

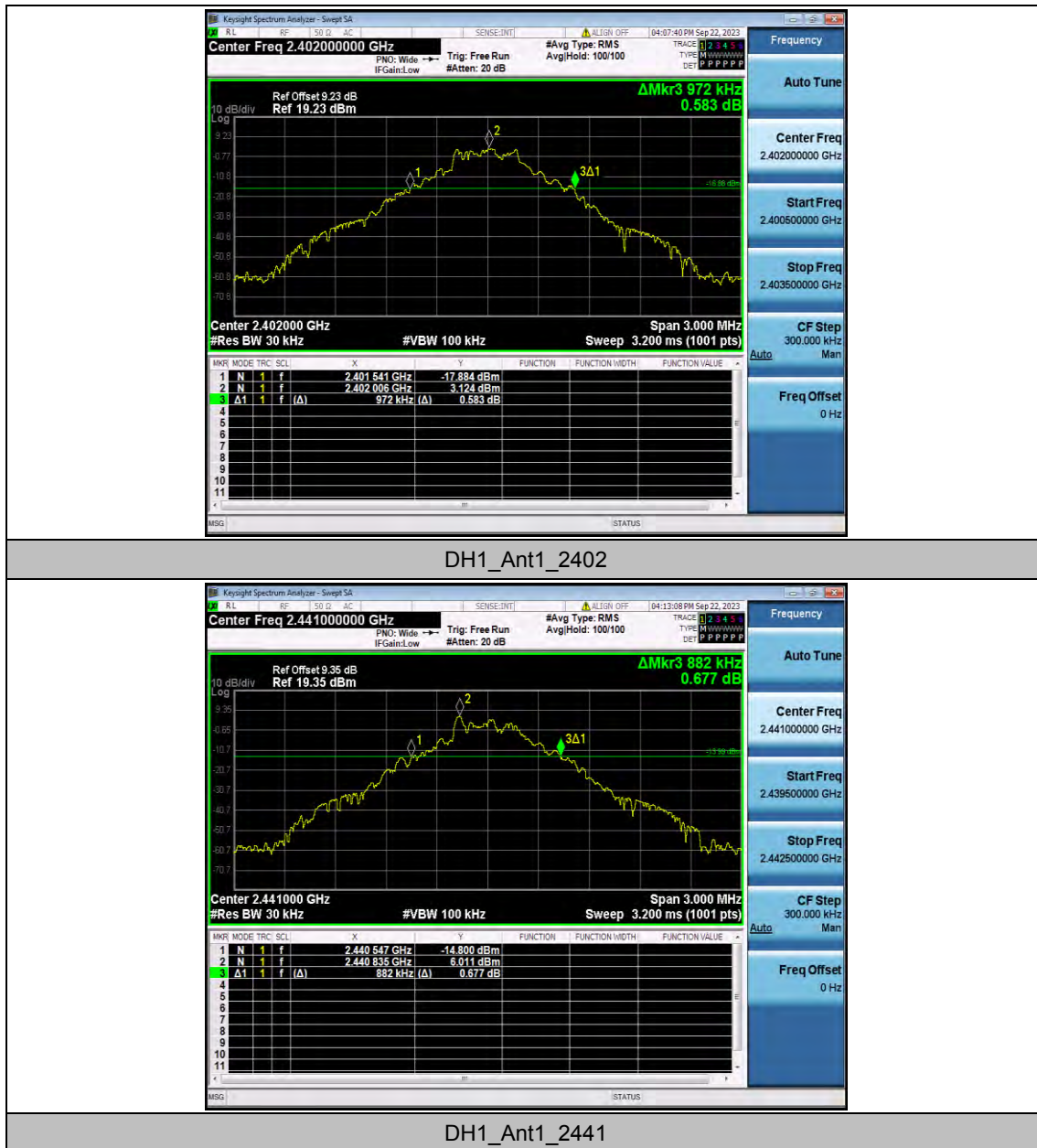
Case No. : <u>GTS20230822007-1-1</u>	
Ambient Condition: <u>24</u> °C, <u>49</u> %RH, Atmos100.1Kpa,	
Test Date: <u>2023.9.13</u>	Test Engineer: <u>Evan ouyang</u>

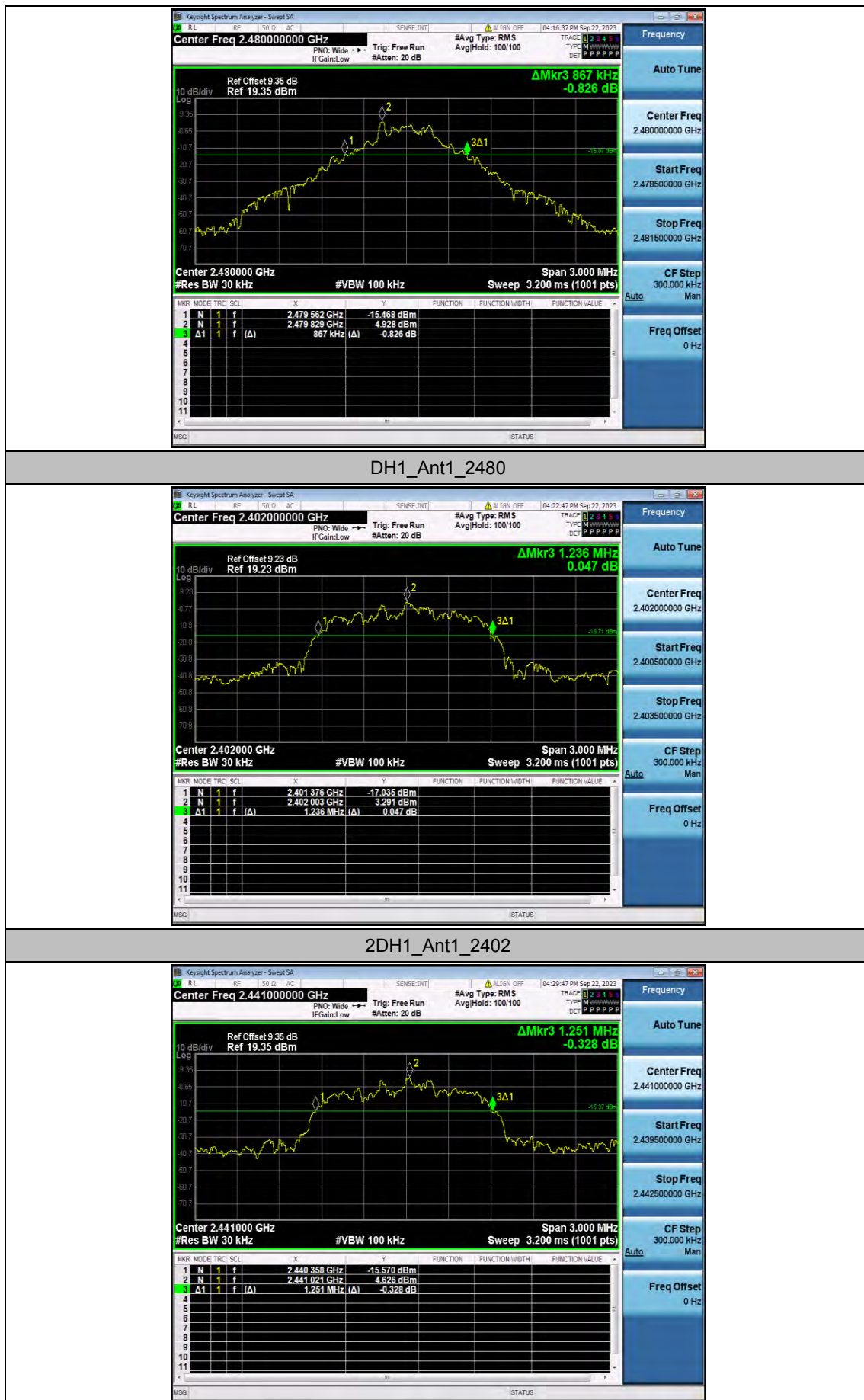
Appendix A.1: 20dB Emission Bandwidth

Test Result

Test Mode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.972	2401.541	2402.513	---	---
		2441	0.882	2440.547	2441.429	---	---
		2480	0.867	2479.562	2480.429	---	---
2DH1	Ant1	2402	1.236	2401.376	2402.612	---	---
		2441	1.251	2440.358	2441.609	---	---
		2480	1.278	2479.355	2480.633	---	---
3DH1	Ant1	2402	1.266	2401.358	2402.624	---	---
		2441	1.257	2440.367	2441.624	---	---
		2480	1.251	2479.382	2480.633	---	---

Test Graphs





2DH1_Ant1_2441



2DH1_Ant1_2480



3DH1_Ant1_2402



3D11_Ant1_2441



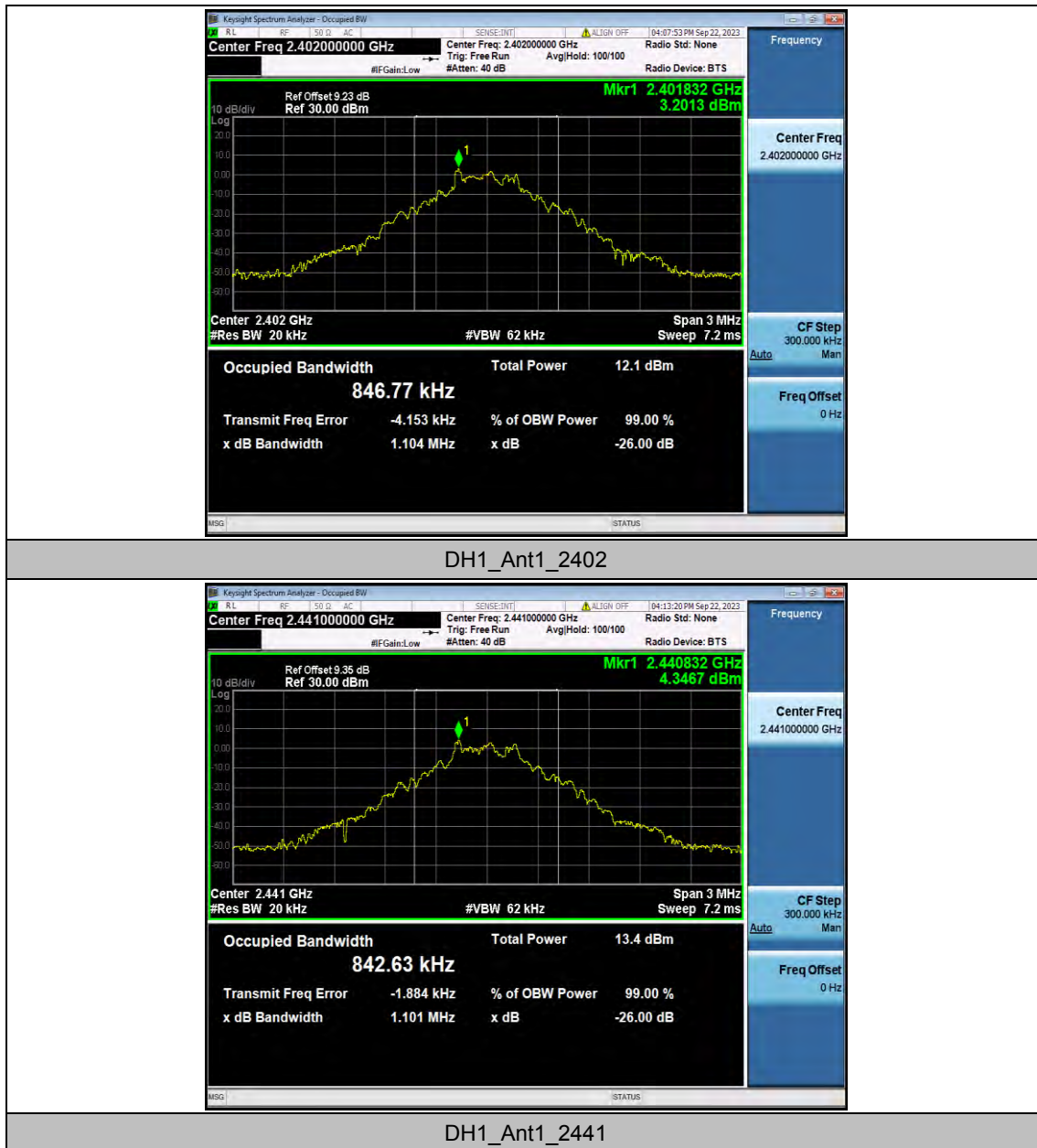
3D11_Ant1_2480

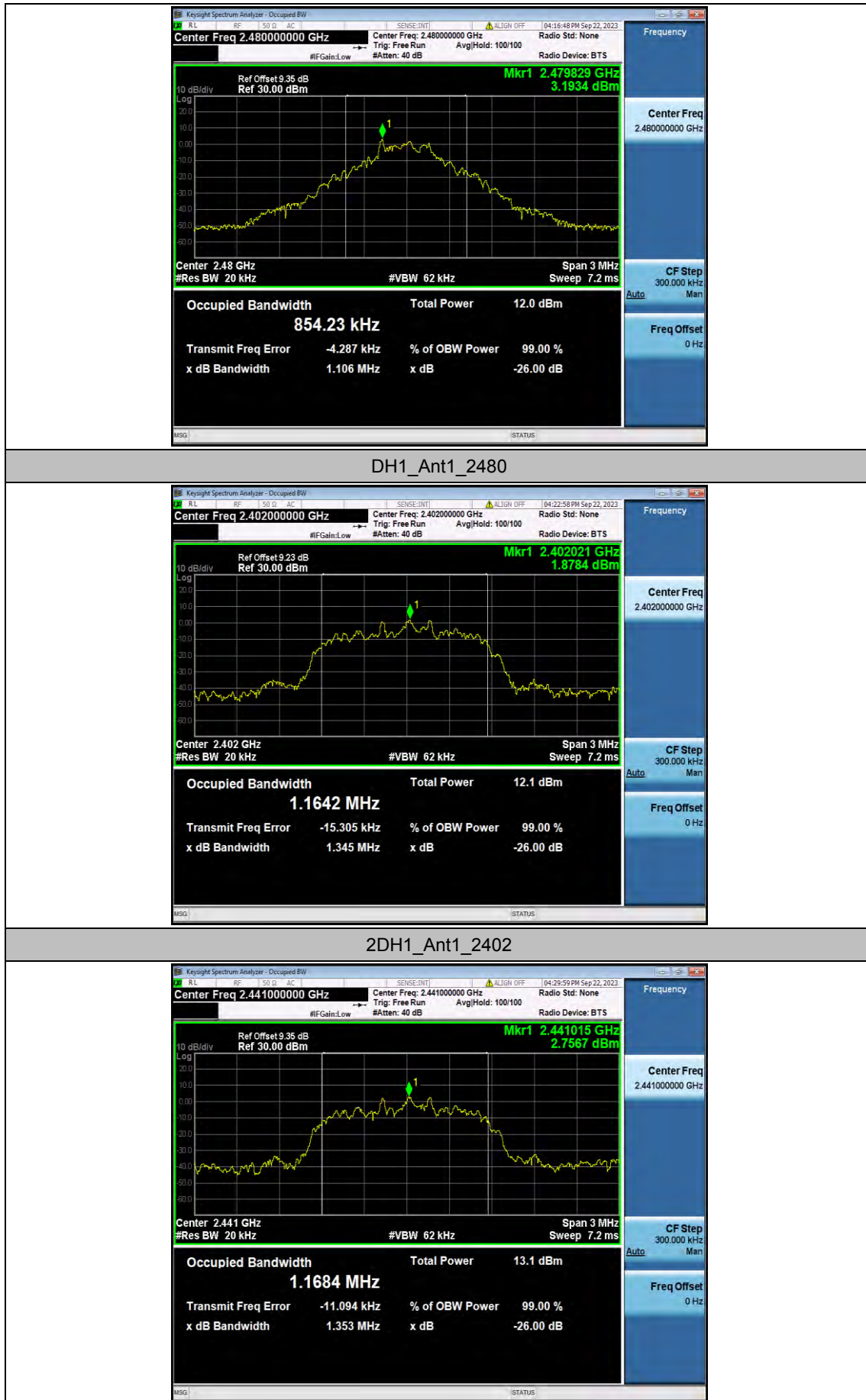
Appendix A.2: Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.84677	2401.572	2402.419	---	---
		2441	0.84263	2440.577	2441.419	---	---
		2480	0.85423	2479.569	2480.423	---	---
2DH1	Ant1	2402	1.1642	2401.403	2402.567	---	---
		2441	1.1684	2440.405	2441.573	---	---
		2480	1.1638	2479.408	2480.572	---	---
3DH1	Ant1	2402	1.1584	2401.428	2402.586	---	---
		2441	1.1637	2440.425	2441.589	---	---
		2480	1.1635	2479.430	2480.594	---	---

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	5.83	≤20.97	PASS
		2441	7.04	≤20.97	PASS
		2480	5.93	≤20.97	PASS
2DH1	Ant1	2402	7.12	≤20.97	PASS
		2441	8.04	≤20.97	PASS
		2480	6.9	≤20.97	PASS
3DH1	Ant1	2402	7.29	≤20.97	PASS
		2441	8.22	≤20.97	PASS
		2480	7.26	≤20.97	PASS

