

Appendix A

RF Test Data for BT V4.0(BDR/EDR) (Conducted Measurement)

Product Name: IP PHONE

Trade Mark: 

Test Model: UC507U

Environmental Conditions

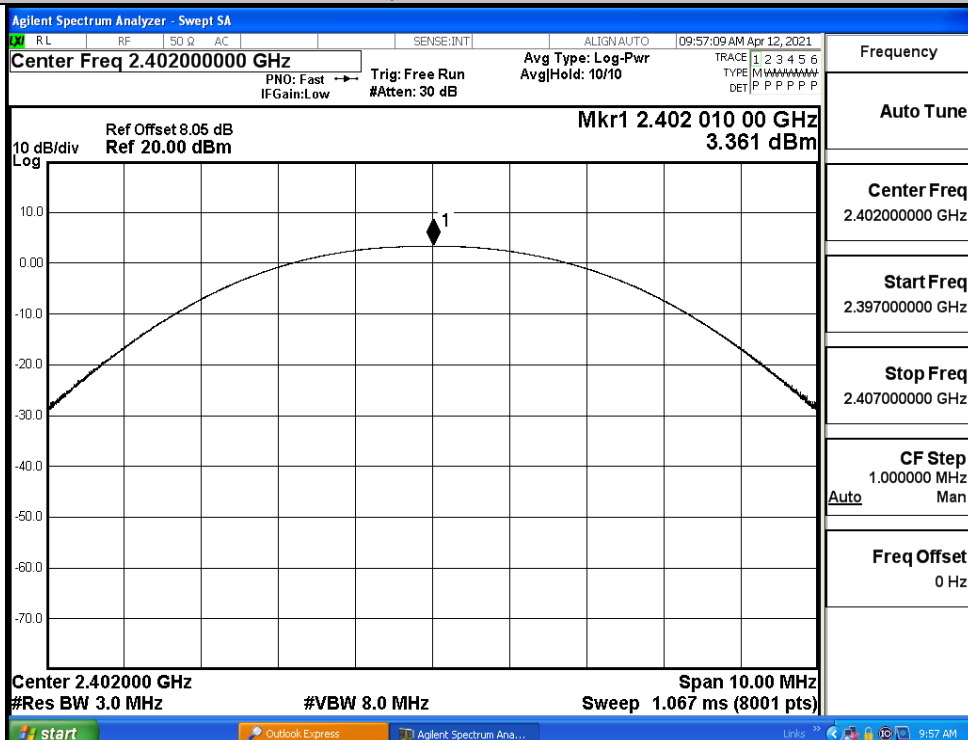
Temperature:	24.6 ° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

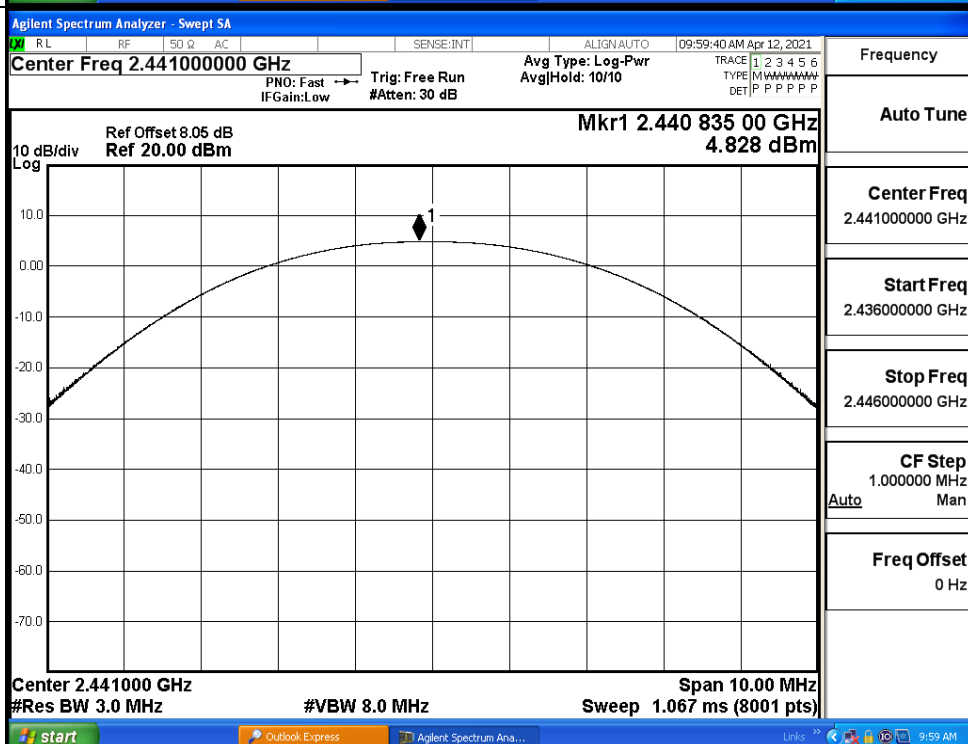
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.361	21	PASS
	MCH	4.828	21	PASS
	HCH	3.188	21	PASS
$\pi/4$ DQPSK	LCH	2.591	21	PASS
	MCH	4.046	21	PASS
	HCH	2.431	21	PASS
8DPSK	LCH	2.695	21	PASS
	MCH	4.164	21	PASS
	HCH	2.598	21	PASS

Test Graphs

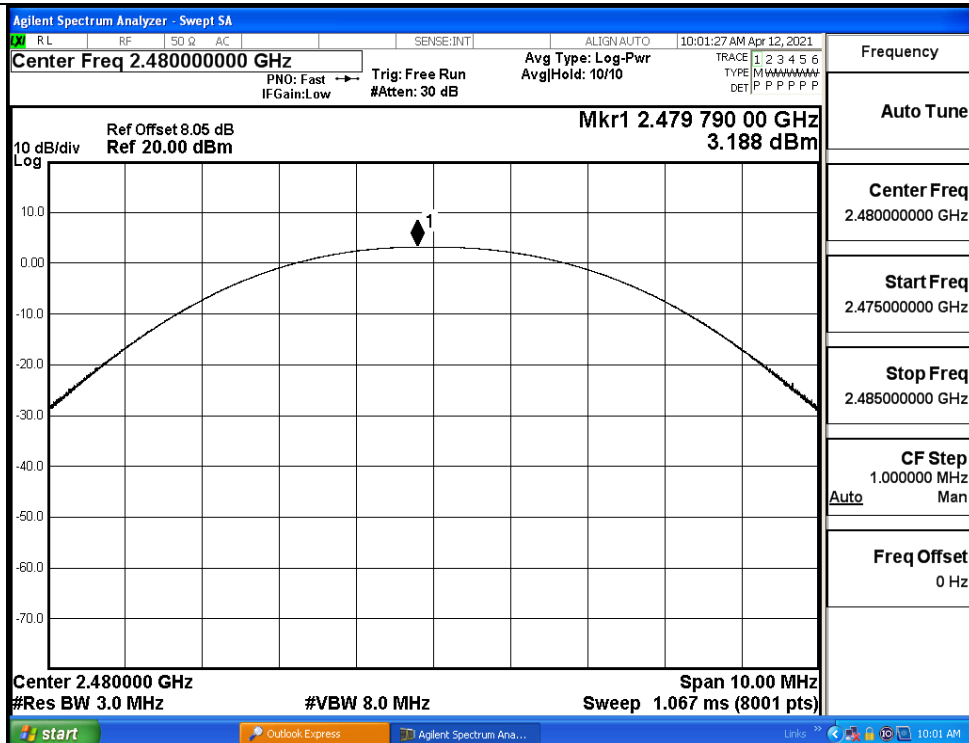
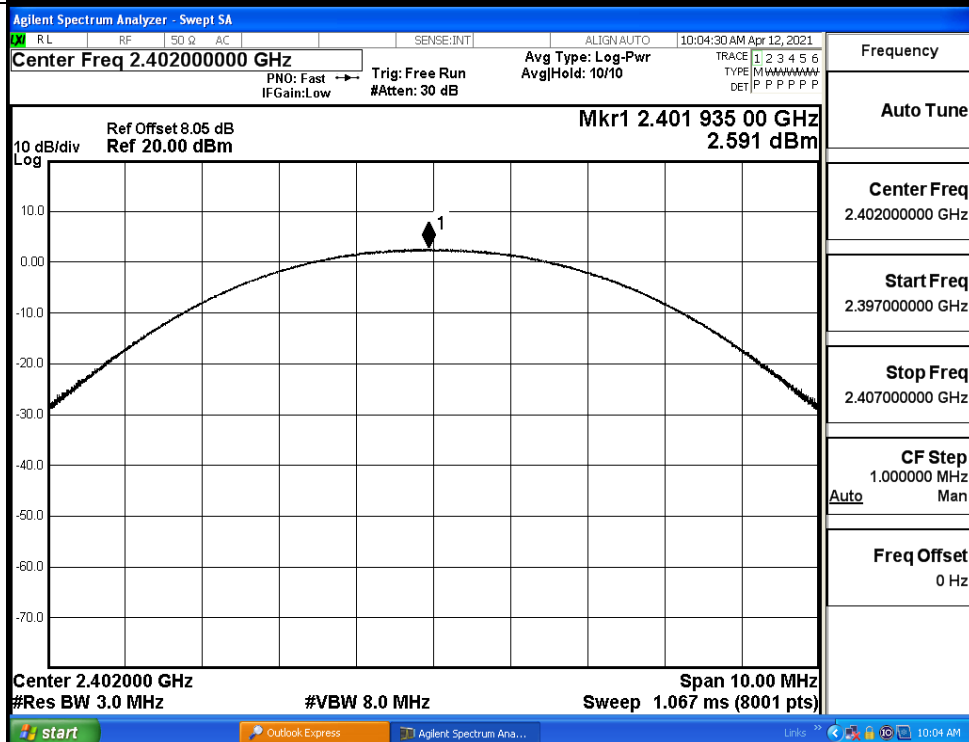
GFSK/LCH

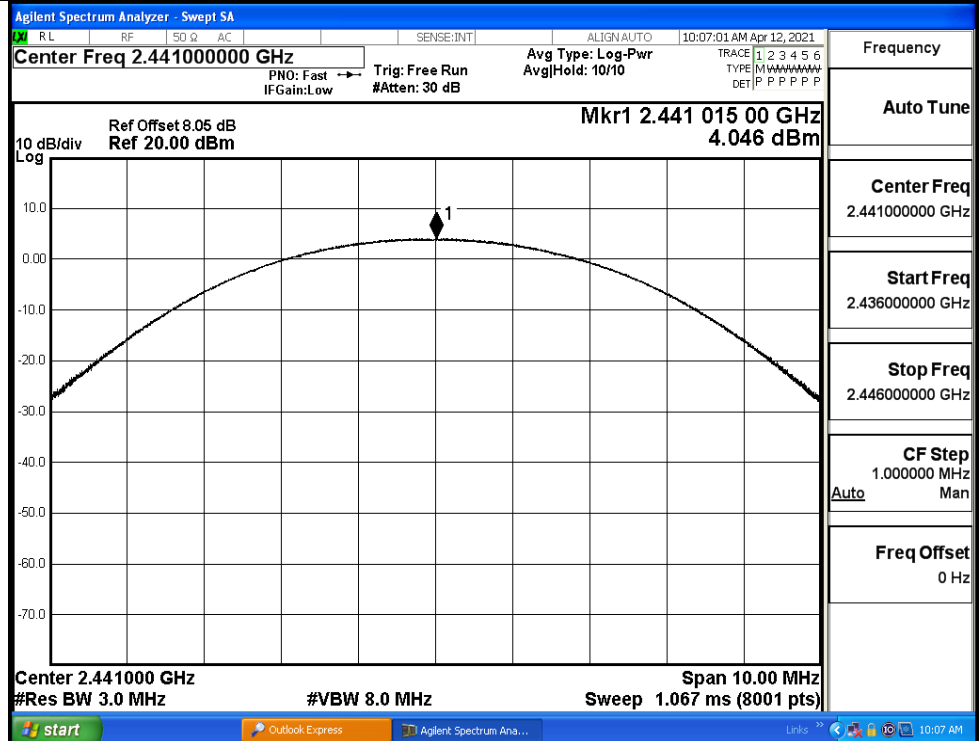
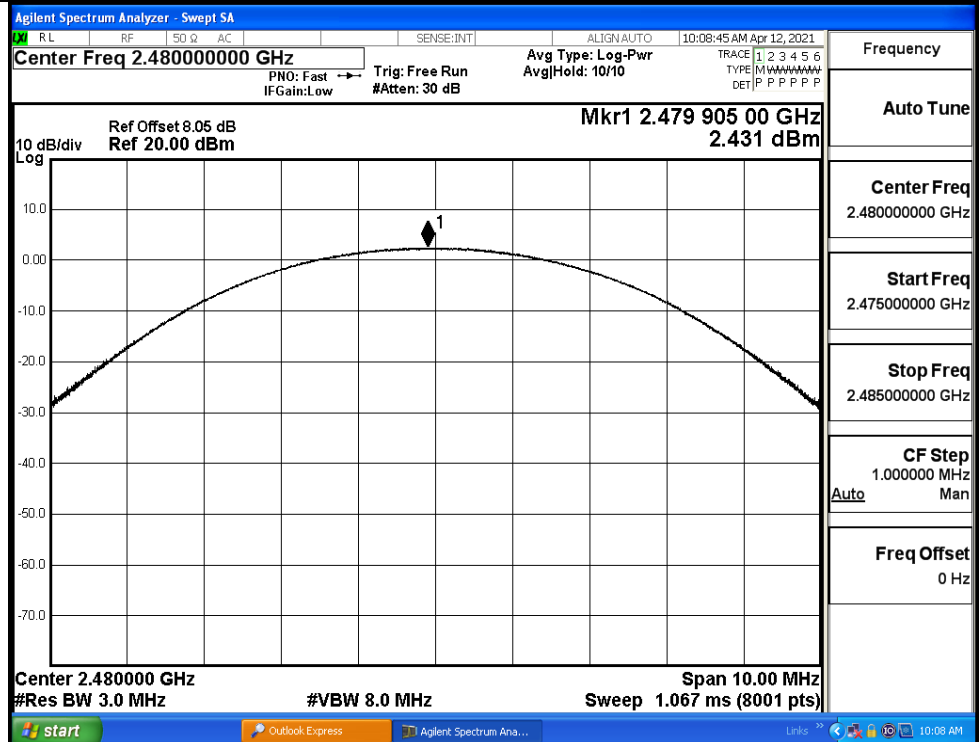


GFSK/MCH

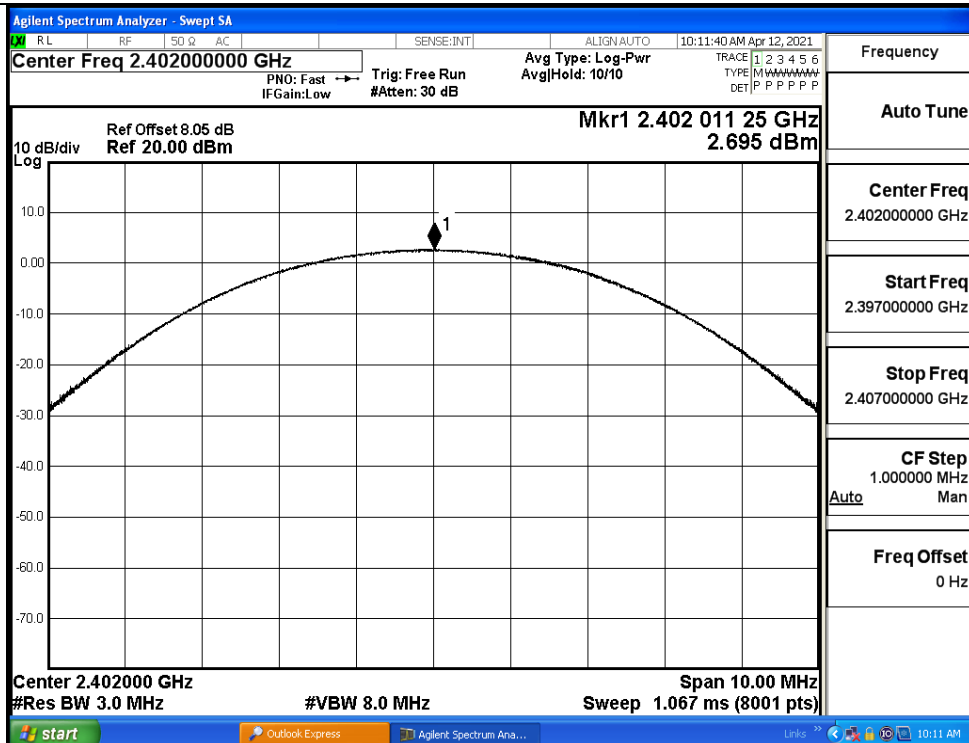


GFSK/HCH

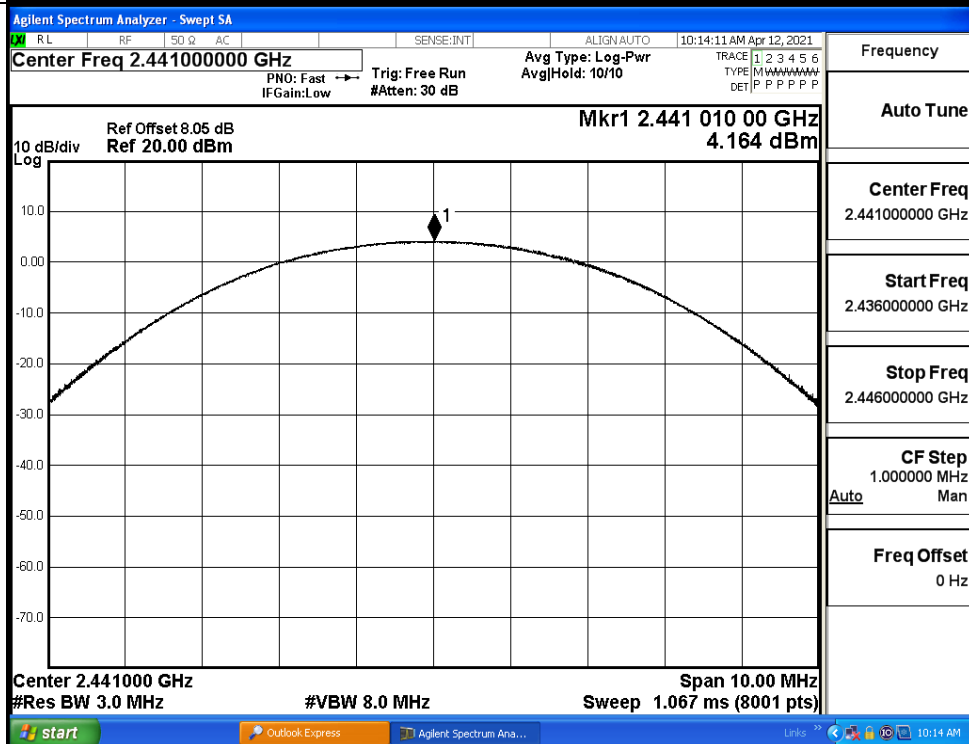
 $\pi/4$ DQPSK/LCH

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

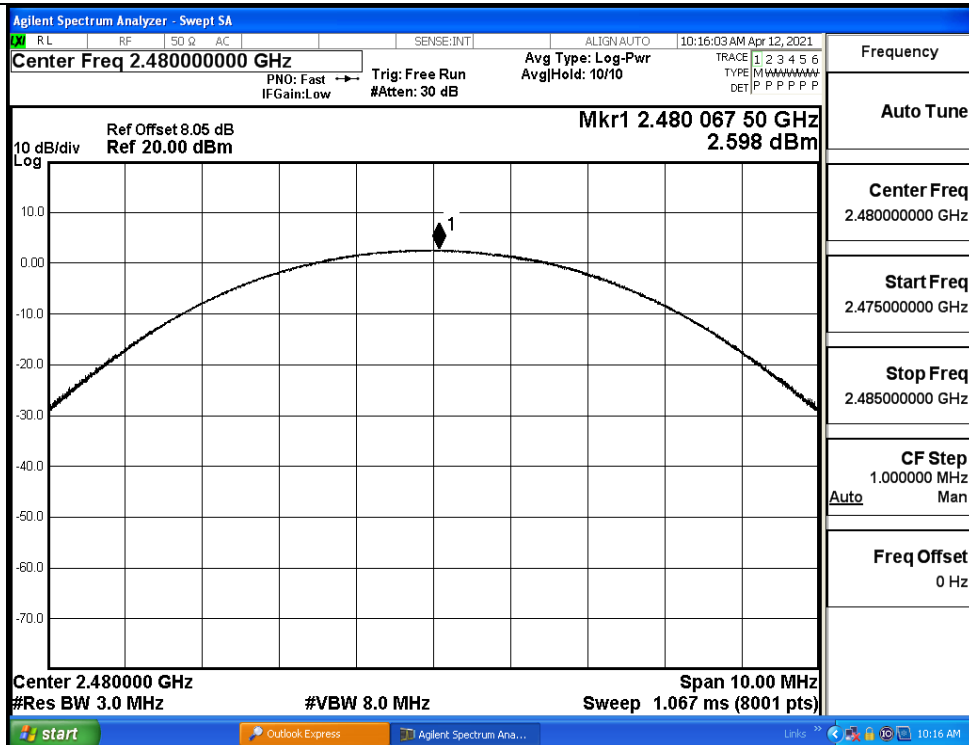
8DPSK/LCH



8DPSK/MCH



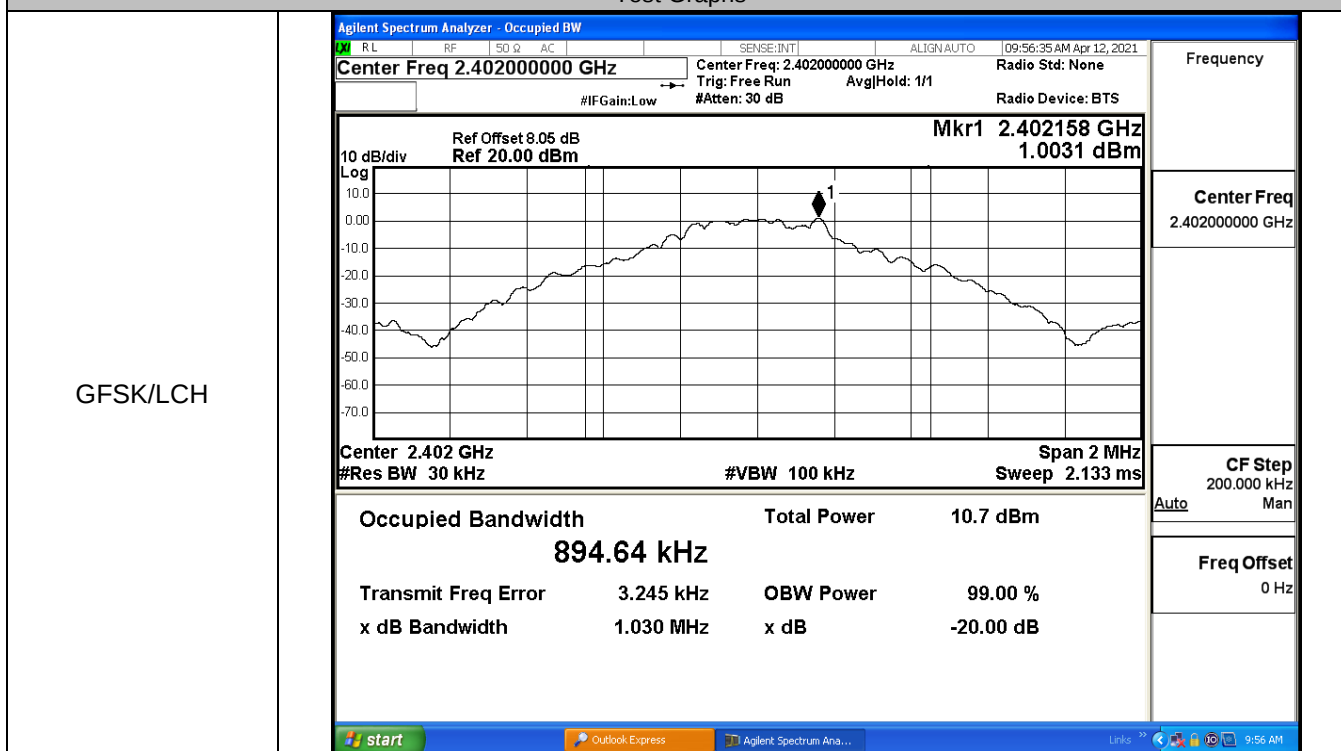
8DPSK/HCH



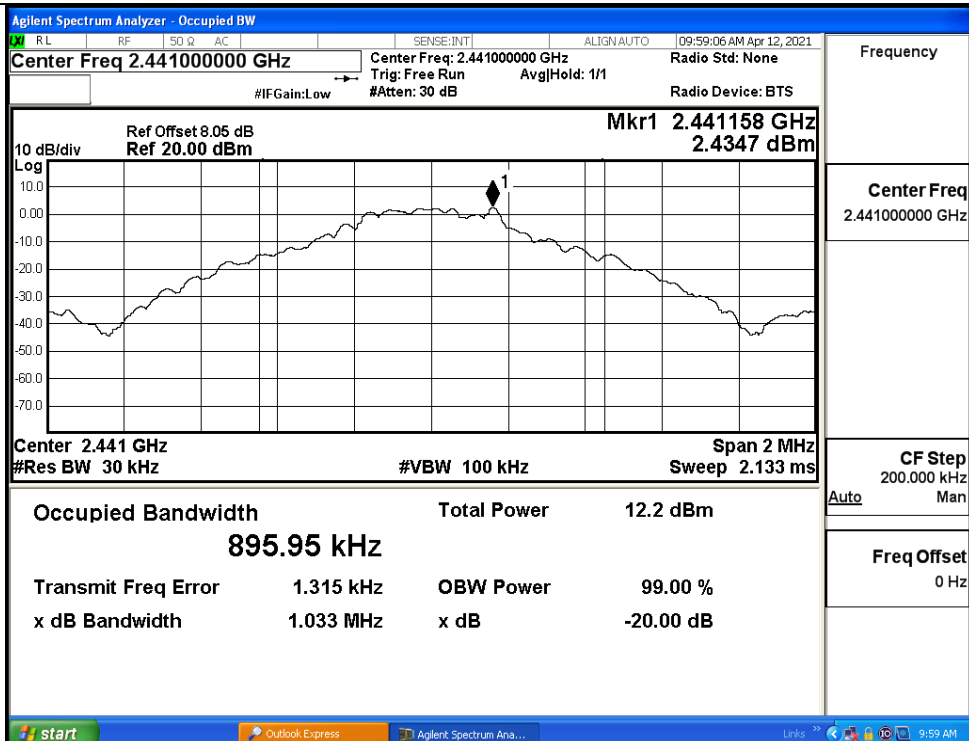
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.030	Not Specified	PASS
	MCH	1.033	Not Specified	PASS
	HCH	1.034	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.290	Not Specified	PASS
	MCH	1.288	Not Specified	PASS
	HCH	1.289	Not Specified	PASS
8DPSK	LCH	1.292	Not Specified	PASS
	MCH	1.295	Not Specified	PASS
	HCH	1.293	Not Specified	PASS

