

Appendix A

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

Product Name: TRUE WIRELESS EARBUDS WITH CHARGING CASE

Trade Mark: N/A

Test Model: RT02B

FCC ID: 2ATOY-RT02B

Environmental Conditions

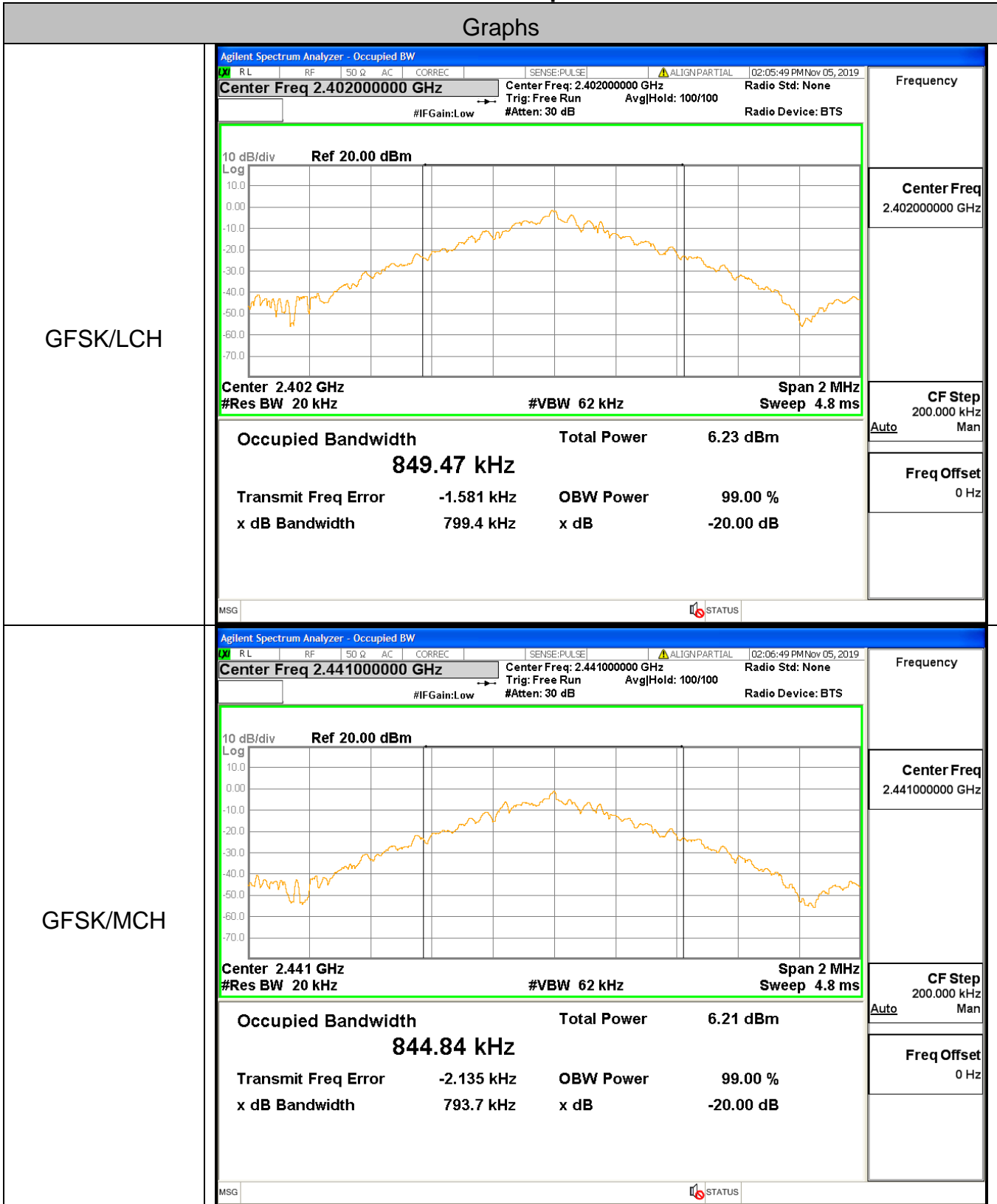
Temperature:	22.7° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Gary Qian
Supervised by:	Eden Hu

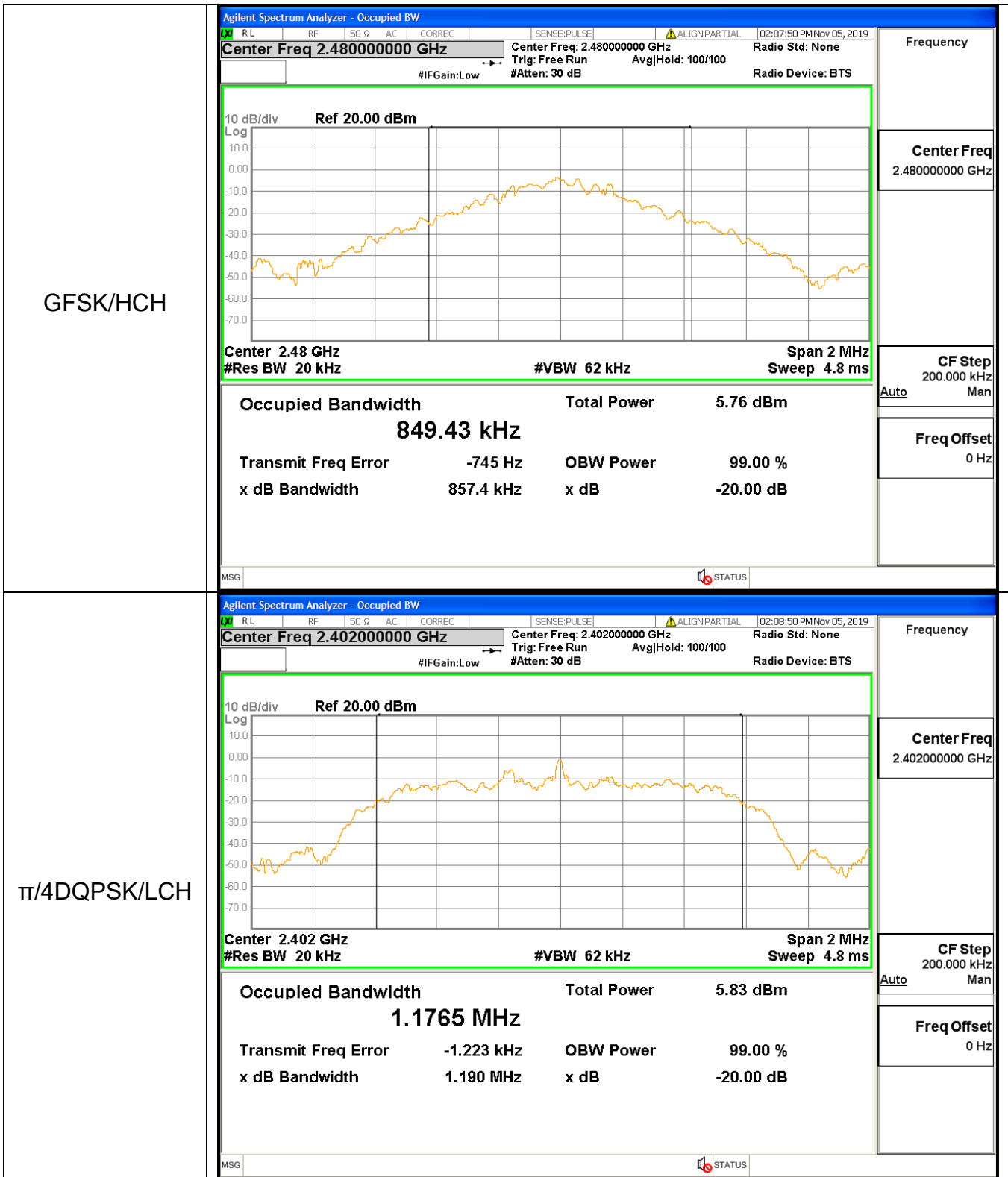
A.1 20 dB Bandwidth

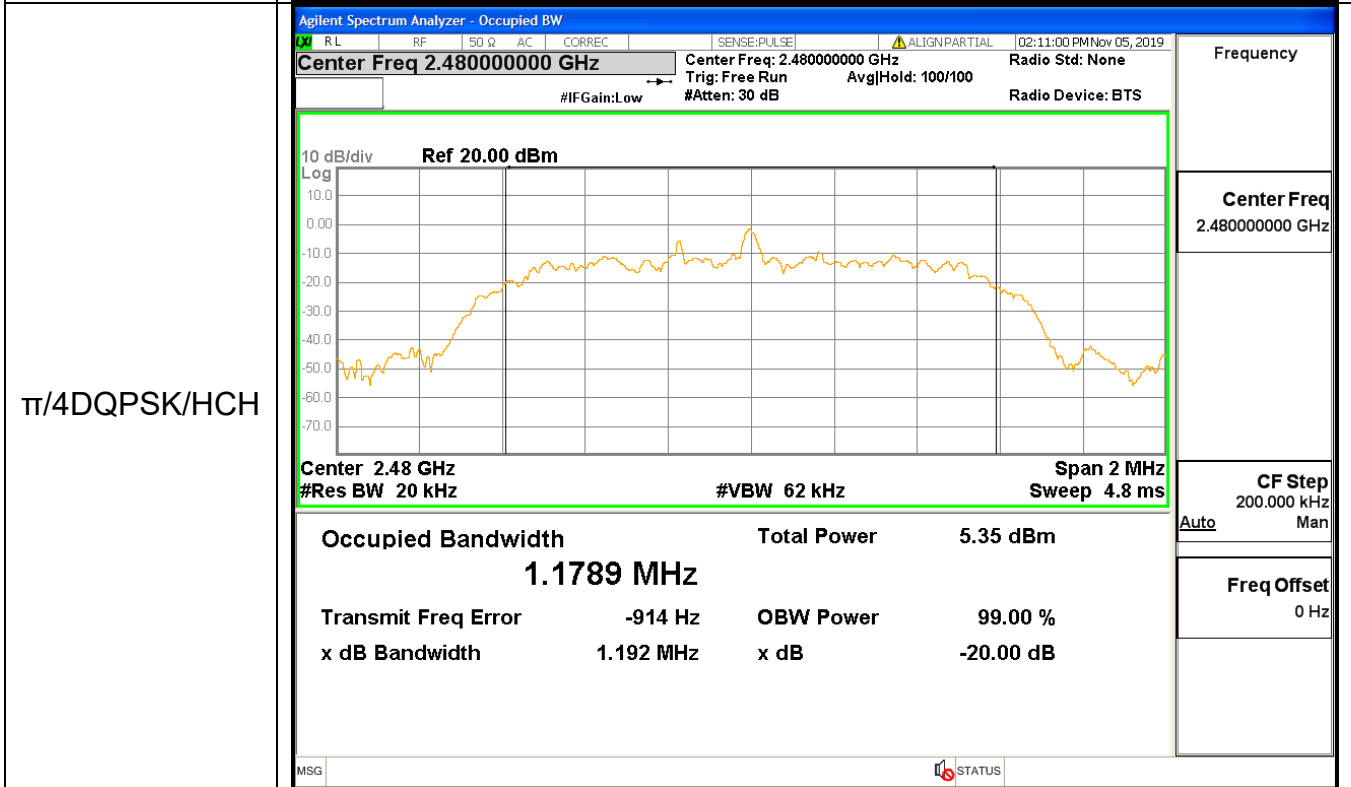
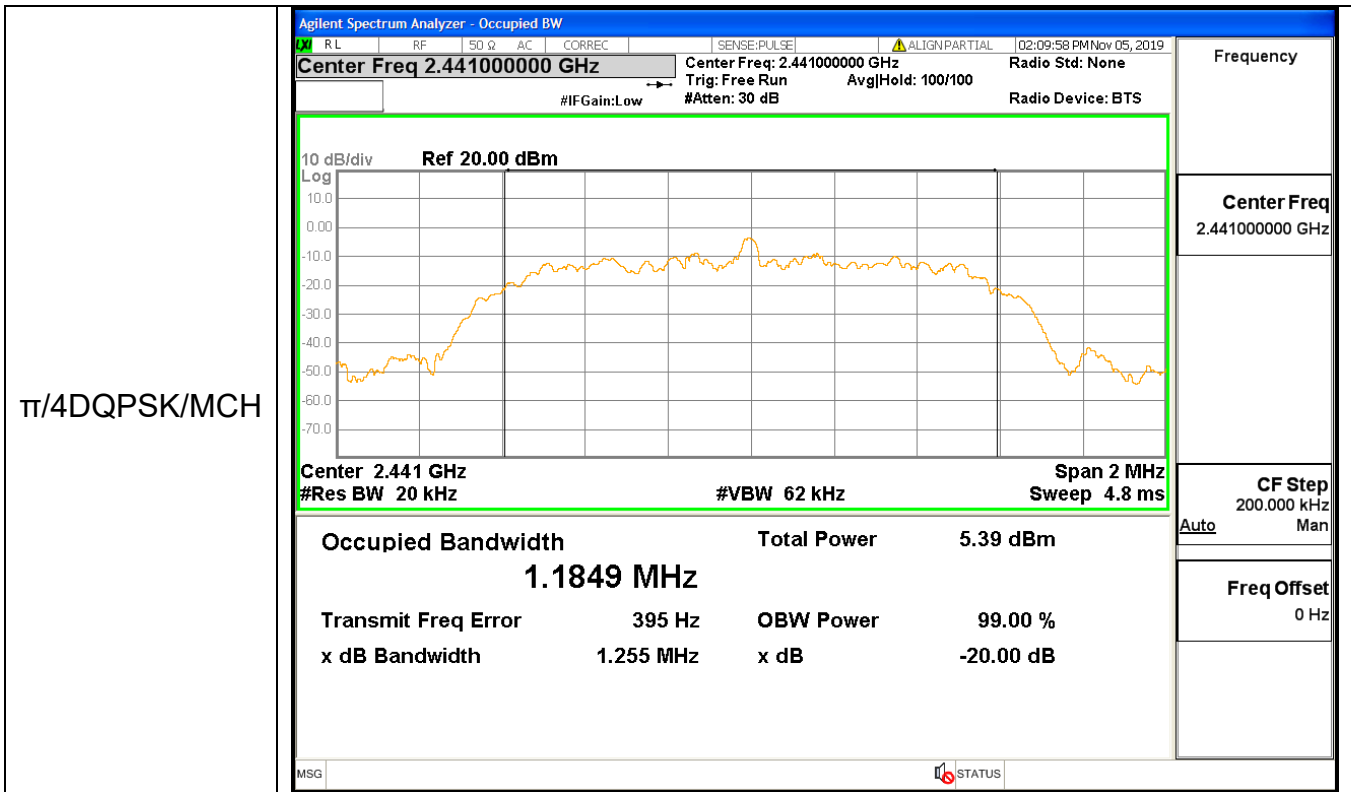
Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.799	Not Specified	PASS
GFSK	MCH	0.794	Not Specified	PASS
GFSK	HCH	0.857	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.190	Not Specified	PASS
$\pi/4$ DQPSK	MCH	1.255	Not Specified	PASS
$\pi/4$ DQPSK	HCH	1.192	Not Specified	PASS

