

Case No. : <u>CTA24071501901</u>	
Ambient Condition: <u>21</u> °C, <u>54</u> %RH	
According Standard: ■Part15C	
Test Date: <u>2024.6.20-2024.8.12</u>	Test Engineer: <u>Lushan Kong</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	0.930	2401.565	2402.495	---	---
		2441	1.032	2440.487	2441.519	---	---
		2480	0.864	2479.571	2480.435	---	---
2DH1	Ant1	2402	1.305	2401.364	2402.669	---	---
		2441	1.254	2440.394	2441.648	---	---
		2480	1.236	2479.409	2480.645	---	---

Test Graphs

DH1_Ant1_2402

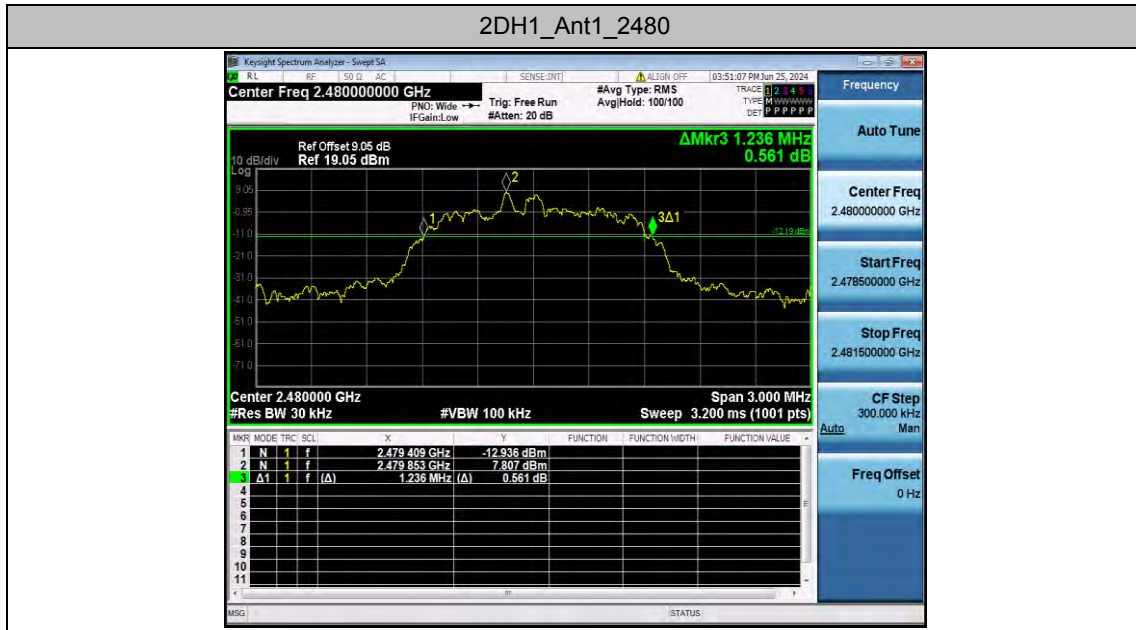


DH1_Ant1_2441



DH1_Ant1_2480



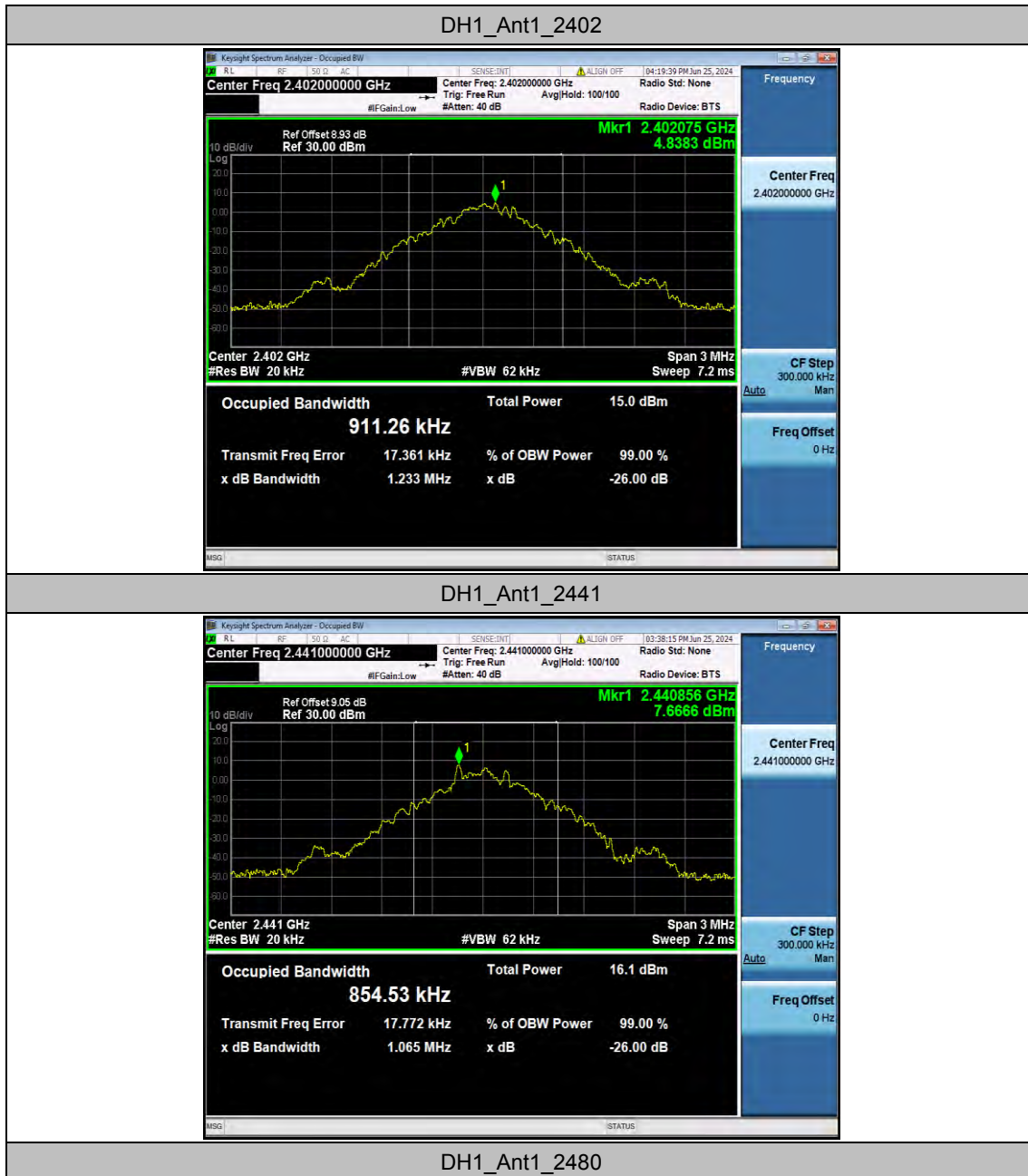


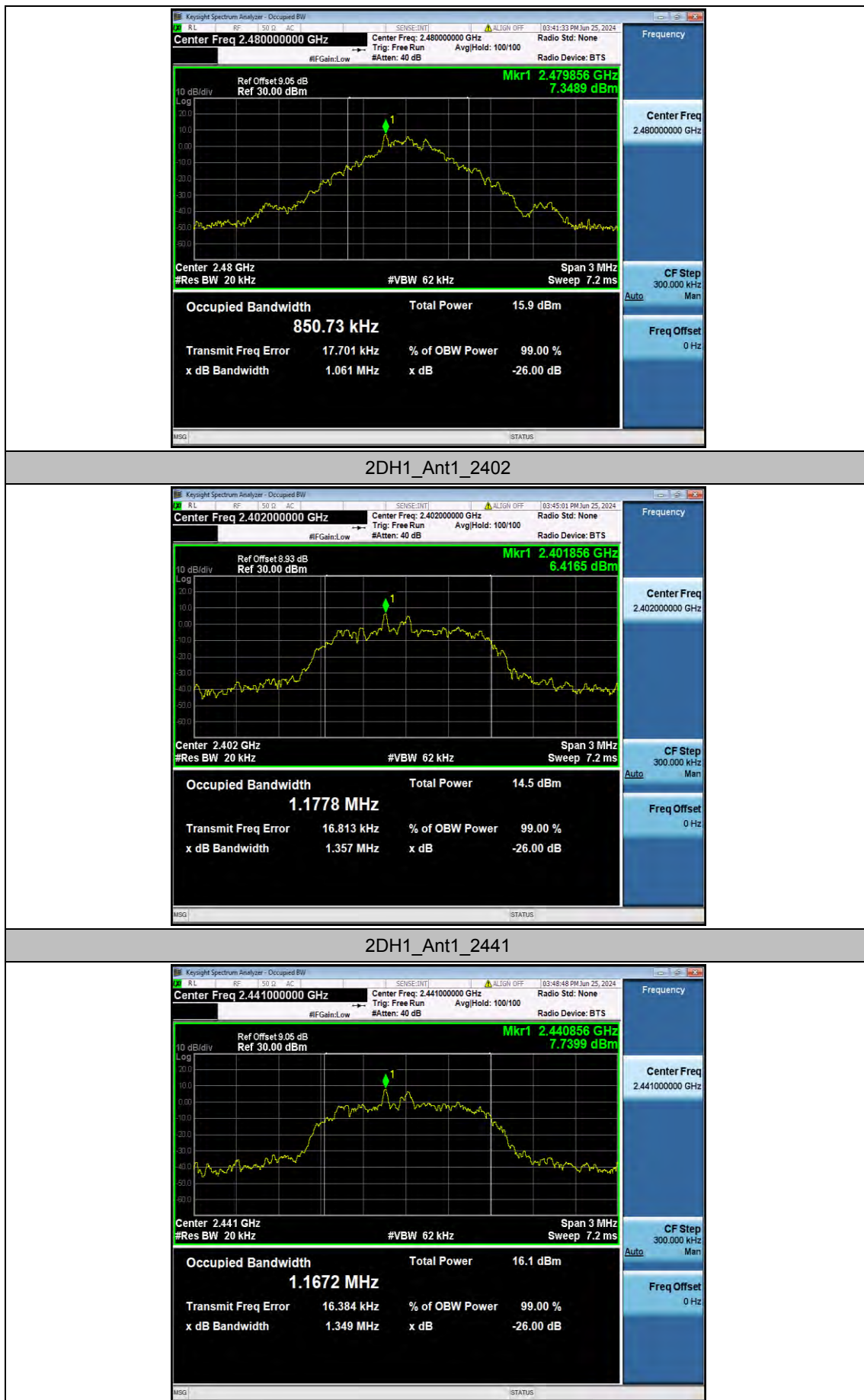
Appendix A.2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.91126	2401.5617	2402.4730	---	---
		2441	0.85453	2440.5905	2441.4450	---	---
		2480	0.85073	2479.5923	2480.4431	---	---
2DH1	Ant1	2402	1.1778	2401.4279	2402.6057	---	---
		2441	1.1672	2440.4328	2441.6000	---	---
		2480	1.1635	2479.4338	2480.5973	---	---