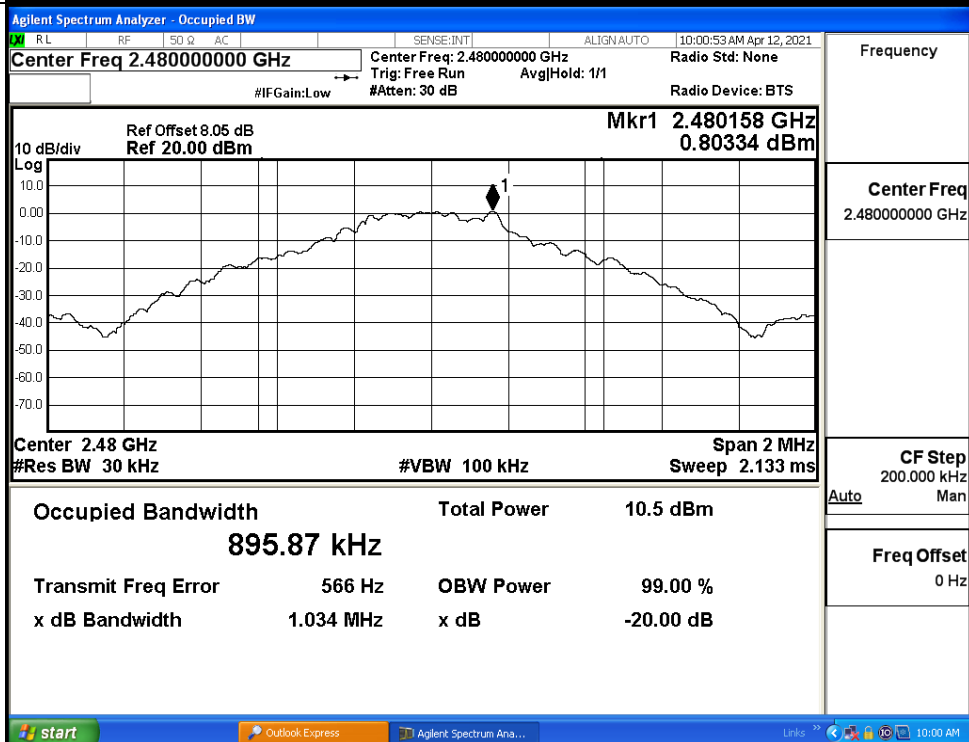
Test Graphs

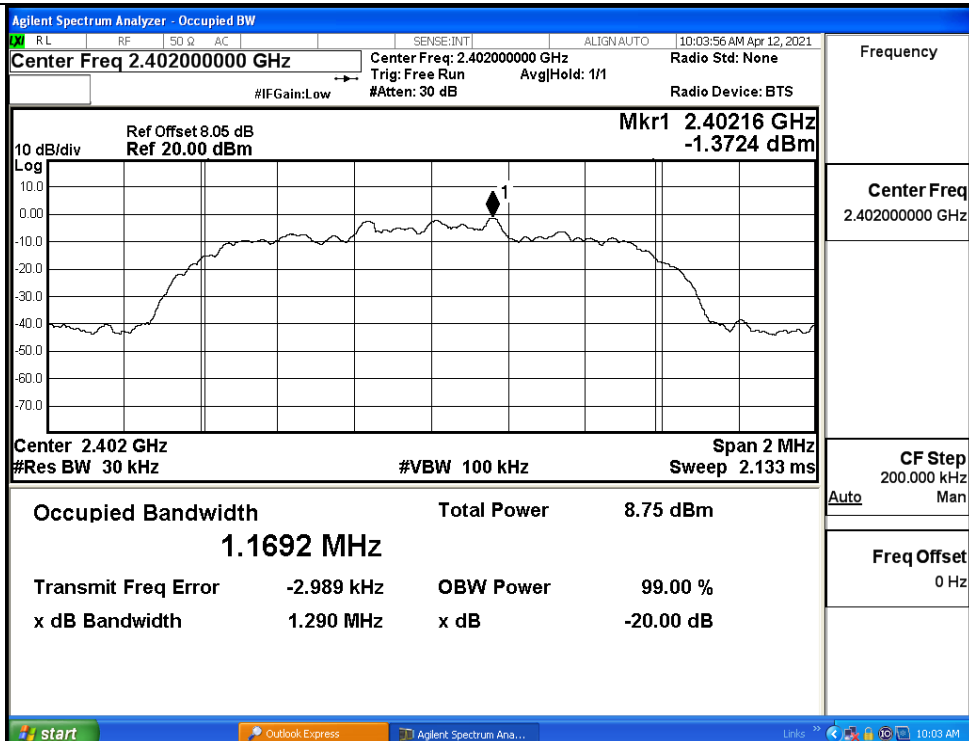


GFSK/MCH

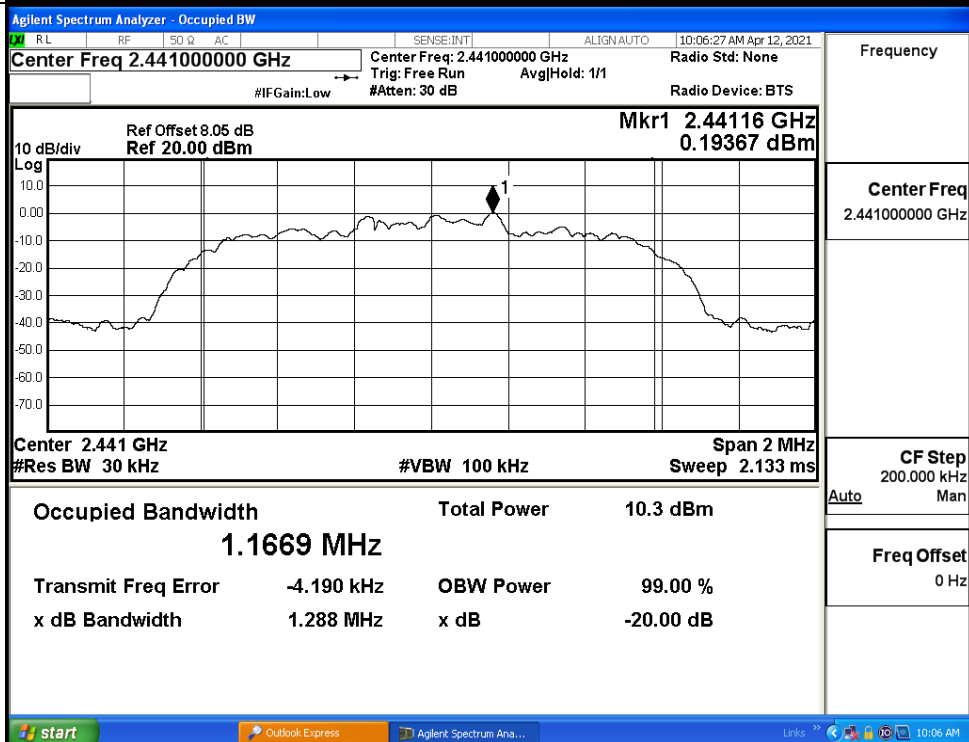


GFSK/HCH



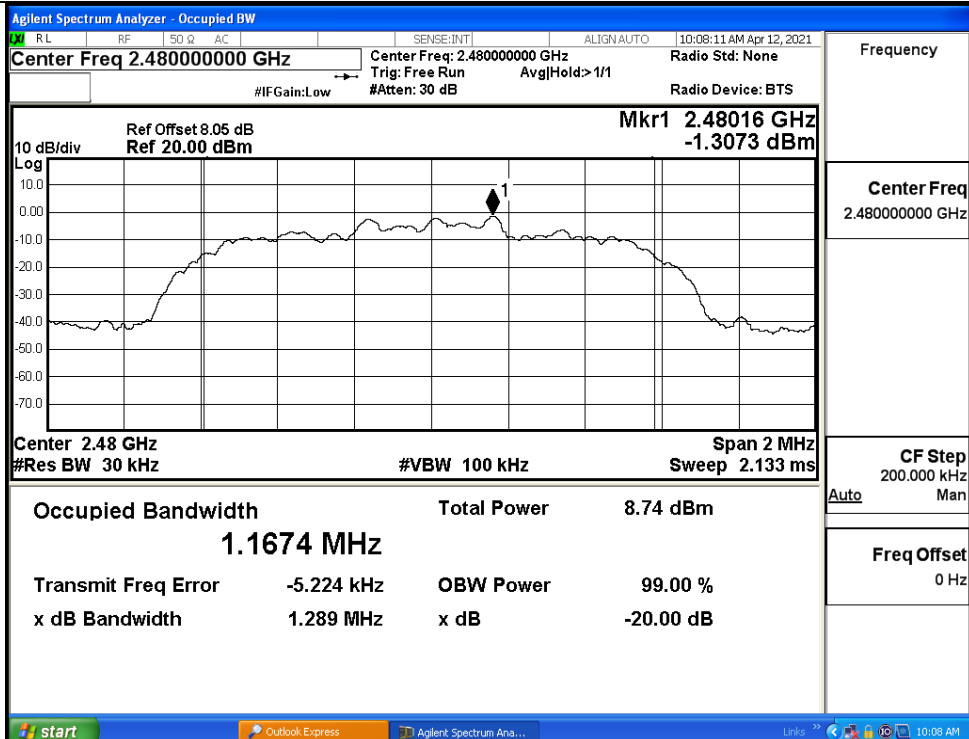
$\pi/4$ DQPSK/LCH

Frequency

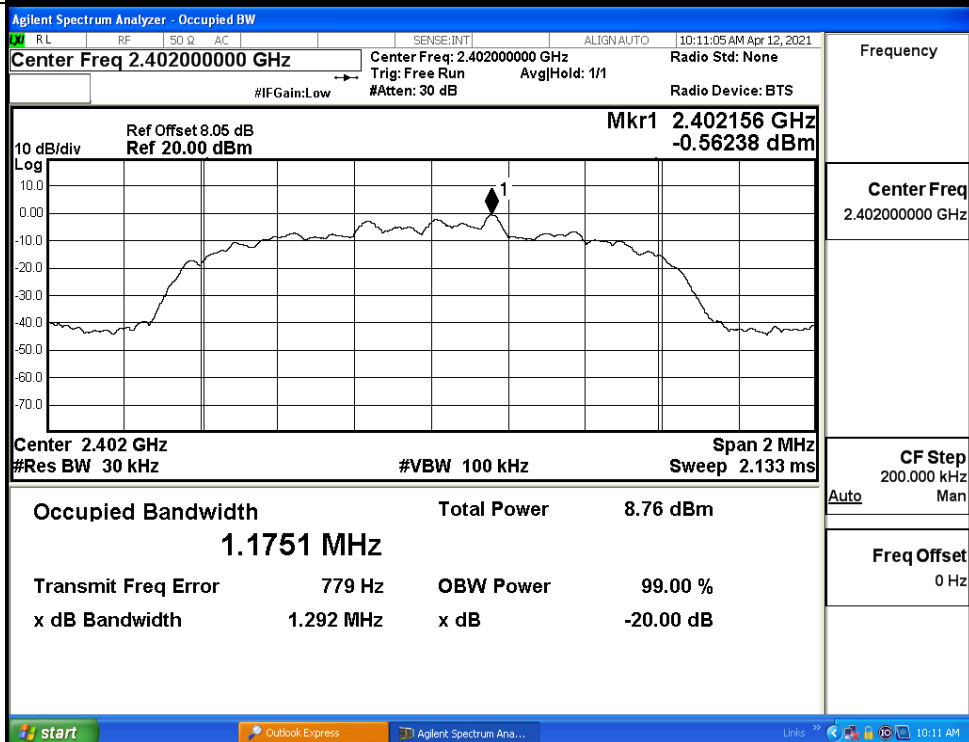
Center Freq
2.40200000 GHzCF Step
200.000 kHz
ManFreq Offset
0 Hz $\pi/4$ DQPSK/MCH

Frequency

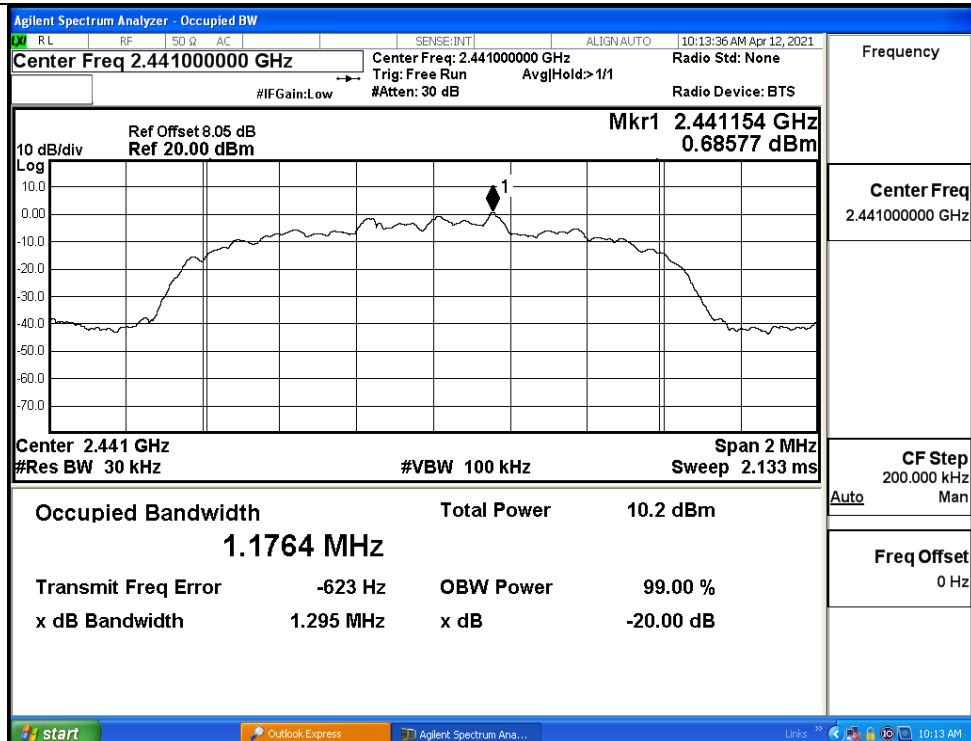
Center Freq
2.44100000 GHzCF Step
200.000 kHz
ManFreq Offset
0 Hz

$\pi/4$ DQPSK/HCH

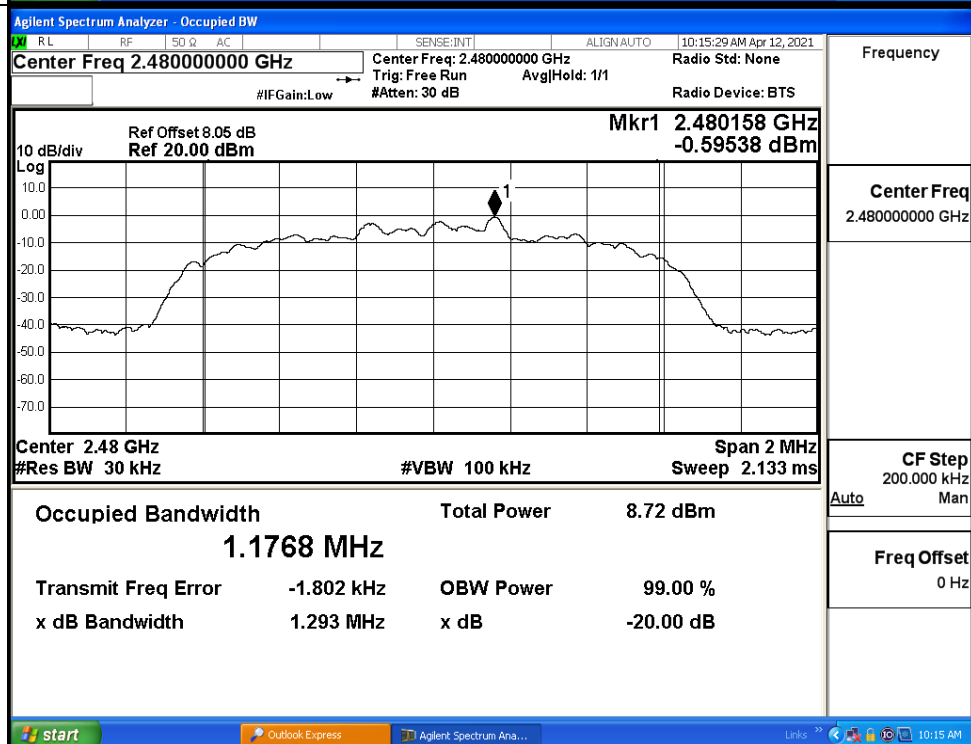
8DPSK/LCH



8DPSK/MCH



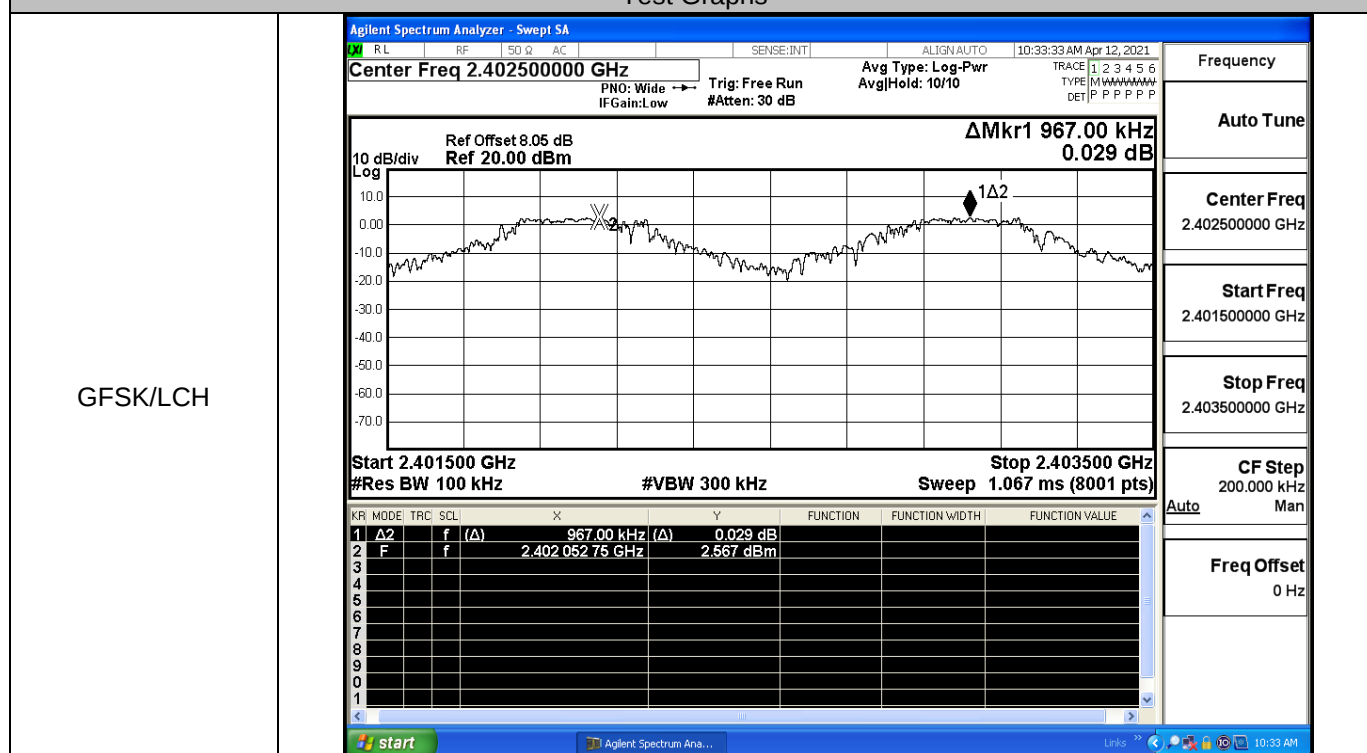
8DPSK/HCH



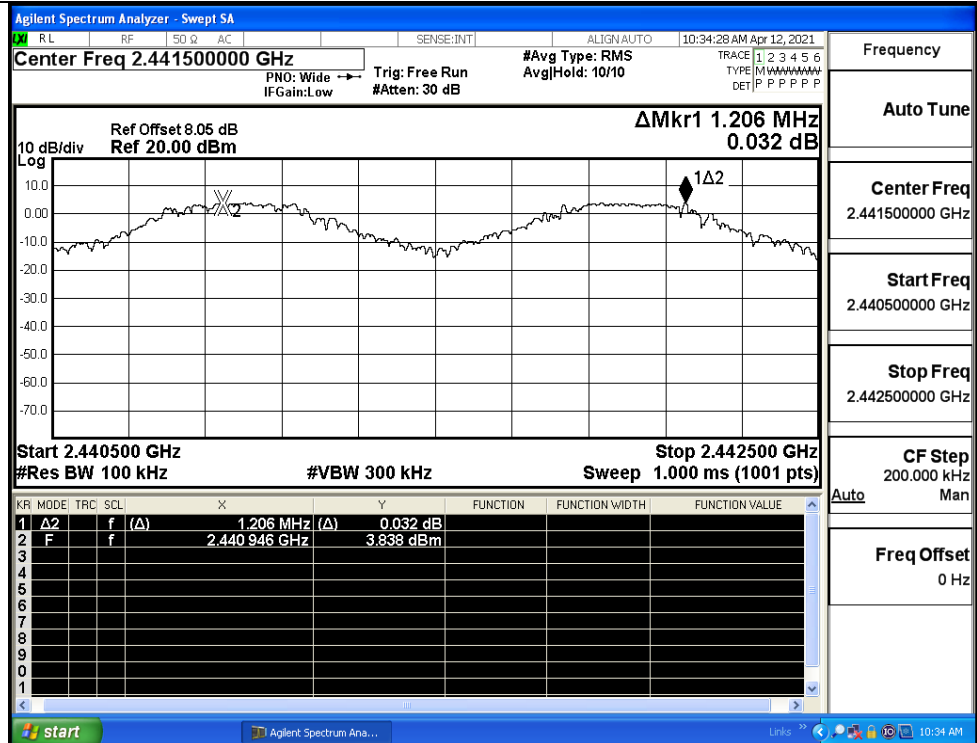
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.967	0.689	PASS
	MCH	1.206	0.689	PASS
	HCH	0.796	0.689	PASS
$\pi/4$ DQPSK	LCH	1.078	0.860	PASS
	MCH	1.164	0.860	PASS
	HCH	0.890	0.860	PASS
8DPSK	LCH	1.090	0.863	PASS
	MCH	0.942	0.863	PASS
	HCH	1.158	0.863	PASS

