

Appendix A

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

Product Name: Bluetooth Speaker

Trade Mark: GSOU

Test Model: M1

Environmental Conditions

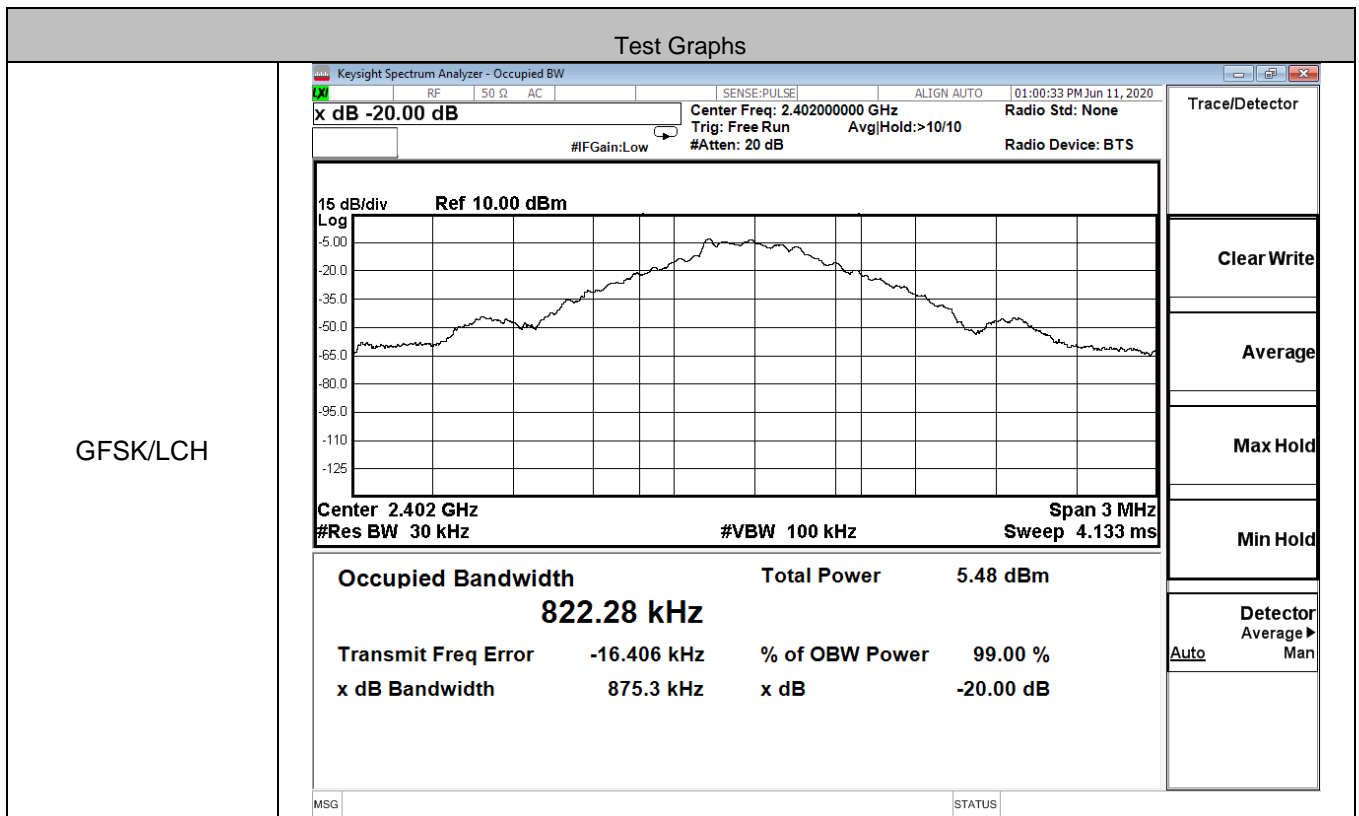
Temperature:	23.3 ° C
Relative Humidity:	52.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

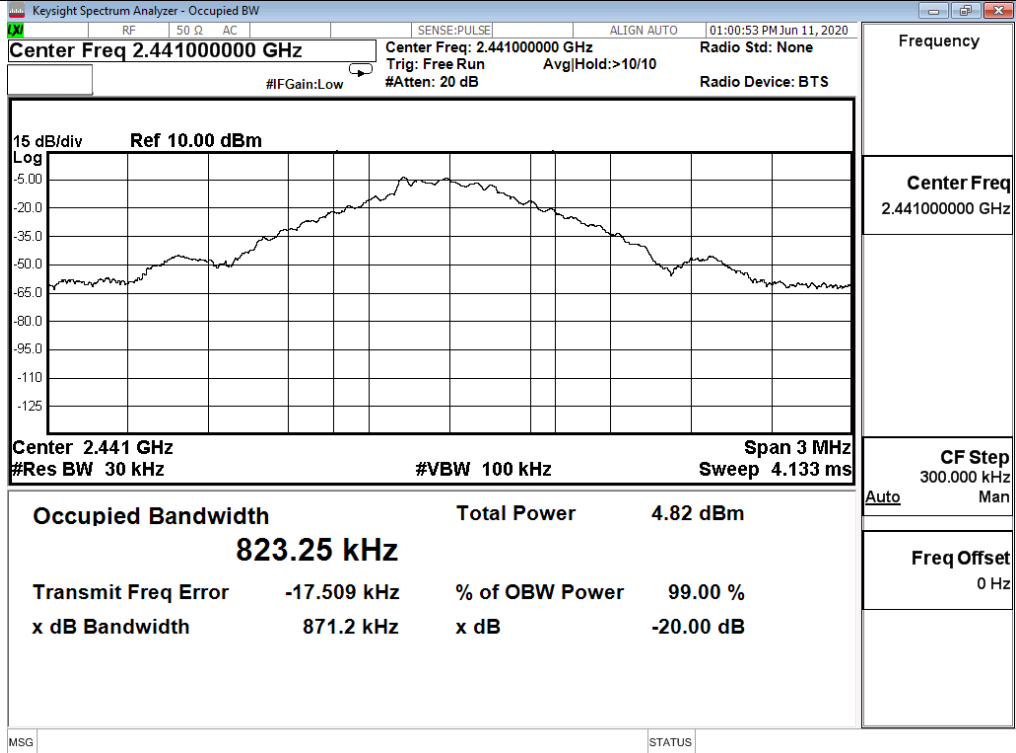
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.809	21	PASS
	MCH	-1.431	21	PASS
	HCH	-2.072	21	PASS
$\pi/4$ DQPSK	LCH	-0.183	21	PASS
	MCH	-0.757	21	PASS
	HCH	-1.437	21	PASS

A.2 20dB Bandwidth

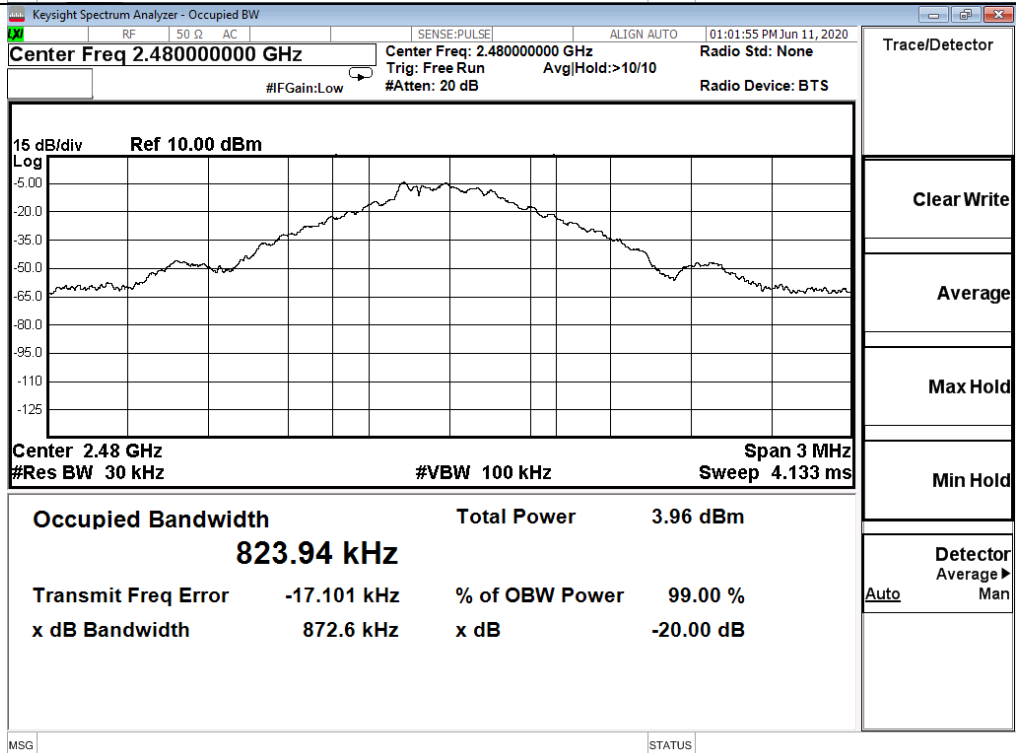
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.8753	Not Specified	PASS
	MCH	0.8712	Not Specified	PASS
	HCH	0.8726	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.254	Not Specified	PASS
	MCH	1.250	Not Specified	PASS
	HCH	1.252	Not Specified	PASS



