

Appendix A

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

Product Name: Walkie Talkie

Trade Mark: N/A

Test Model: AT100

Environmental Conditions

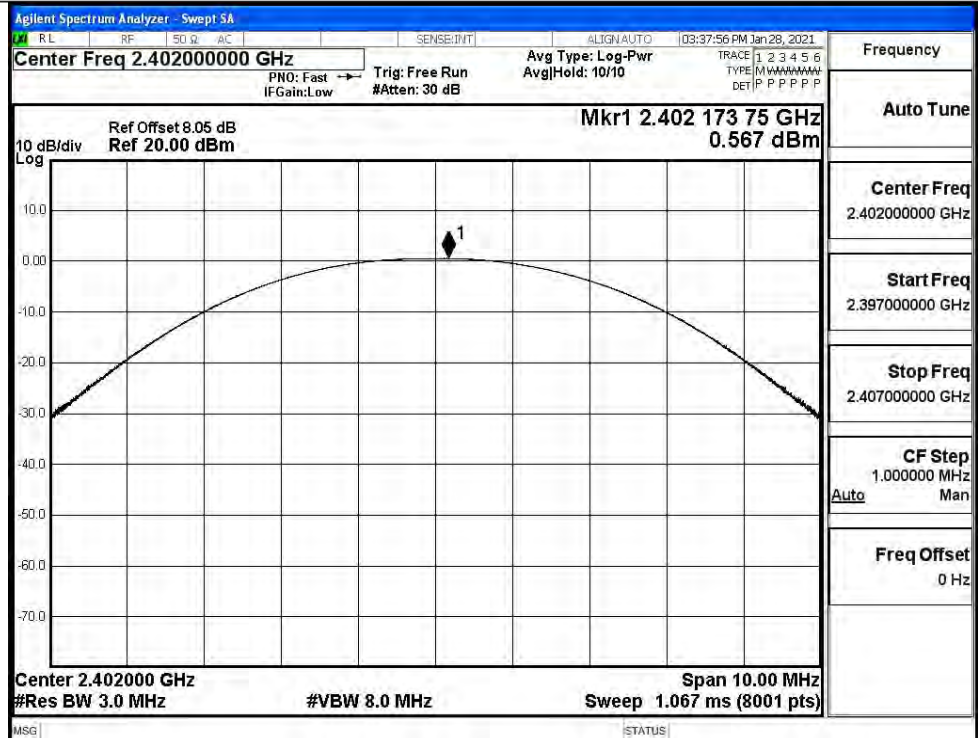
Temperature:	25.3 ° C
Relative Humidity:	54.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	LI HUAN

A.1 Maximum Conducted Peak Output Power

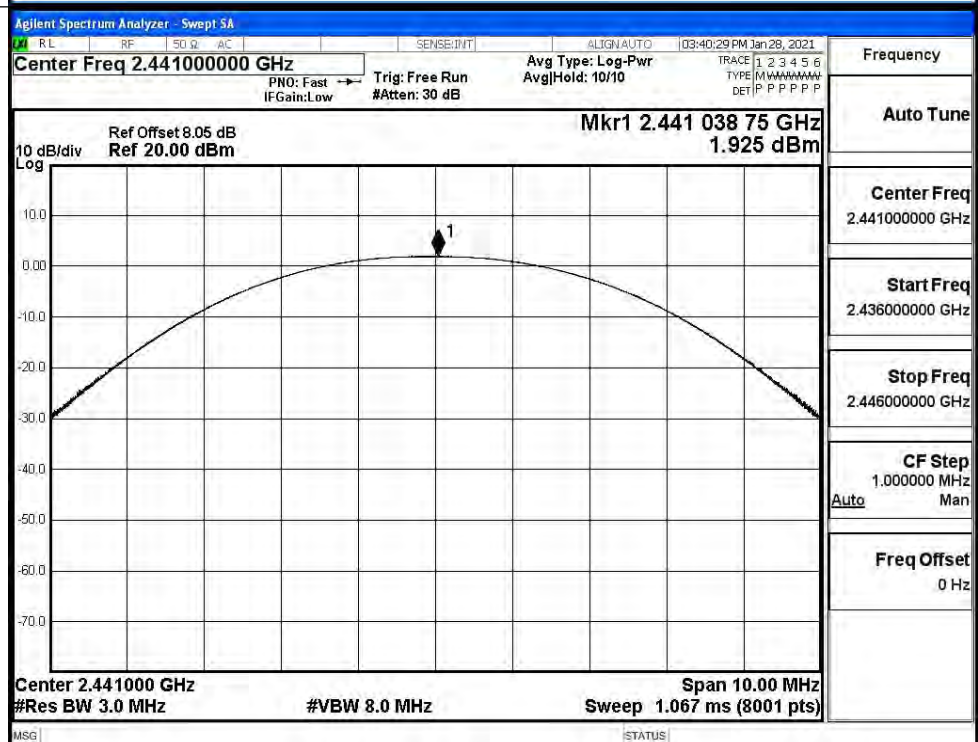
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.567	21	PASS
	MCH	1.925	21	PASS
	HCH	0.373	21	PASS
$\pi/4$ DQPSK	LCH	-0.176	21	PASS
	MCH	1.174	21	PASS
	HCH	-0.319	21	PASS
8DPSK	LCH	-0.076	21	PASS
	MCH	1.314	21	PASS
	HCH	-0.191	21	PASS

Test Graphs

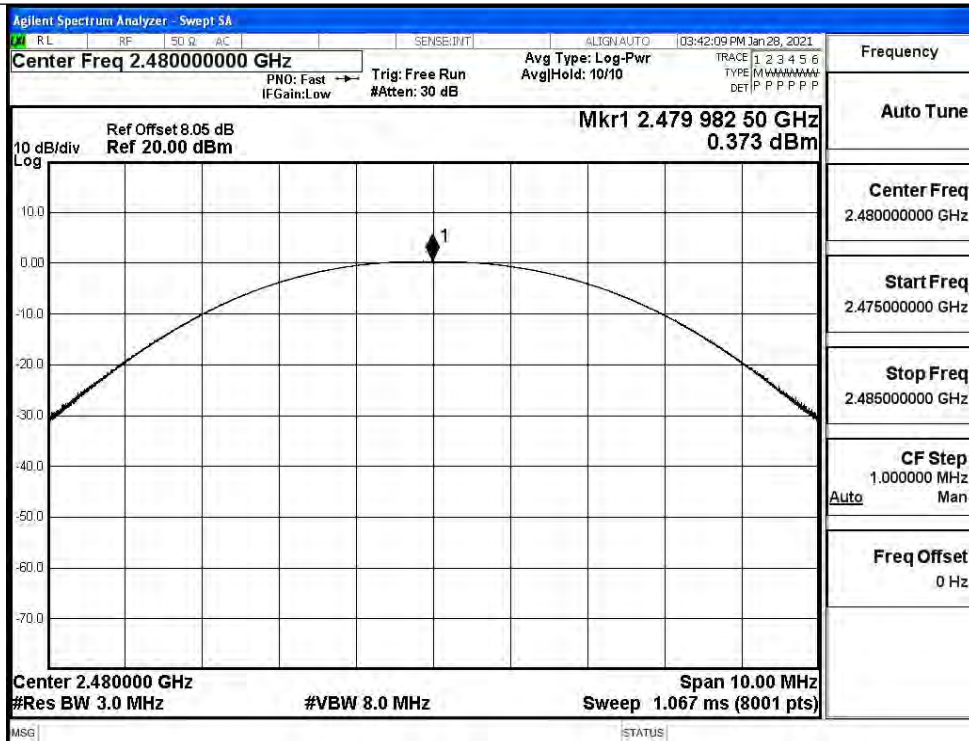
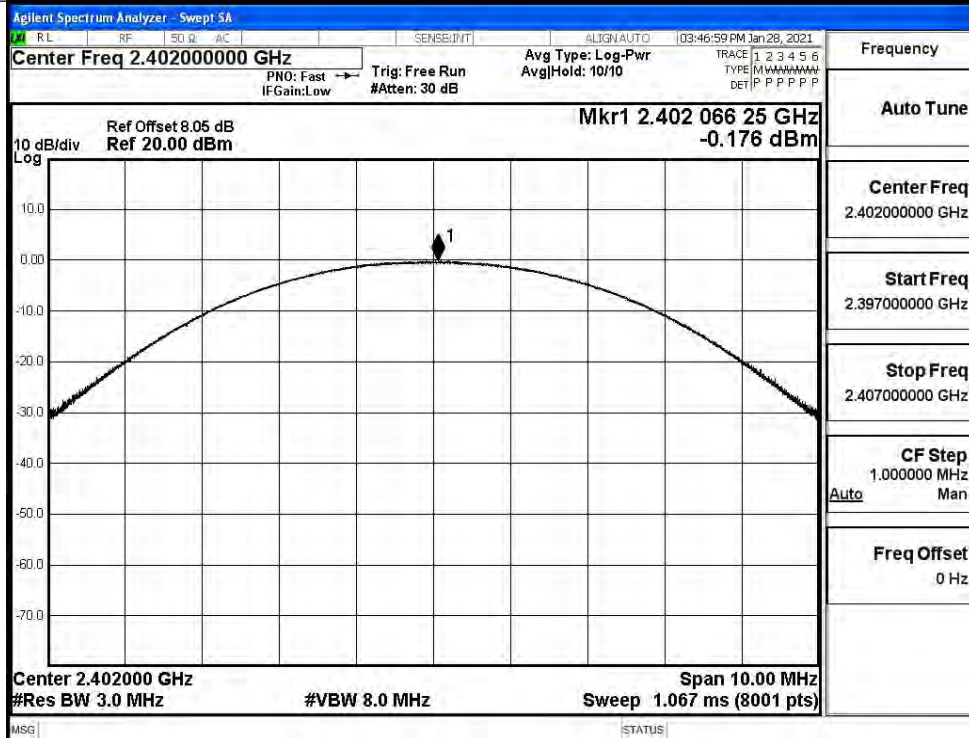
GFSK/LCH

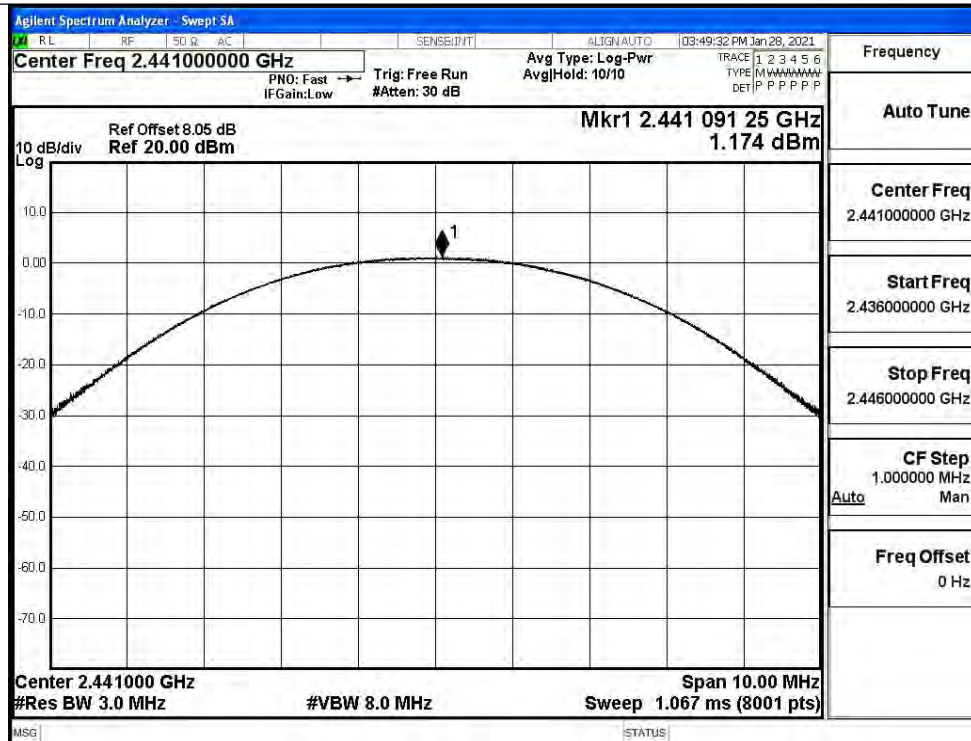
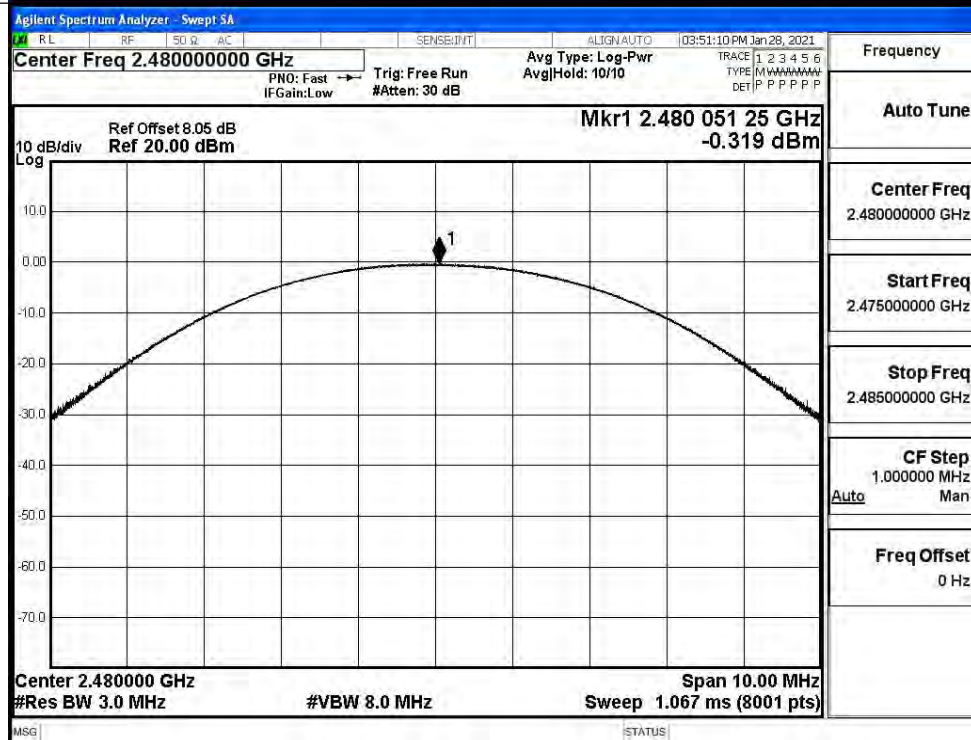


GFSK/MCH

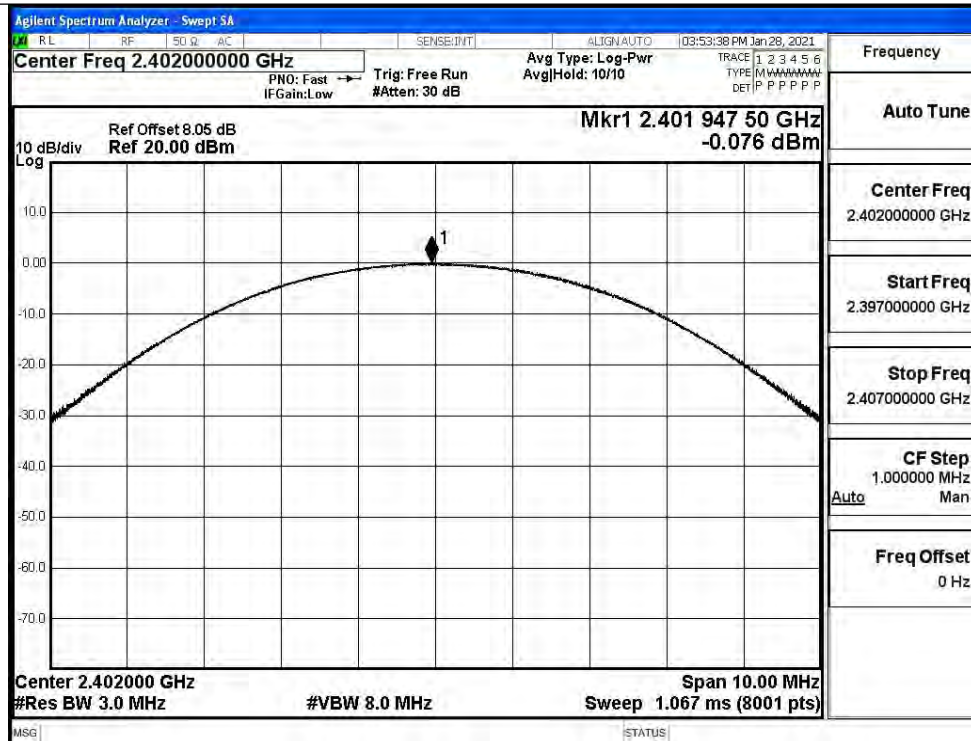


GFSK/HCH

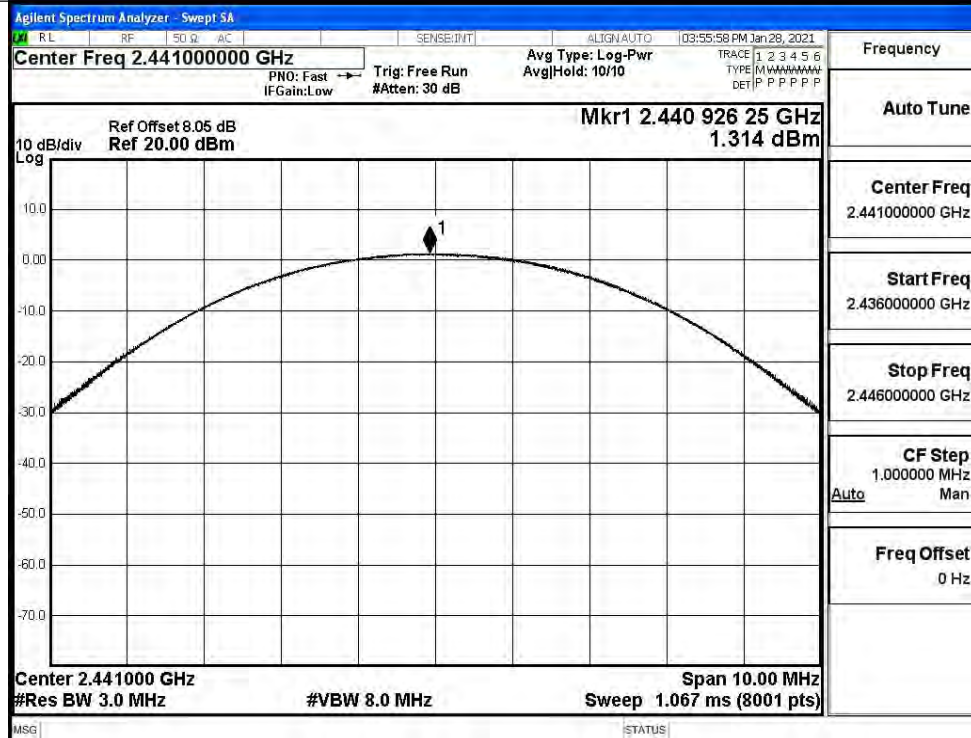
 π /4DQPSK/LCH

$\pi/4$ DQPSK/MCH $\pi/4$ DQPSK/HCH

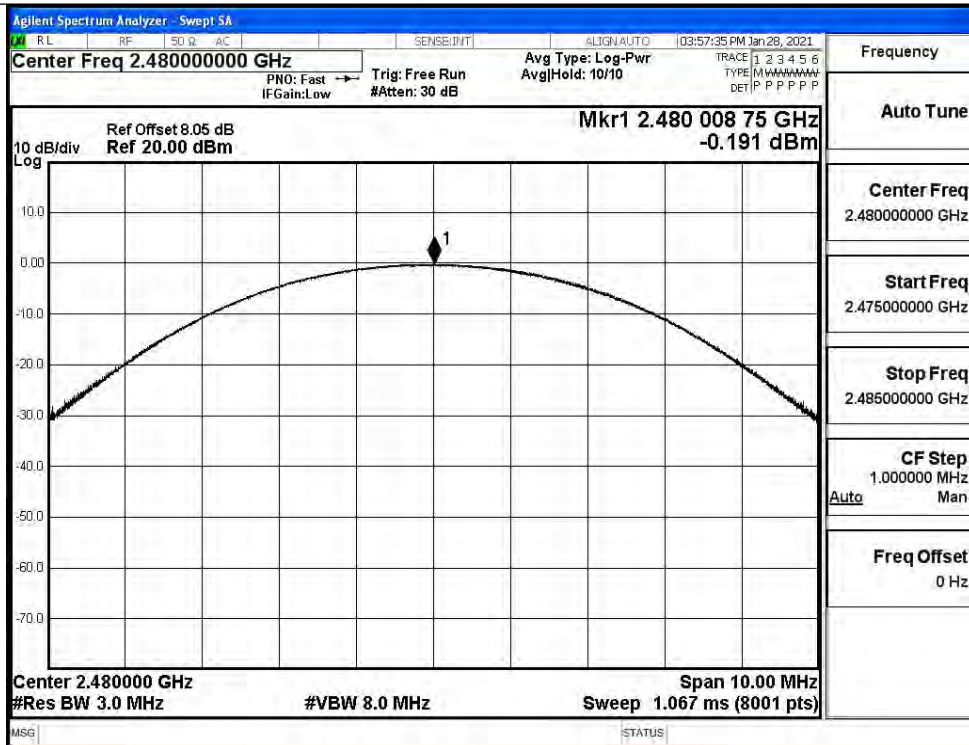
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

