

Case No. : <u>GTS20240320024-1-10</u>	
Ambient Condition: <u>22</u> °C, <u>57</u> %RH	
According Standard: ■Part15C	
Test Date: <u>2024.4.9</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	0.960	2401.508	2402.468	---	---
		2441	0.888	2440.538	2441.426	---	---
		2480	0.888	2479.541	2480.429	---	---
2DH1	Ant1	2402	1.458	2401.238	2402.696	---	---
		2441	1.479	2440.229	2441.708	---	---
		2480	1.464	2479.235	2480.699	---	---
3DH1	Ant1	2402	1.458	2401.268	2402.726	---	---
		2441	1.446	2440.277	2441.723	---	---
		2480	1.437	2479.277	2480.714	---	---

Test Graphs

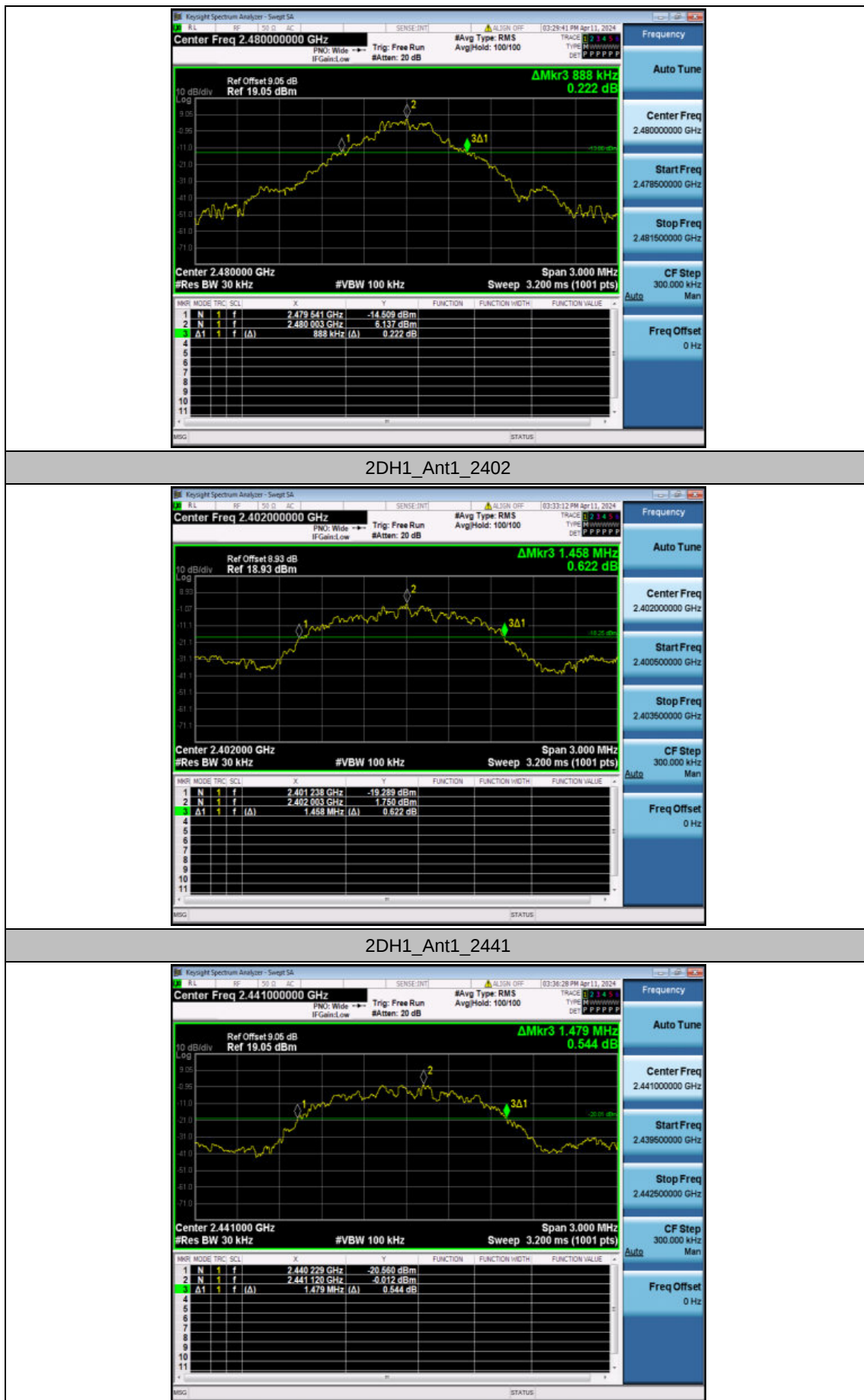
DH1_Ant1_2402



DH1_Ant1_2441



DH1_Ant1_2480



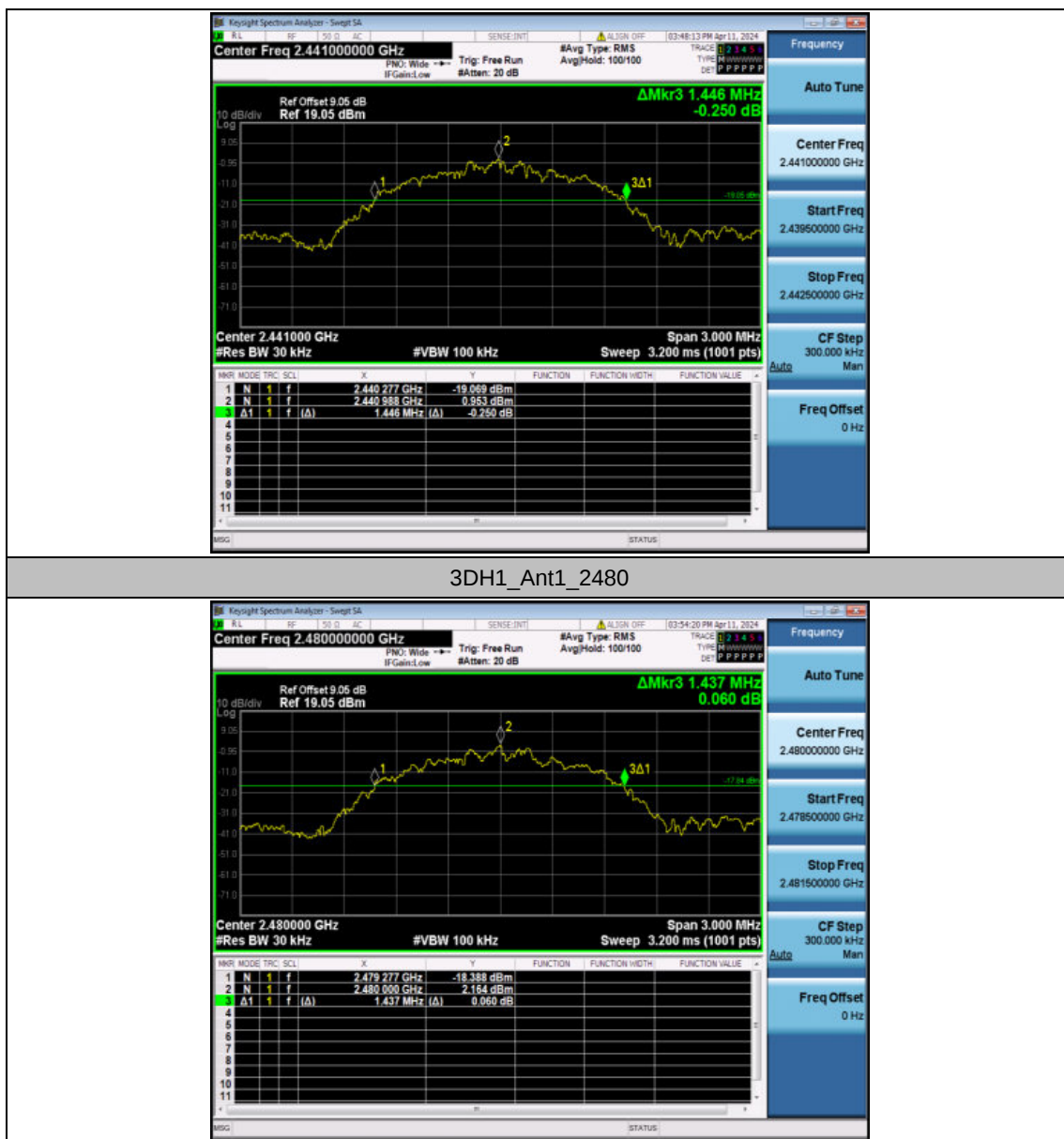
2DH1_Ant1_2480



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	0.87855	2401.5582	2402.4367	---	---
		2441	0.85136	2440.5684	2441.4197	---	---
		2480	0.86034	2479.5625	2480.4229	---	---
2DH1	Ant1	2402	1.3481	2401.3151	2402.6632	---	---
		2441	1.3349	2440.3253	2441.6602	---	---
		2480	1.3410	2479.3222	2480.6632	---	---
3DH1	Ant1	2402	1.3404	2401.3173	2402.6577	---	---
		2441	1.3425	2440.3238	2441.6663	---	---
		2480	1.3437	2479.3205	2480.6642	---	---

Test Graphs

DH1_Ant1_2402



DH1_Ant1_2441



DH1_Ant1_2480



2DH1_Ant1_2402



2DH1_Ant1_2441



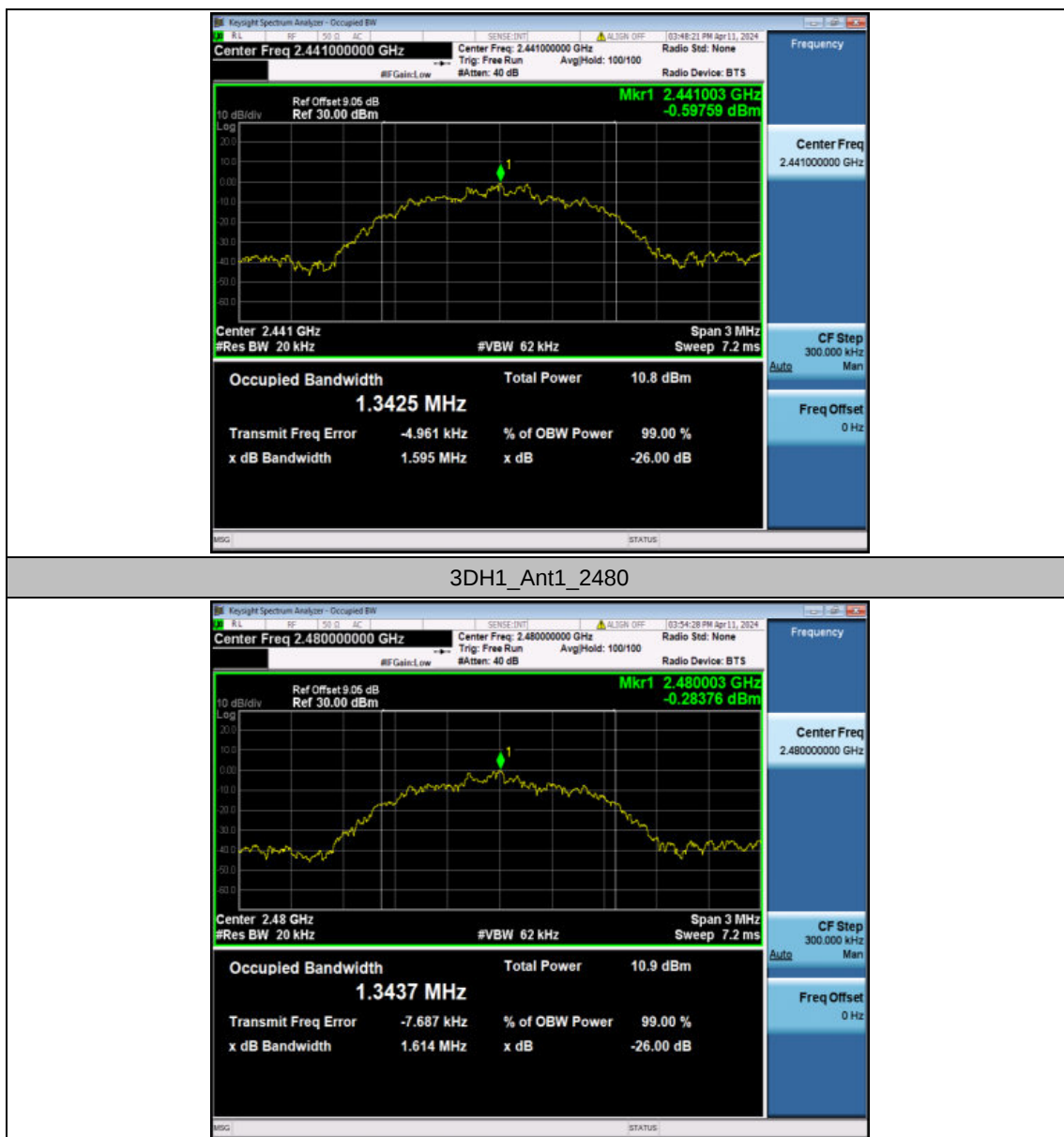
2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