Test Graph

Graphs



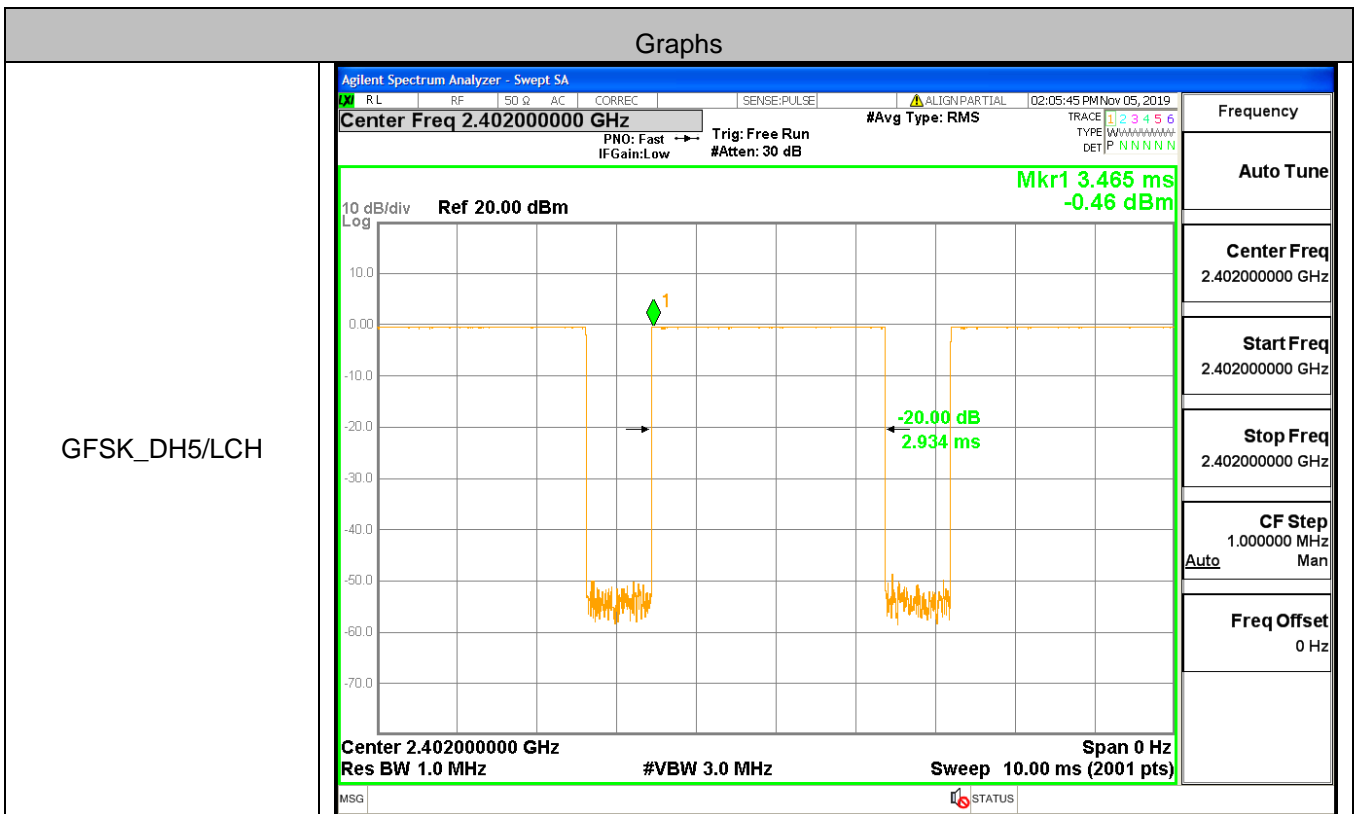


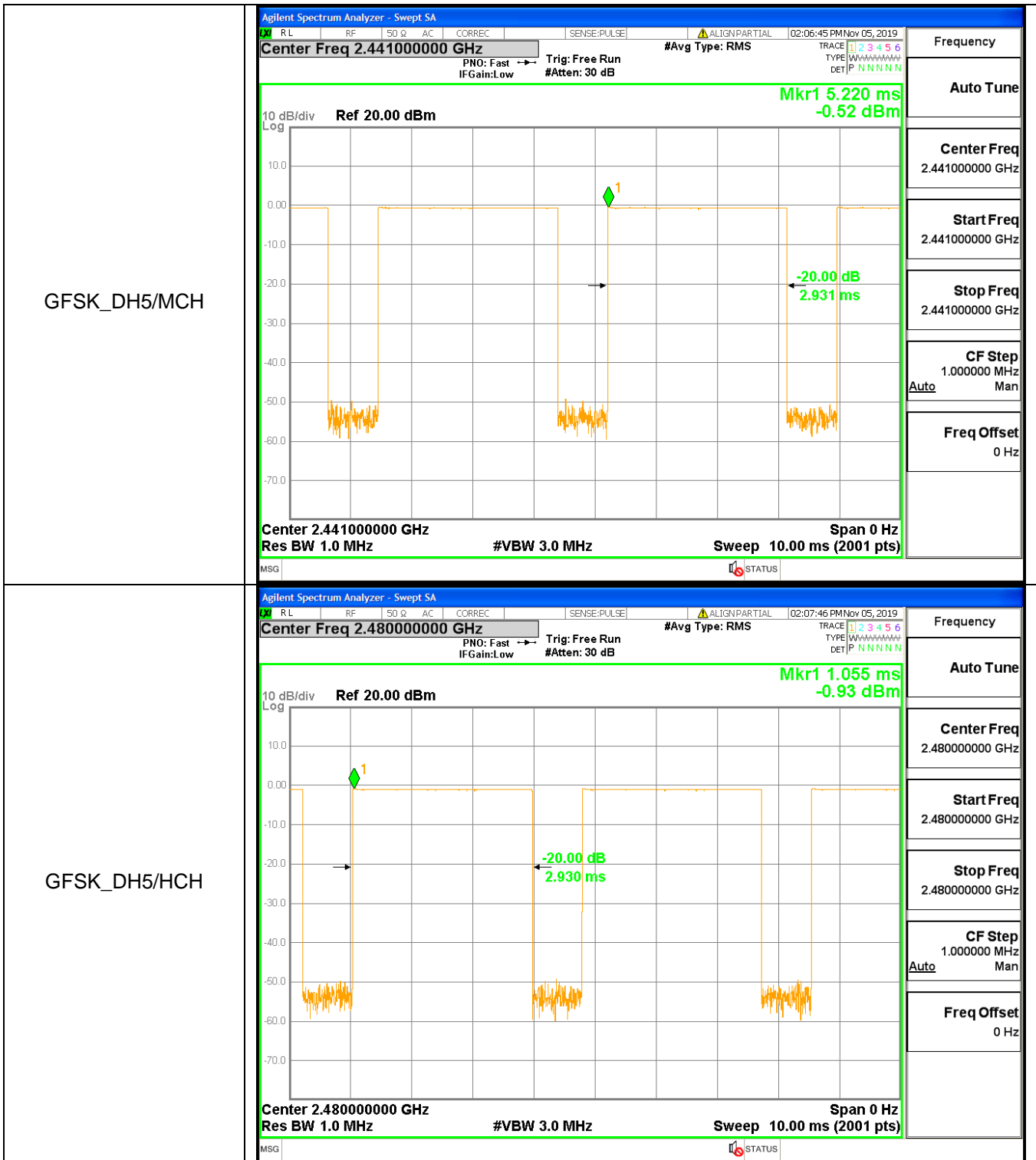


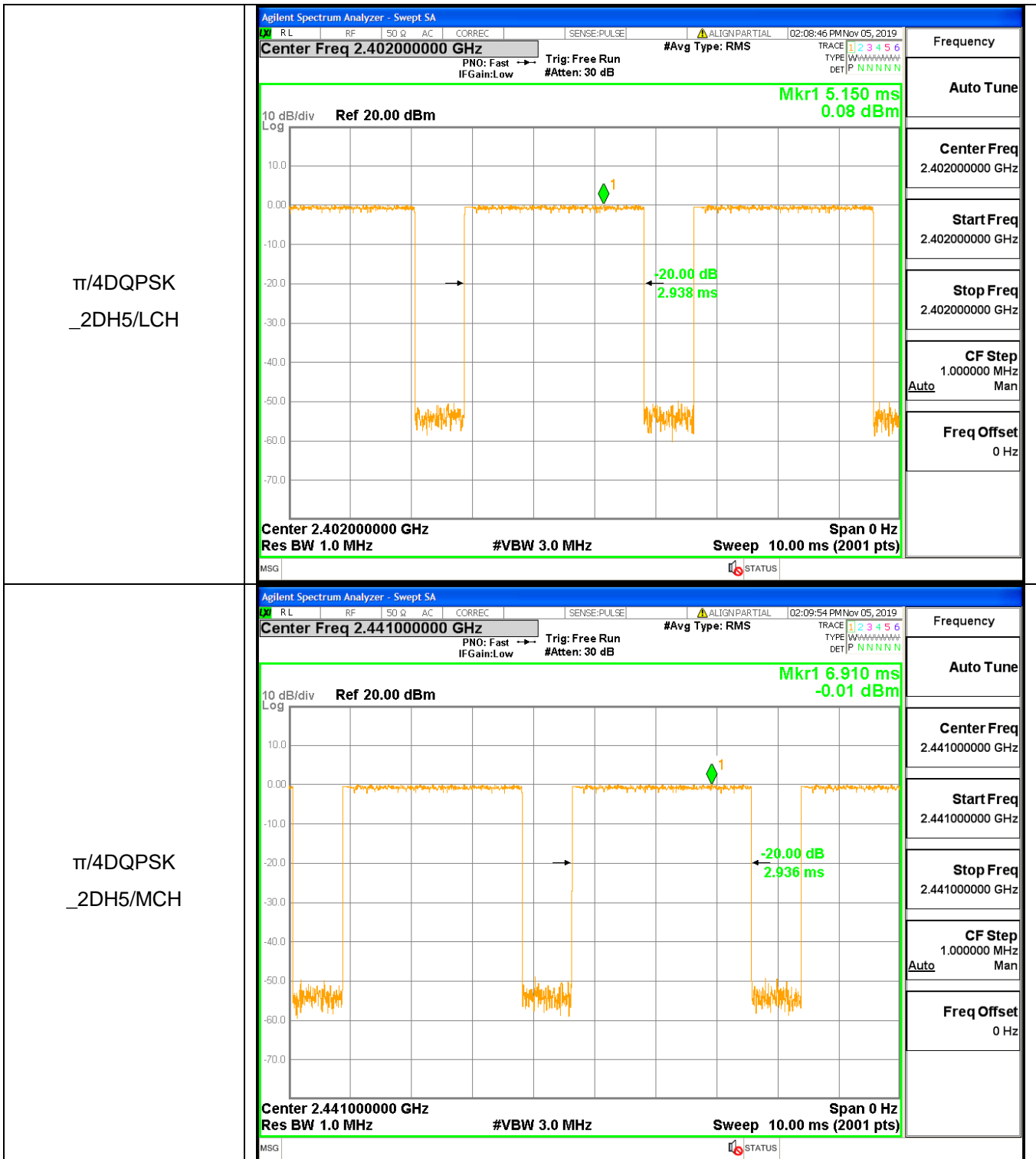
A.2 Dwell Time

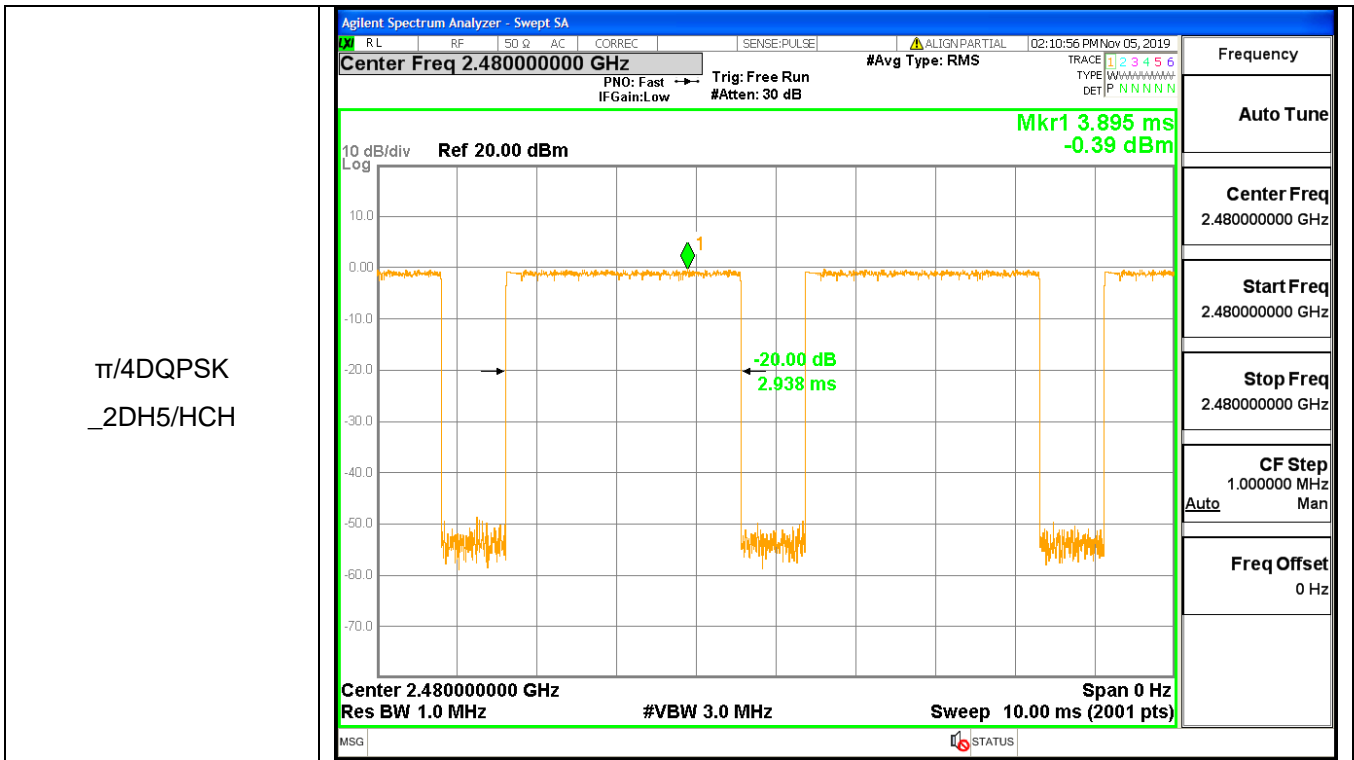
Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002934	106.7	0.313013	0.4	PASS
GFSK	DH5	MCH	0.002931	106.7	0.312731	0.4	PASS
GFSK	DH5	HCH	0.002930	106.7	0.312642	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	0.002938	106.7	0.313522	0.4	PASS
$\pi/4$ DQPSK	2DH5	MCH	0.002936	106.7	0.313223	0.4	PASS
$\pi/4$ DQPSK	2DH5	HCH	0.002938	106.7	0.313515	0.4	PASS

