

Case No. : <u>GTS20241101002-1-01</u>	
Ambient Condition: <u>23</u> °C, <u>49</u> %RH	
According Standard: ■Part15C	
Test Date: <u>2024.12.10</u>	Test Engineer: <u>Evan ouyang</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	0.939	2401.520	2402.459	---	---
		2441	0.939	2440.520	2441.459	---	---
		2480	0.930	2479.529	2480.459	---	---
2DH1	Ant1	2402	1.323	2401.316	2402.639	---	---
		2441	1.287	2440.322	2441.609	---	---
		2480	1.305	2479.316	2480.621	---	---
3DH1	Ant1	2402	1.269	2401.352	2402.621	---	---
		2441	1.293	2440.337	2441.630	---	---
		2480	1.281	2479.340	2480.621	---	---

Test Graphs

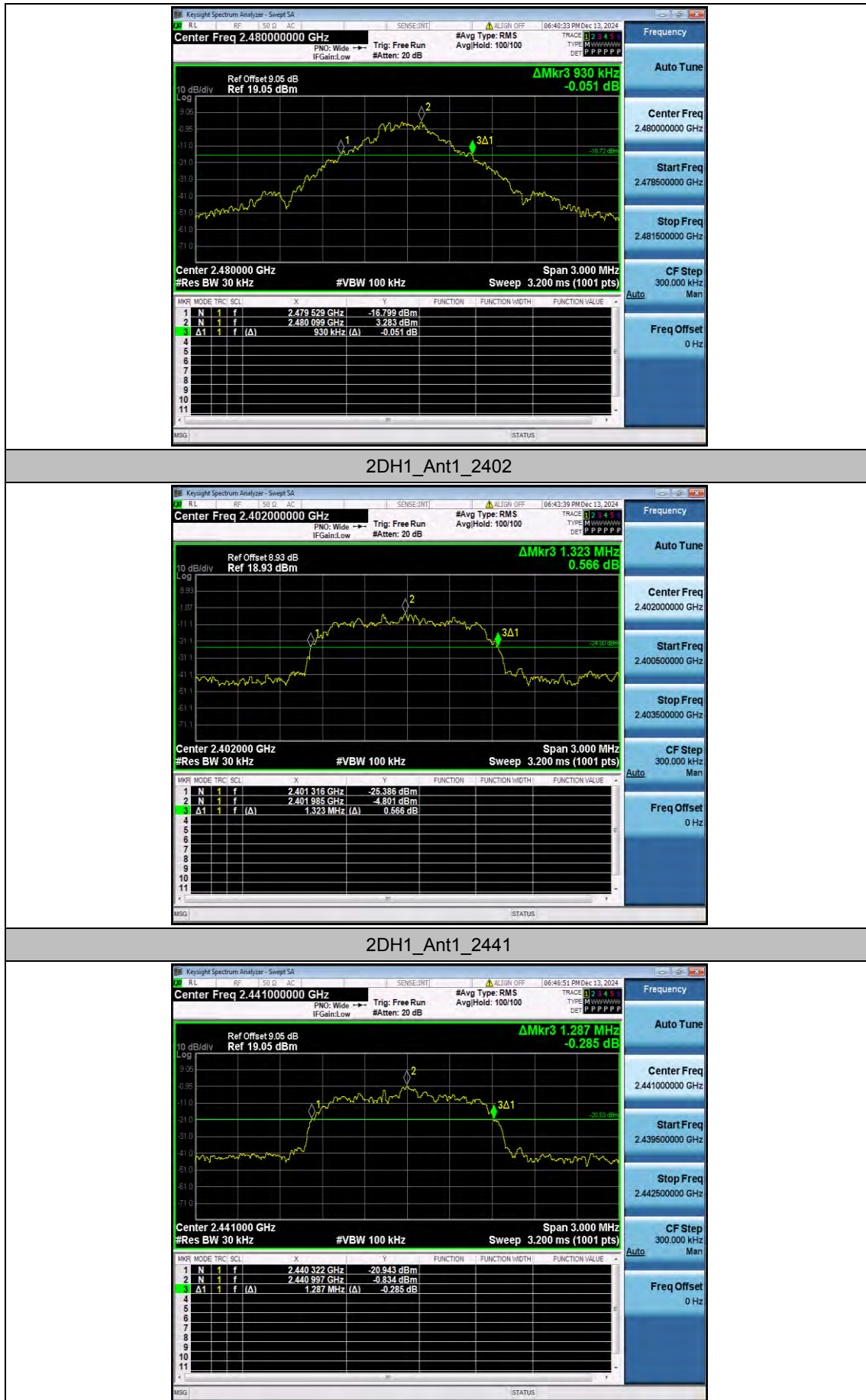
DH1_Ant1_2402



DH1_Ant1_2441



DH1_Ant1_2480



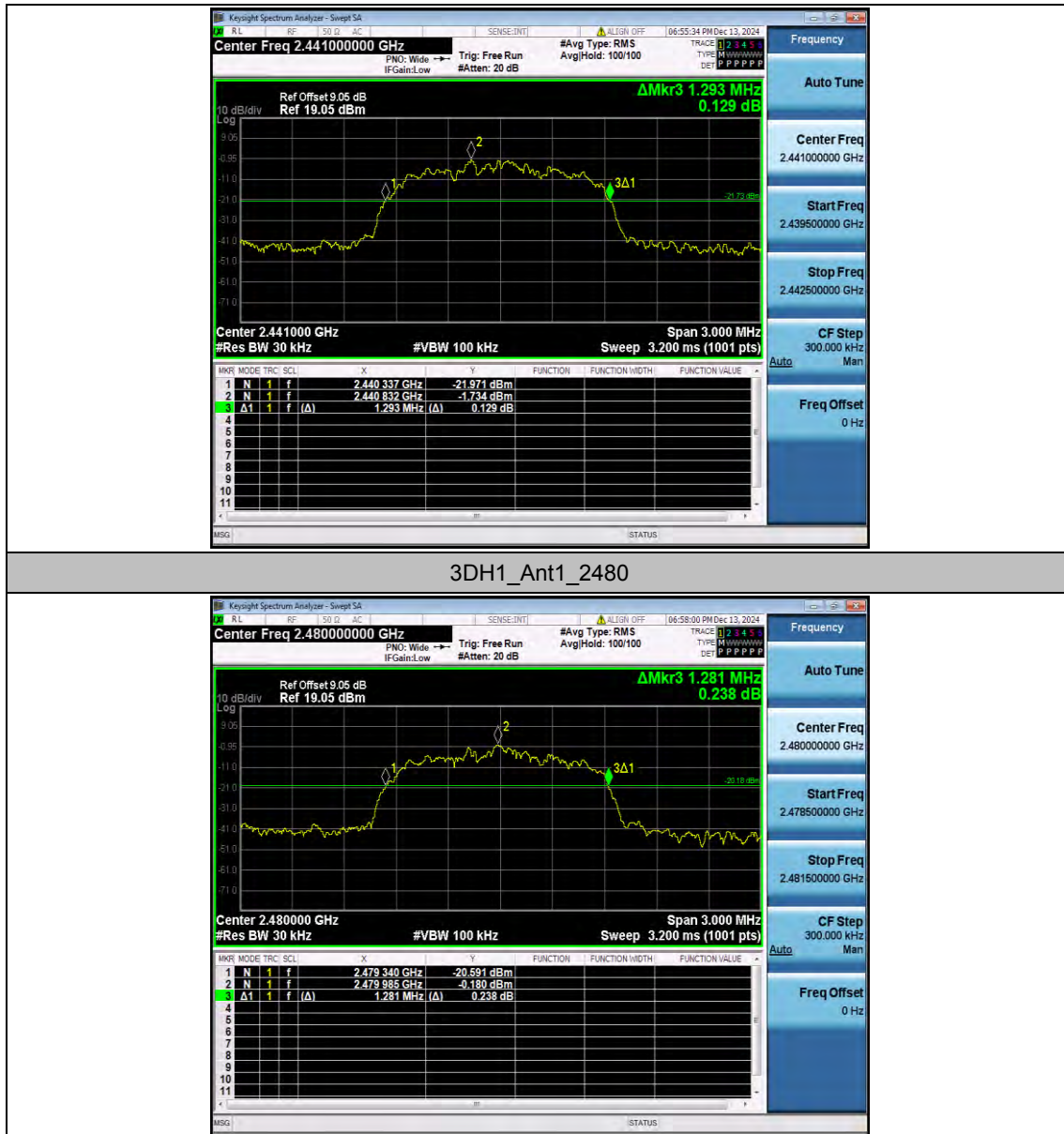
2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



Appendix A.2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.84571	2401.5653	2402.4110	---	---
		2441	0.85096	2440.5626	2441.4136	---	---
		2480	0.84505	2479.5614	2480.4064	---	---
2DH1	Ant1	2402	1.1828	2401.3878	2402.5706	---	---
		2441	1.1762	2440.3905	2441.5667	---	---
		2480	1.1800	2479.3859	2480.5659	---	---
3DH1	Ant1	2402	1.1640	2401.4149	2402.5789	---	---
		2441	1.1638	2440.4138	2441.5776	---	---
		2480	1.1654	2479.4107	2480.5761	---	---

