

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

Product Name: Bluetooth Headphone

Trade Mark: N/A

Test Model: W08

FCC ID: QIF-W08

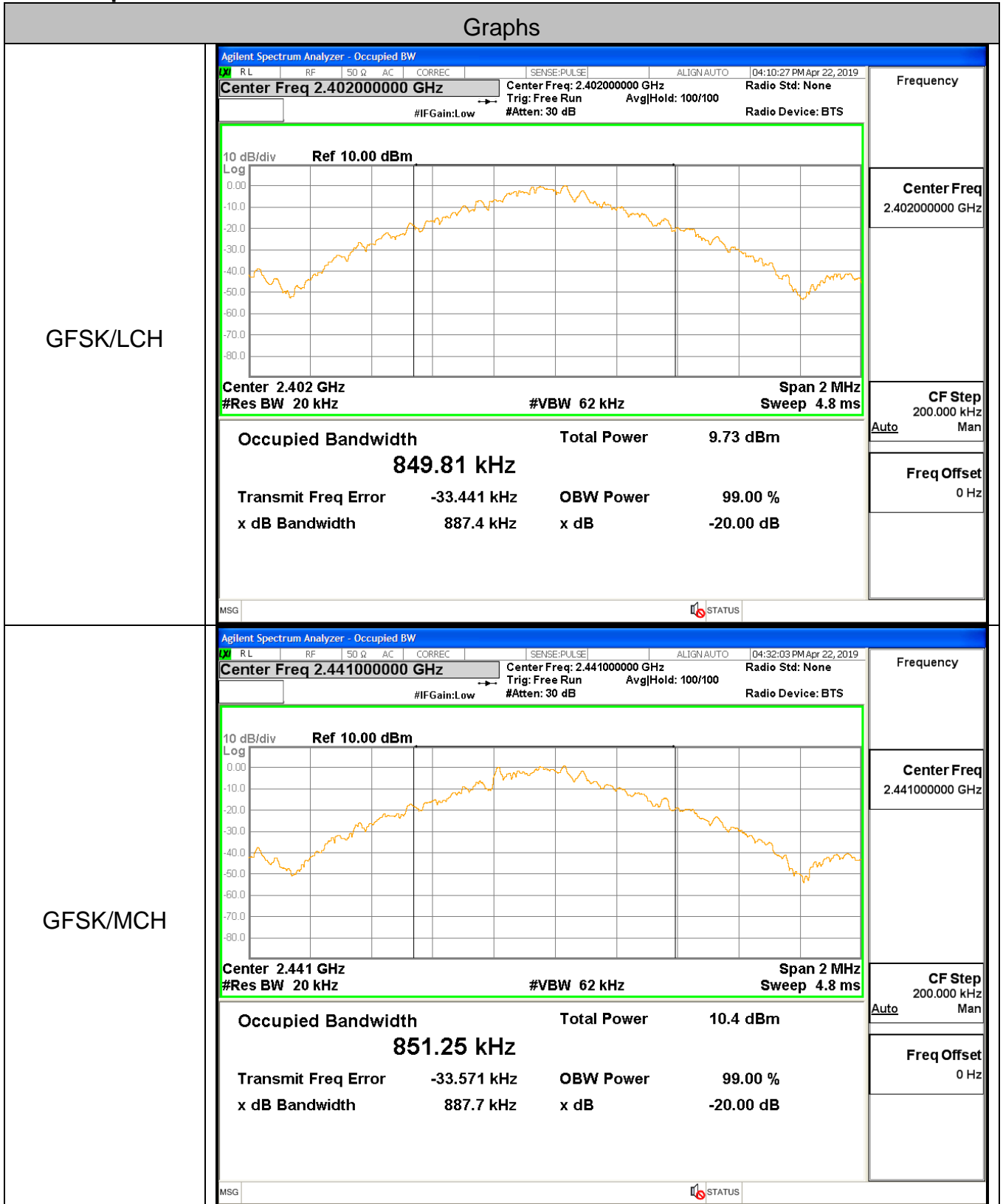
Environmental Conditions

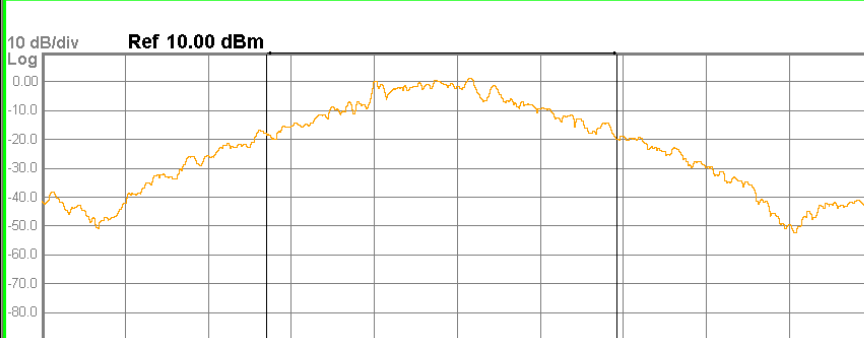
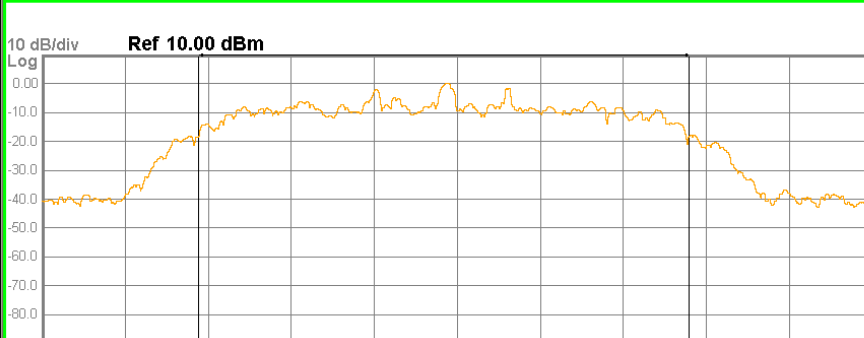
Temperature:	24.1°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Gary Qian
Supervised by:	Eden Hu

A.1 20 dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.887	Not Specified	PASS
GFSK	MCH	0.888	Not Specified	PASS
GFSK	HCH	0.883	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.264	Not Specified	PASS
$\pi/4$ DQPSK	MCH	1.332	Not Specified	PASS
$\pi/4$ DQPSK	HCH	1.304	Not Specified	PASS

Test Graph



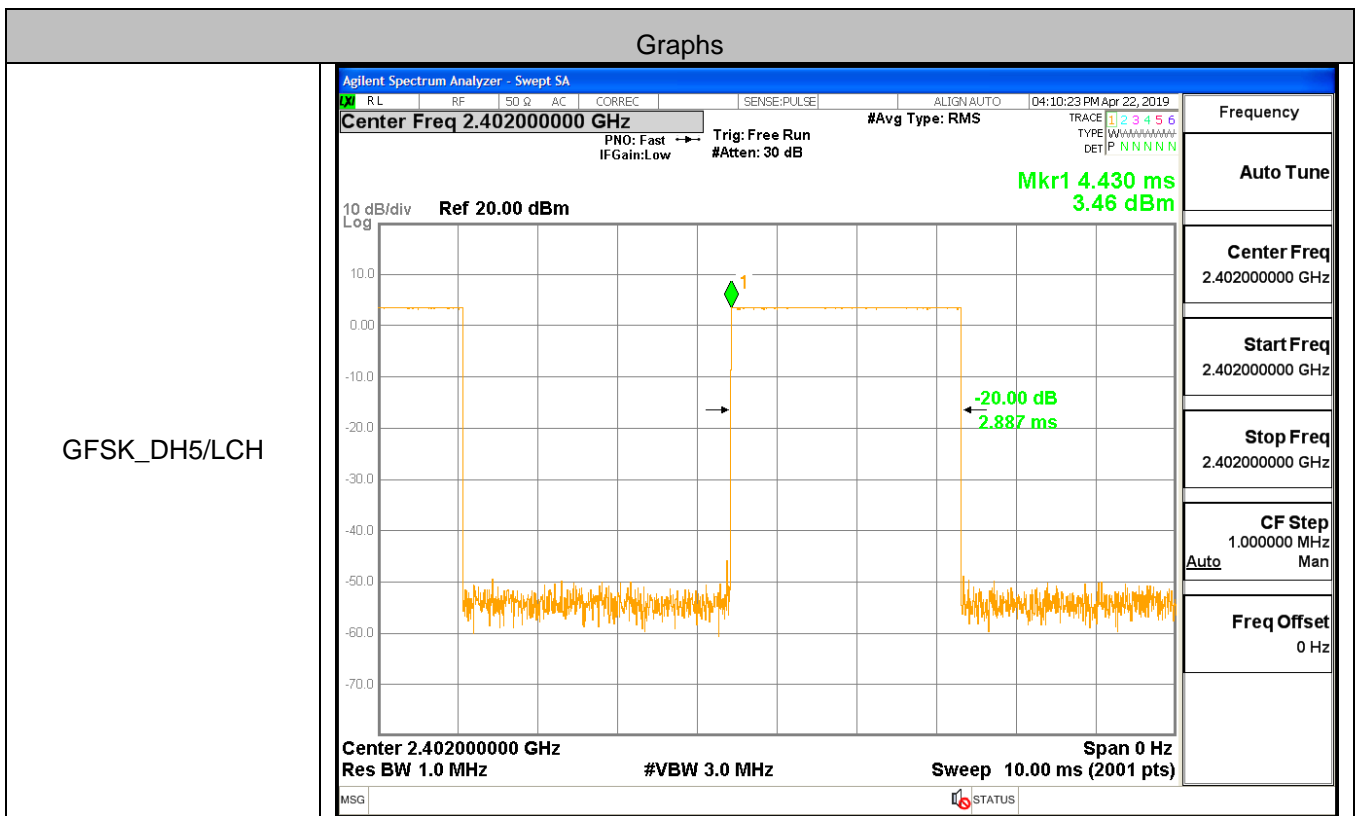
<p style="text-align: center;">GFSK/HCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.48000000 GHz Center Freq: 2.480000000 GHz Radio Std: None</p> <p>Trig: Free Run AvgHold: 100/100</p> <p>#IFGain: Low #Atten: 30 dB Radio Device: BTS</p>  <p>Center 2.48 GHz Span 2 MHz</p> <p>#Res BW 20 kHz #VBW 62 kHz Sweep 4.8 ms</p> <table border="1" data-bbox="459 750 1326 907"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>10.8 dBm</td> </tr> <tr> <td colspan="3" style="text-align: center;">842.00 kHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>-37.659 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>883.2 kHz</td> <td>x dB</td> </tr> <tr> <td></td> <td></td> <td>99.00 %</td> </tr> <tr> <td></td> <td></td> <td>-20.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	10.8 dBm	842.00 kHz			Transmit Freq Error	-37.659 kHz	OBW Power	x dB Bandwidth	883.2 kHz	x dB			99.00 %			-20.00 dB	<p>Frequency</p> <p>Center Freq 2.48000000 GHz</p> <p>CF Step 200.000 kHz</p> <p>Freq Offset 0 Hz</p>
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<p style="text-align: center;">$\pi/4$DQPSK/LCH</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p>Trig: Free Run AvgHold: 100/100</p> <p>#IFGain: Low #Atten: 30 dB Radio Device: BTS</p>  <p>Center 2.402 GHz Span 2 MHz</p> <p>#Res BW 20 kHz #VBW 62 kHz Sweep 4.8 ms</p> <table border="1" data-bbox="459 1534 1326 1691"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>9.47 dBm</td> </tr> <tr> <td colspan="3" style="text-align: center;">1.1816 MHz</td> </tr> <tr> <td>Transmit Freq Error</td> <td>-32.947 kHz</td> <td>OBW Power</td> </tr> <tr> <td>x dB Bandwidth</td> <td>1.264 MHz</td> <td>x dB</td> </tr> <tr> <td></td> <td></td> <td>99.00 %</td> </tr> <tr> <td></td> <td></td> <td>-20.00 dB</td> </tr> </table>	Occupied Bandwidth	Total Power	9.47 dBm	1.1816 MHz			Transmit Freq Error	-32.947 kHz	OBW Power	x dB Bandwidth	1.264 MHz	x dB			99.00 %			-20.00 dB	<p>Frequency</p> <p>Center Freq 2.40200000 GHz</p> <p>CF Step 200.000 kHz</p> <p>Freq Offset 0 Hz</p>
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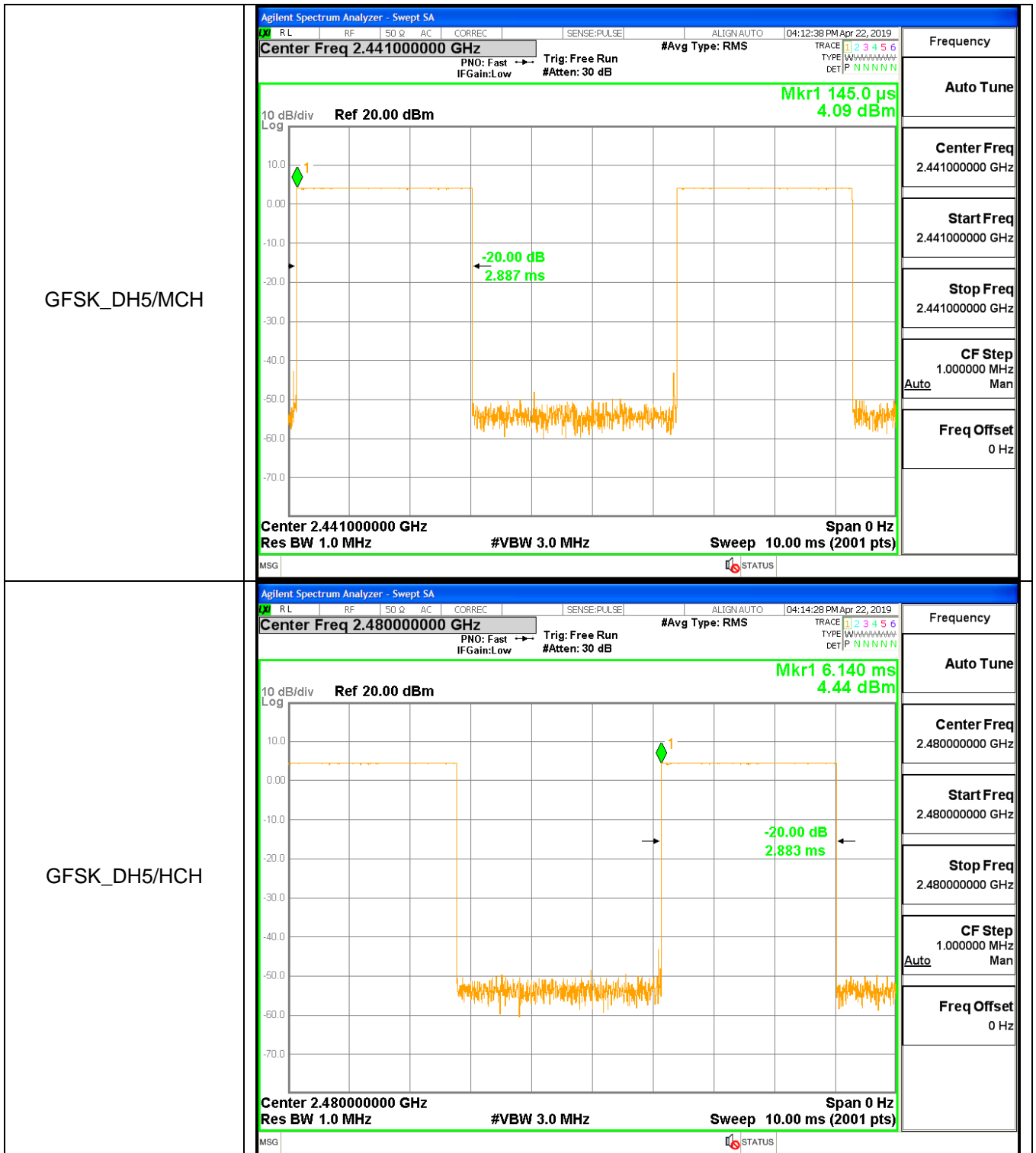


