

Appendix A

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

Product Name: MICRO EARPIECE

Trade Mark: N/A

Test Model: RT10

FCC ID: 2ATOY-RT10

Environmental Conditions

Temperature:	22.7° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Gary Qian
Supervised by:	Eden Hu

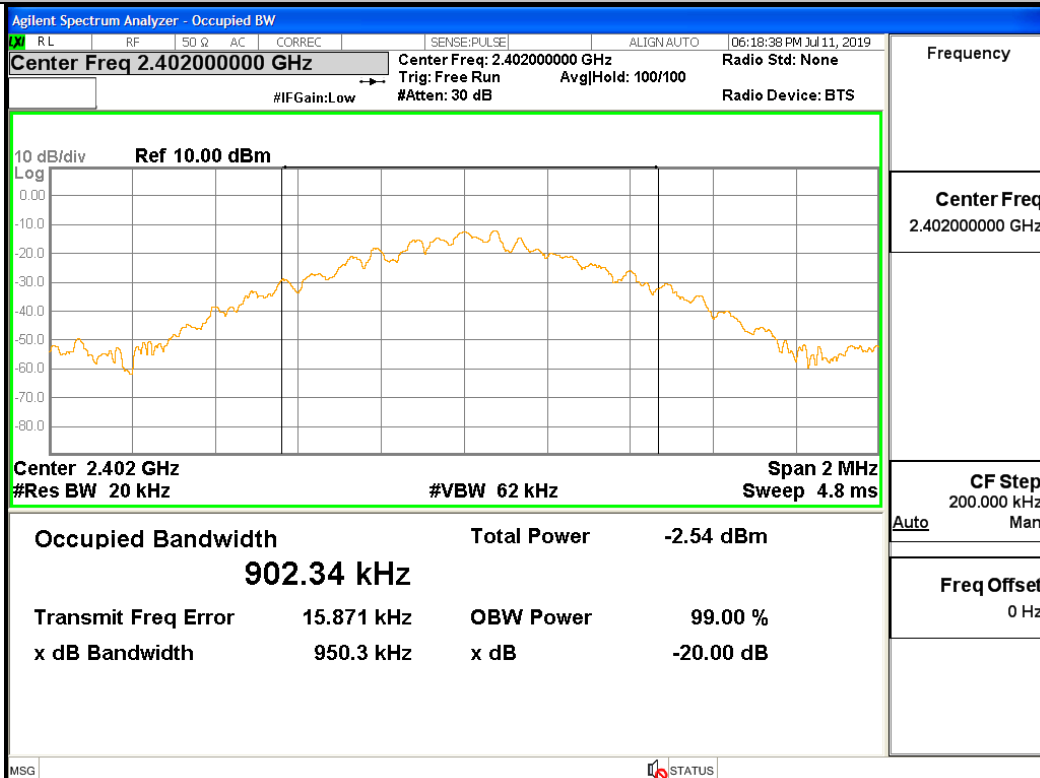
A.1 20 dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.950	Not Specified	PASS
GFSK	MCH	0.952	Not Specified	PASS
GFSK	HCH	0.949	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.371	Not Specified	PASS
$\pi/4$ DQPSK	MCH	1.379	Not Specified	PASS
$\pi/4$ DQPSK	HCH	1.360	Not Specified	PASS
8DPSK	LCH	1.367	Not Specified	PASS
8DPSK	MCH	1.349	Not Specified	PASS
8DPSK	HCH	1.351	Not Specified	PASS

Test Graph

Graphs

GFSK/LCH



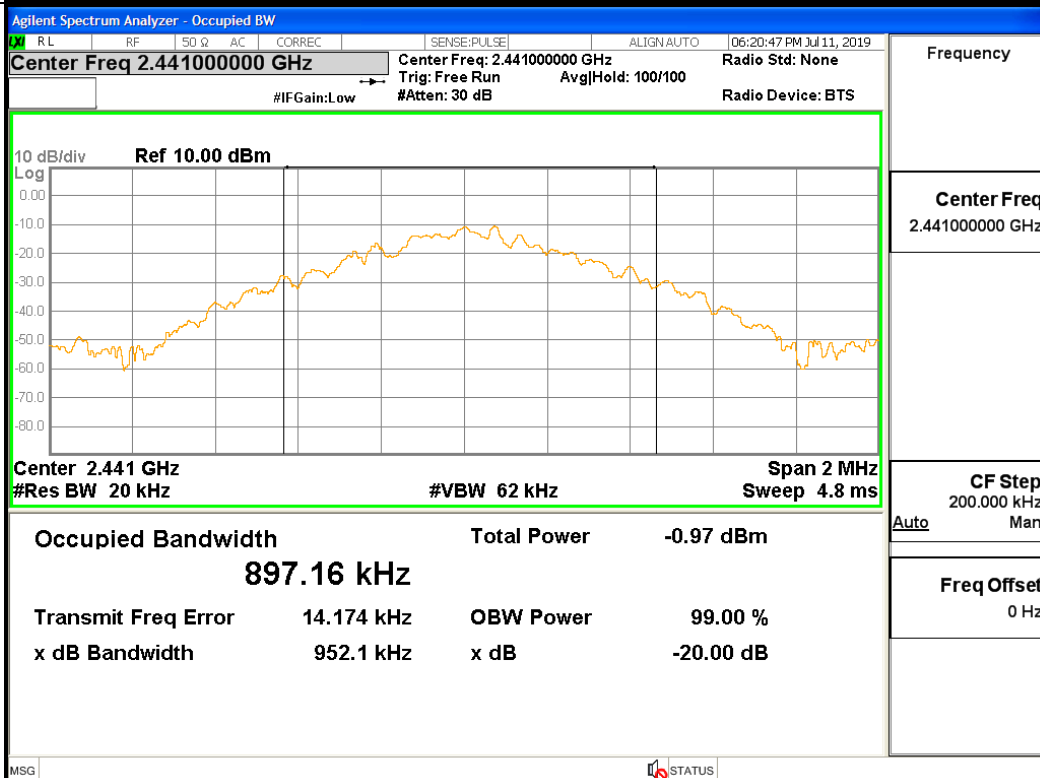
Frequency

Center Freq
2.40200000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

GFSK/MCH

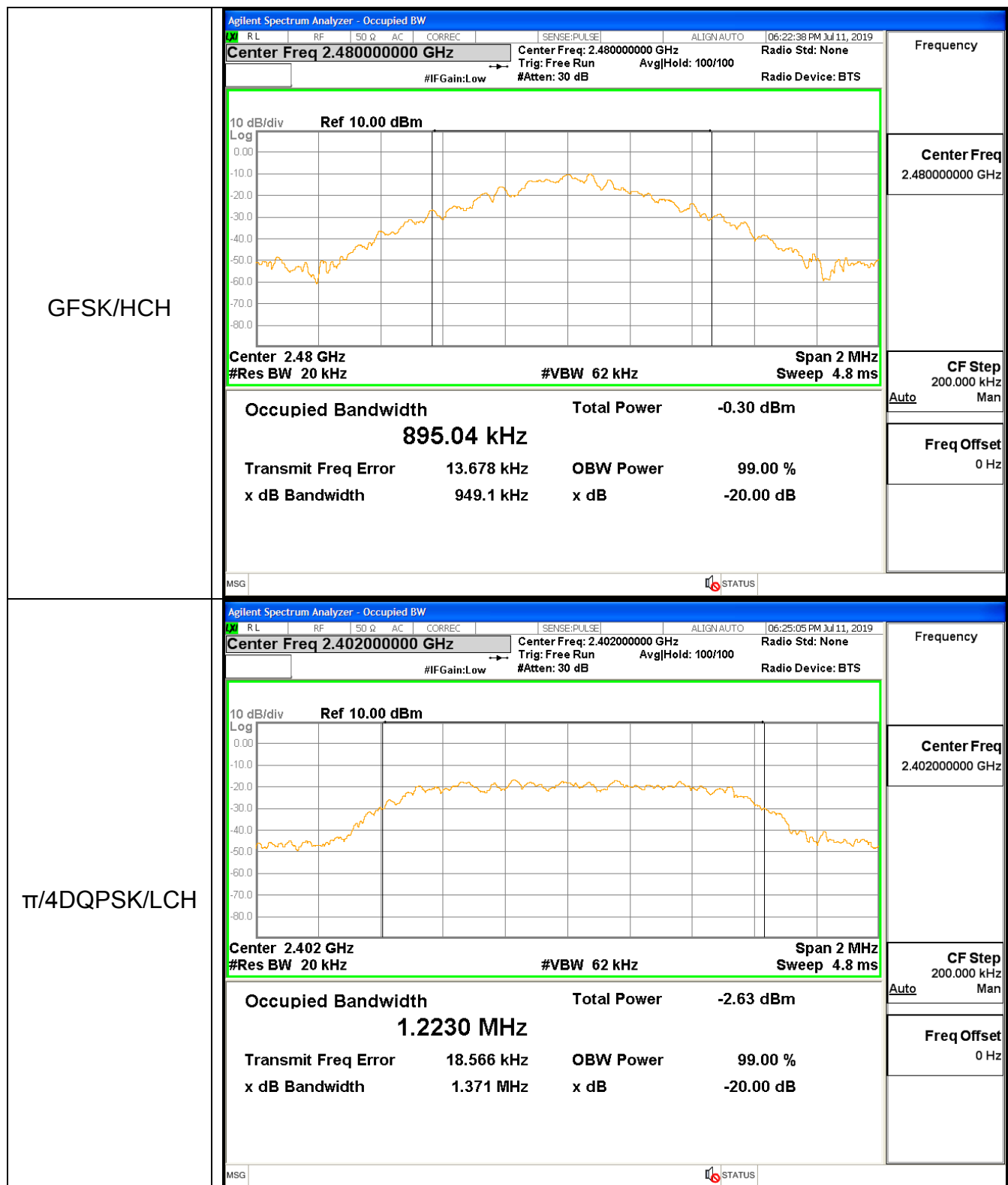


Frequency

Center Freq
2.44100000 GHz

CF Step
200.000 kHz
Auto Man

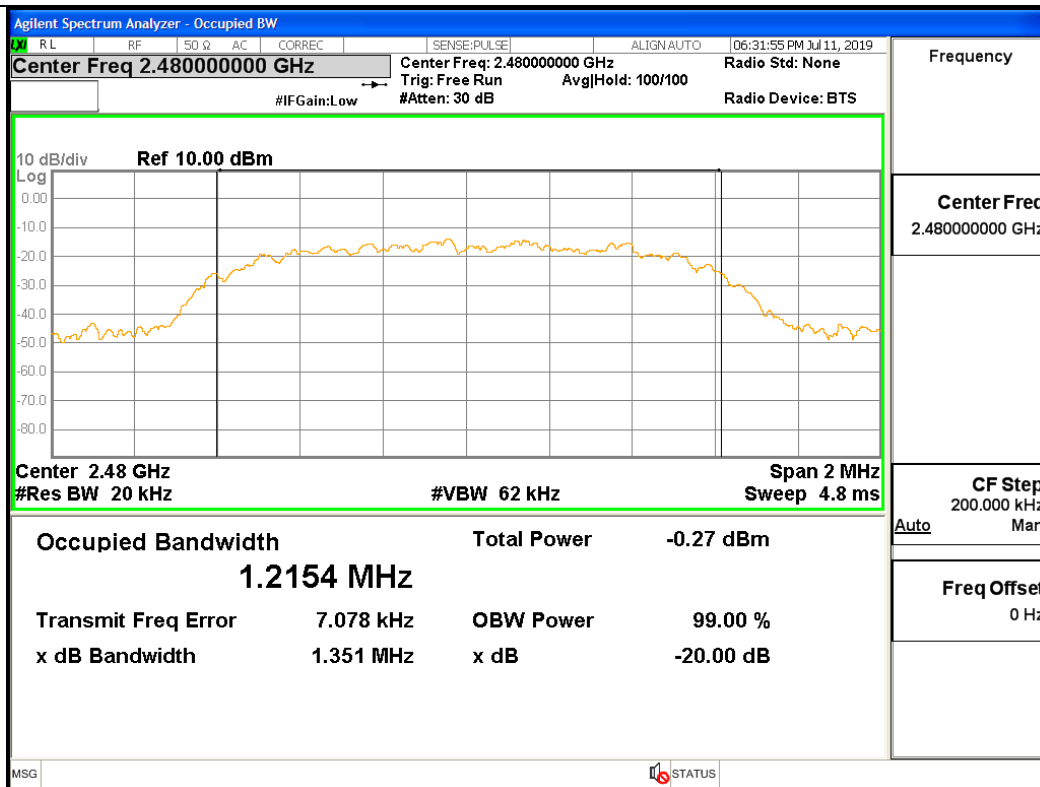
Freq Offset
0 Hz







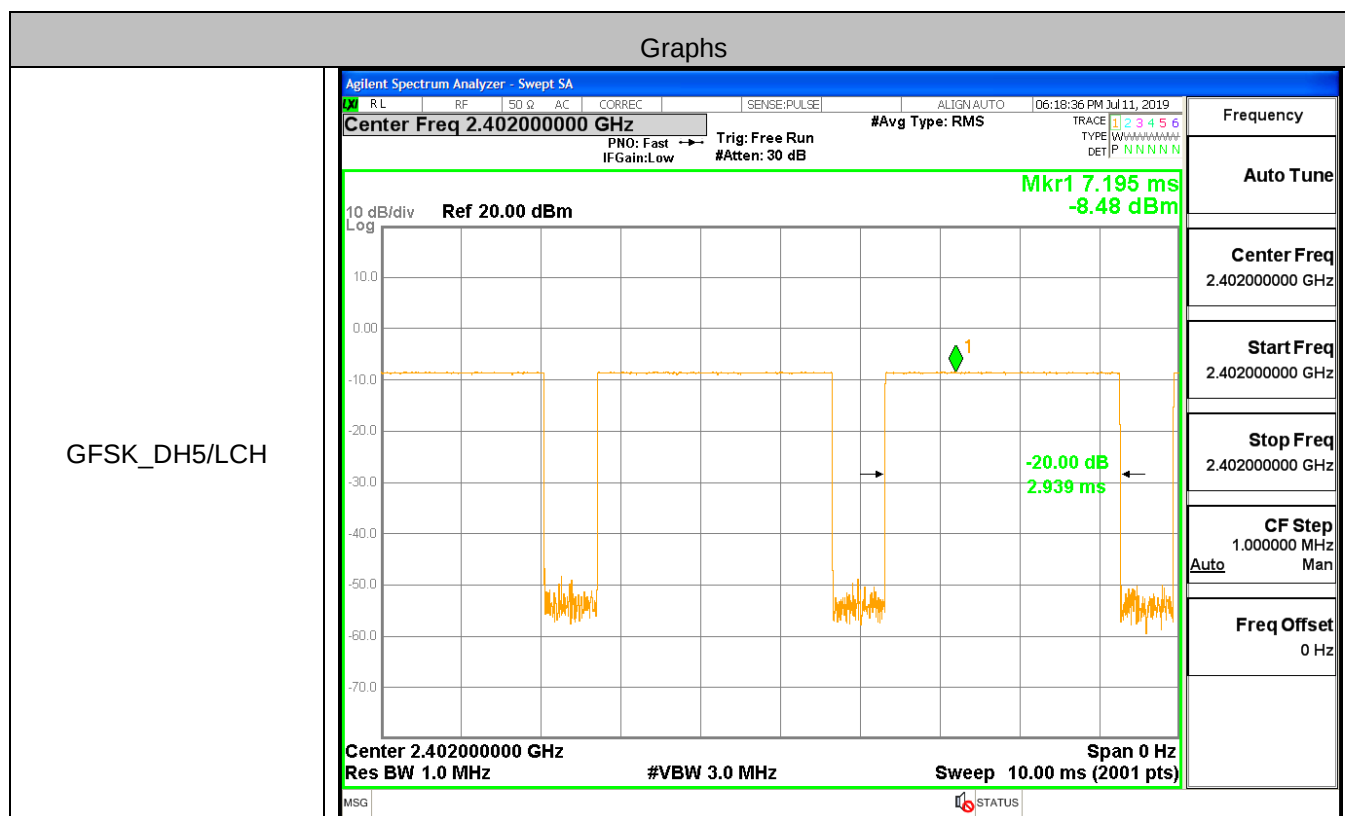
8DPSK/HCH

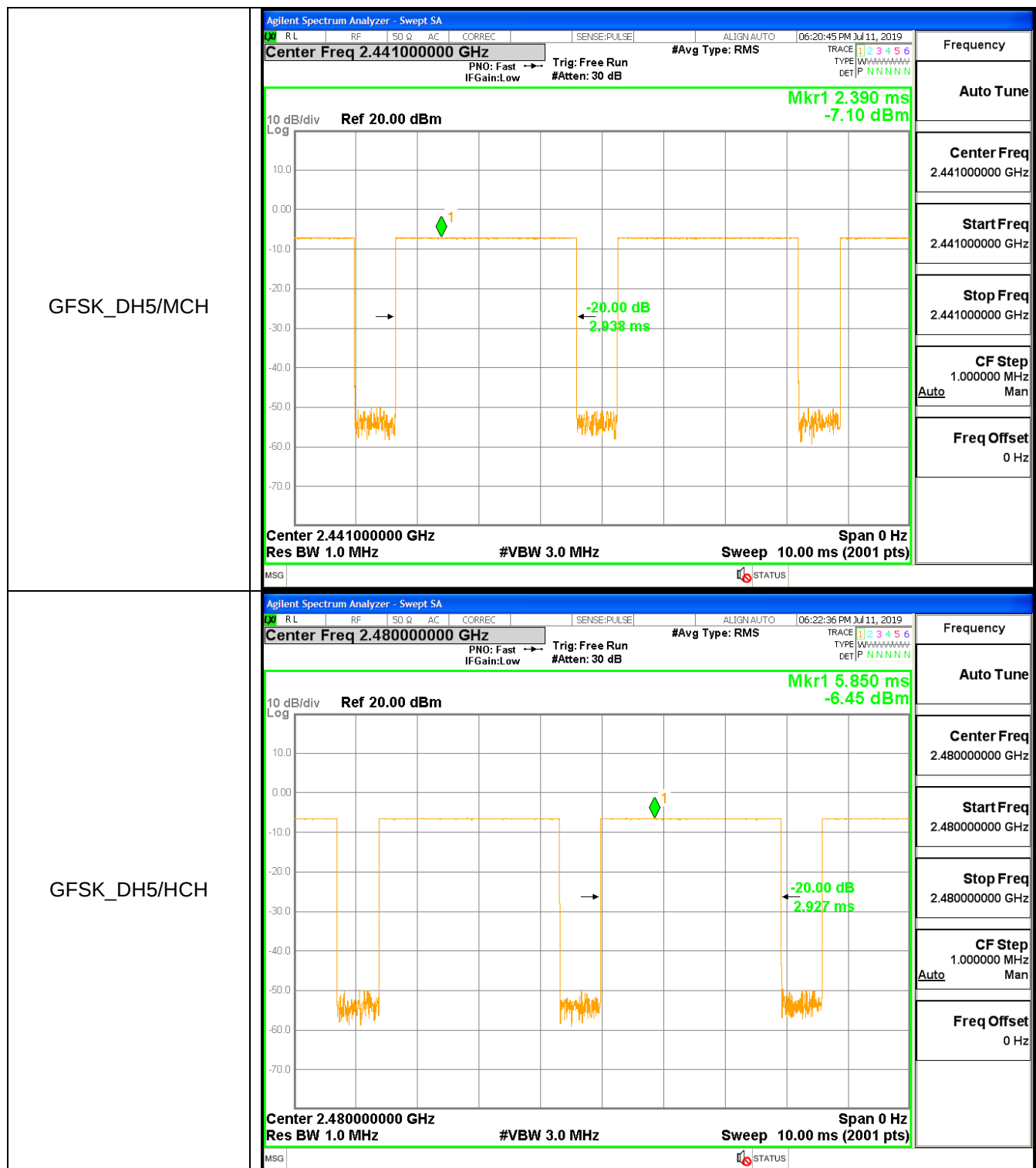


A.2 Dwell Time

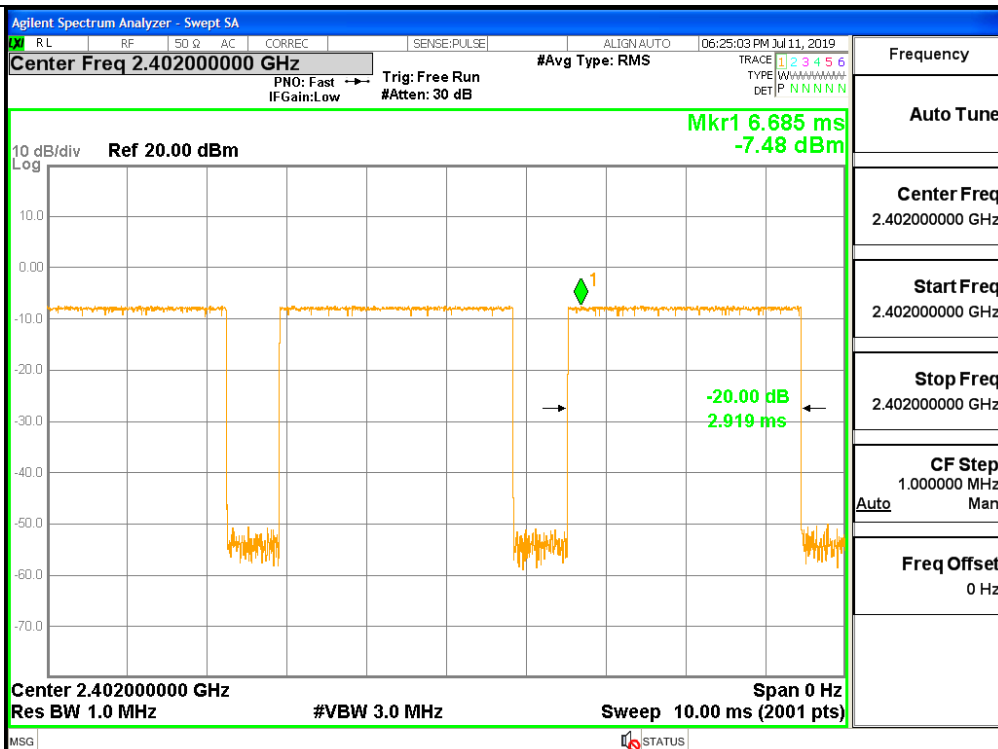
Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002939	106.7	0.313557	0.4	PASS
GFSK	DH5	MCH	0.002938	106.7	0.313530	0.4	PASS
GFSK	DH5	HCH	0.002927	106.7	0.312315	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	0.002919	106.7	0.311423	0.4	PASS
$\pi/4$ DQPSK	2DH5	MCH	0.002928	106.7	0.312366	0.4	PASS
$\pi/4$ DQPSK	2DH5	HCH	0.002928	106.7	0.312470	0.4	PASS
8DPSK	3DH5	LCH	0.002914	106.7	0.310923	0.4	PASS
8DPSK	3DH5	MCH	0.002934	106.7	0.313071	0.4	PASS
8DPSK	3DH5	HCH	0.002919	106.7	0.311451	0.4	PASS