Test Graphs

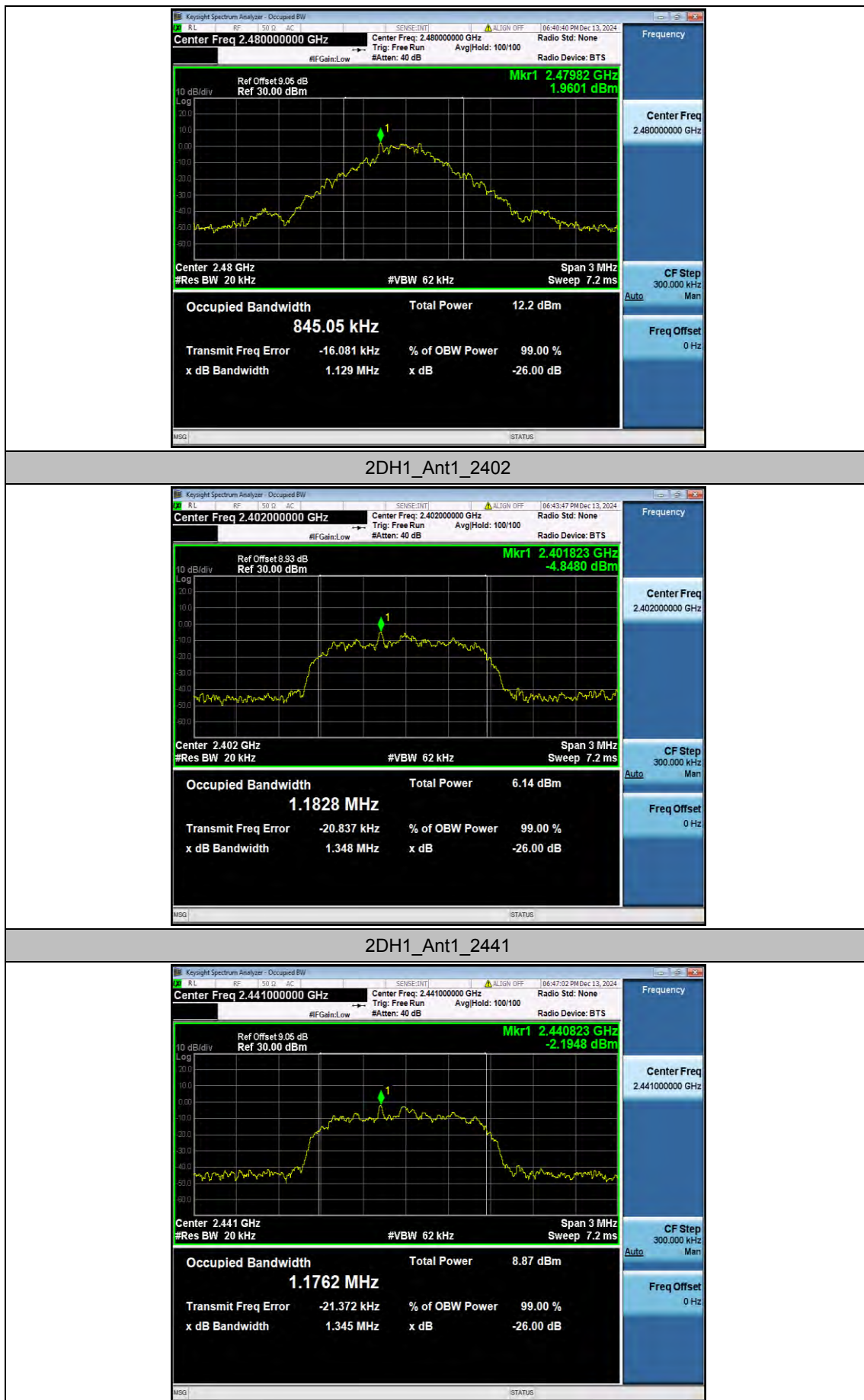
DH1_Ant1_2402



DH1_Ant1_2441



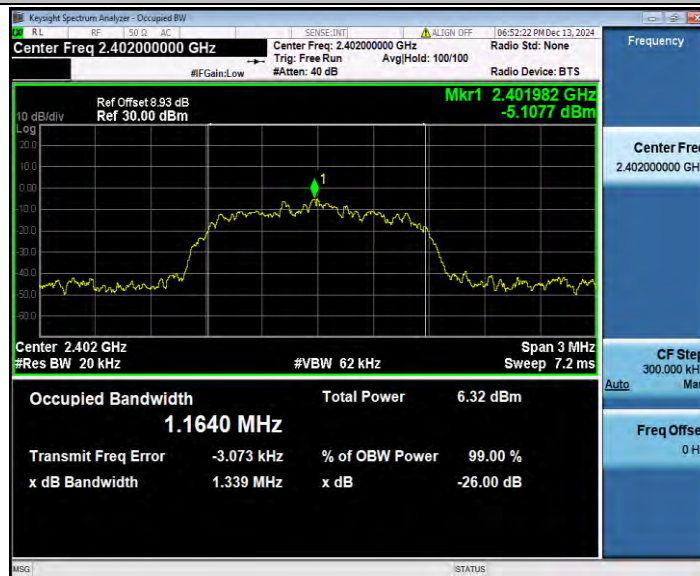
DH1_Ant1_2480



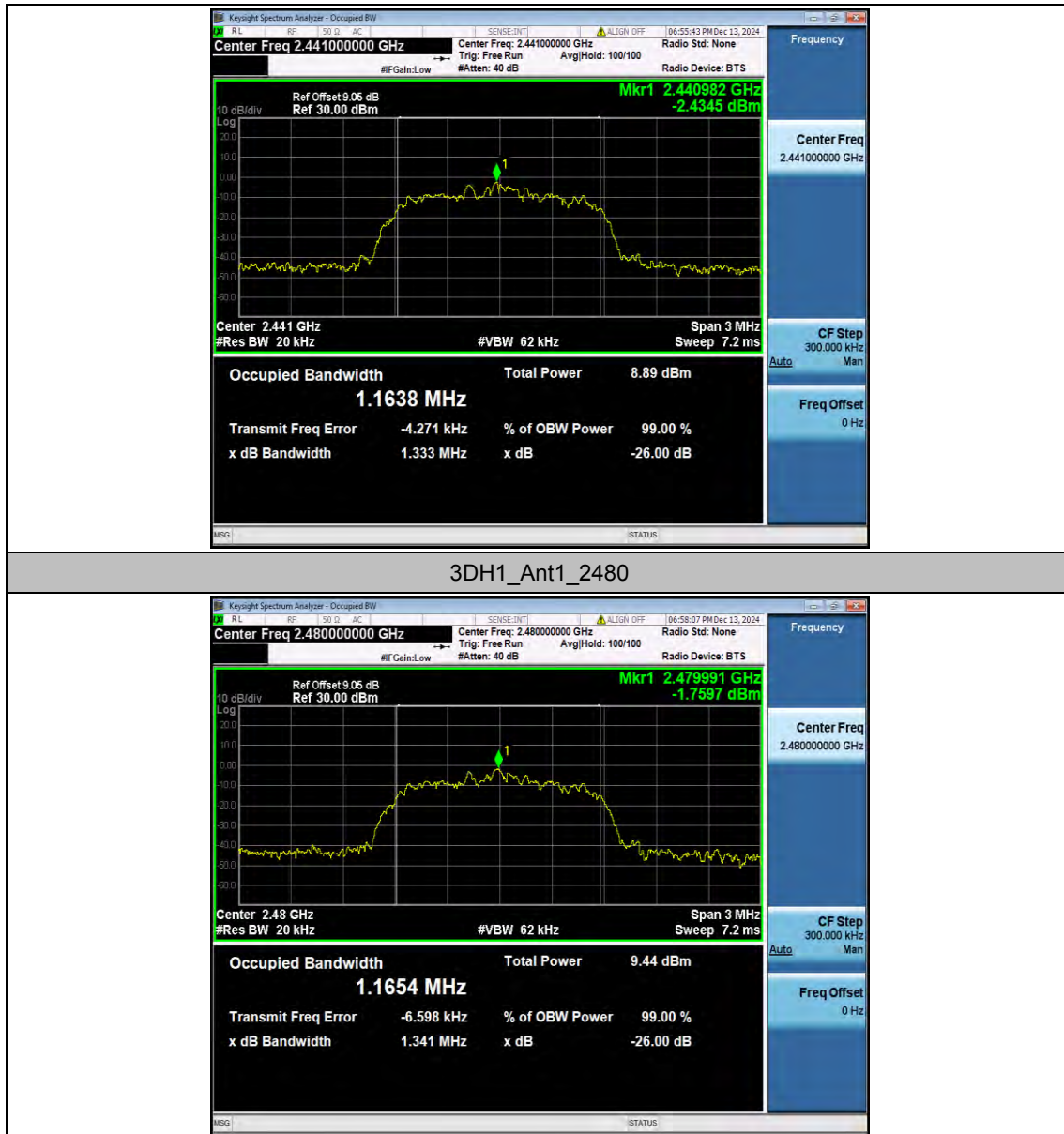
2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



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	3.80	≤20.97	PASS
		2441	7.22	≤20.97	PASS
		2480	7.42	≤20.97	PASS
2DH1	Ant1	2402	3.09	≤20.97	PASS
		2441	5.54	≤20.97	PASS
		2480	5.84	≤20.97	PASS
3DH1	Ant1	2402	3.56	≤20.97	PASS
		2441	5.92	≤20.97	PASS
		2480	6.20	≤20.97	PASS

Appendix A.4: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	0.672	≥ 0.626	PASS
		Hop_2441	1.002	≥ 0.626	PASS
		Hop_2480	1.006	≥ 0.626	PASS
2DH1	Ant1	Hop_2402	0.99	≥ 0.882	PASS
		Hop_2441	0.992	≥ 0.882	PASS
		Hop_2480	1.006	≥ 0.882	PASS
3DH1	Ant1	Hop_2402	1.01	≥ 0.862	PASS
		Hop_2441	1.016	≥ 0.862	PASS
		Hop_2480	1.176	≥ 0.862	PASS

