

Appendix A

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

Product Name: Urbanista Sydney

Trade Mark: Urbanista

Test Model: Urbanista Sydney

Environmental Conditions

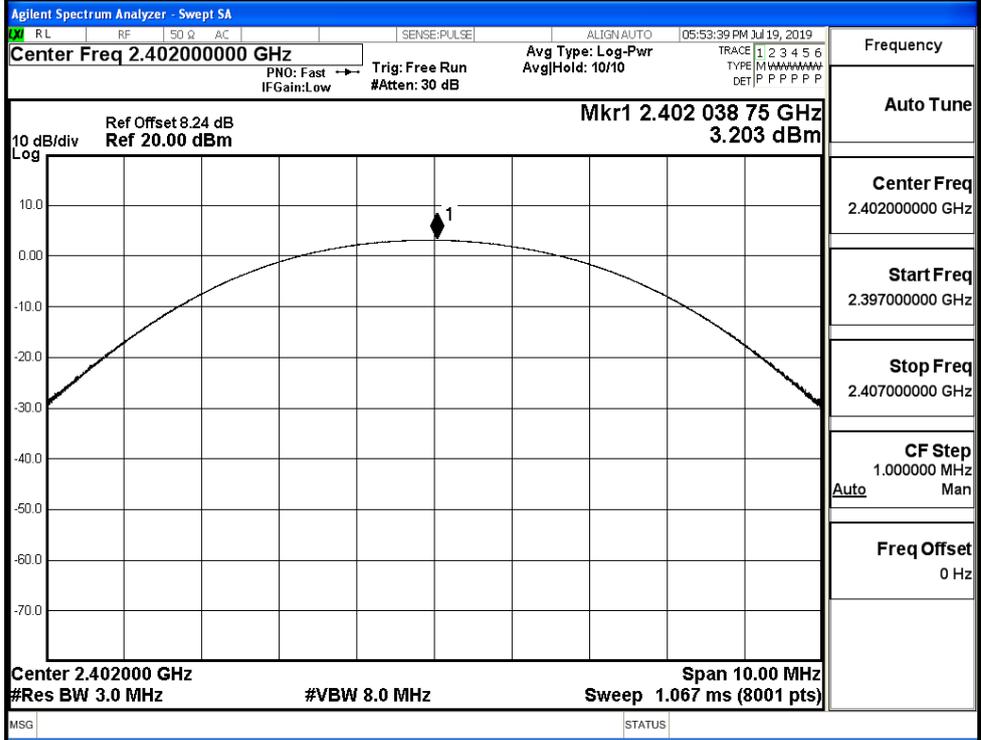
Temperature:	23.9 ° C
Relative Humidity:	52.9%
ATM Pressure:	100.0 kPa
Test Engineer:	JERRY ZENG
Supervised by:	Wang.Chuang

A.1 Maximum Conducted Peak Output Power

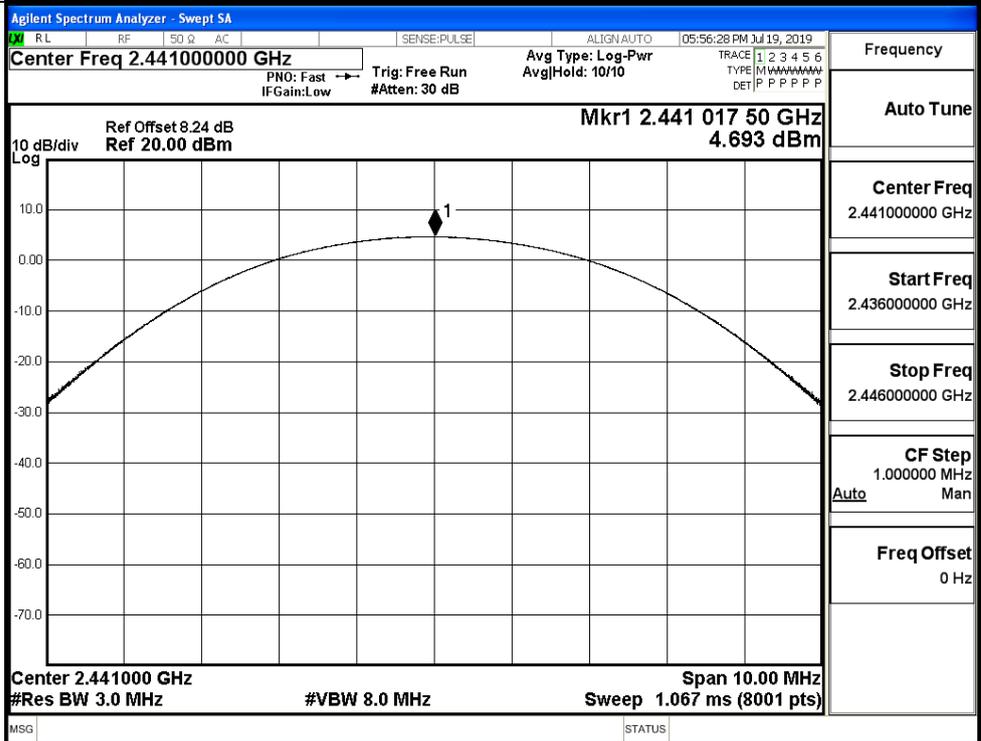
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.203	30	PASS
	MCH	4.693	30	PASS
	HCH	3.569	30	PASS
$\pi/4$ DQPSK	LCH	2.397	21	PASS
	MCH	4.088	21	PASS
	HCH	3.054	21	PASS

Test Graphs

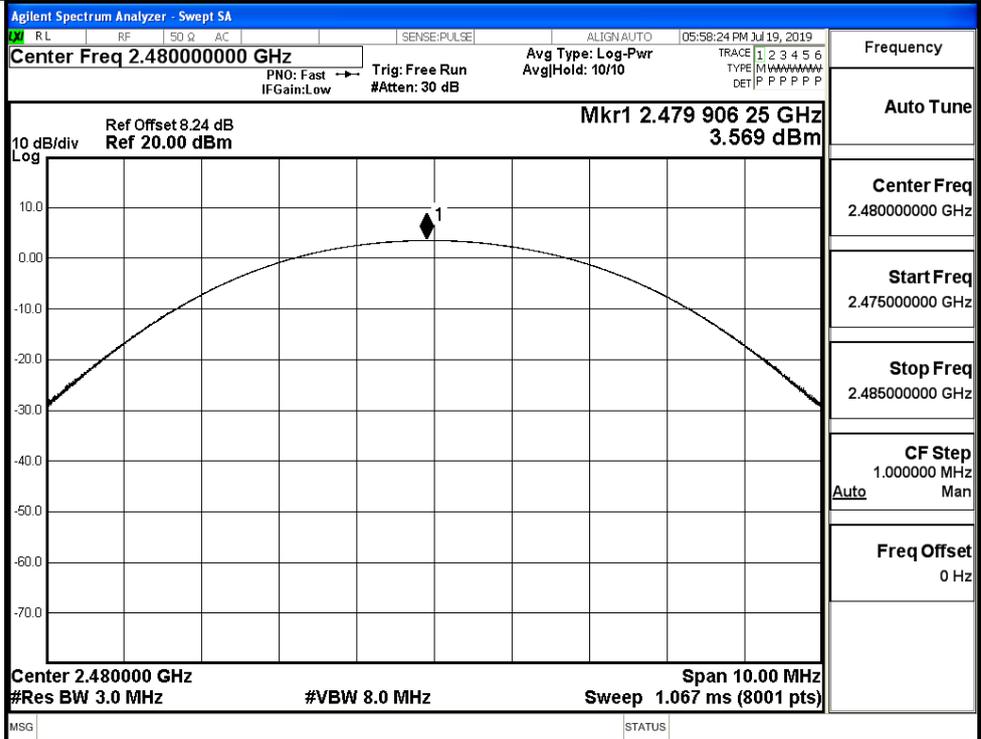
GFSK/LCH



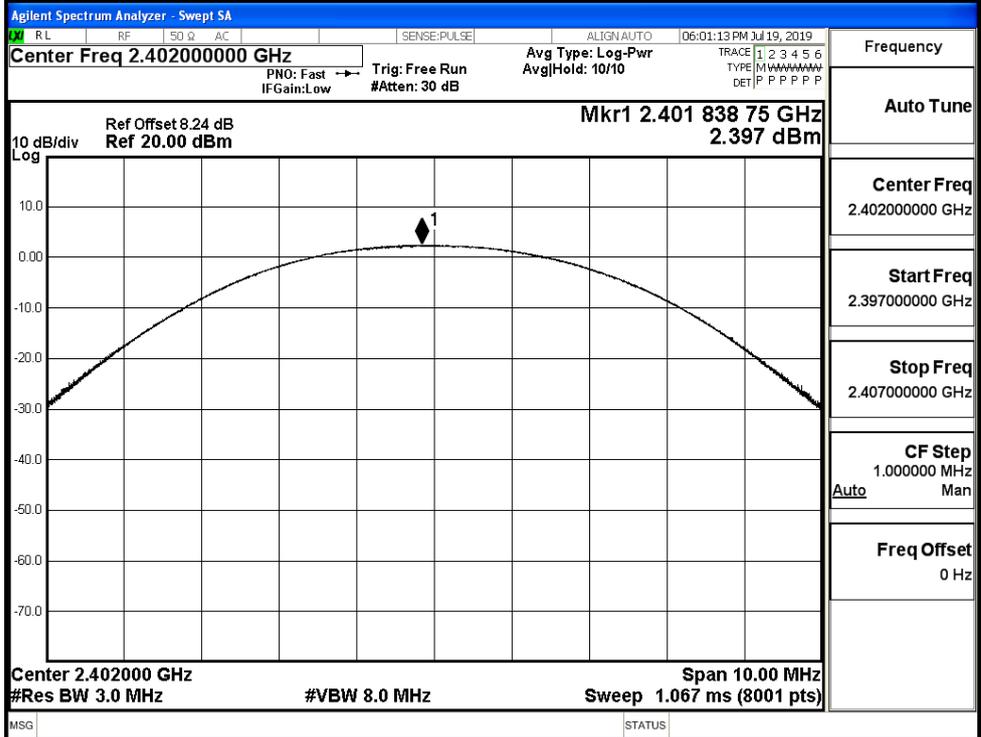
GFSK/MCH

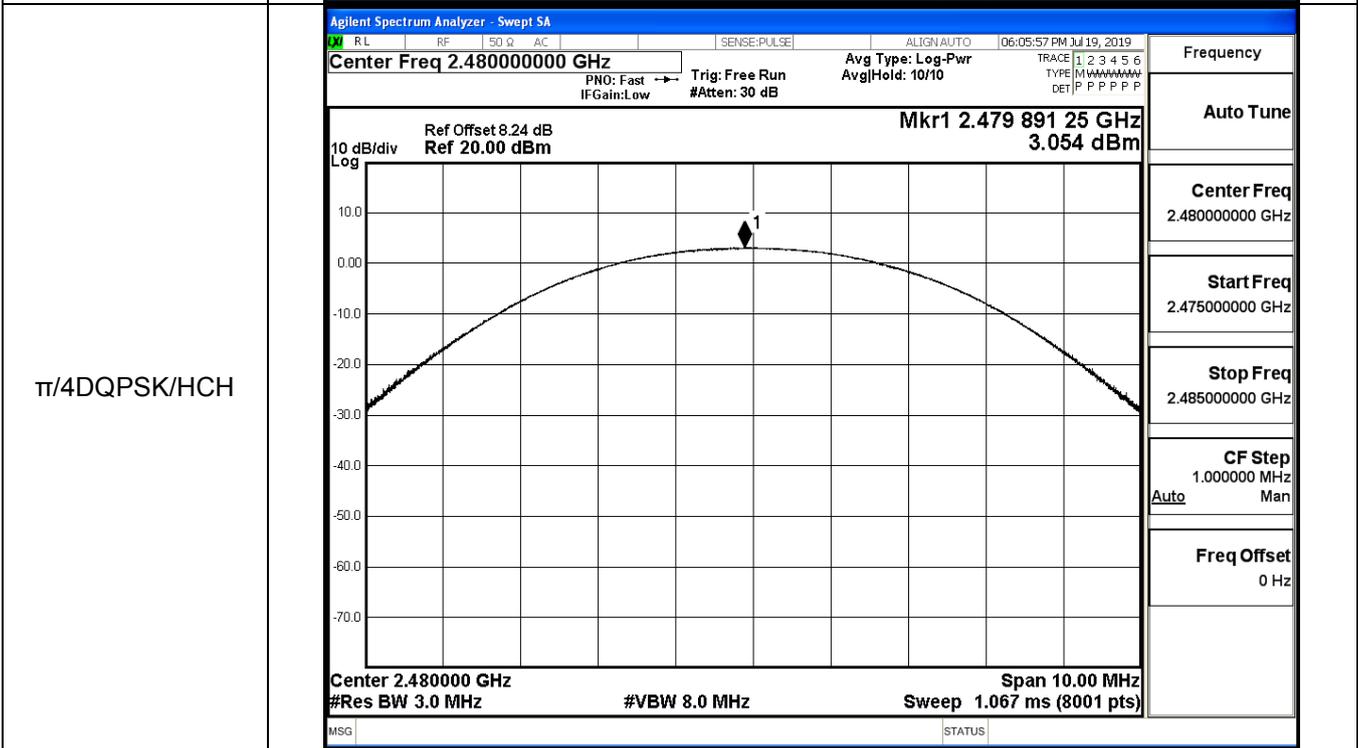
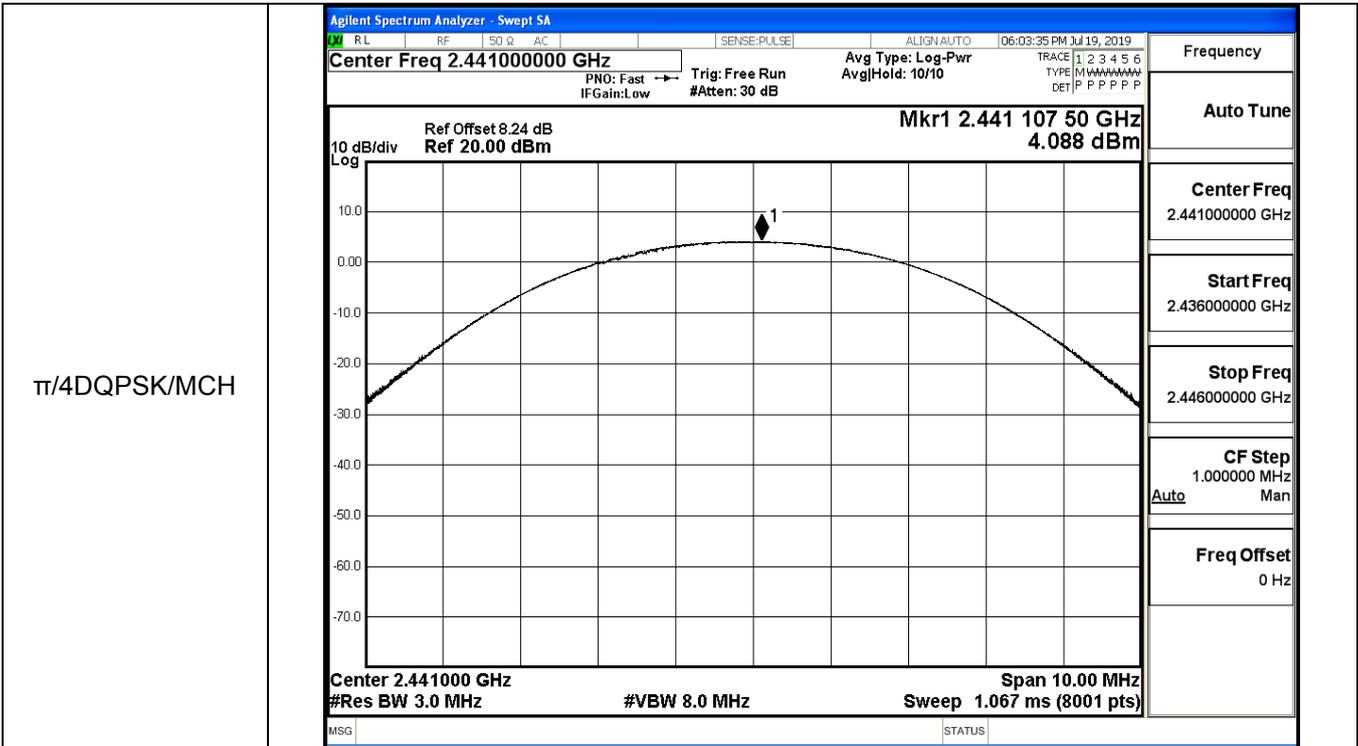


