

Appendix A

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

Product Name: Bluetooth Noise Cancelling Headphones

Trade Mark: LYNXSONIC

Test Model: LYNXSONIC 433

FCC ID: 2AURP-AK1001

Environmental Conditions

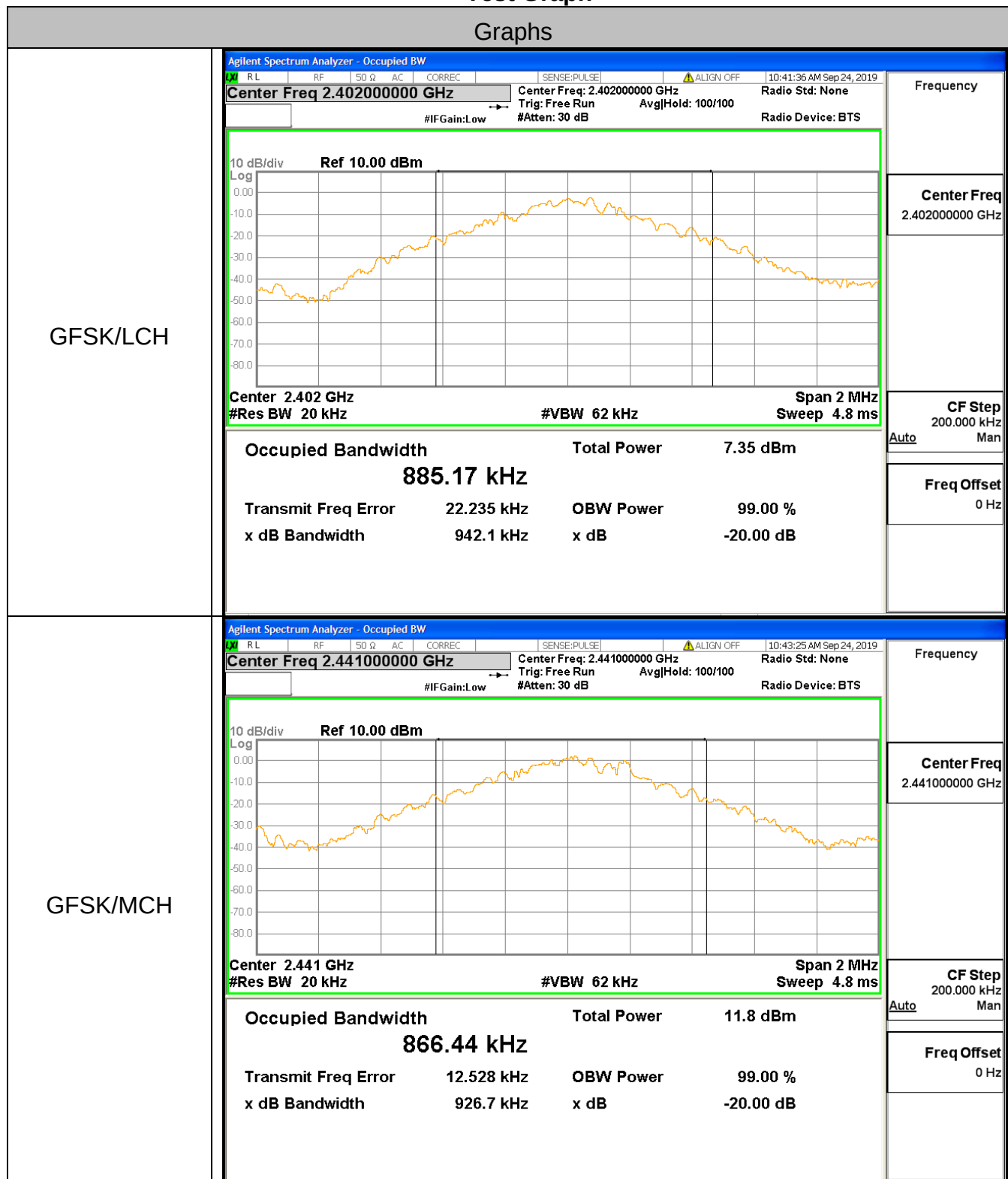
Temperature:	22.8° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Gary Qian
Supervised by:	Eden Hu

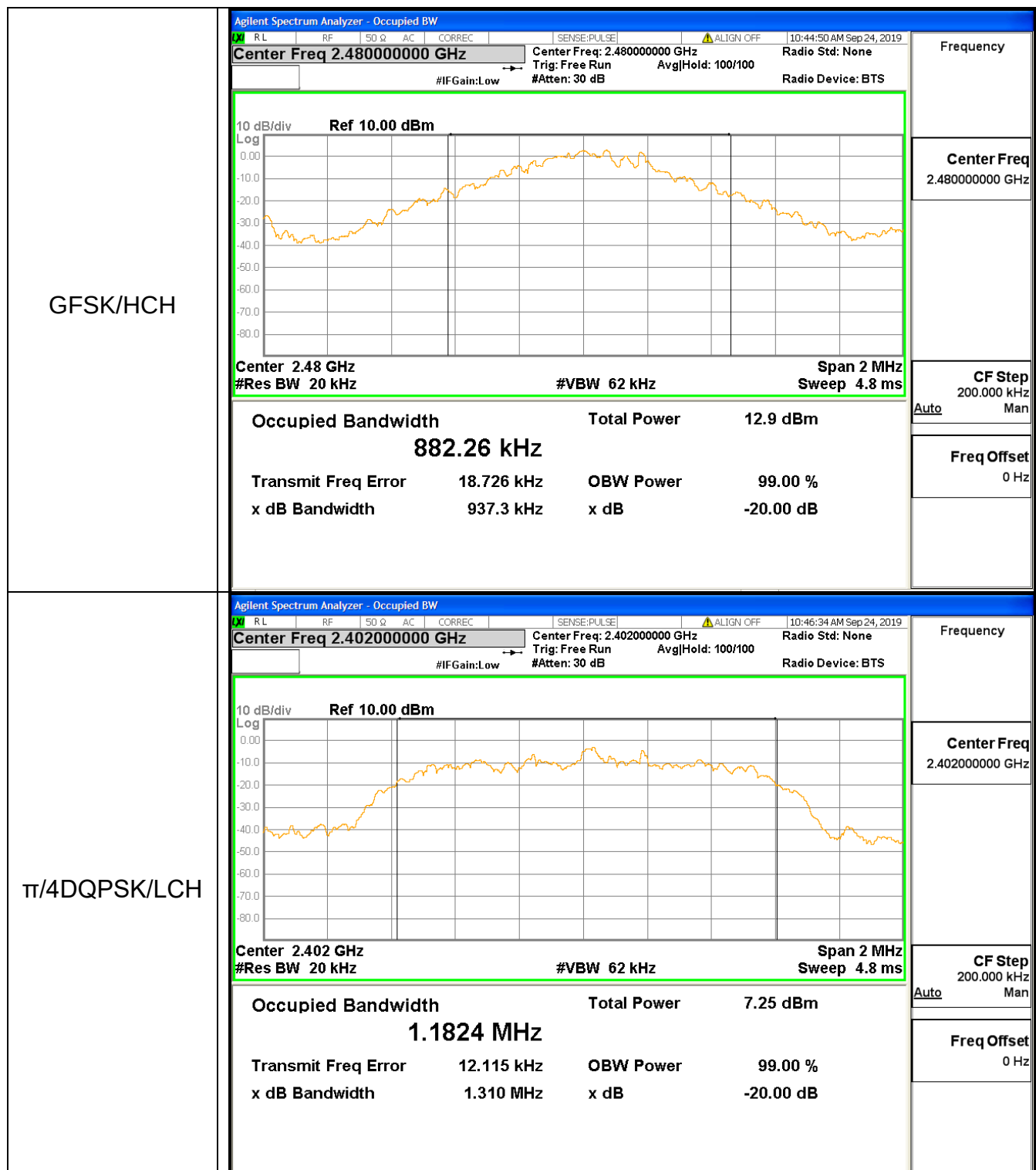
A.1 20 dB Bandwidth

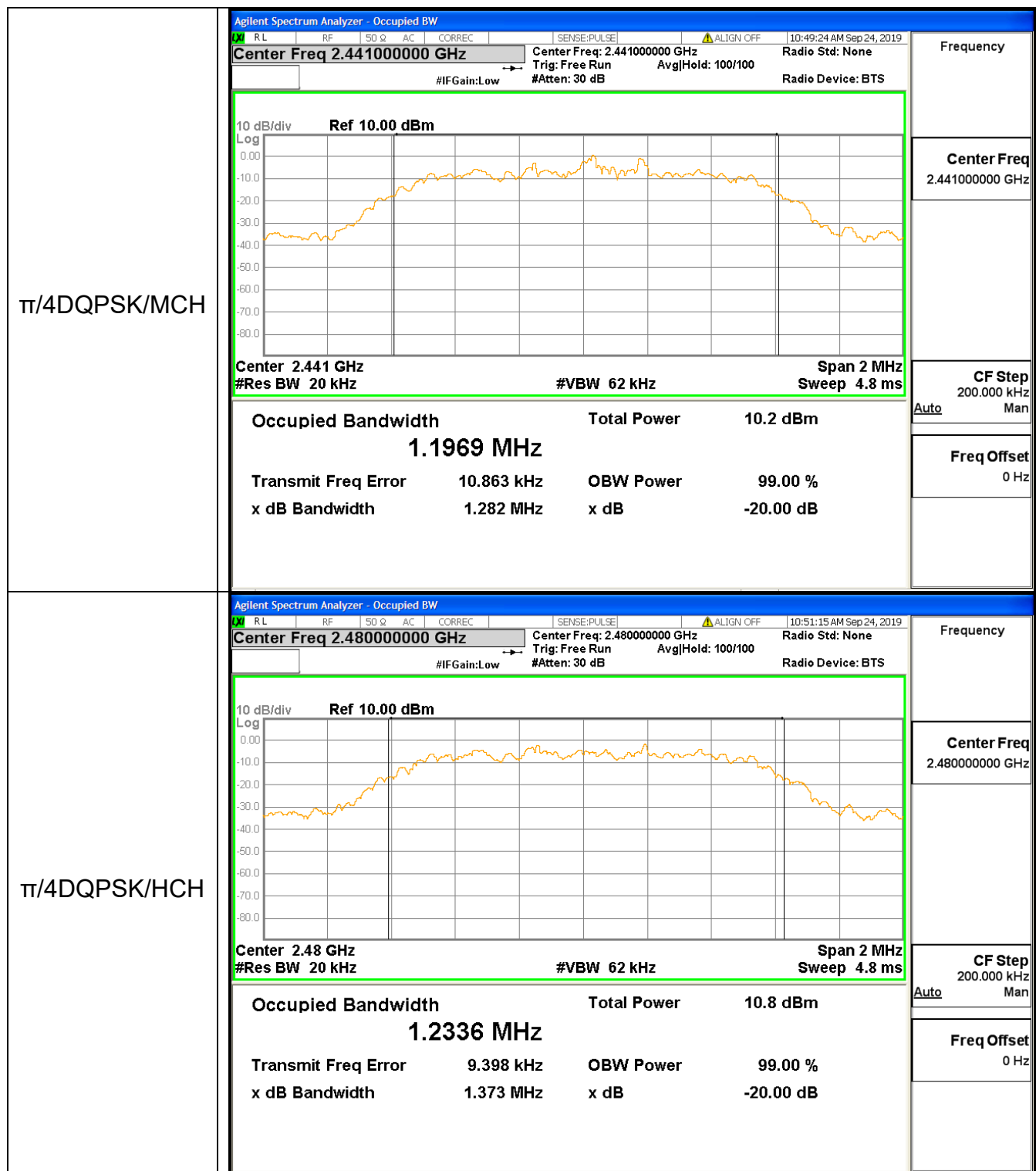
Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.942	Not Specified	PASS
GFSK	MCH	0.927	Not Specified	PASS
GFSK	HCH	0.937	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.310	Not Specified	PASS
$\pi/4$ DQPSK	MCH	1.282	Not Specified	PASS
$\pi/4$ DQPSK	HCH	1.373	Not Specified	PASS
8DPSK	LCH	1.254	Not Specified	PASS
8DPSK	MCH	1.265	Not Specified	PASS
8DPSK	HCH	1.267	Not Specified	PASS

