

Case No. : <u>GTS20231208004-1-14</u>	
Ambient Condition: <u>23</u> °C, <u>48</u> %RH	
According Standard: ■Part15C	
Test Date: <u>2024.1.3</u>	Test Engineer: <u>Evan ouyang</u>

Appendix A.1: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	1.002	2401.487	2402.489	---	---
		2441	1.014	2440.484	2441.498	---	---
		2480	1.017	2479.484	2480.501	---	---
2DH1	Ant1	2402	1.245	2401.379	2402.624	---	---
		2441	1.263	2440.370	2441.633	---	---
		2480	1.293	2479.340	2480.633	---	---
3DH1	Ant1	2402	1.248	2401.376	2402.624	---	---
		2441	1.224	2440.400	2441.624	---	---
		2480	1.254	2479.373	2480.627	---	---

Test Graphs

DH1_Ant1_2402



DH1_Ant1_2441



DH1_Ant1_2480



2DH1_Ant1_2402



2DH1_Ant1_2441



2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



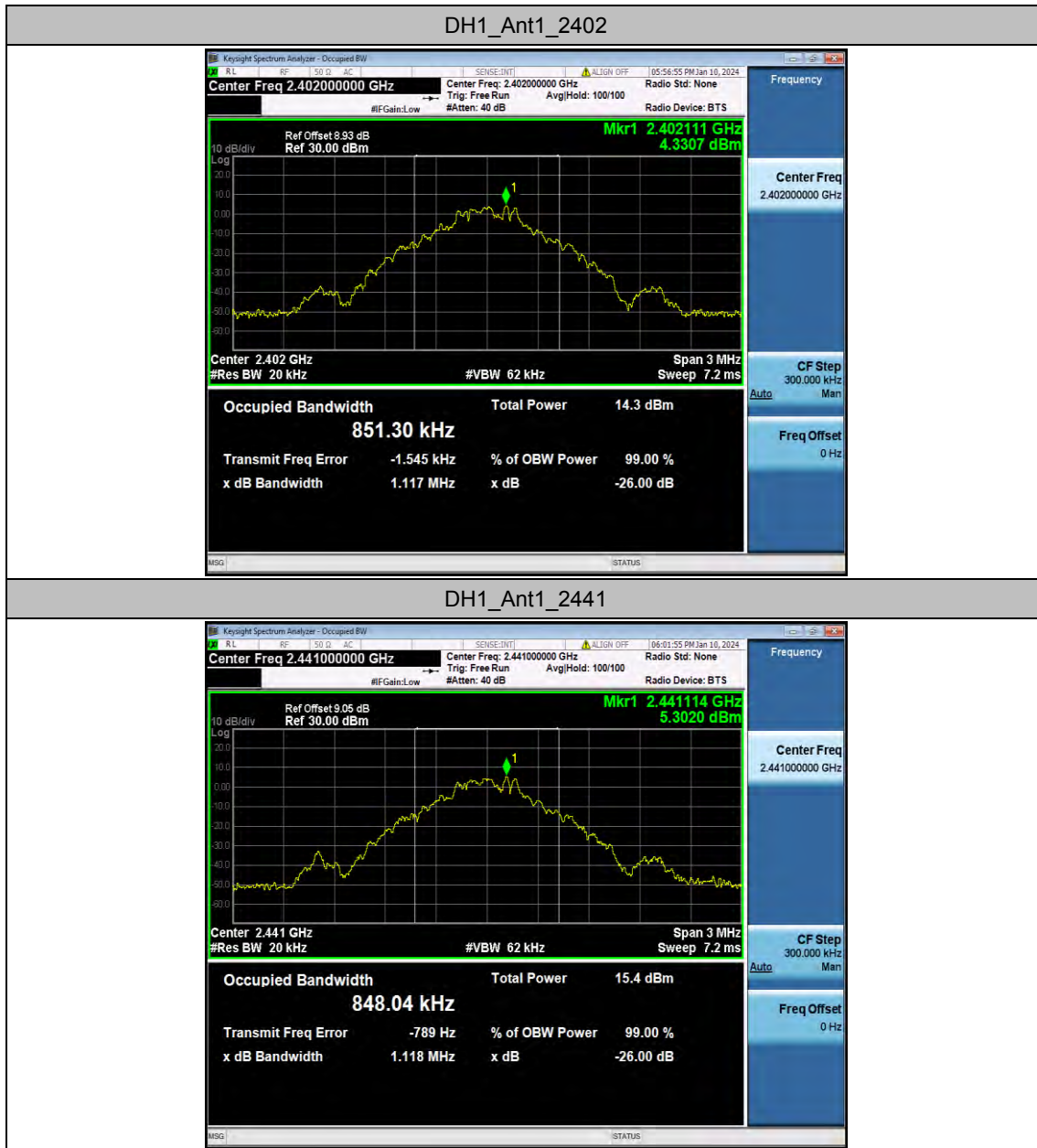


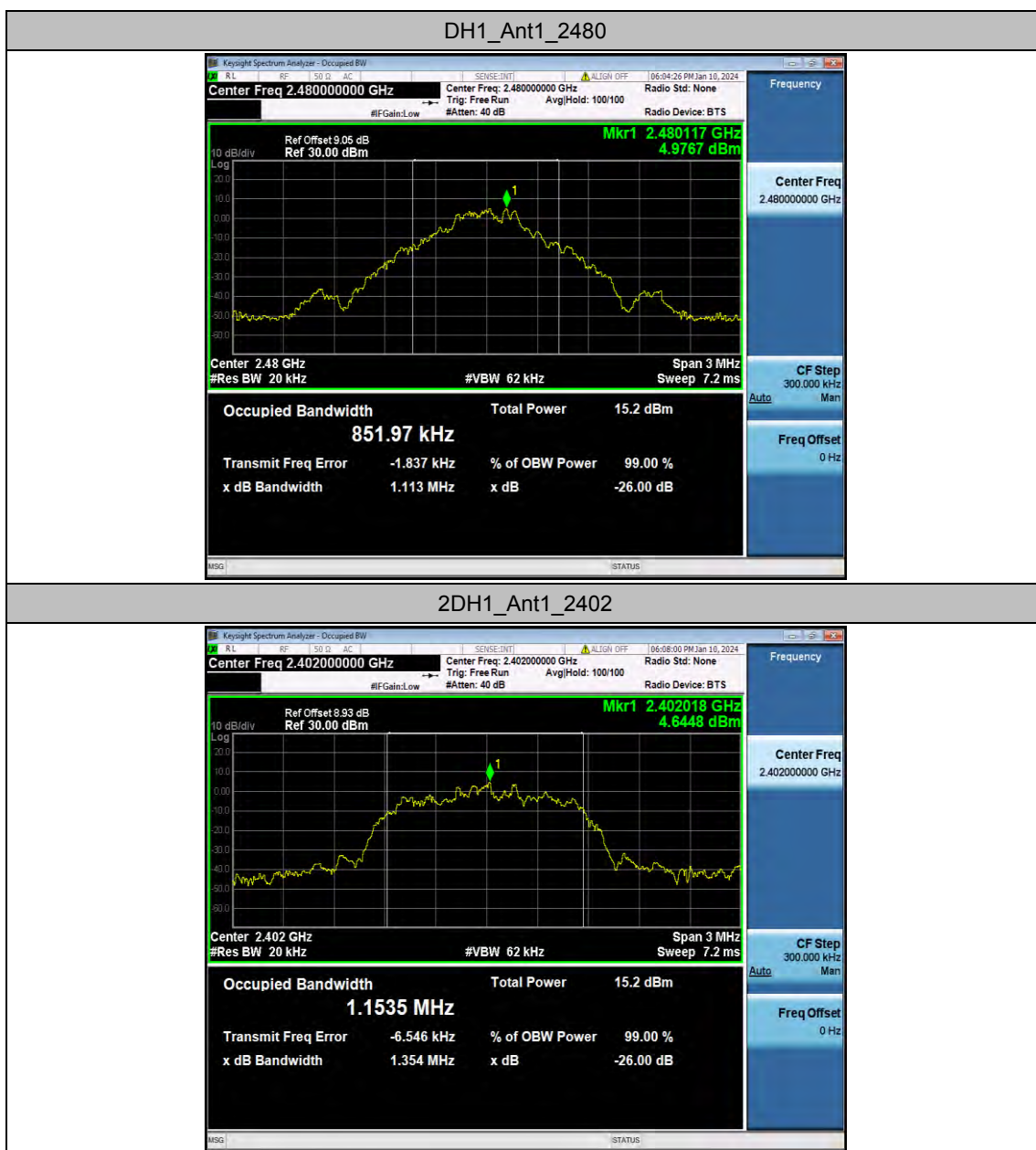
Appendix A.2: Occupied Channel Bandwidth

Test Result

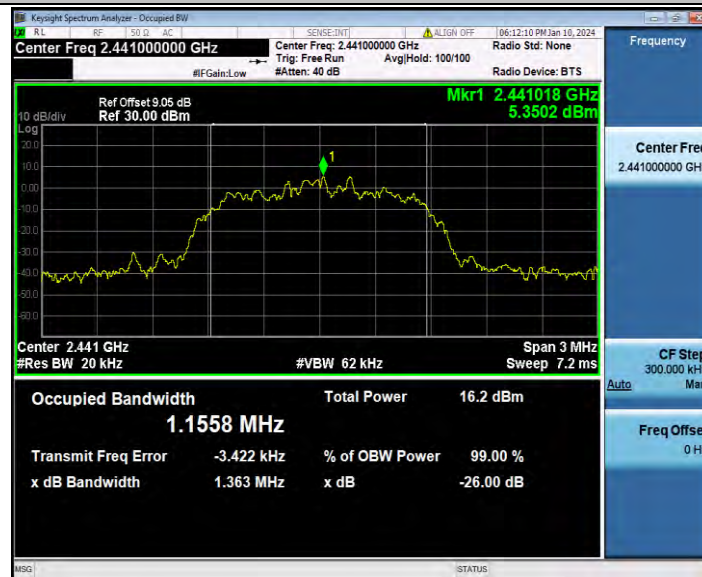
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.85130	2401.5728	2402.4241	---	---
		2441	0.84804	2440.5752	2441.4232	---	---
		2480	0.85197	2479.5722	2480.4241	---	---
2DH1	Ant1	2402	1.1535	2401.4167	2402.5702	---	---
		2441	1.1558	2440.4187	2441.5745	---	---
		2480	1.1571	2479.4145	2480.5716	---	---
3DH1	Ant1	2402	1.1406	2401.4360	2402.5766	---	---
		2441	1.1428	2440.4343	2441.5771	---	---
		2480	1.1501	2479.4315	2480.5816	---	---

Test Graphs





2DH1_Ant1_2441



2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441





Appendix A.3: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH1	Ant1	2402	8.59	≤20.97	PASS
		2441	9.63	≤20.97	PASS
		2480	9.30	≤20.97	PASS
2DH1	Ant1	2402	10.95	≤20.97	PASS
		2441	11.70	≤20.97	PASS
		2480	11.44	≤20.97	PASS
3DH1	Ant1	2402	11.97	≤20.97	PASS
		2441	12.19	≤20.97	PASS
		2480	12.08	≤20.97	PASS

Appendix A.4: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	0.99	≥ 0.678	PASS
		Hop_2441	0.982	≥ 0.678	PASS
		Hop_2480	0.99	≥ 0.678	PASS
2DH1	Ant1	Hop_2402	0.994	≥ 0.862	PASS
		Hop_2441	1.154	≥ 0.862	PASS
		Hop_2480	1.016	≥ 0.862	PASS
3DH1	Ant1	Hop_2402	0.992	≥ 0.836	PASS
		Hop_2441	1.158	≥ 0.836	PASS
		Hop_2480	1.034	≥ 0.836	PASS

