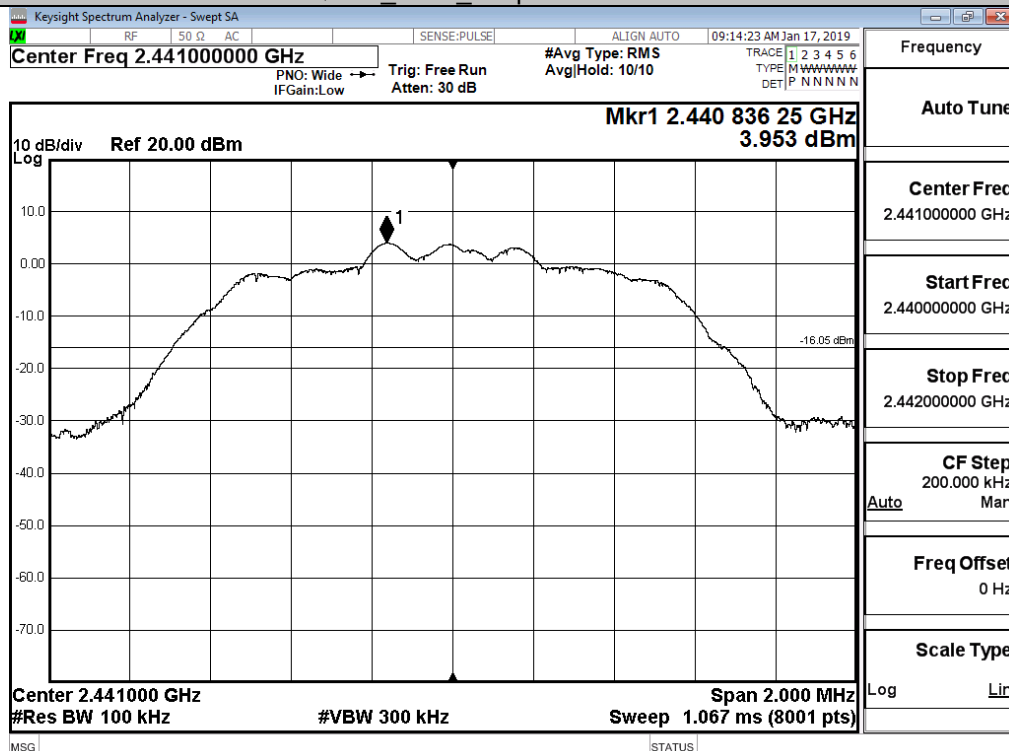


Puw

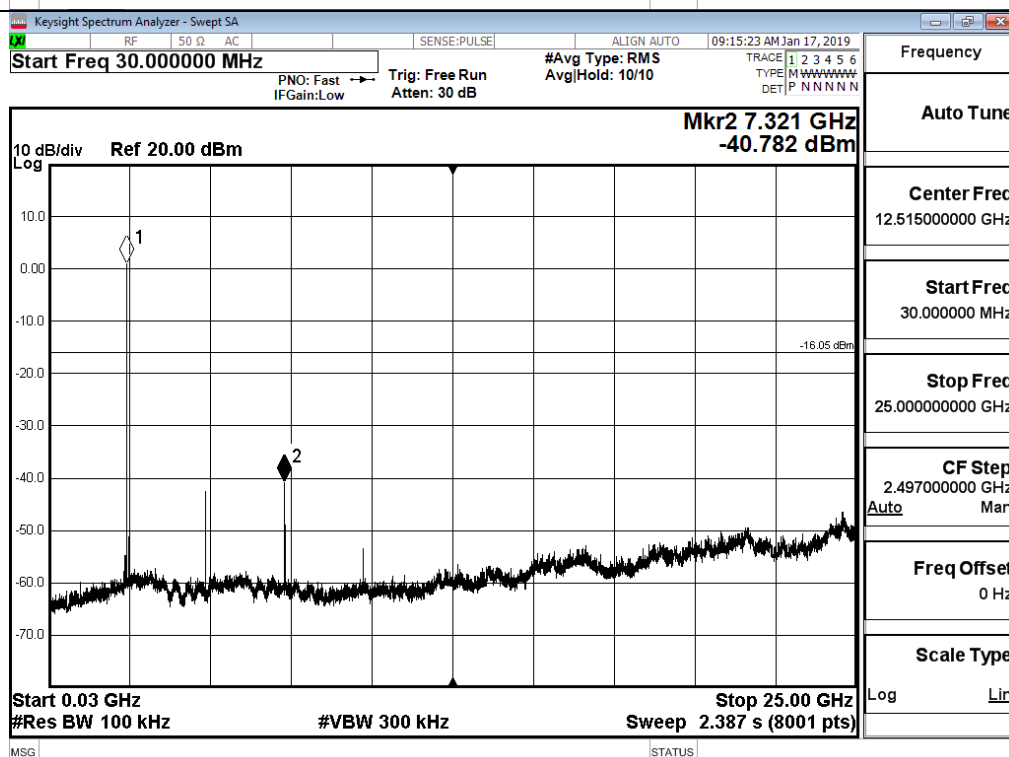


$\pi/4$ DQPSK_MCH_Graphs

Pref

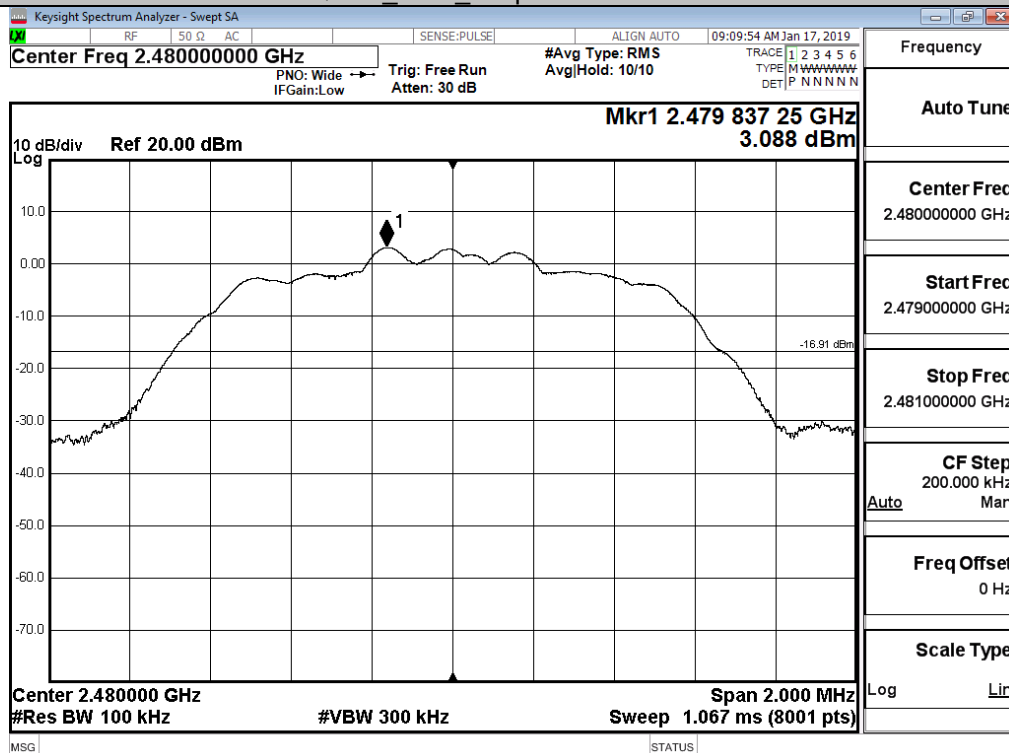


Puw

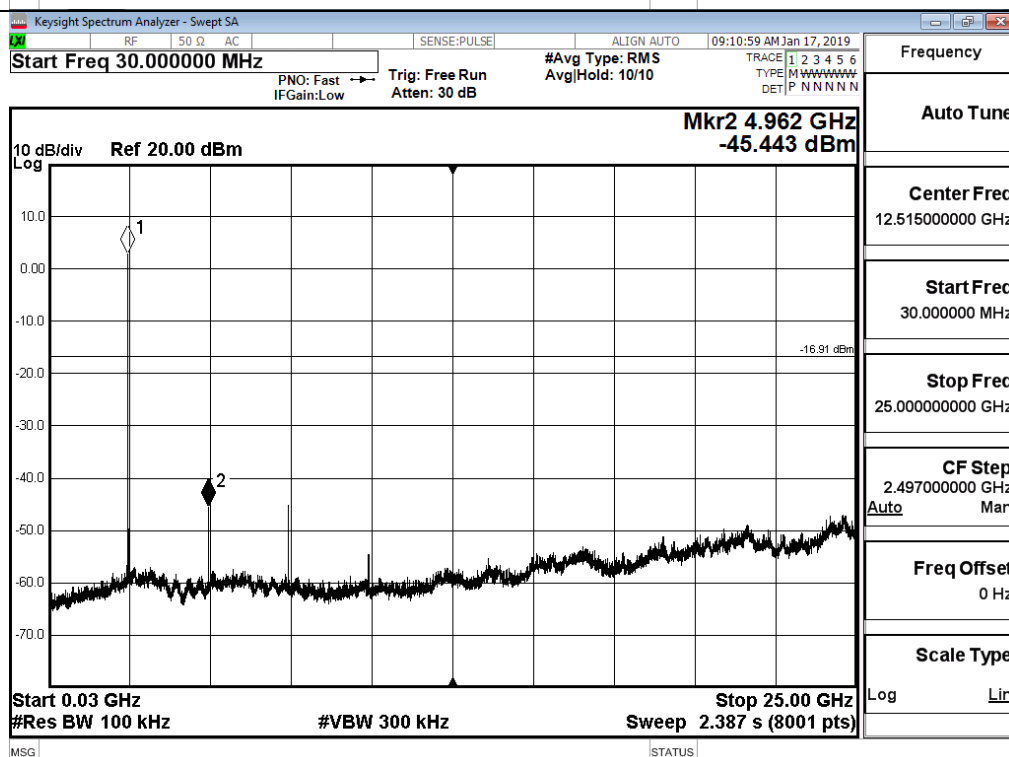


$\pi/4$ DQPSK_HCH_Graphs