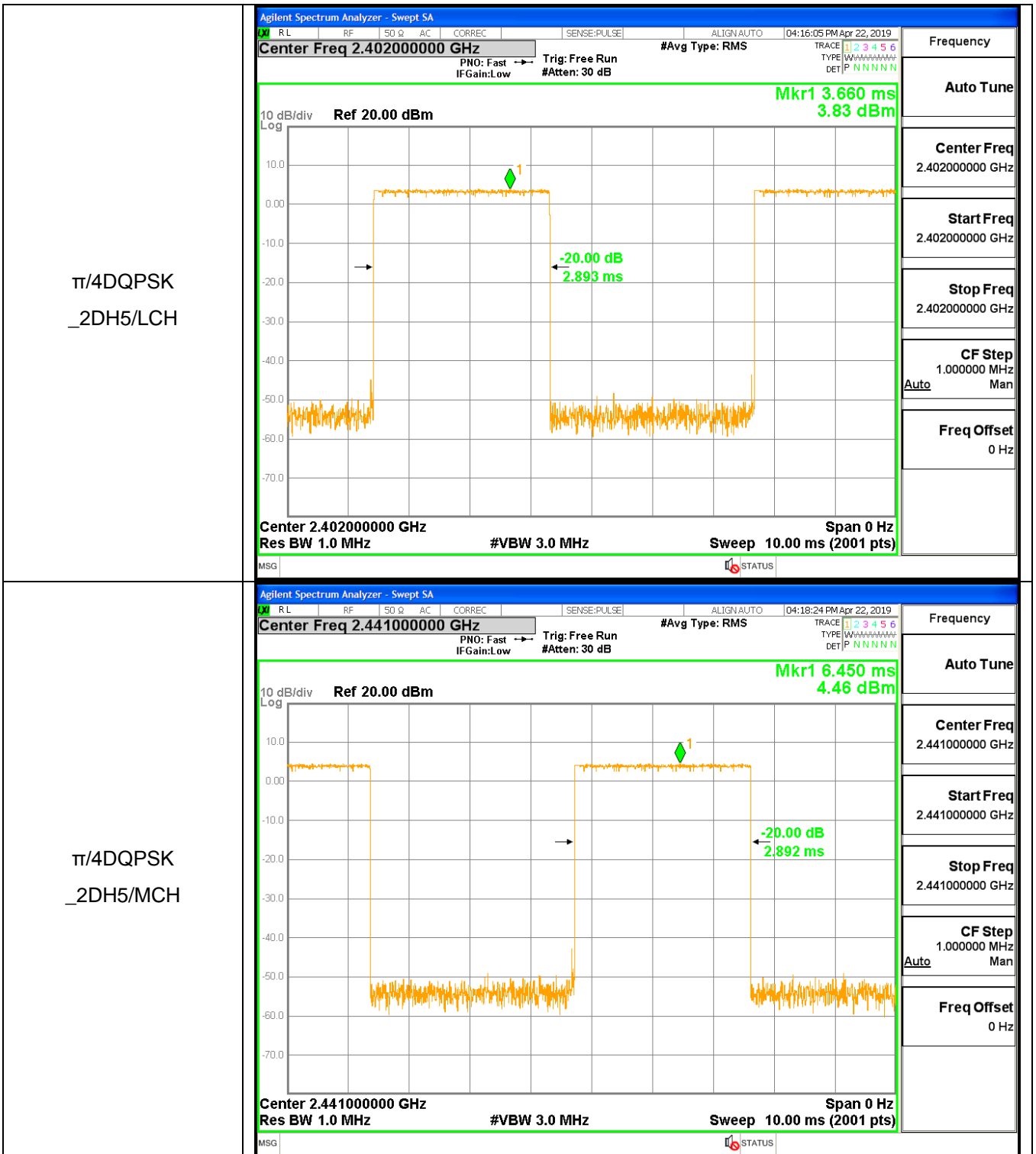
A.2 Dwell Time

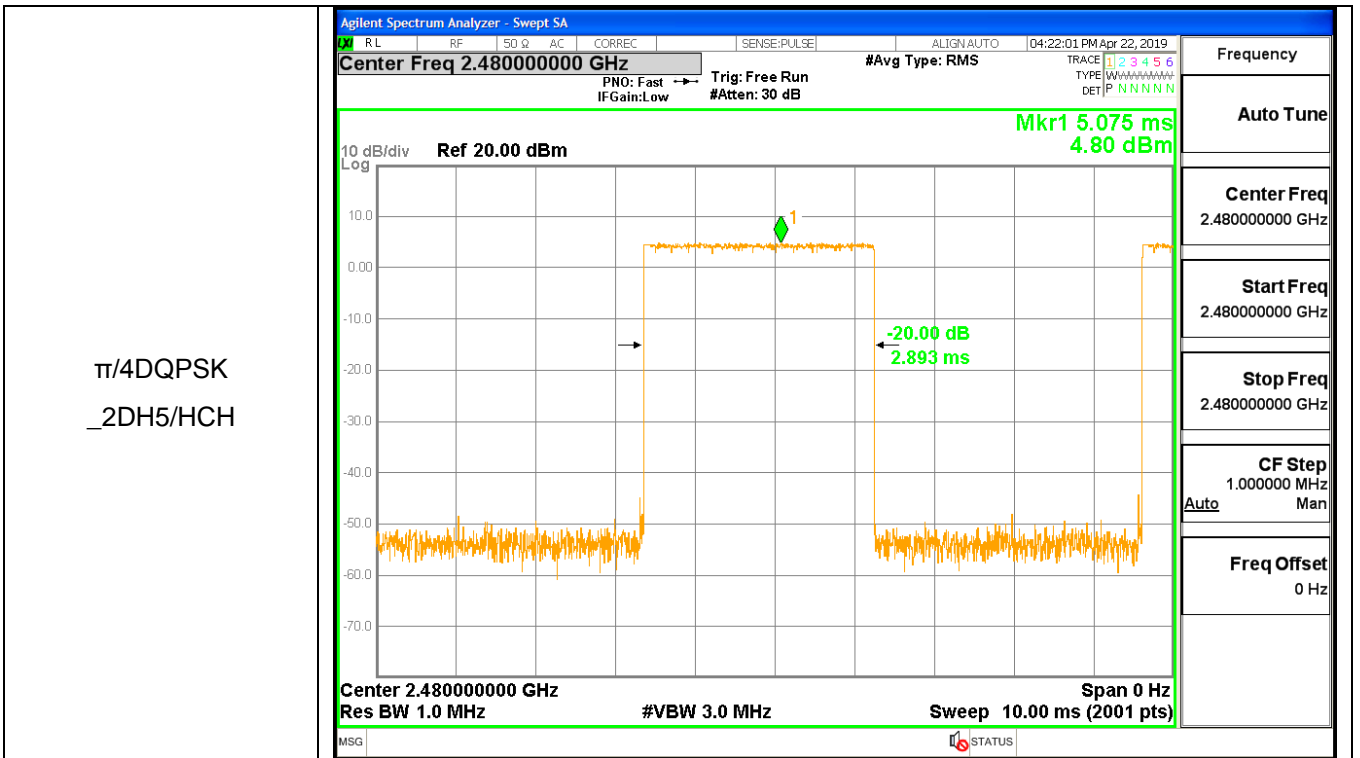
Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002887	106.7	0.308081	0.4	PASS
GFSK	DH5	MCH	0.002887	106.7	0.308033	0.4	PASS
GFSK	DH5	HCH	0.002883	106.7	0.307653	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	0.002893	106.7	0.308672	0.4	PASS
$\pi/4$ DQPSK	2DH5	MCH	0.002892	106.7	0.308623	0.4	PASS
$\pi/4$ DQPSK	2DH5	HCH	0.002893	106.7	0.308677	0.4	PASS

