

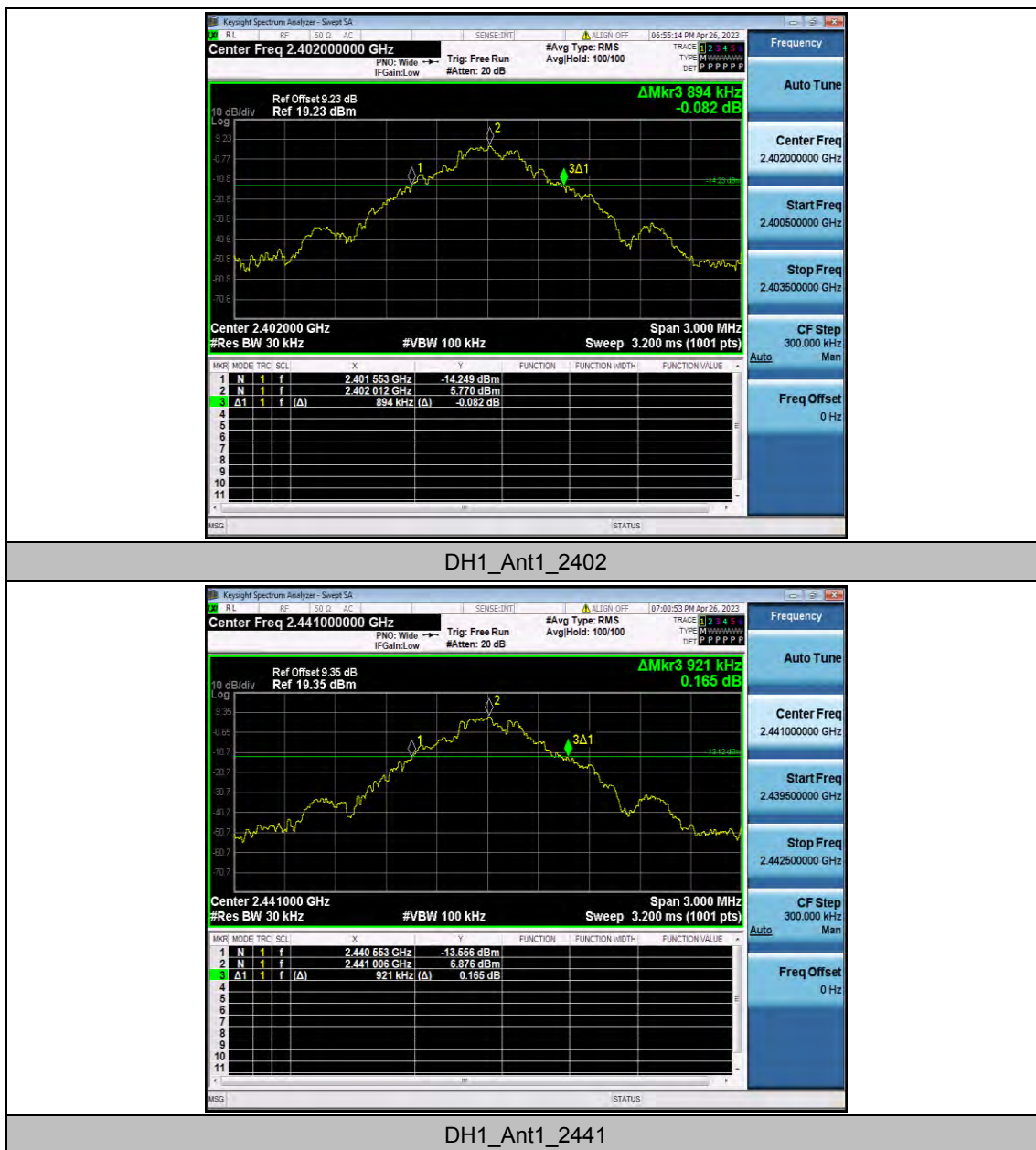
Case No. : <u>GTS20230420011-1-1</u>	
Ambient Condition: <u>23</u> °C, <u>49</u> %RH, Atmos100.1Kpa,	
Test Date: <u>2023.4.25</u>	Test Engineer: <u>Jenny zeng</u>

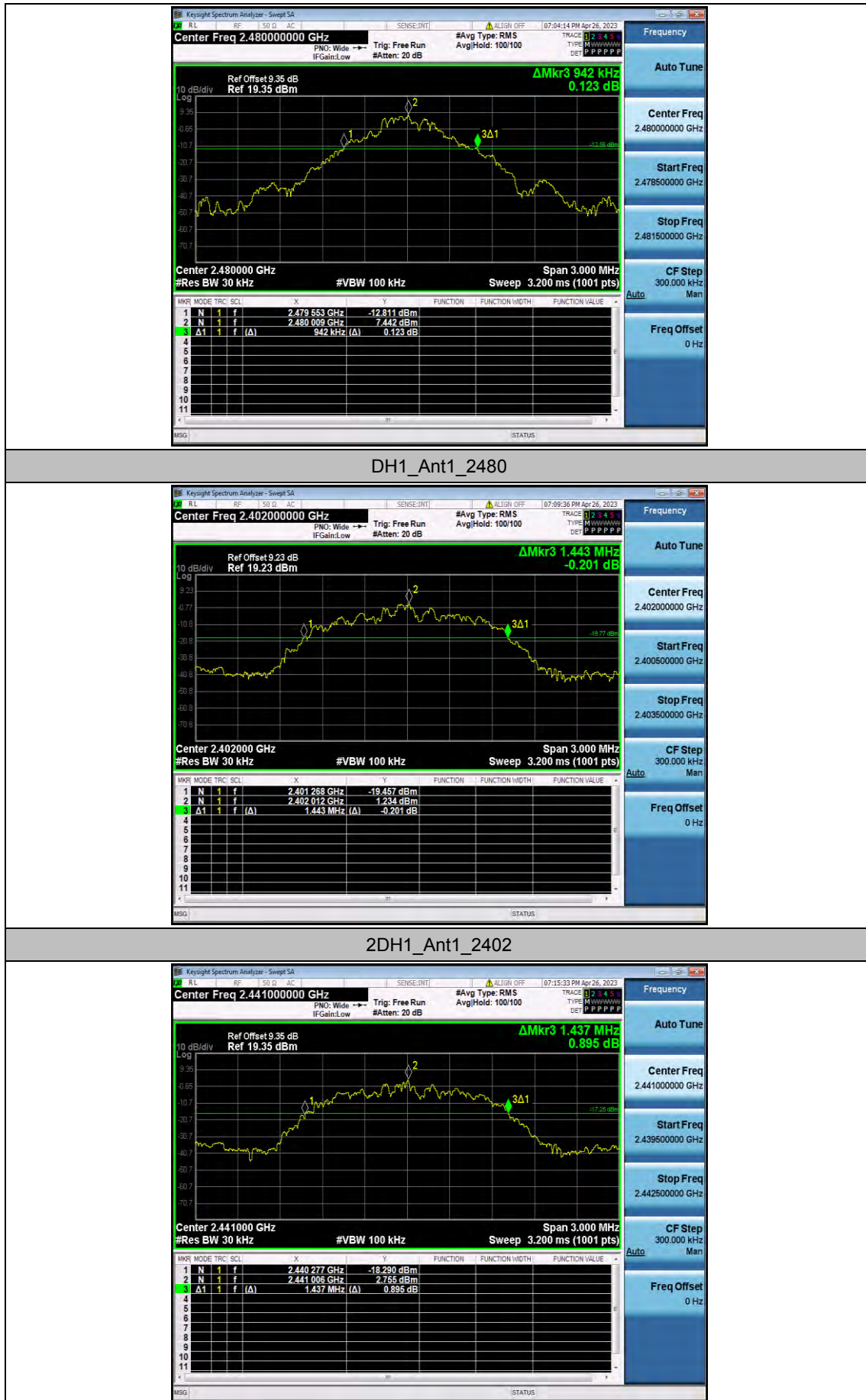
Appendix A.1: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.894	2401.553	2402.447	---	---
		2441	0.921	2440.553	2441.474	---	---
		2480	0.942	2479.553	2480.495	---	---
2DH1	Ant1	2402	1.443	2401.268	2402.711	---	---
		2441	1.437	2440.277	2441.714	---	---
		2480	1.443	2479.268	2480.711	---	---
3DH1	Ant1	2402	1.425	2401.277	2402.702	---	---
		2441	1.443	2440.286	2441.729	---	---
		2480	1.452	2479.283	2480.735	---	---