Appendix A.3: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH1	Ant1	2402	6.81	≤20.97	PASS
		2441	7.83	≤20.97	PASS
		2480	7.57	≤20.97	PASS
2DH1	Ant1	2402	5.78	≤20.97	PASS
		2441	5.92	≤20.97	PASS
		2480	6.34	≤20.97	PASS
3DH1	Ant1	2402	5.83	≤20.97	PASS
		2441	6.15	≤20.97	PASS
		2480	6.60	≤20.97	PASS

Appendix A.4: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	0.848	≥ 0.640	PASS
		Hop_2441	1.006	≥ 0.640	PASS
		Hop_2480	0.842	≥ 0.640	PASS
2DH1	Ant1	Hop_2402	1.102	≥ 0.986	PASS
		Hop_2441	0.998	≥ 0.986	PASS
		Hop_2480	1.01	≥ 0.986	PASS
3DH1	Ant1	Hop_2402	1.008	≥ 0.972	PASS
		Hop_2441	1.156	≥ 0.972	PASS
		Hop_2480	1.334	≥ 0.972	PASS

Test Graphs

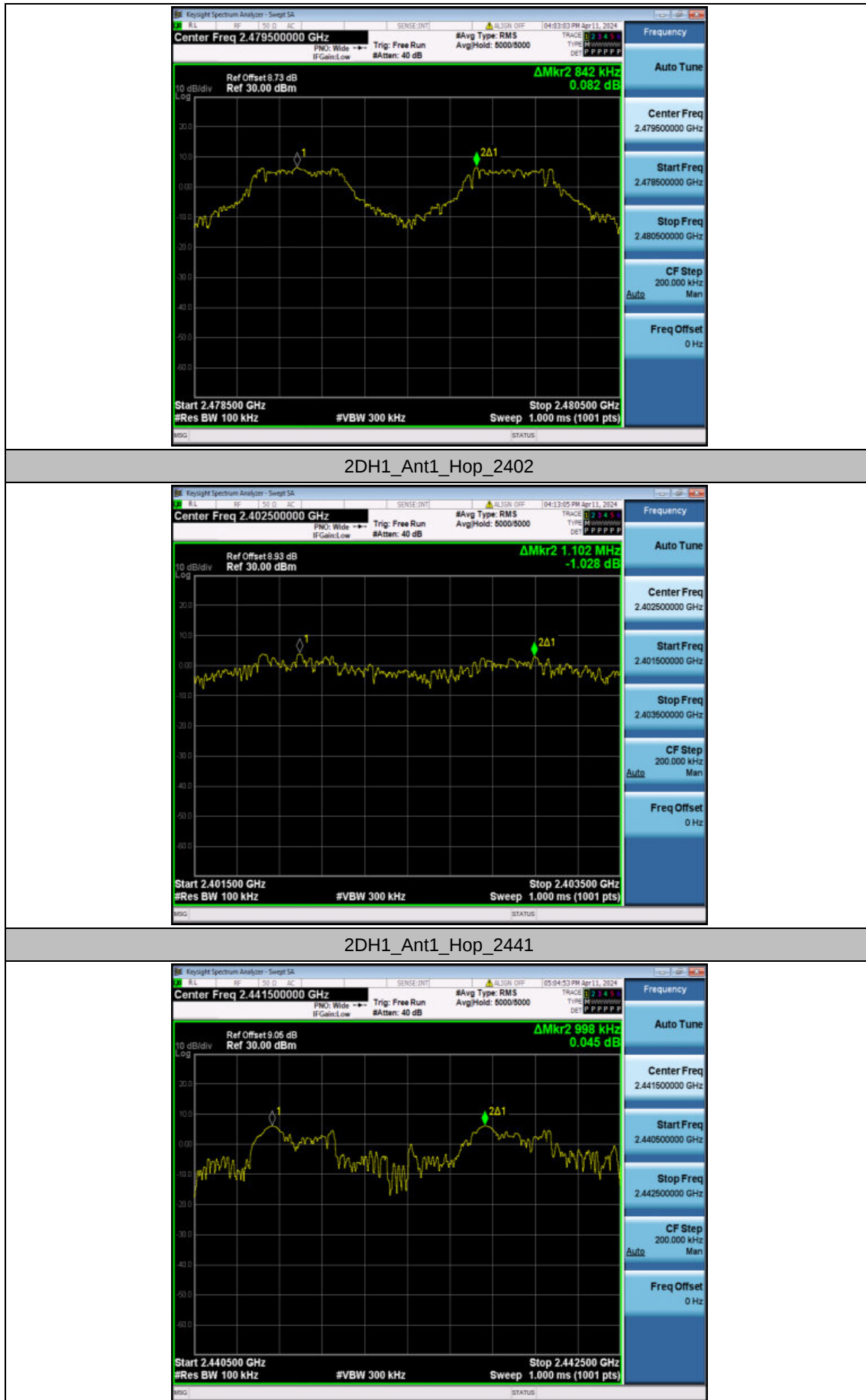
DH1_Ant1_Hop_2402



DH1_Ant1_Hop_2441



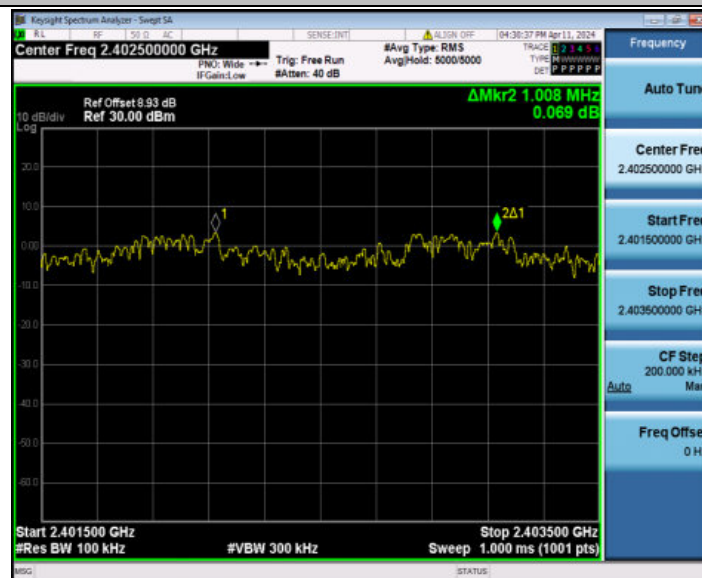