Pref



Puw

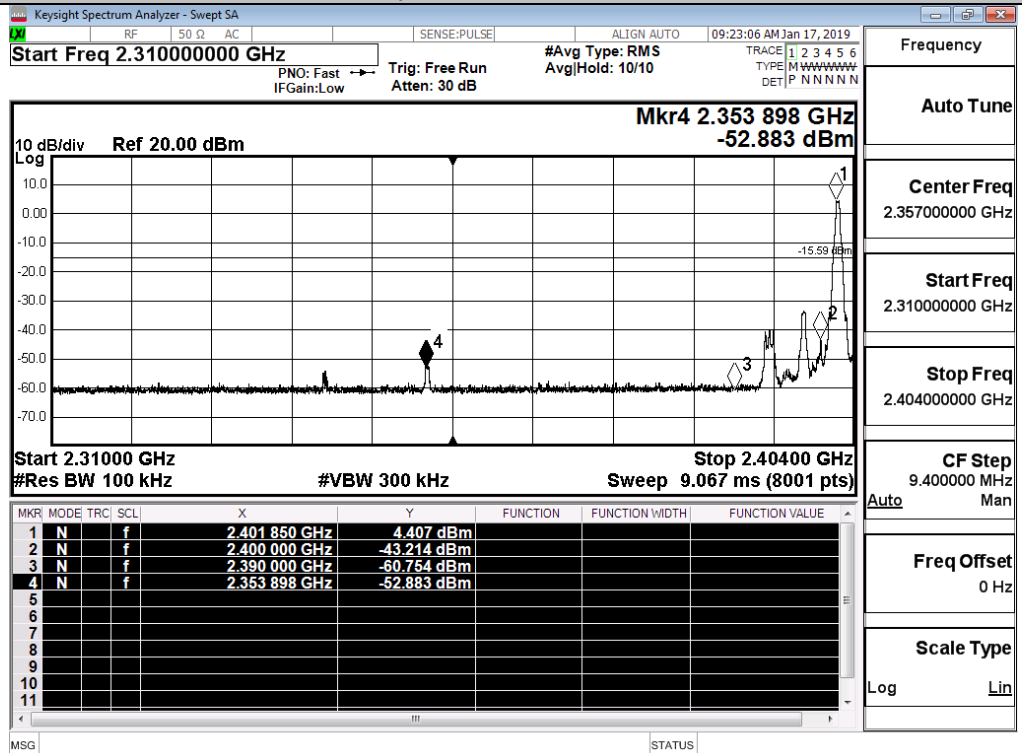


A.7 Band-edge for RF Conducted Emissions

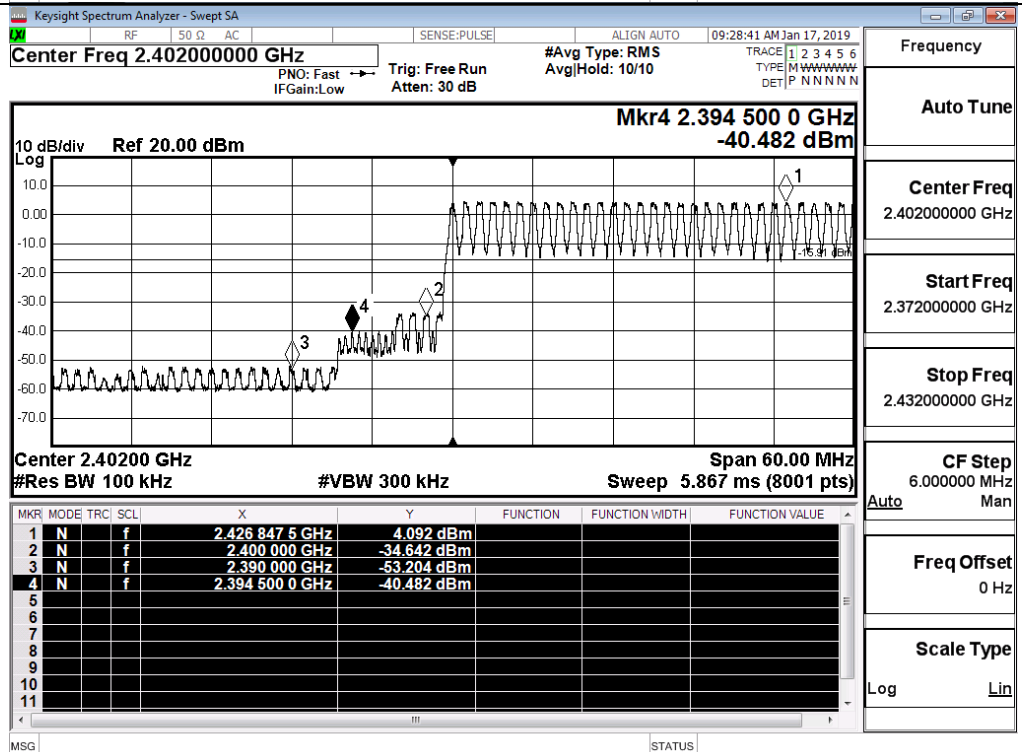
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	4.407	Off	-52.883	-15.59	PASS
			4.092	On	-40.482	-15.91	PASS
	HCH	2480	3.161	Off	-53.072	-16.84	PASS
			3.041	On	-48.801	-16.96	PASS
$\pi/4$ DQPSK	LCH	2402	4.331	Off	-52.581	-15.67	PASS
			4.257	On	-45.691	-15.74	PASS
	HCH	2480	3.133	Off	-53.231	-16.87	PASS
			3.634	On	-50.875	-16.37	PASS

