

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

Product Name: Bluetooth headset

Trade Mark: sentry

Test Model: BT930

FCC ID: 2ACP4BT930

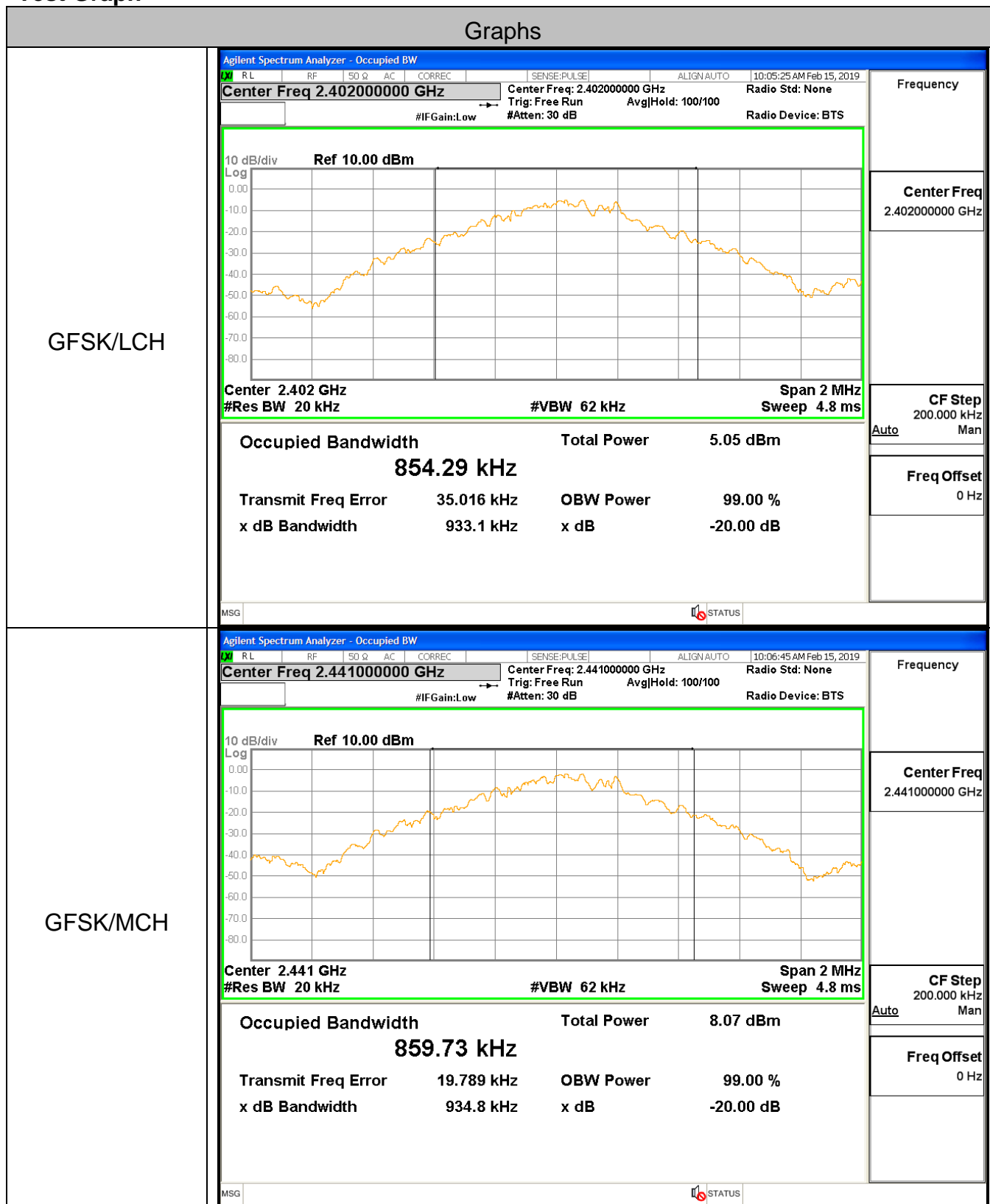
Environmental Conditions

Temperature:	23.1 °C
Relative Humidity:	55%
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	0.933	Not Specified	PASS
GFSK	MCH	0.935	Not Specified	PASS
GFSK	HCH	0.939	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.240	Not Specified	PASS
$\pi/4$ DQPSK	MCH	1.279	Not Specified	PASS
$\pi/4$ DQPSK	HCH	1.229	Not Specified	PASS

Test Graph

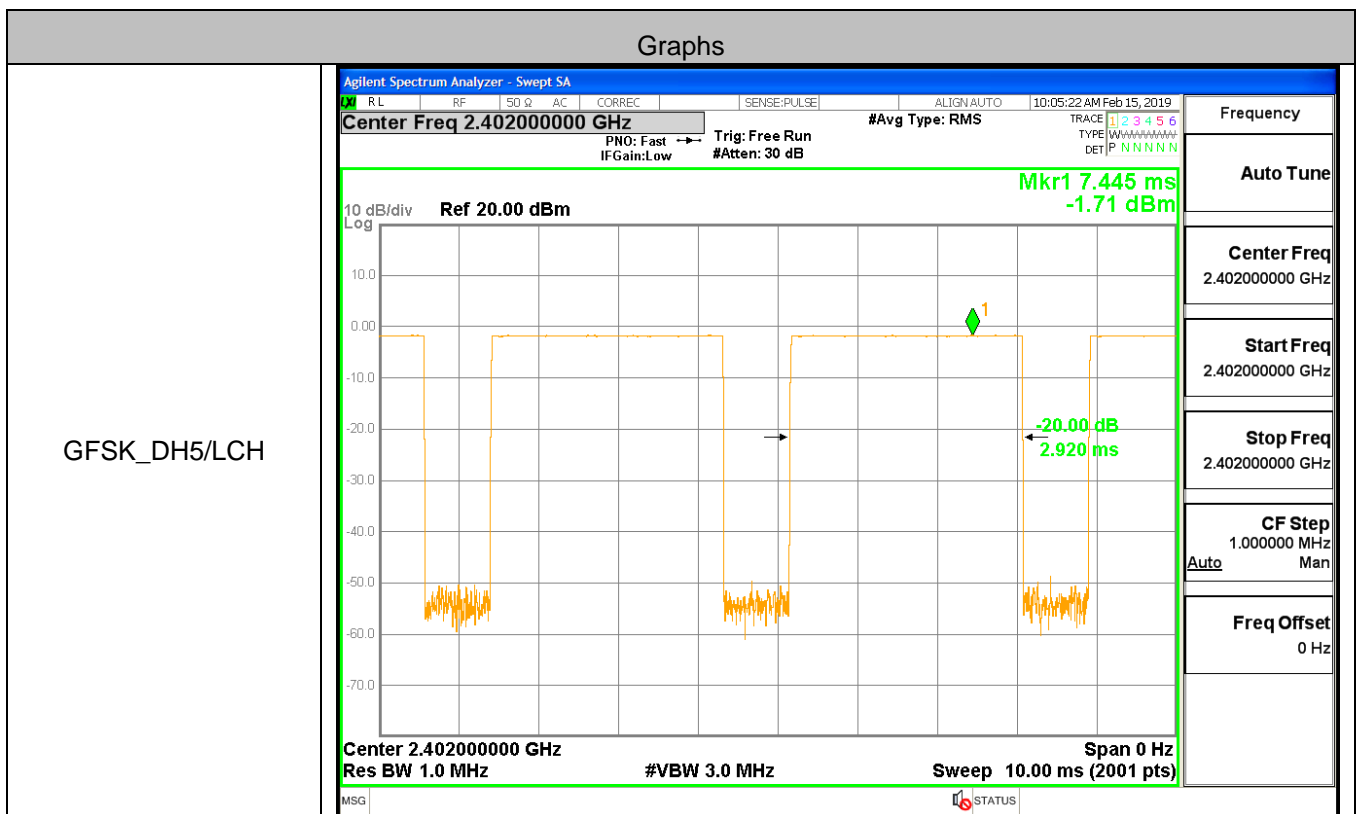


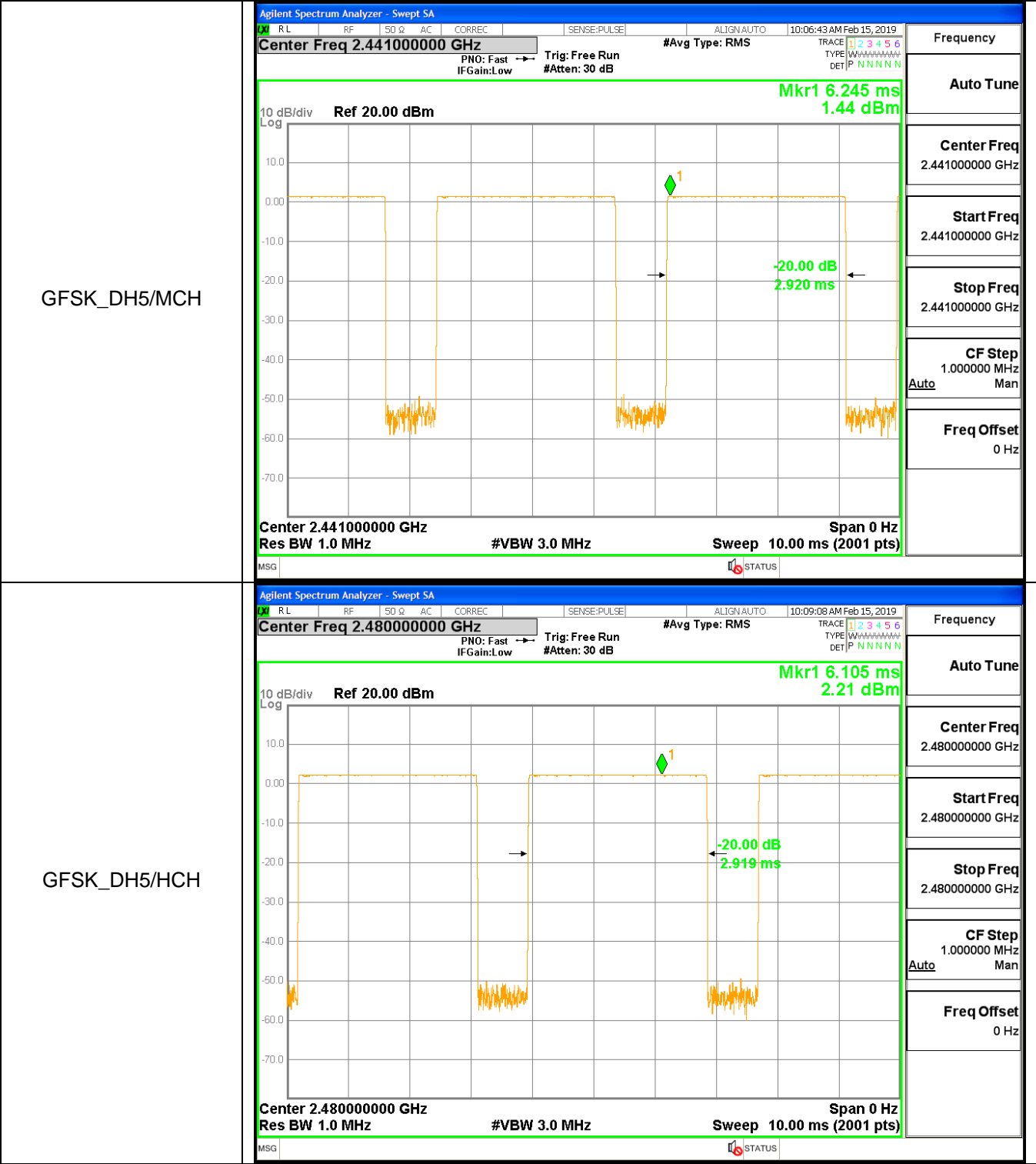
<div>π/4DQPSK/MCH</div>	<div><div>Agilent Spectrum Analyzer - Occupied BW</div><div><div><div>Center Freq 2.441000000 GHz</div><div>Center Freq: 2.441000000 GHz</div><div>Trig: Free Run</div><div>#IFGain: Low</div><div>#Atten: 30 dB</div></div><div><div>Radio Std: None</div><div>Avg/Hold: 100/100</div><div>Radio Device: BTS</div></div></div><div><div>10 dB/div</div><div>Ref 10.00 dBm</div><div></div><div><div>Center 2.441 GHz</div><div>#Res BW 20 kHz</div><div>#VBW 62 kHz</div><div>Span 2 MHz</div><div>Sweep 4.8 ms</div></div><div><div>Occupied Bandwidth</div><div>1.1768 MHz</div><div>Total Power</div><div>4.40 dBm</div><div>Transmit Freq Error</div><div>21.714 kHz</div><div>OBW Power</div><div>99.00 %</div><div>x dB Bandwidth</div><div>1.279 MHz</div><div>x dB</div><div>-20.00 dB</div></div><div><div>MSG</div><div>STATUS</div></div></div><div><div>Frequency</div><div>Center Freq</div><div>2.441000000 GHz</div><div>CF Step</div><div>200.000 kHz</div><div>Man</div><div>Auto</div><div>Freq Offset</div><div>0 Hz</div></div></div>
<div>π/4DQPSK/HCH</div>	<div><div>Agilent Spectrum Analyzer - Occupied BW</div><div><div><div>Center Freq 2.480000000 GHz</div><div>Center Freq: 2.480000000 GHz</div><div>Trig: Free Run</div><div>#IFGain: Low</div><div>#Atten: 30 dB</div></div><div><div>Radio Std: None</div><div>Avg/Hold: 100/100</div><div>Radio Device: BTS</div></div></div><div><div>10 dB/div</div><div>Ref 10.00 dBm</div><div></div><div><div>Center 2.48 GHz</div><div>#Res BW 20 kHz</div><div>#VBW 62 kHz</div><div>Span 2 MHz</div><div>Sweep 4.8 ms</div></div><div><div>Occupied Bandwidth</div><div>1.1830 MHz</div><div>Total Power</div><div>5.22 dBm</div><div>Transmit Freq Error</div><div>23.121 kHz</div><div>OBW Power</div><div>99.00 %</div><div>x dB Bandwidth</div><div>1.229 MHz</div><div>x dB</div><div>-20.00 dB</div></div><div><div>MSG</div><div>STATUS</div></div></div><div><div>Frequency</div><div>Center Freq</div><div>2.480000000 GHz</div><div>CF Step</div><div>200.000 kHz</div><div>Man</div><div>Auto</div><div>Freq Offset</div><div>0 Hz</div></div></div>