DH1_Ant1_Hop_2480



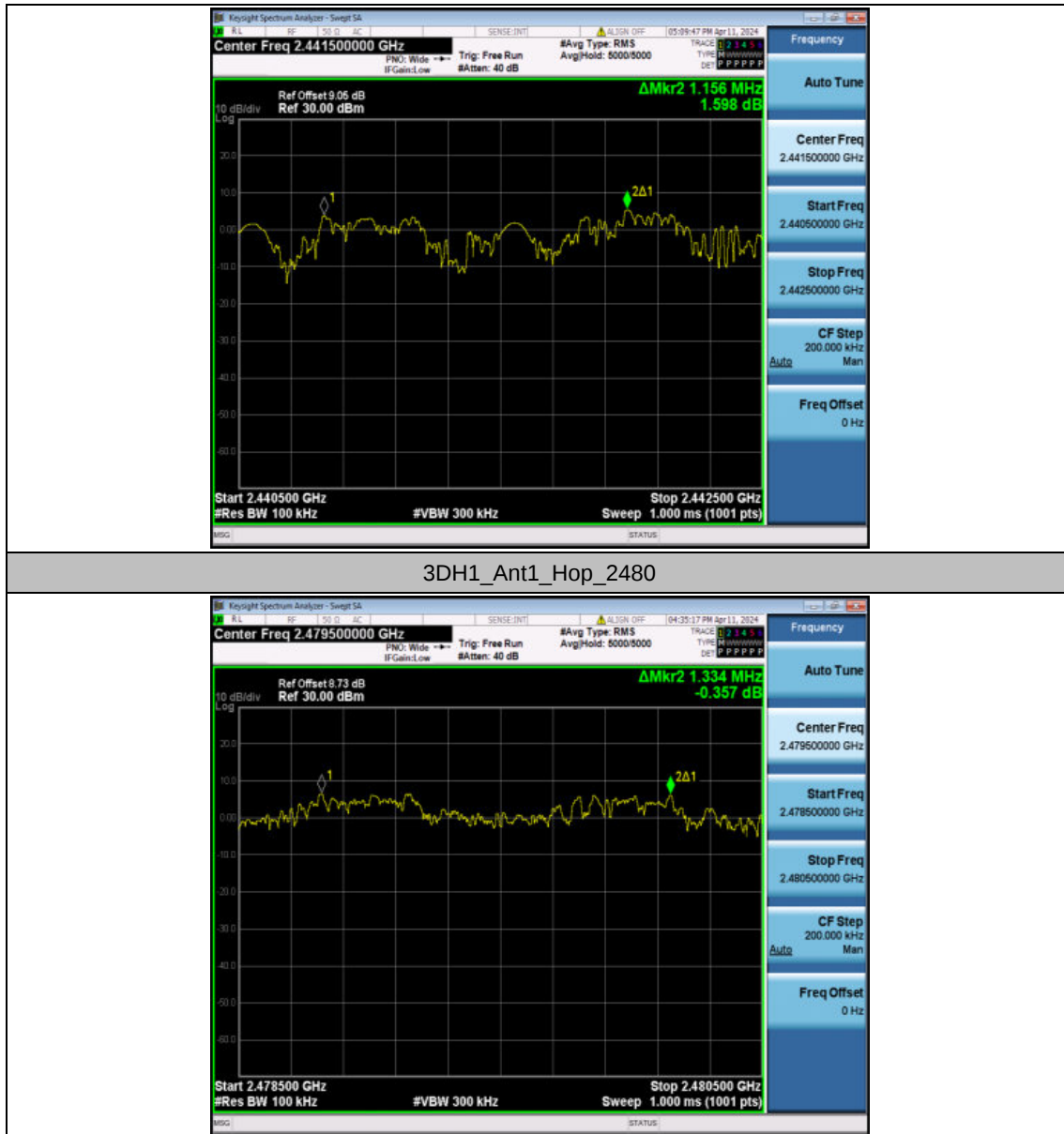
2DH1_Ant1_Hop_2480



3DH1_Ant1_Hop_2402



3DH1_Ant1_Hop_2441

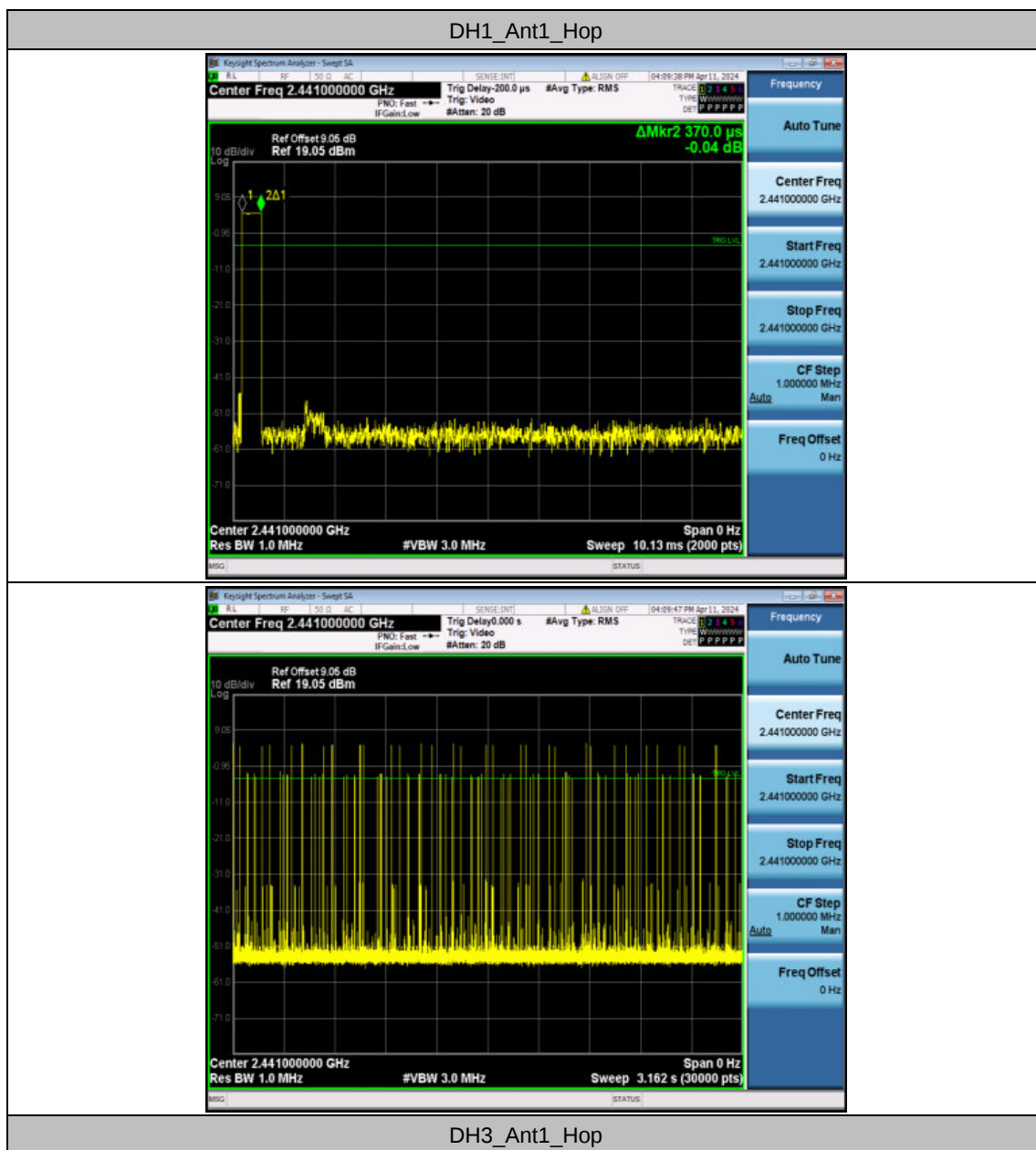


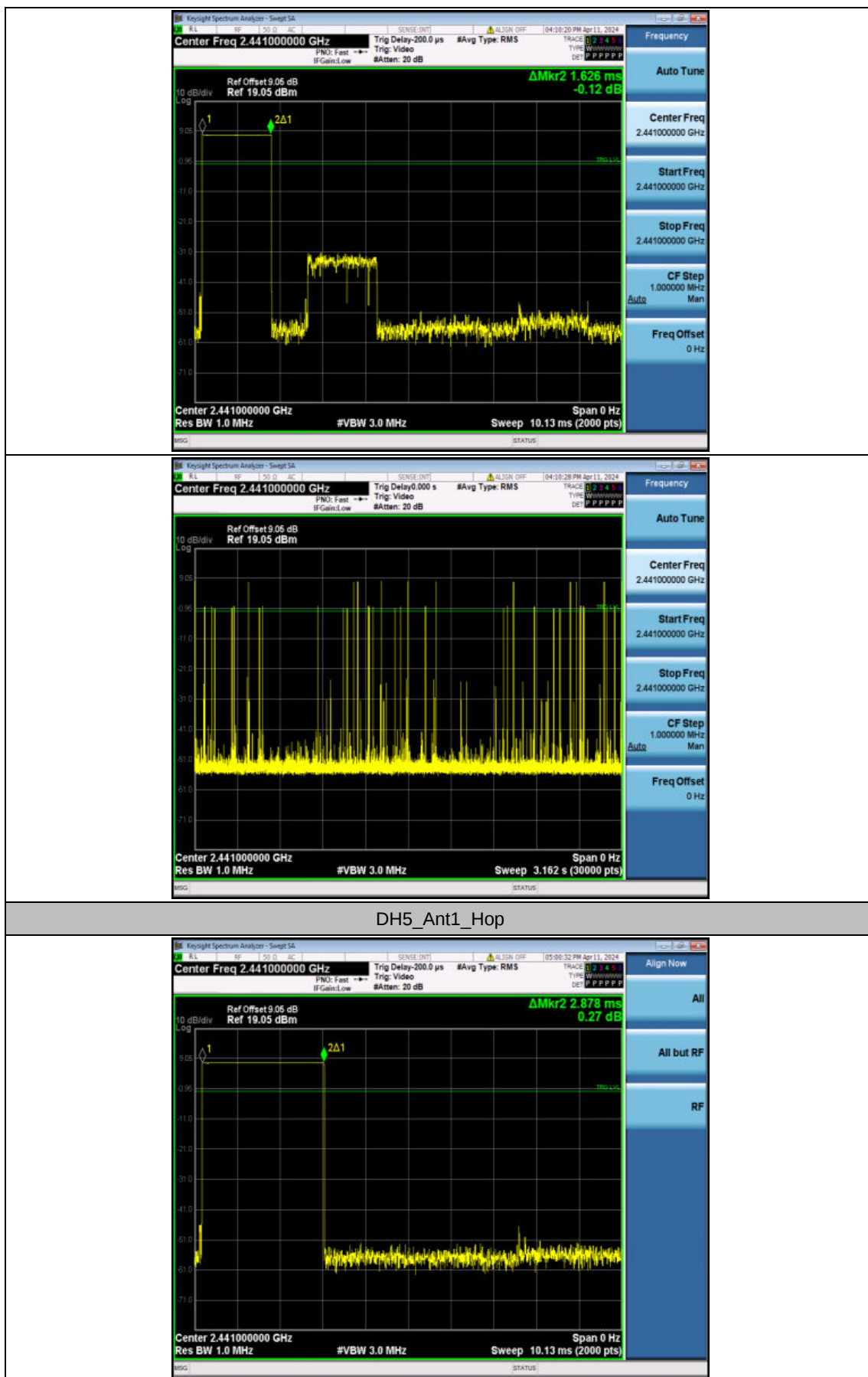
Appendix A.5: Time of occupancy

Test Result

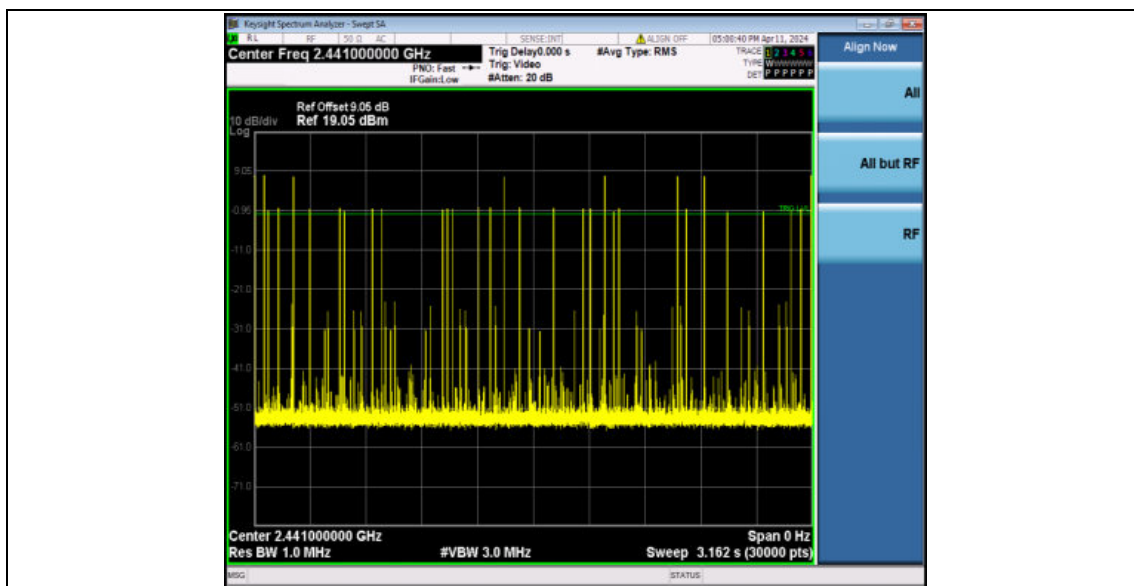
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.370	320	0.118	≤0.4	PASS
DH3	Ant1	Hop	1.626	120	0.195	≤0.4	PASS
DH5	Ant1	Hop	2.878	80	0.23	≤0.4	PASS
2DH1	Ant1	Hop	0.385	360	0.139	≤0.4	PASS
2DH3	Ant1	Hop	1.631	220	0.359	≤0.4	PASS
2DH5	Ant1	Hop	2.878	100	0.288	≤0.4	PASS
3DH1	Ant1	Hop	0.380	390	0.148	≤0.4	PASS
3DH3	Ant1	Hop	1.631	150	0.245	≤0.4	PASS
3DH5	Ant1	Hop	2.883	130	0.375	≤0.4	PASS

Test Graphs

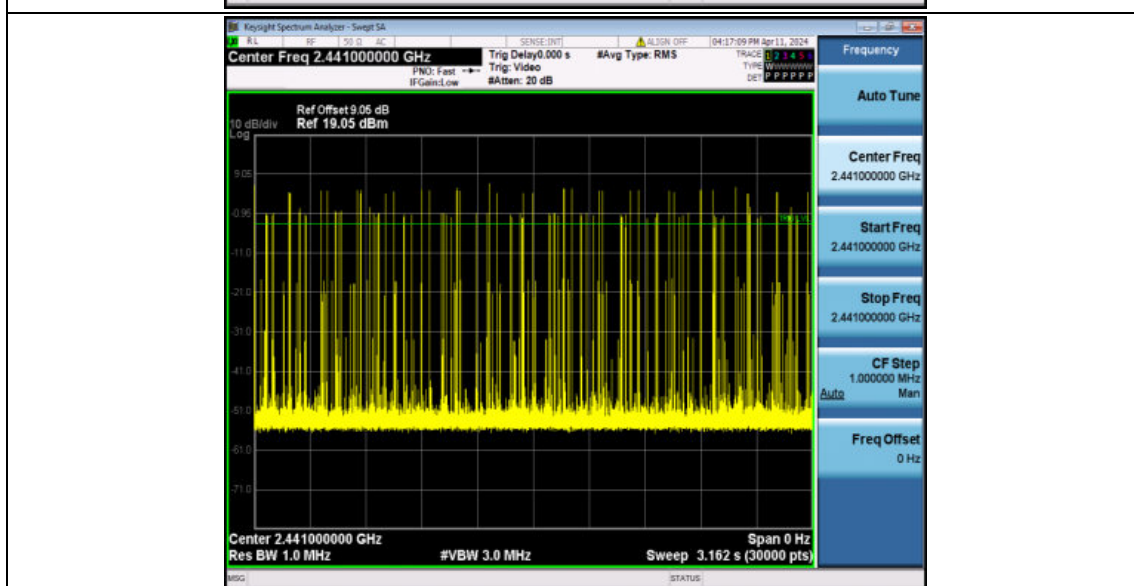
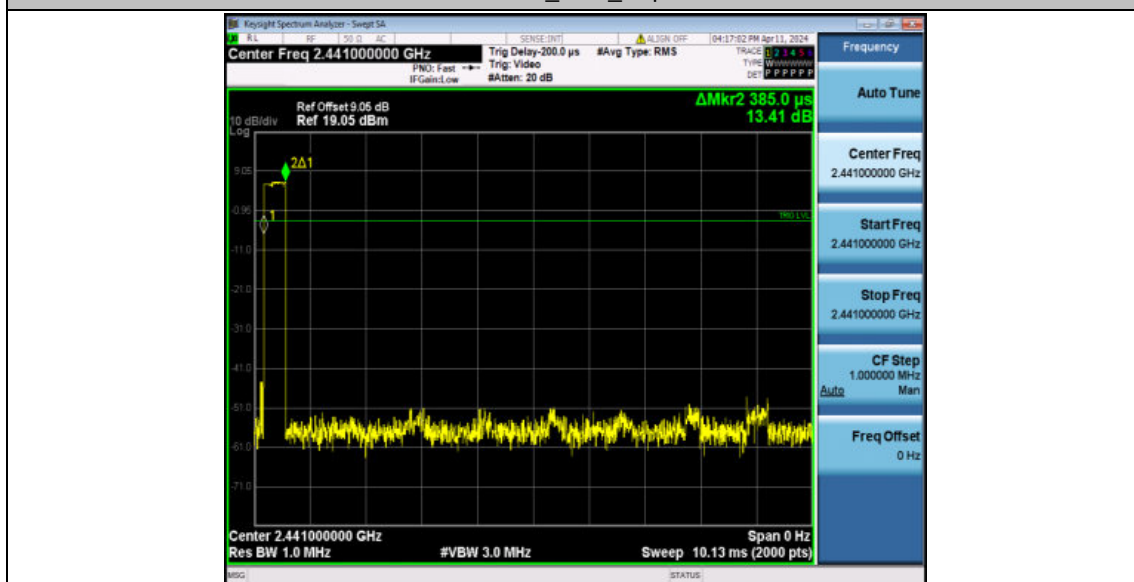