Test Graph





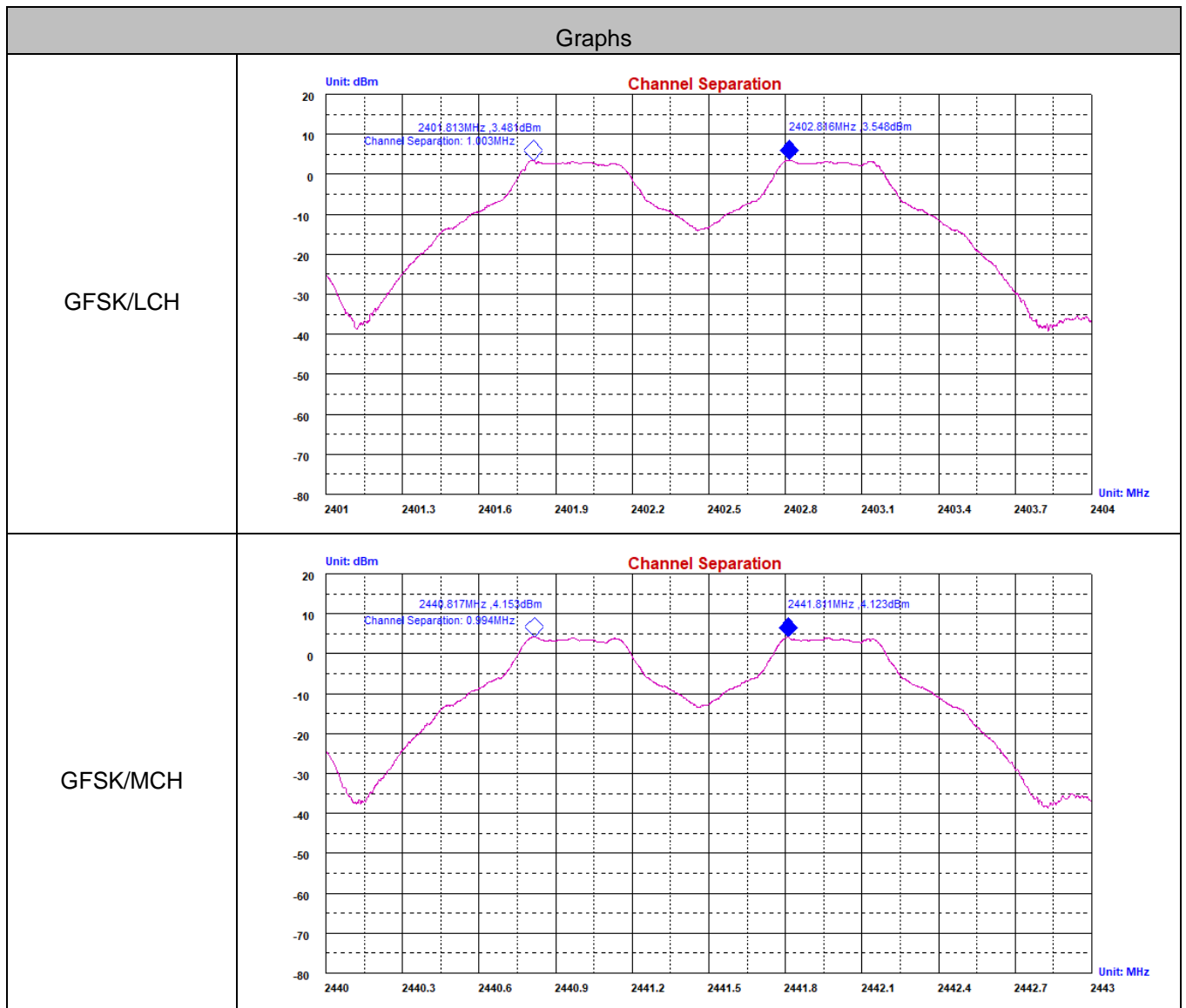


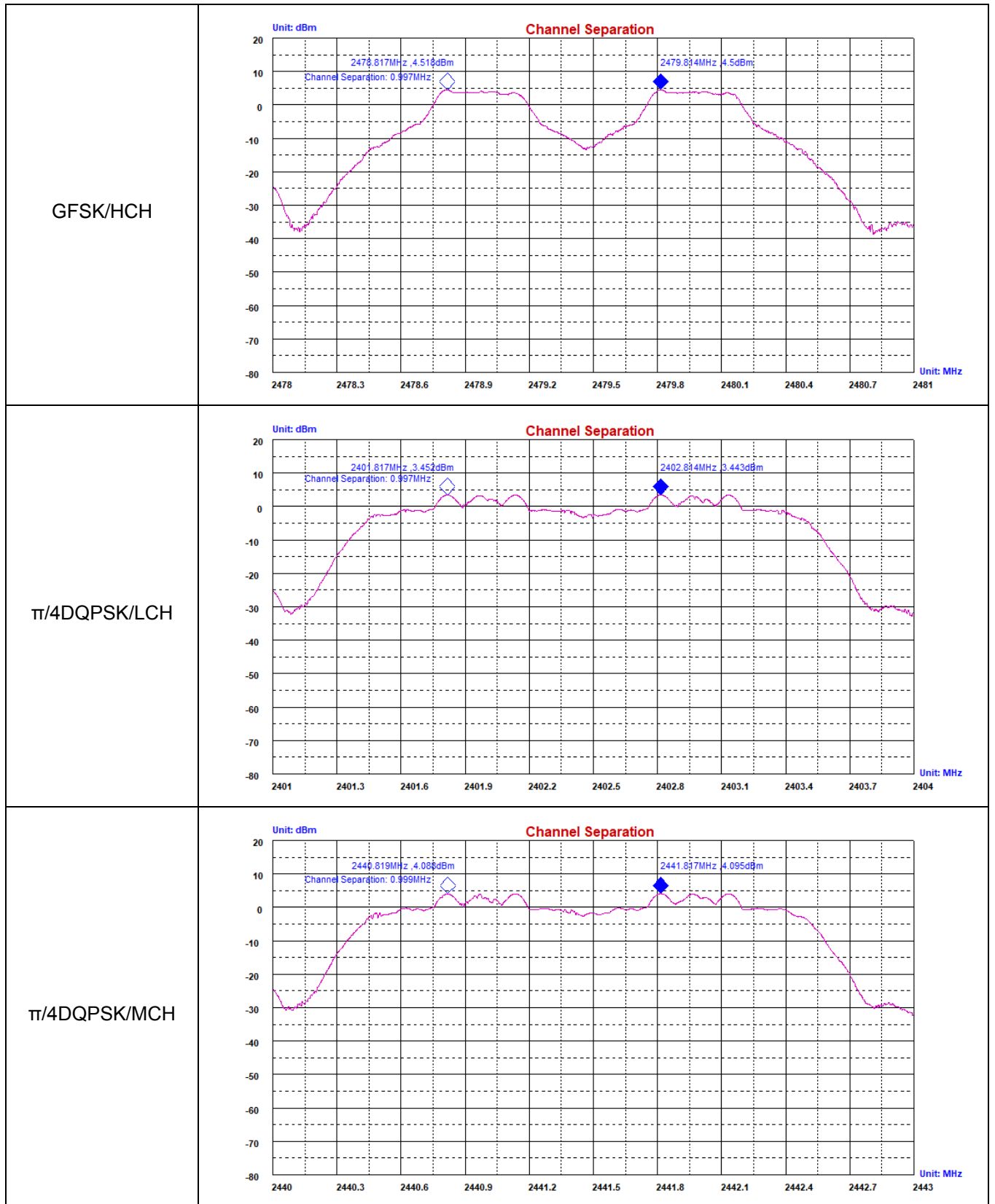


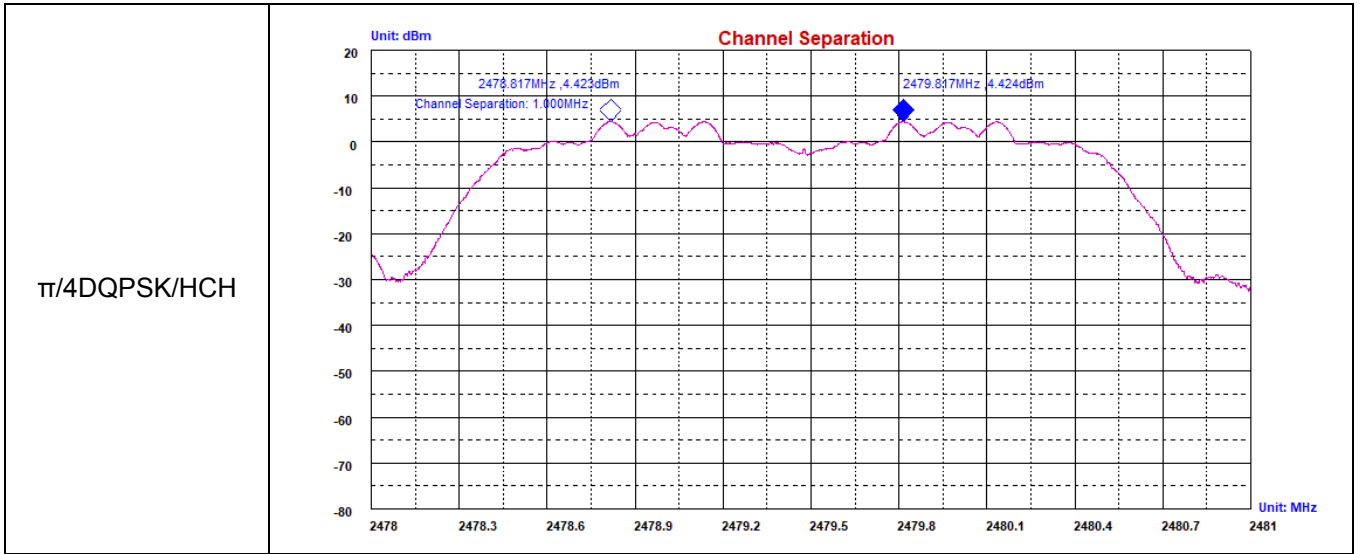
A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.003	0.591	PASS
GFSK	MCH	0.994	0.592	PASS
GFSK	HCH	1.060	0.589	PASS
$\pi/4$ DQPSK	LCH	0.997	0.843	PASS
$\pi/4$ DQPSK	MCH	0.999	0.888	PASS
$\pi/4$ DQPSK	HCH	1.000	0.869	PASS

