

Case No. : <u>GTS20230203009-1-10</u>
Ambient Condition: <u>23</u> °C, <u>49</u> %RH, Atmos100.1Kpa,
Test Date: <u>2023.3.20</u> Test Engineer: <u>Jenny zeng</u>

Appendix A.1: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	1.035	2401.481	2402.516	---	---
		2441	1.035	2440.481	2441.516	---	---
		2480	1.035	2479.481	2480.516	---	---
2DH1	Ant1	2402	1.350	2401.313	2402.663	---	---
		2441	1.344	2440.316	2441.660	---	---
		2480	1.350	2479.313	2480.663	---	---
3DH1	Ant1	2402	1.299	2401.331	2402.630	---	---
		2441	1.296	2440.334	2441.630	---	---
		2480	1.293	2479.334	2480.627	---	---

Test Graphs

DH1_Ant1_2402



DH1_Ant1_2441



DH1_Ant1_2480



2DH1_Ant1_2402



2DH1_Ant1_2441



2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



3DH1_Ant1_2480

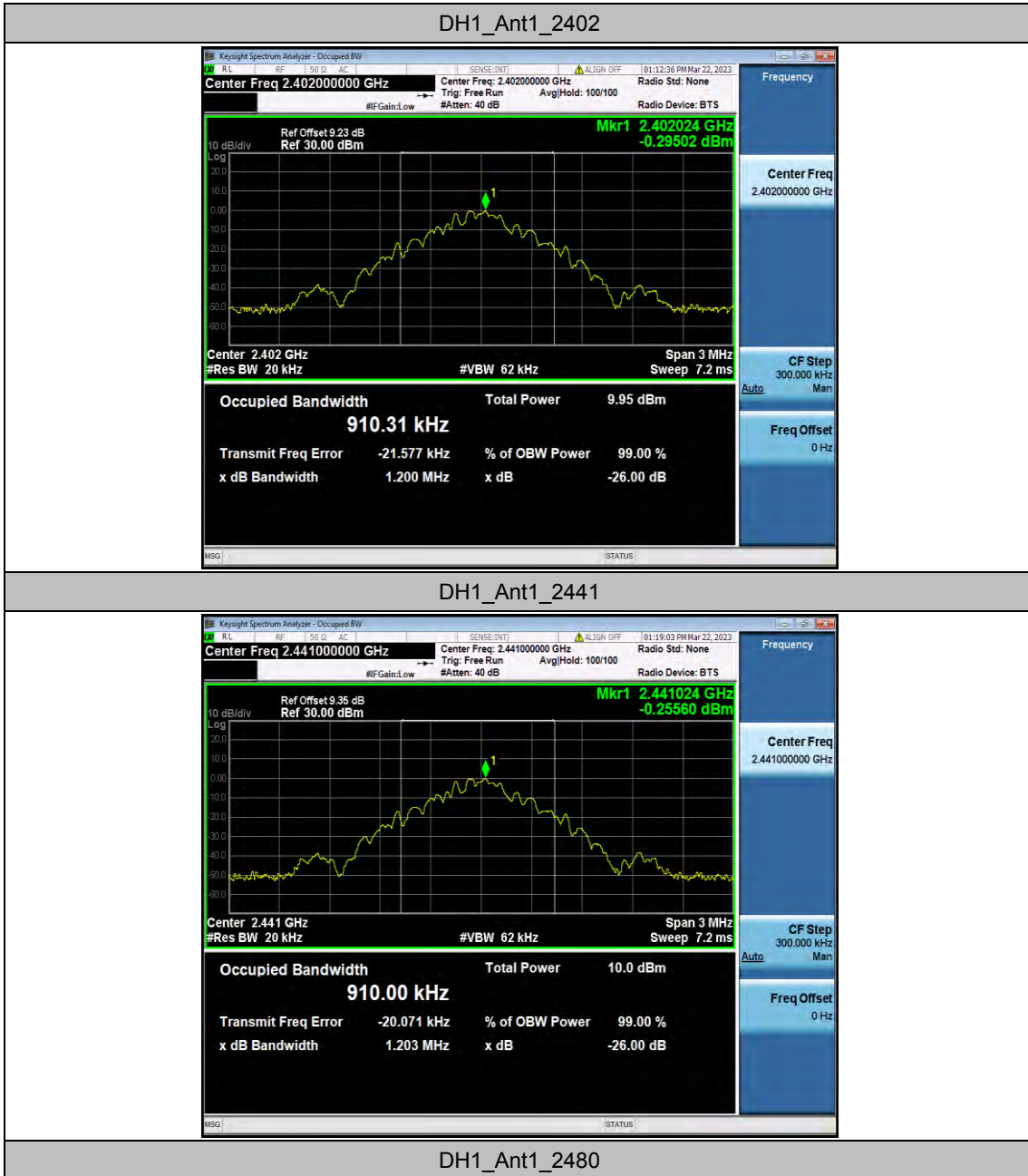


Appendix A.2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.91031	2401.523	2402.434	---	---
		2441	0.91000	2440.525	2441.435	---	---
		2480	0.90982	2479.522	2480.432	---	---
2DH1	Ant1	2402	1.1801	2401.397	2402.577	---	---
		2441	1.1787	2440.398	2441.576	---	---
		2480	1.1793	2479.396	2480.576	---	---
3DH1	Ant1	2402	1.1630	2401.410	2402.573	---	---
		2441	1.1619	2440.411	2441.573	---	---
		2480	1.1626	2479.409	2480.572	---	---

Test Graphs





2DH1_Ant1_2402



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	5.3	≤20.97	PASS
		2441	5.6	≤20.97	PASS
		2480	5.92	≤20.97	PASS
2DH1	Ant1	2402	5.37	≤20.97	PASS
		2441	5.87	≤20.97	PASS
		2480	5.93	≤20.97	PASS
3DH1	Ant1	2402	5.68	≤20.97	PASS
		2441	6.16	≤20.97	PASS
		2480	6.18	≤20.97	PASS

Appendix A.4: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	1.008	≥ 0.690	PASS
		Hop_2441	0.992	≥ 0.690	PASS
		Hop_2480	1.326	≥ 0.690	PASS
2DH1	Ant1	Hop_2402	1.336	≥ 0.900	PASS
		Hop_2441	1.336	≥ 0.900	PASS
		Hop_2480	1.01	≥ 0.900	PASS
3DH1	Ant1	Hop_2402	1	≥ 0.866	PASS
		Hop_2441	1.148	≥ 0.866	PASS
		Hop_2480	1.006	≥ 0.866	PASS