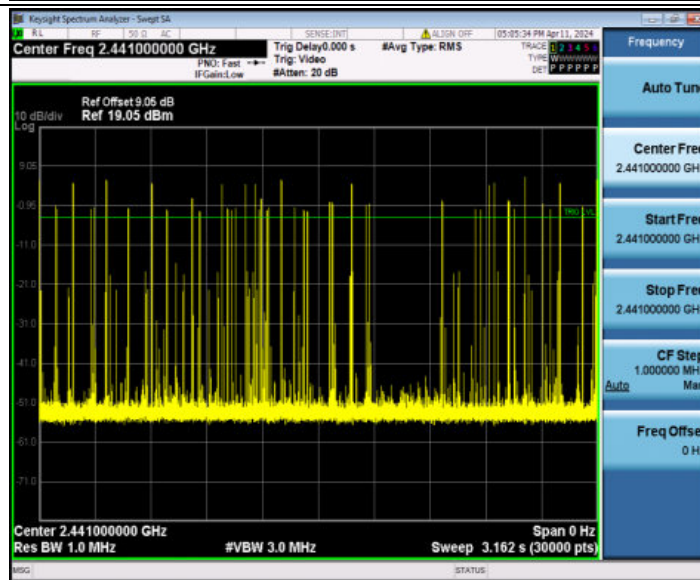
DH5_Ant1_Hop



2DH1_Ant1_Hop



2DH3_Ant1_Hop



Keysight Spectrum Analyzer - Single SA

SENSE: INT | ALIGN: OFF | 09:12:18 PM Apr 13, 2024

Center Freq 2.441000000 GHz

Trig Delay: 200.0 μ s | #Avg Type: RMS

Trace 0 2 3 4 5 | TYPE: Waveform | DET: P P P P P

Ref Offset 9.05 dB | Ref 19.05 dBm

Δ Mkr2 2.878 ms | -0.06 dB

10 dB/div | Log

9.05 | 0.95 | -0.95 | -1.95 | -2.95 | -3.95 | -4.95 | -5.95 | -6.95 | -7.95

1 | 2 Δ 1

Mod LVL

Center Freq 2.441000000 GHz

Span 0 Hz

Res BW 1.0 MHz

#VBW 3.0 MHz

Sweep 10.13 ms (2000 pts)

Auto Tune

Frequency

Center Freq 2.441000000 GHz

Start Freq 2.441000000 GHz

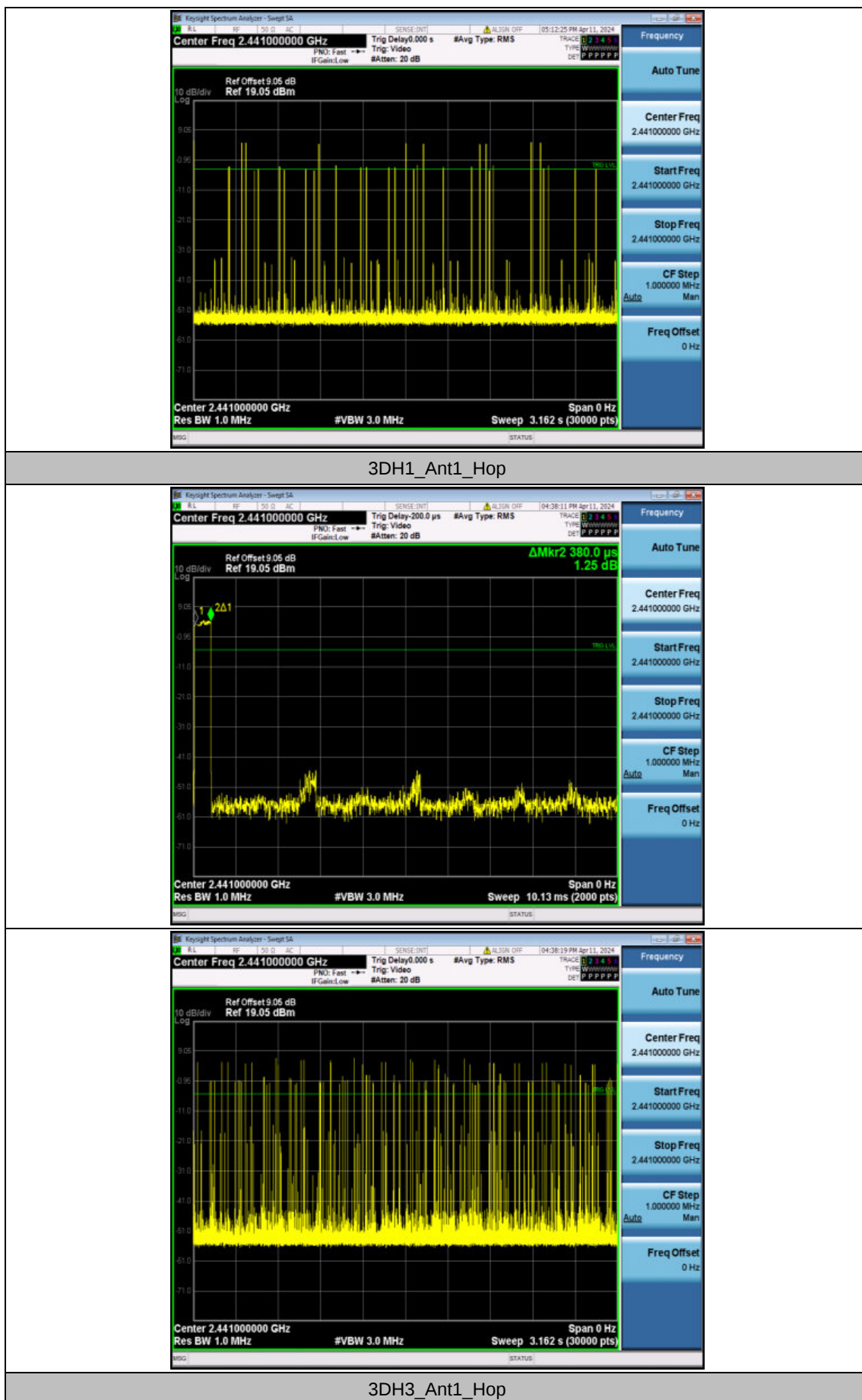
Stop Freq 2.441000000 GHz

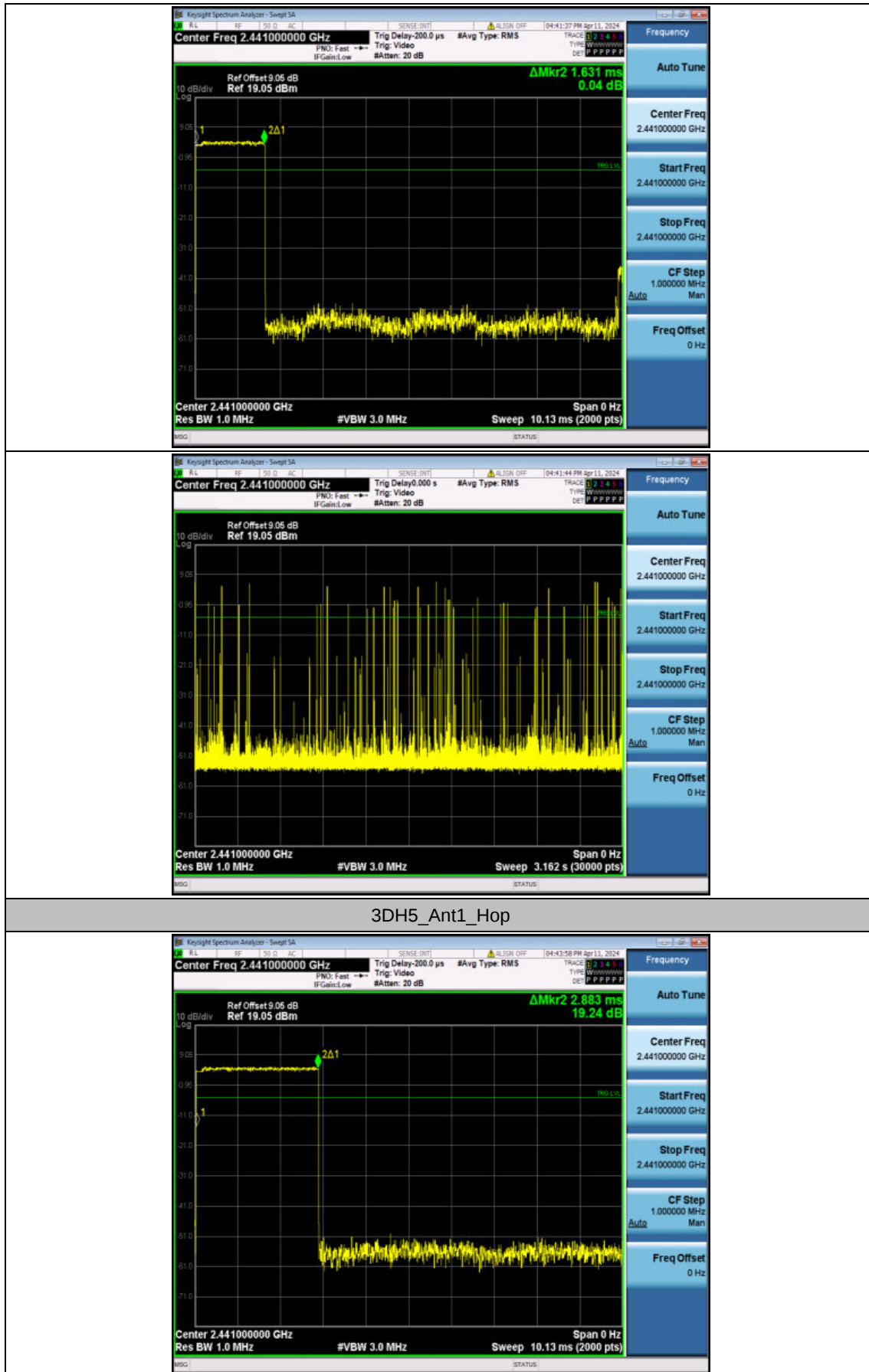
CF Step 1.000000 MHz

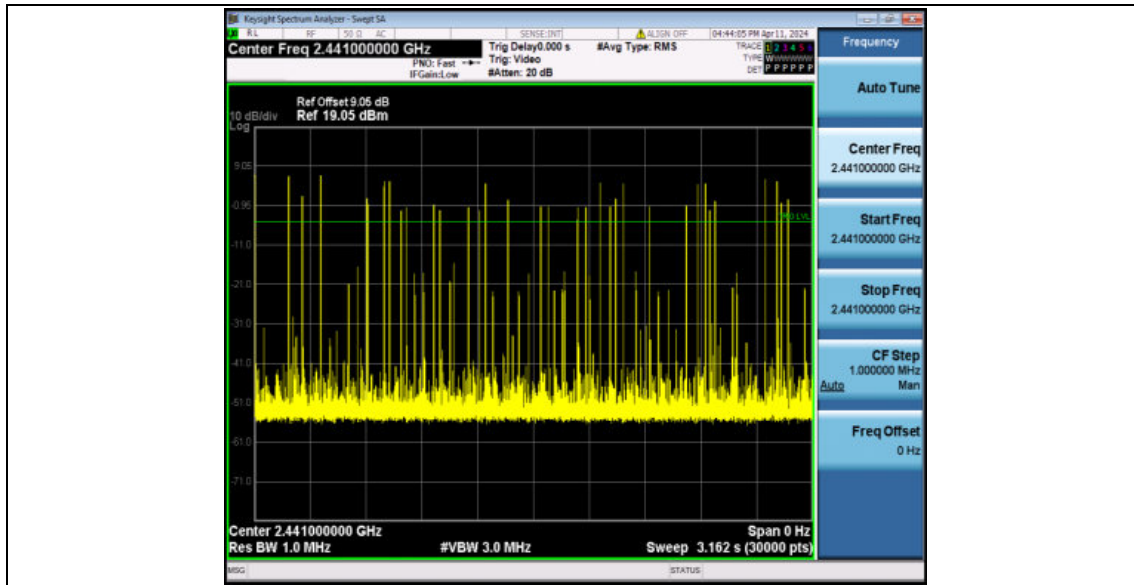
Auto Man

Freq Offset 0 Hz

STATUS







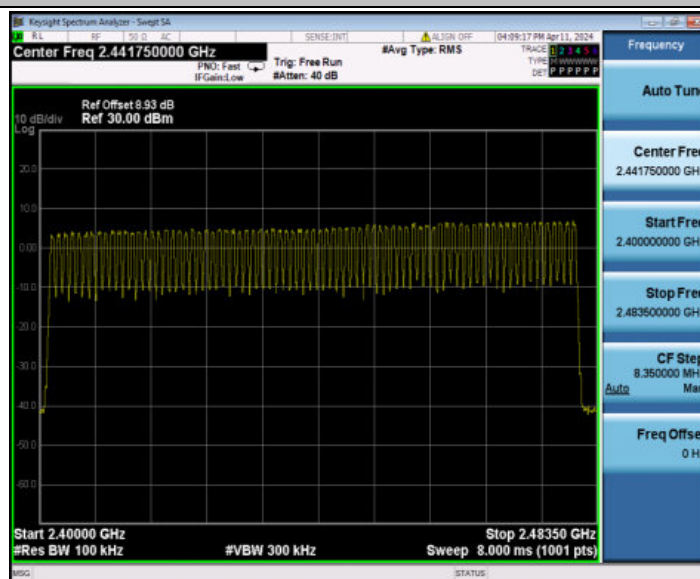
Appendix A.6: Number of hopping channels