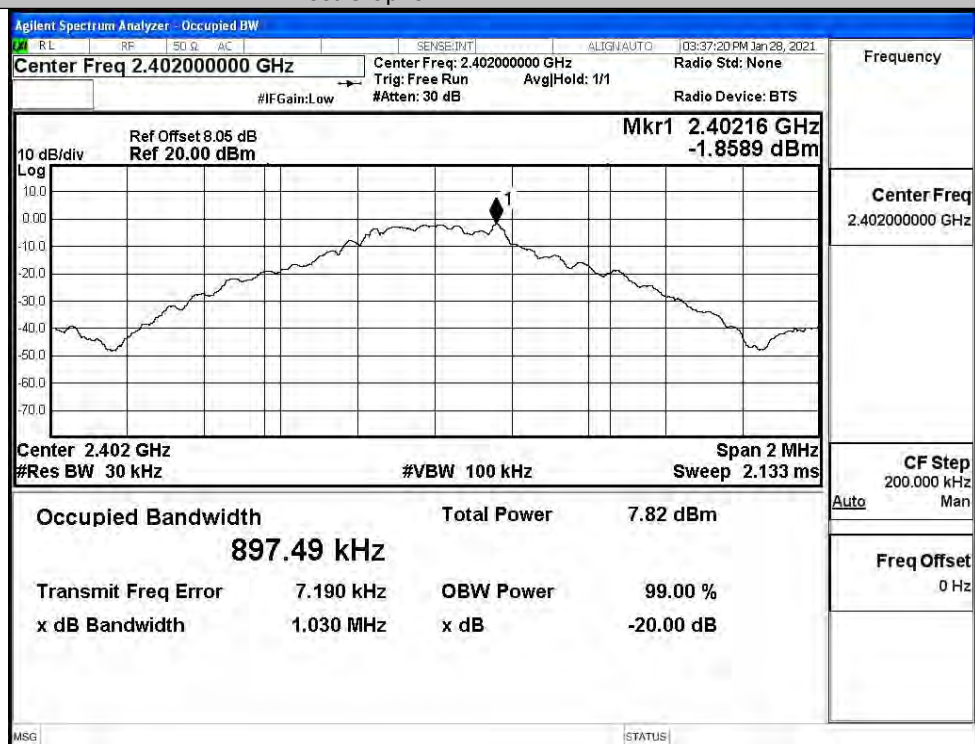


A.2 20dB Bandwidth

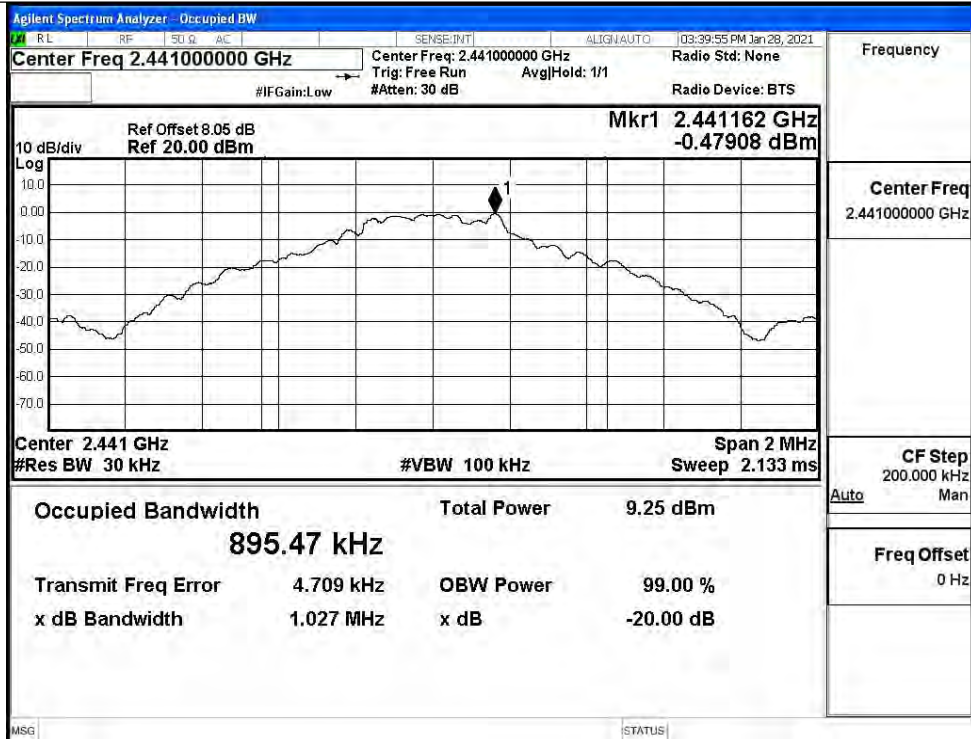
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.030	Not Specified	PASS
	MCH	1.027	Not Specified	PASS
	HCH	1.029	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.287	Not Specified	PASS
	MCH	1.288	Not Specified	PASS
	HCH	1.288	Not Specified	PASS
8DPSK	LCH	1.290	Not Specified	PASS
	MCH	1.291	Not Specified	PASS
	HCH	1.304	Not Specified	PASS

Test Graphs

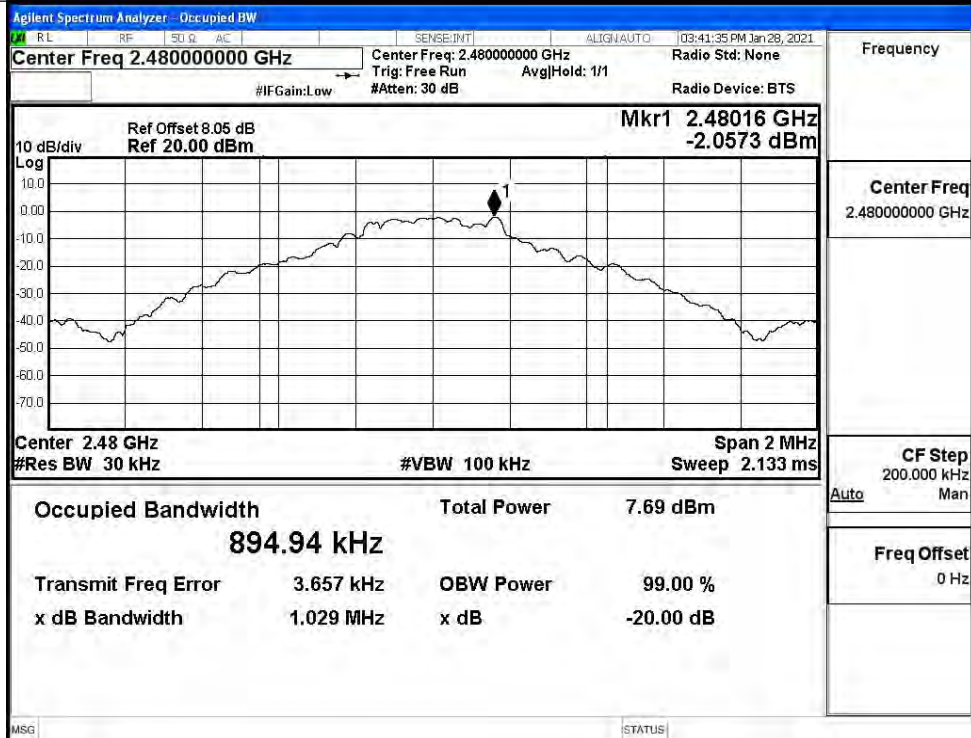
GFSK/LCH

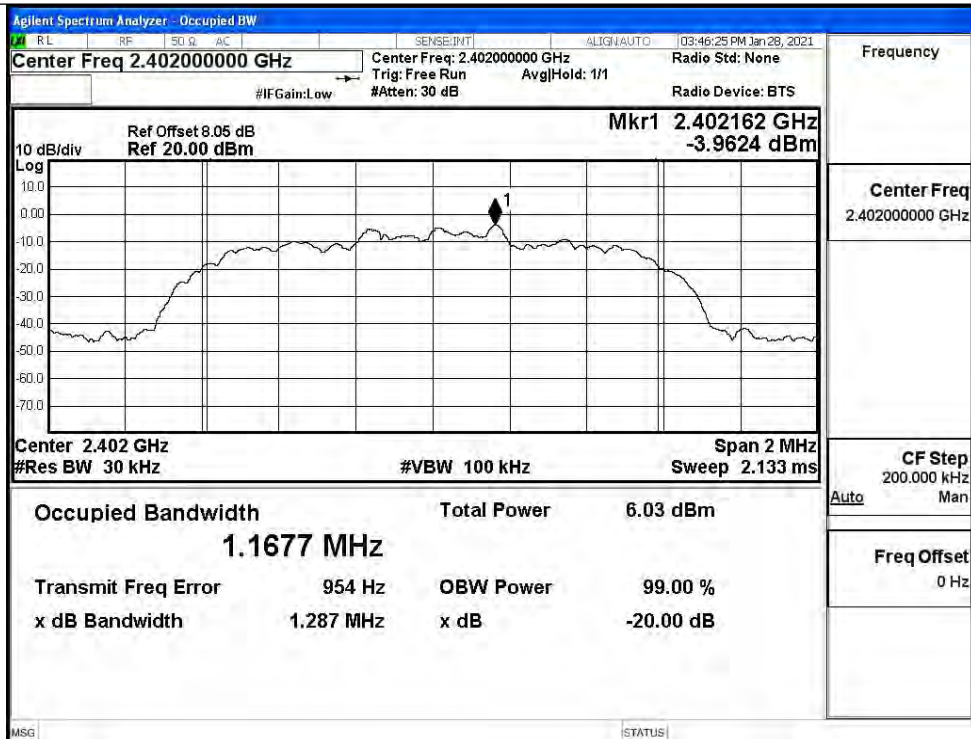
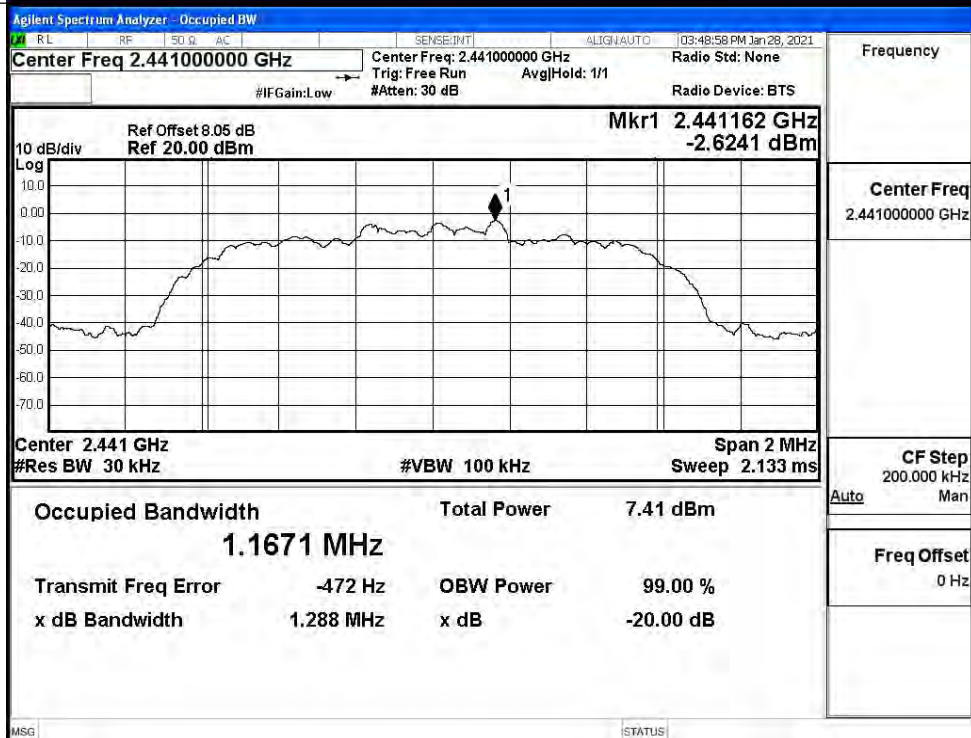


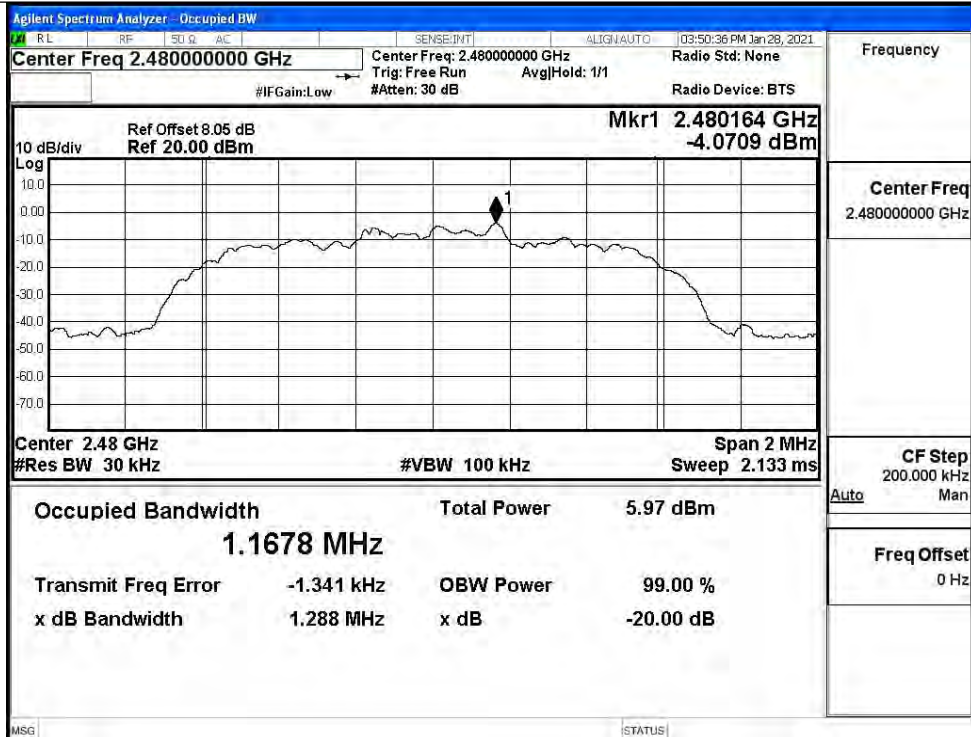
GFSK/MCH



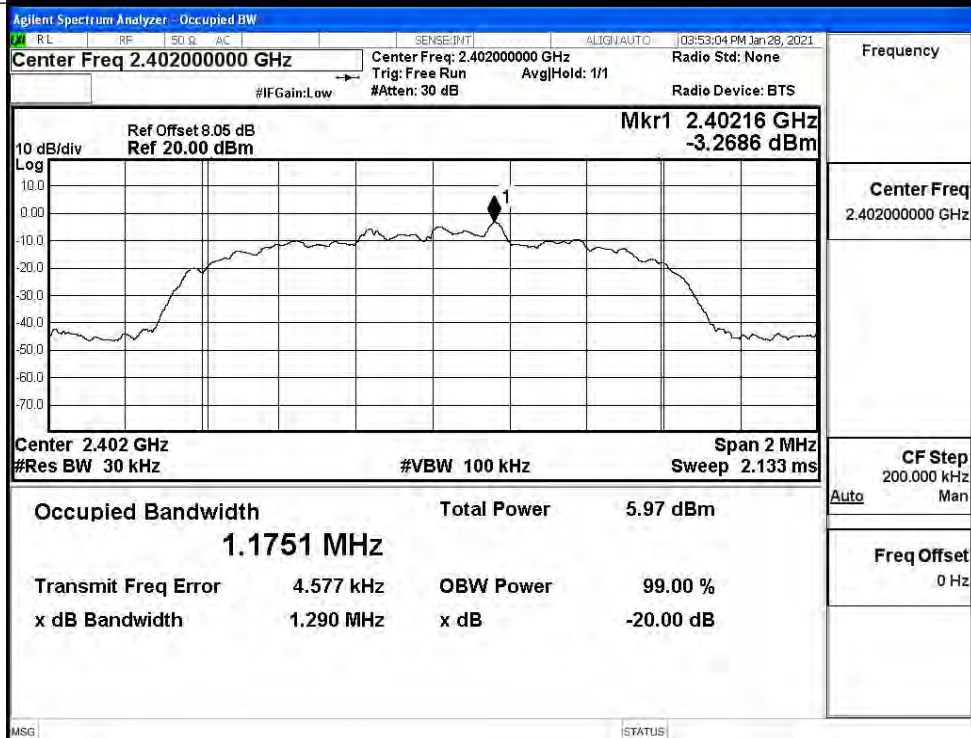
GFSK/HCH



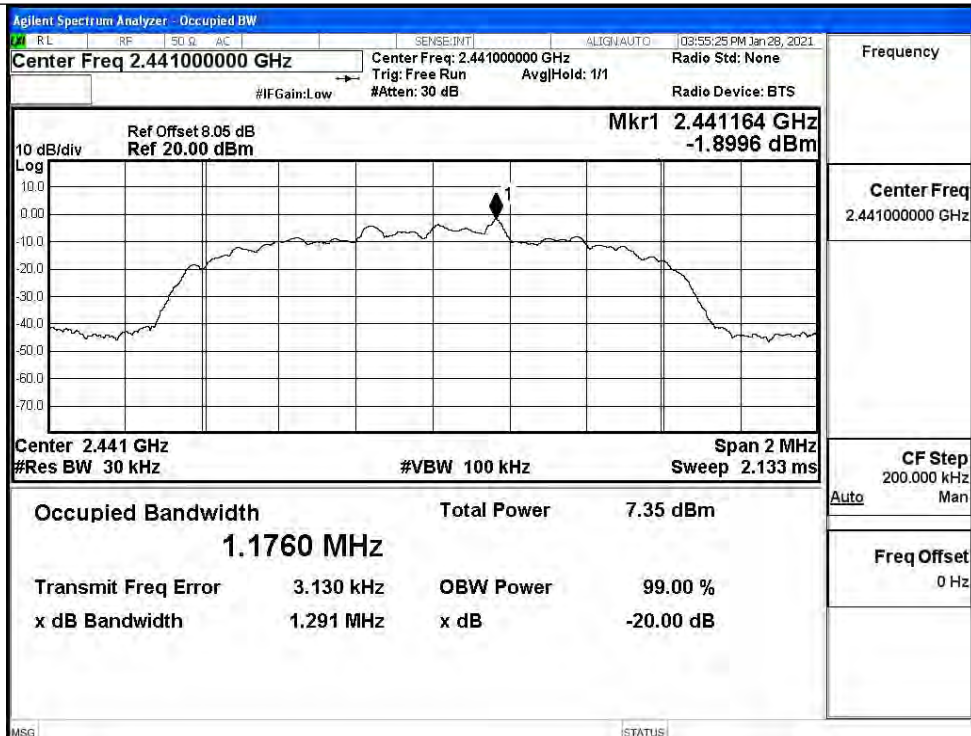
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

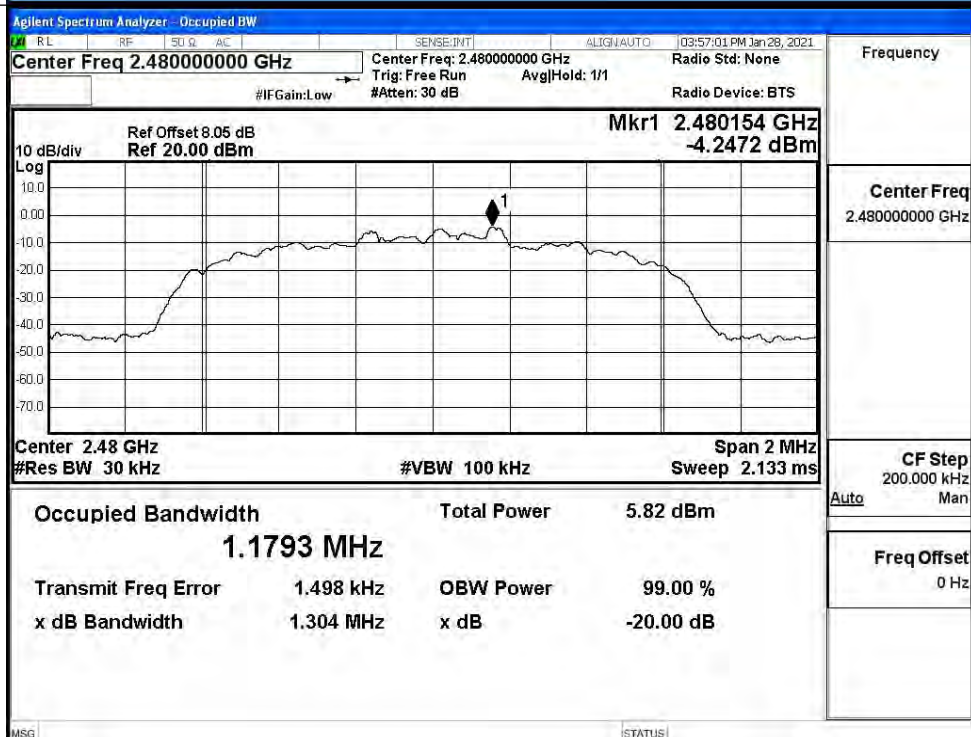
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

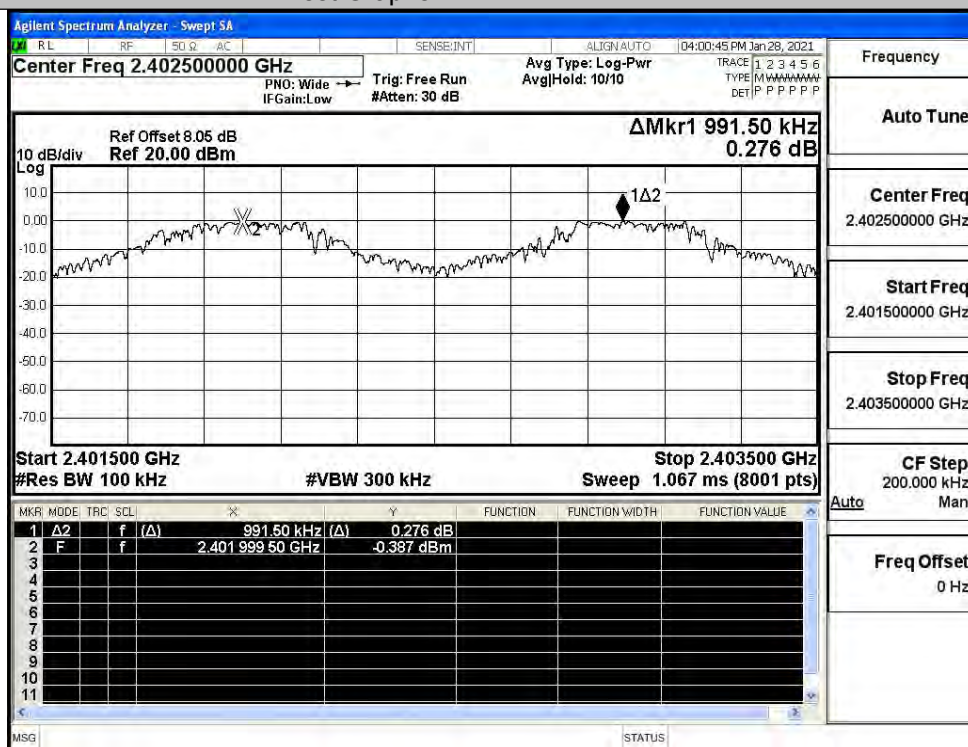


A.3 Carrier Frequency Separation

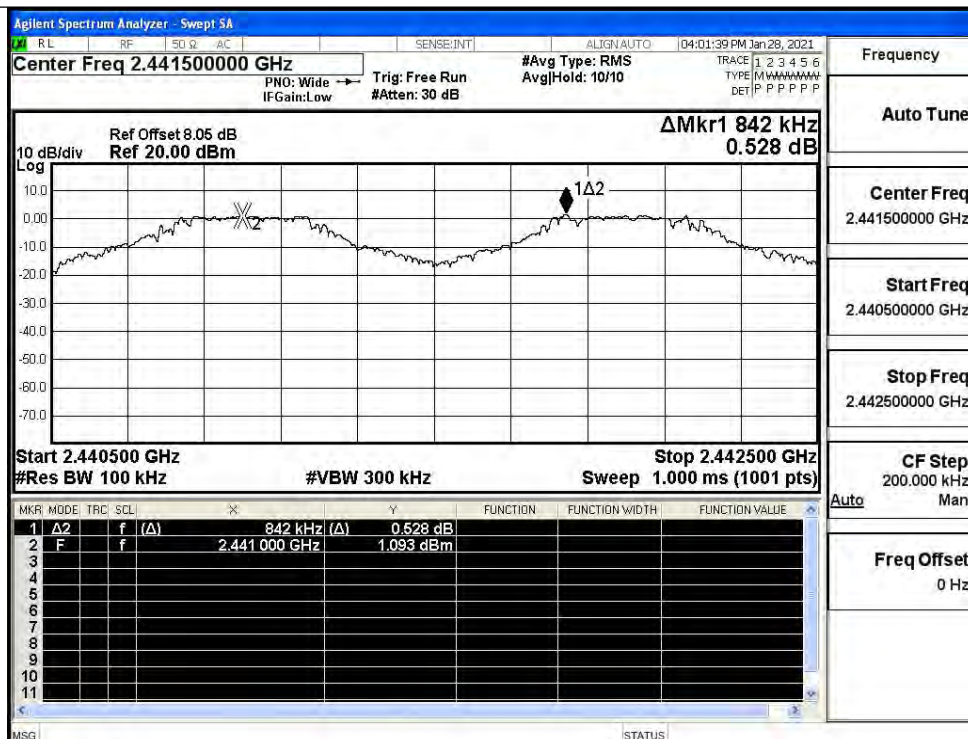
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.992	0.687	PASS
	MCH	0.842	0.685	PASS
	HCH	1.096	0.686	PASS
$\pi/4$ DQPSK	LCH	1.204	0.858	PASS
	MCH	1.136	0.859	PASS
	HCH	0.988	0.859	PASS
8DPSK	LCH	0.936	0.860	PASS
	MCH	1.242	0.861	PASS
	HCH	1.020	0.869	PASS

