

FCC Appendix RF Test Data for BT

FCC ID : 2BSTF-L-SIDEA2031

Company : Korllo (shanghai) Technology co., Ltd.

EUT : Wireless Bluetooth Earbuds

Model Number : L-Side A2031

Report No. : CTA25101301502

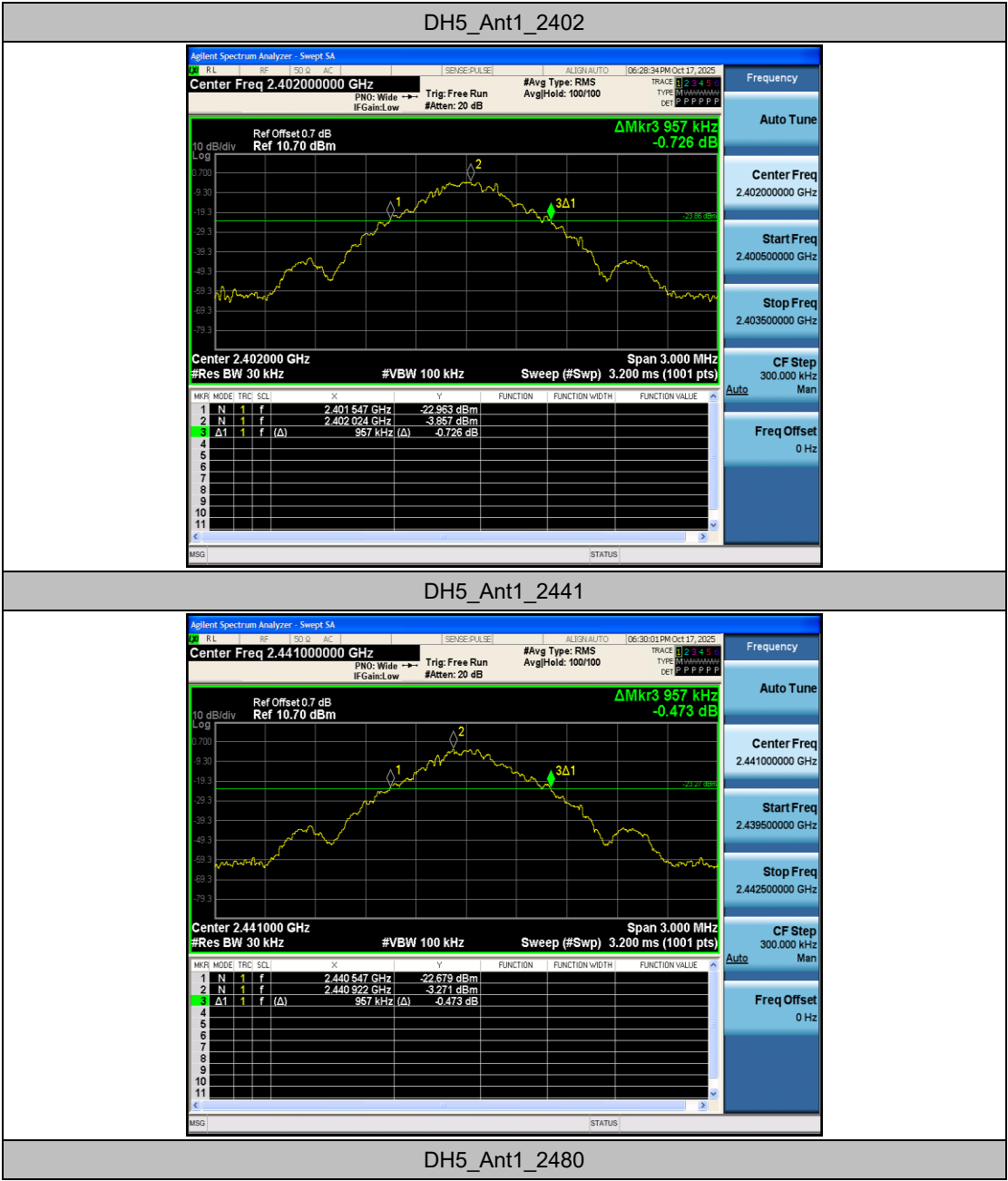
Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.957	2401.547	2402.504	---	---
		2441	0.957	2440.547	2441.504	---	---
		2480	0.939	2479.553	2480.492	---	---
2DH5	Ant1	2402	1.341	2401.337	2402.678	---	---
		2441	1.269	2440.379	2441.648	---	---
		2480	1.326	2479.349	2480.675	---	---
3DH5	Ant1	2402	1.278	2401.382	2402.660	---	---
		2441	1.317	2440.346	2441.663	---	---
		2480	1.305	2479.358	2480.663	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

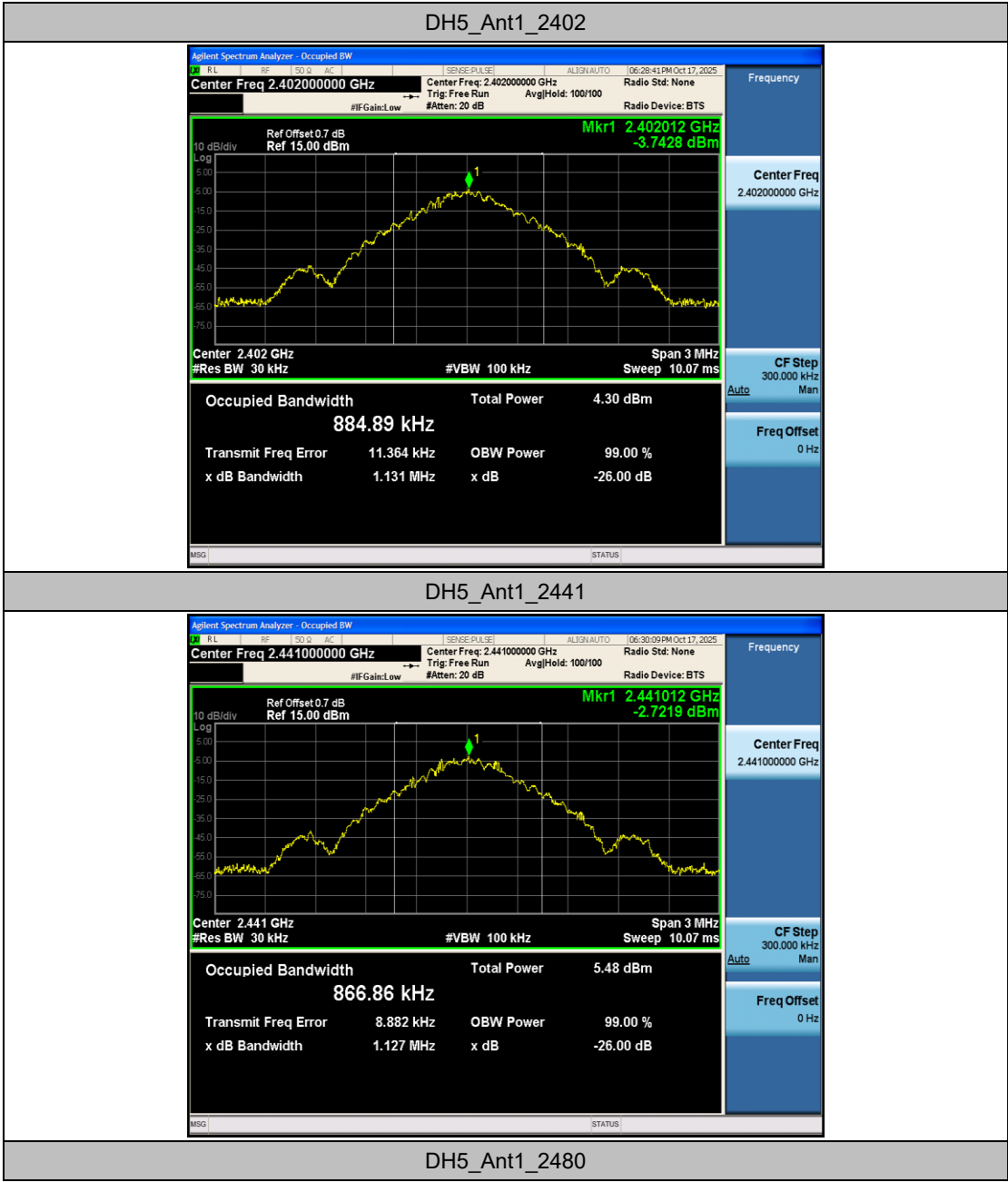


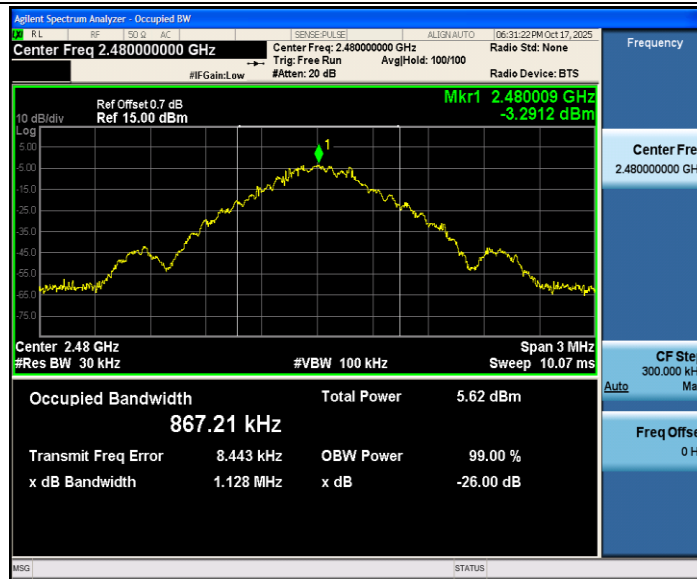
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.88489	2401.5689	2402.4538	---	---
		2441	0.86686	2440.5755	2441.4423	---	---
		2480	0.86721	2479.5748	2480.4420	---	---
2DH5	Ant1	2402	1.1992	2401.4118	2402.6110	---	---
		2441	1.1899	2440.4158	2441.6057	---	---
		2480	1.1897	2479.4163	2480.6060	---	---
3DH5	Ant1	2402	1.1907	2401.4152	2402.6059	---	---
		2441	1.1886	2440.4157	2441.6043	---	---
		2480	1.1875	2479.4166	2480.6041	---	---

