

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

Product Name: Bluetooth Headphones

Trade Mark: Vivitar

Test Model: V50018BT

FCC ID: 2AL9B-V50018BT

Environmental Conditions

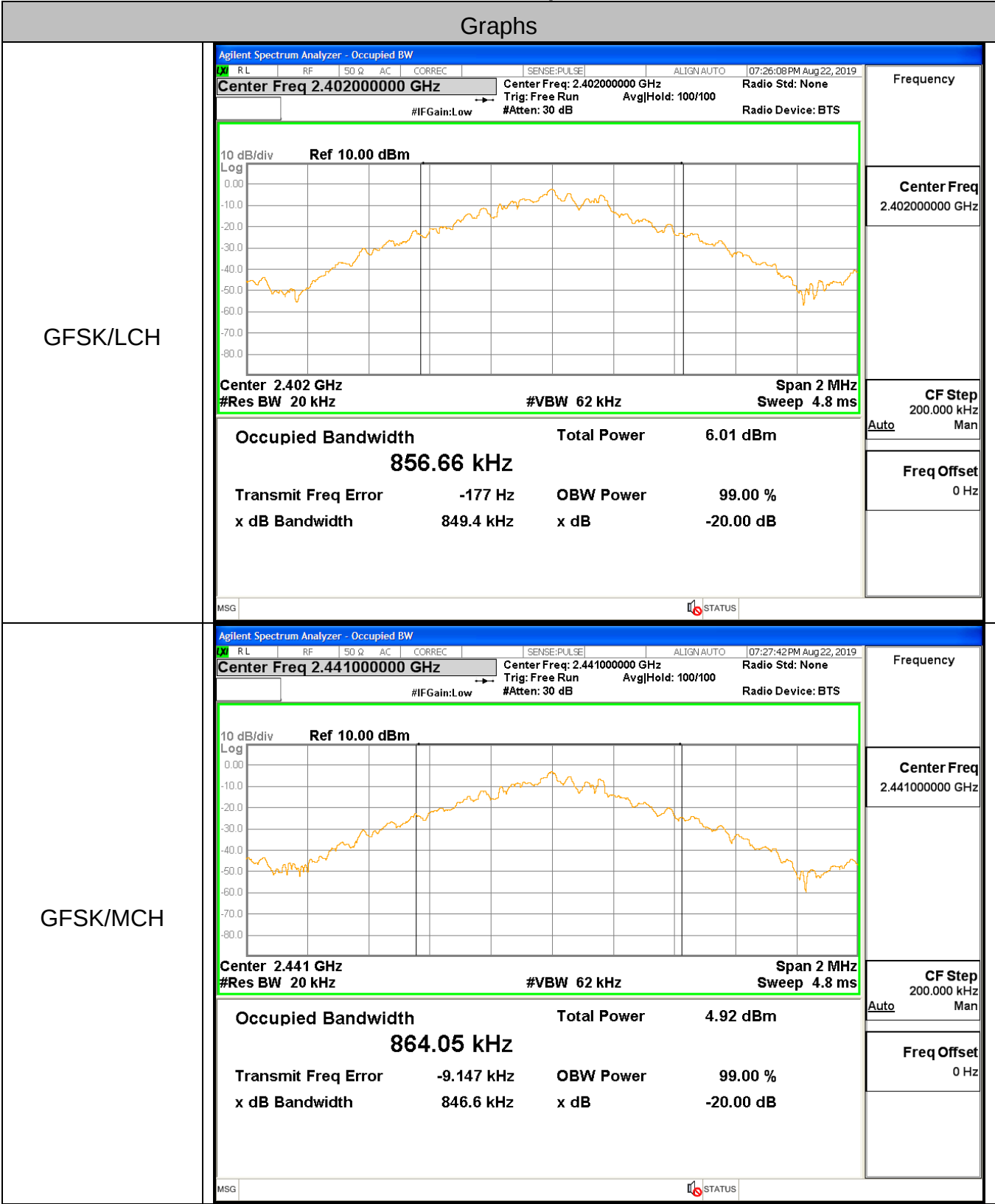
Temperature:	24.7° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Gary Qian
Supervised by:	Eden Hu

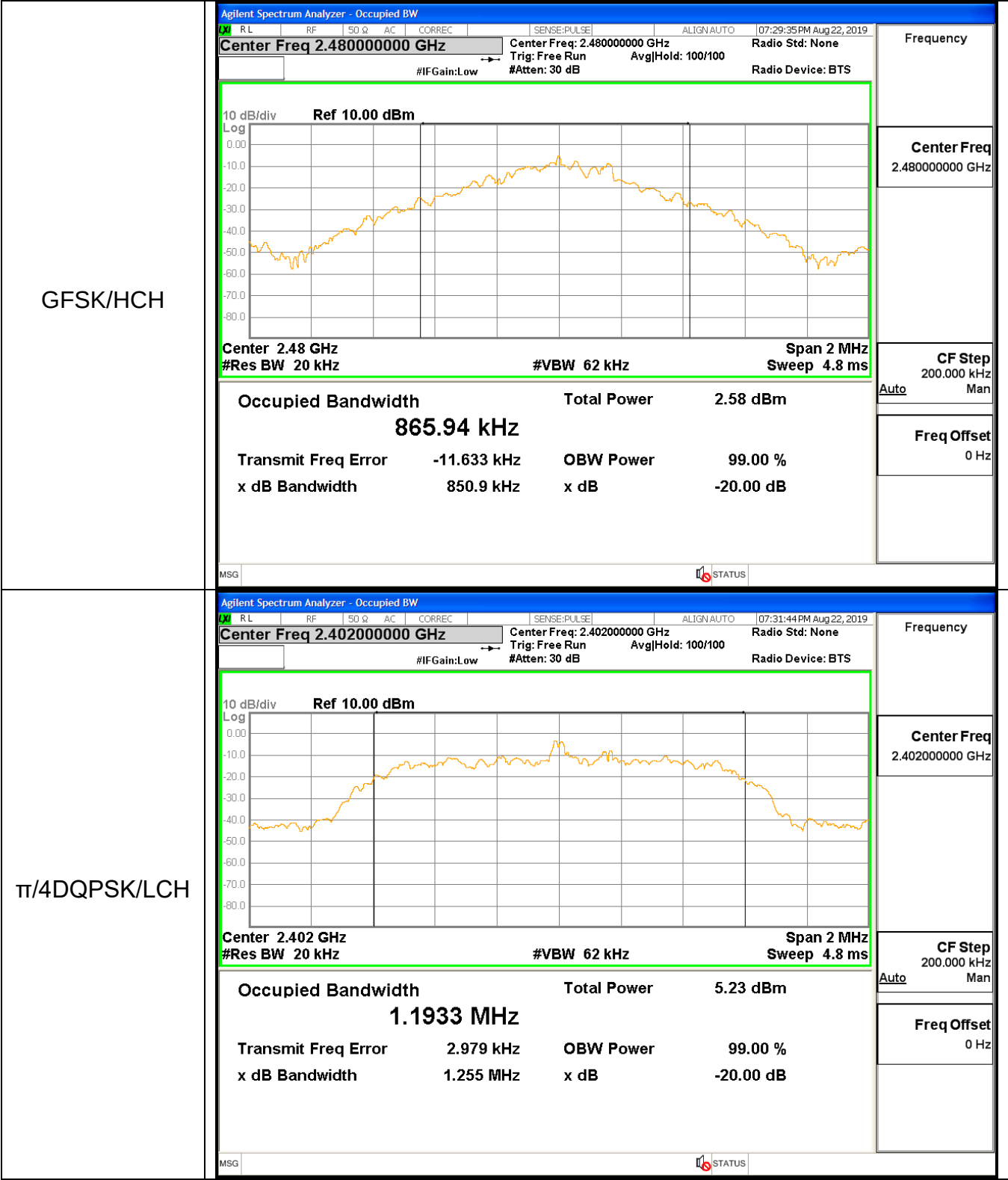
A.1 20 dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.849	Not Specified	PASS
GFSK	MCH	0.847	Not Specified	PASS
GFSK	HCH	0.851	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.255	Not Specified	PASS
$\pi/4$ DQPSK	MCH	1.252	Not Specified	PASS
$\pi/4$ DQPSK	HCH	1.218	Not Specified	PASS

