

Case No. : <u>GTS20230215017-1-8</u>
Ambient Condition: <u>23</u> °C, <u>51</u> %RH, Atmos100.1Kpa,
Test Date: <u>2023.3.22</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	0.939	2401.550	2402.489	---	---
		2441	0.942	2440.547	2441.489	---	---
		2480	0.870	2479.547	2480.417	---	---
2DH1	Ant1	2402	1.278	2401.364	2402.642	---	---
		2441	1.254	2440.367	2441.621	---	---
		2480	1.251	2479.364	2480.615	---	---
3DH1	Ant1	2402	1.233	2401.397	2402.630	---	---
		2441	1.260	2440.370	2441.630	---	---
		2480	1.269	2479.361	2480.630	---	---

Test Graphs

DH1_Ant1_2402



DH1_Ant1_2441



DH1_Ant1_2480



2D11_Ant1_2402



2D11_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	0.83932	2401.582	2402.421	---	---
		2441	0.83659	2440.580	2441.417	---	---
		2480	0.84088	2479.573	2480.414	---	---
2DH1	Ant1	2402	1.1518	2401.422	2402.574	---	---
		2441	1.1515	2440.422	2441.574	---	---
		2480	1.1584	2479.415	2480.573	---	---
3DH1	Ant1	2402	1.1539	2401.432	2402.586	---	---
		2441	1.1515	2440.434	2441.585	---	---
		2480	1.1528	2479.433	2480.585	---	---

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

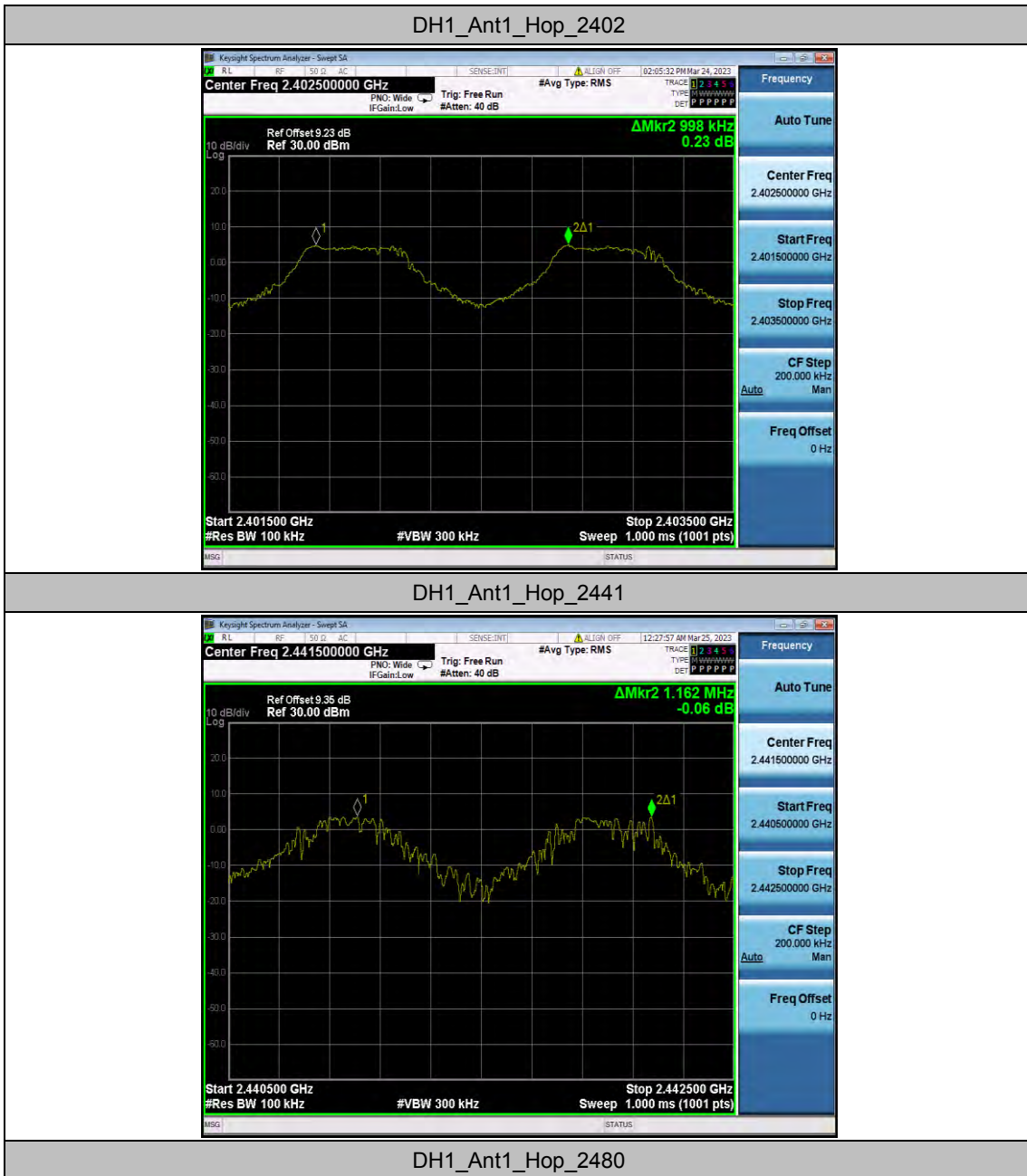
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH1	Ant1	2402	4.81	≤30.00	PASS
		2441	6.88	≤30.00	PASS
		2480	8.66	≤30.00	PASS
2DH1	Ant1	2402	4.56	≤20.97	PASS
		2441	6.79	≤20.97	PASS
		2480	8.57	≤20.97	PASS
3DH1	Ant1	2402	5.07	≤20.97	PASS
		2441	7.29	≤20.97	PASS
		2480	9.03	≤20.97	PASS

Appendix A.4: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	0.998	≥ 0.942	PASS
		Hop_2441	1.162	≥ 0.942	PASS
		Hop_2480	0.988	≥ 0.942	PASS
2DH1	Ant1	Hop_2402	1.006	≥ 0.848	PASS
		Hop_2441	0.994	≥ 0.848	PASS
		Hop_2480	1.008	≥ 0.848	PASS
3DH1	Ant1	Hop_2402	1.008	≥ 0.846	PASS
		Hop_2441	1.02	≥ 0.846	PASS
		Hop_2480	1	≥ 0.846	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

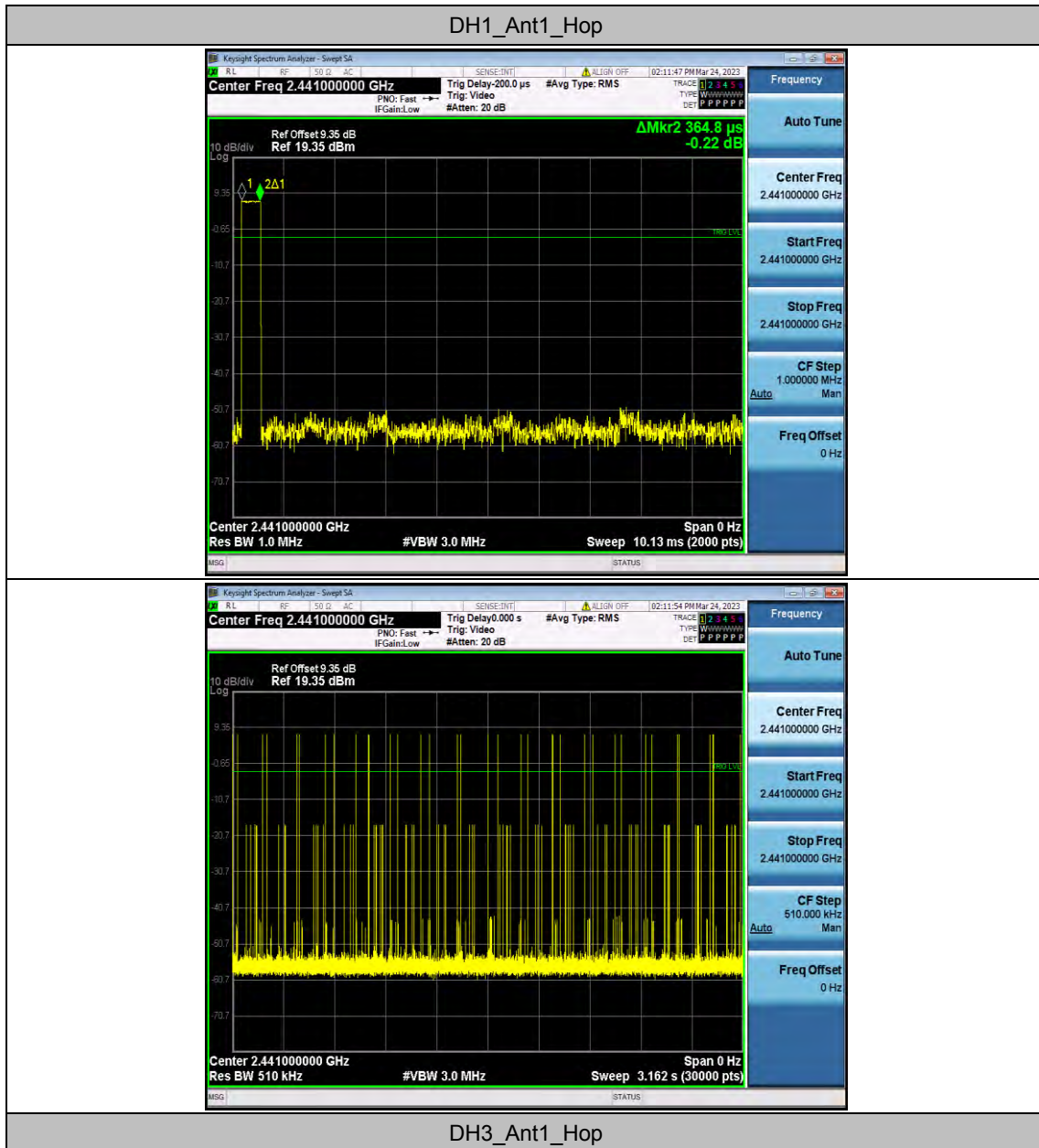


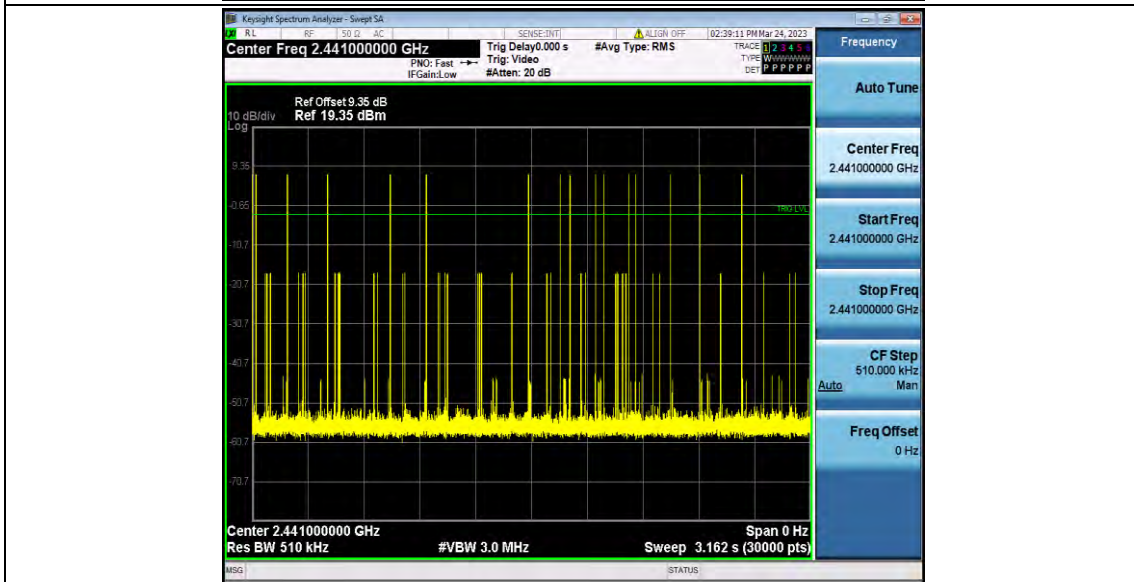
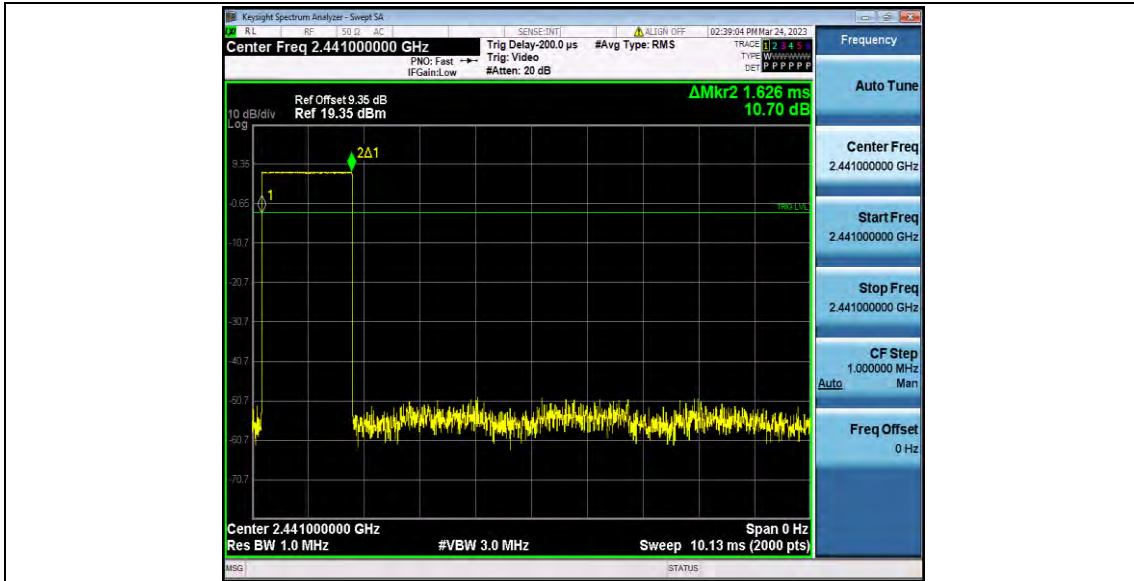
Appendix A.5: Time of occupancy