Test Graphs

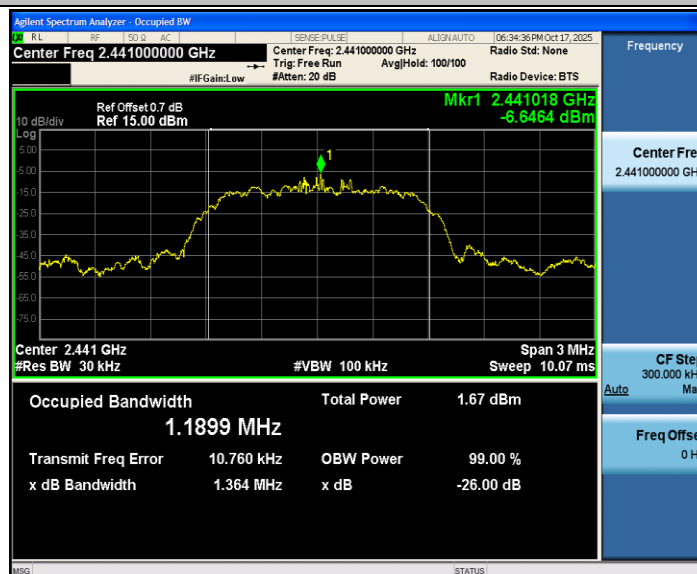




2DH5_Ant1_2402



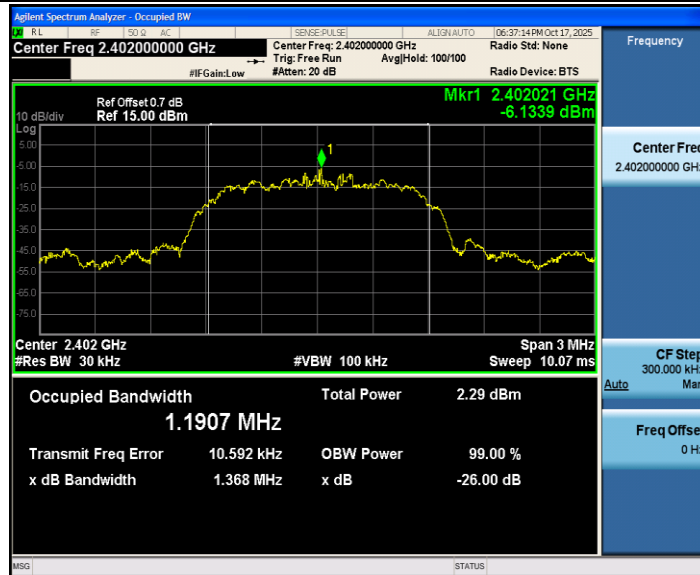
2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

Left:

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-0.36	≤20.97	PASS
		2441	-0.37	≤20.97	PASS
		2480	-0.21	≤20.97	PASS
2DH5	Ant1	2402	-1.22	≤20.97	PASS
		2441	-1.20	≤20.97	PASS
		2480	-1.16	≤20.97	PASS
3DH5	Ant1	2402	-1.09	≤20.97	PASS
		2441	-1.13	≤20.97	PASS
		2480	-1.17	≤20.97	PASS

Right:

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-0.39	≤20.97	PASS
		2441	-0.42	≤20.97	PASS
		2480	-0.24	≤20.97	PASS
2DH5	Ant1	2402	-1.23	≤20.97	PASS
		2441	-1.22	≤20.97	PASS
		2480	-1.21	≤20.97	PASS
3DH5	Ant1	2402	-1.13	≤20.97	PASS
		2441	-1.18	≤20.97	PASS
		2480	-1.20	≤20.97	PASS

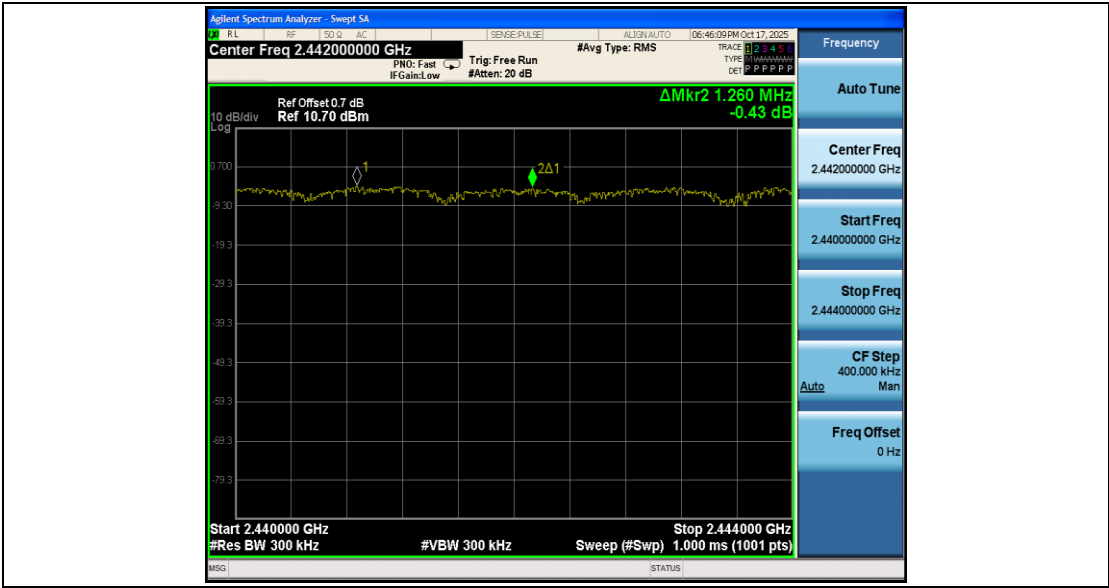
Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.02	≥ 0.957	PASS
2DH5	Ant1	Hop	0.976	≥ 0.894	PASS
3DH5	Ant1	Hop	1.26	≥ 0.878	PASS