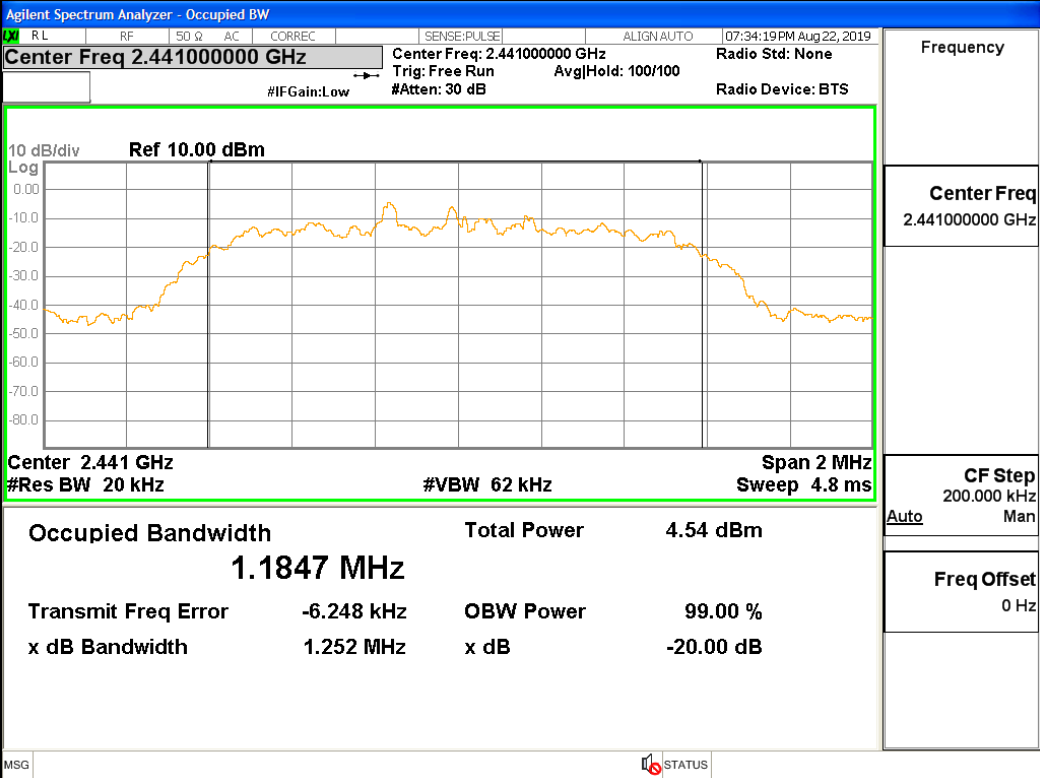
Test Graph

Graphs

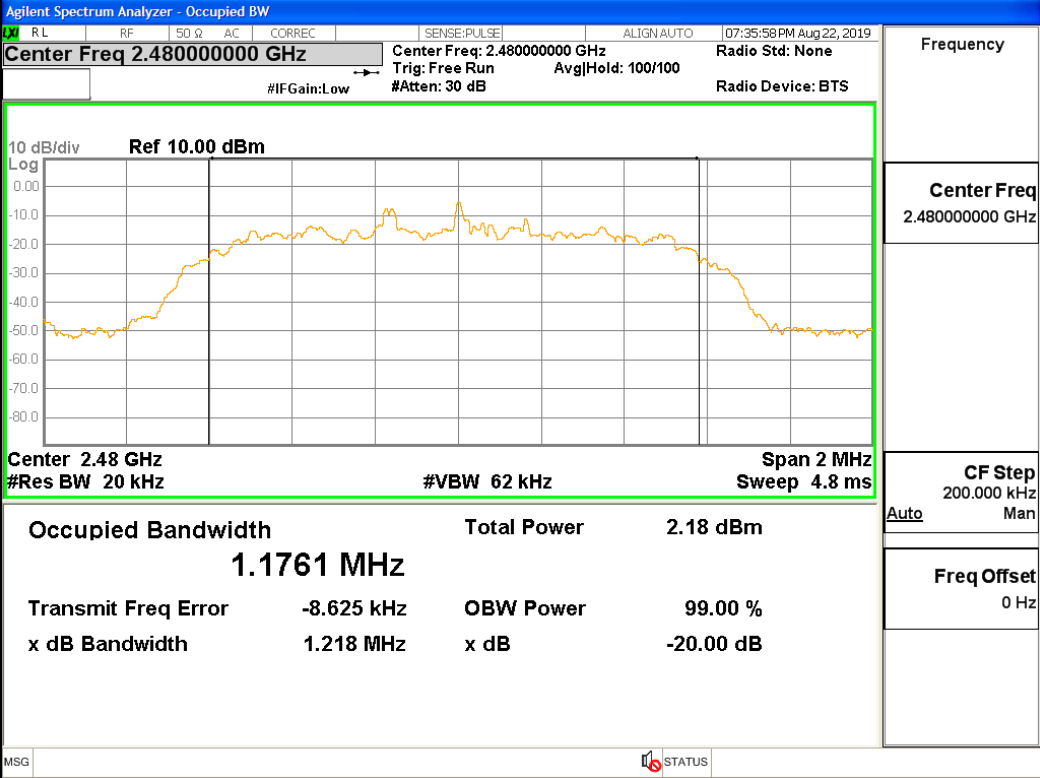




π /4DQPSK/MCH



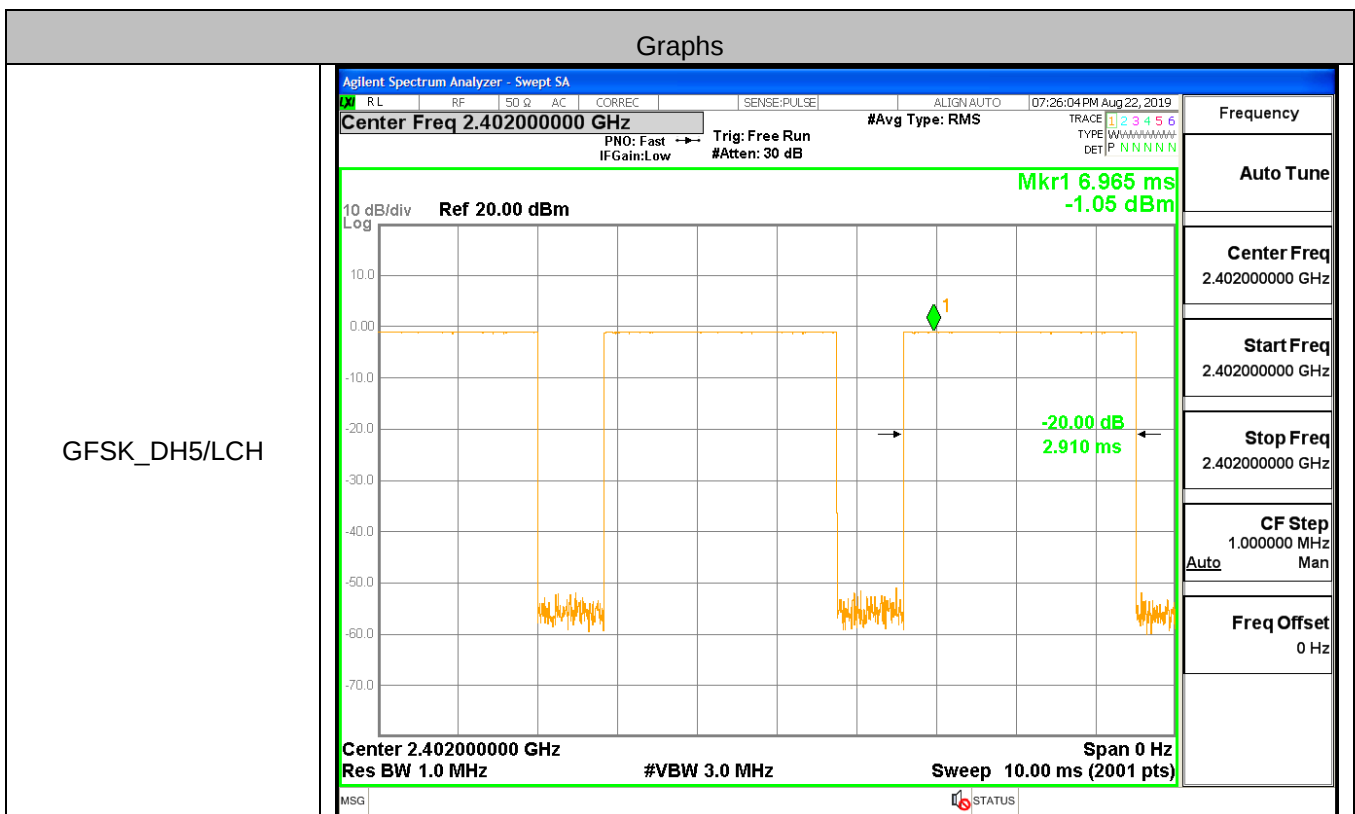
π /4DQPSK/HCH

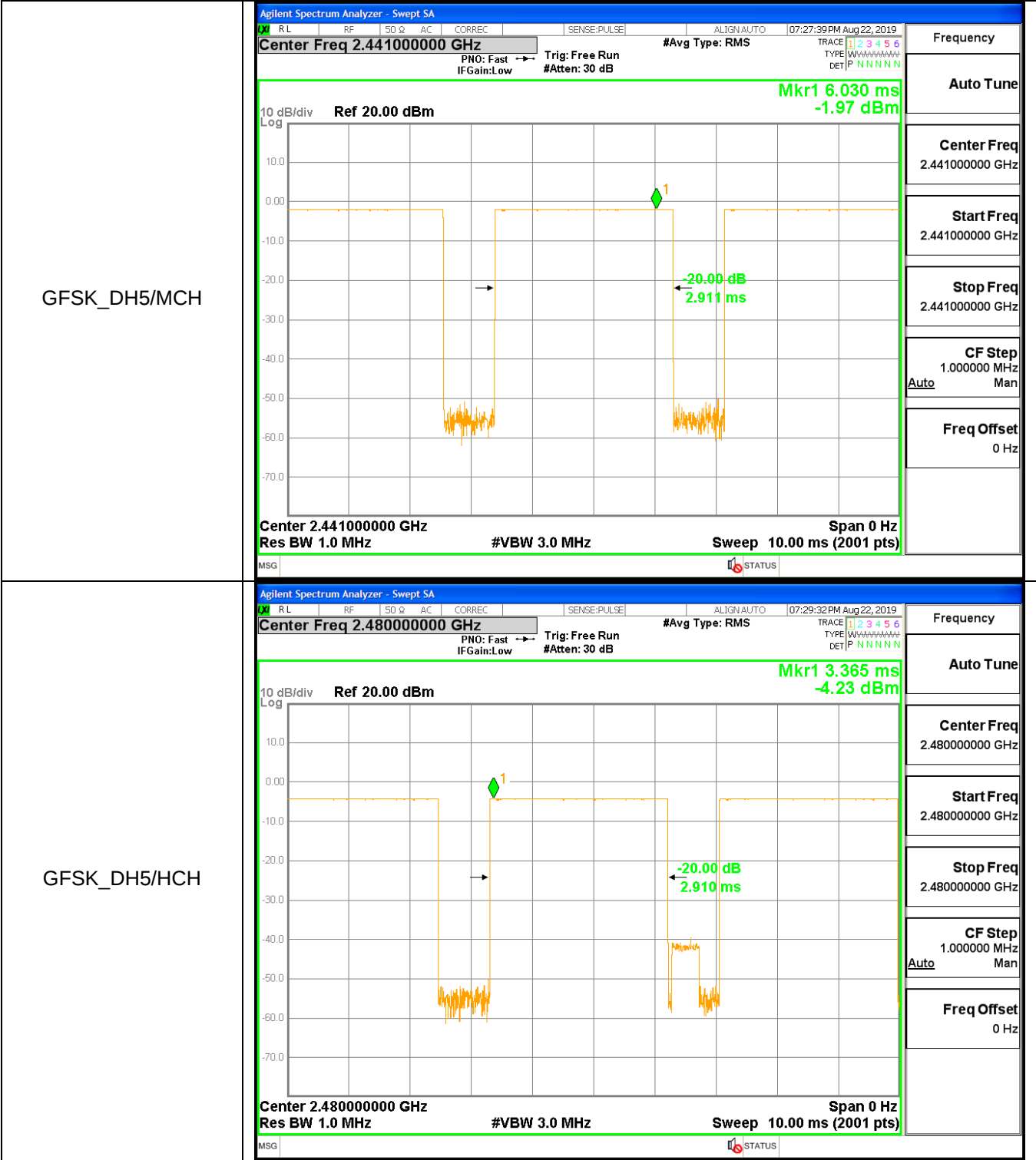


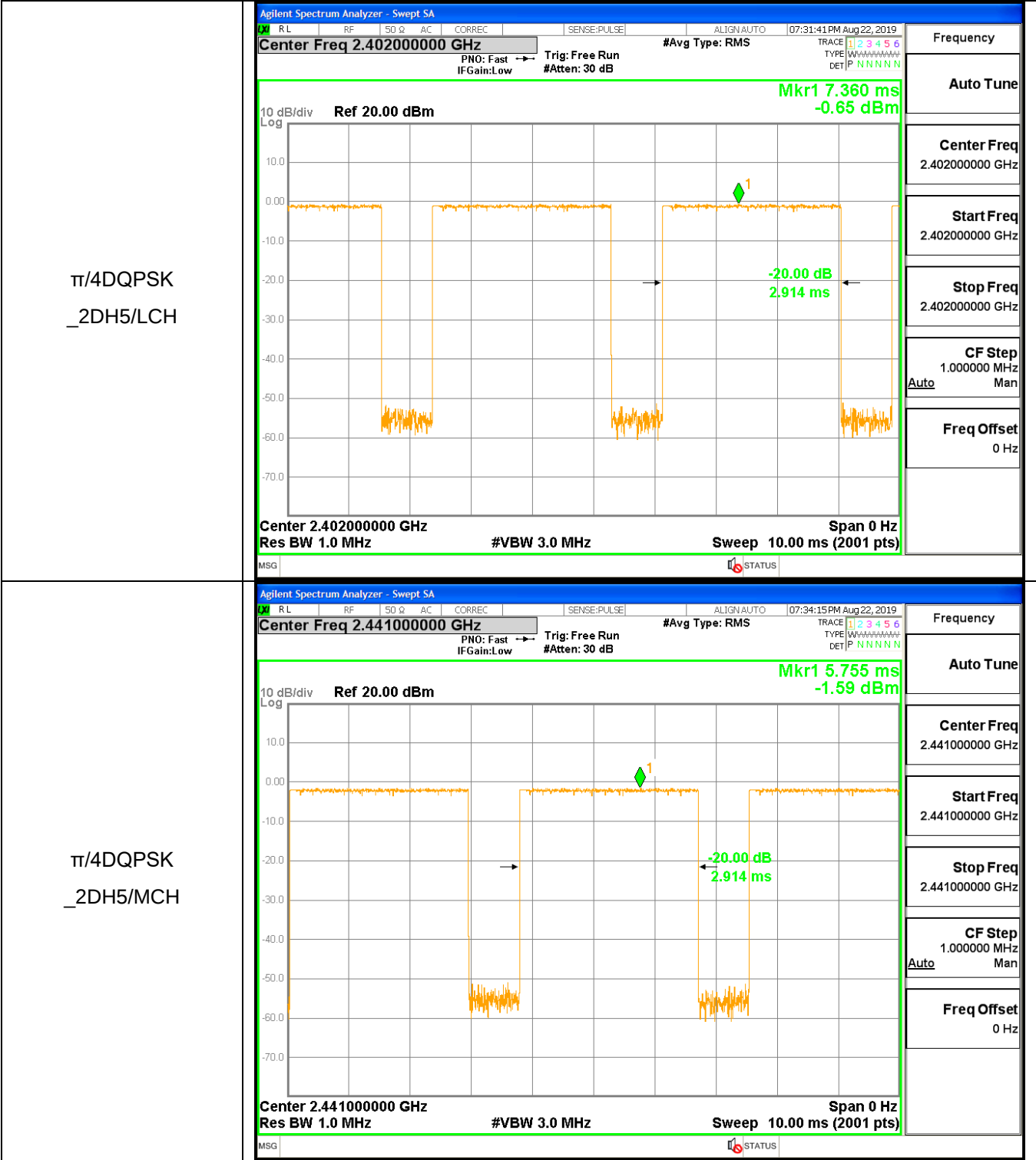
A.2 Dwell Time

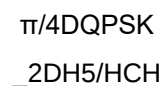
Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002910	106.7	0.310451	0.4	PASS
GFSK	DH5	MCH	0.002911	106.7	0.310604	0.4	PASS
GFSK	DH5	HCH	0.002910	106.7	0.310462	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	0.002914	106.7	0.310958	0.4	PASS
$\pi/4$ DQPSK	2DH5	MCH	0.002914	106.7	0.310973	0.4	PASS
$\pi/4$ DQPSK	2DH5	HCH	0.002914	106.7	0.310975	0.4	PASS