Test Graph





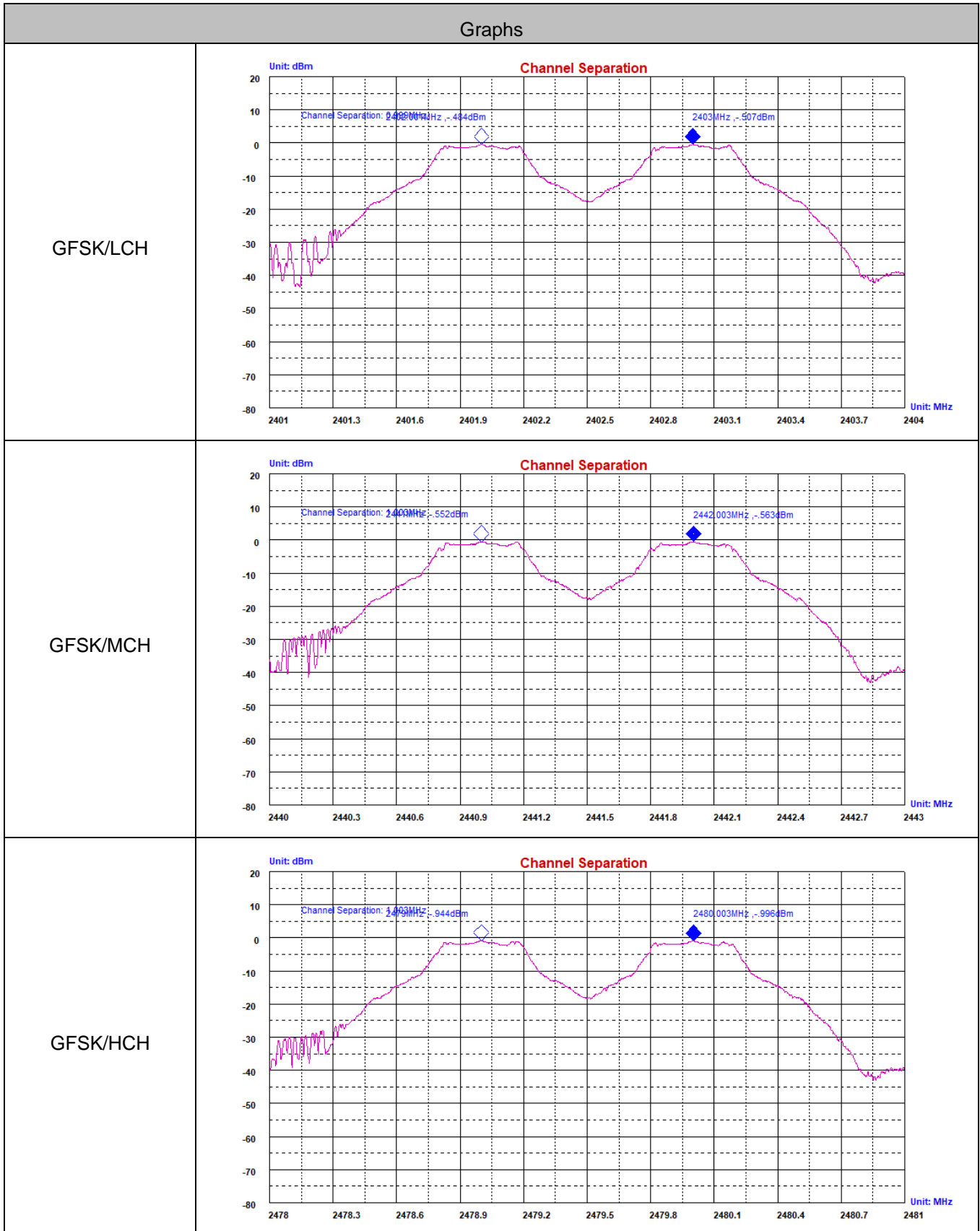


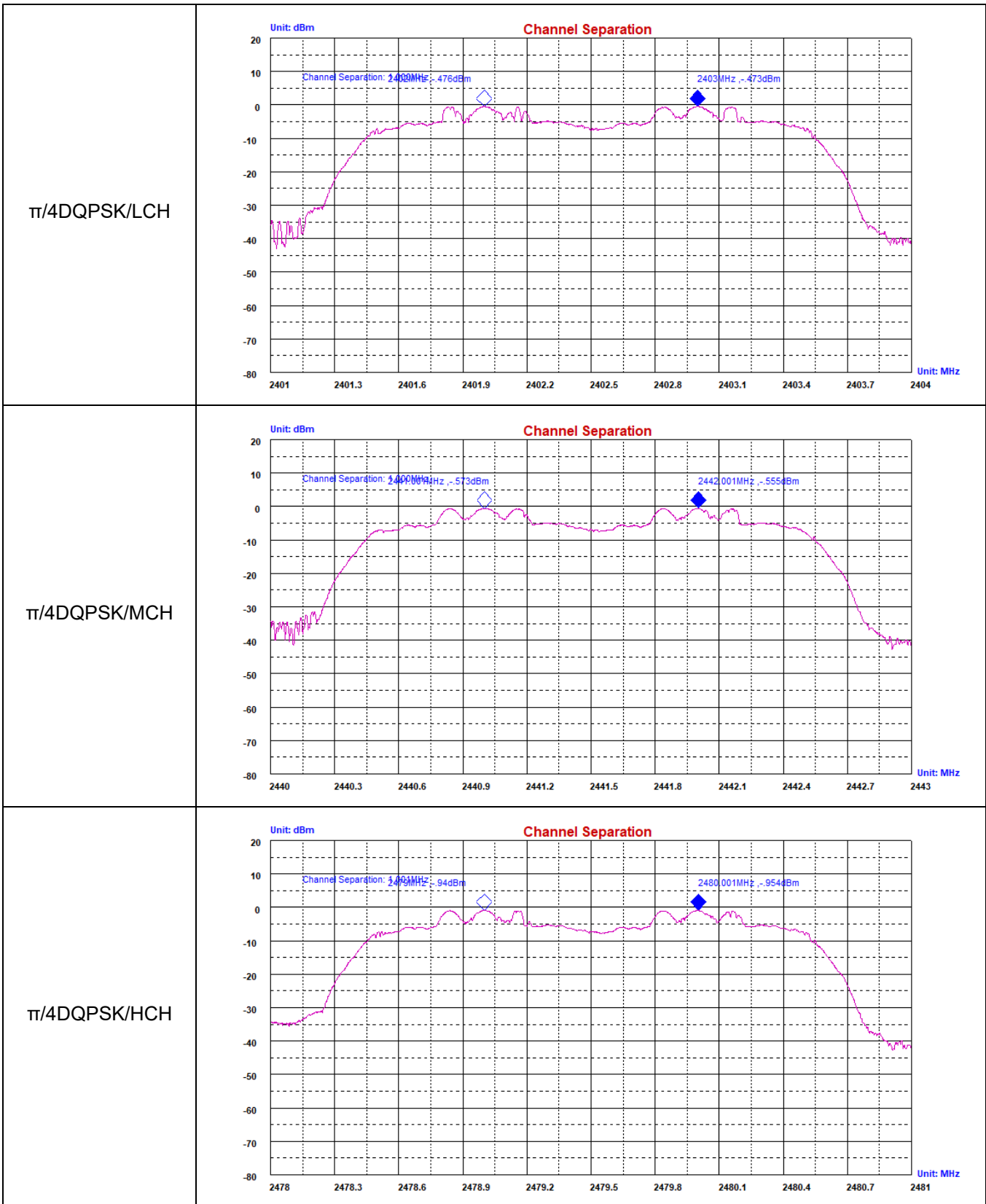


A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.999	0.533	PASS
GFSK	MCH	1.003	0.529	PASS
GFSK	HCH	1.003	0.571	PASS
$\pi/4$ DQPSK	LCH	1.000	0.793	PASS
$\pi/4$ DQPSK	MCH	1.000	0.837	PASS
$\pi/4$ DQPSK	HCH	1.001	0.795	PASS