Test Graphs

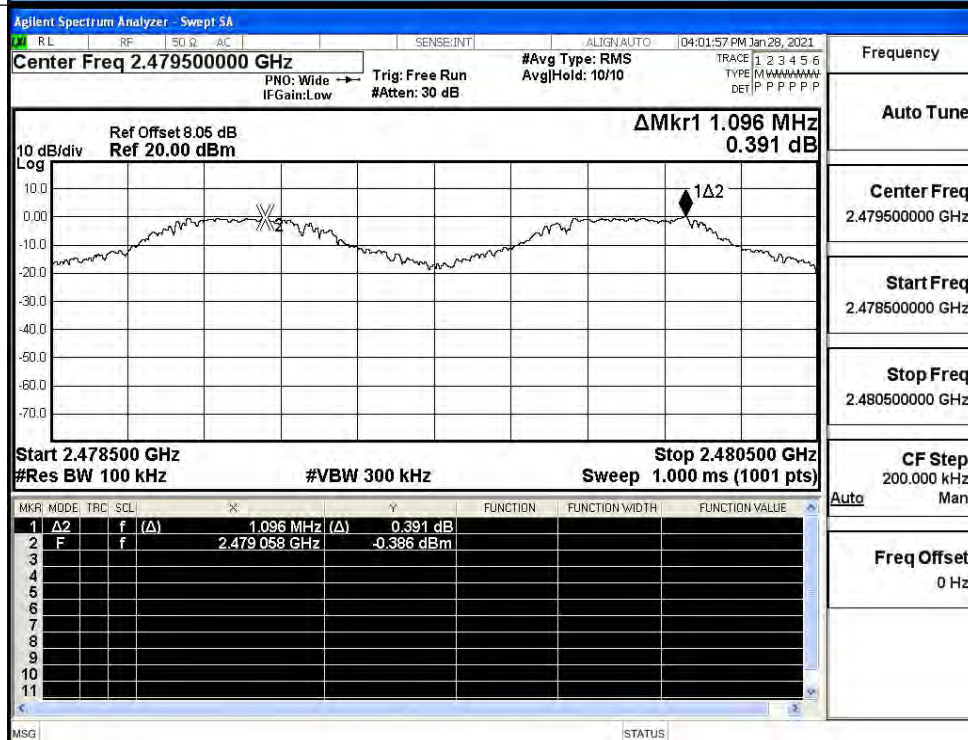
GFSK/LCH

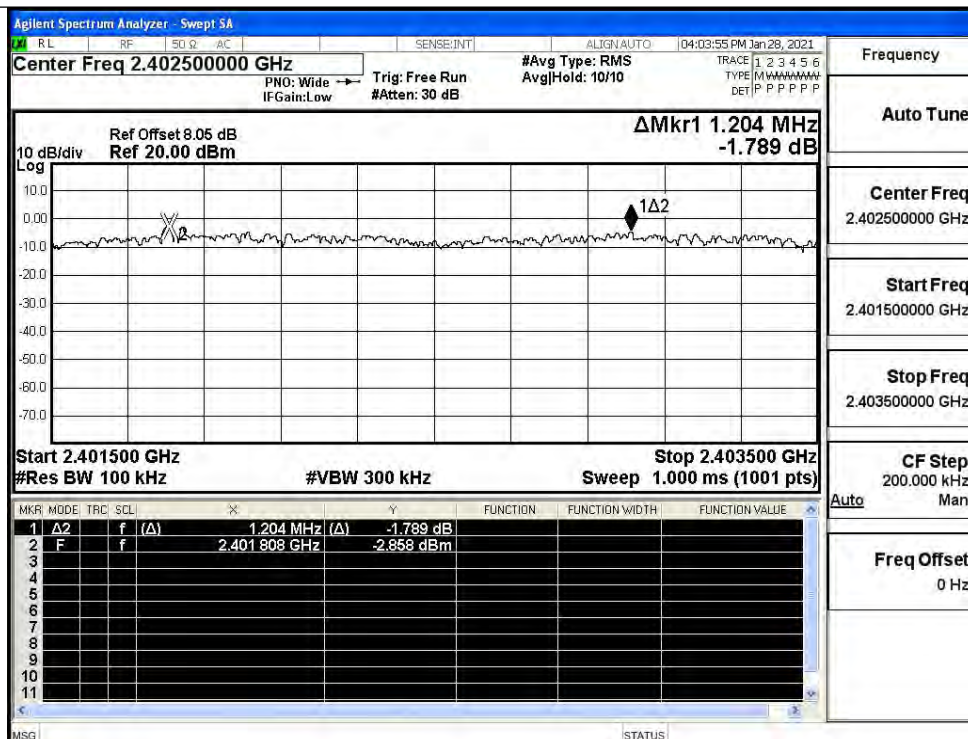
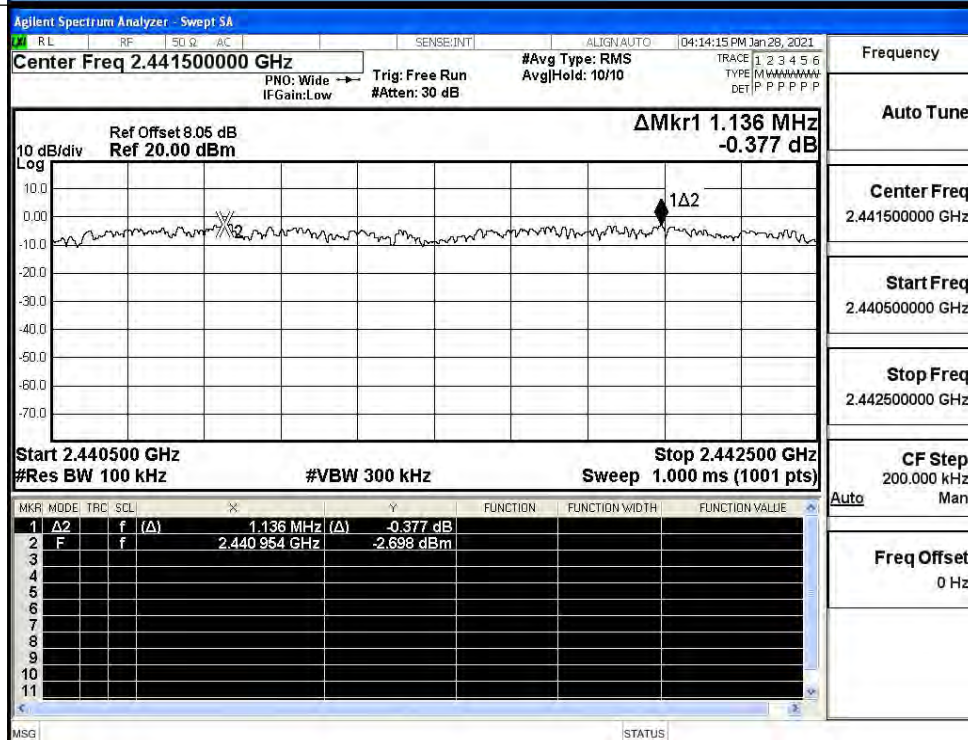


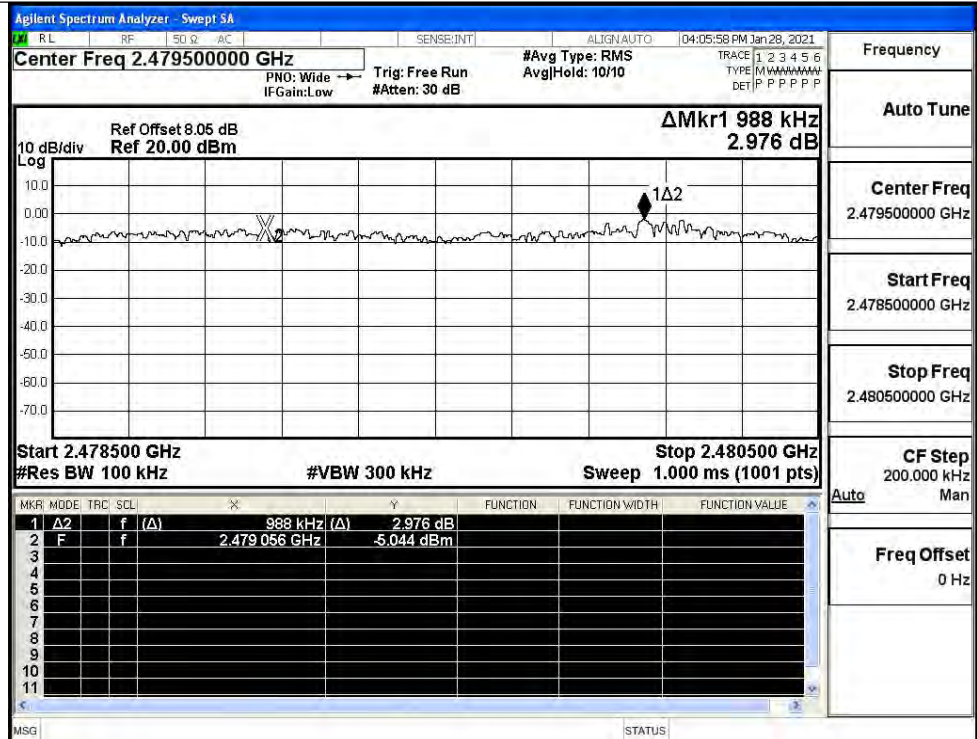
GFSK/MCH



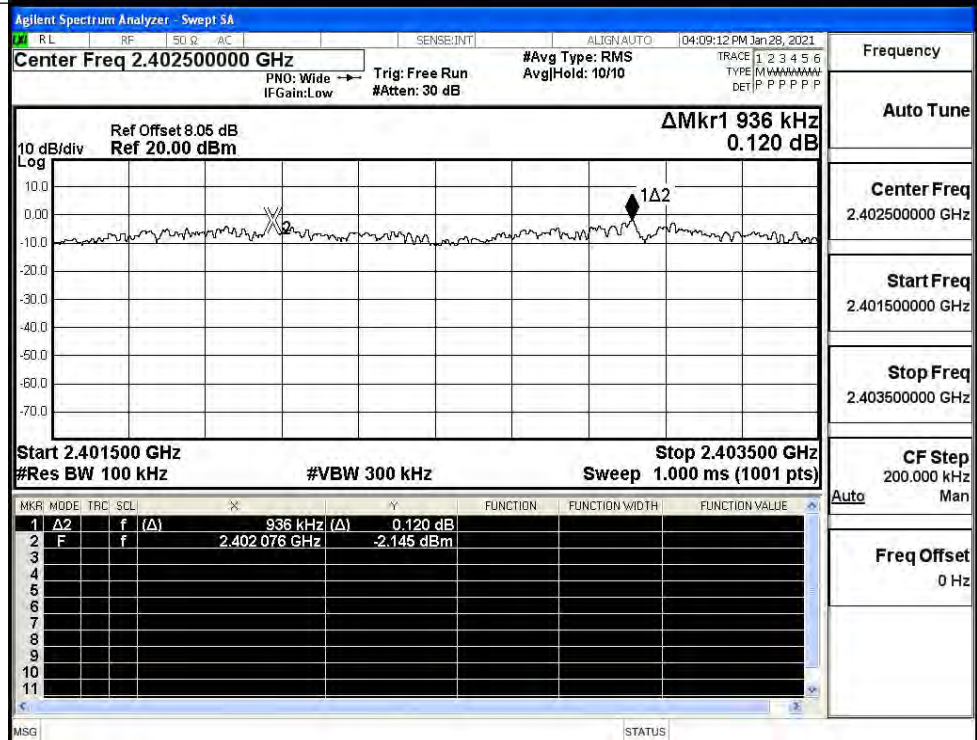
GFSK/HCH



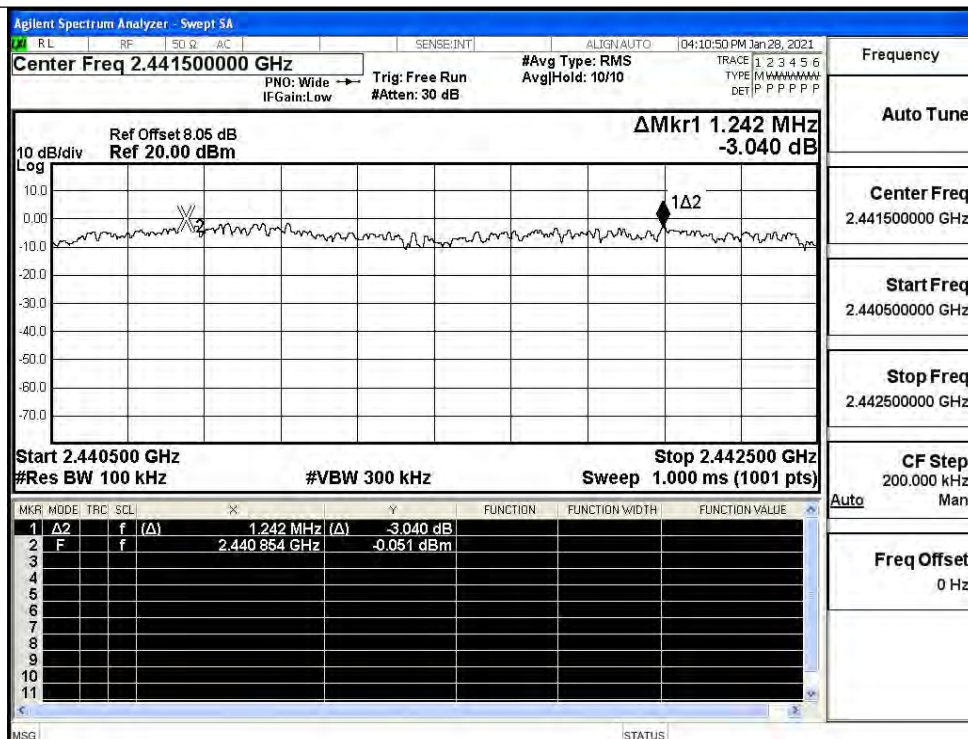
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

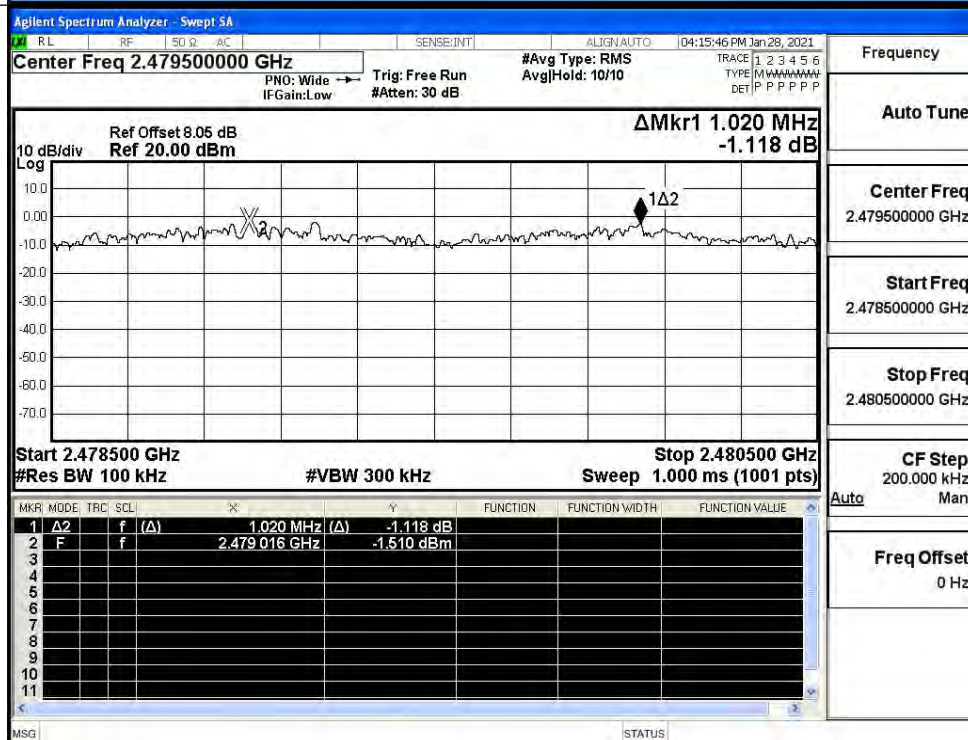
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

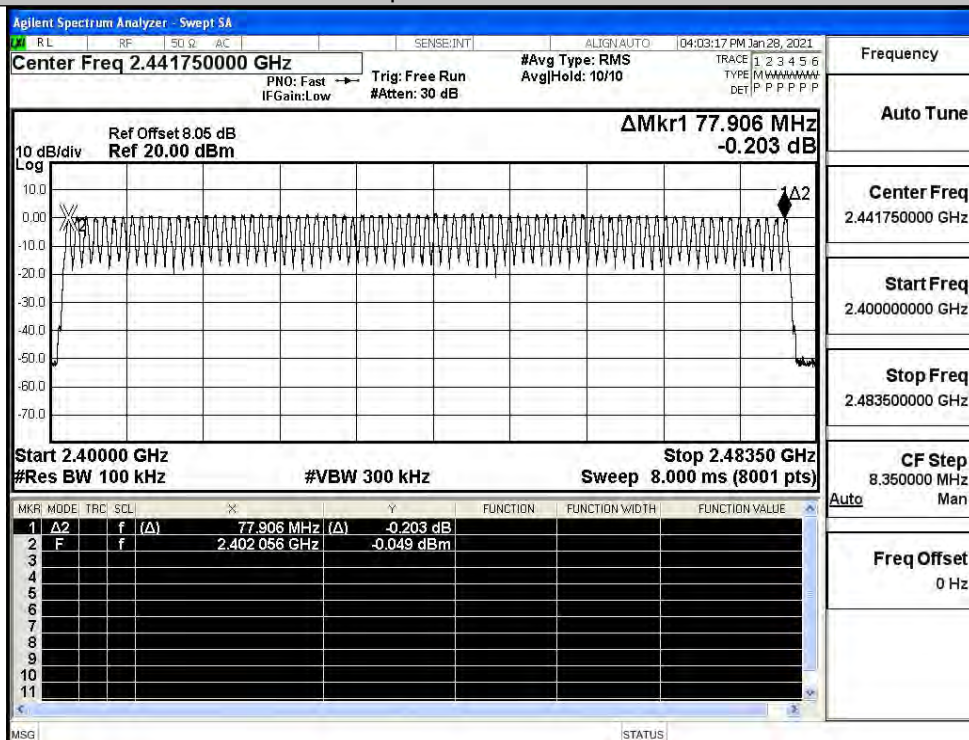
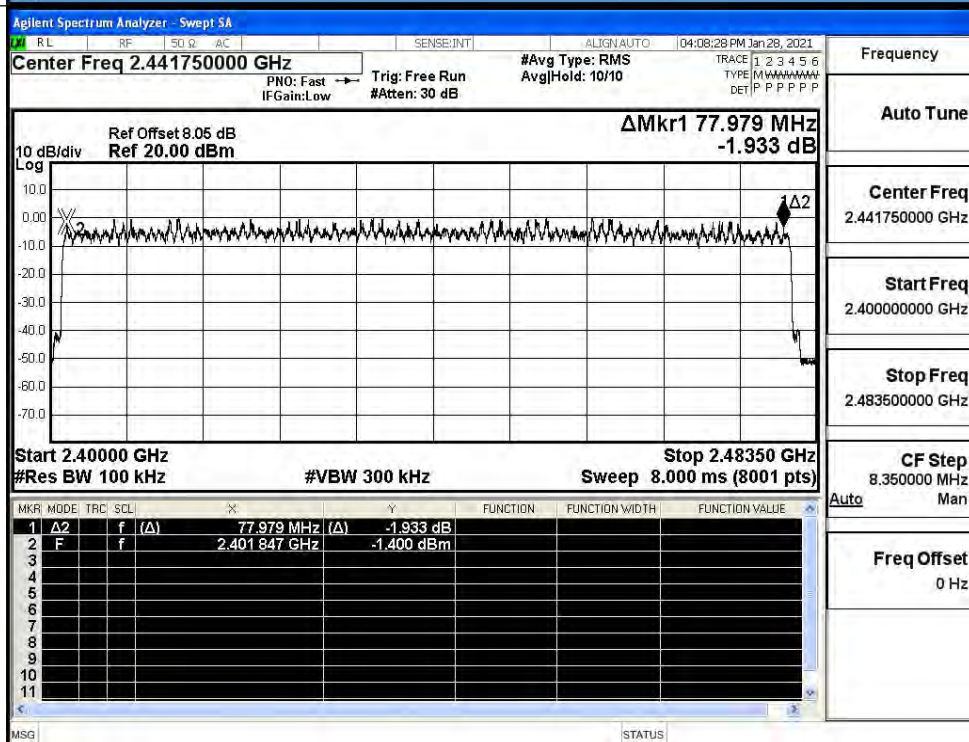


A.4 Hopping Channel Number

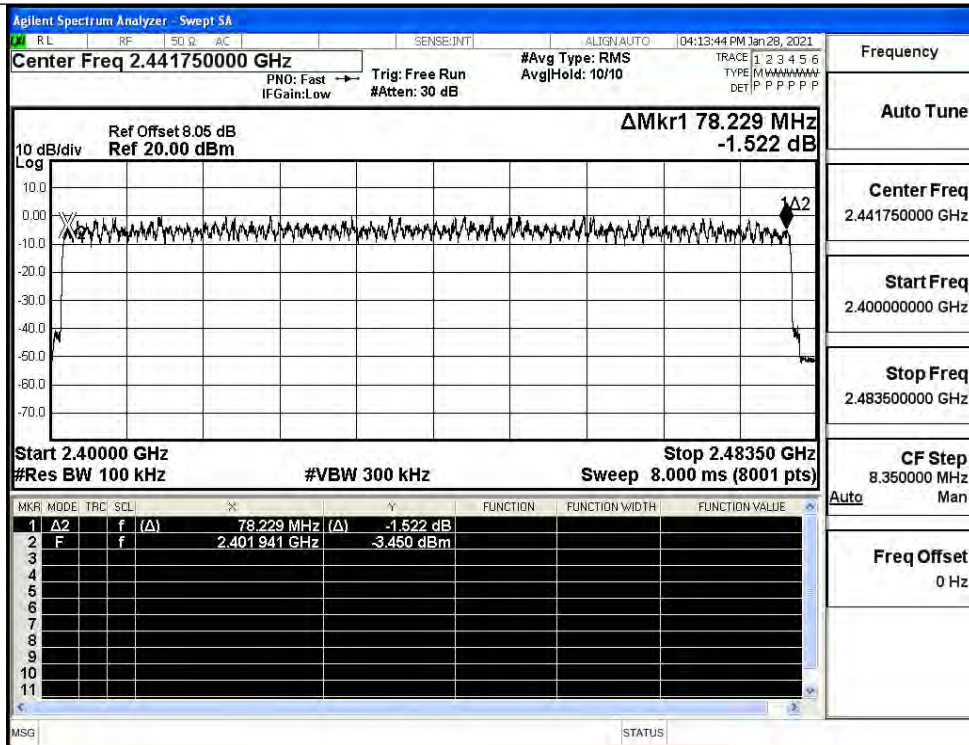
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

