

FCC Appendix RF Test Data

FCC ID : 2AQ5R-BT-31D

Company : Shenzhen KTC Commercial Display Technology CO.,LTD.

EUT : Dongle

Model Number : BT-31D

Report No. : CTA25071601401

Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.954	2401.544	2402.498	---	---
		2441	0.954	2440.547	2441.501	---	---
		2480	0.951	2479.547	2480.498	---	---
2DH5	Ant1	2402	1.281	2401.379	2402.660	---	---
		2441	1.341	2440.334	2441.675	---	---
		2480	1.323	2479.346	2480.669	---	---
3DH5	Ant1	2402	1.287	2401.361	2402.648	---	---
		2441	1.317	2440.355	2441.672	---	---
		2480	1.308	2479.361	2480.669	---	---

Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

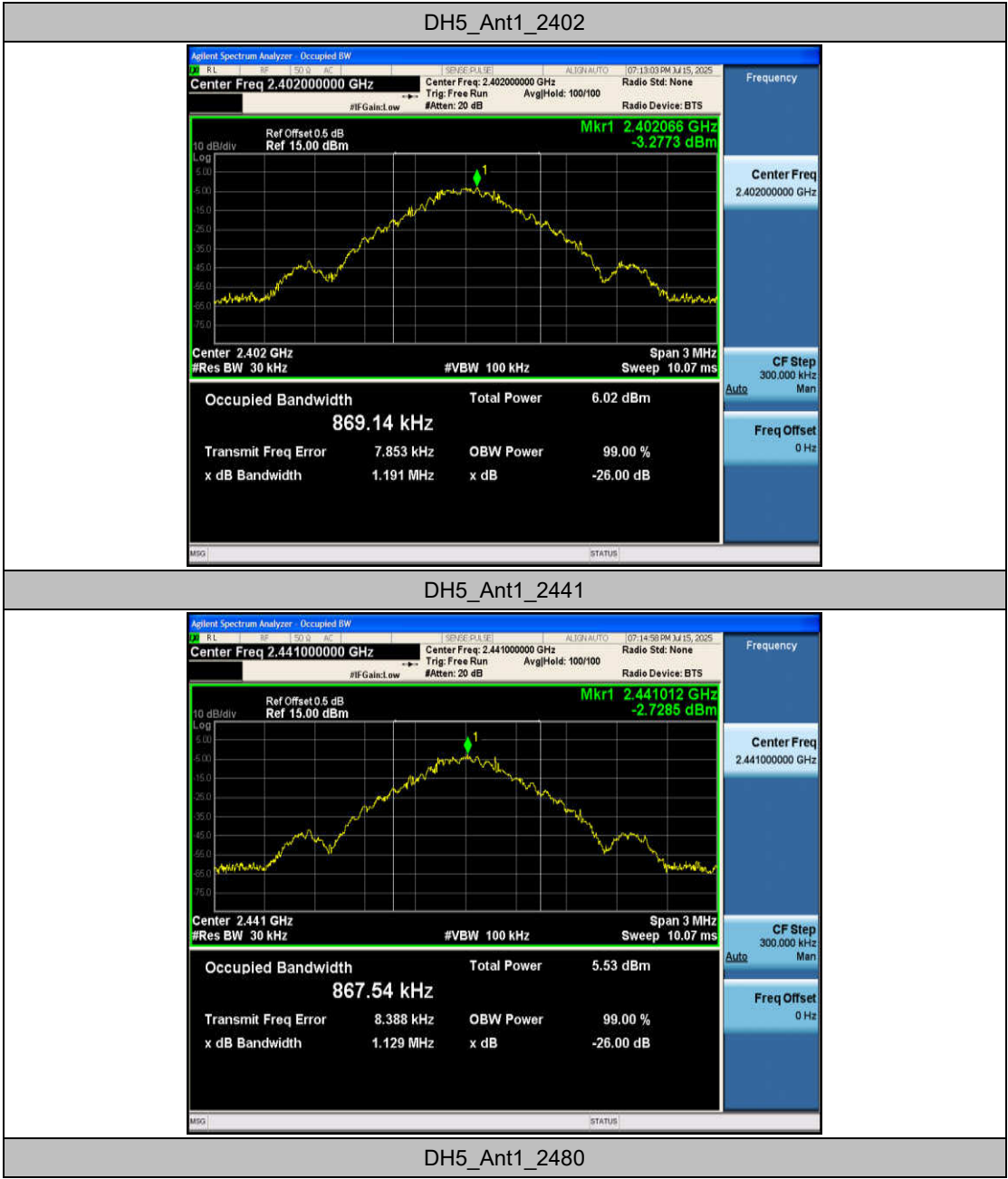


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86914	2401.5733	2402.4424	---	---
		2441	0.86754	2440.5746	2441.4422	---	---
		2480	0.87631	2479.5705	2480.4468	---	---
2DH5	Ant1	2402	1.1927	2401.4127	2402.6054	---	---
		2441	1.1872	2440.4154	2441.6026	---	---
		2480	1.1889	2479.4158	2480.6047	---	---
3DH5	Ant1	2402	1.1898	2401.4142	2402.6040	---	---
		2441	1.1892	2440.4147	2441.6039	---	---
		2480	1.1858	2479.4159	2480.6017	---	---

Test Graphs





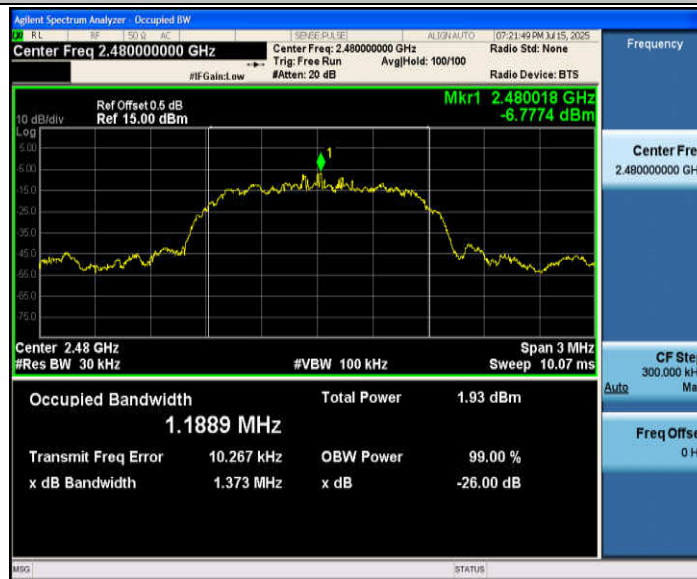
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.07	≤ 20.97	PASS
		2441	-0.45	≤ 20.97	PASS
		2480	-0.72	≤ 20.97	PASS
2DH5	Ant1	2402	-0.70	≤ 20.97	PASS
		2441	-1.19	≤ 20.97	PASS
		2480	-1.50	≤ 20.97	PASS
3DH5	Ant1	2402	-0.31	≤ 20.97	PASS
		2441	-0.86	≤ 20.97	PASS
		2480	-1.14	≤ 20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.032	≥ 0.954	PASS
2DH5	Ant1	Hop	1.092	≥ 0.894	PASS
3DH5	Ant1	Hop	0.932	≥ 0.878	PASS