Test Graph

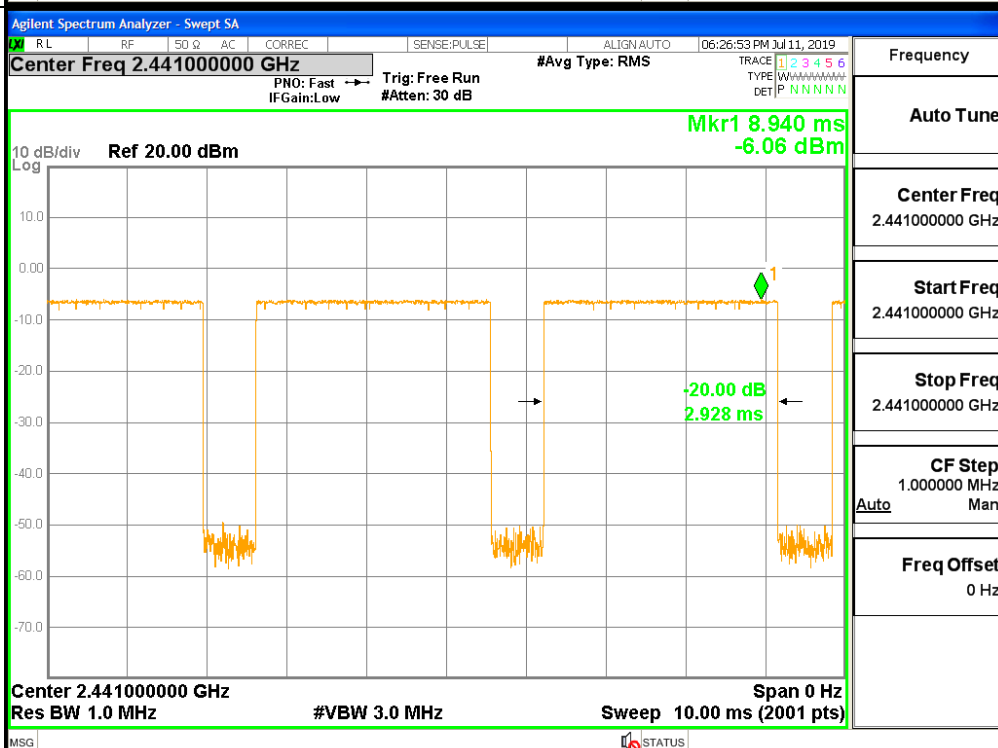




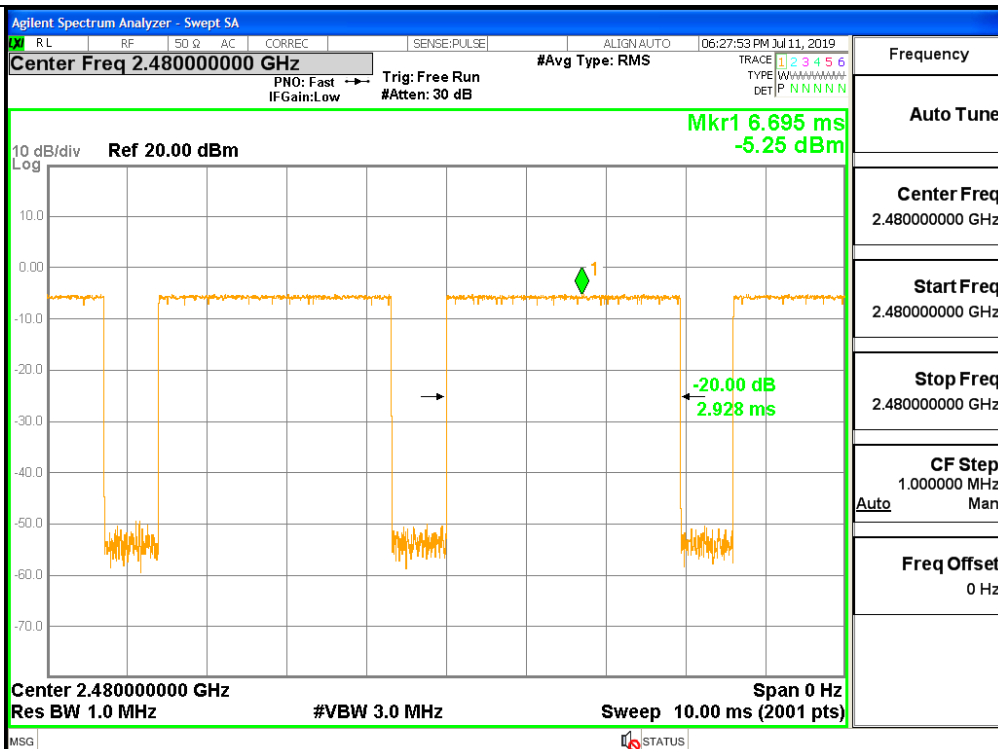
$\pi/4$ DQPSK
_2DH5/LCH



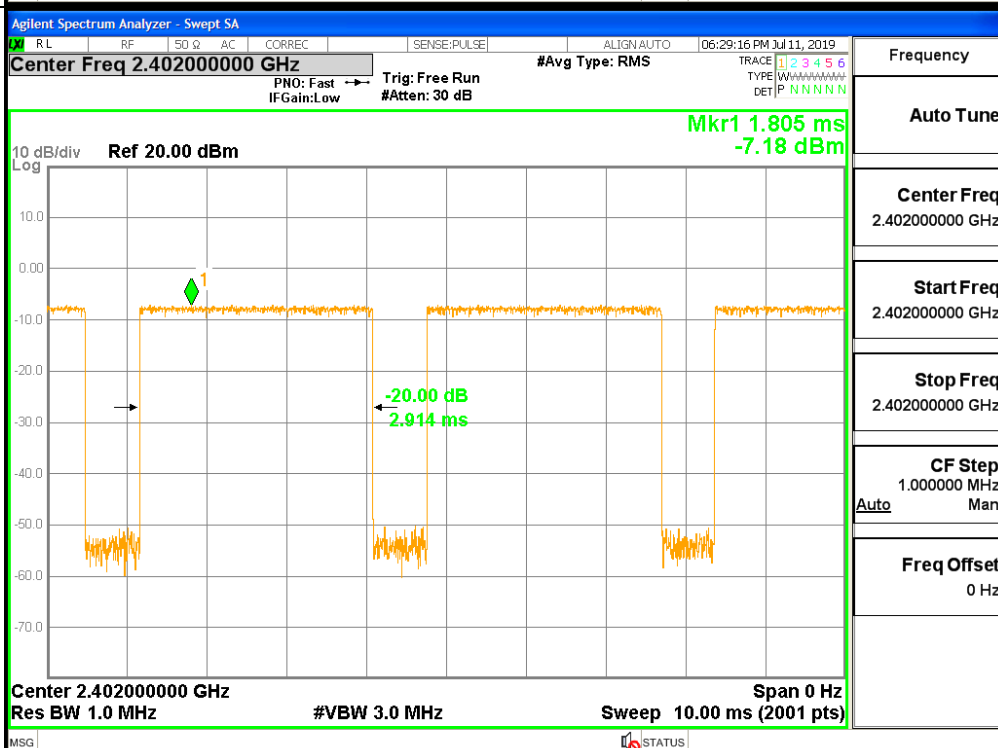
$\pi/4$ DQPSK
_2DH5/MCH

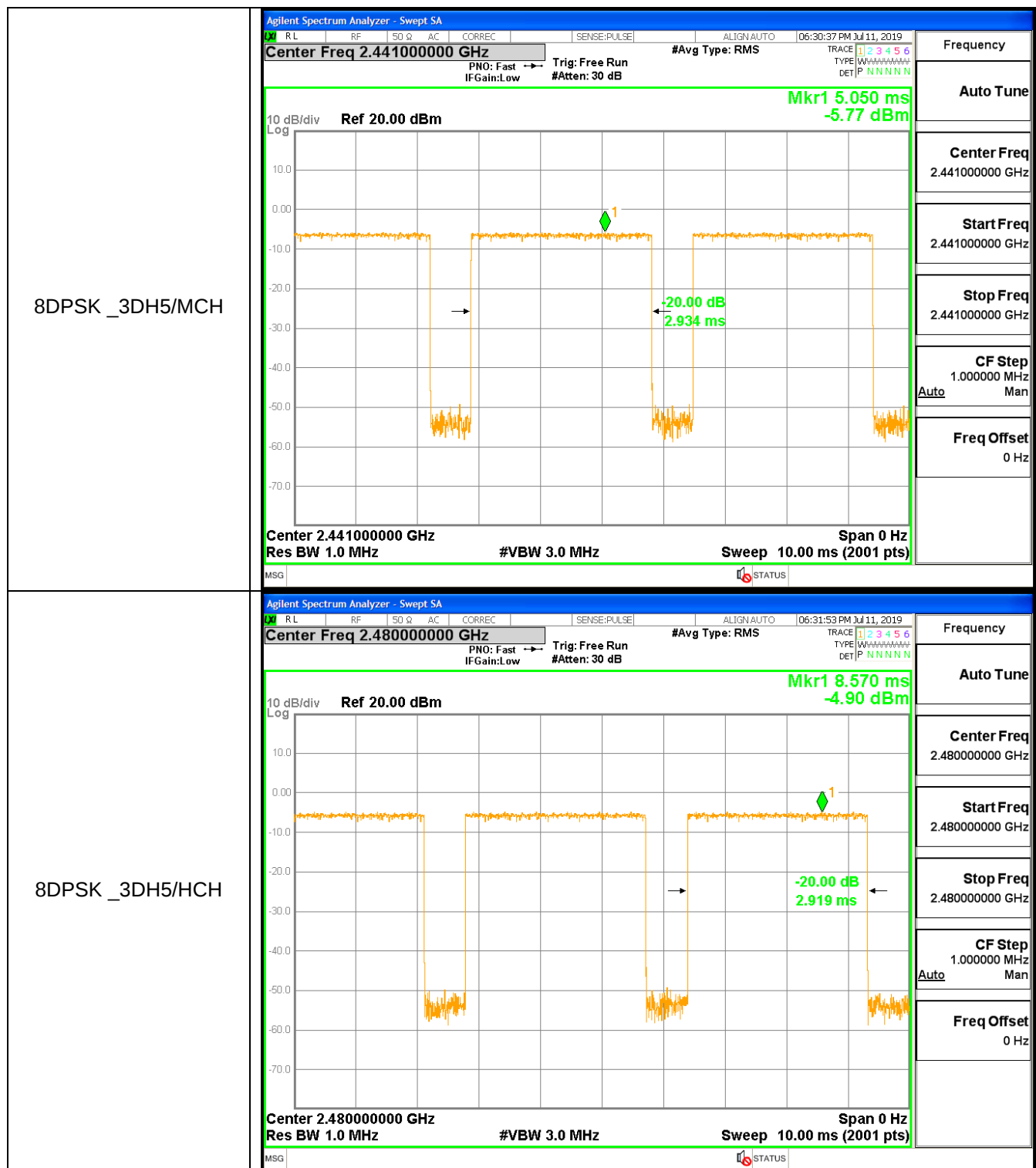


$\pi/4$ DQPSK
_2DH5/HCH



8DPSK_3DH5/LCH

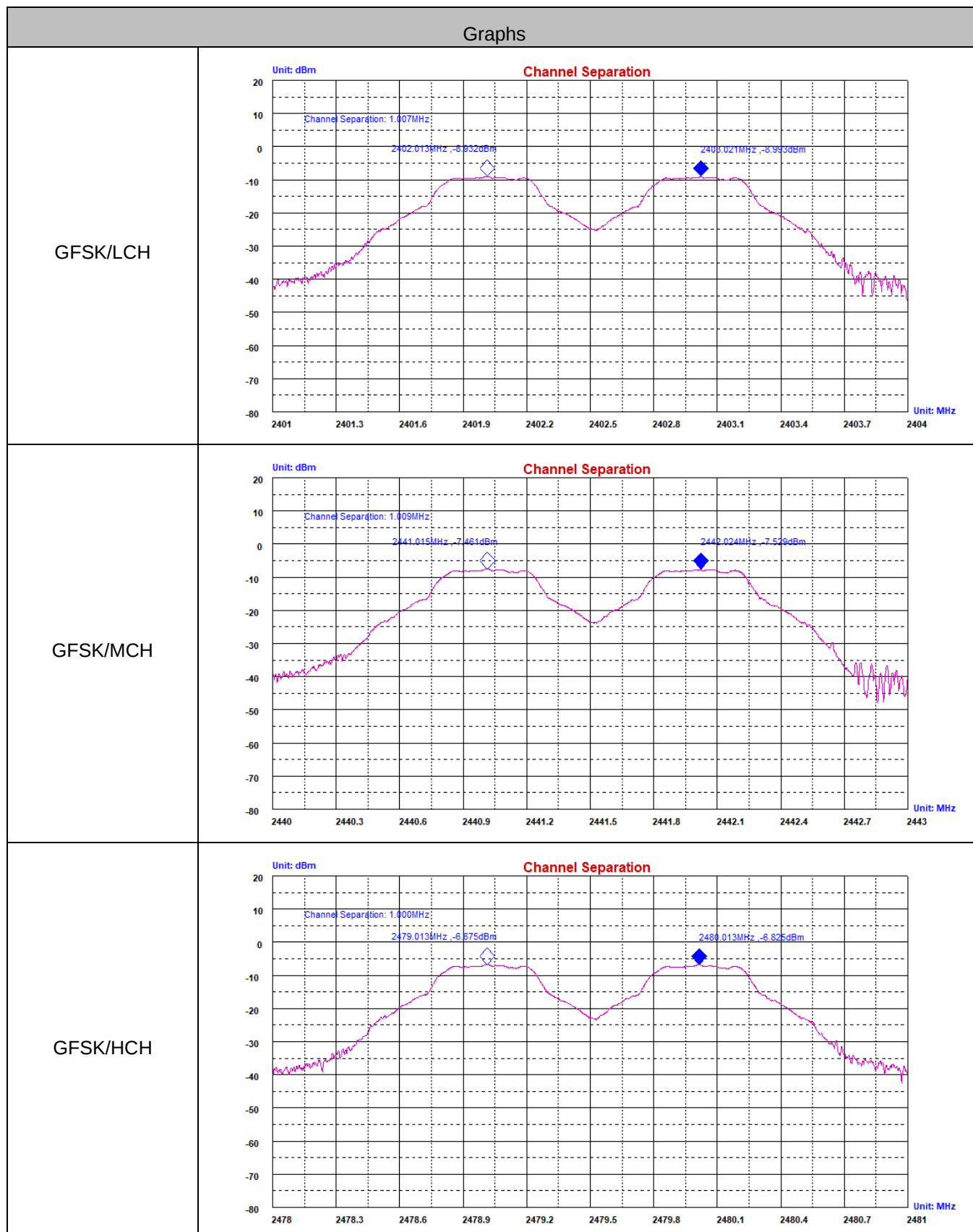


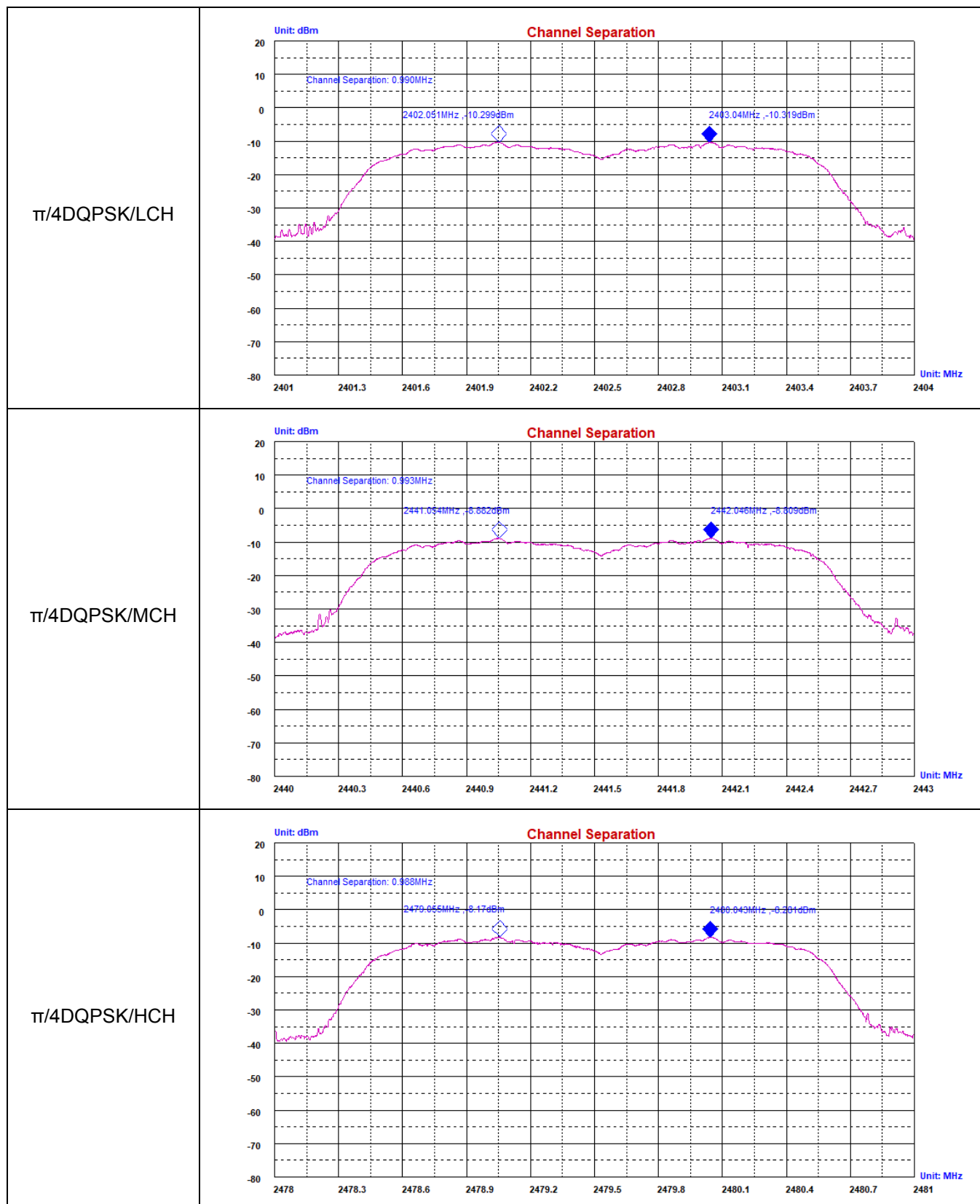


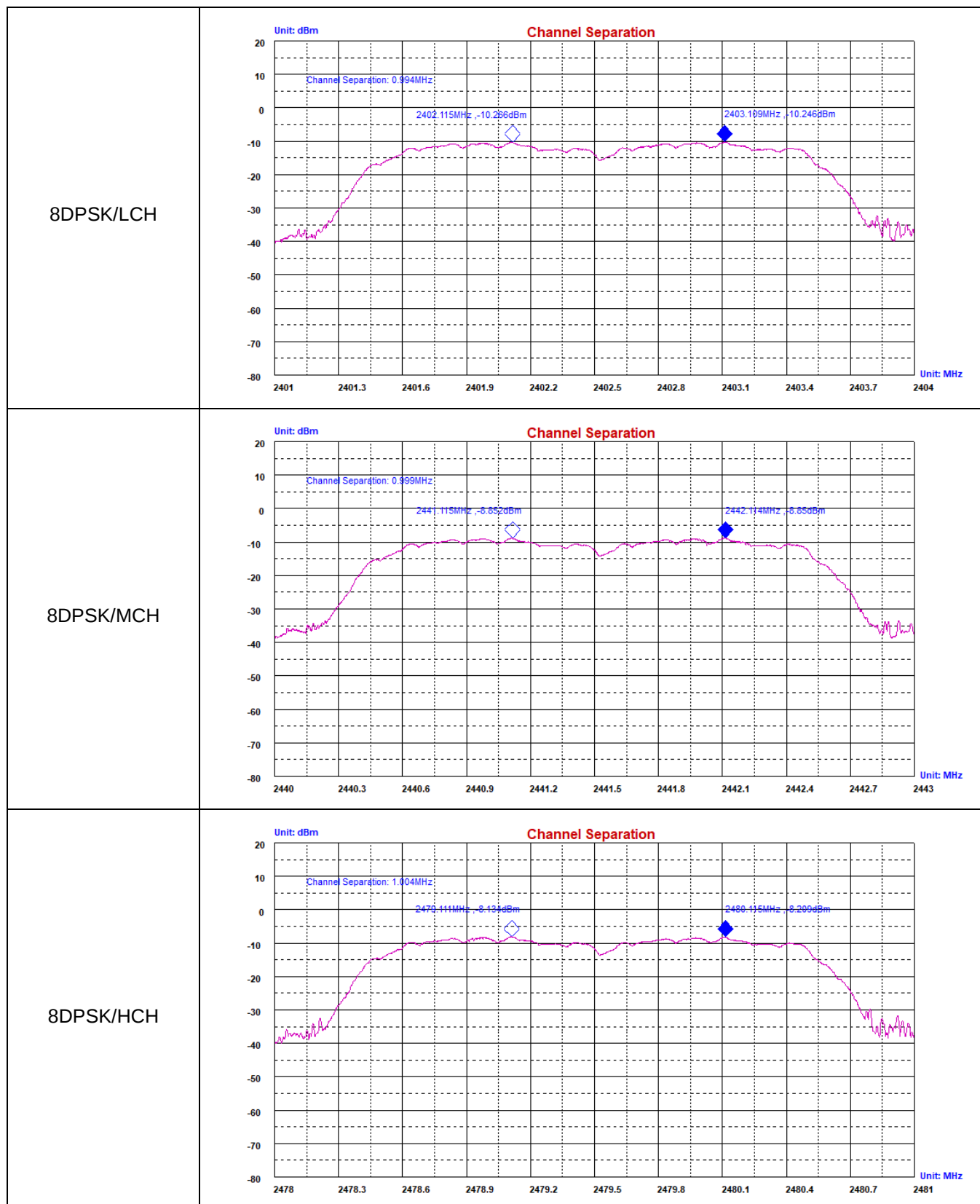
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.007	0.633	PASS
GFSK	MCH	1.009	0.635	PASS
GFSK	HCH	1.000	0.633	PASS
$\pi/4$ DQPSK	LCH	0.990	0.914	PASS
$\pi/4$ DQPSK	MCH	0.993	0.919	PASS
$\pi/4$ DQPSK	HCH	0.988	0.907	PASS
8DPSK	LCH	0.994	0.911	PASS
8DPSK	MCH	0.999	0.899	PASS
8DPSK	HCH	1.004	0.901	PASS

