

Appendix A

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

Product Name: Receiver

Trade Mark: TOMATIS

Test Model: BB01

FCC ID: 2AQR2-BB01

Environmental Conditions

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

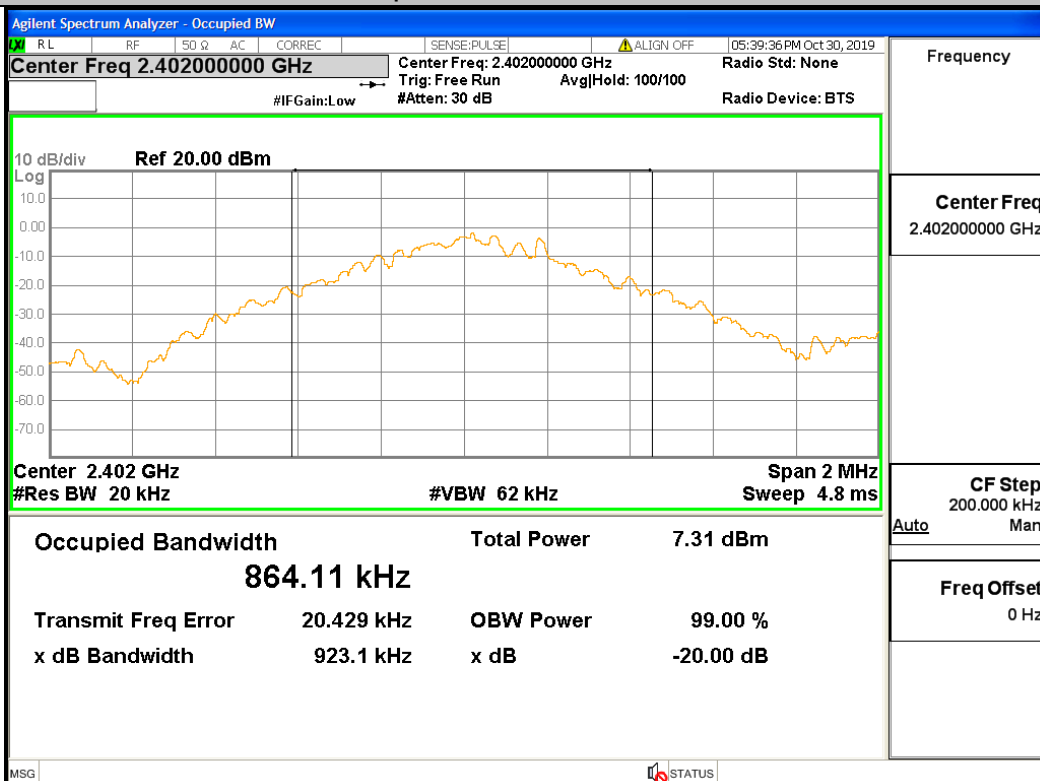
A.1 20 dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.923	Not Specified	PASS
GFSK	MCH	0.939	Not Specified	PASS
GFSK	HCH	0.948	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.223	Not Specified	PASS
$\pi/4$ DQPSK	MCH	1.232	Not Specified	PASS
$\pi/4$ DQPSK	HCH	1.228	Not Specified	PASS
8DPSK	LCH	1.288	Not Specified	PASS
8DPSK	MCH	1.253	Not Specified	PASS
8DPSK	HCH	1.277	Not Specified	PASS

Test Graph

Graphs

GFSK/LCH



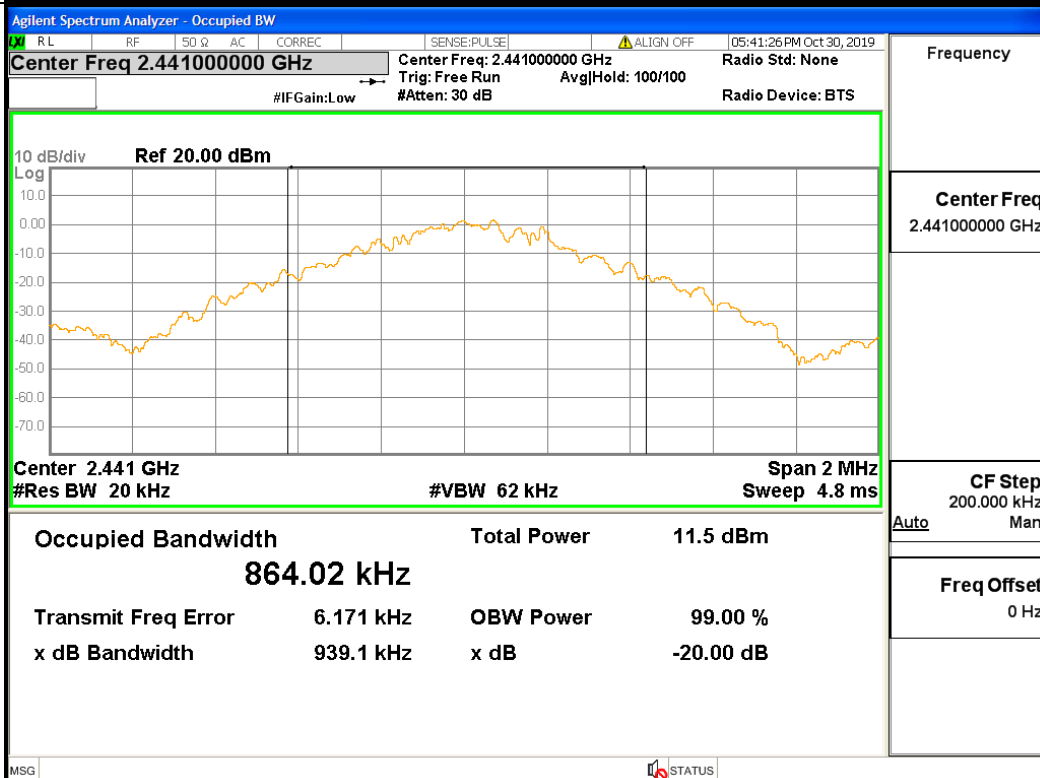
Frequency

Center Freq
2.40200000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

GFSK/MCH

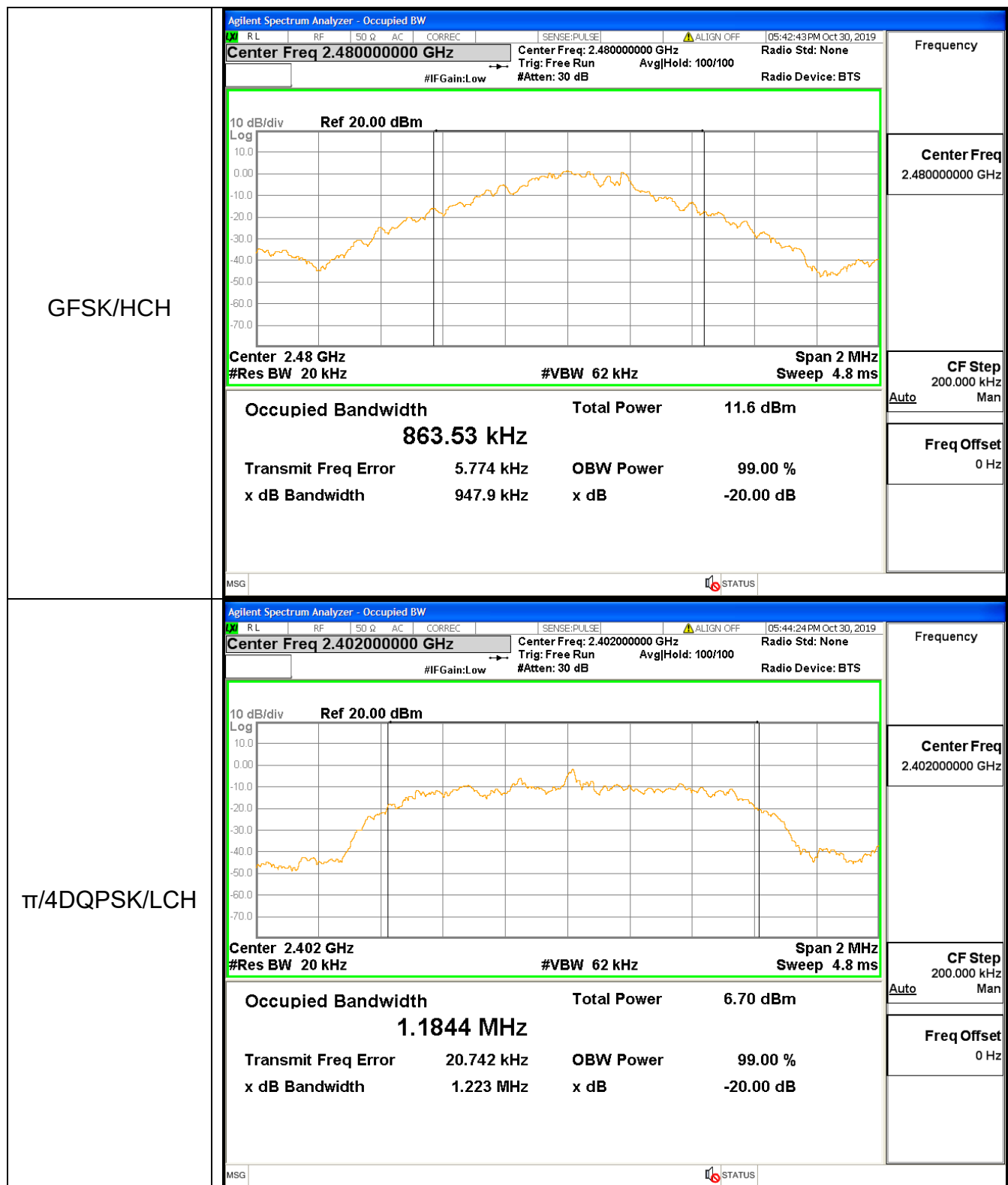


Frequency

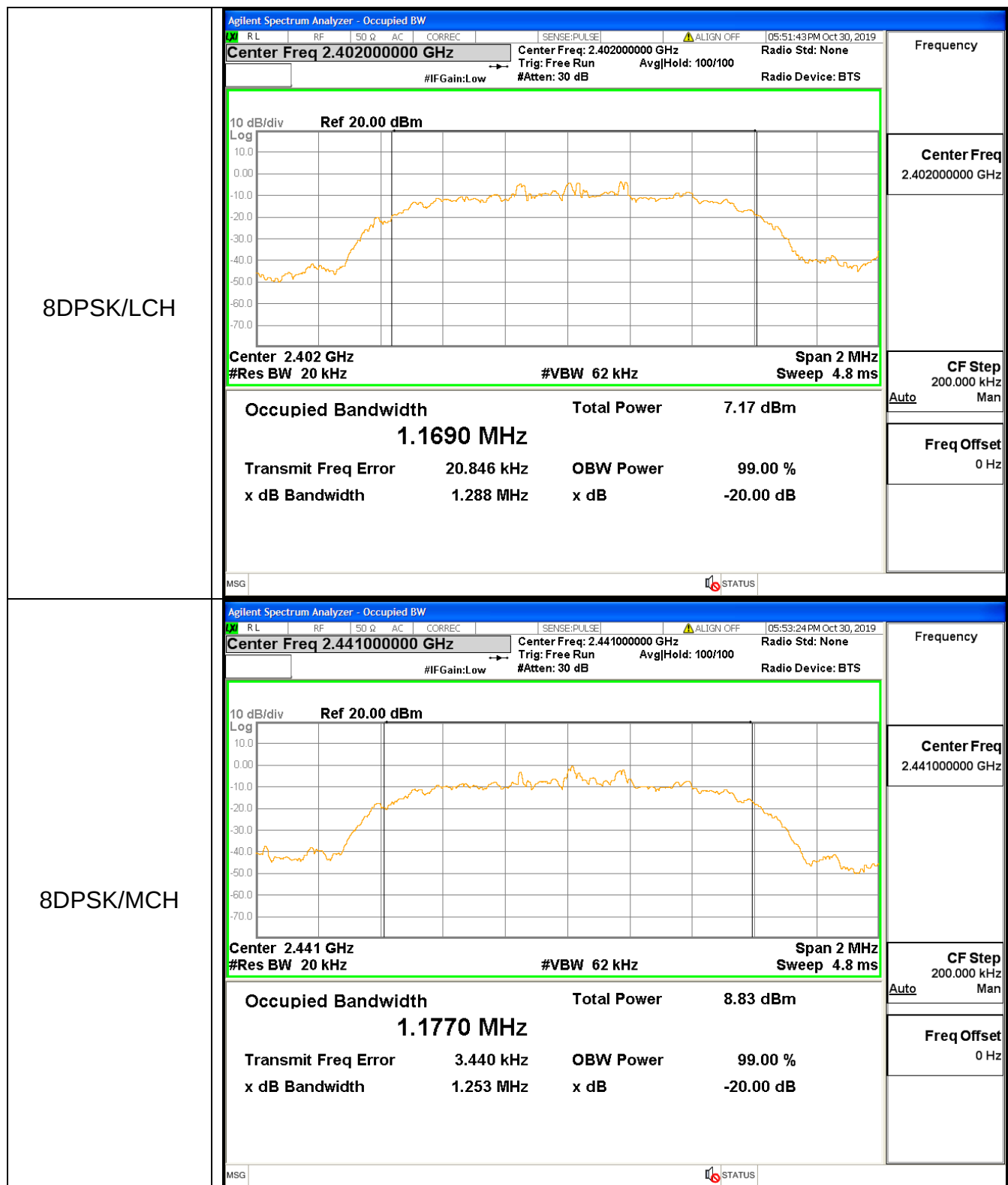
Center Freq
2.44100000 GHz

CF Step
200.000 kHz
Auto Man

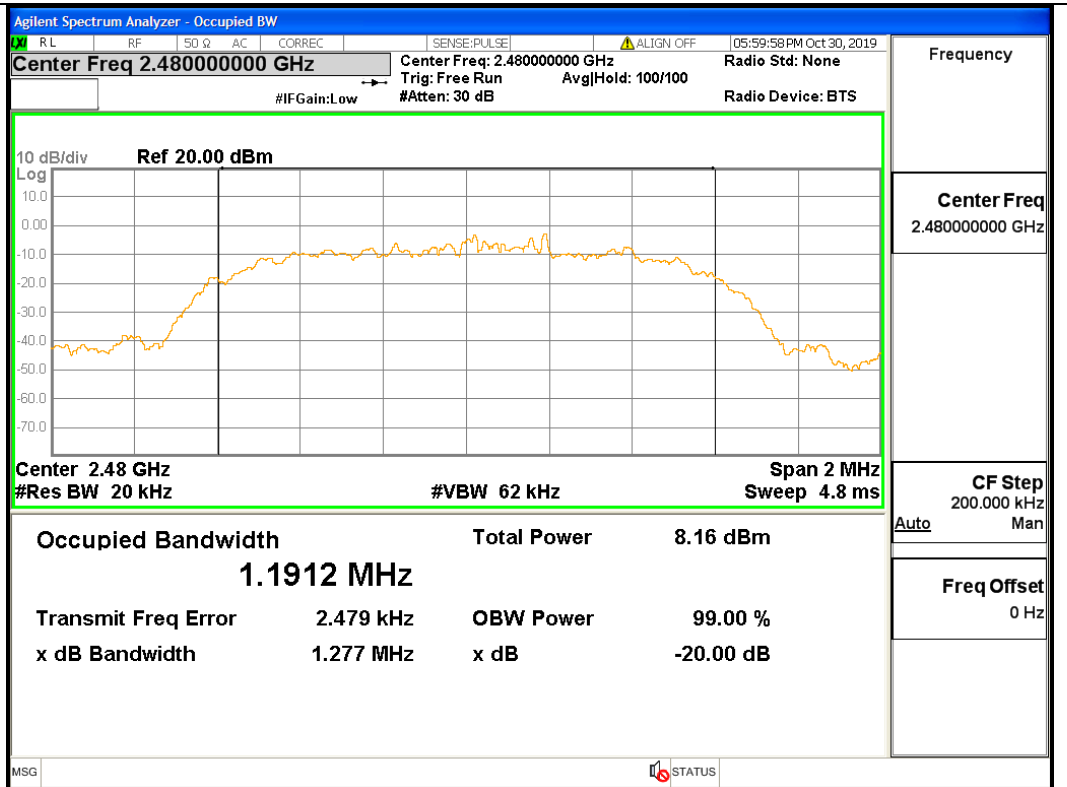
Freq Offset
0 Hz







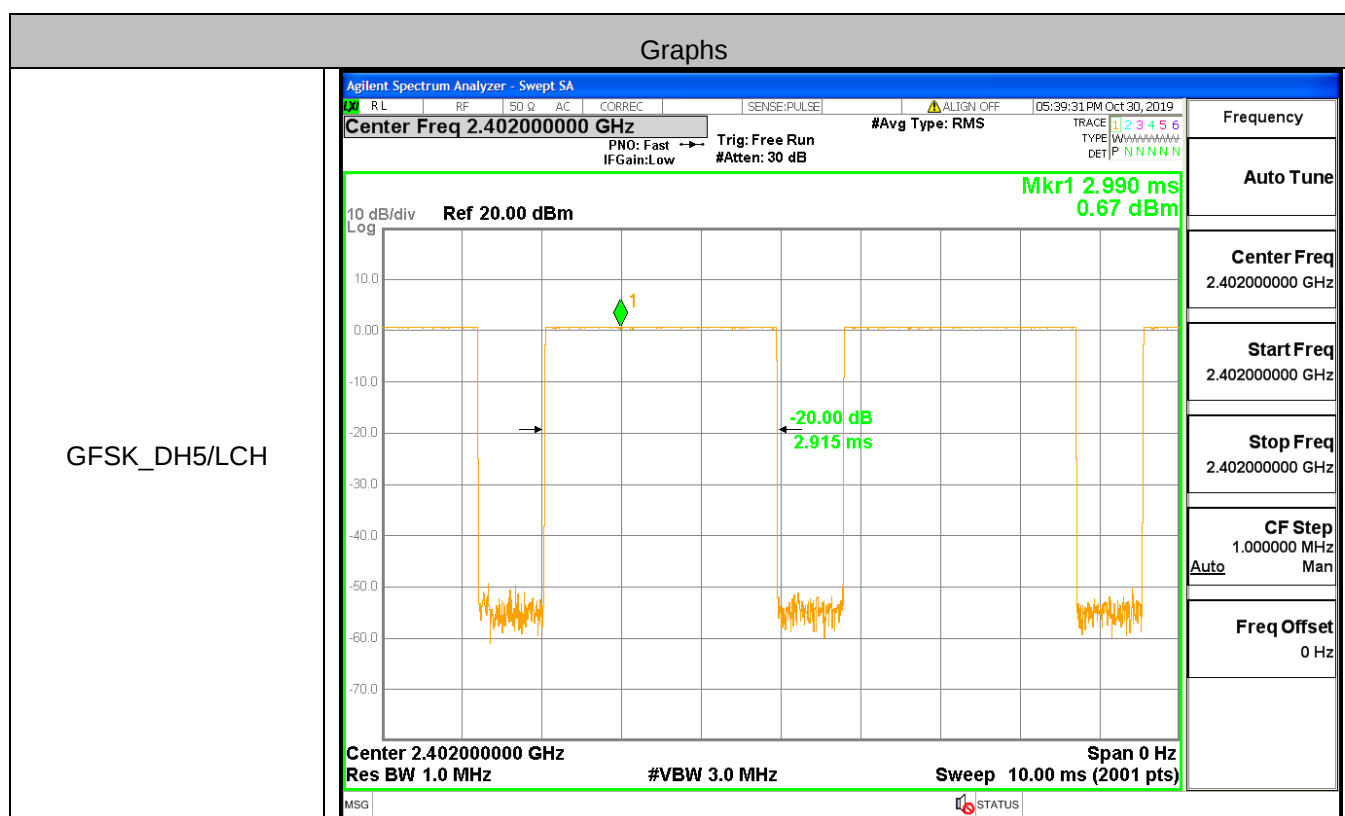
8DPSK/HCH

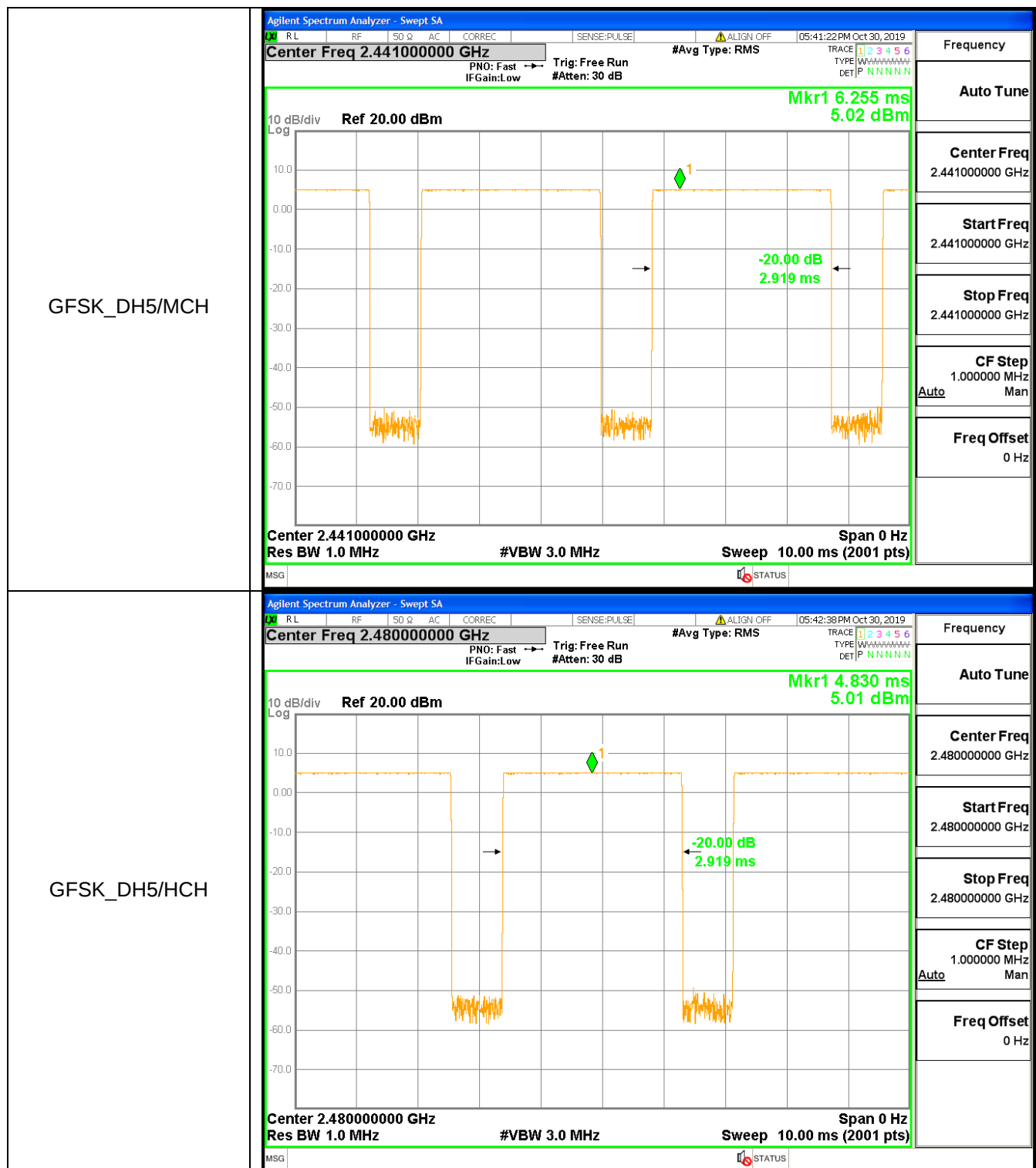


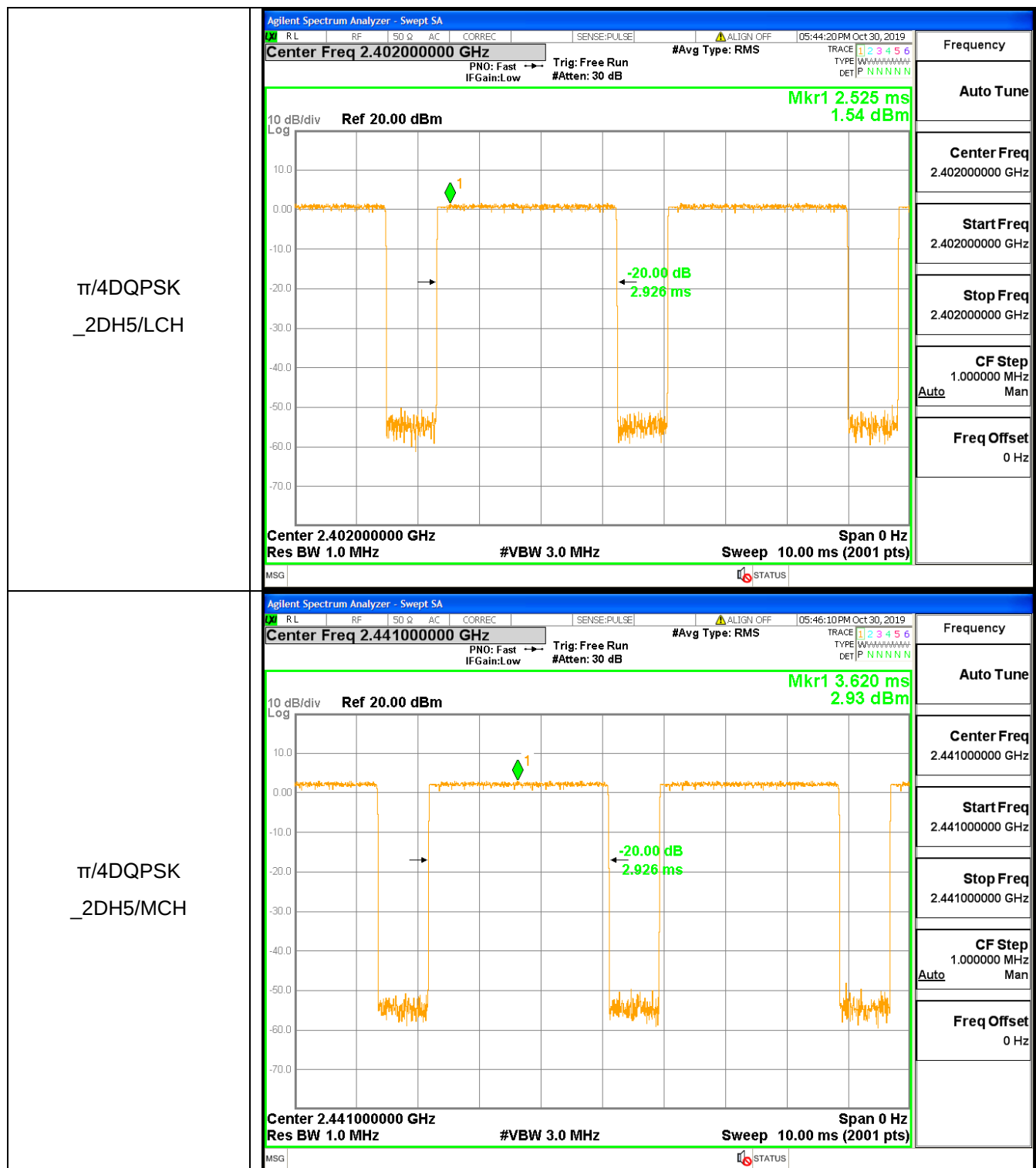
A.2 Dwell Time

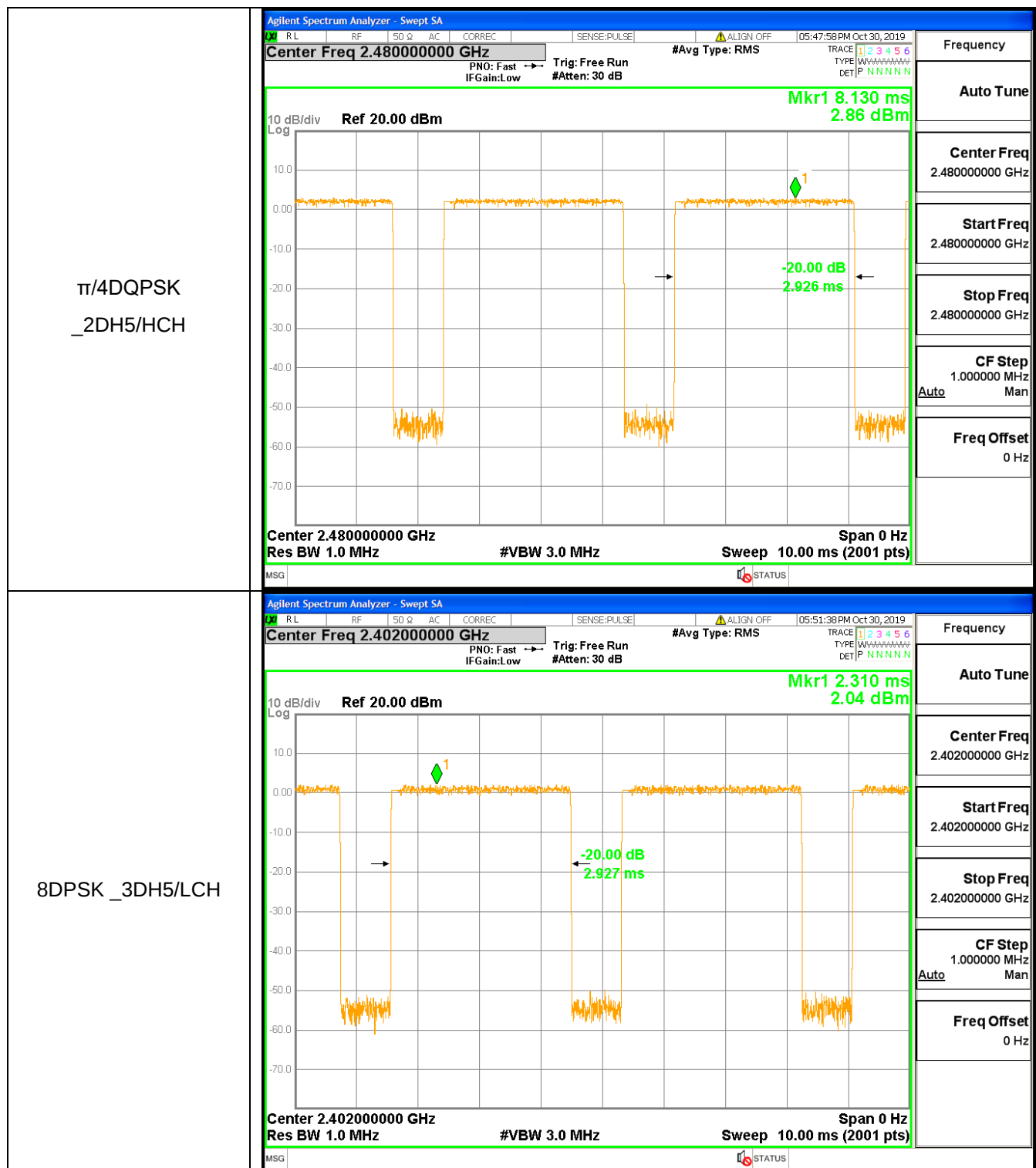
Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002915	106.7	0.311061	0.4	PASS
GFSK	DH5	MCH	0.002919	106.7	0.311419	0.4	PASS
GFSK	DH5	HCH	0.002919	106.7	0.311418	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	0.002926	106.7	0.312184	0.4	PASS
$\pi/4$ DQPSK	2DH5	MCH	0.002926	106.7	0.312205	0.4	PASS
$\pi/4$ DQPSK	2DH5	HCH	0.002926	106.7	0.312216	0.4	PASS
8DPSK	3DH5	LCH	0.002927	106.7	0.312355	0.4	PASS
8DPSK	3DH5	MCH	0.002927	106.7	0.312280	0.4	PASS
8DPSK	3DH5	HCH	0.002928	106.7	0.312422	0.4	PASS

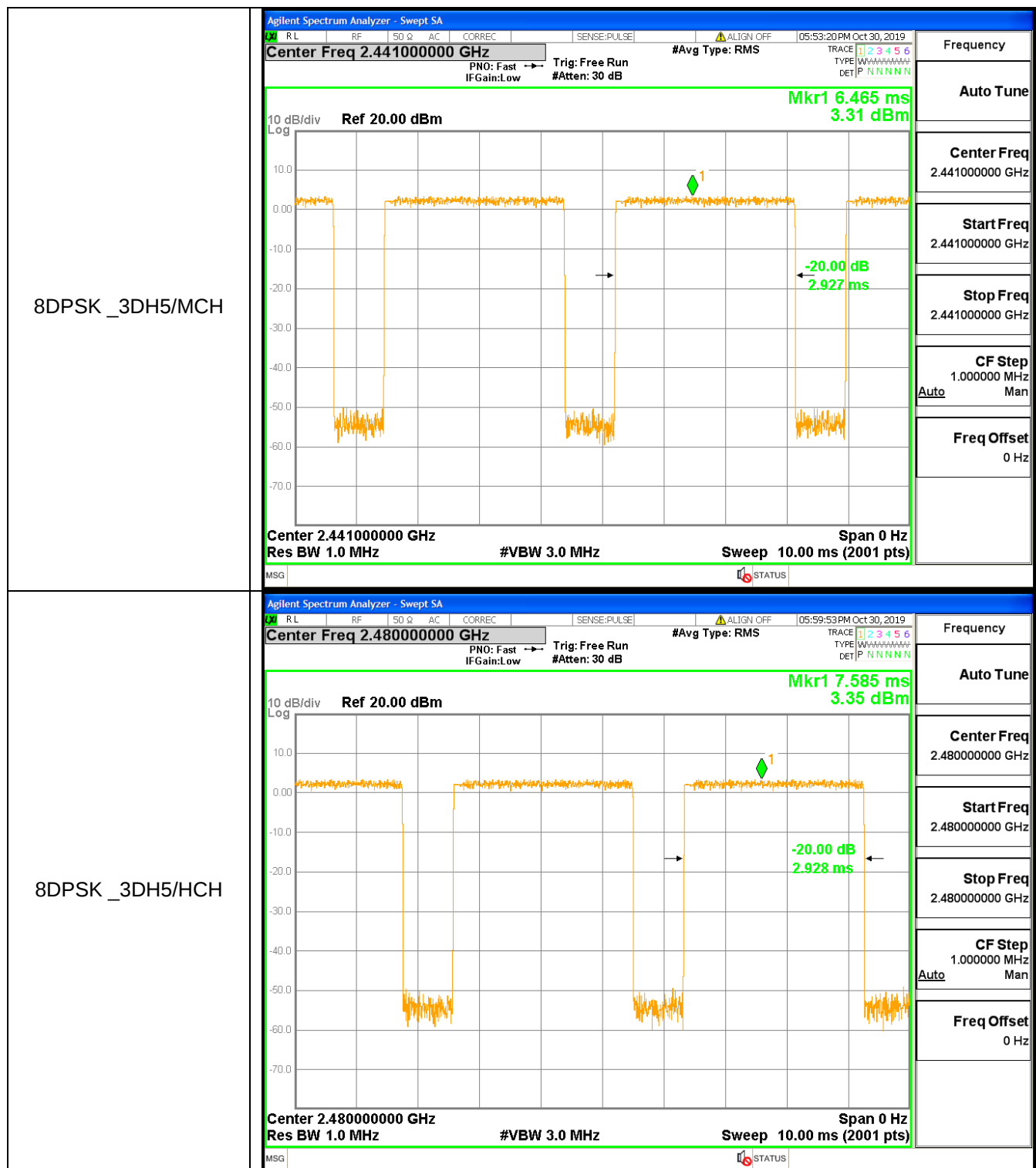
Test Graph







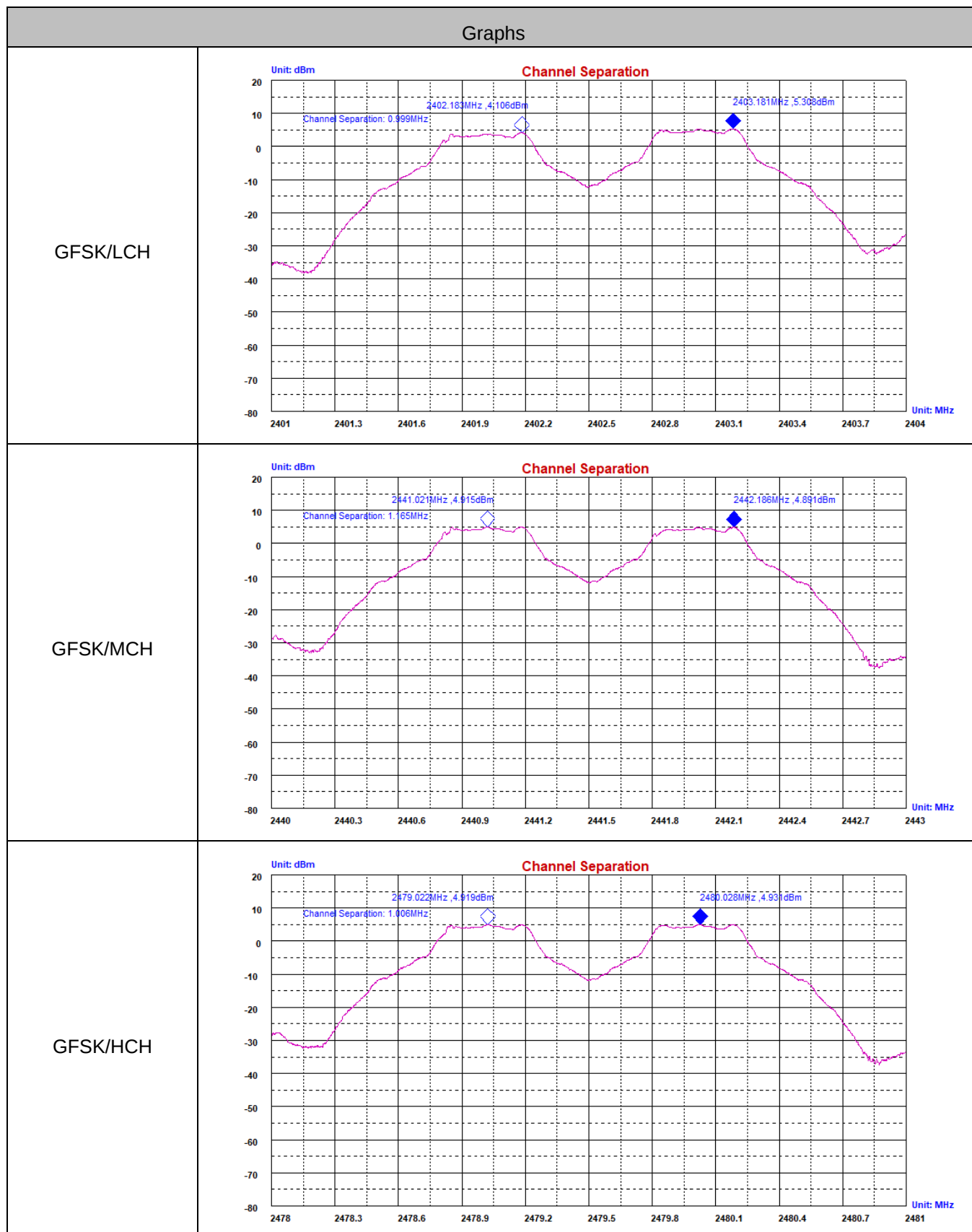


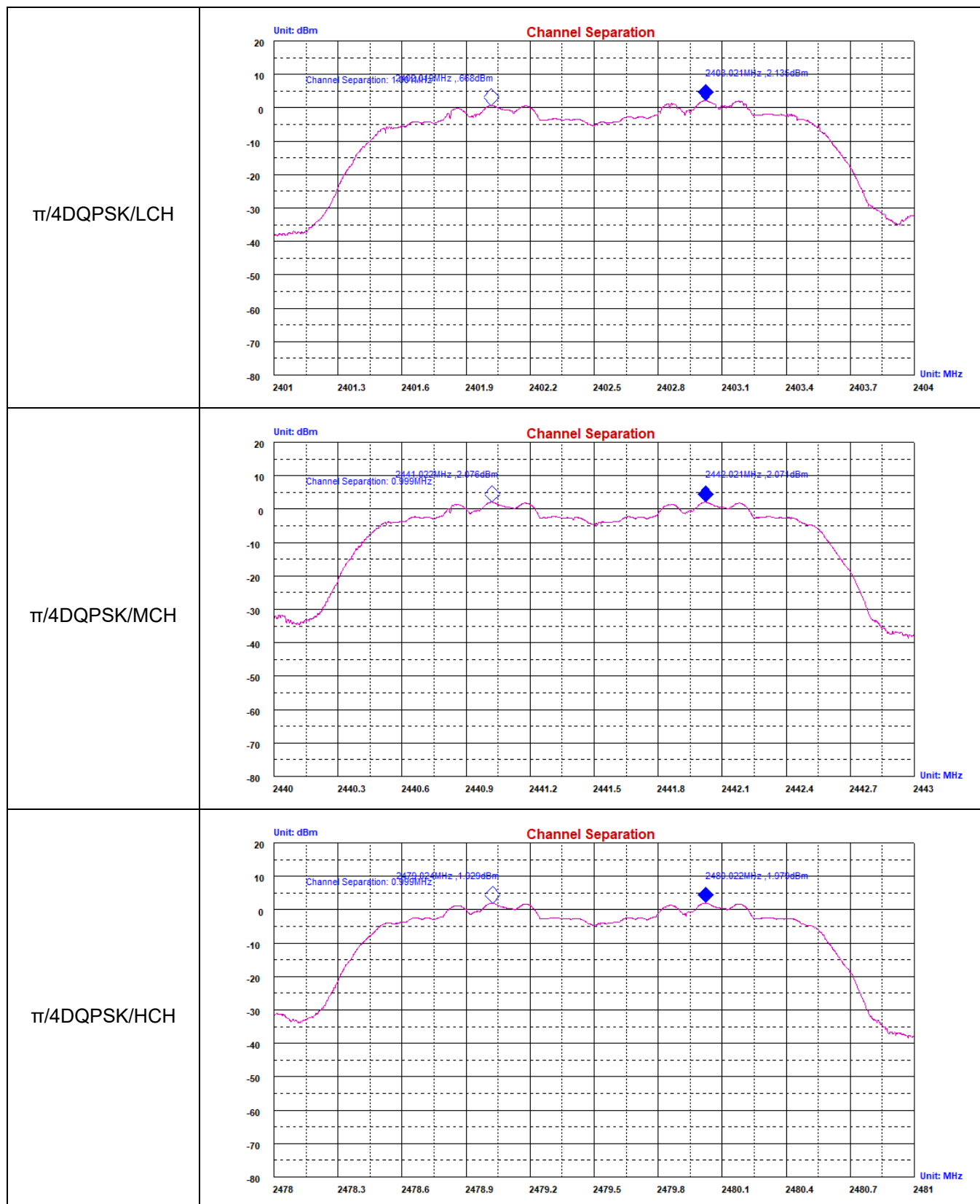


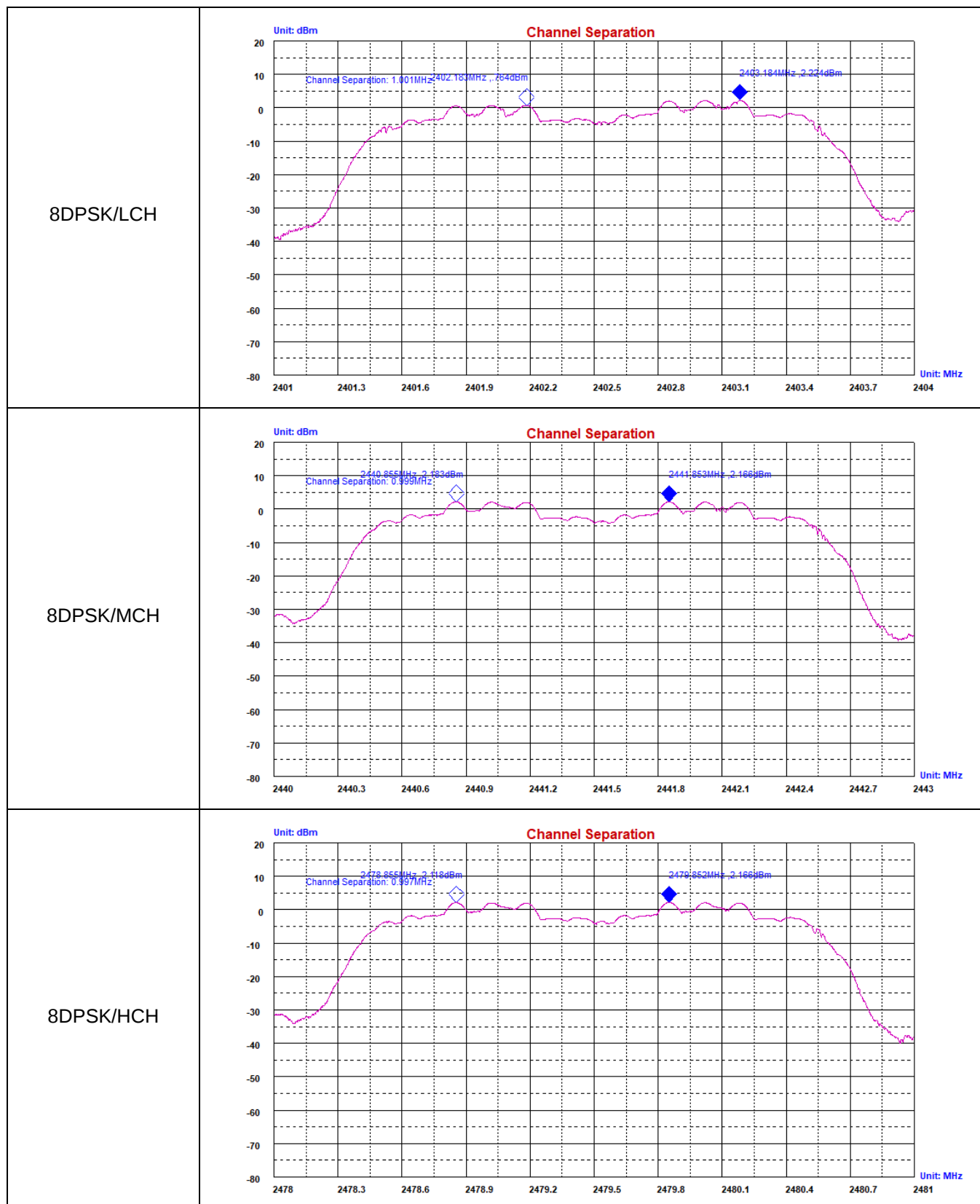
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.999	0.615	PASS
GFSK	MCH	1.165	0.626	PASS
GFSK	HCH	1.006	0.632	PASS
$\pi/4$ DQPSK	LCH	1.001	0.815	PASS
$\pi/4$ DQPSK	MCH	0.999	0.821	PASS
$\pi/4$ DQPSK	HCH	0.999	0.819	PASS
8DPSK	LCH	1.001	0.859	PASS
8DPSK	MCH	0.999	0.835	PASS
8DPSK	HCH	0.997	0.851	PASS

Test Graph





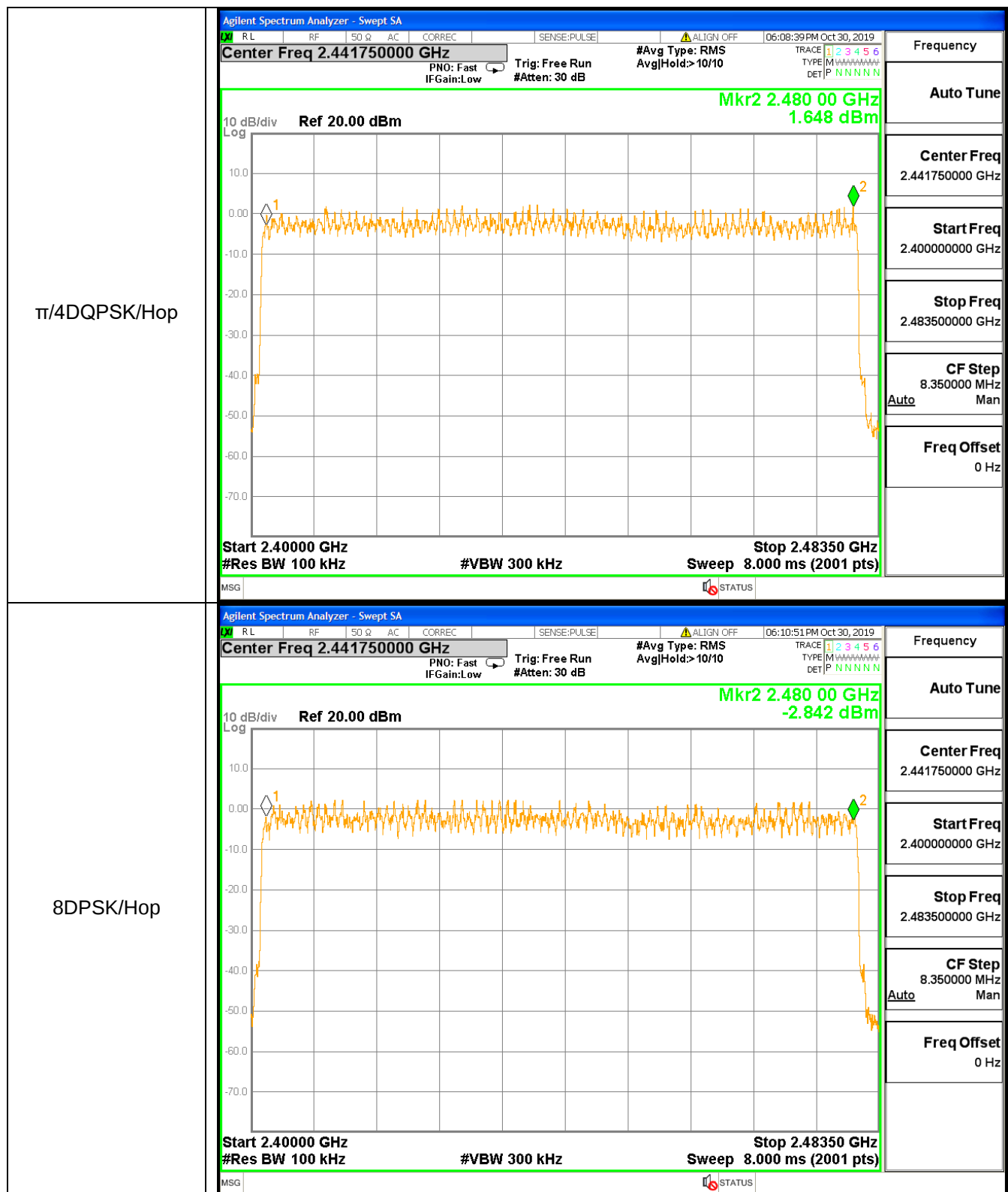


A.4 Hopping Channel Number

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

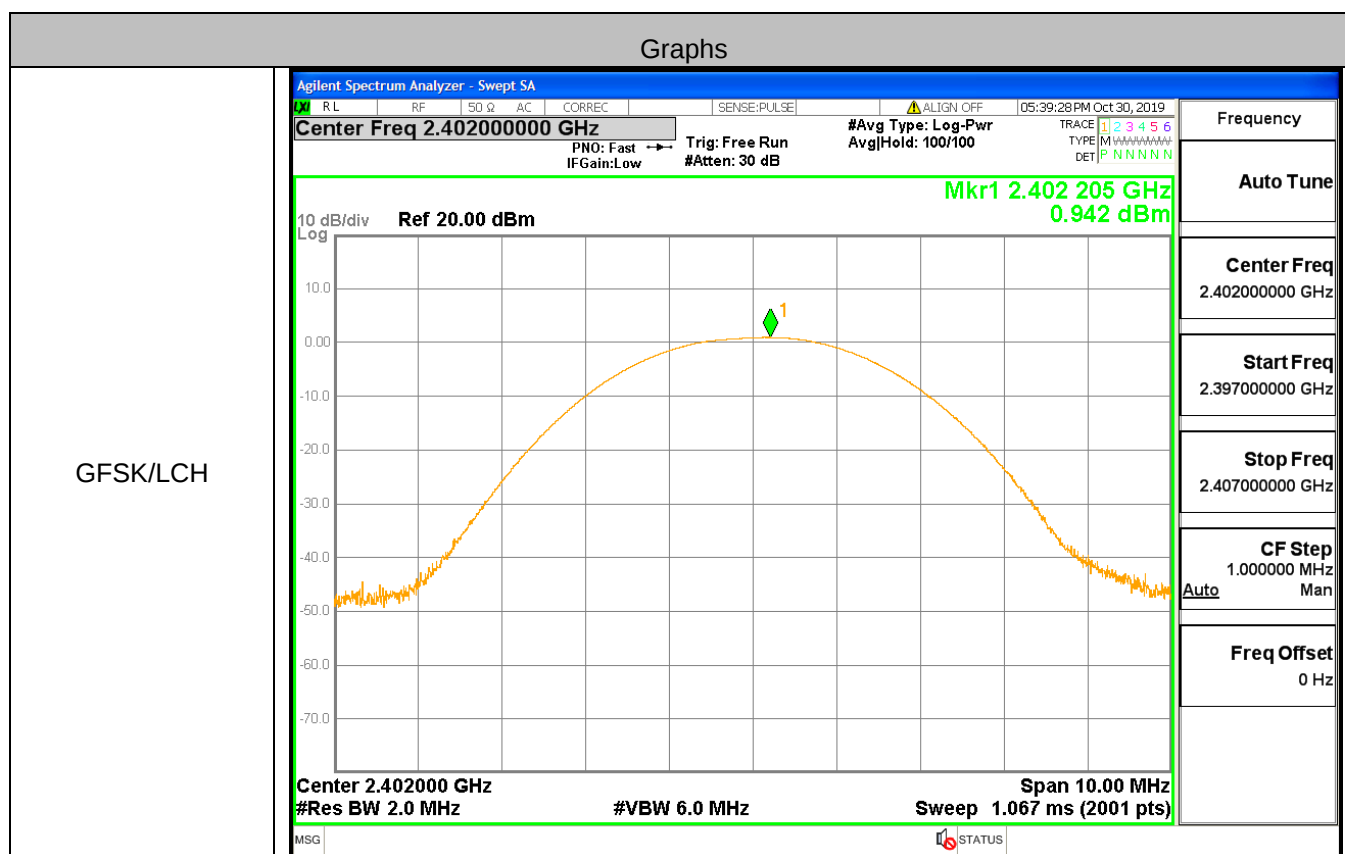


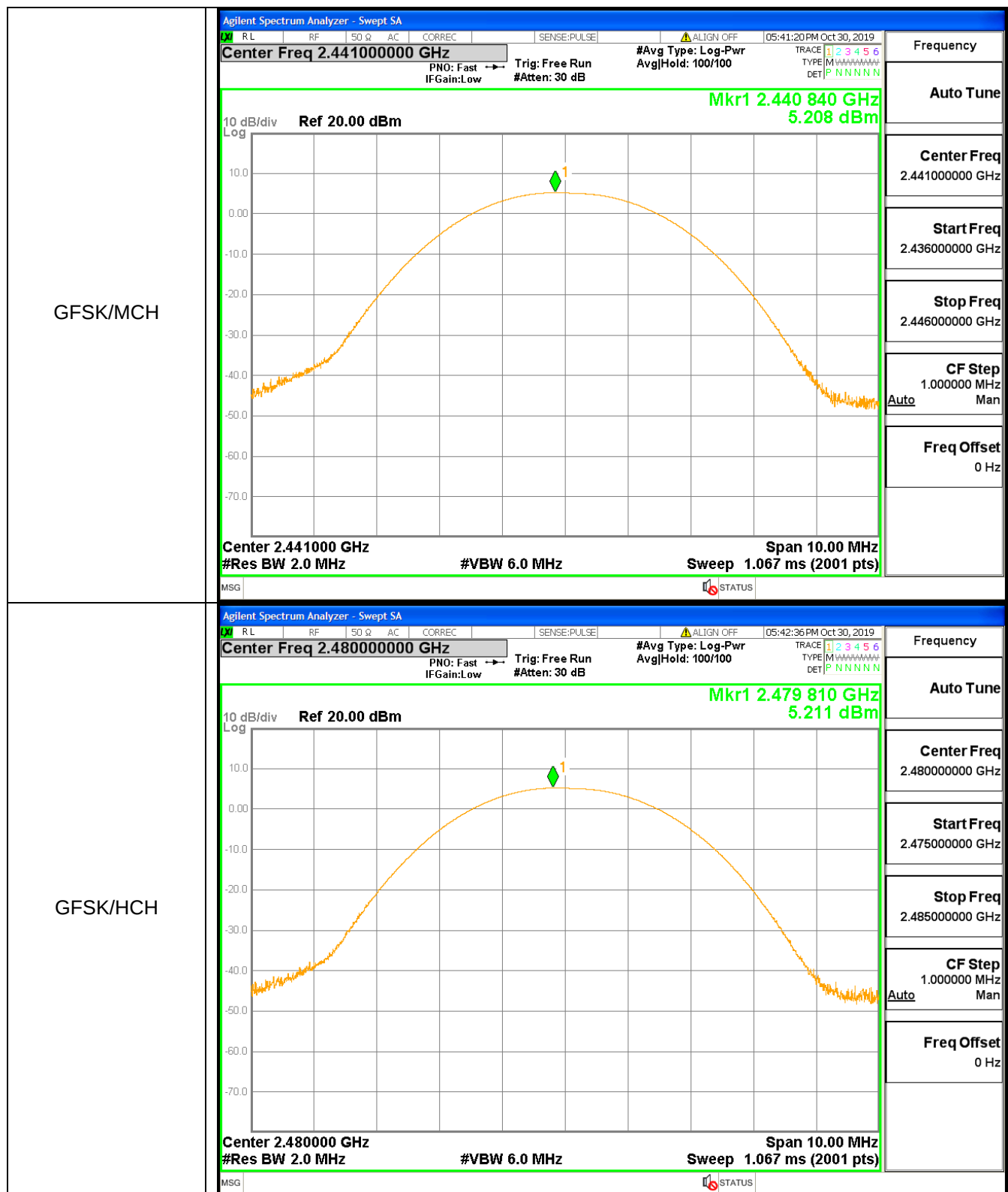


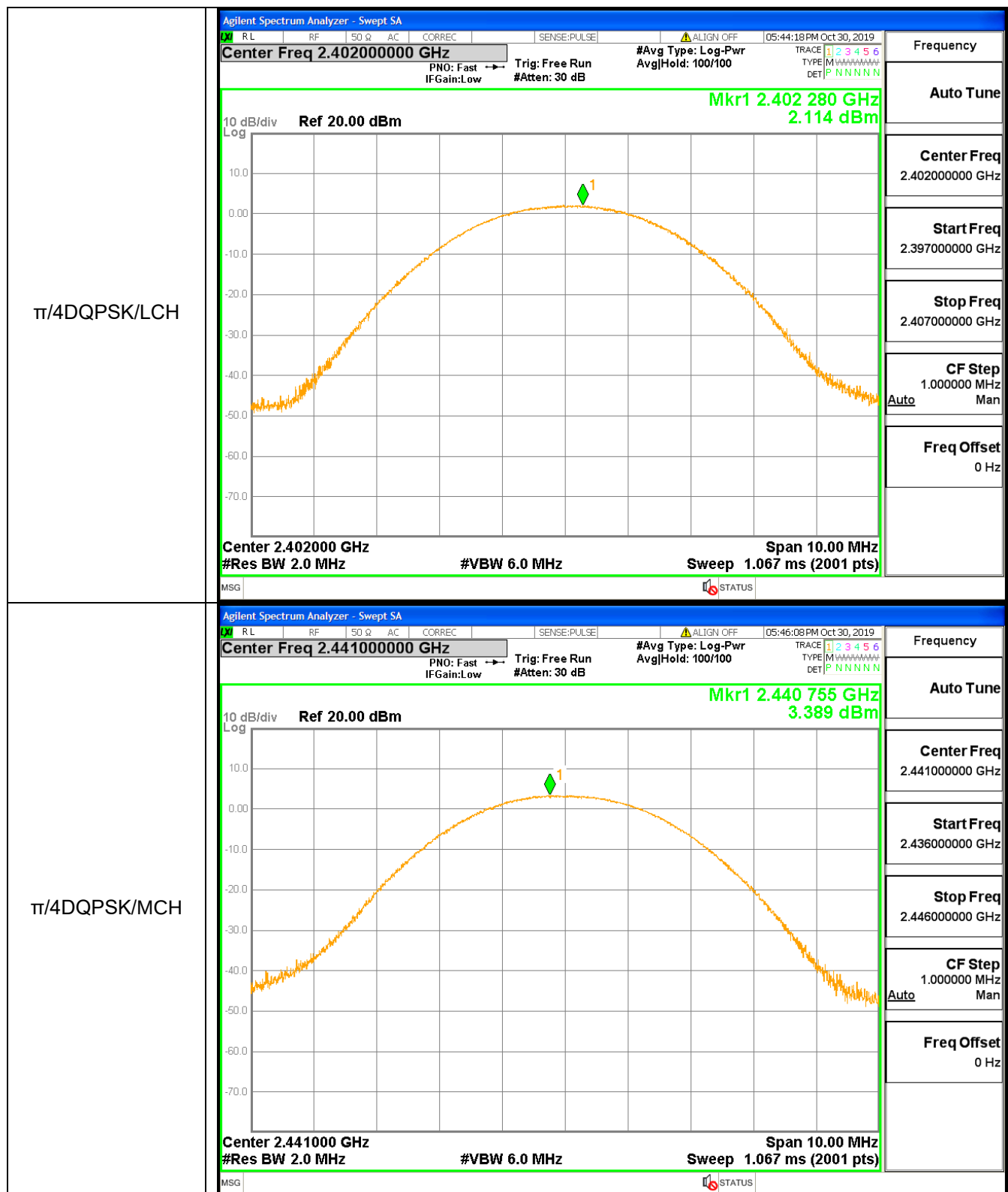
A.5 Conducted Peak Output Power

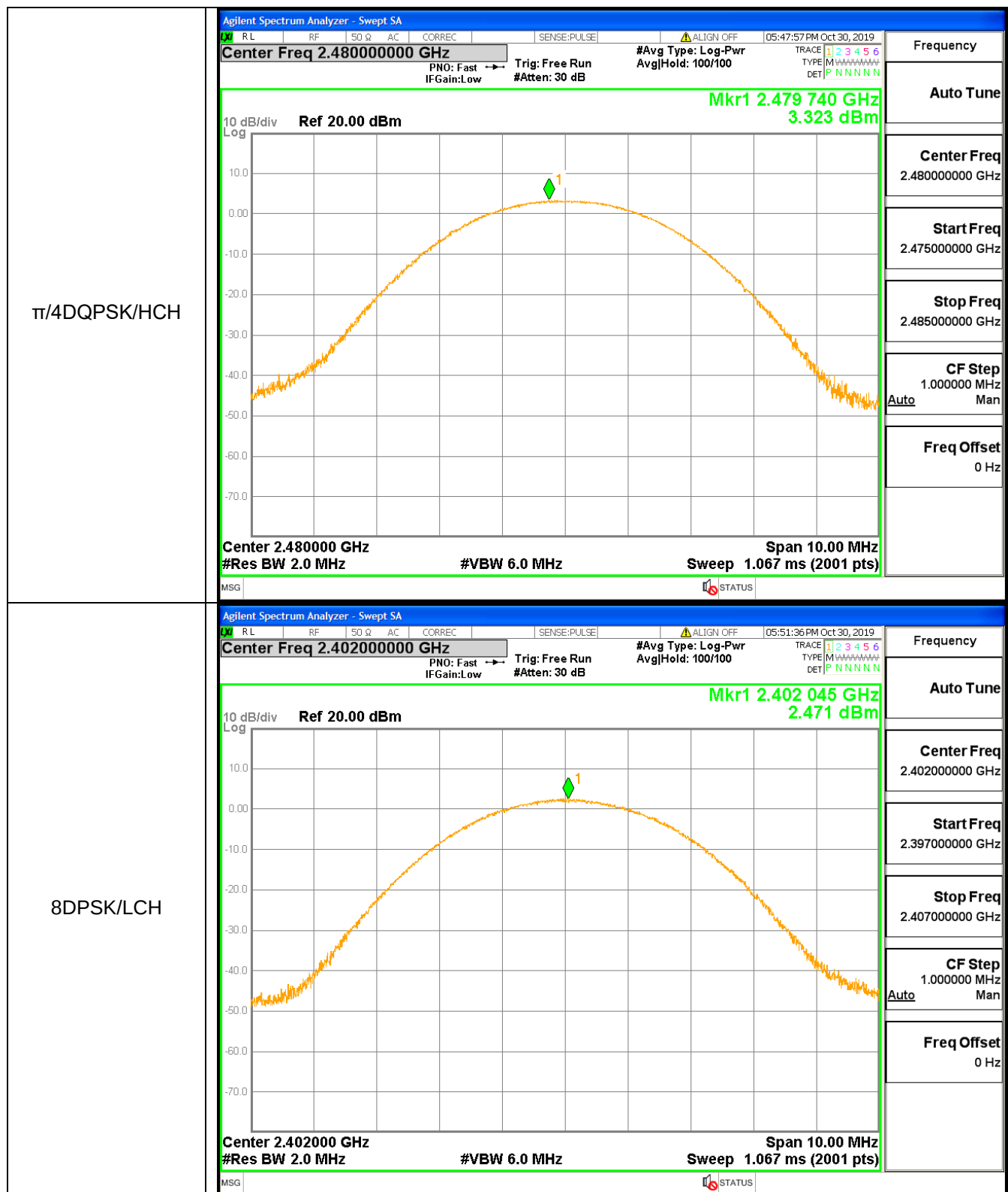
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.942	21	PASS
GFSK	MCH	5.208	21	PASS
GFSK	HCH	5.211	21	PASS
$\pi/4$ DQPSK	LCH	2.114	21	PASS
$\pi/4$ DQPSK	MCH	3.389	21	PASS
$\pi/4$ DQPSK	HCH	3.323	21	PASS
8DPSK	LCH	2.471	21	PASS
8DPSK	MCH	3.728	21	PASS
8DPSK	HCH	3.743	21	PASS