Test Graphs







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	9.59	≤ 20.97	PASS
		2441	11.08	≤ 20.97	PASS
		2480	10.80	≤ 20.97	PASS
2DH1	Ant1	2402	10.25	≤ 20.97	PASS
		2441	11.64	≤ 20.97	PASS
		2480	11.30	≤ 20.97	PASS

Appendix A.4: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	0.984	≥ 0.688	PASS
		Hop_2441	1.136	≥ 0.688	PASS
		Hop_2480	0.974	≥ 0.688	PASS
2DH1	Ant1	Hop_2402	1.008	≥ 0.870	PASS
		Hop_2441	1.01	≥ 0.870	PASS
		Hop_2480	0.88	≥ 0.870	PASS

Test Graphs

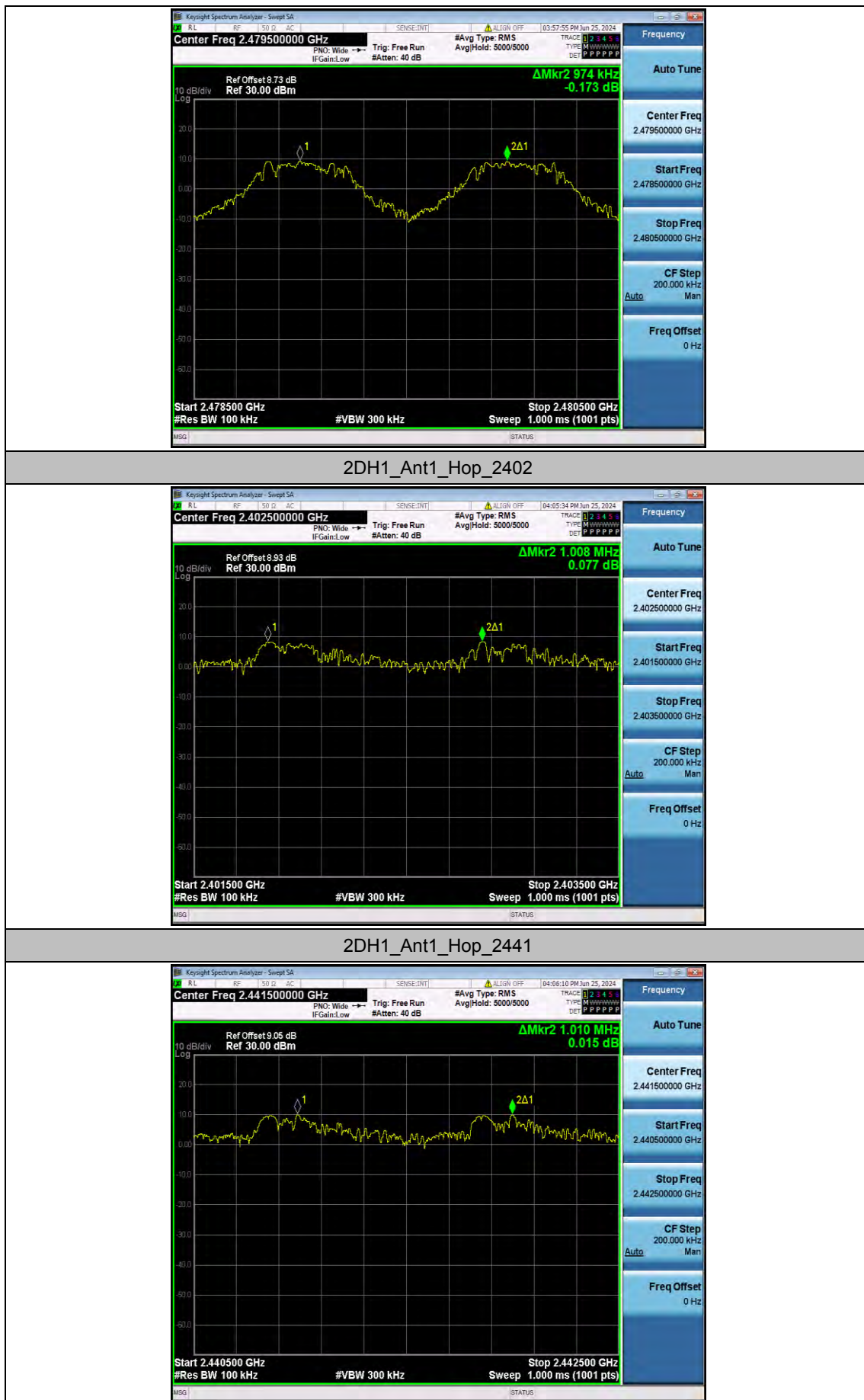
DH1_Ant1_Hop_2402