Test Graphs

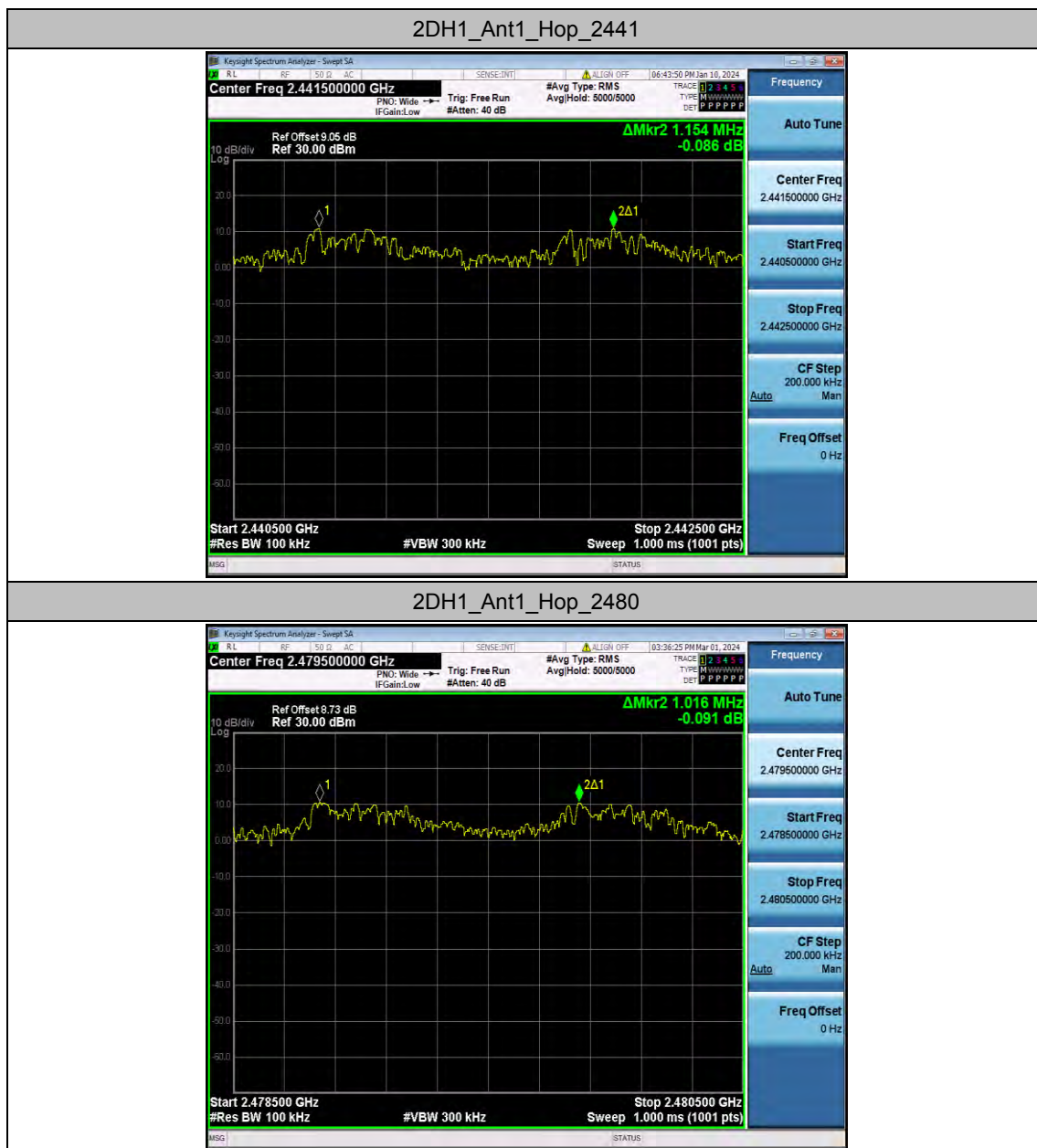
DH1_Ant1_Hop_2402



DH1_Ant1_Hop_2441







3DH1_Ant1_Hop_2402



3DH1_Ant1_Hop_2441



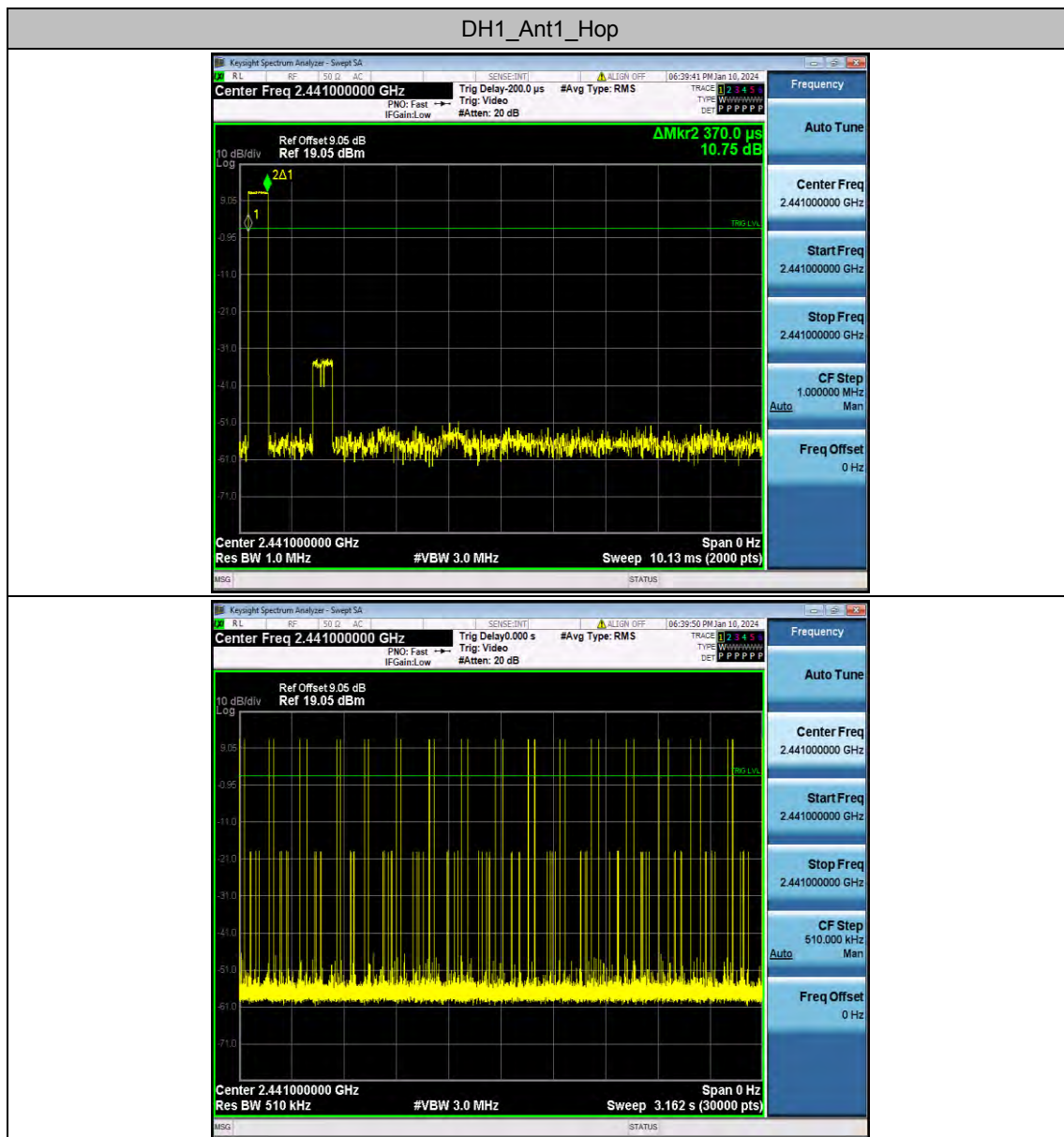


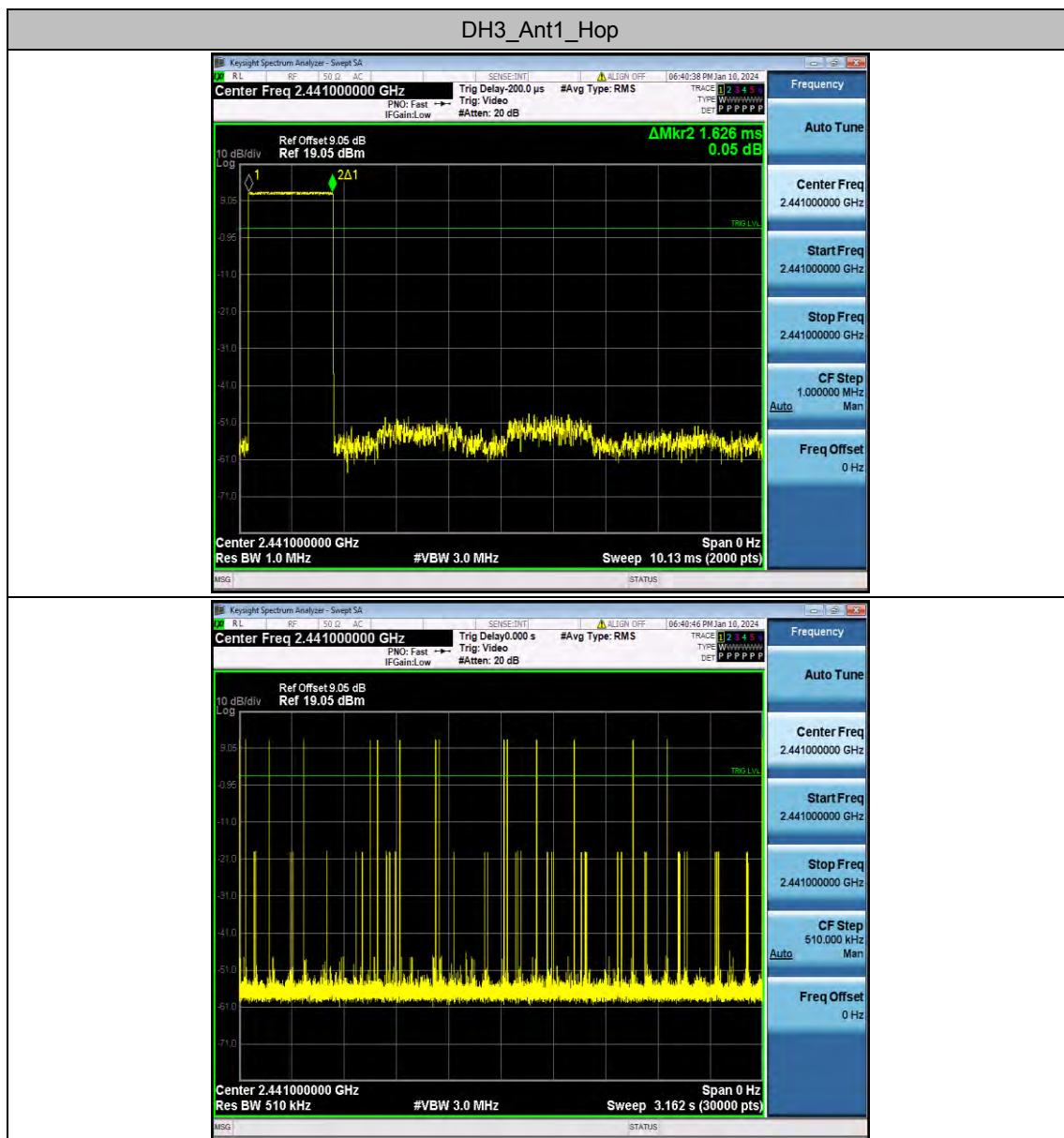
Appendix A.5: Time of occupancy

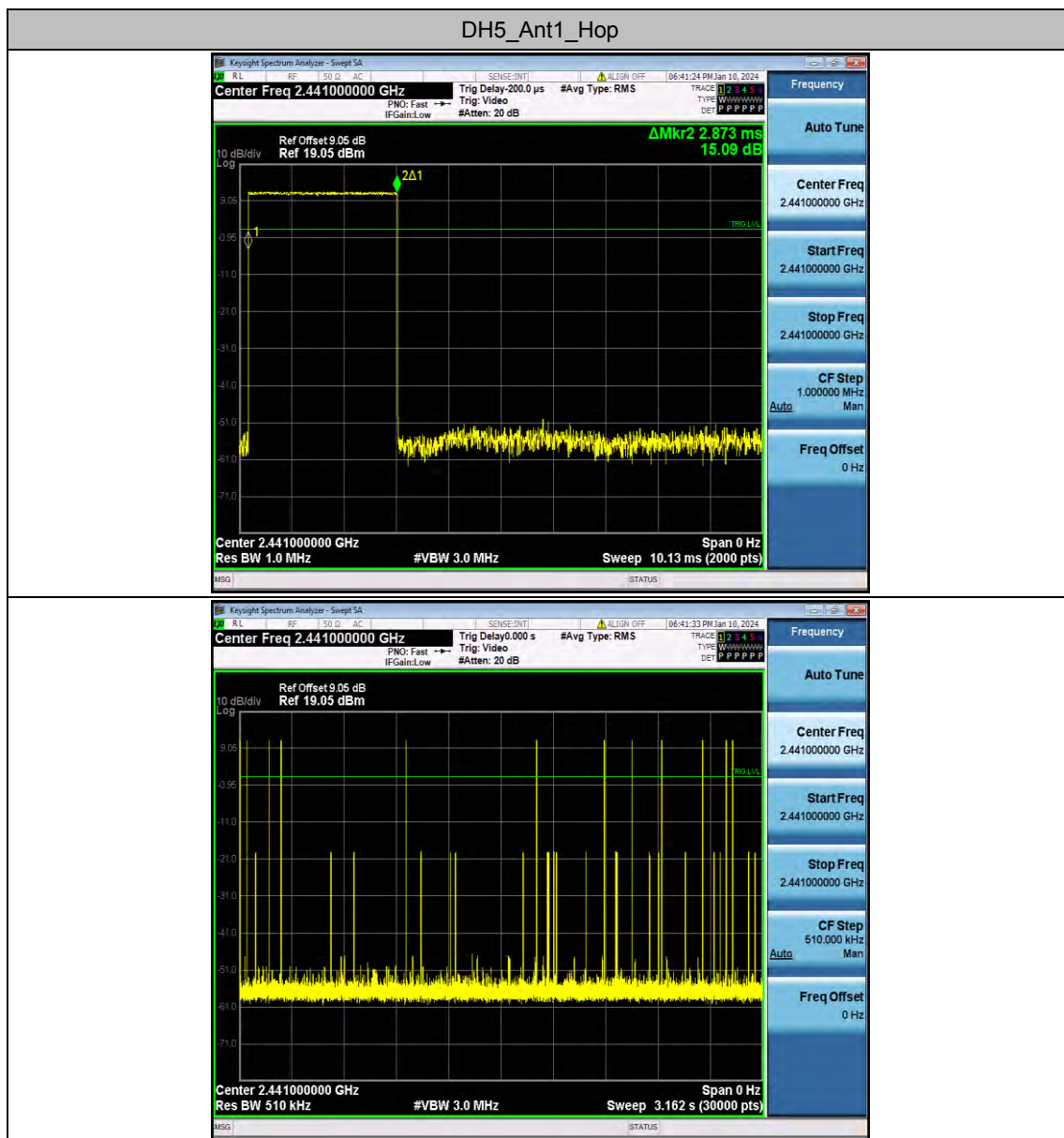
Test Result

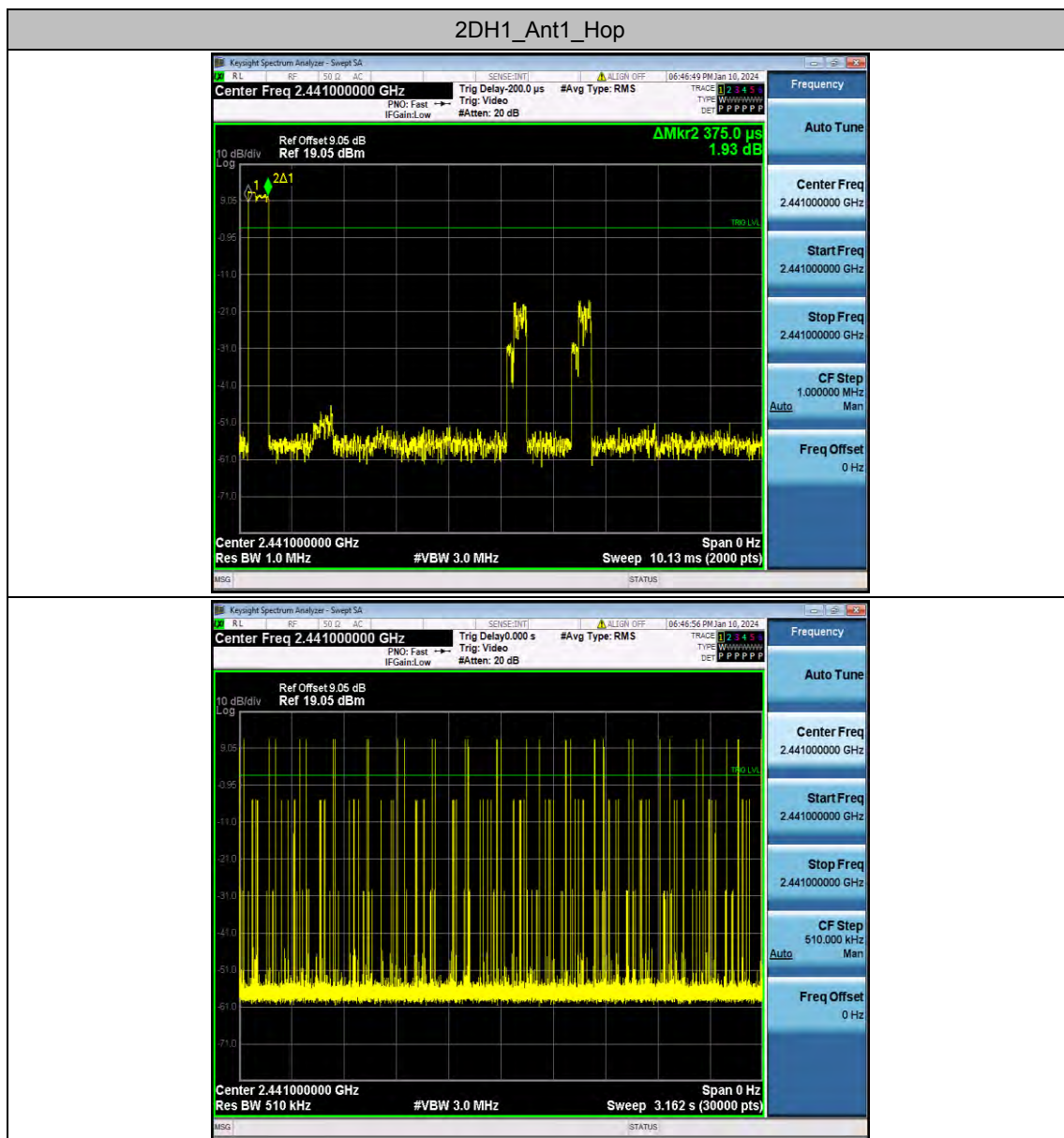
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.370	330	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.626	160	0.26	≤0.4	PASS
DH5	Ant1	Hop	2.873	120	0.345	≤0.4	PASS
2DH1	Ant1	Hop	0.375	330	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.626	160	0.26	≤0.4	PASS
2DH5	Ant1	Hop	2.878	120	0.345	≤0.4	PASS
3DH1	Ant1	Hop	0.375	330	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.626	180	0.293	≤0.4	PASS
3DH5	Ant1	Hop	2.878	120	0.345	≤0.4	PASS

