

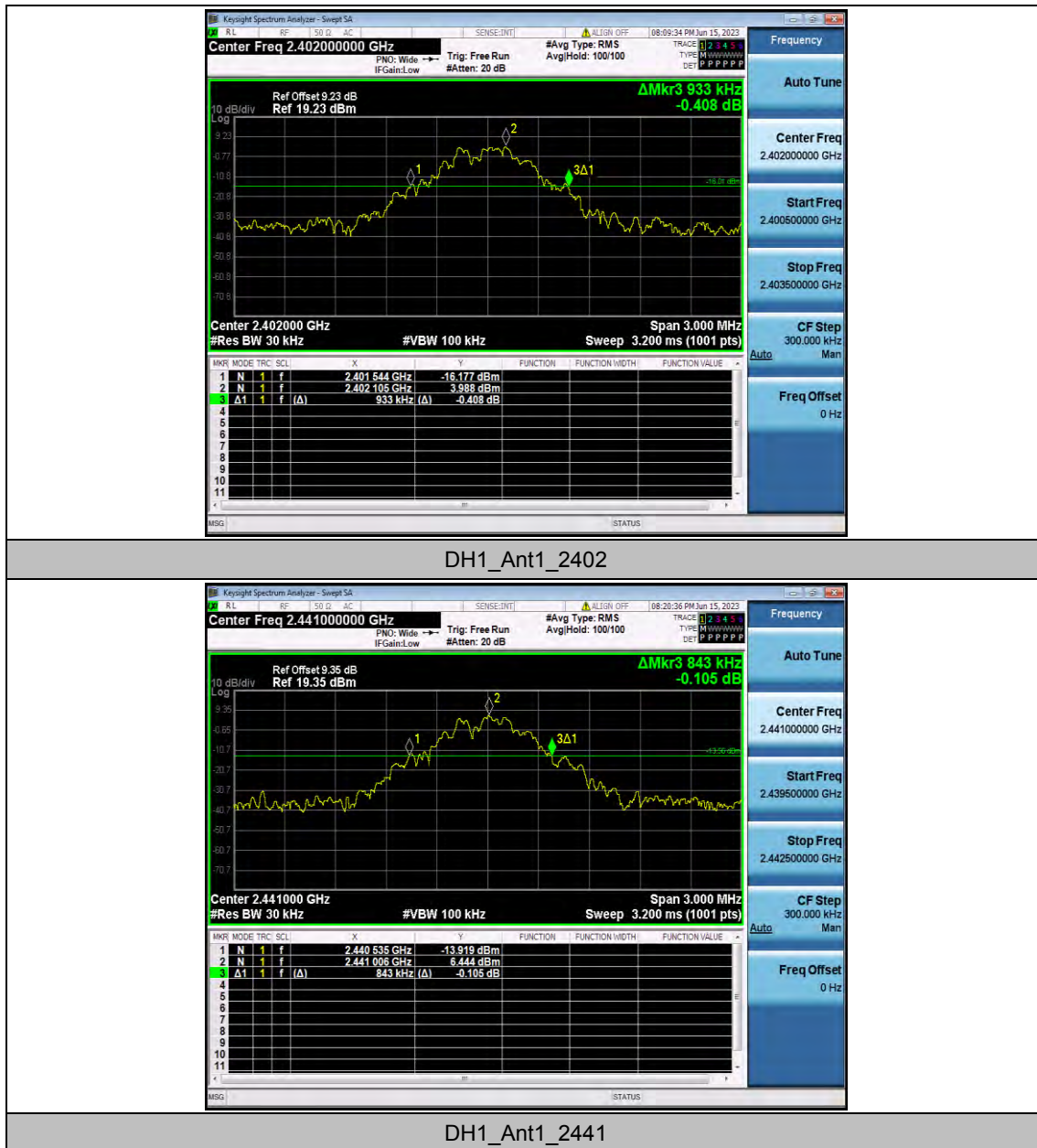
Case No. : <u>GTS20230523010-1-11</u>	
Ambient Condition: <u>23</u> °C, <u>49</u> %RH, Atmos100.1Kpa,	
Test Date: <u>2023.6.14</u>	Test Engineer: <u>Jenny zeng</u>

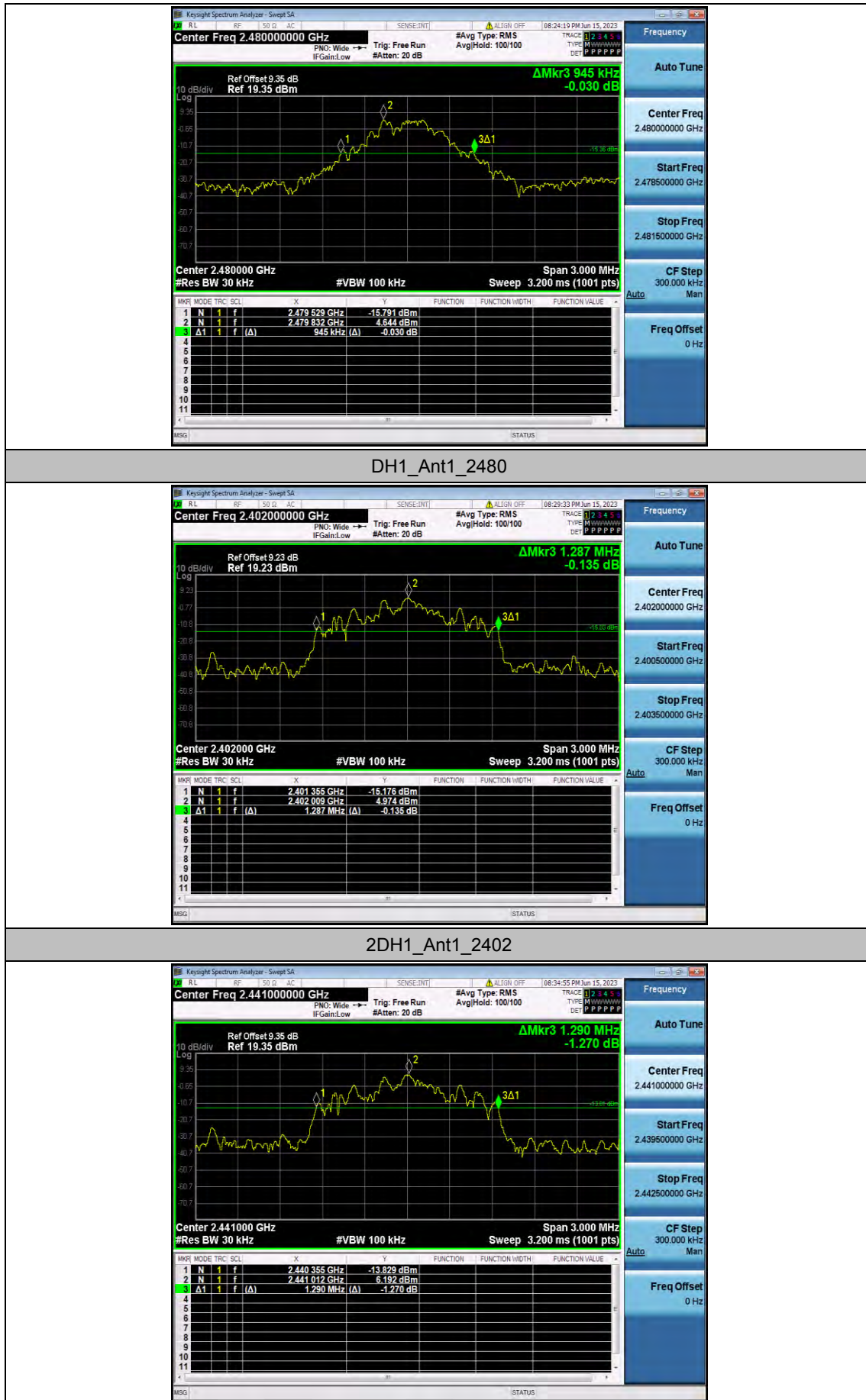
Appendix A.1: 20dB Emission Bandwidth

Test Result

Test Mode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.933	2401.544	2402.477	---	---
		2441	0.843	2440.535	2441.378	---	---
		2480	0.945	2479.529	2480.474	---	---
2DH1	Ant1	2402	1.287	2401.355	2402.642	---	---
		2441	1.290	2440.355	2441.645	---	---
		2480	1.287	2479.355	2480.642	---	---
3DH1	Ant1	2402	1.209	2401.421	2402.630	---	---
		2441	1.191	2440.439	2441.630	---	---
		2480	1.230	2479.409	2480.639	---	---