Test Graphs



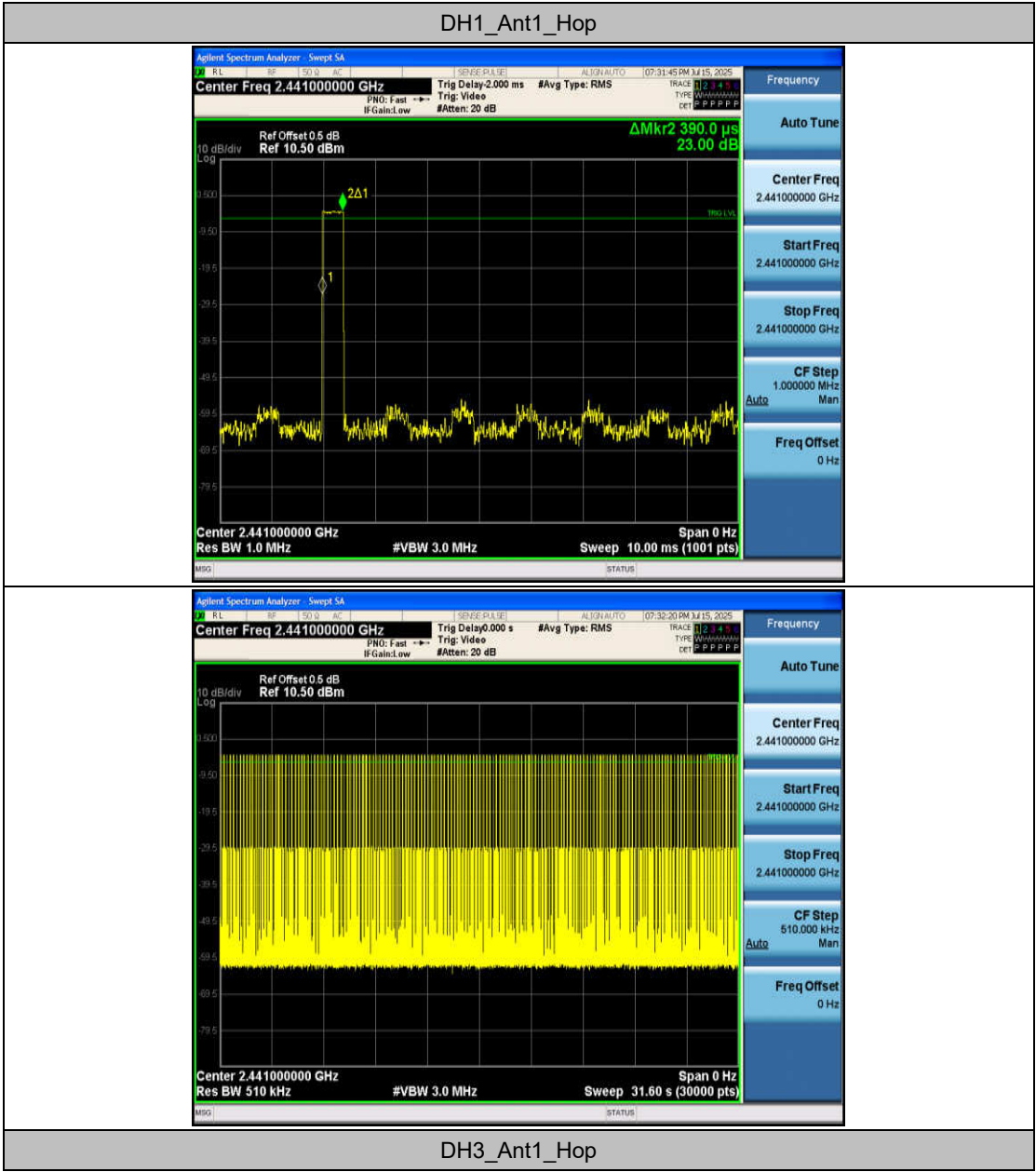


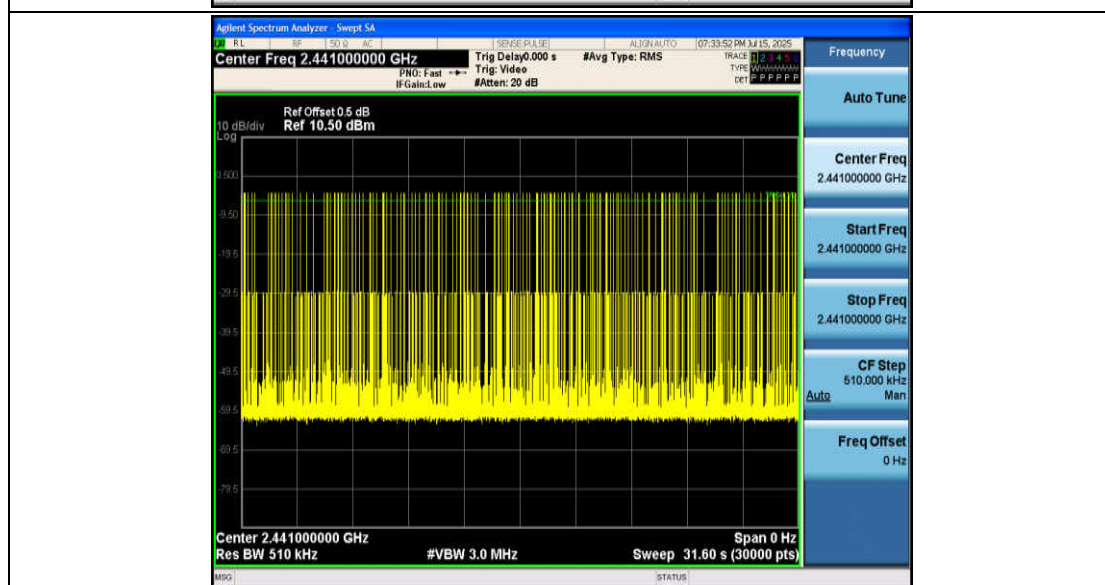
Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	316	0.123	≤0.4	PASS
DH3	Ant1	Hop	1.650	167	0.276	≤0.4	PASS
DH5	Ant1	Hop	2.900	113	0.328	≤0.4	PASS
2DH1	Ant1	Hop	0.400	319	0.128	≤0.4	PASS
2DH3	Ant1	Hop	1.650	173	0.285	≤0.4	PASS
2DH5	Ant1	Hop	2.890	119	0.344	≤0.4	PASS
3DH1	Ant1	Hop	0.400	319	0.128	≤0.4	PASS
3DH3	Ant1	Hop	1.650	159	0.262	≤0.4	PASS
3DH5	Ant1	Hop	2.900	108	0.313	≤0.4	PASS

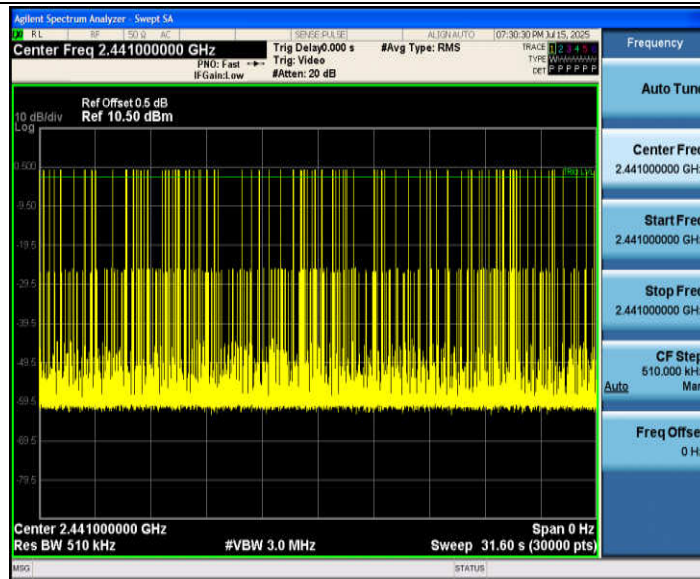
Test Graphs



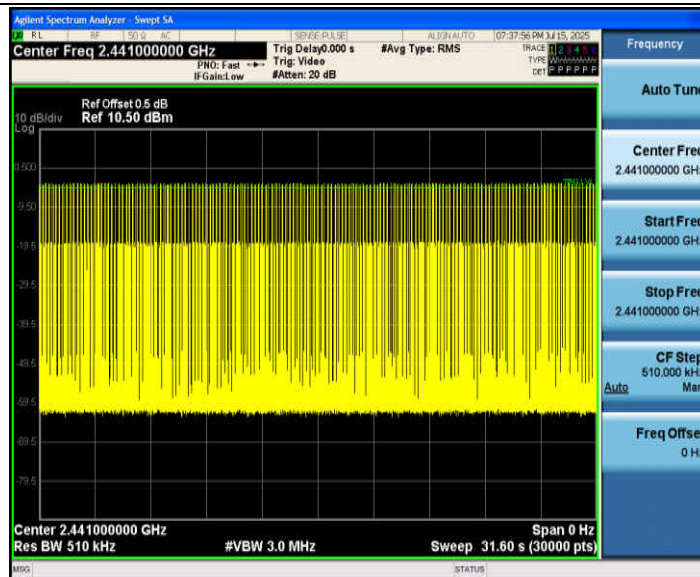
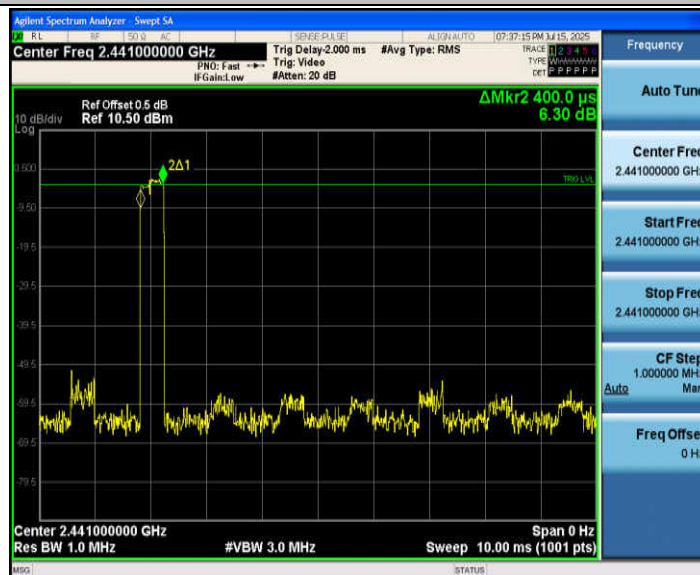


DH5_Ant1_Hop

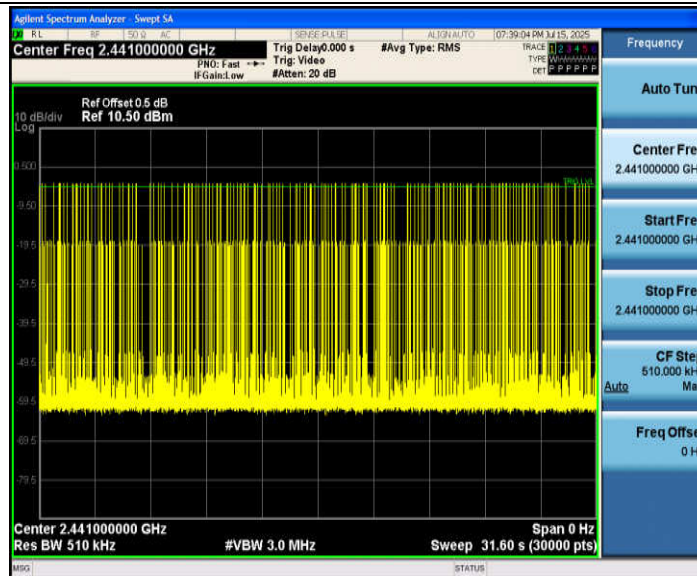




2DH1_Ant1_Hop

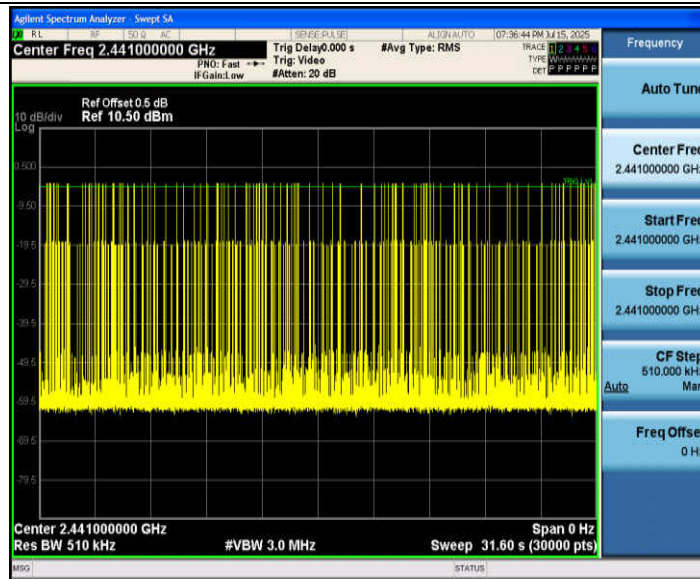


2DH3_Ant1_Hop

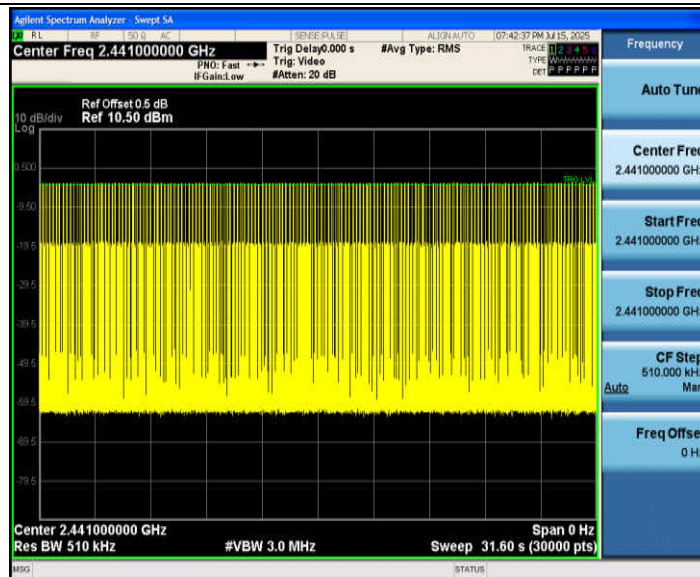


2DH5_Ant1_Hop

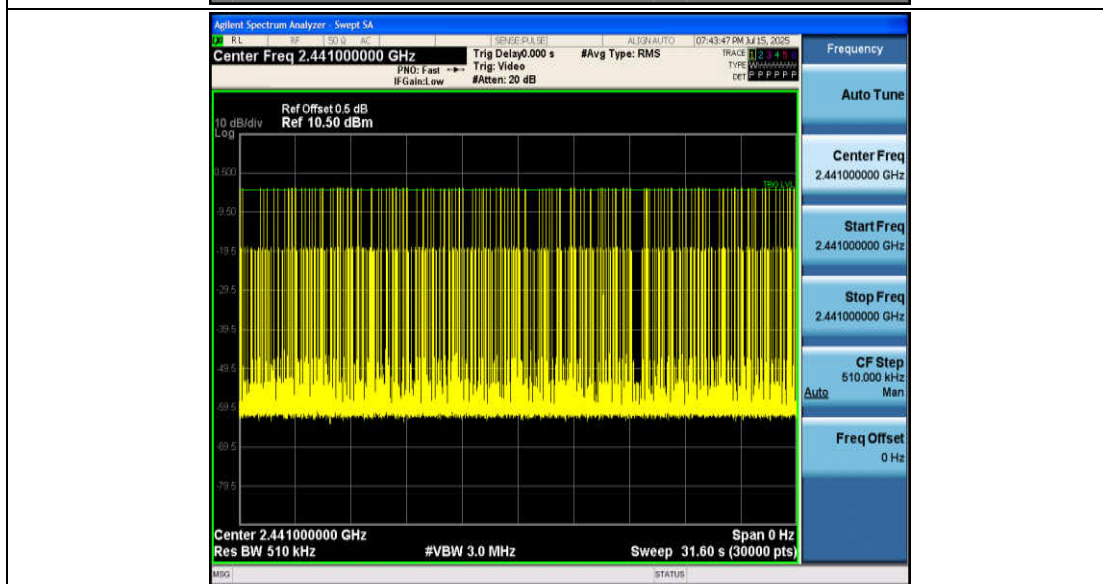




3DH1_Ant1_Hop

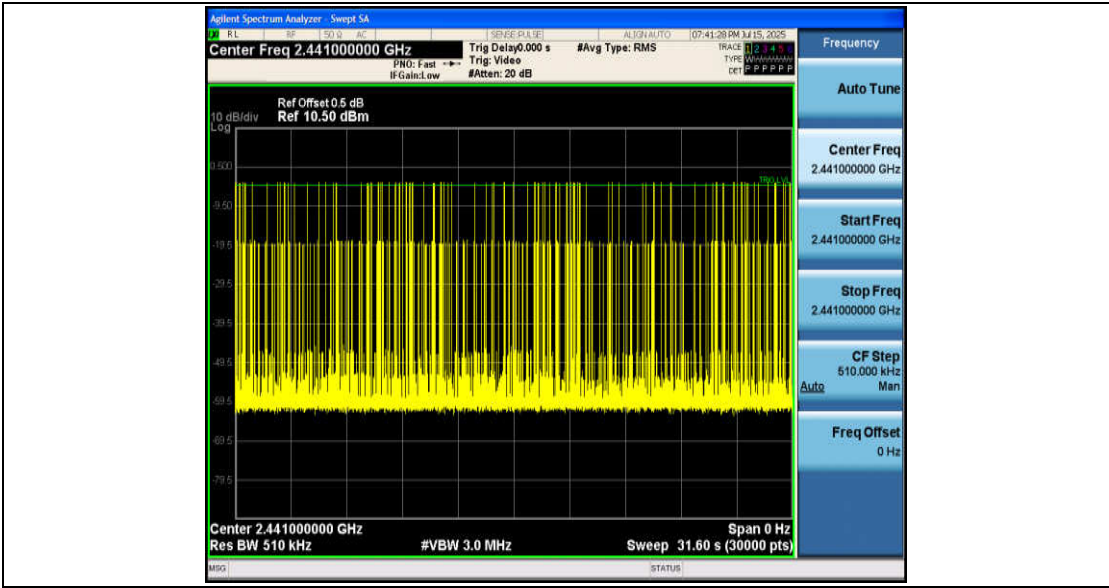


3DH3_Ant1_Hop



3DH5_Ant1_Hop



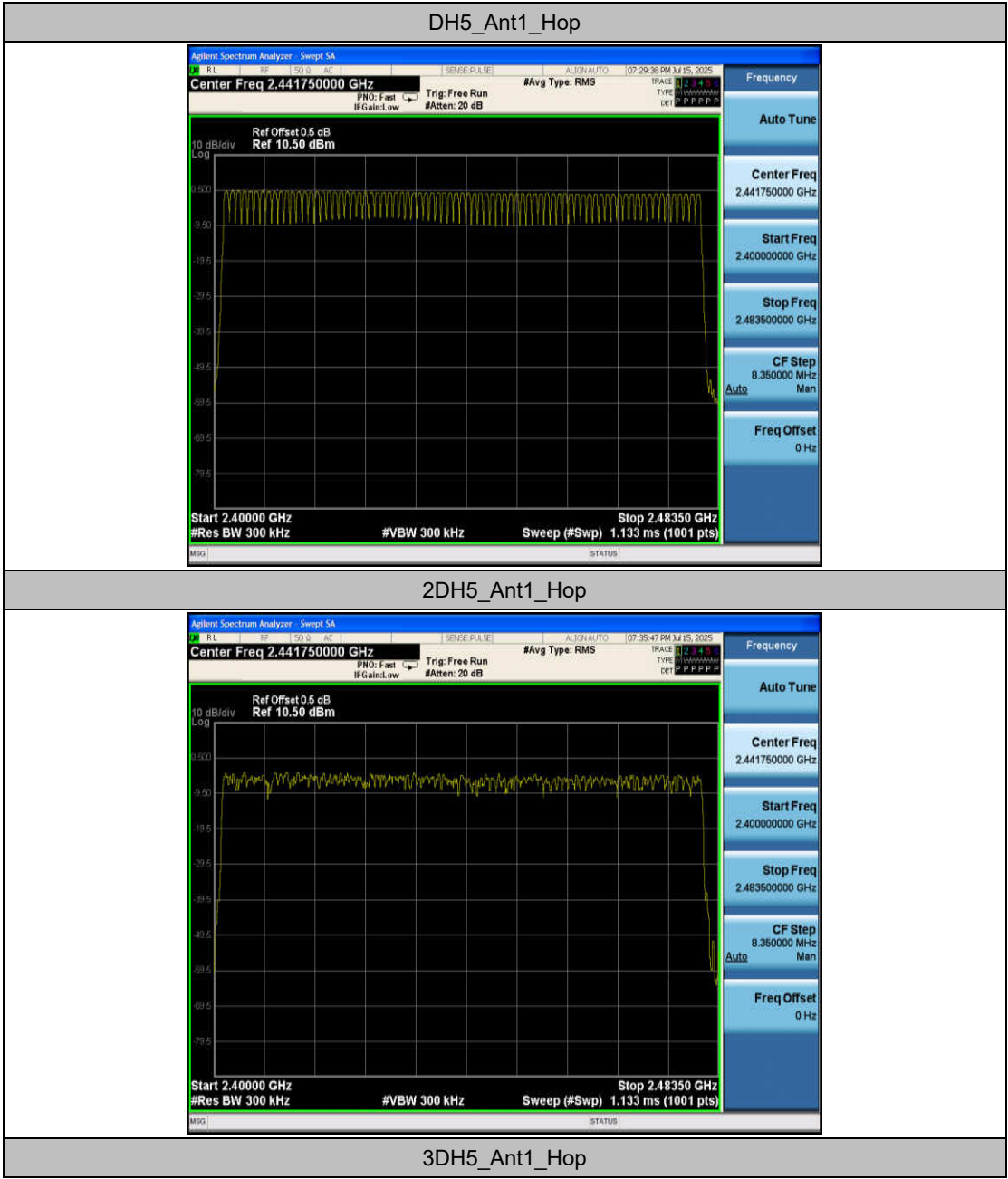


Appendix F: Number of hopping channels

Test Result

TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs



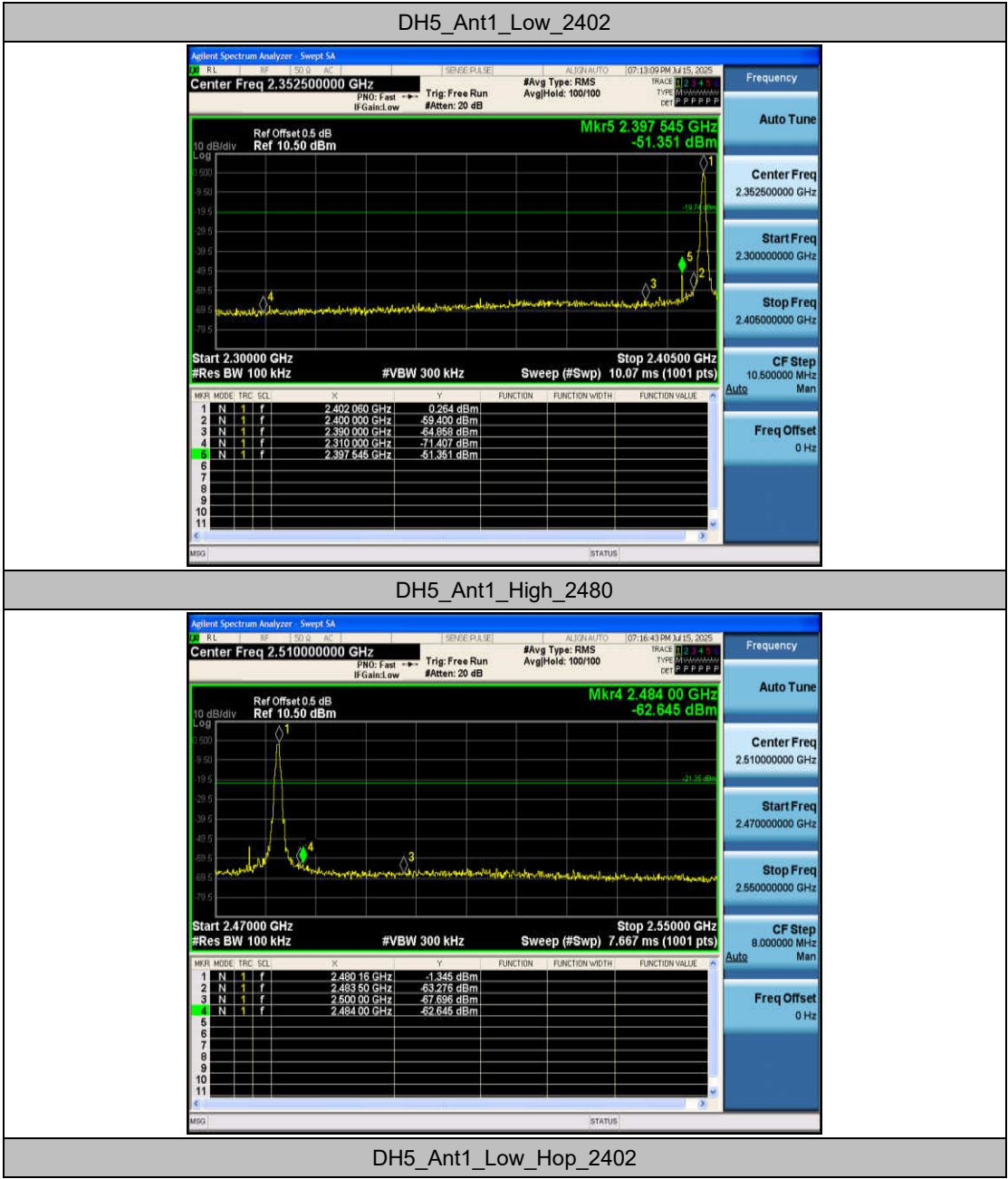


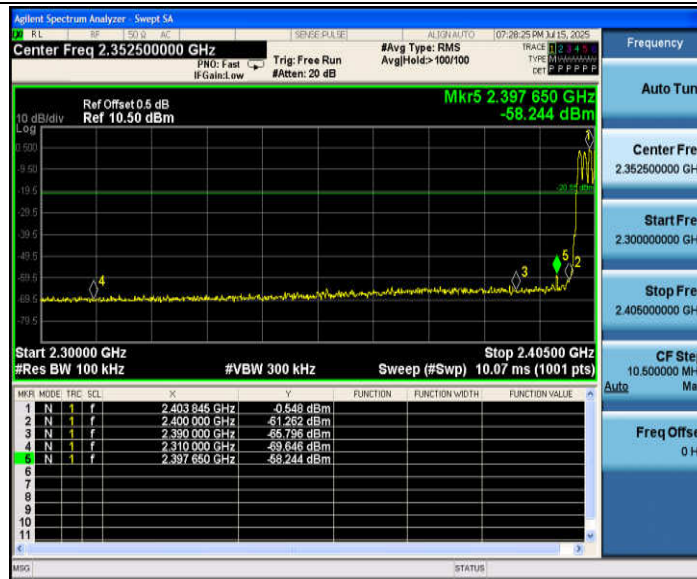
Appendix G: Band edge measurements