Test Graph



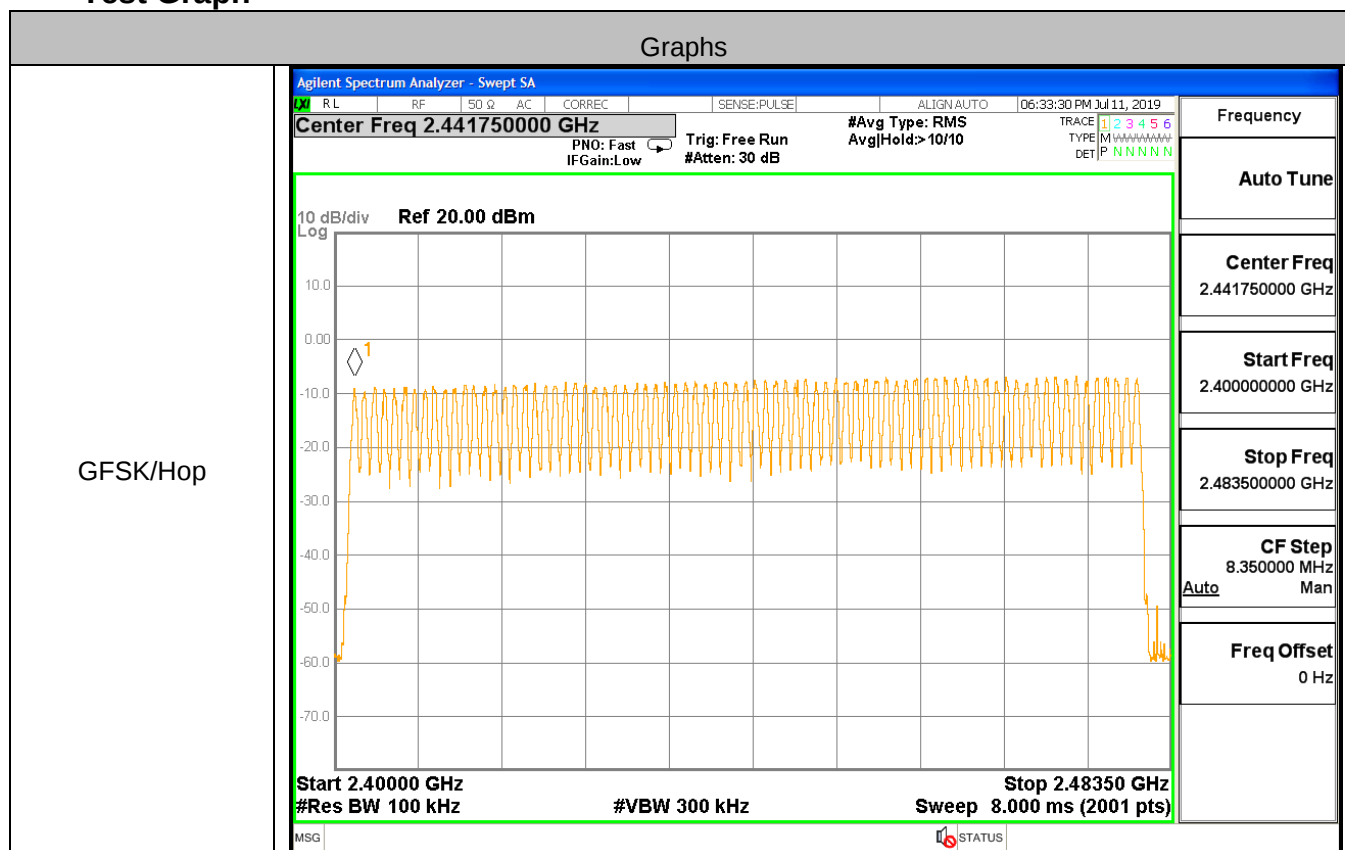


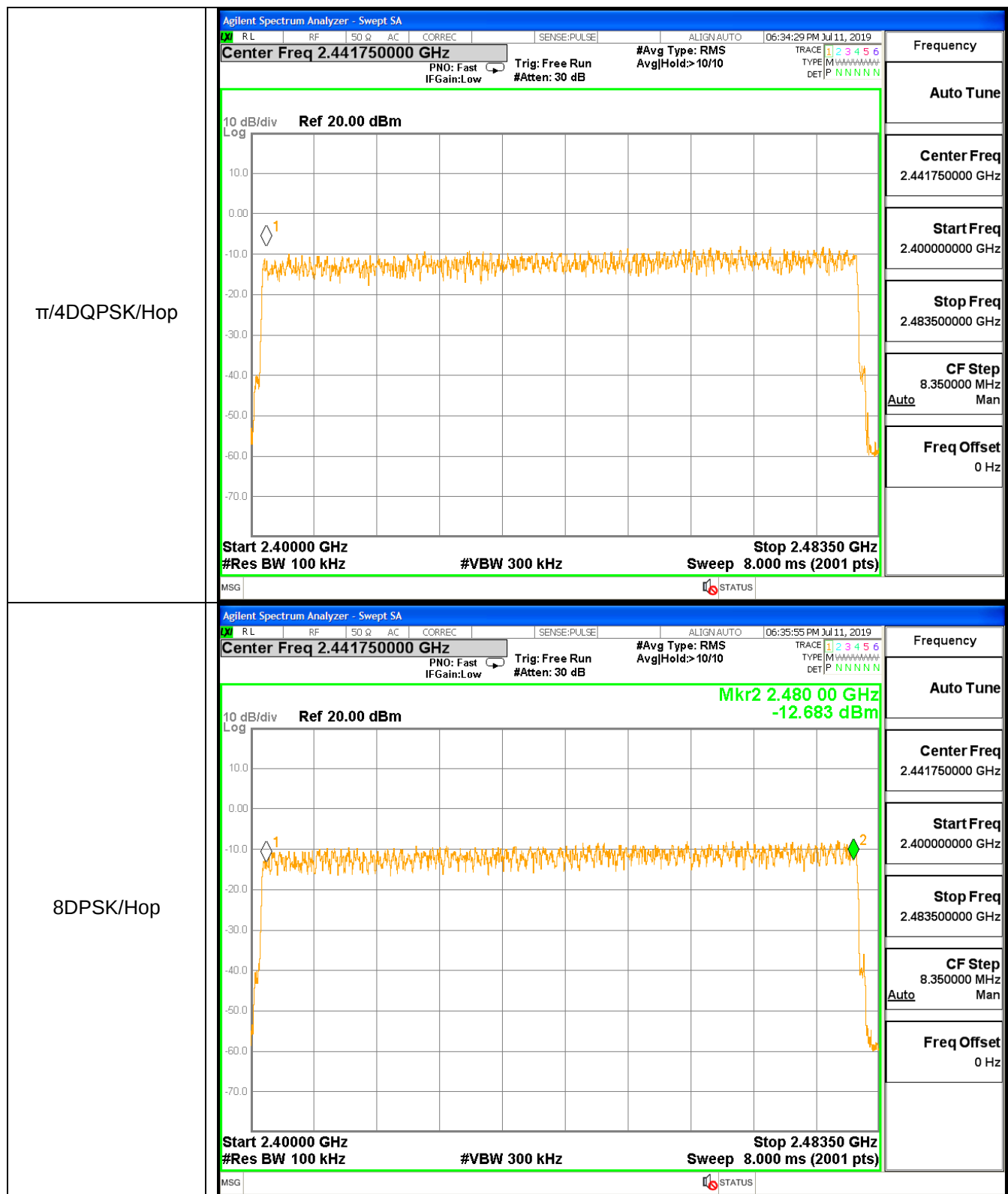


A.4 Hopping Channel Number

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 Graph

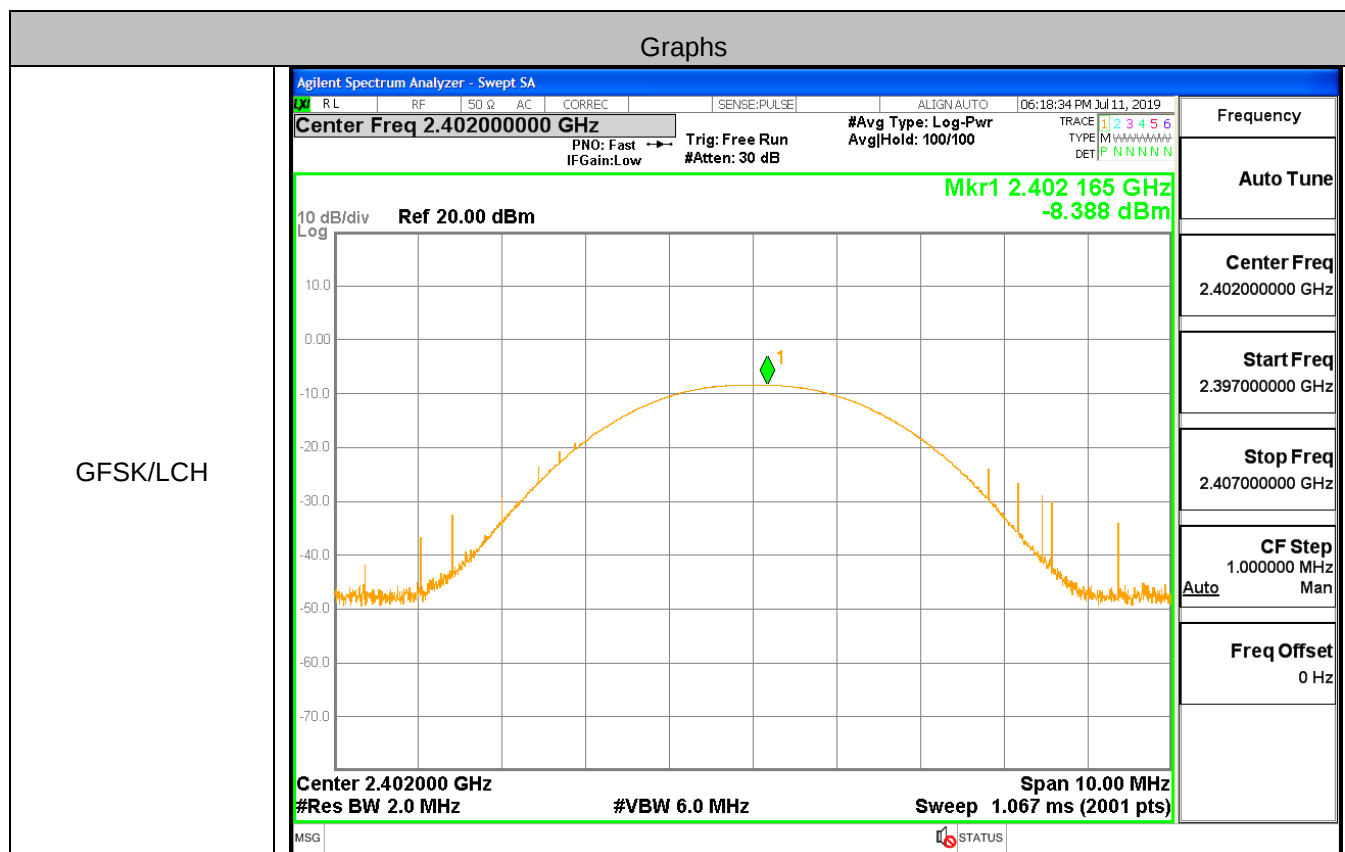


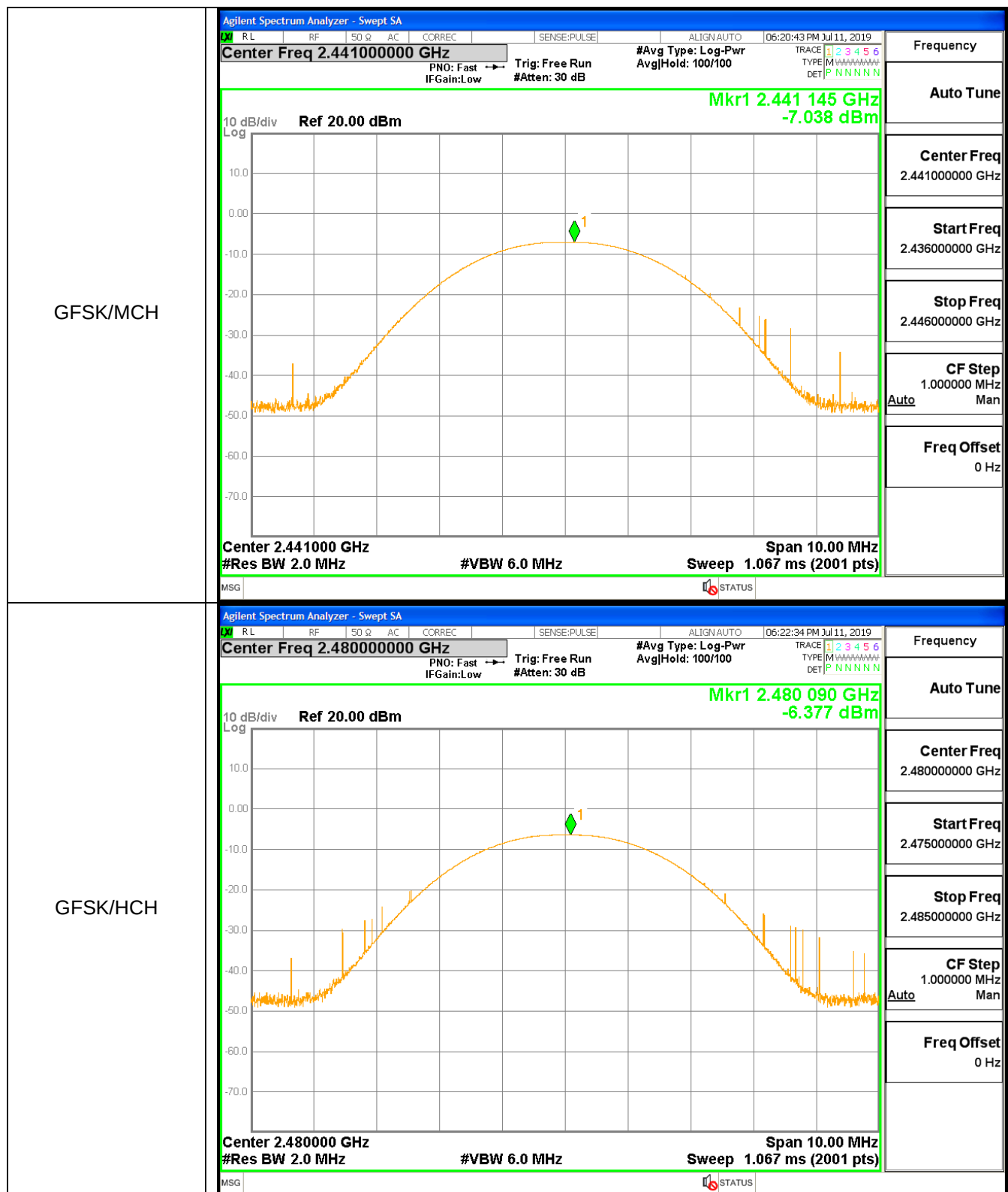


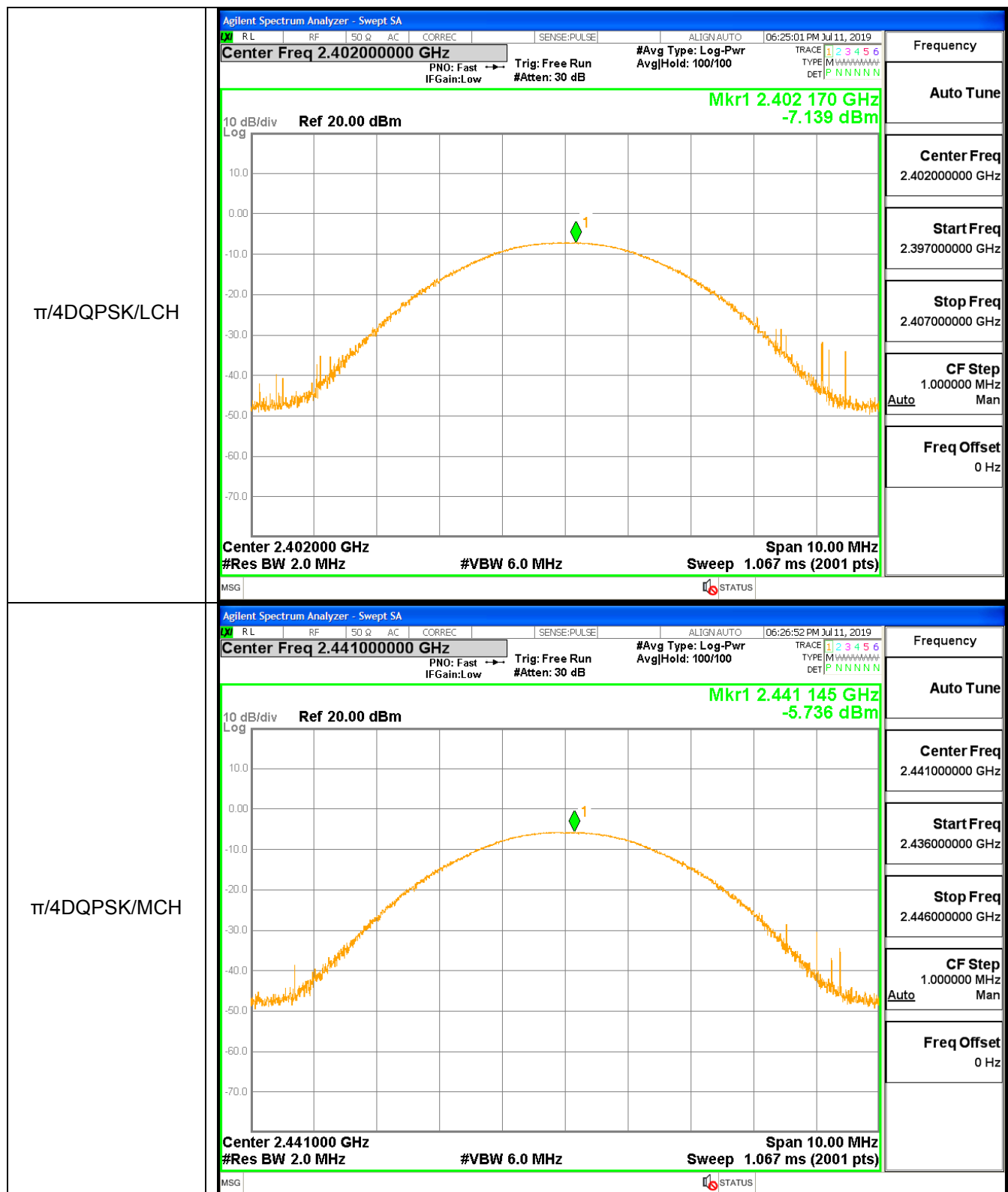
A.5 Conducted Peak Output Power

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-8.388	21	PASS
GFSK	MCH	-7.038	21	PASS
GFSK	HCH	-6.377	21	PASS
$\pi/4$ DQPSK	LCH	-7.139	21	PASS
$\pi/4$ DQPSK	MCH	-5.736	21	PASS
$\pi/4$ DQPSK	HCH	-4.869	21	PASS
8DPSK	LCH	-6.935	21	PASS
8DPSK	MCH	-5.531	21	PASS
8DPSK	HCH	-4.568	21	PASS