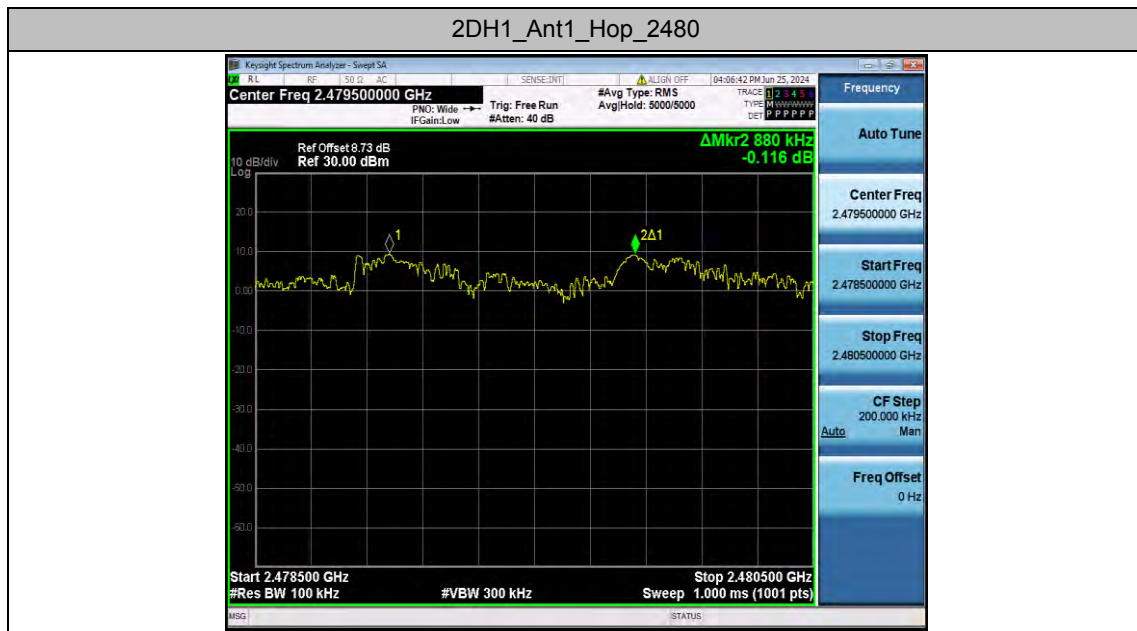


DH1_Ant1_Hop_2441



DH1_Ant1_Hop_2480



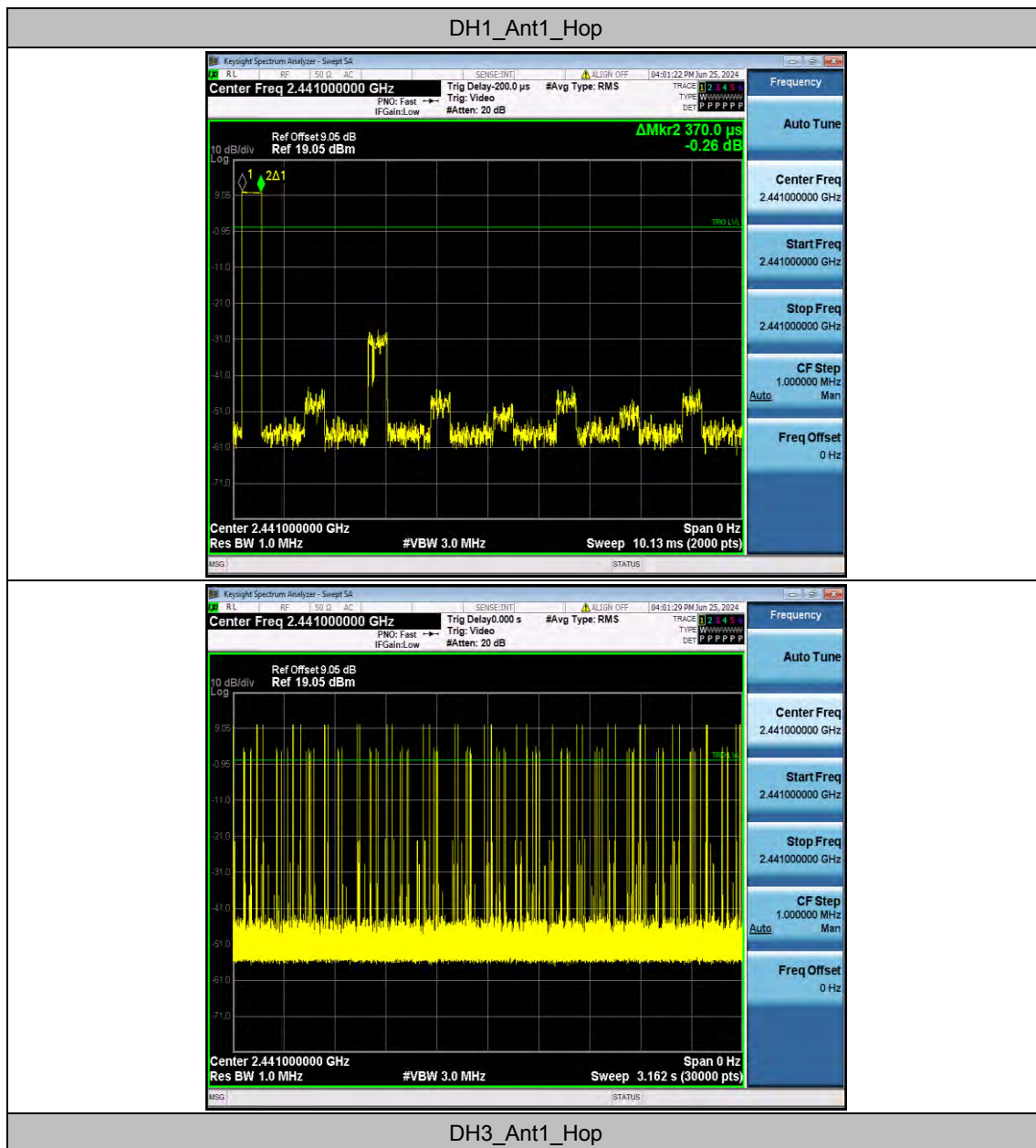


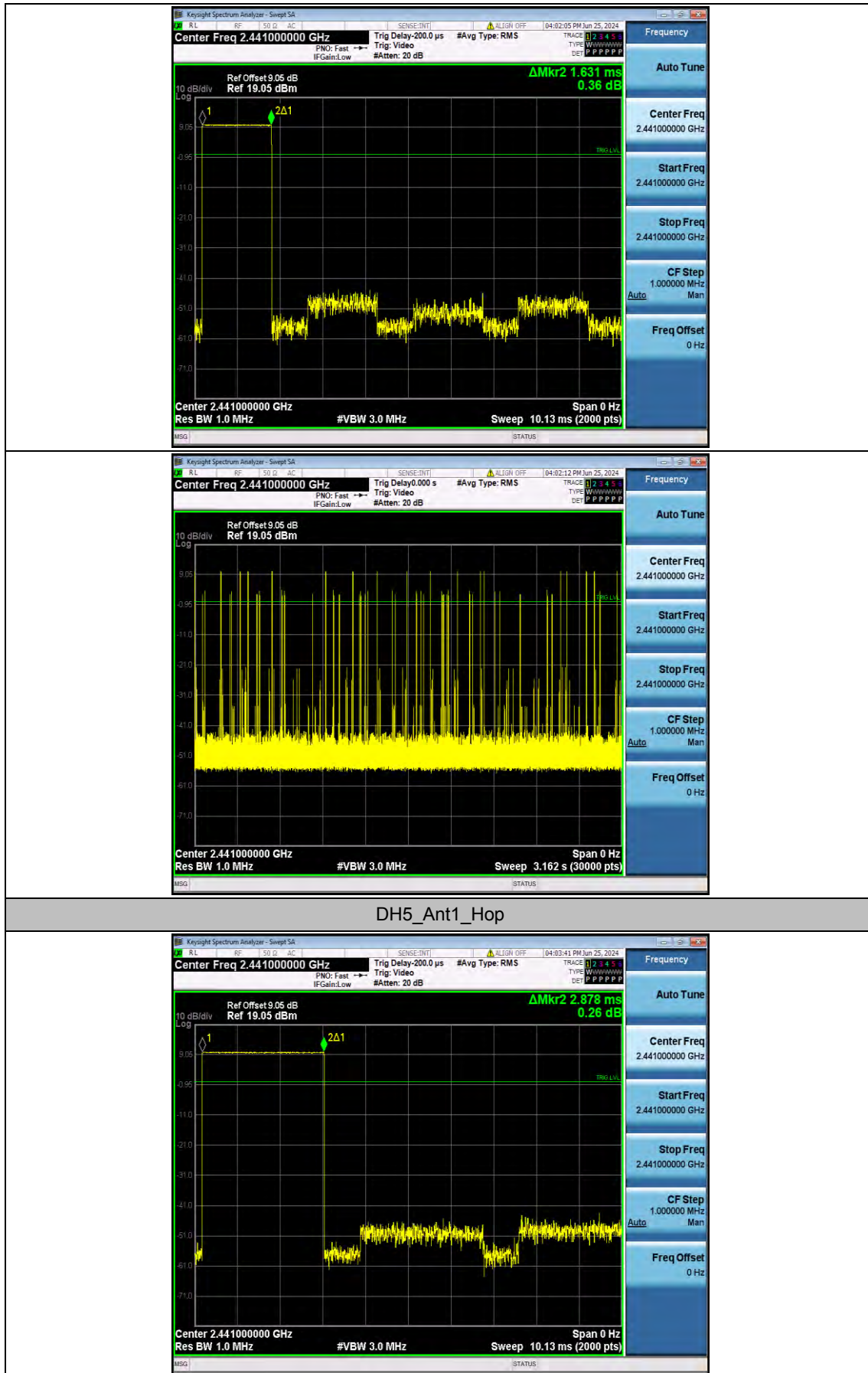
Appendix A.5: Time of occupancy

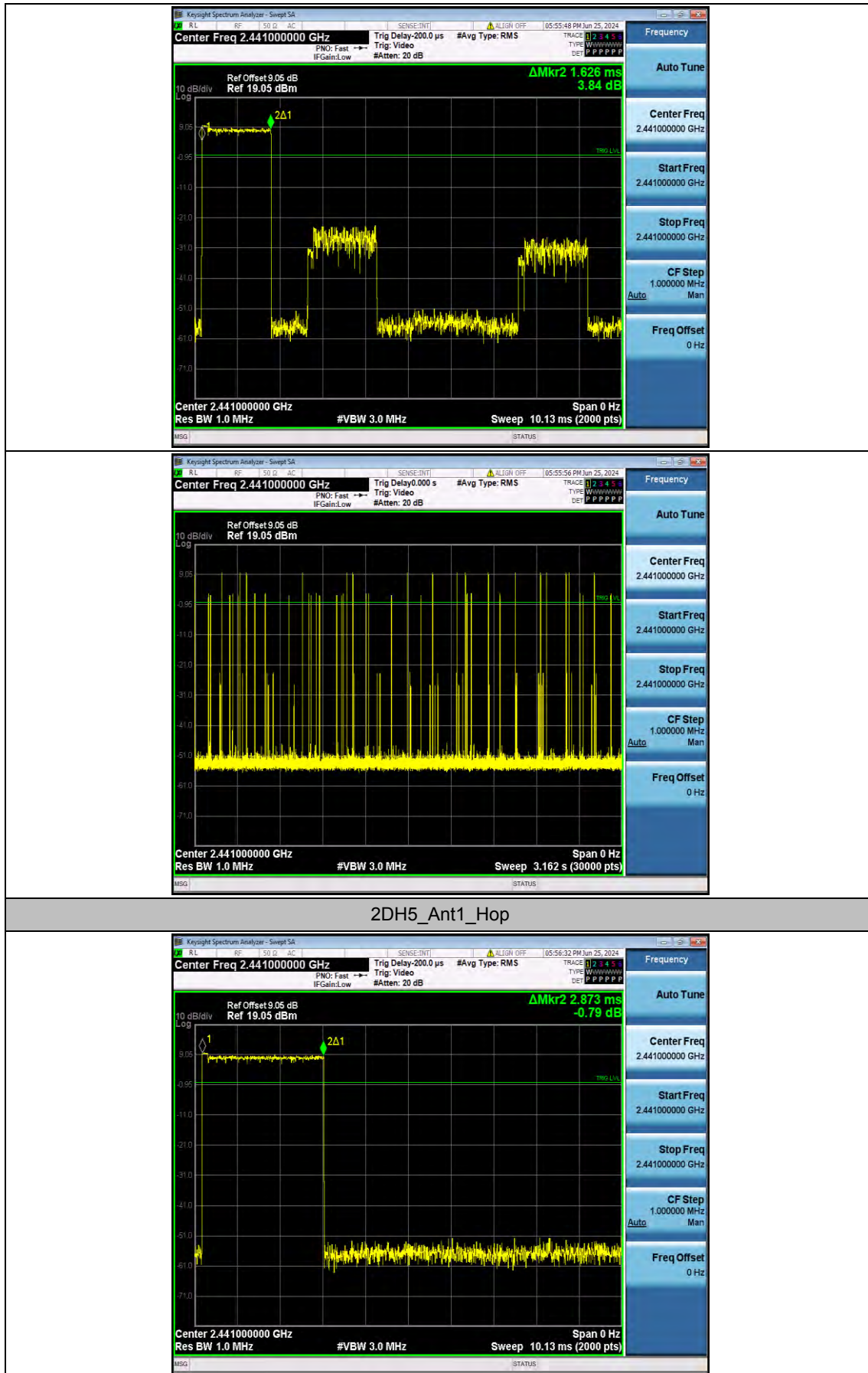
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.370	330	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.631	190	0.31	≤0.4	PASS
DH5	Ant1	Hop	2.878	130	0.374	≤0.4	PASS
2DH1	Ant1	Hop	0.385	650	0.25	≤0.4	PASS
2DH3	Ant1	Hop	1.626	180	0.293	≤0.4	PASS
2DH5	Ant1	Hop	2.873	80	0.23	≤0.4	PASS