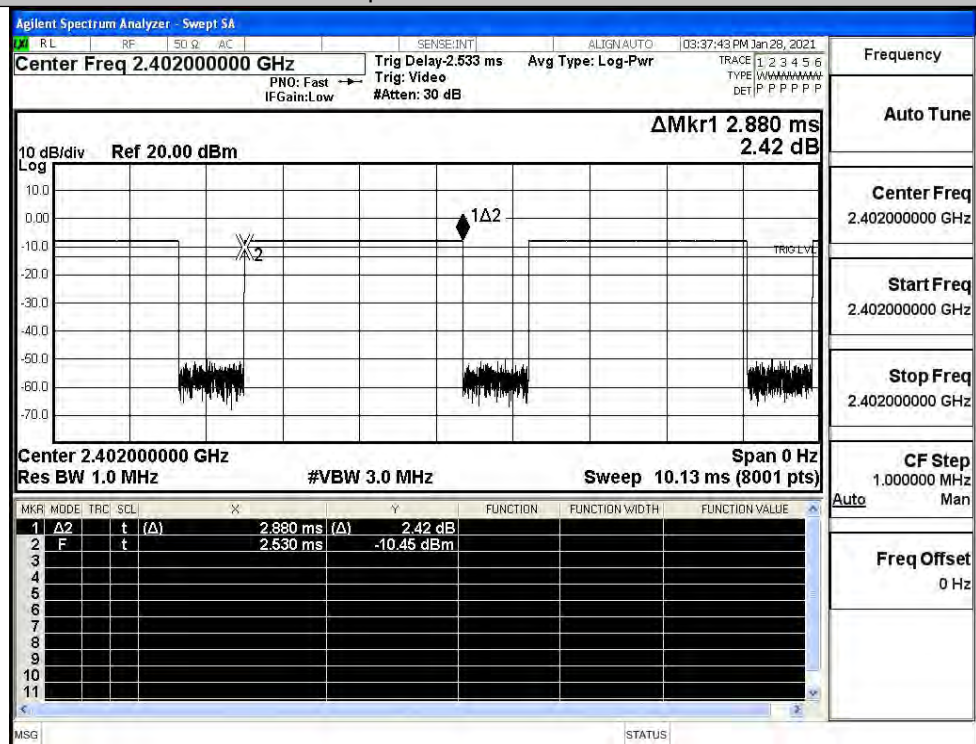


A.5 Dwell Time

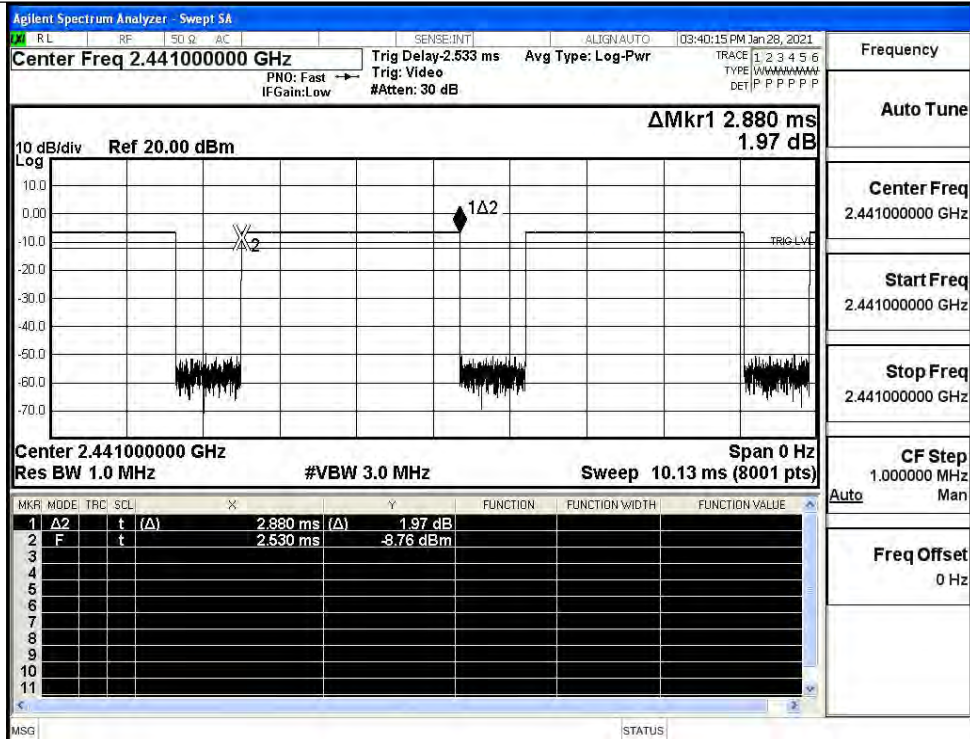
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88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

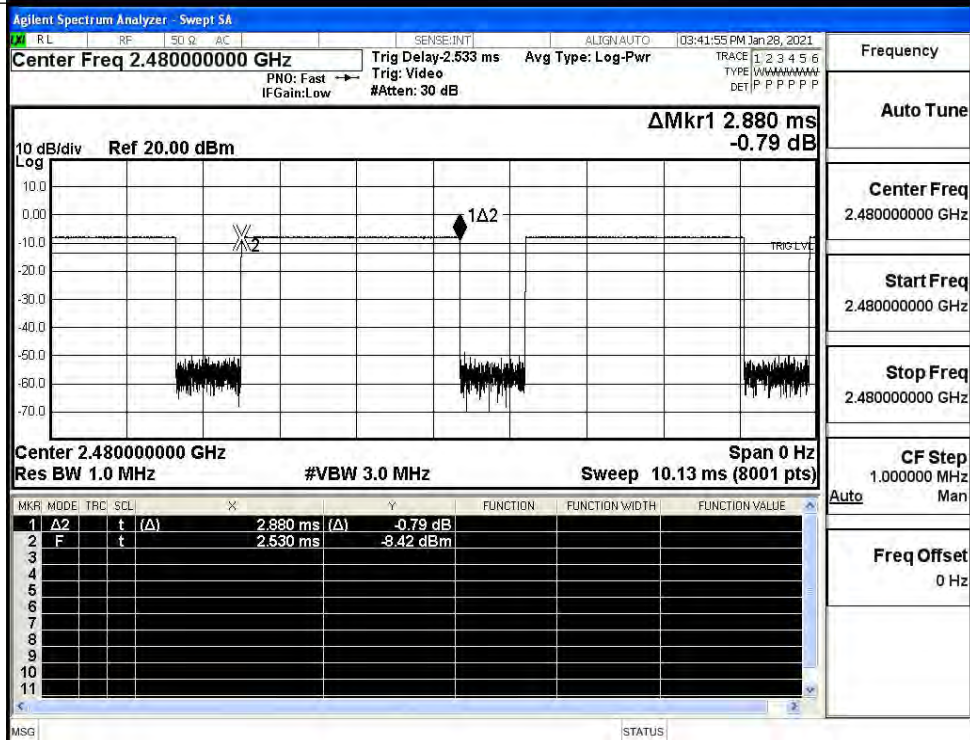
GFSK_DH5/LCH



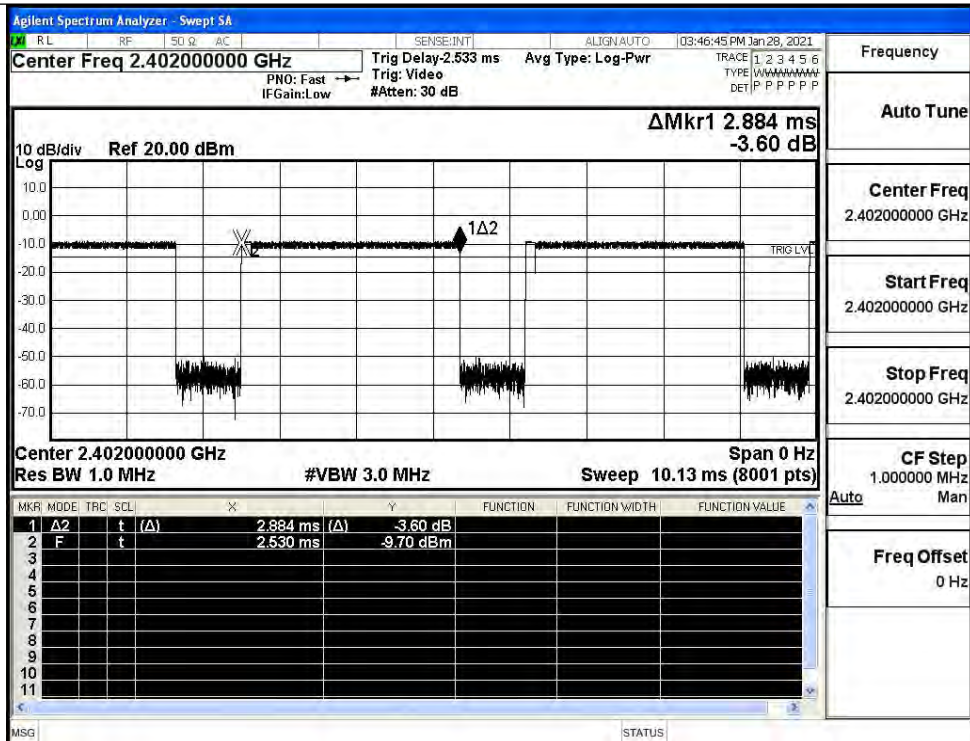
GFSK_DH5/MCH



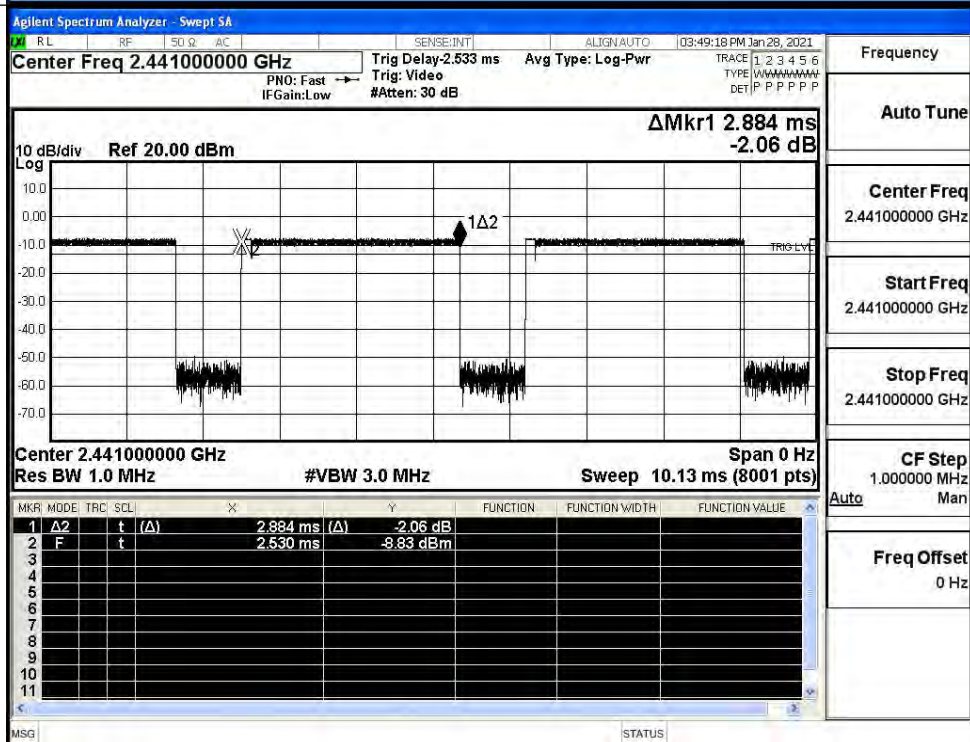
GFSK_DH5/HCH



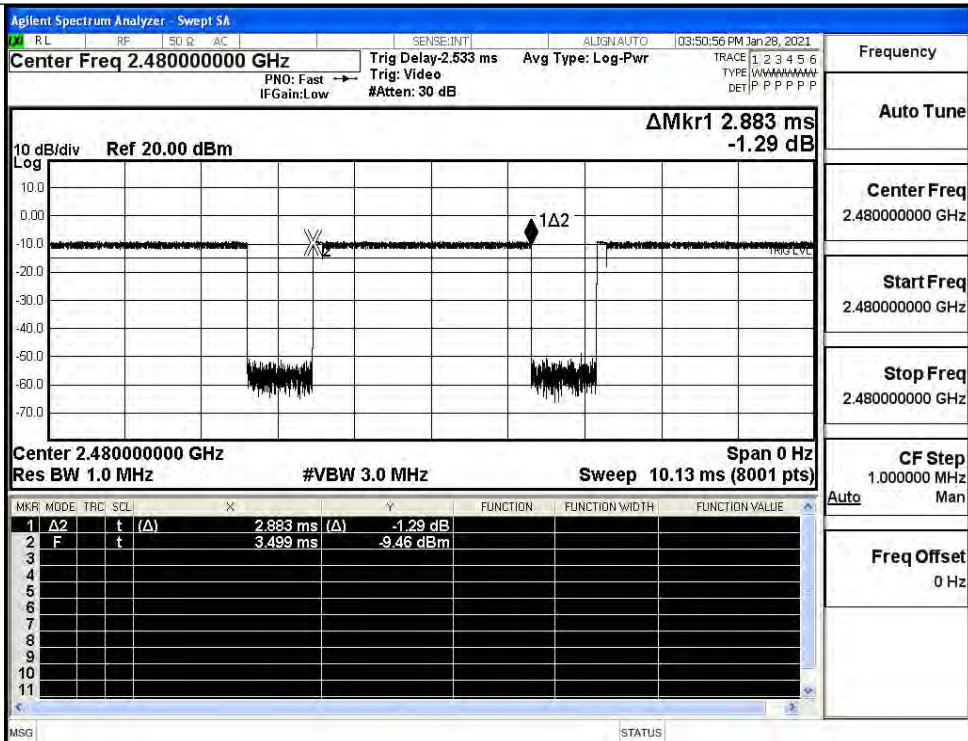
$\pi/4$ DQPSK
_2DH5/LCH



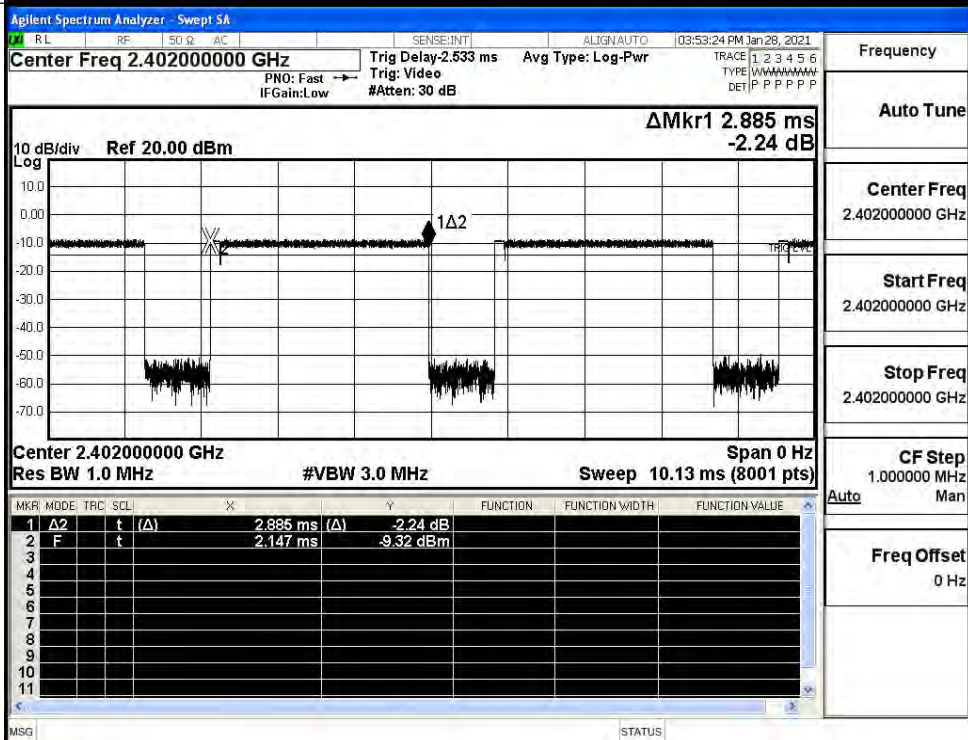
$\pi/4$ DQPSK
_2DH5/MCH



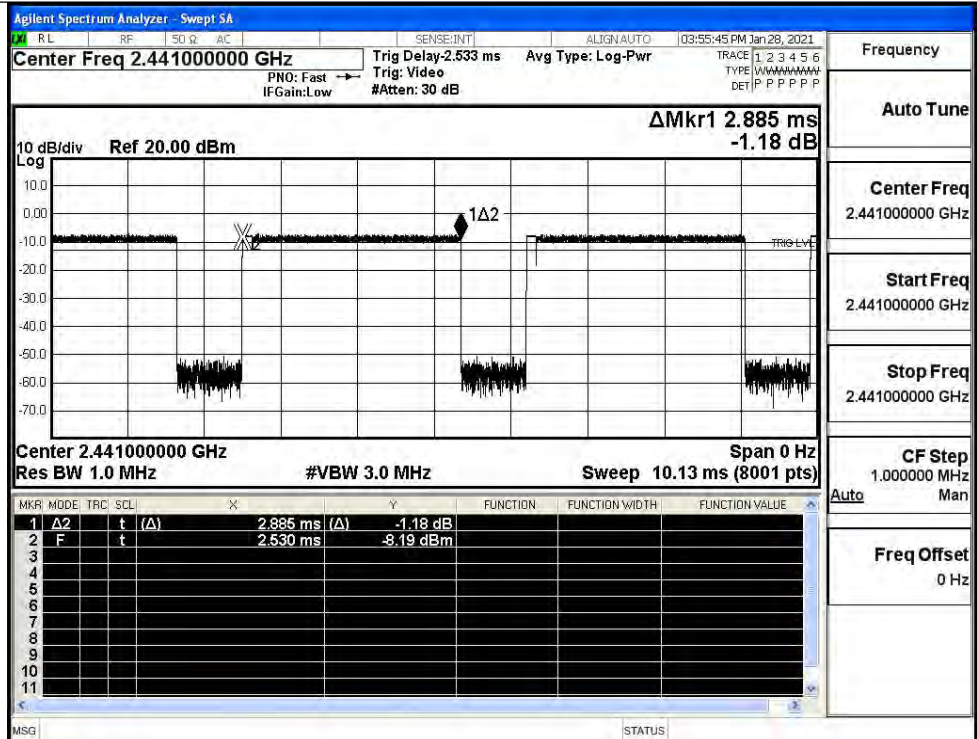
$\pi/4$ DQPSK
_2DH5/HCH



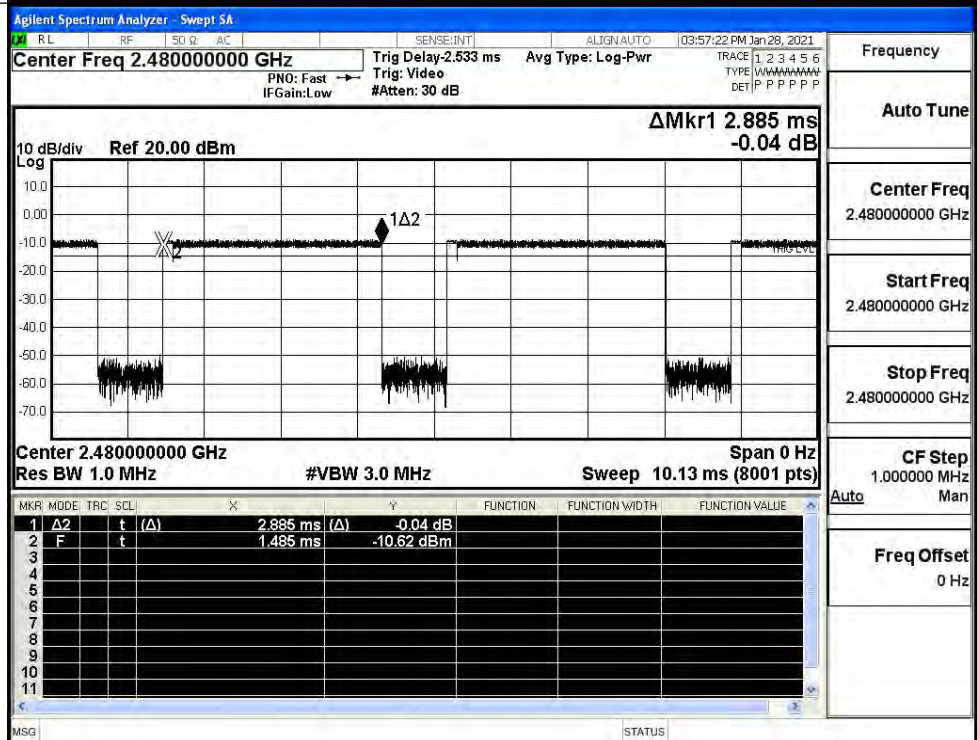
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