Test Graphs





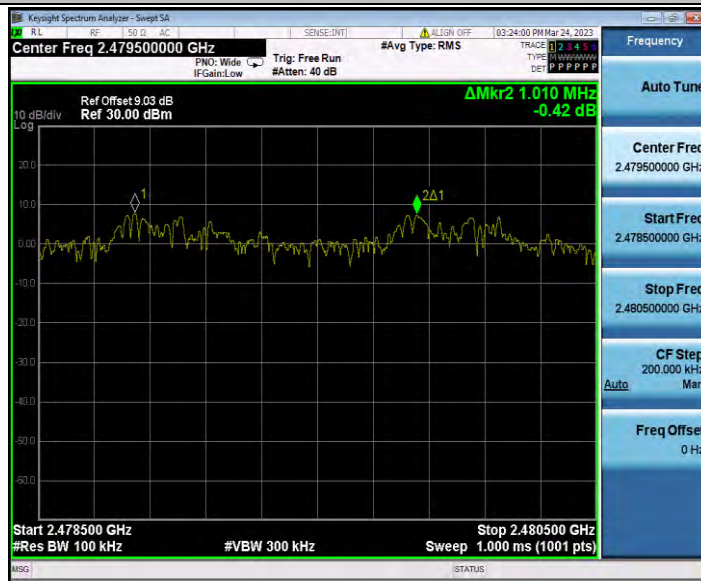
2DH1_Ant1_Hop_2402



2DH1_Ant1_Hop_2441



2DH1_Ant1_Hop_2480



3DH1_Ant1_Hop_2402



3DH1_Ant1_Hop_2441



3DH1_Ant1_Hop_2480

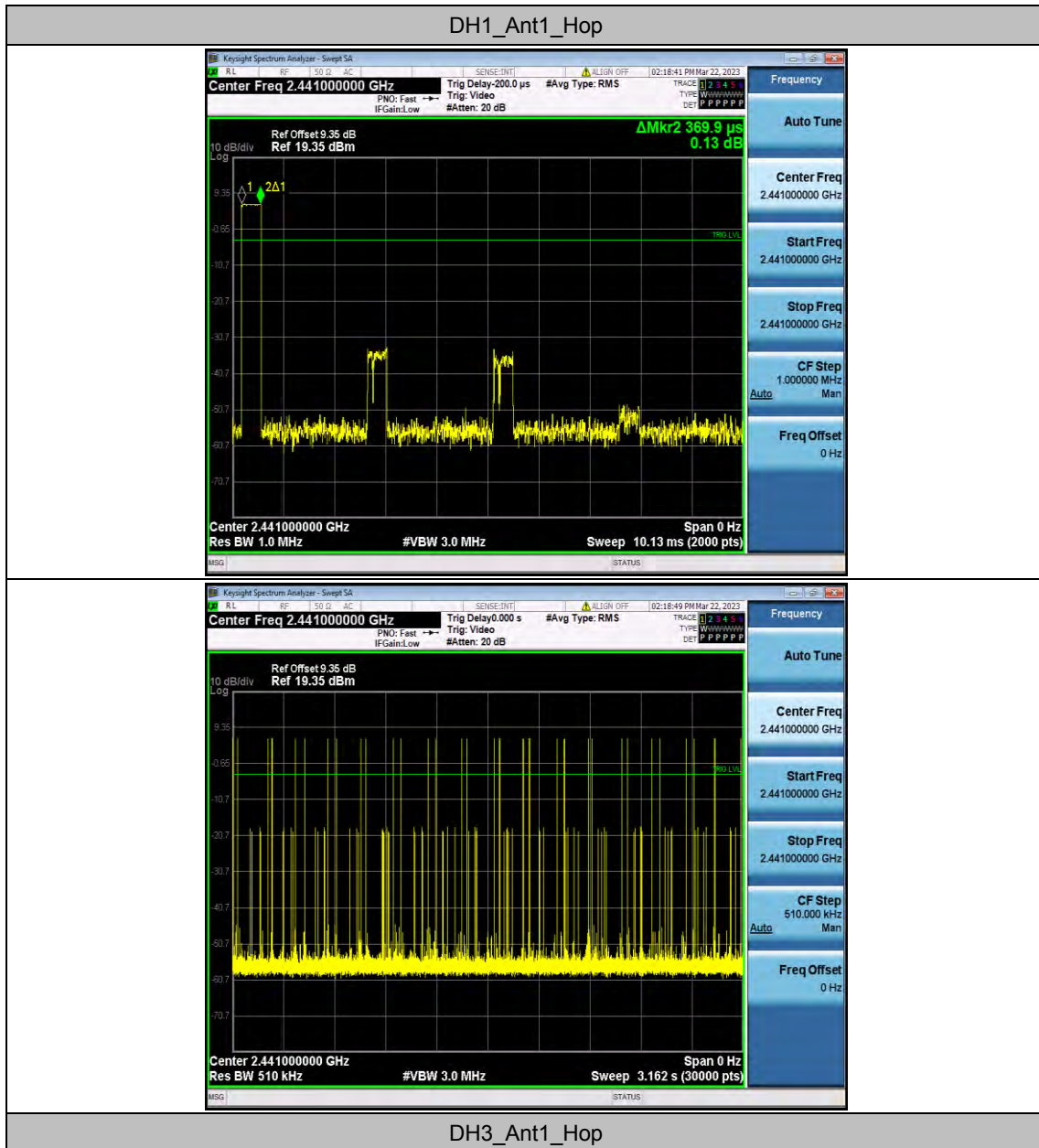


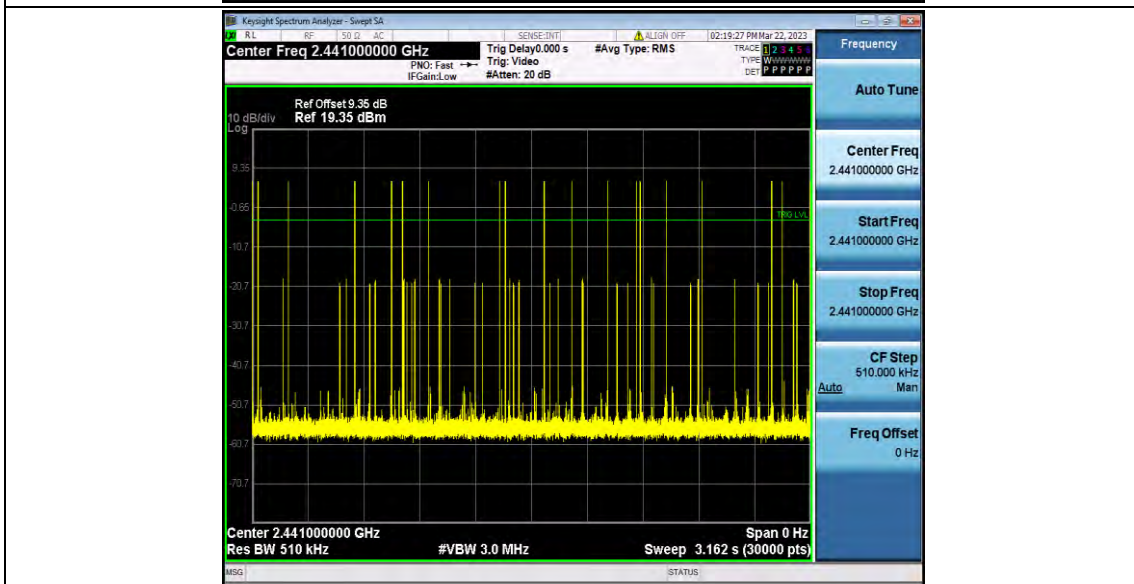
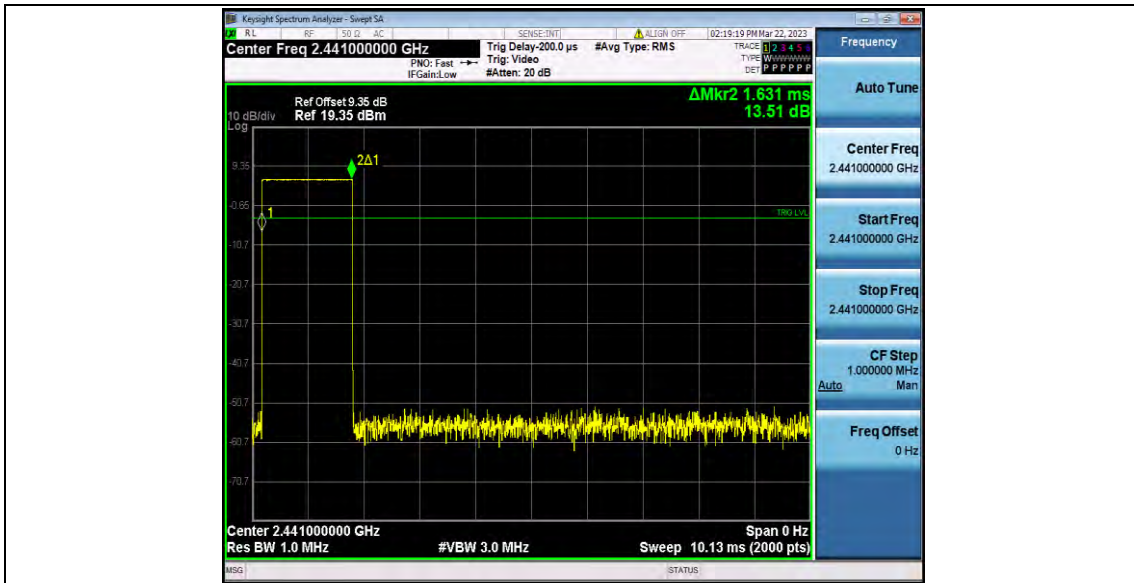
Appendix A.5: Time of occupancy

Test Result

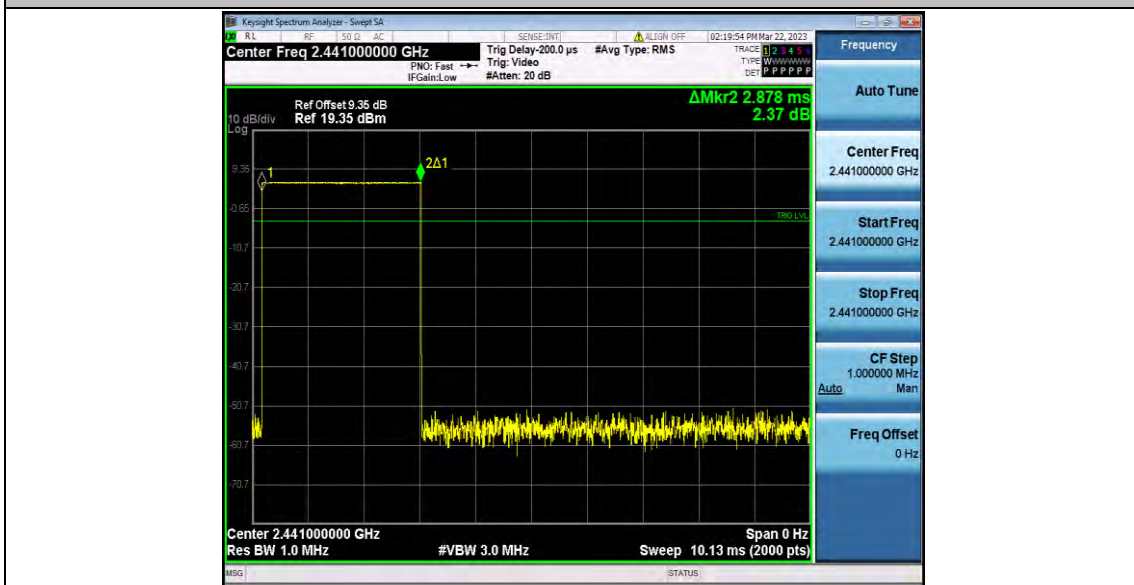
TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.37	330	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.63	190	0.31	≤0.4	PASS
DH5	Ant1	Hop	2.88	100	0.288	≤0.4	PASS
2DH1	Ant1	Hop	0.38	330	0.125	≤0.4	PASS
2DH3	Ant1	Hop	1.64	140	0.229	≤0.4	PASS
2DH5	Ant1	Hop	2.88	100	0.288	≤0.4	PASS
3DH1	Ant1	Hop	0.39	330	0.127	≤0.4	PASS
3DH3	Ant1	Hop	1.63	150	0.245	≤0.4	PASS
3DH5	Ant1	Hop	2.88	40	0.115	≤0.4	PASS