Test Graphs

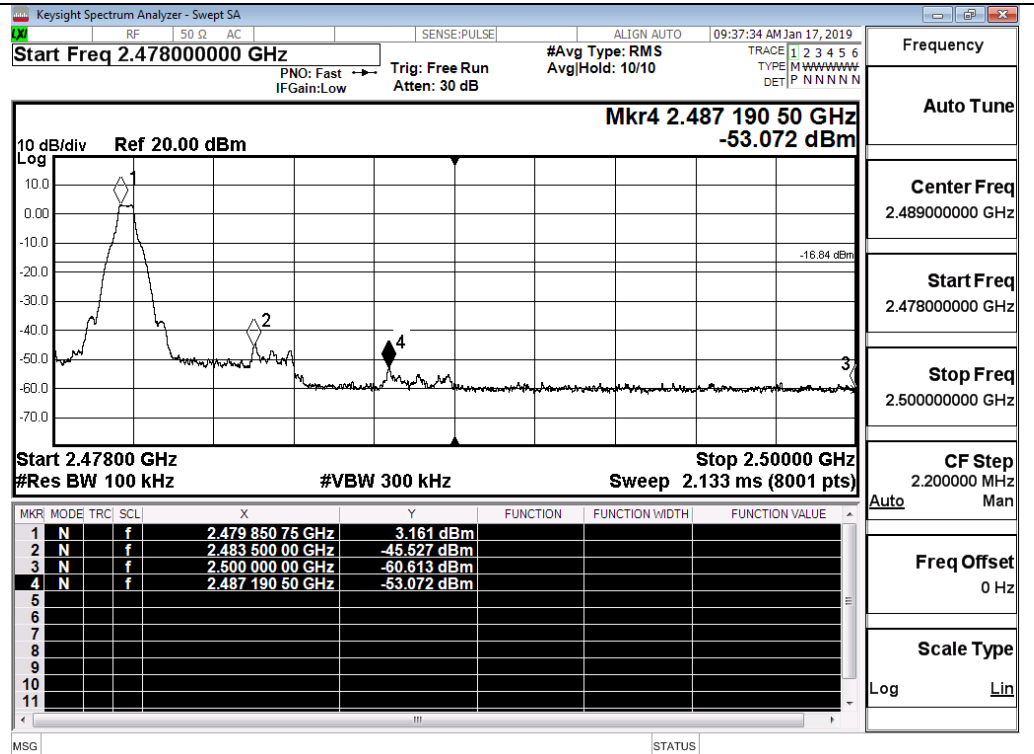
GFSK/LCH/No Hop



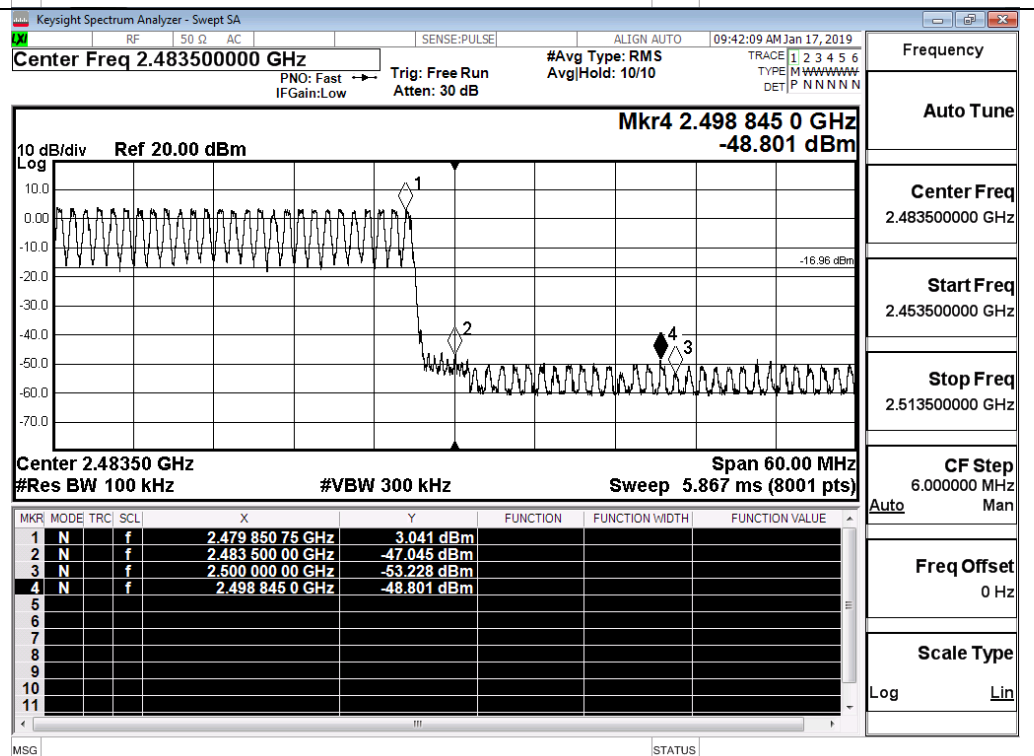
GFSK/LCH/Hop



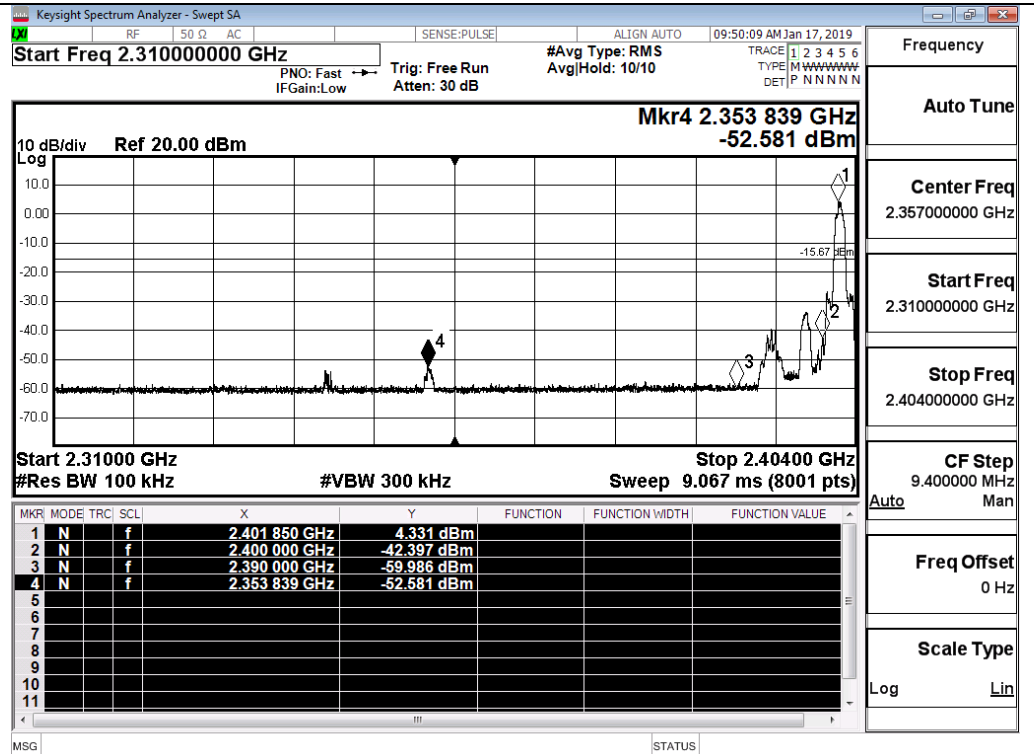
GFSK/HCH/No Hop



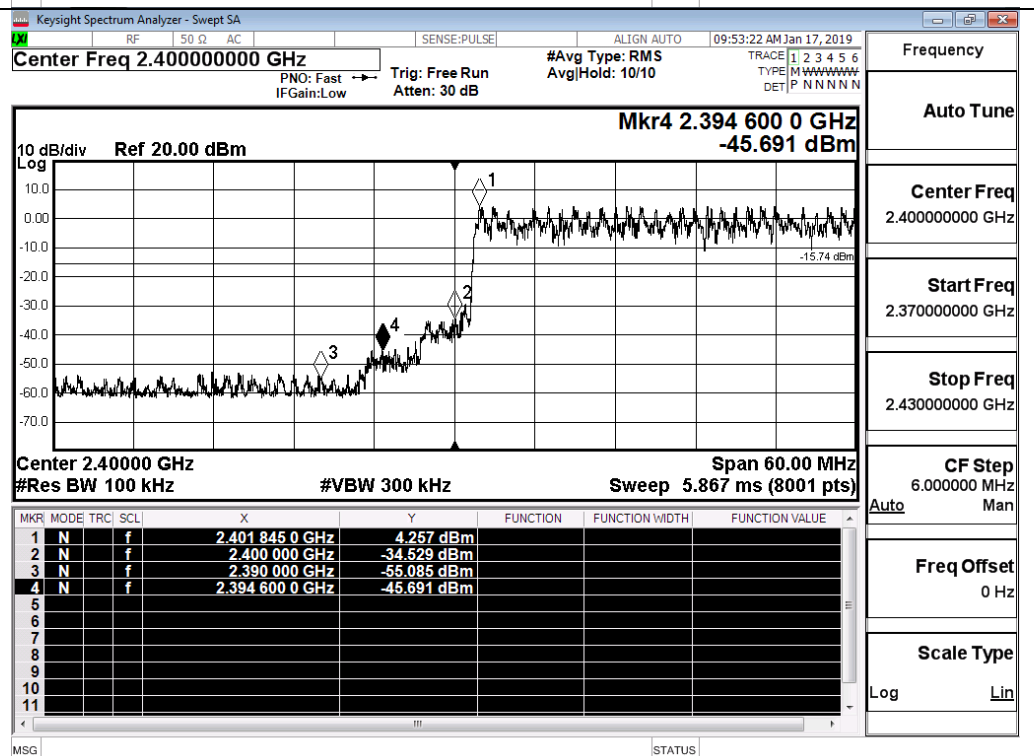
GFSK/HCH/Hop



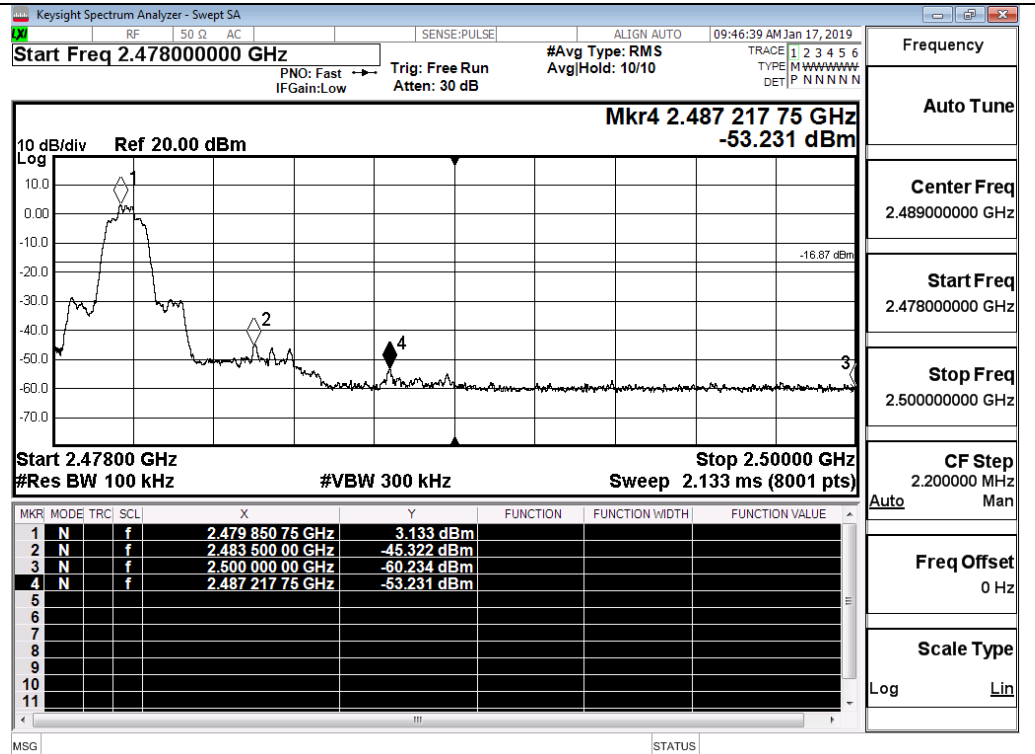
$\pi/4$ DQPSK/LCH/No
Hop



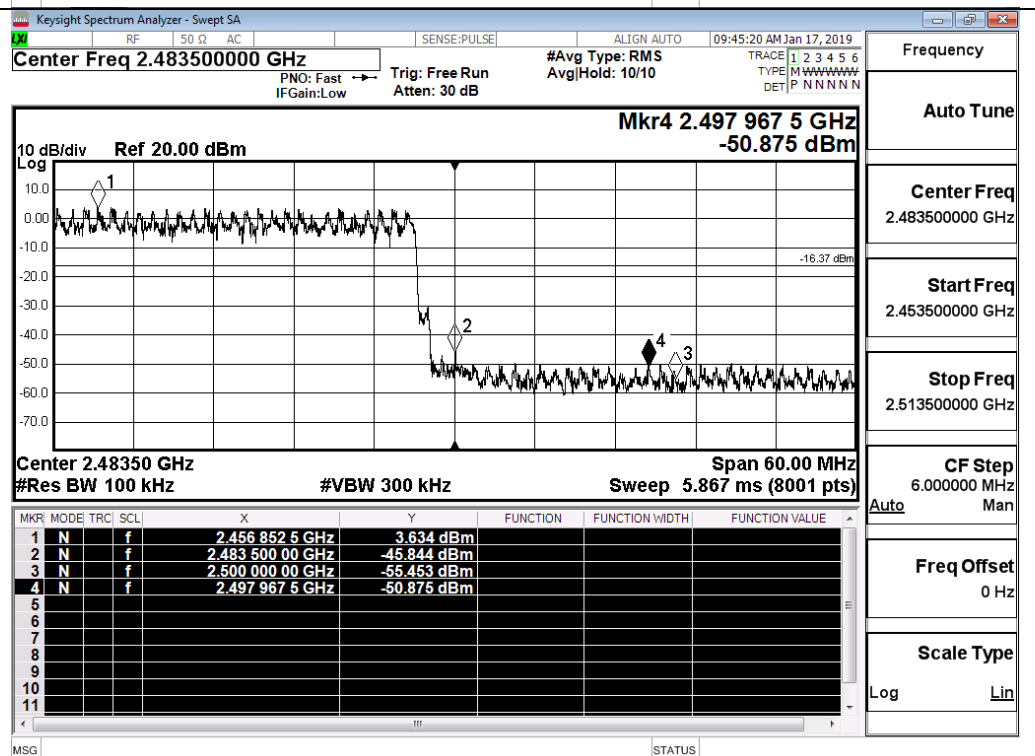
$\pi/4$ DQPSK/LCH/Hop



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



