

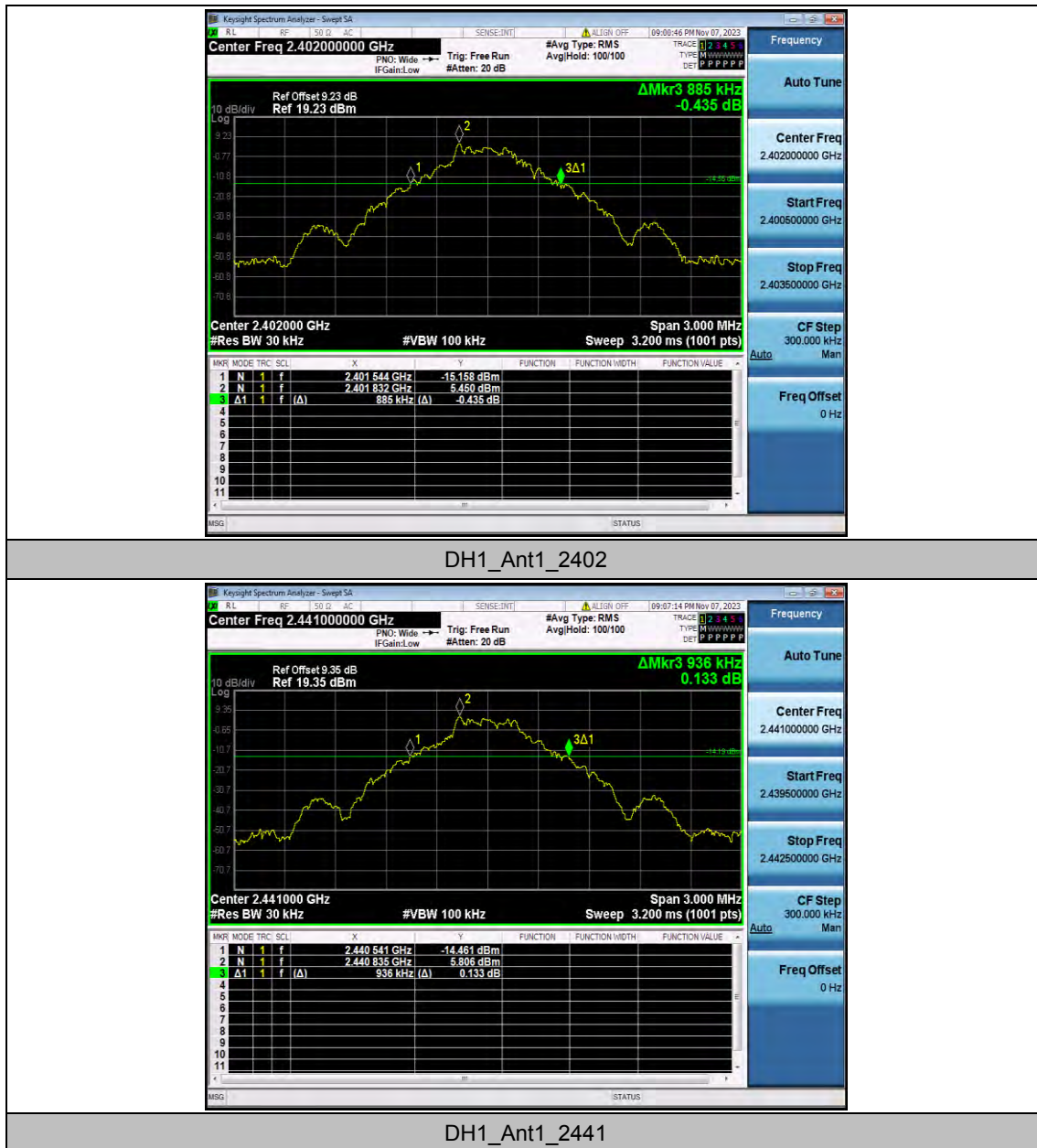
Case No. : <u>GTS20230628002-1-9</u>	
Ambient Condition: <u>23</u> °C, <u>49</u> %RH, Atmos100.1Kpa,	
Test Date: <u>2023.11.3</u>	Test Engineer: <u>Evan ouyang</u>

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	0.885	2401.544	2402.429	---	---
		2441	0.936	2440.541	2441.477	---	---
		2480	1.023	2479.463	2480.486	---	---
2DH1	Ant1	2402	1.269	2401.358	2402.627	---	---
		2441	1.269	2440.361	2441.630	---	---
		2480	1.257	2479.358	2480.615	---	---
3DH1	Ant1	2402	1.257	2401.370	2402.627	---	---
		2441	1.257	2440.367	2441.624	---	---
		2480	1.266	2479.355	2480.621	---	---

Test Graphs





2DH1_Ant1_2441



2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



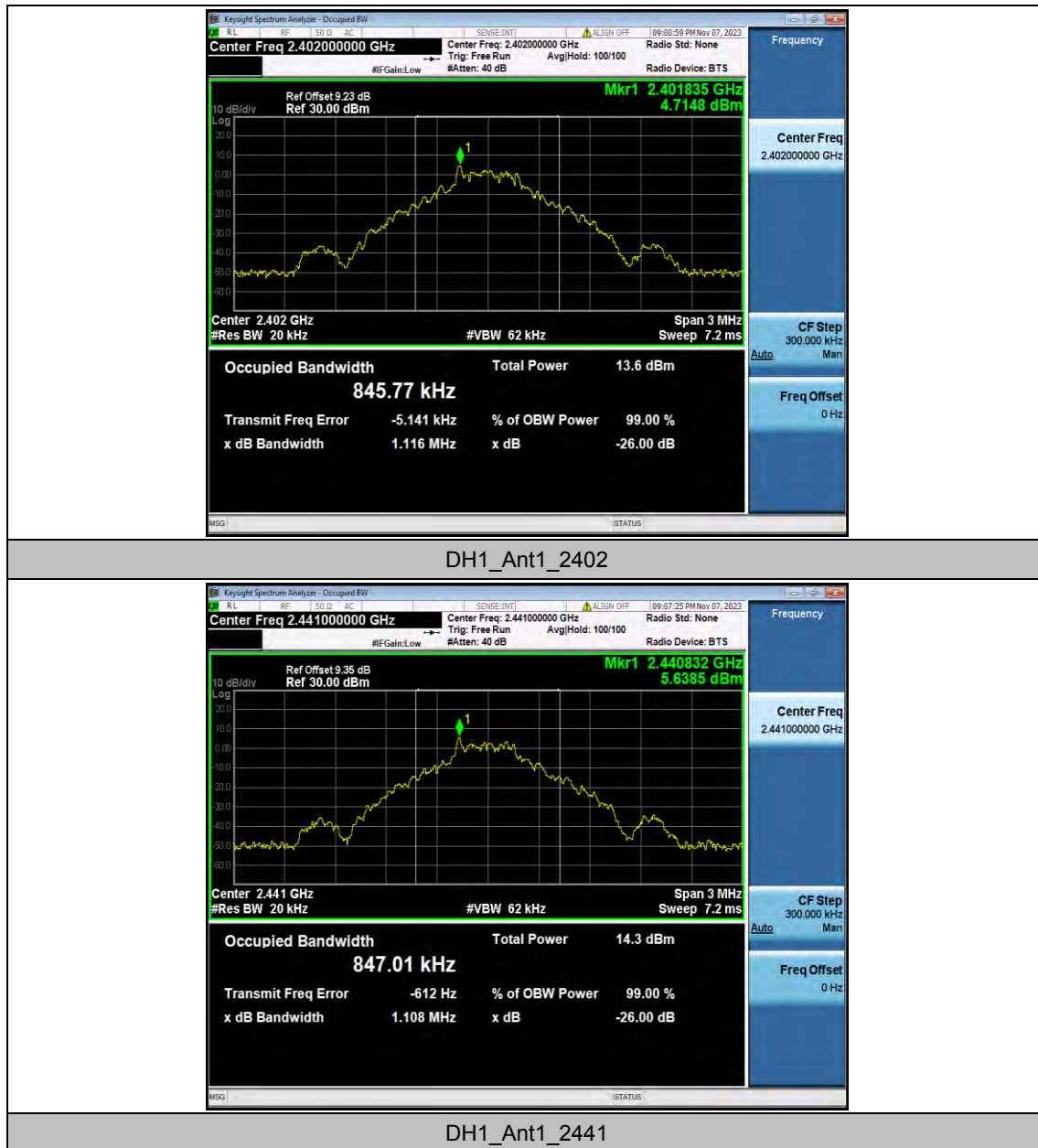
3DH1_Ant1_2480

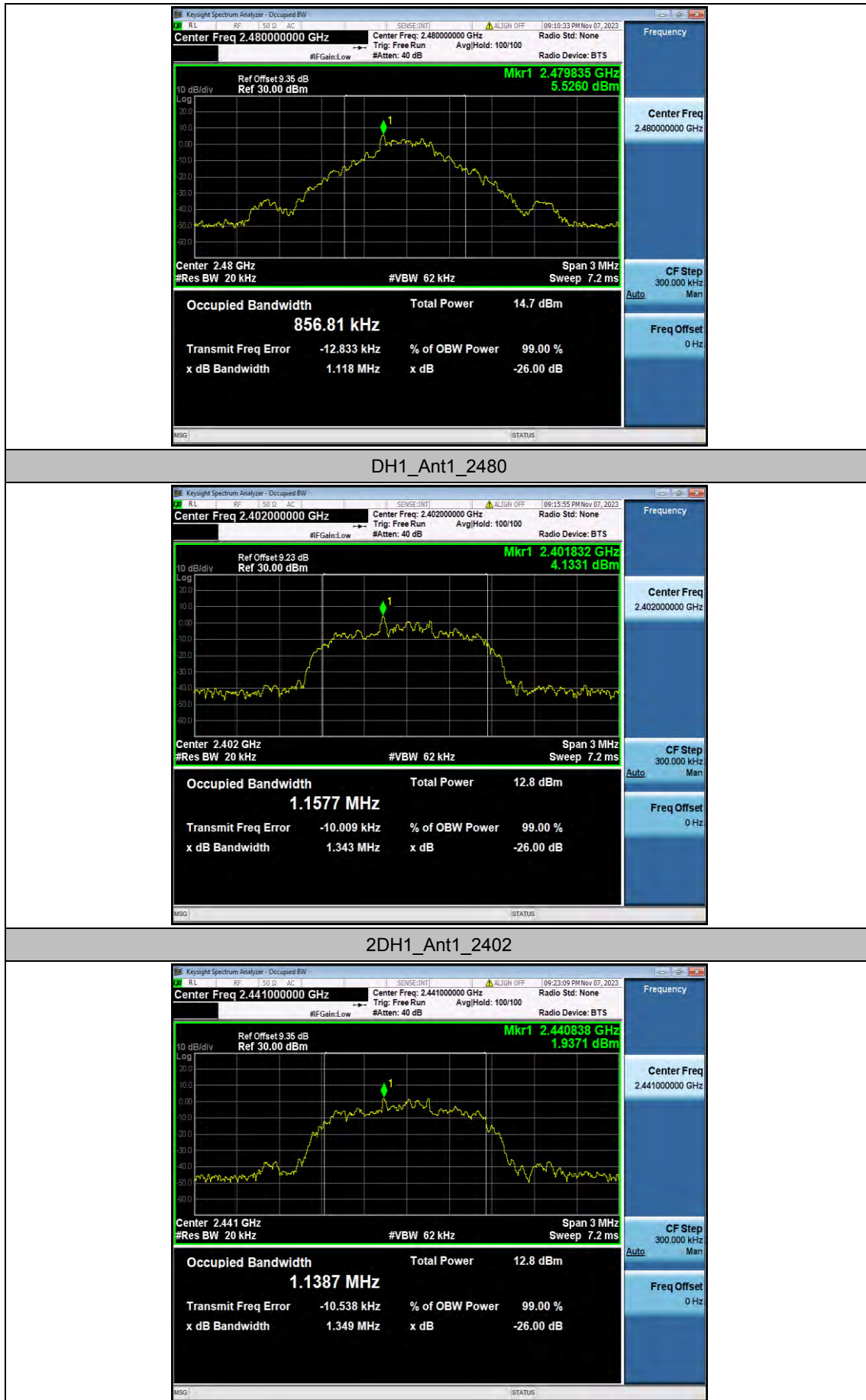
Appendix A.2: Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.84577	2401.572	2402.418	---	---
		2441	0.84701	2440.576	2441.423	---	---
		2480	0.85681	2479.559	2480.416	---	---
2DH1	Ant1	2402	1.1577	2401.411	2402.569	---	---
		2441	1.1387	2440.420	2441.559	---	---
		2480	1.1593	2479.405	2480.565	---	---
3DH1	Ant1	2402	1.1513	2401.428	2402.579	---	---
		2441	1.1526	2440.428	2441.580	---	---
		2480	1.1592	2479.424	2480.583	---	---

Test Graphs

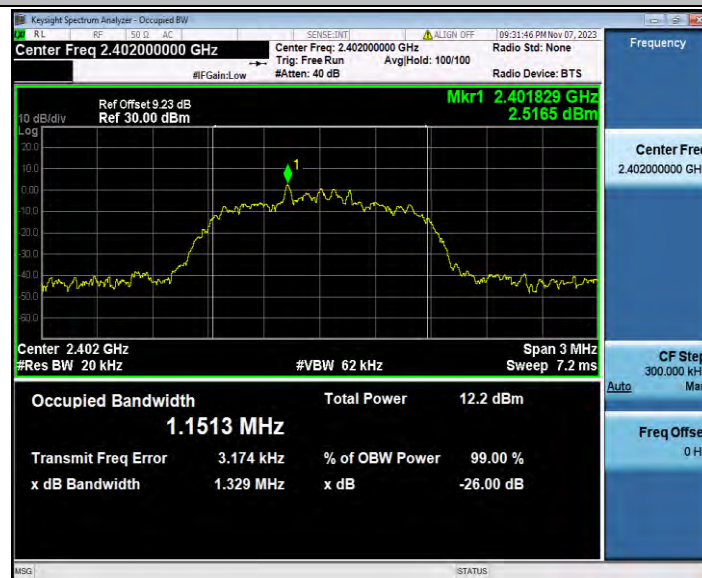




2DH1_Ant1_2441



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	7.84	≤20.97	PASS
		2441	8.38	≤20.97	PASS
		2480	8.82	≤20.97	PASS
2DH1	Ant1	2402	7.28	≤20.97	PASS
		2441	7.86	≤20.97	PASS
		2480	7.95	≤20.97	PASS
3DH1	Ant1	2402	7.48	≤20.97	PASS
		2441	8.27	≤20.97	PASS
		2480	8.27	≤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	1.314	≥ 0.682	PASS
		Hop_2441	0.99	≥ 0.682	PASS
		Hop_2480	0.832	≥ 0.682	PASS
2DH1	Ant1	Hop_2402	1.002	≥ 0.846	PASS
		Hop_2441	1.004	≥ 0.846	PASS
		Hop_2480	1.164	≥ 0.846	PASS
3DH1	Ant1	Hop_2402	1.174	≥ 0.844	PASS
		Hop_2441	1.002	≥ 0.844	PASS
		Hop_2480	1.154	≥ 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