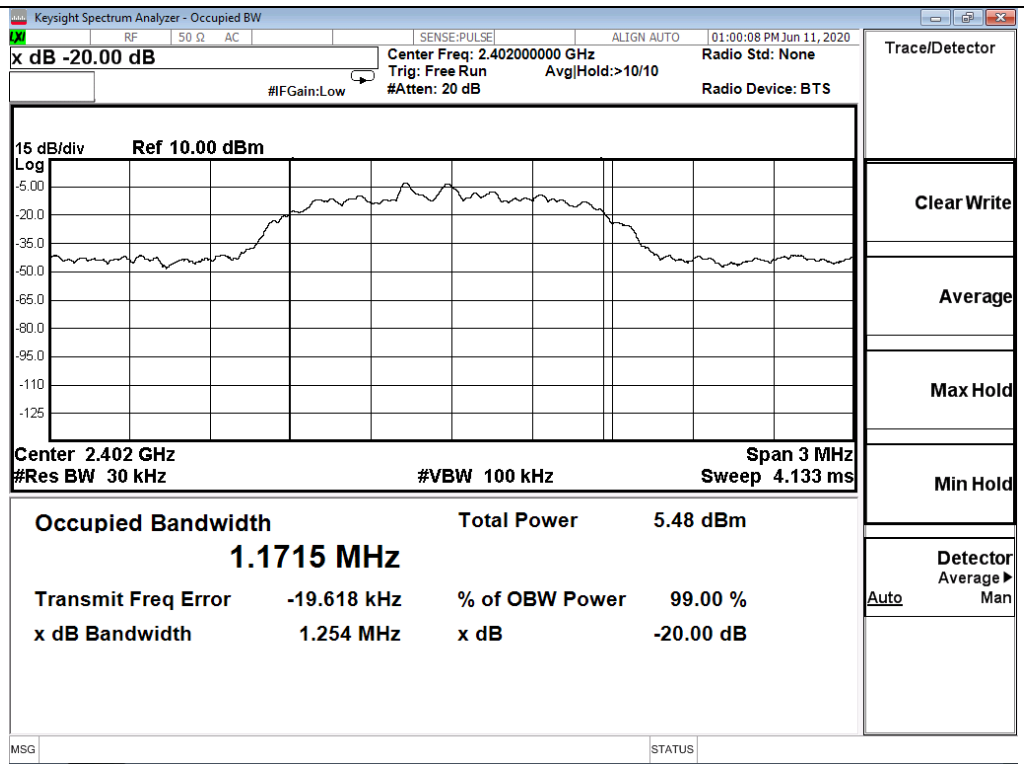
GFSK/MCH



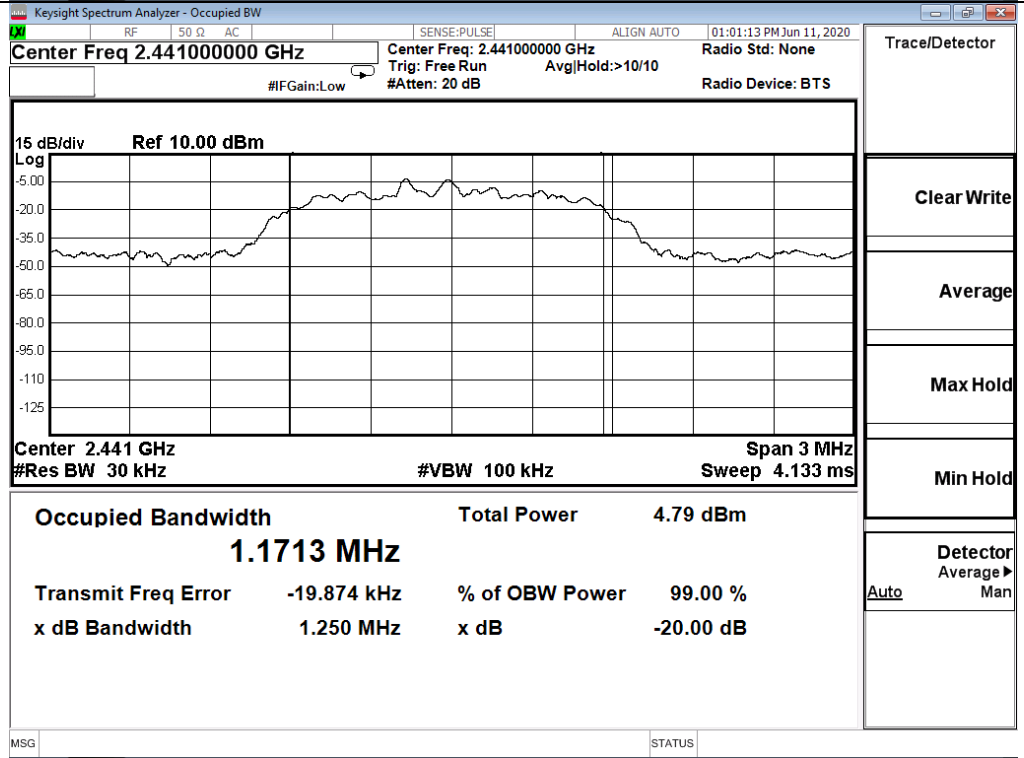
GFSK/HCH

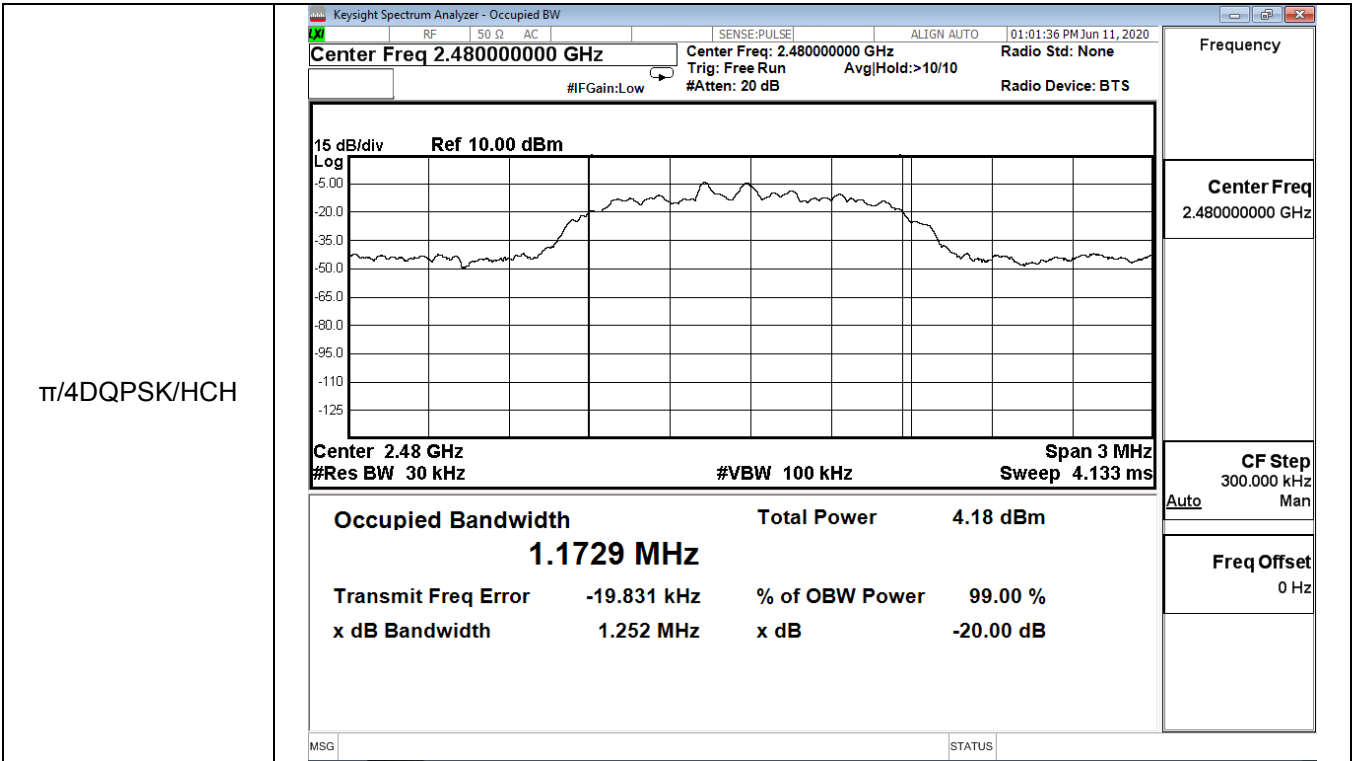


$\pi/4$ DQPSK/LCH



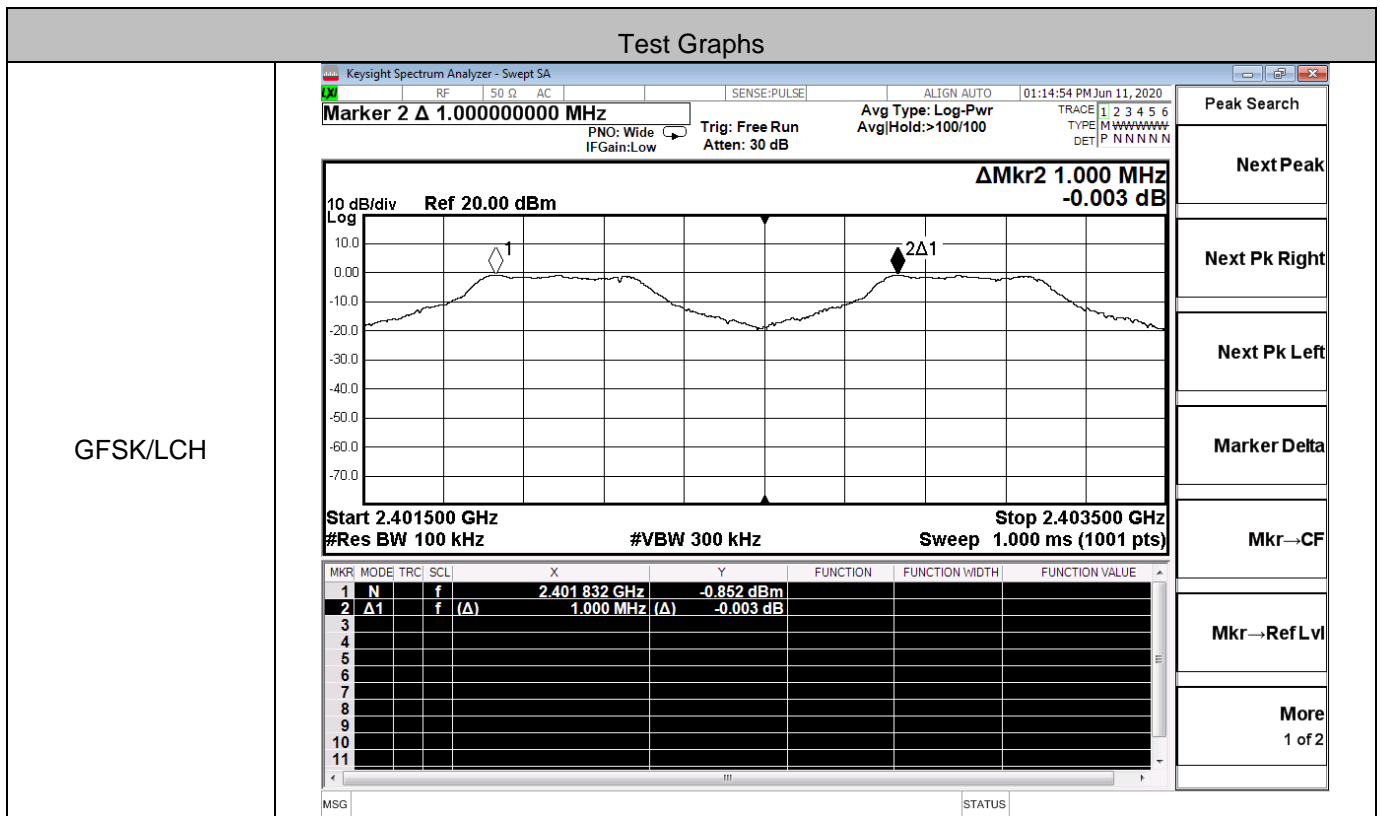
$\pi/4$ DQPSK/MCH



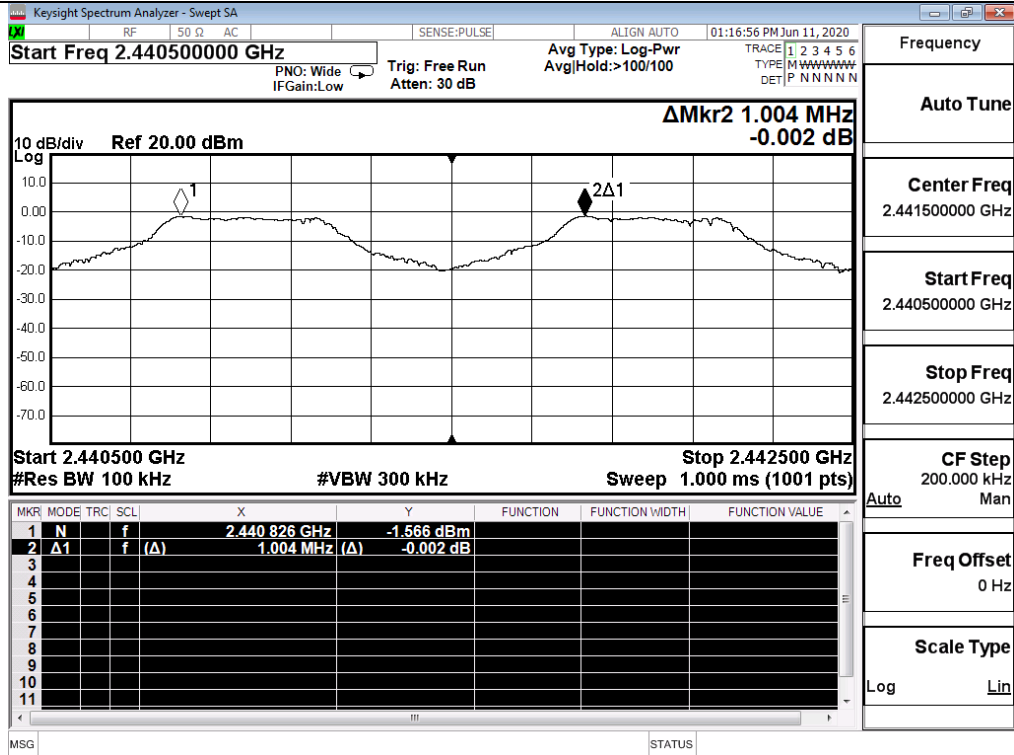


A.3 Carrier Frequency Separation

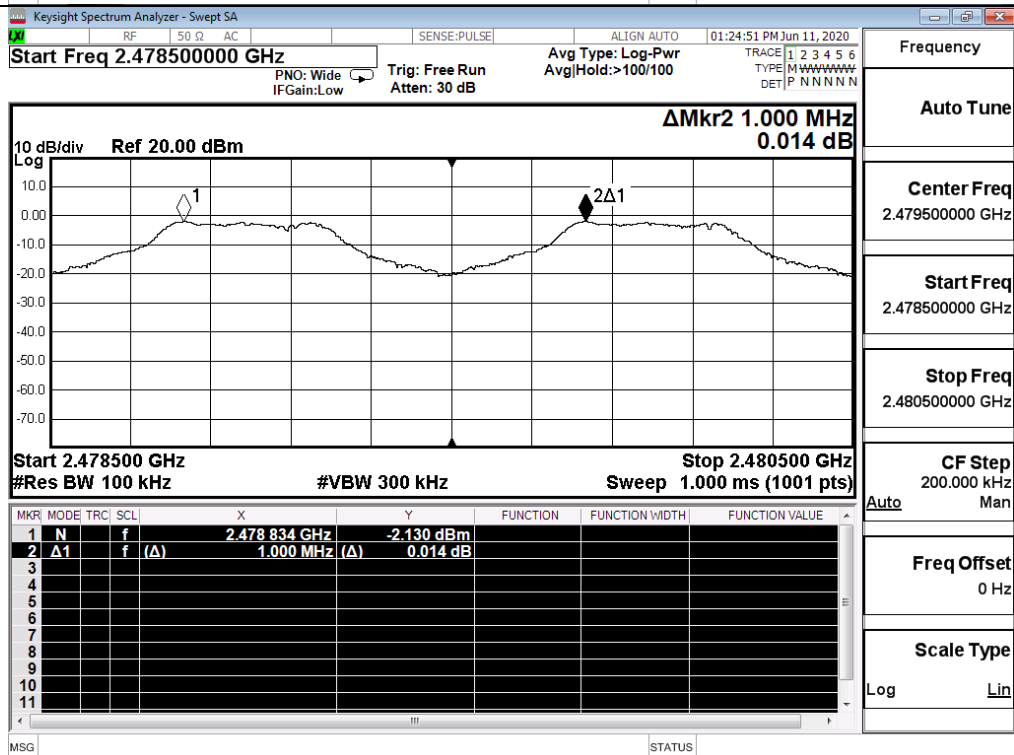
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.000	0.58	PASS
	MCH	1.004	0.58	PASS
	HCH	1.000	0.58	PASS
π/4DQPSK	LCH	1.002	0.84	PASS
	MCH	1.004	0.83	PASS
	HCH	0.998	0.83	PASS



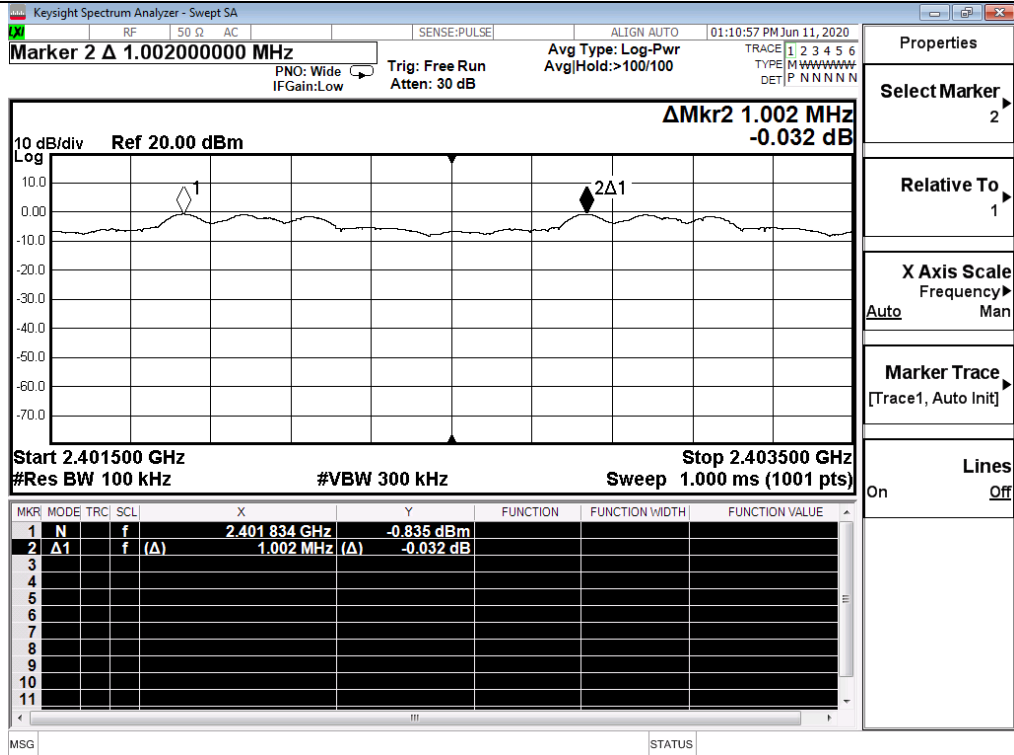
GFSK/MCH



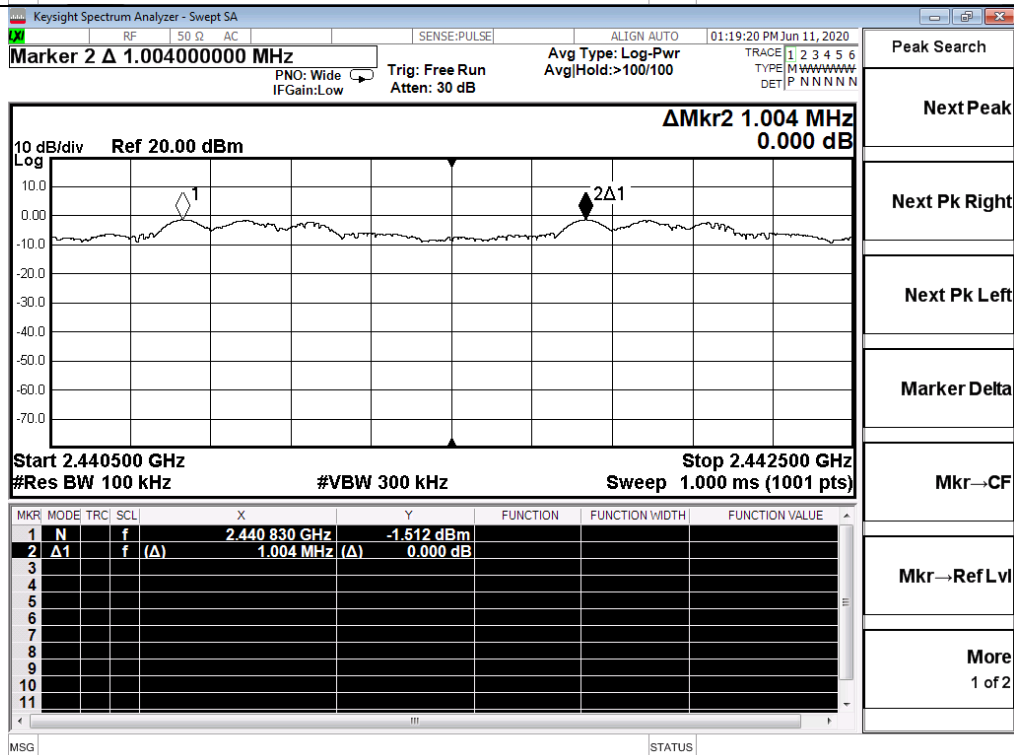
GFSK/HCH



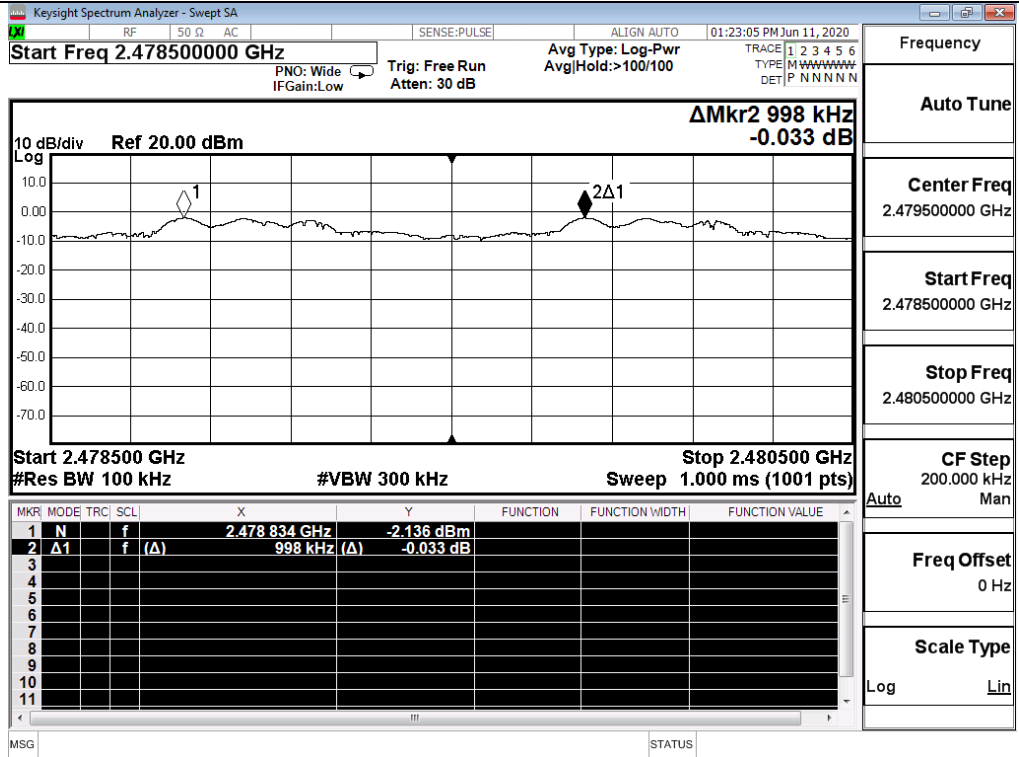
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