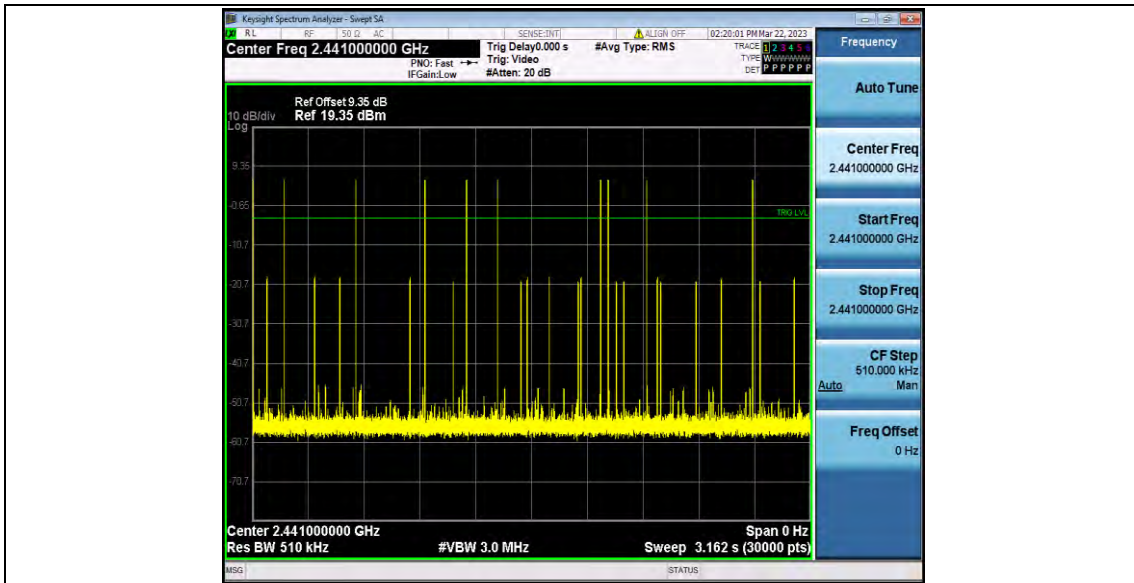
Test Graphs



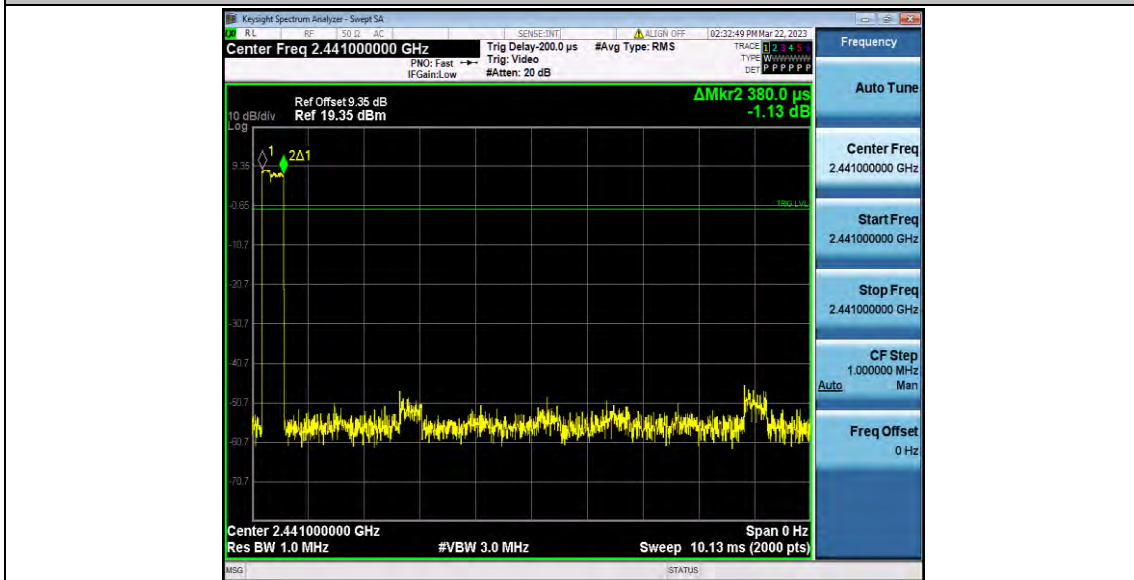


DH5_Ant1_Hop

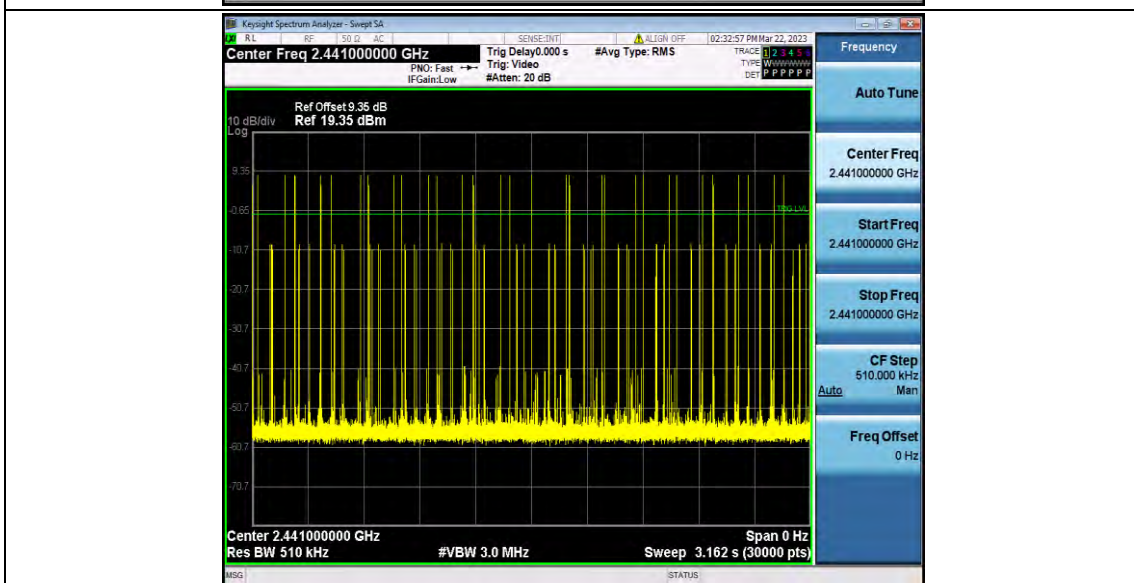


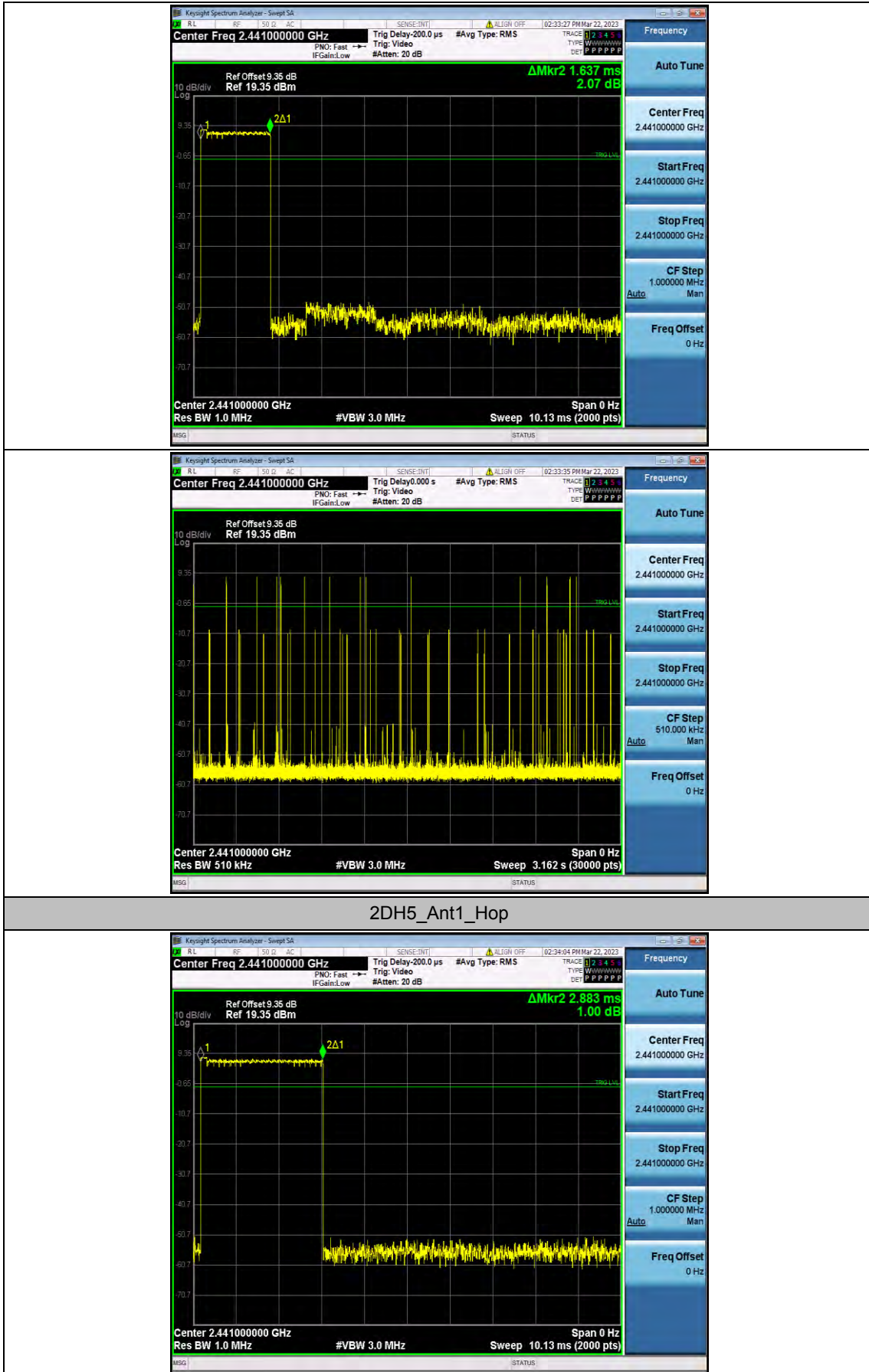


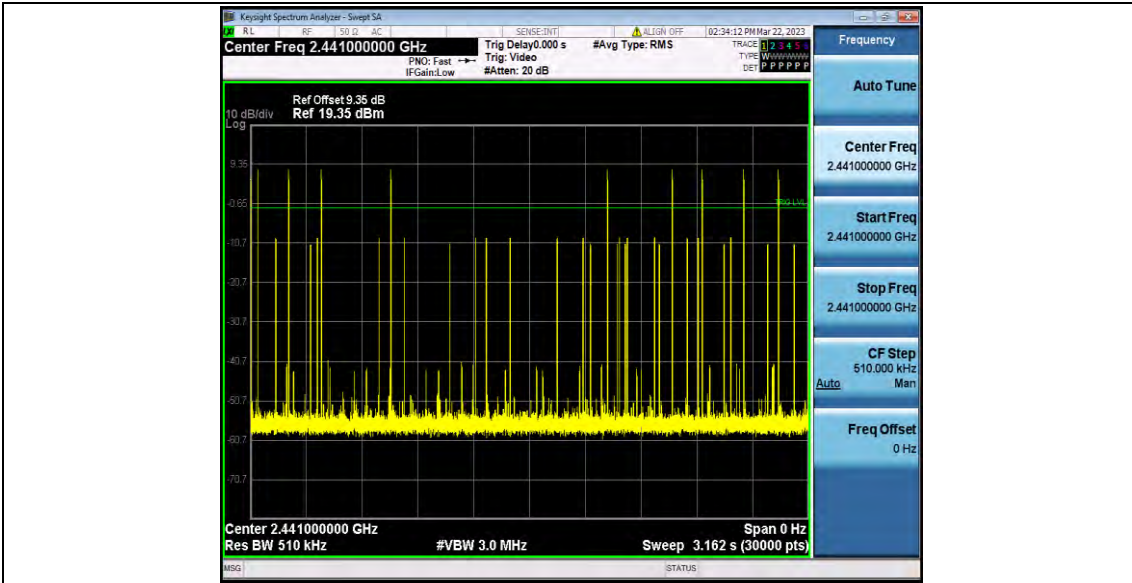
2DH1_Ant1_Hop



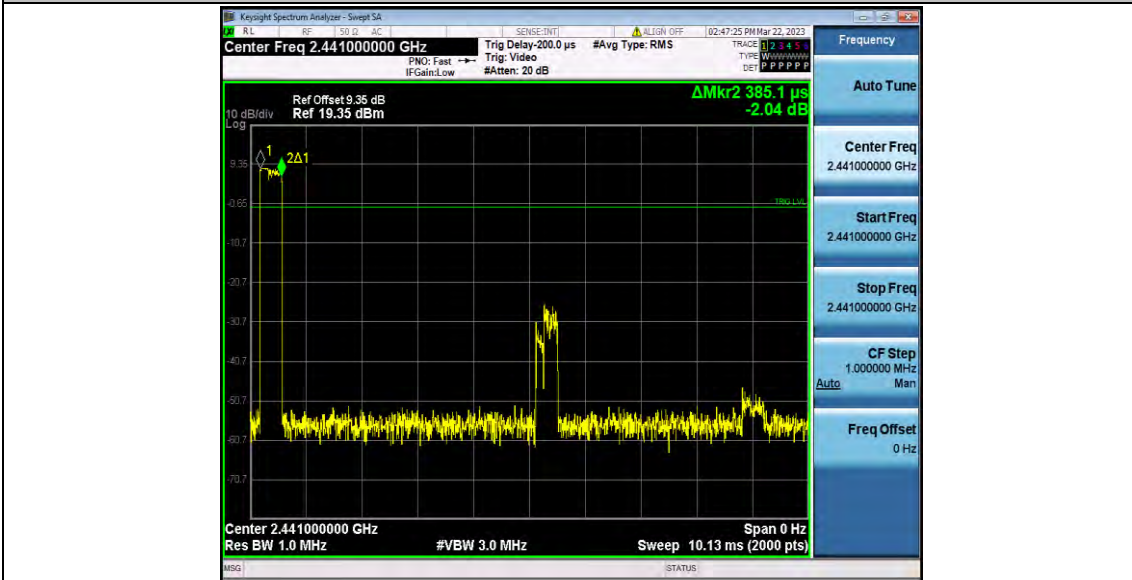
2DH3_Ant1_Hop



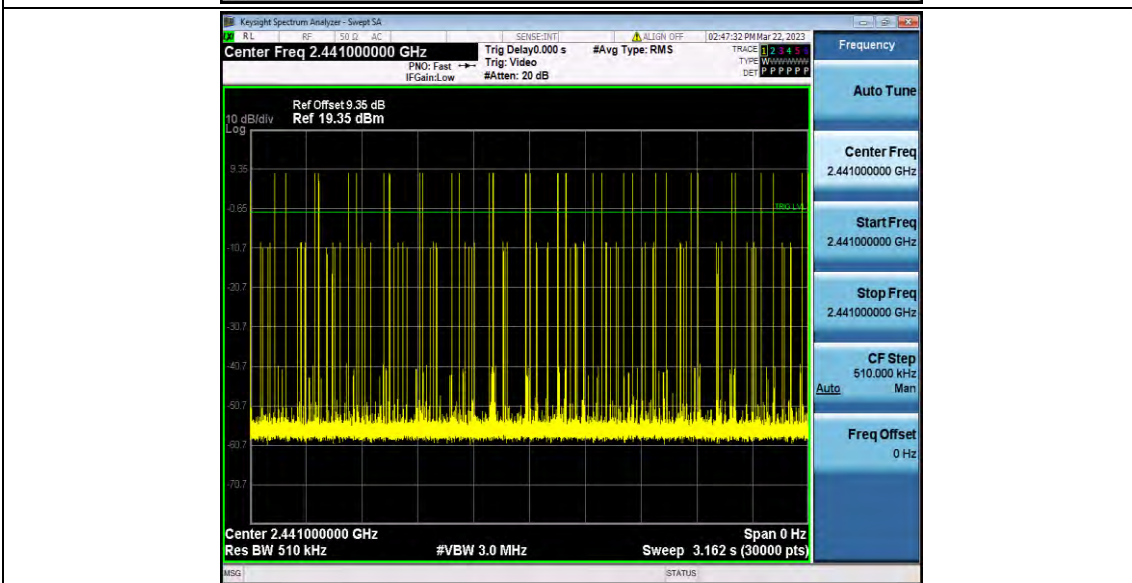


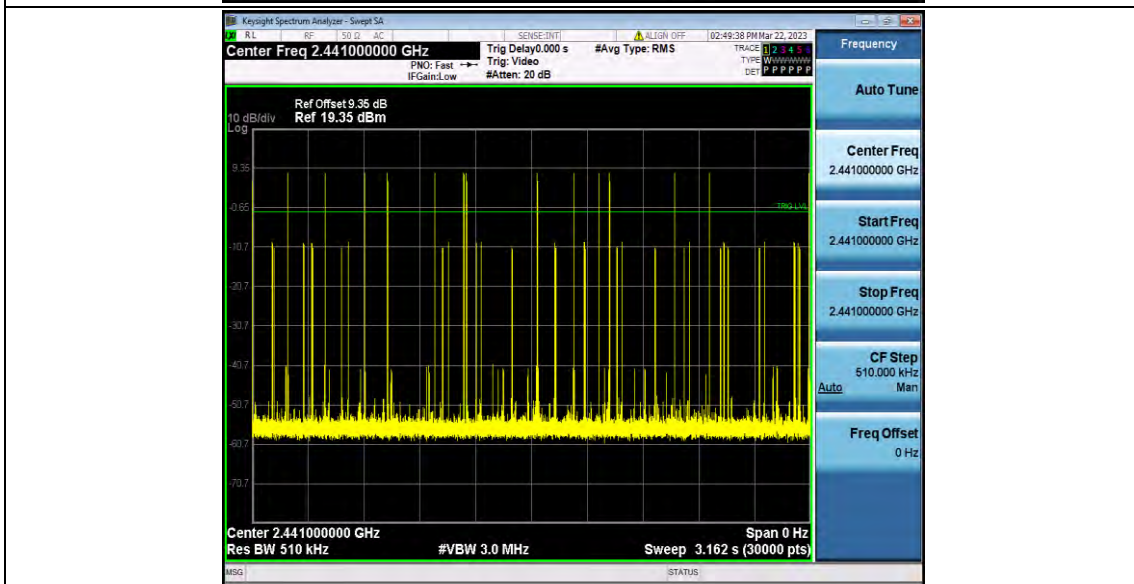
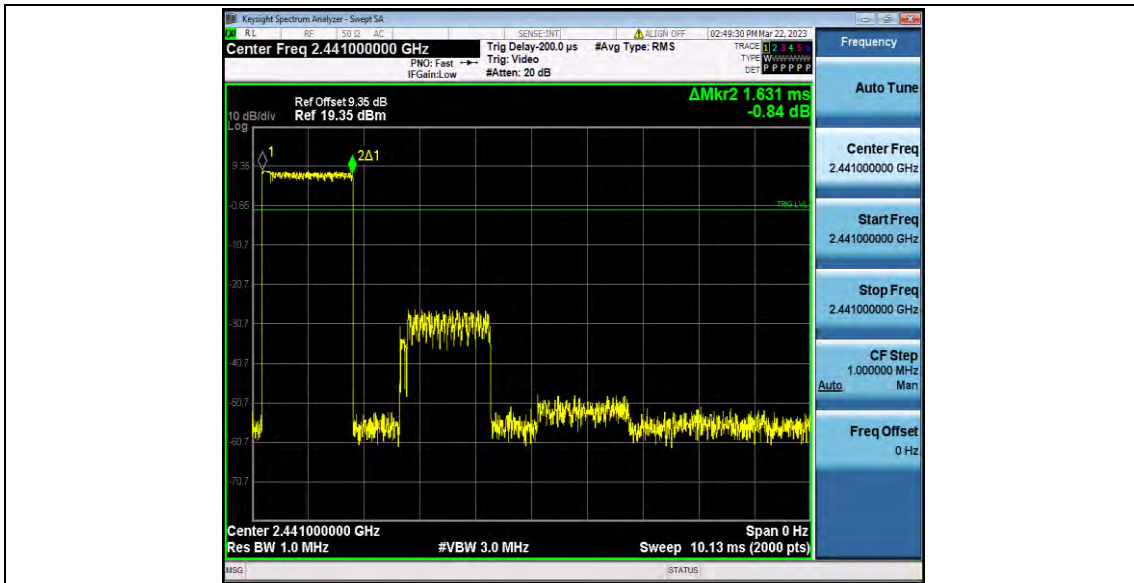


3DH1_Ant1_Hop

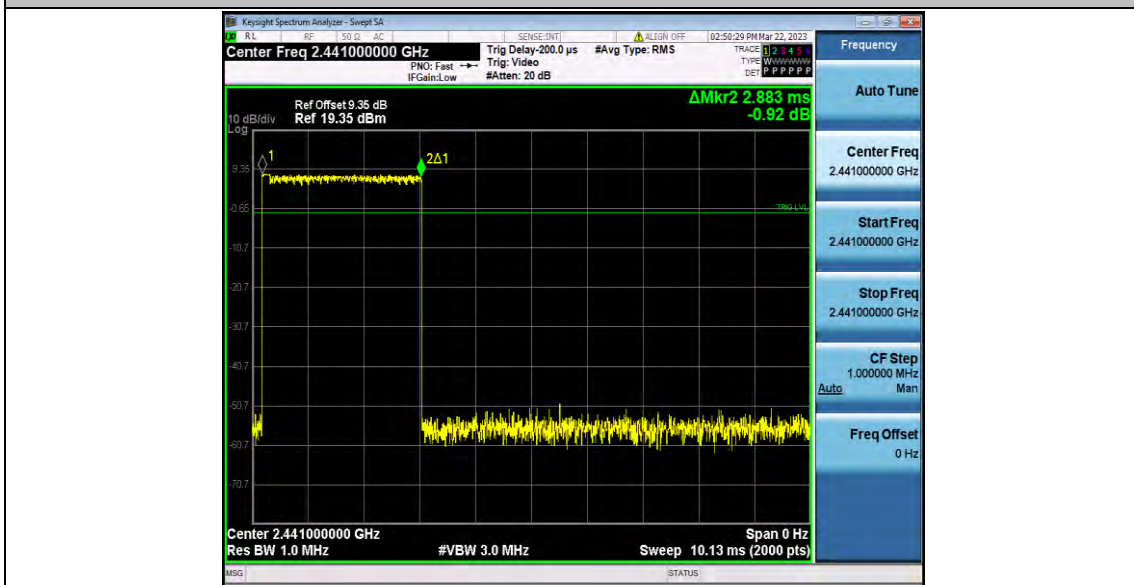


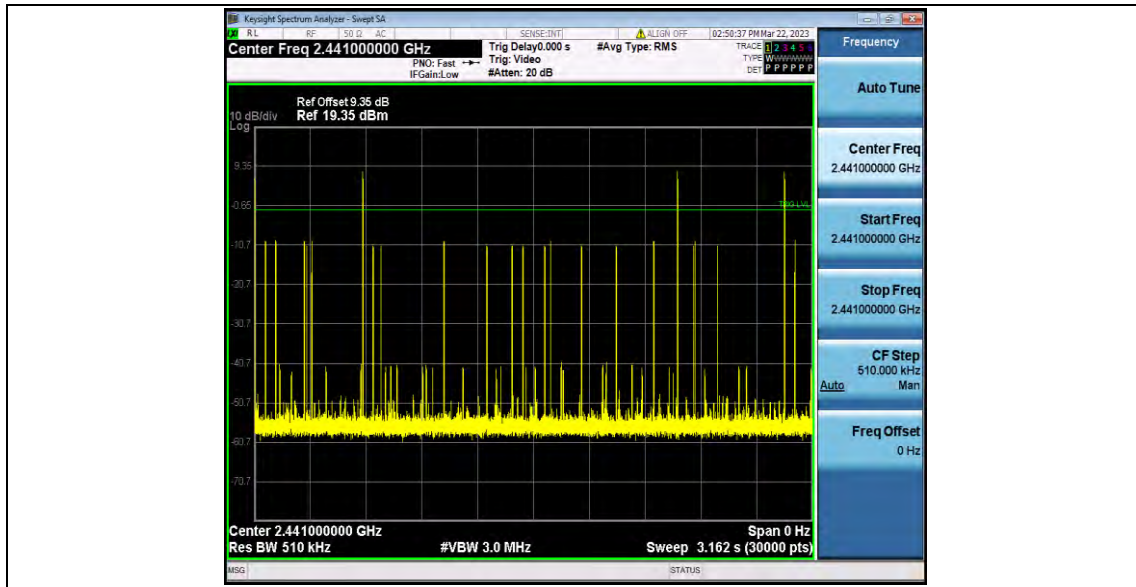
3DH3_Ant1_Hop





3DH5_Ant1_Hop



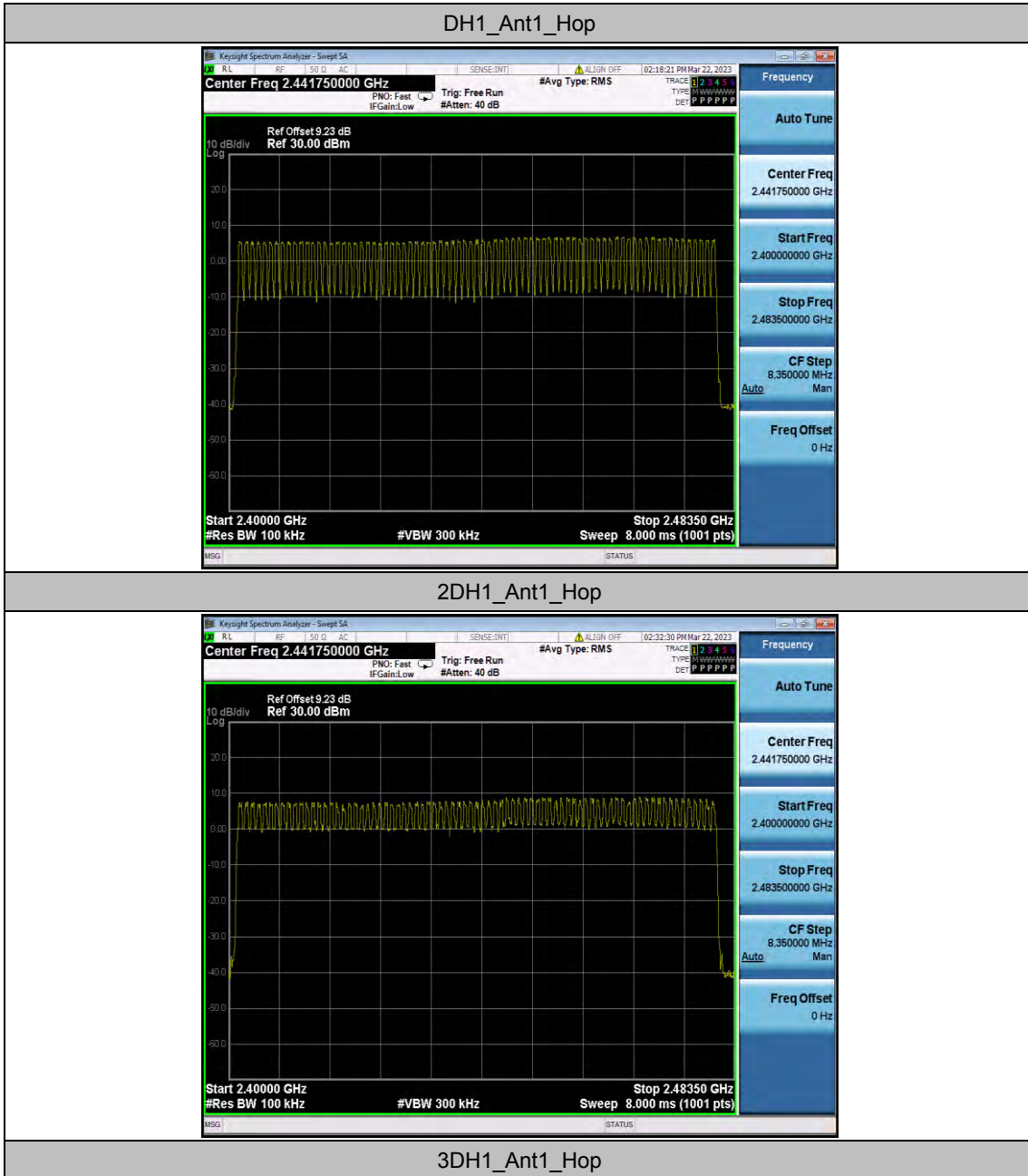


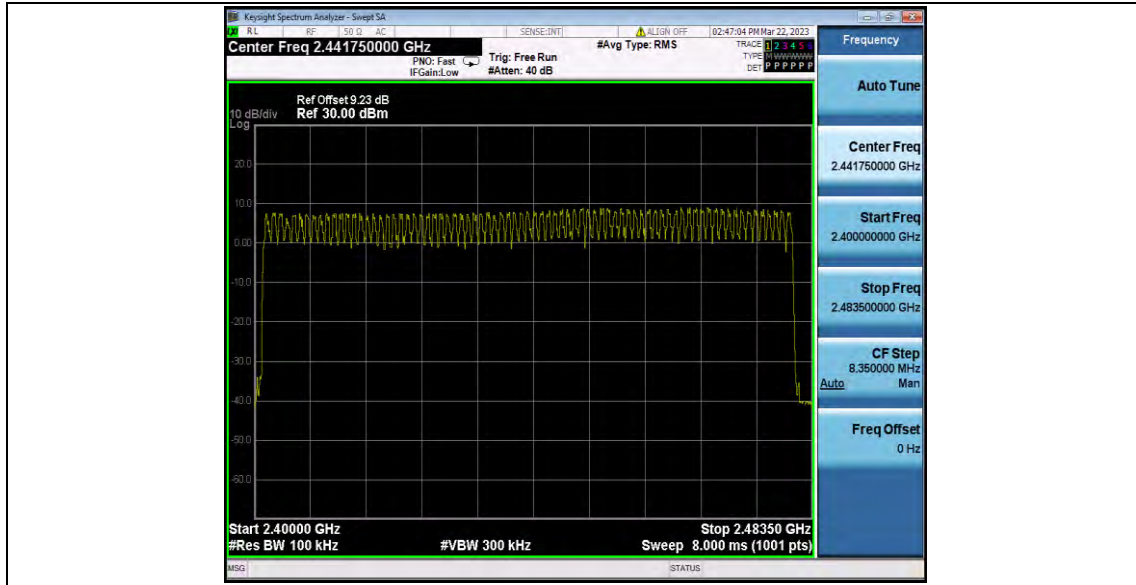
Appendix A.6: Number of hopping channels

Test Result

TestMode	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



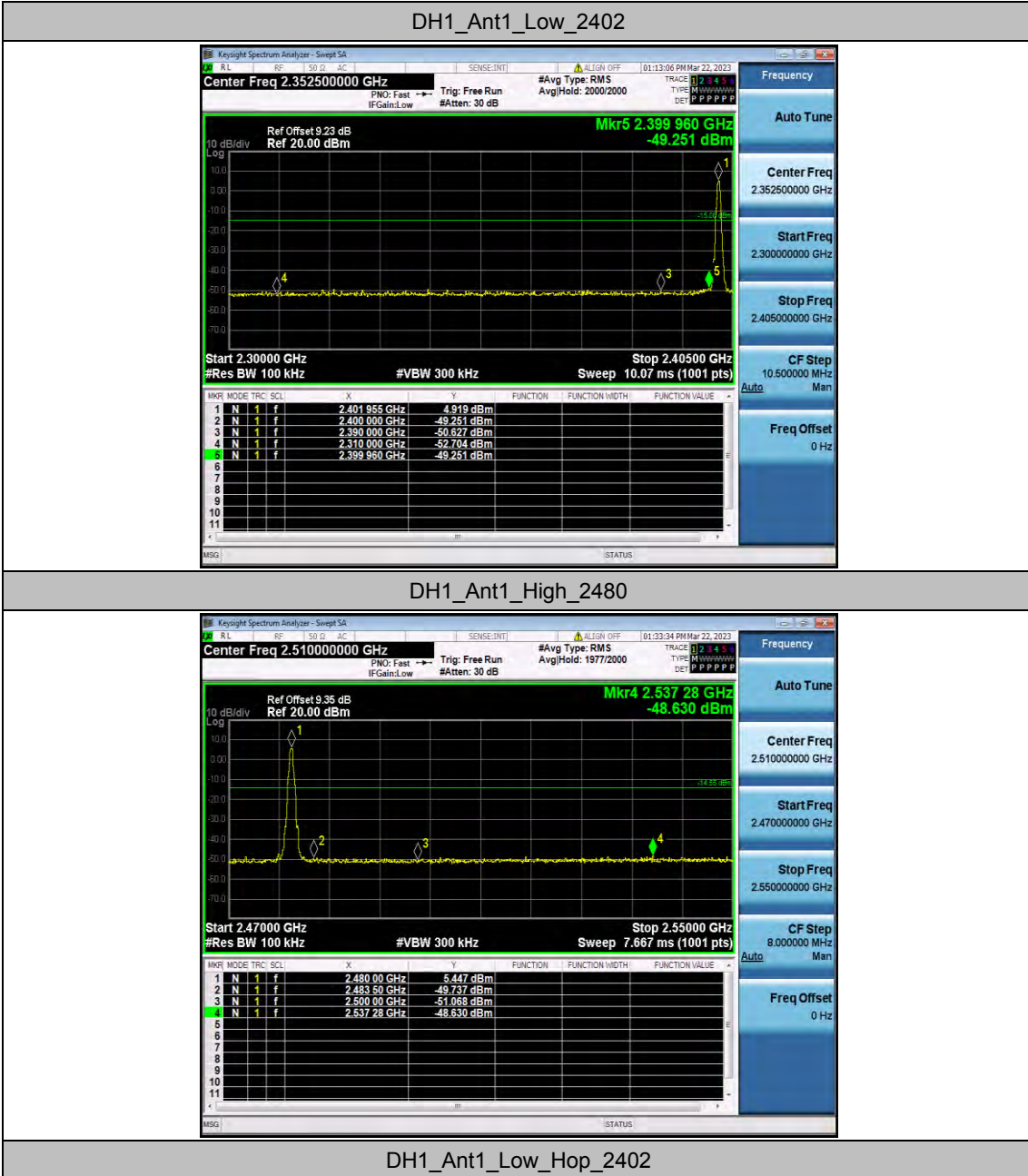


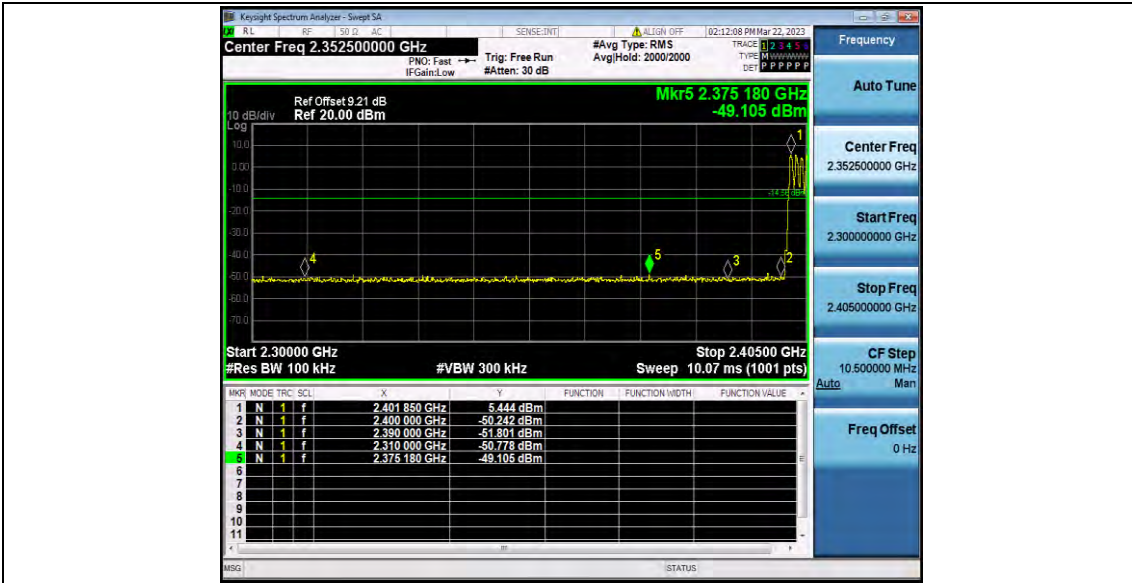
Appendix A.7: Band edge measurements

Test Result

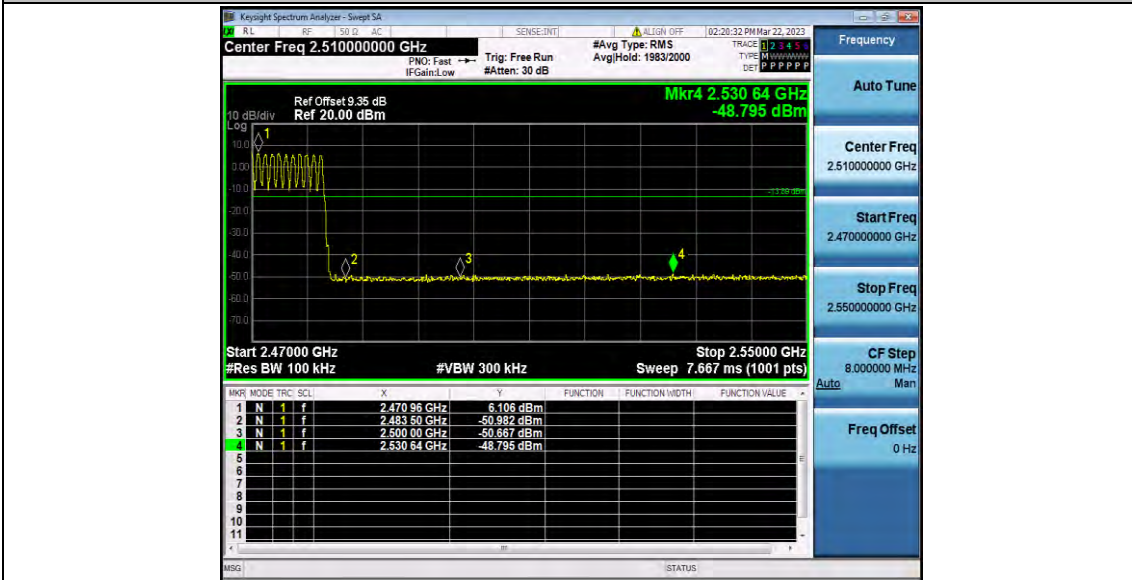
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	4.92	-49.25	≤-15.08	PASS
		High	2480	5.45	-48.63	≤-14.55	PASS
		Low	Hop_2402	5.44	-49.11	≤-14.56	PASS
		High	Hop_2480	6.11	-48.8	≤-13.89	PASS
2DH1	Ant1	Low	2402	0.59	-48.7	≤-19.41	PASS
		High	2480	1.09	-48.26	≤-18.91	PASS
		Low	Hop_2402	7.40	-49.12	≤-12.6	PASS
		High	Hop_2480	7.94	-47.46	≤-12.06	PASS
3DH1	Ant1	Low	2402	0.77	-48.18	≤-19.23	PASS
		High	2480	1.26	-48.73	≤-18.74	PASS
		Low	Hop_2402	6.95	-49.06	≤-13.05	PASS
		High	Hop_2480	8.45	-48.52	≤-11.55	PASS