Test Graphs





2DH1_Ant1_2441



2DH1_Ant1_2480



3DH1_Ant1_2402



3D11_Ant1_2441



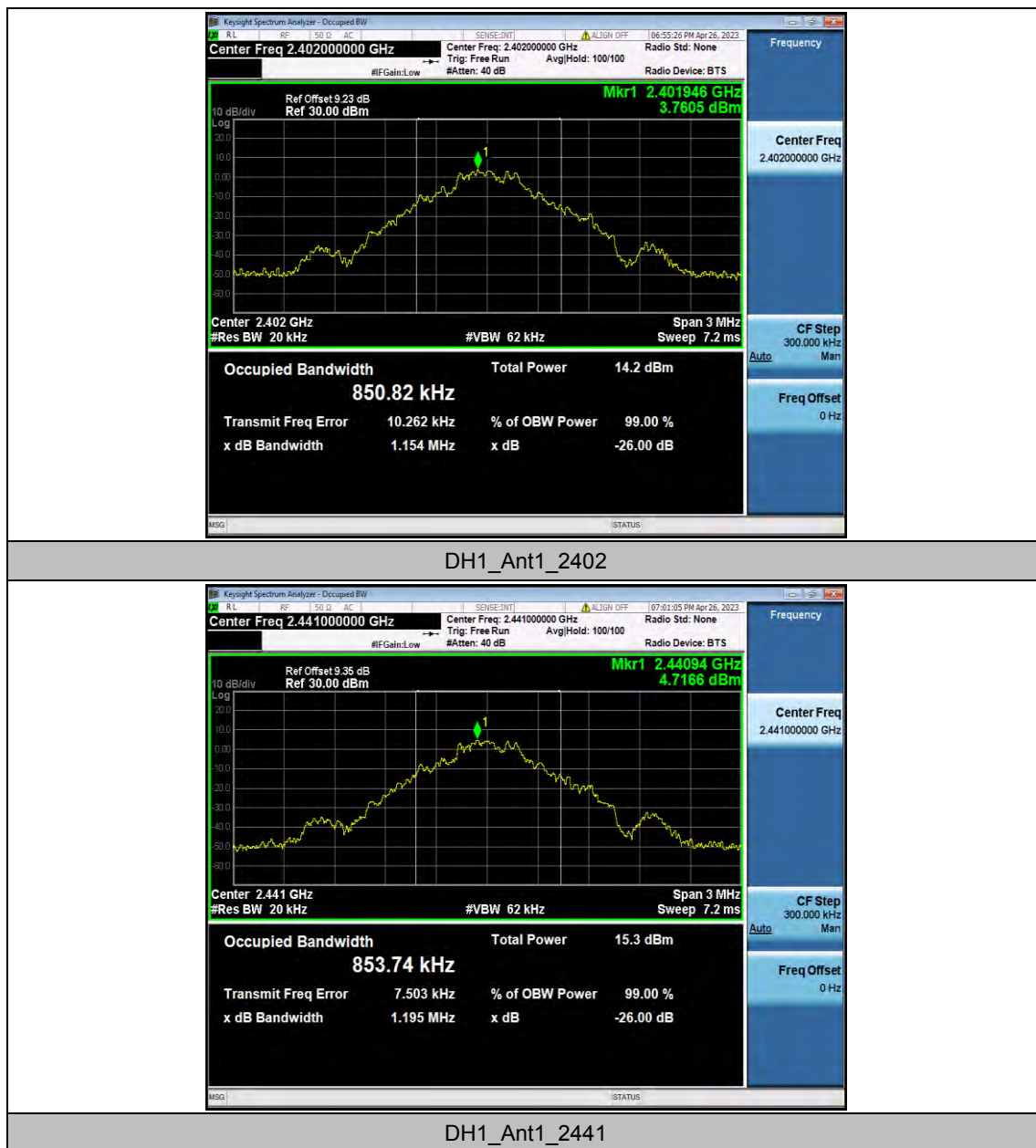
3D11_Ant1_2480

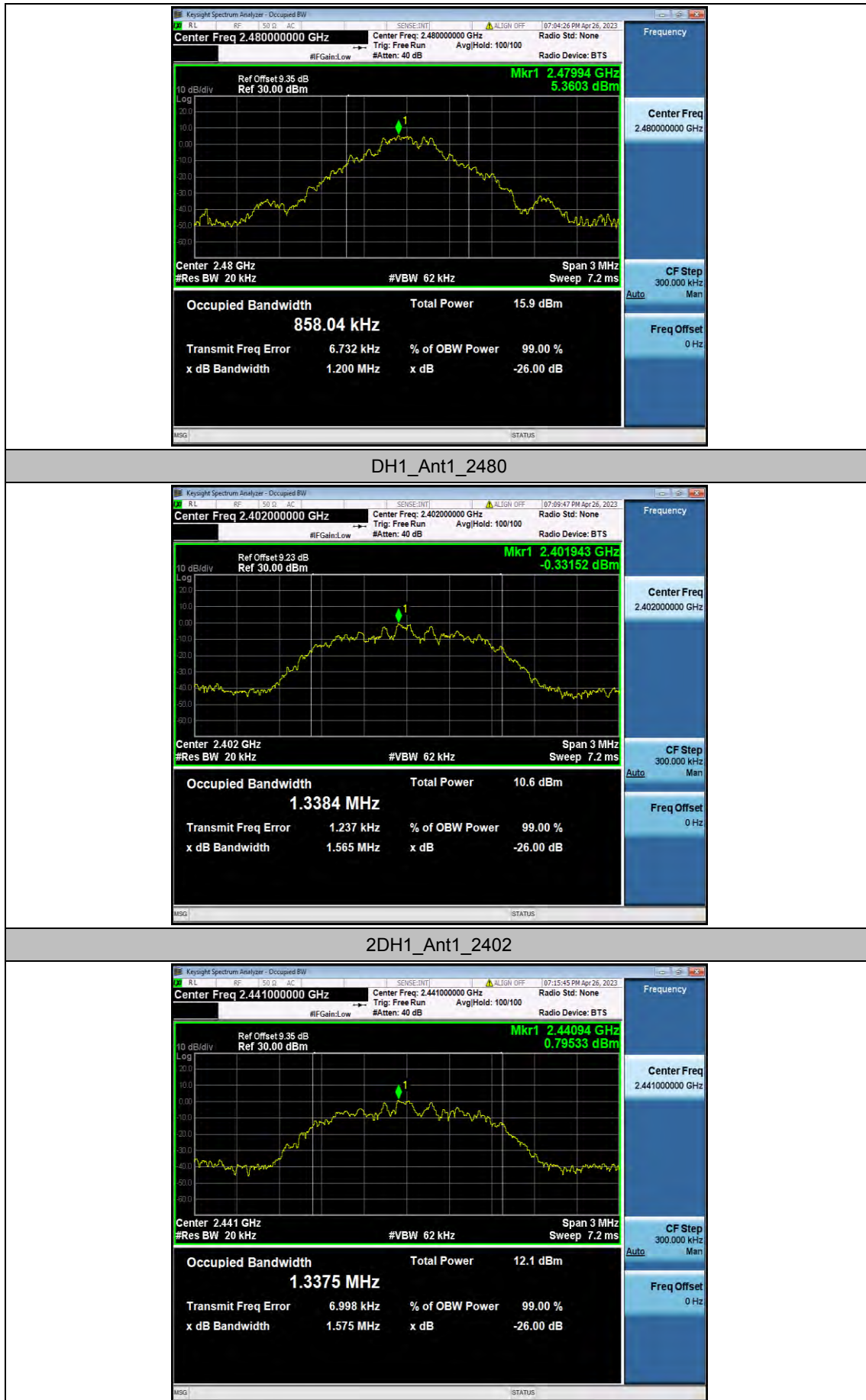
Appendix A.2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.85082	2401.585	2402.436	---	---
		2441	0.85374	2440.581	2441.434	---	---
		2480	0.85804	2479.578	2480.436	---	---
2DH1	Ant1	2402	1.3384	2401.332	2402.670	---	---
		2441	1.3375	2440.338	2441.676	---	---
		2480	1.3300	2479.337	2480.667	---	---
3DH1	Ant1	2402	1.3462	2401.333	2402.679	---	---
		2441	1.3319	2440.343	2441.675	---	---
		2480	1.3365	2479.337	2480.673	---	---

Test Graphs





2DH1_Ant1_2441



2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



3DH1_Ant1_2480

Appendix A.3: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH1	Ant1	2402	7.96	≤ 20.97	PASS
		2441	9.04	≤ 20.97	PASS
		2480	9.67	≤ 20.97	PASS
2DH1	Ant1	2402	6.08	≤ 20.97	PASS
		2441	7.3	≤ 20.97	PASS
		2480	7.9	≤ 20.97	PASS
3DH1	Ant1	2402	6.2	≤ 20.97	PASS
		2441	7.45	≤ 20.97	PASS
		2480	8.05	≤ 20.97	PASS

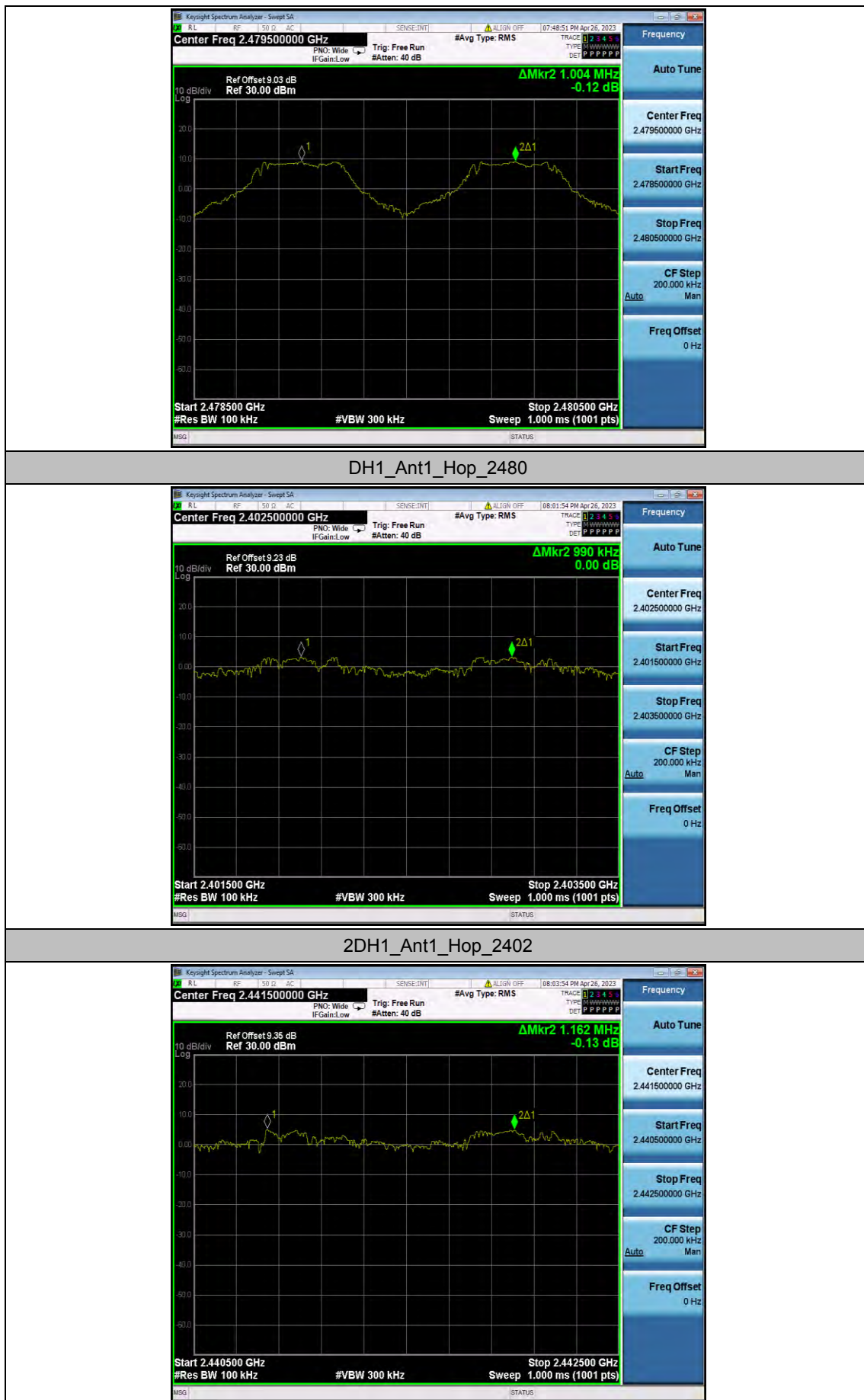
Appendix A.4: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	1.154	≥ 0.942	PASS
		Hop_2441	0.996	≥ 0.942	PASS
		Hop_2480	1.004	≥ 0.942	PASS
2DH1	Ant1	Hop_2402	0.99	≥ 0.962	PASS
		Hop_2441	1.162	≥ 0.962	PASS
		Hop_2480	1.156	≥ 0.962	PASS
3DH1	Ant1	Hop_2402	1.334	≥ 0.968	PASS
		Hop_2441	1.02	≥ 0.968	PASS
		Hop_2480	1.008	≥ 0.968	PASS