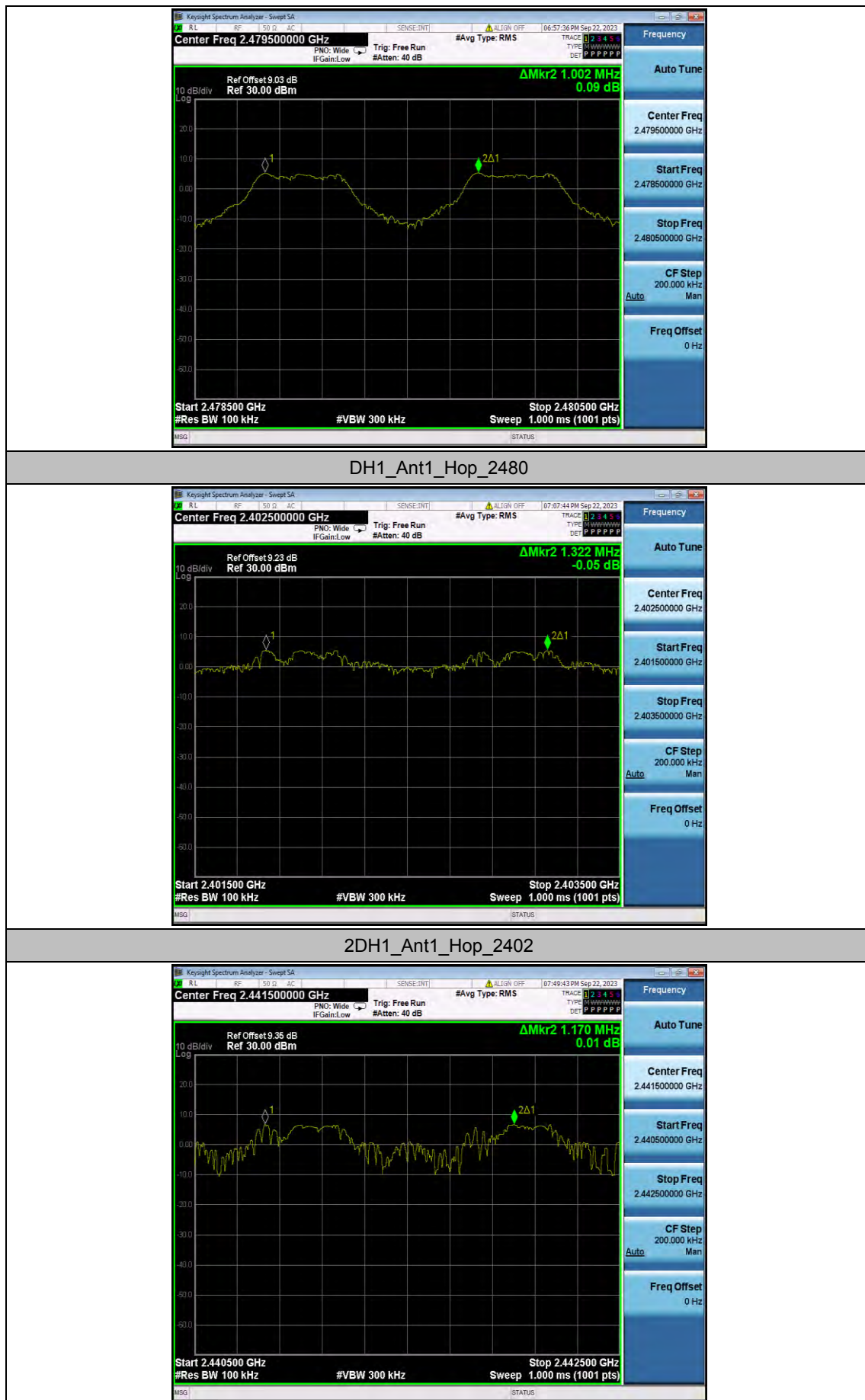
Appendix A.4: Carrier frequency separation

Test Result

Test Mode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	1.002	≥ 0.972	PASS
		Hop_2441	1.326	≥ 0.972	PASS
		Hop_2480	1.002	≥ 0.972	PASS
2DH1	Ant1	Hop_2402	1.322	≥ 0.852	PASS
		Hop_2441	1.17	≥ 0.852	PASS
		Hop_2480	1.326	≥ 0.852	PASS
3DH1	Ant1	Hop_2402	0.998	≥ 0.844	PASS
		Hop_2441	1.004	≥ 0.844	PASS
		Hop_2480	1	≥ 0.844	PASS

Test Graphs





2DH1_Ant1_Hop_2441



2DH1_Ant1_Hop_2480



3DH1_Ant1_Hop_2402



3DH1_Ant1_Hop_2441



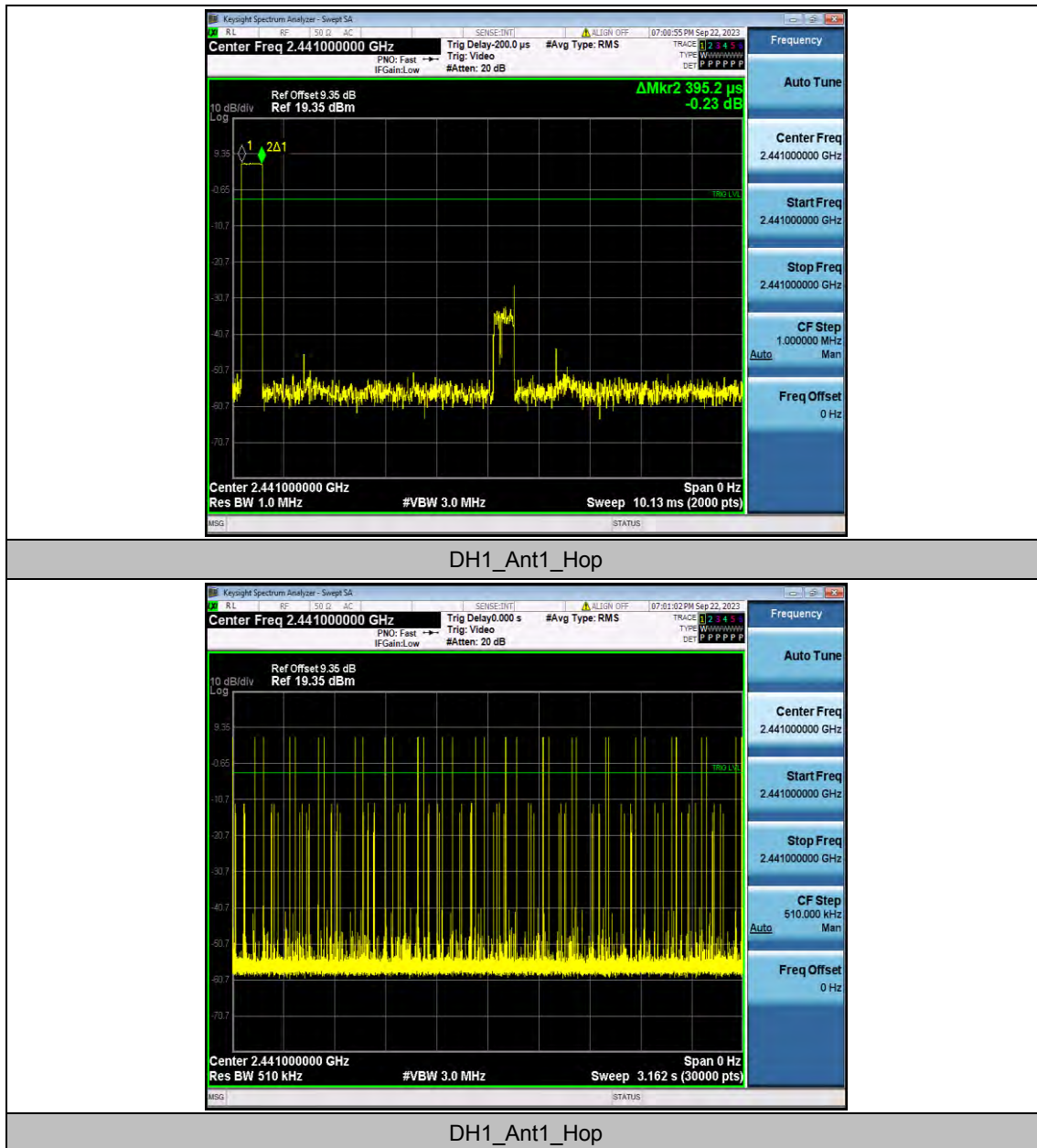
3DH1_Ant1_Hop_2480

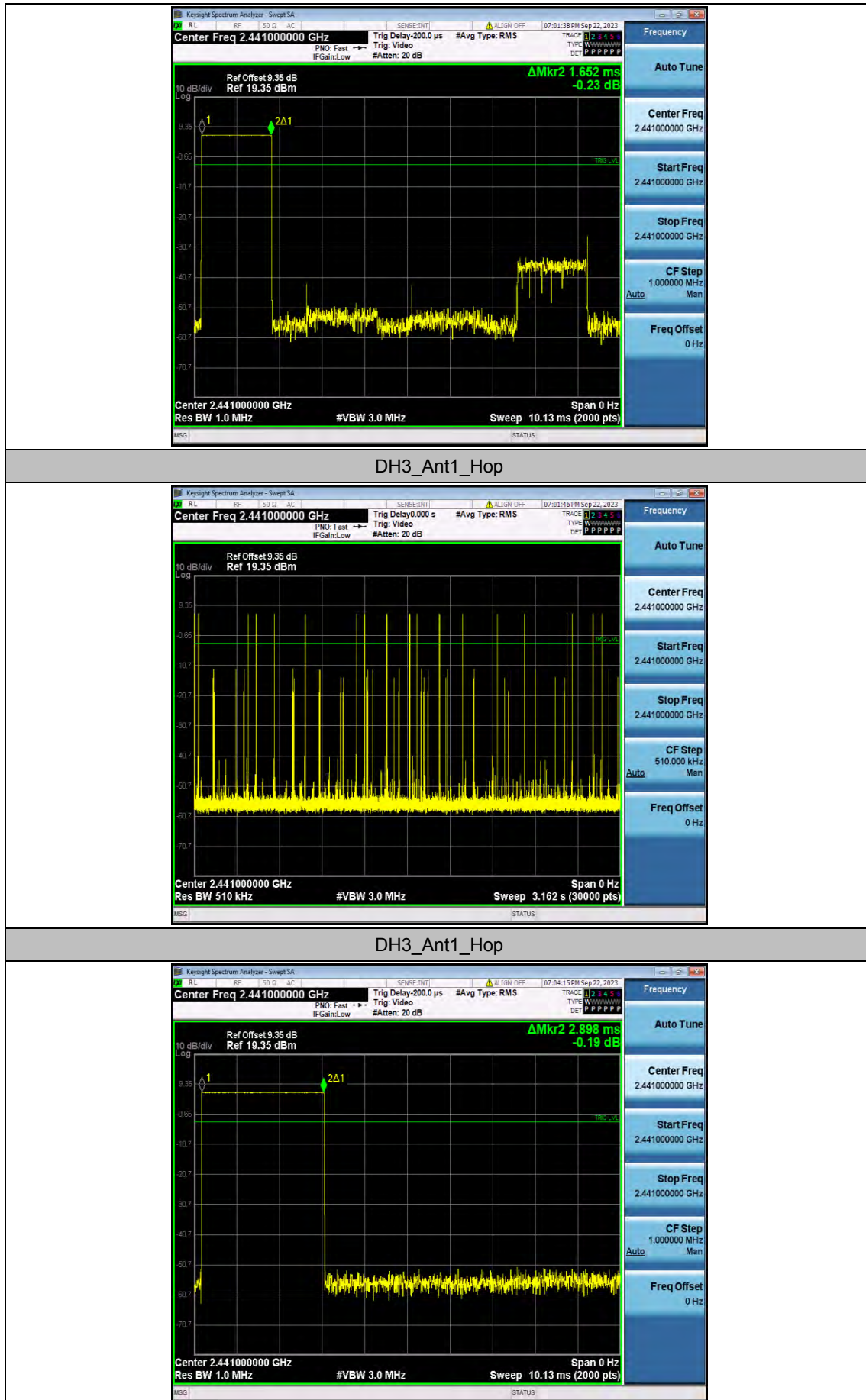
Appendix A.5: Time of occupancy

Test Result

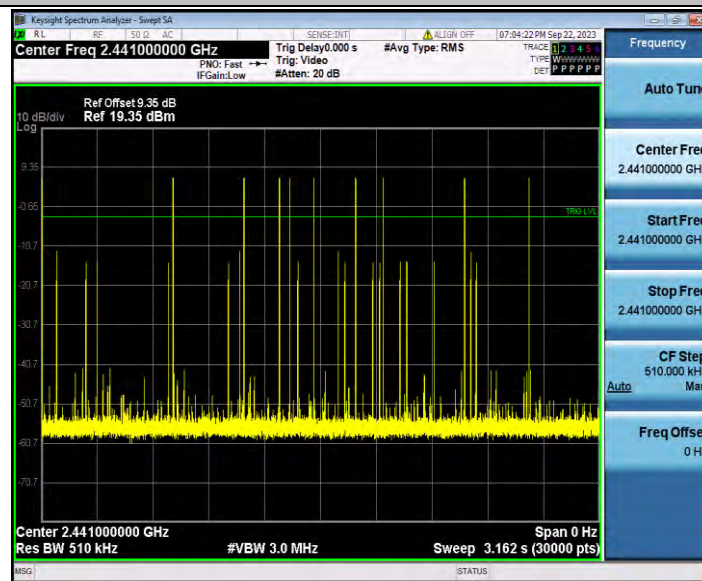
Test Mode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.40	330	0.13	≤0.4	PASS
DH3	Ant1	Hop	1.65	200	0.33	≤0.4	PASS
DH5	Ant1	Hop	2.90	100	0.29	≤0.4	PASS
2DH1	Ant1	Hop	0.39	330	0.129	≤0.4	PASS
2DH3	Ant1	Hop	1.64	150	0.246	≤0.4	PASS
2DH5	Ant1	Hop	2.89	110	0.318	≤0.4	PASS
3DH1	Ant1	Hop	0.39	320	0.125	≤0.4	PASS
3DH3	Ant1	Hop	1.61	170	0.274	≤0.4	PASS
3DH5	Ant1	Hop	2.89	130	0.375	≤0.4	PASS