Test Graphs





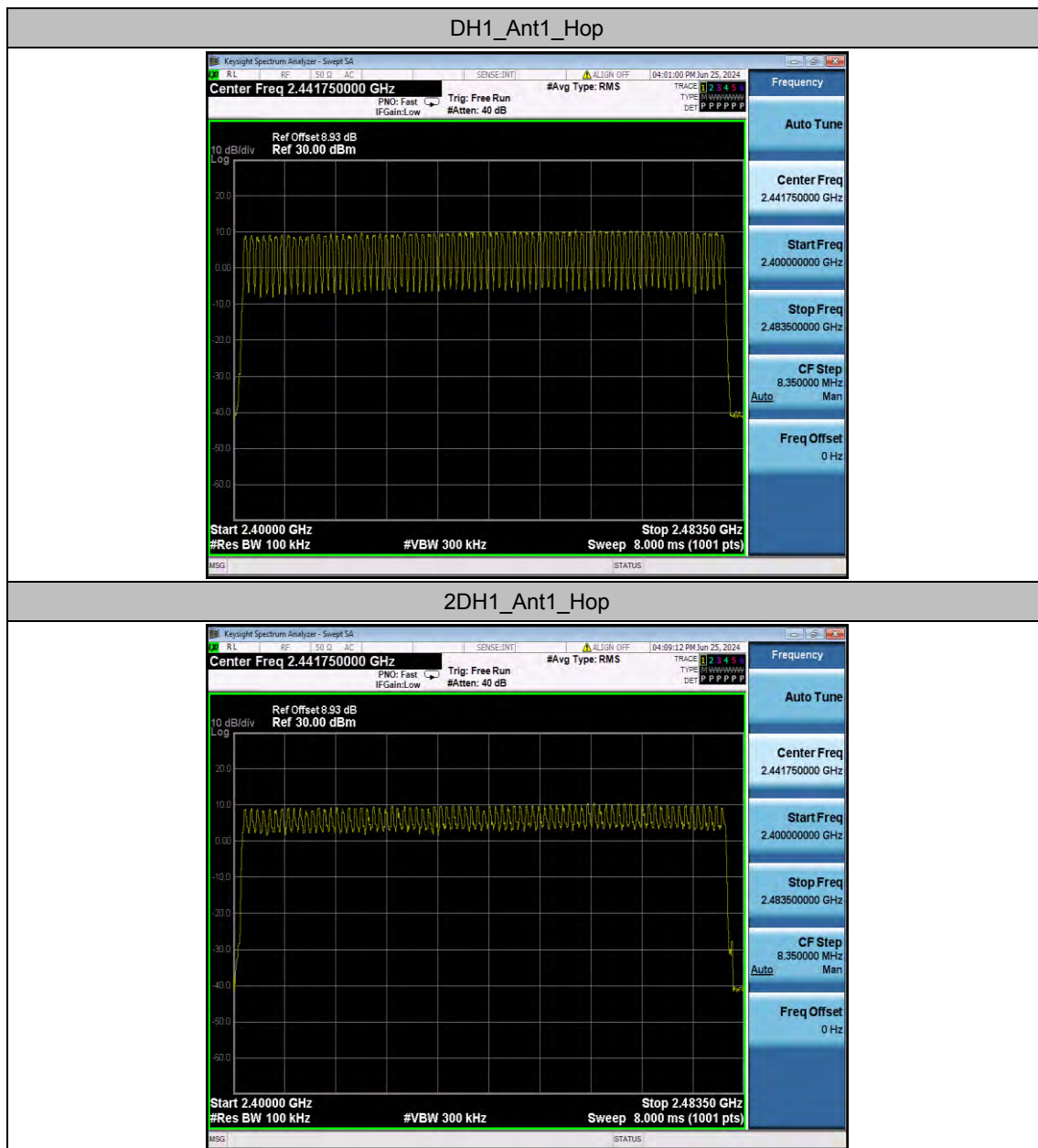


Appendix A.6: Number of hopping channels

Test Result

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

Test Graphs



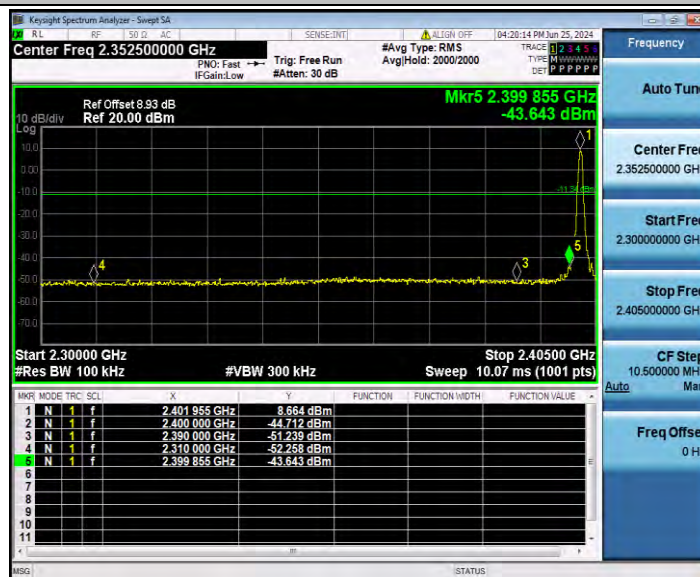
Appendix A.7: Band edge measurements

Test Result

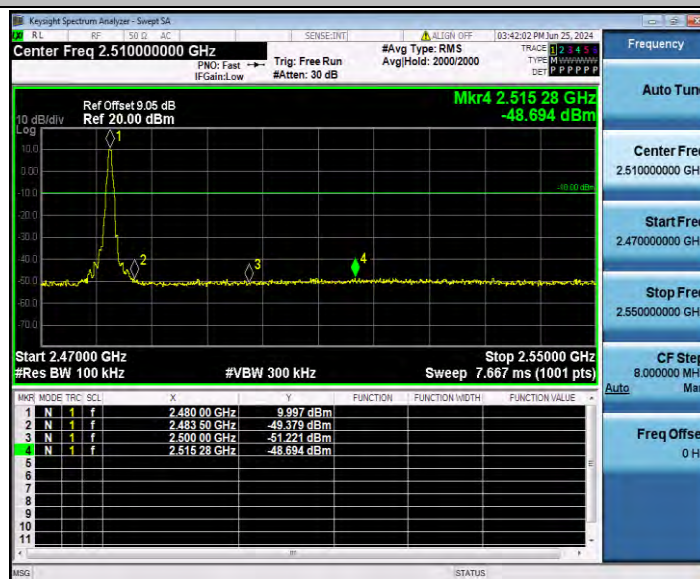
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	8.66	-43.64	≤ -11.34	PASS
		High	2480	10.00	-48.69	≤ -10	PASS
		Low	Hop_2402	8.97	-47.91	≤ -11.03	PASS
		High	Hop_2480	9.50	-47.51	≤ -10.5	PASS
2DH1	Ant1	Low	2402	8.93	-39.45	≤ -11.07	PASS
		High	2480	10.00	-47.86	≤ -10	PASS
		Low	Hop_2402	8.29	-45.3	≤ -11.71	PASS
		High	Hop_2480	9.46	-47.88	≤ -10.54	PASS