Test Graphs





2DH1_Ant1_Hop_2441



2DH1_Ant1_Hop_2480



3DH1_Ant1_Hop_2402

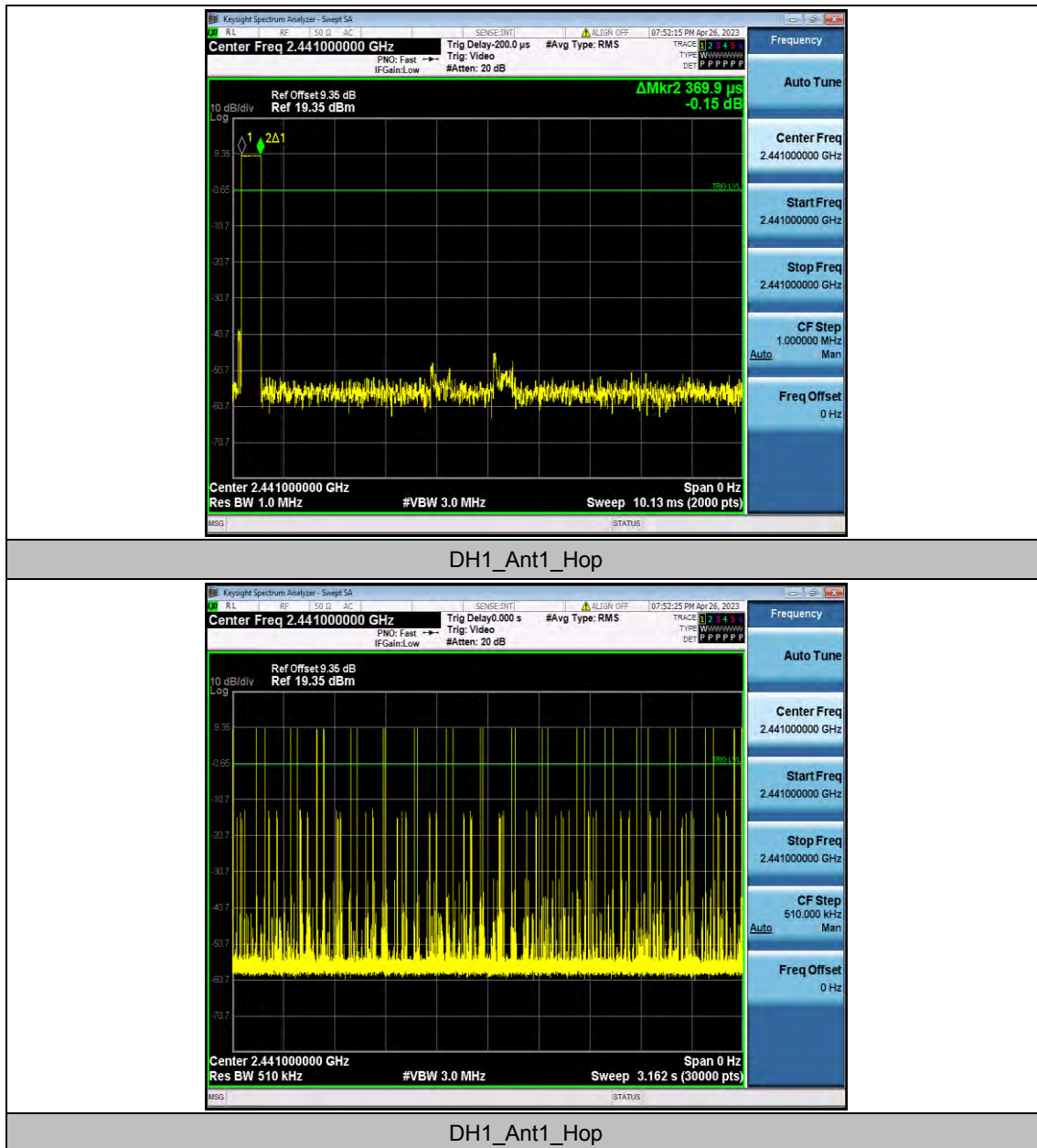


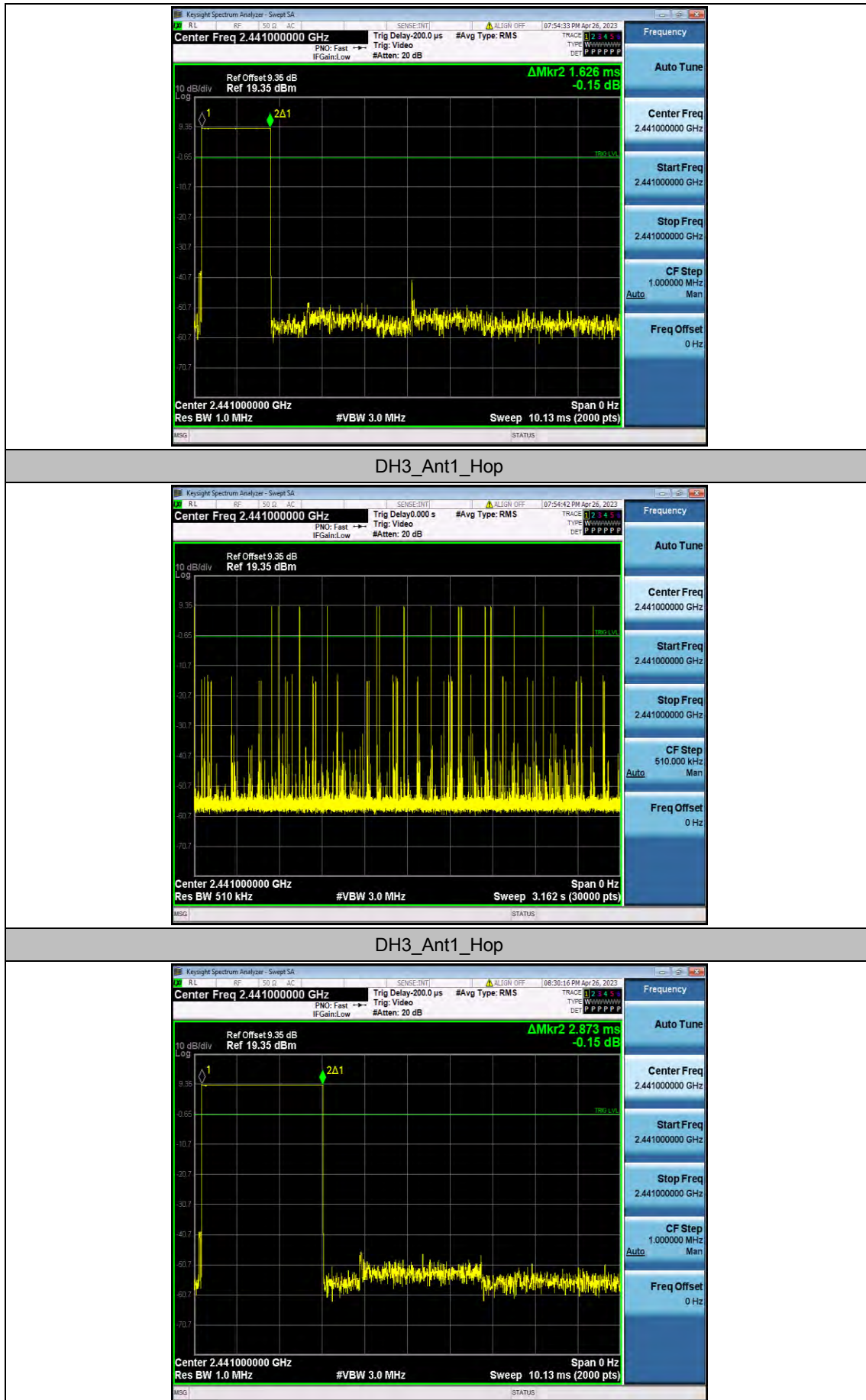
Appendix A.5: Time of occupancy

Test Result

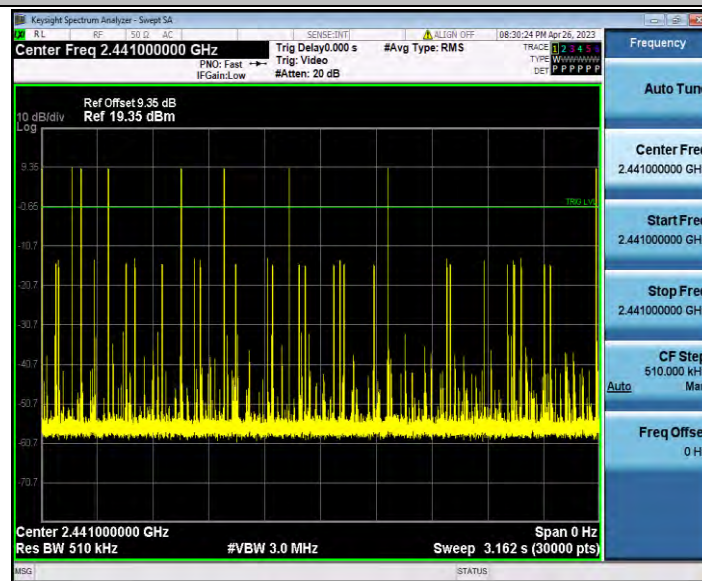
TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.37	330	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.63	160	0.26	≤0.4	PASS
DH5	Ant1	Hop	2.87	90	0.259	≤0.4	PASS
2DH1	Ant1	Hop	0.38	330	0.125	≤0.4	PASS
2DH3	Ant1	Hop	1.63	190	0.31	≤0.4	PASS
2DH5	Ant1	Hop	2.88	50	0.144	≤0.4	PASS
3DH1	Ant1	Hop	0.38	330	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.60	180	0.289	≤0.4	PASS
3DH5	Ant1	Hop	2.88	110	0.317	≤0.4	PASS

Test Graphs

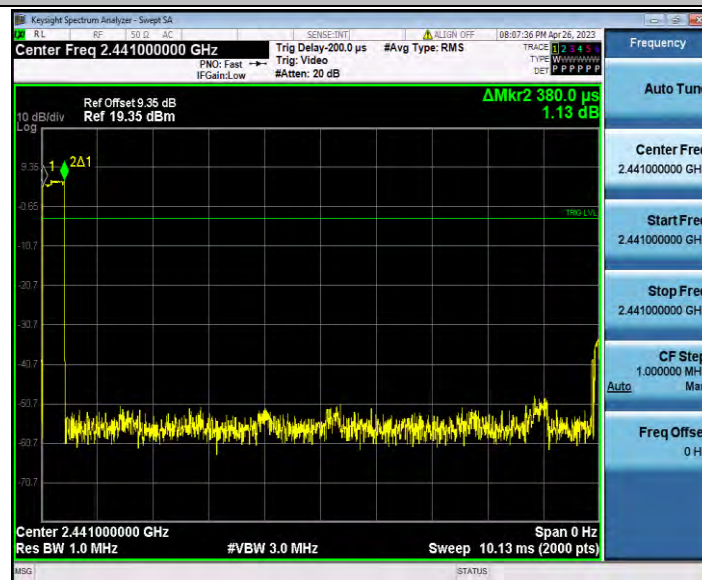




DH5_Ant1_Hop



DH5_Ant1_Hop



2DH1_Ant1_Hop

Keysight Spectrum Analyzer - Swept SA

SENSE-TWT ALIGN OFF 08:13:46 PM Apr 26, 2023

Center Freq 2.441000000 GHz Trig Delay 0.000 s #Avg Type: RMS

PNO: Fast IFGain: Low Trig: Video #Atten: 20 dB TYPE: WWWWWW DET: P P P P P P

Ref Offset: 9.35 dB
Ref 19.35 dBm

10 dB/div
Log

9.35
0.65
-0.7
-20.7
-30.7
-40.7
-50.7
-60.7
-70.7

TRIG LVL

Center 2.441000000 GHz Span 0 Hz
Res BW 510 kHz #VBW 3.0 MHz Sweep 3.162 s (30000 pts)