Test Graph





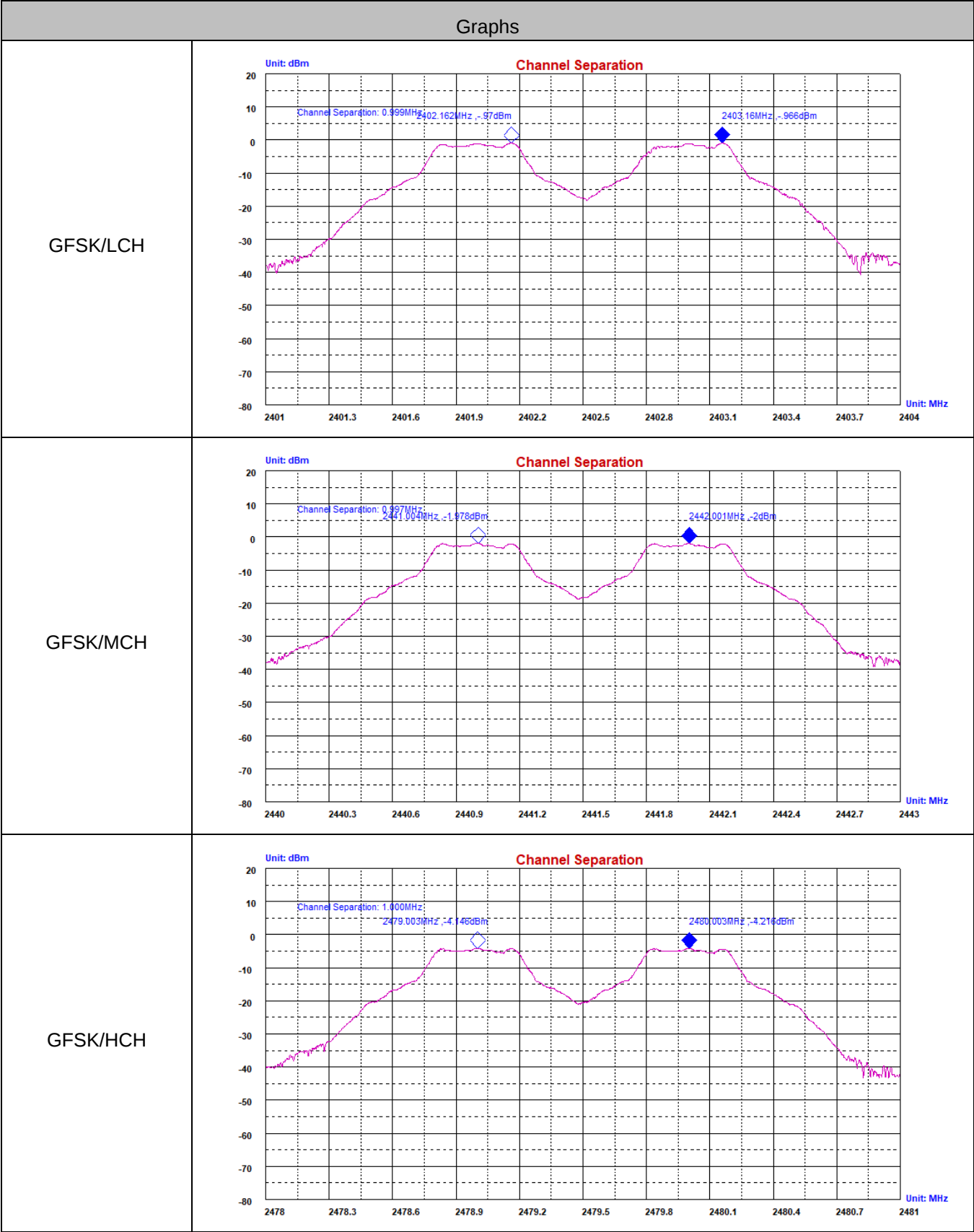


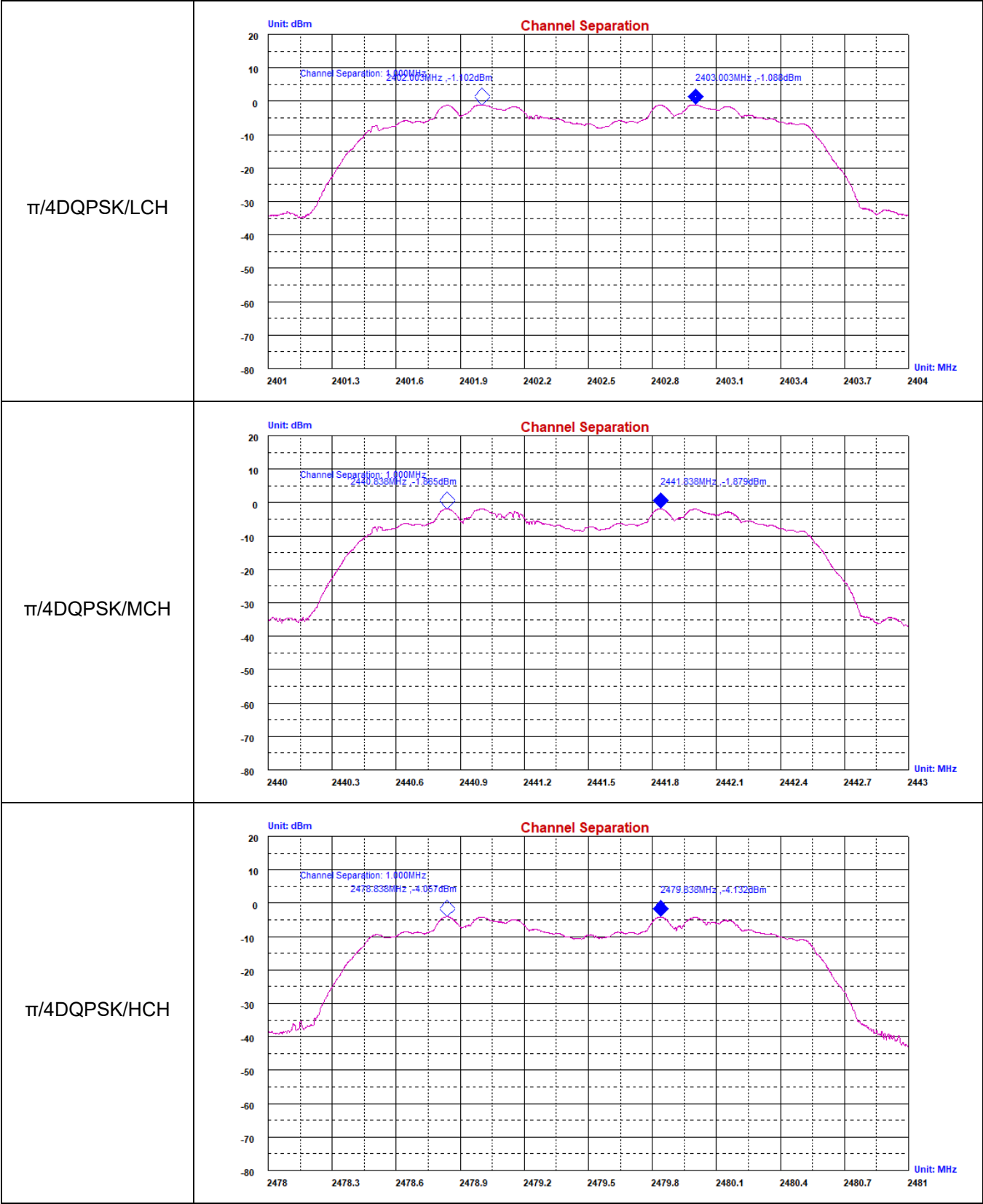


A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.999	0.566	PASS
GFSK	MCH	0.997	0.565	PASS
GFSK	HCH	1.000	0.567	PASS
$\pi/4$ DQPSK	LCH	1.000	0.837	PASS
$\pi/4$ DQPSK	MCH	1.000	0.835	PASS
$\pi/4$ DQPSK	HCH	1.000	0.812	PASS