Test Graph







Frequency

Auto Tune

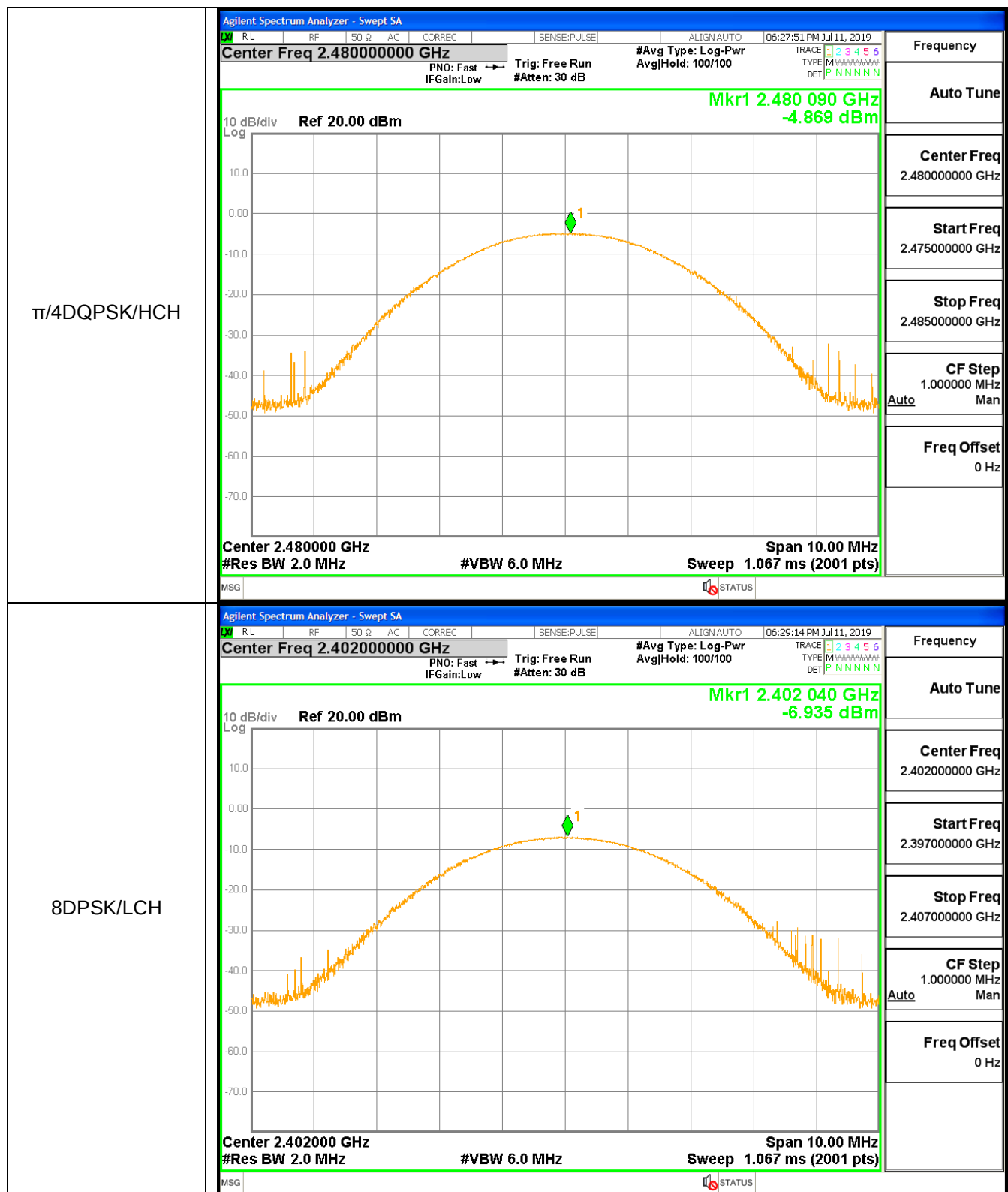
Center Freq
2.402000000 GHz

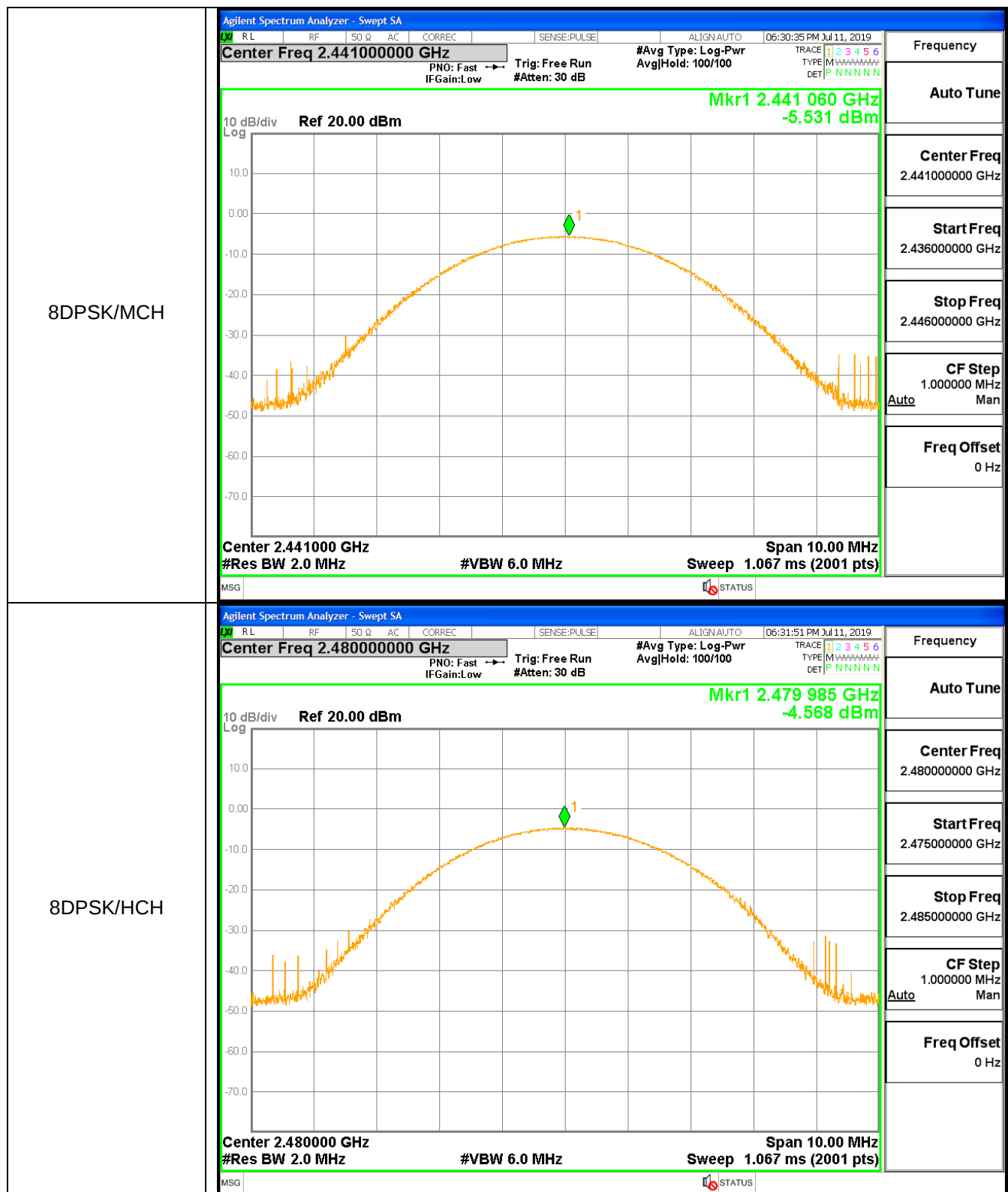
Start Freq
2.397000000 GHz

Stop Freq
2.407000000 GHz

CF Step
1.000000 MHz
Auto Man

Freq Offset
0 Hz





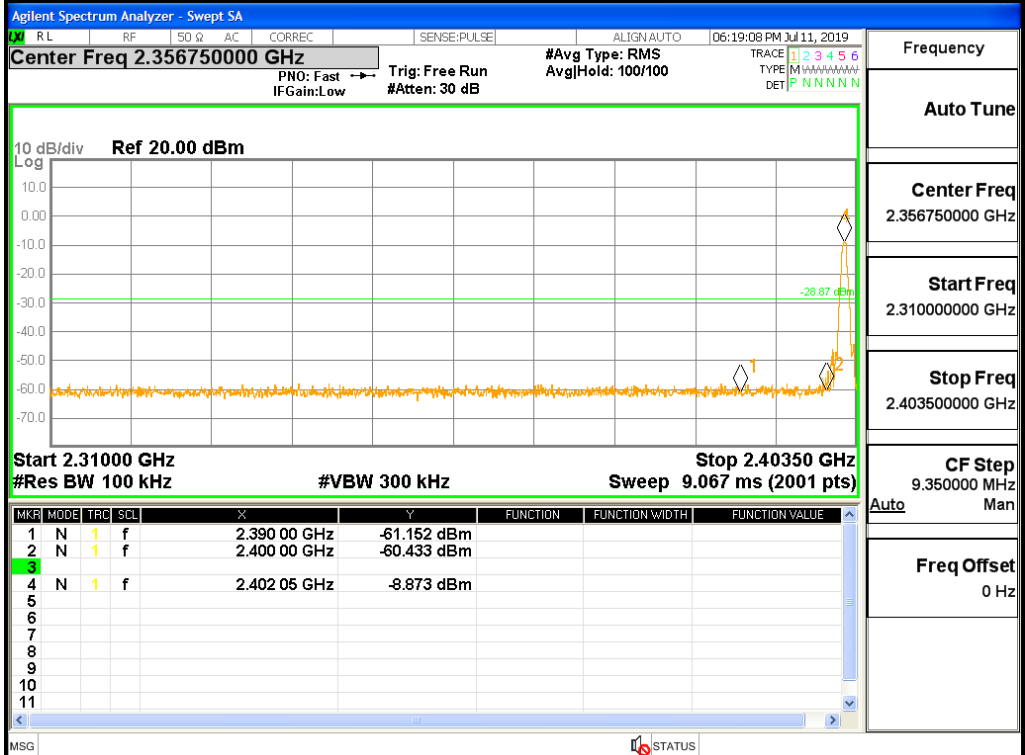
A.6 Band-edge for RF Conducted Emissions

Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2400	-8.873	-60.43	-28.873	Pass
1DH5	2480	2489.411	-6.869	-56.969	-26.869	Pass
2DH5	2402	2400	-10.401	-53.43	-30.401	Pass
2DH5	2480	2483.886	-8.514	-55.76	-28.514	Pass
3DH5	2402	2400	-10.044	-53.8	-30.044	Pass
3DH5	2480	2483.5	-7.881	-60.67	-27.881	Pass
1DH5-Hopping	2402	2400	-7.935	-59.28	-27.935	Pass
1DH5-Hopping	2480	2483.5	-6.997	-59.9	-26.997	Pass
2DH5-Hopping	2402	2400	-9.132	-55.06	-29.132	Pass
2DH5-Hopping	2480	2500	-8.172	-59.14	-28.172	Pass
3DH5-Hopping	2402	2399.7	-9.616	-51.733	-29.616	Pass
3DH5-Hopping	2480	2500	-8.051	-58.91	-28.051	Pass