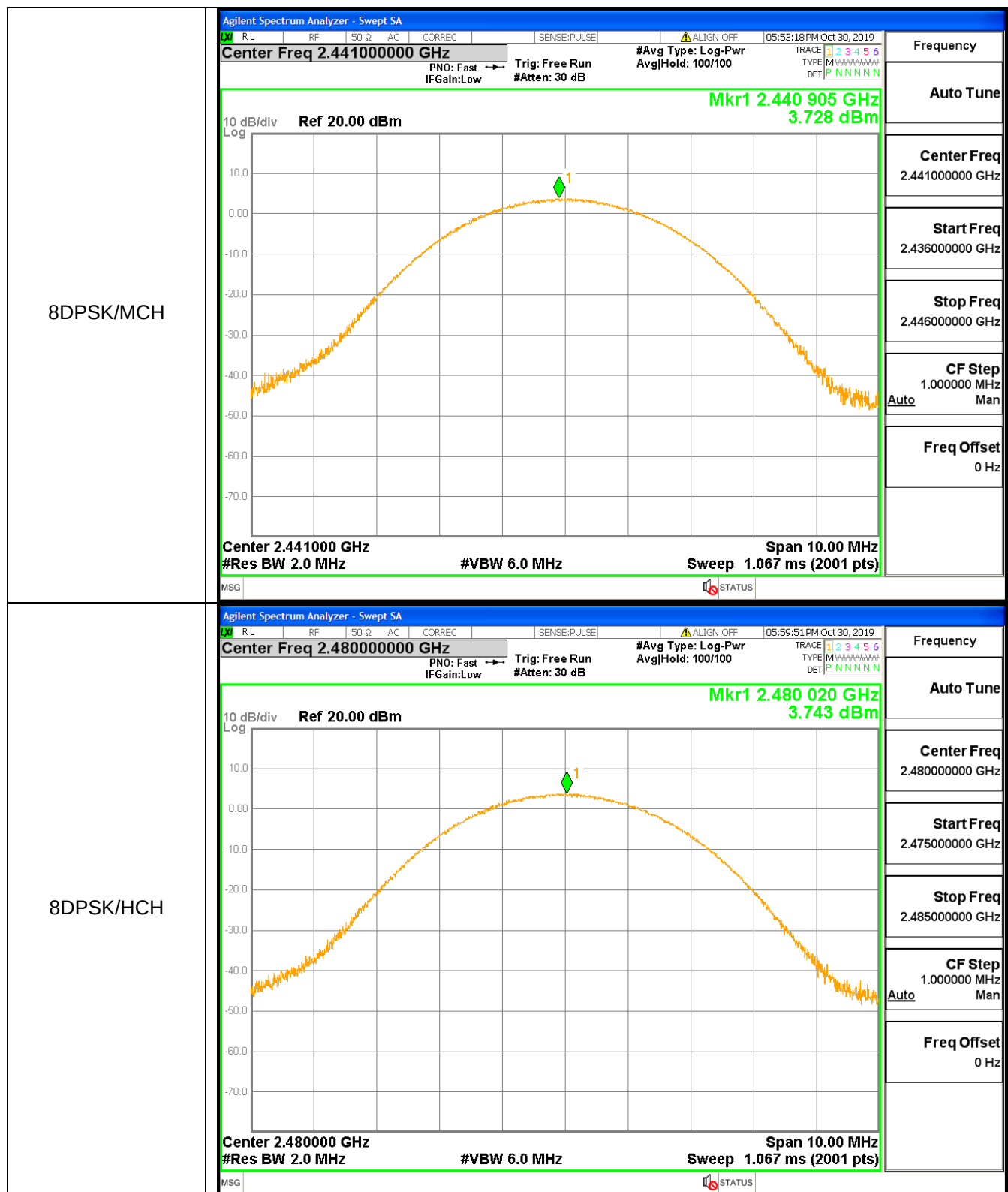
Test Graph











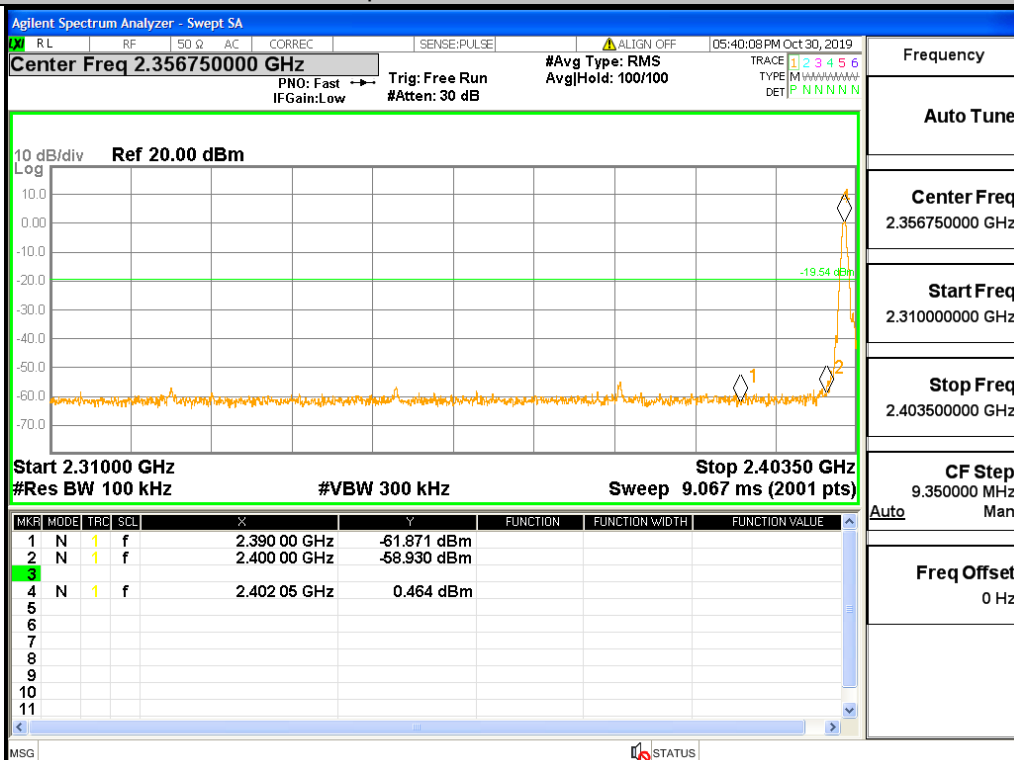
A.6 Band-edge for RF Conducted Emissions

Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2400	0.464	-58.93	-19.536	Pass
1DH5	2480	2496.044	4.938	-56.113	-15.062	Pass
2DH5	2402	2400	-0.549	-51.88	-20.549	Pass
2DH5	2480	2496.119	1.958	-57.229	-18.042	Pass
3DH5	2402	2400	-2.057	-52.54	-22.057	Pass
3DH5	2480	2483.5	1.906	-54.88	-18.094	Pass
1DH5-Hopping	2402	2393.04	1.968	-53.372	-18.032	Pass
1DH5-Hopping	2480	2498.05	1.879	-47.949	-18.121	Pass
2DH5-Hopping	2402	2395.2	2.169	-53.243	-17.831	Pass
2DH5-Hopping	2480	2487.04	1.202	-49.352	-18.798	Pass
3DH5-Hopping	2402	2400	2.186	-52.22	-17.814	Pass
3DH5-Hopping	2480	2498.17	1.375	-47.568	-18.625	Pass