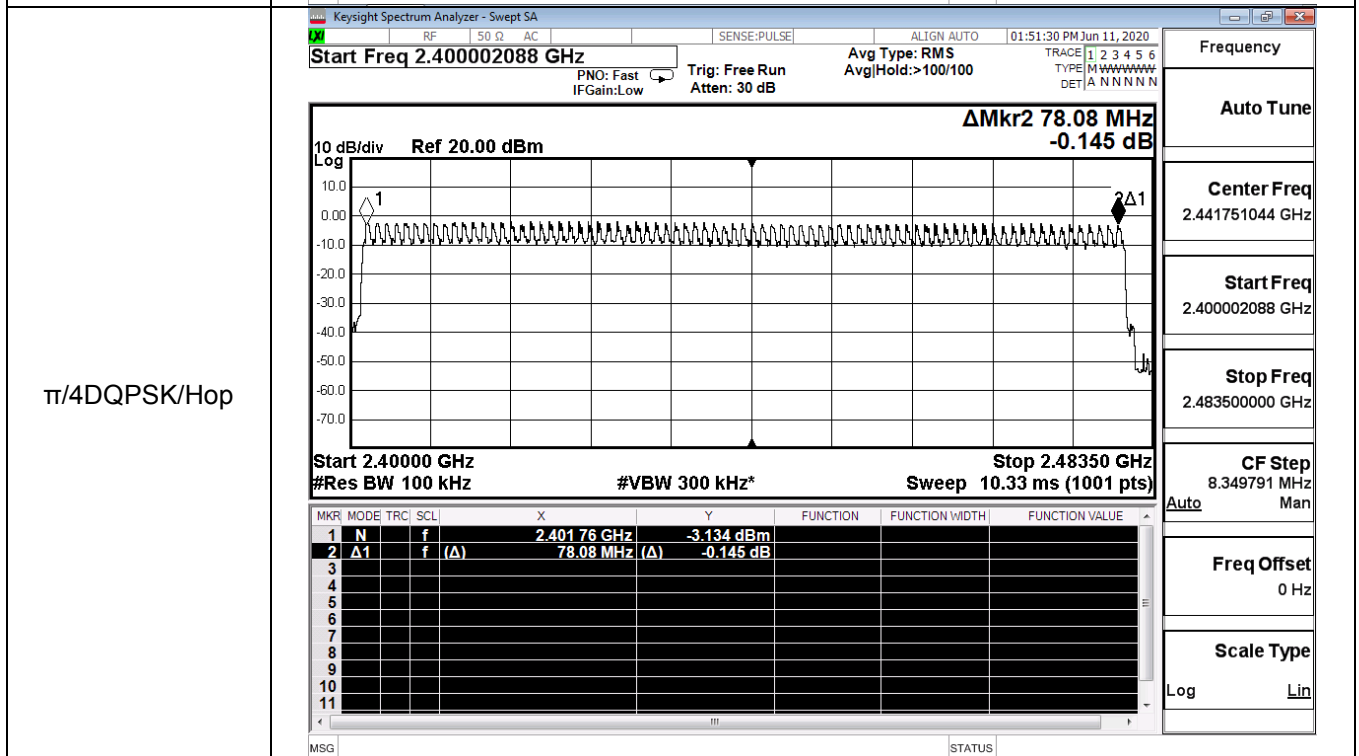
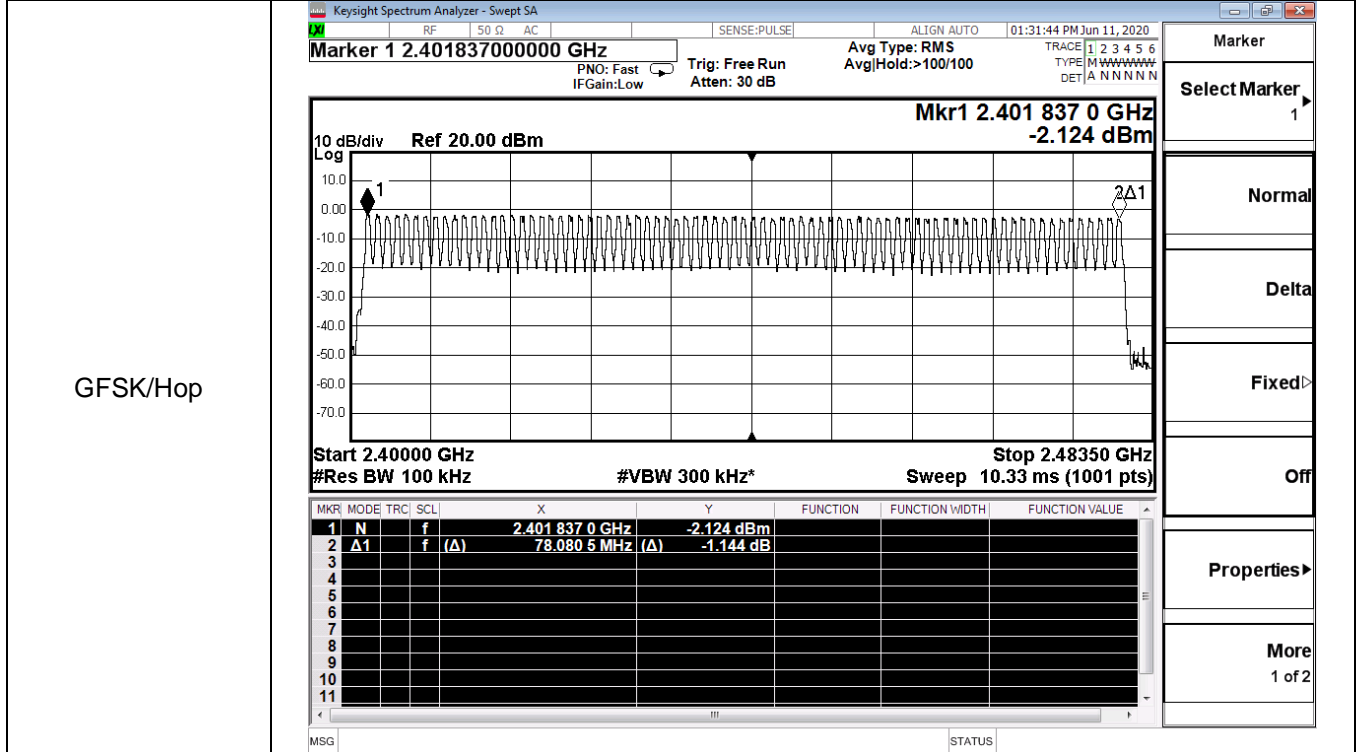
π/4DQPSK/HCH



A.4 Hopping Channel Number

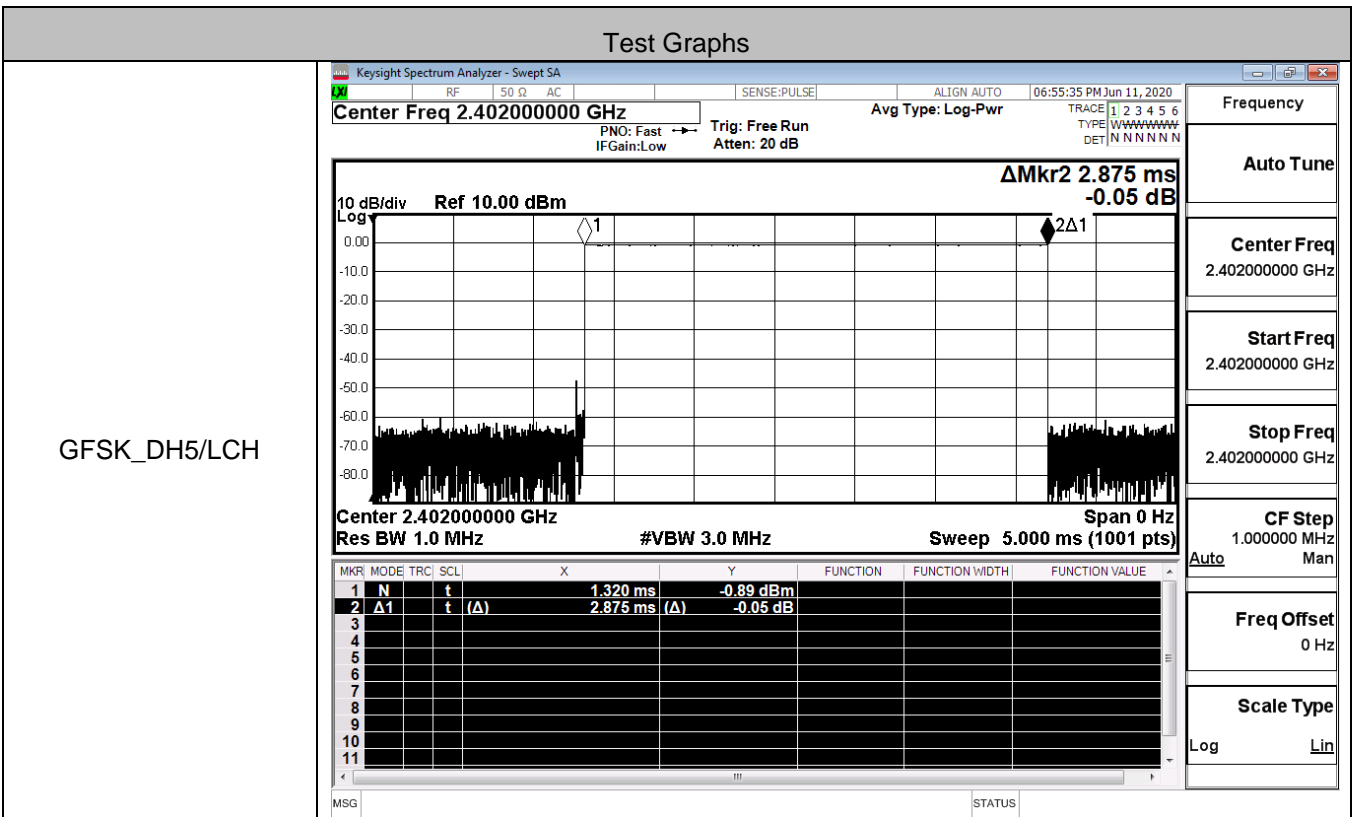
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS

Test Graphs

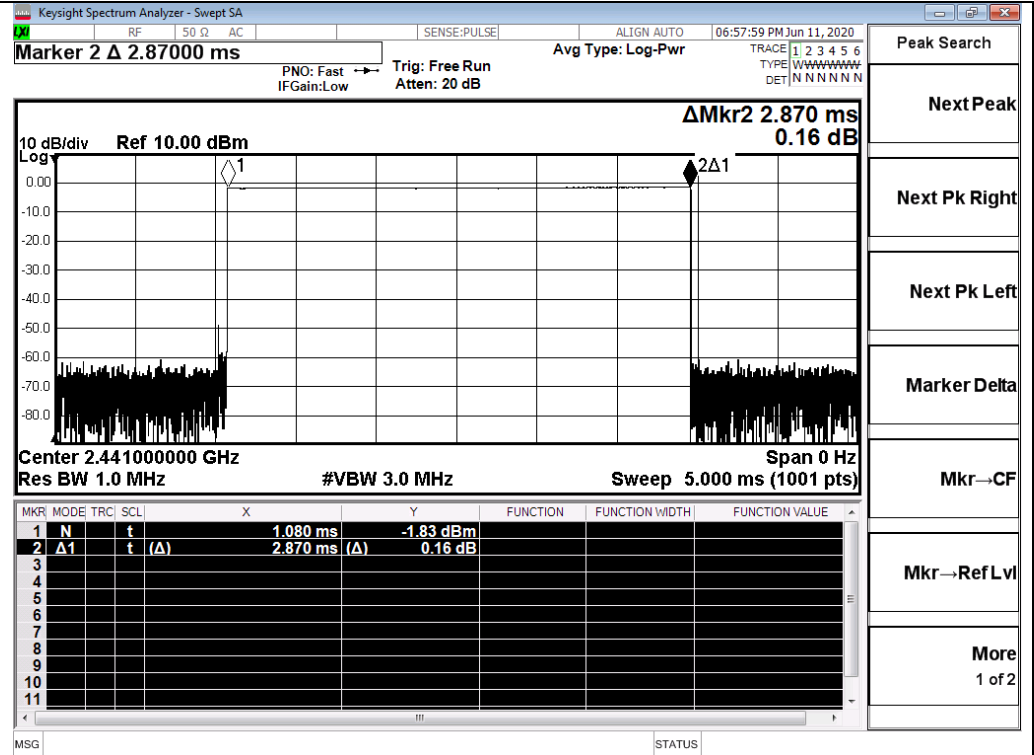


A.5 Dwell Time

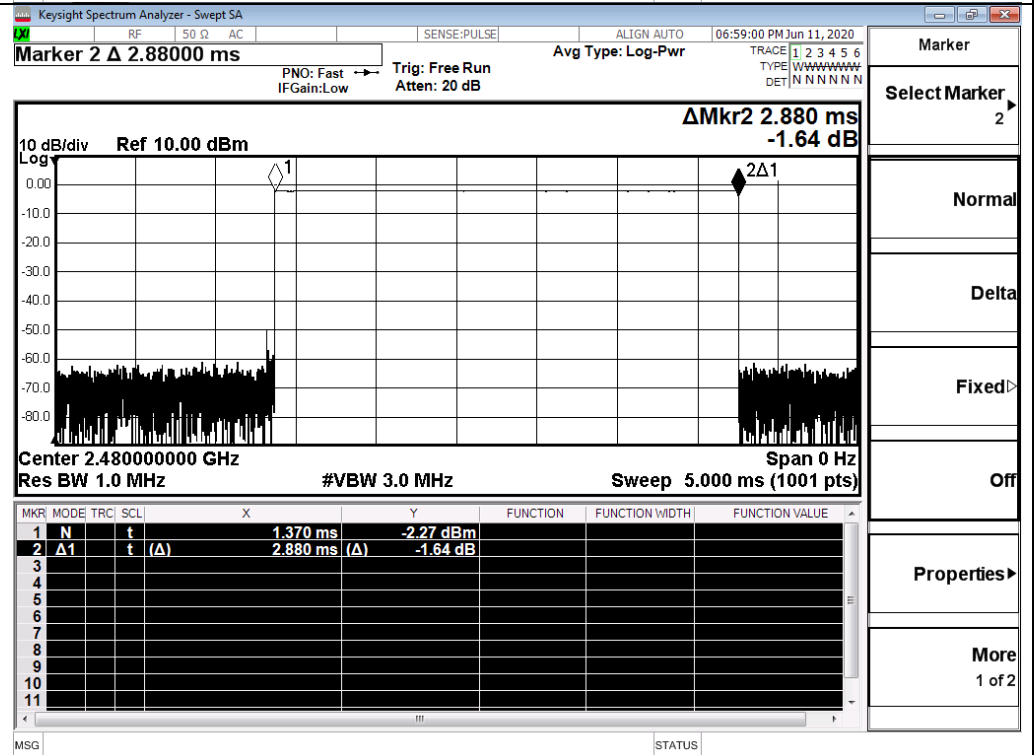
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.31	0.4	PASS
	DH5	MCH	2.87	106.7	0.31	0.4	PASS
	DH5	HCH	2.88	106.7	0.31	0.4	PASS
π/4DQPSK	2DH5	LCH	2.89	106.7	0.31	0.4	PASS
	2DH5	MCH	2.88	106.7	0.31	0.4	PASS
	2DH5	HCH	2.88	106.7	0.31	0.4	PASS