Test Graphs



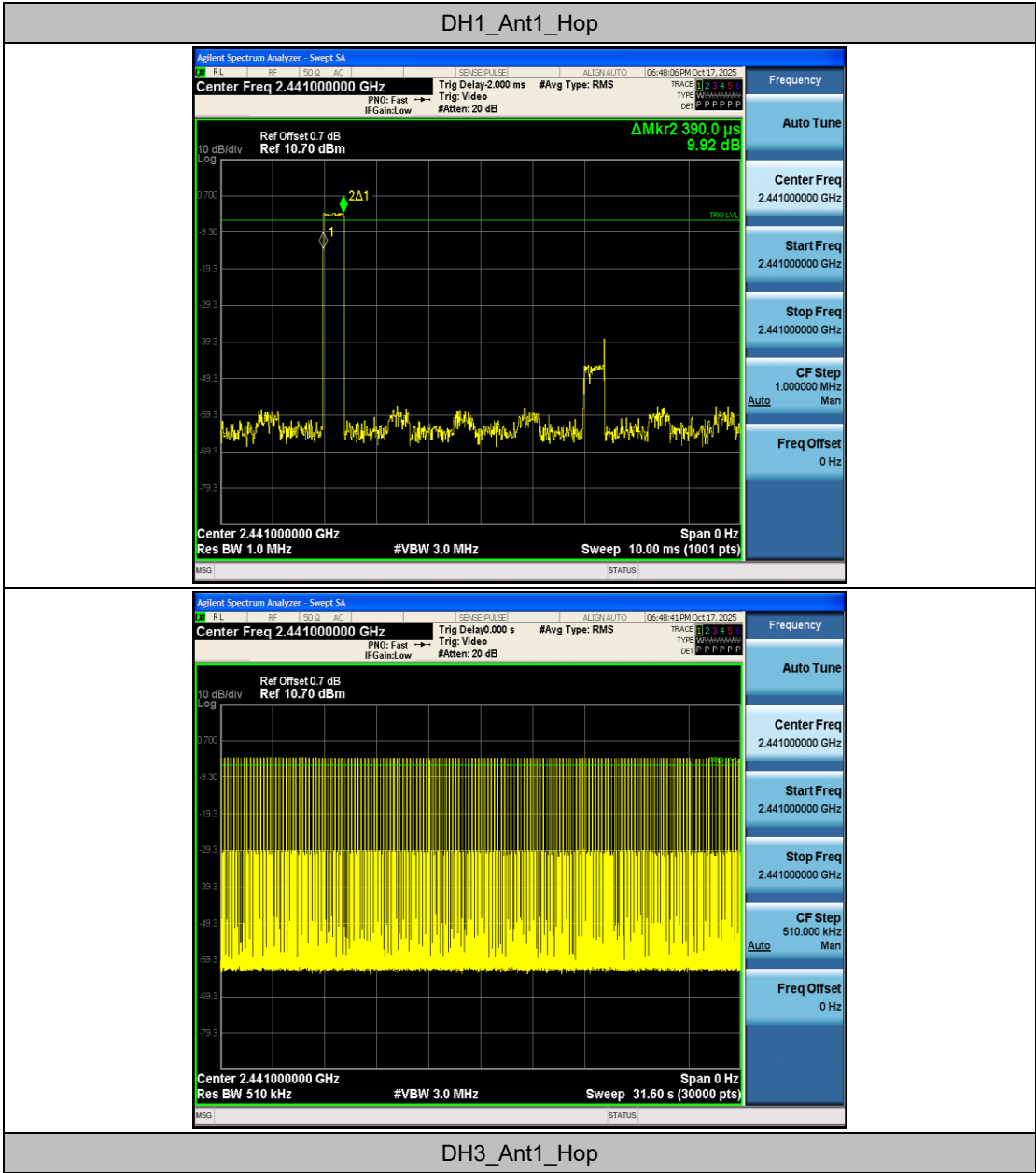


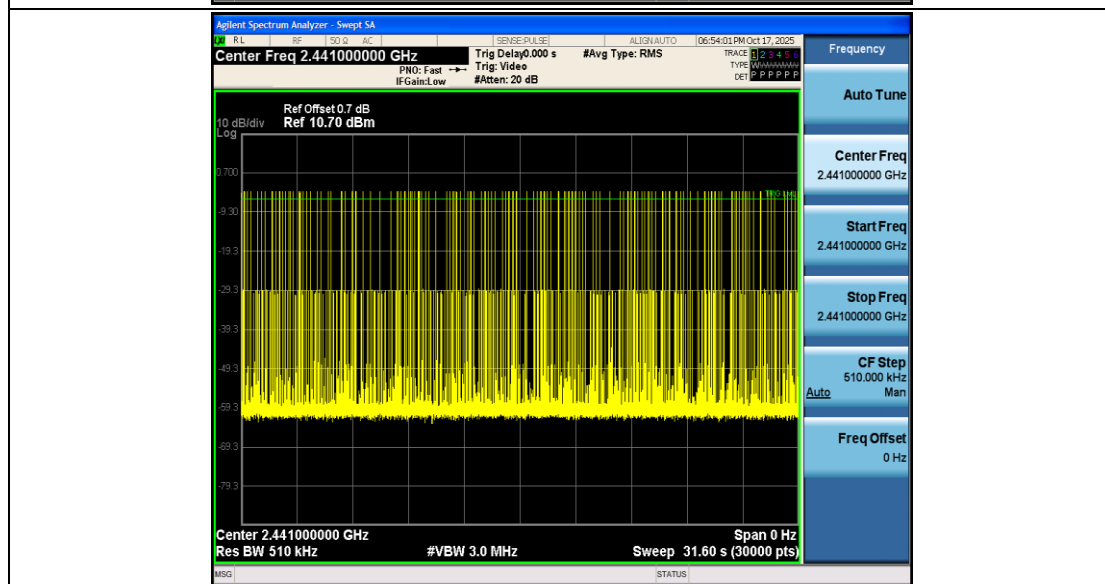
Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	315	0.123	≤0.4	PASS
DH3	Ant1	Hop	1.640	156	0.256	≤0.4	PASS
DH5	Ant1	Hop	2.890	99	0.286	≤0.4	PASS
2DH1	Ant1	Hop	0.390	319	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.640	163	0.267	≤0.4	PASS
2DH5	Ant1	Hop	2.900	101	0.293	≤0.4	PASS
3DH1	Ant1	Hop	0.390	313	0.122	≤0.4	PASS
3DH3	Ant1	Hop	1.640	160	0.262	≤0.4	PASS
3DH5	Ant1	Hop	2.890	104	0.301	≤0.4	PASS

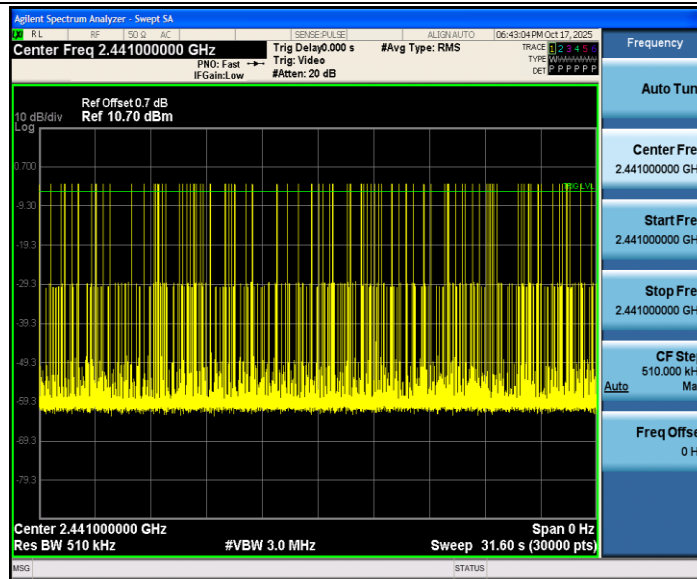
Test Graphs



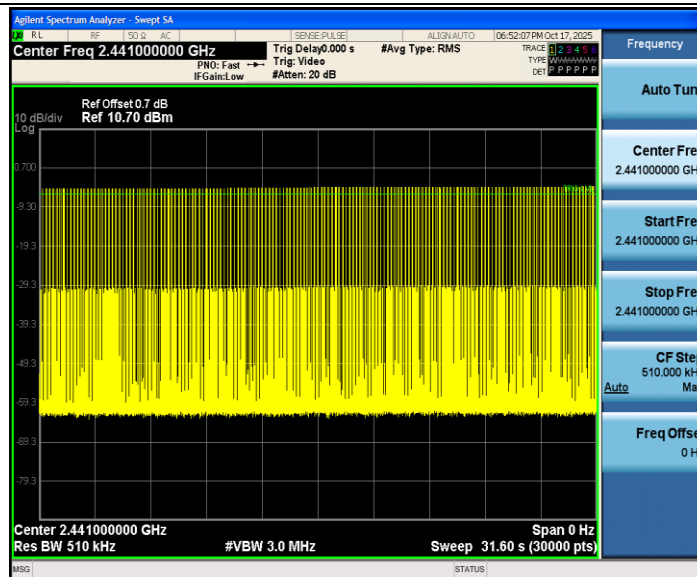
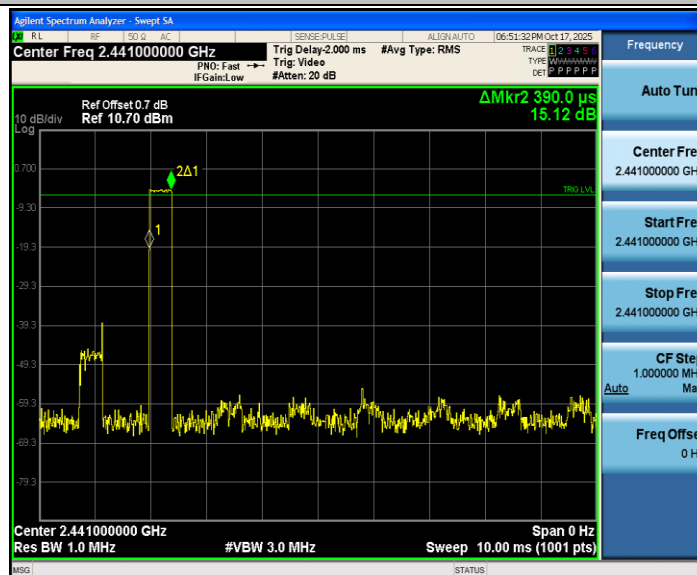