Auto Tune

Center Freq
2.441000000 GHz

Start Freq
2.441000000 GHz

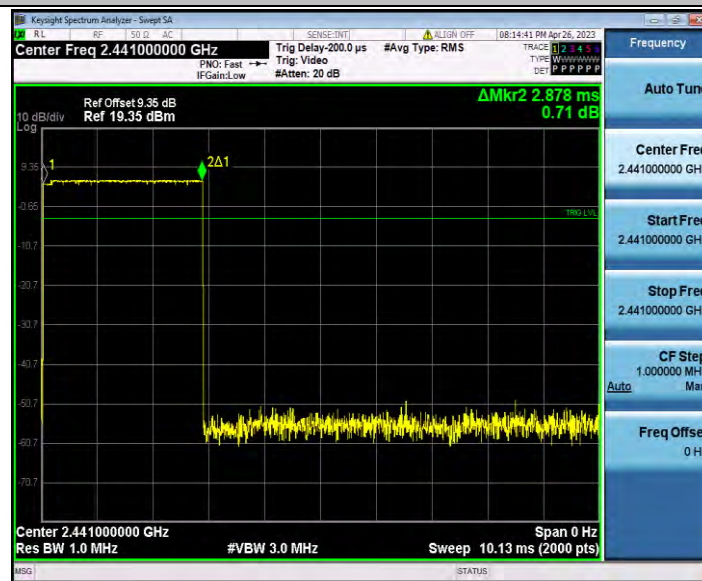
Stop Freq
2.441000000 GHz

CF Step
510.000 kHz
Auto Man

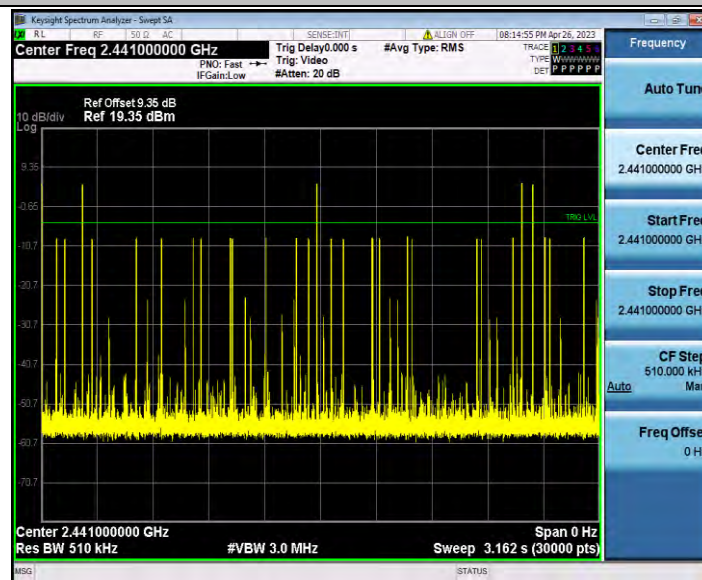
Freq Offset
0 Hz

MSG STATUS

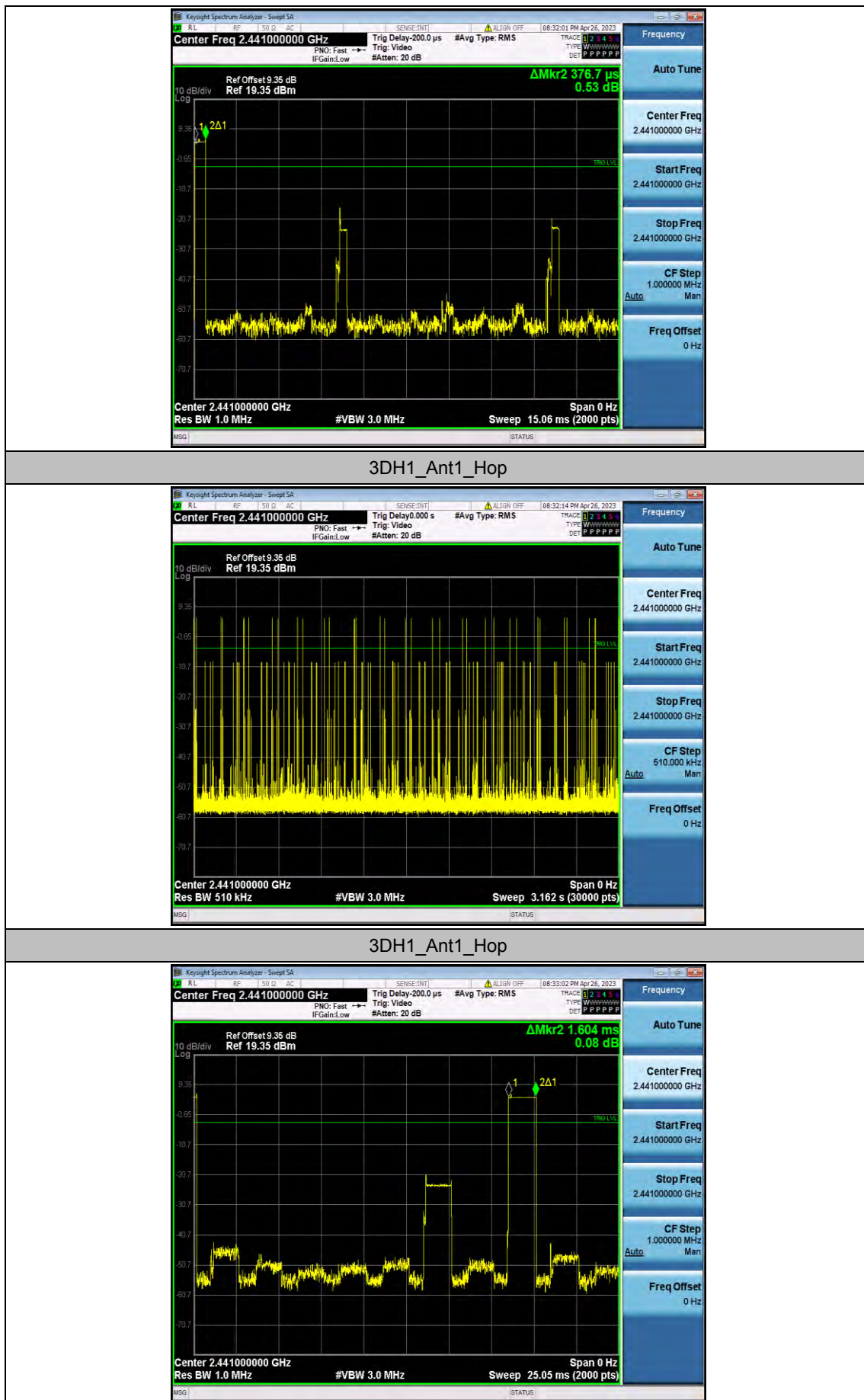
2DH3_Ant1_Hop



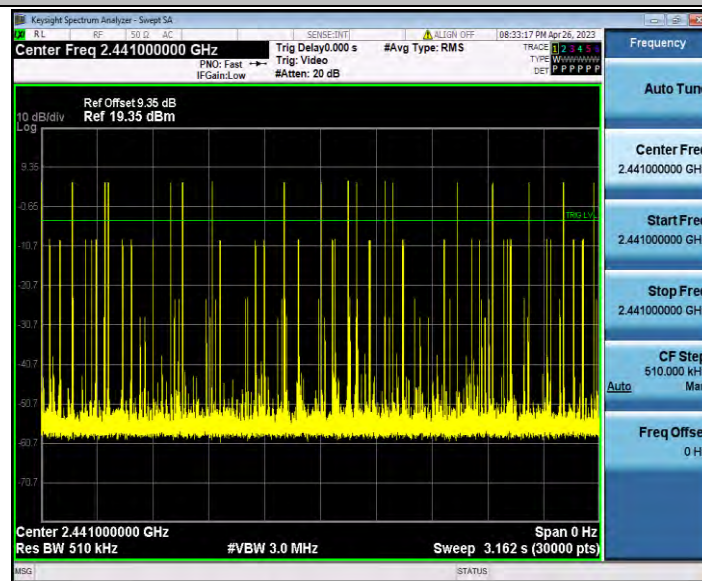
2DH5_Ant1_Hop



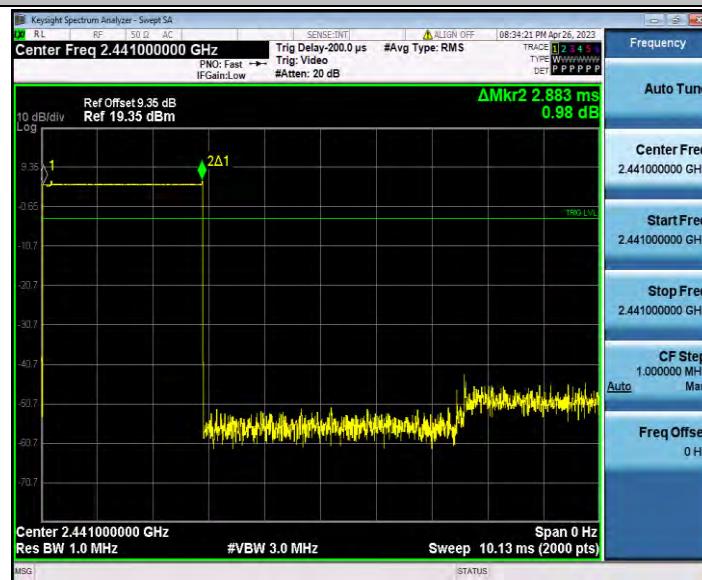
2DH5_Ant1_Hop



3DH3_Ant1_Hop



3DH3_Ant1_Hop



3DH5_Ant1_Hop

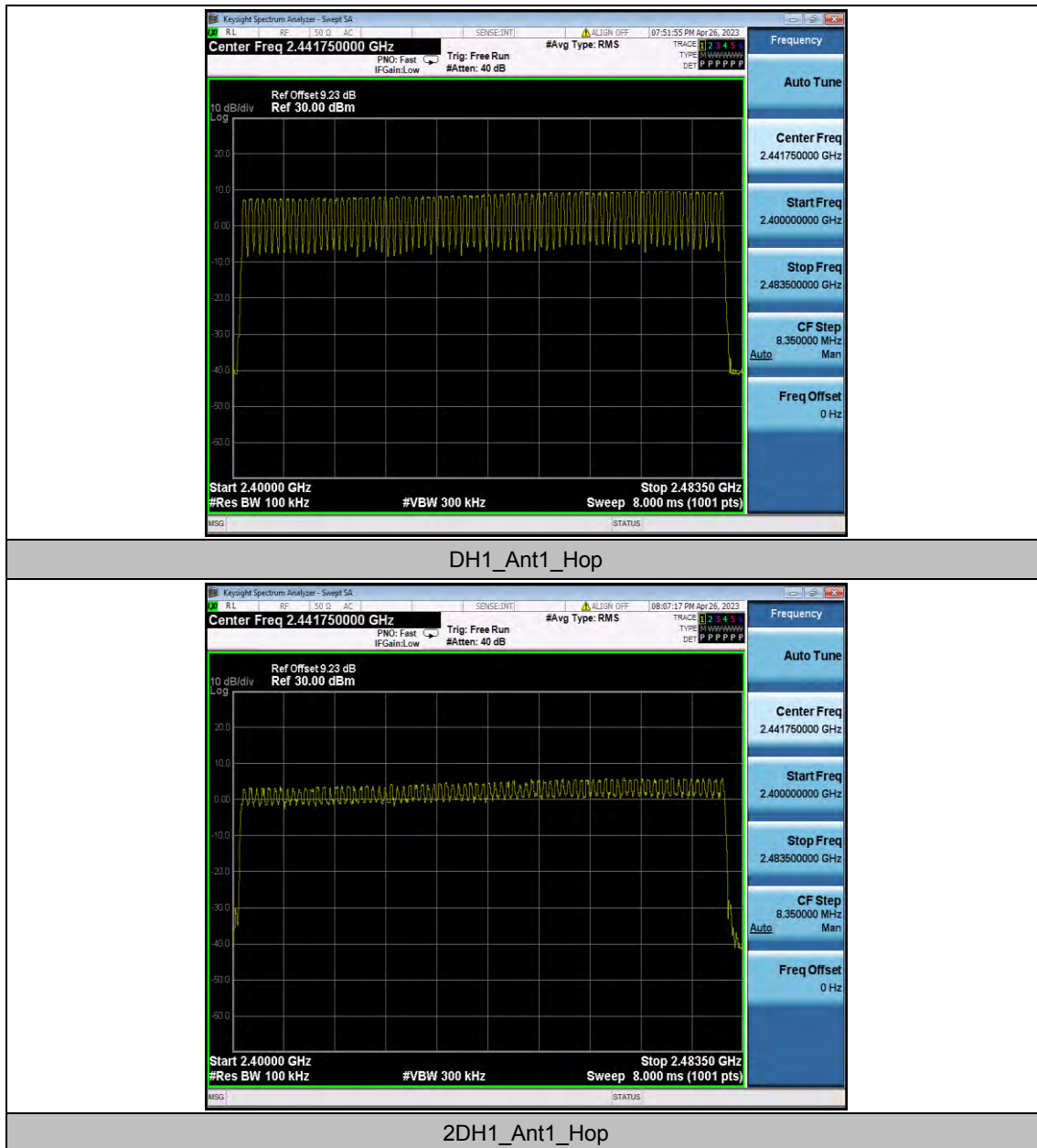


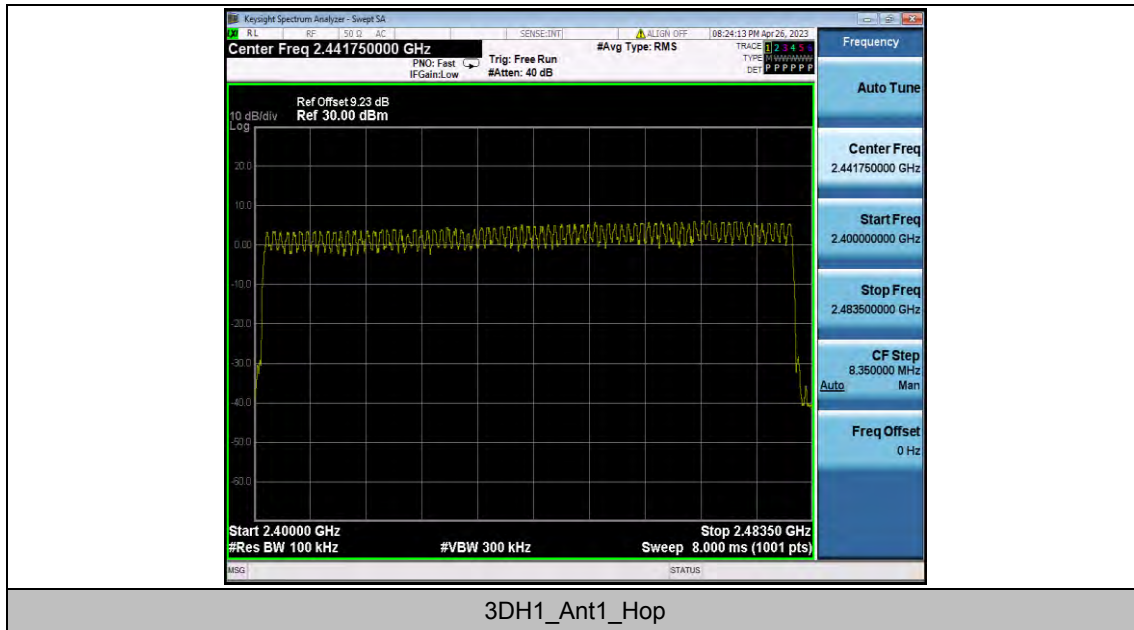
Appendix A.6: Number of hopping channels