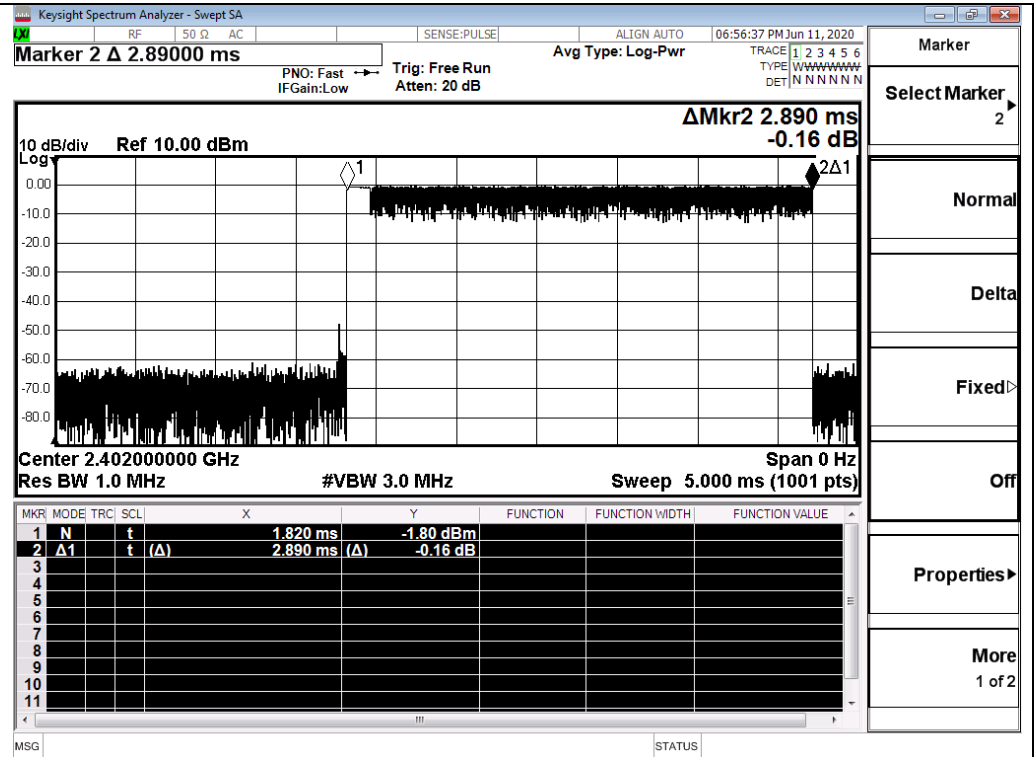
GFSK_DH5/MCH



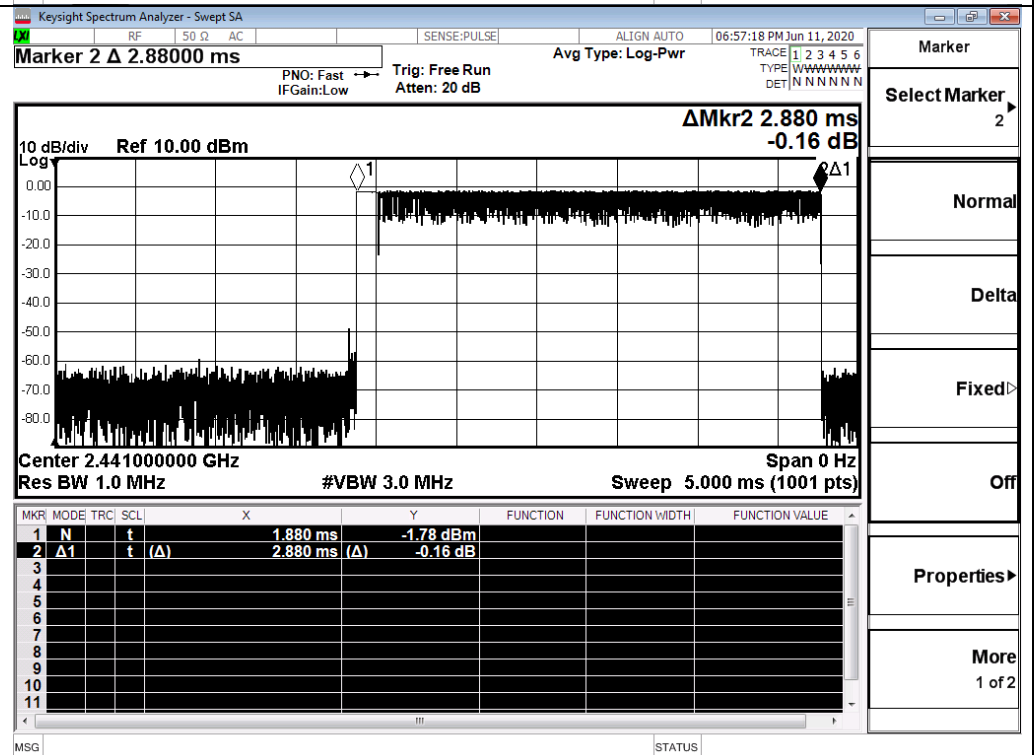
GFSK_DH5/HCH



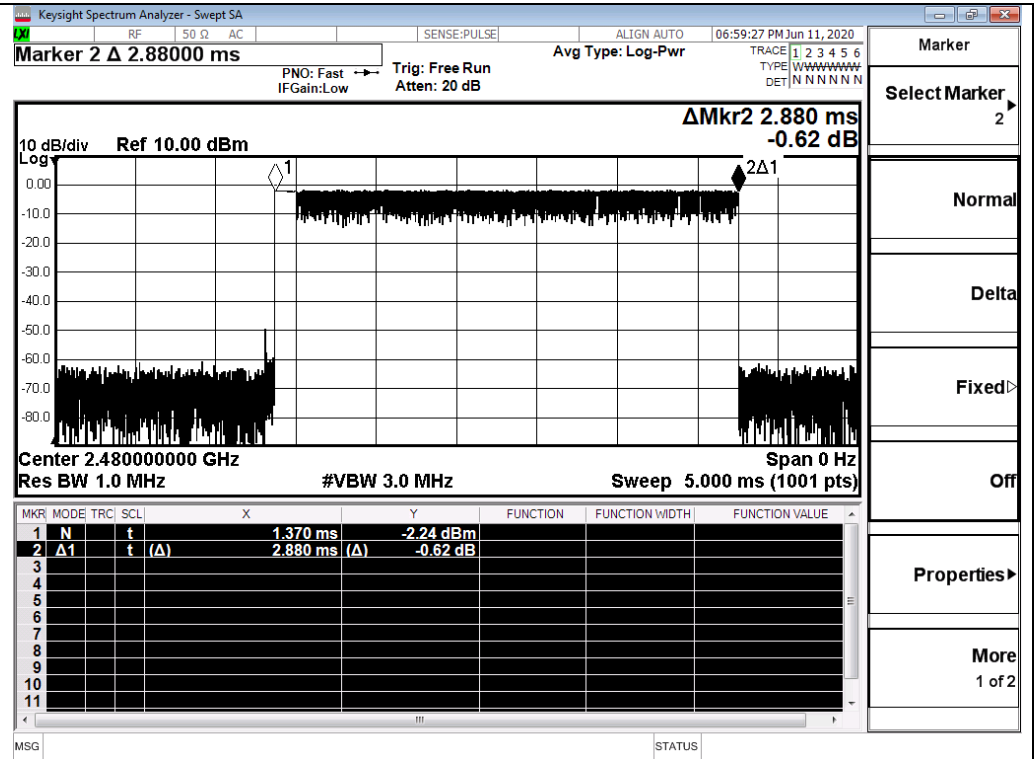
$\pi/4$ DQPSK
_2DH5/LCH



$\pi/4$ DQPSK
_2DH5/MCH

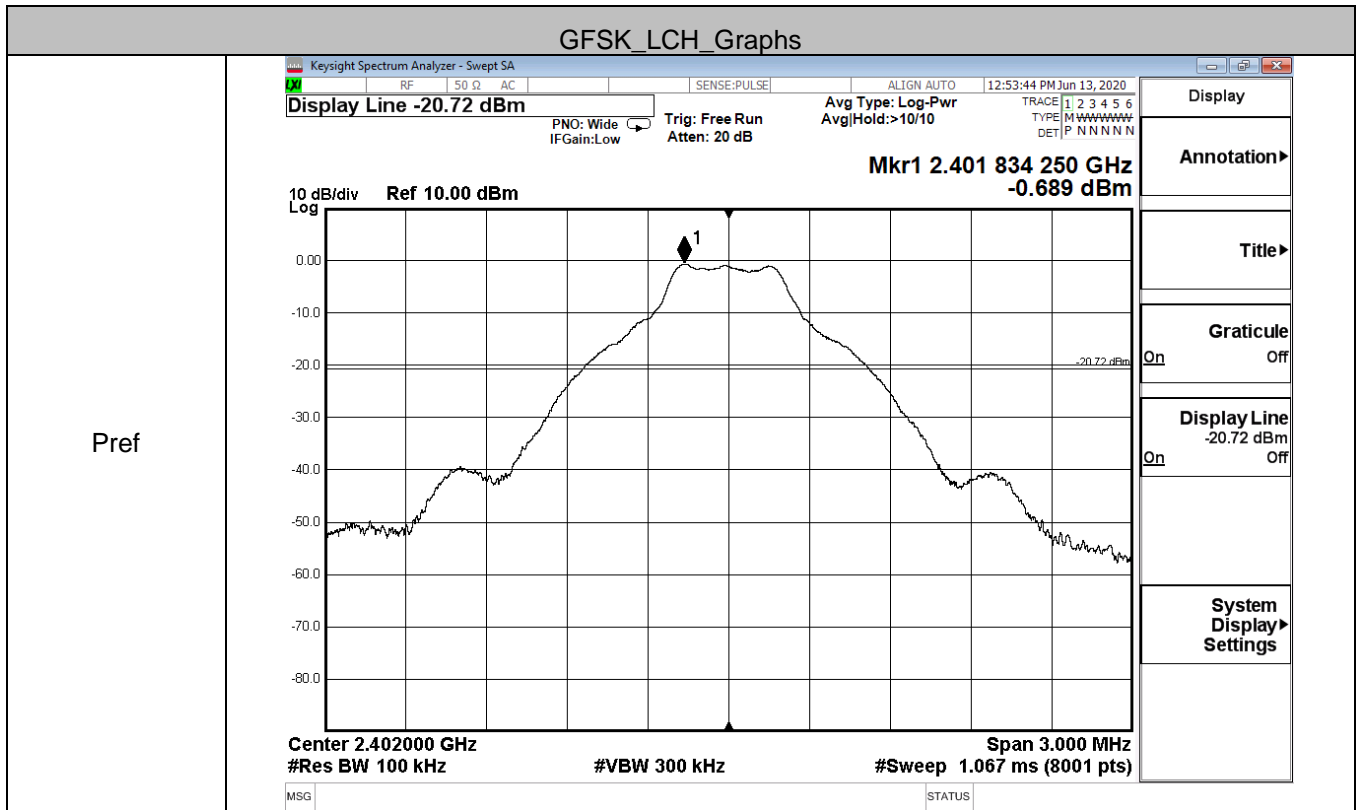


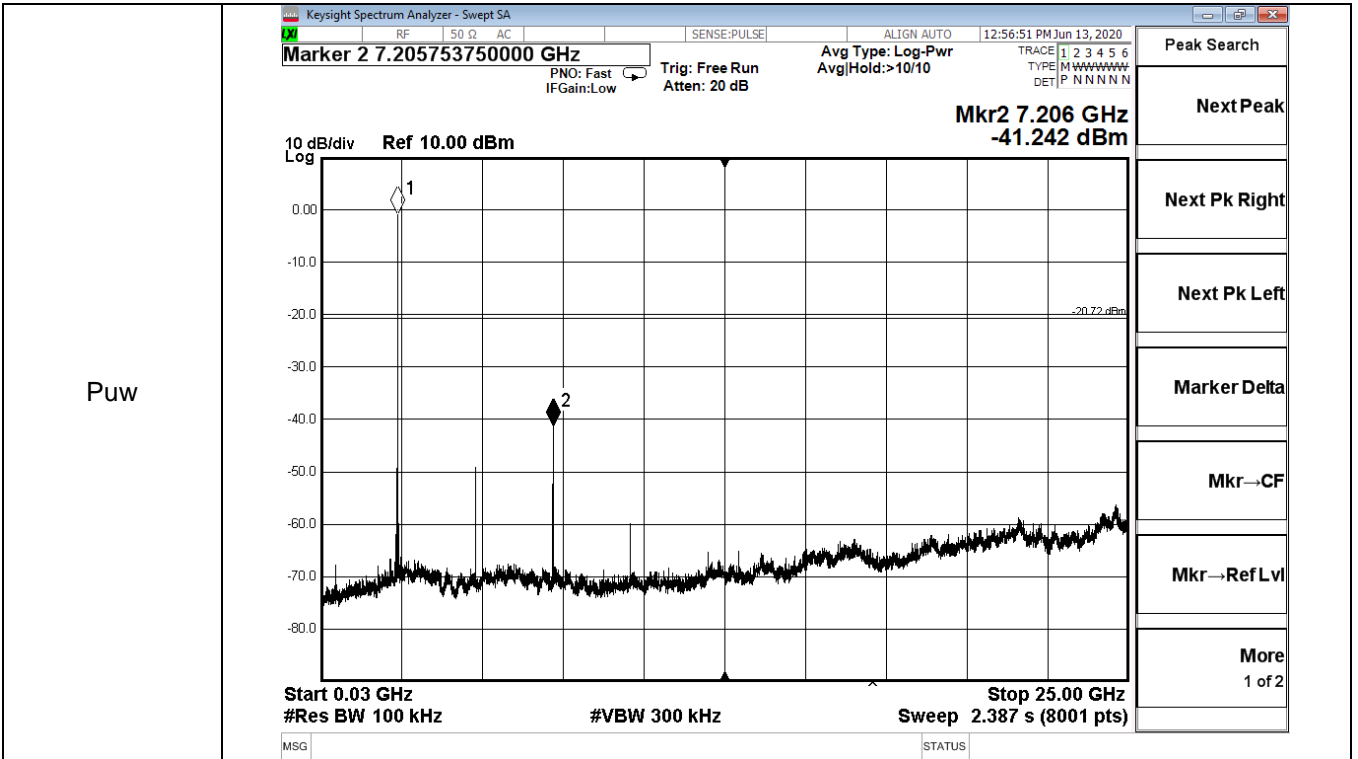
$\pi/4$ DQPSK
_2DH5/HCH



A.6 RF Conducted Spurious Emissions

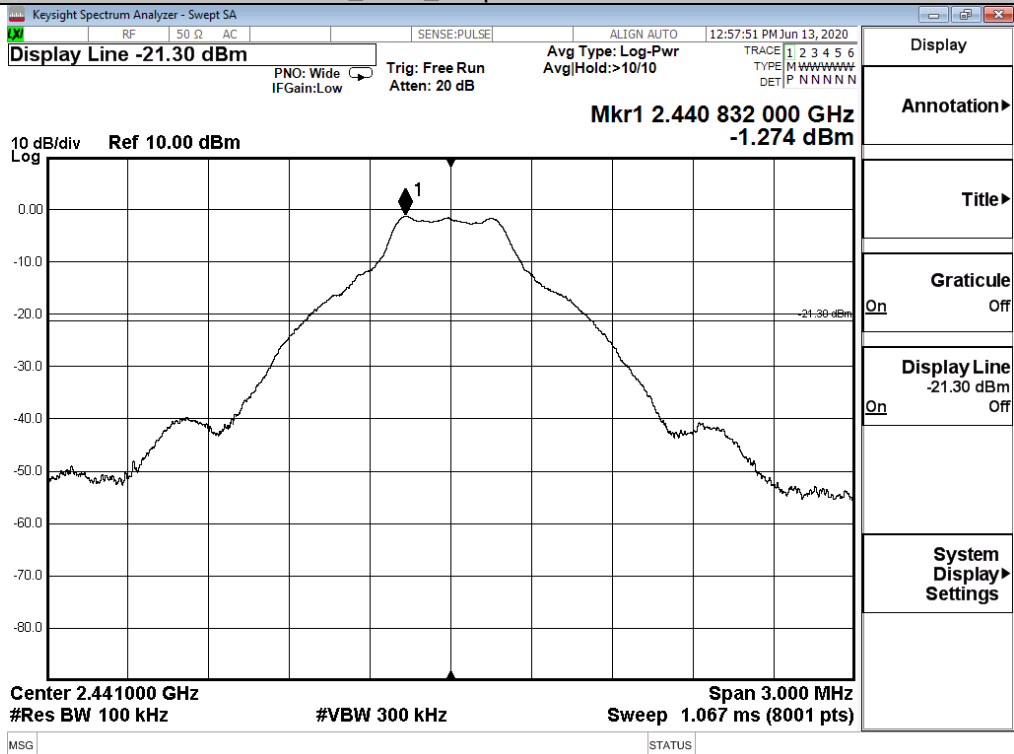
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.689	-41.242	-20.69	PASS
	MCH	-1.274	-41.891	-21.27	PASS
	HCH	-2.113	-44.191	-22.11	PASS
$\pi/4$ DQPSK	LCH	-0.574	-41.389	-20.57	PASS
	MCH	-1.296	-44.978	-21.30	PASS
	HCH	-2.061	-46.327	-22.06	PASS