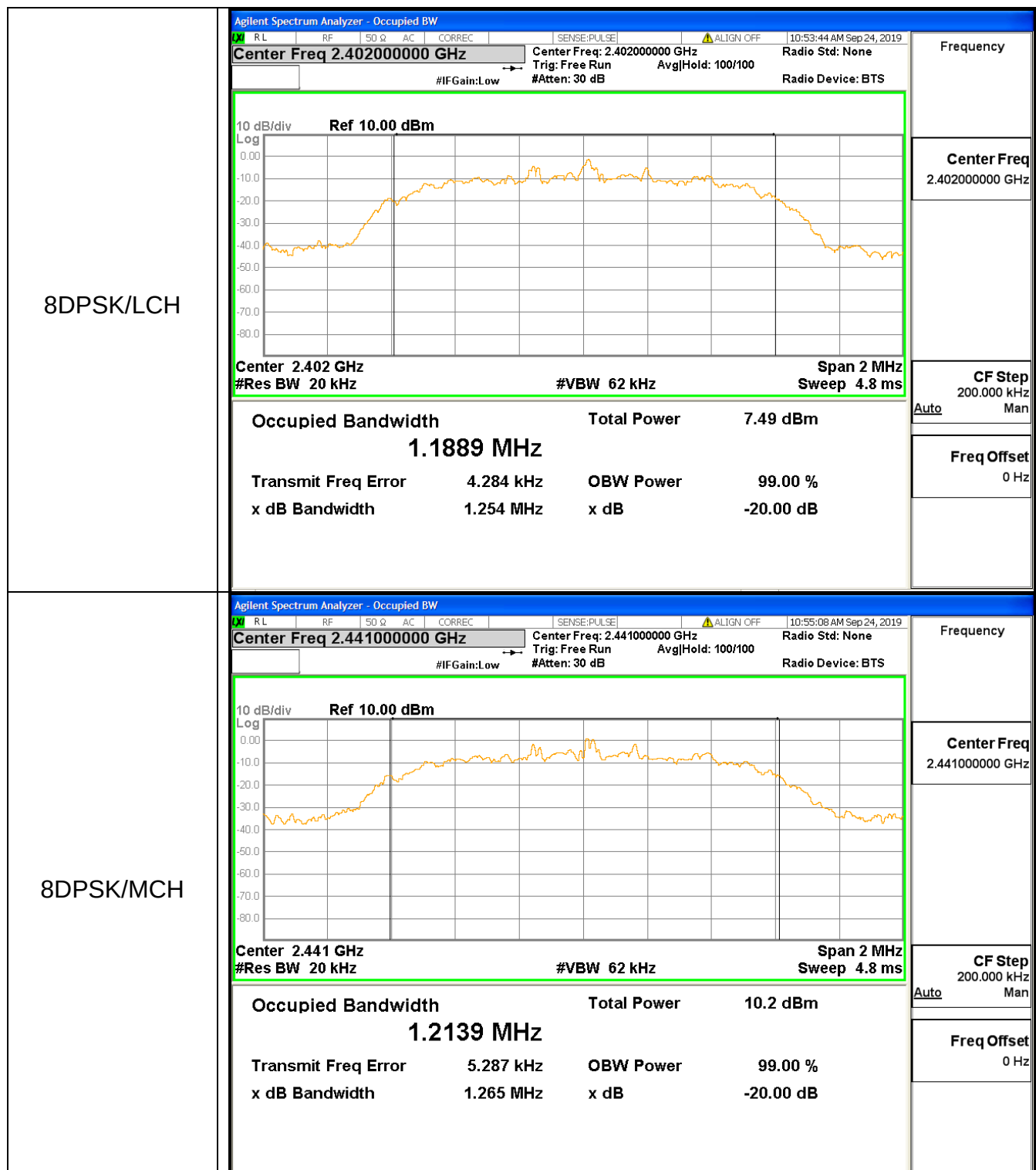
Test Graph

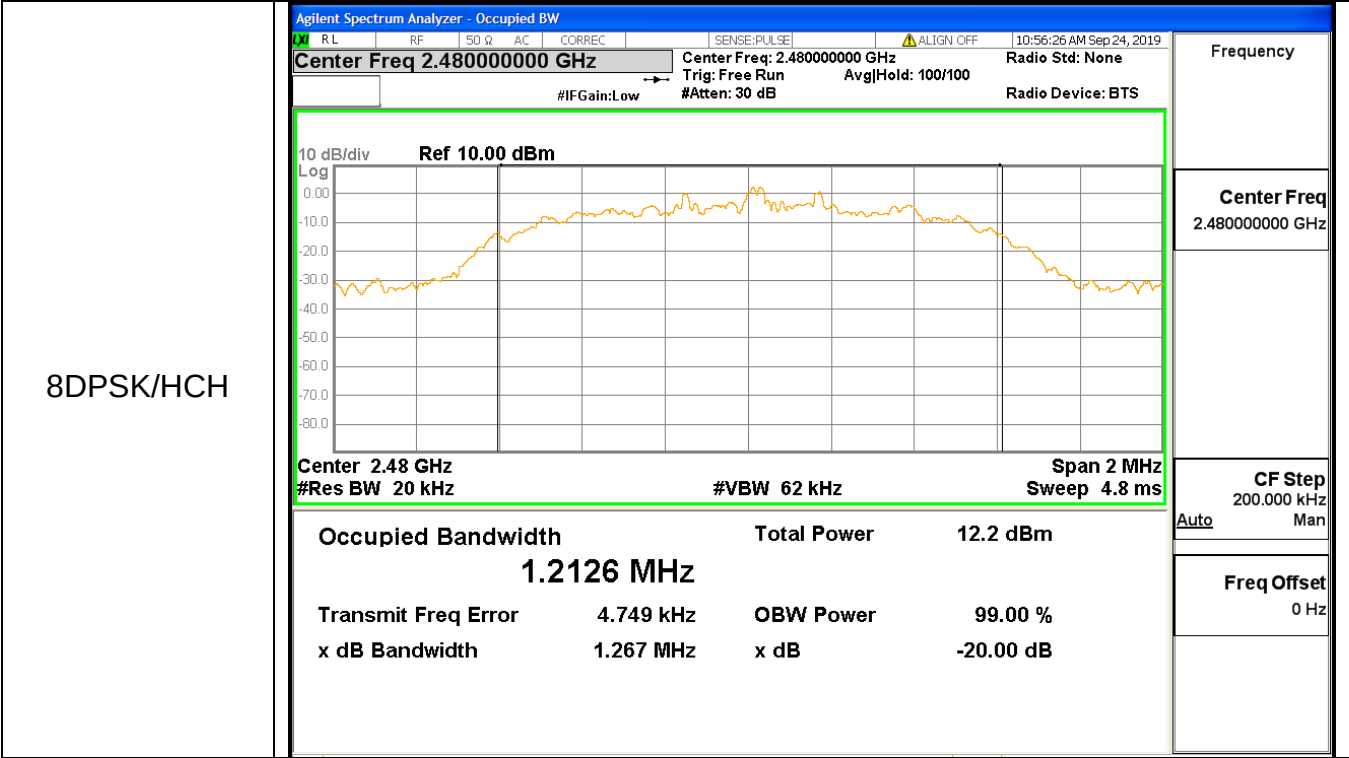
Graphs







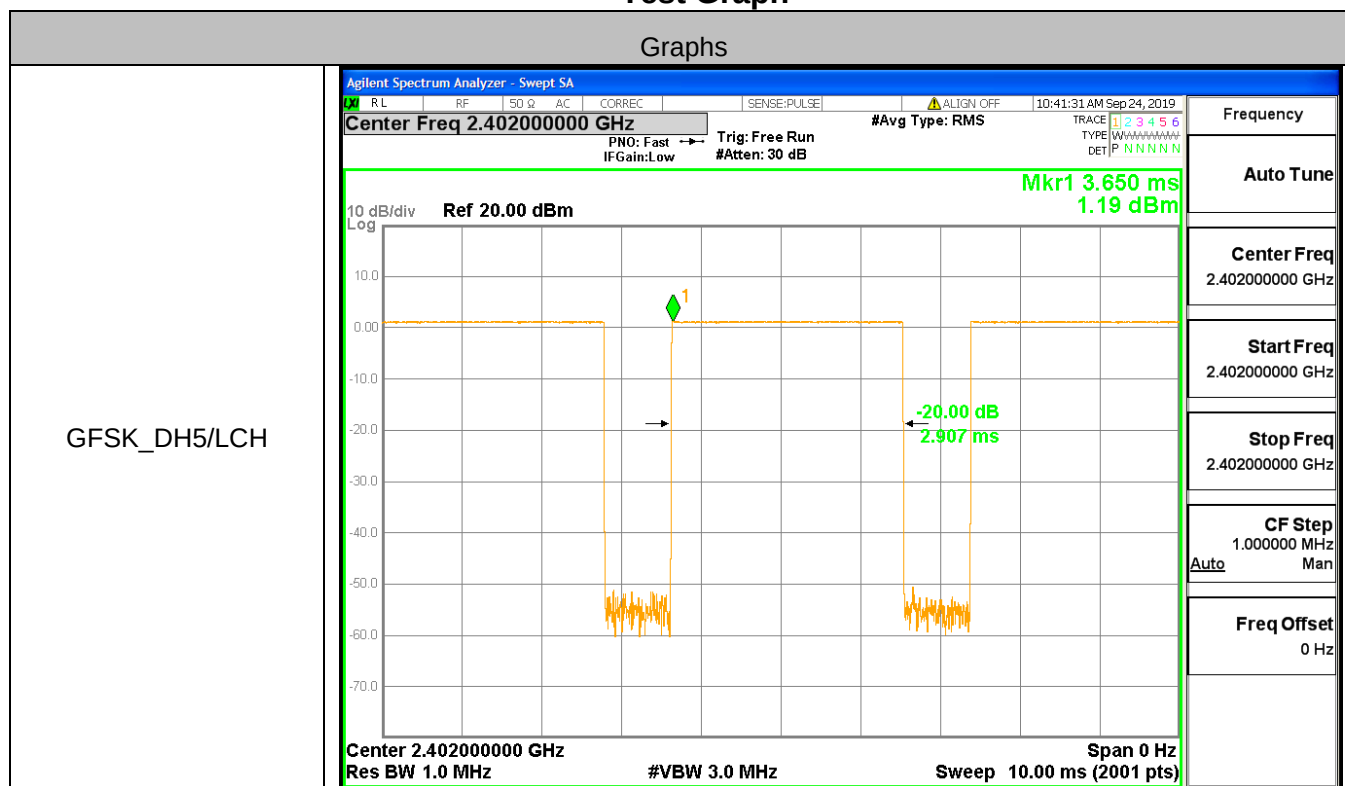


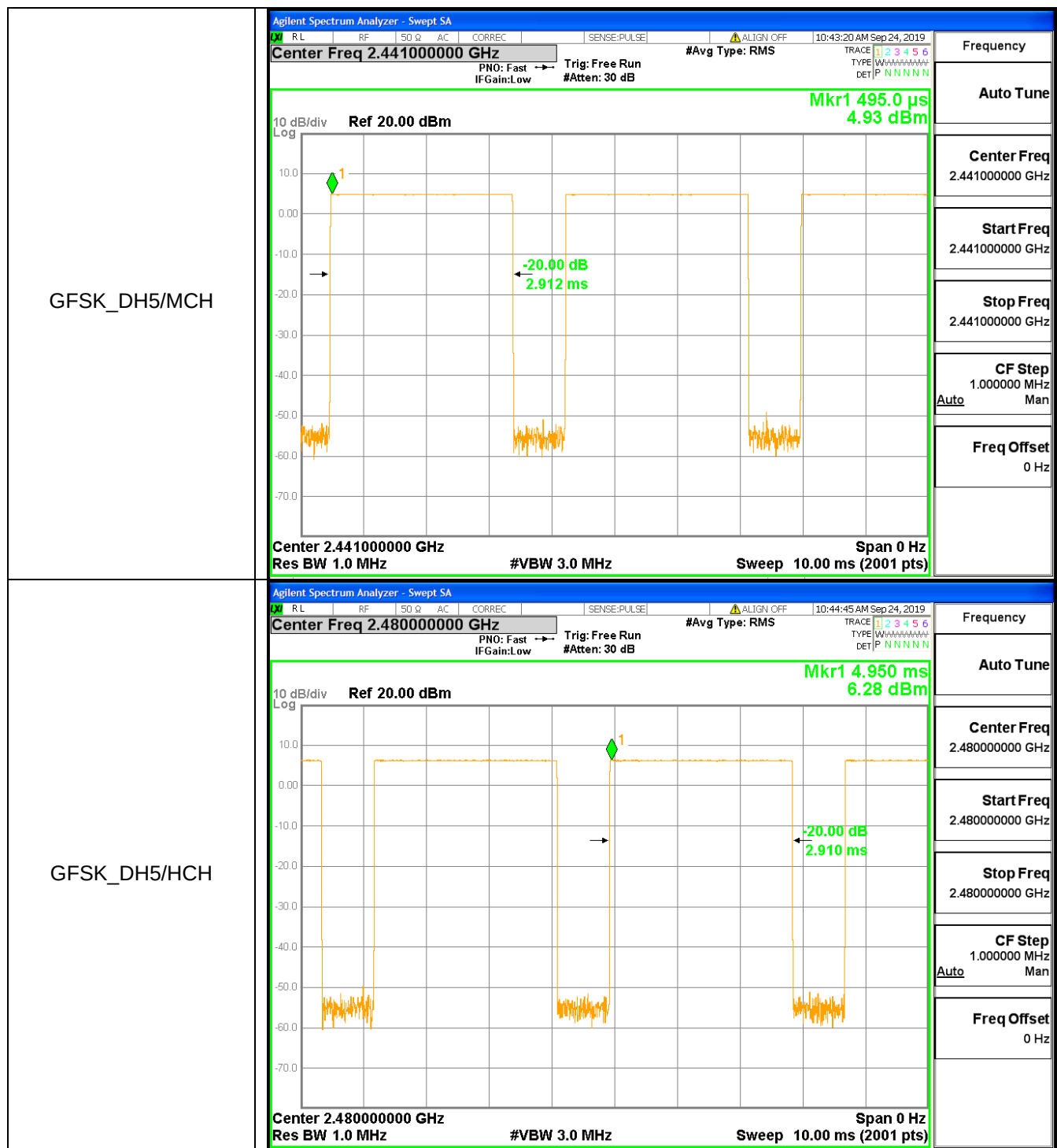


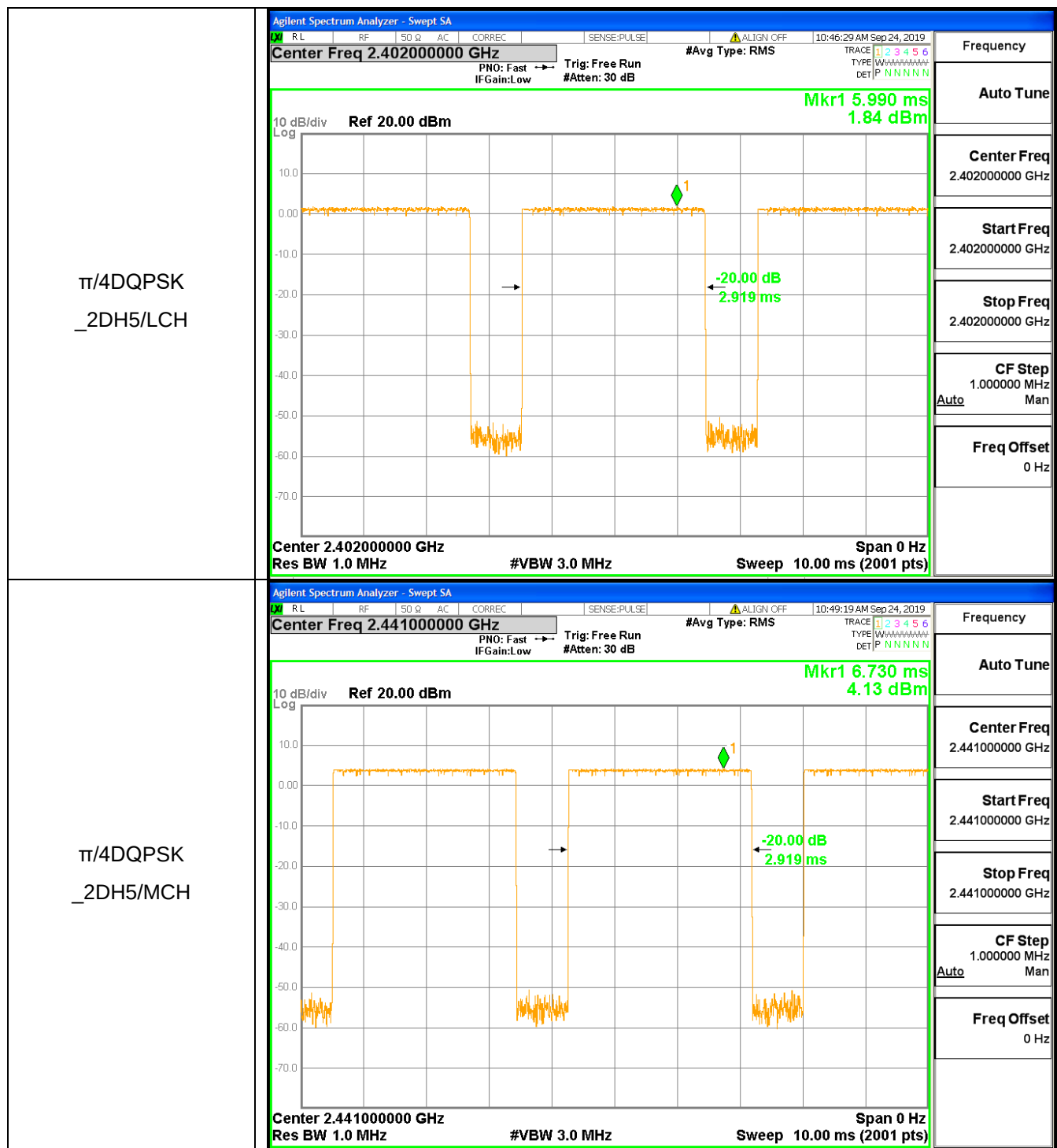
A.2 Dwell Time

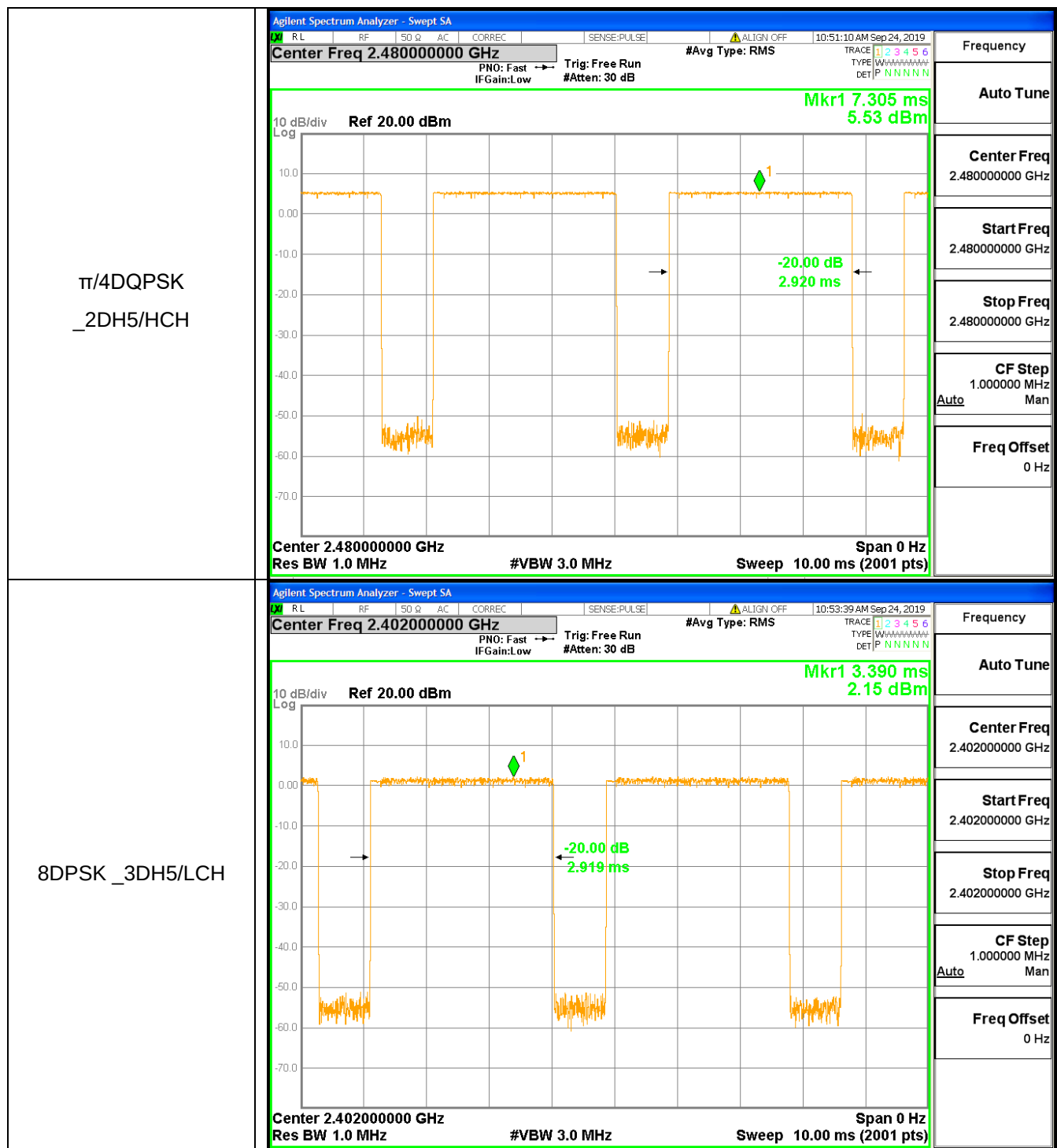
Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002907	106.7	0.310217	0.4	PASS
GFSK	DH5	MCH	0.002912	106.7	0.310676	0.4	PASS
GFSK	DH5	HCH	0.002910	106.7	0.310521	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	0.002919	106.7	0.311478	0.4	PASS
$\pi/4$ DQPSK	2DH5	MCH	0.002919	106.7	0.311472	0.4	PASS
$\pi/4$ DQPSK	2DH5	HCH	0.002920	106.7	0.311557	0.4	PASS
8DPSK	3DH5	LCH	0.002919	106.7	0.311479	0.4	PASS
8DPSK	3DH5	MCH	0.002920	106.7	0.311572	0.4	PASS
8DPSK	3DH5	HCH	0.002920	106.7	0.311535	0.4	PASS

