

**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: QIF-RT02B**

**Environmental Conditions**

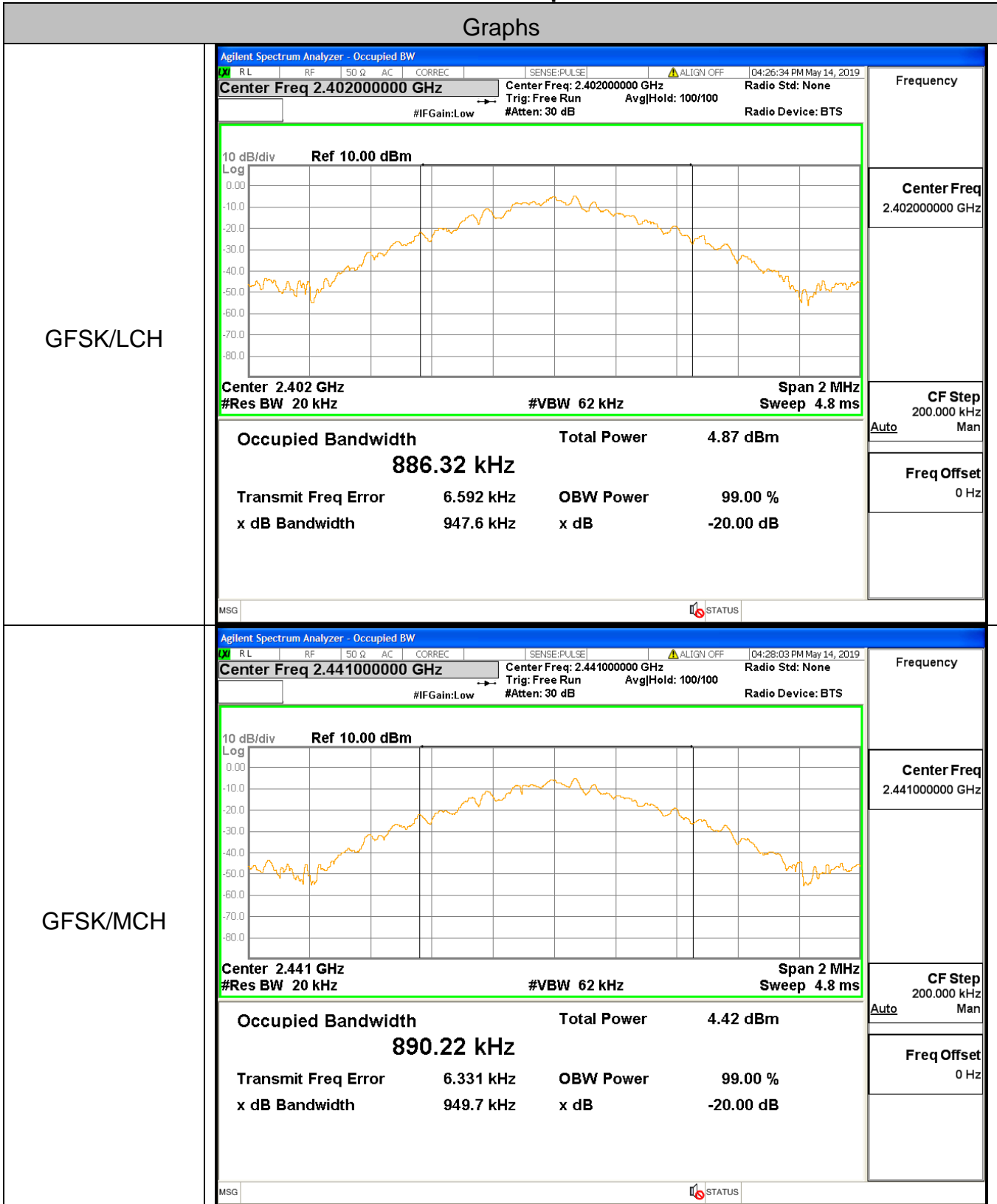
Temperature:	23.1 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Gary Qian
Supervised by:	Eden Hu

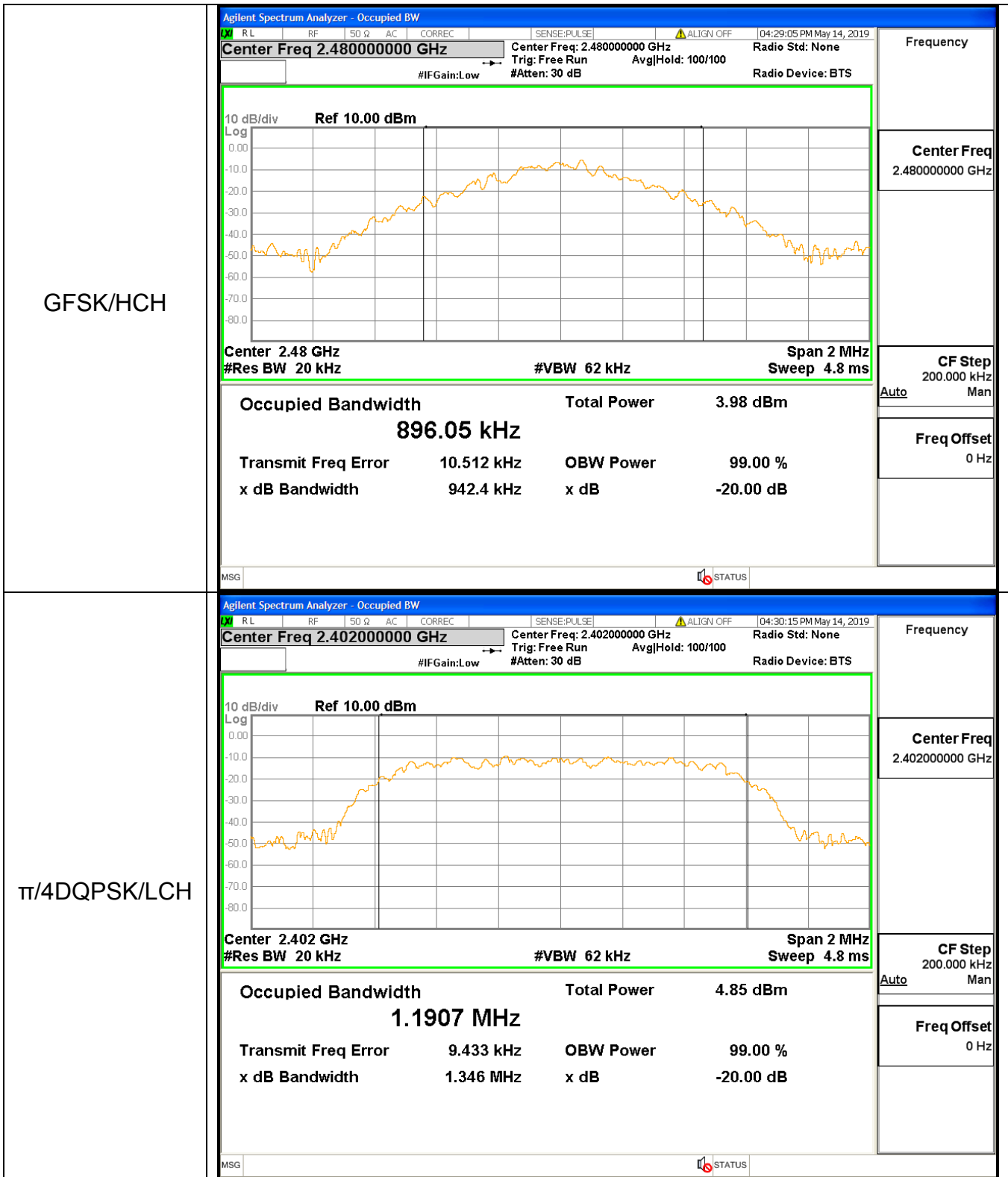
**A.1 20 dB Bandwidth**

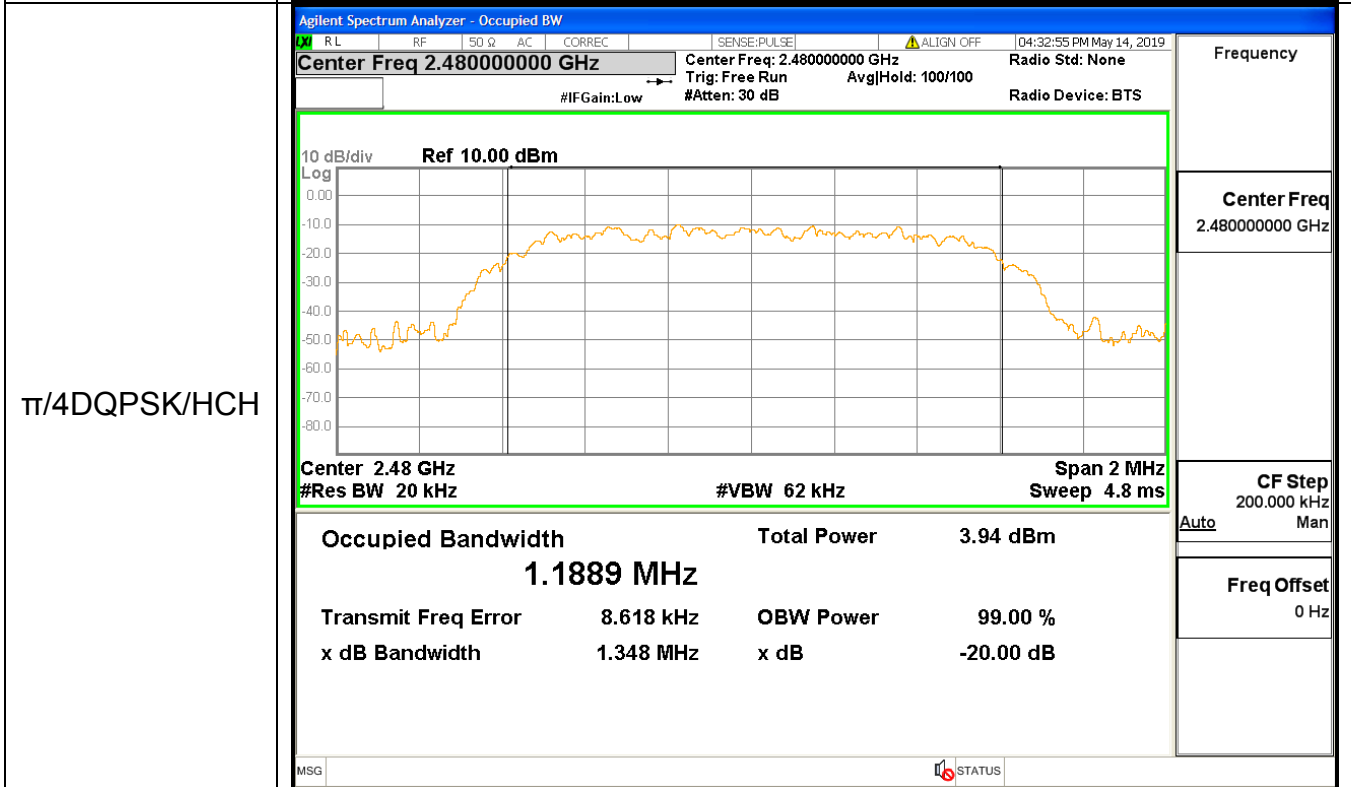
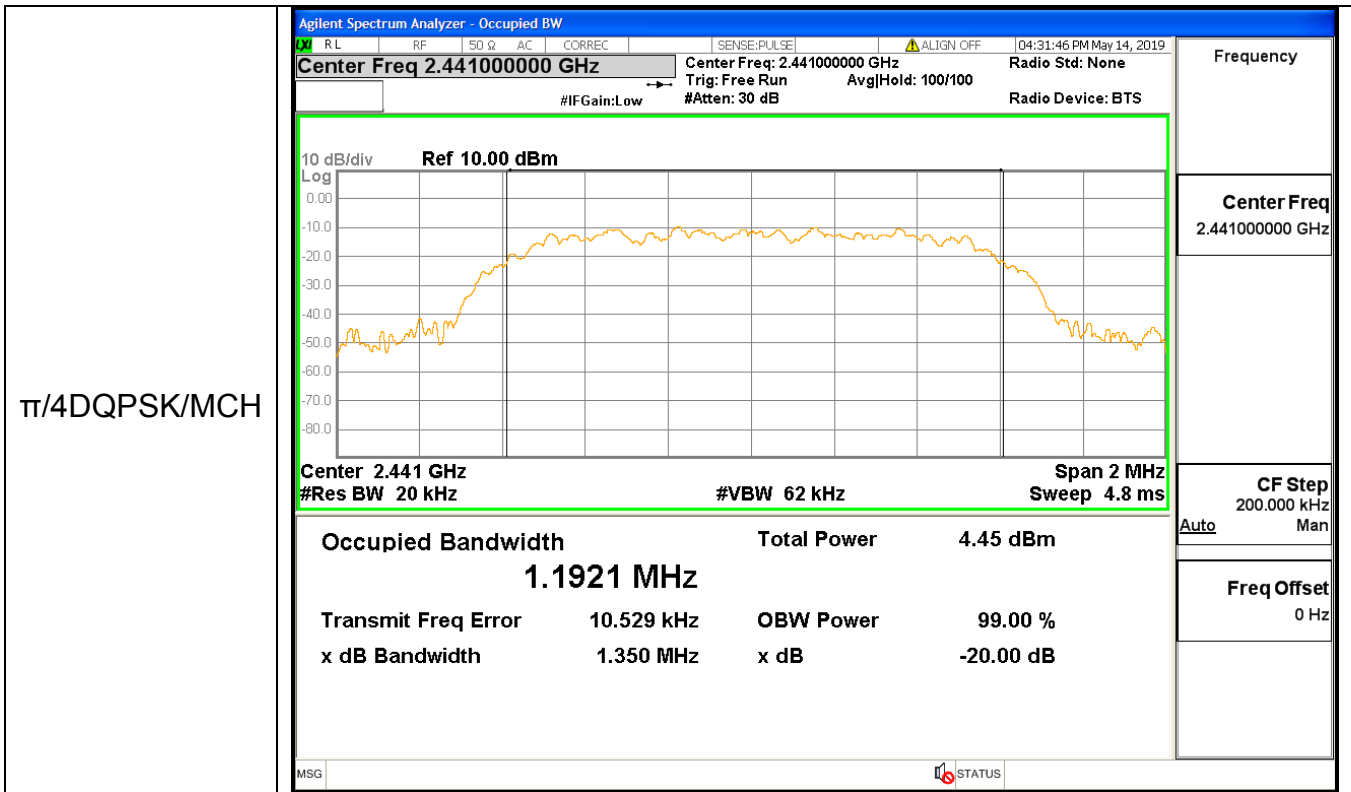
Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.948	Not Specified	PASS
GFSK	MCH	0.950	Not Specified	PASS
GFSK	HCH	0.942	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.346	Not Specified	PASS
$\pi/4$ DQPSK	MCH	1.350	Not Specified	PASS
$\pi/4$ DQPSK	HCH	1.348	Not Specified	PASS
8DPSK	LCH	1.341	Not Specified	PASS
8DPSK	MCH	1.340	Not Specified	PASS
8DPSK	HCH	1.341	Not Specified	PASS