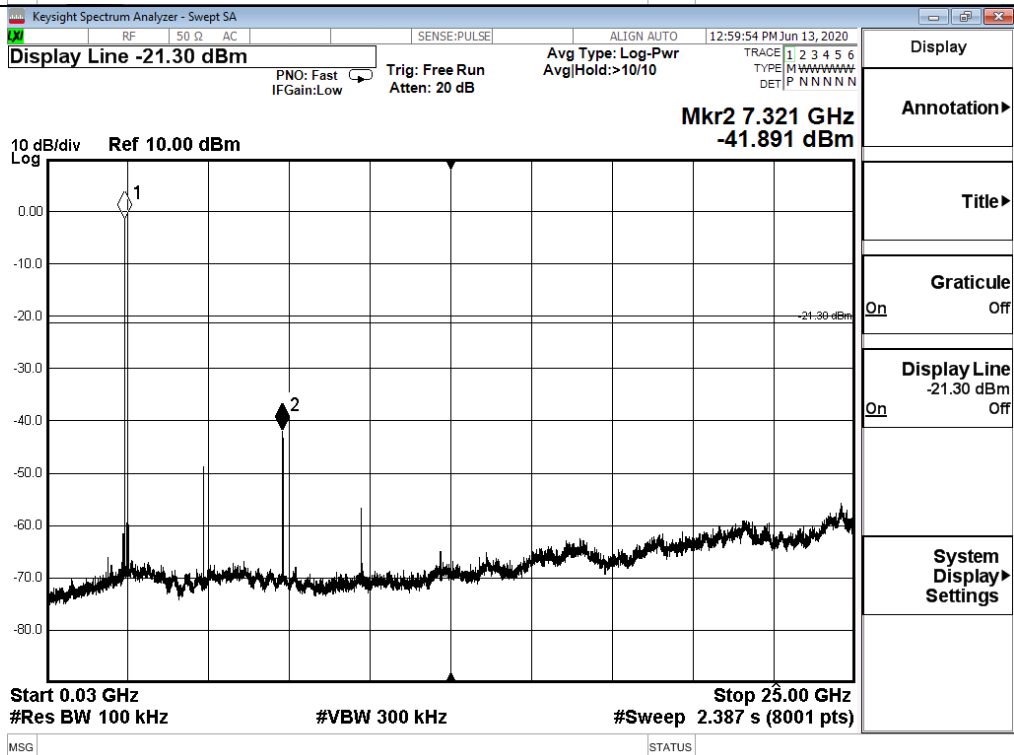


GFSK_MCH_Graphs

Pref

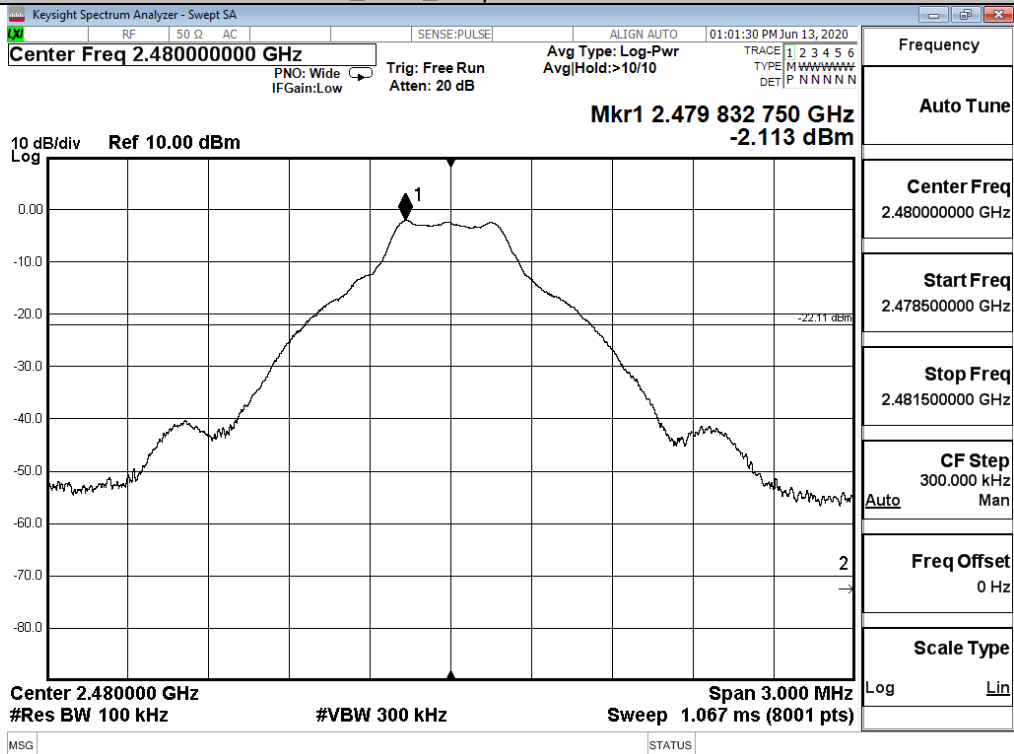


Puw

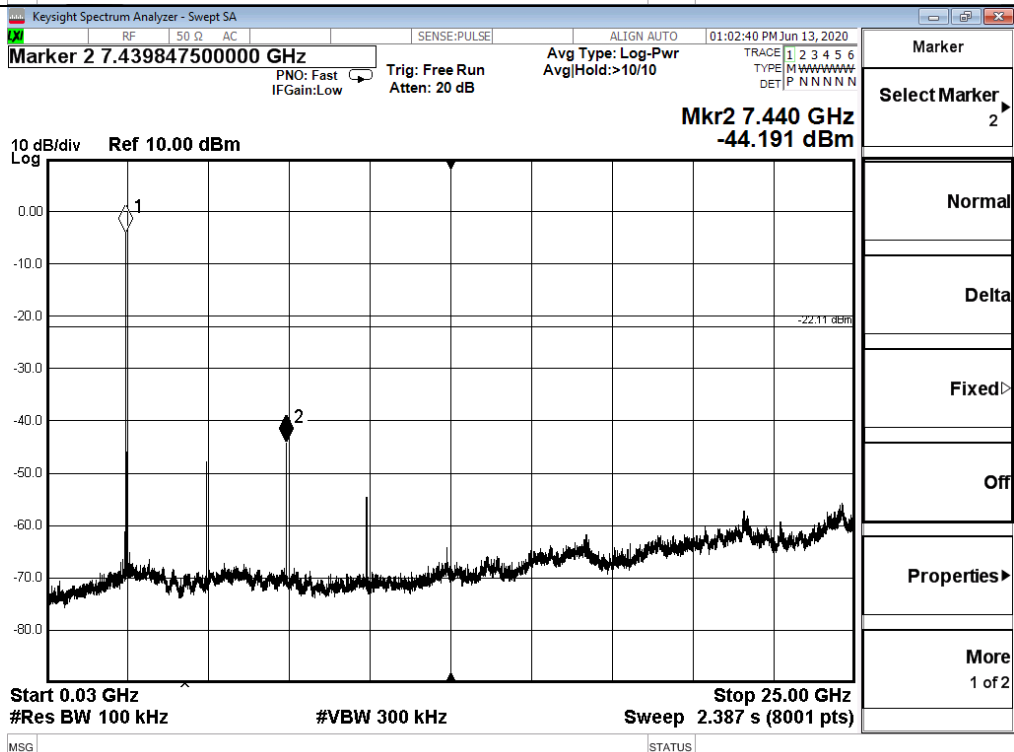


GFSK_HCH_Graphs

Pref

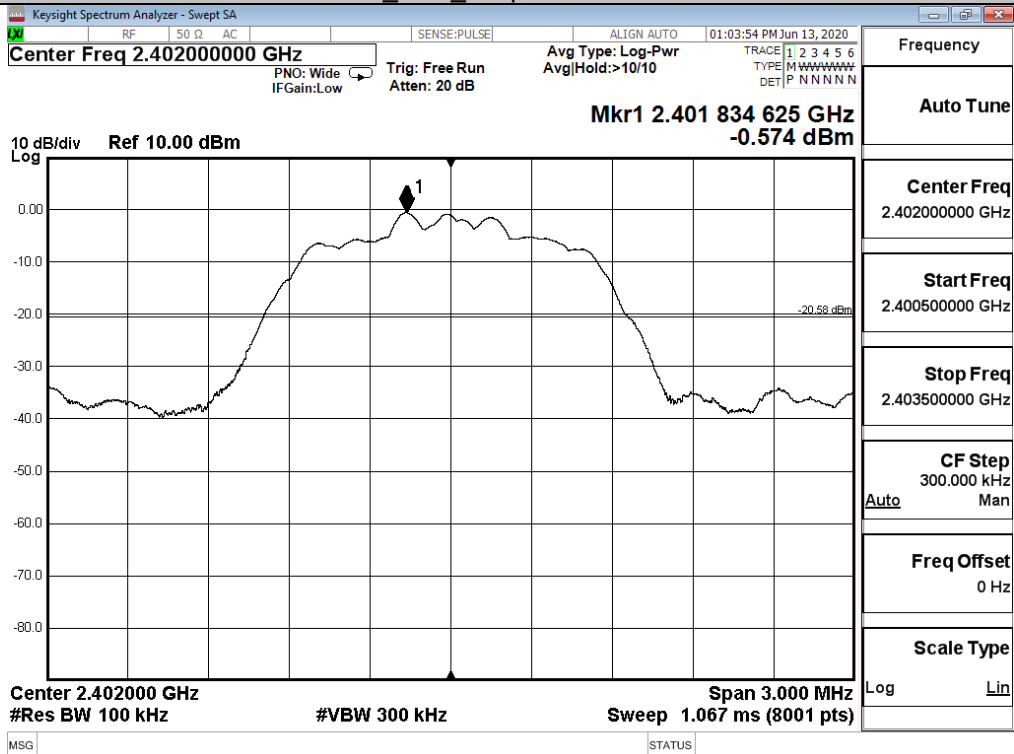


Puw

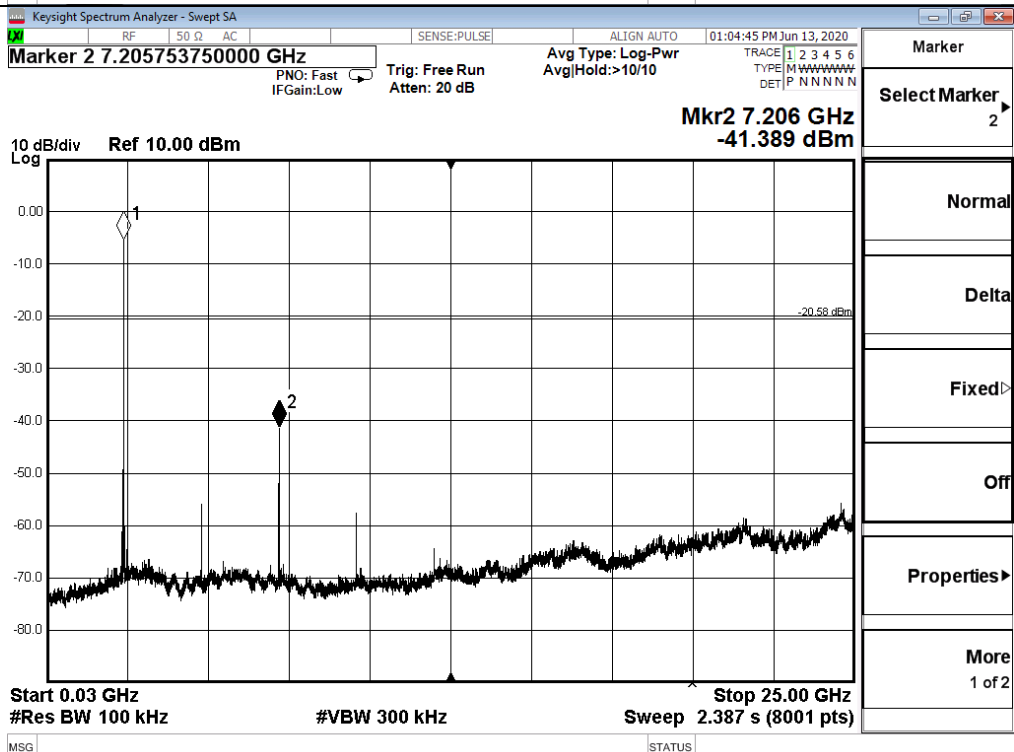


$\pi/4$ DQPSK_LCH_Graphs

Pref

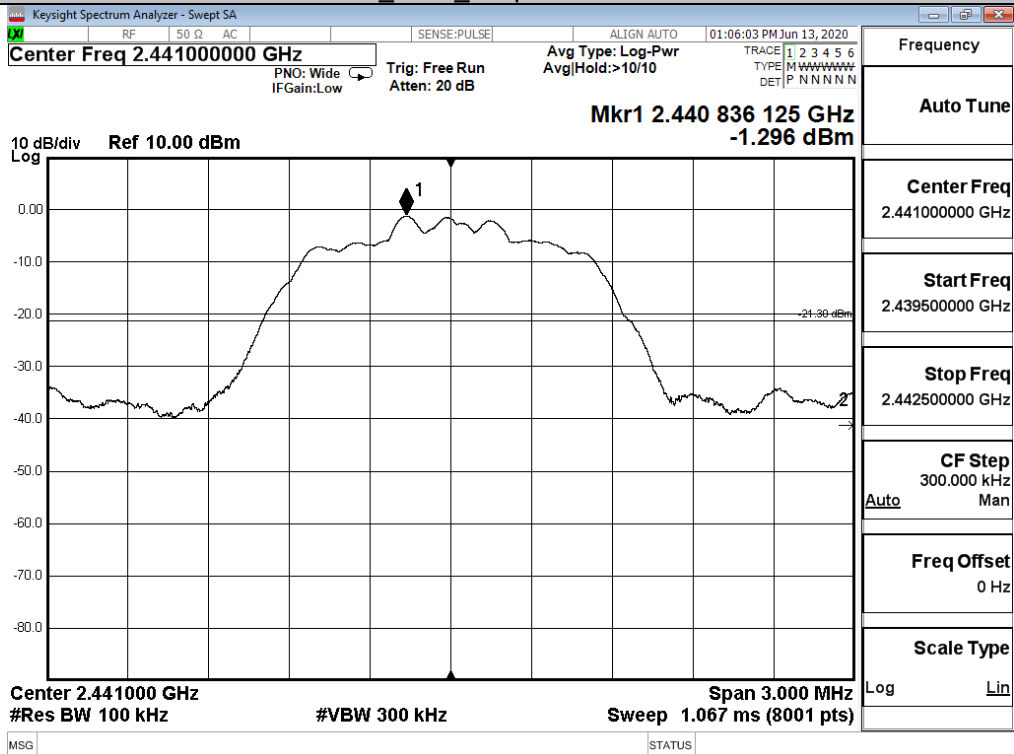


Puw

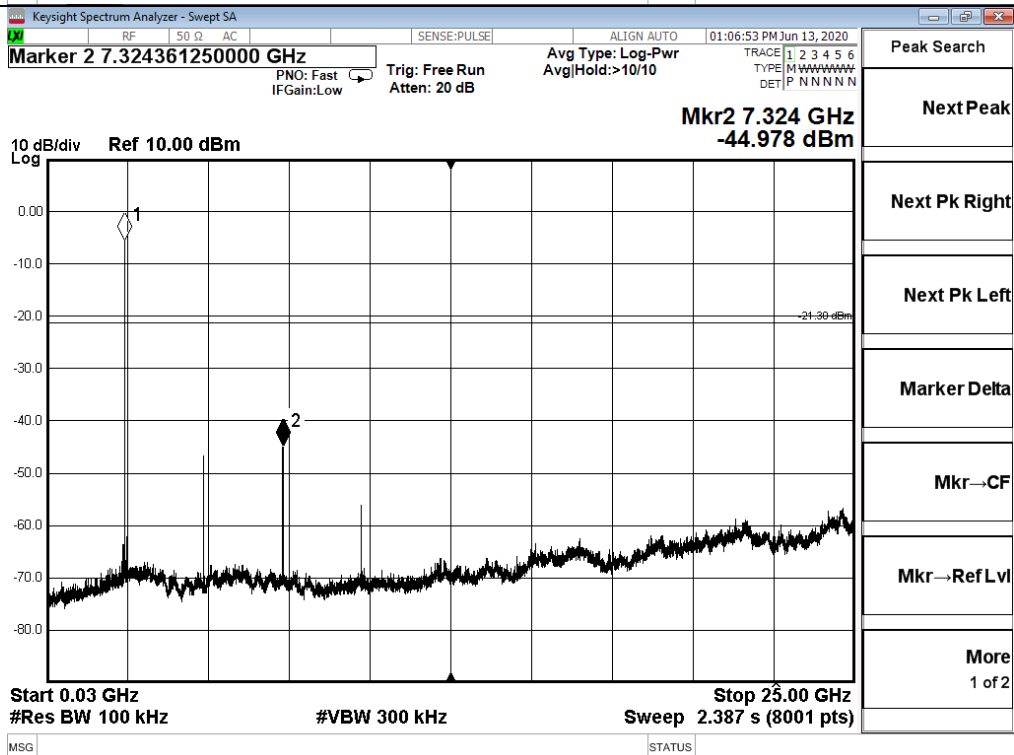


$\pi/4$ DQPSK_MCH_Graphs

Pref

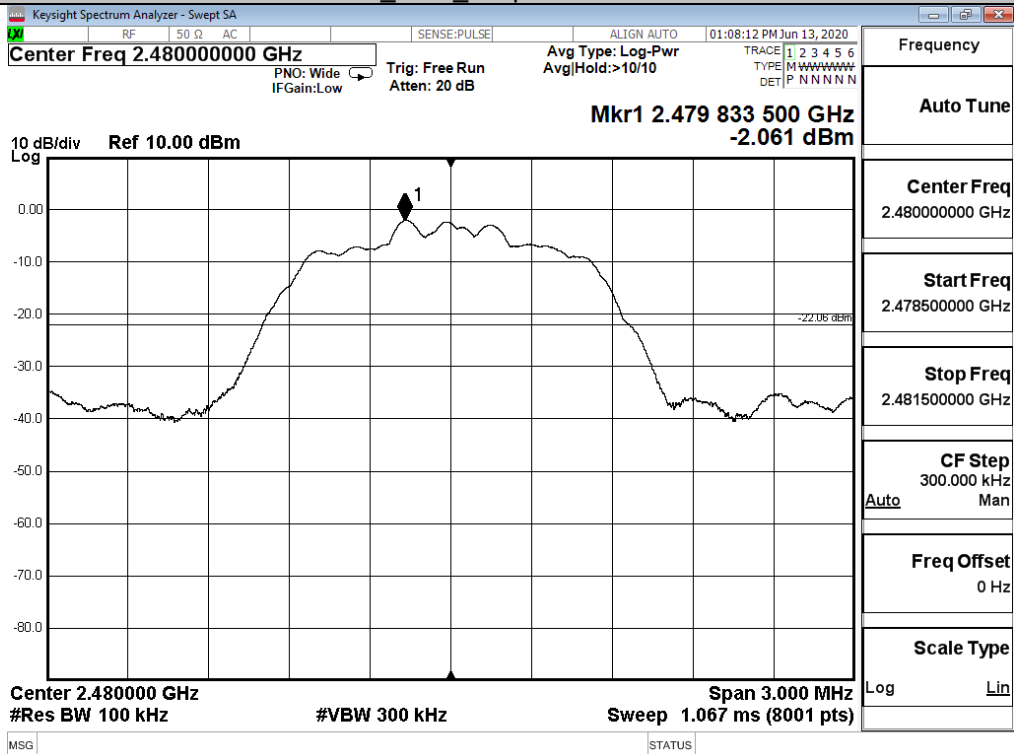


Puw

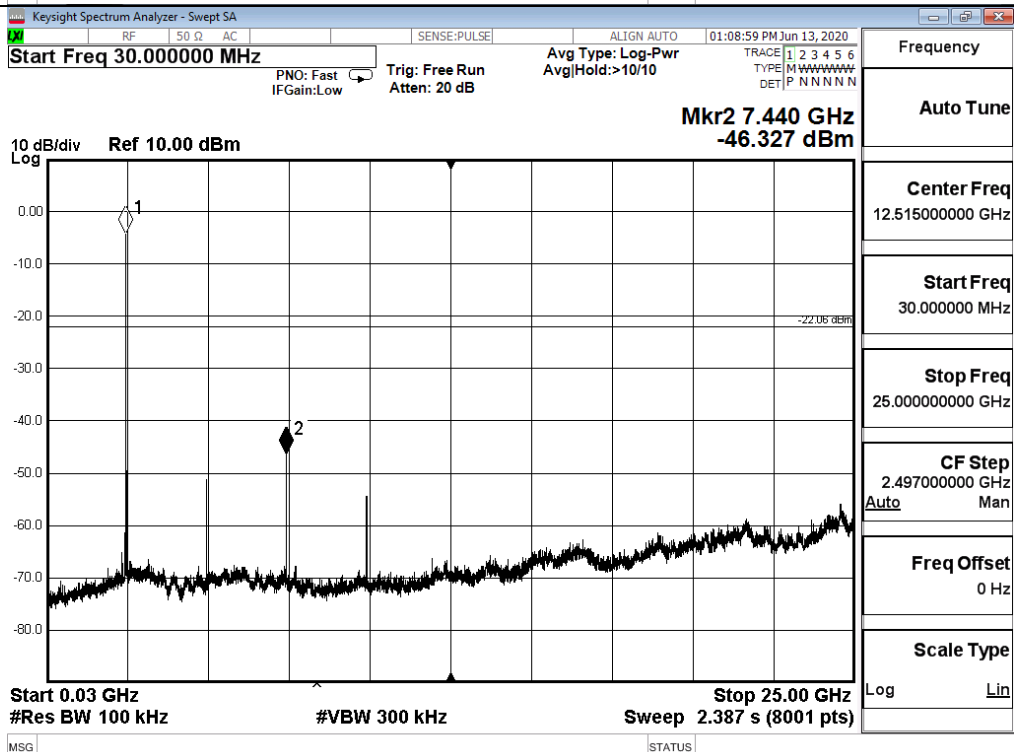