Test Graphs

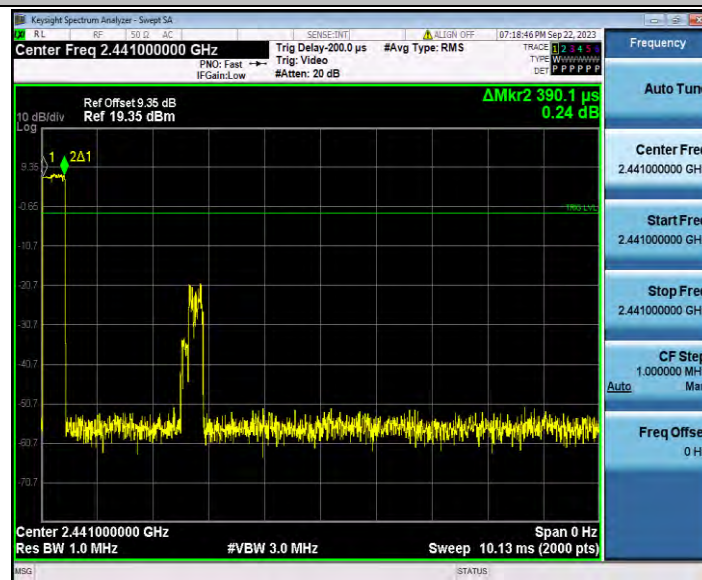




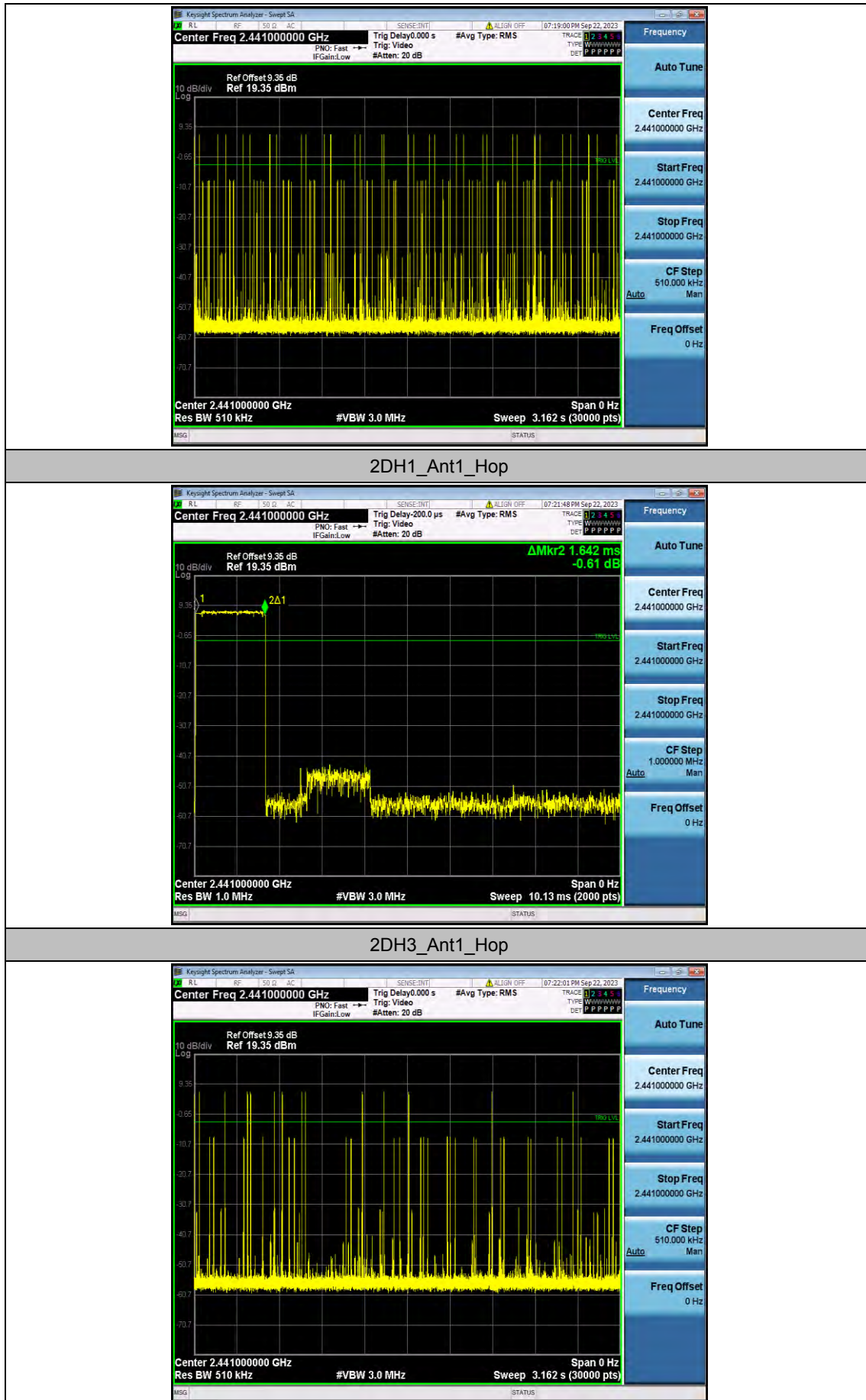
DH5_Ant1_Hop



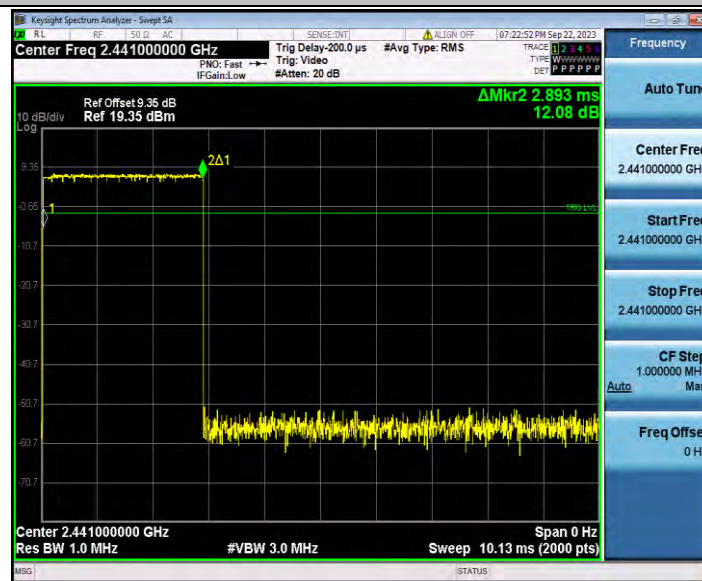
DH5_Ant1_Hop



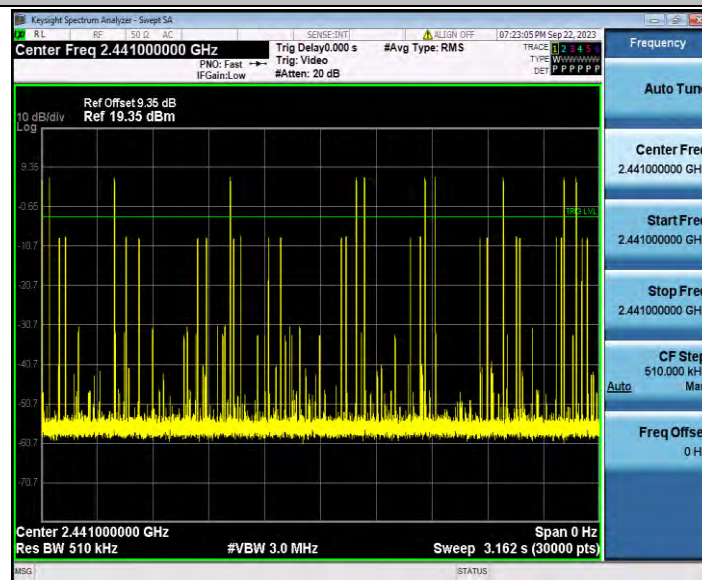
2DH1_Ant1_Hop



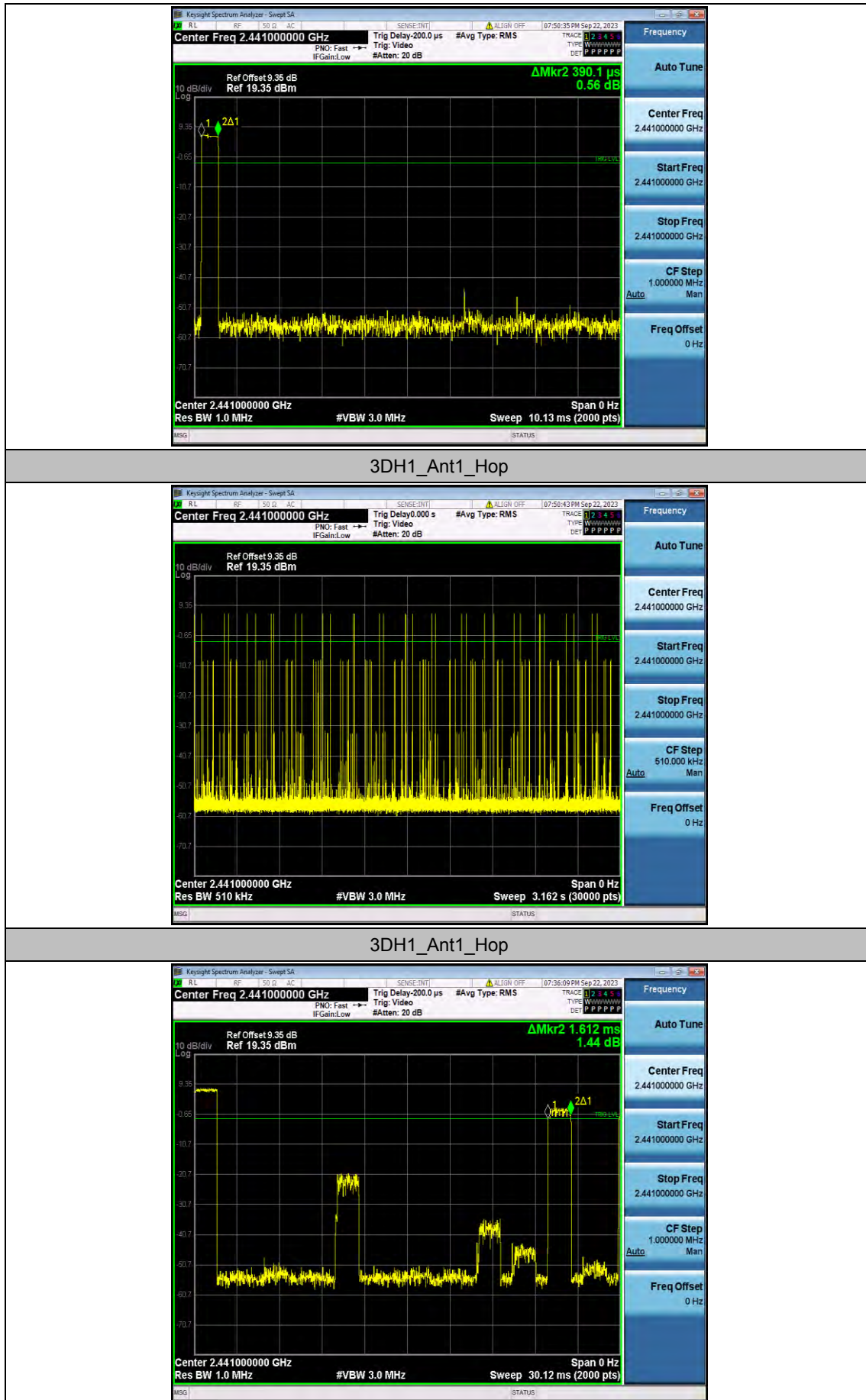
2DH3_Ant1_Hop



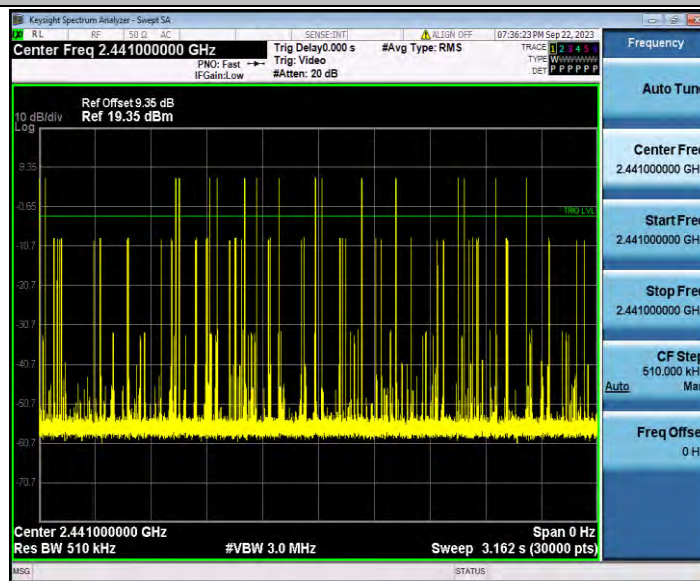
2DH5_Ant1_Hop



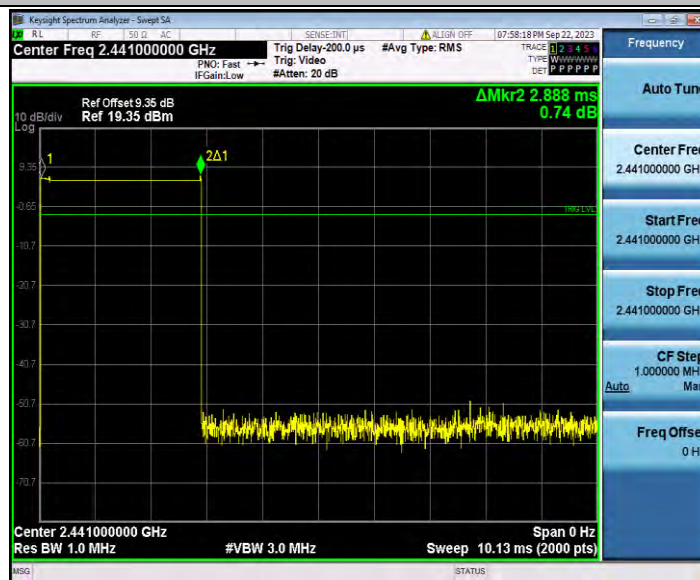
2DH5_Ant1_Hop



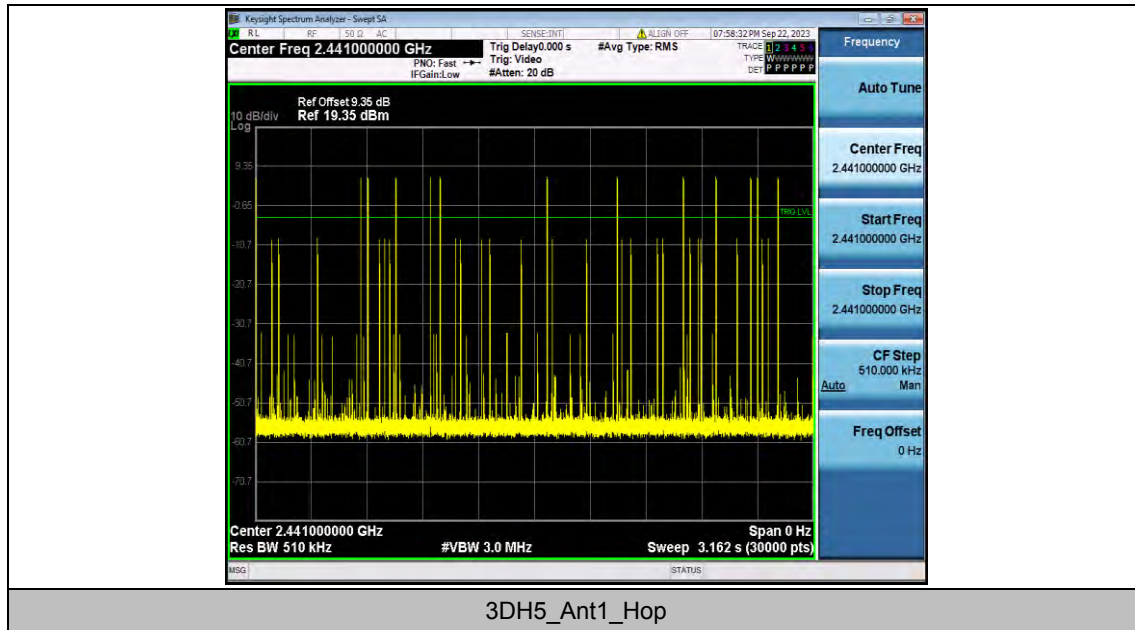
3DH3_Ant1_Hop



3DH3_Ant1_Hop



3DH5_Ant1_Hop

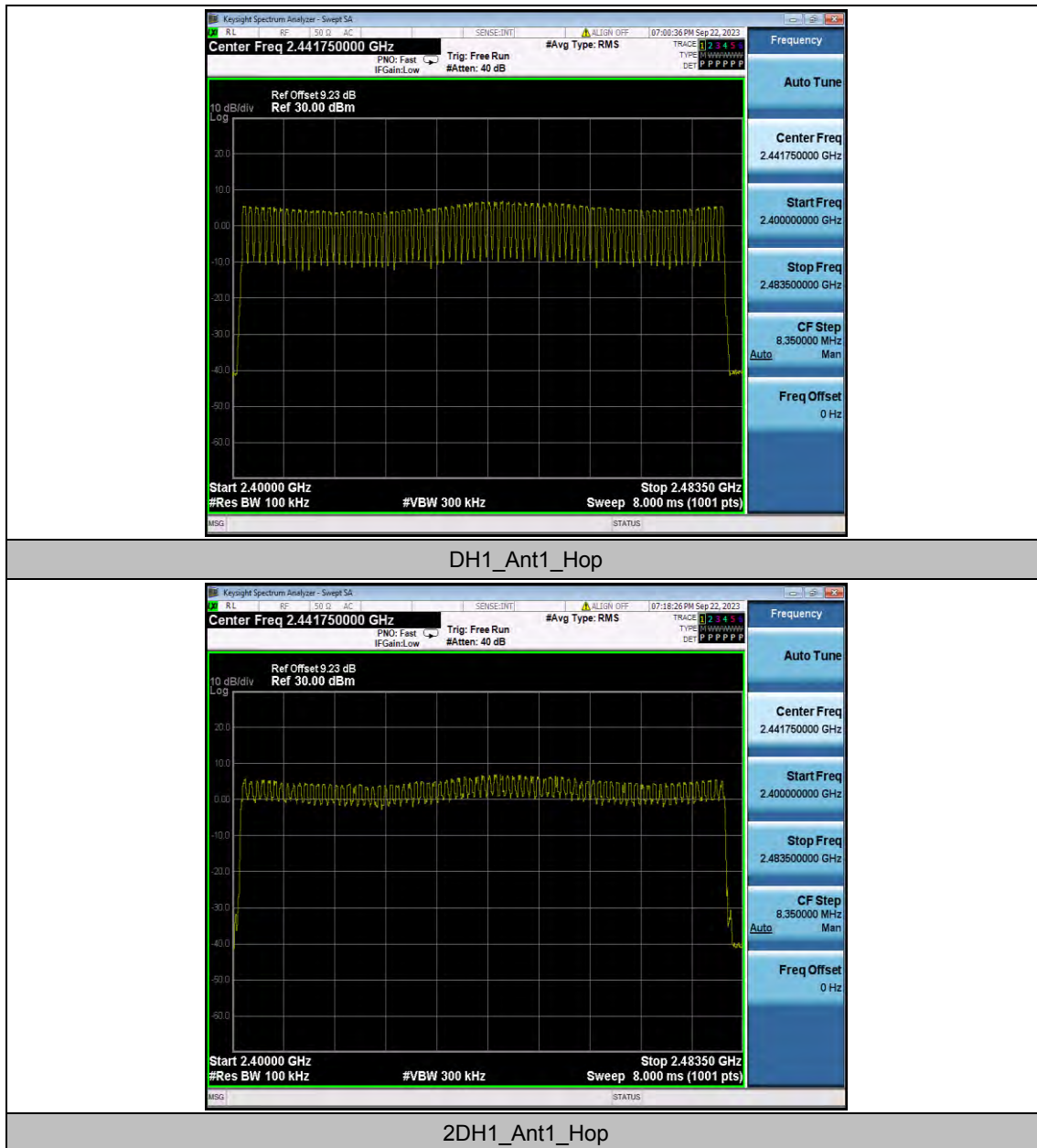


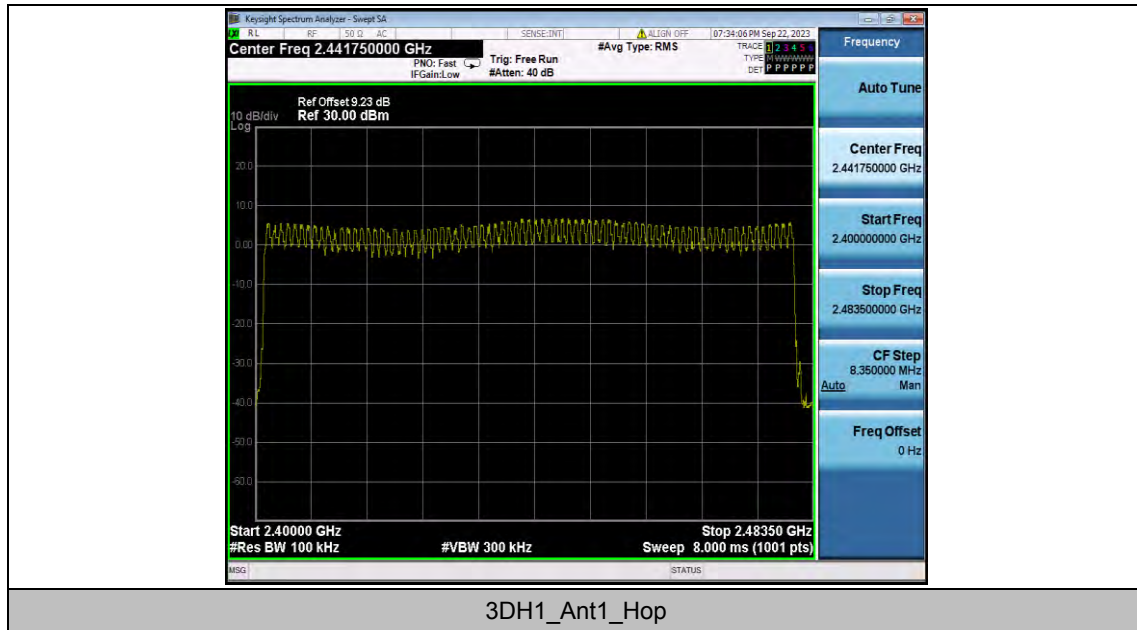
Appendix A.6: Number of hopping channels

Test Result

Test Mode	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



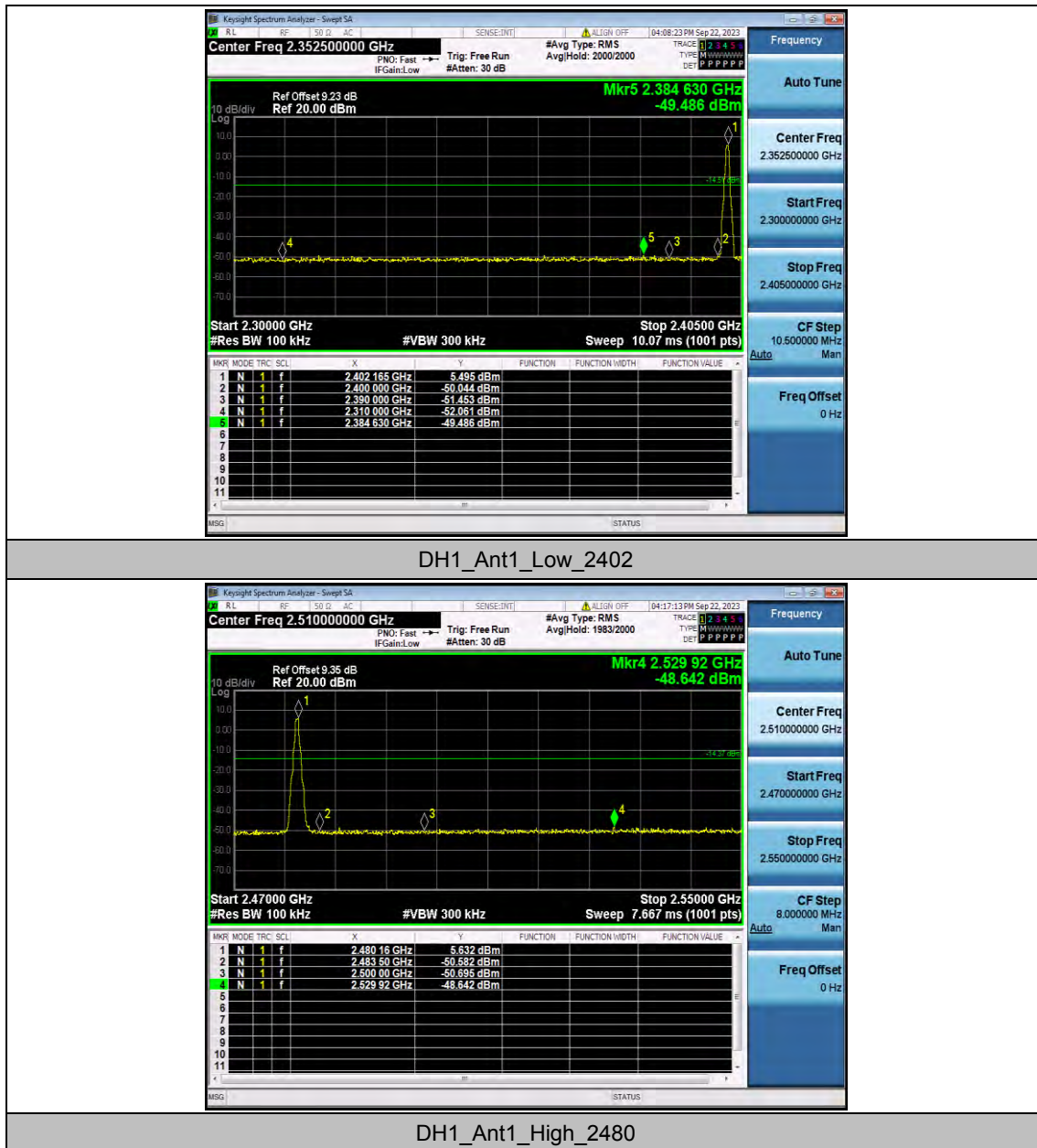


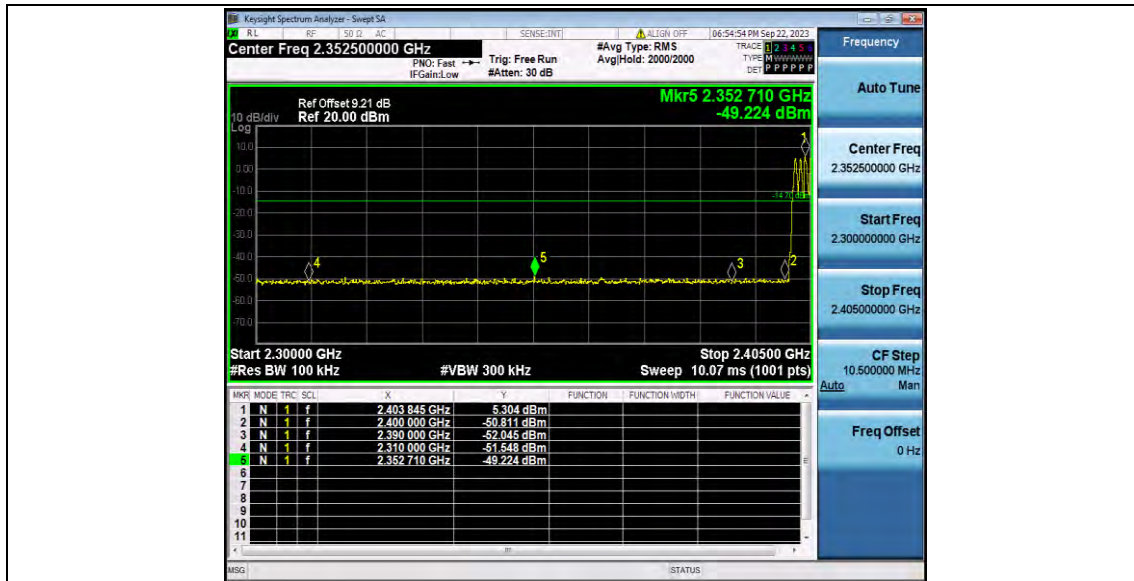
Appendix A.7: Band edge measurements

Test Result

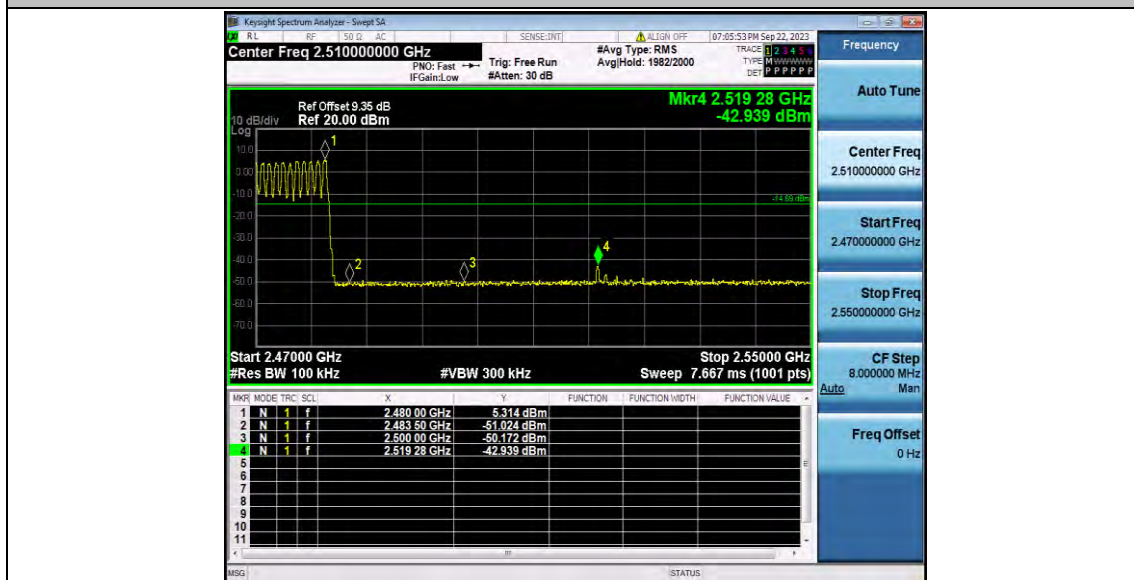
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	5.50	-49.49	≤ -14.51	PASS
		High	2480	5.63	-48.64	≤ -14.37	PASS
		Low	Hop_2402	5.30	-49.22	≤ -14.7	PASS
		High	Hop_2480	5.31	-42.94	≤ -14.69	PASS
2DH1	Ant1	Low	2402	5.47	-46.38	≤ -14.53	PASS
		High	2480	5.63	-29.5	≤ -14.37	PASS
		Low	Hop_2402	5.23	-42.99	≤ -14.77	PASS
		High	Hop_2480	4.50	-36.99	≤ -15.5	PASS
3DH1	Ant1	Low	2402	5.44	-47.37	≤ -14.56	PASS
		High	2480	5.80	-43.96	≤ -14.2	PASS
		Low	Hop_2402	5.26	-49.55	≤ -14.74	PASS
		High	Hop_2480	4.98	-37.62	≤ -15.02	PASS