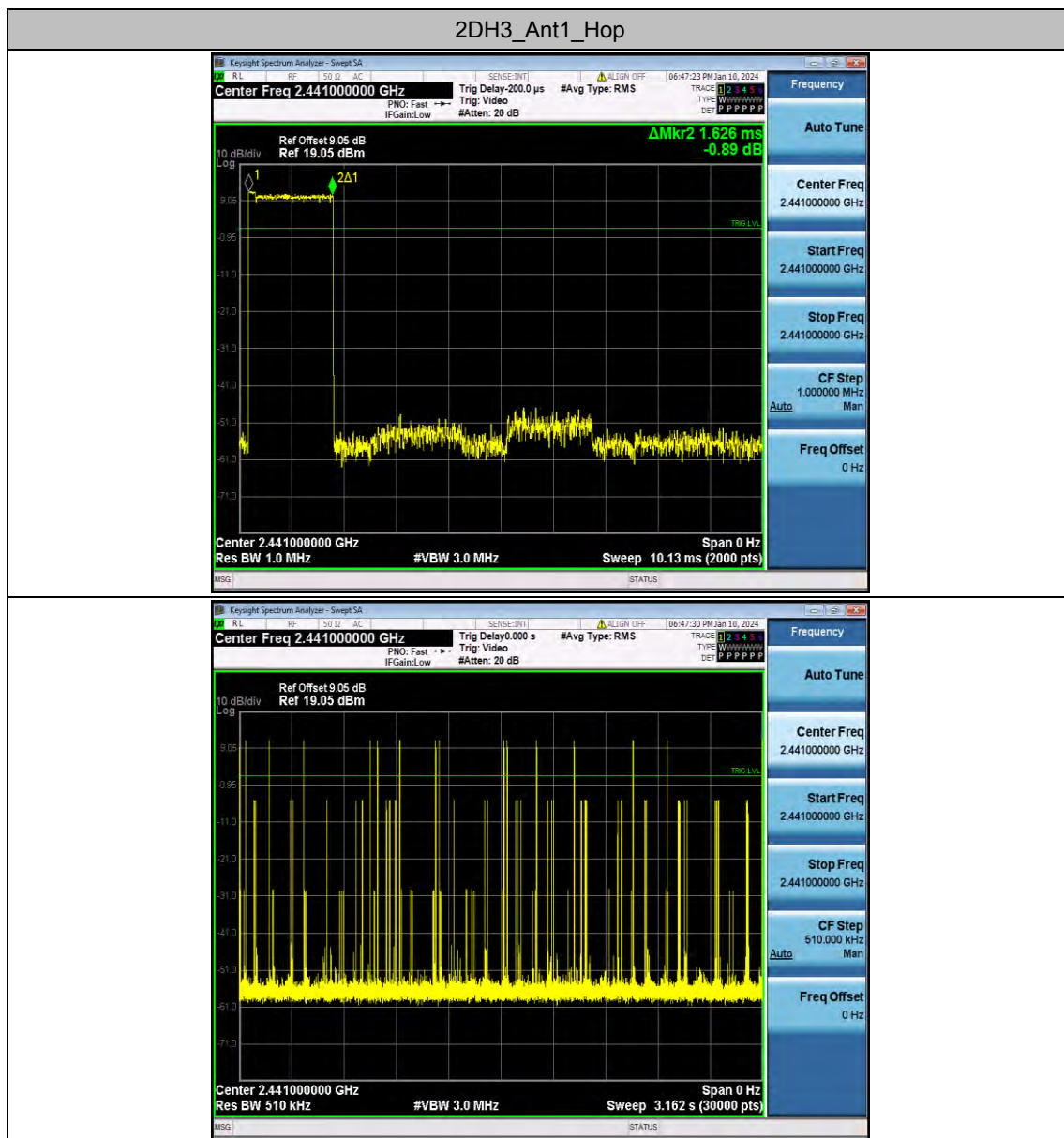
Test Graphs

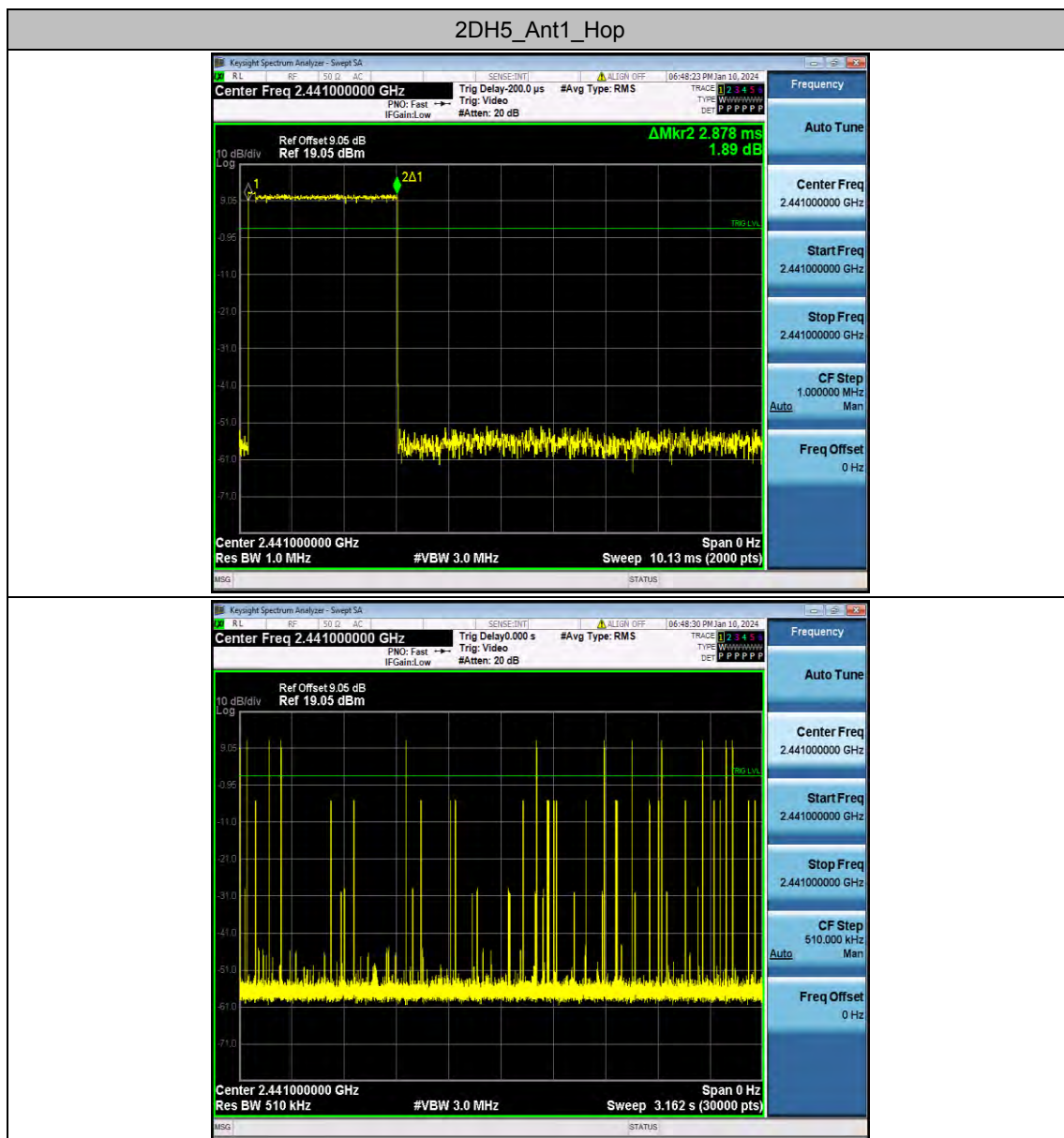


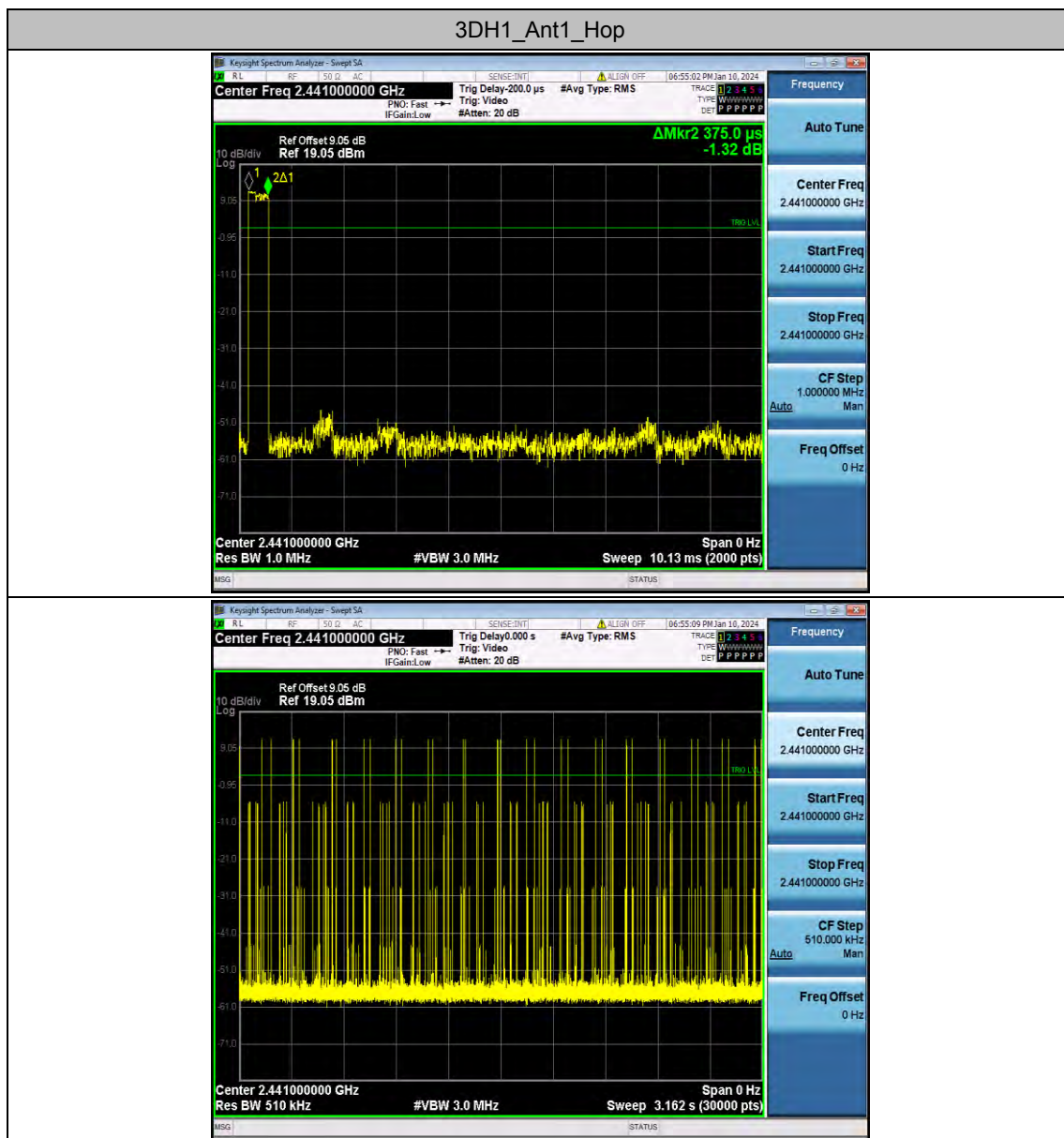


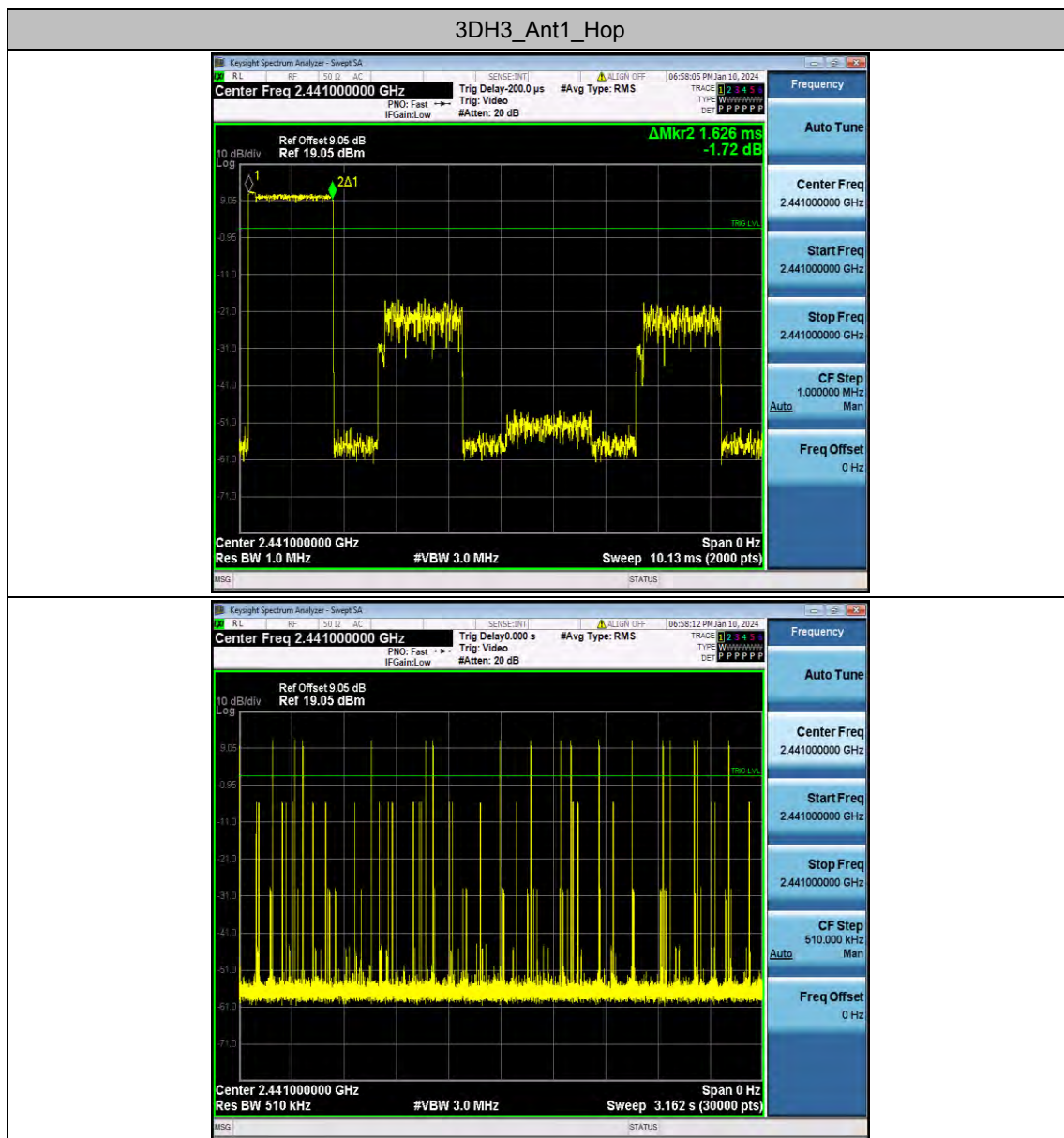


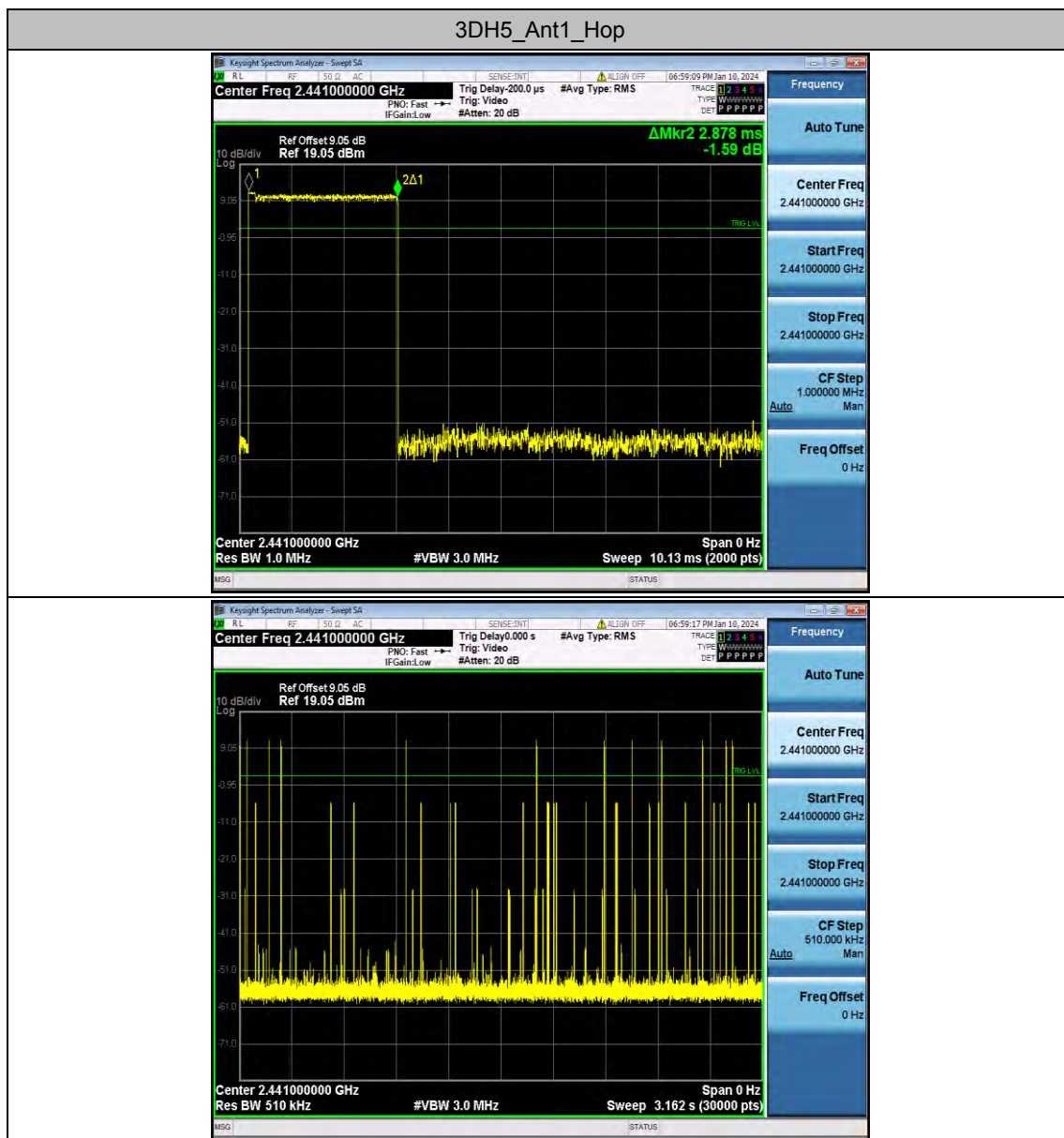










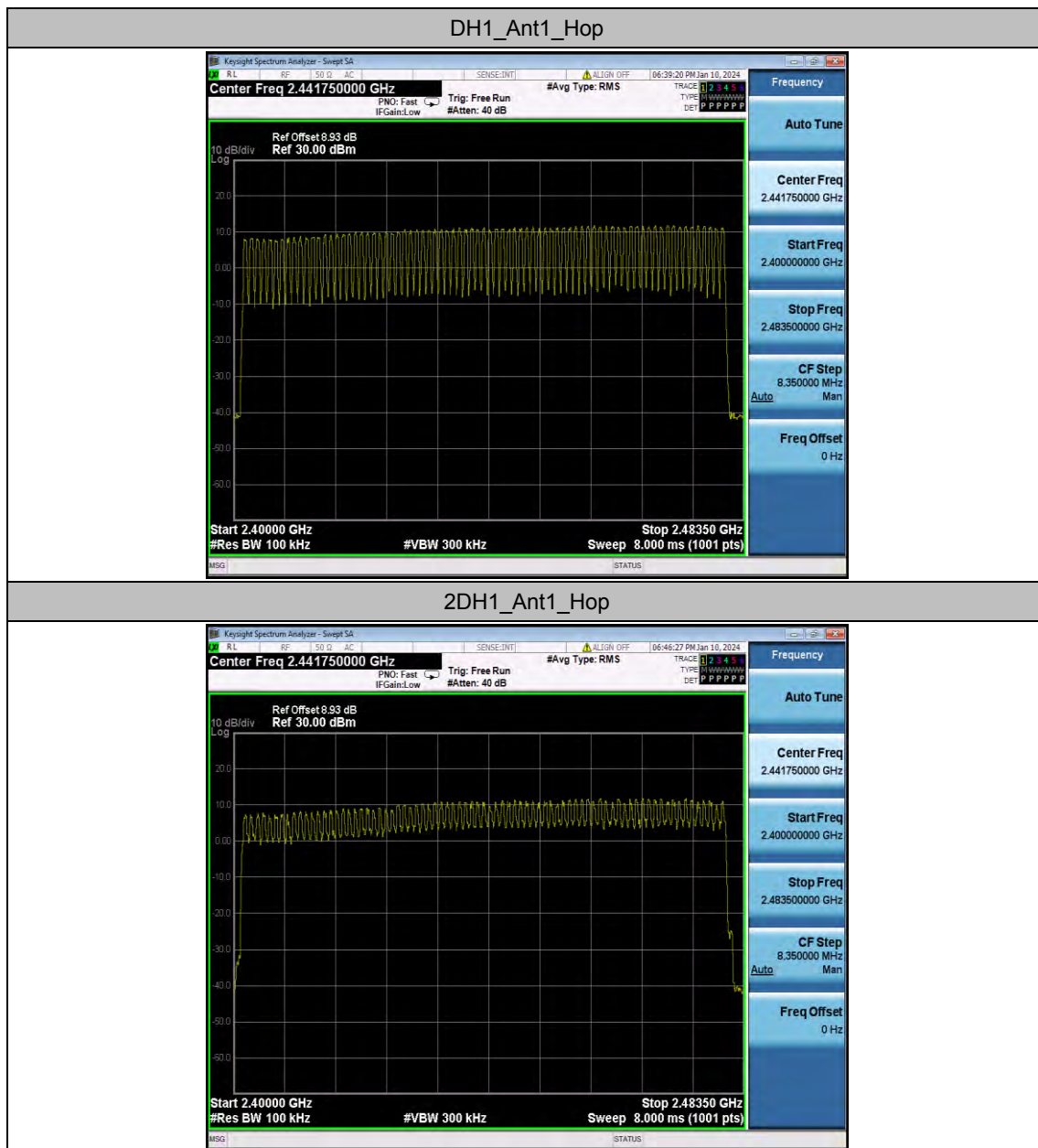


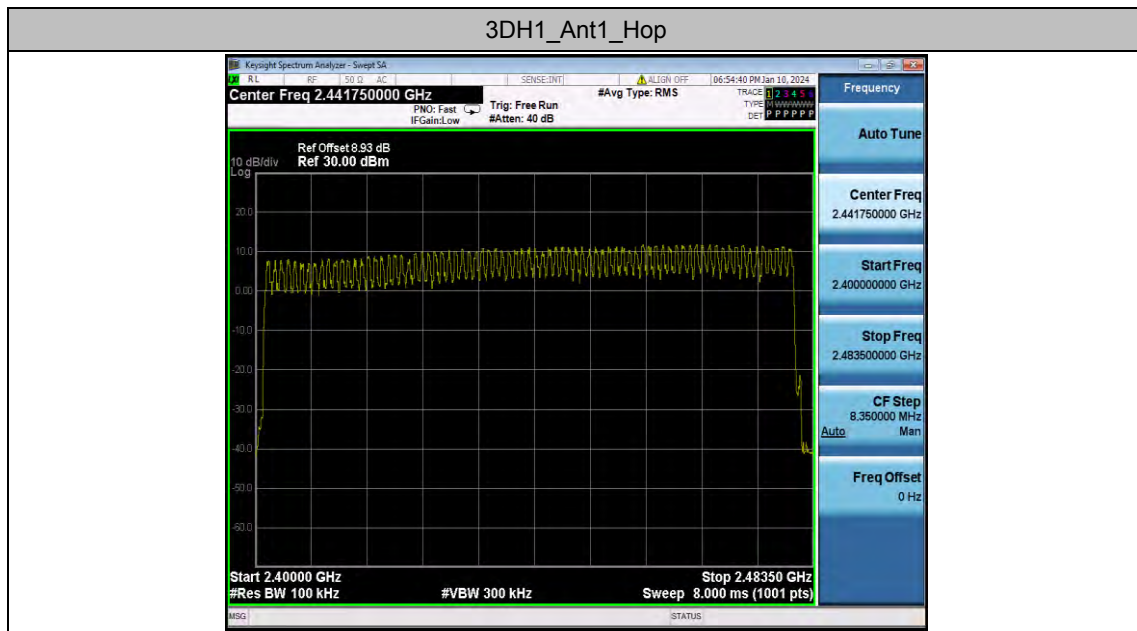
Appendix A.6: Number of hopping channels

Test Result

TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH1	Ant1	Hop	79	≥15	PASS
2DH1	Ant1	Hop	79	≥15	PASS
3DH1	Ant1	Hop	79	≥15	PASS