Test Graphs

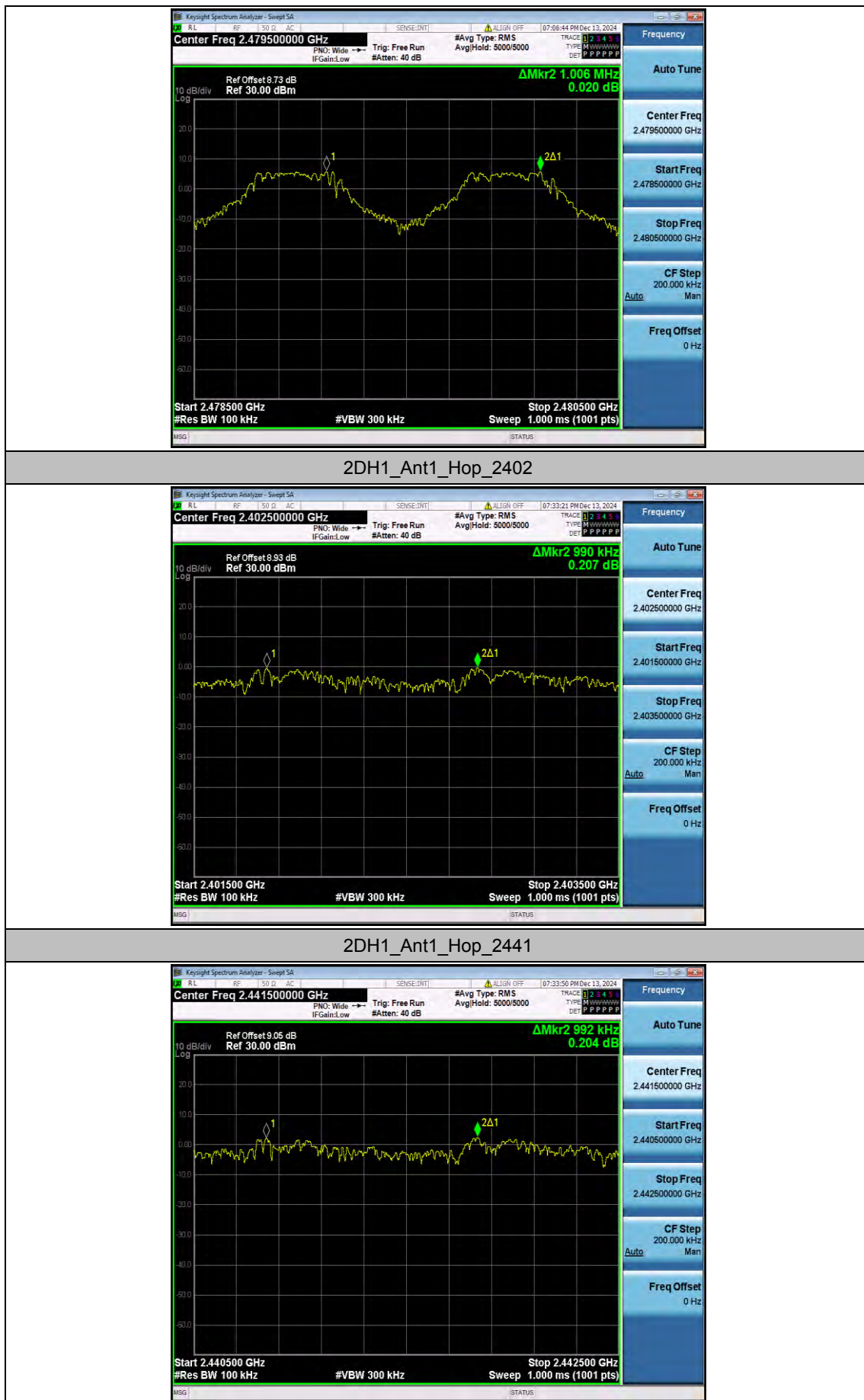
DH1_Ant1_Hop_2402



DH1_Ant1_Hop_2441



DH1_Ant1_Hop_2480



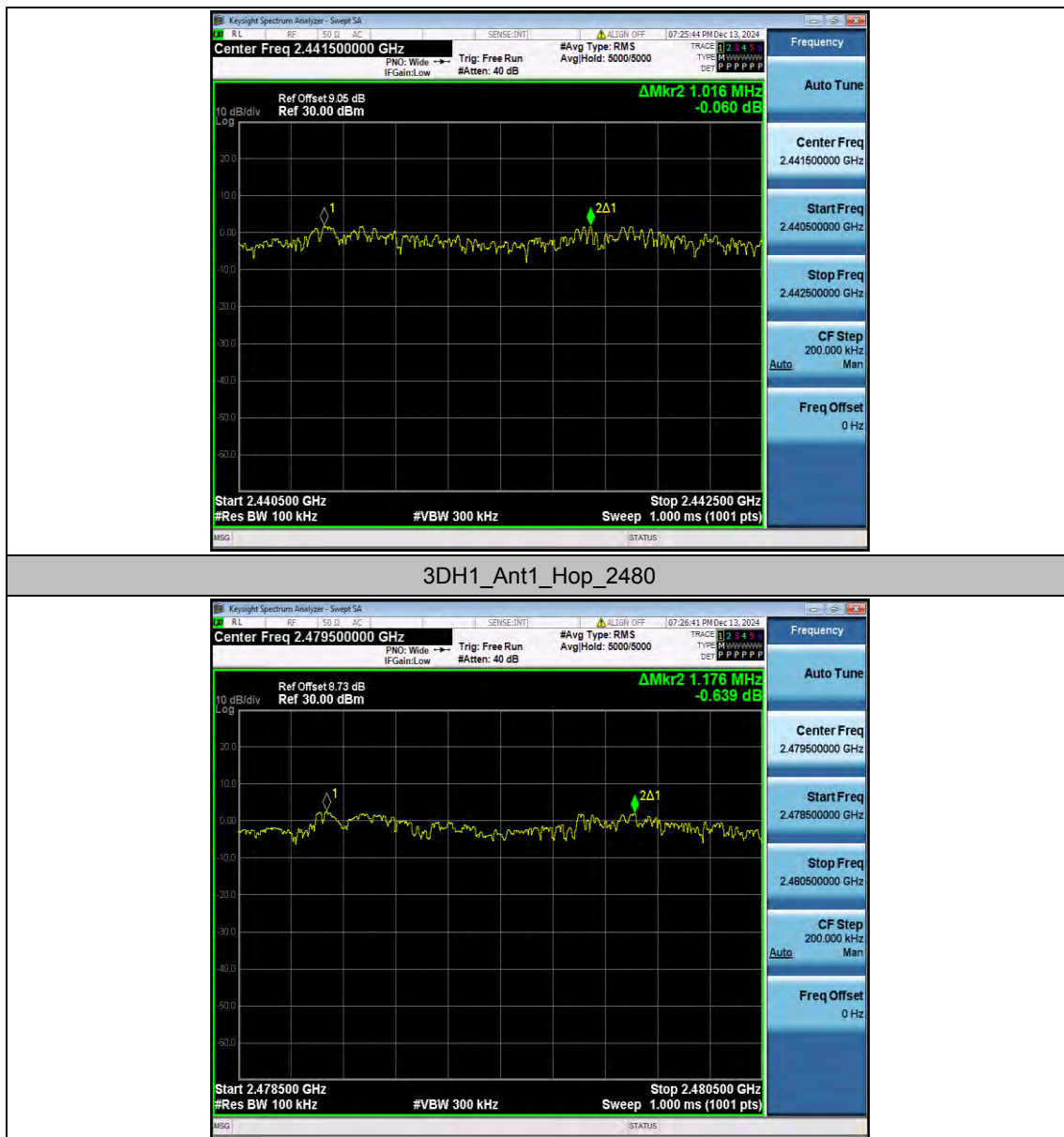
2DH1_Ant1_Hop_2480



3DH1_Ant1_Hop_2402



3DH1_Ant1_Hop_2441

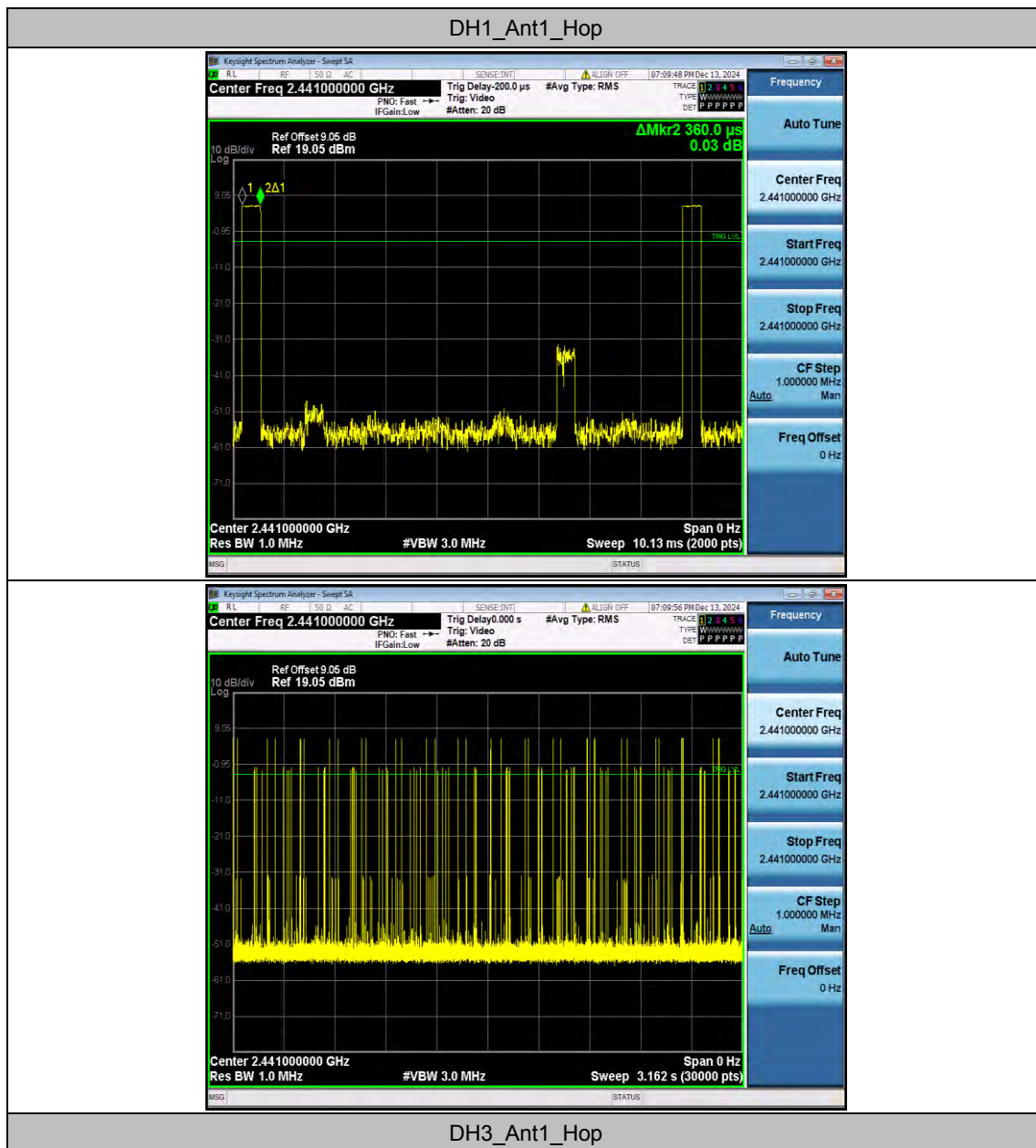


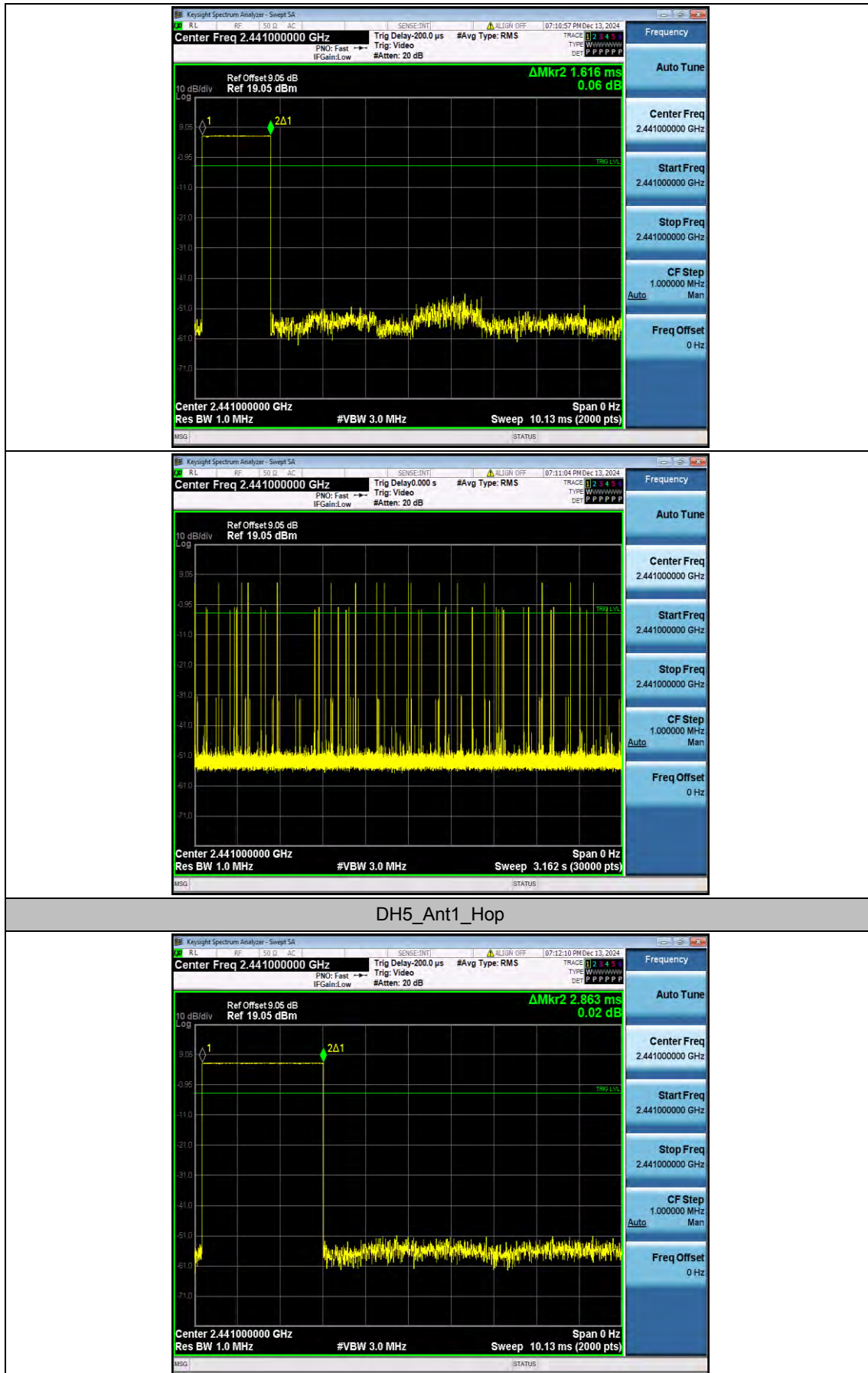
Appendix A.5: Time of occupancy

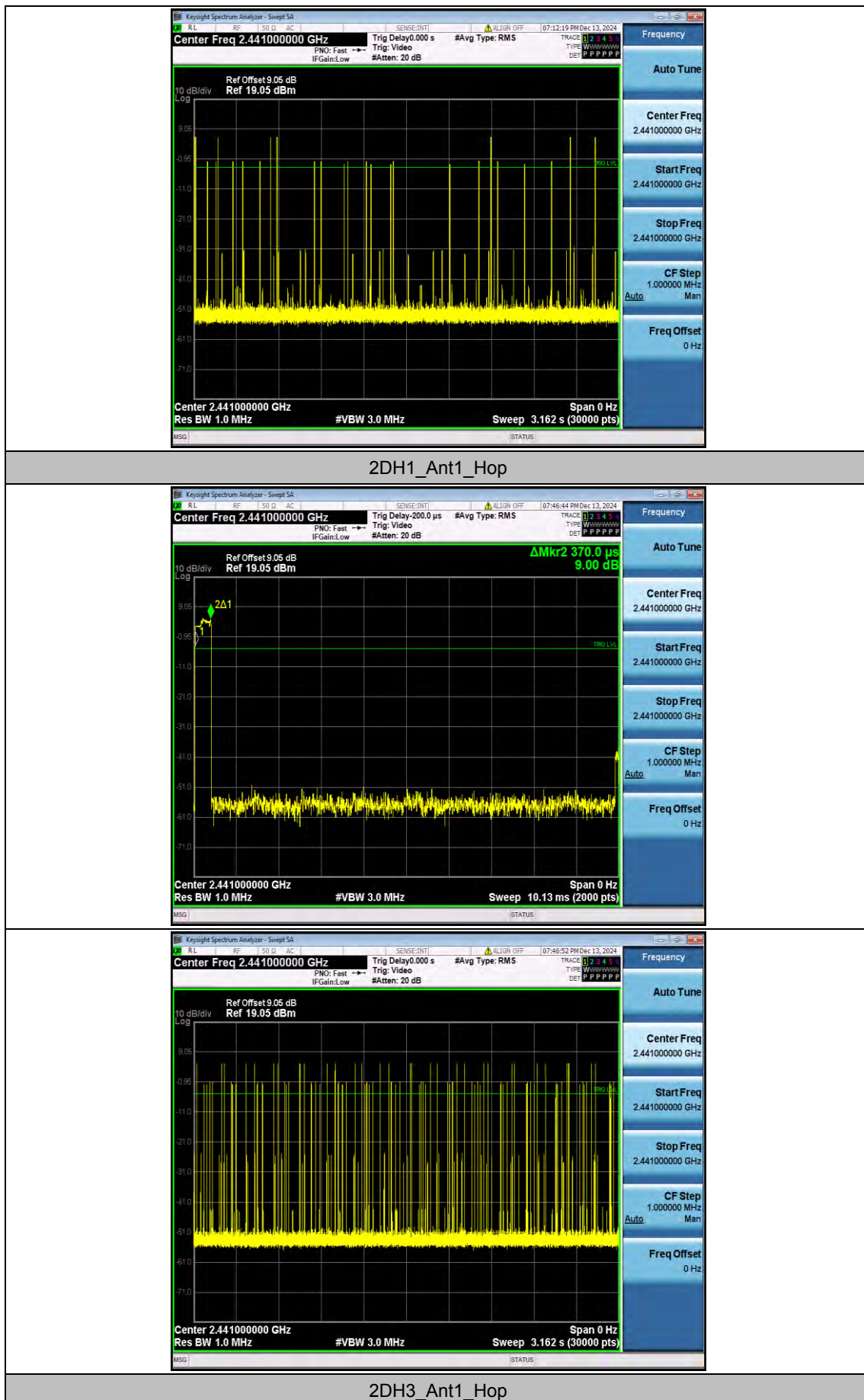
Test Result

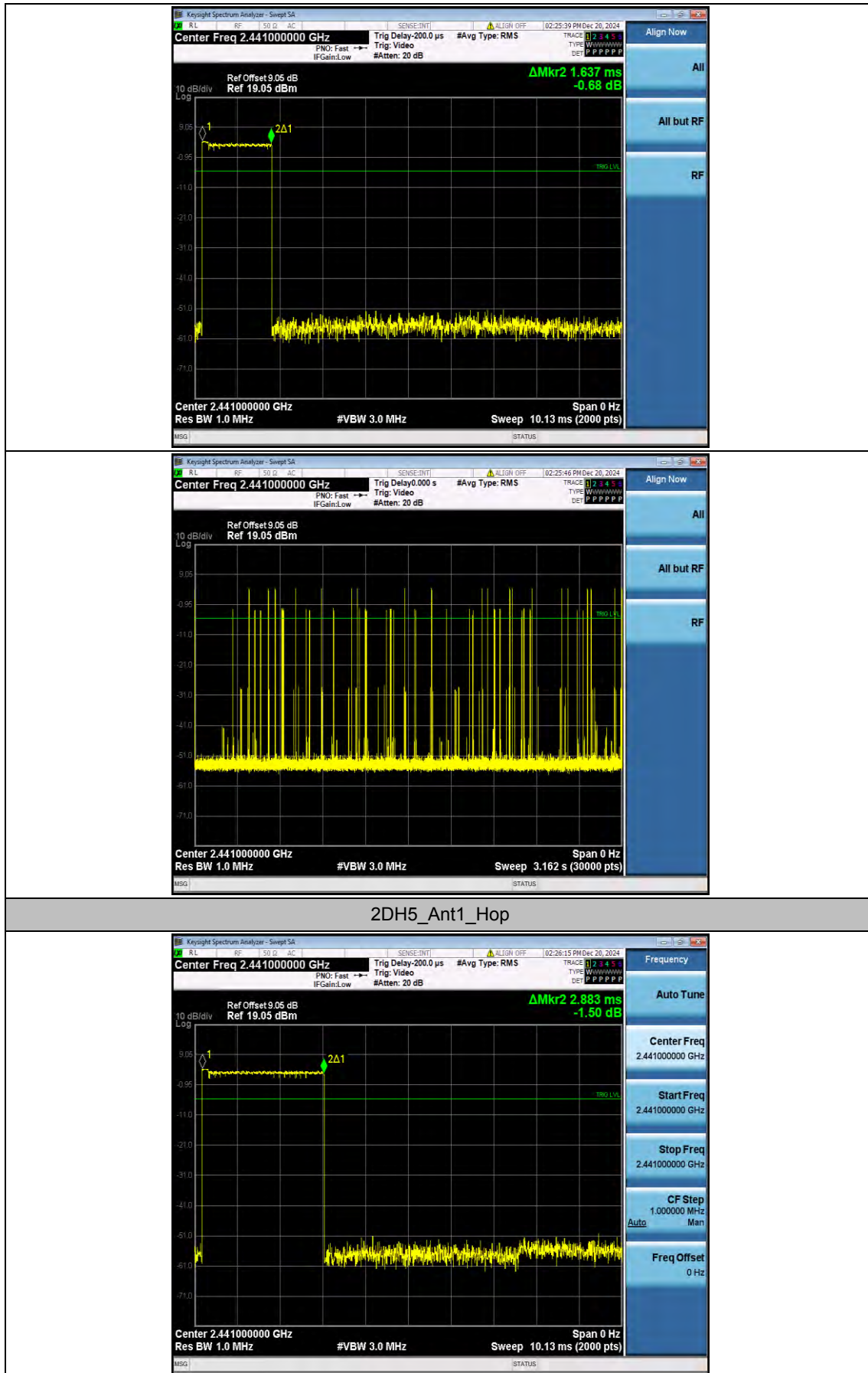
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.360	320	0.115	≤0.4	PASS
DH3	Ant1	Hop	1.616	170	0.275	≤0.4	PASS
DH5	Ant1	Hop	2.863	80	0.229	≤0.4	PASS
2DH1	Ant1	Hop	0.370	510	0.189	≤0.4	PASS
2DH3	Ant1	Hop	1.637	210	0.344	≤0.4	PASS
2DH5	Ant1	Hop	2.883	130	0.375	≤0.4	PASS
3DH1	Ant1	Hop	0.365	530	0.193	≤0.4	PASS
3DH3	Ant1	Hop	1.637	170	0.278	≤0.4	PASS
3DH5	Ant1	Hop	2.883	130	0.375	≤0.4	PASS