GFSK/HCH



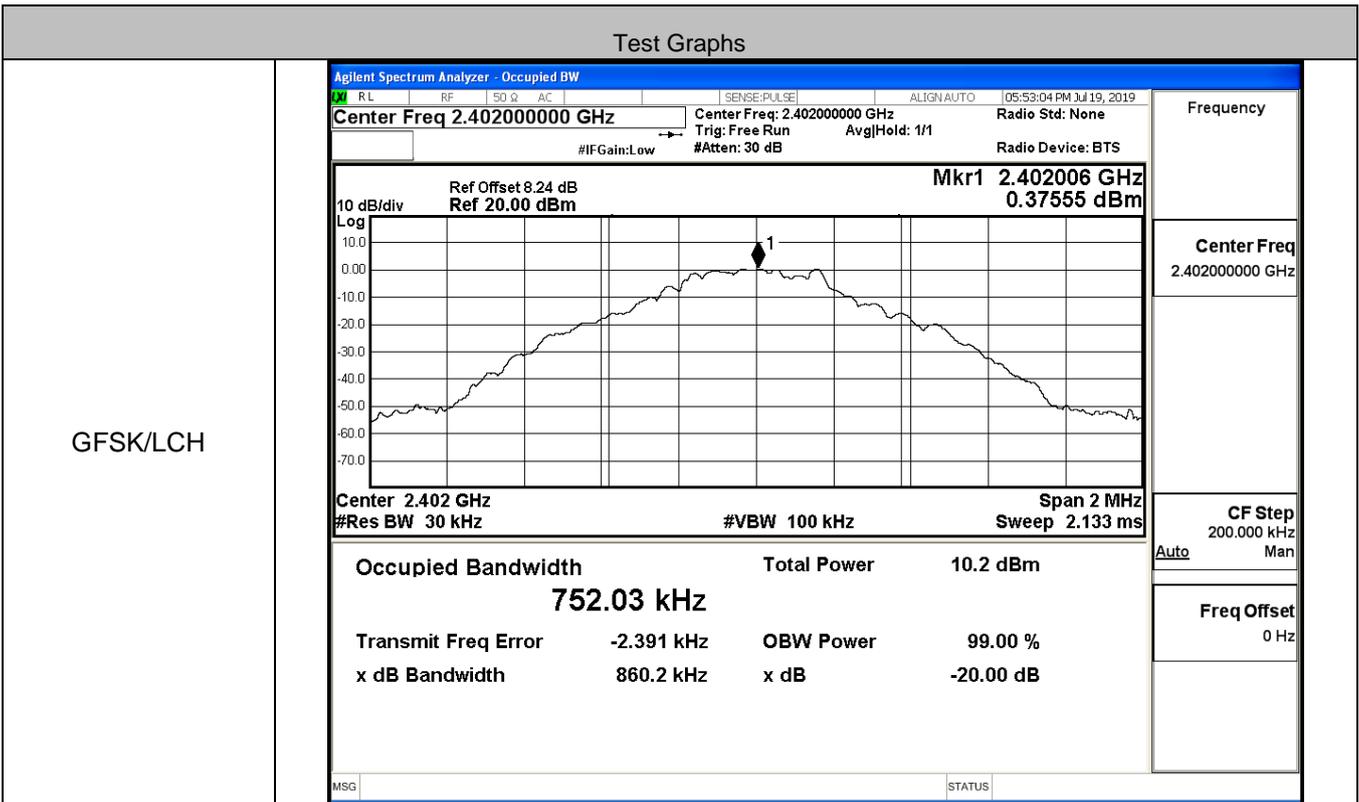
$\pi/4$ DQPSK/LCH



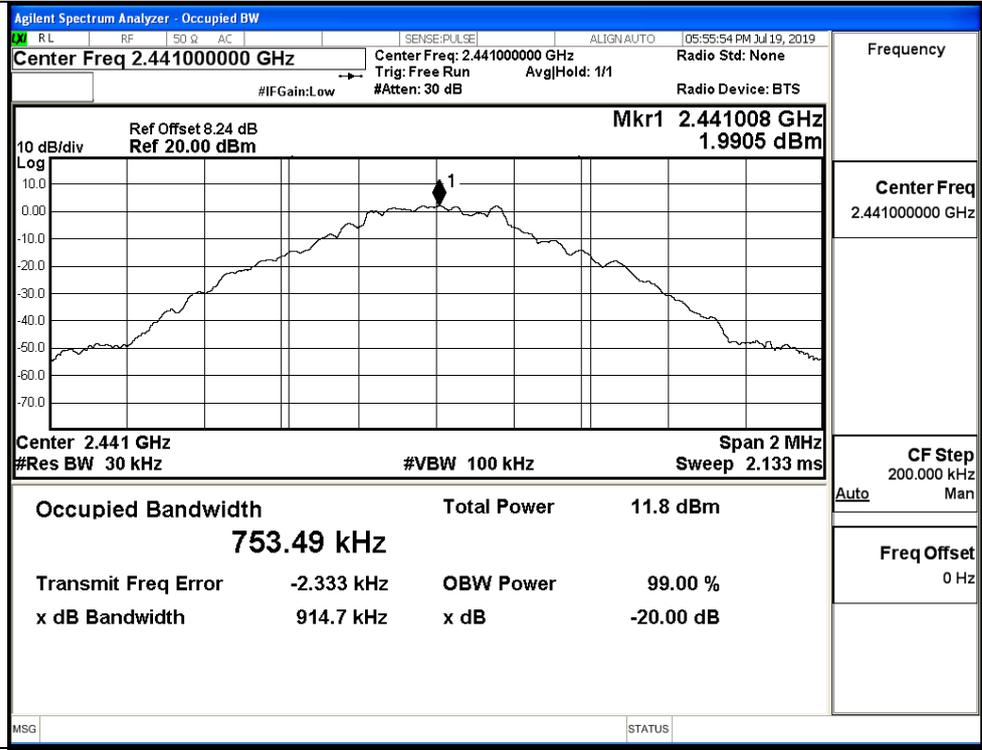


A.2 20dB Bandwidth

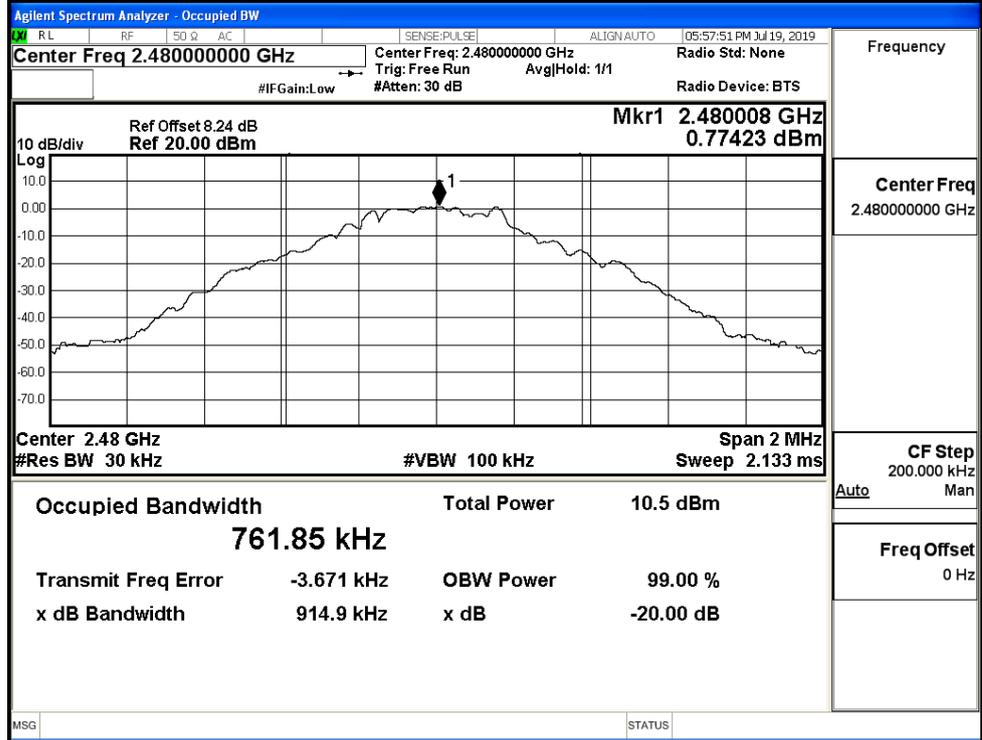
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.8602	Not Specified	PASS
	MCH	0.9147	Not Specified	PASS
	HCH	0.9149	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.270	Not Specified	PASS
	MCH	1.272	Not Specified	PASS
	HCH	1.273	Not Specified	PASS



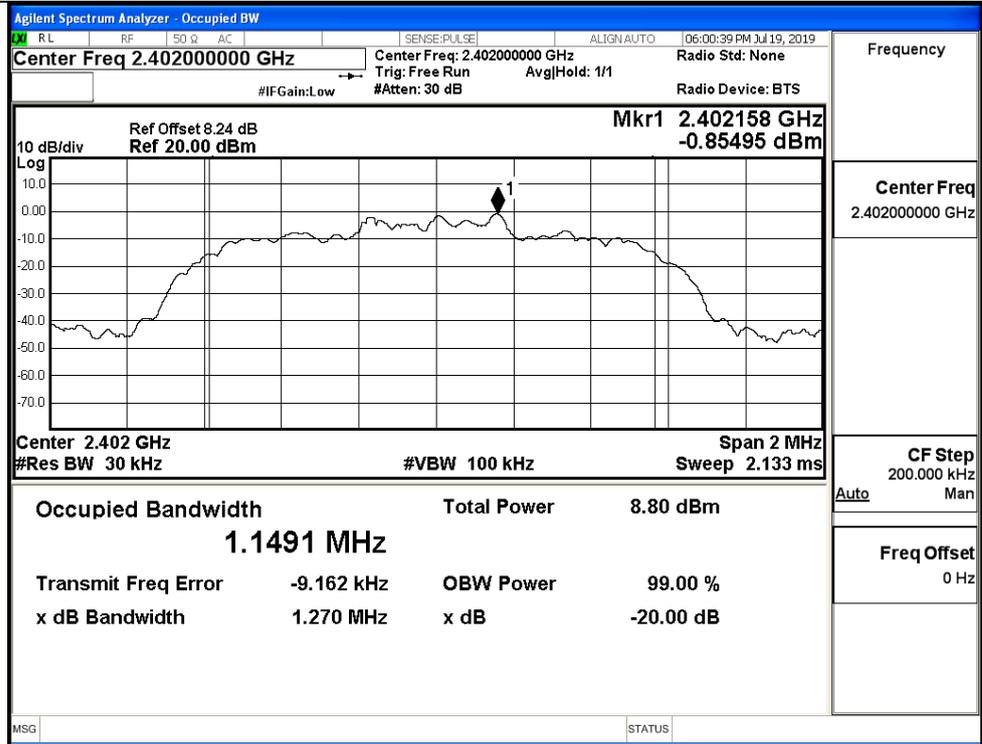
GFSK/MCH



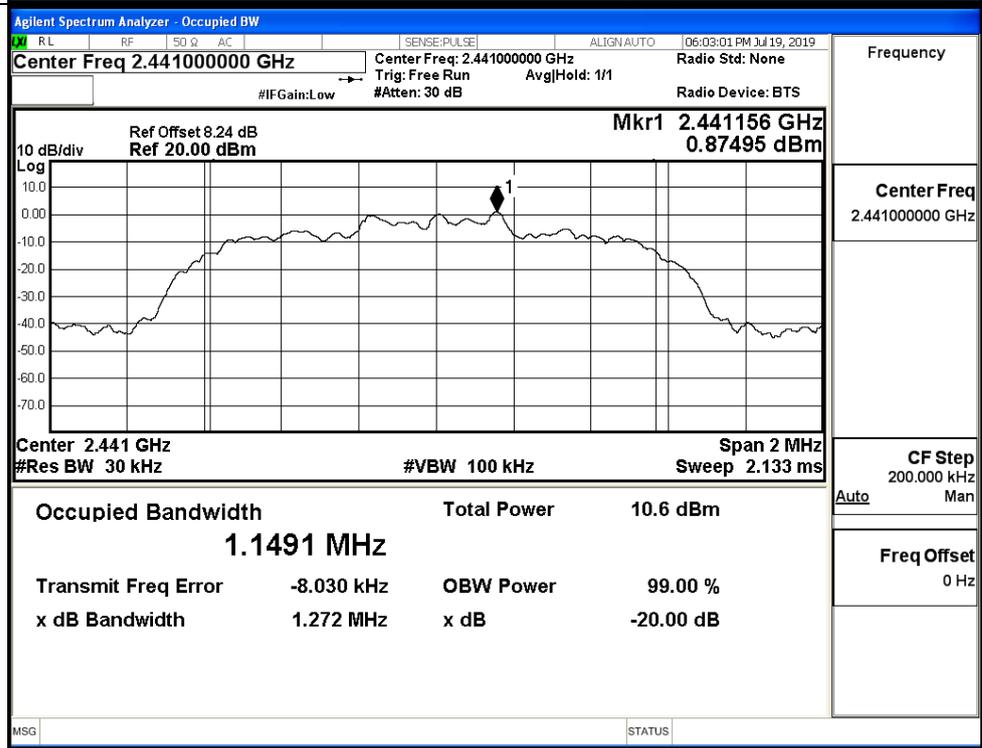
GFSK/HCH



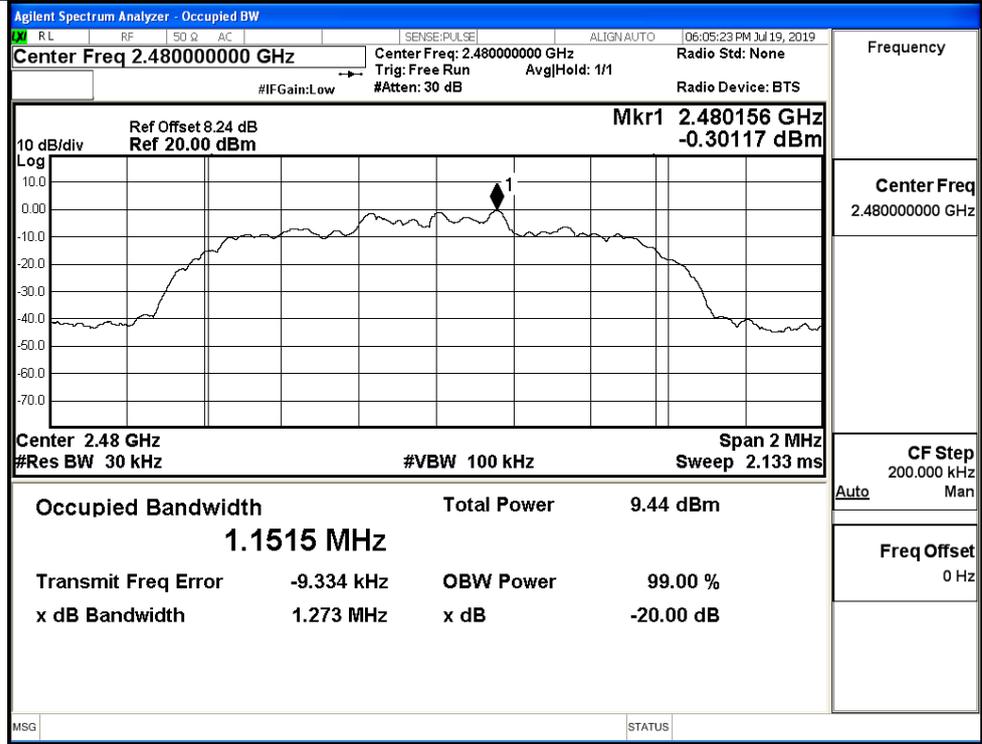
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH

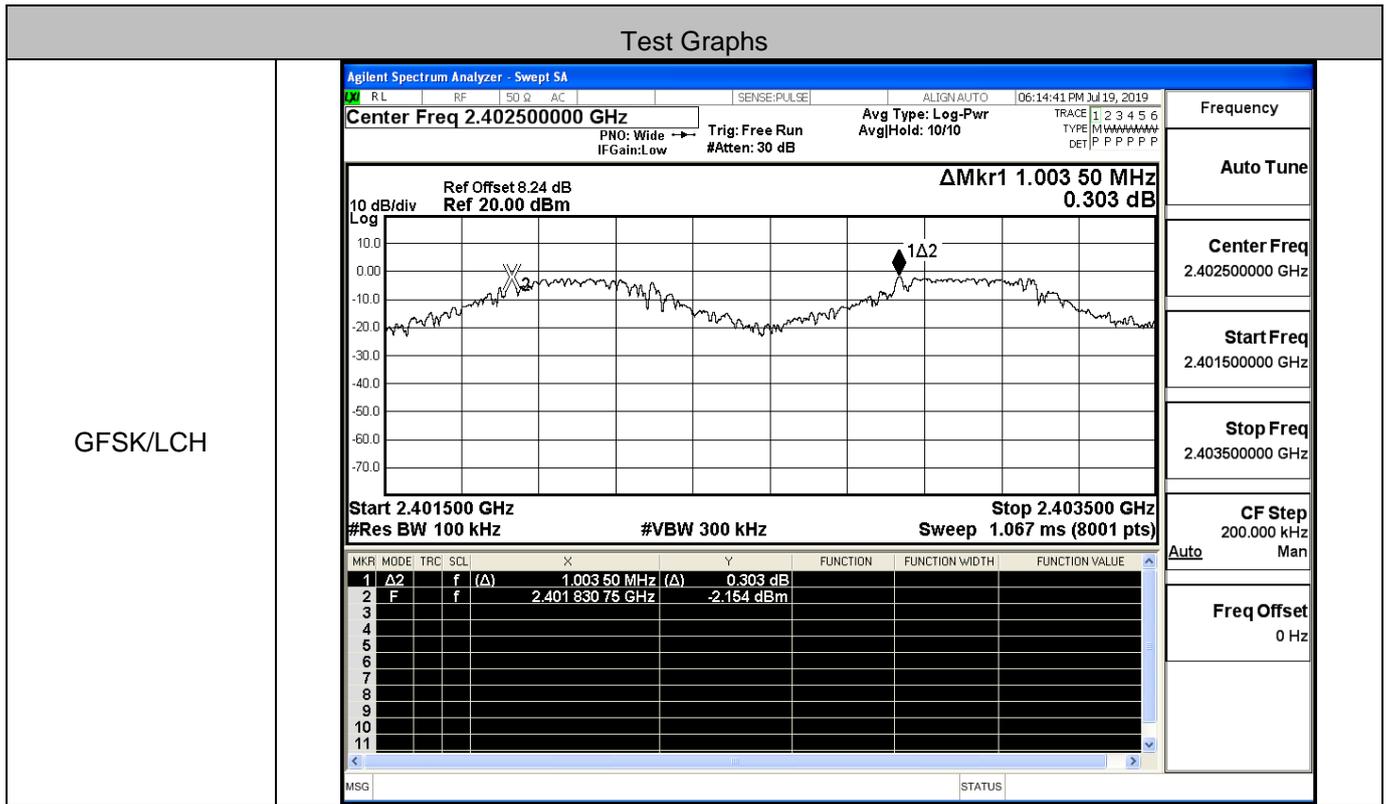


$\pi/4$ DQPSK/HCH

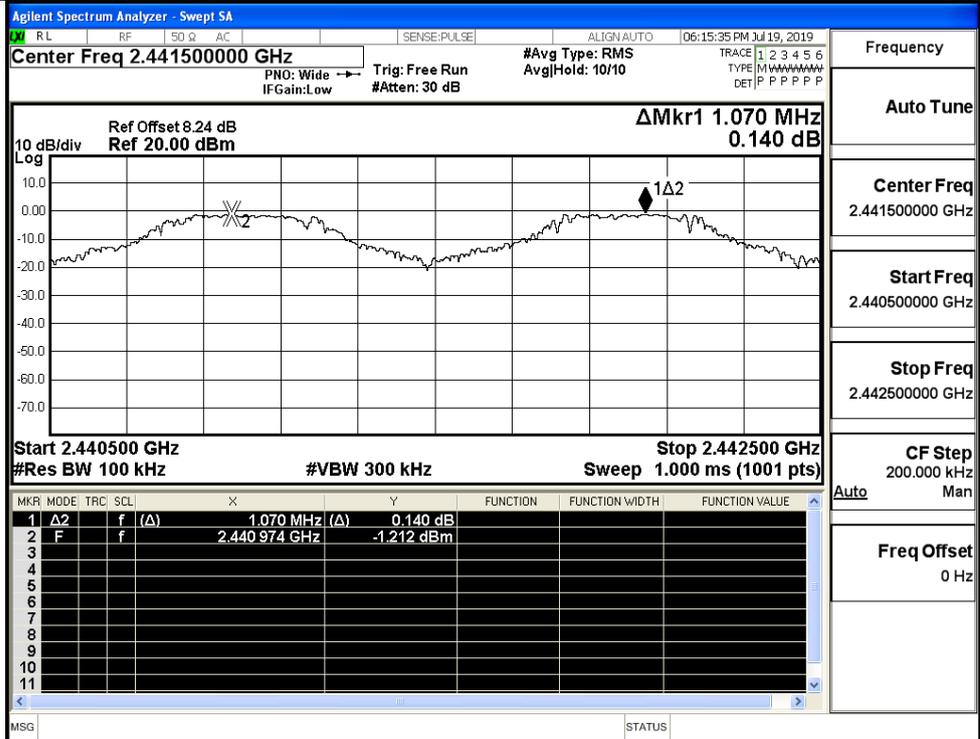


A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.003	0.610	PASS
	MCH	1.070	0.610	PASS
	HCH	0.996	0.610	PASS
π/4DQPSK	LCH	1.026	0.849	PASS
	MCH	1.360	0.849	PASS
	HCH	0.944	0.849	PASS