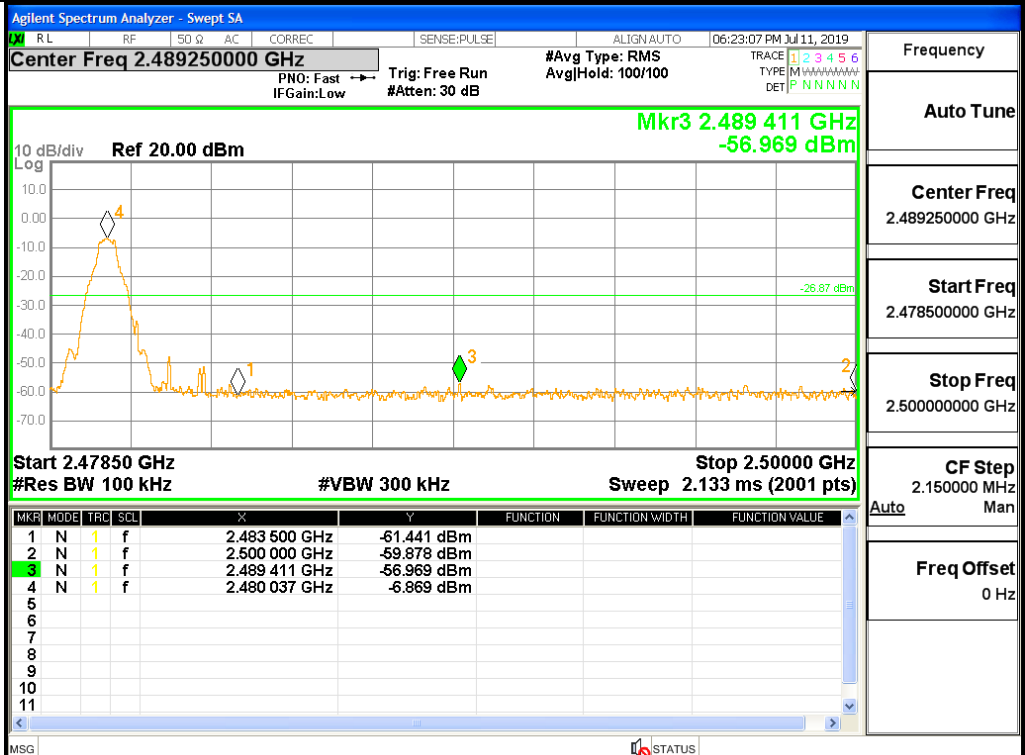
Test Graph

Graphs

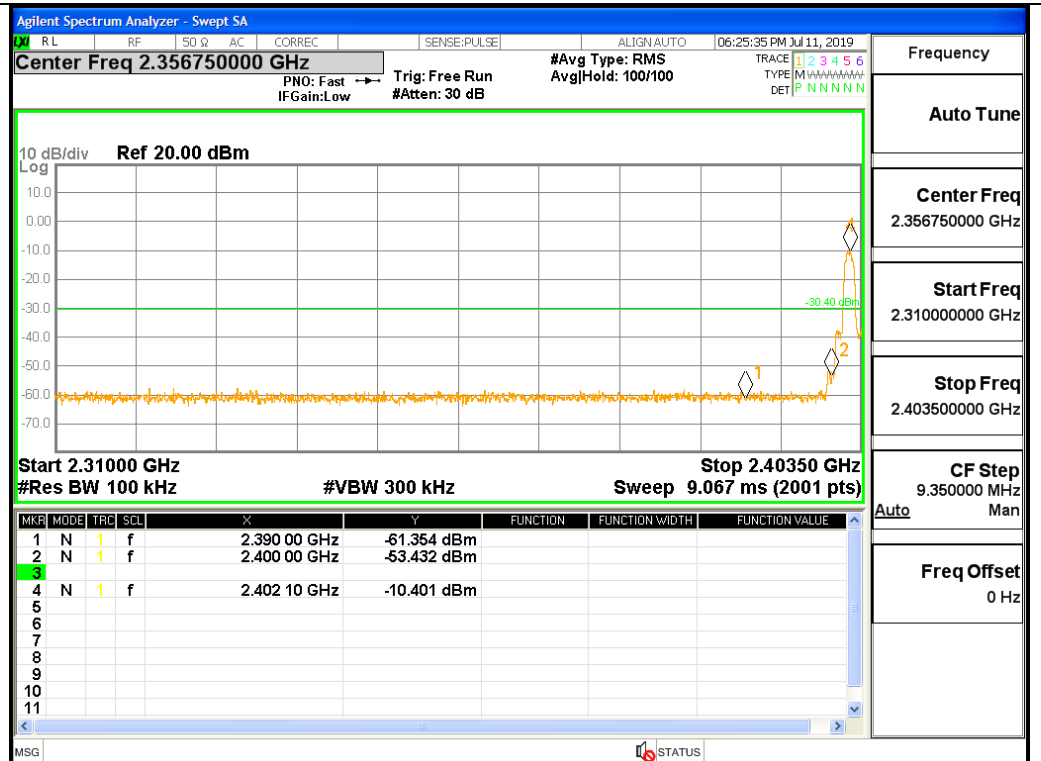
GFSK/LCH/No Hop



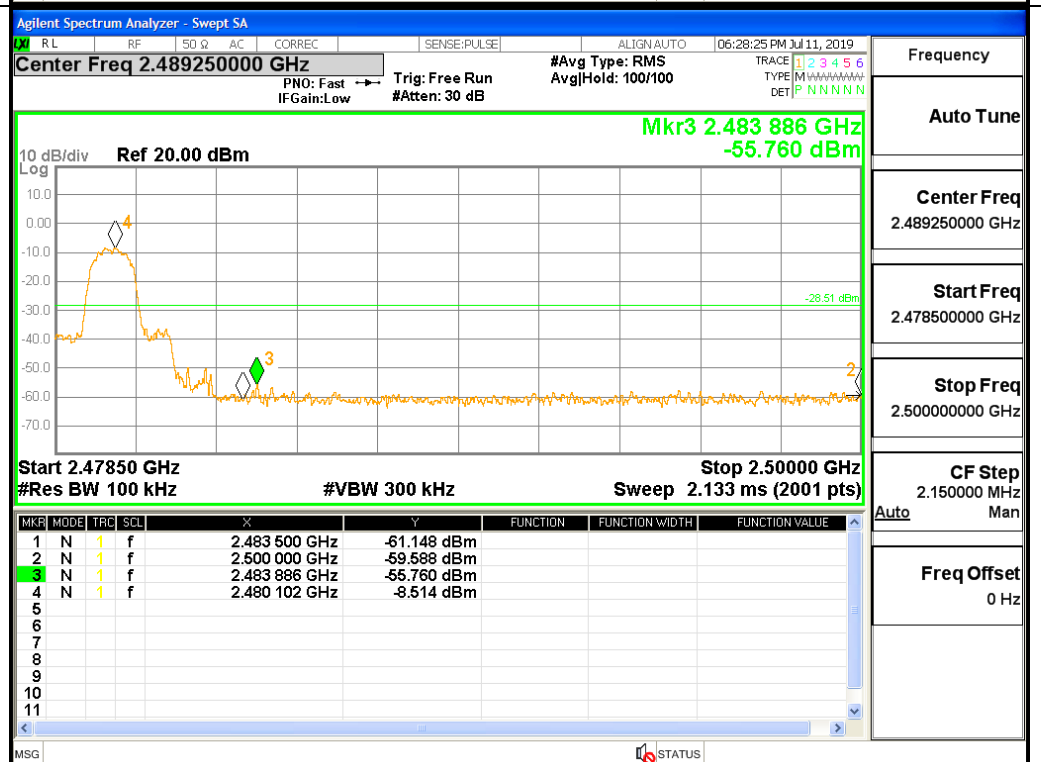
GFSK/HCH/No Hop



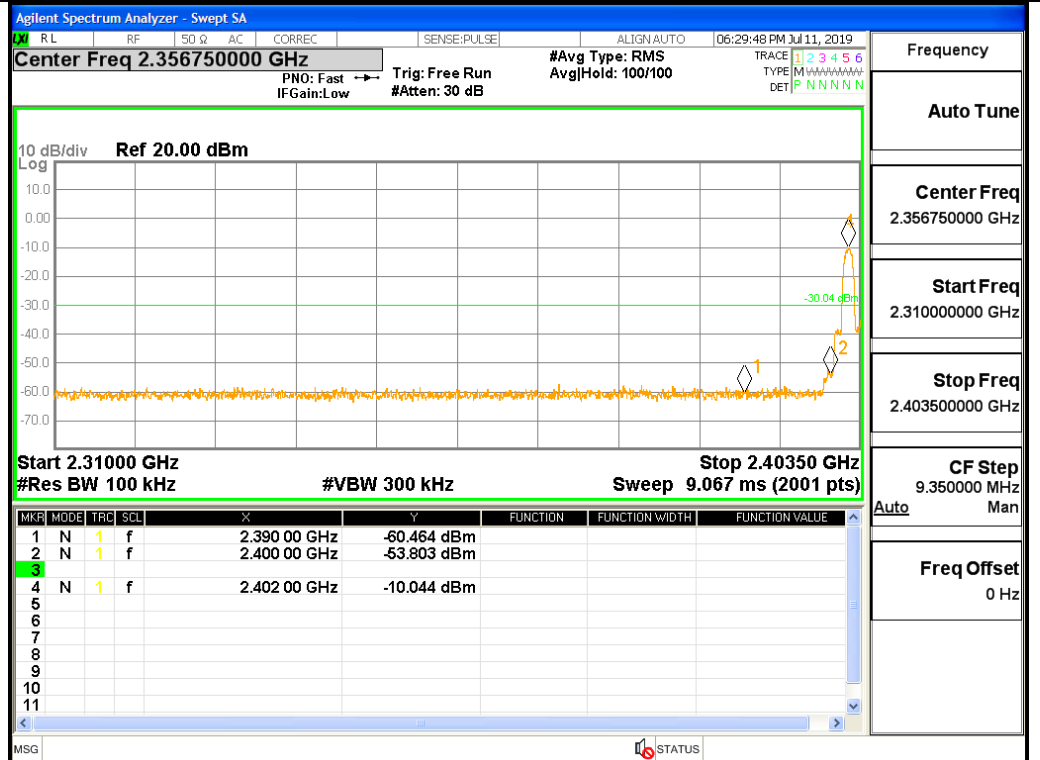
π /4DQPSK/LCH/No
Hop



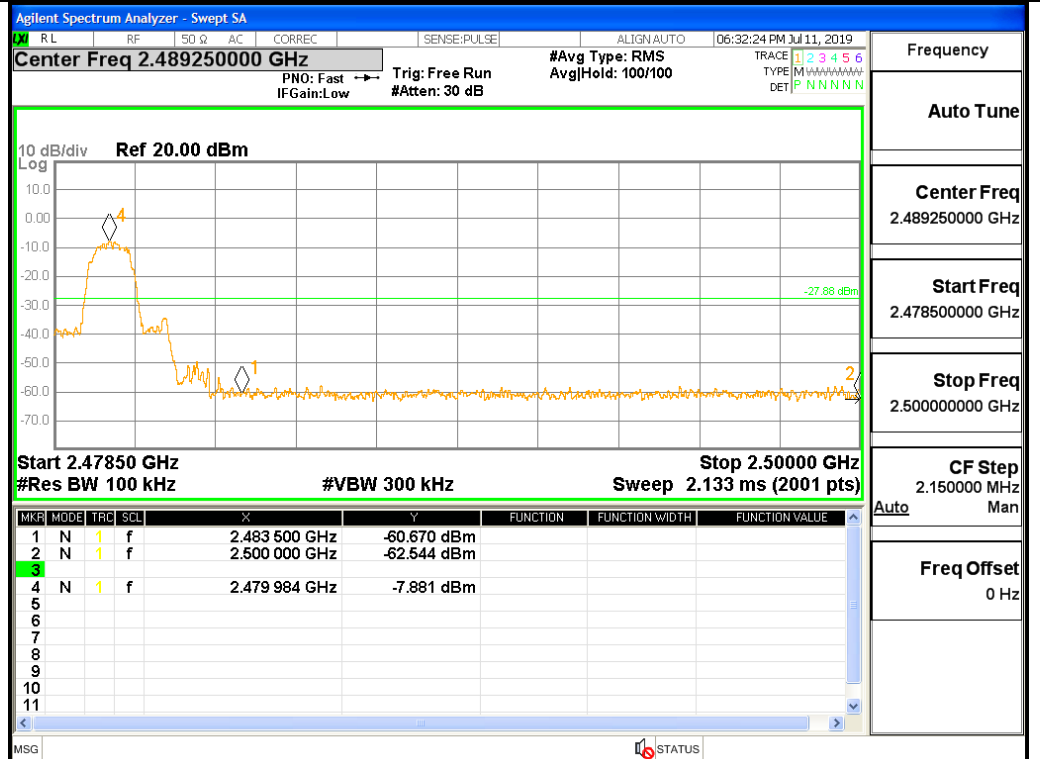
π /4DQPSK/HCH/No
Hop



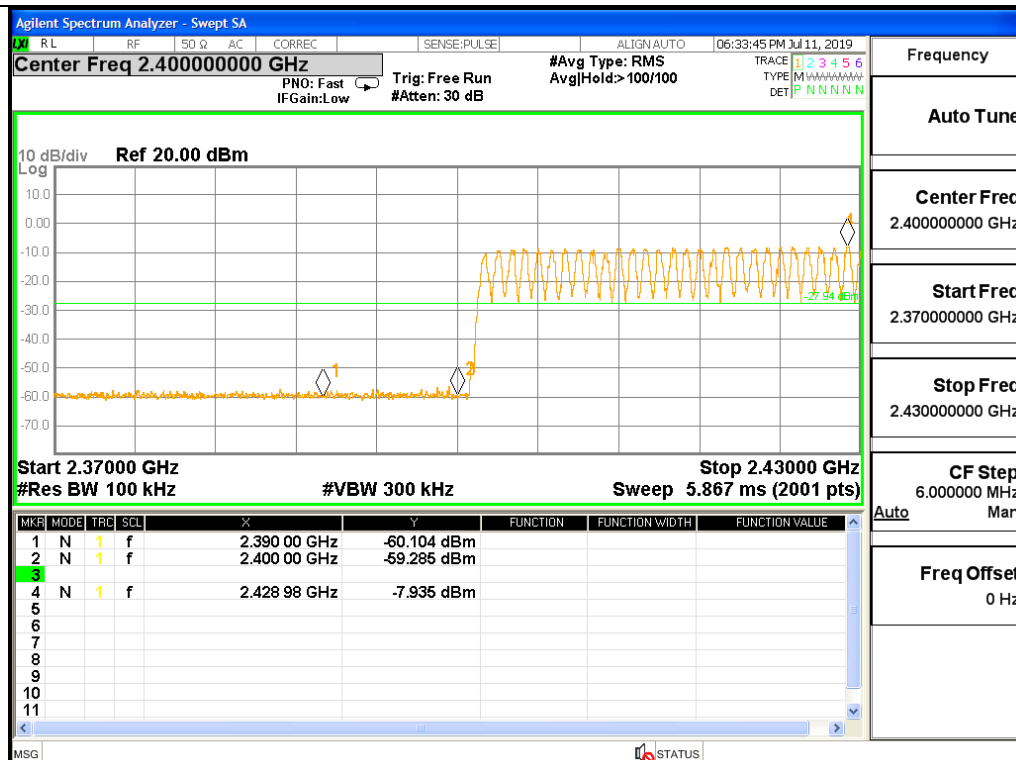
8DPSK/LCH/No Hop



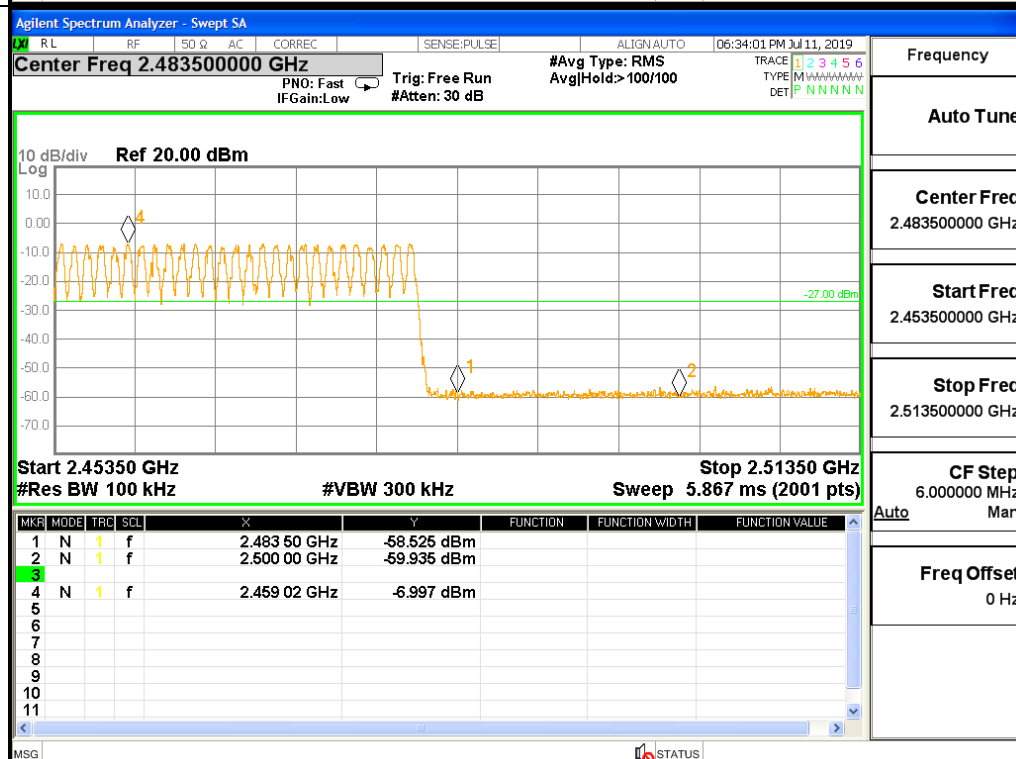
8DPSK/HCH/No Hop

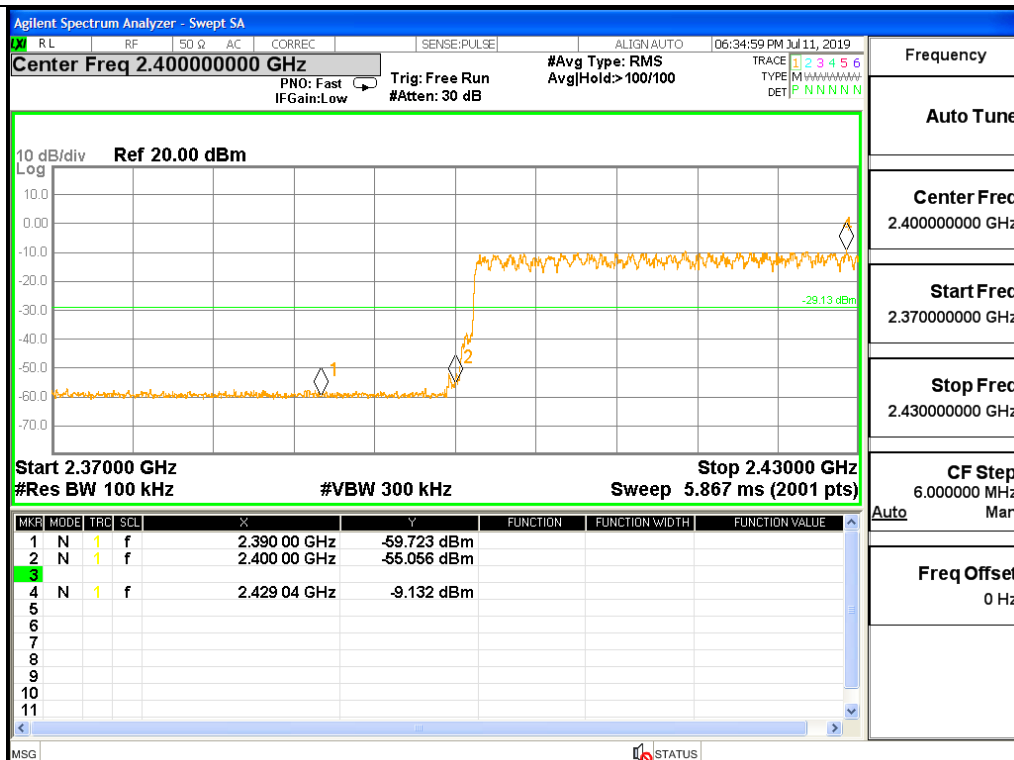
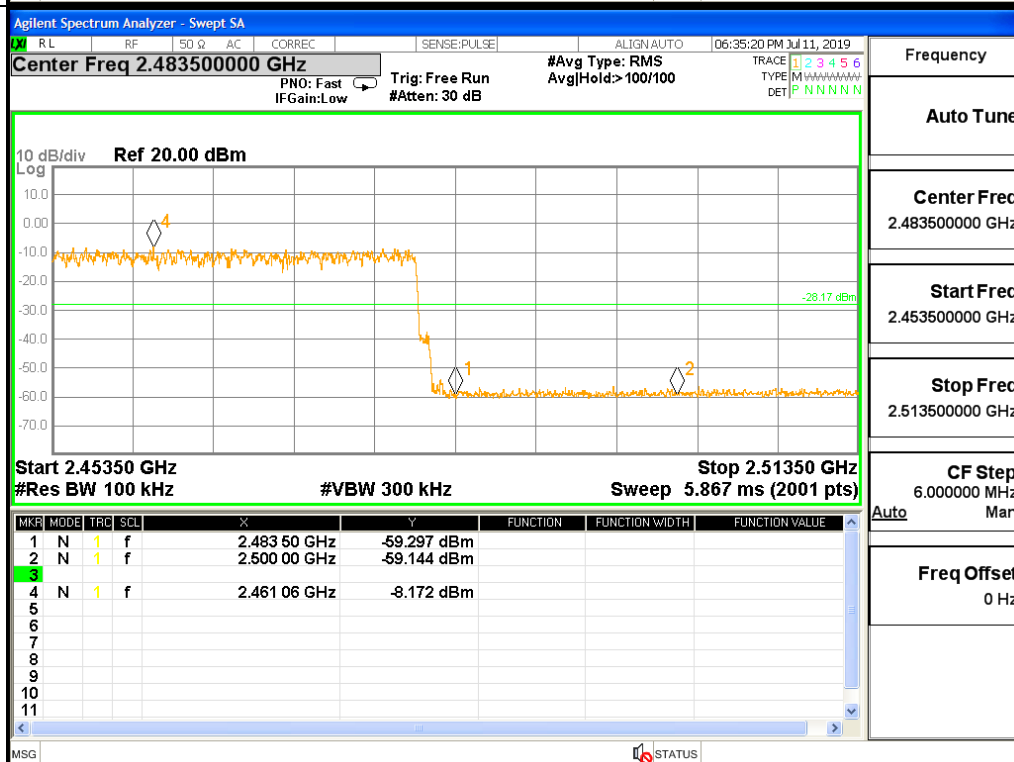