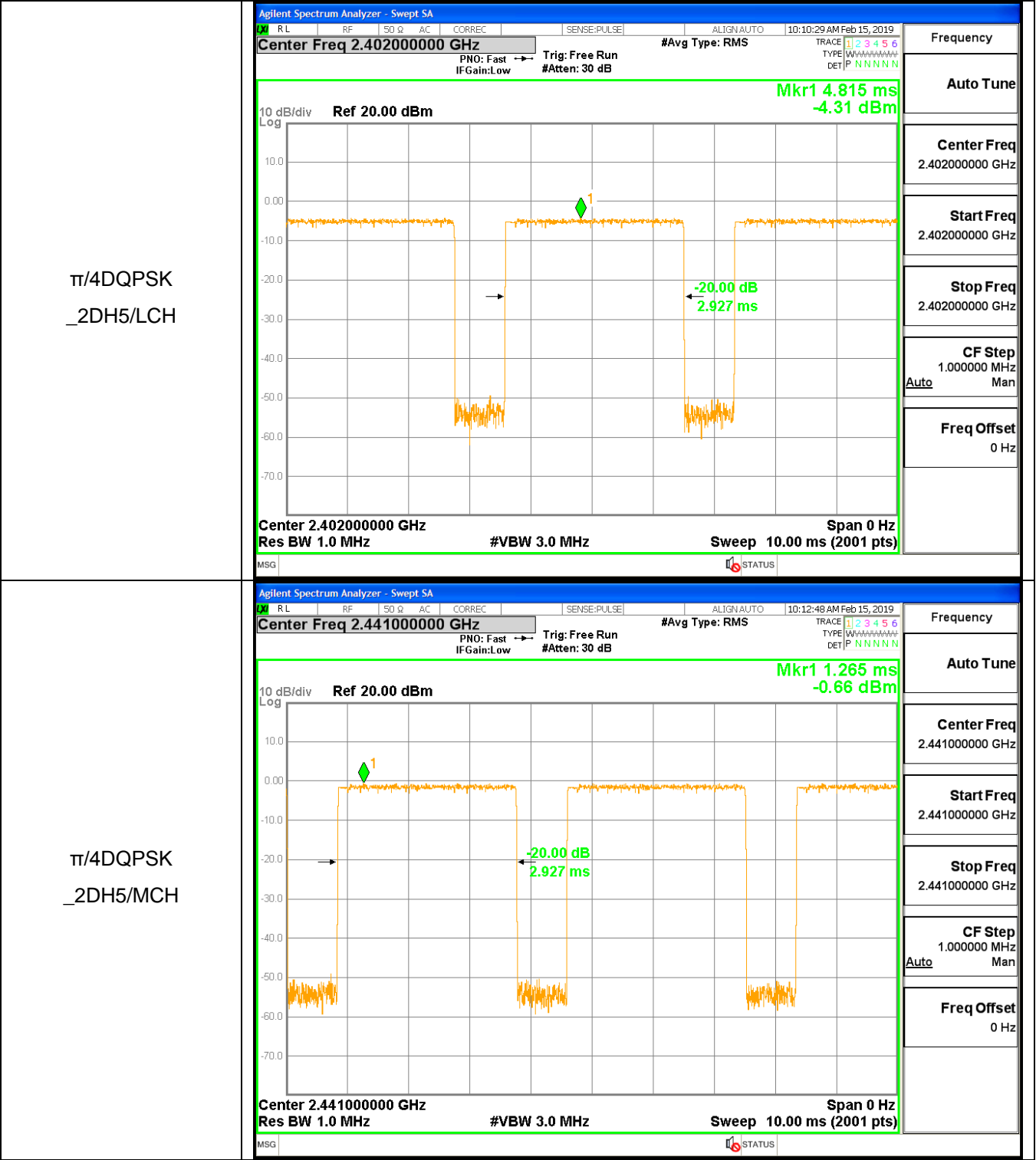
A.2 Dwell Time

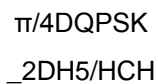
Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002918	106.7	0.3114	0.4	PASS
GFSK	DH5	MCH	0.00292	106.7	0.311548	0.4	PASS
GFSK	DH5	HCH	0.00292	106.7	0.311542	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	0.002919	106.7	0.311488	0.4	PASS
$\pi/4$ DQPSK	2DH5	MCH	0.002927	106.7	0.312344	0.4	PASS
$\pi/4$ DQPSK	2DH5	HCH	0.002927	106.7	0.31233	0.4	PASS