Test Result

TestMode	Antenna	Frequency[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



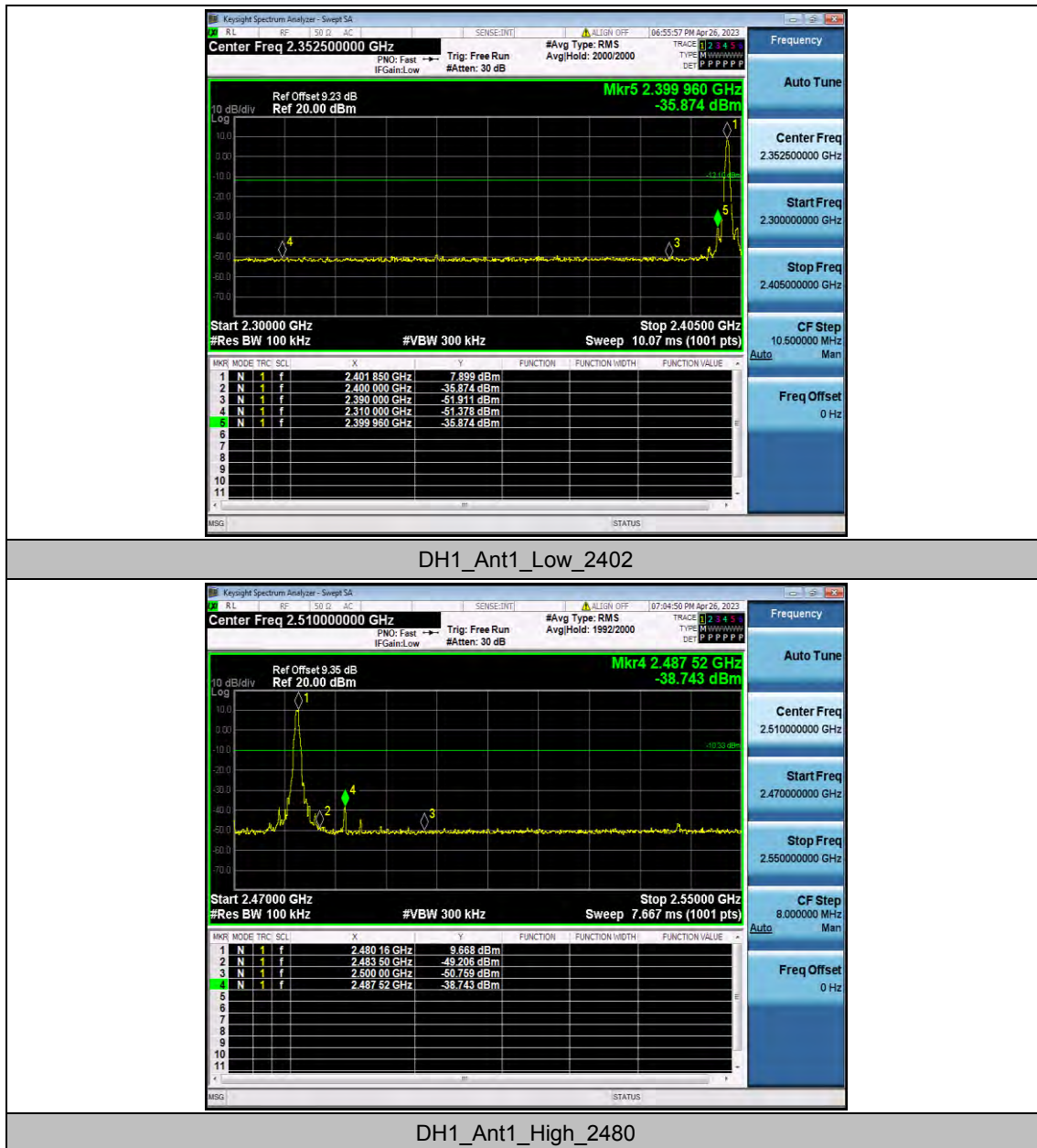


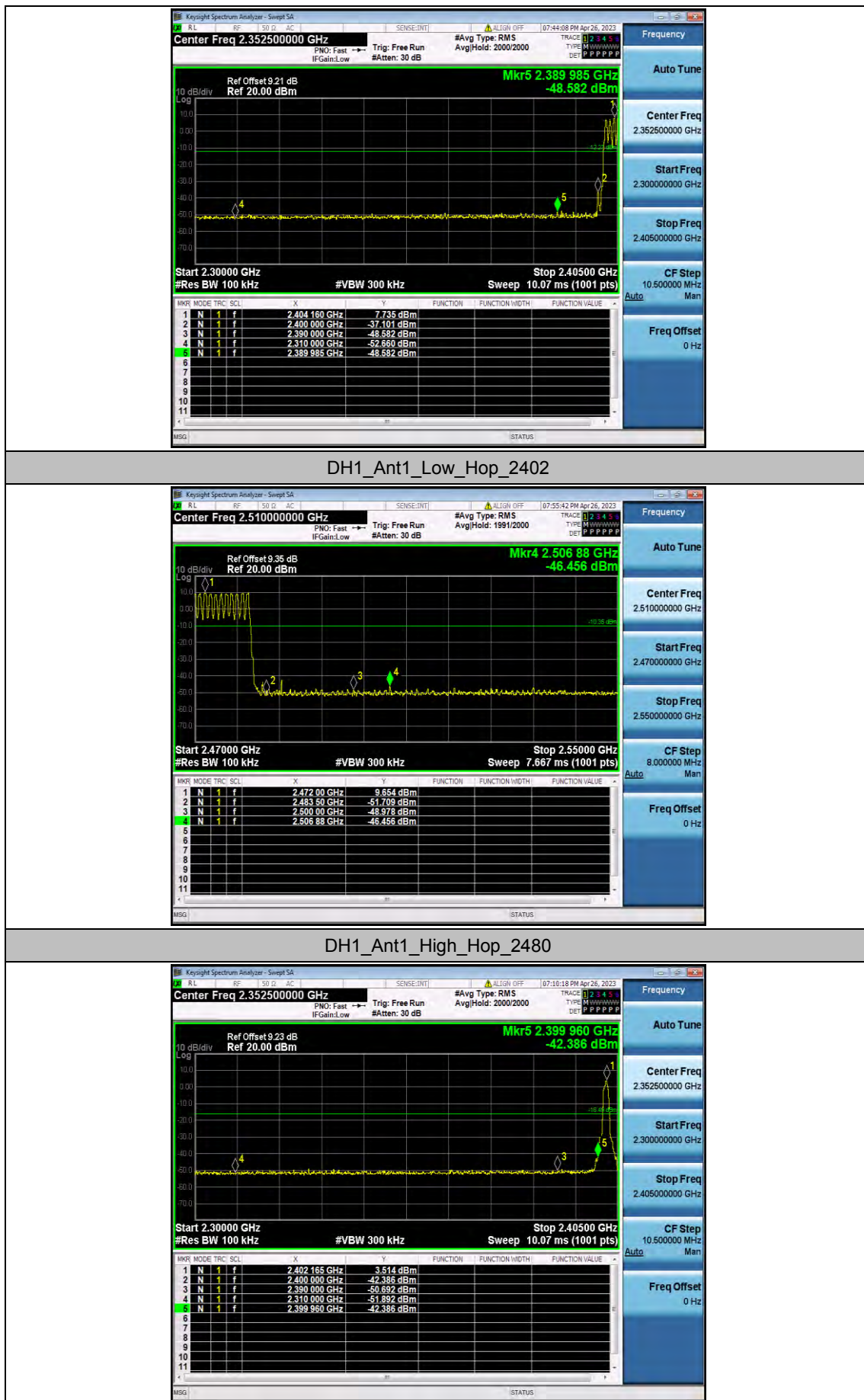
Appendix A.7: Band edge measurements

Test Result

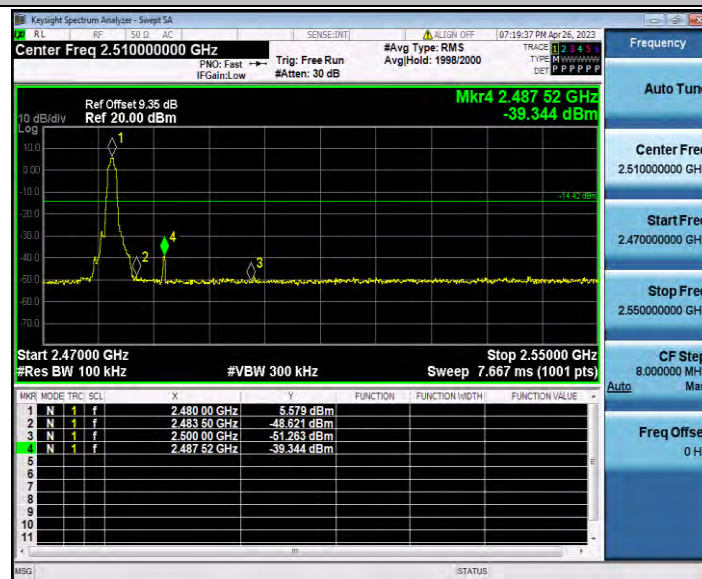
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	7.90	-35.87	≤-12.1	PASS
		High	2480	9.67	-38.74	≤-10.33	PASS
		Low	Hop_2402	7.74	-48.58	≤-12.27	PASS
		High	Hop_2480	9.65	-46.46	≤-10.35	PASS
2DH1	Ant1	Low	2402	3.51	-42.39	≤-16.49	PASS
		High	2480	5.58	-39.34	≤-14.42	PASS
		Low	Hop_2402	2.83	-49.09	≤-17.18	PASS
		High	Hop_2480	6.09	-47.95	≤-13.91	PASS
3DH1	Ant1	Low	2402	3.52	-40.29	≤-16.48	PASS
		High	2480	5.68	-38.76	≤-14.32	PASS
		Low	Hop_2402	2.57	-49.35	≤-17.43	PASS
		High	Hop_2480	5.57	-48.57	≤-14.43	PASS