Test Graph

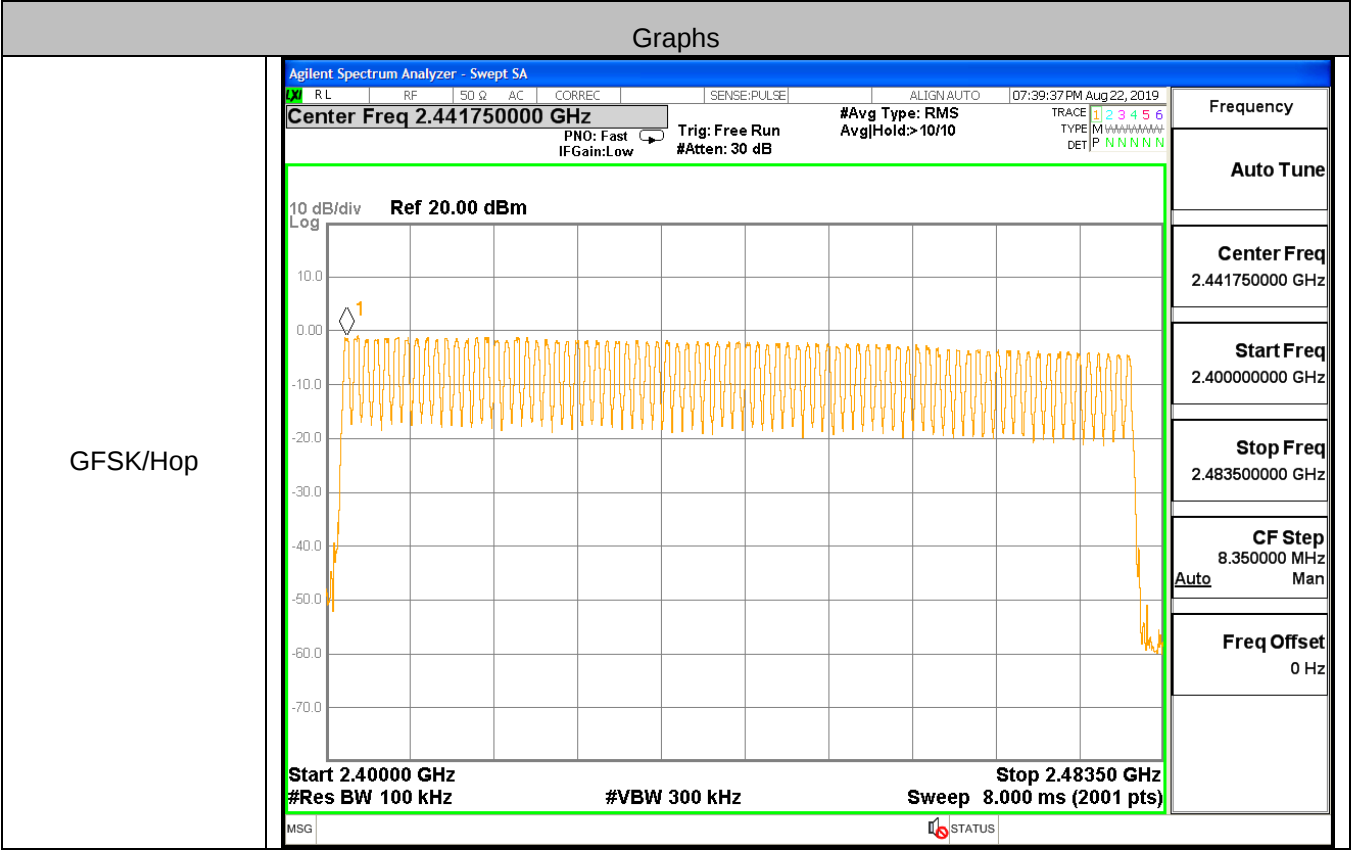




A.4 Hopping Channel Number

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

Test Graph

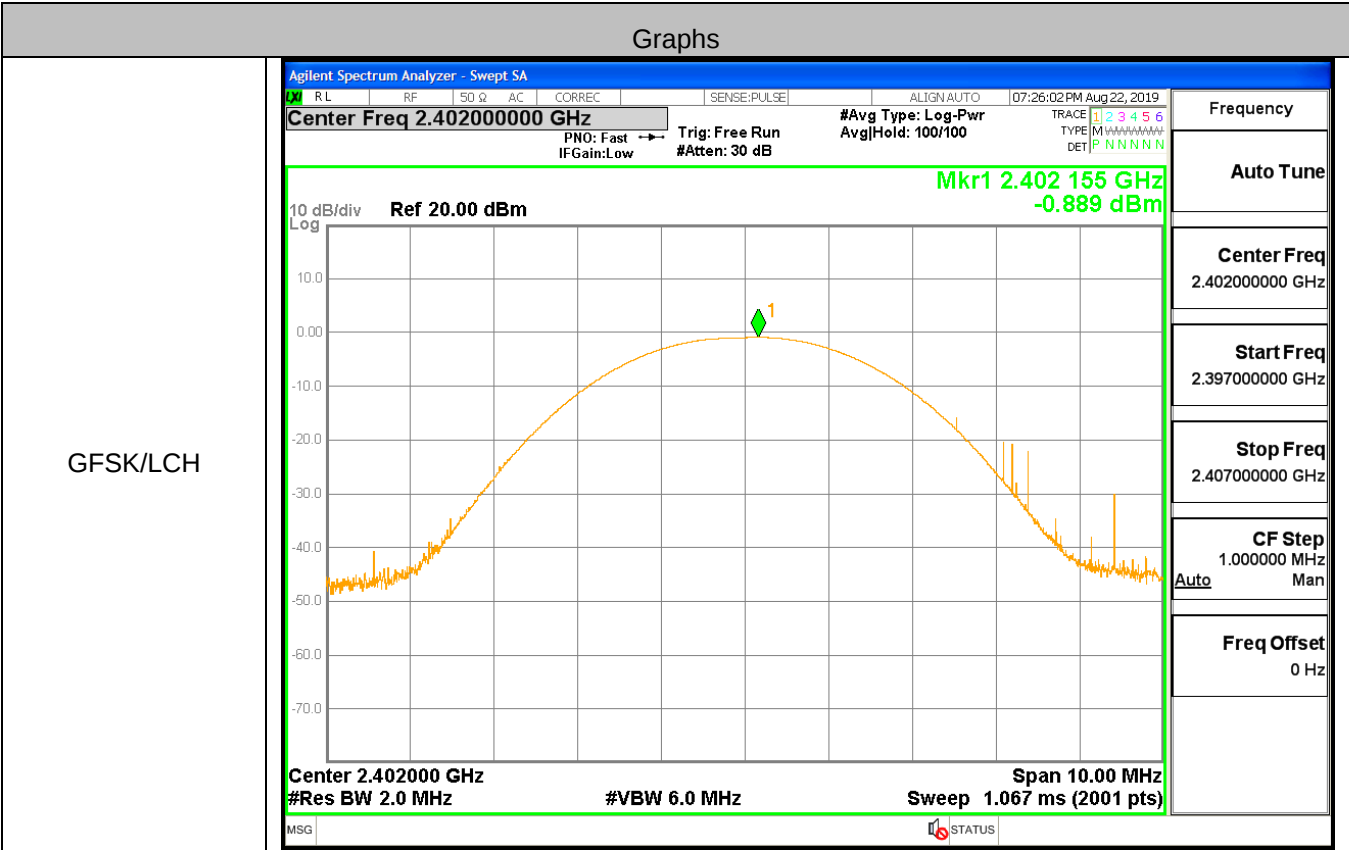


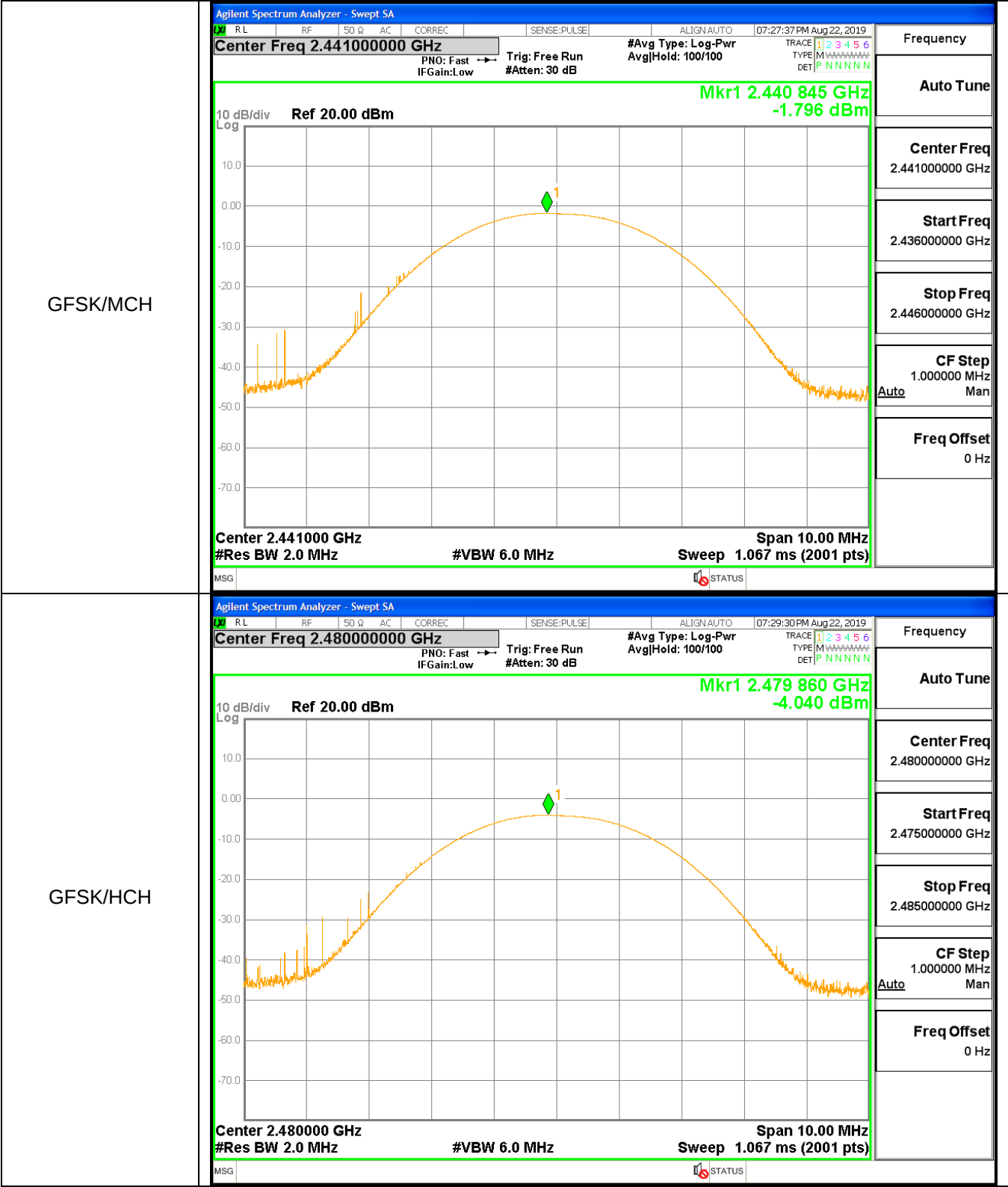


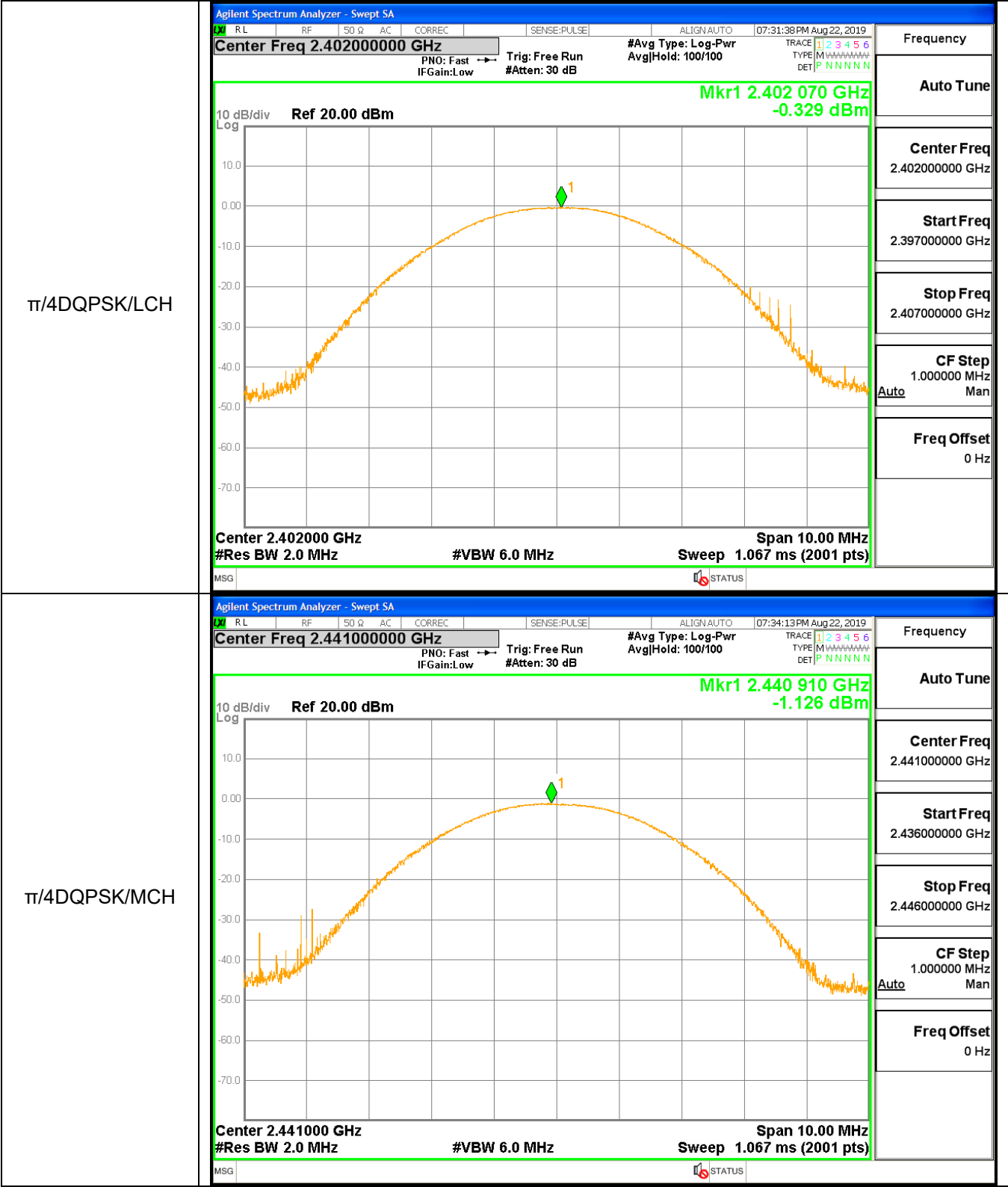
A.5 Conducted Peak Output Power

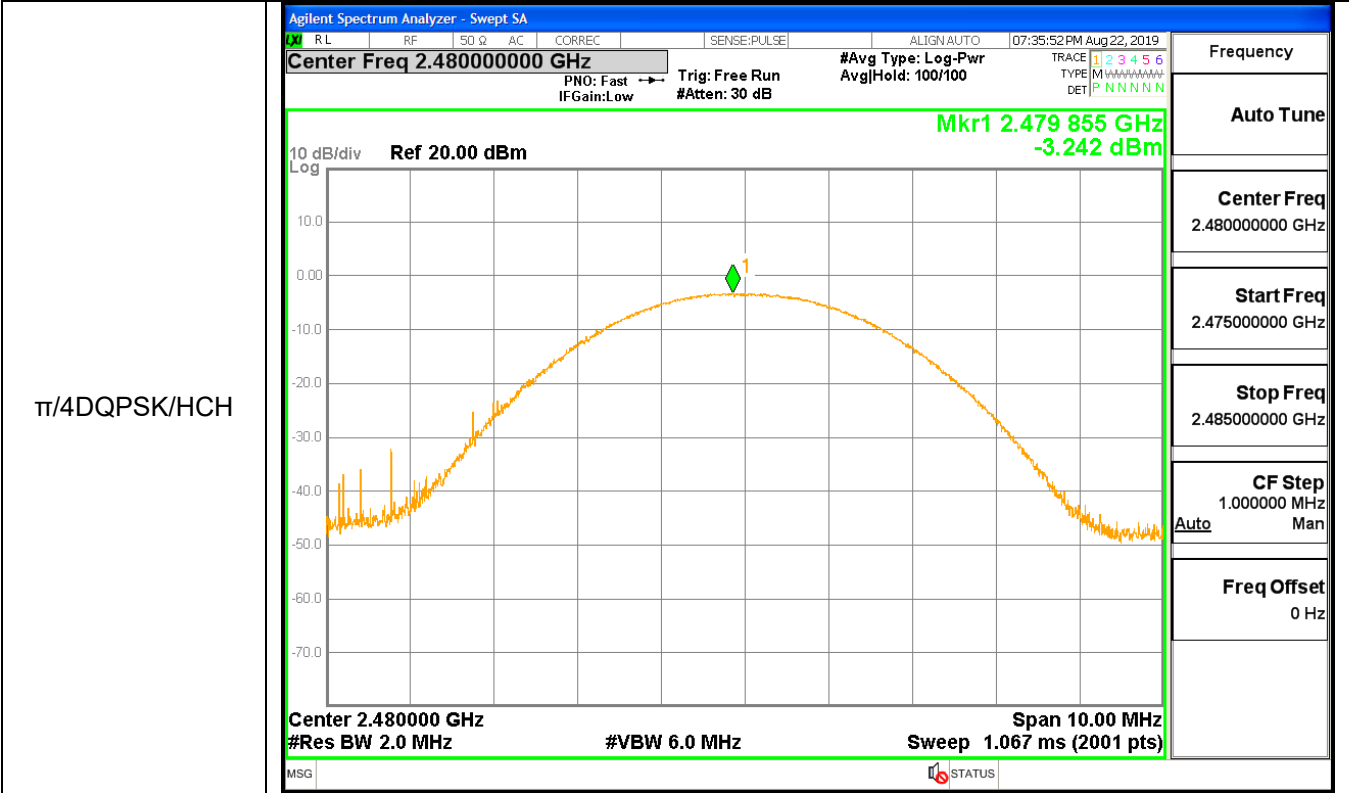
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.889	21	PASS
GFSK	MCH	-1.796	21	PASS
GFSK	HCH	-4.040	21	PASS
π /4DQPSK	LCH	-0.329	21	PASS
π /4DQPSK	MCH	-1.126	21	PASS
π /4DQPSK	HCH	-3.242	21	PASS

Test Graph







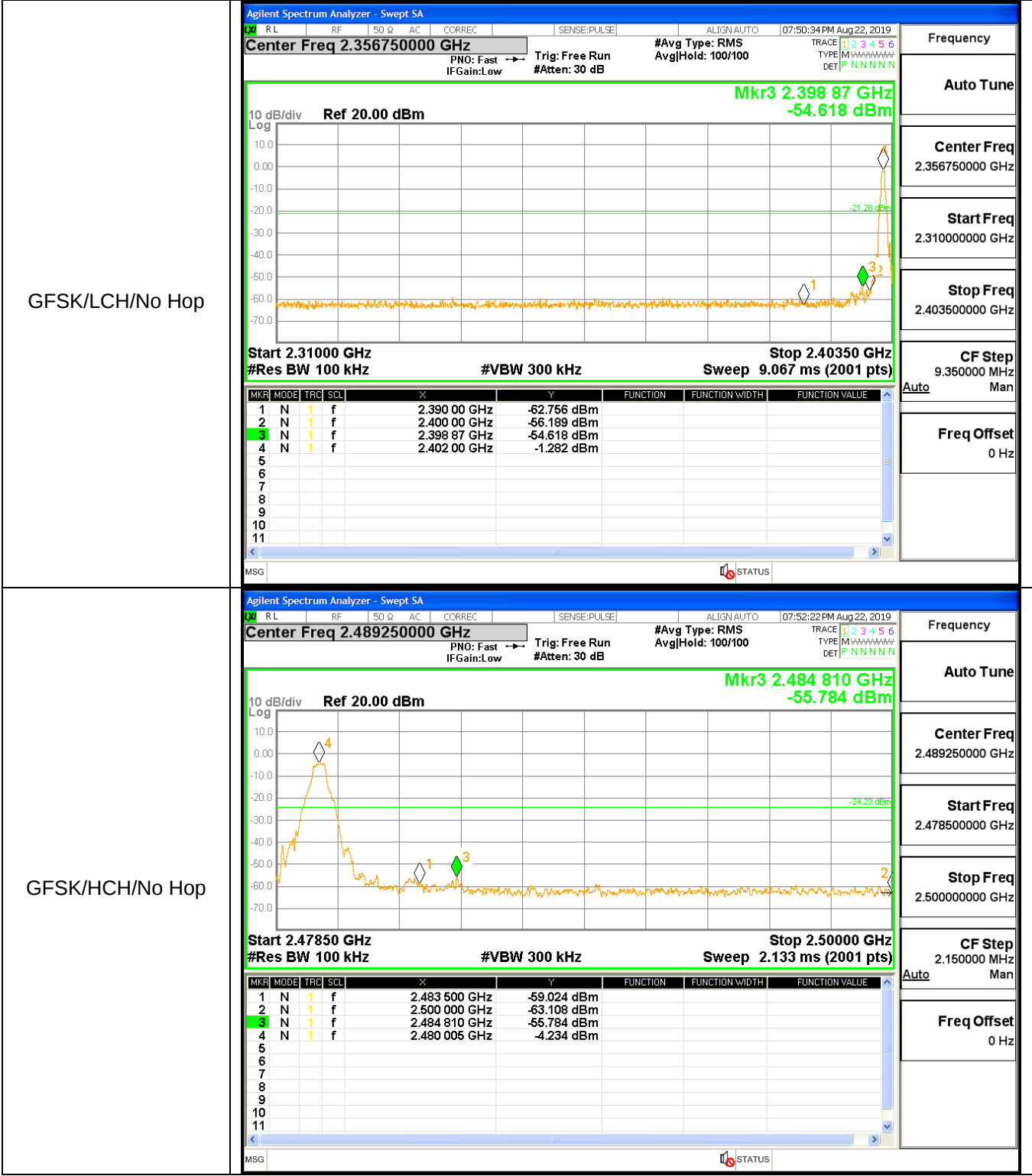


A.6 Band-edge for RF Conducted Emissions

Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2398.872	-1.282	-54.618	-21.282	Pass
1DH5	2480	2484.81	-4.234	-55.784	-24.234	Pass
2DH5	2402	2400	-1.586	-54.44	-21.586	Pass
2DH5	2480	2491.862	-5.062	-58.356	-25.062	Pass
1DH5-Hopping	2402	2400	-1.304	-51.59	-21.304	Pass
1DH5-Hopping	2480	2483.5	-2.513	-59.73	-22.513	Pass
2DH5-Hopping	2402	2400	-1.053	-53.39	-21.053	Pass
2DH5-Hopping	2480	2483.5	-3.266	-59.78	-23.266	Pass