Test Graph





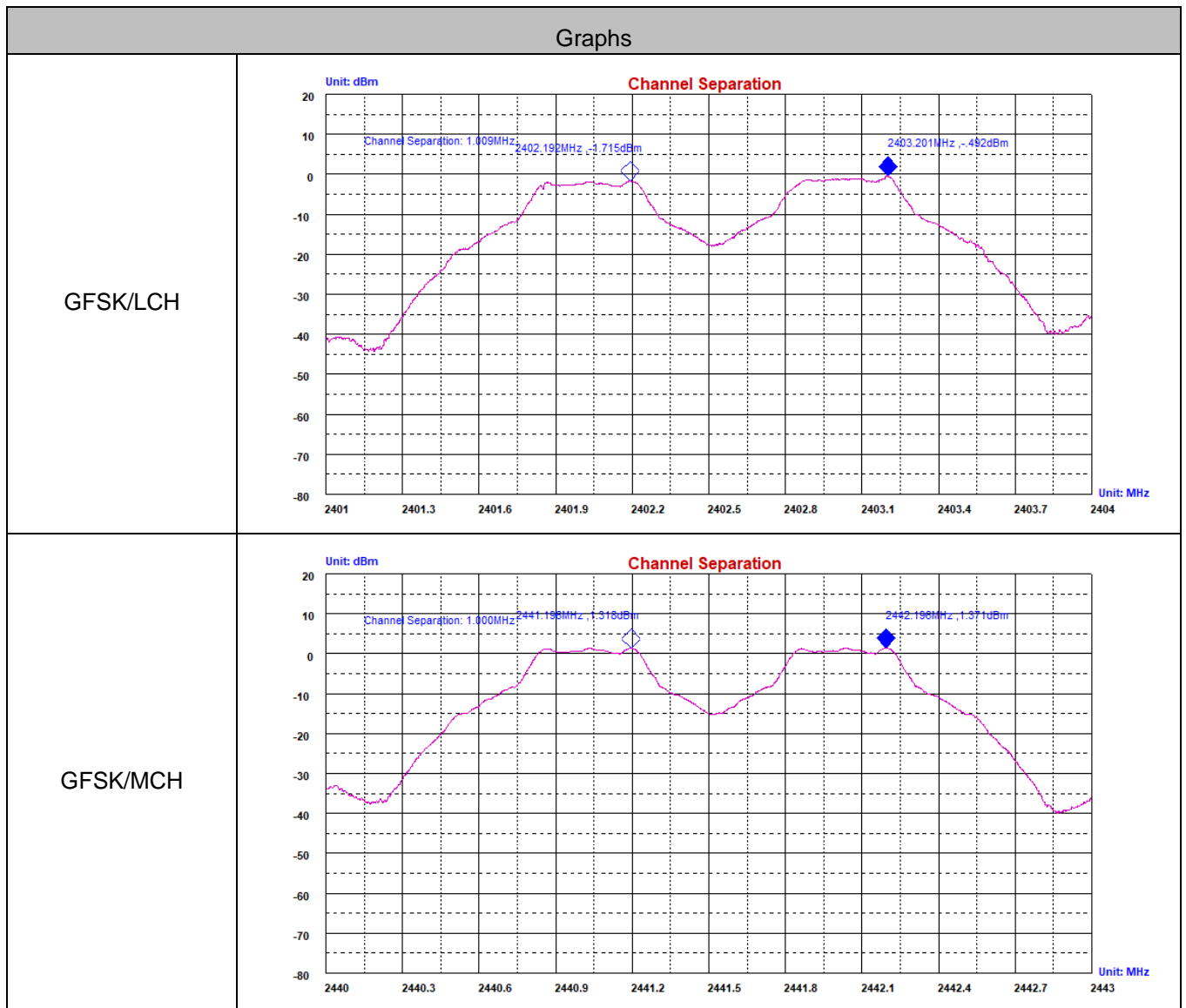


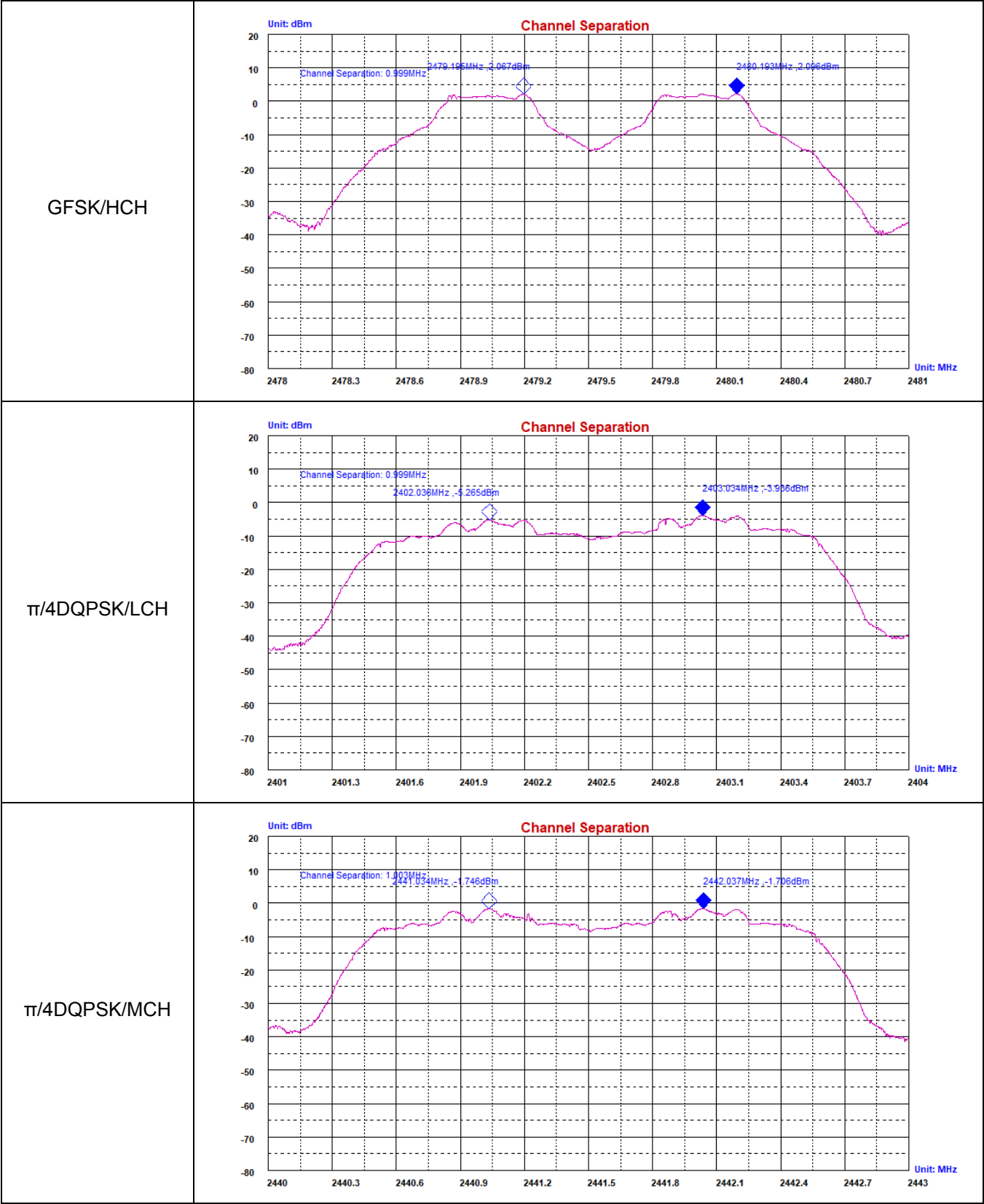


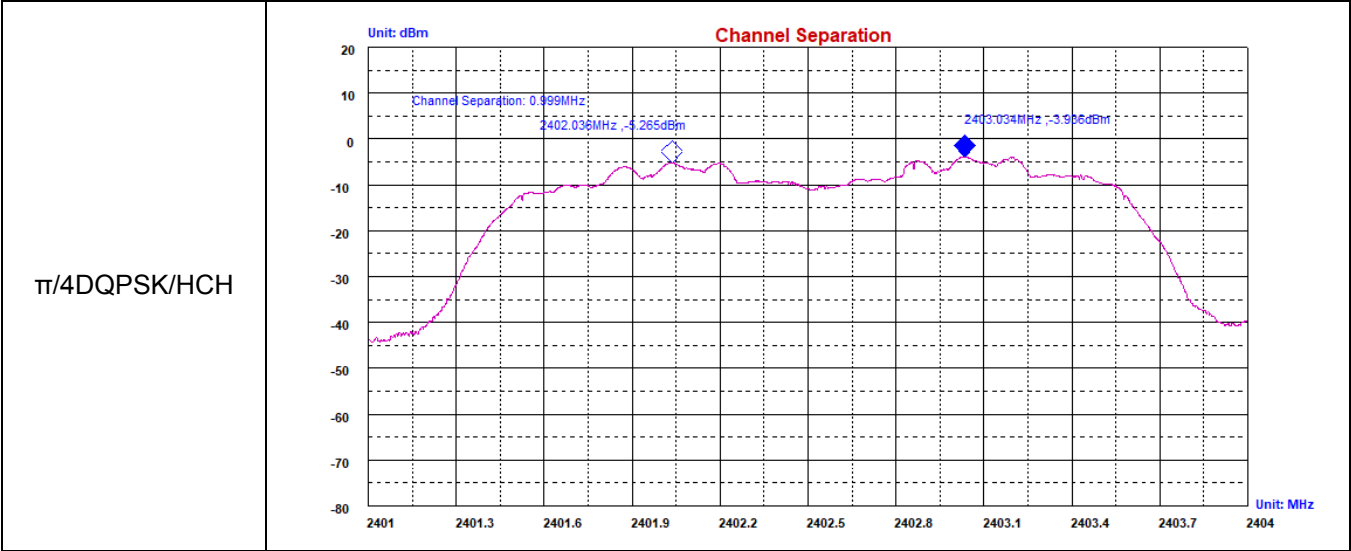
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.009	0.622	PASS
GFSK	MCH	1.000	0.623	PASS
GFSK	HCH	0.999	0.626	PASS
$\pi/4$ DQPSK	LCH	0.999	0.817	PASS
$\pi/4$ DQPSK	MCH	1.003	0.853	PASS
$\pi/4$ DQPSK	HCH	1.001	0.819	PASS