Test Result

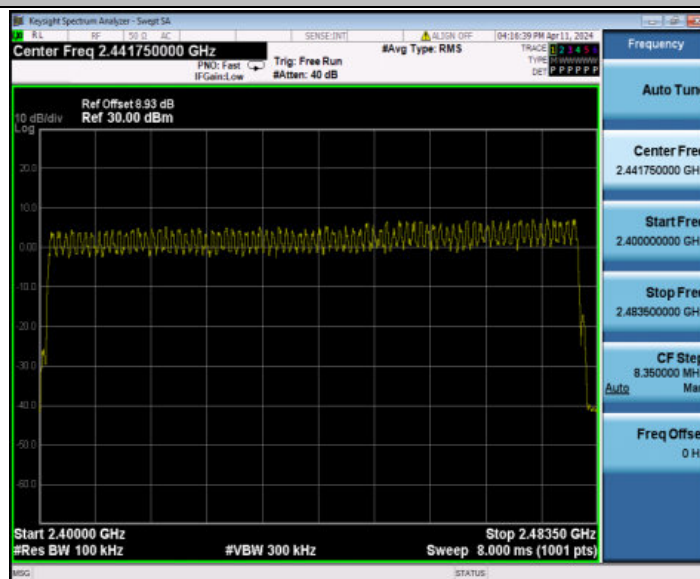
TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH1	Ant1	Hop	79	≥15	PASS
2DH1	Ant1	Hop	79	≥15	PASS
3DH1	Ant1	Hop	79	≥15	PASS

Test Graphs

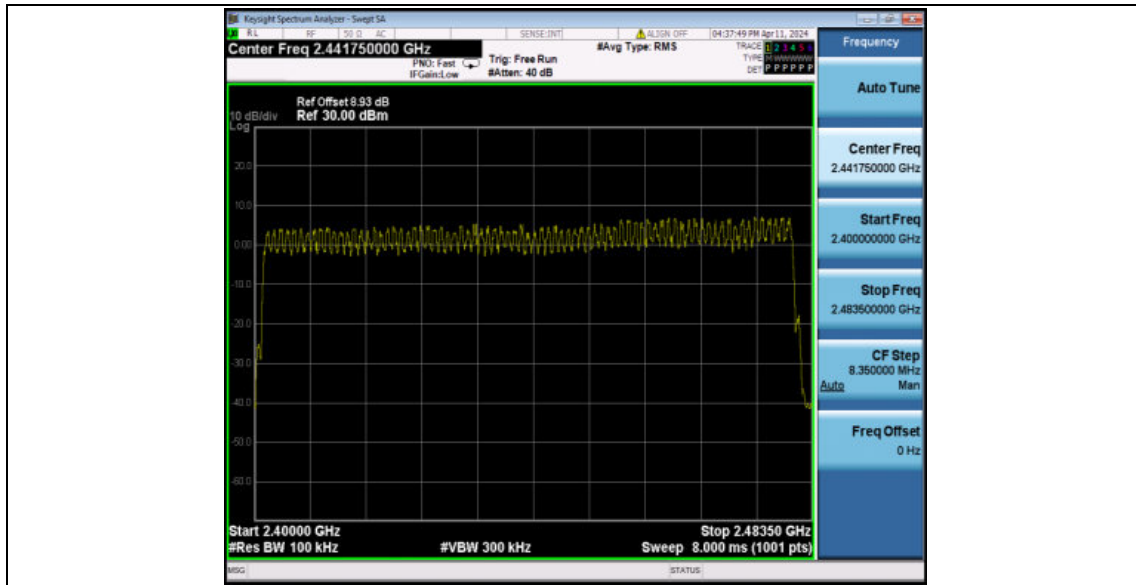
DH1_Ant1_Hop



2DH1_Ant1_Hop



3DH1_Ant1_Hop



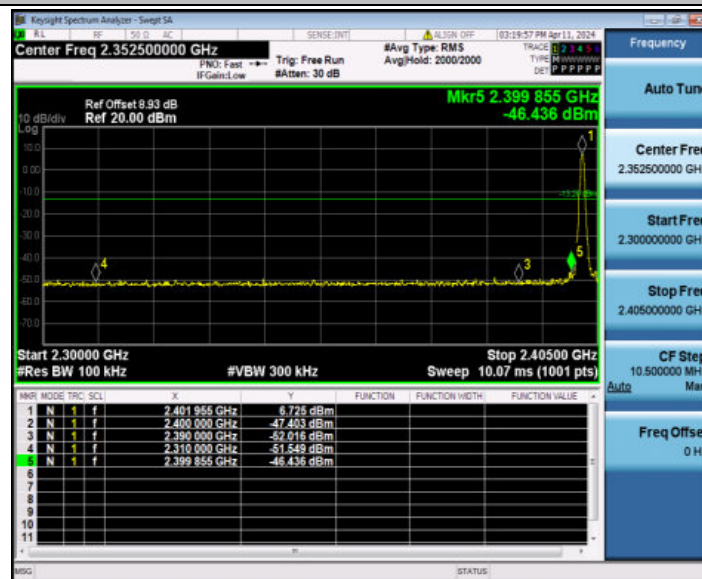
Appendix A.7: Band edge measurements

Test Result

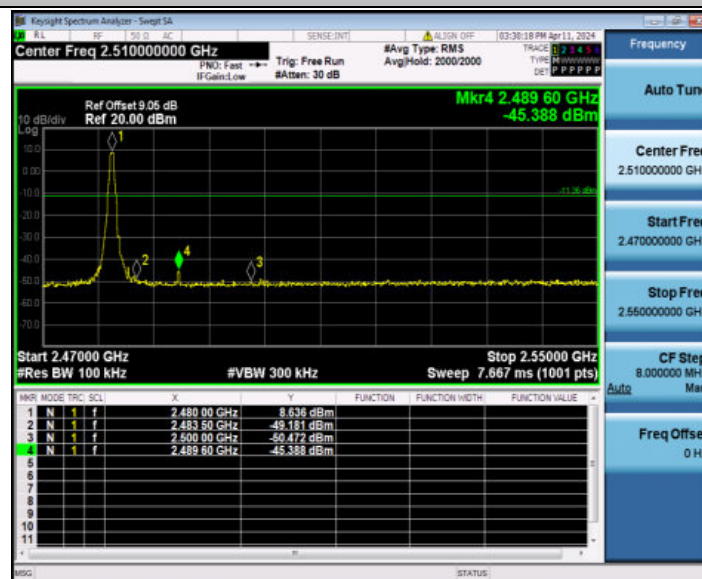
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	6.73	-46.44	≤ -13.28	PASS
		High	2480	8.64	-45.39	≤ -11.36	PASS
		Low	Hop_2402	6.52	-48.99	≤ -13.48	PASS
		High	Hop_2480	8.56	-48.35	≤ -11.44	PASS
2DH1	Ant1	Low	2402	4.23	-39.51	≤ -15.77	PASS
		High	2480	4.48	-44.91	≤ -15.52	PASS
		Low	Hop_2402	6.34	-49.1	≤ -13.66	PASS
		High	Hop_2480	5.21	-48.36	≤ -14.79	PASS
3DH1	Ant1	Low	2402	4.25	-43.01	≤ -15.75	PASS
		High	2480	4.43	-43.55	≤ -15.57	PASS
		Low	Hop_2402	3.71	-49.17	≤ -16.29	PASS
		High	Hop_2480	6.20	-48.65	≤ -13.8	PASS