GFSK/LCH/Hop



GFSK/HCH/Hop

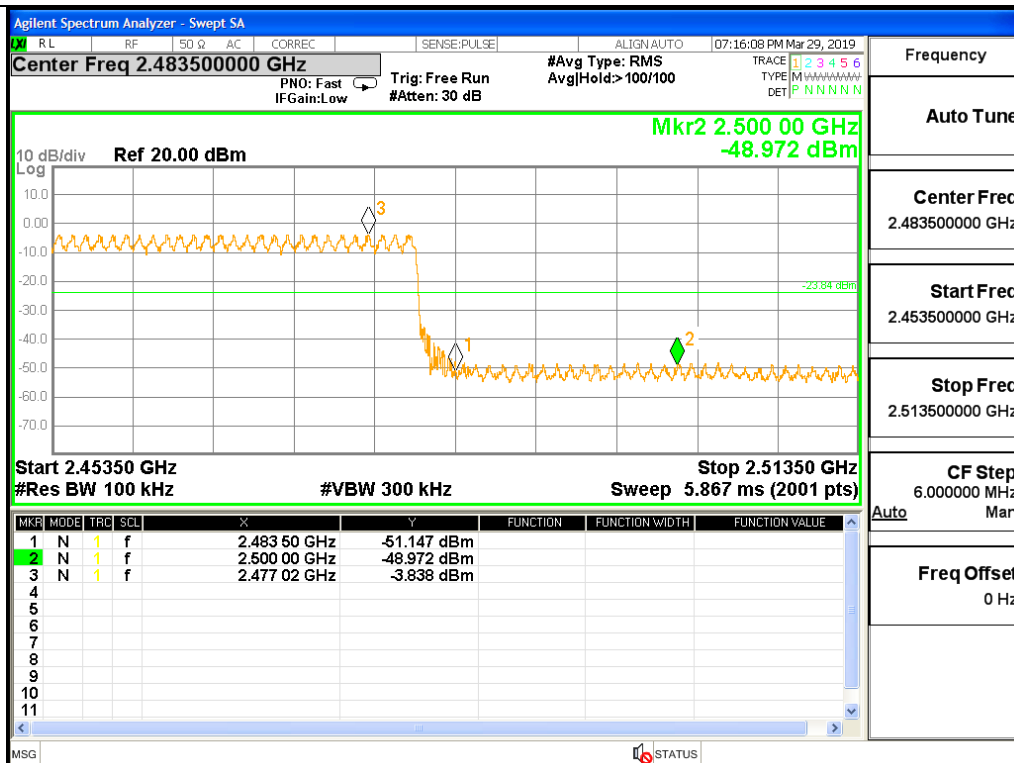


π /4DQPSK/LCH/Hop π /4DQPSK/HCH/Hop

8DPSK/LCH/Hop

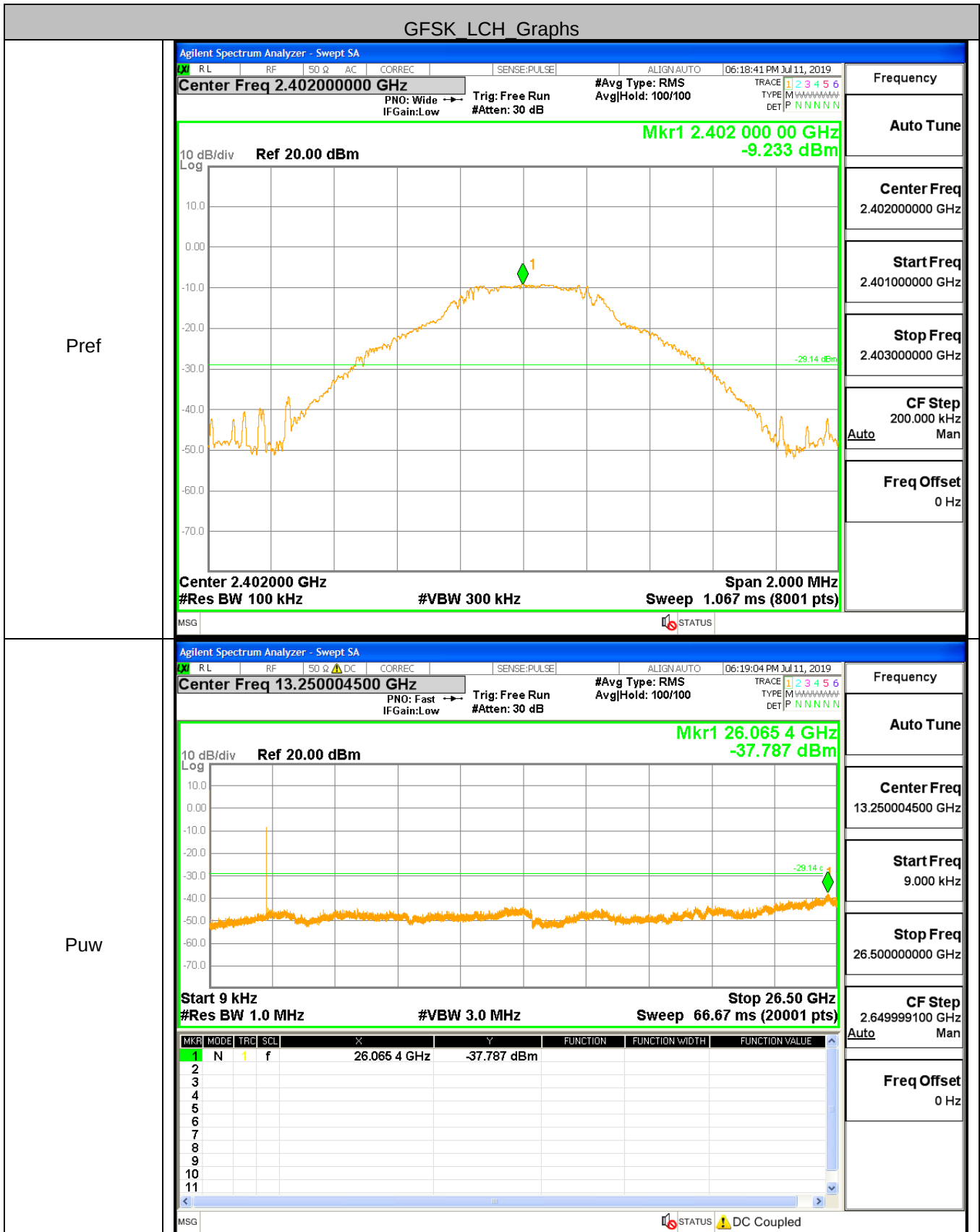


8DPSK/HCH/Hop



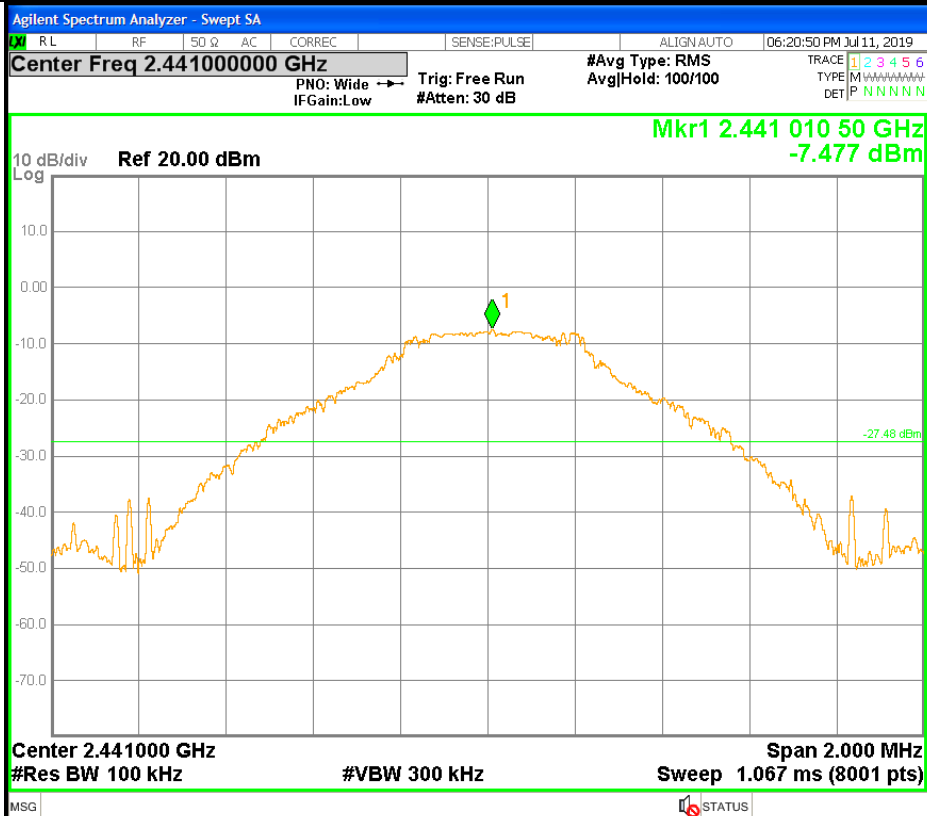
A.7 RF Conducted Spurious Emissions

Test Graph

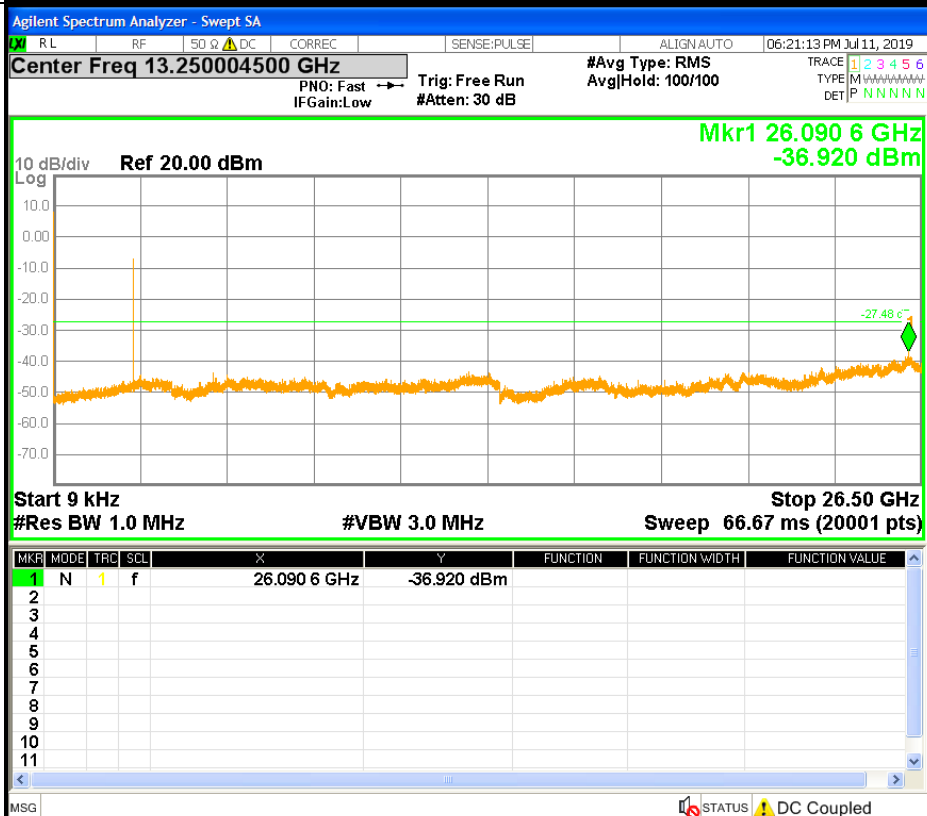


GFSK MCH Graphs

Pref

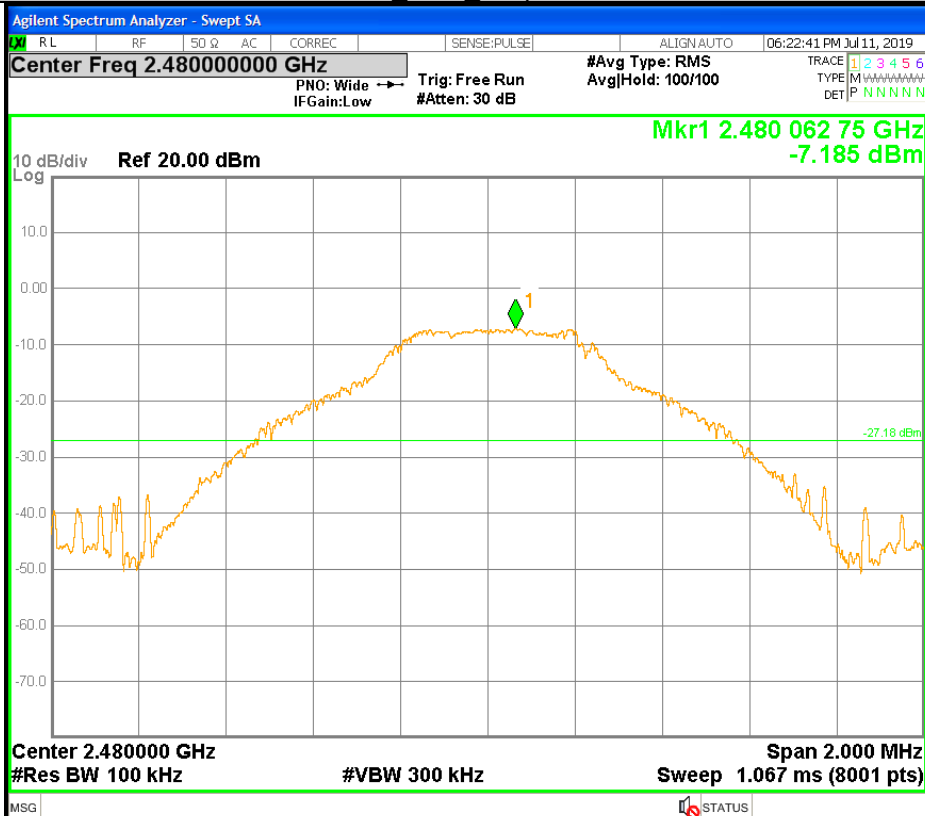


Puw

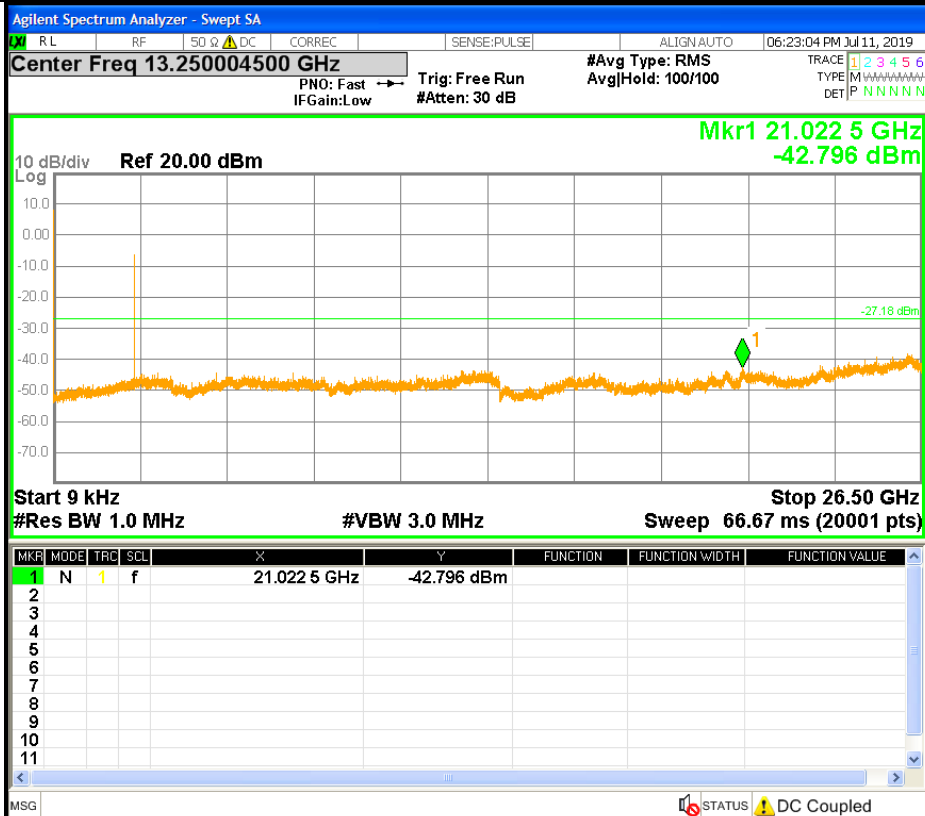


GFSK HCH Graphs

Pref

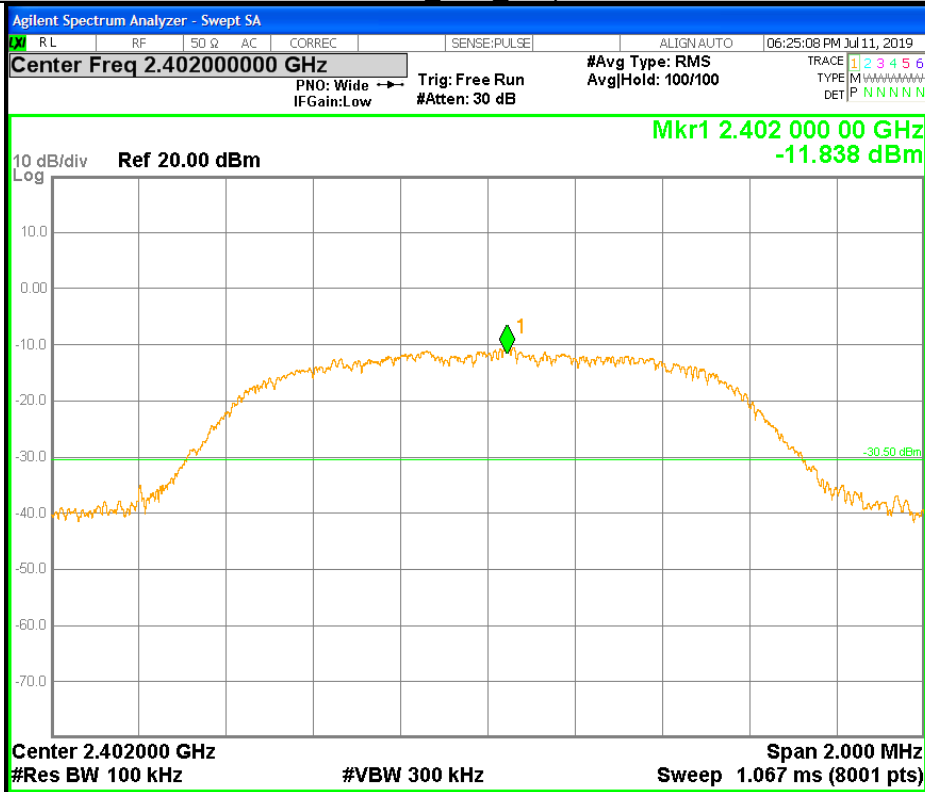


Puw



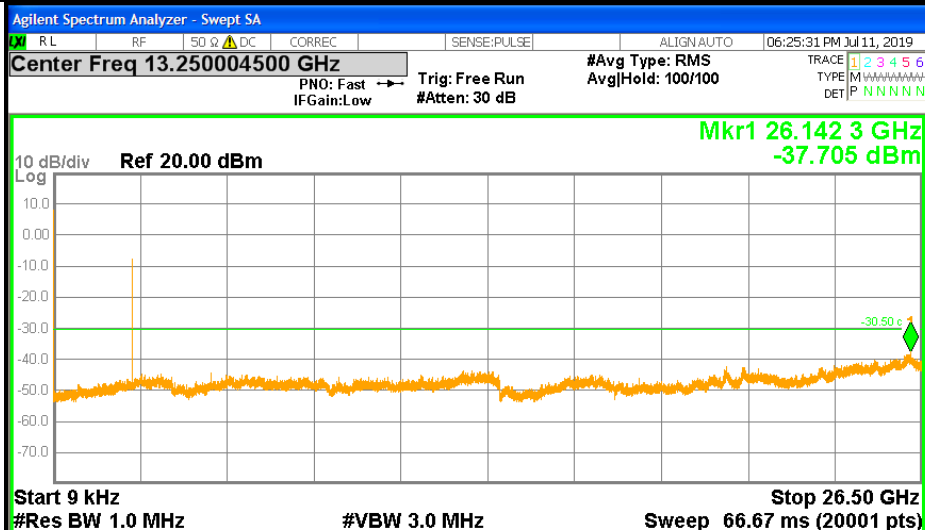
$\pi/4$ DQPSK LCH Graphs

Pref



Frequency
Auto Tune
Center Freq 2.402000000 GHz
Start Freq 2.401000000 GHz
Stop Freq 2.403000000 GHz
CF Step 200.000 kHz Auto
Freq Offset 0 Hz

Puw

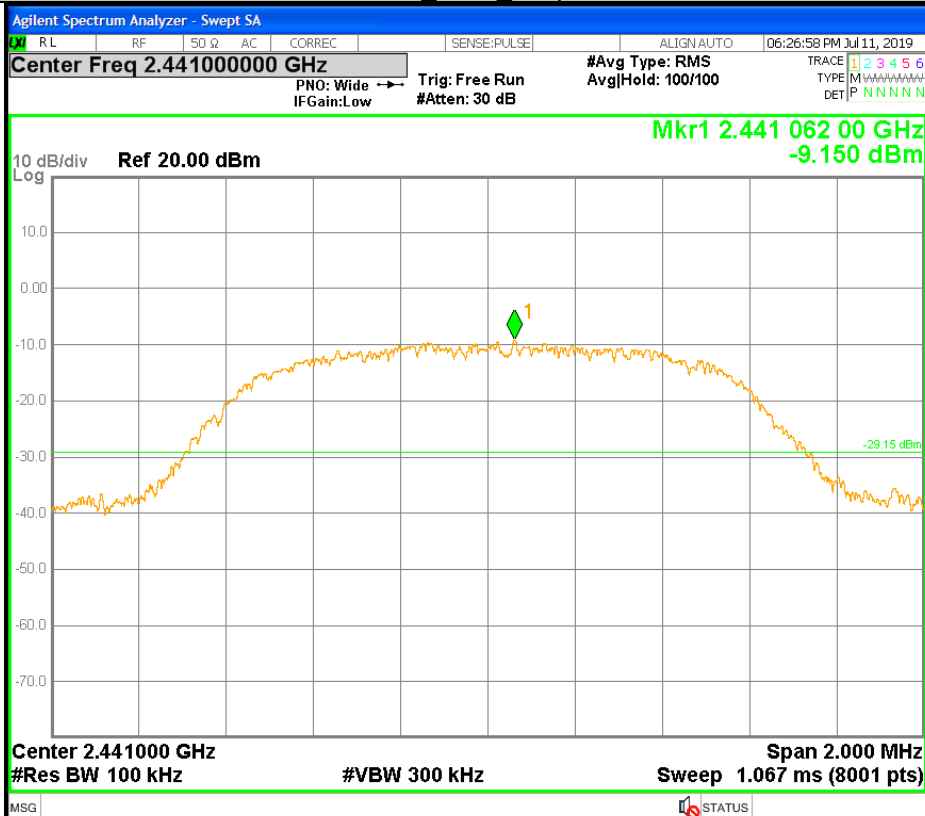


Frequency
Auto Tune
Center Freq 13.250004500 GHz
Start Freq 9.000 kHz
Stop Freq 26.500000000 GHz
CF Step 2.649999100 GHz Auto
Freq Offset 0 Hz

MR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	26.142 3 GHz	-37.705 dBm			
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								

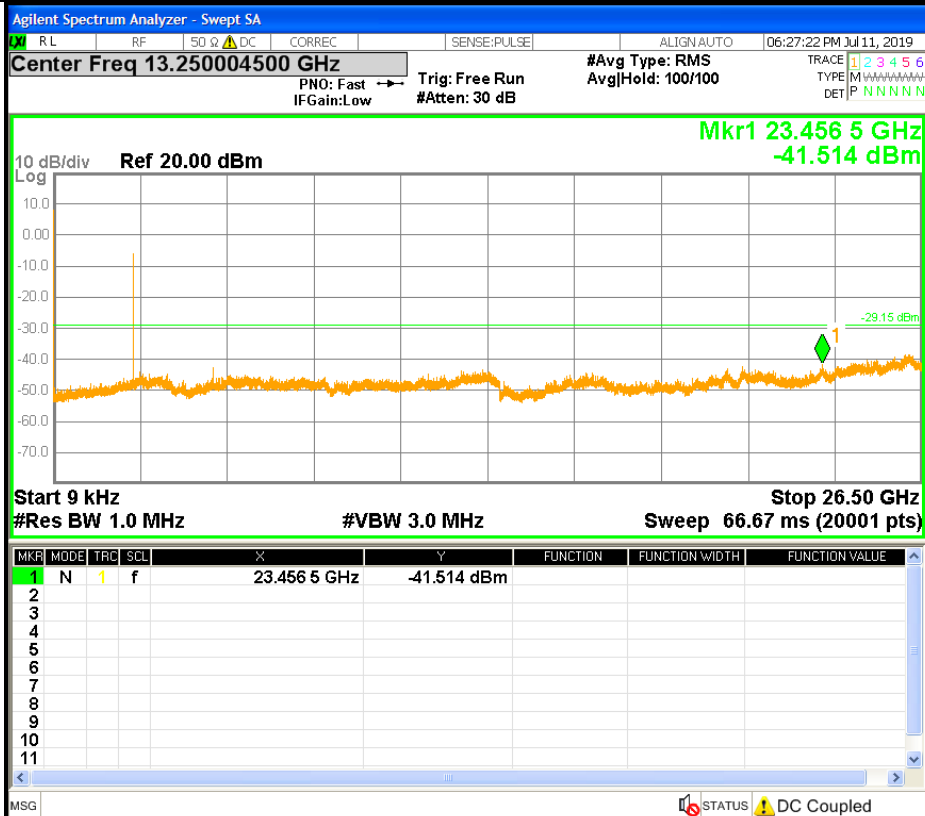
$\pi/4$ DQPSK MCH Graphs

Pref



Frequency
Auto Tune
Center Freq 2.441000000 GHz
Start Freq 2.440000000 GHz
Stop Freq 2.442000000 GHz
CF Step 200.000 kHz Auto
Freq Offset 0 Hz

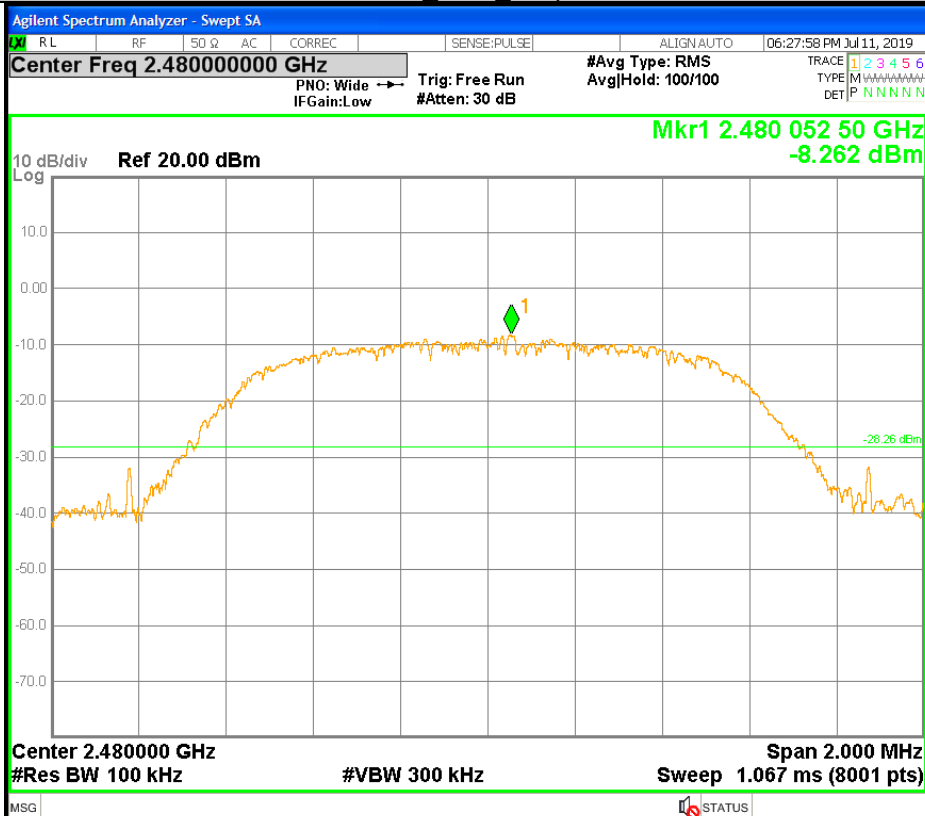
Puw



Frequency
Auto Tune
Center Freq 13.250004500 GHz
Start Freq 9.000 kHz
Stop Freq 26.500000000 GHz
CF Step 2.649999100 GHz Auto
Freq Offset 0 Hz

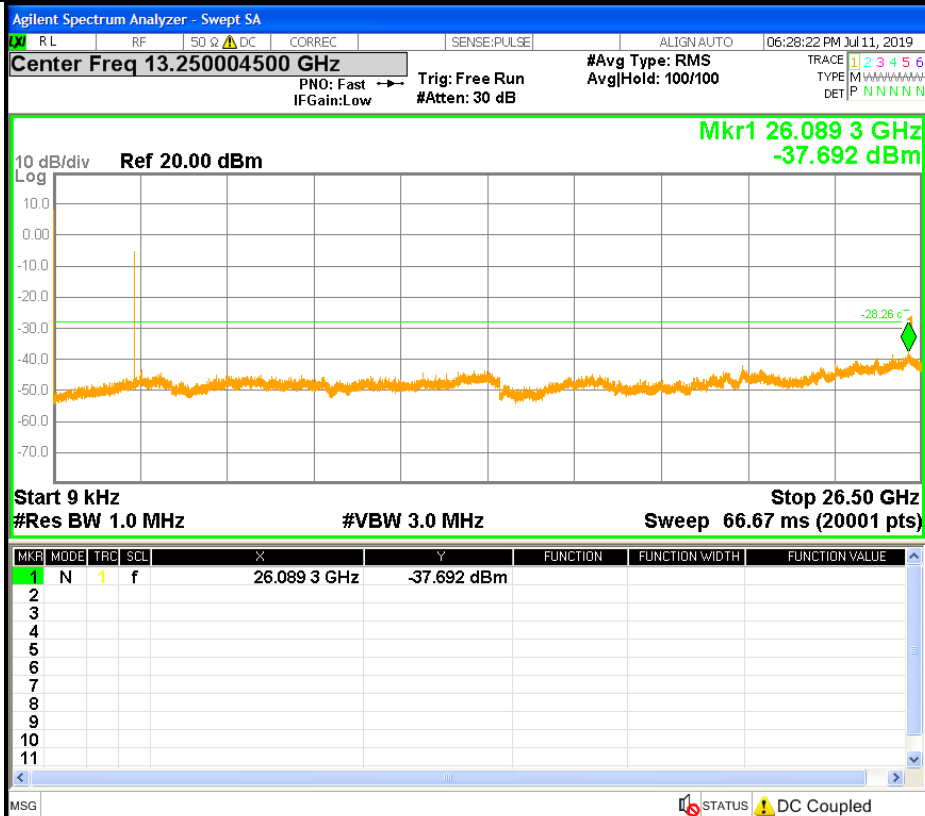
$\pi/4$ DQPSK HCH Graphs

Pref



Frequency
Auto Tune
Center Freq 2.480000000 GHz
Start Freq 2.479000000 GHz
Stop Freq 2.481000000 GHz
CF Step 200.000 kHz Auto
Freq Offset 0 Hz