Test Result

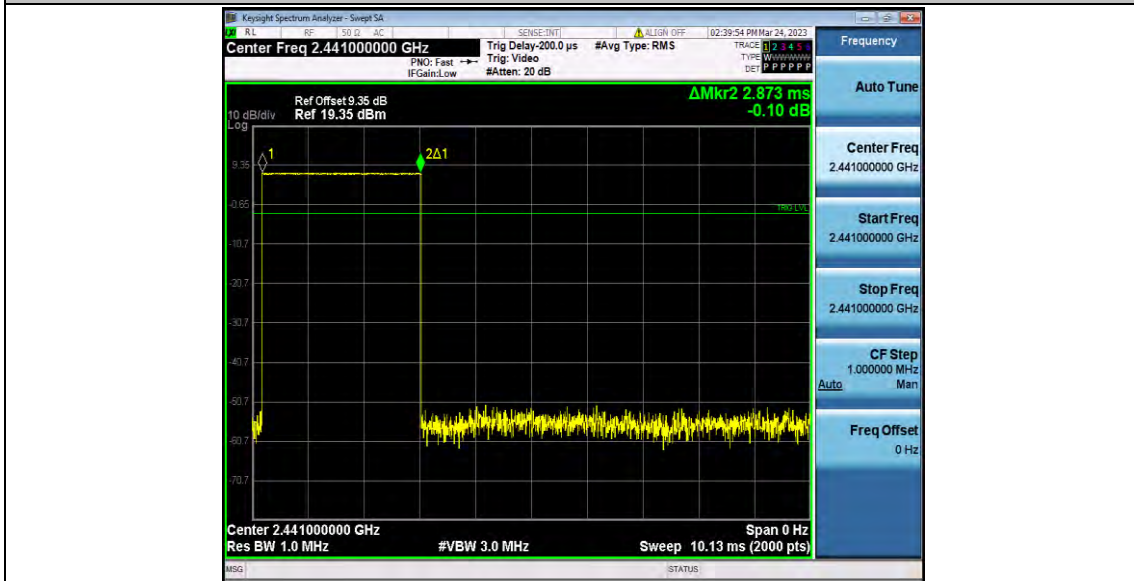
TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.36	330	0.12	≤0.4	PASS
DH3	Ant1	Hop	1.63	160	0.26	≤0.4	PASS
DH5	Ant1	Hop	2.87	110	0.316	≤0.4	PASS
2DH1	Ant1	Hop	0.38	330	0.125	≤0.4	PASS
2DH3	Ant1	Hop	1.63	160	0.26	≤0.4	PASS
2DH5	Ant1	Hop	2.88	110	0.317	≤0.4	PASS
3DH1	Ant1	Hop	0.38	320	0.121	≤0.4	PASS
3DH3	Ant1	Hop	1.63	170	0.276	≤0.4	PASS
3DH5	Ant1	Hop	2.88	110	0.317	≤0.4	PASS

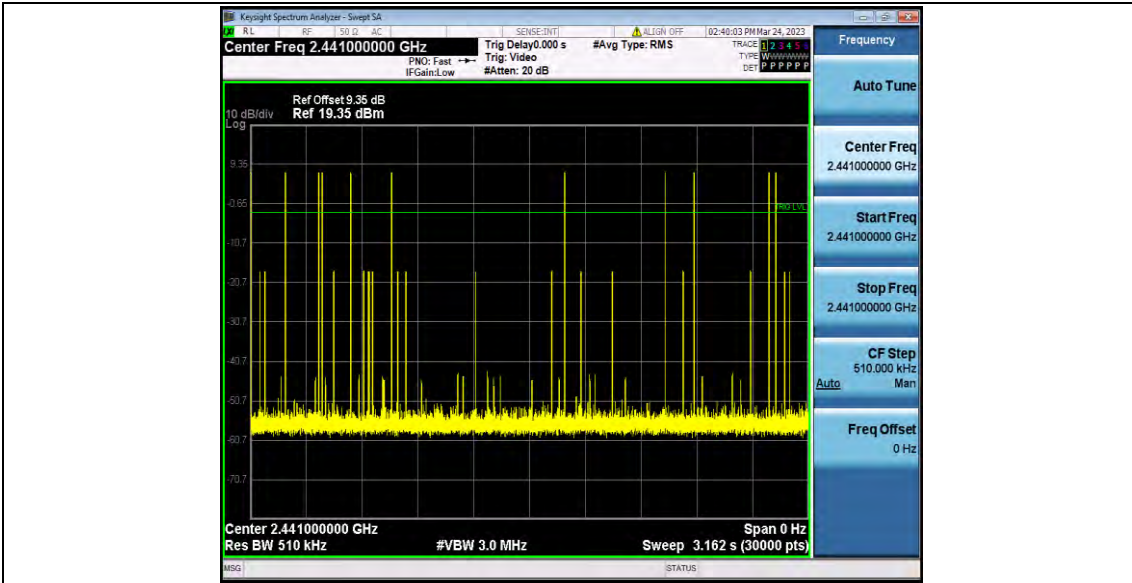
Test Graphs



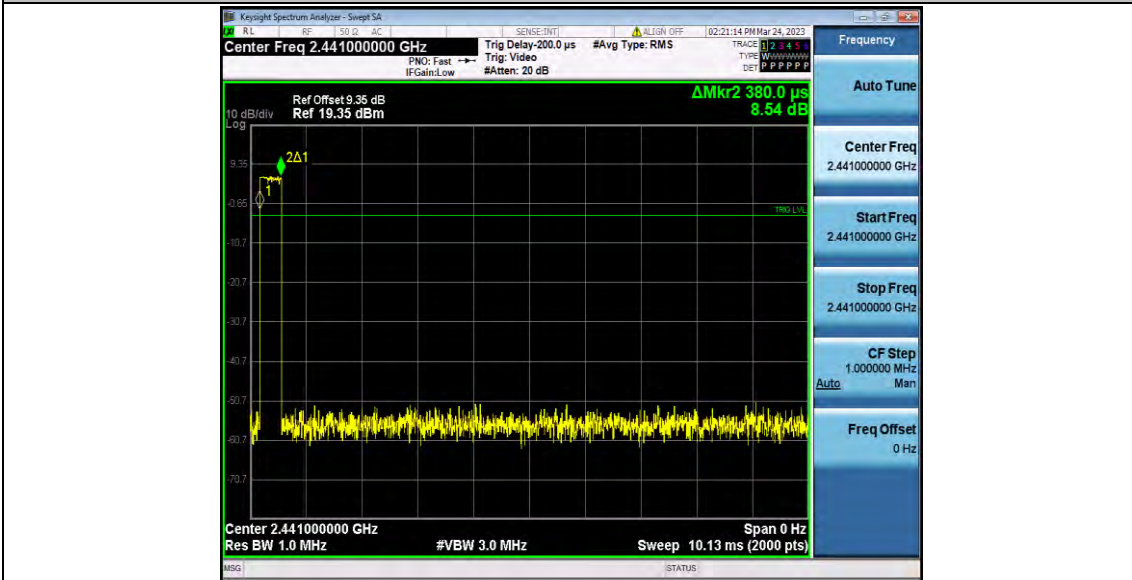


DH5_Ant1_Hop

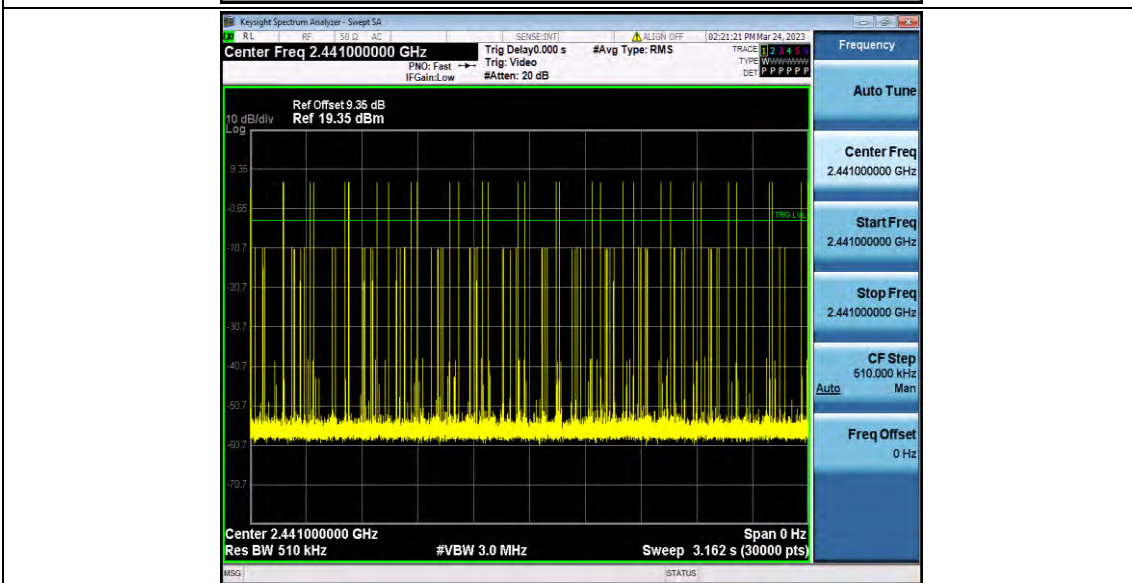


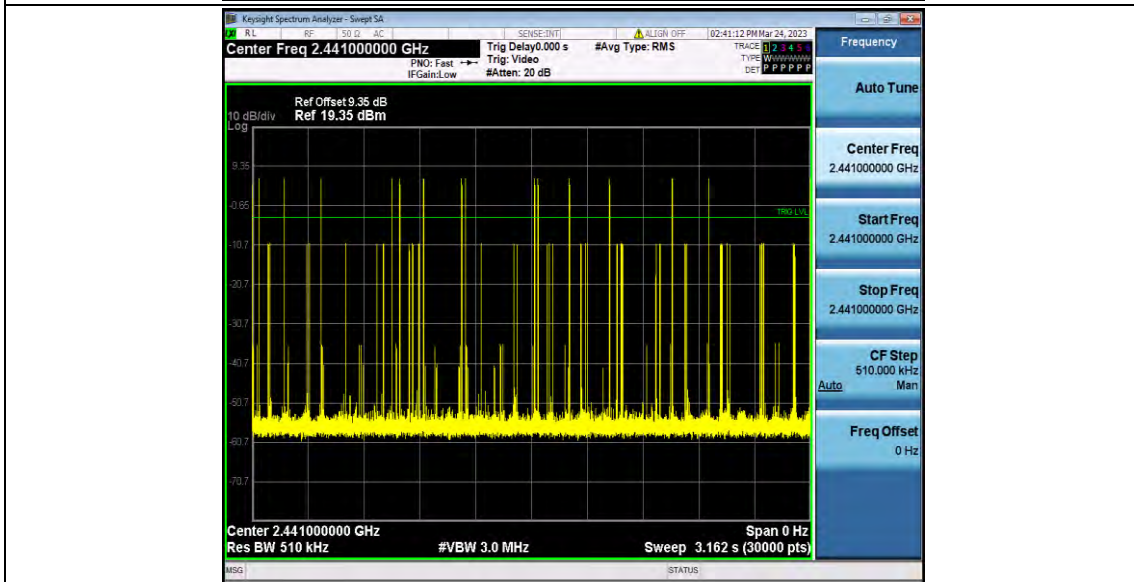
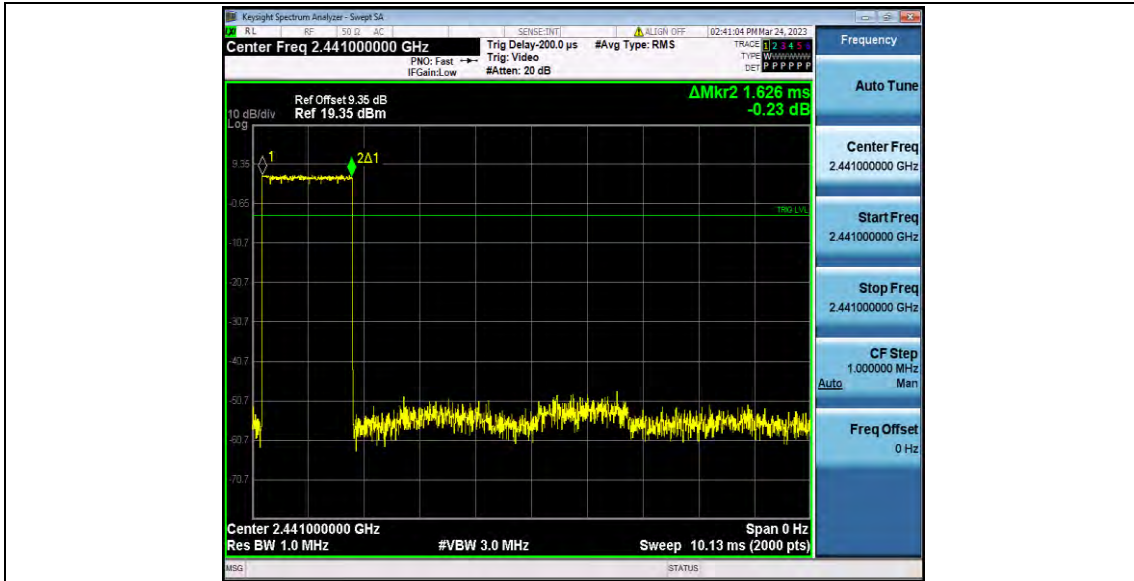