Test Graphs

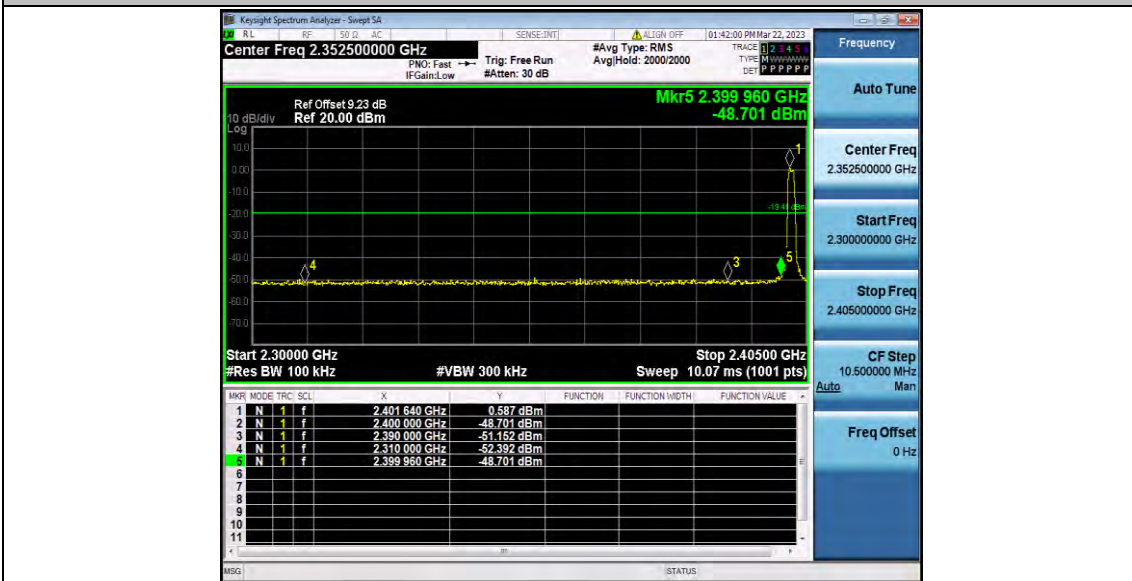




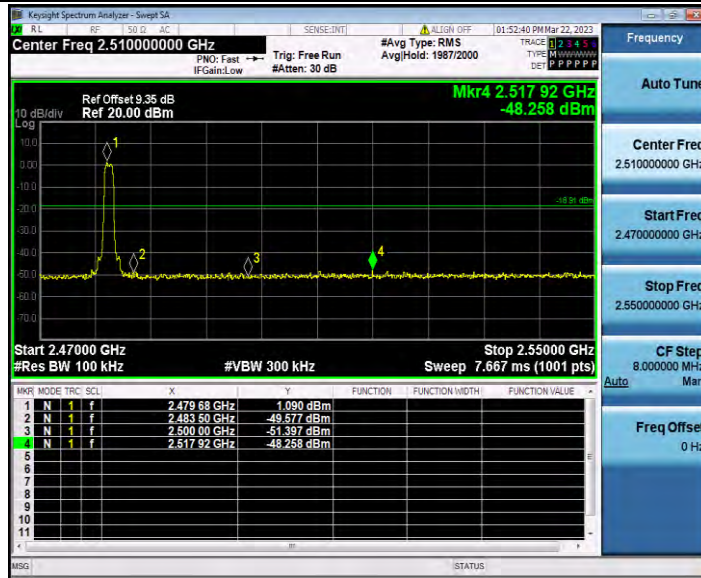
DH1_Ant1_High_Hop_2480



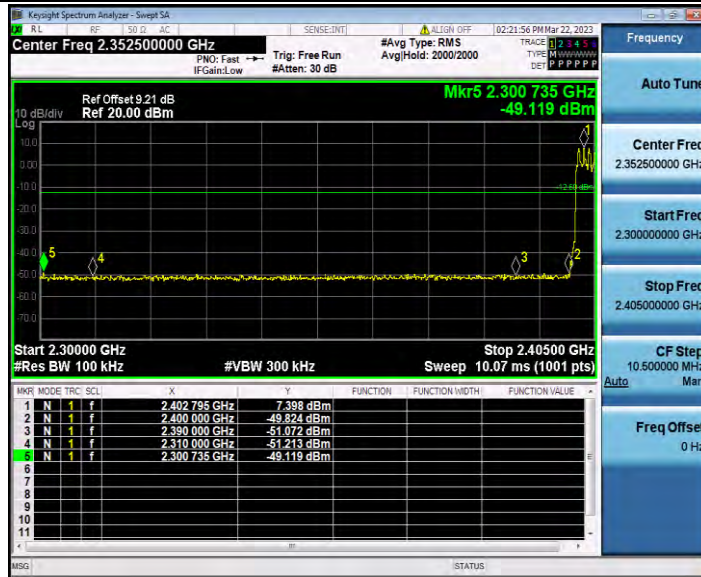
2DH1_Ant1_Low_2402



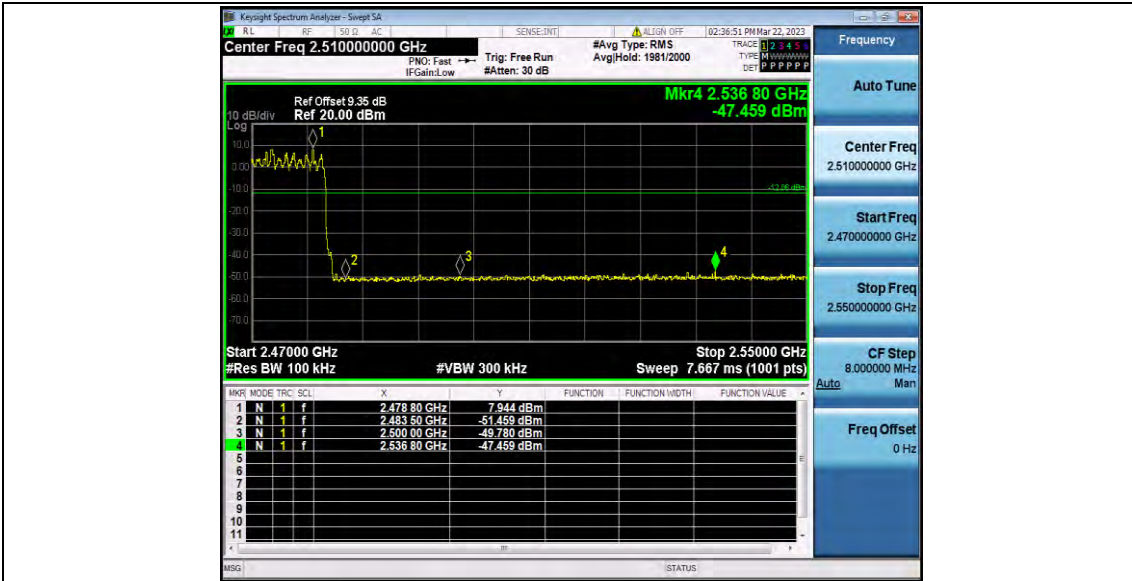
2DH1_Ant1_High_2480



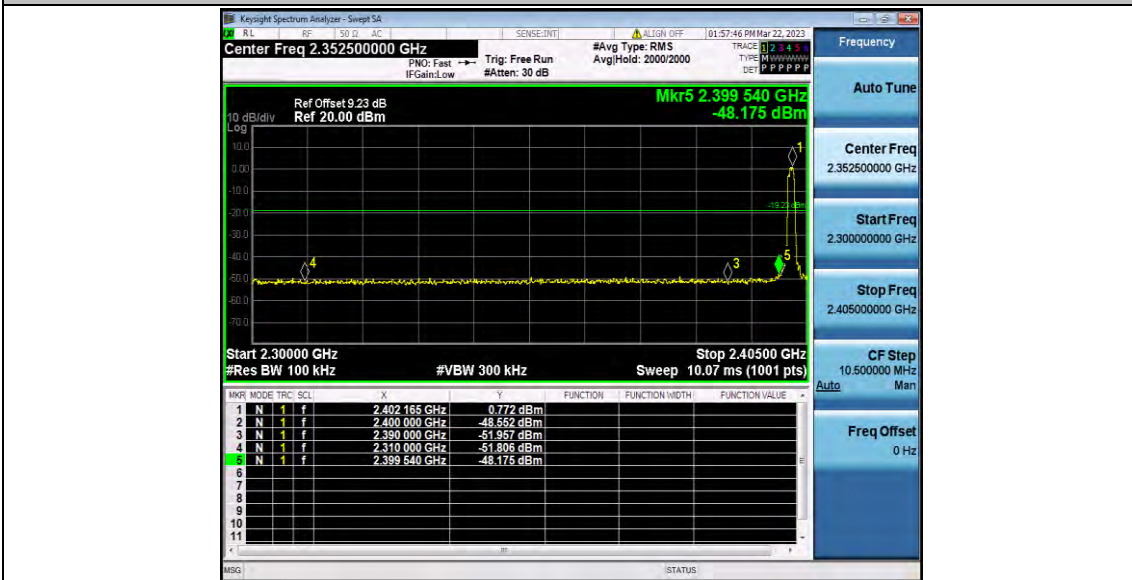
2DH1_Ant1_Low_Hop_2402



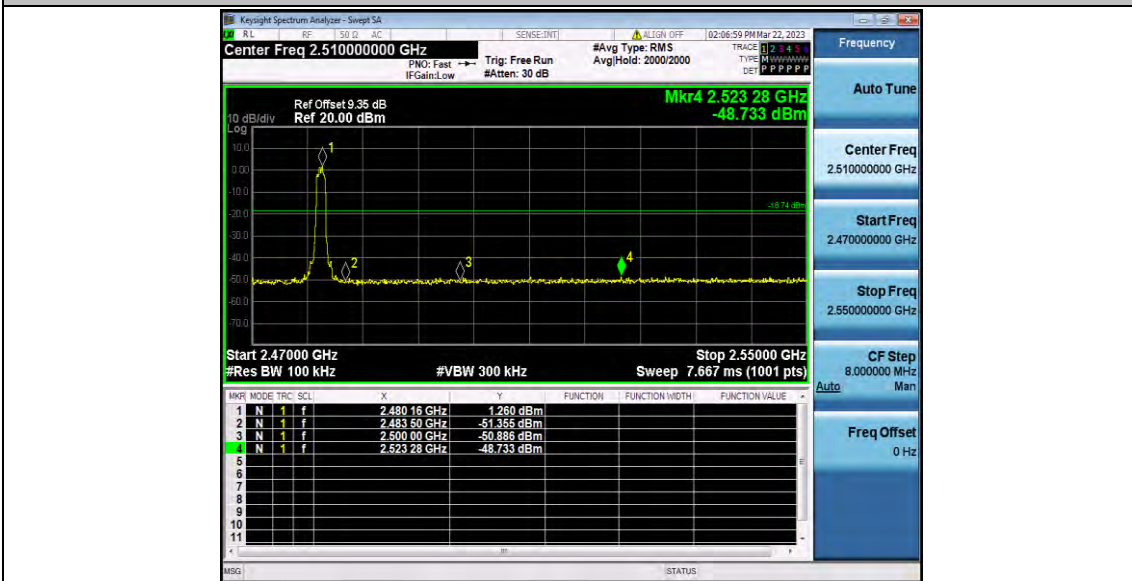
2DH1_Ant1_High_Hop_2480



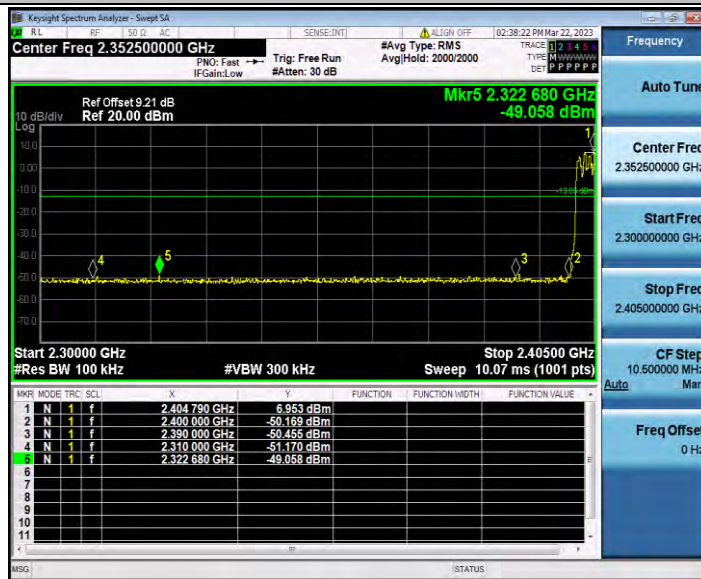
3D H1_Ant1_Low_2402



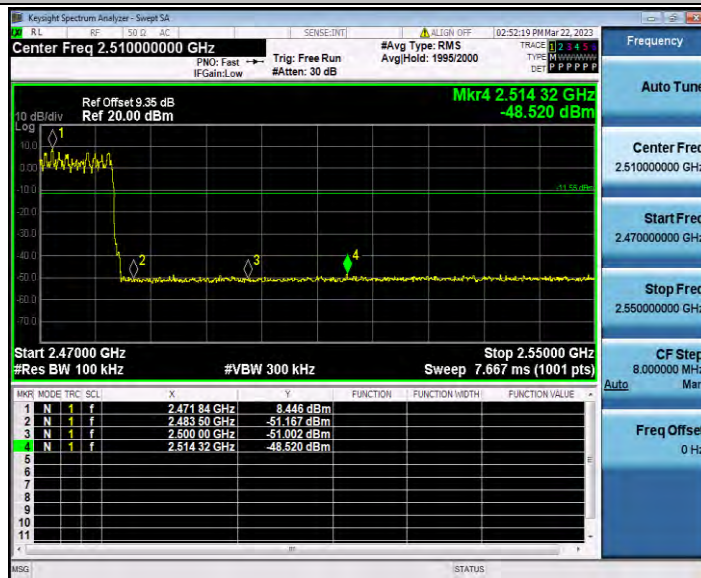
3D H1_Ant1_High_2480



3DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_Hop_2480

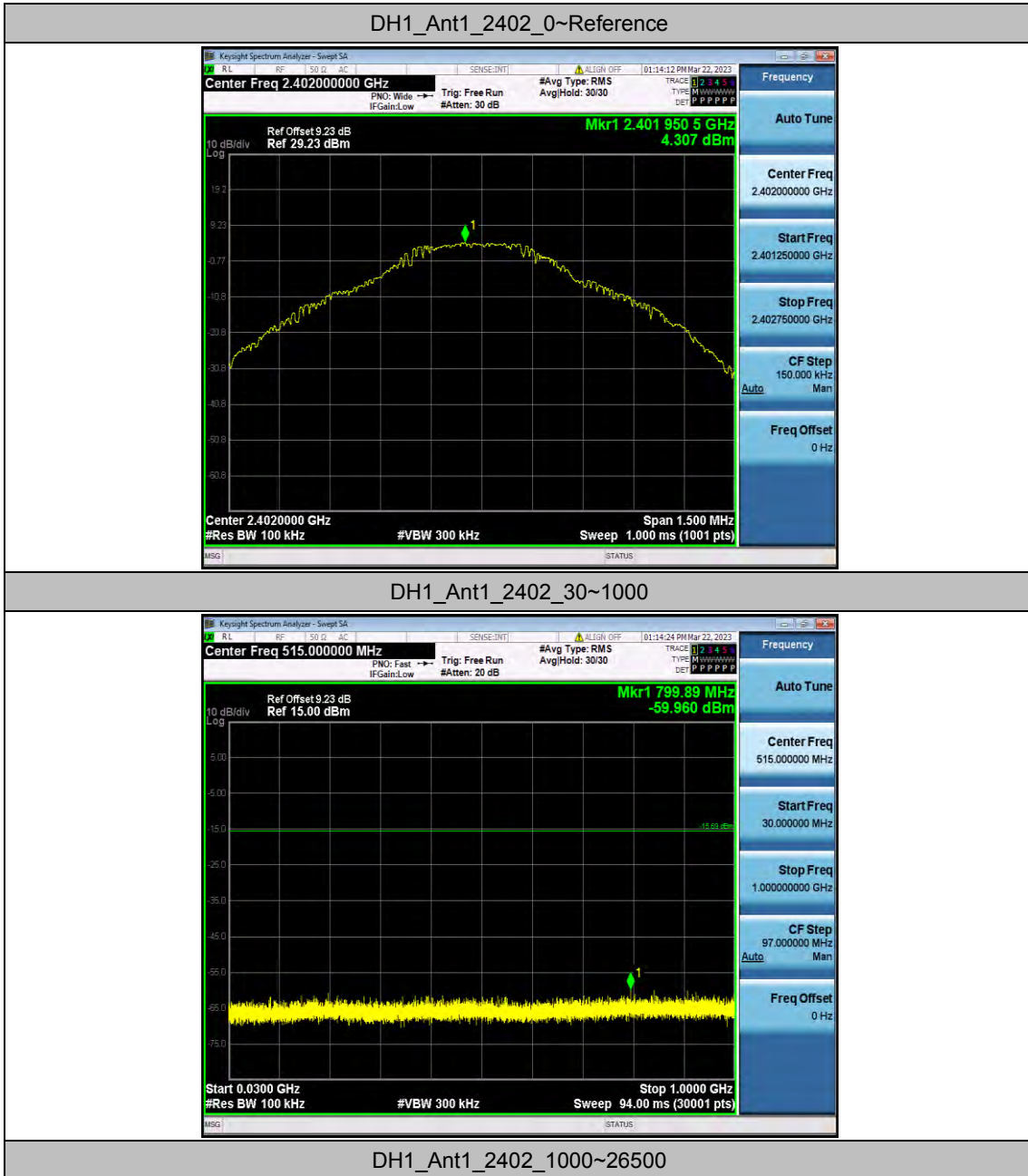


Appendix A.8: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	4.31	4.31	---	PASS
			30~1000	4.31	-59.96	≤ -15.69	PASS
			1000~26500	4.31	-43.99	≤ -15.69	PASS
		2441	Reference	4.56	4.56	---	PASS
			30~1000	4.56	-60.2	≤ -15.44	PASS
			1000~26500	4.56	-45.66	≤ -15.44	PASS
		2480	Reference	4.96	4.96	---	PASS
			30~1000	4.96	-60.34	≤ -15.04	PASS
			1000~26500	4.96	-46.97	≤ -15.04	PASS
2DH1	Ant1	2402	Reference	0.36	0.36	---	PASS
			30~1000	0.36	-60.42	≤ -19.64	PASS
			1000~26500	0.36	-47.18	≤ -19.64	PASS
		2441	Reference	0.78	0.78	---	PASS
			30~1000	0.78	-59.86	≤ -19.22	PASS
			1000~26500	0.78	-47.21	≤ -19.22	PASS
		2480	Reference	0.85	0.85	---	PASS
			30~1000	0.85	-60.18	≤ -19.15	PASS
			1000~26500	0.85	-47.41	≤ -19.15	PASS
3DH1	Ant1	2402	Reference	0.31	0.31	---	PASS
			30~1000	0.31	-59.73	≤ -19.69	PASS
			1000~26500	0.31	-47.12	≤ -19.69	PASS
		2441	Reference	0.74	0.74	---	PASS
			30~1000	0.74	-60.83	≤ -19.26	PASS
			1000~26500	0.74	-47.79	≤ -19.26	PASS
		2480	Reference	0.78	0.78	---	PASS
			30~1000	0.78	-60.3	≤ -19.22	PASS
			1000~26500	0.78	-47.21	≤ -19.22	PASS

Test Graphs

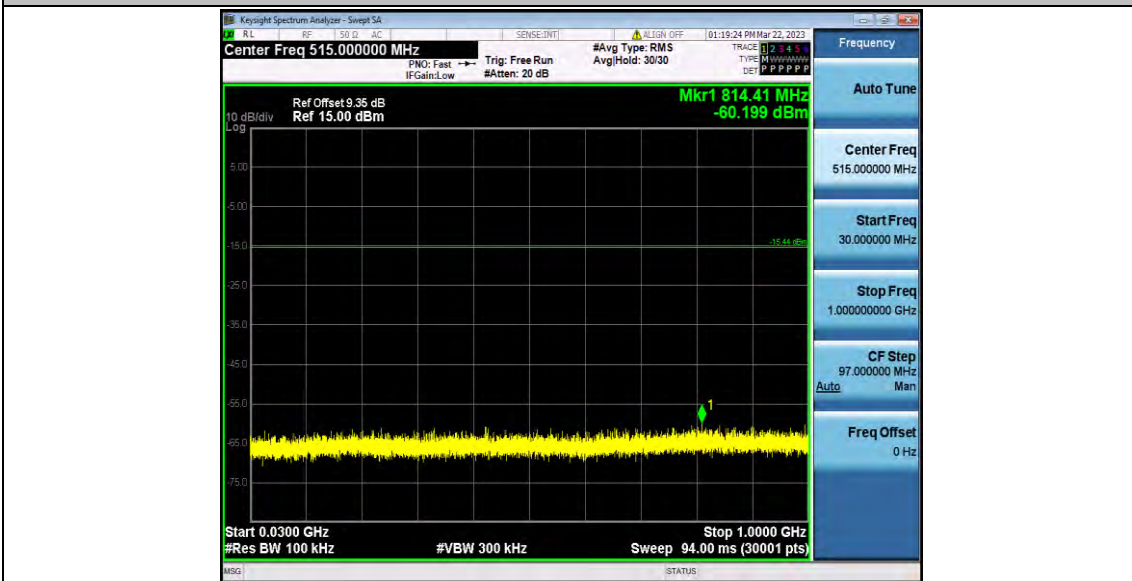




DH1_Ant1_2441_0~Reference



DH1_Ant1_2441_30~1000



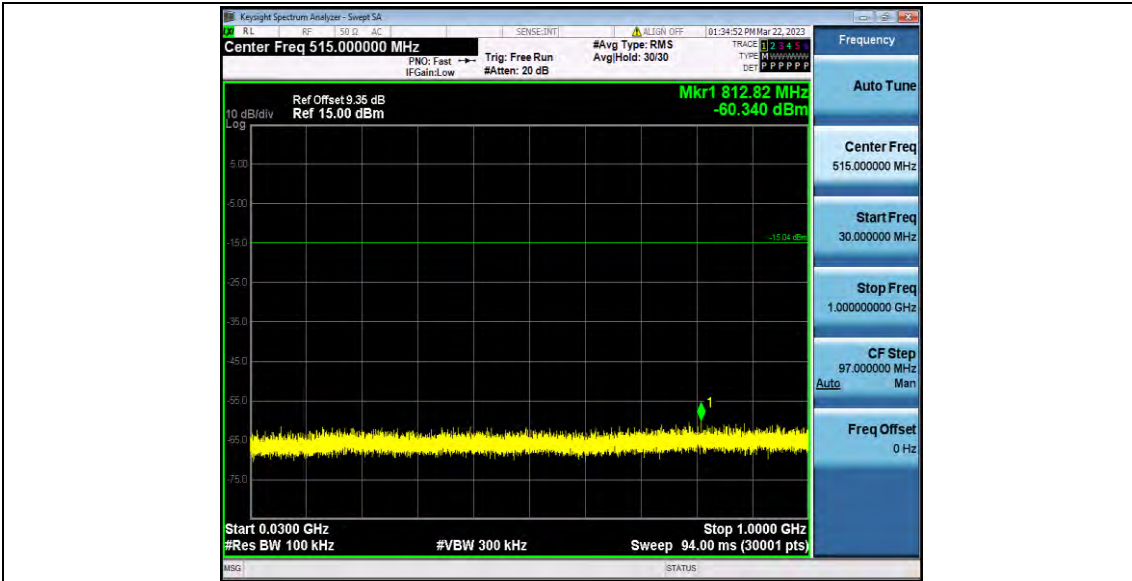
DH1_Ant1_2441_1000~26500



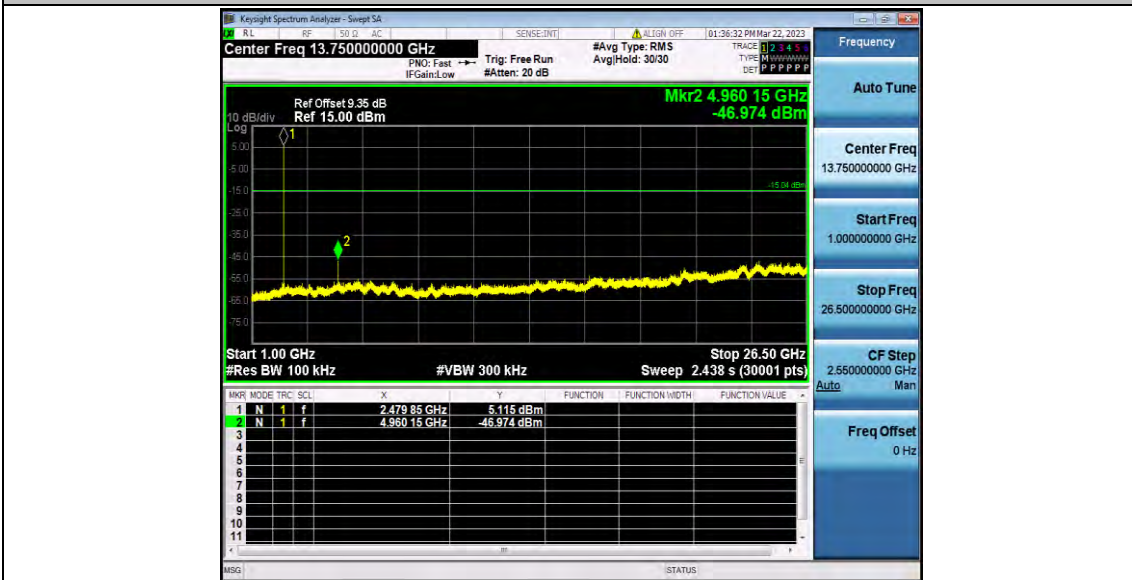
DH1_Ant1_2480_0~Reference



DH1_Ant1_2480_30~1000



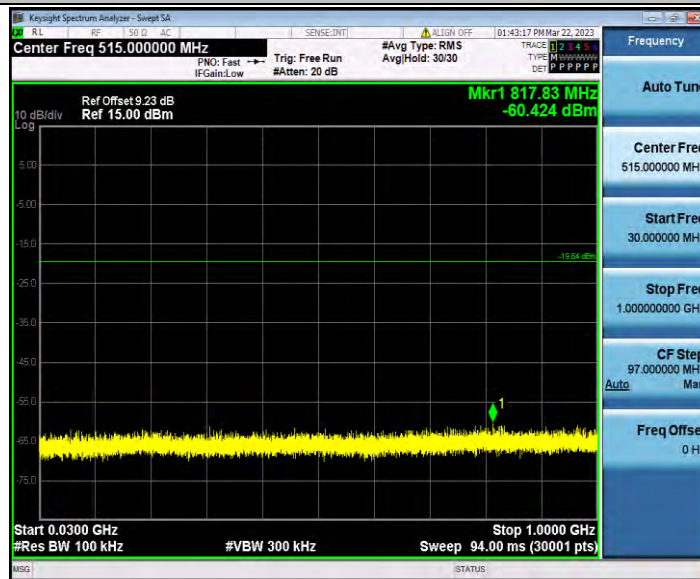
DH1_Ant1_2480_1000~26500



2DH1_Ant1_2402_0~Reference



2DH1_Ant1_2402_30~1000



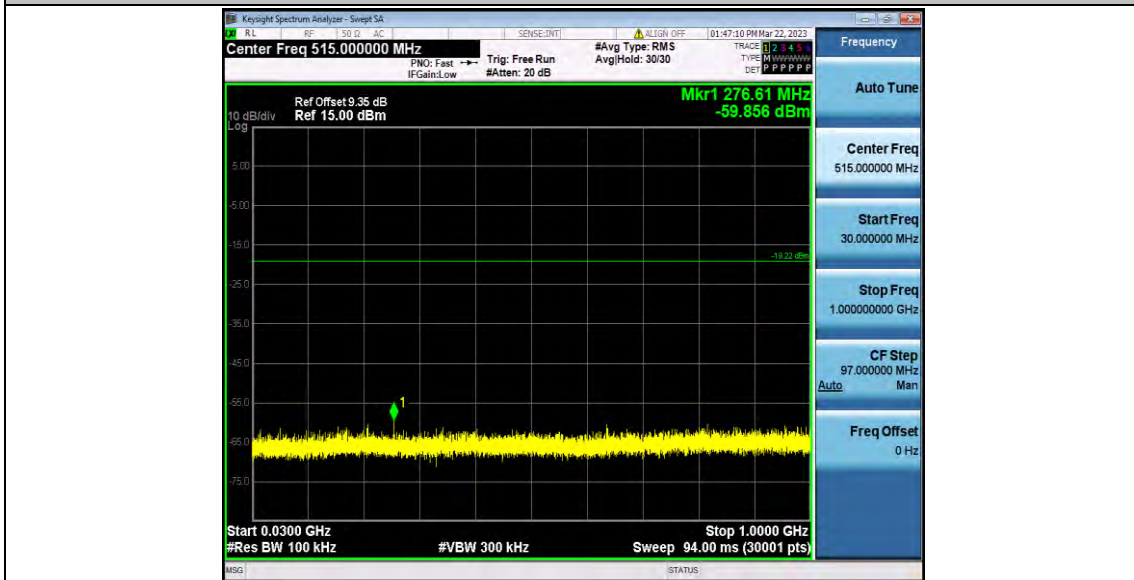
2DH1_Ant1_2402_1000~26500



2DH1_Ant1_2441_0~Reference



2DH1_Ant1_2441_30~100



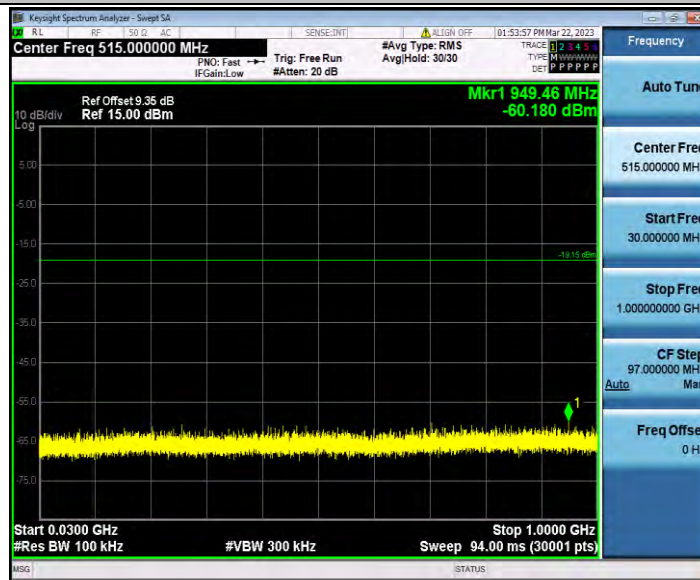