GFSK/MCH



Frequency

Auto Tune

Center Freq
2.441500000 GHz

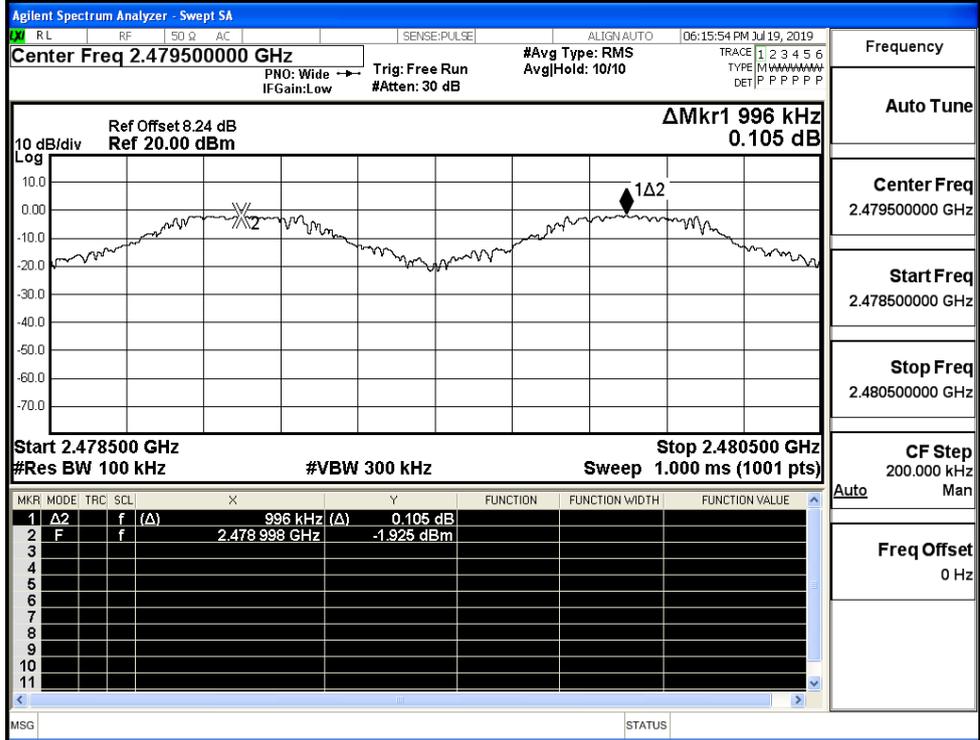
Start Freq
2.440500000 GHz

Stop Freq
2.442500000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

GFSK/HCH



Frequency

Auto Tune

Center Freq
2.479500000 GHz

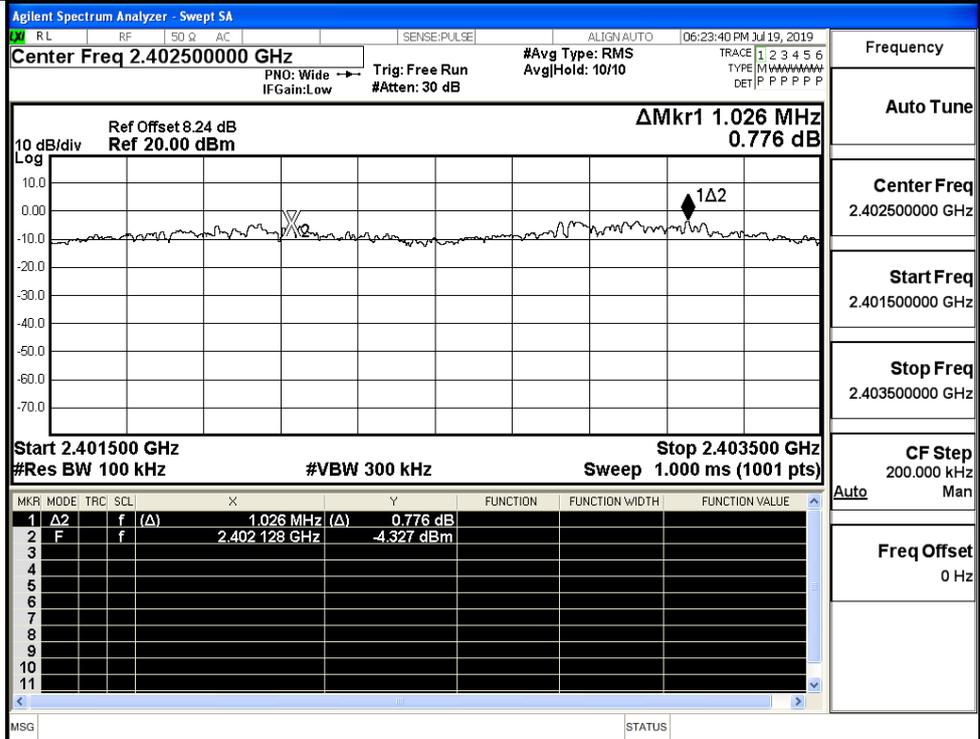
Start Freq
2.478500000 GHz

Stop Freq
2.480500000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

$\pi/4$ DQPSK/LCH



Frequency

Auto Tune

Center Freq
2.402500000 GHz

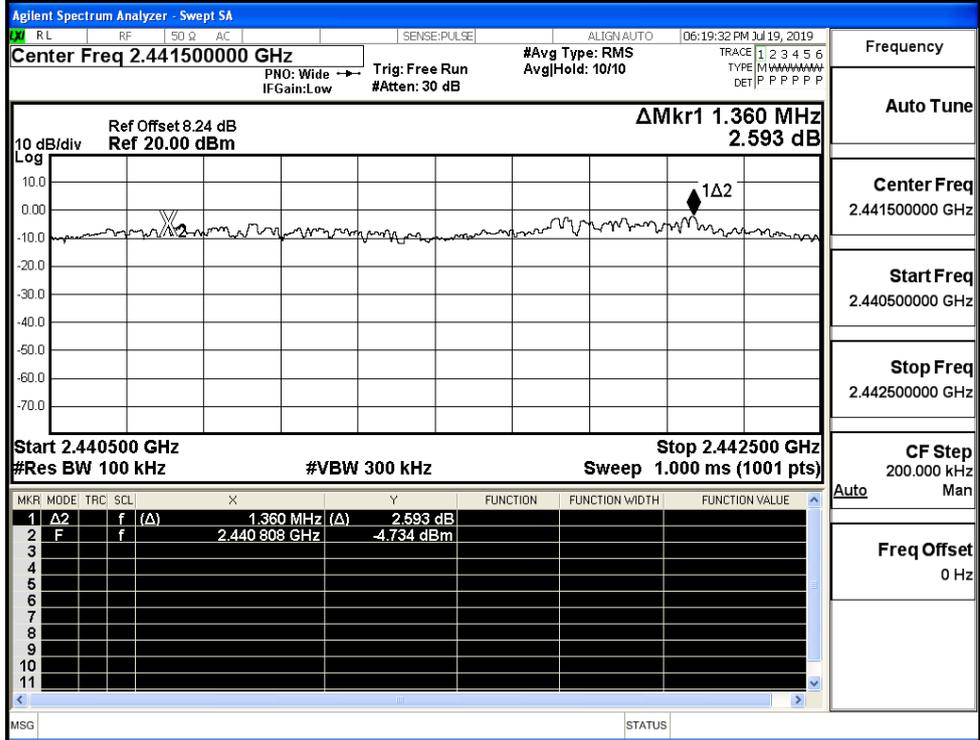
Start Freq
2.401500000 GHz

Stop Freq
2.403500000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

$\pi/4$ DQPSK/MCH



Frequency

Auto Tune

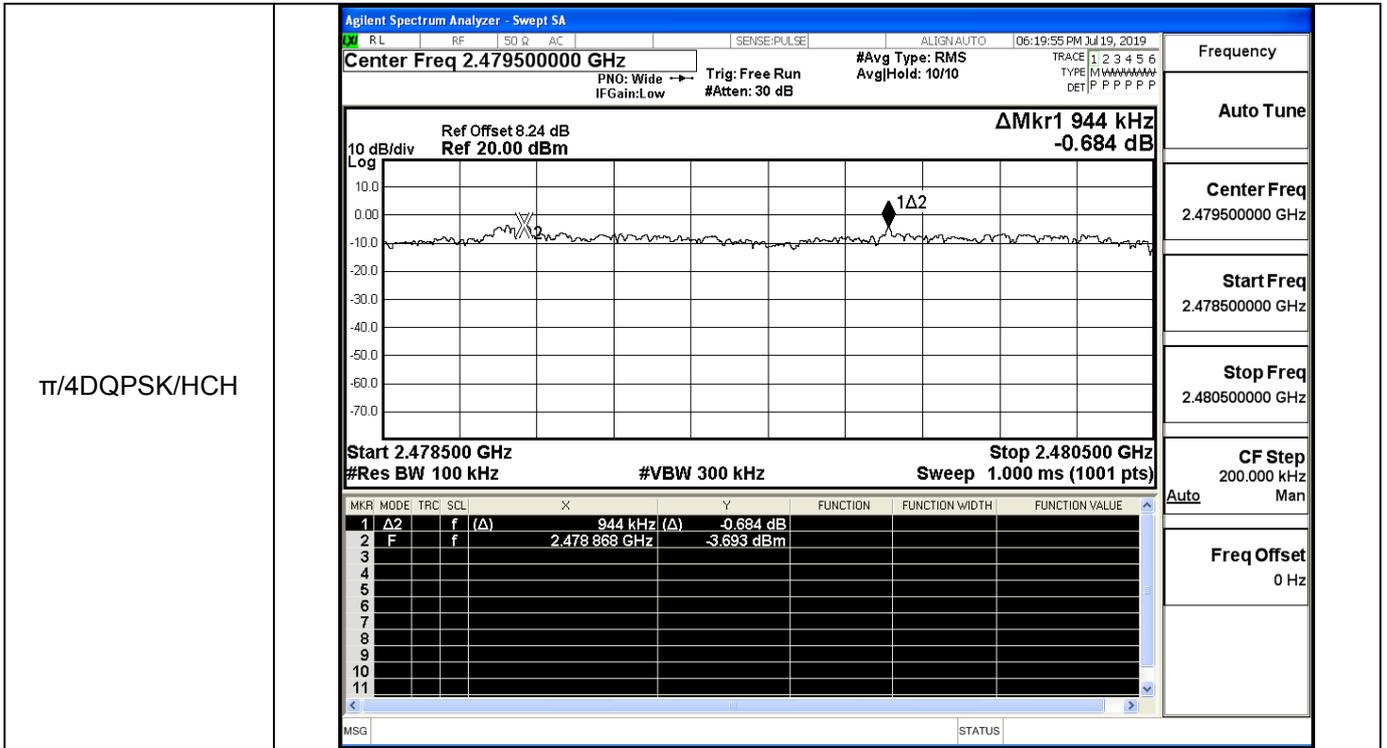
Center Freq
2.441500000 GHz

Start Freq
2.440500000 GHz

Stop Freq
2.442500000 GHz

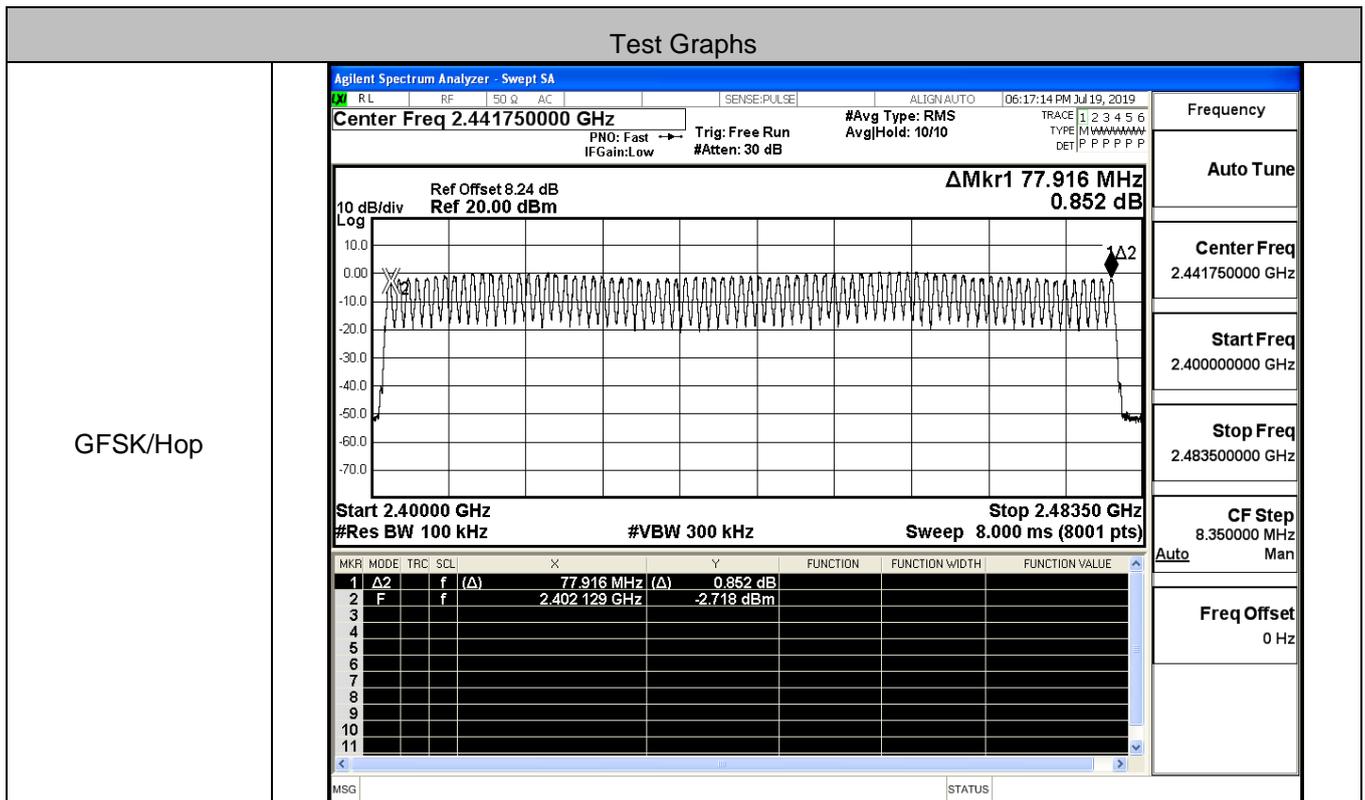
CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

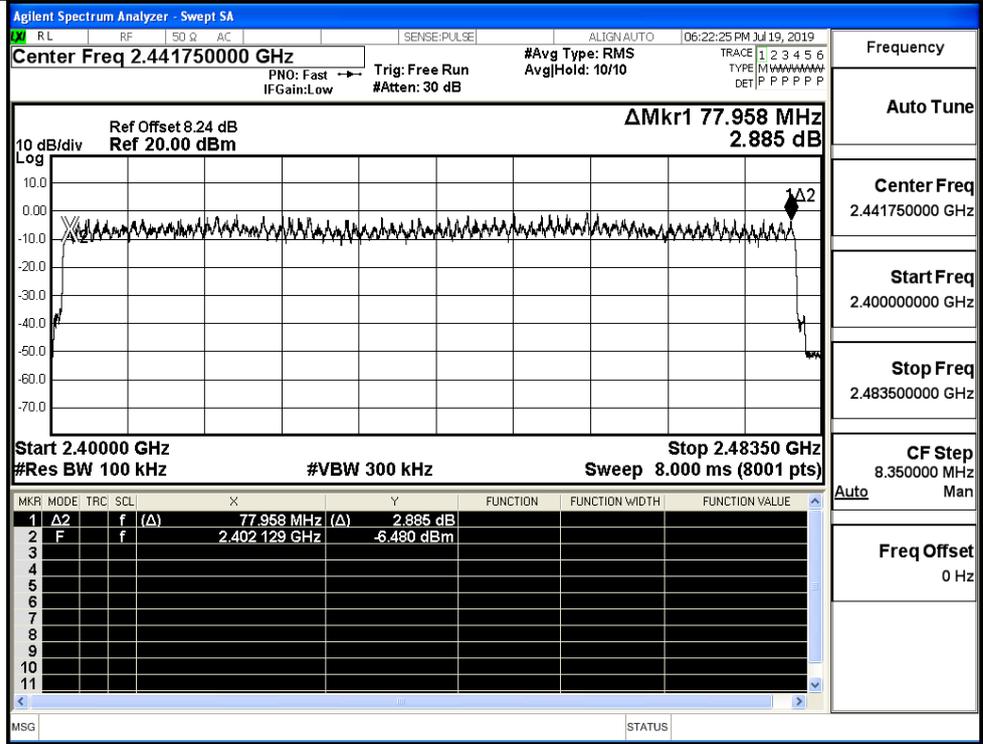


A.4 Hopping Channel Number

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

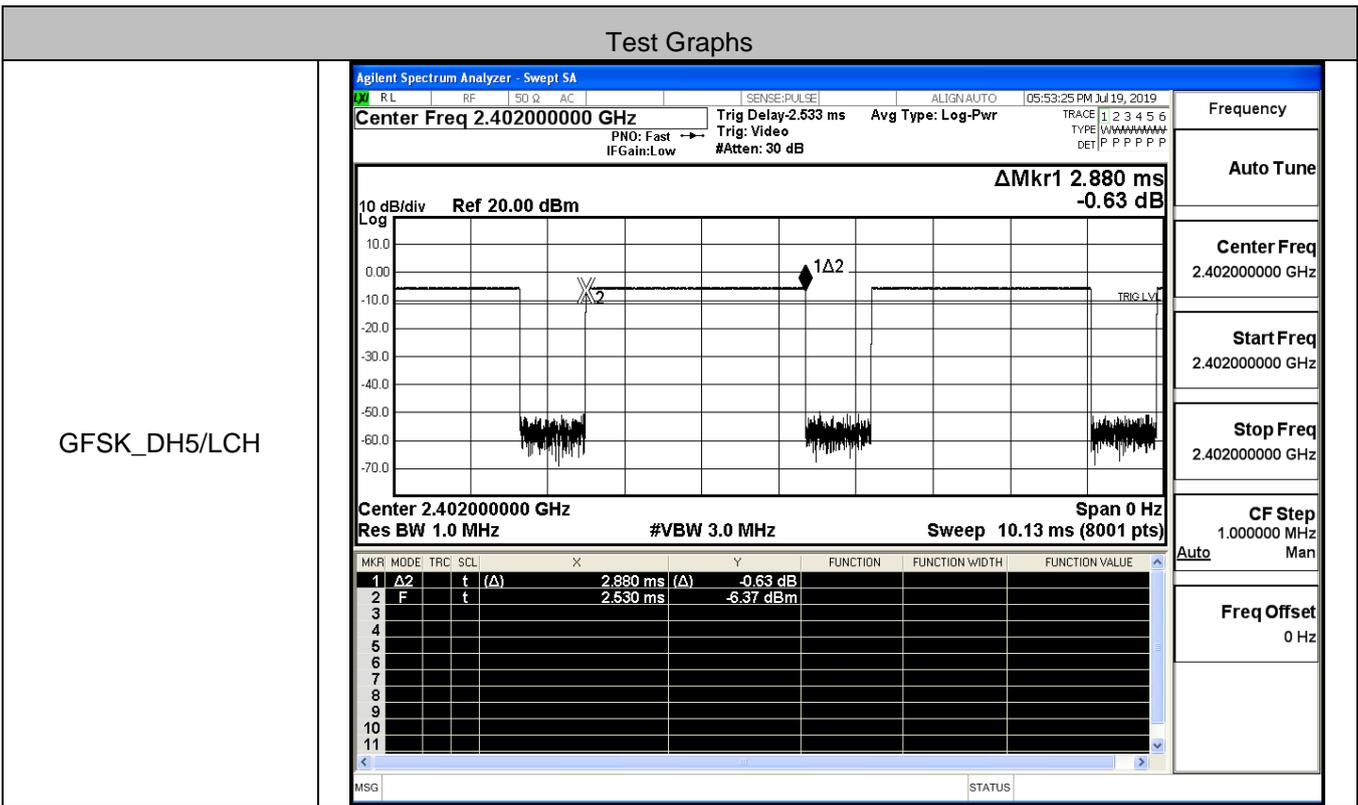


$\pi/4$ DQPSK/Hop

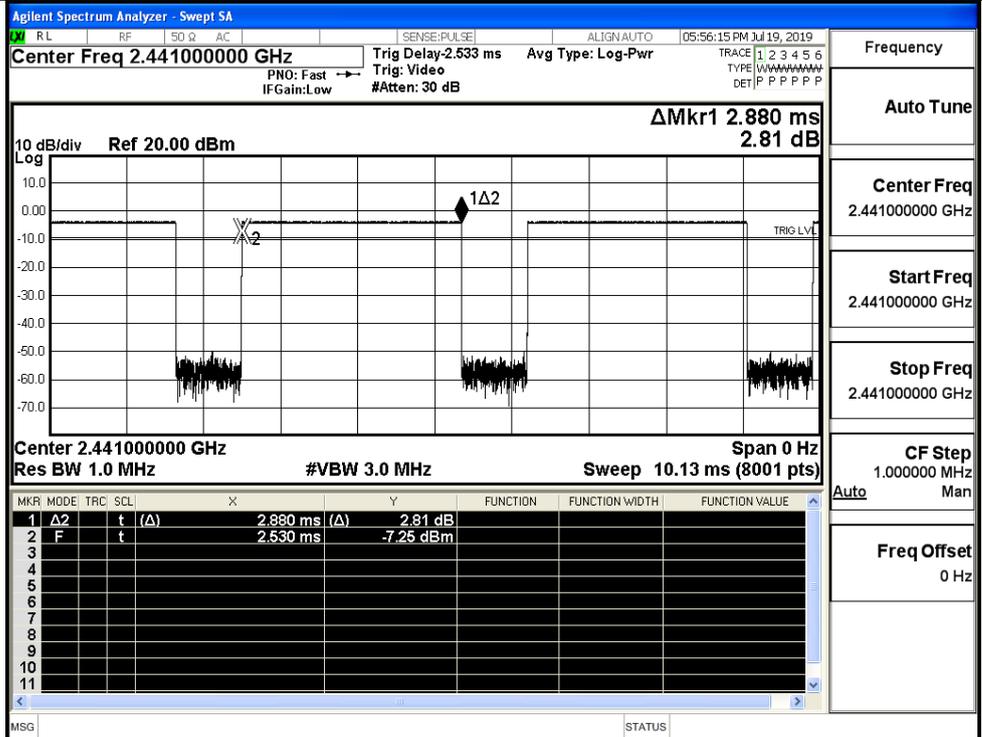


A.5 Dwell Time

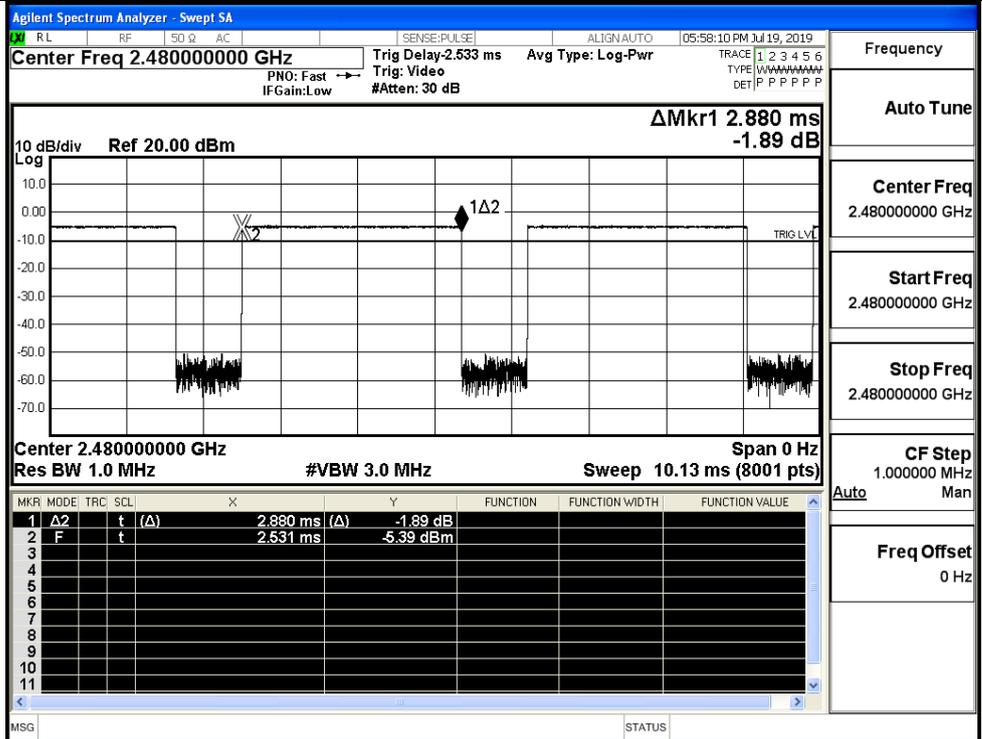
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
π/4DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7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