2DH1_Ant1_Hop

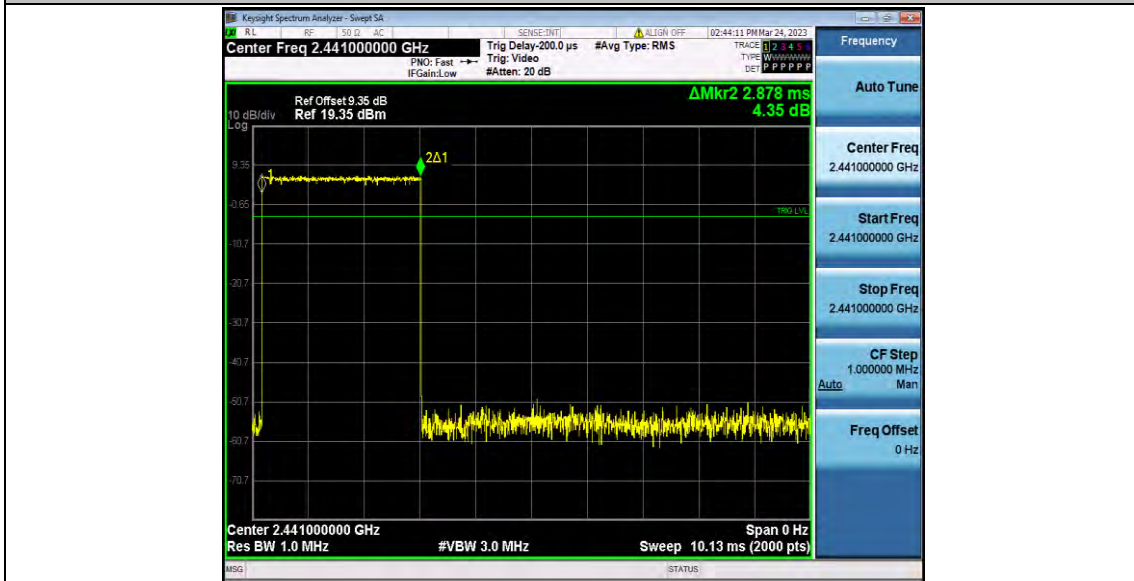


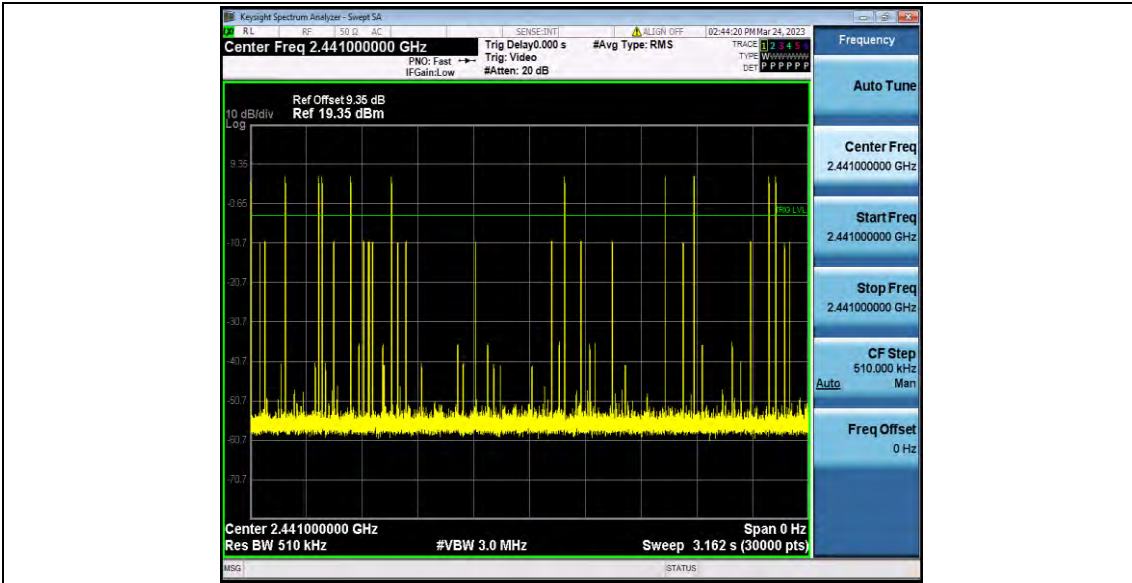
2DH3_Ant1_Hop



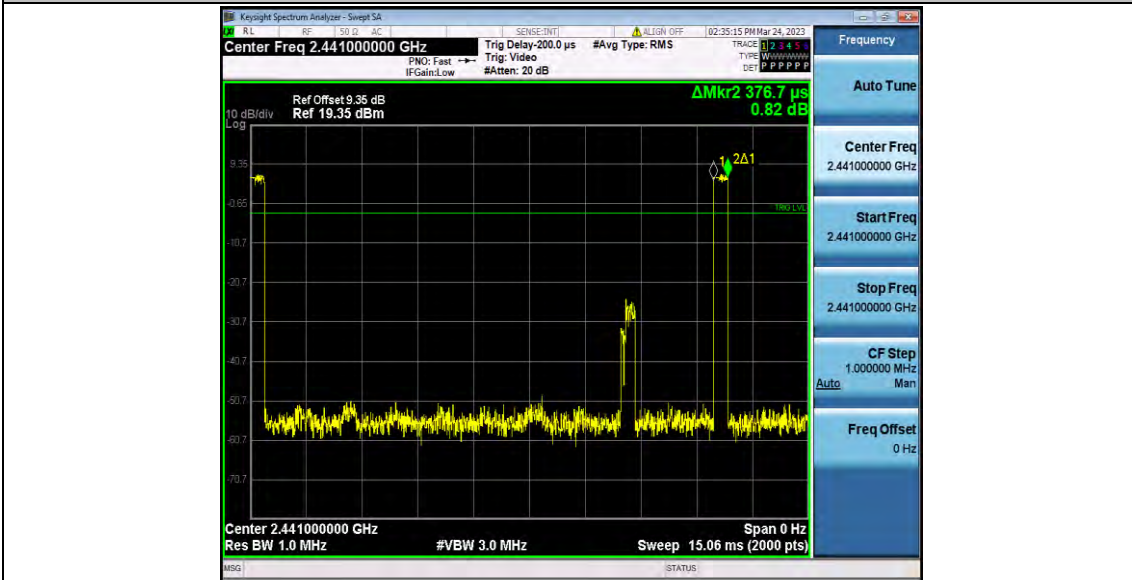


2DH5_Ant1_Hop

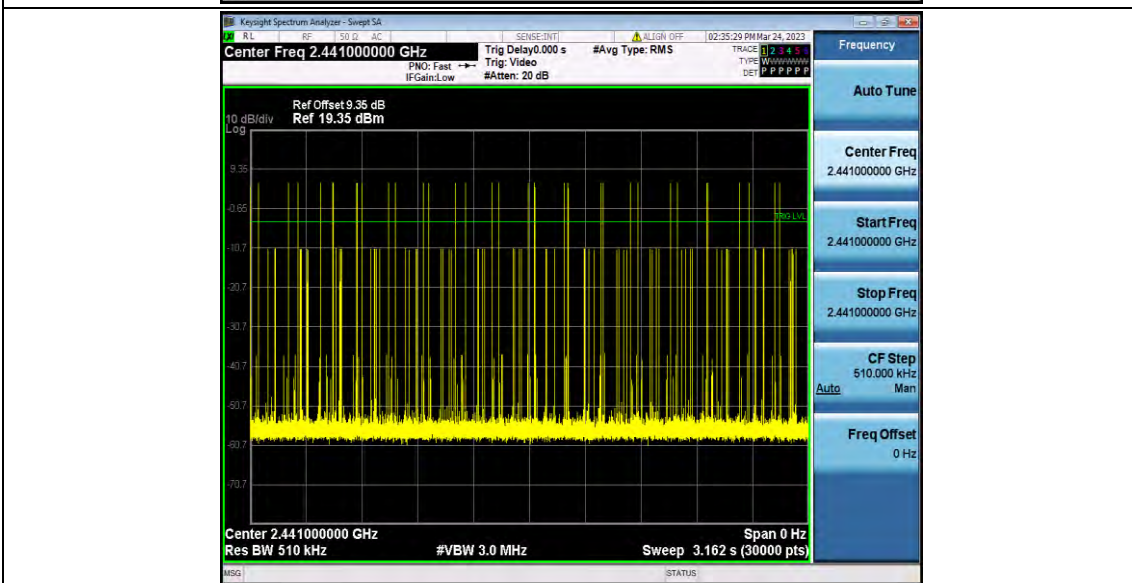


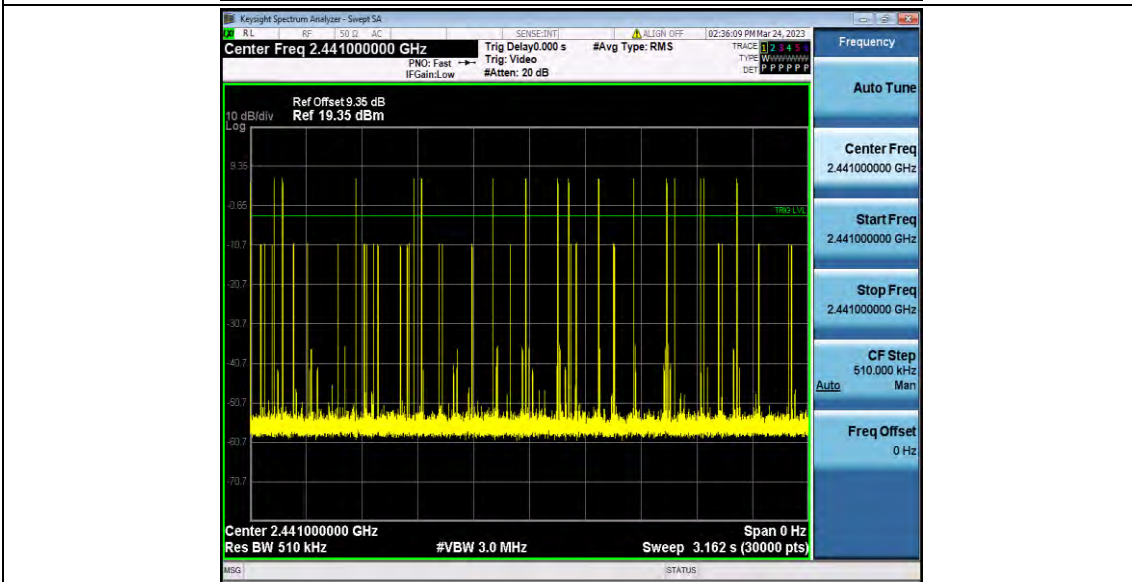
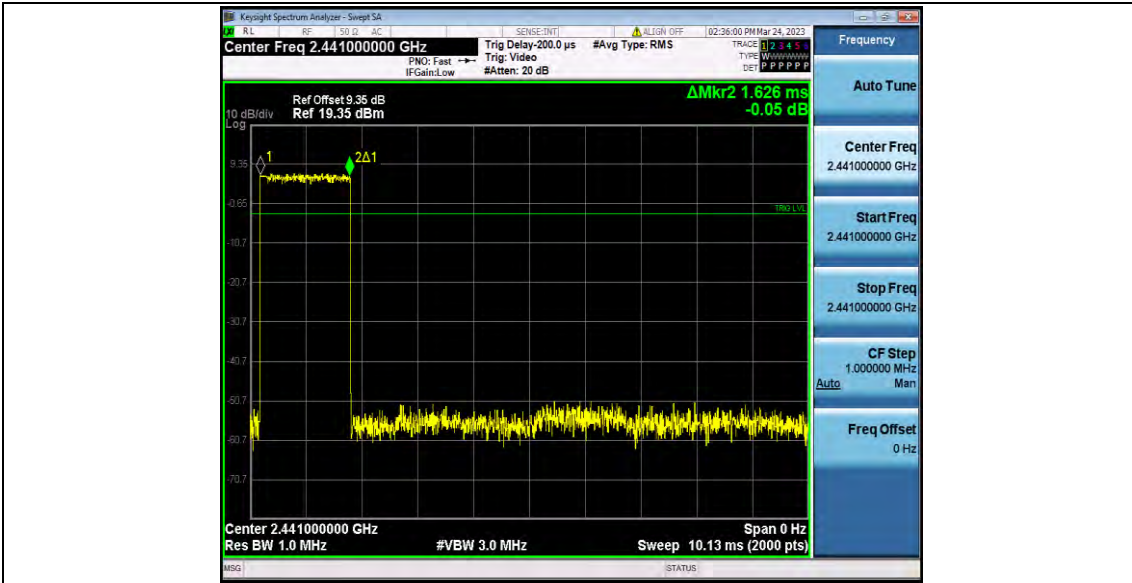