2DH1_Ant1_2441_1000~26500



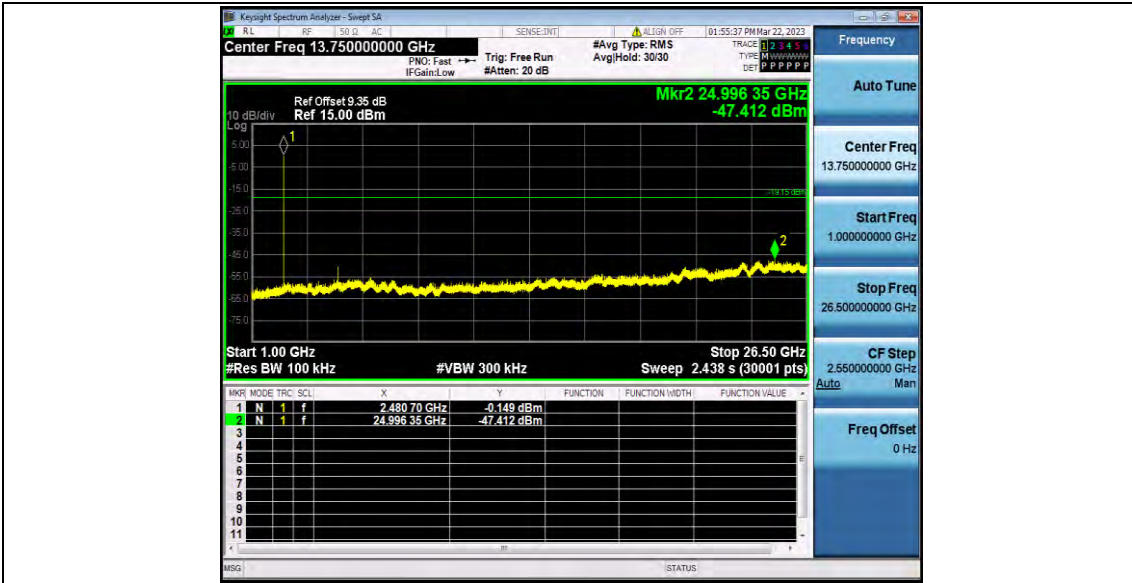
2DH1_Ant1_2480_0~Reference



2DH1_Ant1_2480_30~1000



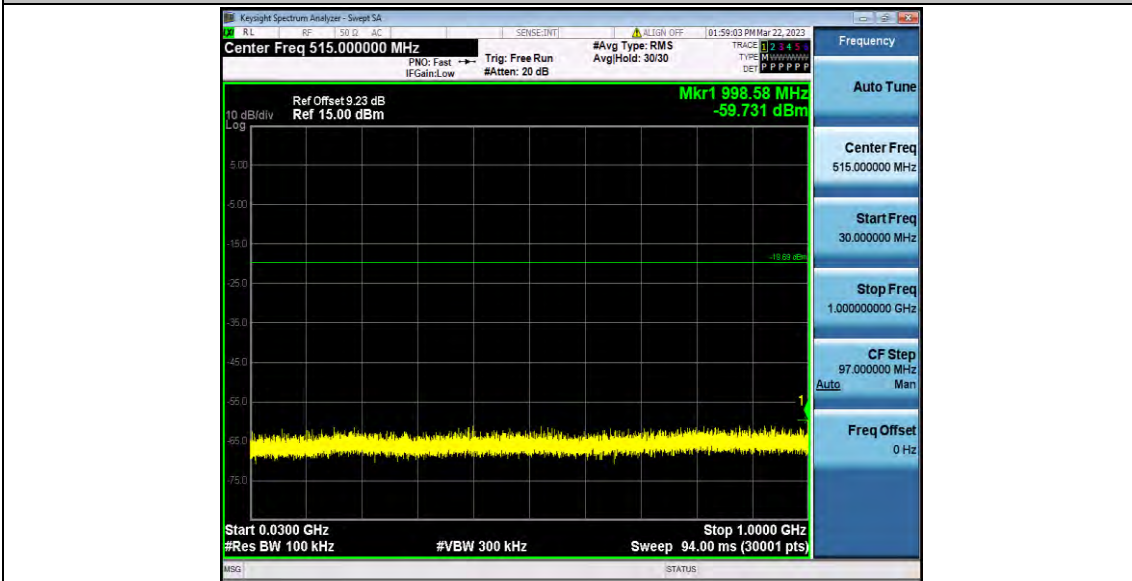
2DH1_Ant1_2480_1000~26500



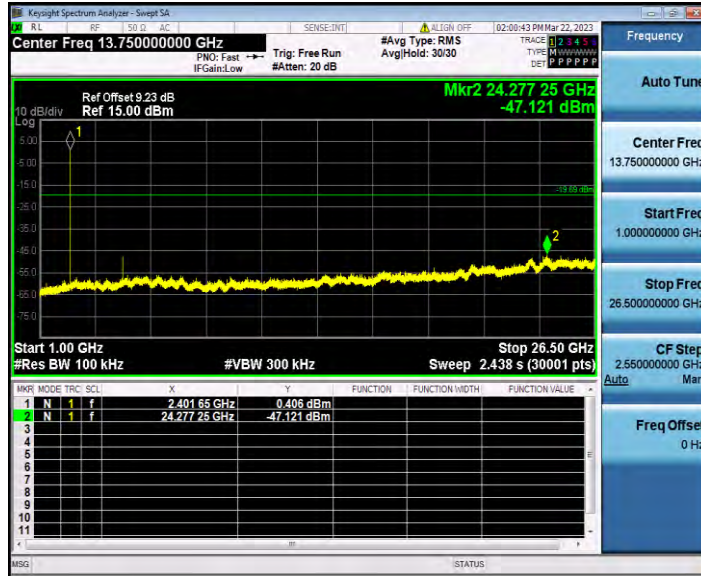
3DH1_Ant1_2402_0~Reference



3DH1_Ant1_2402_30~1000



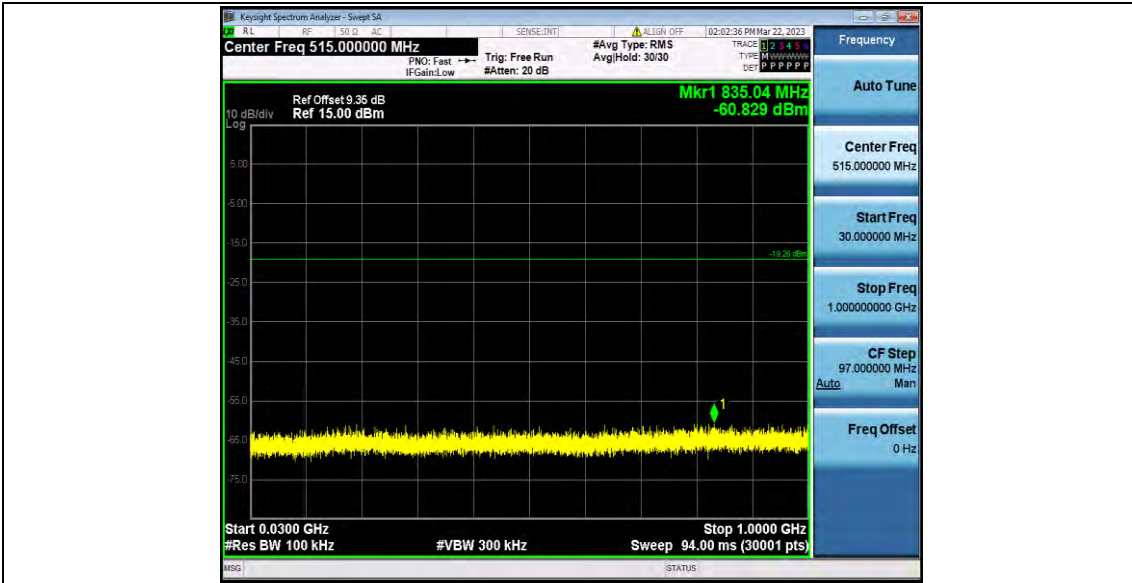
3DH1_Ant1_2402_1000~26500



3DH1_Ant1_2441_0~Reference



3DH1_Ant1_2441_30~1000



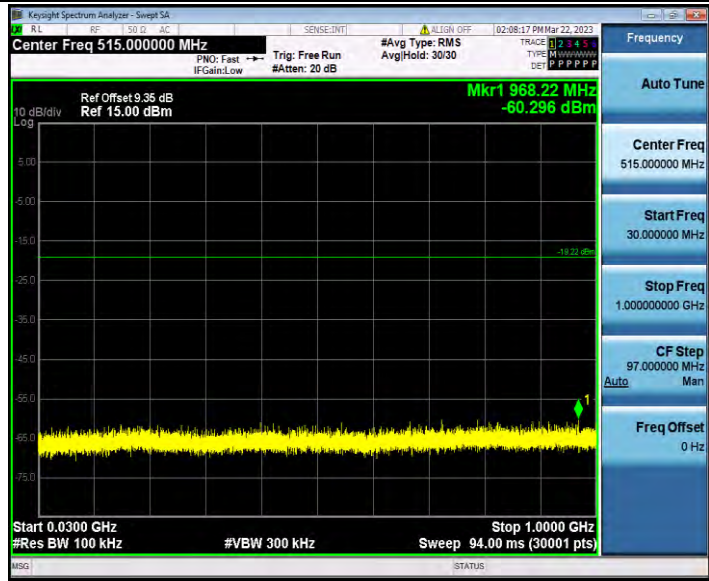
3DH1_Ant1_2441_1000~26500



3DH1_Ant1_2480_0~Reference



3DH1_Ant1_2480_30~1000



3DH1_Ant1_2480_1000~26500