Test Result

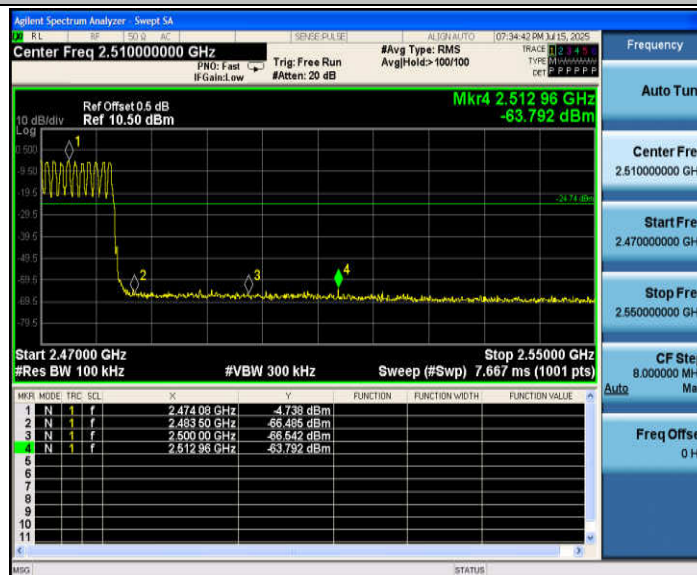
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.26	-51.35	≤-19.74	PASS
		High	2480	-1.35	-62.65	≤-21.35	PASS
		Low	Hop_2402	-0.55	-58.24	≤-20.55	PASS
		High	Hop_2480	-4.74	-63.79	≤-24.74	PASS
2DH5	Ant1	Low	2402	-4.28	-57.47	≤-24.28	PASS
		High	2480	-4.94	-58.08	≤-24.94	PASS
		Low	Hop_2402	-5.45	-63.31	≤-25.45	PASS
		High	Hop_2480	-7.30	-64.71	≤-27.3	PASS
3DH5	Ant1	Low	2402	-4.40	-54.98	≤-24.4	PASS
		High	2480	-4.14	-61.67	≤-24.14	PASS
		Low	Hop_2402	-6.45	-62.62	≤-26.45	PASS
		High	Hop_2480	-5.09	-63.95	≤-25.09	PASS

Test Graphs

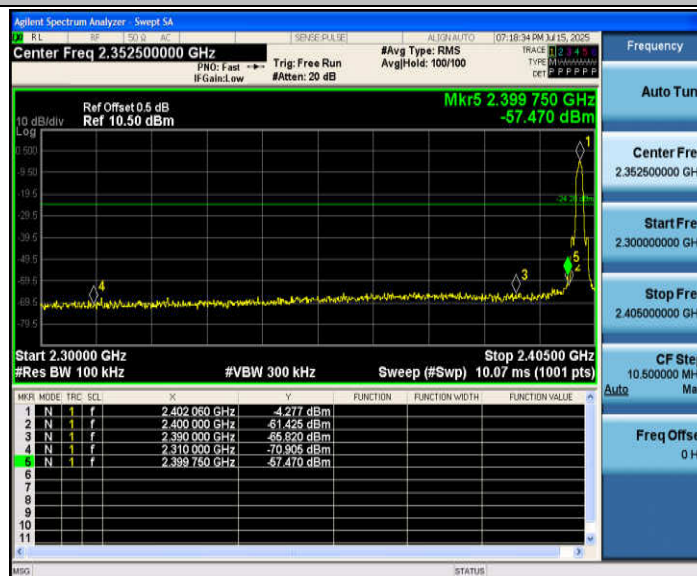




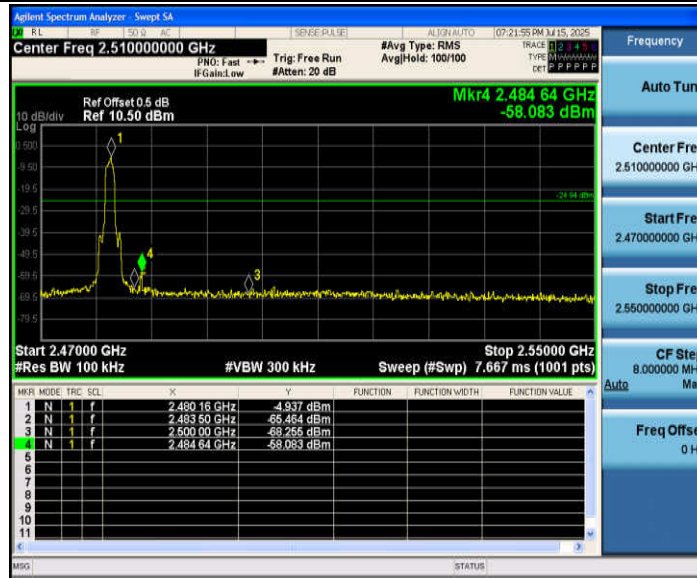
DH5_Ant1_High_Hop_2480



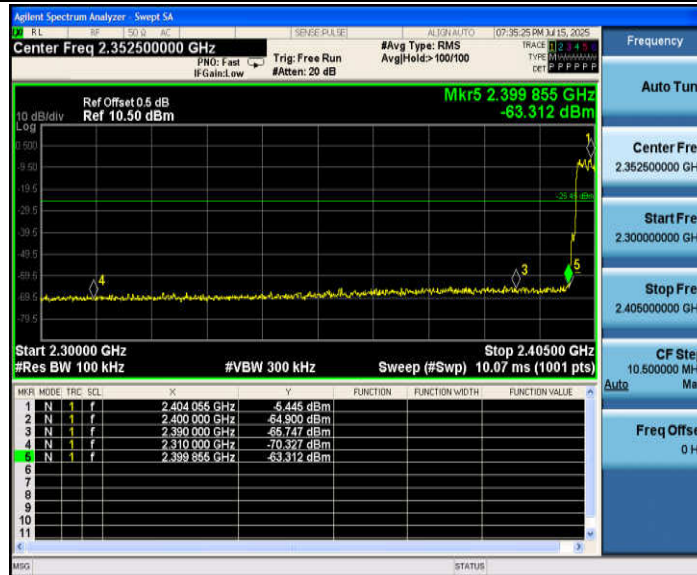
2DH5_Ant1_Low_2402



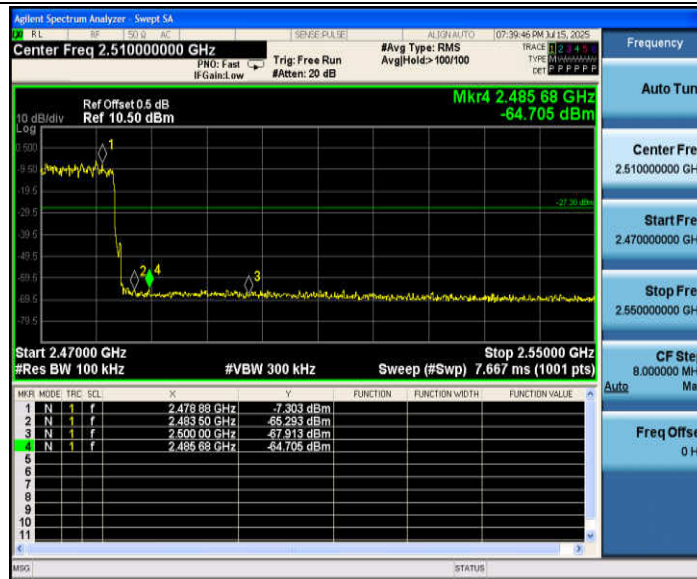
2DH5_Ant1_High_2480



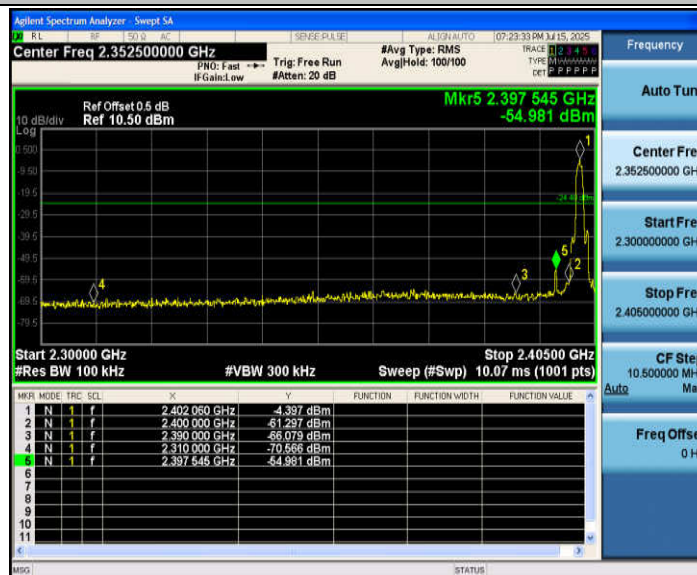
2DH5_Ant1_Low_Hop_2402



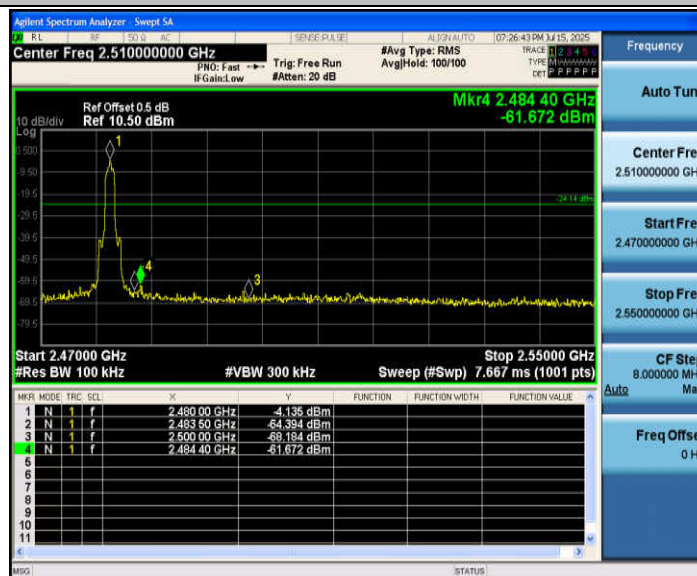
2DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_2402



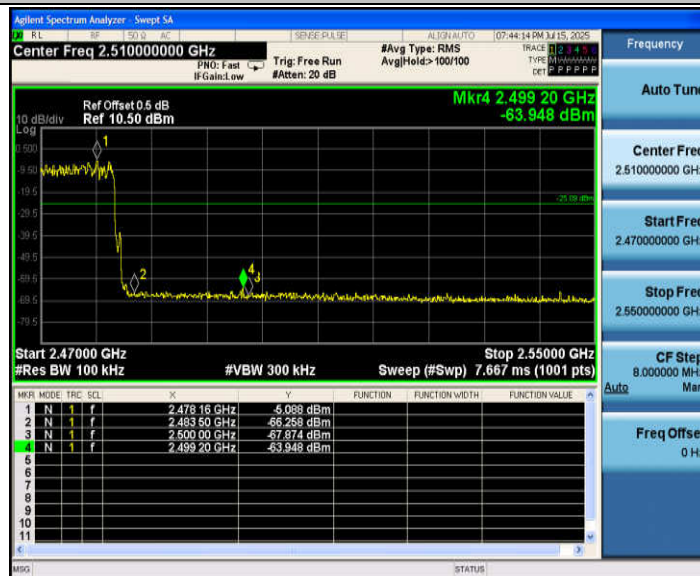
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



Appendix H: Conducted Spurious Emission

Test Result

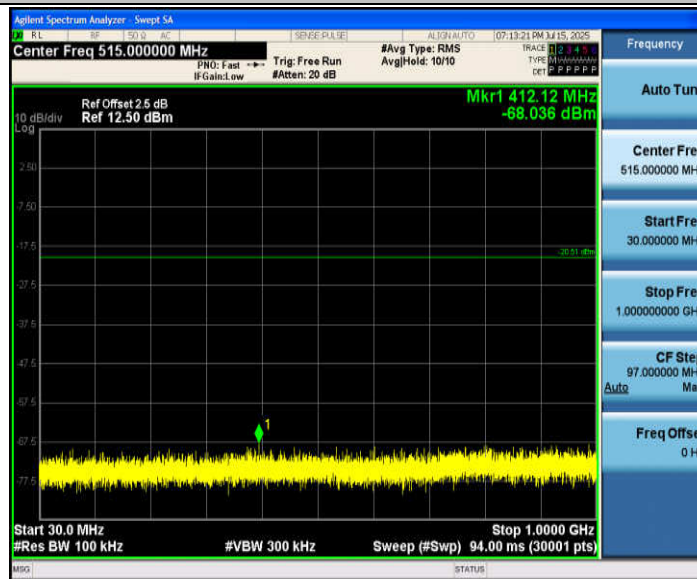
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.51	-0.51	---	PASS
			30~1000	-0.51	-68.04	≤-20.51	PASS
			1000~26500	-0.51	-43.98	≤-20.51	PASS
		2441	Reference	-1.63	-1.63	---	PASS
			30~1000	-1.63	-67.7	≤-21.63	PASS
			1000~26500	-1.63	-44.46	≤-21.63	PASS
		2480	Reference	-1.86	-1.86	---	PASS
			30~1000	-1.86	-67.12	≤-21.86	PASS
			1000~26500	-1.86	-42.22	≤-21.86	PASS
2DH5	Ant1	2402	Reference	-6.38	-6.38	---	PASS
			30~1000	-6.38	-68.31	≤-26.38	PASS
			1000~26500	-6.38	-50.27	≤-26.38	PASS
		2441	Reference	-4.13	-4.13	---	PASS
			30~1000	-4.13	-67.66	≤-24.13	PASS
			1000~26500	-4.13	-47.21	≤-24.13	PASS
		2480	Reference	-5.37	-5.37	---	PASS
			30~1000	-5.37	-67.82	≤-25.37	PASS
			1000~26500	-5.37	-49.85	≤-25.37	PASS
3DH5	Ant1	2402	Reference	-5.31	-5.31	---	PASS
			30~1000	-5.31	-67.58	≤-25.31	PASS
			1000~26500	-5.31	-49.69	≤-25.31	PASS
		2441	Reference	-7.05	-7.05	---	PASS
			30~1000	-7.05	-67.59	≤-27.05	PASS
			1000~26500	-7.05	-49.41	≤-27.05	PASS
		2480	Reference	-6.51	-6.51	---	PASS
			30~1000	-6.51	-67.93	≤-26.51	PASS
			1000~26500	-6.51	-49.8	≤-26.51	PASS

Test Graphs

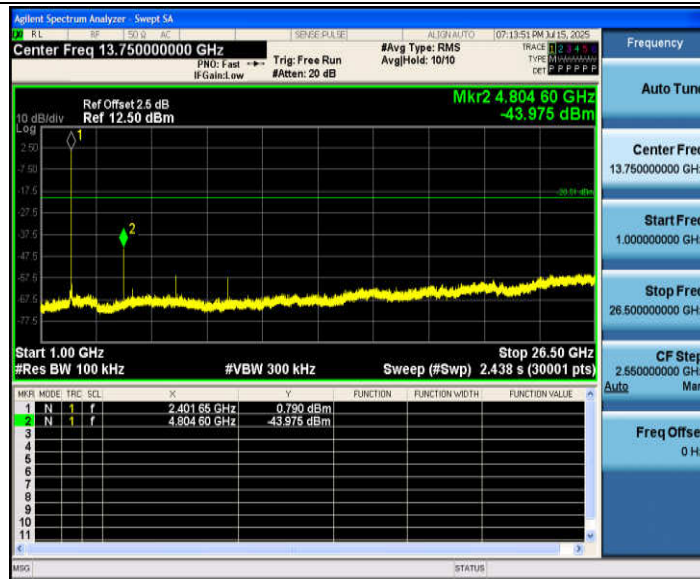
DH5_Ant1_2402_0~Reference



DH5_Ant1_2402_30~1000



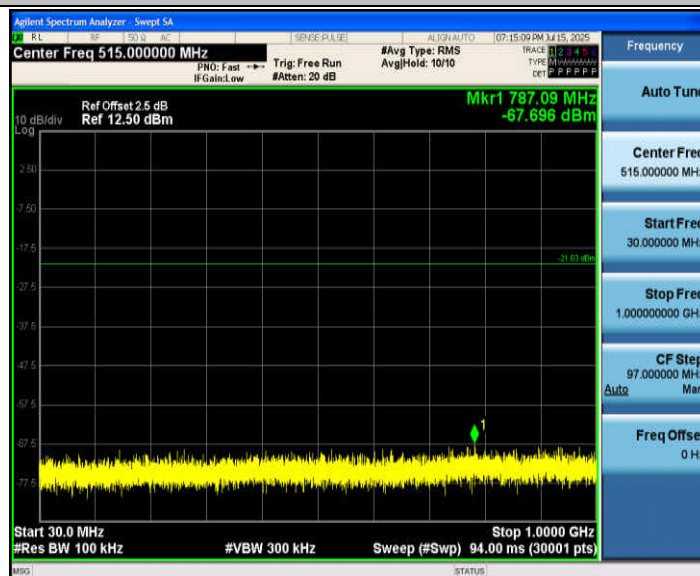
DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



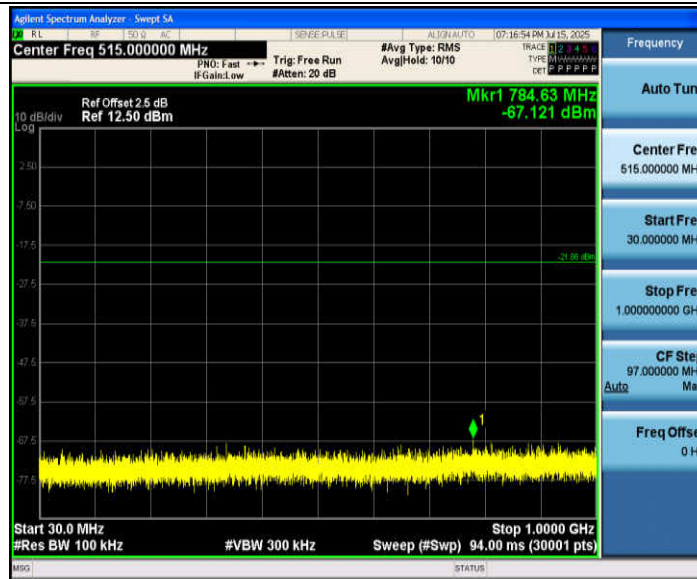
DH5_Ant1_2441_1000~26500



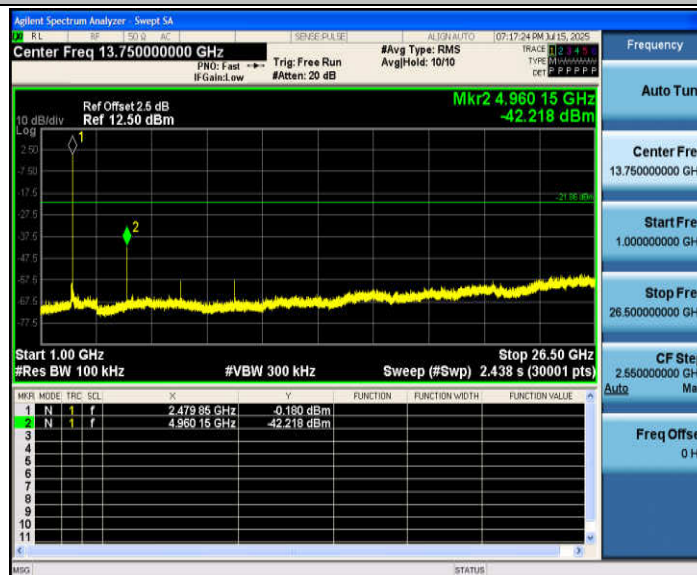
DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



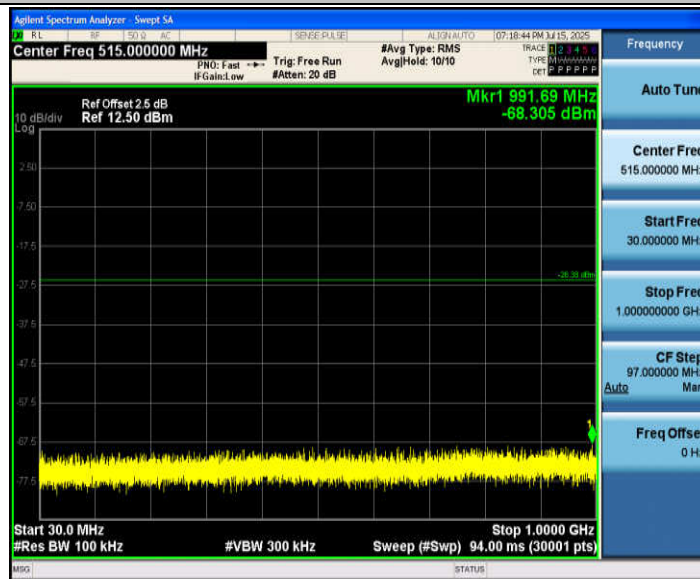
DH5_Ant1_2480_1000~26500



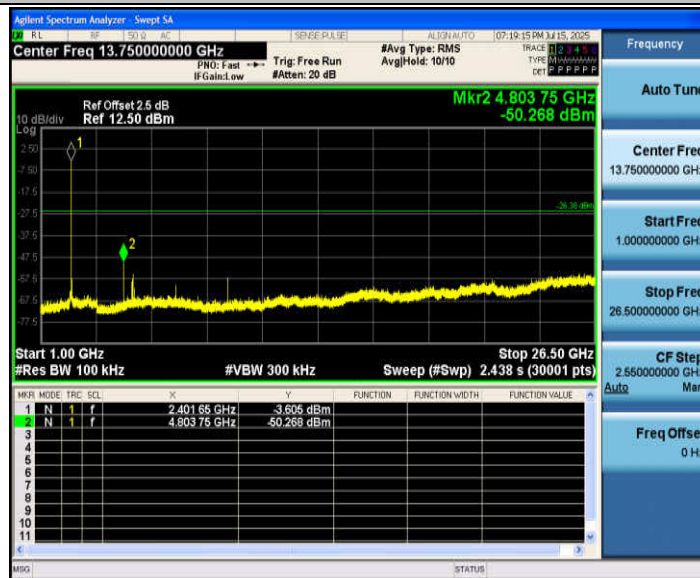
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



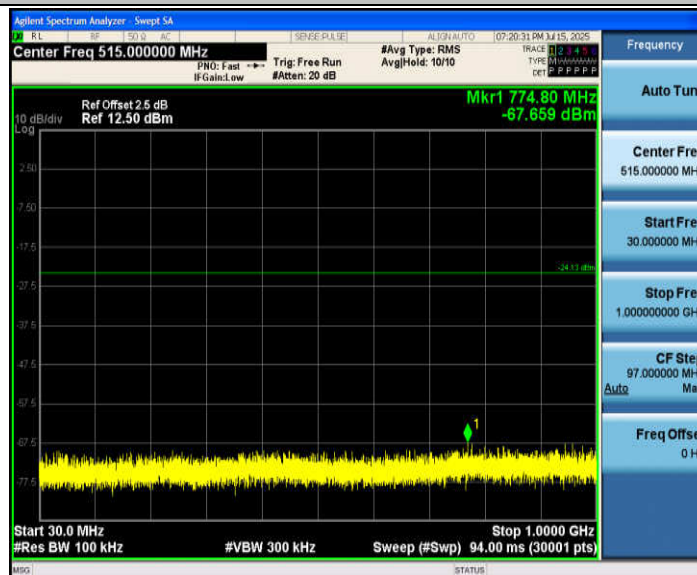
2DH5_Ant1_2402_1000~26500



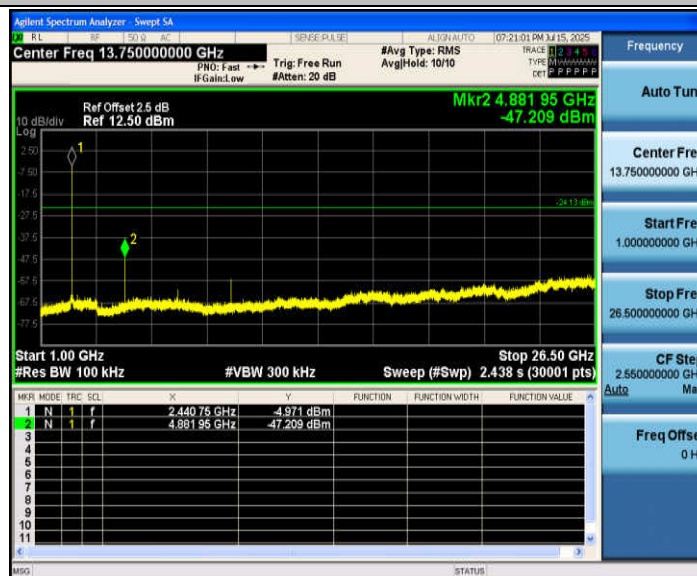
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



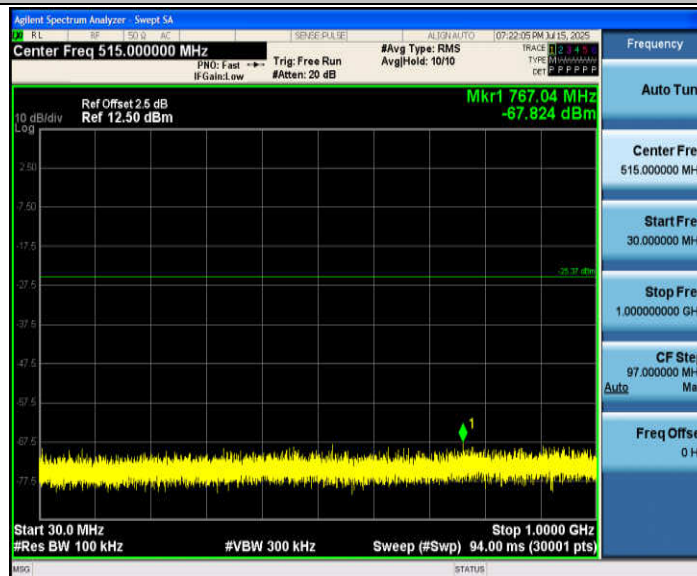
2DH5_Ant1_2441_1000~26500



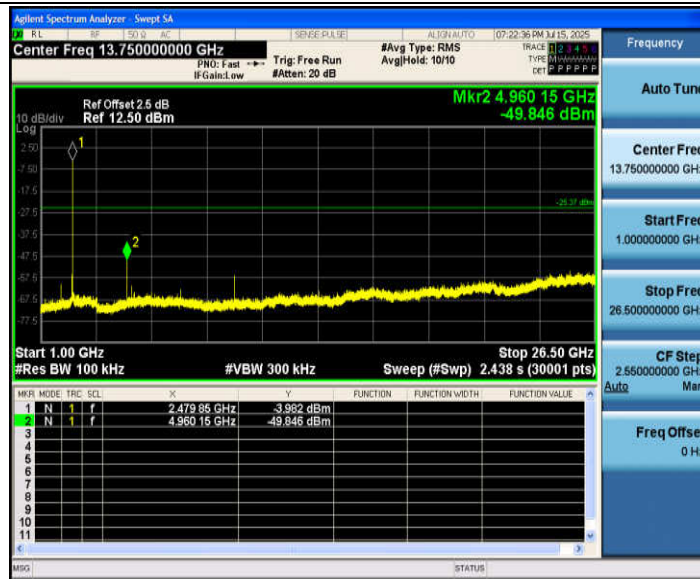
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



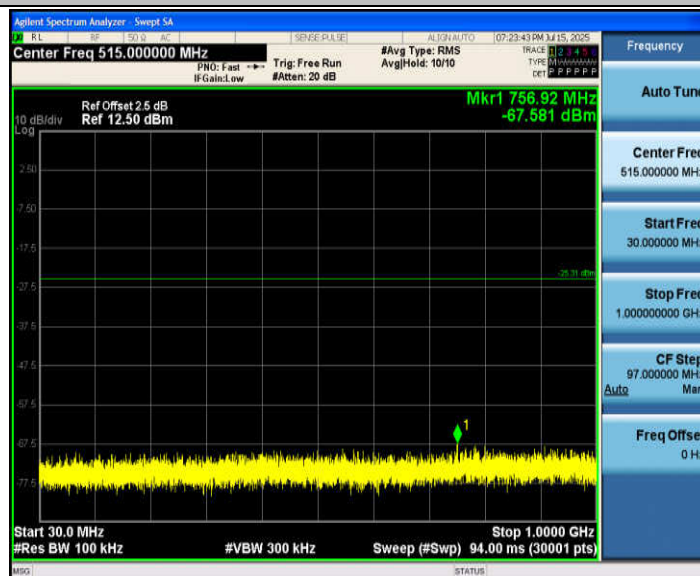
2DH5_Ant1_2480_1000~26500



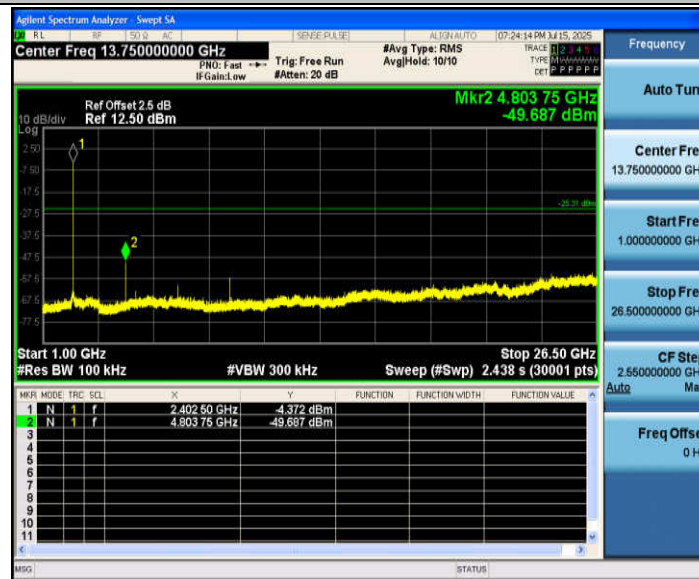
3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000



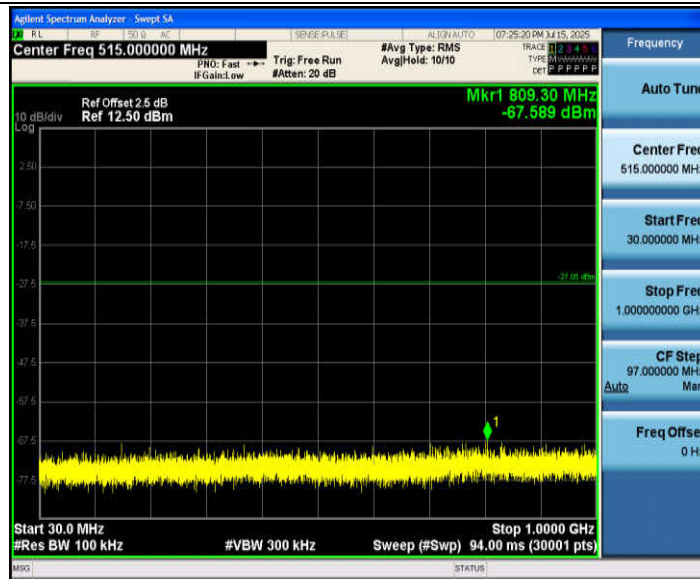
3DH5_Ant1_2402_1000~26500



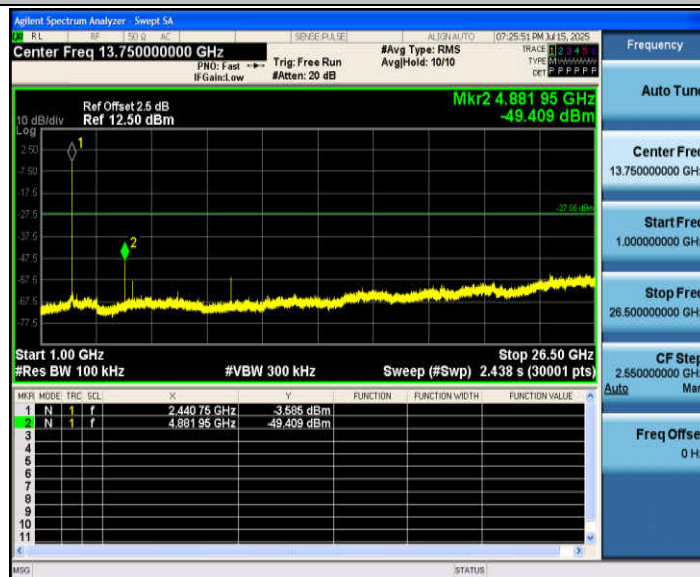
3DH5_Ant1_2441_0~Reference



3DH5_Ant1_2441_30~1000



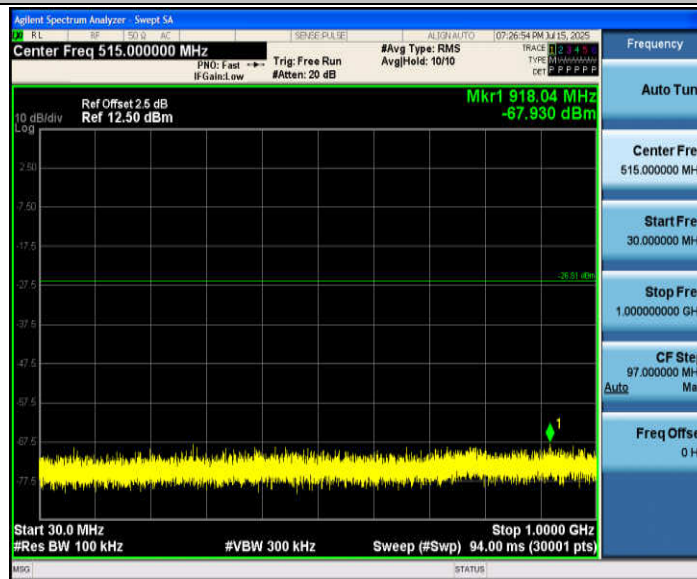
3DH5_Ant1_2441_1000~26500



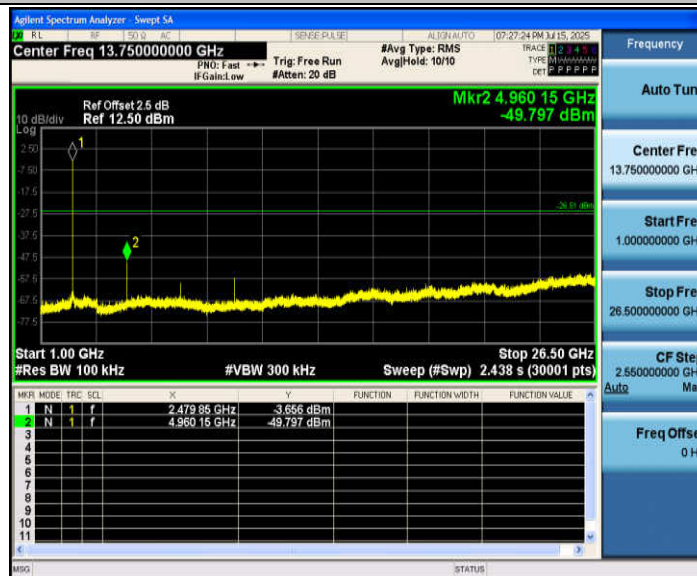
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500

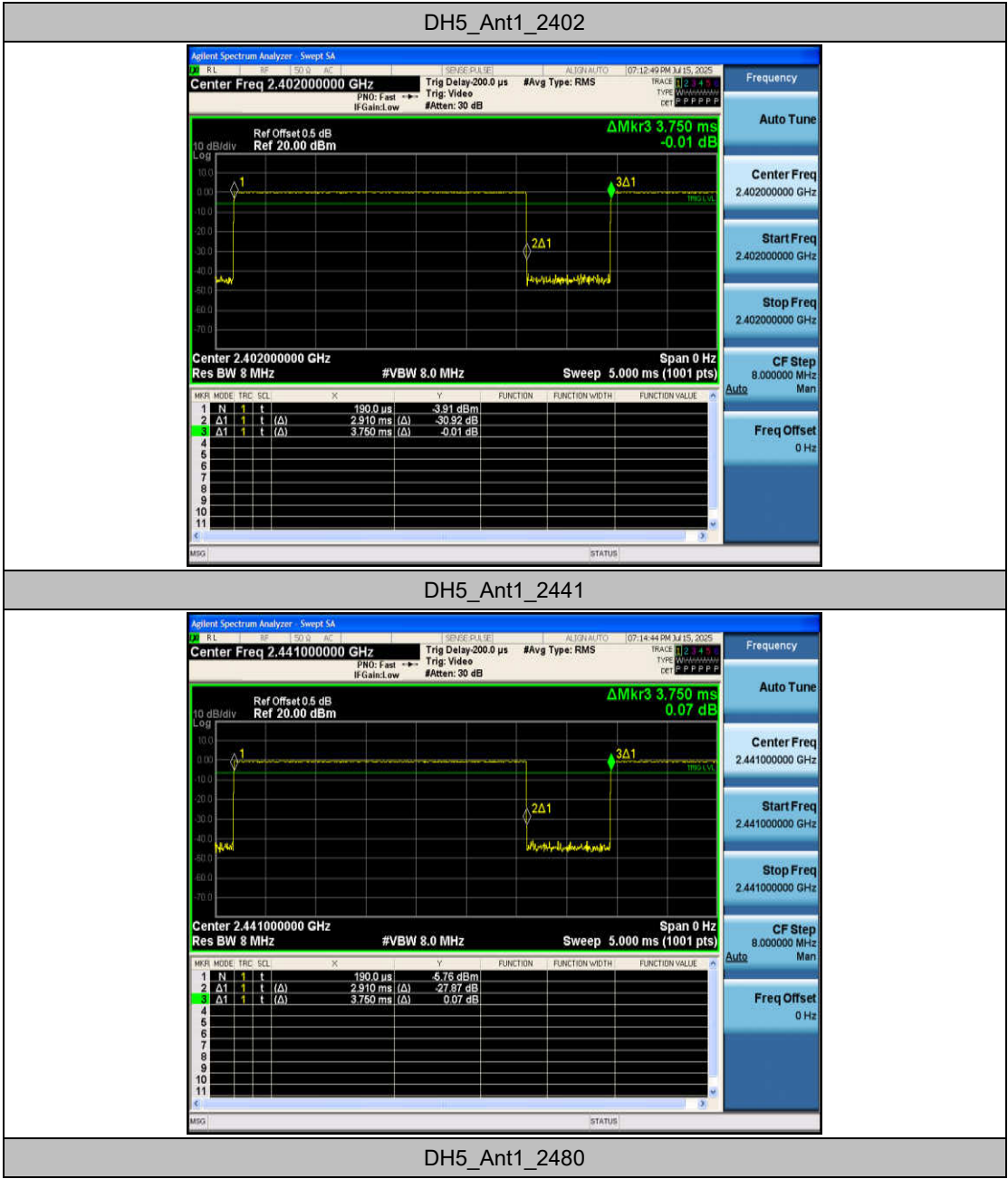


Appendix I: Duty Cycle

Test Result

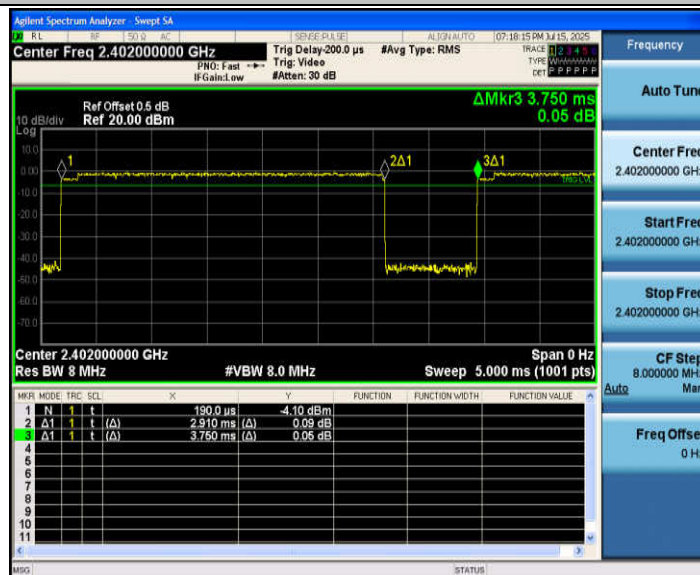
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.91	3.75	77.60	1.10	---	---
		2441	2.91	3.75	77.60	1.10	---	---
		2480	2.91	3.75	77.60	1.10	---	---
2DH5	Ant1	2402	2.91	3.75	77.60	1.10	---	---
		2441	2.91	3.75	77.60	1.10	---	---
		2480	2.92	3.75	77.87	1.09	---	---
3DH5	Ant1	2402	2.92	3.75	77.87	1.09	---	---
		2441	2.92	3.75	77.87	1.09	---	---
		2480	2.92	3.75	77.87	1.09	---	---

Test Graphs

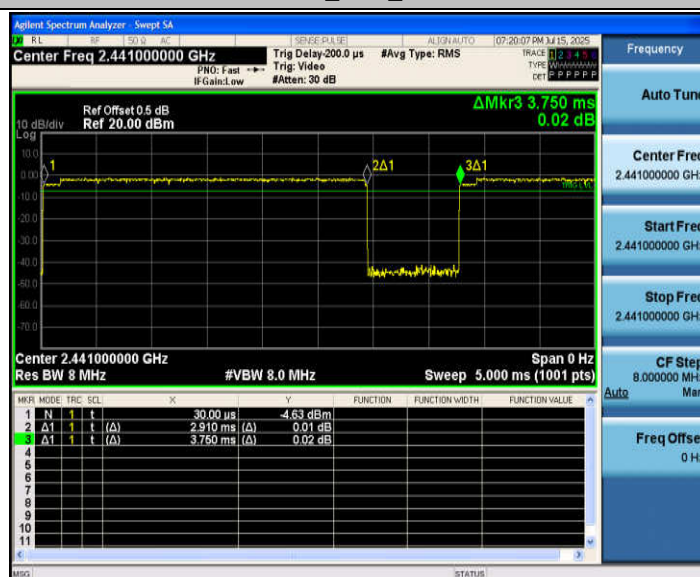




2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