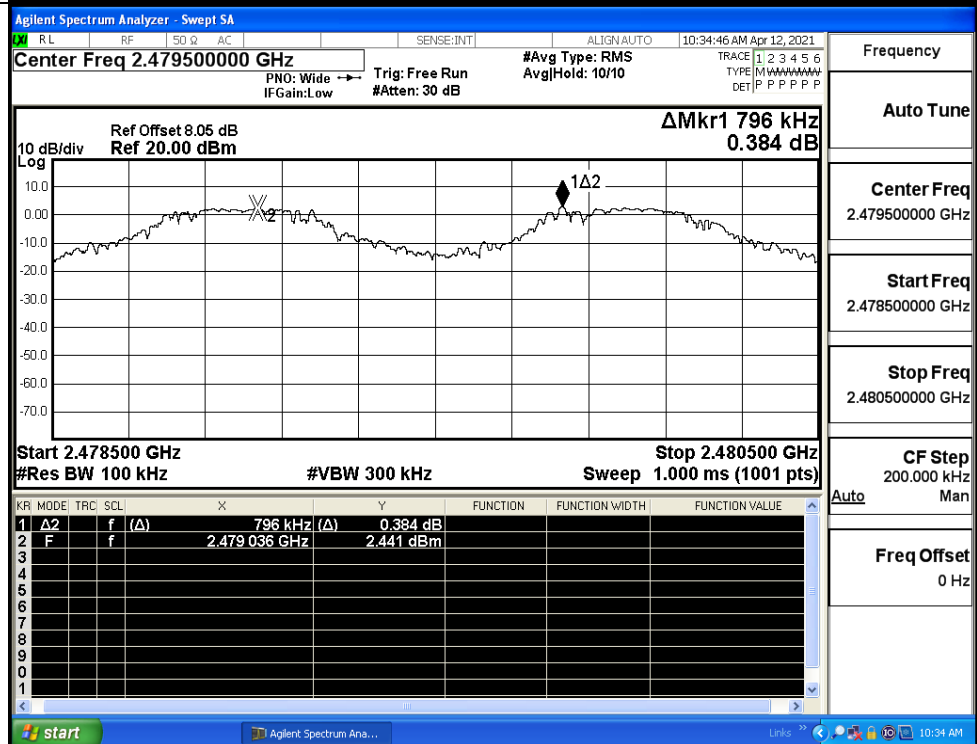
Test Graphs

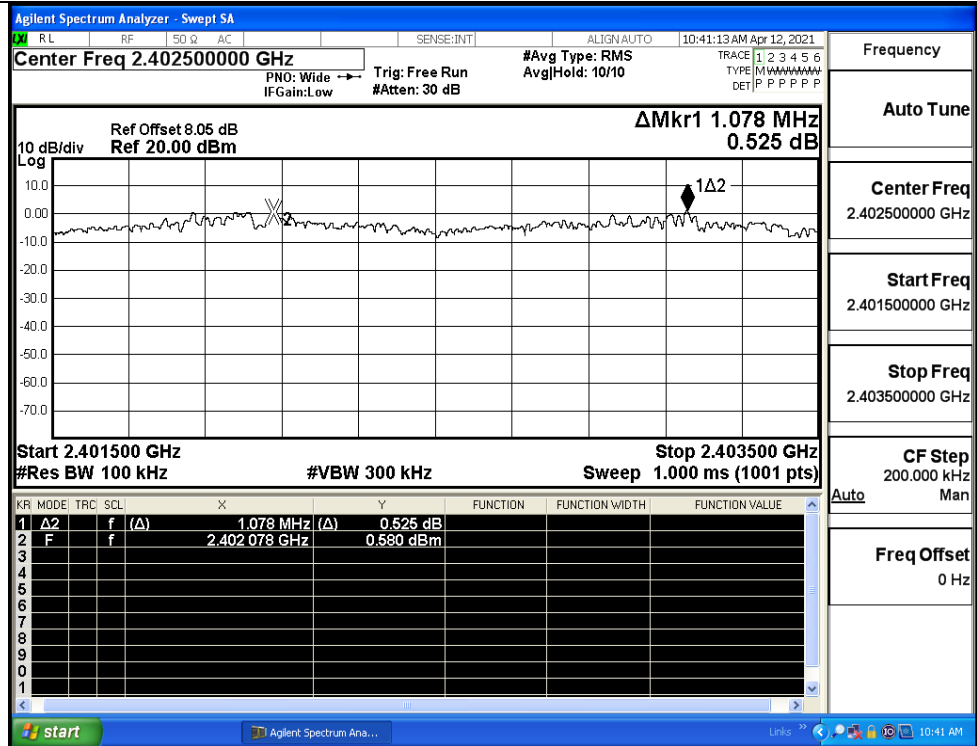
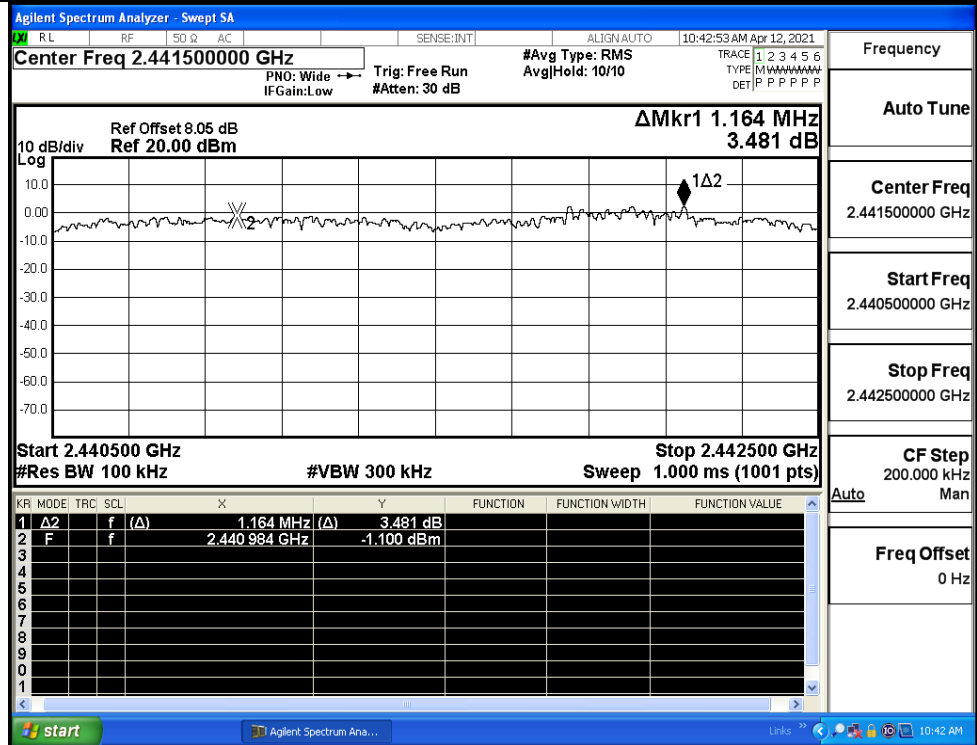


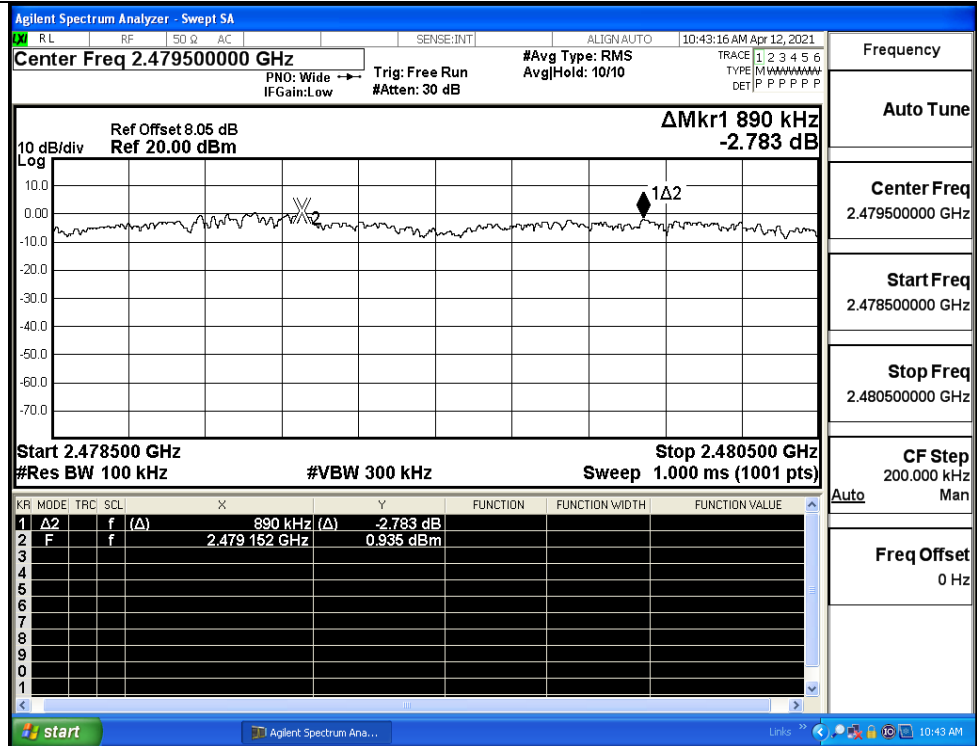
GFSK/MCH



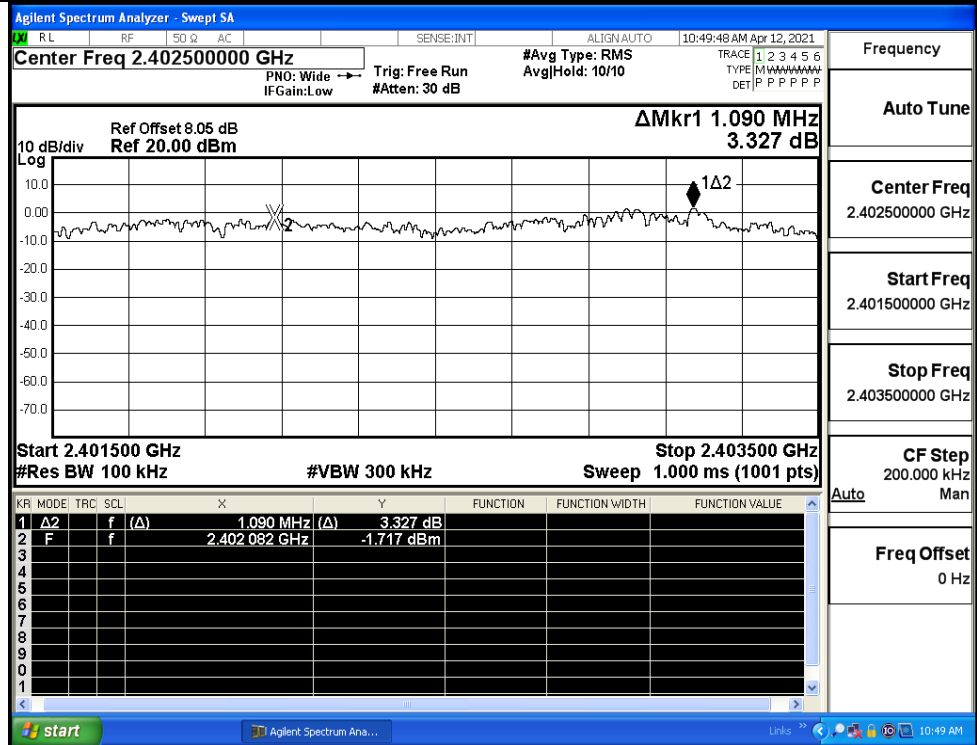
GFSK/HCH



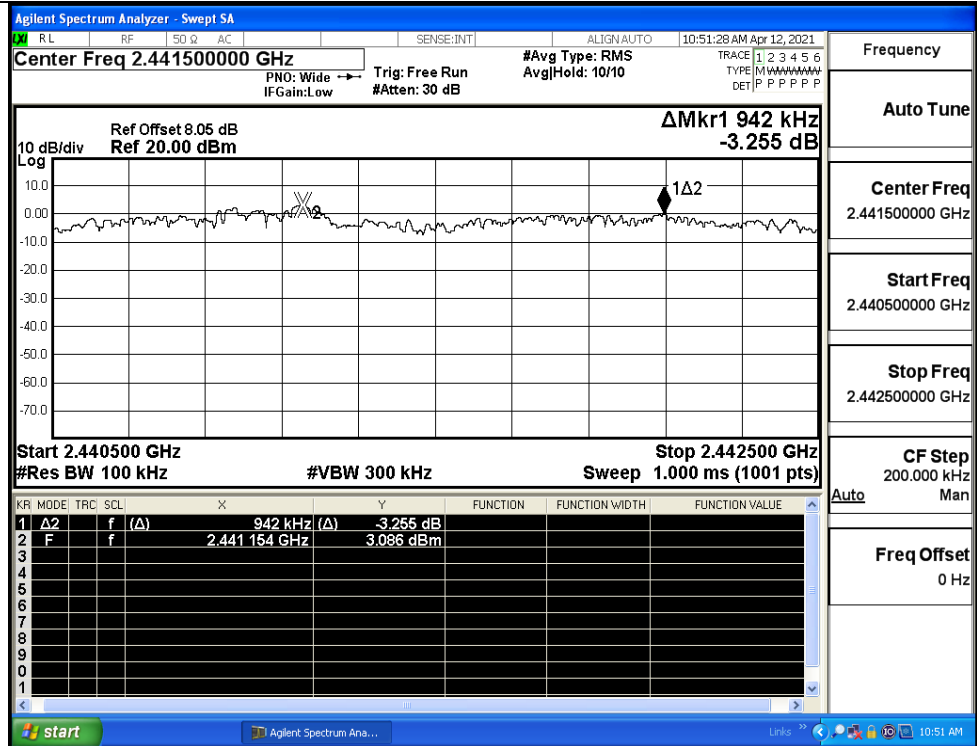
$\pi/4$ DQPSK/LCH $\pi/4$ DQPSK/MCH

$\pi/4$ DQPSK/HCH

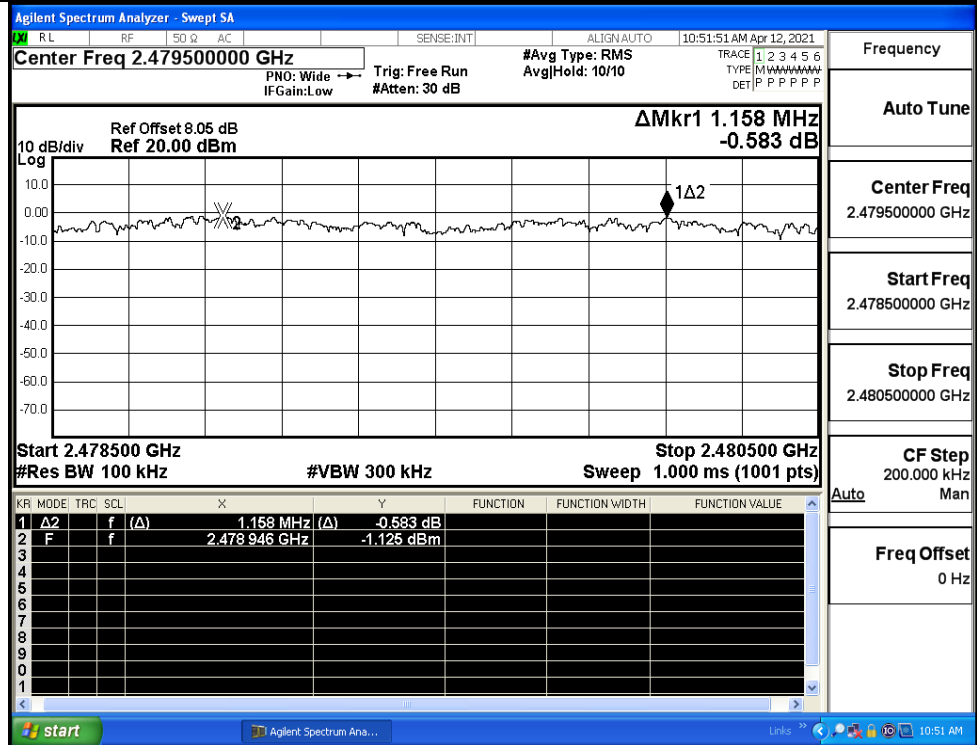
8DPSK/LCH



8DPSK/MCH



8DPSK/HCH

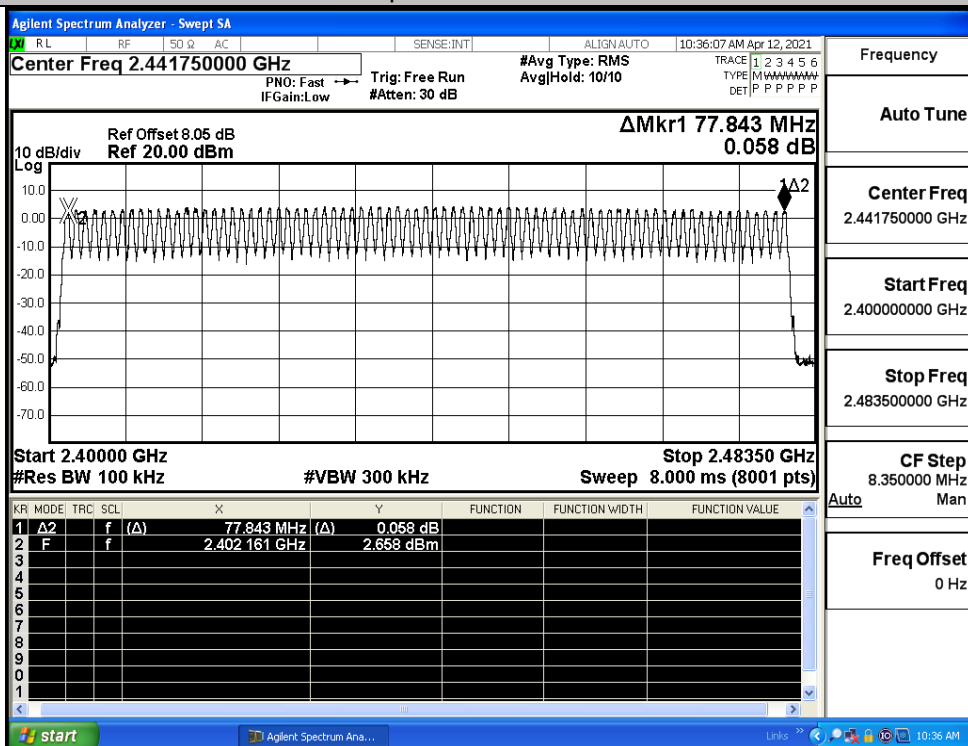
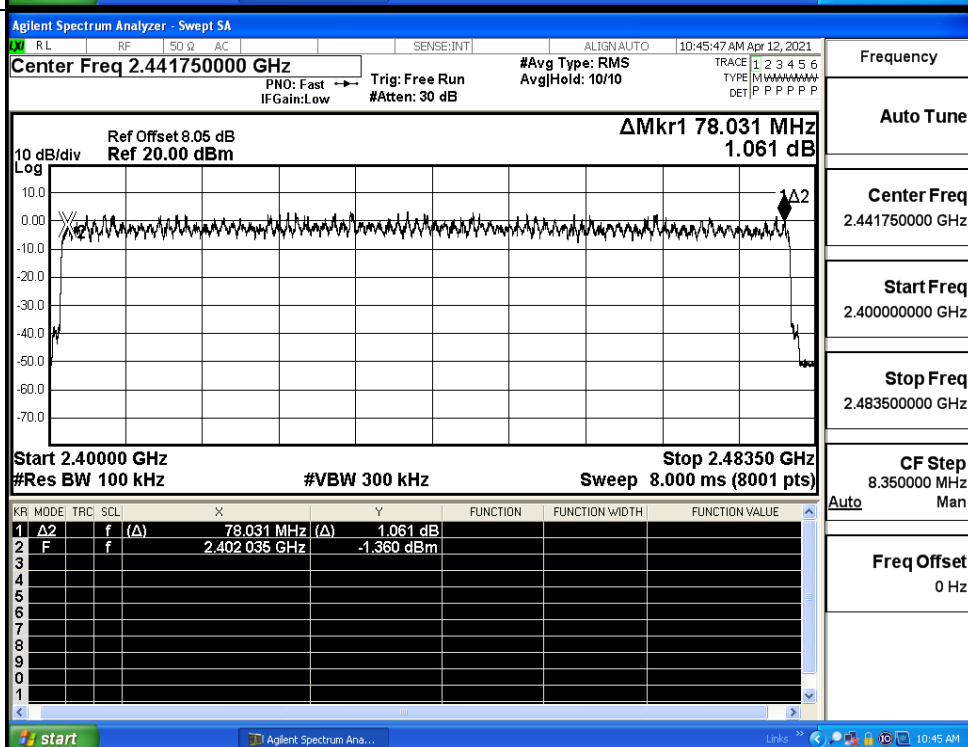


A.4 Hopping Channel Number

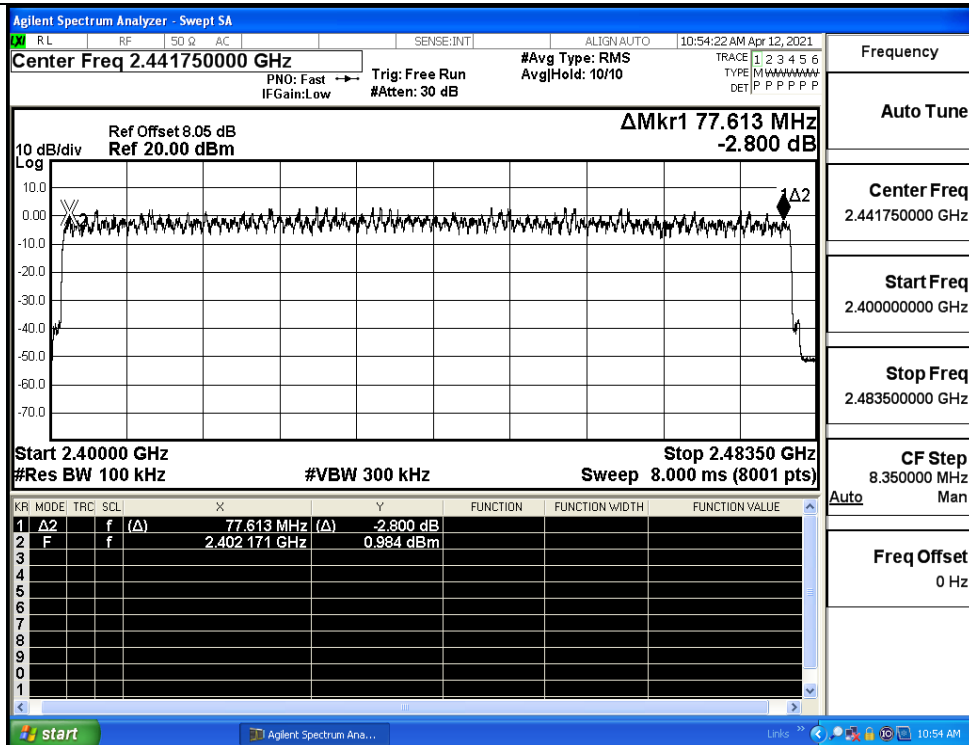
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS
8DPSK	Hop	79	≥ 15	PASS