Test Graphs

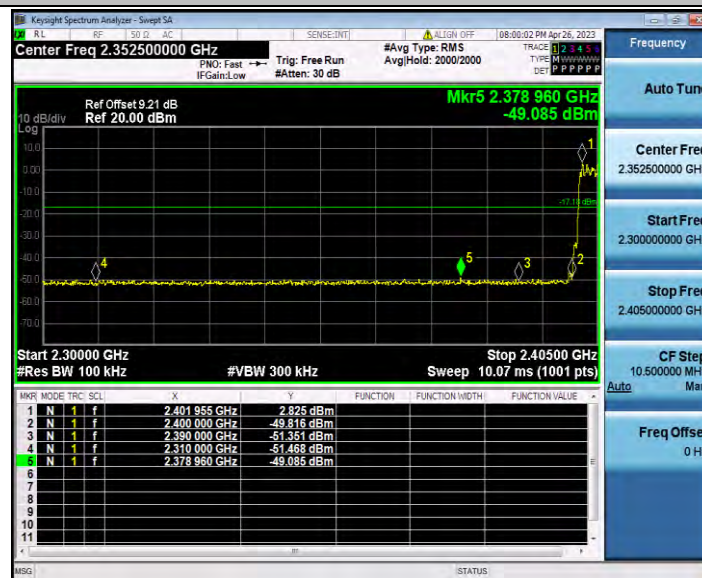




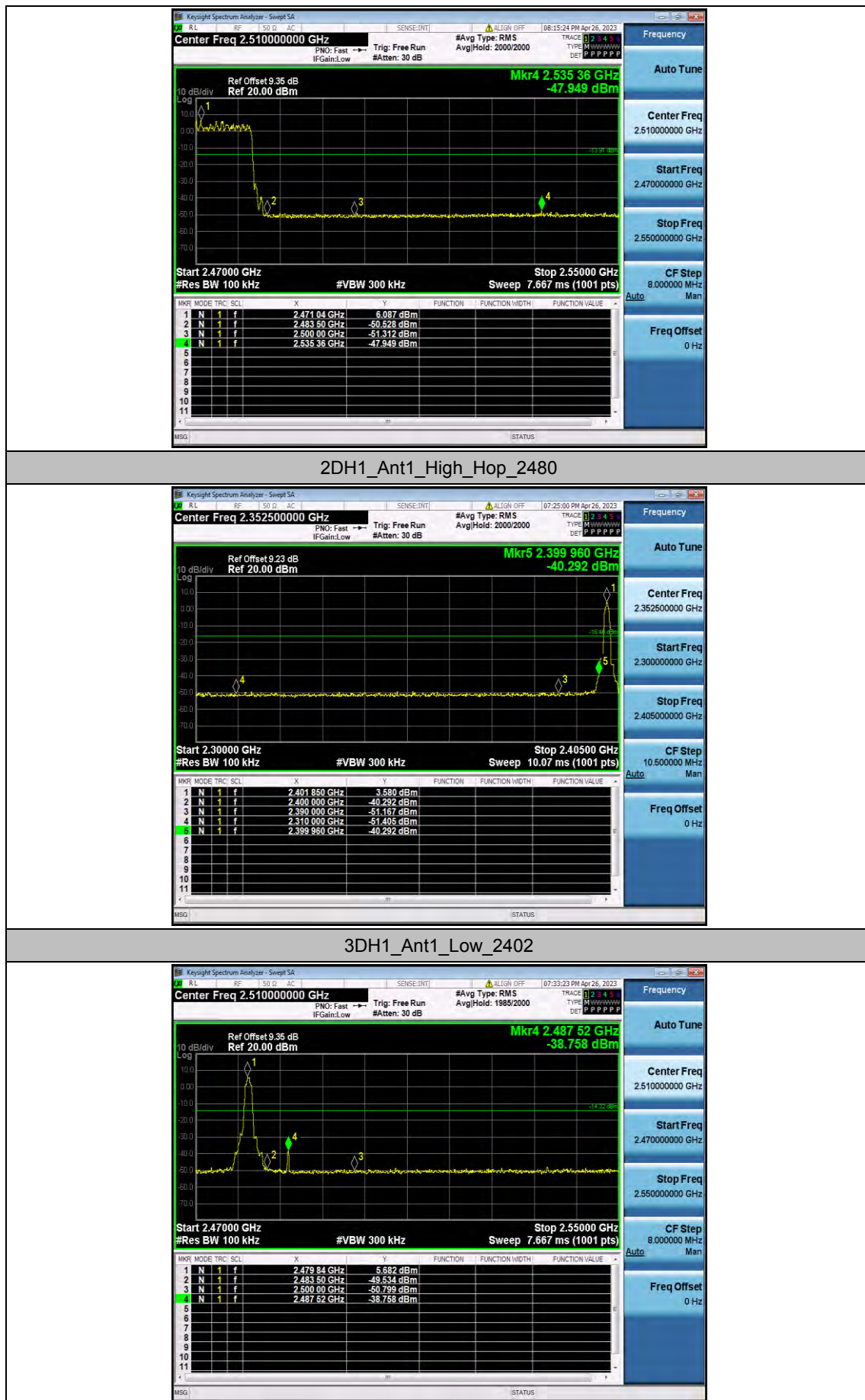
2DH1_Ant1_Low_2402



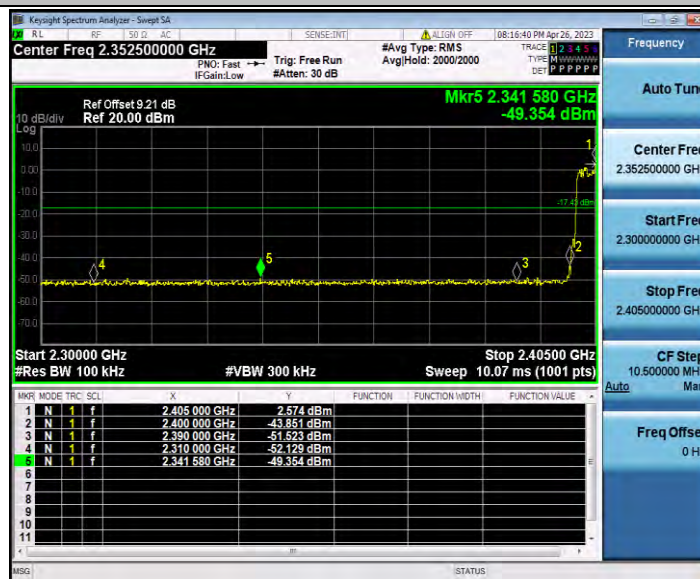
2DH1_Ant1_High_2480



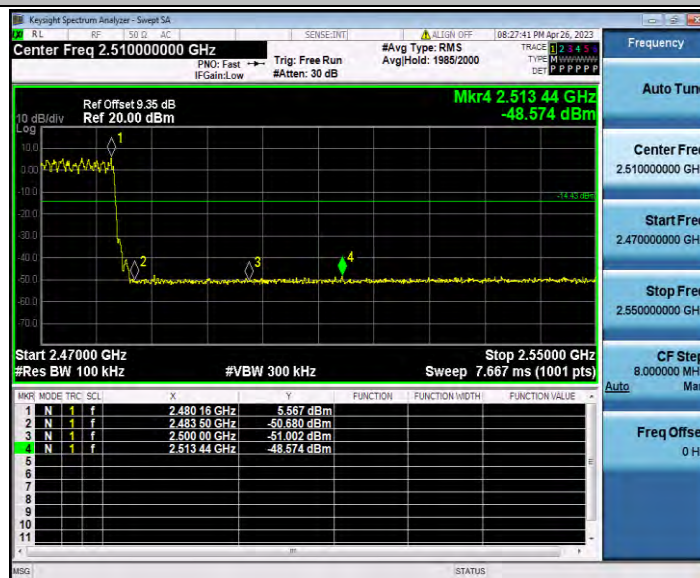
2DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_2480