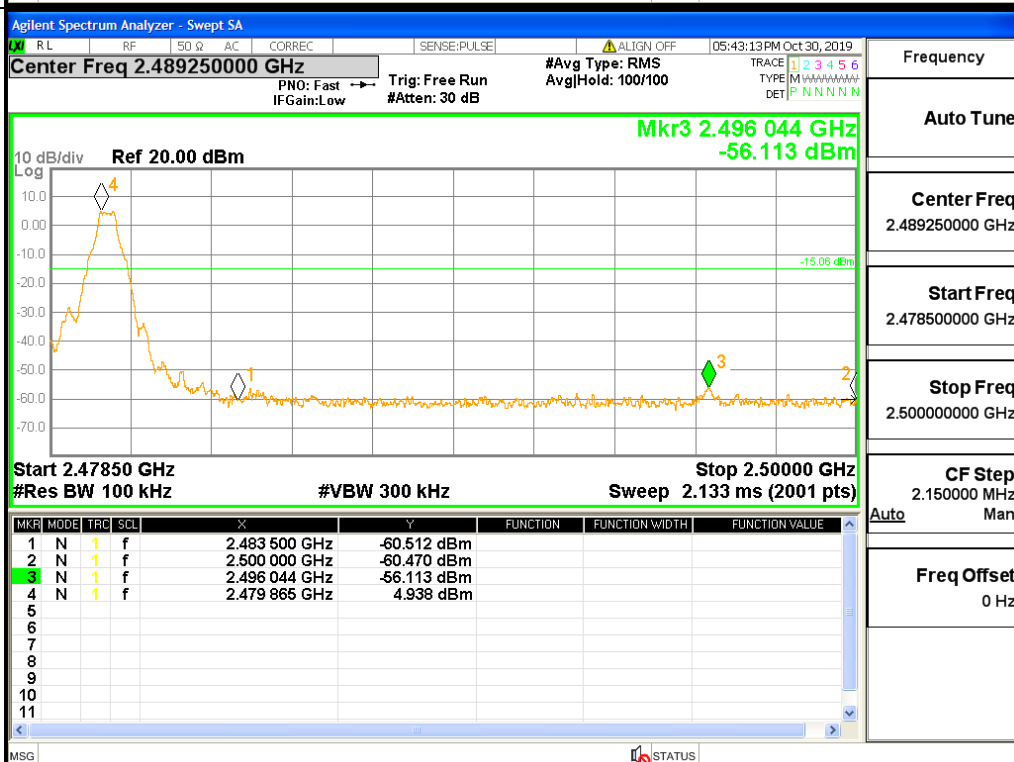
Test Graph

Graphs

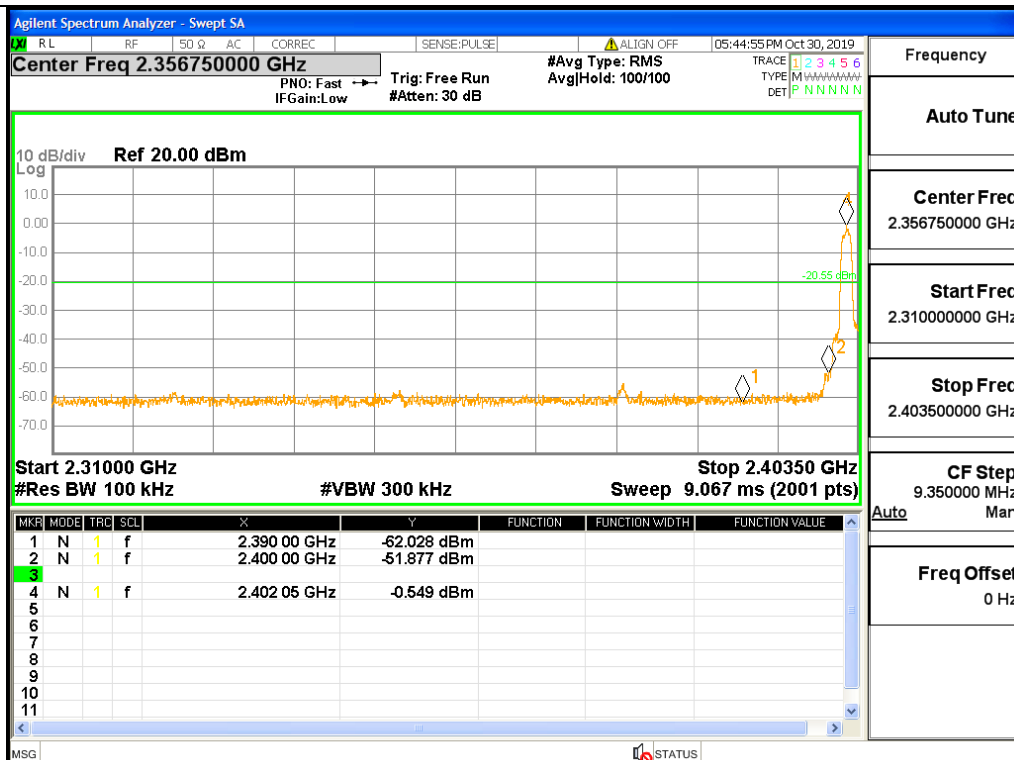
GFSK/LCH/No Hop



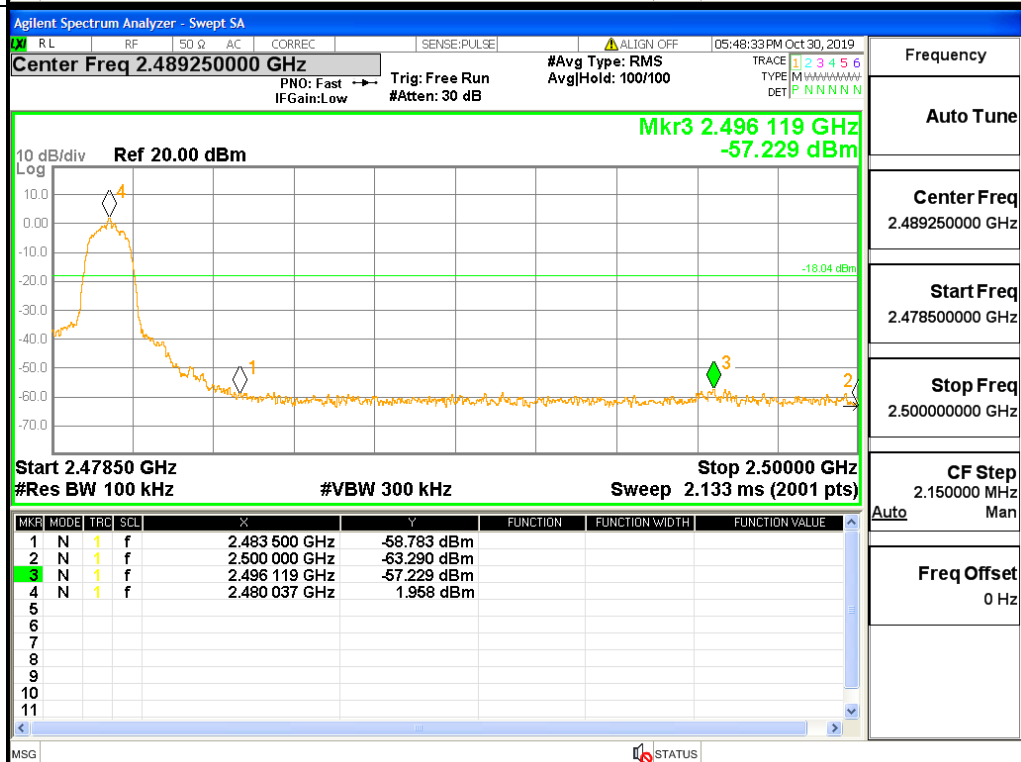
GFSK/HCH/No Hop



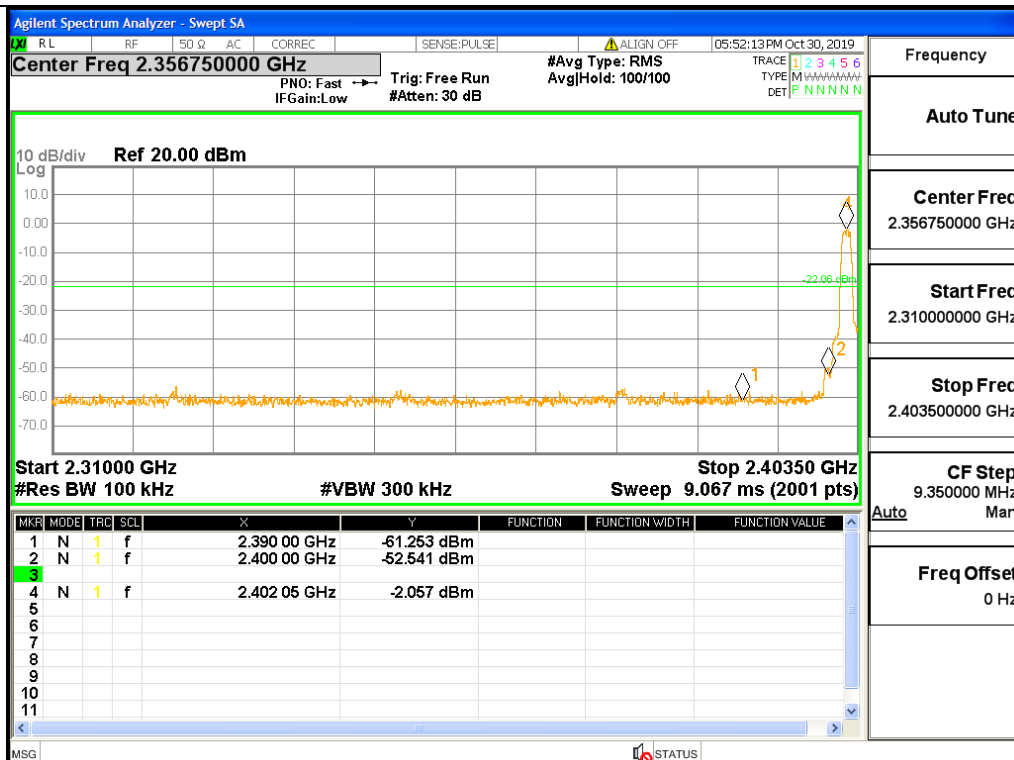
$\pi/4$ DQPSK/LCH/No
Hop



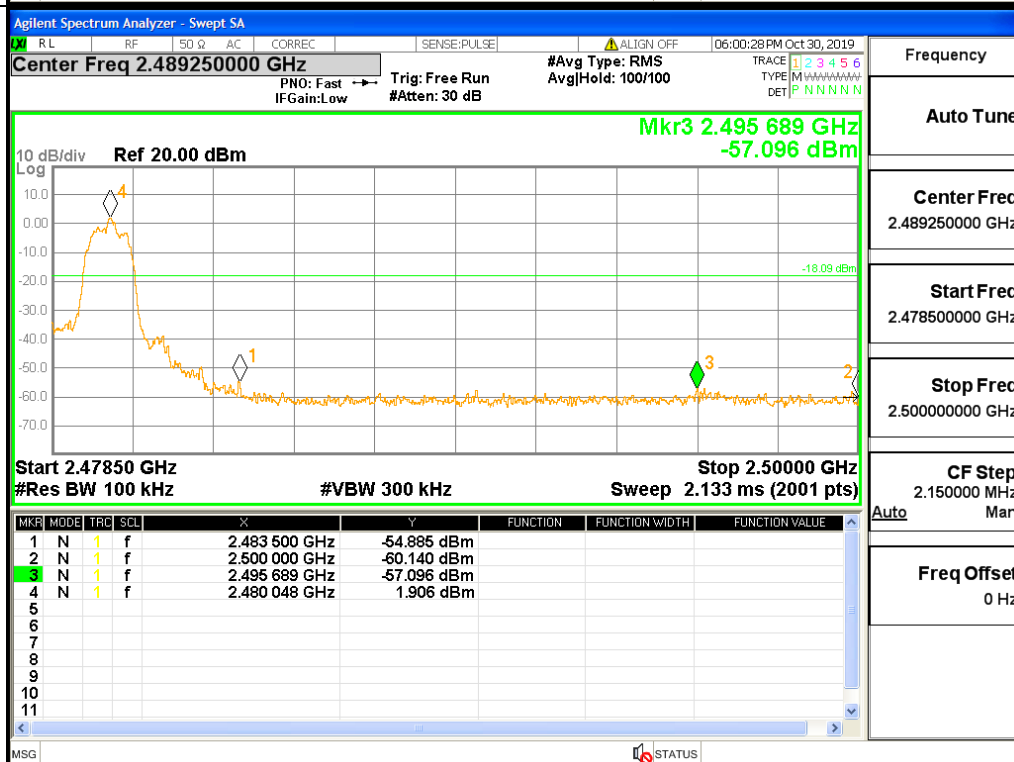
$\pi/4$ DQPSK/HCH/No
Hop



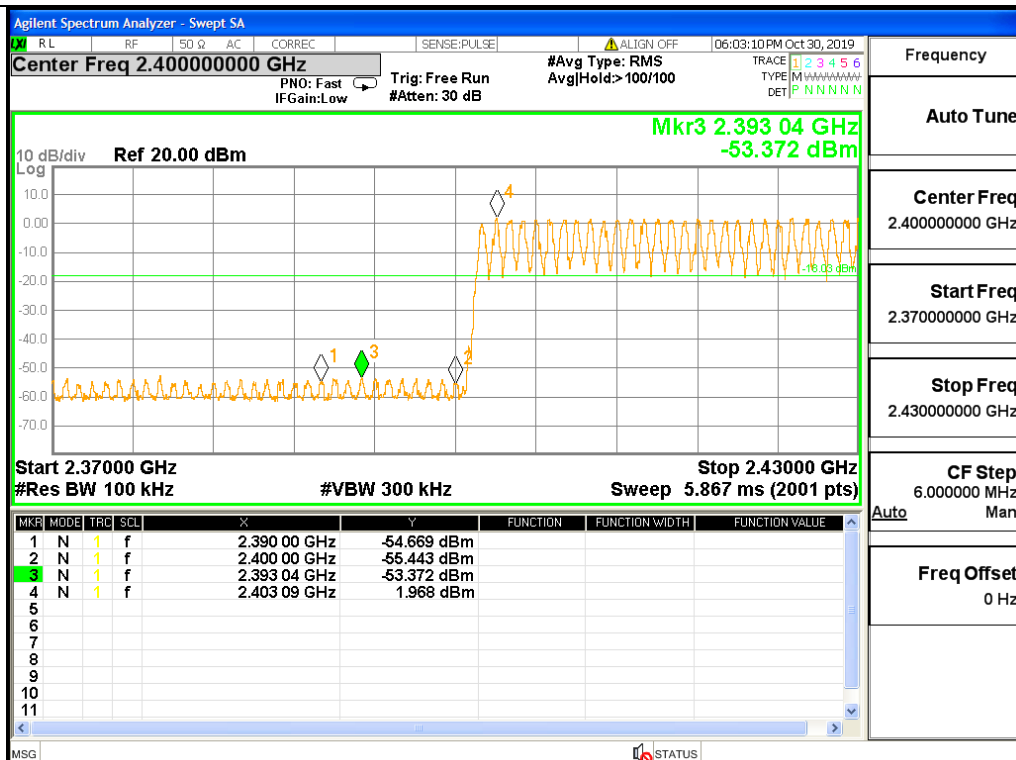
8DPSK/LCH/No Hop



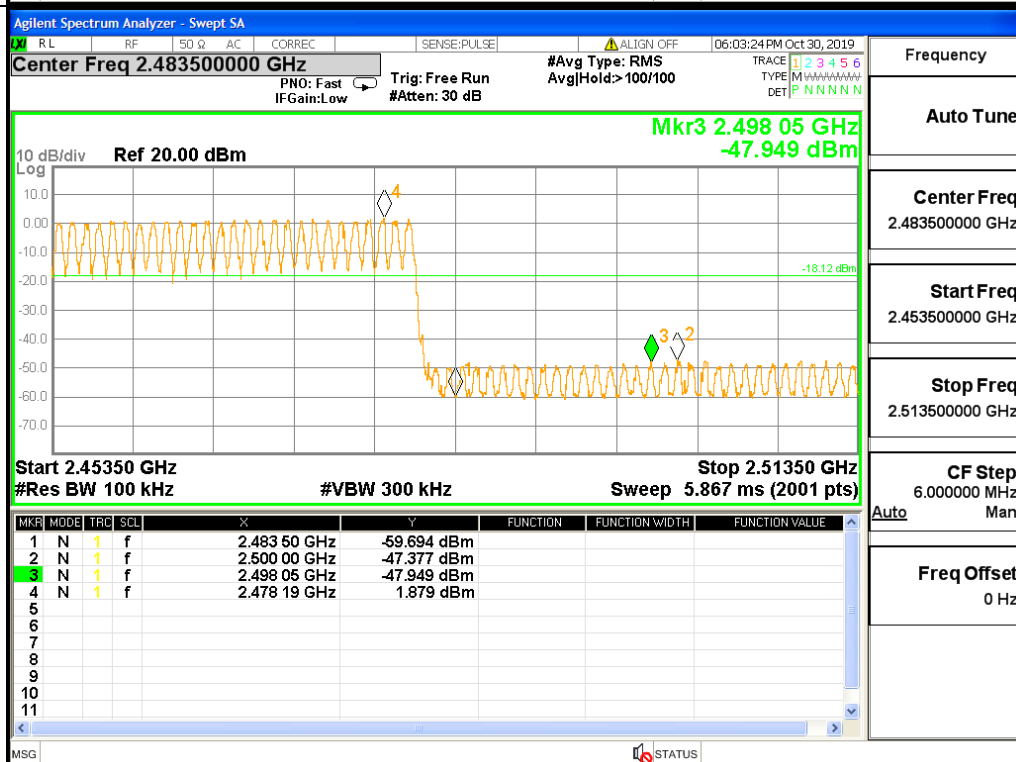
8DPSK/HCH/No Hop

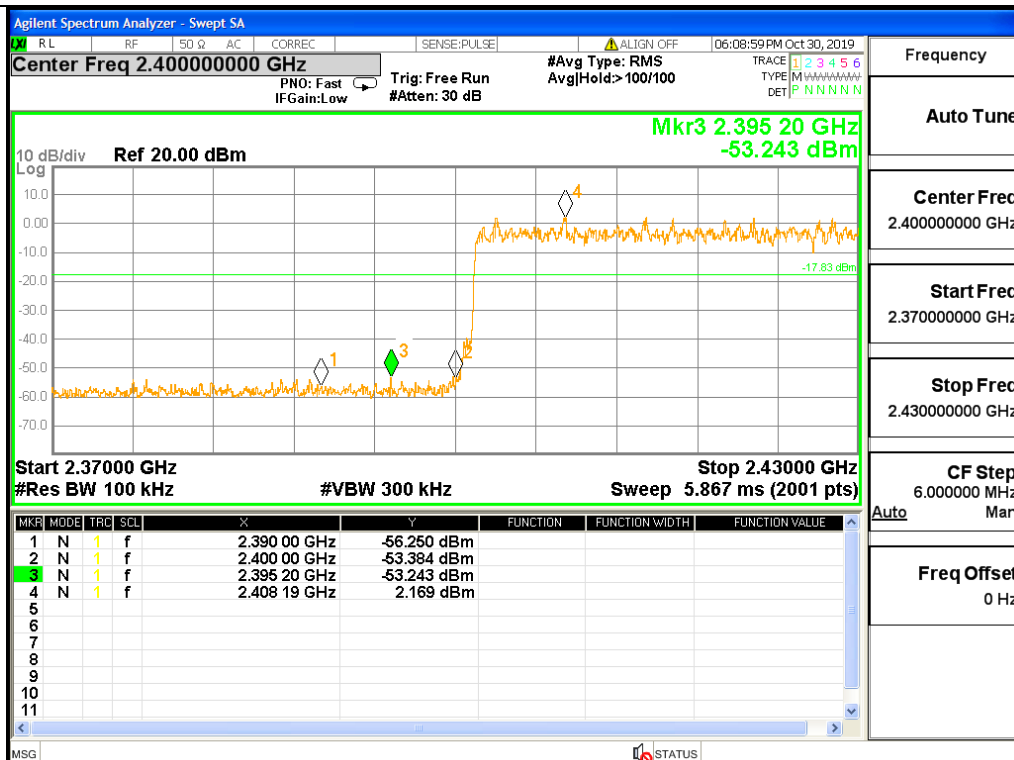
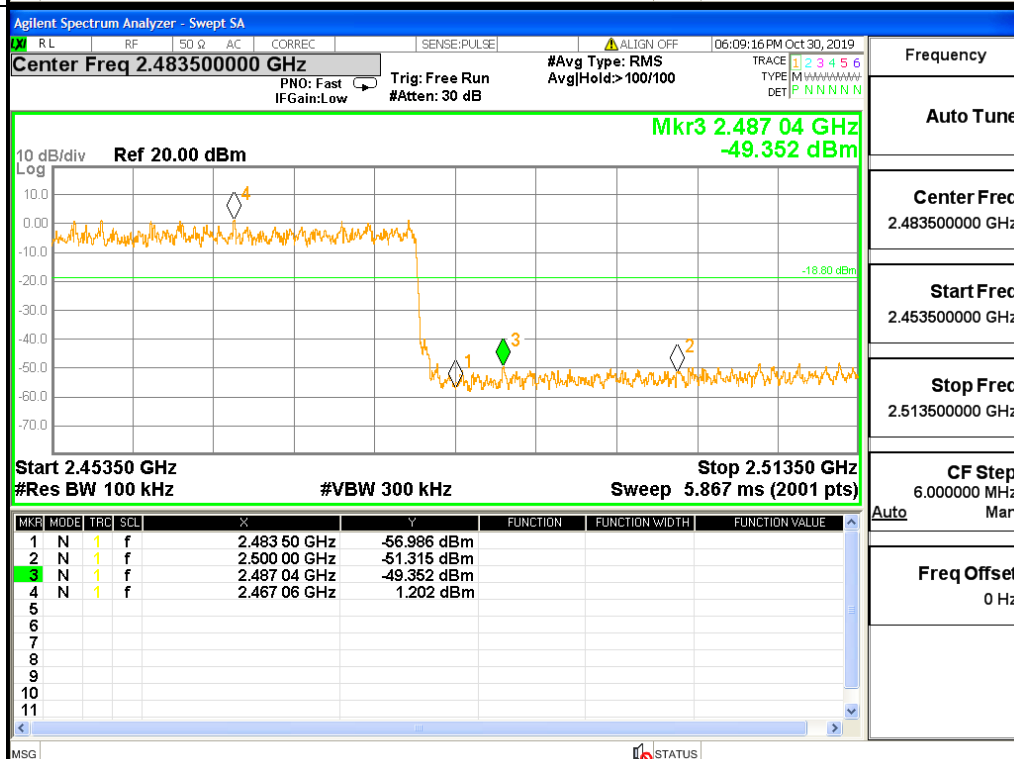