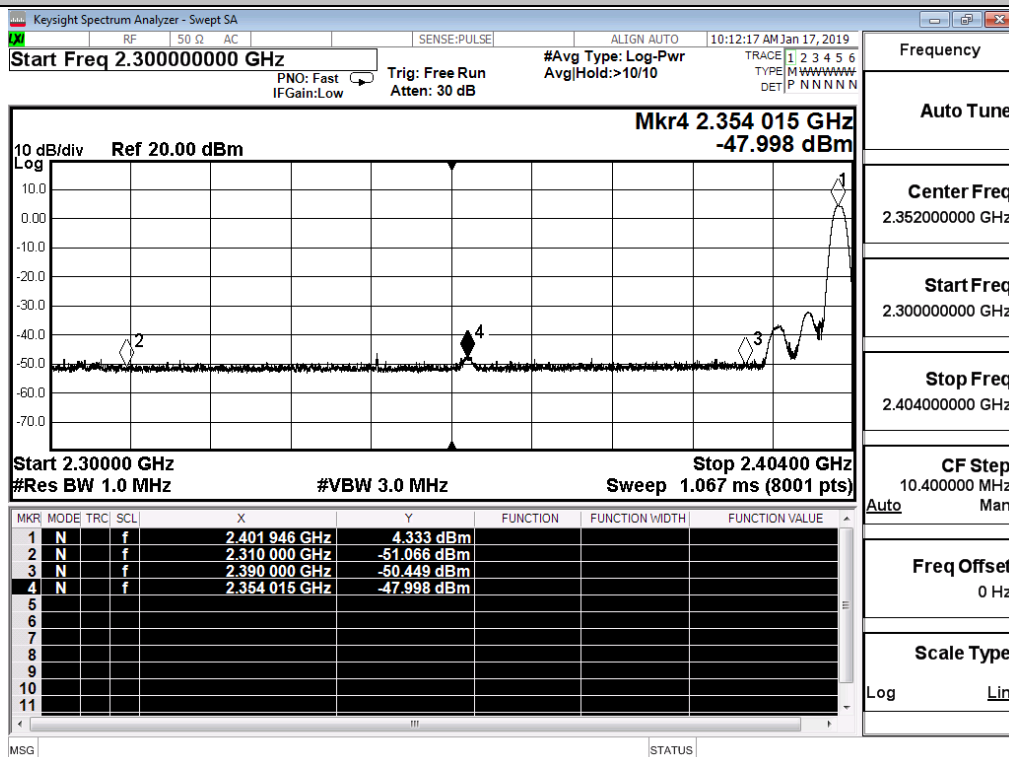
$\pi/4$ DQPSK/HCH/Hop



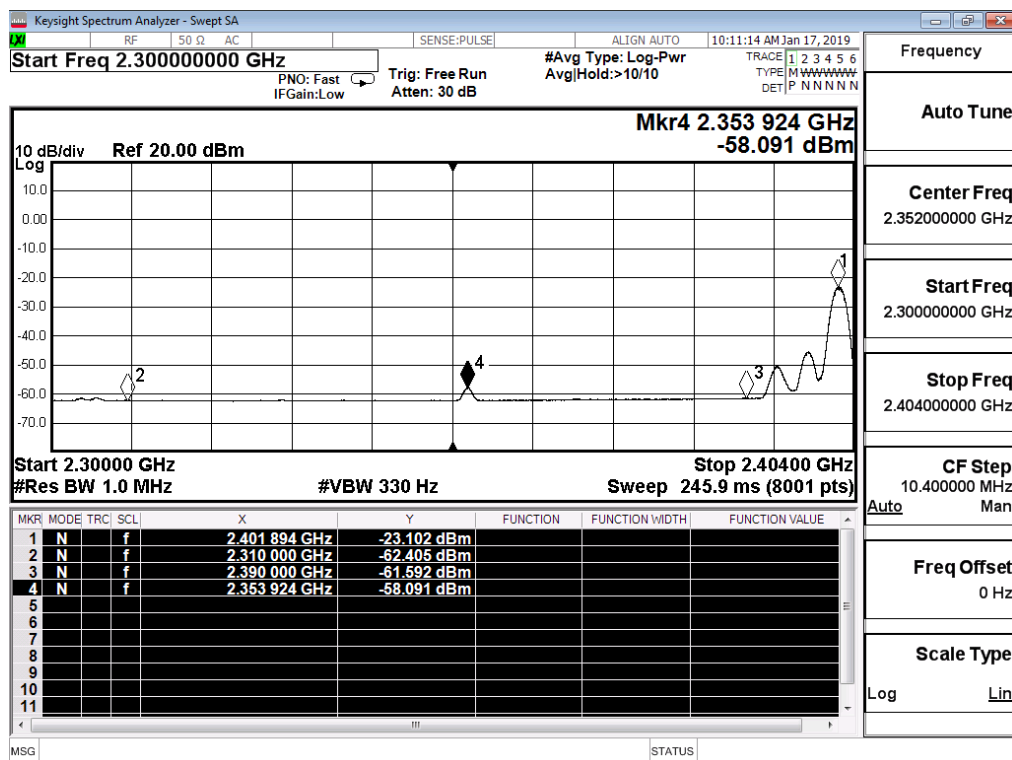
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-51.066	2.0	0	46.19	PEAK	74	PASS
	Off	2310.0	-62.405	2.0	0	34.86	AV	54	PASS
	Off	2390.0	-50.449	2.0	0	46.81	PEAK	74	PASS
	Off	2390.0	-61.592	2.0	0	35.67	AV	54	PASS
	Off	2483.5	-40.400	2.0	0	56.86	PEAK	74	PASS
	Off	2483.5	-53.880	2.0	0	43.38	AV	54	PASS
	Off	2500.0	-49.685	2.0	0	47.58	PEAK	74	PASS
	Off	2500.0	-61.502	2.0	0	35.76	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-51.473	2.0	0	45.79	PEAK	74	PASS
	Off	2310.0	-62.420	2.0	0	34.84	AV	54	PASS
	Off	2390.0	-50.330	2.0	0	46.93	PEAK	74	PASS
	Off	2390.0	-61.648	2.0	0	35.61	AV	54	PASS
	Off	2483.5	-39.758	2.0	0	57.50	PEAK	74	PASS
	Off	2483.5	-55.430	2.0	0	41.83	AV	54	PASS
	Off	2500.0	-49.918	2.0	0	47.34	PEAK	74	PASS
	Off	2500.0	-61.402	2.0	0	35.86	AV	54	PASS