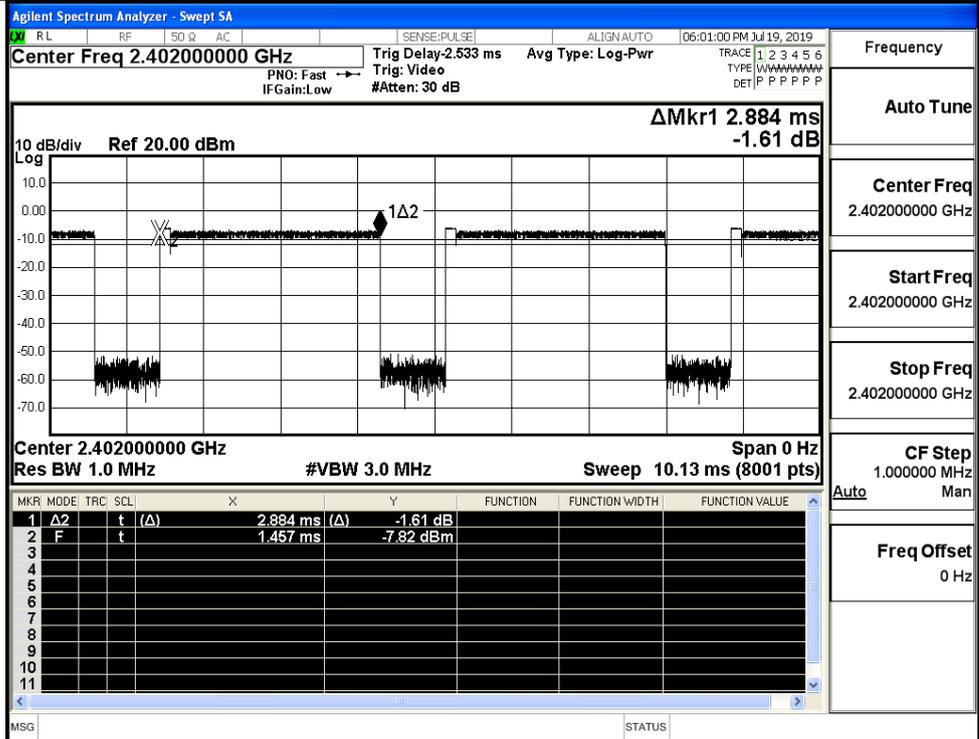
GFSK_DH5/MCH



GFSK_DH5/HCH

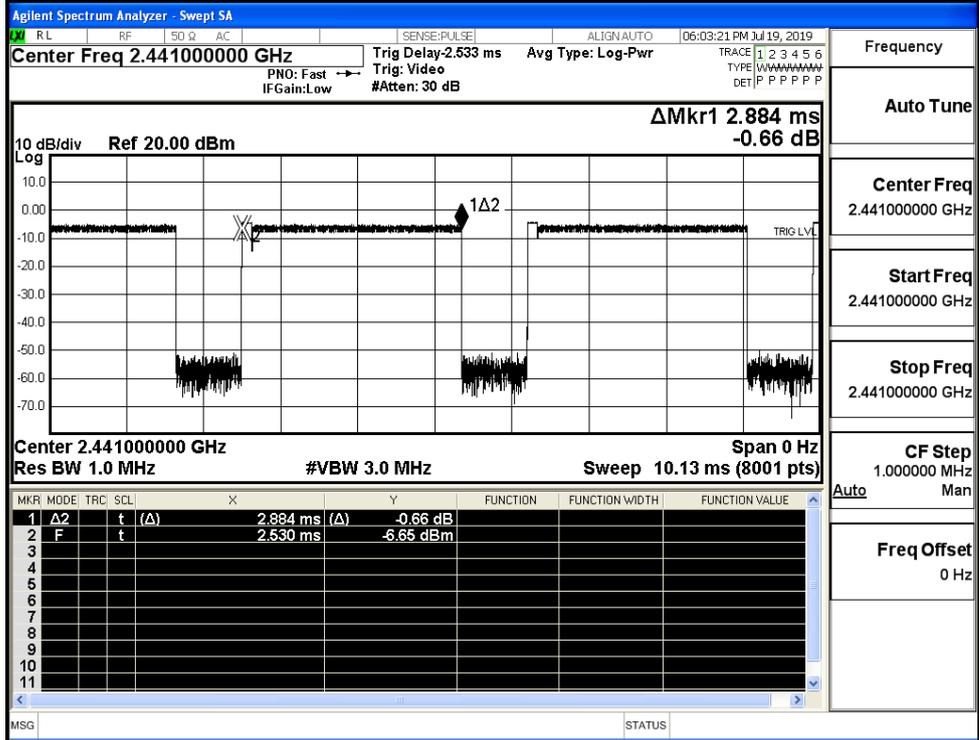


$\pi/4$ DQPSK
_2DH5/LCH



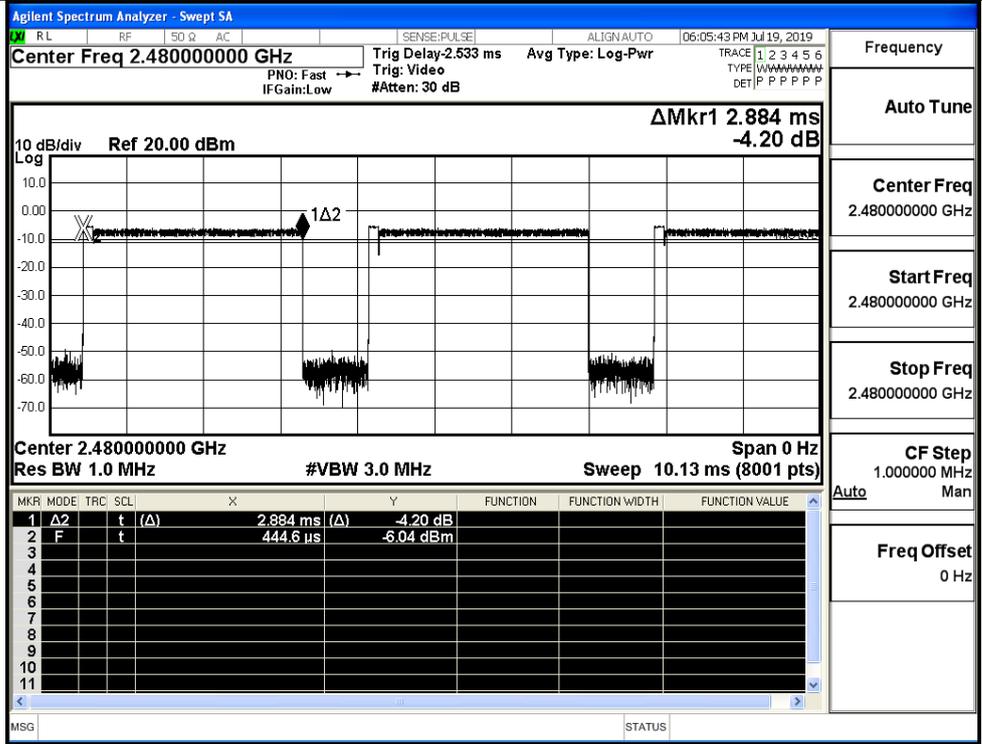
Frequency	2.40200000 GHz
Auto Tune	
Center Freq	2.40200000 GHz
Start Freq	2.40200000 GHz
Stop Freq	2.40200000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

$\pi/4$ DQPSK
_2DH5/MCH



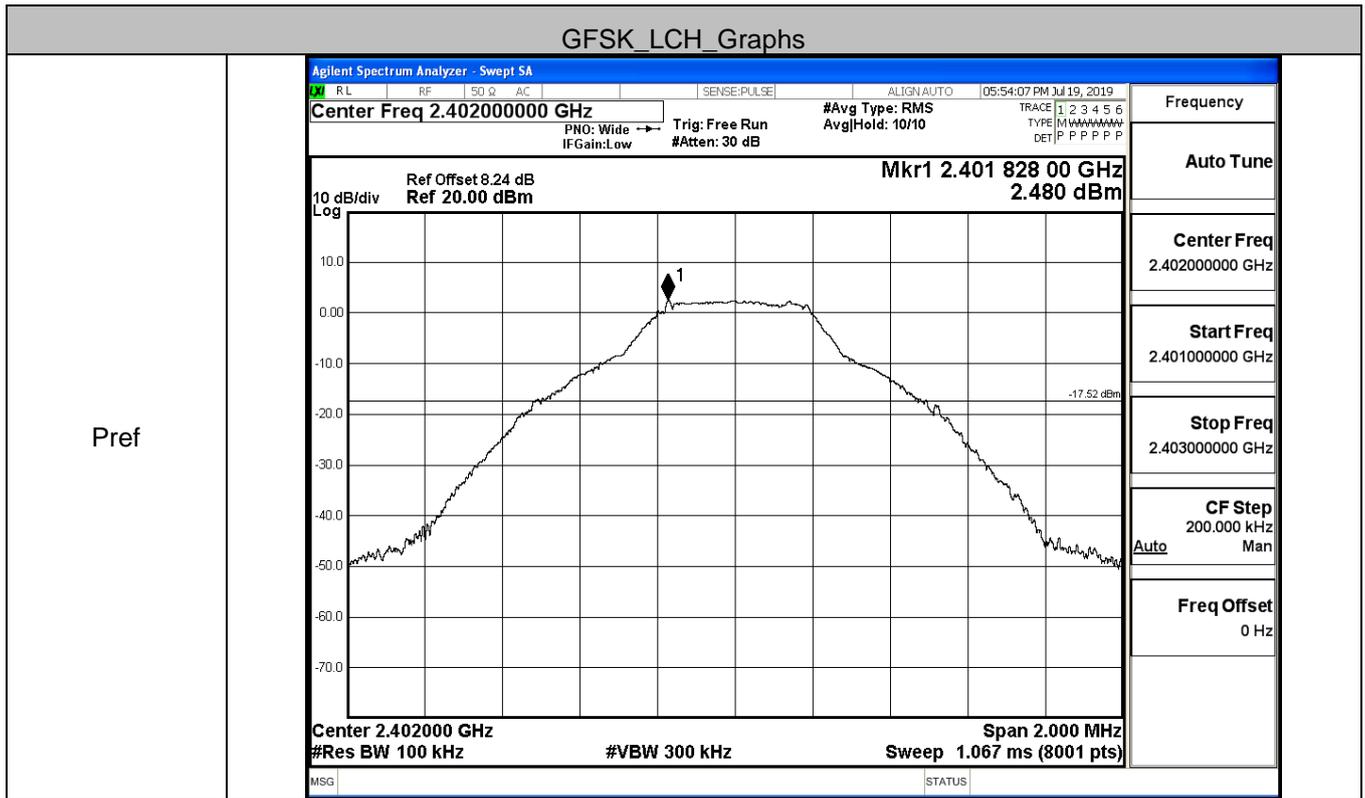
Frequency	2.44100000 GHz
Auto Tune	
Center Freq	2.44100000 GHz
Start Freq	2.44100000 GHz
Stop Freq	2.44100000 GHz
CF Step	1.000000 MHz
Auto	Man
Freq Offset	0 Hz

$\pi/4$ DQPSK
_2DH5/HCH

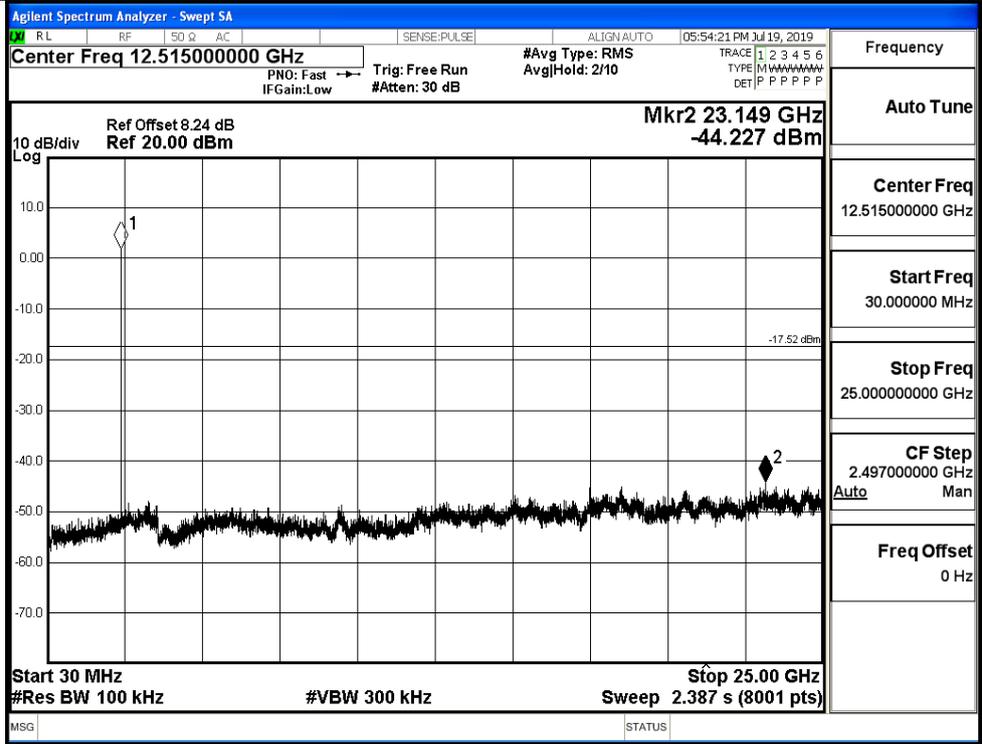


A.6 RF Conducted Spurious Emissions

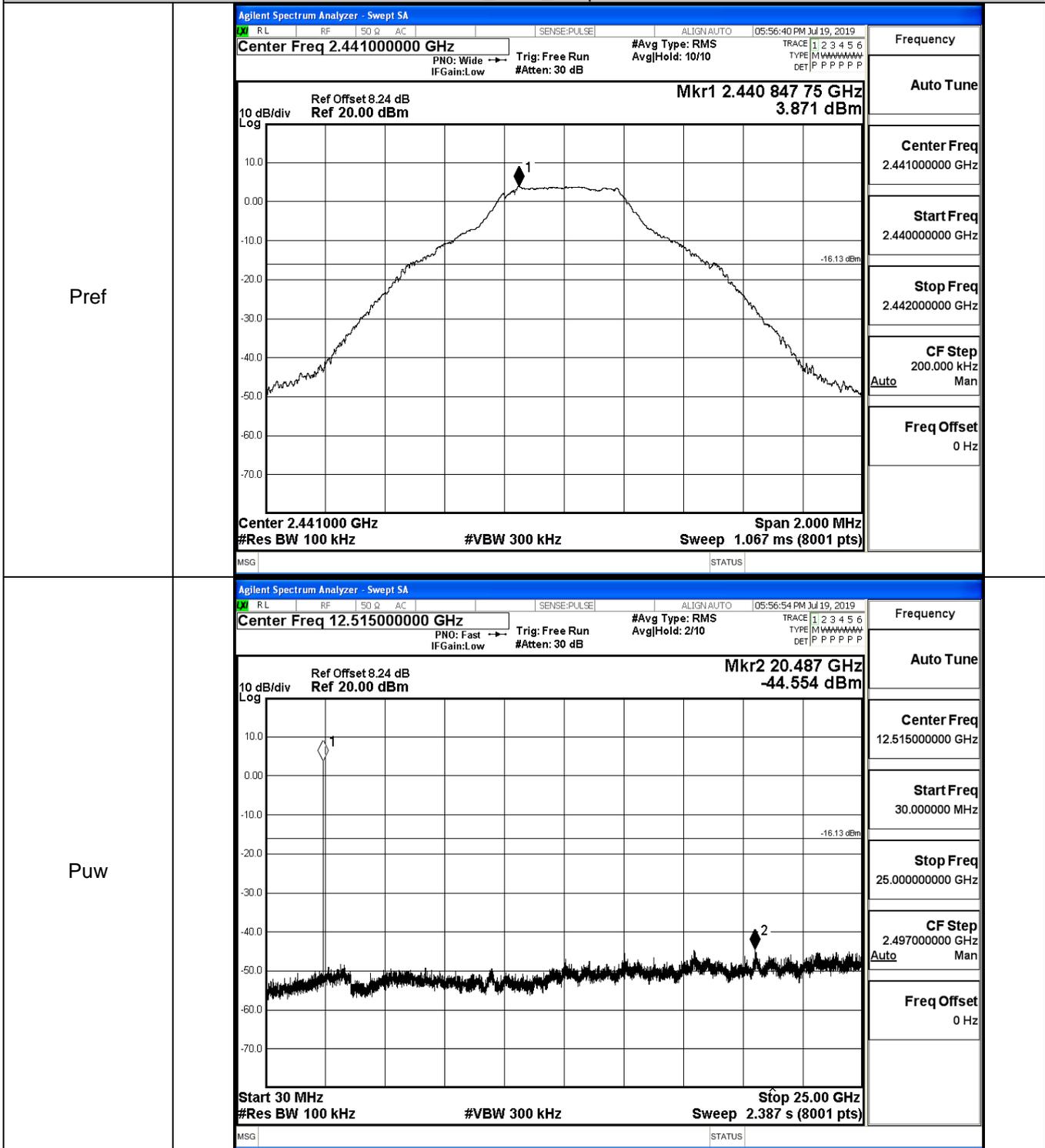
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.48	-44.227	-17.520	PASS
	MCH	3.871	-44.554	-16.129	PASS
	HCH	2.639	-44.433	-17.361	PASS
π /4DQPSK	LCH	1.797	-44.747	-18.203	PASS
	MCH	3.561	-44.759	-16.439	PASS
	HCH	2.224	-44.328	-17.776	PASS