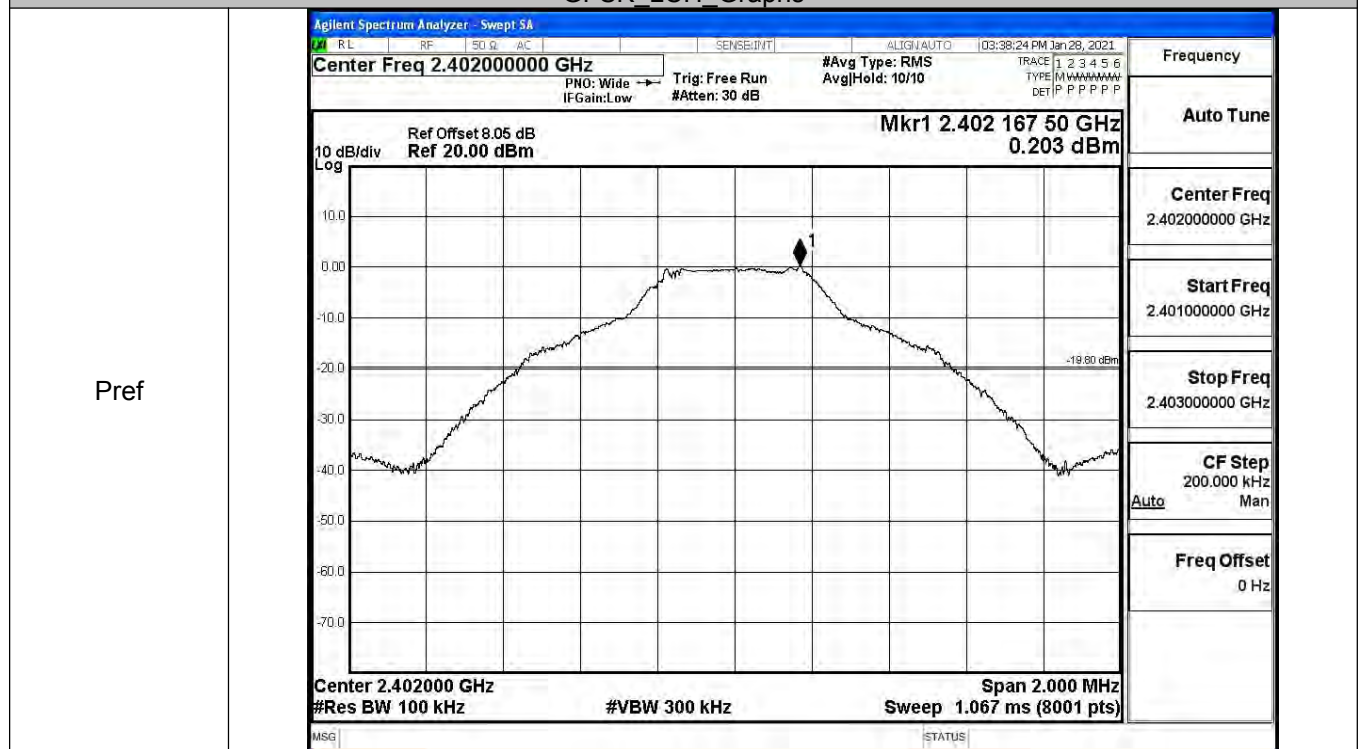
8DPSK_3DH5/HCH



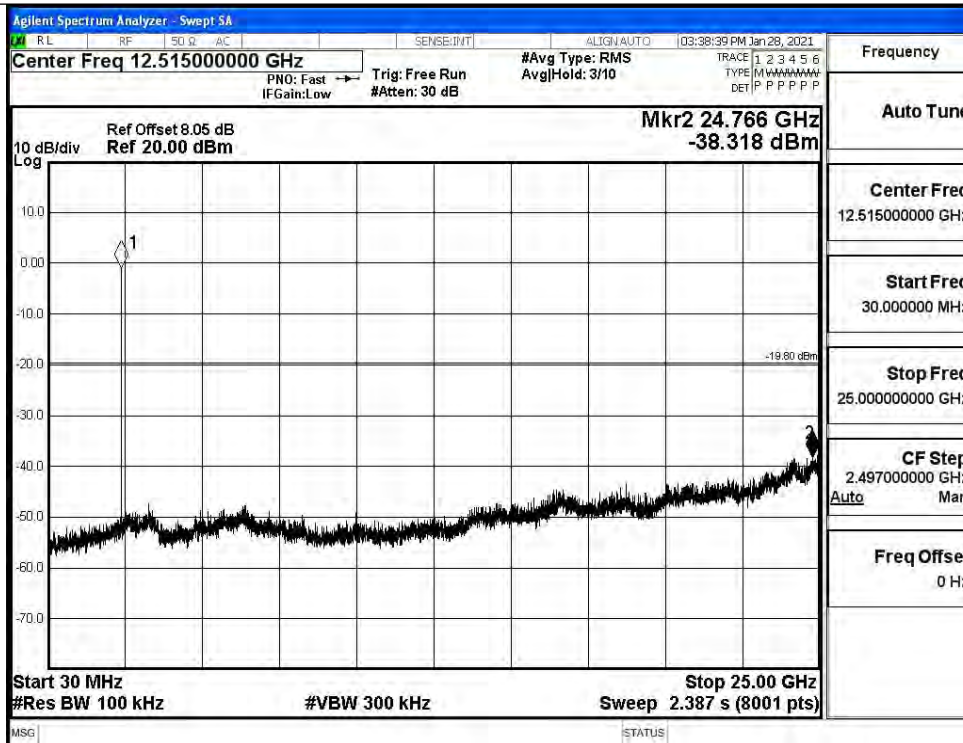
A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.203	-38.318	-19.797	PASS
	MCH	1.631	-36.783	-18.369	PASS
	HCH	0.063	-37.612	-19.937	PASS
$\pi/4$ DQPSK	LCH	-1.38	-37.978	-21.380	PASS
	MCH	0.057	-37.786	-19.943	PASS
	HCH	-1.228	-37.083	-21.228	PASS
8DPSK	LCH	-1.175	-37.370	-21.175	PASS
	MCH	-0.006	-37.667	-20.006	PASS
	HCH	-1.404	-36.285	-21.404	PASS