DH5_Ant1_Hop

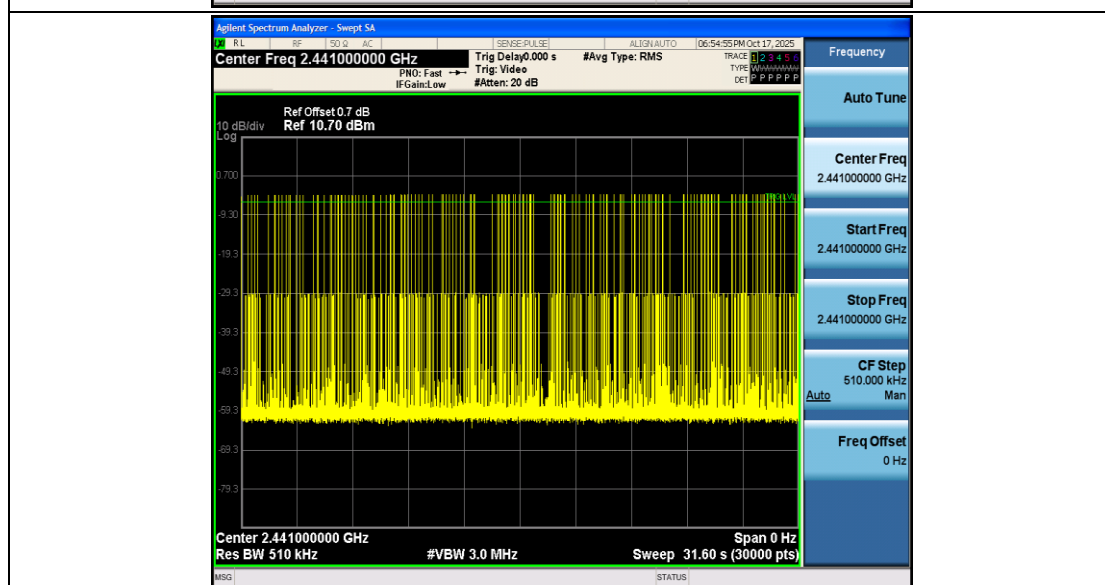




2DH1_Ant1_Hop

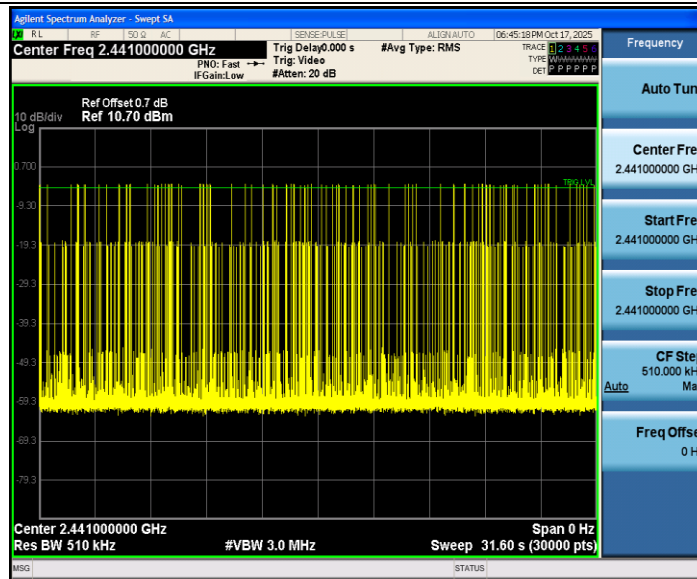


2DH3_Ant1_Hop

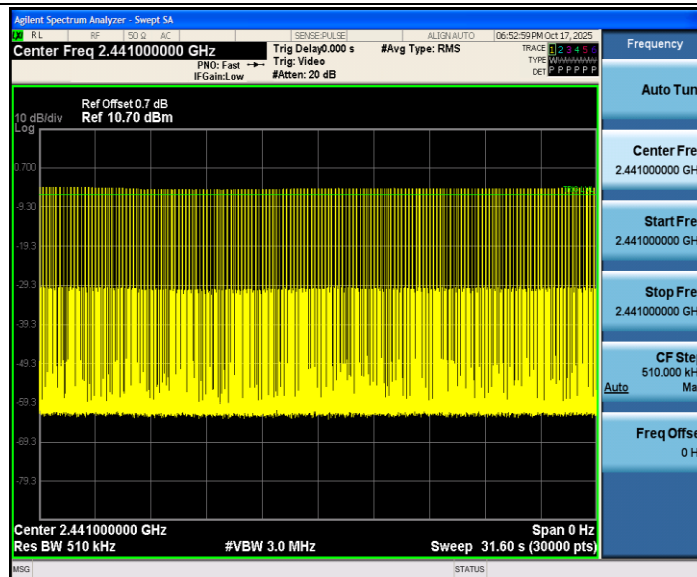
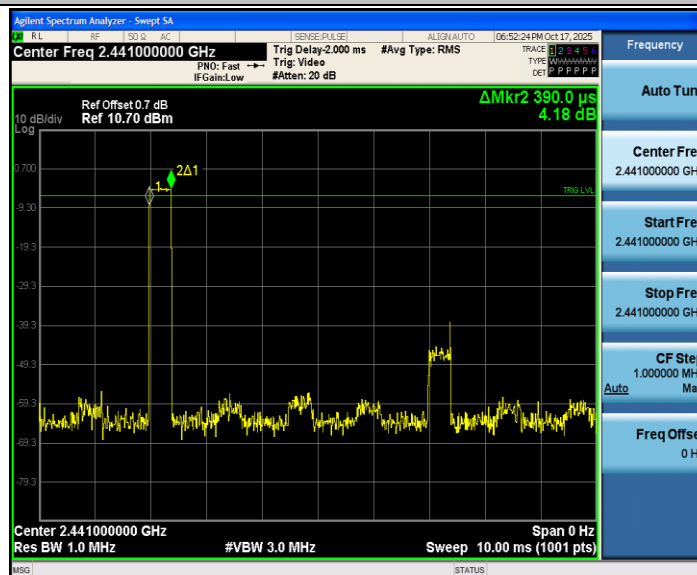


