
FCC Appendix RF Test Data for BT

FCC ID : 2AYIY-EK1023

Company : Shenzhen Yinghongyuan Technology Co., Ltd.

EUT : Bluetooth speaker

Model Number : EK1023

Report No. : CTA26060200401

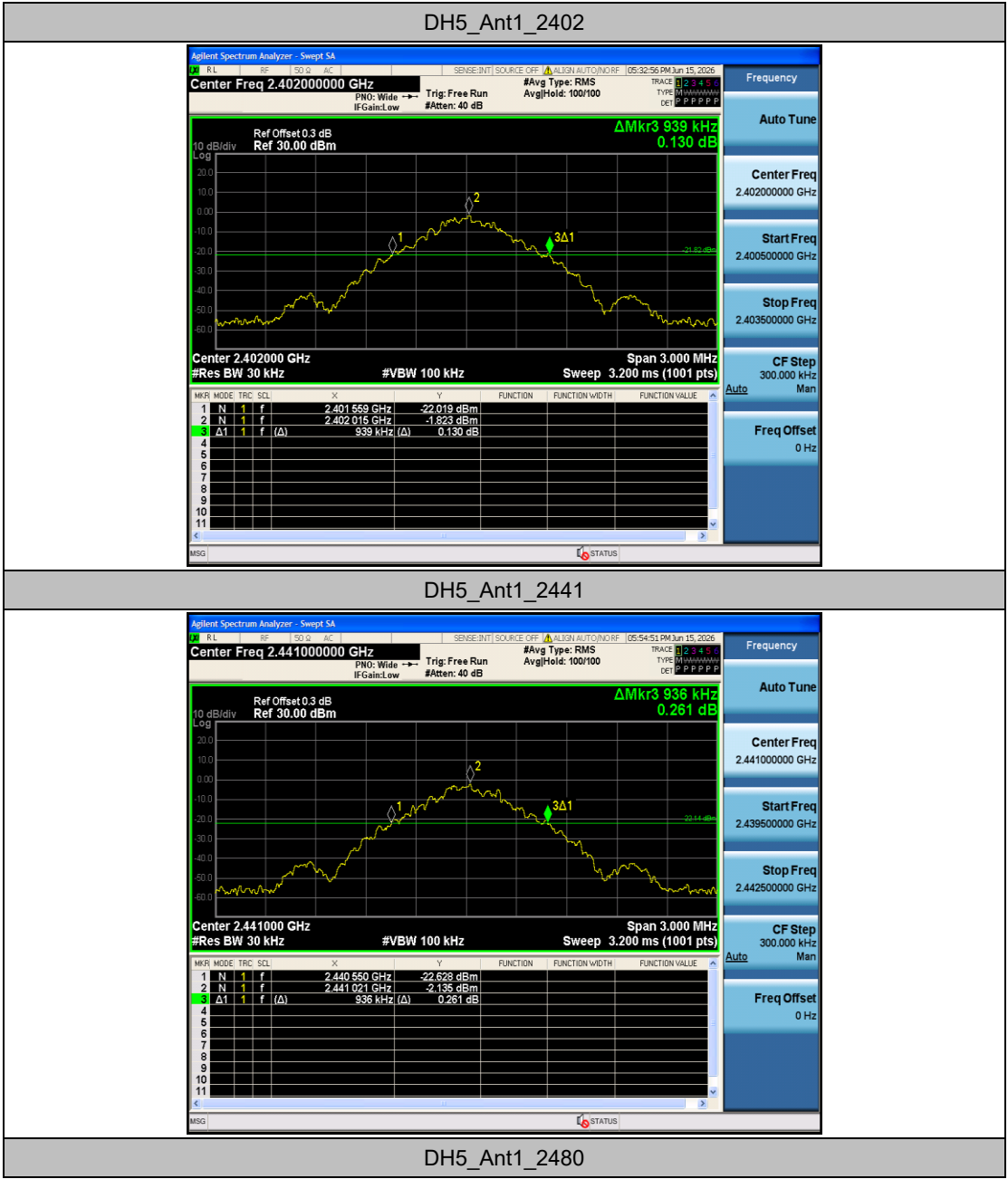
Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.939	2401.559	2402.498	---	---
		2441	0.936	2440.550	2441.486	---	---
		2480	0.948	2479.544	2480.492	---	---
2DH5	Ant1	2402	1.278	2401.376	2402.654	---	---
		2441	1.329	2440.343	2441.672	---	---
		2480	1.284	2479.379	2480.663	---	---
3DH5	Ant1	2402	1.275	2401.370	2402.645	---	---
		2441	1.317	2440.355	2441.672	---	---
		2480	1.314	2479.361	2480.675	---	---

Test Graphs





2DHS_Ant1_2402



2DHS_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix B: Occupied Channel Bandwidth

Test Result

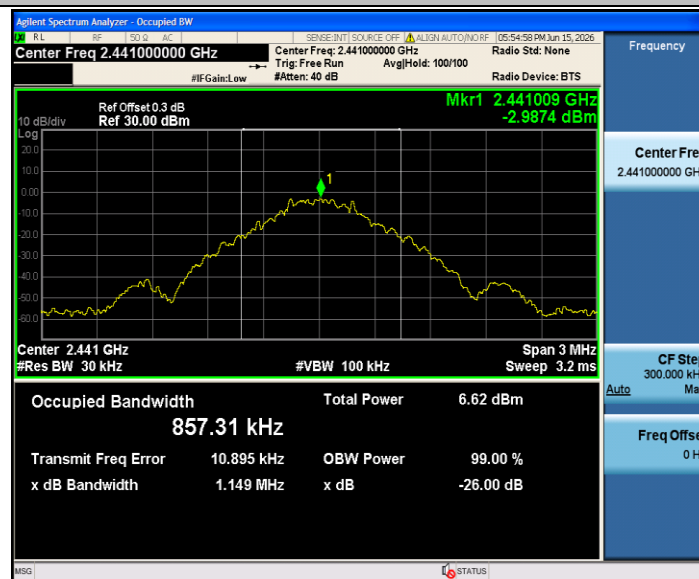
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.85994	2401.5838	2402.4437	---	---
		2441	0.85731	2440.5822	2441.4396	---	---
		2480	0.85900	2479.5779	2480.4369	---	---
2DH5	Ant1	2402	1.1891	2401.4154	2402.6045	---	---
		2441	1.1914	2440.4155	2441.6069	---	---
		2480	1.1846	2479.4186	2480.6032	---	---
3DH5	Ant1	2402	1.1913	2401.4167	2402.6080	---	---
		2441	1.1890	2440.4152	2441.6042	---	---
		2480	1.1899	2479.4179	2480.6078	---	---

Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



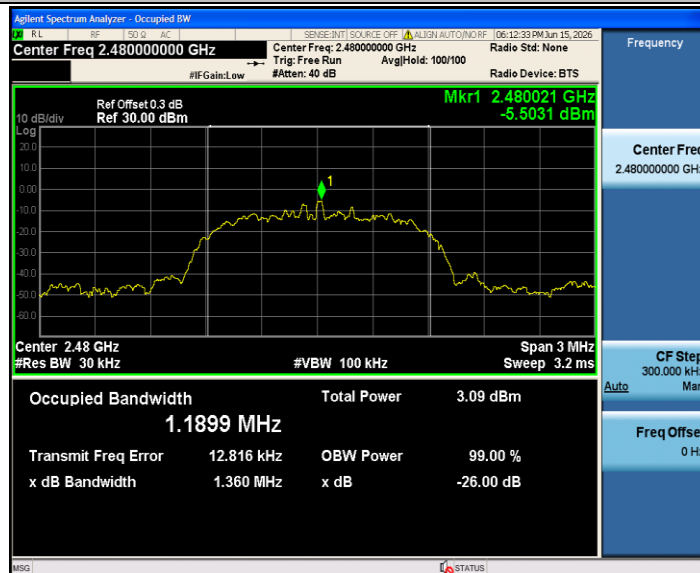
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-0.05	≤20.97	PASS
		2441	-0.08	≤20.97	PASS
		2480	-0.37	≤20.97	PASS
2DH5	Ant1	2402	-1.00	≤20.97	PASS
		2441	-0.95	≤20.97	PASS
		2480	-1.26	≤20.97	PASS
3DH5	Ant1	2402	-0.55	≤20.97	PASS
		2441	-0.61	≤20.97	PASS
		2480	-0.84	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.996	≥ 0.948	PASS
2DH5	Ant1	Hop	1.006	≥ 0.886	PASS
3DH5	Ant1	Hop	1.026	≥ 0.878	PASS