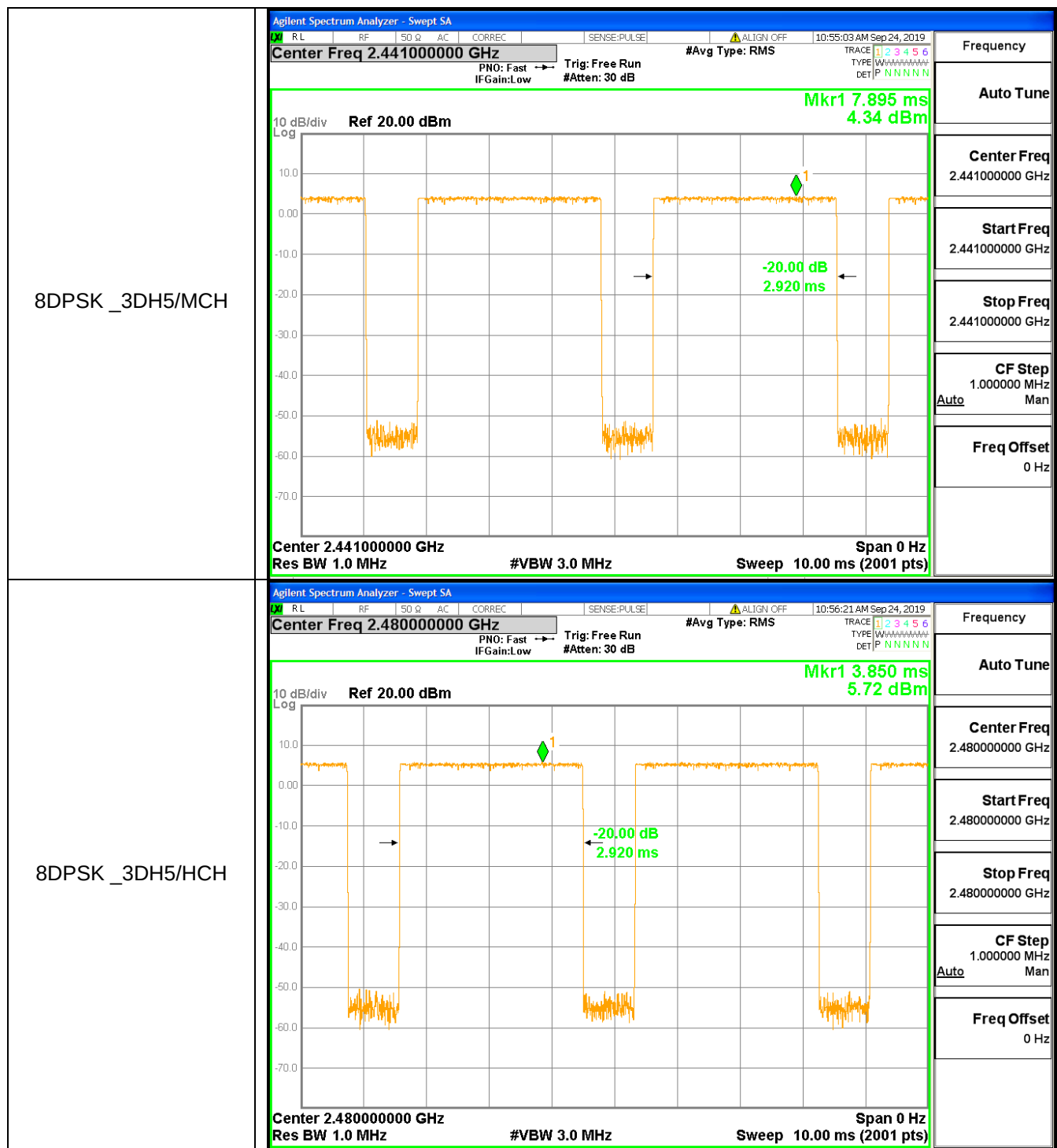
Test Graph







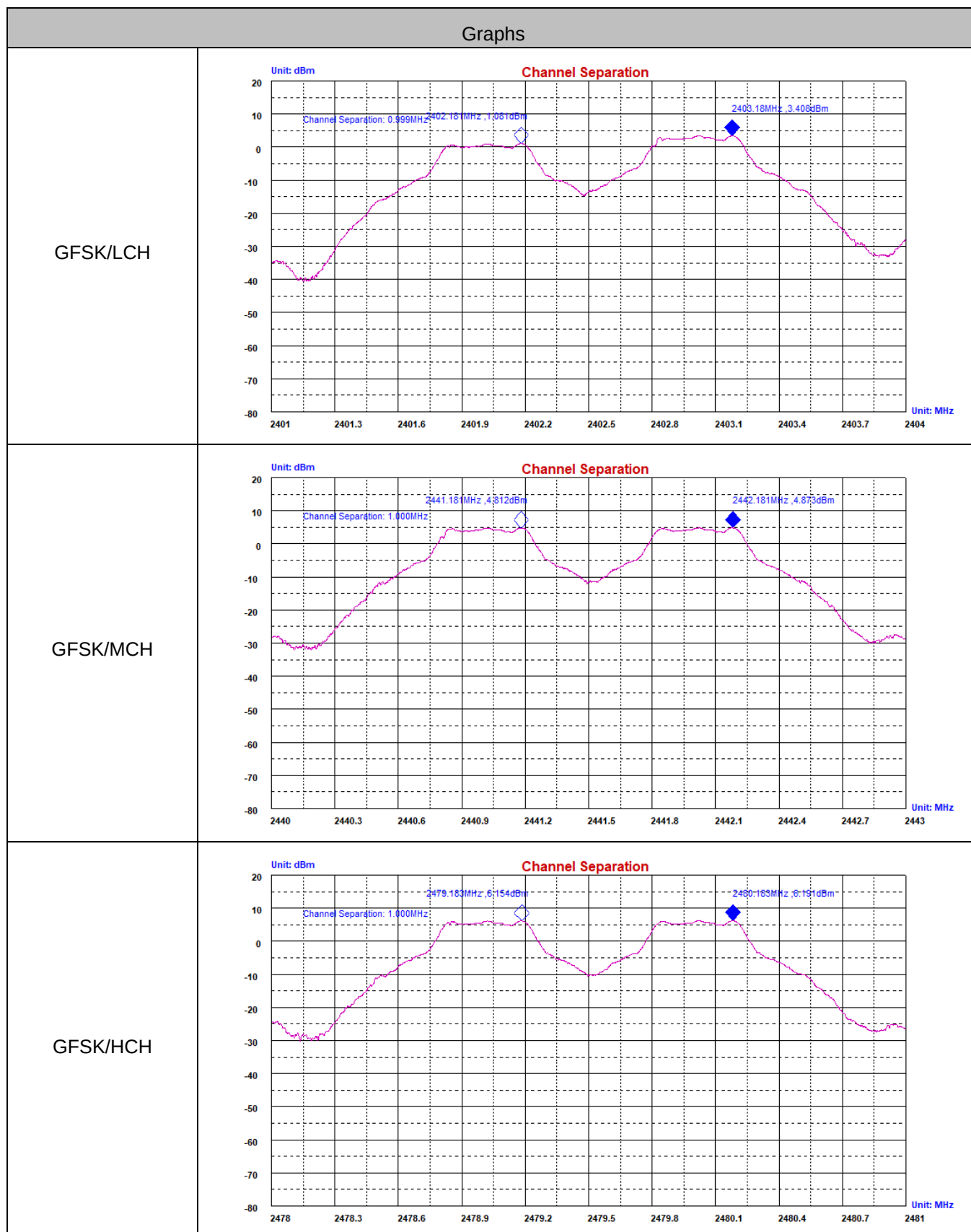


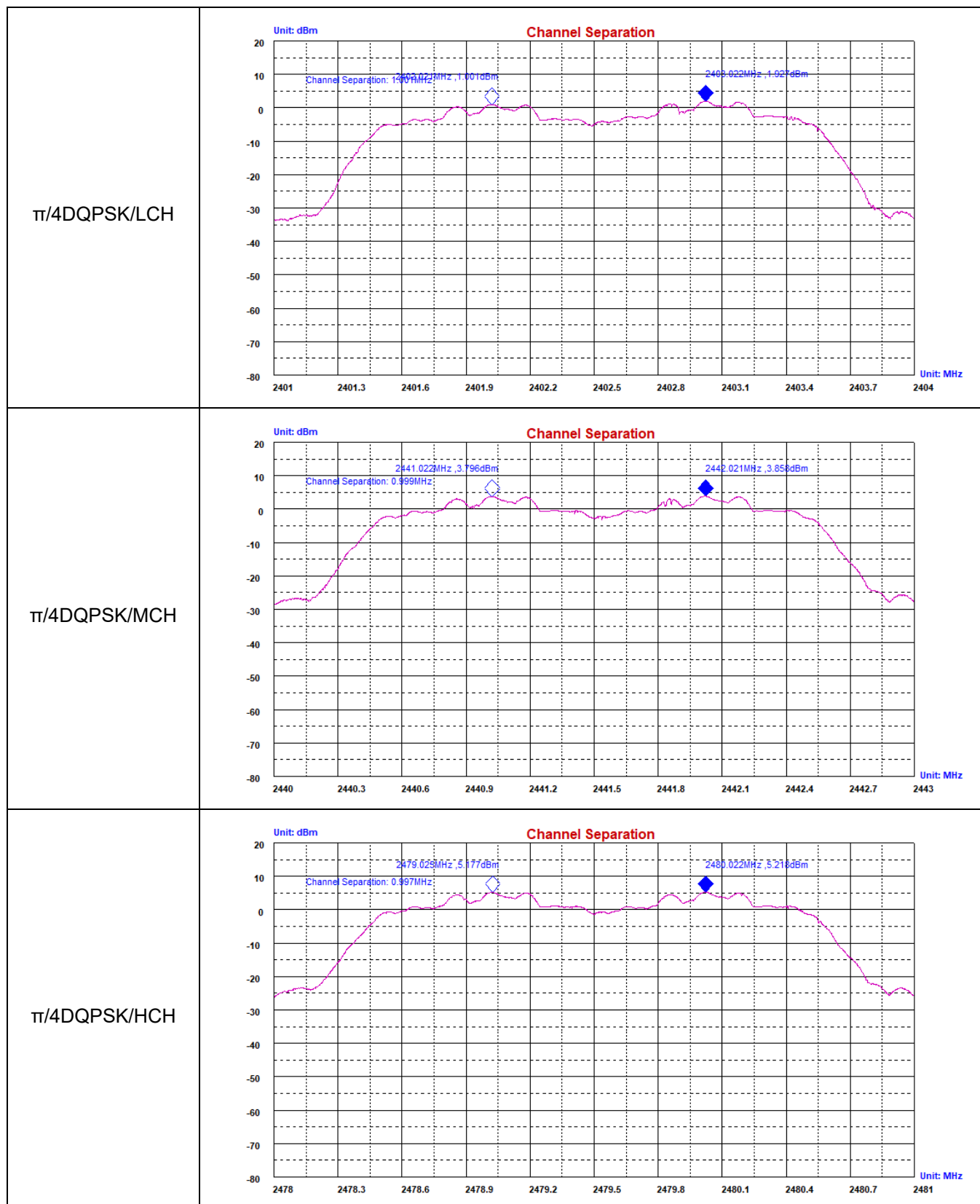


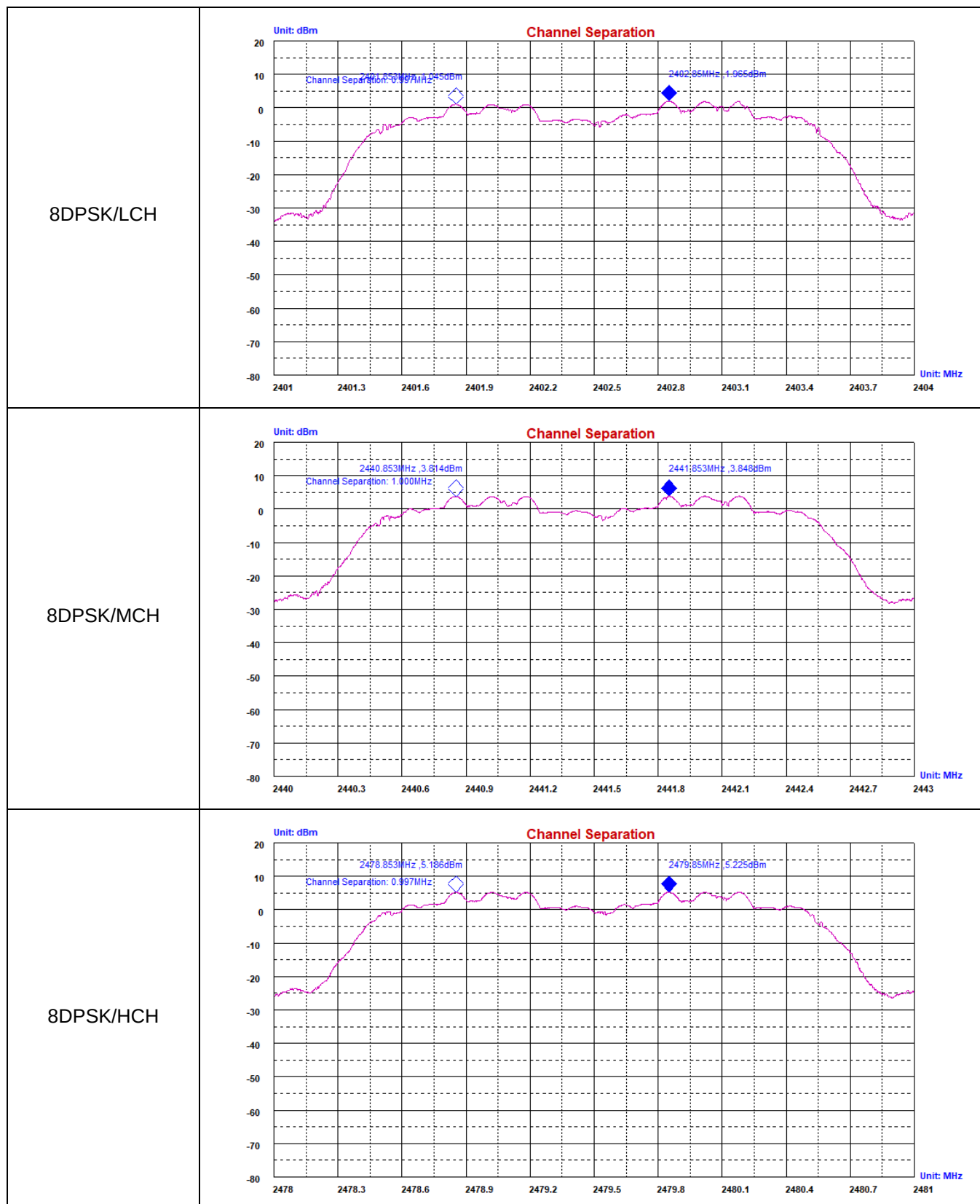
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.999	0.628	PASS
GFSK	MCH	1.000	0.618	PASS
GFSK	HCH	1.000	0.625	PASS
$\pi/4$ DQPSK	LCH	1.001	0.873	PASS
$\pi/4$ DQPSK	MCH	0.999	0.855	PASS
$\pi/4$ DQPSK	HCH	0.997	0.915	PASS
8DPSK	LCH	0.997	0.836	PASS
8DPSK	MCH	1.000	0.843	PASS
8DPSK	HCH	0.997	0.845	PASS