Test Graphs

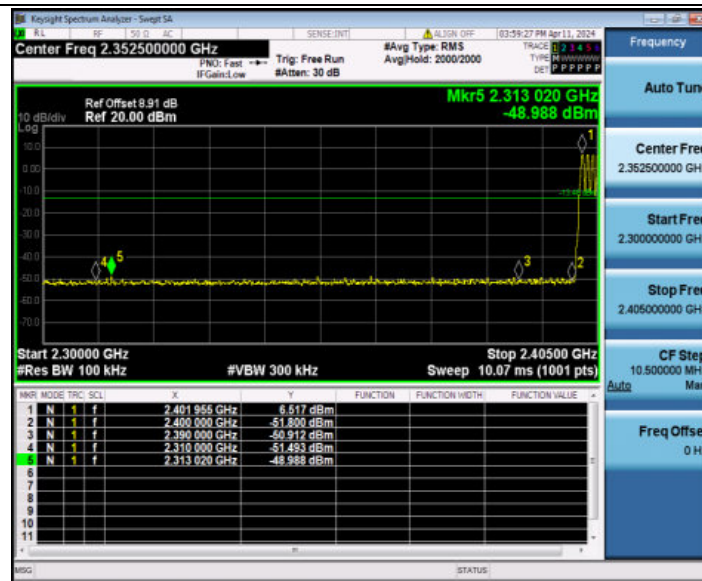
DH1_Ant1_Low_2402



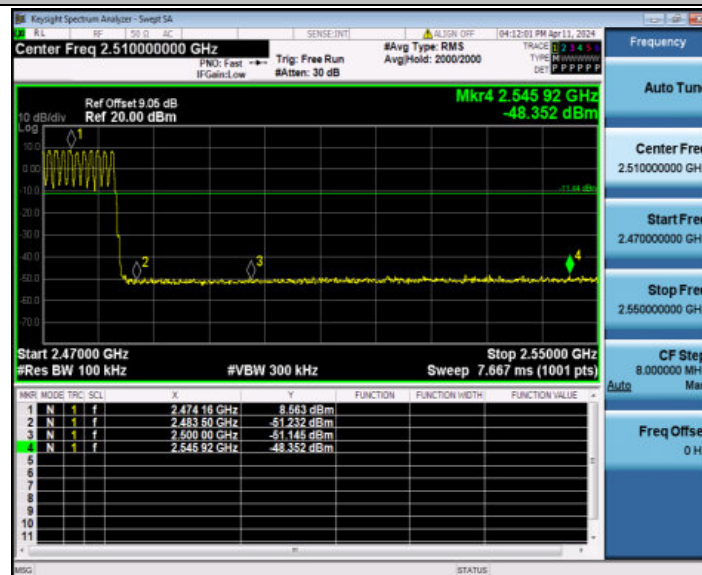
DH1_Ant1_High_2480



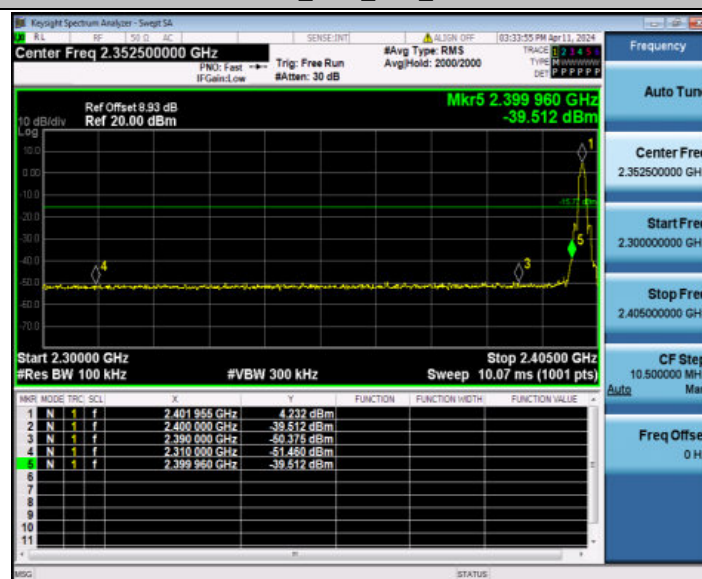
DH1_Ant1_Low_Hop_2402



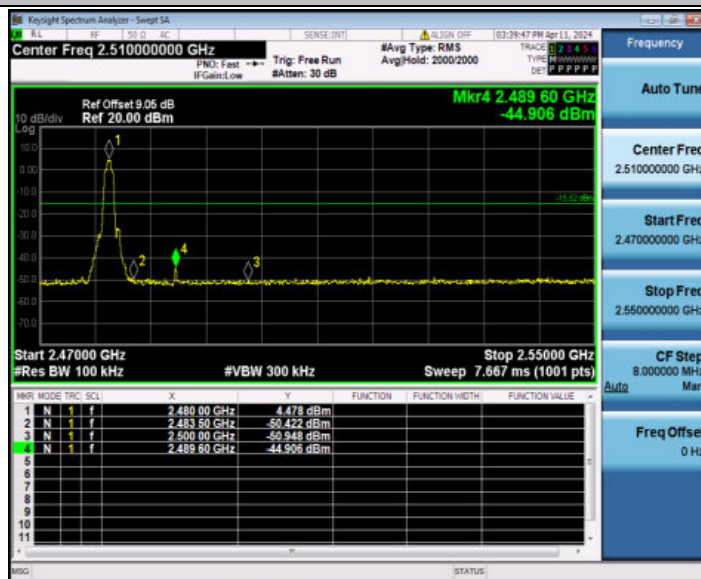
DH1_Ant1_High_Hop_2480



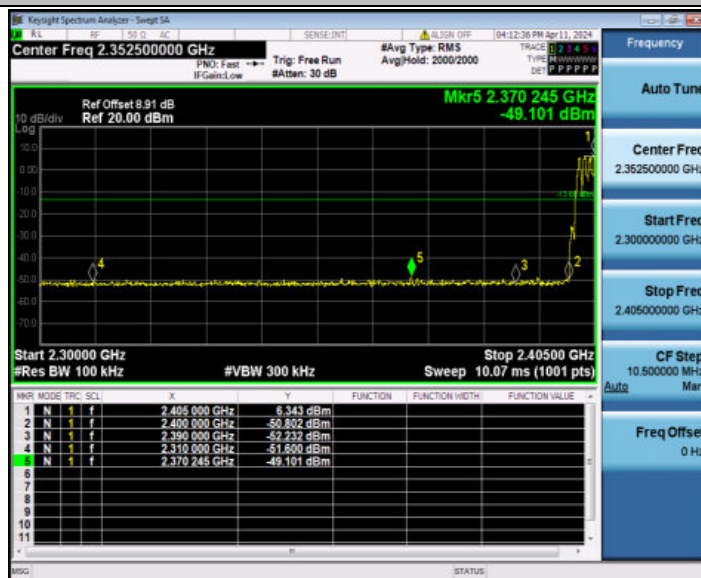
2DH1_Ant1_Low_2402



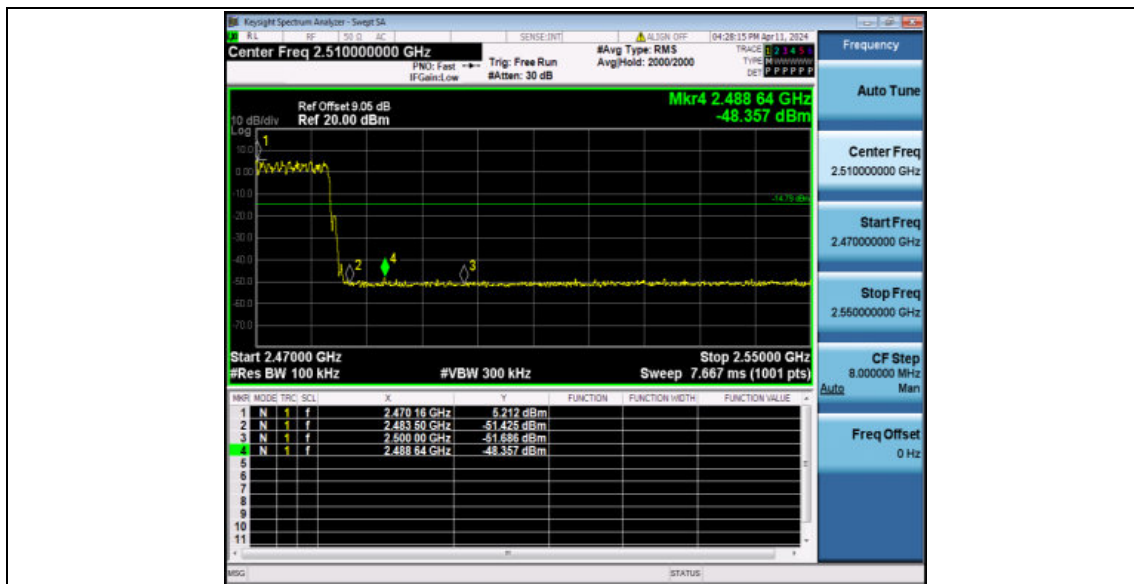
2DH1_Ant1_High_2480



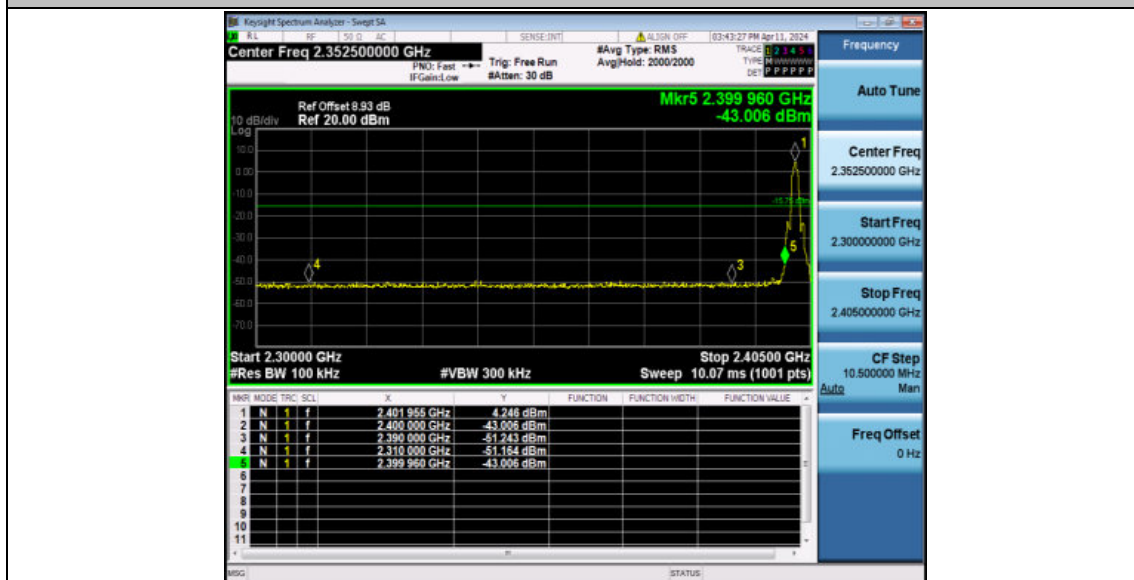
2DH1_Ant1_Low_Hop_2402



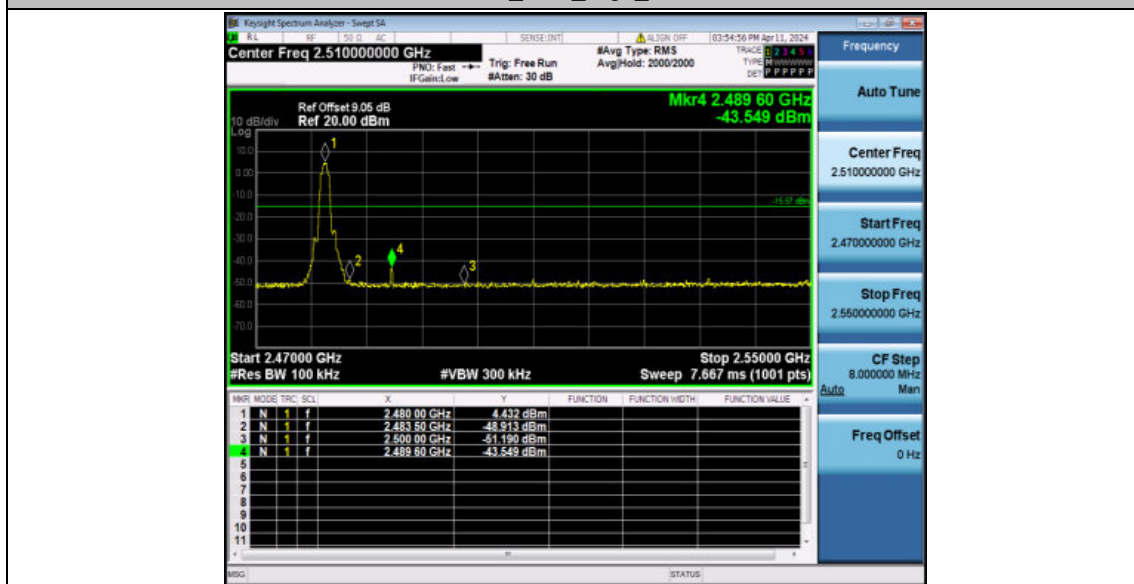
2DH1_Ant1_High_Hop_2480



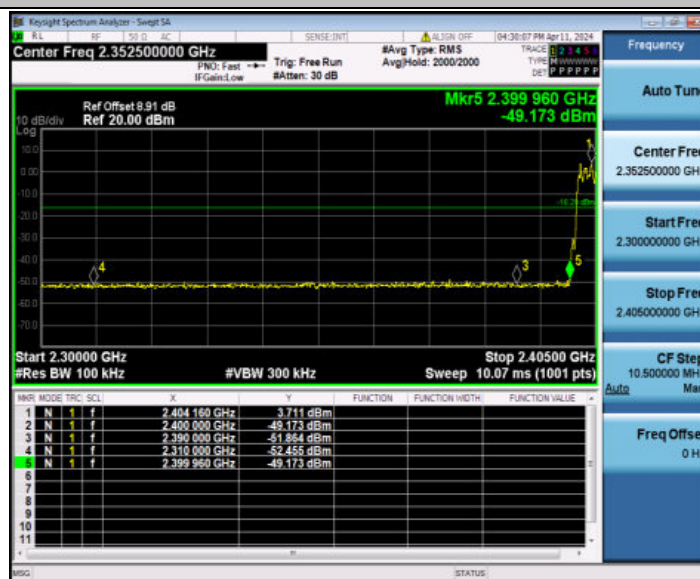
3DH1_Ant1_Low_2402



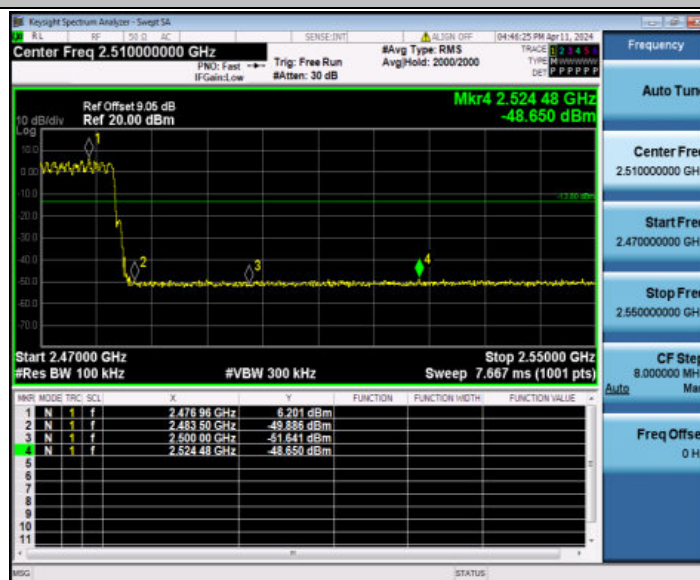
3DH1_Ant1_High_2480



3DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_Hop_2480



Appendix A.8: Conducted Spurious Emission

Test Result

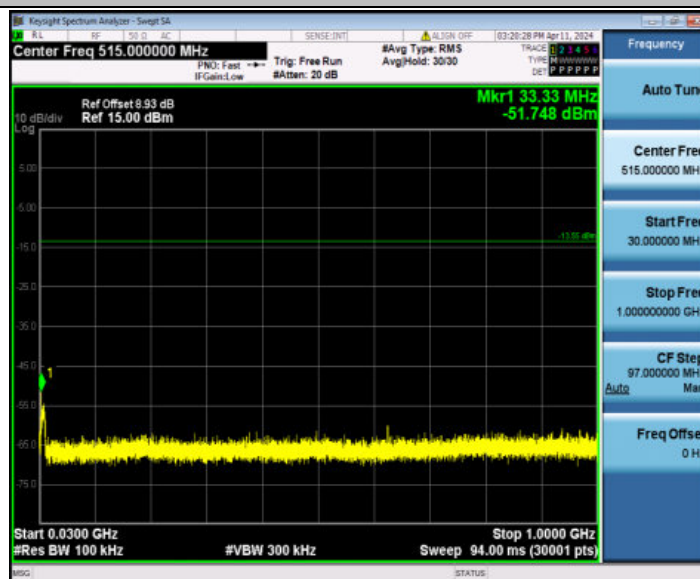
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	6.45	6.45	---	PASS
			30~1000	6.45	-51.75	≤-13.55	PASS
			1000~26500	6.45	-47.67	≤-13.55	PASS
		2441	Reference	7.57	7.57	---	PASS
			30~1000	7.57	-53.91	≤-12.43	PASS
			1000~26500	7.57	-48.26	≤-12.43	PASS
		2480	Reference	8.48	8.48	---	PASS
			30~1000	8.48	-55.8	≤-11.52	PASS
			1000~26500	8.48	-47.76	≤-11.52	PASS
2DH1	Ant1	2402	Reference	4.00	4.00	---	PASS
			30~1000	4.00	-58.46	≤-16	PASS
			1000~26500	4.00	-48.38	≤-16	PASS
		2441	Reference	3.53	3.53	---	PASS
			30~1000	3.53	-56.57	≤-16.47	PASS
			1000~26500	3.53	-47.89	≤-16.47	PASS
		2480	Reference	4.17	4.17	---	PASS
			30~1000	4.17	-55.49	≤-15.83	PASS
			1000~26500	4.17	-47.62	≤-15.83	PASS
3DH1	Ant1	2402	Reference	4.06	4.06	---	PASS
			30~1000	4.06	-55.61	≤-15.94	PASS
			1000~26500	4.06	-47.64	≤-15.94	PASS
		2441	Reference	3.53	3.53	---	PASS
			30~1000	3.53	-58.37	≤-16.47	PASS
			1000~26500	3.53	-47.74	≤-16.47	PASS
		2480	Reference	4.23	4.23	---	PASS
			30~1000	4.23	-60.83	≤-15.77	PASS
			1000~26500	4.23	-48.27	≤-15.77	PASS

