

Appendix A

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

Product Name: Music cup lids

Trade Mark: Haoda

Test Model: ZN-801

FCC ID: 2AR8U-ZN801

Environmental Conditions

Temperature:	22.5 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Gary Qian
Supervised by:	Eden Hu

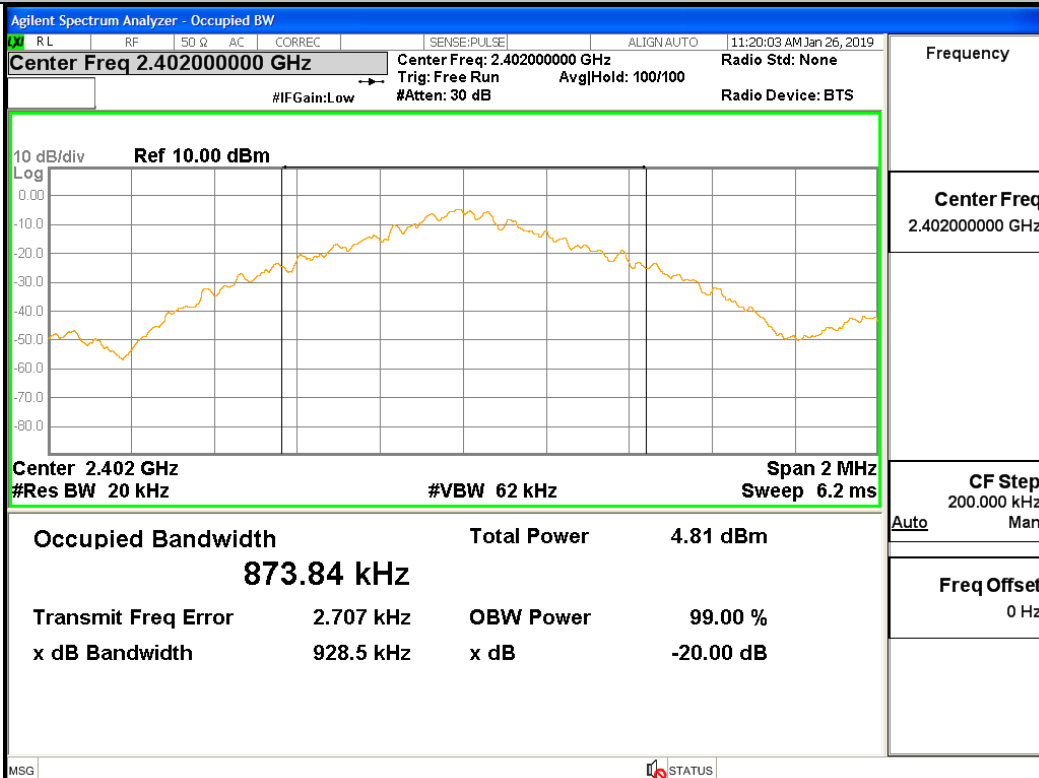
A.1 20 dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit(MHz)	Verdict
GFSK	LCH	0.929	Not Specified	PASS
GFSK	MCH	0.927	Not Specified	PASS
GFSK	HCH	0.929	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.335	Not Specified	PASS
$\pi/4$ DQPSK	MCH	1.348	Not Specified	PASS
$\pi/4$ DQPSK	HCH	1.346	Not Specified	PASS
8DPSK	LCH	1.346	Not Specified	PASS
8DPSK	MCH	1.345	Not Specified	PASS
8DPSK	HCH	1.349	Not Specified	PASS

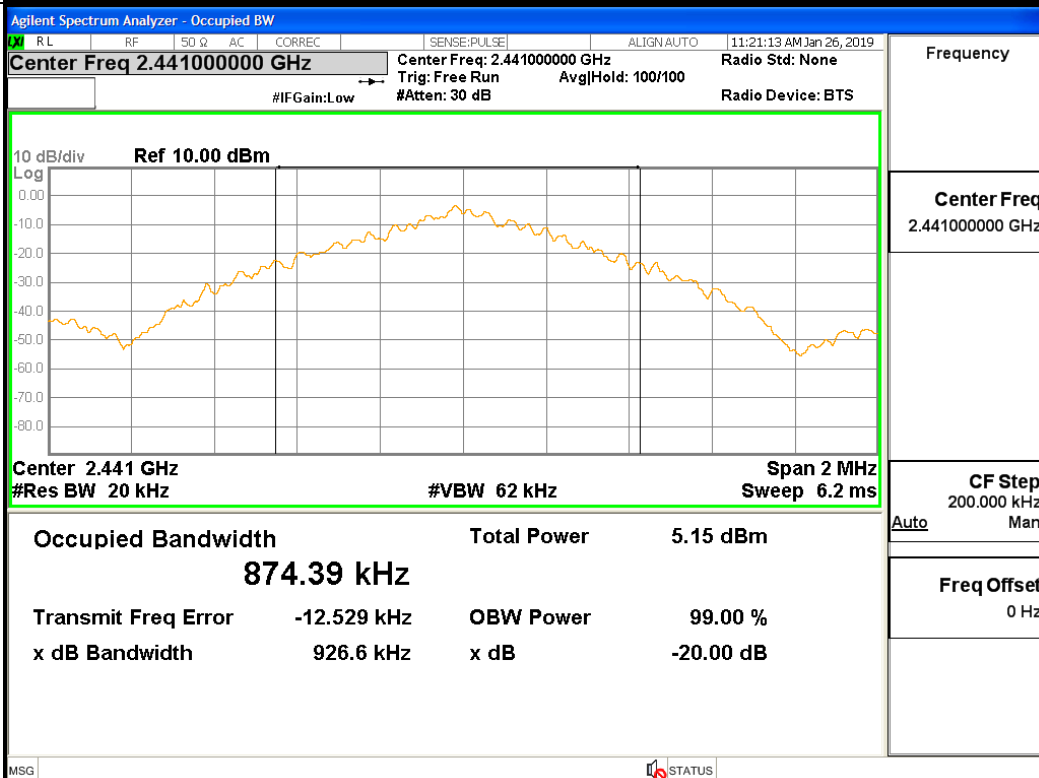
Test Graph

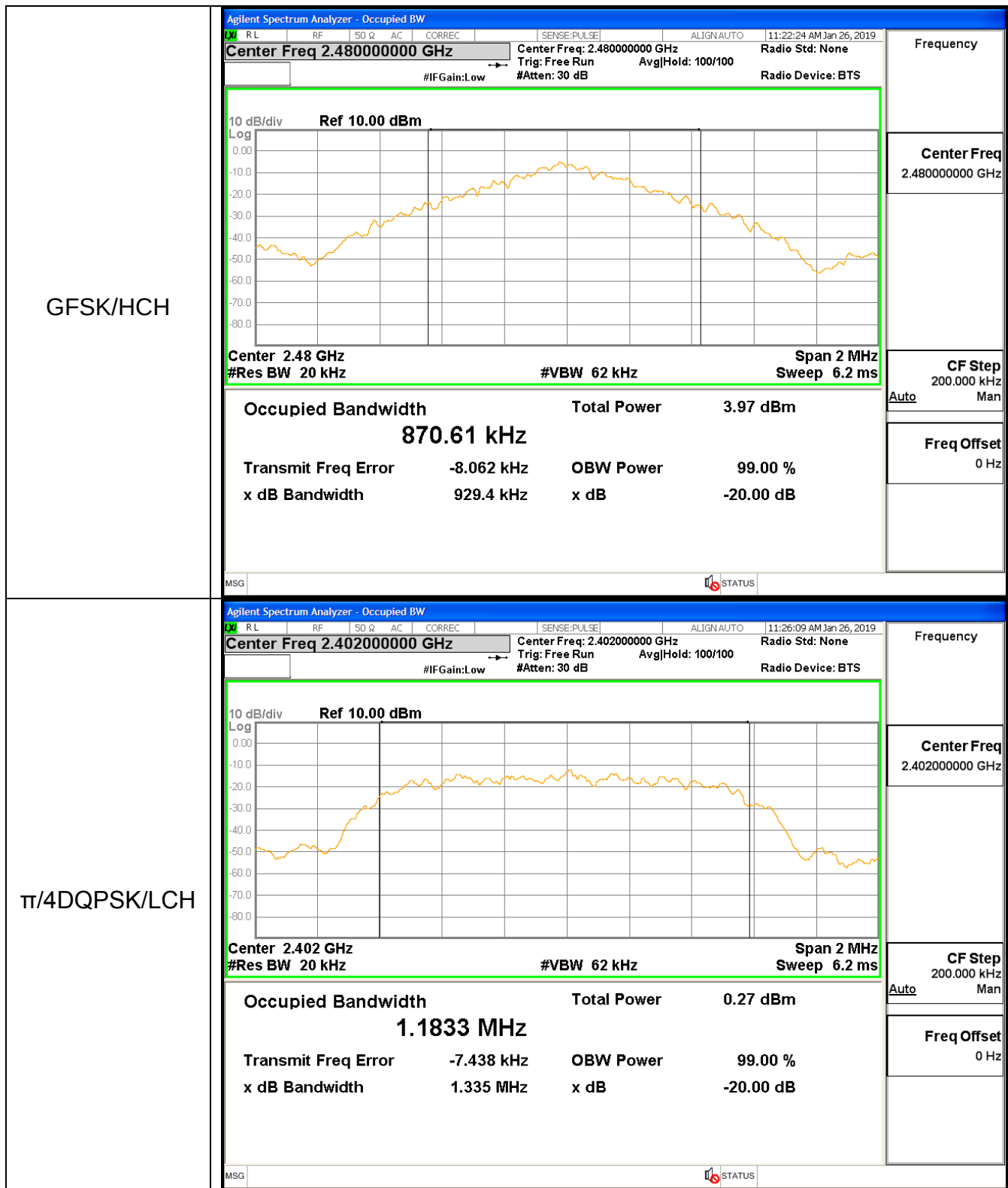
Graphs

GFSK/LCH

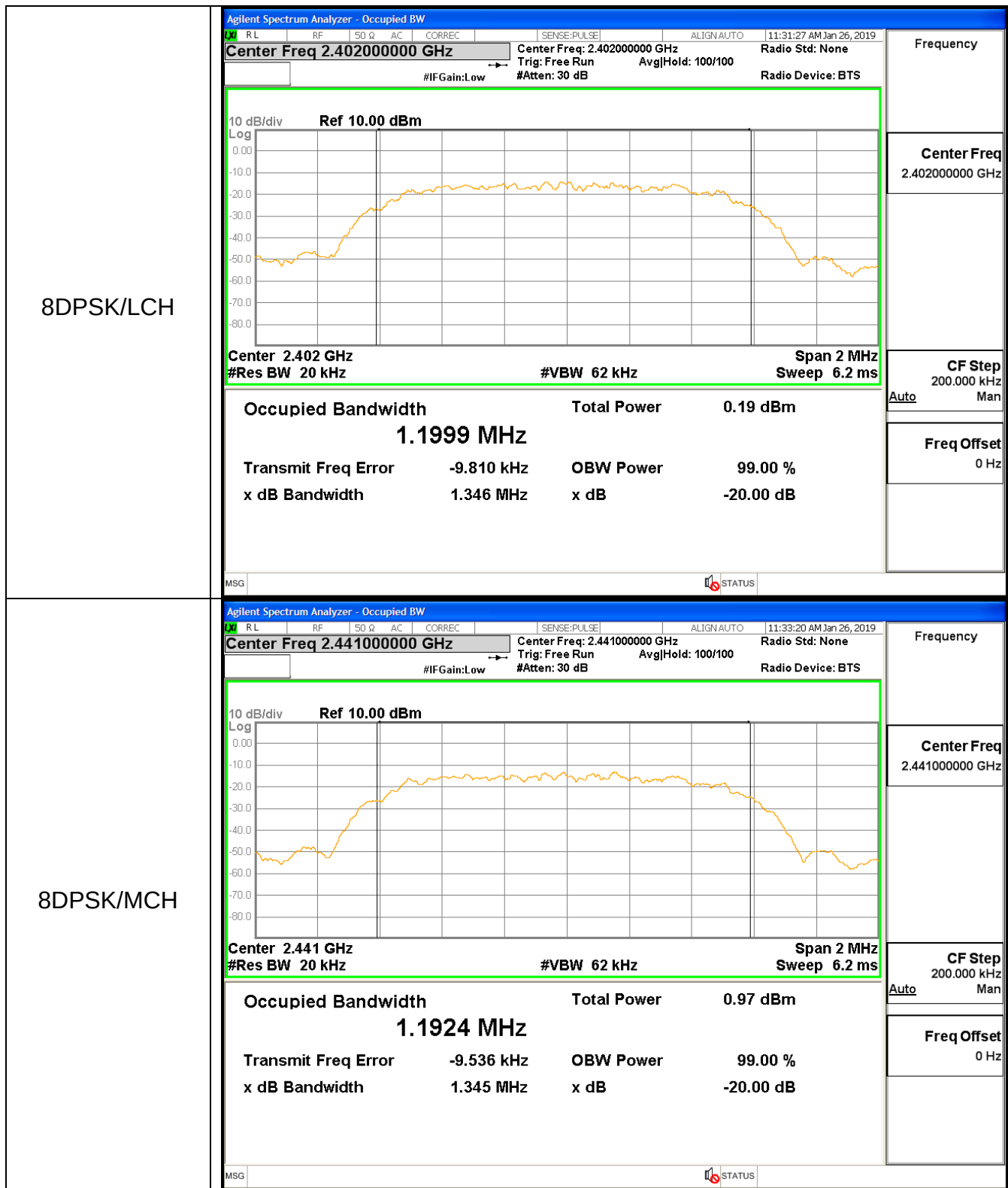


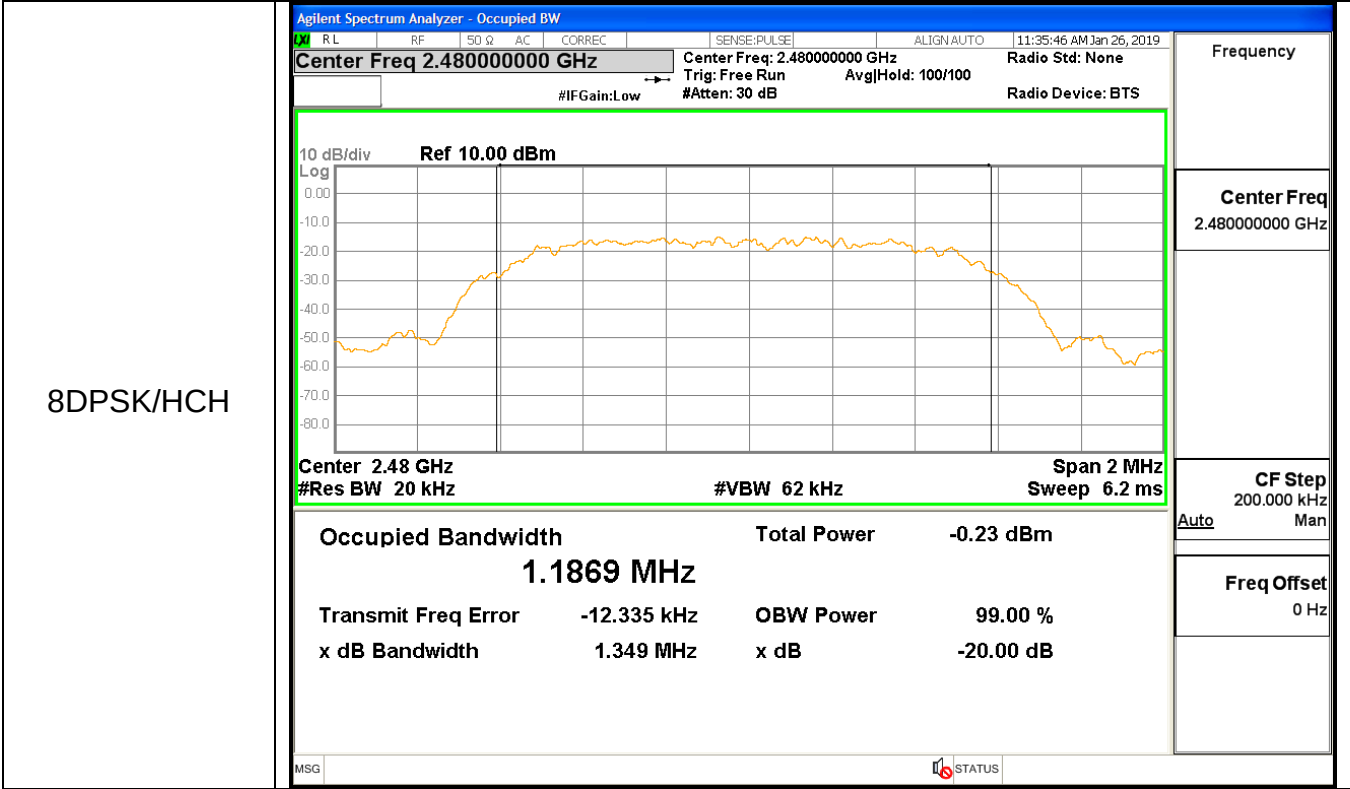
GFSK/MCH





[illegible]