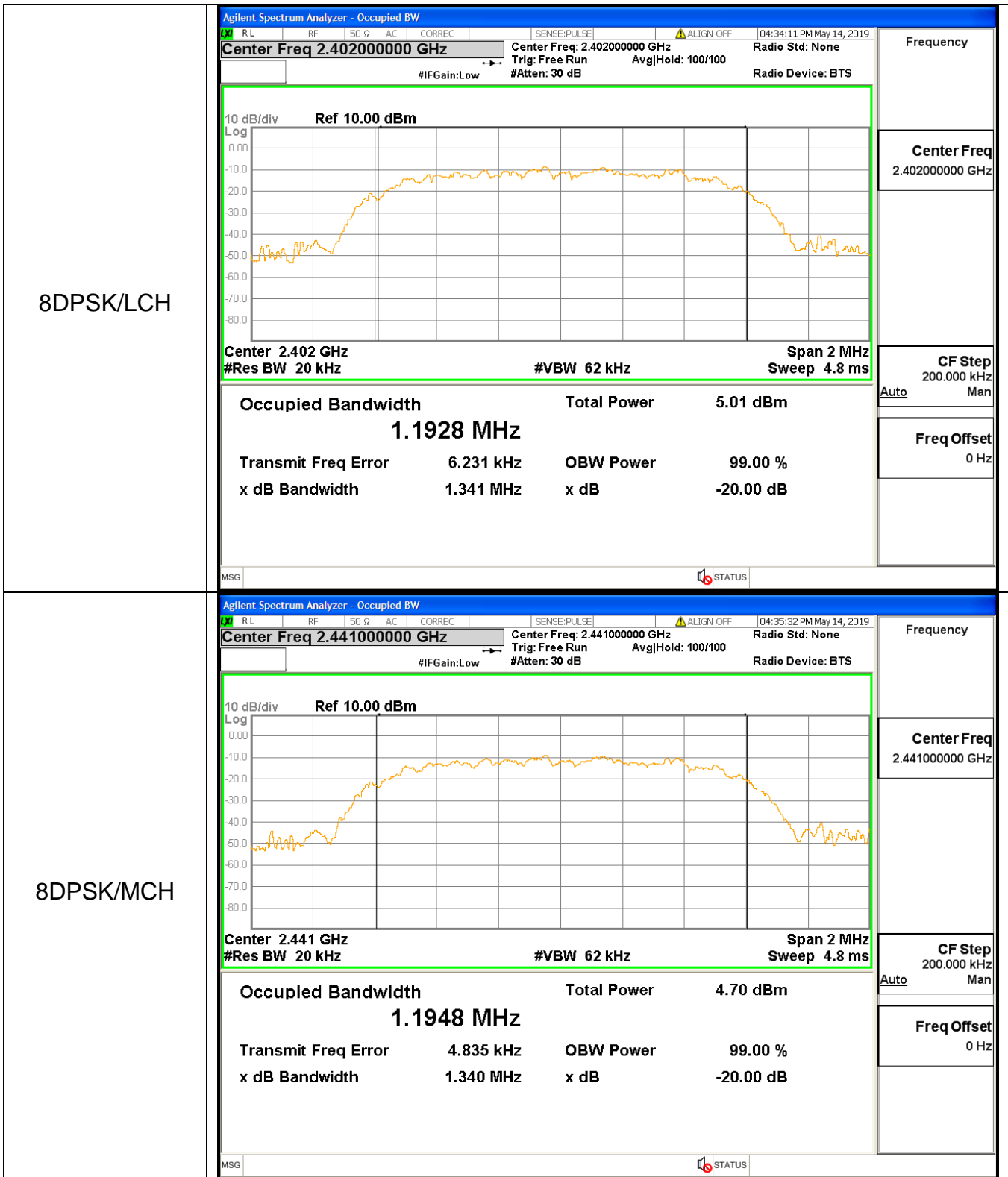
### Test Graph

#### Graphs

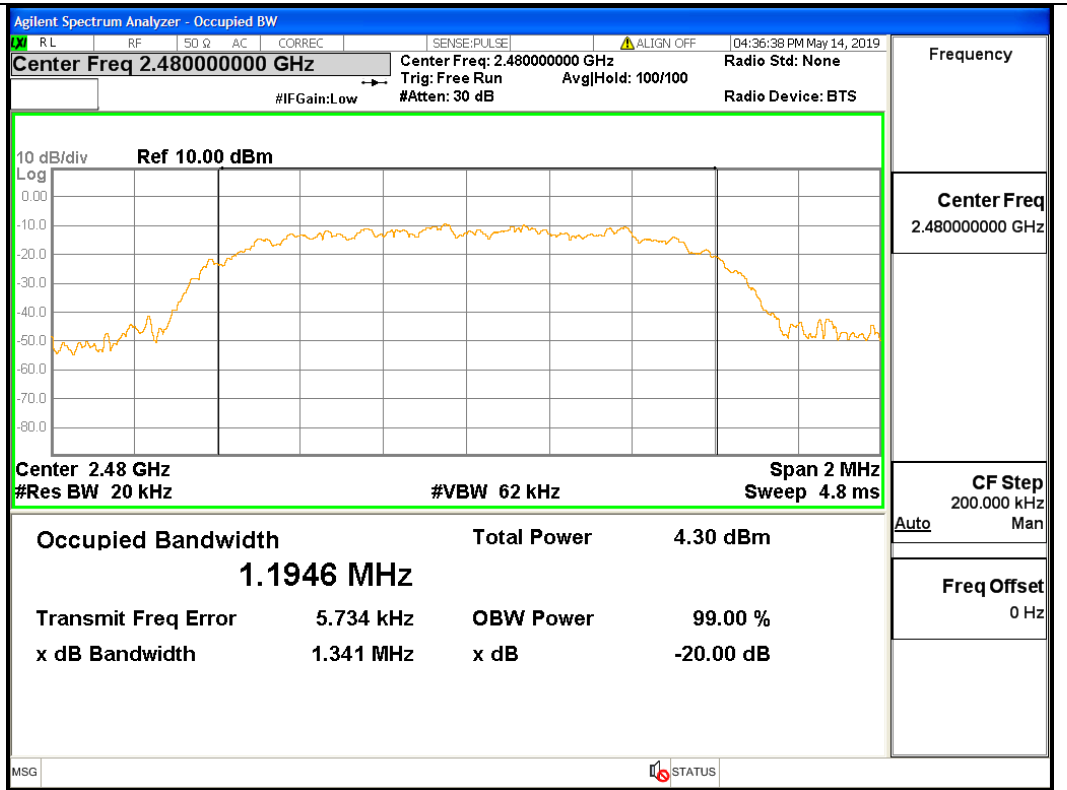








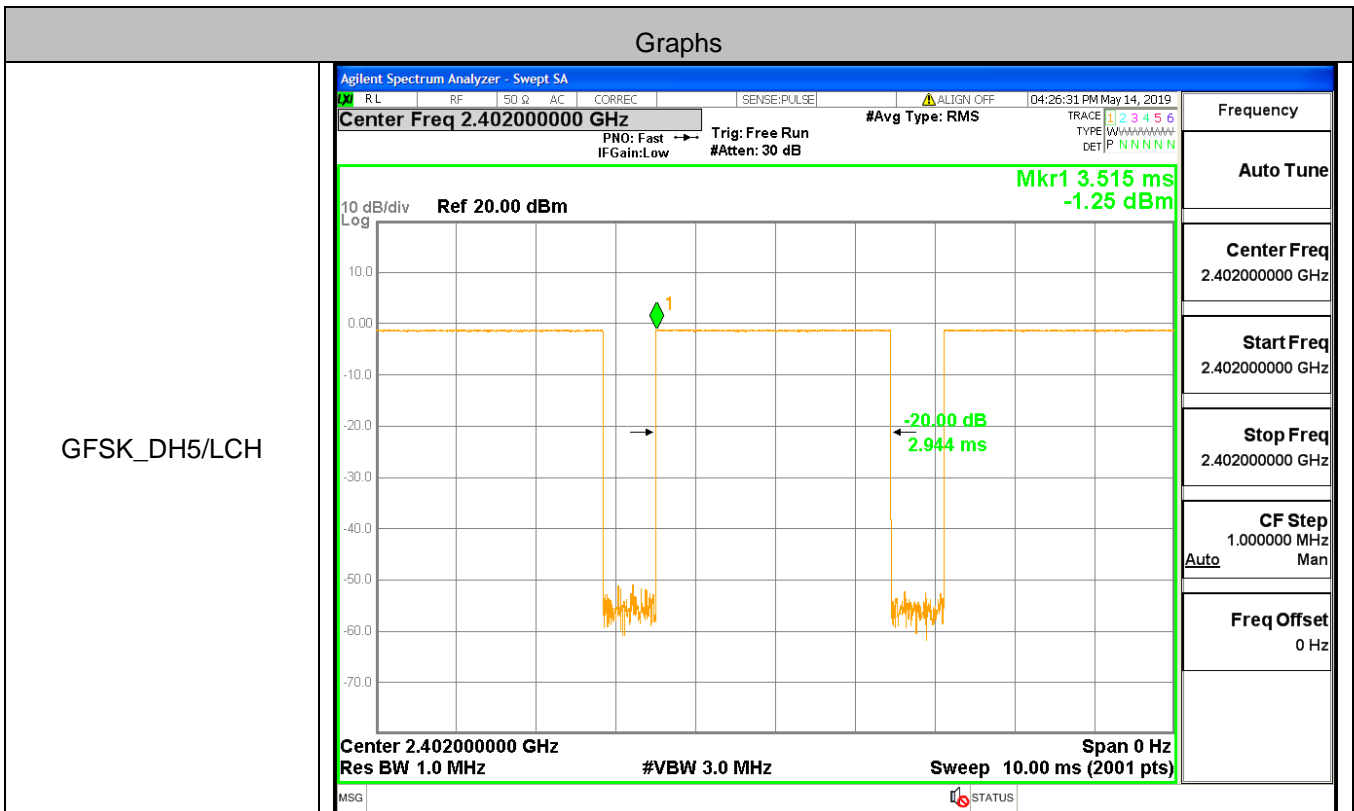
8DPSK/HCH

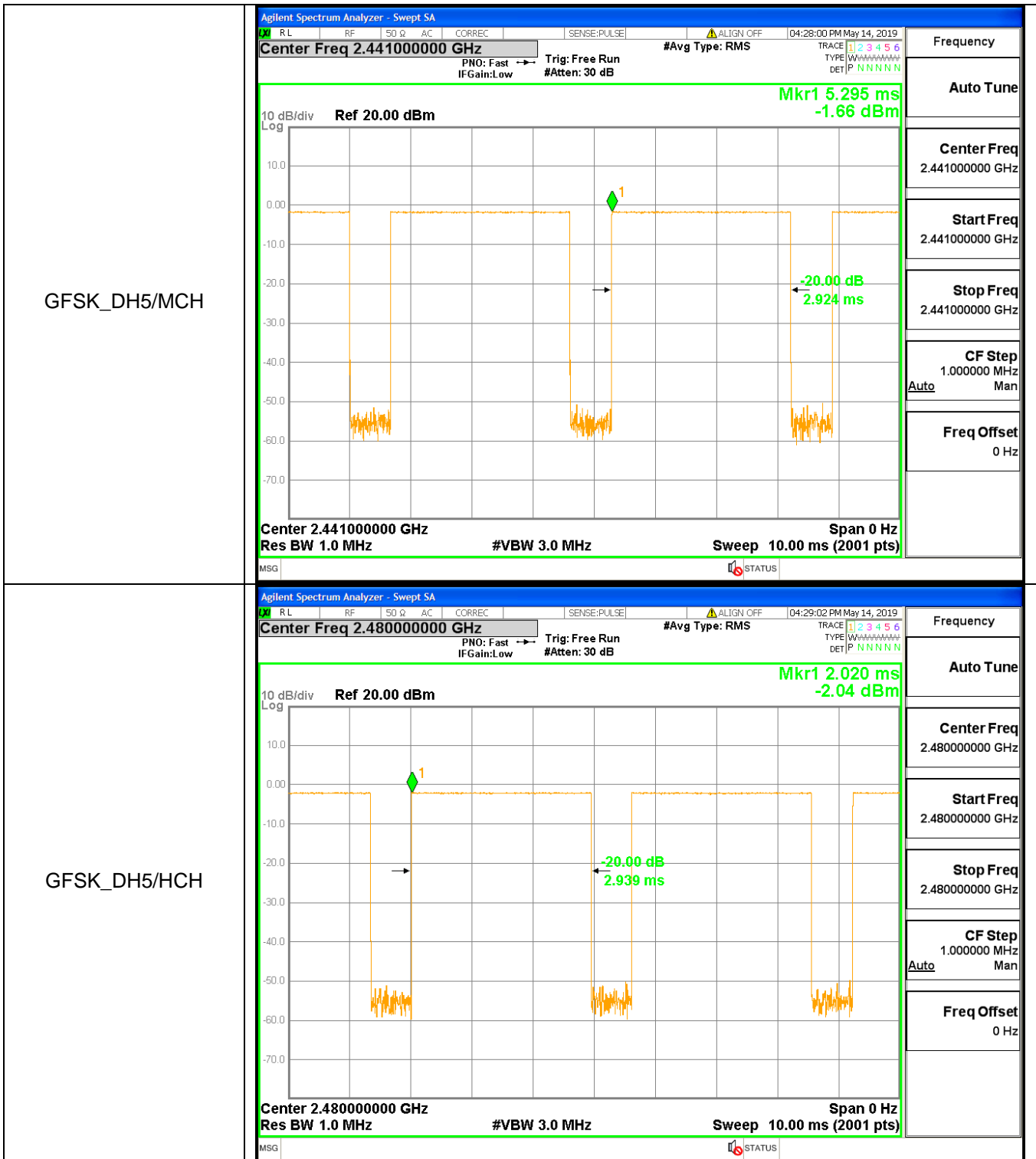


### A.2 Dwell Time

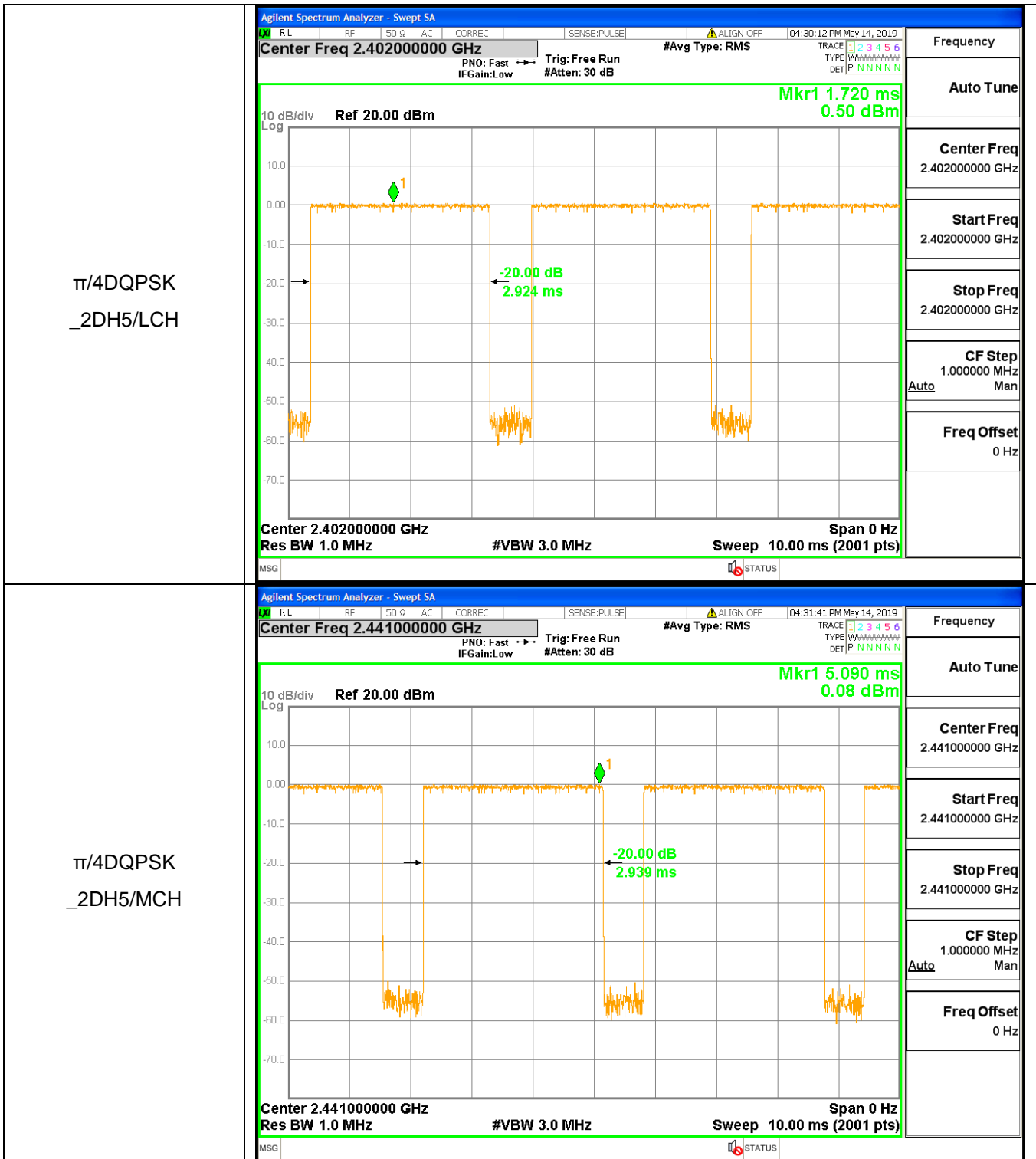
Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002944	106.7	0.314076	0.4	PASS
GFSK	DH5	MCH	0.002924	106.7	0.312018	0.4	PASS
GFSK	DH5	HCH	0.002939	106.7	0.313633	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	0.002924	106.7	0.311962	0.4	PASS
$\pi/4$ DQPSK	2DH5	MCH	0.002939	106.7	0.313608	0.4	PASS
$\pi/4$ DQPSK	2DH5	HCH	0.002923	106.7	0.311907	0.4	PASS
8DPSK	3DH5	LCH	0.002943	106.7	0.314037	0.4	PASS
8DPSK	3DH5	MCH	0.002943	106.7	0.314039	0.4	PASS
8DPSK	3DH5	HCH	0.002939	106.7	0.313609	0.4	PASS

Test Graph

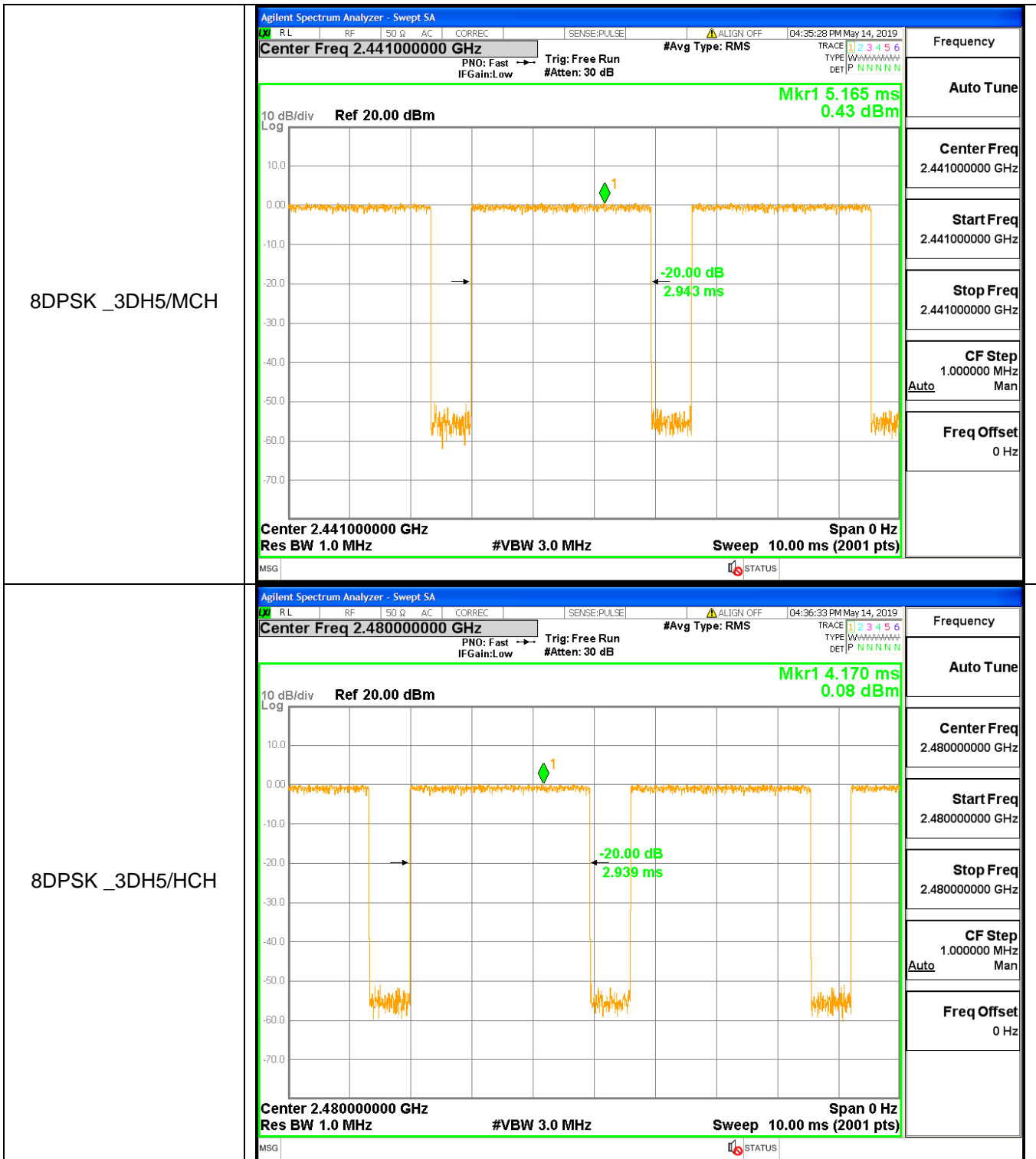








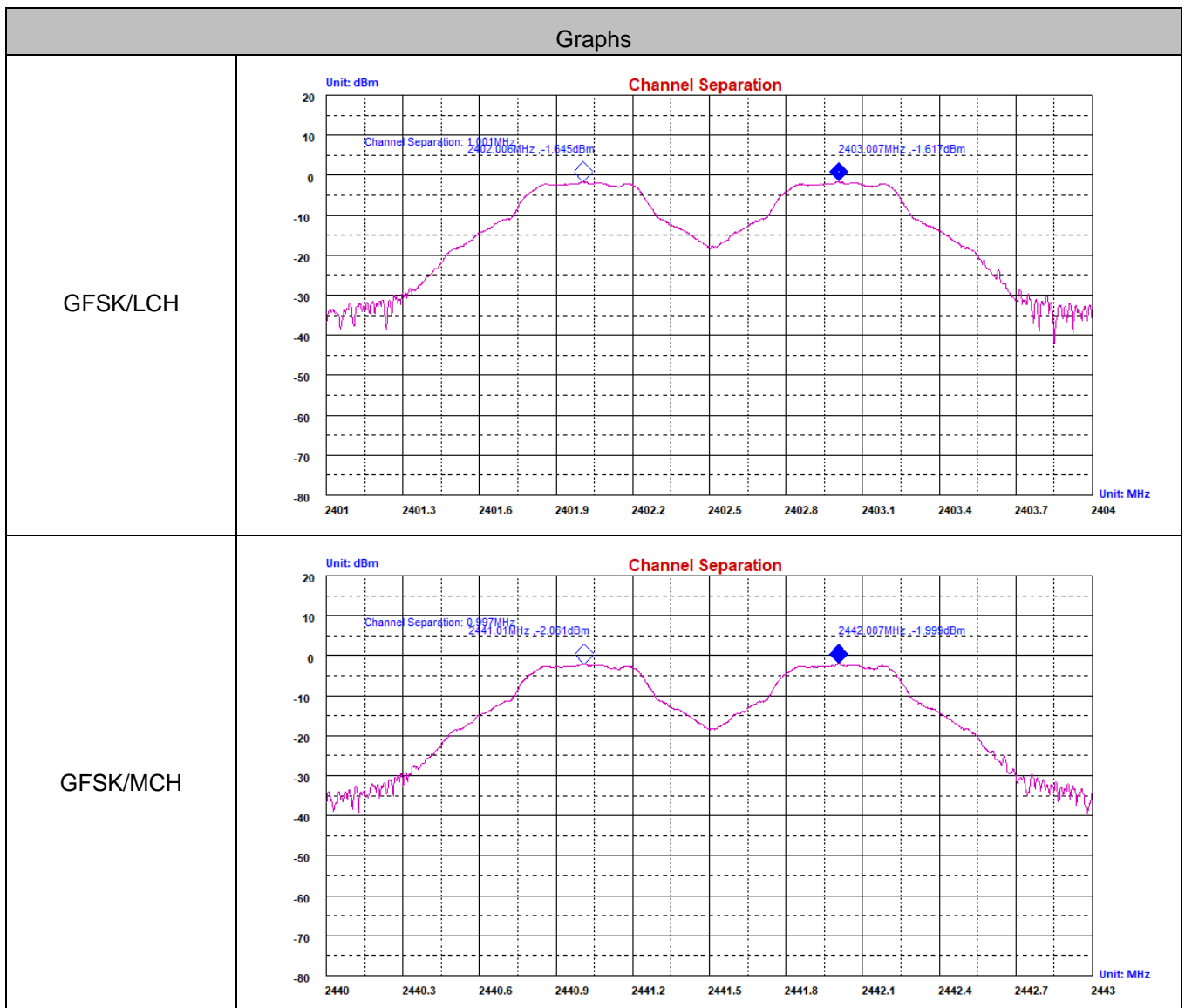


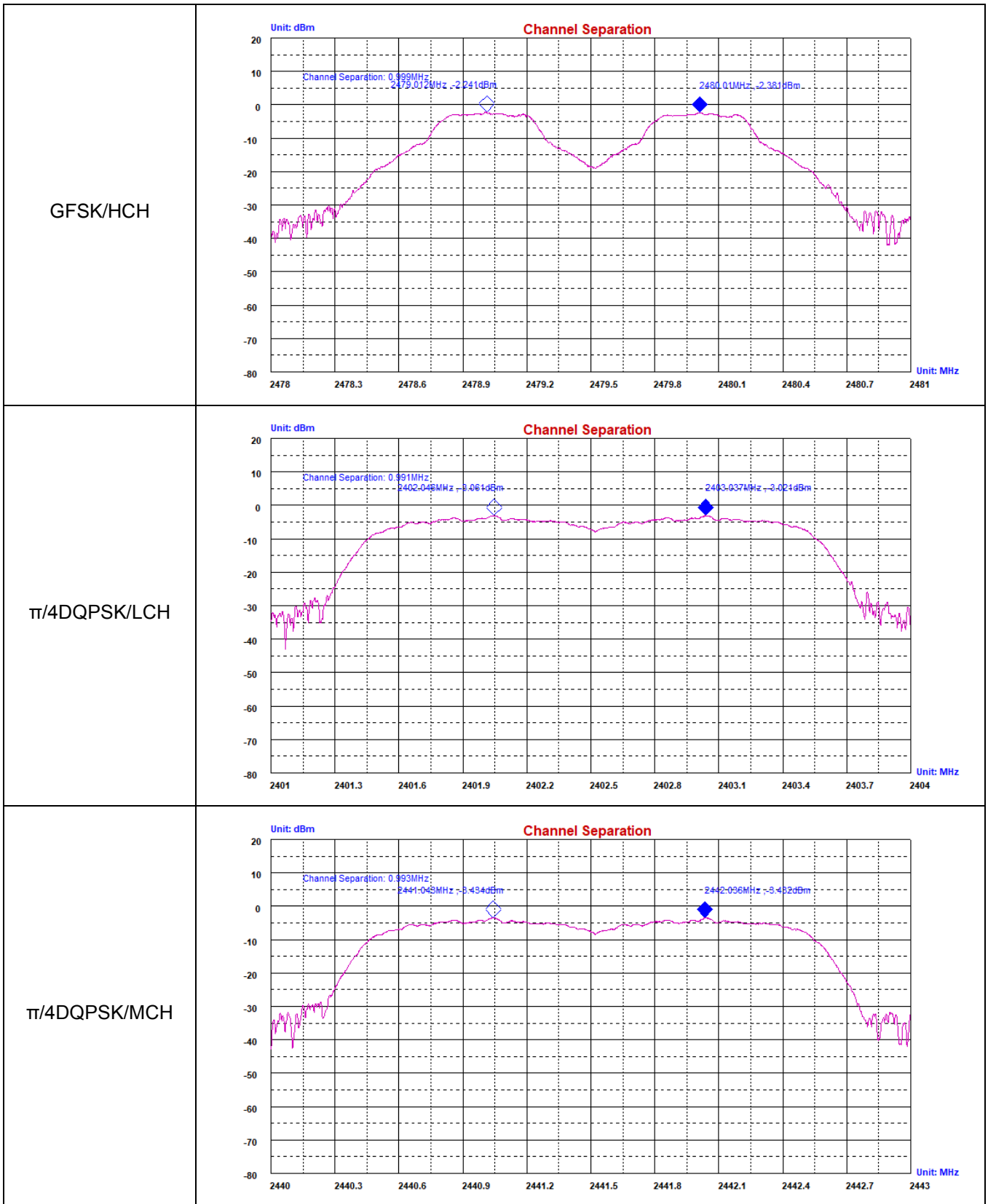


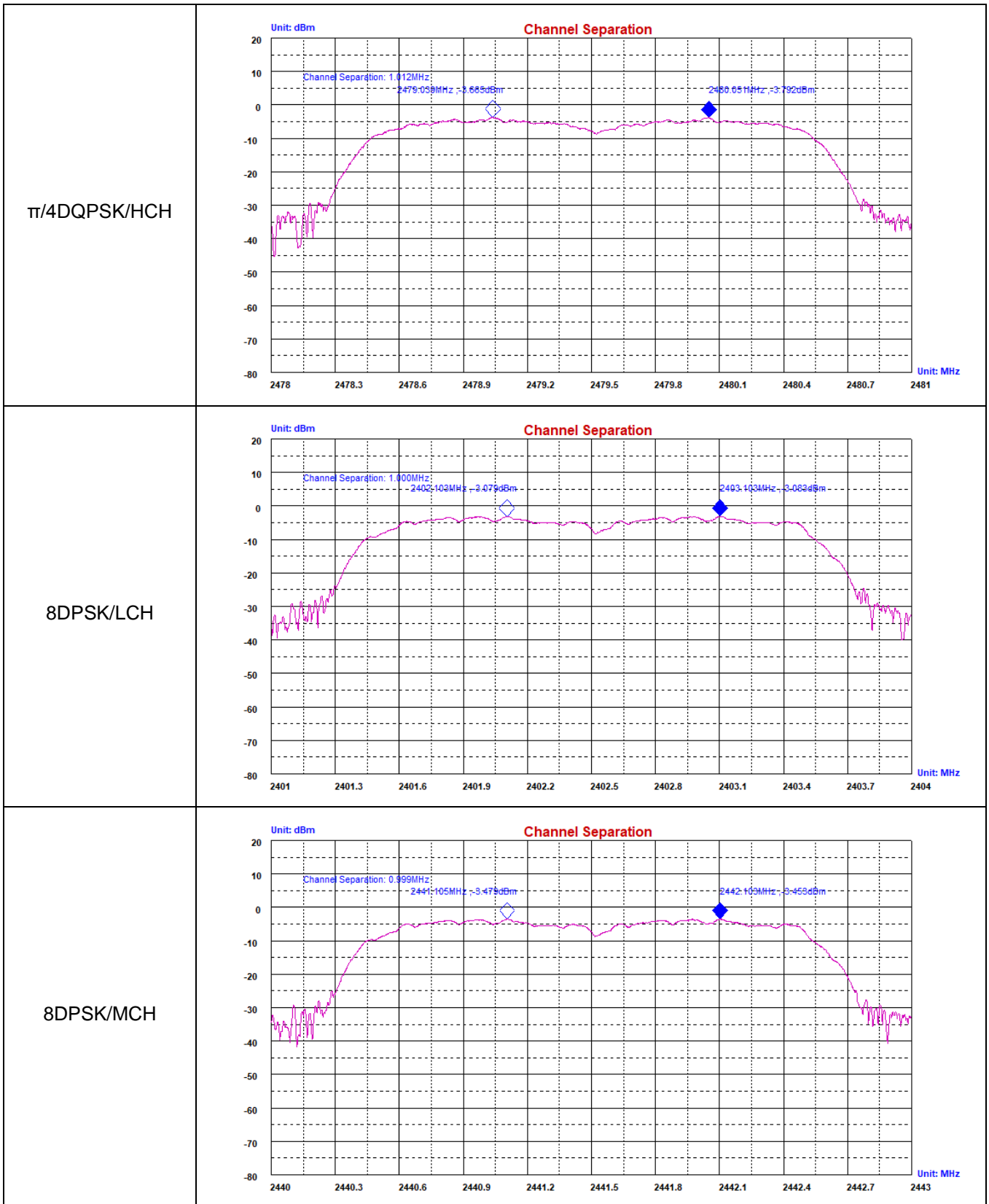
### A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.001	0.632	PASS
GFSK	MCH	0.997	0.633	PASS
GFSK	HCH	0.999	0.628	PASS
$\pi/4$ DQPSK	LCH	0.991	0.897	PASS
$\pi/4$ DQPSK	MCH	0.993	0.900	PASS
$\pi/4$ DQPSK	HCH	1.012	0.899	PASS
8DPSK	LCH	1.000	0.894	PASS
8DPSK	MCH	0.999	0.893	PASS
8DPSK	HCH	1.000	0.894	PASS

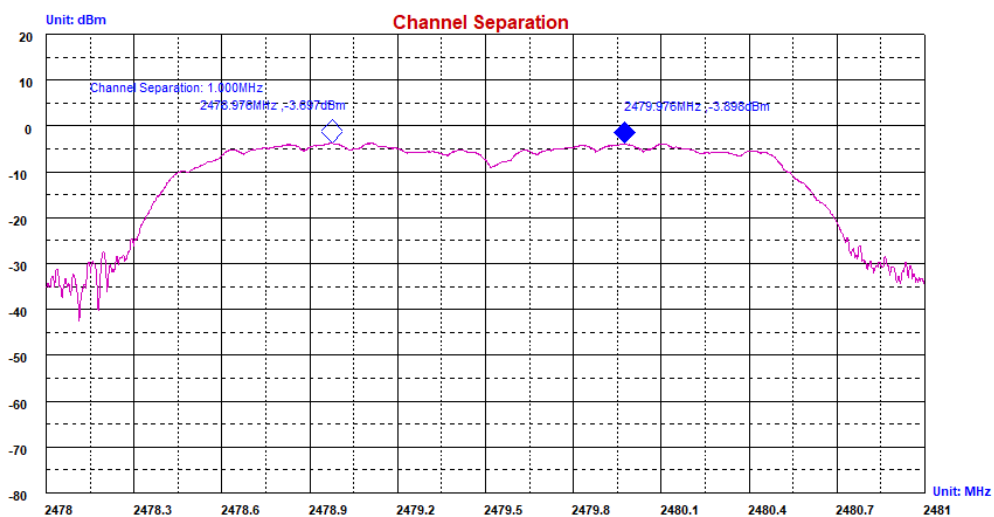
### Test Graph







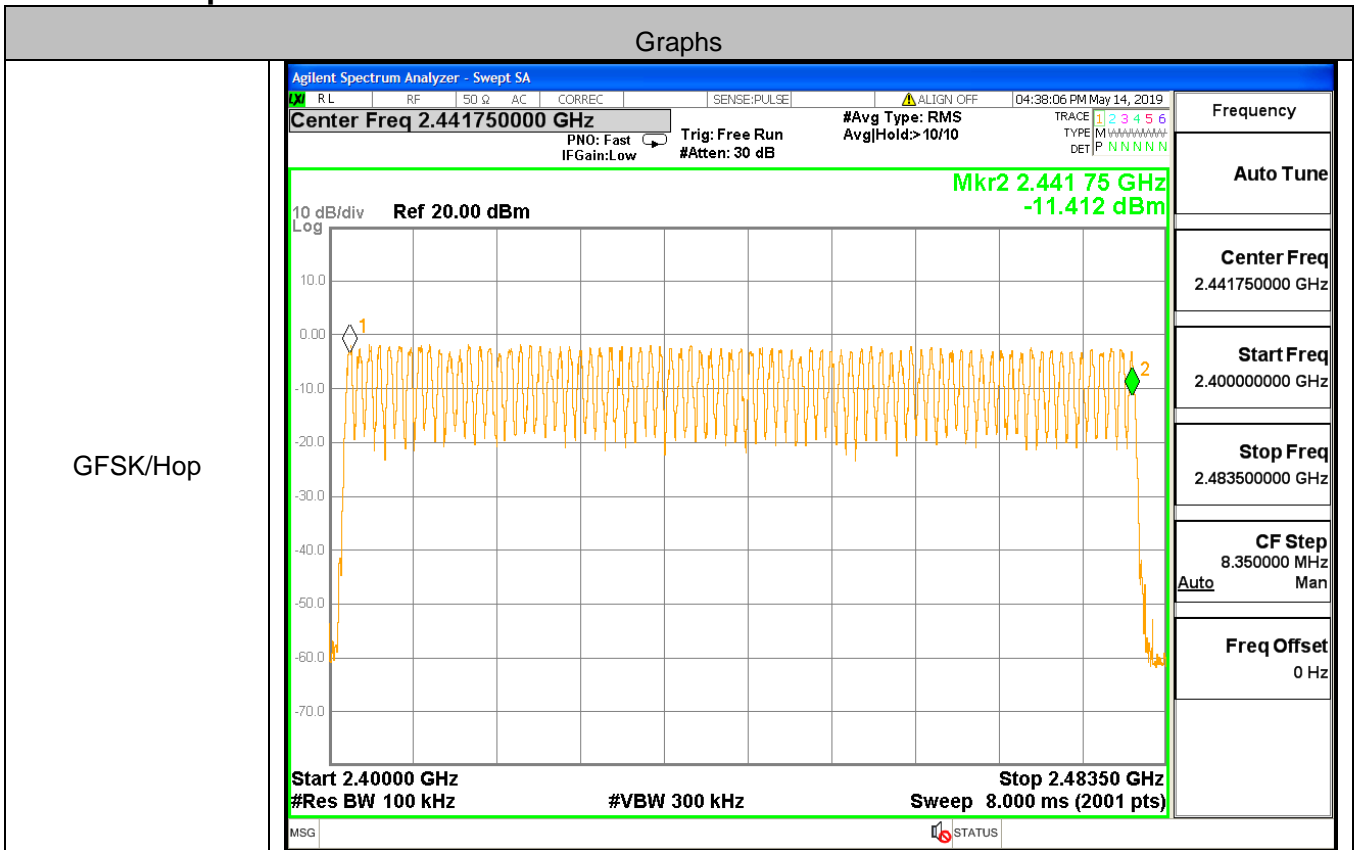
8DPSK/HCH



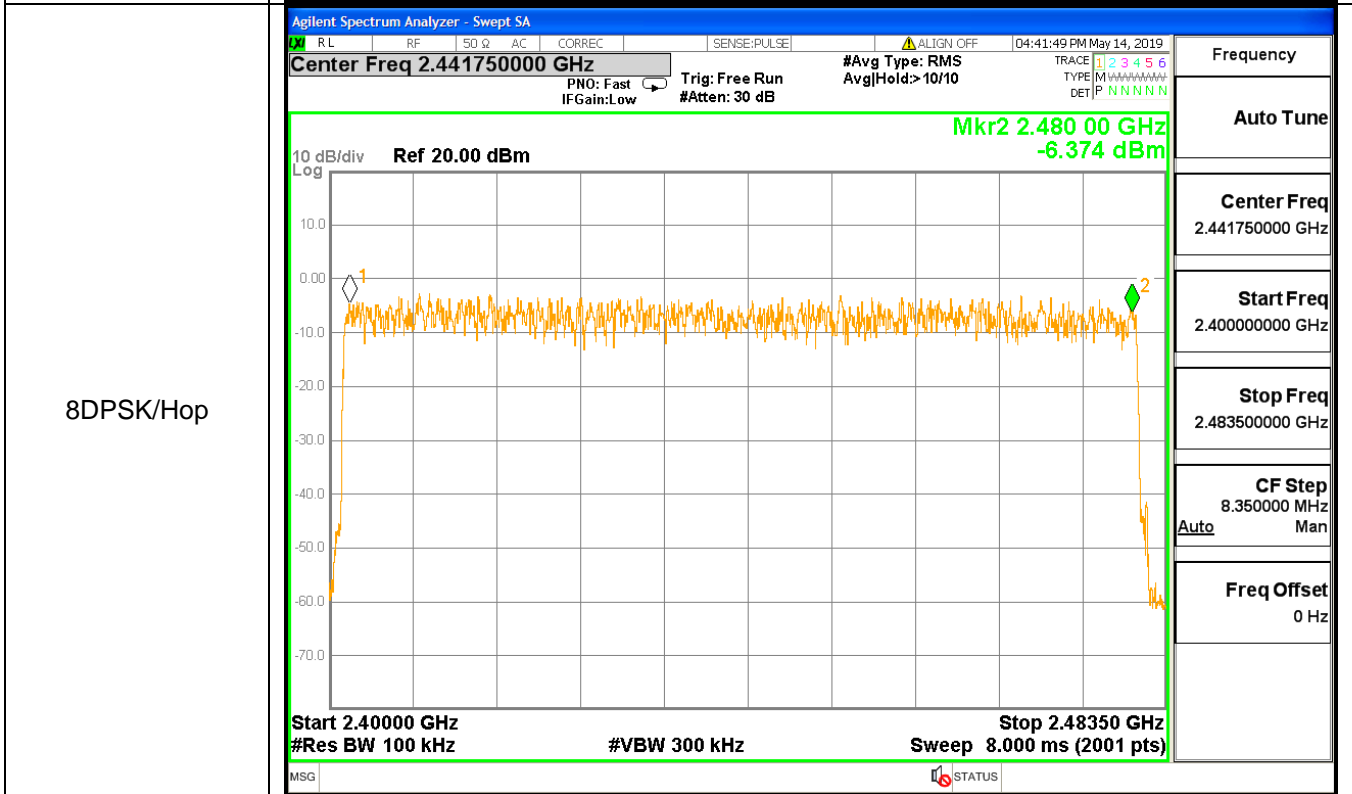
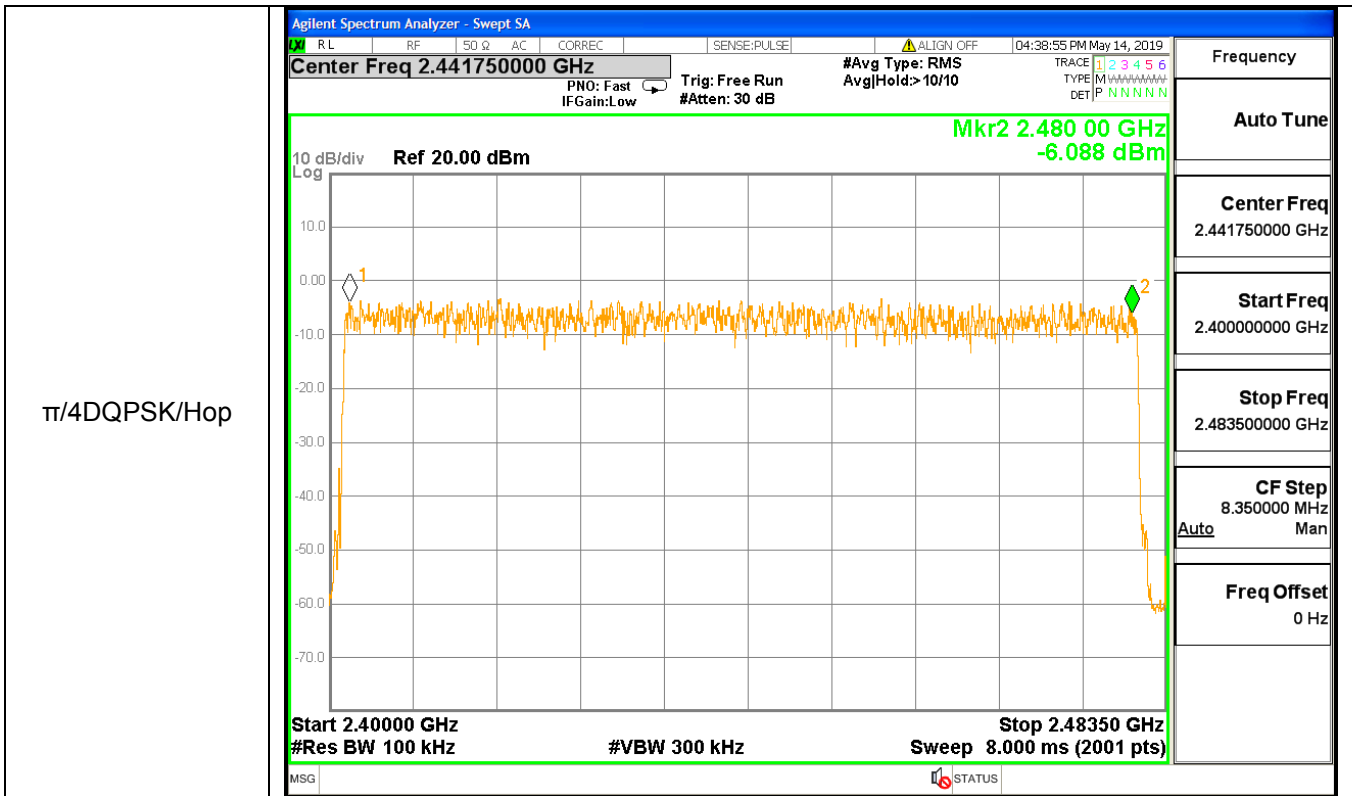
### A.4 Hopping Channel Number

Mode	Channel.	Number of Hopping Channel[N]	Limit[N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

### Test Graph



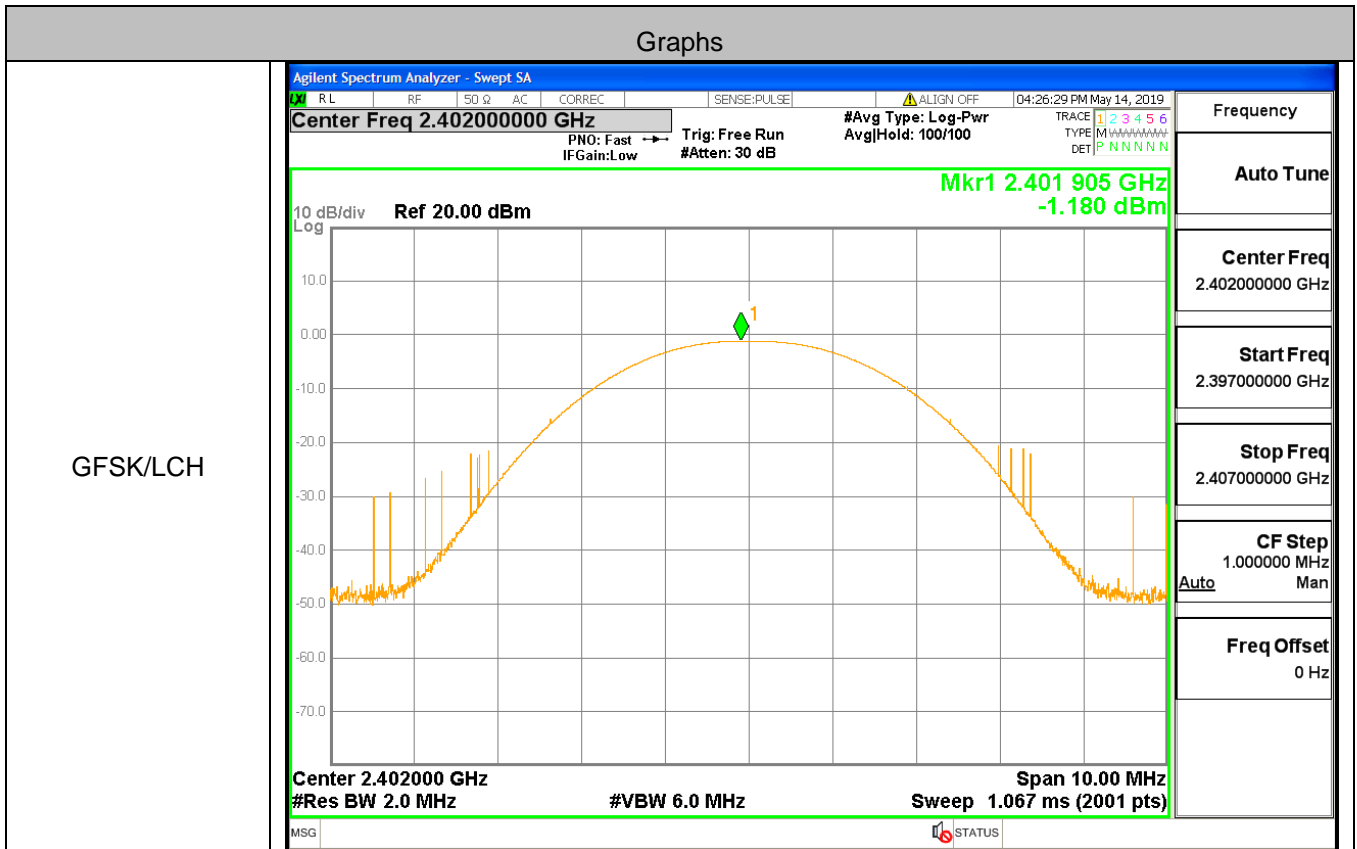


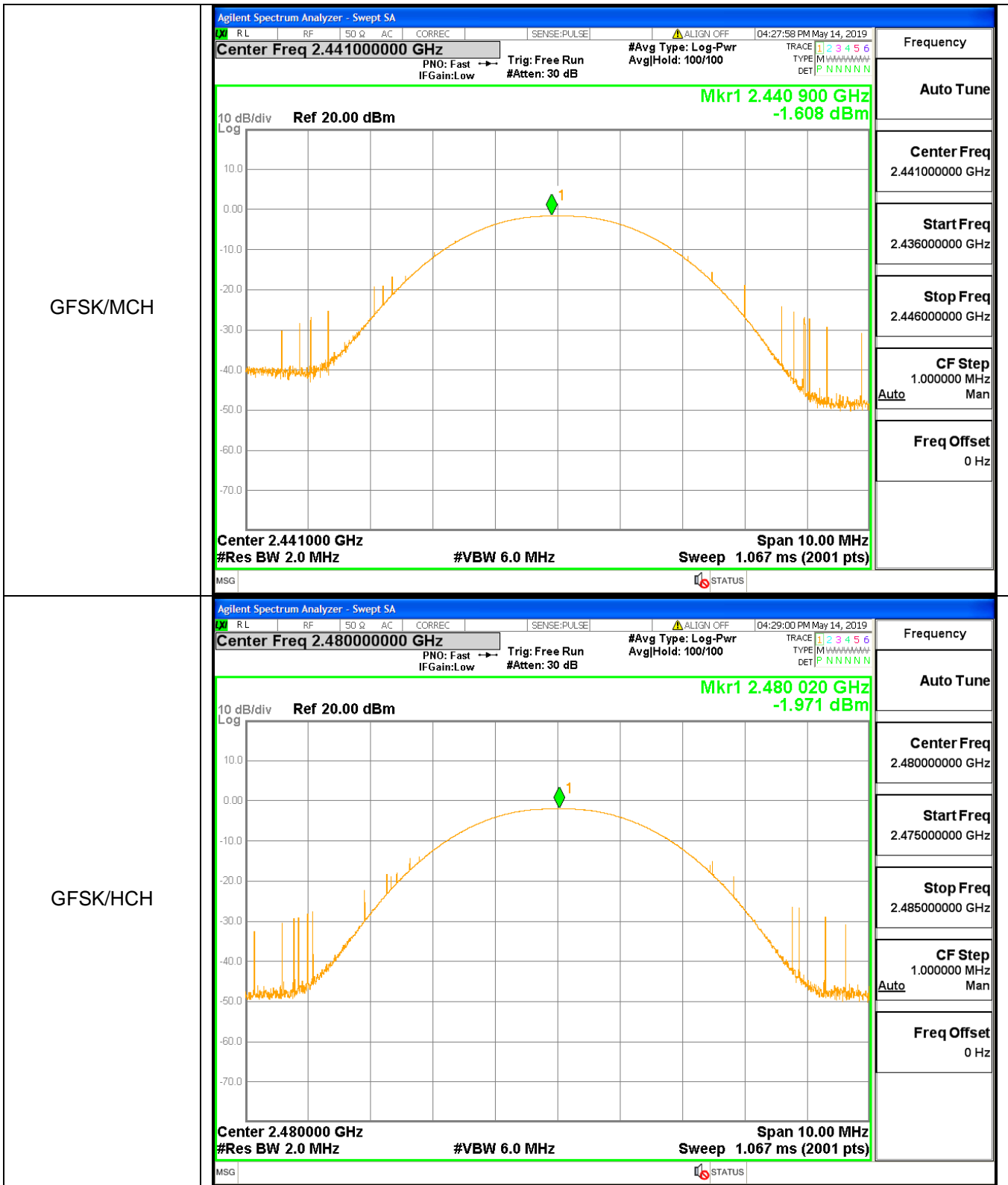


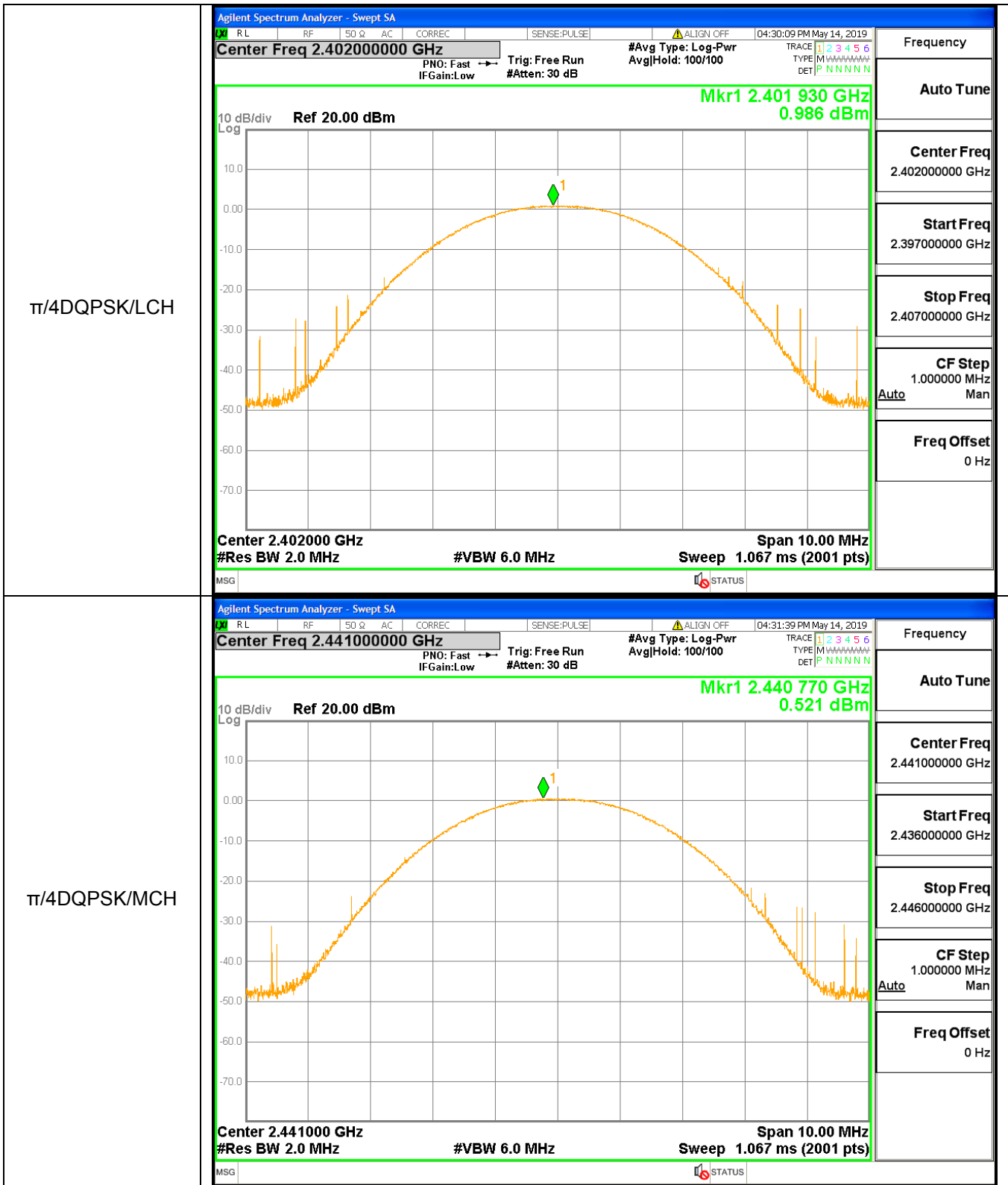
### A.5 Conducted Peak Output Power

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.180	21	PASS
GFSK	MCH	-1.608	21	PASS
GFSK	HCH	-1.971	21	PASS
$\pi/4$ DQPSK	LCH	0.986	21	PASS
$\pi/4$ DQPSK	MCH	0.521	21	PASS
$\pi/4$ DQPSK	HCH	0.242	21	PASS
8DPSK	LCH	1.300	21	PASS
8DPSK	MCH	1.084	21	PASS
8DPSK	HCH	0.742	21	PASS

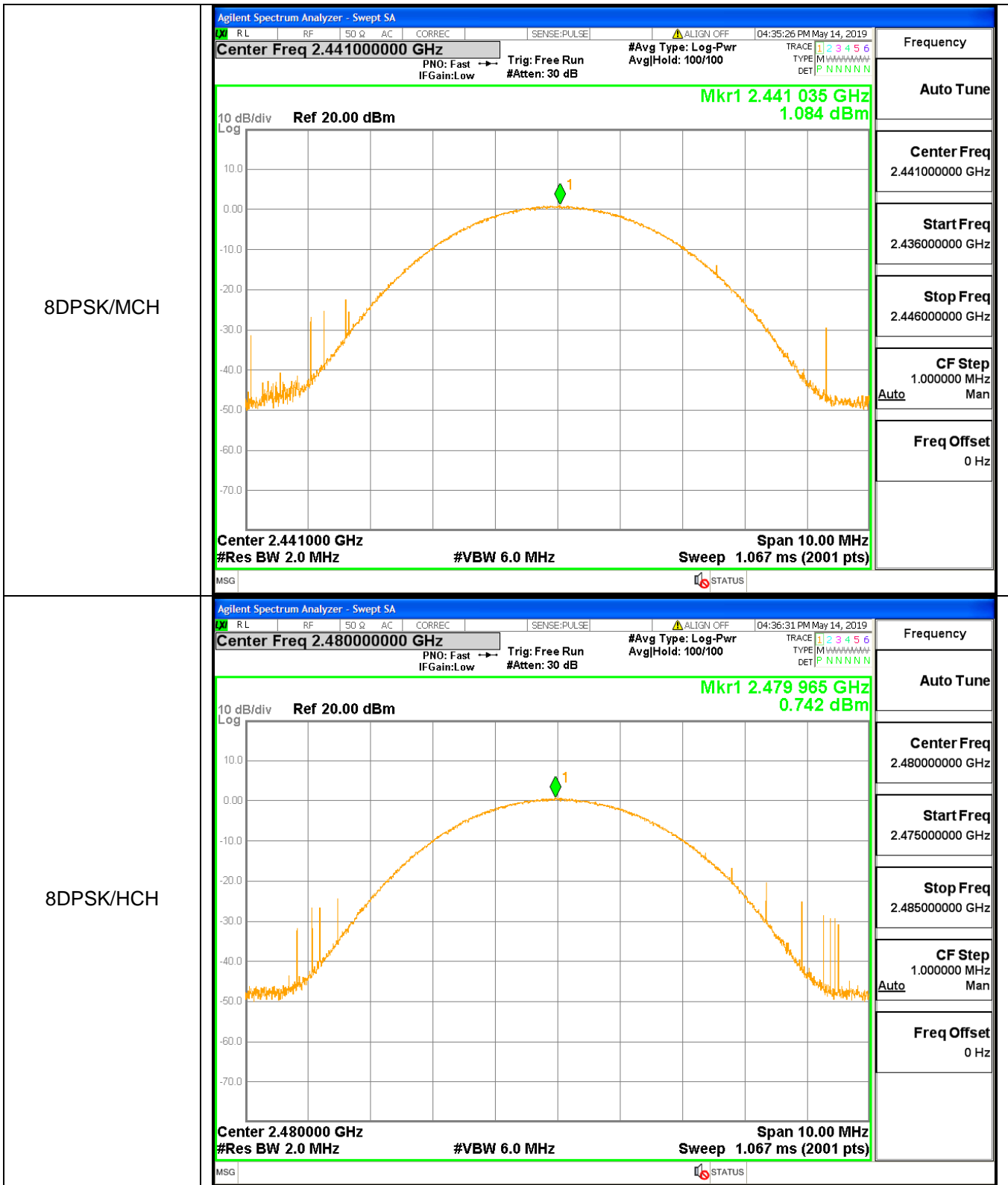
### Test Graph









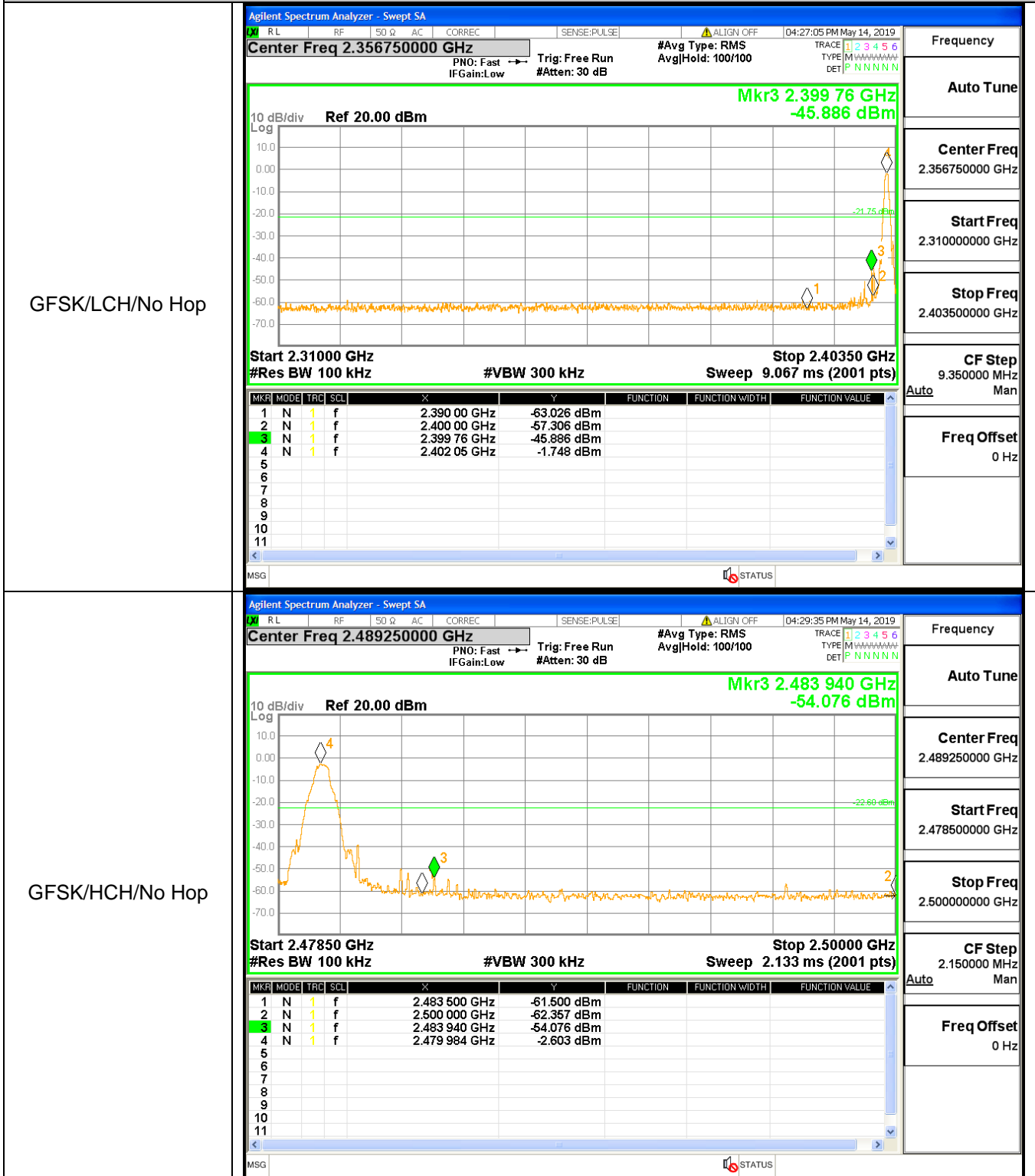


**A.6 Band-edge for RF Conducted Emissions**

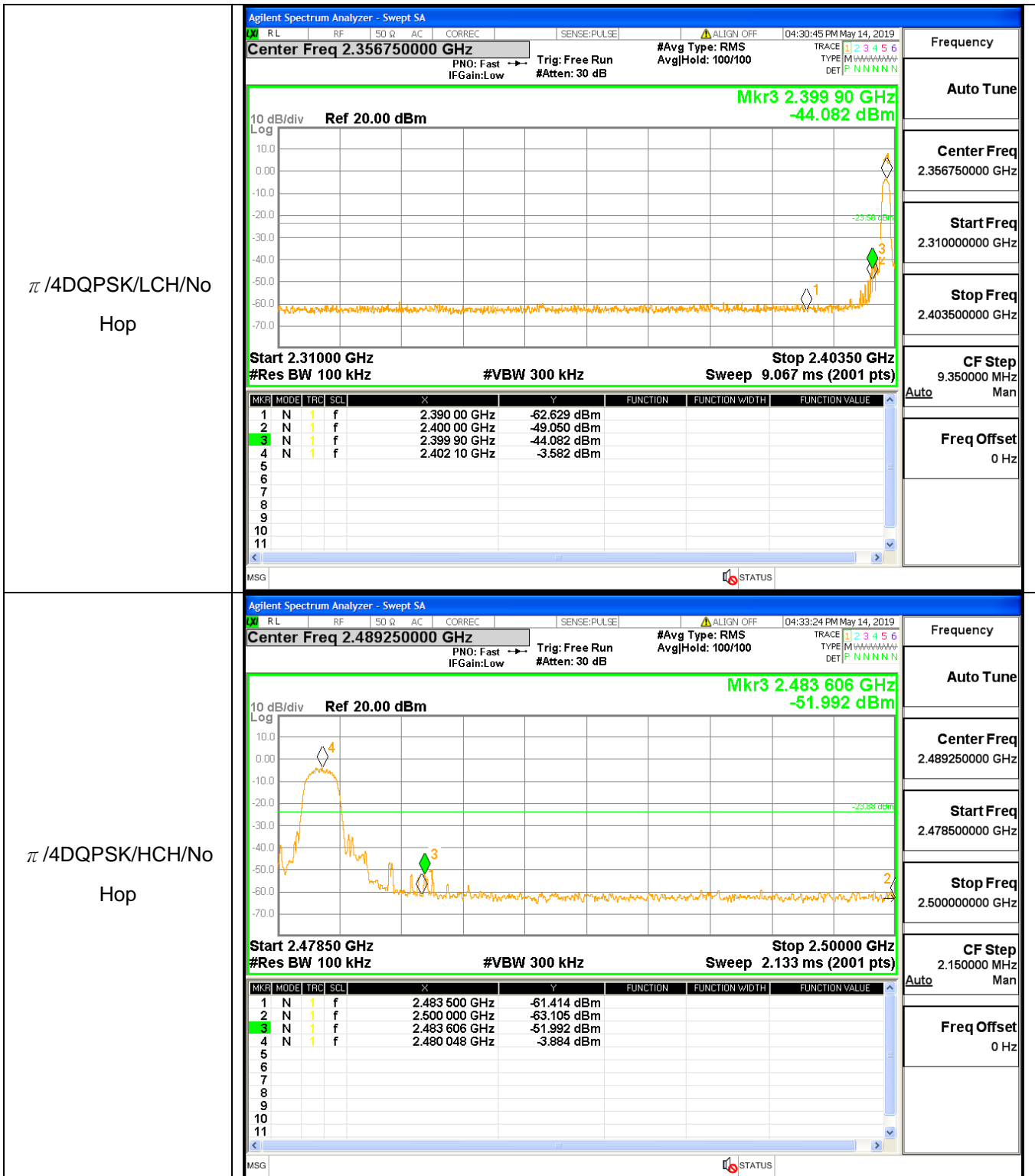
Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2399.76	-1.748	-45.89	-21.748	Pass
1DH5	2480	2483.94	-2.603	-54.08	-22.603	Pass
2DH5	2402	2399.90	-3.582	-44.08	-23.582	Pass
2DH5	2480	2483.61	-3.884	-51.99	-23.884	Pass
3DH5	2402	2399.62	-2.986	-46.48	-22.986	Pass
3DH5	2480	2486.06	-3.882	-57.72	-23.882	Pass
1DH5-Hopping	2402	2399.82	-1.753	-45.32	-21.753	Pass
1DH5-Hopping	2480	2483.50	-2.146	-60.39	-22.146	Pass
2DH5-Hopping	2402	2390.00	-3.430	-60.28	-23.430	Pass
2DH5-Hopping	2480	2483.50	-3.471	-60.19	-23.471	Pass
3DH5-Hopping	2402	2400.00	-3.000	-59.58	-23.000	Pass
3DH5-Hopping	2480	2500.00	-3.747	-60.59	-23.747	Pass

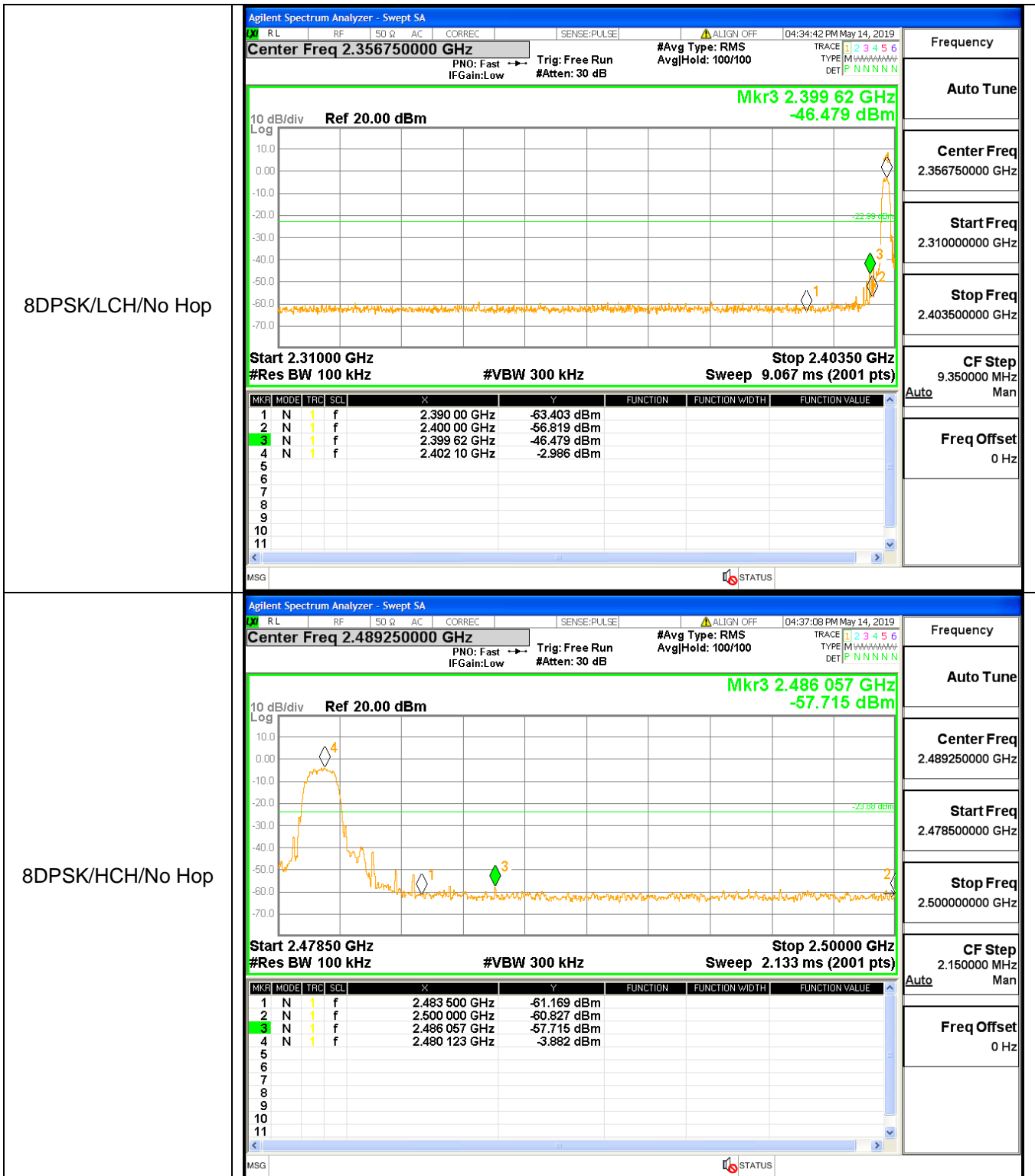
### Test Graph

#### Graphs

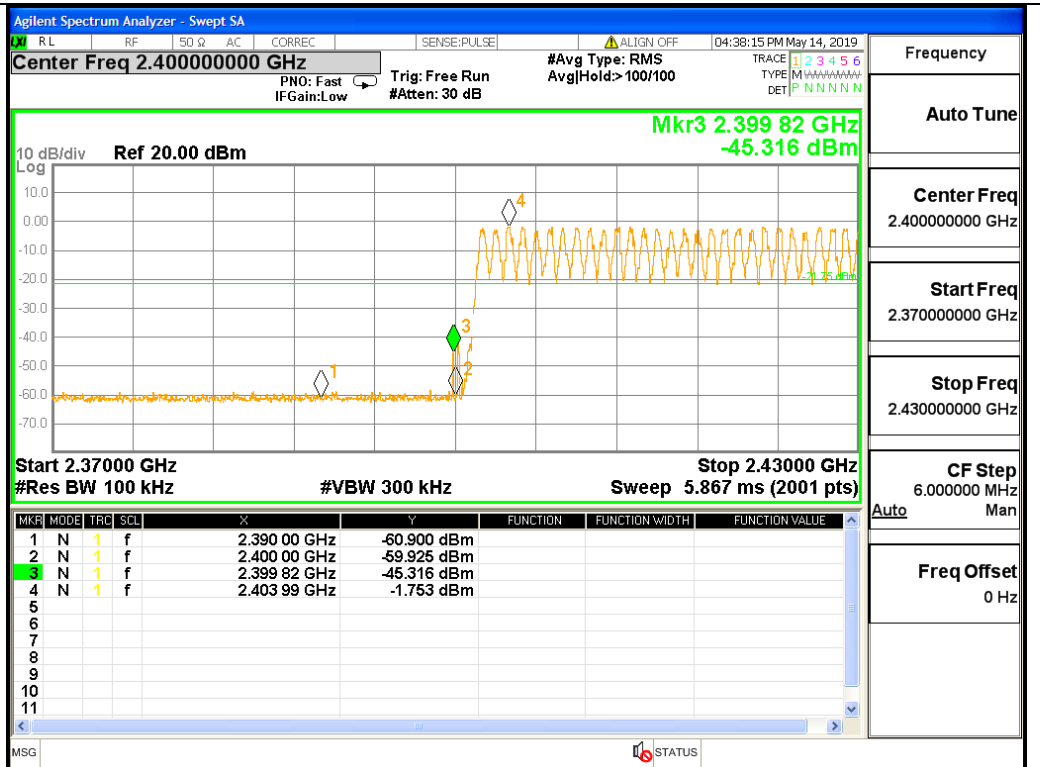




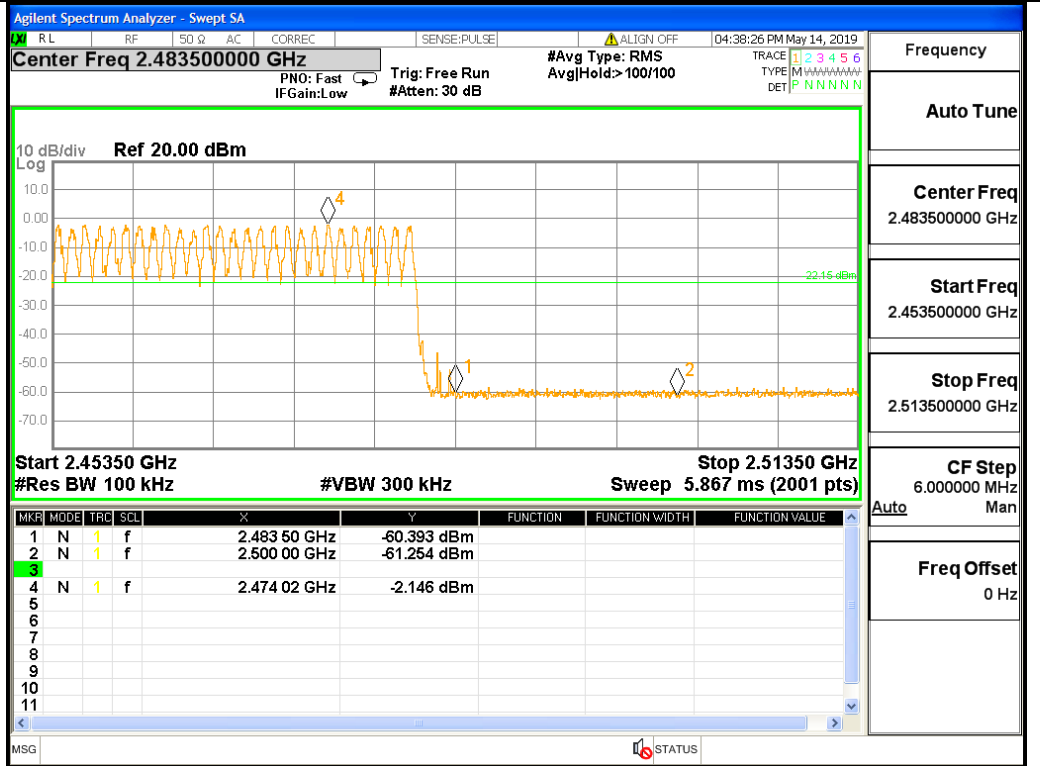


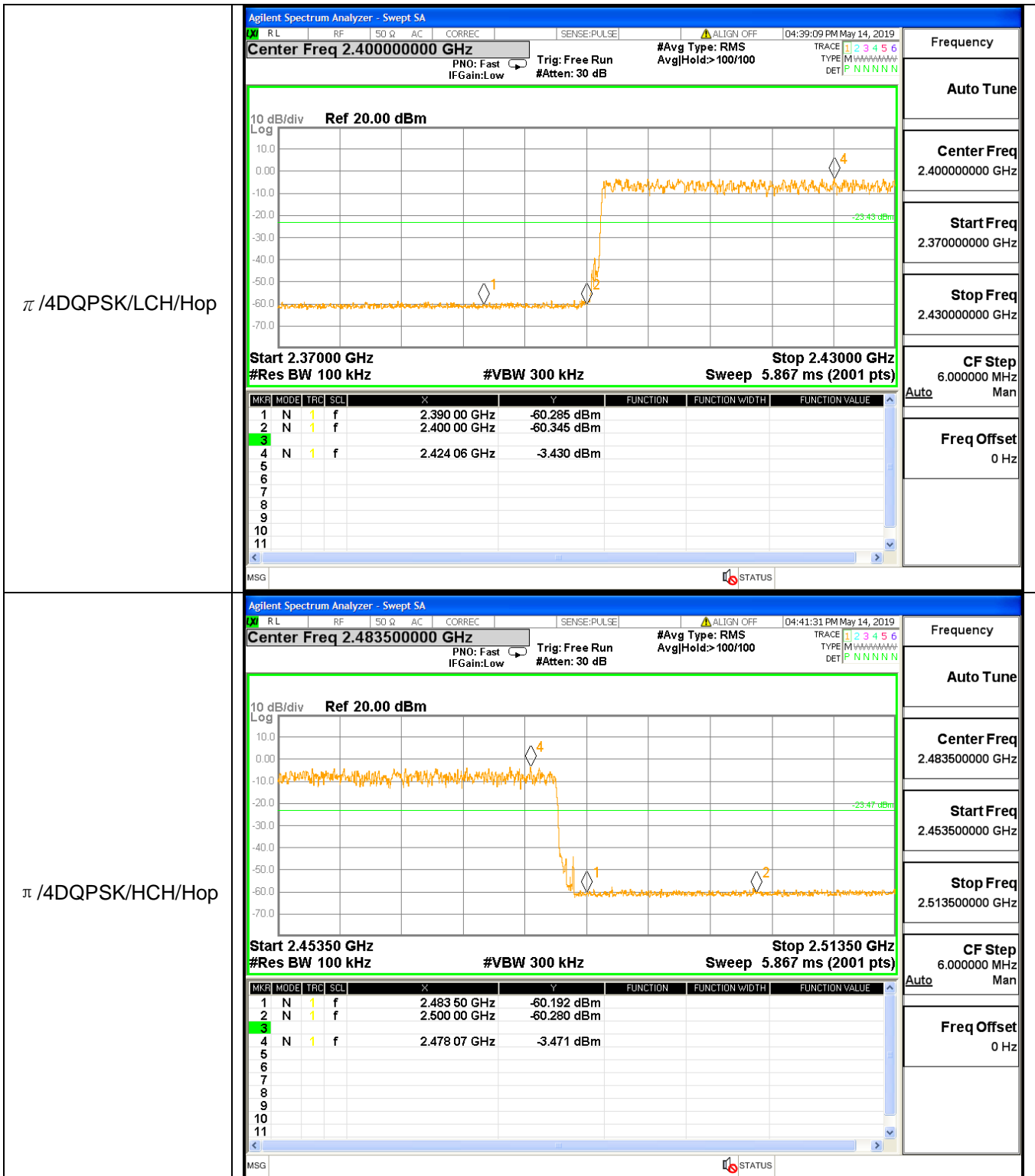


GFSK/LCH/Hop

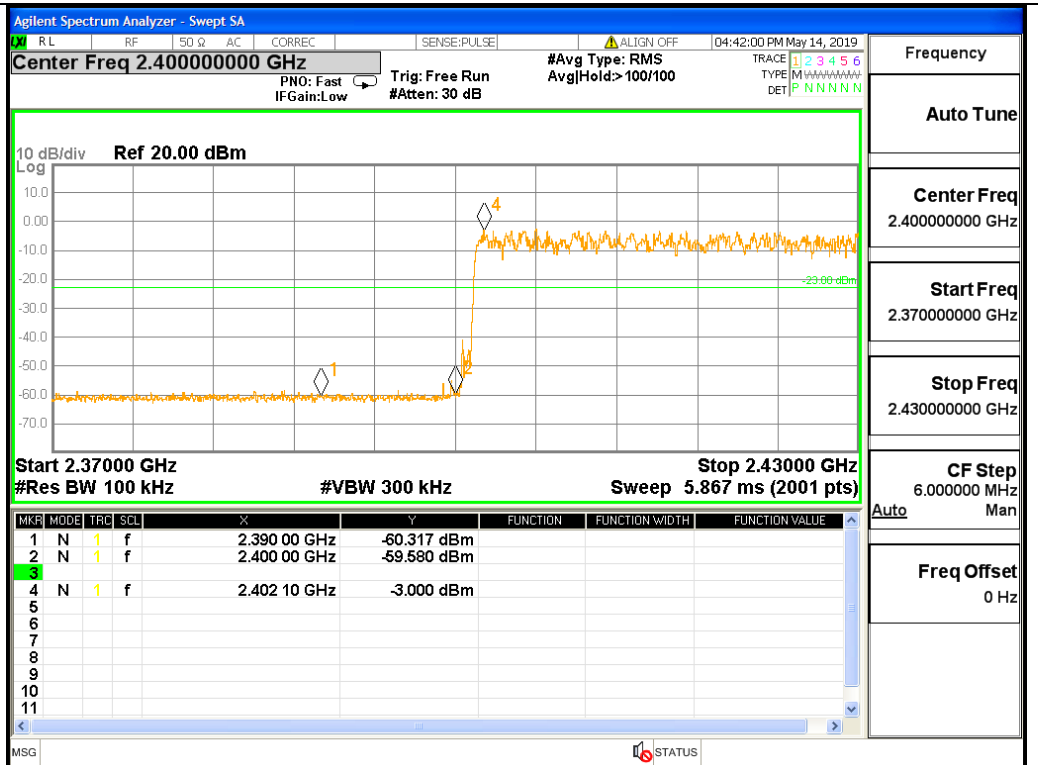


GFSK/HCH/Hop

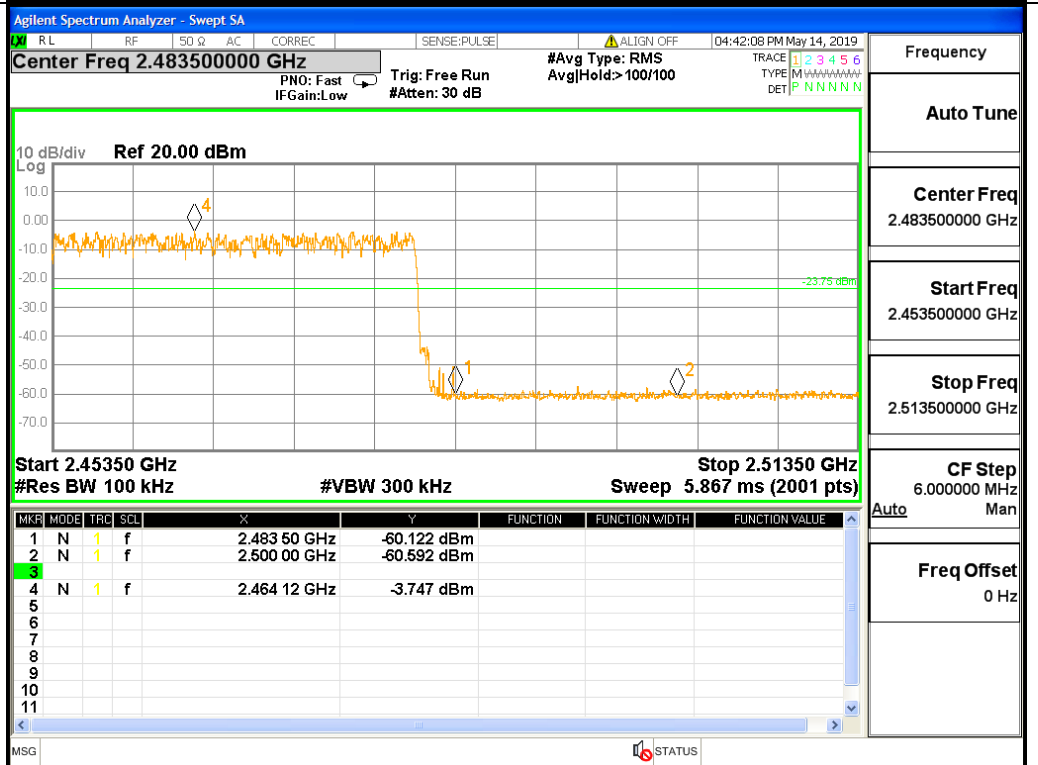




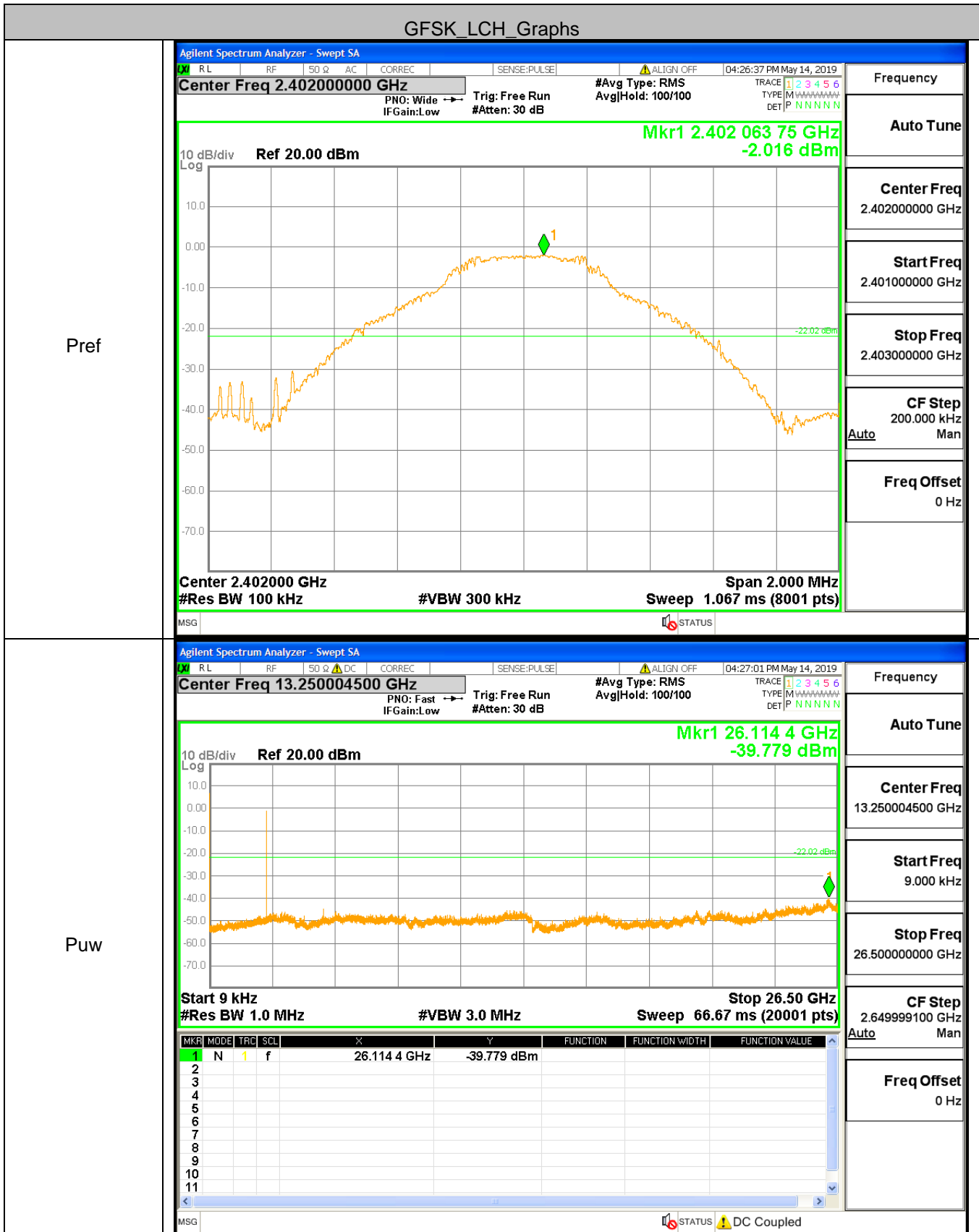
8DPSK/LCH/Hop



8DPSK/HCH/Hop

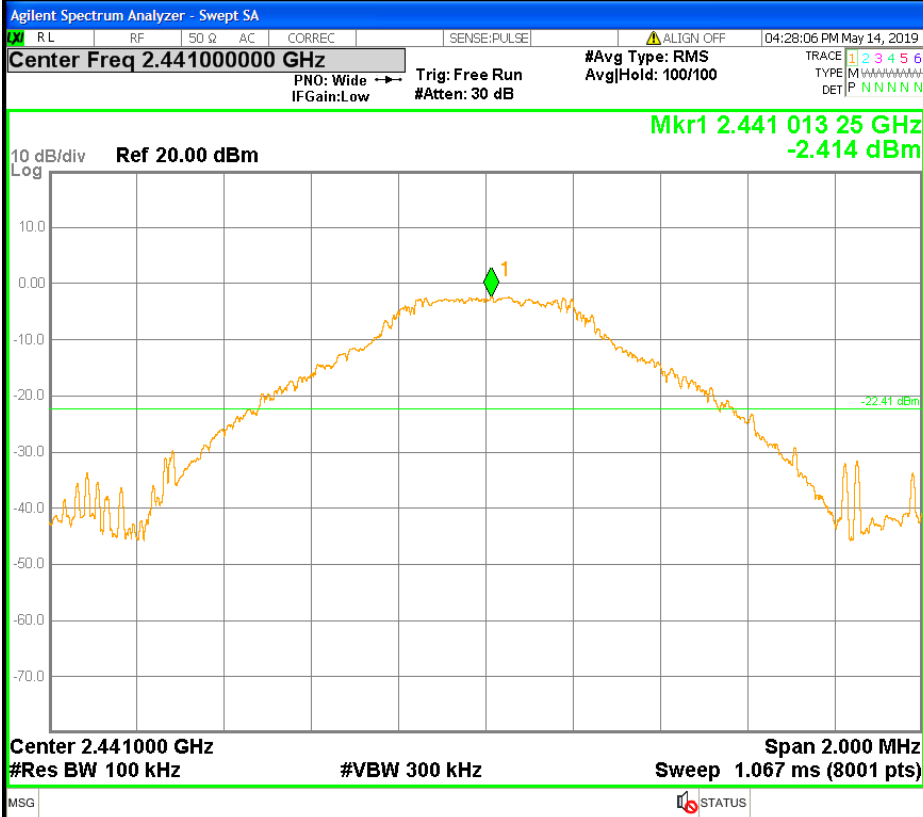