Test Graphs





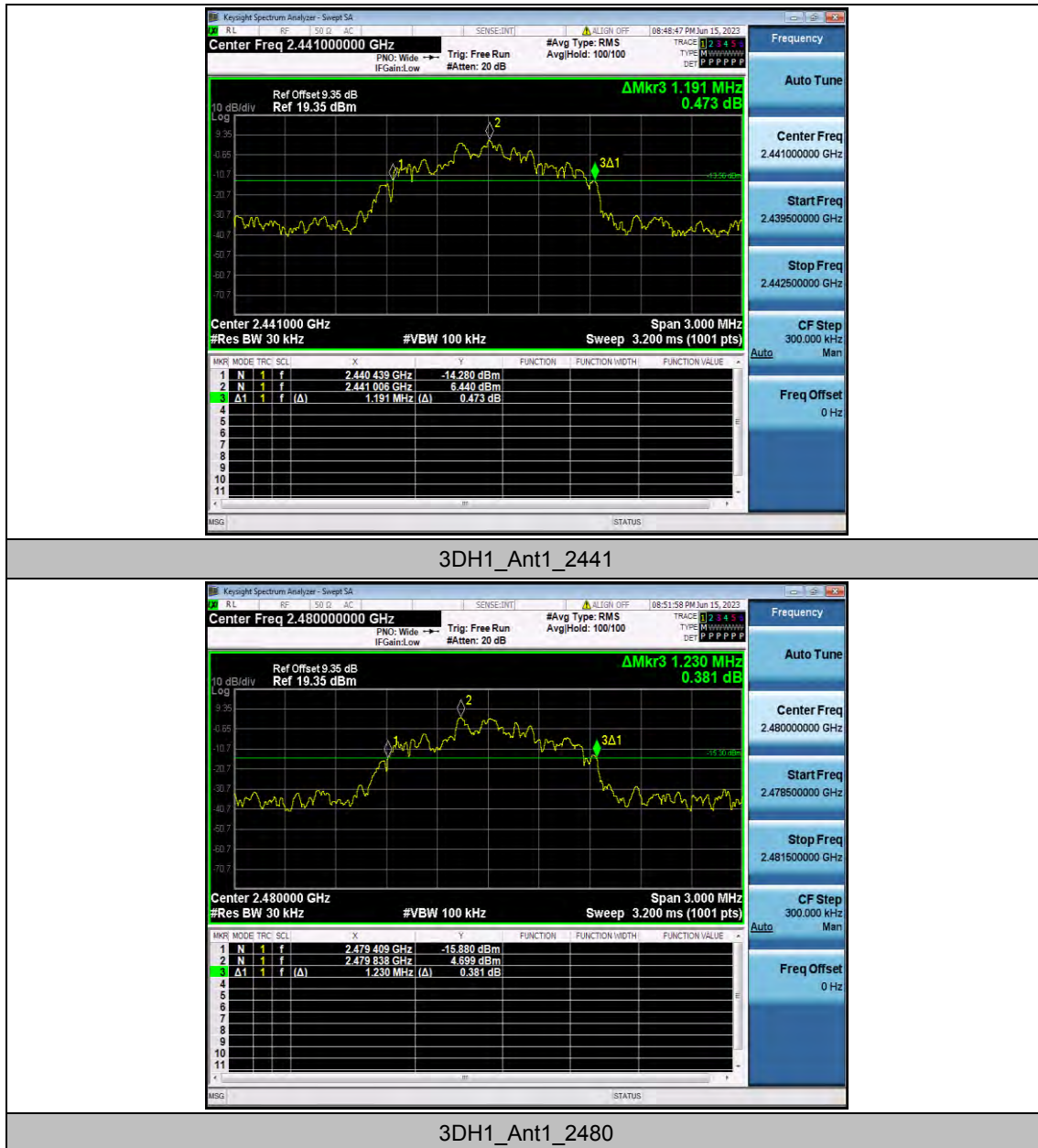
2DH1_Ant1_2441



2DH1_Ant1_2480



3DH1_Ant1_2402

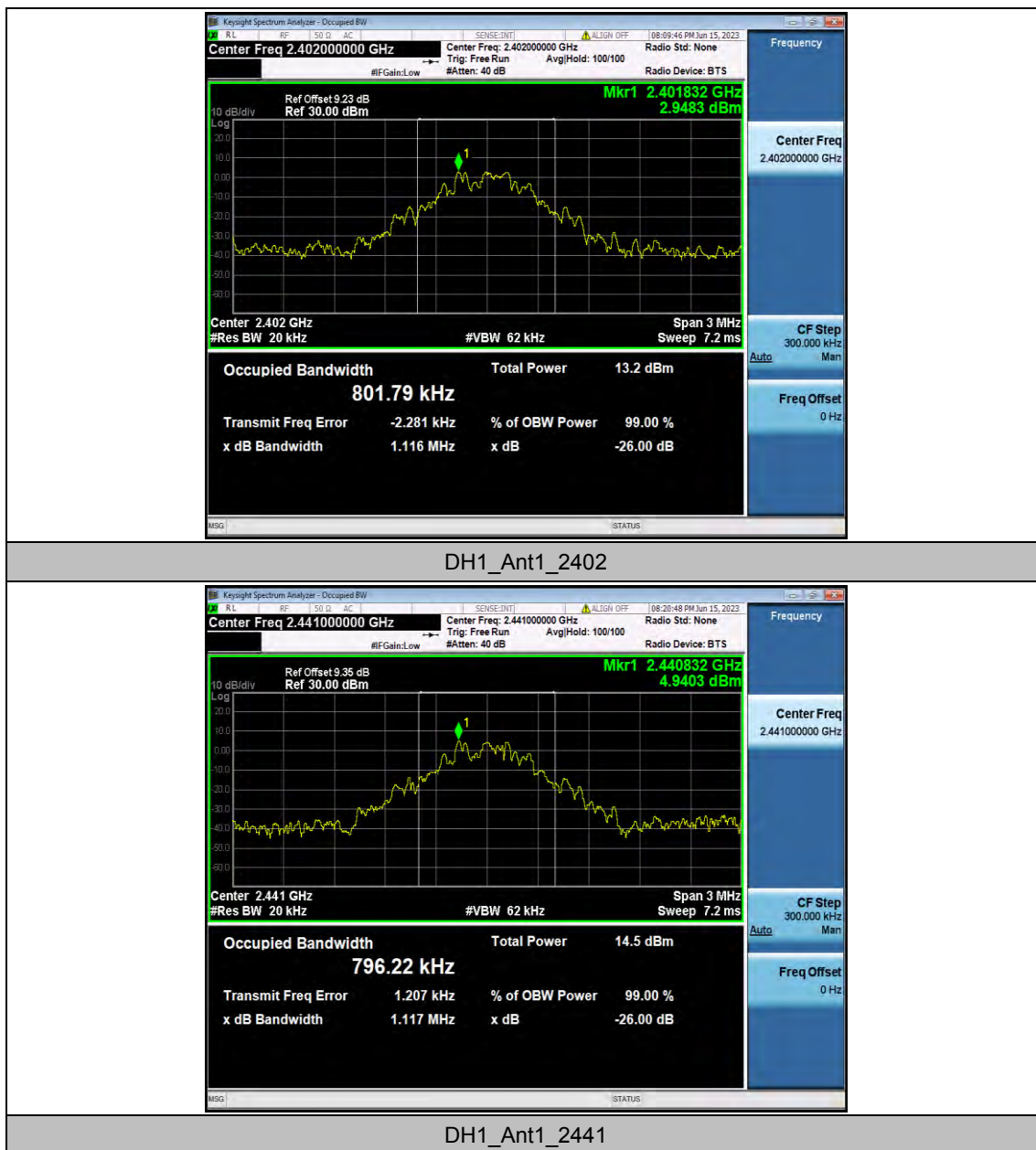


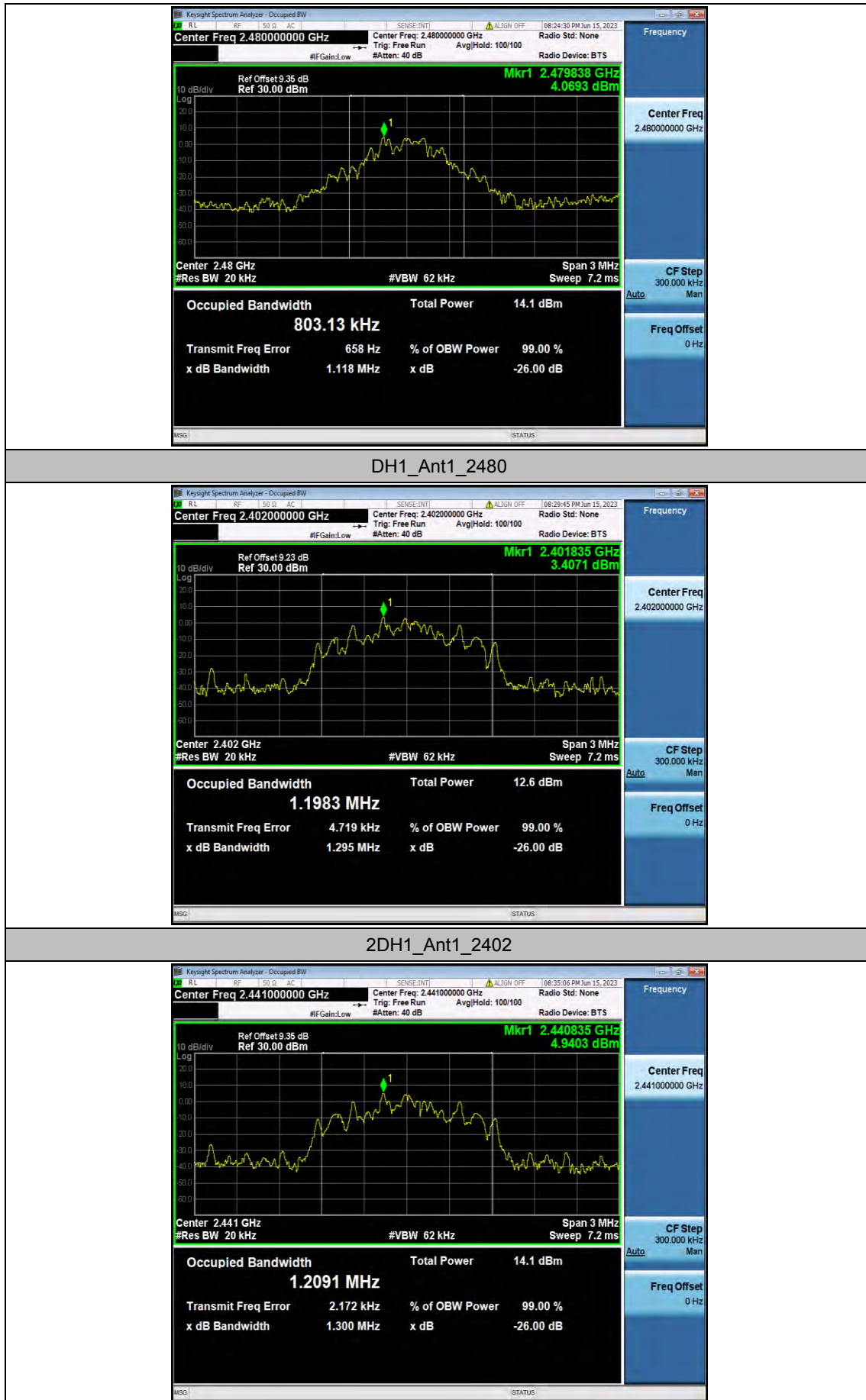
Appendix A.2: Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.80179	2401.597	2402.399	---	---
		2441	0.79622	2440.603	2441.399	---	---
		2480	0.80313	2479.599	2480.402	---	---
2DH1	Ant1	2402	1.1983	2401.406	2402.604	---	---
		2441	1.2091	2440.398	2441.607	---	---
		2480	1.1946	2479.410	2480.604	---	---
3DH1	Ant1	2402	1.0967	2401.455	2402.551	---	---
		2441	1.0954	2440.455	2441.550	---	---
		2480	1.1002	2479.455	2480.555	---	---

Test Graphs





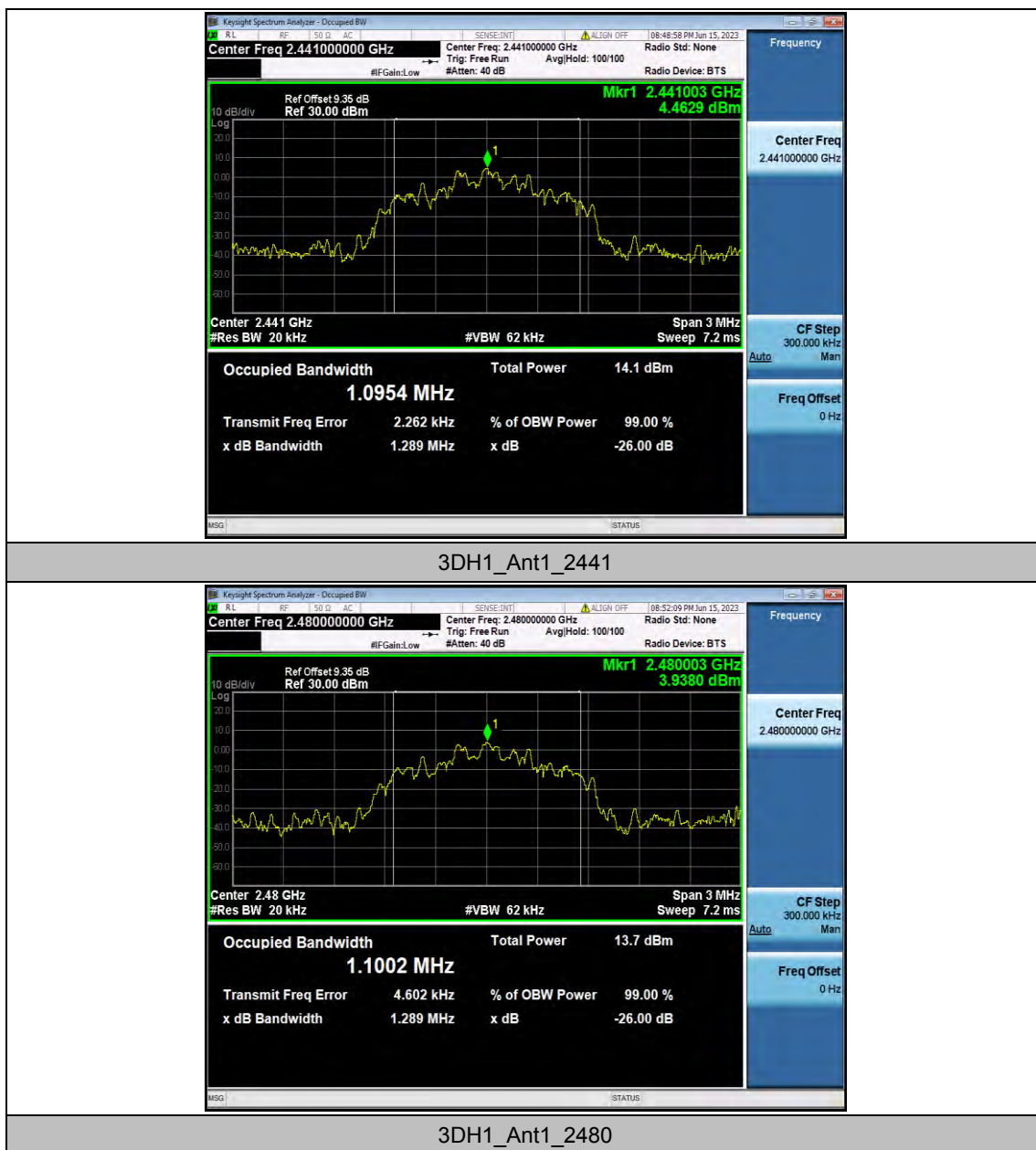
2DH1_Ant1_2441



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	7.77	≤30.00	PASS
		2441	9.21	≤30.00	PASS
		2480	8.67	≤30.00	PASS
2DH1	Ant1	2402	7.8	≤20.97	PASS
		2441	9.2	≤20.97	PASS
		2480	8.67	≤20.97	PASS
3DH1	Ant1	2402	7.77	≤20.97	PASS
		2441	9.19	≤20.97	PASS
		2480	8.64	≤20.97	PASS

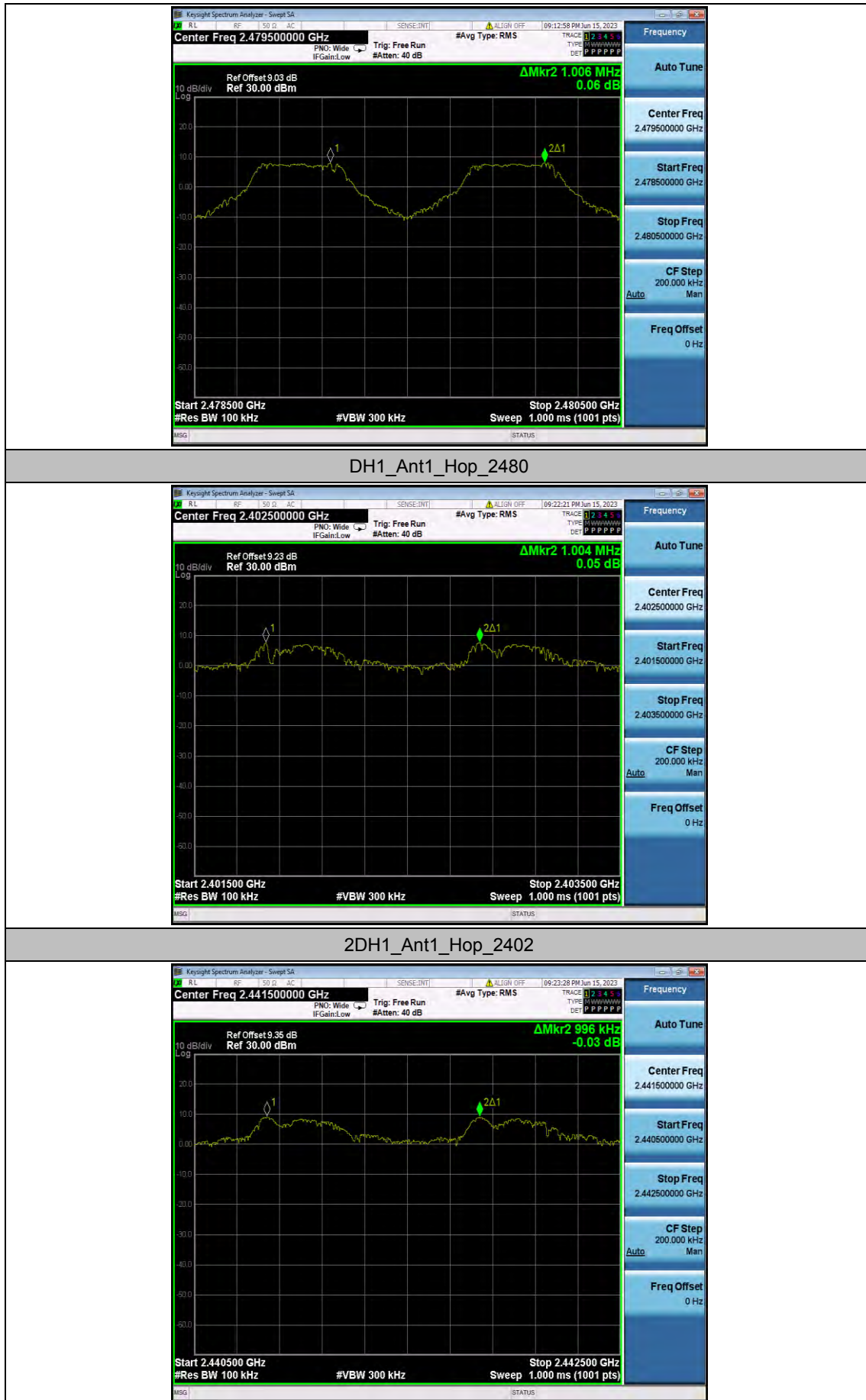
Appendix A.4: Carrier frequency separation

Test Result

Test Mode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	0.99	≥ 0.945	PASS
		Hop_2441	1	≥ 0.945	PASS
		Hop_2480	1.006	≥ 0.945	PASS
2DH1	Ant1	Hop_2402	1.004	≥ 0.860	PASS
		Hop_2441	0.996	≥ 0.860	PASS
		Hop_2480	0.998	≥ 0.860	PASS
3DH1	Ant1	Hop_2402	1.008	≥ 0.820	PASS
		Hop_2441	1.01	≥ 0.820	PASS
		Hop_2480	1.156	≥ 0.820	PASS