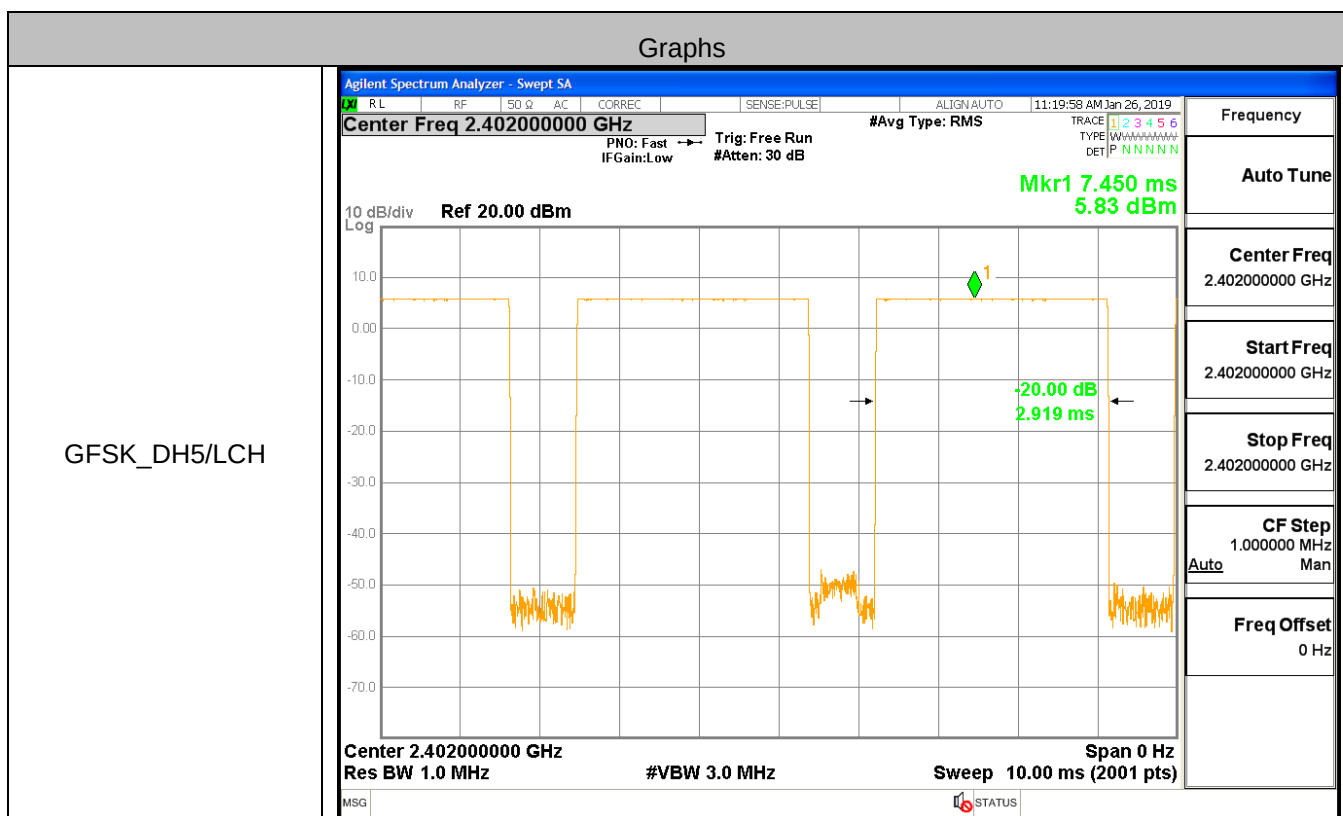


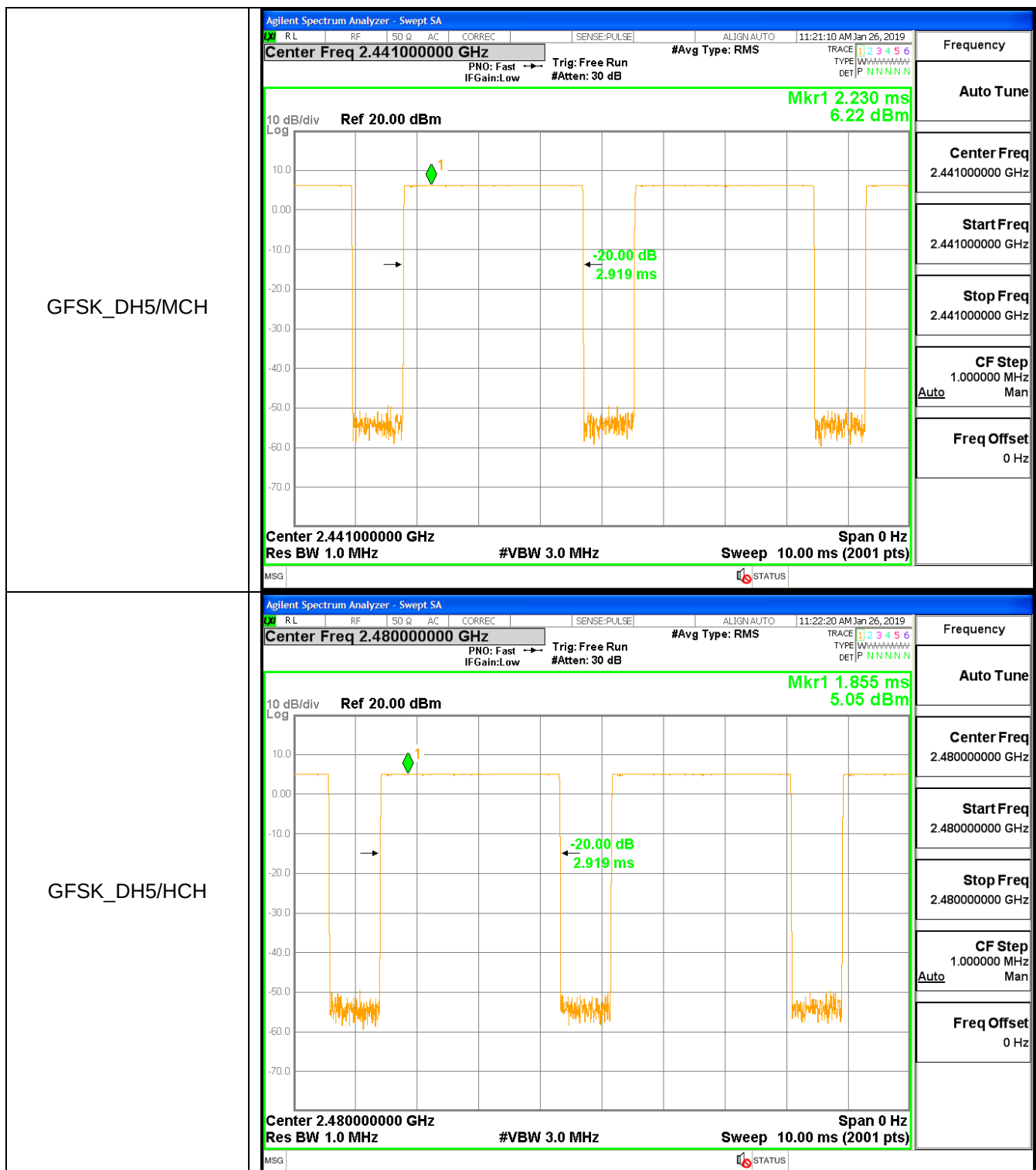


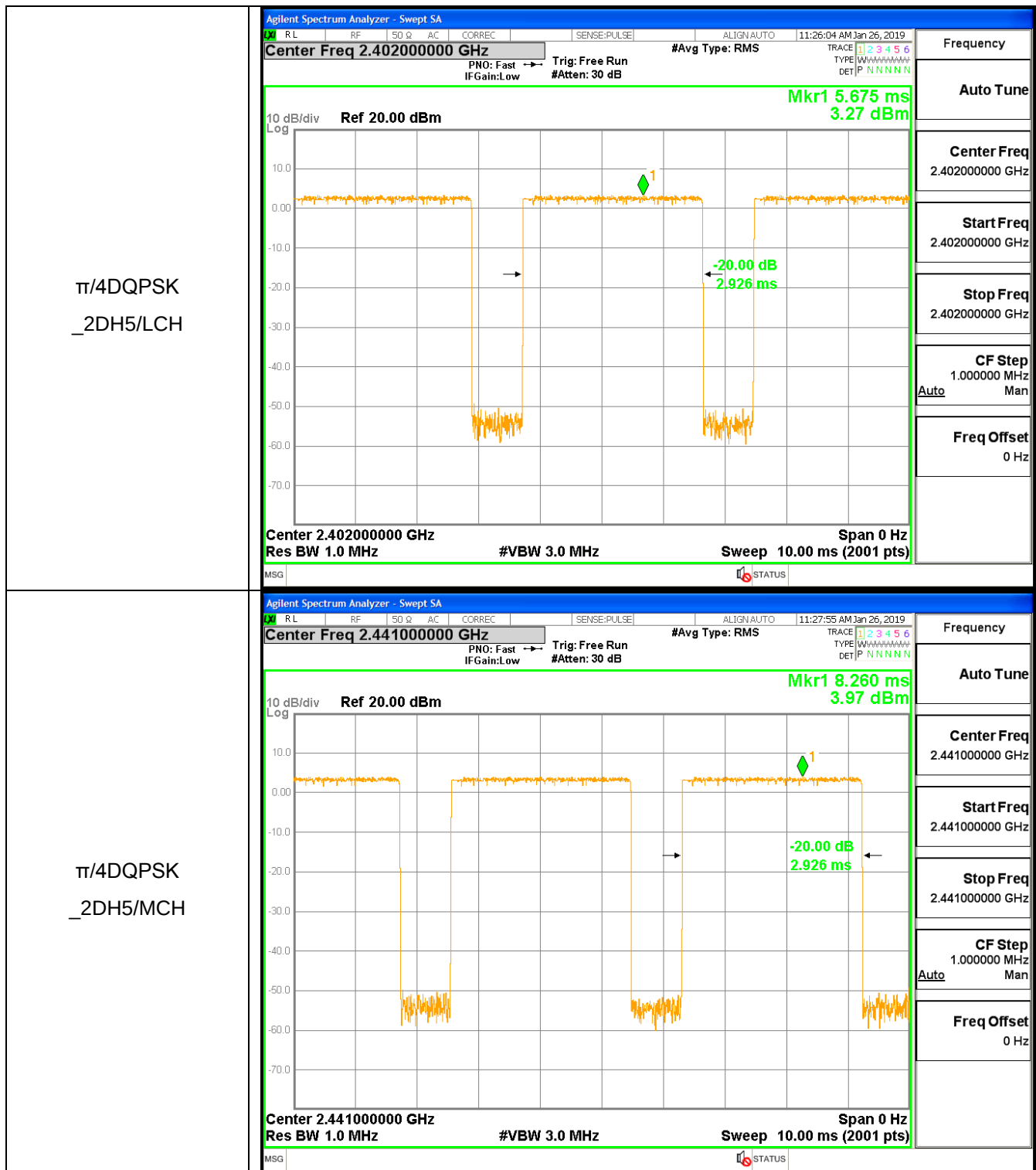
A.2 Dwell Time

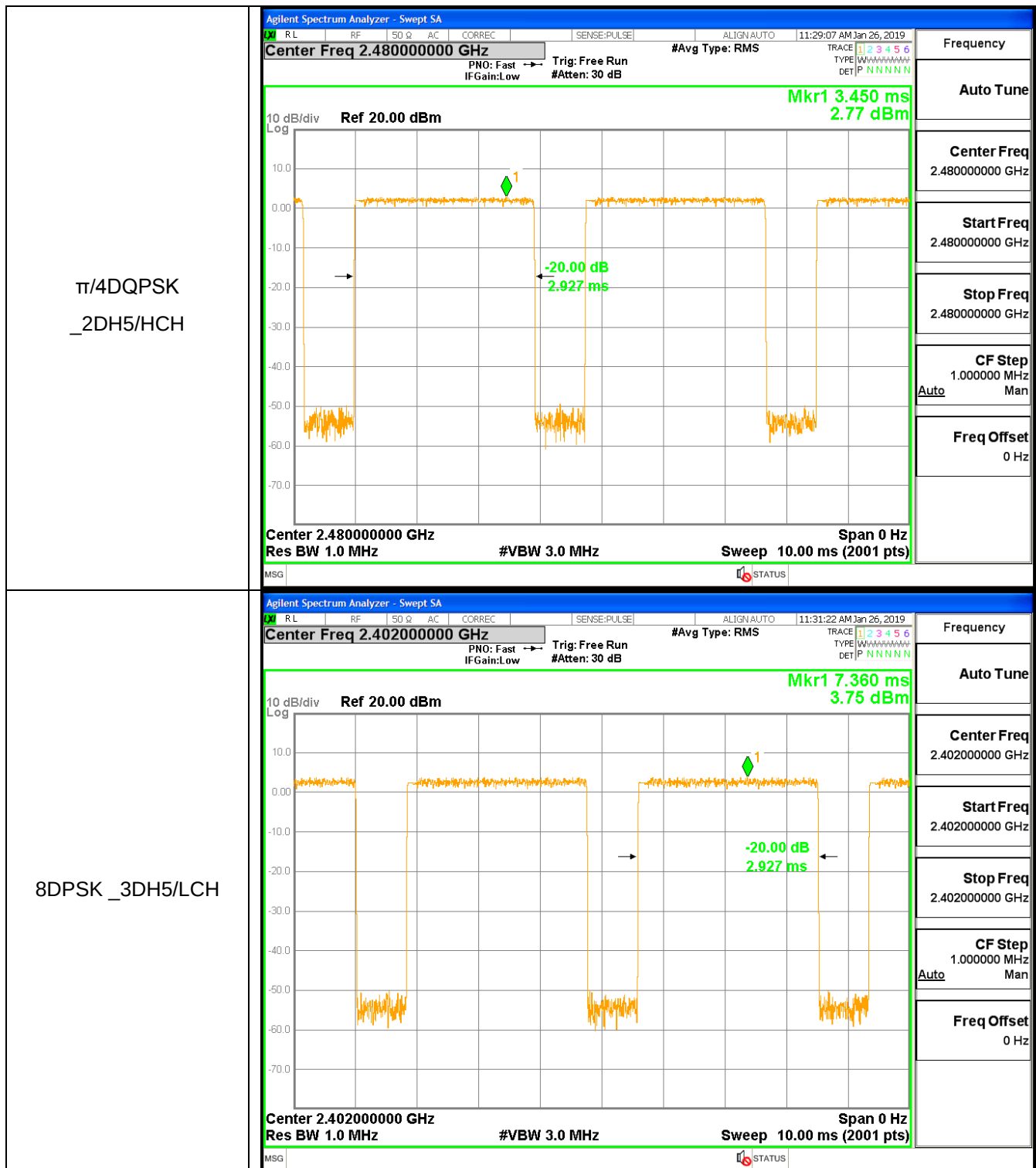
Mode	Packet	Channel	Burst Width [s/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	0.002918966	106.7	0.31145362	0.4	PASS
GFSK	DH5	MCH	0.00291875	106.7	0.311430619	0.4	PASS
GFSK	DH5	HCH	0.002918624	106.7	0.311417151	0.4	PASS
$\pi/4$ DQPSK	2DH5	LCH	0.002925892	106.7	0.312192632	0.4	PASS
$\pi/4$ DQPSK	2DH5	MCH	0.002925701	106.7	0.312172303	0.4	PASS
$\pi/4$ DQPSK	2DH5	HCH	0.002926827	106.7	0.312292486	0.4	PASS
8DPSK	3DH5	LCH	0.002927299	106.7	0.312342761	0.4	PASS
8DPSK	3DH5	MCH	0.002927584	106.7	0.312373177	0.4	PASS
8DPSK	3DH5	HCH	0.00292662	106.7	0.312270315	0.4	PASS

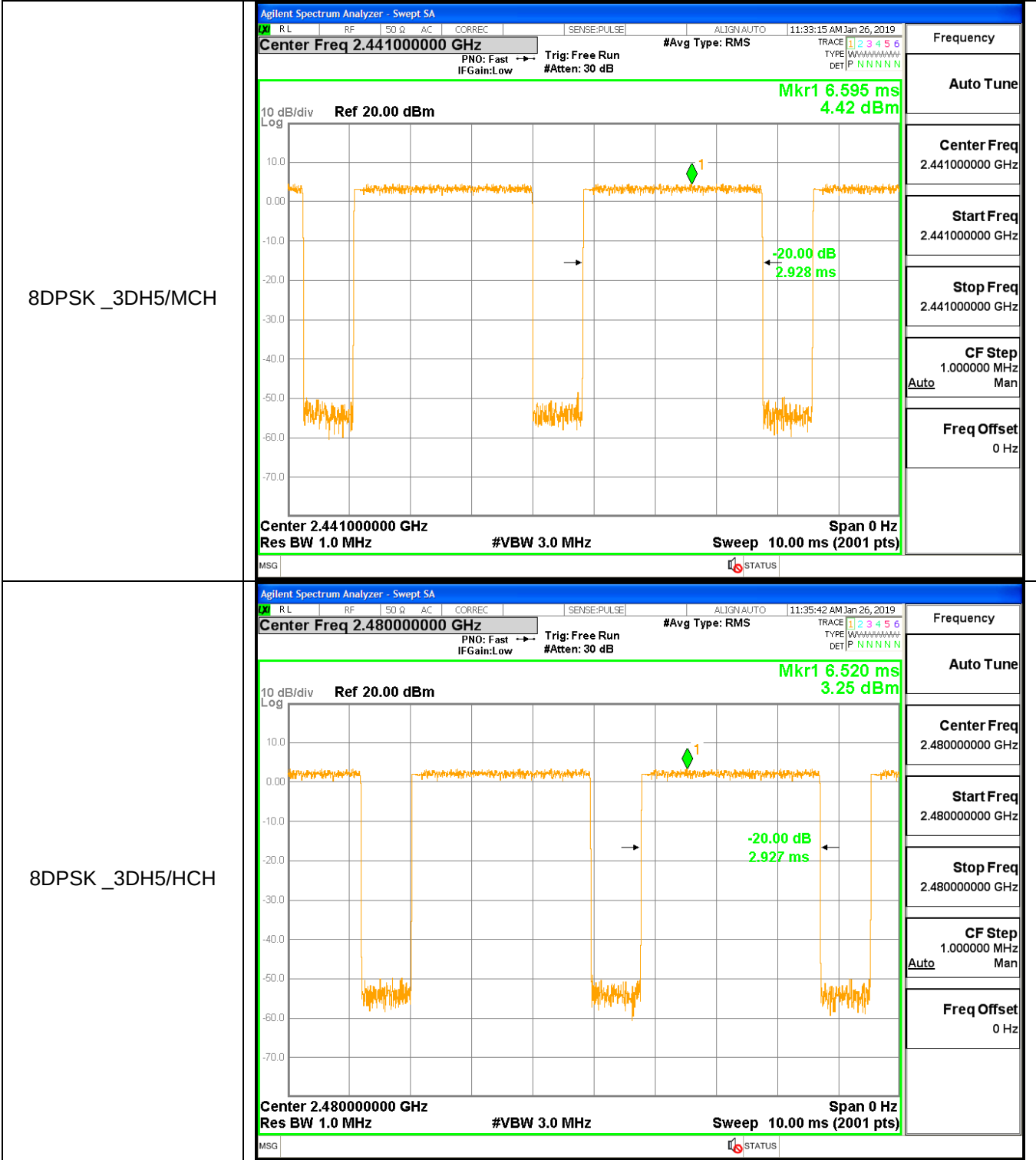
Test Graph









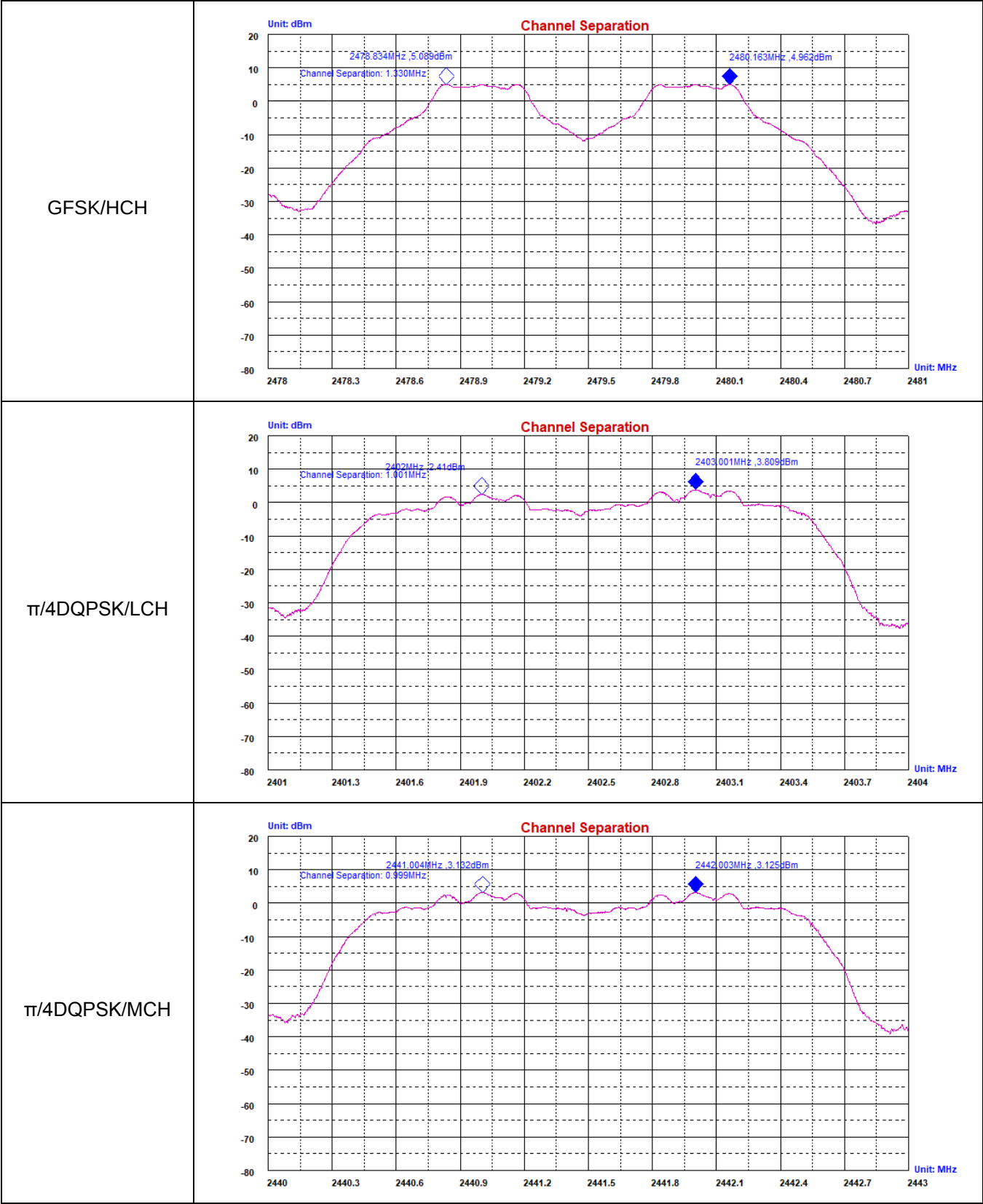


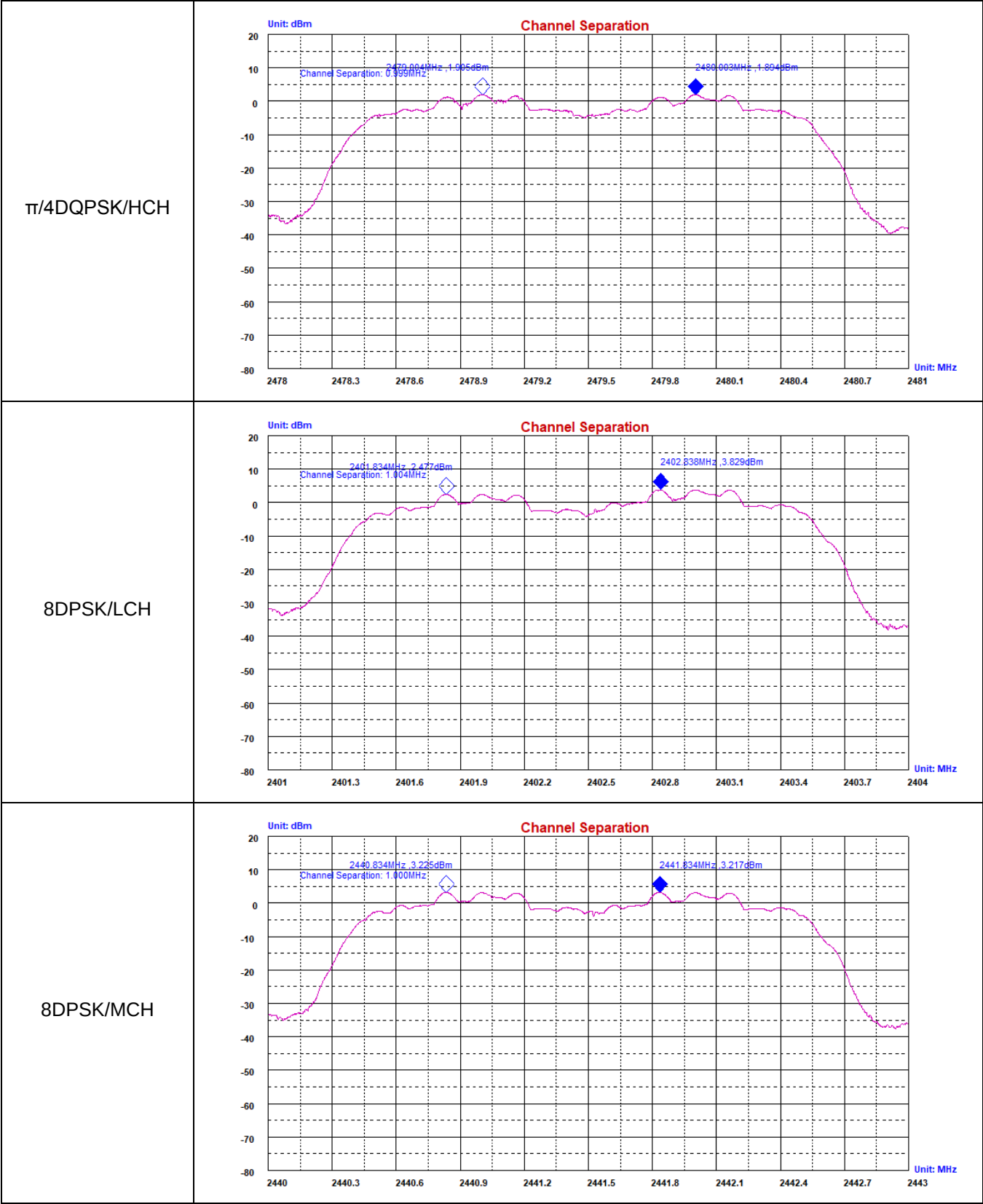
A.3 Carrier Frequency Separation

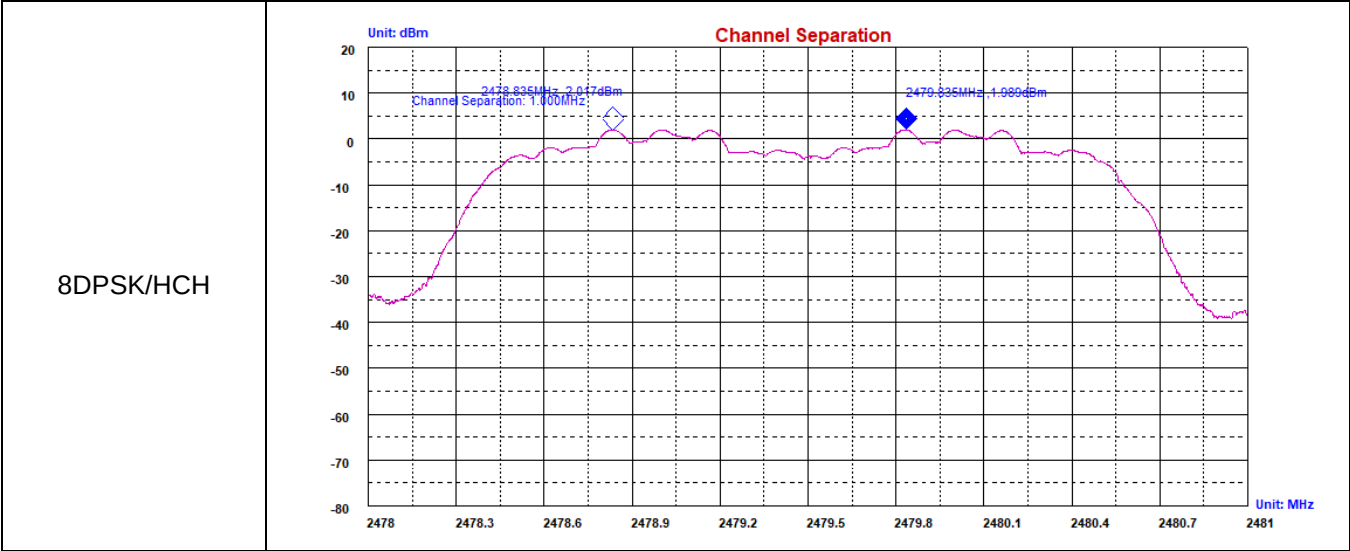
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.003	0.642	PASS
GFSK	MCH	1.000	0.625	PASS
GFSK	HCH	1.330	0.643	PASS
$\pi/4$ DQPSK	LCH	1.001	0.889	PASS
$\pi/4$ DQPSK	MCH	0.999	0.899	PASS
$\pi/4$ DQPSK	HCH	0.999	0.899	PASS
8DPSK	LCH	1.004	0.885	PASS
8DPSK	MCH	1.000	0.896	PASS
8DPSK	HCH	1.000	0.895	PASS