2DH5_Ant1_Hop

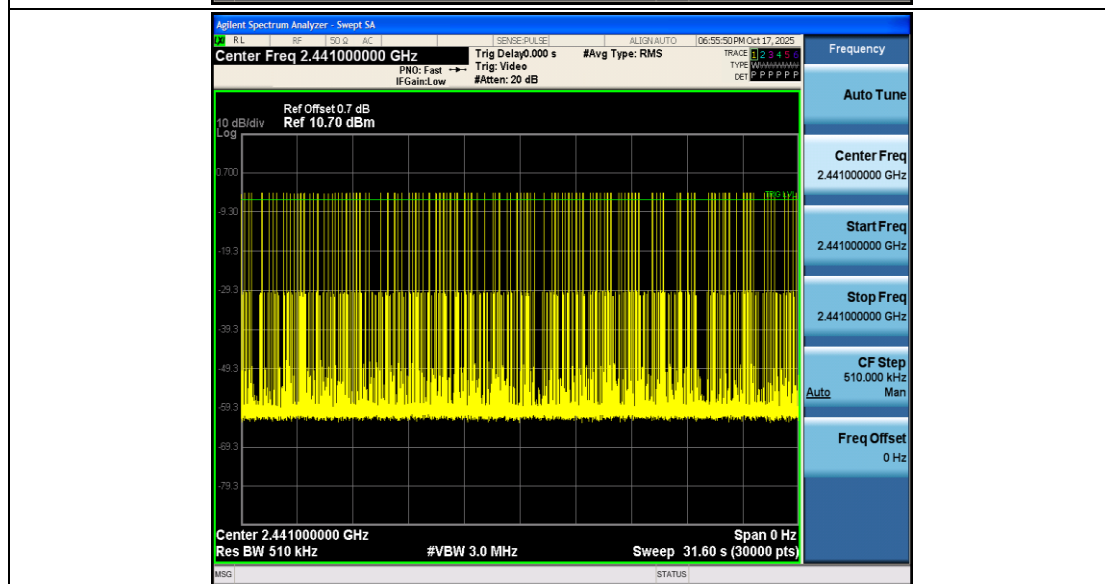




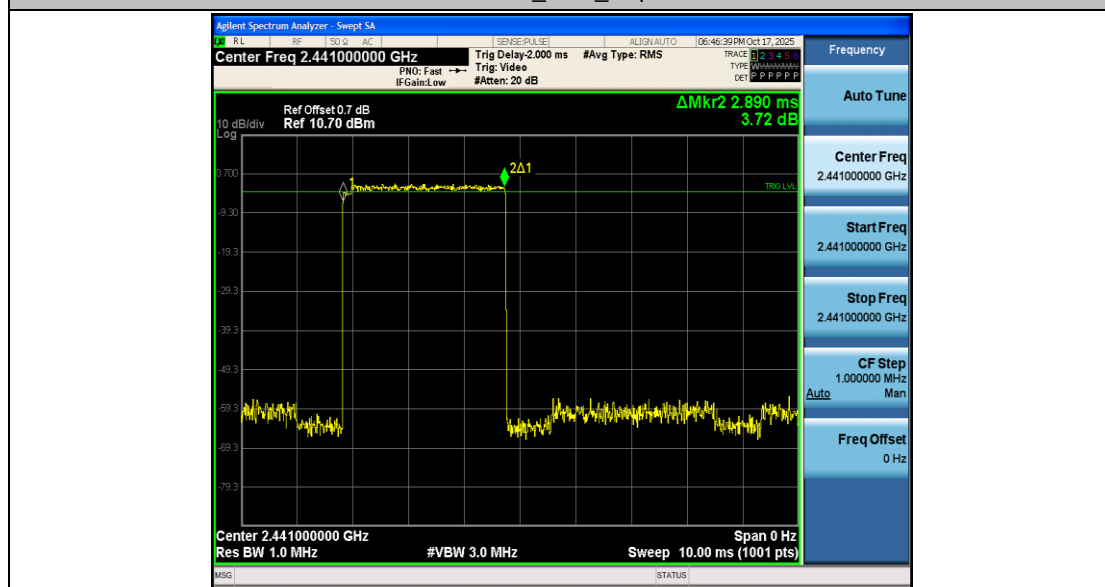
3DH1_Ant1_Hop

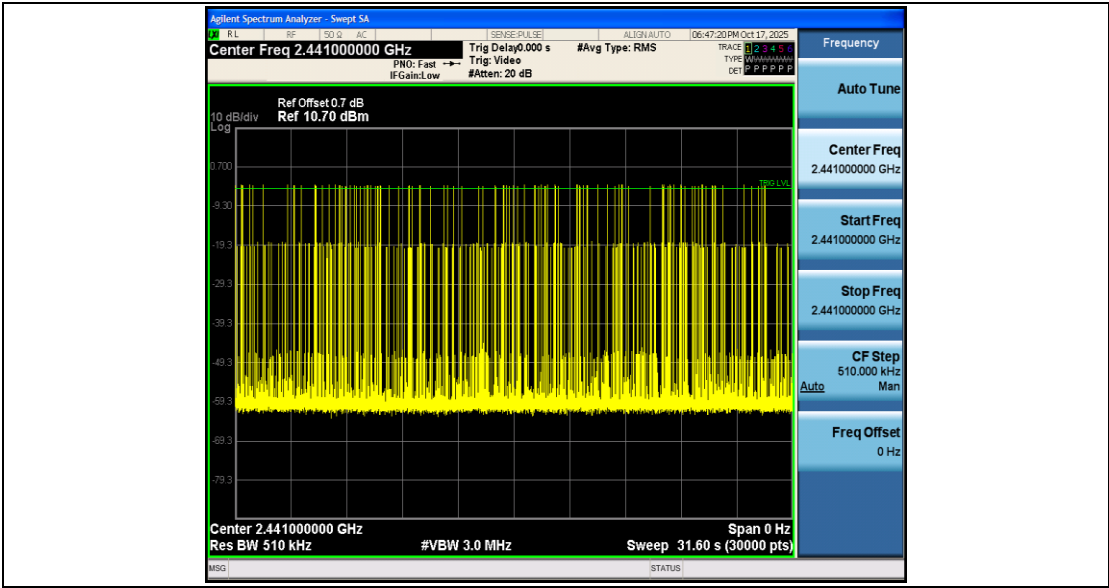


3DH3_Ant1_Hop



3DH5_Ant1_Hop





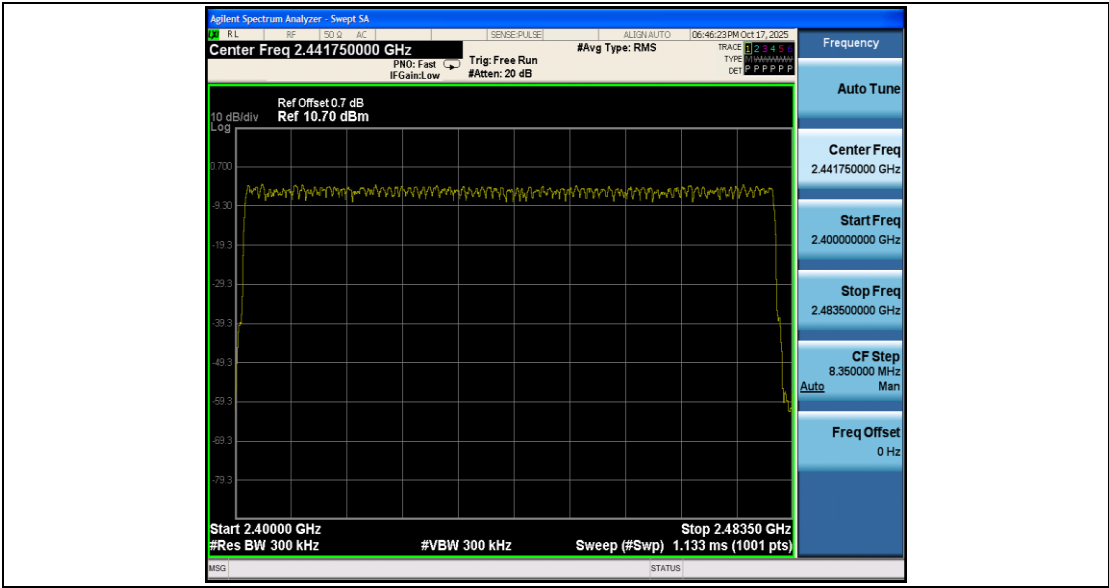
Appendix F: Number of hopping channels

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



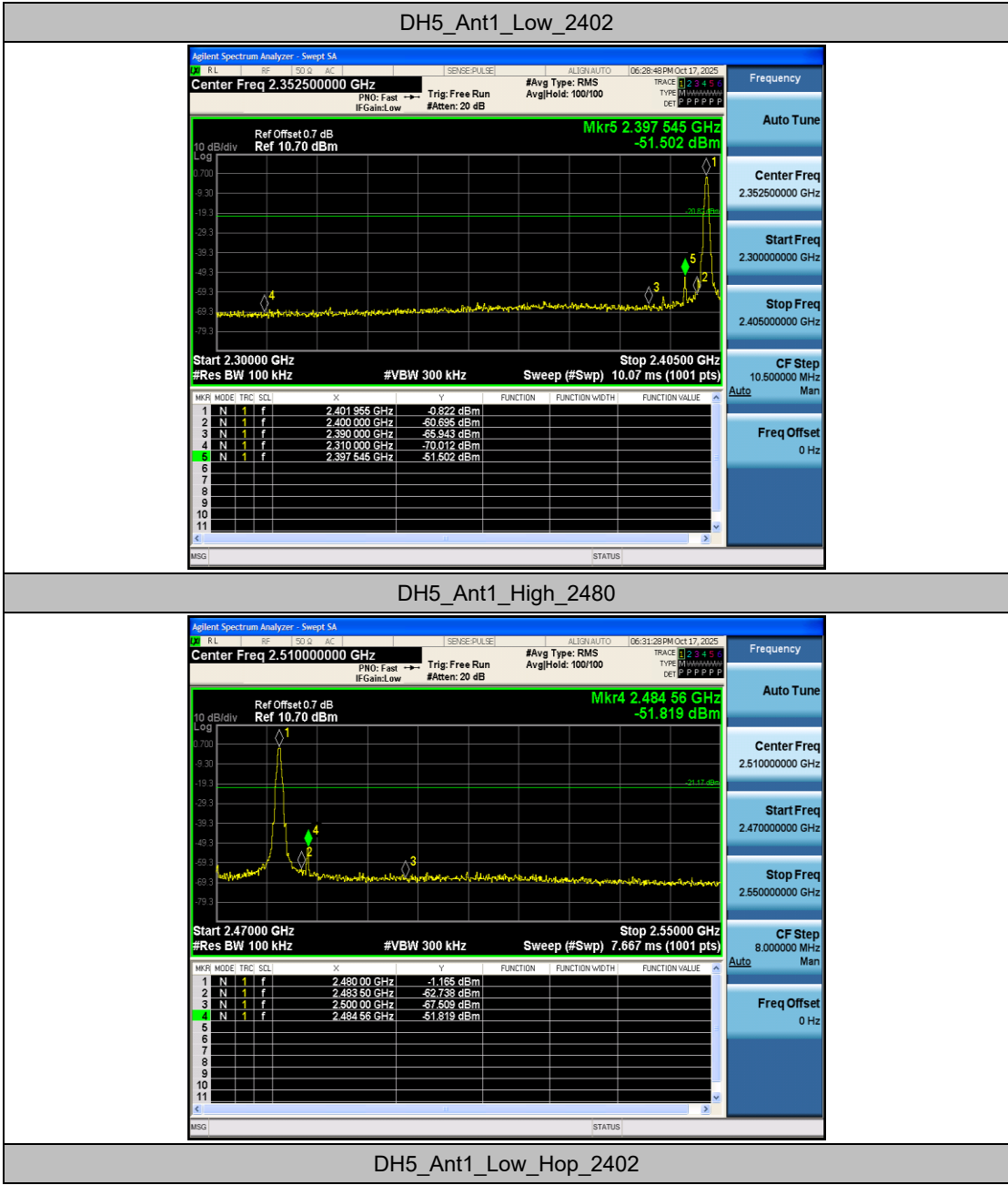


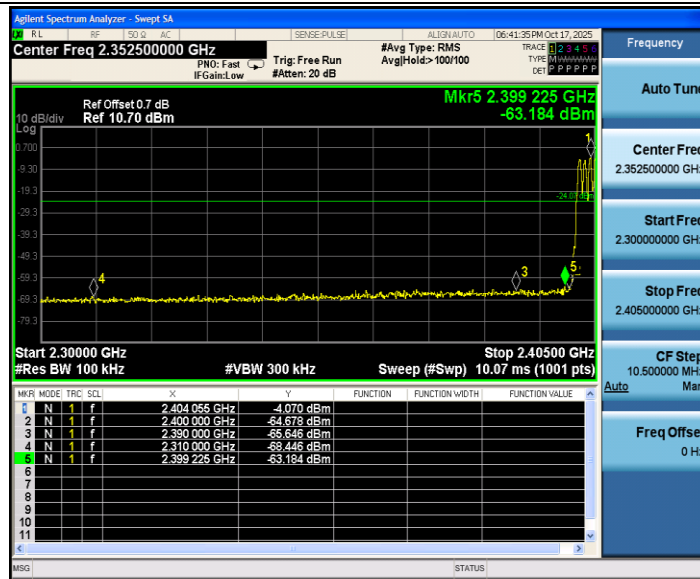
Appendix G: Band edge measurements

Test Result

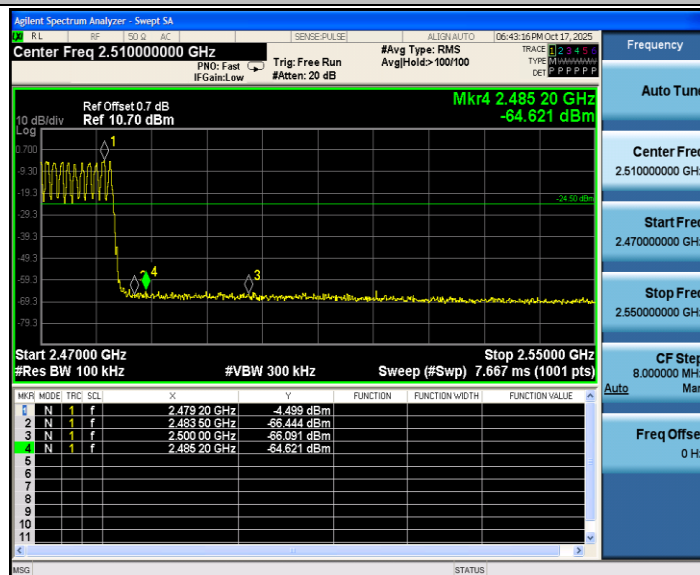
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.82	-51.5	≤-20.82	PASS
		High	2480	-1.17	-51.82	≤-21.17	PASS
		Low	Hop_2402	-4.07	-63.18	≤-24.07	PASS
		High	Hop_2480	-4.50	-64.62	≤-24.5	PASS
2DH5	Ant1	Low	2402	-3.93	-55.04	≤-23.93	PASS
		High	2480	-5.18	-63.78	≤-25.18	PASS
		Low	Hop_2402	-6.70	-55.69	≤-26.7	PASS
		High	Hop_2480	-3.85	-64.14	≤-23.85	PASS
3DH5	Ant1	Low	2402	-5.08	-61.02	≤-25.08	PASS
		High	2480	-5.31	-64.16	≤-25.31	PASS
		Low	Hop_2402	-6.57	-60.87	≤-26.57	PASS
		High	Hop_2480	-5.18	-62.75	≤-25.18	PASS