Test Graph



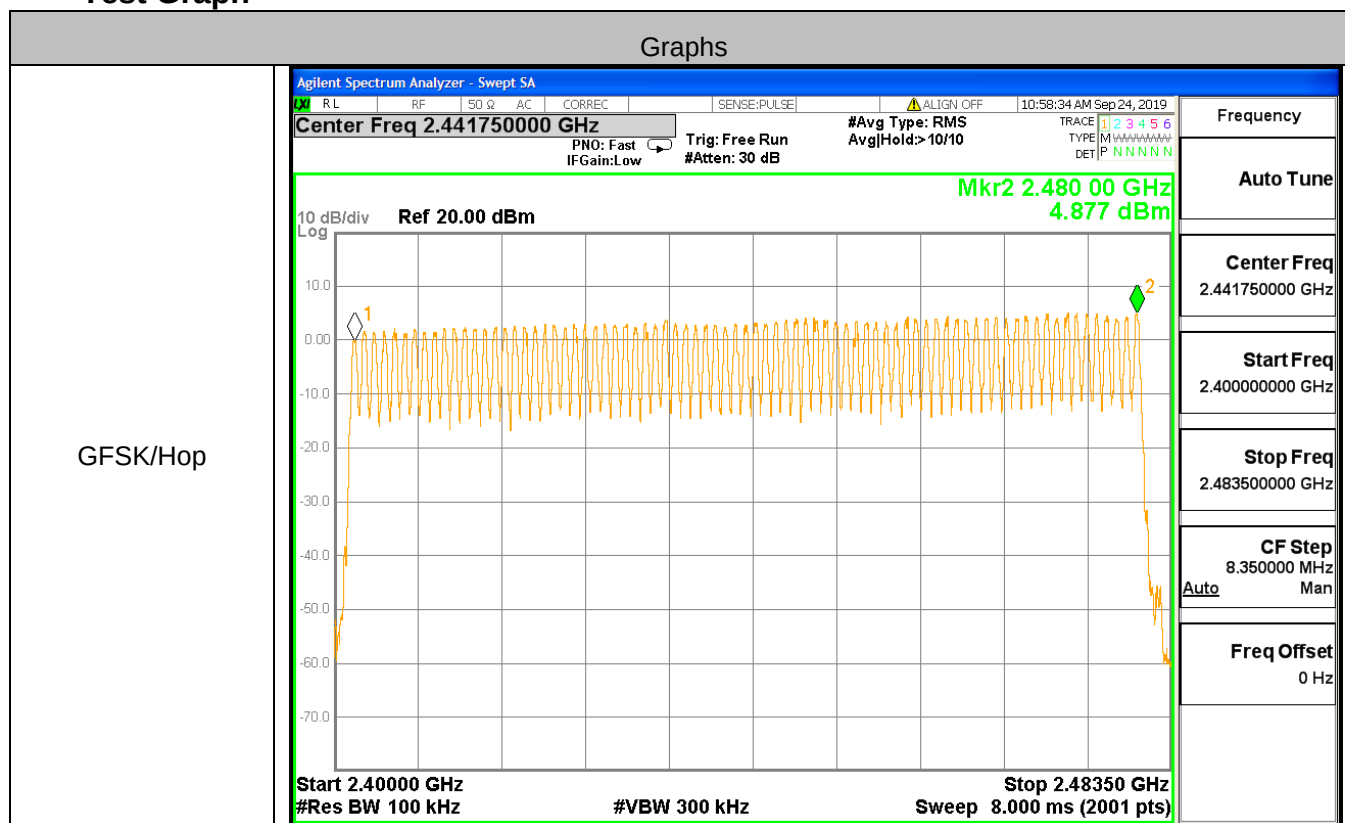


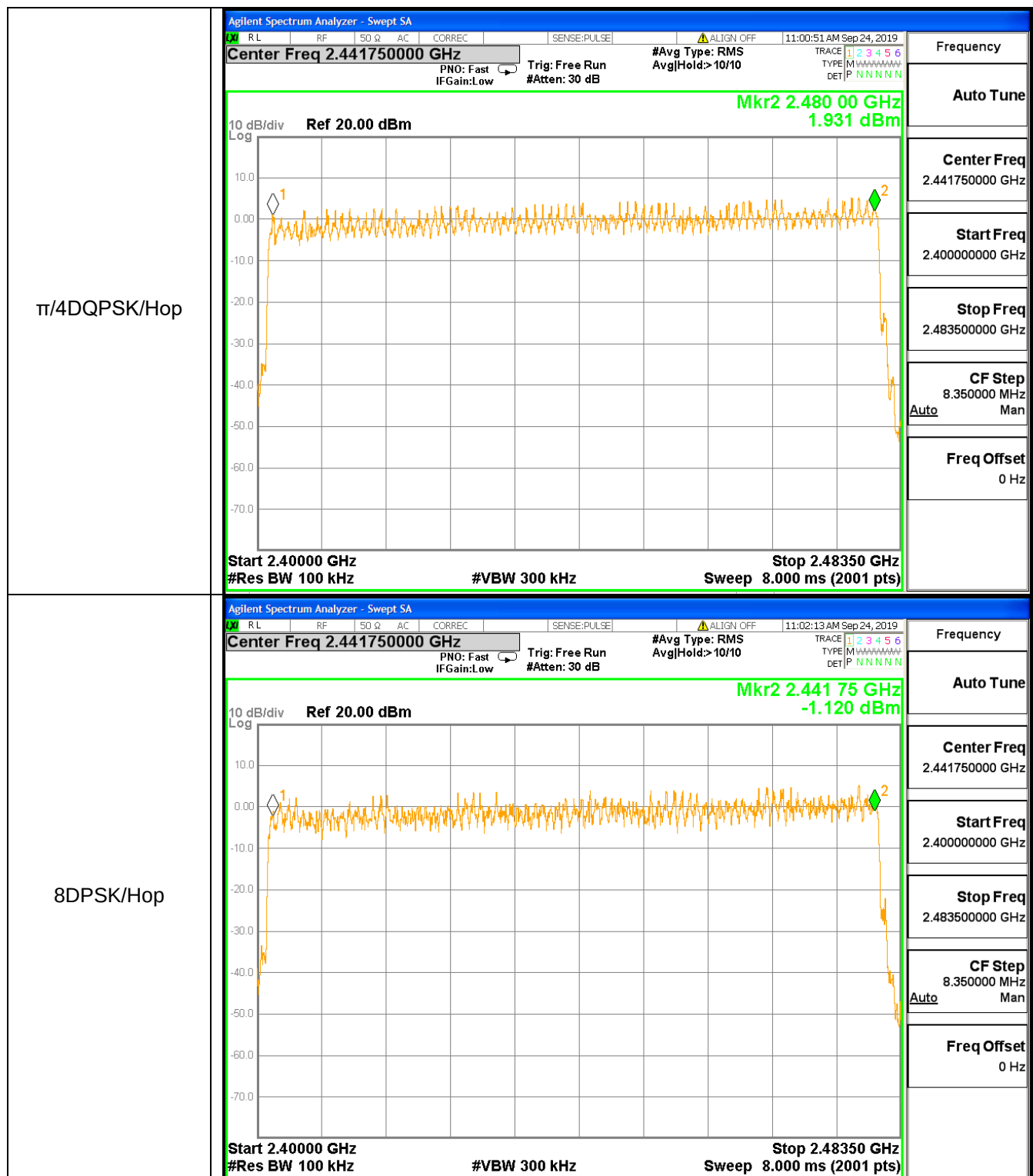


A.4 Hopping Channel Number

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

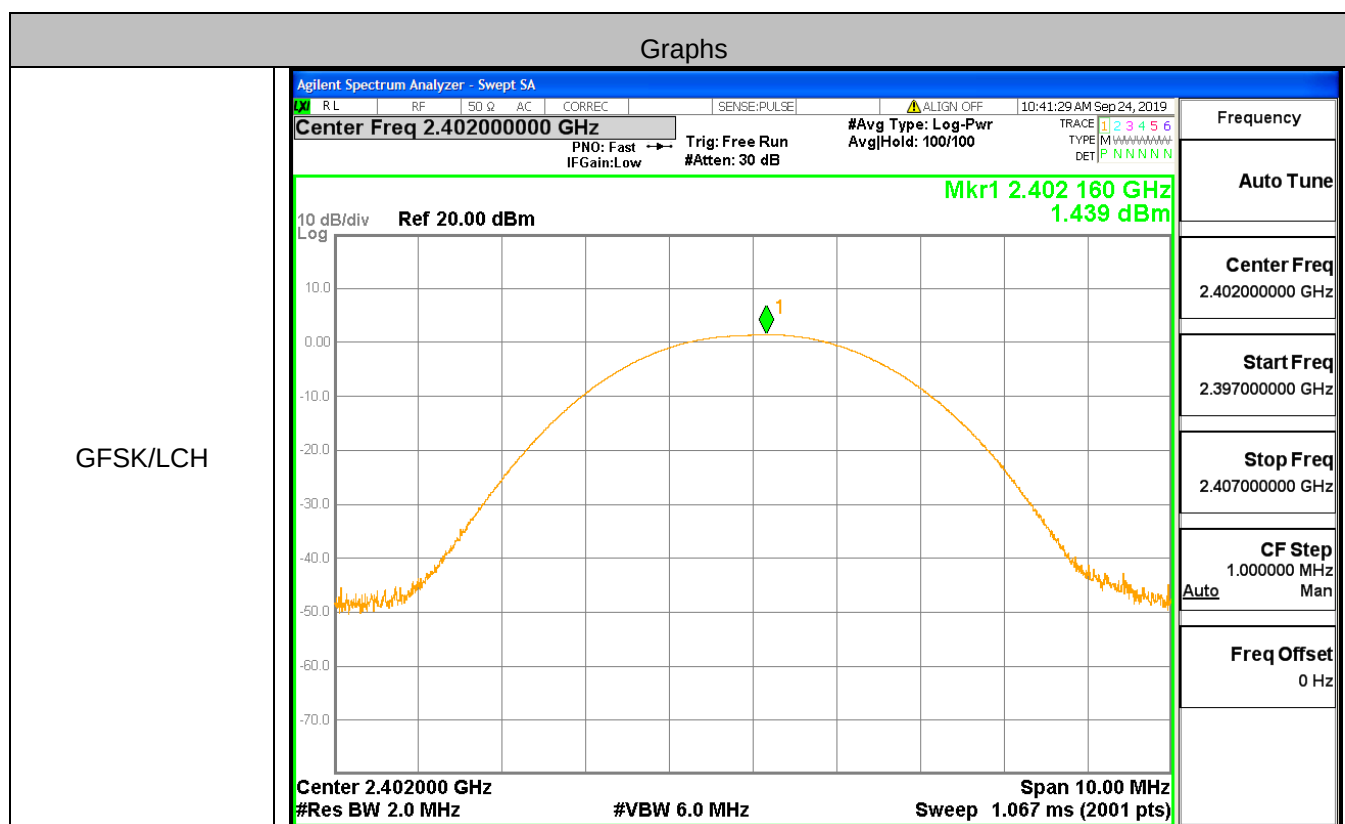


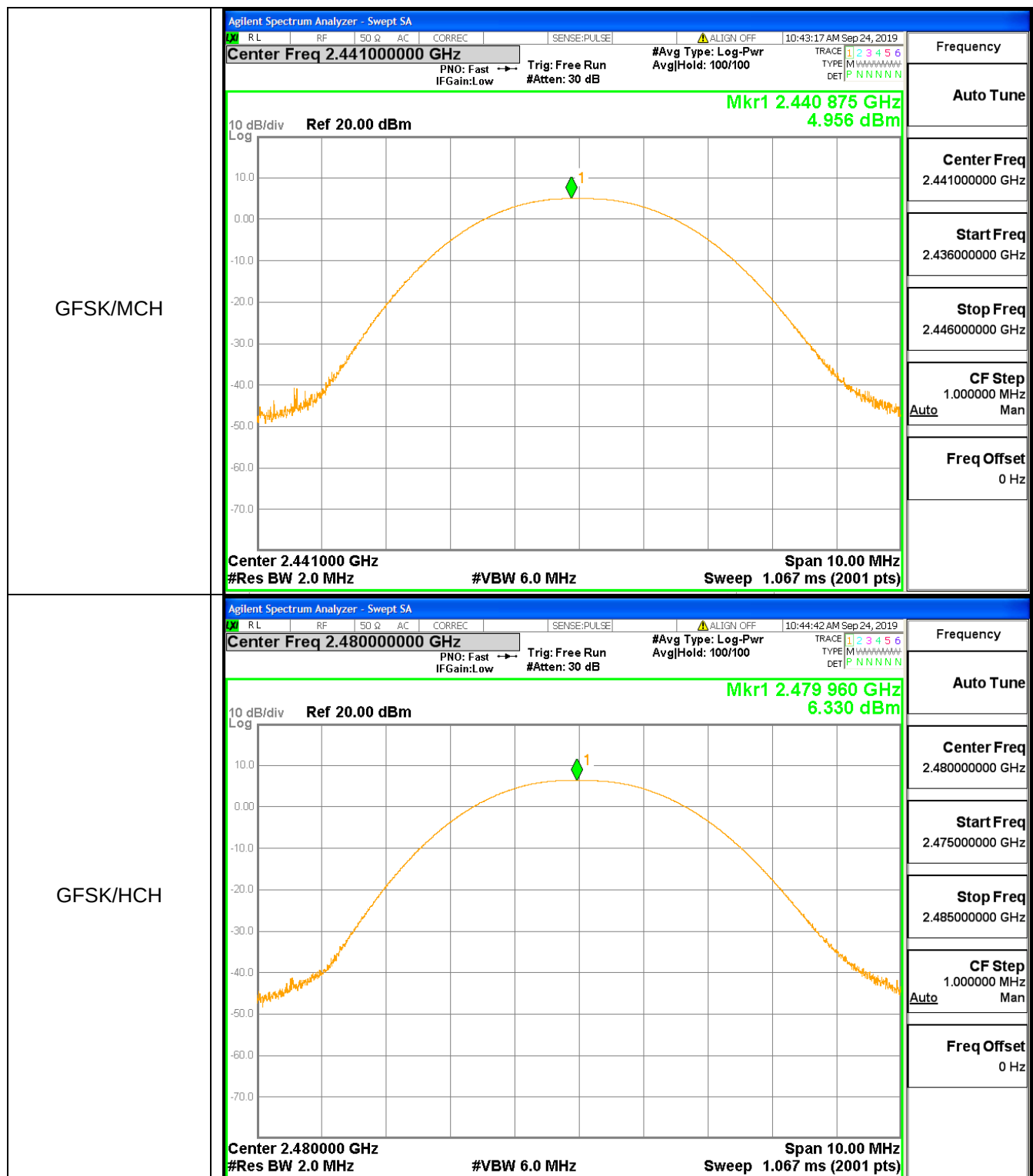


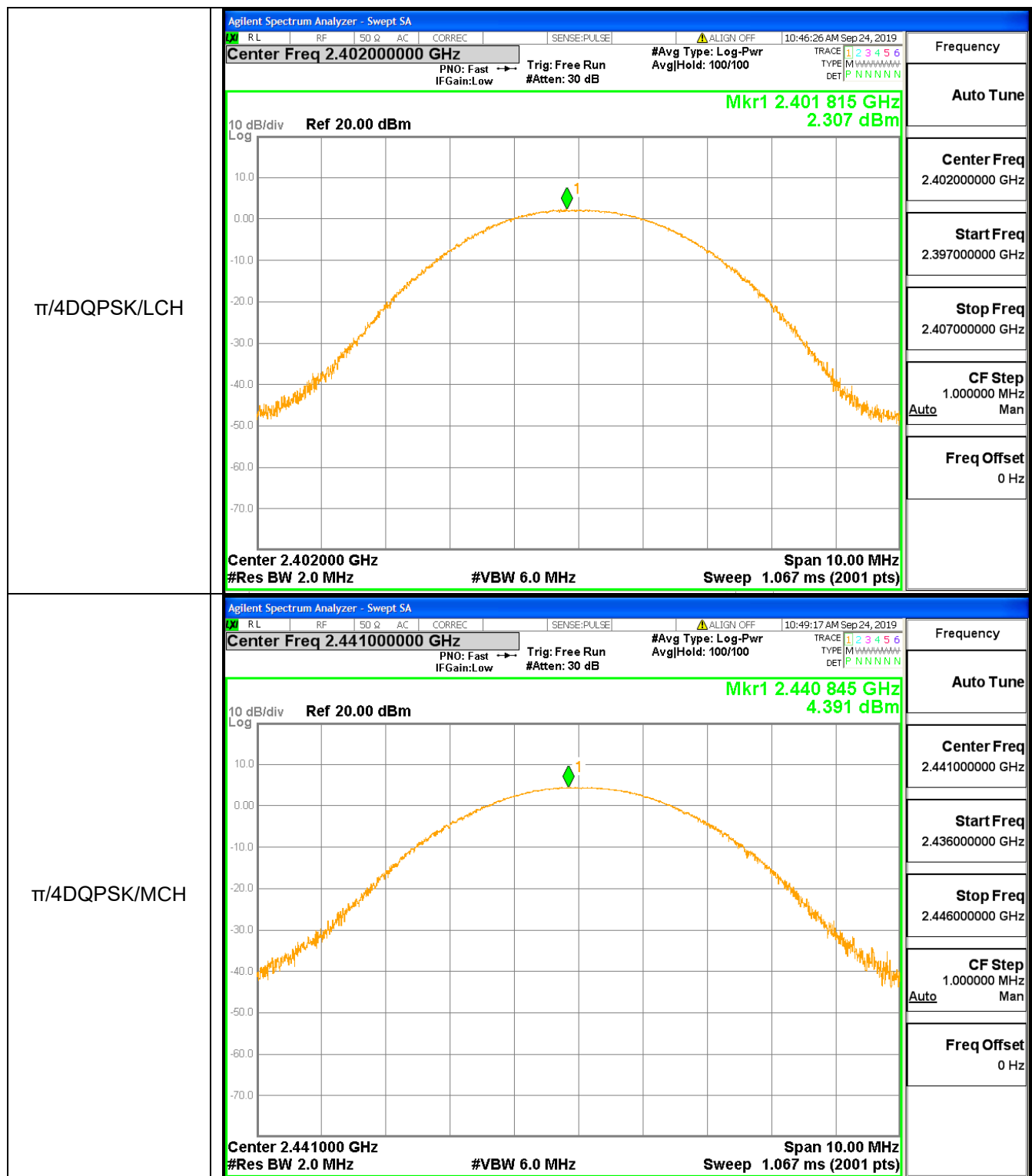
A.5 Conducted Peak Output Power

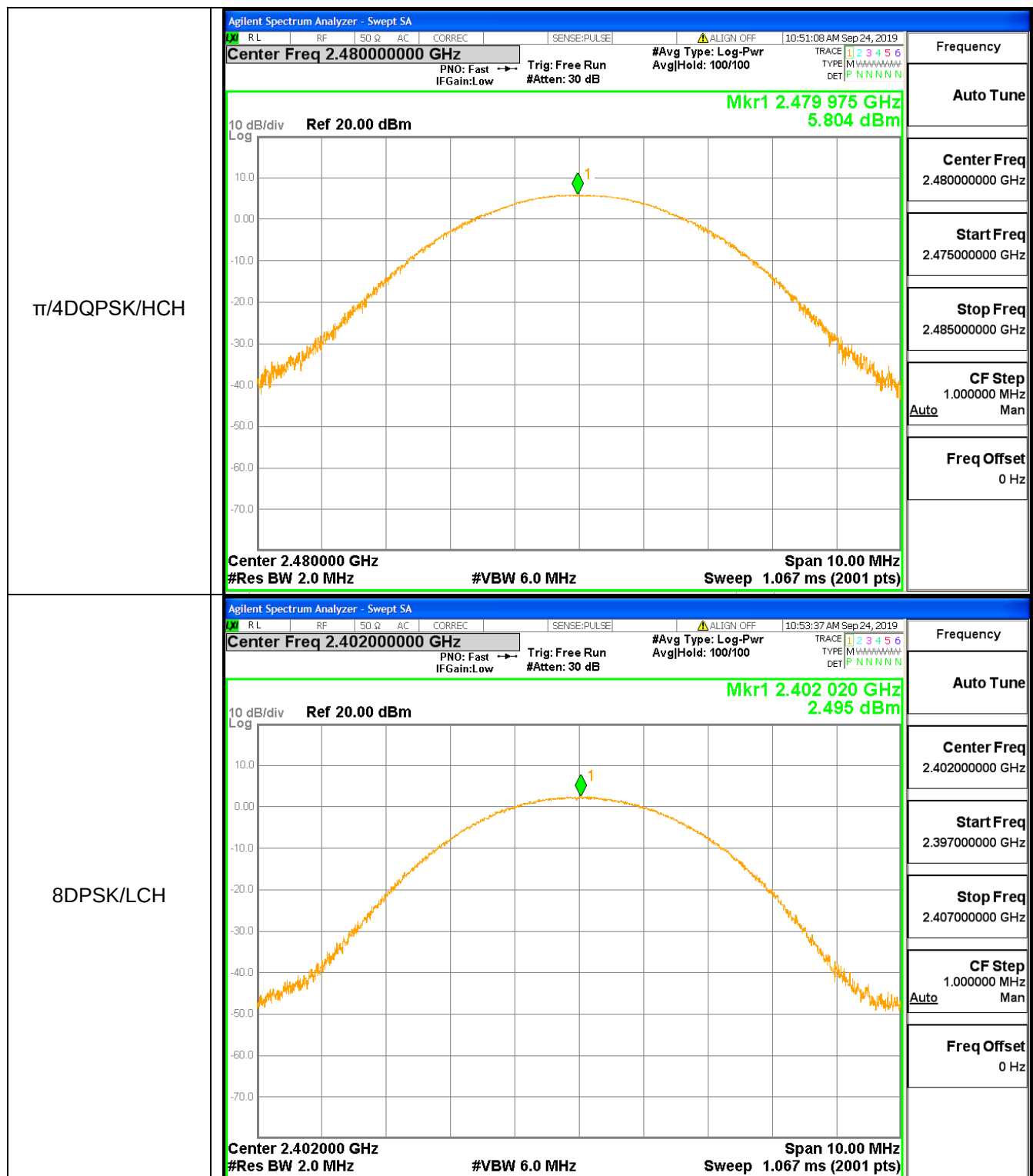
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	1.439	21	PASS
GFSK	MCH	4.956	21	PASS
GFSK	HCH	6.330	21	PASS
$\pi/4$ DQPSK	LCH	2.307	21	PASS
$\pi/4$ DQPSK	MCH	4.391	21	PASS
$\pi/4$ DQPSK	HCH	5.804	21	PASS
8DPSK	LCH	2.495	21	PASS
8DPSK	MCH	4.494	21	PASS
8DPSK	HCH	5.863	21	PASS

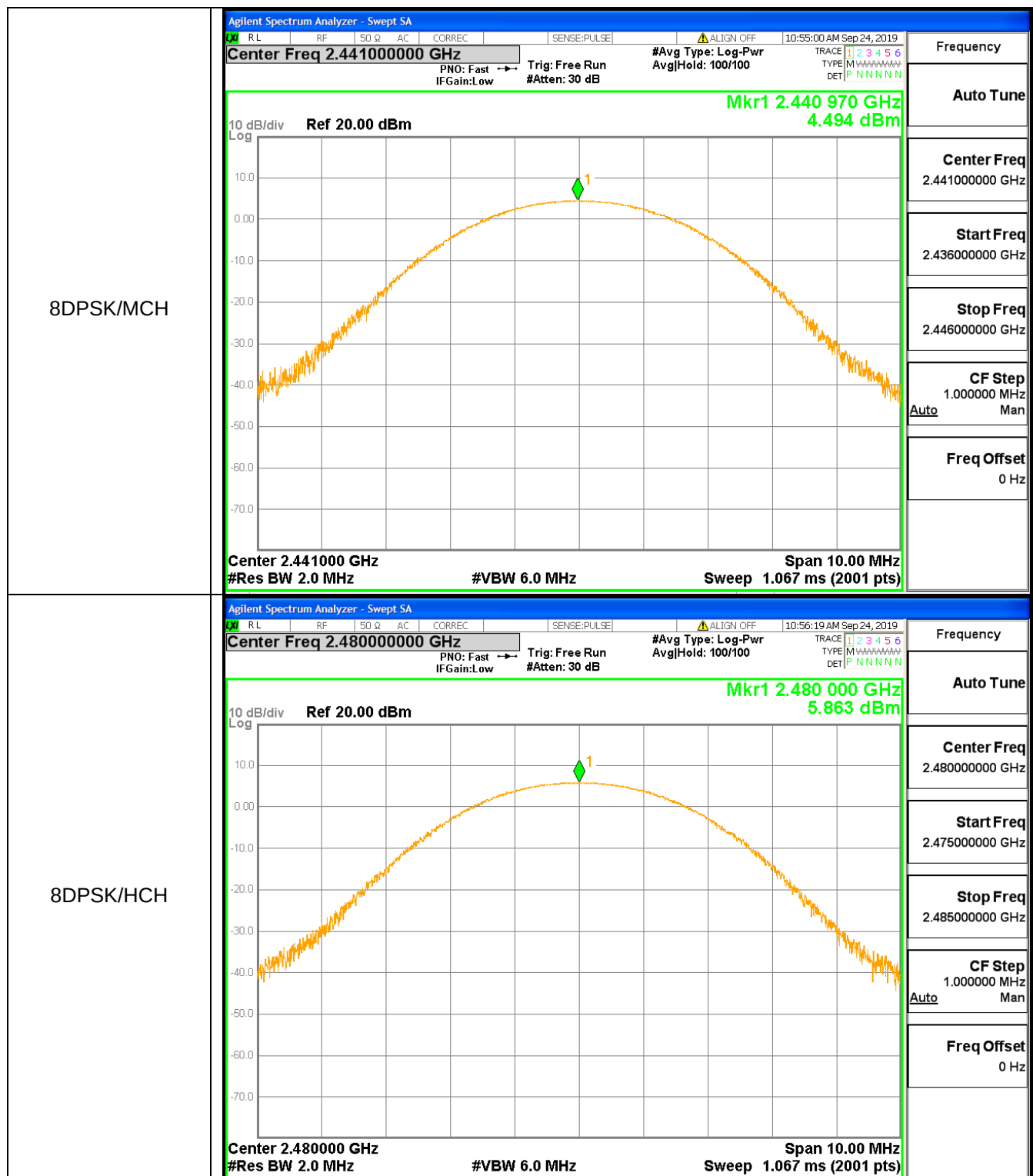
Test Graph











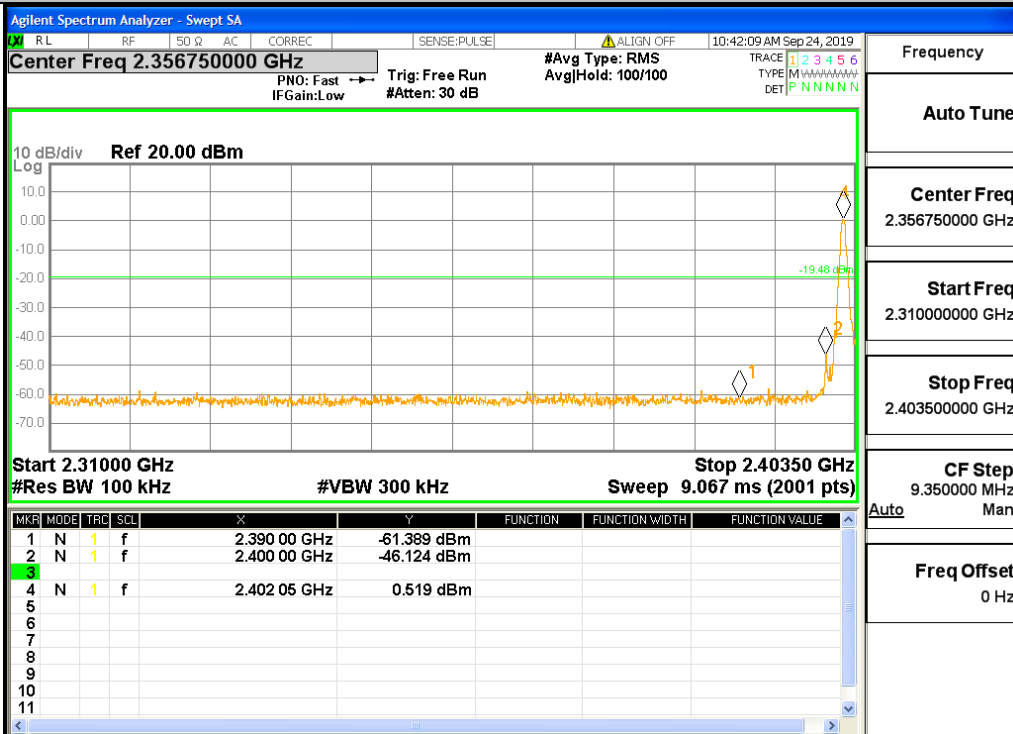
A.6 Band-edge for RF Conducted Emissions

Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2400	0.519	-46.12	-19.481	Pass
1DH5	2480	2483.5	5.731	-58.67	-14.269	Pass
2DH5	2402	2400	1.043	-37.79	-18.957	Pass
2DH5	2480	2483.5	4.157	-48.39	-15.843	Pass
3DH5	2402	2400	0.829	-37.55	-19.171	Pass
3DH5	2480	2483.5	5.013	-46.1	-14.987	Pass
1DH5-Hopping	2402	2400	3.284	-46.32	-16.716	Pass
1DH5-Hopping	2480	2500	5.018	-60.42	-14.982	Pass
2DH5-Hopping	2402	2399.97	3.239	-41.214	-16.761	Pass
2DH5-Hopping	2480	2483.5	5.099	-56.33	-14.901	Pass
3DH5-Hopping	2402	2400	3.509	-48.76	-16.491	Pass
3DH5-Hopping	2480	2483.5	5.219	-48.3	-14.781	Pass