### A.7 RF Conducted Spurious Emissions Test Graph



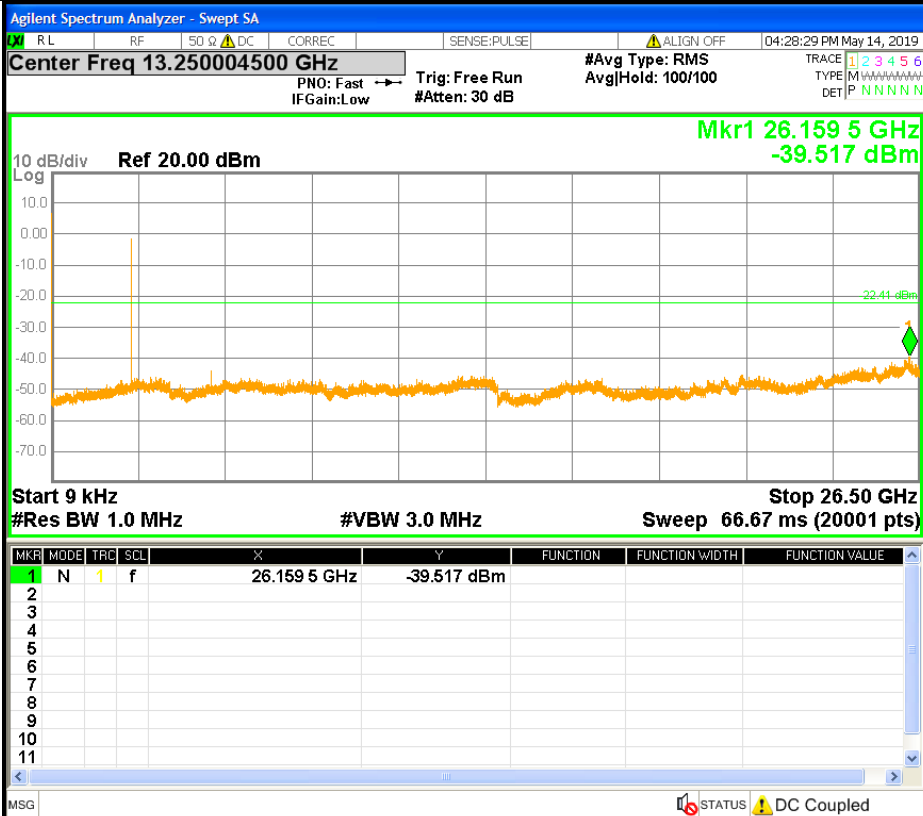
GFSK\_MCH\_Graphs

Pref



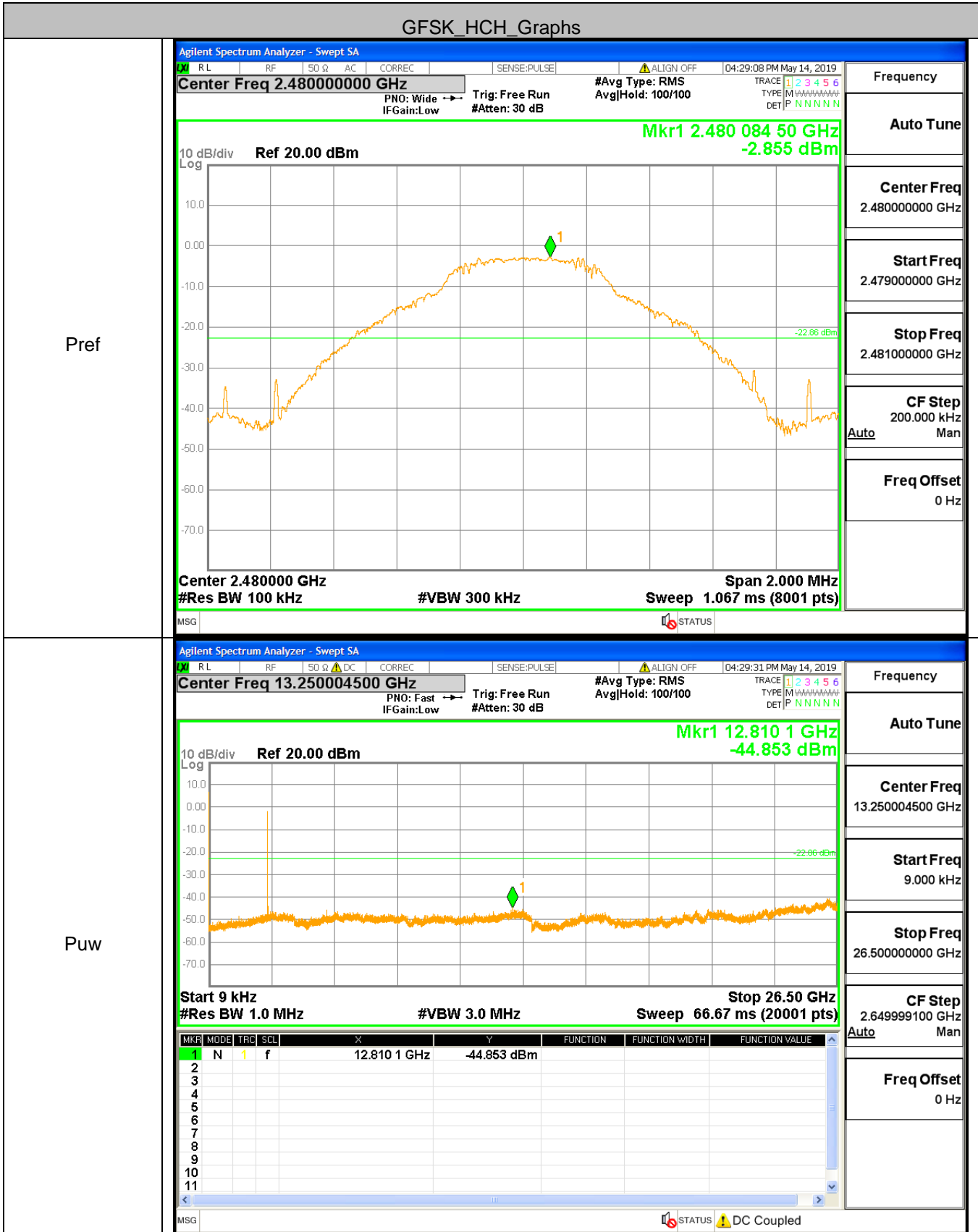
Frequency
Auto Tune
Center Freq 2.441000000 GHz
Start Freq 2.440000000 GHz
Stop Freq 2.442000000 GHz
CF Step 200.000 kHz Auto Man
Freq Offset 0 Hz

Puw



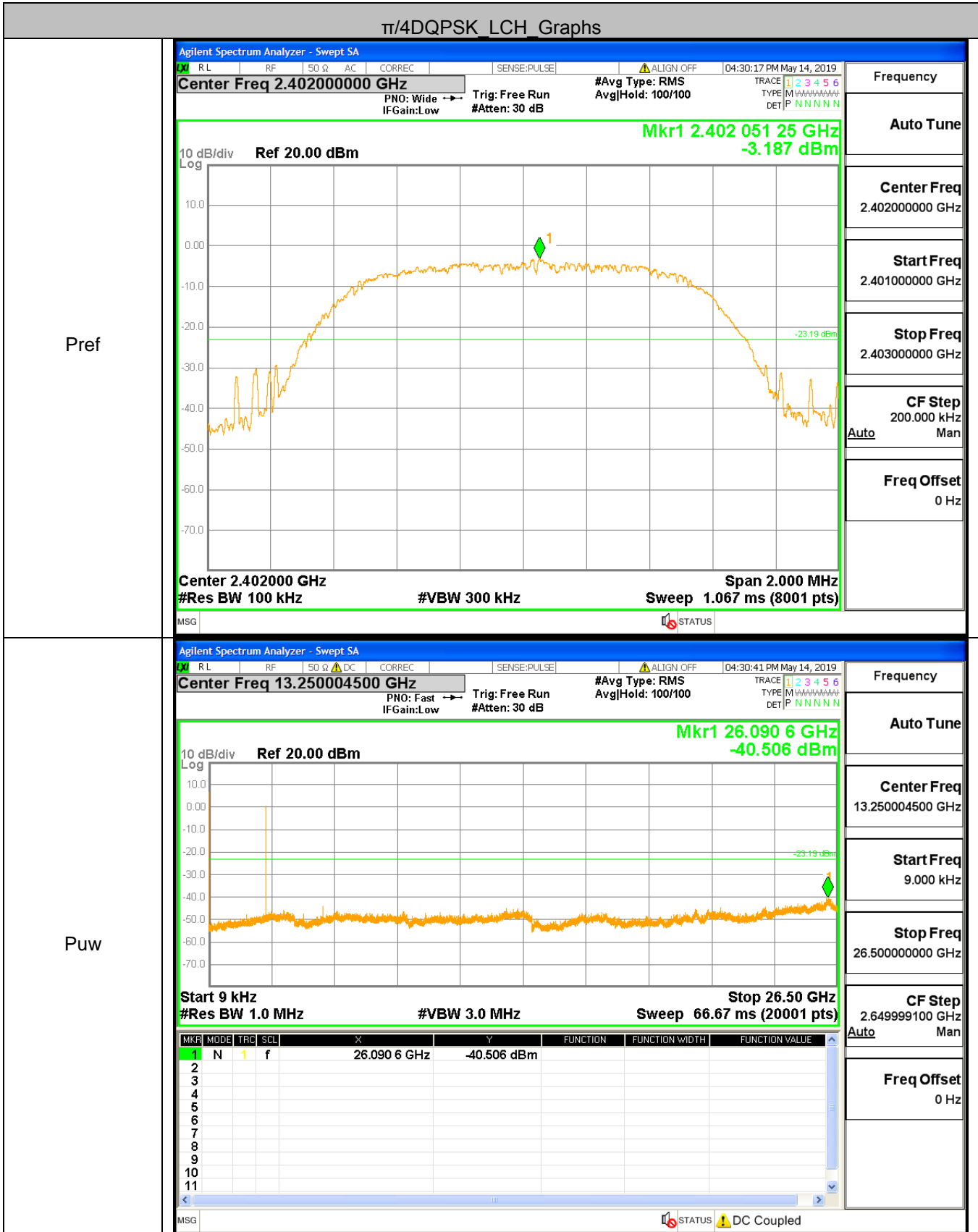
Frequency
Auto Tune
Center Freq 13.250004500 GHz
Start Freq 9.000 kHz
Stop Freq 26.500000000 GHz
CF Step 2.649999100 GHz Auto Man
Freq Offset 0 Hz