Test Graph



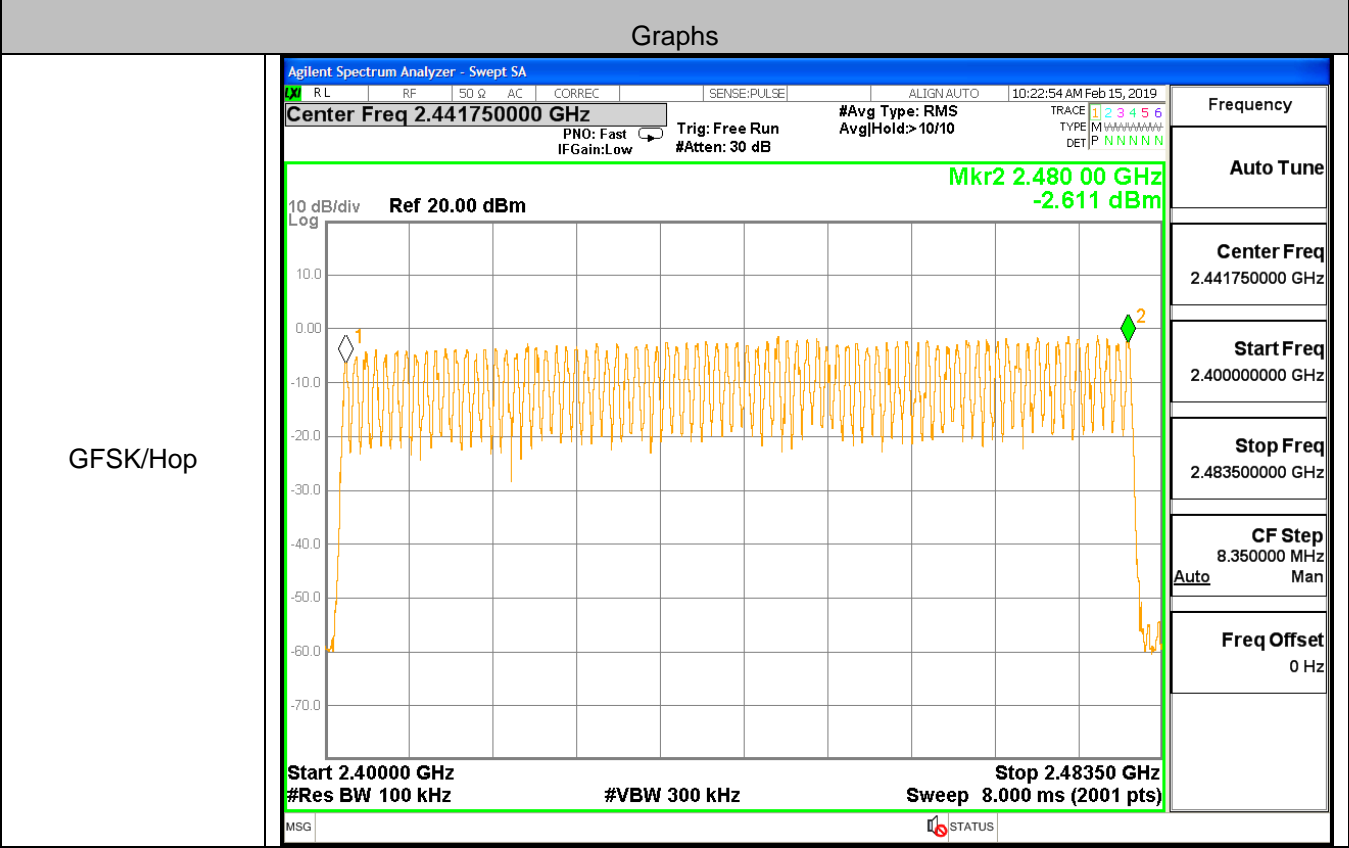




A.4 Hopping Channel Number

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

Test Graph

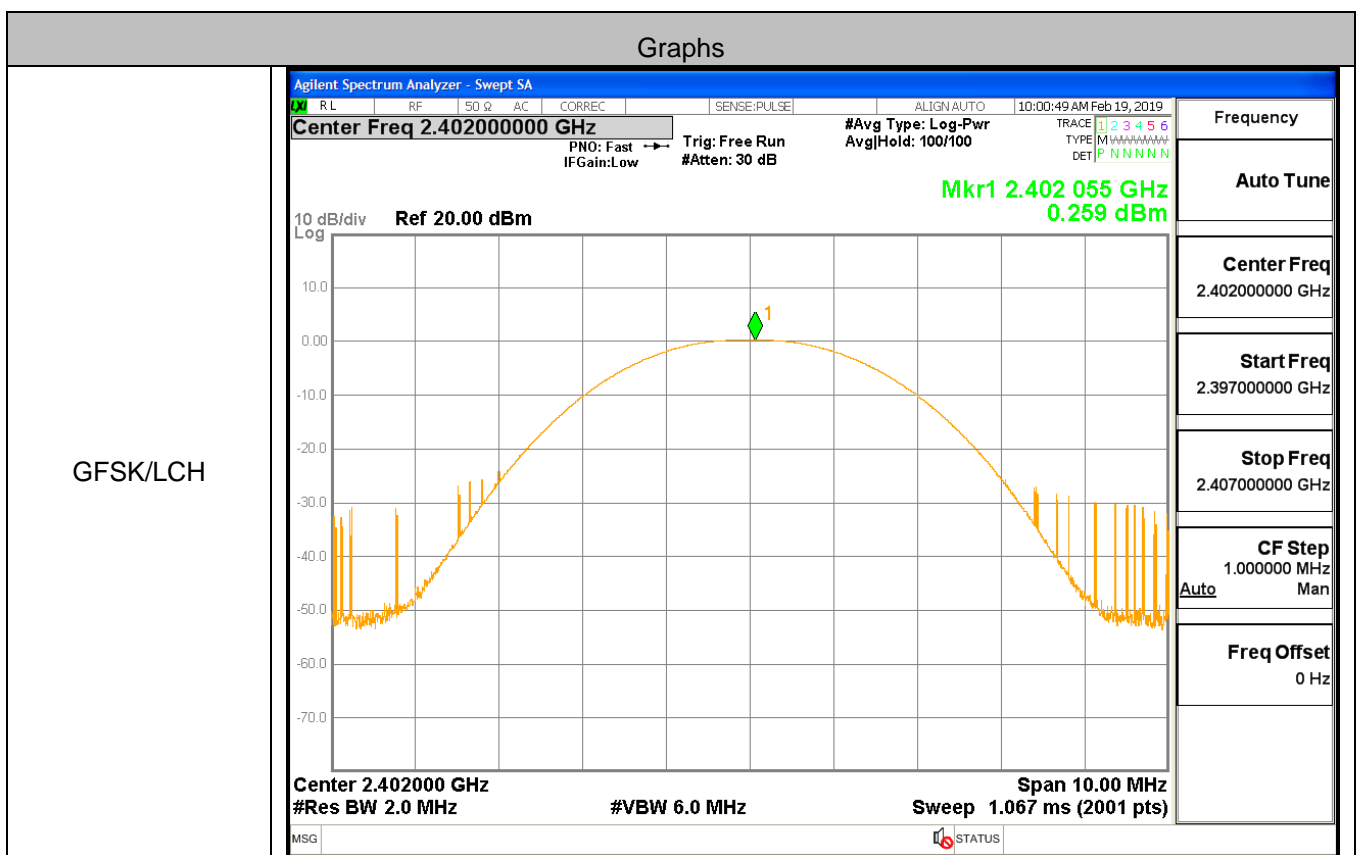


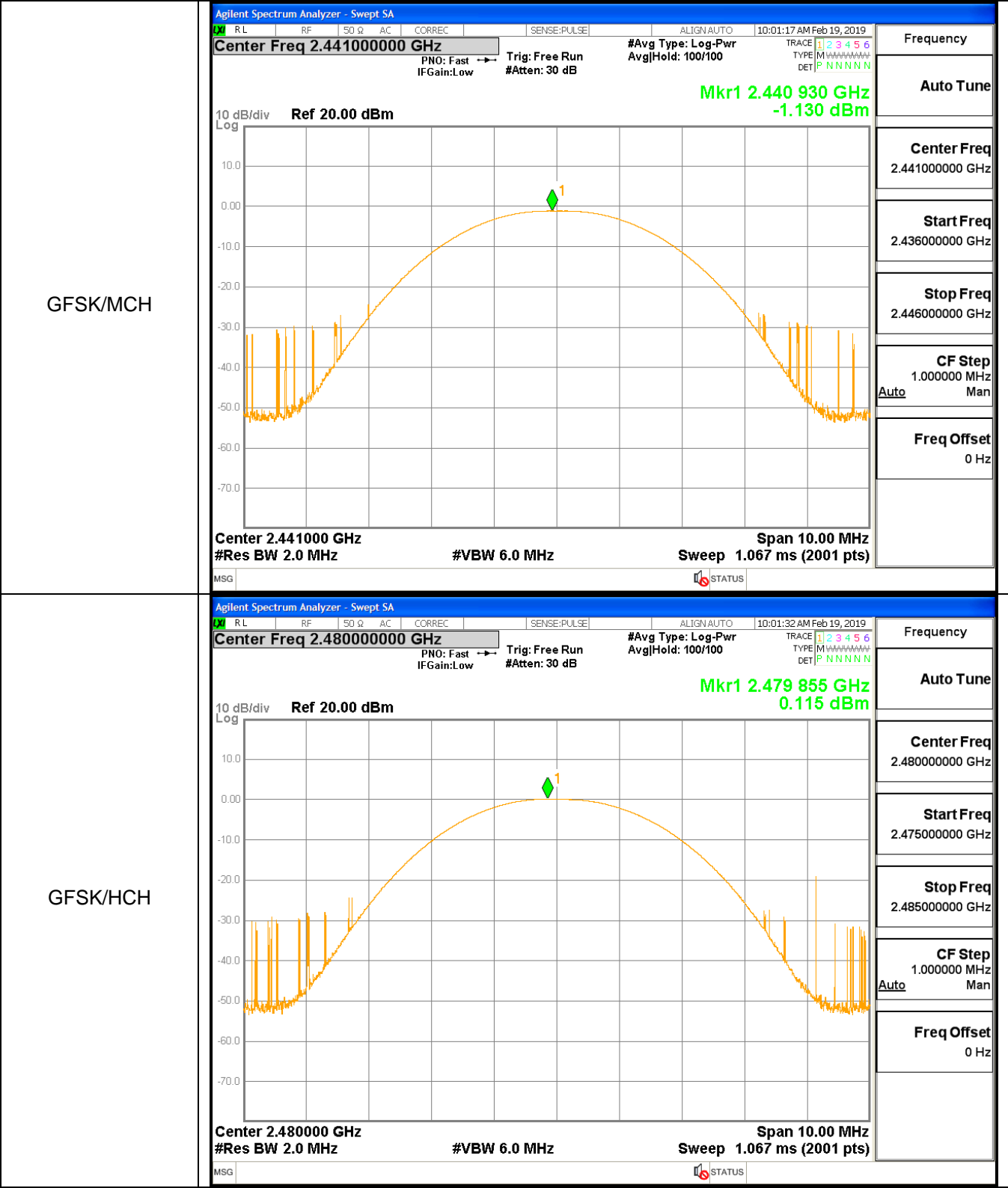


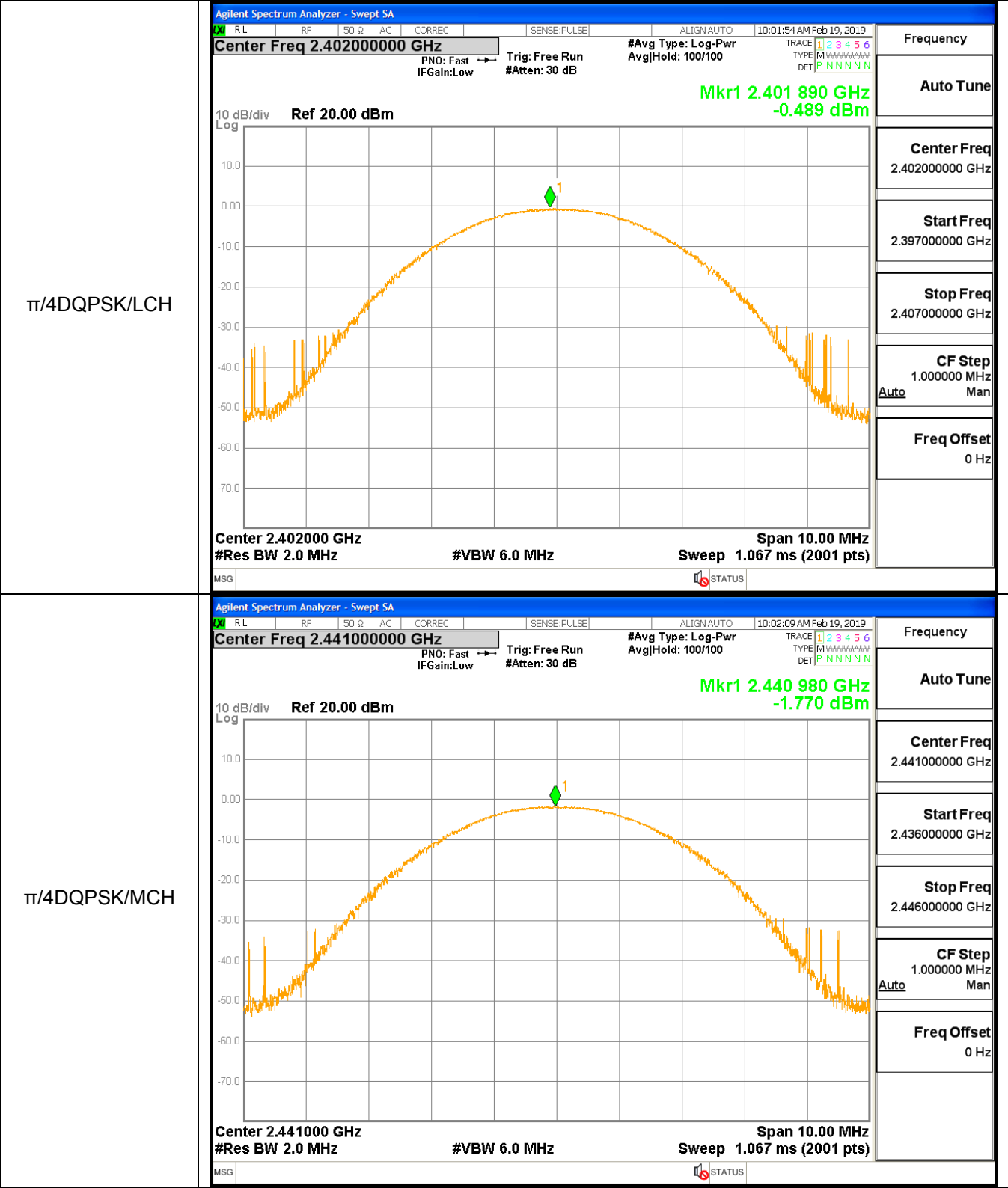
A.5 Conducted Peak Output Power

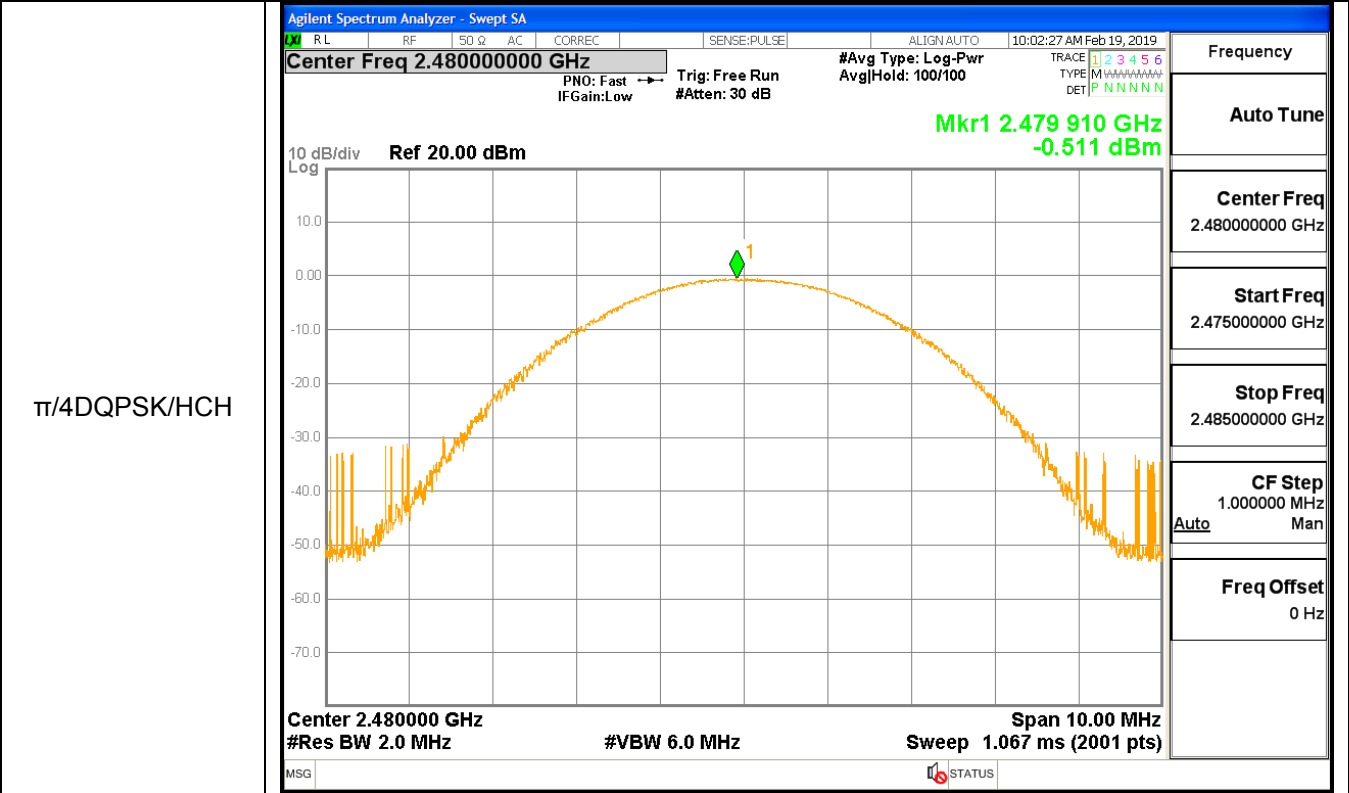
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.259	21	PASS
GFSK	MCH	-1.130	21	PASS
GFSK	HCH	0.115	21	PASS
$\pi/4$ DQPSK	LCH	-0.489	21	PASS
$\pi/4$ DQPSK	MCH	-1.770	21	PASS
$\pi/4$ DQPSK	HCH	-0.511	21	PASS