Test Graphs

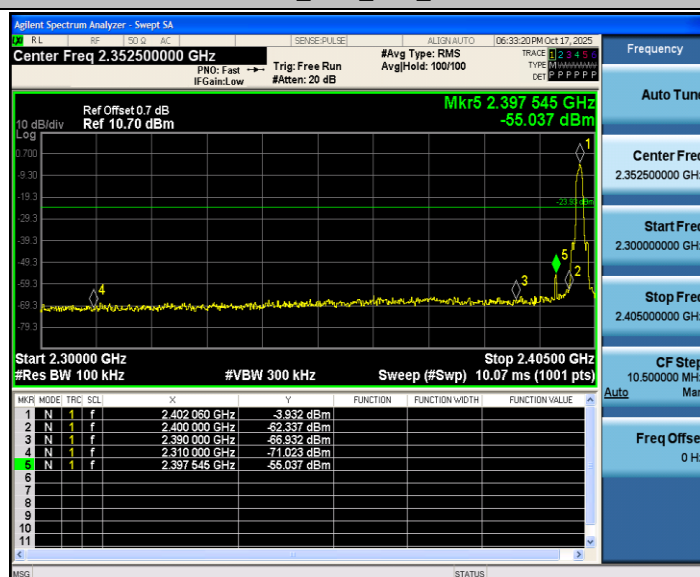




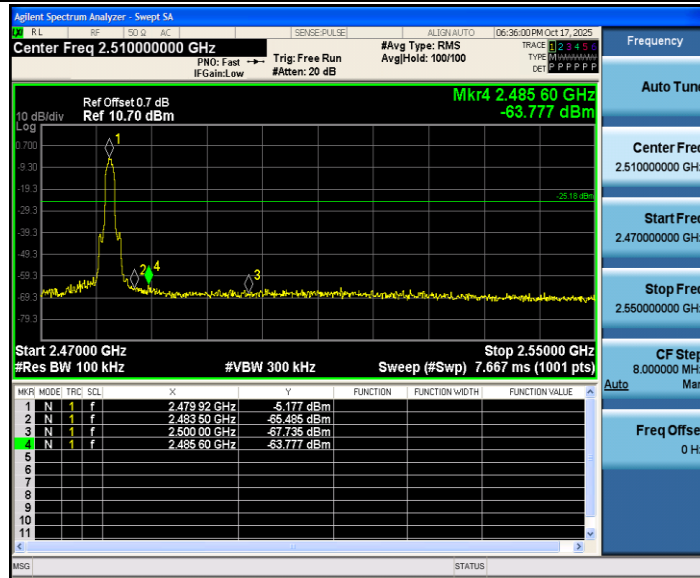
DH5_Ant1_High_Hop_2480



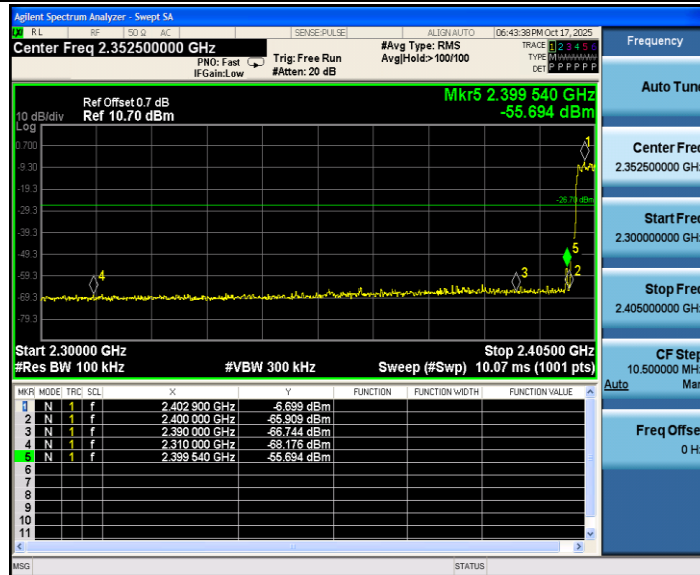
2DH5_Ant1_Low_2402



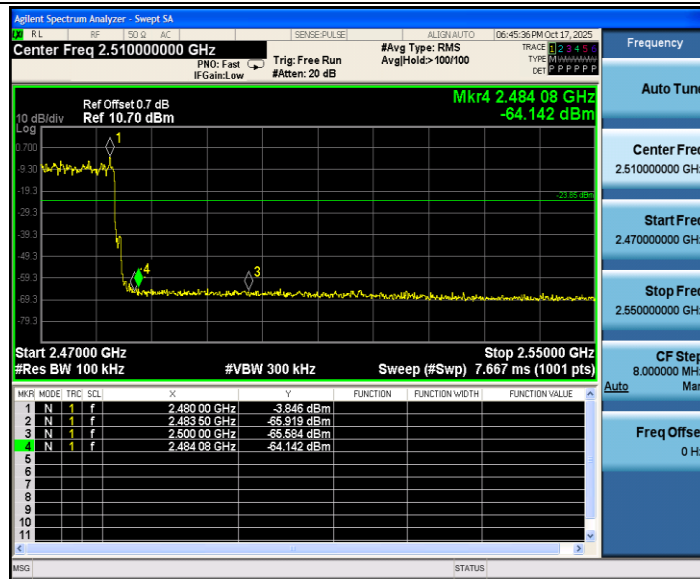
2DH5_Ant1_High_2480



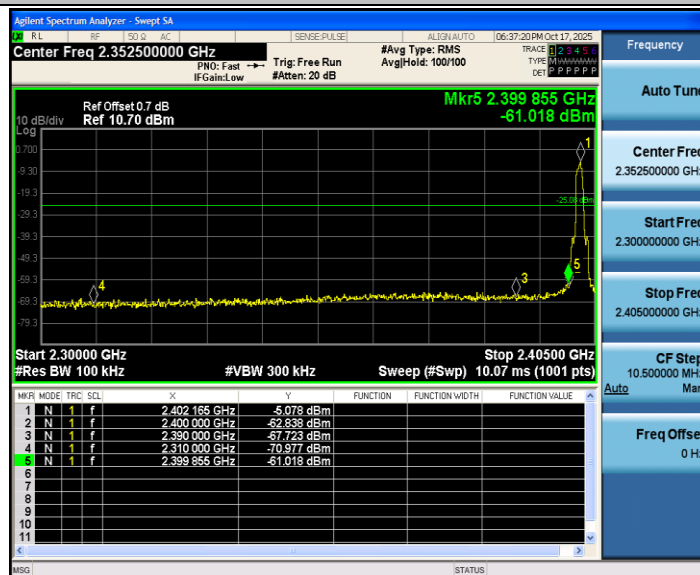
2DH5_Ant1_Low_Hop_2402



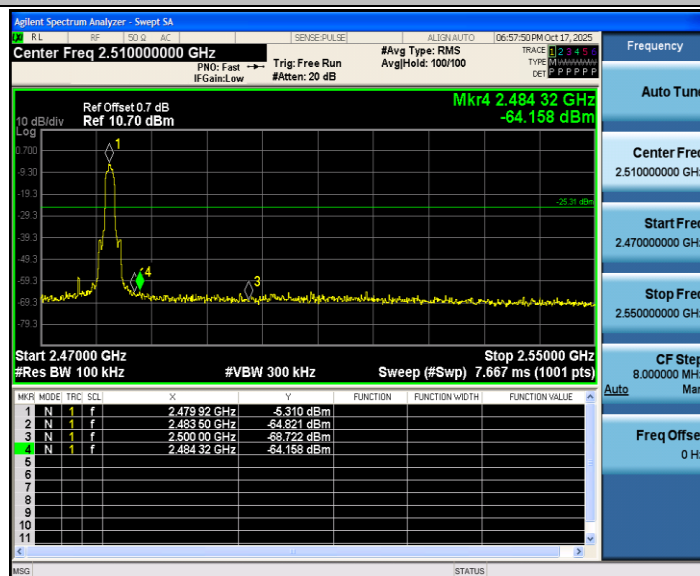
2DH5_Ant1_High_Hop_2480



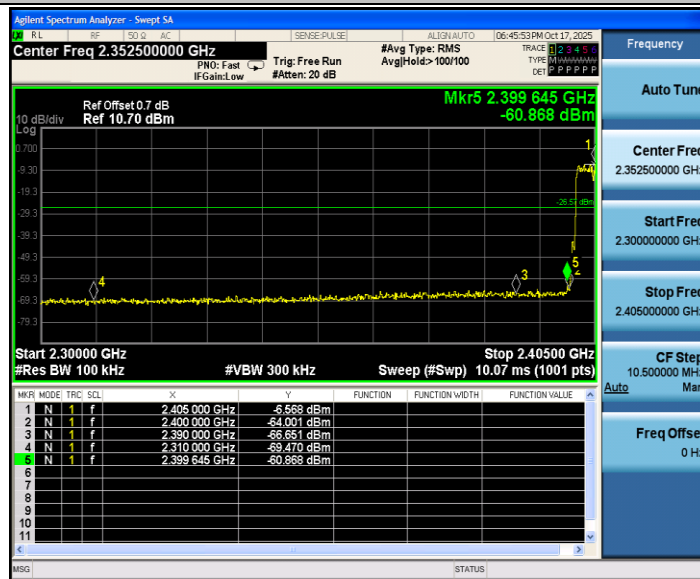
3DH5_Ant1_Low_2402



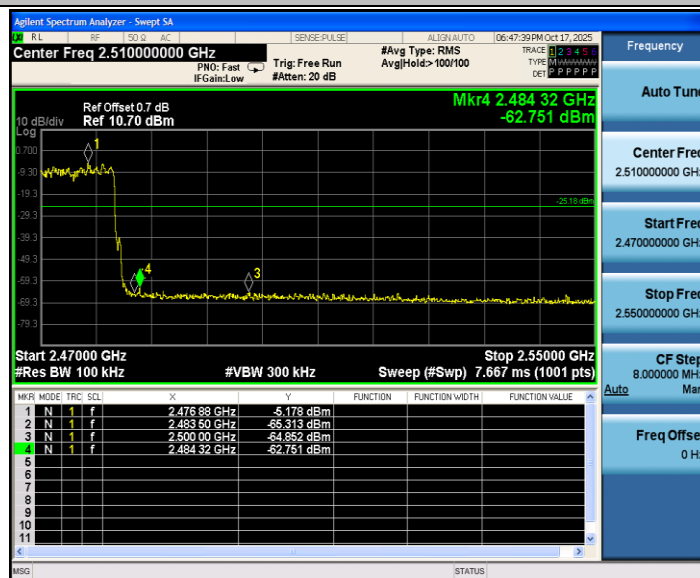
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

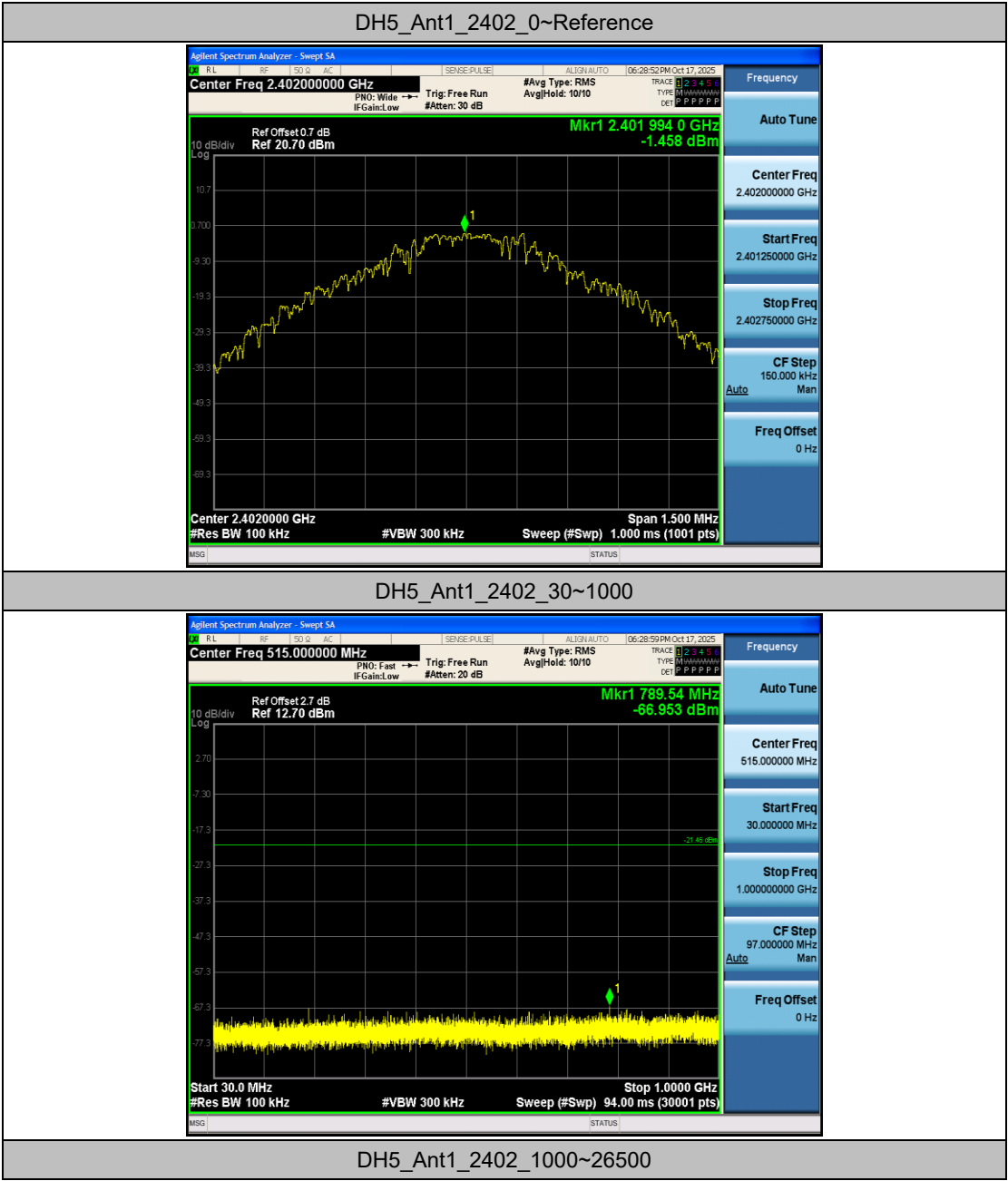


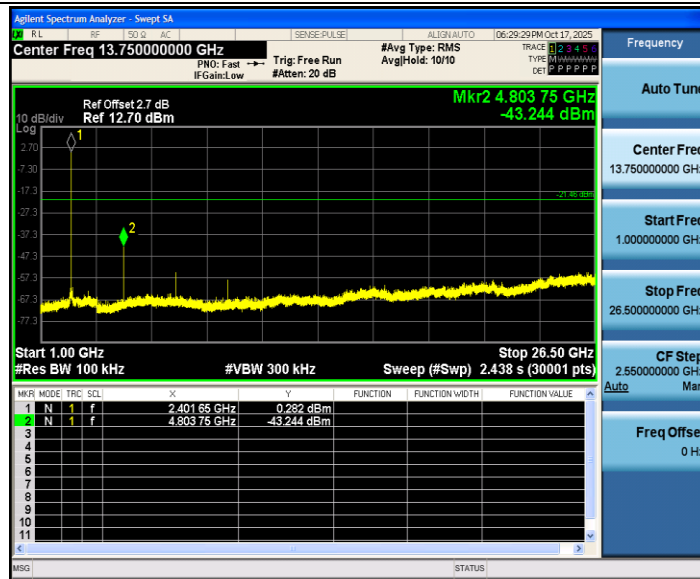
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.46	-1.46	---	PASS
			30~1000	-1.46	-66.95	≤-21.46	PASS
			1000~26500	-1.46	-43.24	≤-21.46	PASS
		2441	Reference	-1.38	-1.38	---	PASS
			30~1000	-1.38	-67.92	≤-21.38	PASS