Test Graphs

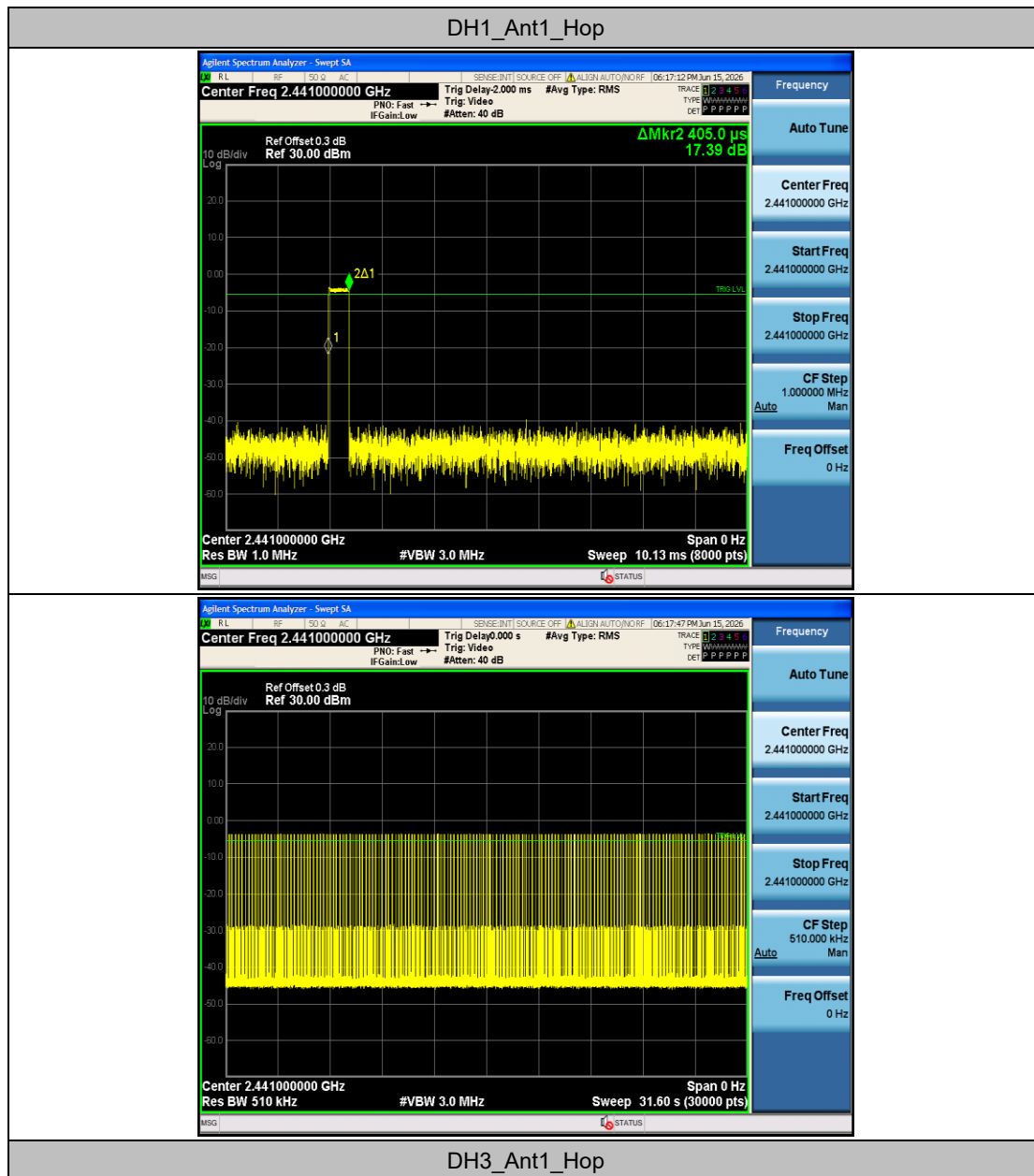


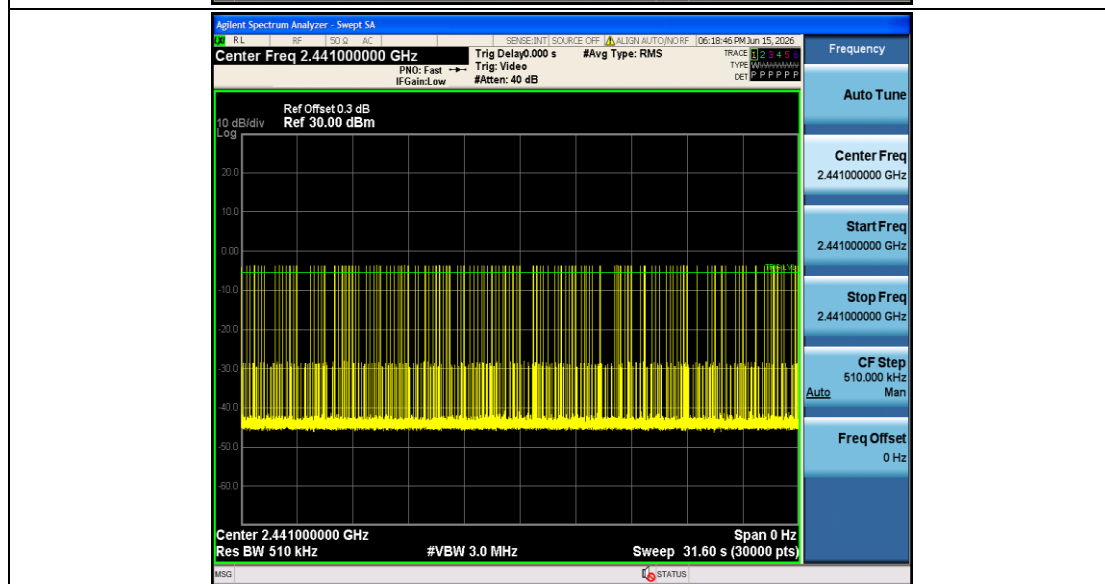
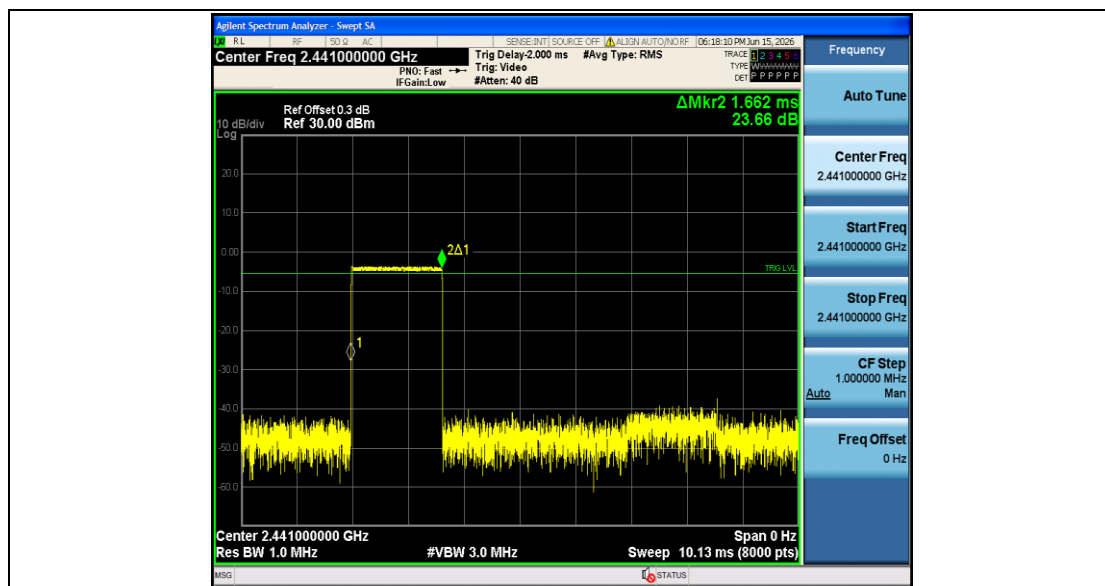
Appendix E: Time of occupancy

Test Result

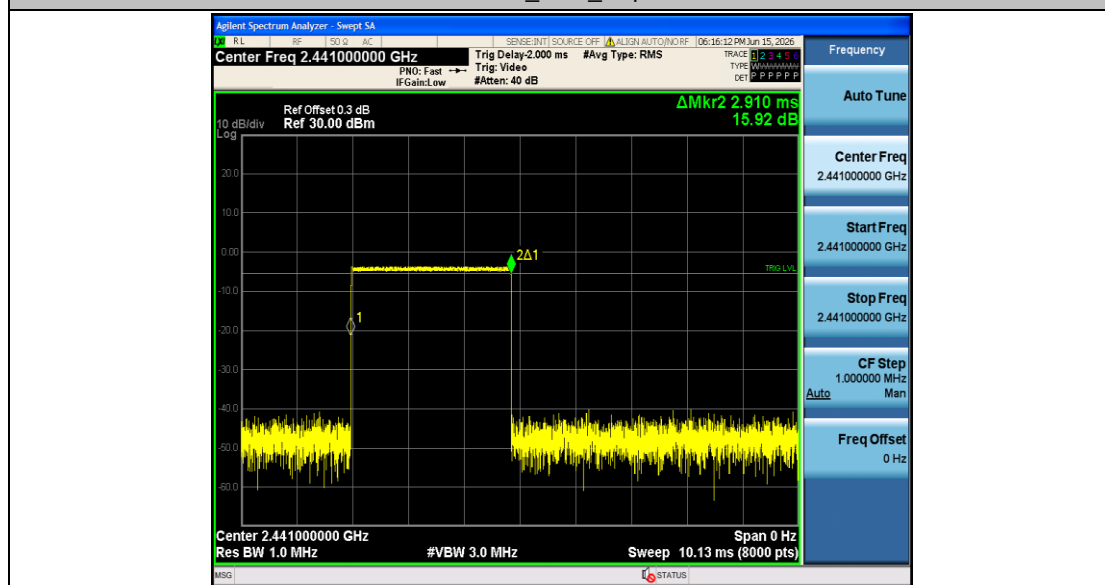
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.405	316	0.128	≤0.4	PASS
DH3	Ant1	Hop	1.662	167	0.278	≤0.4	PASS
DH5	Ant1	Hop	2.910	107	0.311	≤0.4	PASS
2DH1	Ant1	Hop	0.417	316	0.132	≤0.4	PASS
2DH3	Ant1	Hop	1.668	155	0.259	≤0.4	PASS
2DH5	Ant1	Hop	2.916	102	0.297	≤0.4	PASS
3DH1	Ant1	Hop	0.415	318	0.132	≤0.4	PASS
3DH3	Ant1	Hop	1.666	161	0.268	≤0.4	PASS
3DH5	Ant1	Hop	2.917	101	0.295	≤0.4	PASS