Test Graphs

GFSK/Hop

 $\pi/4$ DQPSK/Hop

8DPSK/Hop

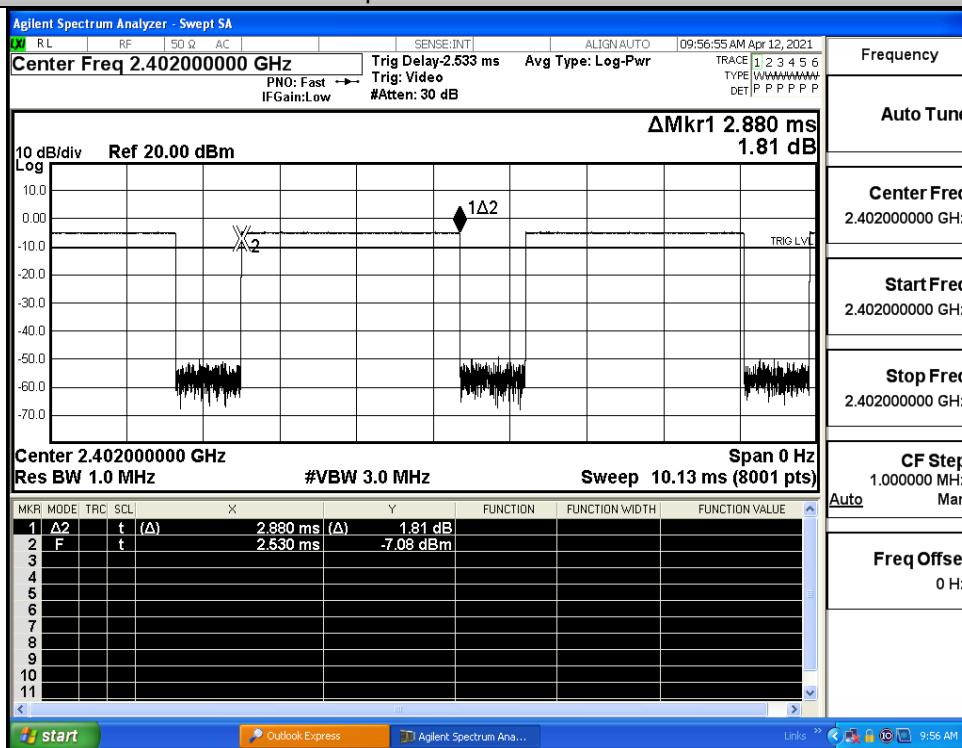


A.5 Dwell Time

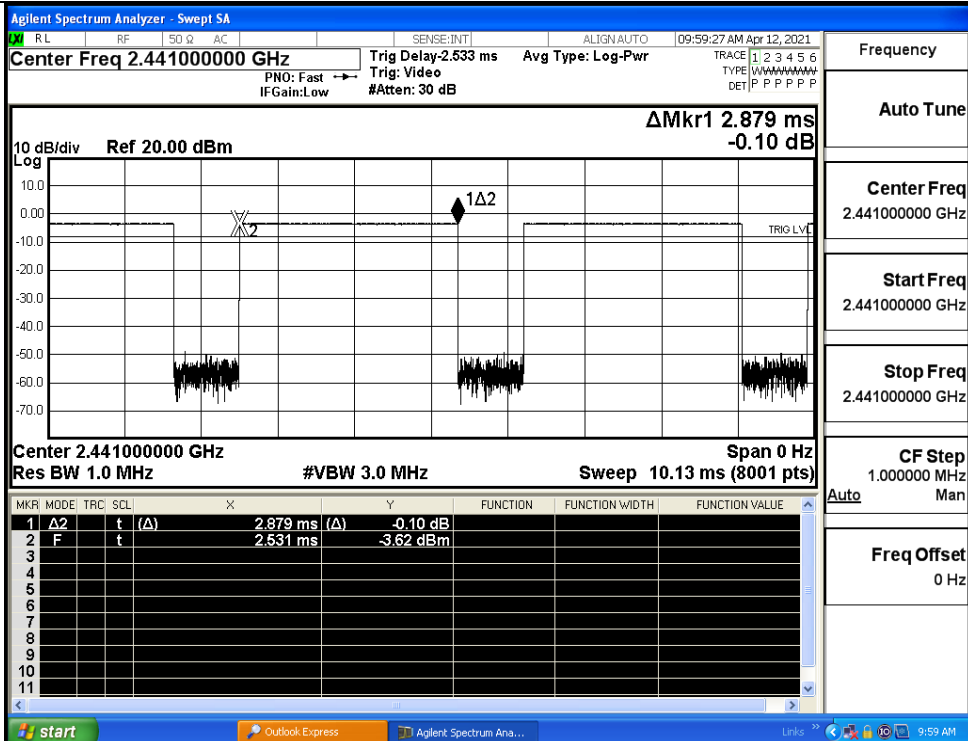
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS
8DPSK	3DH5	LCH	2.88	106.7	0.308	0.4	PASS
	3DH5	MCH	2.88	106.7	0.308	0.4	PASS
	3DH5	HCH	2.88	106.7	0.308	0.4	PASS

Test Graphs

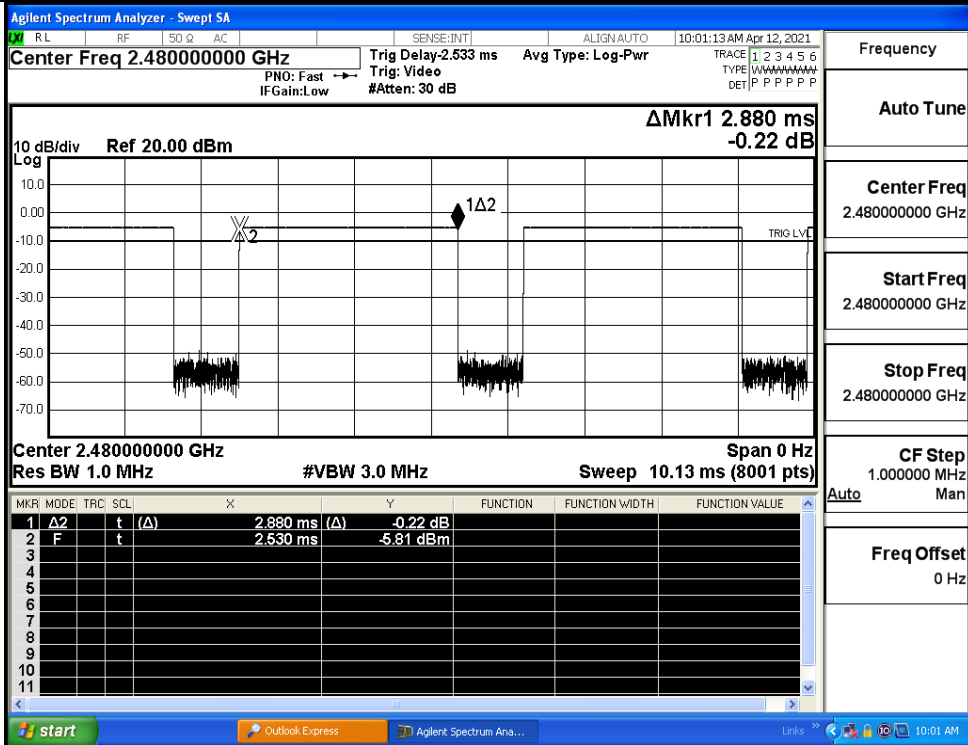
GFSK_DH5/LCH



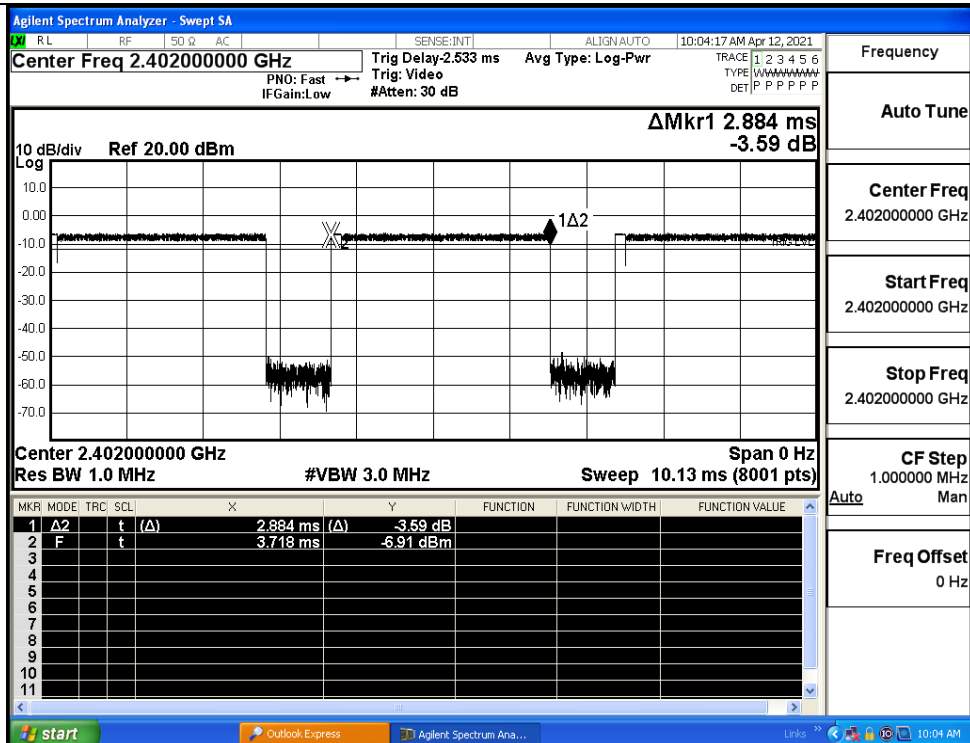
GFSK_DH5/MCH



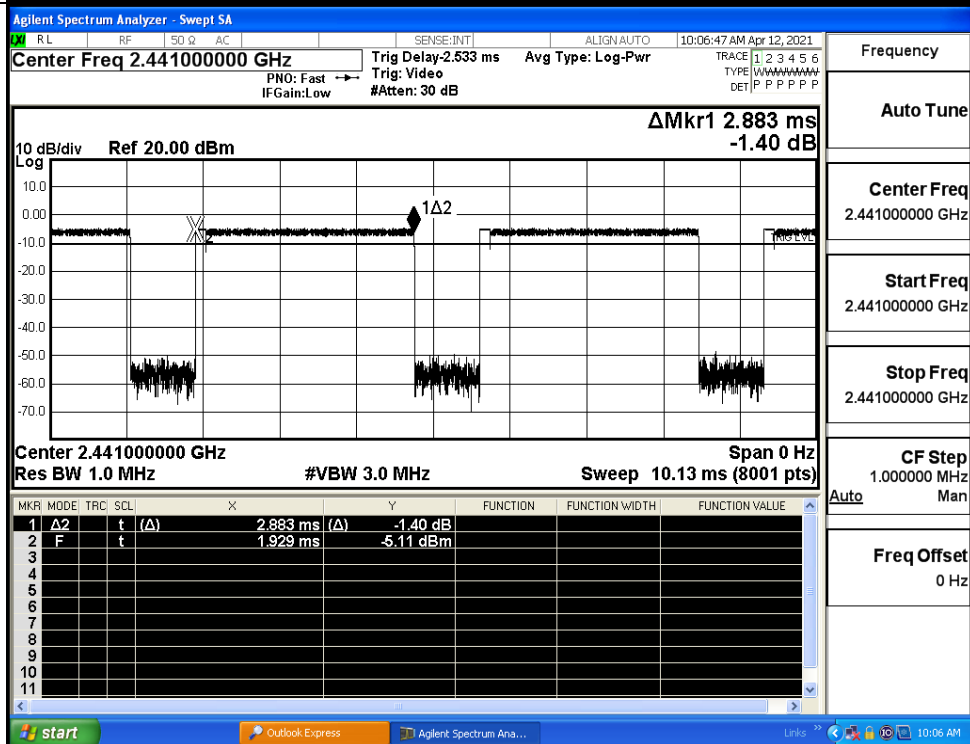
GFSK_DH5/HCH



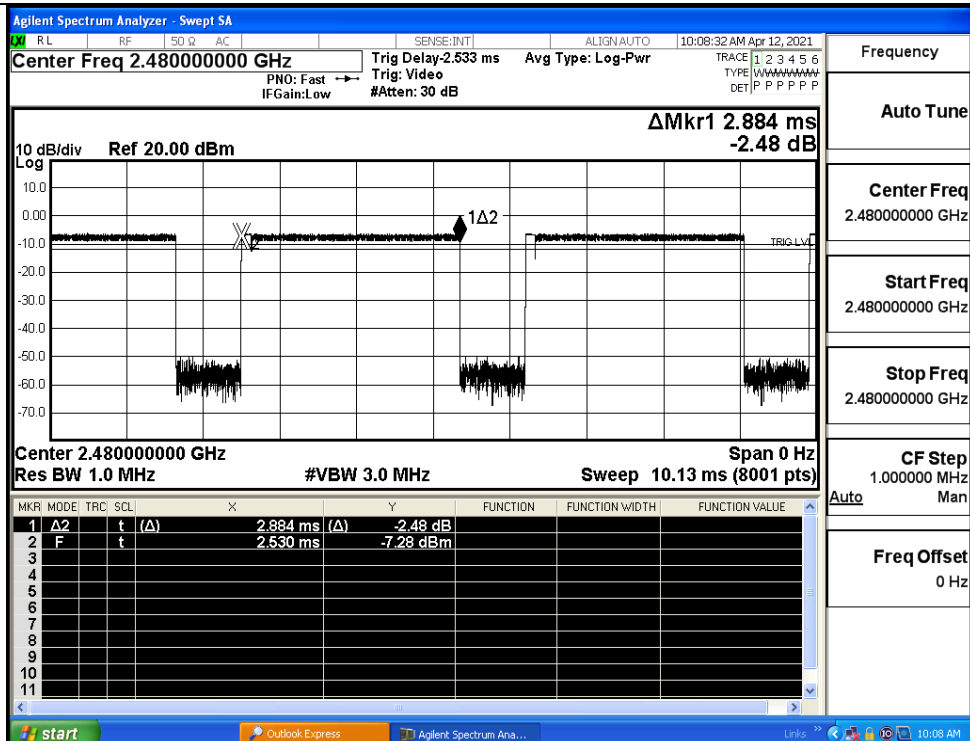
$\pi/4$ DQPSK
_2DH5/LCH



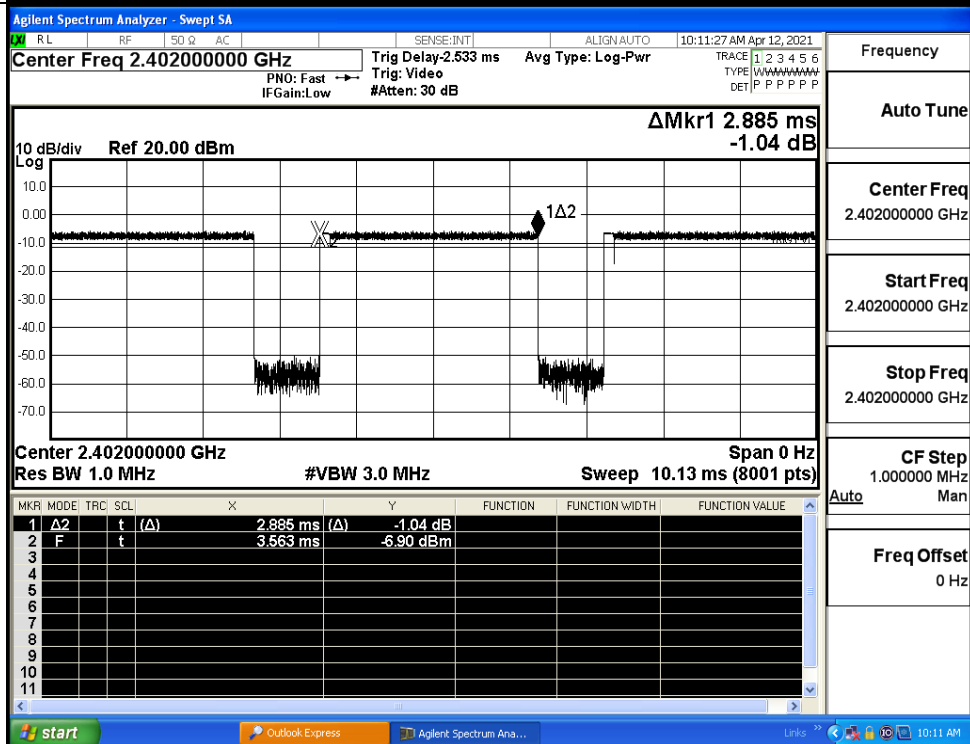
$\pi/4$ DQPSK
_2DH5/MCH



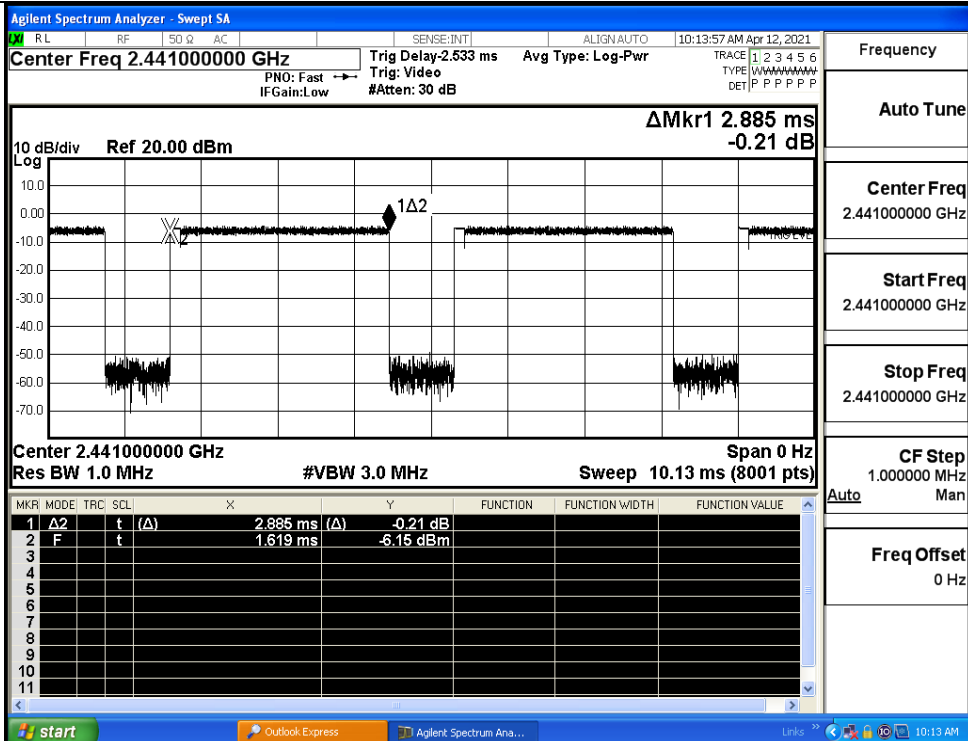
$\pi/4$ DQPSK
_2DH5/HCH



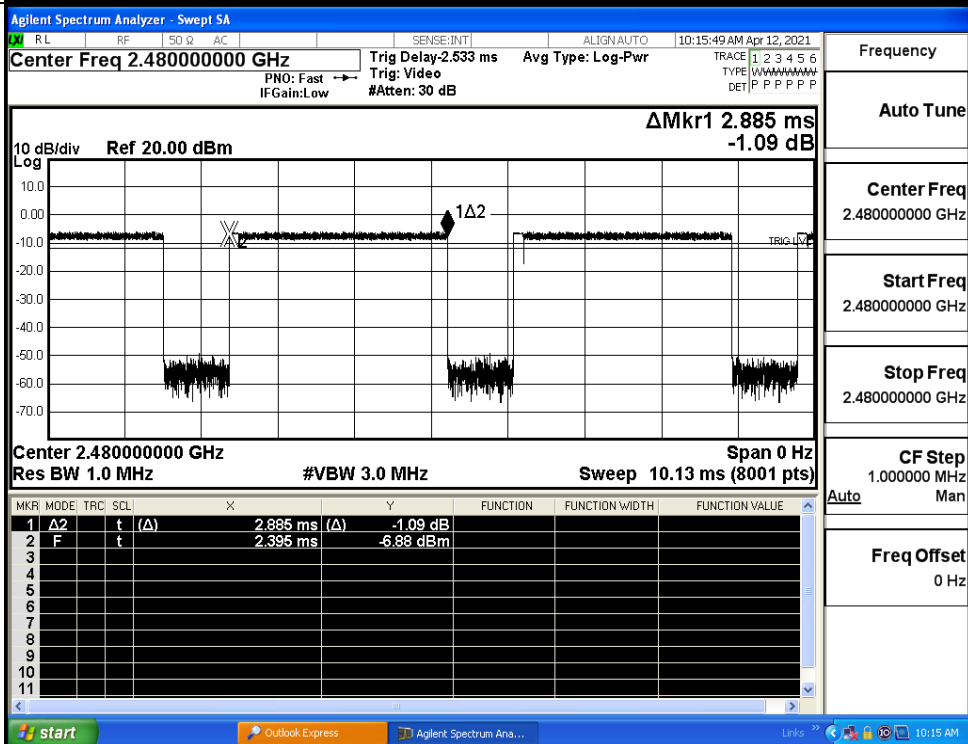
8DPSK _3DH5/LCH



8DPSK_3DH5/MCH



8DPSK_3DH5/HCH

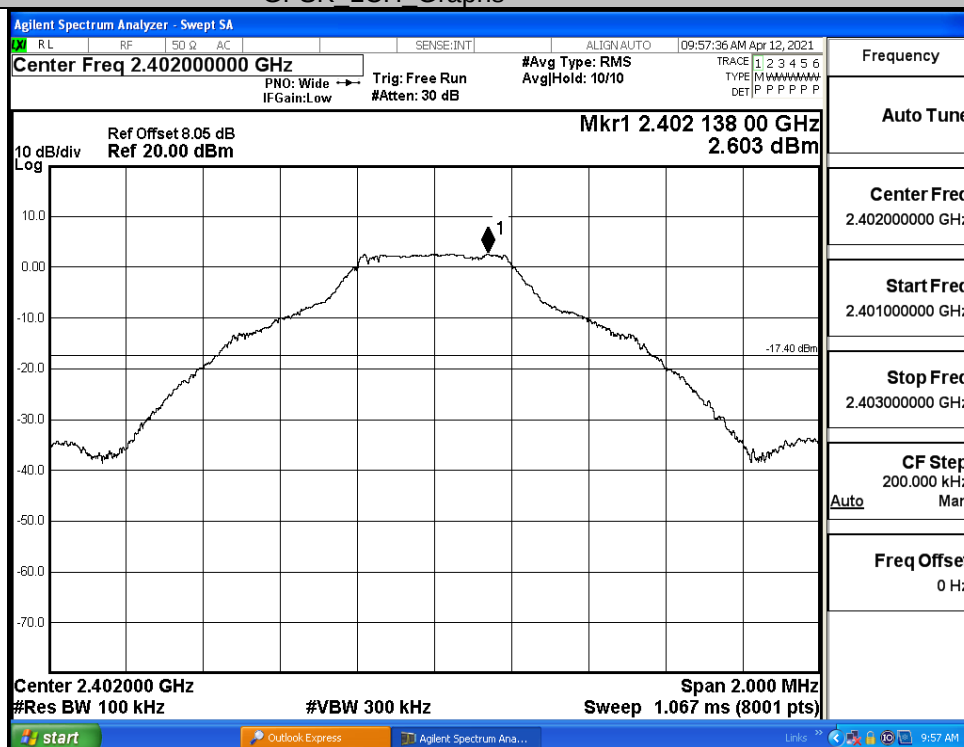


A.6 RF Conducted Spurious Emissions

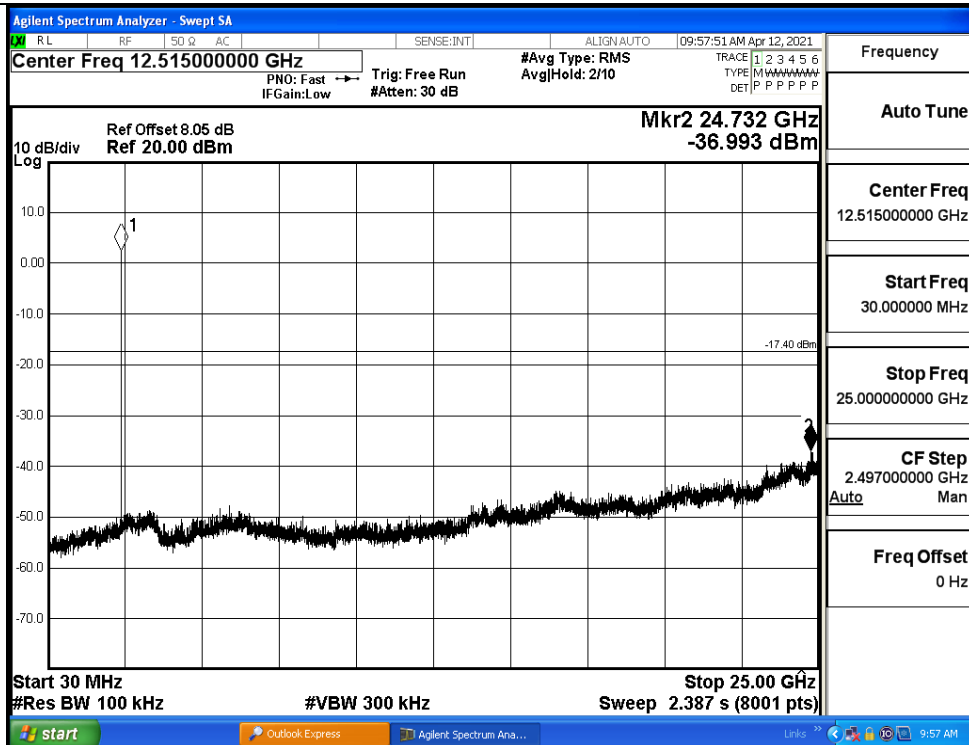
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.603	-36.993	-17.397	PASS
	MCH	4.461	-36.732	-15.539	PASS
	HCH	2.795	-37.416	-17.205	PASS
$\pi/4$ DQPSK	LCH	1.476	-37.908	-18.524	PASS
	MCH	2.897	-37.050	-17.103	PASS
	HCH	1.476	-38.375	-18.524	PASS
8DPSK	LCH	1.623	-37.980	-18.377	PASS
	MCH	3.068	-38.283	-16.932	PASS
	HCH	1.29	-37.045	-18.710	PASS