Test Graph



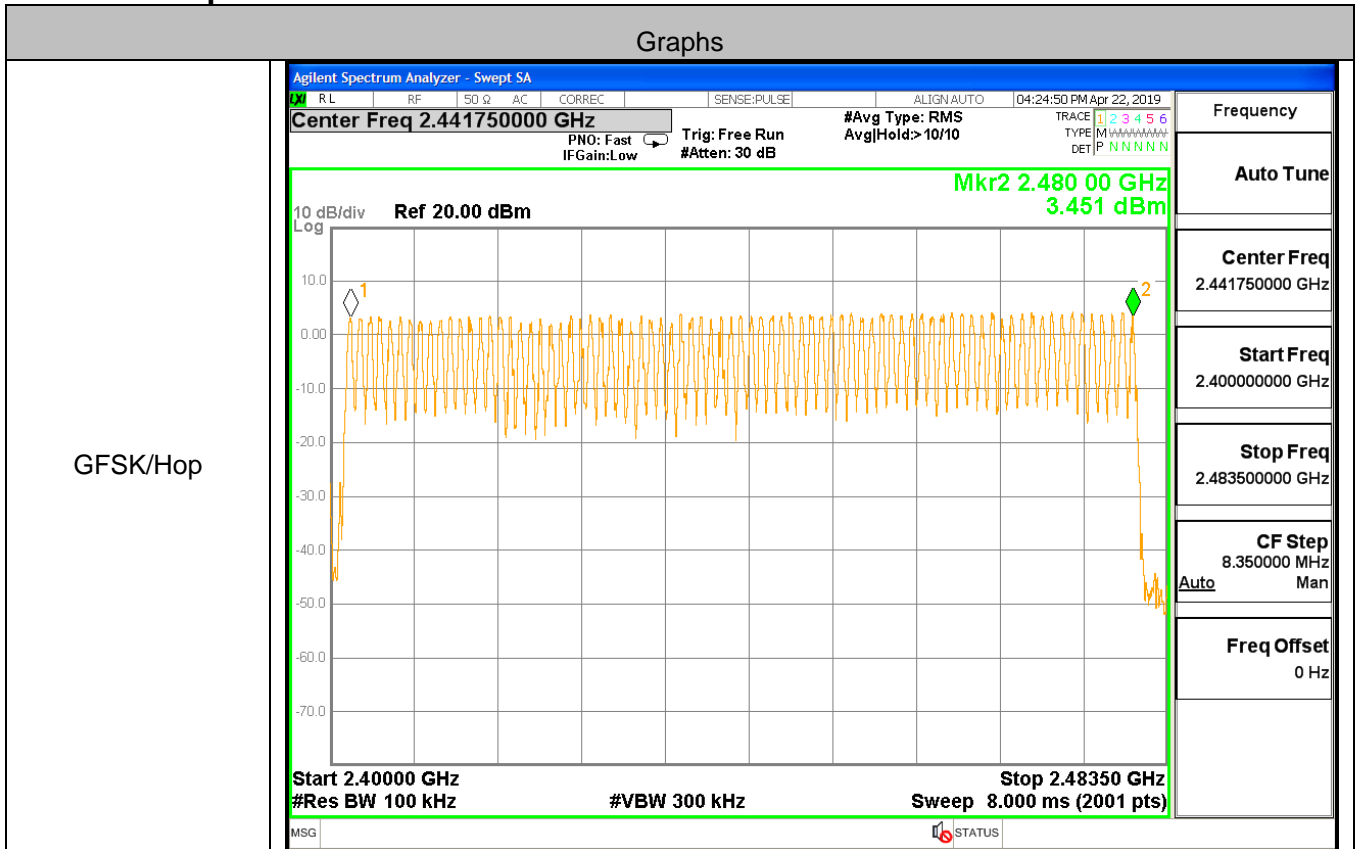


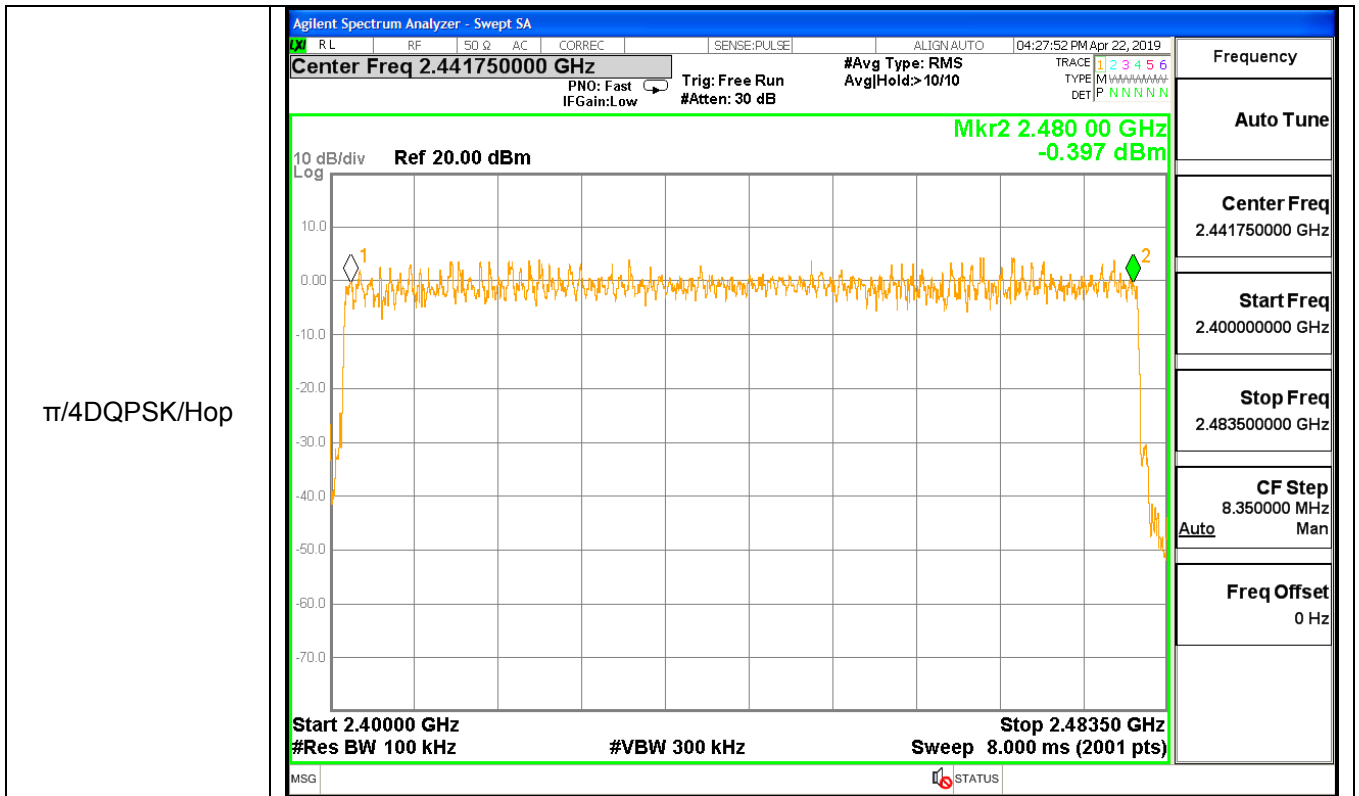


A.4 Hopping Channel Number

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

Test Graph

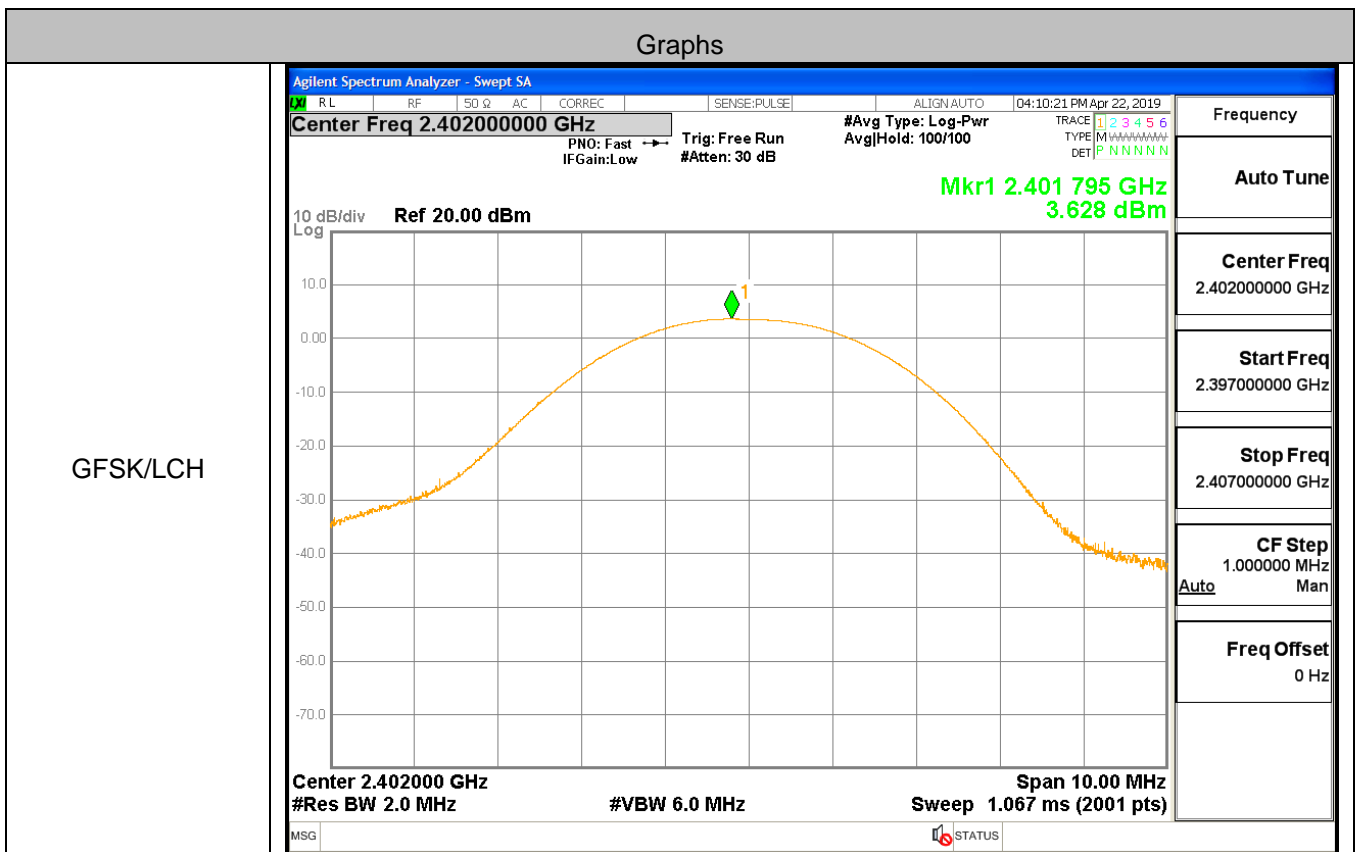


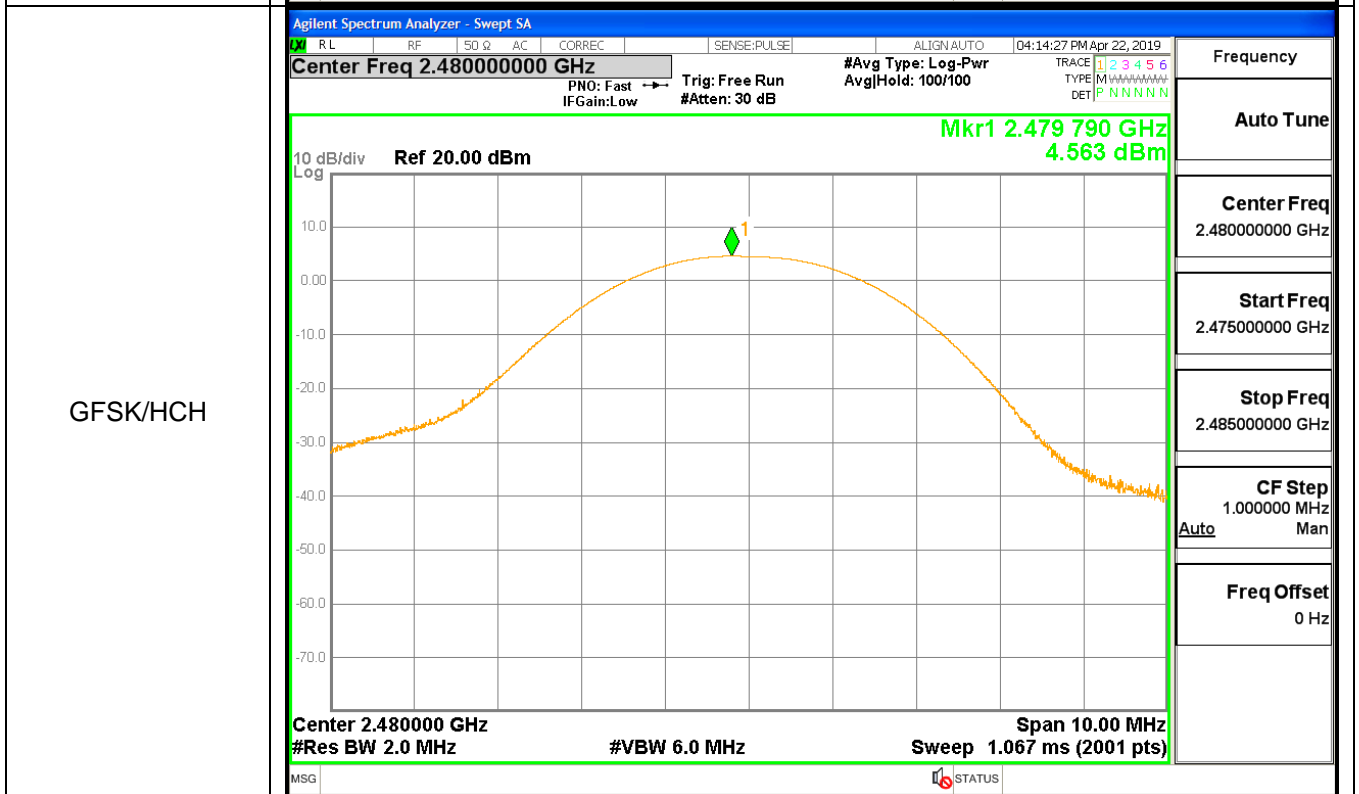
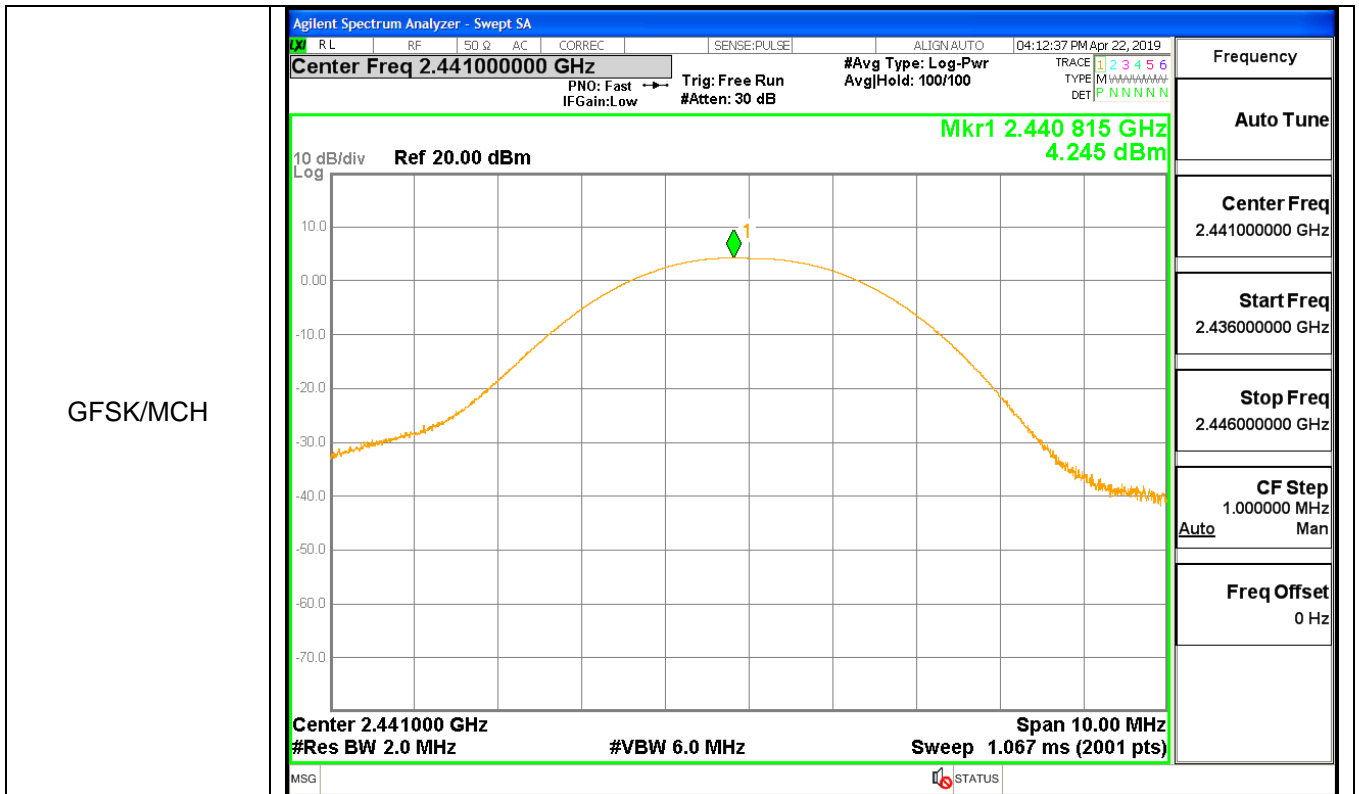


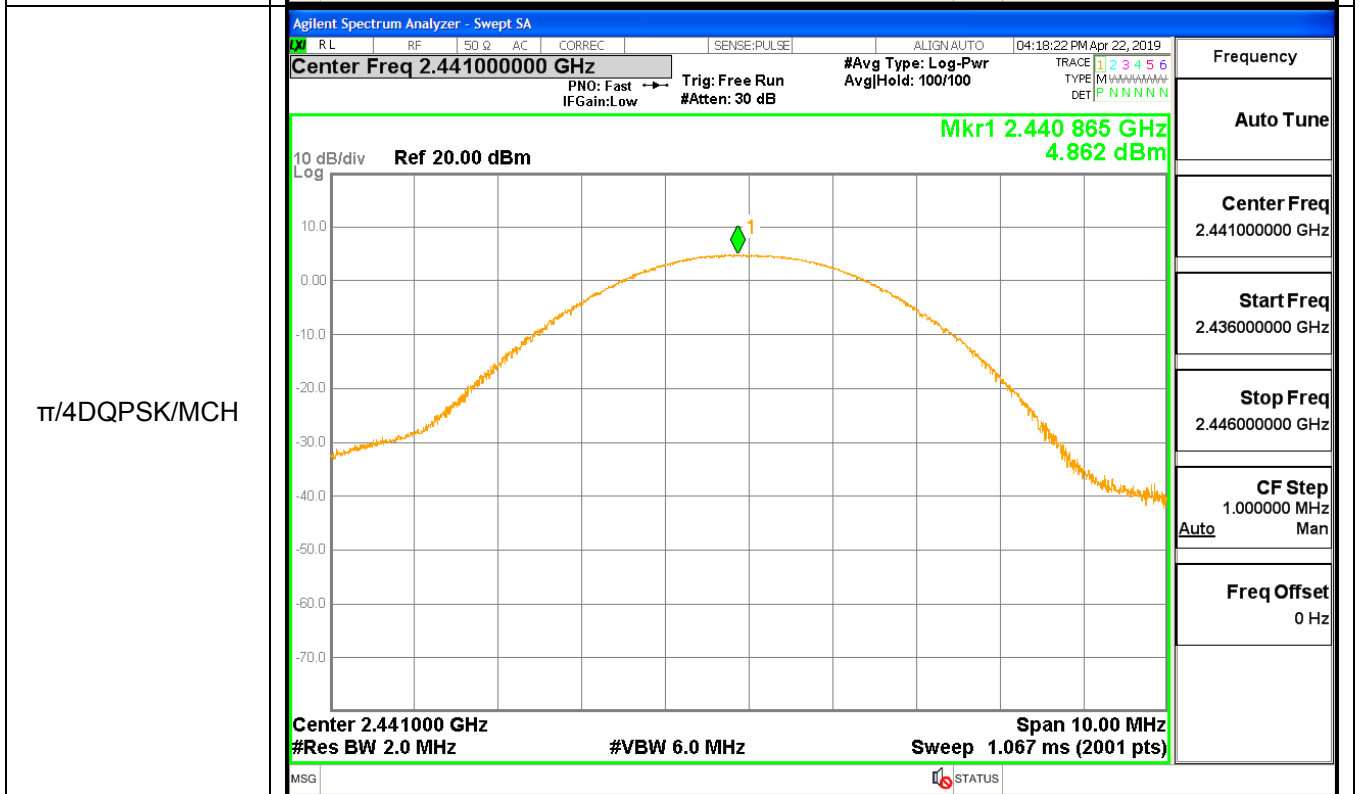
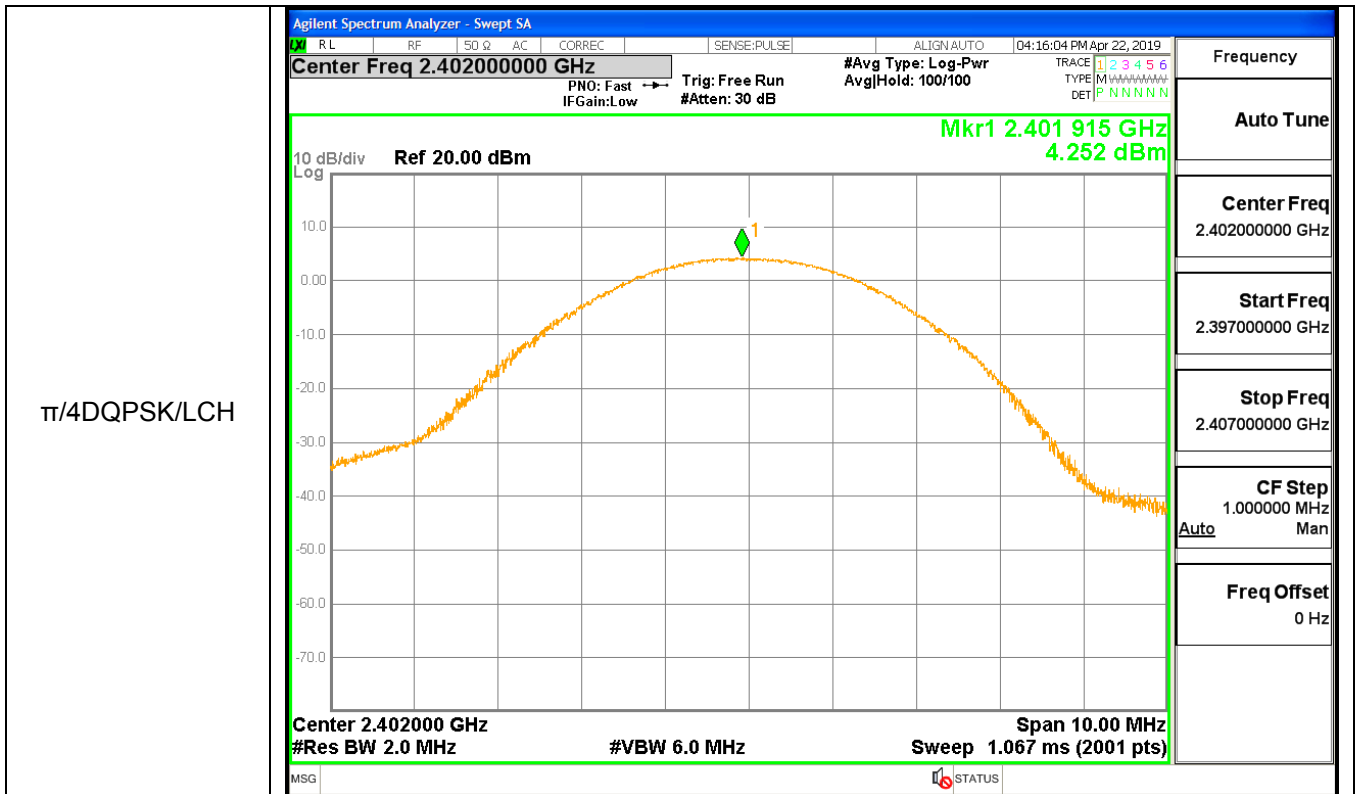
A.5 Conducted Peak Output Power