Test Graphs

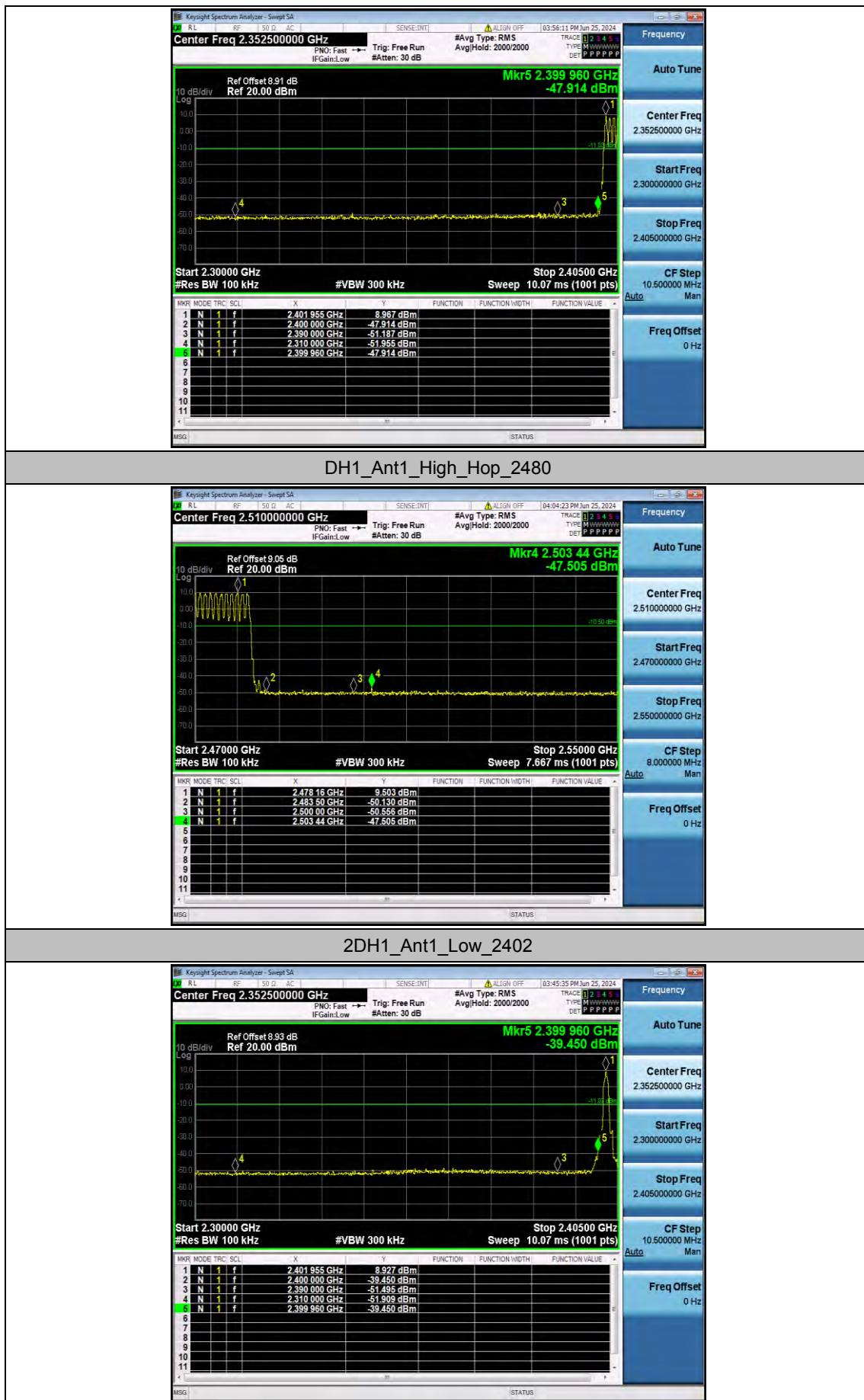
DH1_Ant1_Low_2402



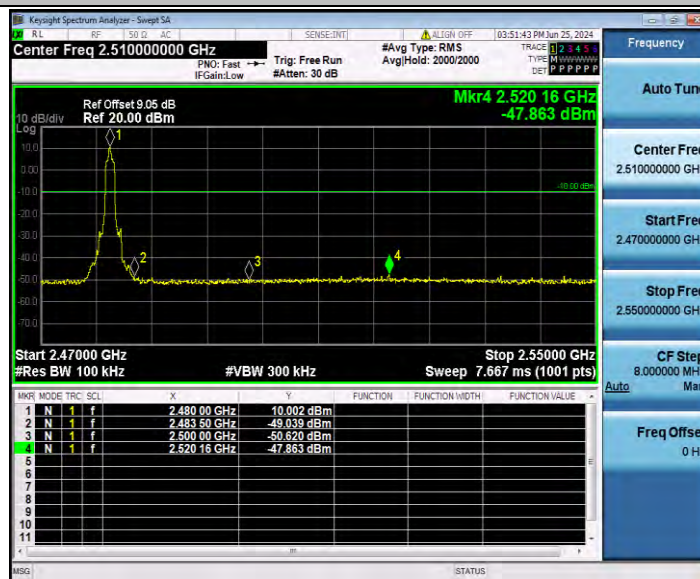
DH1_Ant1_High_2480



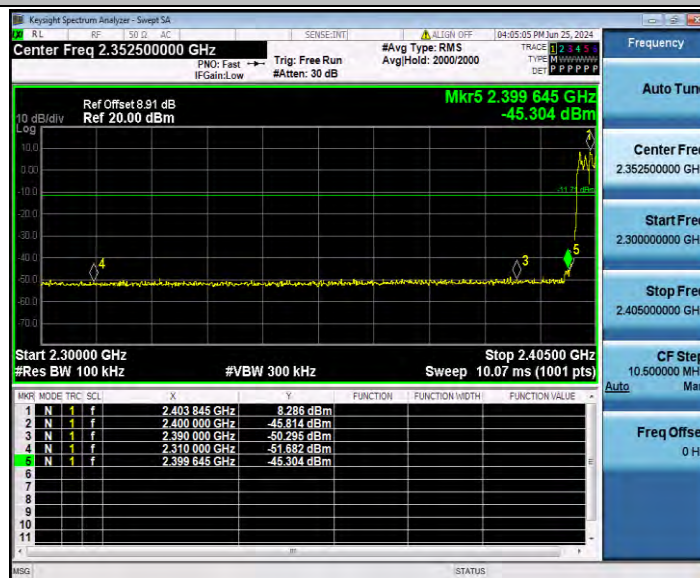
DH1_Ant1_Low_Hop_2402



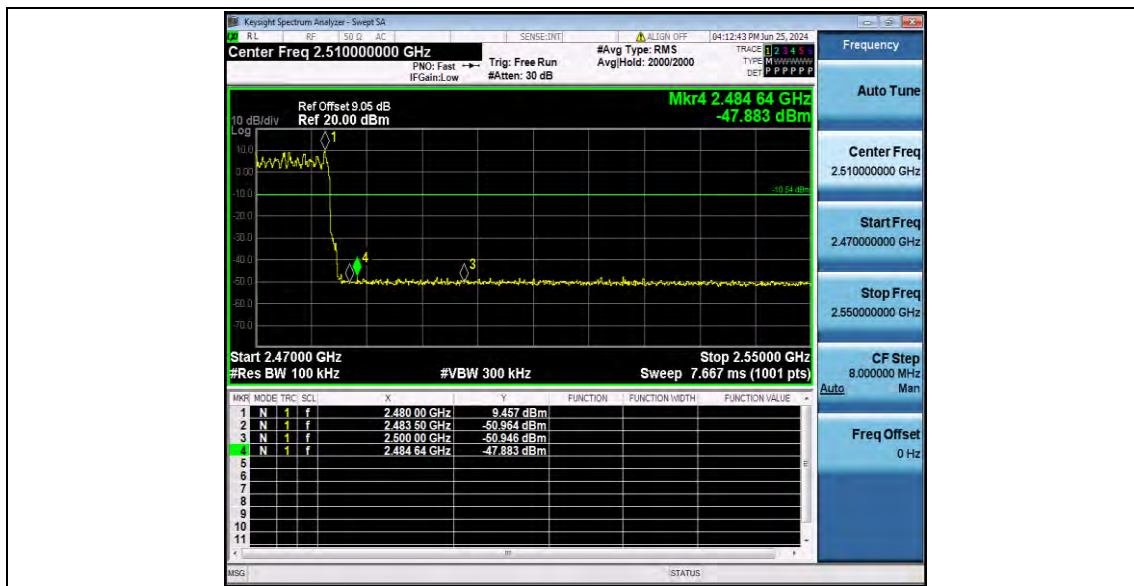
2DH1_Ant1_High_2480



2DH1_Ant1_Low_Hop_2402



2DH1_Ant1_High_Hop_2480

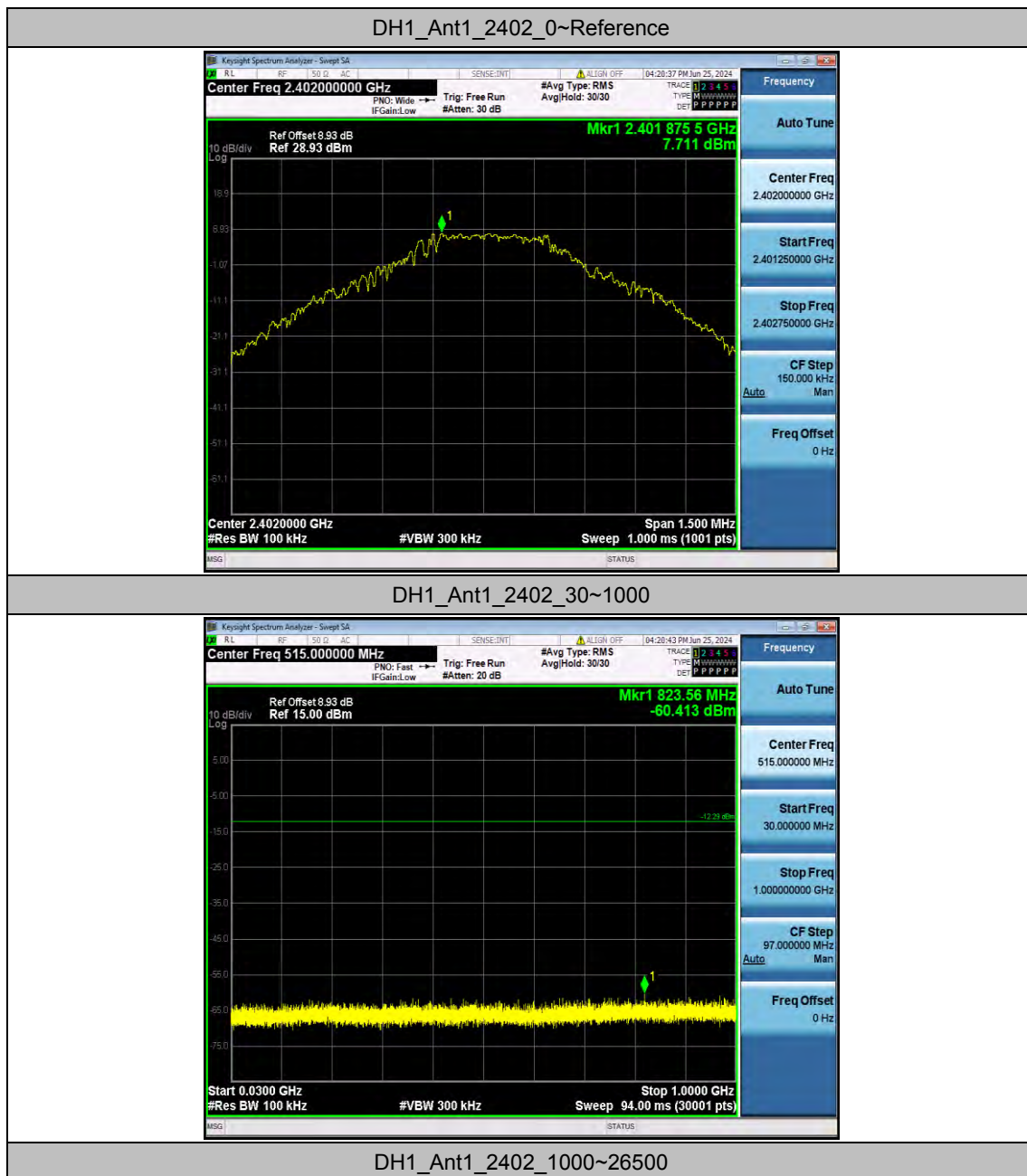


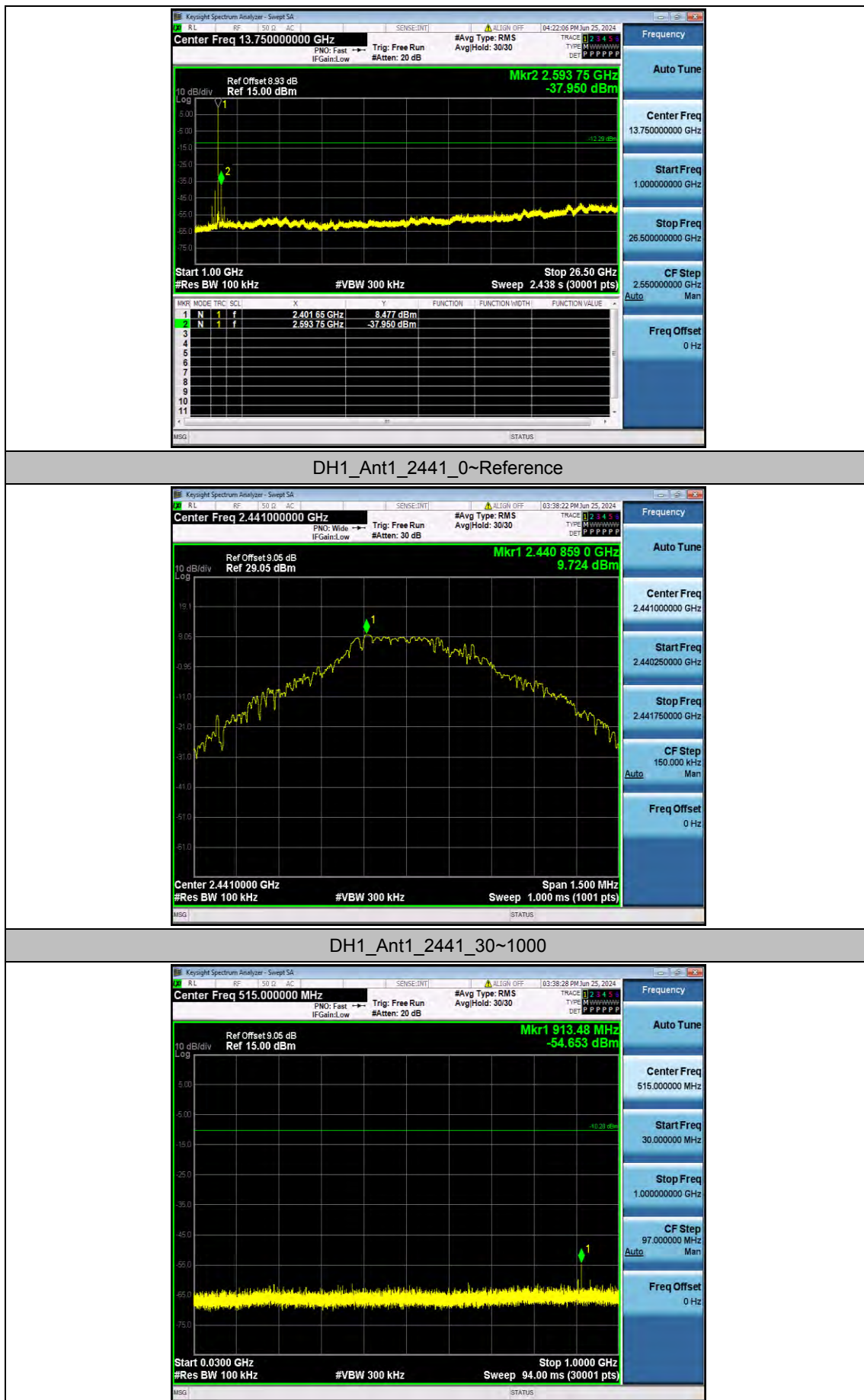
Appendix A.8: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	7.71	7.71	---	PASS
			30~1000	7.71	-60.41	≤ -12.29	PASS
			1000~26500	7.71	-37.95	≤ -12.29	PASS
		2441	Reference	9.72	9.72	---	PASS
			30~1000	9.72	-54.65	≤ -10.28	PASS
			1000~26500	9.72	-37.72	≤ -10.28	PASS
		2480	Reference	8.84	8.84	---	PASS
			30~1000	8.84	-60.08	≤ -11.16	PASS
			1000~26500	8.84	-38.45	≤ -11.16	PASS
2DH1	Ant1	2402	Reference	8.30	8.30	---	PASS
			30~1000	8.30	-44.84	≤ -11.7	PASS
			1000~26500	8.30	-36.62	≤ -11.7	PASS
		2441	Reference	9.72	9.72	---	PASS
			30~1000	9.72	-60.31	≤ -10.28	PASS
			1000~26500	9.72	-38.35	≤ -10.28	PASS
		2480	Reference	9.47	9.47	---	PASS
			30~1000	9.47	-60.41	≤ -10.53	PASS
			1000~26500	9.47	-39.17	≤ -10.53	PASS