			1000~26500	-1.38	-43.54	≤-21.38	PASS
		2480	Reference	-1.41	-1.41	---	PASS
			30~1000	-1.41	-67.75	≤-21.41	PASS
			1000~26500	-1.41	-45.36	≤-21.41	PASS
2DH5	Ant1	2402	Reference	-5.31	-5.31	---	PASS
			30~1000	-5.31	-66.83	≤-25.31	PASS
			1000~26500	-5.31	-51.65	≤-25.31	PASS
		2441	Reference	-6.75	-6.75	---	PASS
			30~1000	-6.75	-67.58	≤-26.75	PASS
			1000~26500	-6.75	-51.68	≤-26.75	PASS
		2480	Reference	-7.30	-7.30	---	PASS
			30~1000	-7.30	-67.19	≤-27.3	PASS
			1000~26500	-7.30	-48.11	≤-27.3	PASS
3DH5	Ant1	2402	Reference	-5.82	-5.82	---	PASS
			30~1000	-5.82	-67.38	≤-25.82	PASS
			1000~26500	-5.82	-48.39	≤-25.82	PASS
		2441	Reference	-7.53	-7.53	---	PASS
			30~1000	-7.53	-67.13	≤-27.53	PASS
			1000~26500	-7.53	-46.86	≤-27.53	PASS
		2480	Reference	-4.05	-4.05	---	PASS
			30~1000	-4.05	-67.3	≤-24.05	PASS
			1000~26500	-4.05	-50.16	≤-24.05	PASS