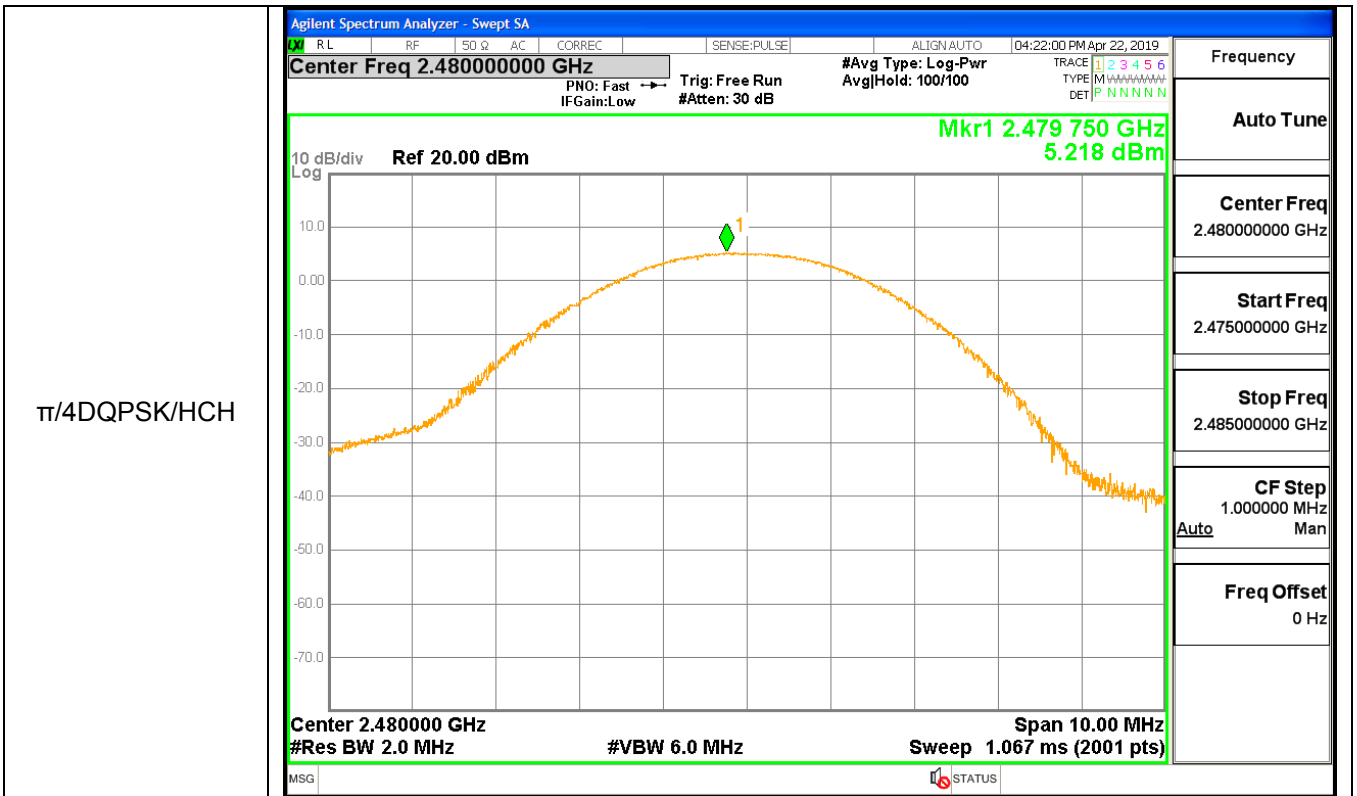
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3.628	21	PASS
GFSK	MCH	4.245	21	PASS
GFSK	HCH	4.563	21	PASS
$\pi/4$ DQPSK	LCH	4.252	21	PASS
$\pi/4$ DQPSK	MCH	4.862	21	PASS
$\pi/4$ DQPSK	HCH	5.218	21	PASS

Test Graph









STATUS

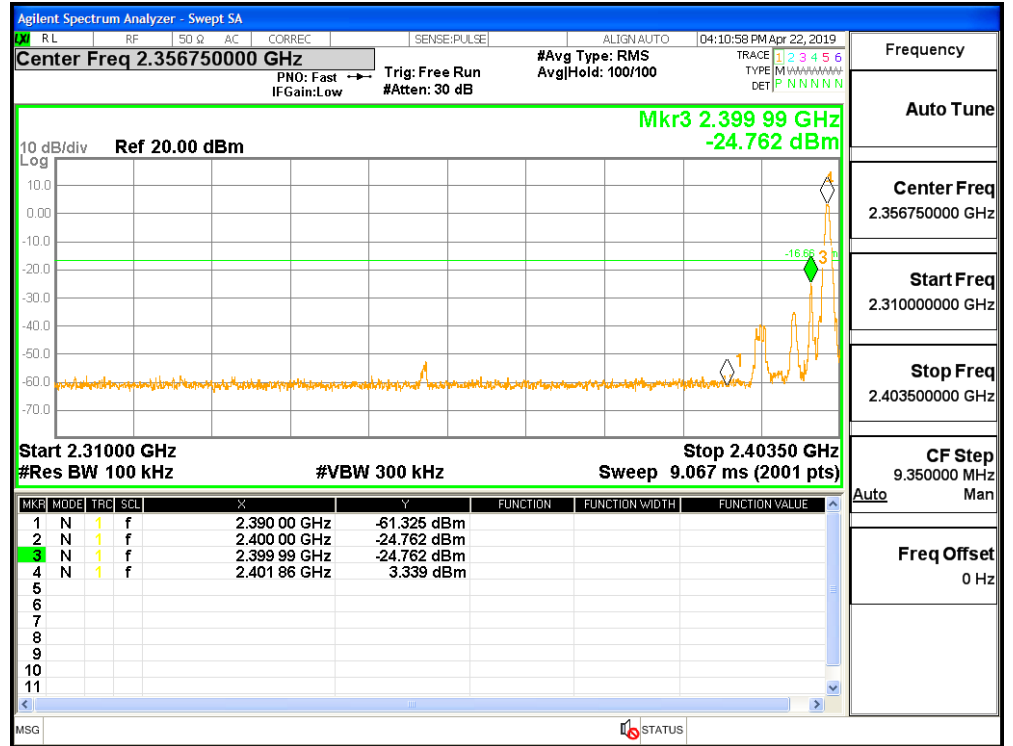
A.6 Band-edge for RF Conducted Emissions

Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2400	3.34	-24.76	-16.66	Pass
1DH5	2480	2483.983	4.13	-44.22	-15.87	Pass
2DH5	2402	2400	0.65	-26.80	-19.35	Pass
2DH5	2480	2483.5	1.62	-46.62	-18.38	Pass
1DH5-Hopping	2402	2399.97	3.88	-27.61	-16.12	Pass
1DH5-Hopping	2480	2484.43	4.27	-44.24	-15.73	Pass
2DH5-Hopping	2402	2400	3.23	-24.59	-16.77	Pass
2DH5-Hopping	2480	2486.14	4.22	-47.82	-15.78	Pass