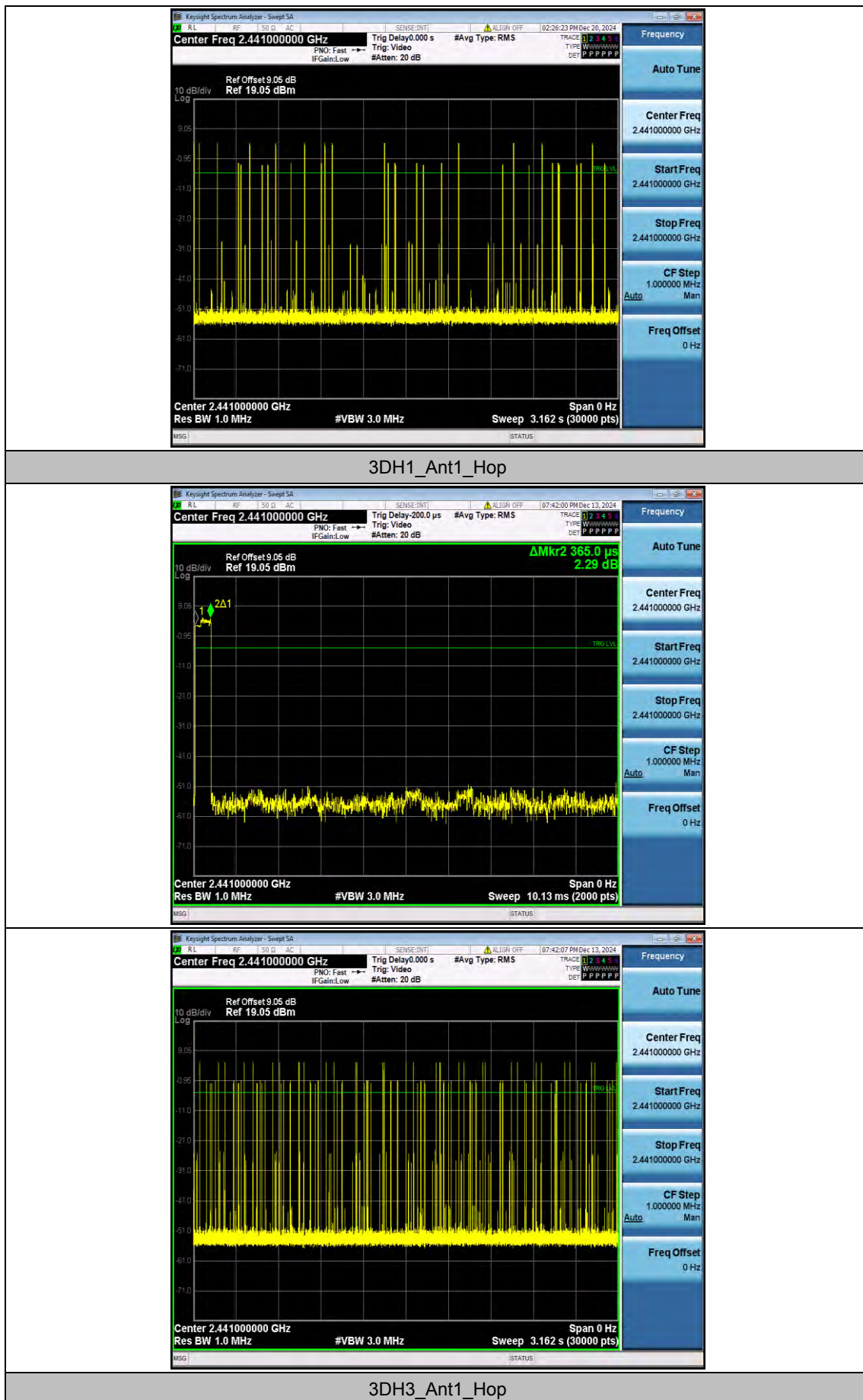
Test Graphs

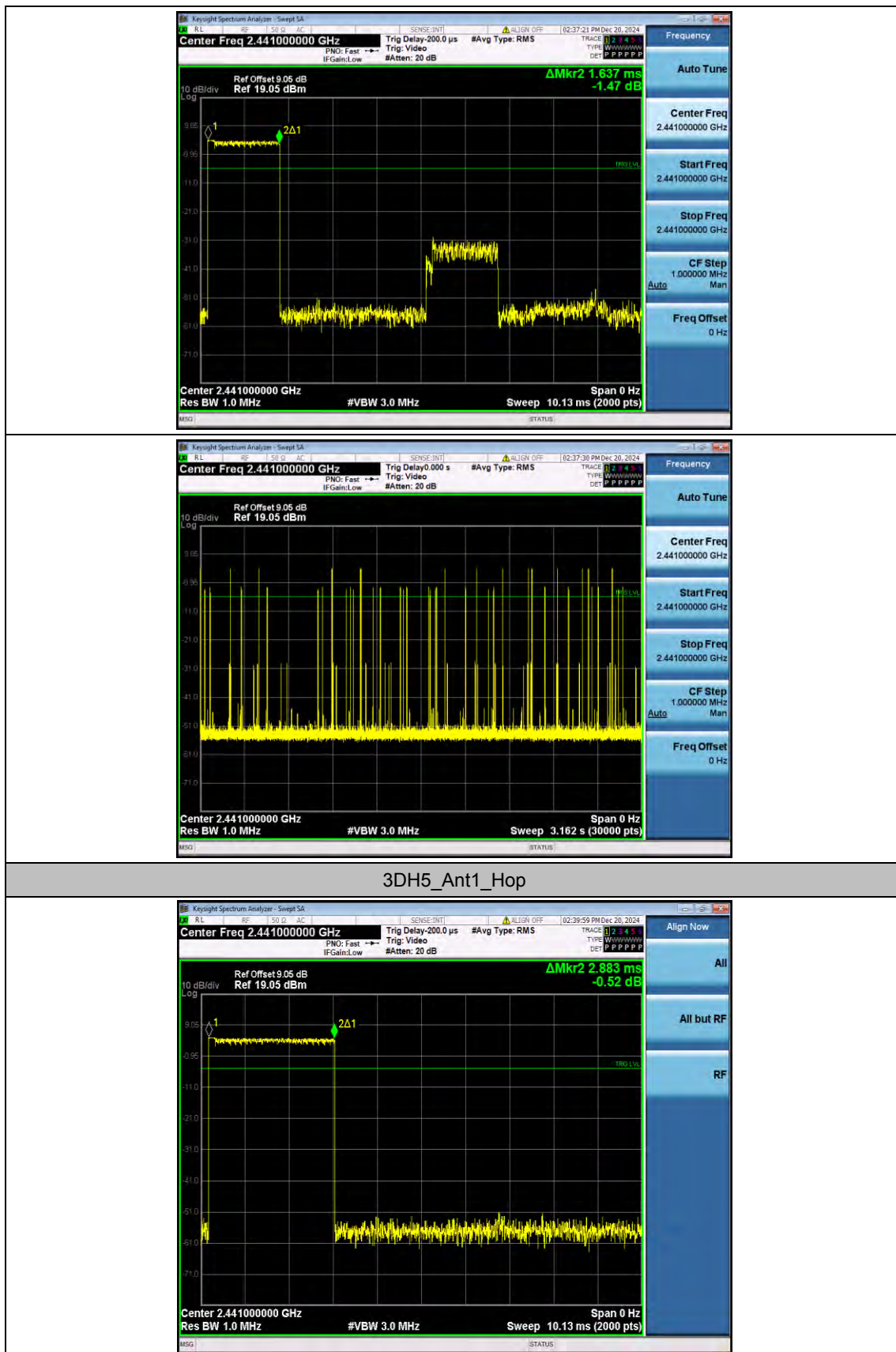


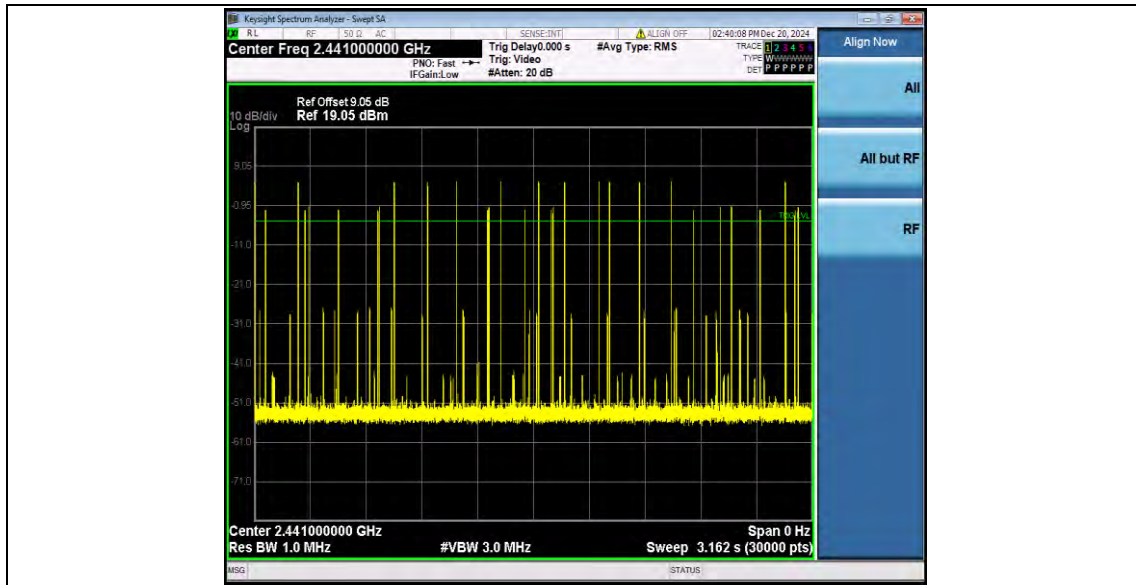










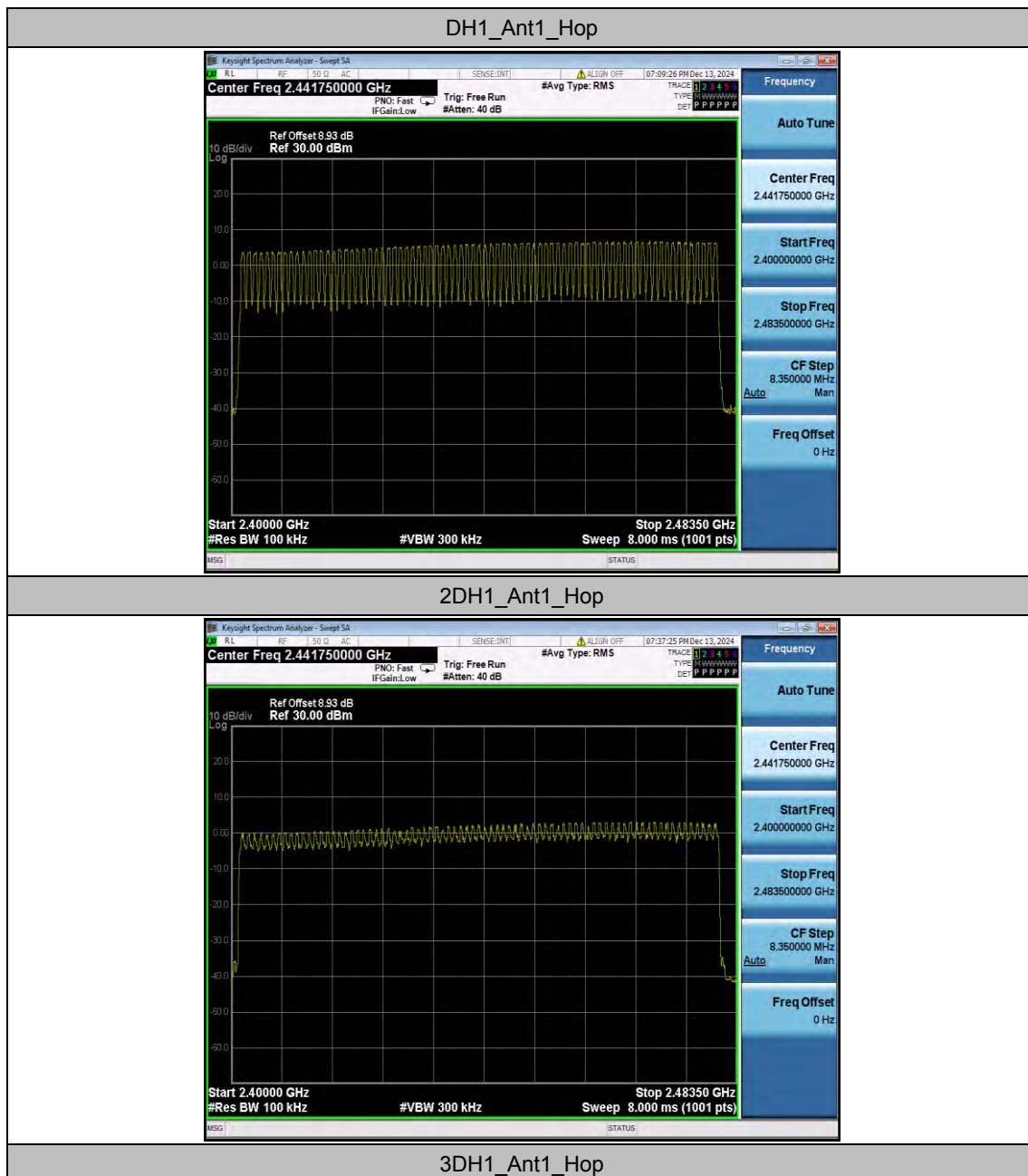


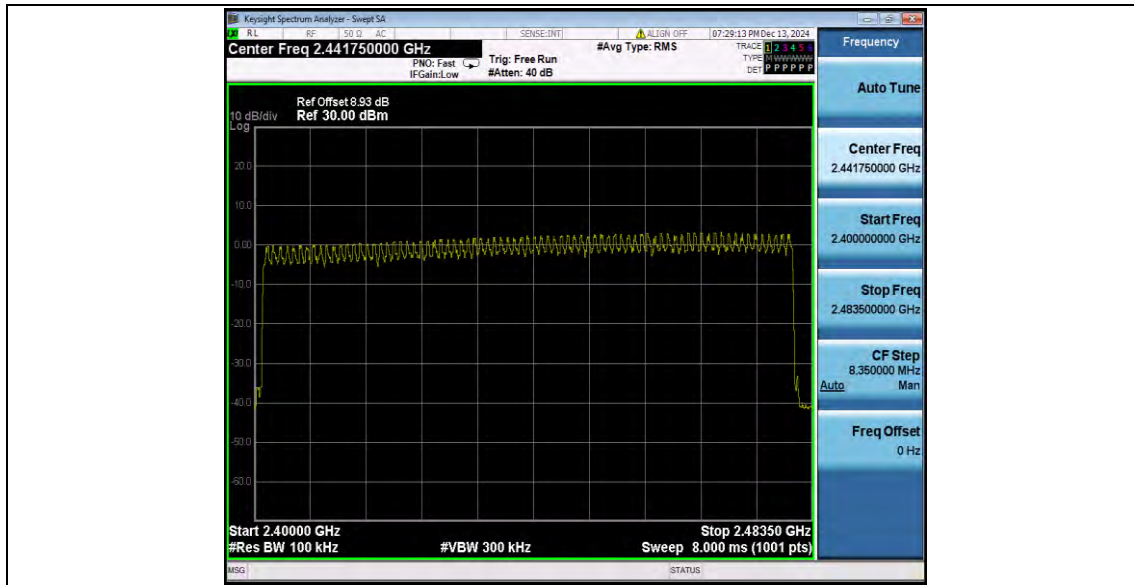
Appendix A.6: Number of hopping channels

Test Result

TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH1	Ant1	Hop	79	≥15	PASS
2DH1	Ant1	Hop	79	≥15	PASS
3DH1	Ant1	Hop	79	≥15	PASS