GFSK\_HCH\_Graphs

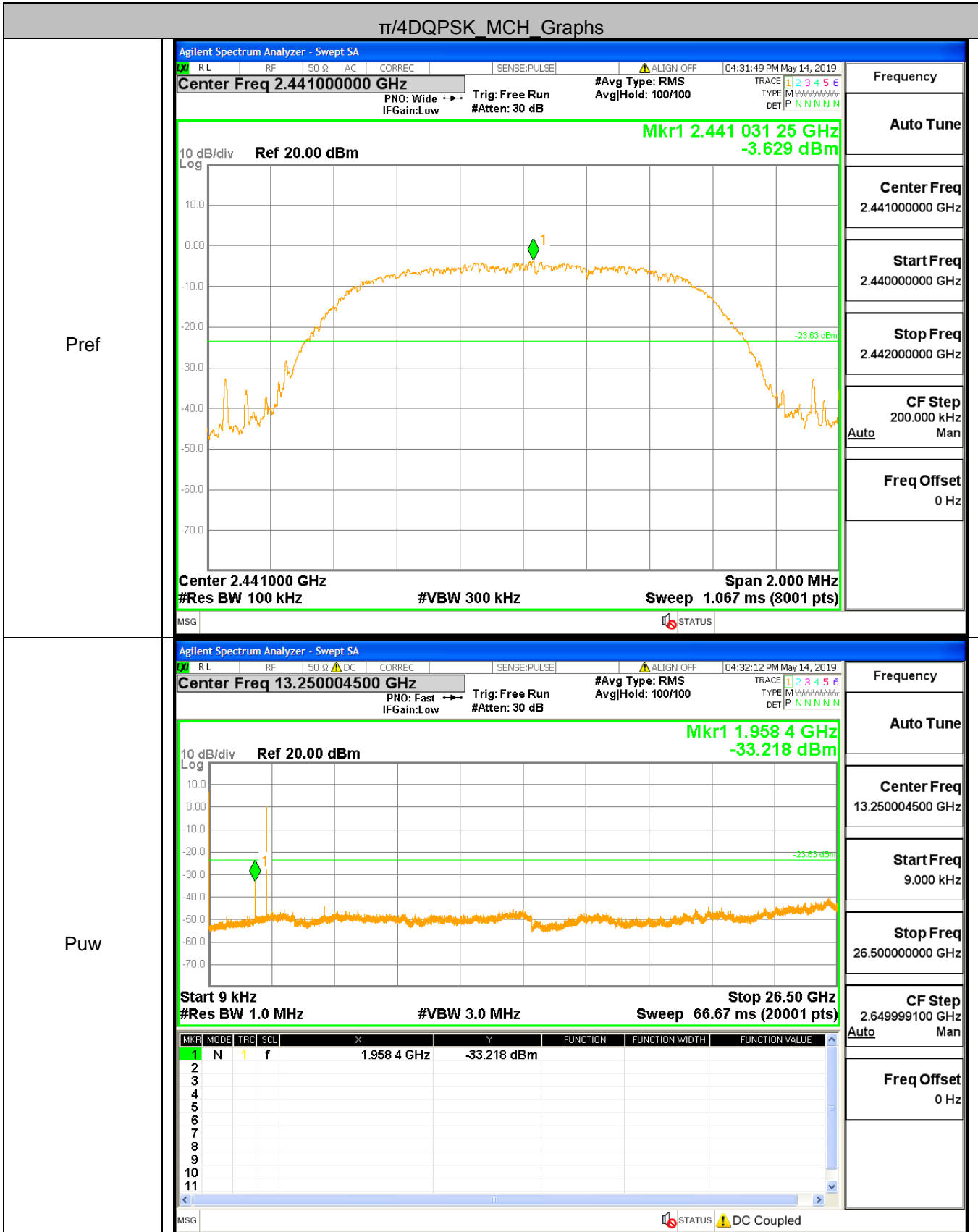




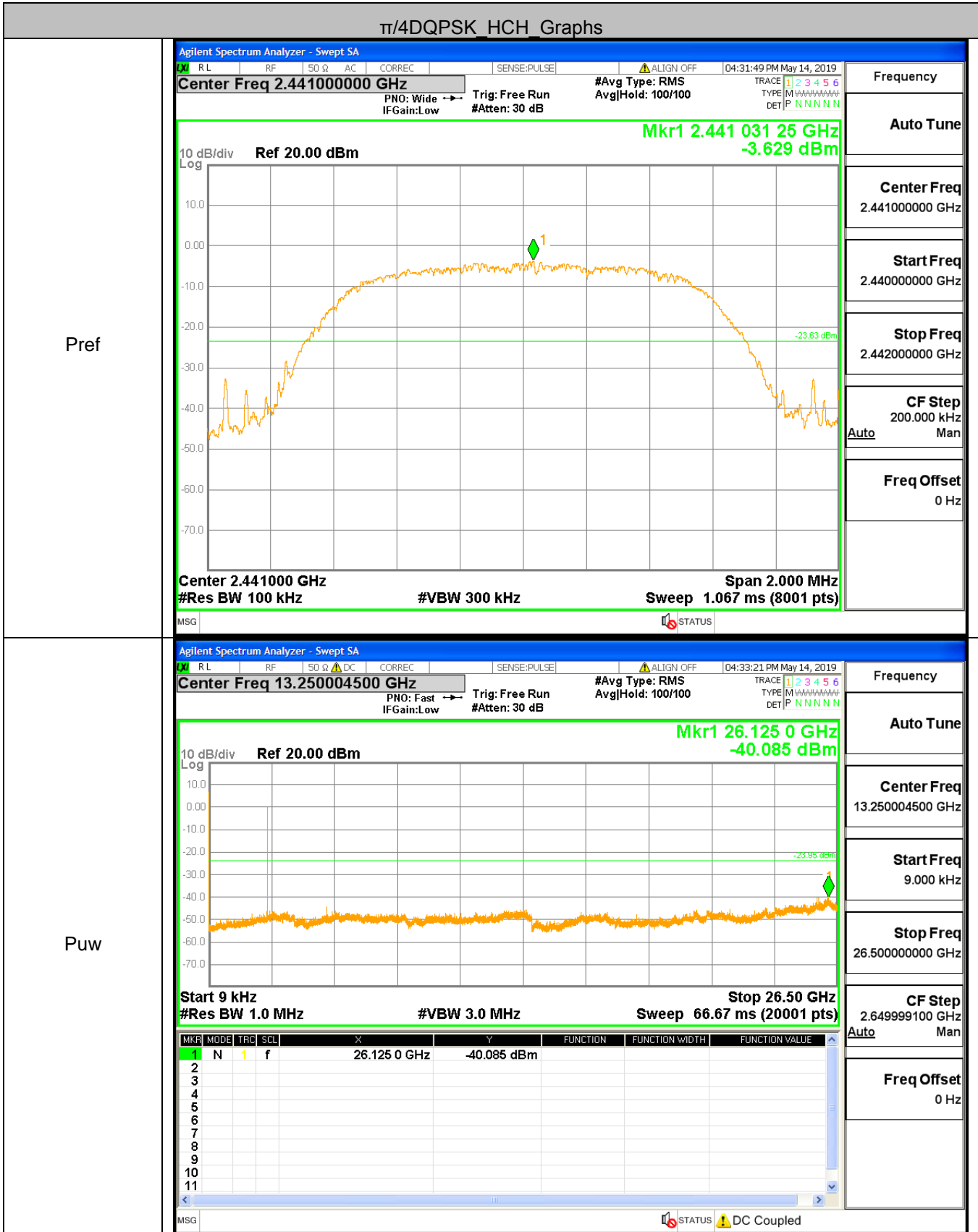
$\pi/4$ DQPSK LCH Graphs



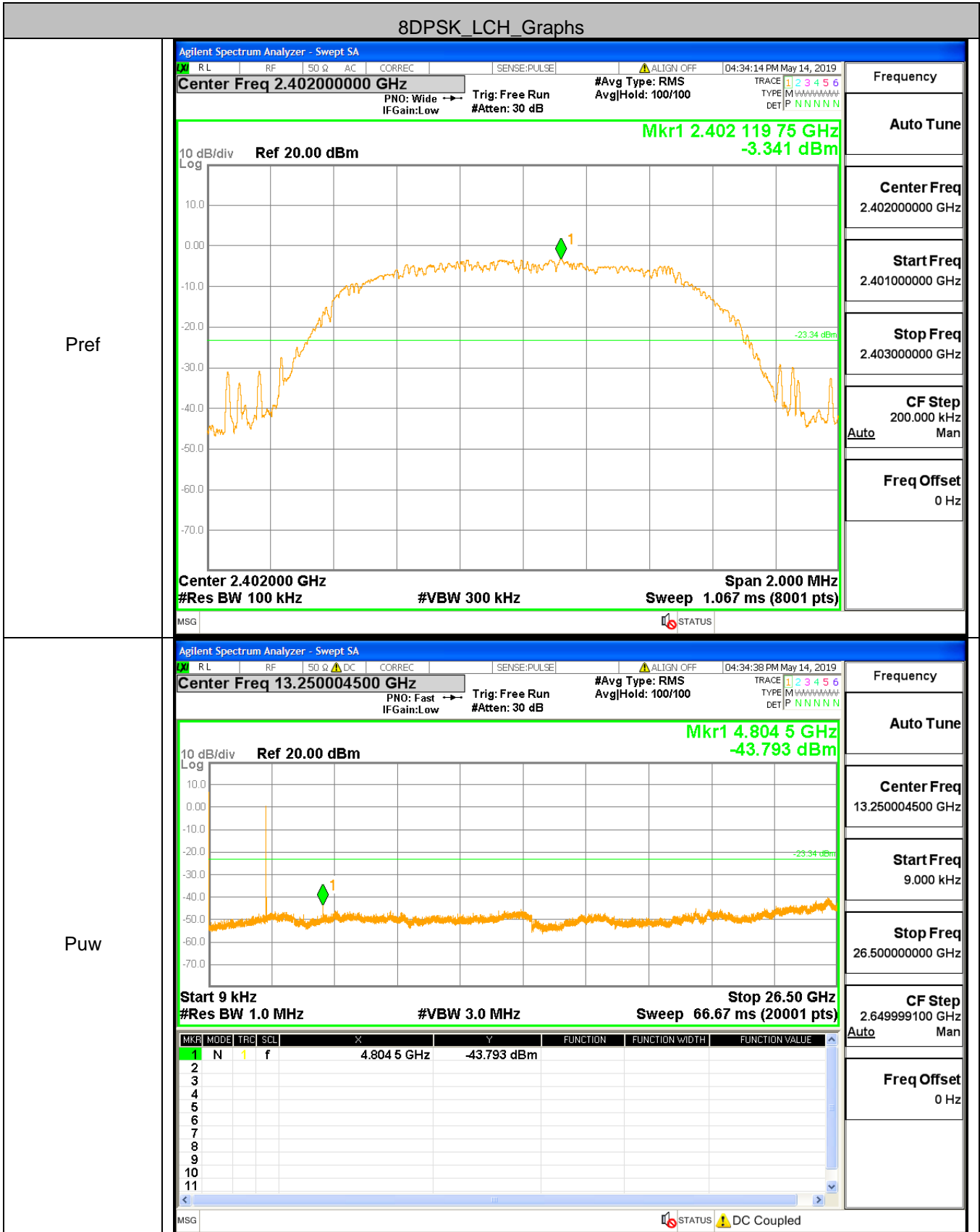
$\pi/4$ DQPSK MCH Graphs



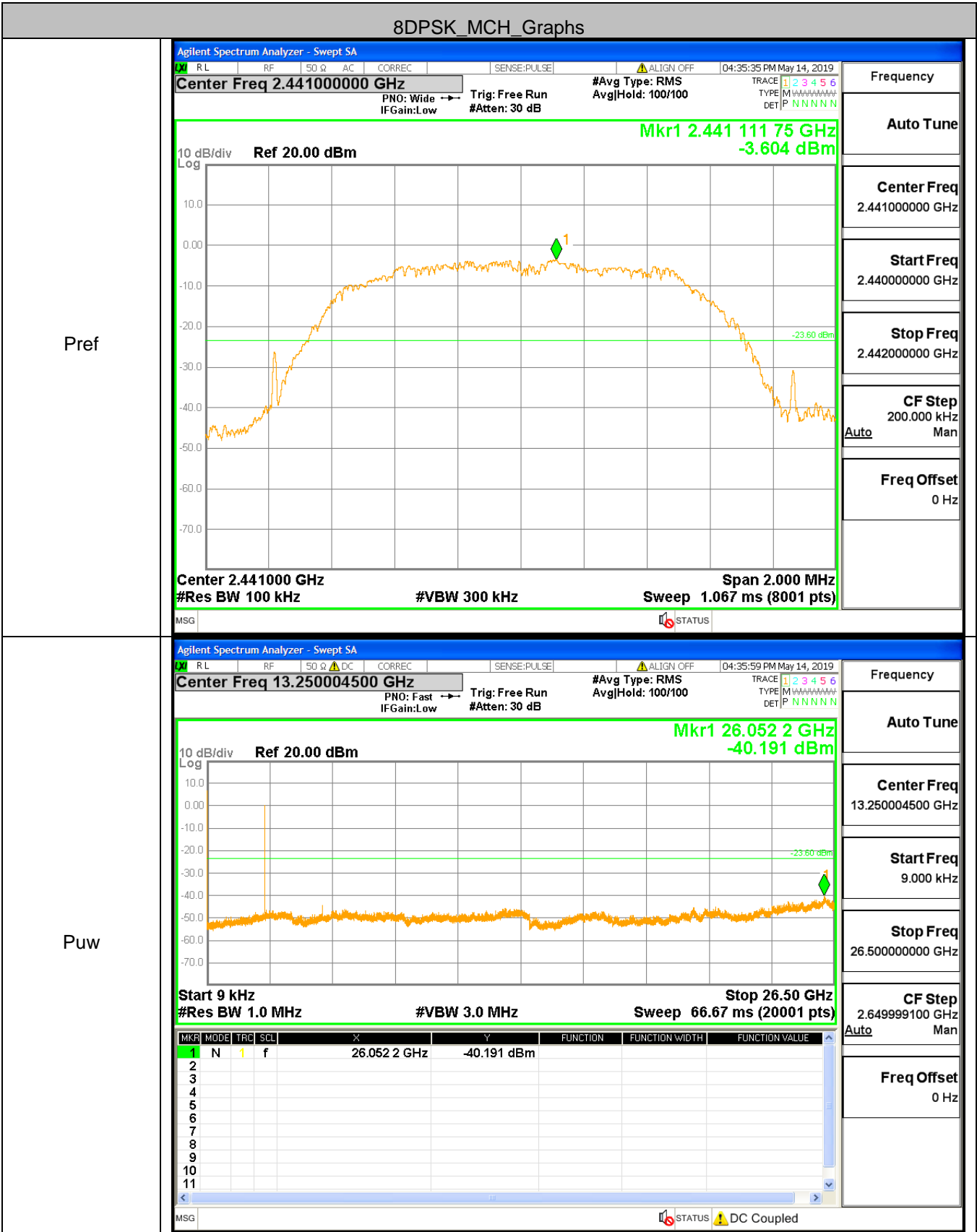
$\pi/4$ DQPSK HCH Graphs



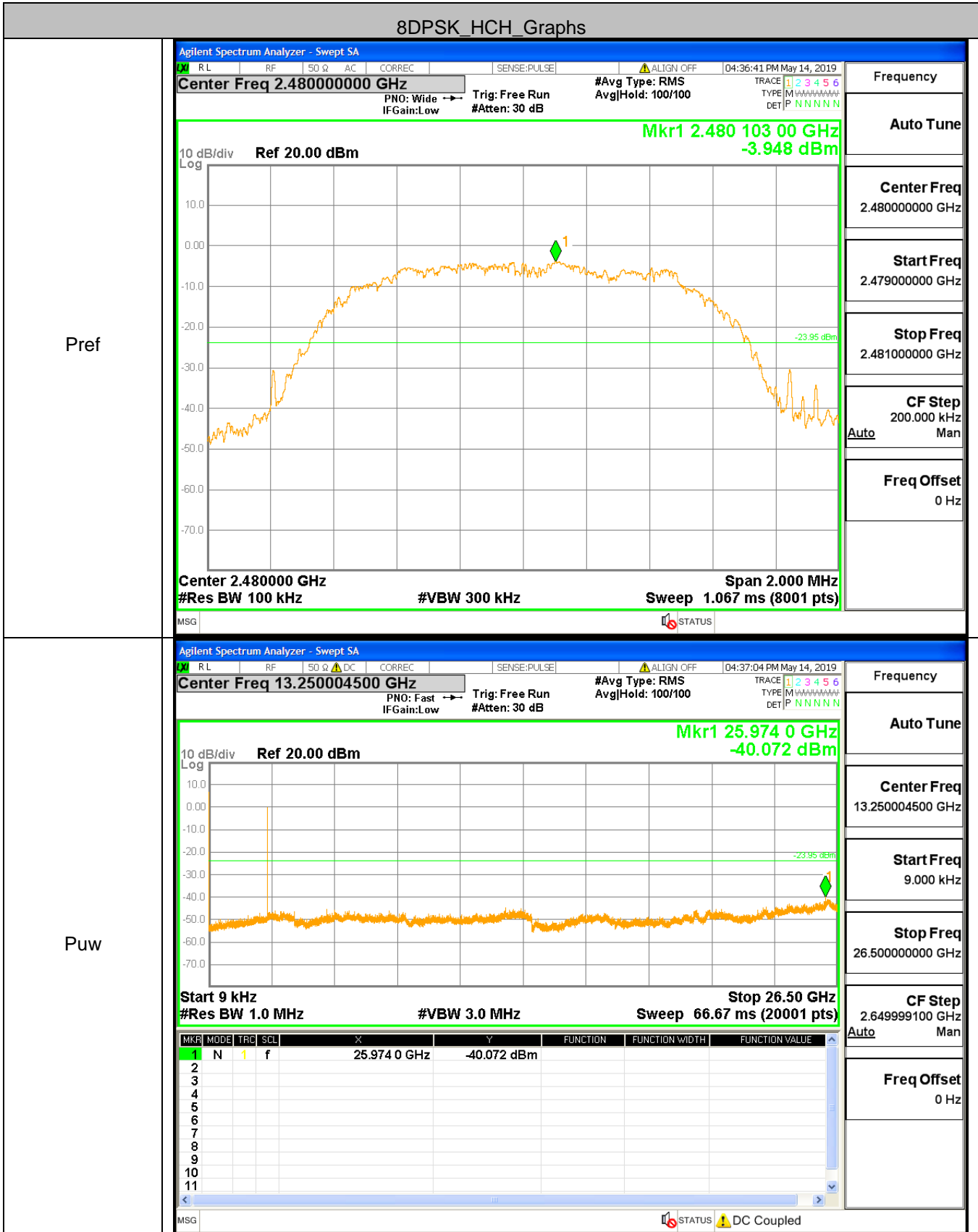
8DPSK\_LCH\_Graphs



8DPSK\_MCH\_Graphs



8DPSK\_HCH\_Graphs

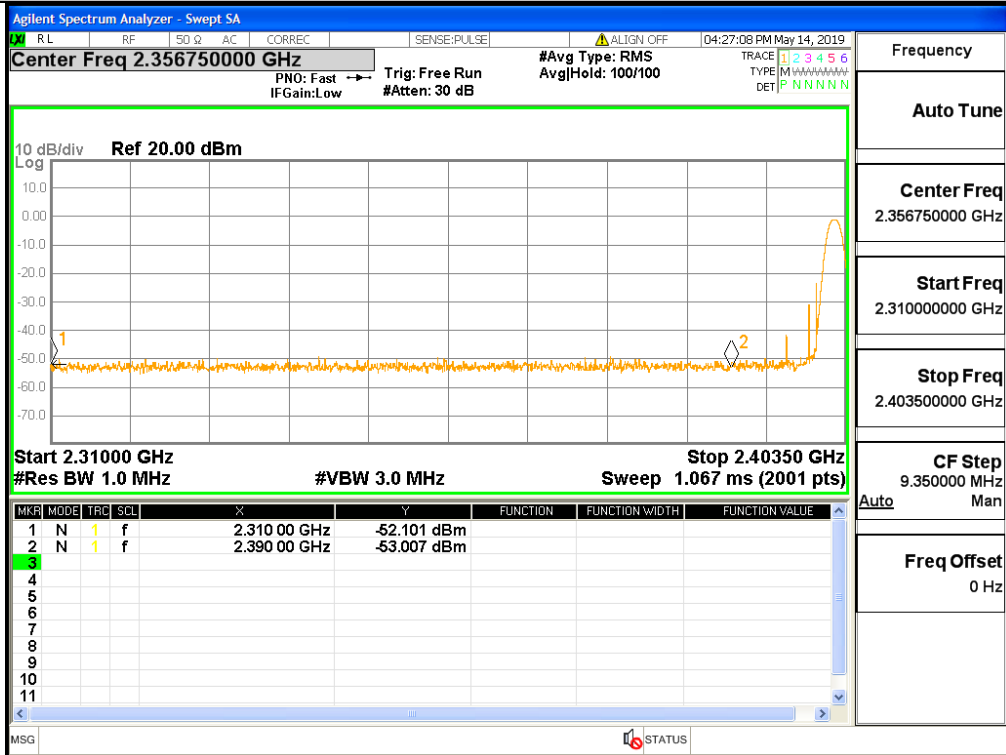


### A.8 Restrict-band band-edge measurements

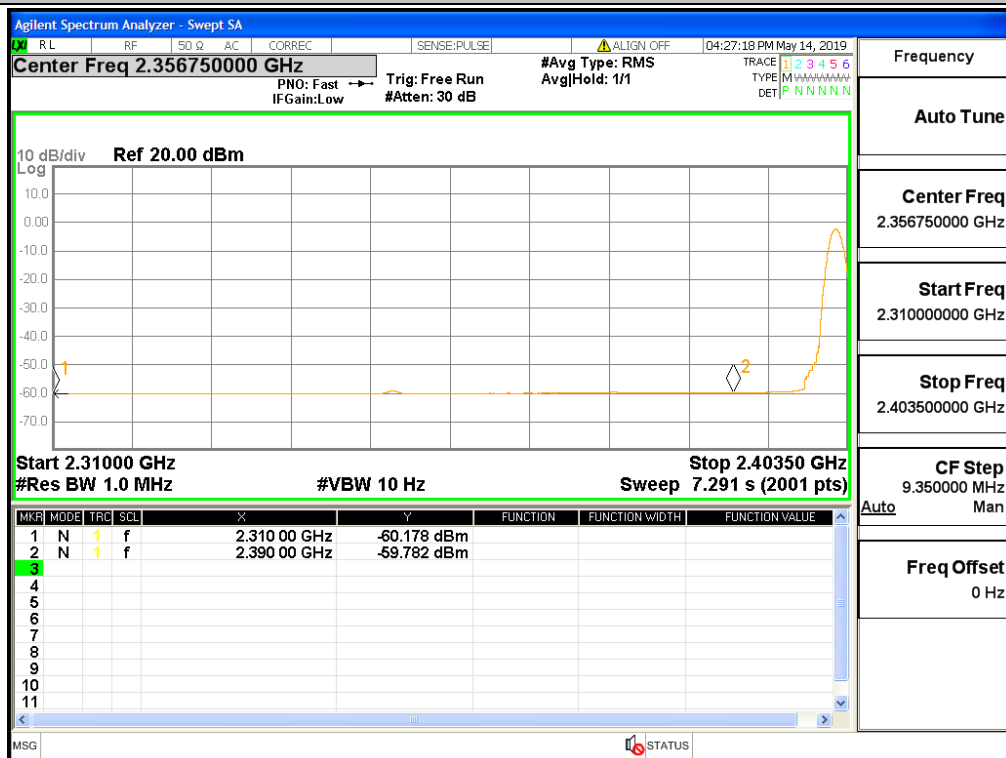
Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2310.00	2.00	0.00	-52.10	45.10	74	Pass
1DH5	2480	2483.56	2.00	0.00	-34.33	62.87	74	Pass
2DH5	2402	2390.00	2.00	0.00	-52.46	44.74	74	Pass
2DH5	2480	2483.61	2.00	0.00	-34.13	63.07	74	Pass
3DH5	2402	2390.00	2.00	0.00	-52.29	44.91	74	Pass
3DH5	2480	2485.25	2.00	0.00	-39.70	57.50	74	Pass

Type	Carrier Frequency (MHz)	Frequency(M Hz)	Gain	Ground Factor	Average Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2390.00	2.00	0.00	-59.78	37.42	54	Pass
1DH5	2480	2483.50	2.00	0.00	-57.15	40.05	54	Pass
2DH5	2402	2390.00	2.00	0.00	-59.78	37.42	54	Pass
2DH5	2480	2483.50	2.00	0.00	-56.34	40.86	54	Pass
3DH5	2402	2390.00	2.00	0.00	-59.76	37.44	54	Pass
3DH5	2480	2483.50	2.00	0.00	-56.35	40.85	54	Pass