3DH1_Ant1_Hop_2441



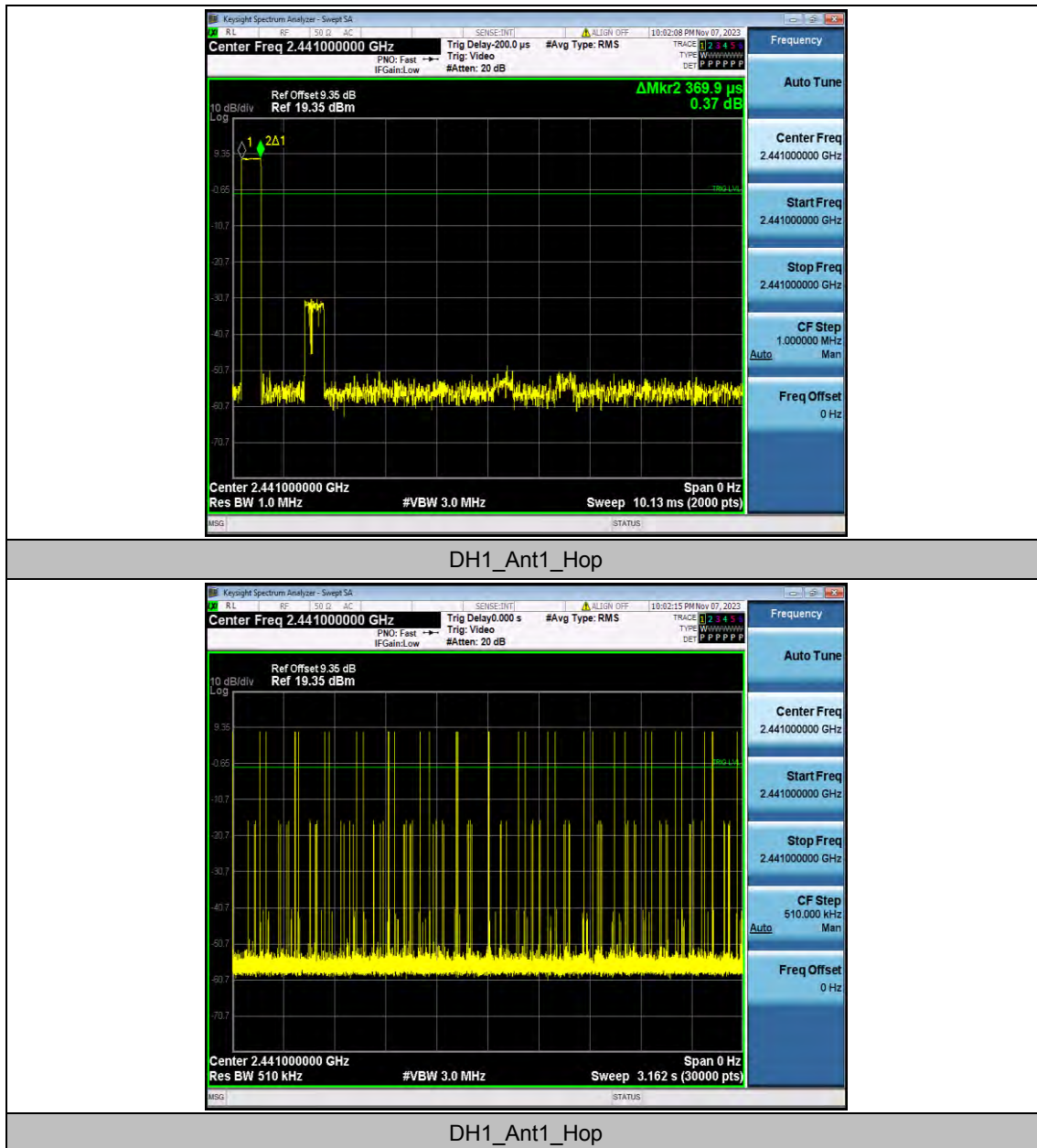
3DH1_Ant1_Hop_2480

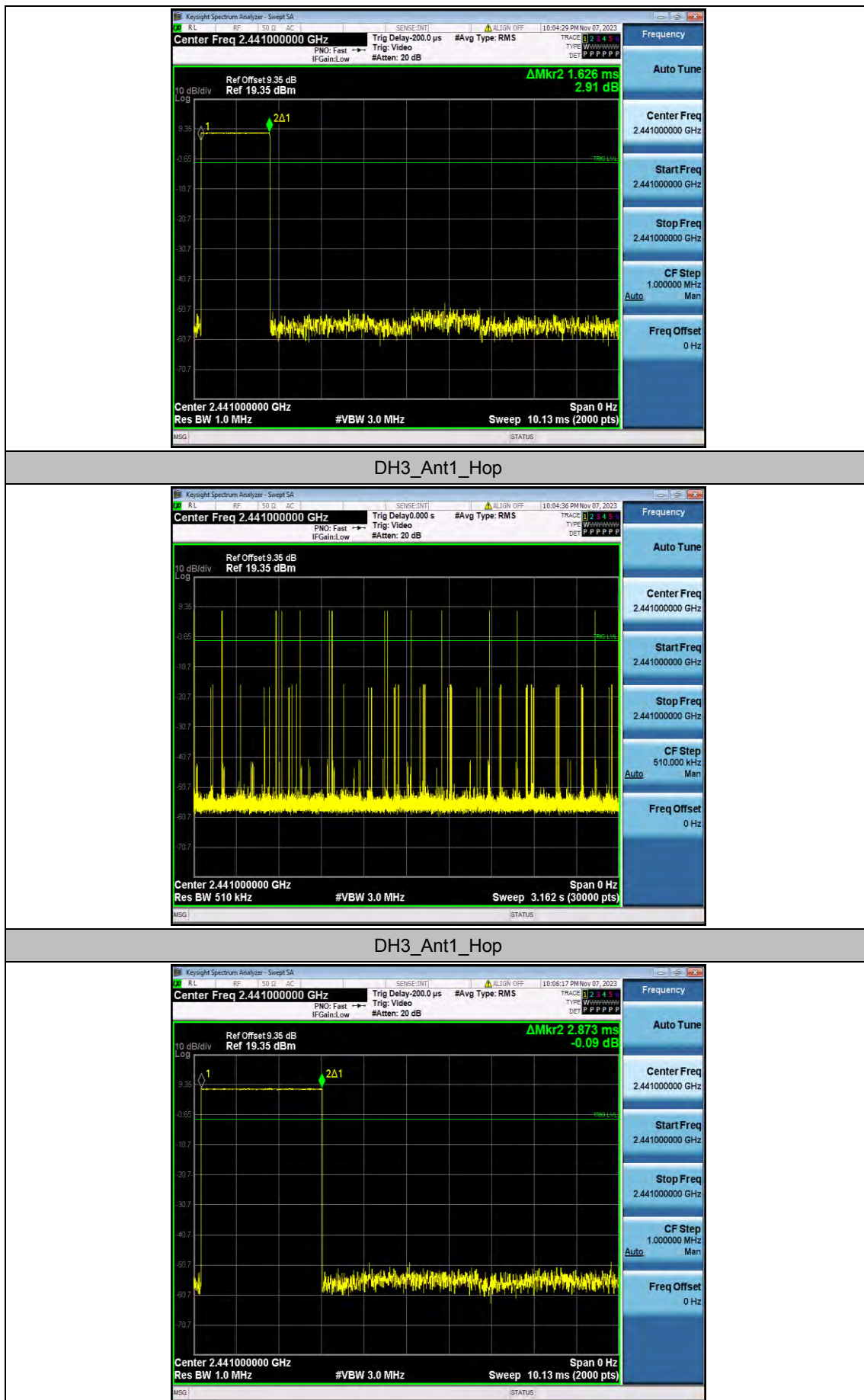
Appendix A.5: Time of occupancy

Test Result

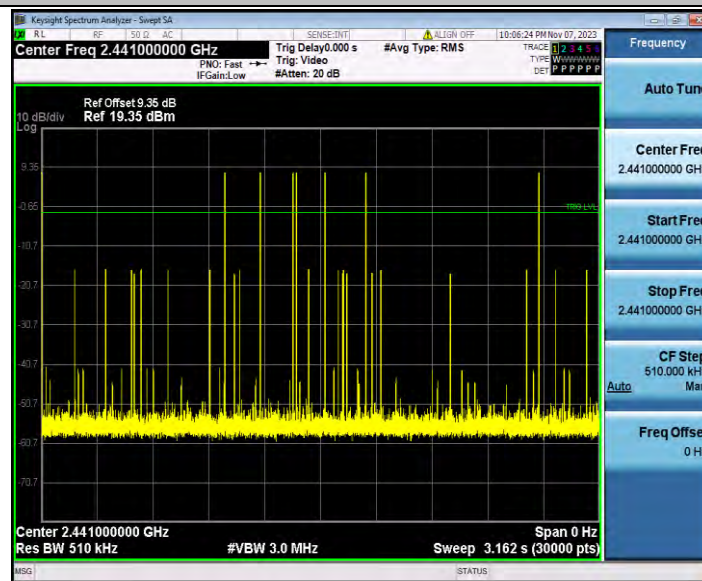
Test Mode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.37	320	0.118	≤0.4	PASS
DH3	Ant1	Hop	1.63	150	0.244	≤0.4	PASS
DH5	Ant1	Hop	2.87	80	0.23	≤0.4	PASS
2DH1	Ant1	Hop	0.37	330	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.63	160	0.26	≤0.4	PASS
2DH5	Ant1	Hop	2.88	110	0.317	≤0.4	PASS
3DH1	Ant1	Hop	0.37	330	0.122	≤0.4	PASS
3DH3	Ant1	Hop	1.63	160	0.26	≤0.4	PASS
3DH5	Ant1	Hop	2.88	80	0.23	≤0.4	PASS