Test Graph



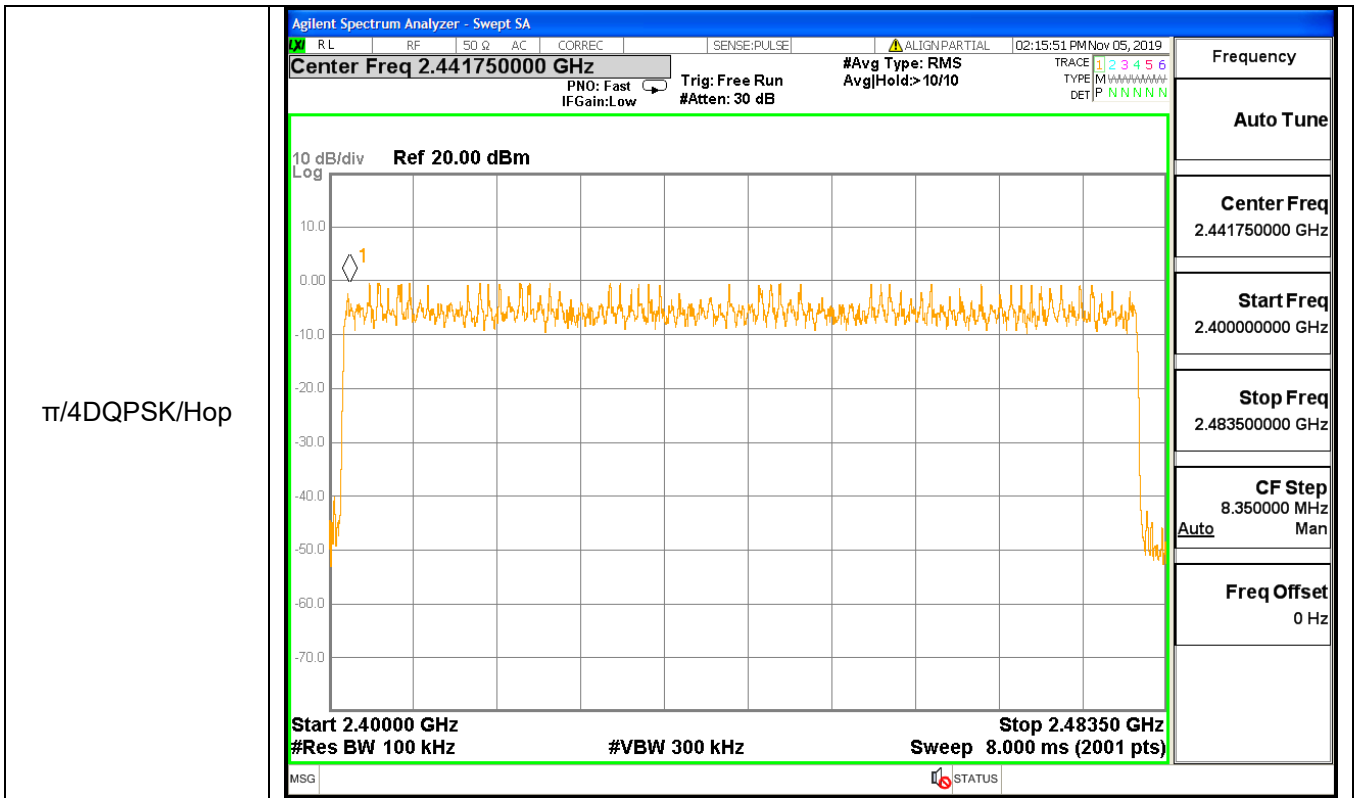


A.4 Hopping Channel Number

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

Test Graph

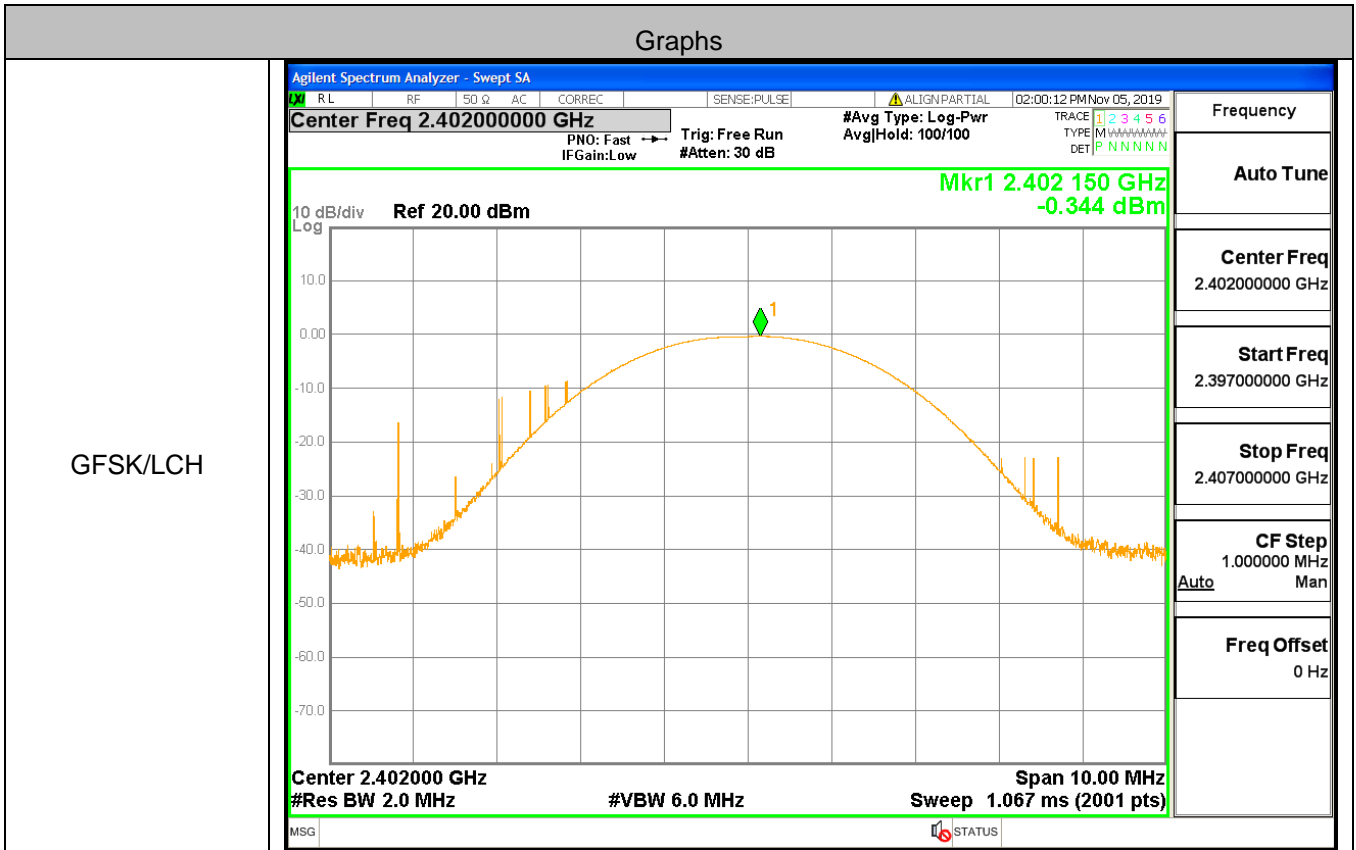


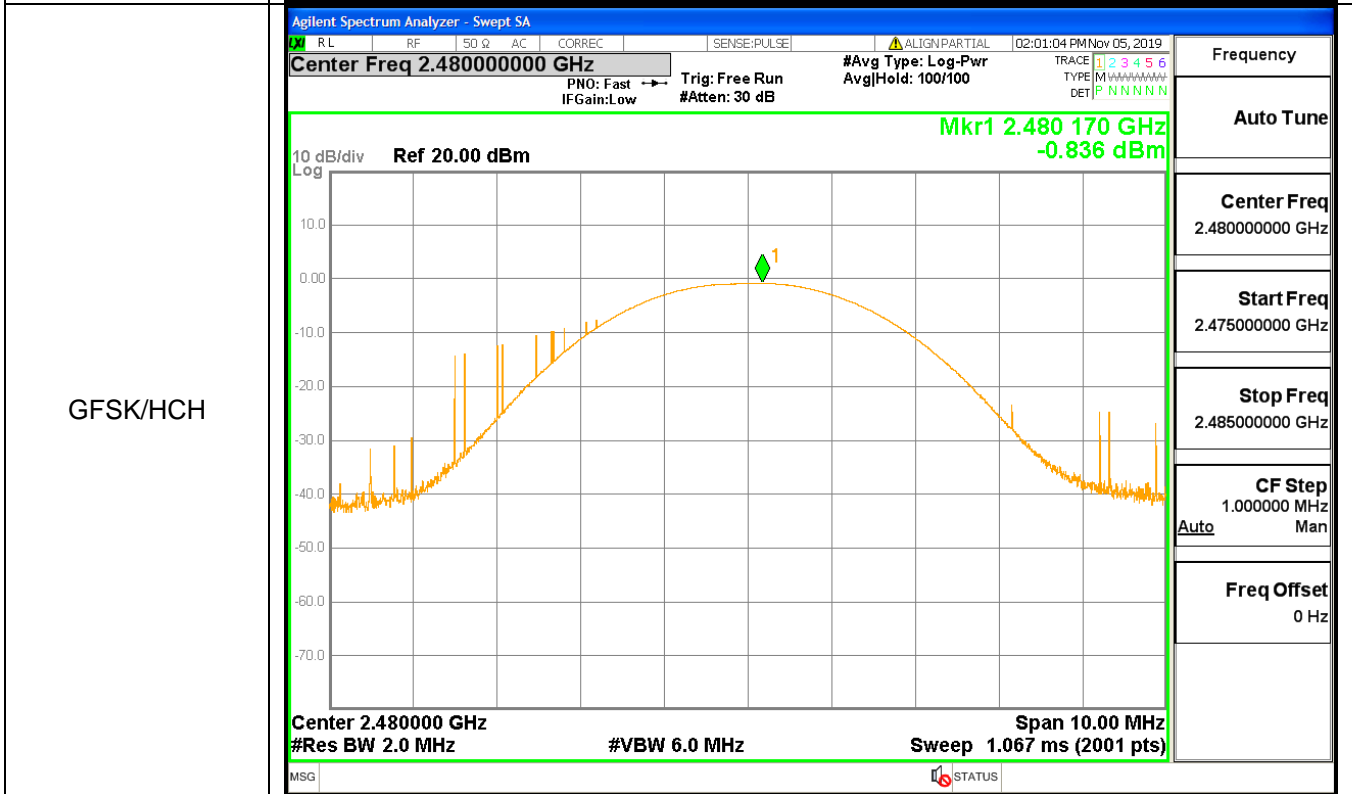
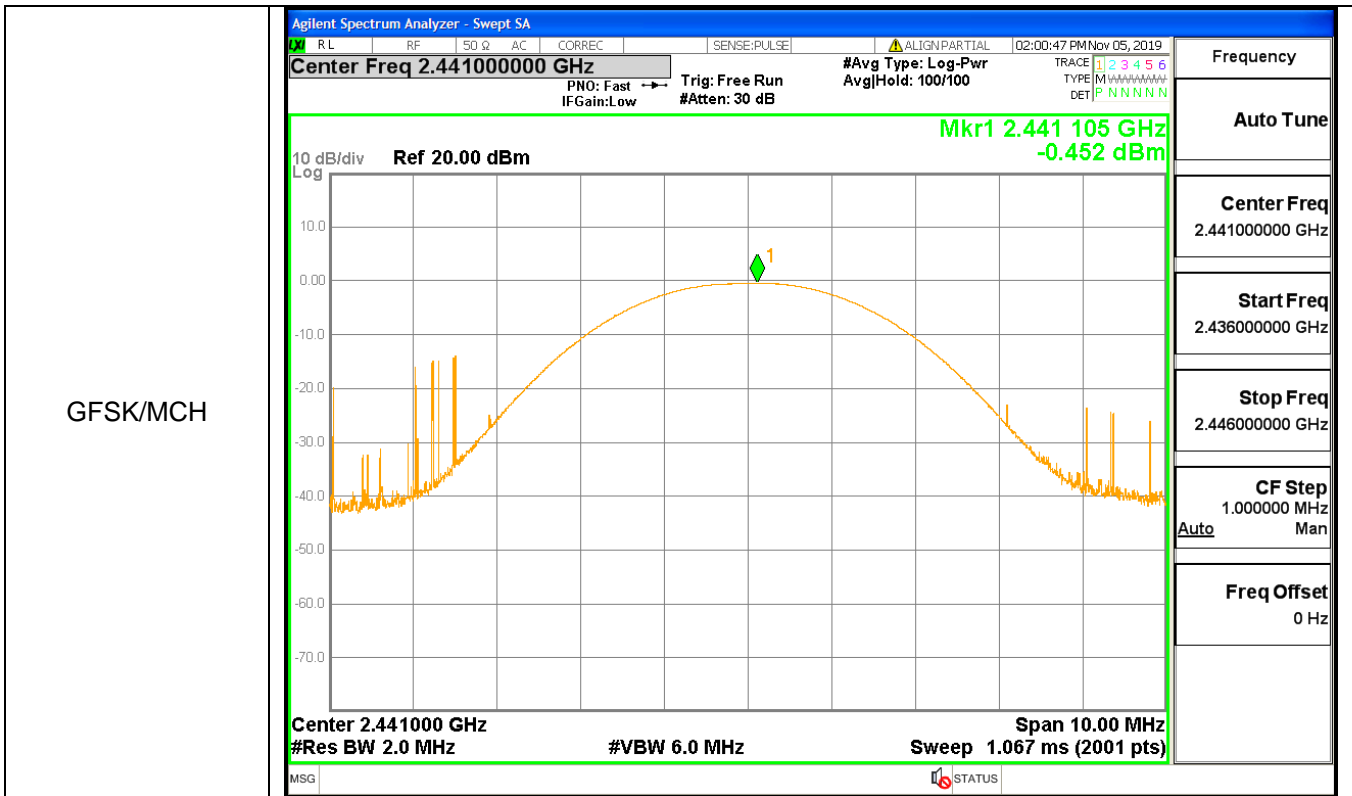


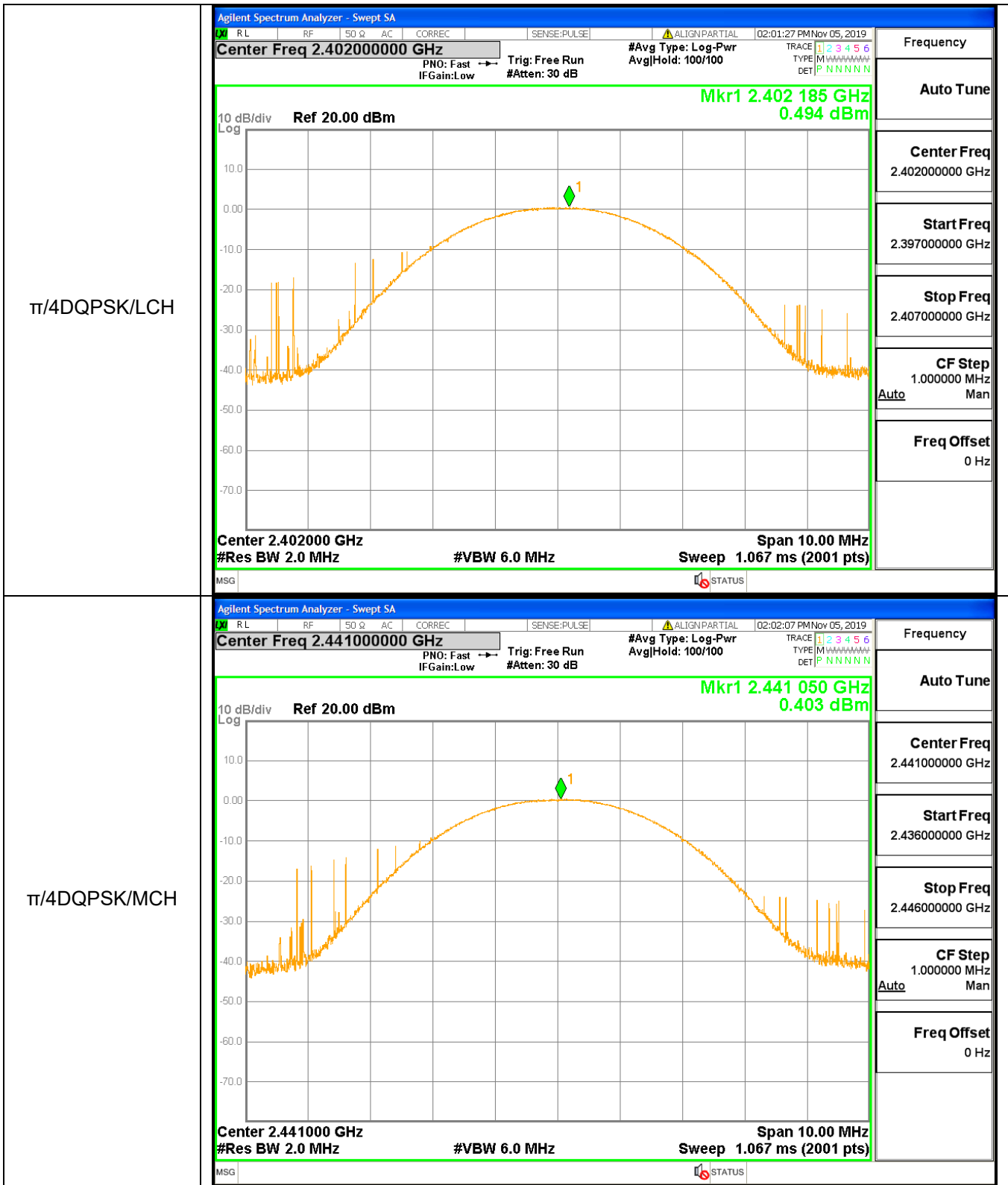
A.5 Conducted Peak Output Power

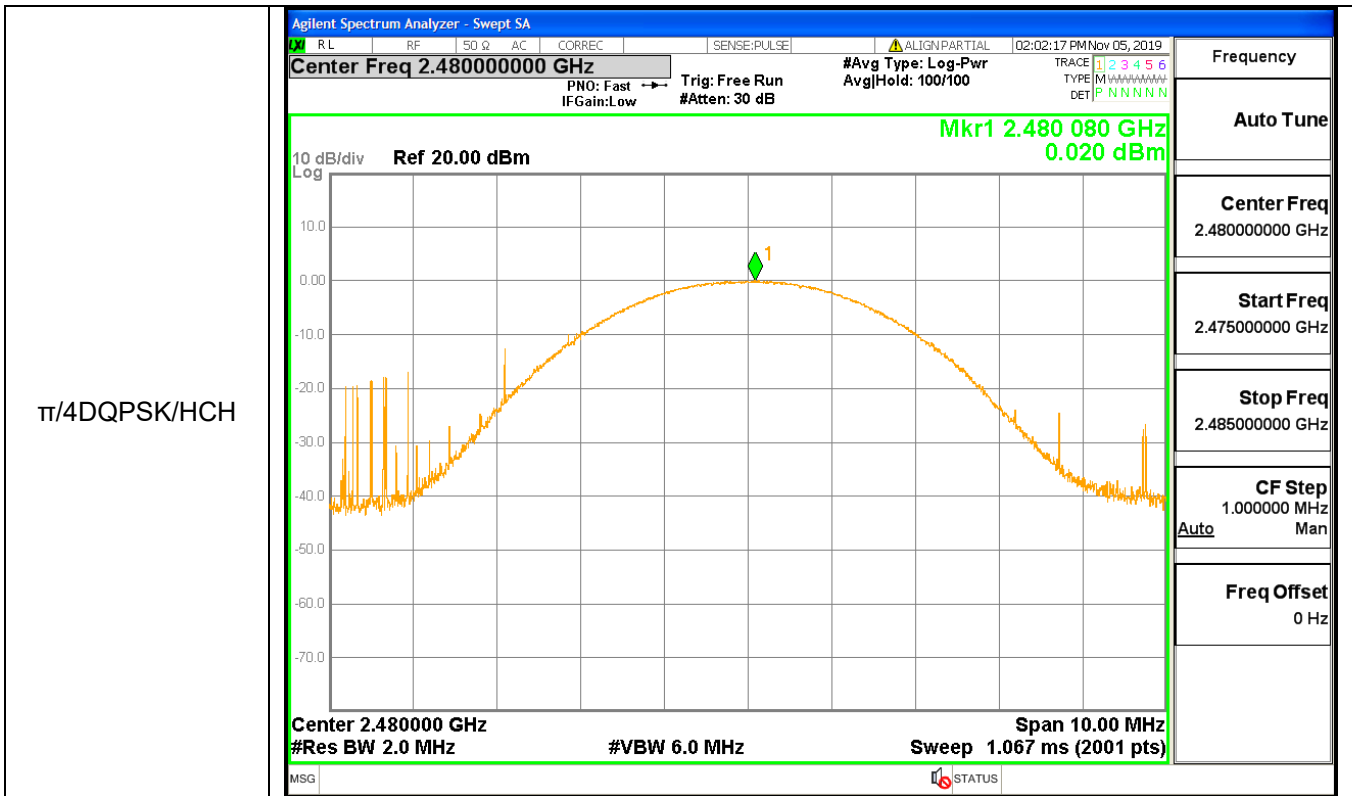
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.344	21	PASS
GFSK	MCH	-0.452	21	PASS
GFSK	HCH	-0.836	21	PASS
$\pi/4$ DQPSK	LCH	0.494	21	PASS
$\pi/4$ DQPSK	MCH	0.403	21	PASS
$\pi/4$ DQPSK	HCH	0.020	21	PASS