Test Graphs



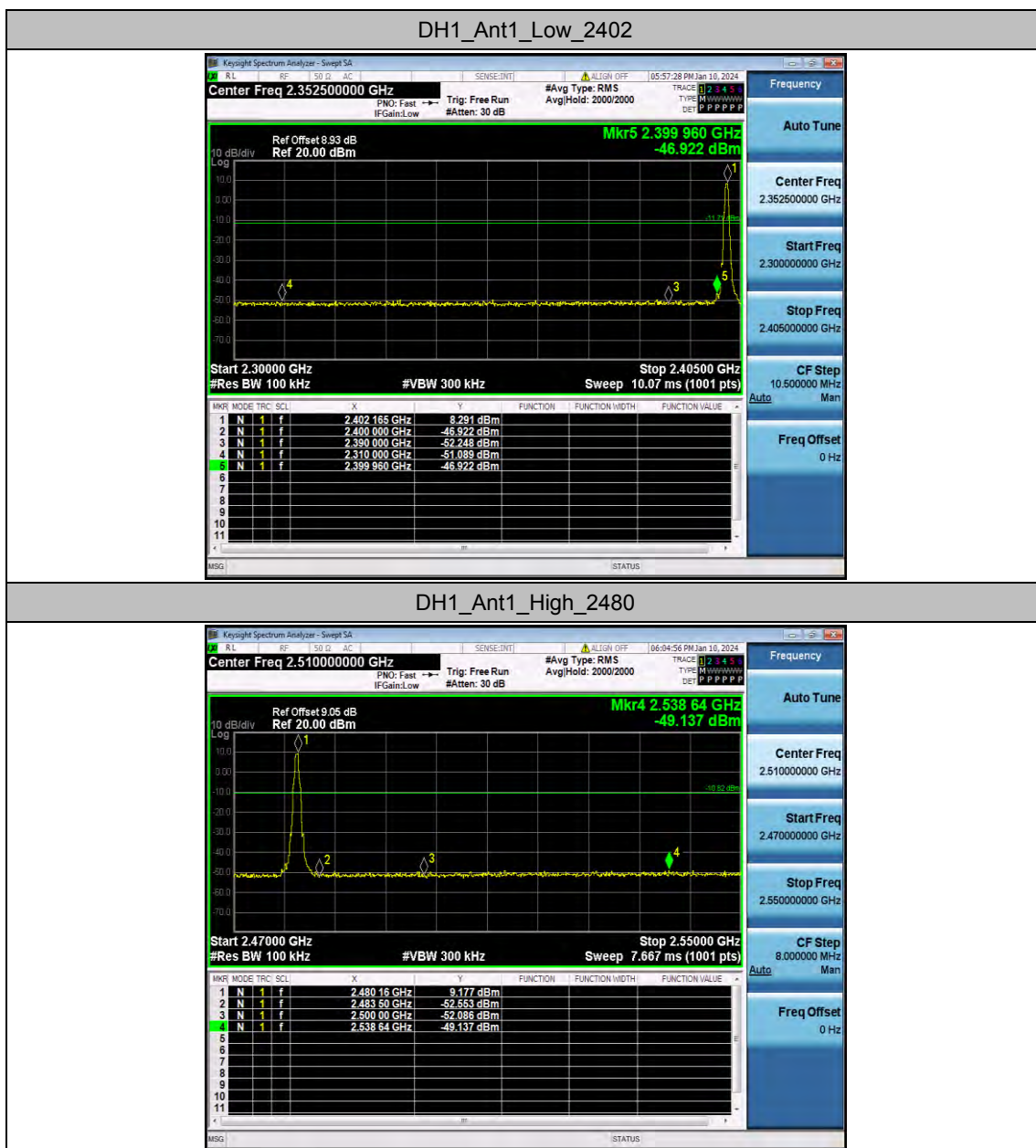


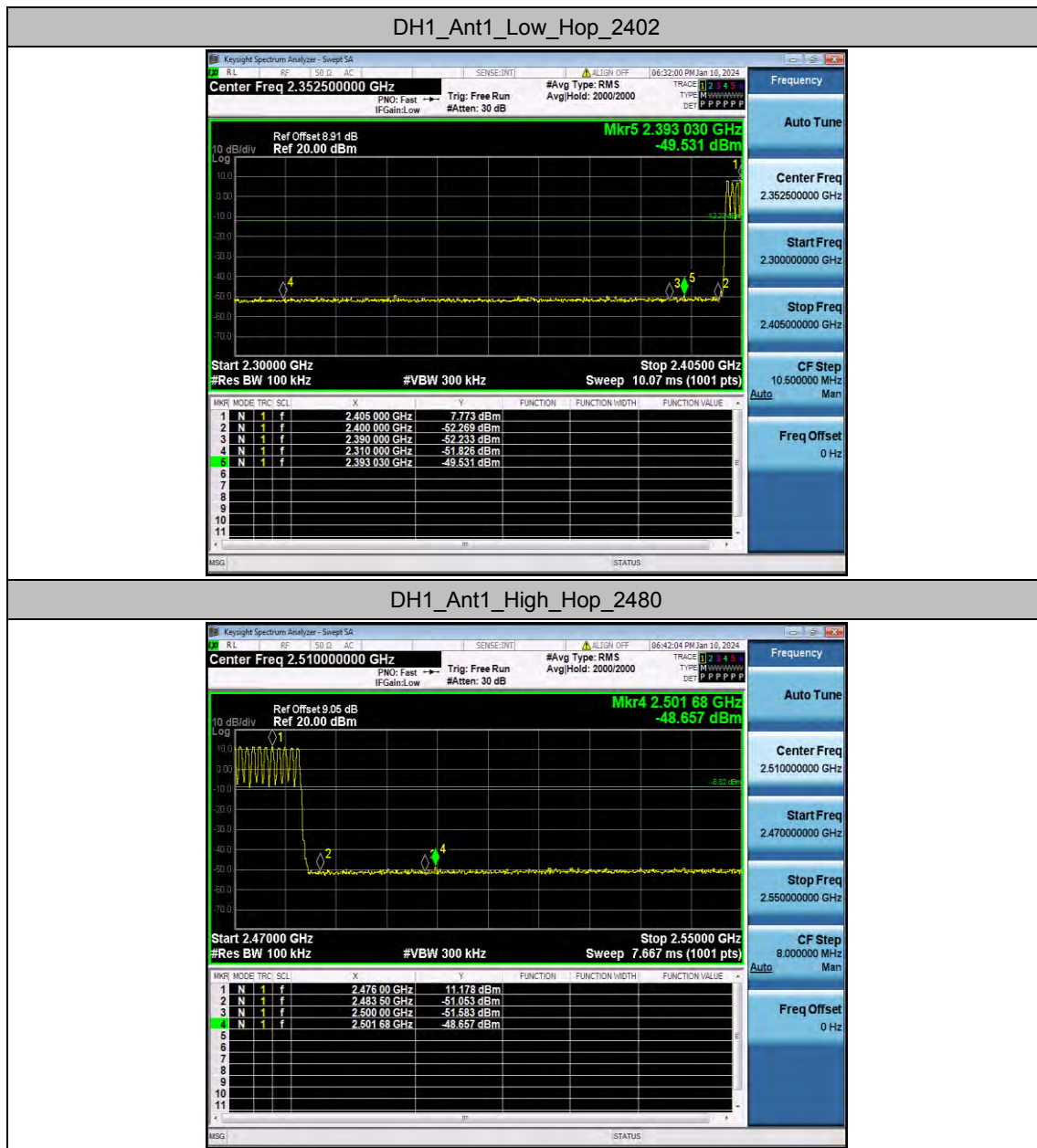
Appendix A.7: Band edge measurements

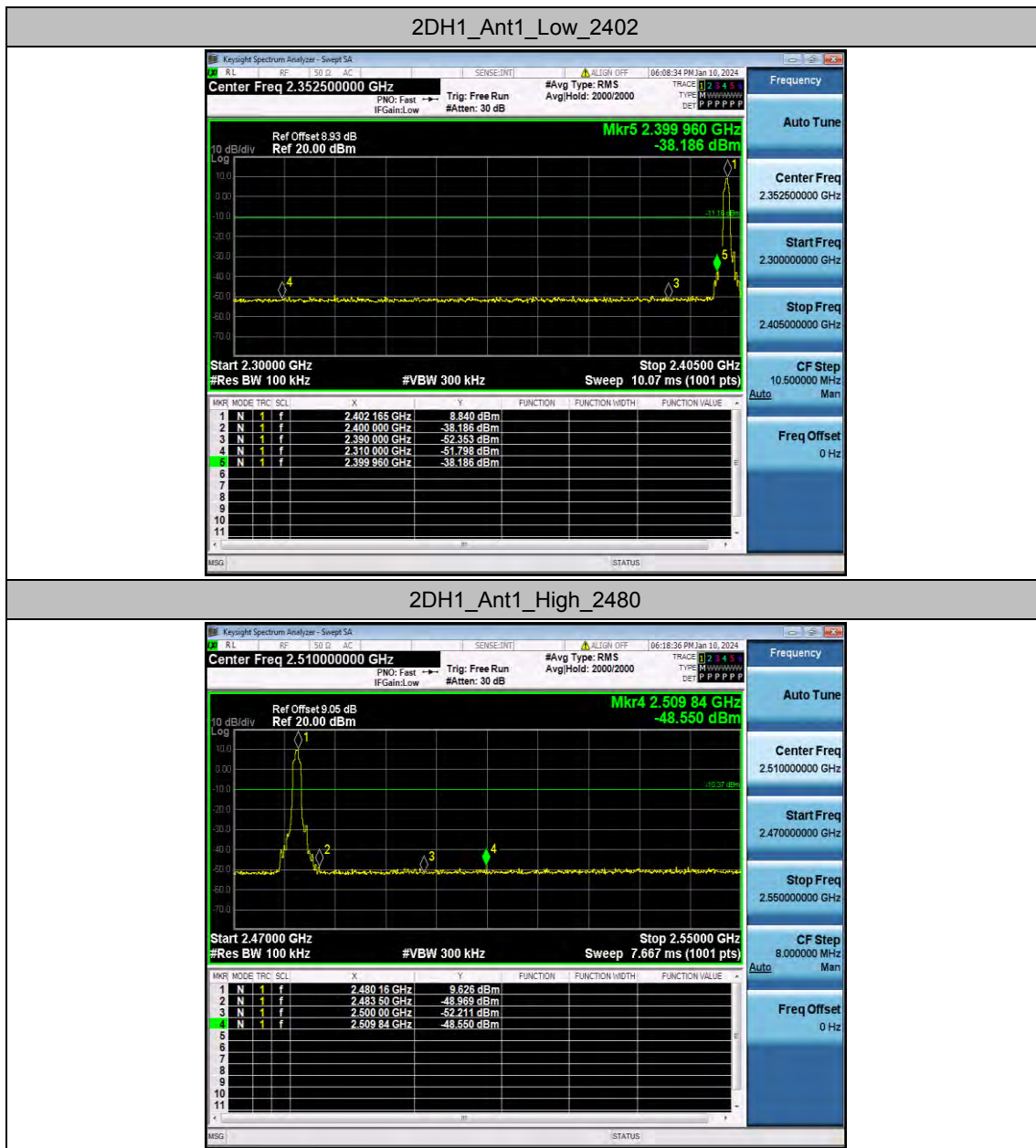
Test Result

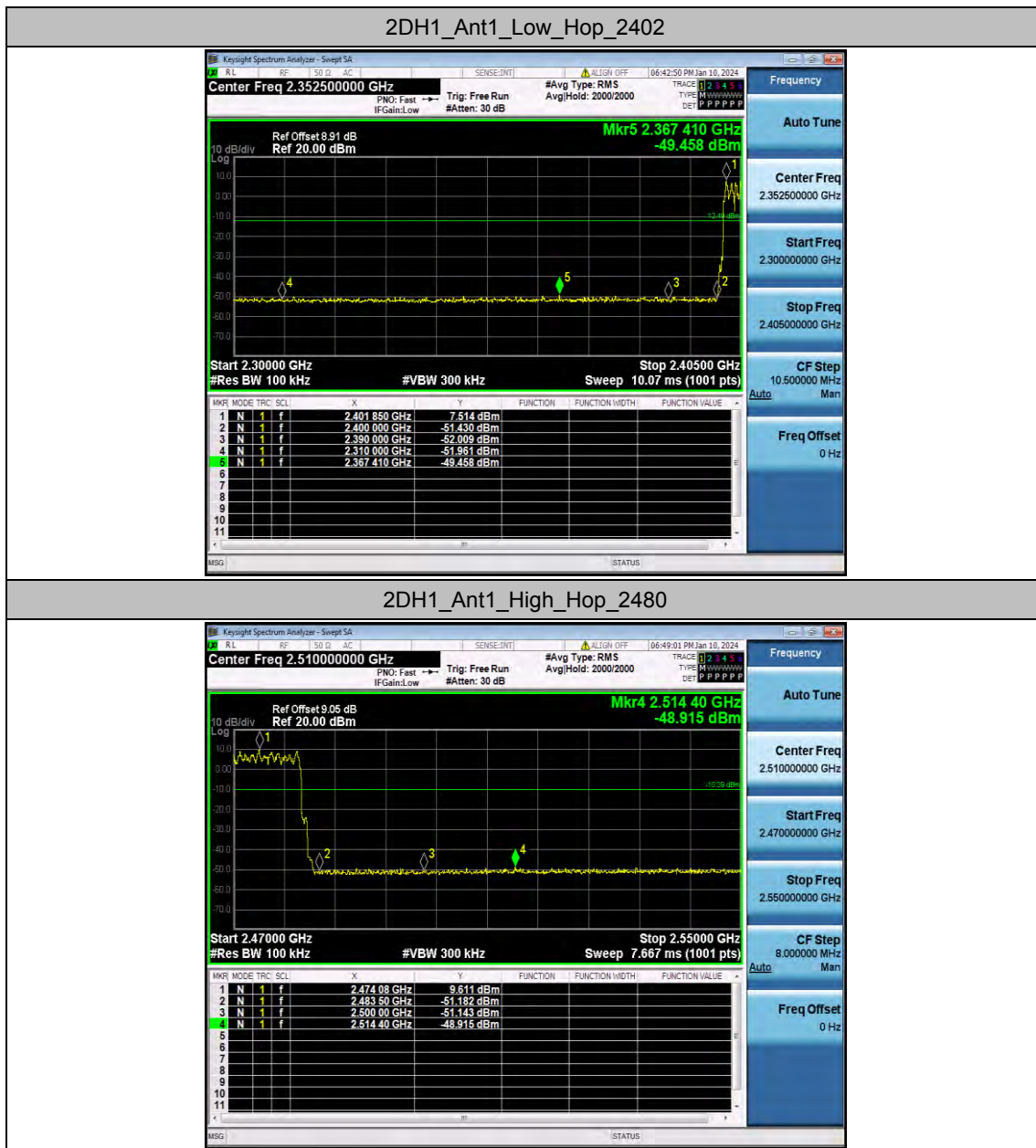
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	8.29	-46.92	≤ -11.71	PASS
		High	2480	9.18	-49.14	≤ -10.82	PASS
		Low	Hop_2402	7.77	-49.53	≤ -12.23	PASS
		High	Hop_2480	11.18	-48.66	≤ -8.82	PASS
2DH1	Ant1	Low	2402	8.84	-38.19	≤ -11.16	PASS
		High	2480	9.63	-48.55	≤ -10.37	PASS
		Low	Hop_2402	7.51	-49.46	≤ -12.49	PASS