Test Graphs





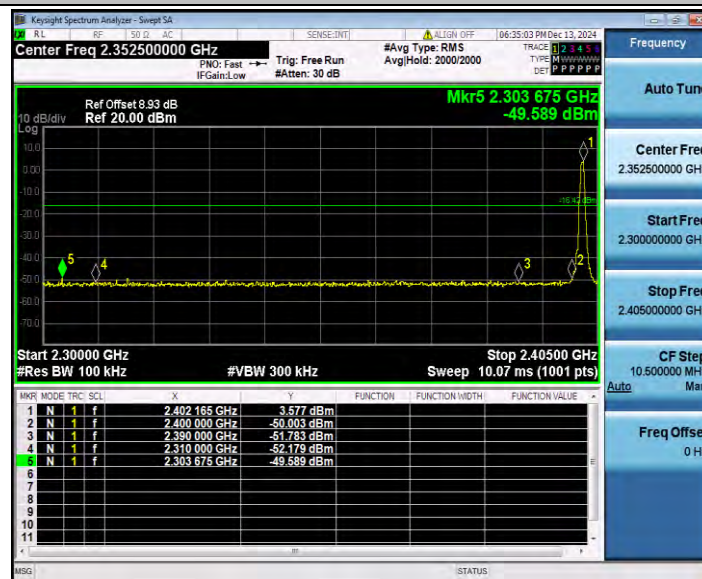
Appendix A.7: Band edge measurements

Test Result

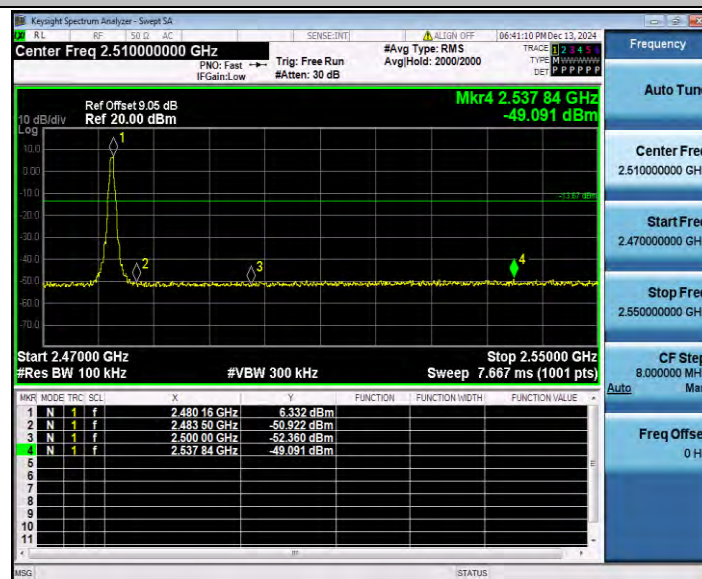
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	3.58	-49.59	≤ -16.42	PASS
		High	2480	6.33	-49.09	≤ -13.67	PASS
		Low	Hop_2402	3.63	-49.95	≤ -16.37	PASS
		High	Hop_2480	6.55	-48.96	≤ -13.45	PASS
2DH1	Ant1	Low	2402	-0.56	-49.34	≤ -20.56	PASS
		High	2480	2.75	-48.15	≤ -17.25	PASS
		Low	Hop_2402	3.63	-49.03	≤ -16.37	PASS
		High	Hop_2480	3.02	-48.85	≤ -16.98	PASS
3DH1	Ant1	Low	2402	-0.30	-49.5	≤ -20.3	PASS
		High	2480	2.98	-48.99	≤ -17.02	PASS
		Low	Hop_2402	-0.33	-49.49	≤ -20.33	PASS
		High	Hop_2480	3.32	-48.53	≤ -16.68	PASS