GFSK LCH Graphs

Pref

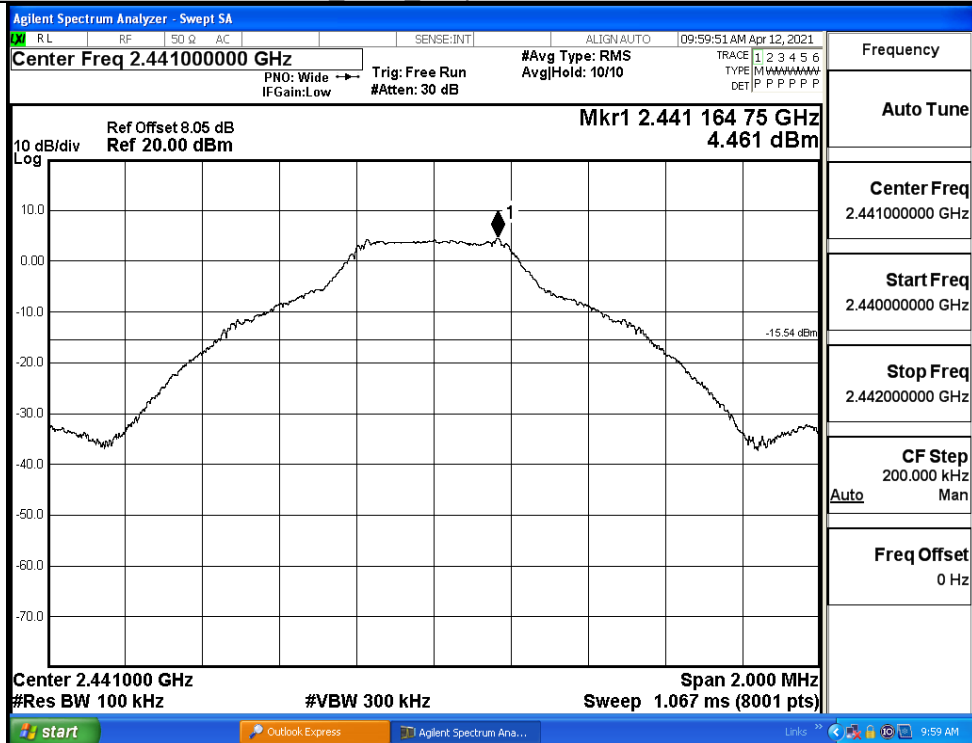


Puw

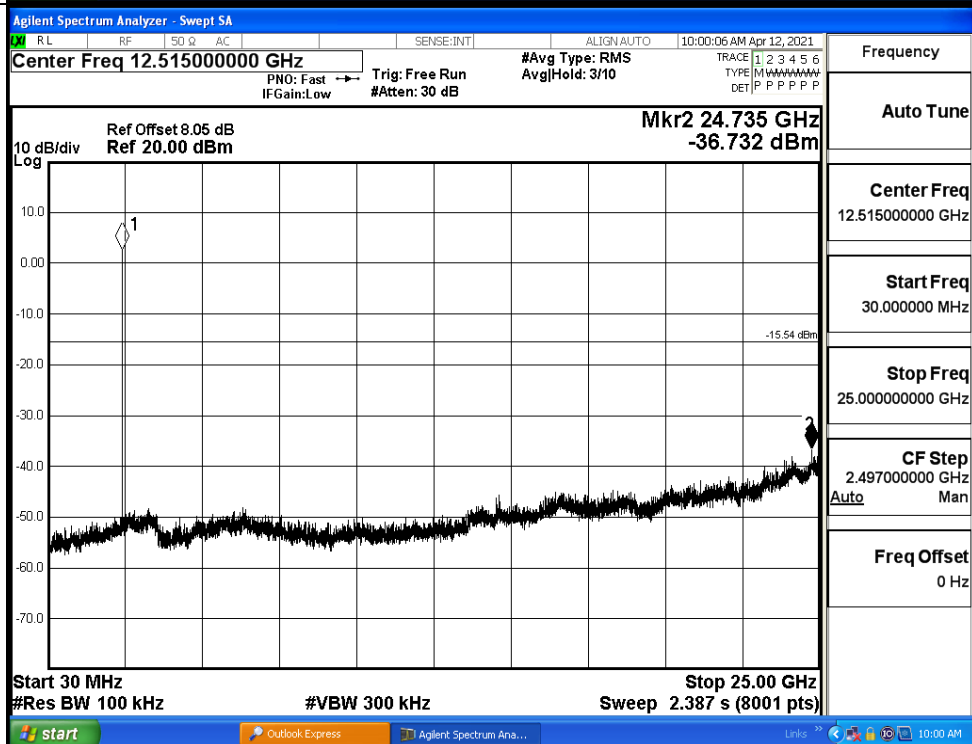


GFSK_MCH_Graphs

Pref

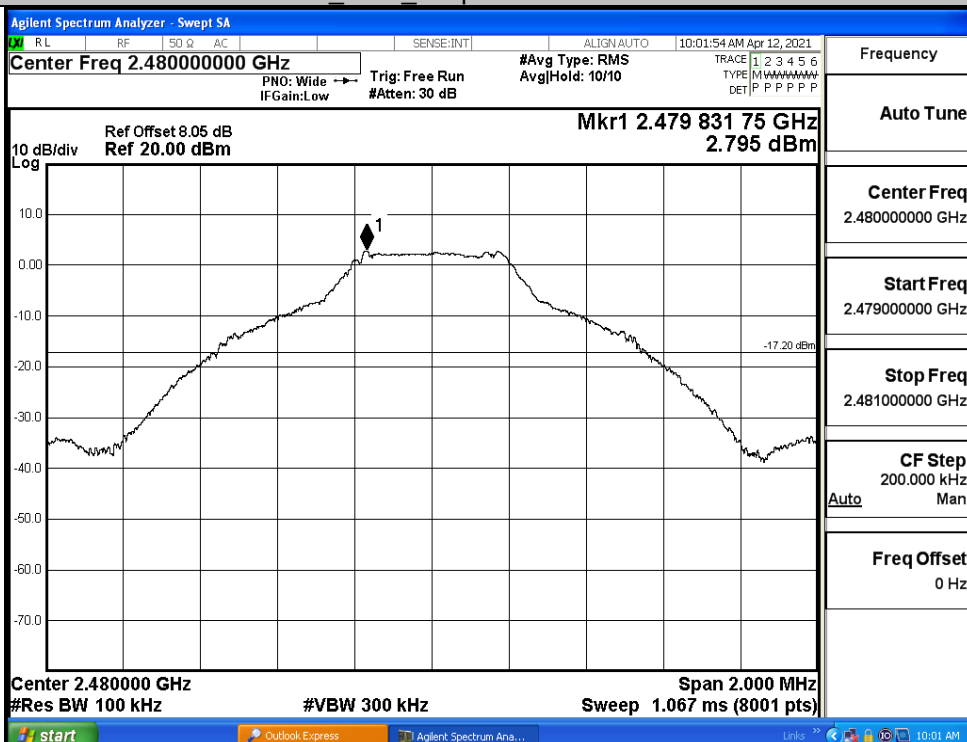


Puw

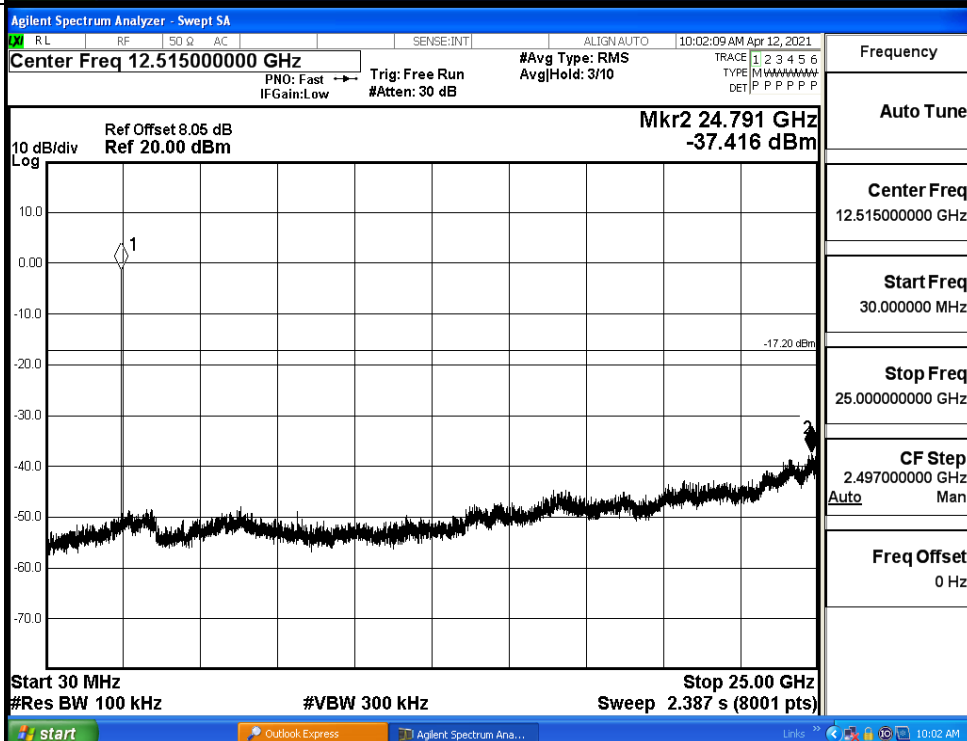


GFSK HCH_Graphs

Pref

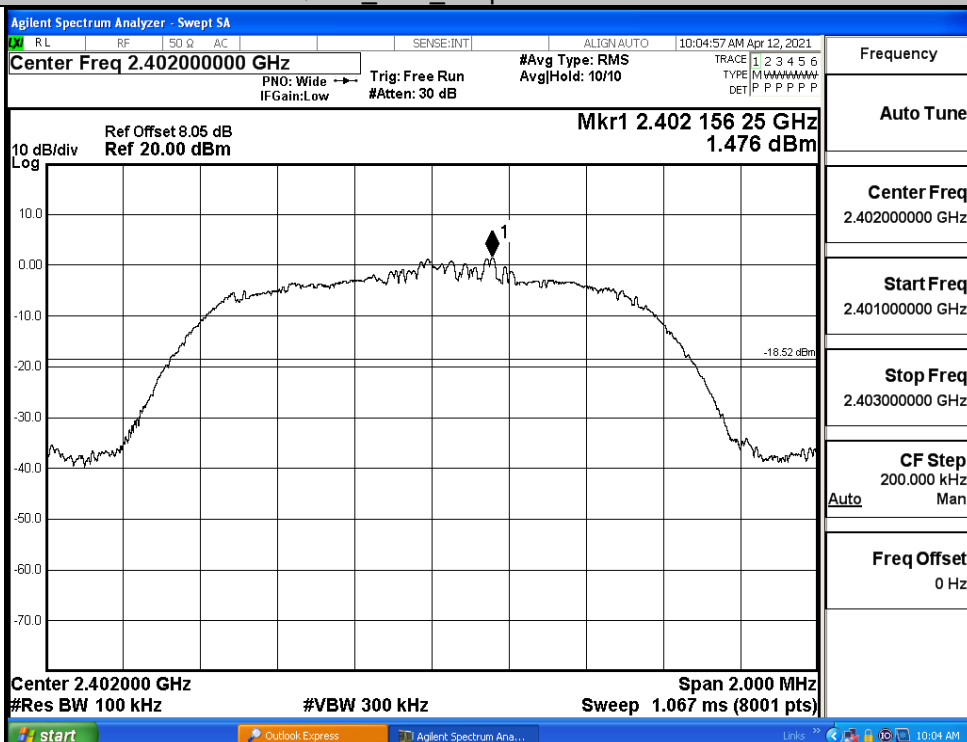


Puw

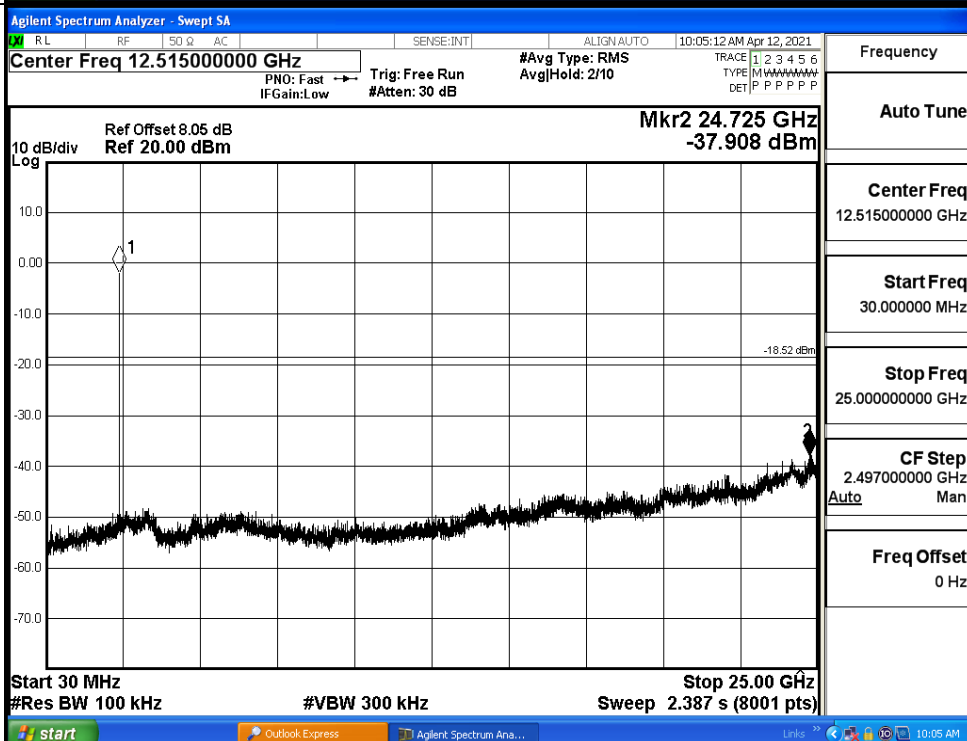


$\pi/4$ DQPSK_LCH_Graphs

Pref

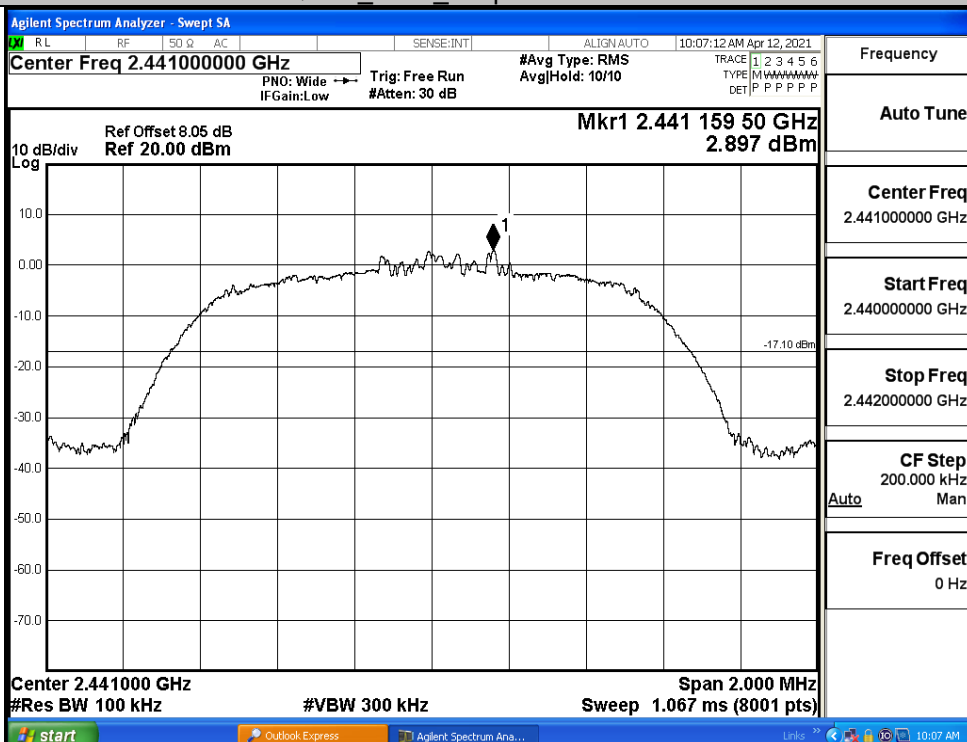


Puw

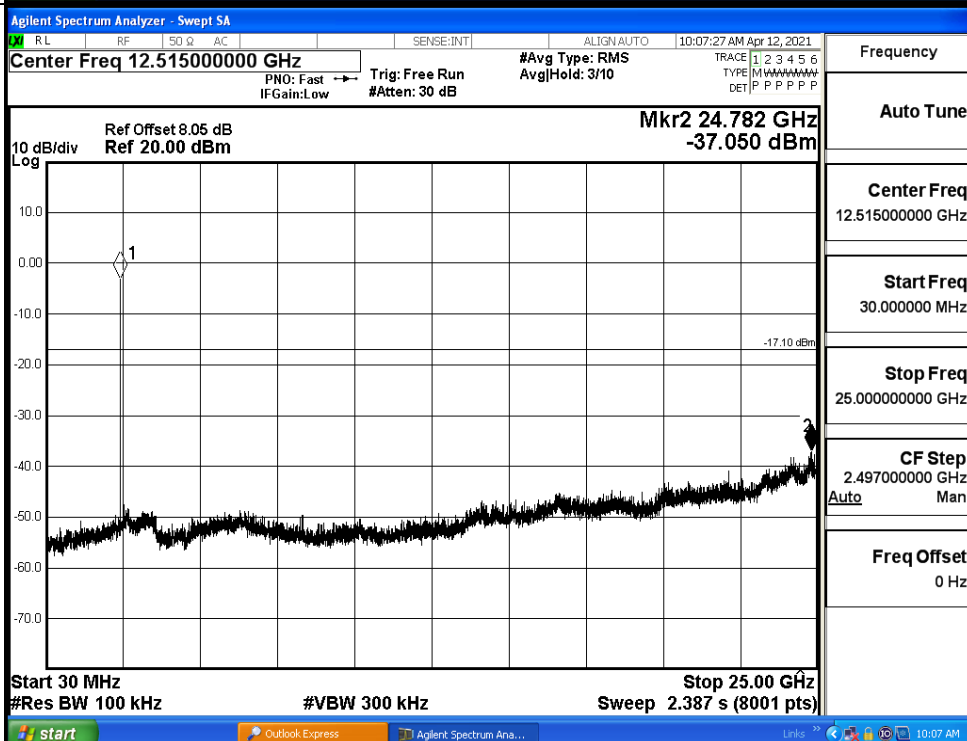


$\pi/4$ DQPSK_MCH_Graphs

Pref

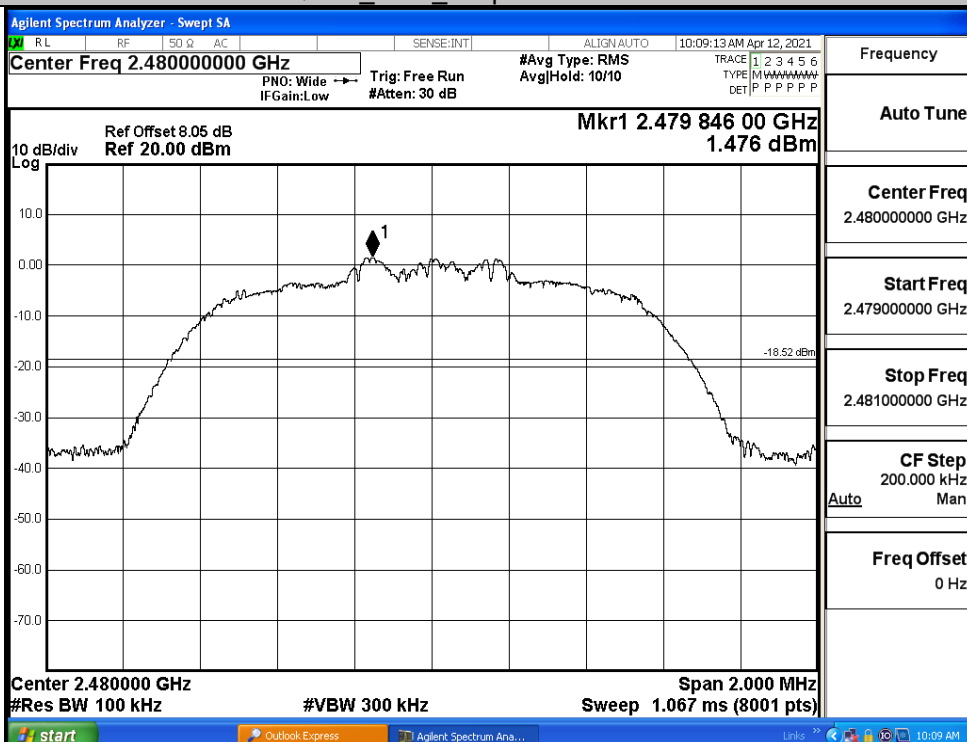


Puw

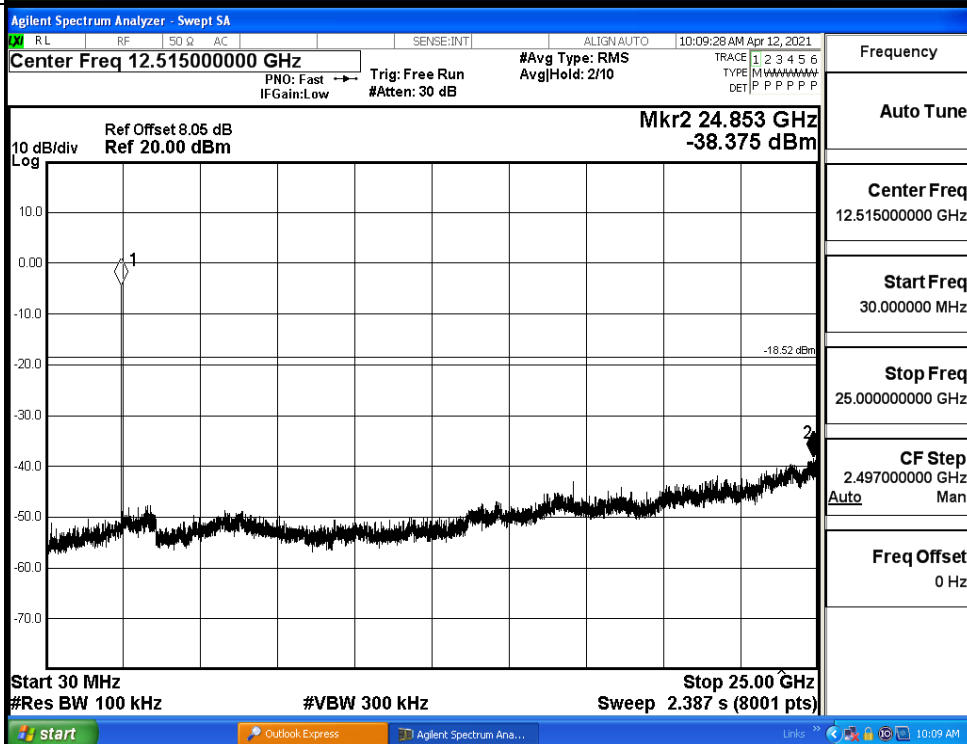


π /4DQPSK_HCH_Graphs

Pref

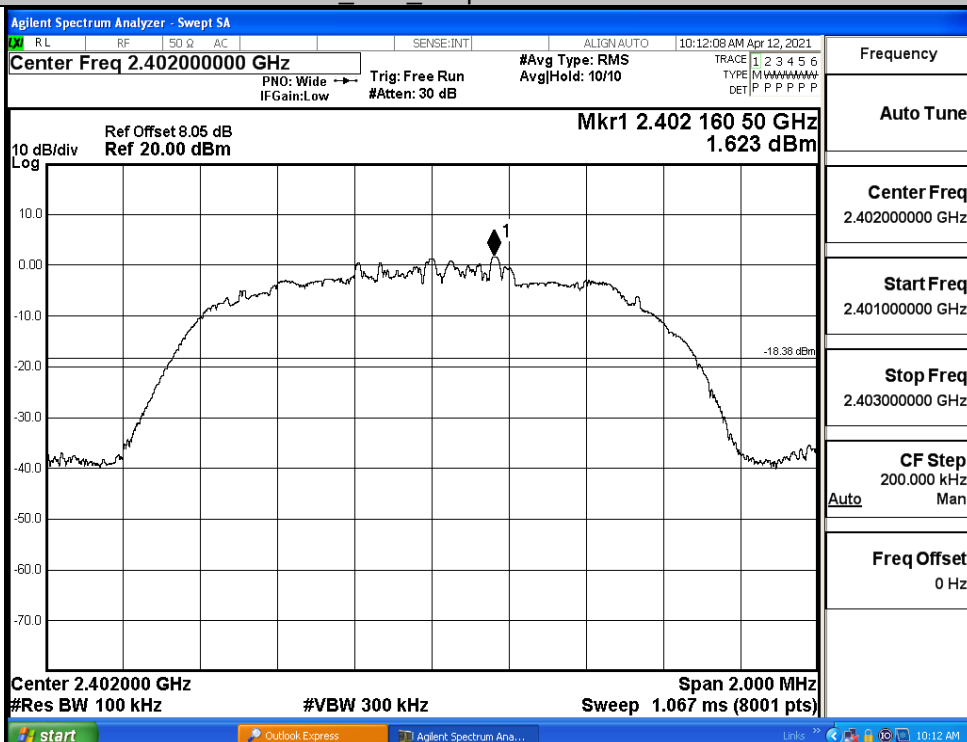


Puw

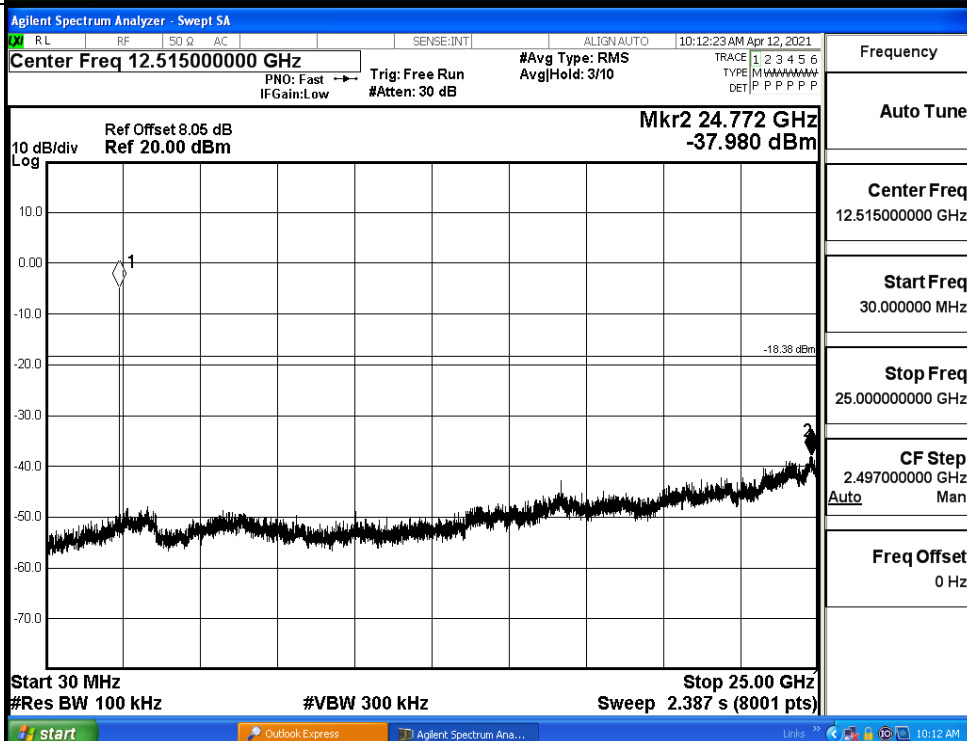


8DPSK_LCH_Graphs

Pref

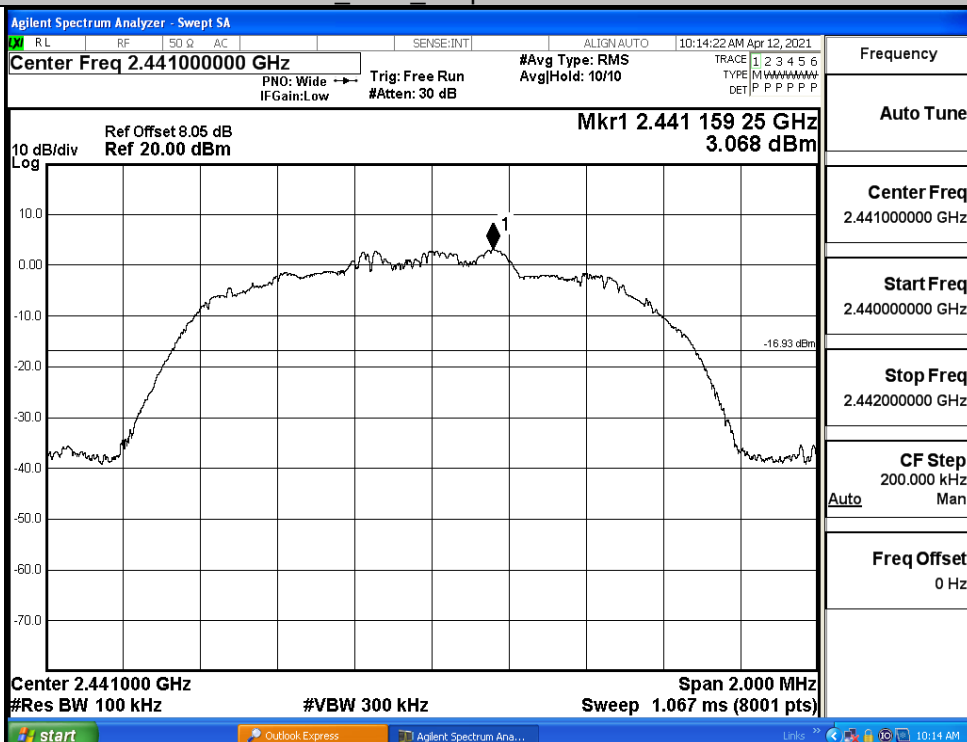


Puw