Test Graph







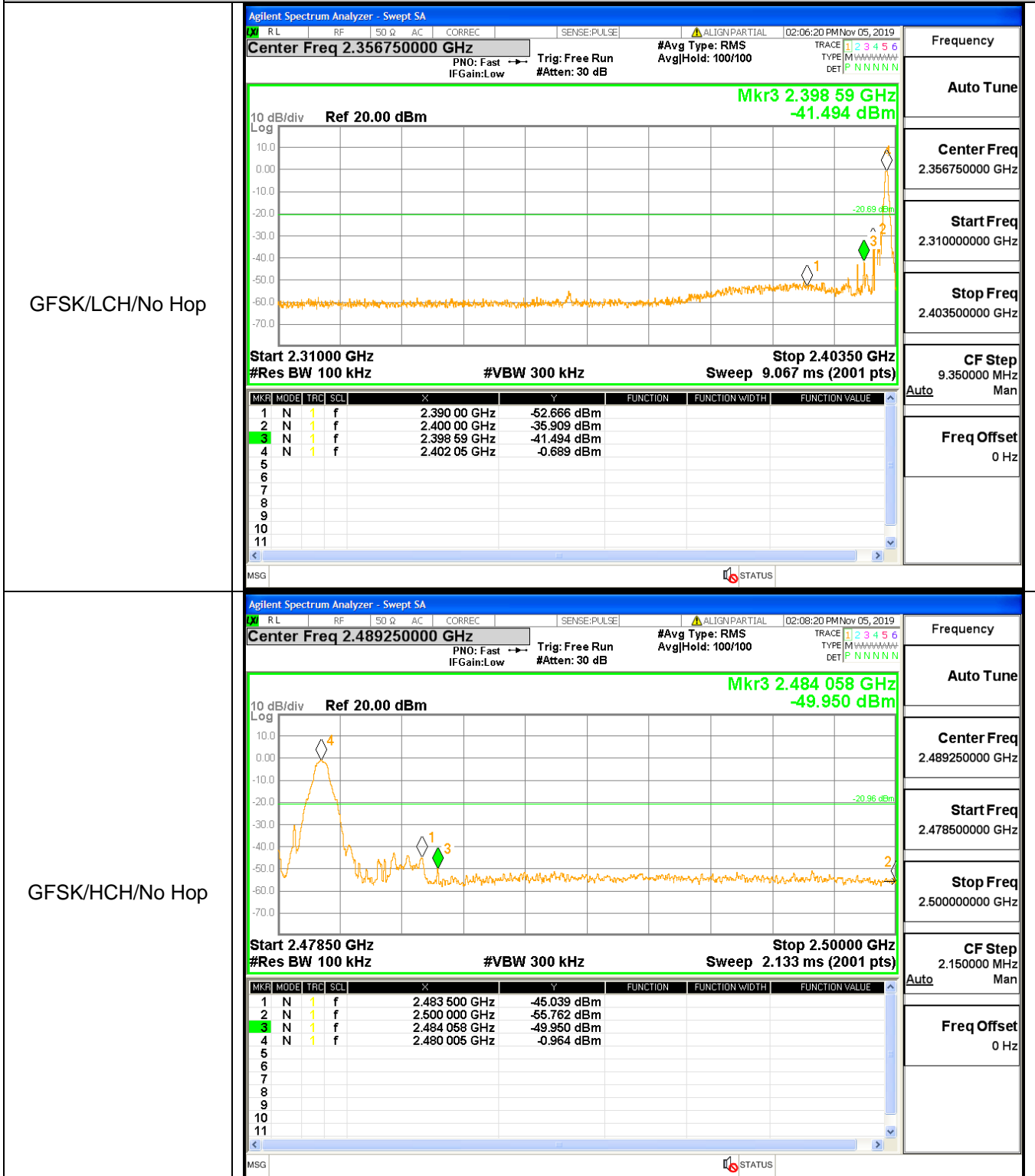


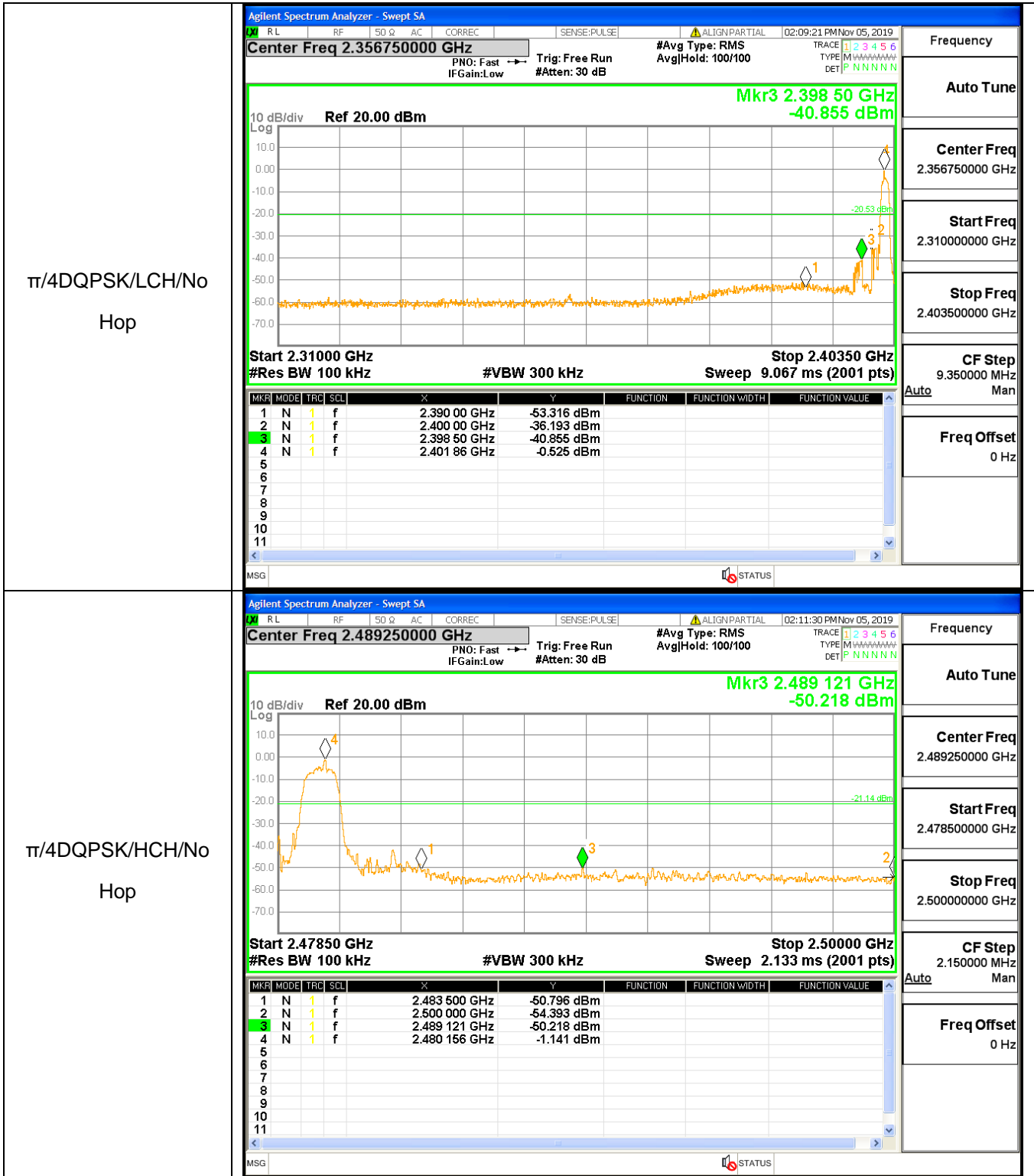
A.6 Band-edge for RF Conducted Emissions

Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2400	-0.689	-35.910	-20.689	Pass
1DH5	2480	2483.5	-0.964	-45.040	-20.964	Pass
2DH5	2402	2400	-0.525	-36.190	-20.525	Pass
2DH5	2480	2489.121	-1.141	-50.218	-21.141	Pass
1DH5-Hopping	2402	2399.88	-0.377	-36.199	-20.377	Pass
1DH5-Hopping	2480	2483.5	-0.789	-45.367	-20.789	Pass
2DH5-Hopping	2402	2398.47	-0.497	-41.287	-20.497	Pass
2DH5-Hopping	2480	2483.5	-0.683	-49.520	-20.683	Pass

