

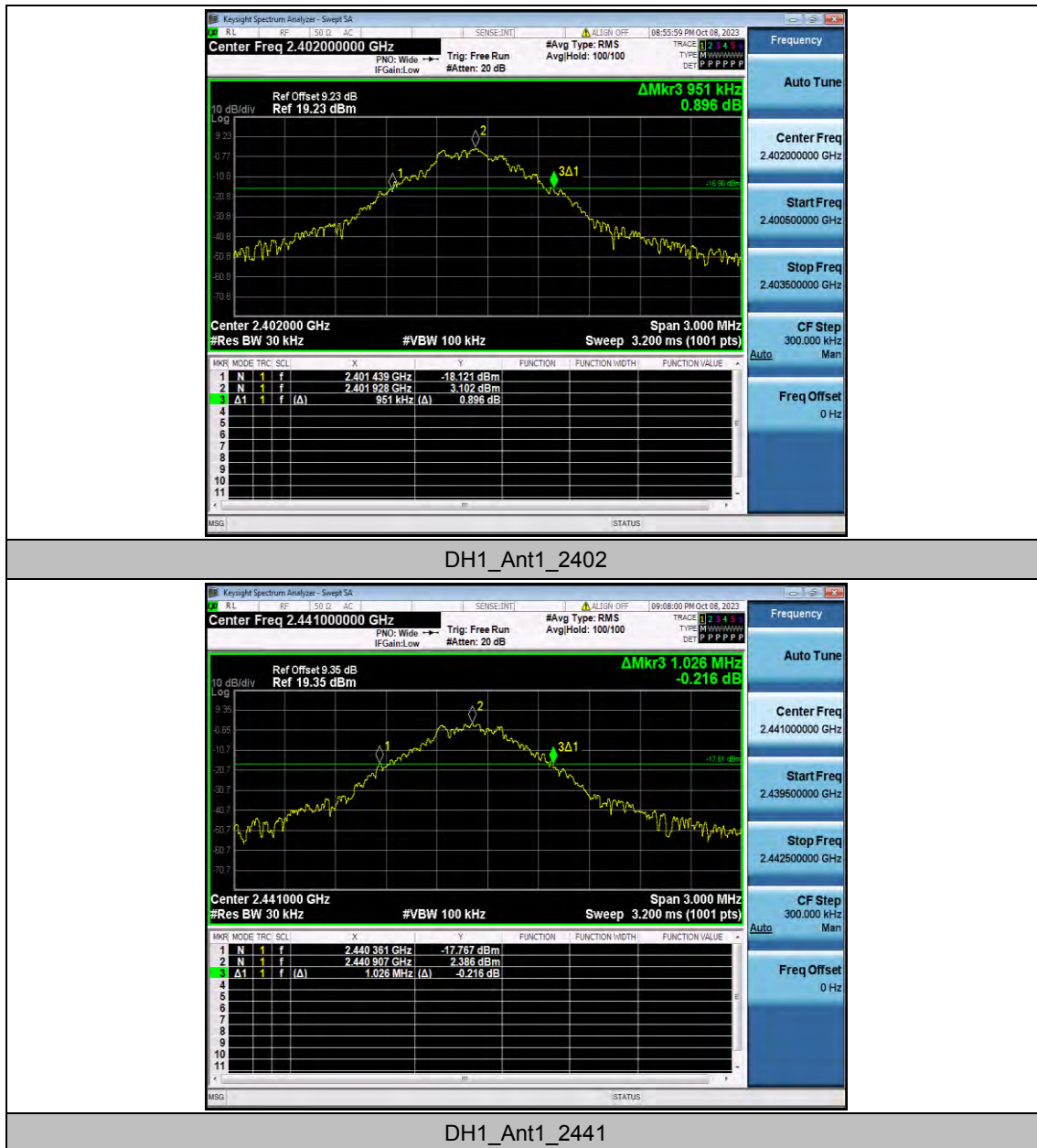
Case No. : <u>GTS20230918011-1-11</u>	
Ambient Condition: <u>23</u> °C, <u>51</u> %RH, Atmos100.1Kpa,	
Test Date: <u>2023.10.8</u>	Test Engineer: <u>Evan ouyang</u>

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	0.951	2401.439	2402.390	---	---
		2441	1.026	2440.361	2441.387	---	---
		2480	1.002	2479.391	2480.393	---	---
2DH1	Ant1	2402	1.263	2401.262	2402.525	---	---
		2441	1.236	2440.283	2441.519	---	---
		2480	1.257	2479.262	2480.519	---	---
3DH1	Ant1	2402	1.266	2401.256	2402.522	---	---
		2441	1.257	2440.259	2441.516	---	---
		2480	1.254	2479.265	2480.519	---	---

Test Graphs





2DH1_Ant1_2441



2DH1_Ant1_2480



3DH1_Ant1_2402



3D H1_Ant1_2441



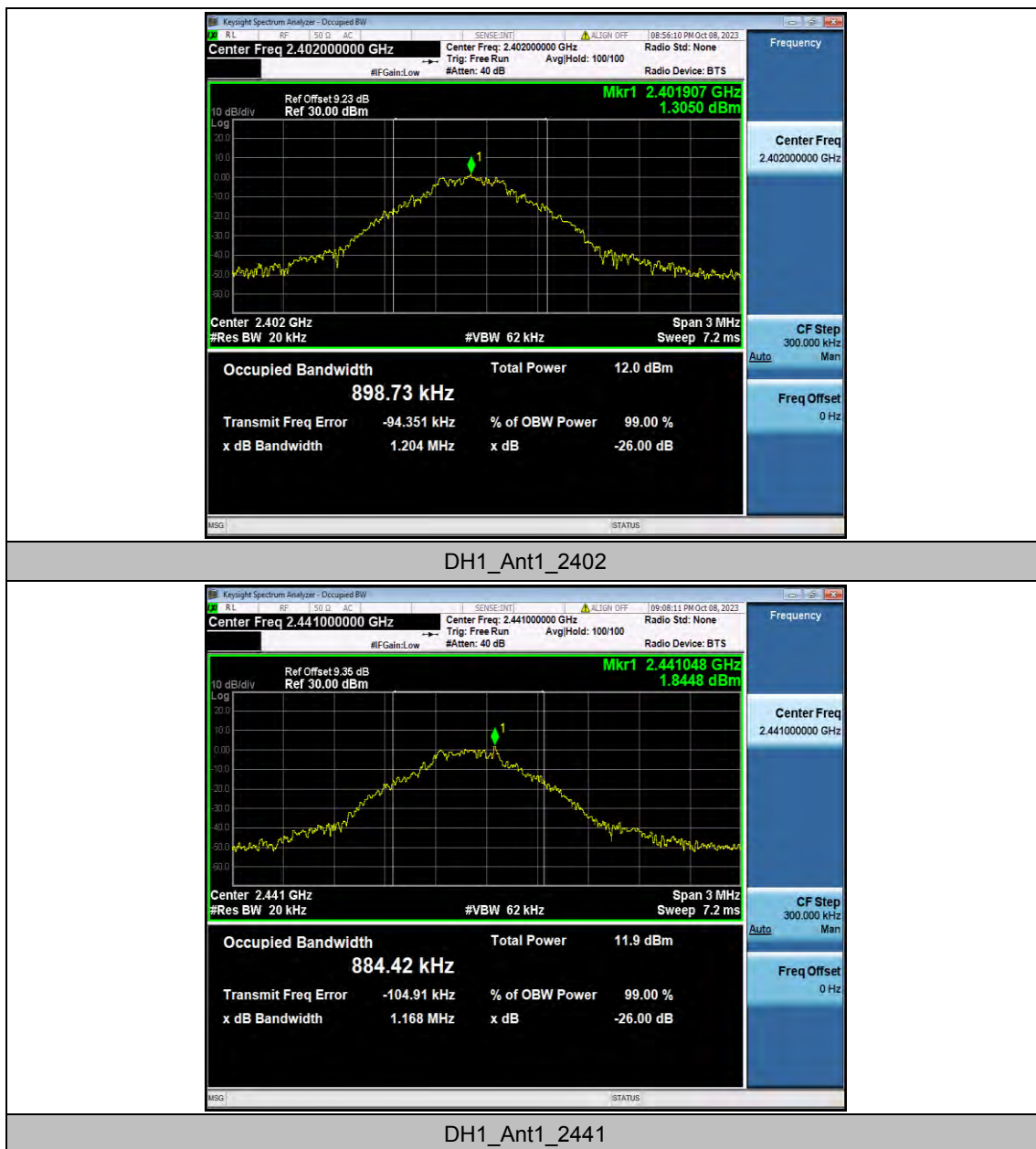
3D H1_Ant1_2480

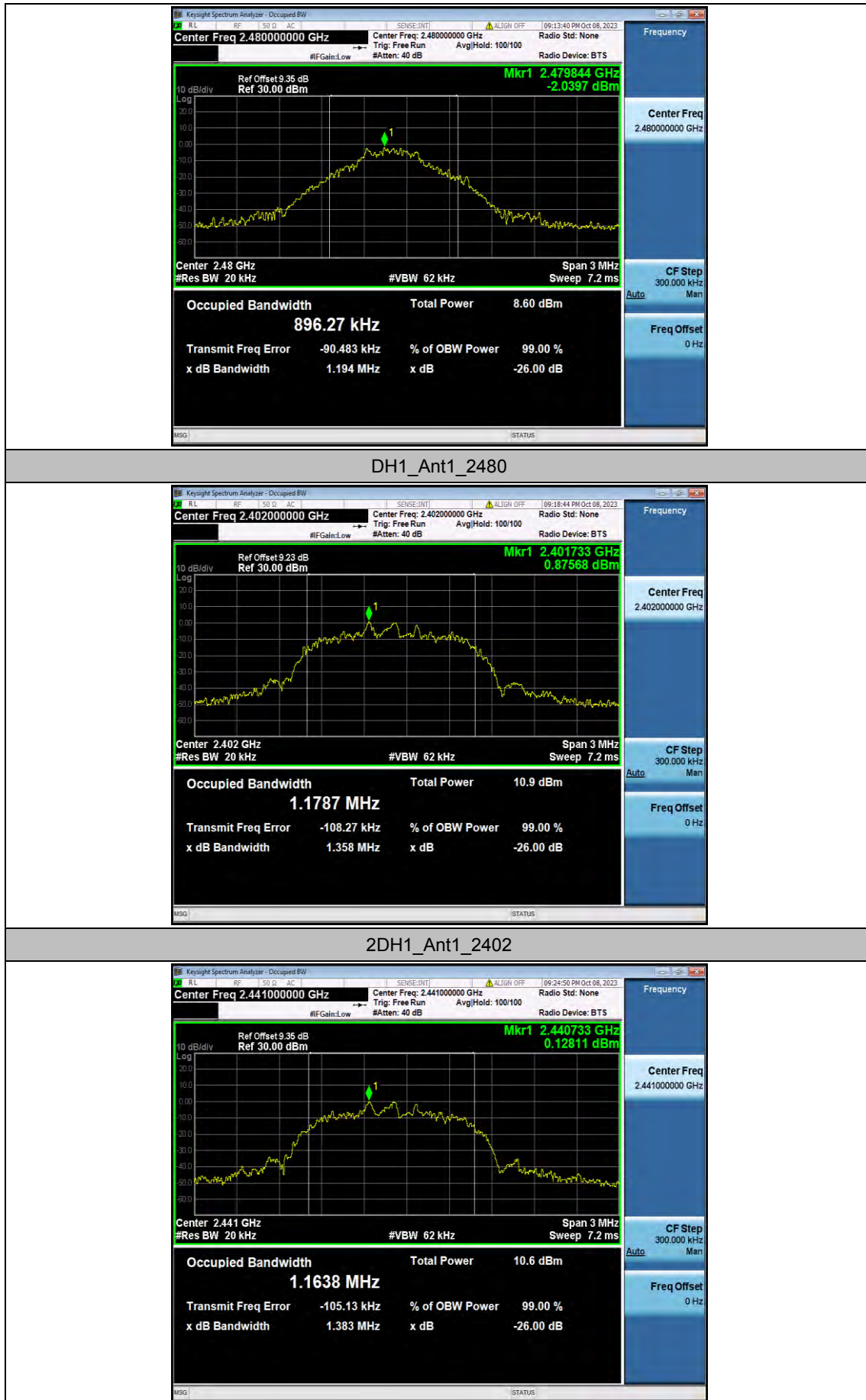
Appendix A.2: Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.89873	2401.456	2402.355	---	---
		2441	0.88442	2440.453	2441.337	---	---
		2480	0.89627	2479.461	2480.358	---	---
2DH1	Ant1	2402	1.1787	2401.302	2402.481	---	---
		2441	1.1638	2440.313	2441.477	---	---
		2480	1.1775	2479.313	2480.490	---	---
3DH1	Ant1	2402	1.1530	2401.324	2402.477	---	---
		2441	1.1746	2440.318	2441.493	---	---
		2480	1.1704	2479.299	2480.469	---	---

Test Graphs





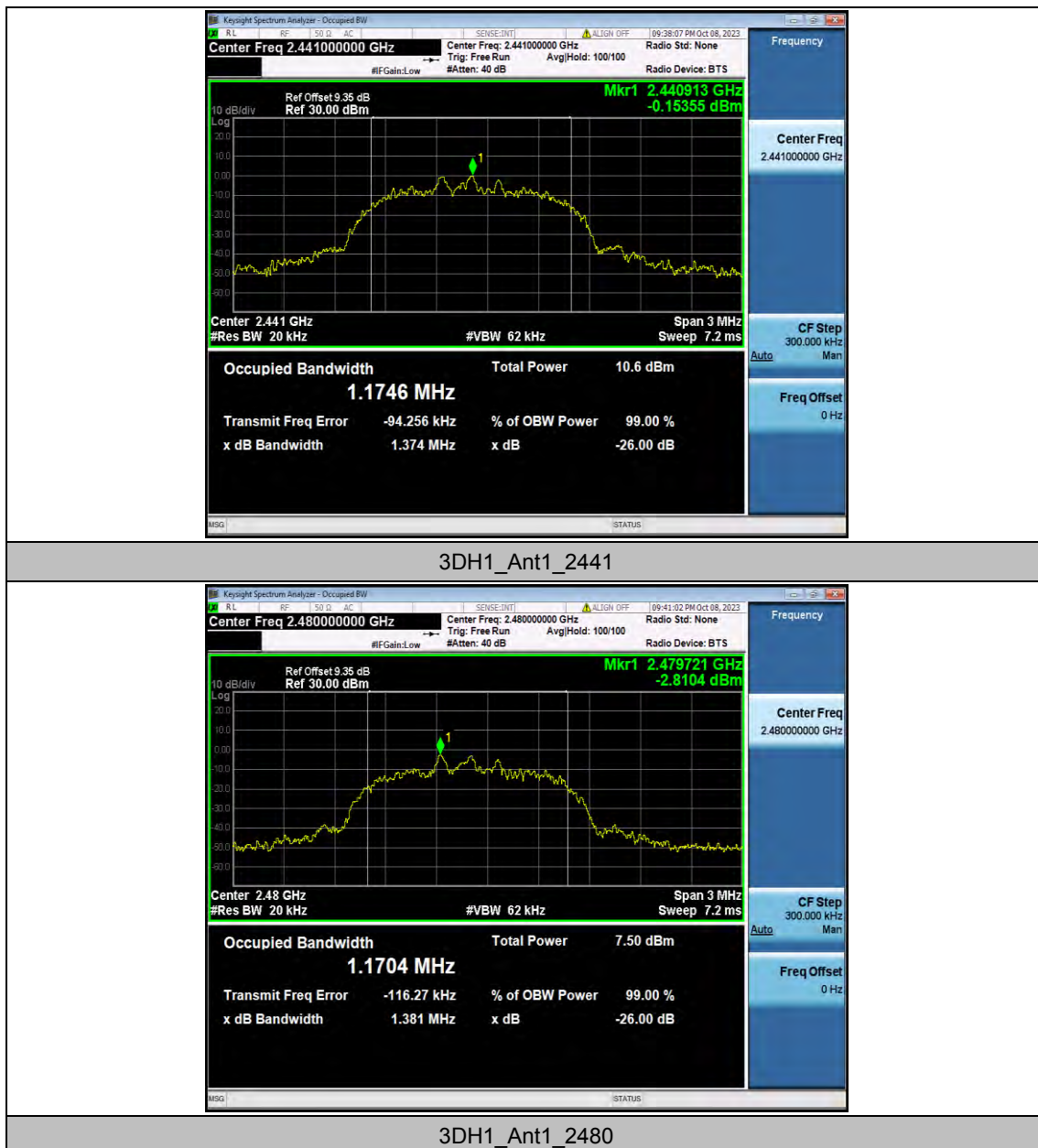
2DH1_Ant1_2441



2DH1_Ant1_2480



3DH1_Ant1_2402



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	5.94	≤20.97	PASS
		2441	5.60	≤20.97	PASS
		2480	2.68	≤20.97	PASS
2DH1	Ant1	2402	5.96	≤20.97	PASS
		2441	1.54	≤20.97	PASS
		2480	2.68	≤20.97	PASS
3DH1	Ant1	2402	5.91	≤20.97	PASS
		2441	5.58	≤20.97	PASS
		2480	2.69	≤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	1.344	≥ 0.684	PASS
		Hop_2441	1.004	≥ 0.684	PASS
		Hop_2480	0.992	≥ 0.684	PASS
2DH1	Ant1	Hop_2402	1	≥ 0.842	PASS
		Hop_2441	1.002	≥ 0.842	PASS
		Hop_2480	0.996	≥ 0.842	PASS
3DH1	Ant1	Hop_2402	1.002	≥ 0.844	PASS
		Hop_2441	1	≥ 0.844	PASS
		Hop_2480	1	≥ 0.844	PASS