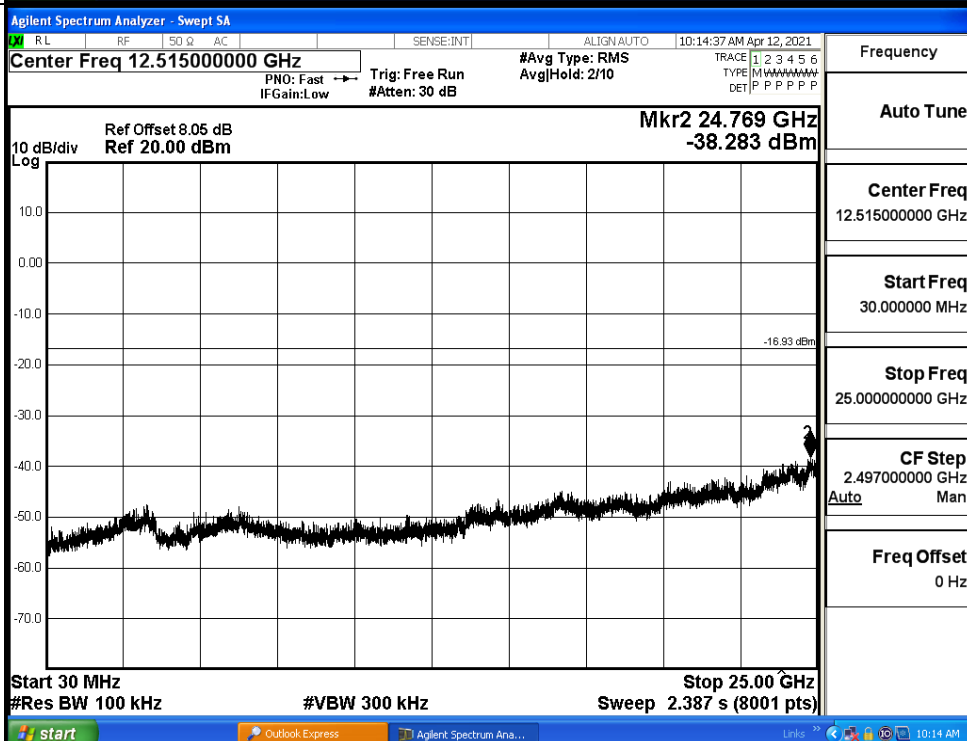


8DPSK_MCH_Graphs

Pref

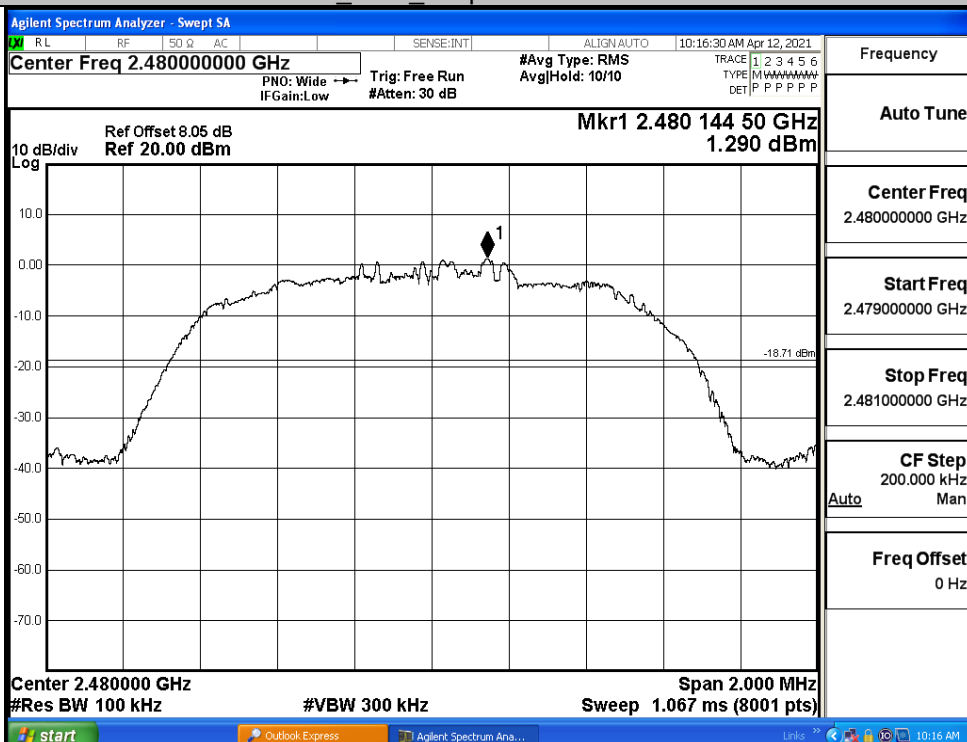


Puw

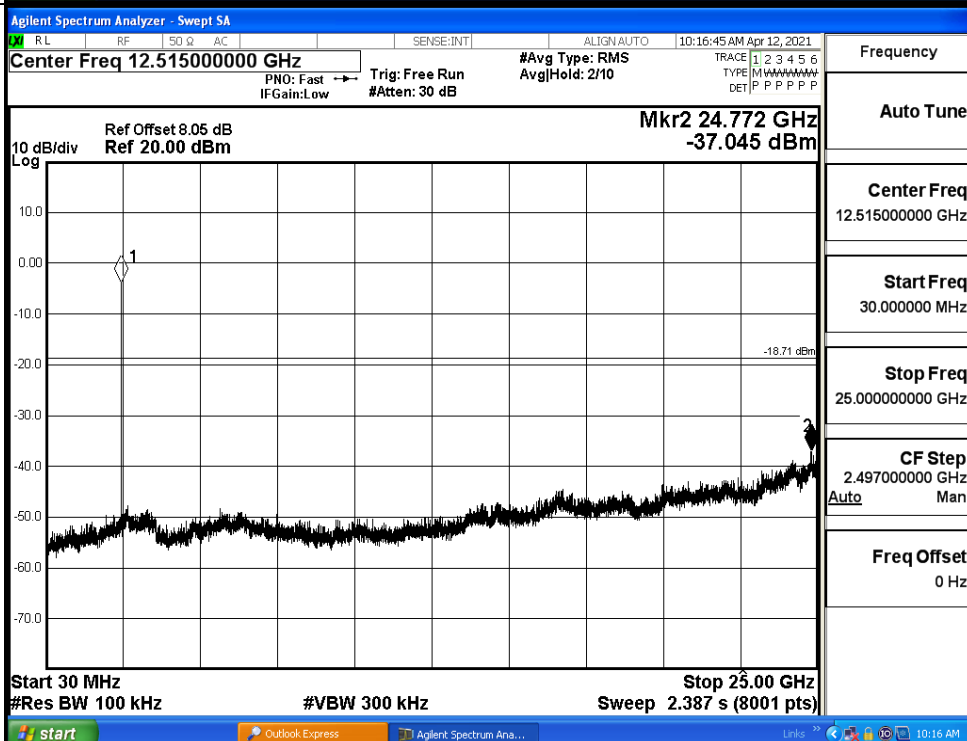


8DPSK_HCH_Graphs

Pref



Puw

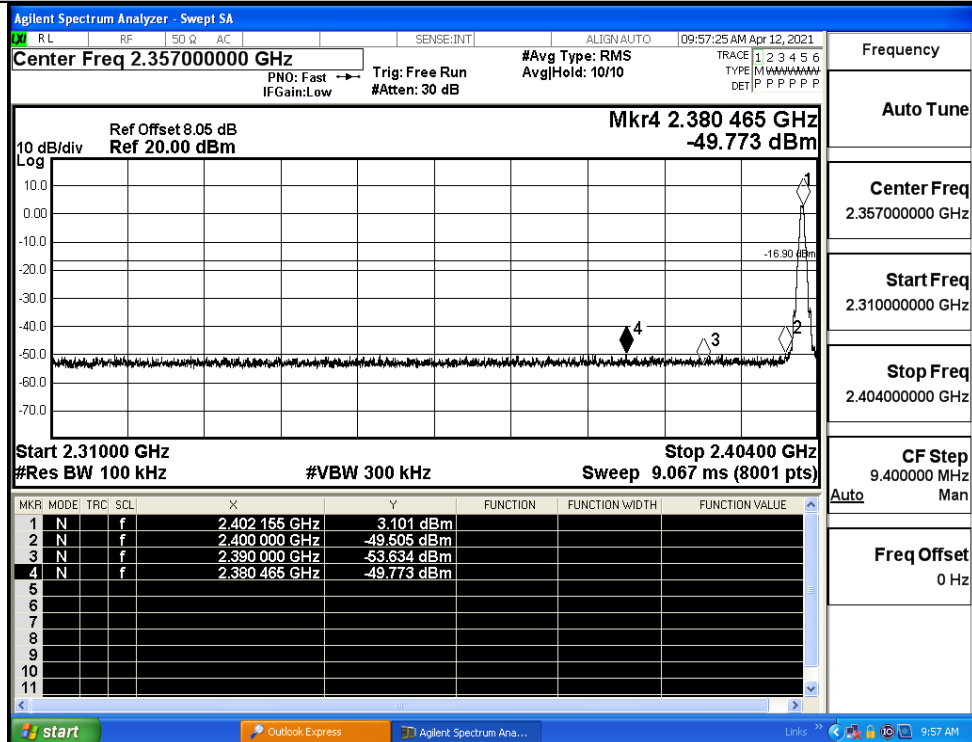


A.7 Band-edge for RF Conducted Emissions

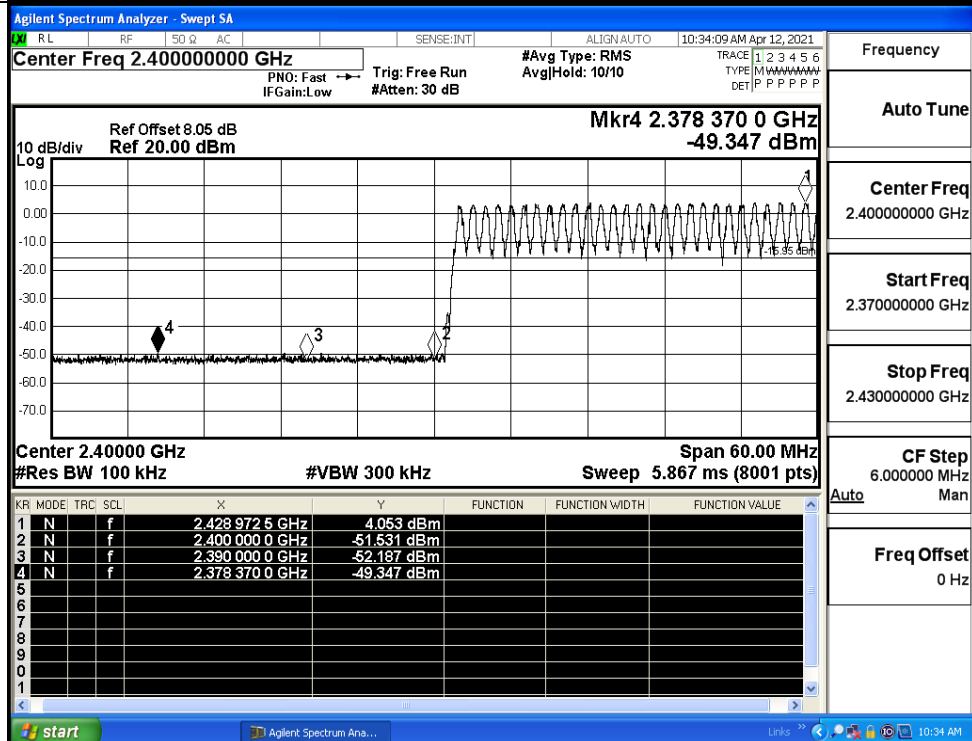
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	3.101	Off	-49.773	-16.9	PASS
			4.053	On	-49.347	-15.95	PASS
	HCH	2480	2.938	Off	-48.116	-17.06	PASS
			3.937	On	-48.121	-16.06	PASS
$\pi/4$ DQPSK	LCH	2402	1.606	Off	-49.224	-18.39	PASS
			3.000	On	-49.090	-17	PASS
	HCH	2480	1.149	Off	-49.074	-18.85	PASS
			2.792	On	-48.170	-17.21	PASS
8DPSK	LCH	2402	-0.600	Off	-49.034	-20.6	PASS
			2.879	On	-49.121	-17.12	PASS
	HCH	2480	1.572	Off	-49.408	-18.43	PASS
			2.622	On	-47.561	-17.38	PASS