Test Graph





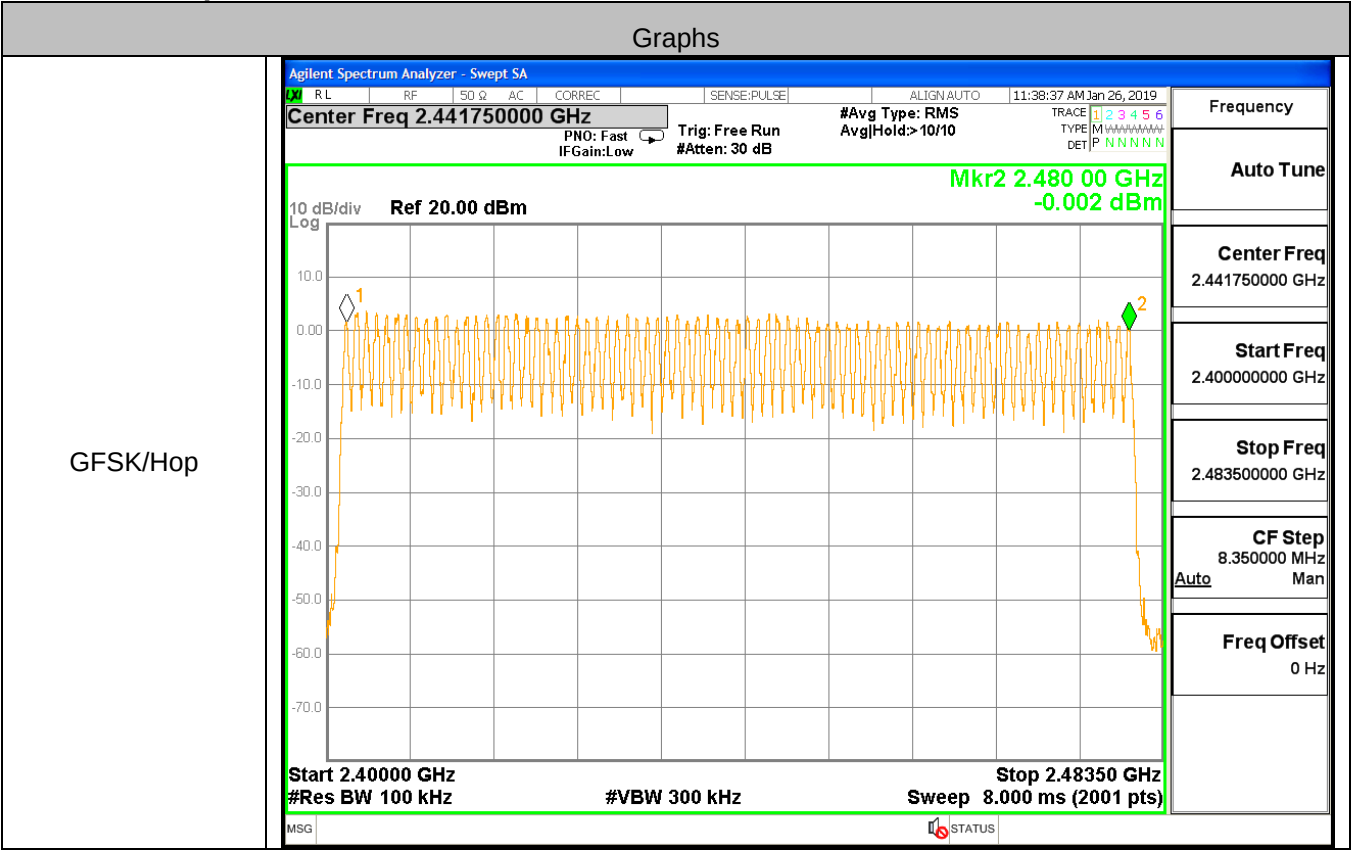


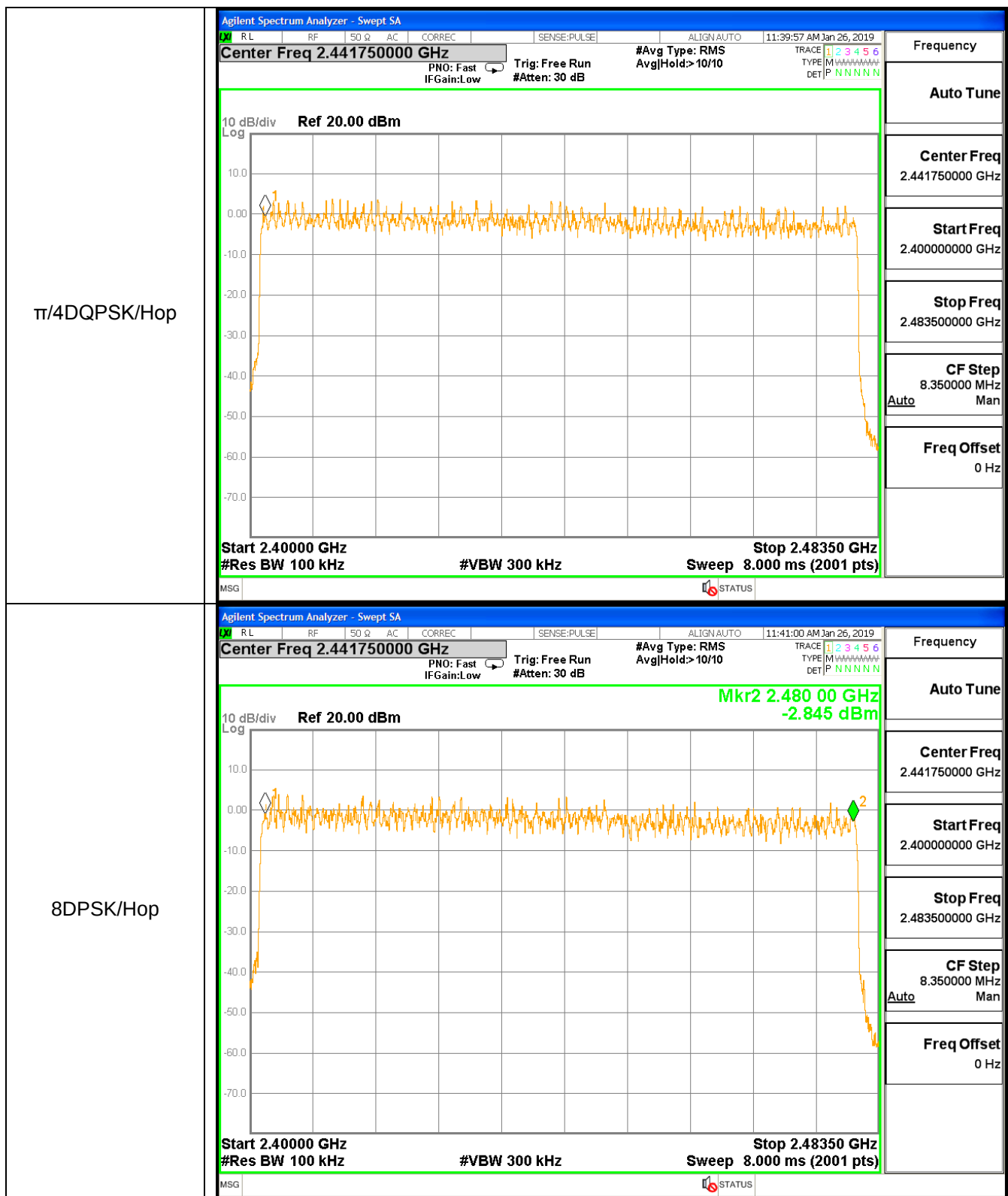


A.4 Hopping Channel Number

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

Test Graph

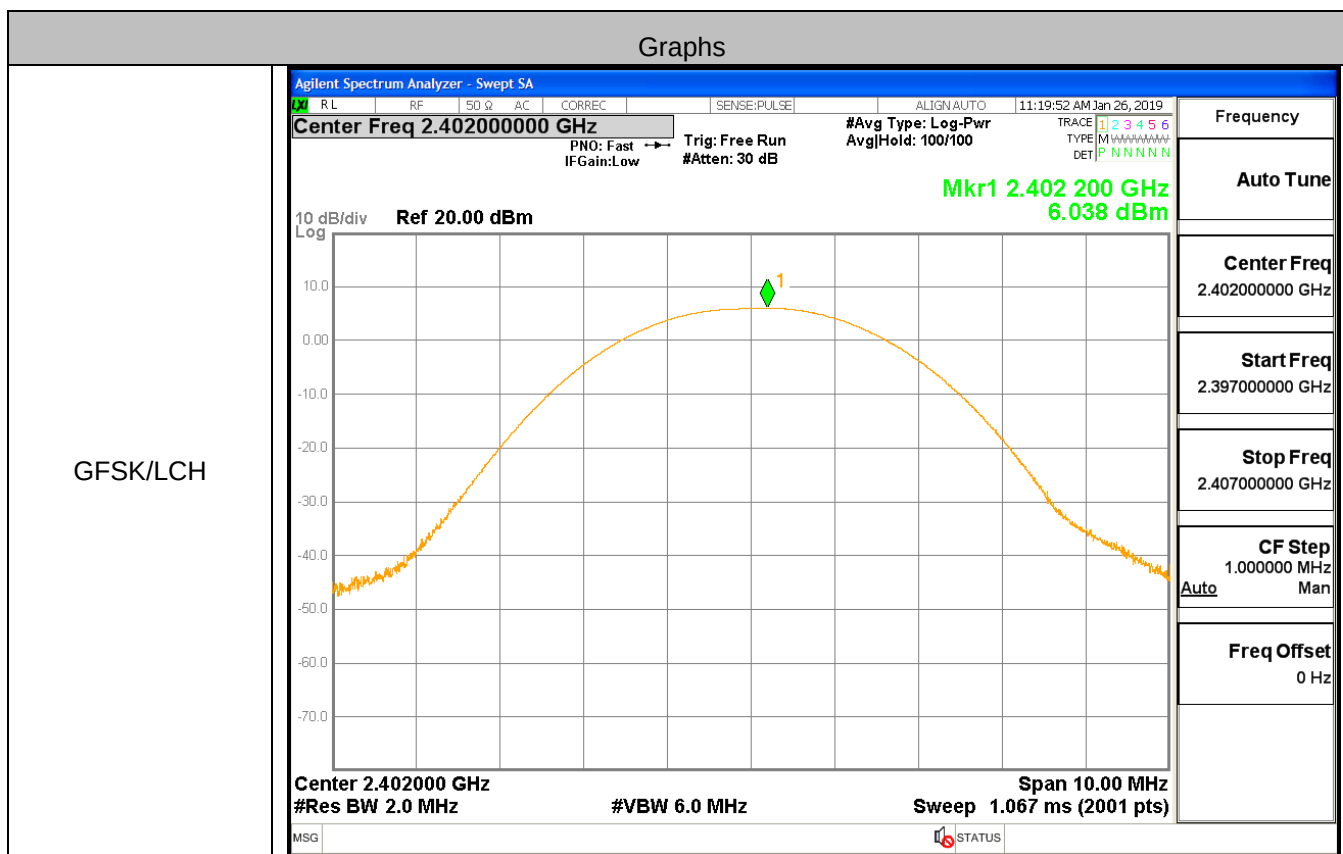


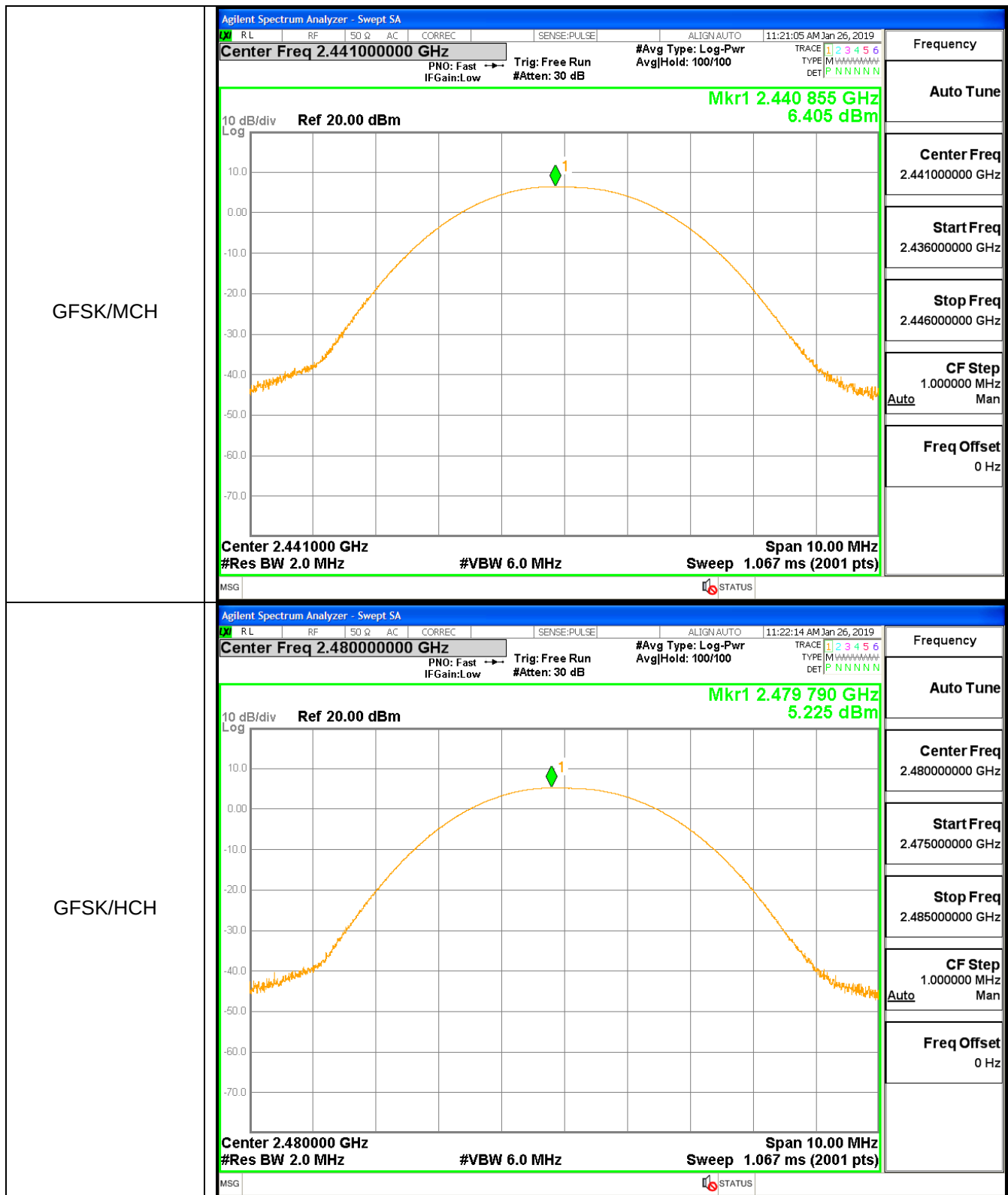


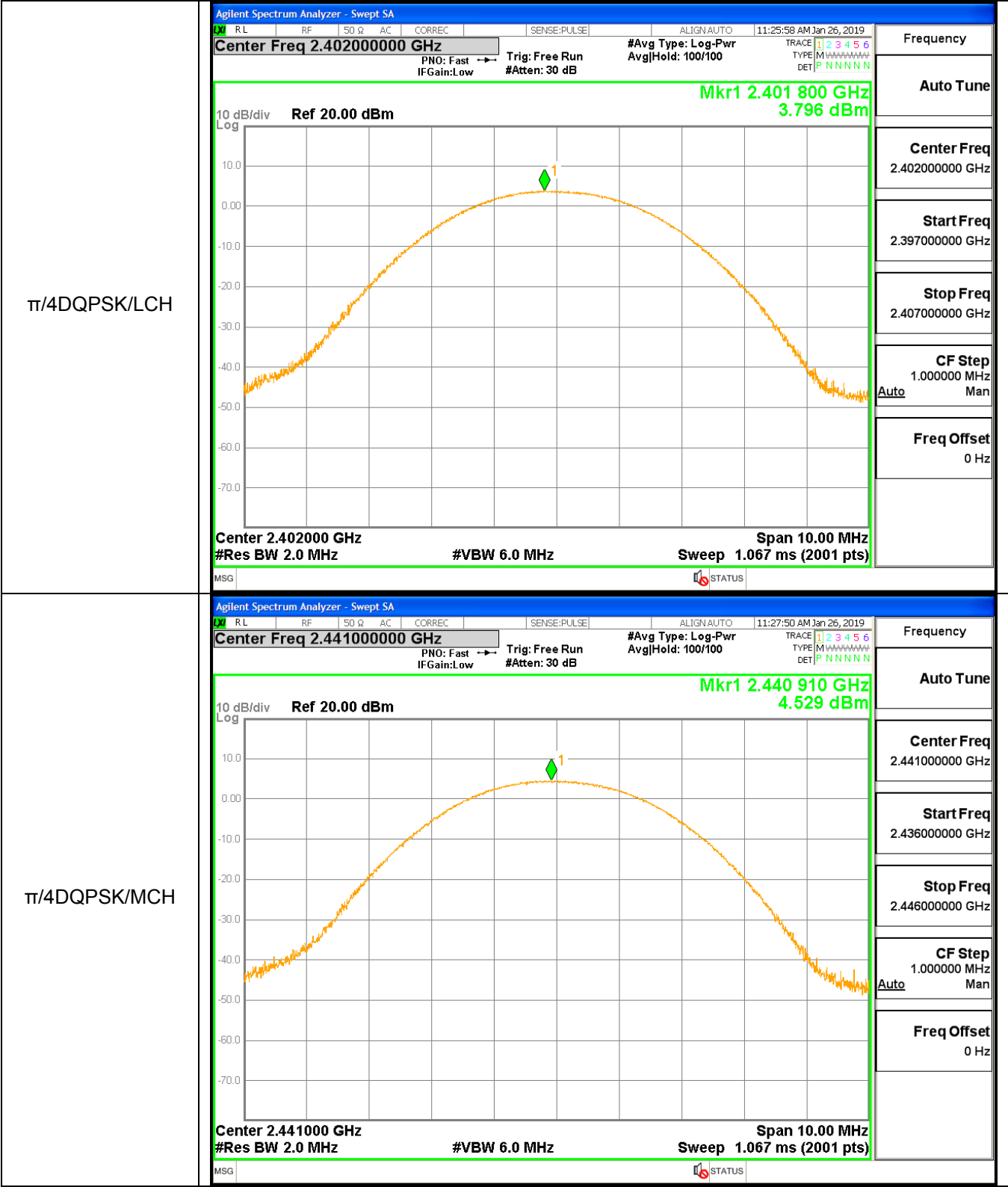
A.5 Conducted Peak Output Power

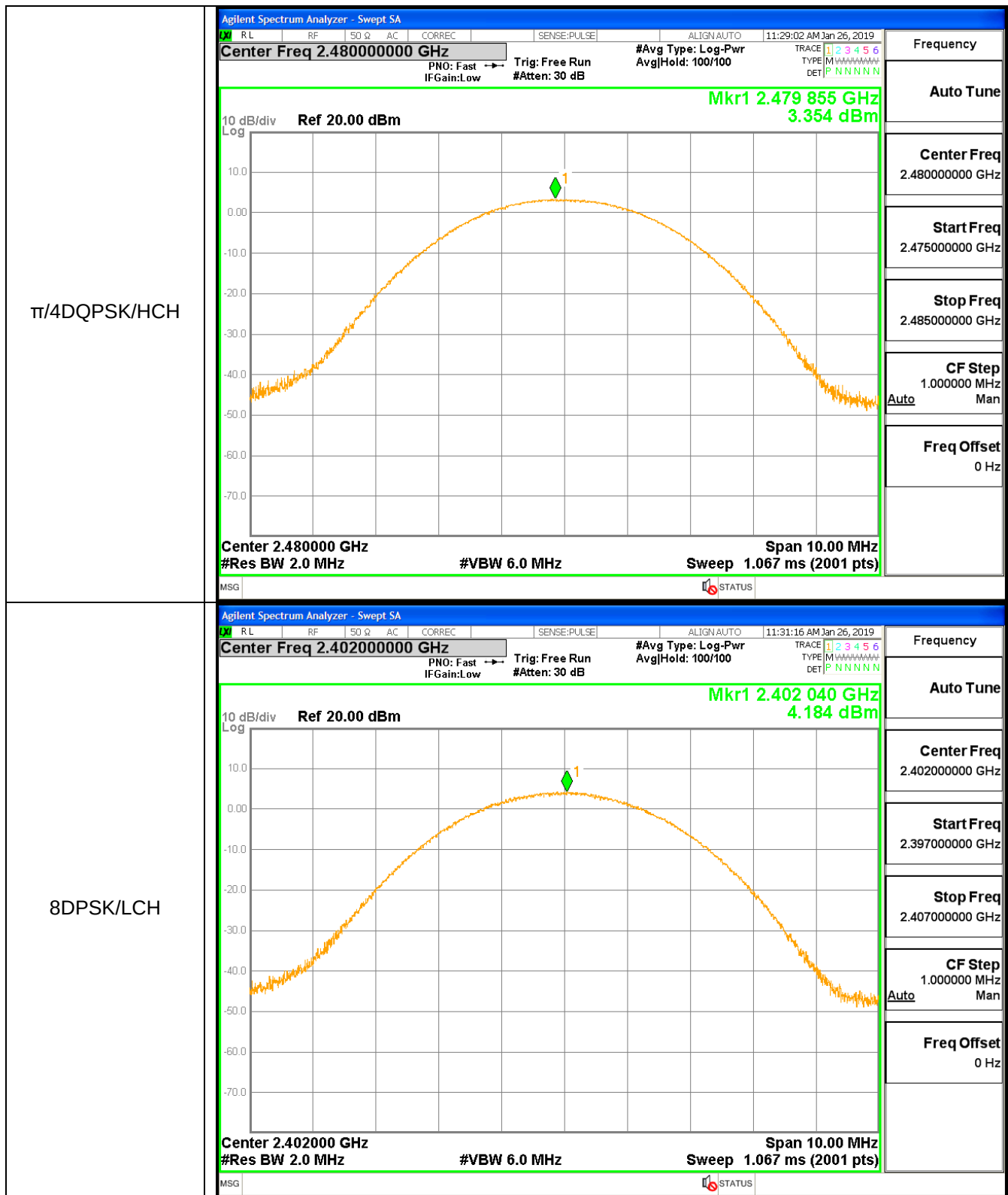
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	6.038	21	PASS
GFSK	MCH	6.405	21	PASS
GFSK	HCH	5.225	21	PASS
$\pi/4$ DQPSK	LCH	3.796	21	PASS
$\pi/4$ DQPSK	MCH	4.529	21	PASS
$\pi/4$ DQPSK	HCH	3.354	21	PASS
8DPSK	LCH	4.184	21	PASS
8DPSK	MCH	4.863	21	PASS
8DPSK	HCH	3.647	21	PASS