Test Graphs

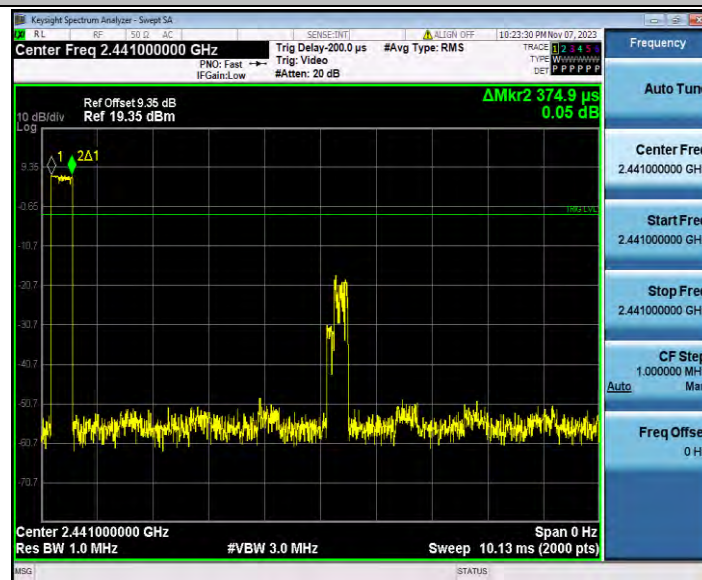




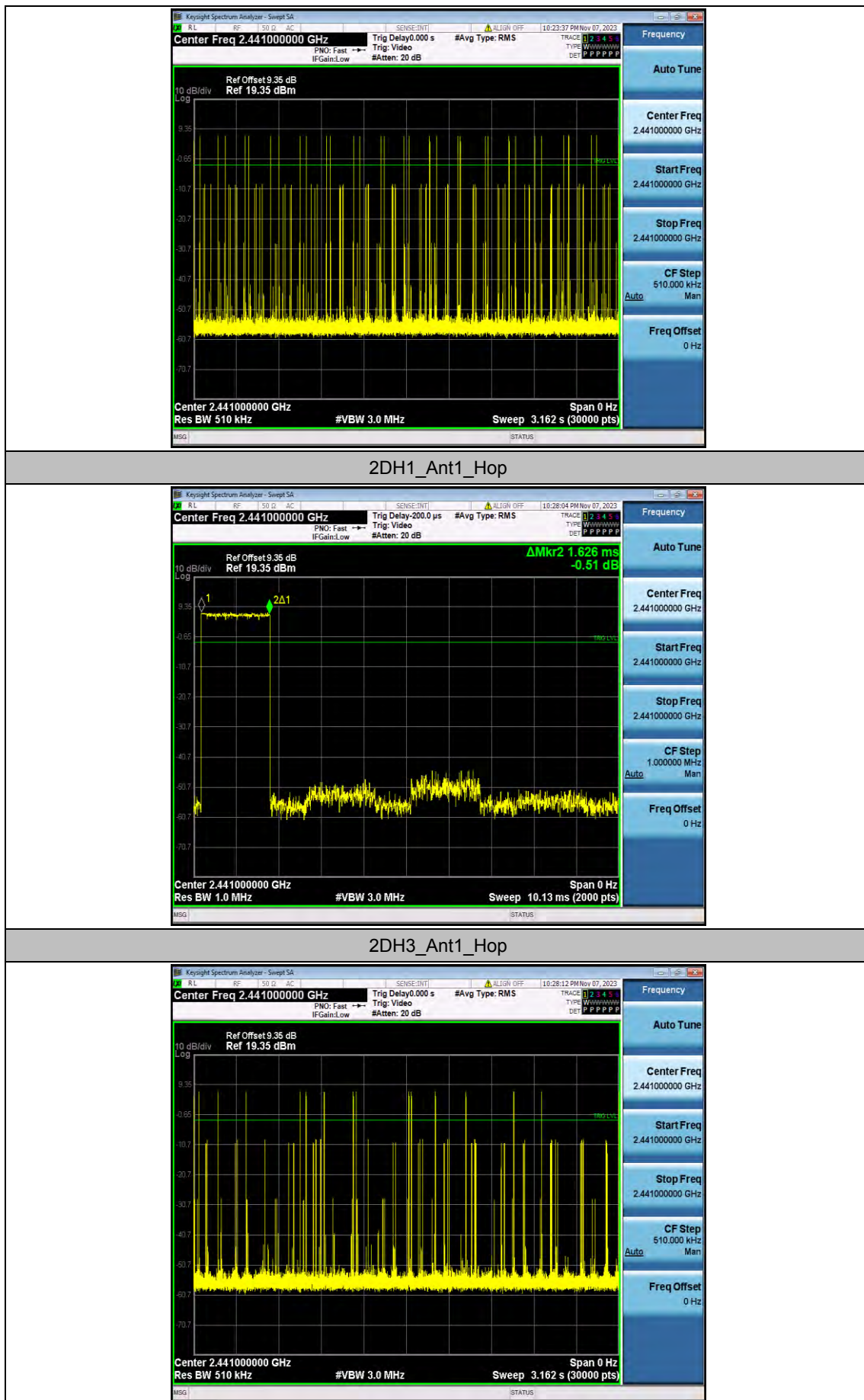
DH5_Ant1_Hop



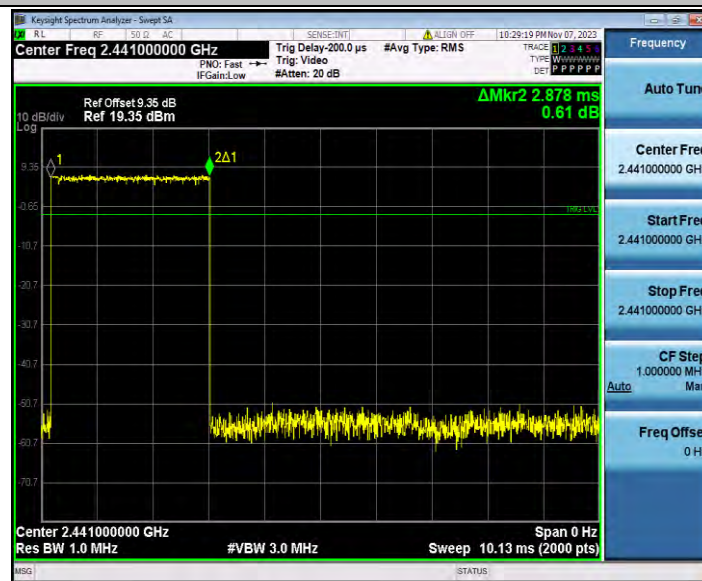
DH5_Ant1_Hop



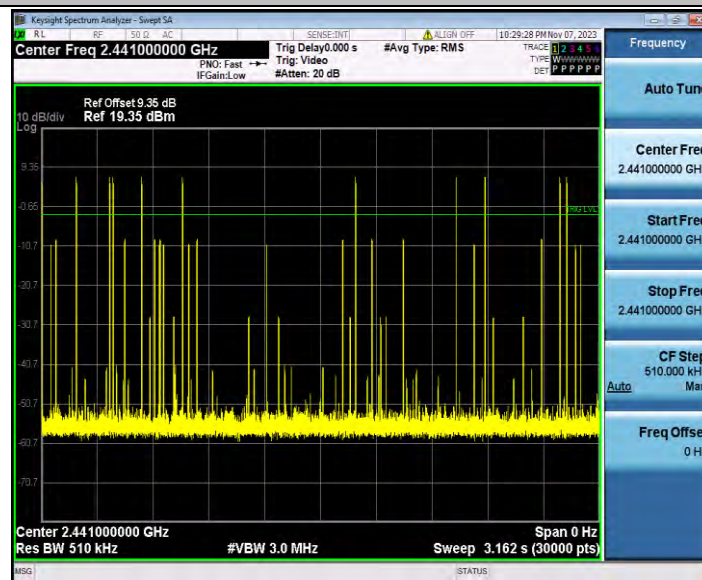
2DH1_Ant1_Hop



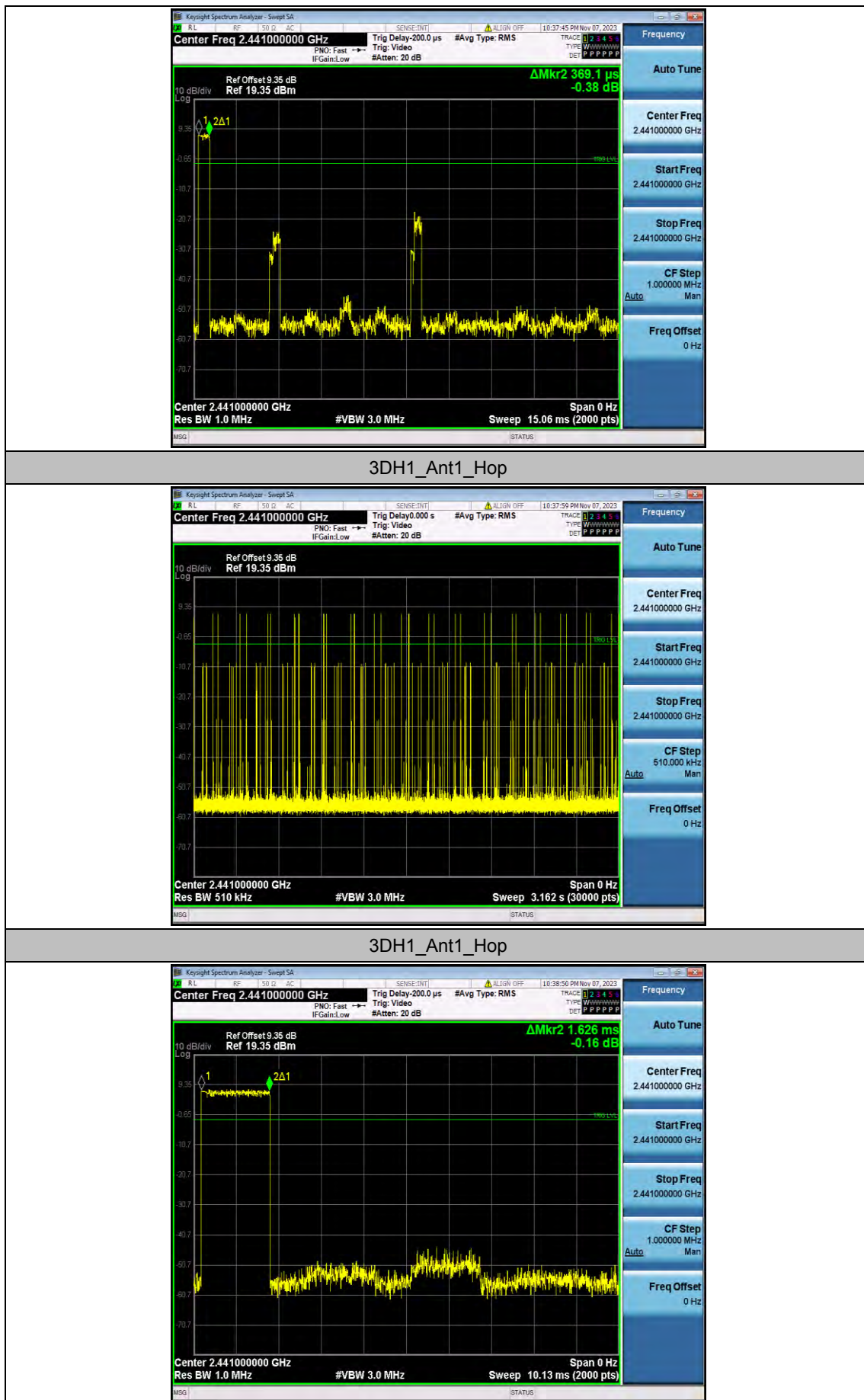
2DH3_Ant1_Hop



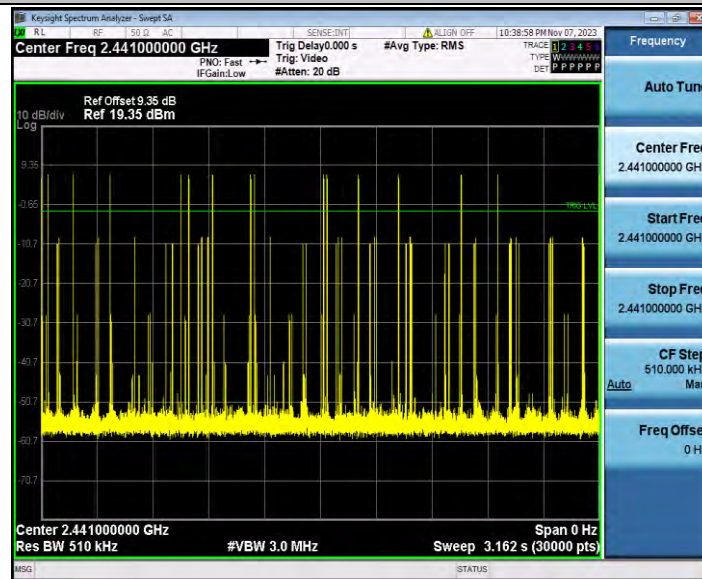
2DH5_Ant1_Hop



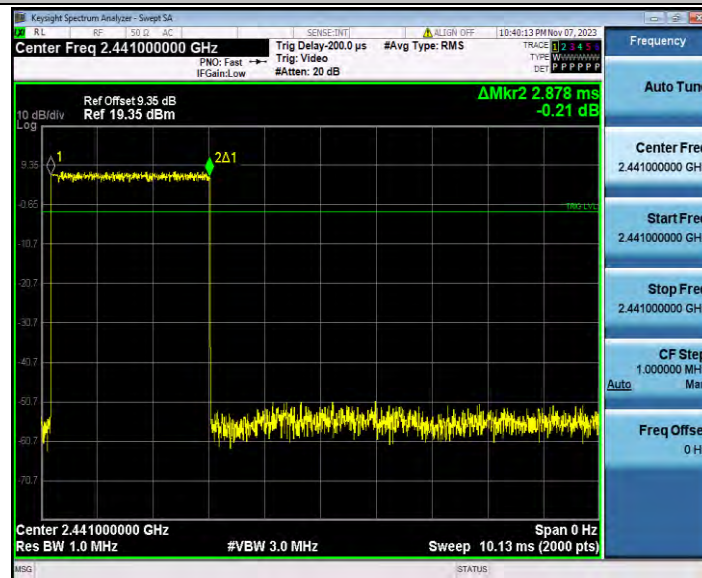
2DH5_Ant1_Hop



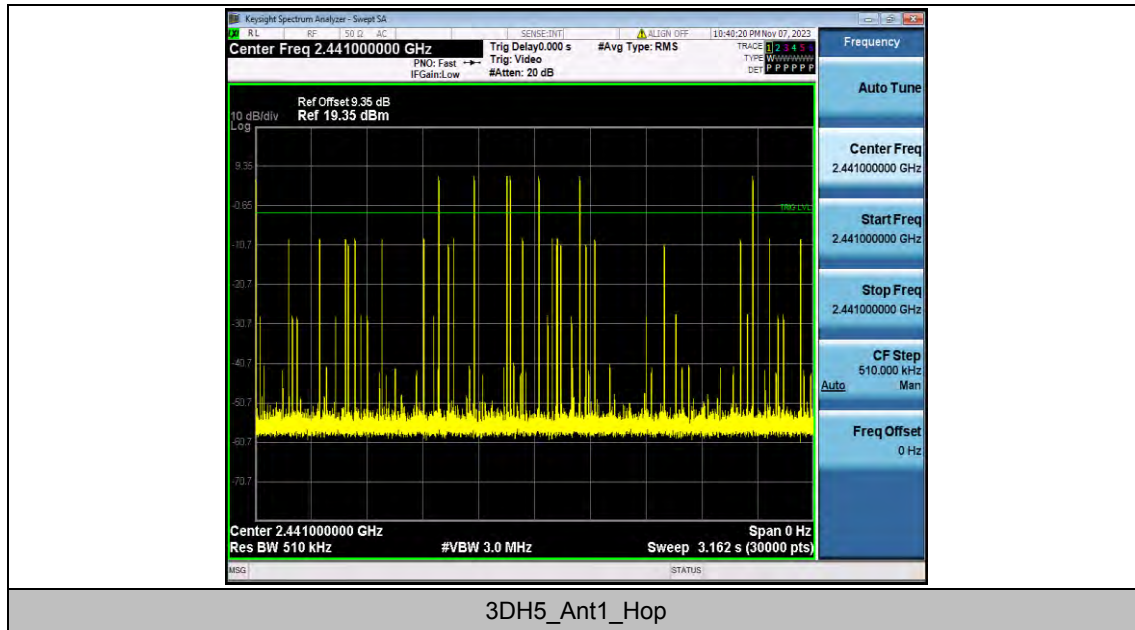
3DH3_Ant1_Hop



3DH3_Ant1_Hop



3DH5_Ant1_Hop



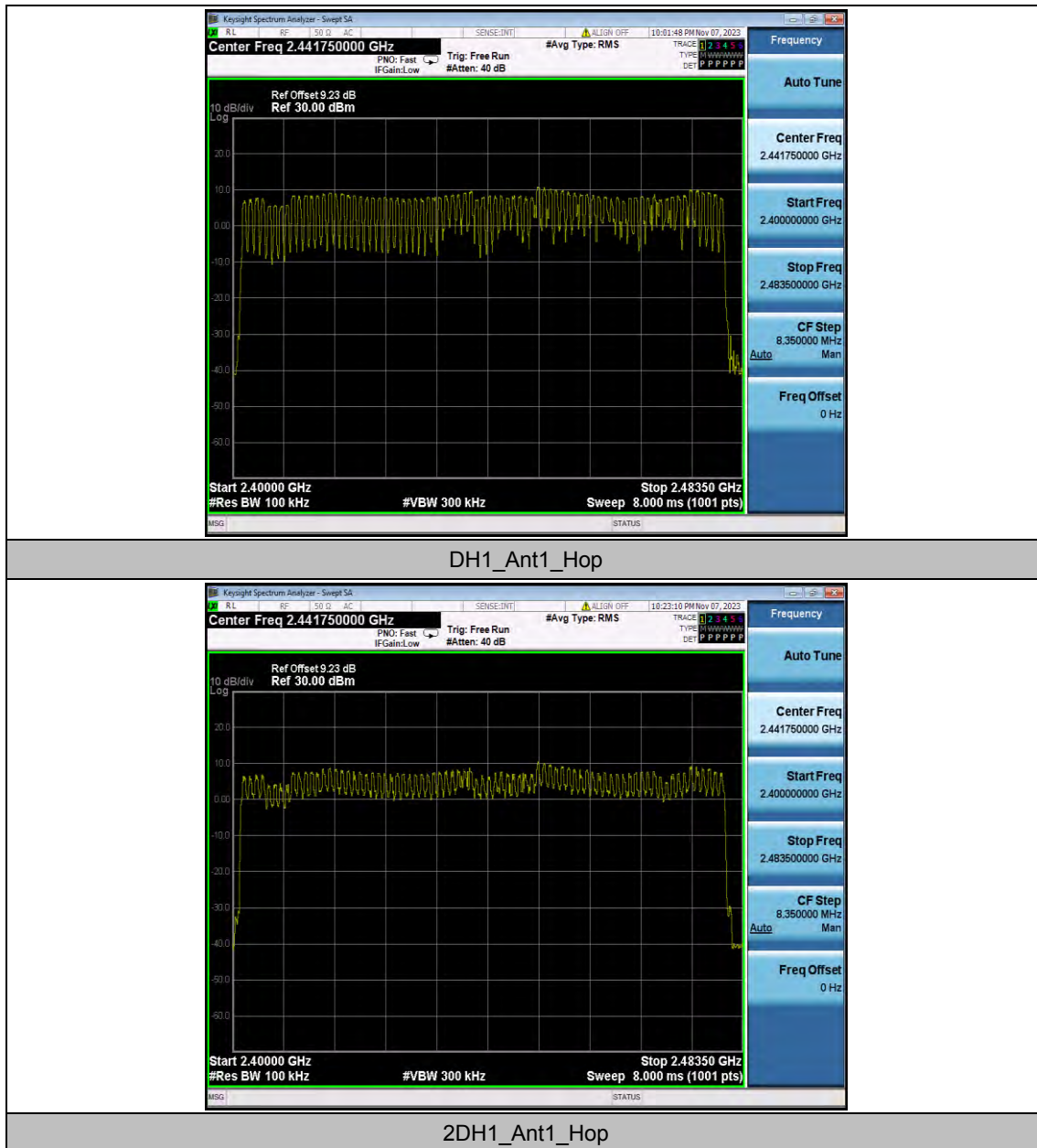
3DH5_Ant1_Hop

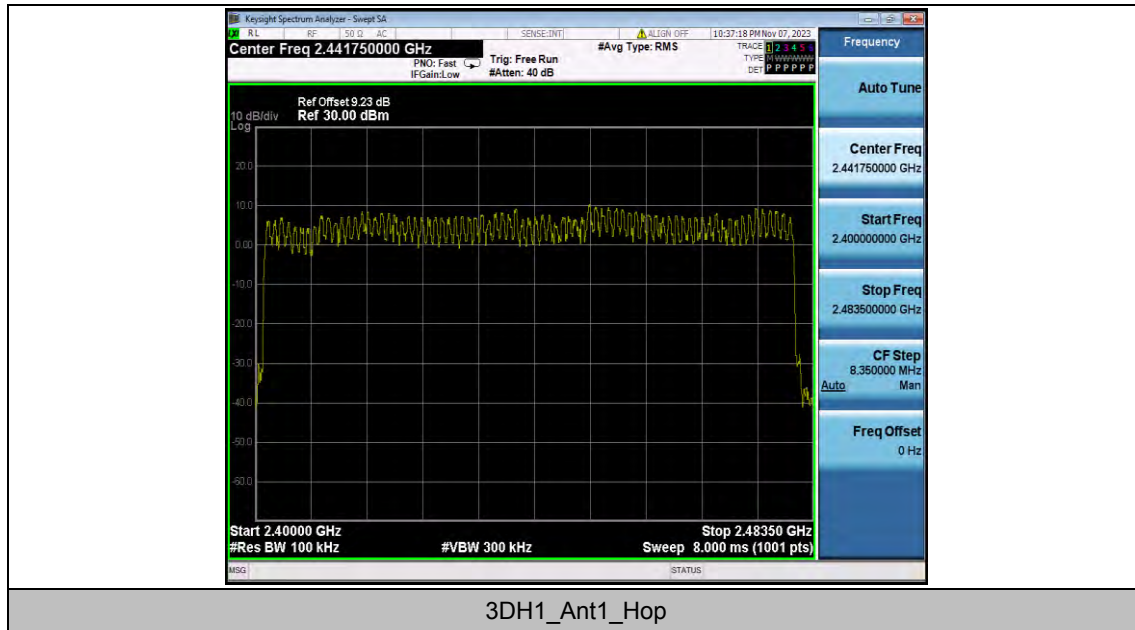
Appendix A.6: Number of hopping channels

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