$\pi/4$ DQPSK_HCH_Graphs

Pref



Puw

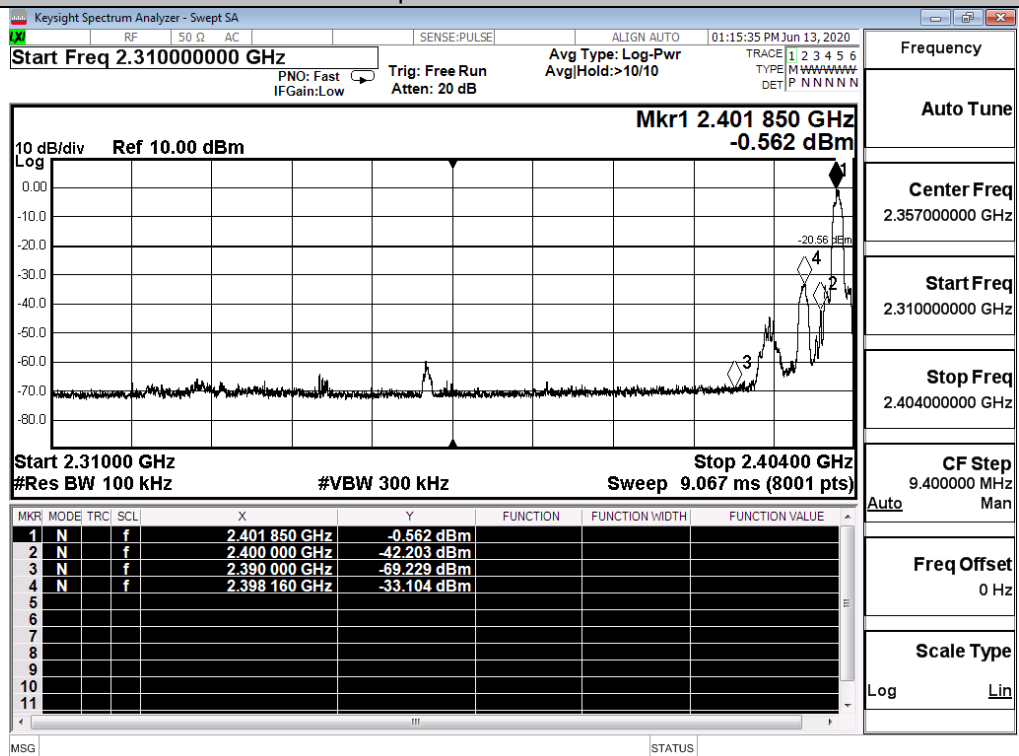


A.7 Band-edge for RF Conducted Emissions

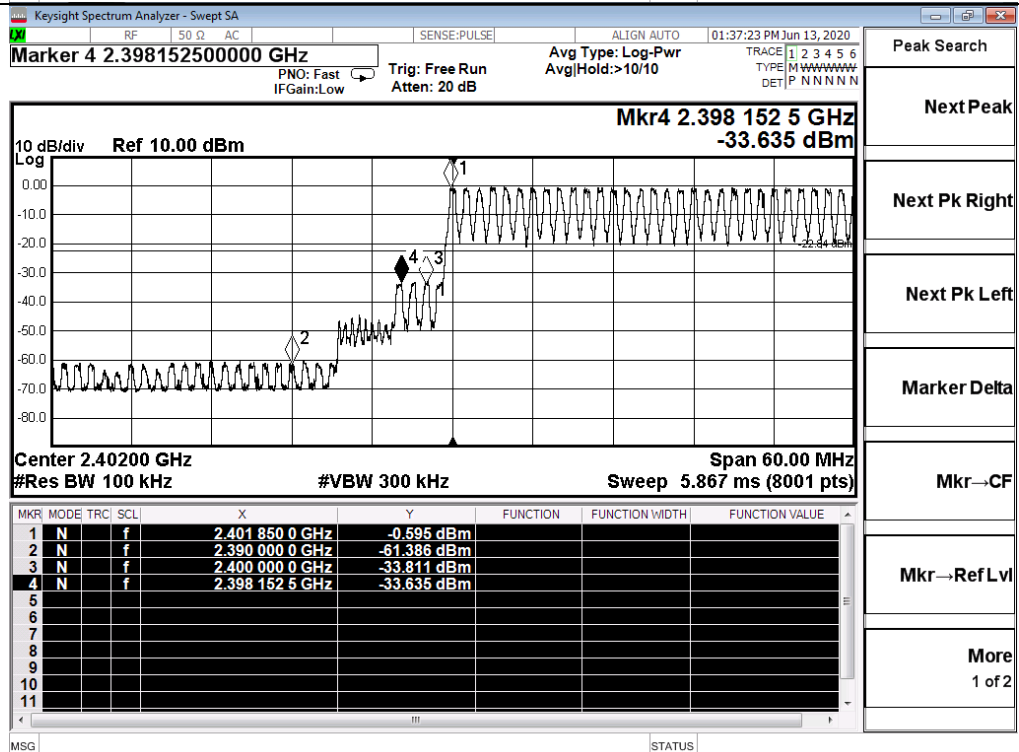
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-0.562	Off	-33.104	-20.56	PASS
			-0.595	On	-33.635	-20.60	PASS
	HCH	2480	-2.033	Off	-47.249	-22.03	PASS
			-2.843	On	-48.767	-22.84	PASS
$\pi/4$ DQPSK	LCH	2402	-0.567	Off	-32.971	-20.57	PASS
			-0.548	On	-33.207	-20.55	PASS
	HCH	2480	-2.027	Off	-47.876	-22.03	PASS
			-2.046	On	-48.614	-22.05	PASS