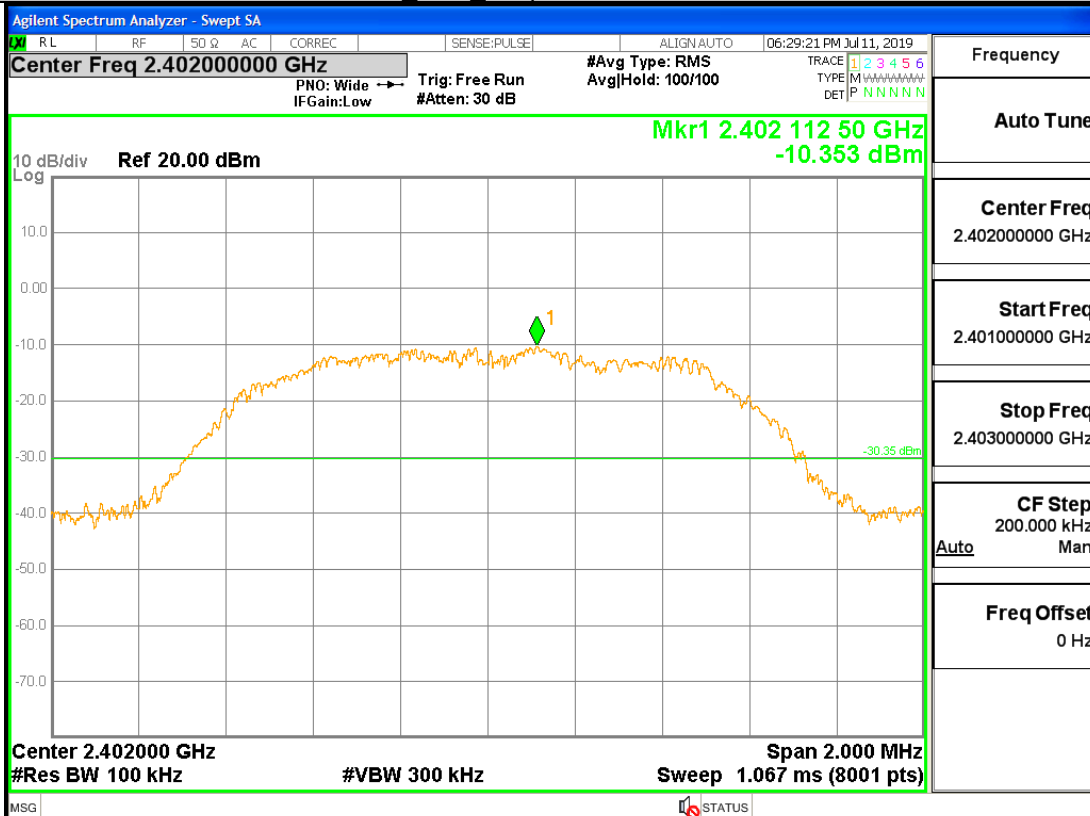
Puw



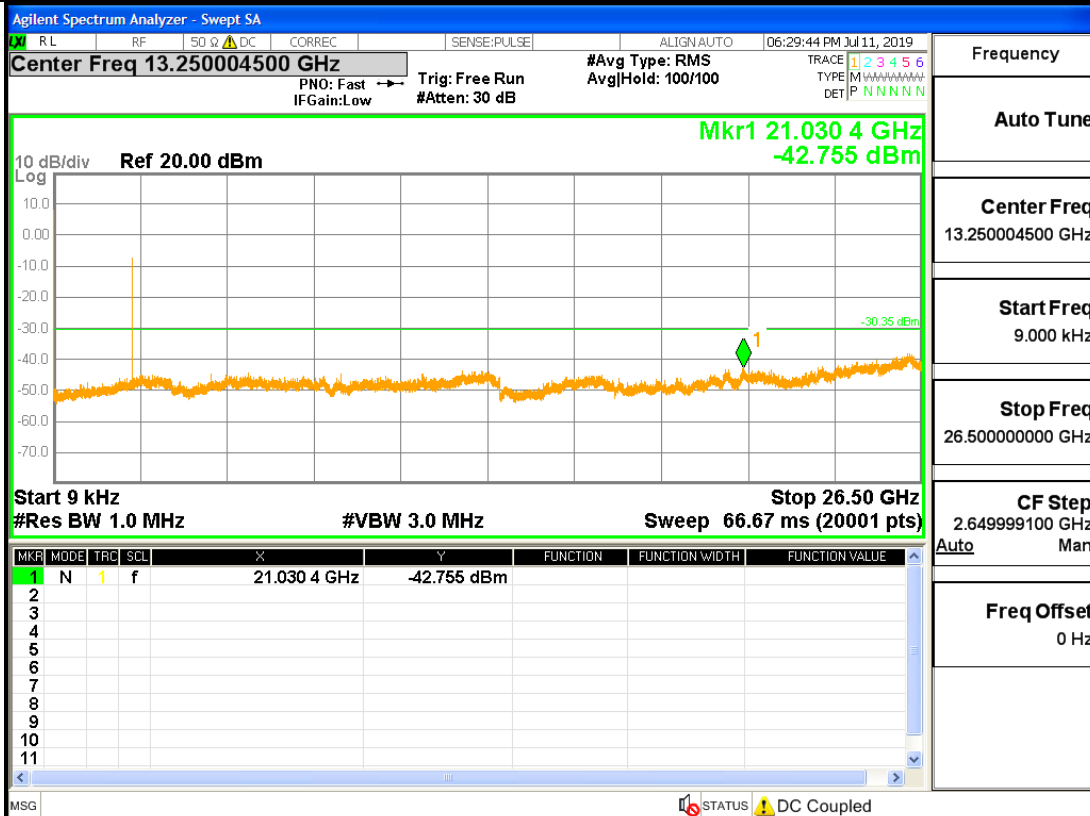
Frequency
Auto Tune
Center Freq 13.250004500 GHz
Start Freq 9.000 kHz
Stop Freq 26.500000000 GHz
CF Step 2.649999100 GHz Auto
Freq Offset 0 Hz

8DPSK LCH Graphs

Pref

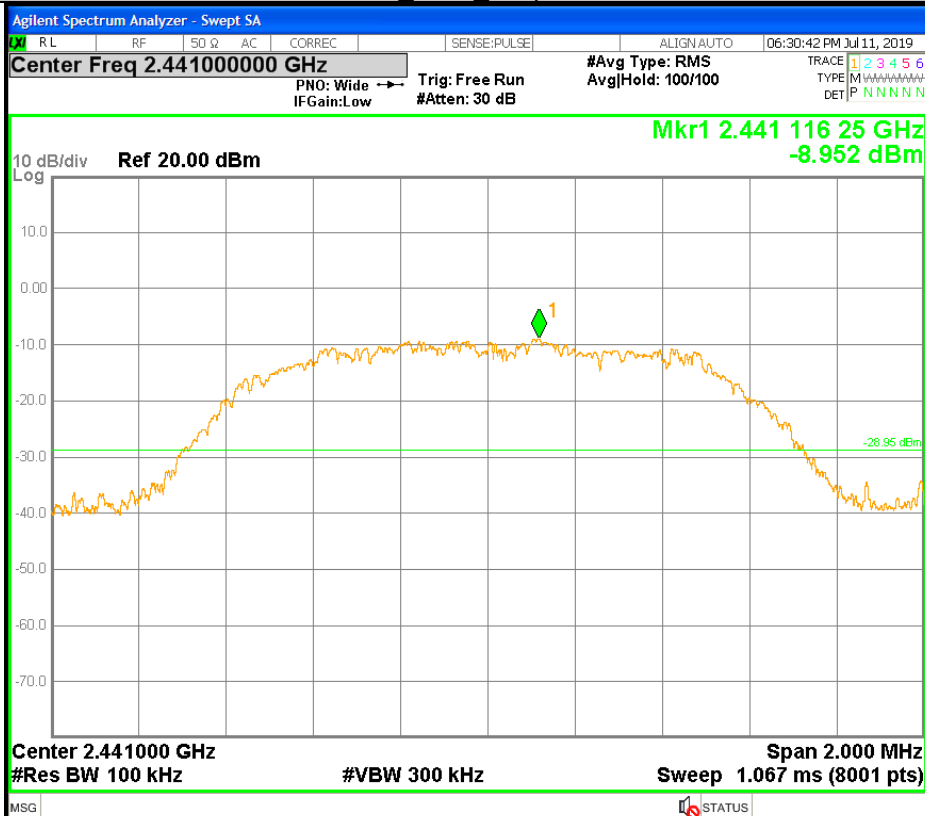


PuW



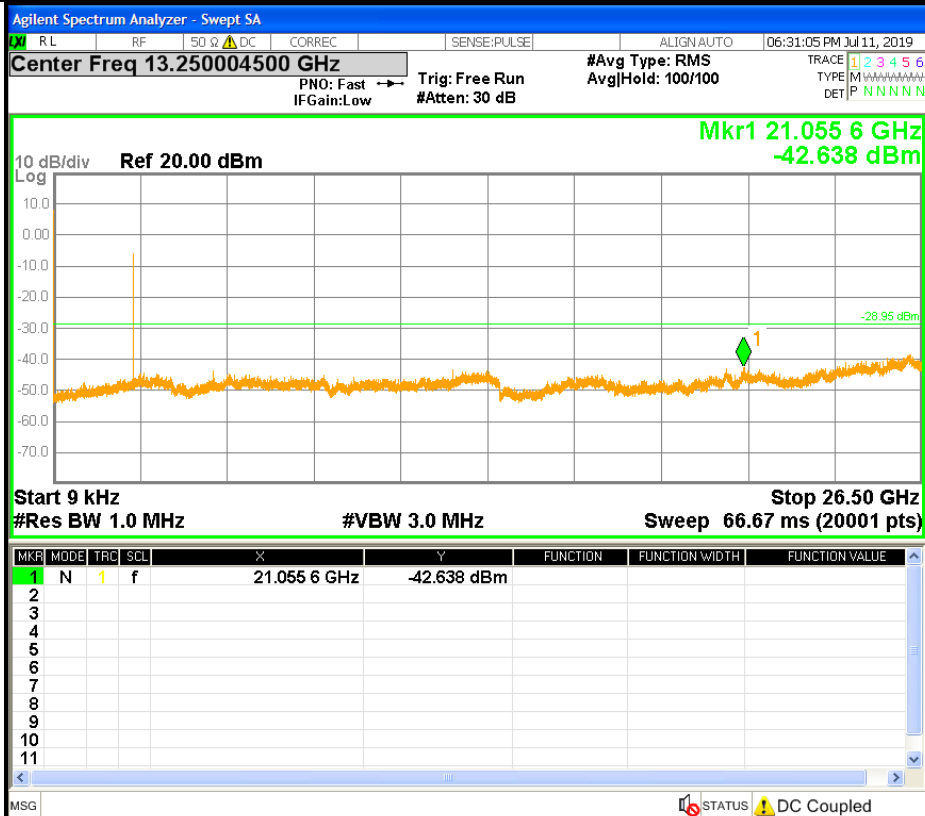
8DPSK MCH Graphs

Pref



Frequency
Auto Tune
Center Freq 2.441000000 GHz
Start Freq 2.440000000 GHz
Stop Freq 2.442000000 GHz
CF Step 200.000 kHz Auto Man
Freq Offset 0 Hz

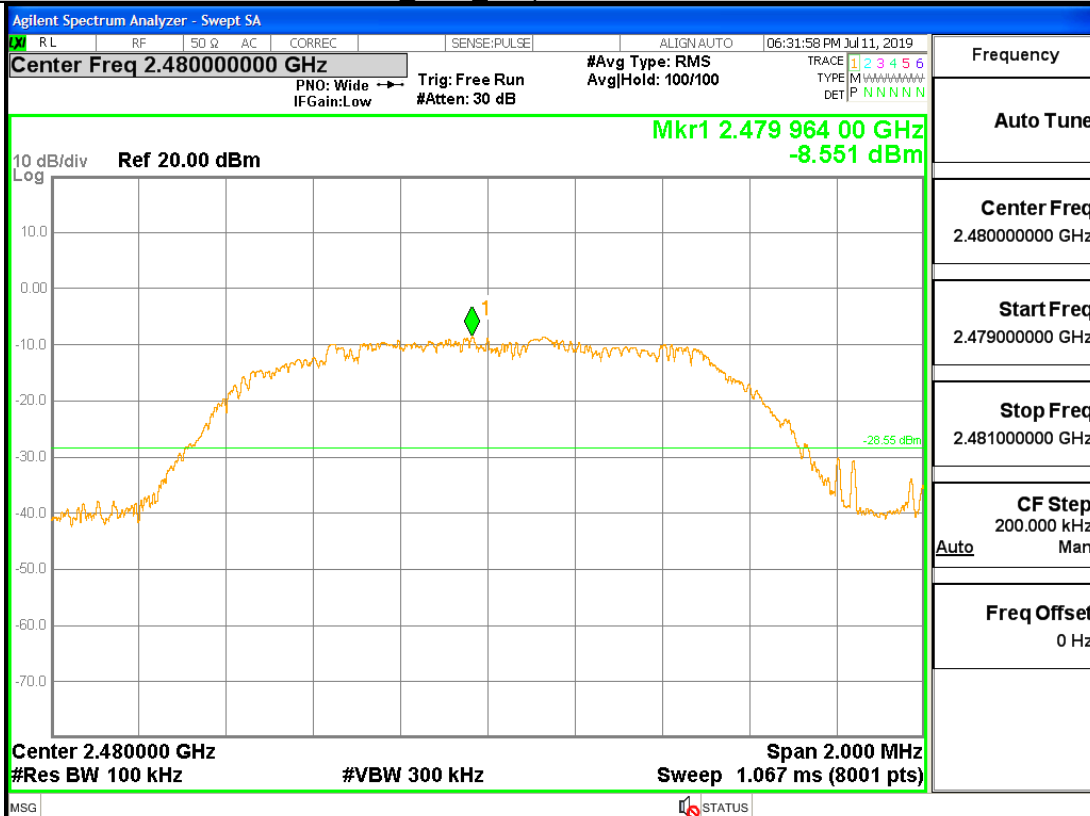
Puw



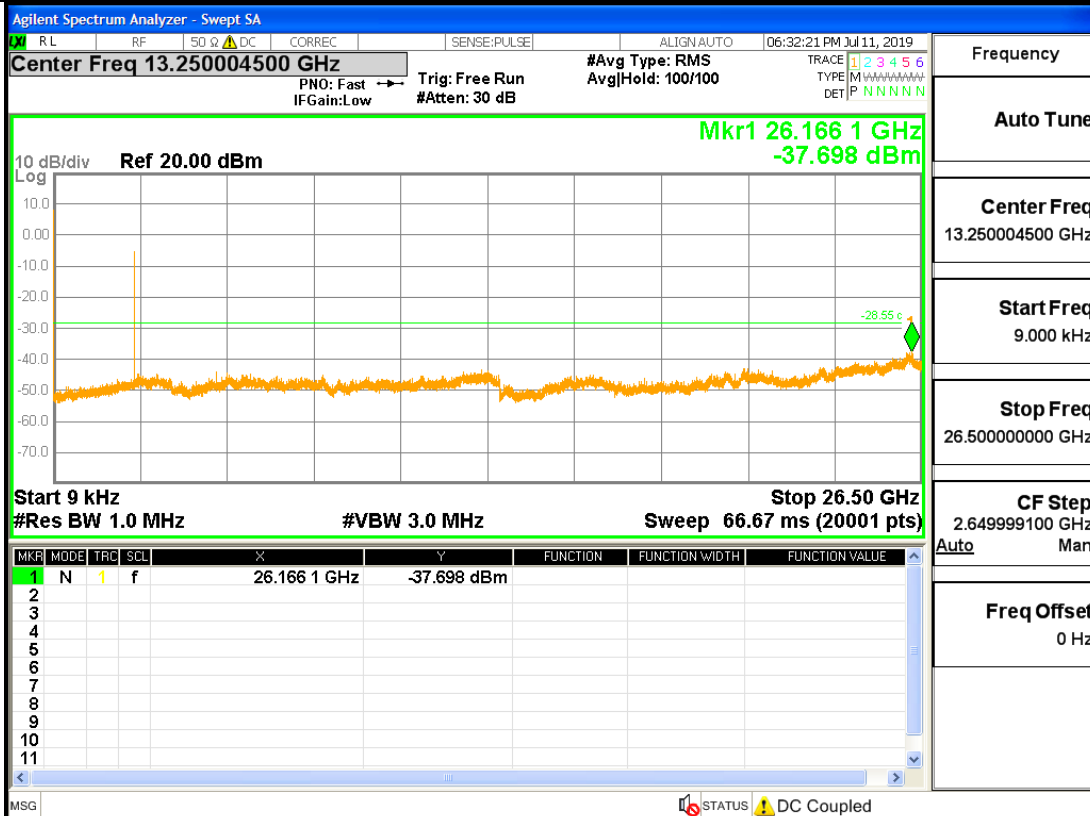
Frequency
Auto Tune
Center Freq 13.250004500 GHz
Start Freq 9.000 kHz
Stop Freq 26.500000000 GHz
CF Step 2.649999100 GHz Auto Man
Freq Offset 0 Hz

8DPSK HCH Graphs

Pref



Puw

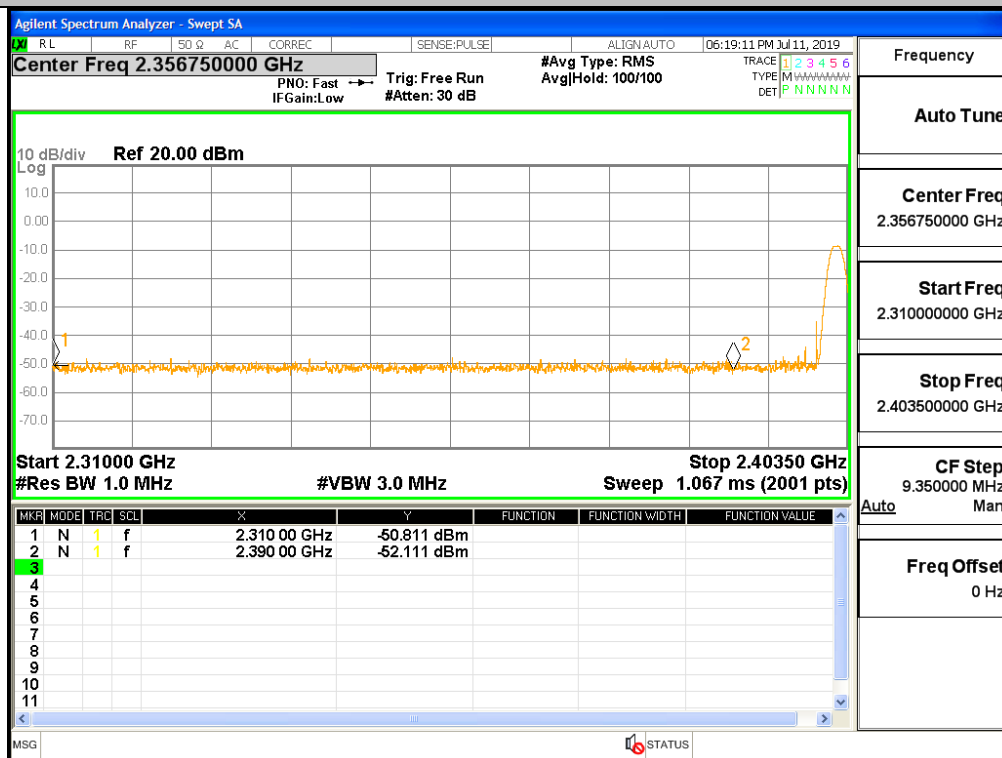


A.8 Restrict-band band-edge measurements

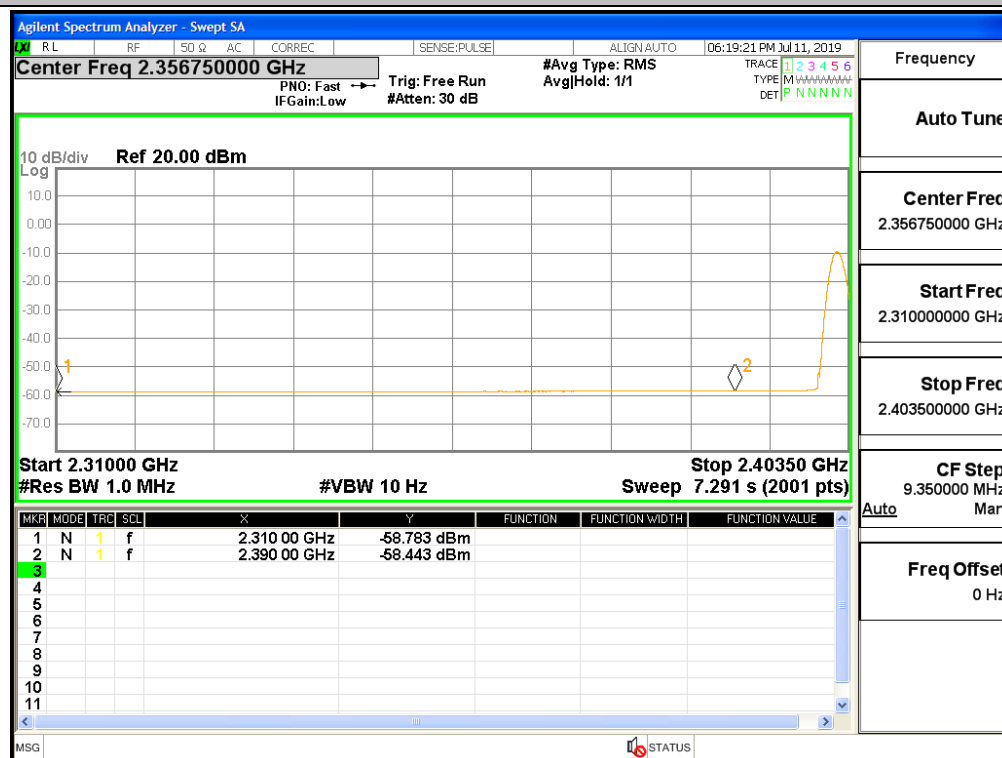
Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2310.00	2.00	0.00	-50.81	46.39	74	Pass
1DH5	2480	2484.13	2.00	0.00	-40.11	57.09	74	Pass
2DH5	2402	2390.00	2.00	0.00	-51.07	46.13	74	Pass
2DH5	2480	2483.91	2.00	0.00	-38.39	58.81	74	Pass
3DH5	2402	2390.00	2.00	0.00	-50.89	46.31	74	Pass
3DH5	2480	2483.85	2.00	0.00	-38.57	58.64	74	Pass

Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Average Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390.00	2.00	0.00	-58.44	38.76	54	Pass
1DH5	2480	2483.50	2.00	0.00	-57.42	39.78	54	Pass
2DH5	2402	2390.00	2.00	0.00	-58.44	38.76	54	Pass
2DH5	2480	2483.50	2.00	0.00	-56.74	40.46	54	Pass
3DH5	2402	2390.00	2.00	0.00	-58.48	38.72	54	Pass
3DH5	2480	2483.50	2.00	0.00	-56.57	40.63	54	Pass