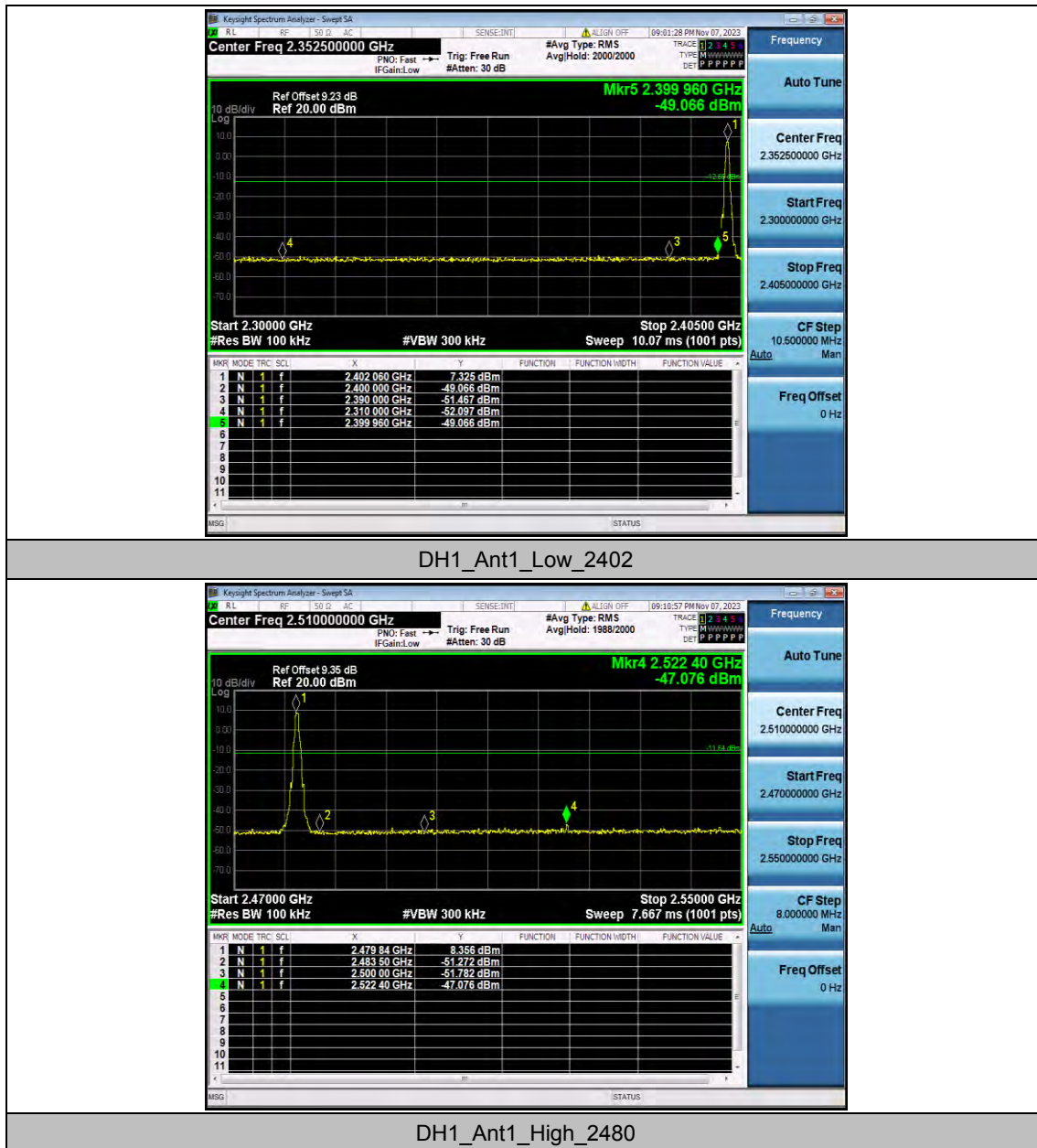


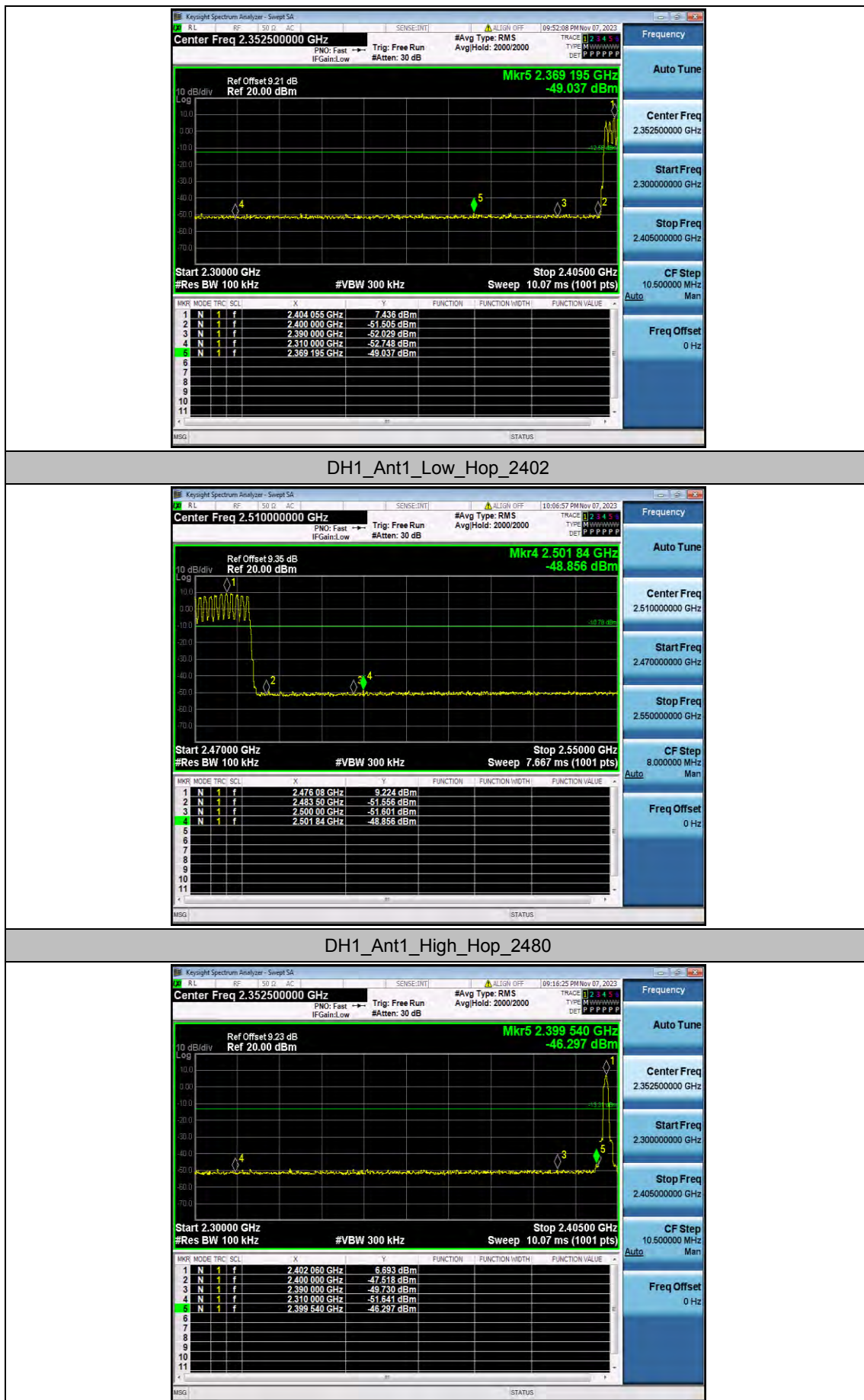
Appendix A.7: Band edge measurements

Test Result

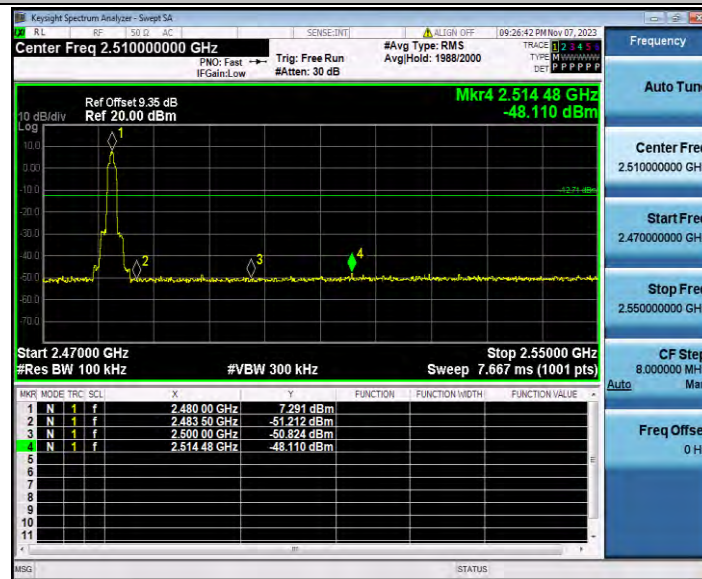
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	7.33	-49.07	≤ -12.68	PASS
		High	2480	8.36	-47.08	≤ -11.64	PASS
		Low	Hop_2402	7.44	-49.04	≤ -12.56	PASS
		High	Hop_2480	9.22	-48.86	≤ -10.78	PASS
2DH1	Ant1	Low	2402	6.69	-46.3	≤ -13.31	PASS
		High	2480	7.29	-48.11	≤ -12.71	PASS
		Low	Hop_2402	6.72	-49.28	≤ -13.28	PASS
		High	Hop_2480	8.03	-42.19	≤ -11.97	PASS
3DH1	Ant1	Low	2402	6.53	-46.52	≤ -13.47	PASS
		High	2480	7.78	-48.81	≤ -12.22	PASS
		Low	Hop_2402	6.96	-49.3	≤ -13.04	PASS
		High	Hop_2480	7.97	-46.1	≤ -12.04	PASS

Test Graphs

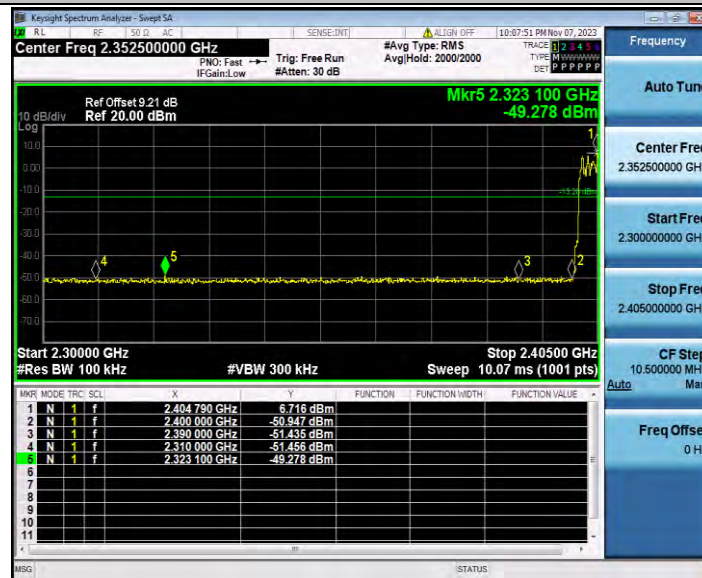




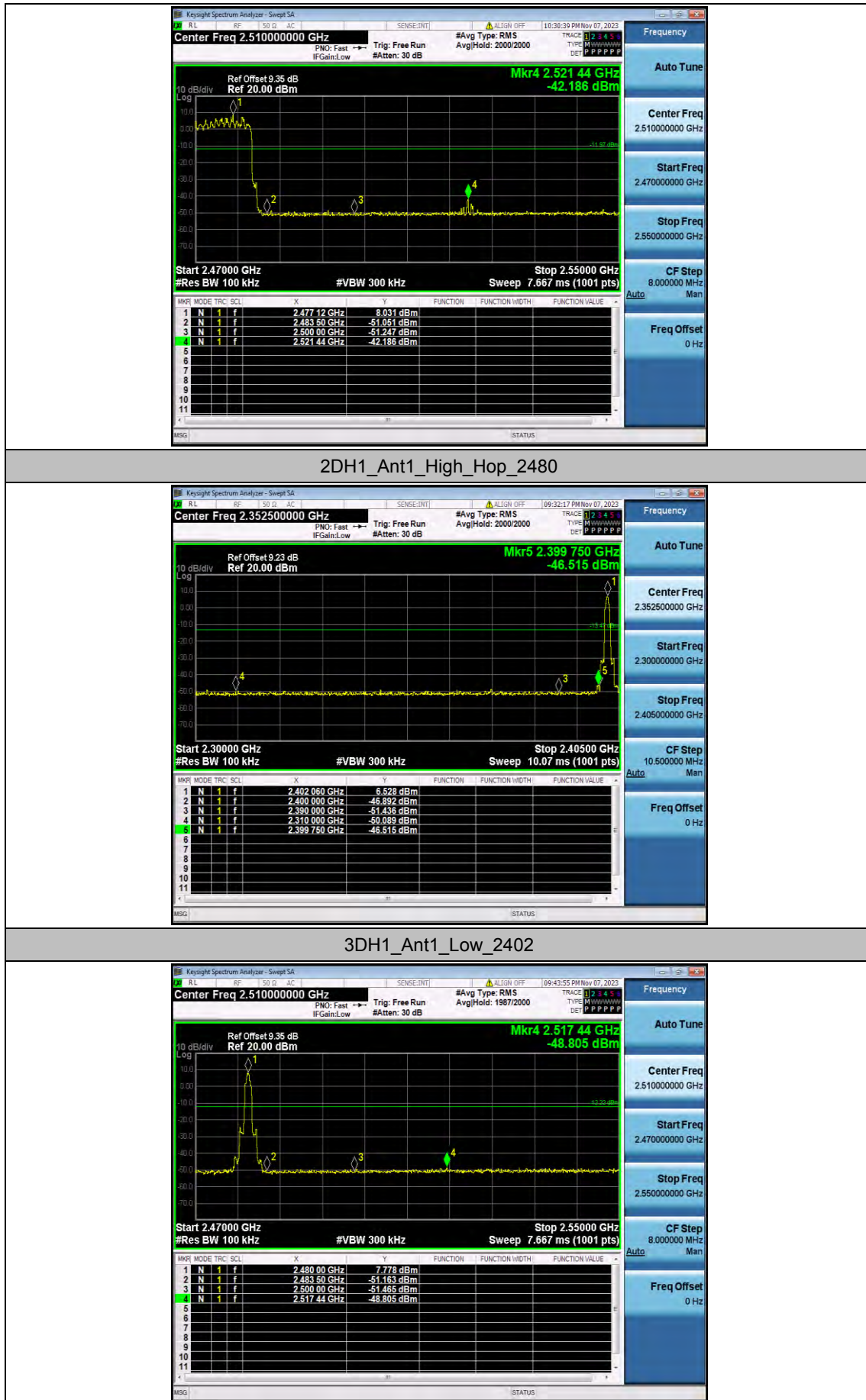
2DH1_Ant1_Low_2402



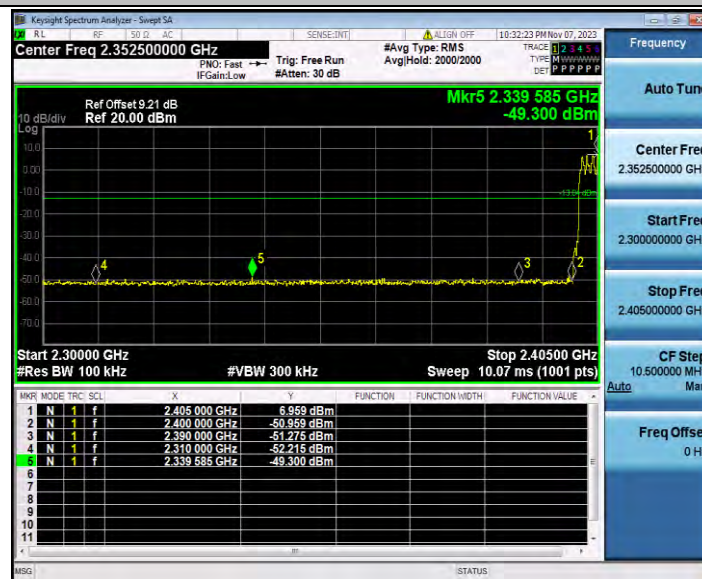
2DH1_Ant1_High_2480



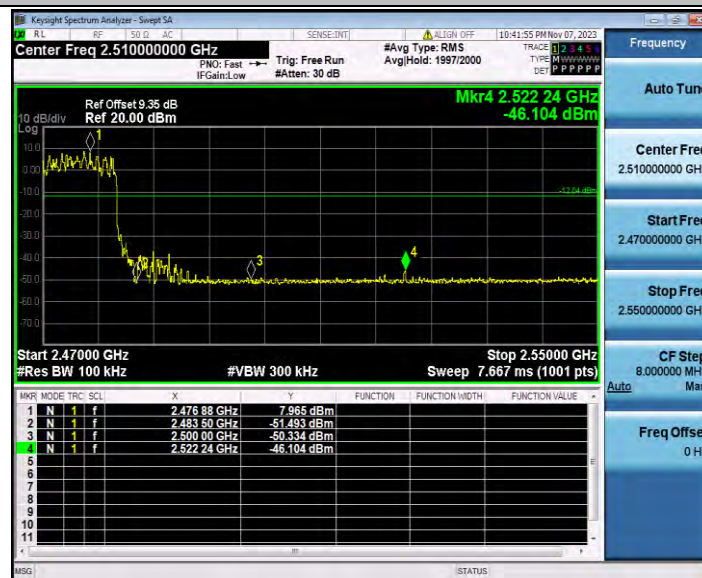
2DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_2480



3DH1_Ant1_Low_Hop_2402



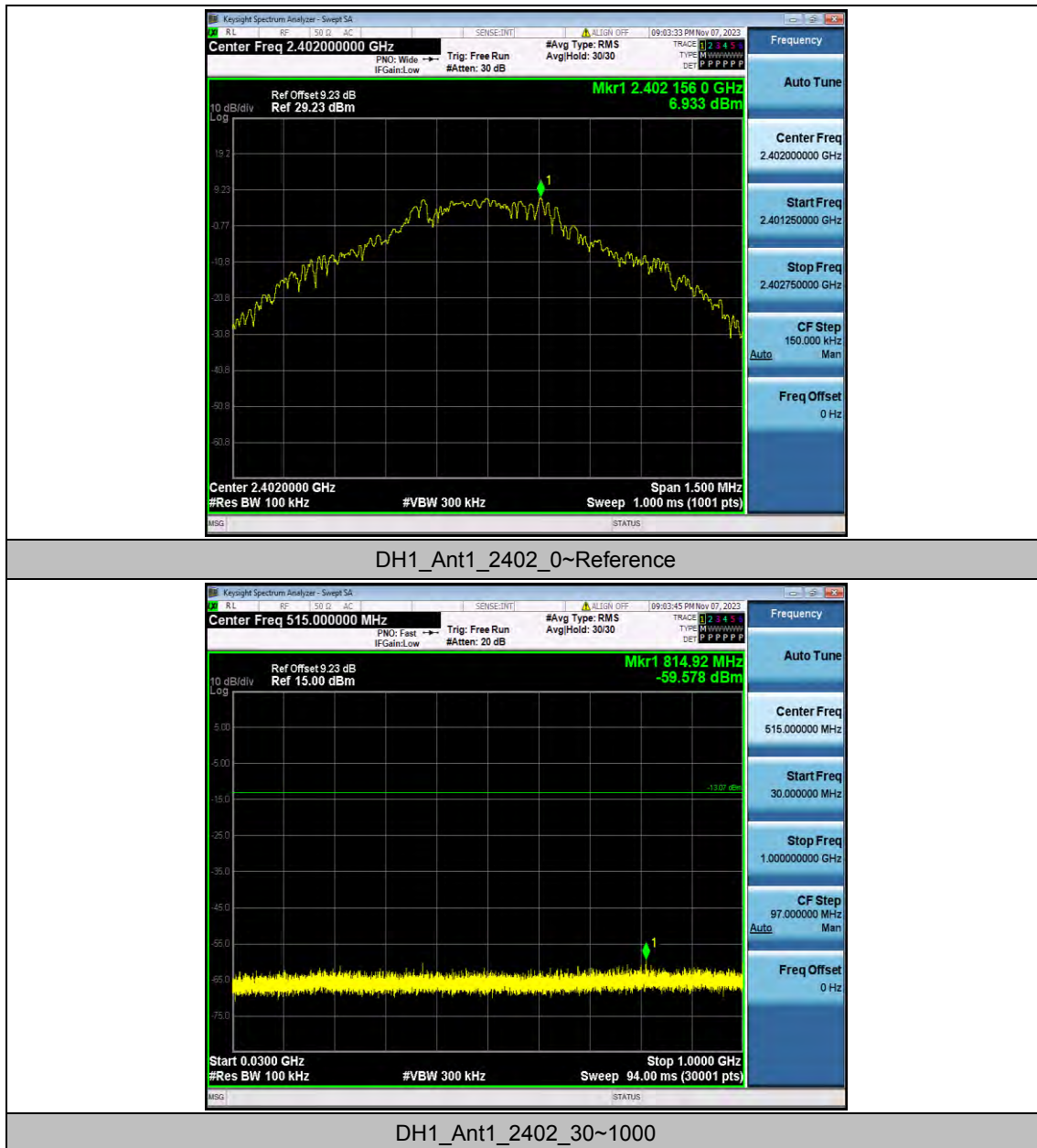
3DH1_Ant1_High_Hop_2480

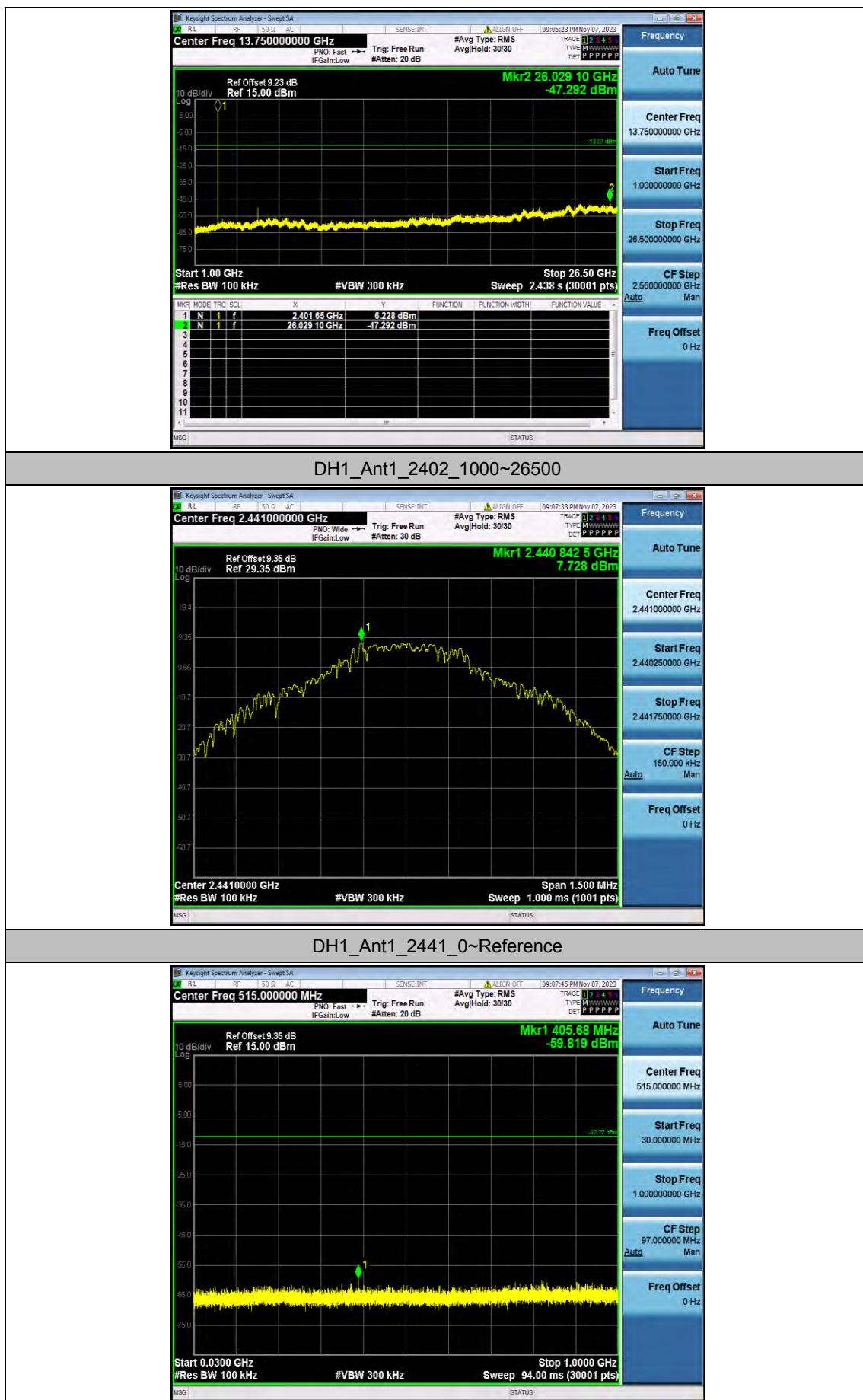
Appendix A.8: Conducted Spurious Emission

Test Result

Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	6.93	6.93	---	PASS
			30~1000	6.93	-59.58	≤ -13.07	PASS
			1000~26500	6.93	-47.29	≤ -13.07	PASS
		2441	Reference	7.73	7.73	---	PASS
			30~1000	7.73	-59.82	≤ -12.27	PASS
			1000~26500	7.73	-47.3	≤ -12.27	PASS
		2480	Reference	8.04	8.04	---	PASS
			30~1000	8.04	-60.18	≤ -11.96	PASS
			1000~26500	8.04	-47.54	≤ -11.96	PASS
2DH1	Ant1	2402	Reference	6.30	6.30	---	PASS
			30~1000	6.30	-60.26	≤ -13.7	PASS
			1000~26500	6.30	-47.58	≤ -13.7	PASS
		2441	Reference	6.17	6.17	---	PASS
			30~1000	6.17	-60.06	≤ -13.83	PASS
			1000~26500	6.17	-47.79	≤ -13.83	PASS
		2480	Reference	6.78	6.78	---	PASS
			30~1000	6.78	-60.85	≤ -13.22	PASS
			1000~26500	6.78	-47.58	≤ -13.22	PASS
3DH1	Ant1	2402	Reference	6.36	6.36	---	PASS
			30~1000	6.36	-60.37	≤ -13.64	PASS
			1000~26500	6.36	-47.96	≤ -13.64	PASS
		2441	Reference	6.40	6.40	---	PASS
			30~1000	6.40	-60.2	≤ -13.6	PASS
			1000~26500	6.40	-47.4	≤ -13.6	PASS
		2480	Reference	7.12	7.12	---	PASS
			30~1000	7.12	-60.44	≤ -12.88	PASS
			1000~26500	7.12	-46.67	≤ -12.88	PASS