Test Graphs

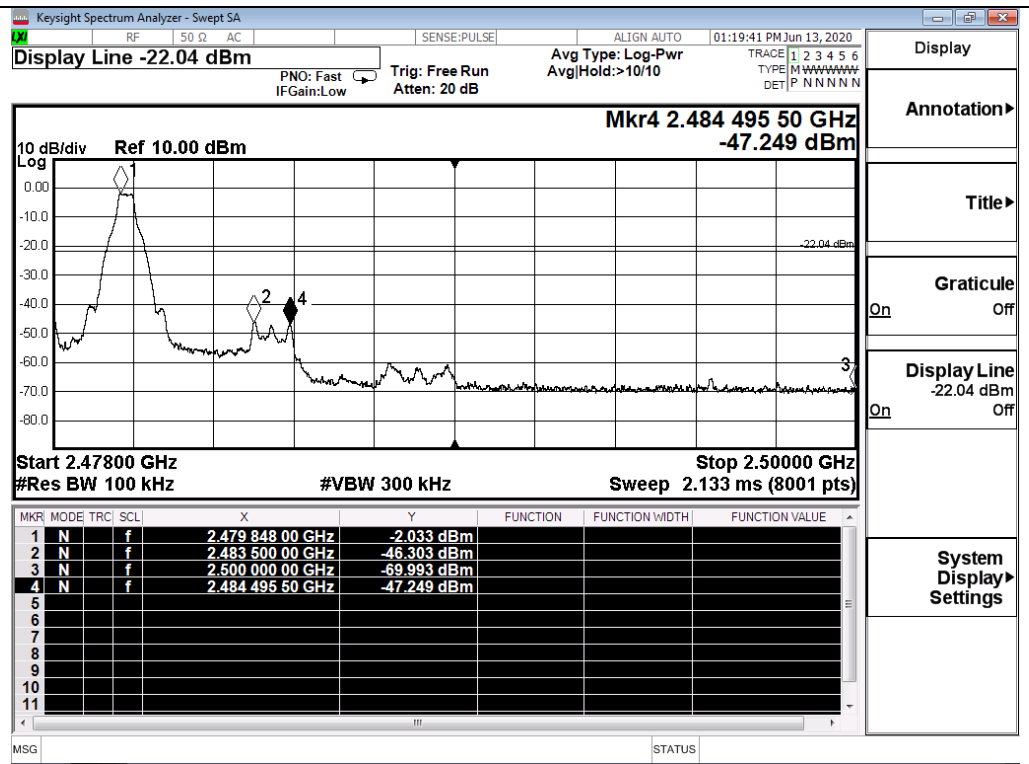
GFSK/LCH/No Hop



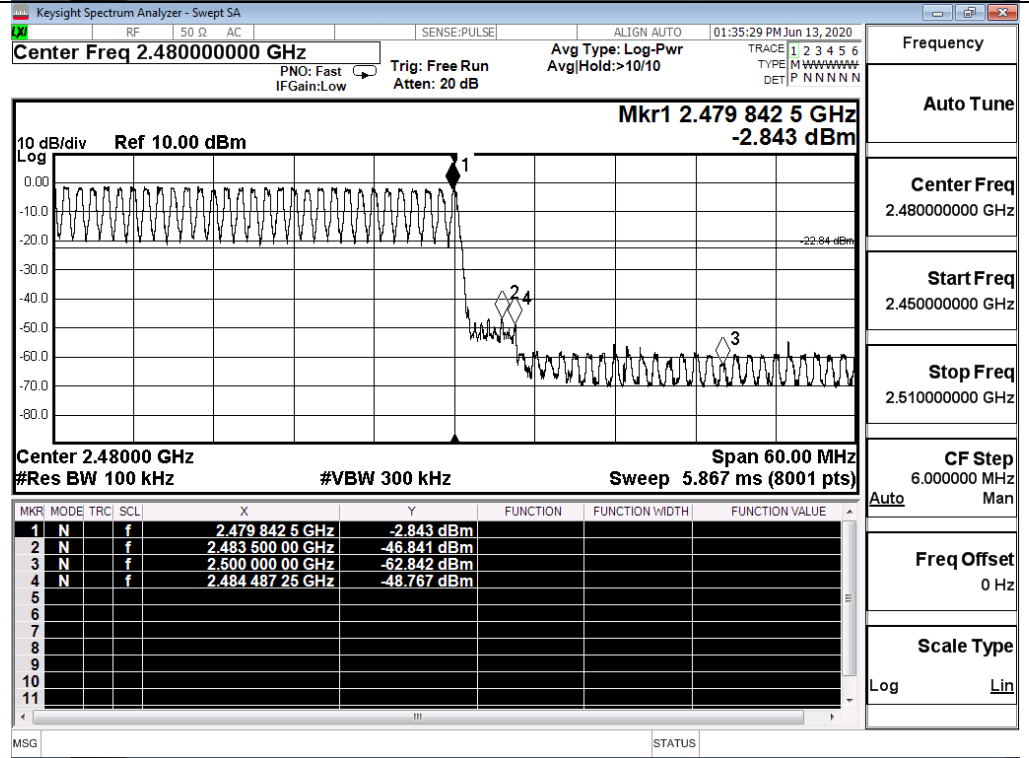
GFSK/LCH/Hop



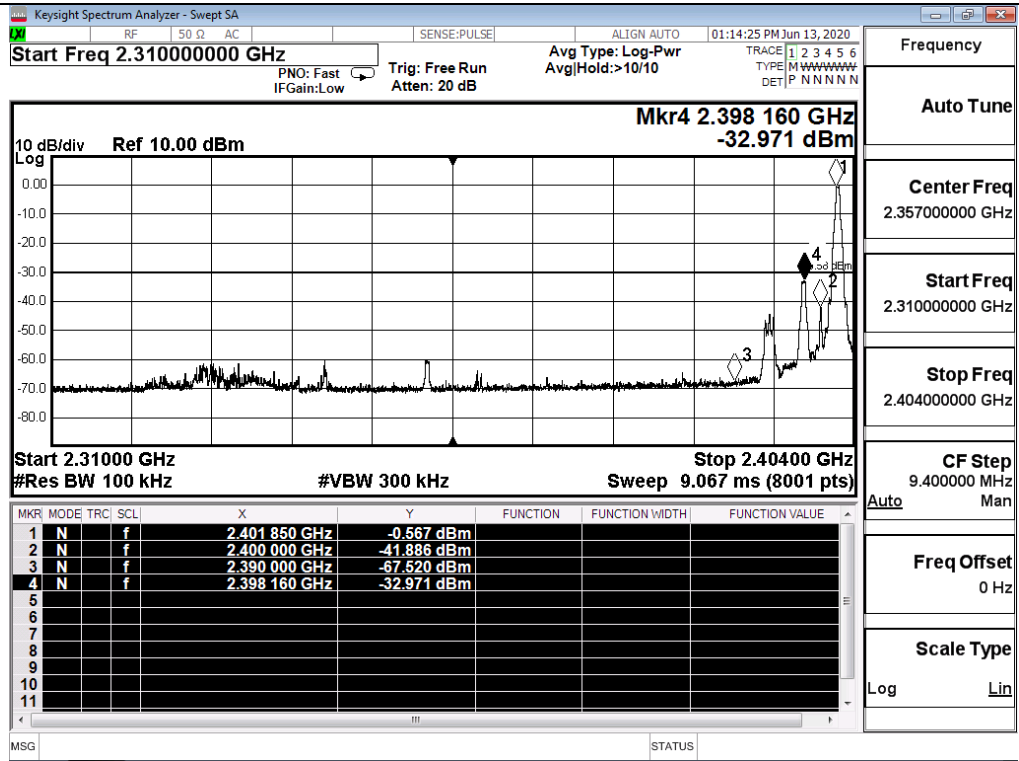
GFSK/HCH/No Hop



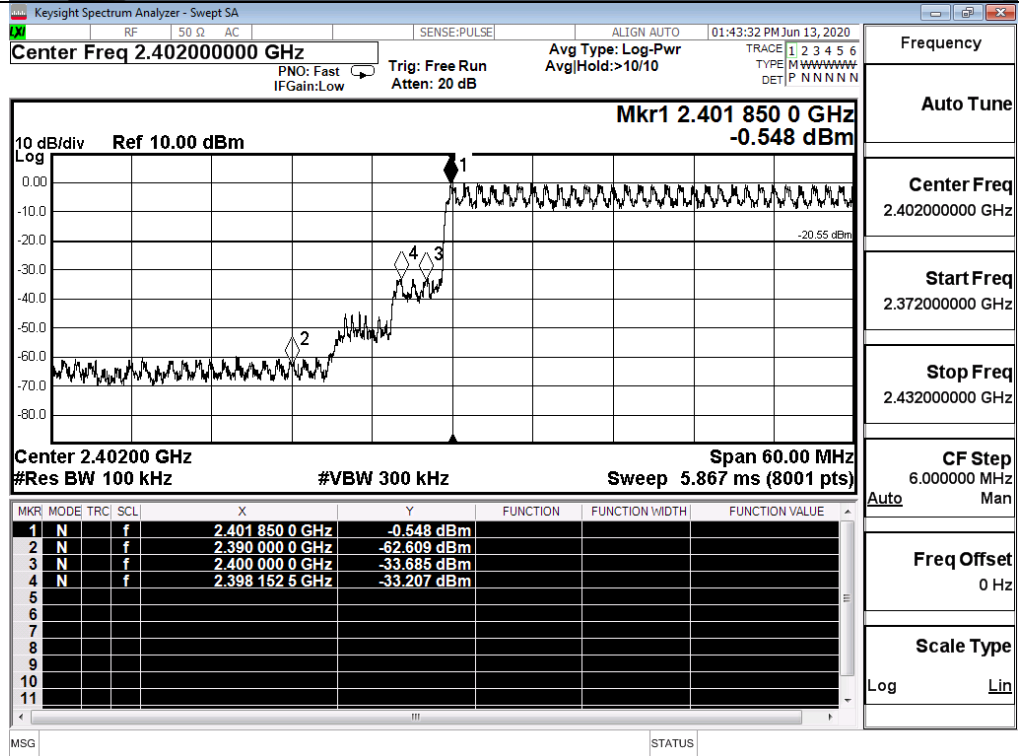
GFSK/HCH/Hop



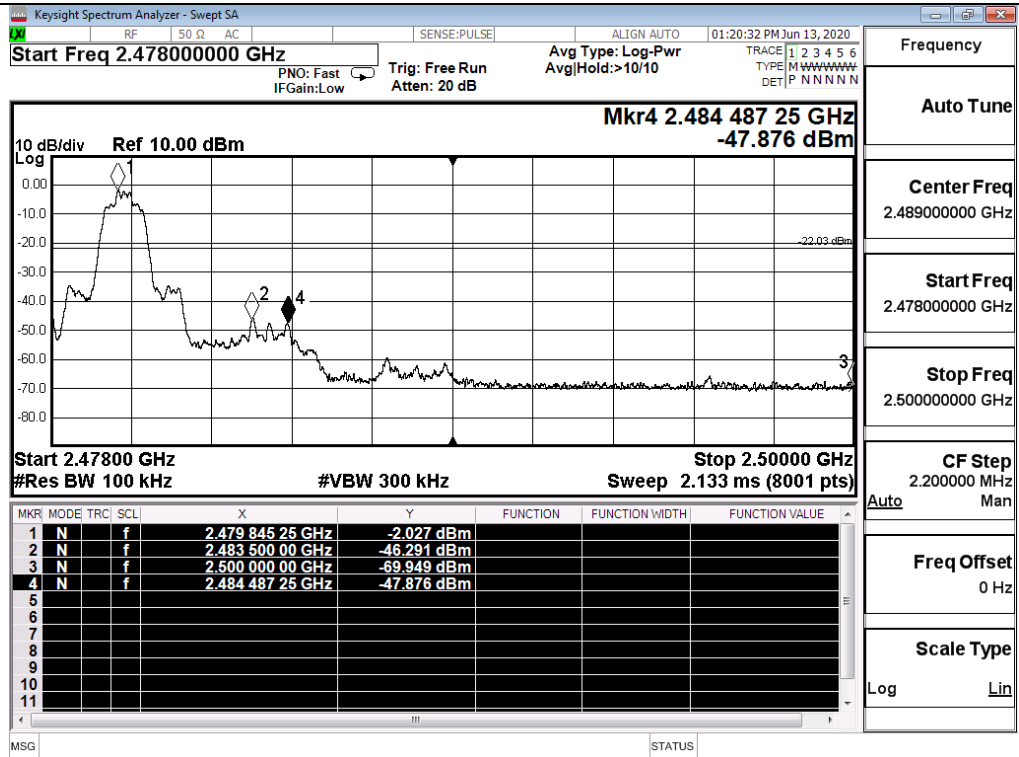
$\pi/4$ DQPSK/LCH/No
Hop



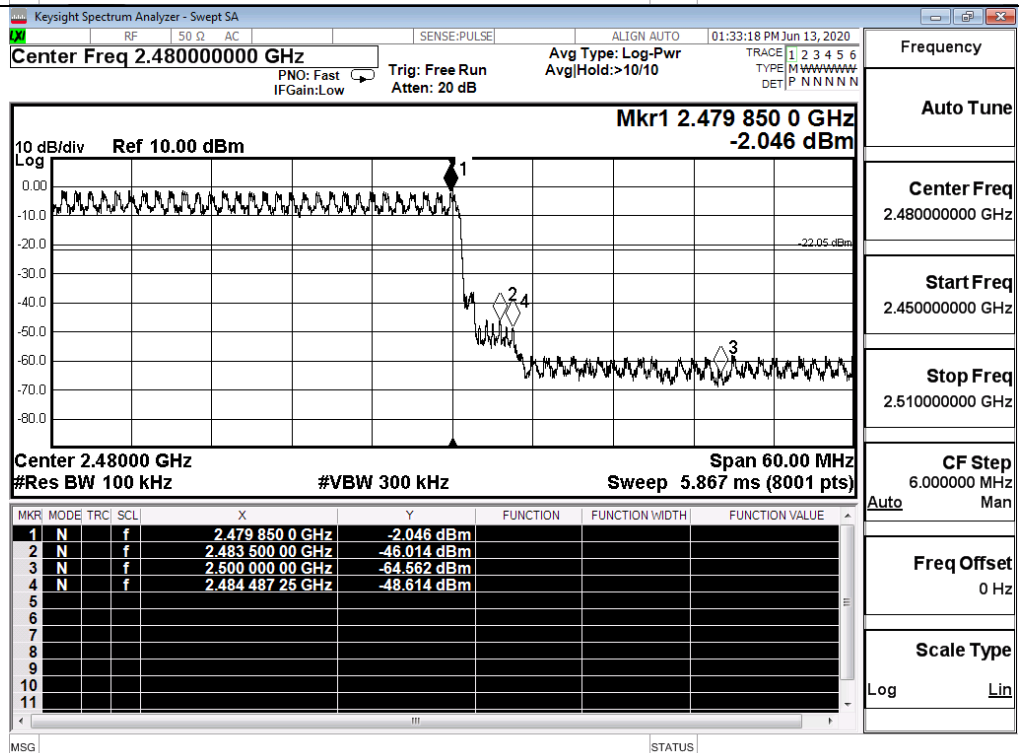
$\pi/4$ DQPSK/LCH/Hop



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



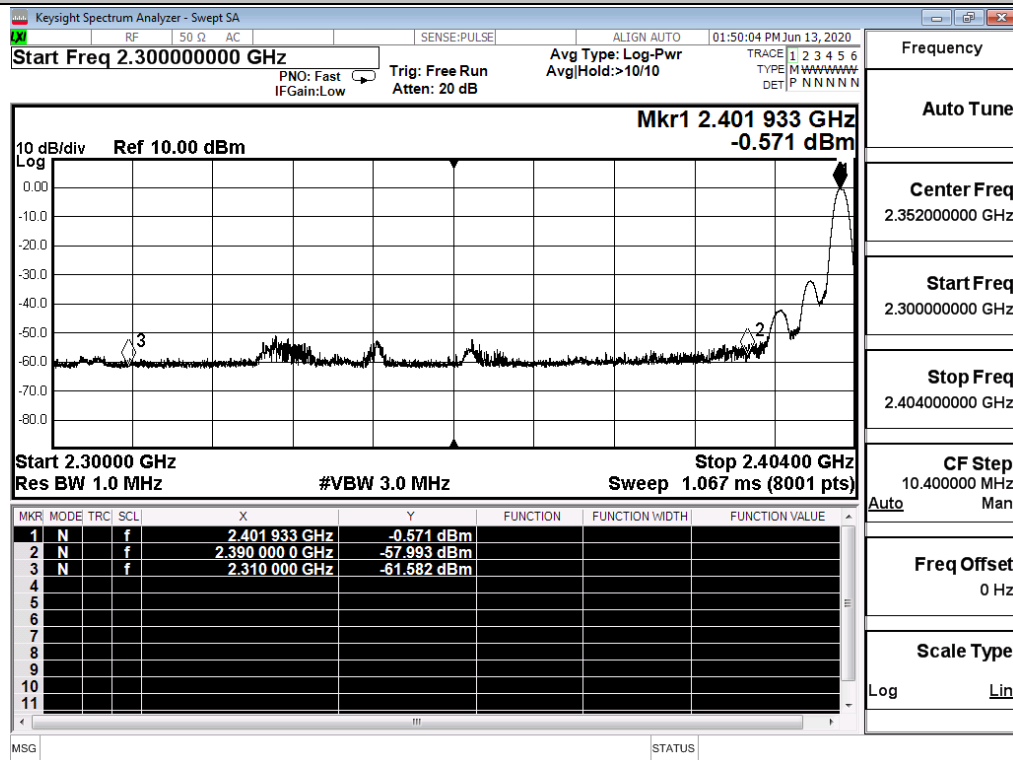
$\pi/4$ DQPSK/HCH/Hop



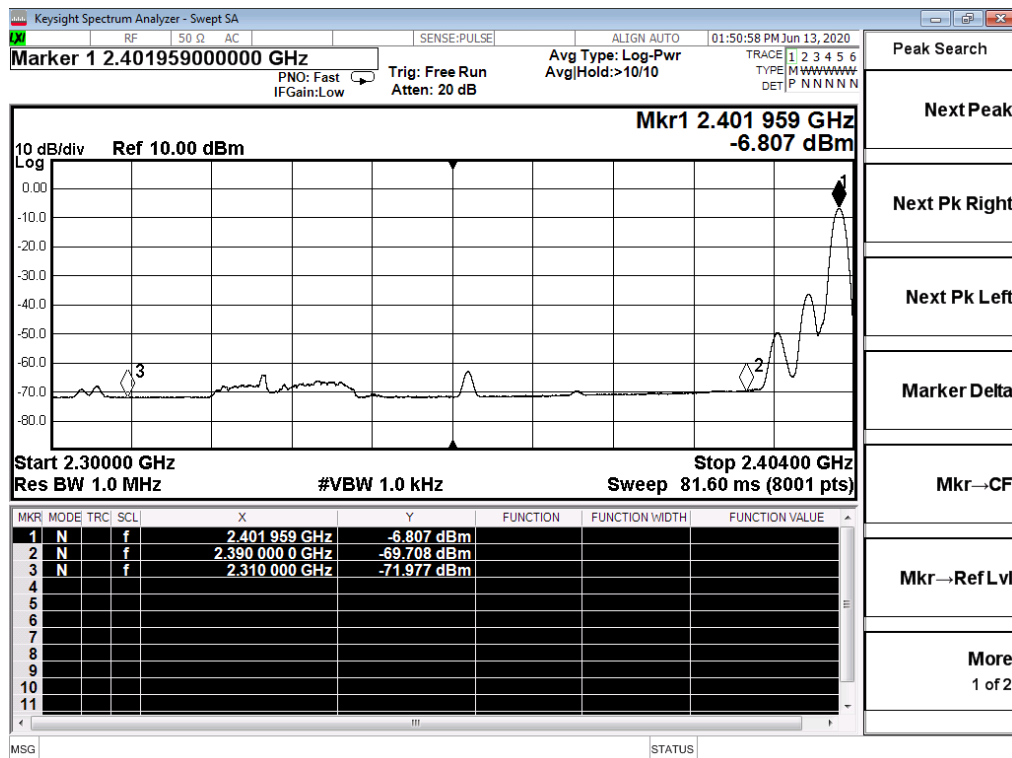
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-61.582	2.0	0	35.68	PEAK	74	PASS
	Off	2310.0	-69.708	2.0	0	27.55	AV	54	PASS
	Off	2390.0	-57.993	2.0	0	39.27	PEAK	74	PASS
	Off	2390.0	-71.977	2.0	0	25.28	AV	54	PASS
	Off	2483.5	-43.217	2.0	0	54.04	PEAK	74	PASS
	Off	2483.5	-52.098	2.0	0	45.16	AV	54	PASS
	Off	2500.0	-61.038	2.0	0	36.22	PEAK	74	PASS