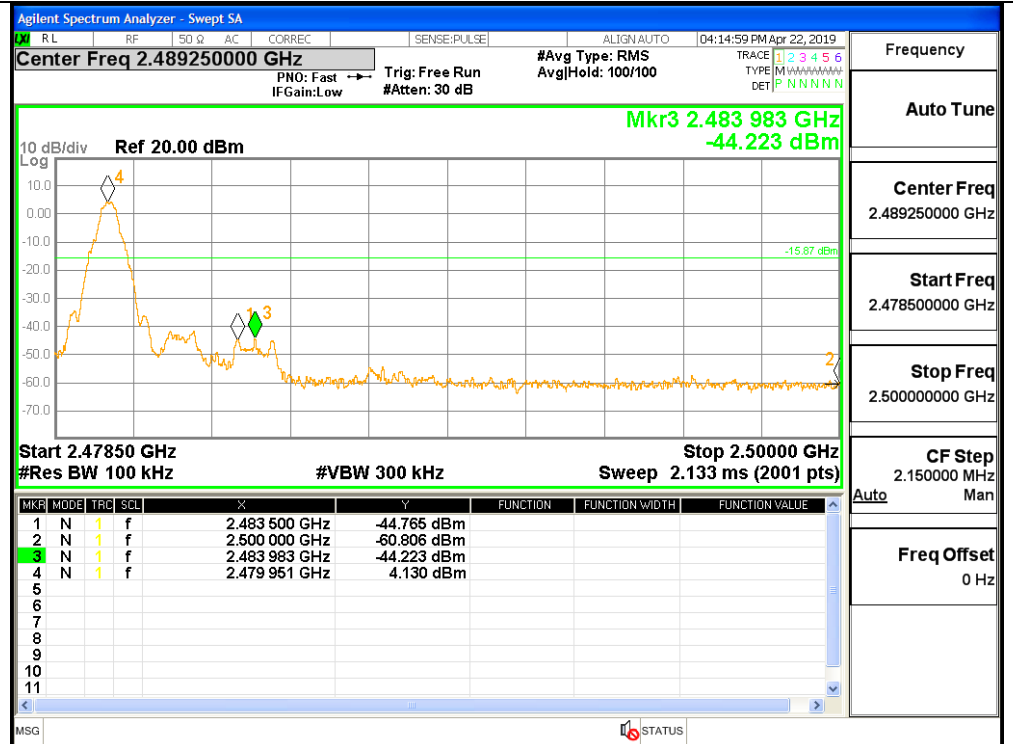
Test Graph

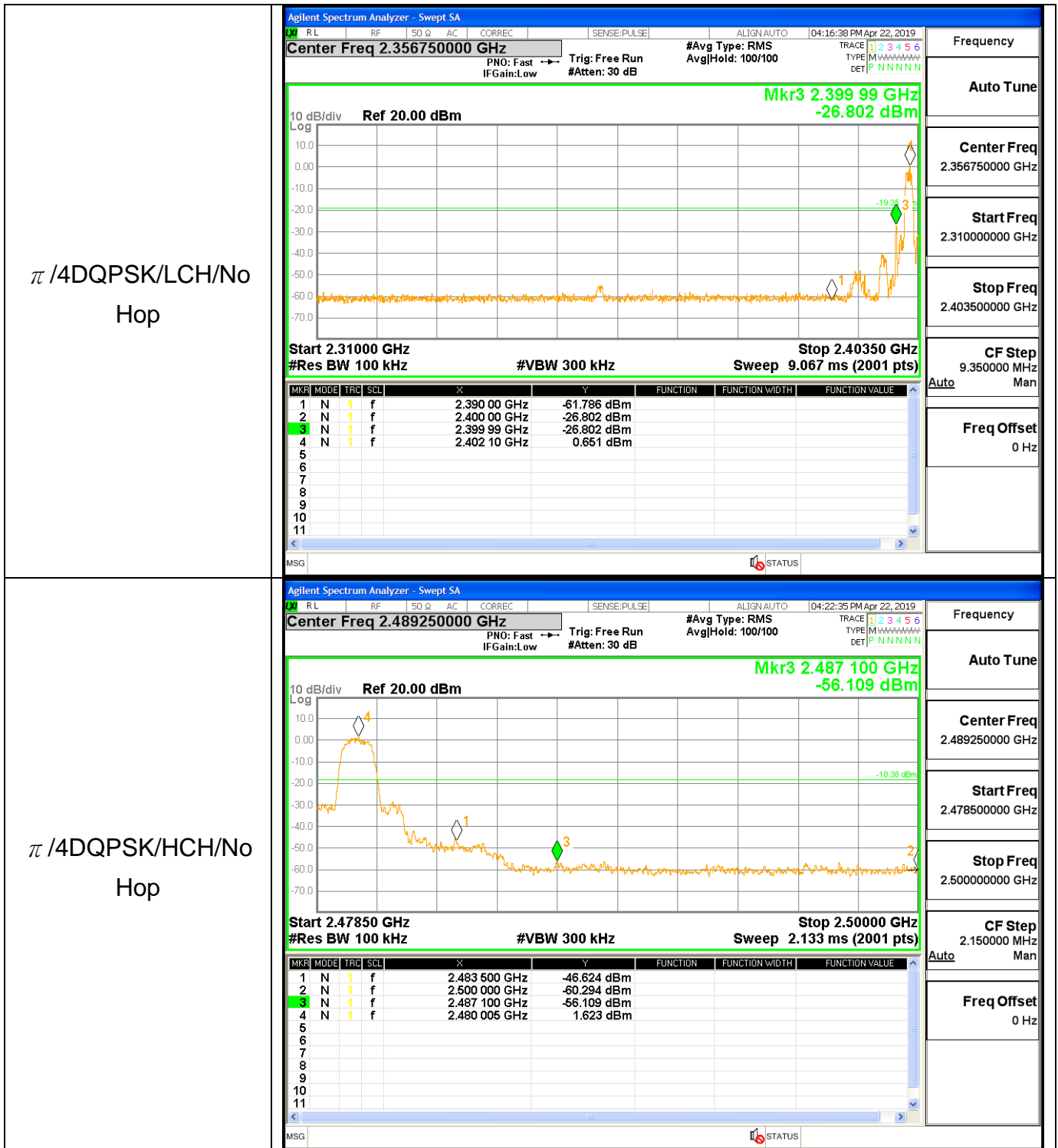
Graphs

GFSK/LCH/No Hop

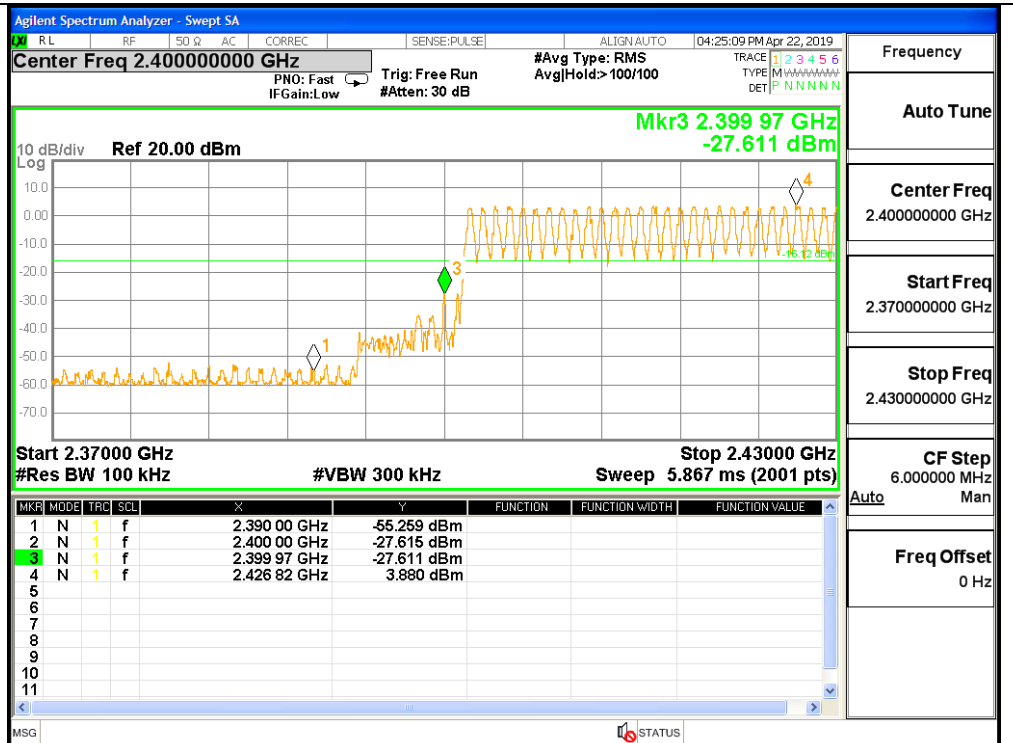


GFSK/HCH/No Hop

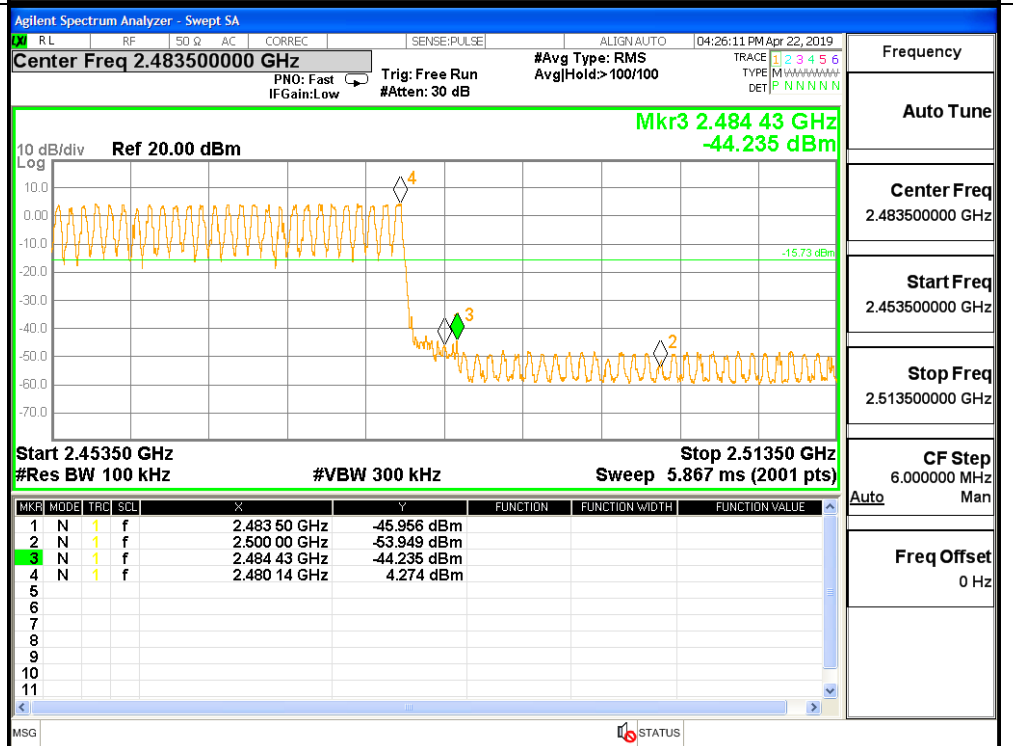


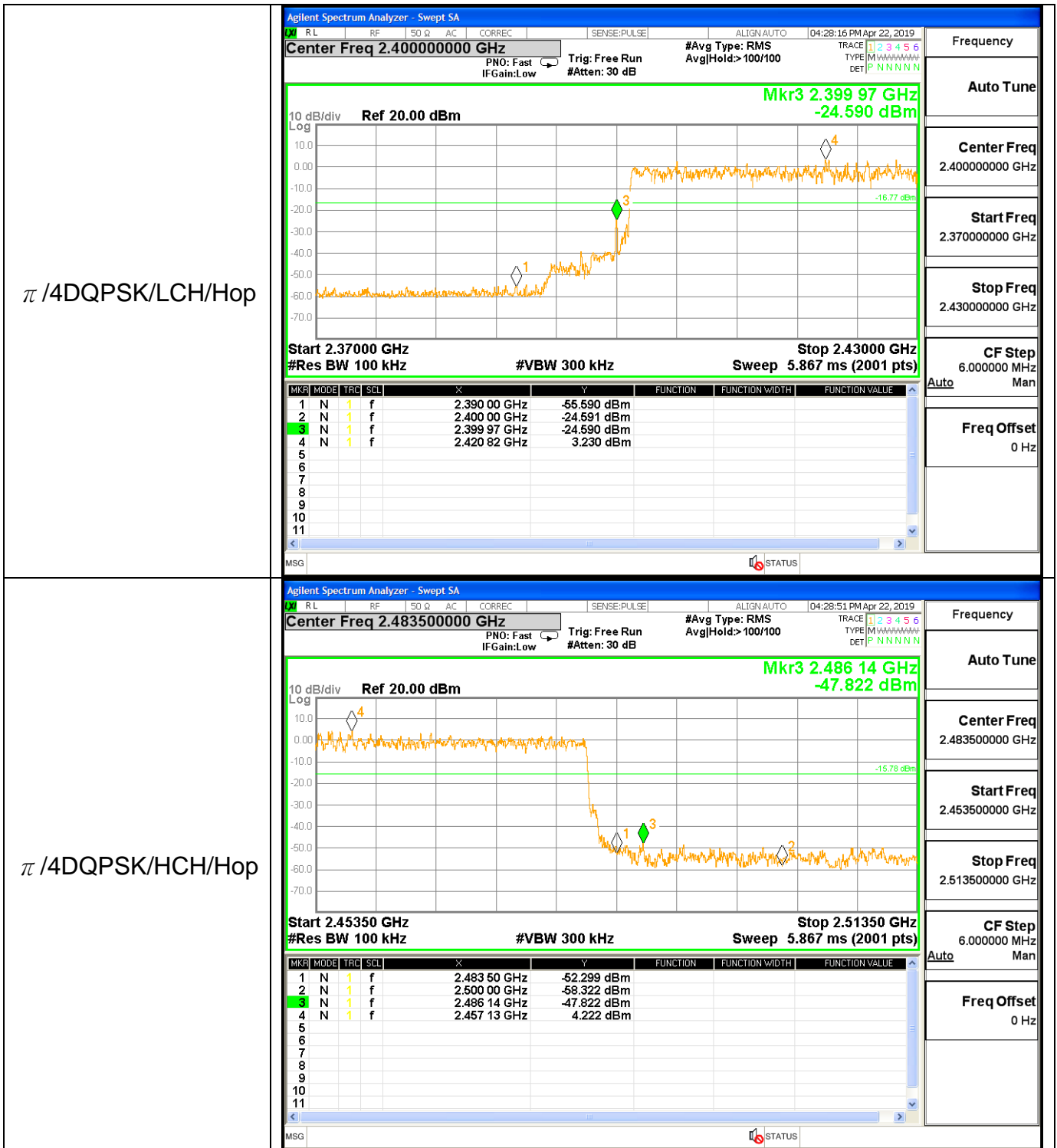


GFSK/LCH/Hop

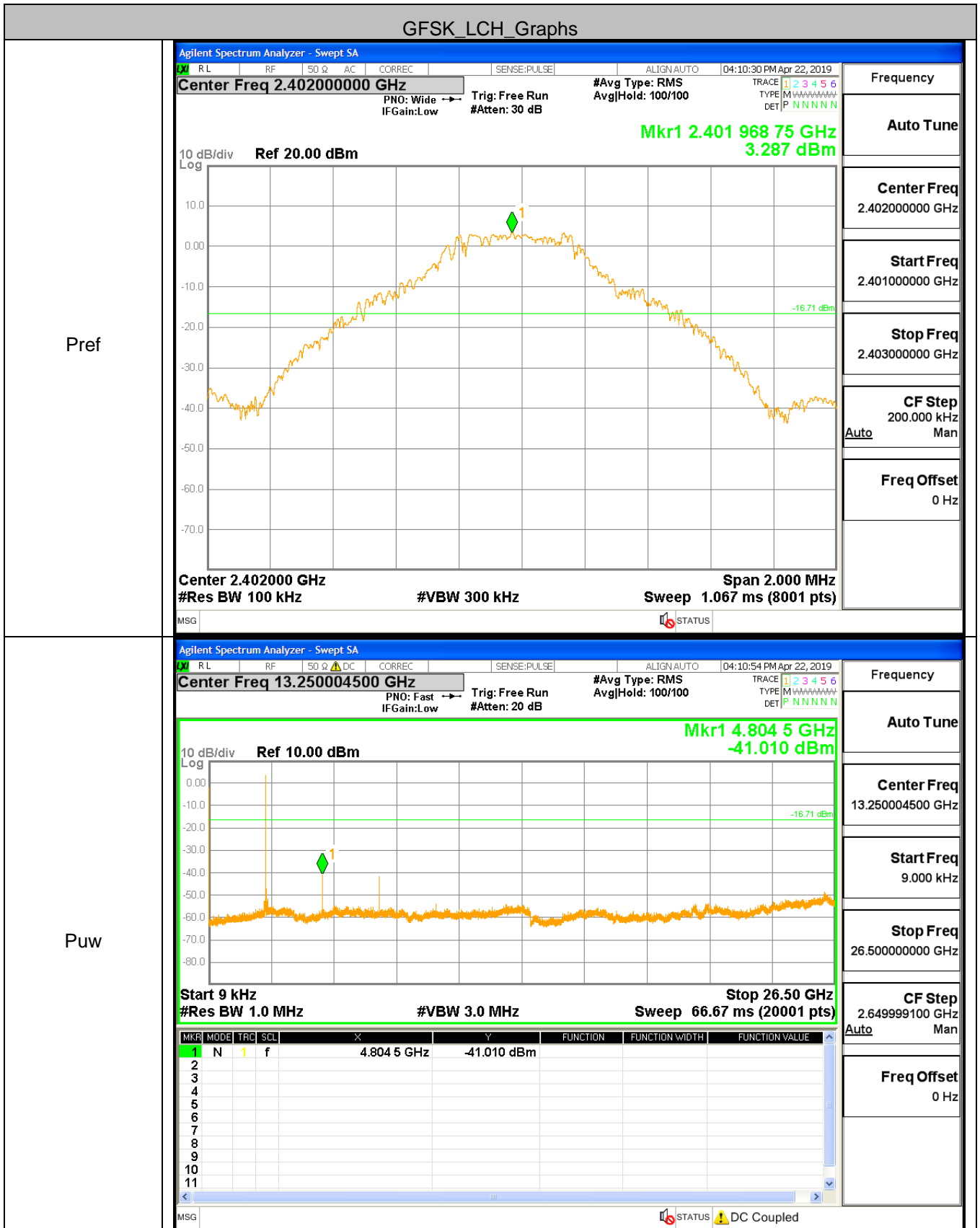


GFSK/HCH/Hop

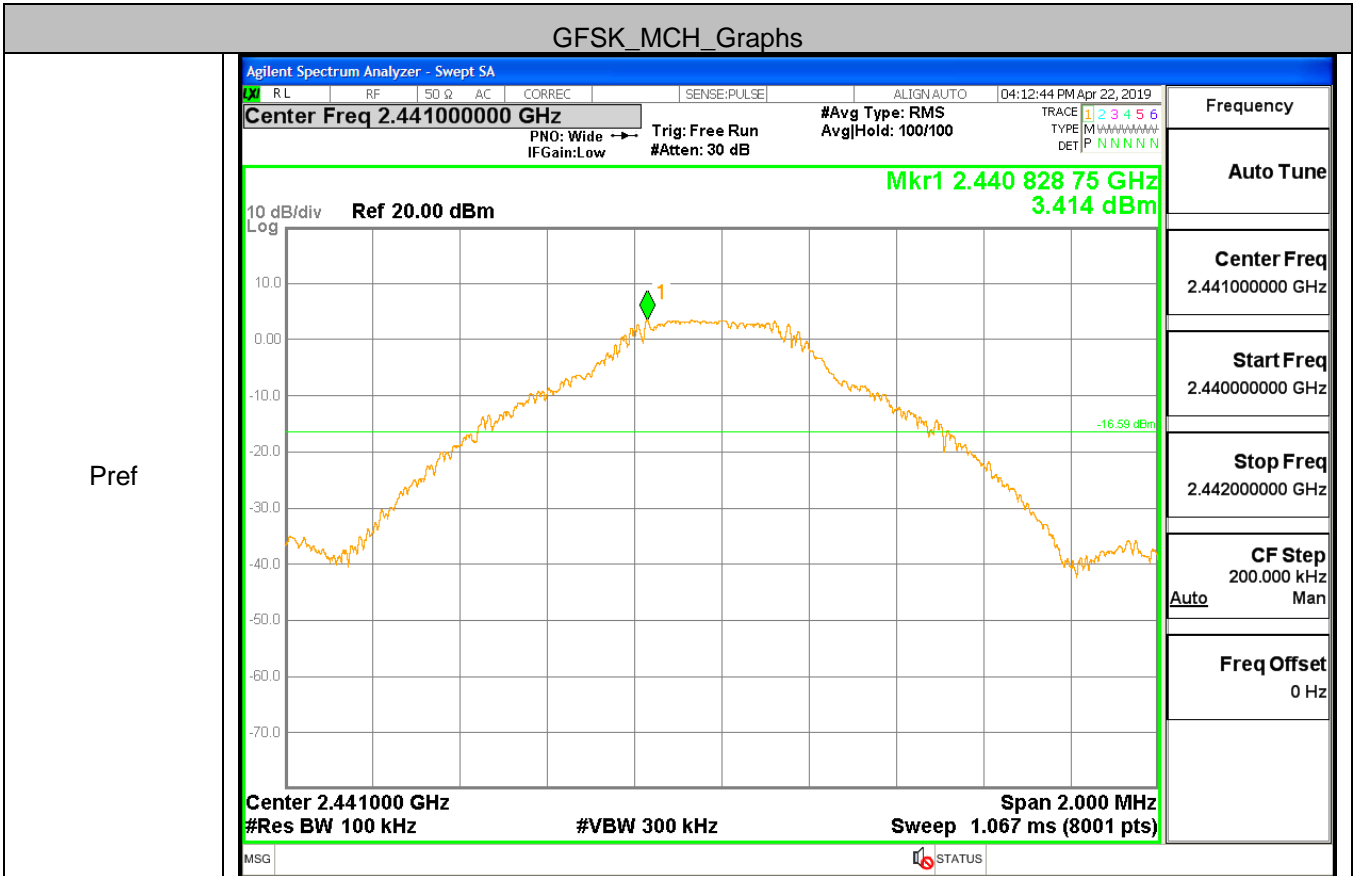




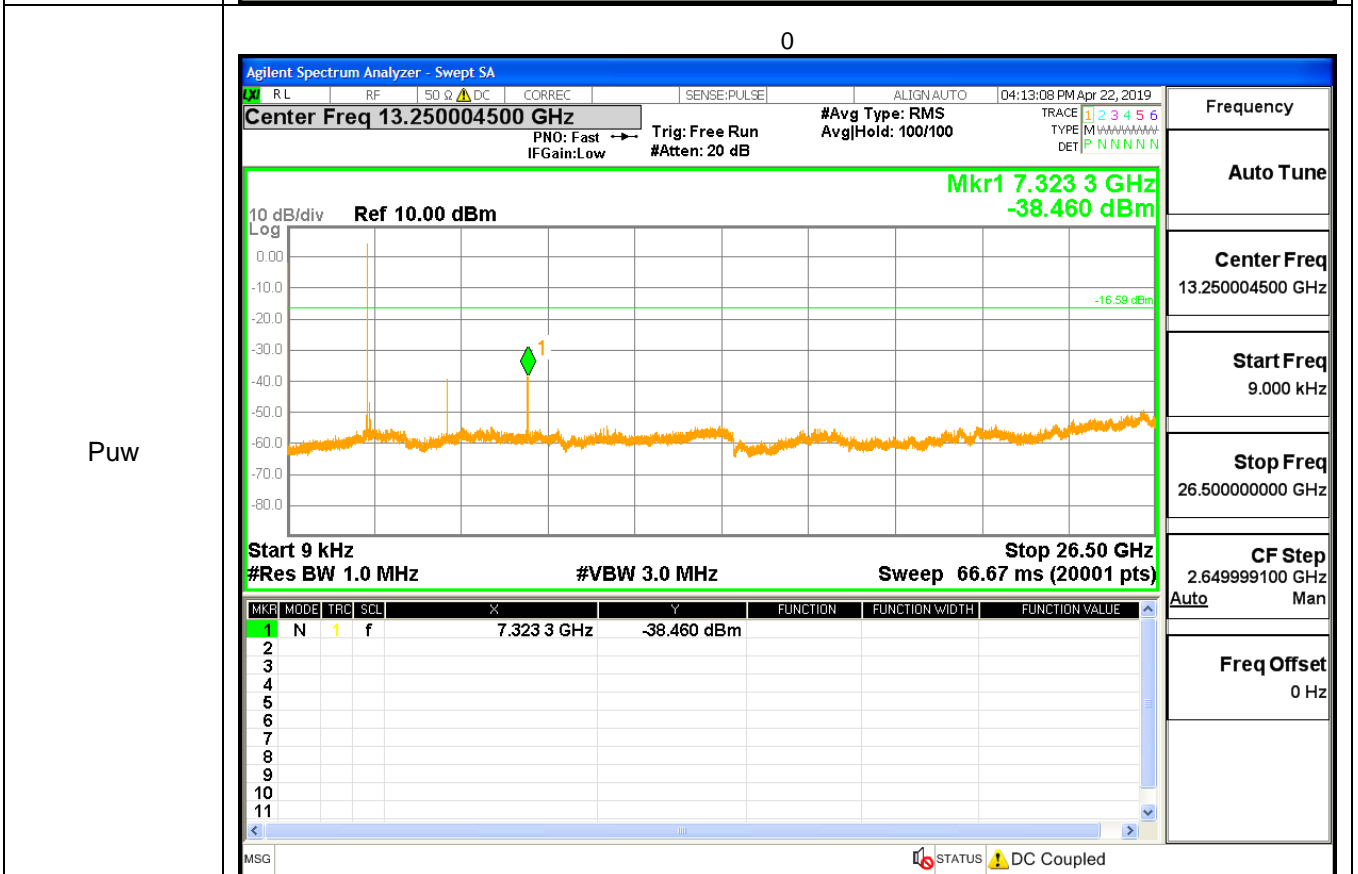
A.7 RF Conducted Spurious Emissions Test Graph



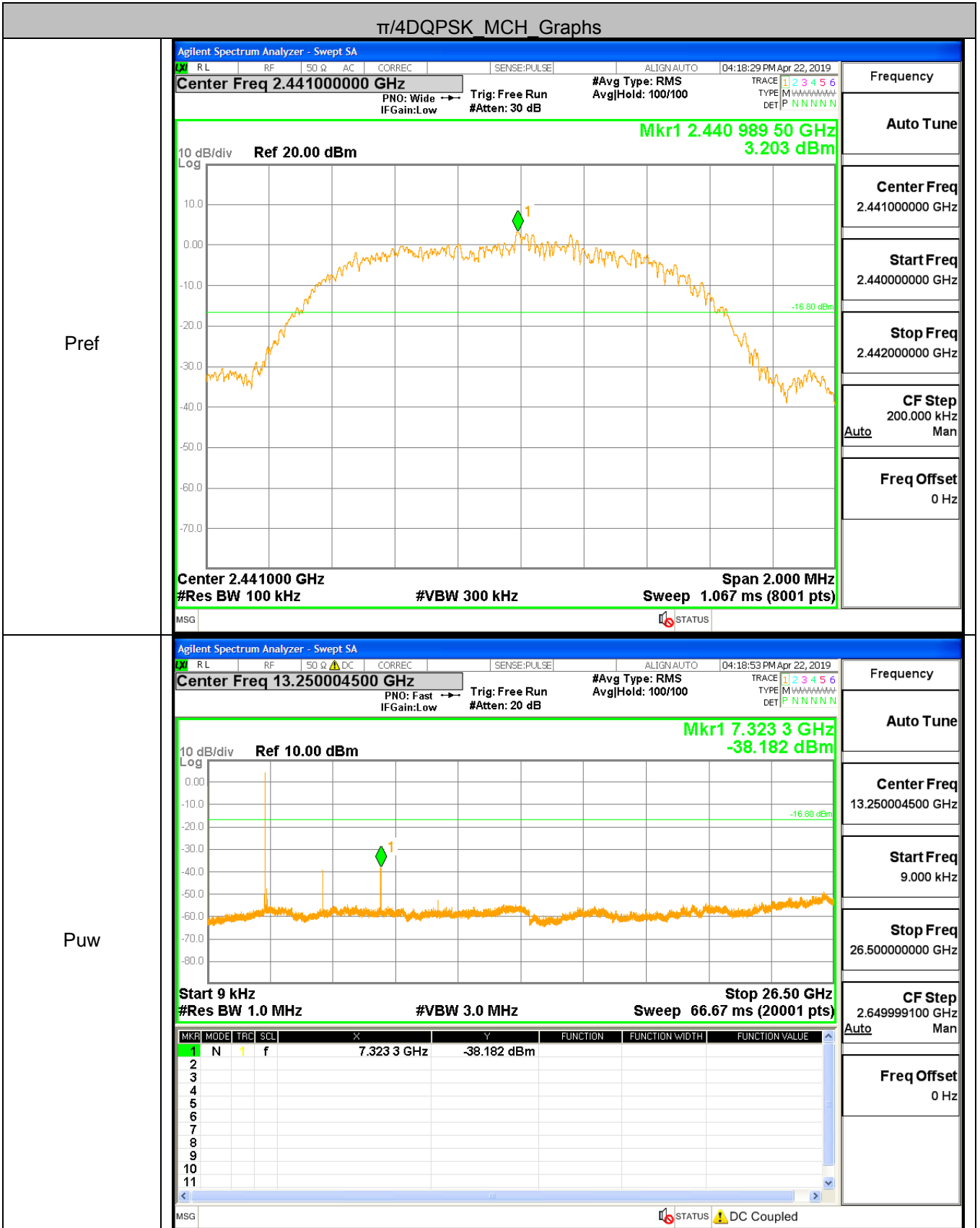
GFSK_MCH_Graphs



0



$\pi/4$ DQPSK MCH Graphs

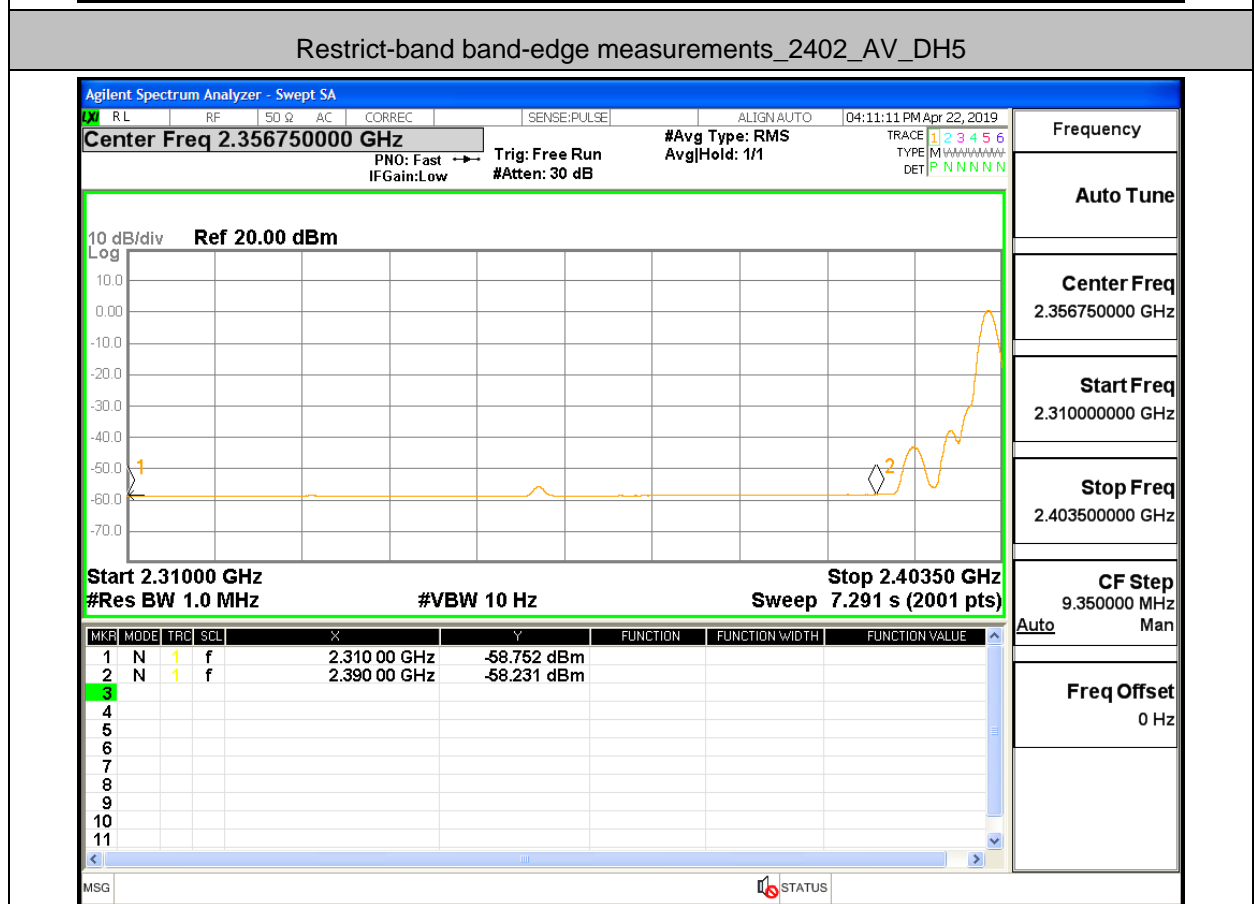
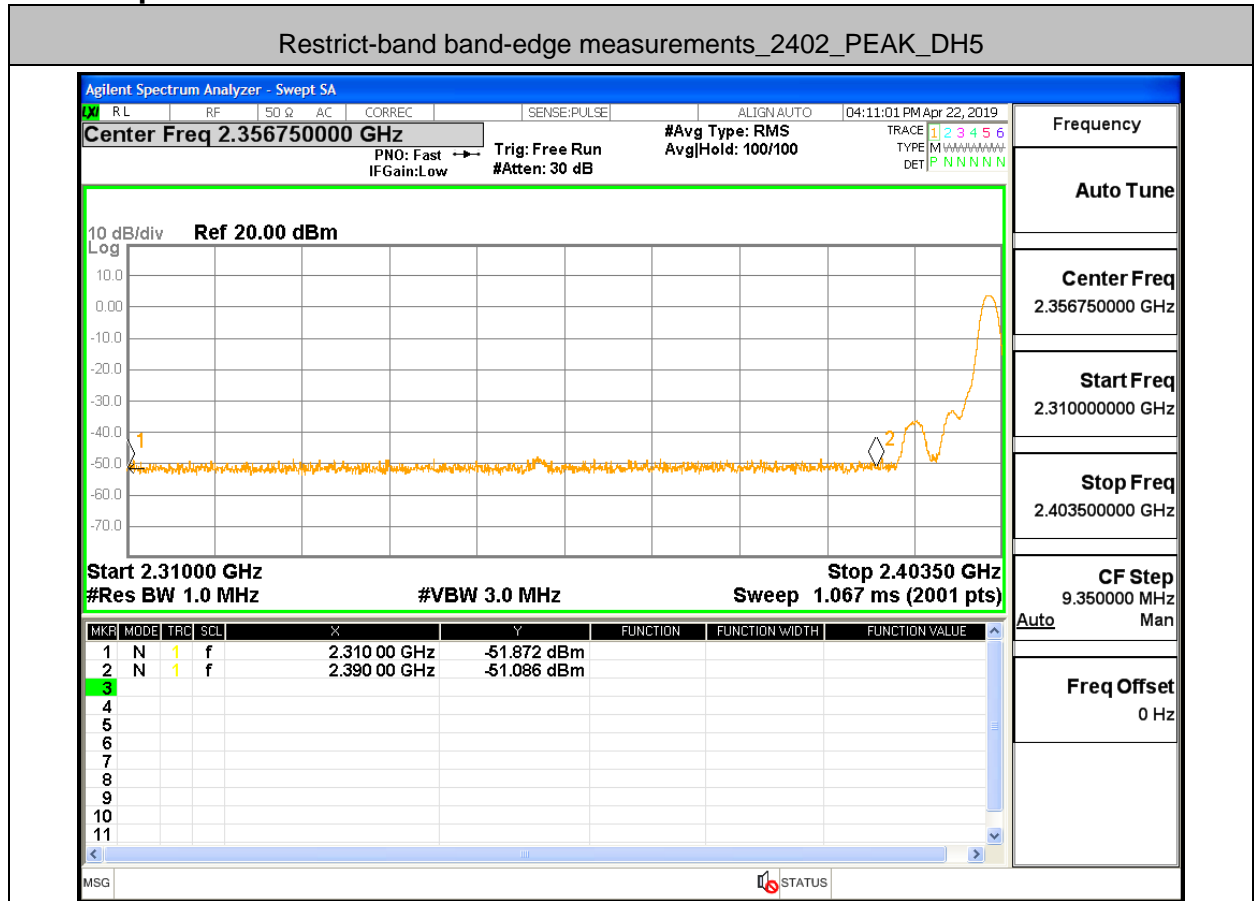


A.8 Restrict-band band-edge measurements

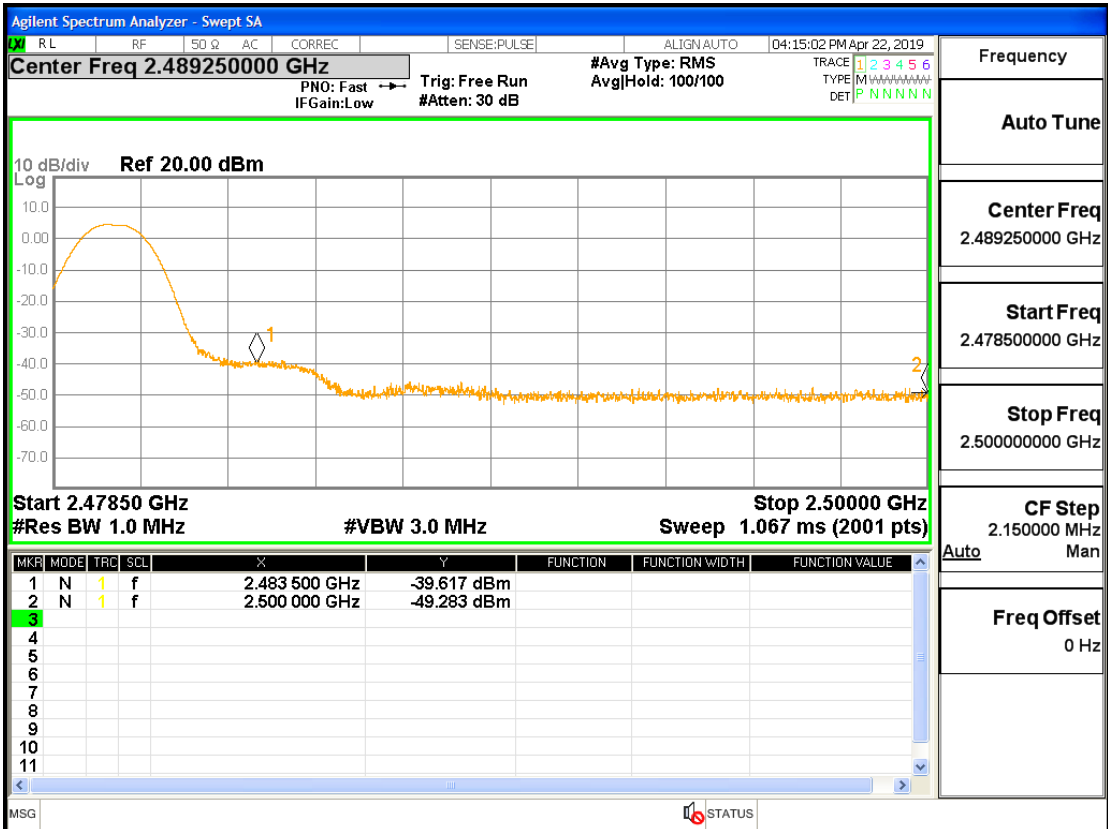
Type	Carrier Frequency (MHz)	Frequency (MHz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390.00	2.00	0.00	-51.09	46.11	74	Pass
1DH5	2480	2483.50	2.00	0.00	-39.62	57.58	74	Pass
2DH5	2402	2310.00	2.00	0.00	-50.47	46.73	74	Pass
2DH5	2480	2483.50	2.00	0.00	-40.23	56.97	74	Pass

Type	Carrier Frequency (MHz)	Frequency (MHz)	Gain	Ground Factor	Average Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390.00	2.00	0.00	-58.23	38.97	54	Pass
1DH5	2480	2483.50	2.00	0.00	-47.22	49.98	54	Pass
2DH5	2402	2390.00	2.00	0.00	-58.23	38.97	54	Pass
2DH5	2480	2483.50	2.00	0.00	-48.89	48.31	54	Pass

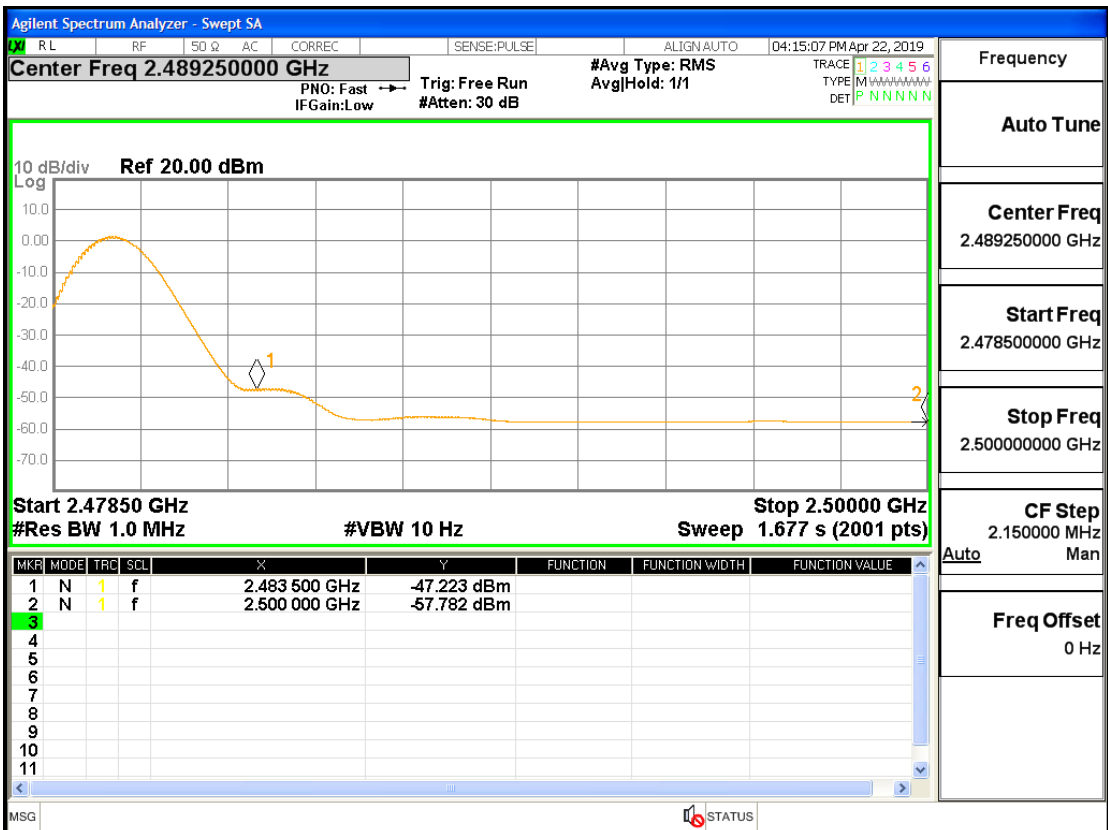
Test Graph



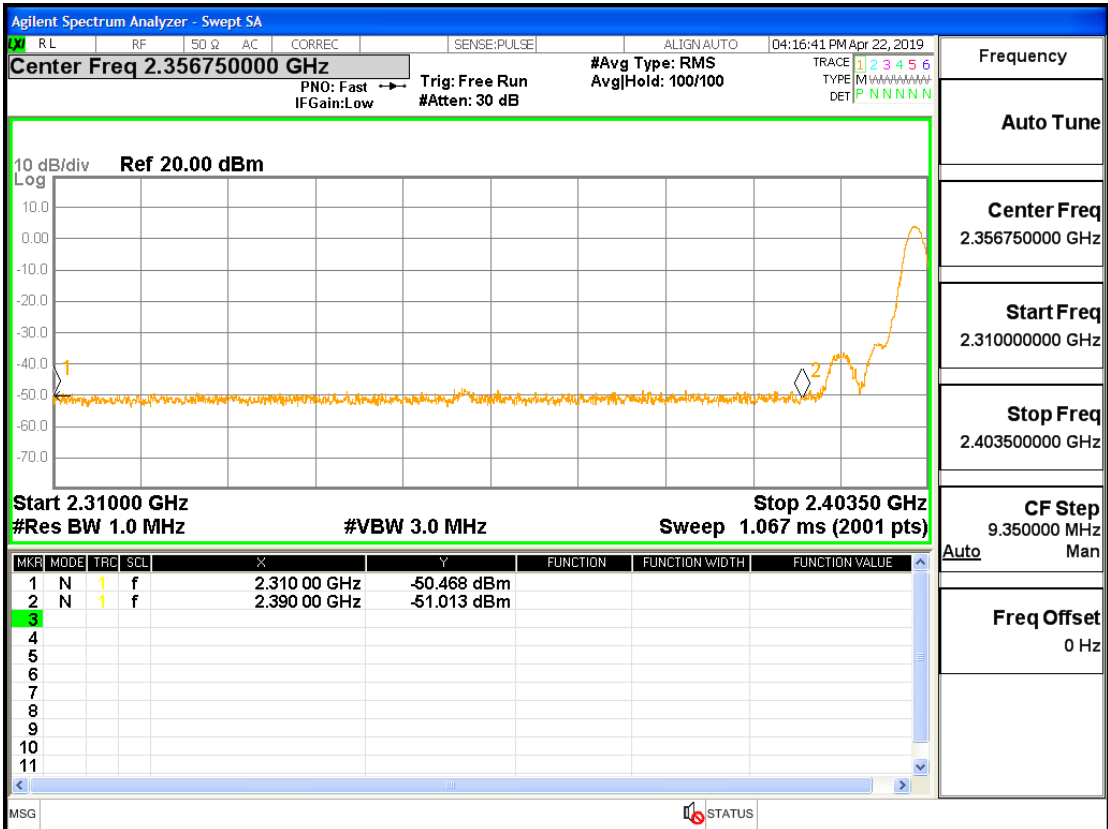
Restrict-band band-edge measurements_2480_PEAK_DH5



Restrict-band band-edge measurements_2480_AV_DH5



Restrict-band band-edge measurements_2402_PEAK_2DH5



Restrict-band band-edge measurements_2402_AV_2DH5