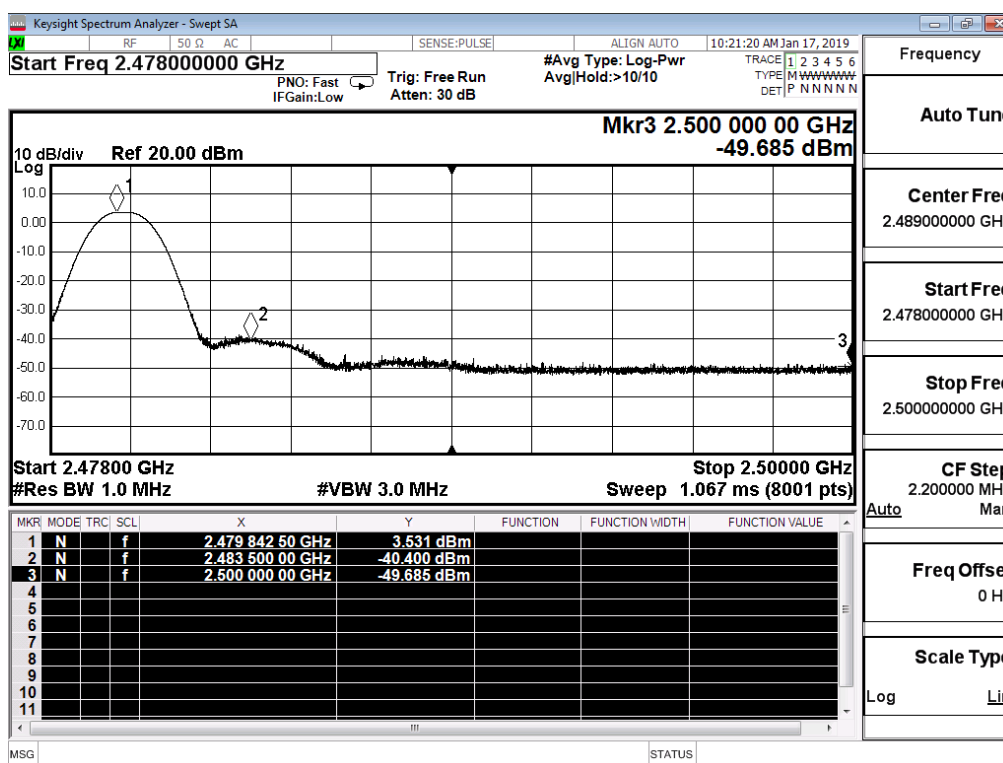
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



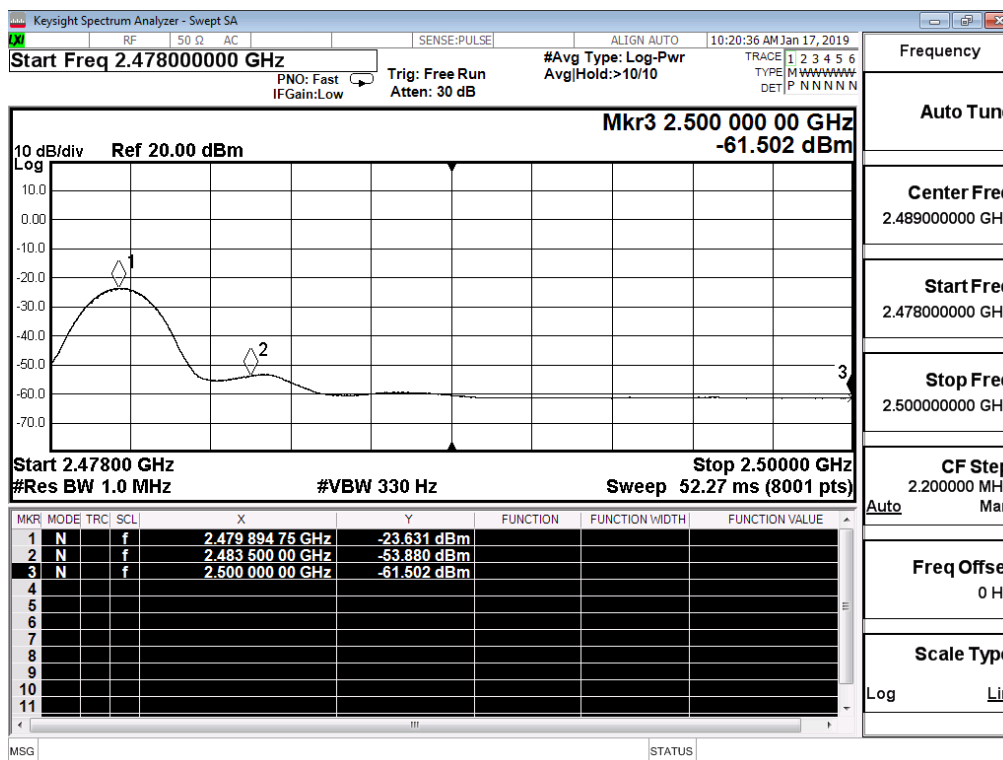
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