GFSK LCH Graphs

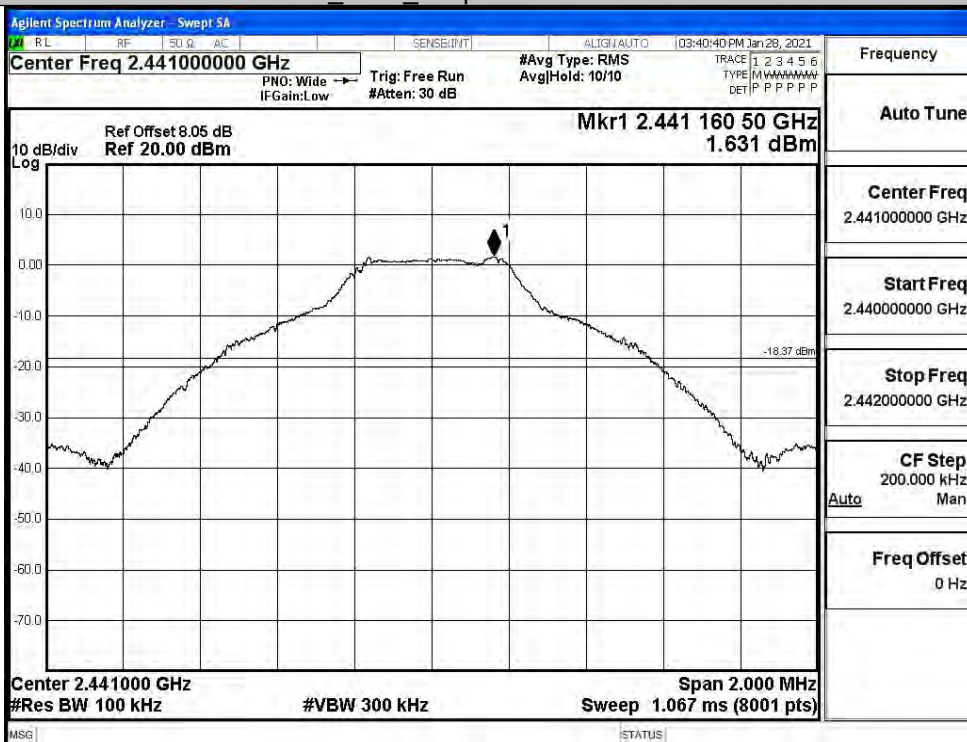


Puw

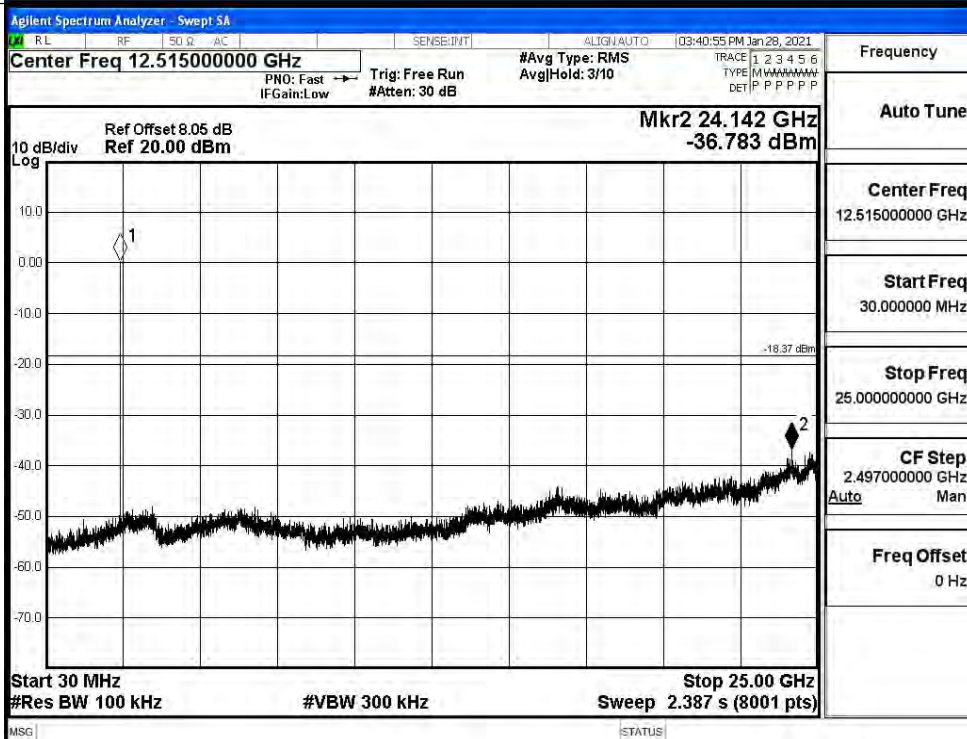


GFSK_MCH_Graphs

Pref

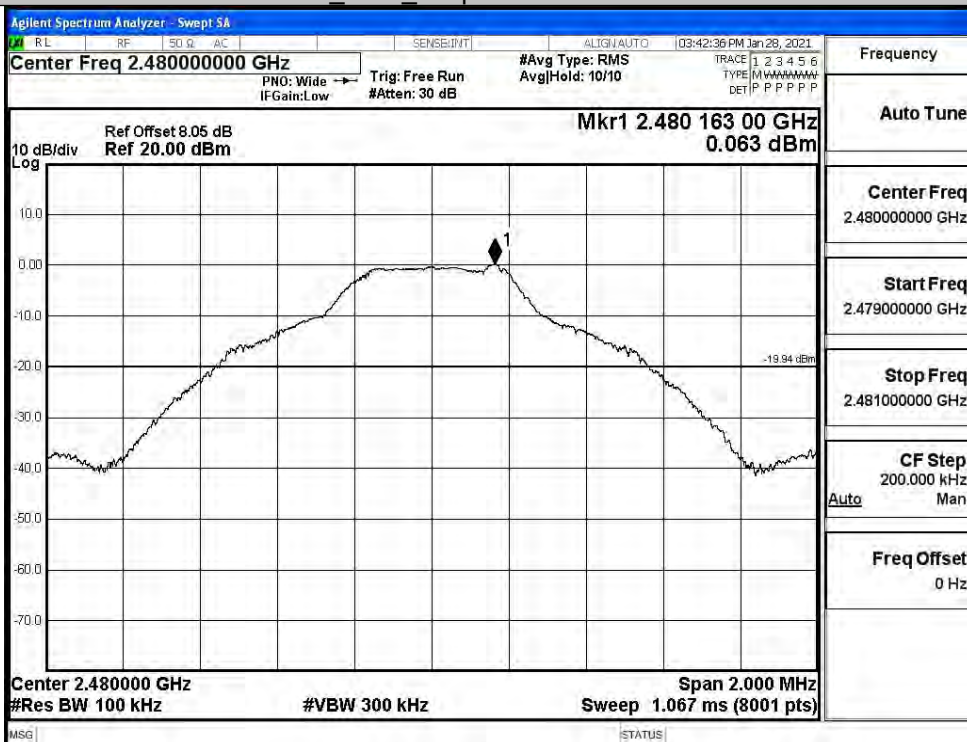


Puw

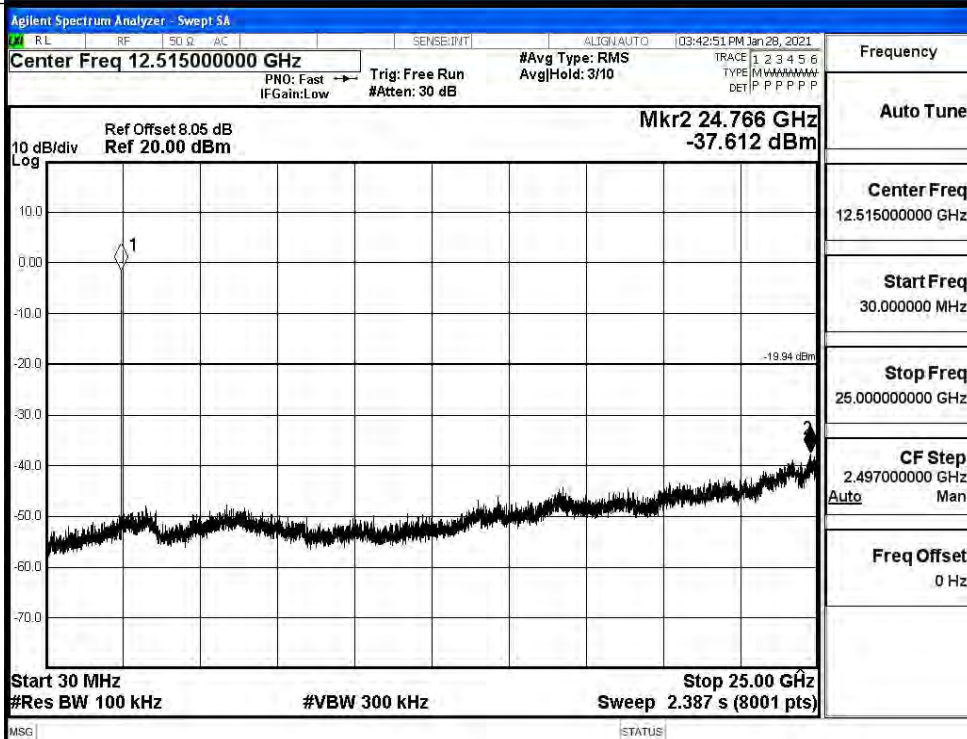


GFSK_HCH_Graphs

Pref

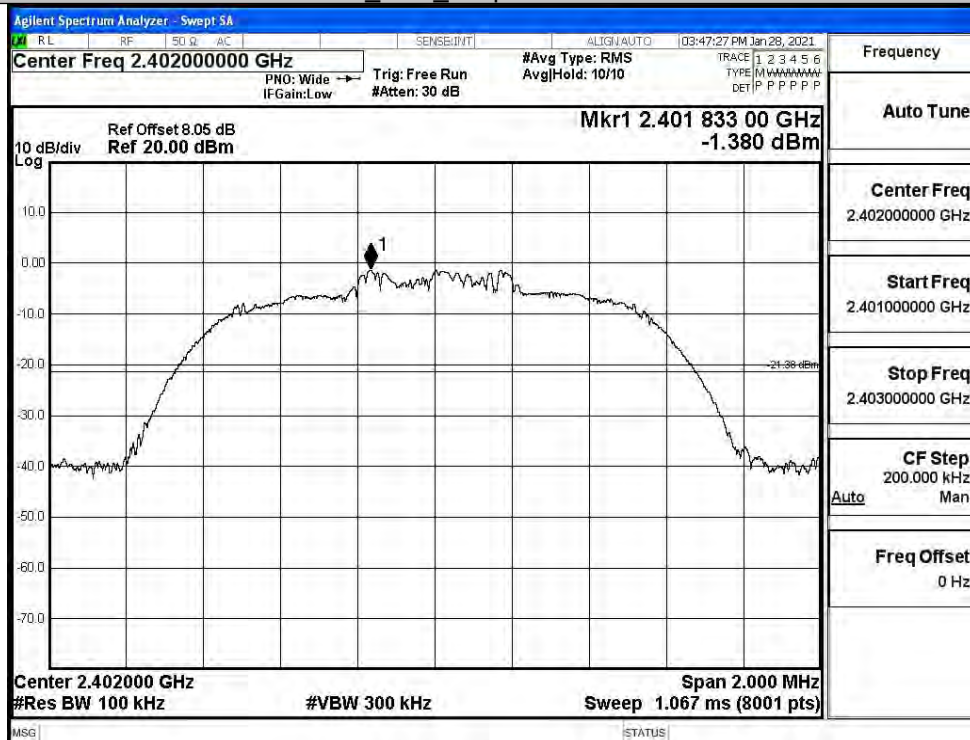


Puw

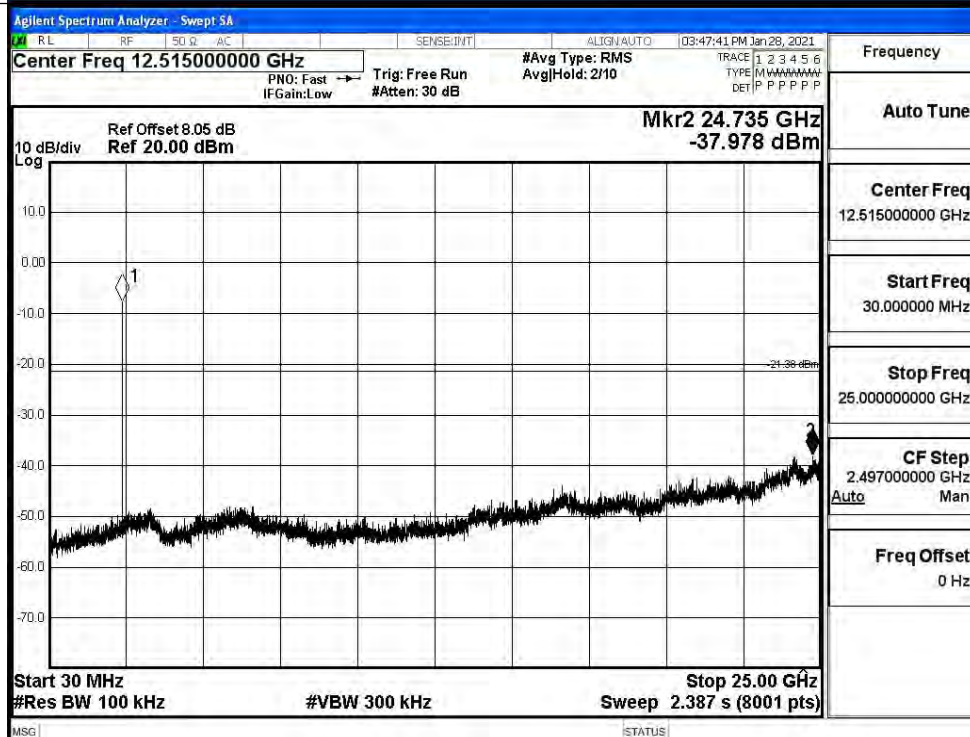


$\pi/4$ DQPSK_LCH_Graphs

Pref

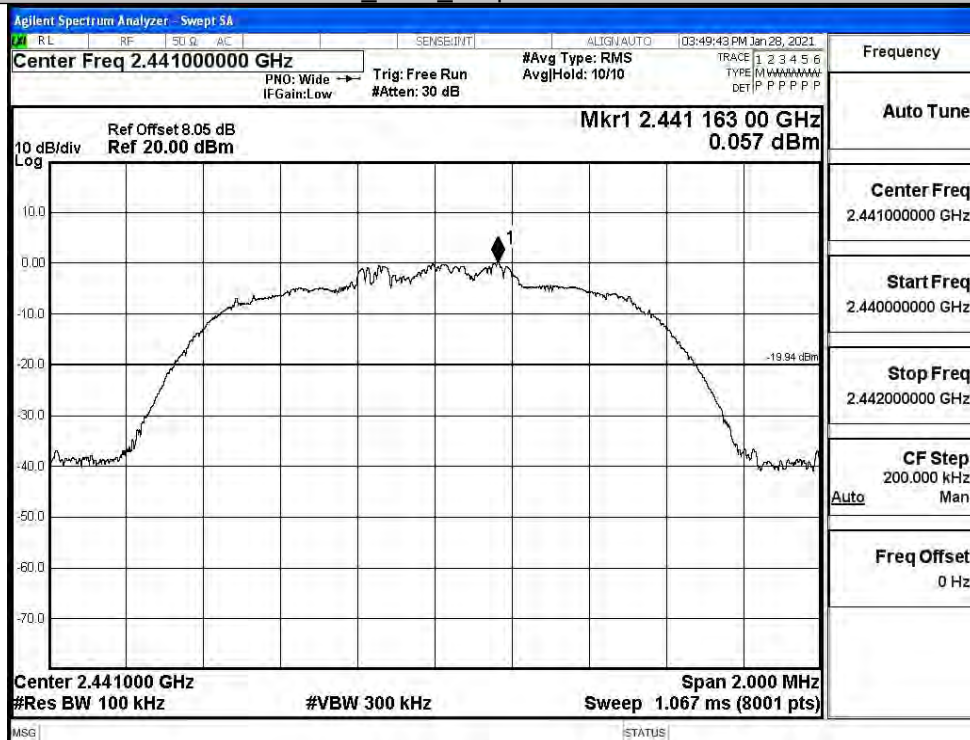


Puw



π /4DQPSK_MCH_Graphs

Pref

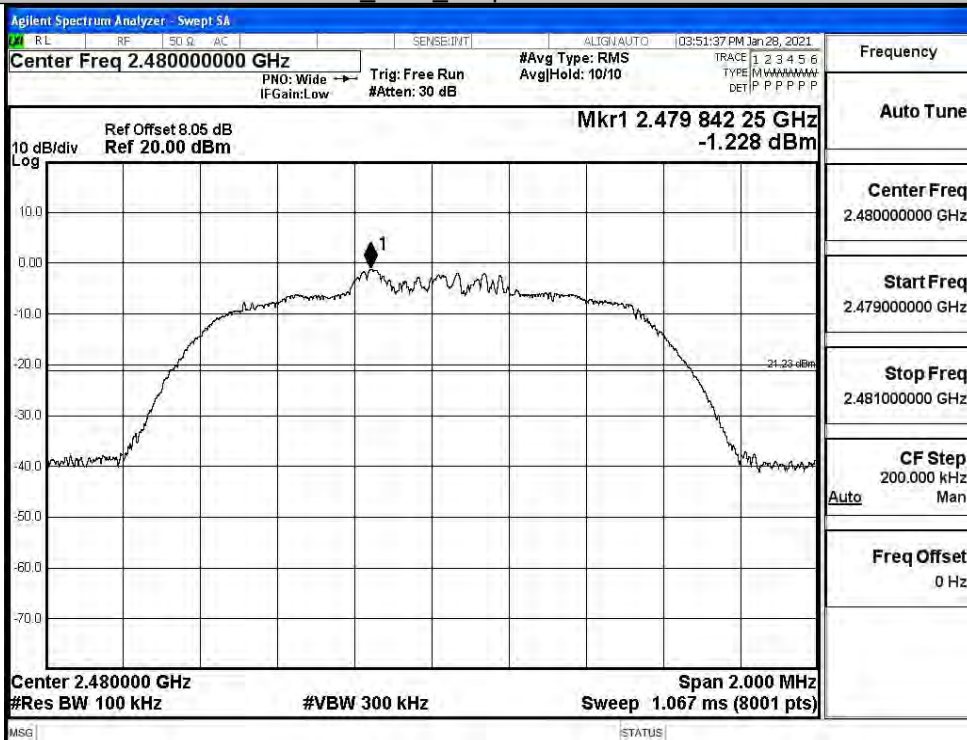


Puw

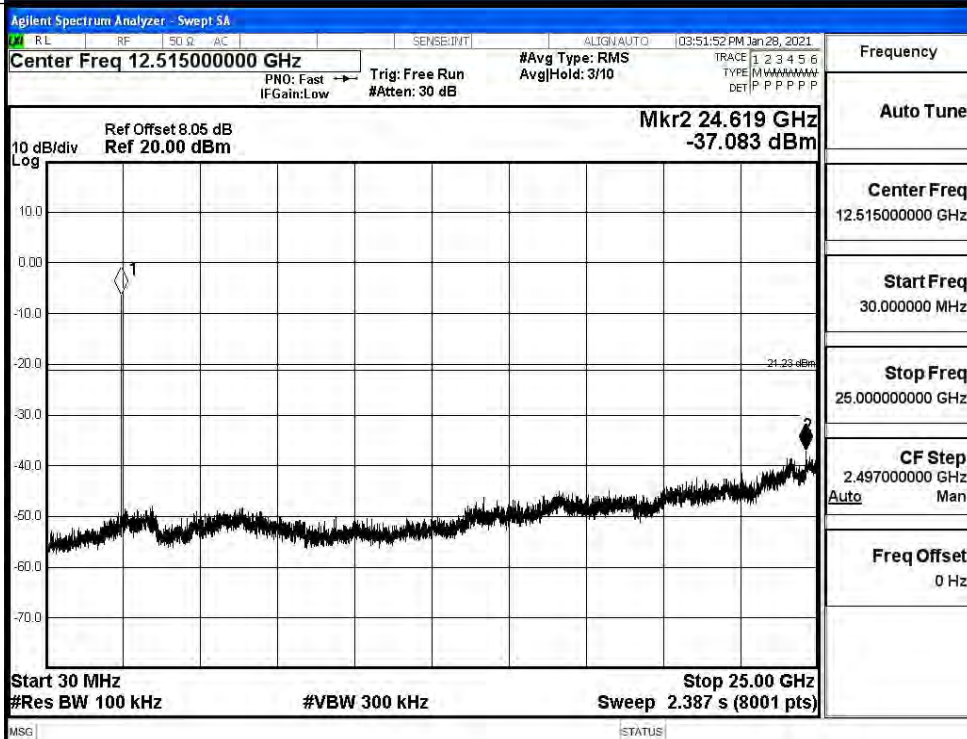


$\pi/4$ DQPSK_HCH_Graphs

Pref

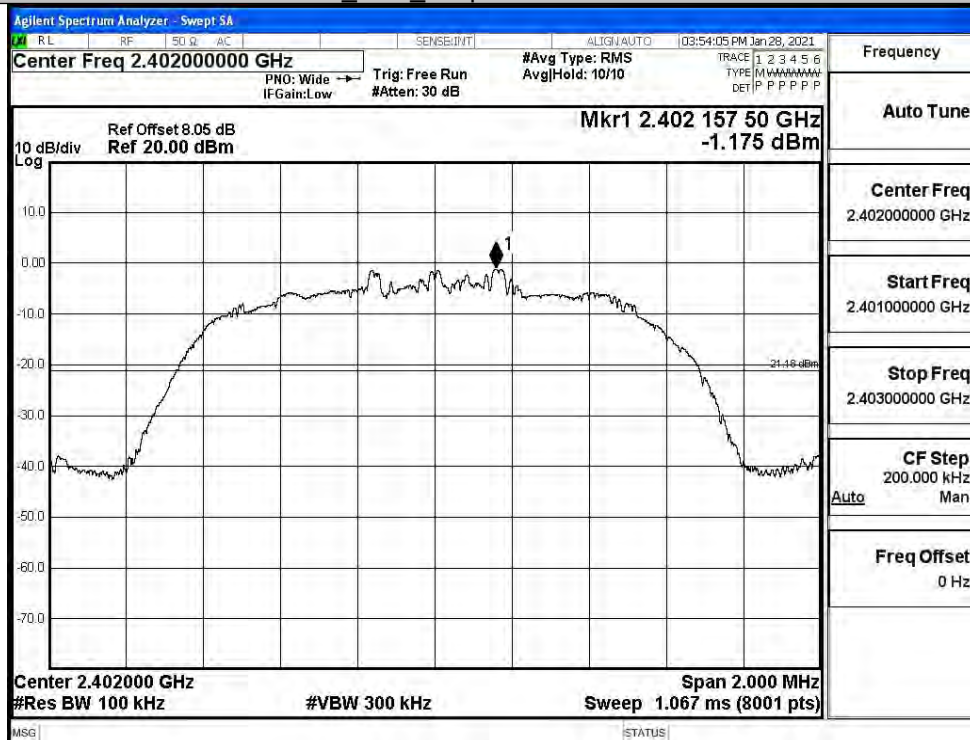


Puw

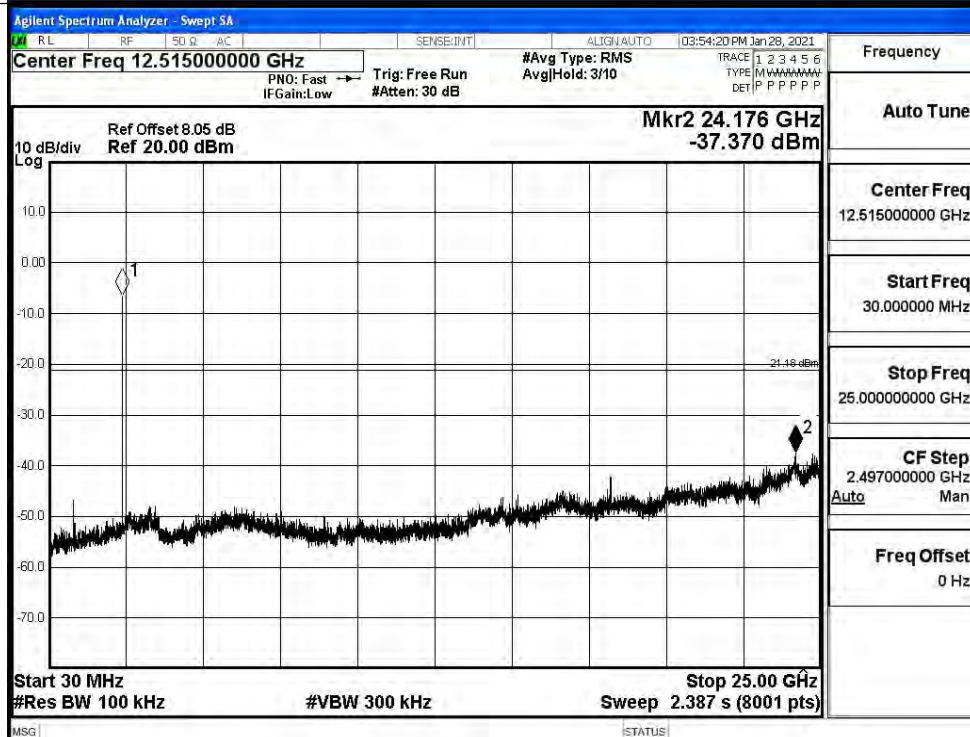


8DPSK_LCH_Graphs

Pref

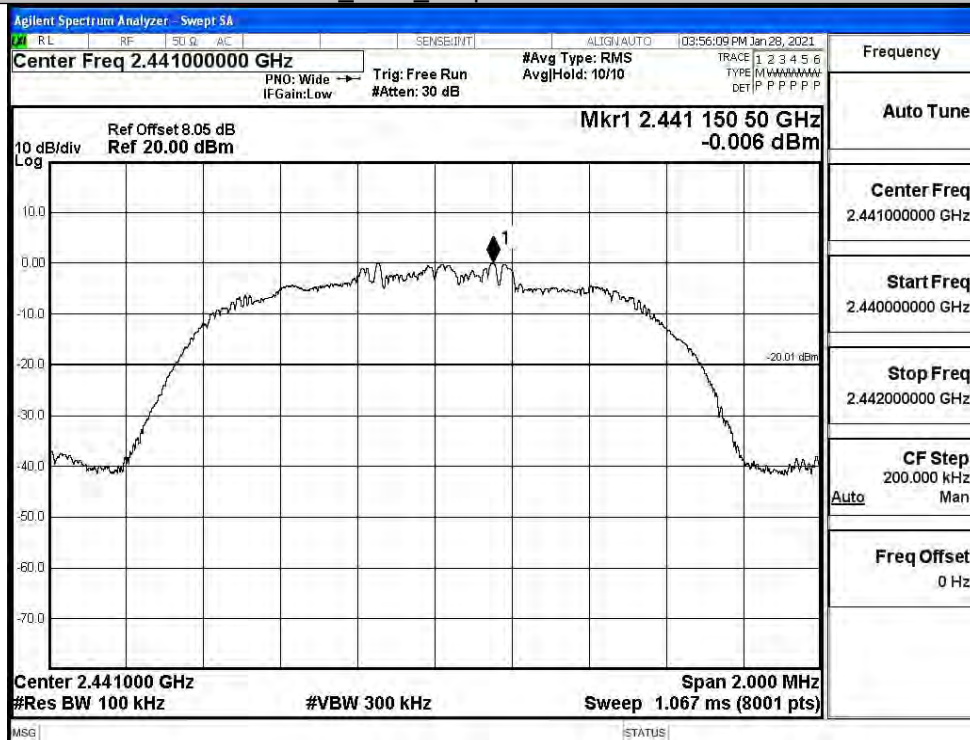


Puw



8DPSK_MCH_Graphs

Pref

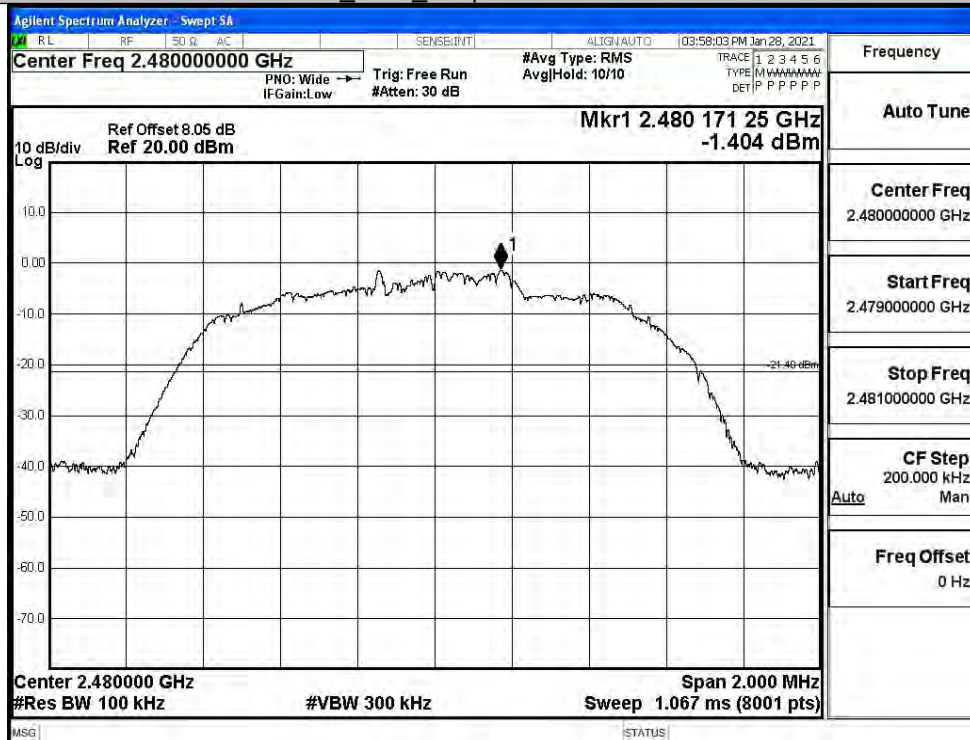


Puw

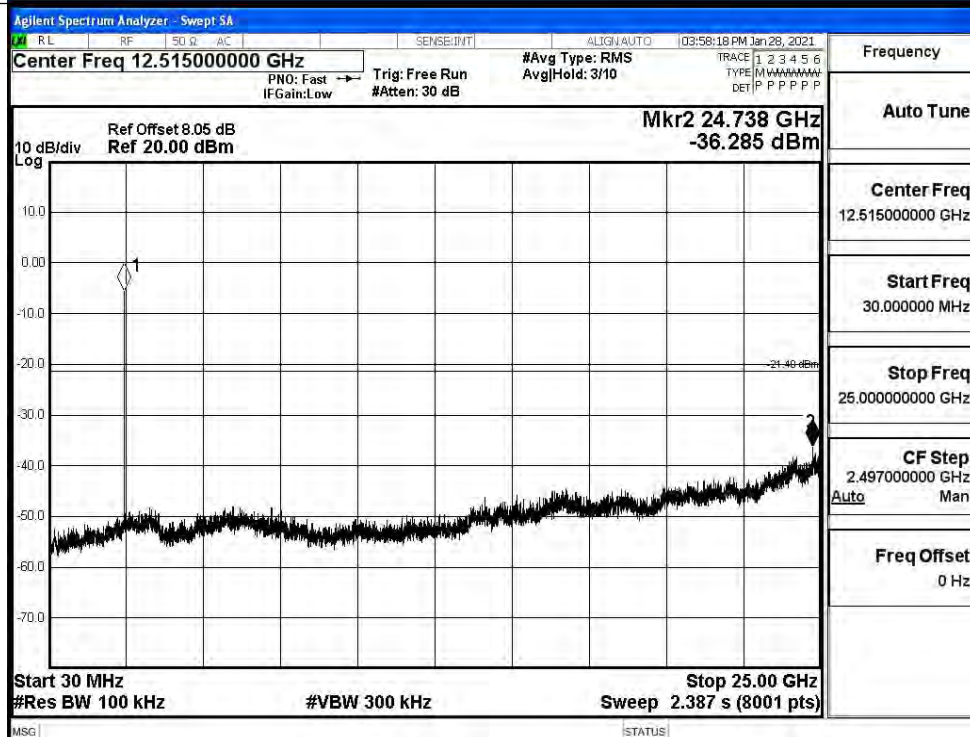


8DPSK_HCH_Graphs

Pref



Puw

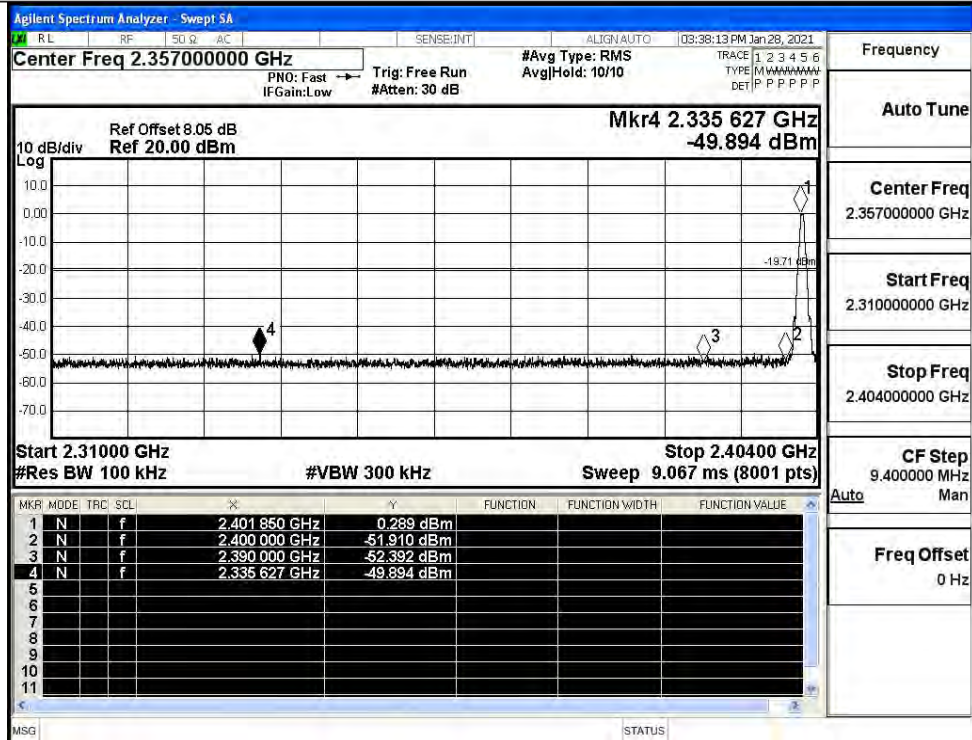


A.7 Band-edge for RF Conducted Emissions

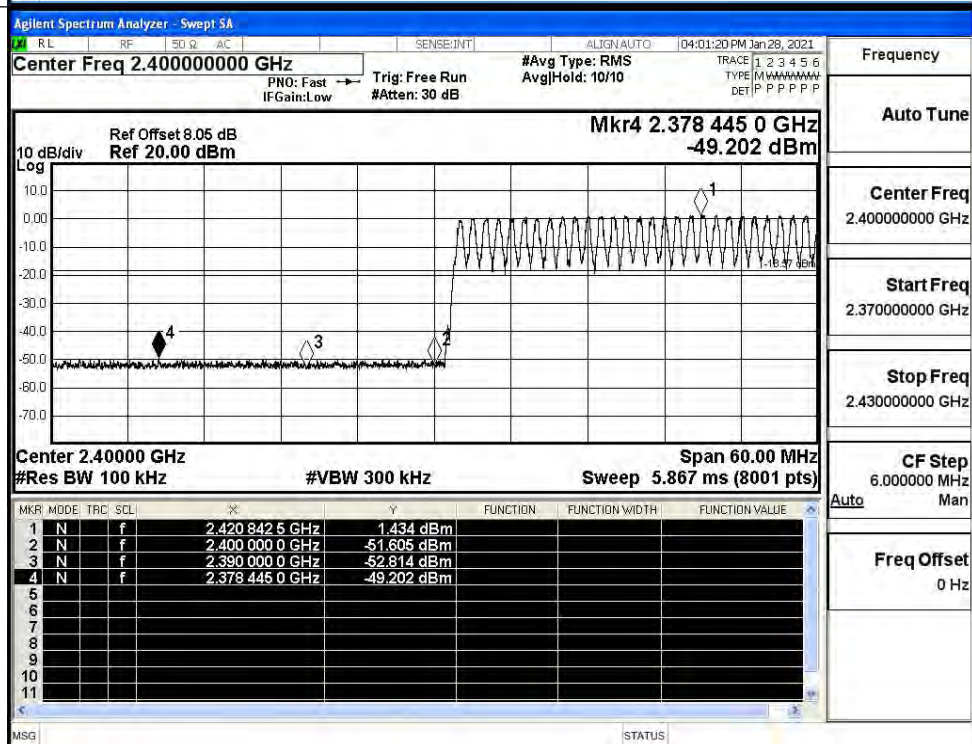
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	0.289	Off	-49.894	-19.71	PASS
			1.434	On	-49.202	-18.57	PASS
	HCH	2480	0.199	Off	-49.524	-19.8	PASS
			1.460	On	-49.128	-18.54	PASS
$\pi/4$ DQPSK	LCH	2402	-1.932	Off	-49.897	-21.93	PASS
			-0.258	On	-49.569	-20.26	PASS
	HCH	2480	-1.851	Off	-49.312	-21.85	PASS
			0.064	On	-48.562	-19.94	PASS
8DPSK	LCH	2402	-1.482	Off	-49.426	-21.48	PASS
			-0.028	On	-48.866	-20.03	PASS
	HCH	2480	-1.628	Off	-49.176	-21.63	PASS
			-0.187	On	-48.665	-20.19	PASS