Test Graphs

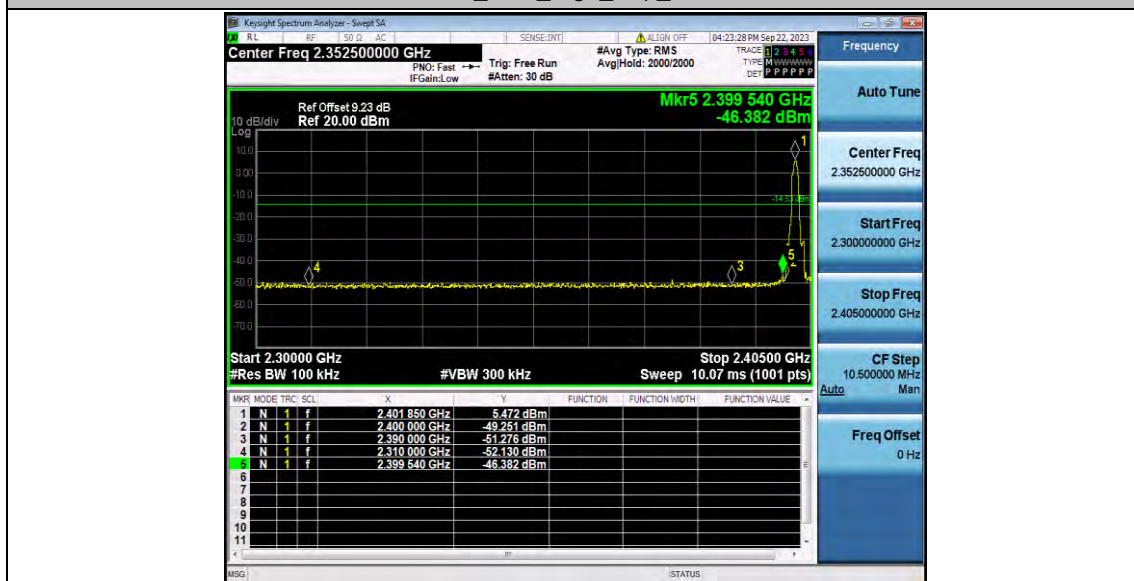




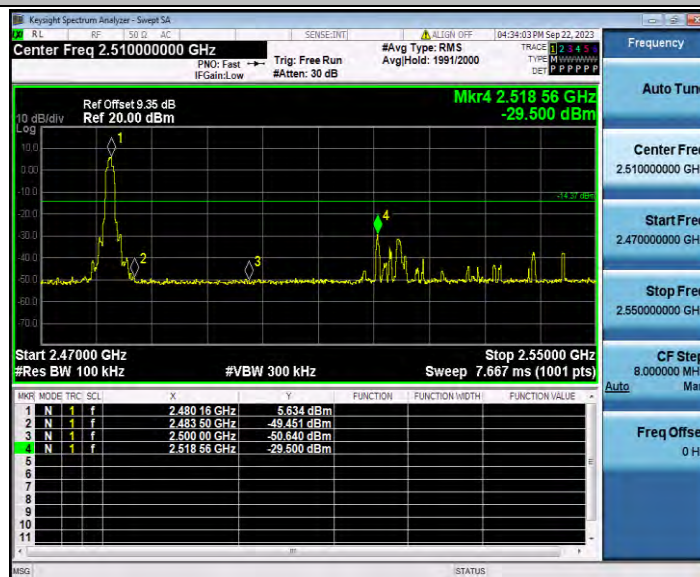
DH1_Ant1_Low_Hop_2402



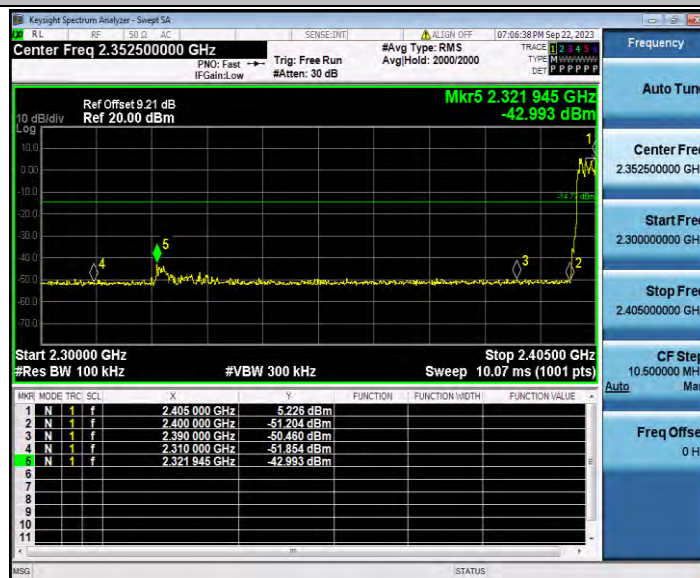
DH1_Ant1_High_Hop_2480



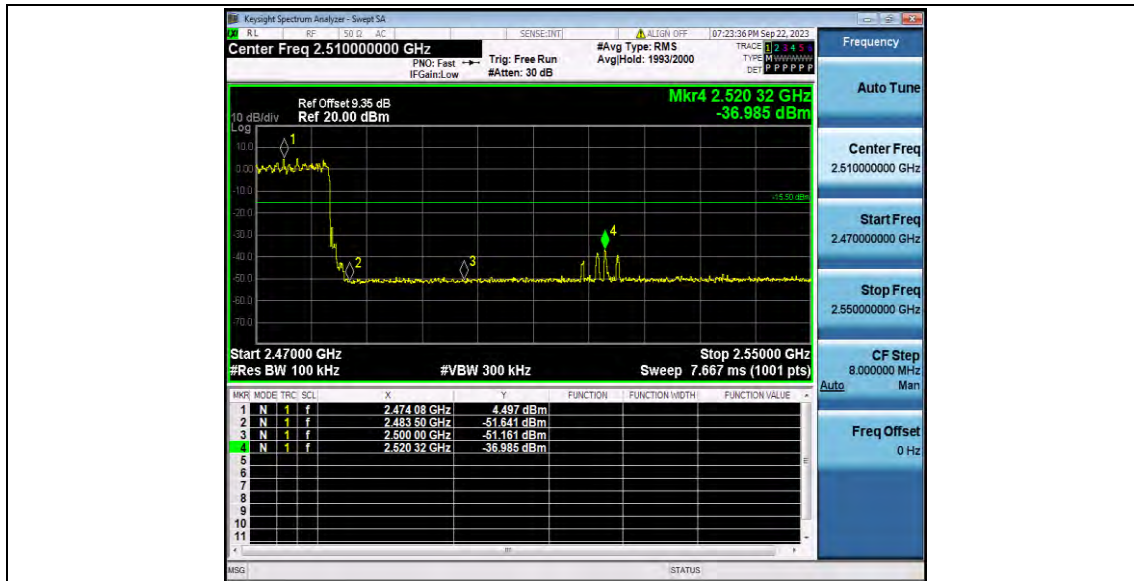
2DH1_Ant1_Low_2402



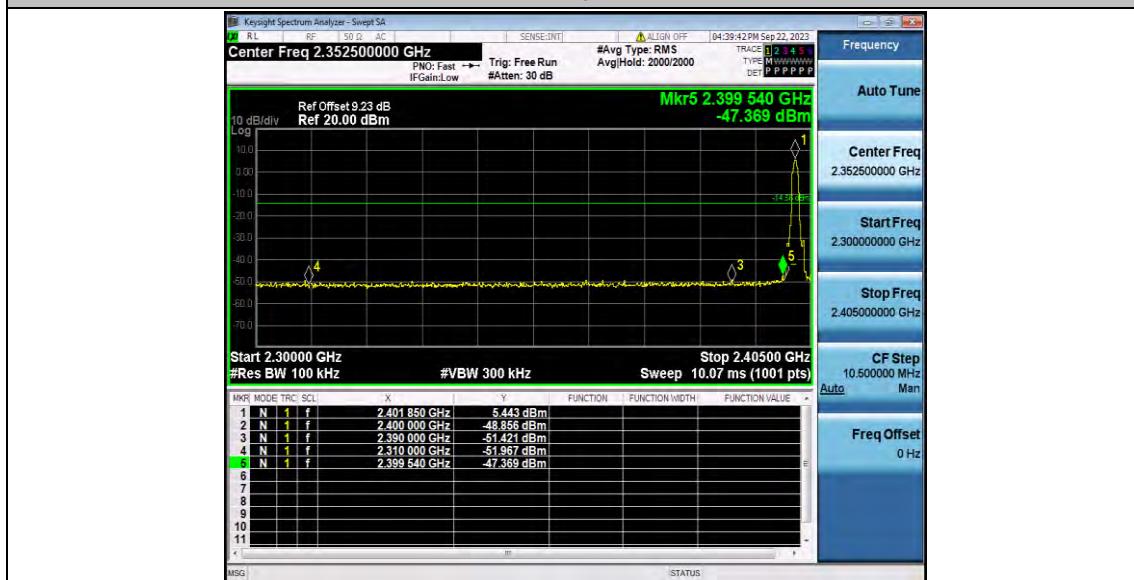
2DH1_Ant1_High_2480



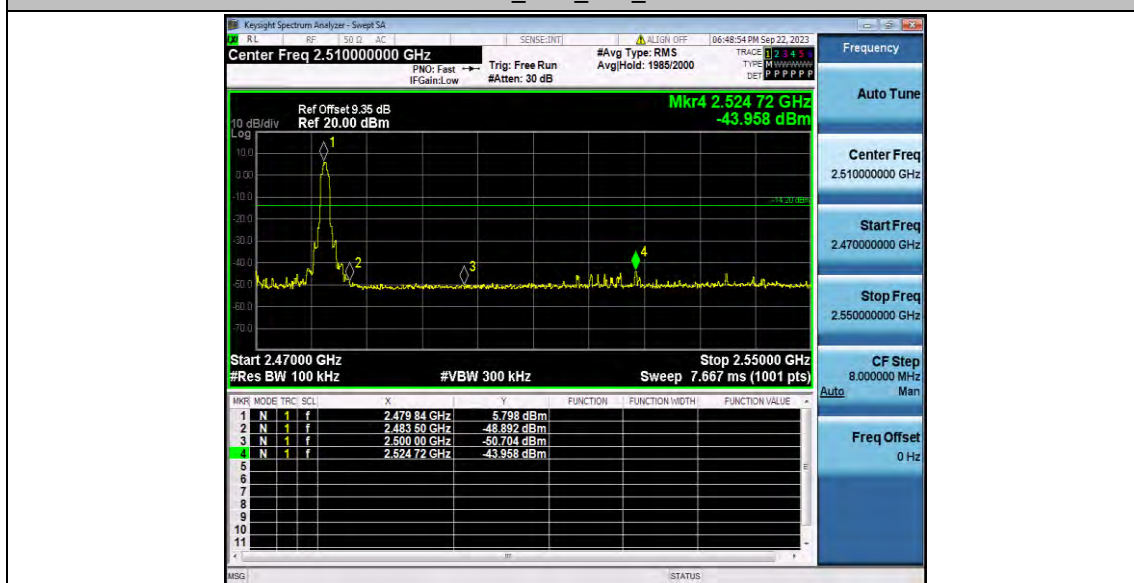
2DH1_Ant1_Low_Hop_2402



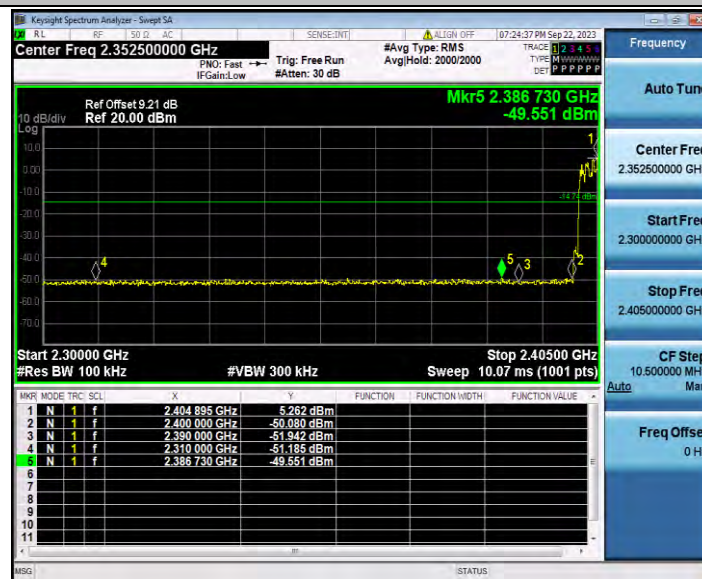
2DH1_Ant1_High_Hop_2480



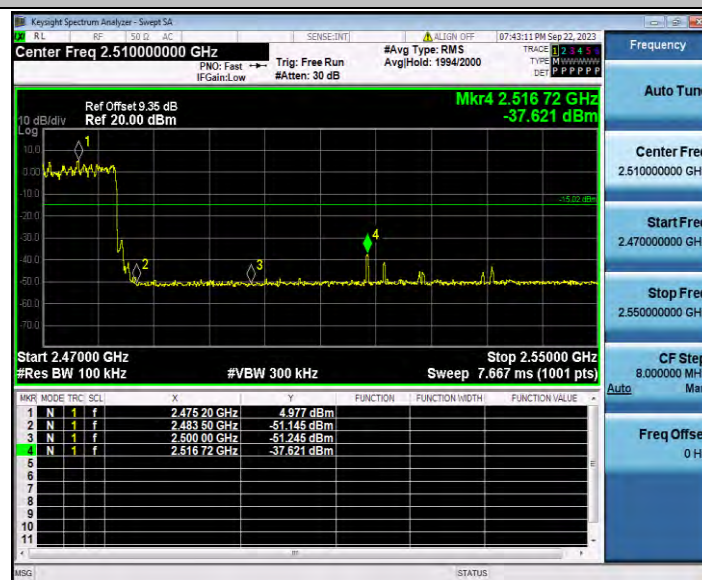
3DH1_Ant1_Low_2402



3DH1_Ant1_High_2480



3DH1_Ant1_Low_Hop_2402



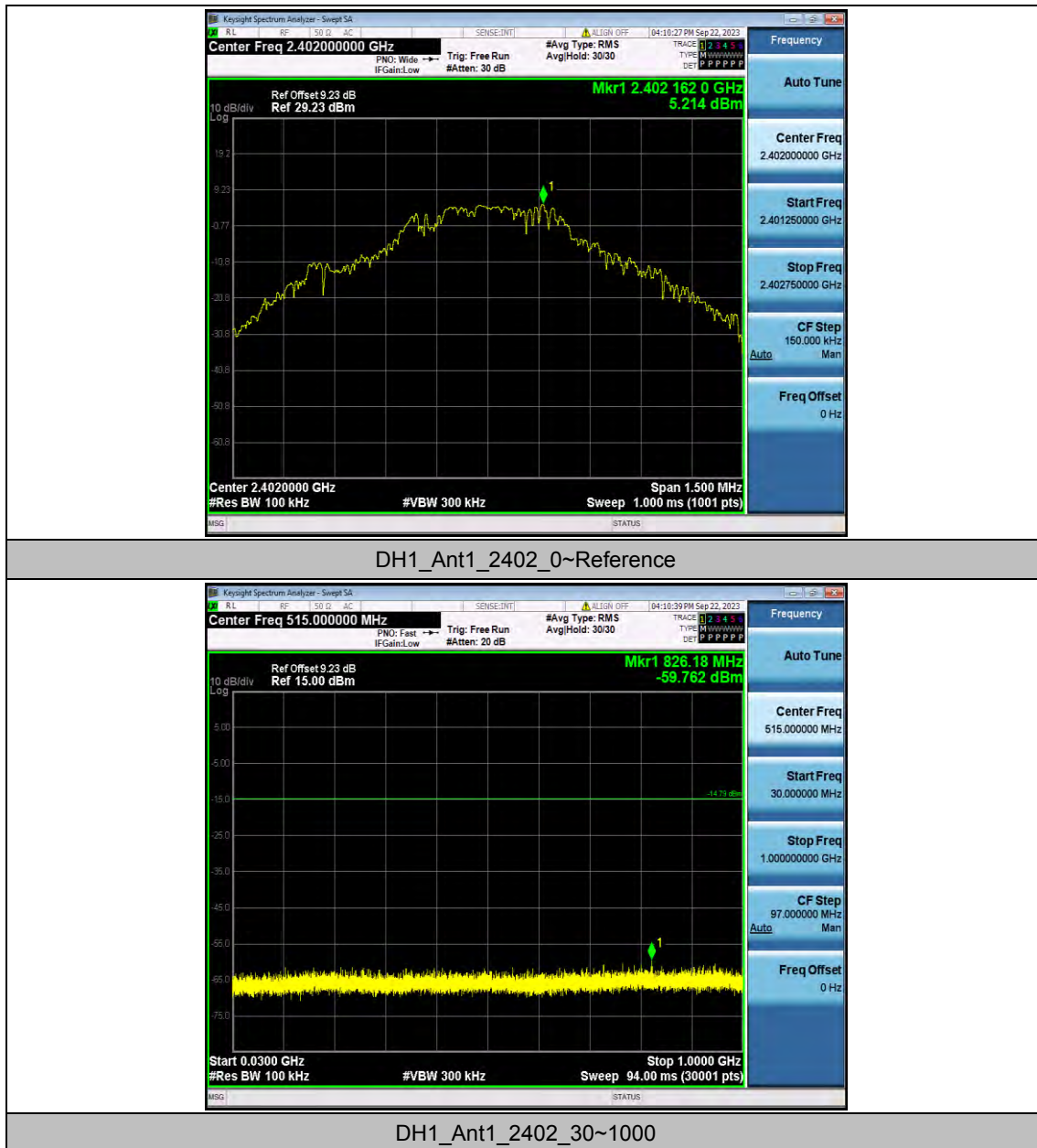
3DH1_Ant1_High_Hop_2480

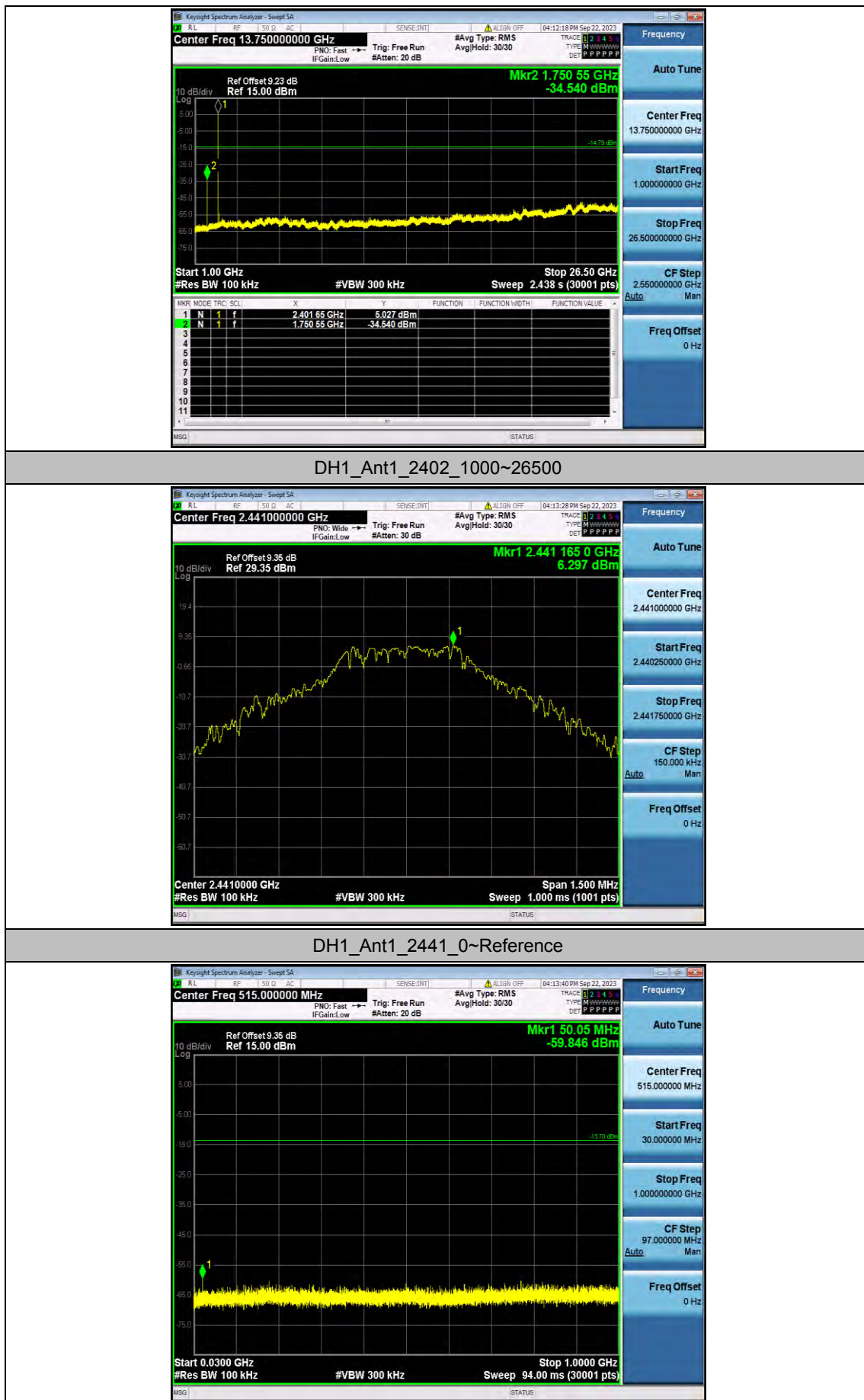
Appendix A.8: Conducted Spurious Emission