Test Graphs





2DH1_Ant1_Hop_2441



2DH1_Ant1_Hop_2480



3DH1_Ant1_Hop_2402



3DH1_Ant1_Hop_2441



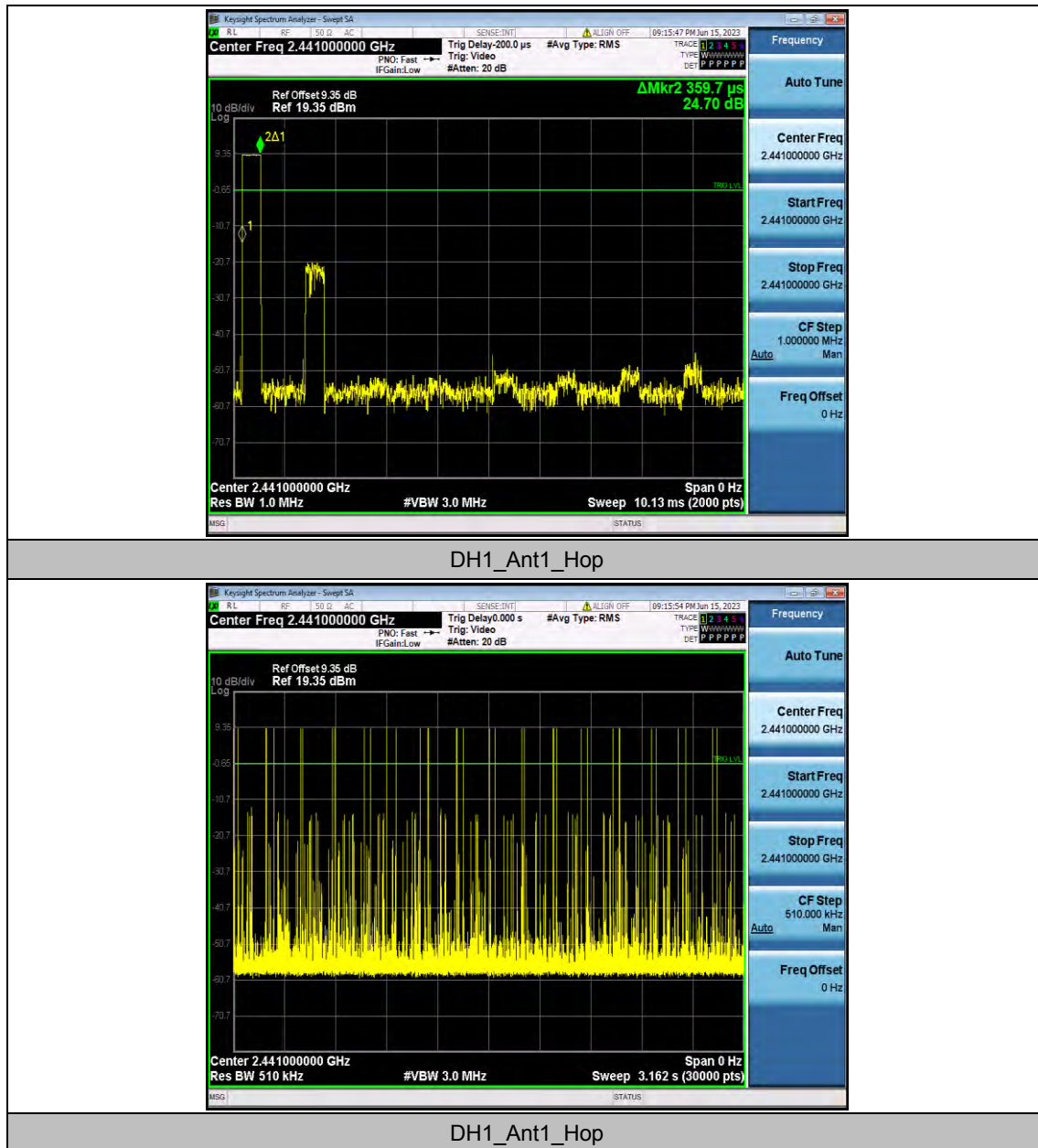
3DH1_Ant1_Hop_2480

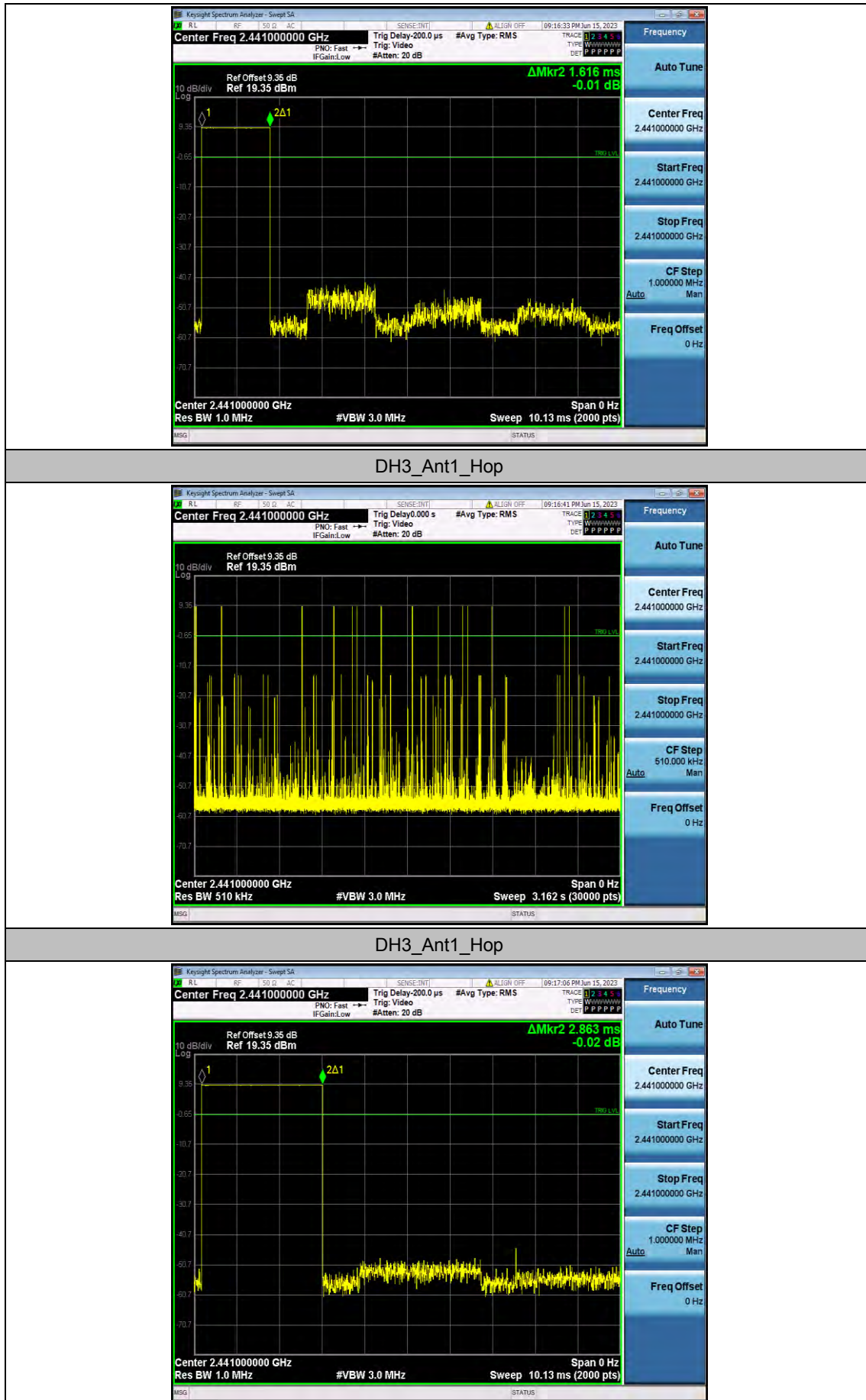
Appendix A.5: Time of occupancy

Test Result

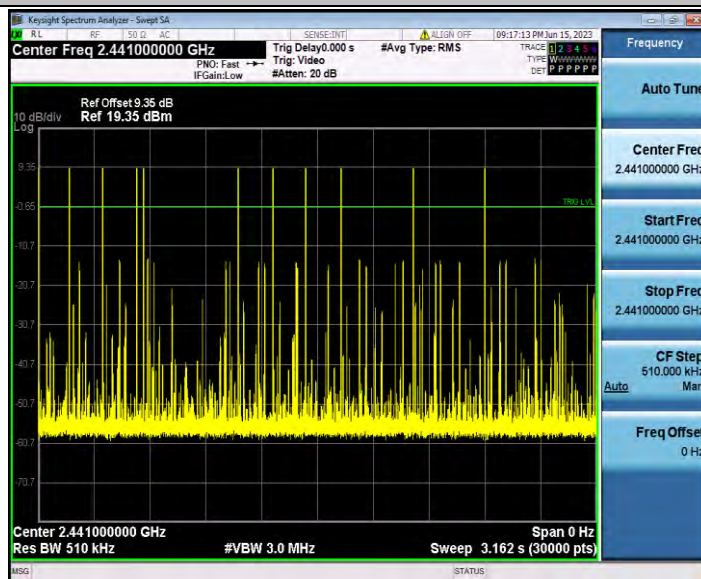
Test Mode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.36	320	0.115	≤0.4	PASS
DH3	Ant1	Hop	1.62	160	0.259	≤0.4	PASS
DH5	Ant1	Hop	2.86	110	0.315	≤0.4	PASS
2DH1	Ant1	Hop	0.37	330	0.122	≤0.4	PASS
2DH3	Ant1	Hop	1.62	190	0.308	≤0.4	PASS
2DH5	Ant1	Hop	2.87	130	0.373	≤0.4	PASS
3DH1	Ant1	Hop	0.37	330	0.122	≤0.4	PASS
3DH3	Ant1	Hop	1.62	160	0.259	≤0.4	PASS
3DH5	Ant1	Hop	2.87	90	0.258	≤0.4	PASS