Test Graphs

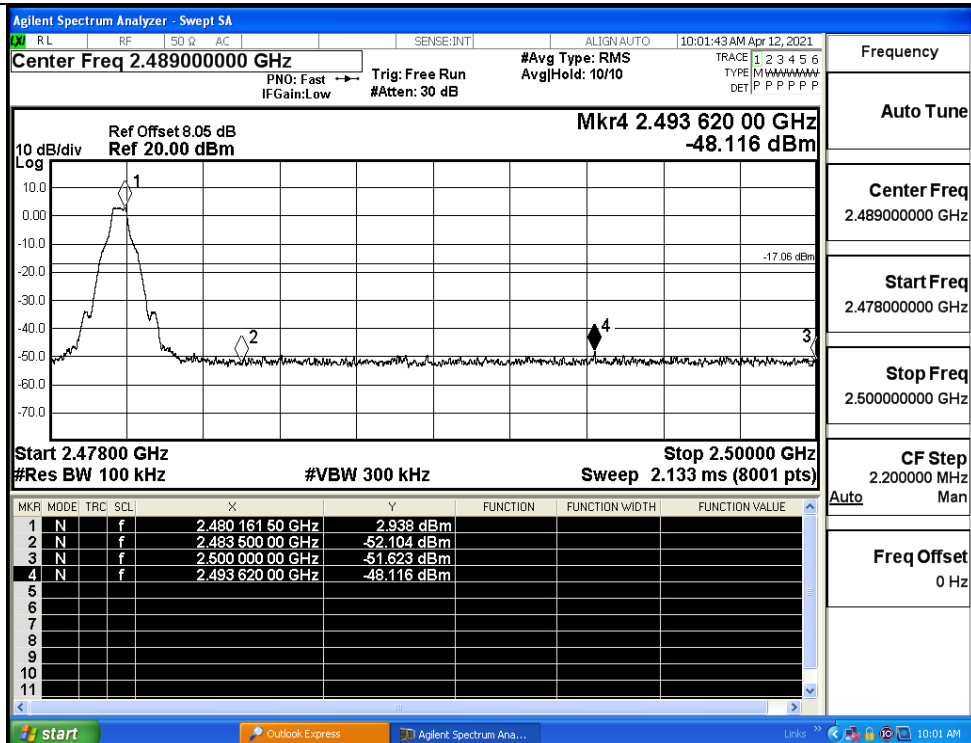
GFSK/LCH/No Hop



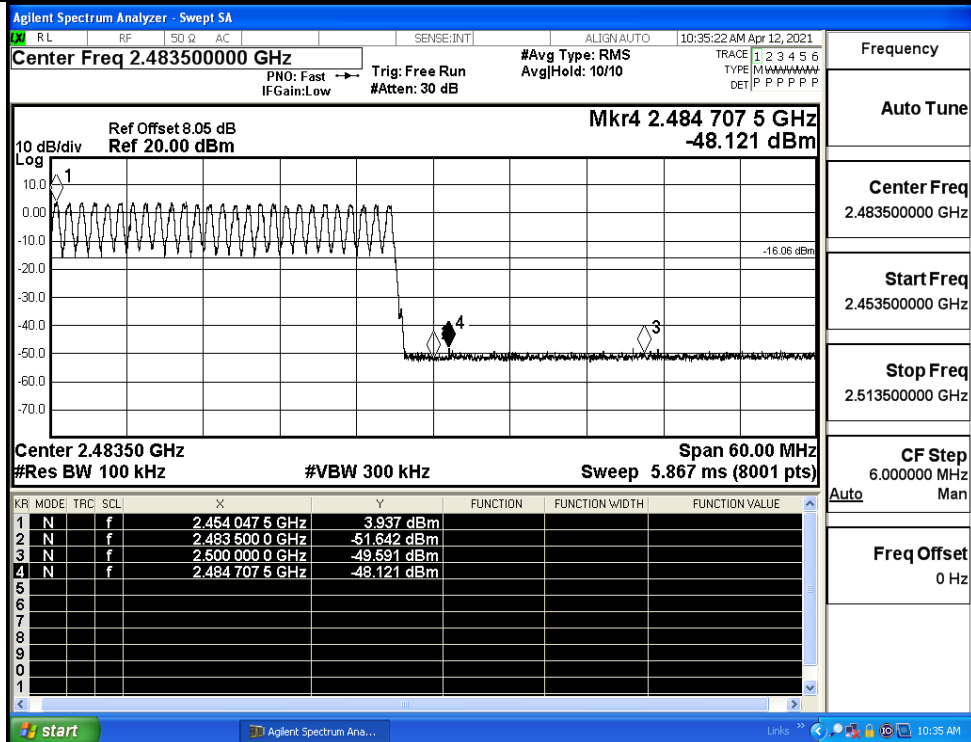
GFSK/LCH/Hop



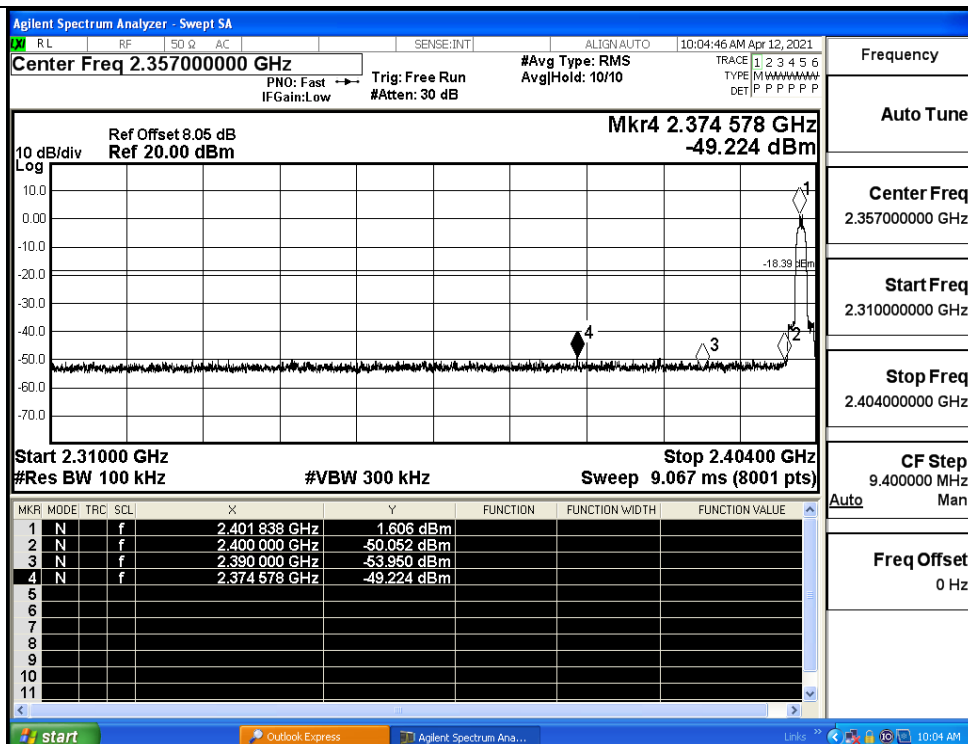
GFSK/HCH/No Hop



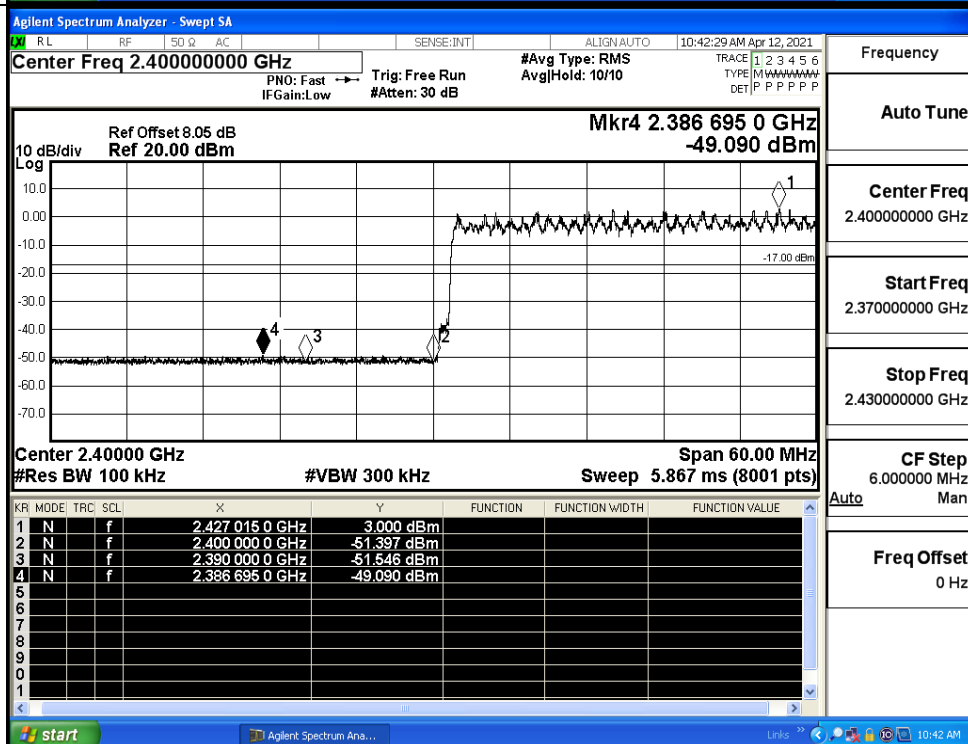
GFSK/HCH/Hop



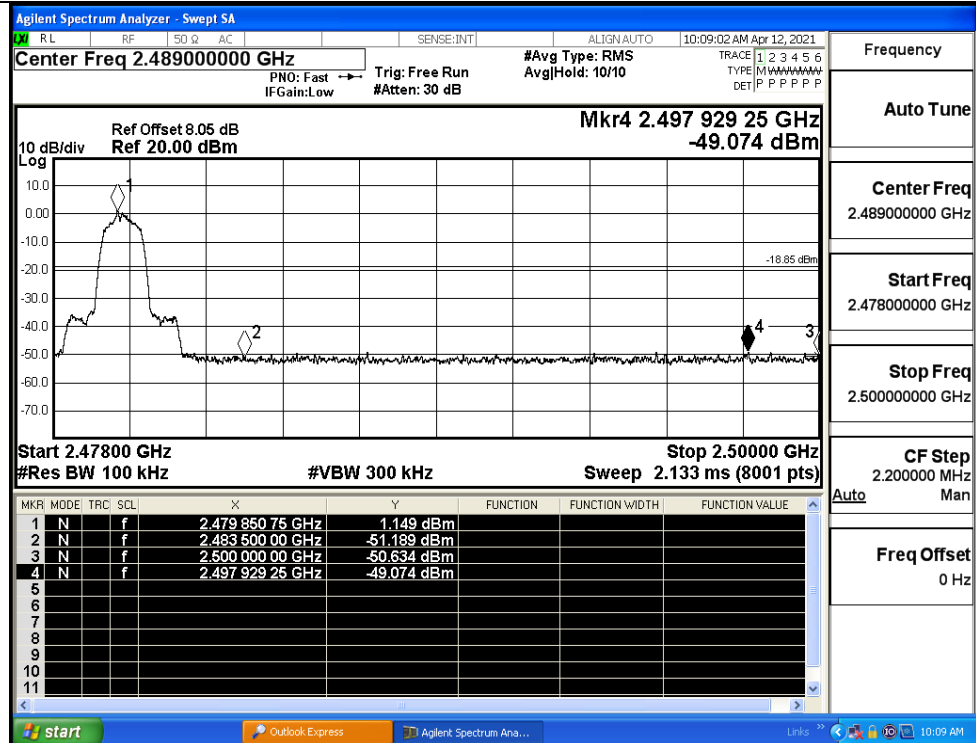
$\pi/4$ DQPSK/LCH/No
Hop



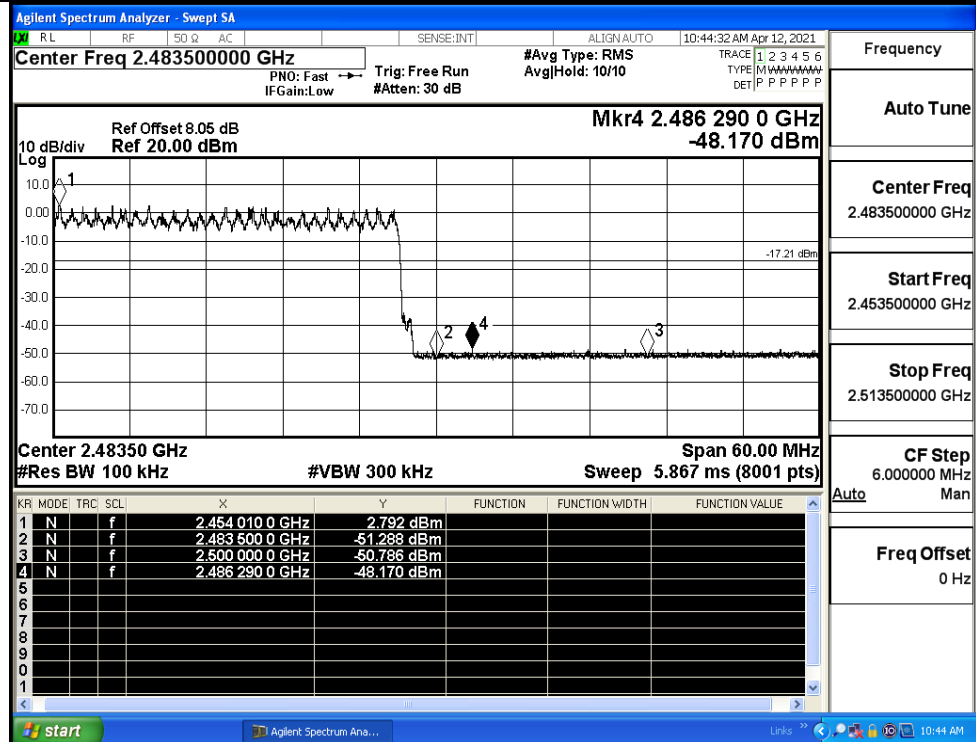
$\pi/4$ DQPSK/LCH/Hop



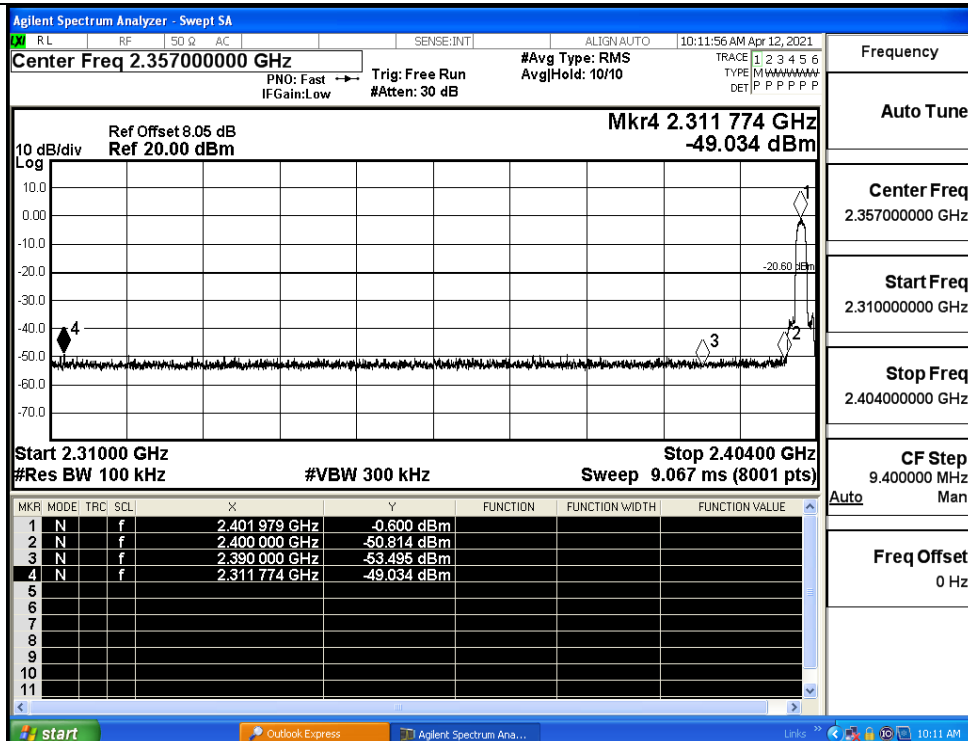
$\pi/4$ DQPSK/HCH/No
Hop



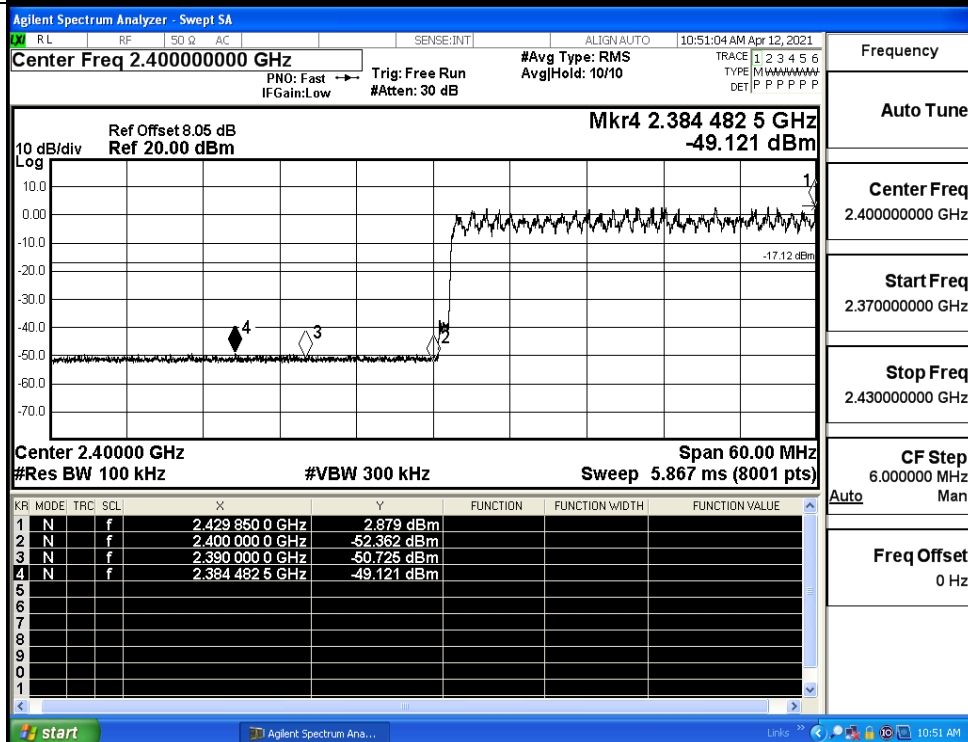
$\pi/4$ DQPSK/HCH/Hop



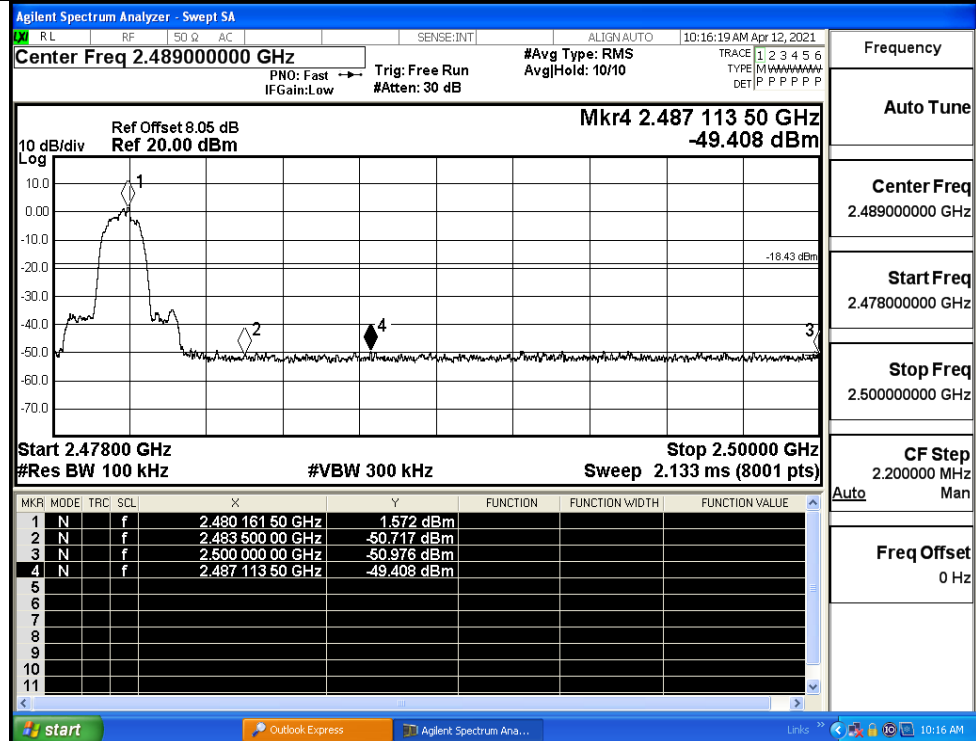
8DPSK/LCH/No Hop



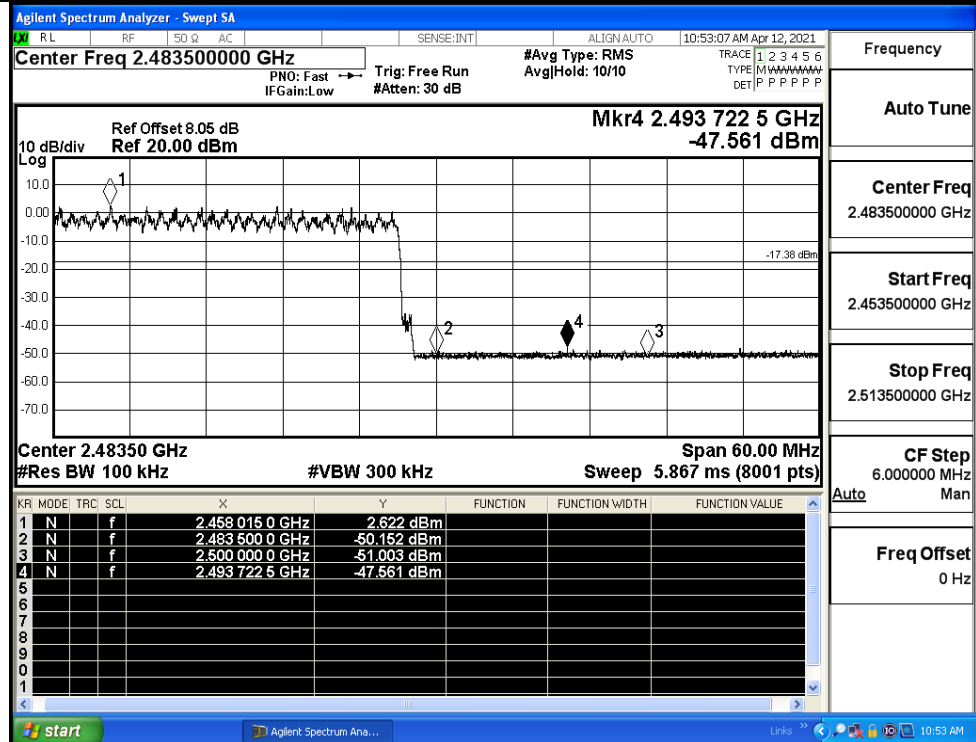
8DPSK/LCH/Hop



8DPSK/HCH/No Hop



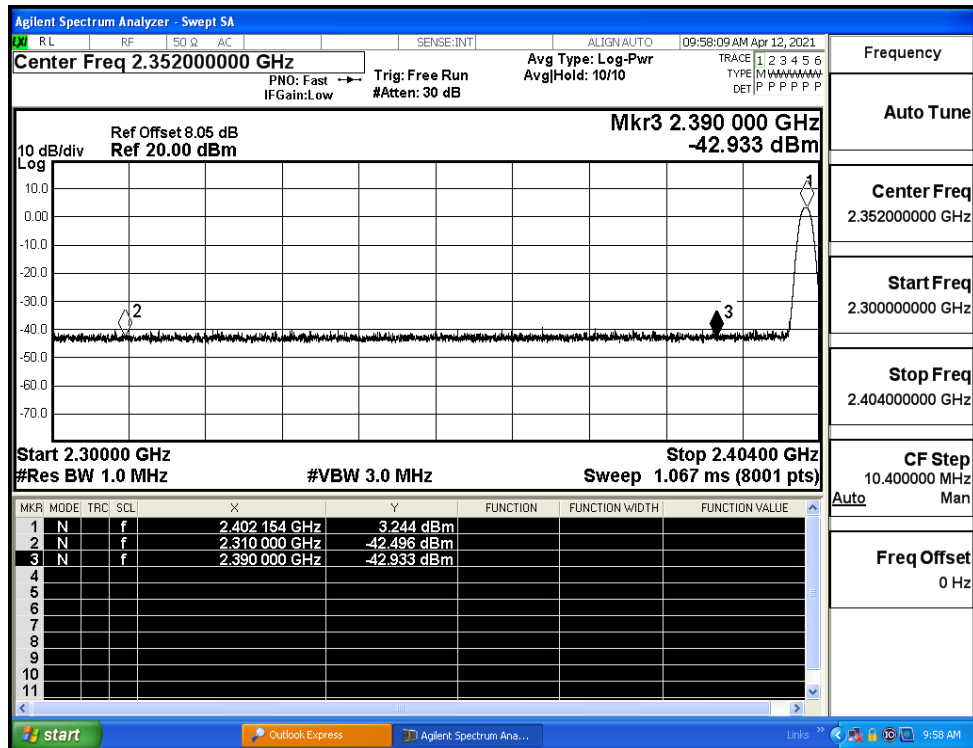
8DPSK/HCH/Hop



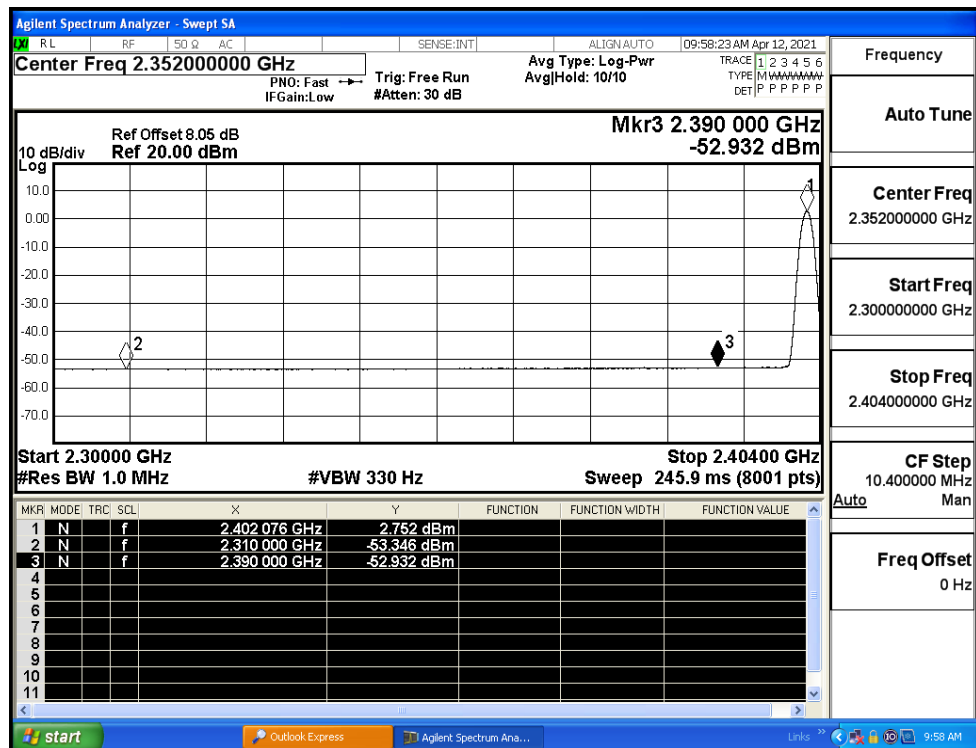
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-42.50	4.2	0	56.93	PEAK	74	PASS
	Off	2310.0	-53.35	4.2	0	46.08	AV	54	PASS
	Off	2390.0	-42.93	4.2	0	56.50	PEAK	74	PASS
	Off	2390.0	-52.93	4.2	0	46.50	AV	54	PASS
	Off	2483.5	-42.85	4.2	0	56.58	PEAK	74	PASS
	Off	2483.5	-52.45	4.2	0	46.98	AV	54	PASS
	Off	2500.0	-41.26	4.2	0	58.17	PEAK	74	PASS
	Off	2500.0	-52.31	4.2	0	47.12	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-43.05	4.2	0	56.38	PEAK	74	PASS
	Off	2310.0	-53.40	4.2	0	46.03	AV	54	PASS
	Off	2390.0	-42.54	4.2	0	56.89	PEAK	74	PASS
	Off	2390.0	-53.05	4.2	0	46.38	AV	54	PASS
	Off	2483.5	-41.88	4.2	0	57.55	PEAK	74	PASS
	Off	2483.5	-52.47	4.2	0	46.96	AV	54	PASS
	Off	2500.0	-42.55	4.2	0	56.88	PEAK	74	PASS
	Off	2500.0	-52.35	4.2	0	47.08	AV	54	PASS
8DPSK	Off	2310.0	-42.18	4.2	0	57.25	PEAK	74	PASS
	Off	2310.0	-53.33	4.2	0	46.10	AV	54	PASS
	Off	2390.0	-41.68	4.2	0	57.75	PEAK	74	PASS
	Off	2390.0	-53.05	4.2	0	46.38	AV	54	PASS
	Off	2483.5	-42.45	4.2	0	56.98	PEAK	74	PASS
	Off	2483.5	-52.34	4.2	0	47.09	AV	54	PASS
	Off	2500.0	-42.02	4.2	0	57.41	PEAK	74	PASS
	Off	2500.0	-52.34	4.2	0	47.09	AV	54	PASS