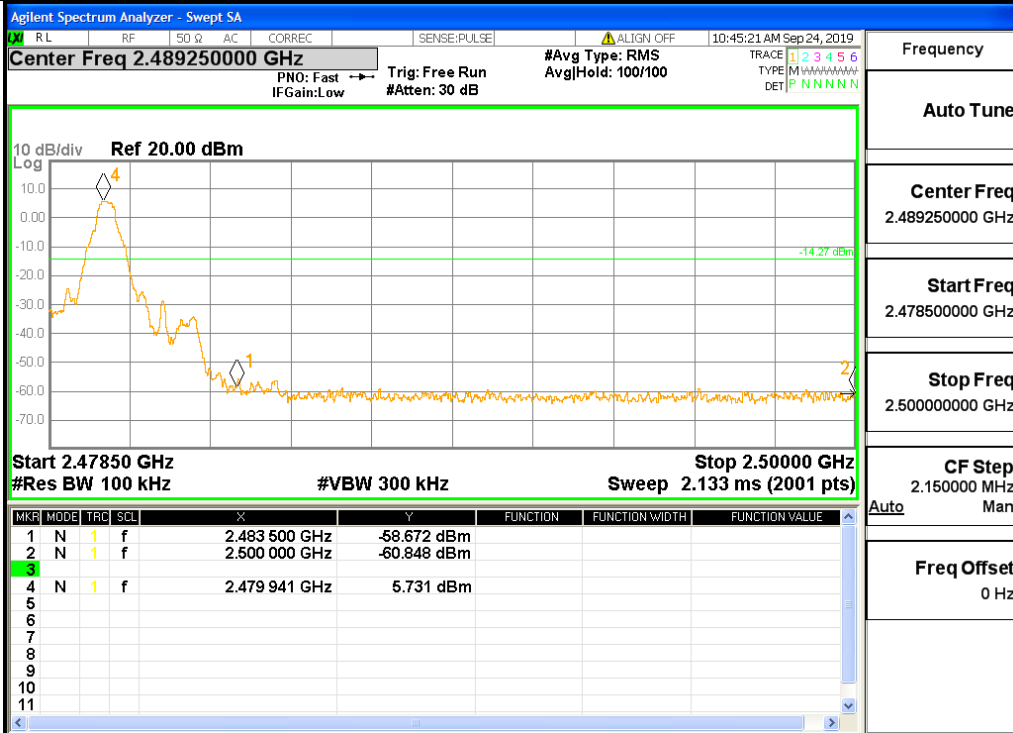
Test Graph

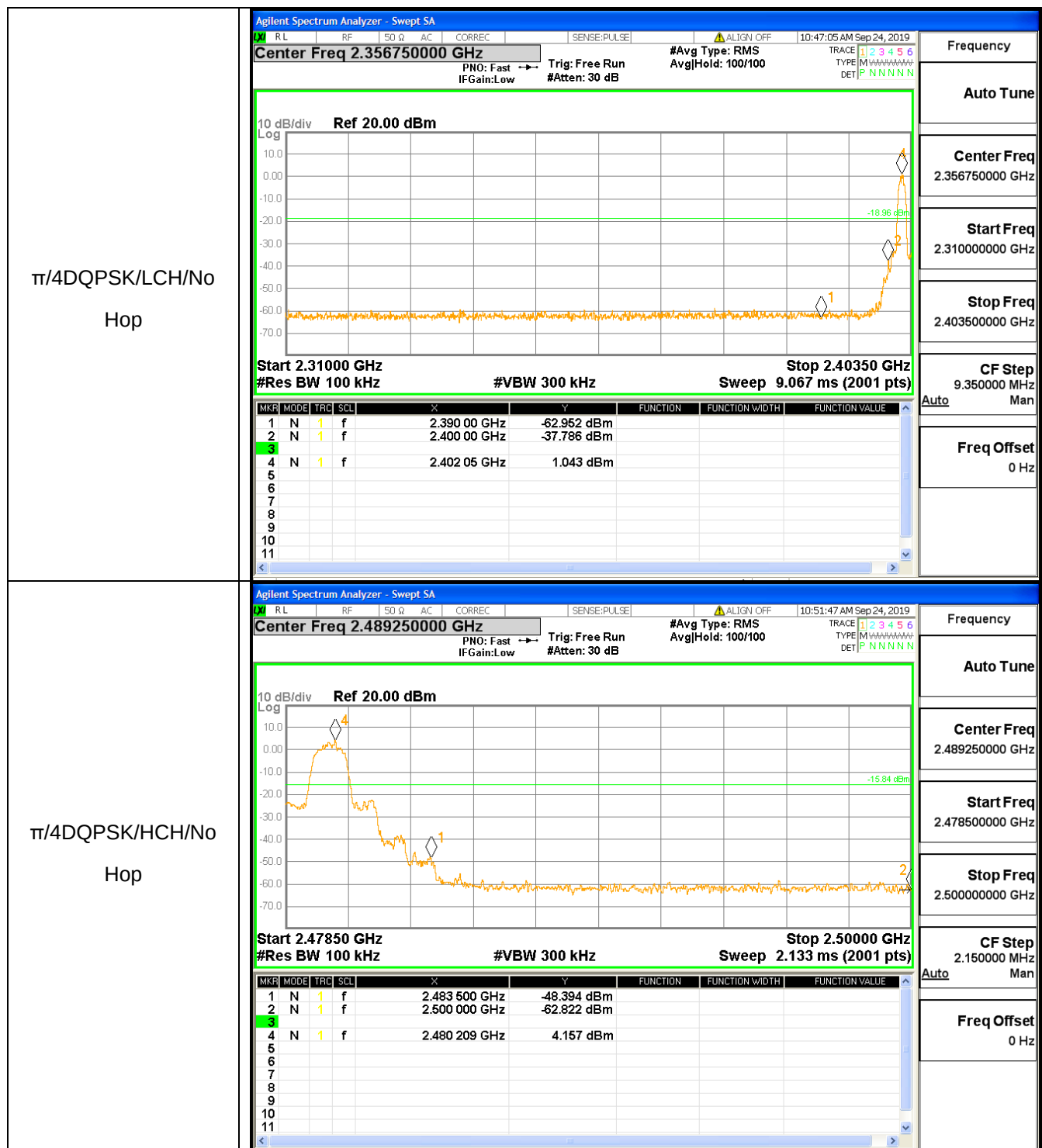
Graphs

GFSK/LCH/No Hop

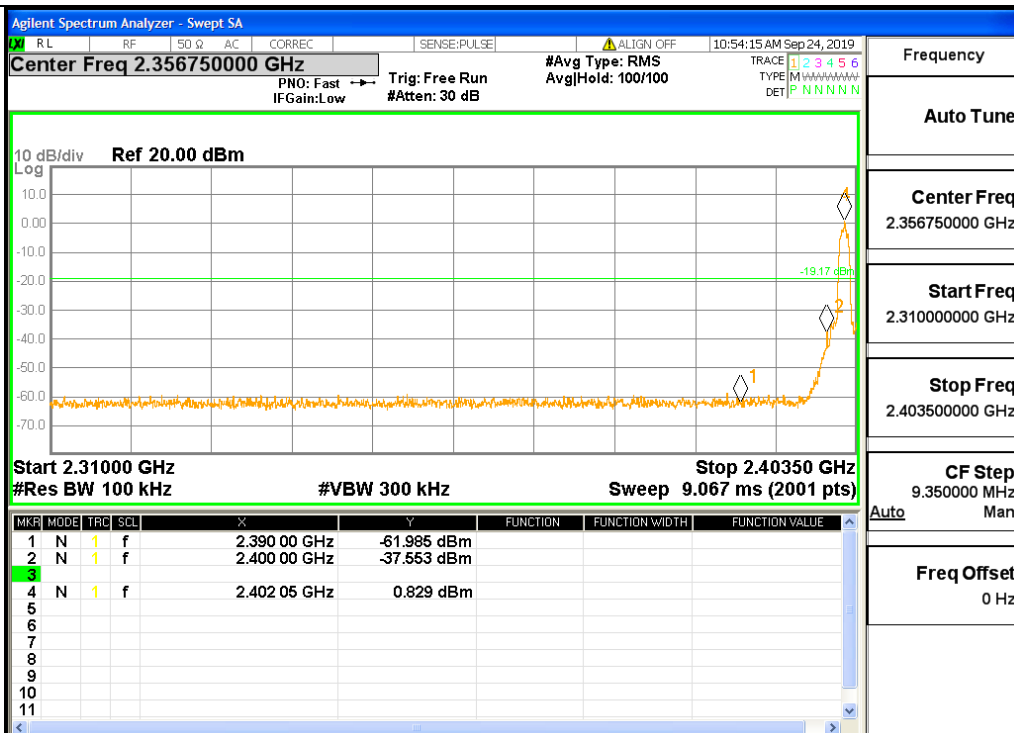


GFSK/HCH/No Hop

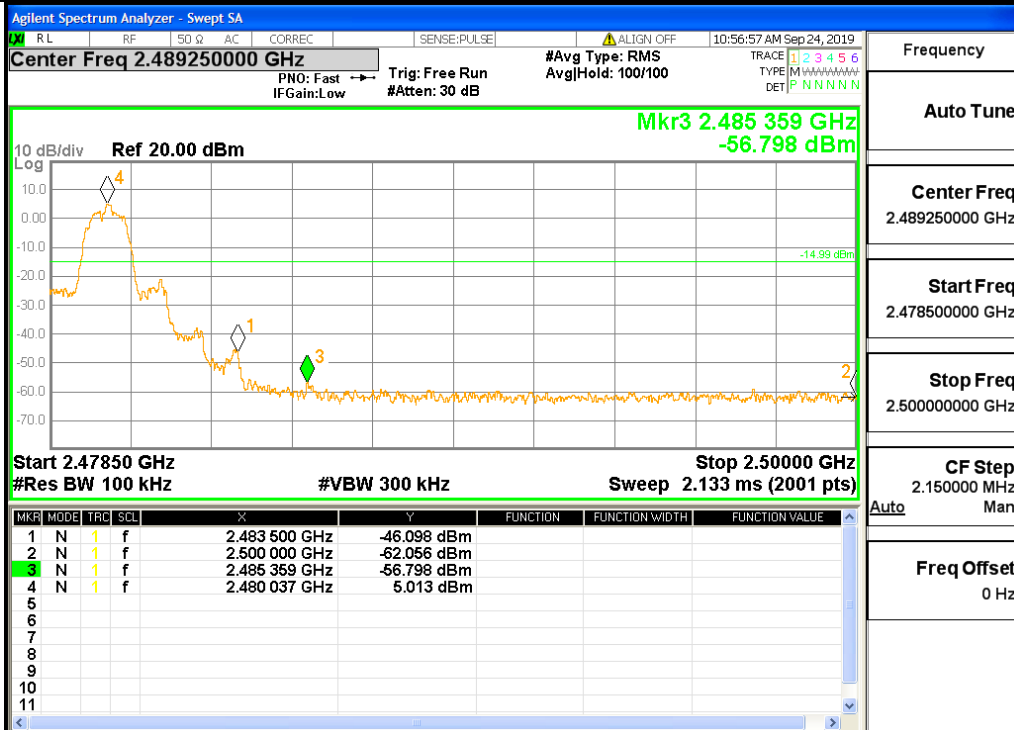




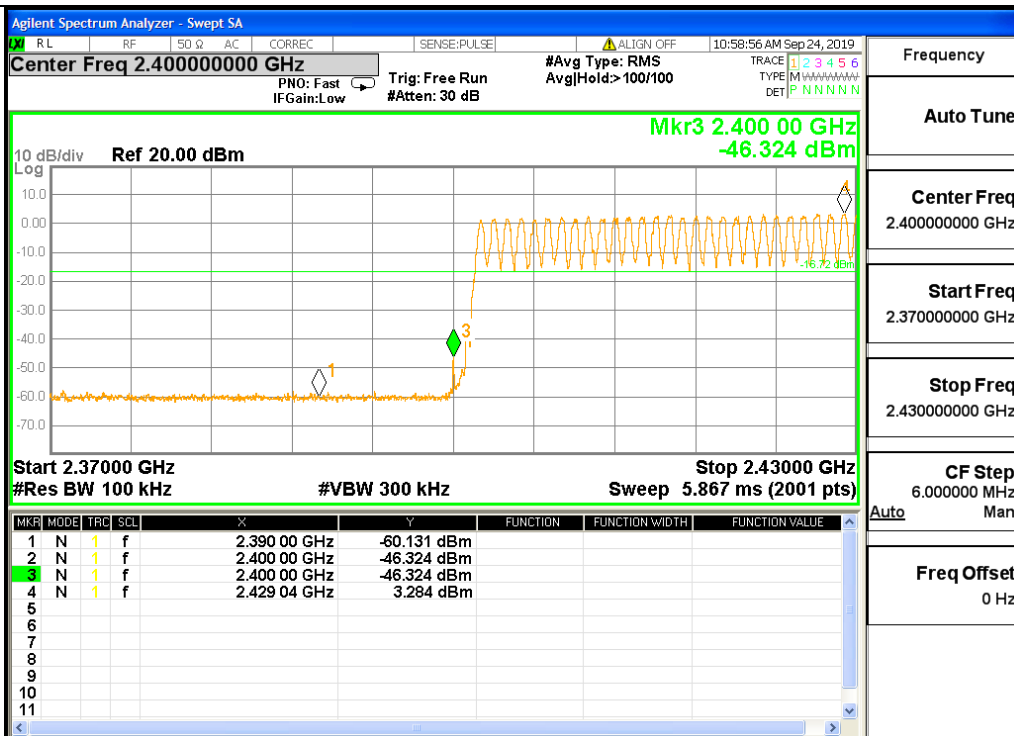
8DPSK/LCH/No Hop



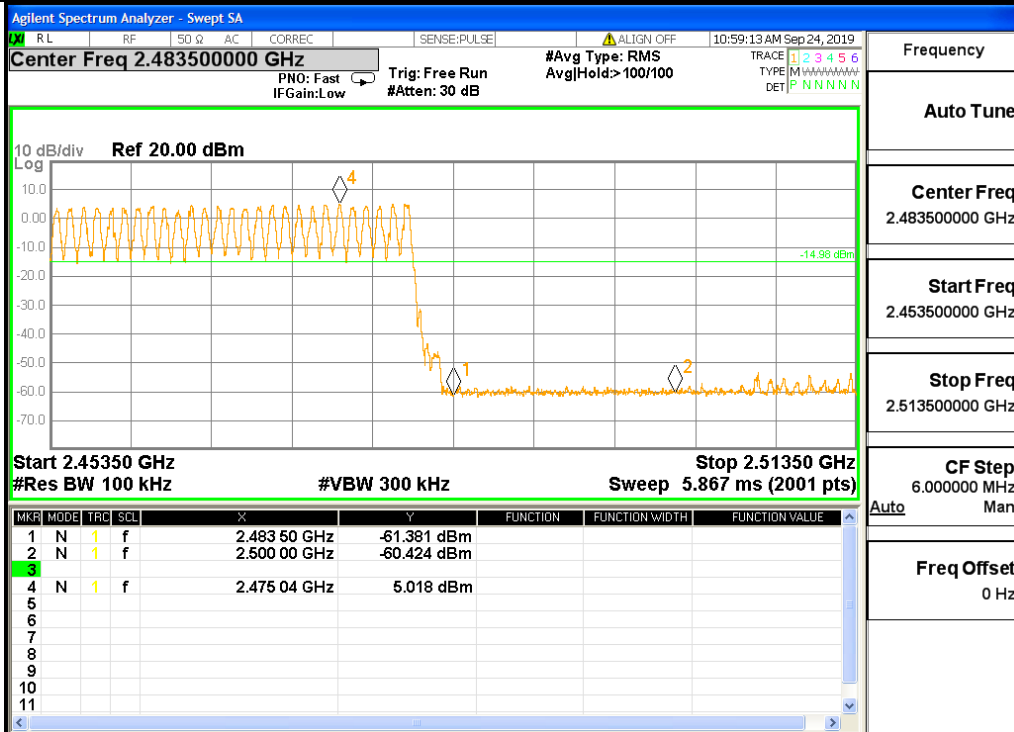
8DPSK/HCH/No Hop

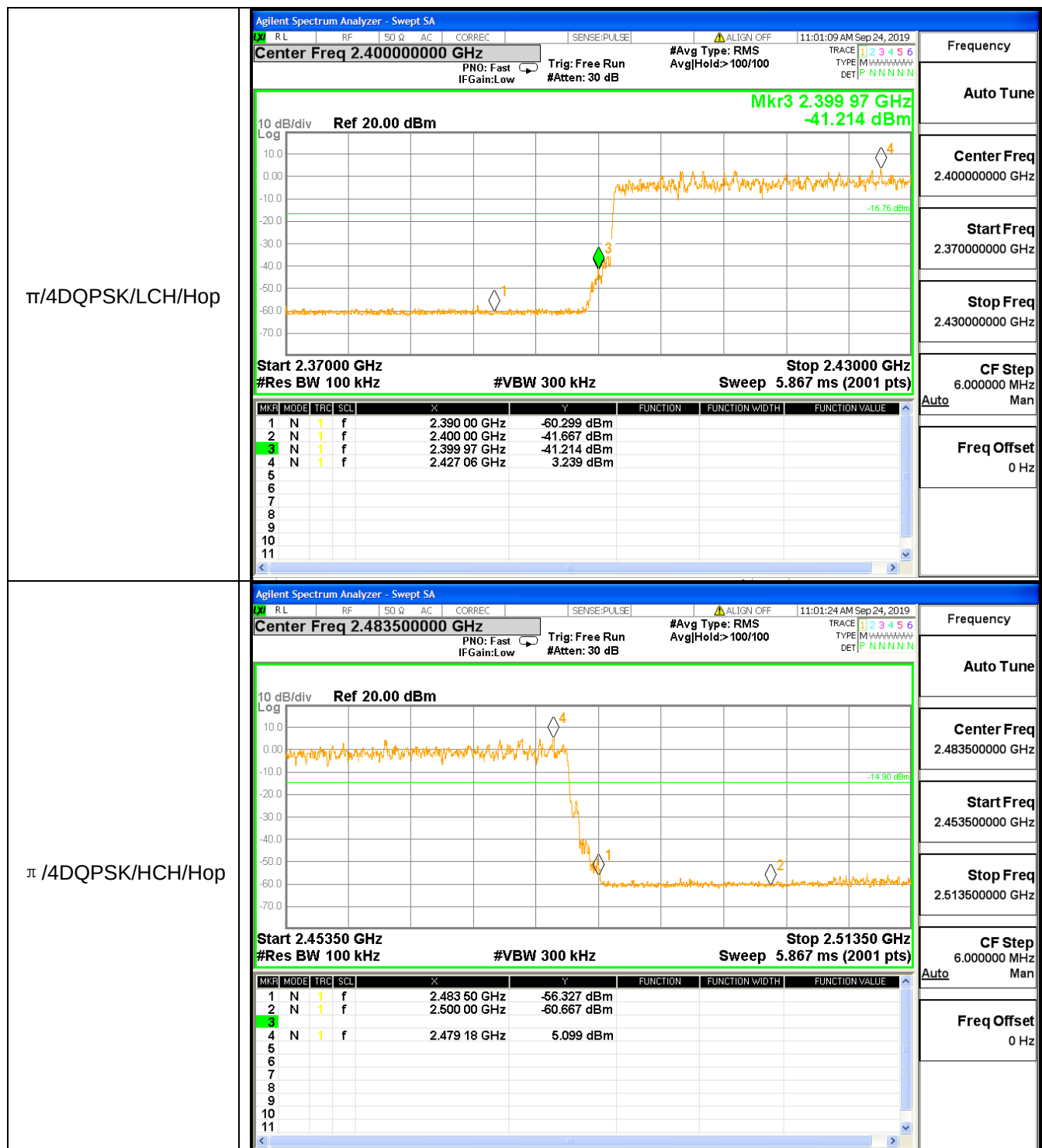


GFSK/LCH/Hop



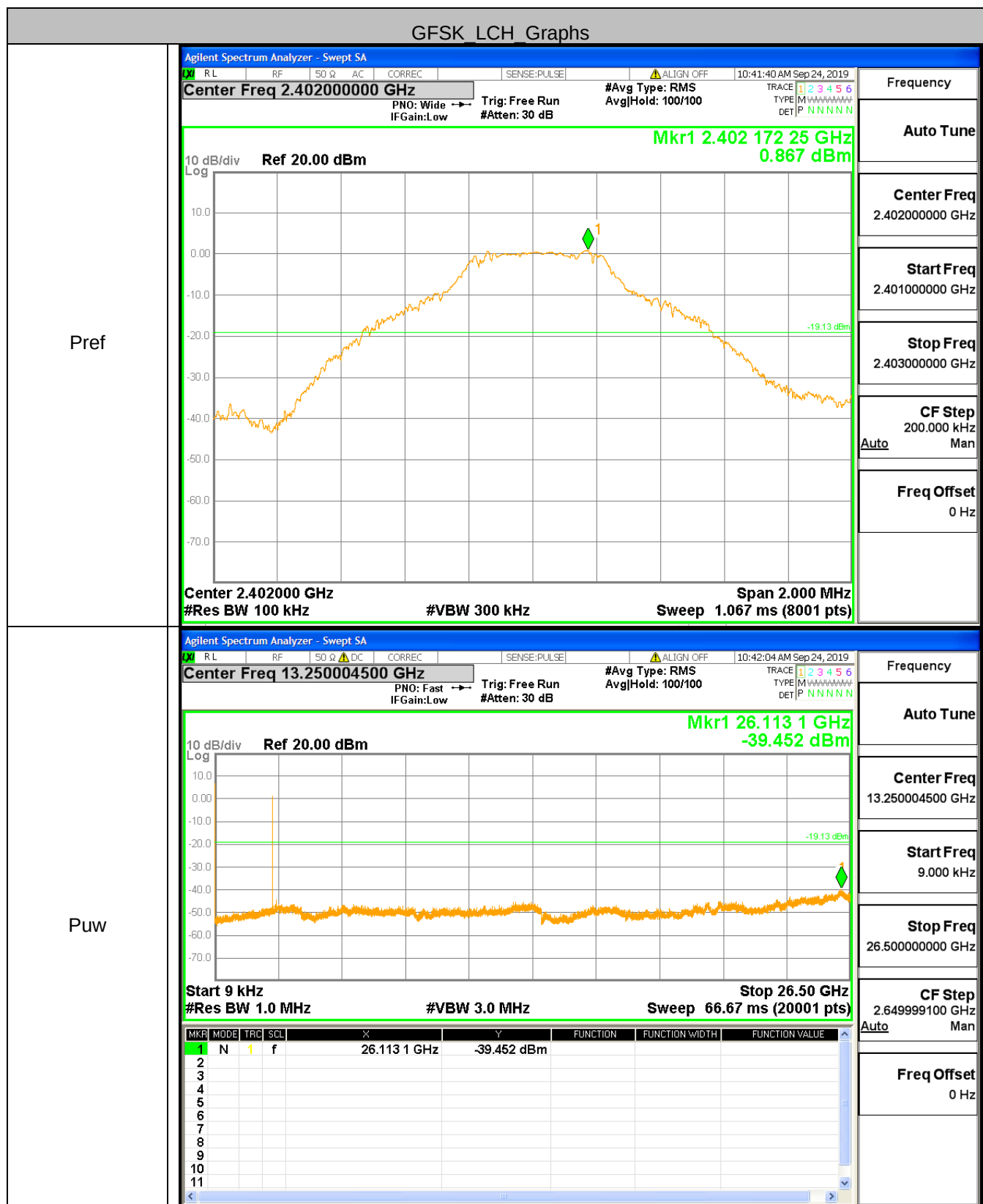
GFSK/HCH/Hop

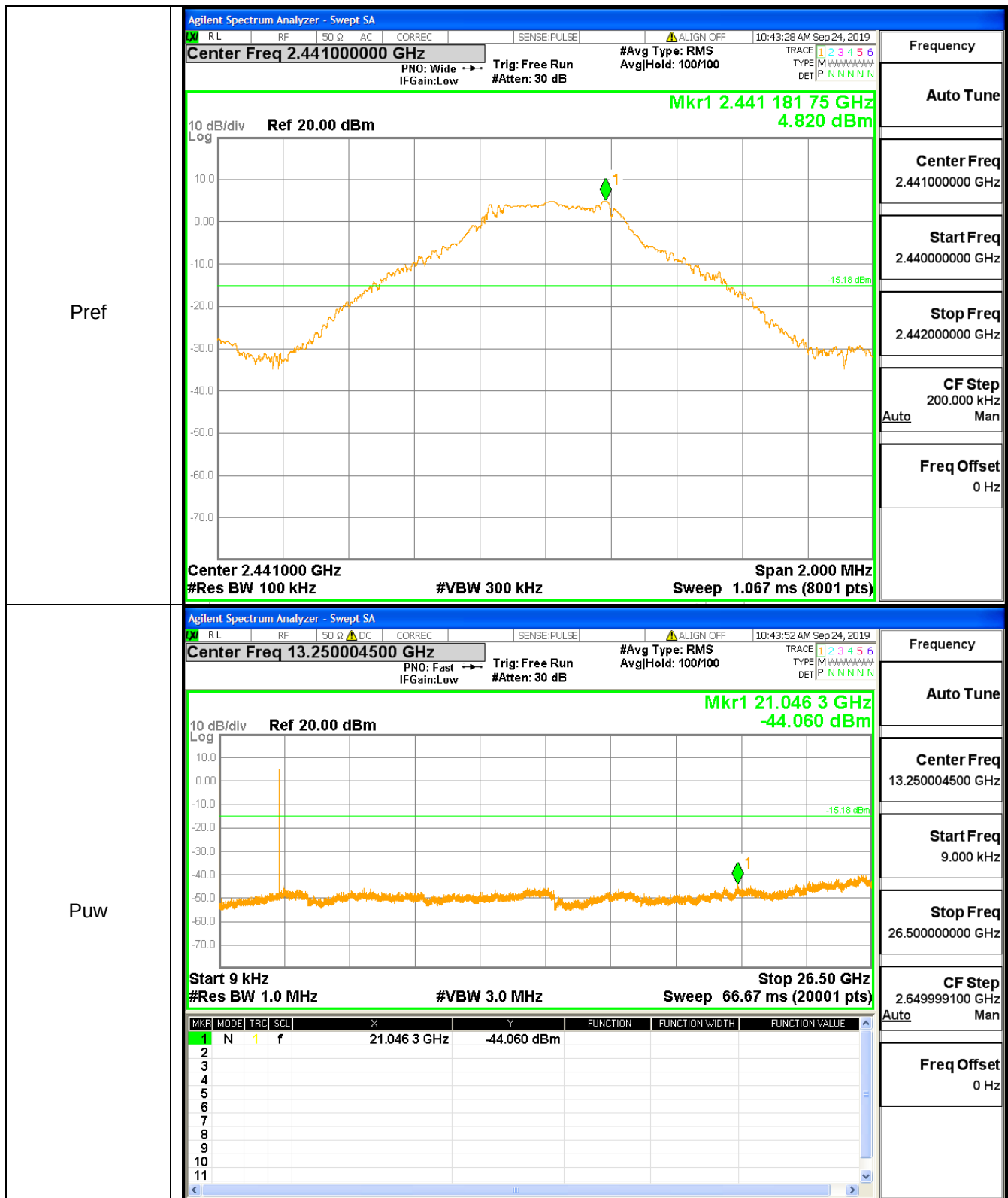