Test Graphs

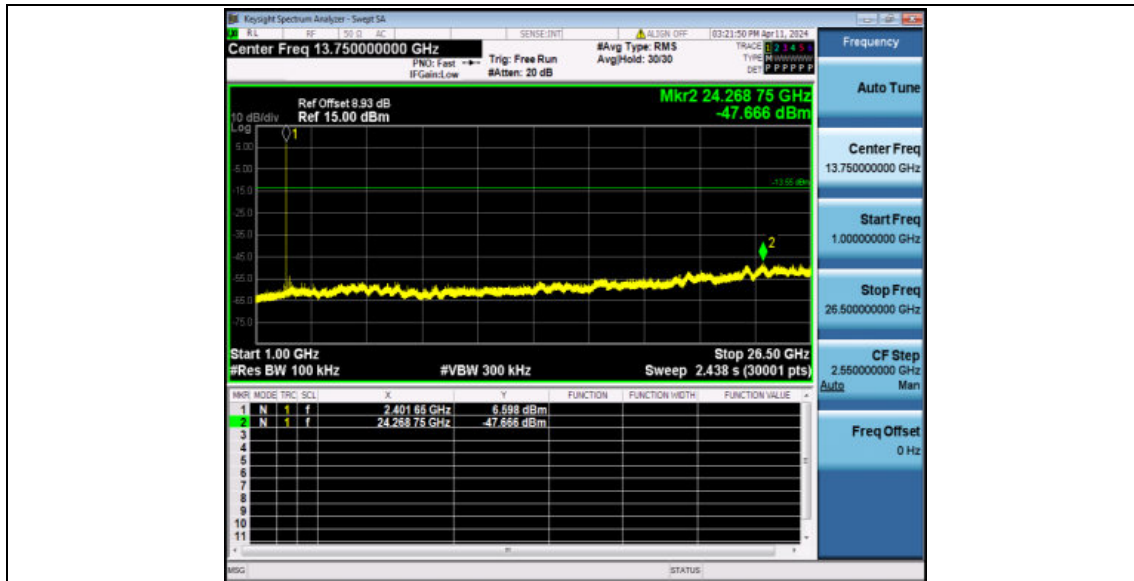
DH1_Ant1_2402_0-Reference



DH1_Ant1_2402_30-1000



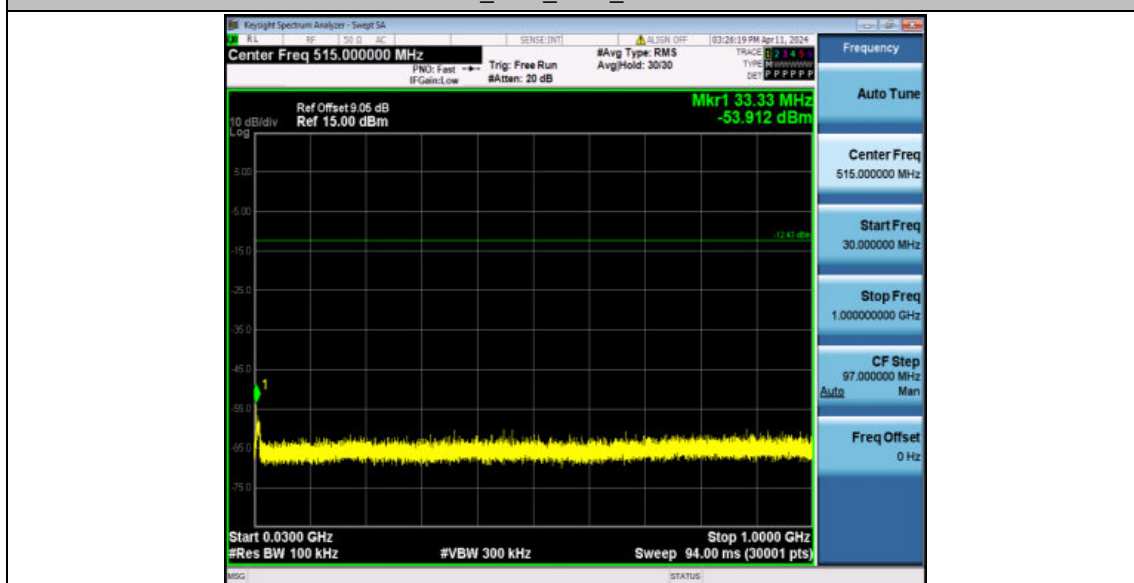
DH1_Ant1_2402_1000-26500



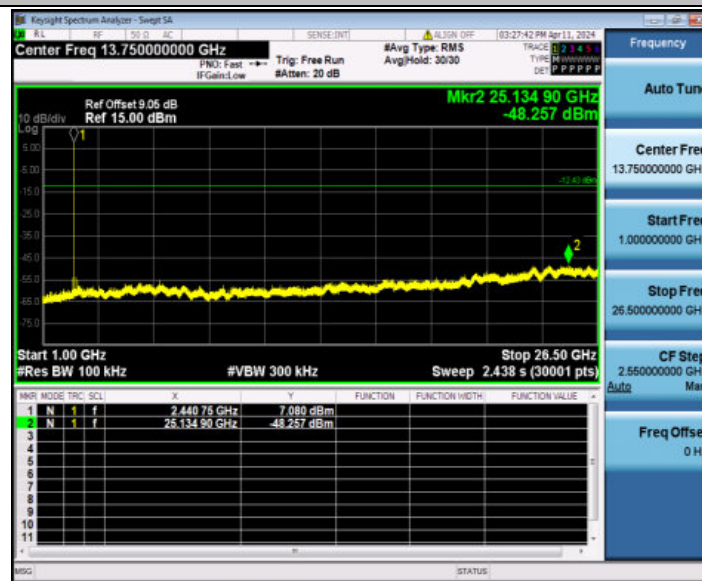
DH1_Ant1_2441_0-Reference



DH1_Ant1_2441_30~1000



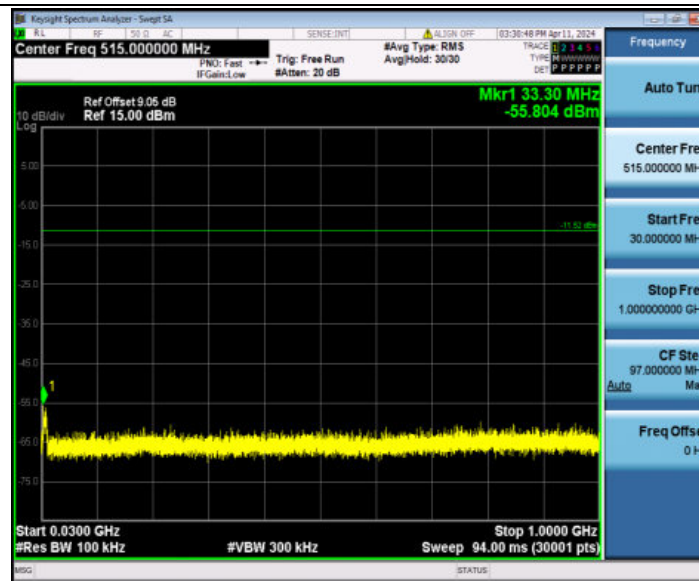
DH1_Ant1_2441_1000~26500



DH1_Ant1_2480_0~Reference



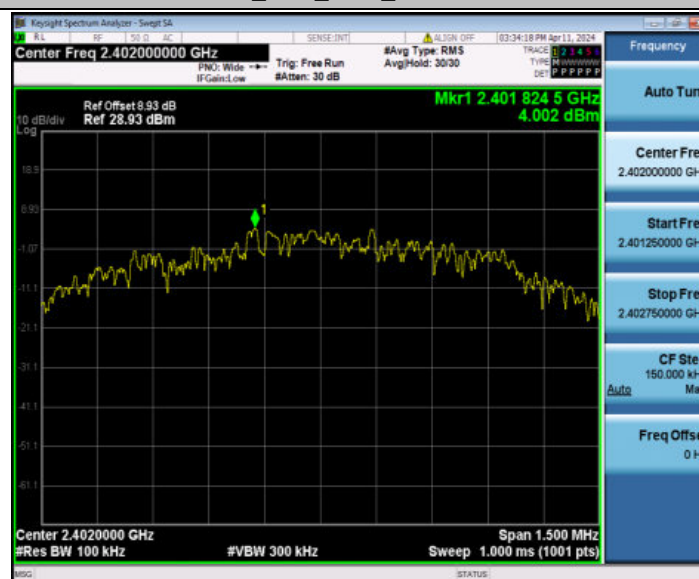
DH1_Ant1_2480_30~1000



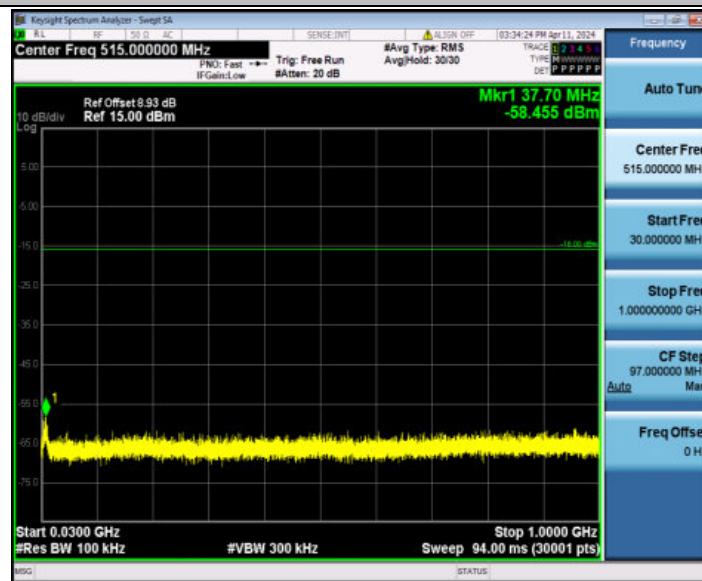
DH1_Ant1_2480_1000~26500



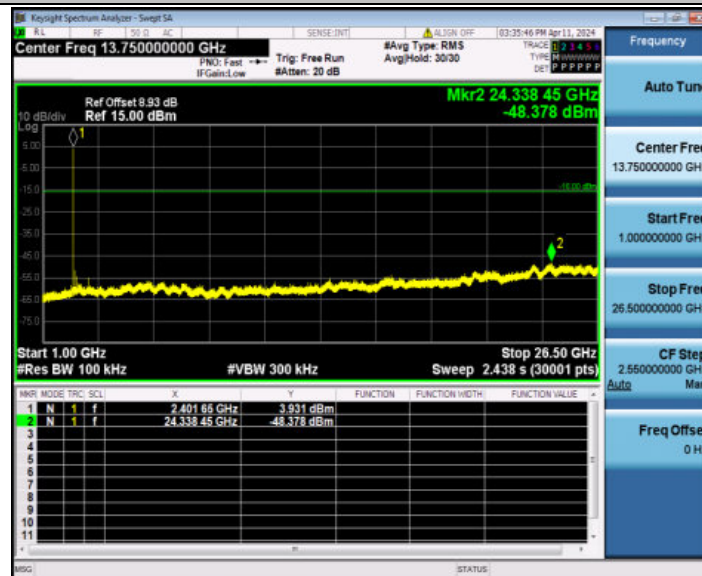
2DH1_Ant1_2402_0~Reference



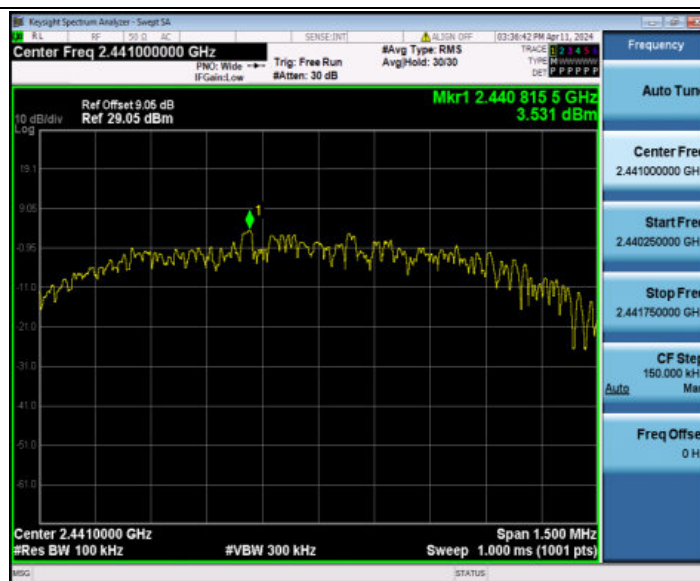
2DH1_Ant1_2402_30~1000