Restrict-band band-edge measurements\_2402\_PEAK\_DH5

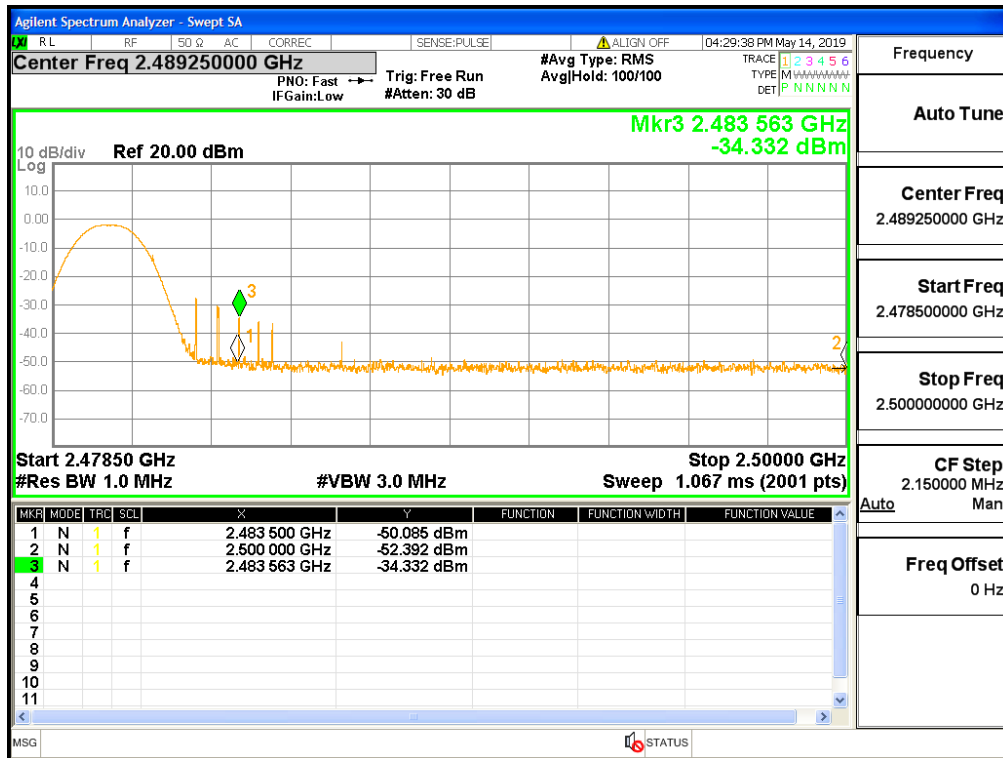


Restrict-band band-edge measurements\_2402\_AV\_DH5

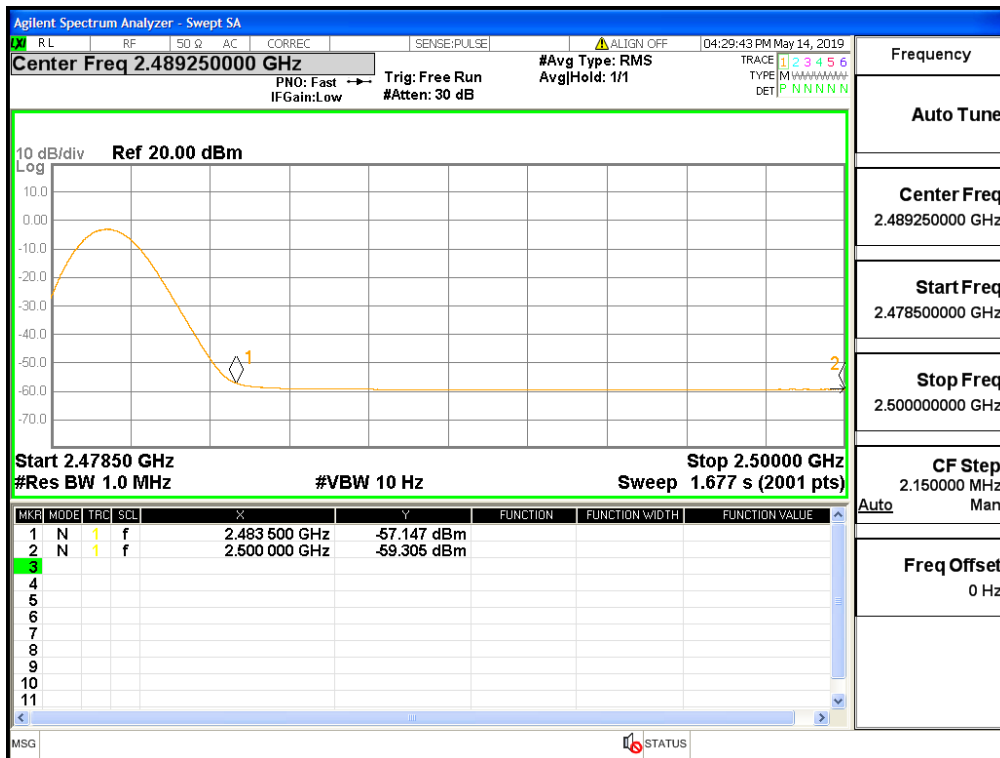




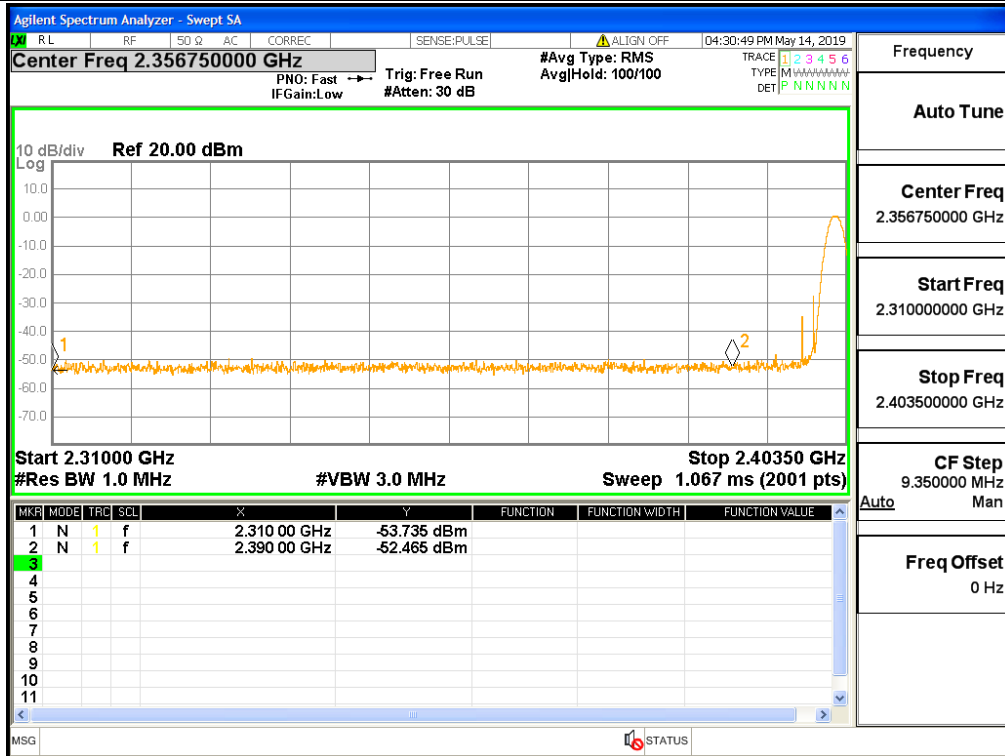
Restrict-band band-edge measurements\_2480\_PEAK\_DH5



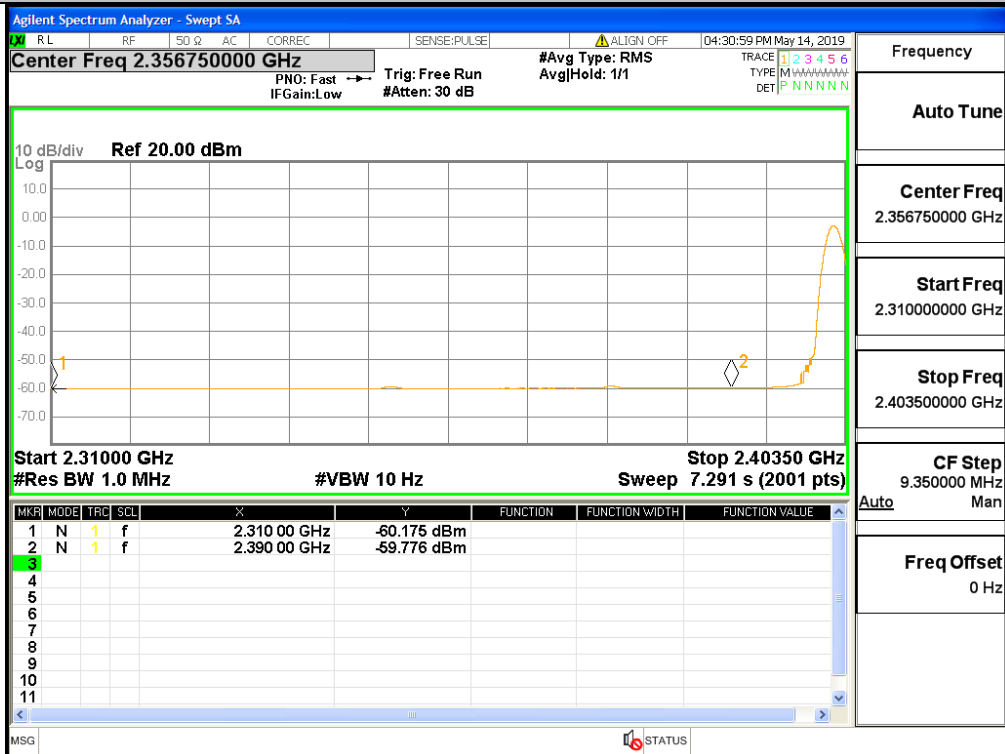
Restrict-band band-edge measurements\_2480\_AV\_DH5



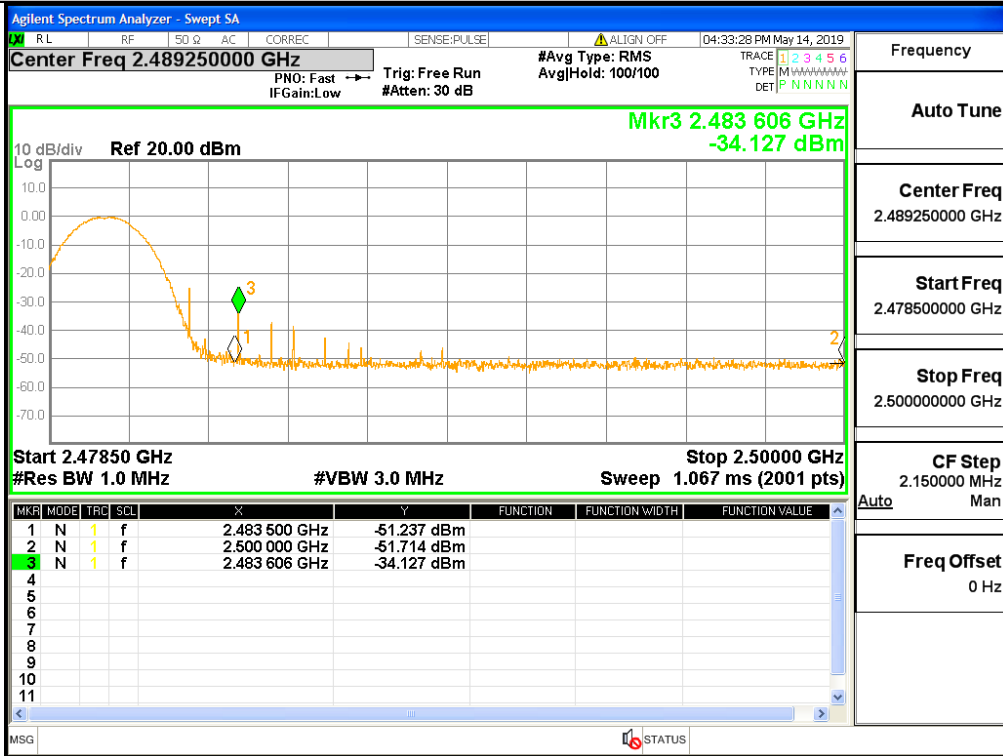
Restrict-band band-edge measurements\_2402\_PEAK\_2DH5



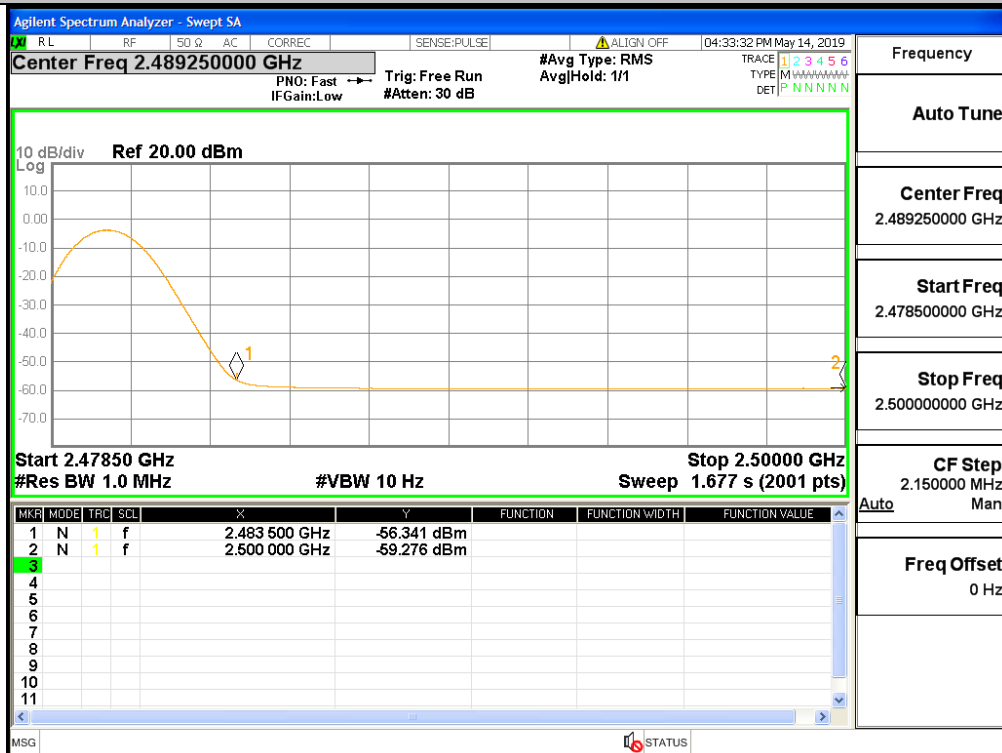
Restrict-band band-edge measurements\_2402\_AV\_2DH5



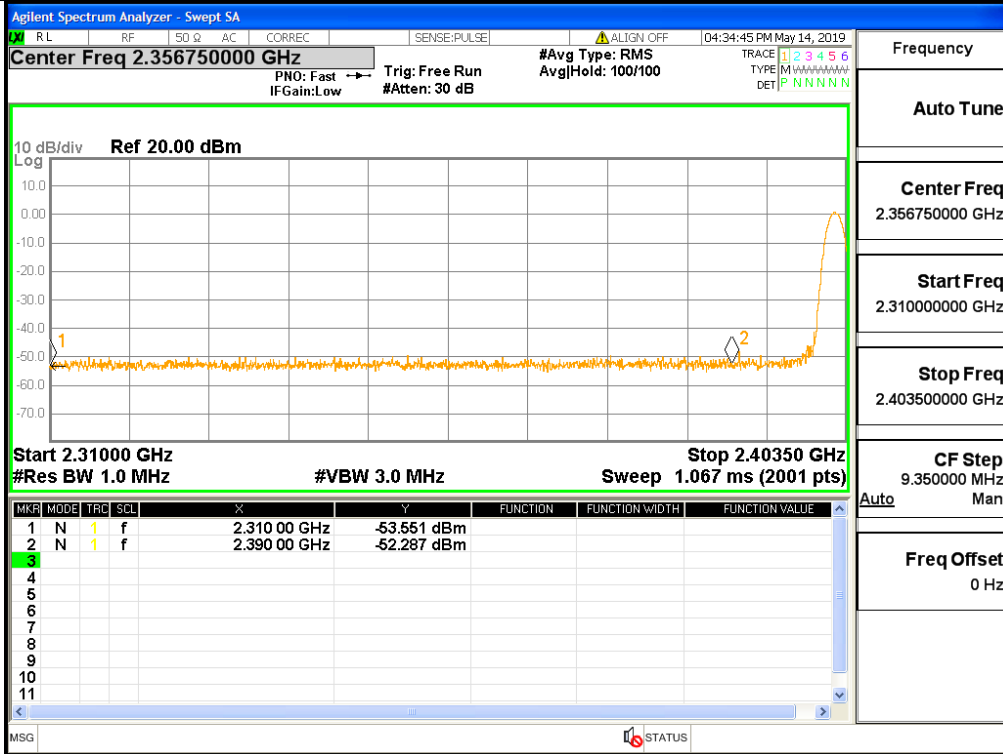
Restrict-band band-edge measurements\_2480\_PEAK\_2DH5



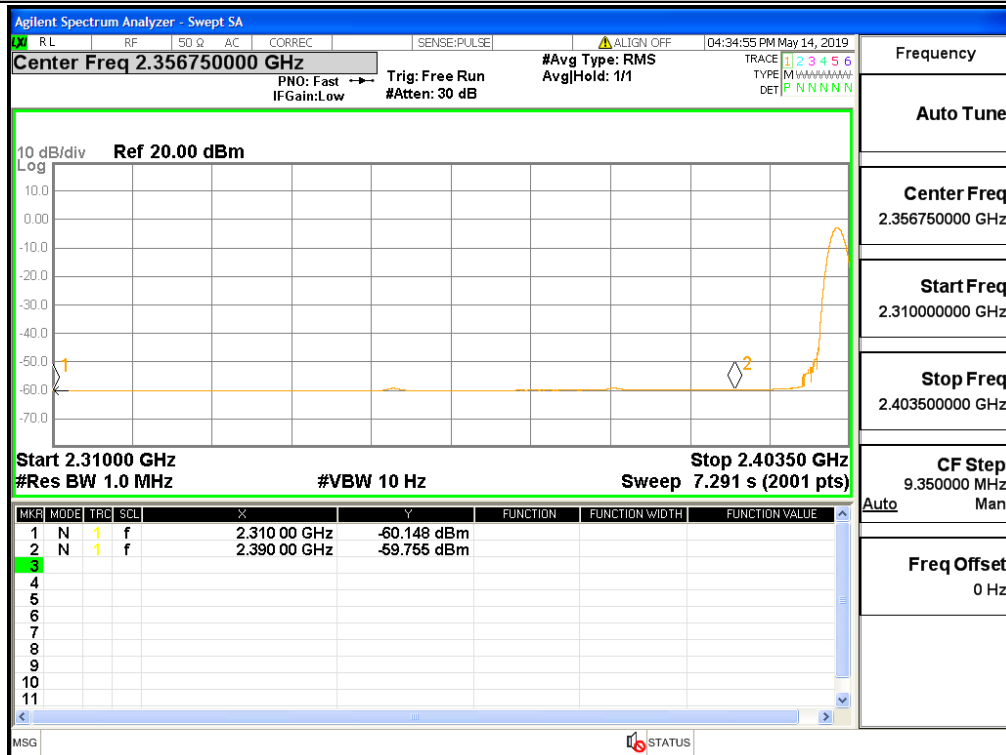
Restrict-band band-edge measurements\_2480\_AV\_2DH5



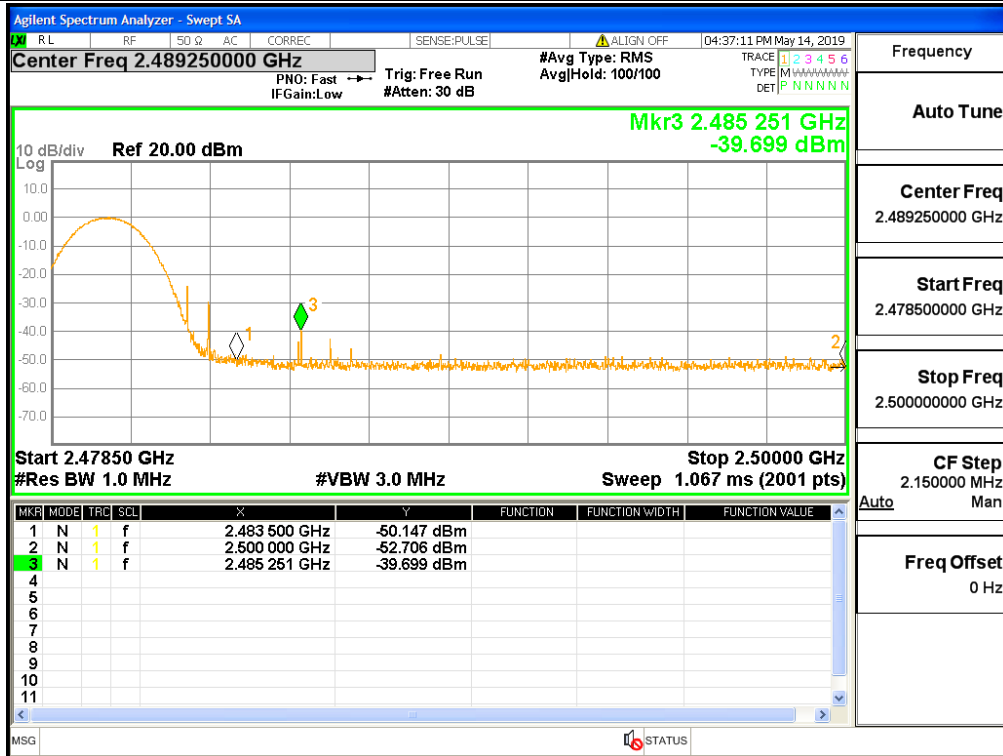
Restrict-band band-edge measurements\_2402\_PEAK\_3DH5



Restrict-band band-edge measurements\_2402\_AV\_3DH5



Restrict-band band-edge measurements\_2480\_PEAK\_3DH5



Restrict-band band-edge measurements\_2480\_AV\_3DH5