	Off	2500.0	-70.385	2.0	0	26.88	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-61.059	2.0	0	36.20	PEAK	74	PASS
	Off	2310.0	-71.845	2.0	0	25.42	AV	54	PASS
	Off	2390.0	-58.418	2.0	0	38.84	PEAK	74	PASS
	Off	2390.0	-69.519	2.0	0	27.74	AV	54	PASS
	Off	2483.5	-43.750	2.0	0	53.51	PEAK	74	PASS
	Off	2483.5	-54.721	2.0	0	42.54	AV	54	PASS
	Off	2500.0	-61.919	2.0	0	35.34	PEAK	74	PASS
	Off	2500.0	-70.503	2.0	0	26.76	AV	54	PASS

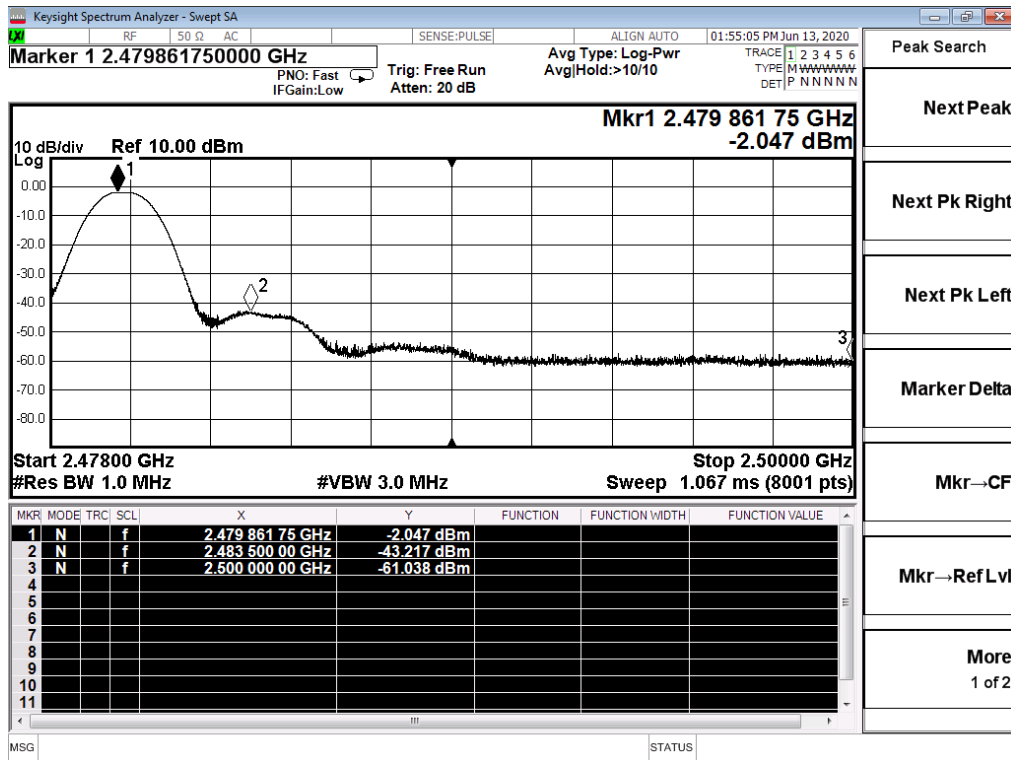
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



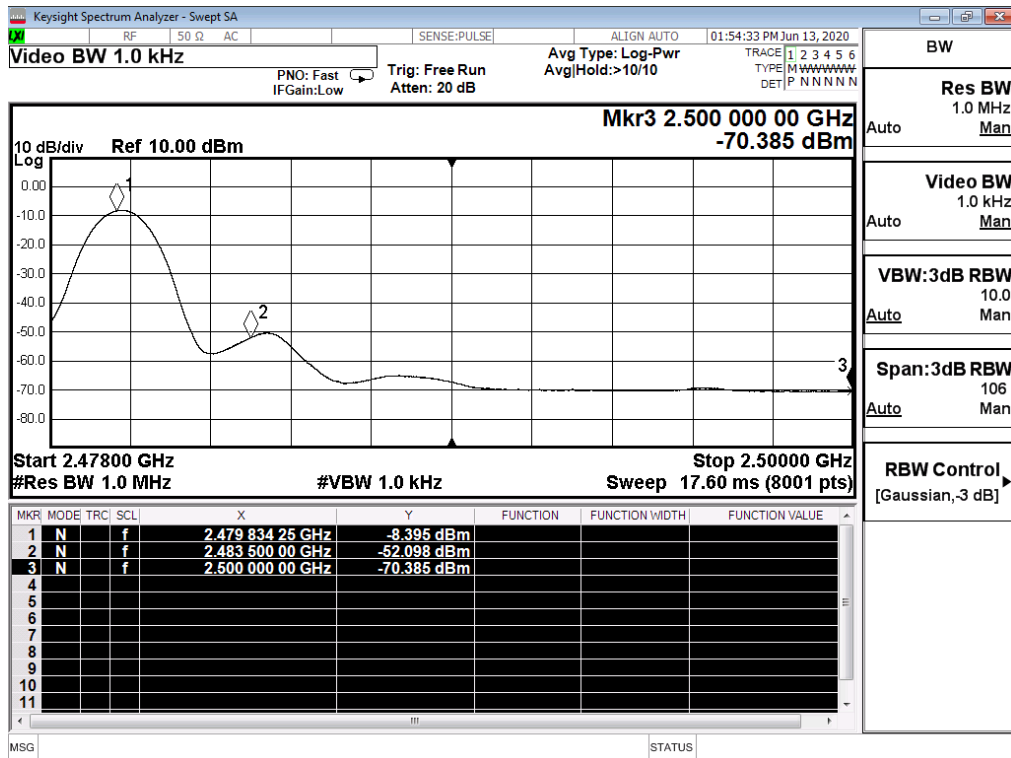
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



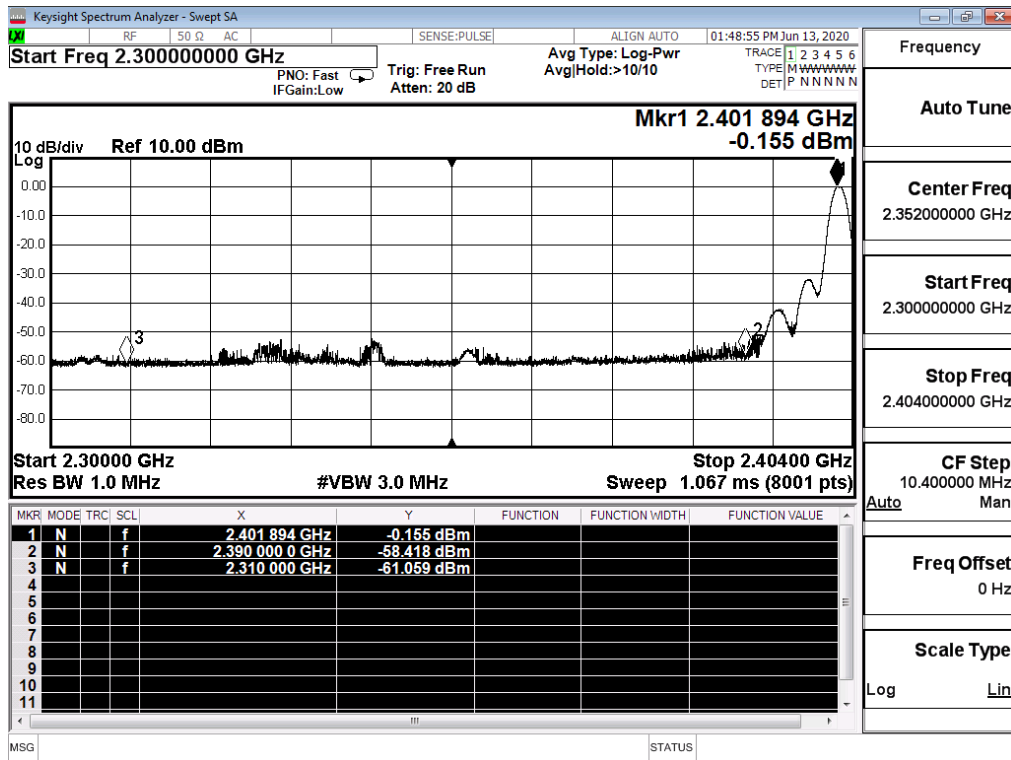
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



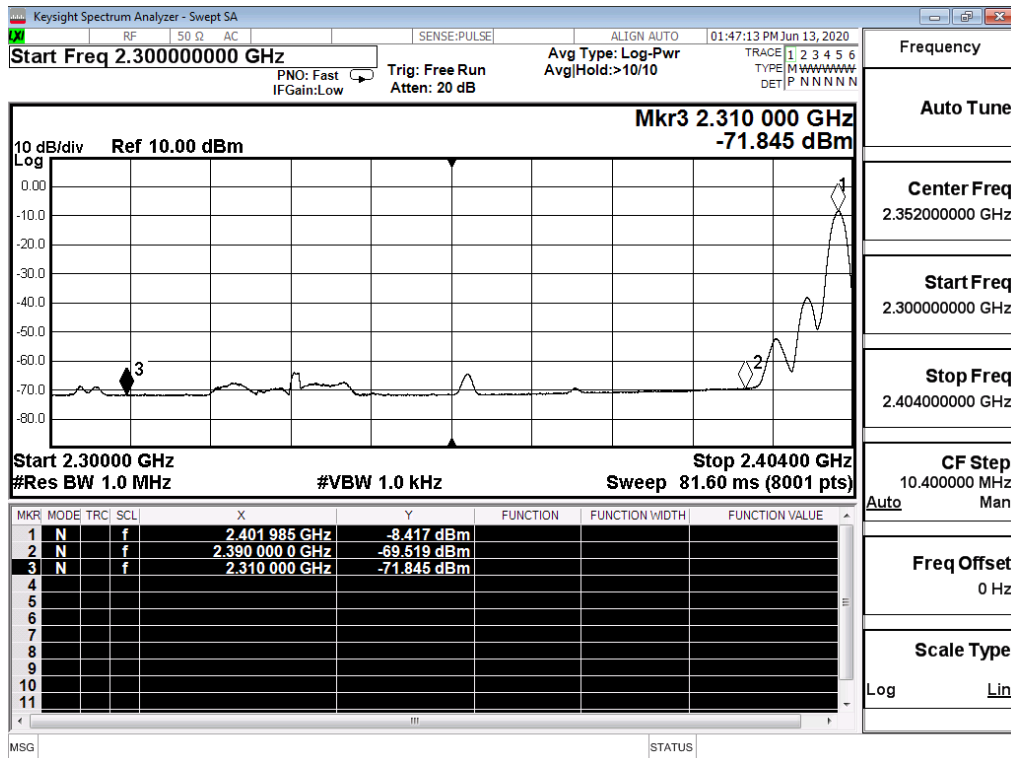
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



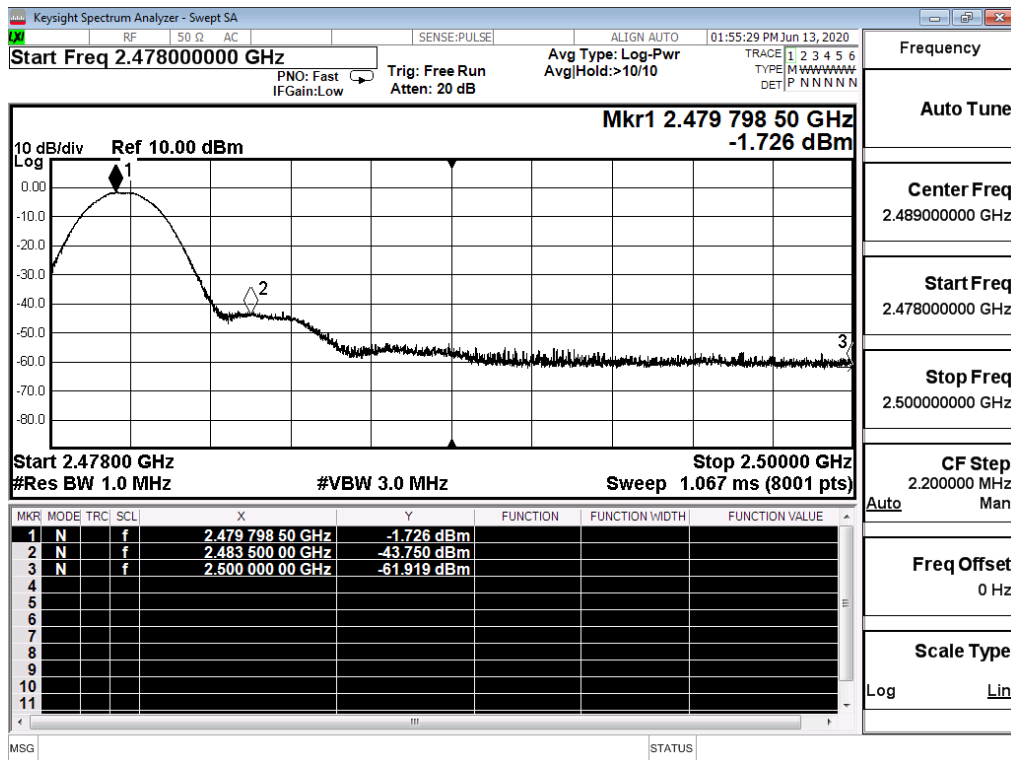
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)



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)