Test Graphs

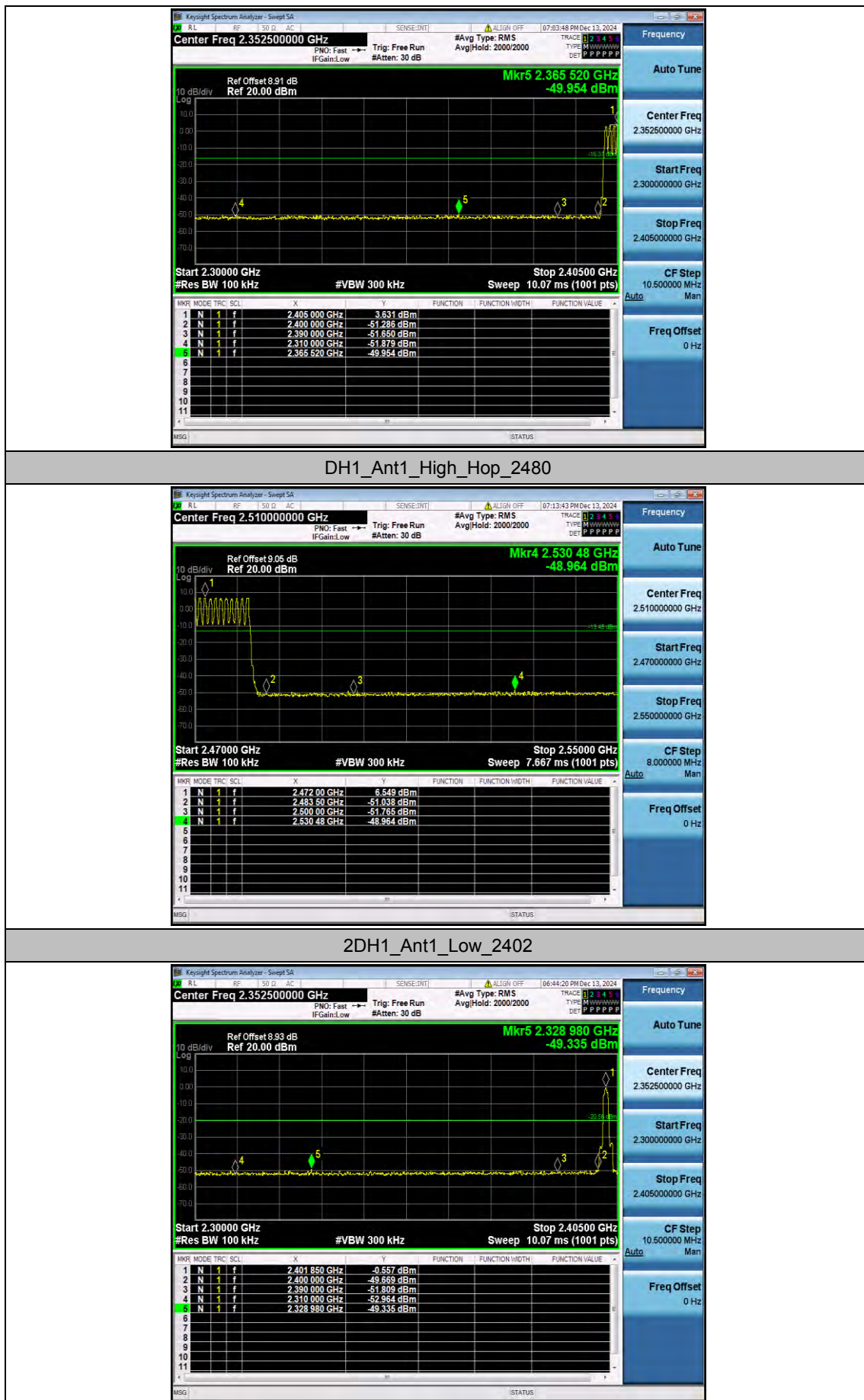
DH1_Ant1_Low_2402



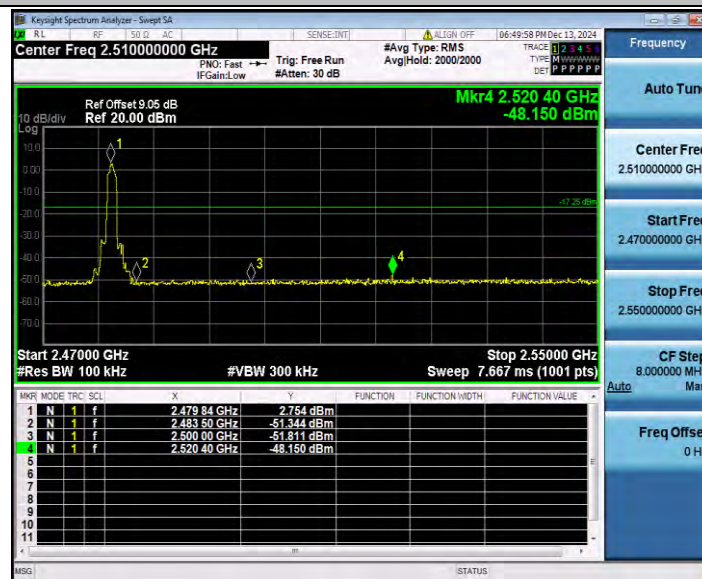
DH1_Ant1_High_2480



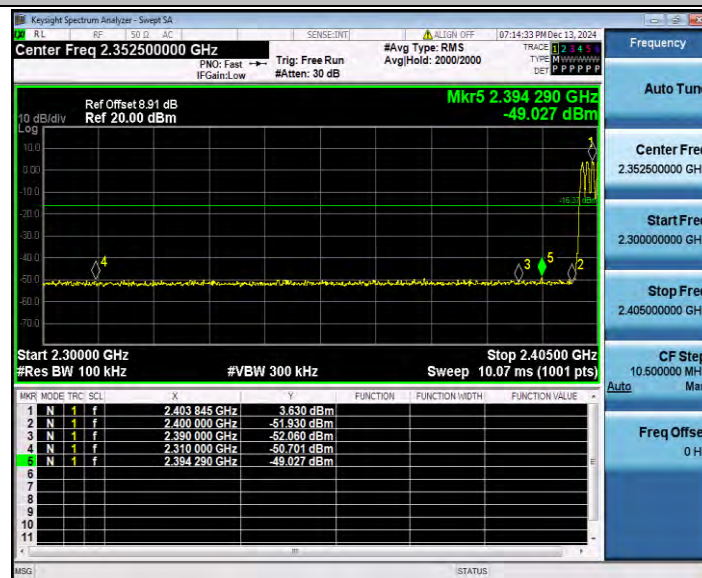
DH1_Ant1_Low_Hop_2402



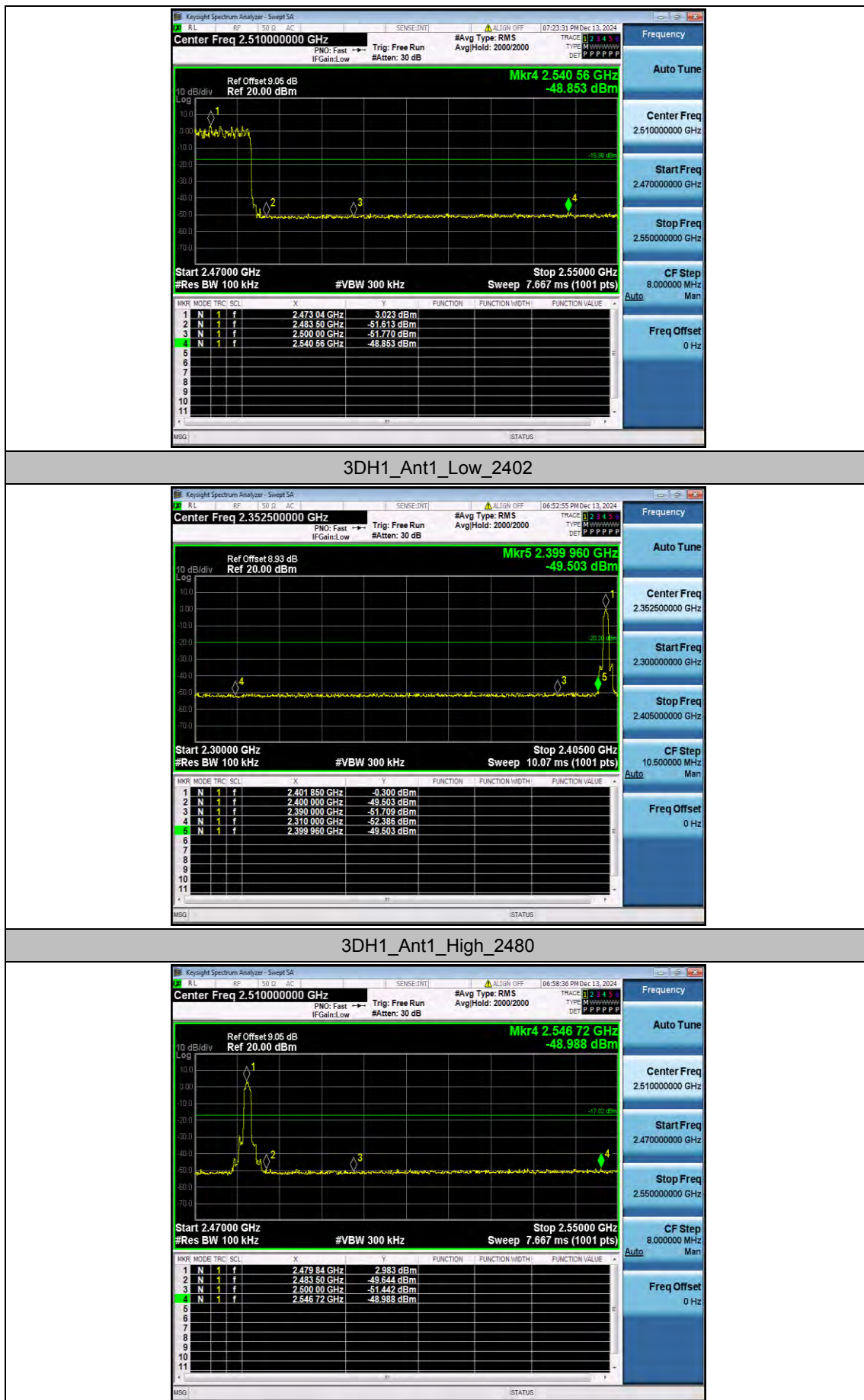
2DH1_Ant1_High_2480



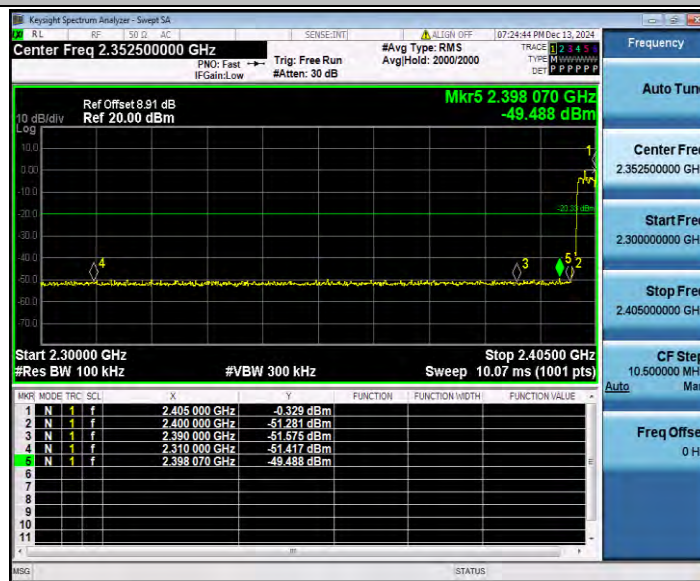
2DH1_Ant1_Low_Hop_2402



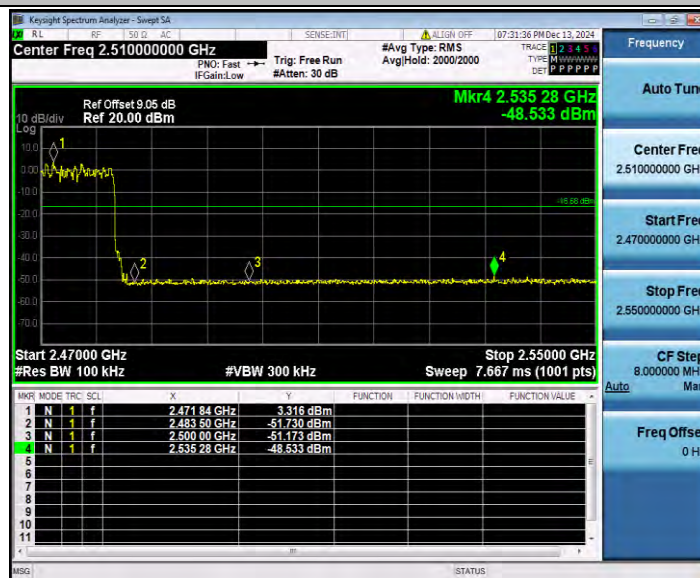
2DH1_Ant1_High_Hop_2480



3DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_Hop_2480

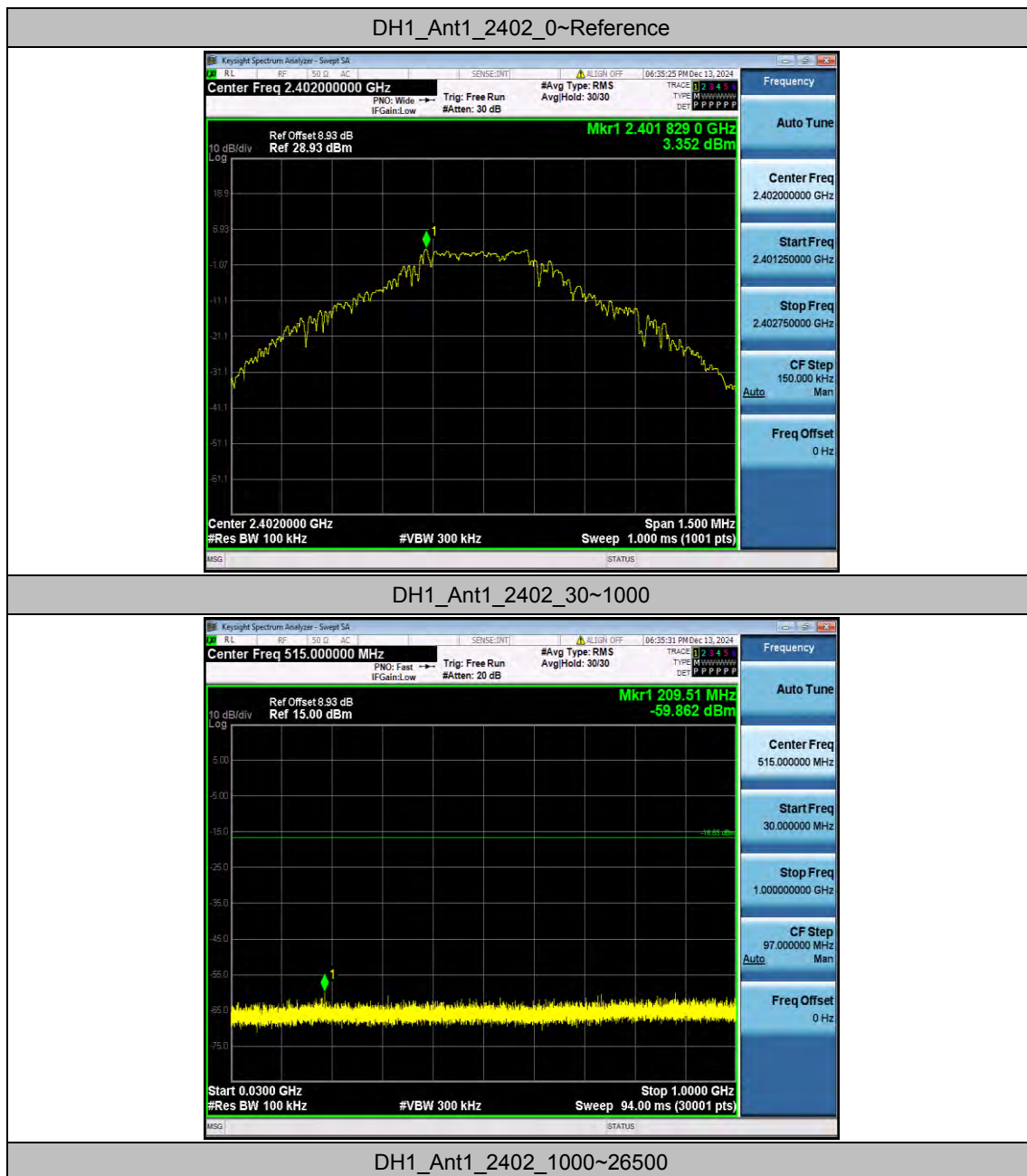


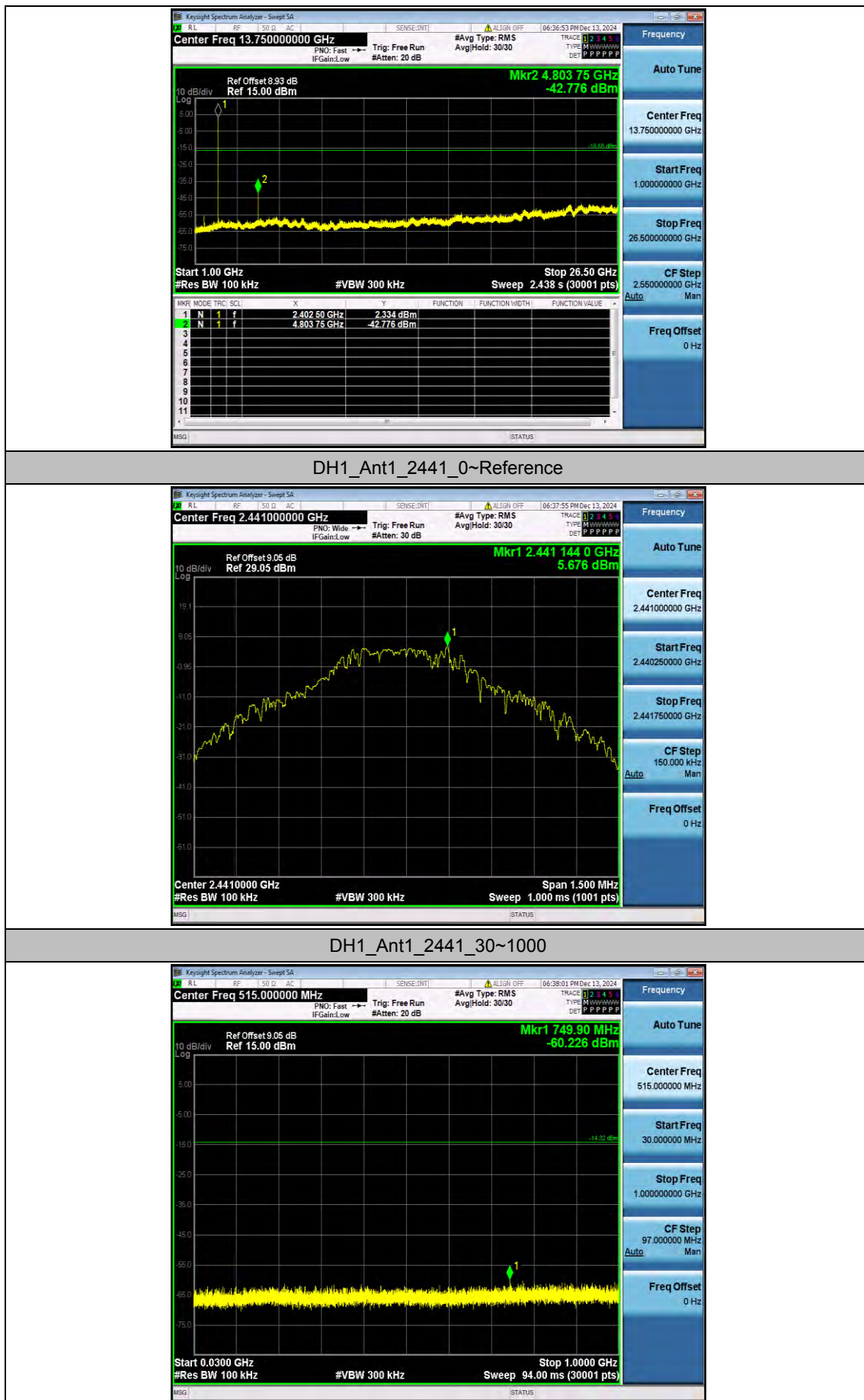
Appendix A.8: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	3.35	3.35	---	PASS
			30~1000	3.35	-59.86	≤ -16.65	PASS
			1000~26500	3.35	-42.78	≤ -16.65	PASS
		2441	Reference	5.68	5.68	---	PASS
			30~1000	5.68	-60.23	≤ -14.32	PASS
			1000~26500	5.68	-45.76	≤ -14.32	PASS
		2480	Reference	5.39	5.39	---	PASS
			30~1000	5.39	-59.79	≤ -14.61	PASS
			1000~26500	5.39	-47.76	≤ -14.61	PASS
2DH1	Ant1	2402	Reference	-1.42	-1.42	---	PASS
			30~1000	-1.42	-59.8	≤ -21.42	PASS
			1000~26500	-1.42	-48.81	≤ -21.42	PASS
		2441	Reference	1.06	1.06	---	PASS
			30~1000	1.06	-60.34	≤ -18.94	PASS
			1000~26500	1.06	-47.91	≤ -18.94	PASS
		2480	Reference	2.57	2.57	---	PASS
			30~1000	2.57	-59.81	≤ -17.43	PASS
			1000~26500	2.57	-47.93	≤ -17.43	PASS
3DH1	Ant1	2402	Reference	-0.46	-0.46	---	PASS
			30~1000	-0.46	-60.51	≤ -20.46	PASS
			1000~26500	-0.46	-47.04	≤ -20.46	PASS
		2441	Reference	2.32	2.32	---	PASS
			30~1000	2.32	-60.61	≤ -17.68	PASS
			1000~26500	2.32	-47.35	≤ -17.68	PASS
		2480	Reference	2.28	2.28	---	PASS
			30~1000	2.28	-60.42	≤ -17.72	PASS
			1000~26500	2.28	-47.19	≤ -17.72	PASS