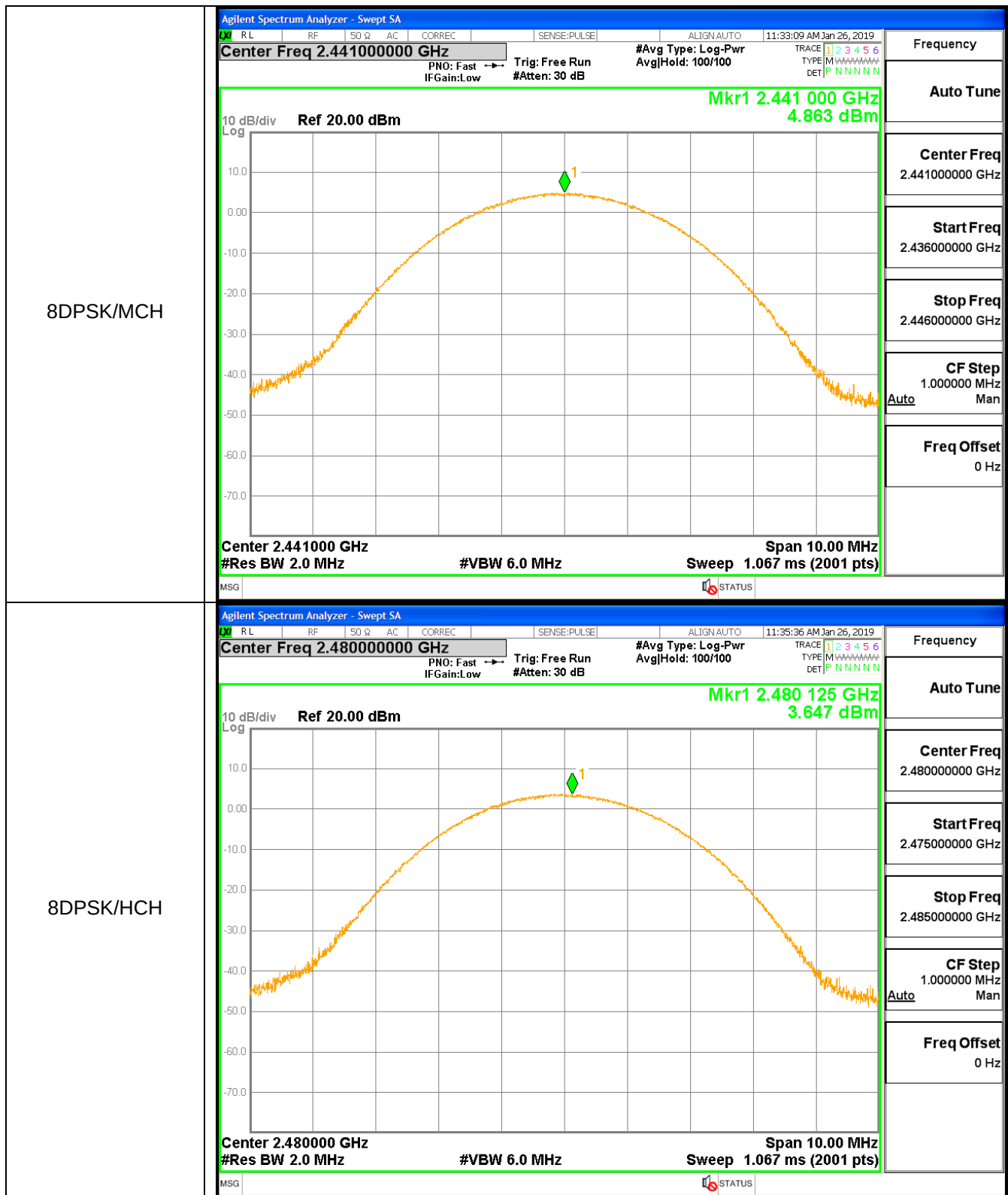
Test Graph







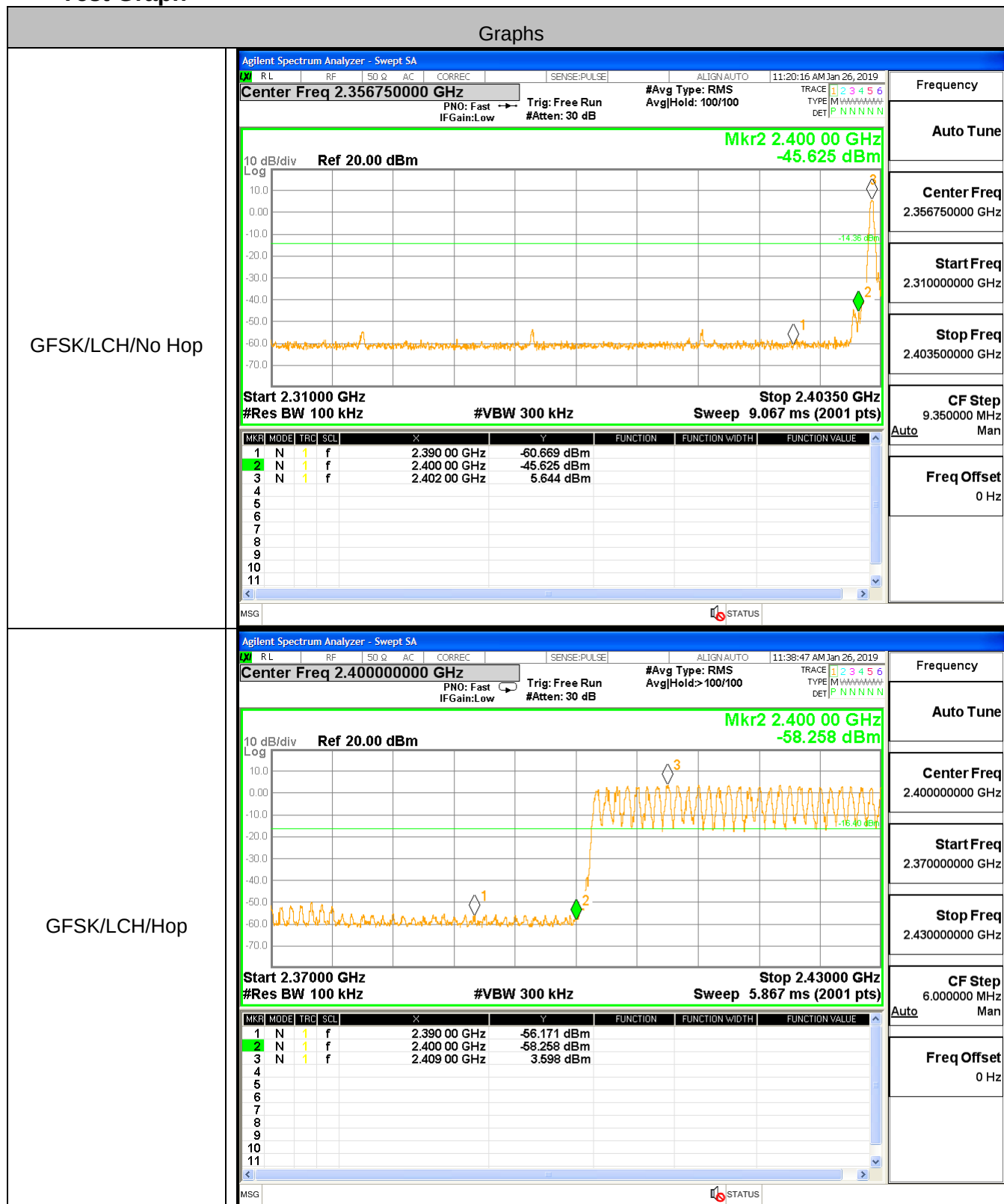


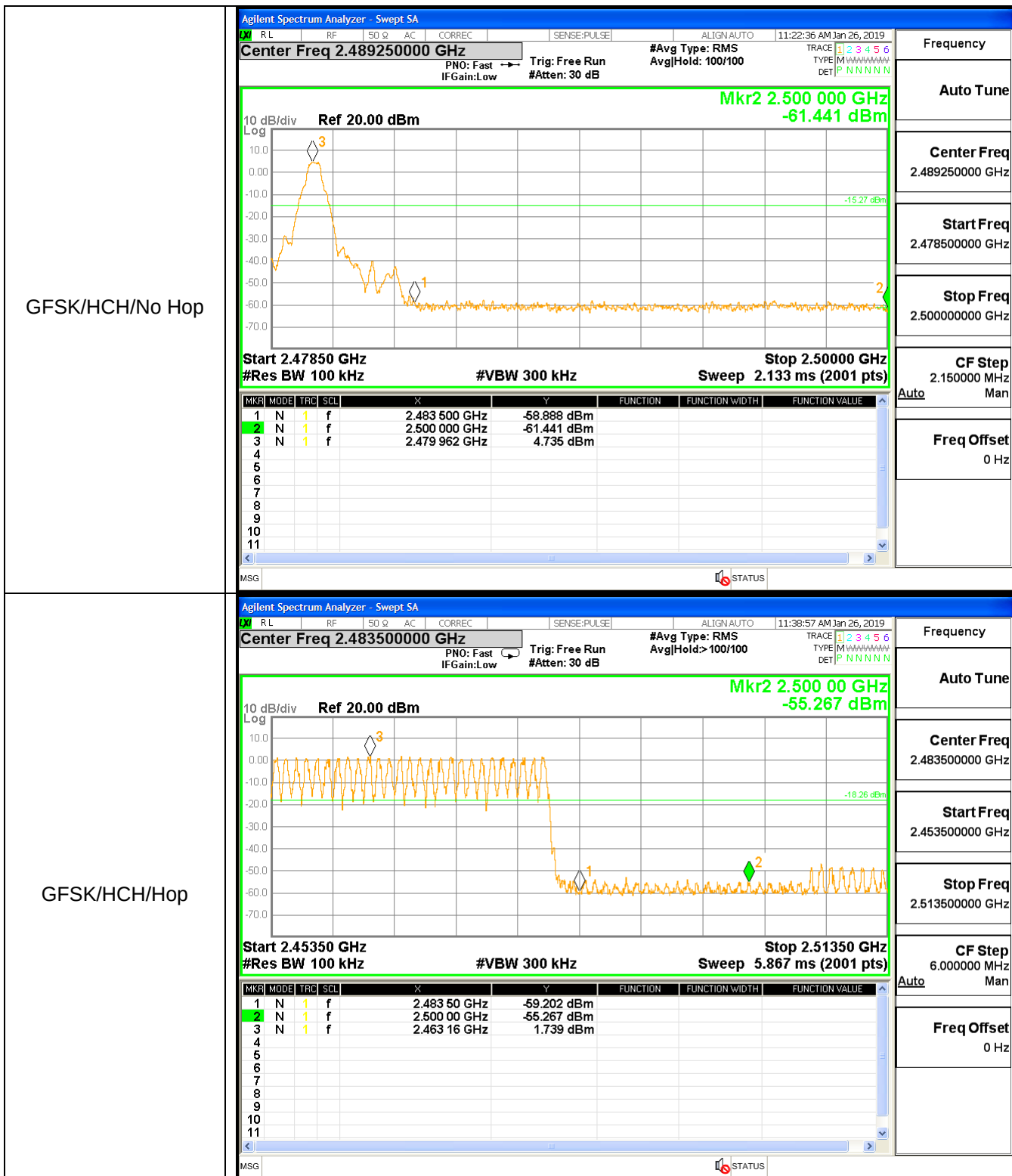


A.6 Band-edge for RF Conducted Emissions

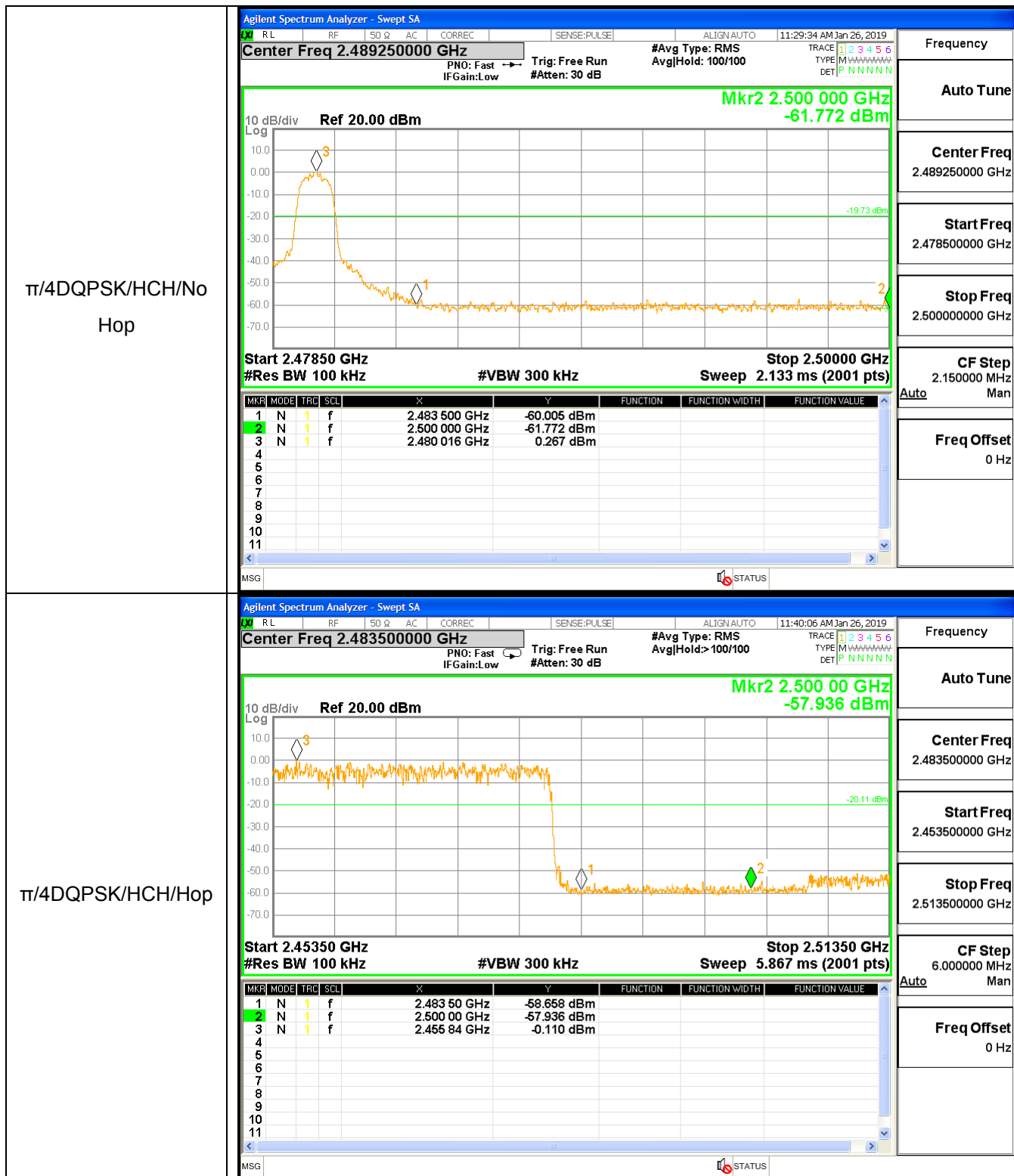
Type	Carrier Frequency(MHz)	Frequency(MHz)	Carrier Frequency Power [dBm]	Bandedge Peak(dBm)	Upper limit(dBm)	Conclusion
1DH5	2402	2390	5.644	-60.67	-14.356	Pass
1DH5	2402	2400	5.644	-45.62	-14.356	Pass
1DH5-Hopping	2402	2390	3.598	-56.17	-16.402	Pass
1DH5-Hopping	2402	2400	3.598	-58.26	-16.402	Pass
1DH5	2480	2483.5	4.735	-58.89	-15.265	Pass
1DH5	2480	2500	4.735	-61.44	-15.265	Pass
1DH5-Hopping	2480	2483.5	1.739	-61.1	-18.261	Pass
1DH5-Hopping	2480	2500	1.739	-55.27	-18.261	Pass
2DH5	2402	2390	2.436	-61.2	-17.564	Pass
2DH5	2402	2400	2.436	-42.23	-17.564	Pass
2DH5-Hopping	2480	2483.5	-0.11	-58.66	-20.11	Pass
2DH5-Hopping	2480	2500	-0.11	-57.94	-20.11	Pass
2DH5	2480	2483.5	0.267	-60	-19.733	Pass
2DH5	2480	2500	0.267	-61.77	-19.733	Pass
2DH5-Hopping	2402	2390	3.633	-59.73	-16.367	Pass
2DH5-Hopping	2402	2400	3.633	-47.6	-16.367	Pass
3DH5	2402	2390	0.254	-60.04	-19.746	Pass
3DH5	2402	2400	0.254	-35.92	-19.746	Pass
3DH5-Hopping	2402	2390	2.483	-60.7	-17.517	Pass
3DH5-Hopping	2402	2400	2.483	-47.45	-17.517	Pass
3DH5	2480	2483.5	0.639	-58.53	-19.361	Pass
3DH5	2480	2500	0.639	-60.22	-19.361	Pass
3DH5-Hopping	2480	2483.5	1.881	-60.03	-18.119	Pass
3DH5-Hopping	2480	2500	1.881	-56.99	-18.119	Pass

Test Graph

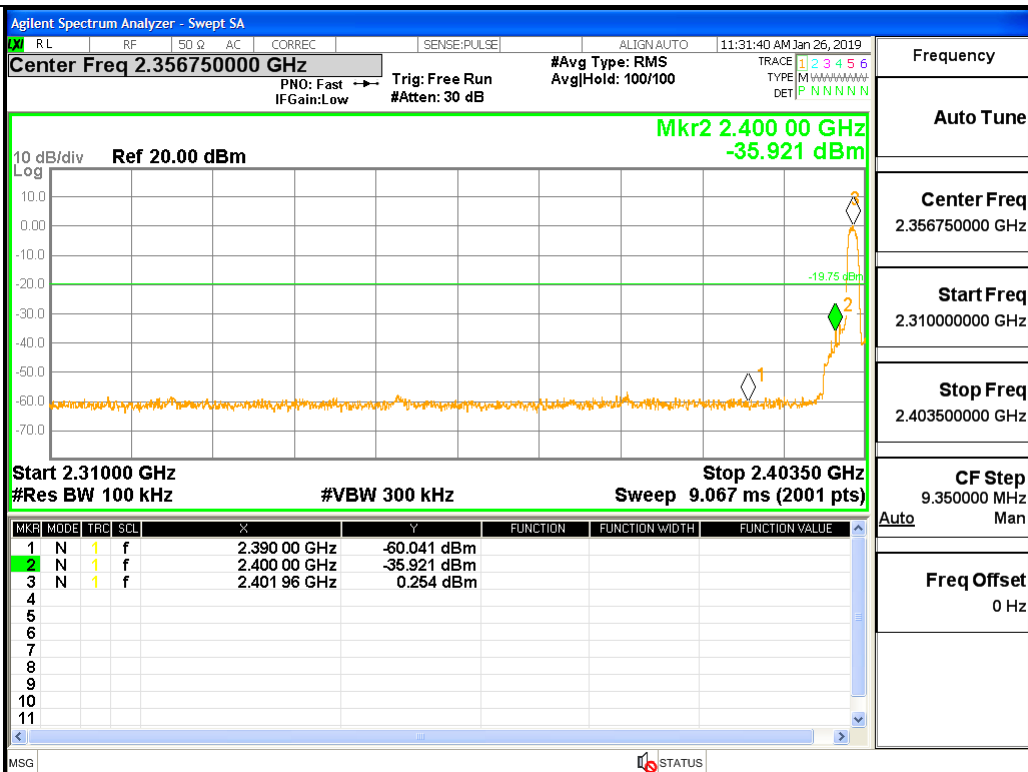




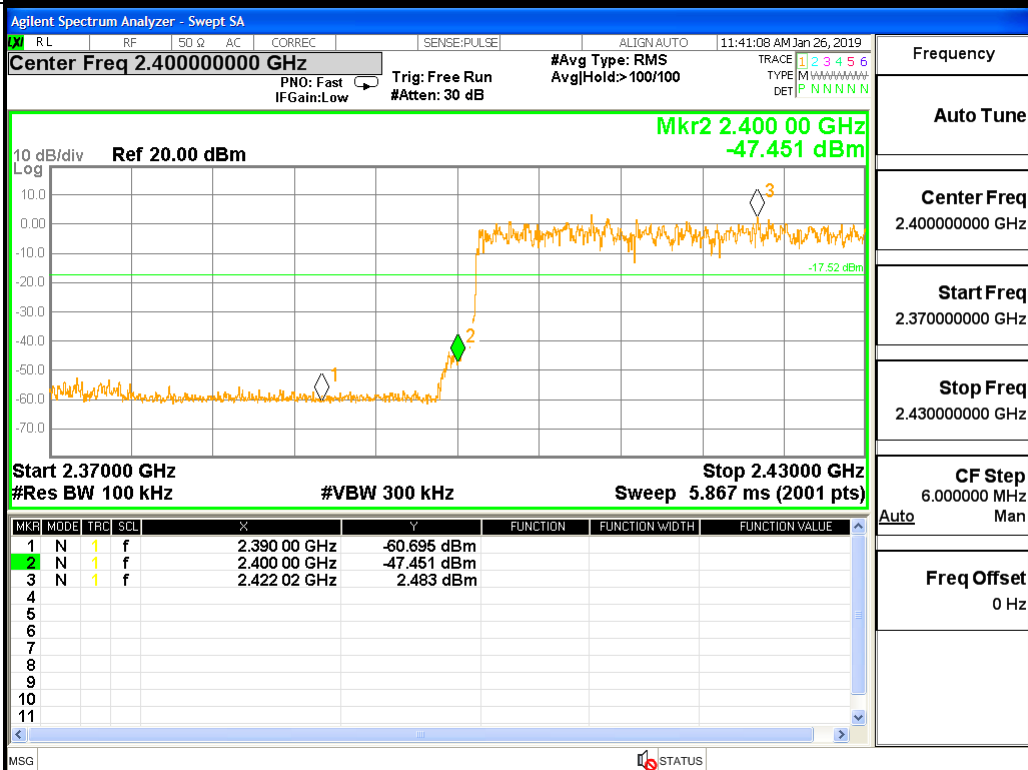


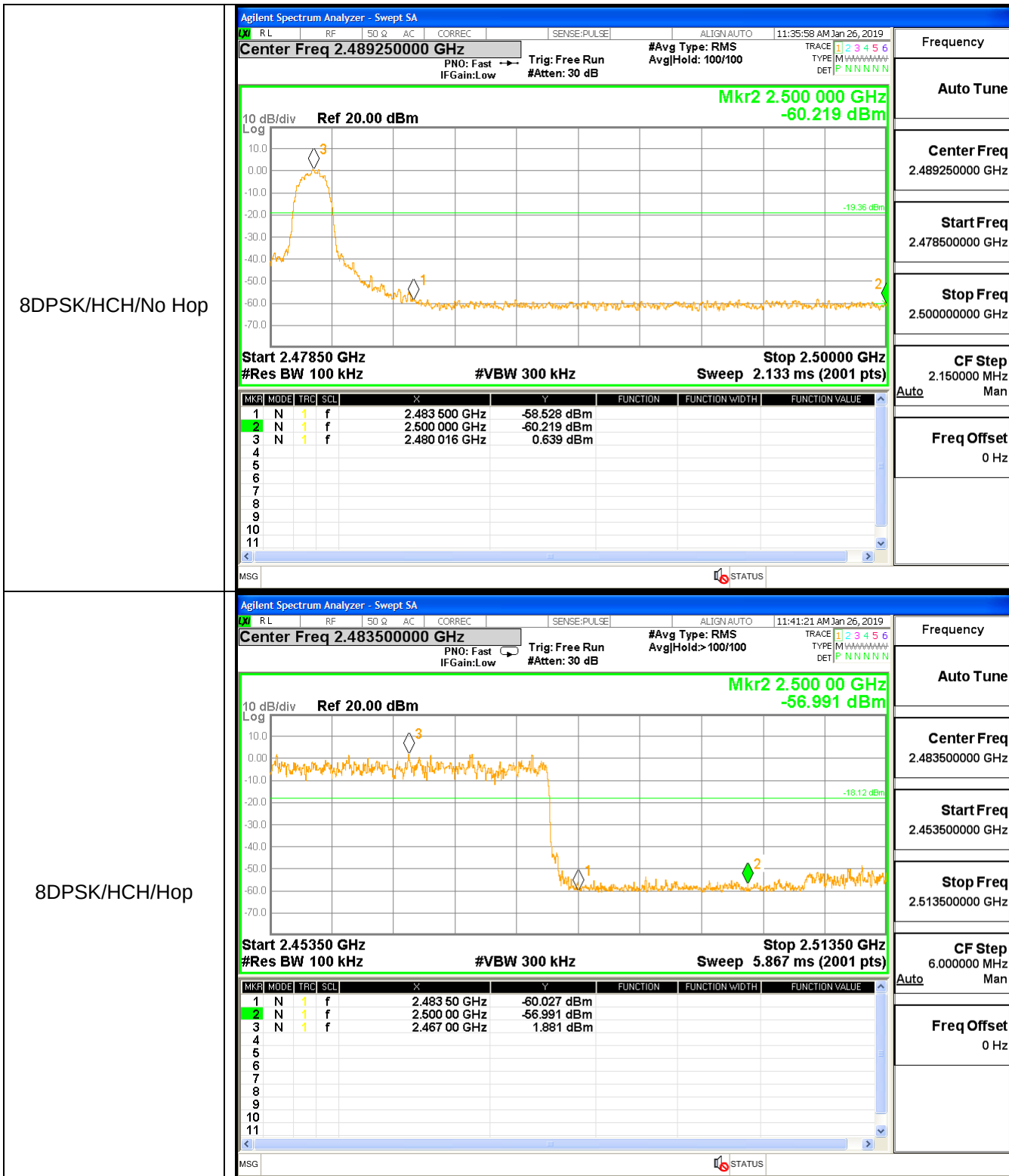


8DPSK/LCH/No Hop

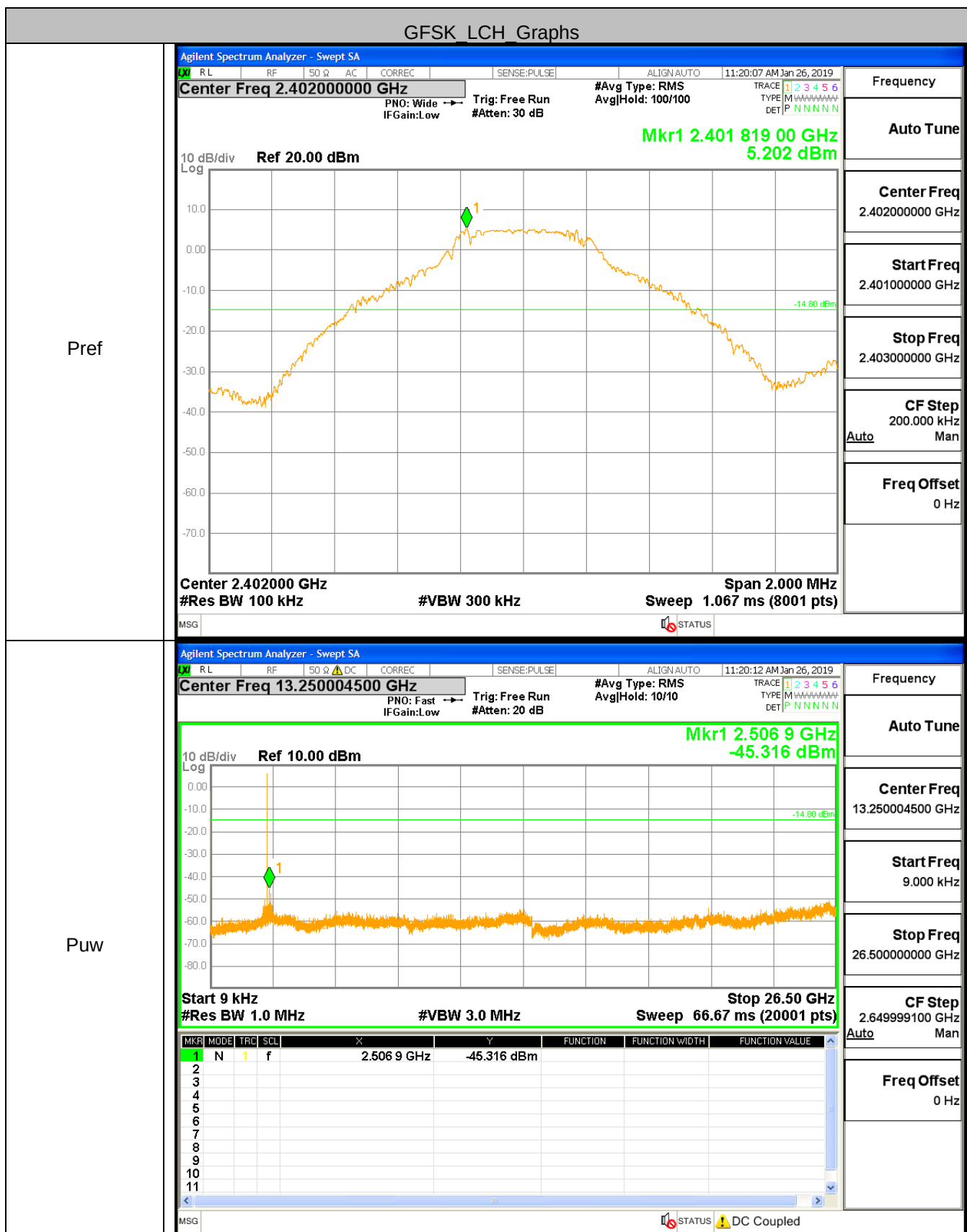


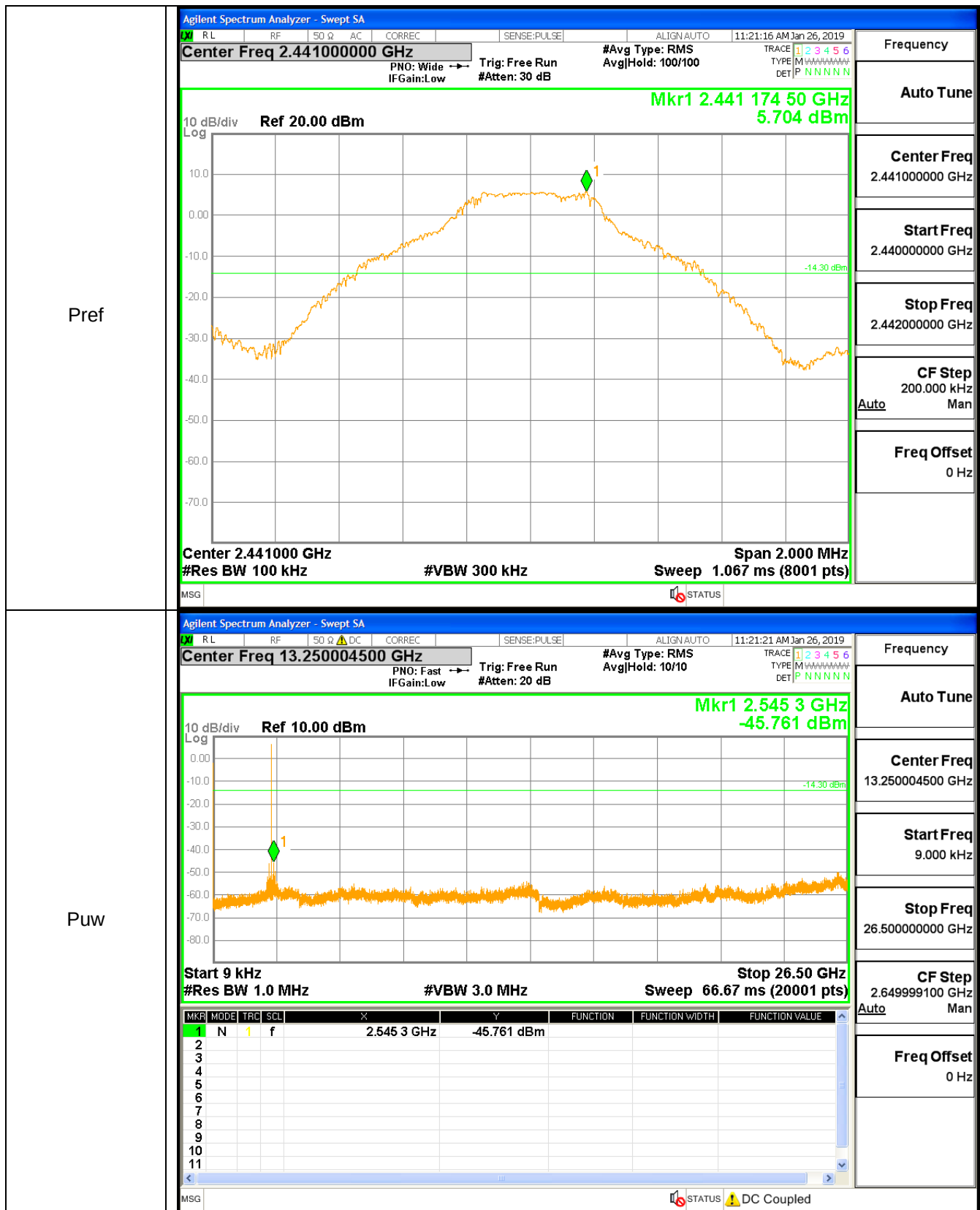
8DPSK/LCH/Hop





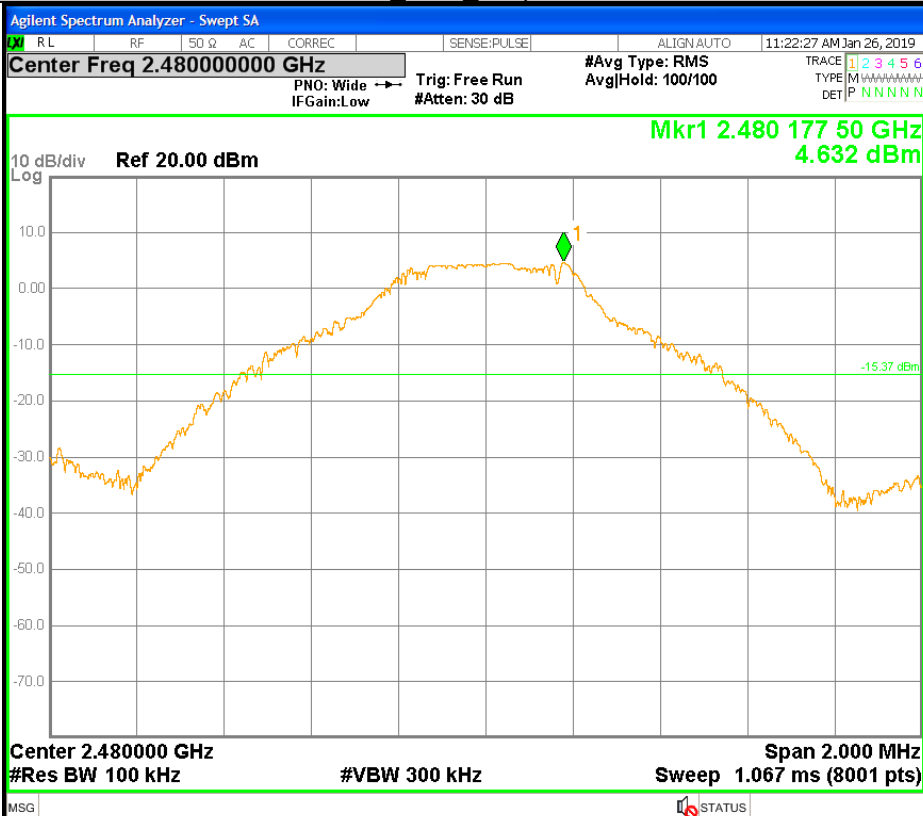
A.7 RF Conducted Spurious Emissions Test Graph