Test Graph

Graphs

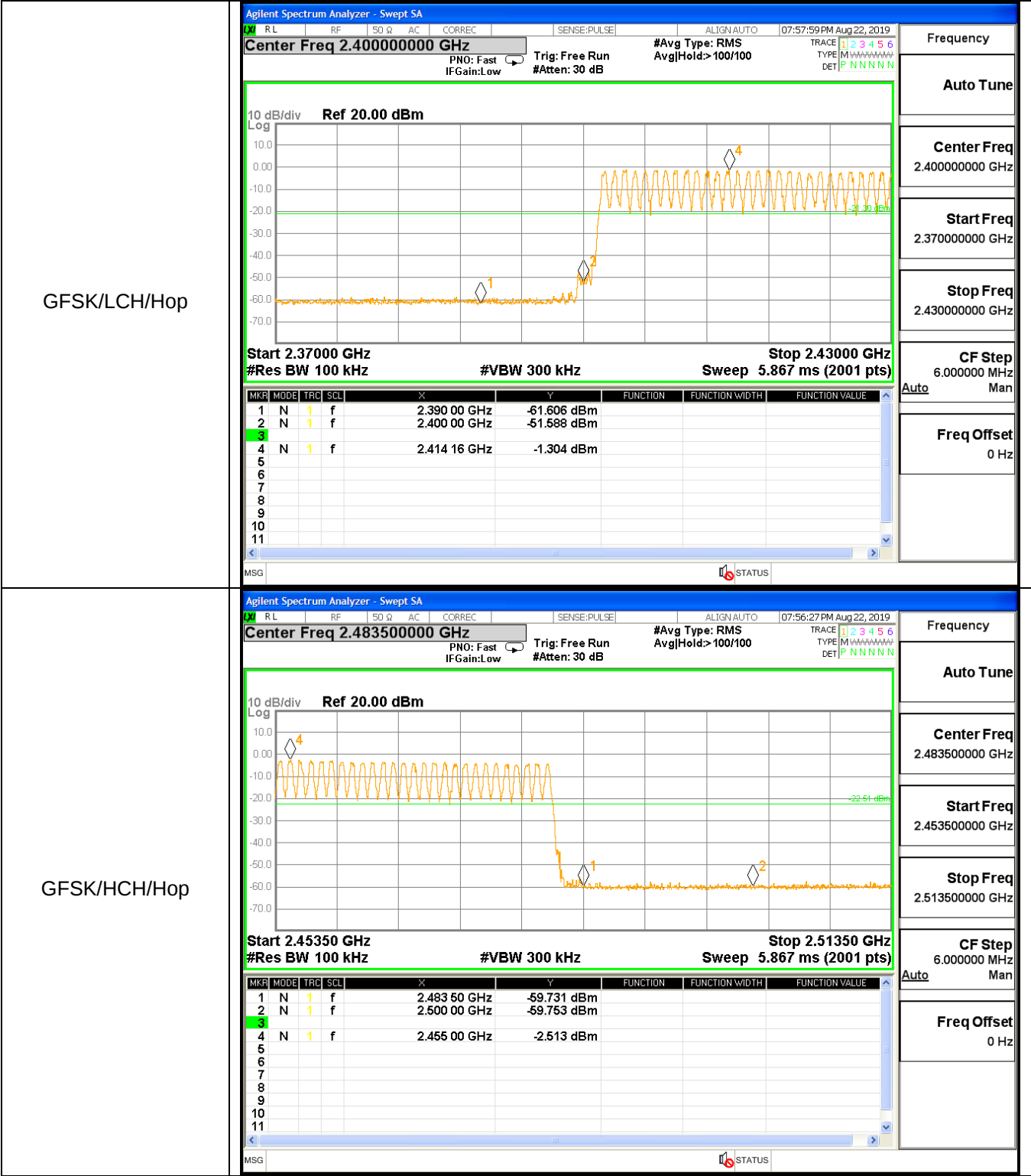


$\pi/4$ DQPSK/LCH/No
Hop

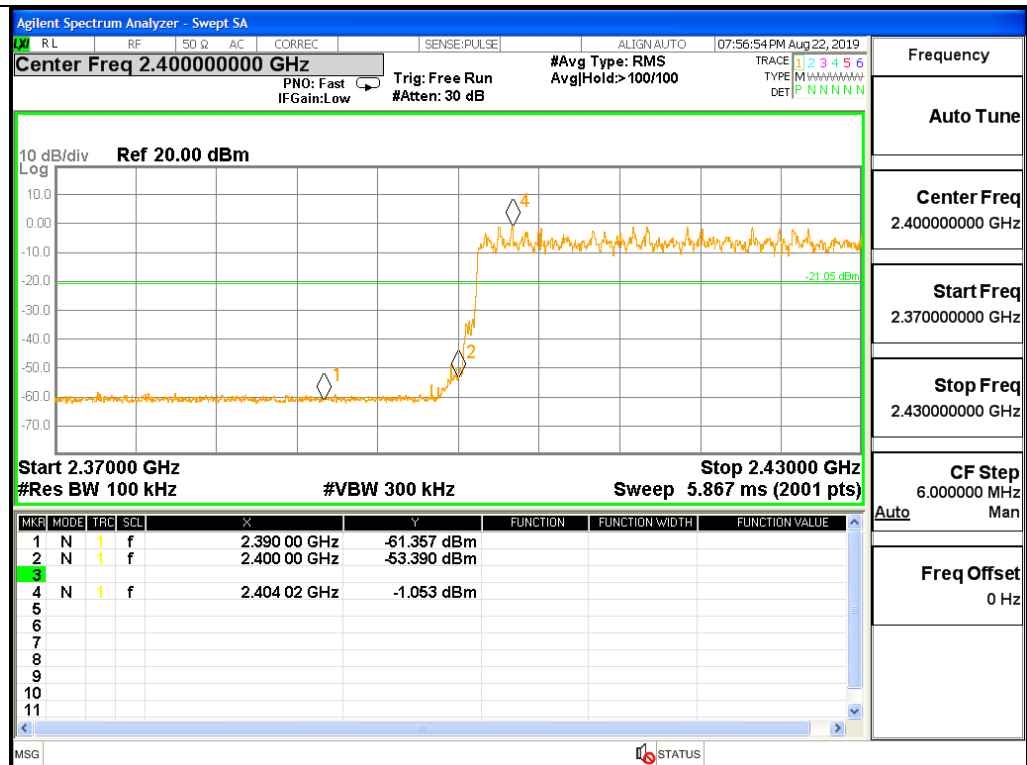
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.390 00 GHz	-60.437 dBm			
2	N	1	f	2.400 00 GHz	-54.442 dBm			
3	N	1	f	2.397 98 GHz	-55.060 dBm			
4	N	1	f	2.402 00 GHz	-1.586 dBm			

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

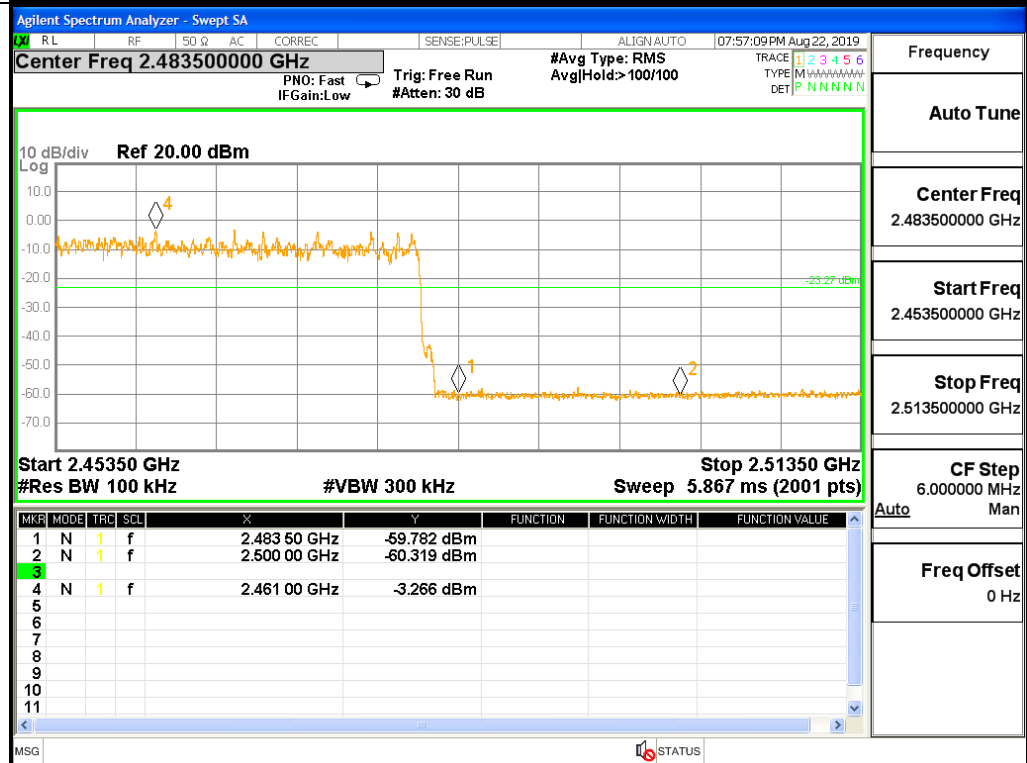
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.483 500 GHz	-59.767 dBm			
2	N	1	f	2.500 000 GHz	-63.927 dBm			
3	N	1	f	2.491 862 GHz	-58.356 dBm			
4	N	1	f	2.479 833 GHz	-5.062 dBm			