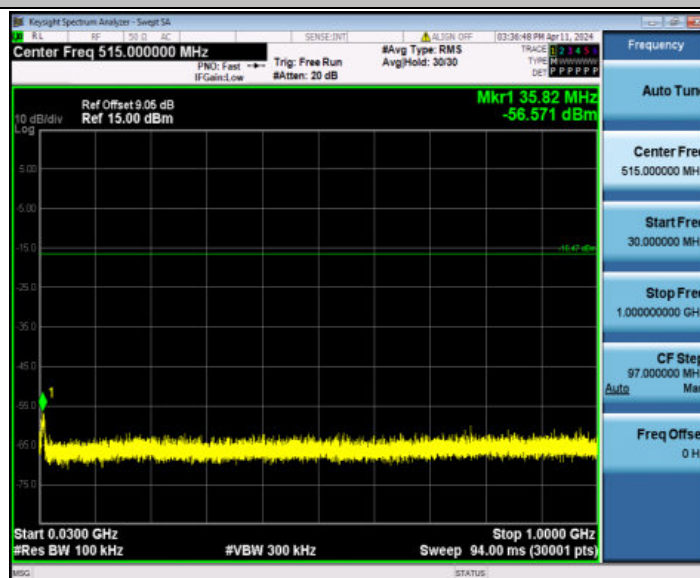
2DH1_Ant1_2402_1000~26500



2DH1_Ant1_2441_0~Reference



2DH1_Ant1_2441_30~1000



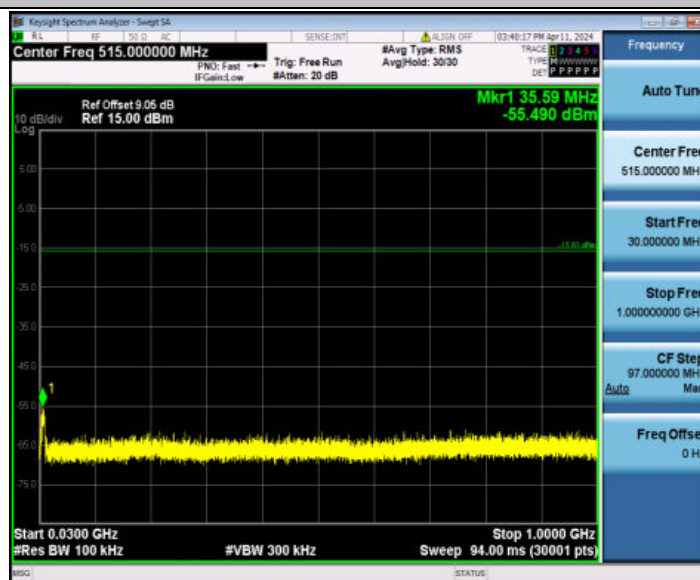
2DH1_Ant1_2441_1000~26500



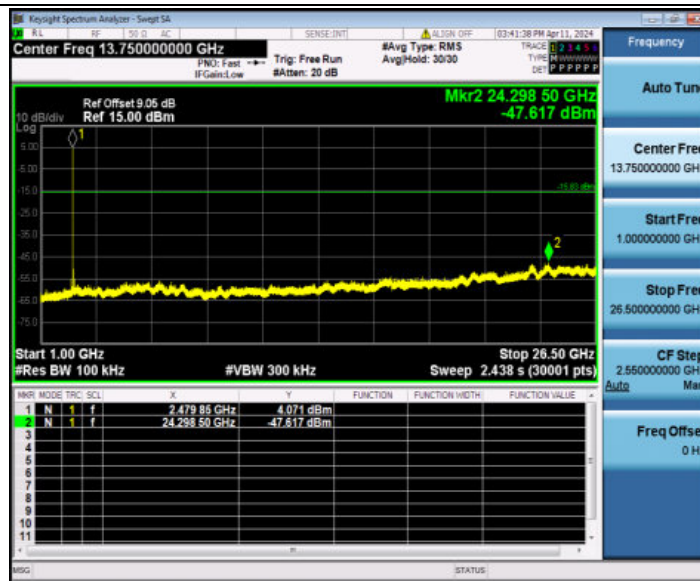
2DH1_Ant1_2480_0~Reference



2DH1_Ant1_2480_30~1000



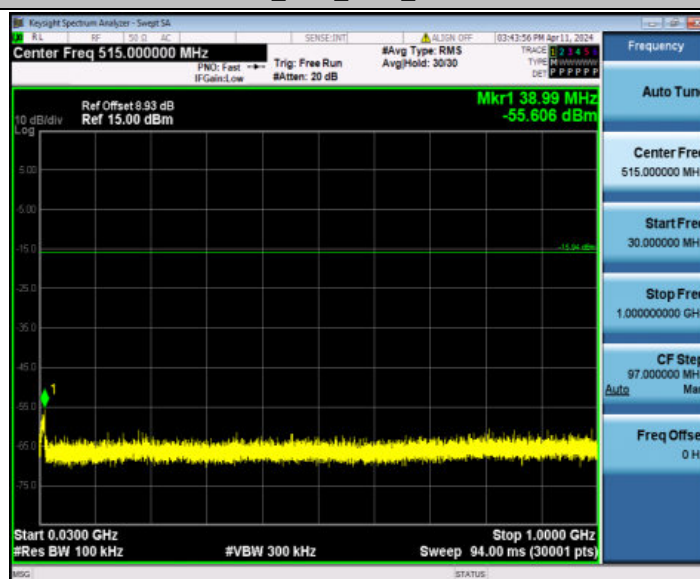
2DH1_Ant1_2480_1000~26500



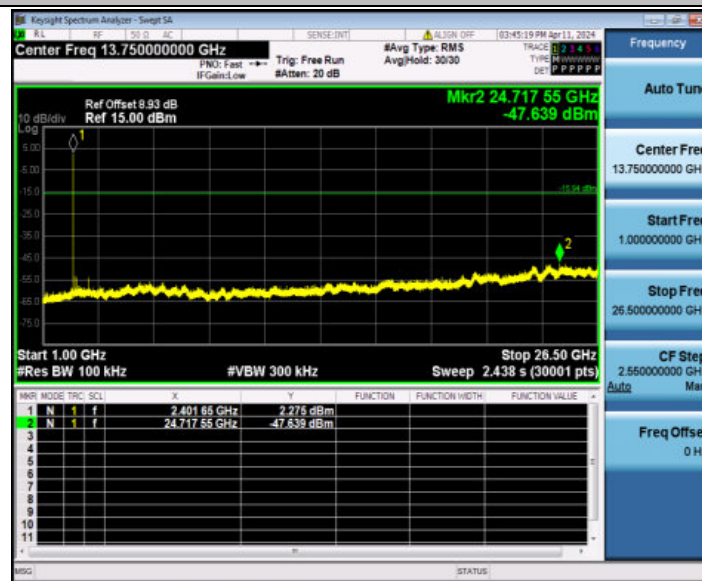
3DH1_Ant1_2402_0~Reference



3DH1_Ant1_2402_30~1000



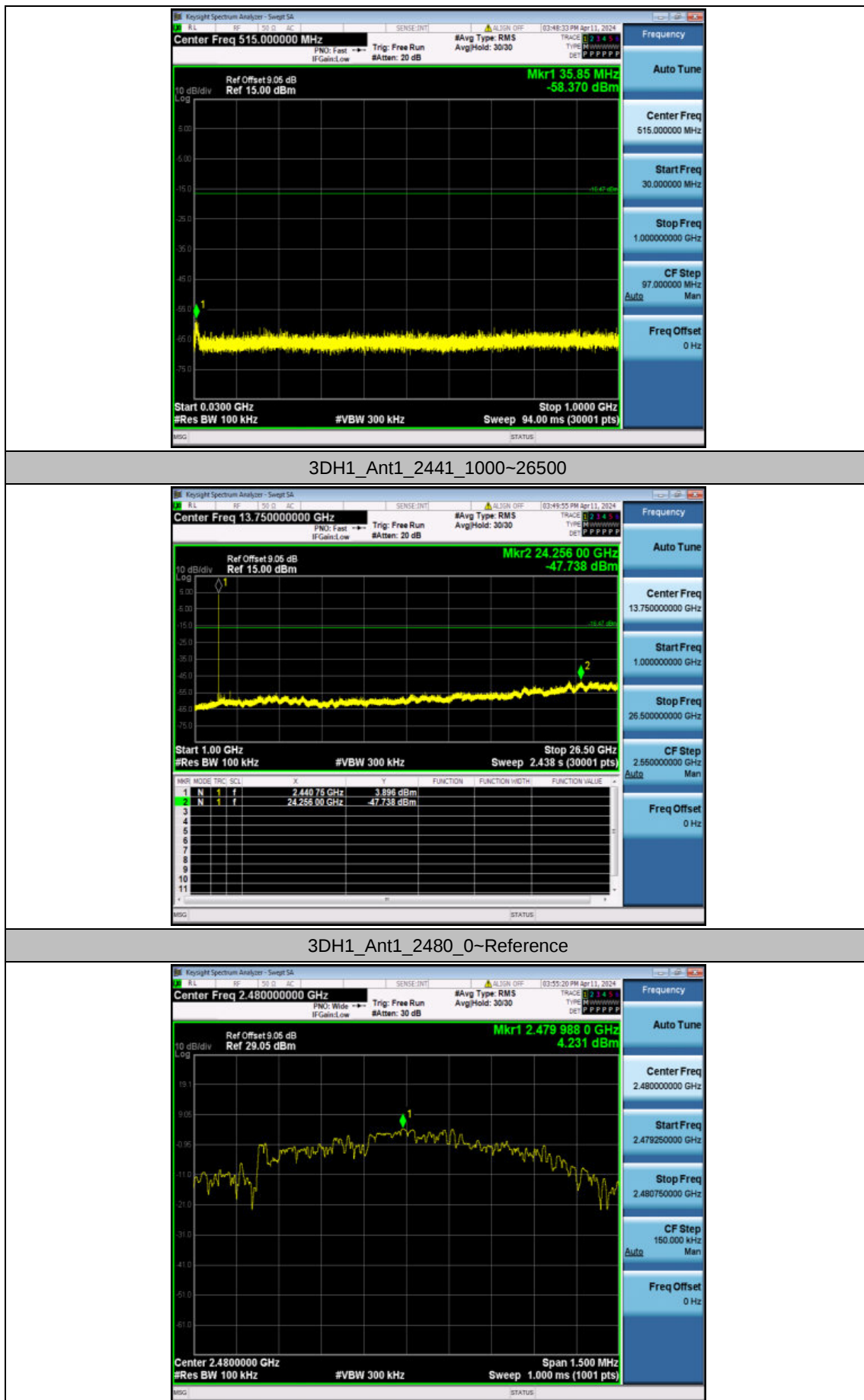
3DH1_Ant1_2402_1000~26500



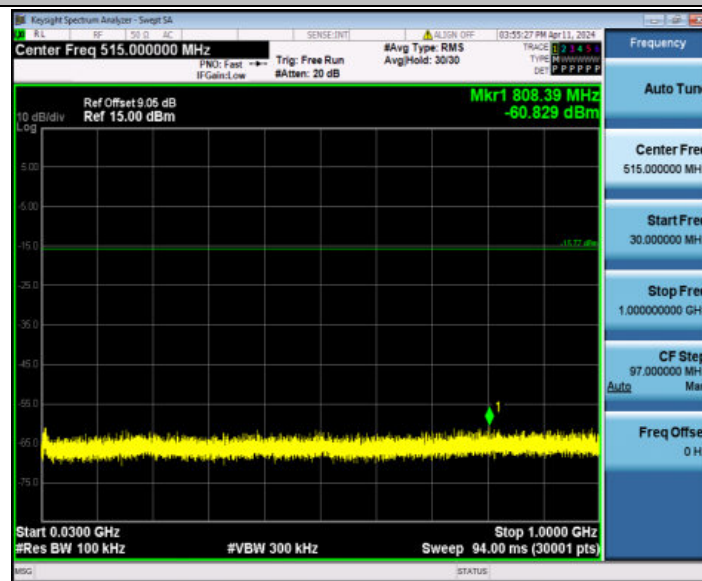
3DH1_Ant1_2441_0~Reference



3DH1_Ant1_2441_30~1000



3DH1_Ant1_2480_30~1000



3DH1_Ant1_2480_1000~26500