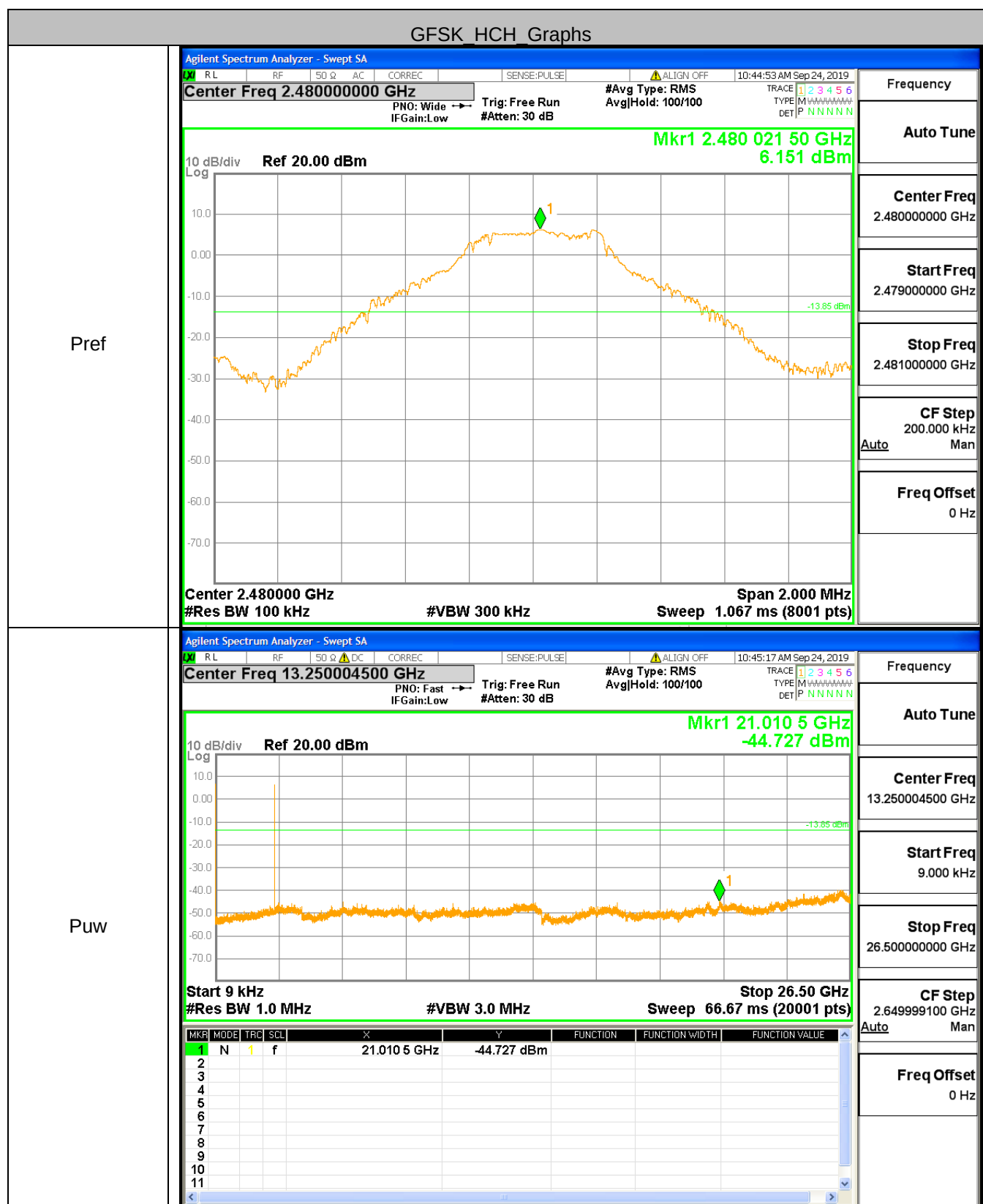


A.7 RF Conducted Spurious Emissions

Test Graph

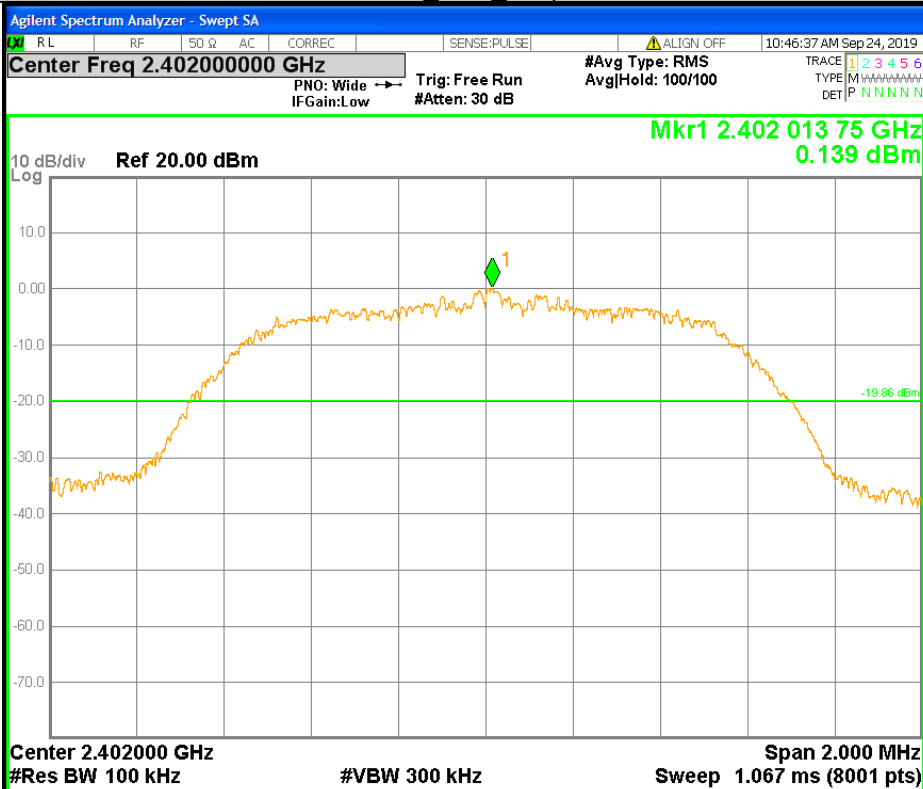






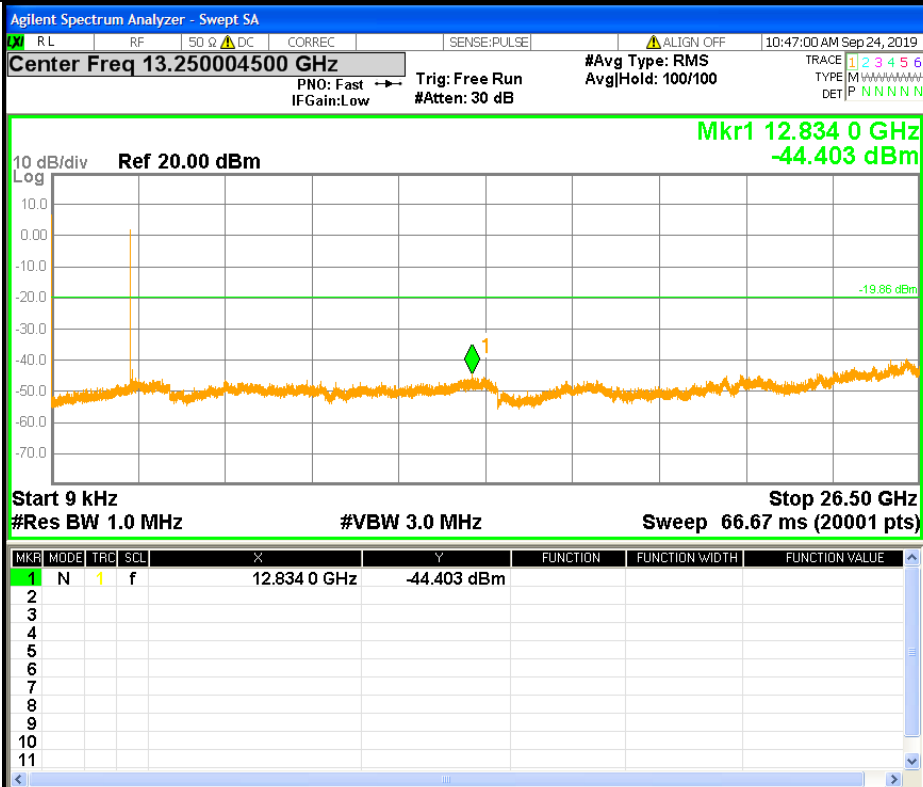
$\pi/4$ DQPSK LCH Graphs

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

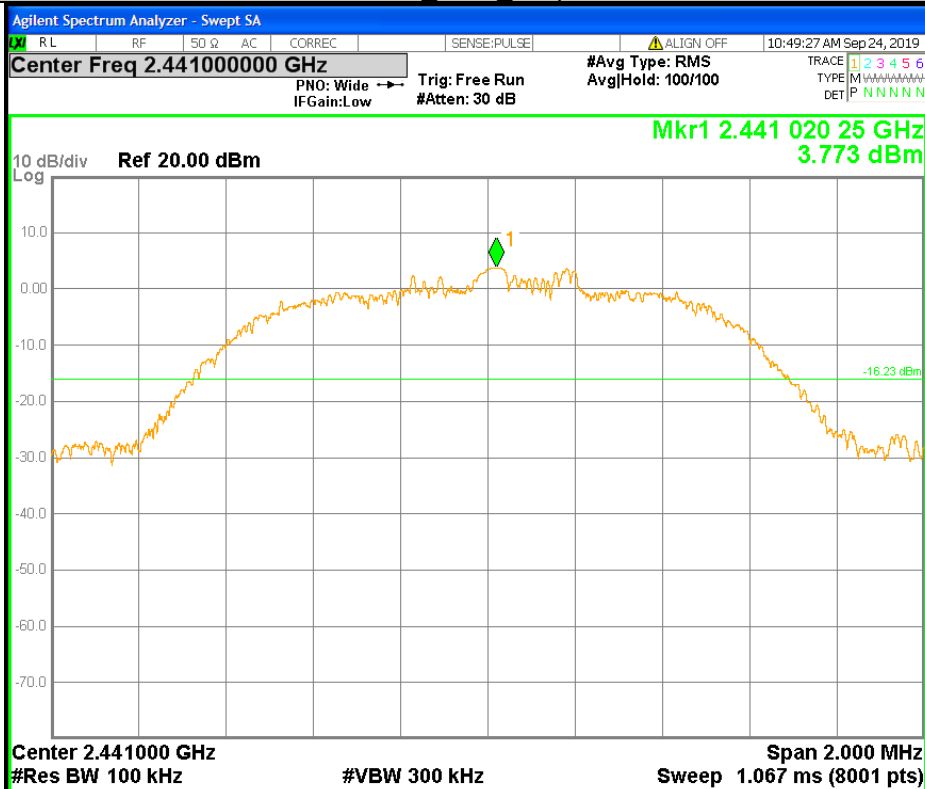
Puw



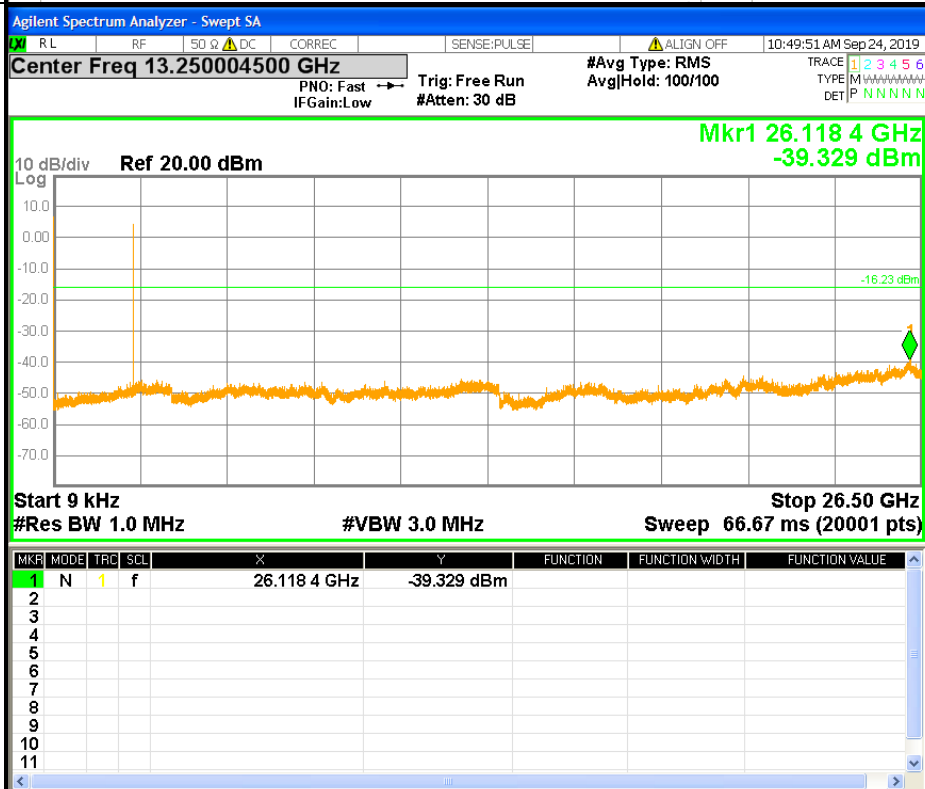
Frequency
Auto Tune
Center Freq 13.250004500 GHz
Start Freq 9.000 kHz
Stop Freq 26.500000000 GHz
CF Step 2.649999100 GHz Auto Man
Freq Offset 0 Hz