$\pi/4$ DQPSK/LCH/Hop

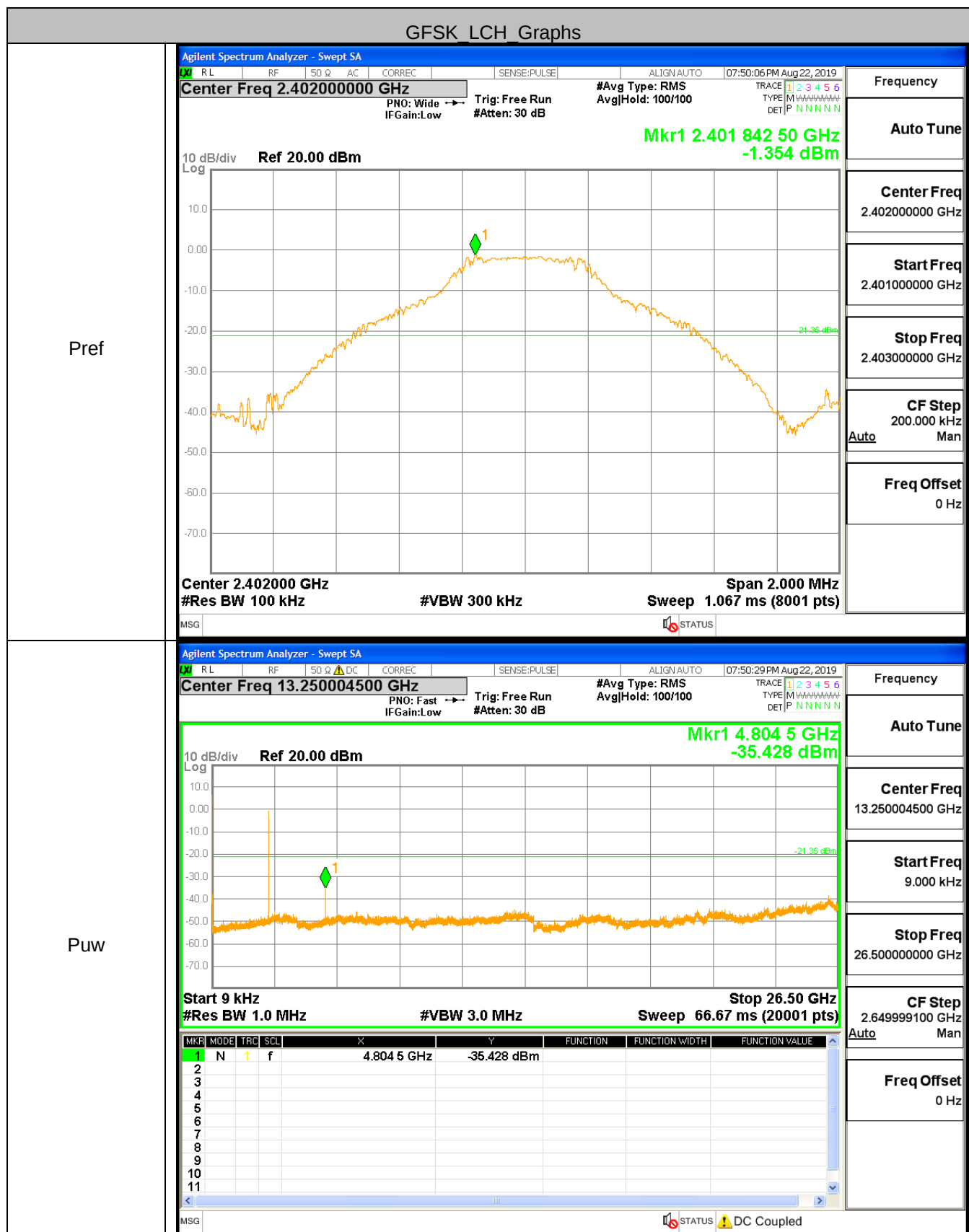


$\pi/4$ DQPSK/HCH/Hop

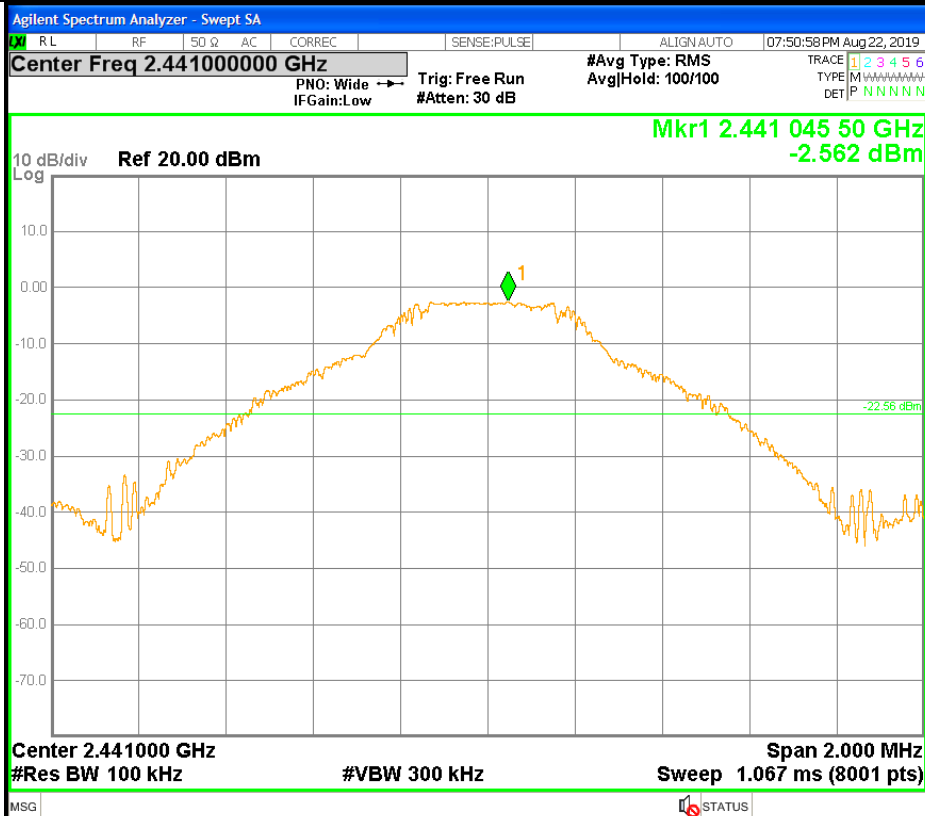


A.7 RF Conducted Spurious Emissions

Test Graph

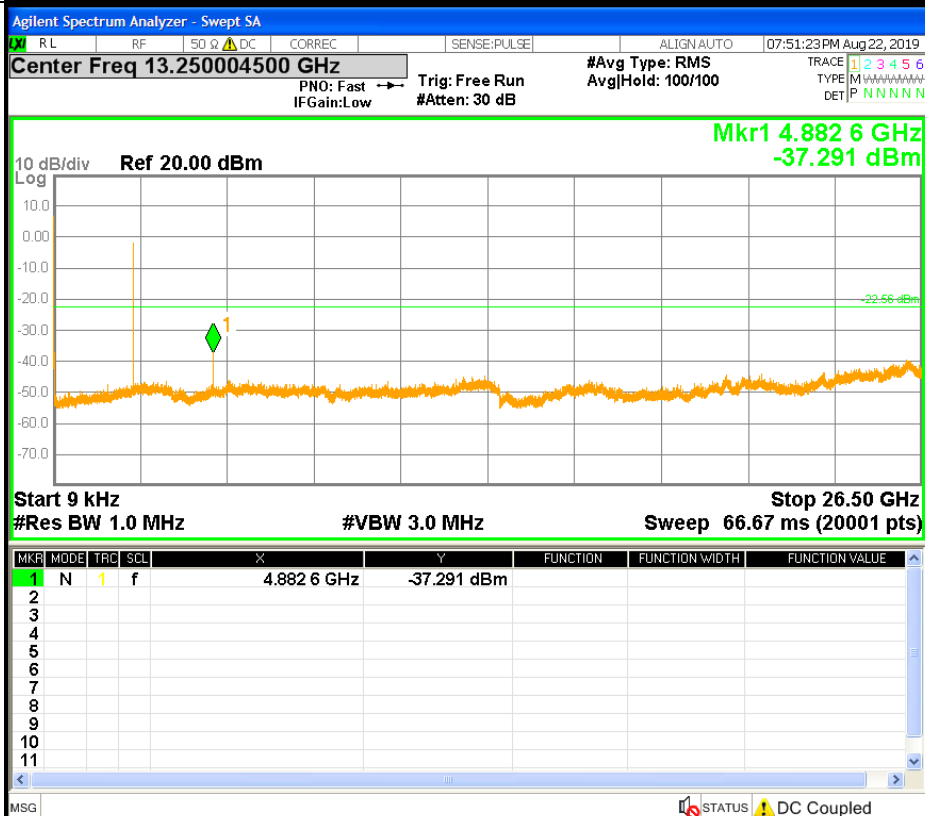


GFSK MCH Graphs

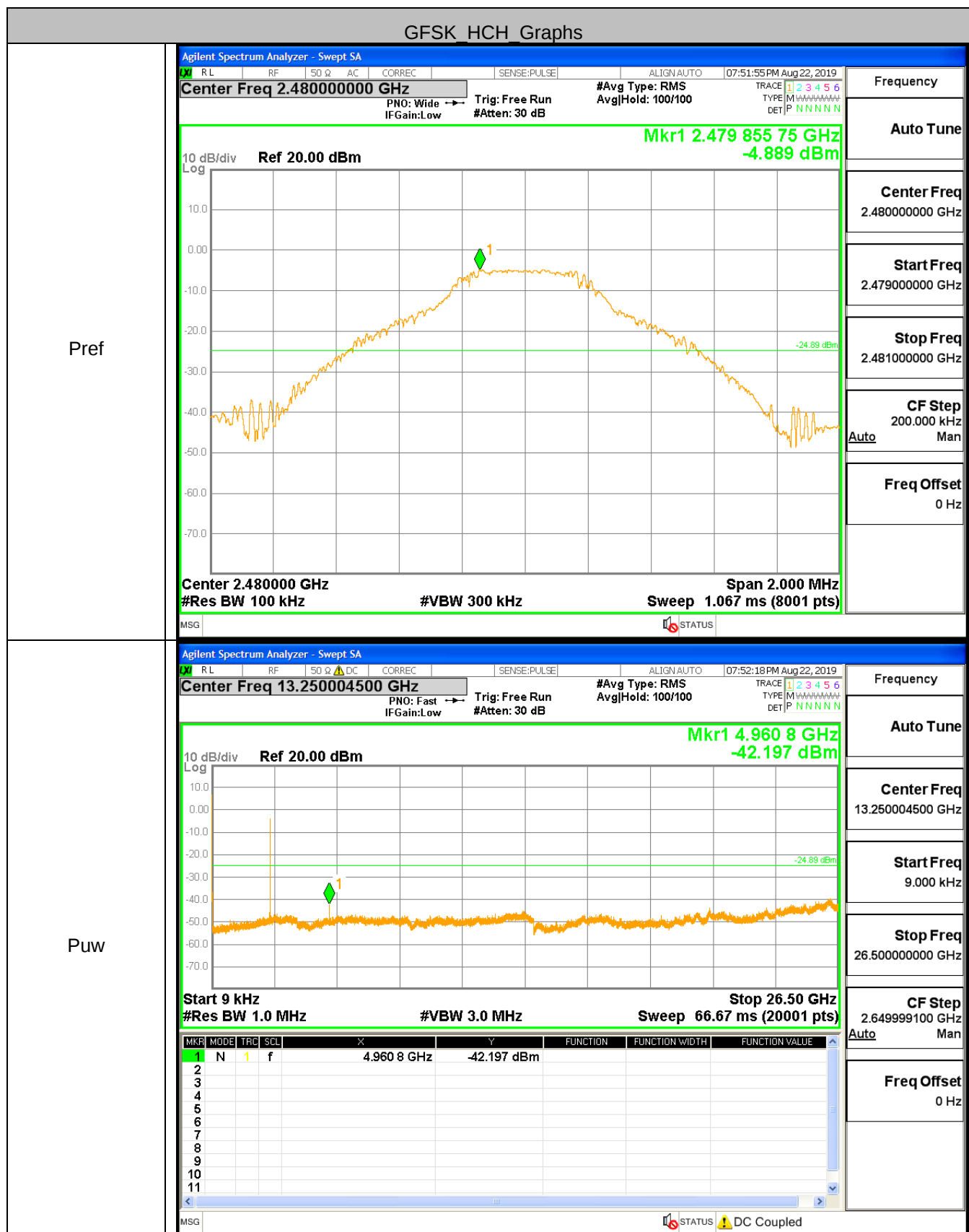


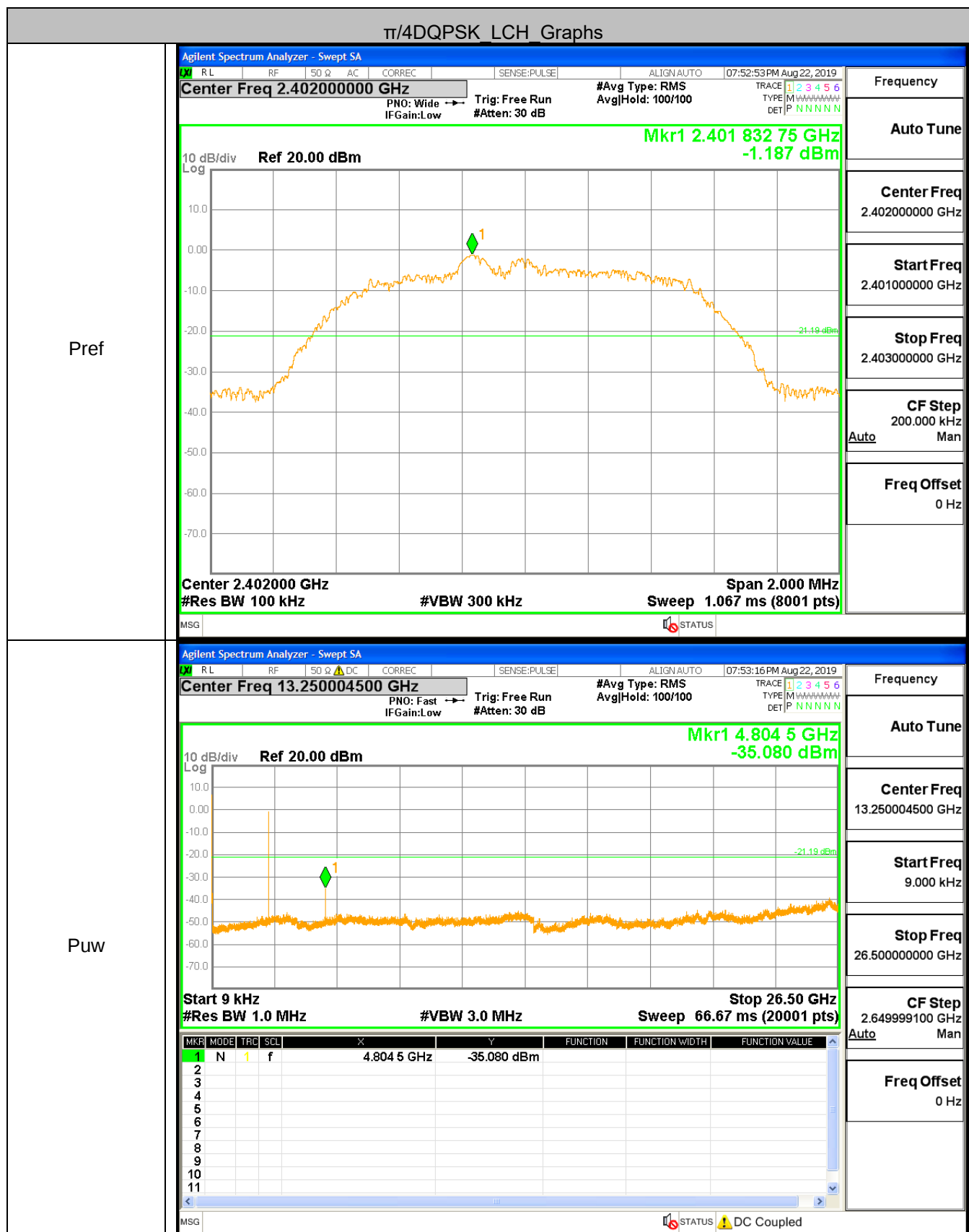
Frequency	
Auto Tune	
Center Freq	2.441000000 GHz
Start Freq	2.440000000 GHz
Stop Freq	2.442000000 GHz
CF Step	200.000 kHz
<u>Auto</u>	Man
Freq Offset	0 Hz