Test Graphs





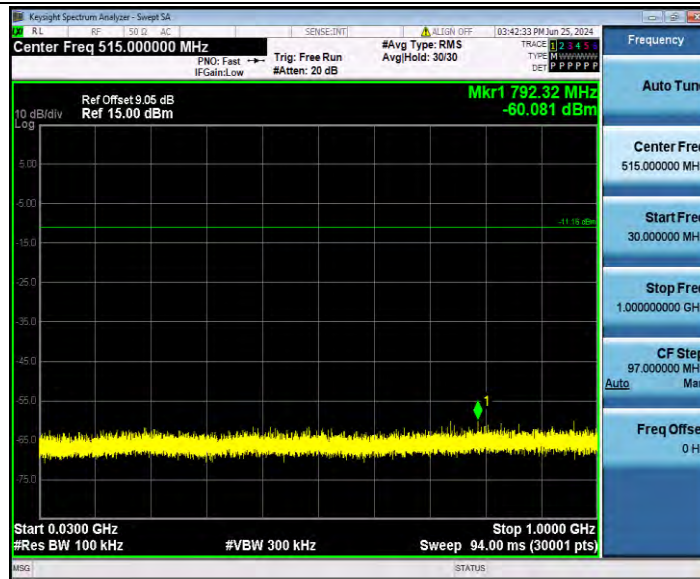
DH1_Ant1_2441_1000~26500



DH1_Ant1_2480_0~Reference



DH1_Ant1_2480_30~1000

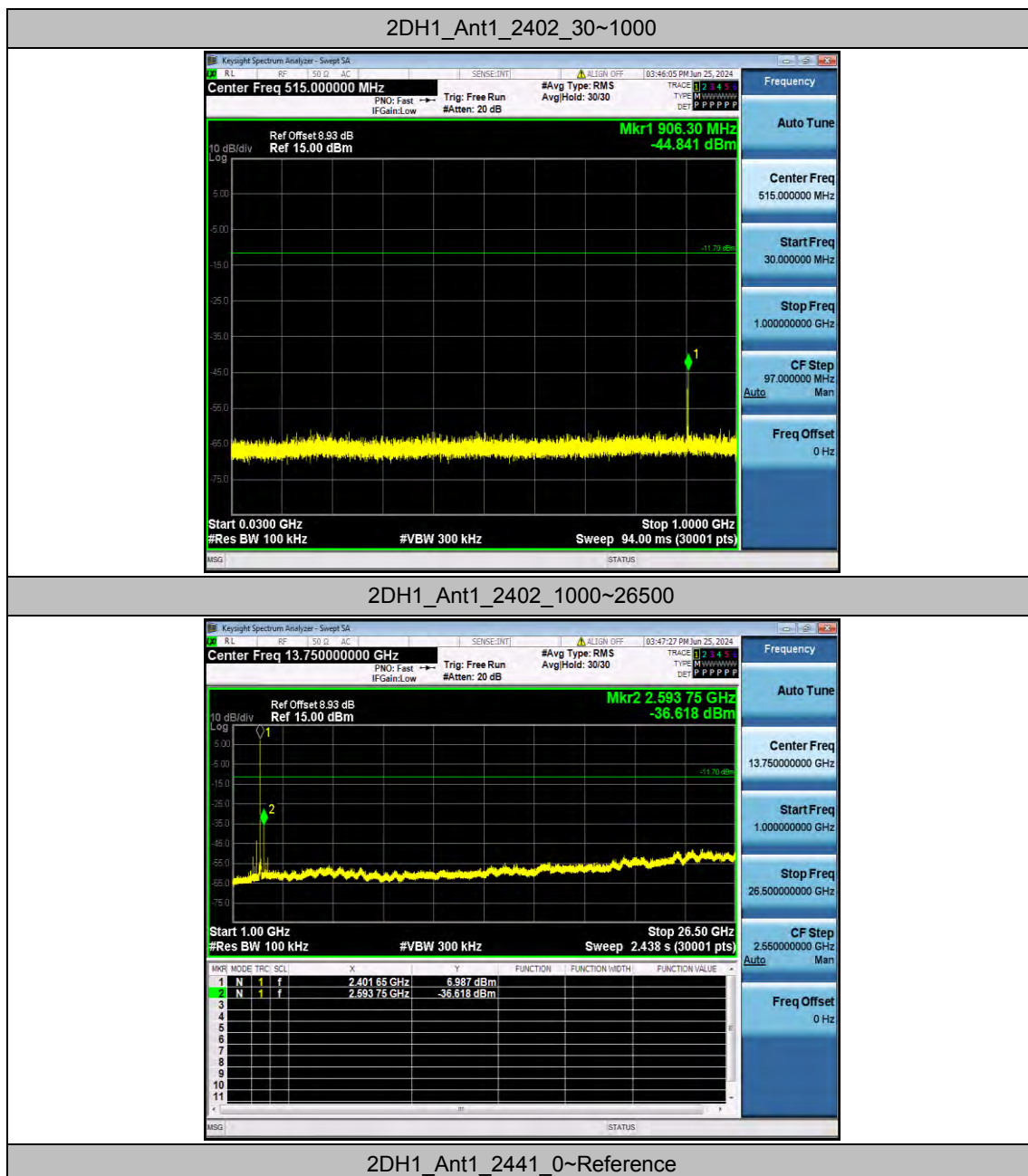


DH1_Ant1_2480_1000~26500



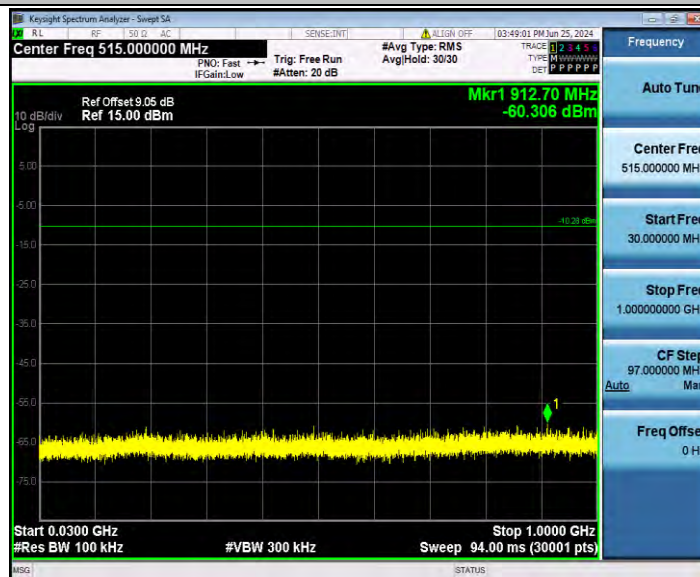
2DH1_Ant1_2402_0~Reference



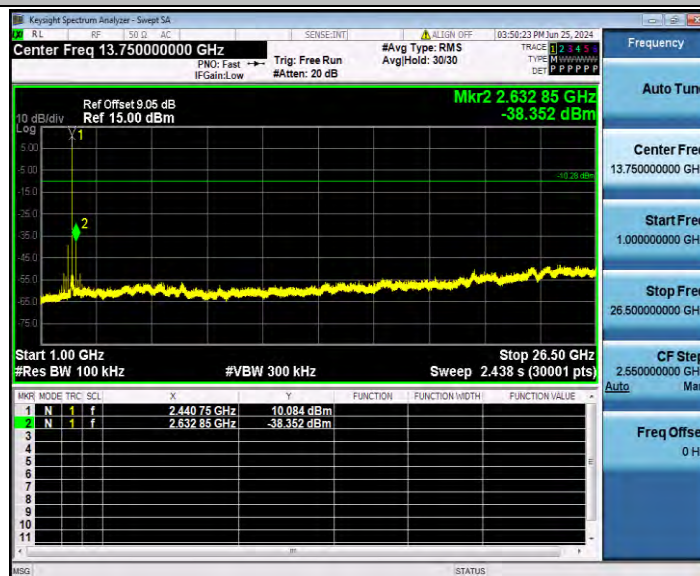




2DH1_Ant1_2441_30~1000



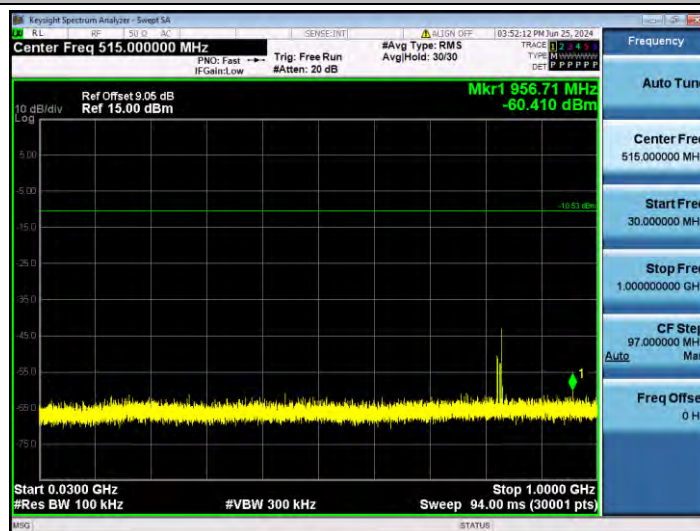
2DH1_Ant1_2441_1000~26500



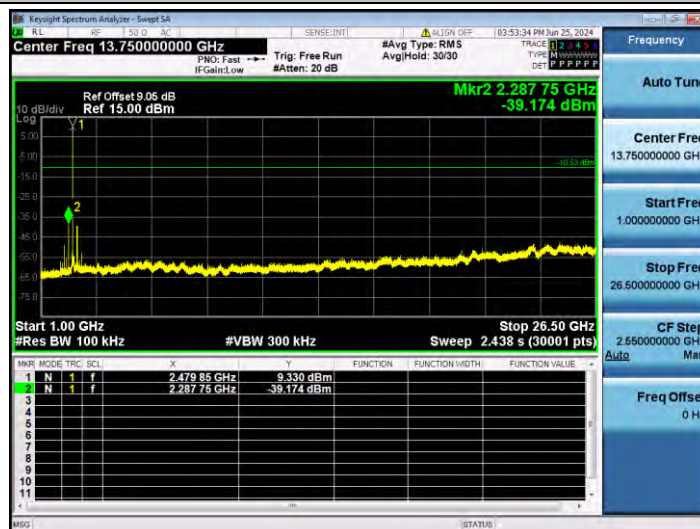
2DH1_Ant1_2480_0~Reference



2DH1_Ant1_2480_30~1000



2DH1_Ant1_2480_1000~26500



Appendix A.9: Emissions in Restricted Bands

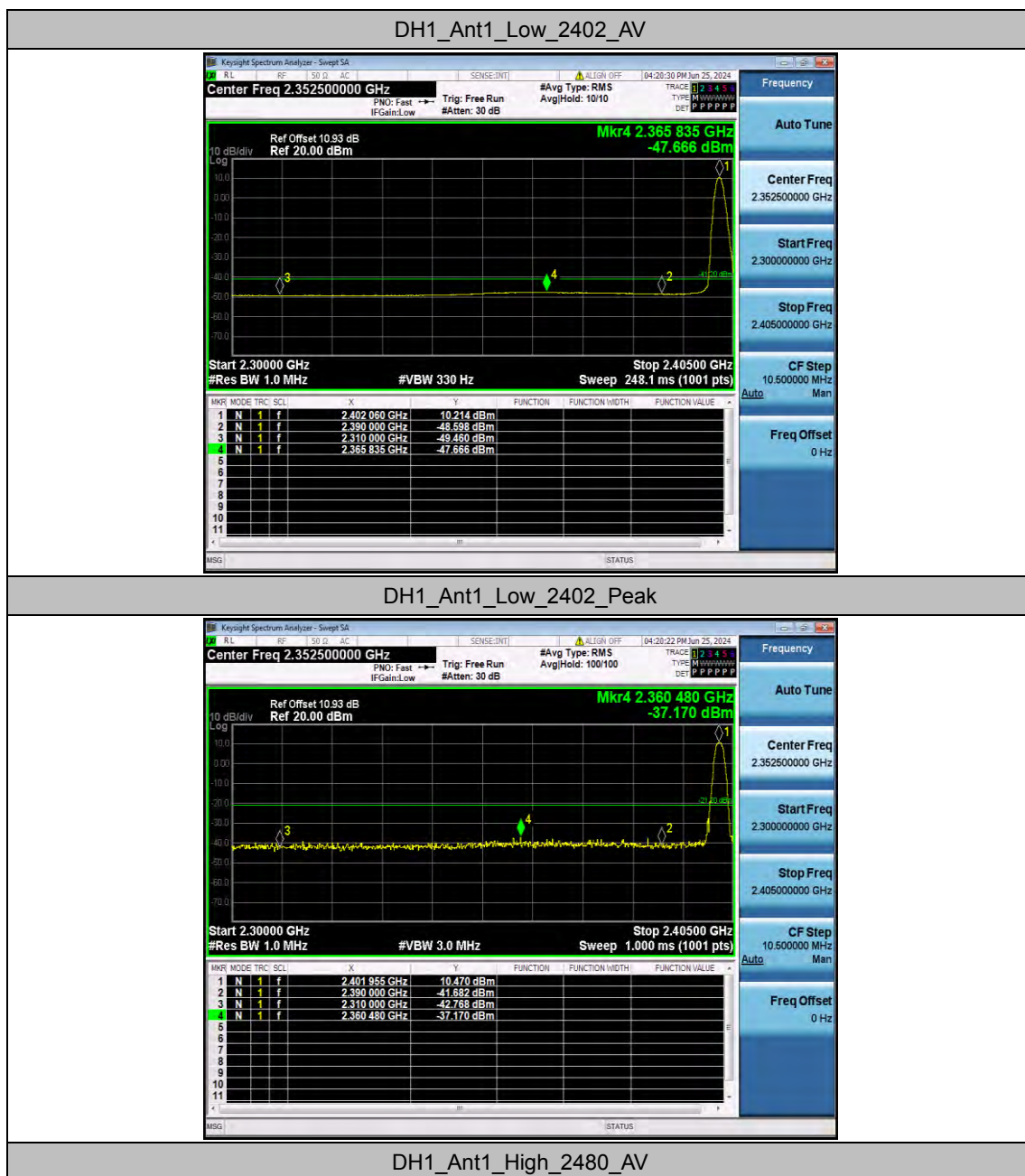
Test Result

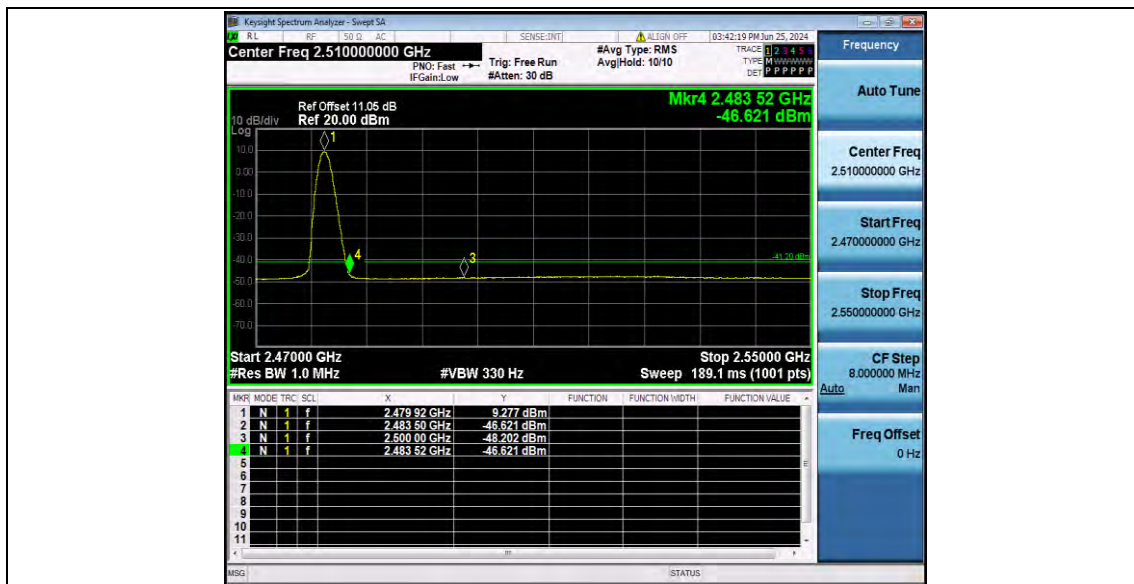
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH1	Ant1	Low	2402	AV	2310.000	-49.46	≤-41.20	45.74	≤54	PASS
				AV	2365.835	-47.67	≤-41.20	47.53	≤54	PASS
				AV	2390.000	-48.6	≤-41.20	46.60	≤54	PASS
				Peak	2310.000	-42.77	≤-21.20	52.43	≤74	PASS
				Peak	2360.480	-37.17	≤-21.20	58.03	≤74	PASS
				Peak	2390.000	-41.68	≤-21.20	53.52	≤74	PASS
		High	2480	AV	2483.500	-46.62	≤-41.20	48.58	≤54	PASS
				AV	2483.520	-46.62	≤-41.20	48.58	≤54	PASS