GFSK/LCH/Hop

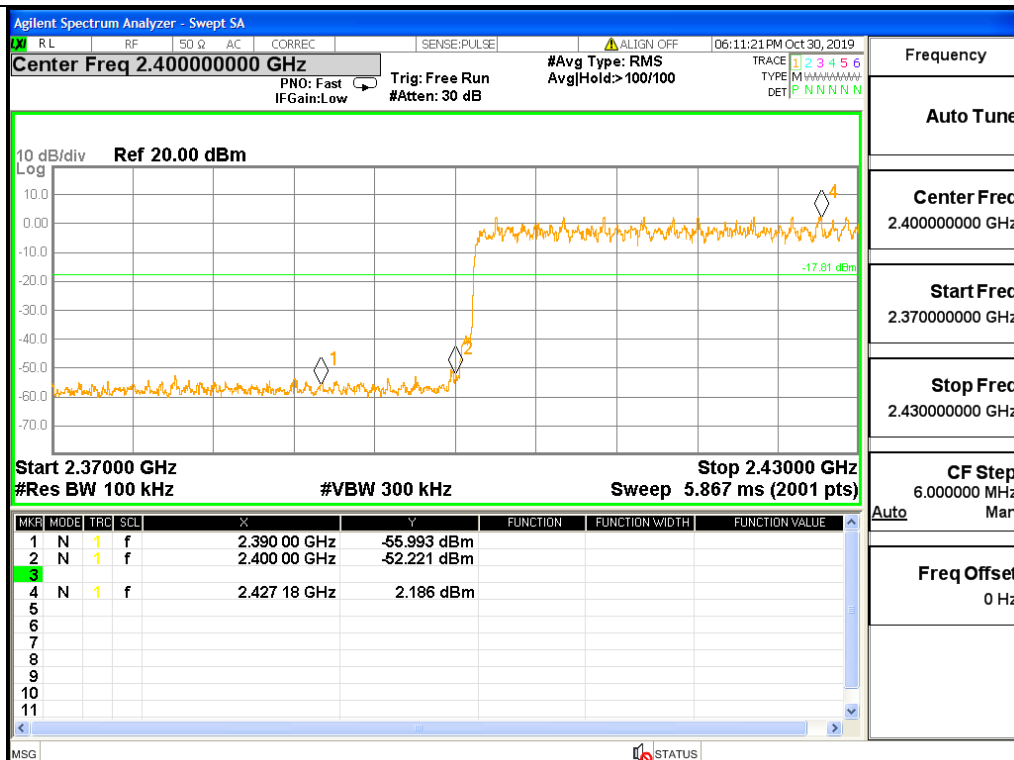


GFSK/HCH/Hop

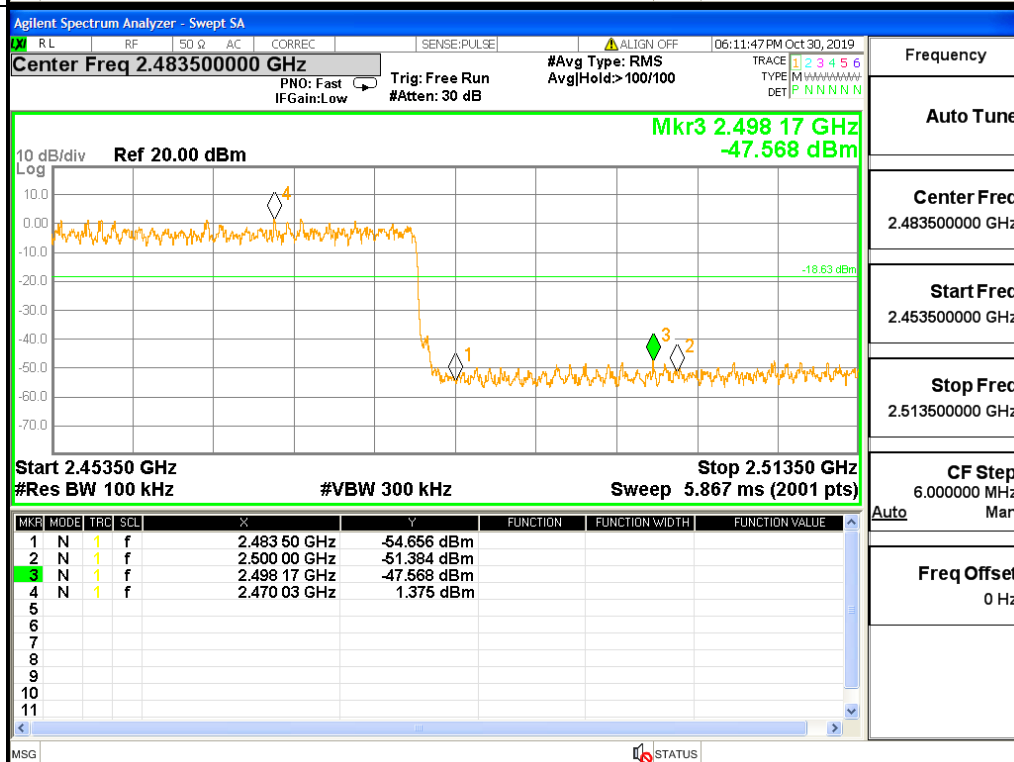


$\pi/4$ DQPSK/LCH/Hop $\pi/4$ DQPSK/HCH/Hop

8DPSK/LCH/Hop

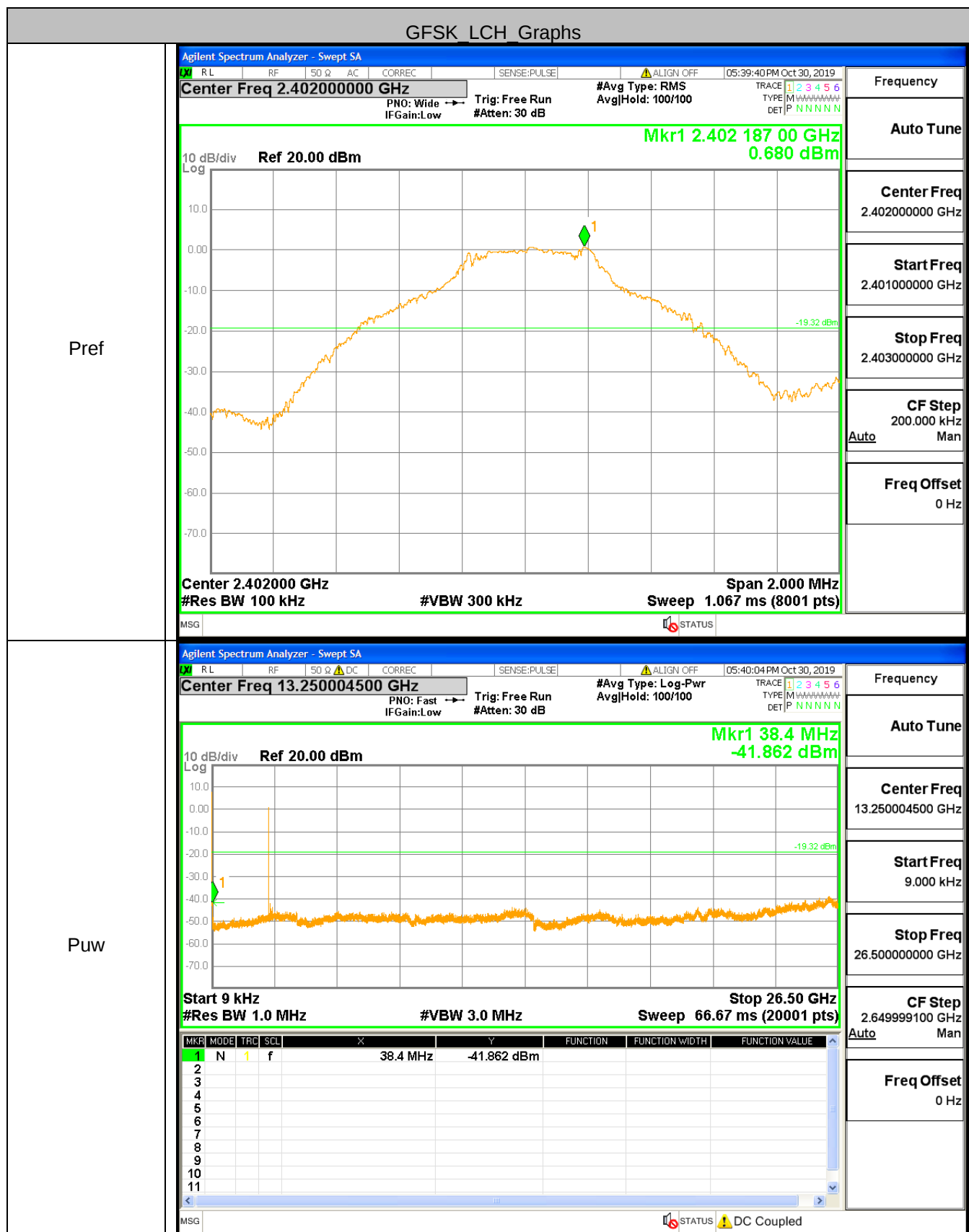


8DPS/HCH/Hop

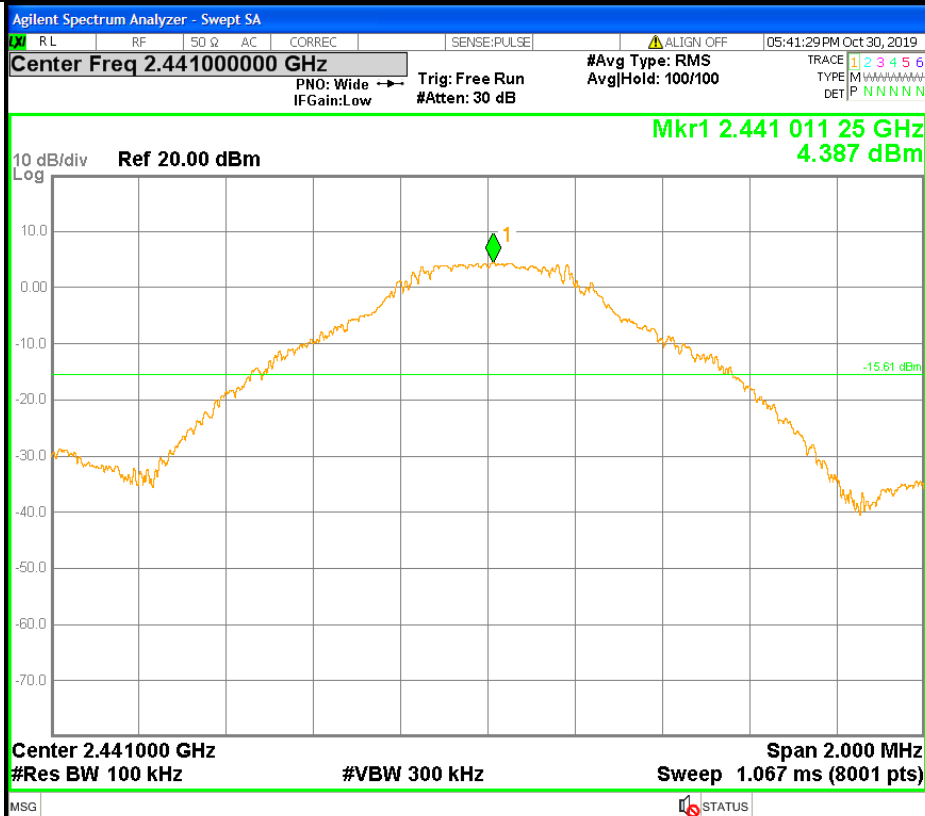


A.7 RF Conducted Spurious Emissions

Test Graph

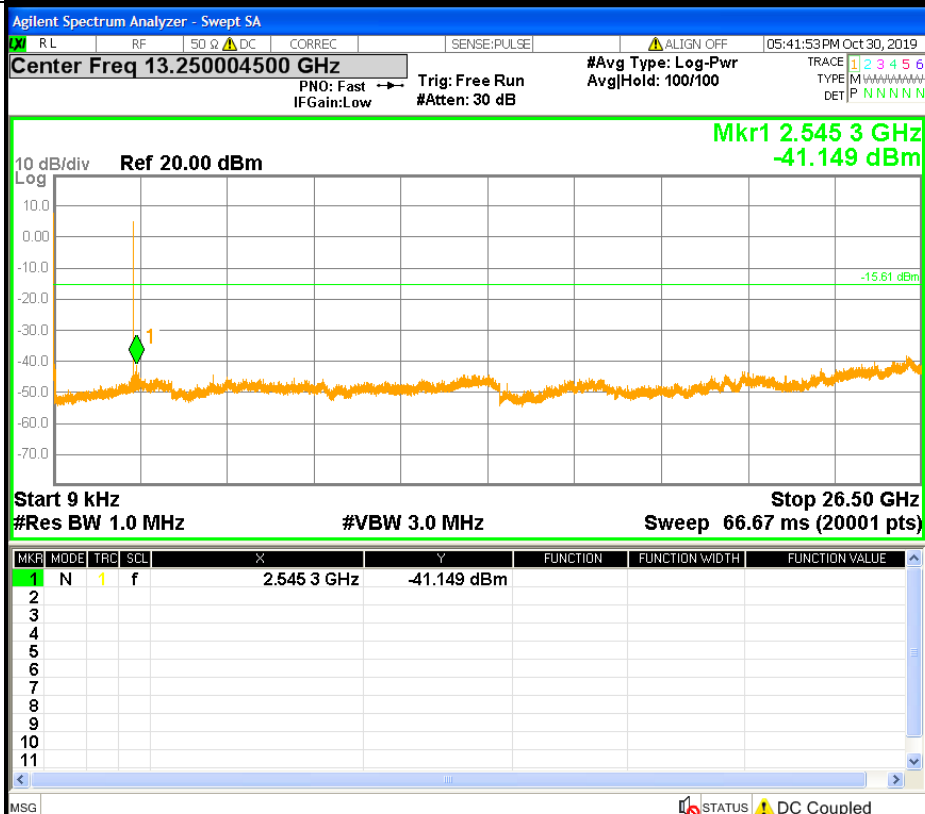


GFSK MCH_Graphs



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

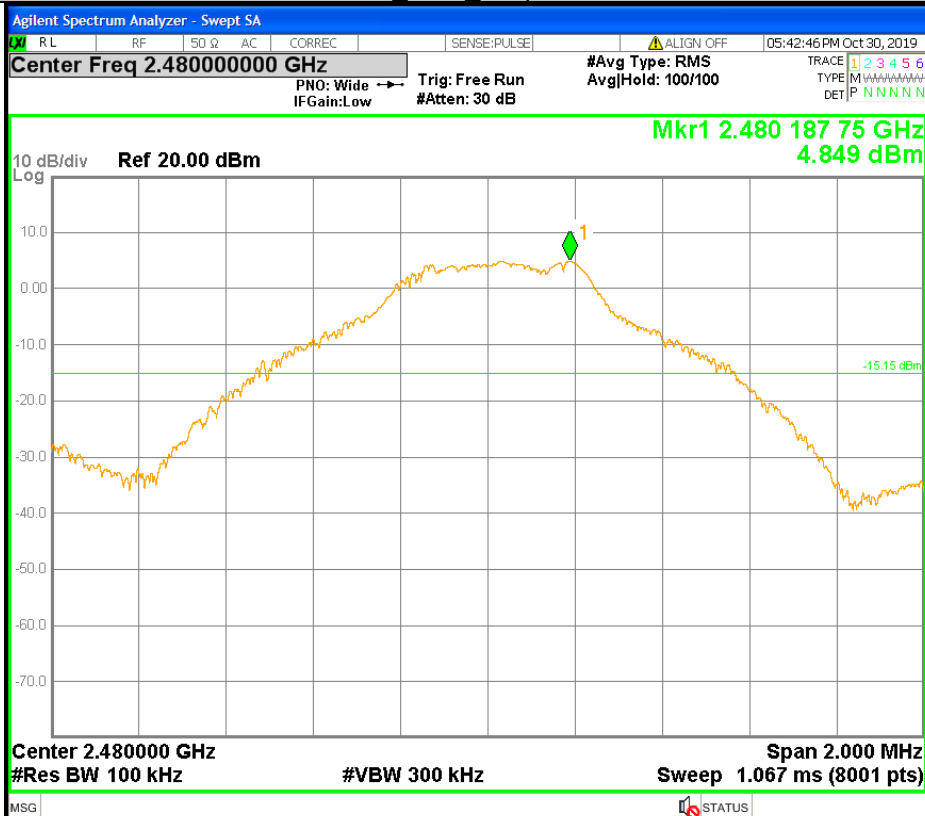
Puw



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

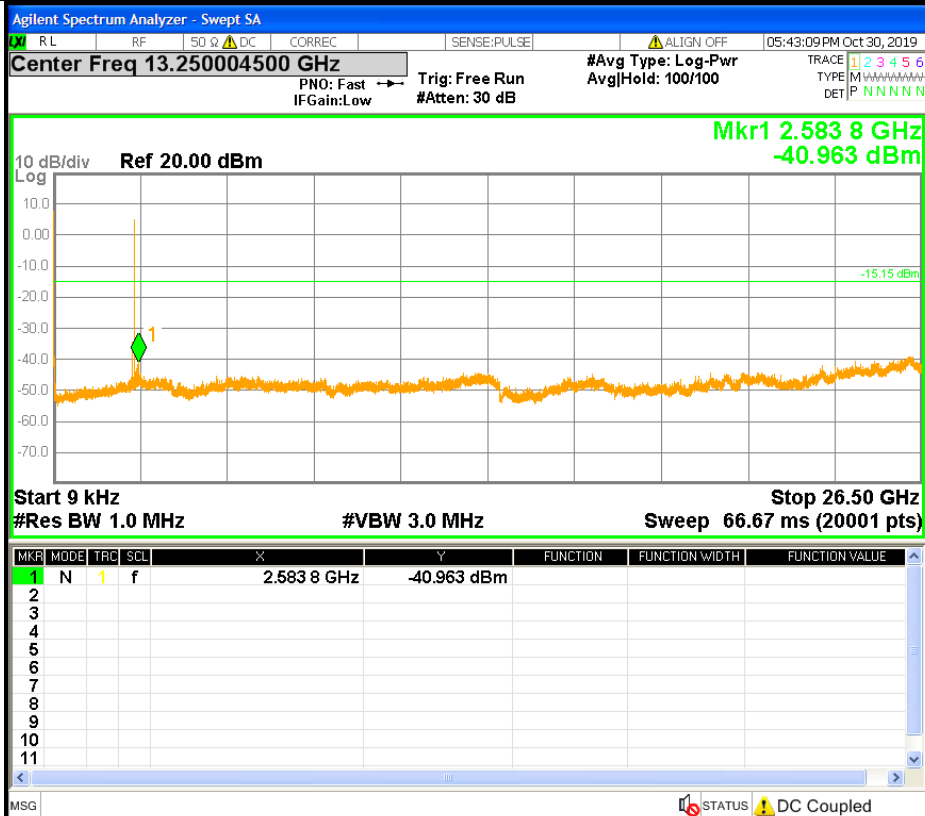
GFSK HCH Graphs

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 Man
Freq Offset 0 Hz

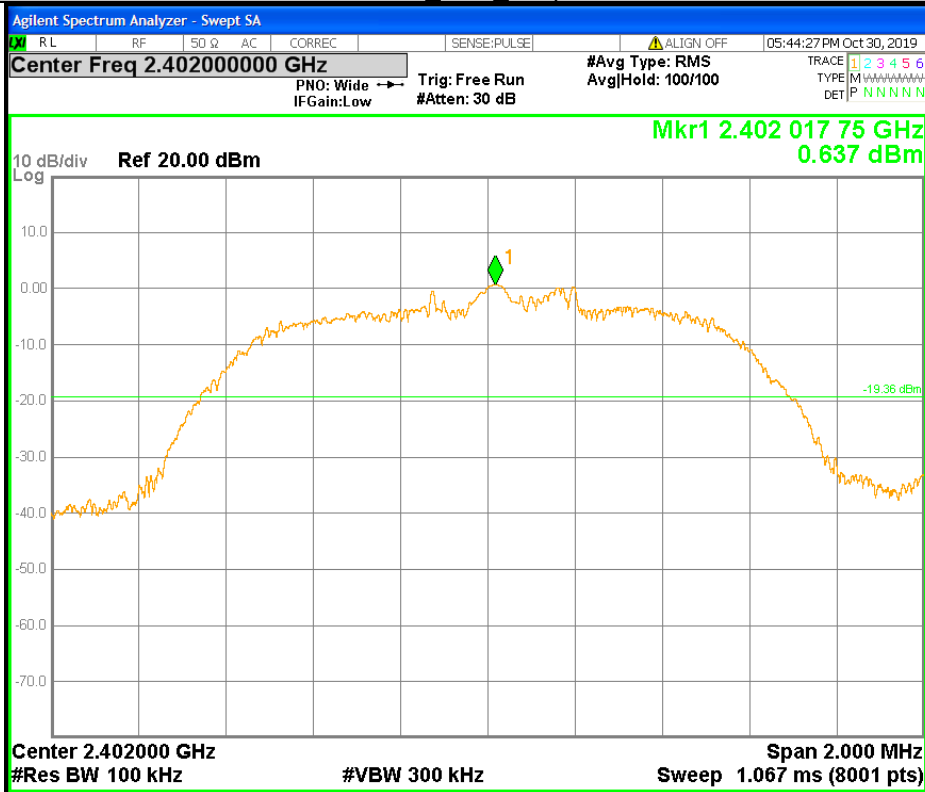
Puw



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

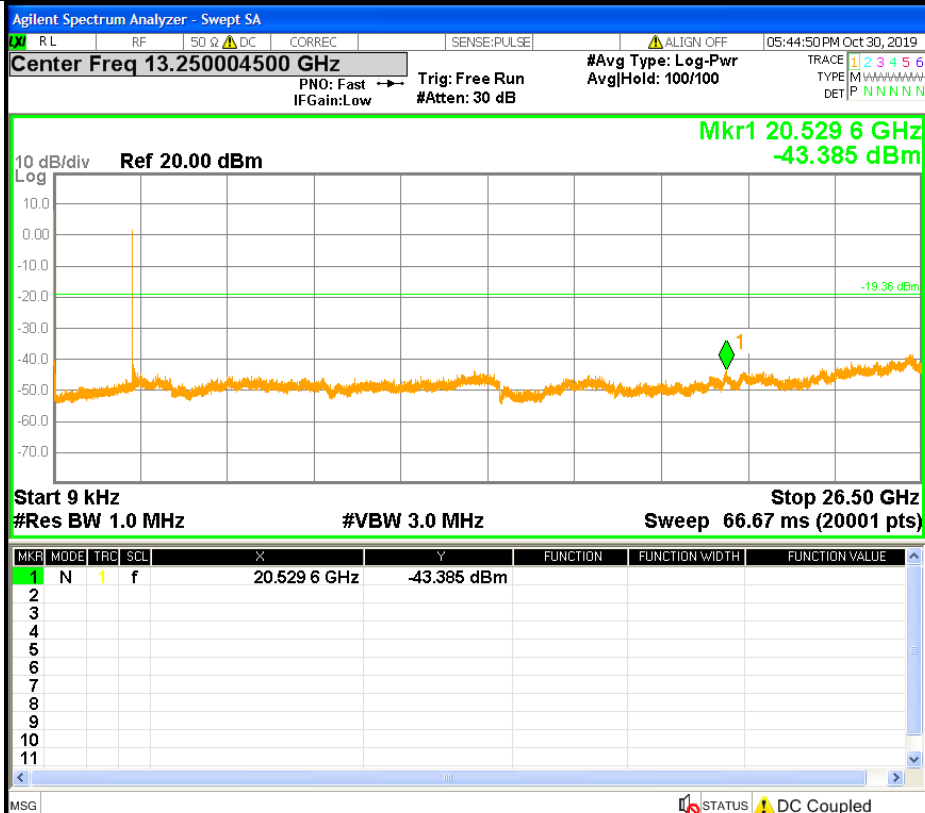
$\pi/4$ DQPSK LCH Graphs

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 Man
Freq Offset 0 Hz

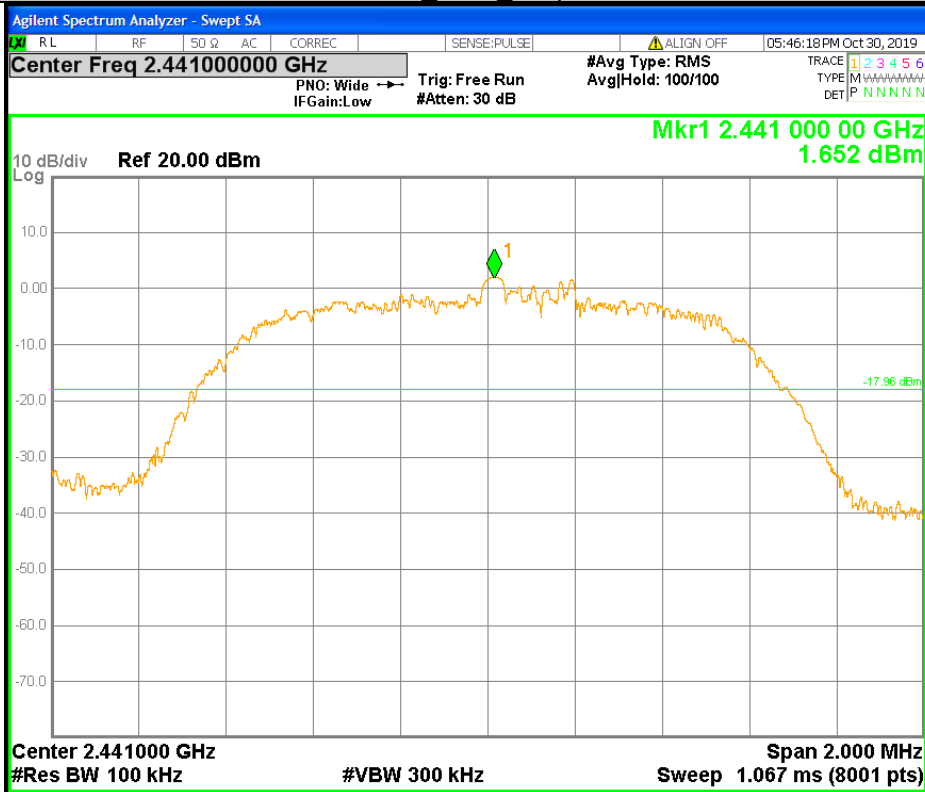
Puw



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

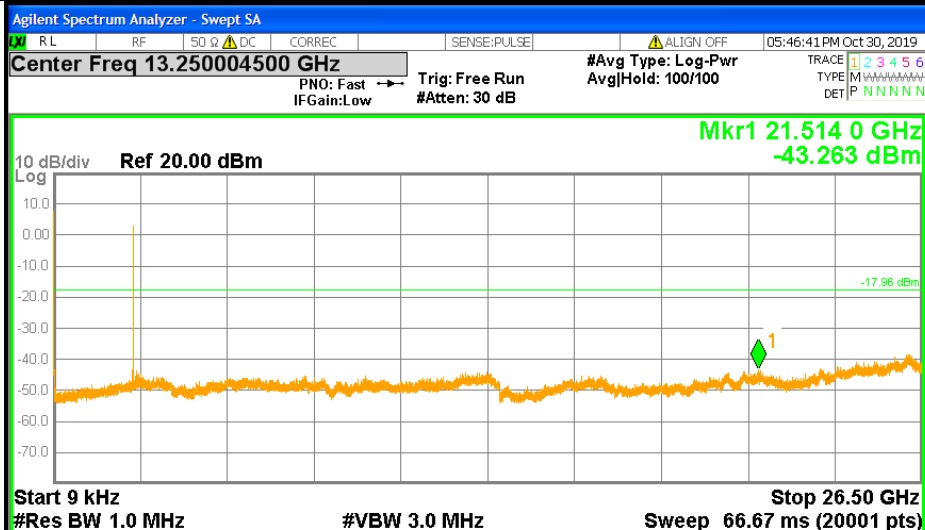
$\pi/4$ DQPSK MCH Graphs

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

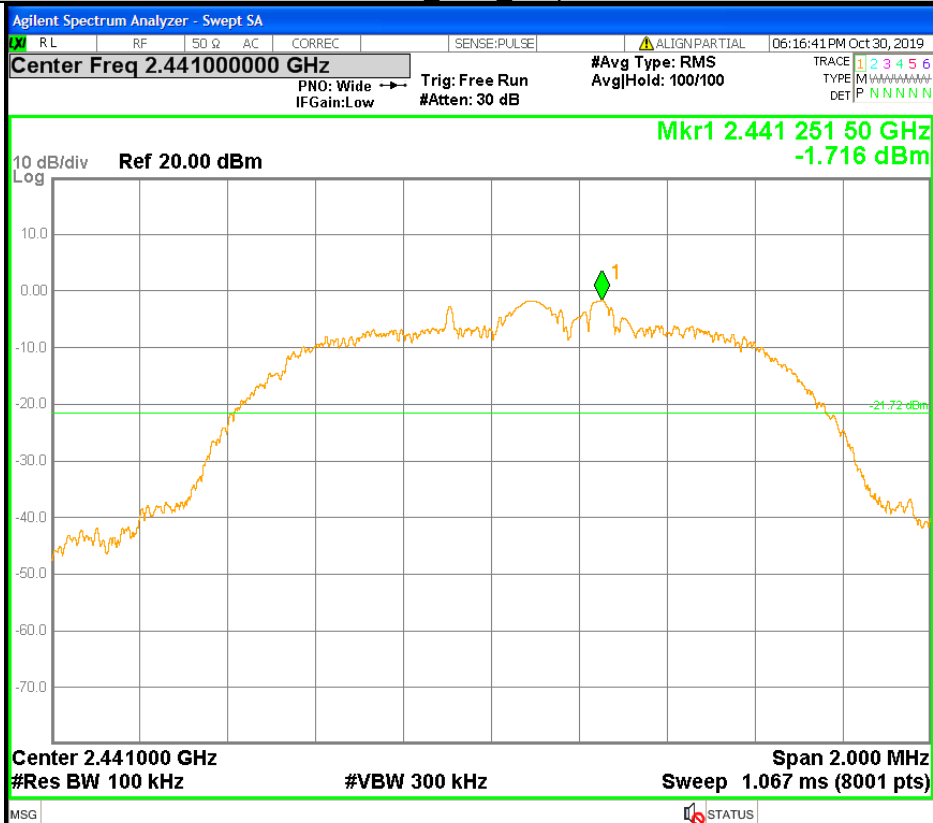


Frequency
Auto Tune
Center Freq 13.250004500 GHz
Start Freq 9.000 kHz
Stop Freq 26.500000000 GHz
CF Step 2.649999100 GHz Auto
Freq Offset 0 Hz