Test Graph





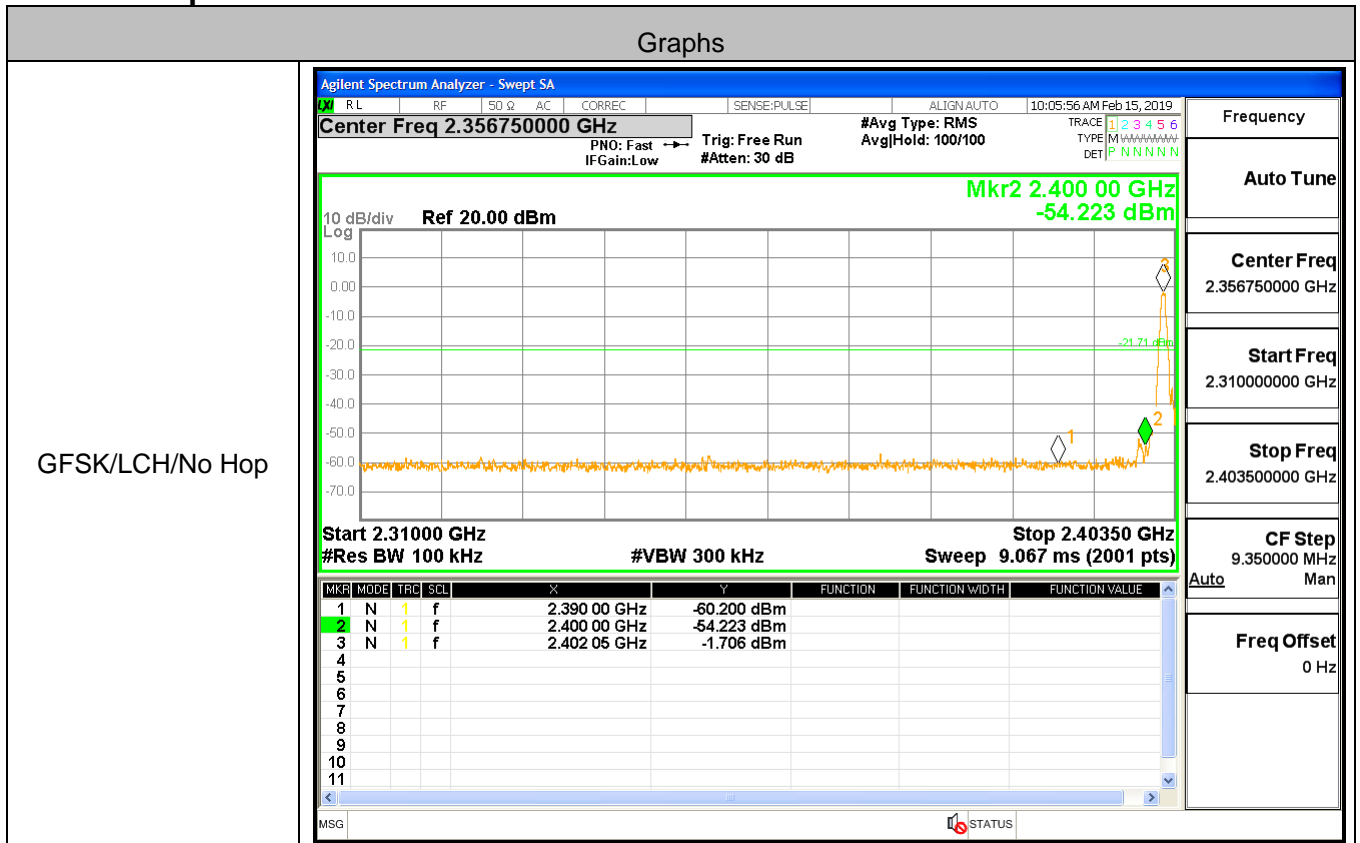




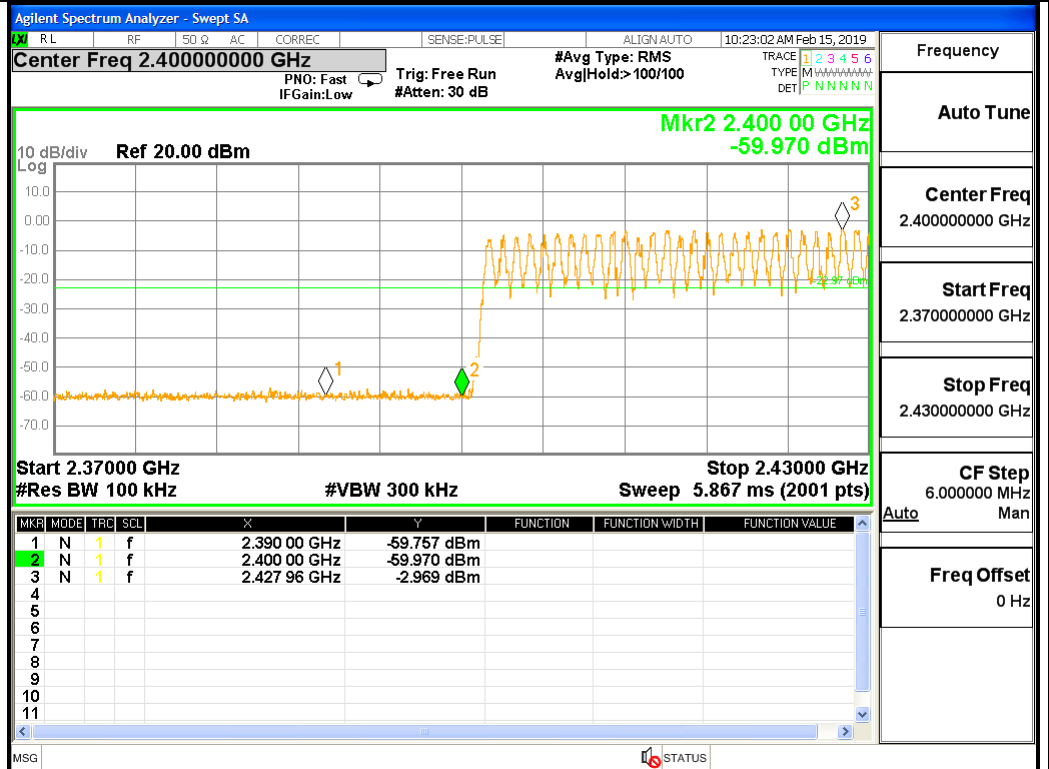
A.6 Band-edge for RF Conducted Emissions

Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2390	-1.706	-60.2	-21.706	Pass
1DH5	2402	2400	-1.706	-54.22	-21.706	Pass
1DH5-Hopping	2402	2390	-2.969	-59.76	-22.969	Pass
1DH5-Hopping	2402	2400	-2.969	-59.97	-22.969	Pass
1DH5	2480	2483.5	2.046	-60.17	-17.954	Pass
1DH5	2480	2500	2.046	-61.7	-17.954	Pass
1DH5-Hopping	2480	2483.5	-1.249	-57.55	-21.249	Pass
1DH5-Hopping	2480	2500	-1.249	-54.5	-21.249	Pass
2DH5	2402	2390	-6.614	-61.29	-26.614	Pass
2DH5	2402	2400	-6.614	-57.57	-26.614	Pass
2DH5-Hopping	2480	2483.5	-3.284	-59.98	-23.284	Pass
2DH5-Hopping	2480	2500	-3.284	-58.87	-23.284	Pass
2DH5	2480	2483.5	-4.004	-60.64	-24.004	Pass
2DH5	2480	2500	-4.004	-60	-24.004	Pass
2DH5-Hopping	2402	2390	-3.87	-60.24	-23.87	Pass
2DH5-Hopping	2402	2400	-3.87	-60.86	-23.87	Pass