3DH1_Ant1_Low_Hop_2402



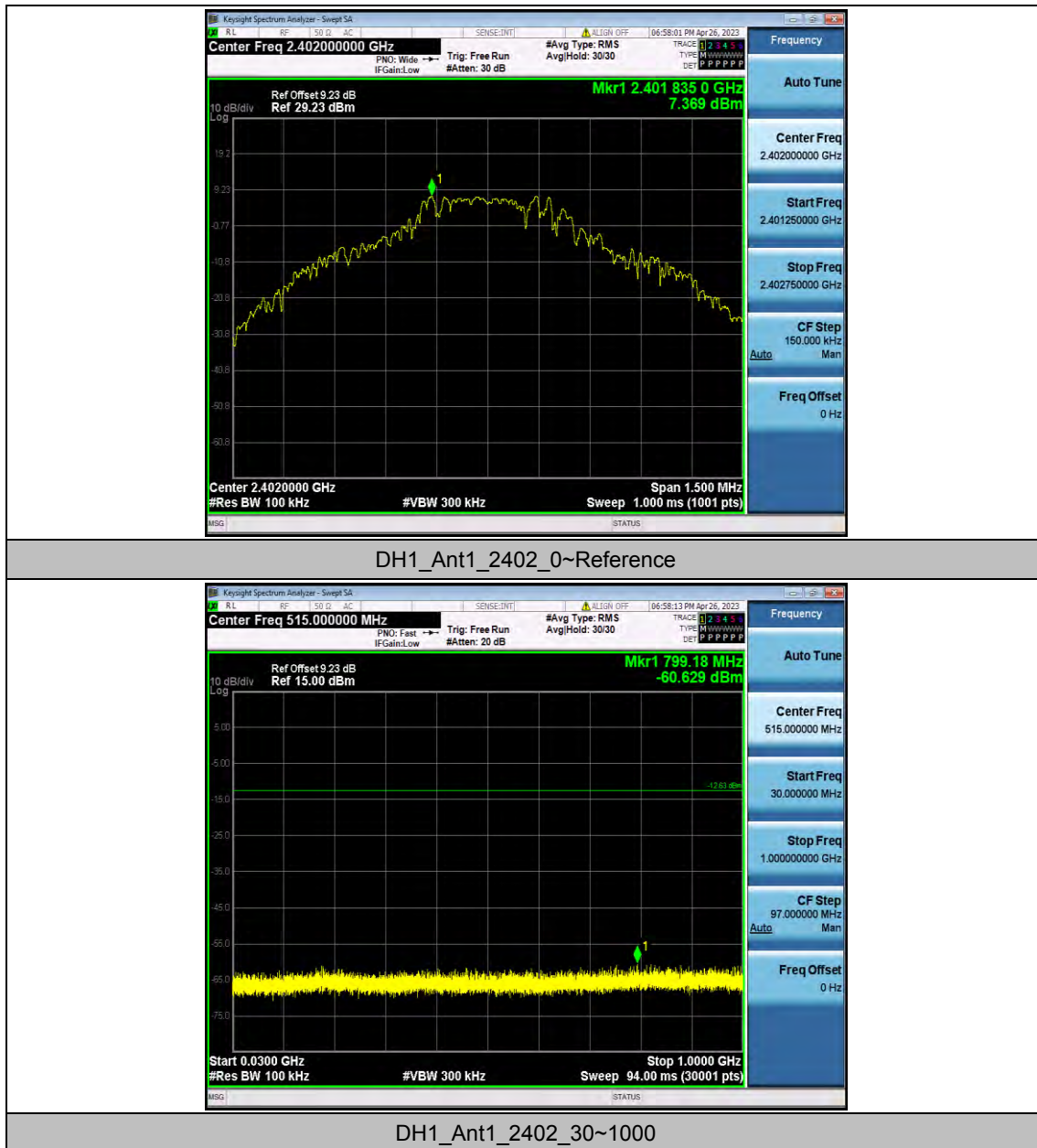
3DH1_Ant1_High_Hop_2480

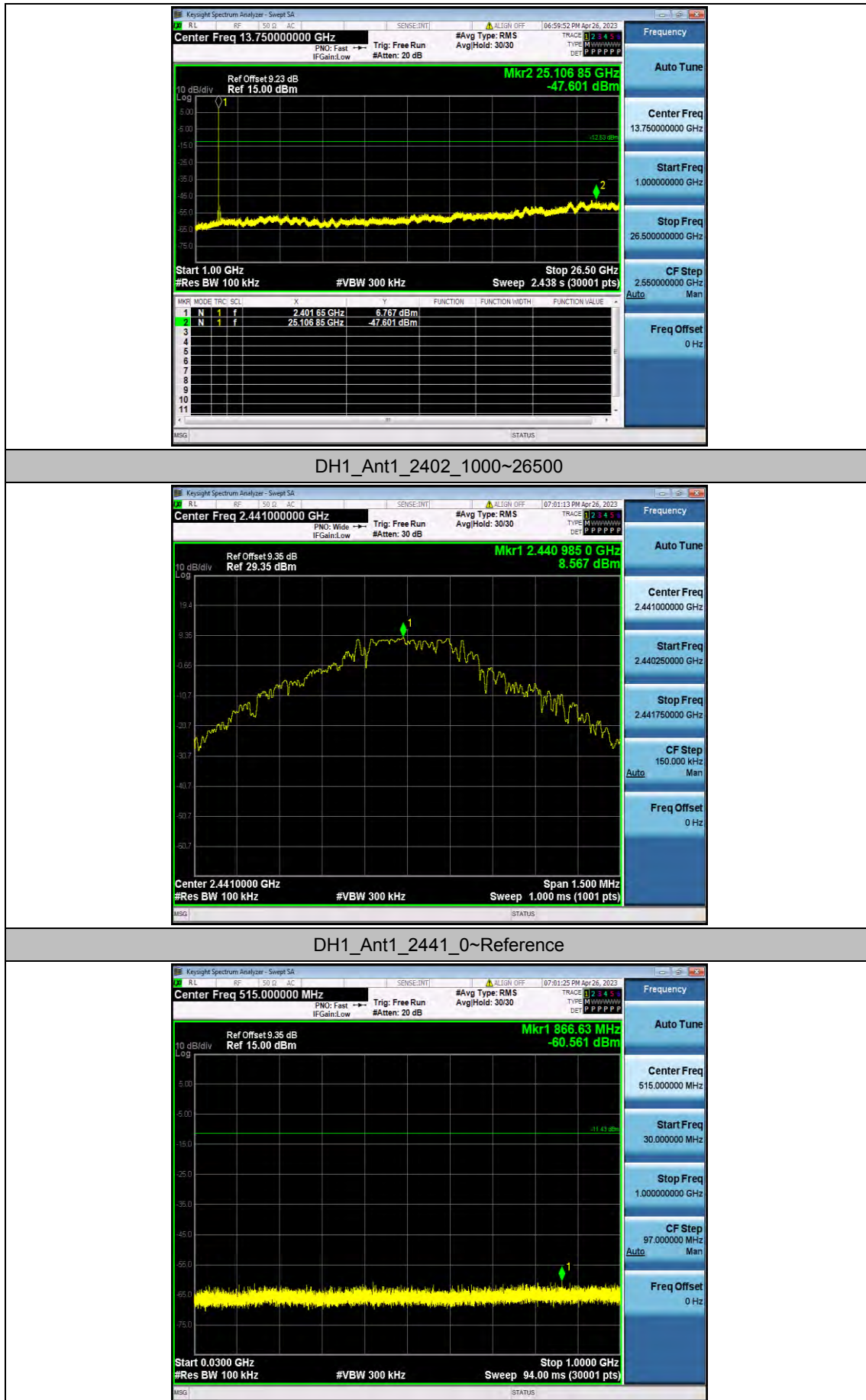
Appendix A.8: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	7.37	7.37	---	PASS
			30~1000	7.37	-60.63	≤ -12.63	PASS
			1000~26500	7.37	-47.6	≤ -12.63	PASS
		2441	Reference	8.57	8.57	---	PASS
			30~1000	8.57	-60.56	≤ -11.43	PASS
			1000~26500	8.57	-47.67	≤ -11.43	PASS
		2480	Reference	9.57	9.57	---	PASS
			30~1000	9.57	-50.37	≤ -10.43	PASS
			1000~26500	9.57	-47.55	≤ -10.43	PASS
2DH1	Ant1	2402	Reference	3.14	3.14	---	PASS
			30~1000	3.14	-60.63	≤ -16.86	PASS
			1000~26500	3.14	-47.81	≤ -16.86	PASS
		2441	Reference	4.65	4.65	---	PASS
			30~1000	4.65	-50.07	≤ -15.35	PASS
			1000~26500	4.65	-47.64	≤ -15.35	PASS
		2480	Reference	4.99	4.99	---	PASS
			30~1000	4.99	-60.86	≤ -15.01	PASS
			1000~26500	4.99	-47.82	≤ -15.01	PASS
3DH1	Ant1	2402	Reference	3.27	3.27	---	PASS
			30~1000	3.27	-60.89	≤ -16.73	PASS
			1000~26500	3.27	-47.56	≤ -16.73	PASS
		2441	Reference	4.77	4.77	---	PASS
			30~1000	4.77	-60.46	≤ -15.23	PASS
			1000~26500	4.77	-46.74	≤ -15.23	PASS
		2480	Reference	5.35	5.35	---	PASS
			30~1000	5.35	-60.15	≤ -14.65	PASS
			1000~26500	5.35	-47.29	≤ -14.65	PASS

Test Graphs





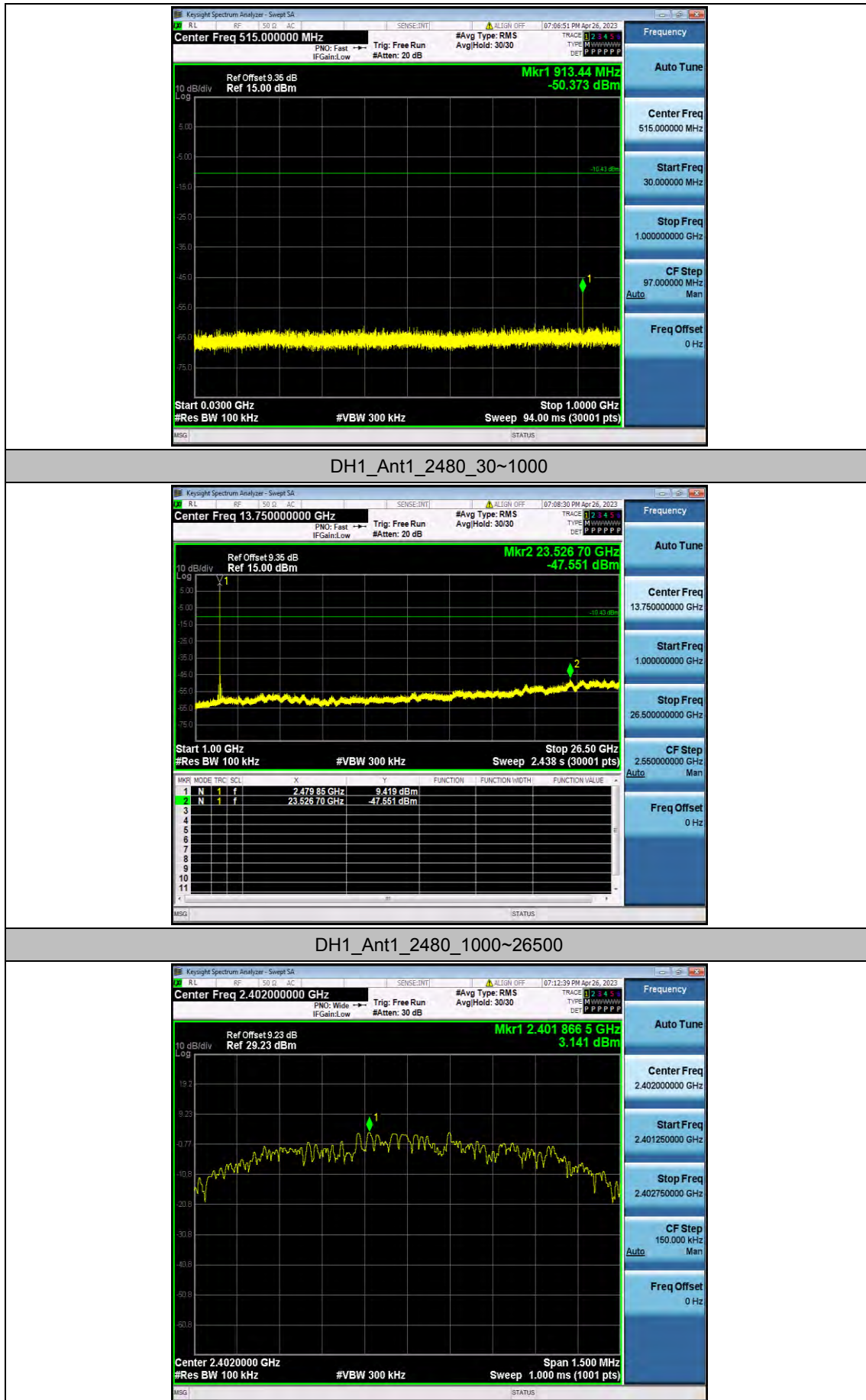
DH1_Ant1_2441_30~1000



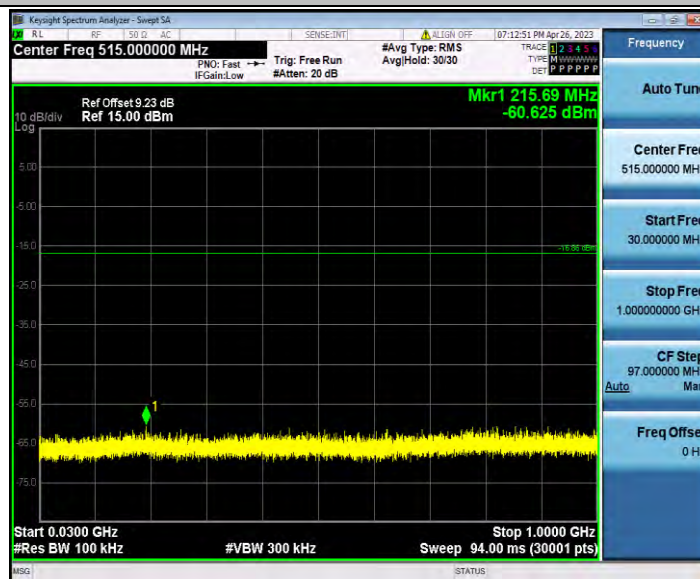
DH1_Ant1_2441_1000~26500



DH1_Ant1_2480_0~Reference



2DH1_Ant1_2402_0~Reference



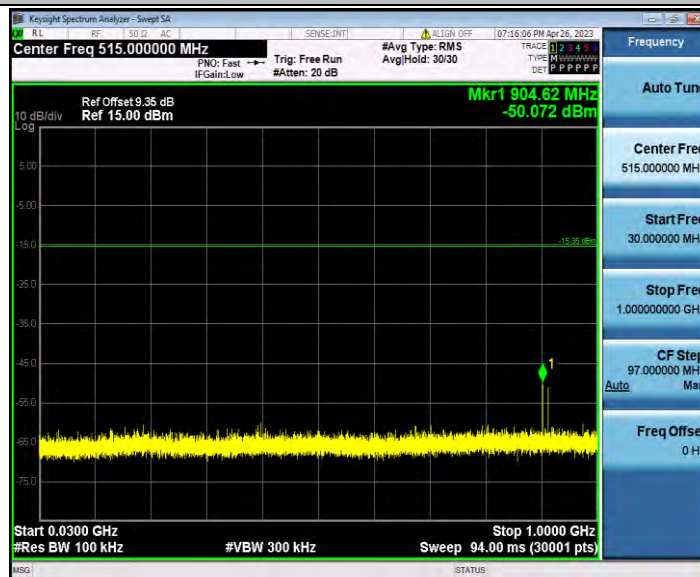
2DH1_Ant1_2402_30~1000



2DH1_Ant1_2402_1000~26500



2DH1_Ant1_2441_0~Reference



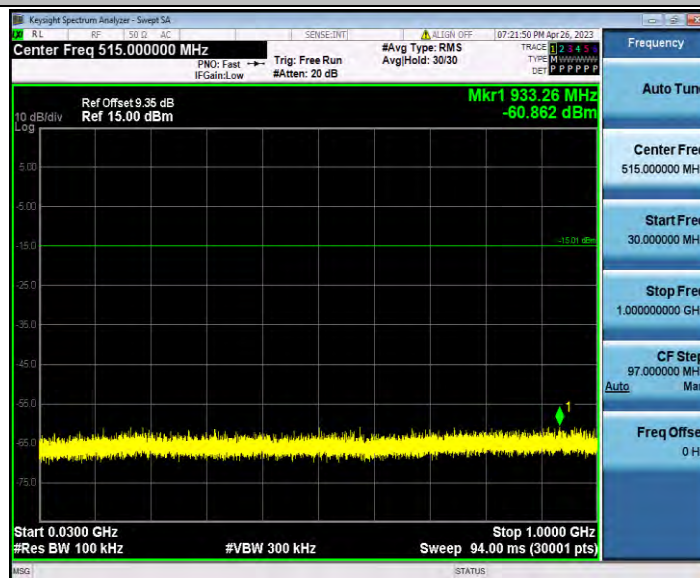
2DH1_Ant1_2441_30~1000



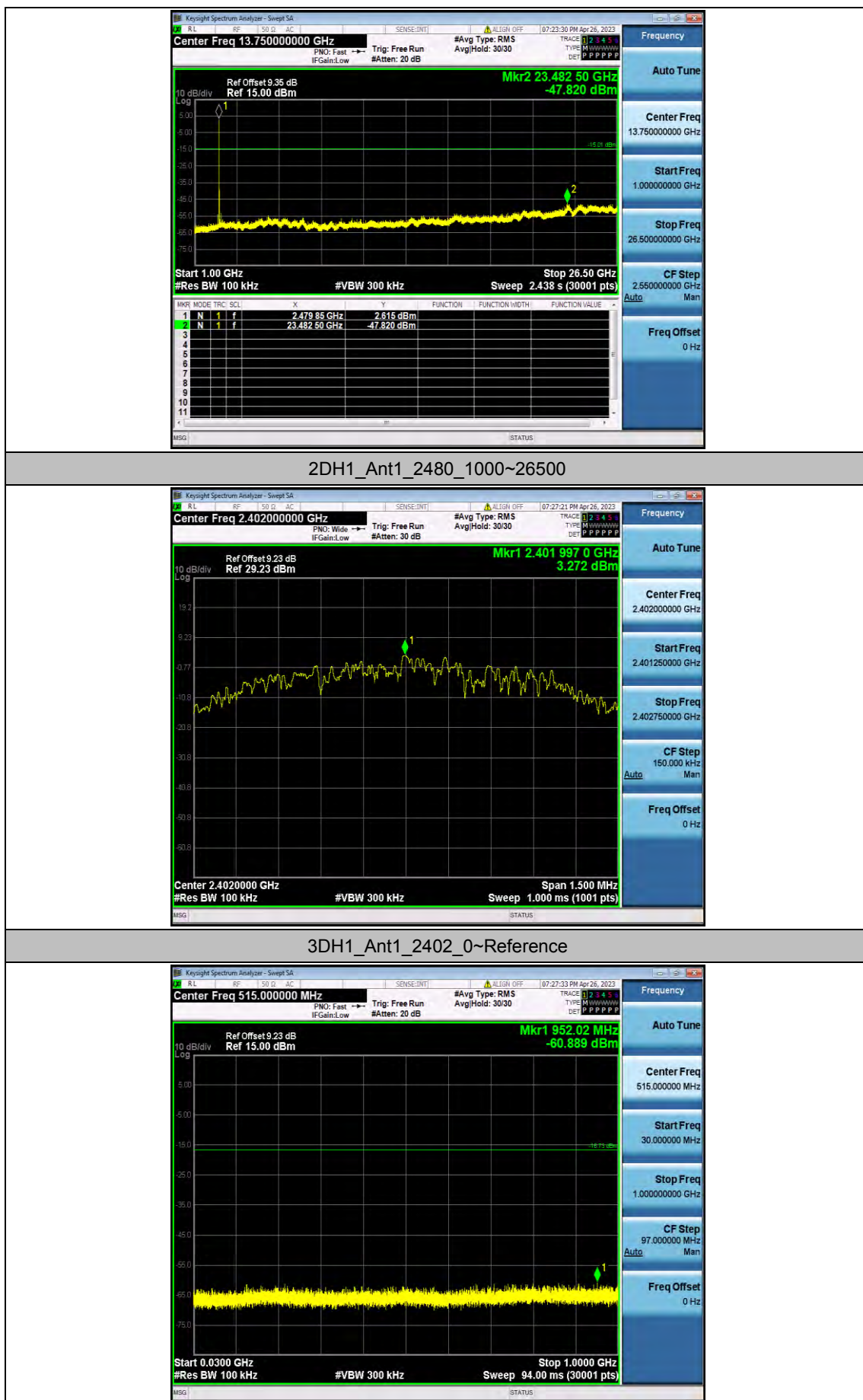
2DH1_Ant1_2441_1000~26500

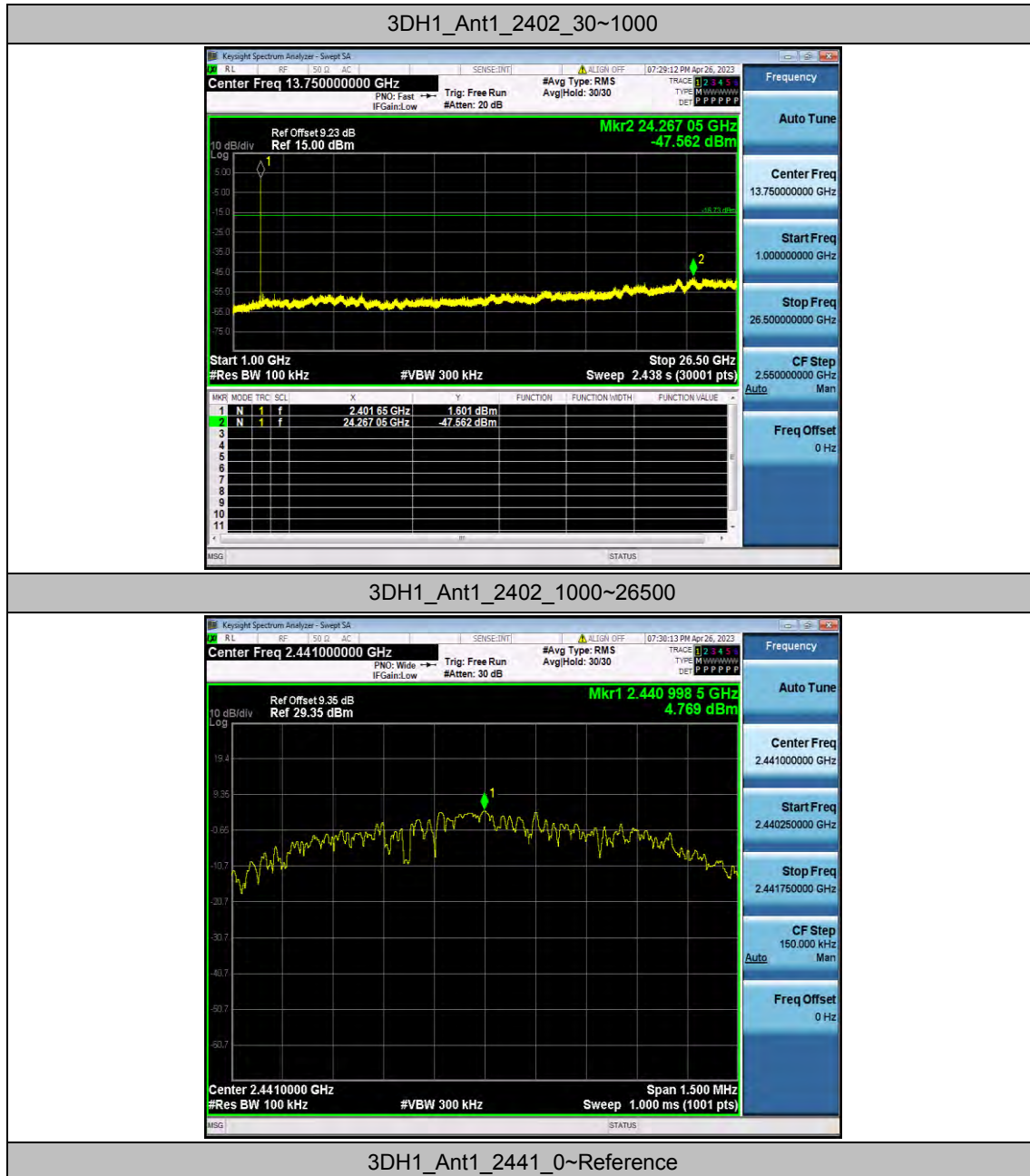


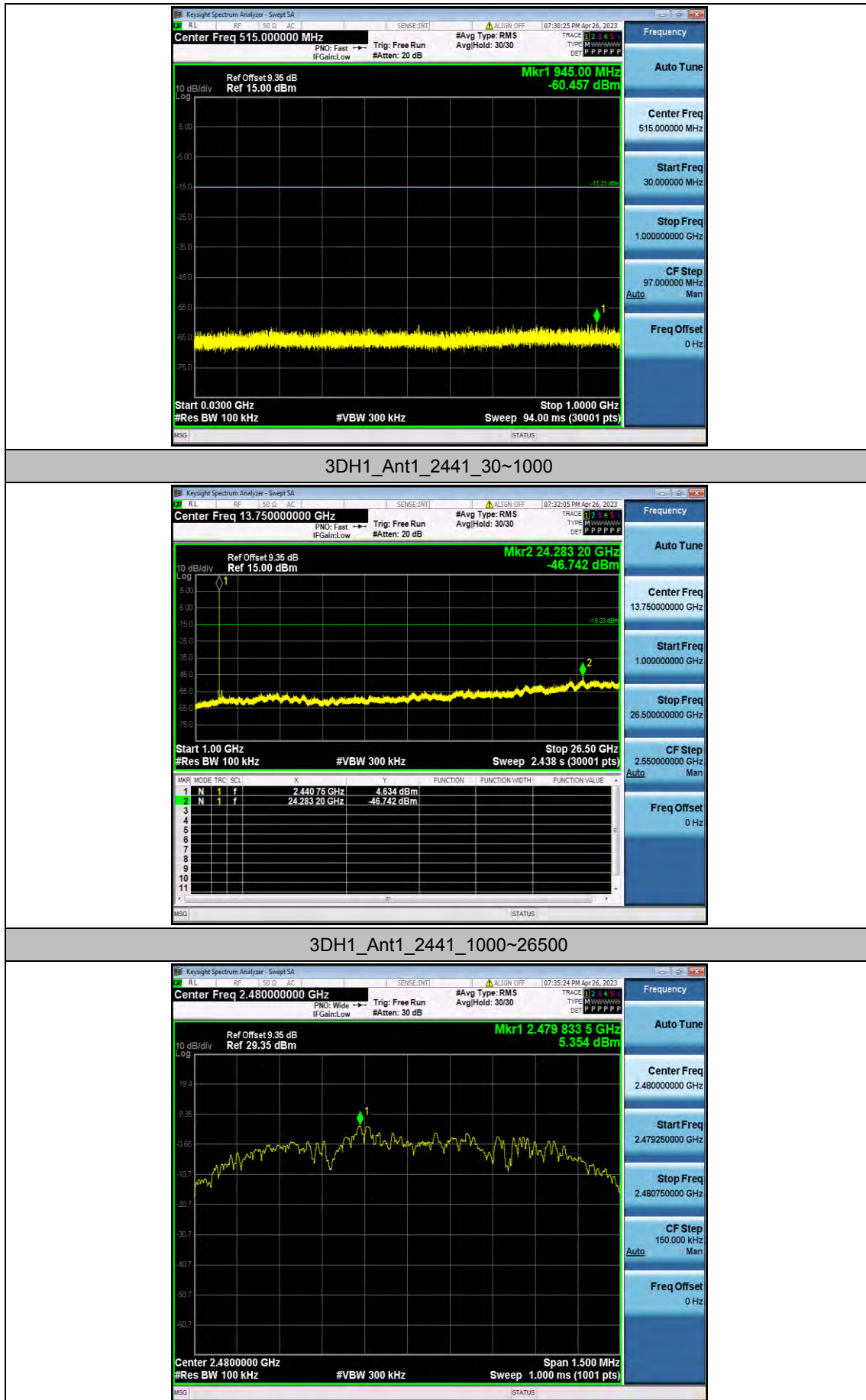
2DH1_Ant1_2480_0~Reference



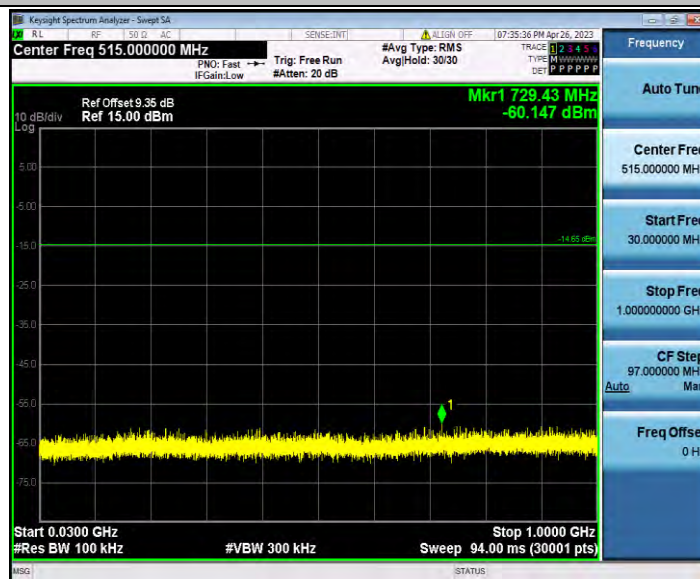
2DH1_Ant1_2480_30~1000







3DH1_Ant1_2480_0~Reference



3DH1_Ant1_2480_30~1000



3DH1_Ant1_2480_1000~26500