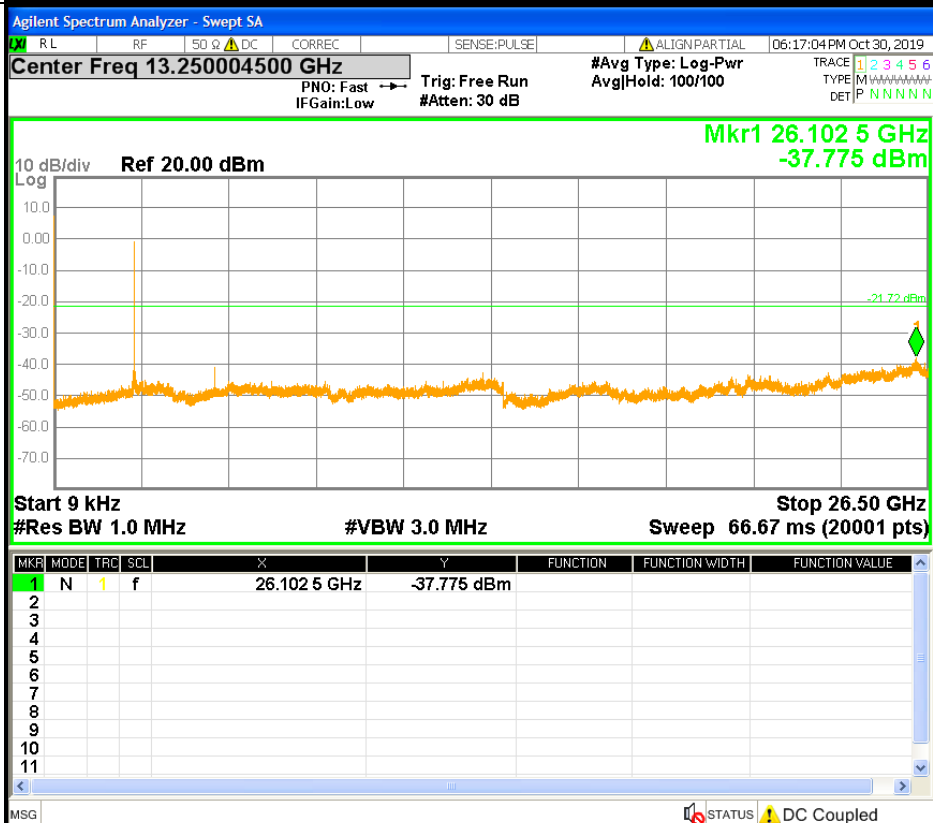
MR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	21.514 0 GHz	-43.263 dBm			
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								

$\pi/4$ DQPSK HCH Graphs

Pref

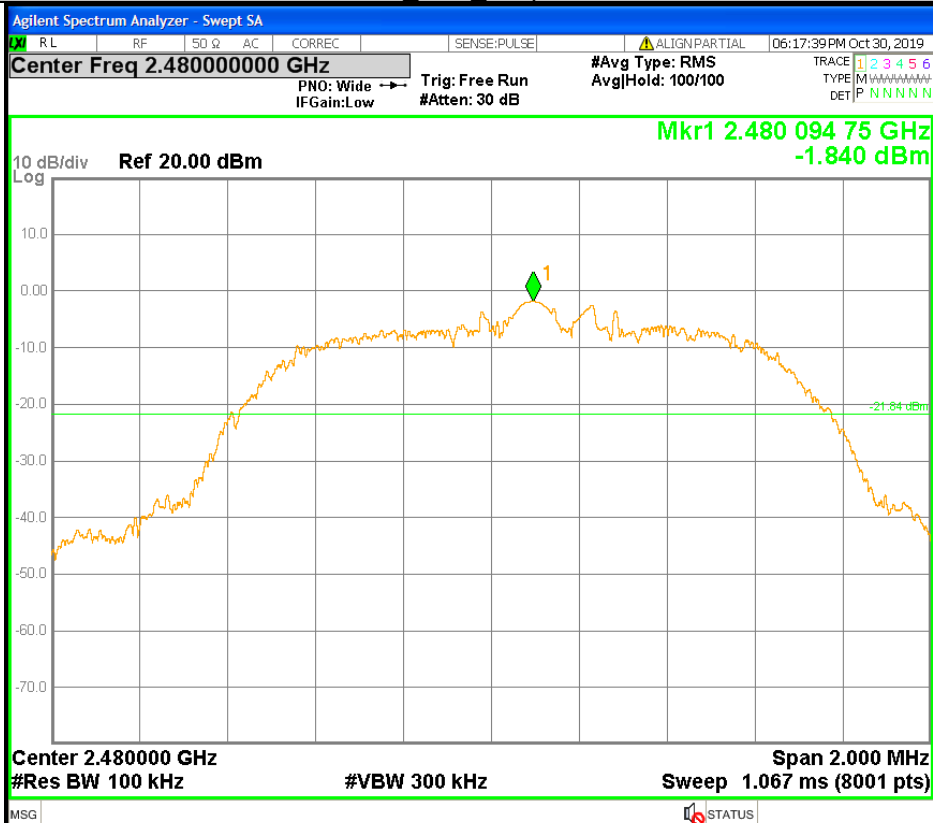


Puw

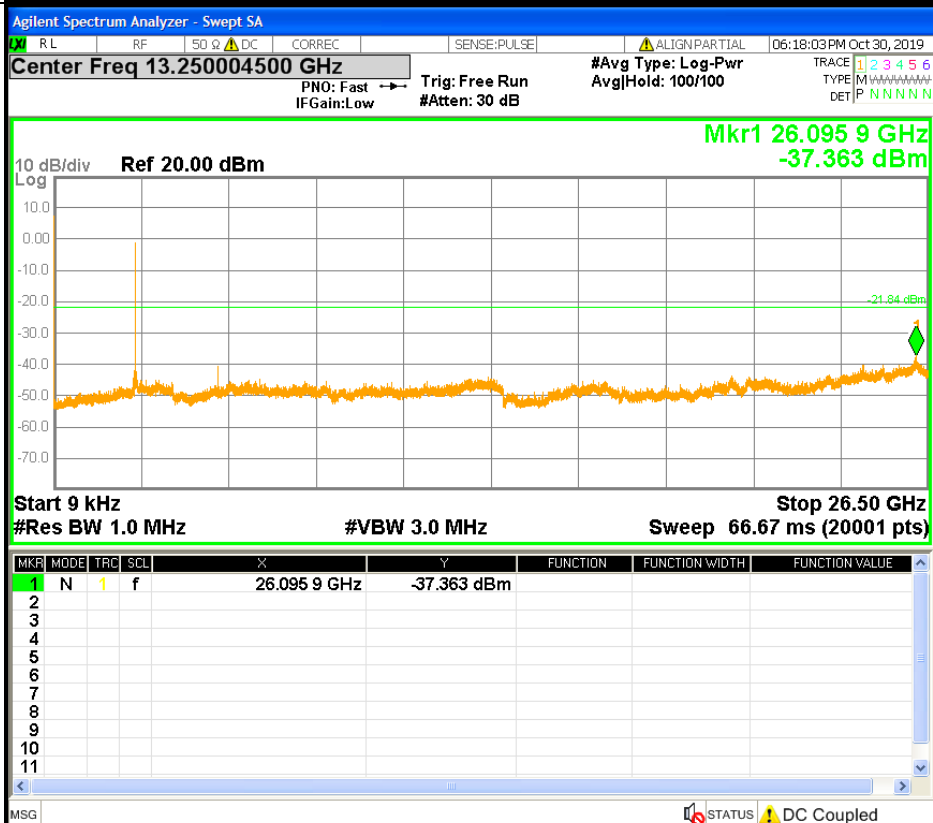


8DPSK LCH Graphs

Pref

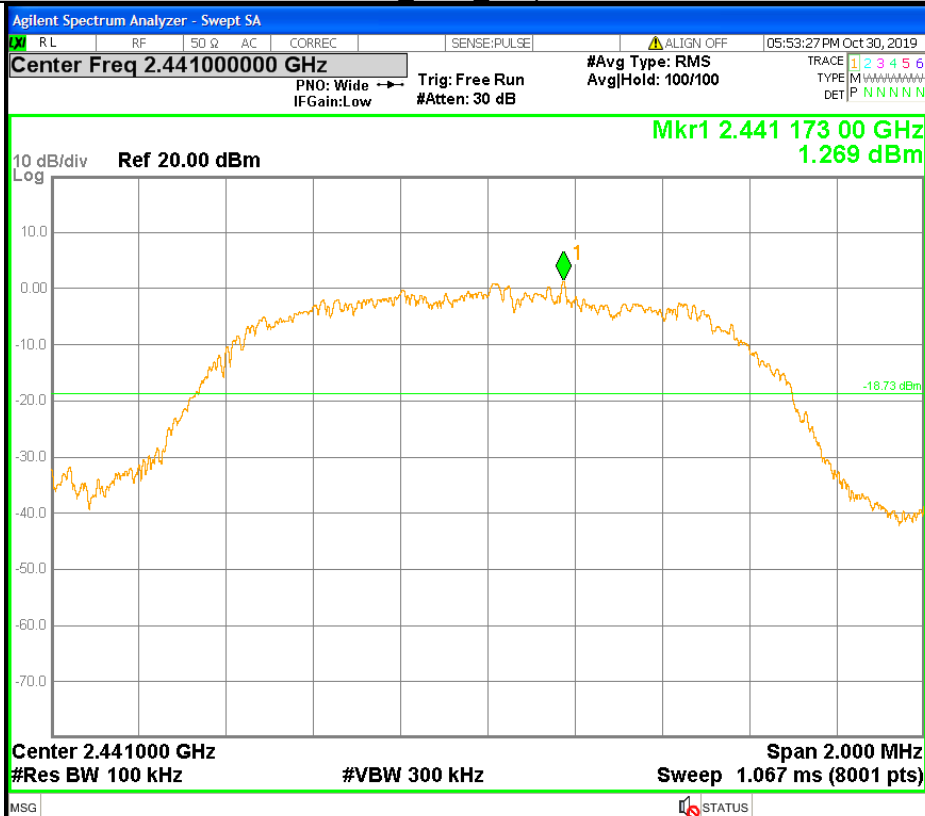


PuW

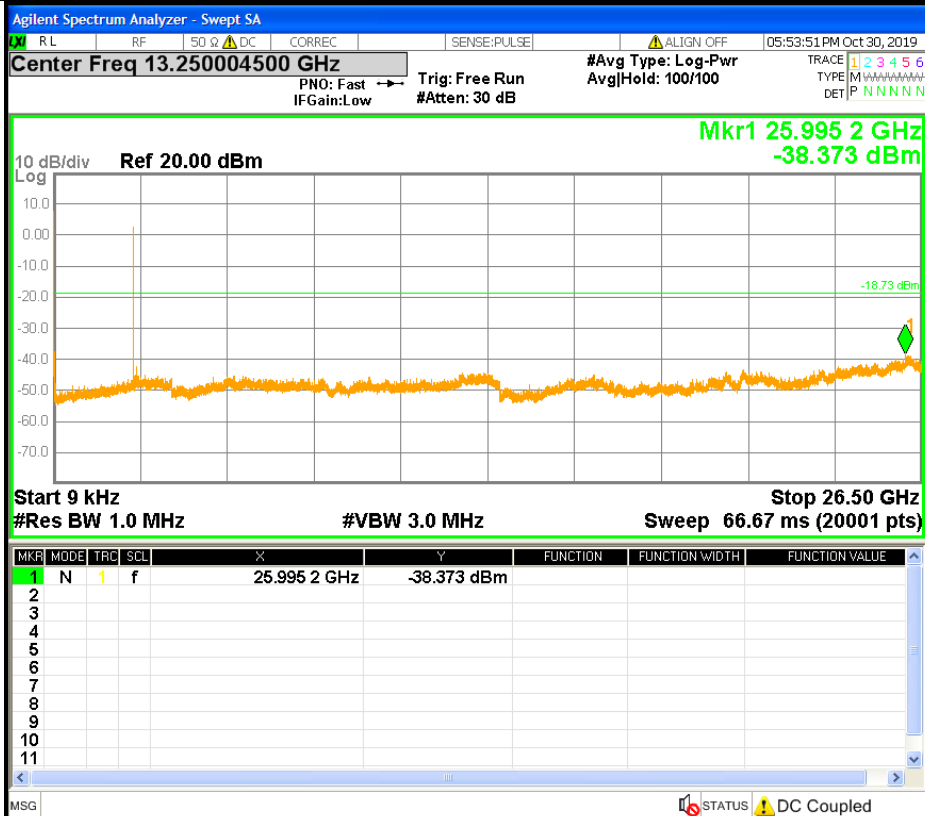


8DPSK MCH Graphs

Pref

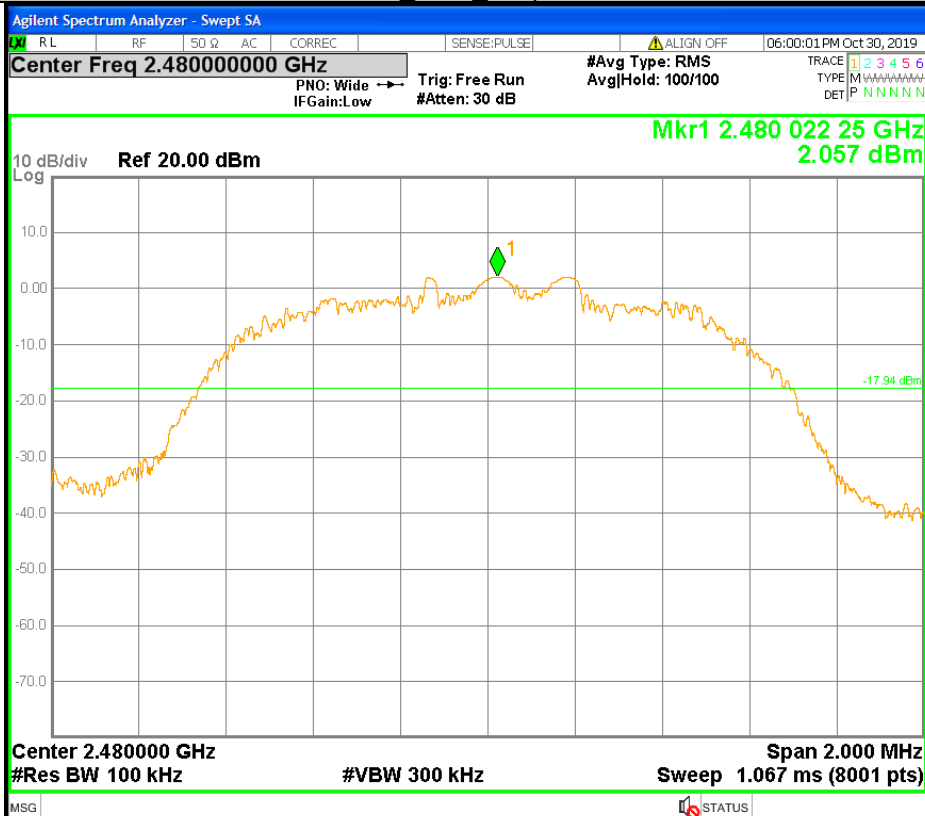


Puw

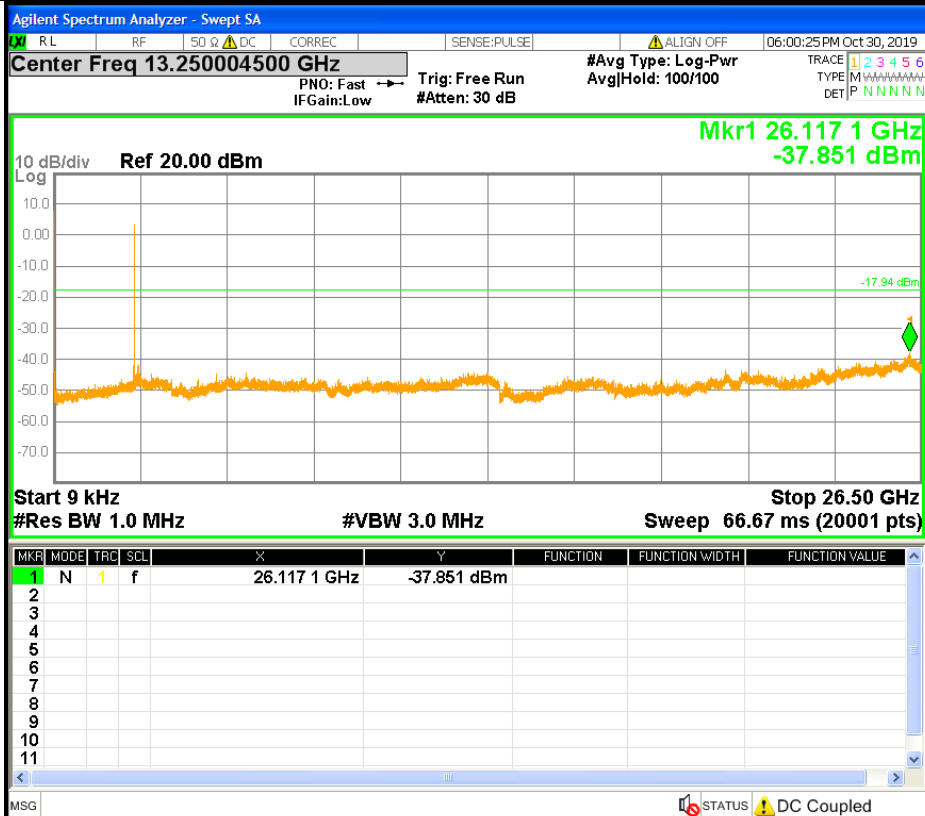


8DPSK HCH Graphs

Pref



Puw

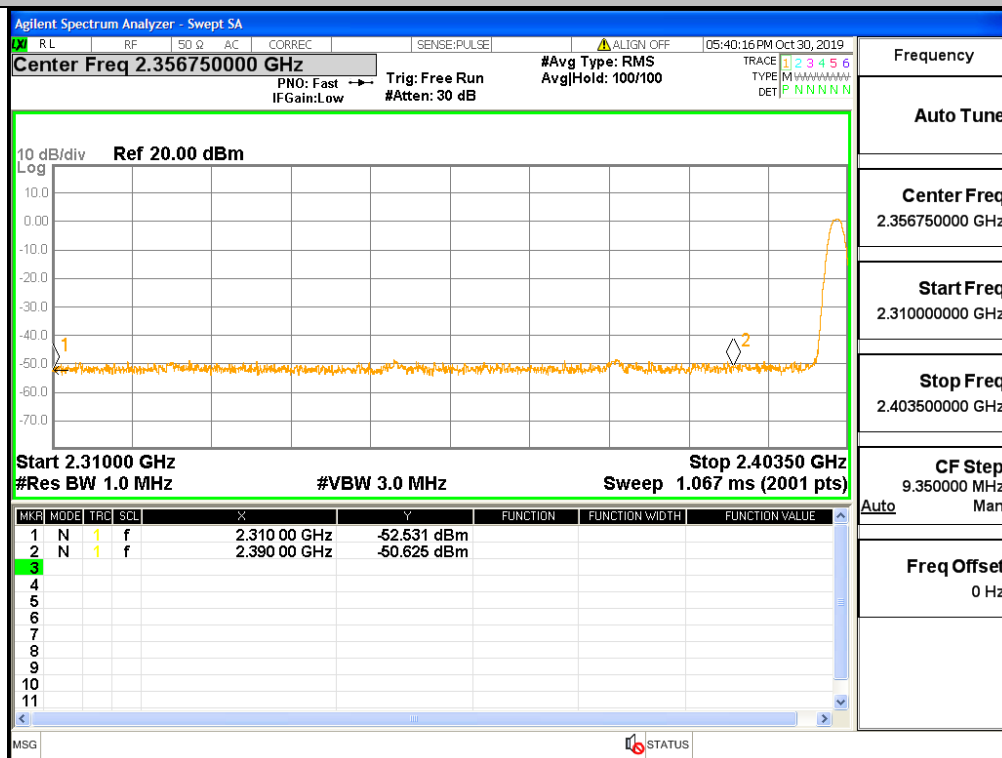


A.8 Restrict-band band-edge measurements

Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390	2.00	0.00	-50.63	46.58	74	Pass
1DH5	2480	2500	2.00	0.00	-49.59	47.61	74	Pass
2DH5	2402	2390	2.00	0.00	-49.62	47.58	74	Pass
2DH5	2480	2483.5	2.00	0.00	-47.47	49.73	74	Pass
3DH5	2402	2375.357	2.00	0.00	-47.53	49.67	74	Pass
3DH5	2480	2483.5	2.00	0.00	-48.89	48.31	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	2.00	0.00	-58.39	38.81	54	Pass
1DH5	2480	2500	2.00	0.00	-51.24	45.96	54	Pass
2DH5	2402	2390	2.00	0.00	-58.35	38.85	54	Pass
2DH5	2480	2483.5	2.00	0.00	-51.97	45.23	54	Pass
3DH5	2402	2375.357	2.00	0.00	-58.48	38.72	54	Pass
3DH5	2480	2483.5	2.00	0.00	-51.94	45.26	54	Pass