		High	Hop_2480	9.61	-48.92	≤ -10.39	PASS
3DH1	Ant1	Low	2402	8.84	-38.5	≤ -11.16	PASS
		High	2480	9.64	-49.09	≤ -10.36	PASS
		Low	Hop_2402	7.42	-49.22	≤ -12.58	PASS
		High	Hop_2480	11.68	-48.04	≤ -8.32	PASS

Test Graphs

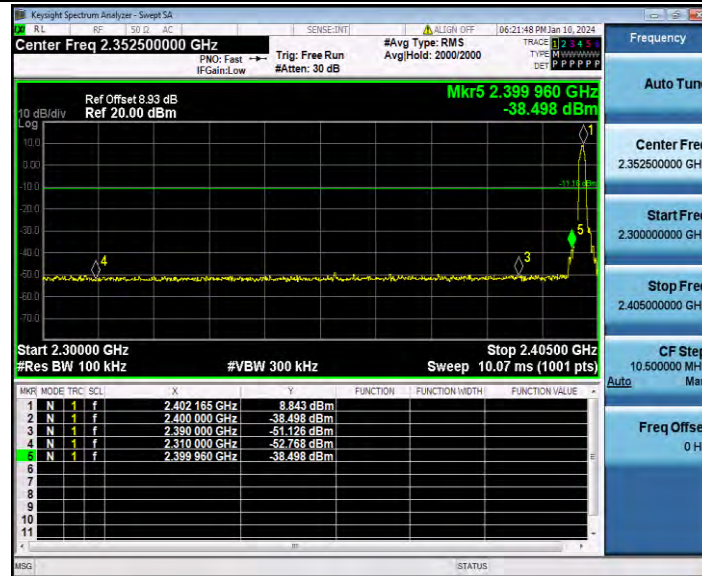




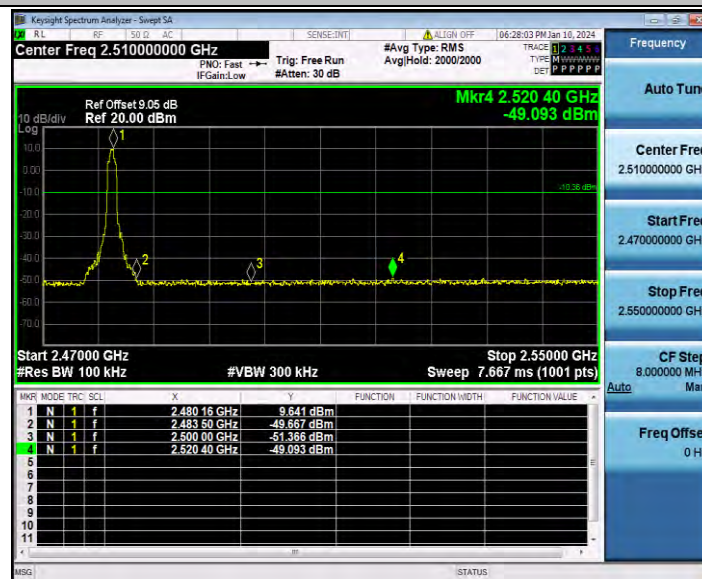


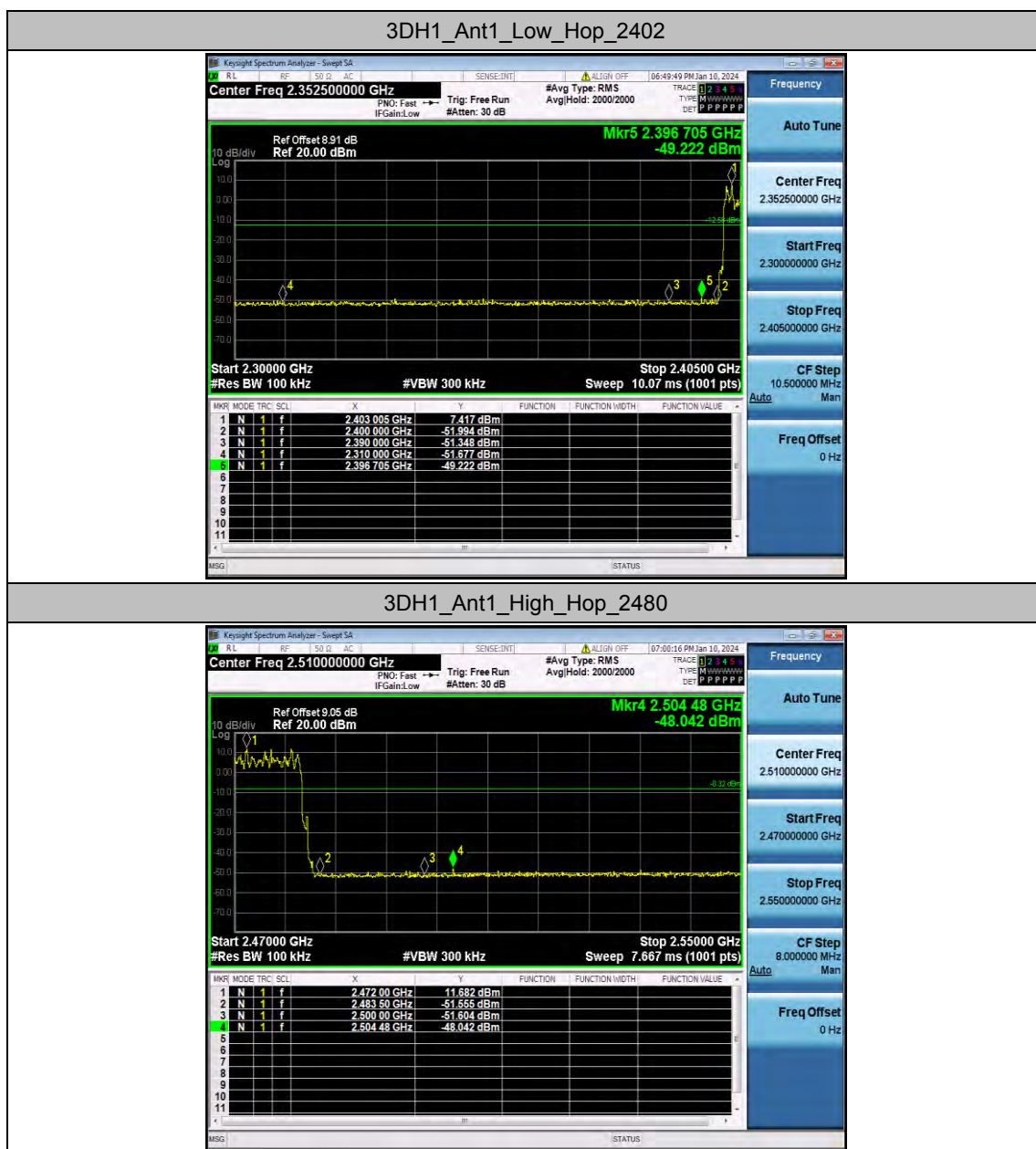


3DH1_Ant1_Low_2402



3DH1_Ant1_High_2480



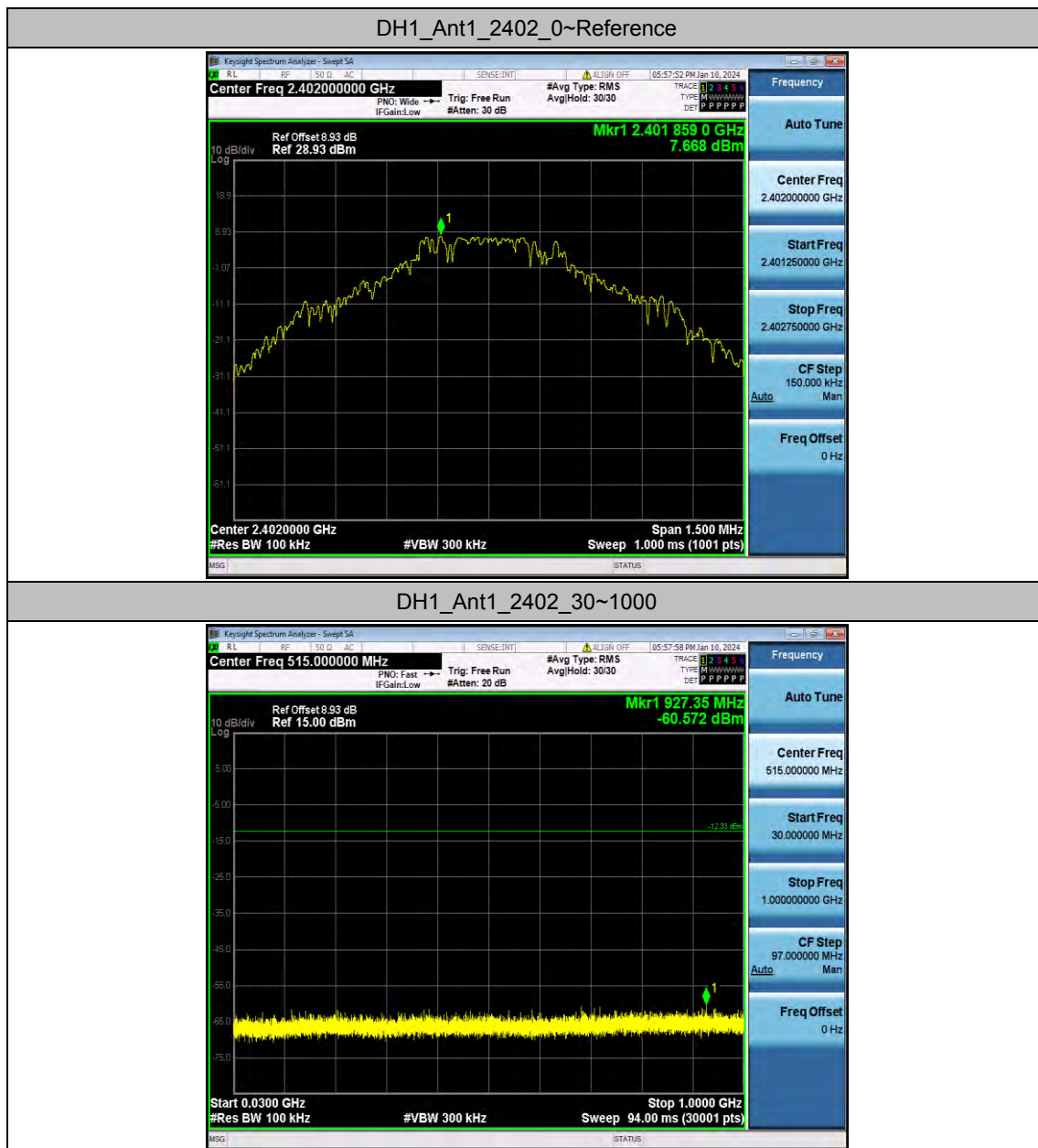


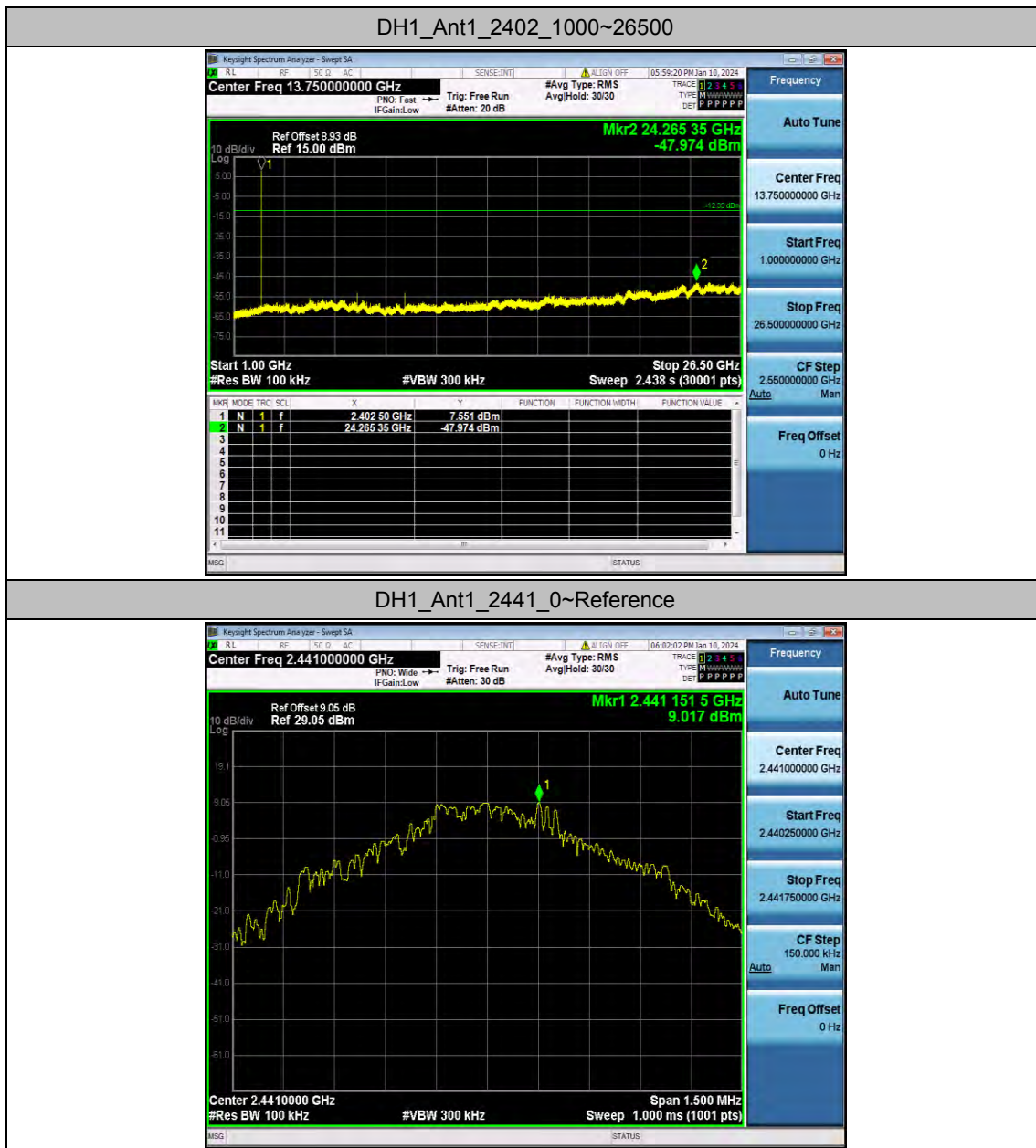
Appendix A.8: Conducted Spurious Emission

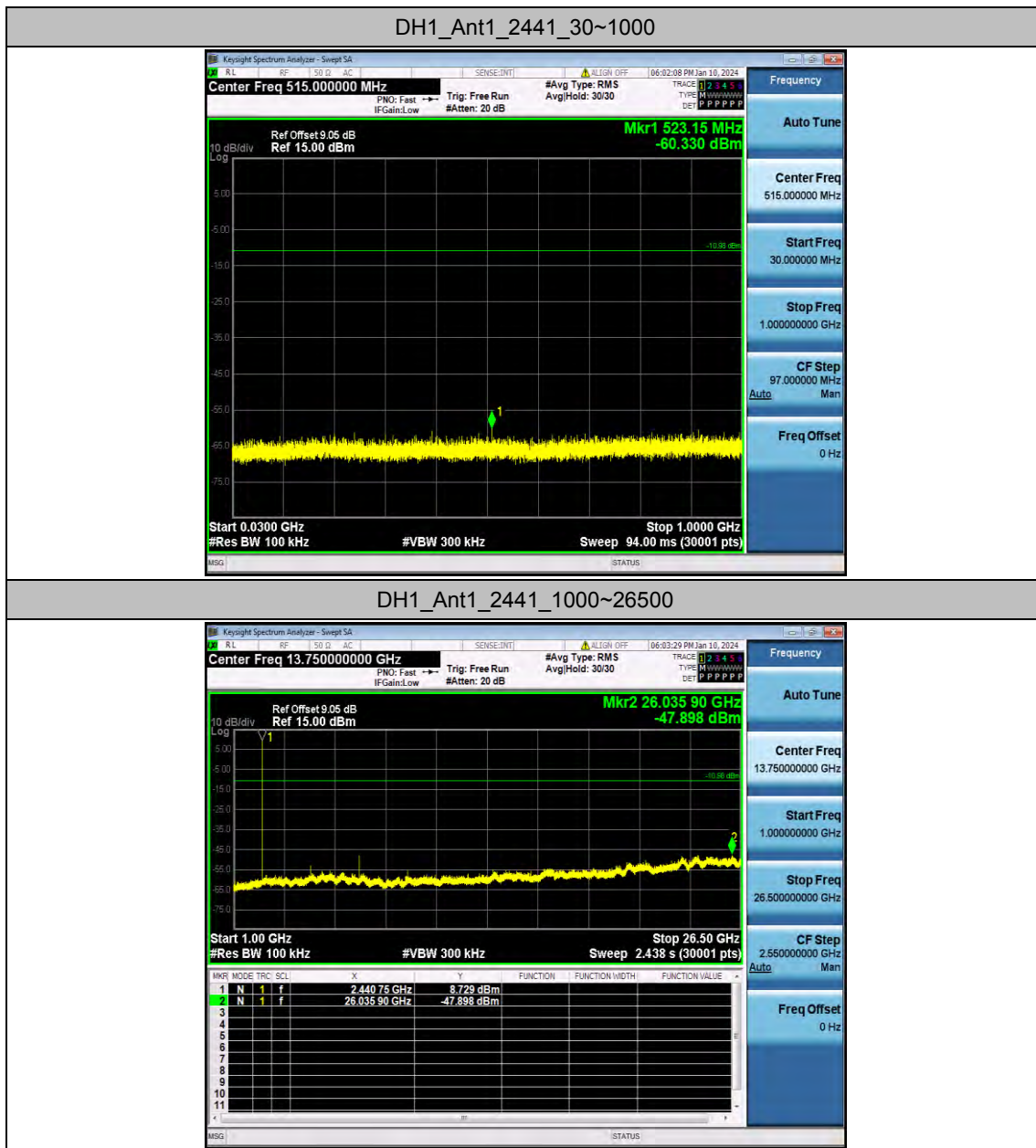
Test Result

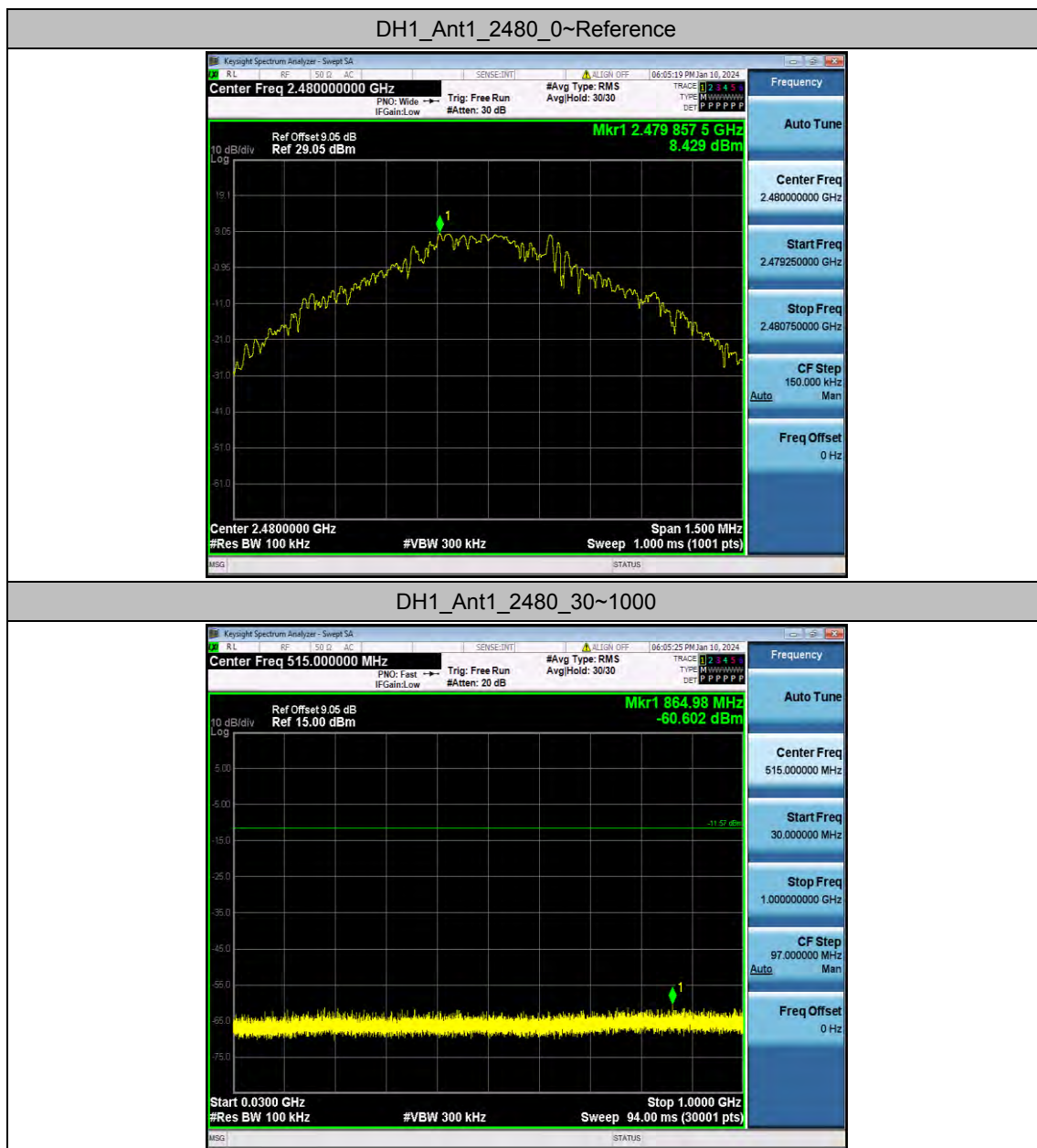
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	7.67	7.67	---	PASS
			30~1000	7.67	-60.57	≤-12.33	PASS
			1000~26500	7.67	-47.97	≤-12.33	PASS
		2441	Reference	9.02	9.02	---	PASS
			30~1000	9.02	-60.33	≤-10.98	PASS
			1000~26500	9.02	-47.9	≤-10.98	PASS
		2480	Reference	8.43	8.43	---	PASS
			30~1000	8.43	-60.6	≤-11.57	PASS
			1000~26500	8.43	-44.42	≤-11.57	PASS
2DH1	Ant1	2402	Reference	8.64	8.64	---	PASS
			30~1000	8.64	-60.85	≤-11.36	PASS
			1000~26500	8.64	-48.05	≤-11.36	PASS
		2441	Reference	8.97	8.97	---	PASS
			30~1000	8.97	-60.2	≤-11.03	PASS
			1000~26500	8.97	-46.79	≤-11.03	PASS
		2480	Reference	9.29	9.29	---	PASS
			30~1000	9.29	-60.7	≤-10.71	PASS
			1000~26500	9.29	-44.17	≤-10.71	PASS
3DH1	Ant1	2402	Reference	8.79	8.79	---	PASS
			30~1000	8.79	-60.77	≤-11.21	PASS
			1000~26500	8.79	-48	≤-11.21	PASS
		2441	Reference	9.56	9.56	---	PASS
			30~1000	9.56	-60.73	≤-10.44	PASS
			1000~26500	9.56	-47.47	≤-10.44	PASS
		2480	Reference	9.42	9.42	---	PASS
			30~1000	9.42	-61.21	≤-10.58	PASS
			1000~26500	9.42	-45.33	≤-10.58	PASS