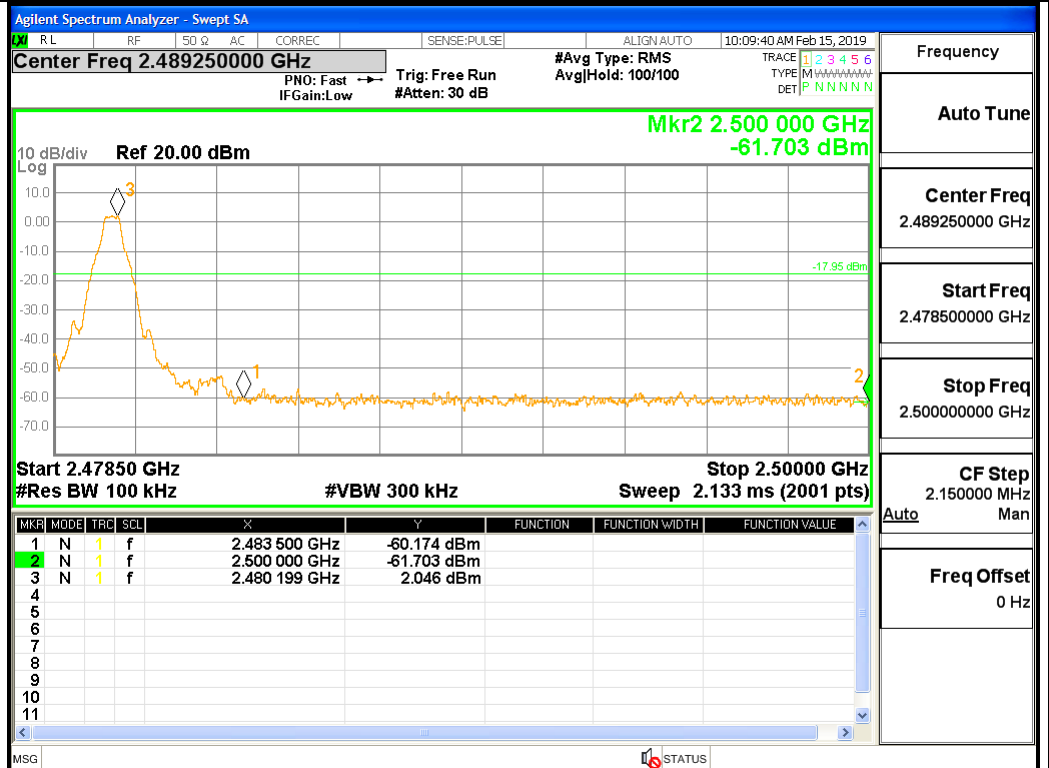
est Graph

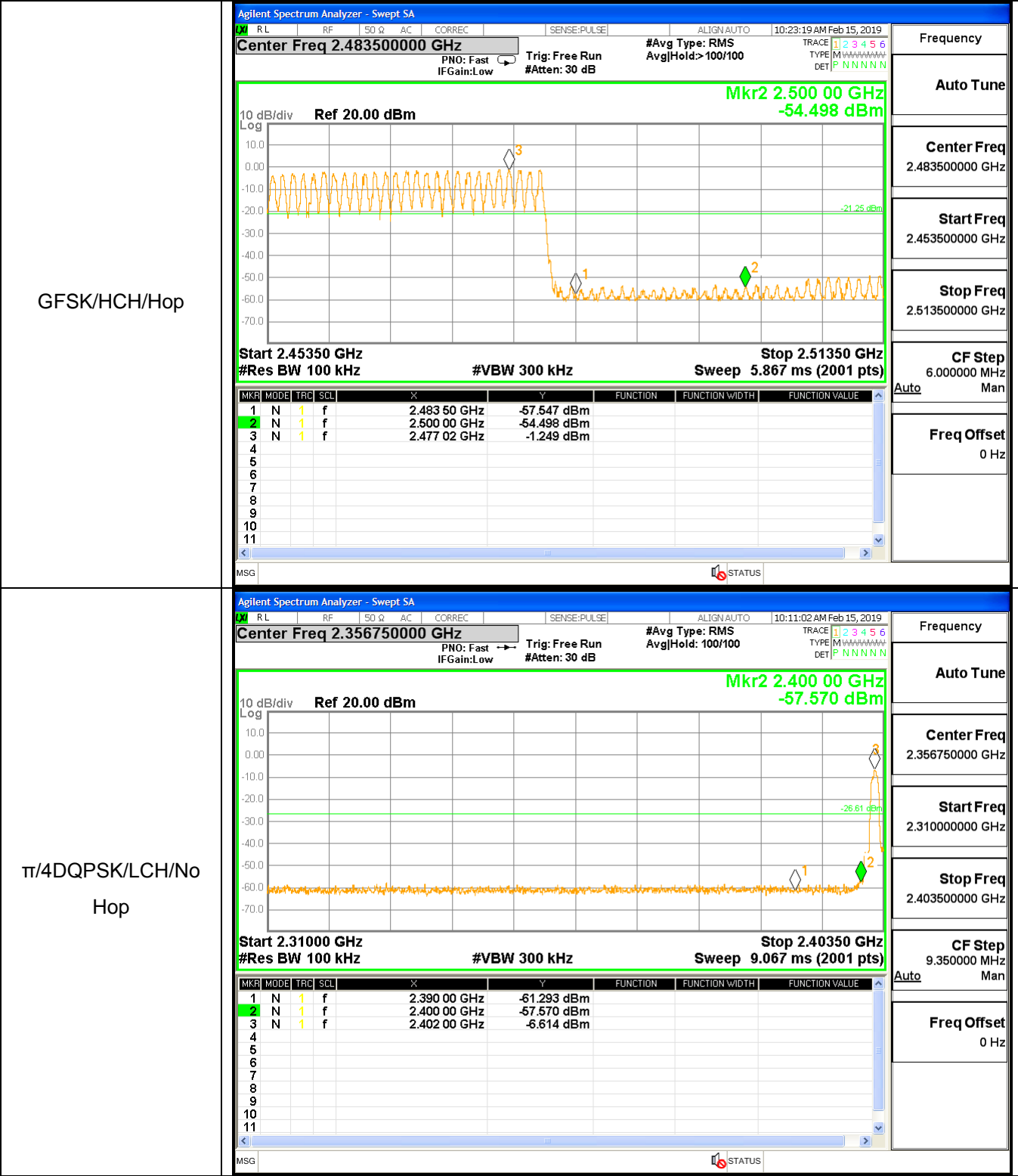


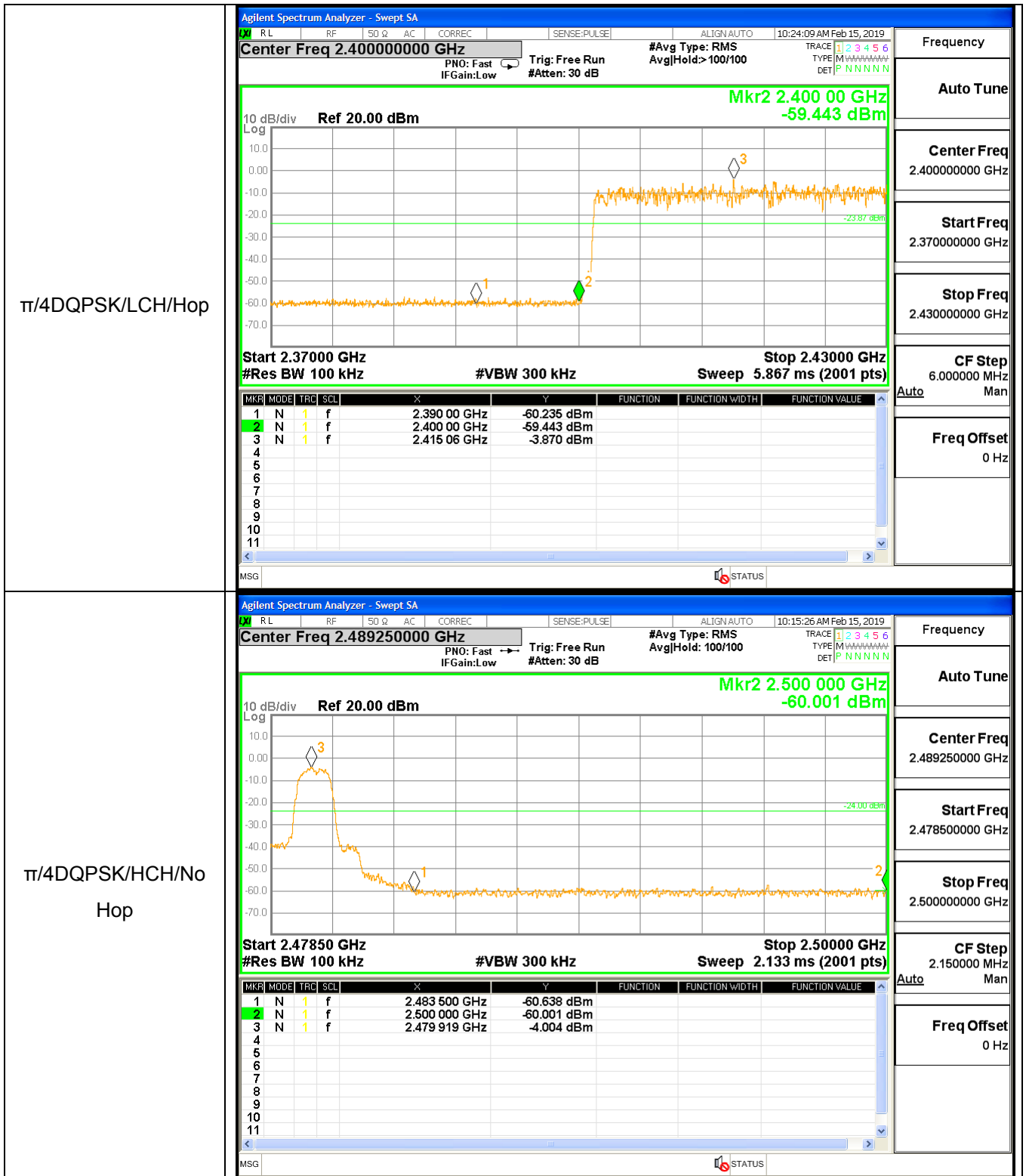
GFSK/LCH/Hop



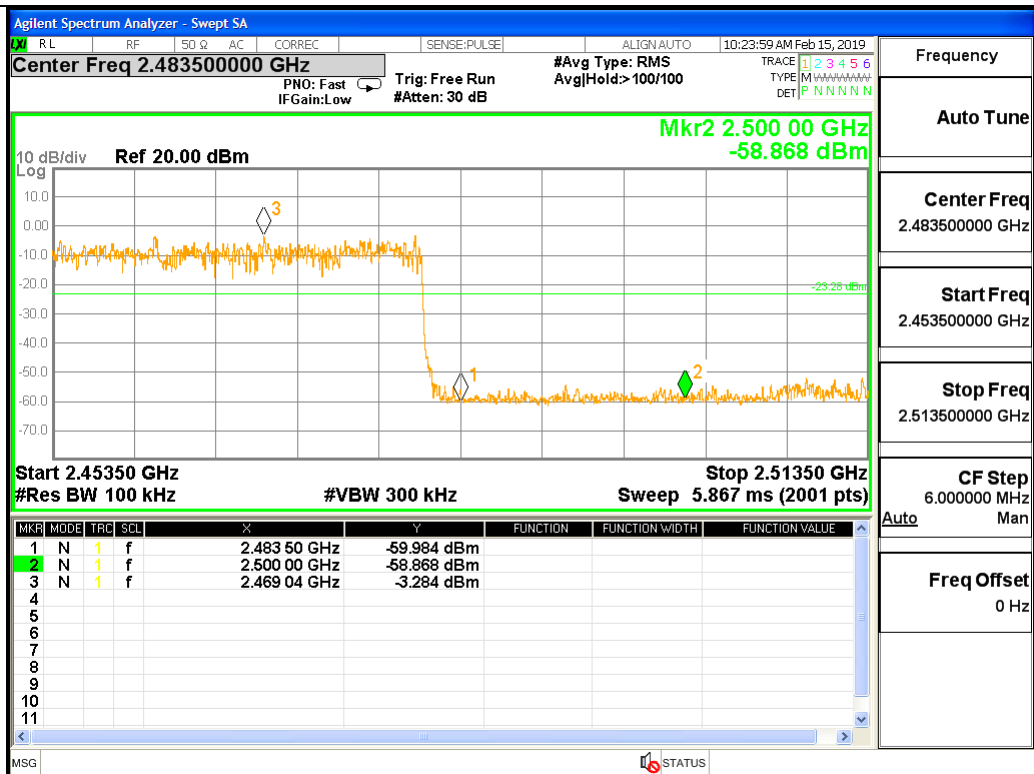
GFSK/HCH/No Hop





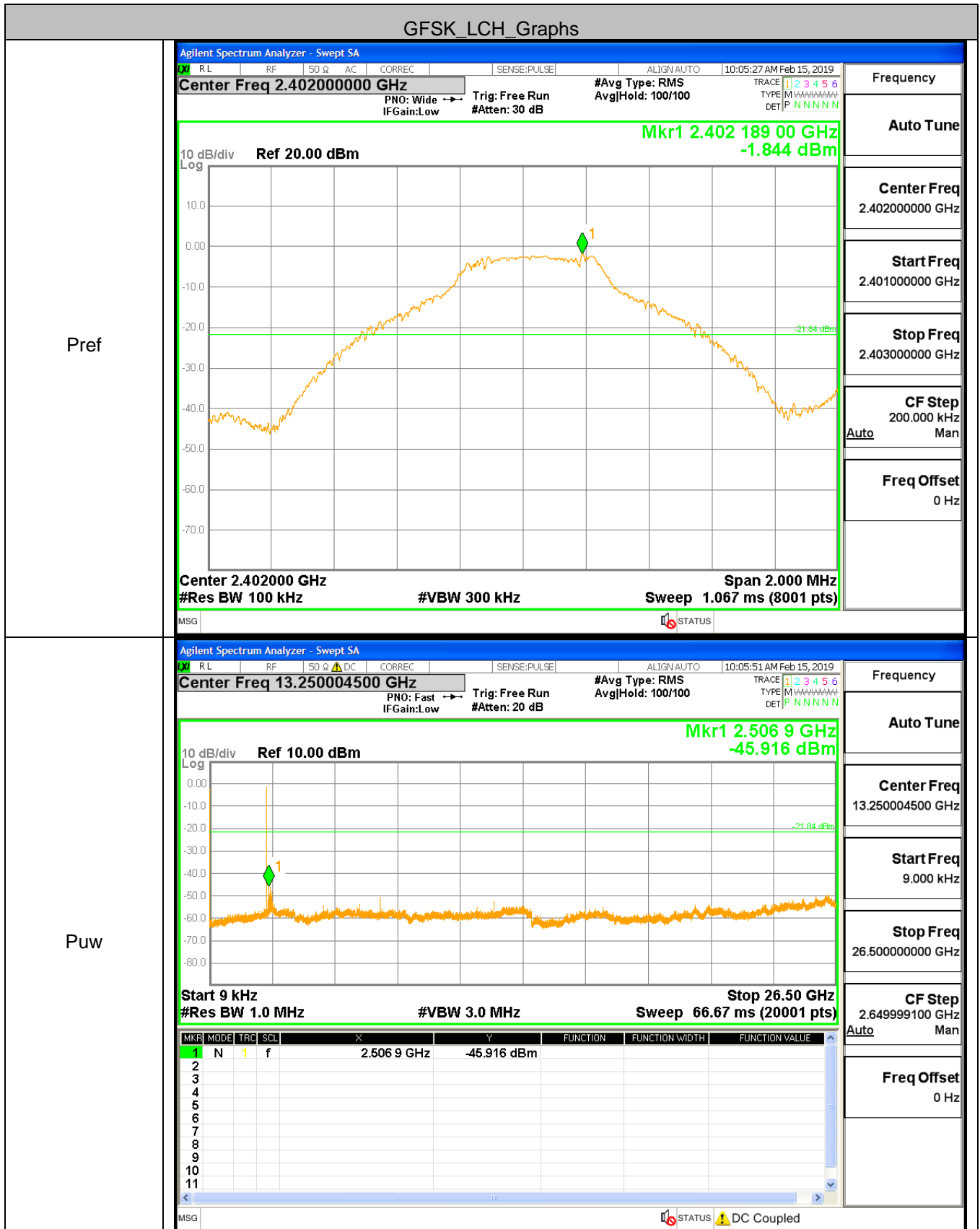


$\pi/4$ DQPSK/HCH/Hop

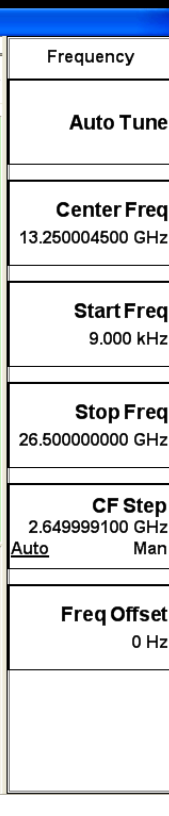
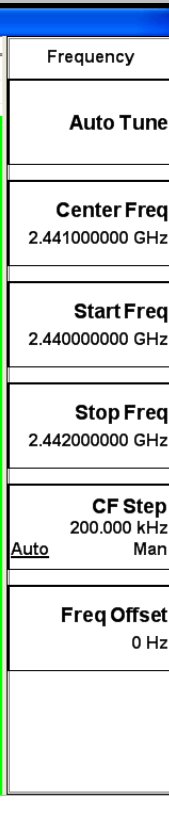