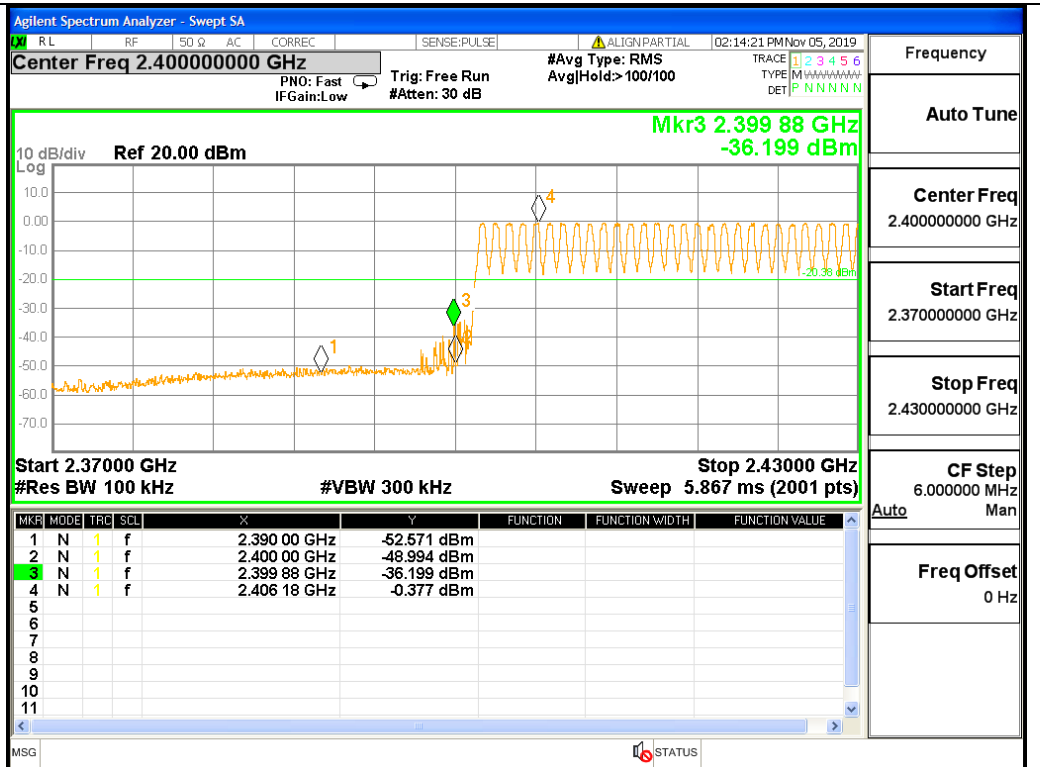
Test Graph

Graphs

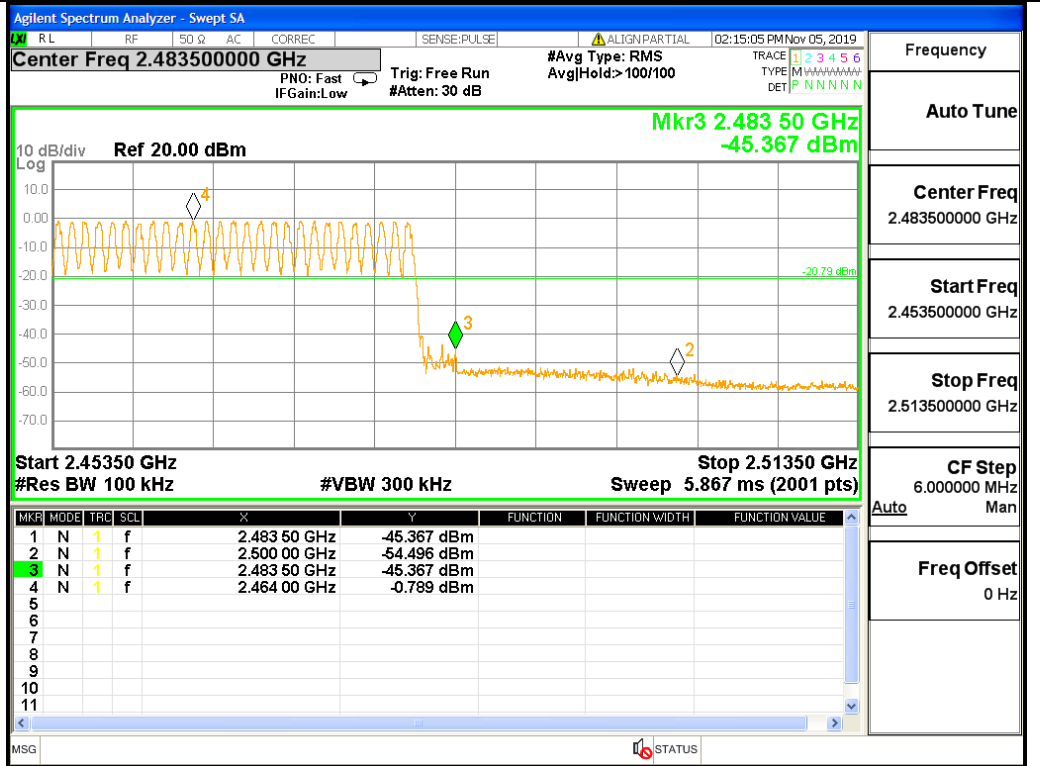




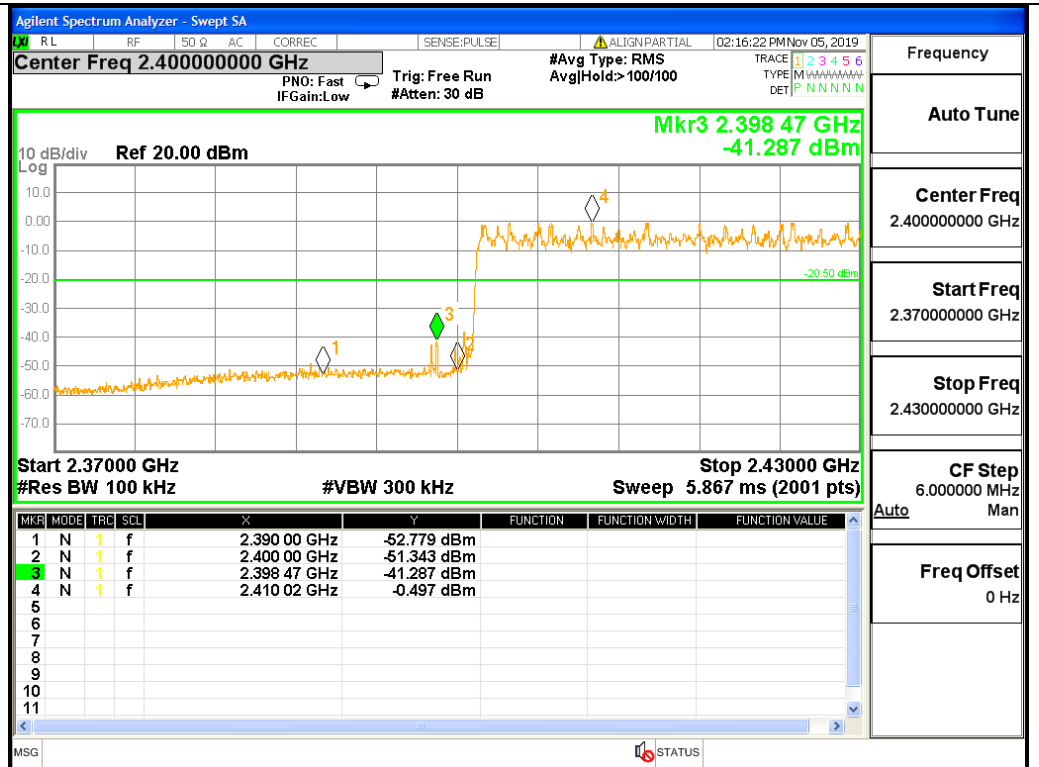
GFSK/LCH/Hop



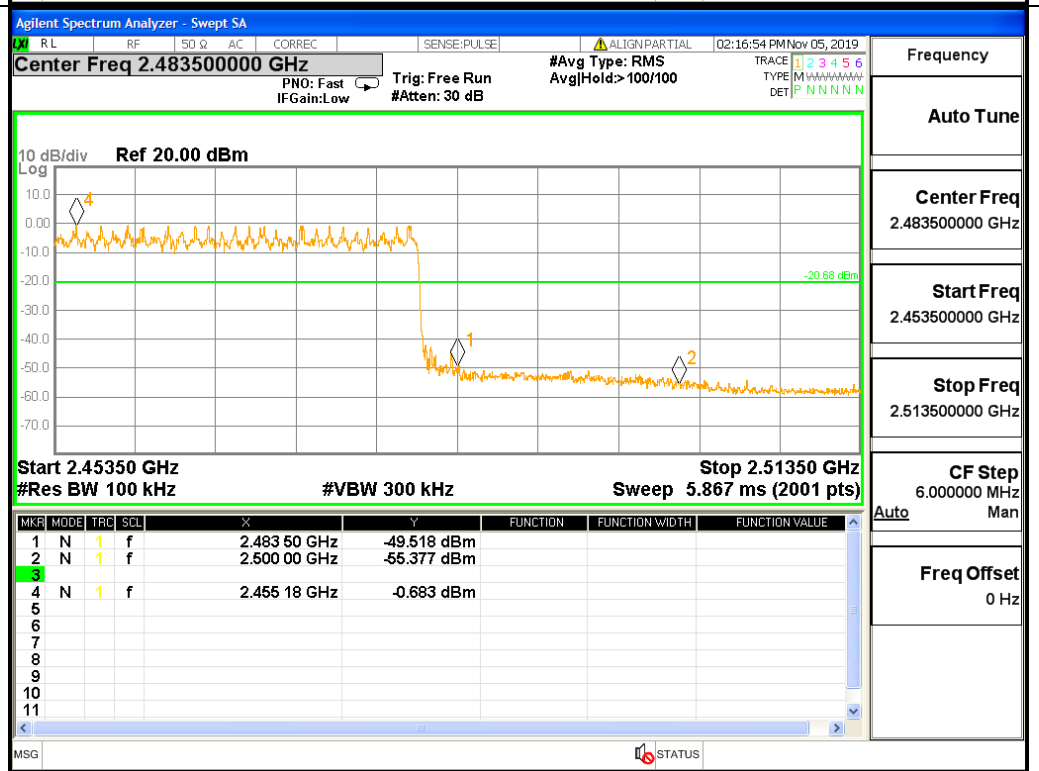
GFSK/HCH/Hop



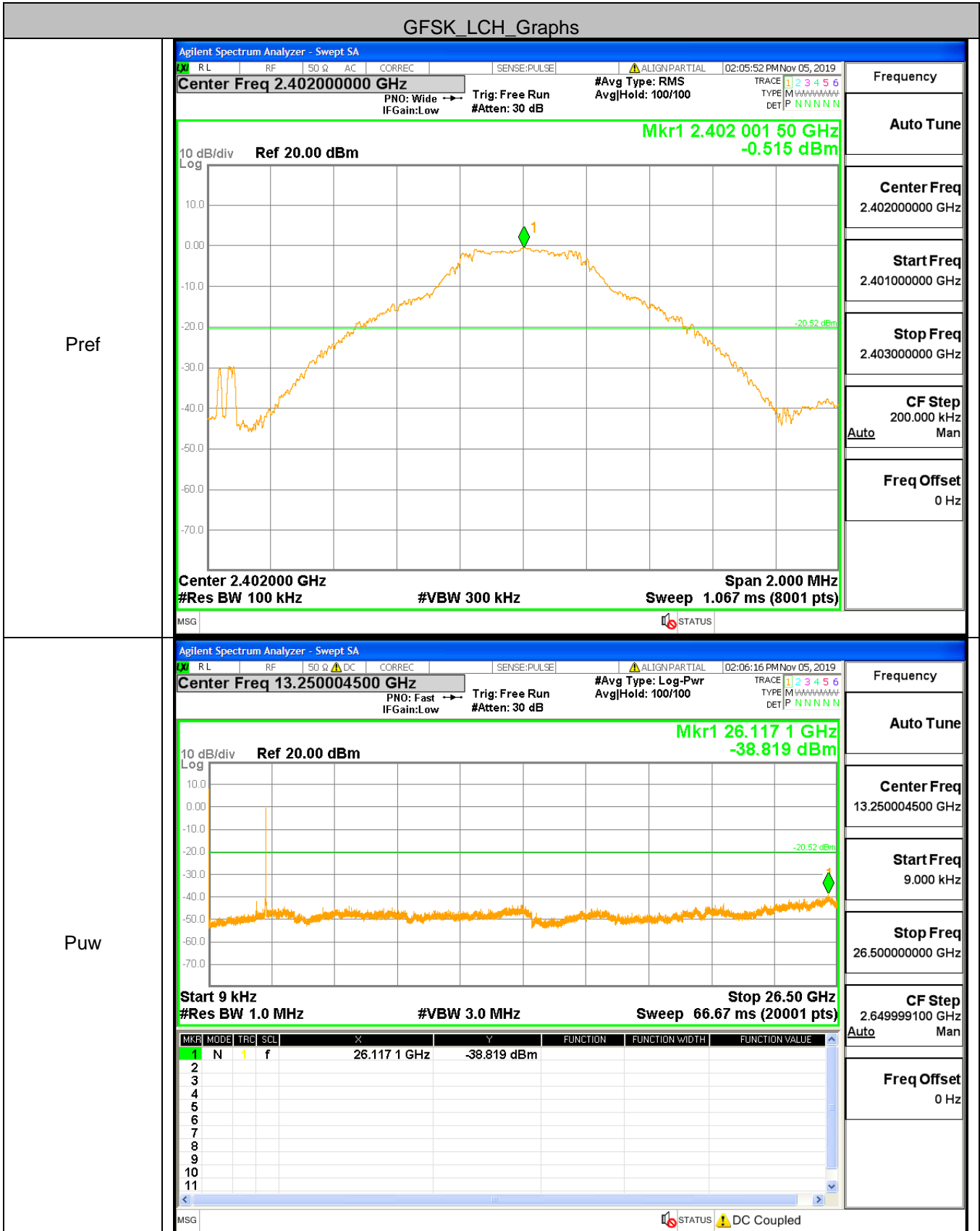
$\pi/4$ DQPSK/LCH/Hop



$\pi/4$ DQPSK/HCH/Hop

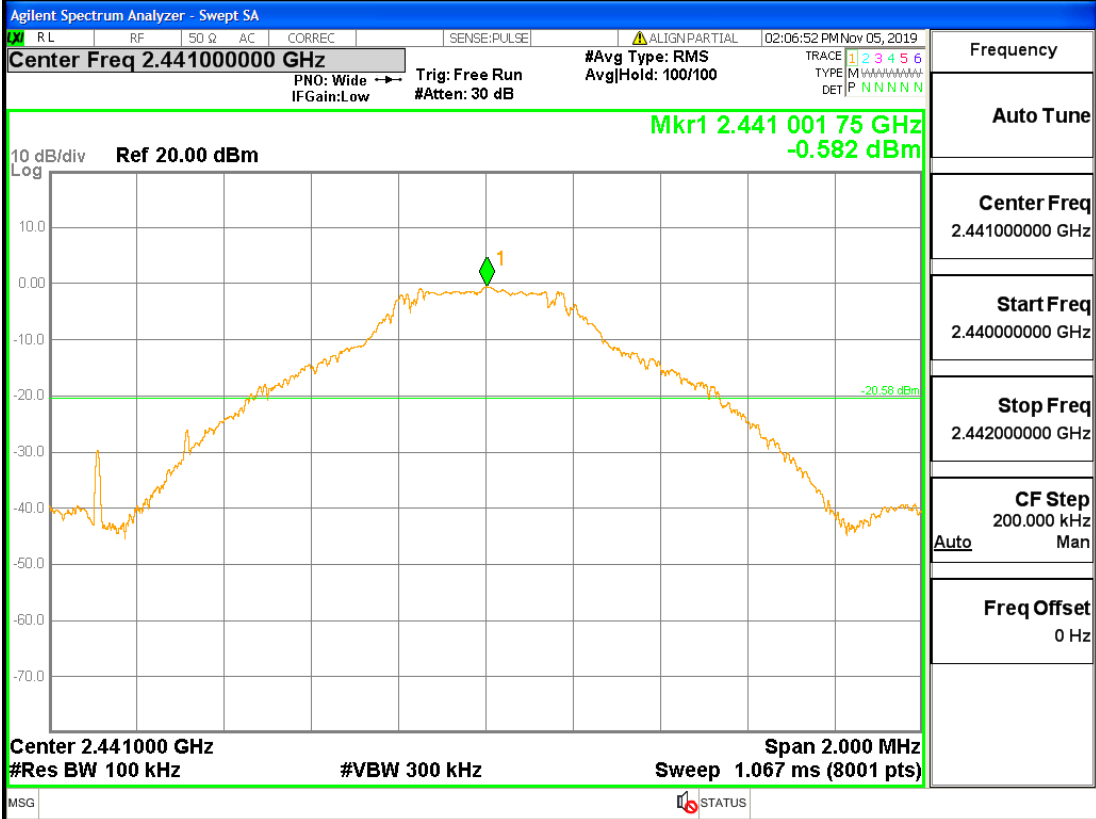


A.7 RF Conducted Spurious Emissions Test Graph

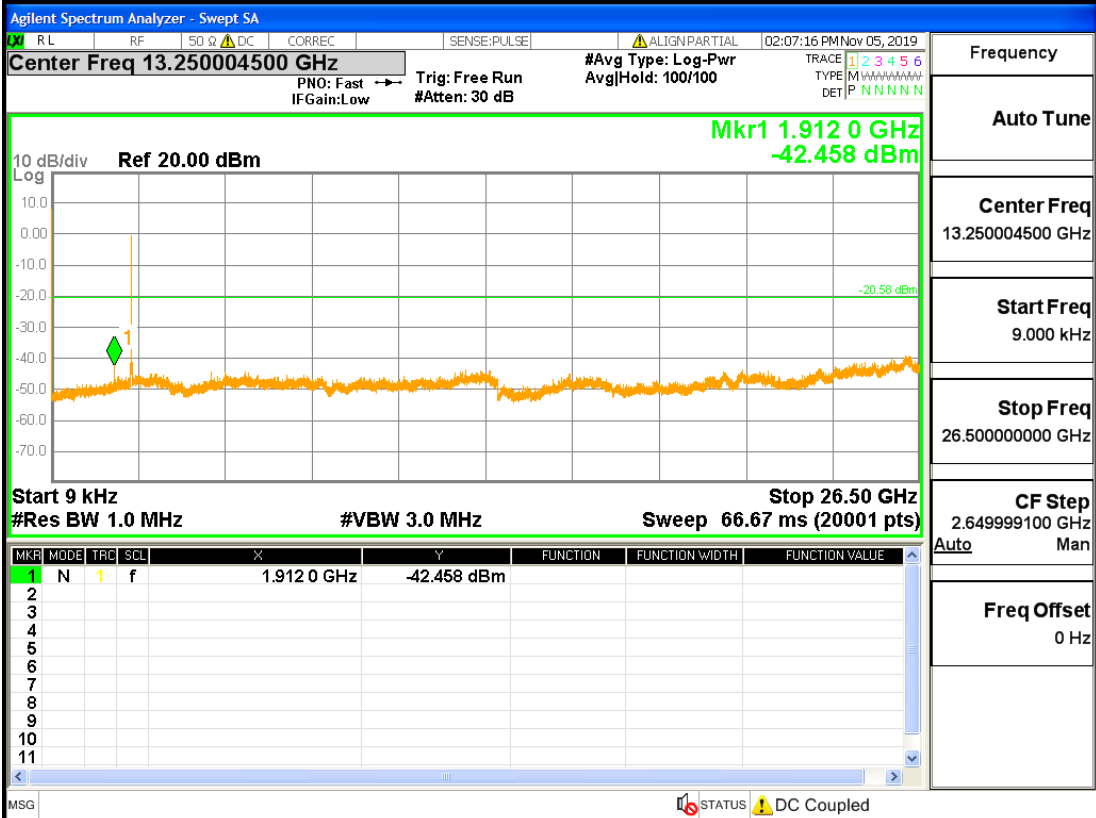


GFSK_MCH_Graphs

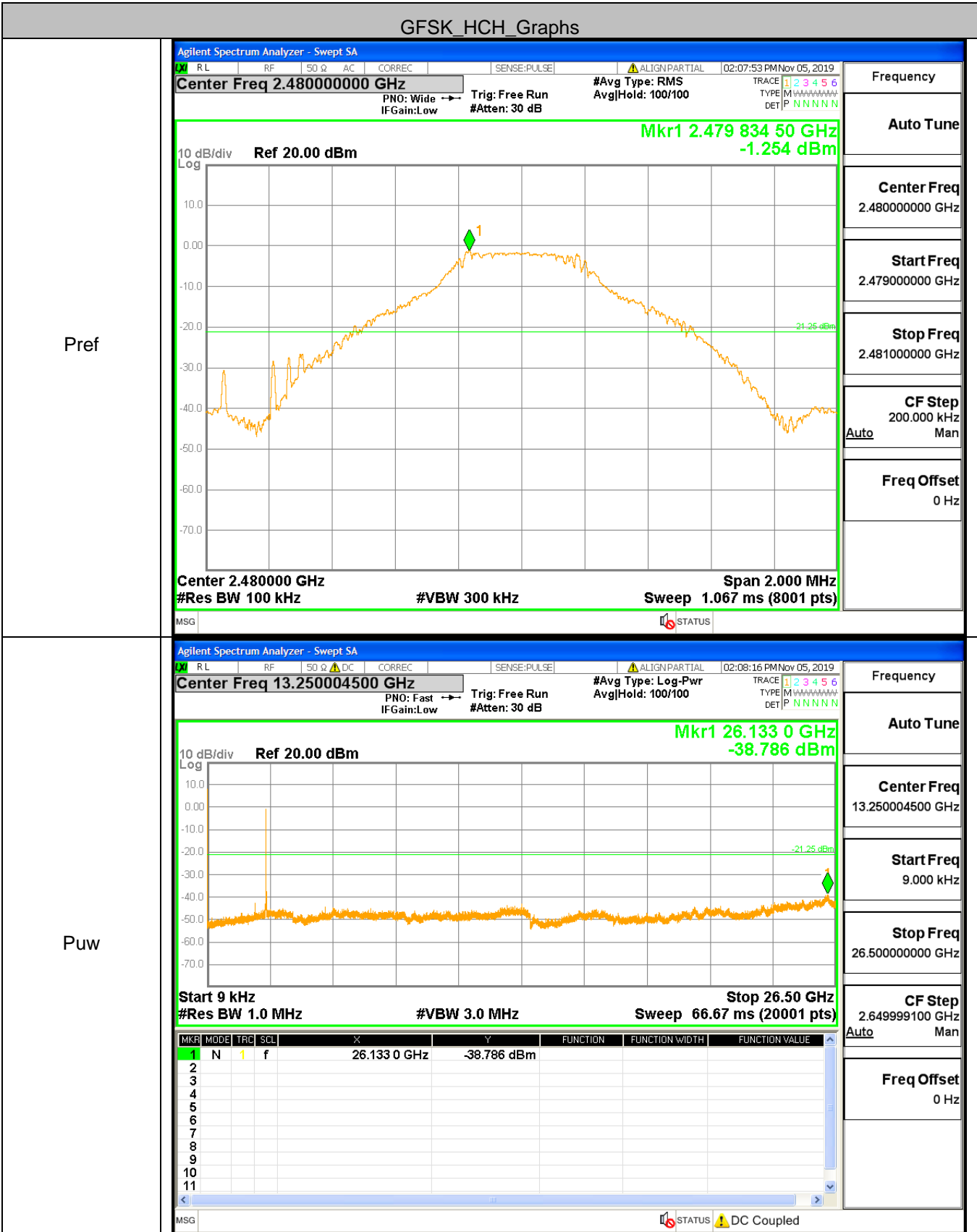
Pref



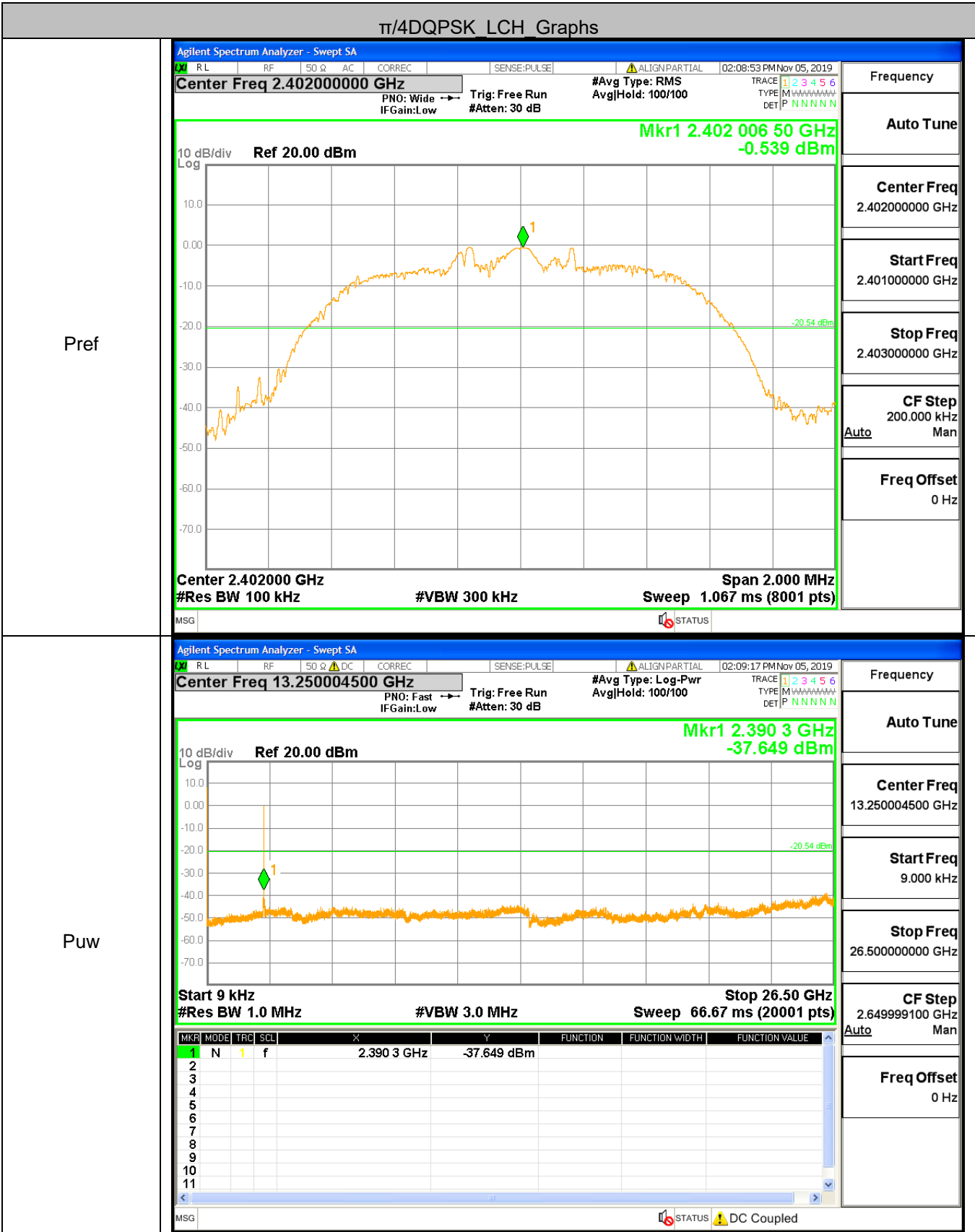
Puw



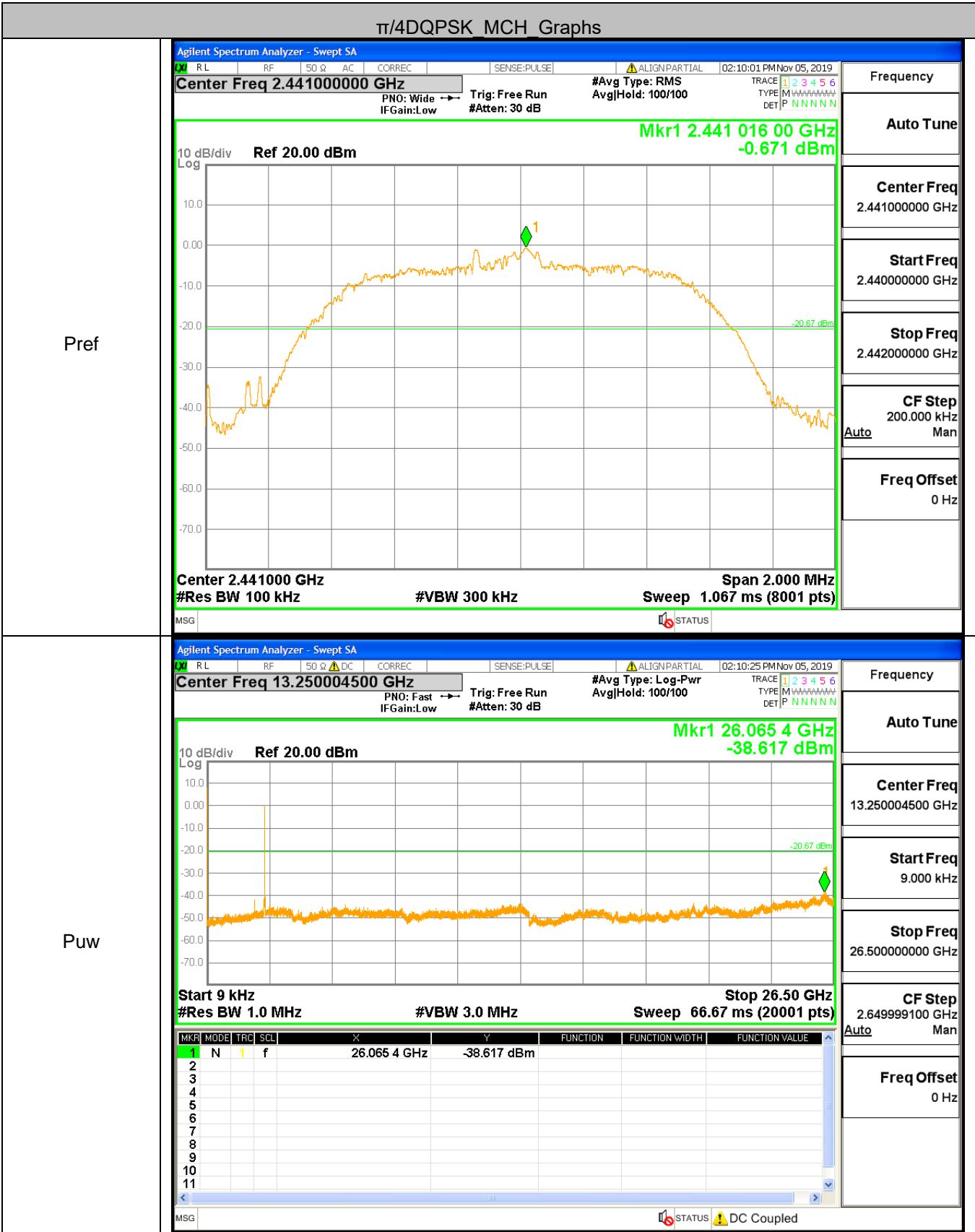
GFSK_HCH_Graphs



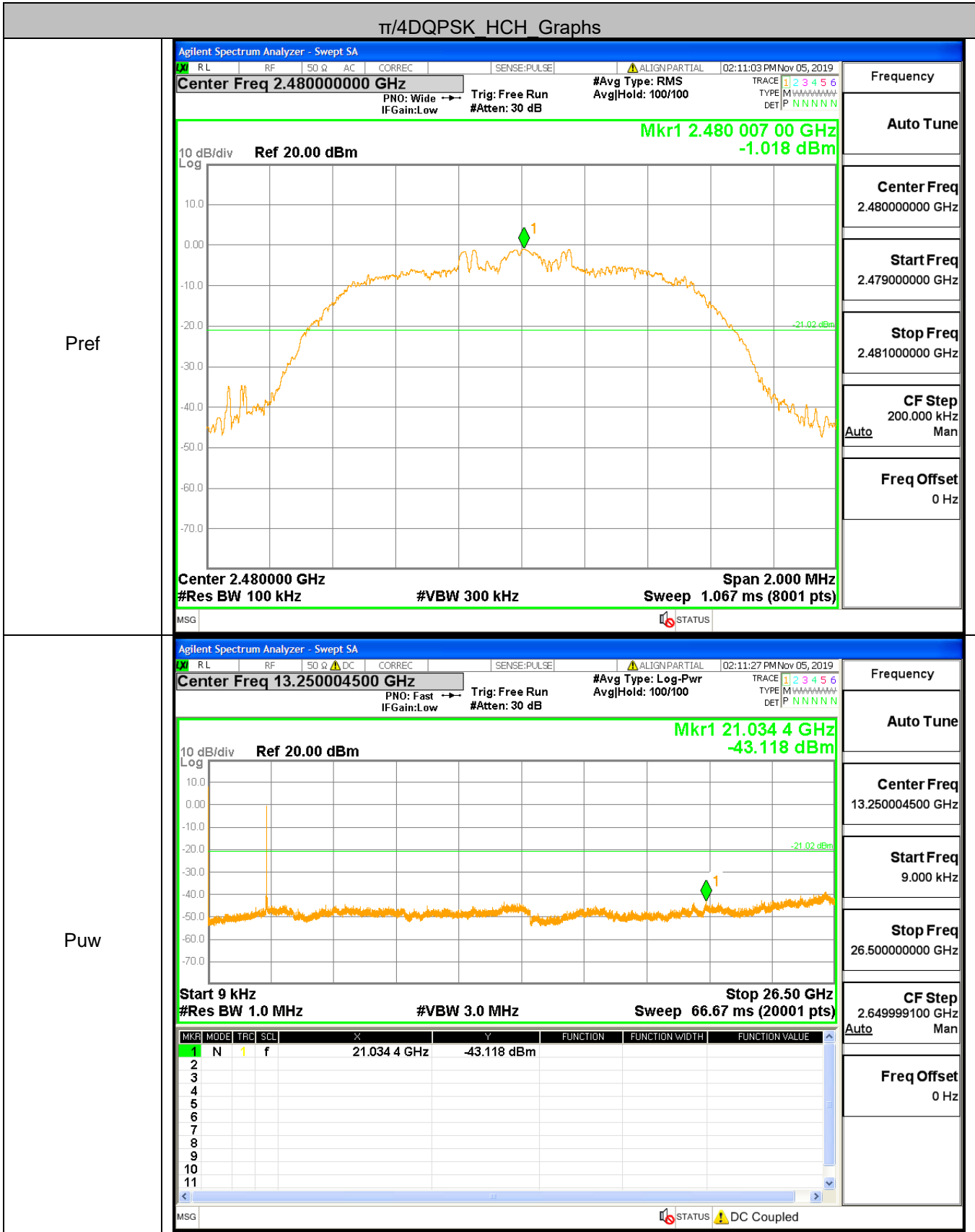
$\pi/4$ DQPSK LCH Graphs



$\pi/4$ DQPSK MCH Graphs