Test Graphs





DH1_Ant1_Hop_2480



2DH1_Ant1_Hop_2402



2DH1_Ant1_Hop_2441



2DH1_Ant1_Hop_2480



3DH1_Ant1_Hop_2402

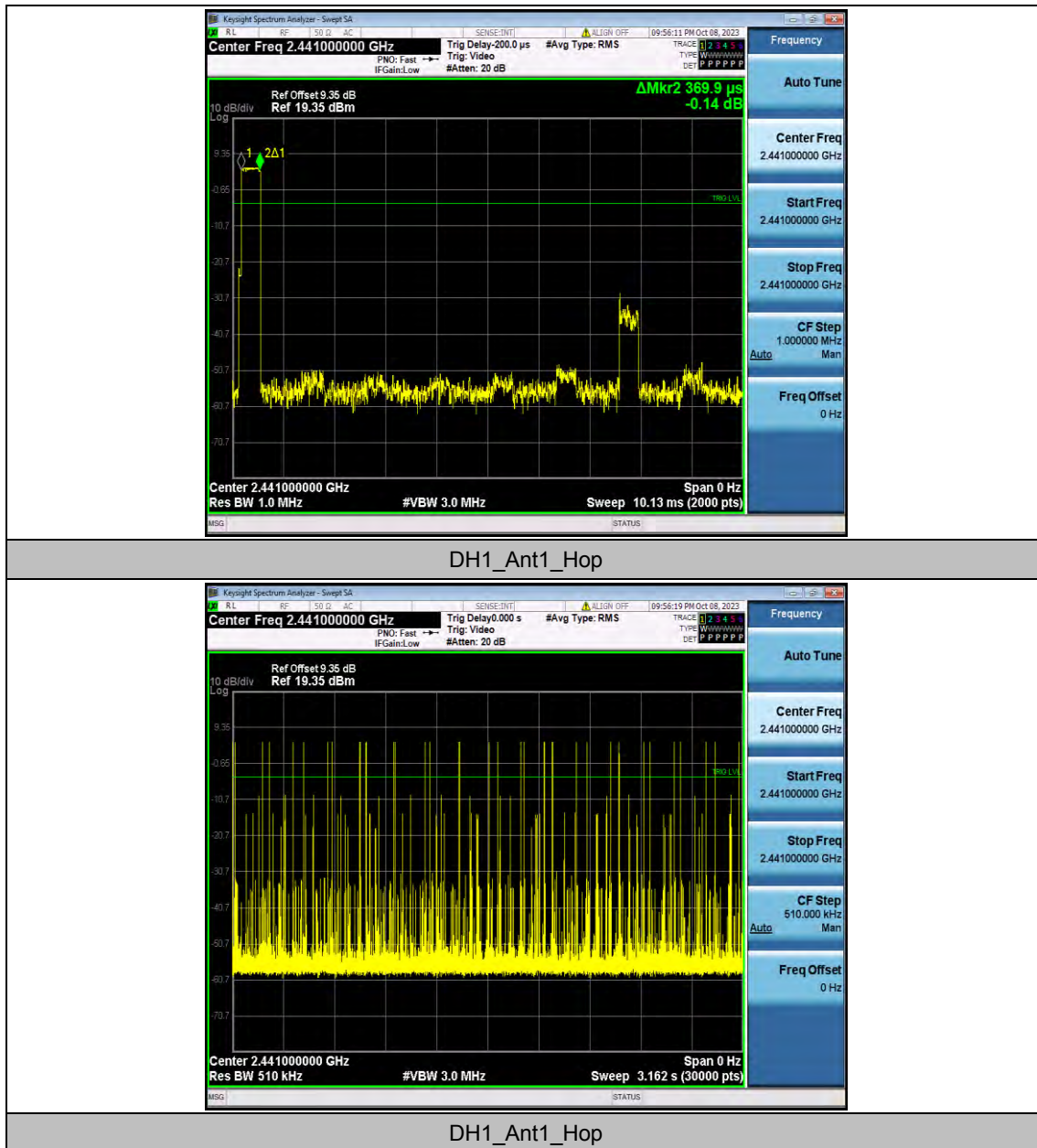


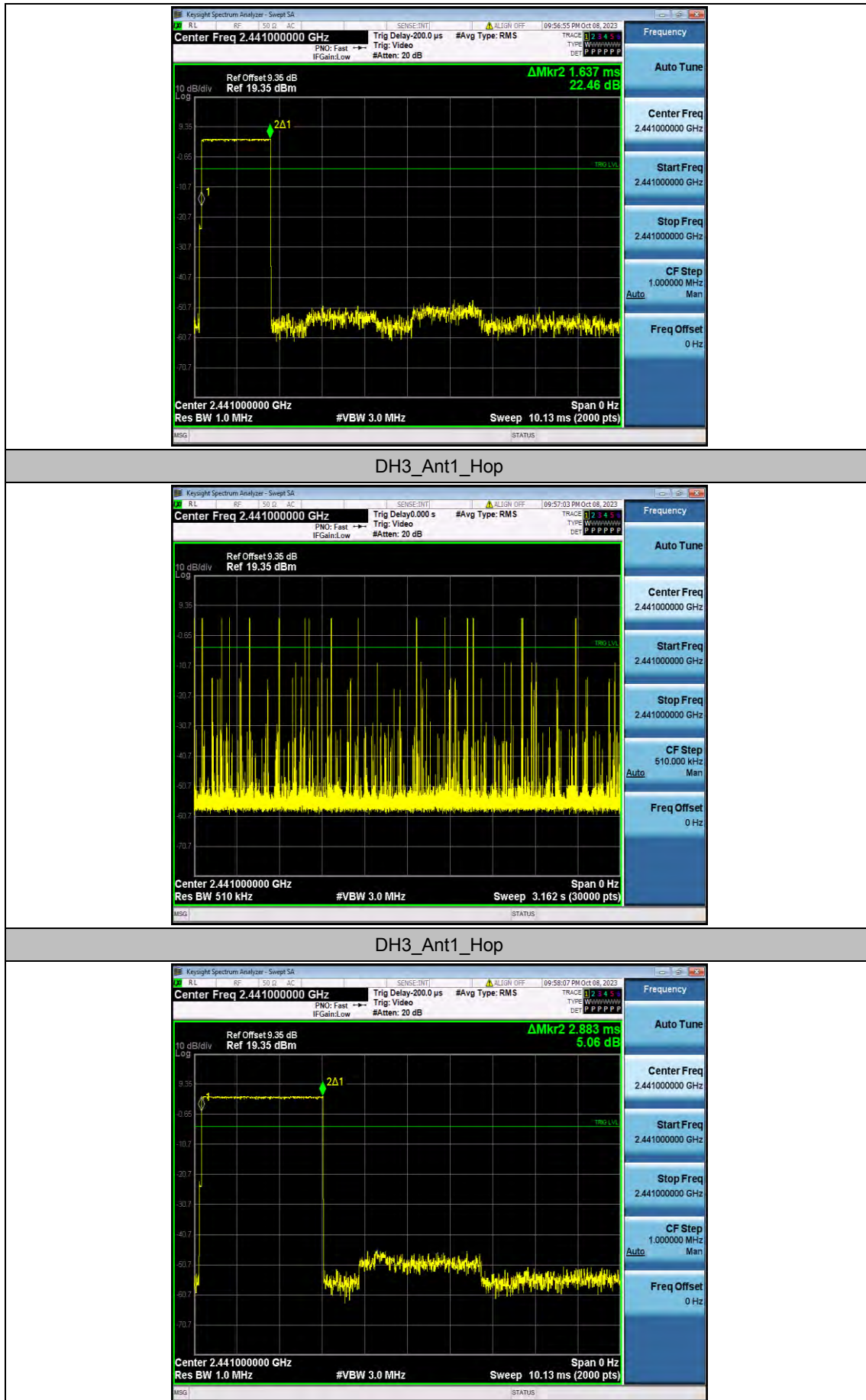
Appendix A.5: Time of occupancy

Test Result

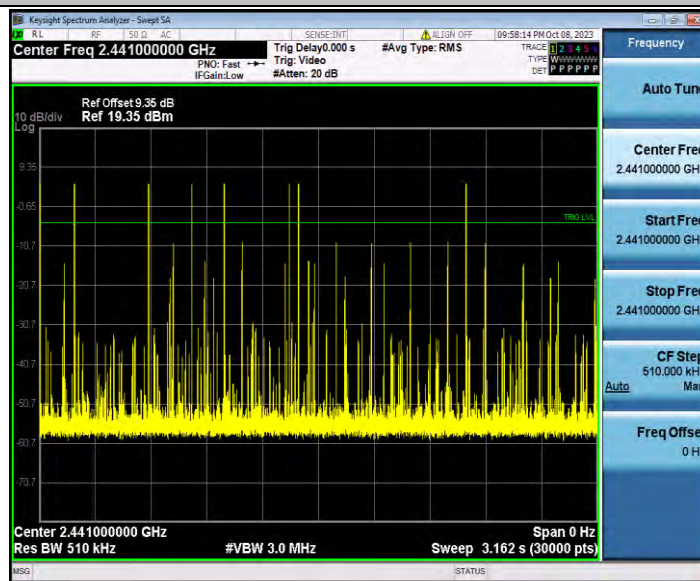
Test Mode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.37	330	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.64	170	0.278	≤0.4	PASS
DH5	Ant1	Hop	2.88	80	0.231	≤0.4	PASS
2DH1	Ant1	Hop	0.38	320	0.122	≤0.4	PASS
2DH3	Ant1	Hop	1.63	140	0.228	≤0.4	PASS
2DH5	Ant1	Hop	2.88	100	0.288	≤0.4	PASS
3DH1	Ant1	Hop	0.38	330	0.125	≤0.4	PASS
3DH3	Ant1	Hop	1.63	160	0.26	≤0.4	PASS
3DH5	Ant1	Hop	2.88	130	0.374	≤0.4	PASS