A.7 RF Conducted Spurious Emissions

Test Graph

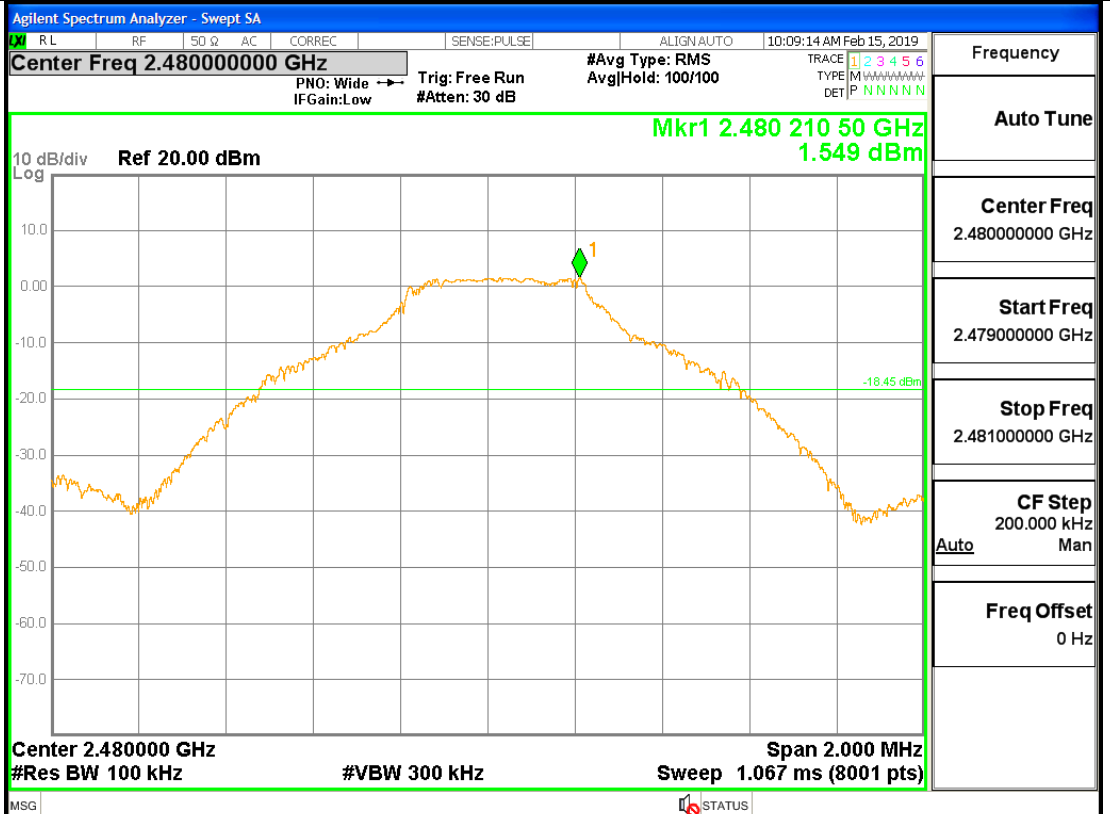


GFSK_MCH_Graphs

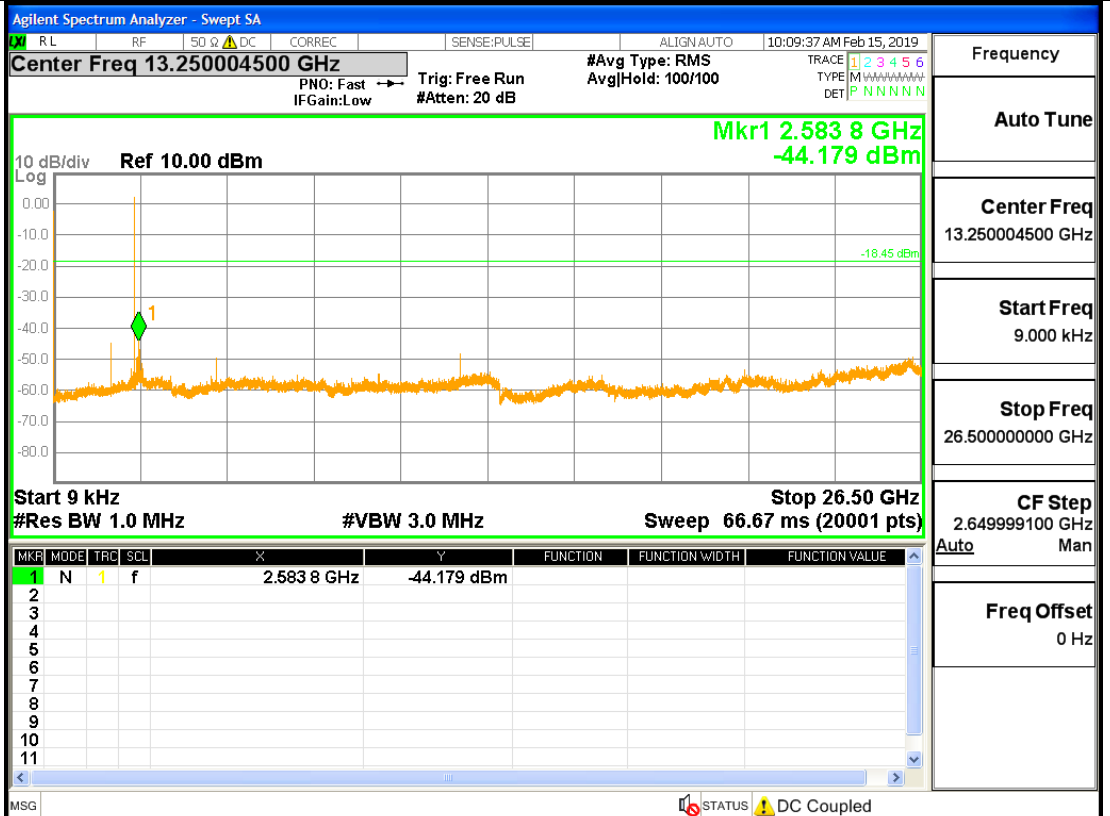


GFSK_HCH_Graphs

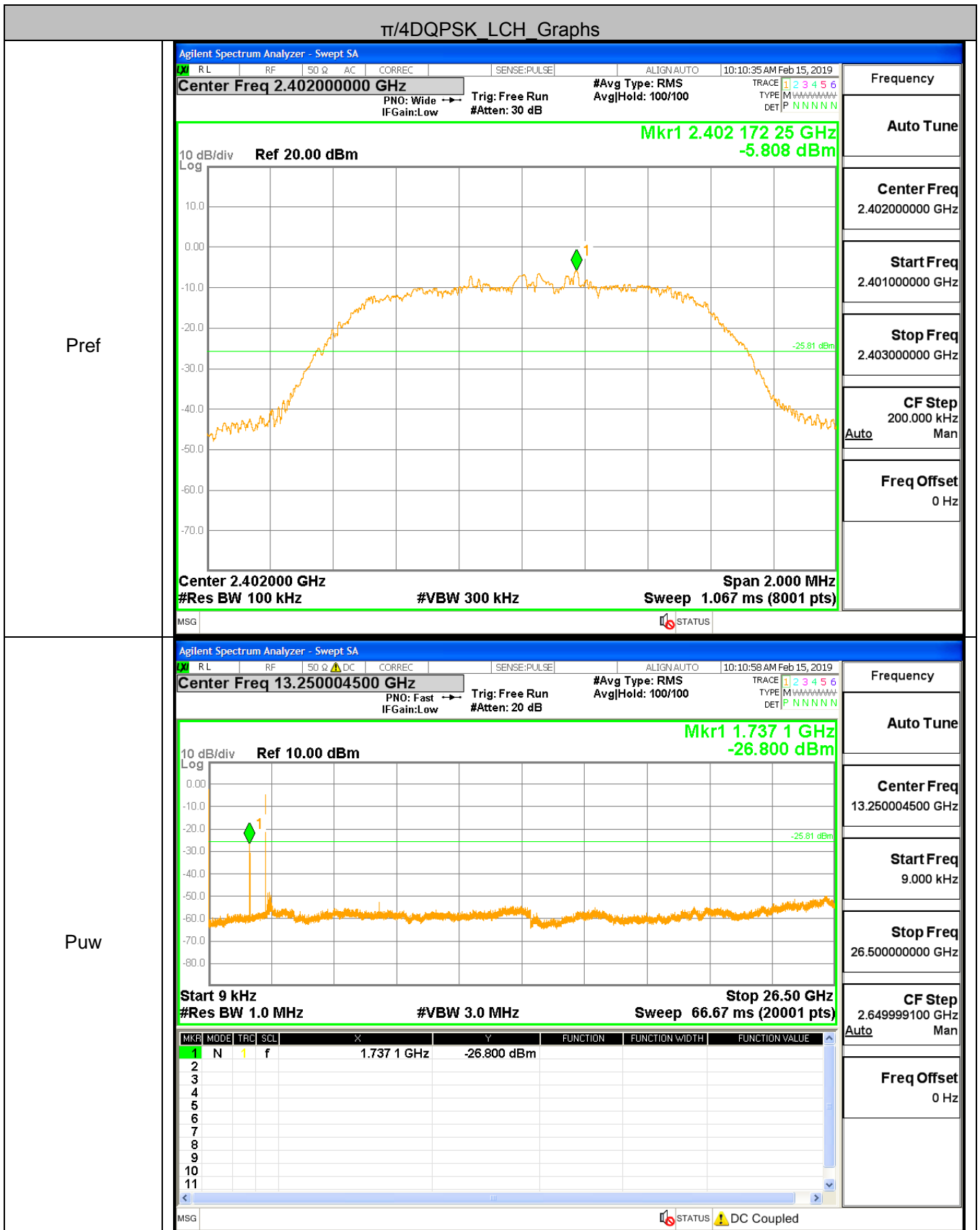
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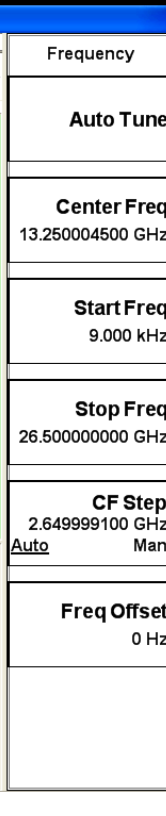
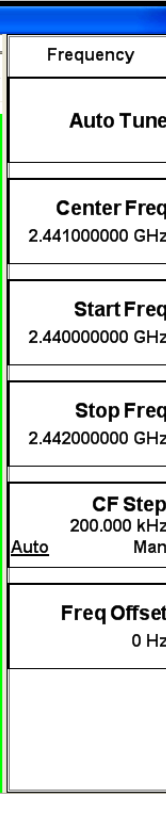
Puw