Test Graphs

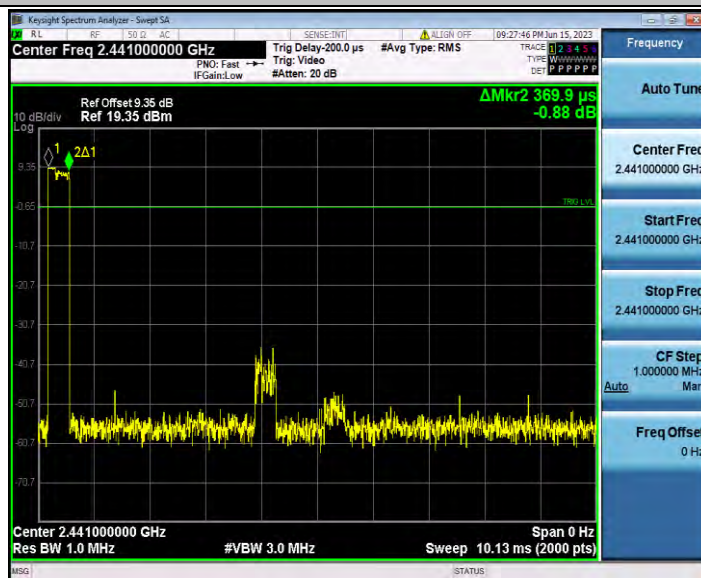




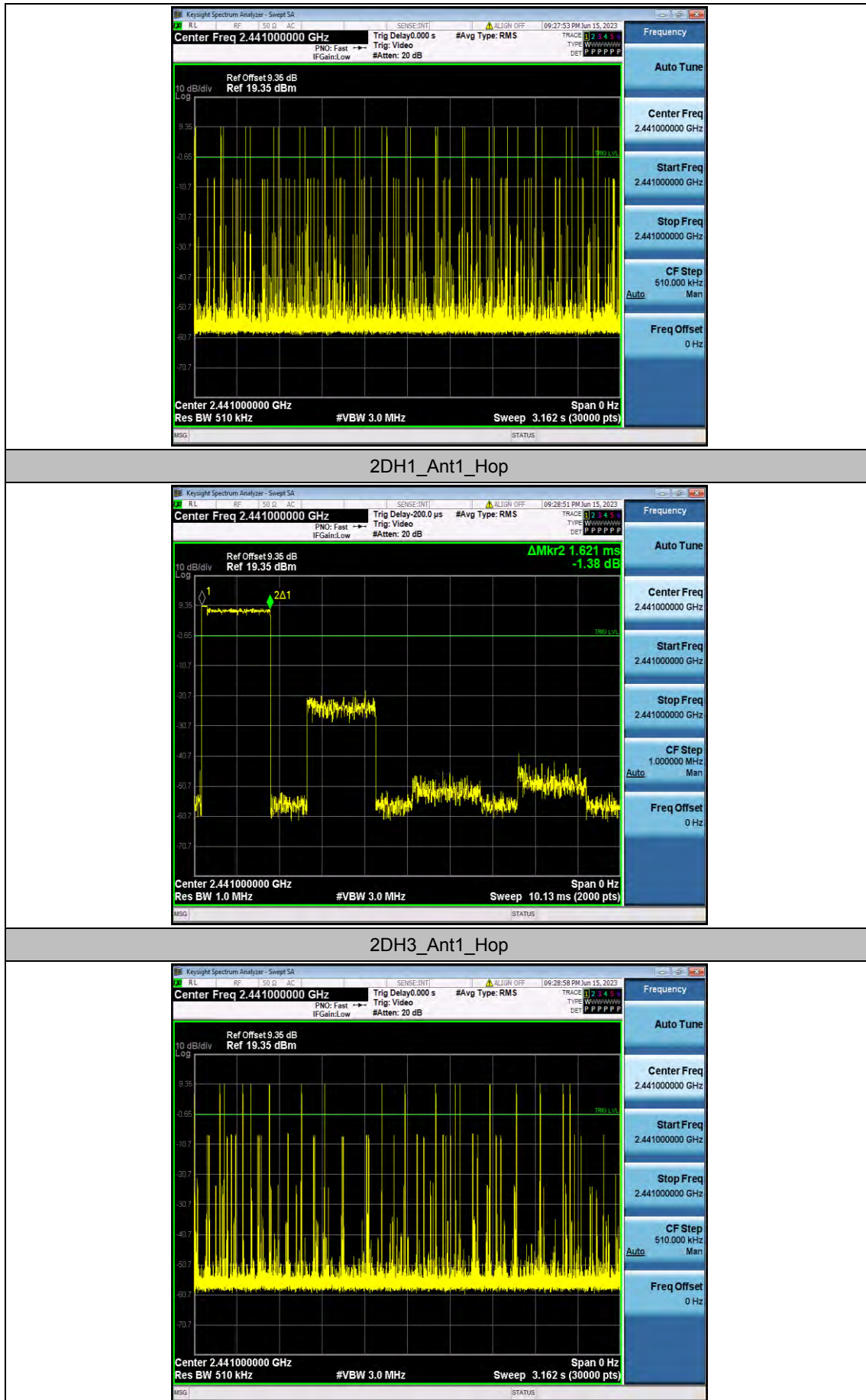
DH5_Ant1_Hop



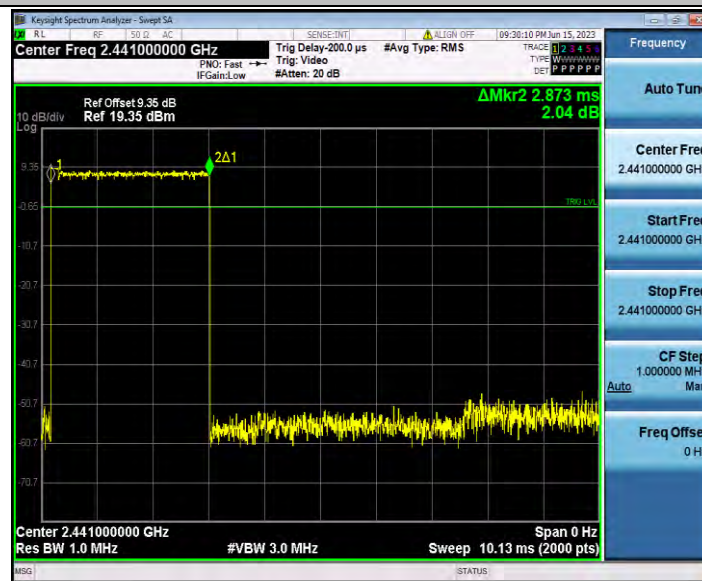
DH5_Ant1_Hop



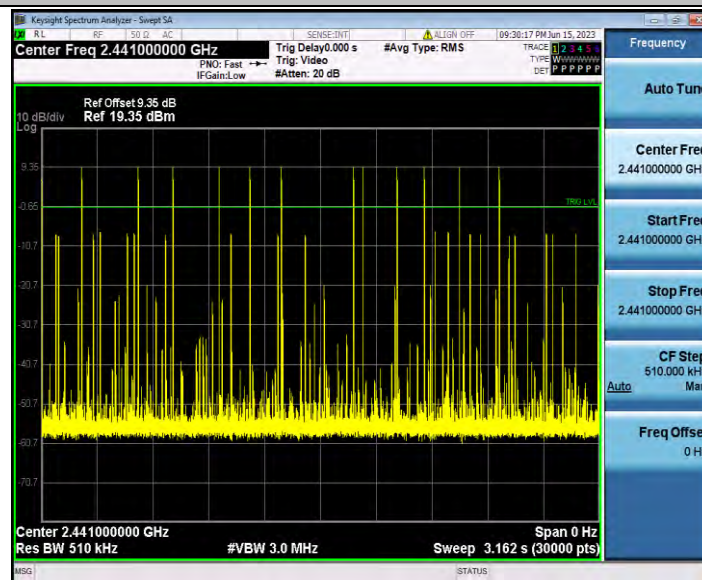
2DH1_Ant1_Hop



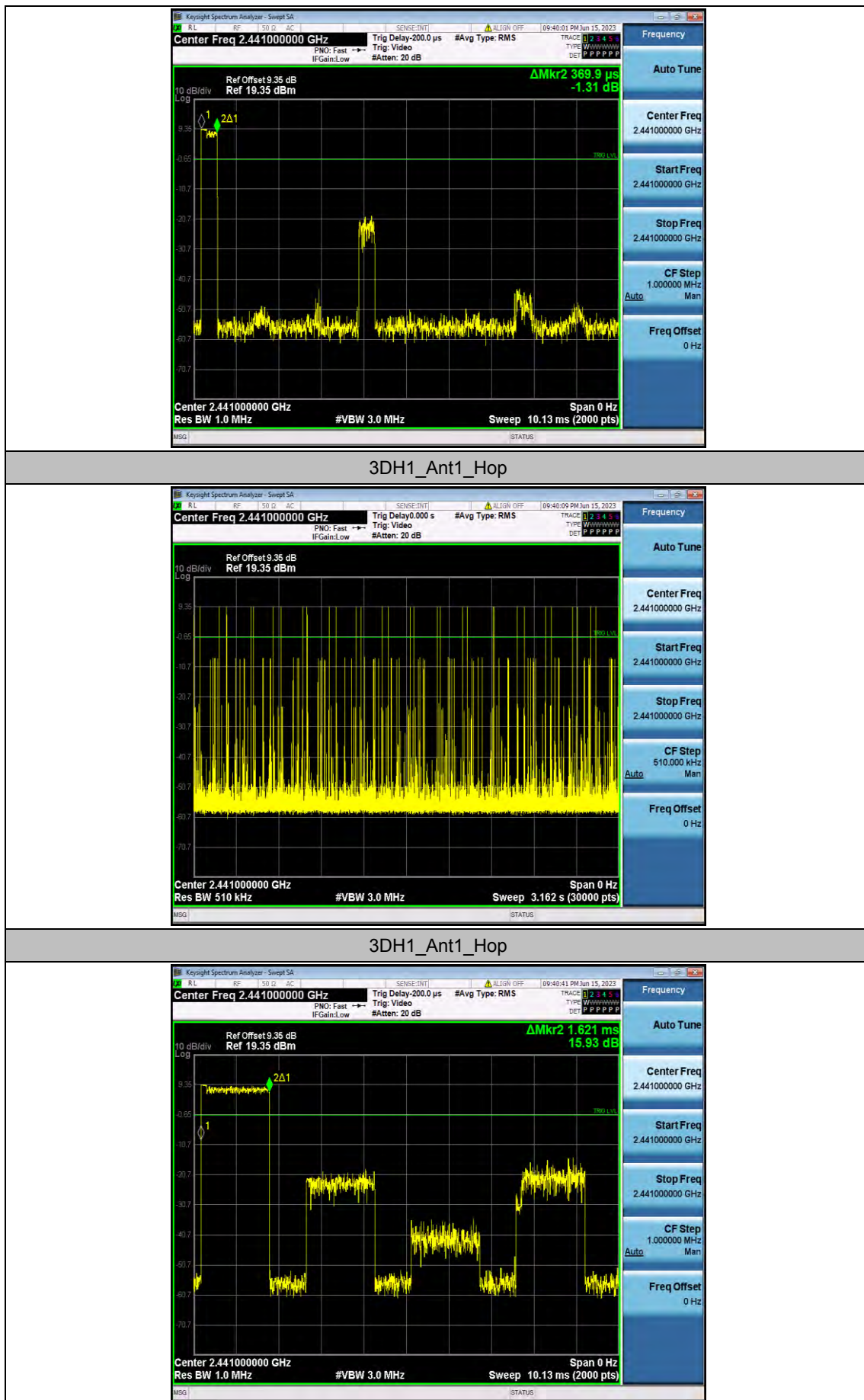
2DH3_Ant1_Hop



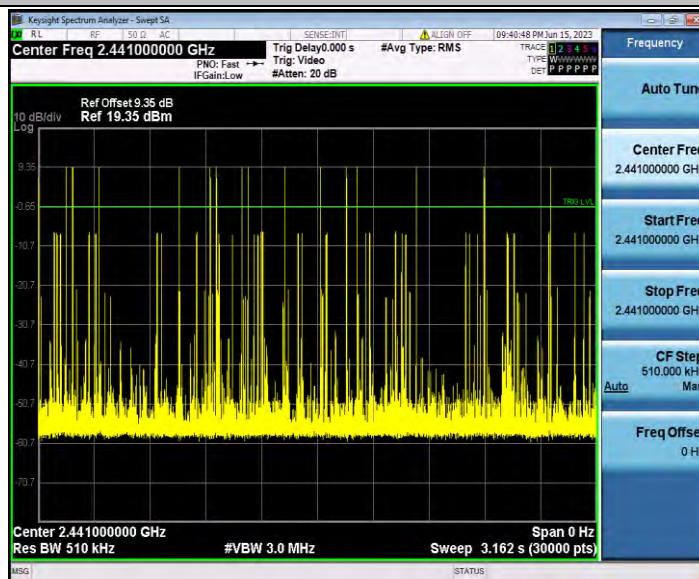
2DH5_Ant1_Hop



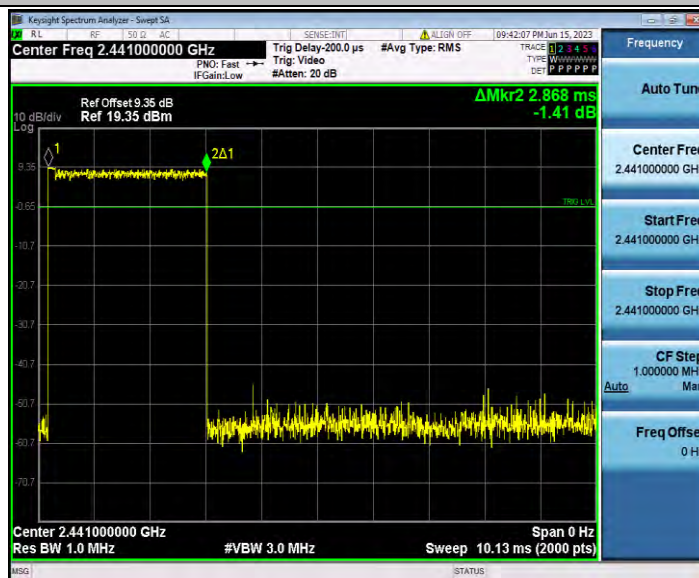
2DH5_Ant1_Hop



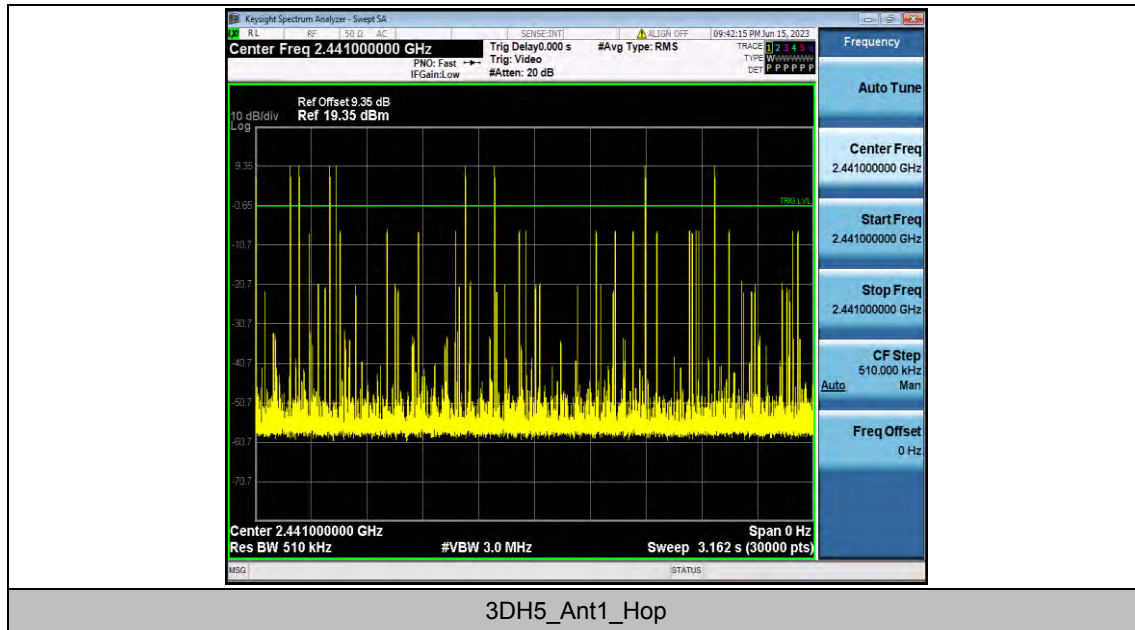
3DH3_Ant1_Hop



3DH3_Ant1_Hop



3DH5_Ant1_Hop

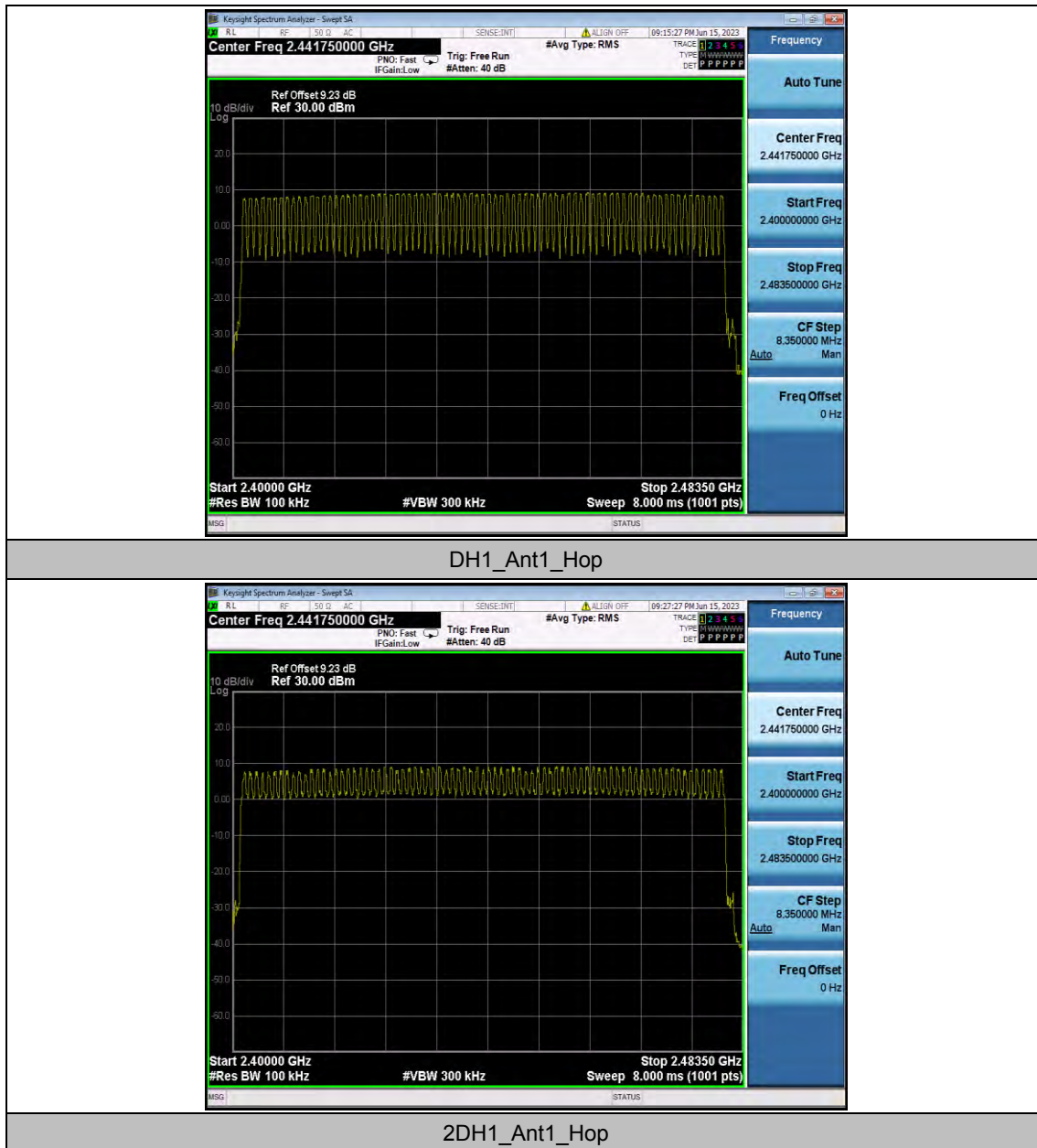


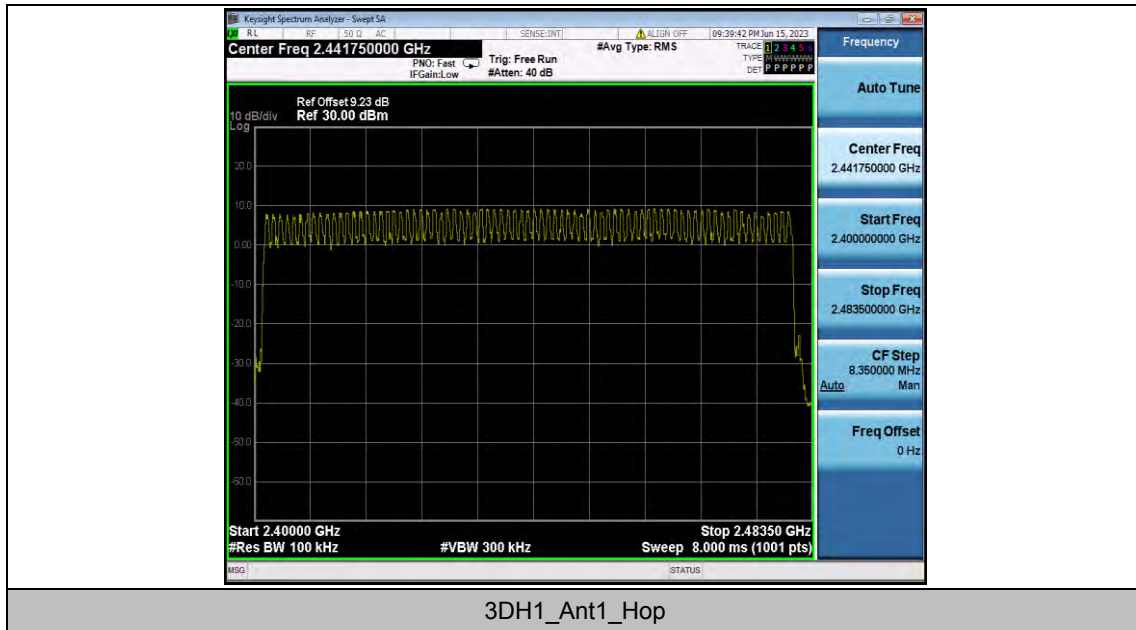
Appendix A.6: Number of hopping channels

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



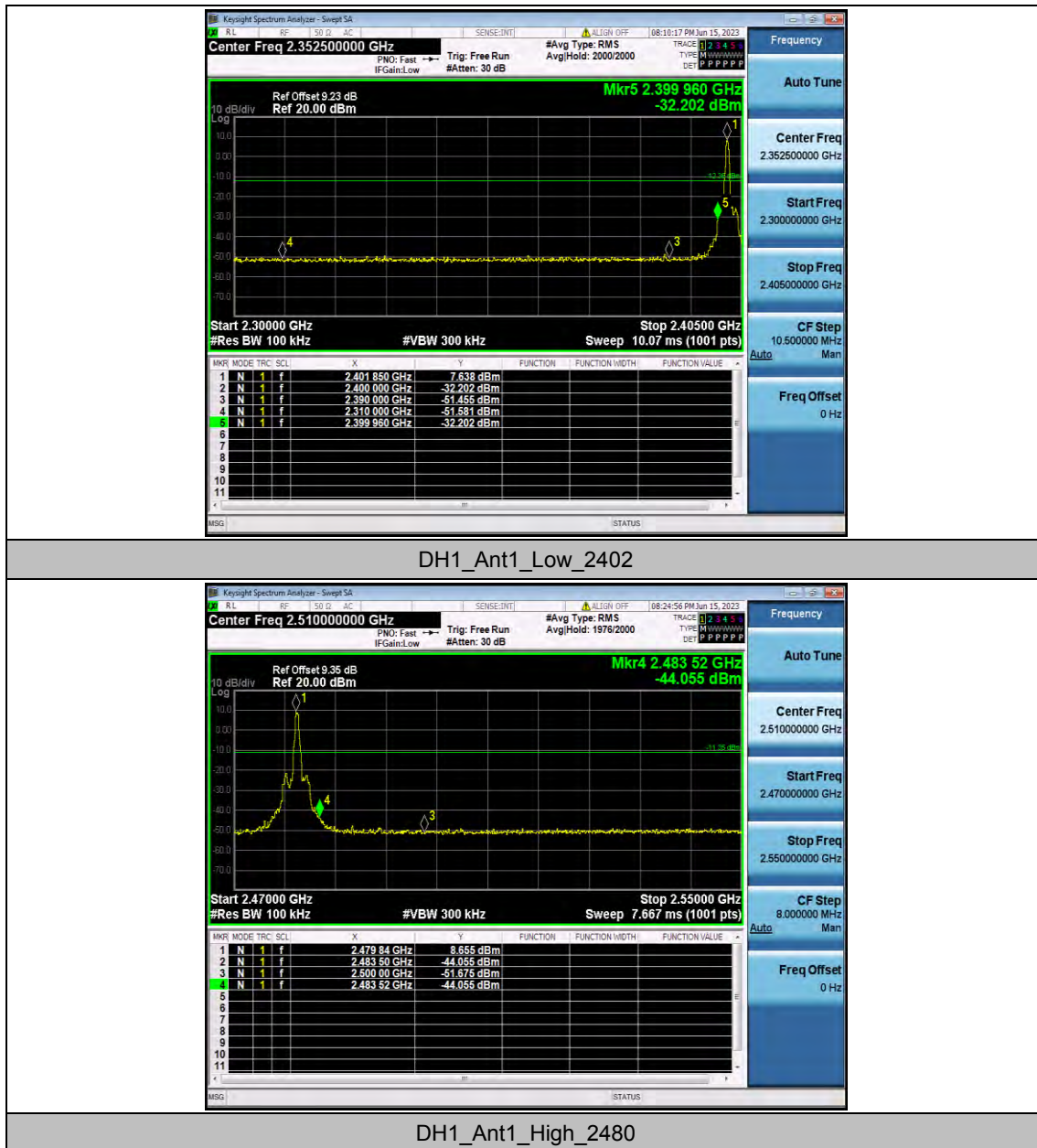


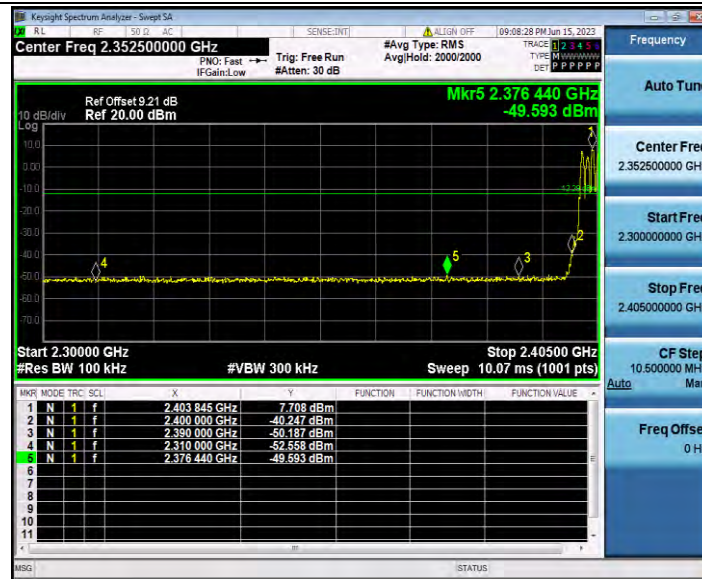
Appendix A.7: Band edge measurements

Test Result

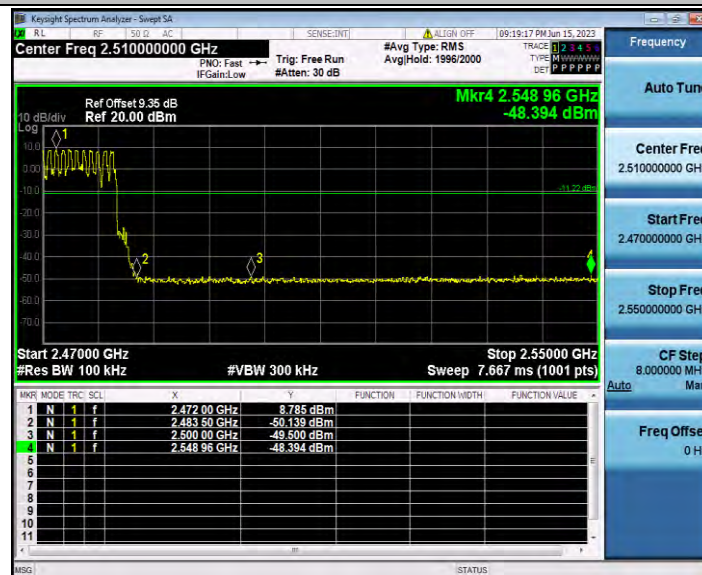
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	7.64	-32.2	≤ -12.36	PASS
		High	2480	8.66	-44.06	≤ -11.35	PASS
		Low	Hop_2402	7.71	-49.59	≤ -12.29	PASS
		High	Hop_2480	8.79	-48.39	≤ -11.22	PASS
2DH1	Ant1	Low	2402	7.67	-32.58	≤ -12.33	PASS
		High	2480	8.65	-44.96	≤ -11.35	PASS
		Low	Hop_2402	7.61	-49.34	≤ -12.39	PASS
		High	Hop_2480	8.89	-49.14	≤ -11.11	PASS
3DH1	Ant1	Low	2402	7.73	-36.45	≤ -12.27	PASS
		High	2480	8.68	-44.47	≤ -11.32	PASS
		Low	Hop_2402	7.59	-49.77	≤ -12.42	PASS
		High	Hop_2480	8.79	-43.16	≤ -11.21	PASS