Test Result

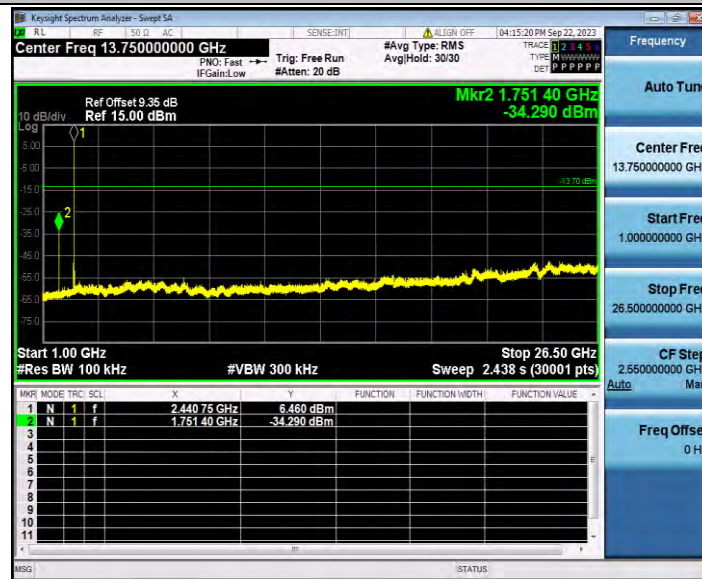
Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	5.21	5.21	---	PASS
			30~1000	5.21	-59.76	≤ -14.79	PASS
			1000~26500	5.21	-34.54	≤ -14.79	PASS
		2441	Reference	6.30	6.30	---	PASS
			30~1000	6.30	-59.85	≤ -13.7	PASS
			1000~26500	6.30	-34.29	≤ -13.7	PASS
		2480	Reference	5.35	5.35	---	PASS
			30~1000	5.35	-60.21	≤ -14.65	PASS
			1000~26500	5.35	-36.47	≤ -14.65	PASS
2DH1	Ant1	2402	Reference	5.18	5.18	---	PASS
			30~1000	5.18	-29.92	≤ -14.82	PASS
			1000~26500	5.18	-34.03	≤ -14.82	PASS
		2441	Reference	6.22	6.22	---	PASS
			30~1000	6.22	-60.13	≤ -13.78	PASS
			1000~26500	6.22	-46.96	≤ -13.78	PASS
		2480	Reference	5.32	5.32	---	PASS
			30~1000	5.32	-59.24	≤ -14.68	PASS
			1000~26500	5.32	-47.66	≤ -14.68	PASS
3DH1	Ant1	2402	Reference	5.15	5.15	---	PASS
			30~1000	5.15	-60.05	≤ -14.85	PASS
			1000~26500	5.15	-35.65	≤ -14.85	PASS
		2441	Reference	6.49	6.49	---	PASS
			30~1000	6.49	-60.39	≤ -13.51	PASS
			1000~26500	6.49	-38.1	≤ -13.51	PASS
		2480	Reference	5.38	5.38	---	PASS
			30~1000	5.38	-60.5	≤ -14.62	PASS
			1000~26500	5.38	-38.23	≤ -14.62	PASS