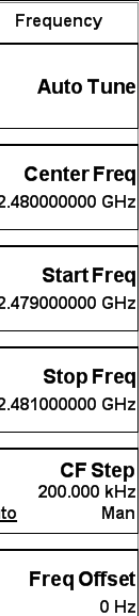
π /4DQPSK LCH Graphs



$\pi/4$ DQPSK MCH Graphs



$\pi/4$ DQPSK HCH Graphs



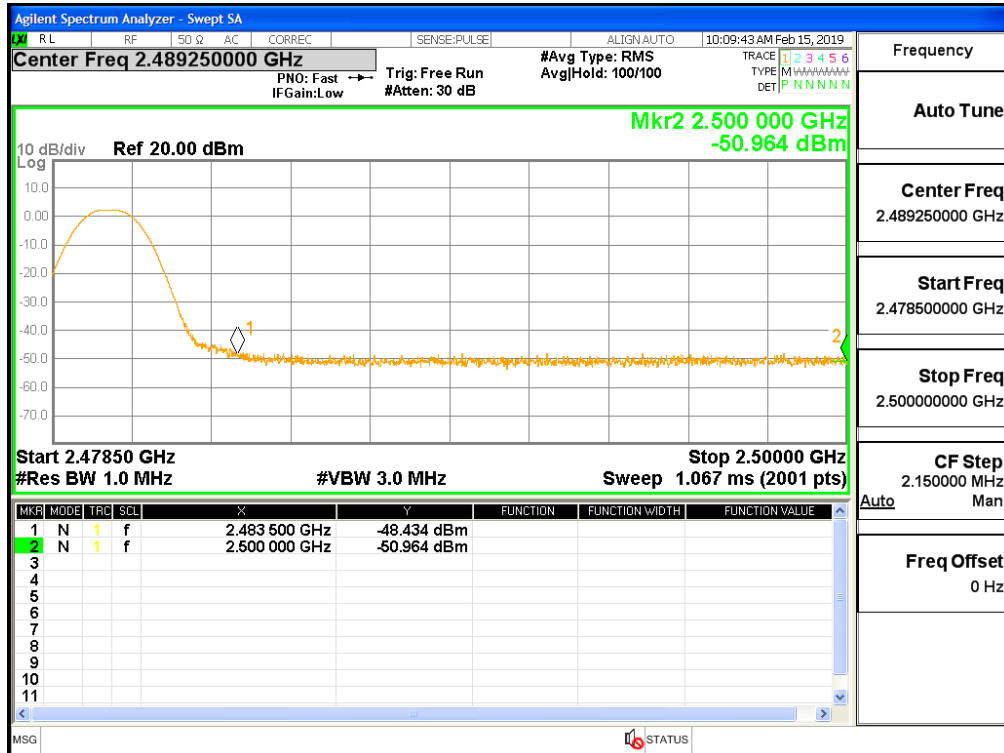
A.8 Restrict-band measurements

Type	Carrier Frequency (MHz)	Frequency(MHz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Average Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2310	2.00	0.00	-50.73	46.98	74	-58.84	38.66	54	Pass
1DH5	2402	2390	2.00	0.00	-50.24	44.88	74	-58.55	38.7	54	Pass
1DH5	2480	2483.5	2.00	0.00	-48.43	52.06	74	-54.37	46.7	54	Pass
1DH5	2480	2500	2.00	0.00	-50.96	46.34	74	-58.01	39.22	54	Pass
2DH5	2402	2310	2.00	0.00	-52.42	45.46	74	-58.84	38.42	54	Pass
2DH5	2402	2390	2.00	0.00	-52.46	46.04	74	-58.59	38.65	54	Pass
2DH5	2480	2483.5	2.00	0.00	-48.64	48.4	74	-55.36	42.92	54	Pass
1DH5	2402	2310	2.00	0.00	-50.73	46.98	74	-58.84	38.66	54	Pass

Test Graph



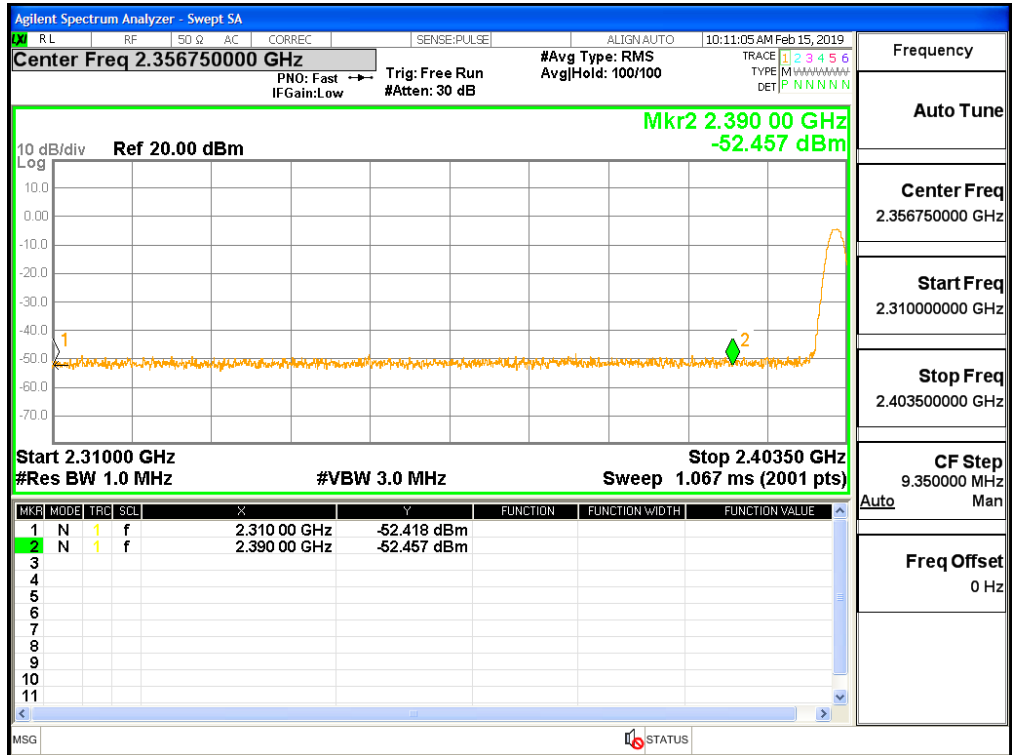
Restrict-band band-edge measurements_2480_PEAK_DH5



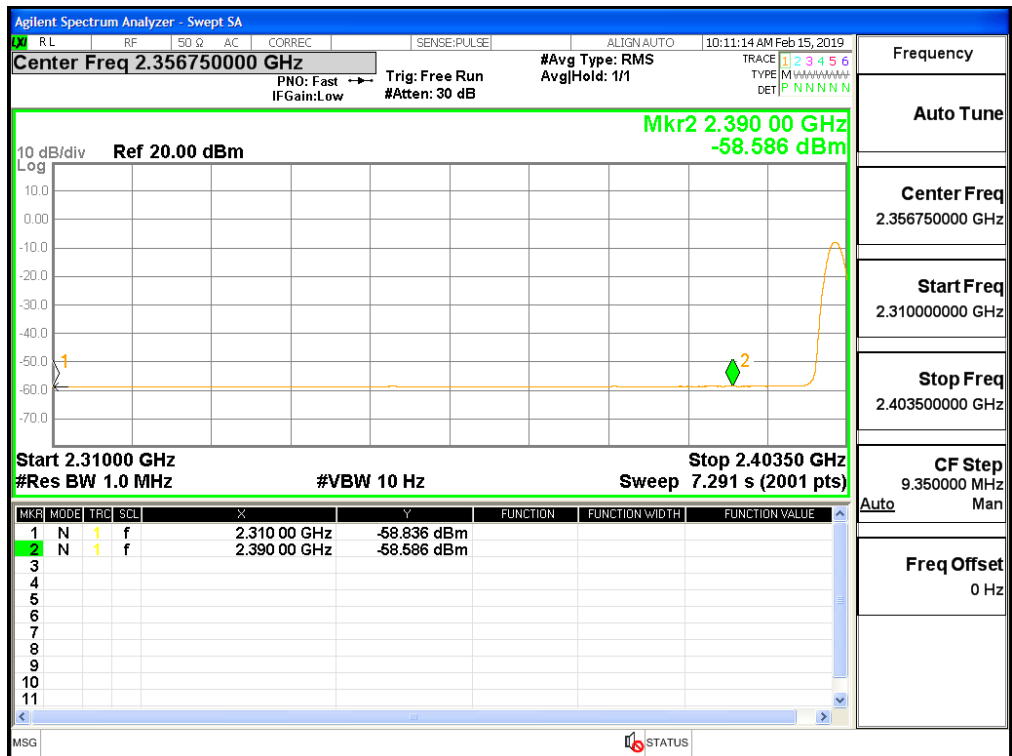
Restrict-band band-edge measurements_2480_AV_DH5



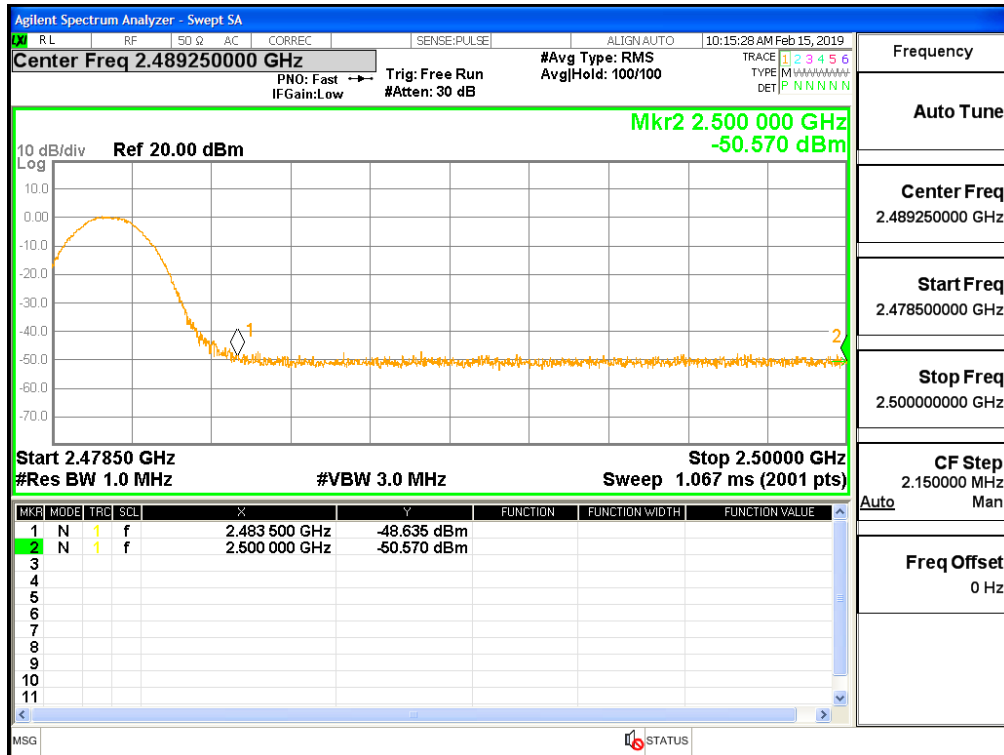
Restrict-band band-edge measurements_2402_PEAK_2DH5



Restrict-band band-edge measurements_2402_AV_2DH5



Restrict-band band-edge measurements_2480_PEAK_2DH5



Restrict-band band-edge measurements_2480_AV_2DH5