Test Graphs

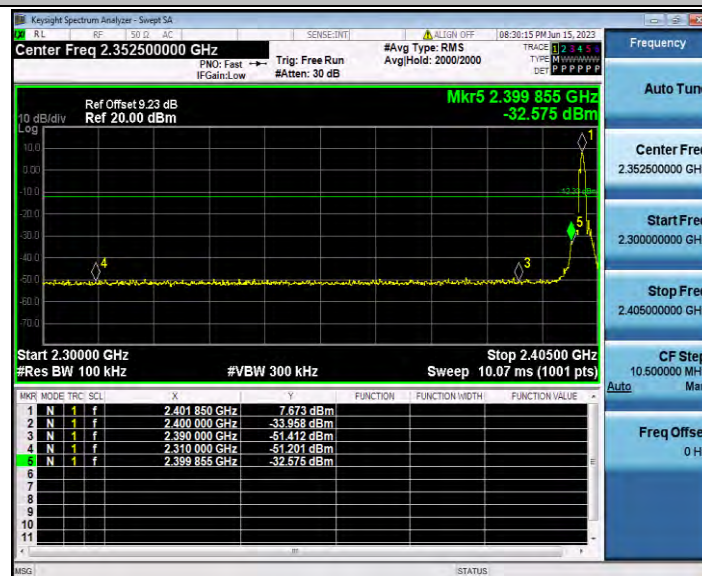




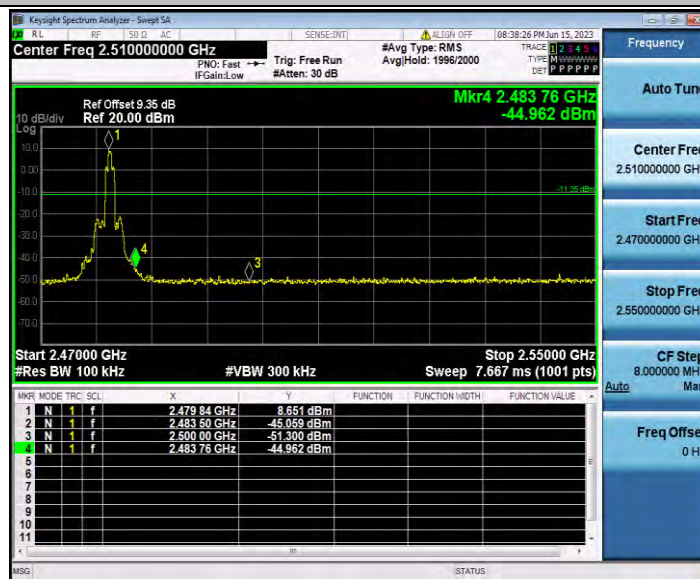
DH1_Ant1_Low_Hop_2402



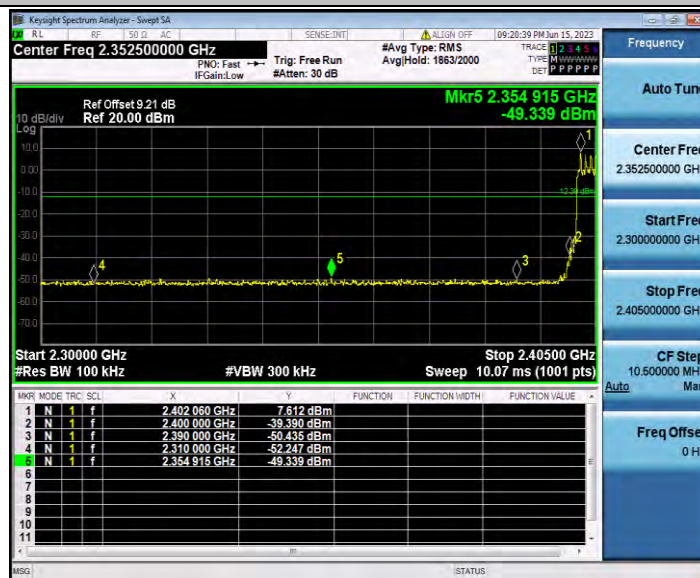
DH1_Ant1_High_Hop_2480



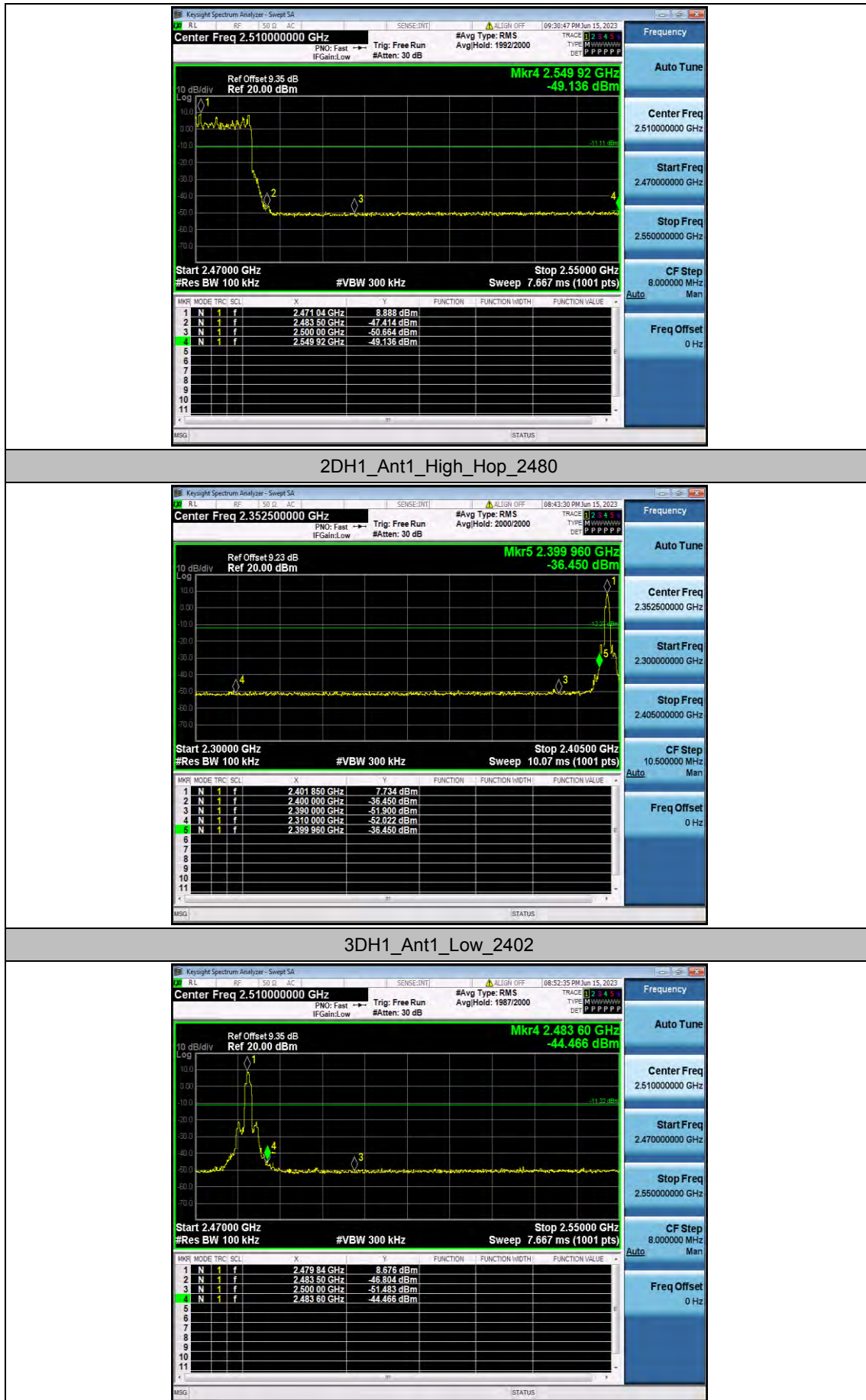
2DH1_Ant1_Low_2402



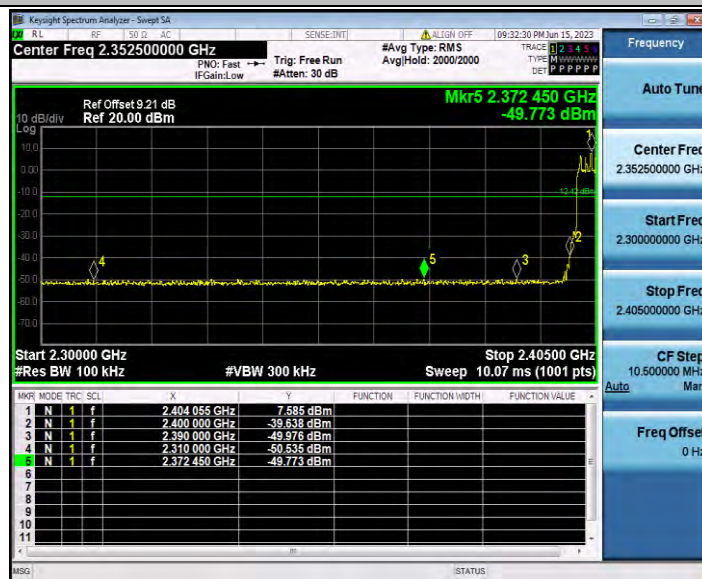
2DH1_Ant1_High_2480



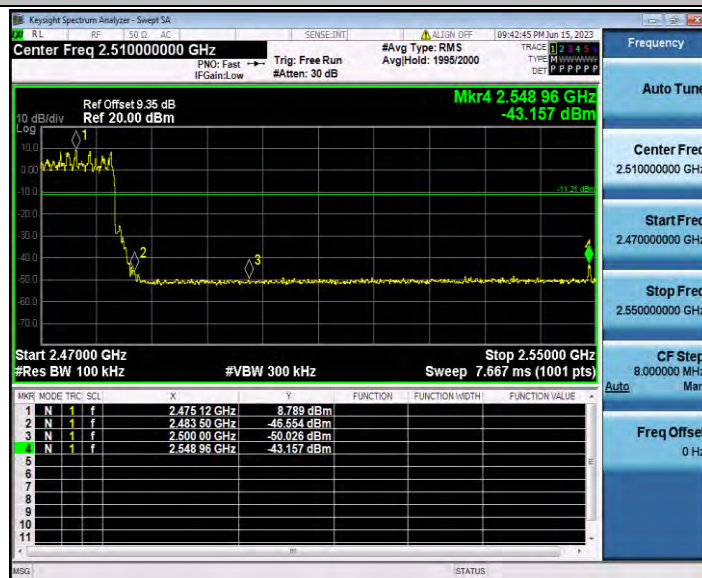
2DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_2480



3DH1_Ant1_Low_Hop_2402



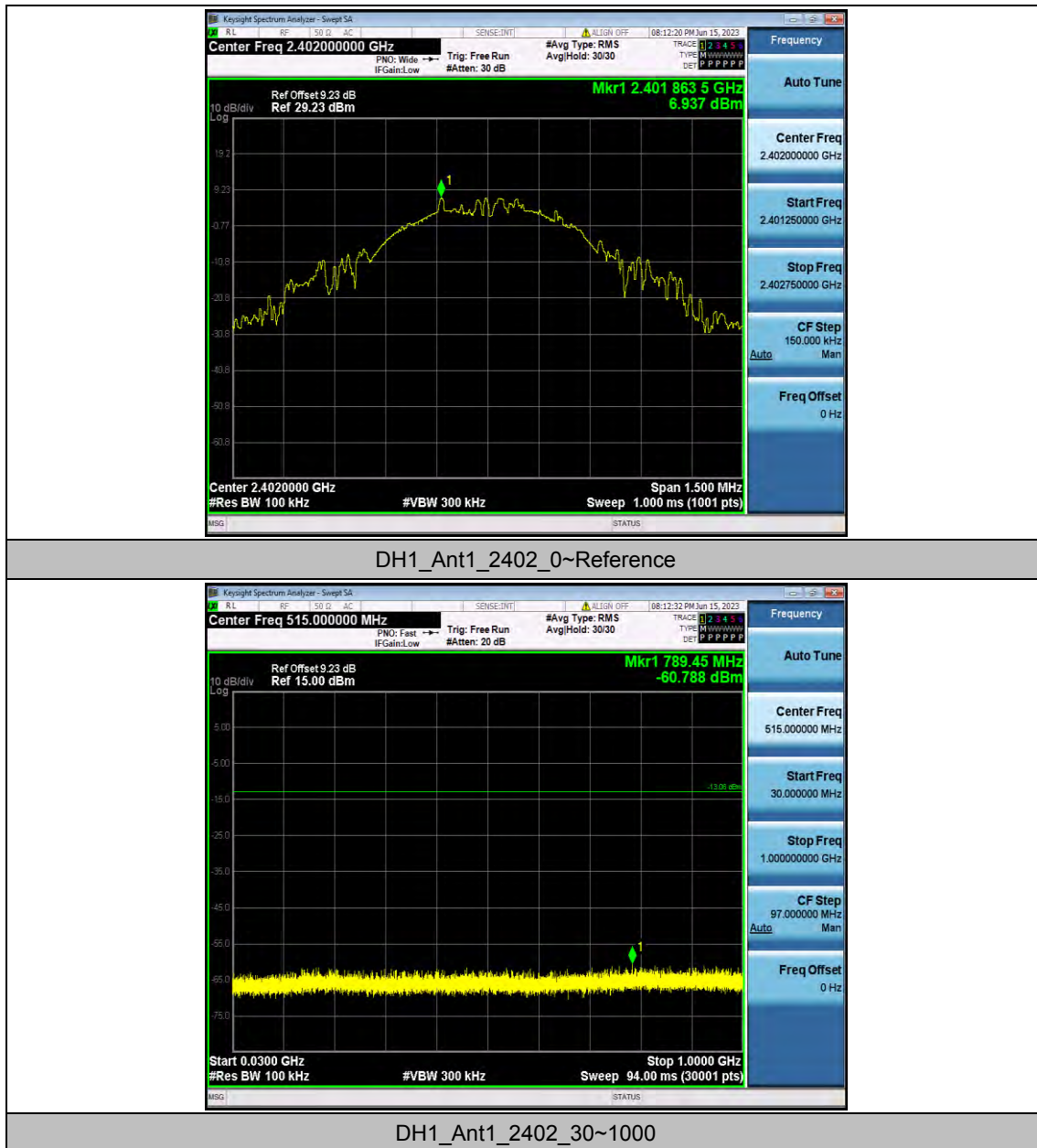
3DH1_Ant1_High_Hop_2480

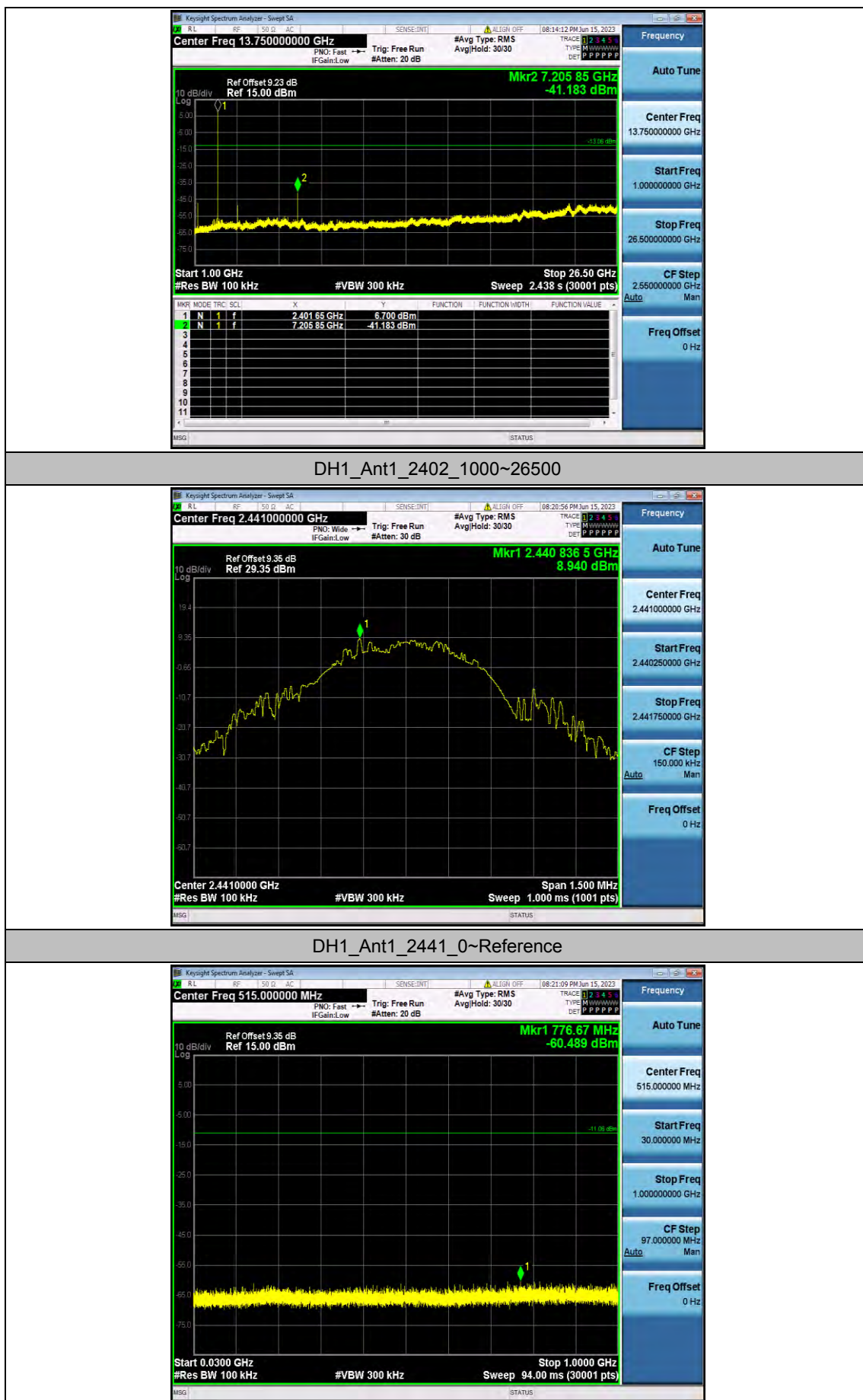
Appendix A.8: Conducted Spurious Emission

Test Result

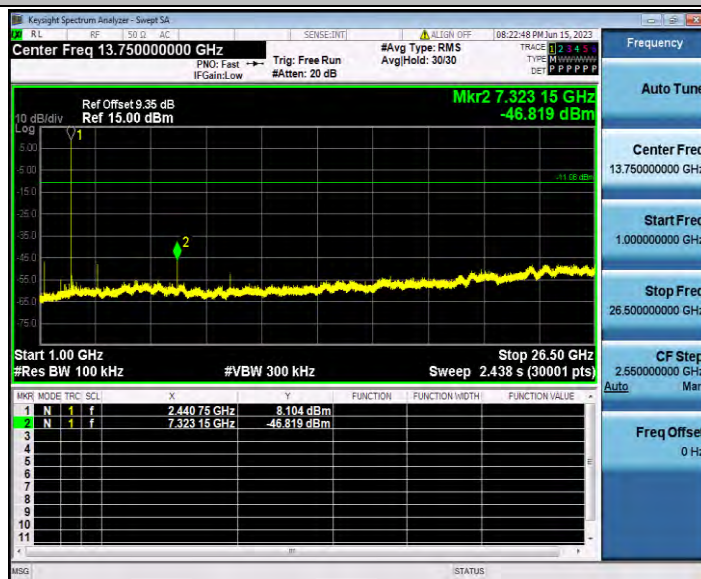
Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	6.94	6.94	---	PASS
			30~1000	6.94	-60.79	≤ -13.06	PASS
			1000~26500	6.94	-41.18	≤ -13.06	PASS
		2441	Reference	8.94	8.94	---	PASS
			30~1000	8.94	-60.49	≤ -11.06	PASS
			1000~26500	8.94	-46.82	≤ -11.06	PASS
		2480	Reference	7.91	7.91	---	PASS
			30~1000	7.91	-60.1	≤ -12.09	PASS
			1000~26500	7.91	-42.68	≤ -12.09	PASS
2DH1	Ant1	2402	Reference	6.97	6.97	---	PASS
			30~1000	6.97	-60.15	≤ -13.03	PASS
			1000~26500	6.97	-43.59	≤ -13.03	PASS
		2441	Reference	8.52	8.52	---	PASS
			30~1000	8.52	-59.44	≤ -11.48	PASS
			1000~26500	8.52	-44.33	≤ -11.48	PASS
		2480	Reference	8.26	8.26	---	PASS
			30~1000	8.26	-59.14	≤ -11.74	PASS
			1000~26500	8.26	-42	≤ -11.74	PASS
3DH1	Ant1	2402	Reference	6.65	6.65	---	PASS
			30~1000	6.65	-61.01	≤ -13.35	PASS
			1000~26500	6.65	-43.48	≤ -13.35	PASS
		2441	Reference	8.36	8.36	---	PASS
			30~1000	8.36	-59.6	≤ -11.64	PASS
			1000~26500	8.36	-43.38	≤ -11.64	PASS
		2480	Reference	8.09	8.09	---	PASS
			30~1000	8.09	-59.98	≤ -11.91	PASS
			1000~26500	8.09	-42.12	≤ -11.91	PASS