Test Graphs





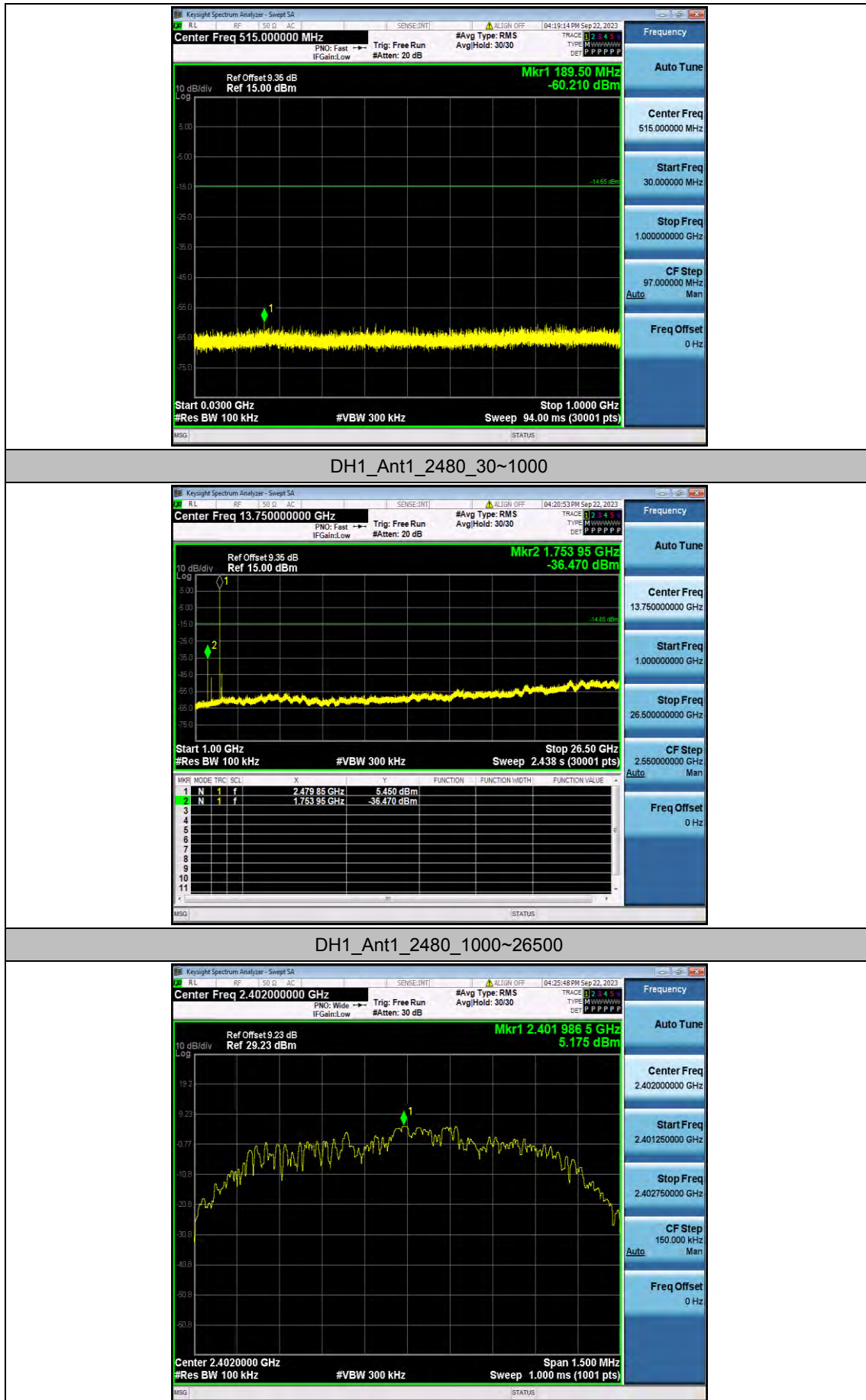
DH1_Ant1_2441_30~1000



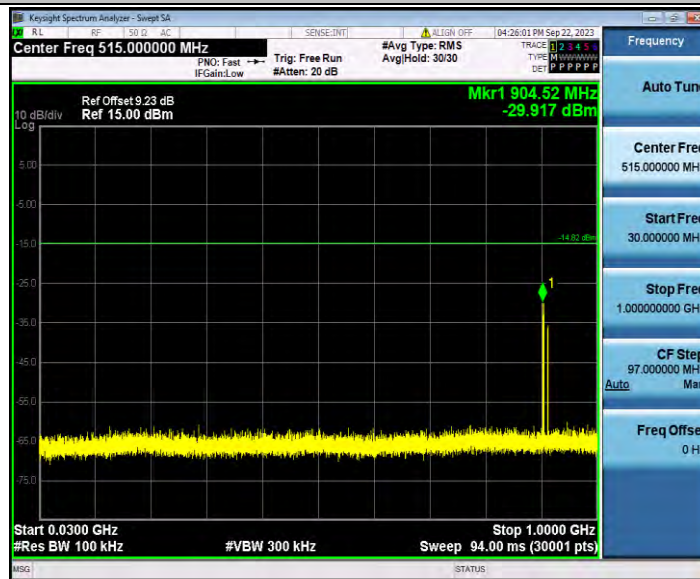
DH1_Ant1_2441_1000~26500



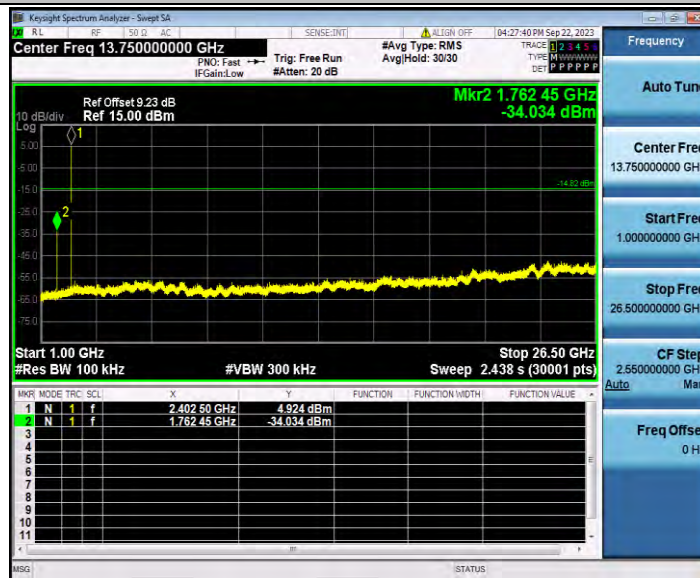
DH1_Ant1_2480_0~Reference



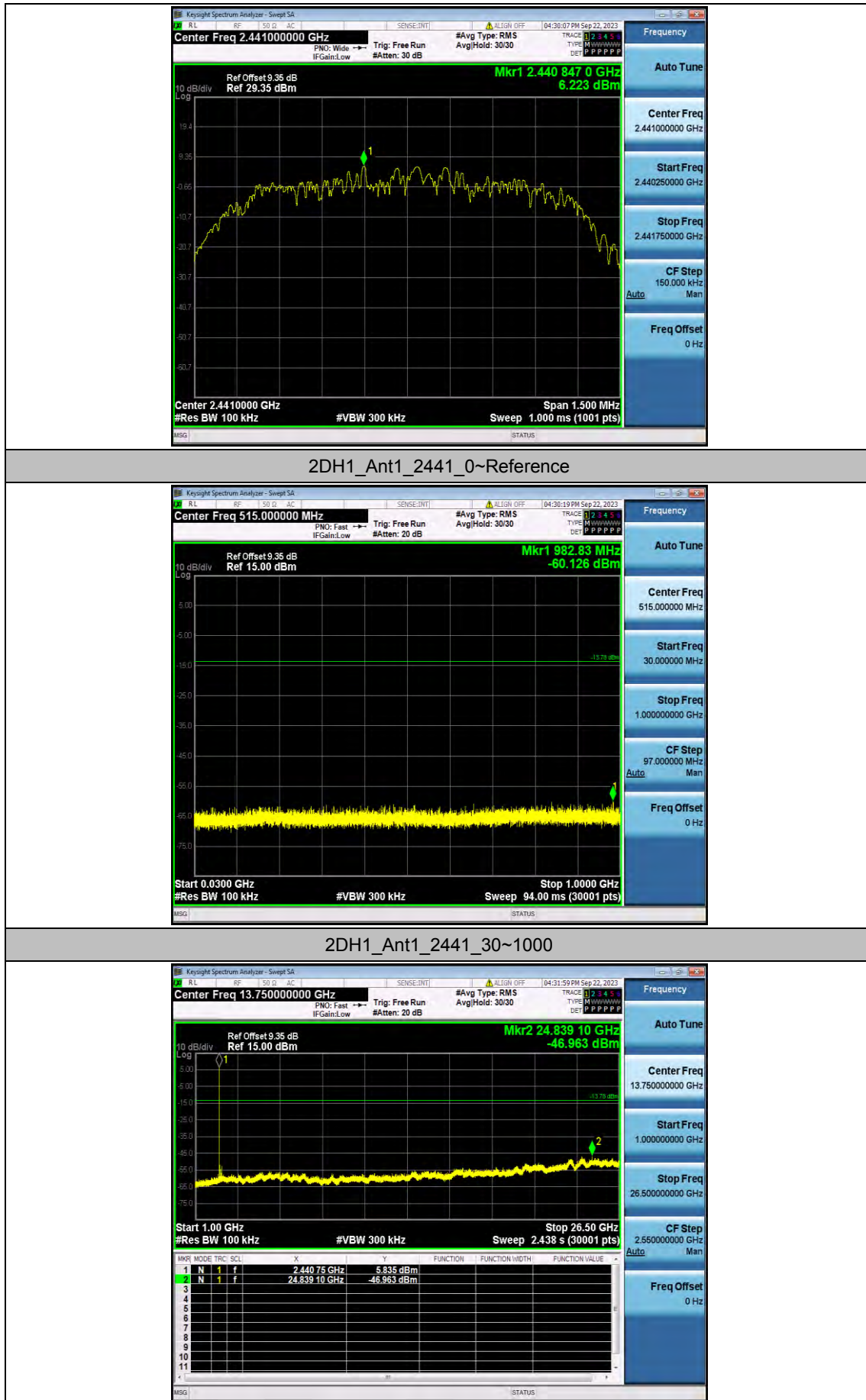
2DH1_Ant1_2402_0~Reference



2DH1_Ant1_2402_30~1000



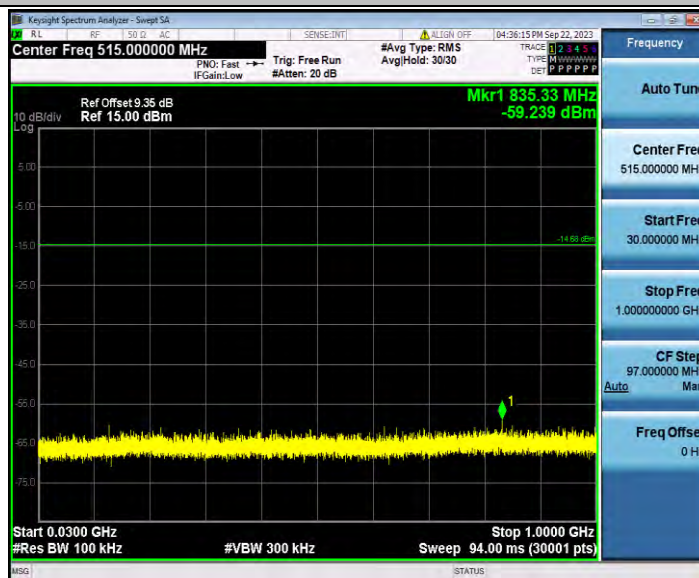
2DH1_Ant1_2402_1000~26500



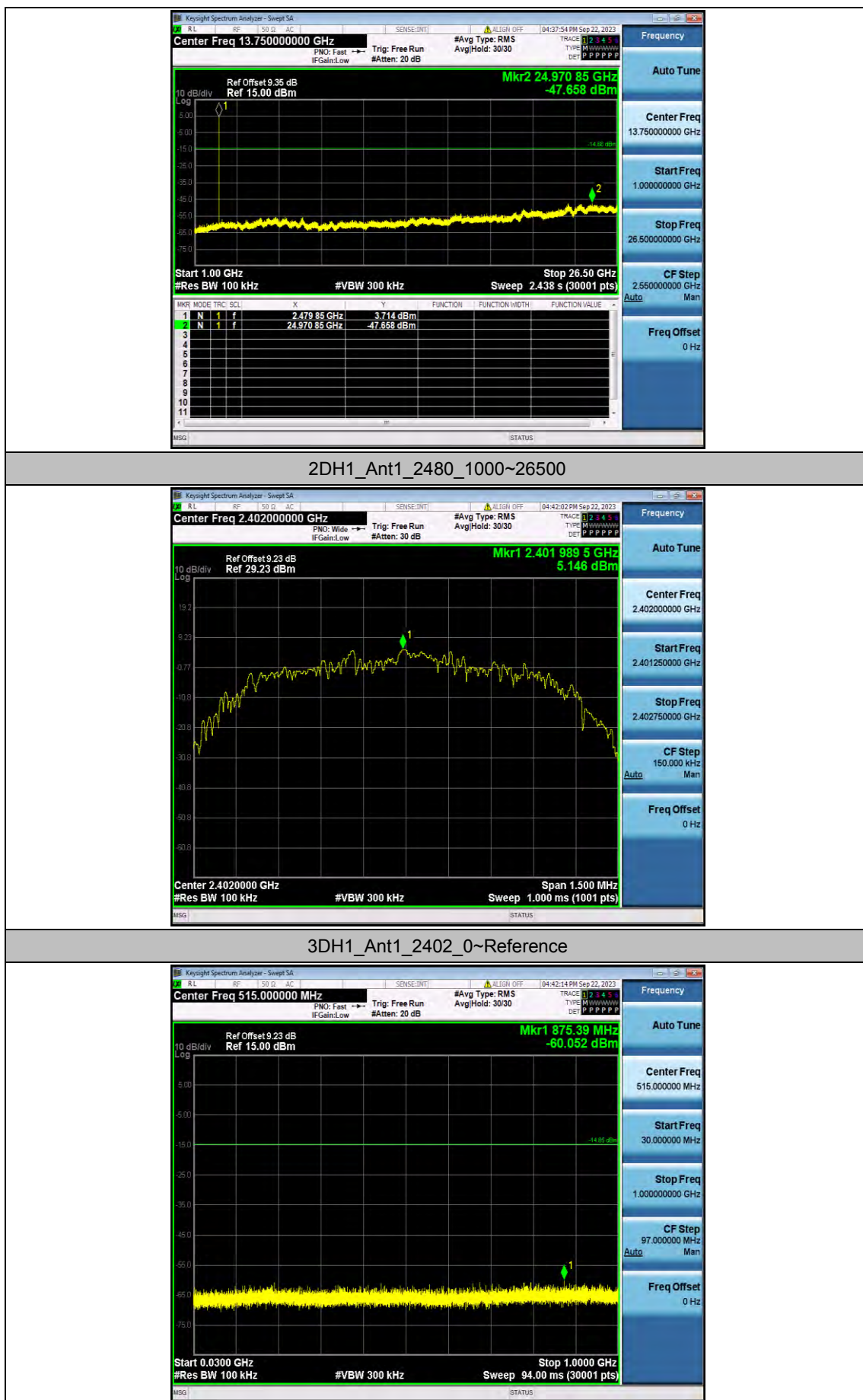
2DH1_Ant1_2441_1000~26500

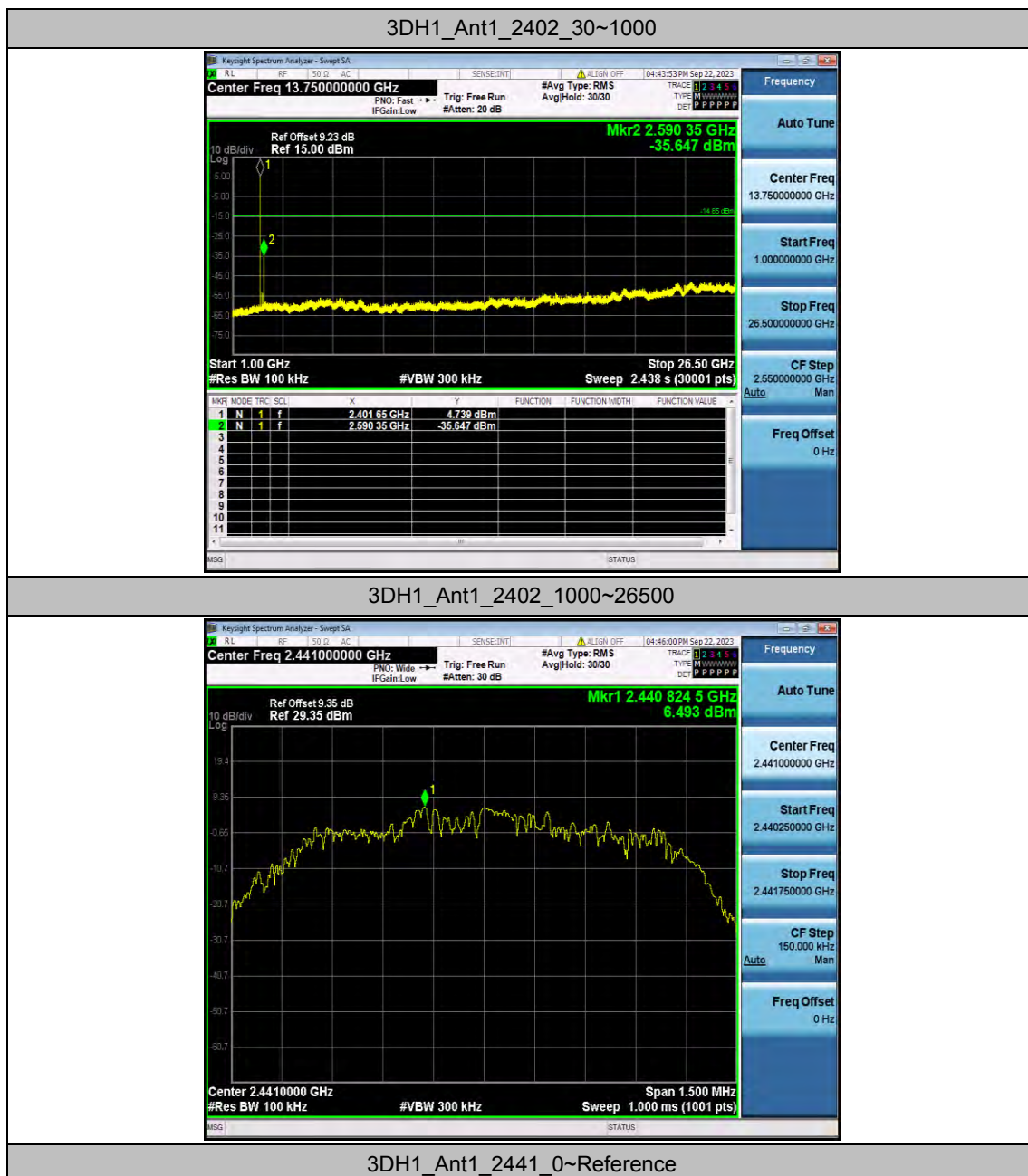


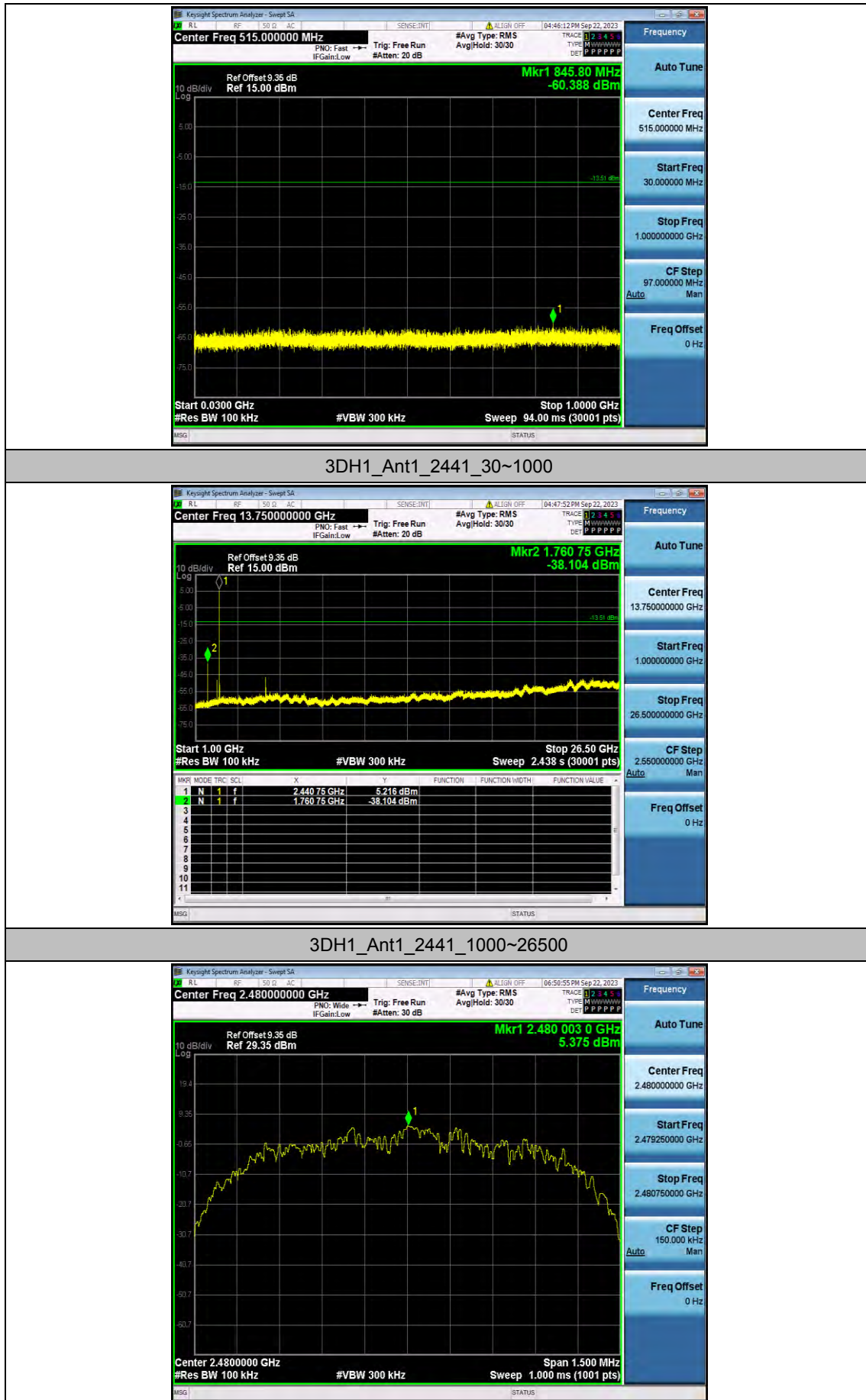
2DH1_Ant1_2480_0~Reference

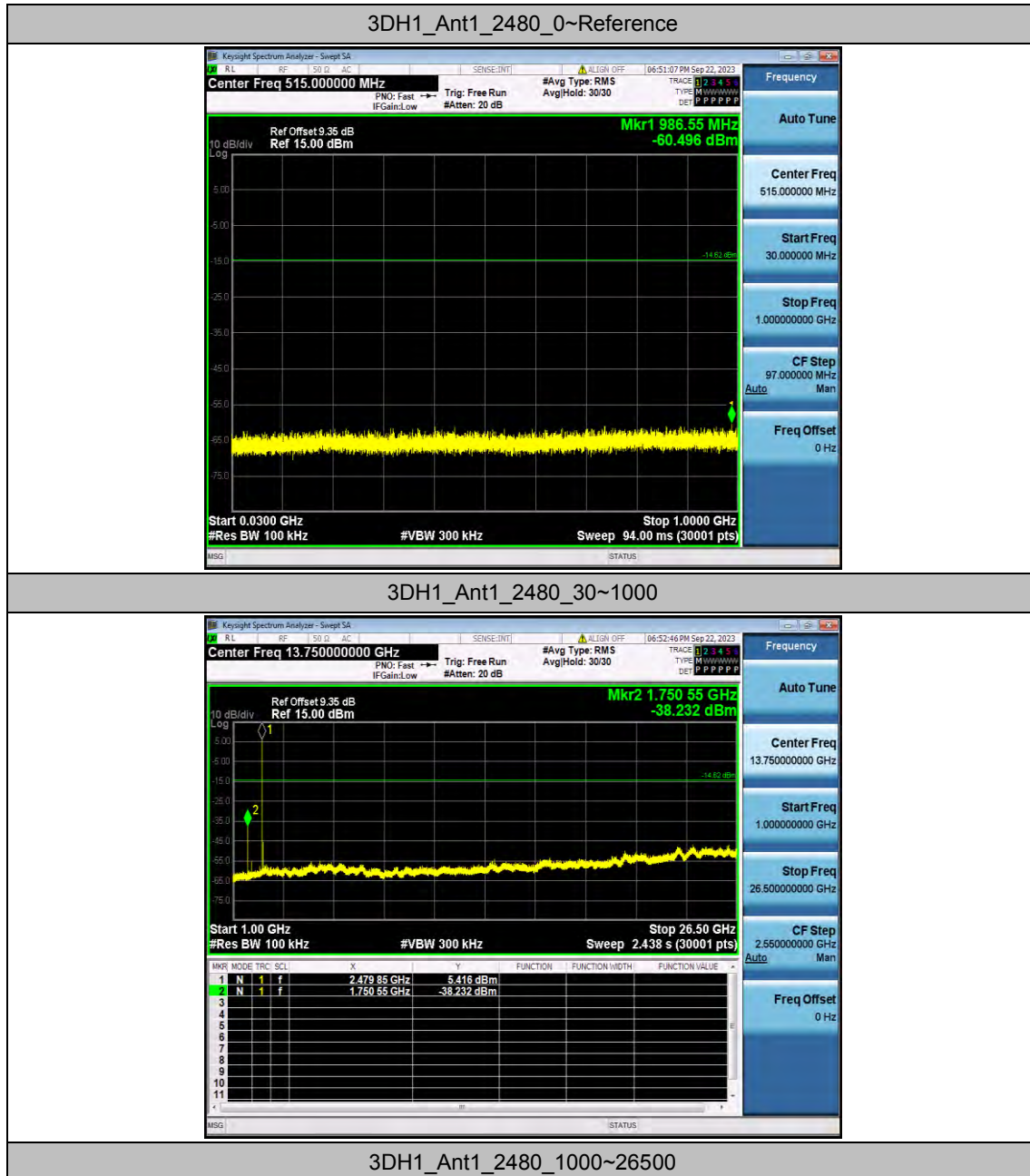


2DH1_Ant1_2480_30~1000









Appendix A.9: Emissions in Restricted Bands

Test Result

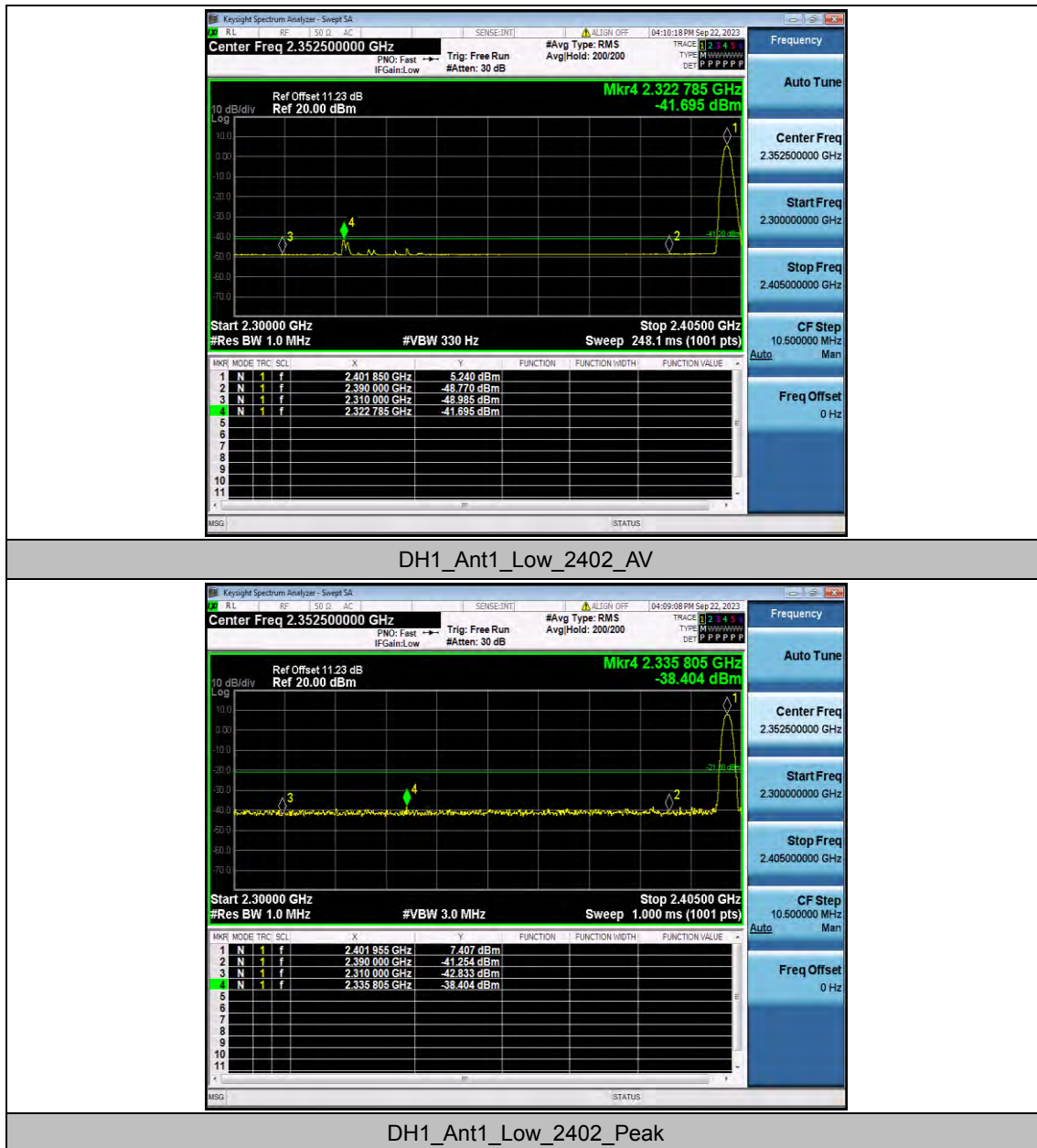
TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH1	Ant1	Low	2402	AV	2310.000	-48.99	≤-41.20	46.21	≤54	PASS
				AV	2322.785	-41.7	≤-41.20	53.50	≤54	PASS
				AV	2390.000	-48.77	≤-41.20	46.43	≤54	PASS
				Peak	2310.000	-42.83	≤-21.20	52.37	≤74	PASS
				Peak	2335.805	-38.4	≤-21.20	56.80	≤74	PASS
				Peak	2390.000	-41.25	≤-21.20	53.95	≤74	PASS
		High	2480	AV	2483.500	-47.9	≤-41.20	47.30	≤54	PASS
				AV	2483.520	-47.9	≤-41.20	47.30	≤54	PASS
				AV	2500.000	-48.41	≤-41.20	46.79	≤54	PASS