$\pi/4$ DQPSK MCH Graphs

Pref

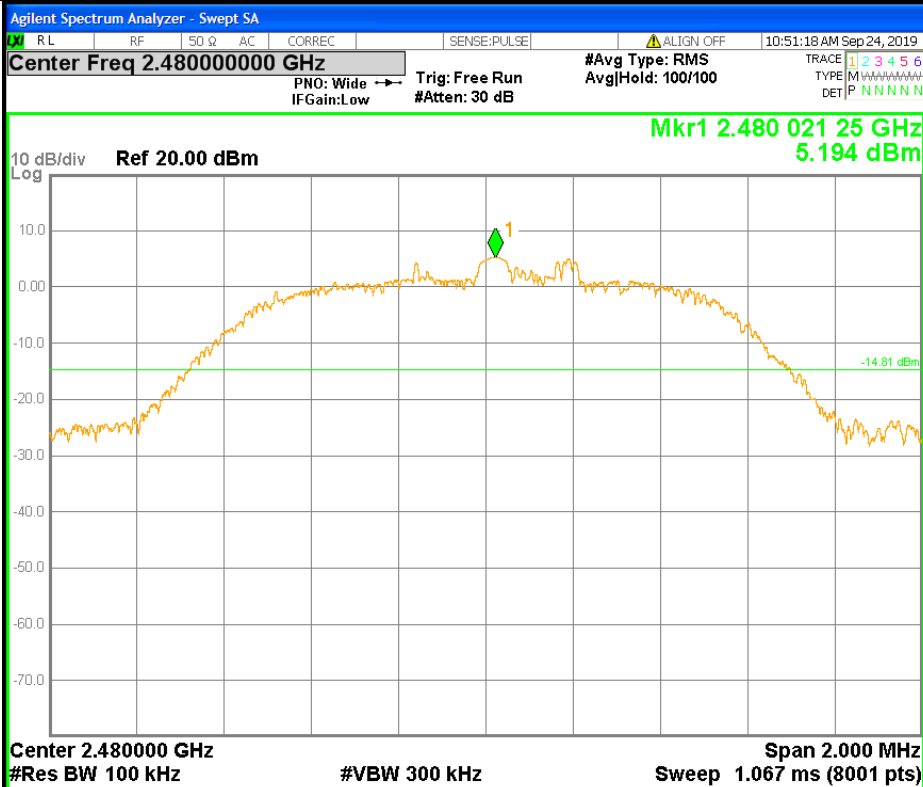


Puw

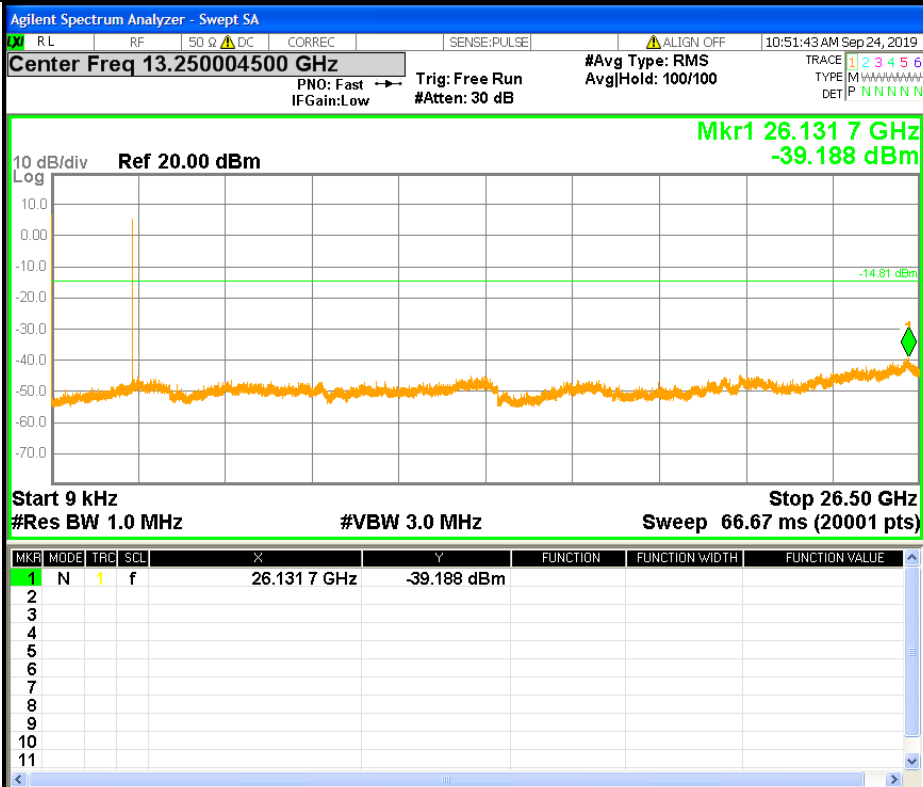


$\pi/4$ DQPSK HCH Graphs

Pref

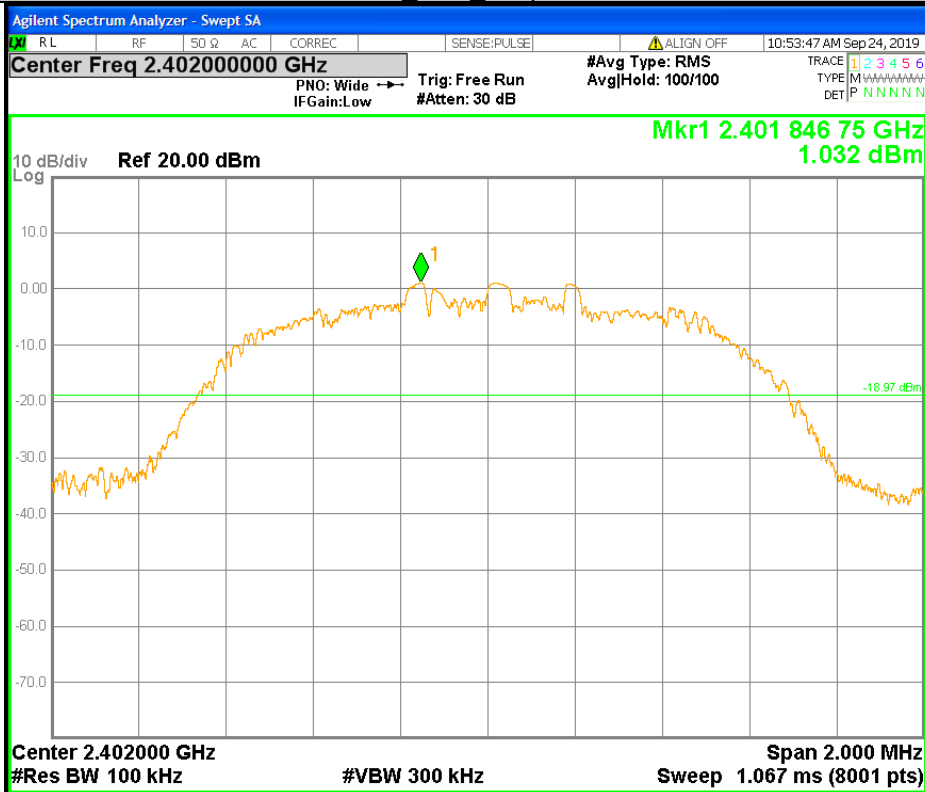


Puw

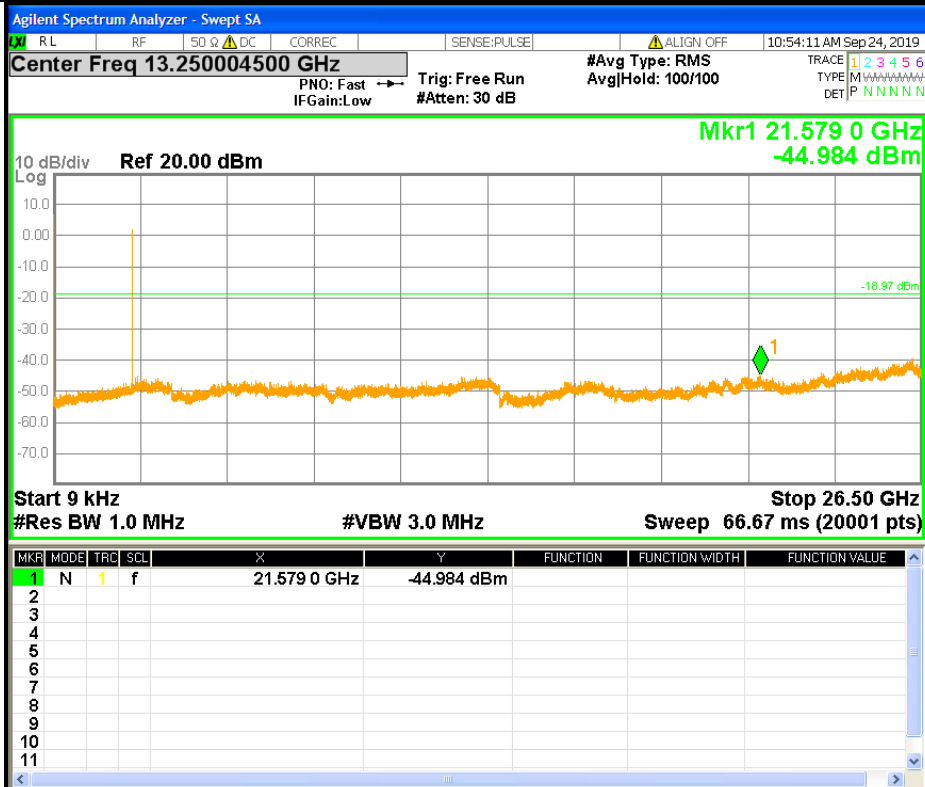


8DPSK LCH Graphs

Pref

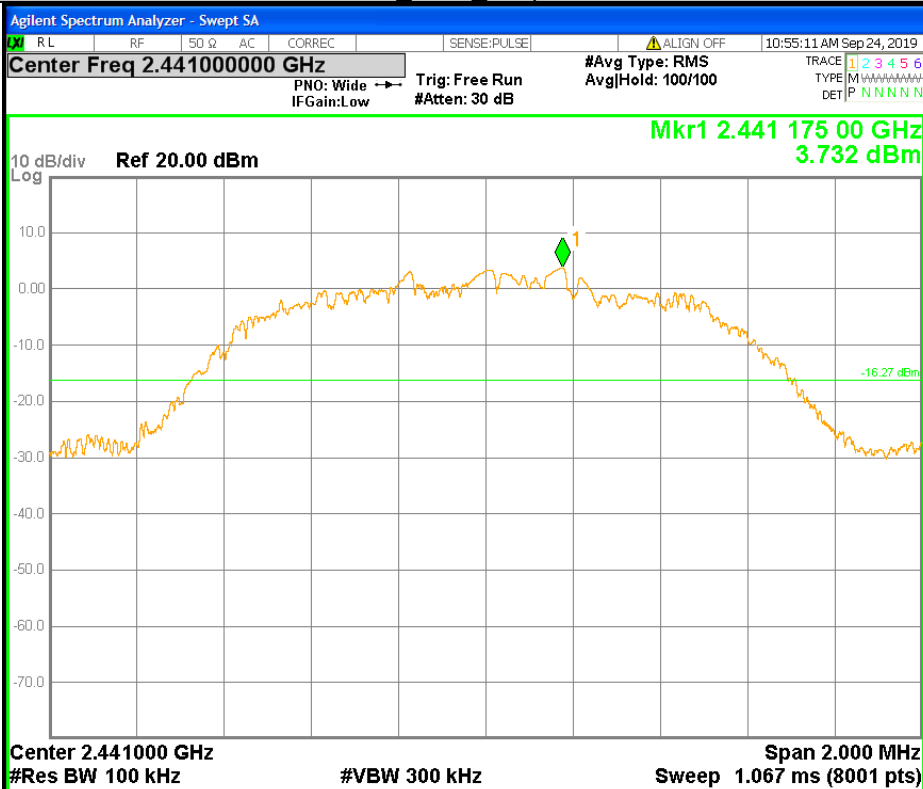


Puw

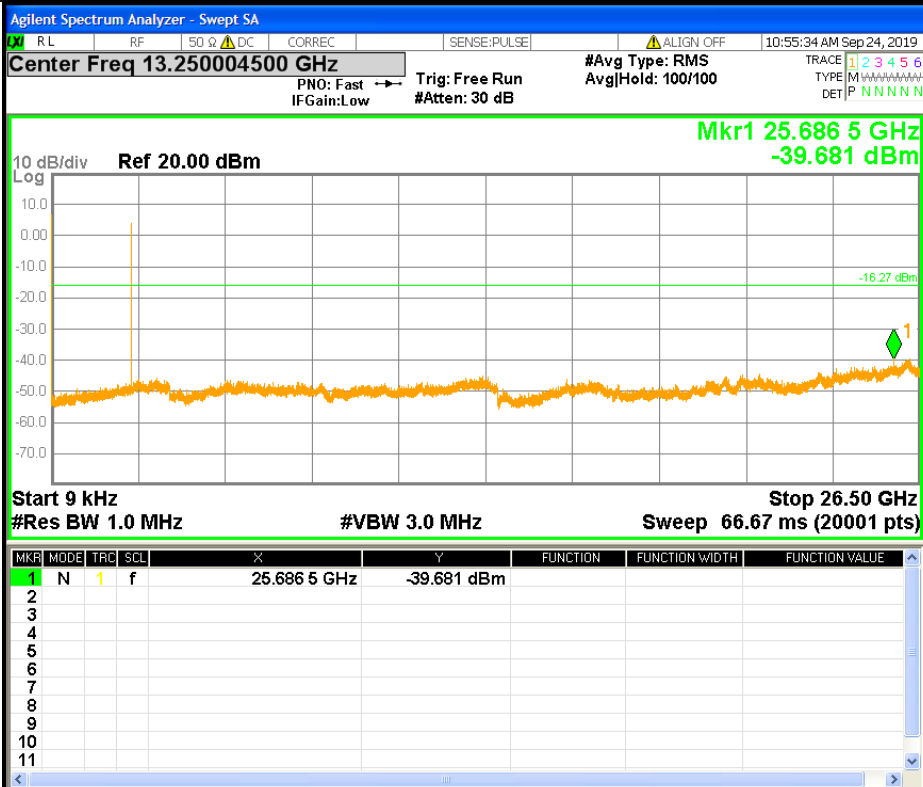


8DPSK MCH Graphs

Pref

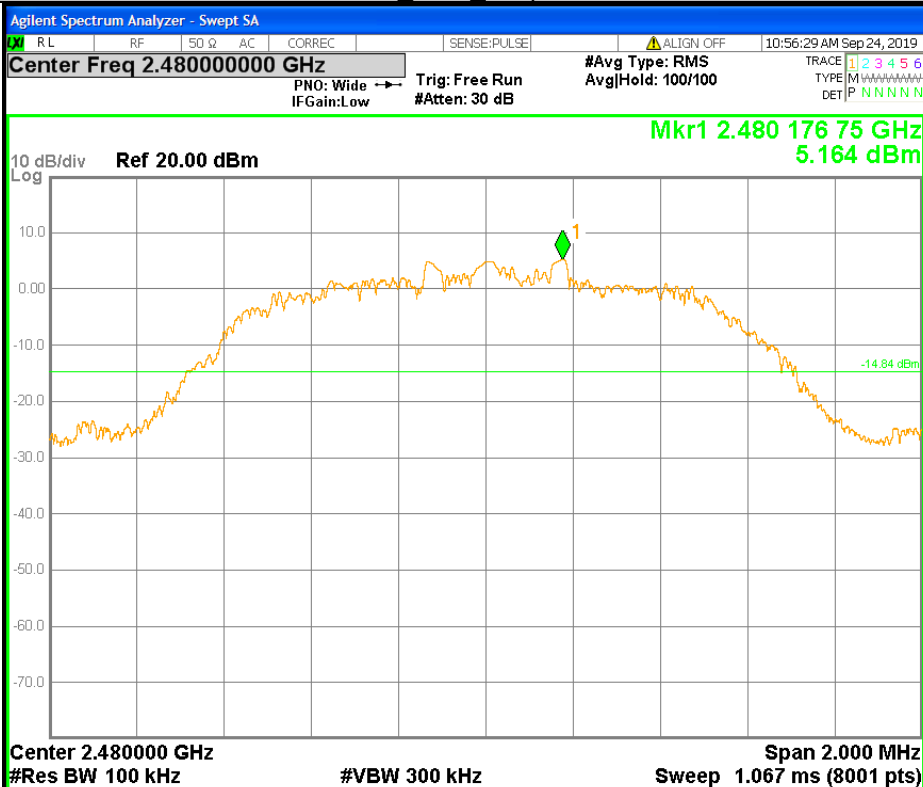


Puw

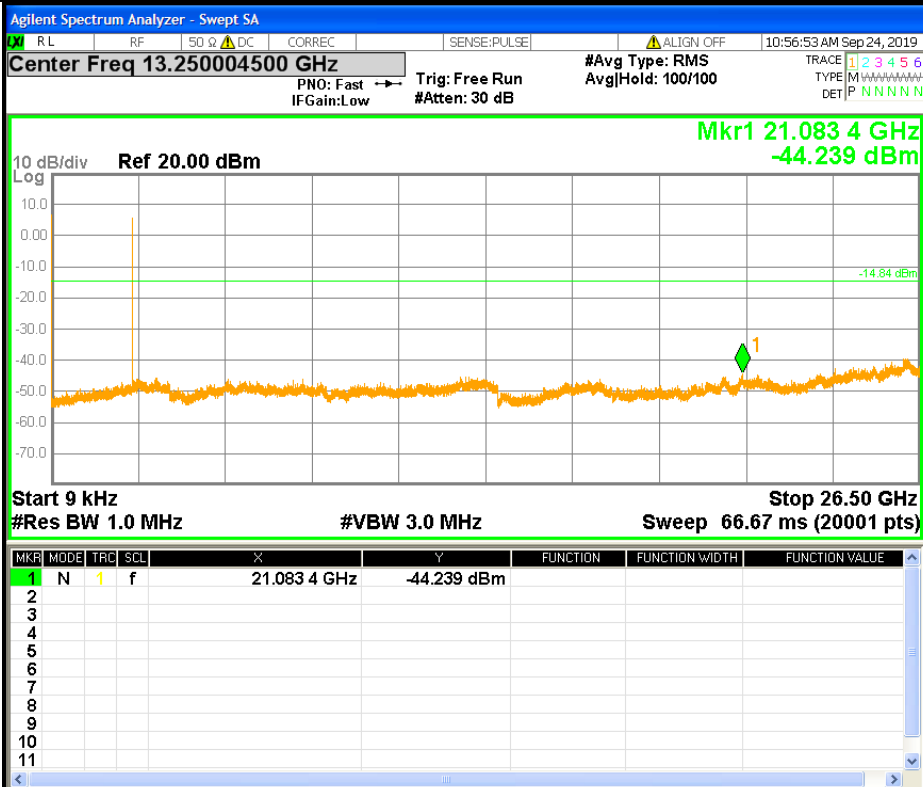


8DPSK HCH Graphs

Pref



Puw

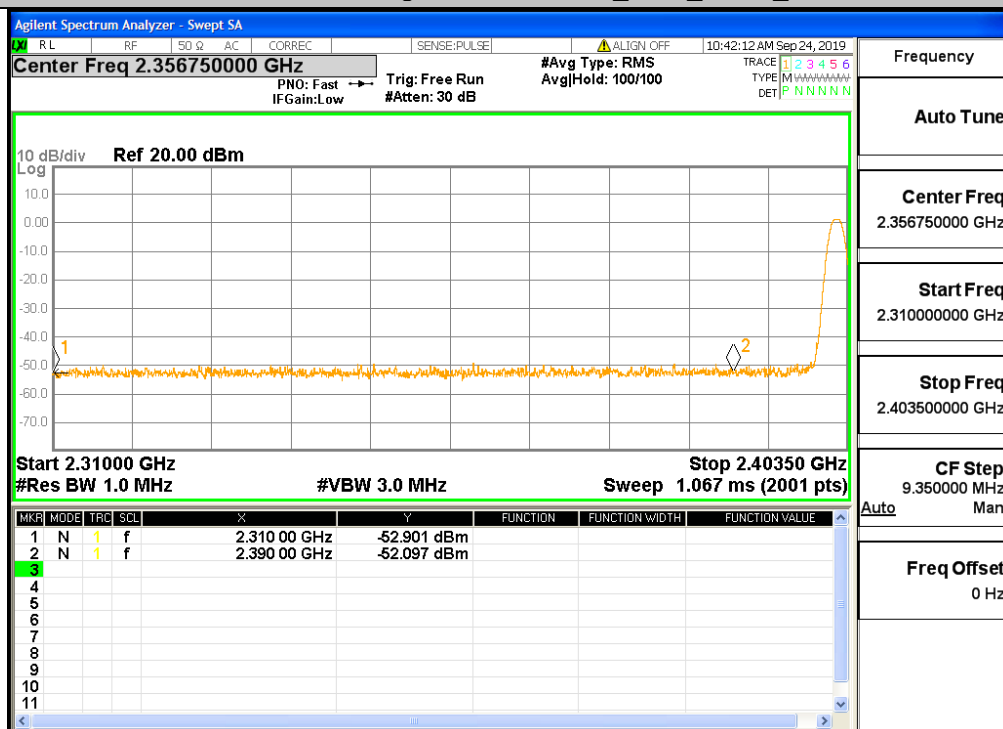


A.8 Restrict-band band-edge measurements

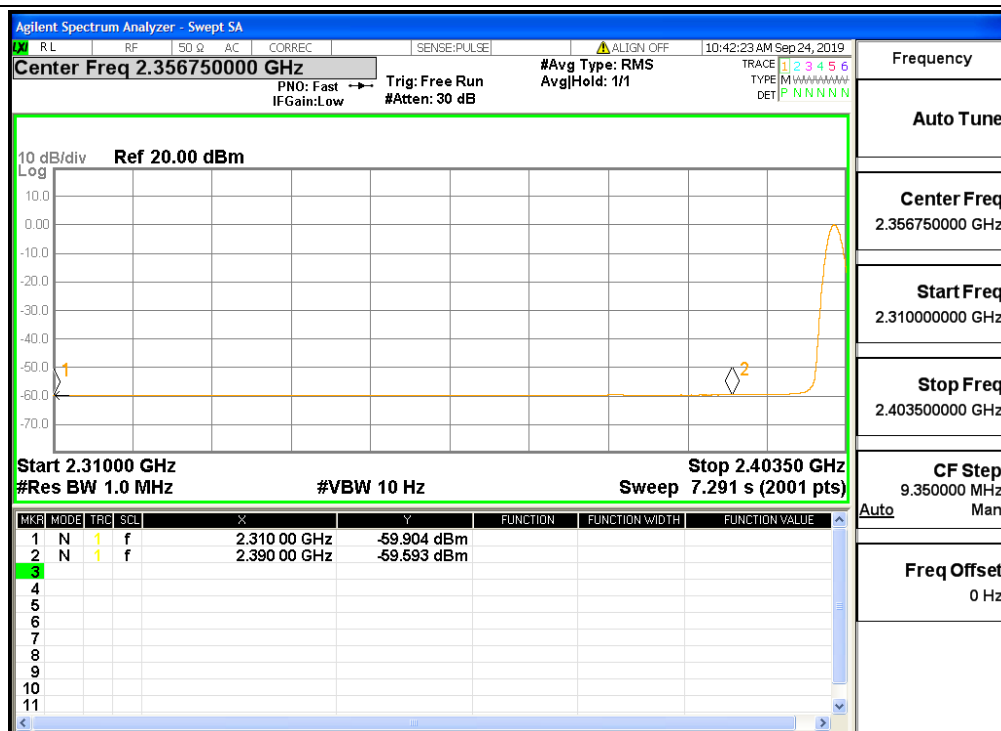
Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390.00	2.00	0.00	-52.10	45.10	74	Pass
1DH5	2480	2483.50	2.00	0.00	-43.48	53.72	74	Pass
2DH5	2402	2310.00	2.00	0.00	-52.98	44.22	74	Pass
2DH5	2480	2483.50	2.00	0.00	-35.84	61.36	74	Pass
3DH5	2402	2390.00	2.00	0.00	-52.25	44.95	74	Pass
3DH5	2480	2483.50	2.00	0.00	-37.98	59.22	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	-59.59	37.61	54	Pass