Test Graphs





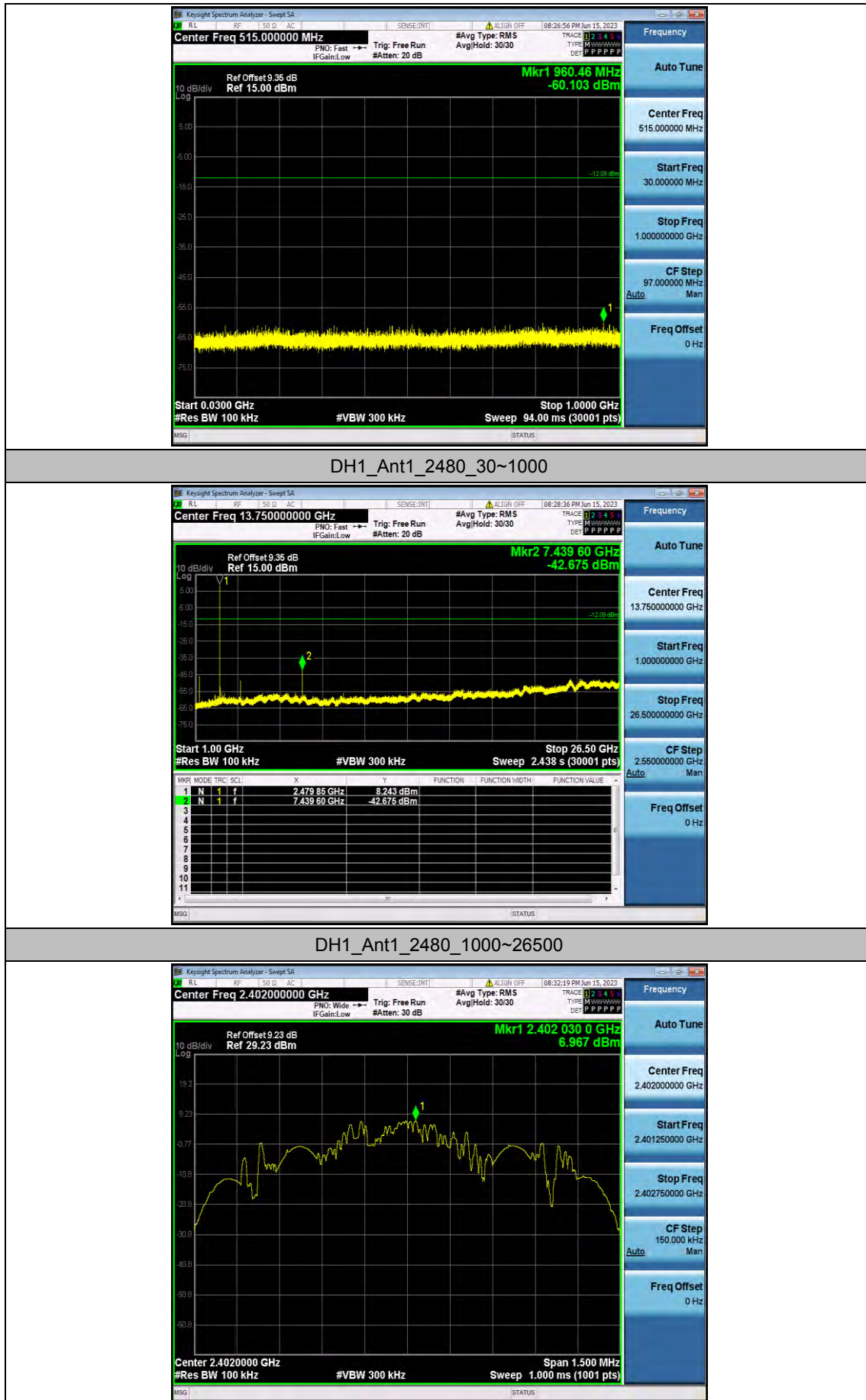
DH1_Ant1_2441_30~1000



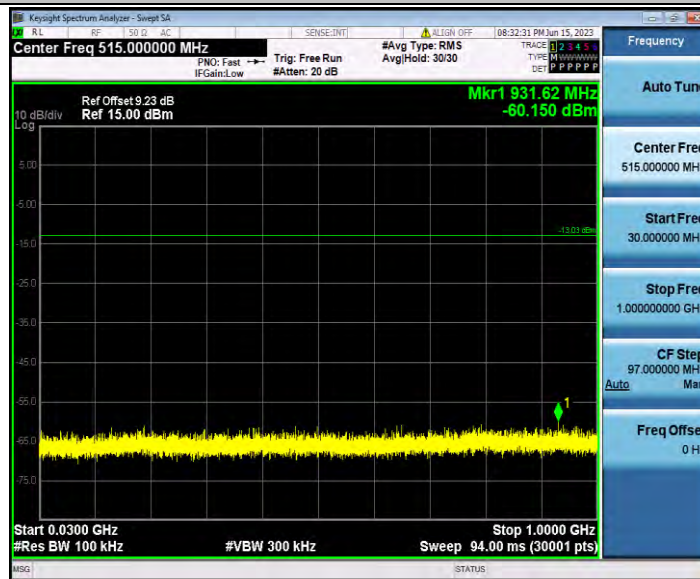
DH1_Ant1_2441_1000~26500



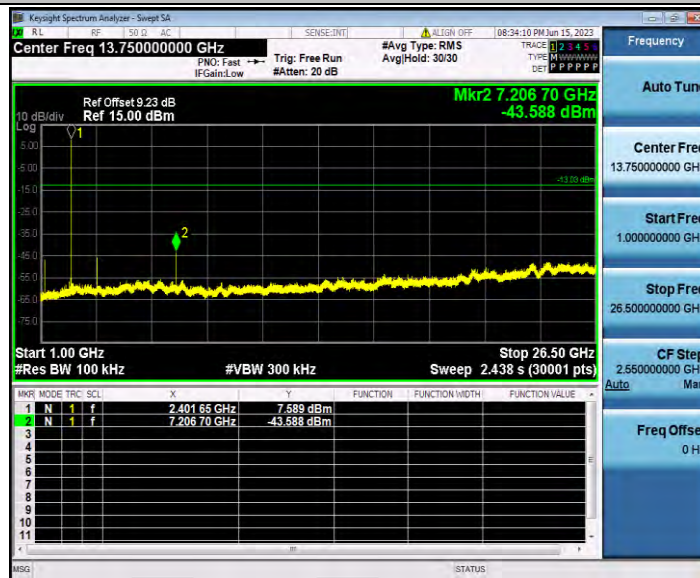
DH1_Ant1_2480_0~Reference



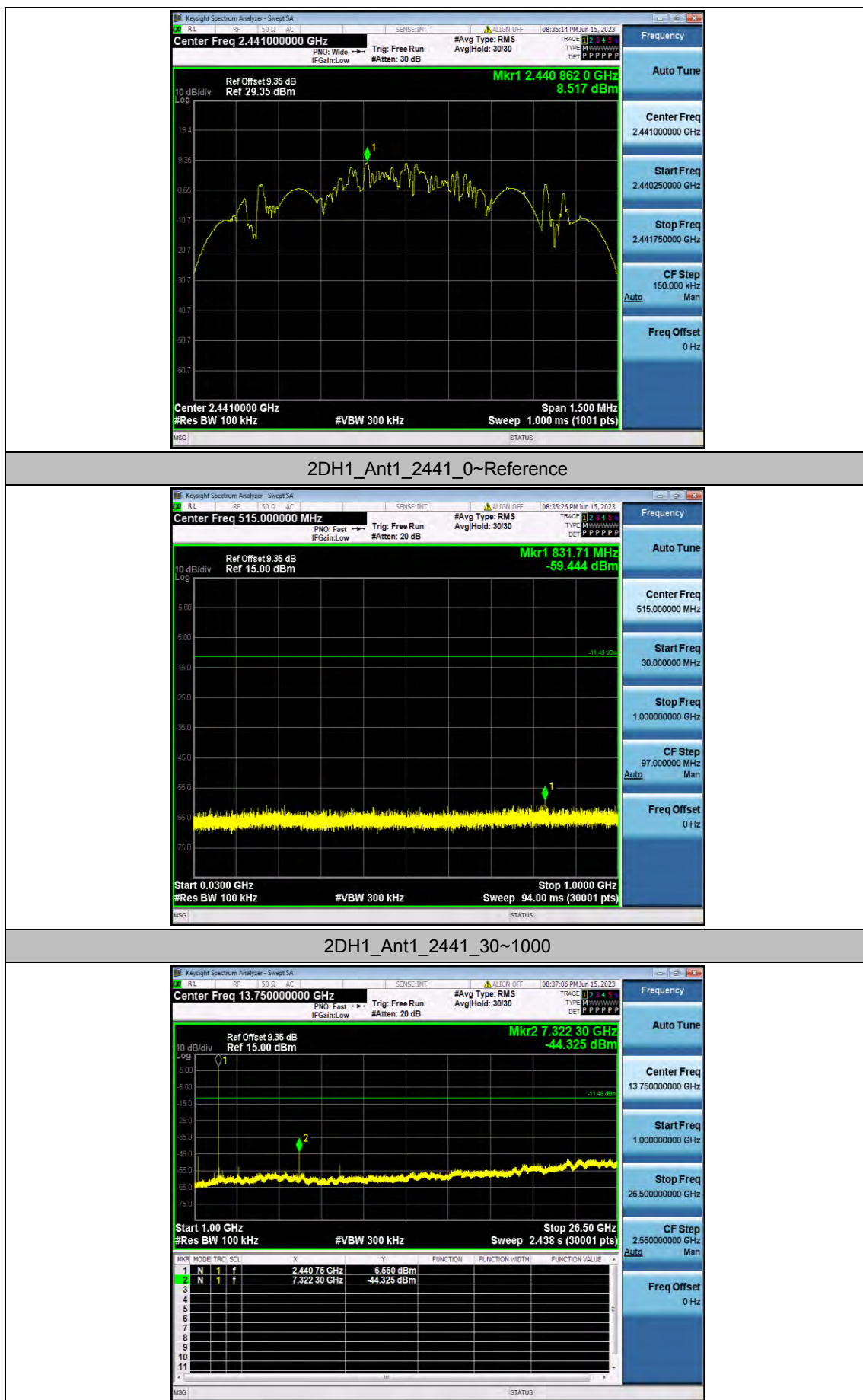
2DH1_Ant1_2402_0~Reference



2DH1_Ant1_2402_30~1000



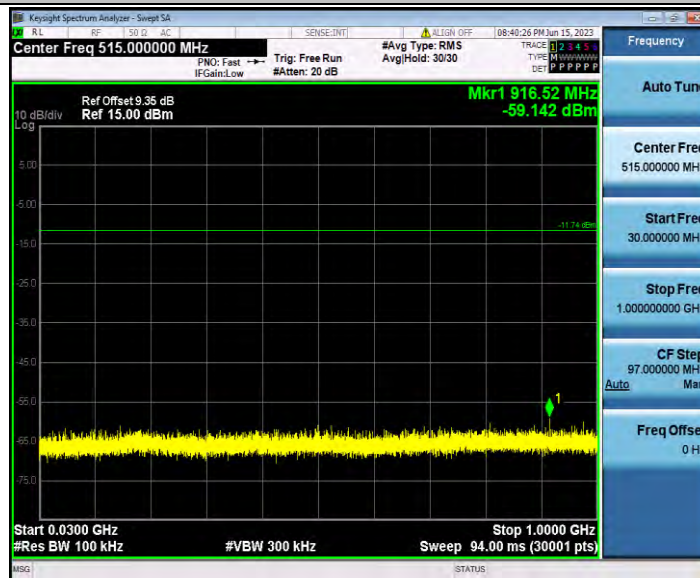
2DH1_Ant1_2402_1000~26500



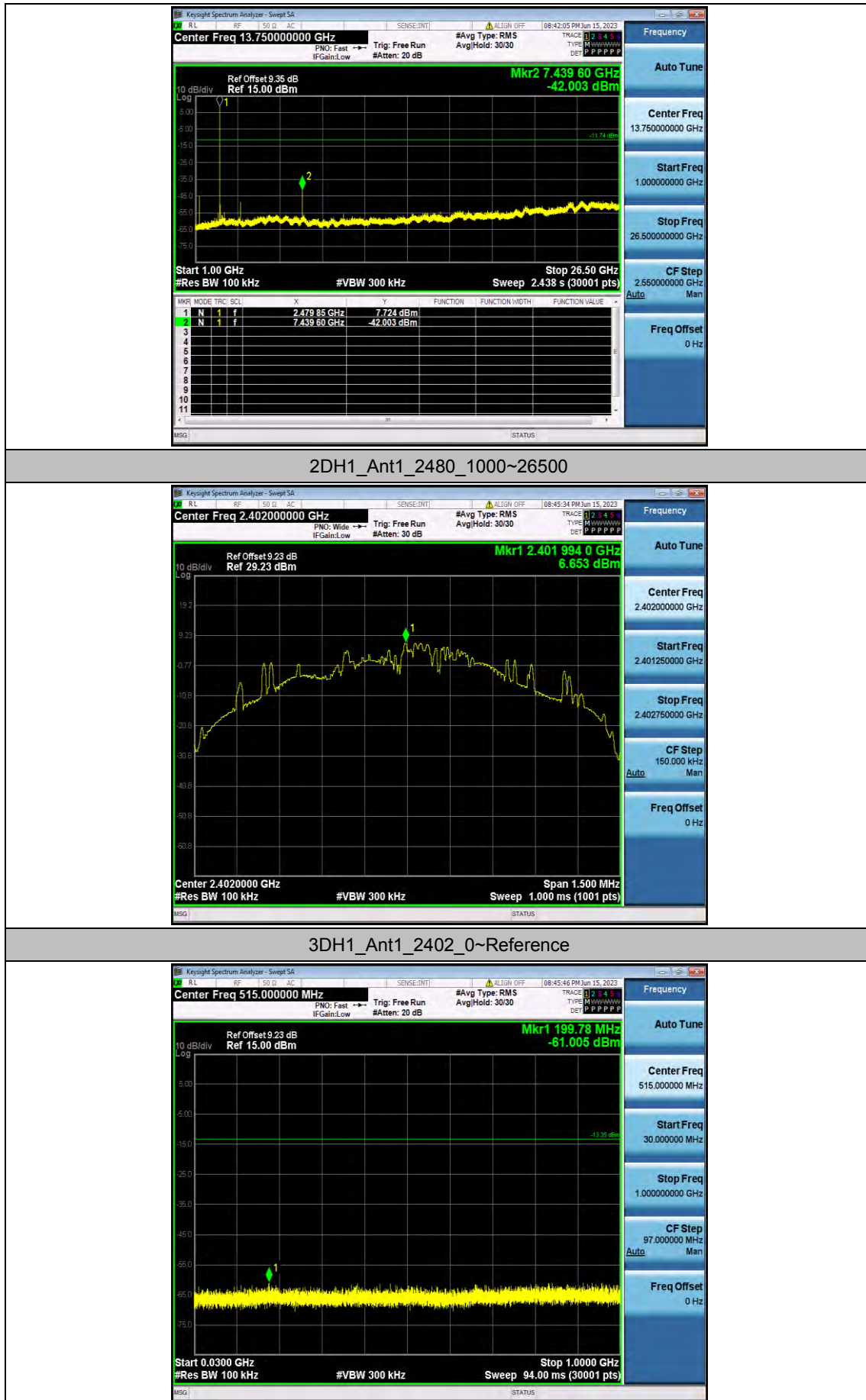
2DH1_Ant1_2441_1000~26500

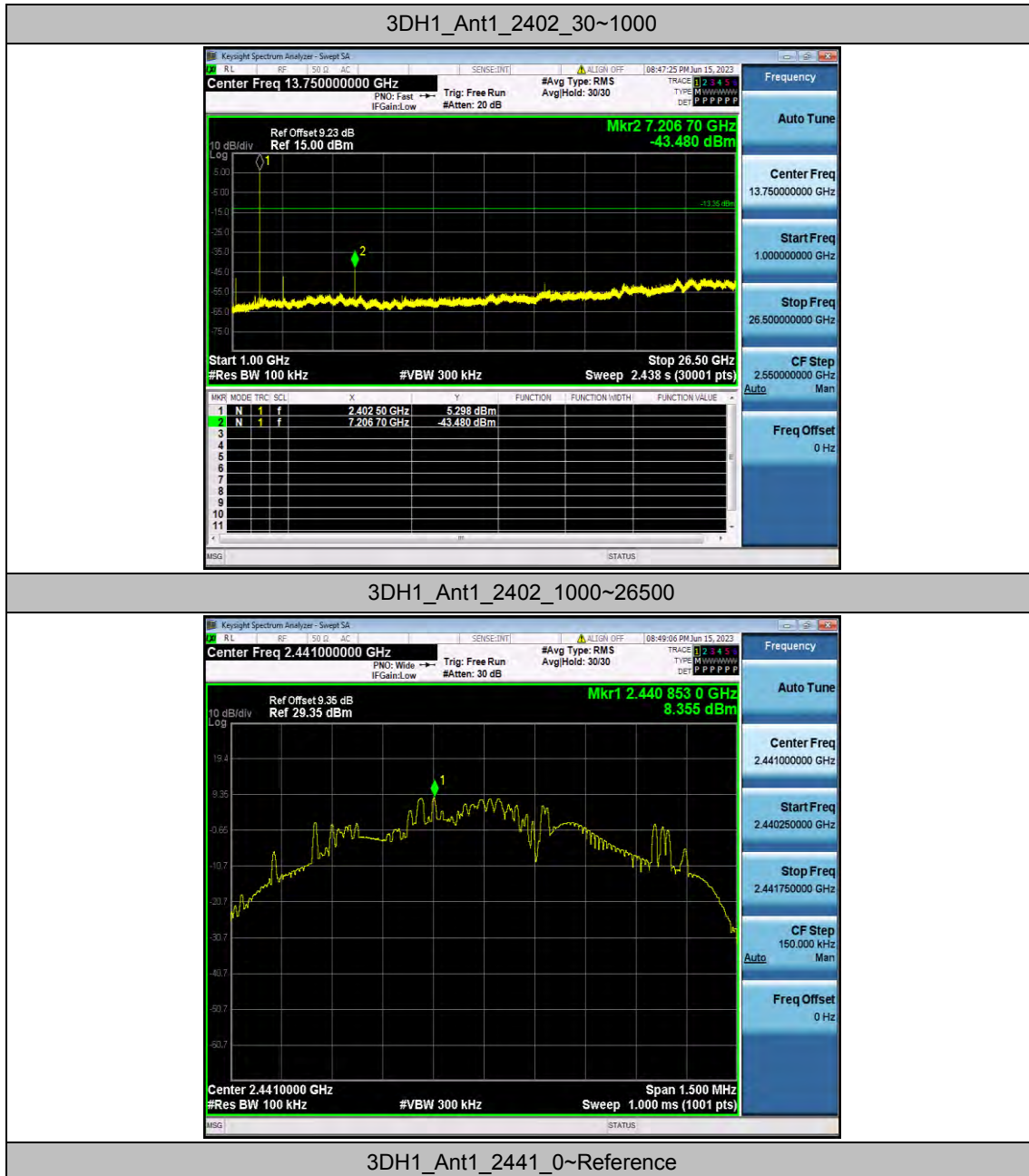


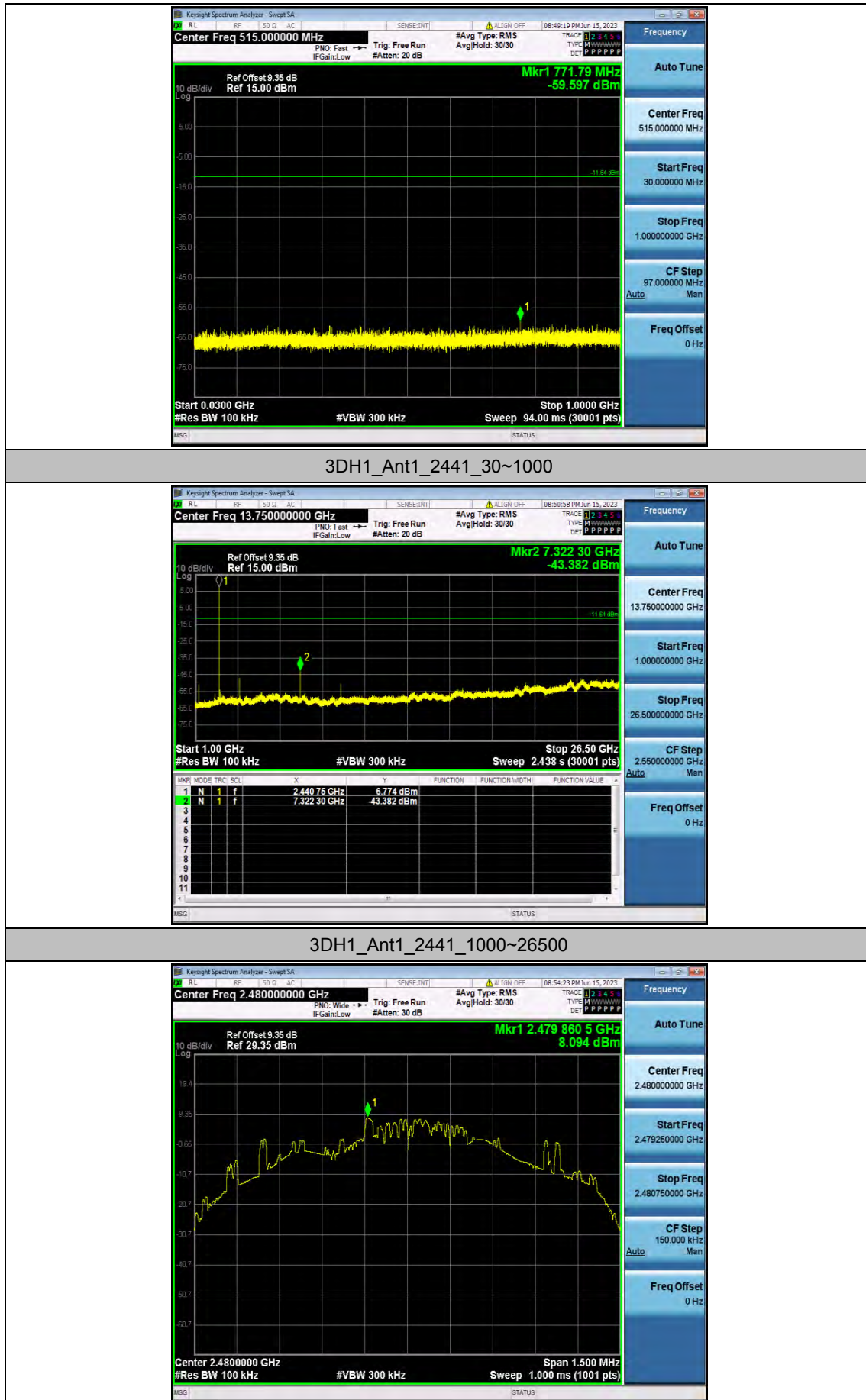
2DH1_Ant1_2480_0~Reference

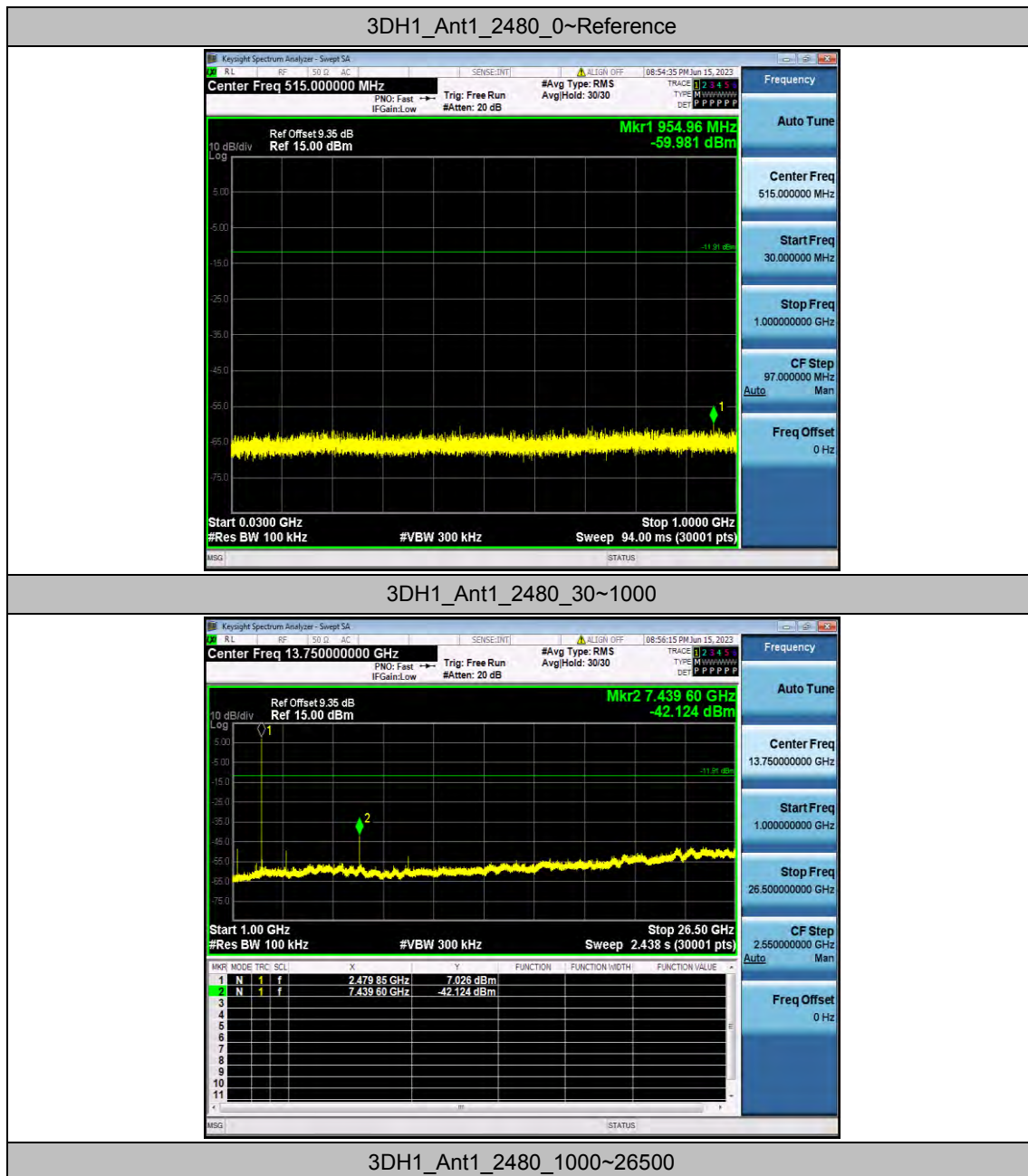


2DH1_Ant1_2480_30~1000









Appendix A.9: Emissions in Restricted Bands

Test Result

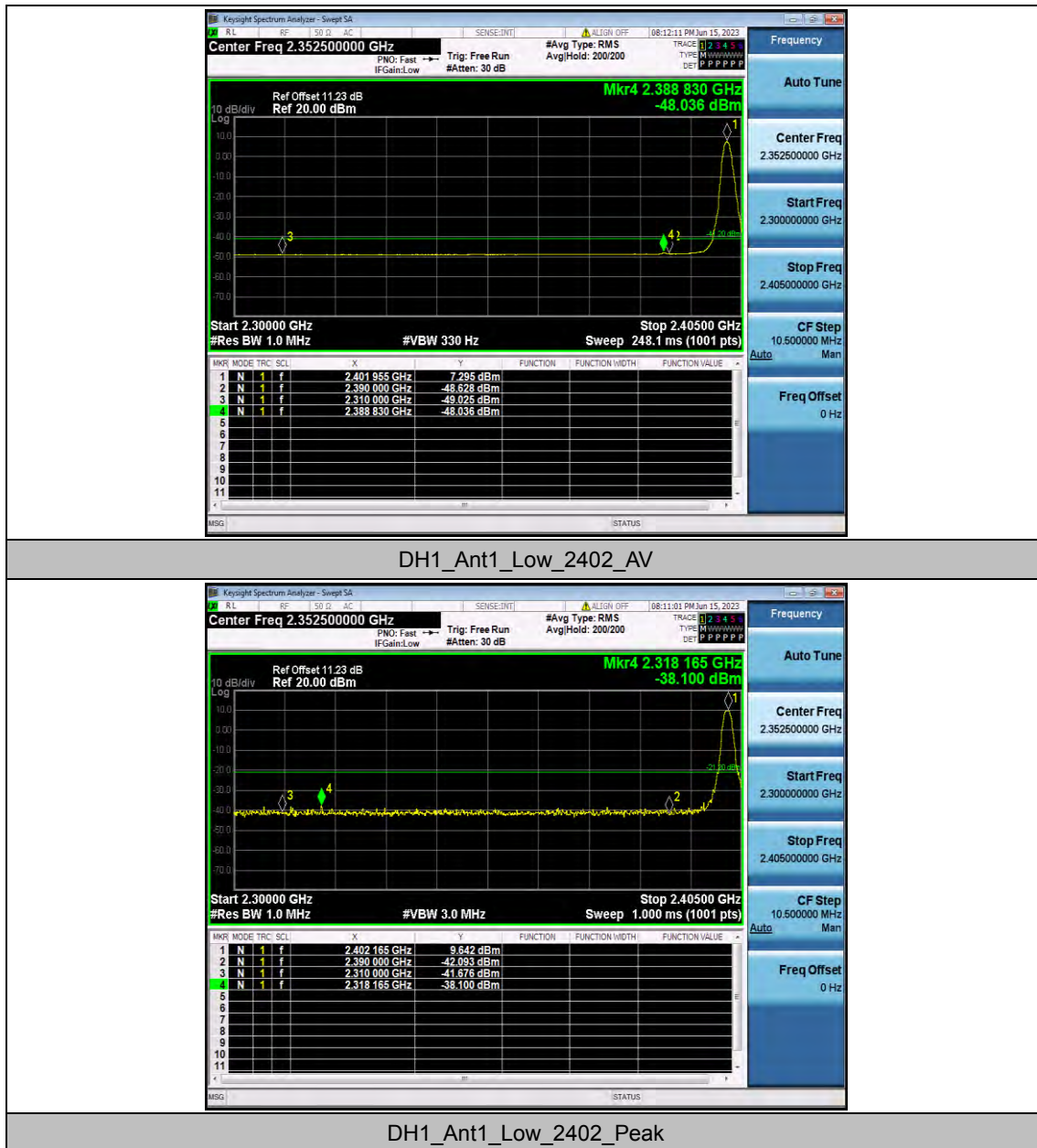
TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH1	Ant1	Low	2402	AV	2310.000	-49.03	≤-41.20	46.17	≤54	PASS
				AV	2388.830	-48.04	≤-41.20	47.16	≤54	PASS
				AV	2390.000	-48.63	≤-41.20	46.57	≤54	PASS
				Peak	2310.000	-41.68	≤-21.20	53.52	≤74	PASS
				Peak	2318.165	-38.1	≤-21.20	57.10	≤74	PASS
				Peak	2390.000	-42.09	≤-21.20	53.11	≤74	PASS
		High	2480	AV	2483.500	-41.92	≤-41.20	53.28	≤54	PASS
				AV	2483.520	-41.92	≤-41.20	53.28	≤54	PASS
				AV	2500.000	-48.38	≤-41.20	46.82	≤54	PASS
				Peak	2483.500	-34.36	≤-21.20	60.84	≤74	PASS
				Peak	2483.600	-31.8	≤-21.20	63.40	≤74	PASS
				Peak	2500.000	-39.6	≤-21.20	55.60	≤74	PASS
2DH1	Ant1	Low	2402	AV	2310.000	-49.13	≤-41.20	46.07	≤54	PASS
				AV	2388.935	-48.33	≤-41.20	46.87	≤54	PASS
				AV	2390.000	-48.66	≤-41.20	46.54	≤54	PASS
				Peak	2310.000	-41.65	≤-21.20	53.55	≤74	PASS
				Peak	2388.410	-36.61	≤-21.20	58.59	≤74	PASS
				Peak	2390.000	-41.69	≤-21.20	53.51	≤74	PASS
		High	2480	AV	2483.500	-43.73	≤-41.20	51.47	≤54	PASS
				AV	2483.520	-43.73	≤-41.20	51.47	≤54	PASS
				AV	2500.000	-48.39	≤-41.20	46.81	≤54	PASS
				Peak	2483.500	-34.81	≤-21.20	60.39	≤74	PASS
				Peak	2483.600	-34.31	≤-21.20	60.89	≤74	PASS
				Peak	2500.000	-40.16	≤-21.20	55.04	≤74	PASS
3DH1	Ant1	Low	2402	AV	2310.000	-49.03	≤-41.20	46.17	≤54	PASS
				AV	2388.725	-48.35	≤-41.20	46.85	≤54	PASS
				AV	2390.000	-48.64	≤-41.20	46.56	≤54	PASS
				Peak	2310.000	-41.5	≤-21.20	53.70	≤74	PASS
				Peak	2314.910	-38.81	≤-21.20	56.39	≤74	PASS
				Peak	2390.000	-39.99	≤-21.20	55.21	≤74	PASS
		High	2480	AV	2483.500	-43.91	≤-41.20	51.29	≤54	PASS
				AV	2483.520	-43.91	≤-41.20	51.29	≤54	PASS
				AV	2500.000	-48.37	≤-41.20	46.83	≤54	PASS
				Peak	2483.500	-35.05	≤-21.20	60.15	≤74	PASS
				Peak	2483.520	-35.05	≤-21.20	60.15	≤74	PASS

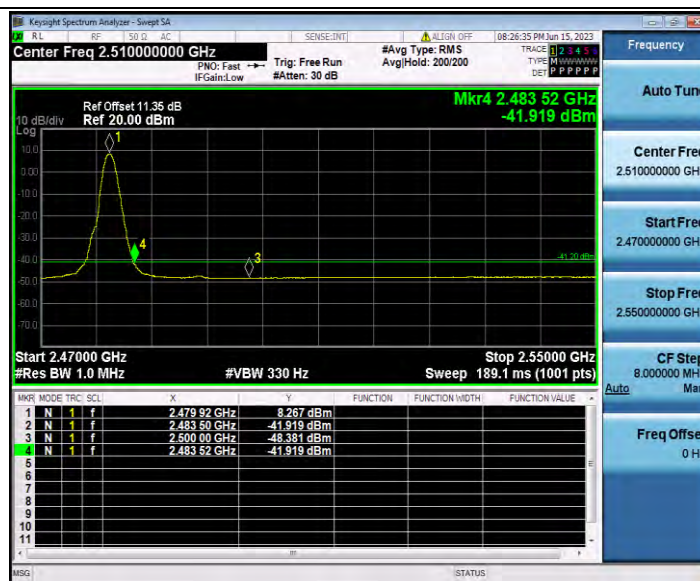
				Peak	2500.000	-40.36	≤-21.20	54.84	≤74	PASS
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Note:

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

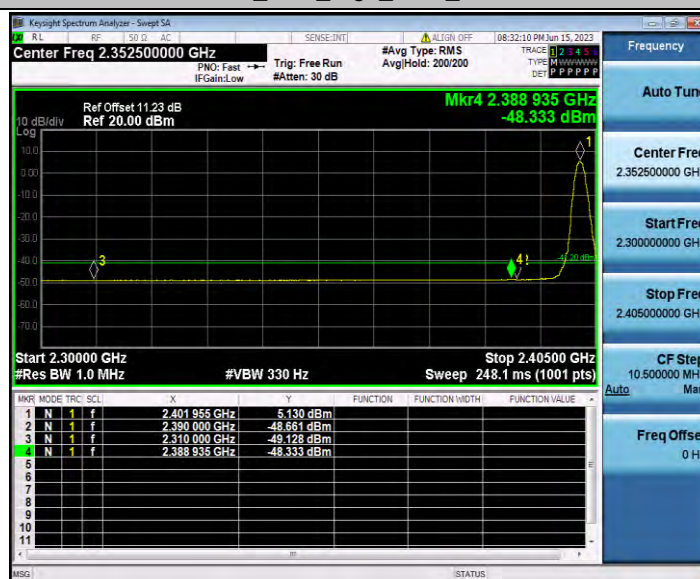




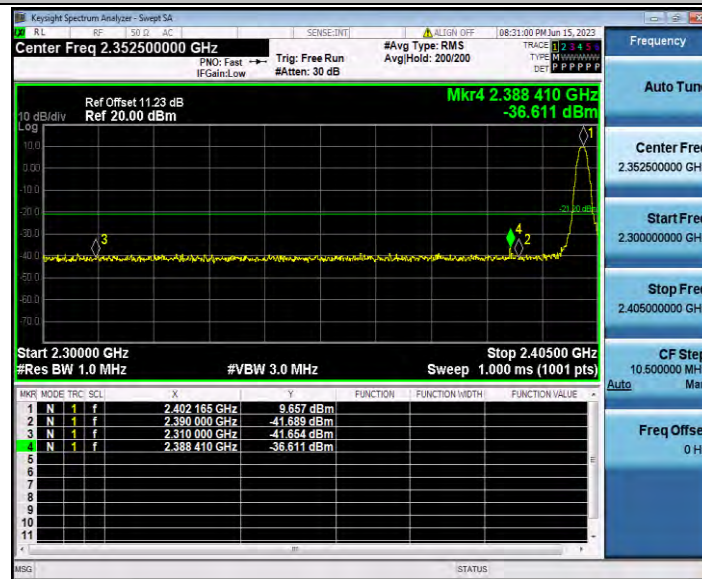
DH1_Ant1_High_2480_AV



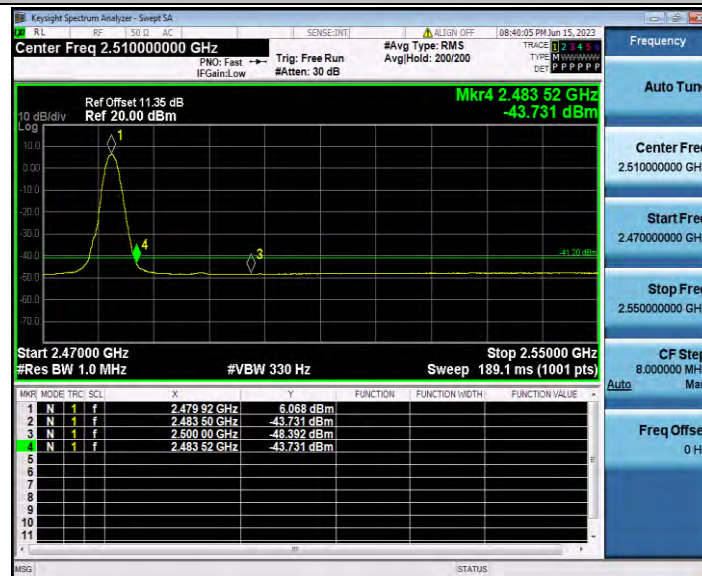
DH1_Ant1_High_2480_Peak



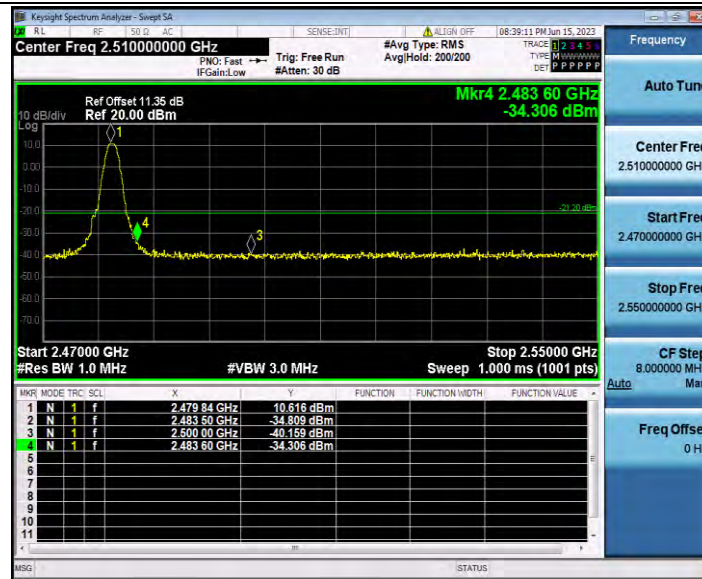
2DH1_Ant1_Low_2402_AV



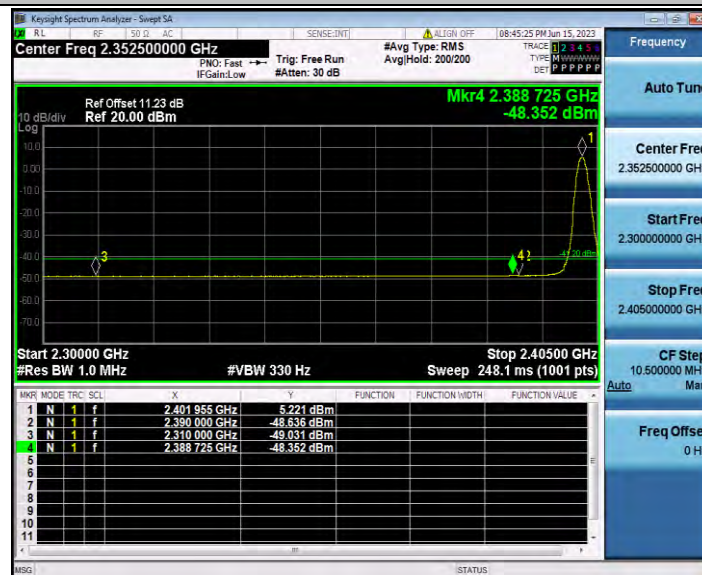
2DH1_Ant1_Low_2402_Peak



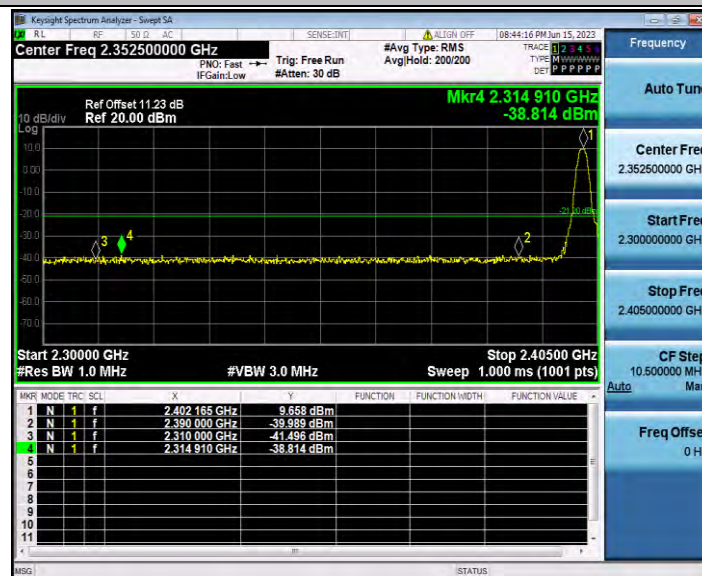
2DH1_Ant1_High_2480_AV



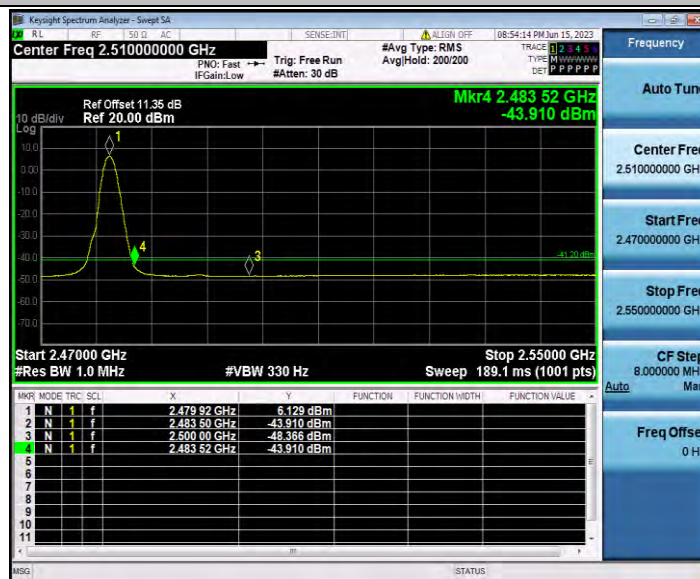
2DH1_Ant1_High_2480_Peak



3DH1_Ant1_Low_2402_AV



3DH1_Ant1_Low_2402_Peak



3DH1_Ant1_High_2480_AV



3DH1_Ant1_High_2480_Peak