Test Graphs

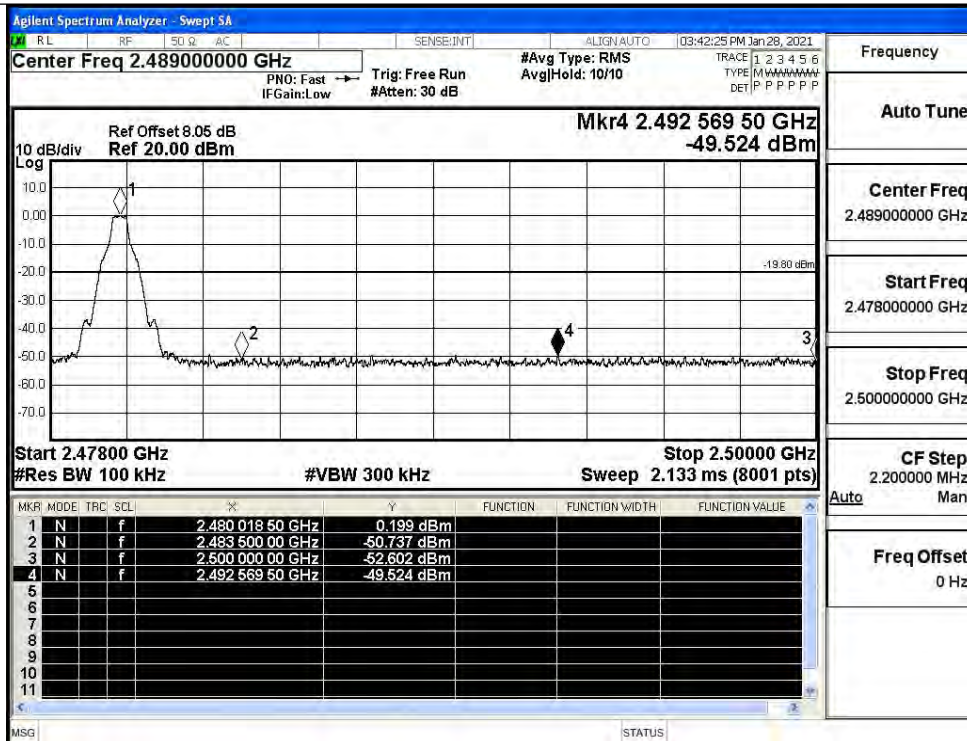
GFSK/LCH/No Hop



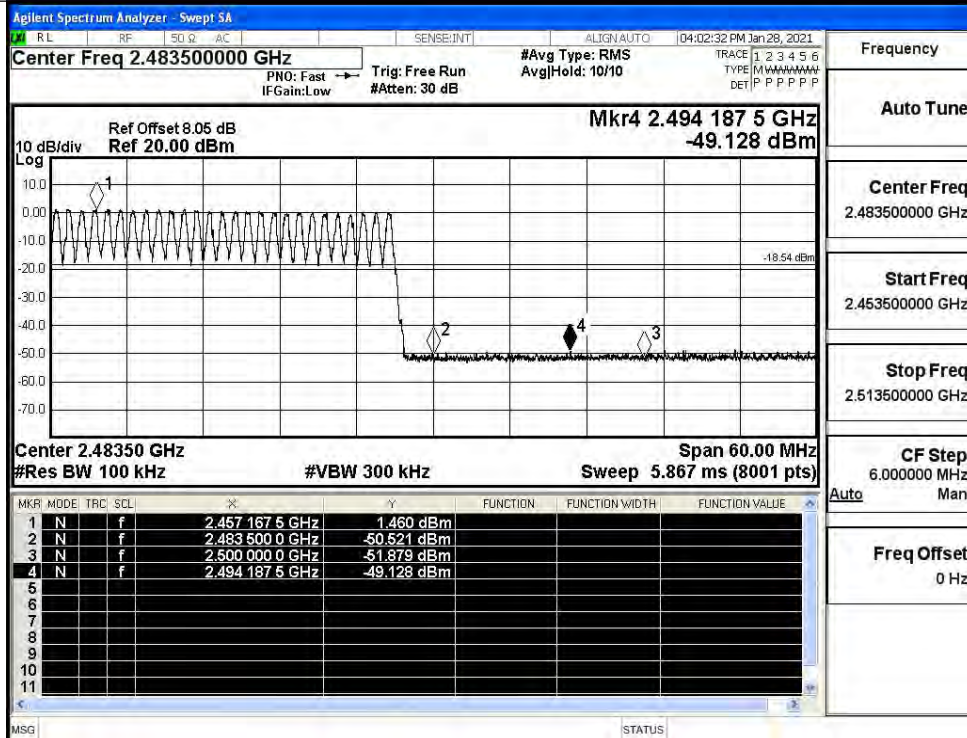
GFSK/LCH/Hop



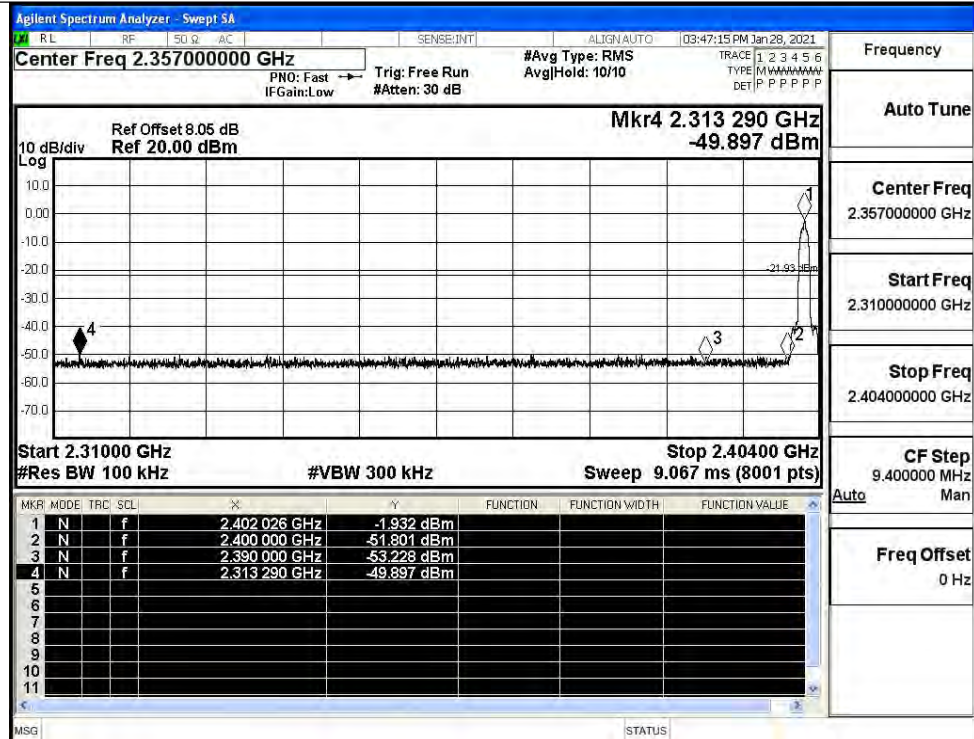
GFSK/HCH/No Hop



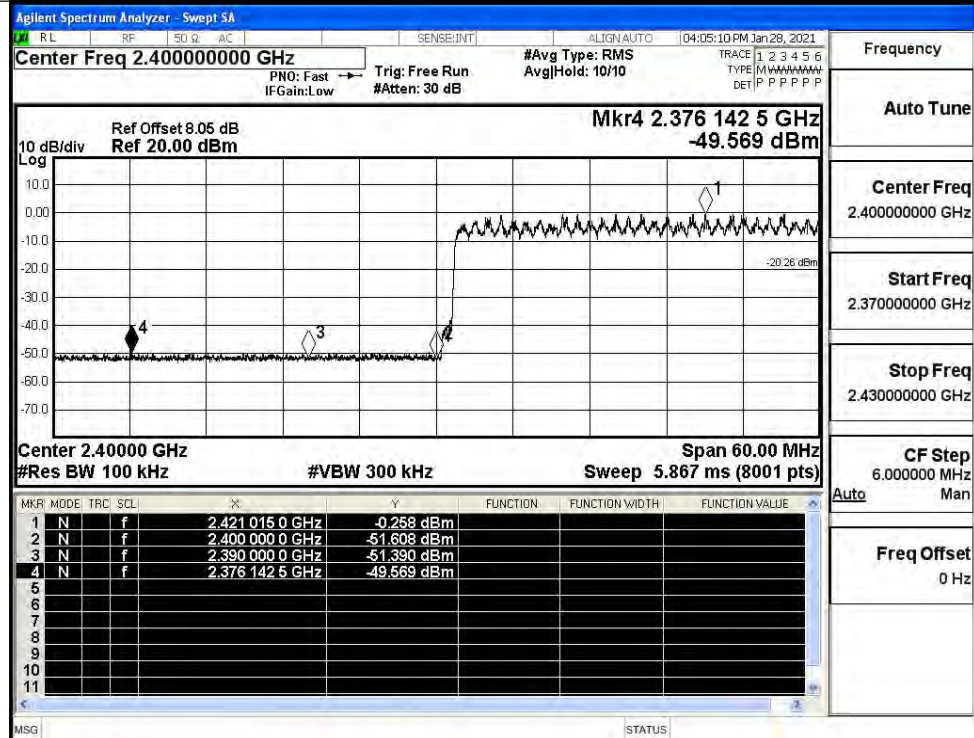
GFSK/HCH/Hop



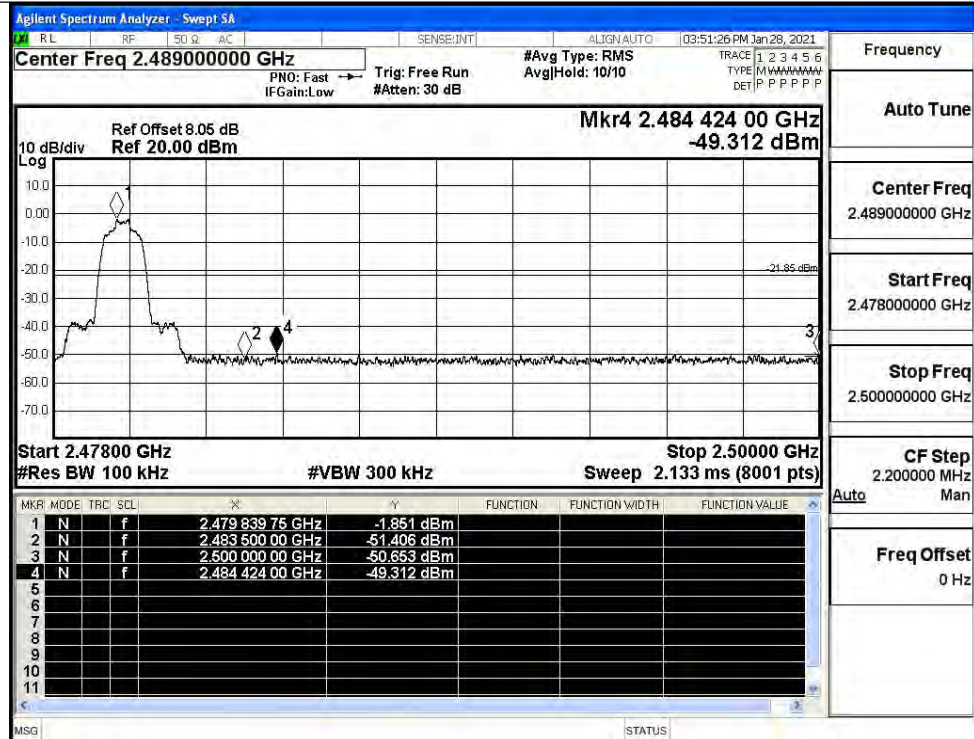
$\pi/4$ DQPSK/LCH/No
Hop



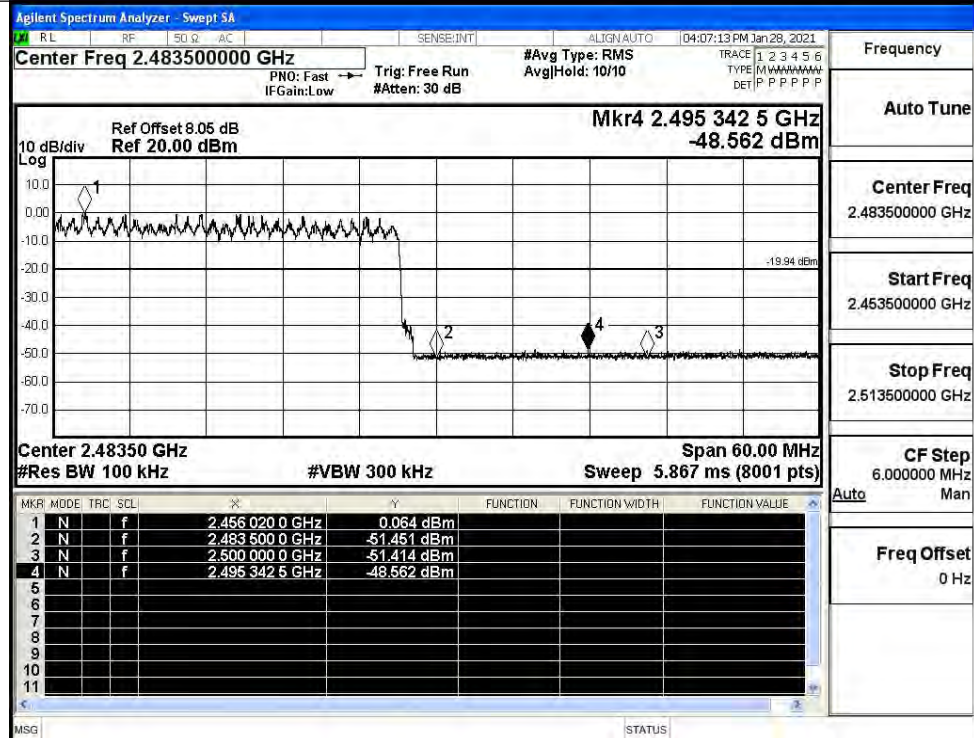
$\pi/4$ DQPSK/LCH/Hop



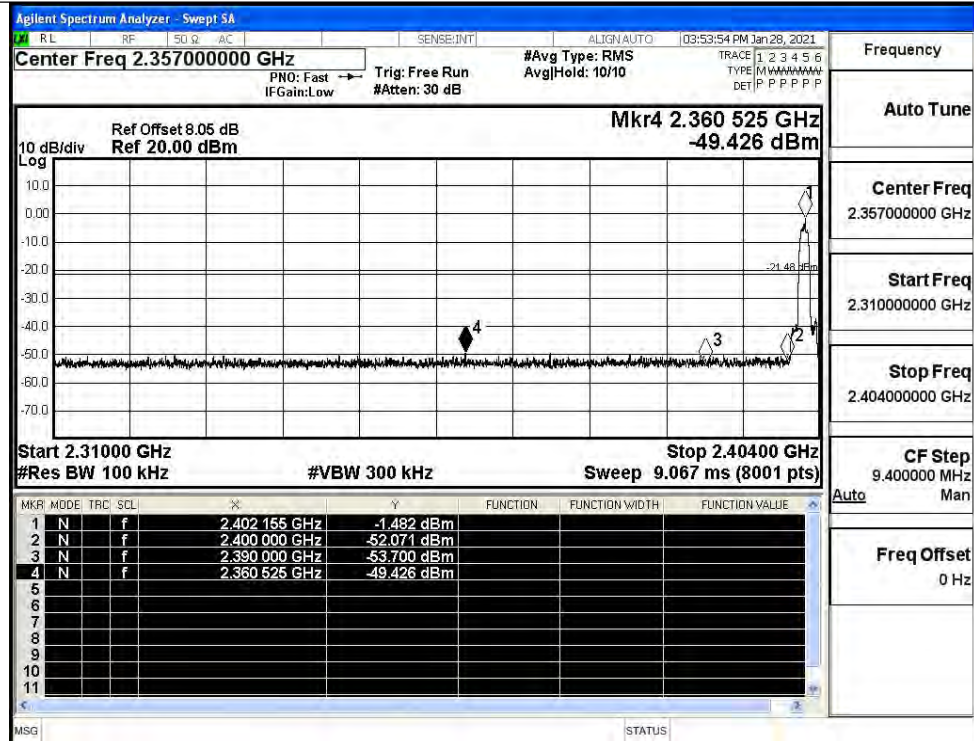
$\pi/4$ DQPSK/HCH/No
Hop



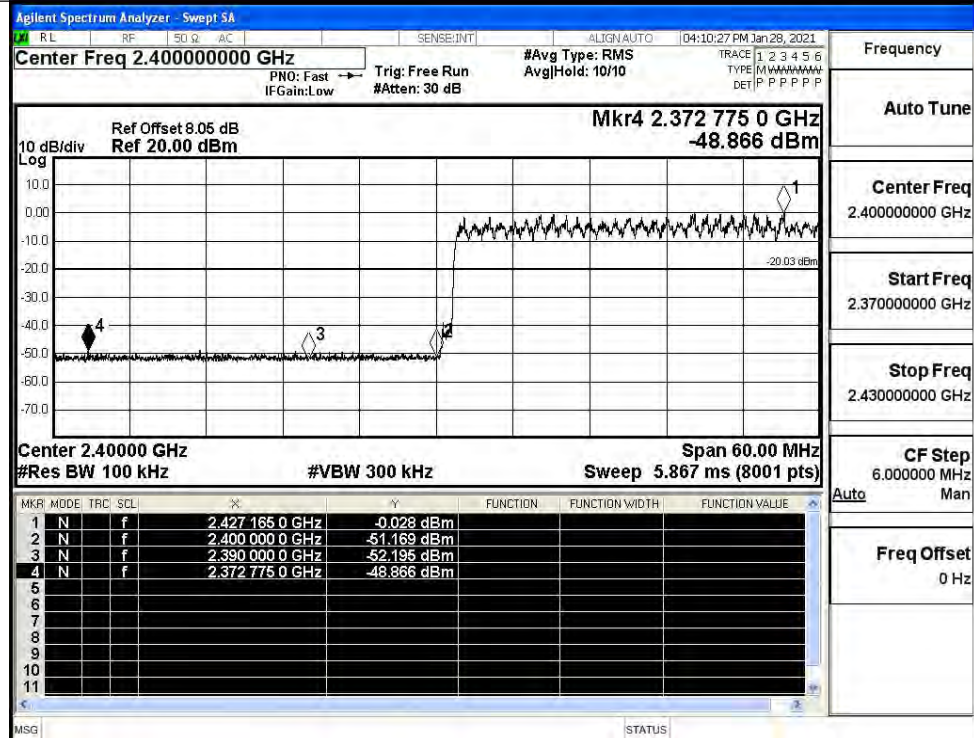
$\pi/4$ DQPSK/HCH/Hop



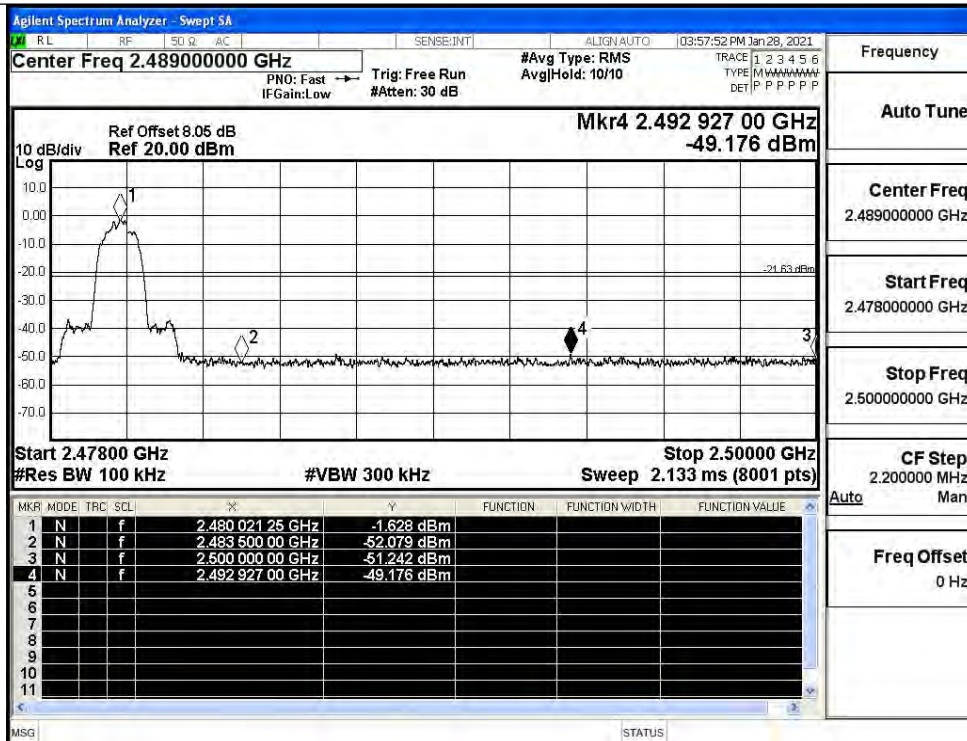
8DPSK/LCH/No Hop



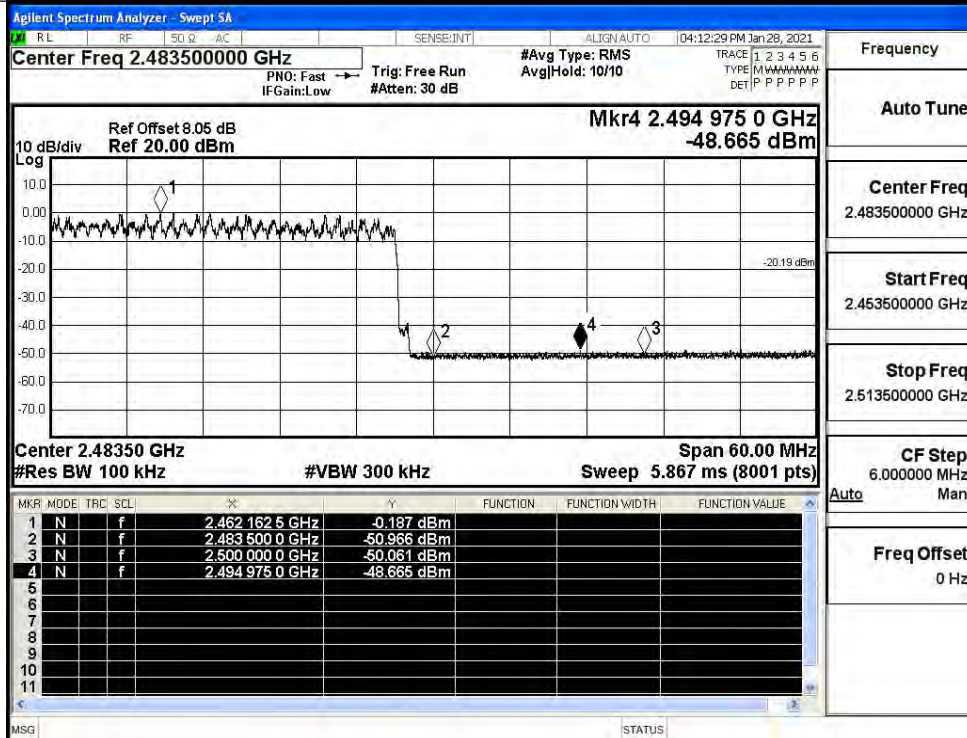
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



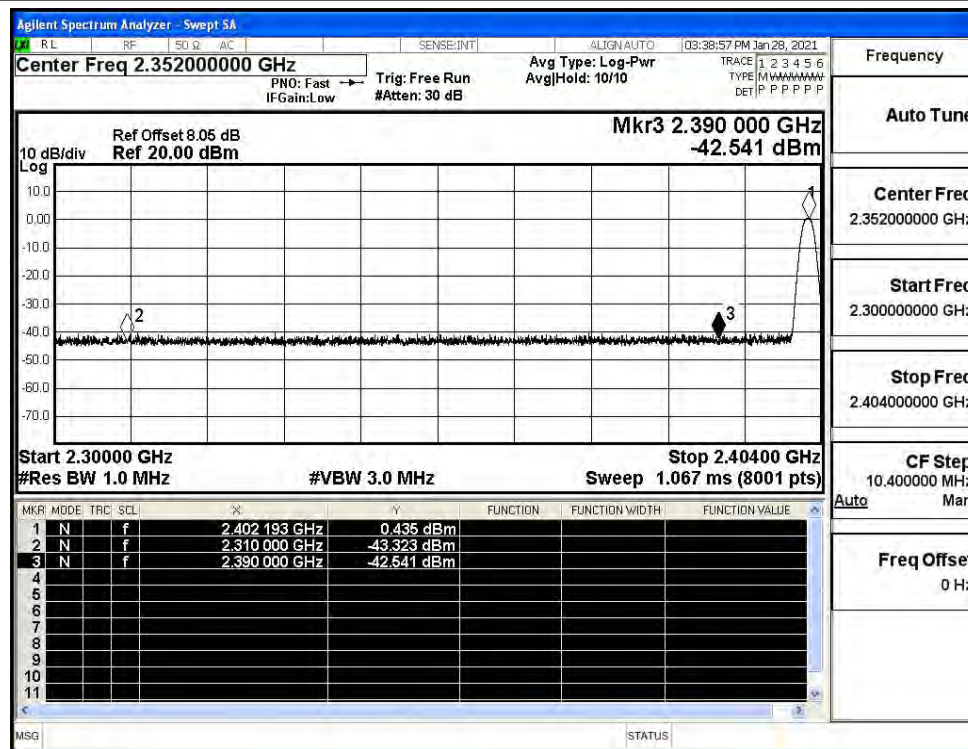
8DPSK/HCH/Hop



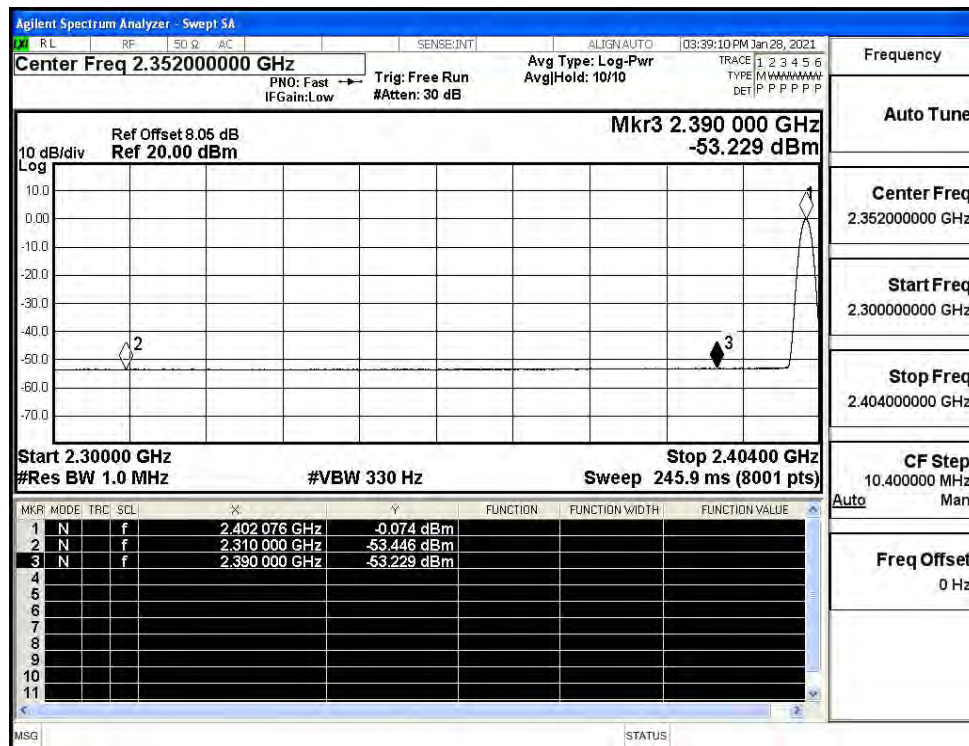
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.32	2.0	0	53.91	PEAK	74	PASS
	Off	2310.0	-53.45	2.0	0	43.78	AV	54	PASS
	Off	2390.0	-42.54	2.0	0	54.69	PEAK	74	PASS
	Off	2390.0	-53.23	2.0	0	44.00	AV	54	PASS
	Off	2483.5	-42.06	2.0	0	55.17	PEAK	74	PASS
	Off	2483.5	-52.75	2.0	0	44.48	AV	54	PASS
	Off	2500.0	-40.71	2.0	0	56.52	PEAK	74	PASS
	Off	2500.0	-52.56	2.0	0	44.67	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-42.22	2.0	0	55.01	PEAK	74	PASS
	Off	2310.0	-53.42	2.0	0	43.81	AV	54	PASS
	Off	2390.0	-42.61	2.0	0	54.62	PEAK	74	PASS
	Off	2390.0	-53.24	2.0	0	43.99	AV	54	PASS
	Off	2483.5	-43.07	2.0	0	54.16	PEAK	74	PASS
	Off	2483.5	-52.58	2.0	0	44.65	AV	54	PASS
	Off	2500.0	-42.12	2.0	0	55.11	PEAK	74	PASS
	Off	2500.0	-52.51	2.0	0	44.72	AV	54	PASS
8DPSK	Off	2310.0	-43.64	2.0	0	53.59	PEAK	74	PASS
	Off	2310.0	-53.66	2.0	0	43.57	AV	54	PASS
	Off	2390.0	-43.18	2.0	0	54.05	PEAK	74	PASS
	Off	2390.0	-53.19	2.0	0	44.04	AV	54	PASS
	Off	2483.5	-42.52	2.0	0	54.71	PEAK	74	PASS
	Off	2483.5	-52.65	2.0	0	44.58	AV	54	PASS
	Off	2500.0	-42.15	2.0	0	55.08	PEAK	74	PASS
	Off	2500.0	-52.54	2.0	0	44.69	AV	54	PASS