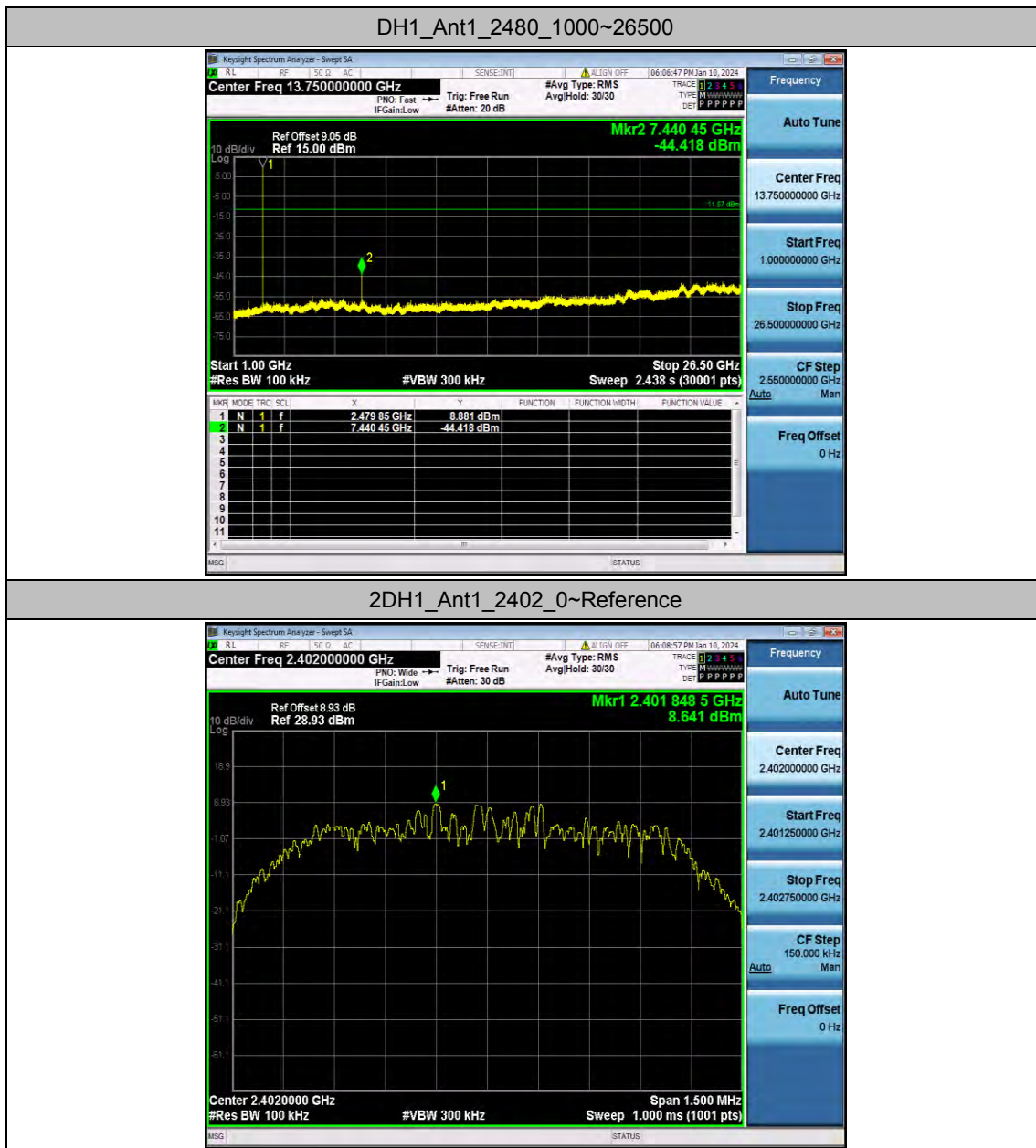
Test Graphs

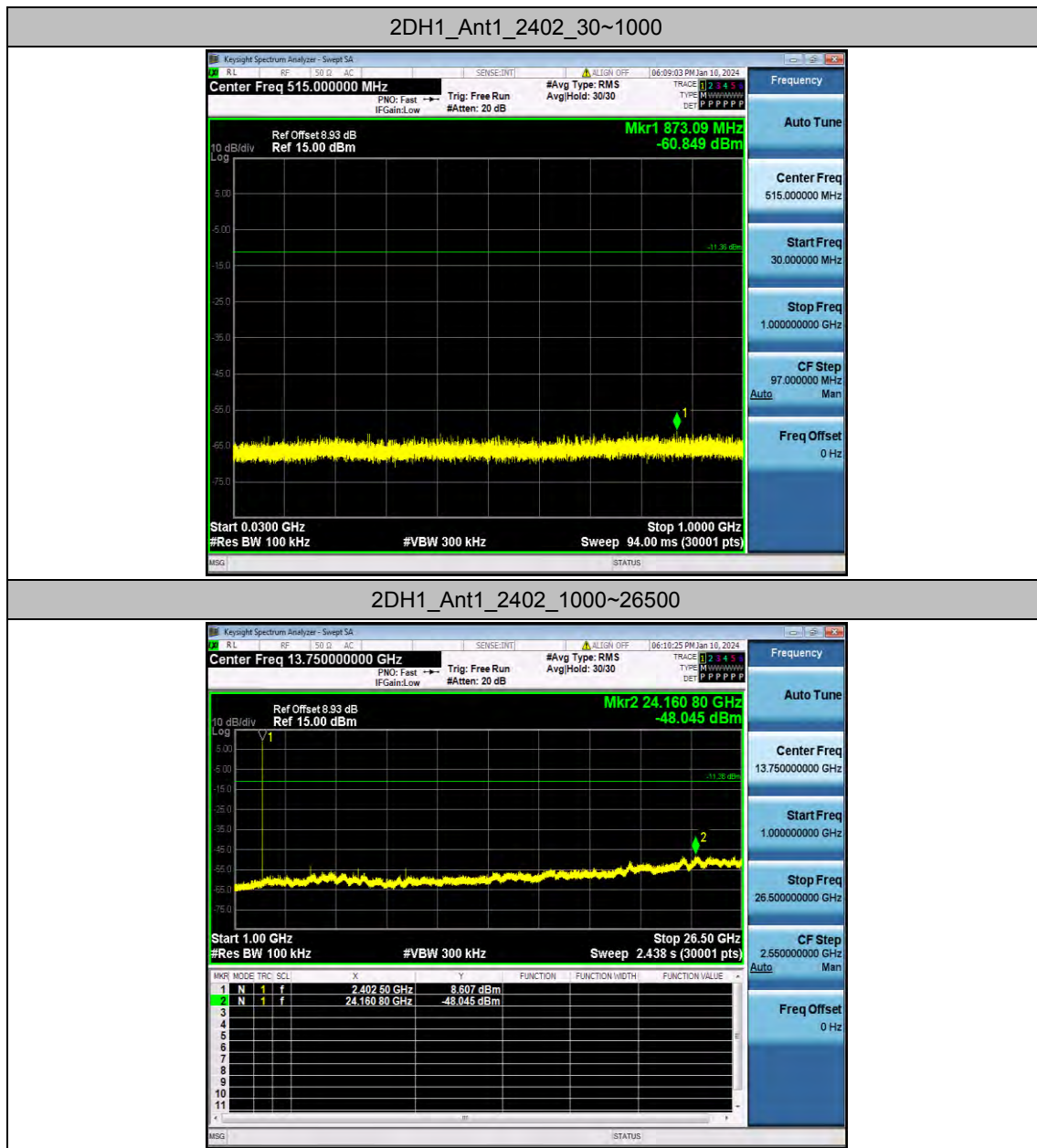


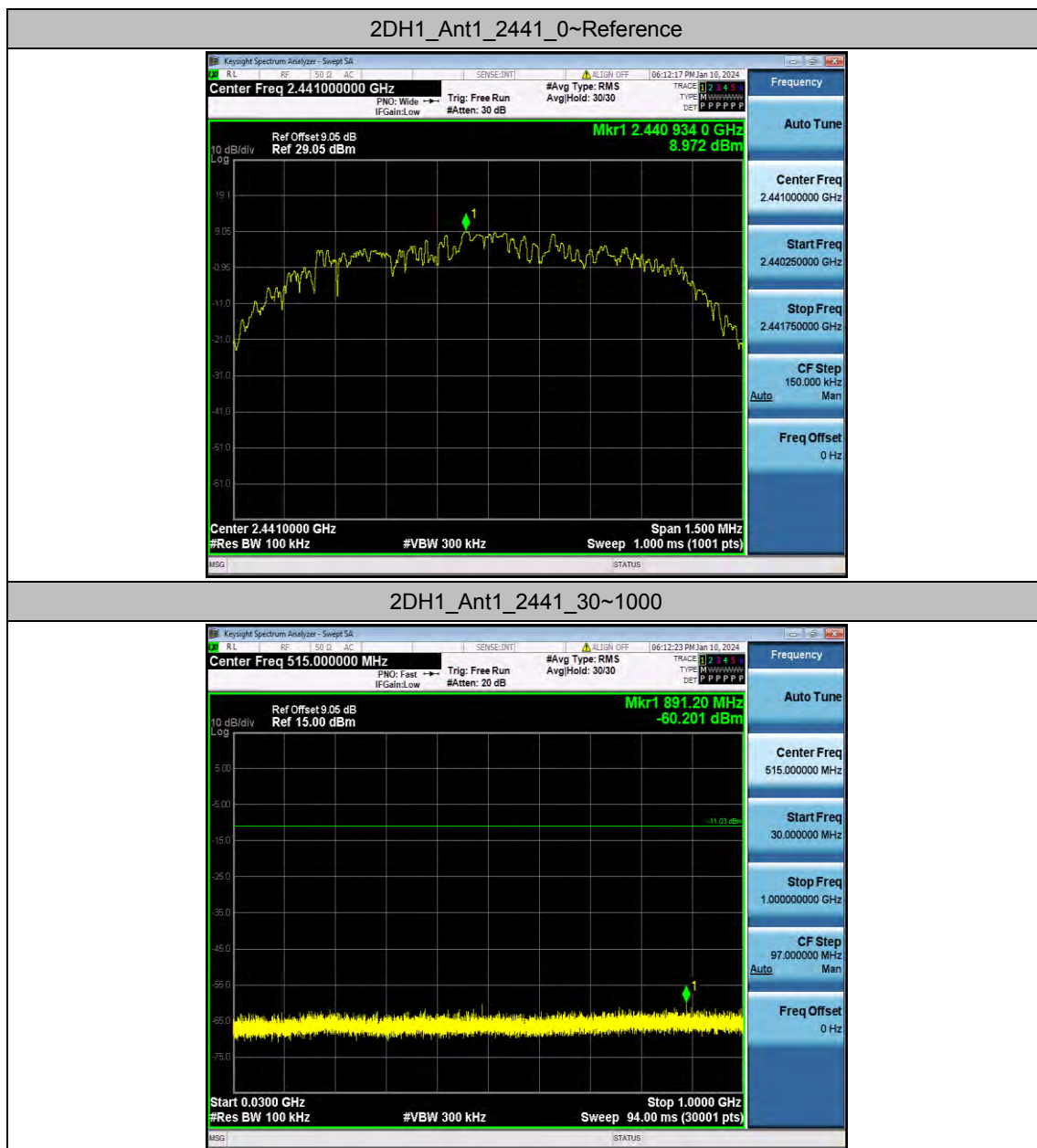


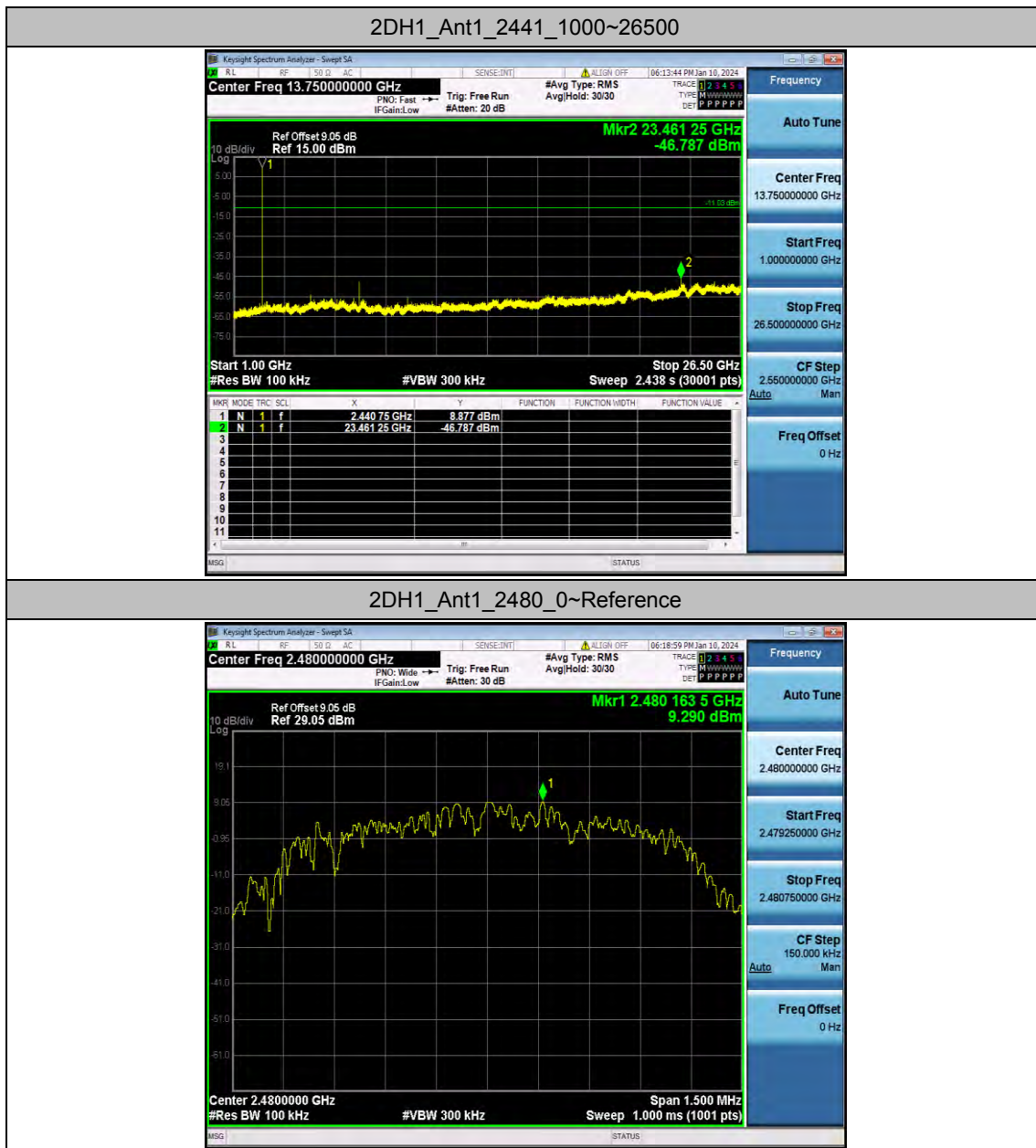


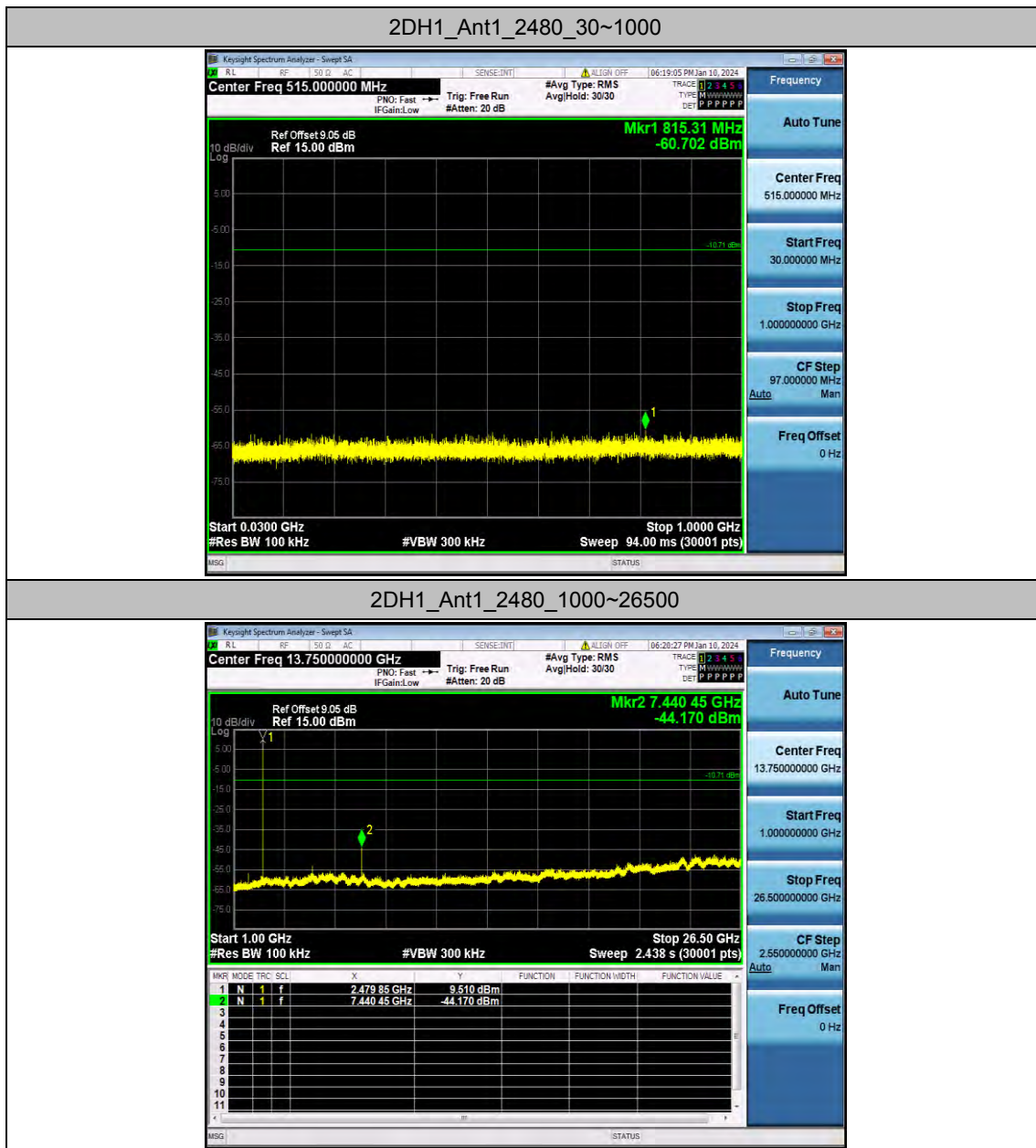


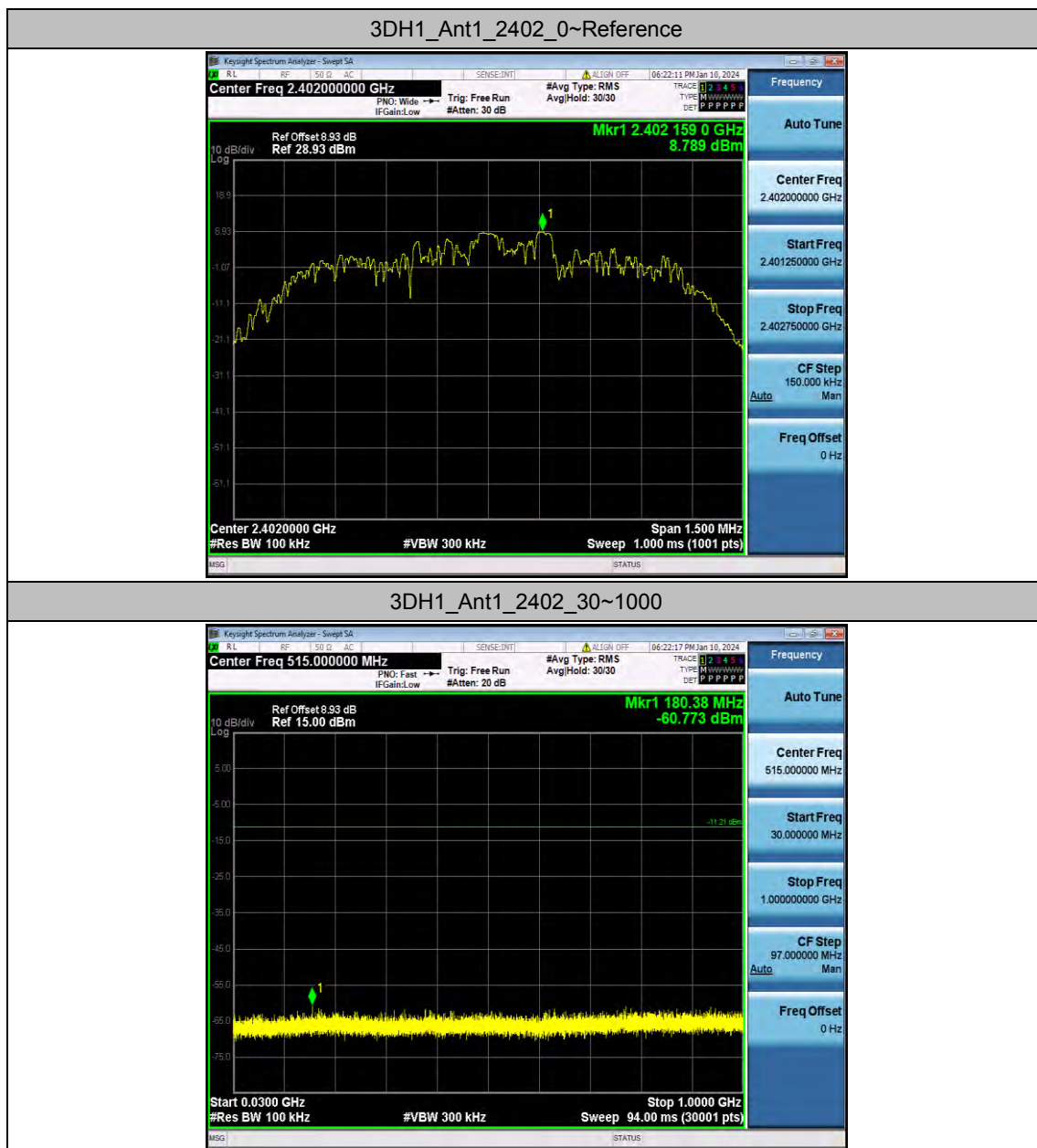


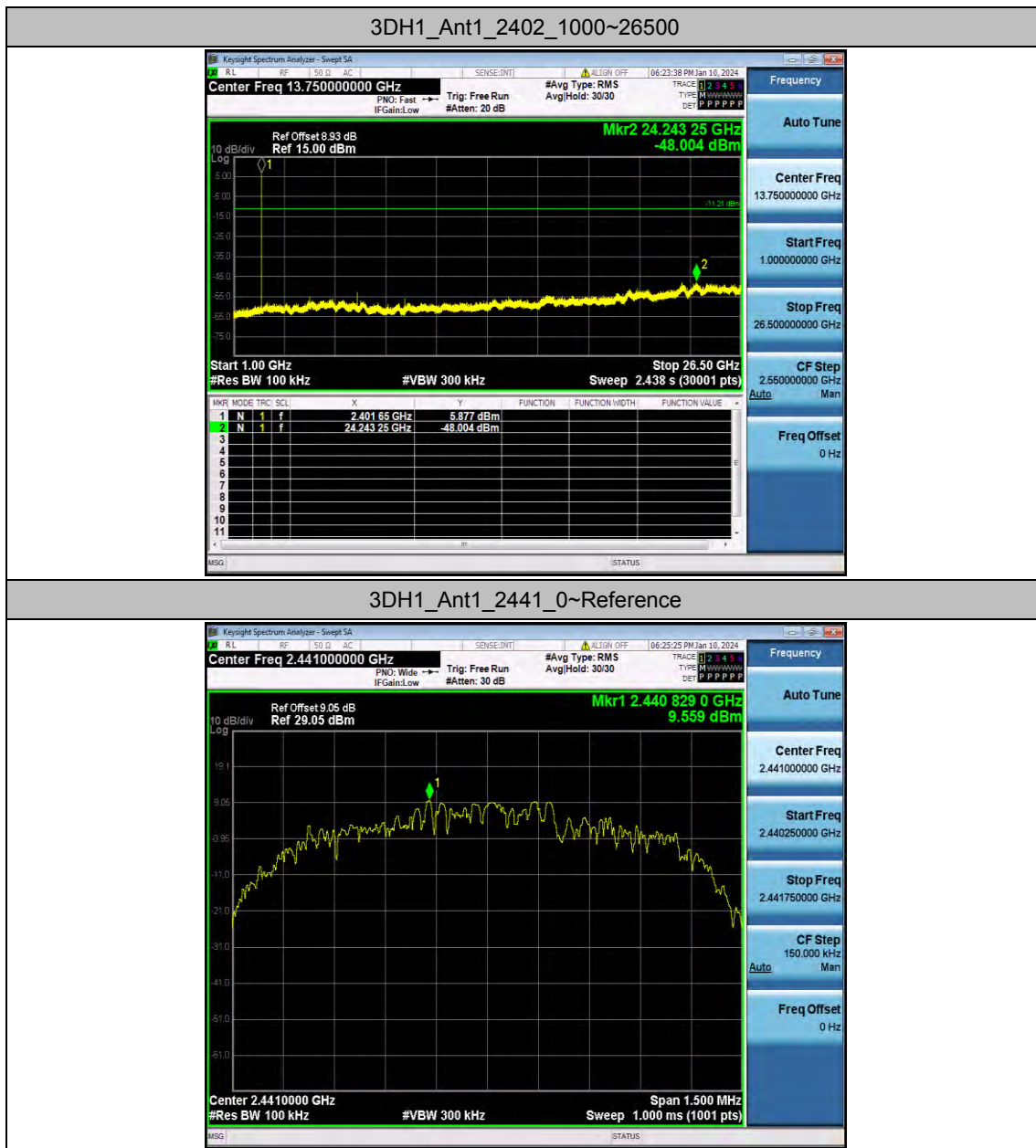


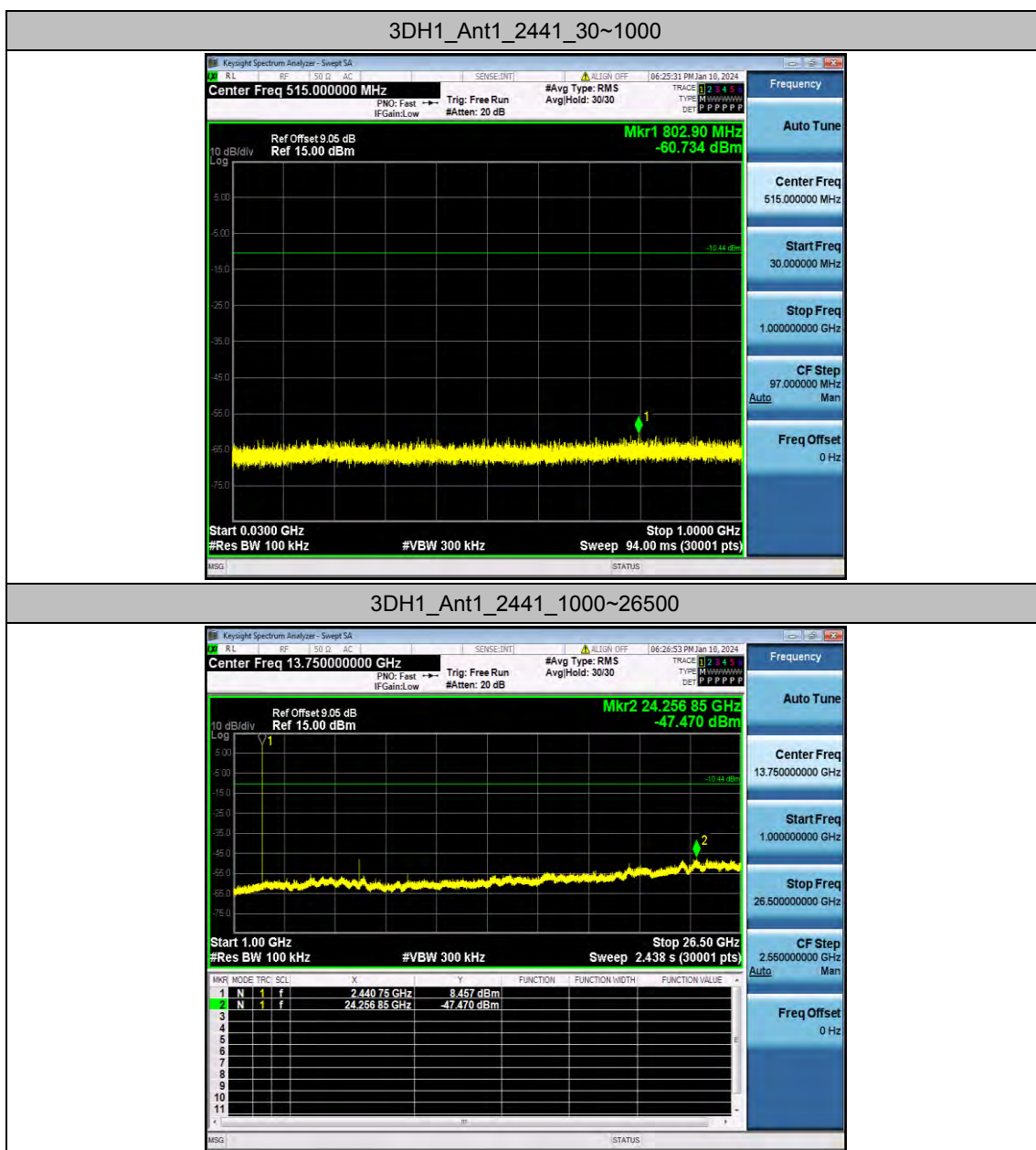


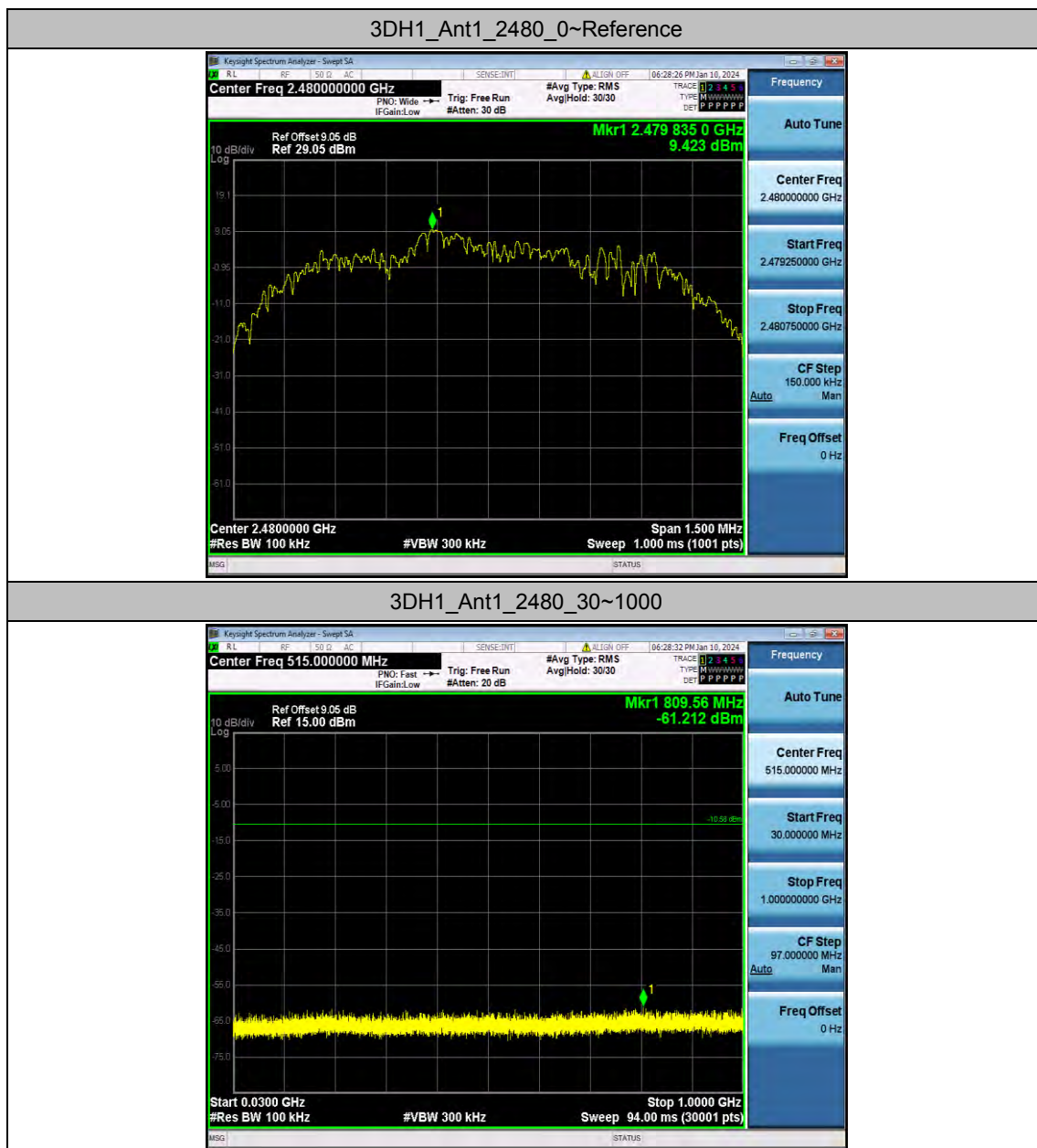


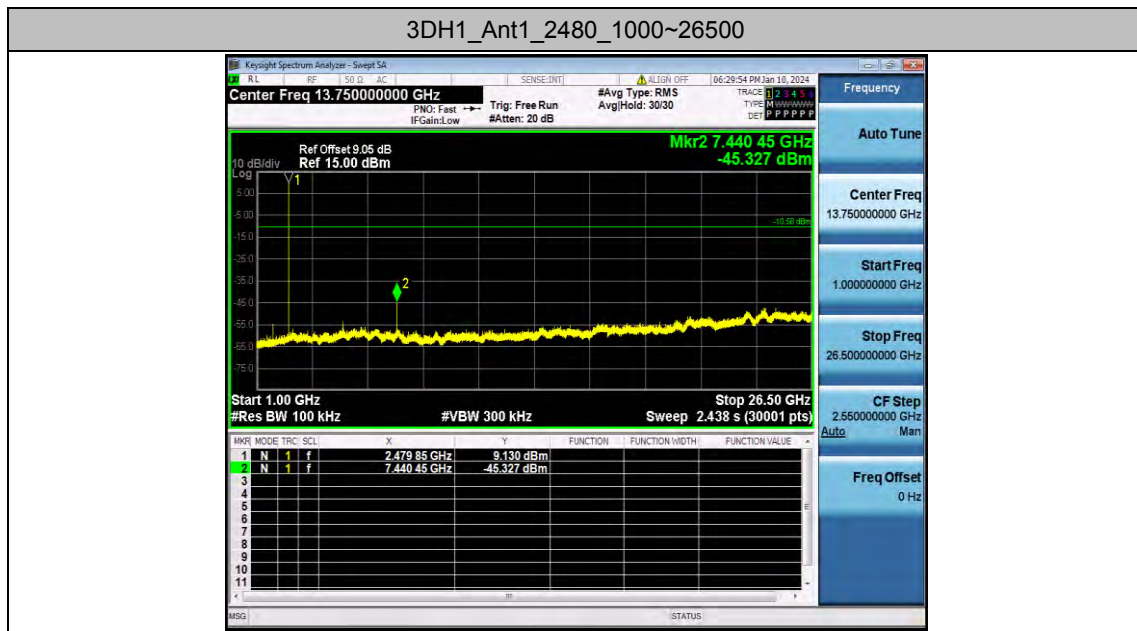












Appendix A.9: Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH1	Ant1	Low	2402	AV	2310.000	-49.43	≤-41.20	45.77	≤54	PASS
				AV	2389.670	-48.96	≤-41.20	46.24	≤54	PASS
				AV	2390.000	-49.14	≤-41.20	46.06	≤54	PASS
				Peak	2310.000	-42.31	≤-21.20	52.89	≤74	PASS
				Peak	2340.845	-39.1	≤-21.20	56.10	≤74	PASS
				Peak	2390.000	-41.5	≤-21.20	53.70	≤74	PASS
		High	2480	AV	2483.500	-47.77	≤-41.20	47.43	≤54	PASS
				AV	2483.520	-47.77	≤-41.20	47.43	≤54	PASS
				AV	2500.000	-48.74	≤-41.20	46.46	≤54	PASS
				Peak	2483.500	-41.56	≤-21.20	53.64	≤74	PASS
				Peak	2498.480	-38.75	≤-21.20	56.45	≤74	PASS
				Peak	2500.000	-41	≤-21.20	54.20	≤74	PASS
2DH1	Ant1	Low	2402	AV	2310.000	-49.52	≤-41.20	45.68	≤54	PASS
				AV	2374.130	-48.95	≤-41.20	46.25	≤54	PASS