Test Graphs





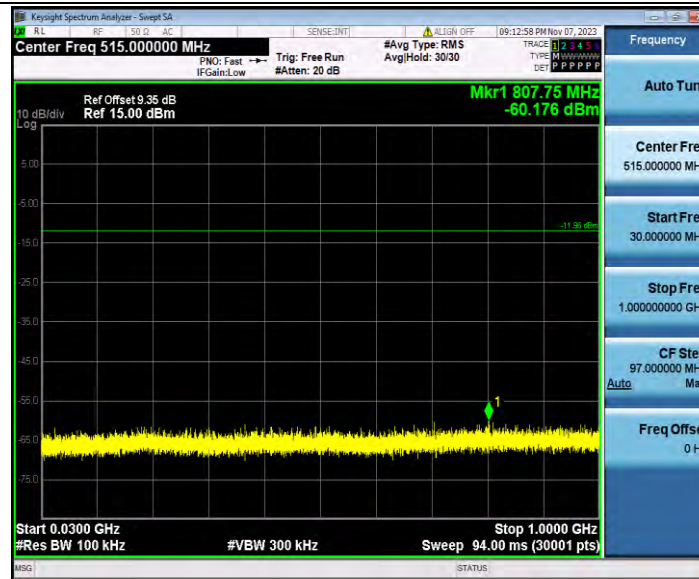
DH1_Ant1_2441_30~1000



DH1_Ant1_2441_1000~26500



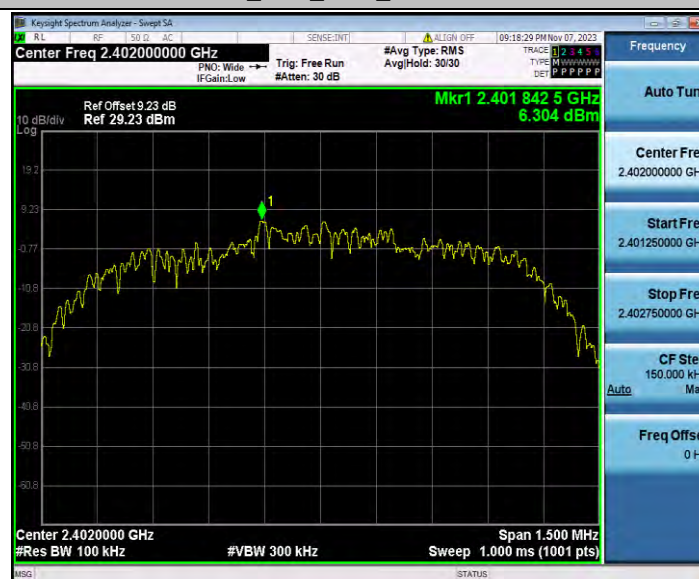
DH1_Ant1_2480_0~Reference



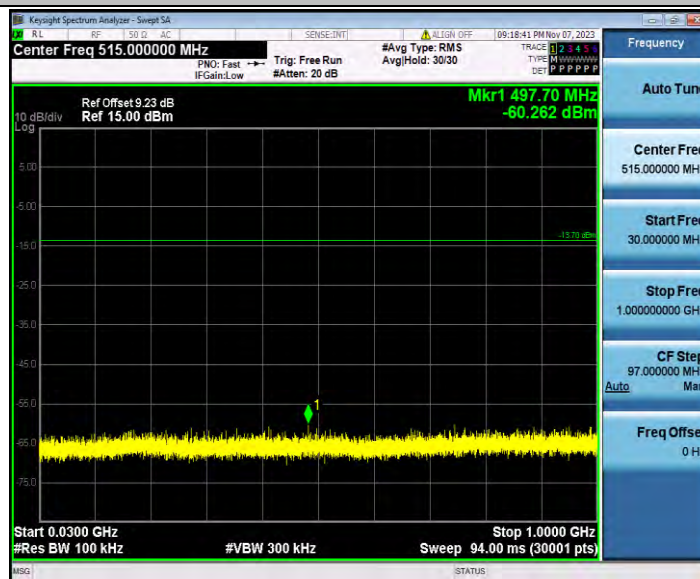
DH1_Ant1_2480_30~1000



DH1_Ant1_2480_1000~26500



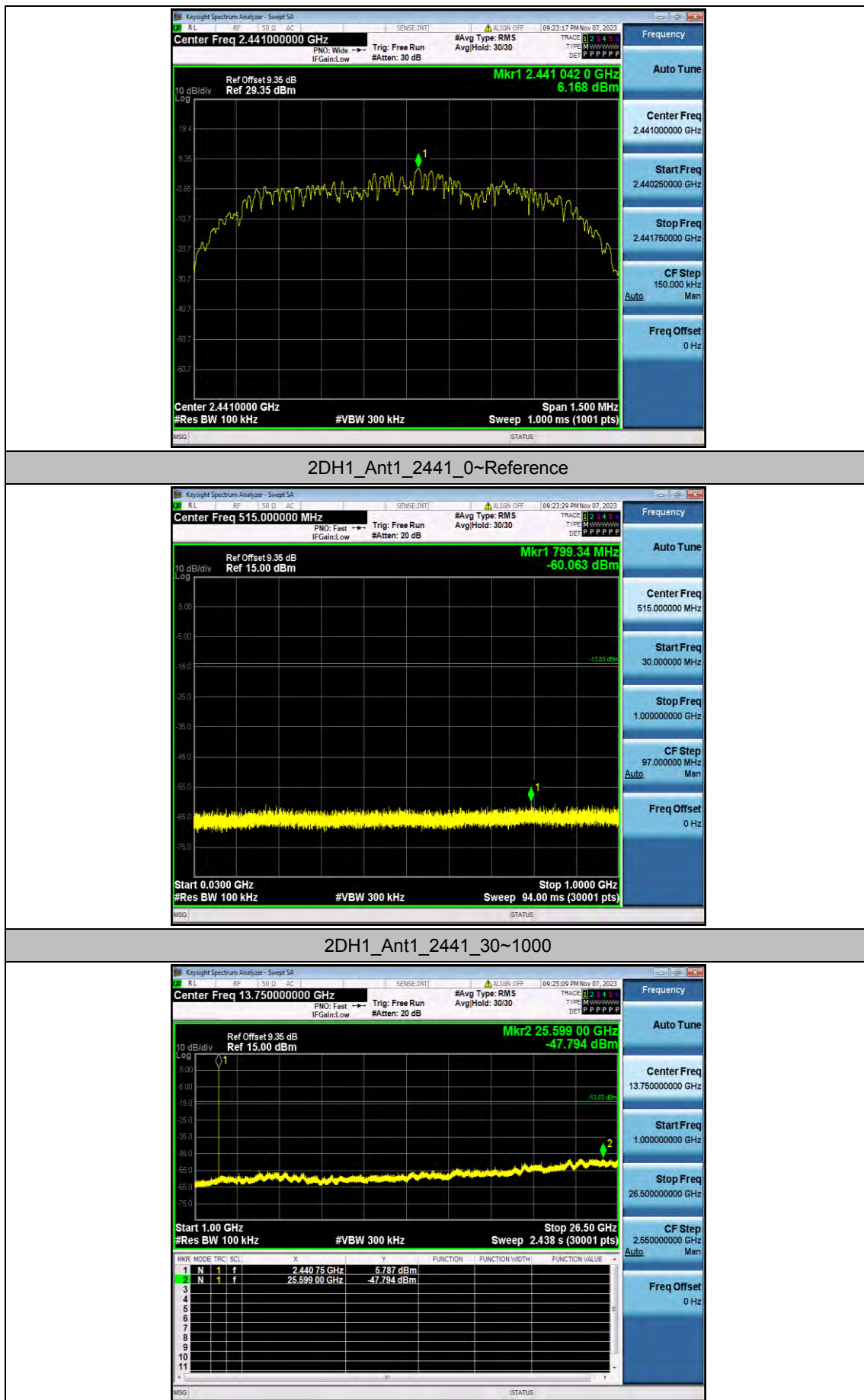
2DH1_Ant1_2402_0~Reference



2DH1_Ant1_2402_30~1000



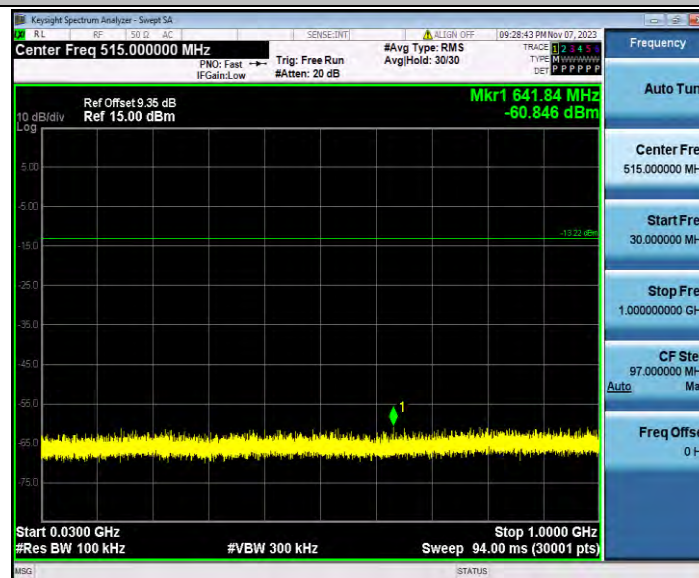
2DH1_Ant1_2402_1000~26500



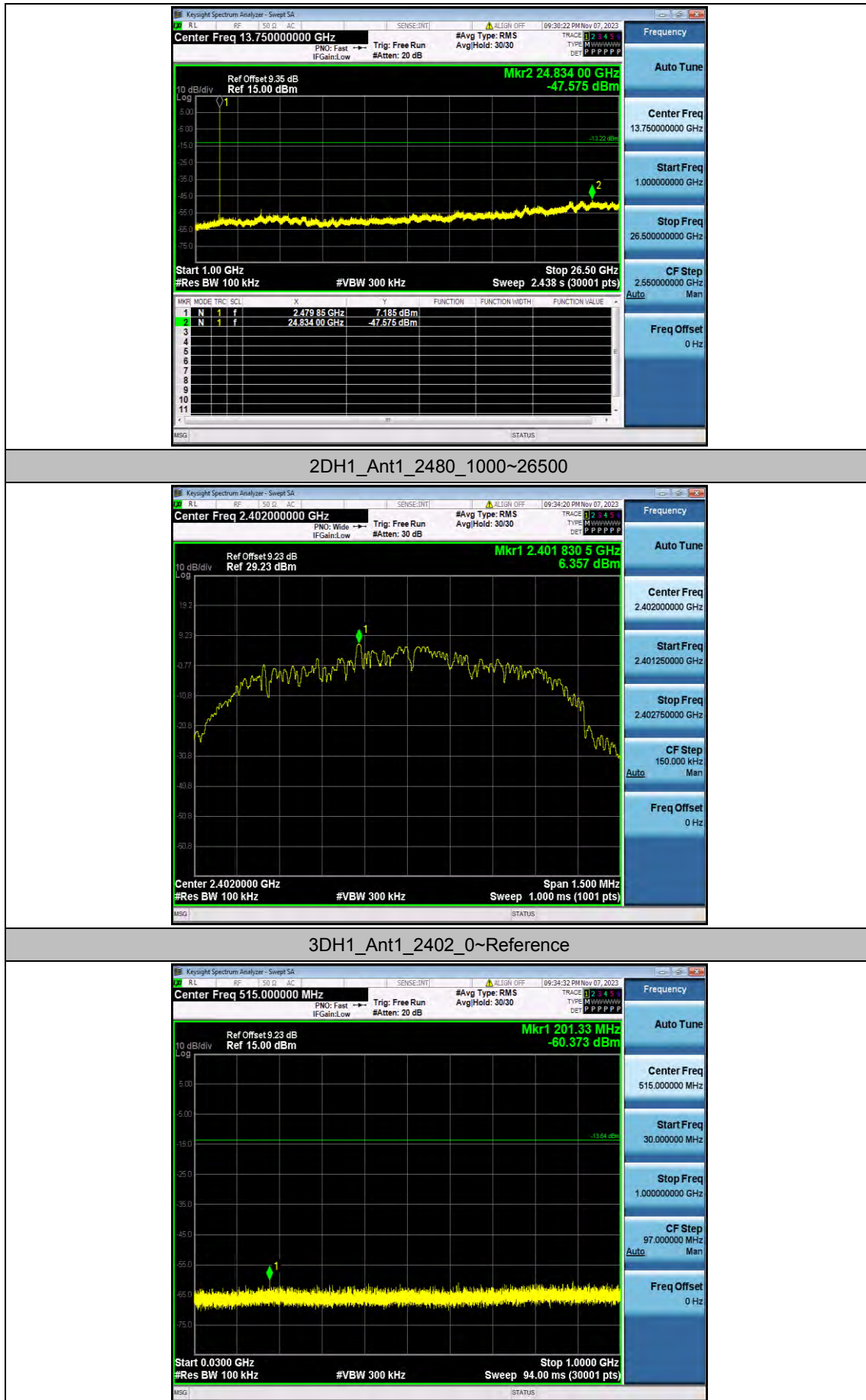
2DH1_Ant1_2441_1000~26500



2DH1_Ant1_2480_0~Reference



2DH1_Ant1_2480_30~1000



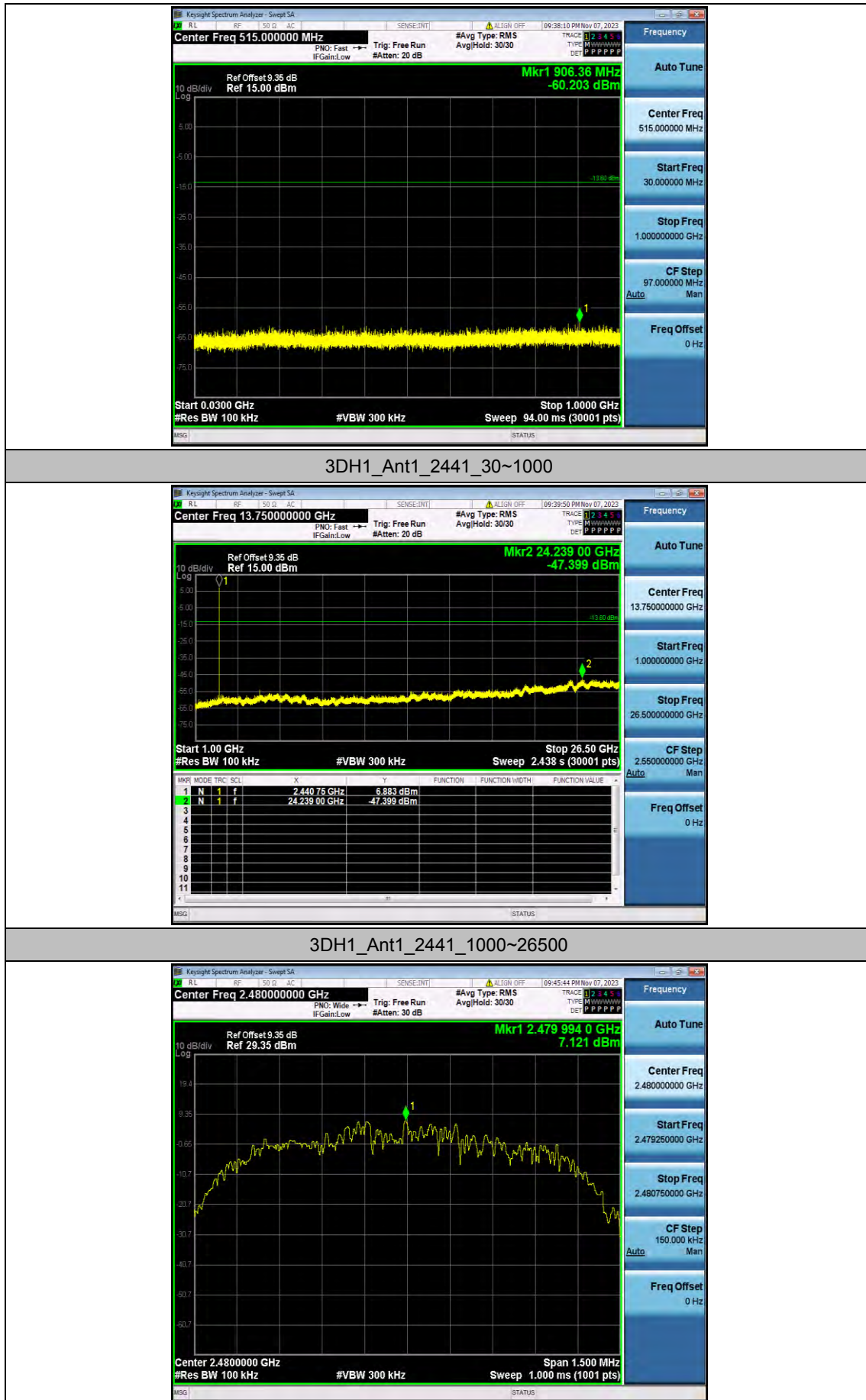
3DH1_Ant1_2402_30~1000



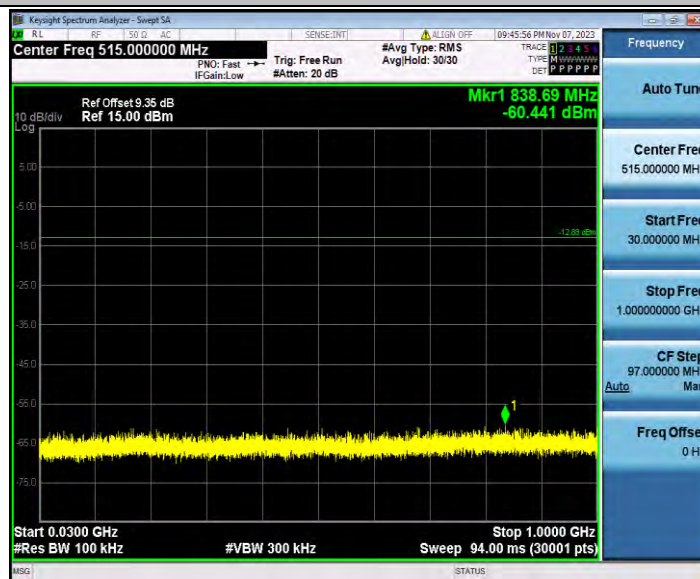
3DH1_Ant1_2402_1000~26500



3DH1_Ant1_2441_0~Reference



3DH1_Ant1_2480_0~Reference



3DH1_Ant1_2480_30~1000



3DH1_Ant1_2480_1000~26500

Appendix A.9: Emissions in Restricted Bands

Test Result

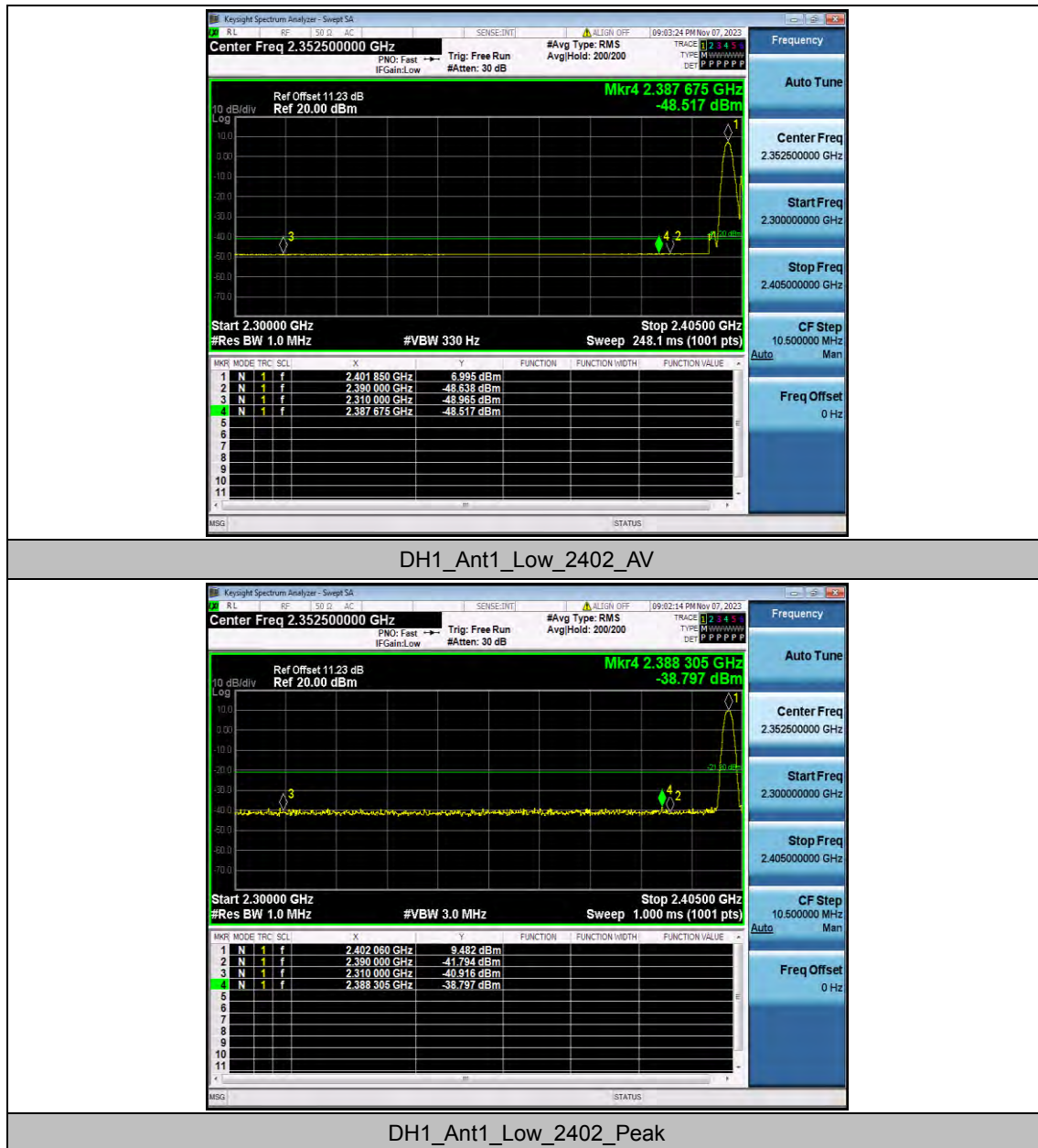
TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH1	Ant1	Low	2402	AV	2310.000	-48.97	≤-41.20	46.23	≤54	PASS
				AV	2387.675	-48.52	≤-41.20	46.68	≤54	PASS
				AV	2390.000	-48.64	≤-41.20	46.56	≤54	PASS
				Peak	2310.000	-40.92	≤-21.20	54.28	≤74	PASS
				Peak	2388.305	-38.8	≤-21.20	56.40	≤74	PASS
				Peak	2390.000	-41.79	≤-21.20	53.41	≤74	PASS
		High	2480	AV	2483.500	-47.62	≤-41.20	47.58	≤54	PASS
				AV	2483.520	-47.62	≤-41.20	47.58	≤54	PASS
				AV	2500.000	-48.37	≤-41.20	46.83	≤54	PASS
				Peak	2483.500	-39.79	≤-21.20	55.41	≤74	PASS
				Peak	2488.480	-38.18	≤-21.20	57.02	≤74	PASS
				Peak	2500.000	-41.19	≤-21.20	54.01	≤74	PASS
2DH1	Ant1	Low	2402	AV	2310.000	-48.97	≤-41.20	46.23	≤54	PASS
				AV	2385.470	-48.42	≤-41.20	46.78	≤54	PASS
				AV	2390.000	-48.69	≤-41.20	46.51	≤54	PASS
				Peak	2310.000	-42.59	≤-21.20	52.61	≤74	PASS
				Peak	2372.240	-38.33	≤-21.20	56.87	≤74	PASS
				Peak	2390.000	-41.33	≤-21.20	53.87	≤74	PASS
		High	2480	AV	2483.500	-47.48	≤-41.20	47.72	≤54	PASS
				AV	2483.520	-47.48	≤-41.20	47.72	≤54	PASS
				AV	2500.000	-48.35	≤-41.20	46.85	≤54	PASS
				Peak	2483.500	-40.87	≤-21.20	54.33	≤74	PASS
				Peak	2484.400	-38.31	≤-21.20	56.89	≤74	PASS
				Peak	2500.000	-40.19	≤-21.20	55.01	≤74	PASS
3DH1	Ant1	Low	2402	AV	2310.000	-49.02	≤-41.20	46.18	≤54	PASS
				AV	2389.880	-48.55	≤-41.20	46.65	≤54	PASS
				AV	2390.000	-48.58	≤-41.20	46.62	≤54	PASS
				Peak	2310.000	-40.75	≤-21.20	54.45	≤74	PASS
				Peak	2383.895	-38.4	≤-21.20	56.80	≤74	PASS
				Peak	2390.000	-41.42	≤-21.20	53.78	≤74	PASS
		High	2480	AV	2483.500	-47.39	≤-41.20	47.81	≤54	PASS
				AV	2483.520	-47.39	≤-41.20	47.81	≤54	PASS
				AV	2500.000	-48.31	≤-41.20	46.89	≤54	PASS
				Peak	2483.500	-39.33	≤-21.20	55.87	≤74	PASS

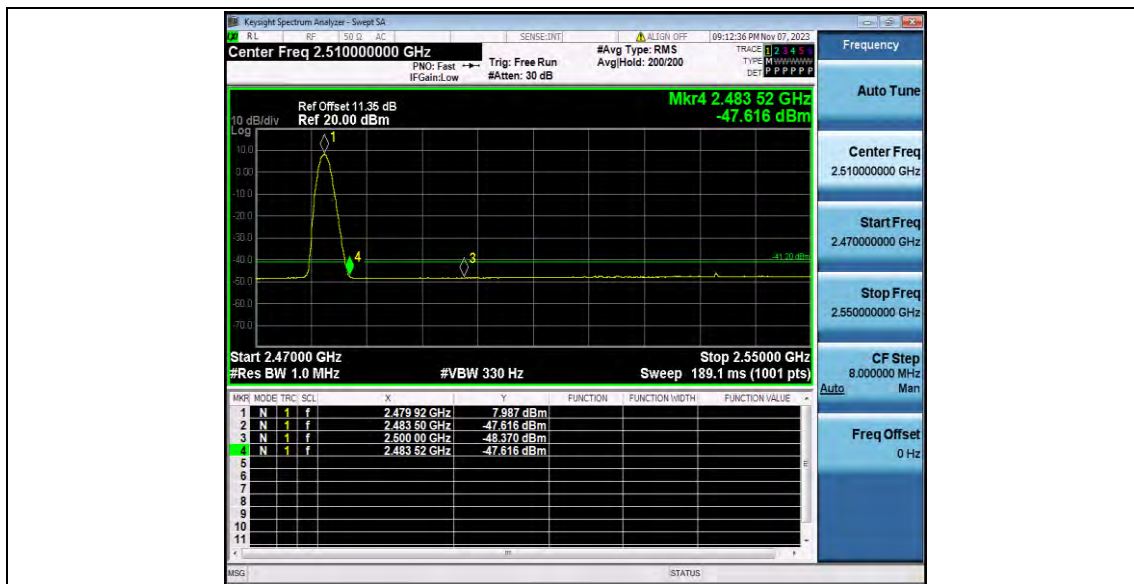
				Peak	2493.760	-38.55	≤ -21.20	56.65	≤ 74	PASS
				Peak	2500.000	-40.92	≤ -21.20	54.28	≤ 74	PASS