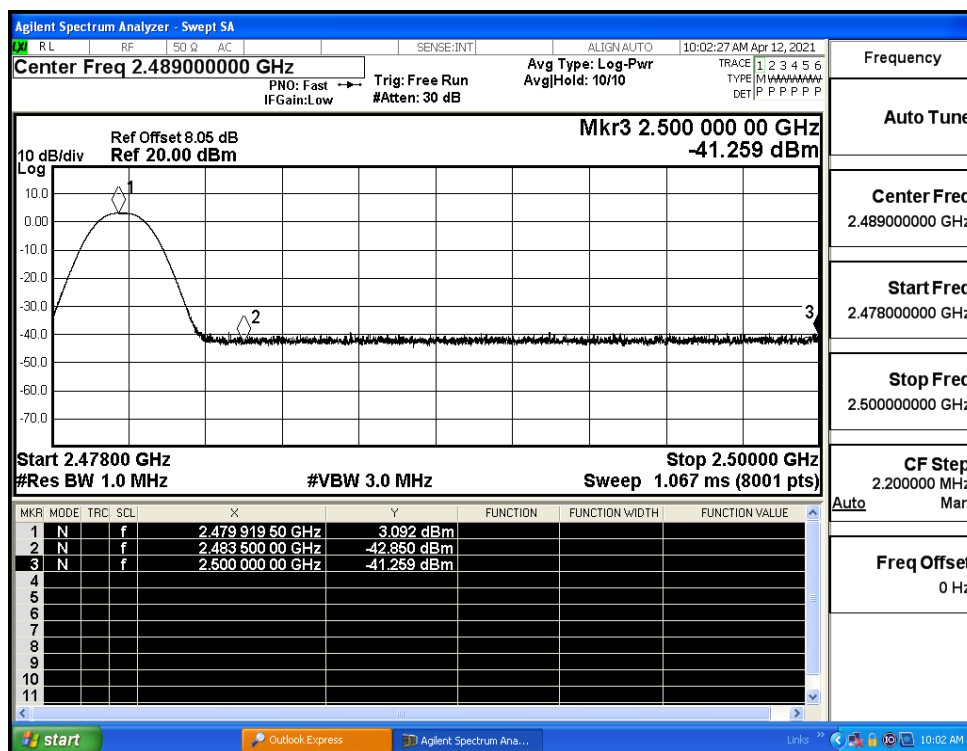
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



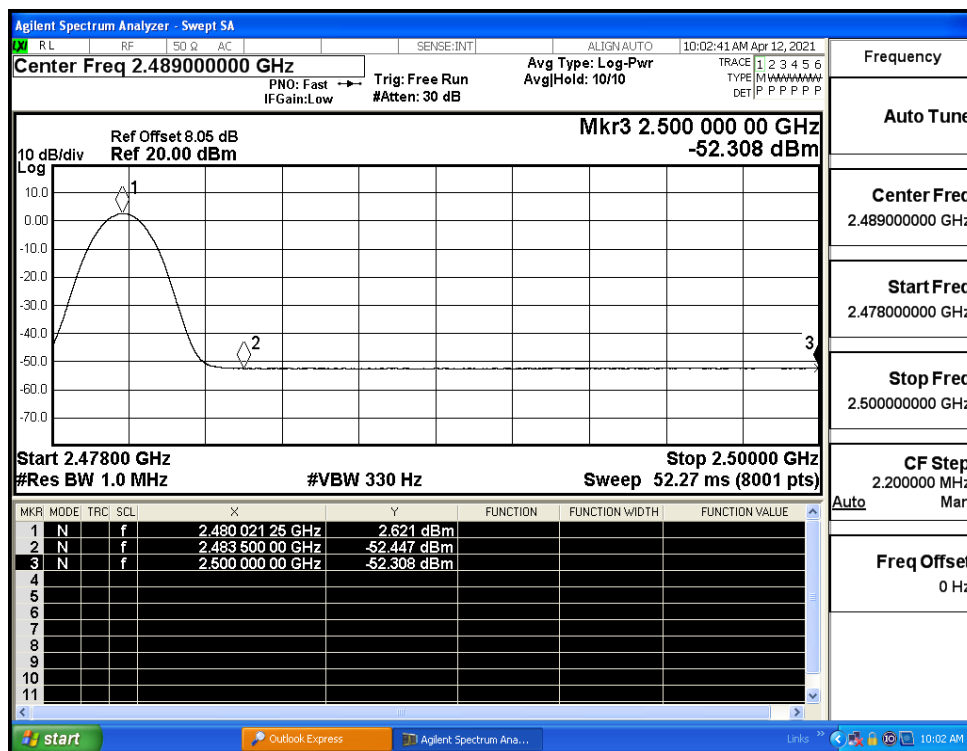
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)

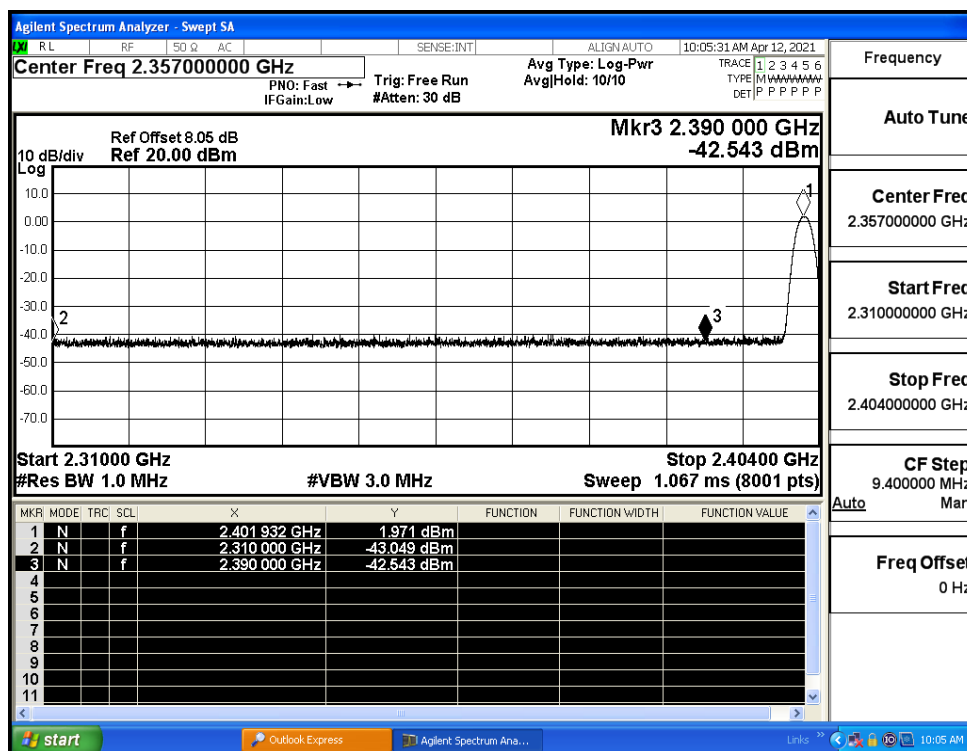
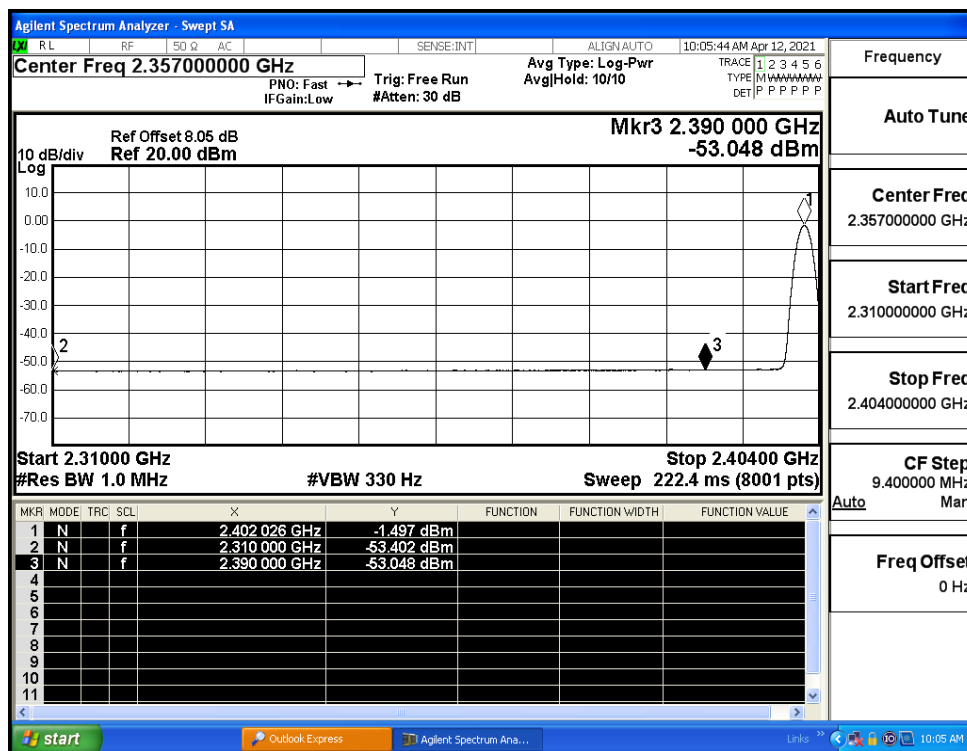


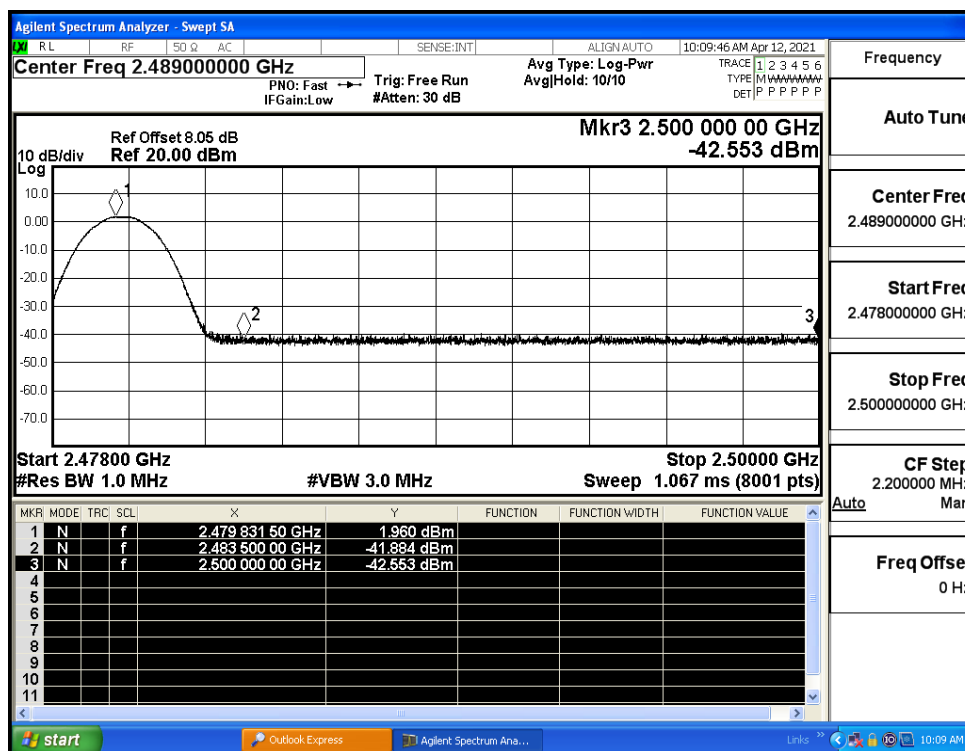
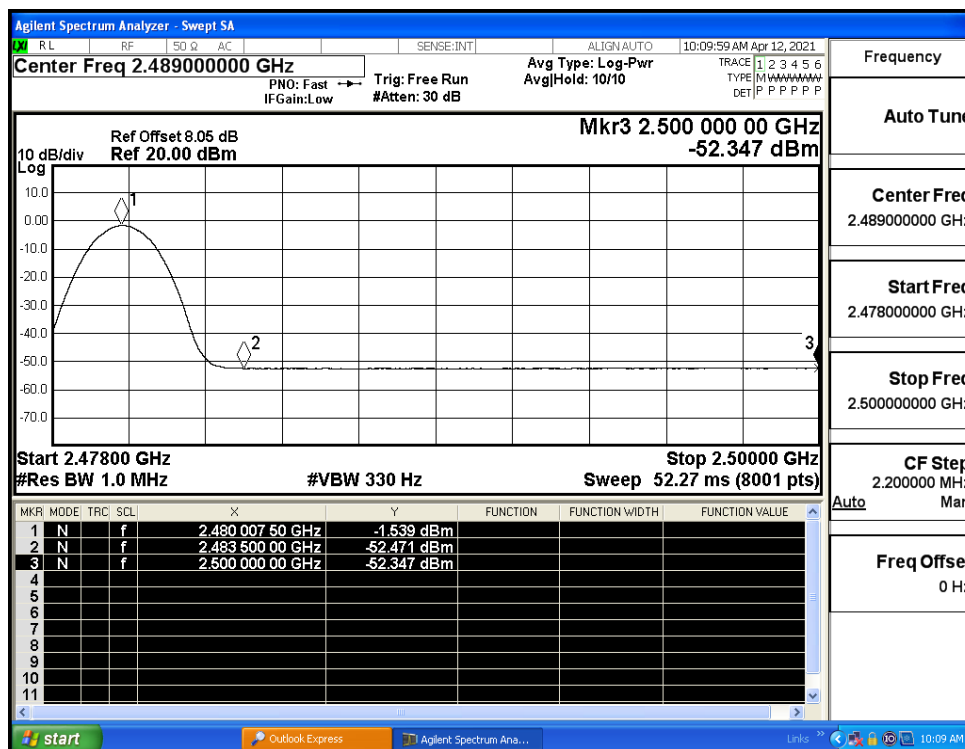
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



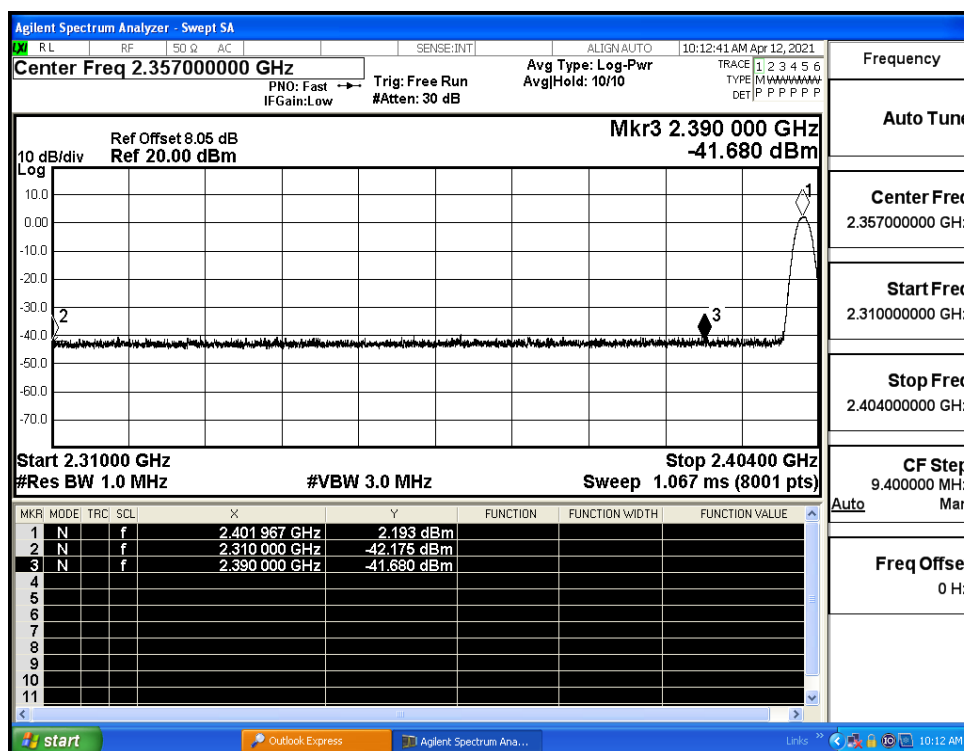
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



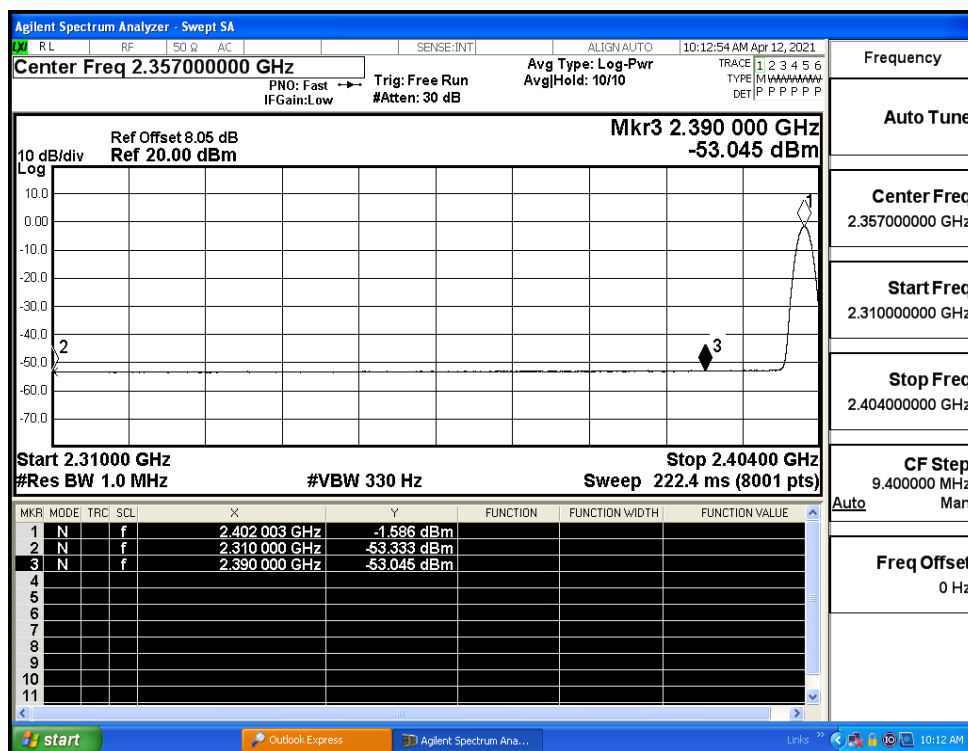
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

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)

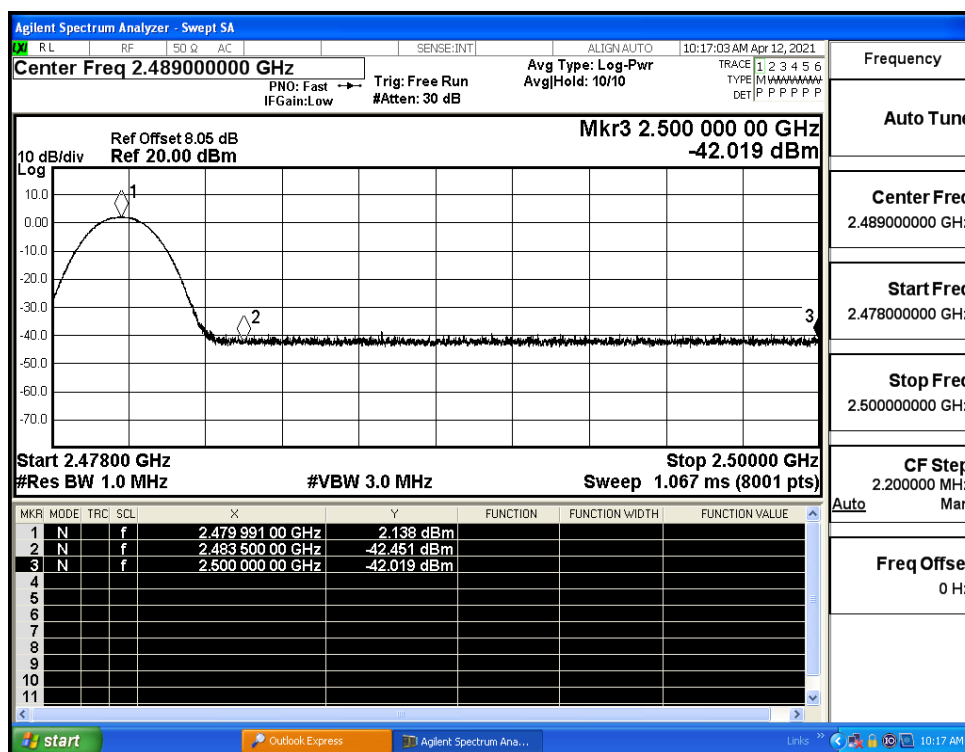
Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



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)