Test Graphs





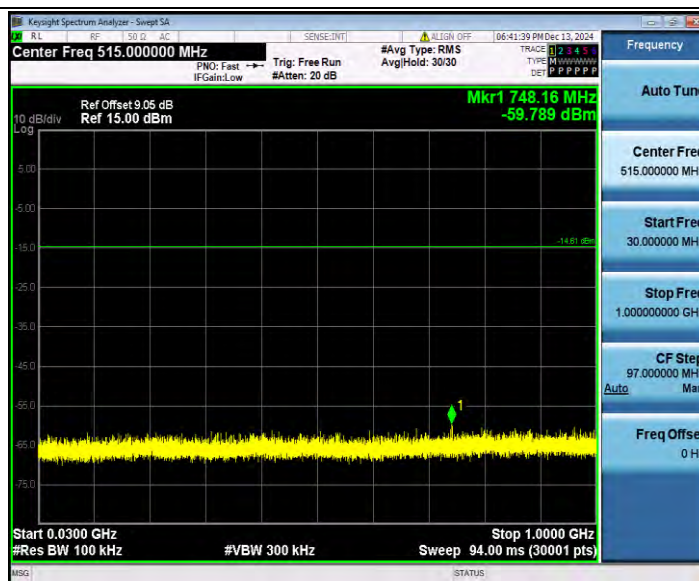
DH1_Ant1_2441_1000~26500



DH1_Ant1_2480_0~Reference



DH1_Ant1_2480_30~1000



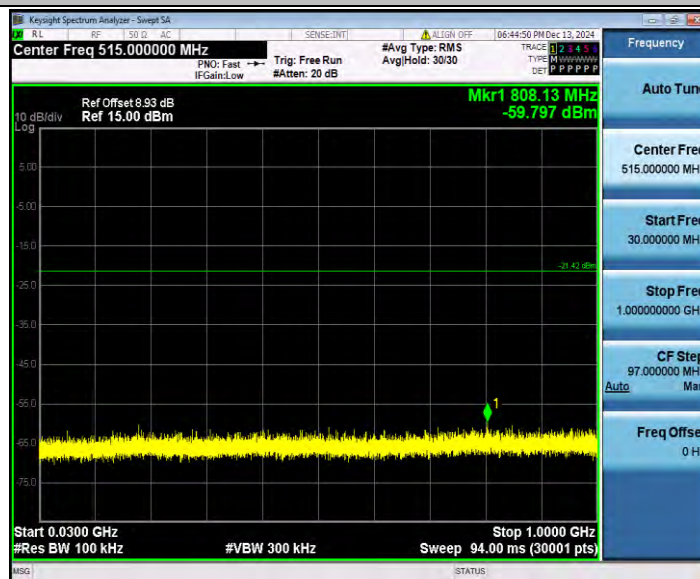
DH1_Ant1_2480_1000~26500



2DH1_Ant1_2402_0~Reference



2DH1_Ant1_2402_30~1000



2DH1_Ant1_2402_1000~26500

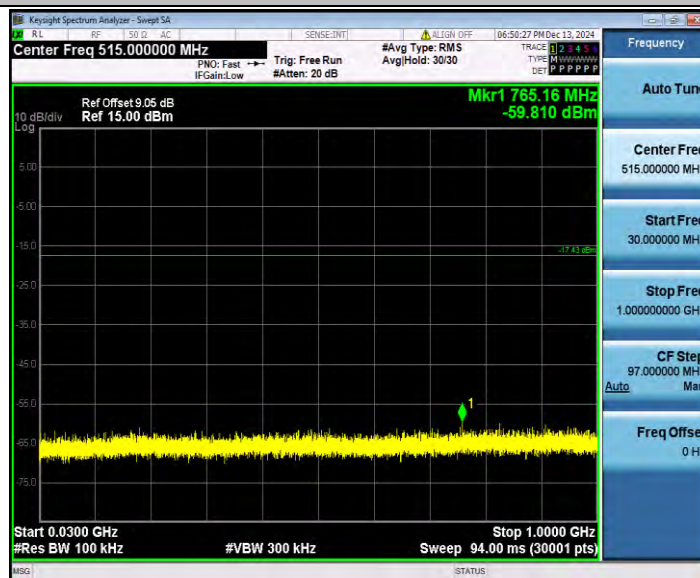


2DH1_Ant1_2441_0~Reference

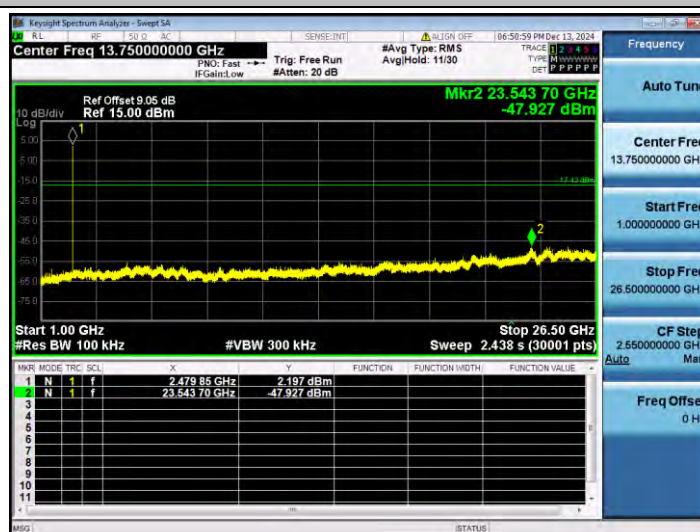
2DH1_Ant1_2480_0~Reference



2DH1_Ant1_2480_30~1000



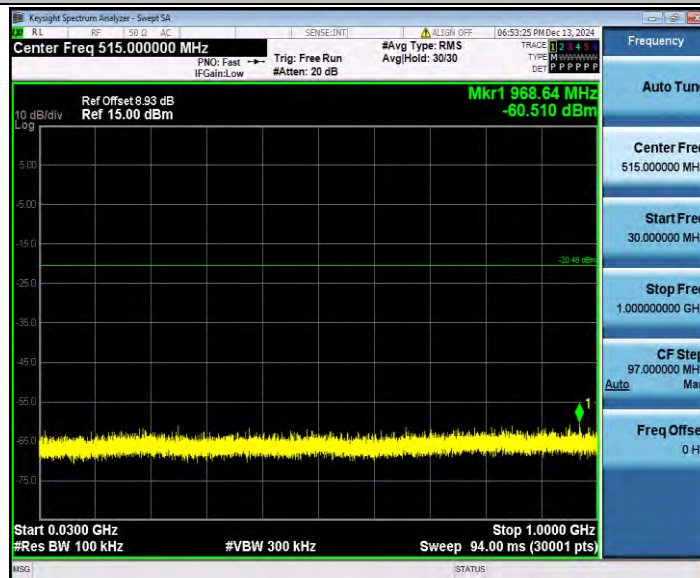
2DH1_Ant1_2480_1000~26500



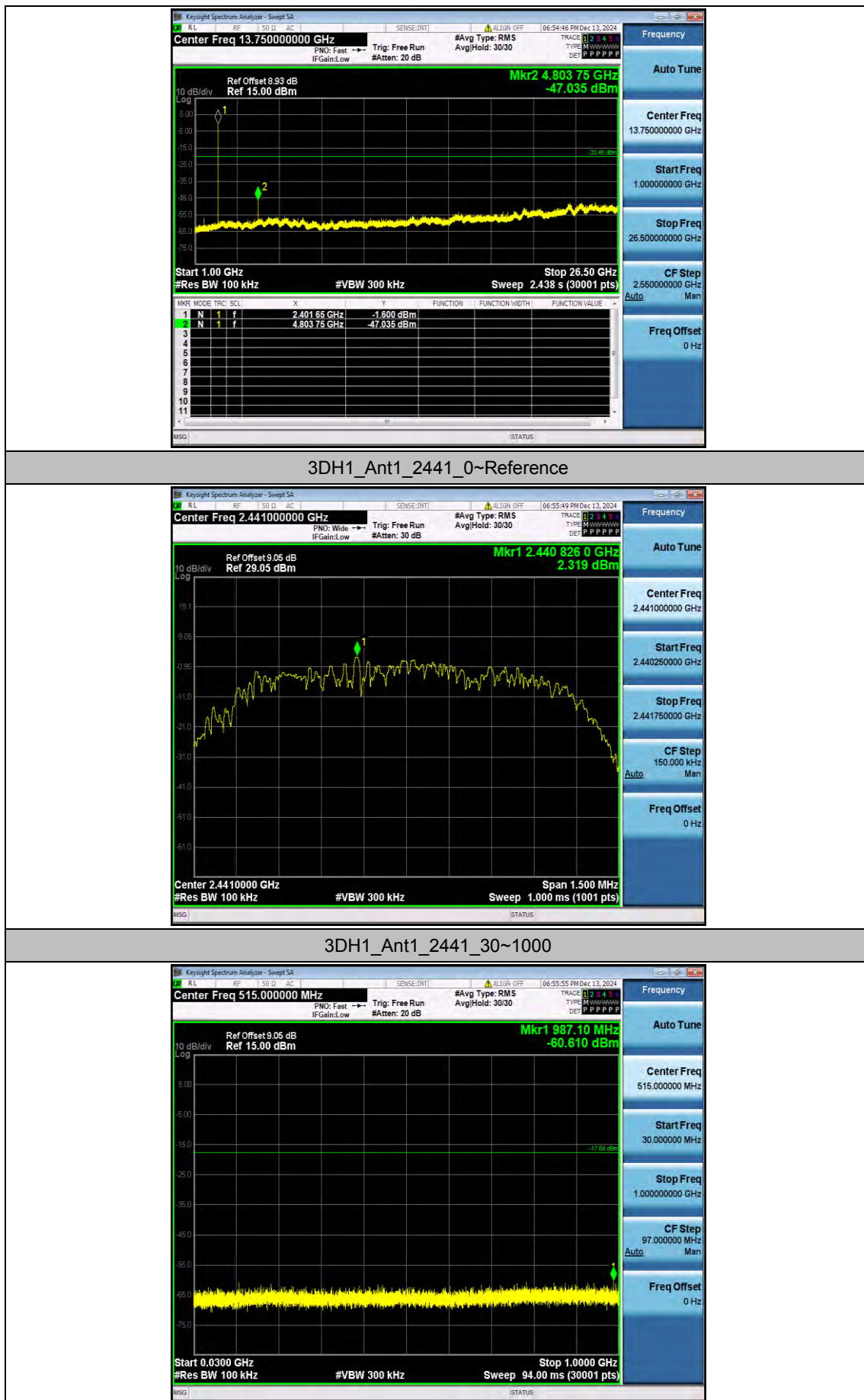
3DH1_Ant1_2402_0~Reference



3DH1_Ant1_2402_30~1000



3DH1_Ant1_2402_1000~26500



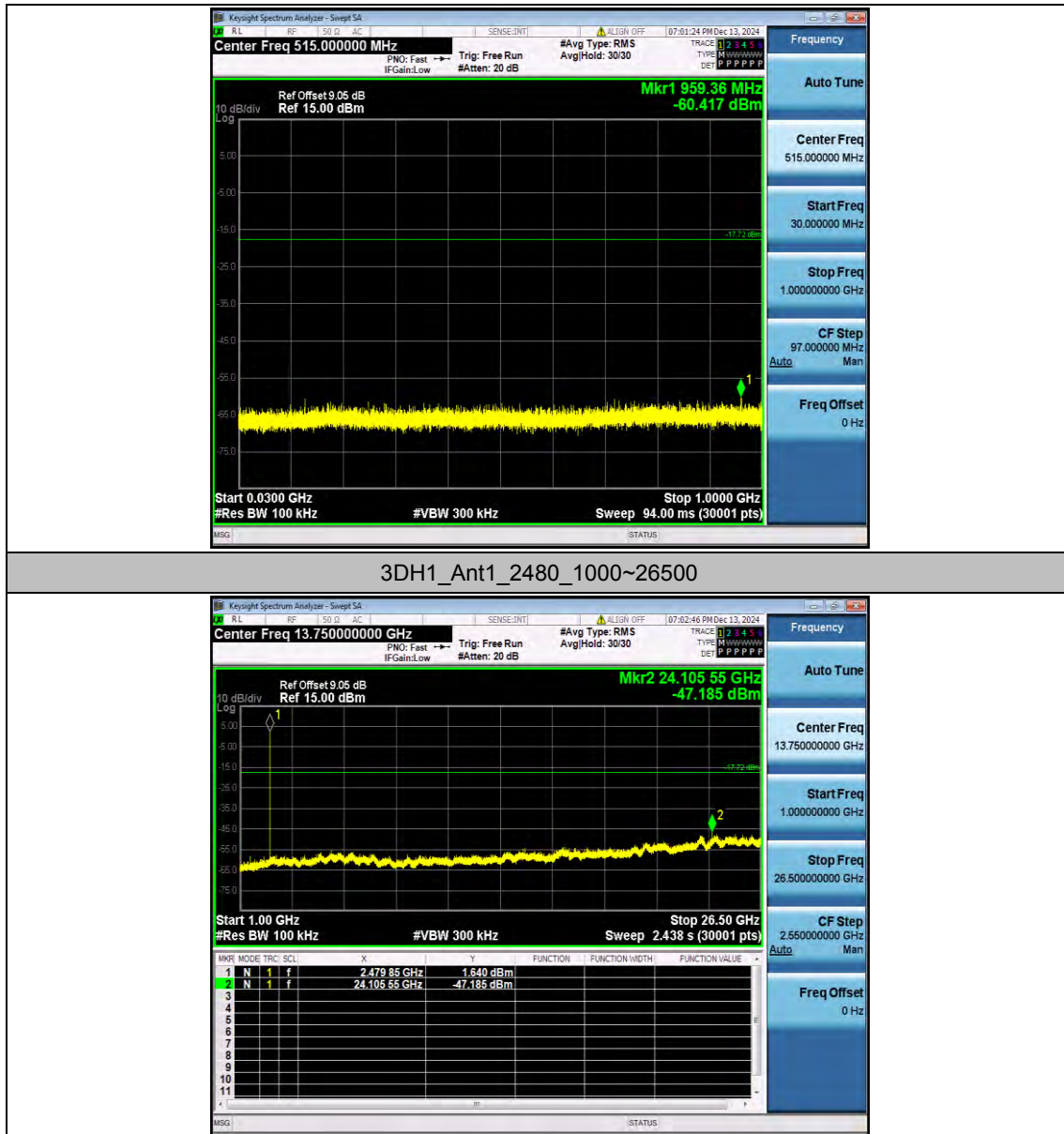
3DH1_Ant1_2441_1000~26500



3DH1_Ant1_2480_0~Reference



3DH1_Ant1_2480_30~1000



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	-49.69	≤-41.20	45.51	≤54	PASS
				AV	2388.305	-49.08	≤-41.20	46.12	≤54	PASS
				AV	2390.000	-49.33	≤-41.20	45.87	≤54	PASS
				Peak	2310.000	-41.05	≤-21.20	54.15	≤74	PASS
				Peak	2327.720	-39.06	≤-21.20	56.14	≤74	PASS
				Peak	2390.000	-41.67	≤-21.20	53.53	≤74	PASS
		High	2480	AV	2483.500	-48.22	≤-41.20	46.98	≤54	PASS
				AV	2483.520	-48.22	≤-41.20	46.98	≤54	PASS
				AV	2500.000	-48.85	≤-41.20	46.35	≤54	PASS
				Peak	2483.500	-41.11	≤-21.20	54.09	≤74	PASS
				Peak	2483.680	-39.04	≤-21.20	56.16	≤74	PASS
				Peak	2500.000	-42.37	≤-21.20	52.83	≤74	PASS
2DH1	Ant1	Low	2402	AV	2310.000	-49.45	≤-41.20	45.75	≤54	PASS
				AV	2387.150	-48.95	≤-41.20	46.25	≤54	PASS
				AV	2390.000	-49.37	≤-41.20	45.83	≤54	PASS
				Peak	2310.000	-42.34	≤-21.20	52.86	≤74	PASS
				Peak	2360.375	-38.7	≤-21.20	56.50	≤74	PASS
				Peak	2390.000	-41.96	≤-21.20	53.24	≤74	PASS
		High	2480	AV	2483.500	-48.39	≤-41.20	46.81	≤54	PASS
				AV	2483.520	-48.39	≤-41.20	46.81	≤54	PASS
				AV	2500.000	-48.89	≤-41.20	46.31	≤54	PASS
				Peak	2483.500	-41.9	≤-21.20	53.30	≤74	PASS
				Peak	2496.160	-37.2	≤-21.20	58.00	≤74	PASS
				Peak	2500.000	-40.15	≤-21.20	55.05	≤74	PASS
3DH1	Ant1	Low	2402	AV	2310.000	-49.56	≤-41.20	45.64	≤54	PASS
				AV	2385.470	-48.96	≤-41.20	46.24	≤54	PASS
				AV	2390.000	-49.25	≤-41.20	45.95	≤54	PASS
				Peak	2310.000	-42.55	≤-21.20	52.65	≤74	PASS
				Peak	2375.285	-37.45	≤-21.20	57.75	≤74	PASS
				Peak	2390.000	-41.61	≤-21.20	53.59	≤74	PASS
		High	2480	AV	2483.500	-48.36	≤-41.20	46.84	≤54	PASS
				AV	2483.520	-48.36	≤-41.20	46.84	≤54	PASS
				AV	2500.000	-48.84	≤-41.20	46.36	≤54	PASS
				Peak	2483.500	-40.96	≤-21.20	54.24	≤74	PASS
				Peak	2491.040	-38.67	≤-21.20	56.53	≤74	PASS

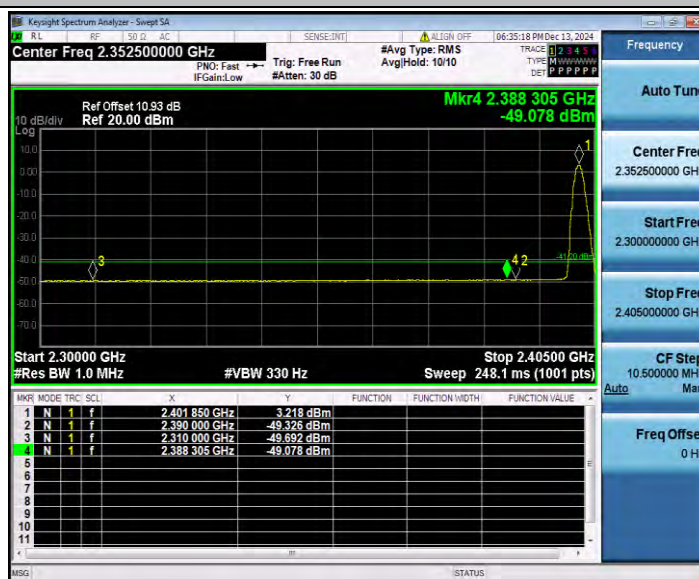
				Peak	2500.000	-42.32	≤-21.20	52.88	≤74	PASS
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Note:

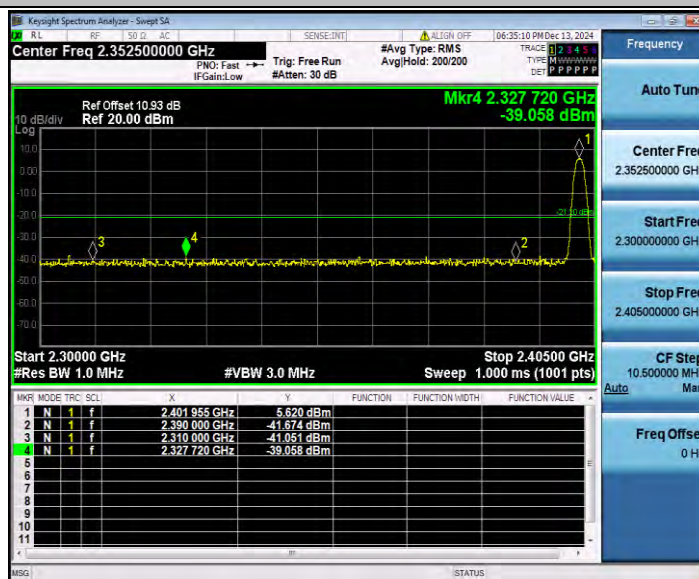
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