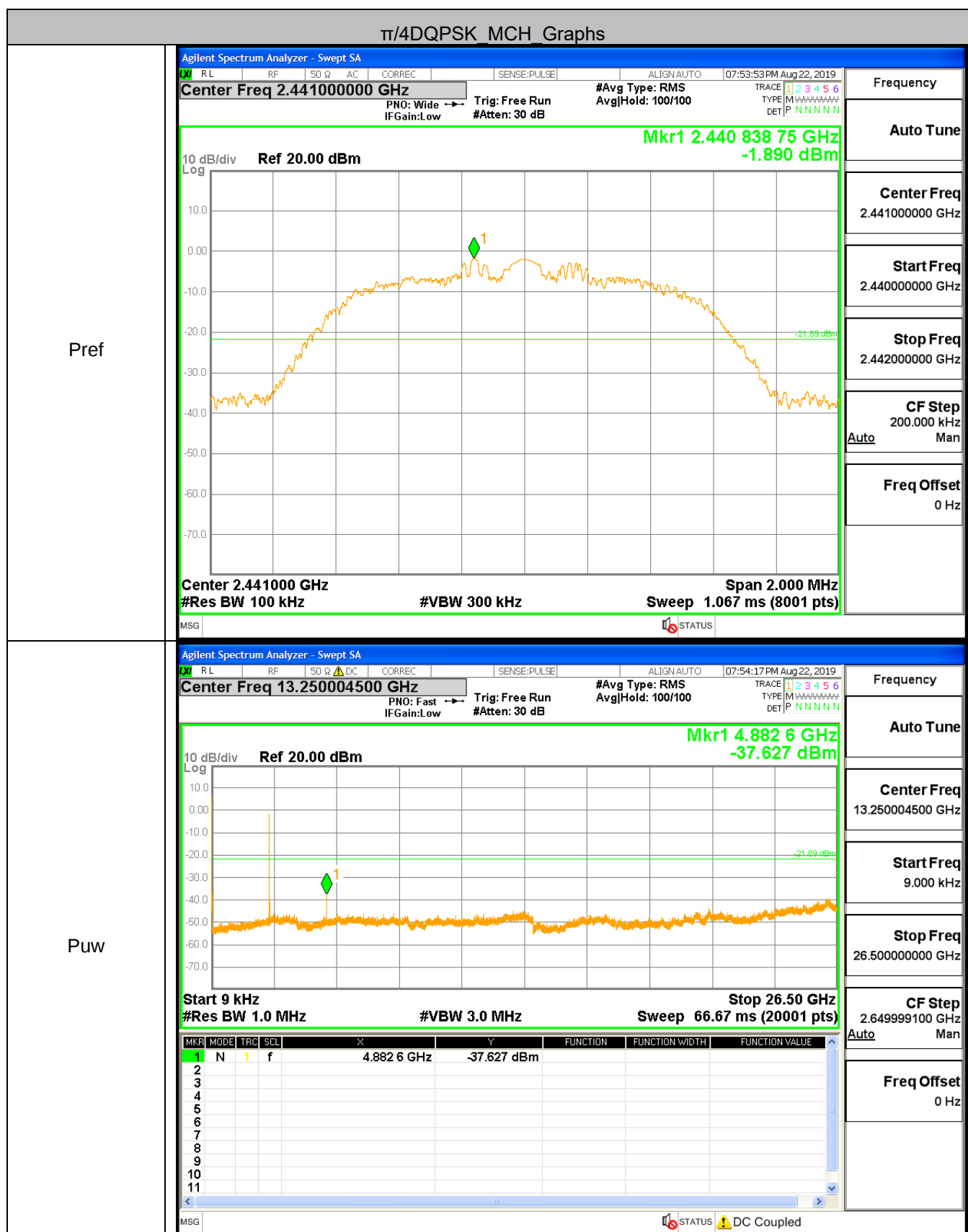
Puw

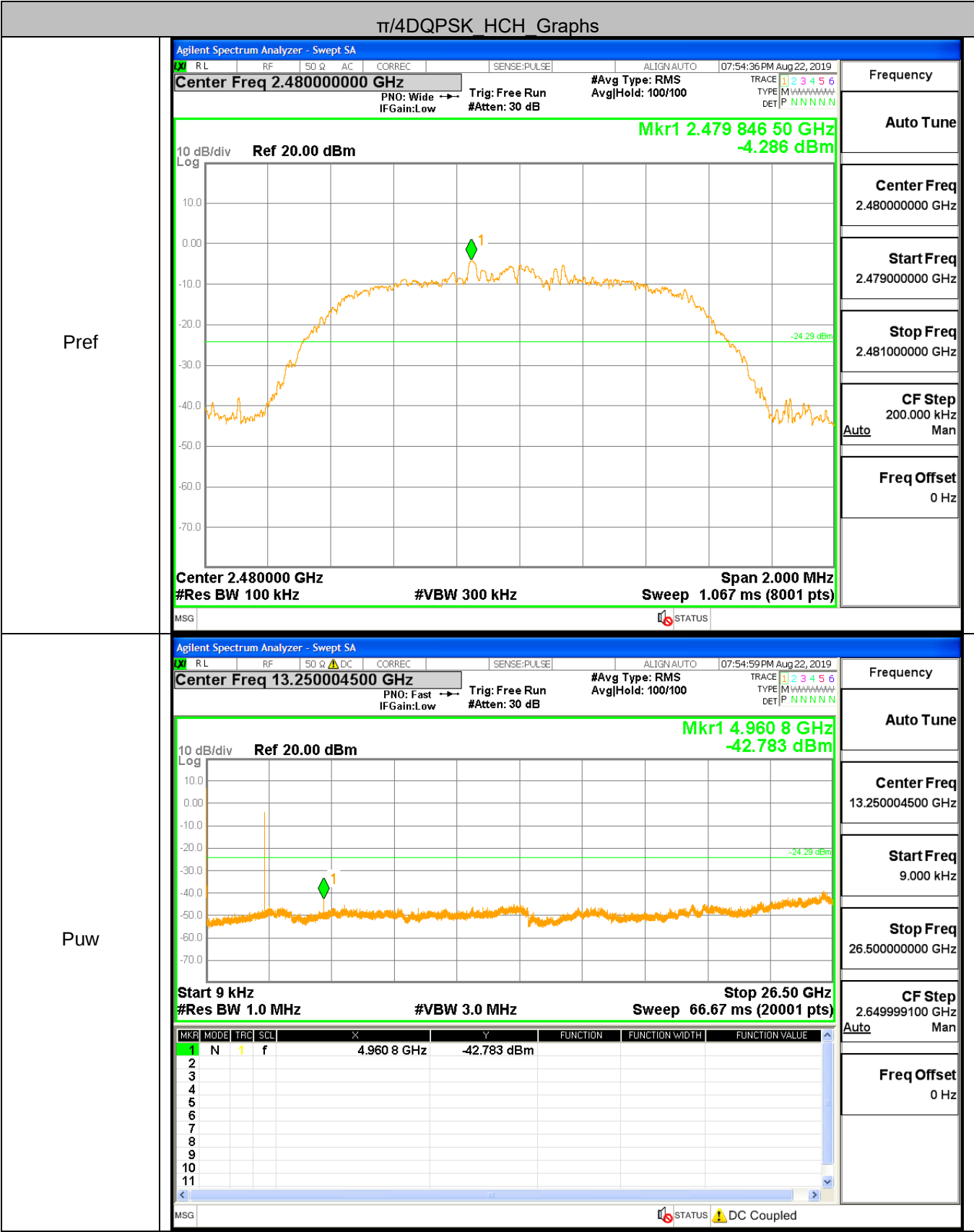


Frequency	
Auto Tune	
Center Freq	13.250004500 GHz
Start Freq	9.000 kHz
Stop Freq	26.500000000 GHz
CF Step	2.649999100 GHz
<u>Auto</u>	Man
Freq Offset	0 Hz







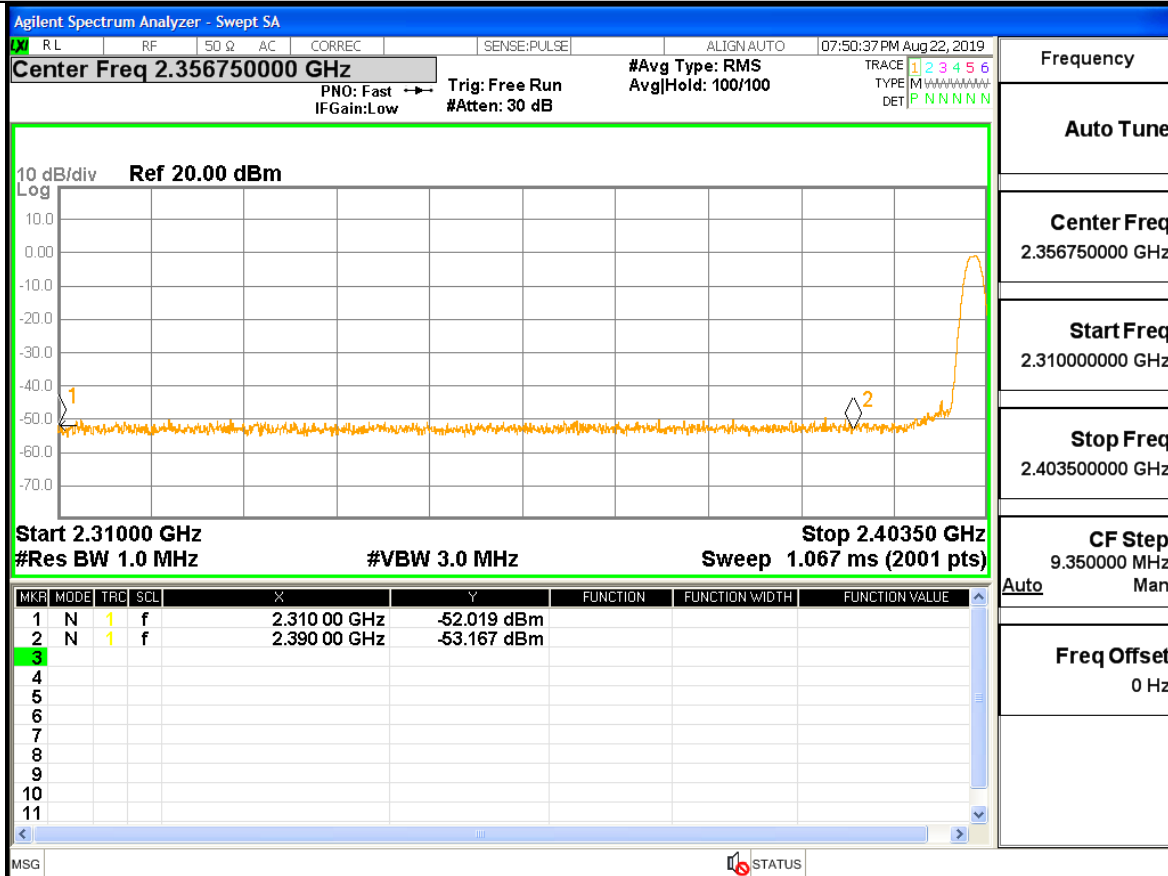


A.8 Restrict-band band-edge measurements

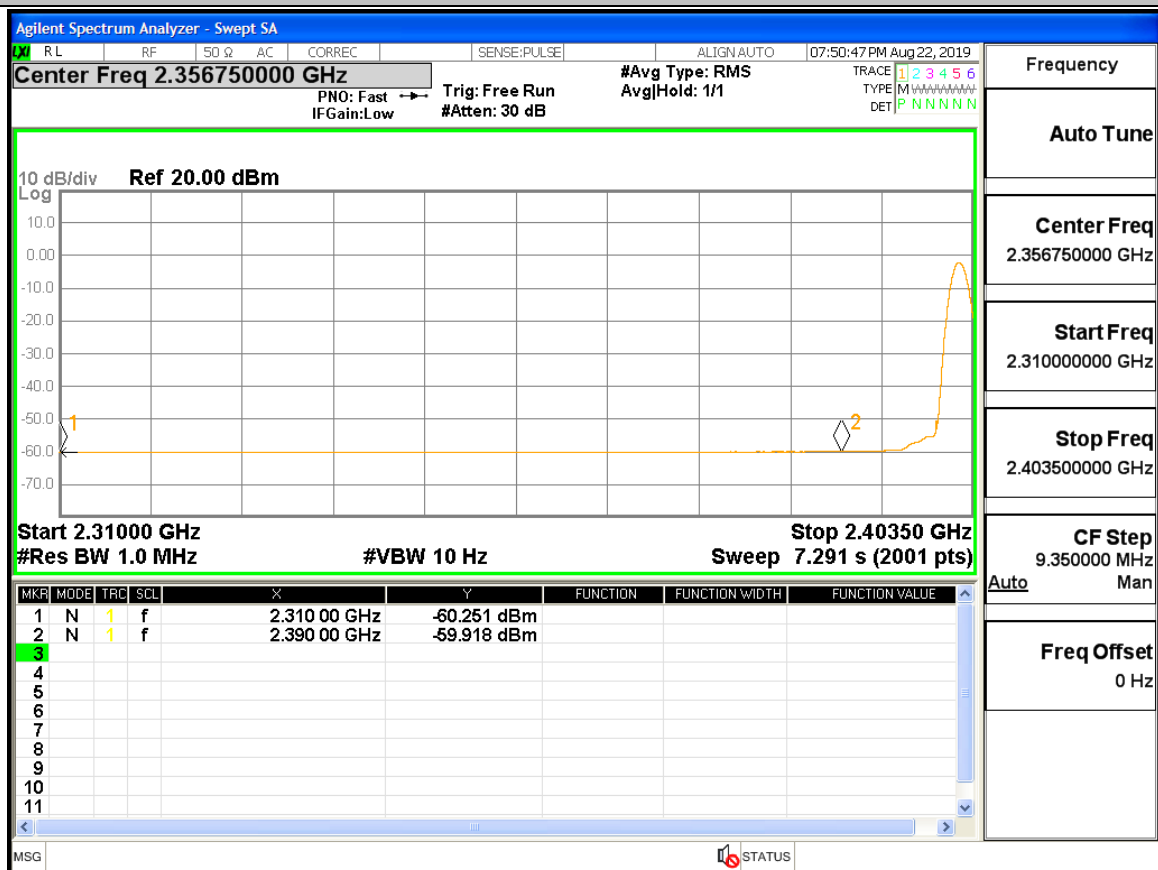
Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2310.00	2.00	0.00	-52.02	45.18	74	Pass
1DH5	2480	2483.50	2.00	0.00	-49.73	47.47	74	Pass
2DH5	2402	2310.00	2.00	0.00	-52.35	44.85	74	Pass
2DH5	2480	2483.50	2.00	0.00	-49.44	47.76	74	Pass

Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Average Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2310.00	2.00	0.00	-59.92	37.28	54	Pass
1DH5	2480	2483.50	2.00	0.00	-56.88	40.32	54	Pass
2DH5	2402	2310.00	2.00	0.00	-59.90	37.30	54	Pass
2DH5	2480	2483.50	2.00	0.00	-57.18	40.02	54	Pass

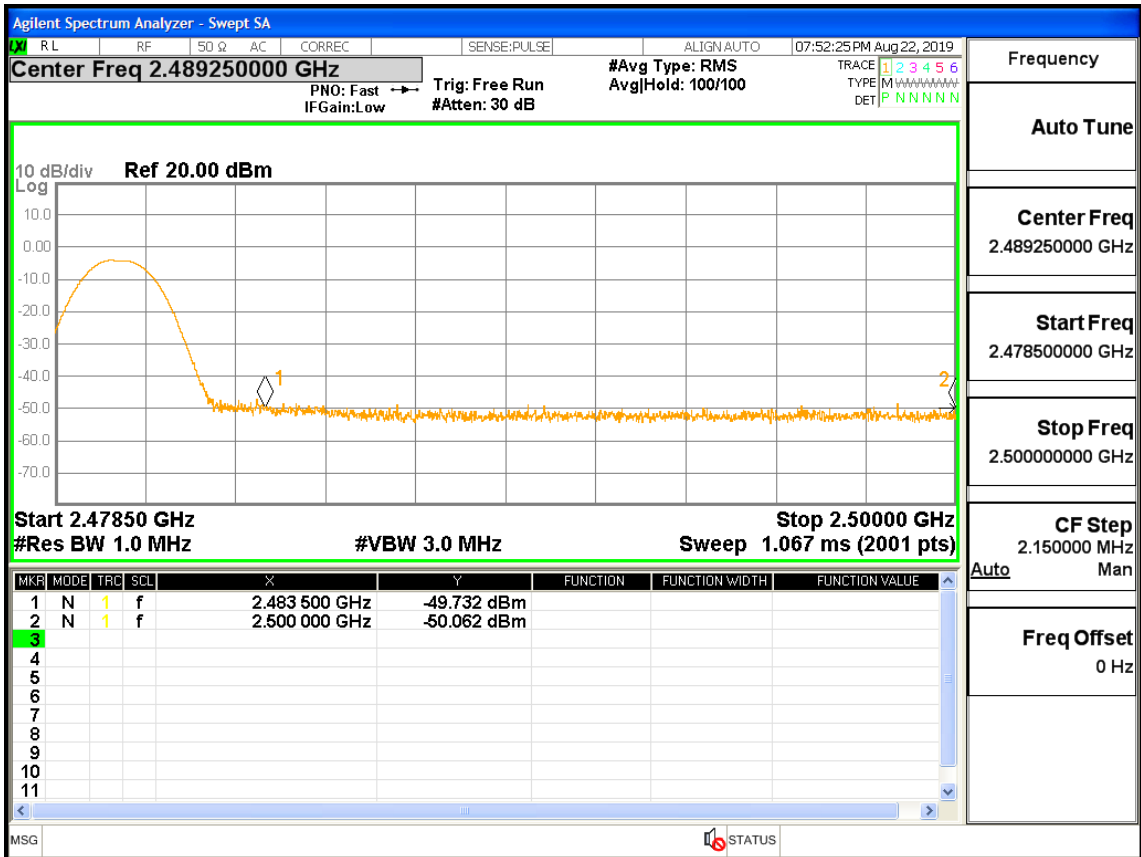
Restrict-band band-edge measurements_2402_PEAK_DH5



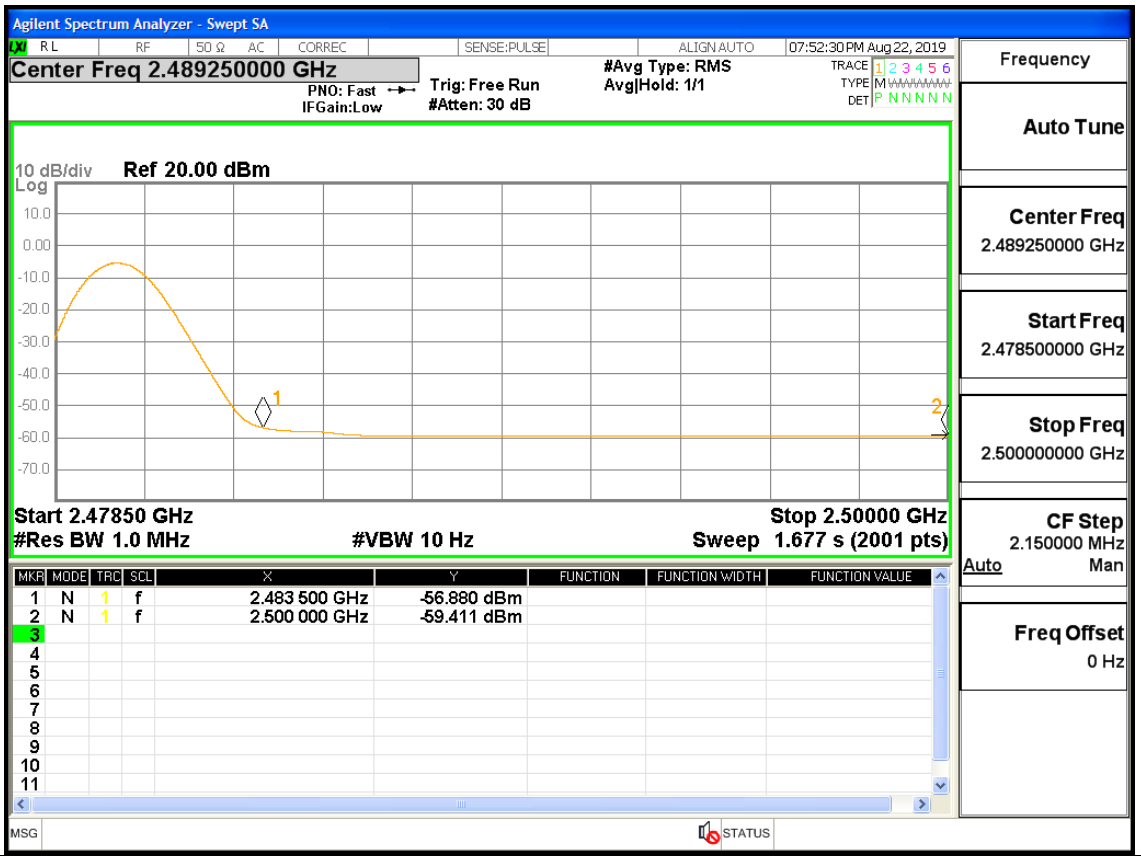
Restrict-band band-edge measurements_2402_AV_DH5



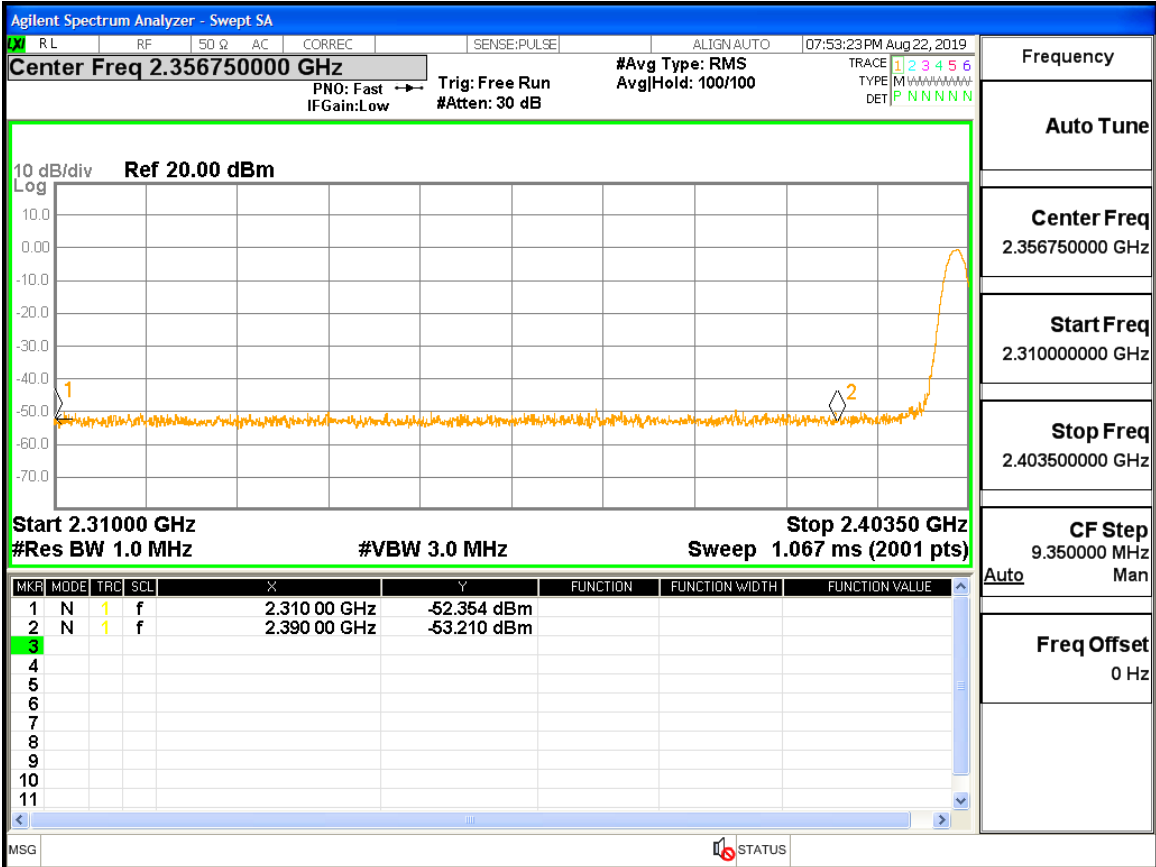
Restrict-band band-edge measurements_2480_PEAK_DH5



Restrict-band band-edge measurements_2480_AV_DH5



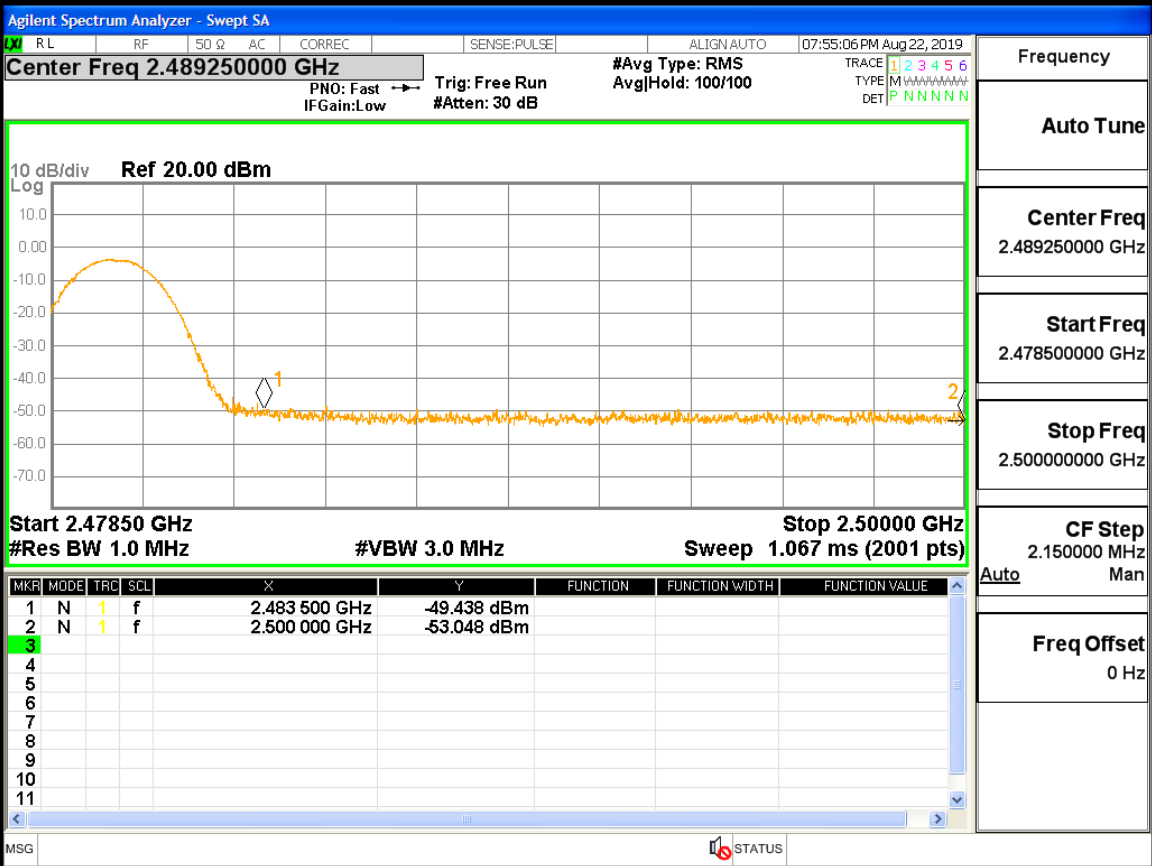
Restrict-band band-edge measurements_2402_PEAK_2DH5



Restrict-band band-edge measurements_2402_AV_2DH5



Restrict-band band-edge measurements_2480_PEAK_2DH5



Restrict-band band-edge measurements_2480_AV_2DH5