				AV	2390.000	-49.22	≤-41.20	45.98	≤54	PASS
				Peak	2310.000	-41.11	≤-21.20	54.09	≤74	PASS
				Peak	2358.485	-39.03	≤-21.20	56.17	≤74	PASS
				Peak	2390.000	-39.38	≤-21.20	55.82	≤74	PASS
		High	2480	AV	2483.500	-46.85	≤-41.20	48.35	≤54	PASS
				AV	2483.520	-46.85	≤-41.20	48.35	≤54	PASS
				AV	2500.000	-48.82	≤-41.20	46.38	≤54	PASS
				Peak	2483.500	-40.22	≤-21.20	54.98	≤74	PASS
				Peak	2496.720	-37.84	≤-21.20	57.36	≤74	PASS
				Peak	2500.000	-40.05	≤-21.20	55.15	≤74	PASS
3DH1	Ant1	Low	2402	AV	2310.000	-49.36	≤-41.20	45.84	≤54	PASS
				AV	2385.260	-48.9	≤-41.20	46.30	≤54	PASS
				AV	2390.000	-49.05	≤-41.20	46.15	≤54	PASS
				Peak	2310.000	-42.31	≤-21.20	52.89	≤74	PASS
				Peak	2372.240	-38.77	≤-21.20	56.43	≤74	PASS
				Peak	2390.000	-41.43	≤-21.20	53.77	≤74	PASS
		High	2480	AV	2483.500	-46.79	≤-41.20	48.41	≤54	PASS
				AV	2483.520	-46.79	≤-41.20	48.41	≤54	PASS
				AV	2500.000	-48.7	≤-41.20	46.50	≤54	PASS
				Peak	2483.500	-39.39	≤-21.20	55.81	≤74	PASS
				Peak	2483.600	-30.58	≤-21.20	64.62	≤74	PASS

				Peak	2500.000	-41.05	≤ -21.20	54.15	≤ 74	PASS
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Note:

1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