				Peak	2483.500	-40.3	≤-21.20	54.90	≤74	PASS
				Peak	2493.360	-38.68	≤-21.20	56.52	≤74	PASS
				Peak	2500.000	-40.85	≤-21.20	54.35	≤74	PASS
2DH1	Ant1	Low	2402	AV	2310.000	-48.98	≤-41.20	46.22	≤54	PASS
				AV	2386.940	-48.57	≤-41.20	46.63	≤54	PASS
				AV	2390.000	-48.64	≤-41.20	46.56	≤54	PASS
				Peak	2310.000	-40.99	≤-21.20	54.21	≤74	PASS
				Peak	2369.825	-38.21	≤-21.20	56.99	≤74	PASS
				Peak	2390.000	-40.3	≤-21.20	54.90	≤74	PASS
		High	2480	AV	2483.500	-46.71	≤-41.20	48.49	≤54	PASS
				AV	2483.520	-46.71	≤-41.20	48.49	≤54	PASS
				AV	2500.000	-48.38	≤-41.20	46.82	≤54	PASS
				Peak	2483.500	-38.21	≤-21.20	56.99	≤74	PASS
				Peak	2483.680	-36.96	≤-21.20	58.24	≤74	PASS
				Peak	2500.000	-39.76	≤-21.20	55.44	≤74	PASS
3DH1	Ant1	Low	2402	AV	2310.000	-48.95	≤-41.20	46.25	≤54	PASS
				AV	2381.795	-48.54	≤-41.20	46.66	≤54	PASS
				AV	2390.000	-48.72	≤-41.20	46.48	≤54	PASS
				Peak	2310.000	-41.21	≤-21.20	53.99	≤74	PASS
				Peak	2374.760	-38.32	≤-21.20	56.88	≤74	PASS
				Peak	2390.000	-41.29	≤-21.20	53.91	≤74	PASS
		High	2480	AV	2483.500	-46.26	≤-41.20	48.94	≤54	PASS
				AV	2483.520	-46.26	≤-41.20	48.94	≤54	PASS
				AV	2500.000	-48.35	≤-41.20	46.85	≤54	PASS
				Peak	2483.500	-34.67	≤-21.20	60.53	≤74	PASS
				Peak	2483.520	-34.67	≤-21.20	60.53	≤74	PASS

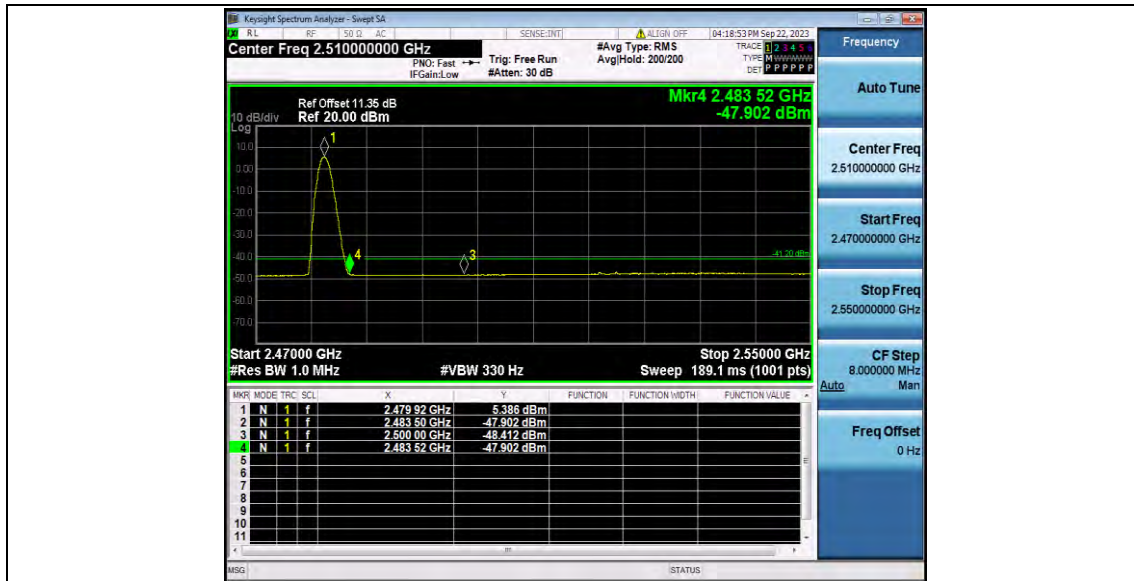
				Peak	2500.000	-41.48	≤-21.20	53.72	≤74	PASS
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Note:

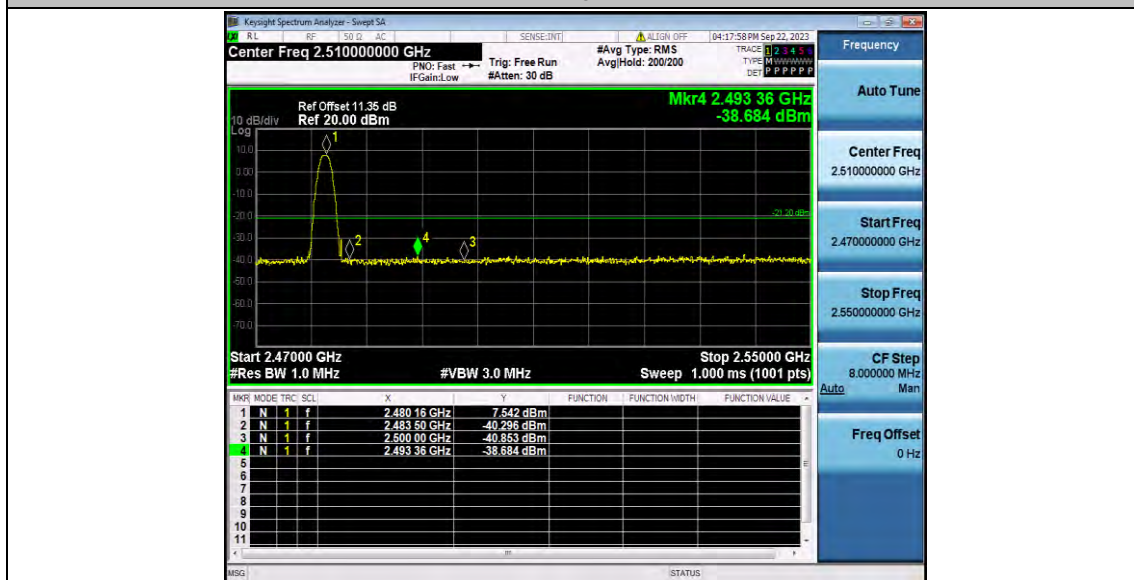
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

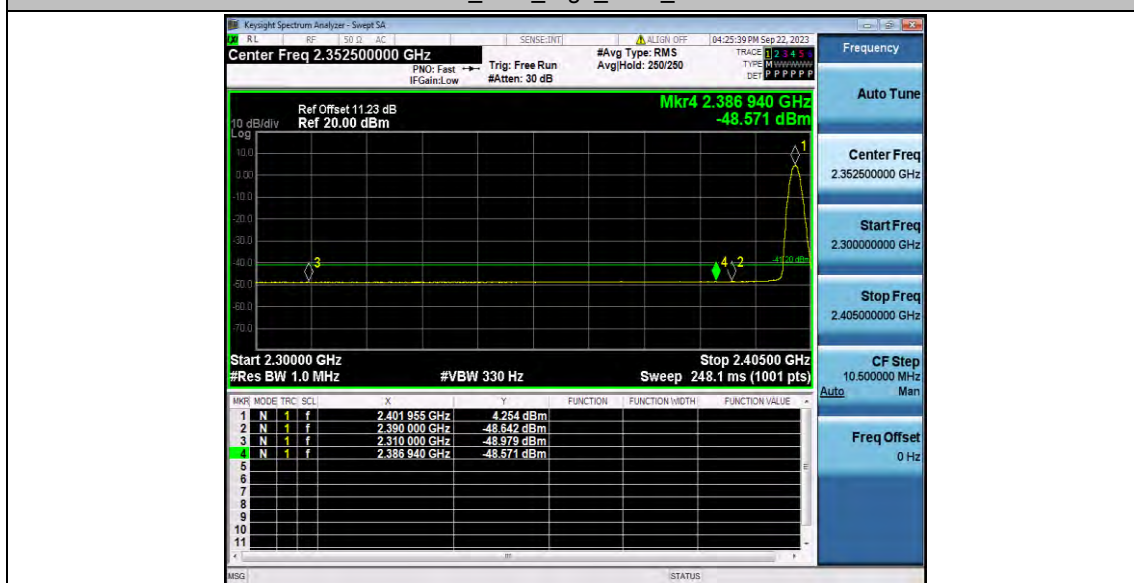




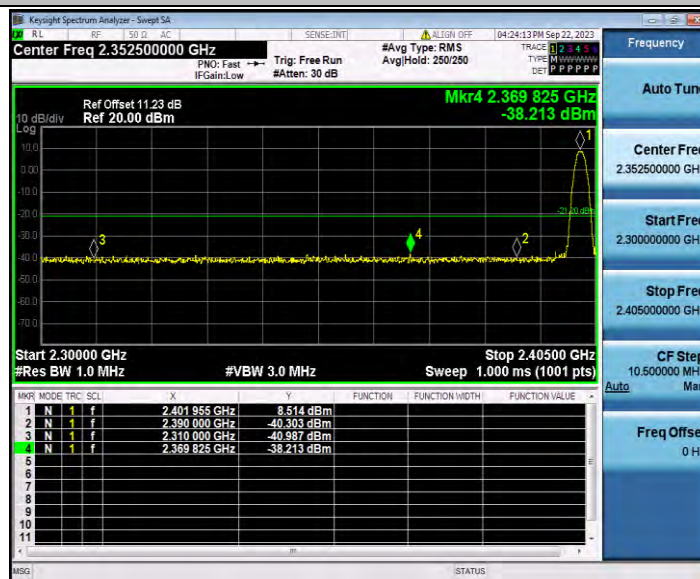
DH1_Ant1_High_2480_AV



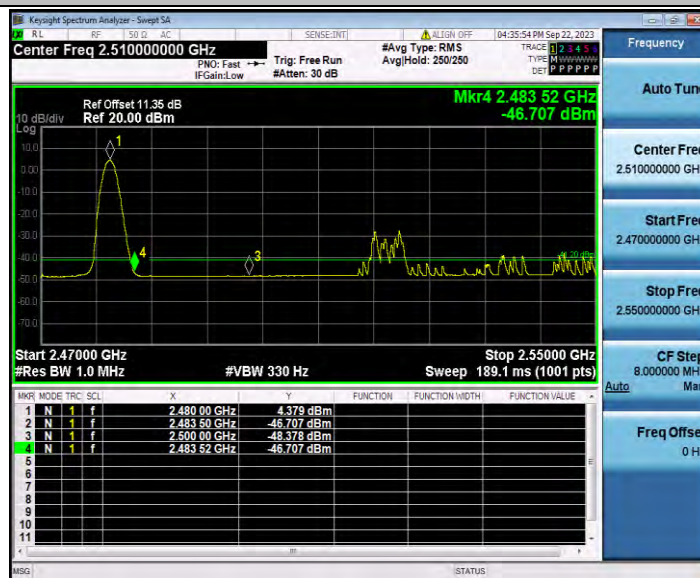
DH1_Ant1_High_2480_Peak



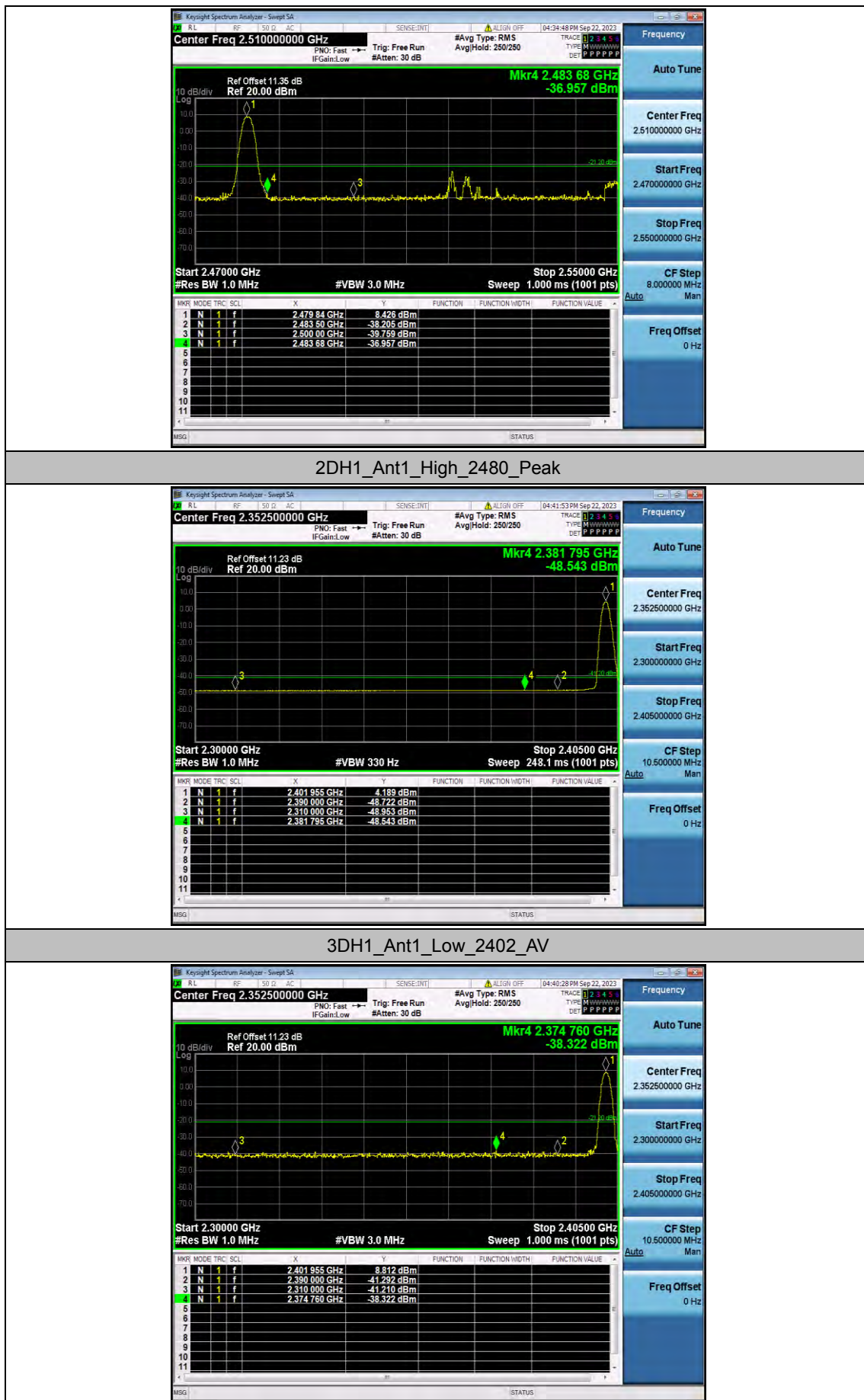
2DH1_Ant1_Low_2402_AV



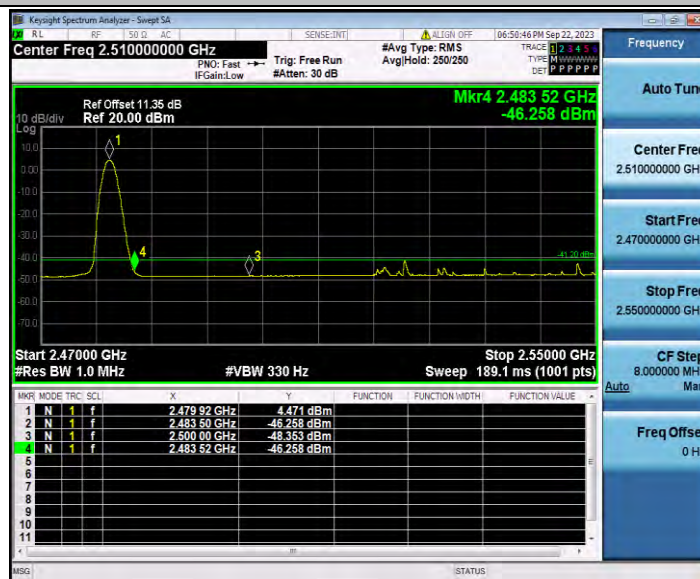
2DH1_Ant1_Low_2402_Peak



2DH1_Ant1_High_2480_AV



3DH1_Ant1_Low_2402_Peak



3DH1_Ant1_High_2480_AV



3DH1_Ant1_High_2480_Peak