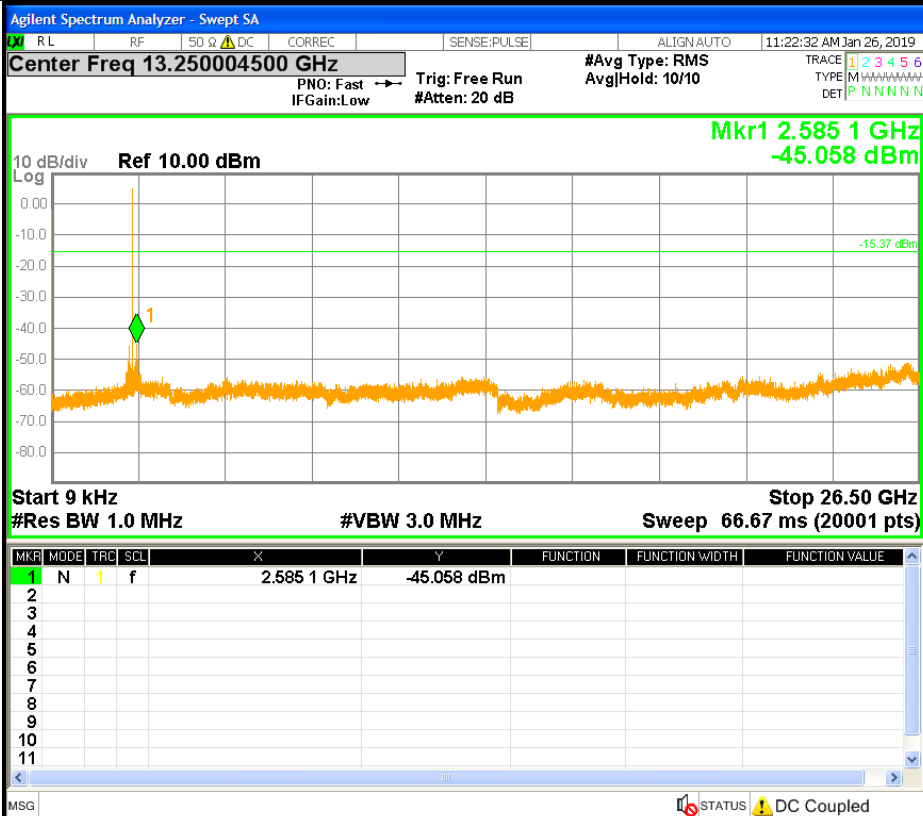


GFSK HCH Graphs

Pref

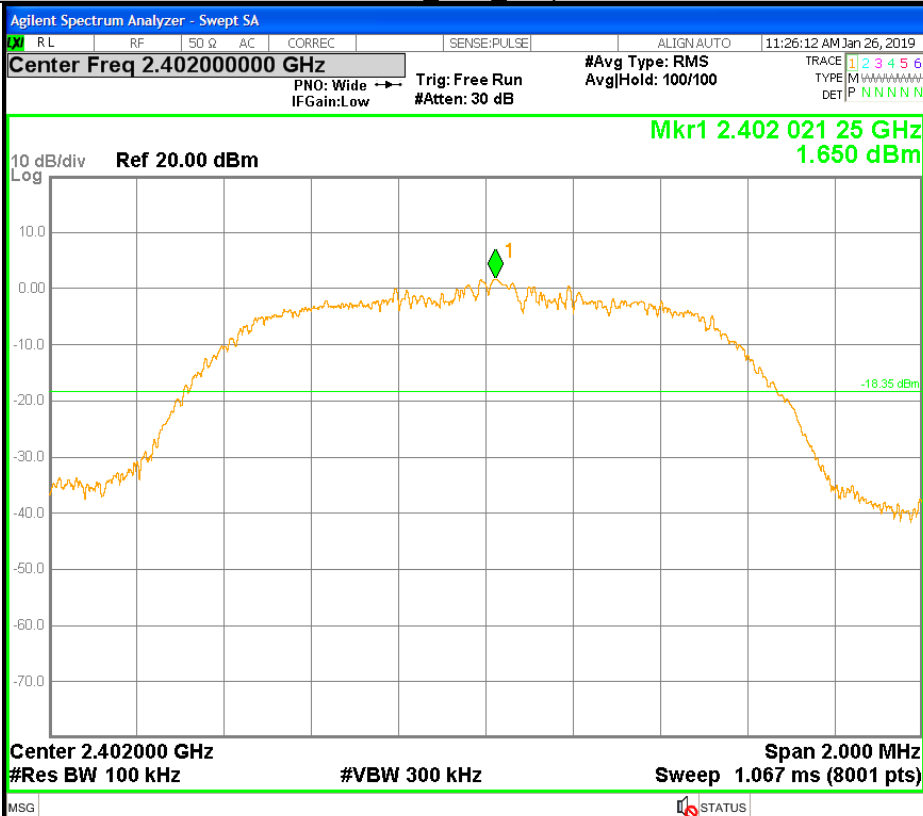


Puw

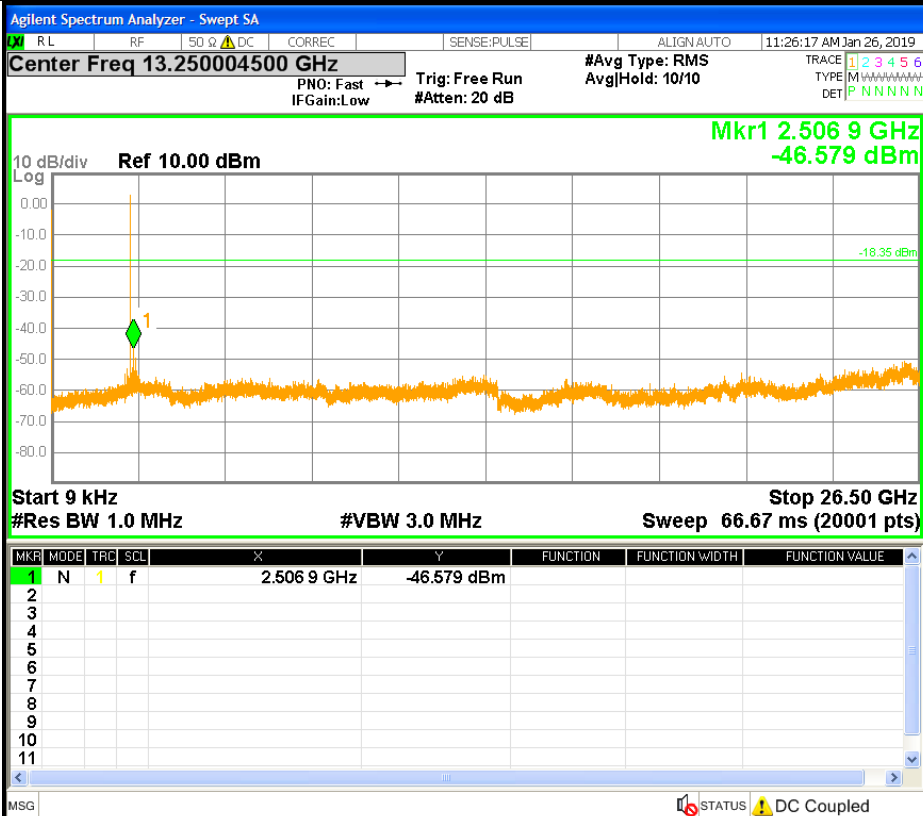


$\pi/4$ DQPSK LCH Graphs

Pref

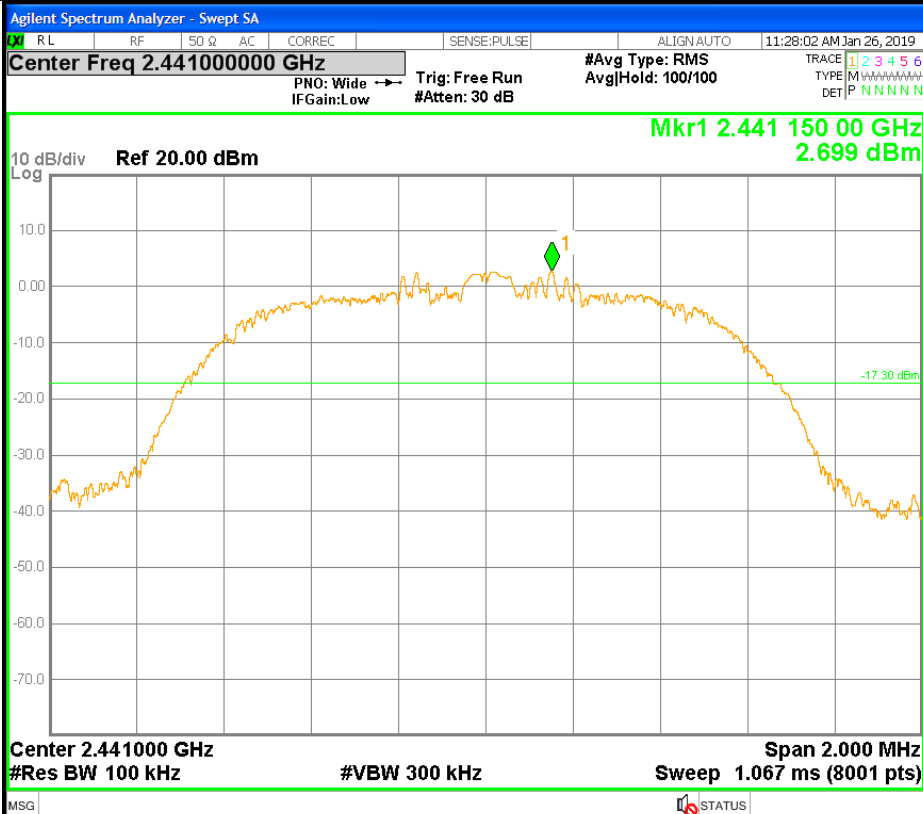


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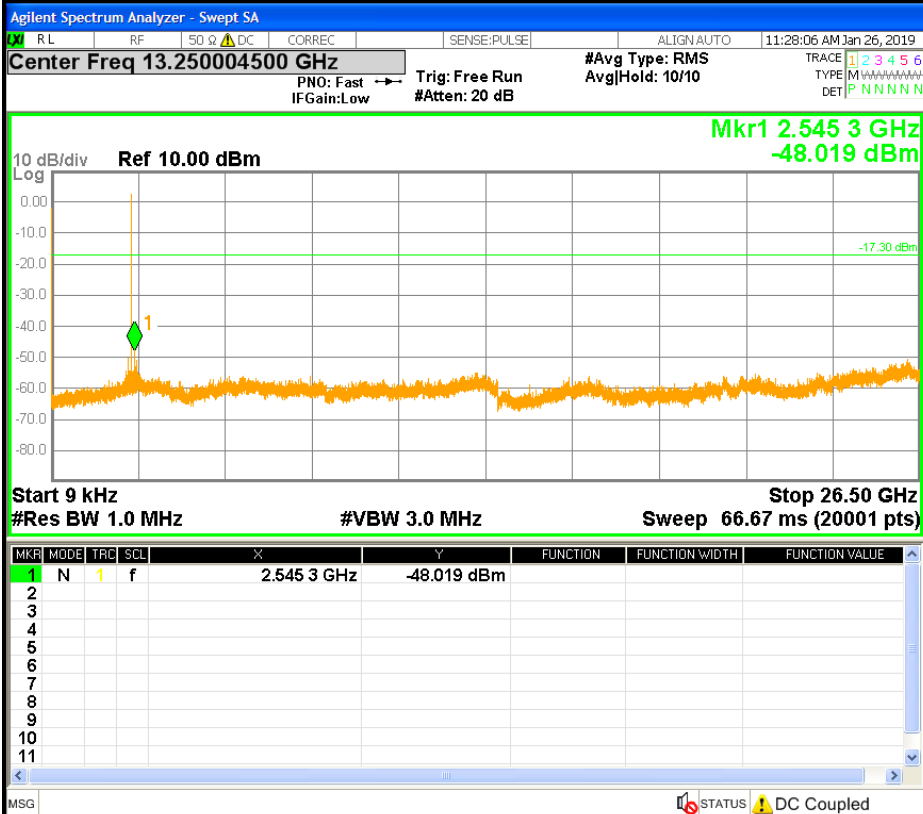


$\pi/4$ DQPSK MCH Graphs

Pref

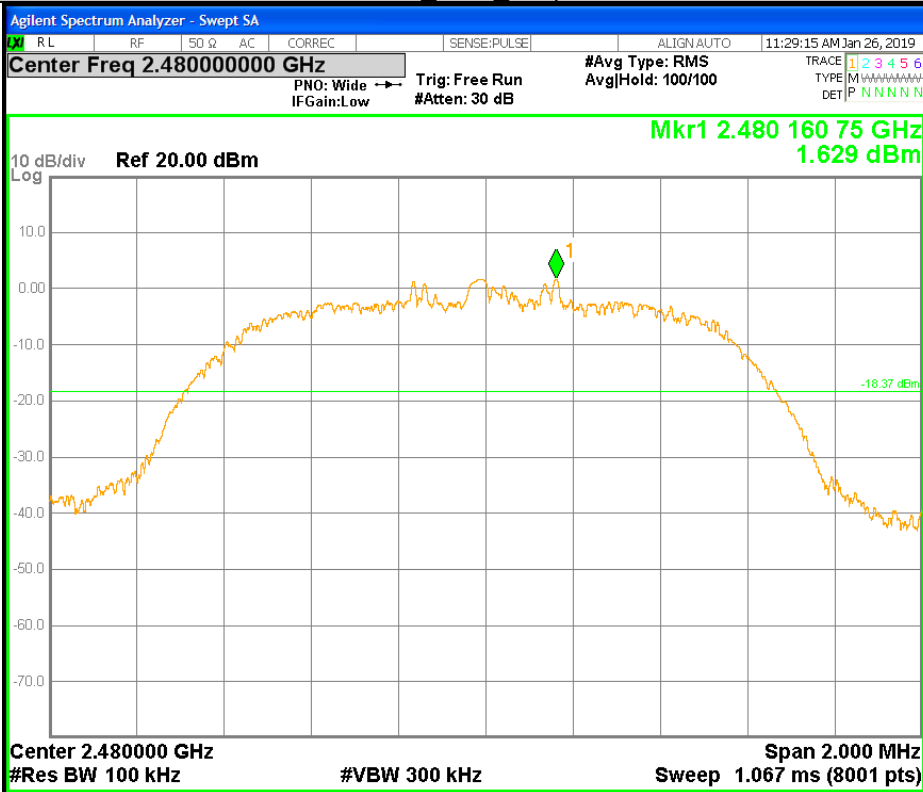


Puw

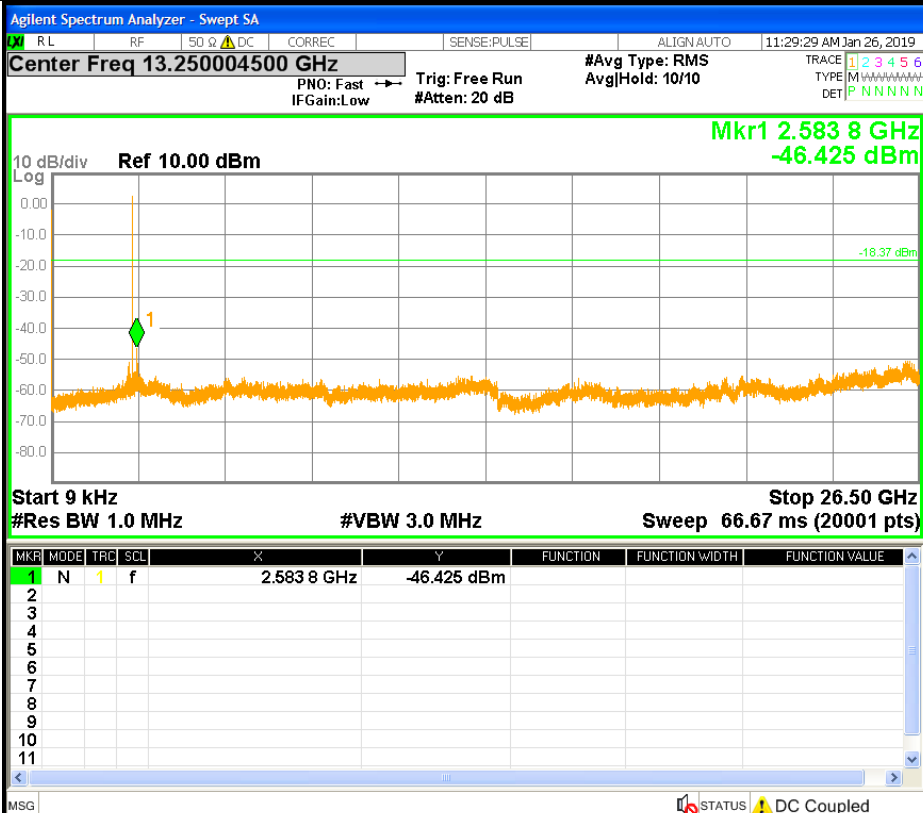


$\pi/4$ DQPSK HCH Graphs

Pref

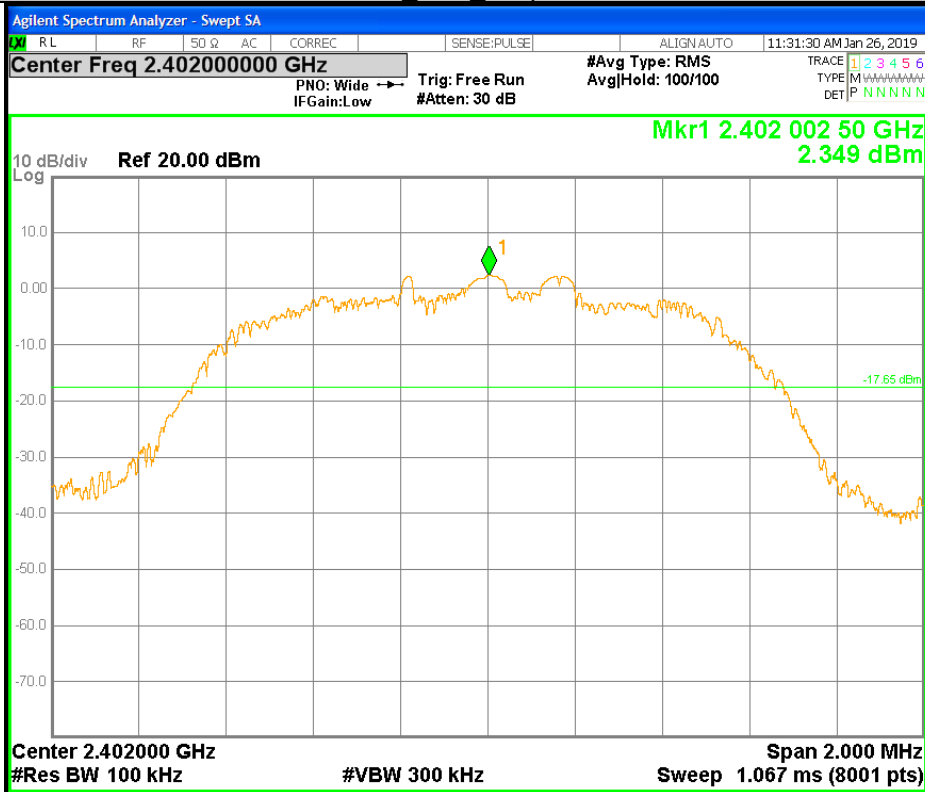


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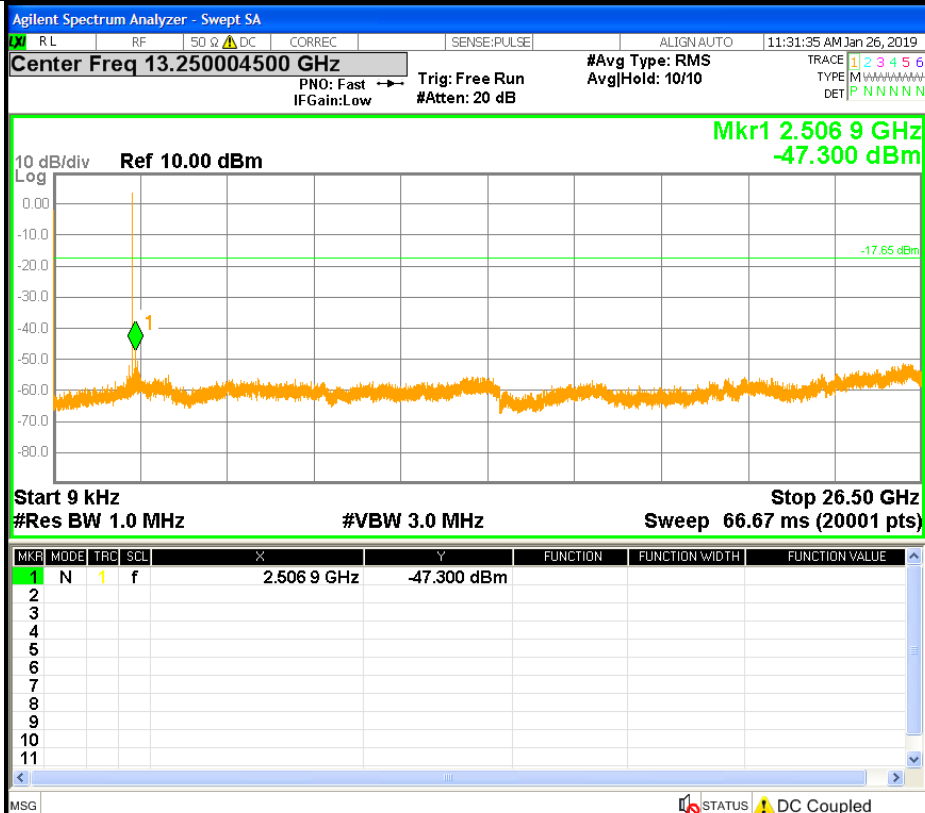


8DPSK LCH Graphs

Pref

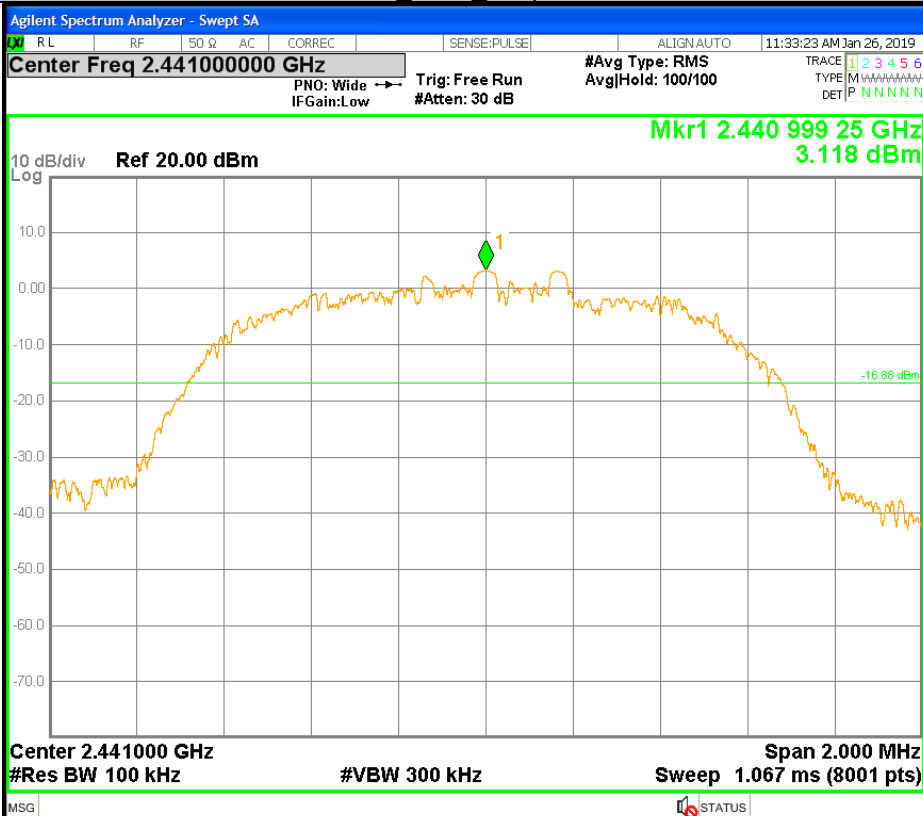


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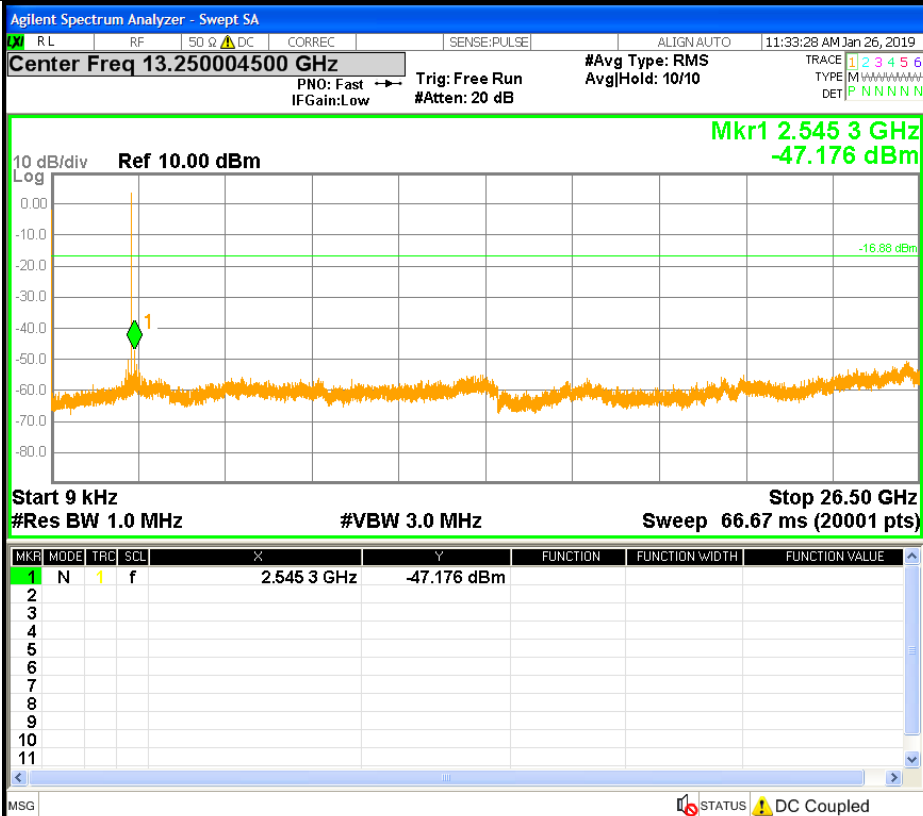


8DPSK MCH Graphs

Pref

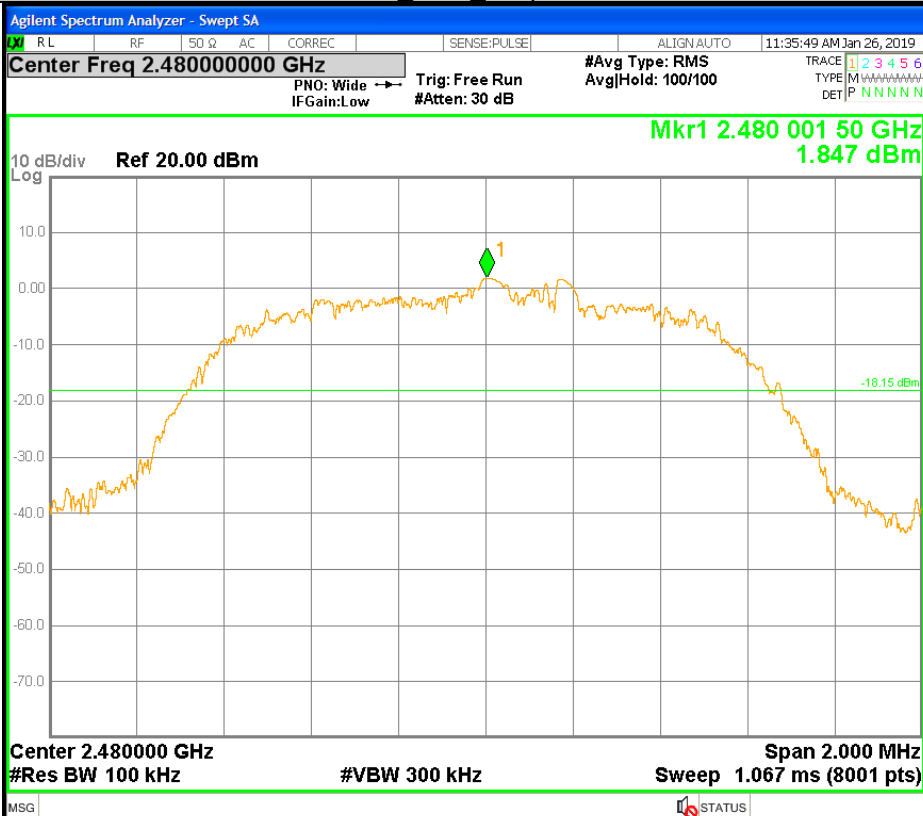


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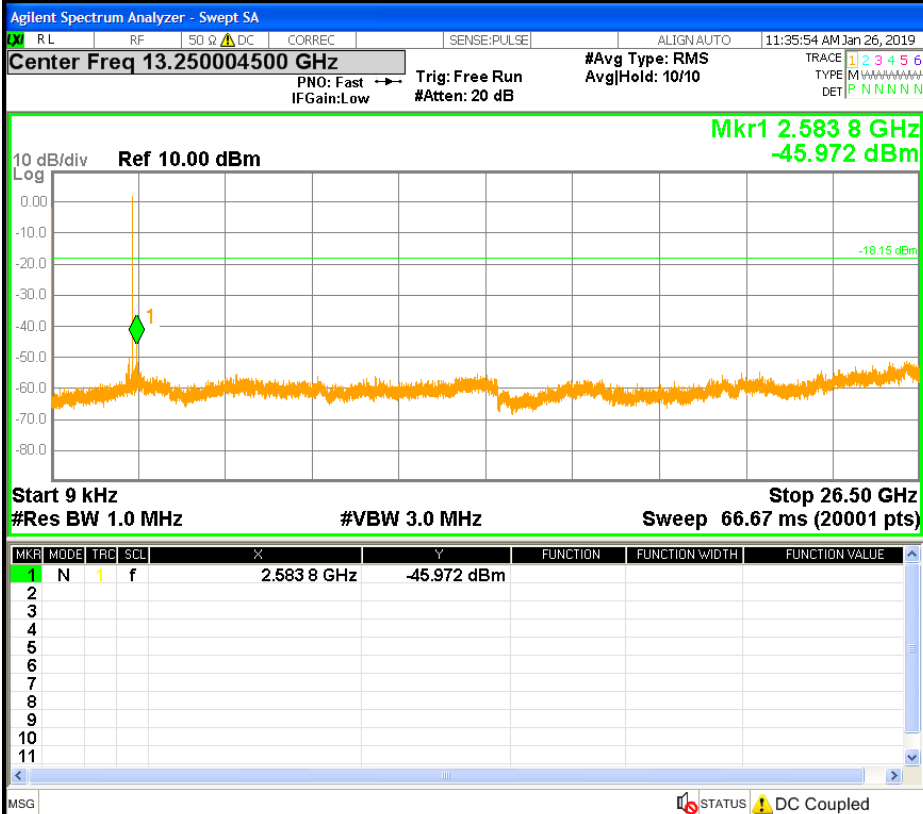


8DPSK HCH Graphs

Pref



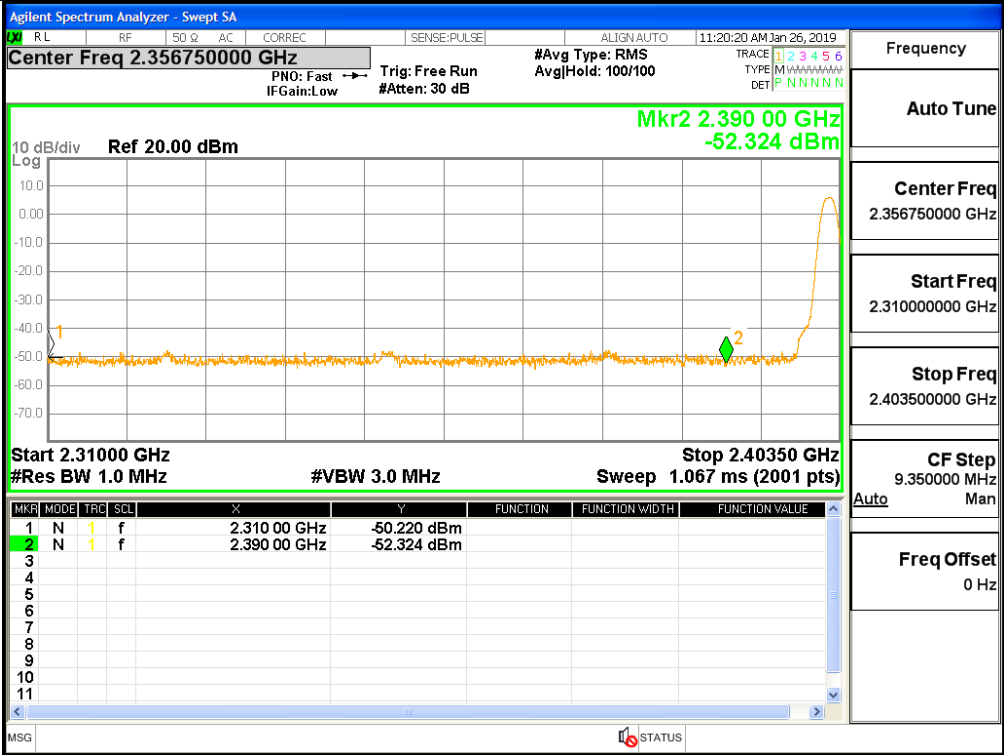
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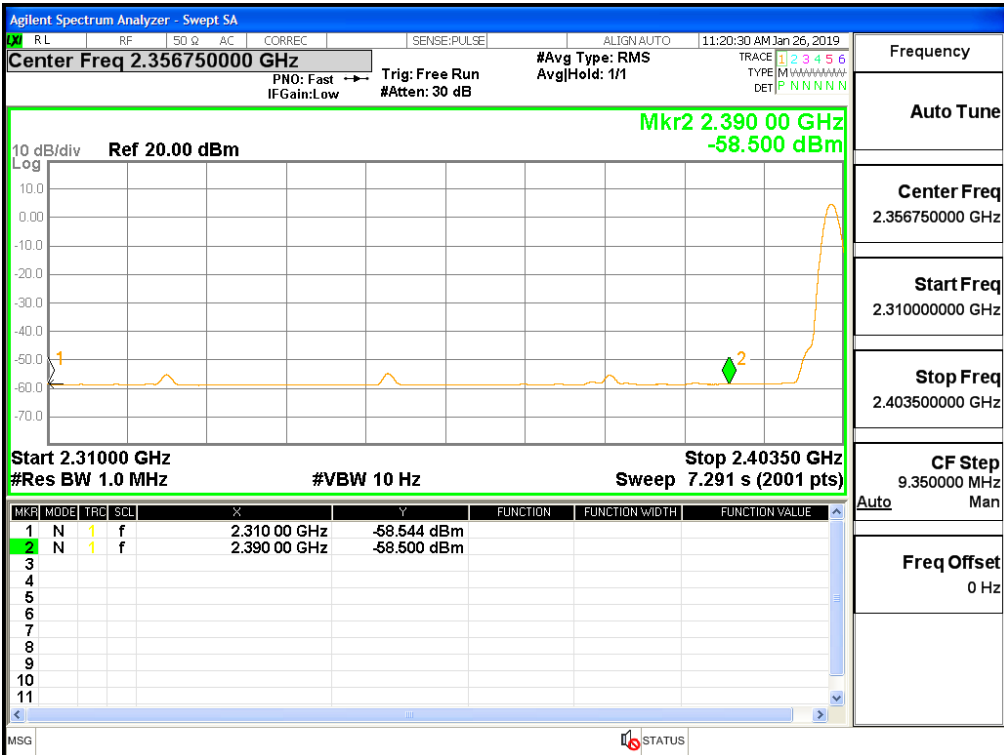
A.8 Restrict-band band-edge measurements

Type	Carrier Frequency (MHz)	Frequency(MHz)	Gain	Ground Factor	Peak Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Average Value(dBm)	E [dBuV/m]	Limit [dBuV/m]	Conclusion
1DH5	2402	2310	2.00	0.00	-50.22	46.98	74	-58.54	38.66	54	Pass
1DH5	2402	2390	2.00	0.00	-52.32	44.88	74	-58.5	38.7	54	Pass
1DH5	2480	2483.5	2.00	0.00	-45.14	52.06	74	-50.5	46.7	54	Pass
1DH5	2480	2500	2.00	0.00	-50.86	46.34	74	-57.98	39.22	54	Pass
2DH5	2402	2310	2.00	0.00	-51.74	45.46	74	-58.78	38.42	54	Pass
2DH5	2402	2390	2.00	0.00	-51.16	46.04	74	-58.55	38.65	54	Pass
2DH5	2480	2483.5	2.00	0.00	-48.8	48.4	74	-54.28	42.92	54	Pass
2DH5	2480	2500	2.00	0.00	-50.38	46.82	74	-58.02	39.18	54	Pass
3DH5	2402	2310	2.00	0.00	-53.23	43.97	74	-58.81	38.39	54	Pass
3DH5	2402	2390	2.00	0.00	-51.51	45.69	74	-58.57	38.63	54	Pass
3DH5	2480	2483.5	2.00	0.00	-47.58	49.62	74	-54.16	43.04	54	Pass
3DH5	2480	2500	2.00	0.00	-50.82	46.38	74	-58.05	39.15	54	Pass

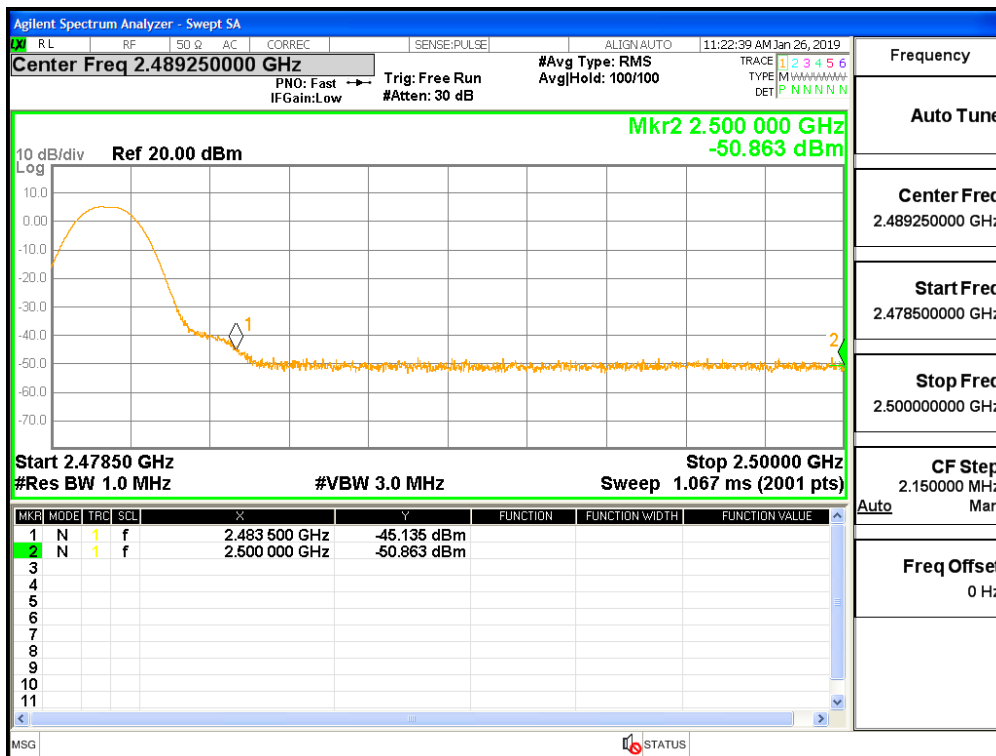
Restrict-band band-edge measurements_2402_PEAK_DH5



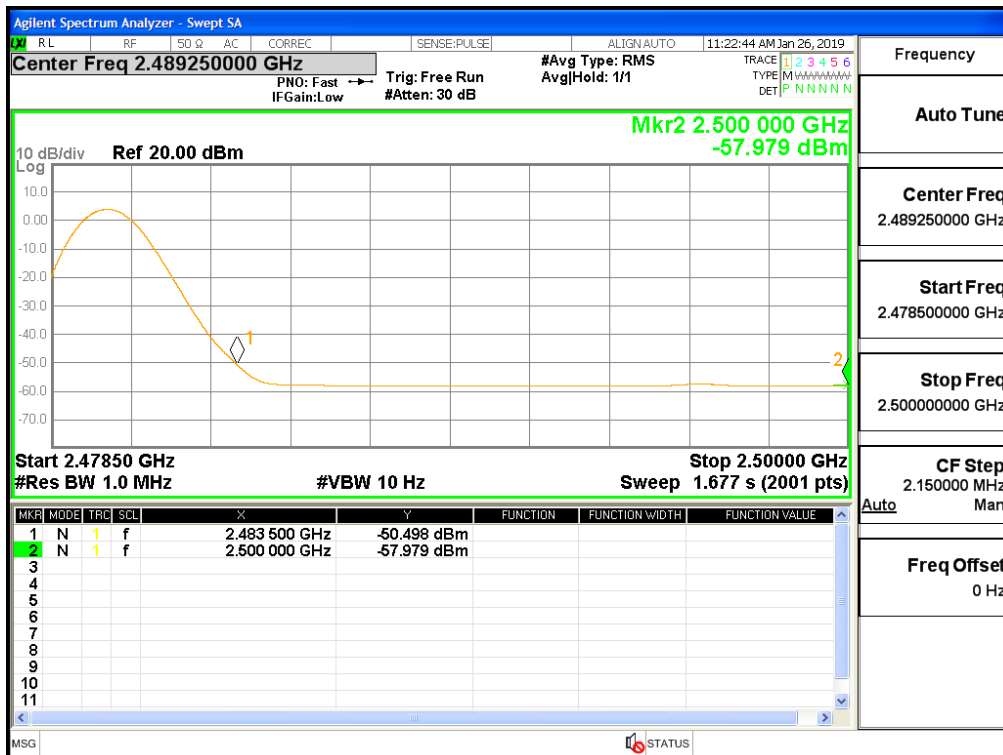
Restrict-band band-edge measurements_2402_AV_DH5



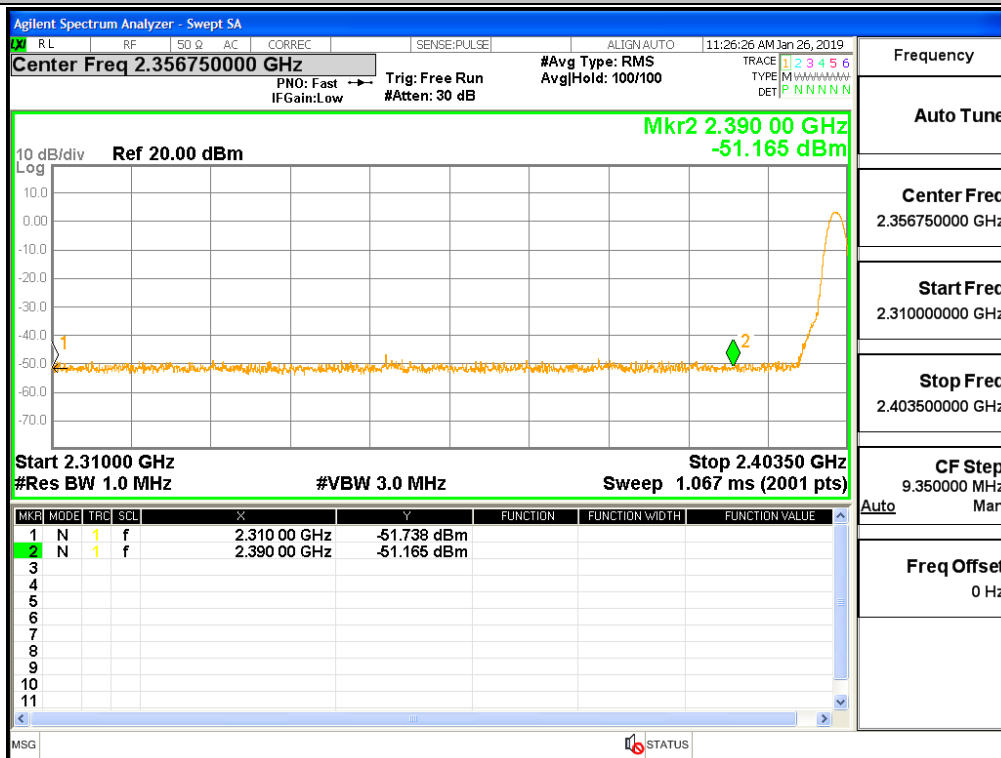
Restrict-band band-edge measurements_2480_PEAK_DH5



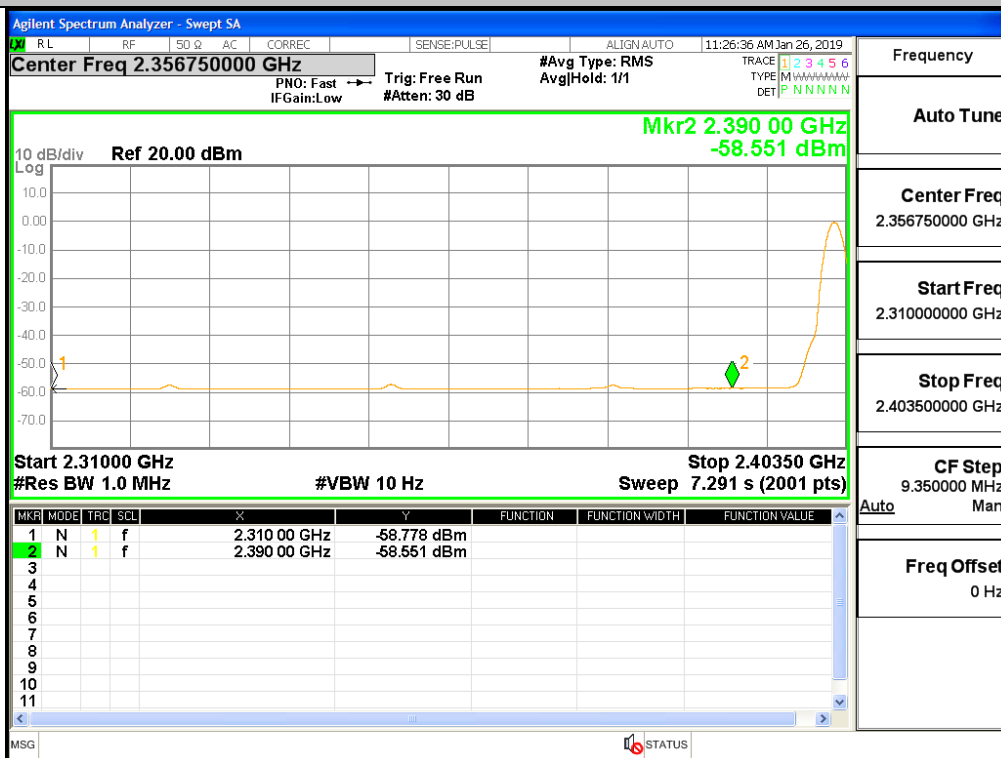
Restrict-band band-edge measurements_2480_AV_DH5



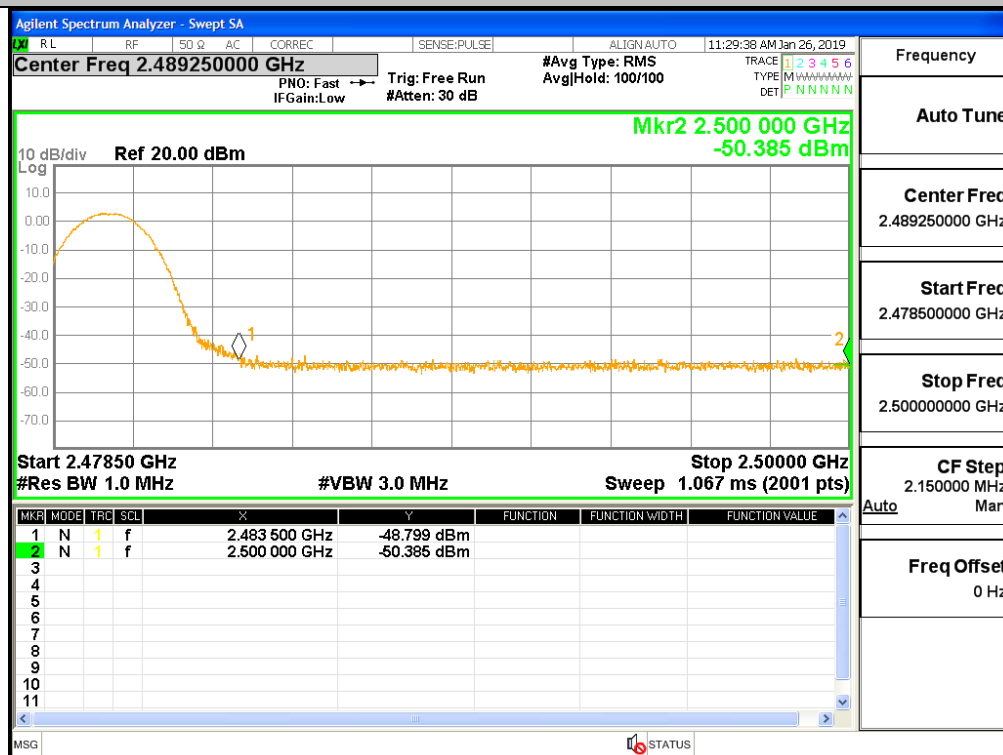
Restrict-band band-edge measurements_2402_PEAK_2DH5



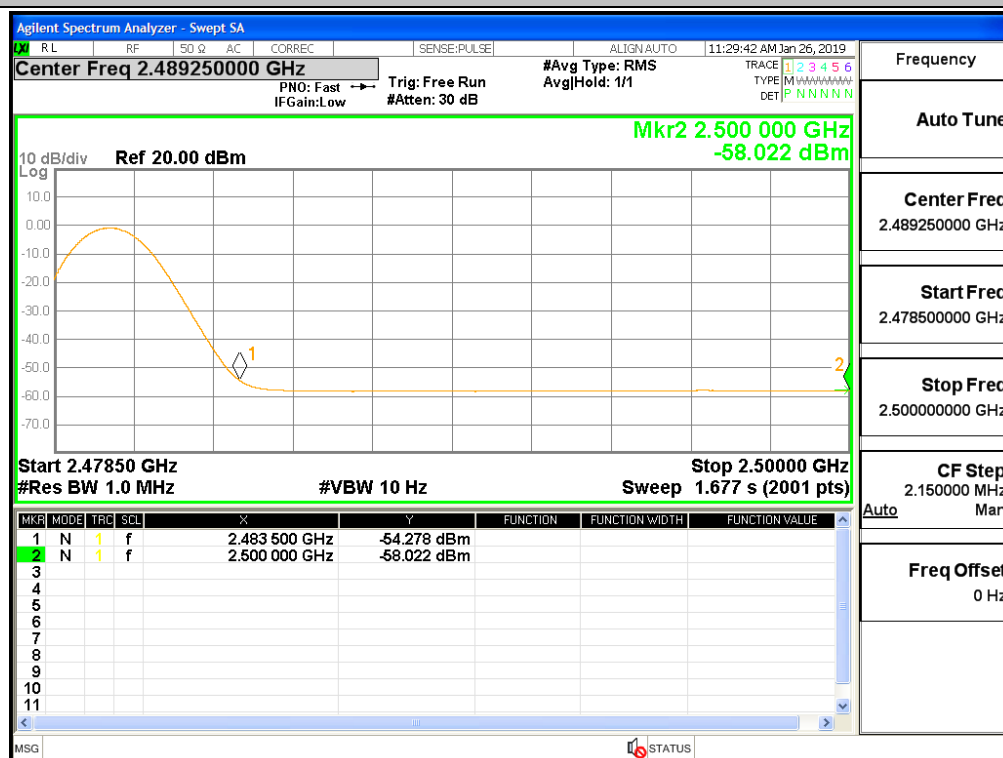
Restrict-band band-edge measurements_2402_AV_2DH5



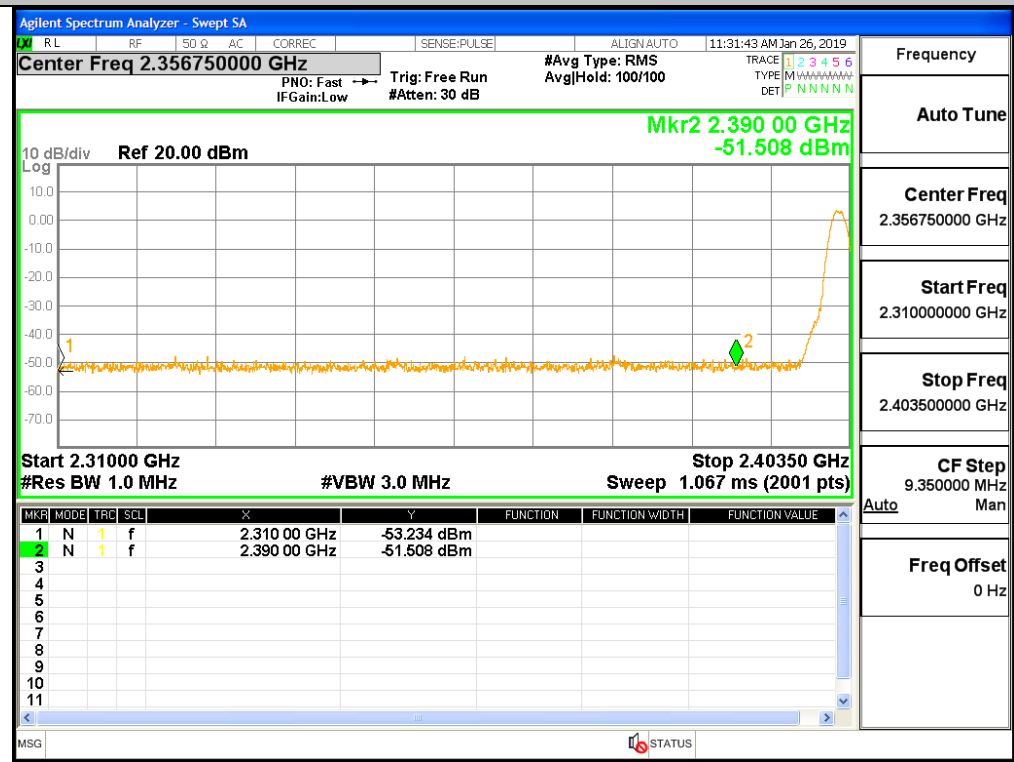
Restrict-band band-edge measurements 2480 PEAK 2DH5



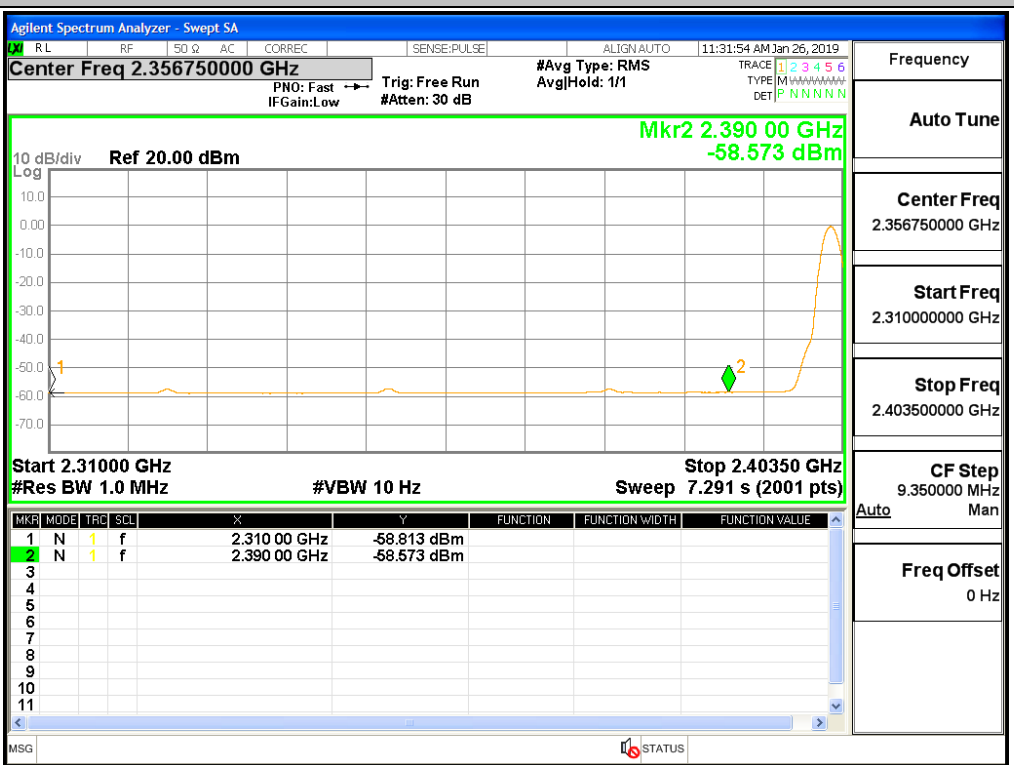
Restrict-band band-edge measurements 2480 AV 2DH5



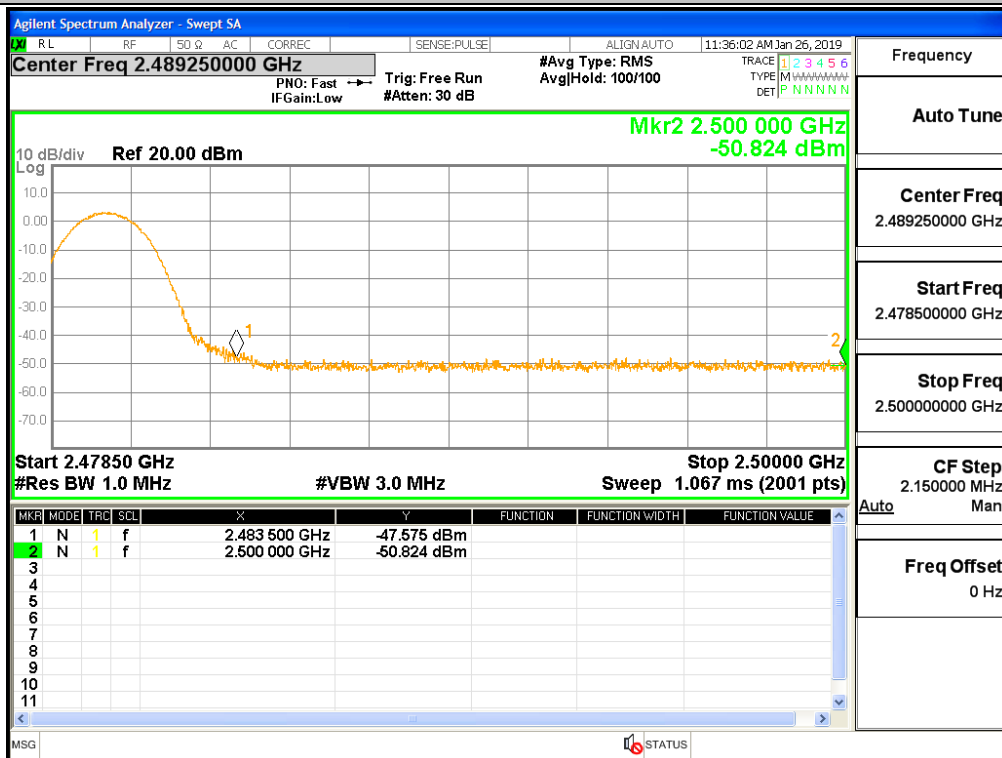
Restrict-band band-edge measurements_2402_PEAK_3DH5



Restrict-band band-edge measurements_2402_AV_3DH5



Restrict-band band-edge measurements_2480_PEAK_3DH5



Restrict-band band-edge measurements_2480_AV_3DH5