Note:

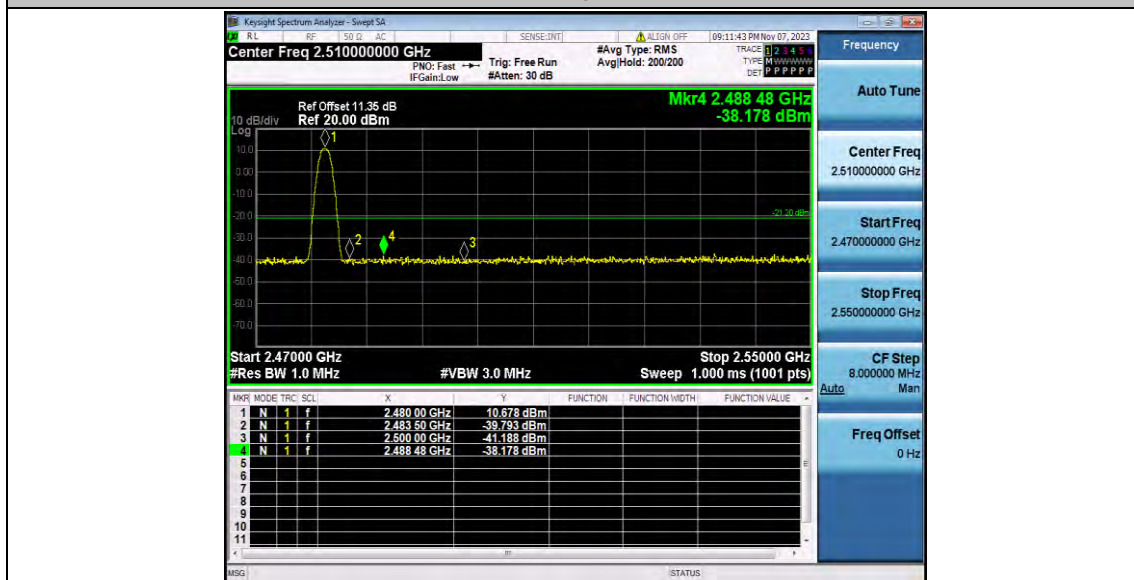
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

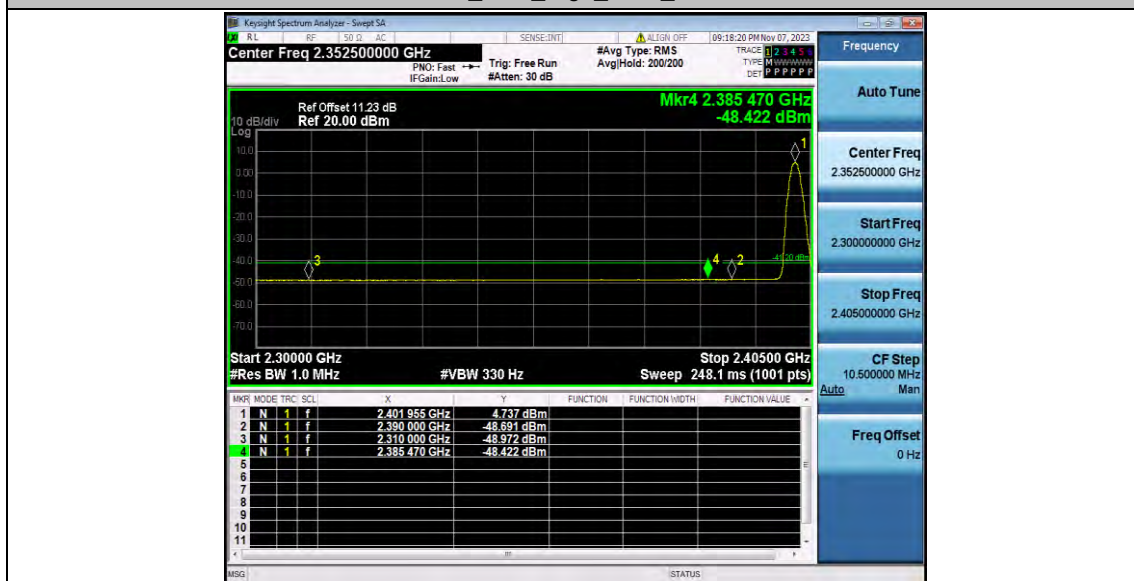




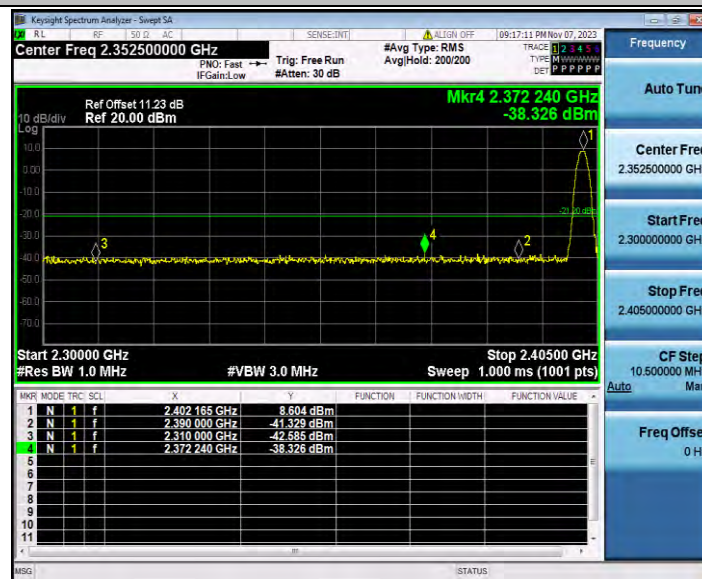
DH1_Ant1_High_2480_AV



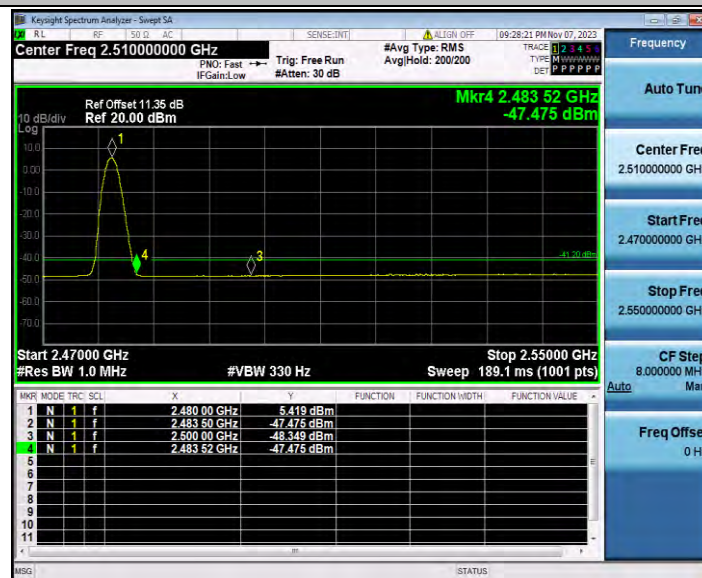
DH1_Ant1_High_2480_Peak



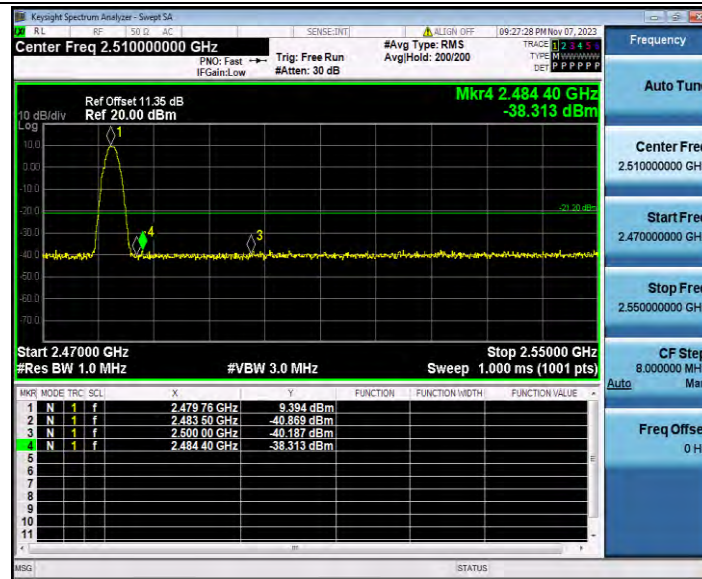
2DH1_Ant1_Low_2402_AV



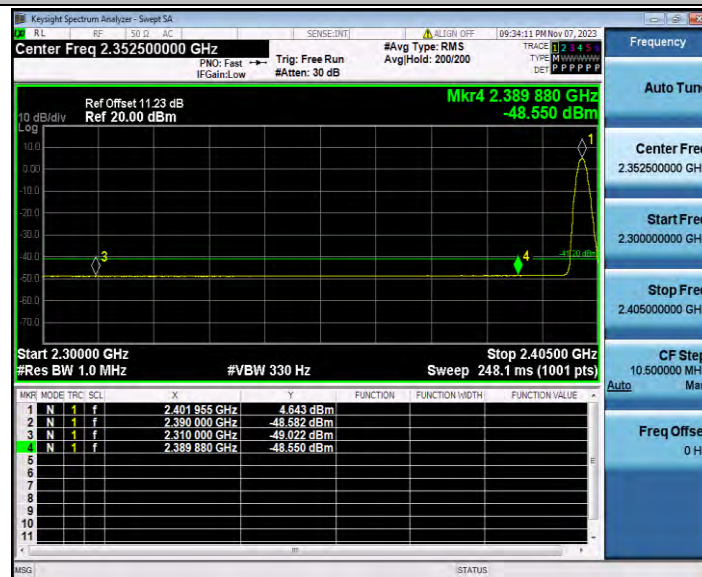
2DH1_Ant1_Low_2402_Peak



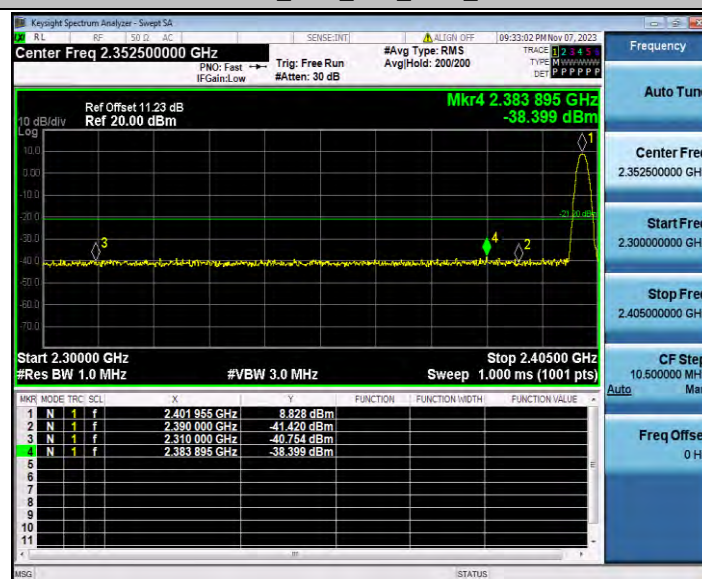
2DH1_Ant1_High_2480_AV



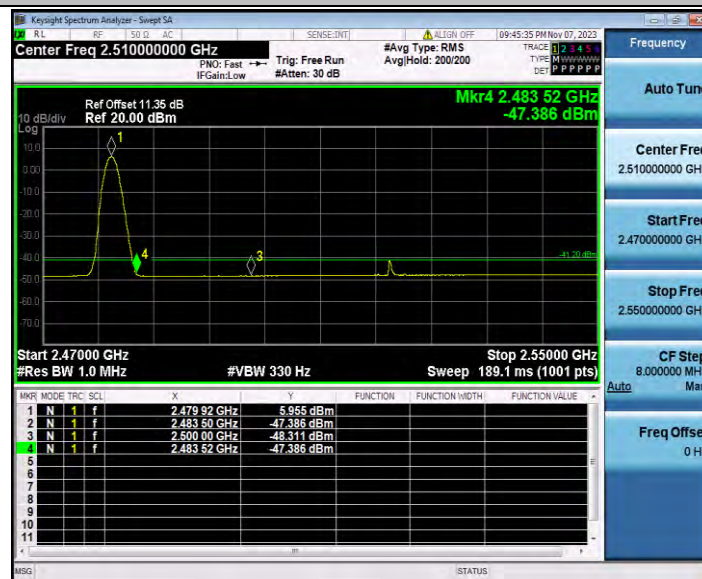
2DH1_Ant1_High_2480_Peak



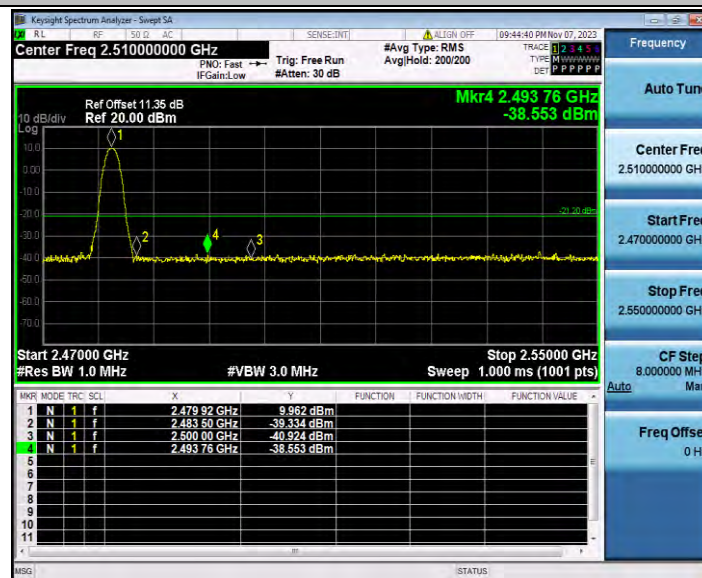
3DH1_Ant1_Low_2402_AV



3DH1_Ant1_Low_2402_Peak



3DH1_Ant1_High_2480_AV



3DH1_Ant1_High_2480_Peak