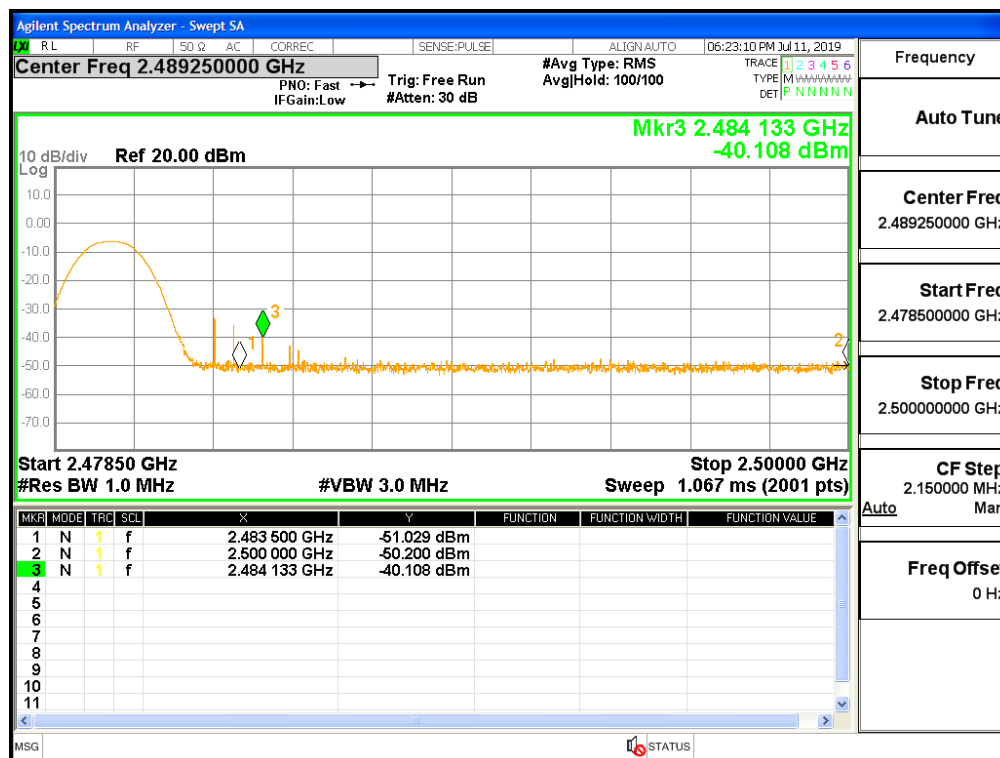
Restrict-band band-edge measurements_2402_PEAK_DH5



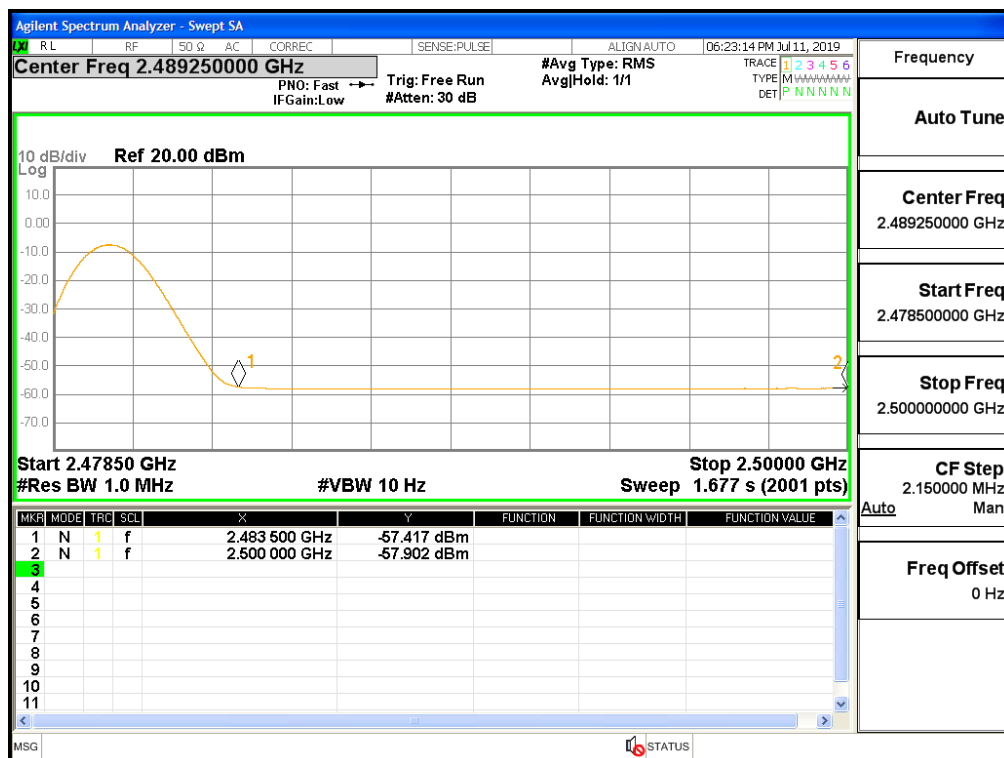
Restrict-band band-edge measurements_2402_AV_DH5



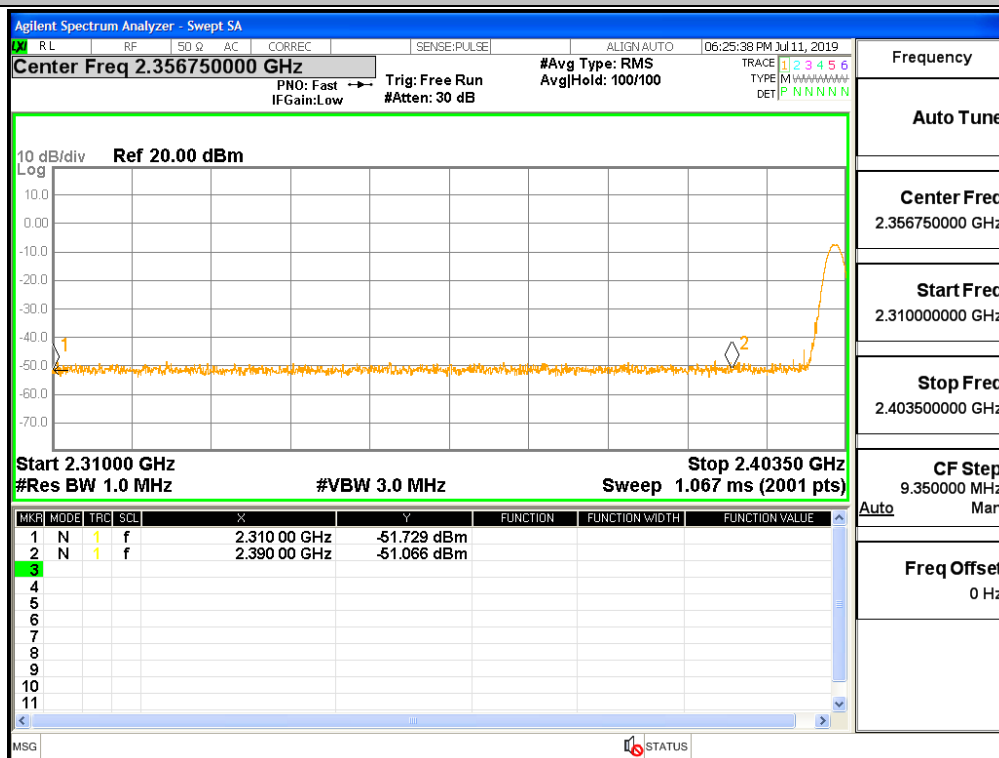
Restrict-band band-edge measurements_2480_PEAK_DH5



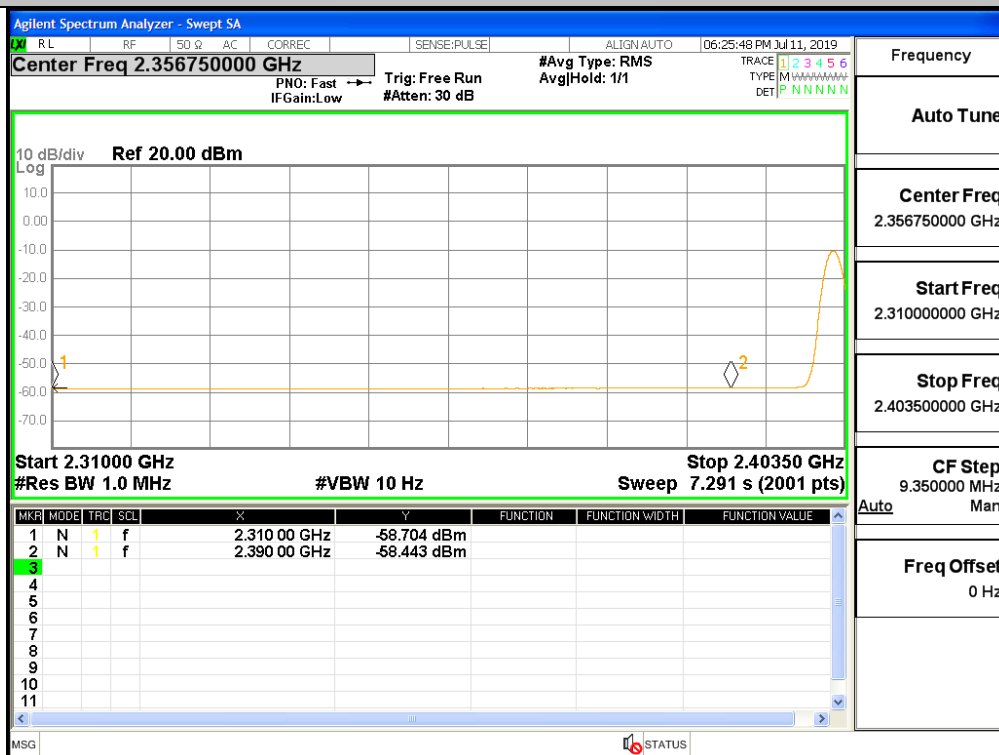
Restrict-band band-edge measurements_2480_AV_DH5



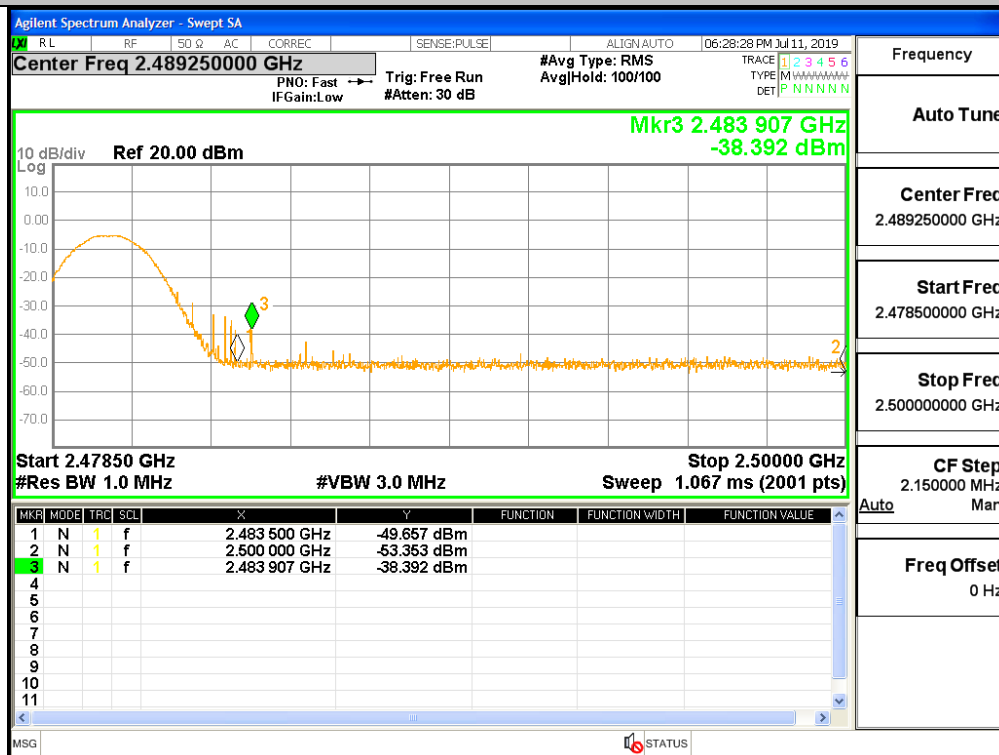
Restrict-band band-edge measurements_2402_PEAK_2DH5



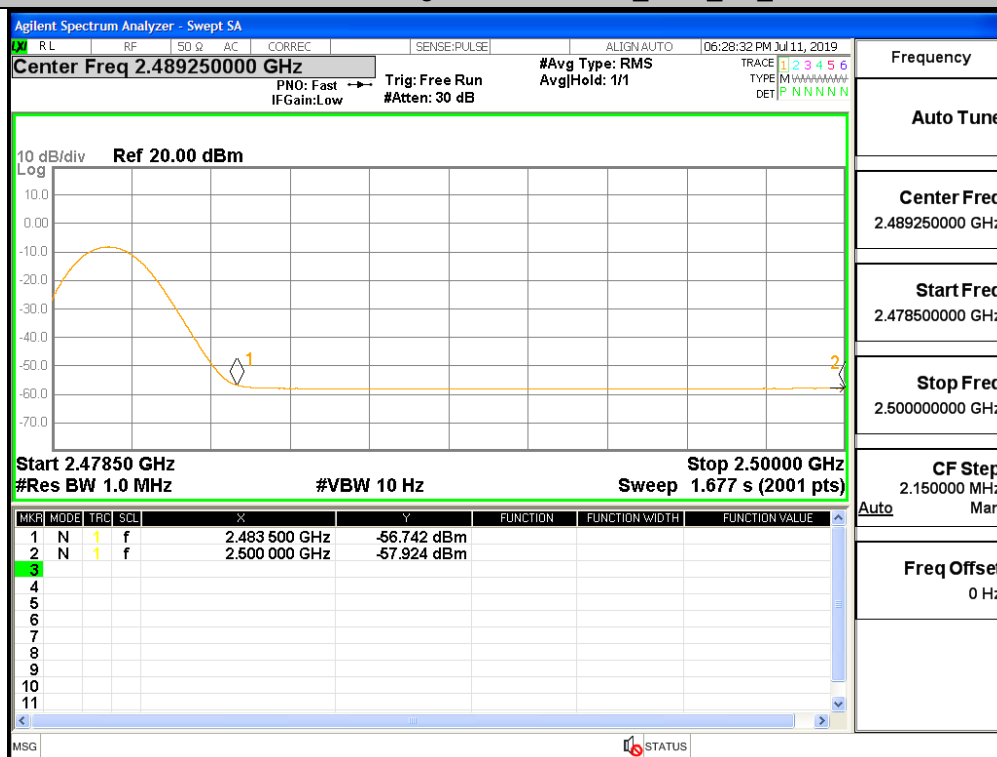
Restrict-band band-edge measurements_2402_AV_2DH5



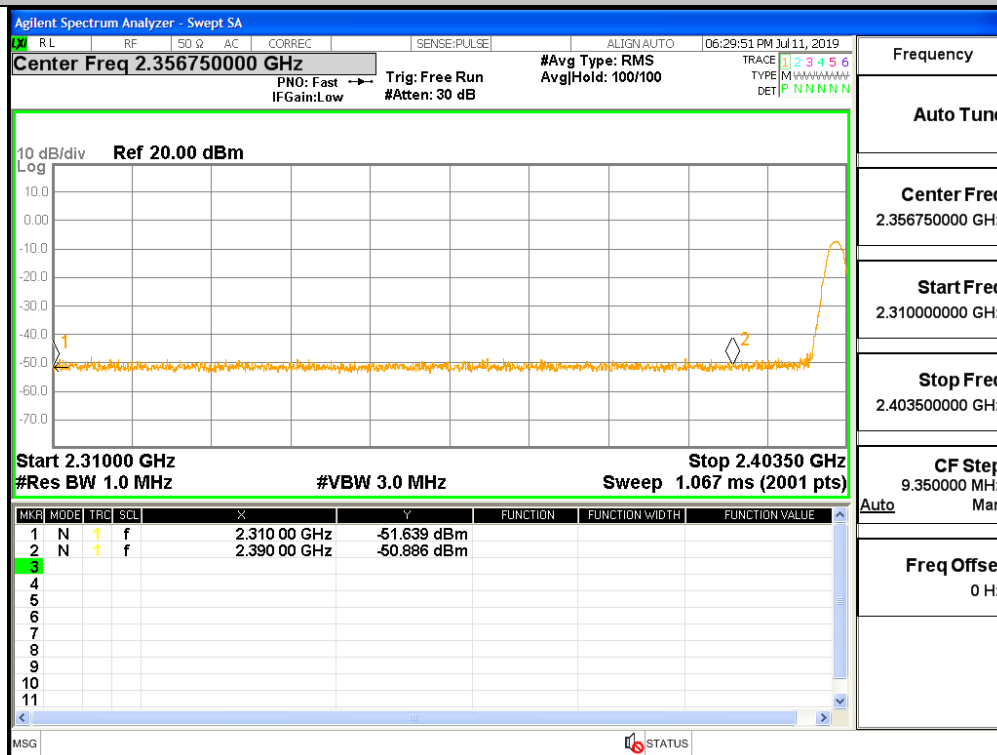
Restrict-band band-edge measurements_2480_PEAK_2DH5



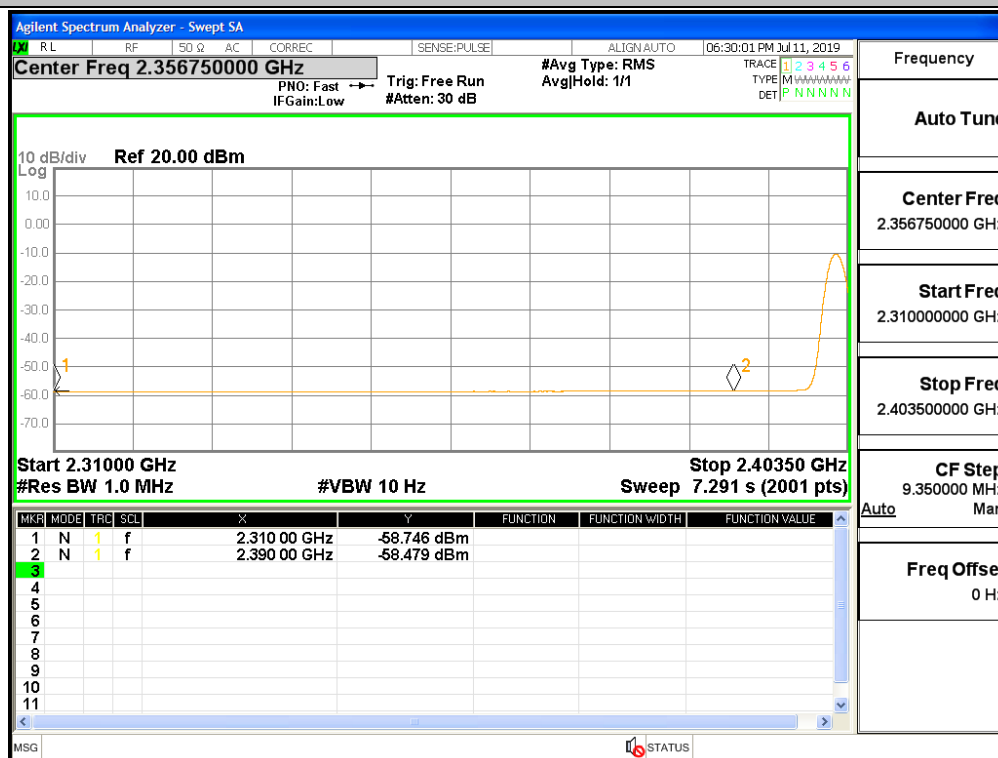
Restrict-band band-edge measurements_2480_AV_2DH5



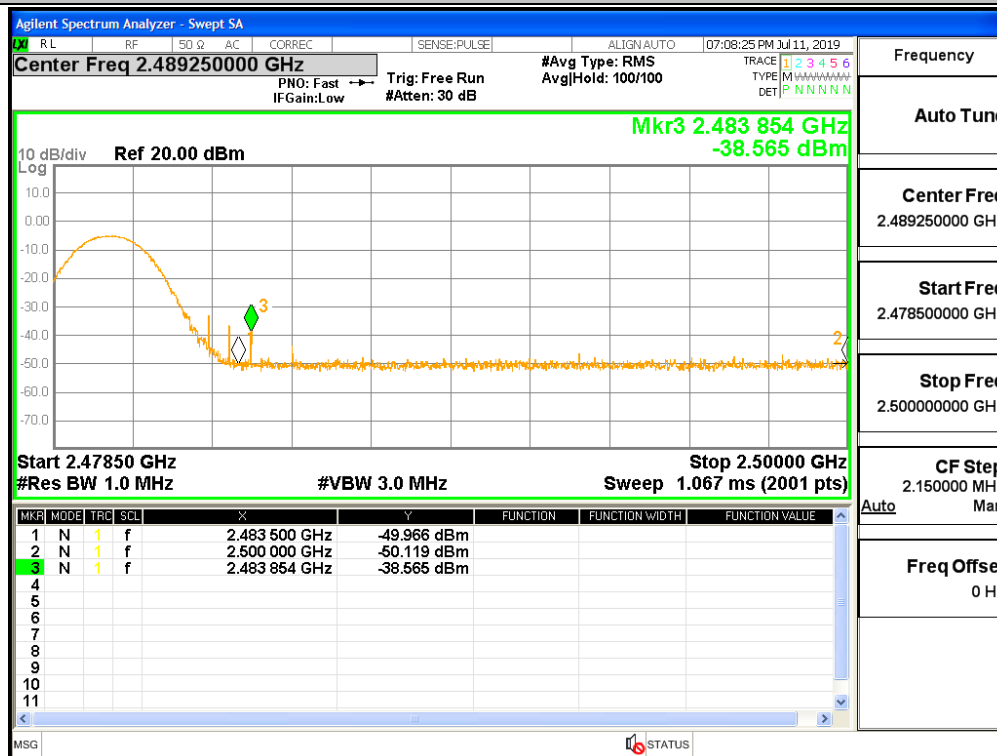
Restrict-band band-edge measurements_2402_PEAK_3DH5



Restrict-band band-edge measurements_2402_AV_3DH5



Restrict-band band-edge measurements_2480_PEAK_3DH5



Restrict-band band-edge measurements_2480_AV_3DH5