$\pi/4$ DQPSK HCH Graphs

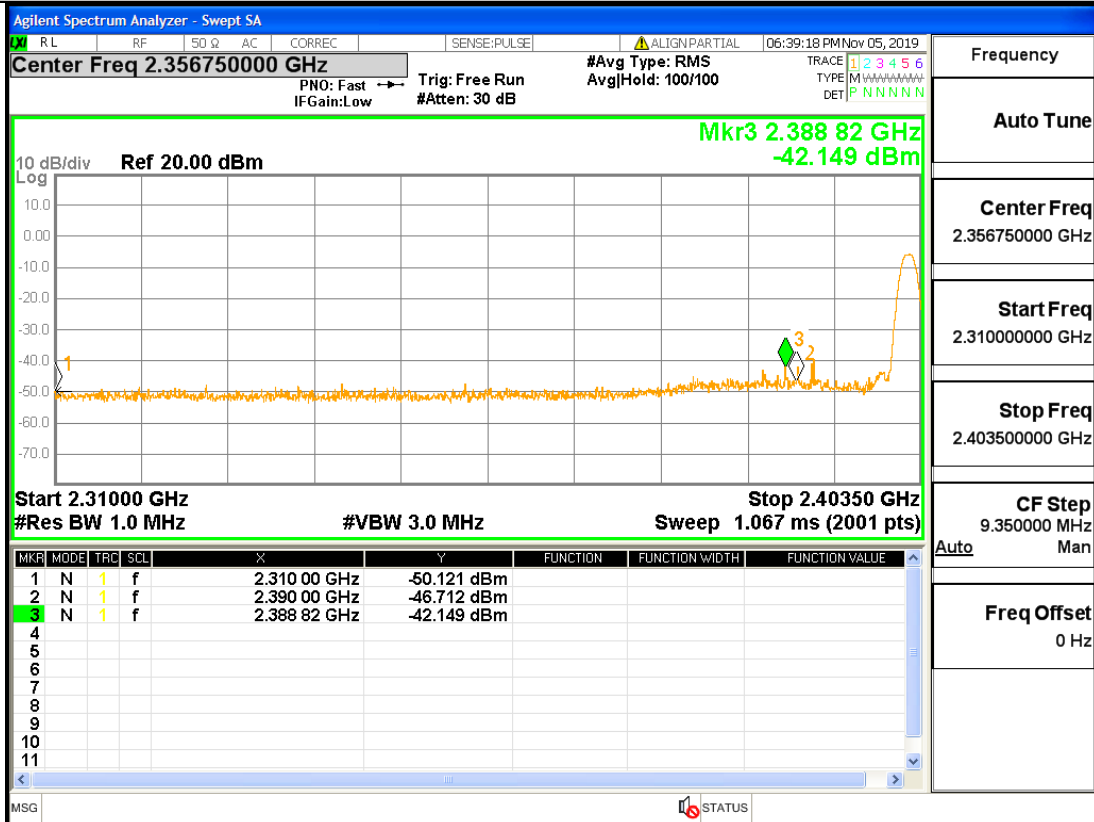


A.8 Restrict-band band-edge measurements

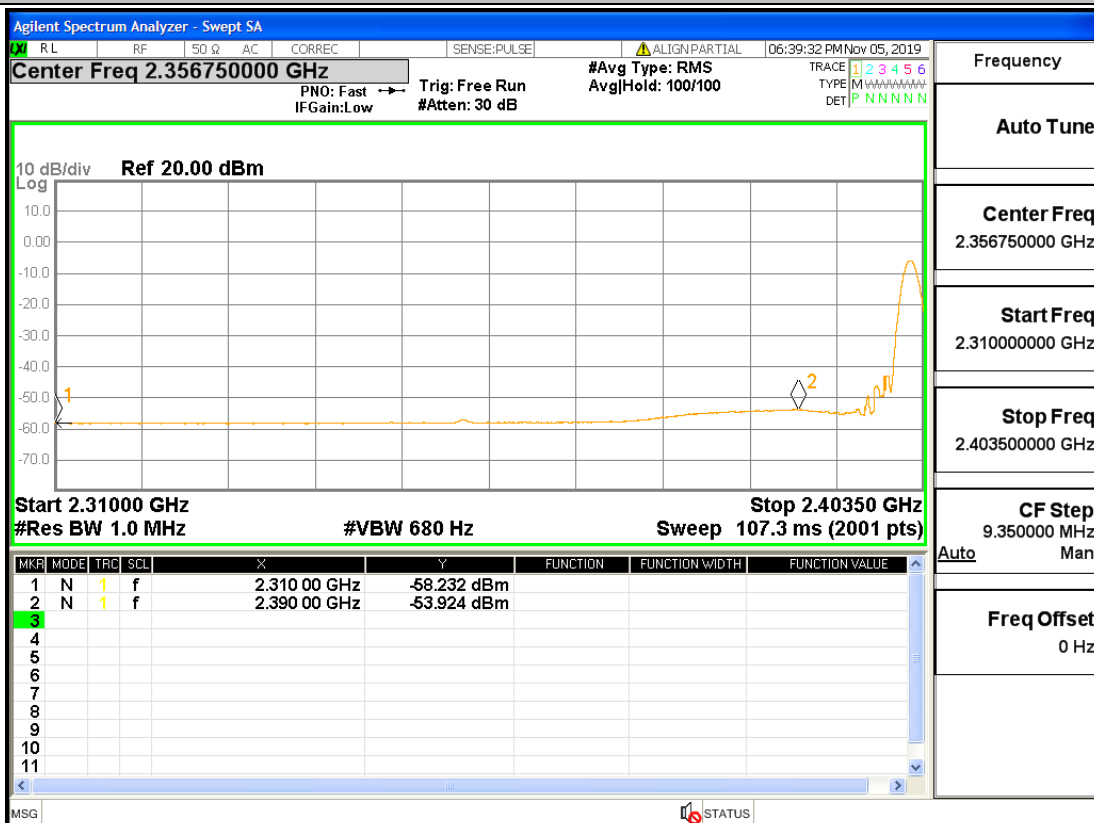
Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2388.821	5.54	0.00	-42.149	58.591	74	Pass
1DH5	2480	2483.821	5.54	0.00	-34.564	66.176	74	Pass
2DH5	2402	2386.670	5.54	0.00	-44.068	56.672	74	Pass
2DH5	2480	2483.907	5.54	0.00	-34.638	66.102	74	Pass

Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Average Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2388.821	5.54	0.00	-53.924	46.816	54	Pass
1DH5	2480	2483.821	5.54	0.00	-49.284	51.456	54	Pass
2DH5	2402	2386.670	5.54	0.00	-53.893	46.847	54	Pass
2DH5	2480	2483.907	5.54	0.00	-51.119	49.621	54	Pass