1DH5	2480	2483.50	2.00	0.00	-48.10	49.10	54	Pass
2DH5	2402	2310.00	2.00	0.00	-59.60	37.60	54	Pass
2DH5	2480	2483.50	2.00	0.00	-47.76	49.44	54	Pass
3DH5	2402	2390.00	2.00	0.00	-59.59	37.61	54	Pass
3DH5	2480	2483.50	2.00	0.00	-48.22	48.98	54	Pass

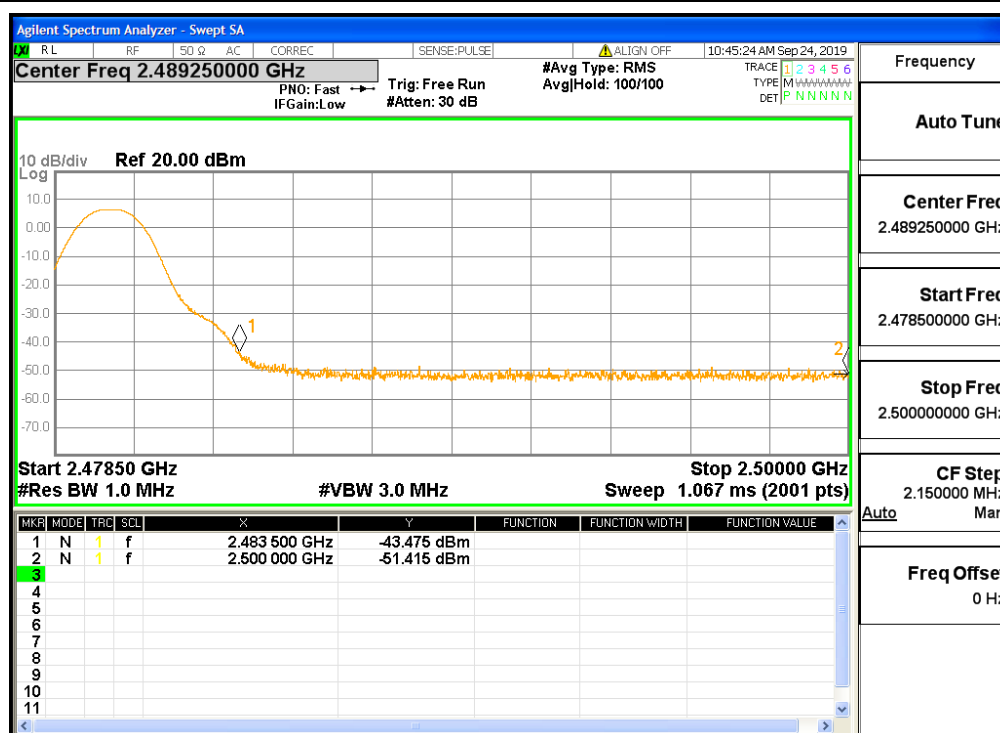
Restrict-band band-edge measurements_2402_PEAK_DH5



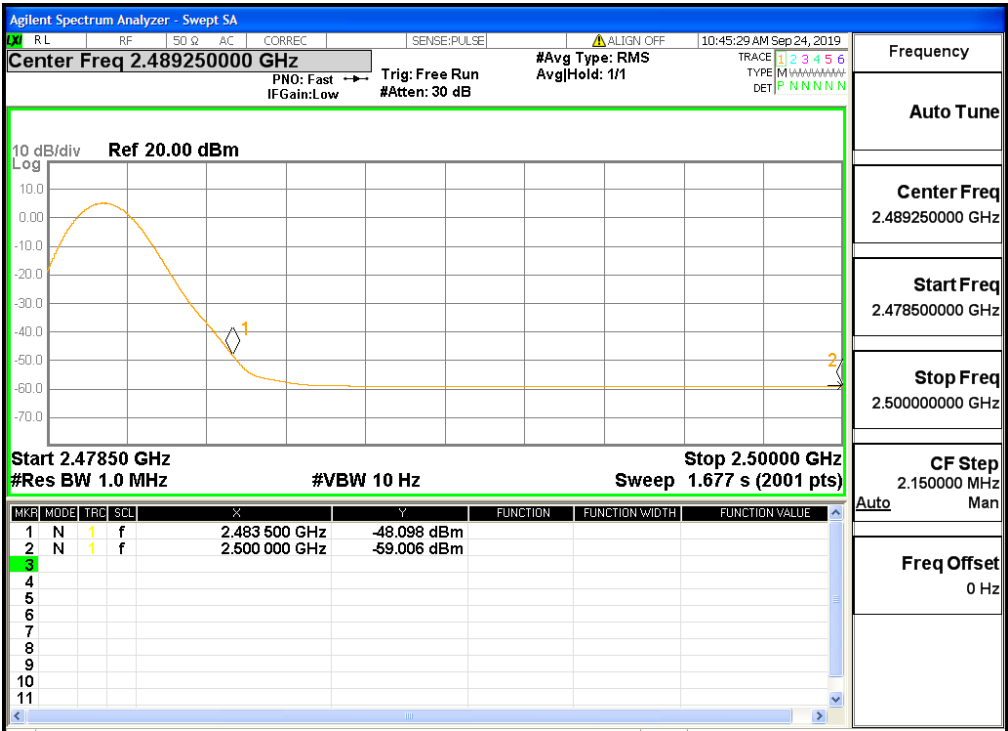
Restrict-band band-edge measurements_2402_AV_DH5



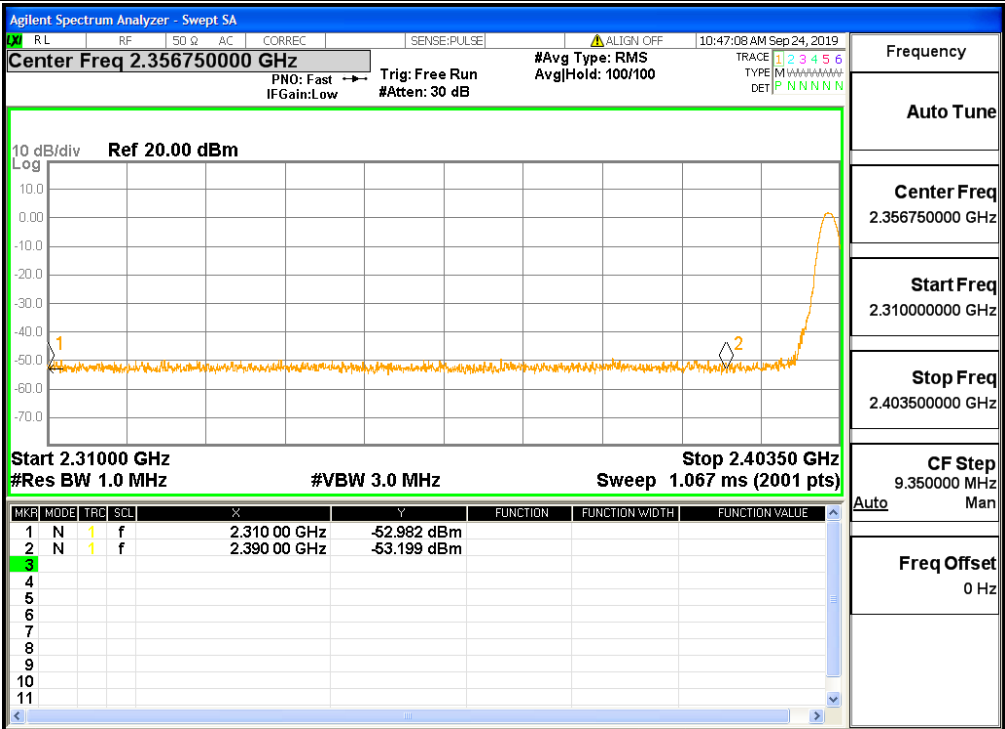
Restrict-band band-edge measurements_2480_PEAK_DH5



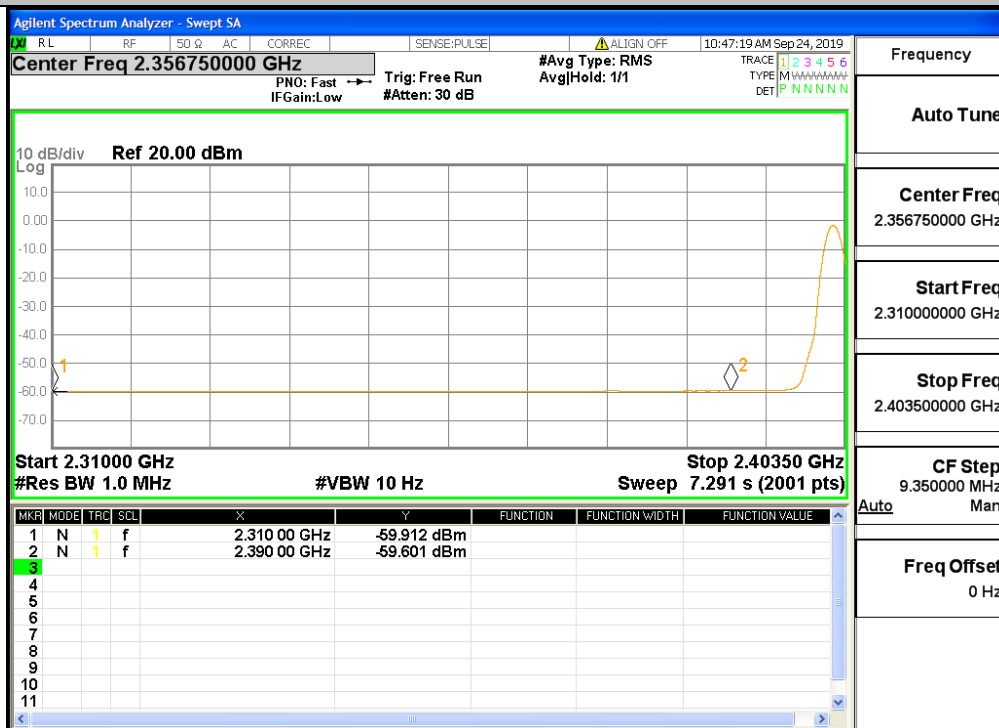
Restrict-band band-edge measurements 2480 AV DH5



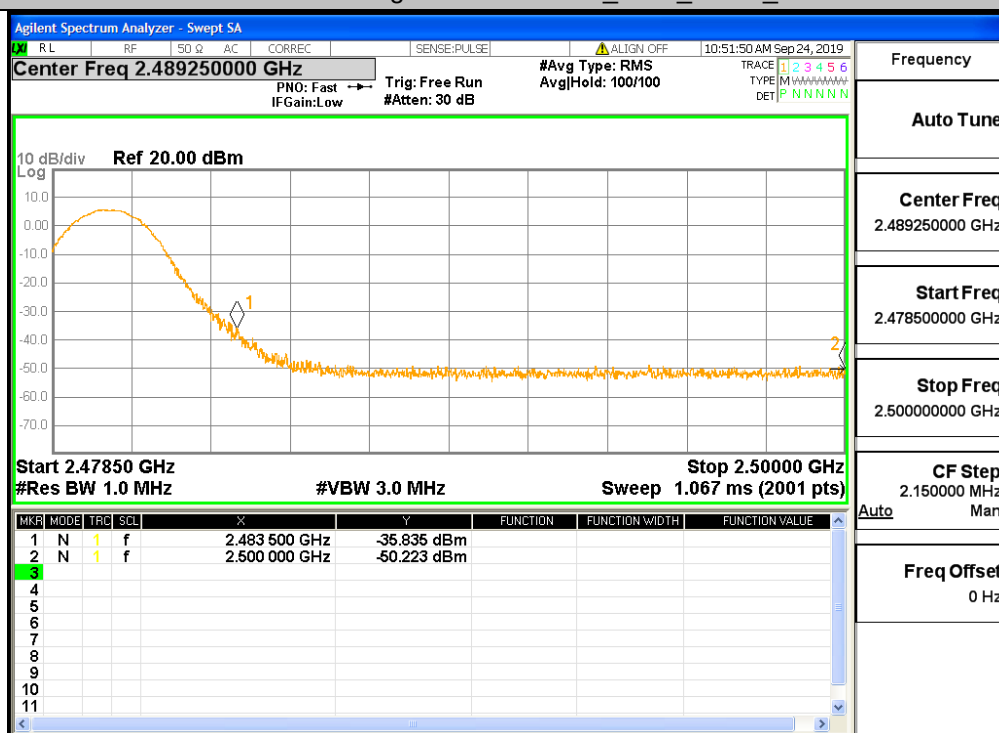
Restrict-band band-edge measurements_2402_PEAK_2DH5



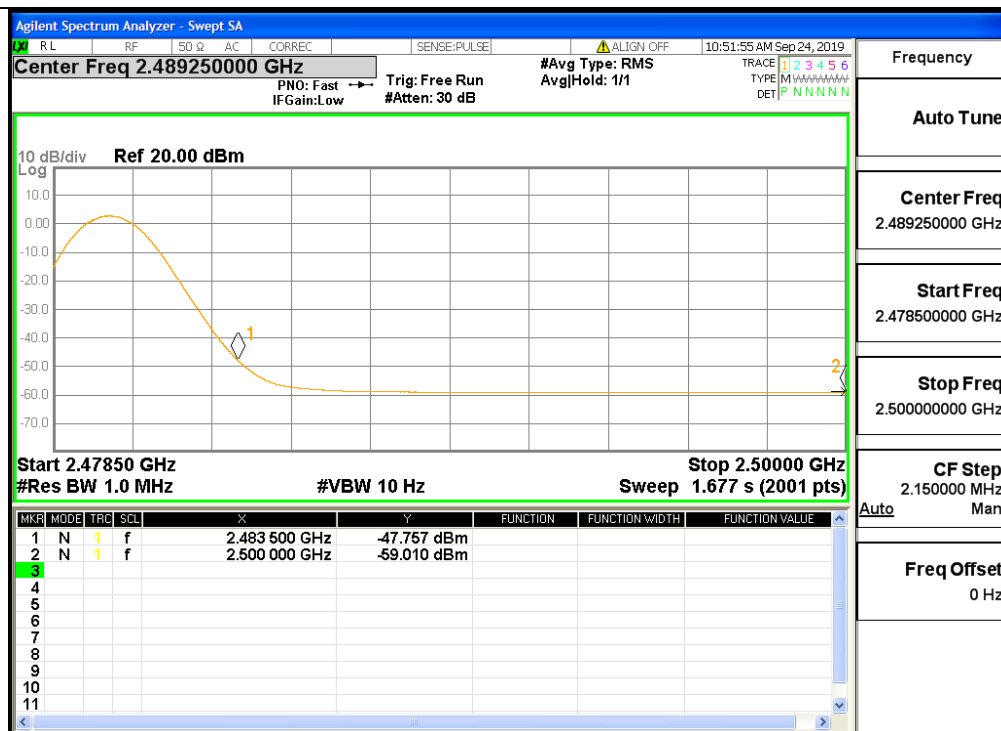
Restrict-band band-edge measurements_2402_AV_2DH5



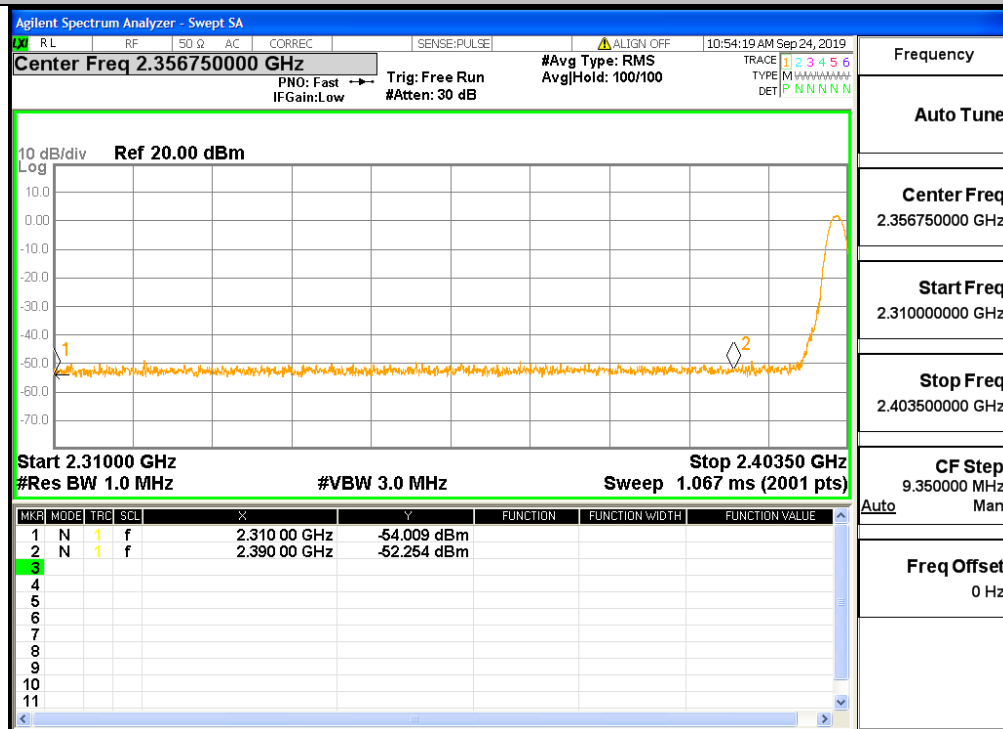
Restrict-band band-edge measurements_2480_PEAK_2DH5



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