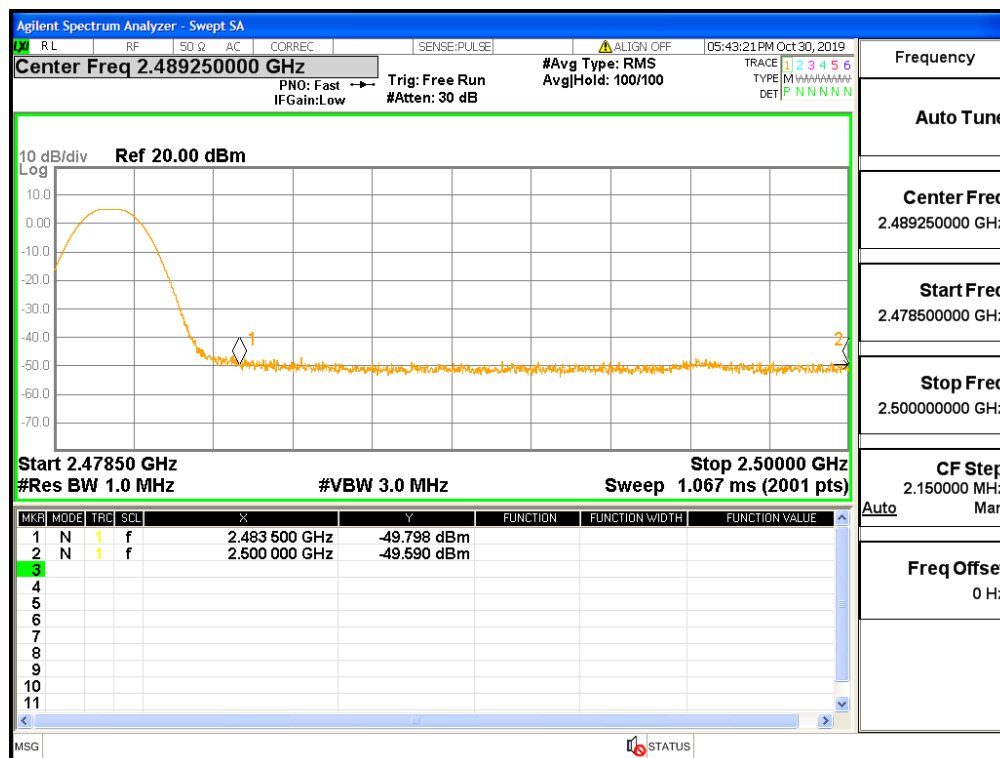
Restrict-band band-edge measurements_2402_PEAK_DH5



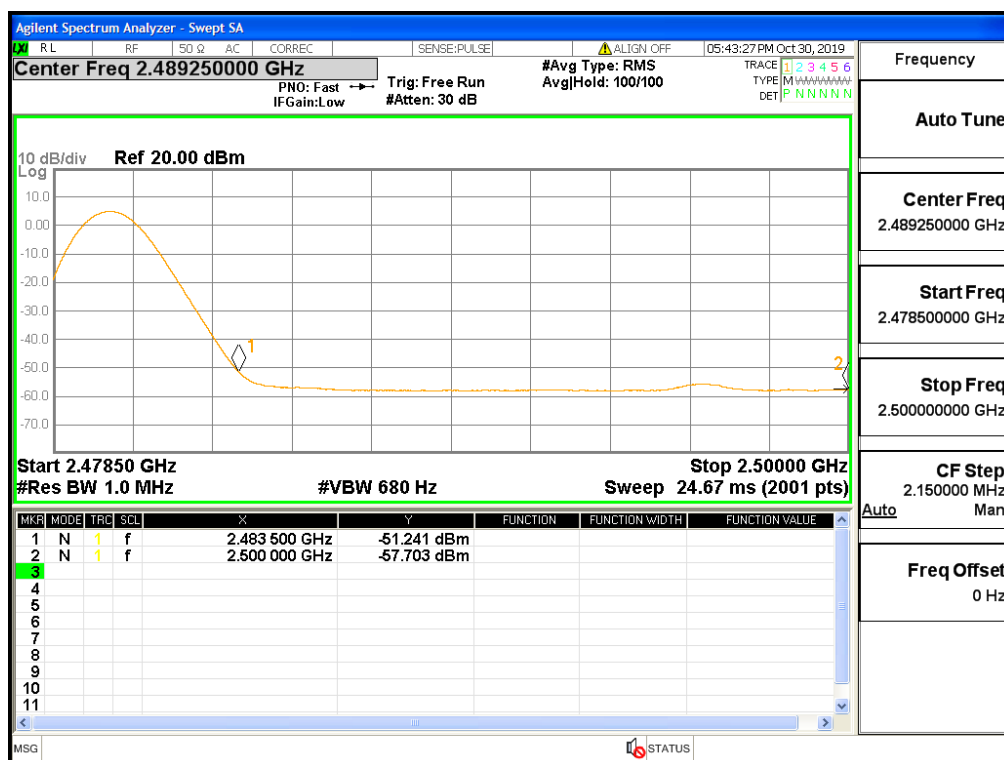
Restrict-band band-edge measurements_2402_AV_DH5



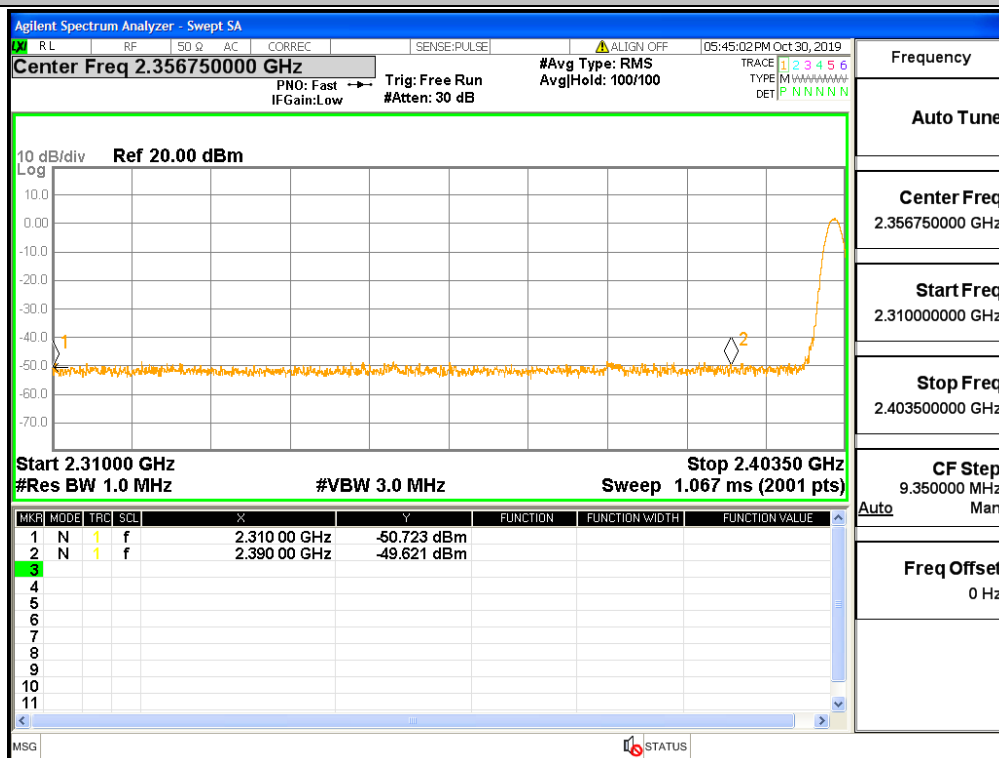
Restrict-band band-edge measurements_2480_PEAK_DH5



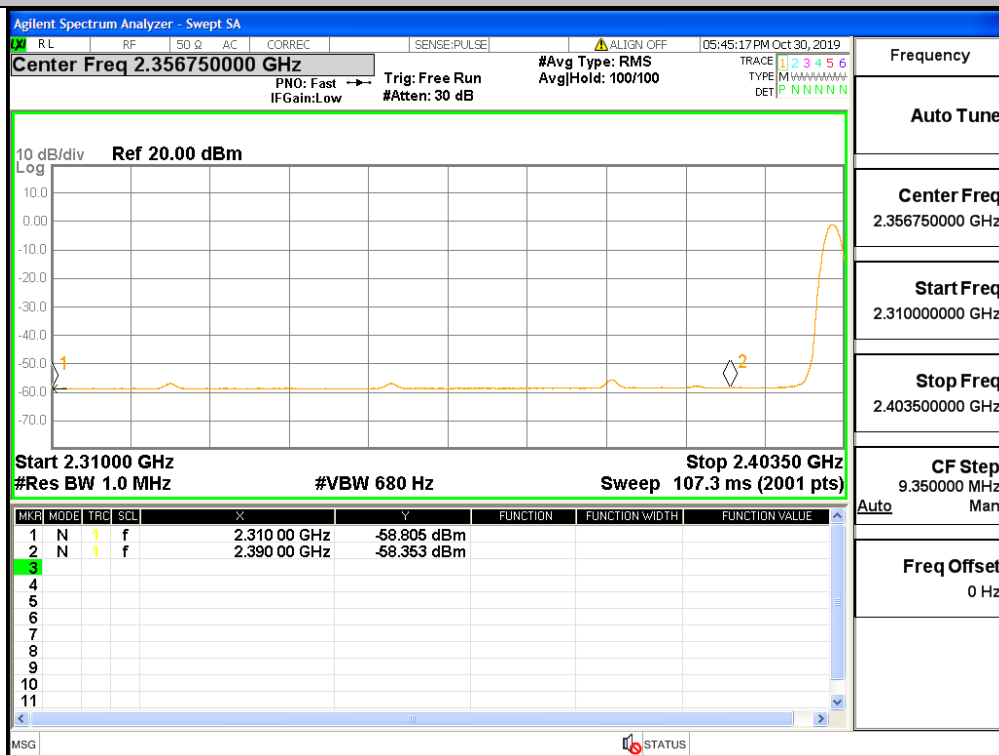
Restrict-band band-edge measurements_2480_AV_DH5



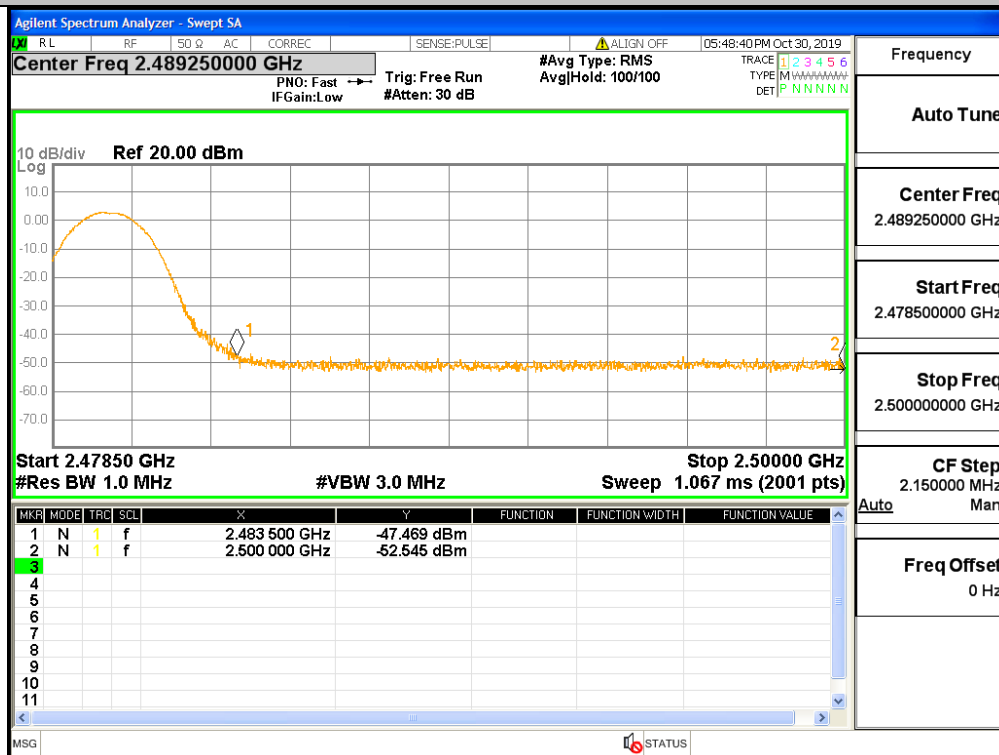
Restrict-band band-edge measurements_2402_PEAK_2DH5



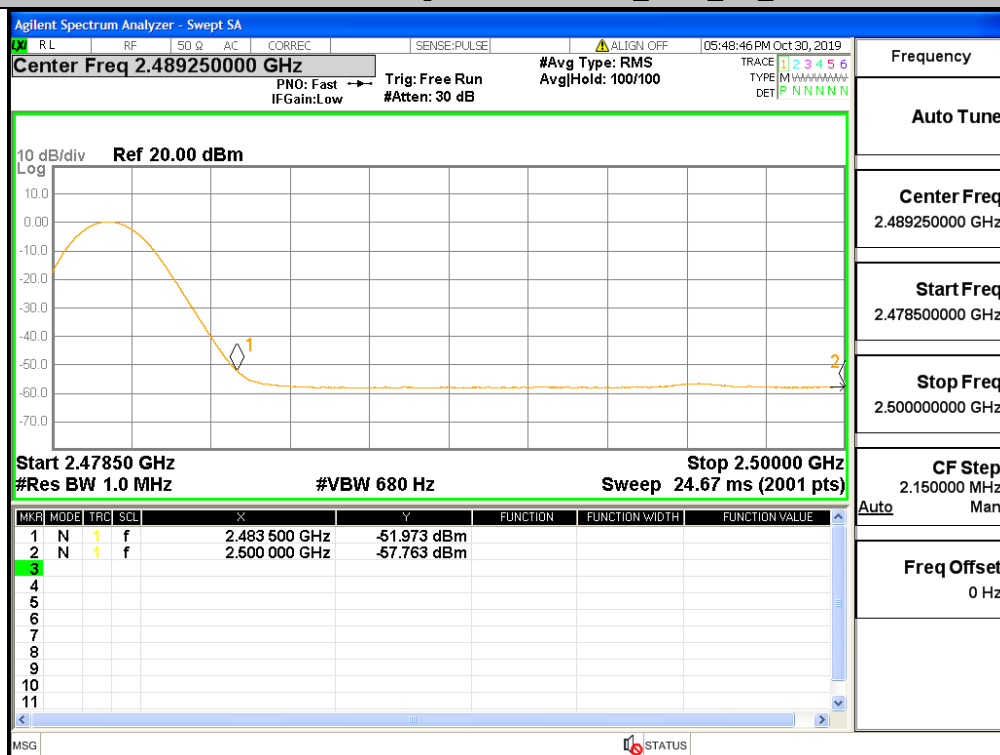
Restrict-band band-edge measurements_2402_AV_2DH5



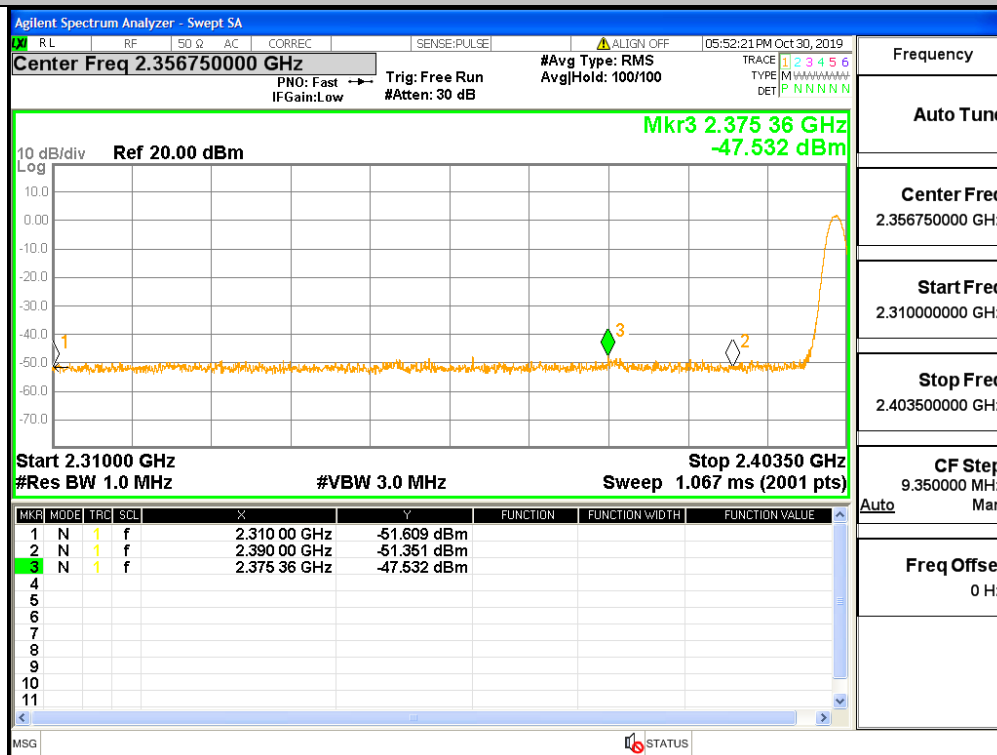
Restrict-band band-edge measurements_2480_PEAK_2DH5



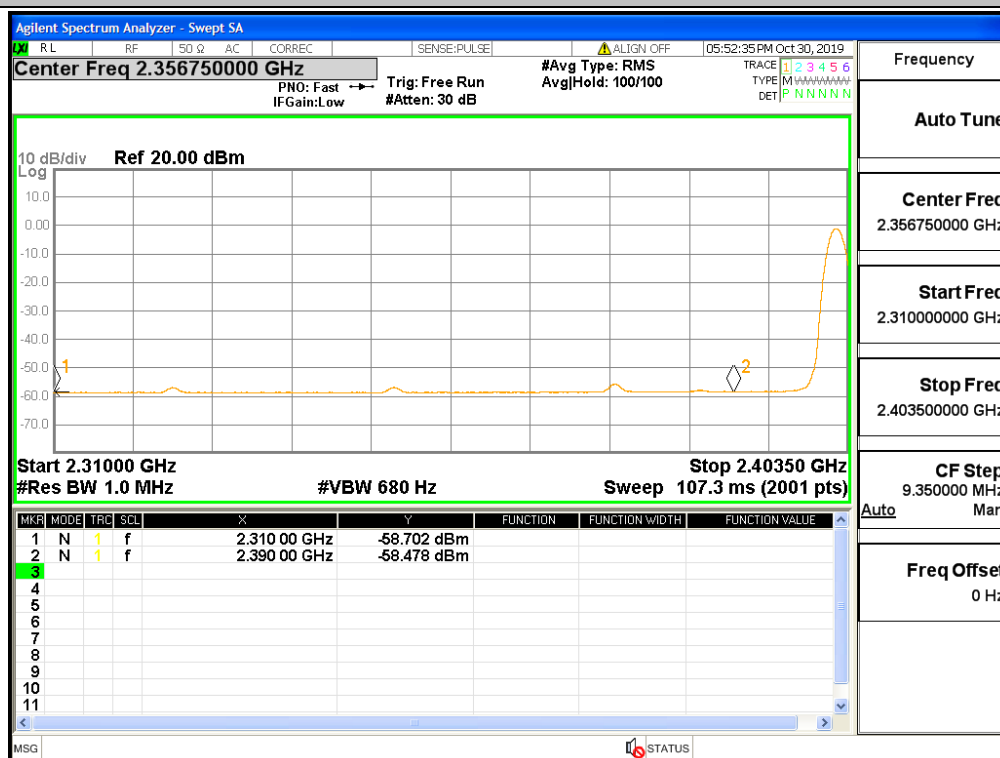
Restrict-band band-edge measurements_2480_AV_2DH5



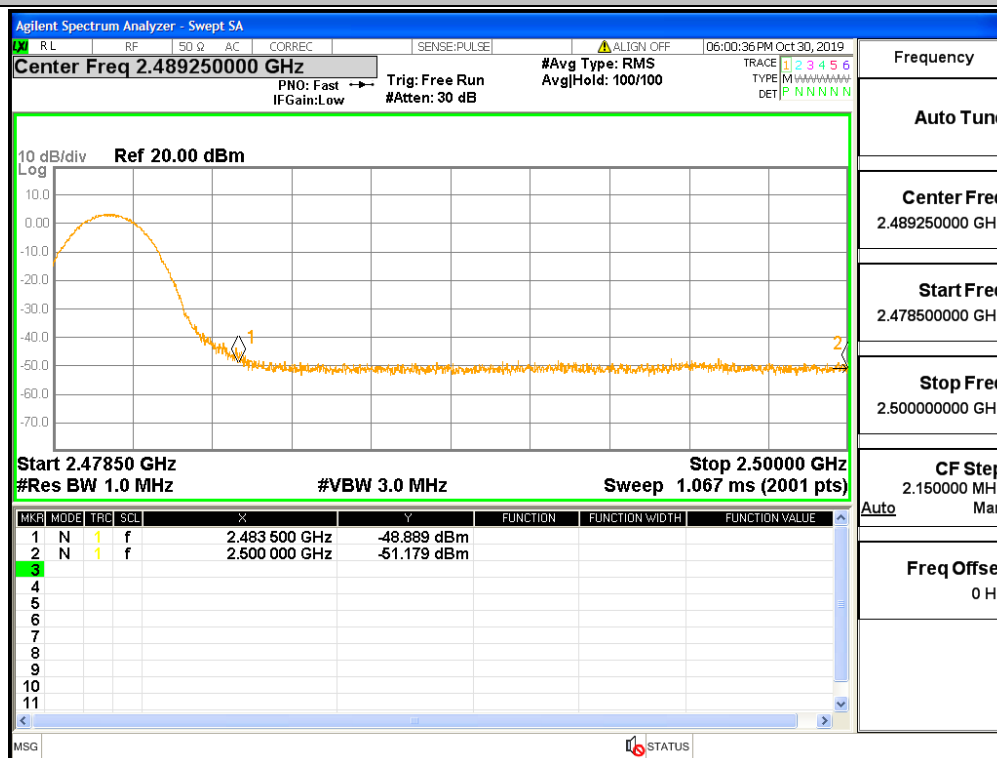
Restrict-band band-edge measurements_2402_PEAK_3DH5



Restrict-band band-edge measurements_2402_AV_3DH5



Restrict-band band-edge measurements_2480_PEAK_3DH5



Restrict-band band-edge measurements_2480_AV_3DH5