Test Graphs

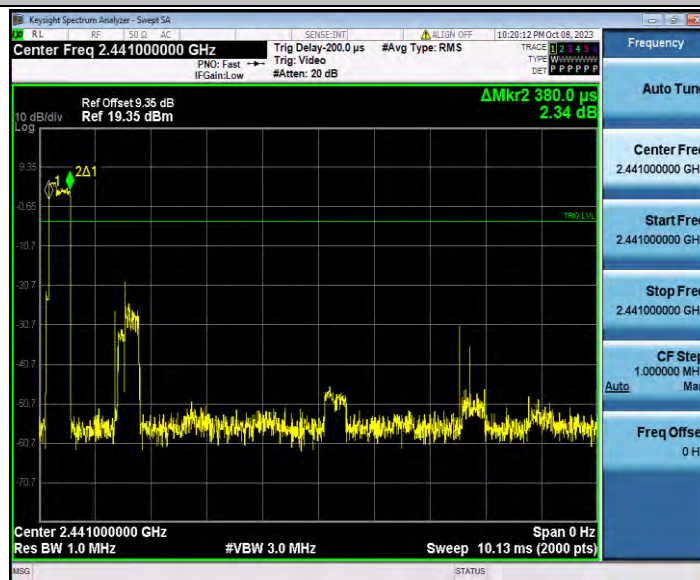




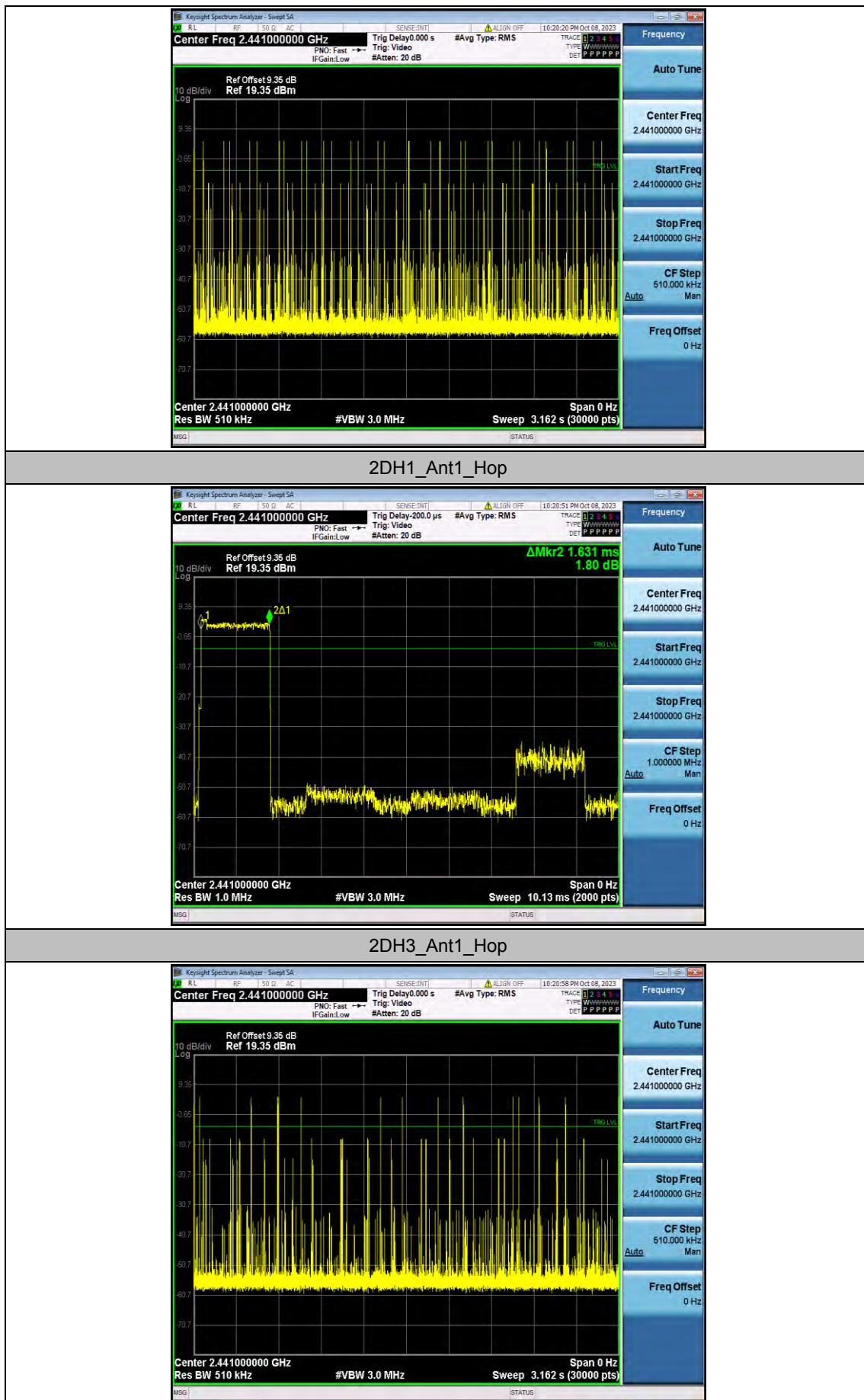
DH5_Ant1_Hop



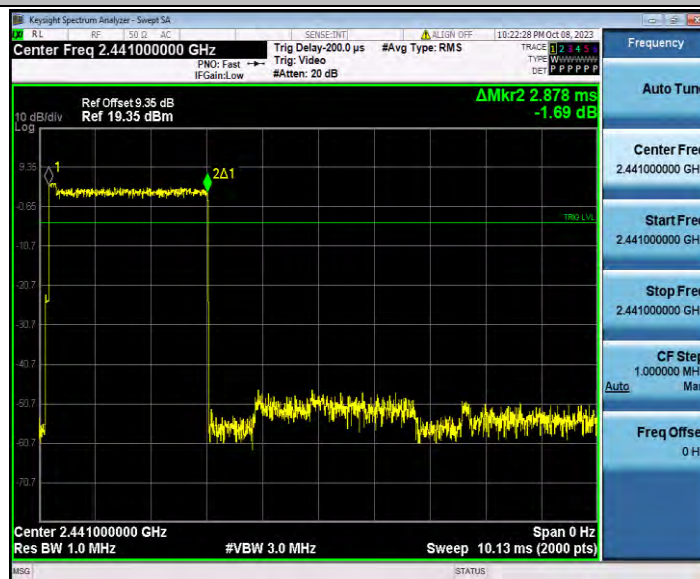
DH5_Ant1_Hop



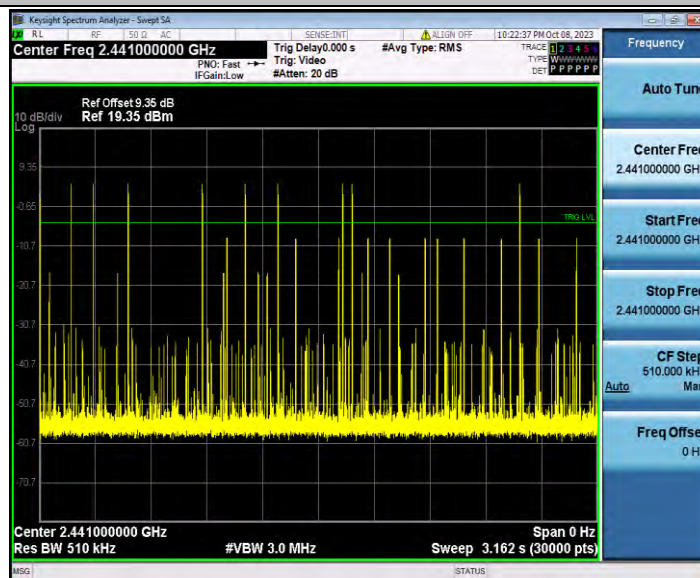
2DH1_Ant1_Hop



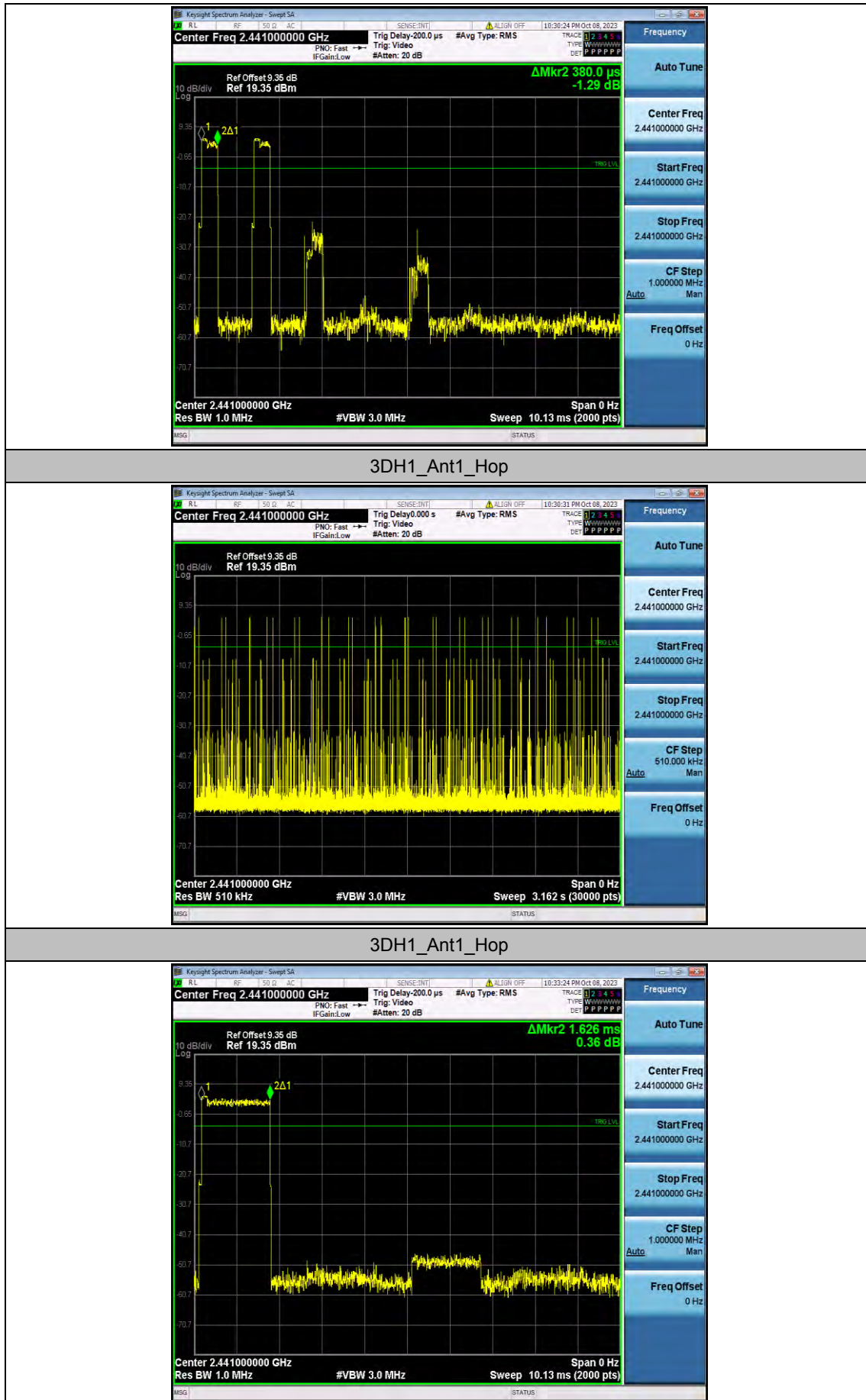
2DH3_Ant1_Hop



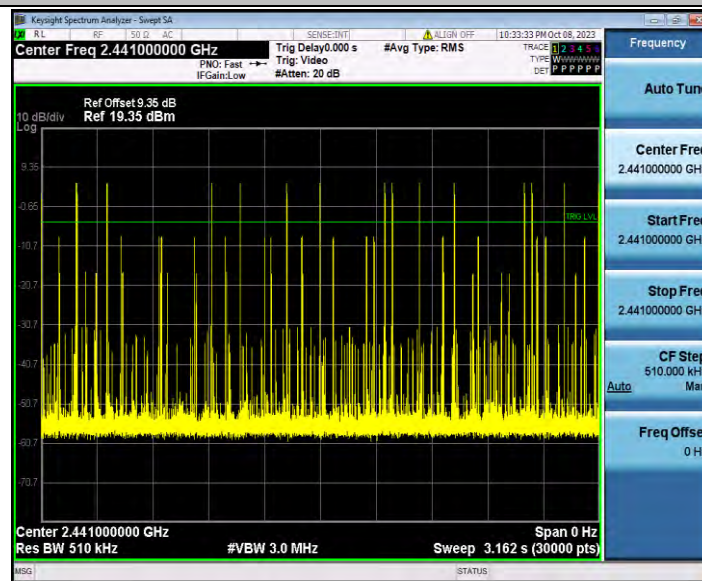
2DH5_Ant1_Hop



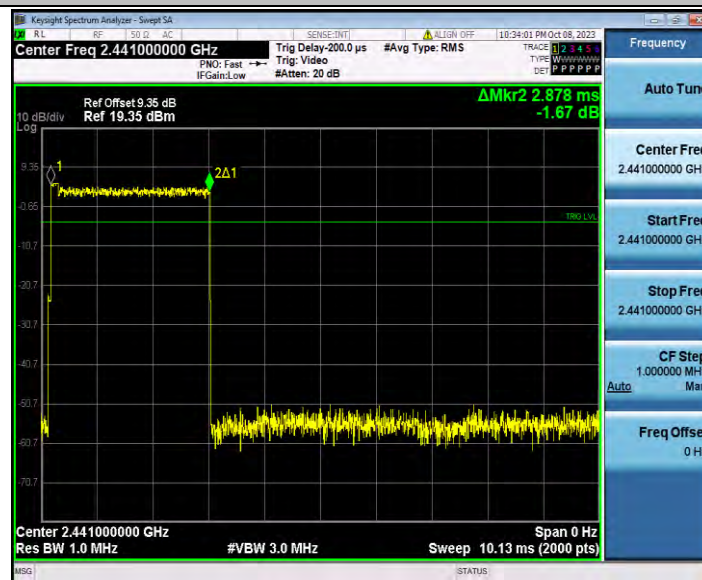
2DH5_Ant1_Hop



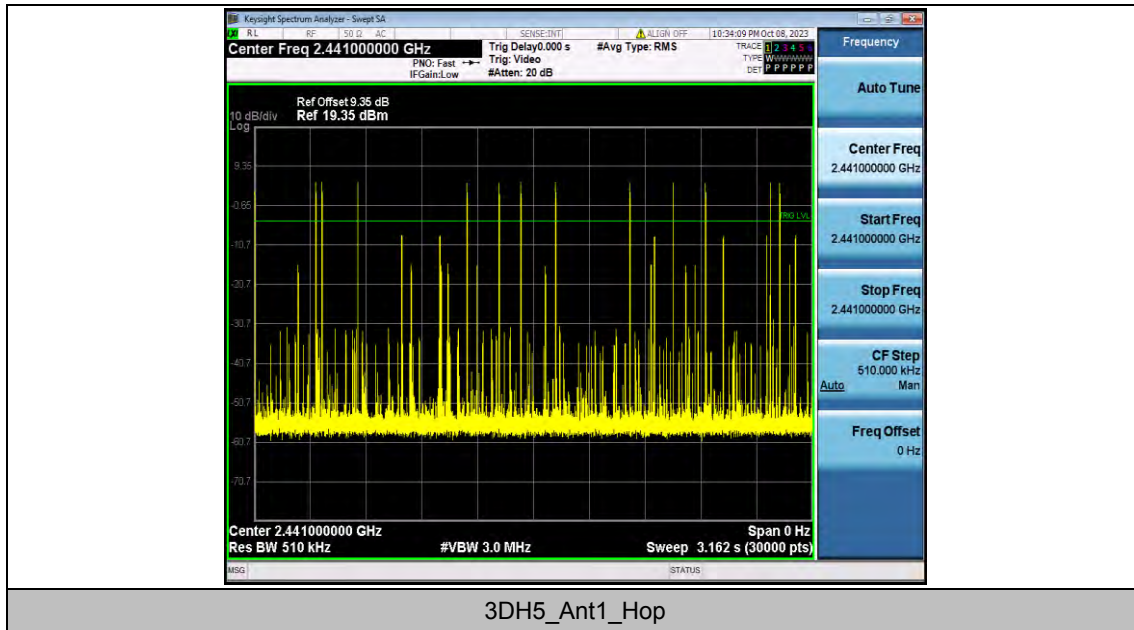
3DH3_Ant1_Hop



3DH3_Ant1_Hop



3DH5_Ant1_Hop

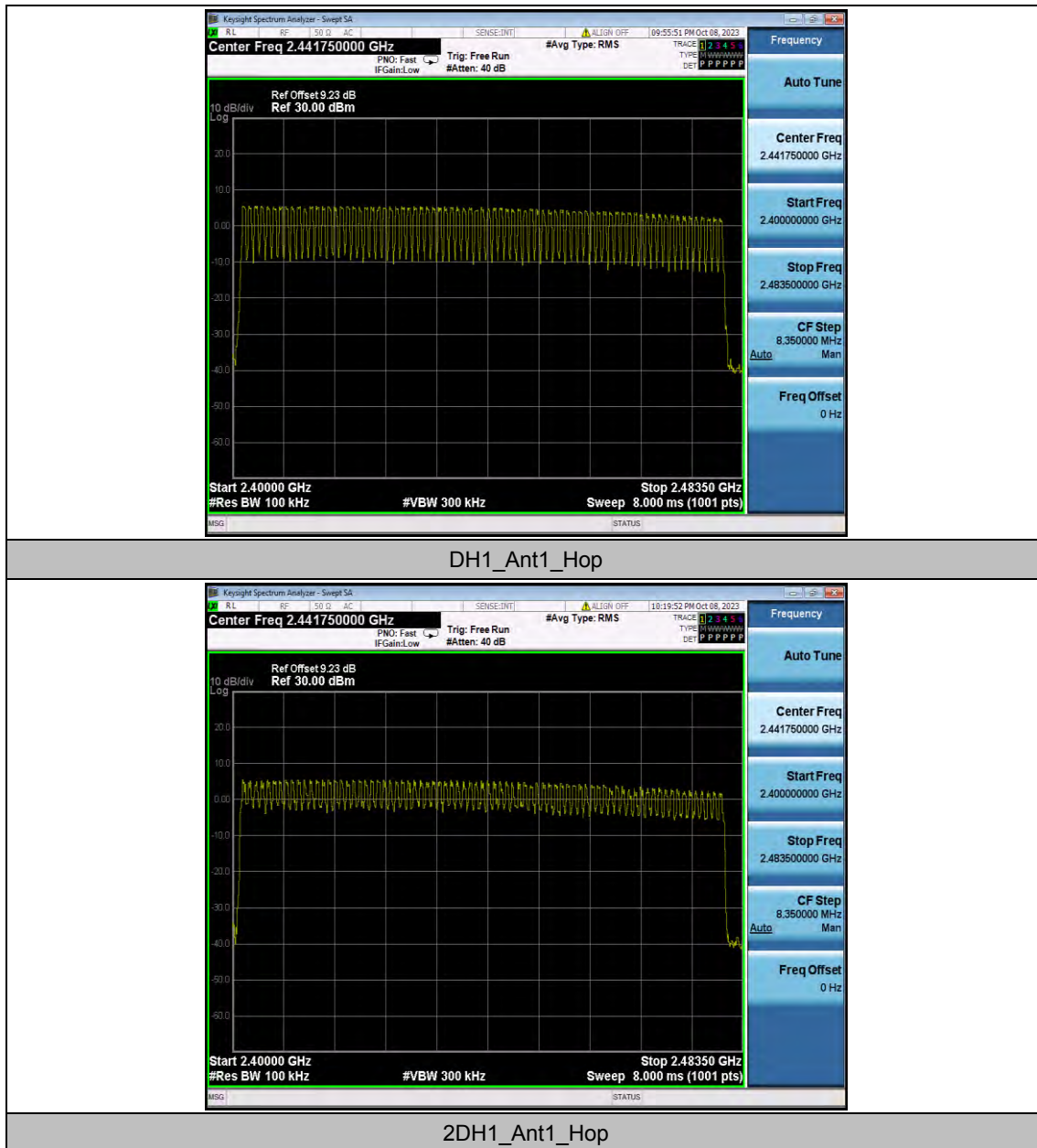


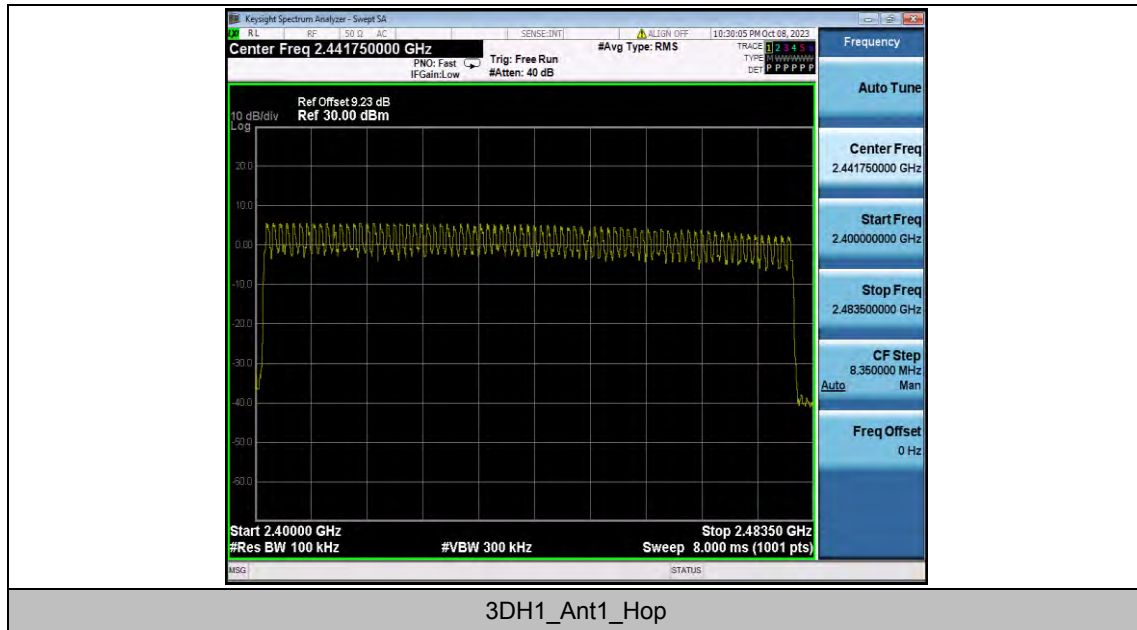
Appendix A.6: Number of hopping channels

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



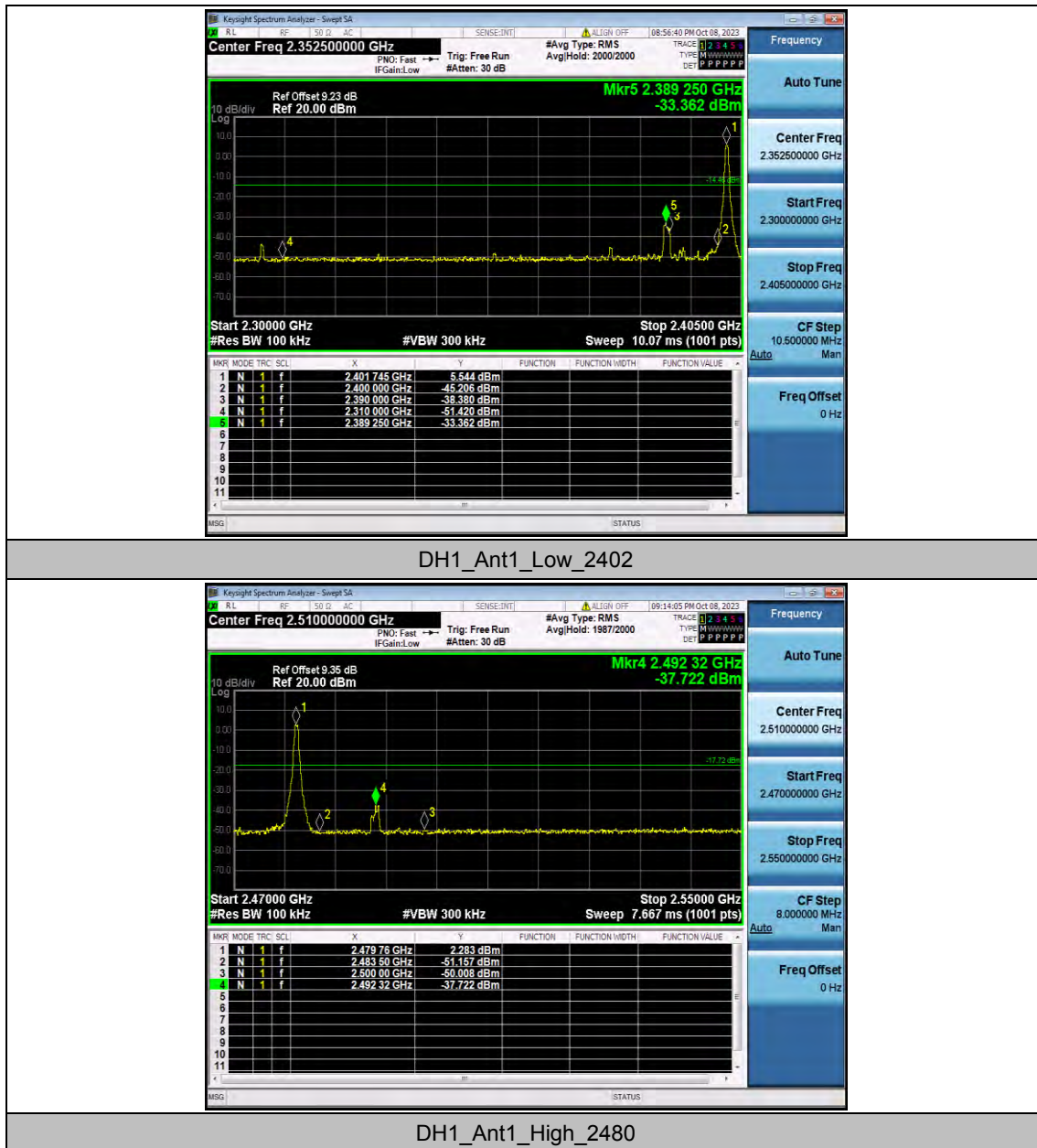


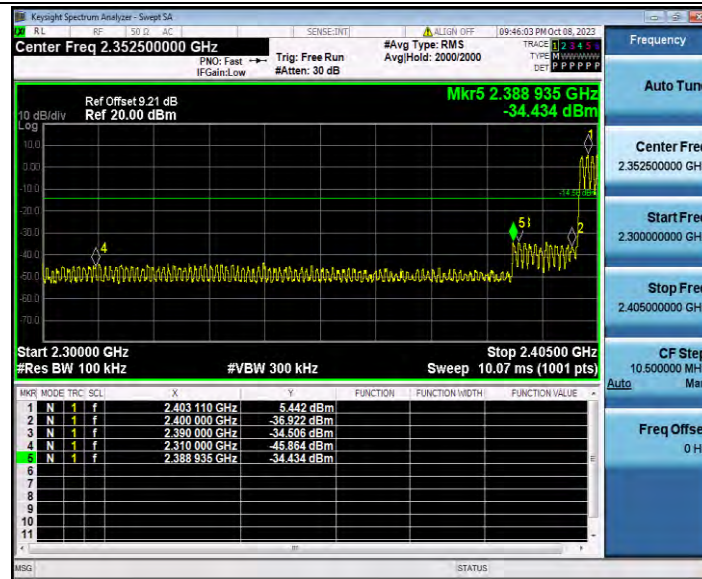
Appendix A.7: Band edge measurements

Test Result

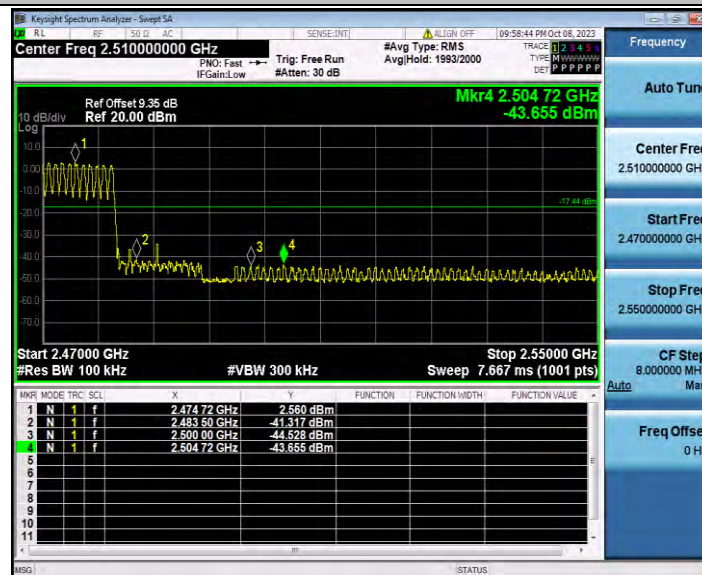
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	5.54	-33.36	≤ -14.46	PASS
		High	2480	2.28	-37.72	≤ -17.72	PASS
		Low	Hop_2402	5.44	-34.43	≤ -14.56	PASS
		High	Hop_2480	2.56	-43.66	≤ -17.44	PASS
2DH1	Ant1	Low	2402	5.55	-31.46	≤ -14.45	PASS
		High	2480	2.30	-40.33	≤ -17.7	PASS
		Low	Hop_2402	5.13	-37.01	≤ -14.87	PASS
		High	Hop_2480	0.91	-45.11	≤ -19.1	PASS
3DH1	Ant1	Low	2402	5.52	-32.33	≤ -14.48	PASS
		High	2480	2.36	-38.56	≤ -17.64	PASS
		Low	Hop_2402	4.19	-35.33	≤ -15.82	PASS
		High	Hop_2480	2.53	-44.38	≤ -17.47	PASS

Test Graphs

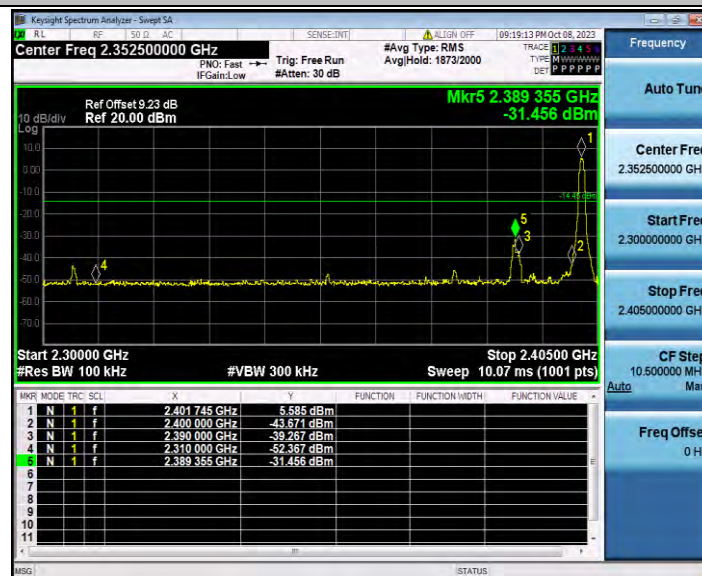




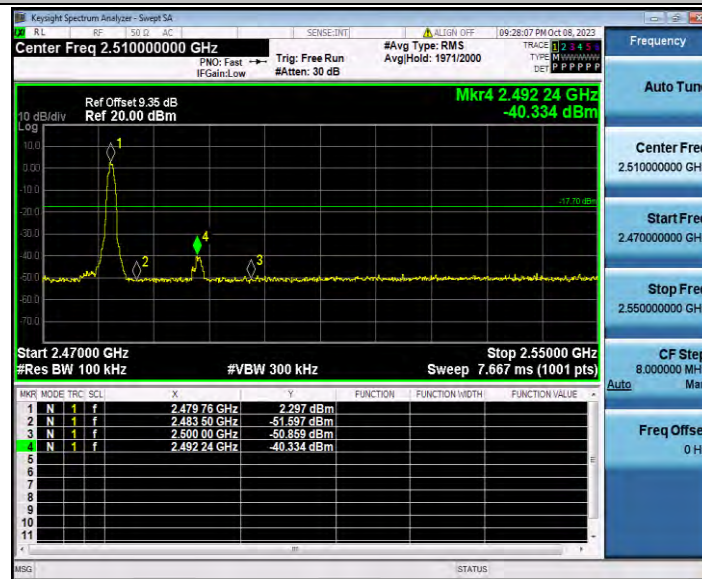
DH1_Ant1_Low_Hop_2402



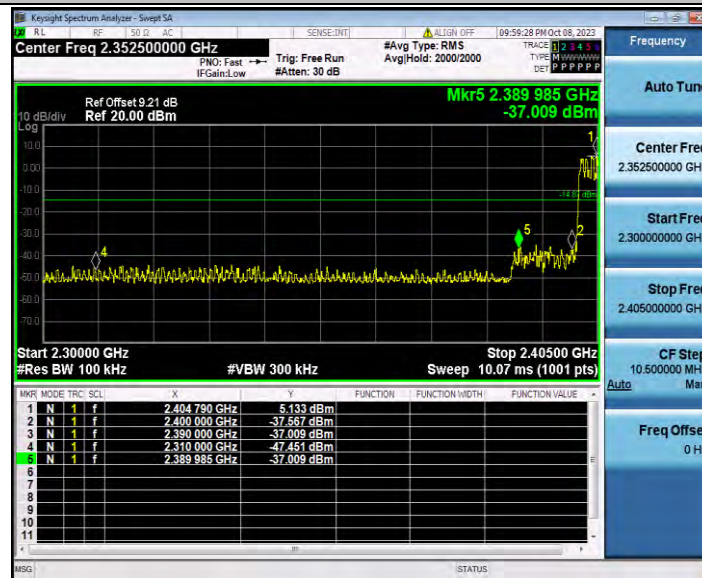
DH1_Ant1_High_Hop_2480



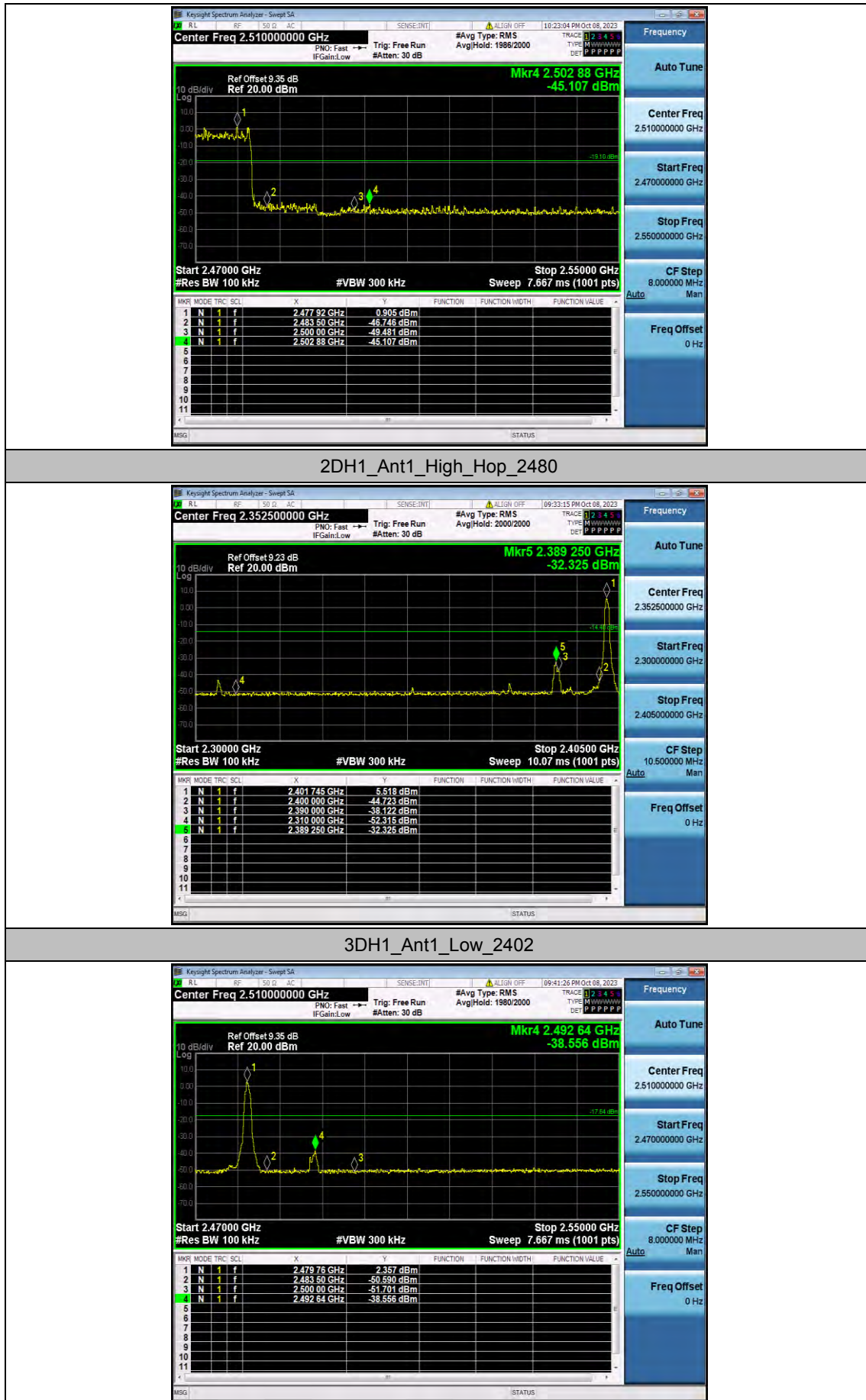
2DH1_Ant1_Low_2402



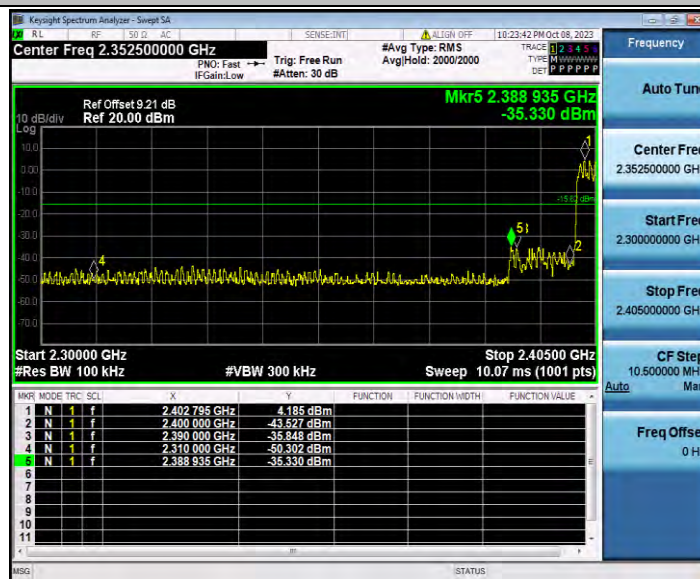
2DH1_Ant1_High_2480



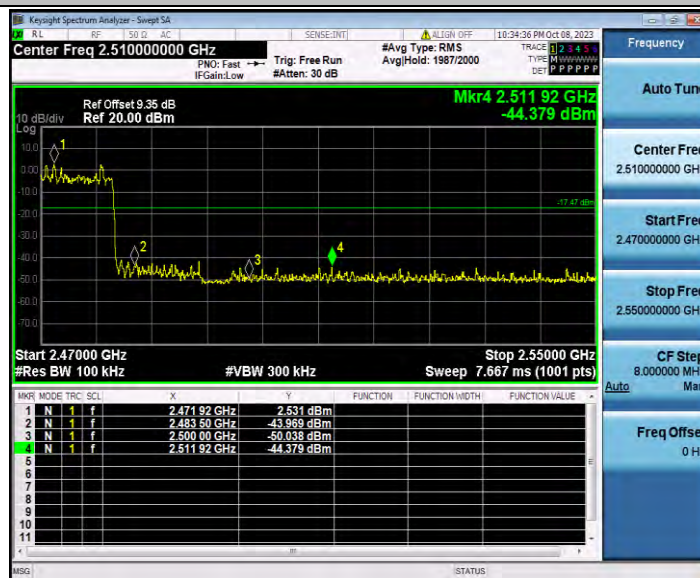
2DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_2480



3DH1_Ant1_Low_Hop_2402



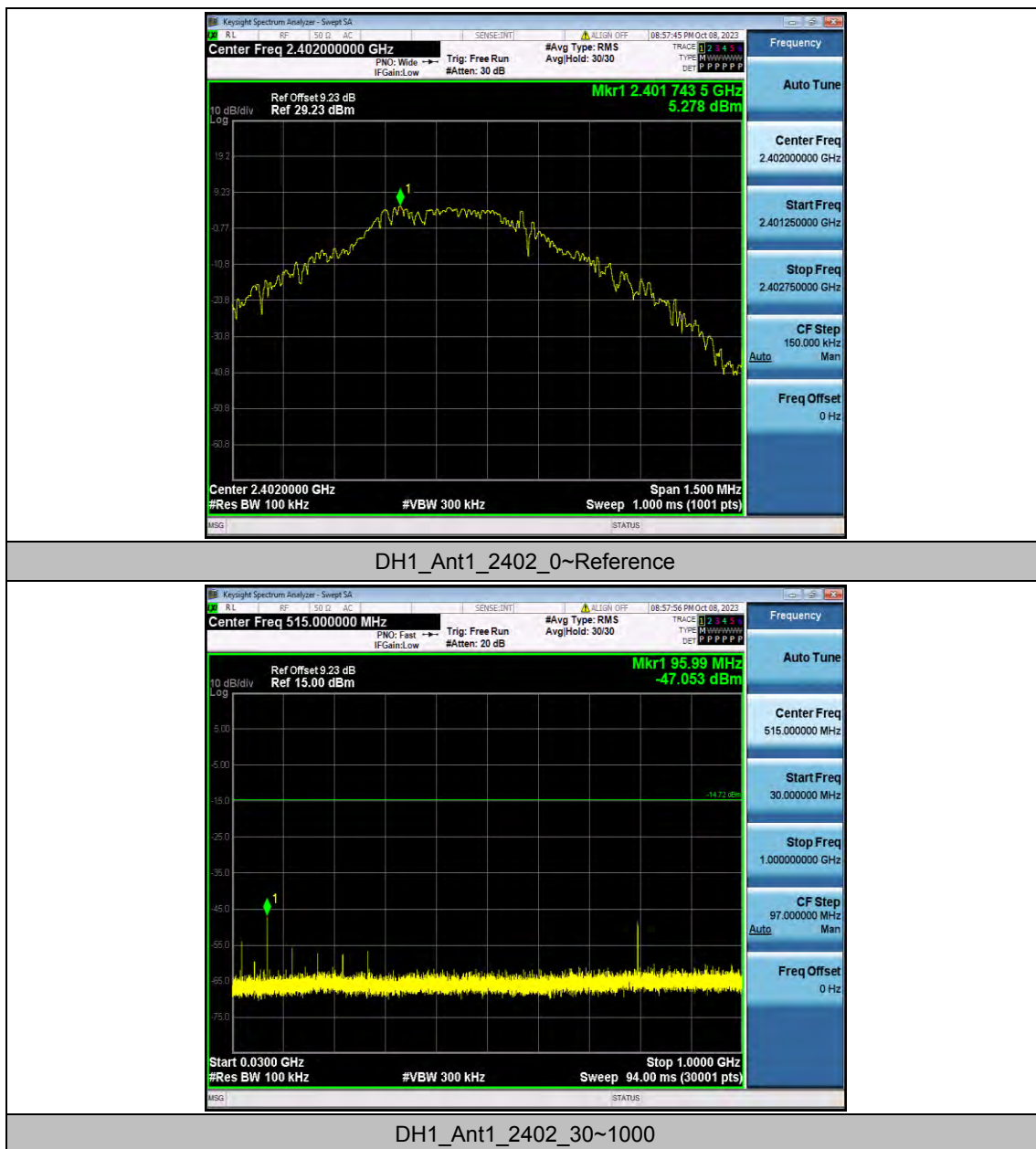
3DH1_Ant1_High_Hop_2480

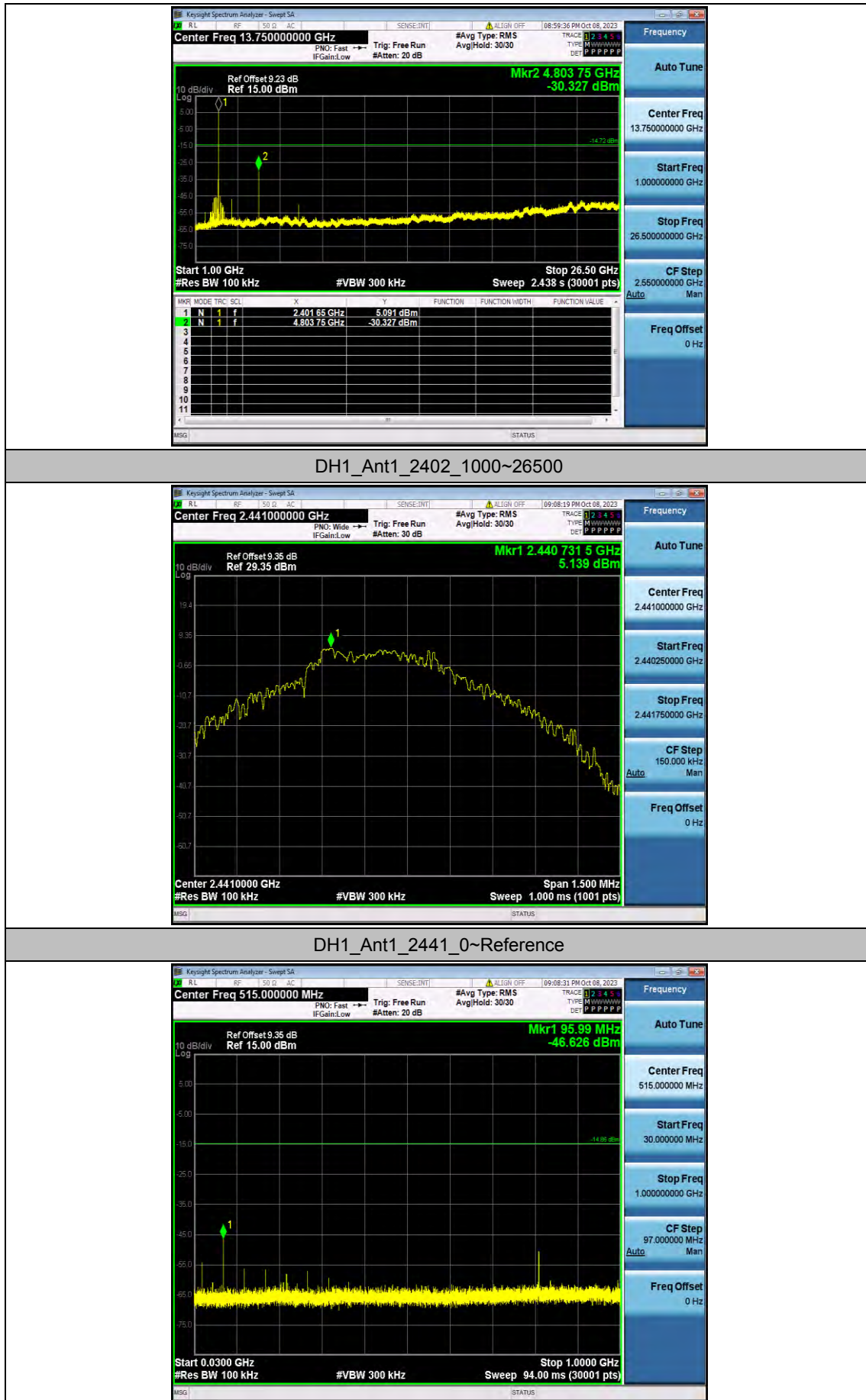
Appendix A.8: Conducted Spurious Emission

Test Result

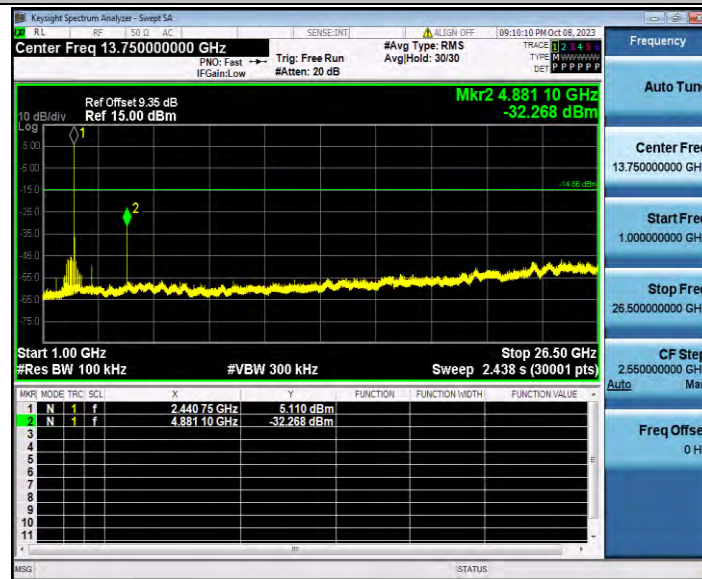
Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	5.28	5.28	---	PASS
			30~1000	5.28	-47.05	≤ -14.72	PASS
			1000~26500	5.28	-30.33	≤ -14.72	PASS
		2441	Reference	5.14	5.14	---	PASS
			30~1000	5.14	-46.63	≤ -14.86	PASS
			1000~26500	5.14	-32.27	≤ -14.86	PASS
		2480	Reference	2.19	2.19	---	PASS
			30~1000	2.19	-46.86	≤ -17.81	PASS
			1000~26500	2.19	-36	≤ -17.81	PASS
2DH1	Ant1	2402	Reference	4.77	4.77	---	PASS
			30~1000	4.77	-47.52	≤ -15.23	PASS
			1000~26500	4.77	-30.35	≤ -15.23	PASS
		2441	Reference	4.28	4.28	---	PASS
			30~1000	4.28	-46.89	≤ -15.72	PASS
			1000~26500	4.28	-31.04	≤ -15.72	PASS
		2480	Reference	2.22	2.22	---	PASS
			30~1000	2.22	-47.3	≤ -17.78	PASS
			1000~26500	2.22	-34.29	≤ -17.78	PASS
3DH1	Ant1	2402	Reference	5.44	5.44	---	PASS
			30~1000	5.44	-46.62	≤ -14.56	PASS
			1000~26500	5.44	-31.02	≤ -14.56	PASS
		2441	Reference	4.96	4.96	---	PASS
			30~1000	4.96	-46.77	≤ -15.04	PASS
			1000~26500	4.96	-31.09	≤ -15.04	PASS
		2480	Reference	2.06	2.06	---	PASS
			30~1000	2.06	-46.7	≤ -17.94	PASS
			1000~26500	2.06	-39.36	≤ -17.94	PASS

Test Graphs





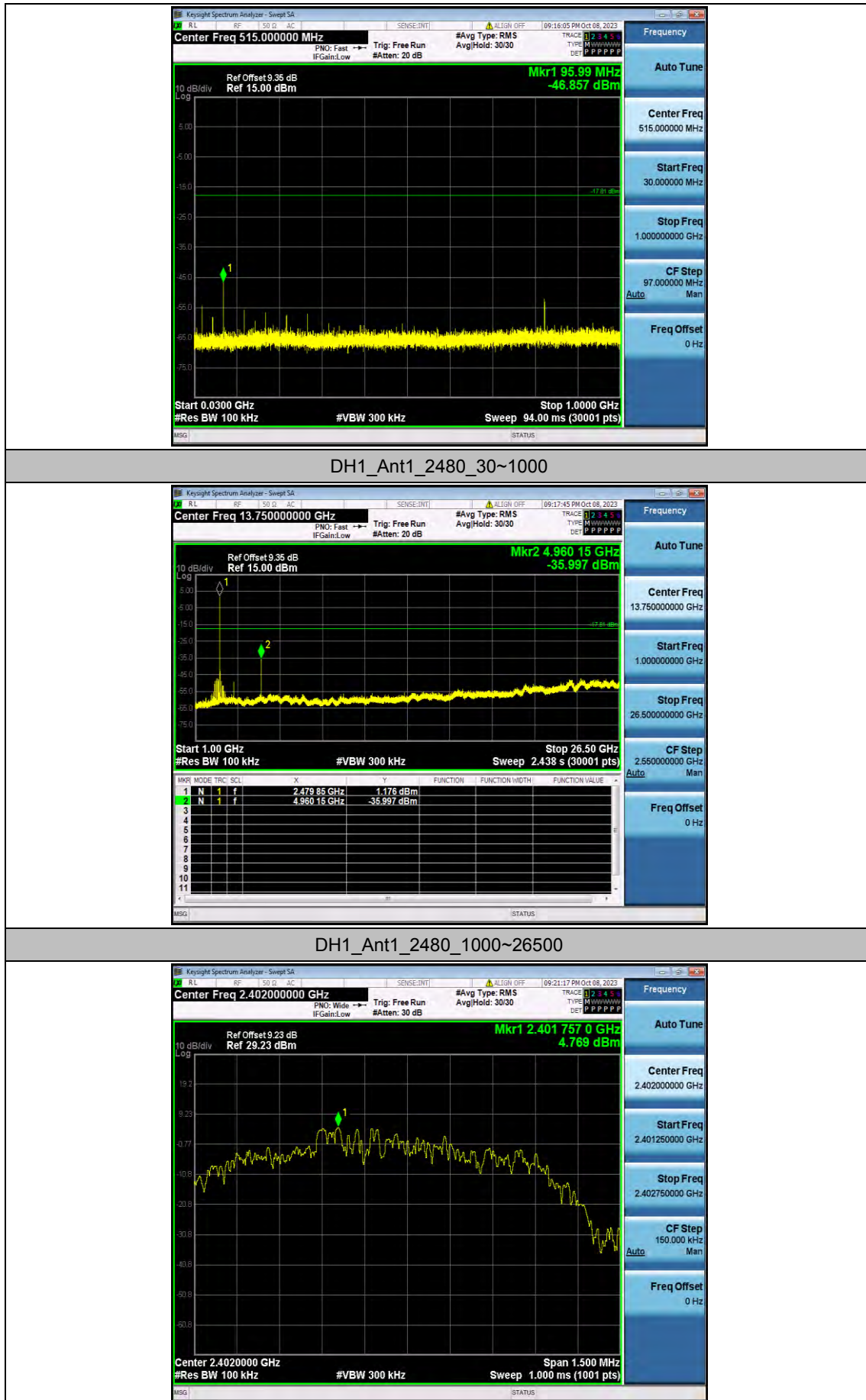
DH1_Ant1_2441_30~1000



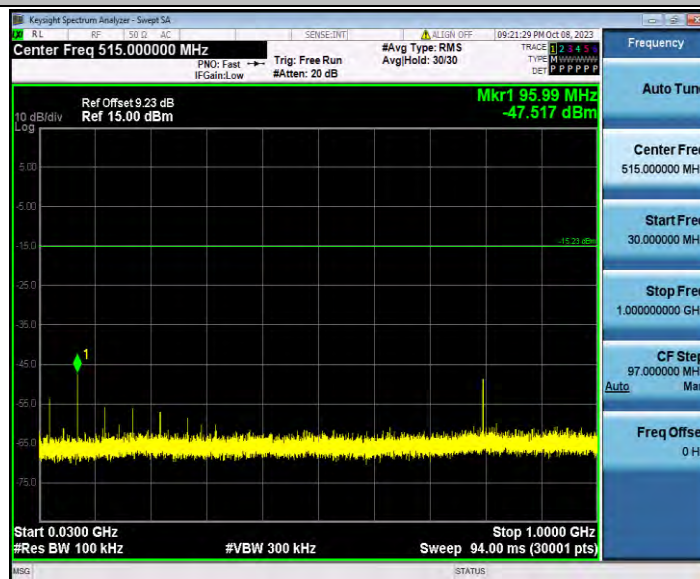
DH1_Ant1_2441_1000~26500



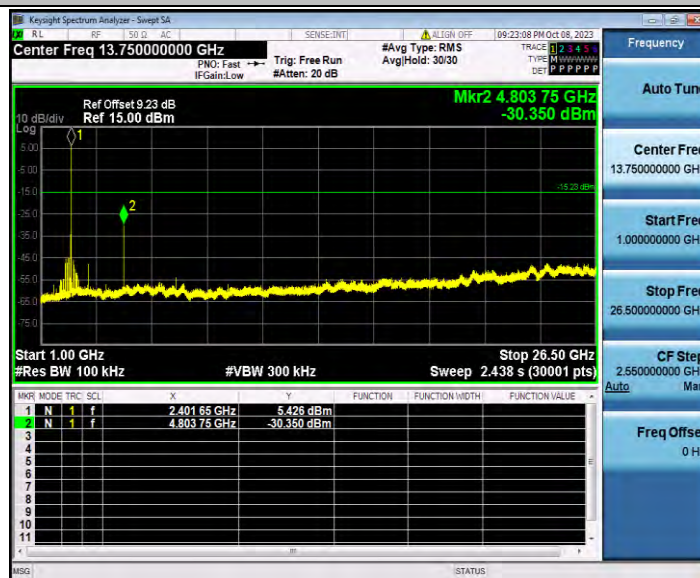
DH1_Ant1_2480_0~Reference



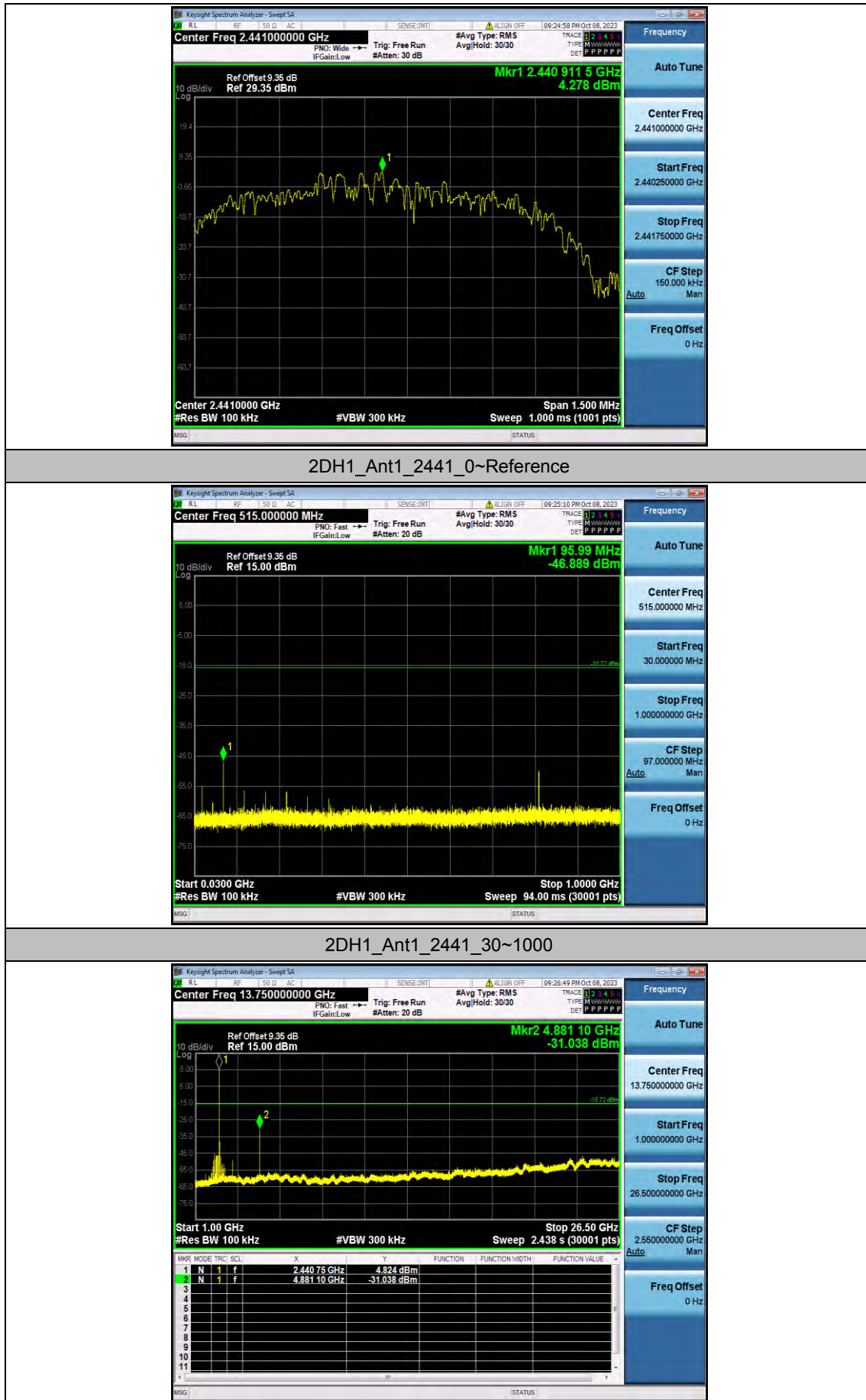
2DH1_Ant1_2402_0~Reference



2DH1_Ant1_2402_30~1000



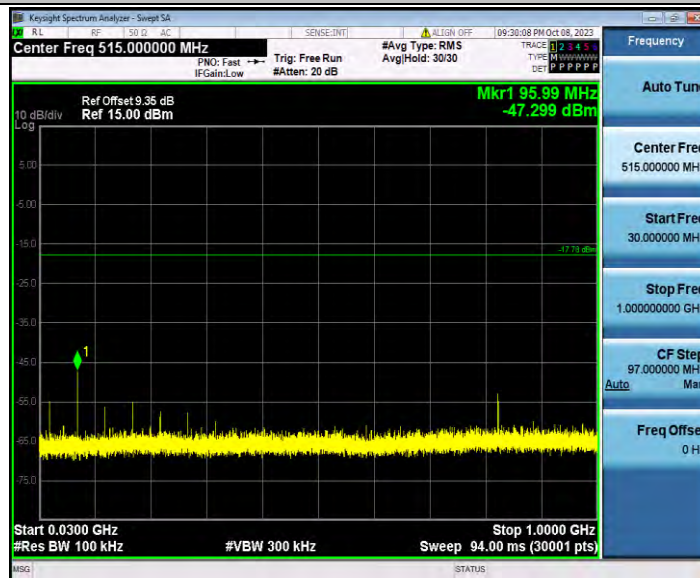
2DH1_Ant1_2402_1000~26500



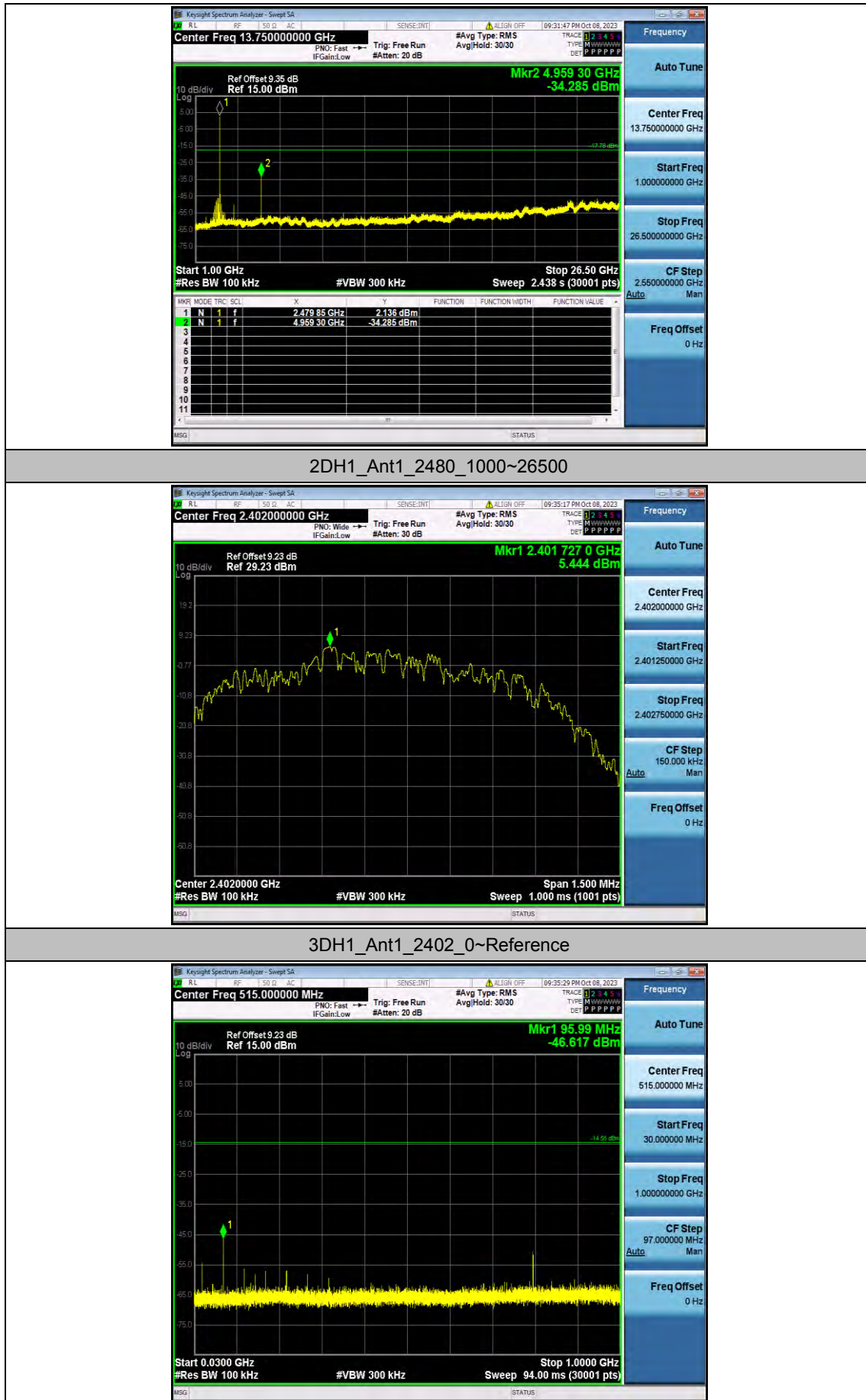
2DH1_Ant1_2441_1000~26500

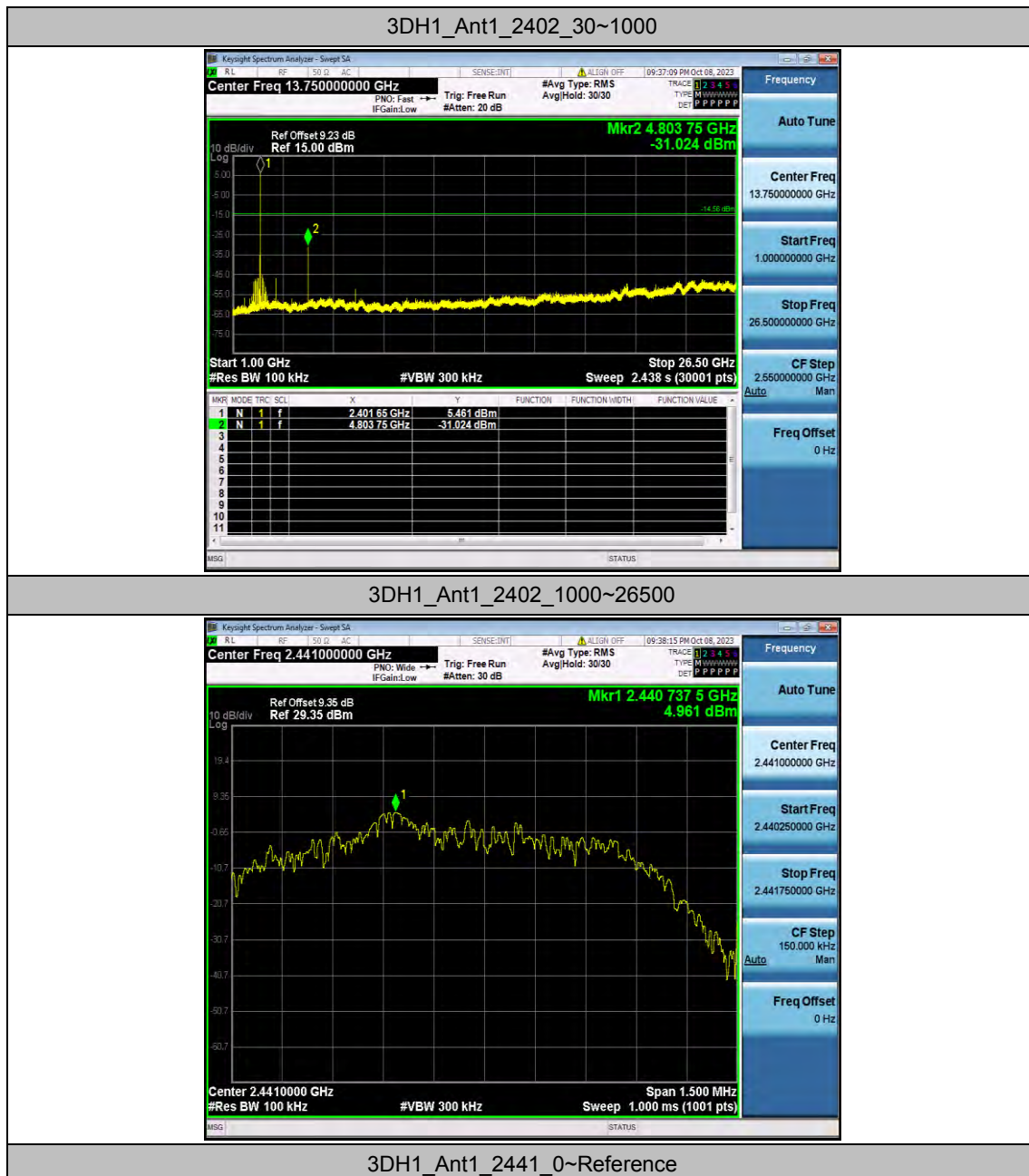


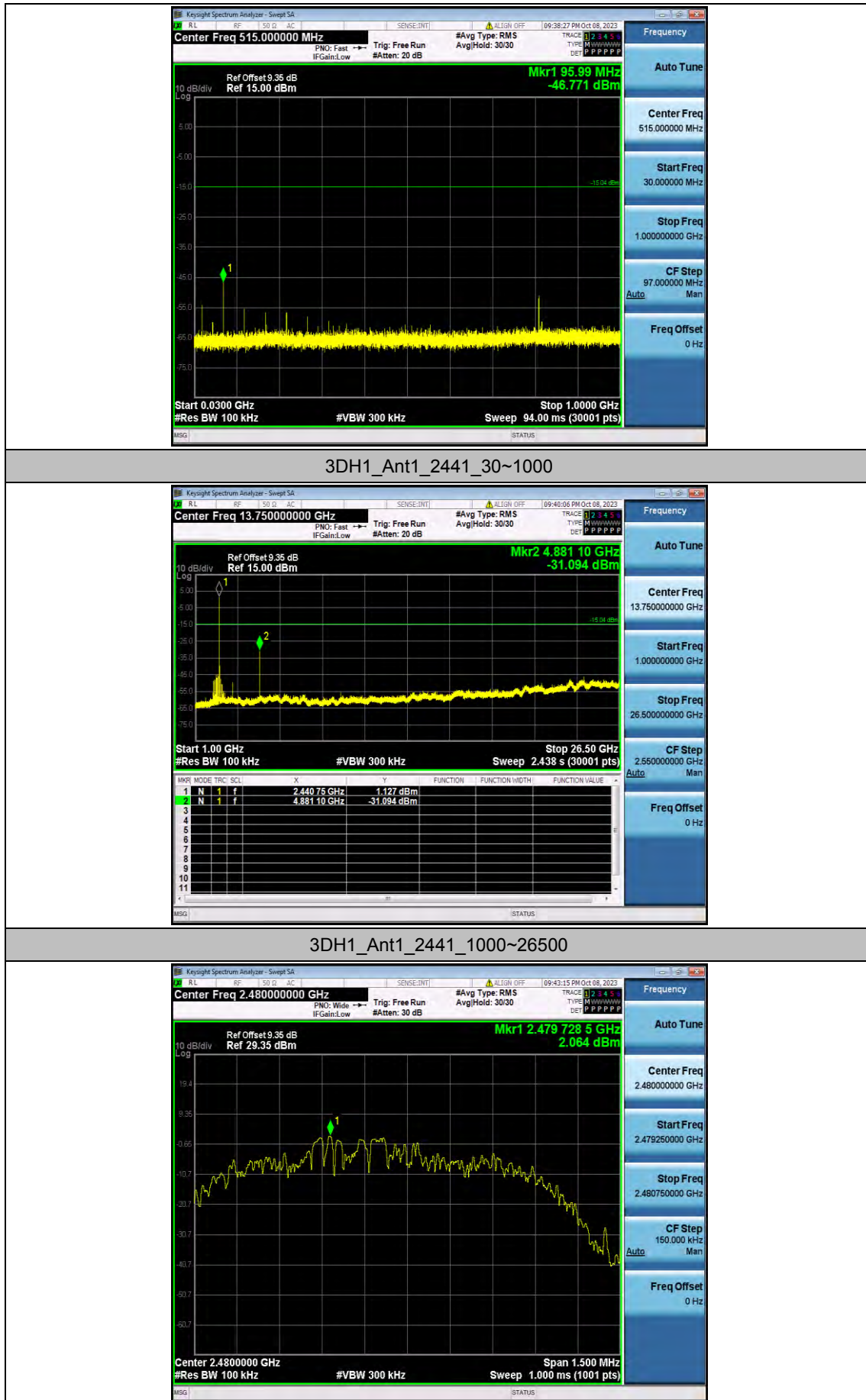
2DH1_Ant1_2480_0~Reference

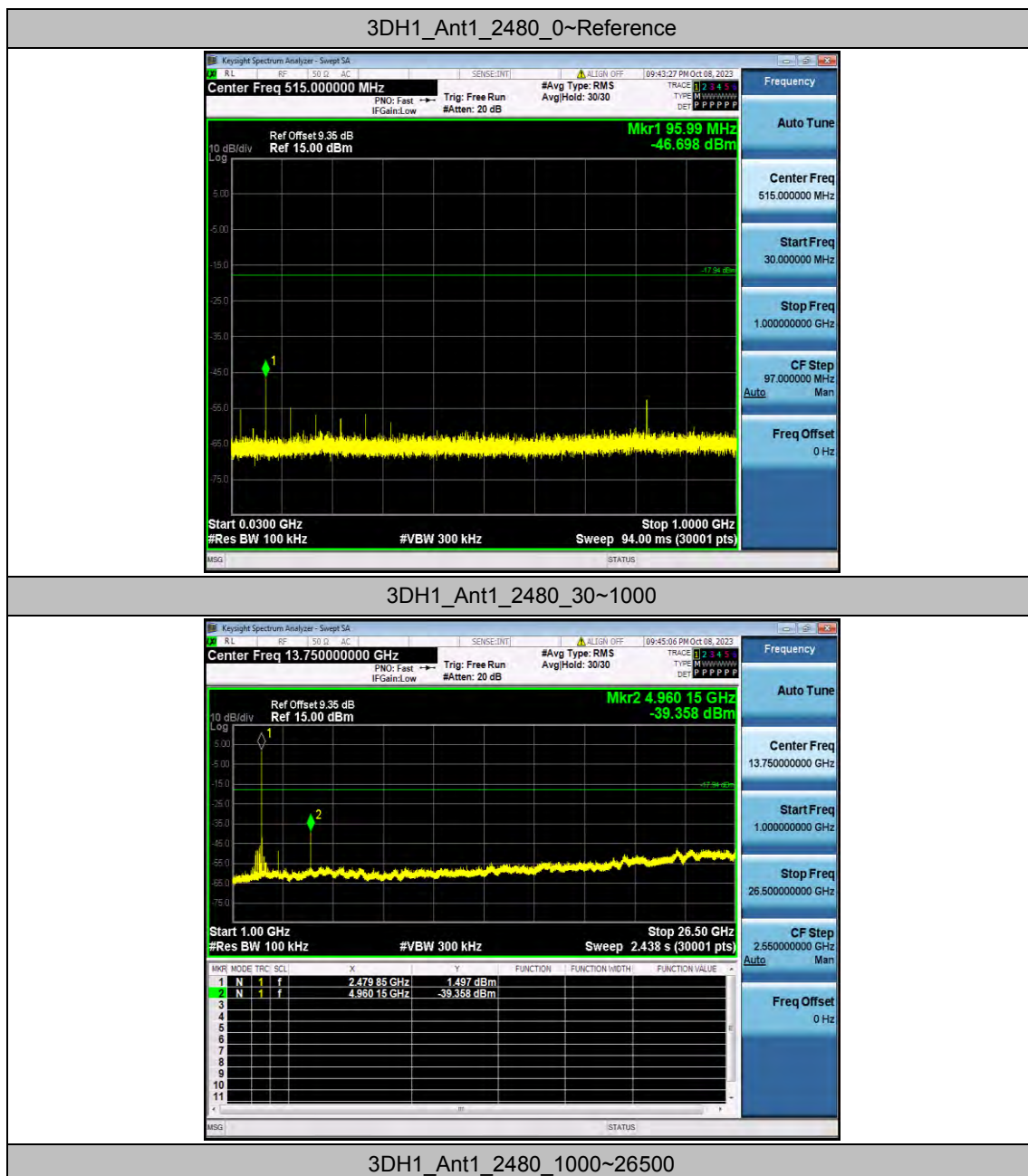


2DH1_Ant1_2480_30~1000









Appendix A.9: Emissions in Restricted Bands

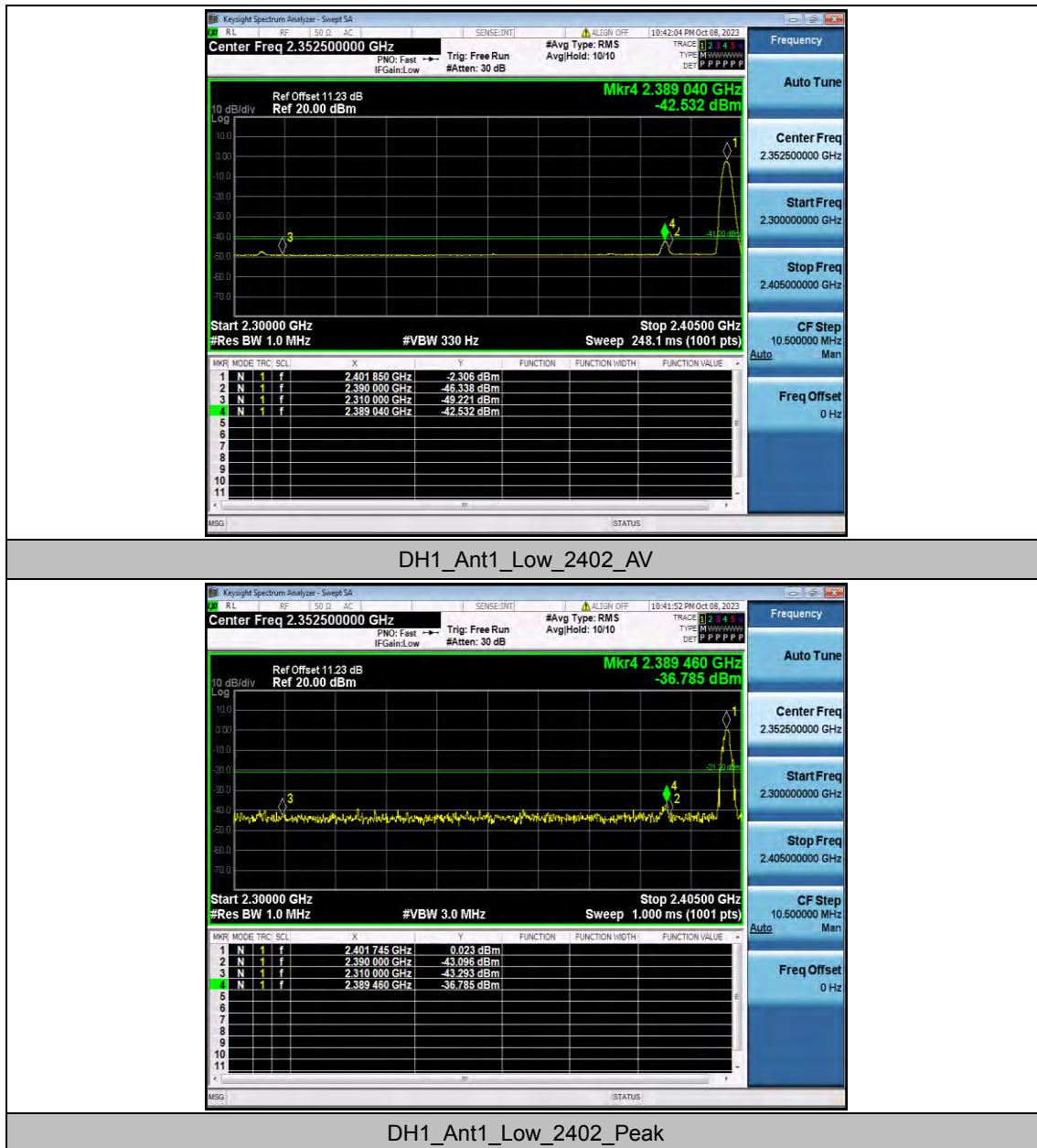
Test Result

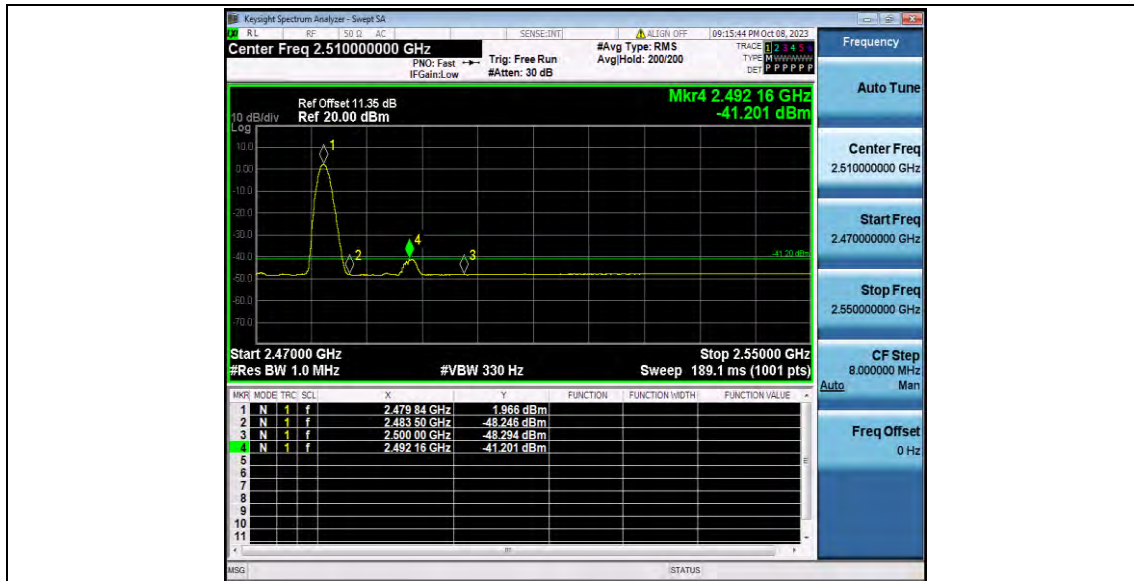
TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH1	Ant1	Low	2402	AV	2310.000	-49.22	≤-41.20	45.98	≤54	PASS
				AV	2389.040	-42.53	≤-41.20	52.67	≤54	PASS
				AV	2390.000	-46.34	≤-41.20	48.86	≤54	PASS
				Peak	2310.000	-43.29	≤-21.20	51.91	≤74	PASS
				Peak	2389.460	-36.79	≤-21.20	58.41	≤74	PASS
				Peak	2390.000	-43.1	≤-21.20	52.10	≤74	PASS
		High	2480	AV	2483.500	-48.25	≤-41.20	46.95	≤54	PASS
				AV	2492.160	-41.2	≤-41.20	54.00	≤54	PASS
				AV	2500.000	-48.29	≤-41.20	46.91	≤54	PASS
				Peak	2483.500	-40.98	≤-21.20	54.22	≤74	PASS
				Peak	2492.480	-33.25	≤-21.20	61.95	≤74	PASS
				Peak	2500.000	-41.06	≤-21.20	54.14	≤74	PASS
2DH1	Ant1	Low	2402	AV	2310.000	-49.23	≤-41.20	45.97	≤54	PASS
				AV	2389.040	-43.71	≤-41.20	51.49	≤54	PASS
				AV	2390.000	-44.09	≤-41.20	51.11	≤54	PASS
				Peak	2310.000	-42.09	≤-21.20	53.11	≤74	PASS
				Peak	2389.355	-35	≤-21.20	60.20	≤74	PASS
				Peak	2390.000	-39.37	≤-21.20	55.83	≤74	PASS
		High	2480	AV	2483.500	-48.27	≤-41.20	46.93	≤54	PASS
				AV	2492.560	-42.46	≤-41.20	52.74	≤54	PASS
				AV	2500.000	-48.27	≤-41.20	46.93	≤54	PASS
				Peak	2483.500	-41.86	≤-21.20	53.34	≤74	PASS
				Peak	2492.800	-33.92	≤-21.20	61.28	≤74	PASS
				Peak	2500.000	-40.34	≤-21.20	54.86	≤74	PASS
3DH1	Ant1	Low	2402	AV	2310.000	-49.16	≤-41.20	46.04	≤54	PASS
				AV	2389.250	-43.7	≤-41.20	51.50	≤54	PASS
				AV	2390.000	-44.01	≤-41.20	51.19	≤54	PASS
				Peak	2310.000	-42.3	≤-21.20	52.90	≤74	PASS
				Peak	2389.460	-32.75	≤-21.20	62.45	≤74	PASS
				Peak	2390.000	-37.86	≤-21.20	57.34	≤74	PASS
		High	2480	AV	2483.500	-48.33	≤-41.20	46.87	≤54	PASS
				AV	2492.480	-42.33	≤-41.20	52.87	≤54	PASS
				AV	2500.000	-48.3	≤-41.20	46.90	≤54	PASS
				Peak	2483.500	-40.92	≤-21.20	54.28	≤74	PASS
				Peak	2492.320	-32.92	≤-21.20	62.28	≤74	PASS
				Peak	2500.000	-40.93	≤-21.20	54.27	≤74	PASS

Note:

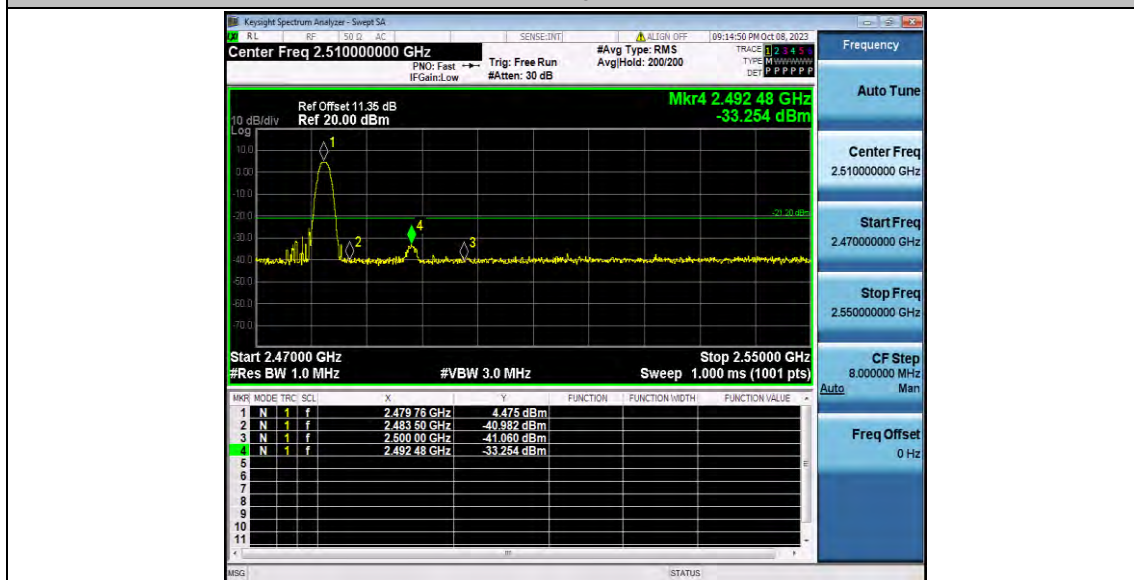
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

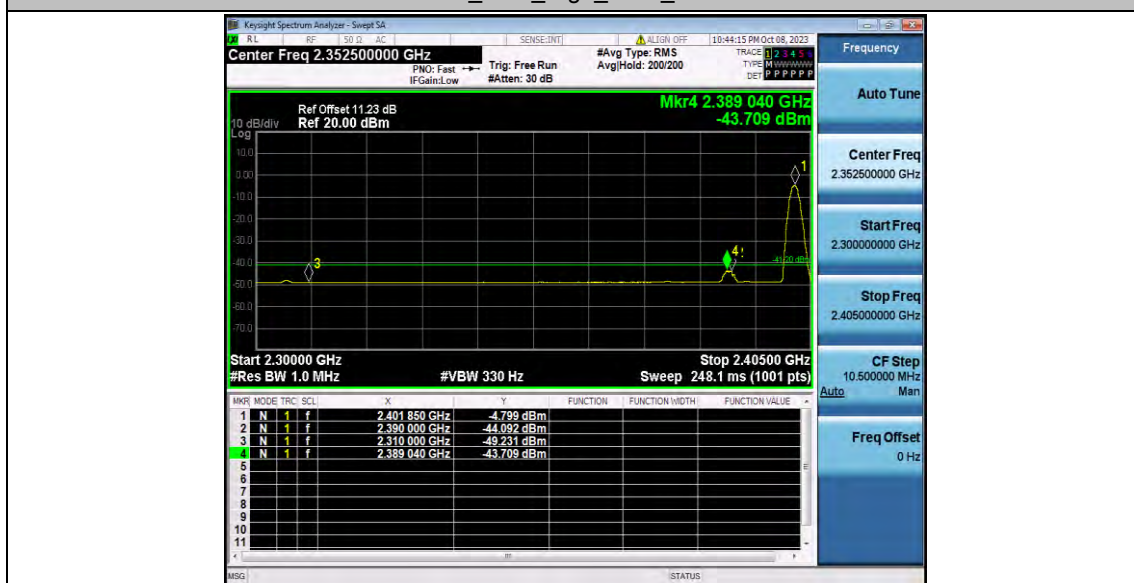




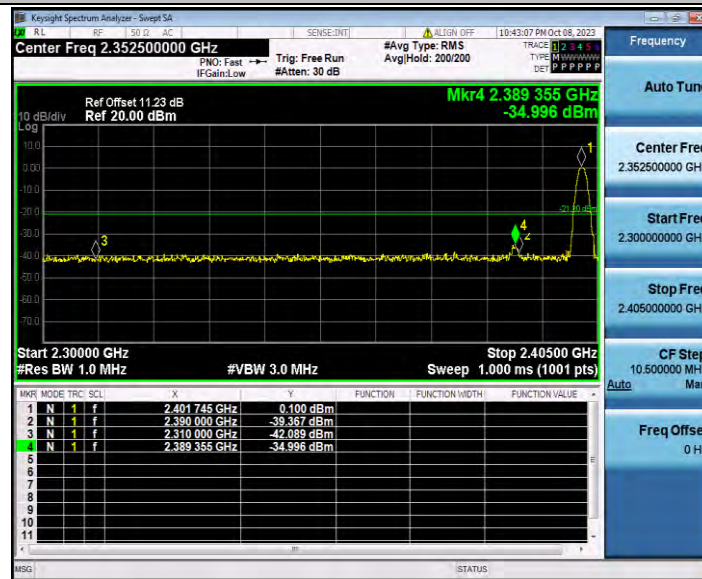
DH1_Ant1_High_2480_AV



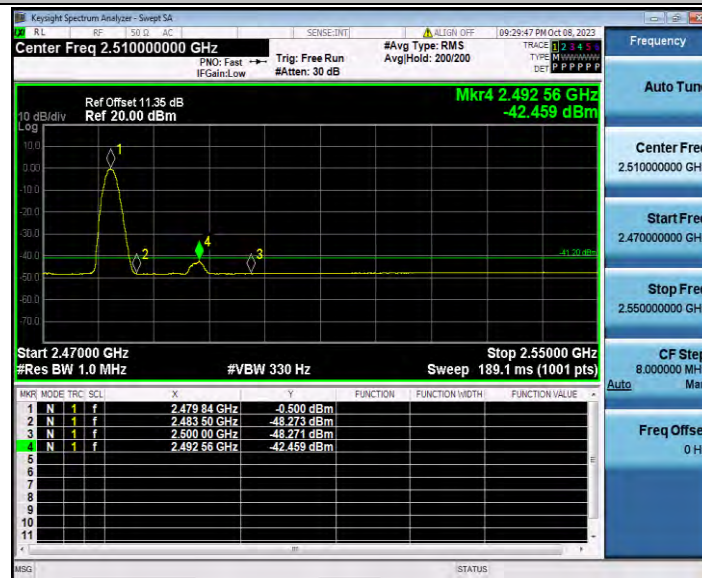
DH1_Ant1_High_2480_Peak



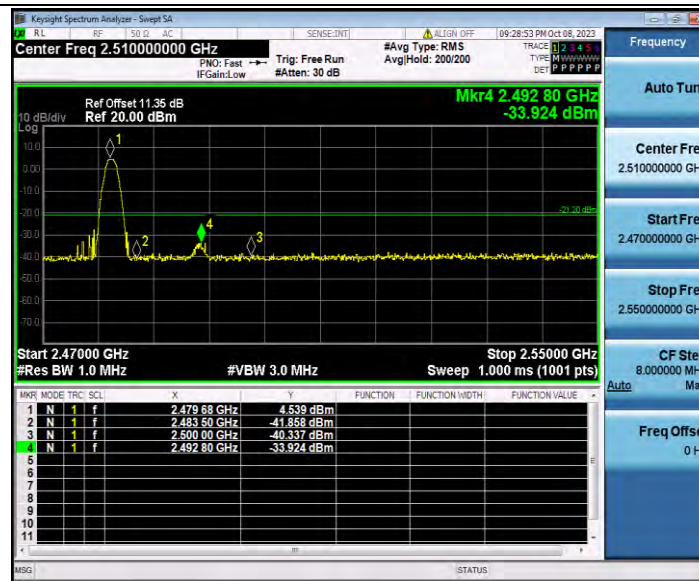
2DH1_Ant1_Low_2402_AV



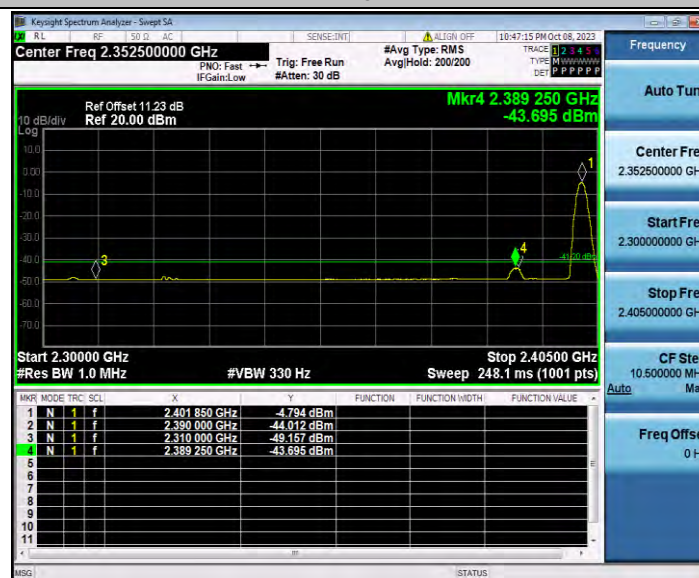
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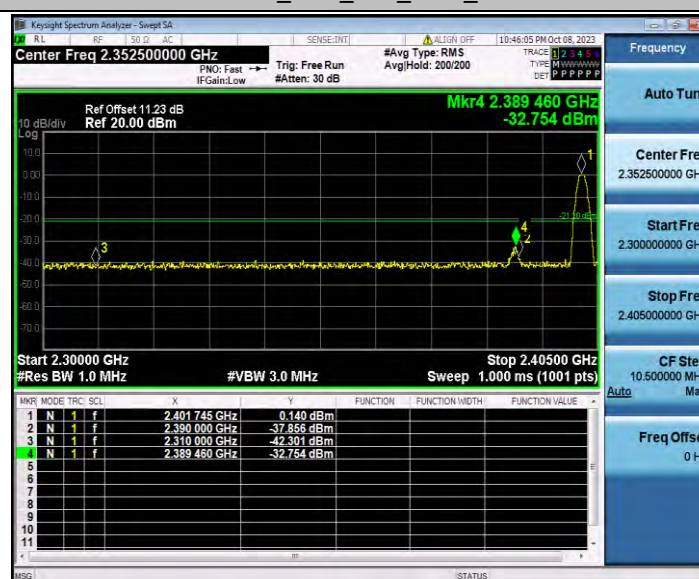
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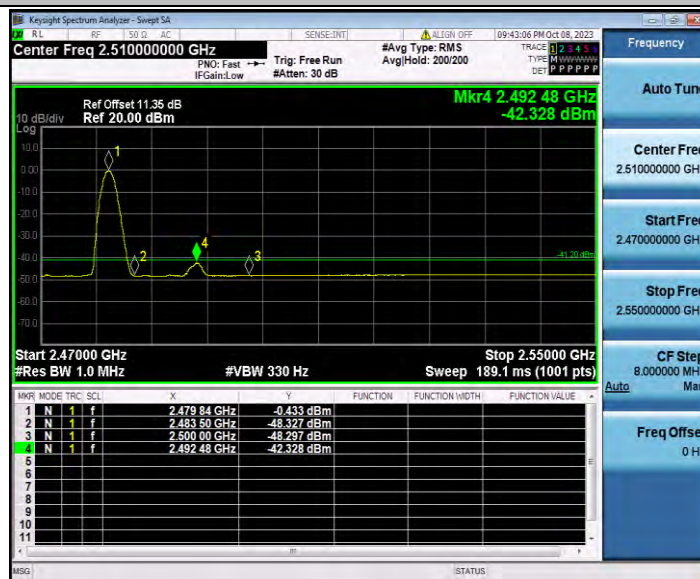
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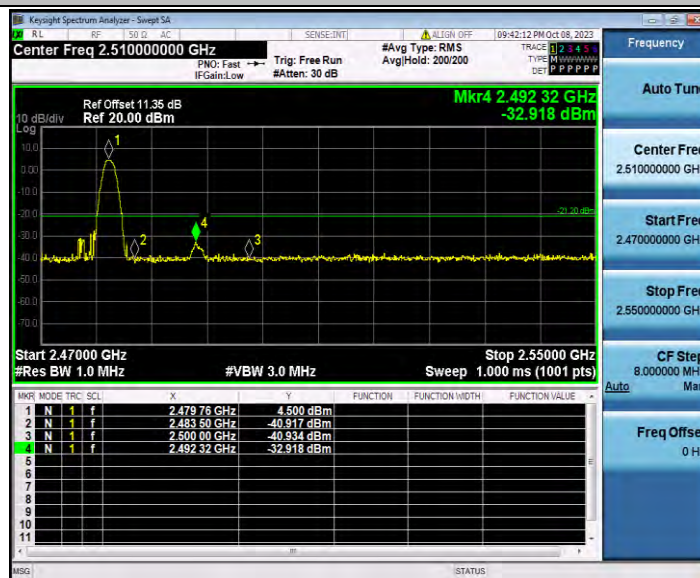
3DH1_Ant1_Low_2402_AV



3DH1_Ant1_Low_2402_Peak



3DH1_Ant1_High_2480_AV



3DH1_Ant1_High_2480_Peak