3DH1_Ant1_Hop

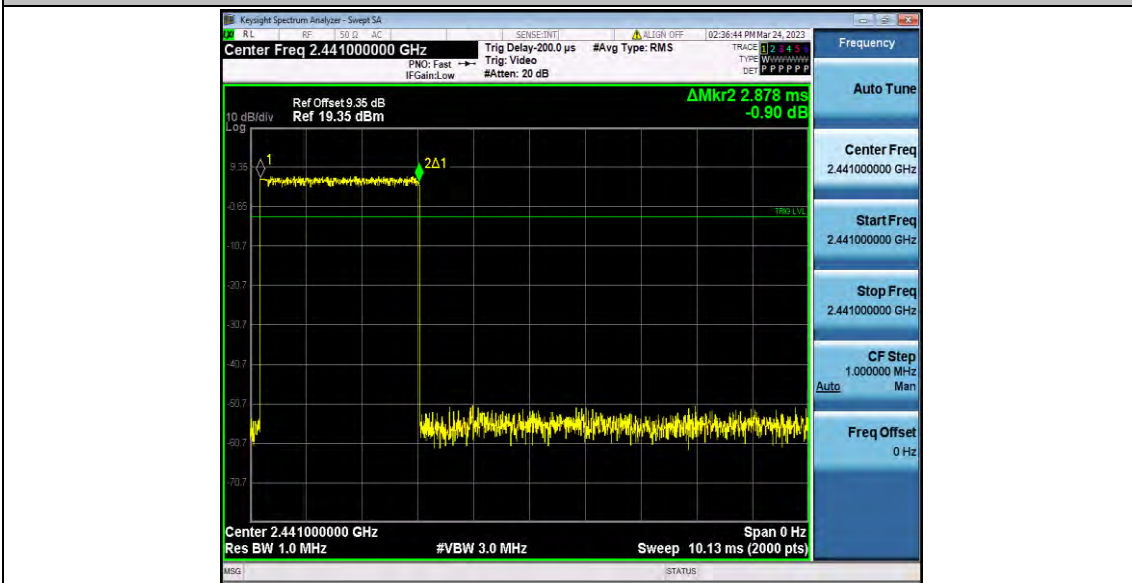


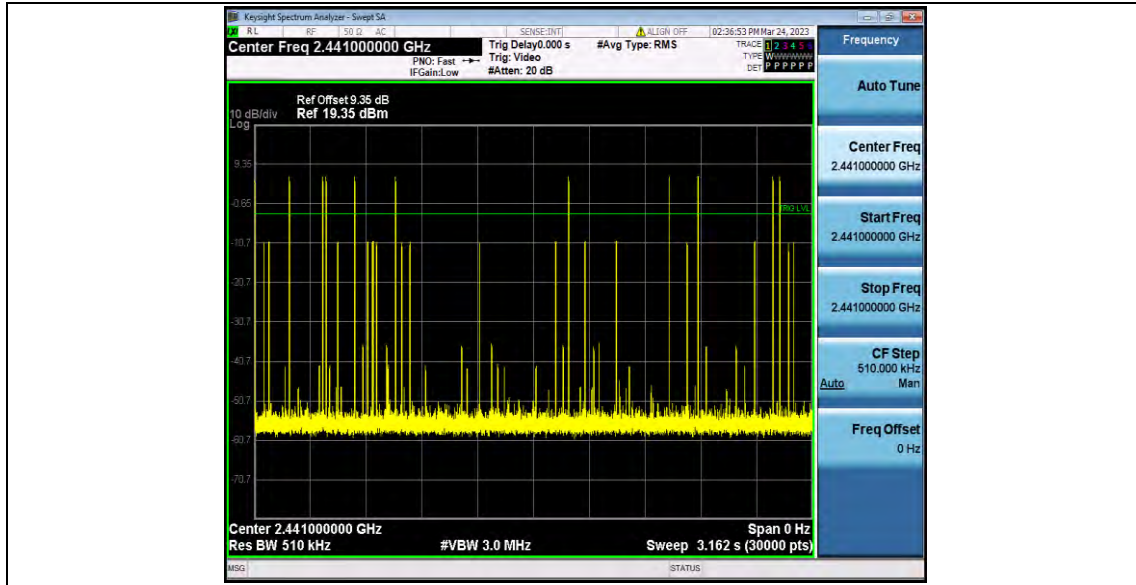
3DH3_Ant1_Hop





3DH5_Ant1_Hop



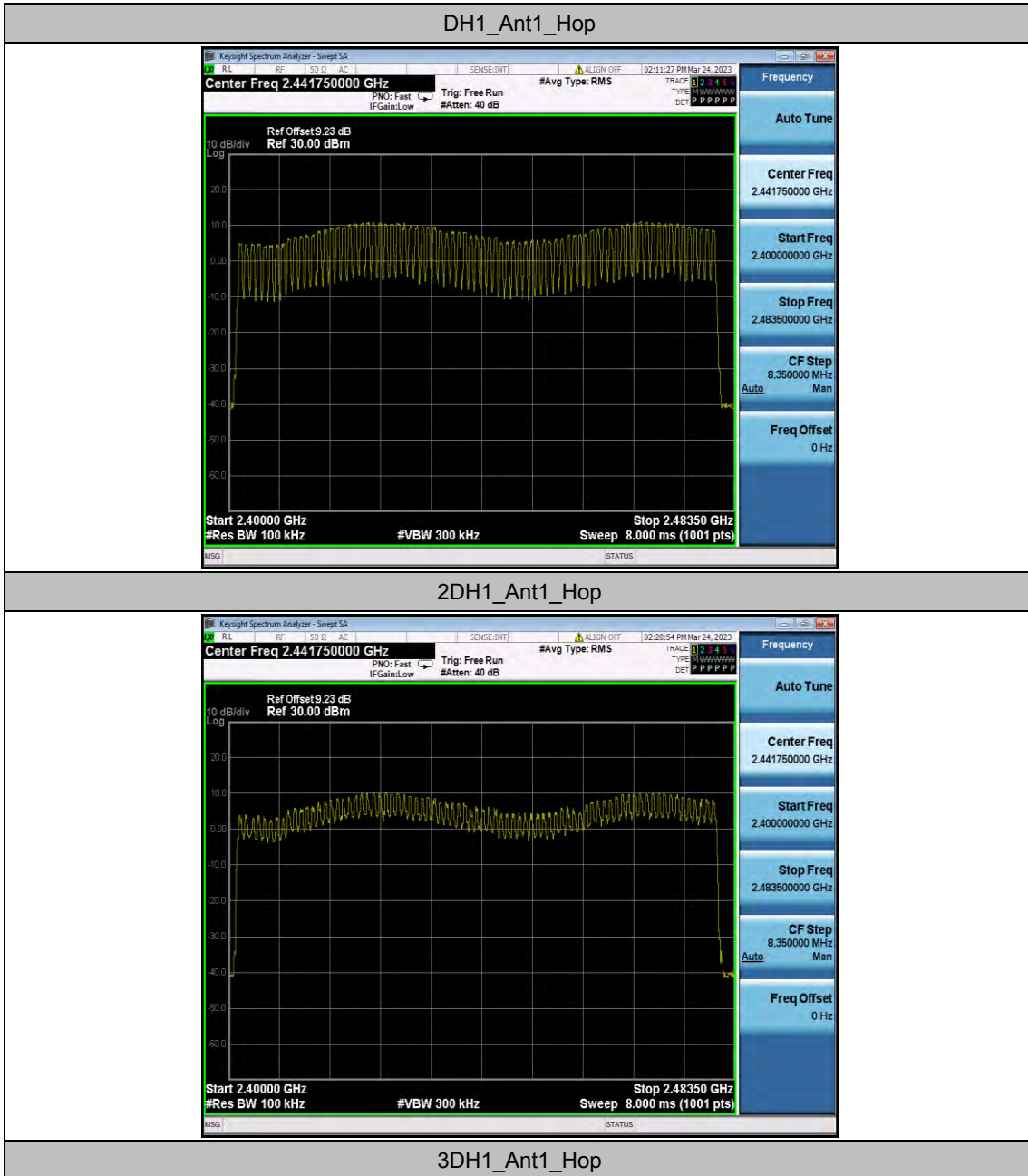


Appendix A.6: Number of hopping channels

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



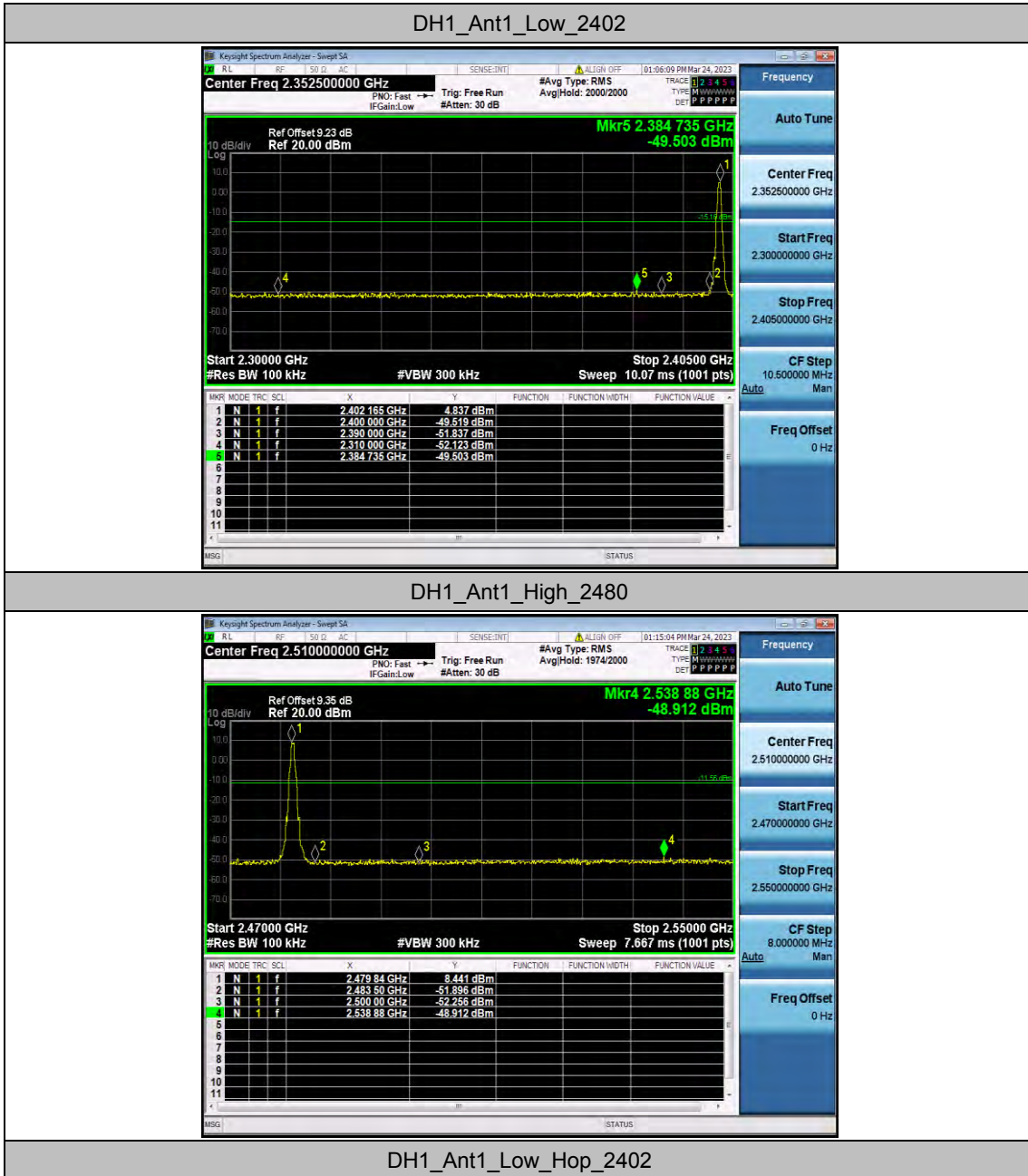


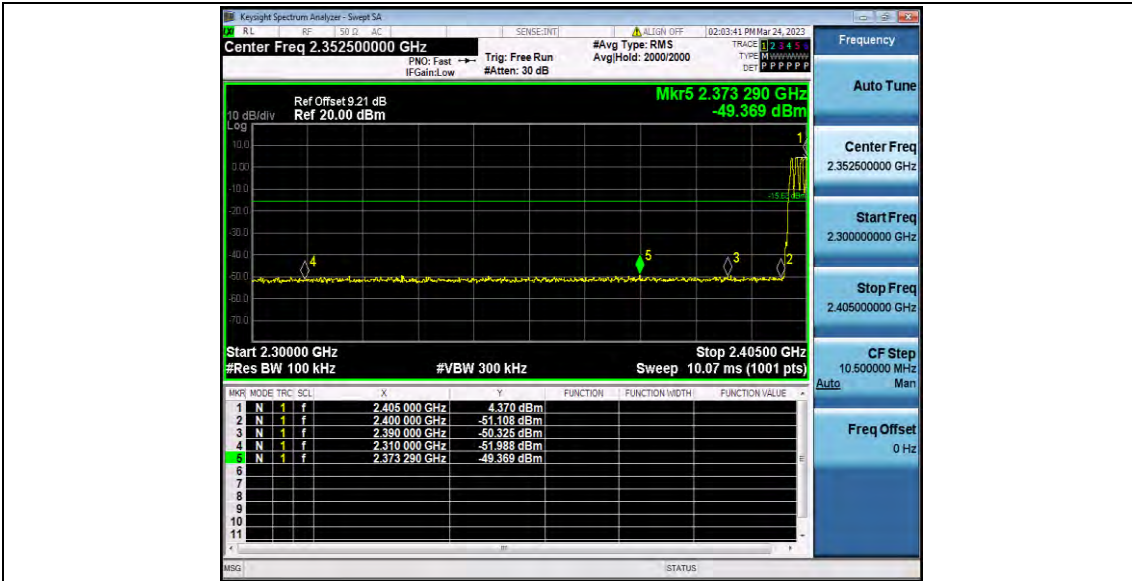
Appendix A.7: Band edge measurements

Test Result

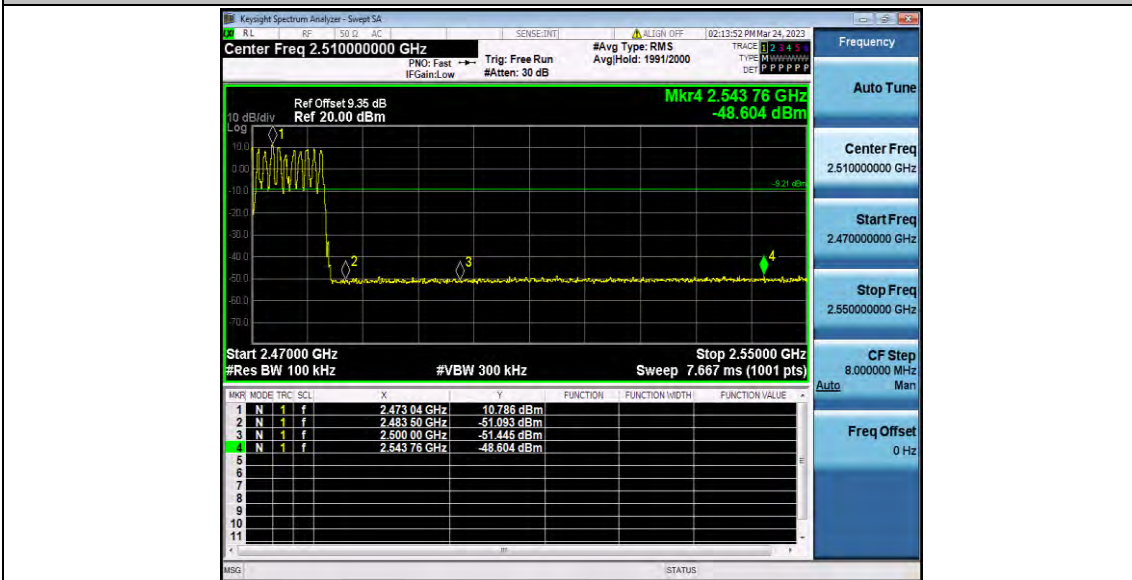
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	4.84	-49.5	≤-15.16	PASS
		High	2480	8.44	-48.91	≤-11.56	PASS
		Low	Hop_2402	4.37	-49.37	≤-15.63	PASS
		High	Hop_2480	10.79	-48.6	≤-9.21	PASS
2DH1	Ant1	Low	2402	3.77	-49.32	≤-16.23	PASS
		High	2480	7.97	-48.69	≤-12.03	PASS
		Low	Hop_2402	3.26	-49.16	≤-16.74	PASS
		High	Hop_2480	-1.49	-47.93	≤-21.49	PASS
3DH1	Ant1	Low	2402	3.75	-49.03	≤-16.25	PASS
		High	2480	7.92	-48.31	≤-12.08	PASS
		Low	Hop_2402	3.60	-49.37	≤-16.41	PASS
		High	Hop_2480	8.43	-48.67	≤-11.57	PASS

Test Graphs

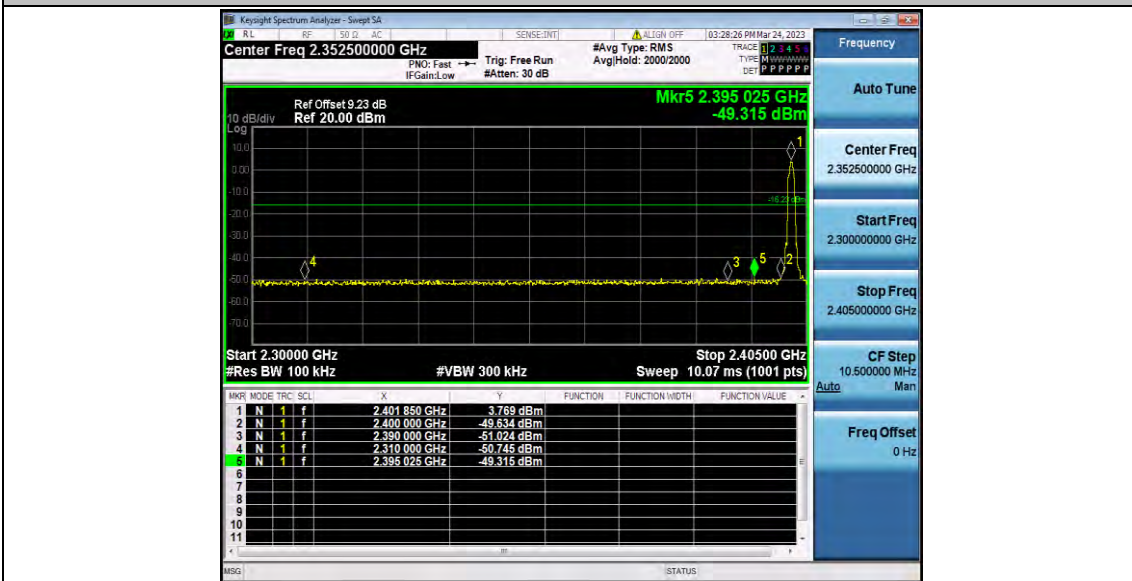




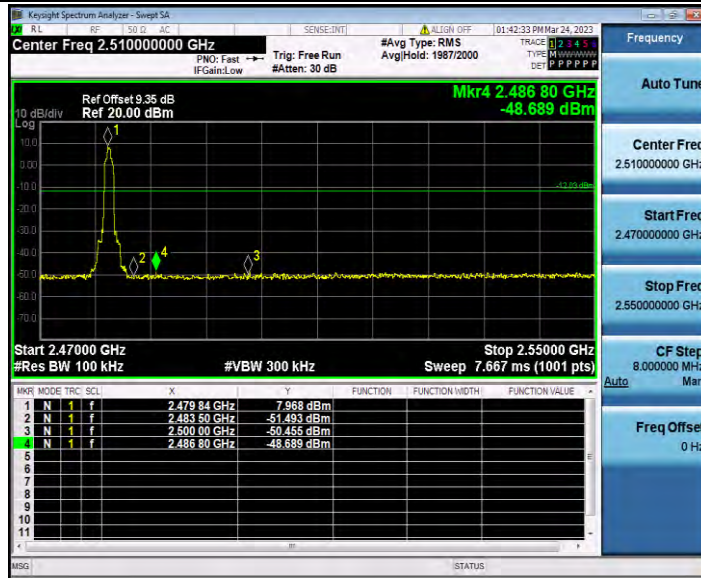
DH1_Ant1_High_Hop_2480



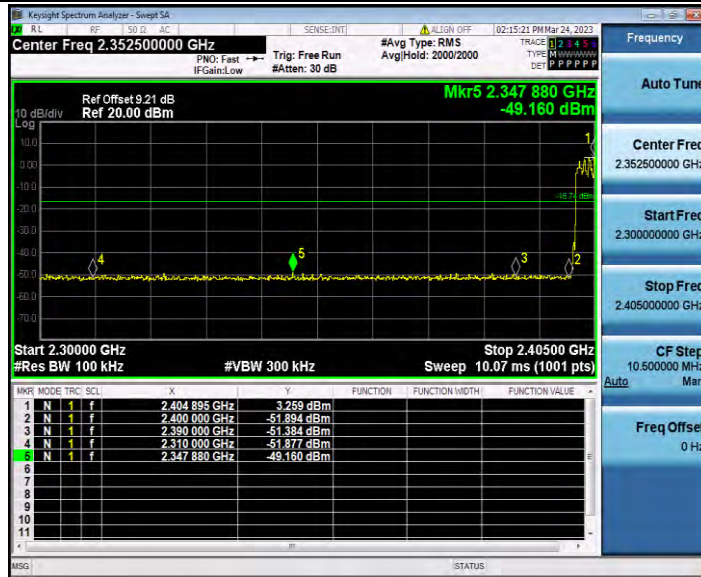
2D11_Ant1_Low_2402



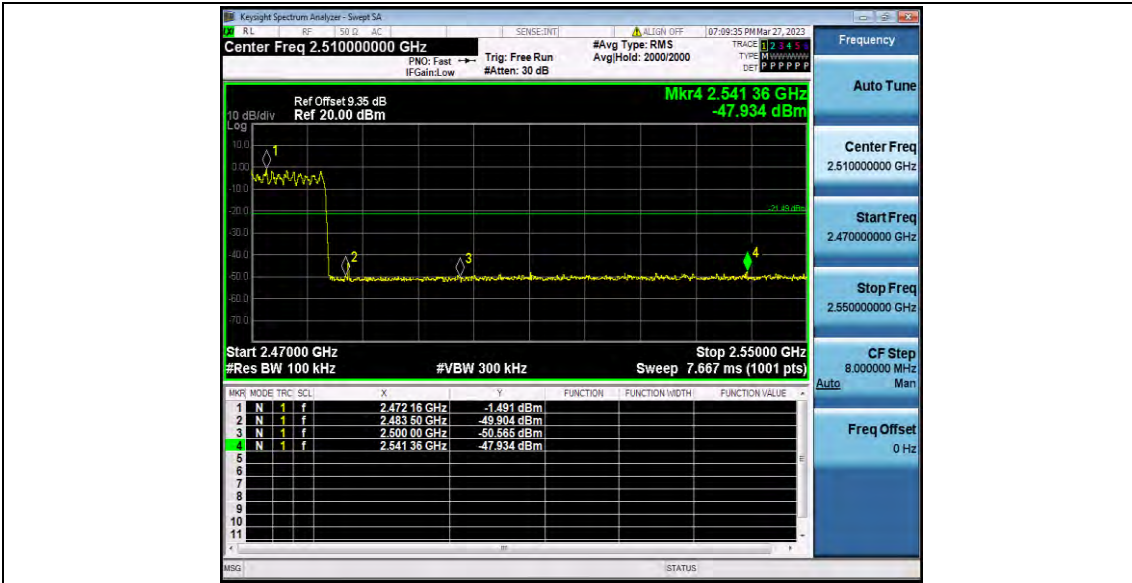
2DH1_Ant1_High_2480



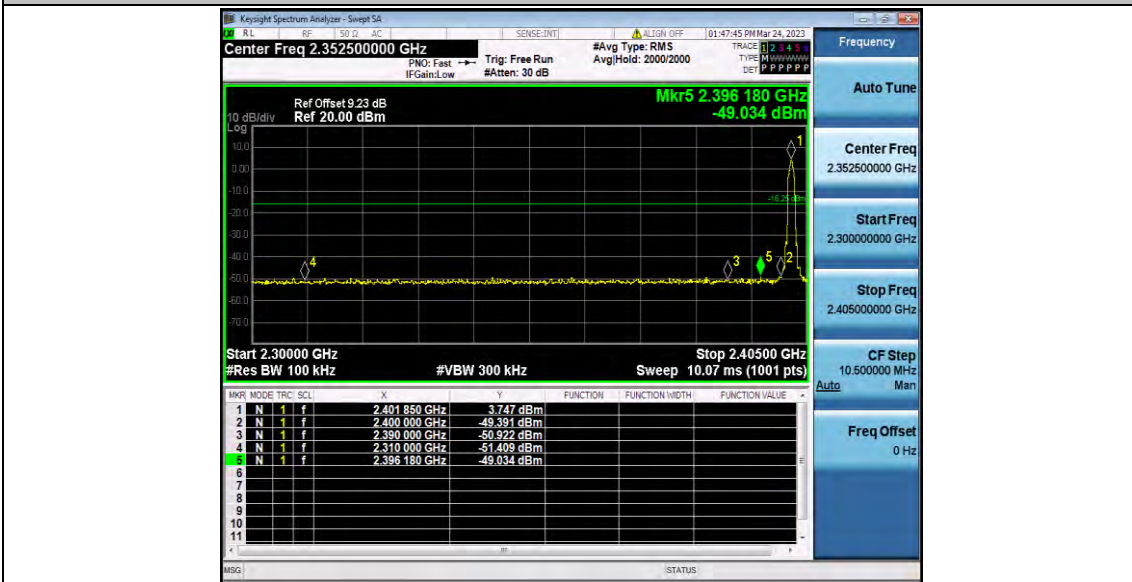
2DH1_Ant1_Low_Hop_2402



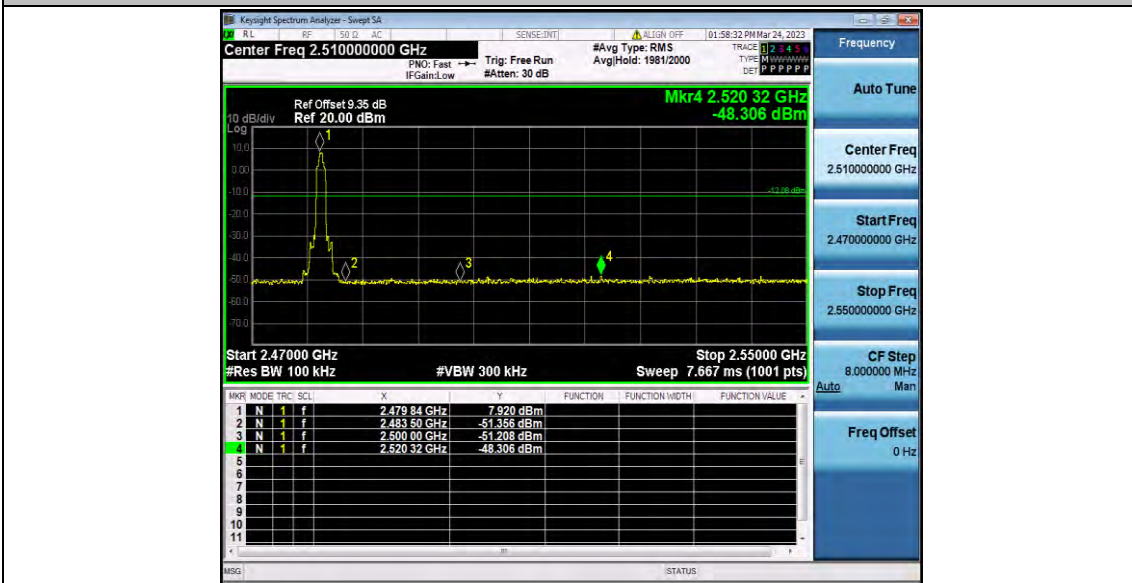
2DH1_Ant1_High_Hop_2480



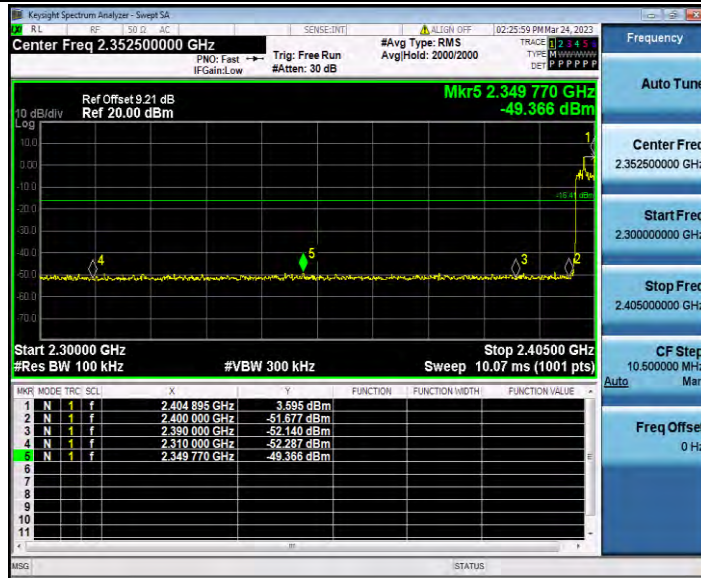
3D H1_Ant1_Low_2402



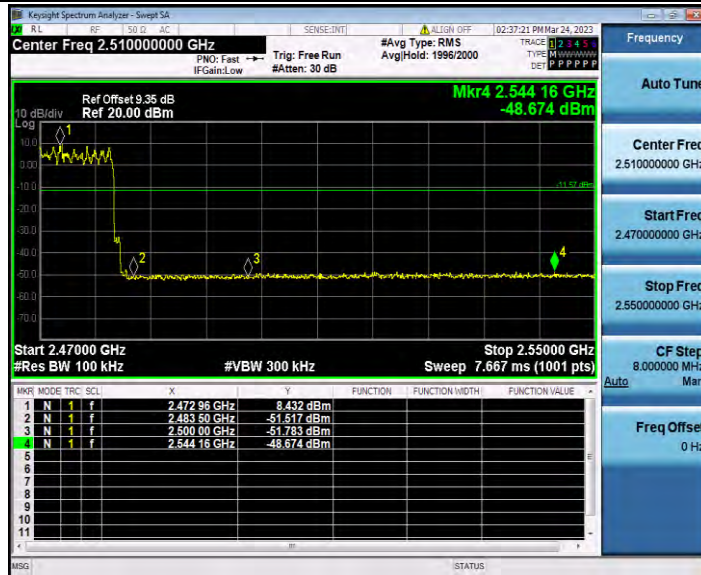
3D H1_Ant1_High_2480



3DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_Hop_2480

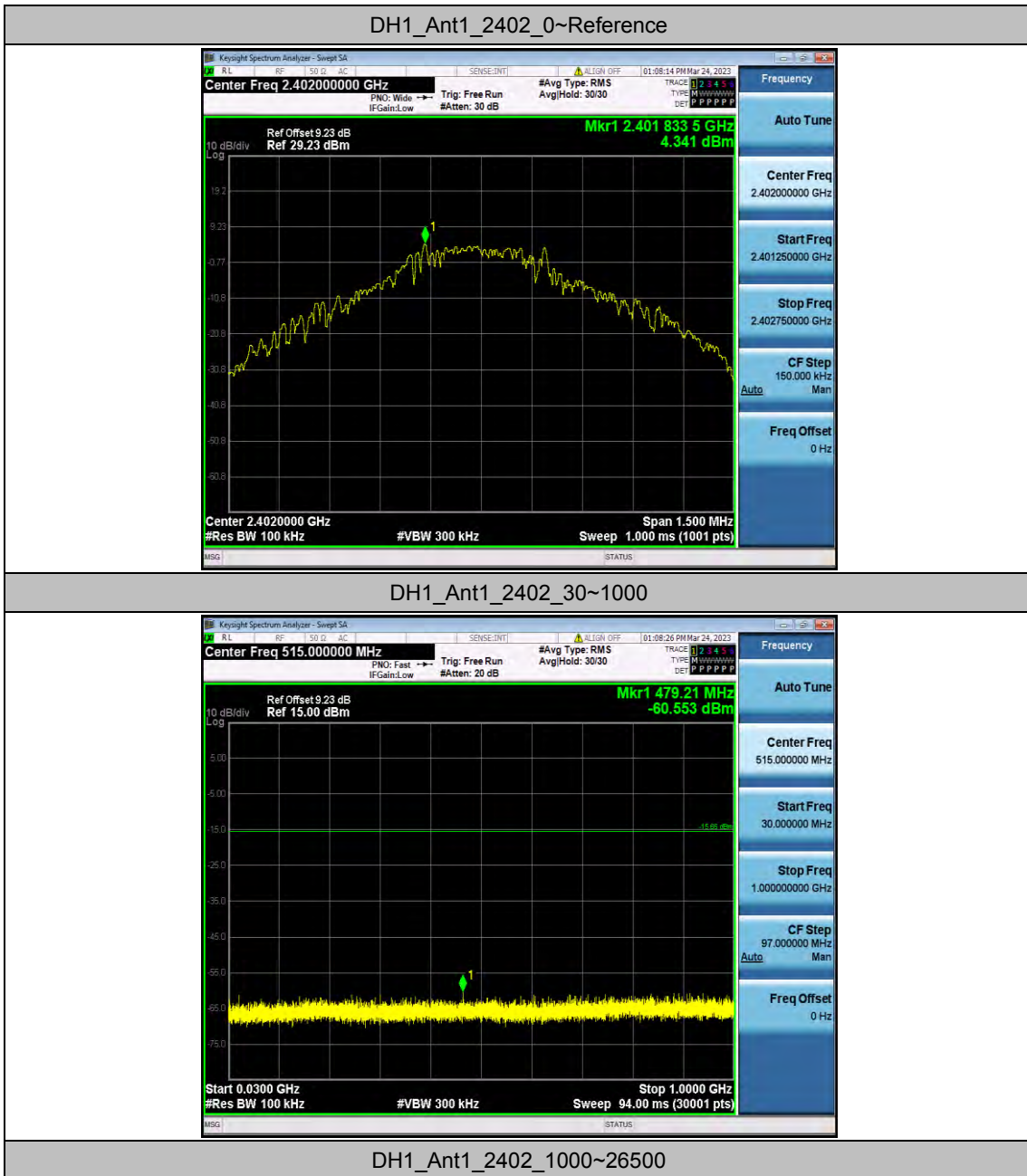


Appendix A.8: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	4.34	4.34	---	PASS
			30~1000	4.34	-60.55	≤-15.66	PASS
			1000~26500	4.34	-47.52	≤-15.66	PASS
		2441	Reference	6.26	6.26	---	PASS
			30~1000	6.26	-59.91	≤-13.74	PASS
			1000~26500	6.26	-47.84	≤-13.74	PASS
		2480	Reference	8.29	8.29	---	PASS
			30~1000	8.29	-59.5	≤-11.71	PASS
			1000~26500	8.29	-48.29	≤-11.71	PASS
2DH1	Ant1	2402	Reference	3.57	3.57	---	PASS
			30~1000	3.57	-60.63	≤-16.43	PASS
			1000~26500	3.57	-46.58	≤-16.43	PASS
		2441	Reference	5.94	5.94	---	PASS
			30~1000	5.94	-60.55	≤-14.06	PASS
			1000~26500	5.94	-47.66	≤-14.06	PASS
		2480	Reference	7.79	7.79	---	PASS
			30~1000	7.79	-58.05	≤-12.21	PASS
			1000~26500	7.79	-47.28	≤-12.21	PASS
3DH1	Ant1	2402	Reference	3.55	3.55	---	PASS
			30~1000	3.55	-60.38	≤-16.45	PASS
			1000~26500	3.55	-47.23	≤-16.45	PASS
		2441	Reference	5.36	5.36	---	PASS
			30~1000	5.36	-60.25	≤-14.64	PASS
			1000~26500	5.36	-47.46	≤-14.64	PASS
		2480	Reference	7.36	7.36	---	PASS
			30~1000	7.36	-60.05	≤-12.64	PASS
			1000~26500	7.36	-47.27	≤-12.64	PASS

Test Graphs

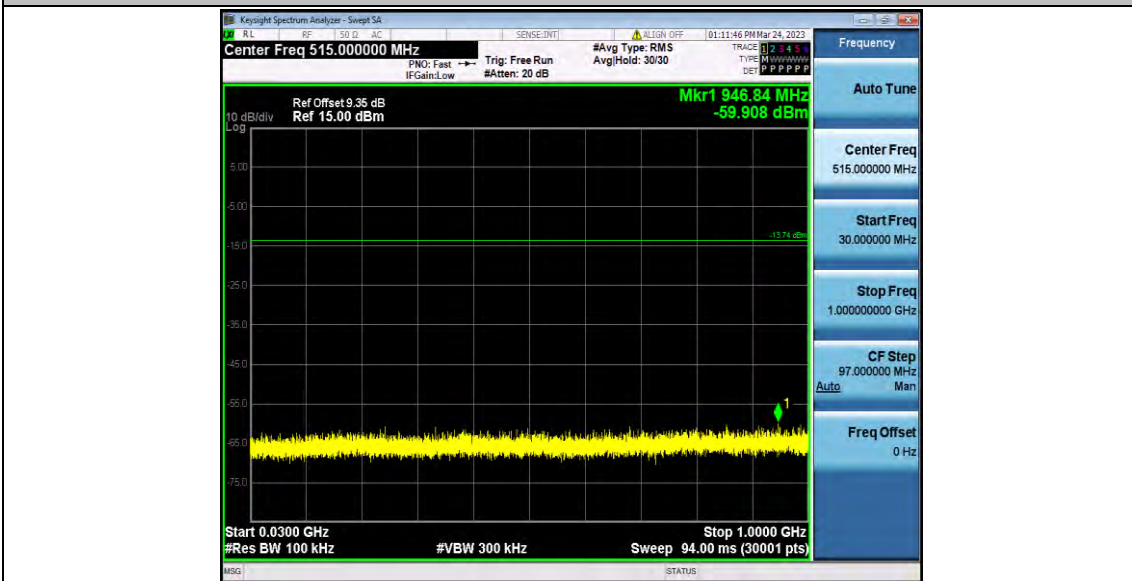




DH1_Ant1_2441_0~Reference



DH1_Ant1_2441_30~1000



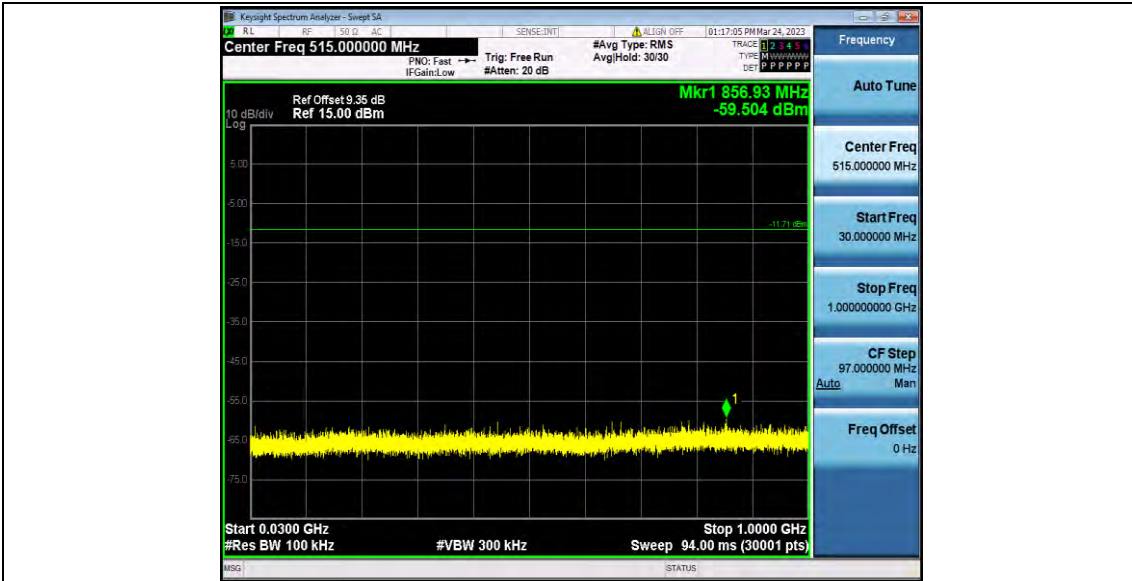
DH1_Ant1_2441_1000~26500



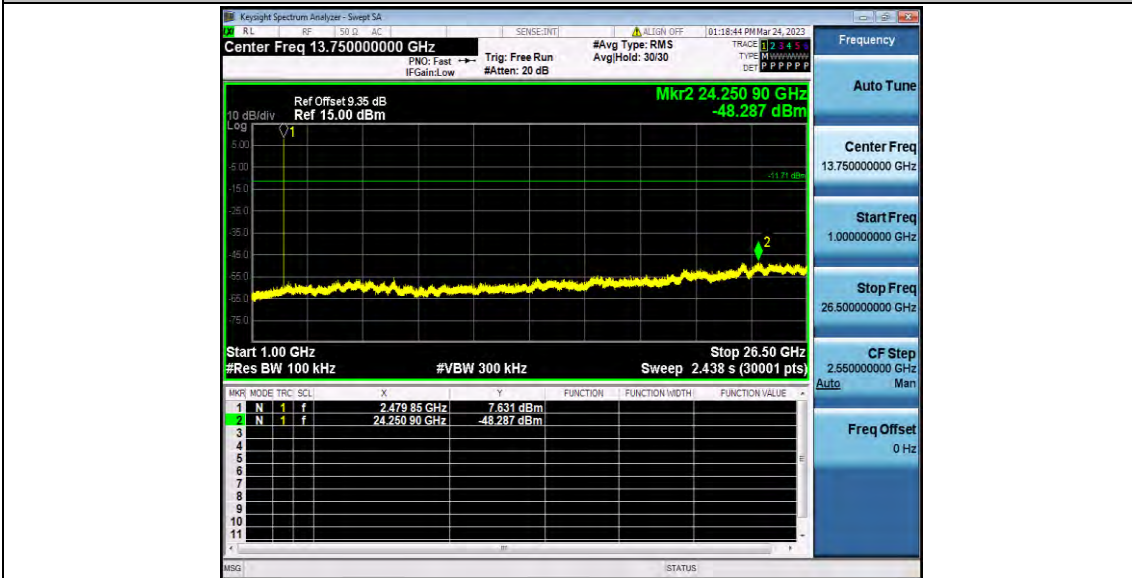
DH1_Ant1_2480_0~Reference



DH1_Ant1_2480_30~1000



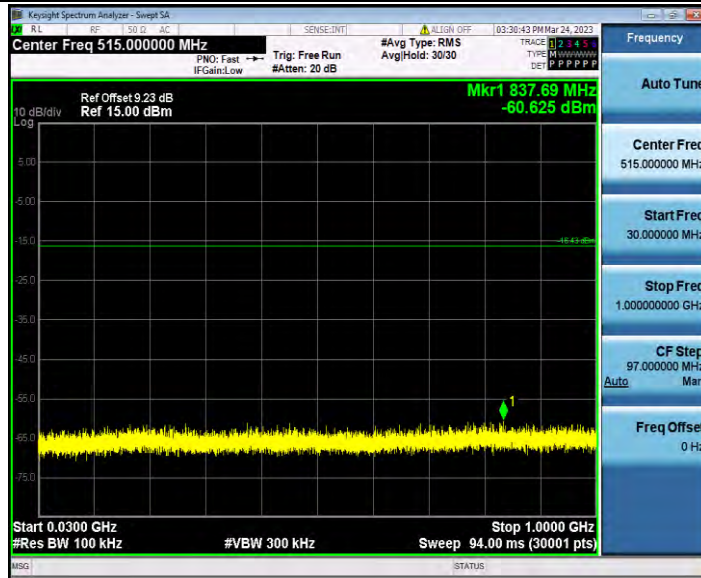
DH1_Ant1_2480_1000~26500



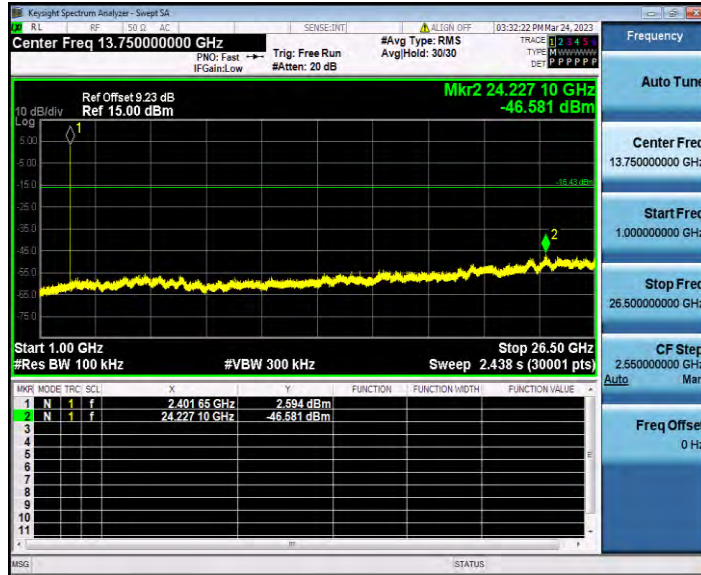
2DH1_Ant1_2402_0~Reference



2DH1_Ant1_2402_30~1000



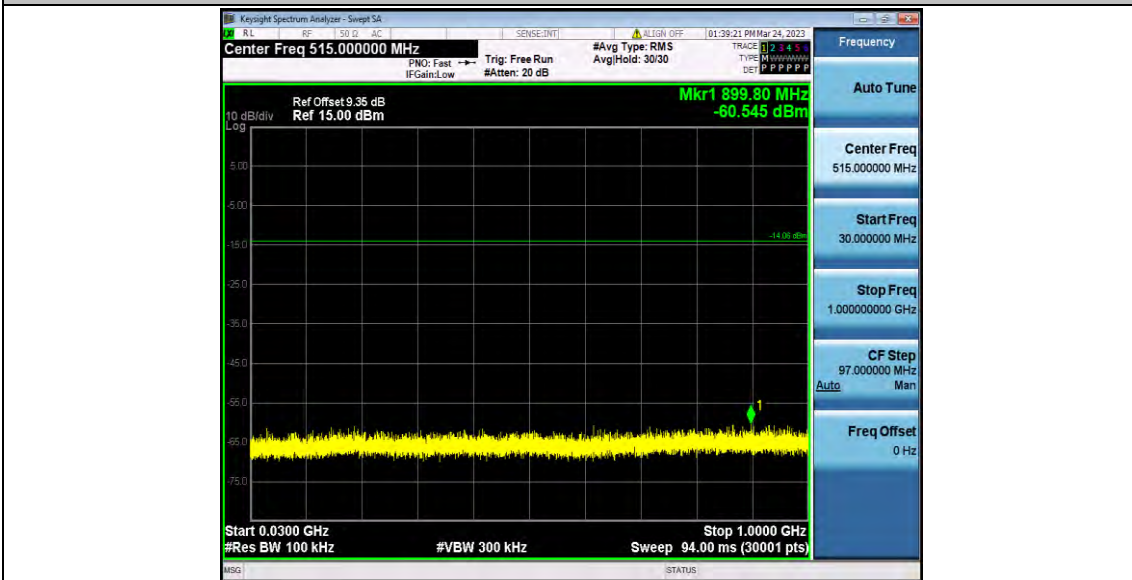
2DH1_Ant1_2402_1000~26500



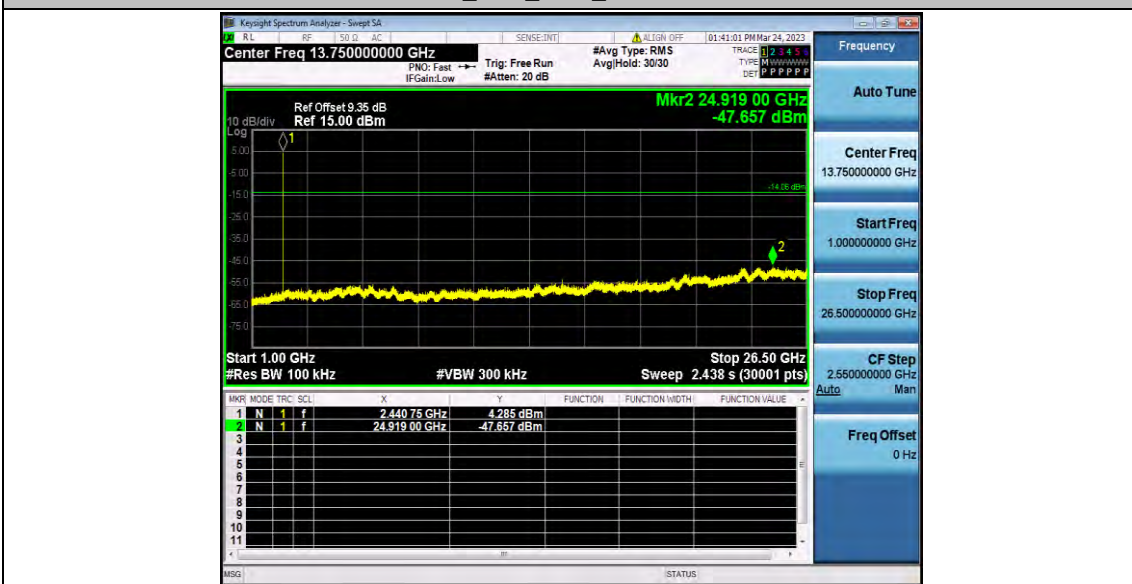
2DH1_Ant1_2441_0~Reference



2DH1_Ant1_2441_30~100



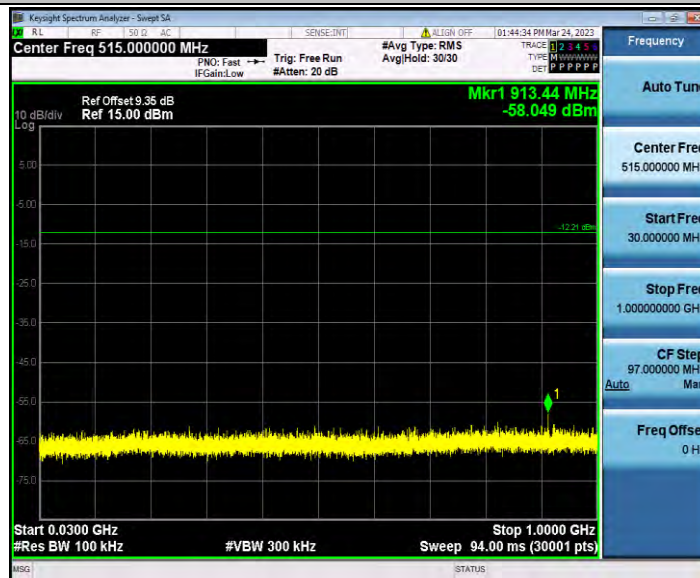
2DH1_Ant1_2441_1000~26500



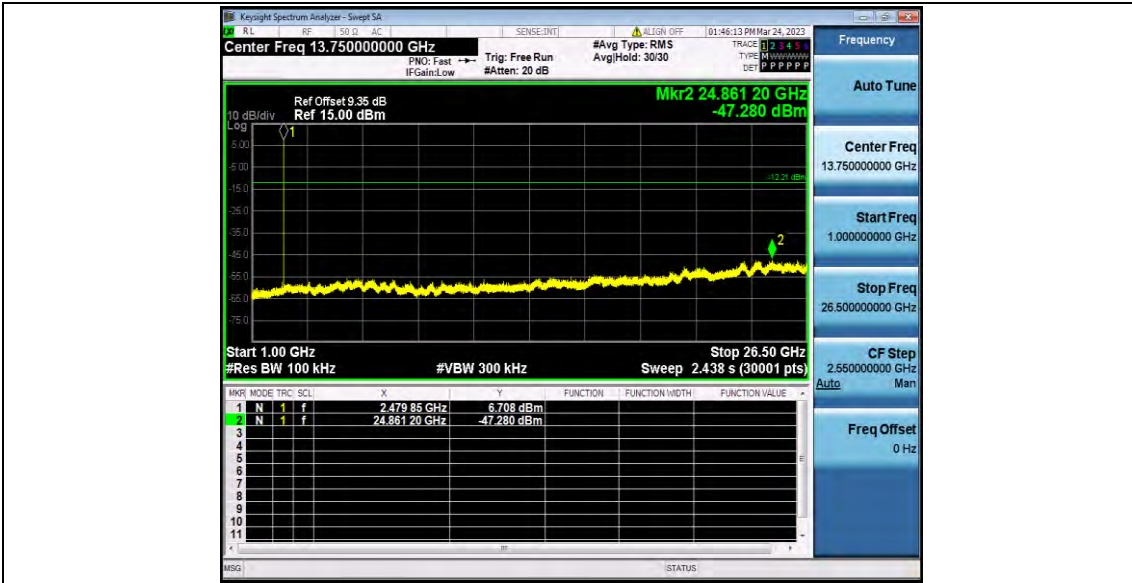
2DH1_Ant1_2480_0~Reference



2DH1_Ant1_2480_30~1000



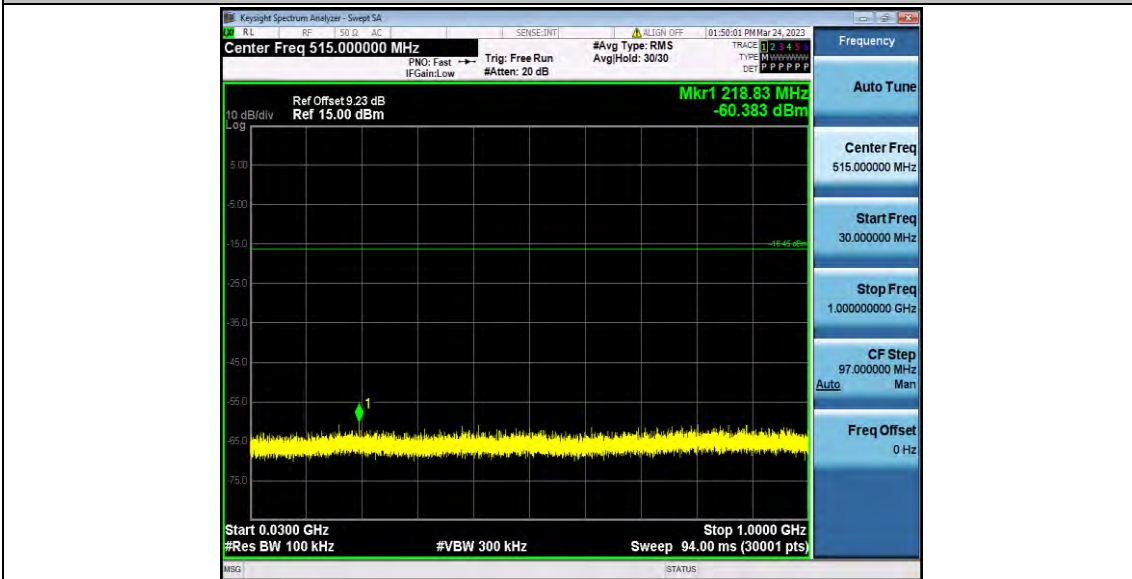
2DH1_Ant1_2480_1000~26500



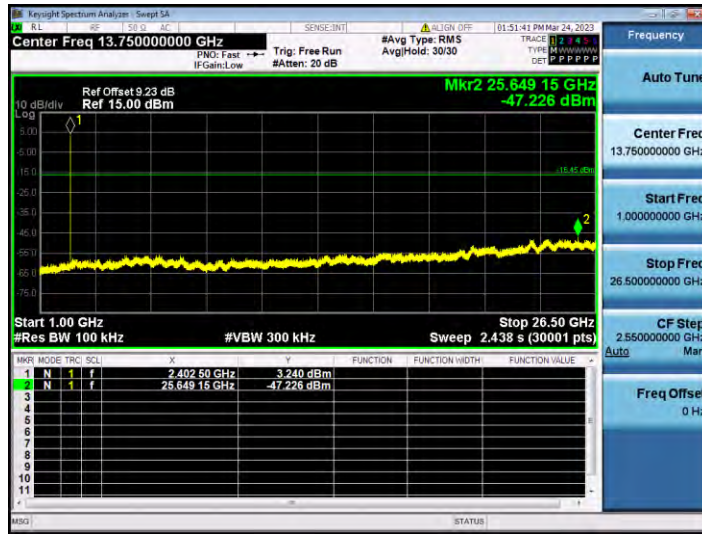
3DH1_Ant1_2402_0~Reference



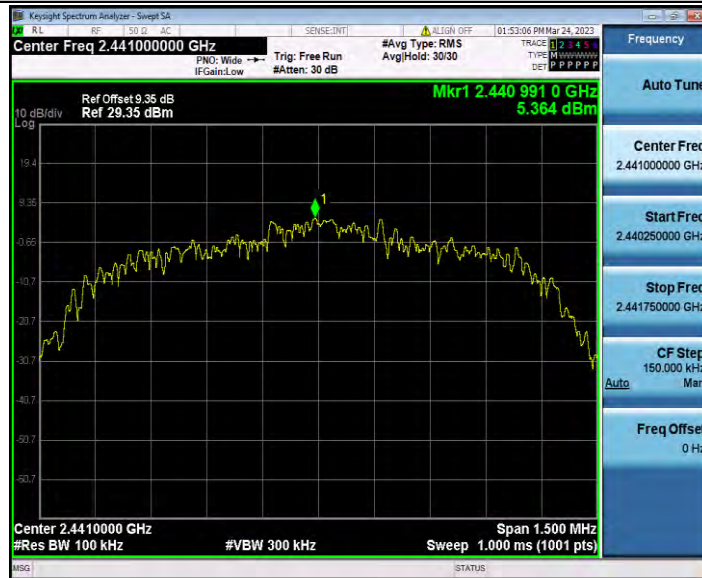
3DH1_Ant1_2402_30~1000



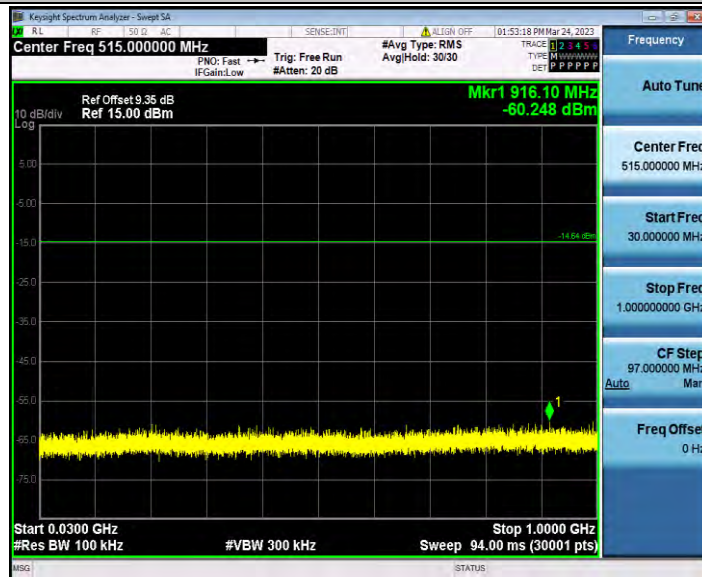
3DH1_Ant1_2402_1000~26500



3DH1_Ant1_2441_0~Reference



3DH1_Ant1_2441_30~1000



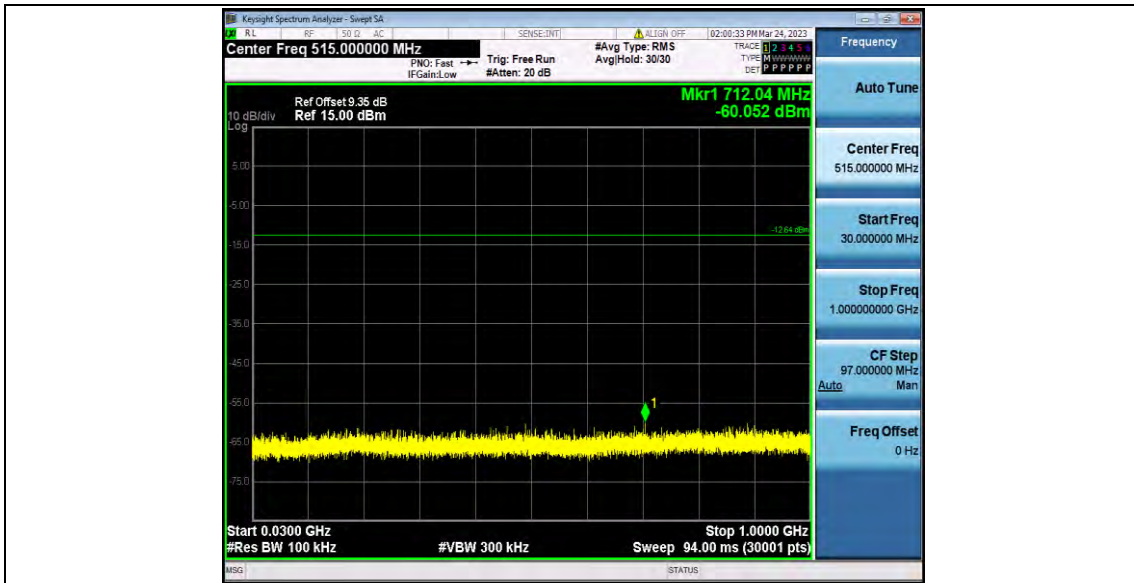
3DH1_Ant1_2441_1000~26500



3DH1_Ant1_2480_0~Reference



3DH1_Ant1_2480_30~1000



3DH1_Ant1_2480_1000~26500