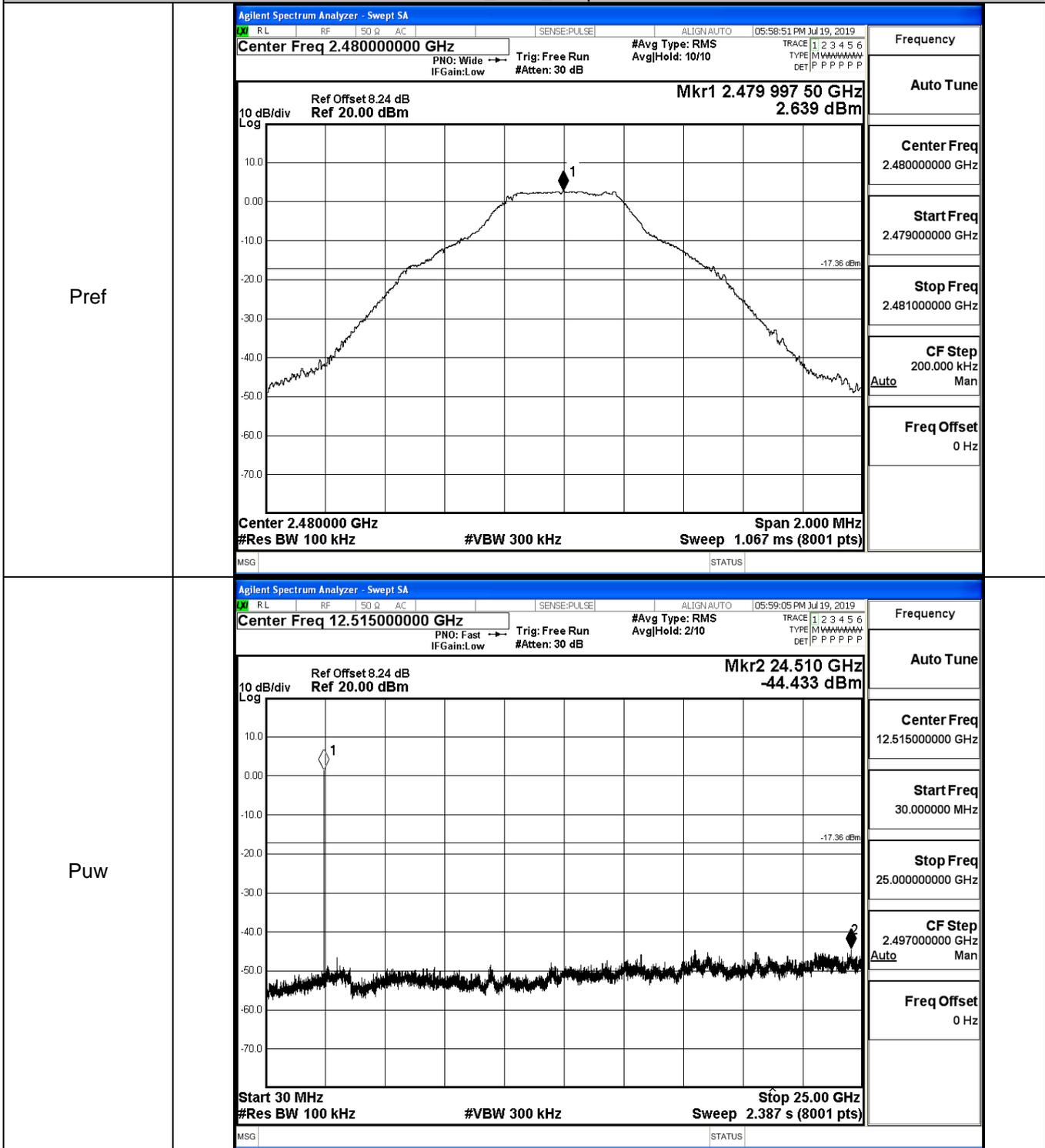
Puw



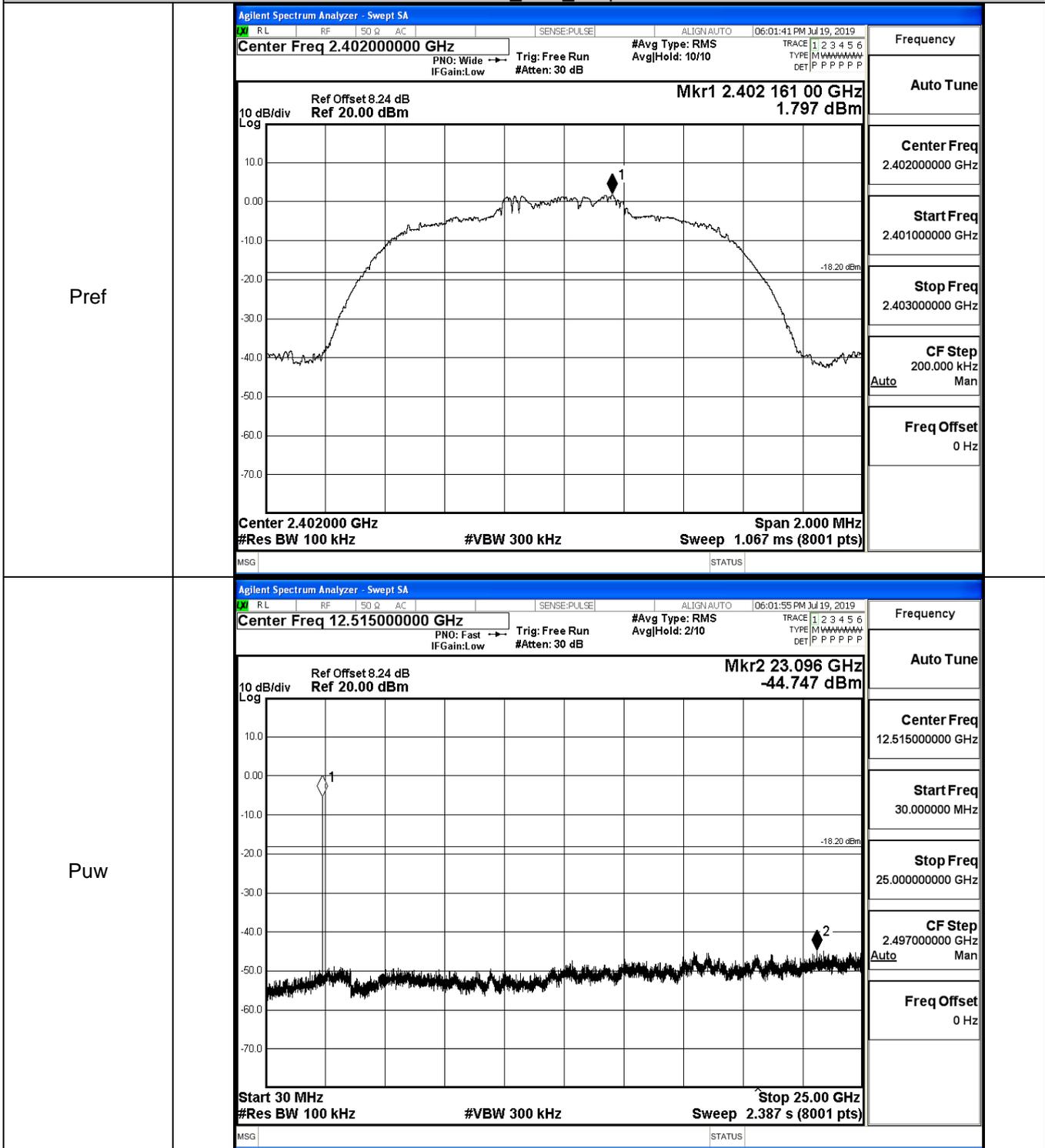
GFSK_MCH_Graphs



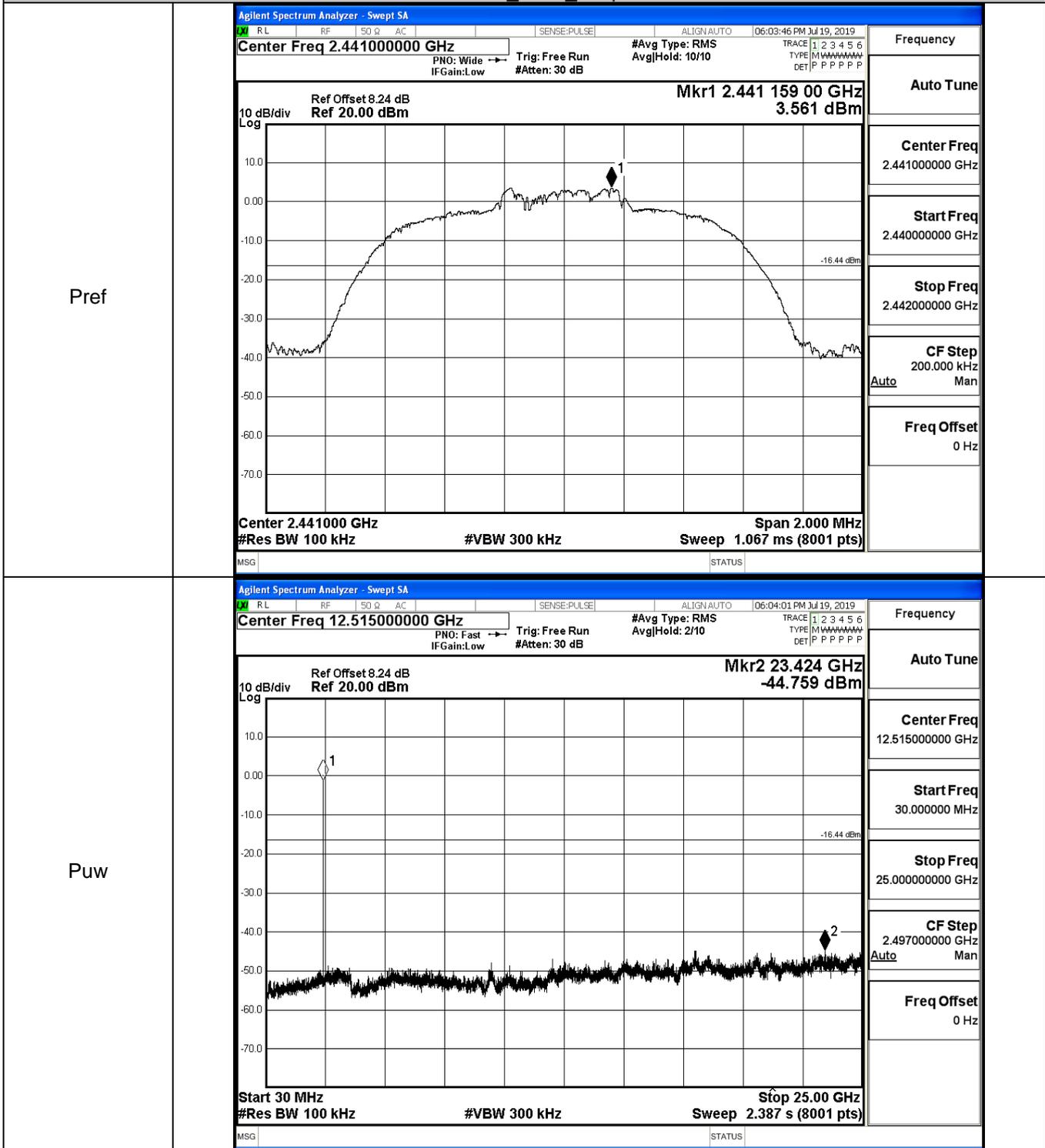
GFSK_HCH_Graphs



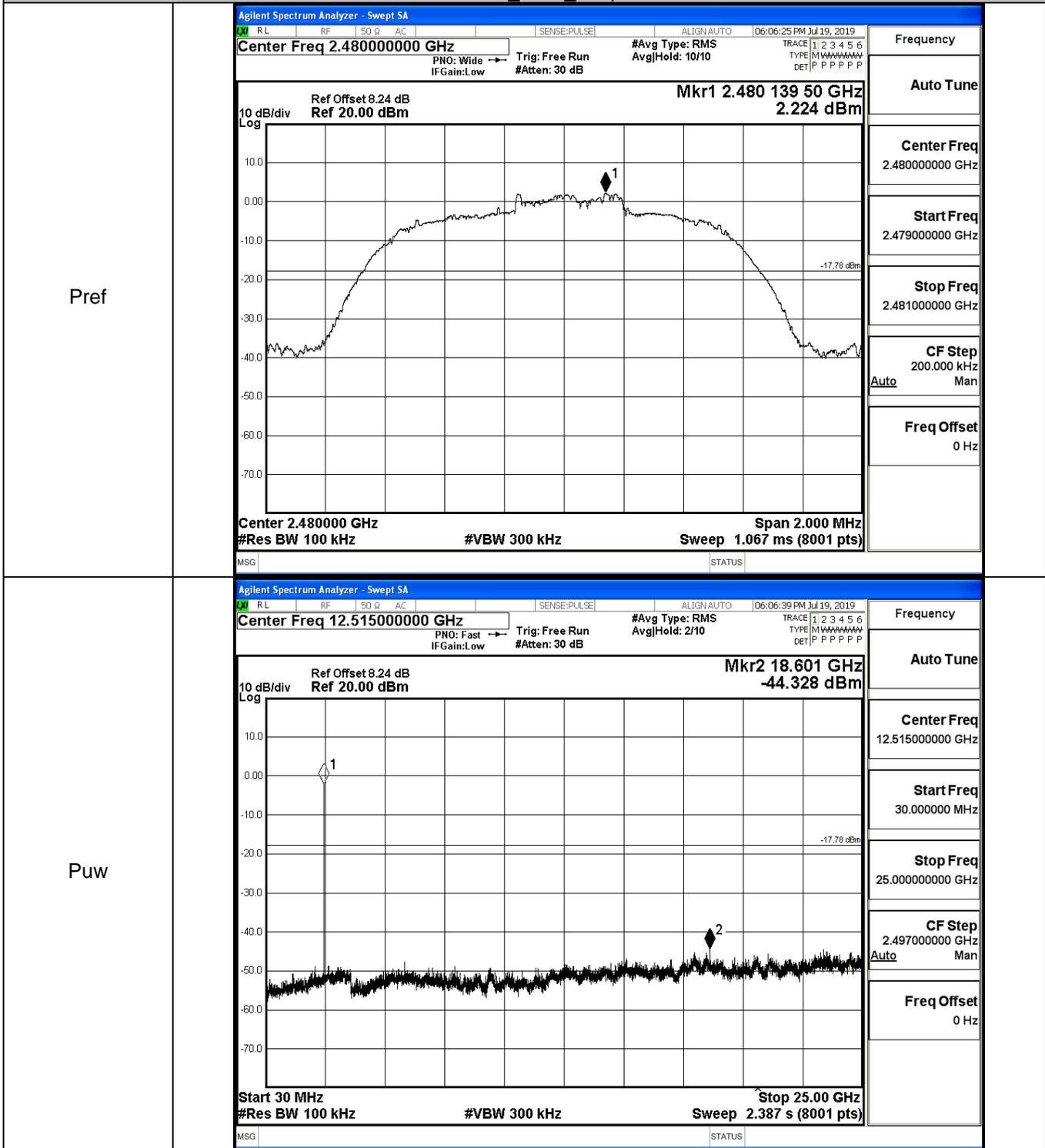
$\pi/4$ DQPSK_LCH_Graphs



$\pi/4$ DQPSK_MCH_Graphs



$\pi/4$ DQPSK_HCH_Graphs

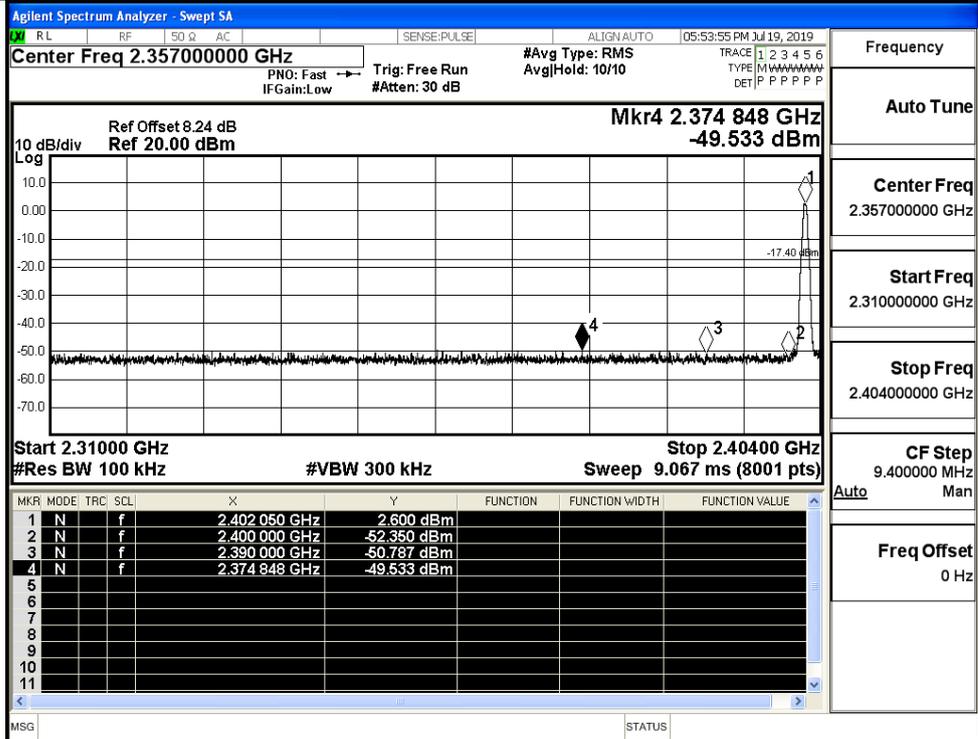


A.7 Band-edge for RF Conducted Emissions

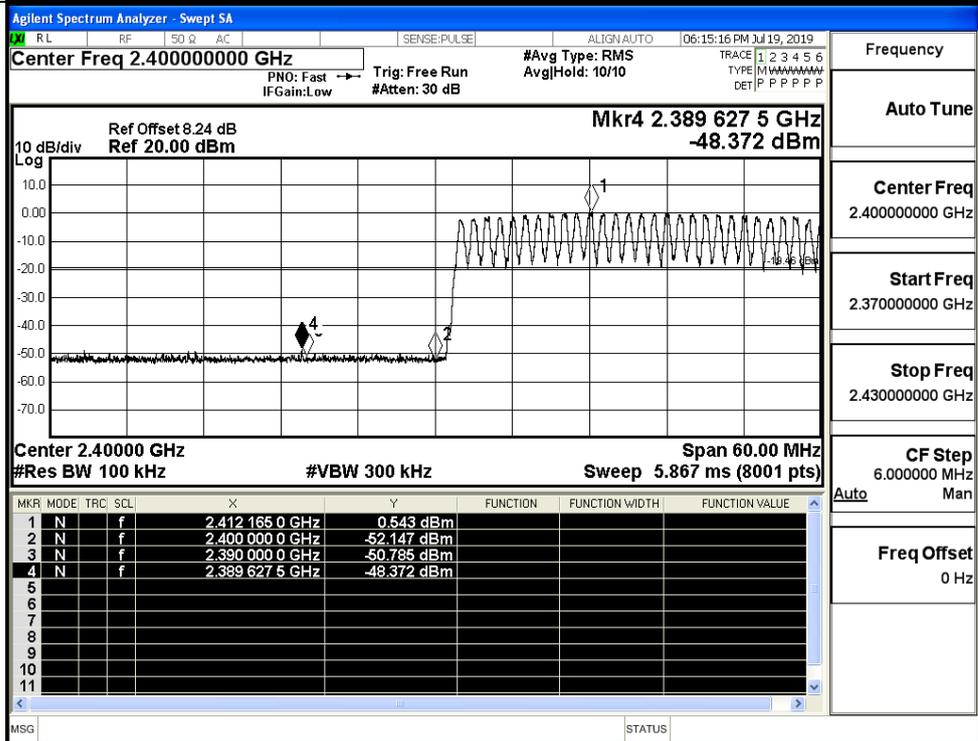
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	2.600	Off	-49.533	-17.4	PASS
			0.543	On	-48.372	-19.46	PASS
	HCH	2480	3.183	Off	-49.462	-16.82	PASS
			0.391	On	-49.349	-19.61	PASS
π/4DQPSK	LCH	2402	2.046	Off	-49.873	-17.95	PASS
			-0.982	On	-48.671	-20.98	PASS
	HCH	2480	2.689	Off	-49.784	-17.31	PASS
			-0.858	On	-49.234	-20.86	PASS

Test Graphs

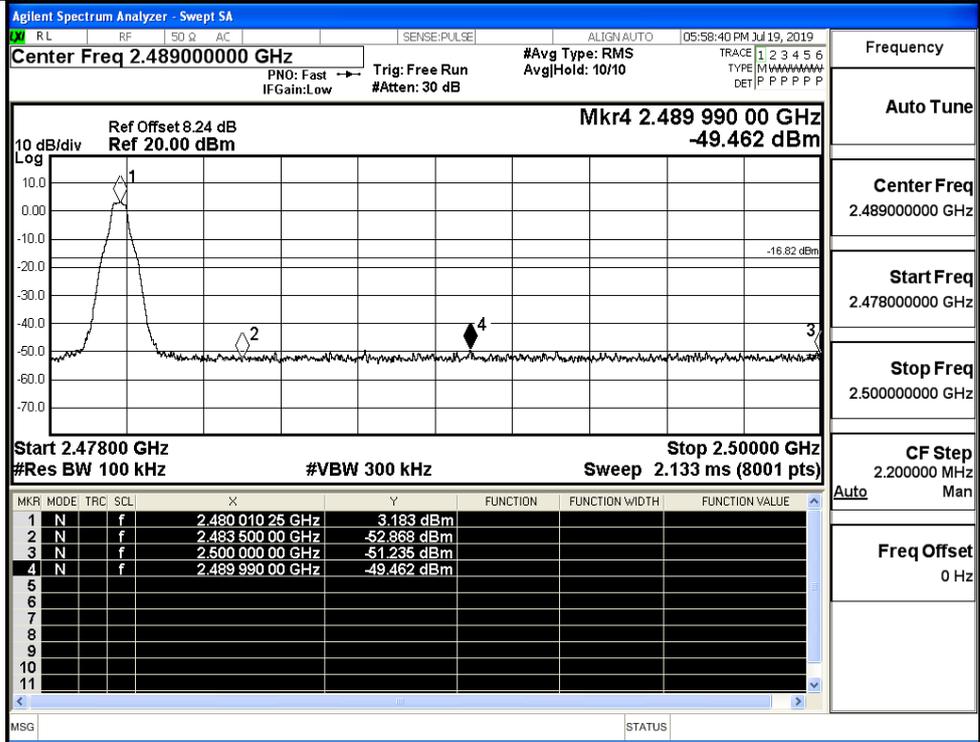
GFSK/LCH/No Hop



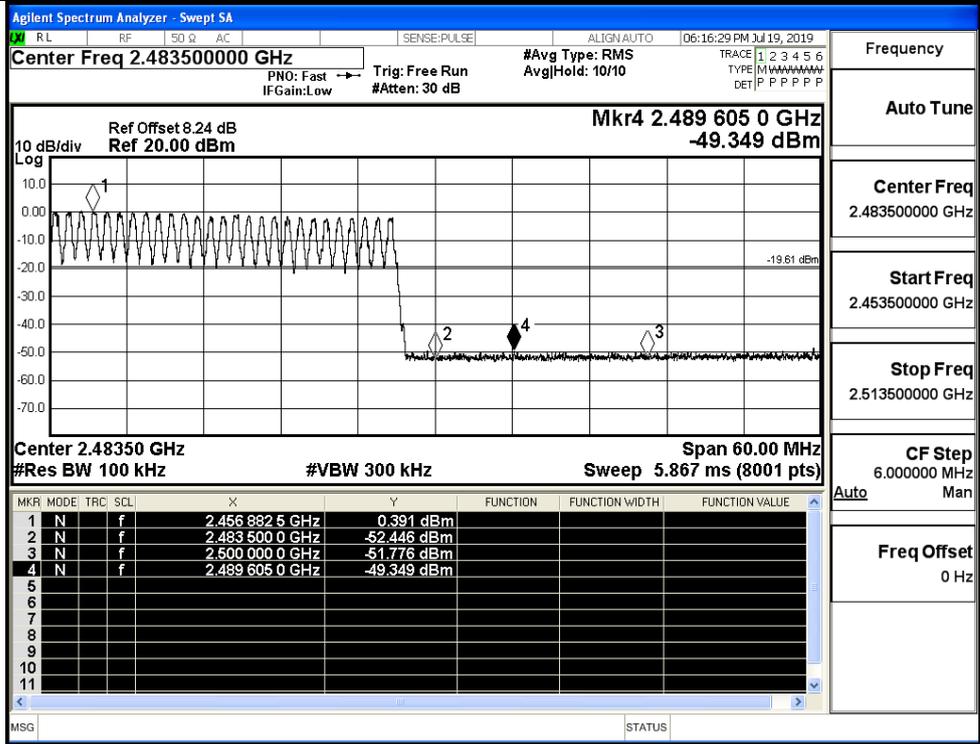
GFSK/LCH/Hop



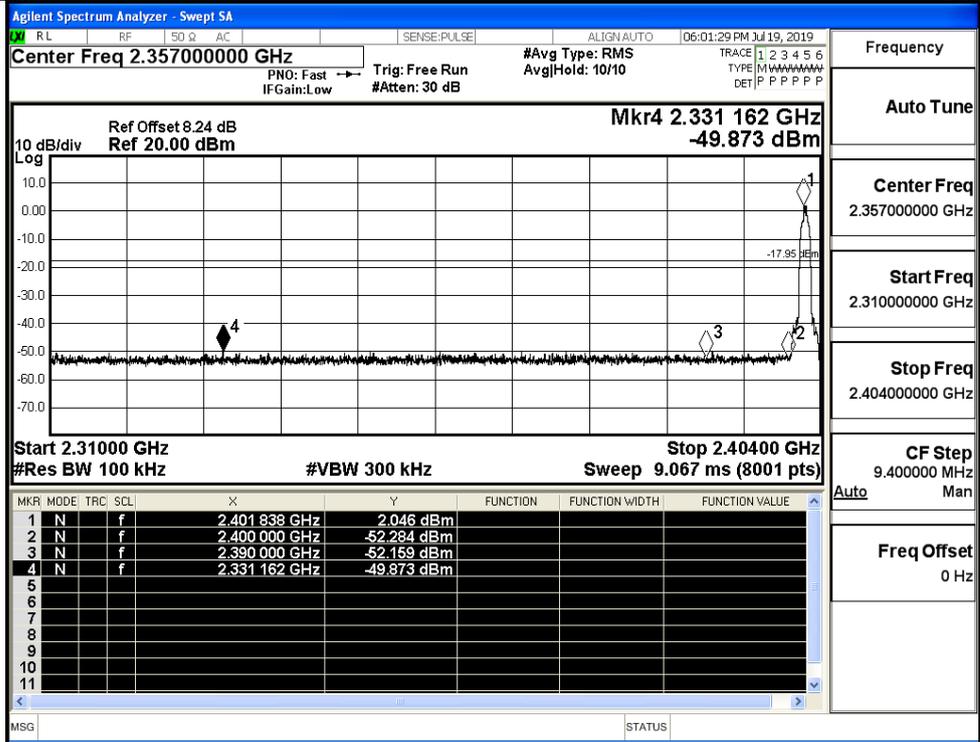
GFSK/HCH/No Hop



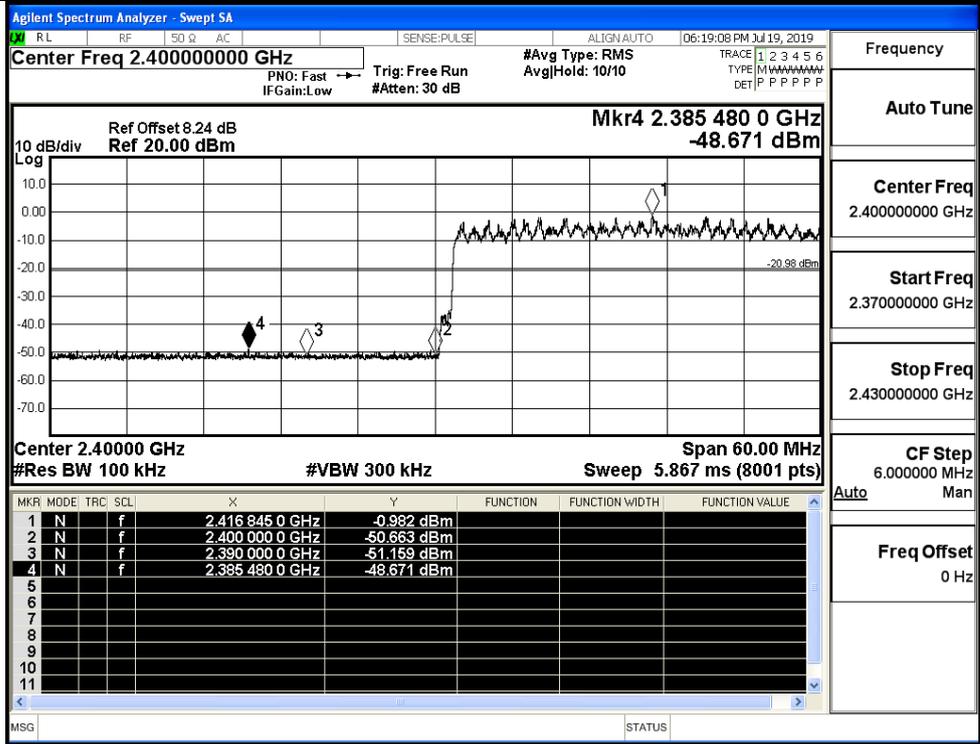
GFSK/HCH/Hop



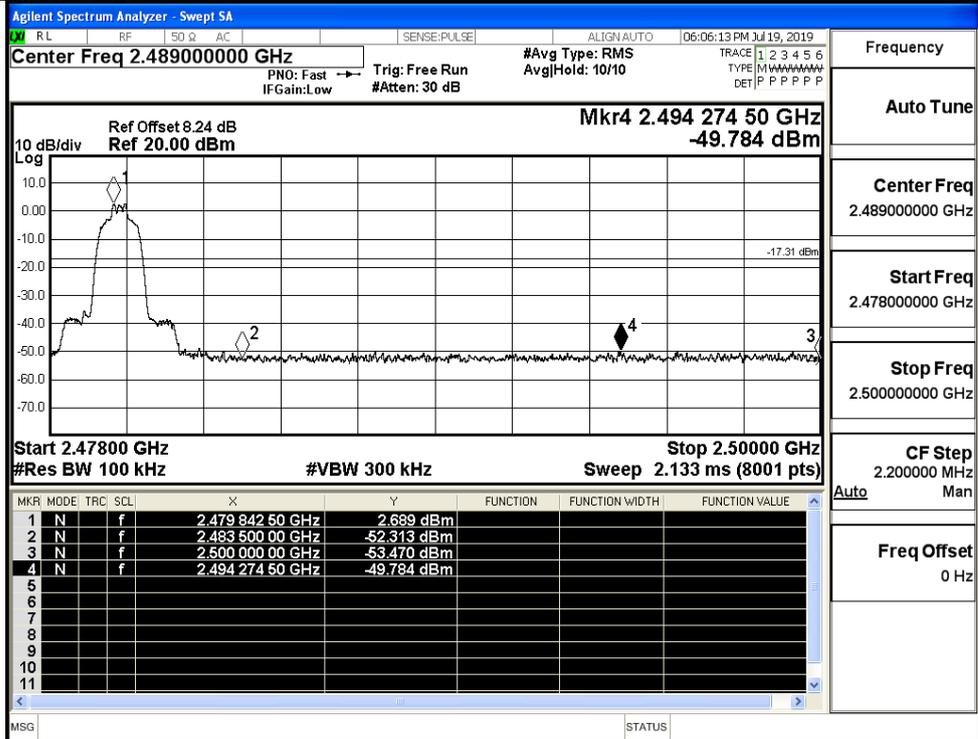
$\pi/4$ DQPSK/LCH/No
Hop



$\pi/4$ DQPSK/LCH/Hop

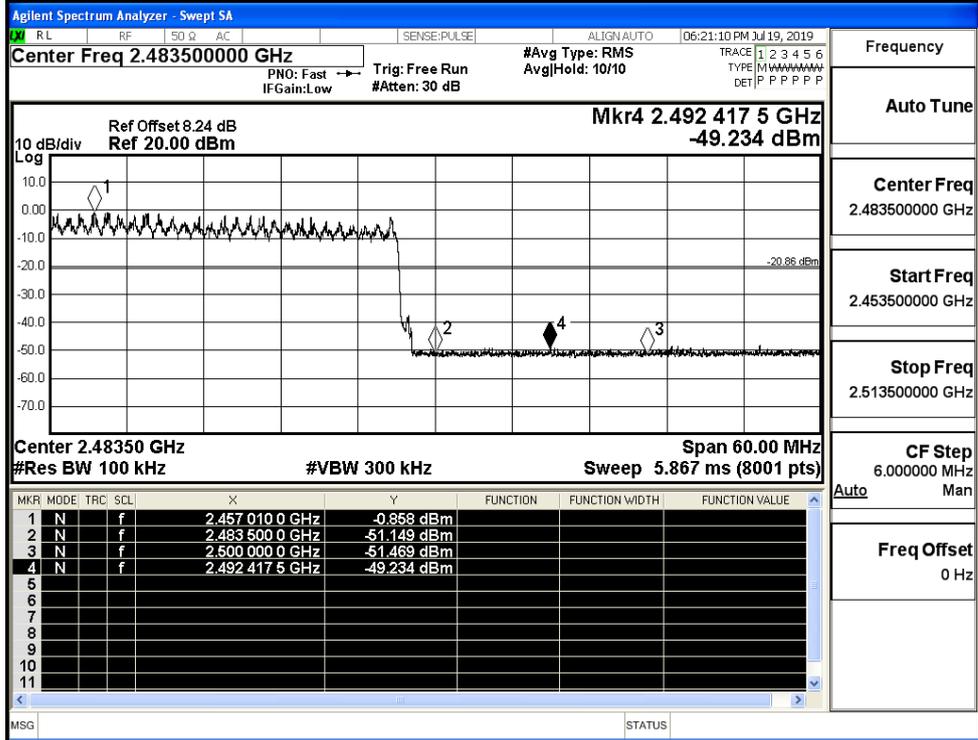


π /4DQPSK/HCH/No
Hop



Frequency
Auto Tune
Center Freq
2.489000000 GHz
Start Freq
2.478000000 GHz
Stop Freq
2.500000000 GHz
CF Step
2.200000 MHz
Auto Man
Freq Offset
0 Hz