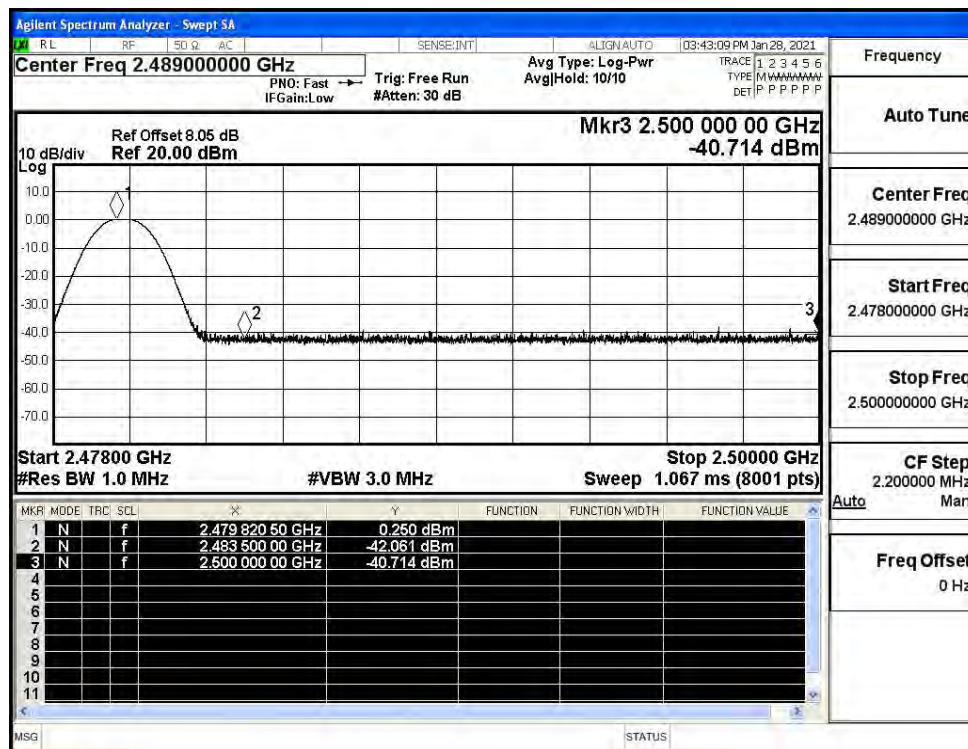
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



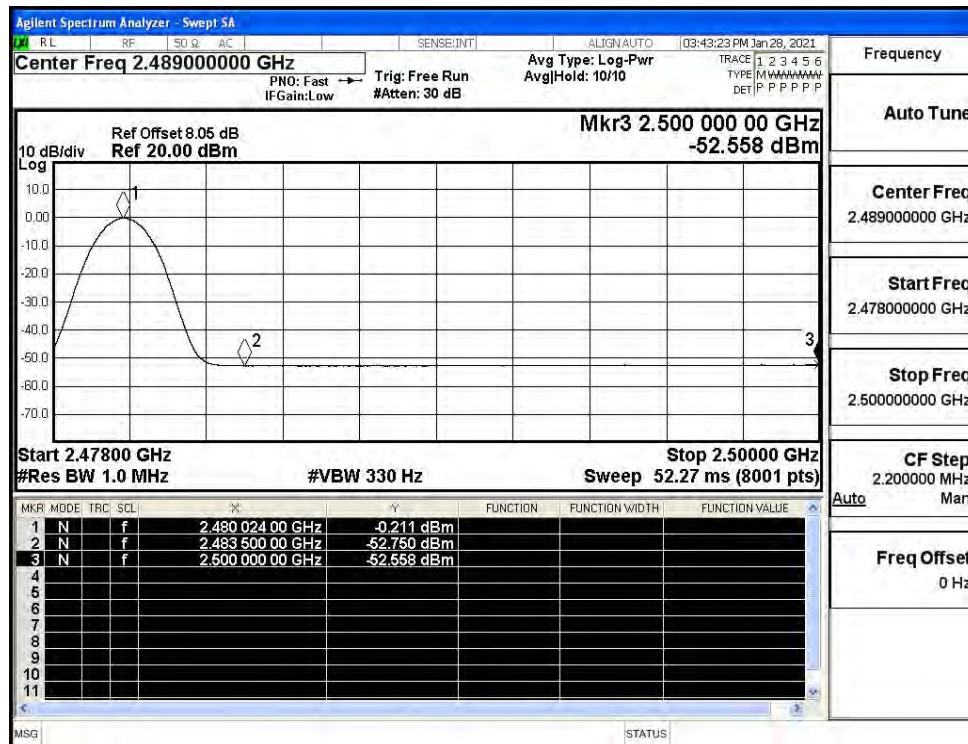
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

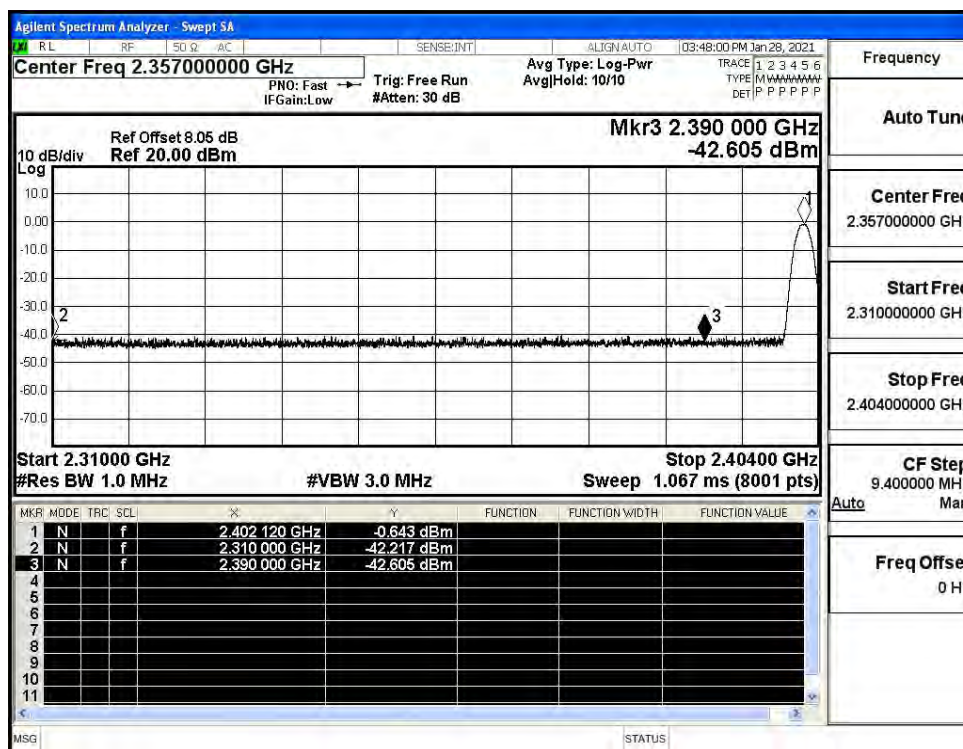
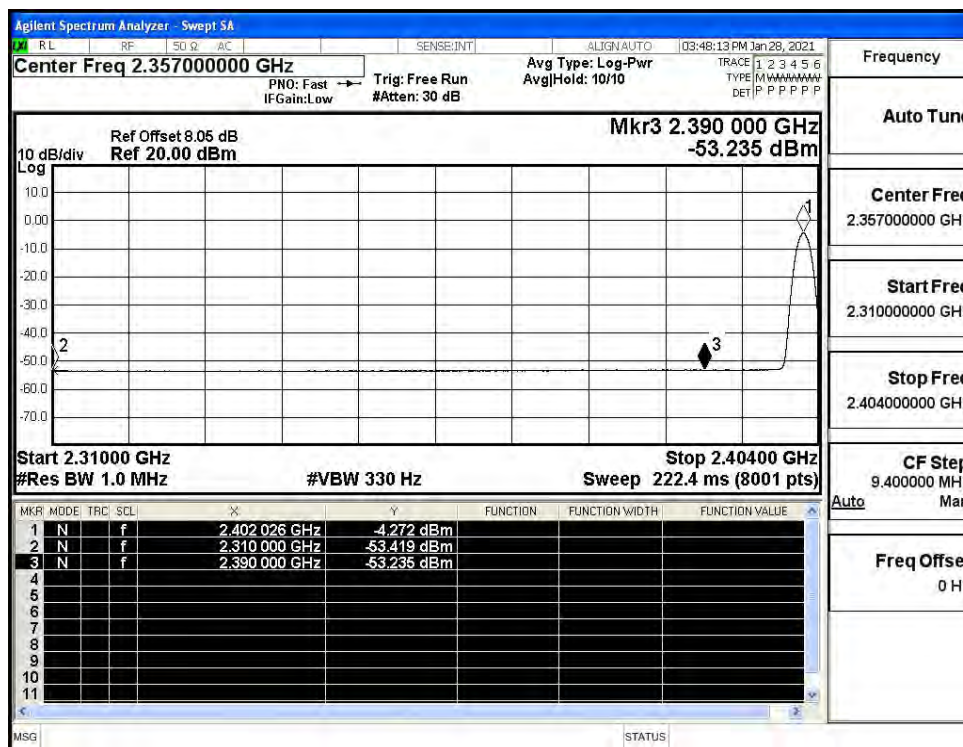


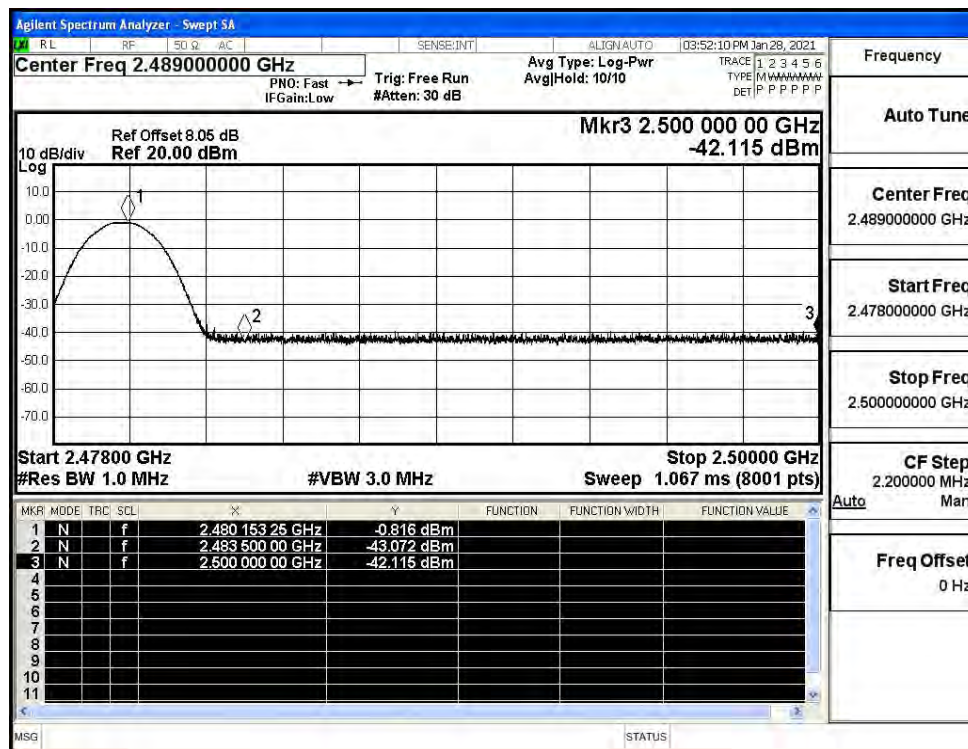
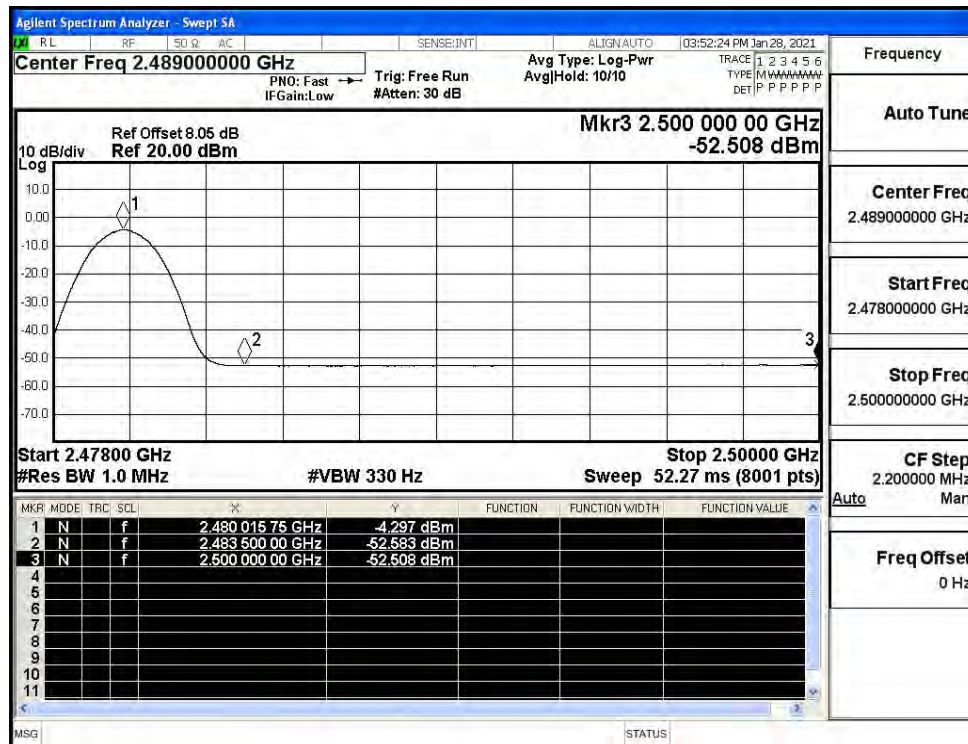
Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



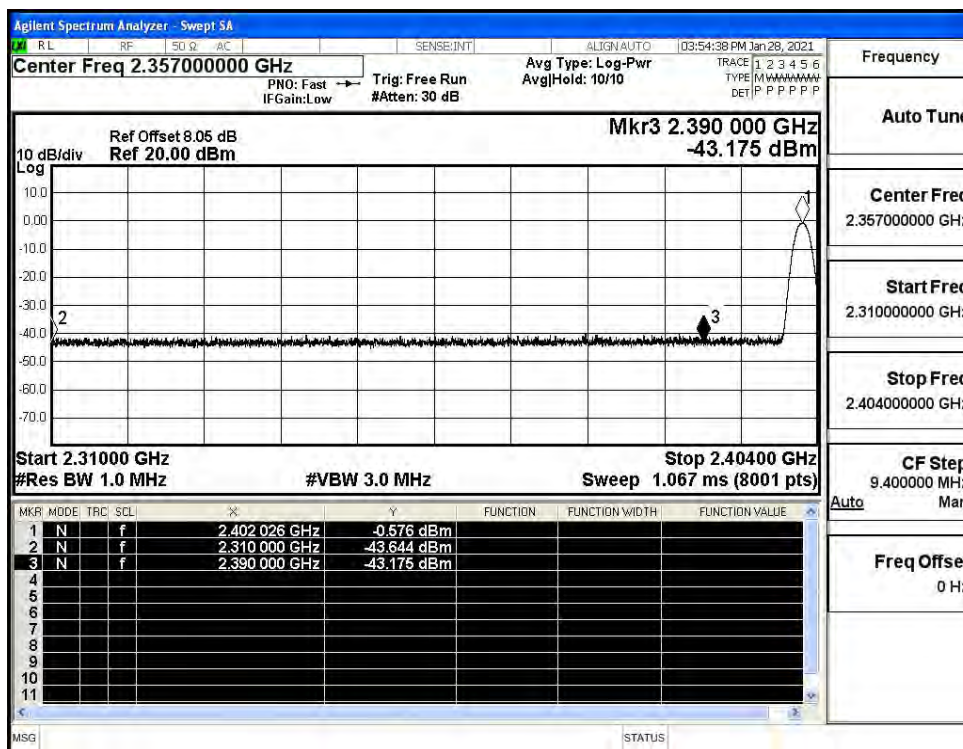
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



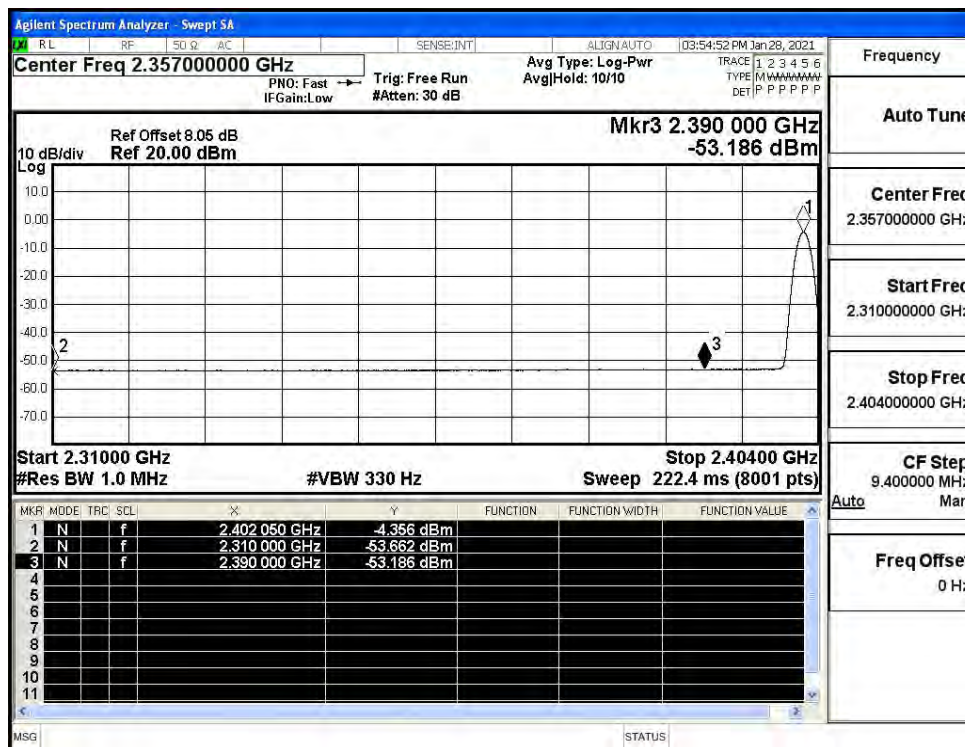
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

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)

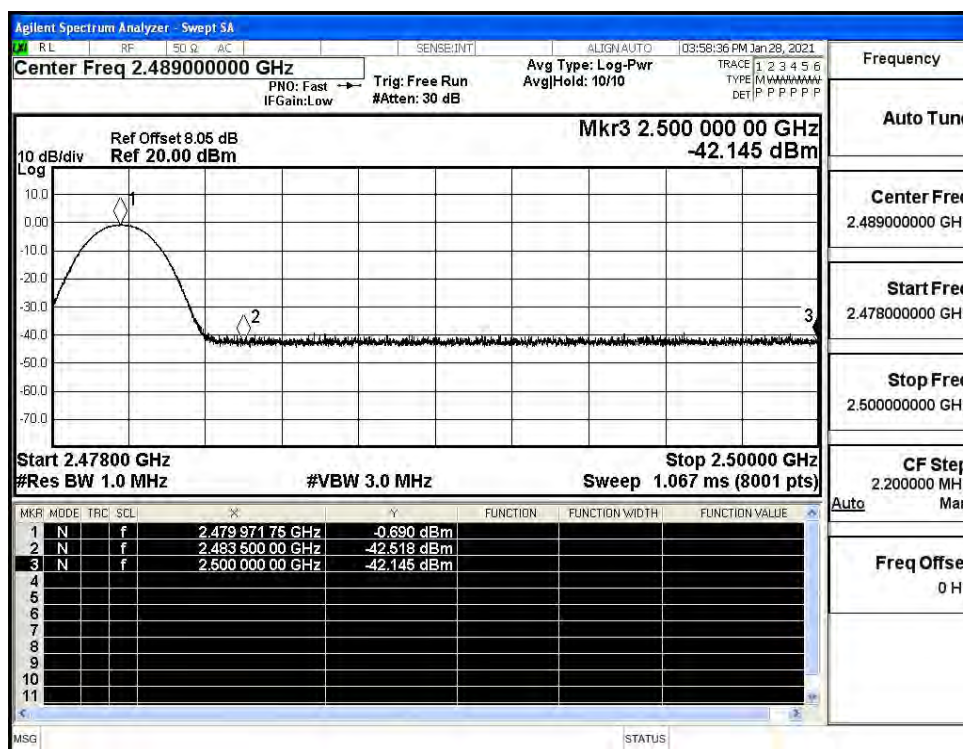
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