				AV	2500.000	-48.2	≤-41.20	47.00	≤54	PASS
				Peak	2483.500	-39.81	≤-21.20	55.39	≤74	PASS
				Peak	2491.600	-38.24	≤-21.20	56.96	≤74	PASS
				Peak	2500.000	-40.31	≤-21.20	54.89	≤74	PASS
2DH1	Ant1	Low	2402	AV	2310.000	-49.5	≤-41.20	45.70	≤54	PASS
				AV	2369.825	-48.15	≤-41.20	47.05	≤54	PASS
				AV	2390.000	-48.93	≤-41.20	46.27	≤54	PASS
				Peak	2310.000	-40.16	≤-21.20	55.04	≤74	PASS
				Peak	2378.330	-37.4	≤-21.20	57.80	≤74	PASS
				Peak	2390.000	-40.43	≤-21.20	54.77	≤74	PASS
		High	2480	AV	2483.500	-46.09	≤-41.20	49.11	≤54	PASS
				AV	2483.520	-46.09	≤-41.20	49.11	≤54	PASS
				AV	2500.000	-48.41	≤-41.20	46.79	≤54	PASS
				Peak	2483.500	-39.18	≤-21.20	56.02	≤74	PASS
				Peak	2483.760	-31.94	≤-21.20	63.26	≤74	PASS
				Peak	2500.000	-40.62	≤-21.20	54.58	≤74	PASS

Note:

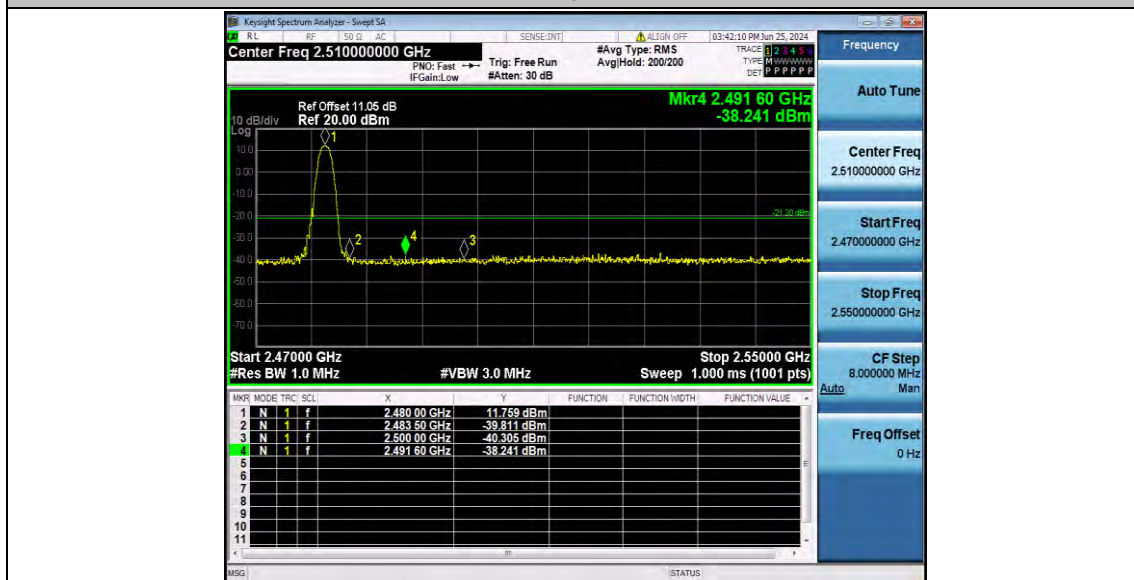
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

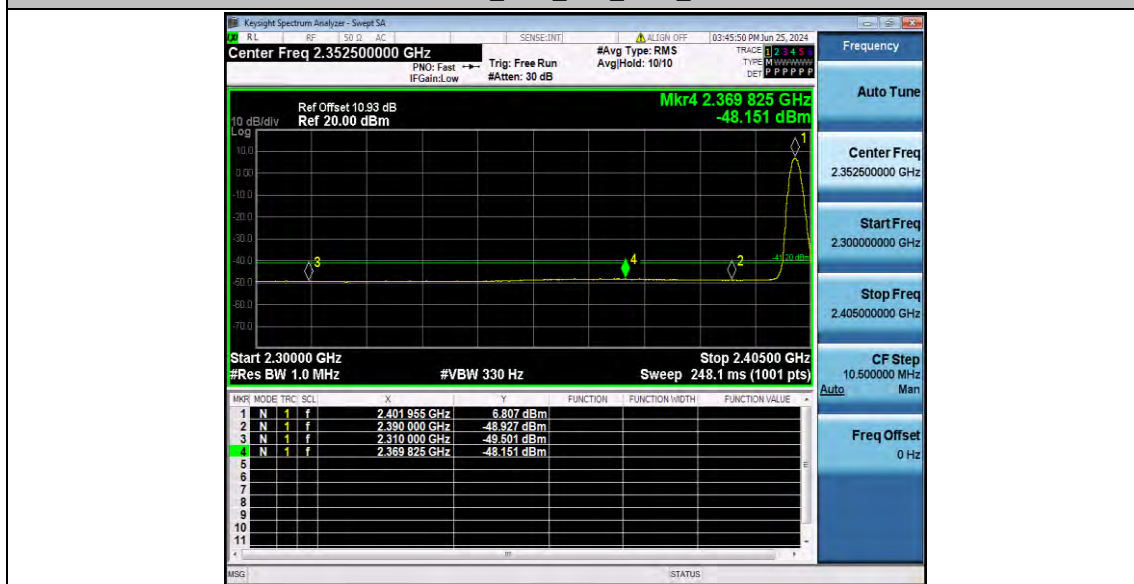




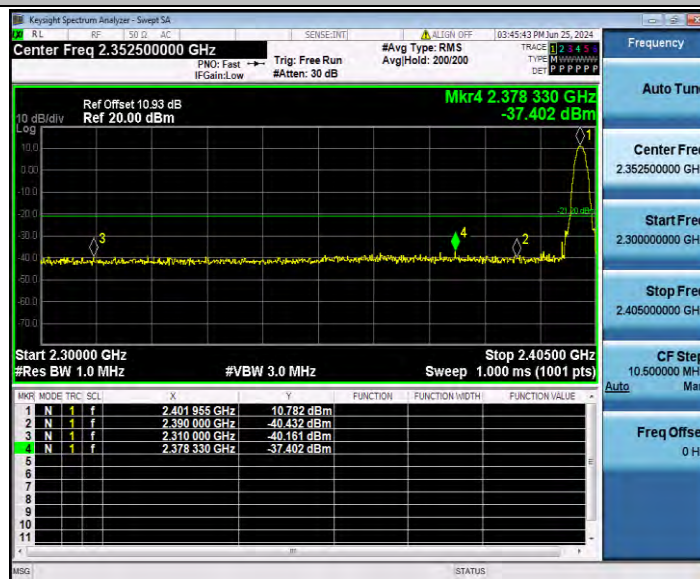
DH1_Ant1_High_2480_Peak



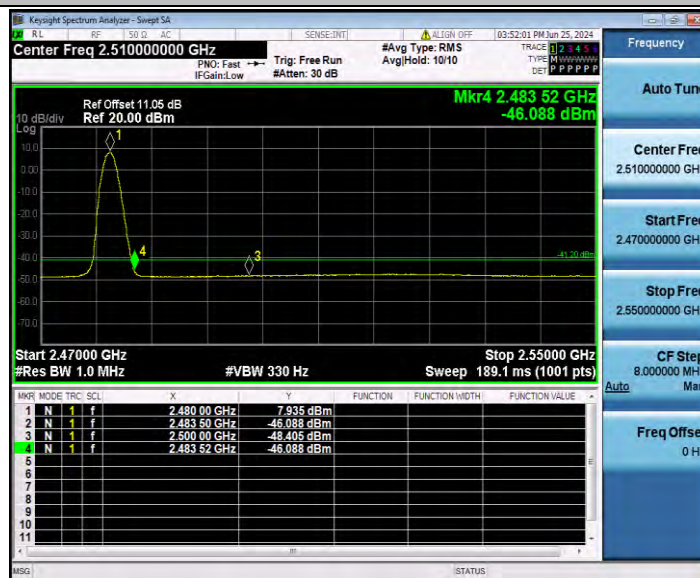
2DH1_Ant1_Low_2402_AV



2DH1_Ant1_Low_2402_Peak



2DH1_Ant1_High_2480_AV



2DH1_Ant1_High_2480_Peak