π /4DQPSK/HCH/Hop

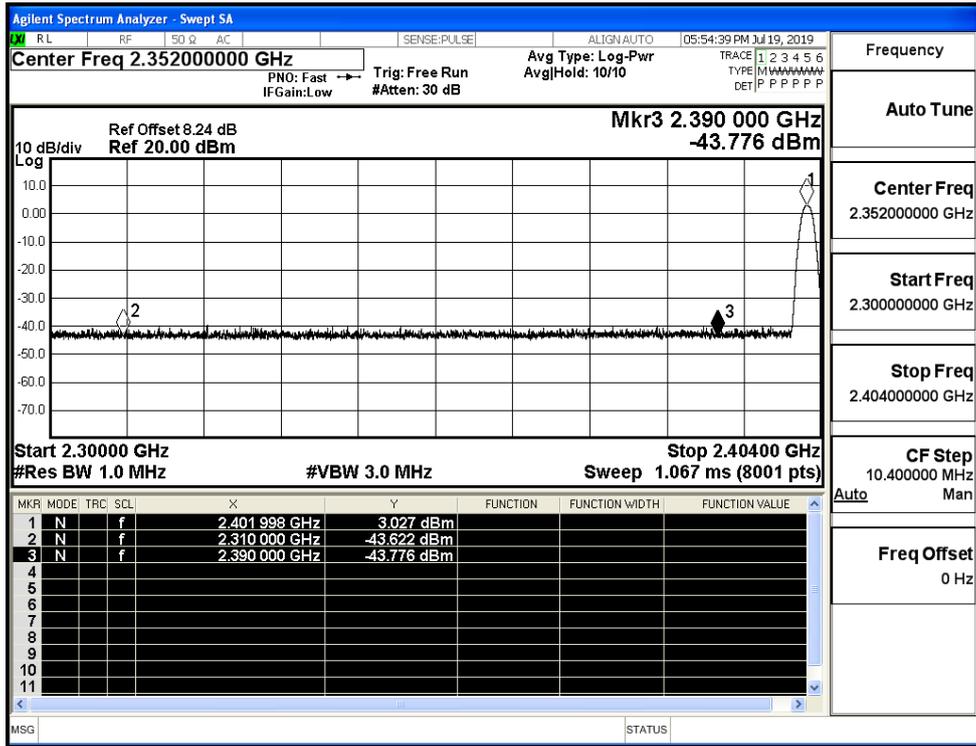


Frequency
Auto Tune
Center Freq
2.483500000 GHz
Start Freq
2.453500000 GHz
Stop Freq
2.513500000 GHz
CF Step
6.000000 MHz
Auto Man
Freq Offset
0 Hz

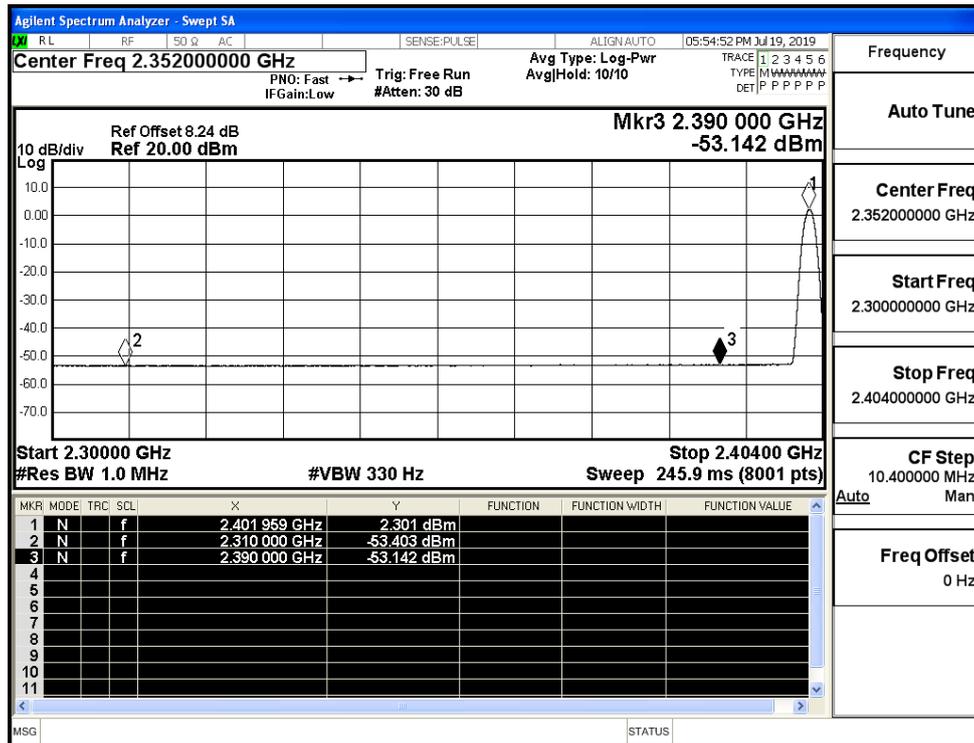
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-43.62	2.0	0	53.64	PEAK	74	PASS
	Off	2310.0	-53.40	2.0	0	43.85	AV	54	PASS
	Off	2390.0	-43.78	2.0	0	53.48	PEAK	74	PASS
	Off	2390.0	-53.14	2.0	0	44.12	AV	54	PASS
	Off	2483.5	-41.72	2.0	0	55.54	PEAK	74	PASS
	Off	2483.5	-52.79	2.0	0	44.47	AV	54	PASS
	Off	2500.0	-42.26	2.0	0	55.00	PEAK	74	PASS
	Off	2500.0	-52.87	2.0	0	44.39	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-42.79	2.0	0	54.47	PEAK	74	PASS
	Off	2310.0	-53.34	2.0	0	43.92	AV	54	PASS
	Off	2390.0	-43.11	2.0	0	54.15	PEAK	74	PASS
	Off	2390.0	-53.22	2.0	0	44.03	AV	54	PASS
	Off	2483.5	-43.03	2.0	0	54.23	PEAK	74	PASS
	Off	2483.5	-52.88	2.0	0	44.38	AV	54	PASS
	Off	2500.0	-41.87	2.0	0	55.39	PEAK	74	PASS
	Off	2500.0	-52.68	2.0	0	44.58	AV	54	PASS

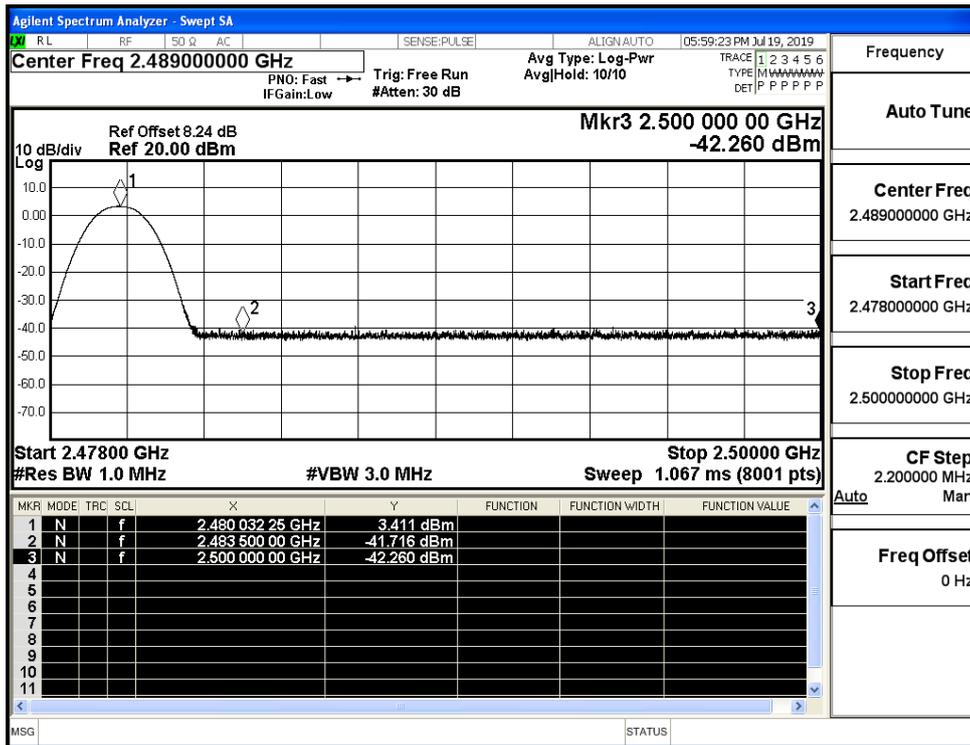
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



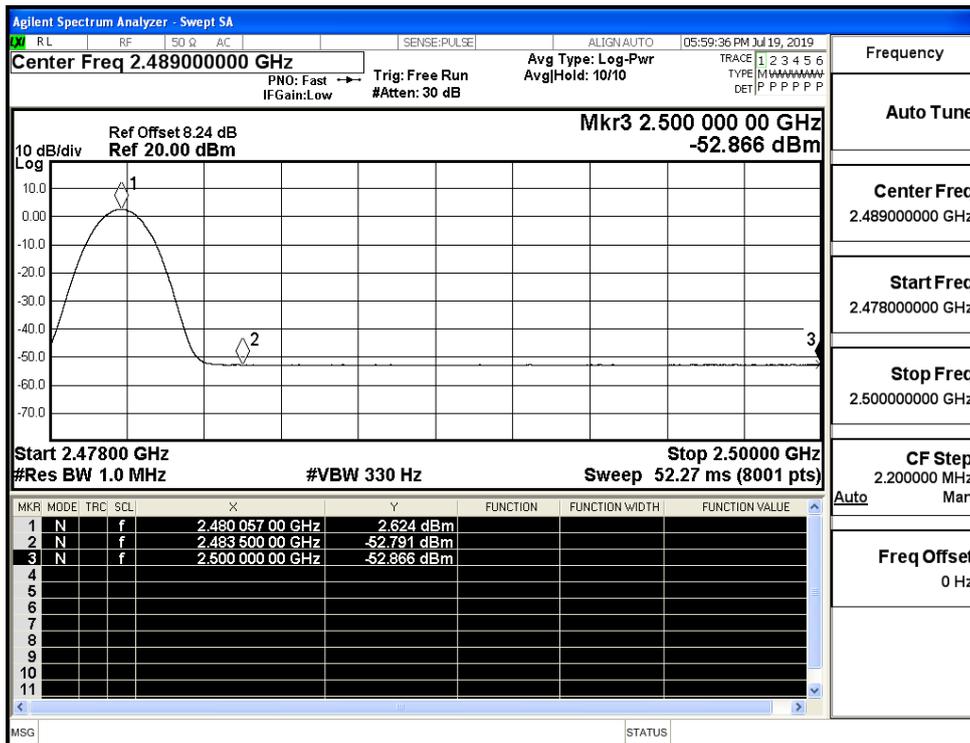
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)



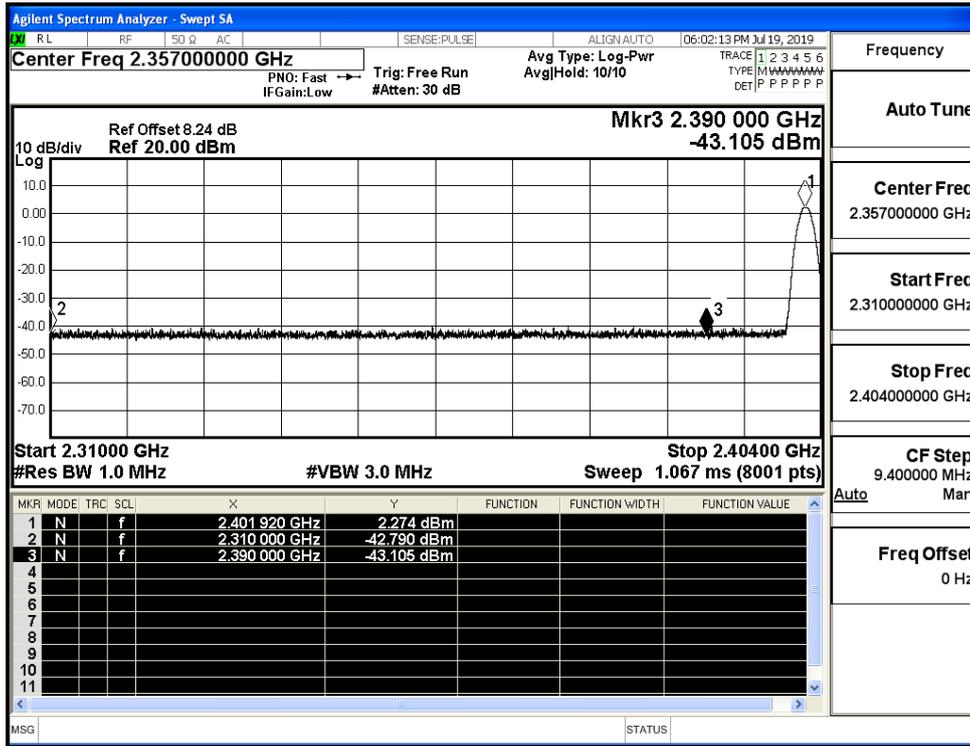
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



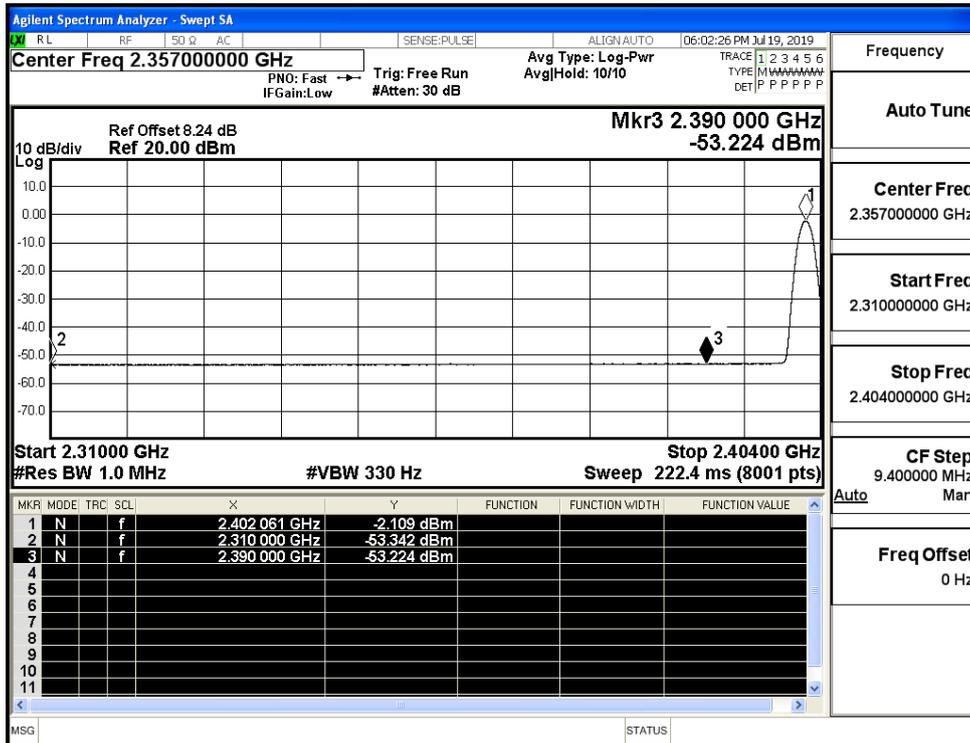
Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)



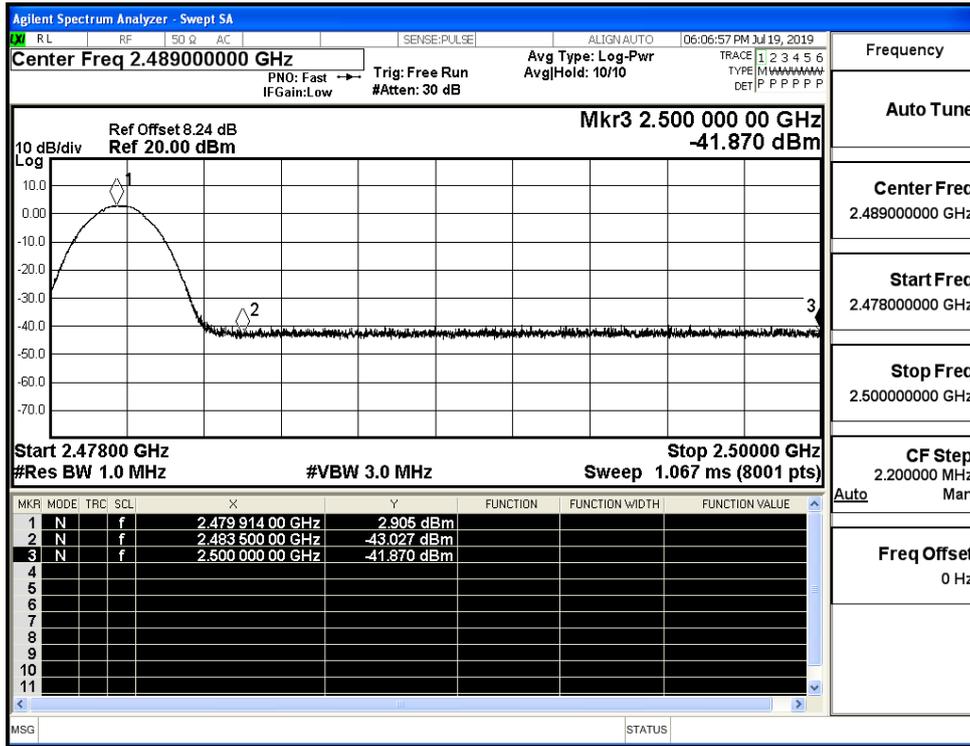
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)



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)