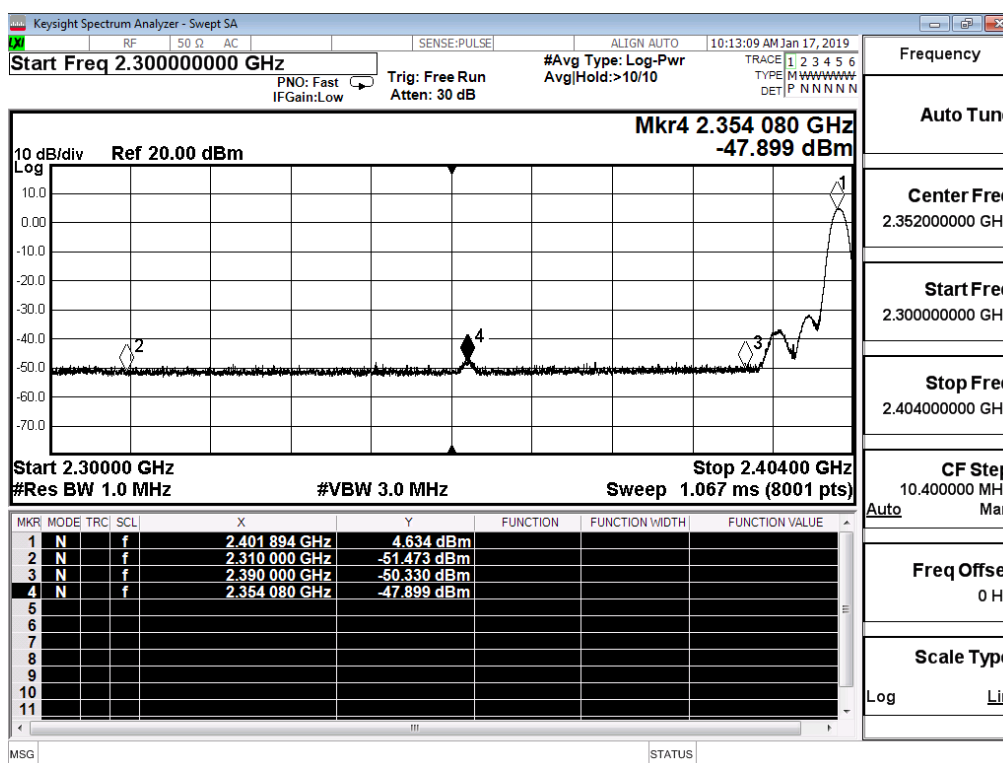
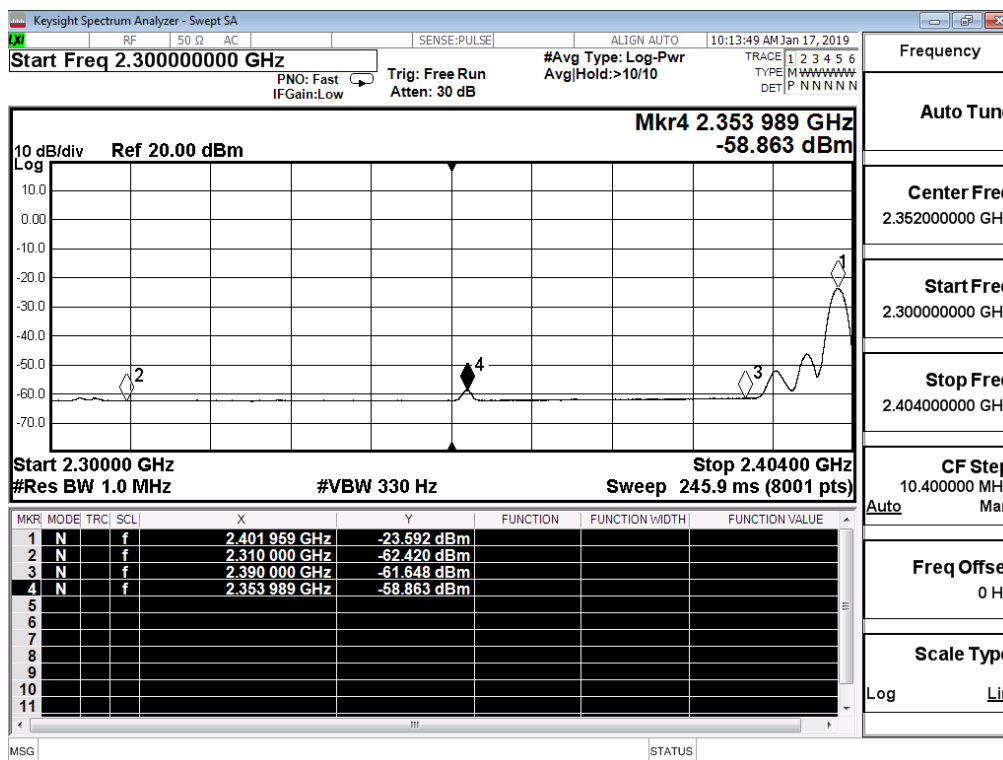


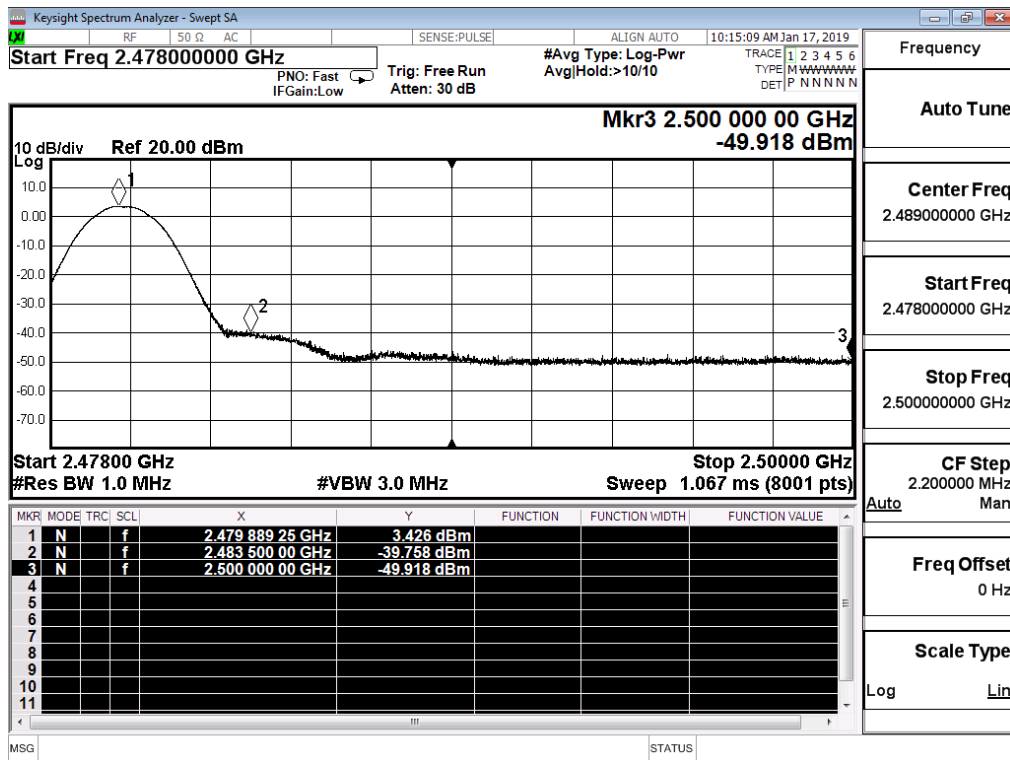
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



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)