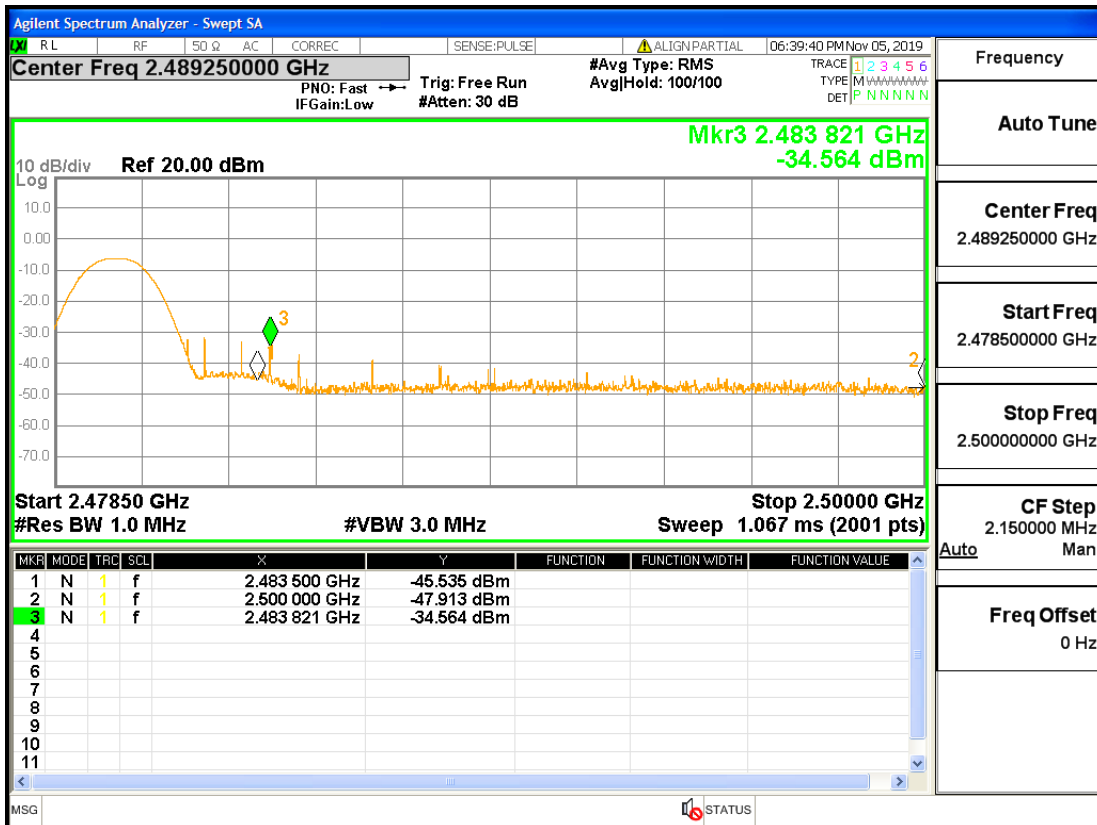
Restrict-band band-edge measurements_2402_PEAK_DH5



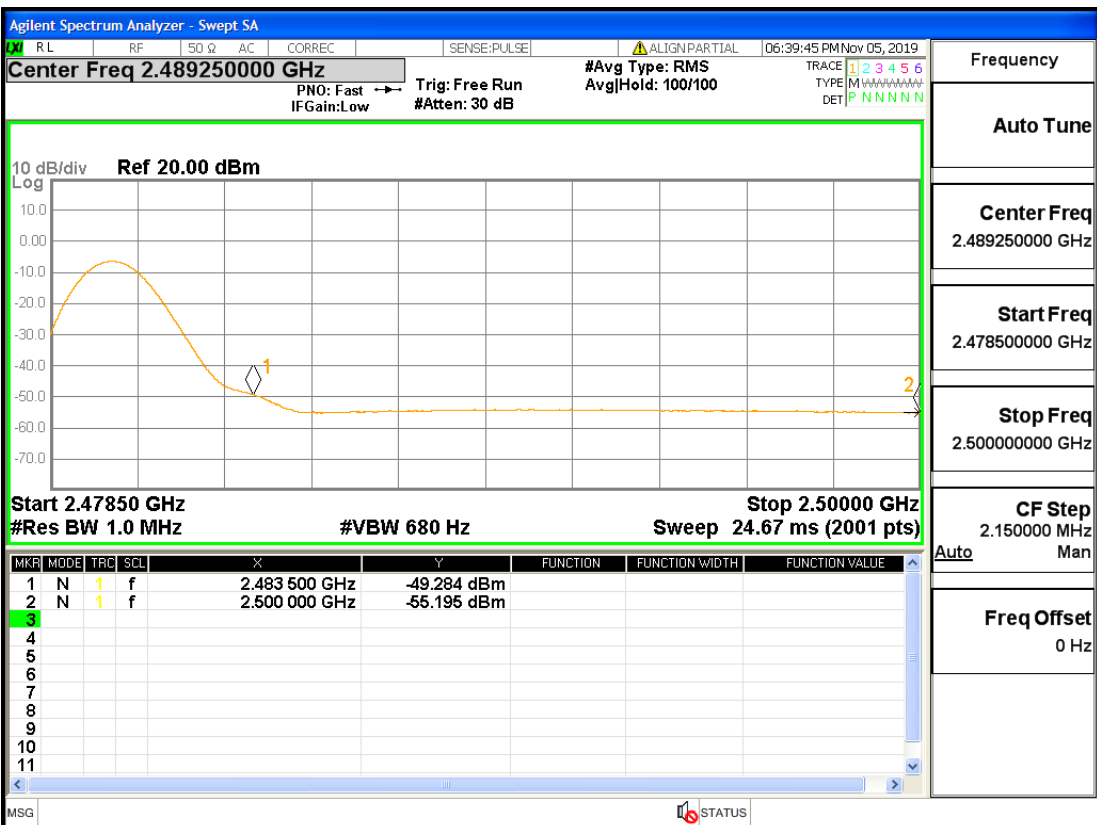
Restrict-band band-edge measurements_2402_AV_DH5



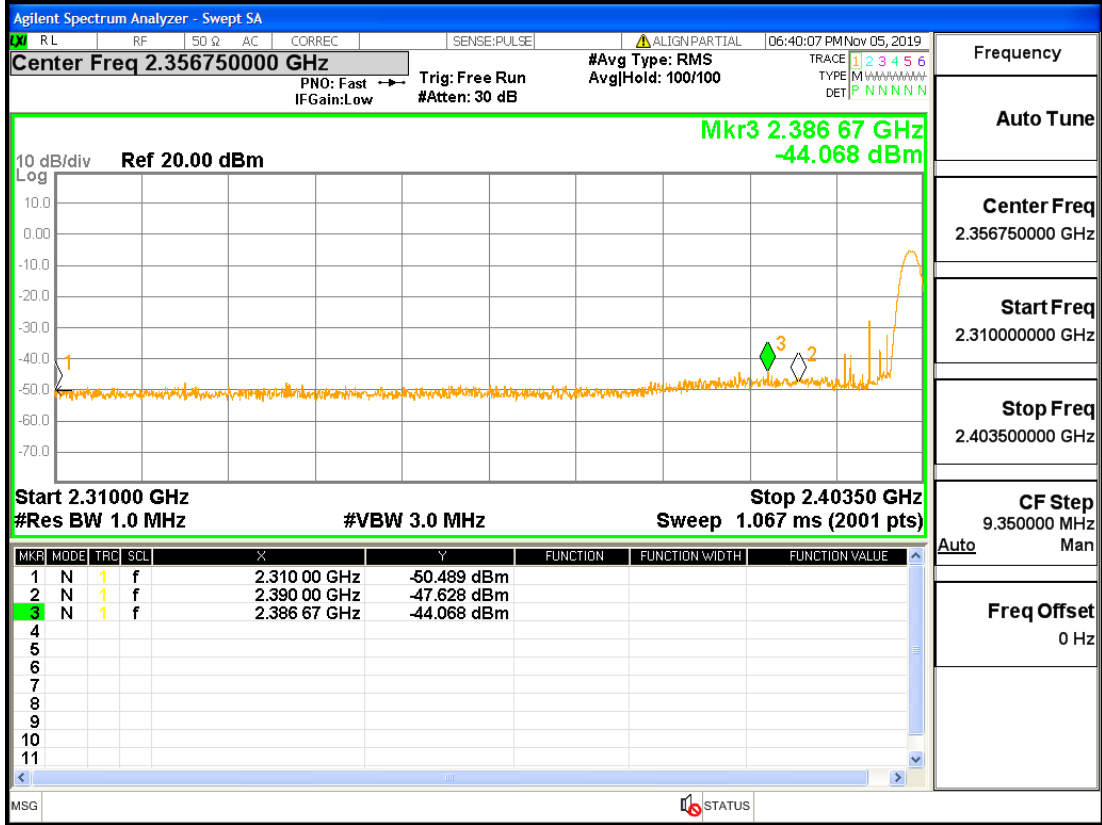
Restrict-band band-edge measurements_2480_PEAK_DH5



Restrict-band band-edge measurements_2480_AV_DH5

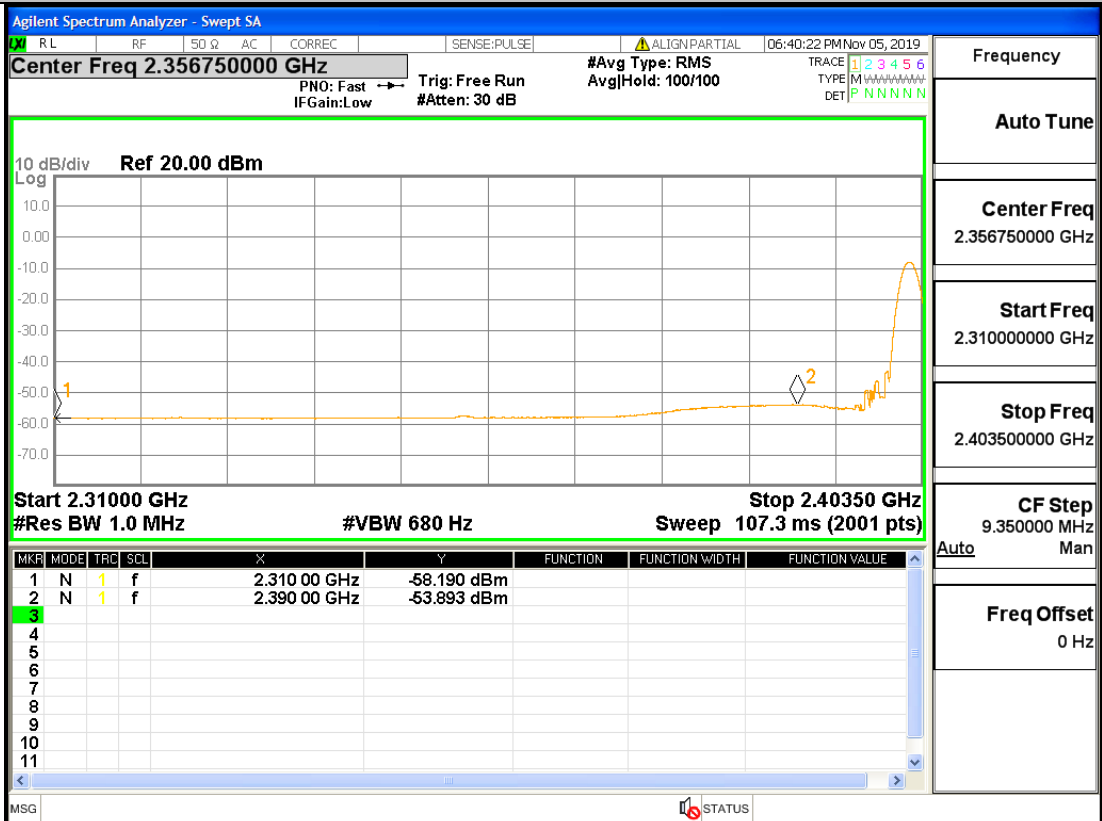


Restrict-band band-edge measurements_2402_PEAK_2DH5



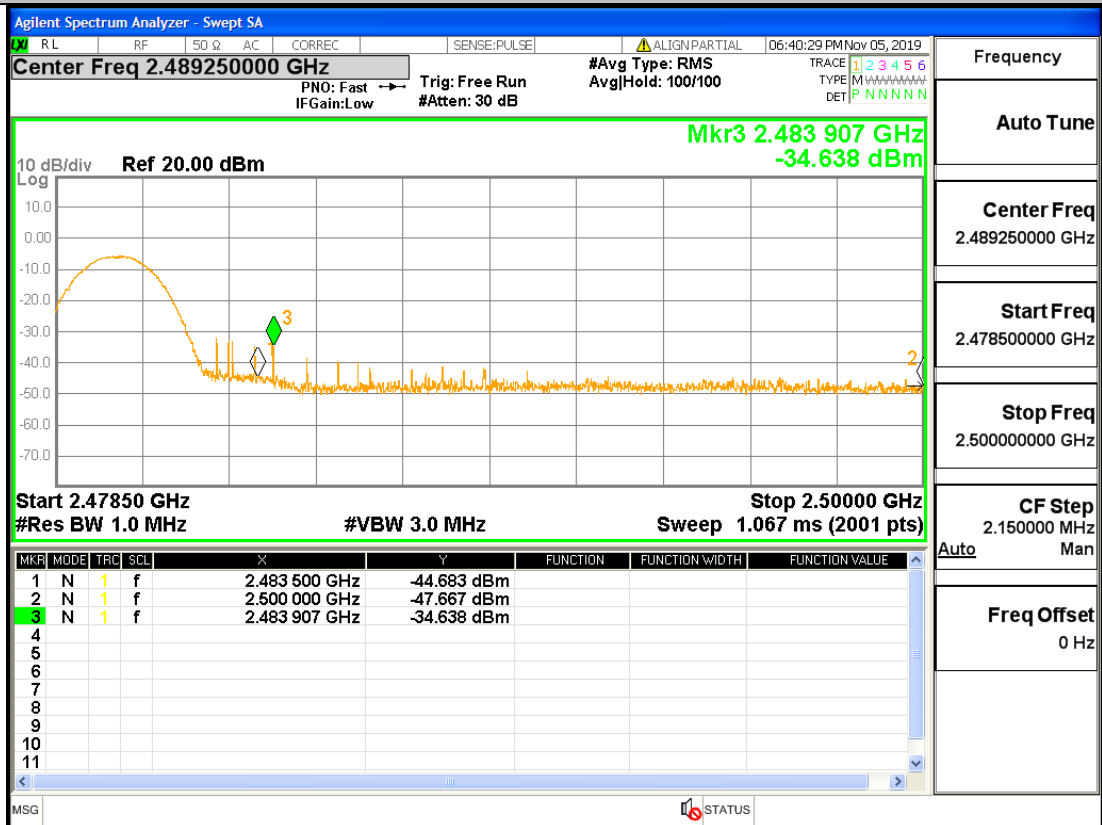
Frequency
Auto Tune
Center Freq 2.356750000 GHz
Start Freq 2.310000000 GHz
Stop Freq 2.403500000 GHz
CF Step 9.350000 MHz Auto Man
Freq Offset 0 Hz

Restrict-band band-edge measurements_2402_AV_2DH5



Frequency
Auto Tune
Center Freq 2.356750000 GHz
Start Freq 2.310000000 GHz
Stop Freq 2.403500000 GHz
CF Step 9.350000 MHz Auto Man
Freq Offset 0 Hz

Restrict-band band-edge measurements_2480_PEAK_2DH5



Restrict-band band-edge measurements_2480_AV_2DH5