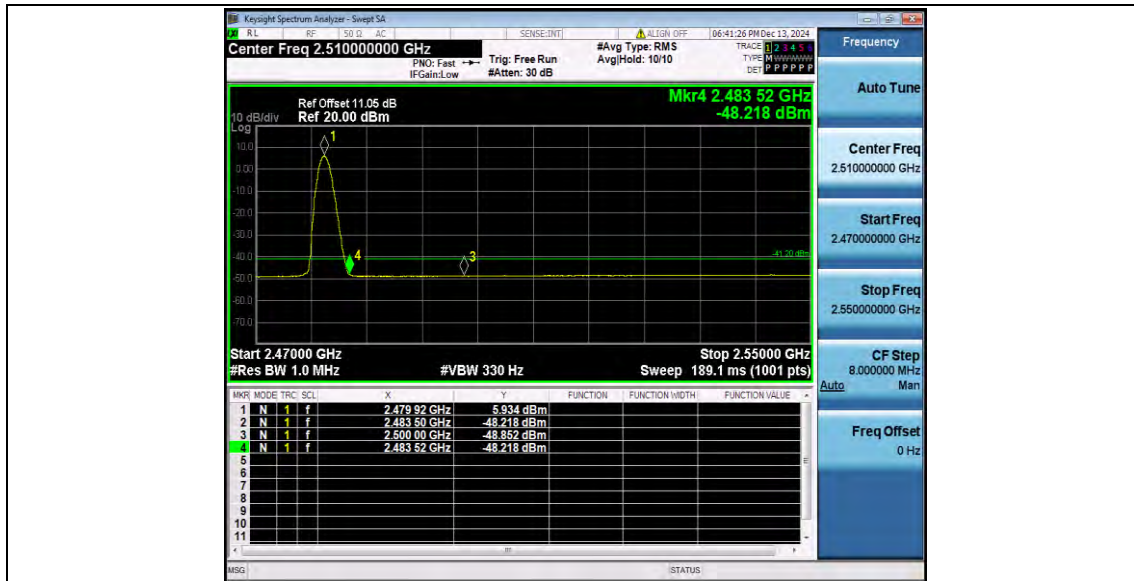
DH1_Ant1_Low_2402_AV



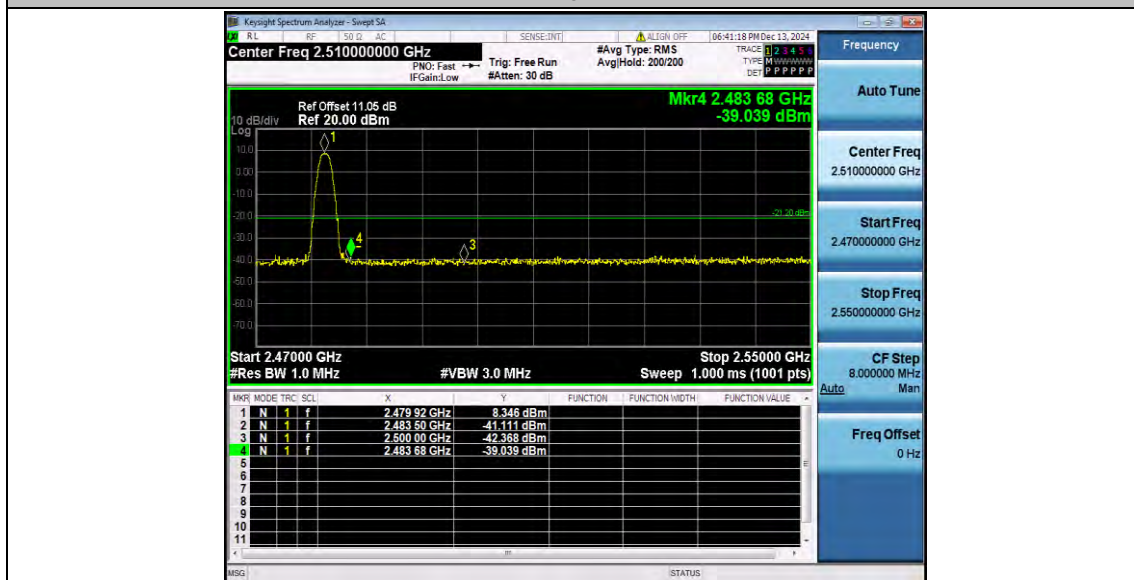
DH1_Ant1_Low_2402_Peak



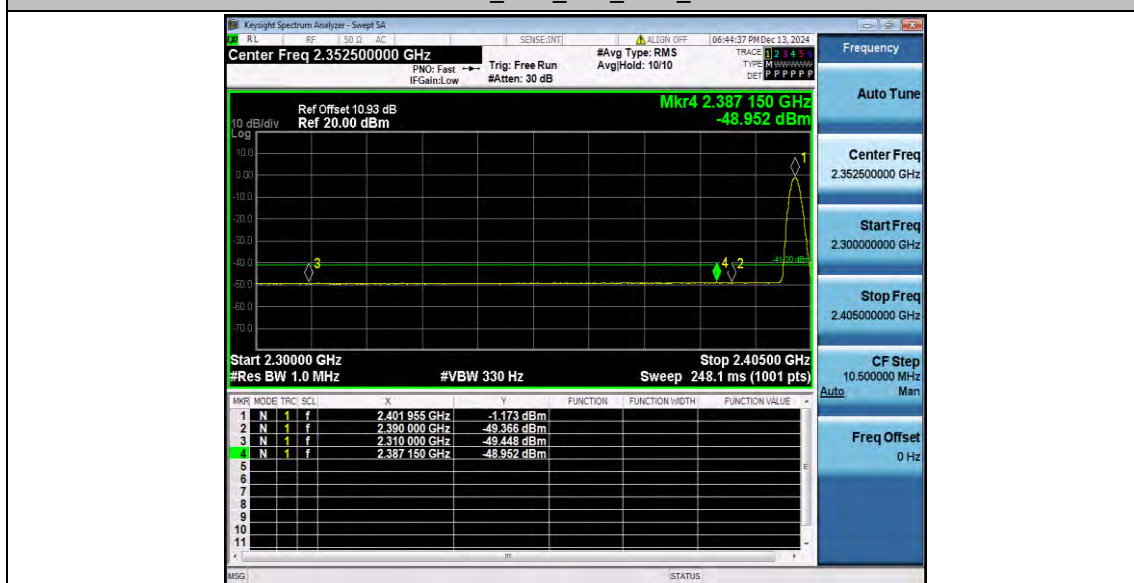
DH1_Ant1_High_2480_AV



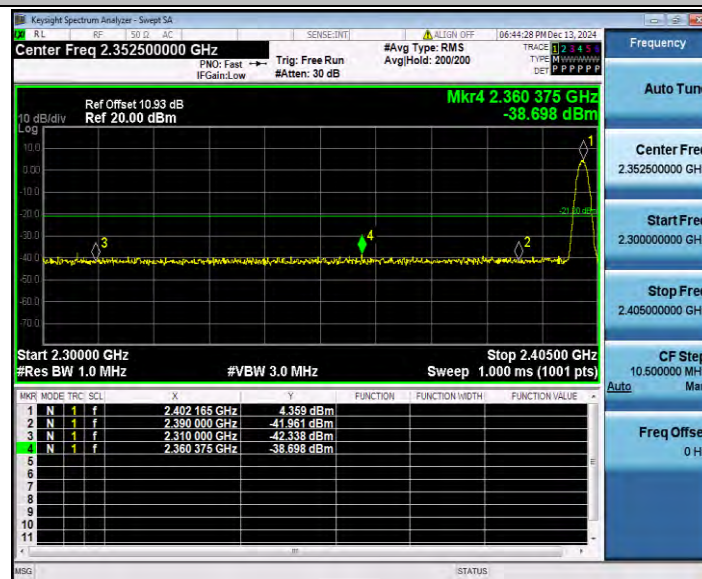
DH1_Ant1_High_2480_Peak



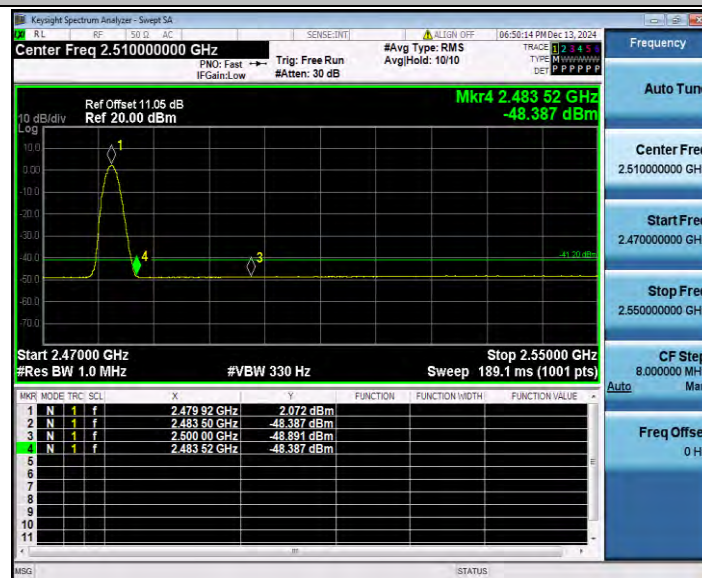
2DH1_Ant1_Low_2402_AV



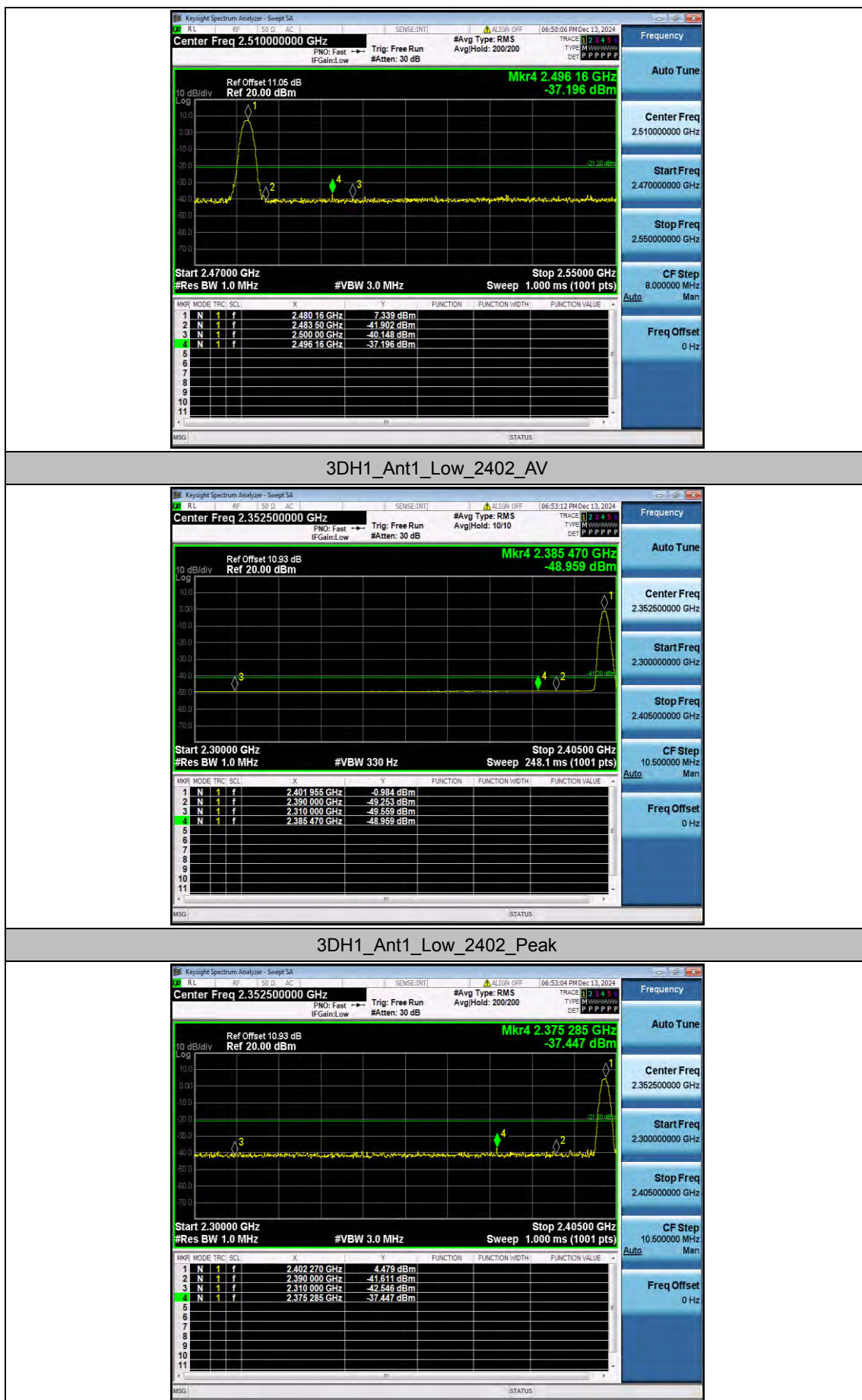
2DH1_Ant1_Low_2402_Peak



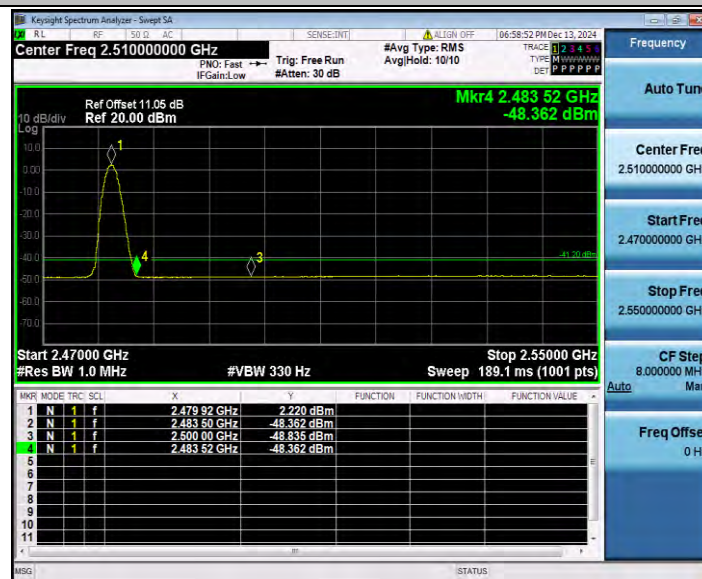
2DH1_Ant1_High_2480_AV



2DH1_Ant1_High_2480_Peak



3DH1_Ant1_High_2480_AV



3DH1_Ant1_High_2480_Peak