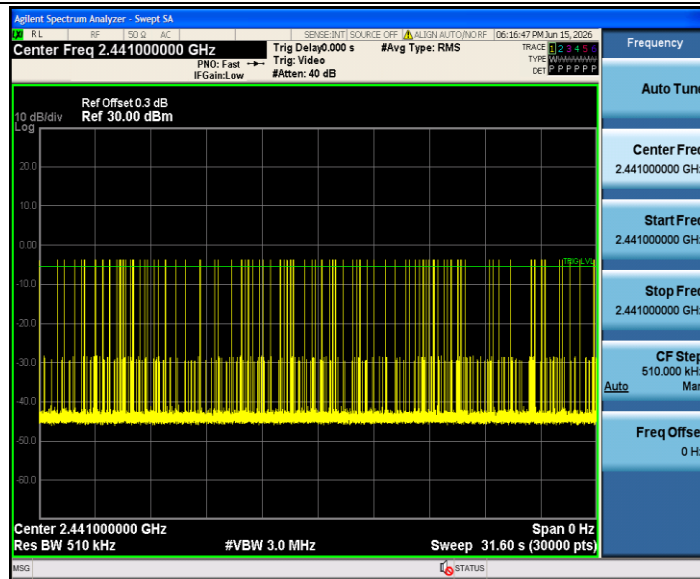
Test Graphs



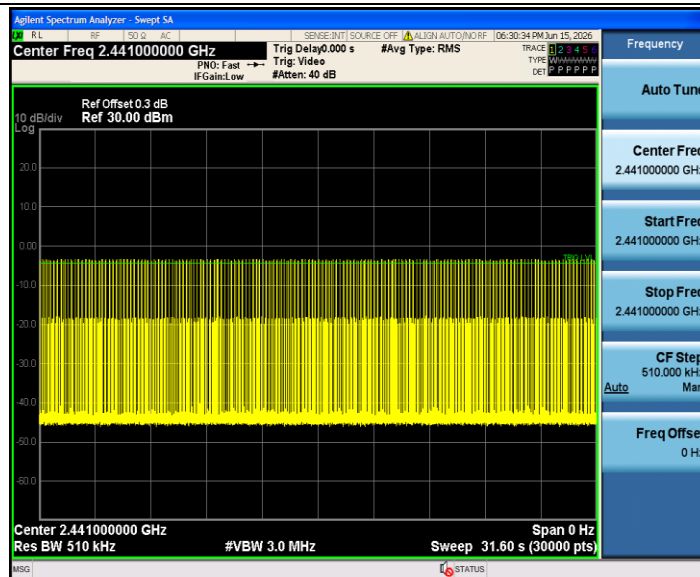
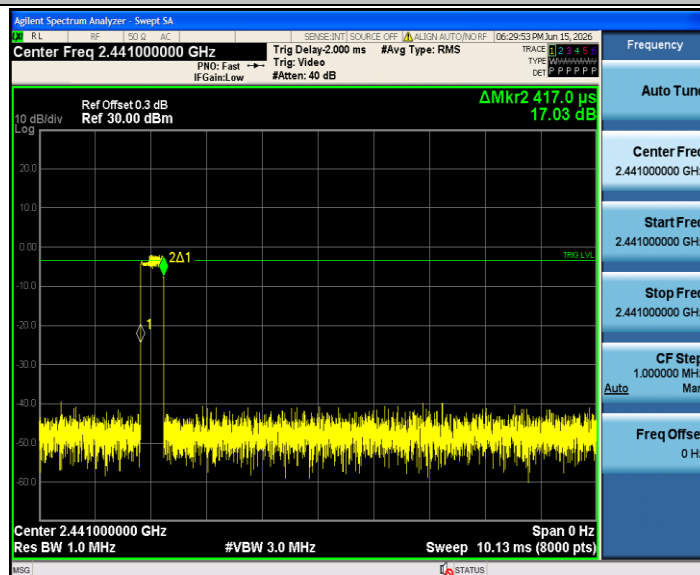


DH5_Ant1_Hop

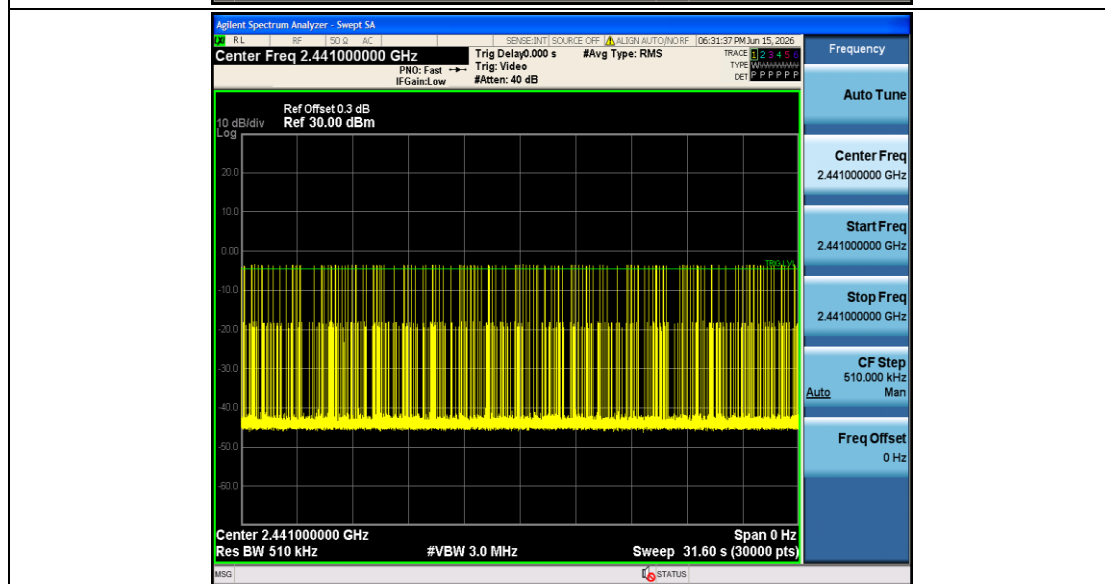
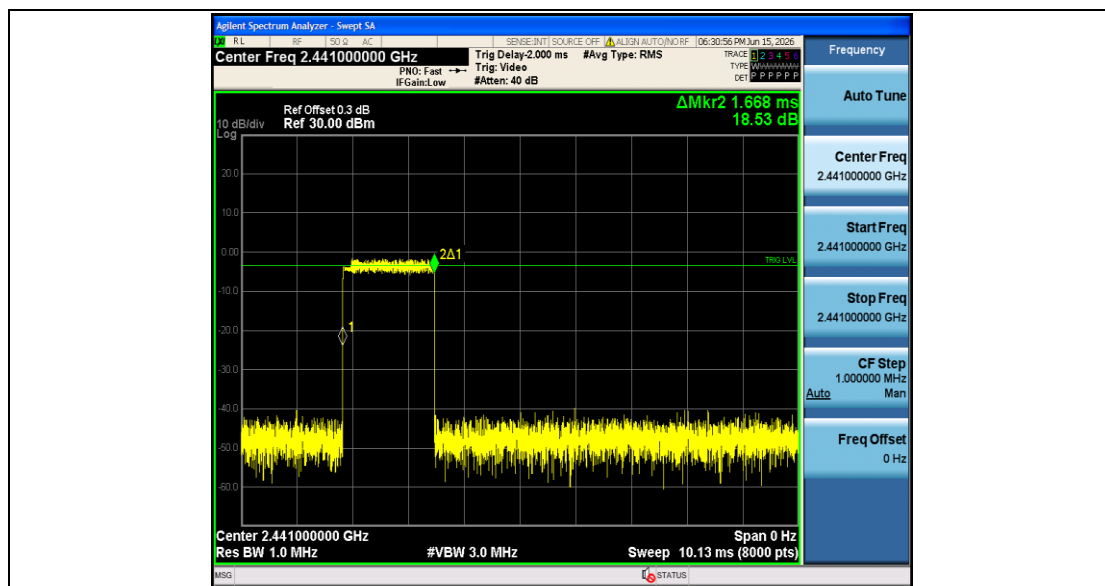




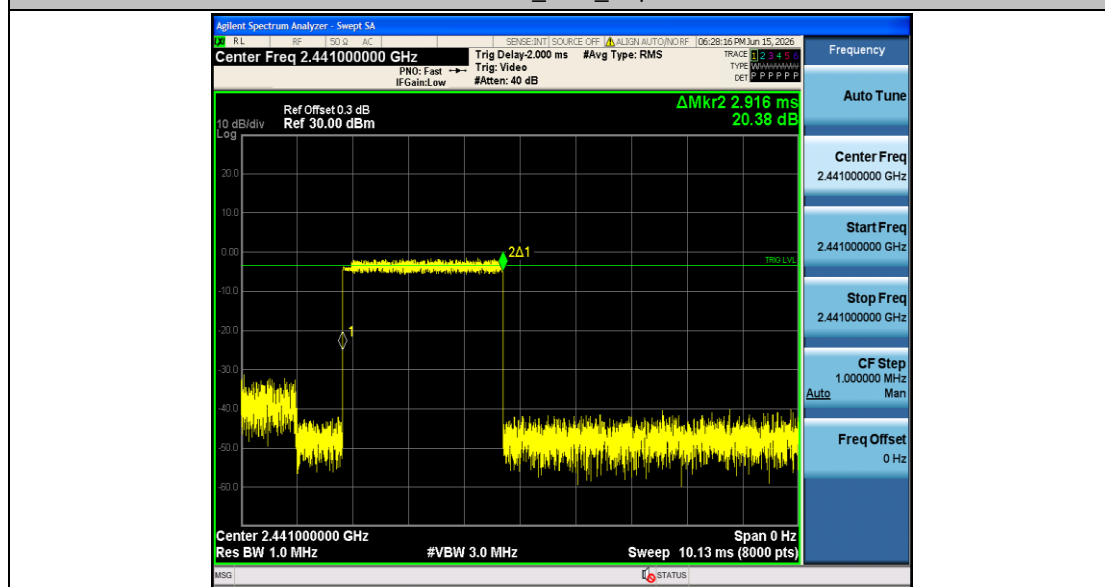
2DH1_Ant1_Hop

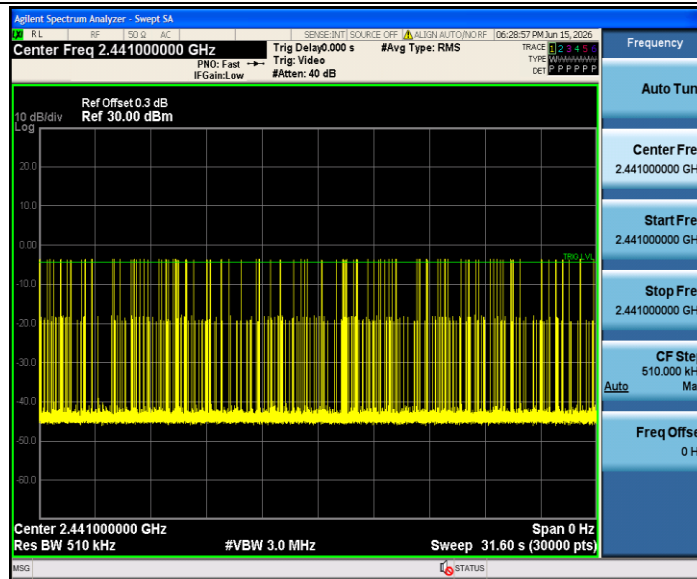


2DH3_Ant1_Hop

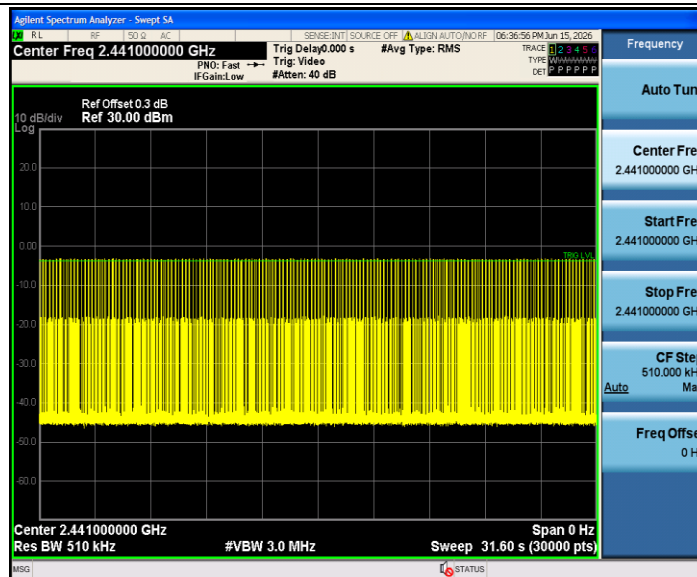
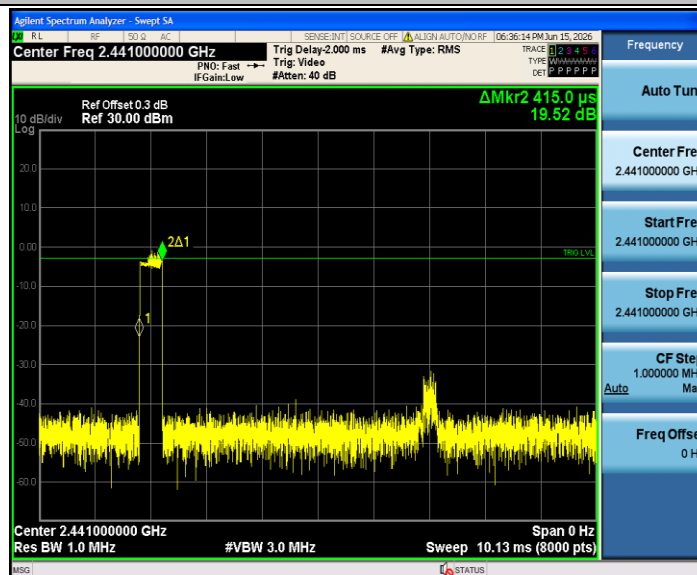


2DH5_Ant1_Hop

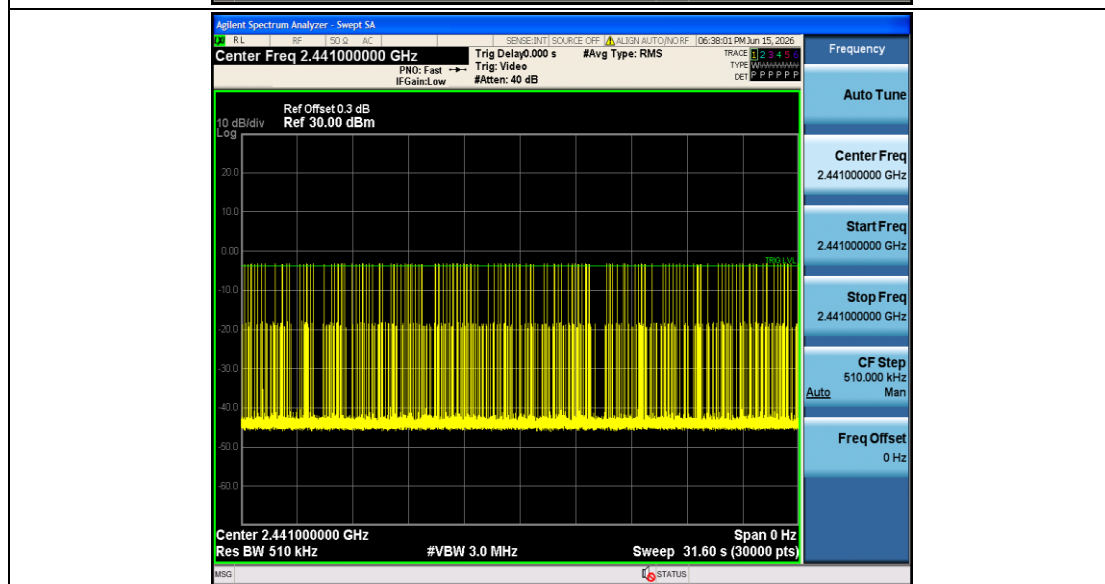
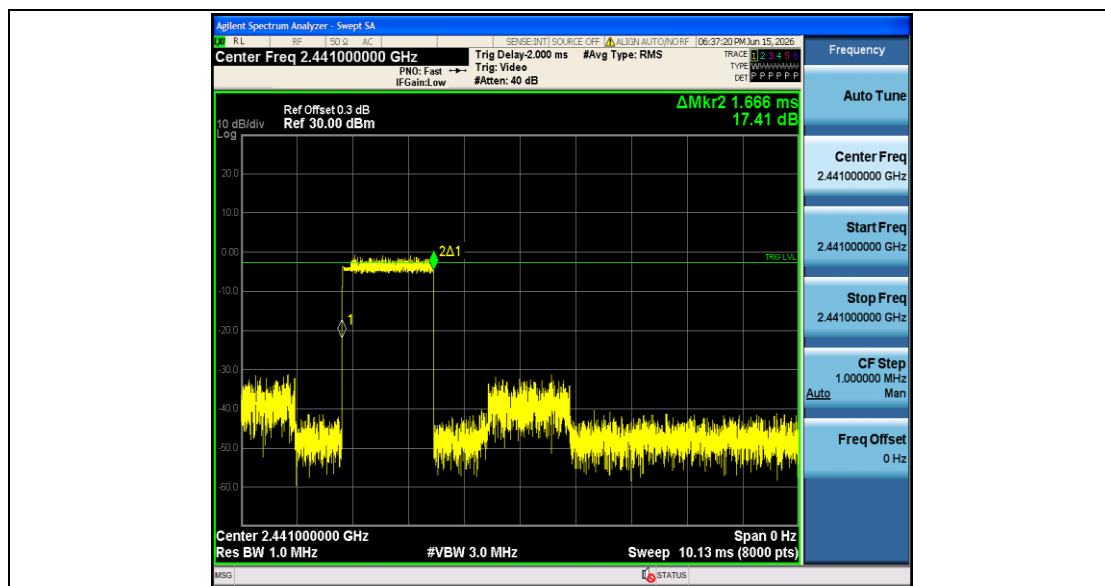




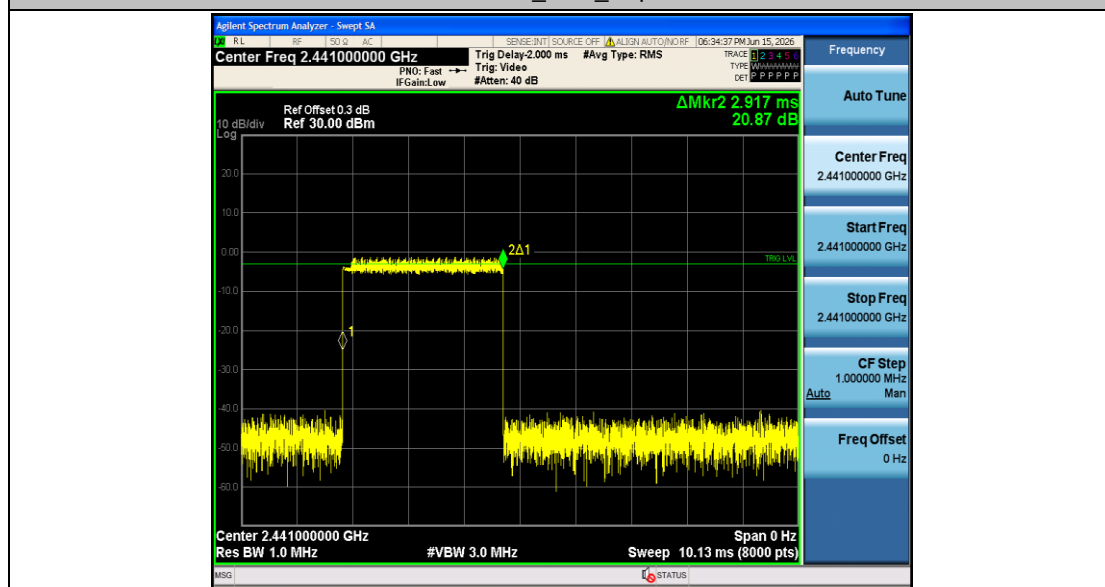
3DH1_Ant1_Hop



3DH3_Ant1_Hop



3DH5_Ant1_Hop

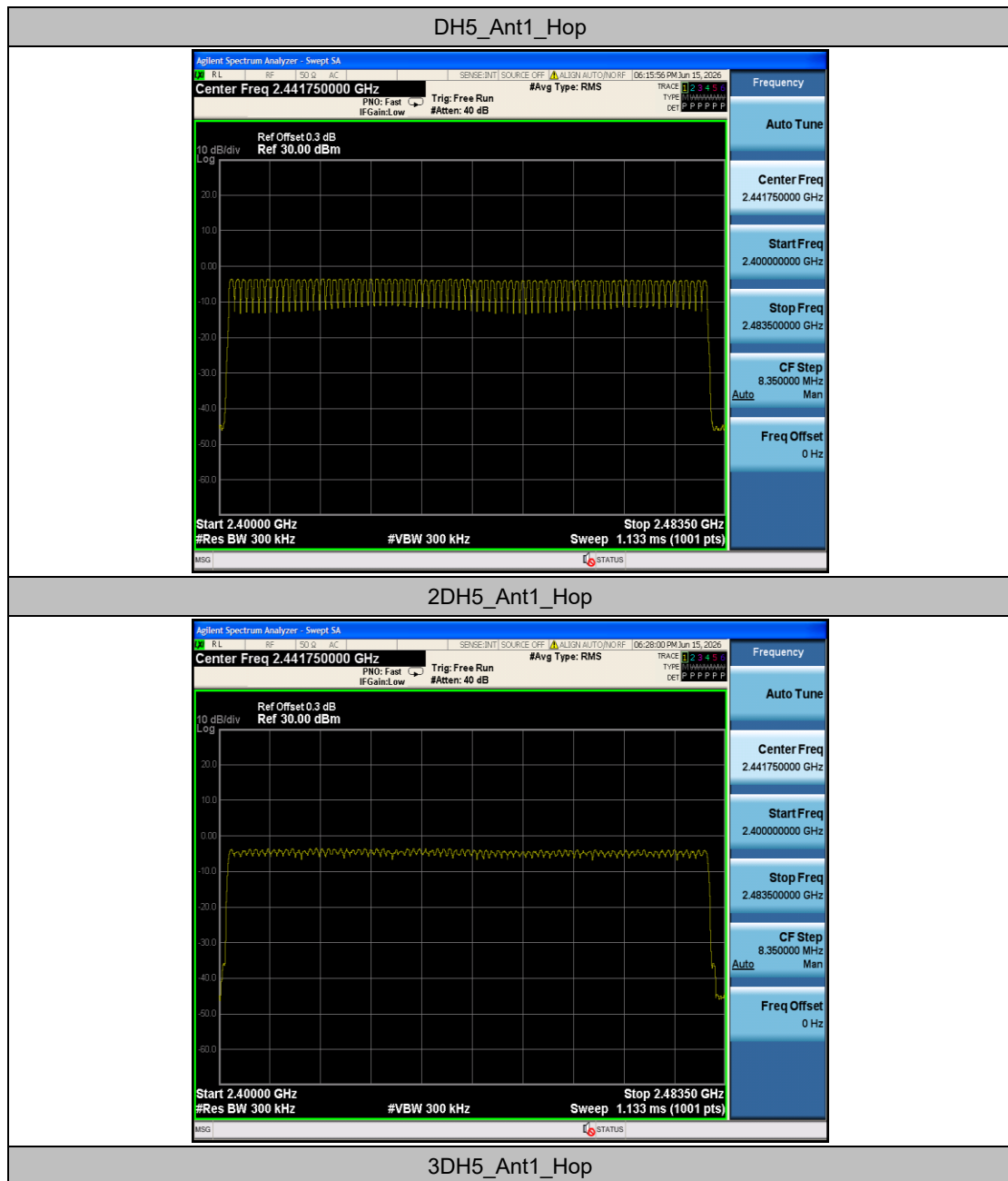


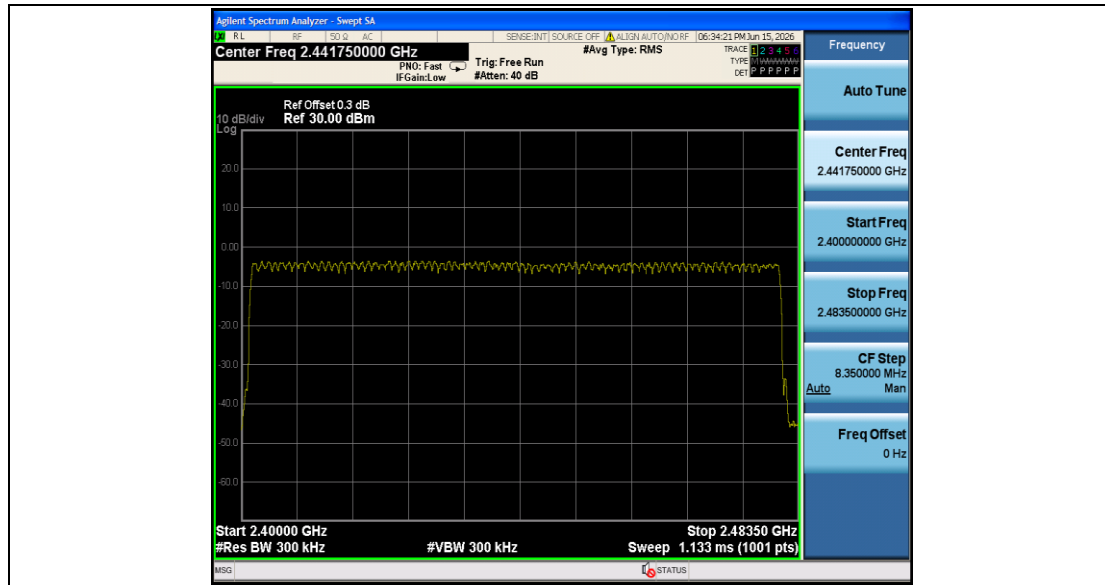
Appendix F: Number of hopping channels

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





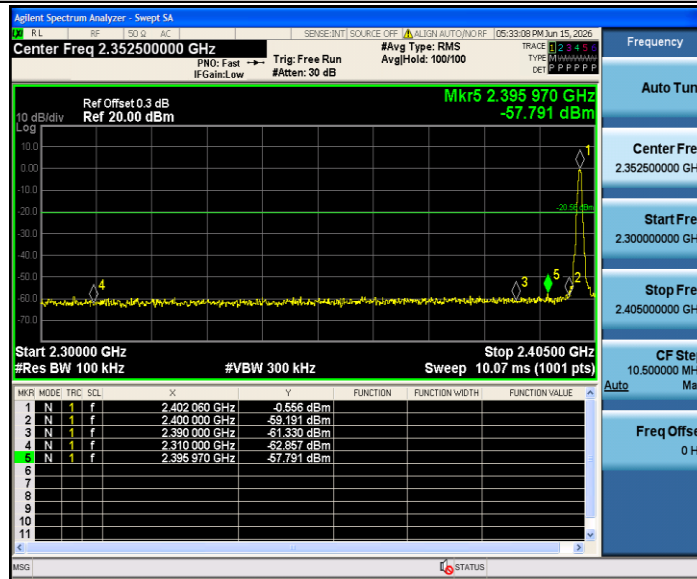
Appendix G: Band edge measurements

Test Result

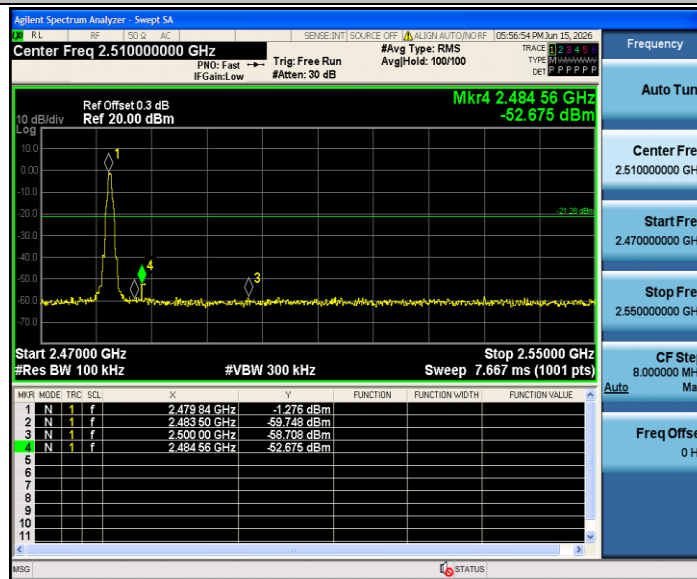
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.56	-57.79	≤-20.56	PASS
		High	2480	-1.28	-52.68	≤-21.28	PASS
		Low	Hop_2402	-4.76	-58.2	≤-24.76	PASS
		High	Hop_2480	-4.50	-57.32	≤-24.5	PASS
2DH5	Ant1	Low	2402	-3.83	-57.98	≤-23.83	PASS
		High	2480	-4.78	-57.27	≤-24.78	PASS
		Low	Hop_2402	-3.60	-56.08	≤-23.6	PASS
		High	Hop_2480	-3.98	-57.37	≤-23.98	PASS
3DH5	Ant1	Low	2402	-4.23	-58.52	≤-24.23	PASS
		High	2480	-5.21	-54.18	≤-25.21	PASS
		Low	Hop_2402	-4.99	-57.17	≤-24.99	PASS
		High	Hop_2480	-4.40	-56.41	≤-24.4	PASS

Test Graphs

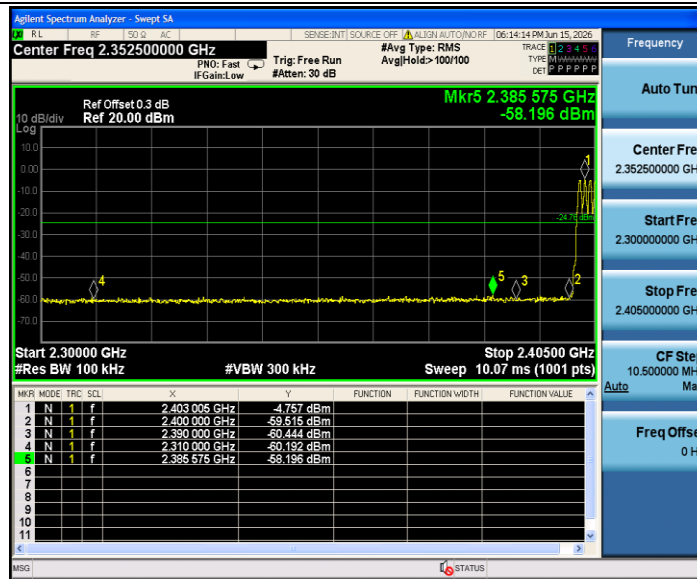
DH5_Ant1_Low_2402



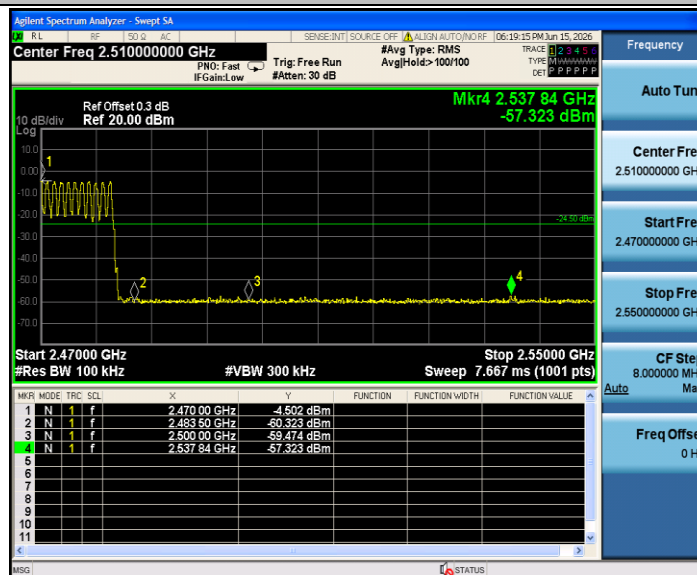
DH5_Ant1_High_2480



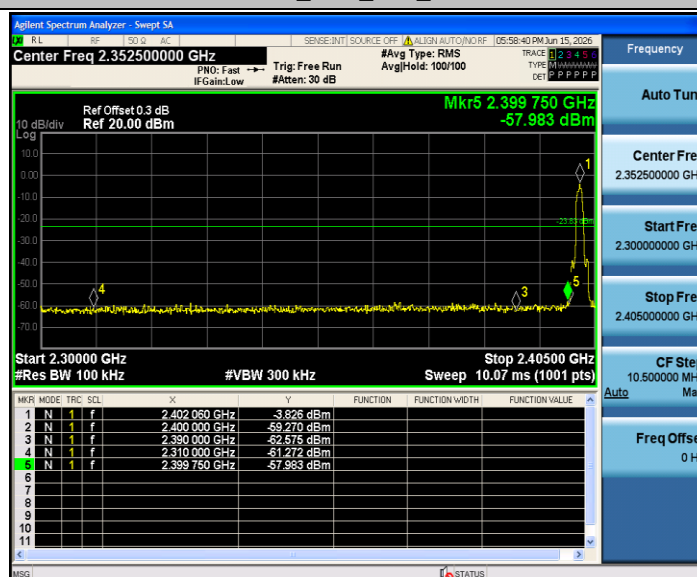
DH5_Ant1_Low_Hop_2402



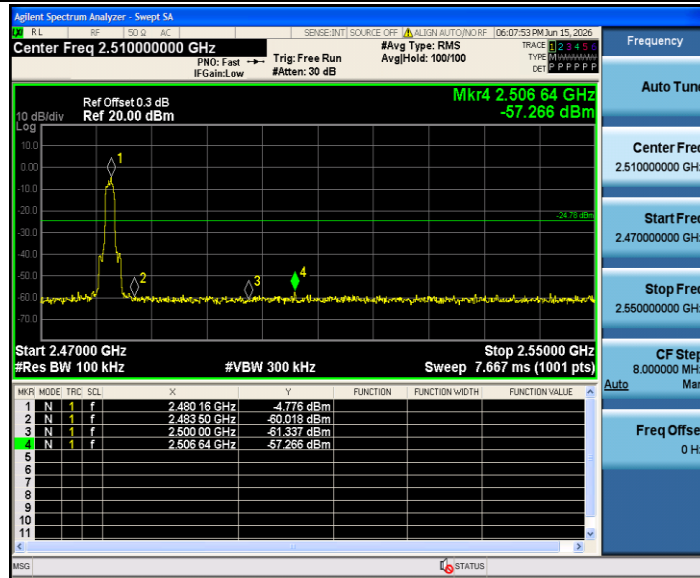
DH5_Ant1_High_Hop_2480



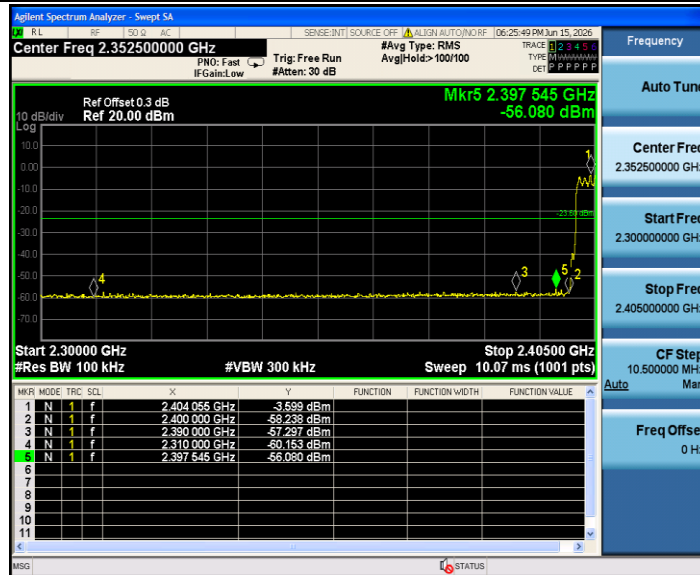
2DH5_Ant1_Low_2402



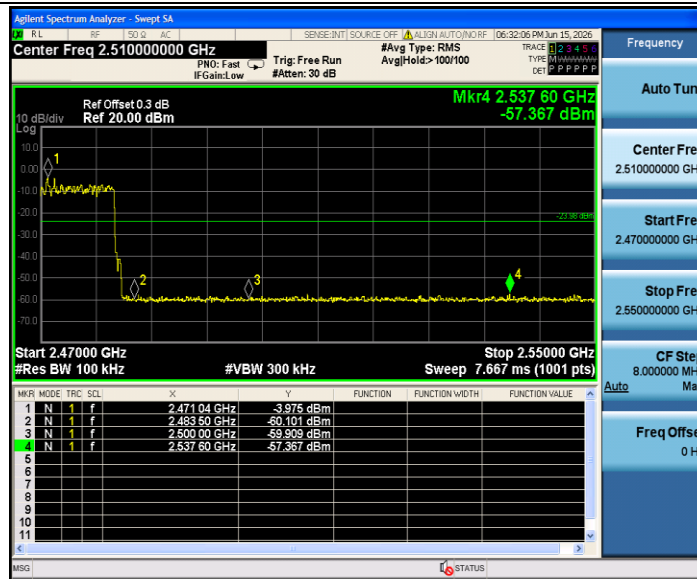
2DH5_Ant1_High_2480



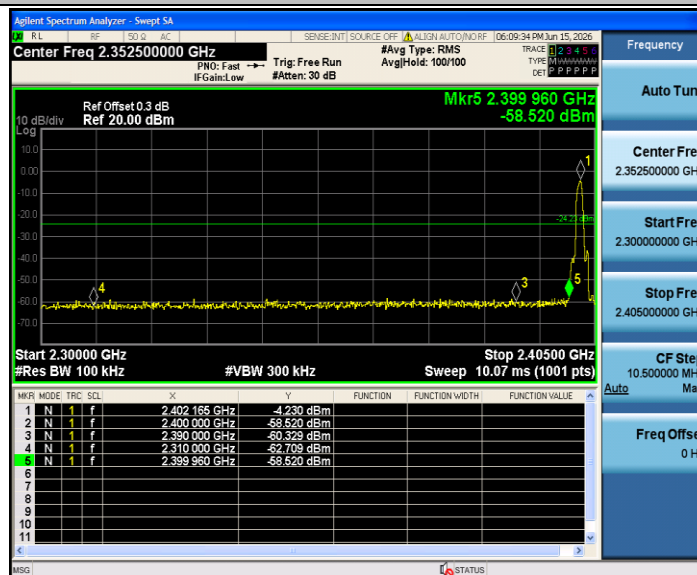
2DH5_Ant1_Low_Hop_2402



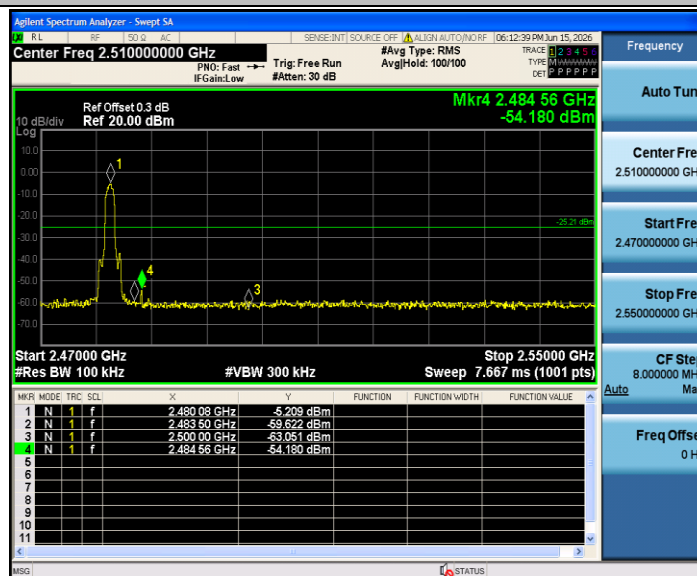
2DH5_Ant1_High_Hop_2480



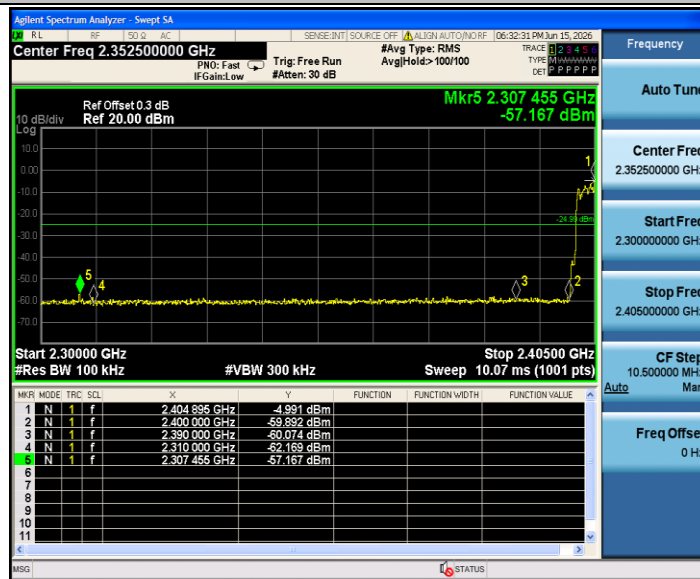
3DH5_Ant1_Low_2402



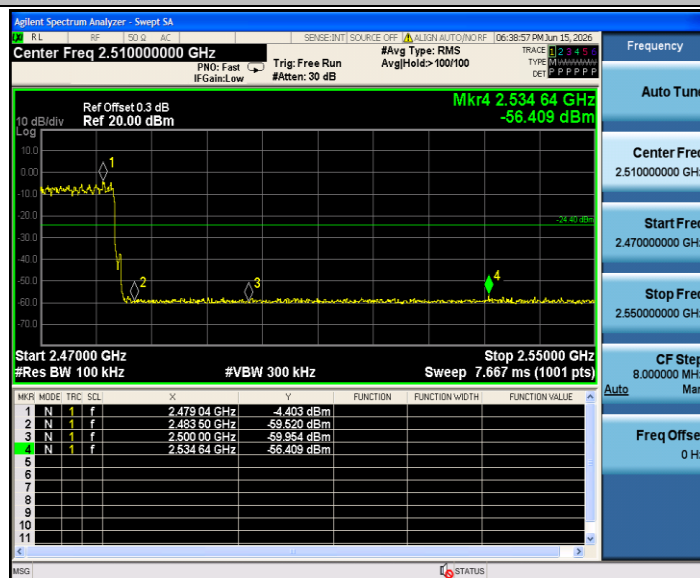
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

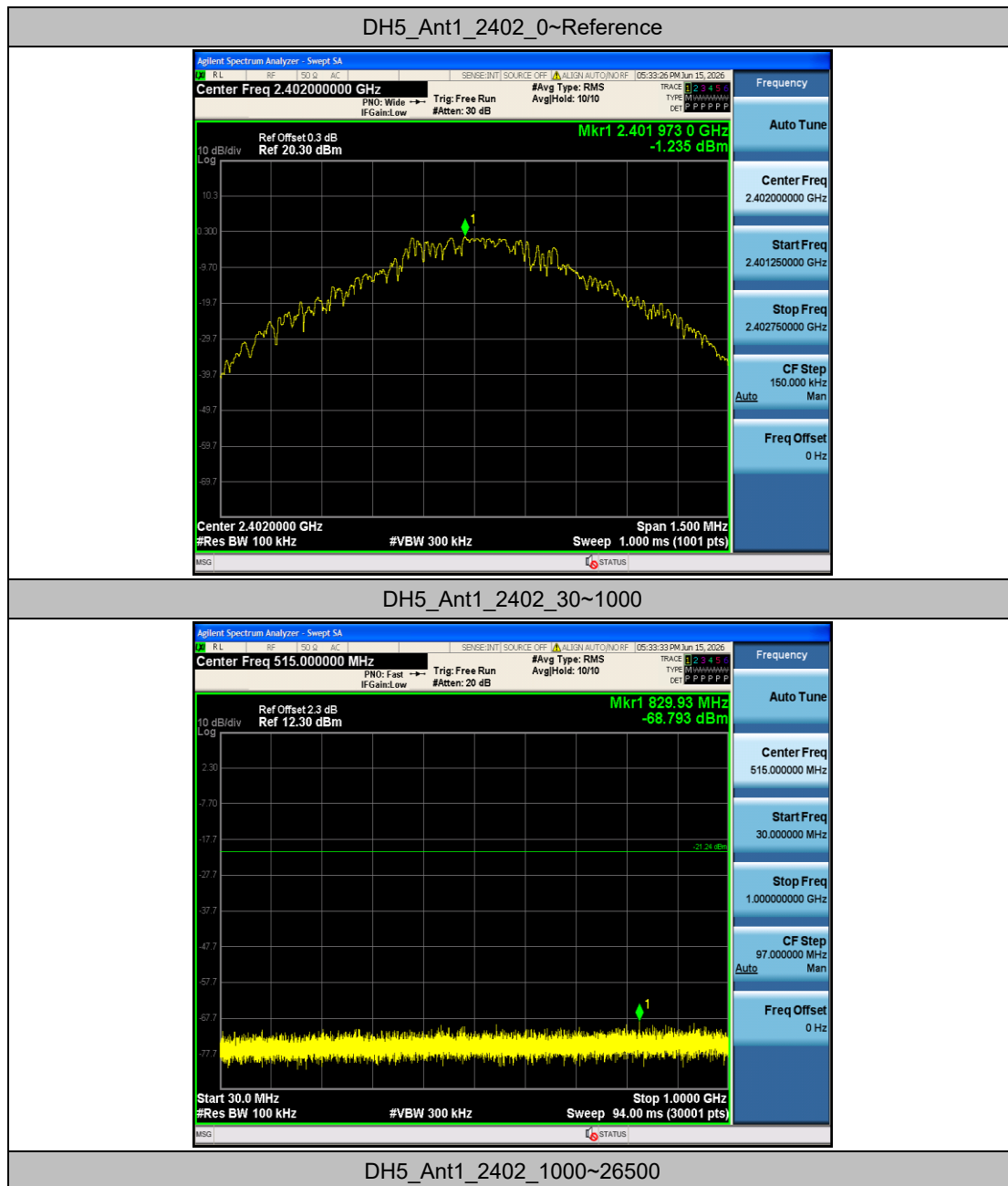


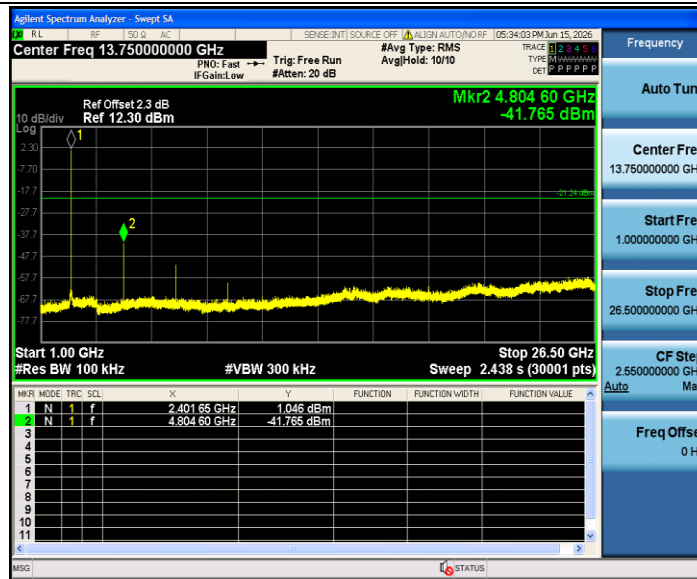
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.24	-1.24	---	PASS
			30~1000	-1.24	-68.79	≤-21.24	PASS
			1000~26500	-1.24	-41.77	≤-21.24	PASS
		2441	Reference	-1.14	-1.14	---	PASS
			30~1000	-1.14	-68.51	≤-21.14	PASS
			1000~26500	-1.14	-41.03	≤-21.14	PASS
		2480	Reference	-0.98	-0.98	---	PASS
			30~1000	-0.98	-68.25	≤-20.98	PASS
			1000~26500	-0.98	-40.84	≤-20.98	PASS
2DH5	Ant1	2402	Reference	-5.01	-5.01	---	PASS
			30~1000	-5.01	-69.31	≤-25.01	PASS
			1000~26500	-5.01	-48.58	≤-25.01	PASS
		2441	Reference	-6.30	-6.30	---	PASS
			30~1000	-6.30	-68.74	≤-26.3	PASS
			1000~26500	-6.30	-46.38	≤-26.3	PASS
		2480	Reference	-7.15	-7.15	---	PASS
			30~1000	-7.15	-69.01	≤-27.15	PASS
			1000~26500	-7.15	-49.26	≤-27.15	PASS
3DH5	Ant1	2402	Reference	-5.25	-5.25	---	PASS
			30~1000	-5.25	-68.72	≤-25.25	PASS
			1000~26500	-5.25	-48.07	≤-25.25	PASS
		2441	Reference	-3.78	-3.78	---	PASS
			30~1000	-3.78	-69.64	≤-23.78	PASS
			1000~26500	-3.78	-47.6	≤-23.78	PASS
		2480	Reference	-5.58	-5.58	---	PASS
			30~1000	-5.58	-68.41	≤-25.58	PASS
			1000~26500	-5.58	-45.67	≤-25.58	PASS

Test Graphs

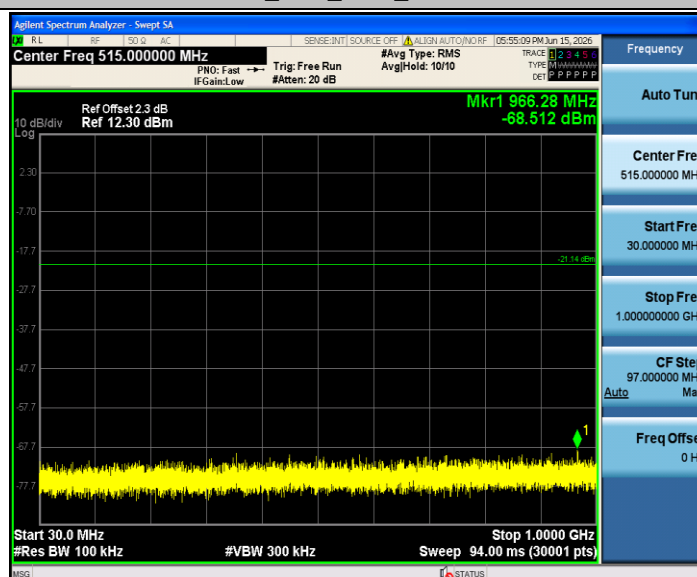




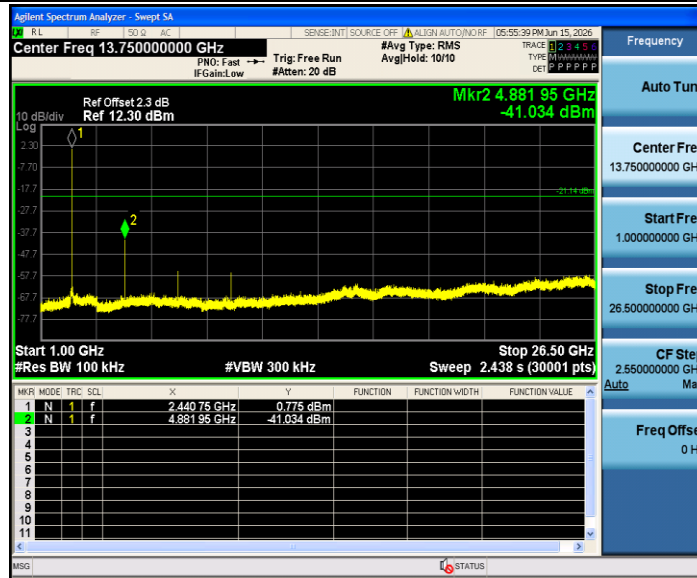
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



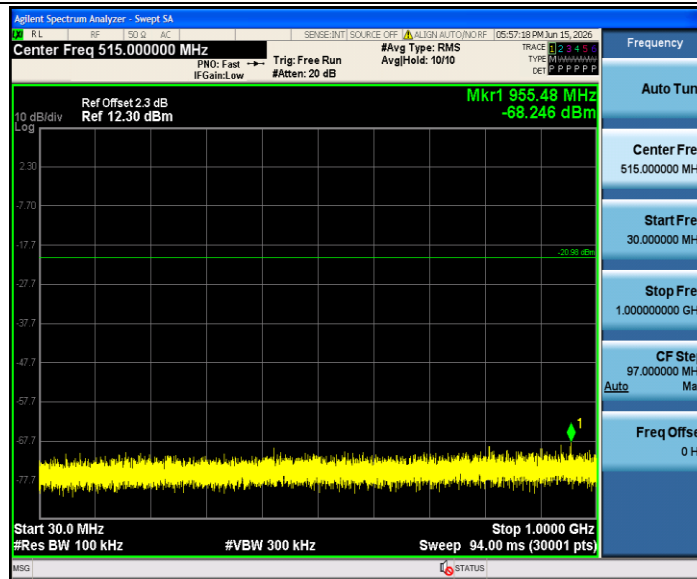
DH5_Ant1_2441_1000~26500



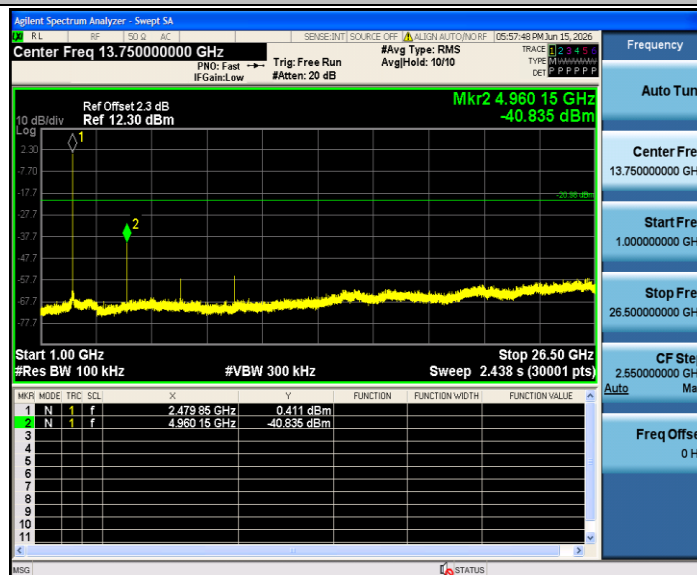
DH5_Ant1_2480_0~Reference



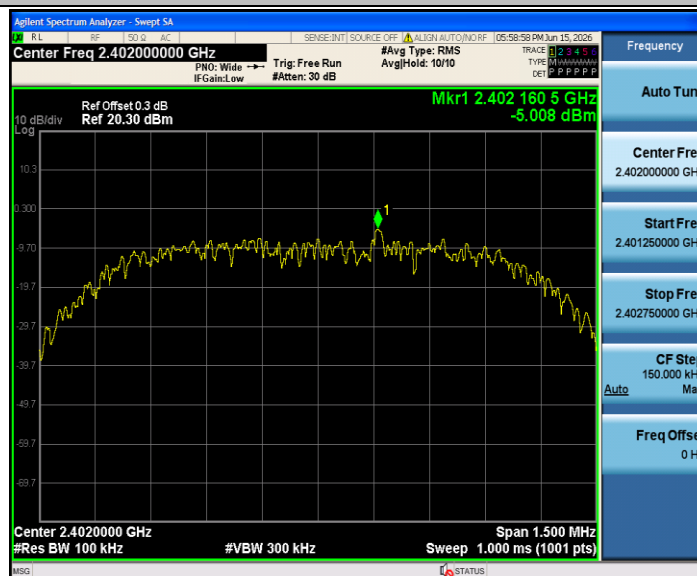
DH5_Ant1_2480_30~1000



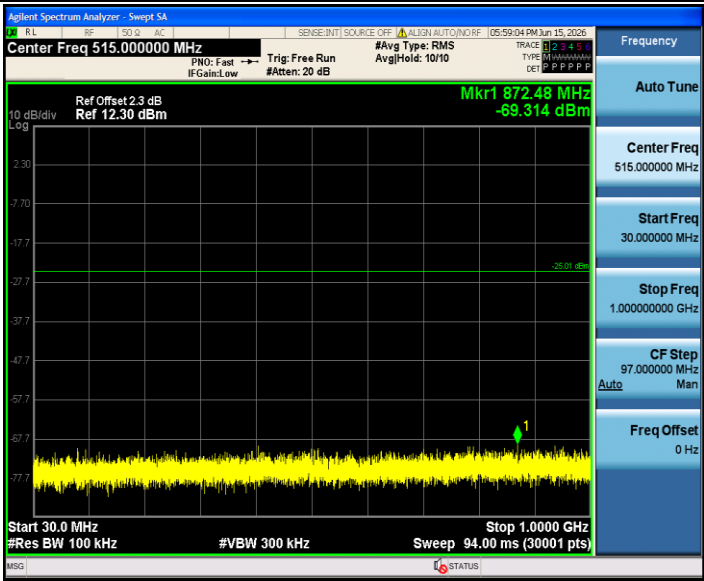
DH5_Ant1_2480_1000~26500



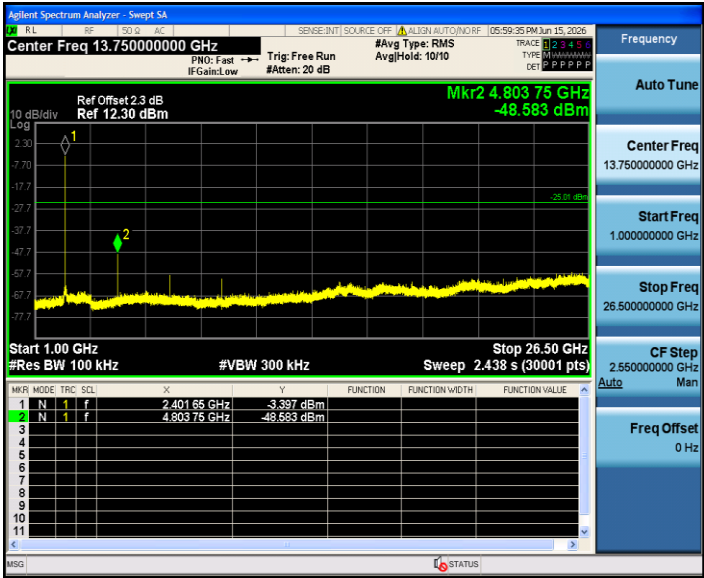
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference