

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

**Product Name: Bluetooth Headphones**

**Trade Mark: Altec Lansing**

**Test Model: MZX250**

**FCC ID: 2AL9B-MZX250**

**Environmental Conditions**

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

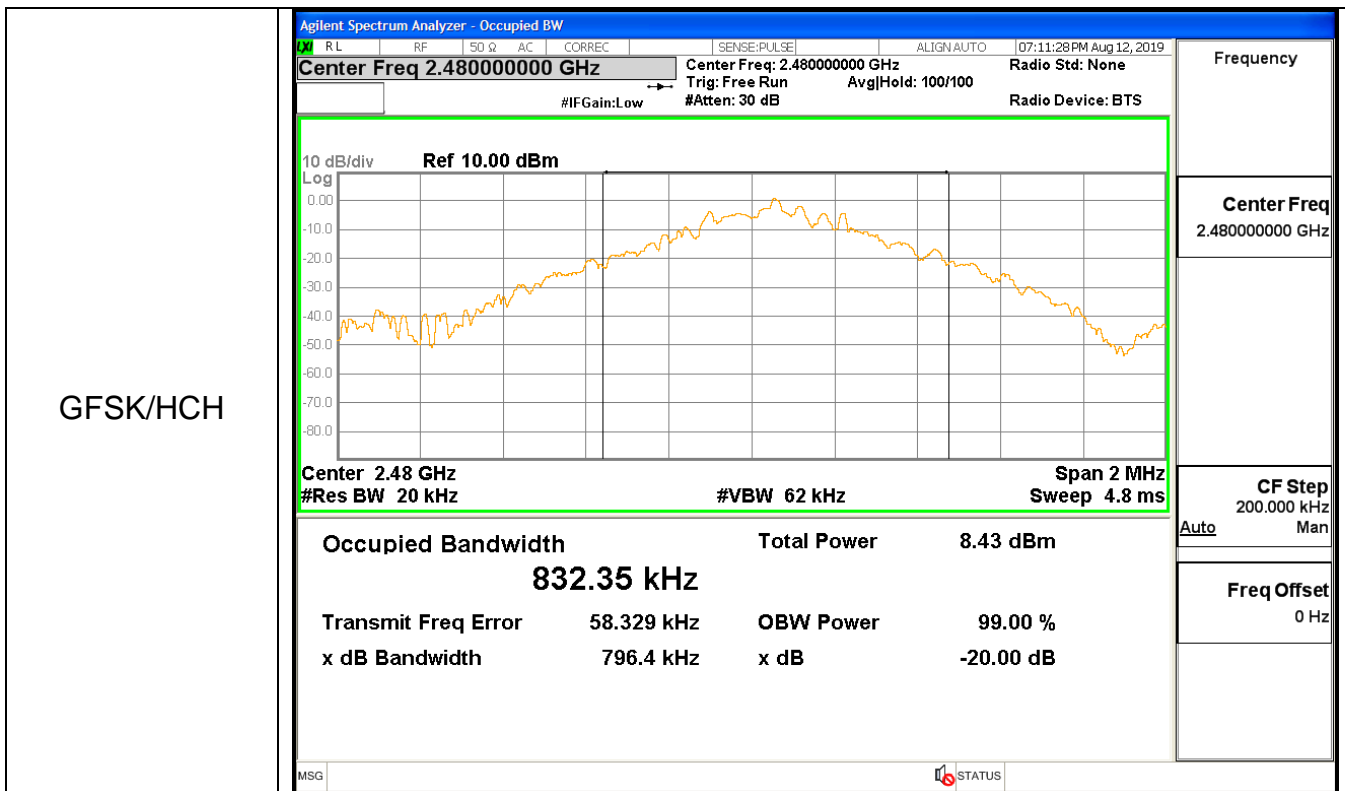
**A.1 20 dB Bandwidth**

Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.849	Not Specified	PASS
GFSK	MCH	0.794	Not Specified	PASS
GFSK	HCH	0.796	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.194	Not Specified	PASS
$\pi/4$ DQPSK	MCH	1.205	Not Specified	PASS
$\pi/4$ DQPSK	HCH	1.196	Not Specified	PASS

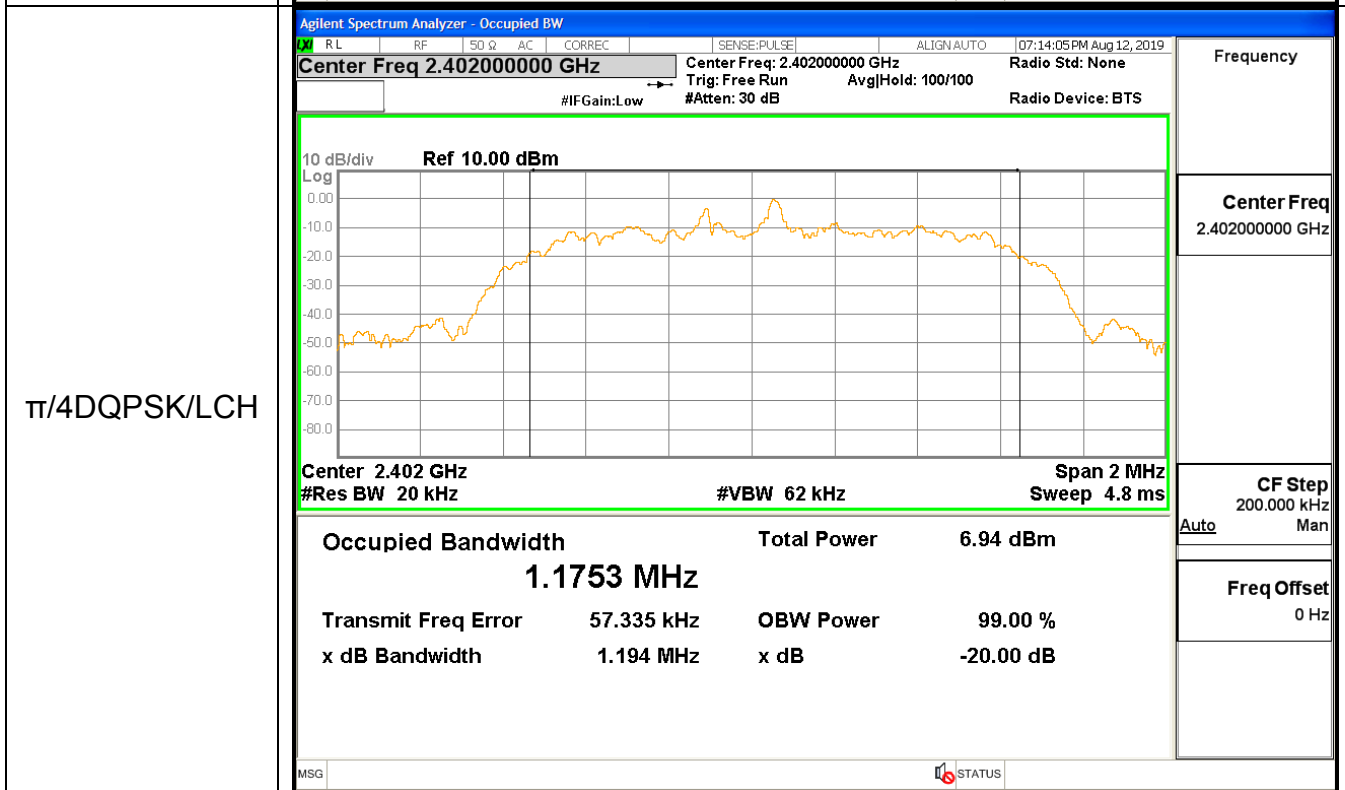
Test Graph

Graphs

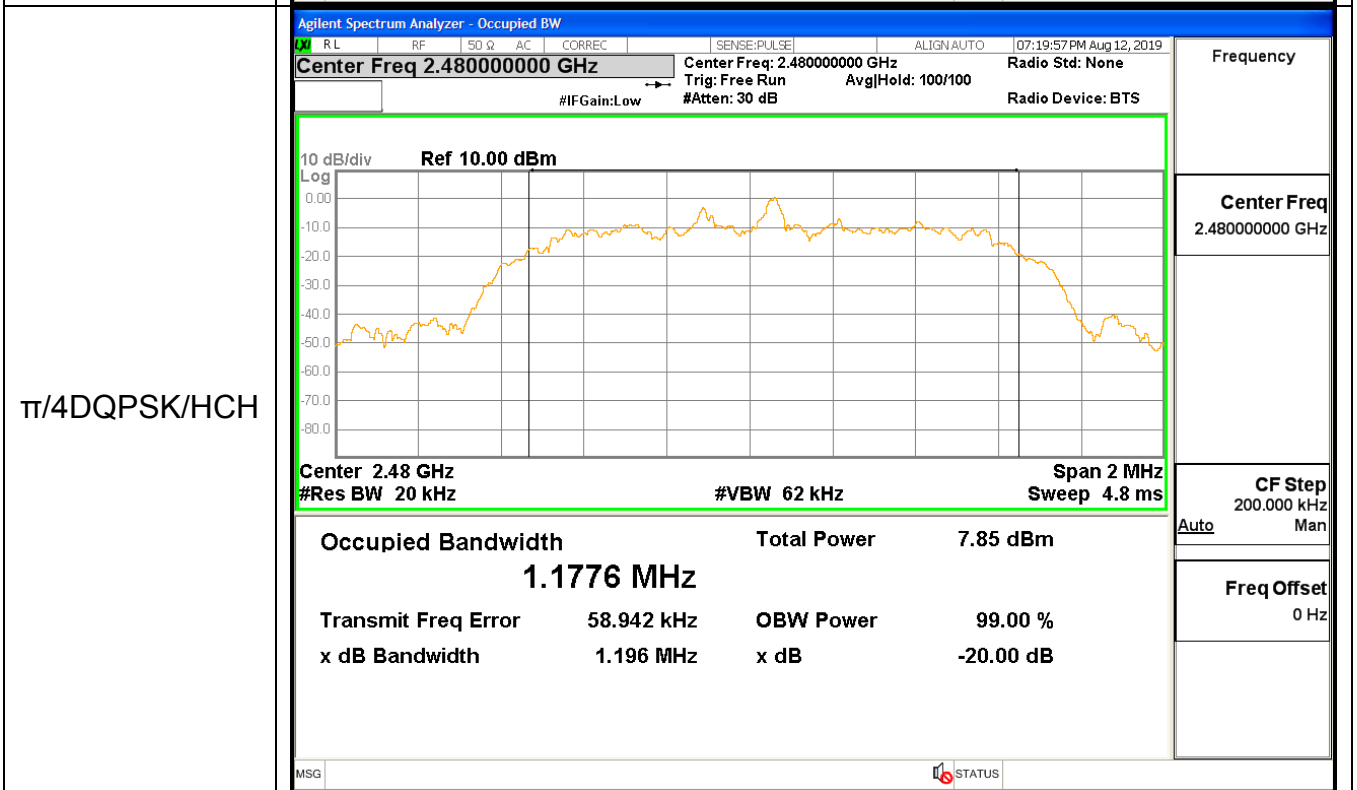
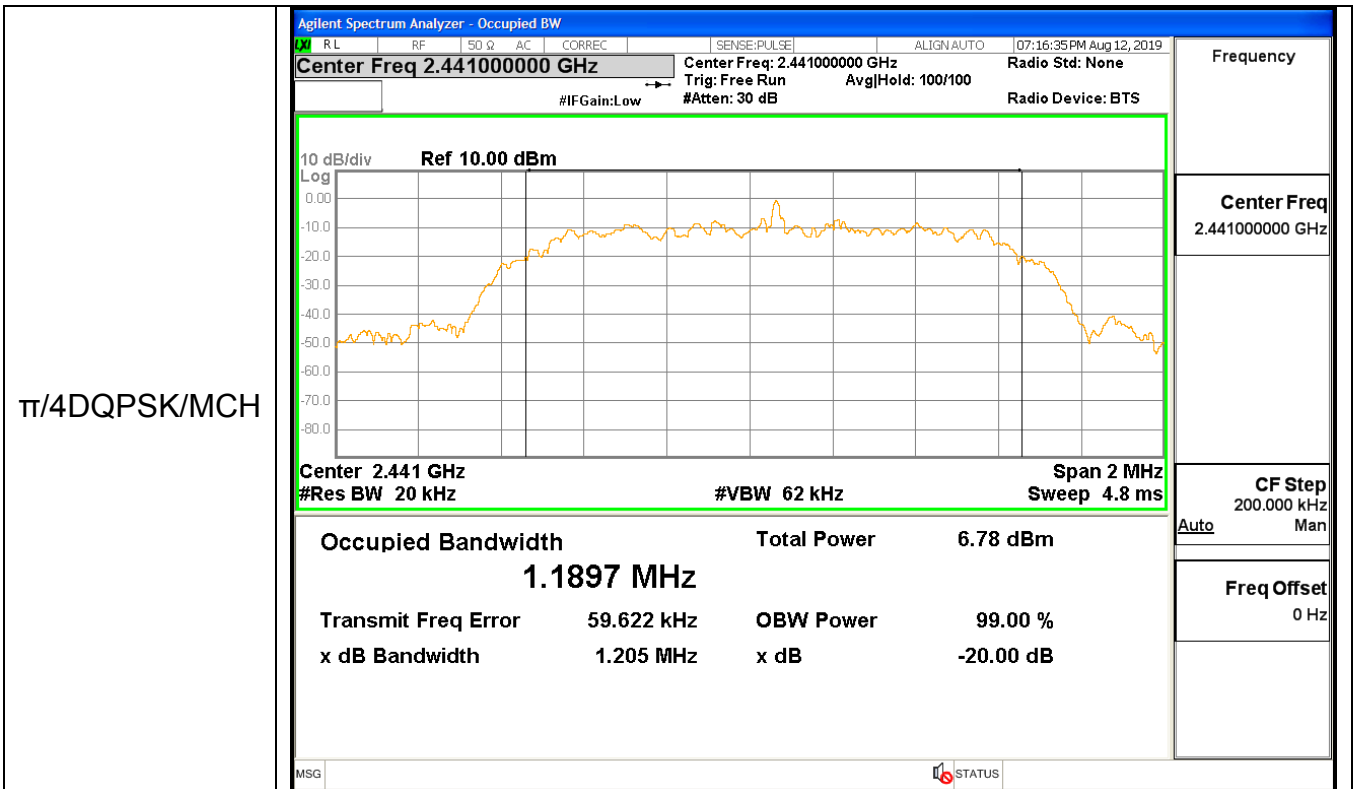
GFSK/LCH	Agilent Spectrum Analyzer - Occupied BW Center Freq <b>2.402000000 GHz</b> Center Freq: 2.402000000 GHz    Radio Std: None #IFGain: Low    Trig: Free Run    Avg Hold: 100/100    Radio Device: BTS #Atten: 30 dB			Frequency Center Freq 2.402000000 GHz																	
				CF Step 200.000 kHz Auto    Man																	
Center 2.402 GHz    Span 2 MHz #Res BW 20 kHz    #VBW 62 kHz    Sweep 4.8 ms			Freq Offset 0 Hz																		
<table border="0"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>7.30 dBm</td> </tr> <tr> <td><b>839.59 kHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>56.825 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-20.00 dB</td> </tr> <tr> <td>849.2 kHz</td> <td></td> <td></td> </tr> </table>			Occupied Bandwidth	Total Power	7.30 dBm	<b>839.59 kHz</b>			Transmit Freq Error	OBW Power	99.00 %	56.825 kHz			x dB Bandwidth	x dB	-20.00 dB	849.2 kHz			
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GFSK/HCH



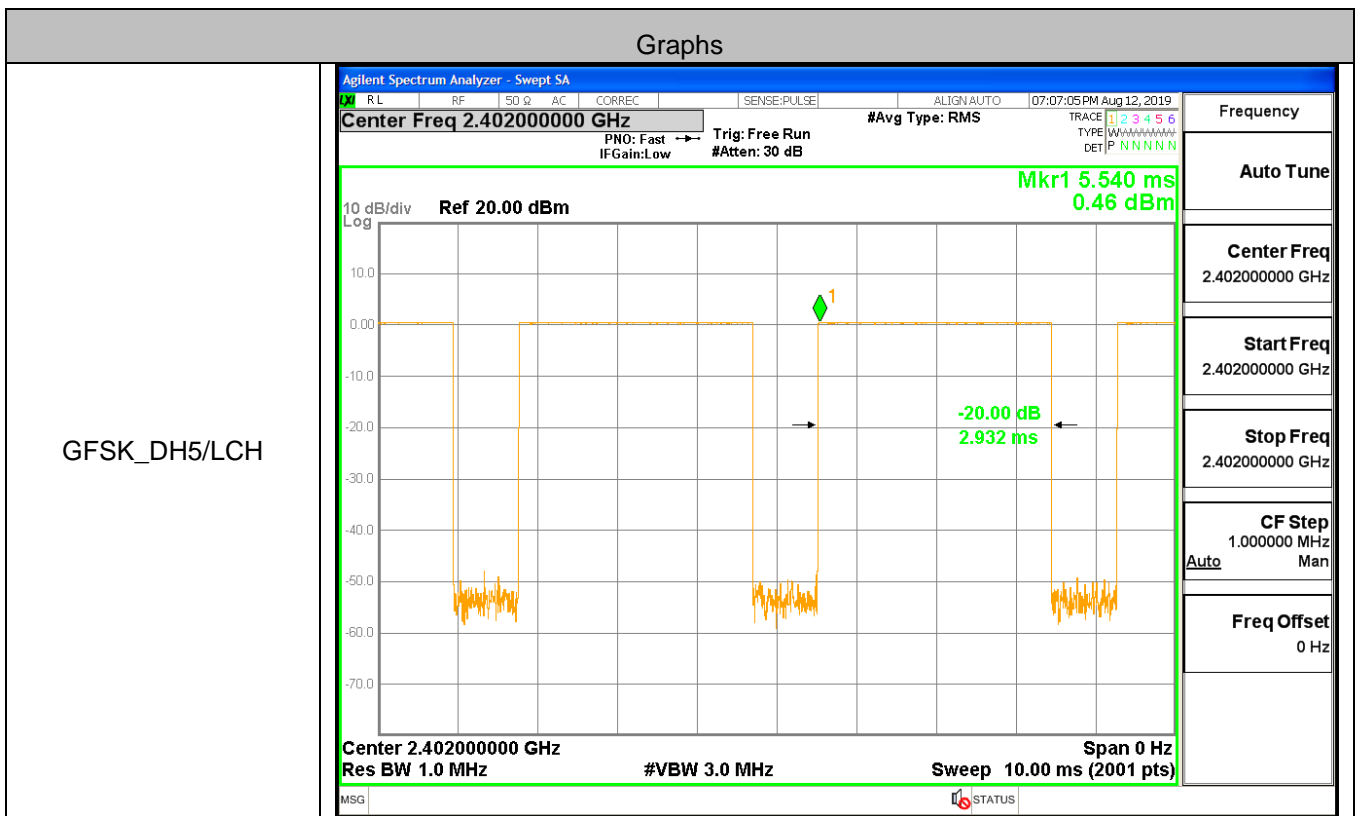
π/4DQPSK/LCH

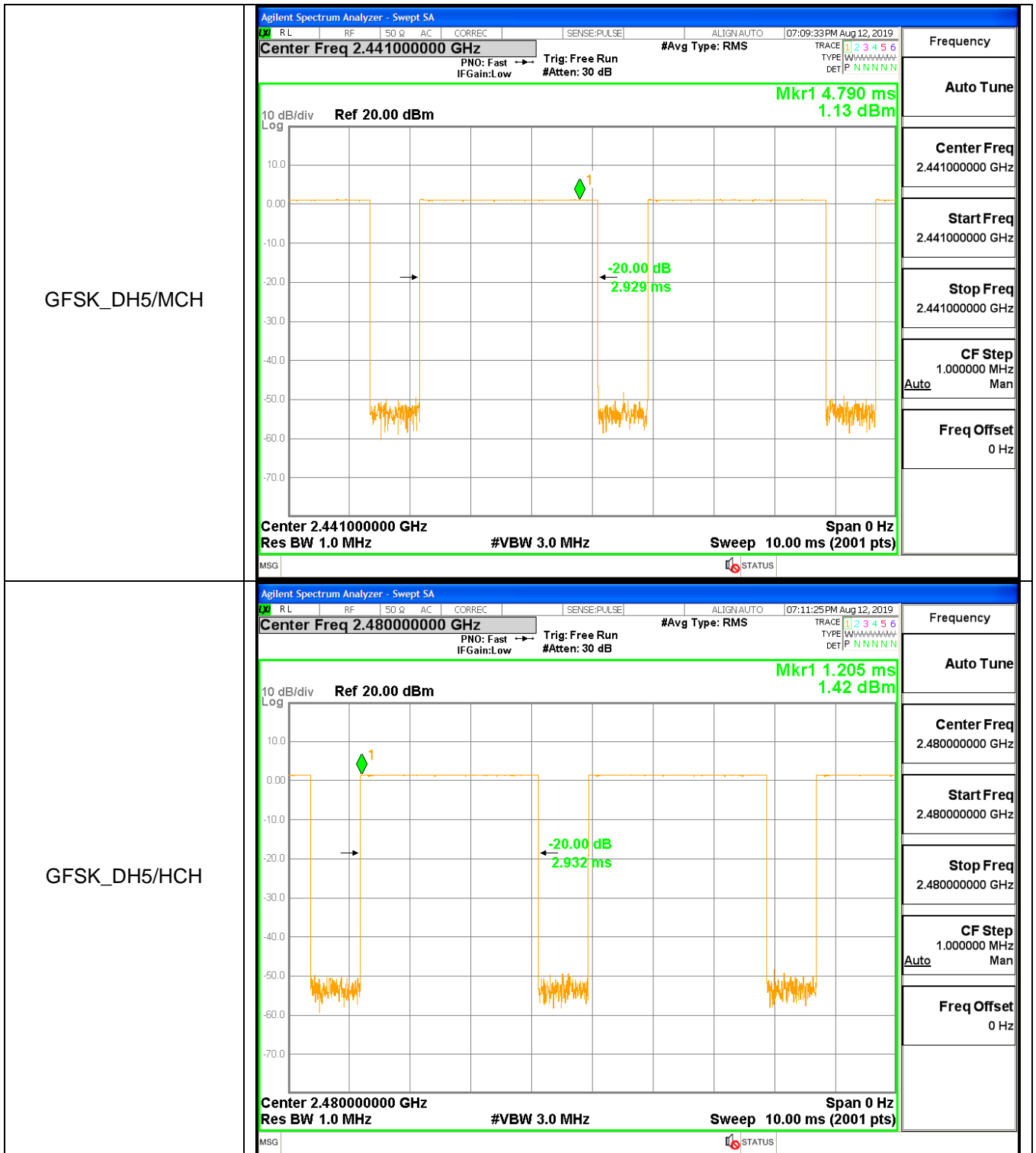


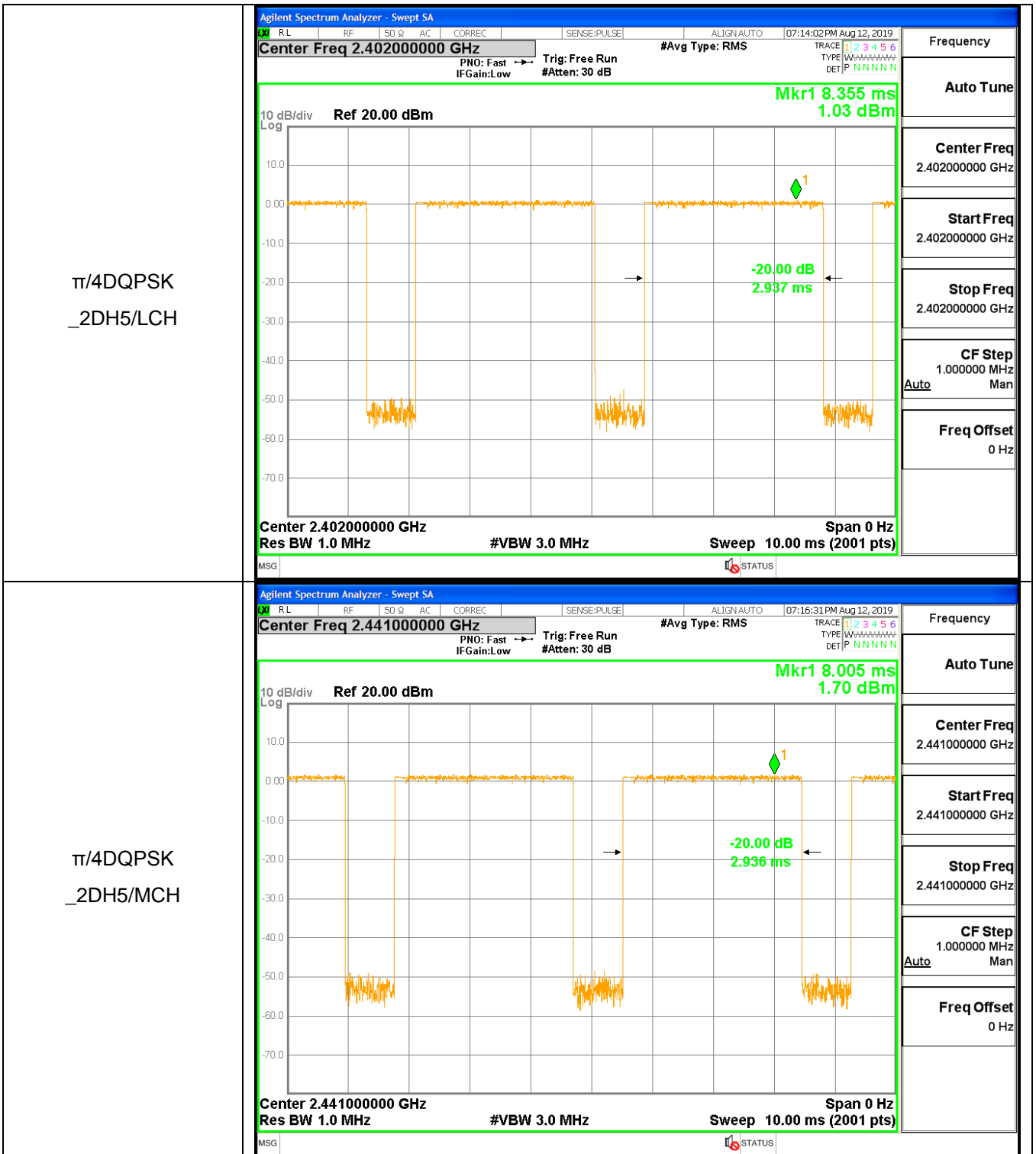
### A.2 Dwell Time

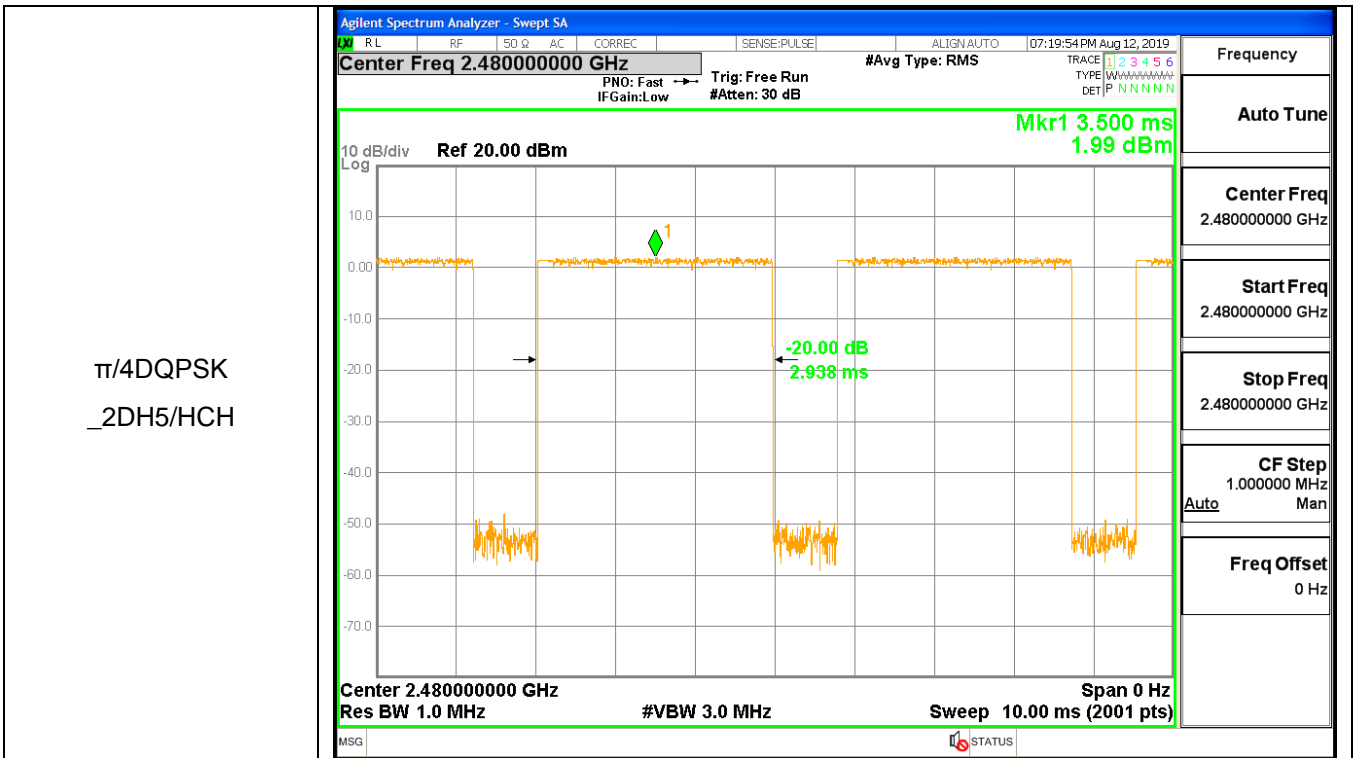
Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002932	106.7	0.312811	0.4	PASS
GFSK	DH5	MCH	0.002929	106.7	0.312506	0.4	PASS
GFSK	DH5	HCH	0.002932	106.7	0.312809	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	0.002937	106.7	0.313343	0.4	PASS
$\pi/4$ DQPSK	2DH5	MCH	0.002936	106.7	0.313312	0.4	PASS
$\pi/4$ DQPSK	2DH5	HCH	0.002938	106.7	0.313536	0.4	PASS

### Test Graph







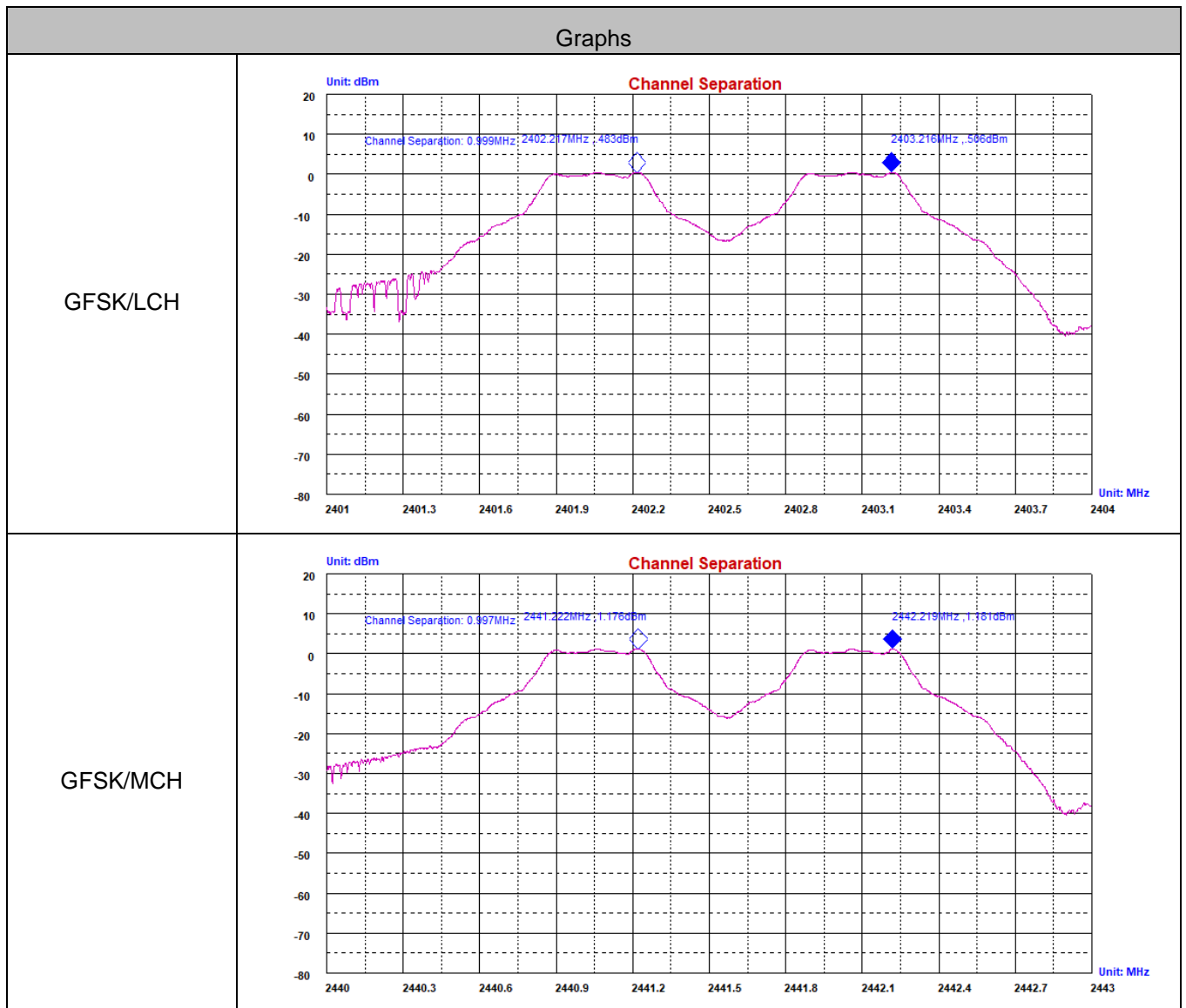


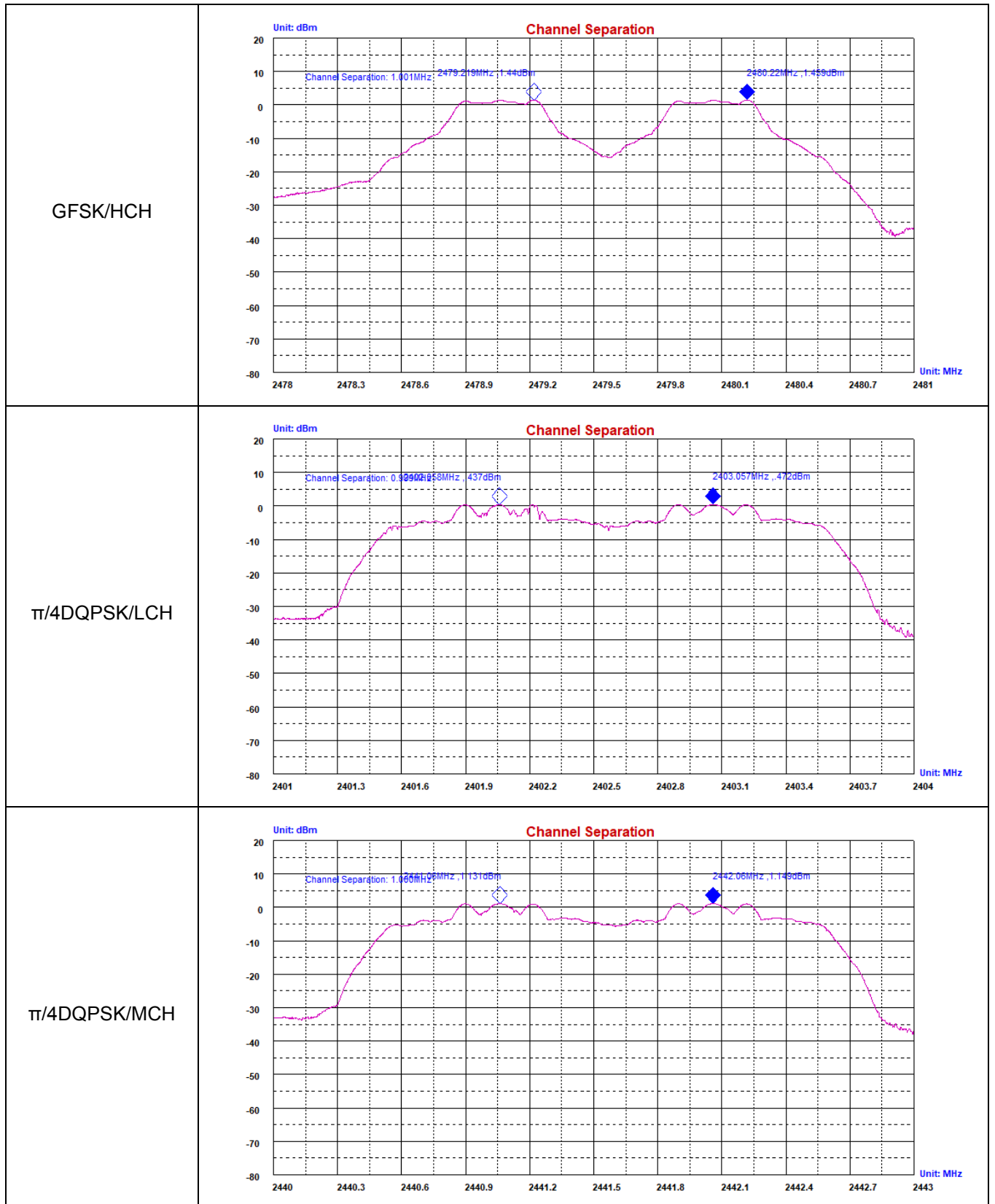


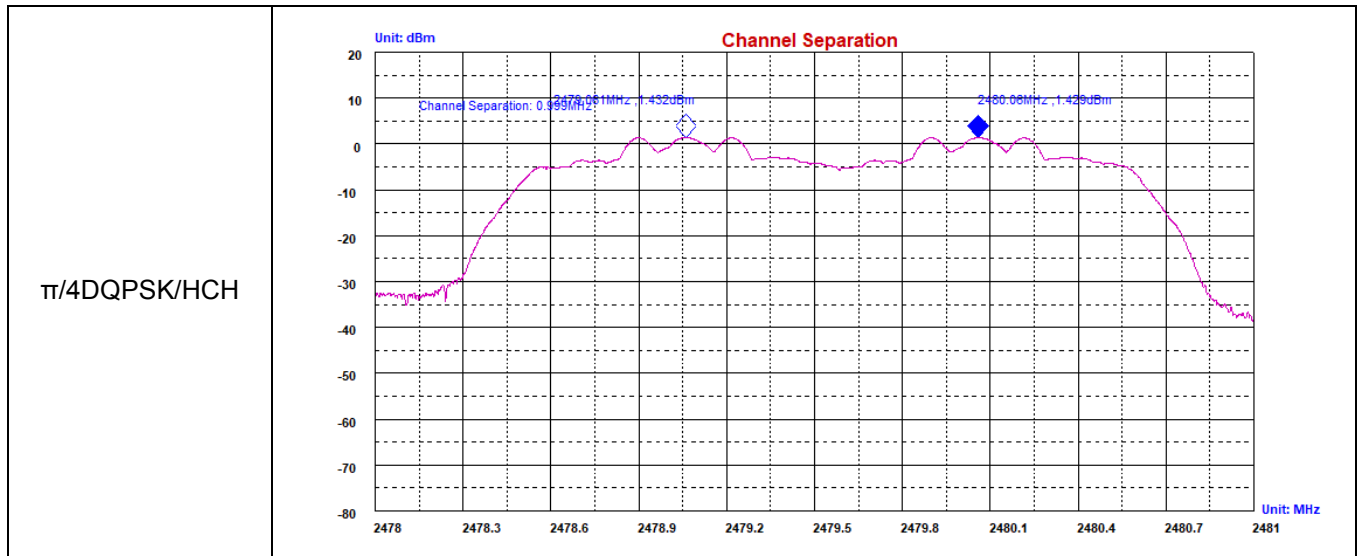
### A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.999	0.566	PASS
GFSK	MCH	0.997	0.529	PASS
GFSK	HCH	1.001	0.797	PASS
$\pi/4$ DQPSK	LCH	0.999	0.796	PASS
$\pi/4$ DQPSK	MCH	1.000	0.803	PASS
$\pi/4$ DQPSK	HCH	0.999	0.797	PASS

### Test Graph



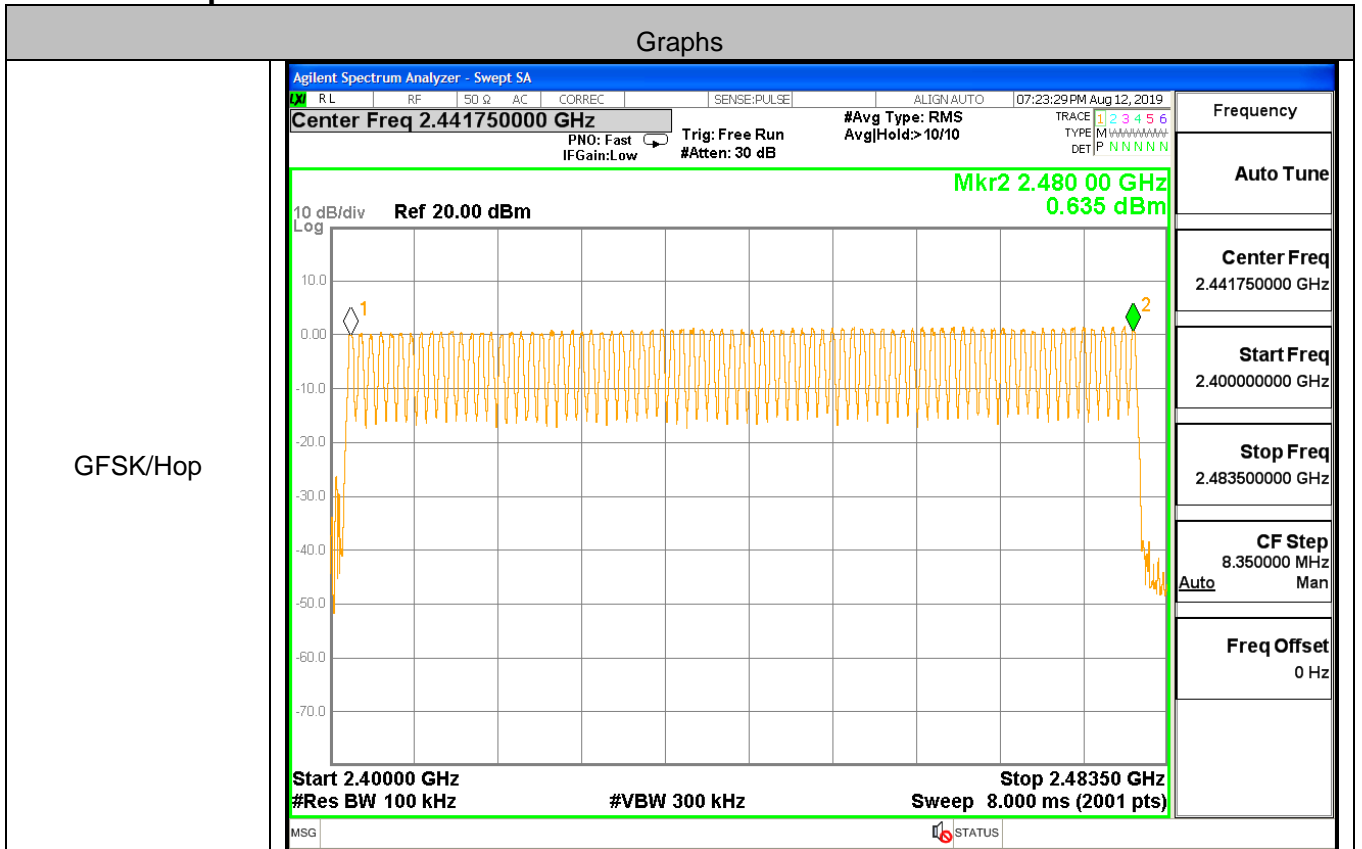


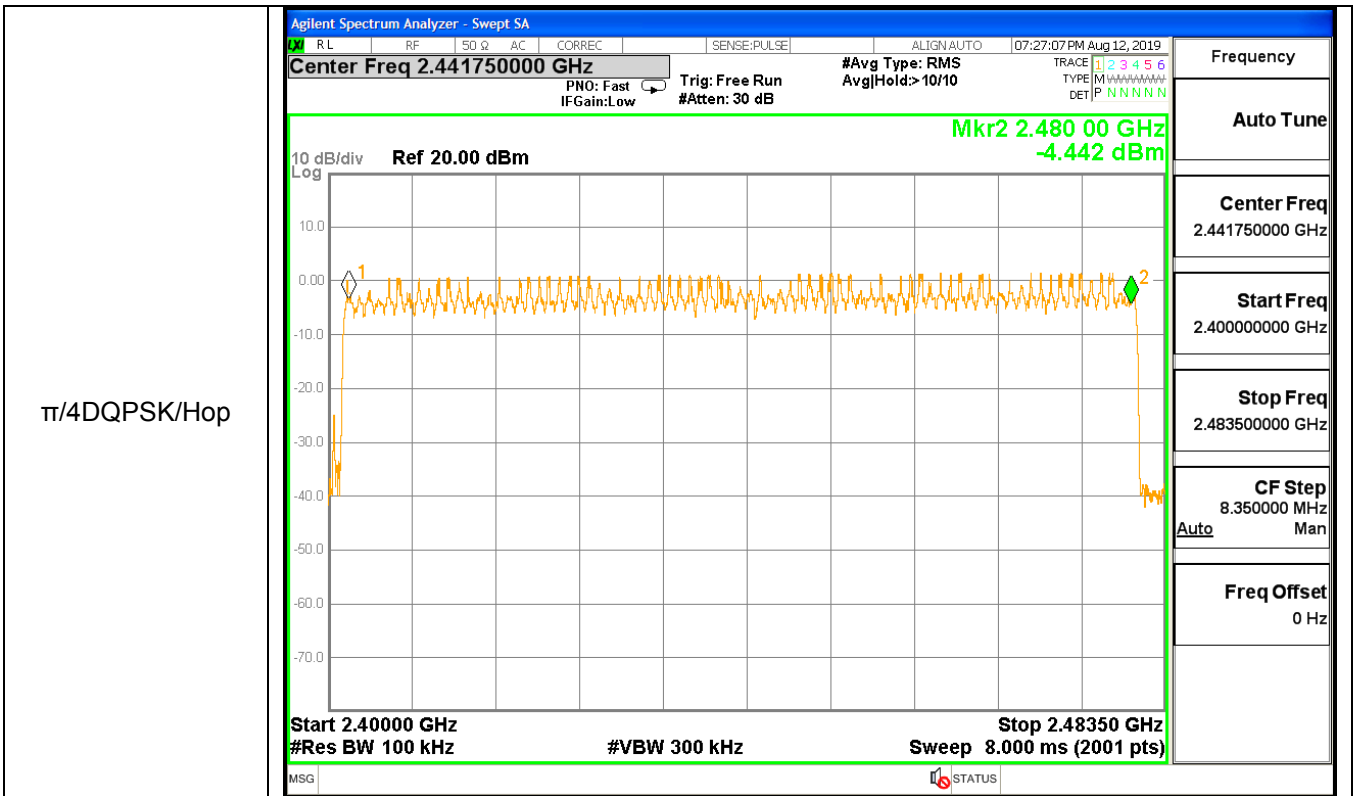


### A.4 Hopping Channel Number

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

### Test Graph

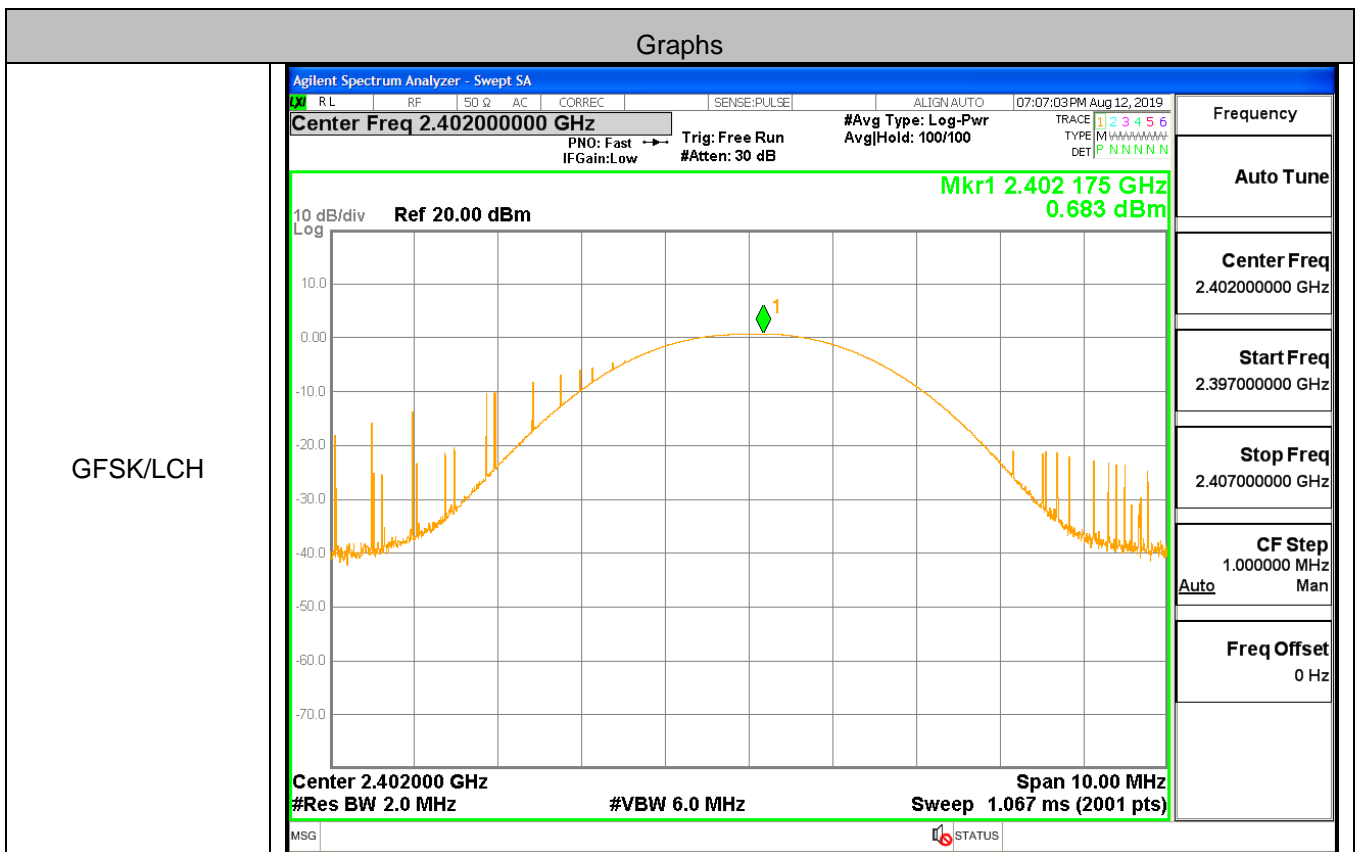


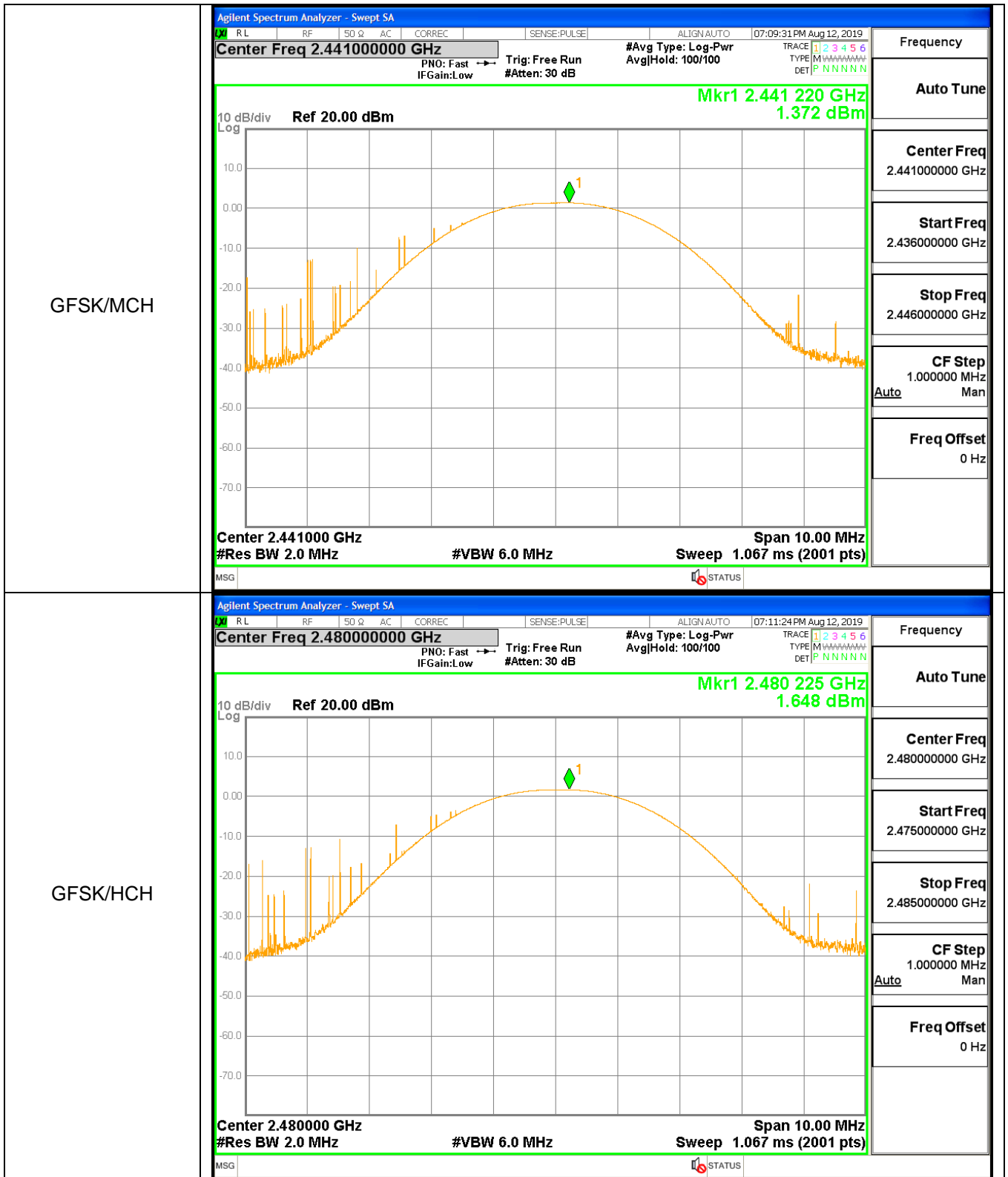


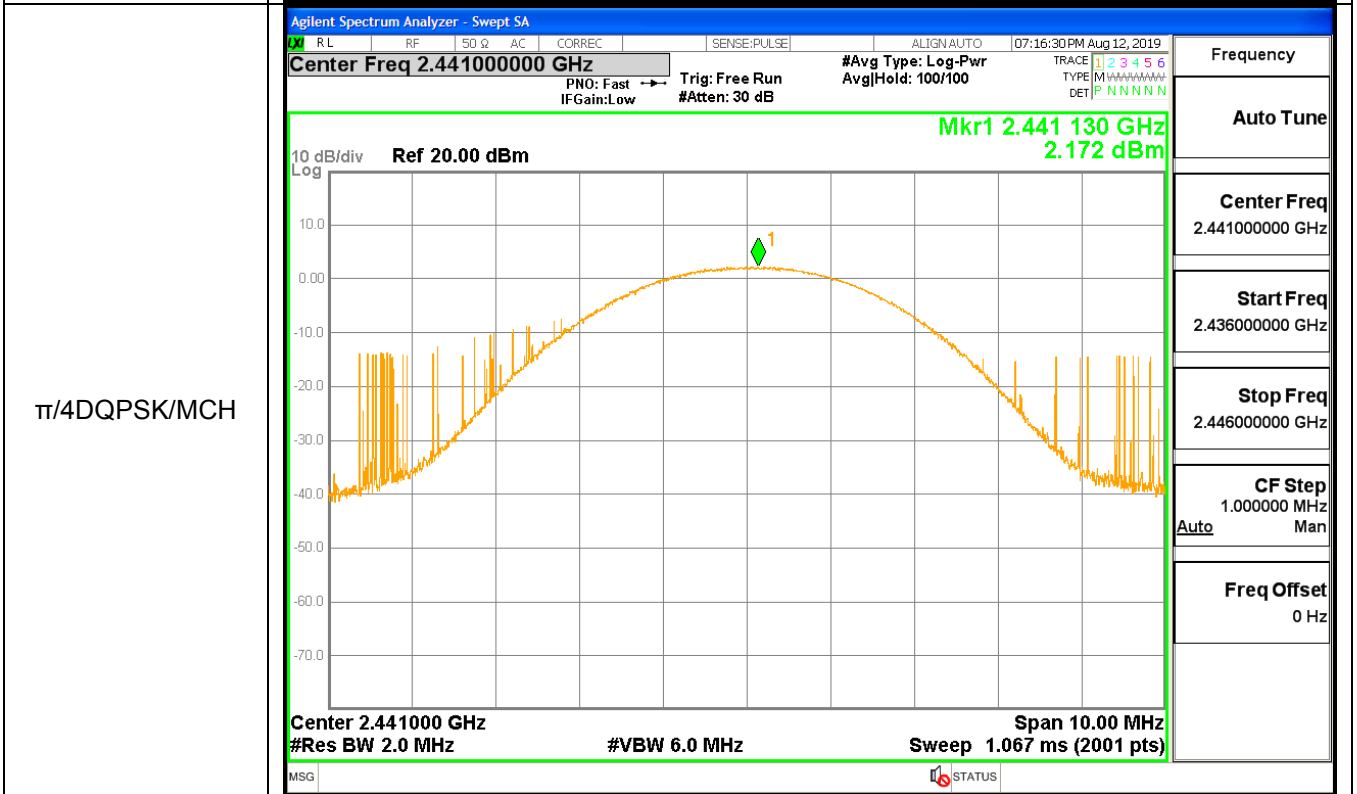
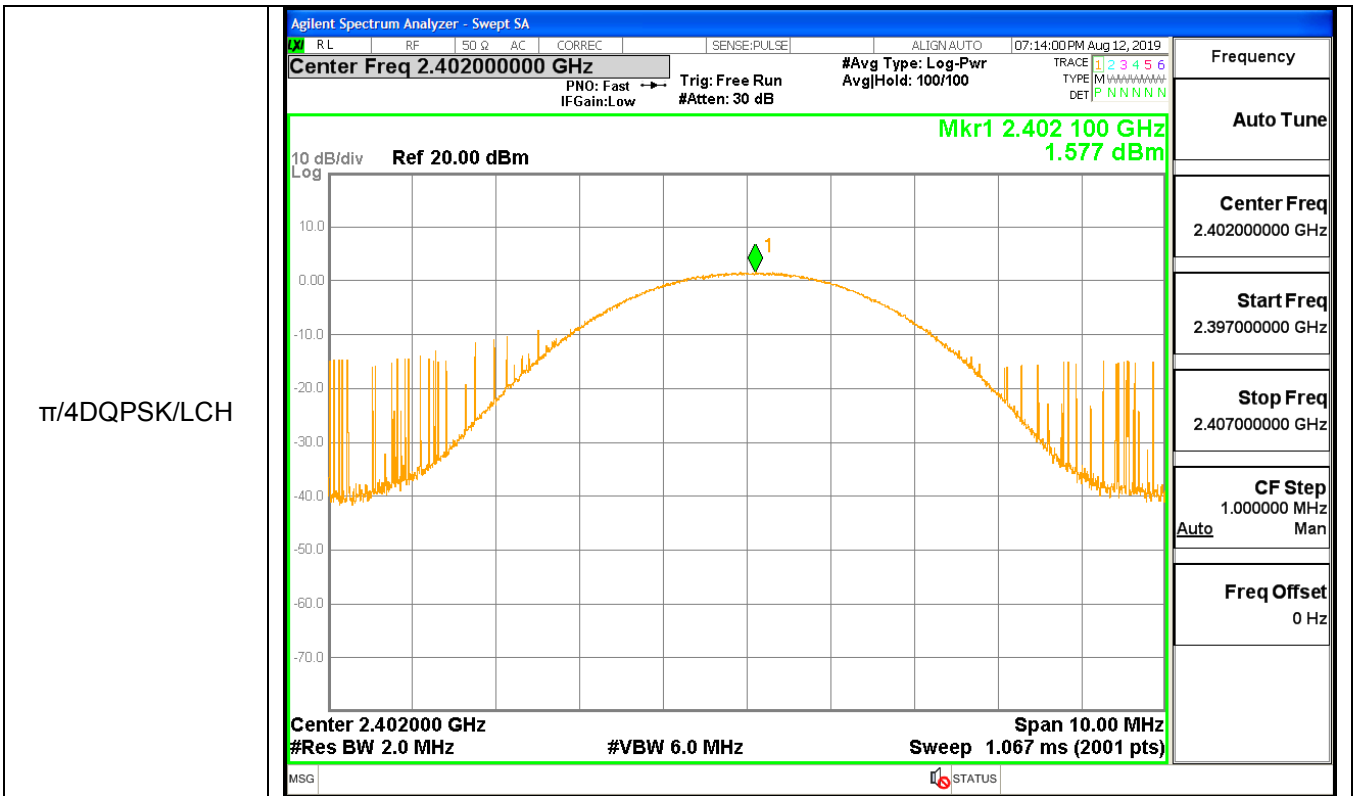
### A.5 Conducted Peak Output Power

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.683	21	PASS
GFSK	MCH	1.372	21	PASS
GFSK	HCH	1.648	21	PASS
$\pi/4$ DQPSK	LCH	1.577	21	PASS
$\pi/4$ DQPSK	MCH	2.172	21	PASS
$\pi/4$ DQPSK	HCH	2.523	21	PASS

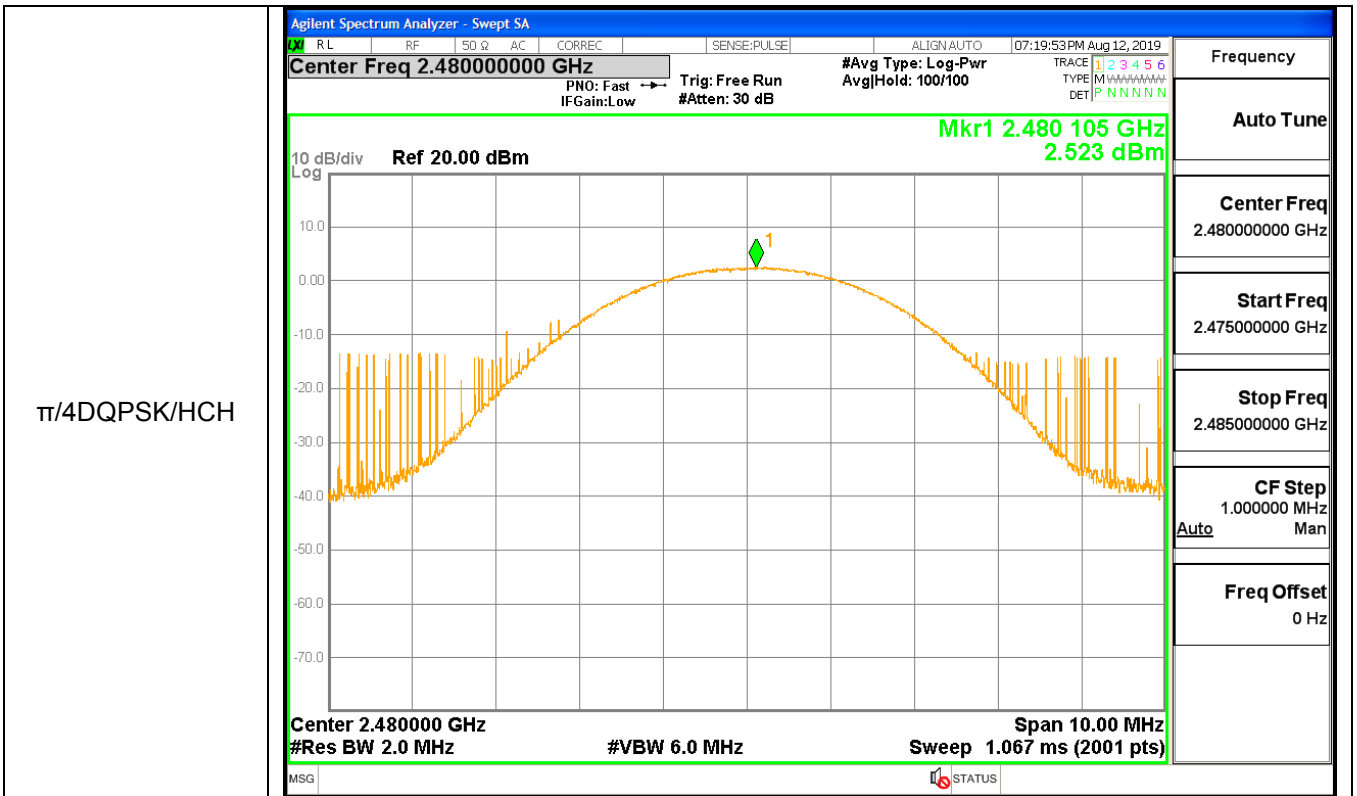
### Test Graph











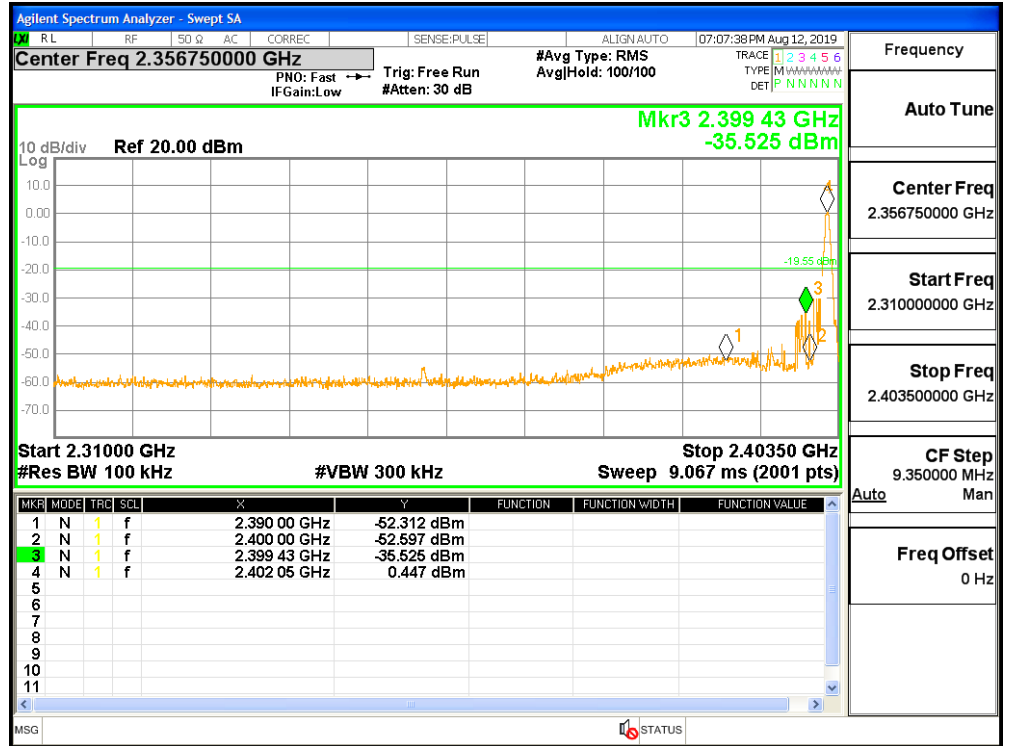
### A.6 Band-edge for RF Conducted Emissions

Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2399.433	0.447	-35.525	-19.553	Pass
1DH5	2480	2483.5	1.338	-43.45	-18.662	Pass
2DH5	2402	2399.012	0.257	-36.03	-19.743	Pass
2DH5	2480	2484.23	1.416	-38.321	-18.584	Pass
1DH5-Hopping	2402	2398.47	0.76	-39.015	-19.24	Pass
1DH5-Hopping	2480	2483.5	1.476	-43.97	-18.524	Pass
2DH5-Hopping	2402	2400	0.671	-34.19	-19.329	Pass
2DH5-Hopping	2480	2484.1	1.458	-39.418	-18.542	Pass

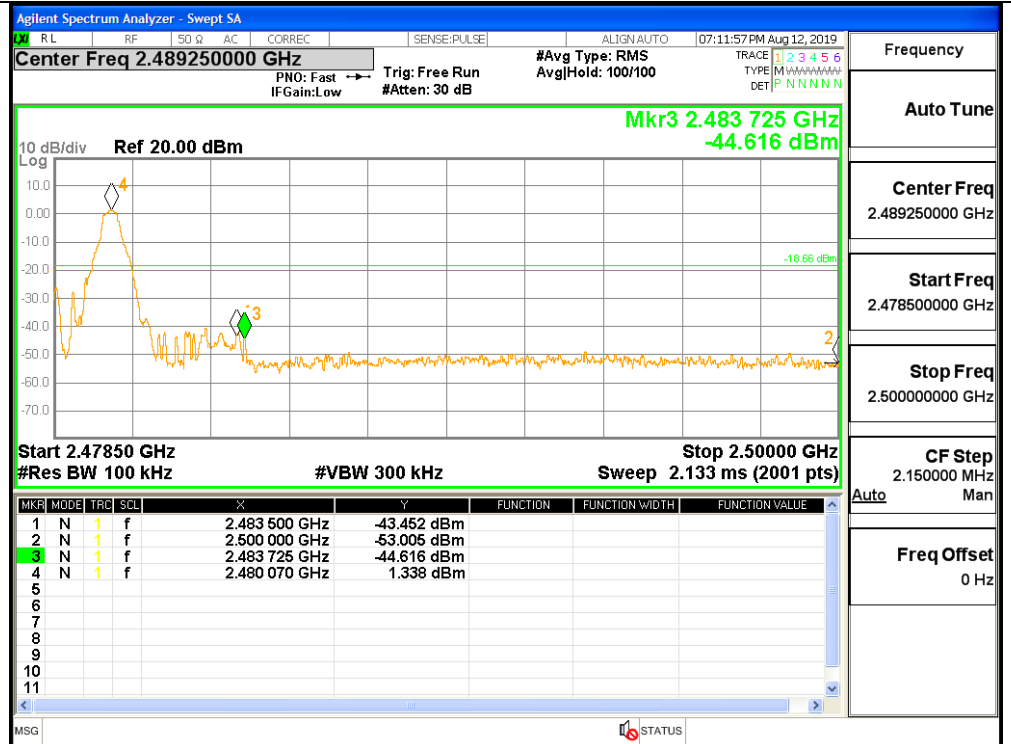
### Test Graph

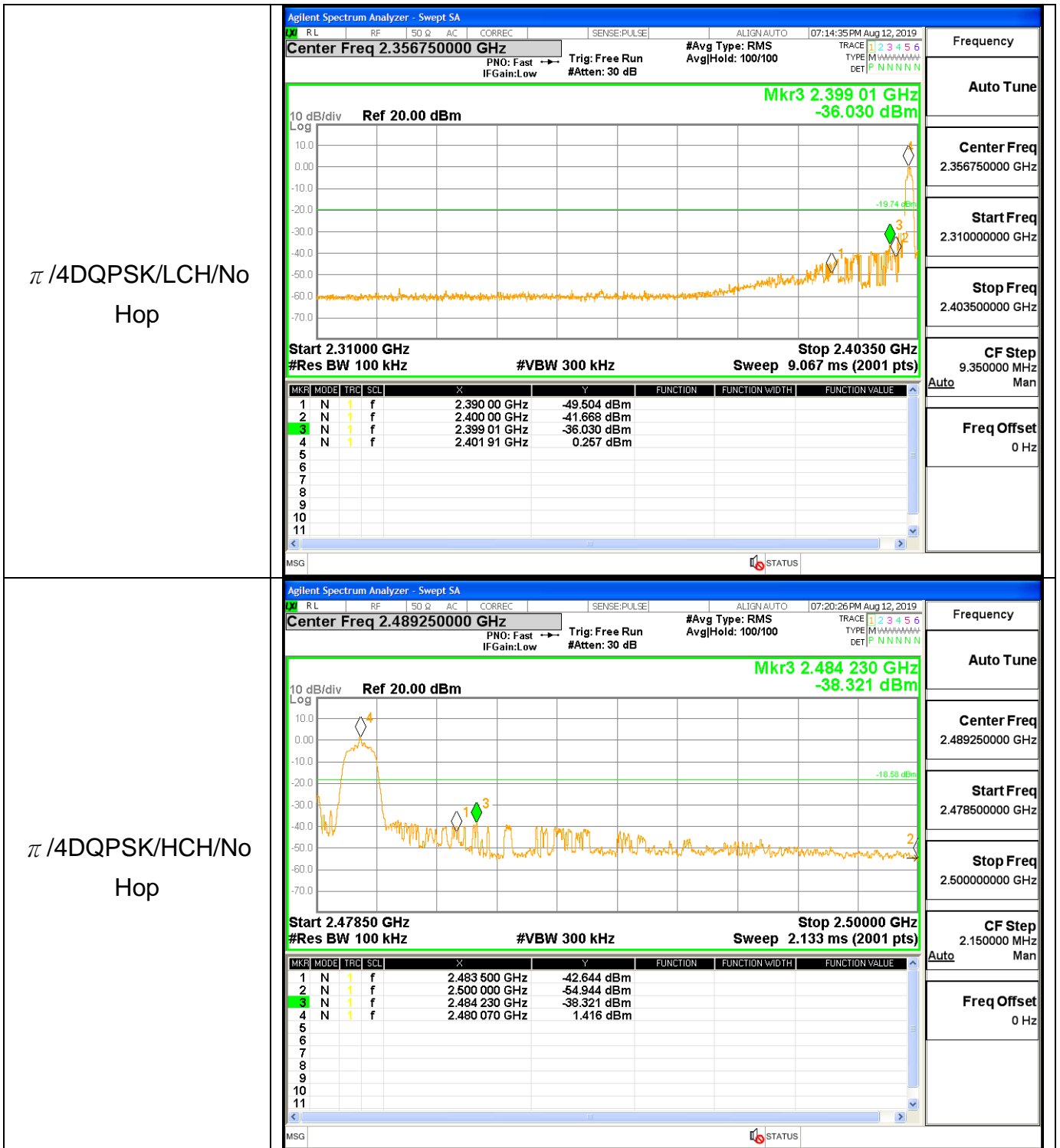
#### Graphs

GFSK/LCH/No Hop

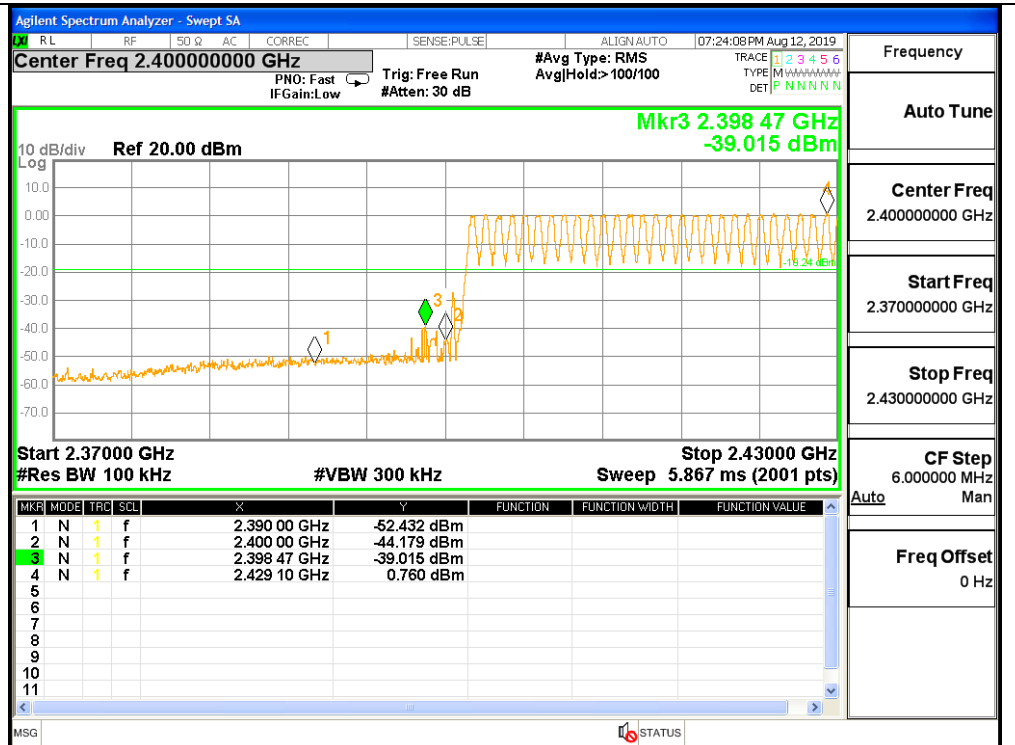


GFSK/HCH/No Hop

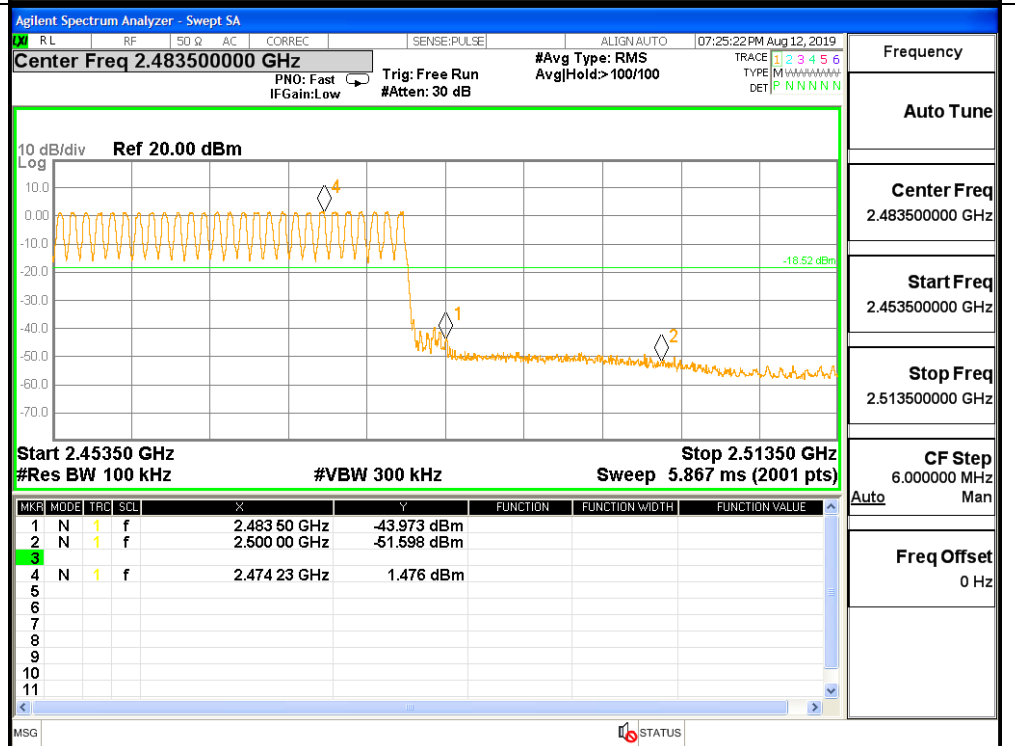




GFSK/LCH/Hop

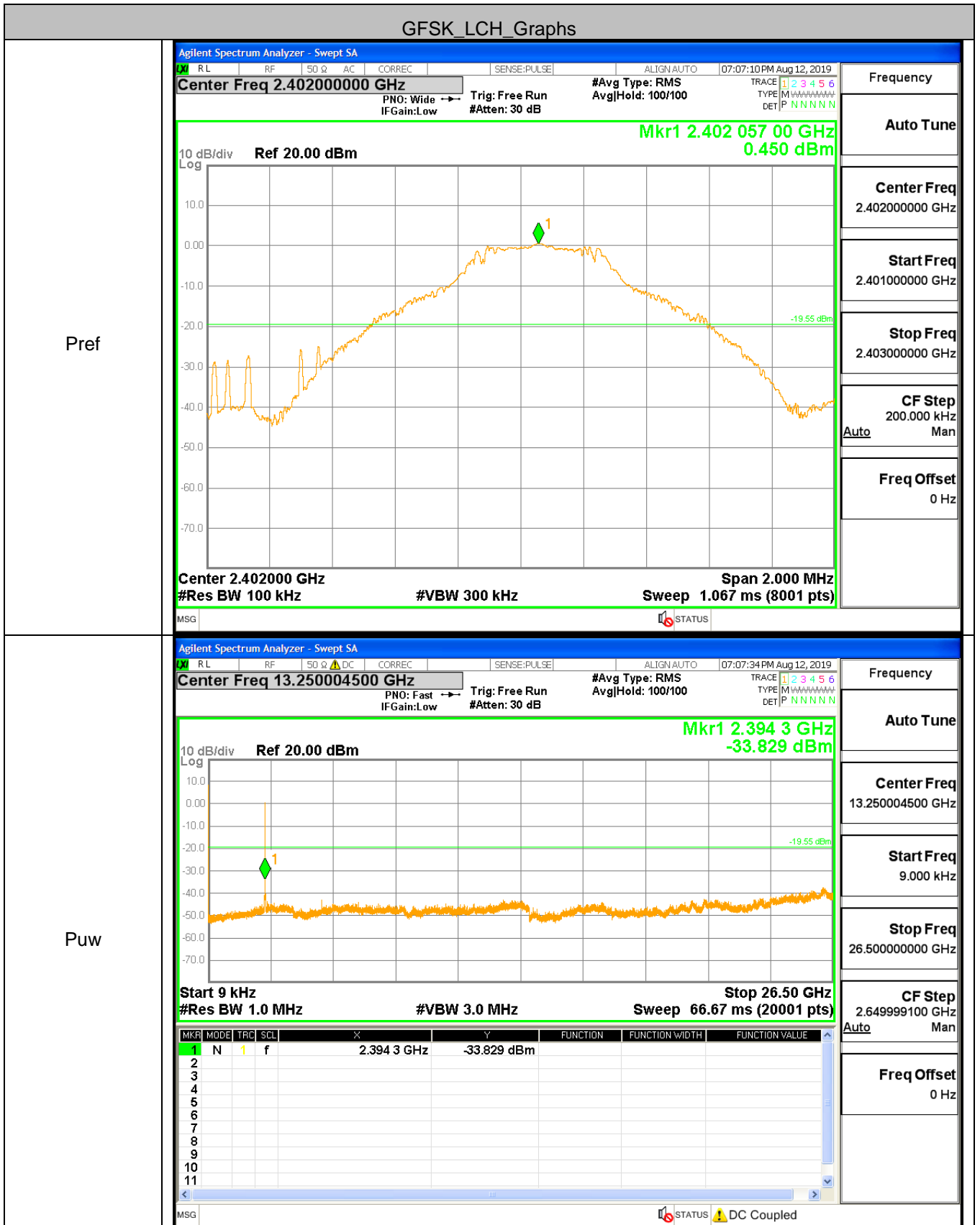


GFSK/HCH/Hop

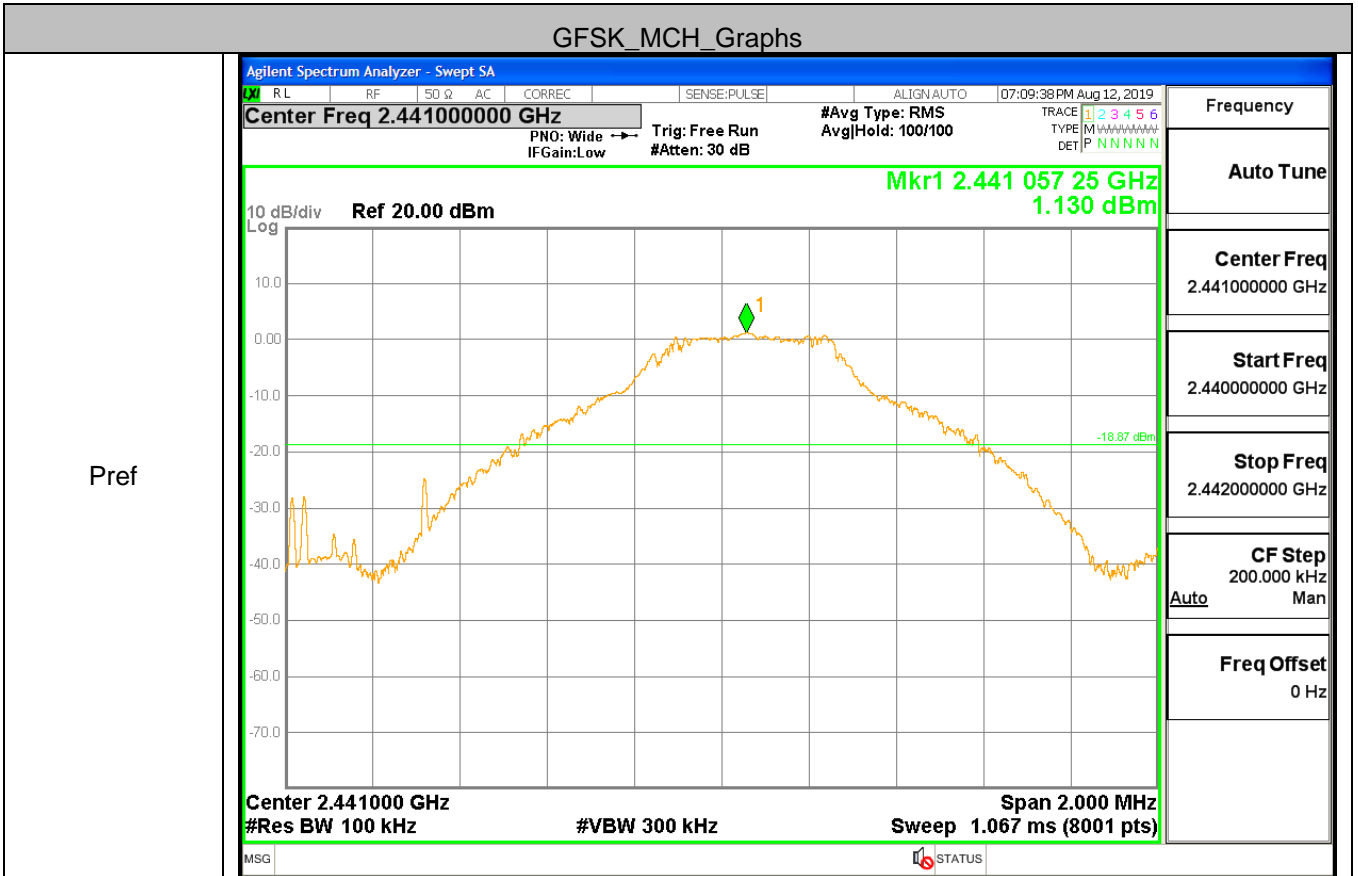




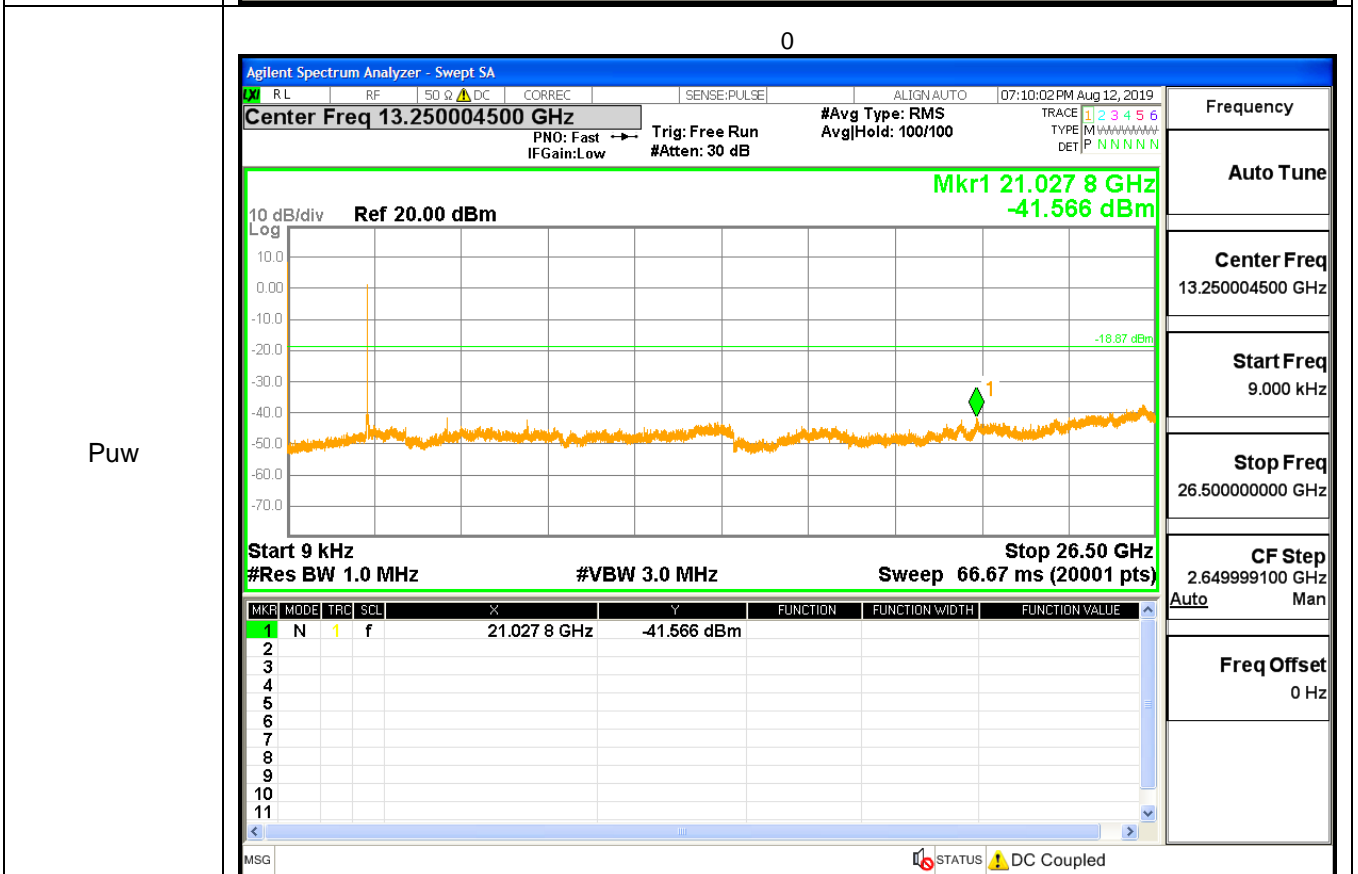
## A.7 RF Conducted Spurious Emissions Test Graph



GFSK\_MCH\_Graphs

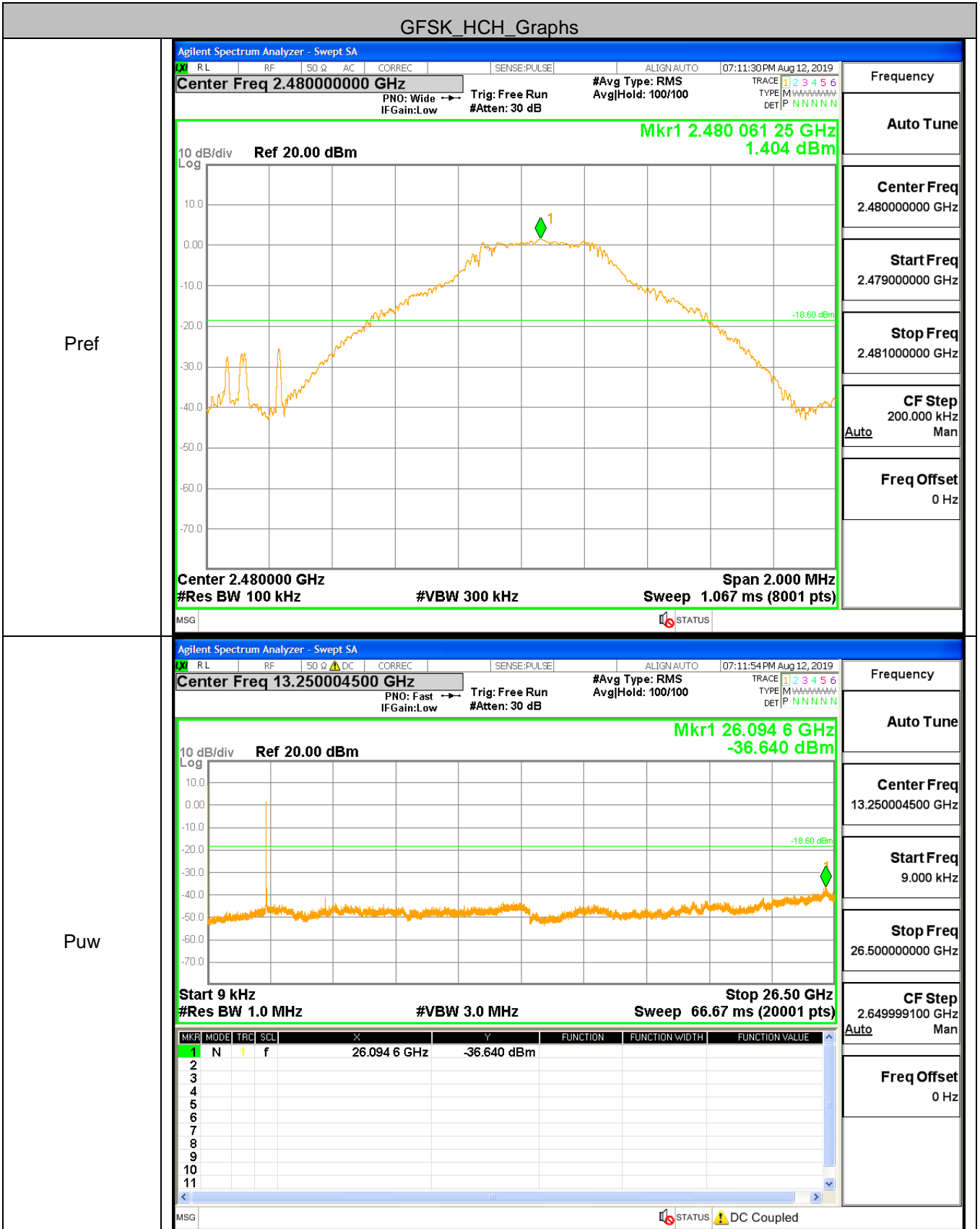


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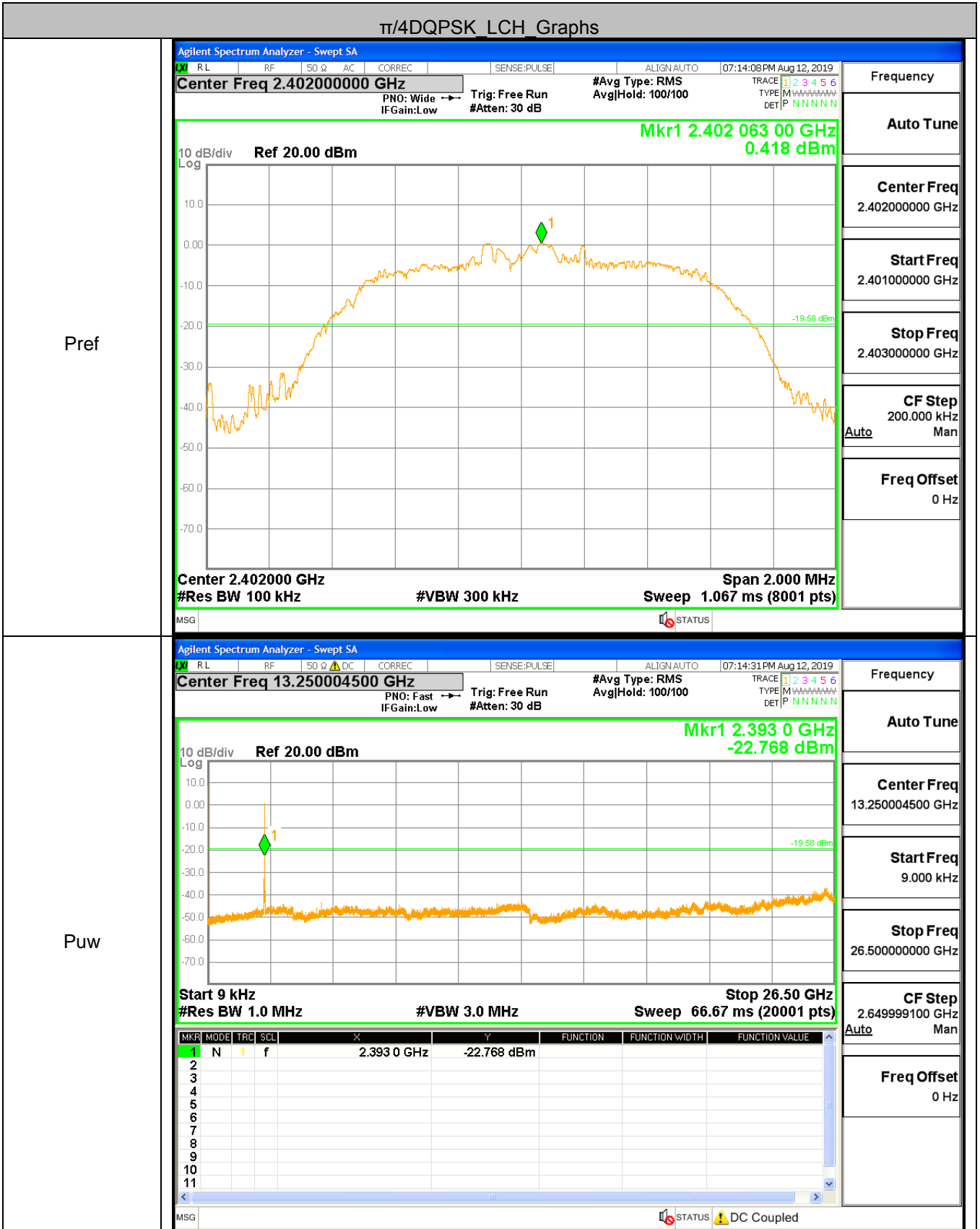




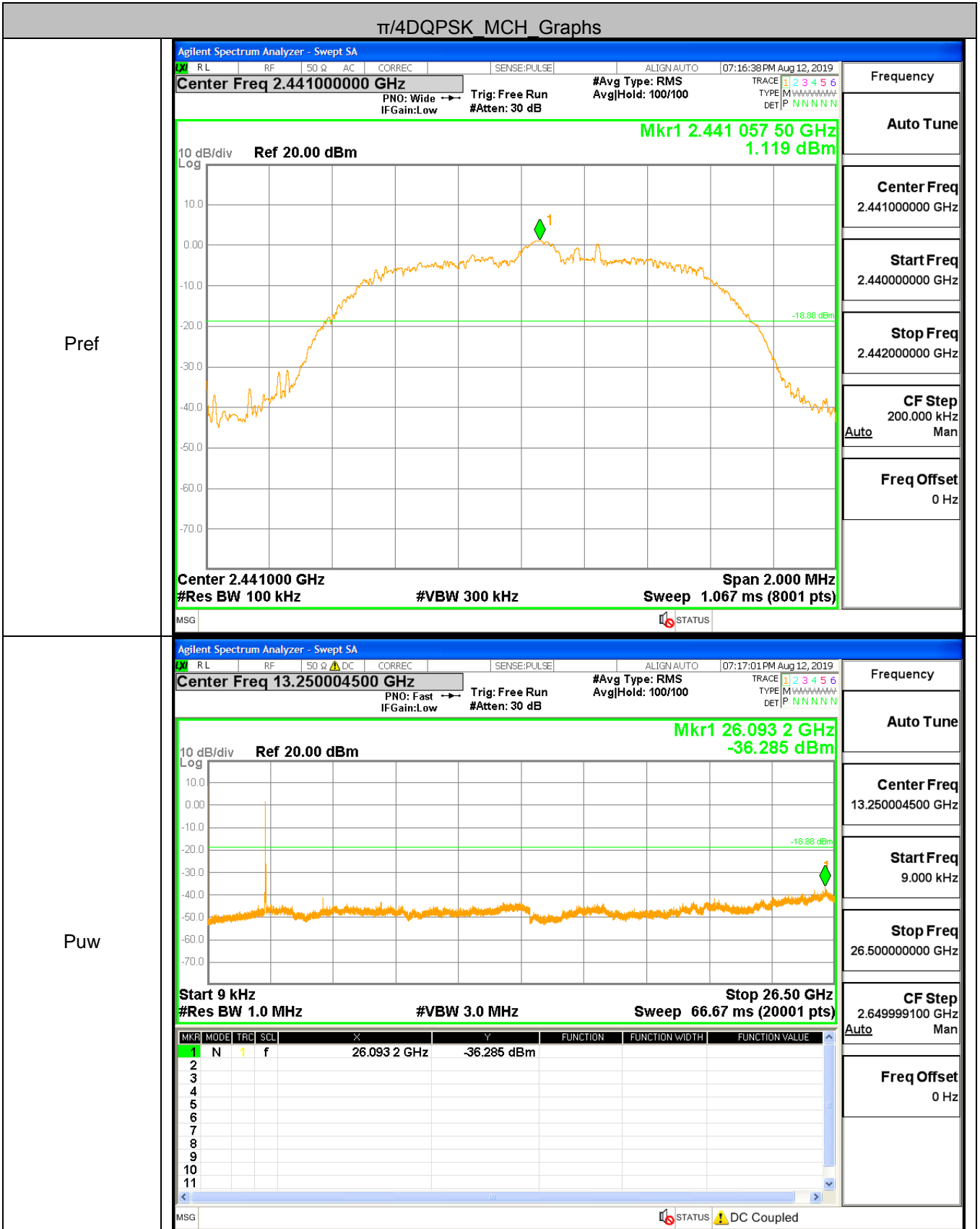
GFSK\_HCH\_Graphs



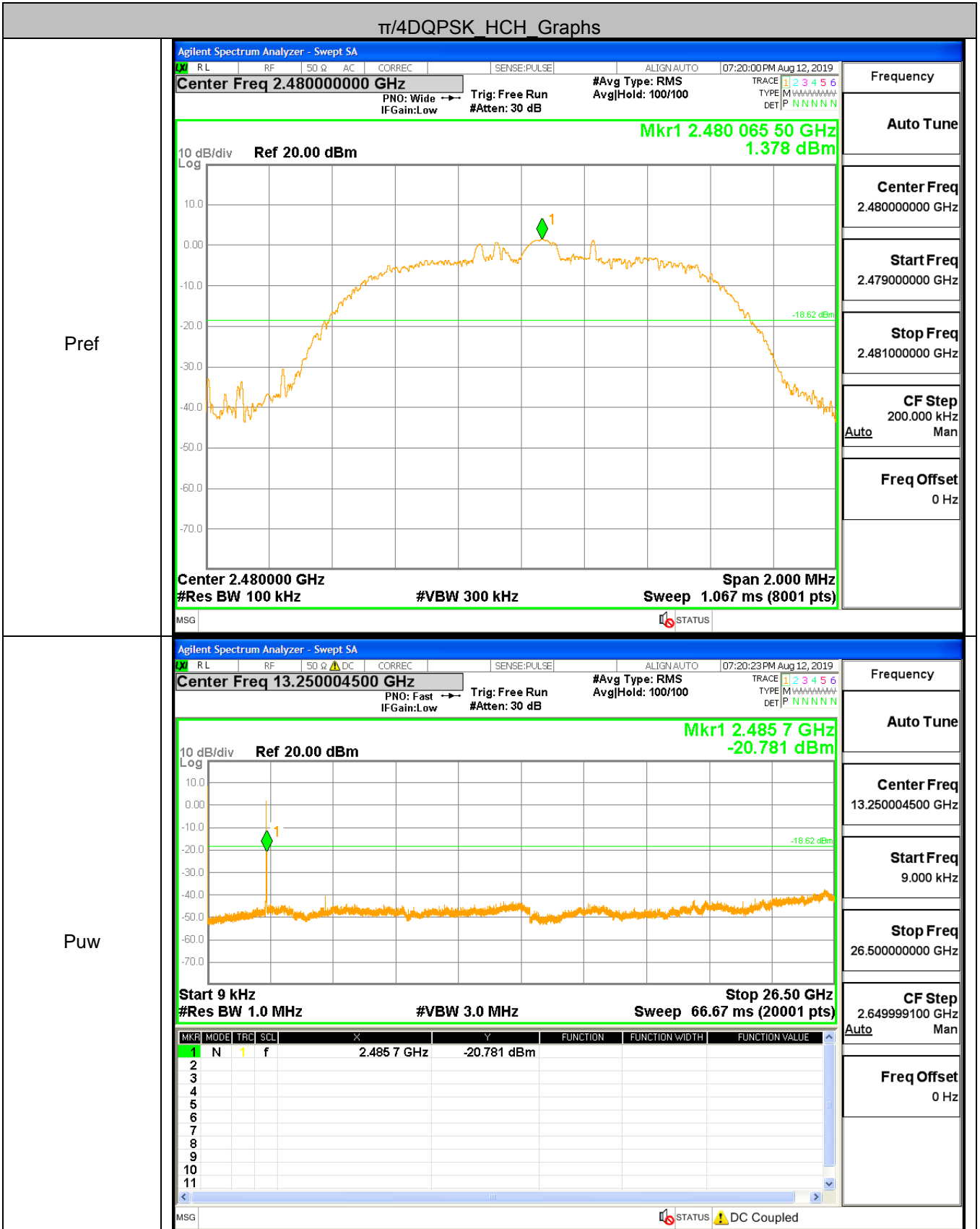
$\pi/4$ DQPSK LCH Graphs



$\pi/4$ DQPSK MCH Graphs



$\pi/4$ DQPSK HCH Graphs

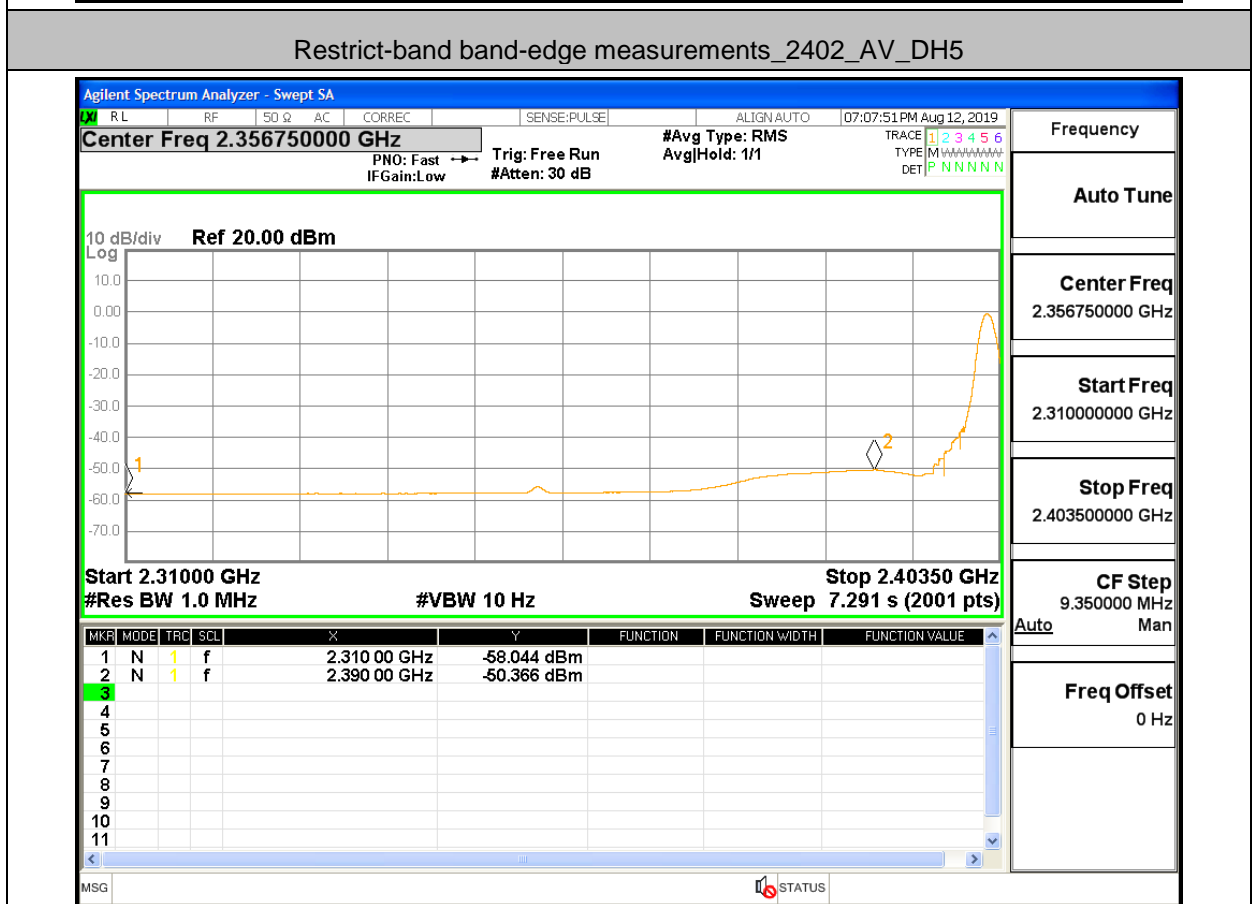
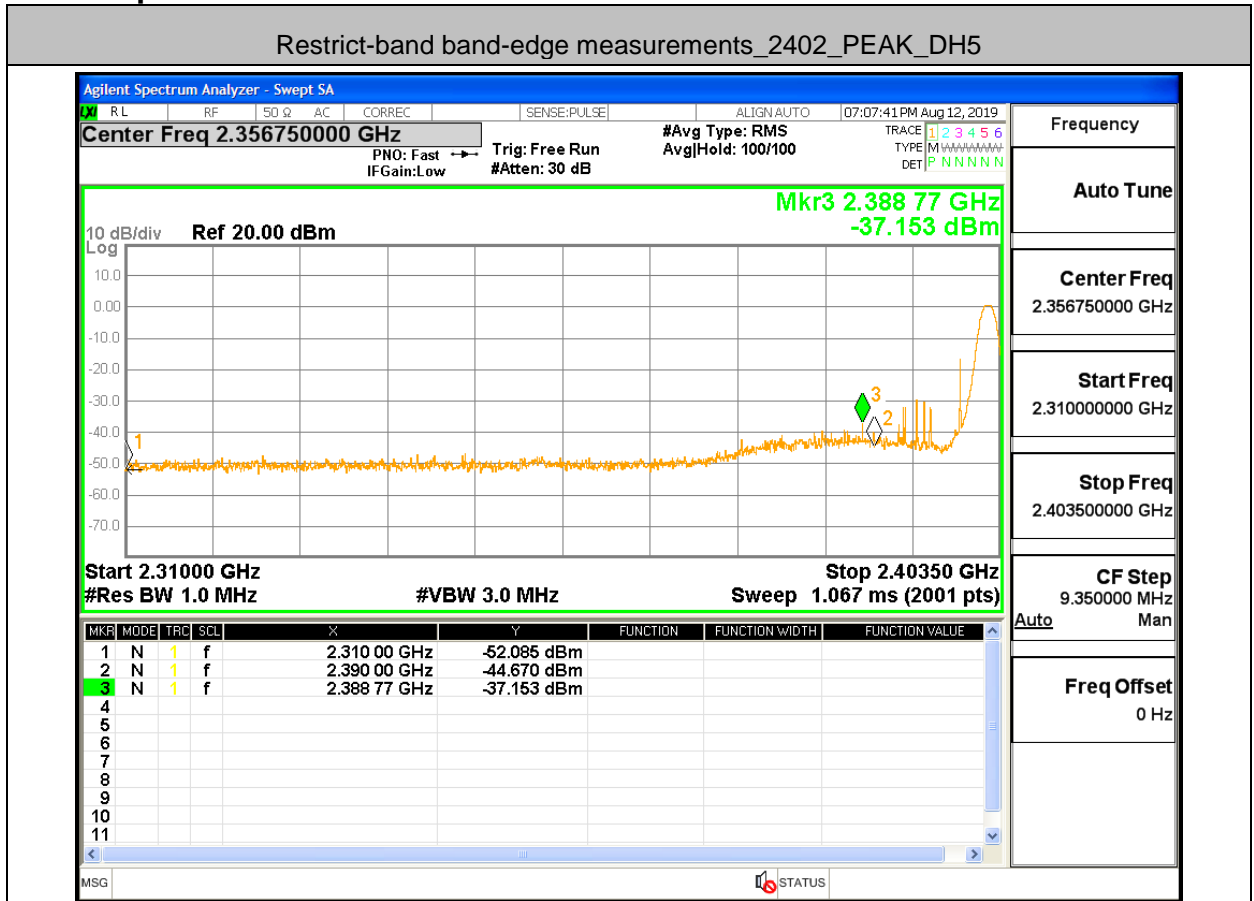


### A.8 Restrict-band measurements

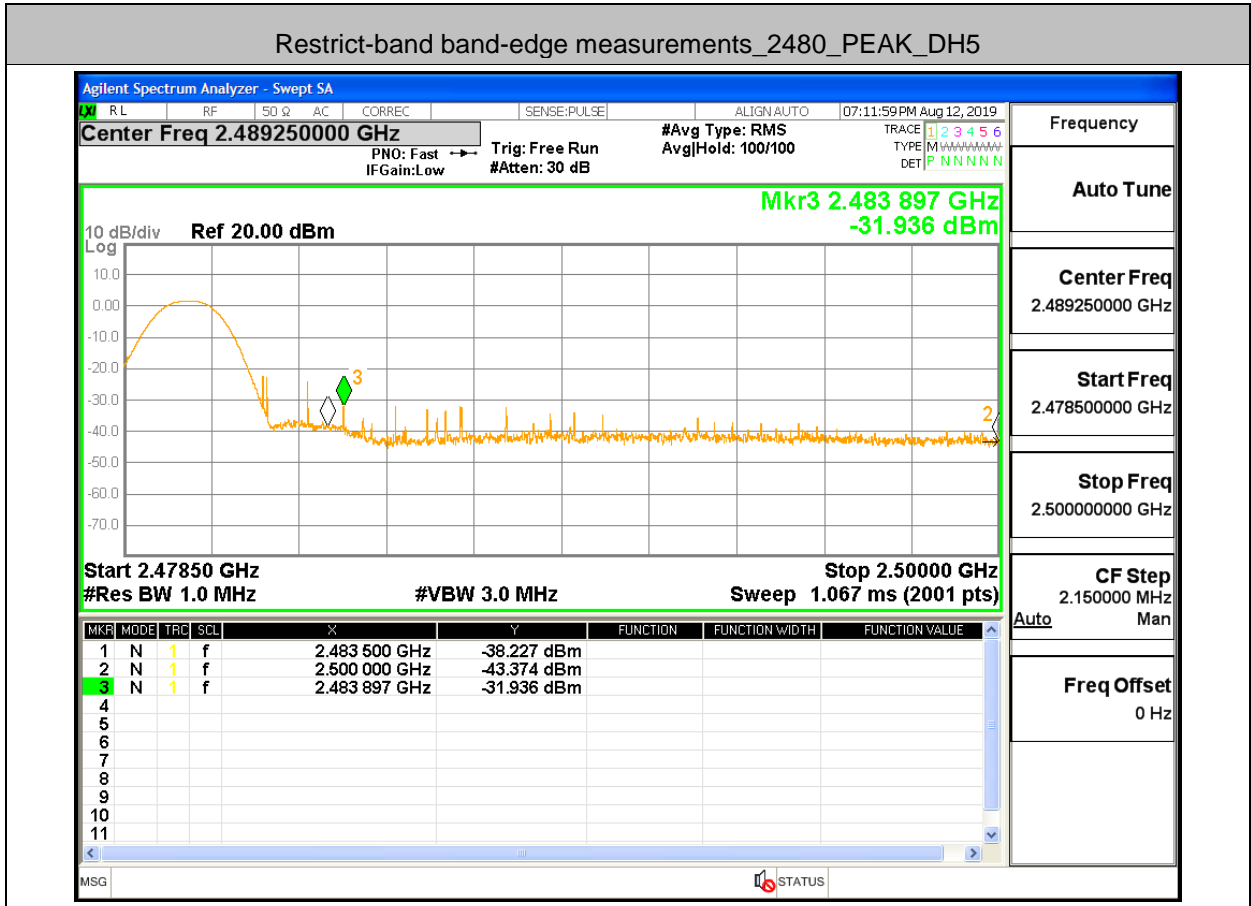
Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2388.77	2.00	0.00	-37.15	60.05	74	Pass
1DH5	2480	2483.90	2.00	0.00	-31.94	65.26	74	Pass
2DH5	2402	2387.89	2.00	0.00	-28.09	69.11	74	Pass
2DH5	2480	2483.50	2.00	0.00	-35.97	61.23	74	Pass

Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Average Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2388.77	2.00	0.00	-50.37	46.83	54	Pass
1DH5	2480	2483.90	2.00	0.00	-44.32	52.88	54	Pass
2DH5	2402	2387.89	2.00	0.00	-49.70	47.50	54	Pass
2DH5	2480	2484.38	2.00	0.00	-45.39	51.81	54	Pass

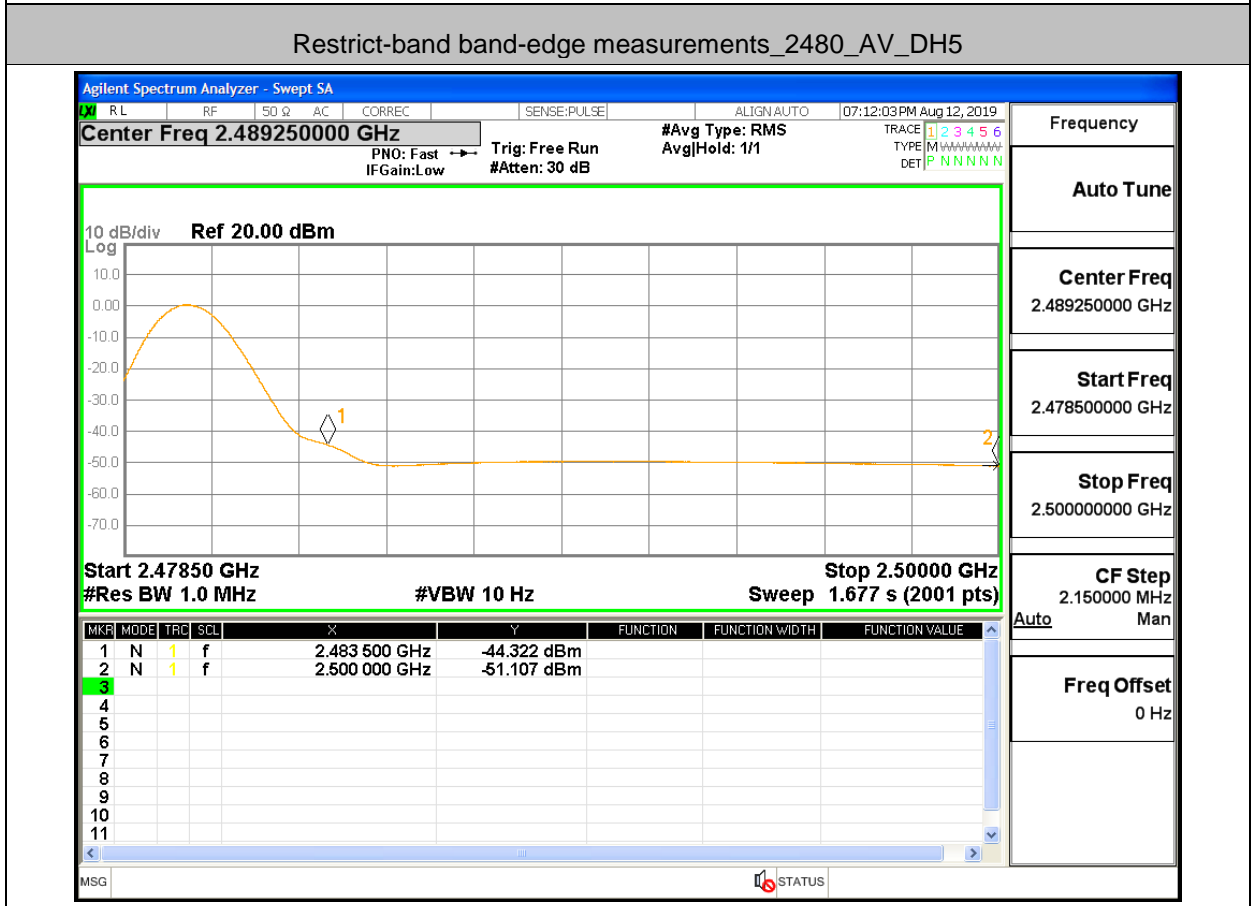
### Test Graph



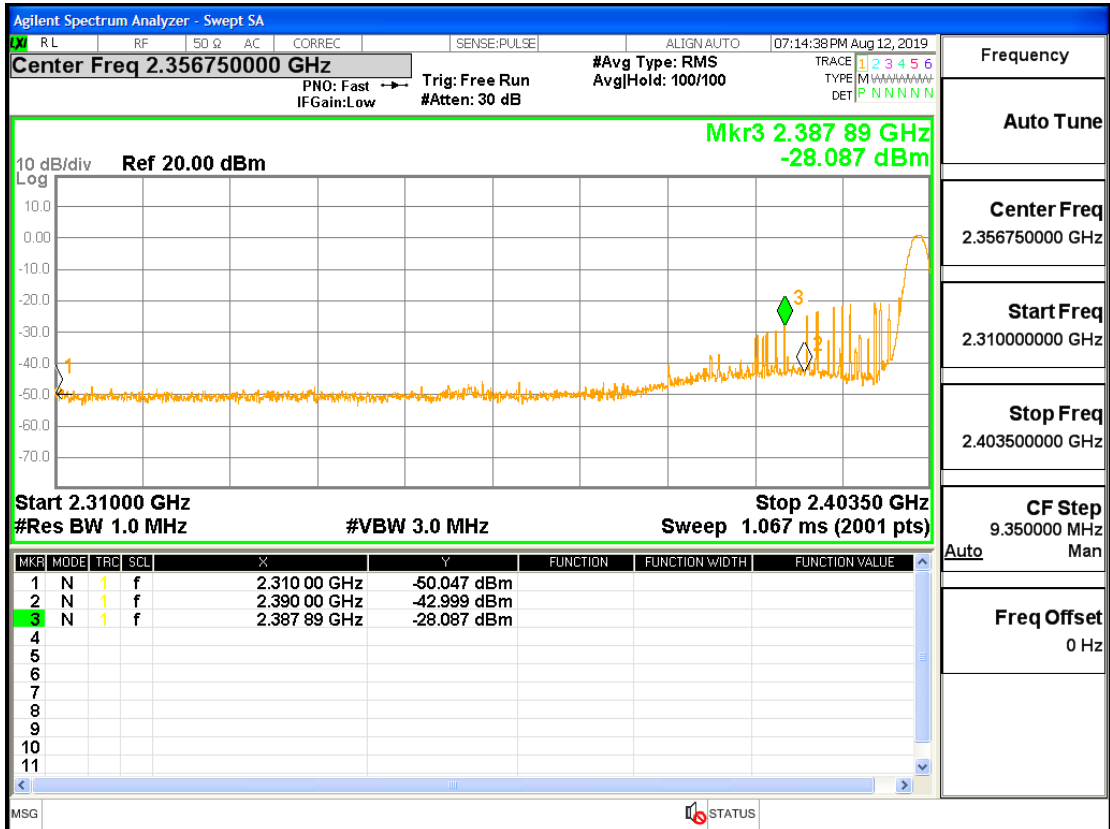
Restrict-band band-edge measurements\_2480\_PEAK\_DH5



Restrict-band band-edge measurements\_2480\_AV\_DH5



Restrict-band band-edge measurements\_2402\_PEAK\_2DH5



Restrict-band band-edge measurements\_2402\_AV\_2DH5