Test Graphs

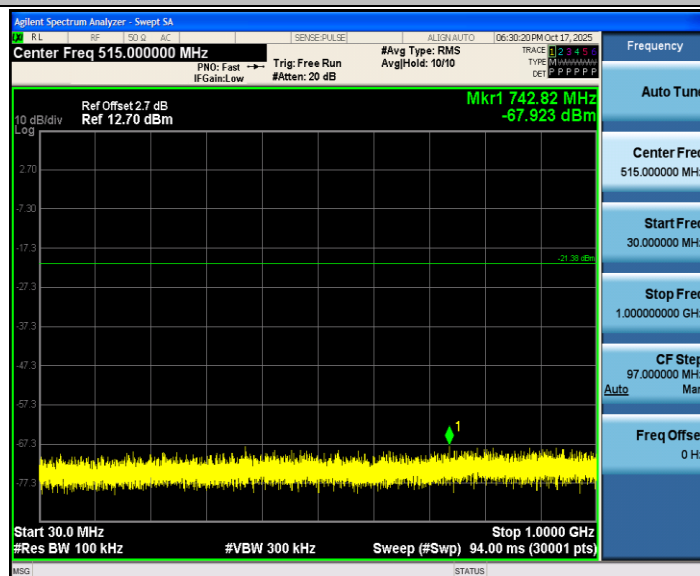




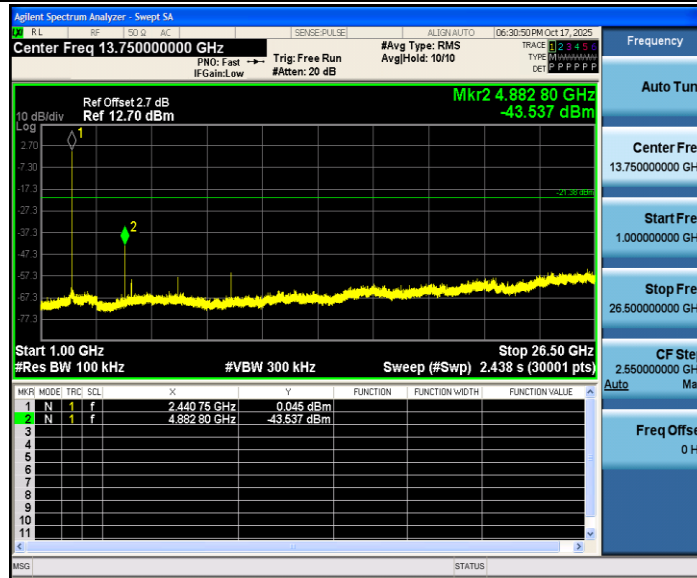
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



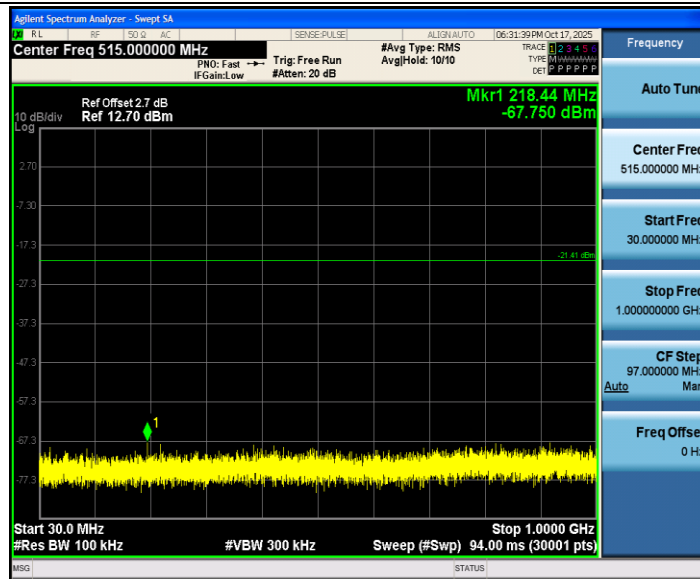
DH5_Ant1_2441_1000~26500



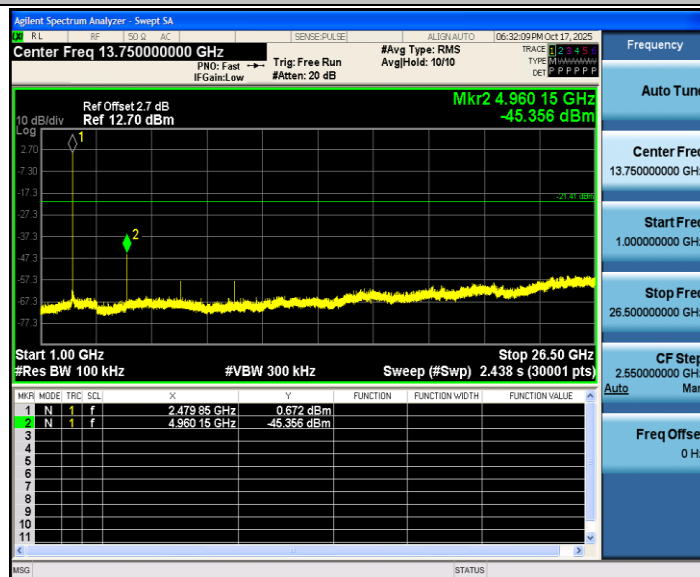
DH5_Ant1_2480_0~Reference



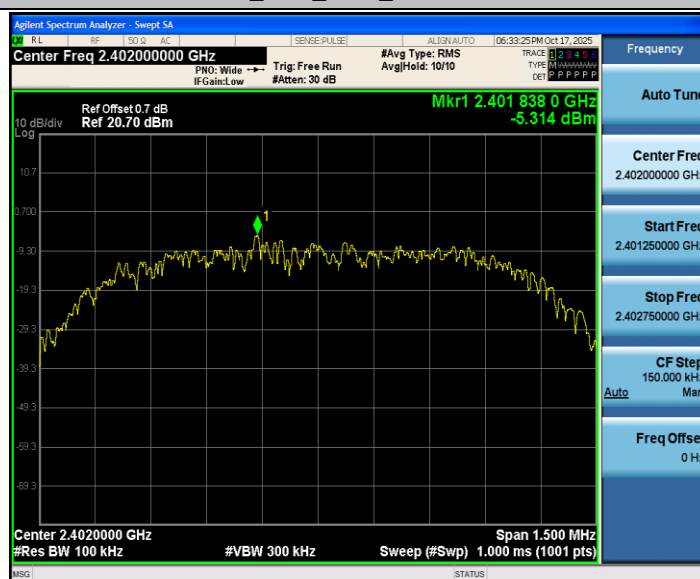
DH5_Ant1_2480_30~1000



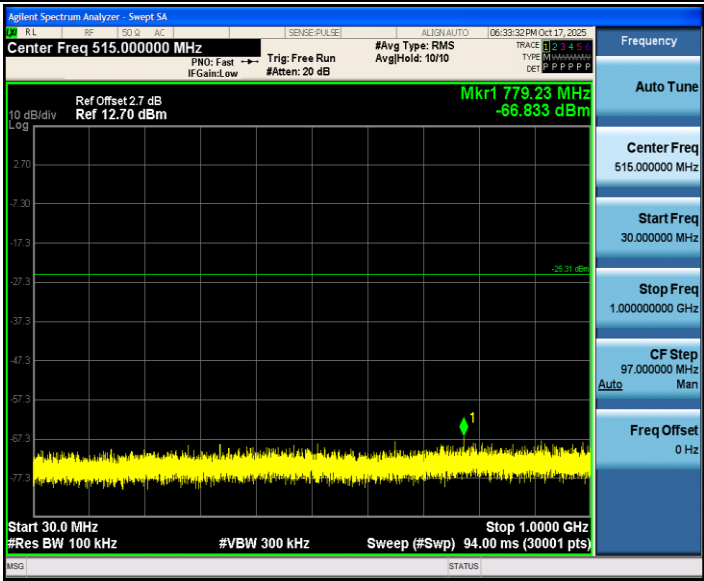
DH5_Ant1_2480_1000~26500



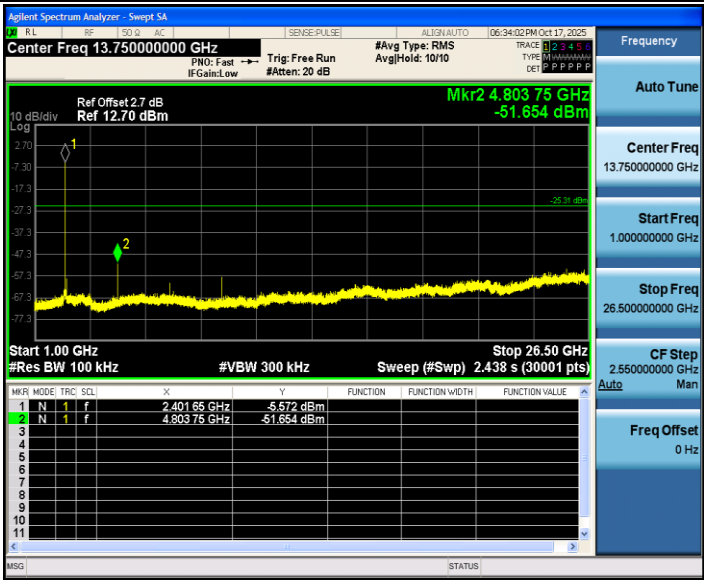
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference