

FCC Appendix RF Test Data for BT

FCC ID : 2BTRQ-MSA-7515MX

Company : MITZU GLOBAL LLC

EUT : Speaker

Model Number : MSA-7515MX

Report No. : CTA25120801901

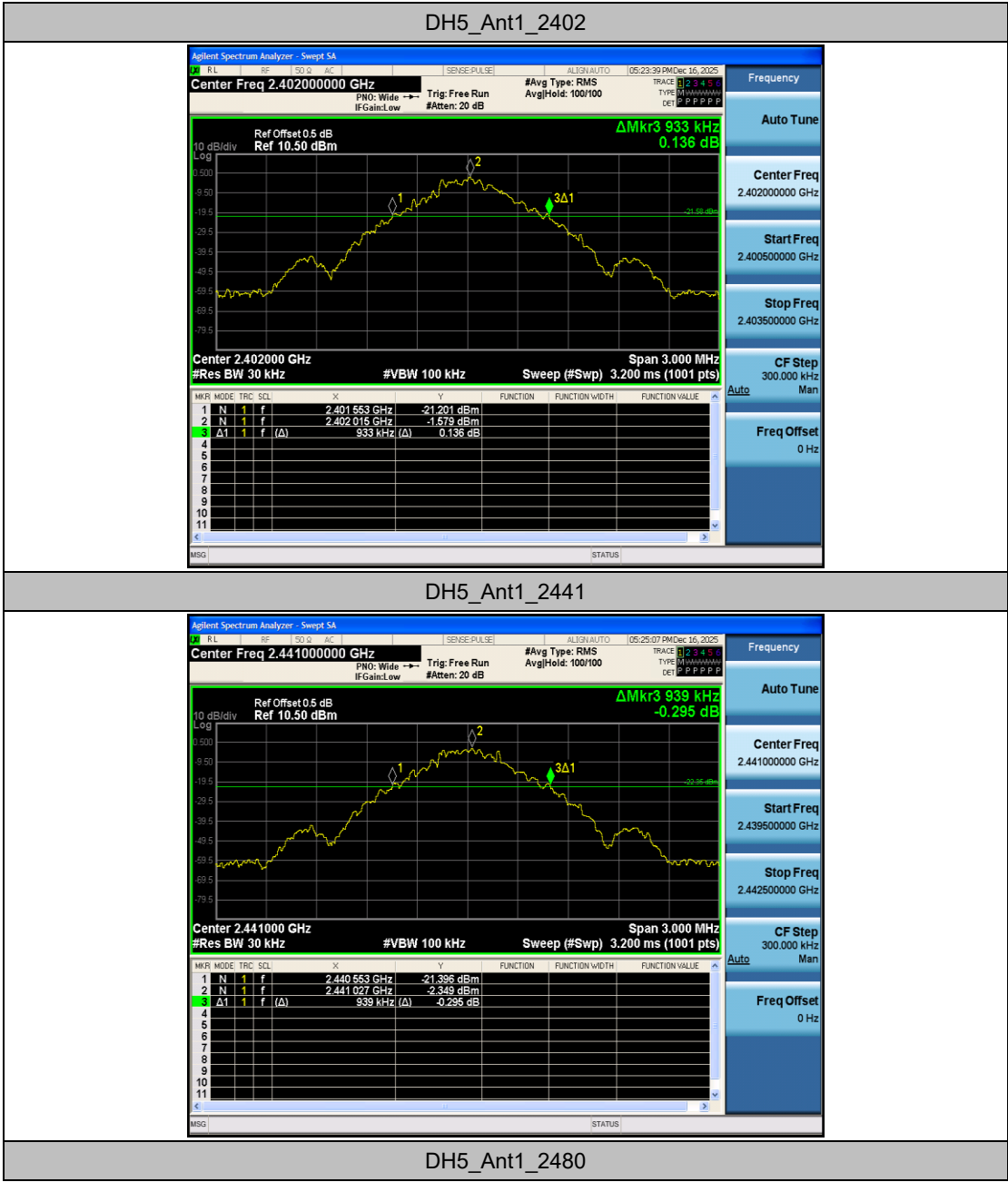
Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.933	2401.553	2402.486	---	---
		2441	0.939	2440.553	2441.492	---	---
		2480	0.948	2479.550	2480.498	---	---
2DH5	Ant1	2402	1.281	2401.382	2402.663	---	---
		2441	1.323	2440.343	2441.666	---	---
		2480	1.320	2479.349	2480.669	---	---
3DH5	Ant1	2402	1.272	2401.382	2402.654	---	---
		2441	1.266	2440.388	2441.654	---	---
		2480	1.305	2479.352	2480.657	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

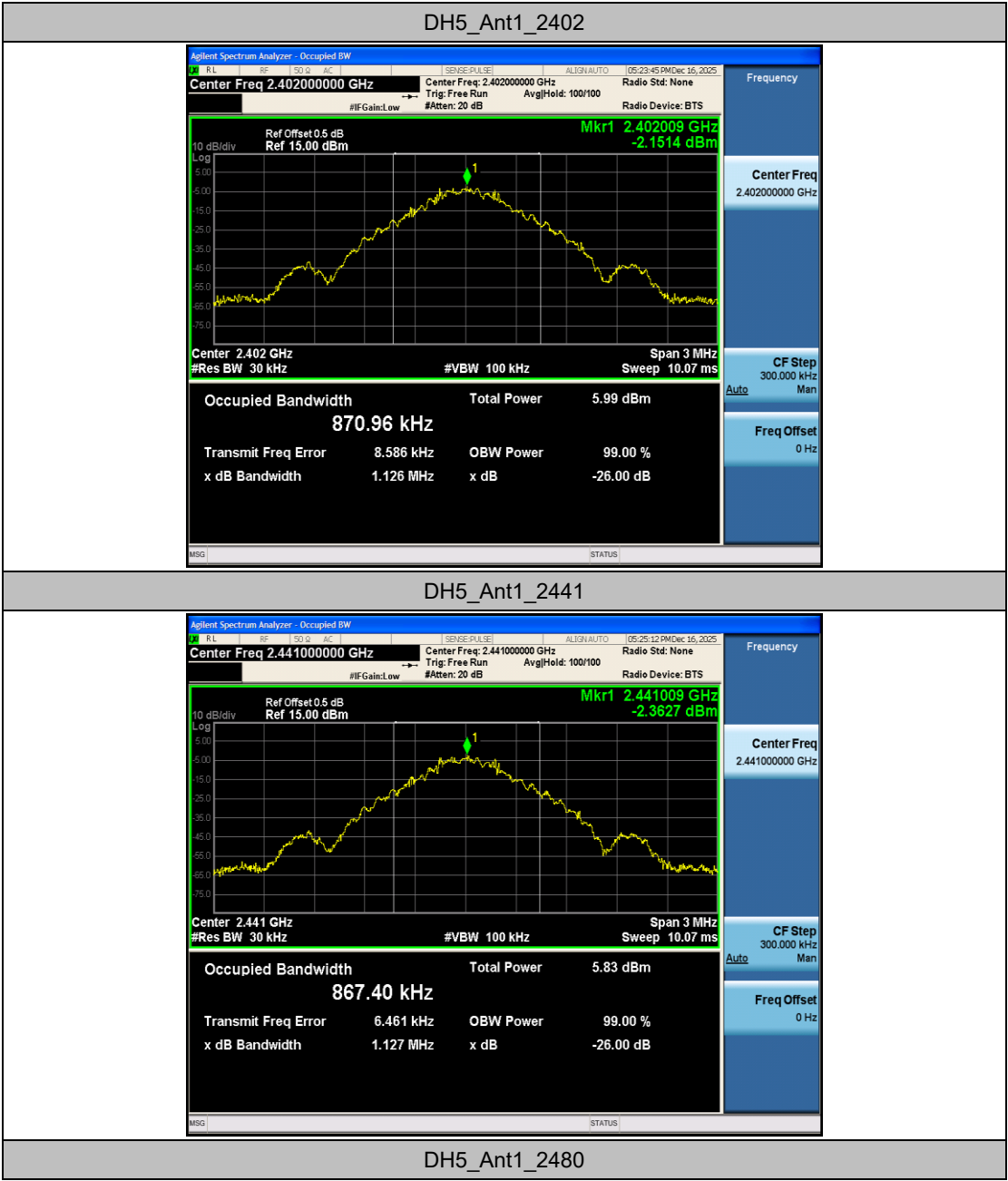


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87096	2401.5731	2402.4441	---	---
		2441	0.86740	2440.5728	2441.4402	---	---
		2480	0.86988	2479.5744	2480.4443	---	---
2DH5	Ant1	2402	1.1804	2401.4195	2402.5999	---	---
		2441	1.1835	2440.4180	2441.6015	---	---
		2480	1.1812	2479.4200	2480.6012	---	---
3DH5	Ant1	2402	1.1885	2401.4167	2402.6052	---	---
		2441	1.1858	2440.4174	2441.6032	---	---
		2480	1.1877	2479.4175	2480.6052	---	---

Test Graphs

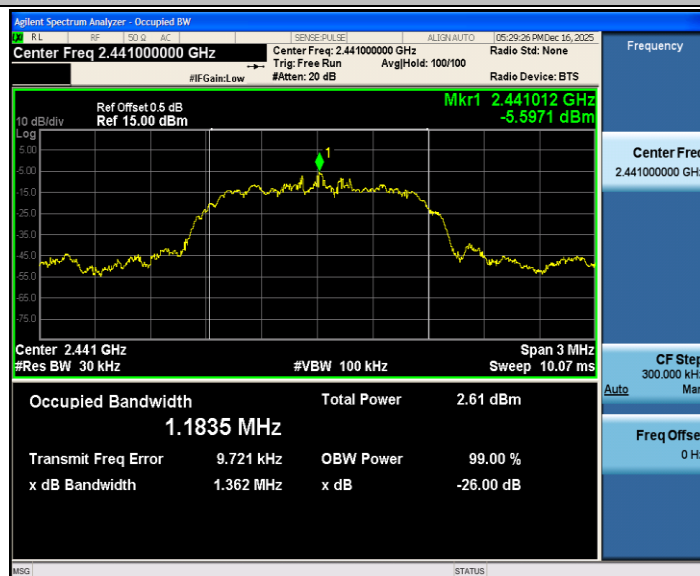




2DH5_Ant1_2402



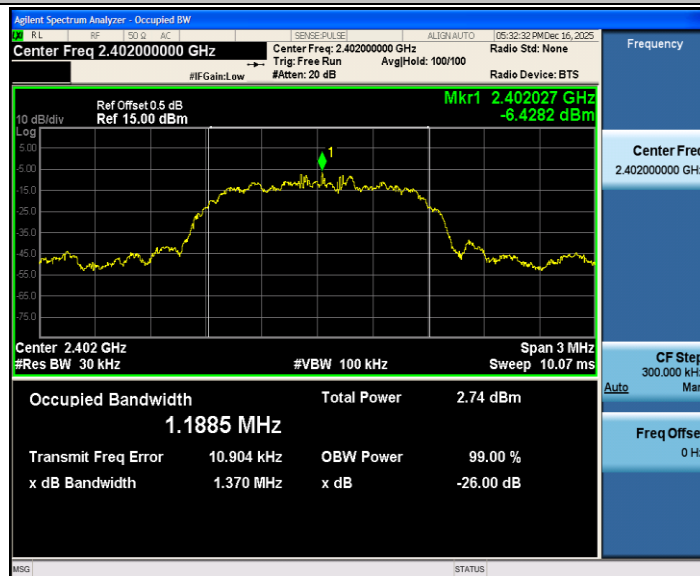
2DH5_Ant1_2441



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	0.10	≤20.97	PASS
		2441	-0.18	≤20.97	PASS
		2480	-0.28	≤20.97	PASS
2DH5	Ant1	2402	-0.78	≤20.97	PASS
		2441	-0.95	≤20.97	PASS
		2480	-1.10	≤20.97	PASS
3DH5	Ant1	2402	-0.74	≤20.97	PASS
		2441	-0.97	≤20.97	PASS
		2480	-1.09	≤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	1.216	≥ 0.882	PASS
3DH5	Ant1	Hop	1.004	≥ 0.870	PASS

Test Graphs



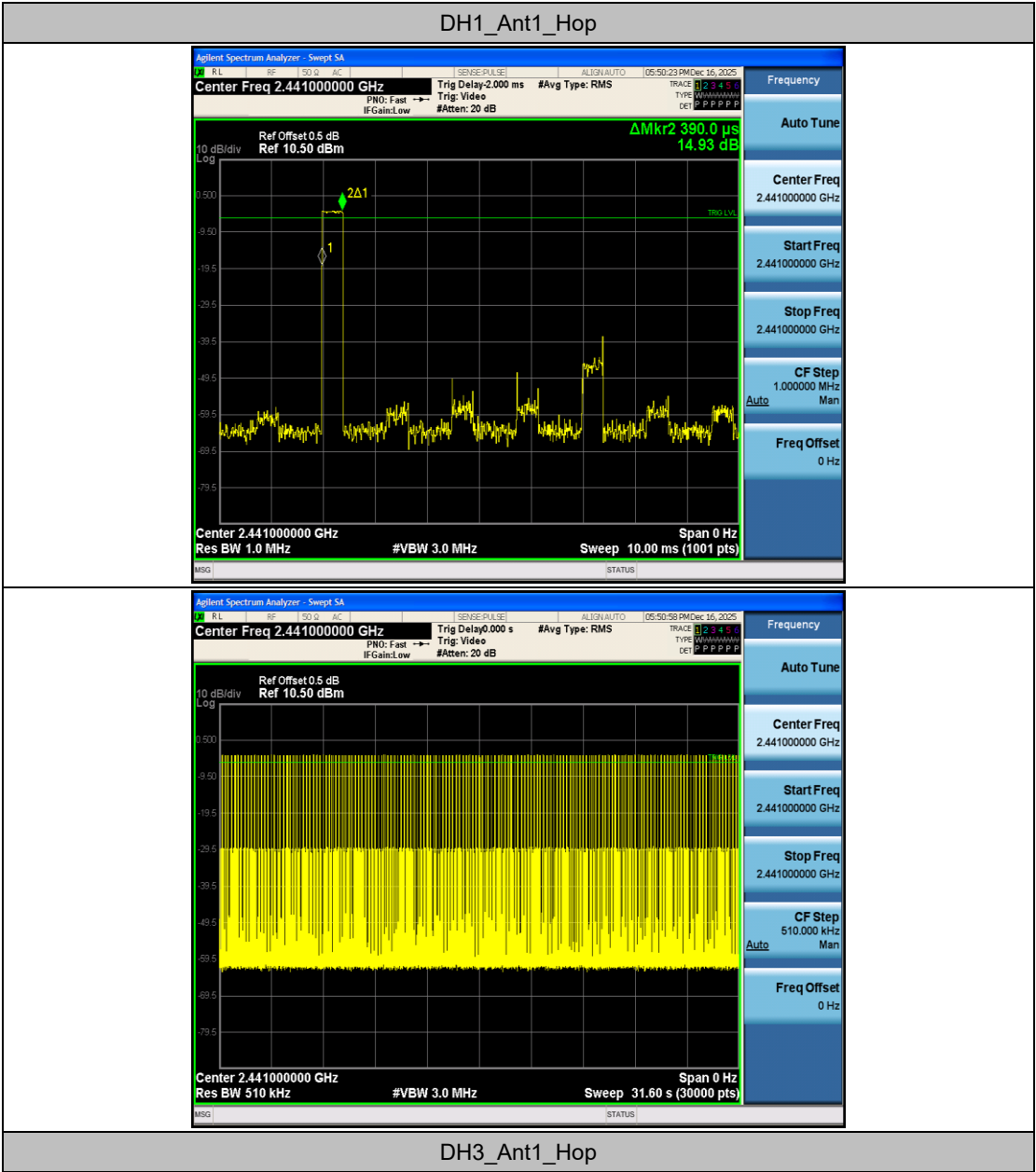


Appendix E: Time of occupancy

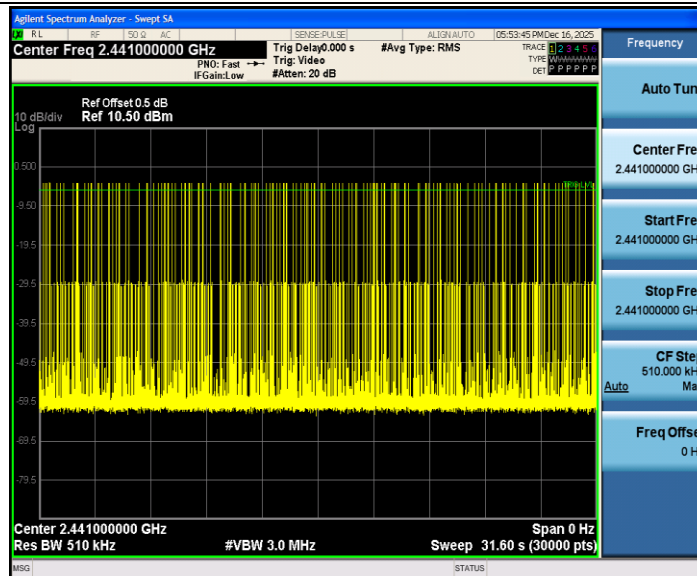
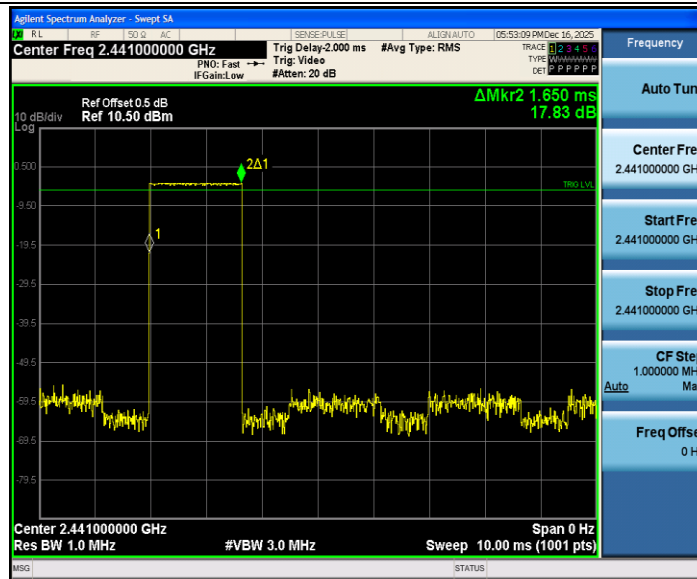
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	317	0.124	≤0.4	PASS
DH3	Ant1	Hop	1.650	159	0.262	≤0.4	PASS
DH5	Ant1	Hop	2.890	102	0.295	≤0.4	PASS
2DH1	Ant1	Hop	0.390	318	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.640	159	0.261	≤0.4	PASS
2DH5	Ant1	Hop	2.900	108	0.313	≤0.4	PASS
3DH1	Ant1	Hop	0.390	319	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.640	166	0.272	≤0.4	PASS
3DH5	Ant1	Hop	2.900	109	0.316	≤0.4	PASS

Test Graphs

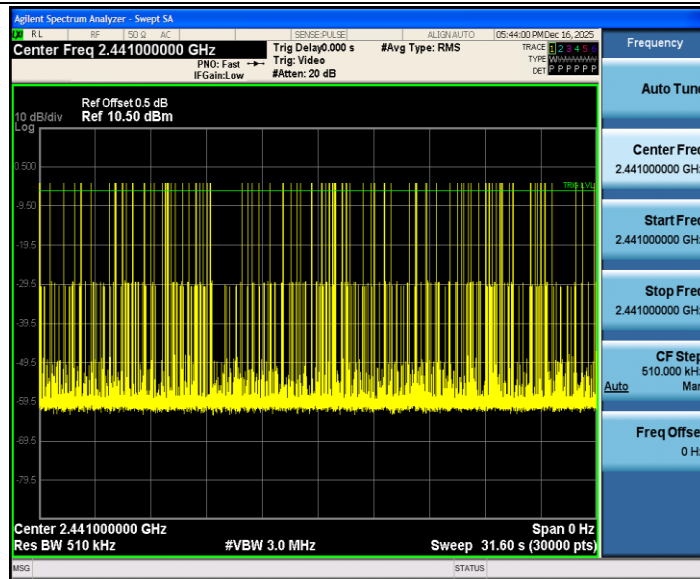


DH3_Ant1_Hop

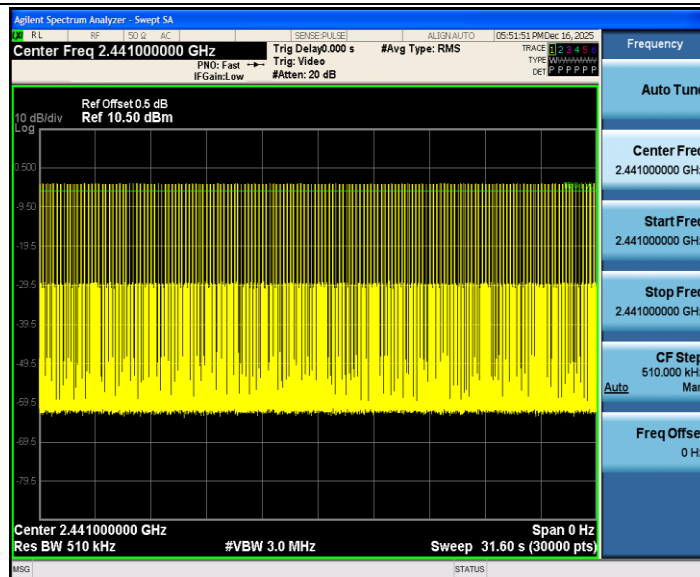
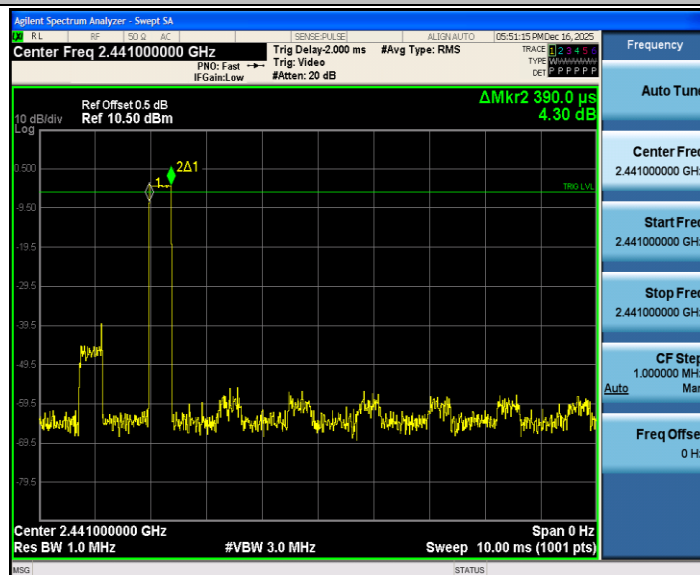


DH5_Ant1_Hop

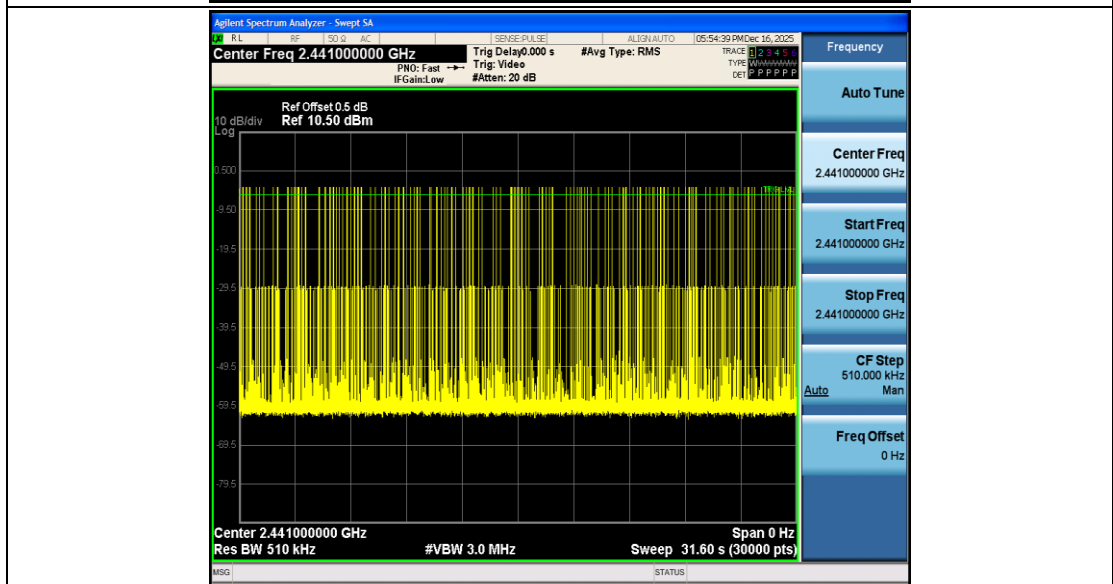
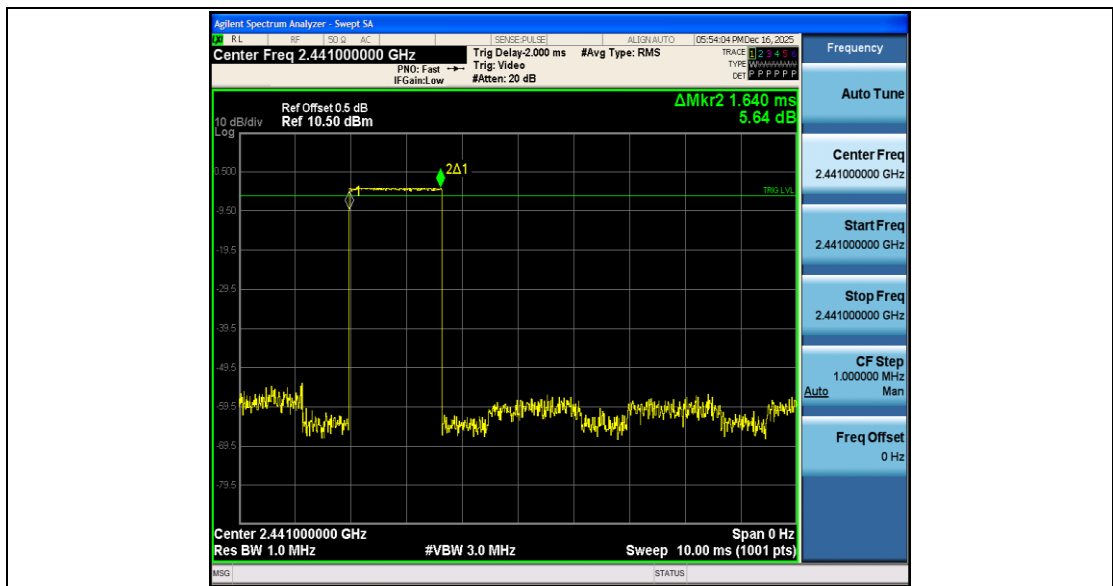




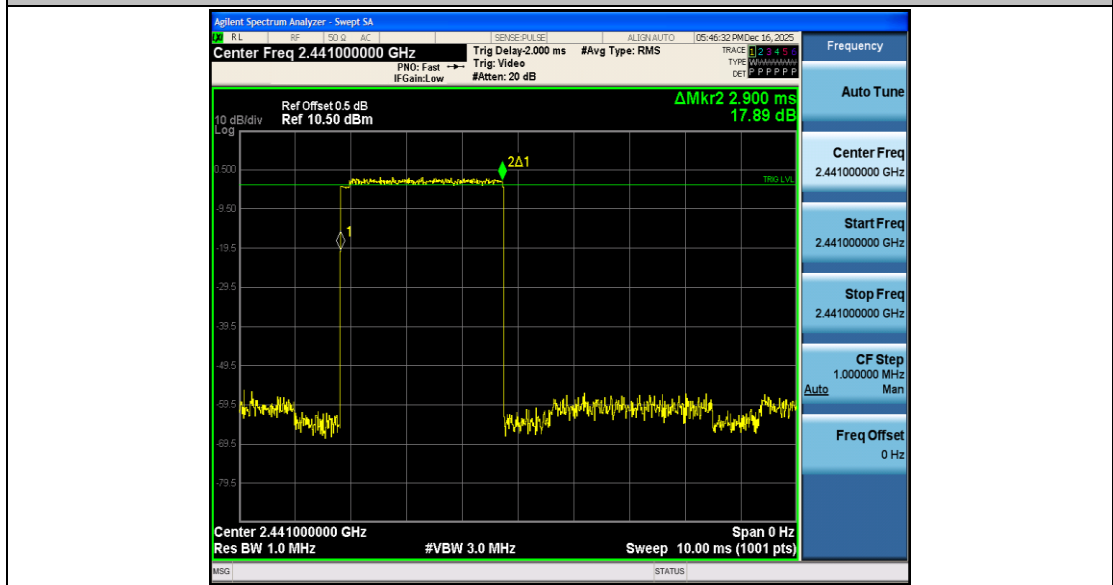
2DH1_Ant1_Hop

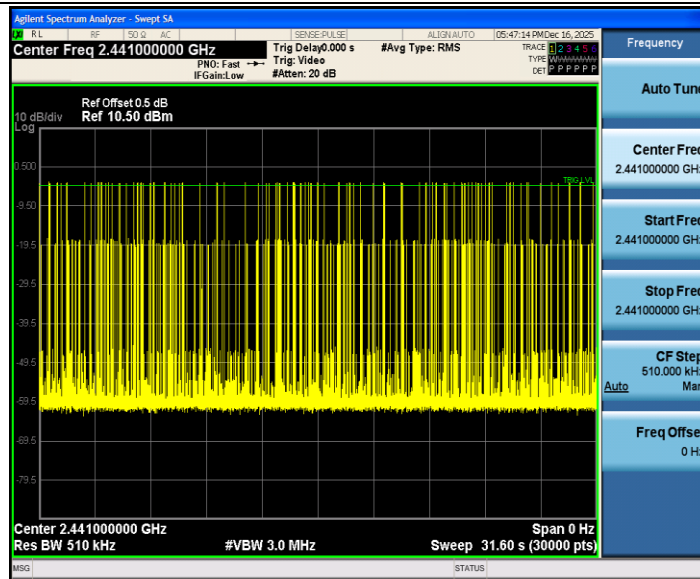


2DH3_Ant1_Hop

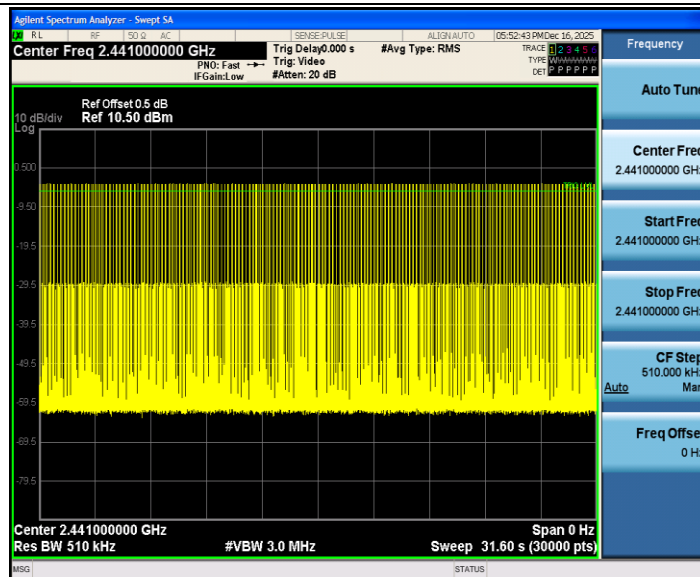
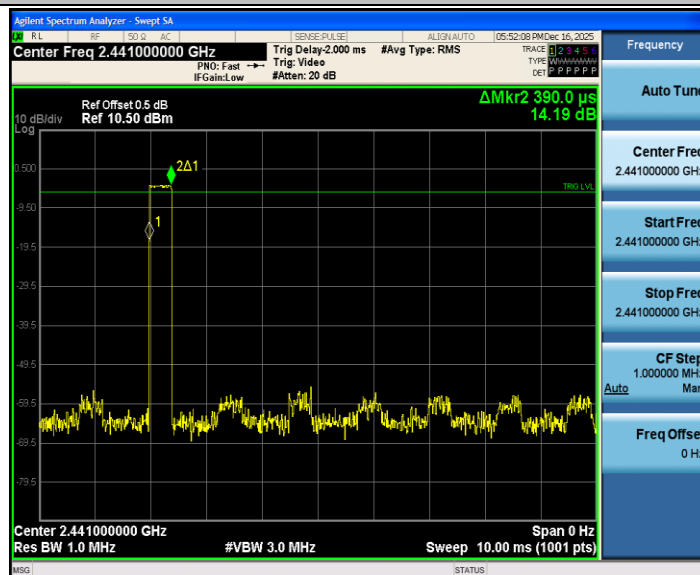


2DH5_Ant1_Hop

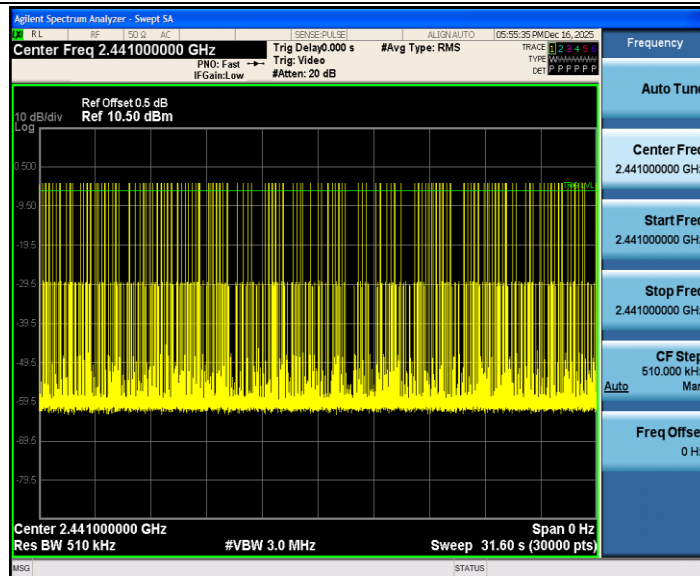
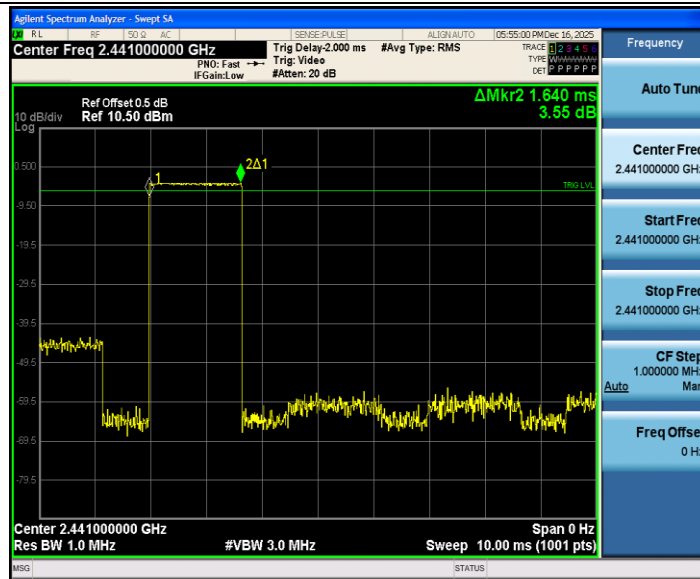




3DH1_Ant1_Hop

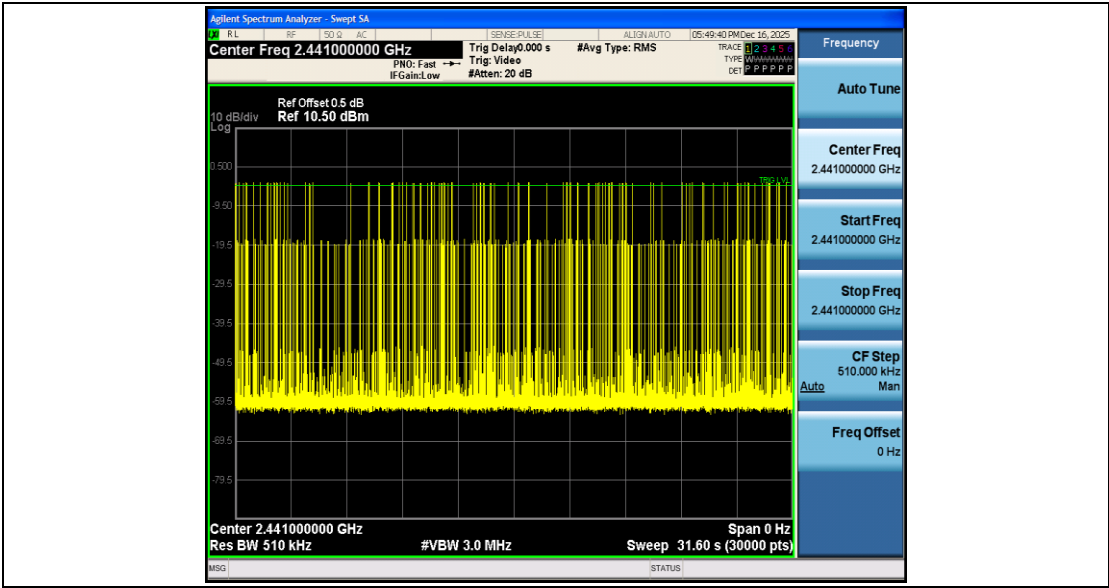


3DH3_Ant1_Hop



3DH5_Ant1_Hop





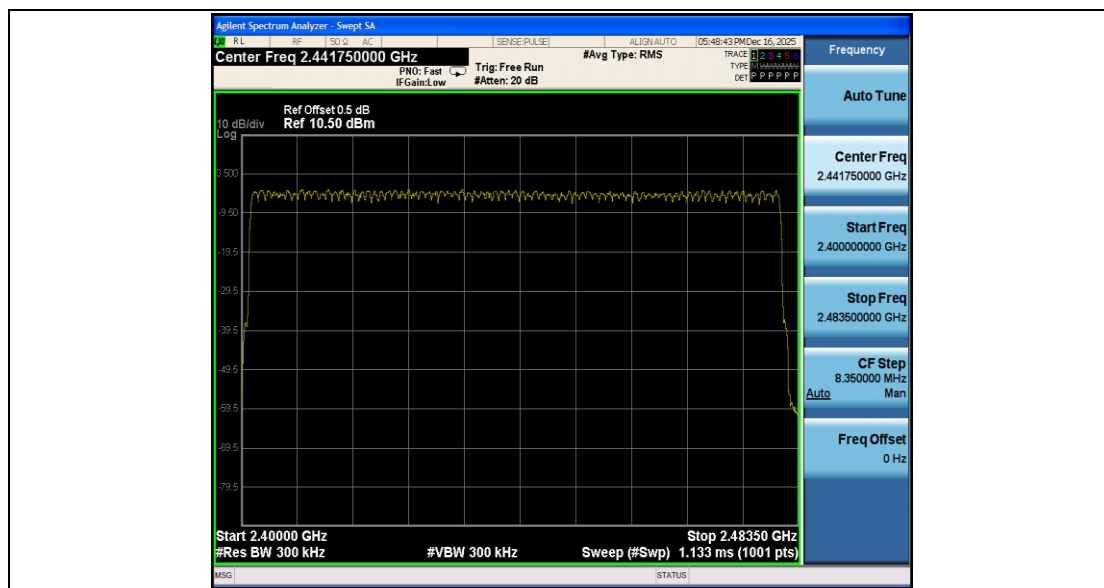
Appendix F: Number of hopping channels

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



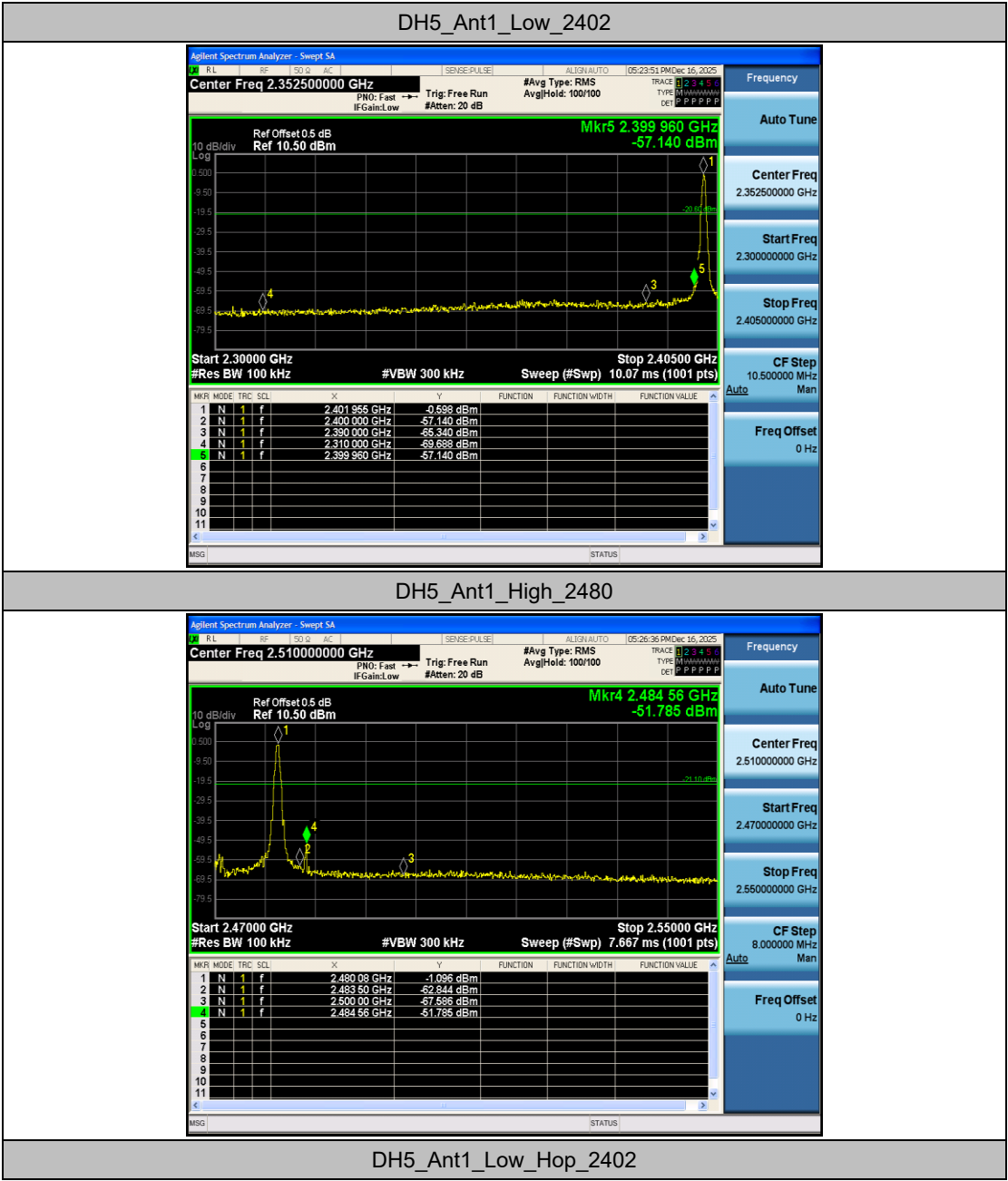


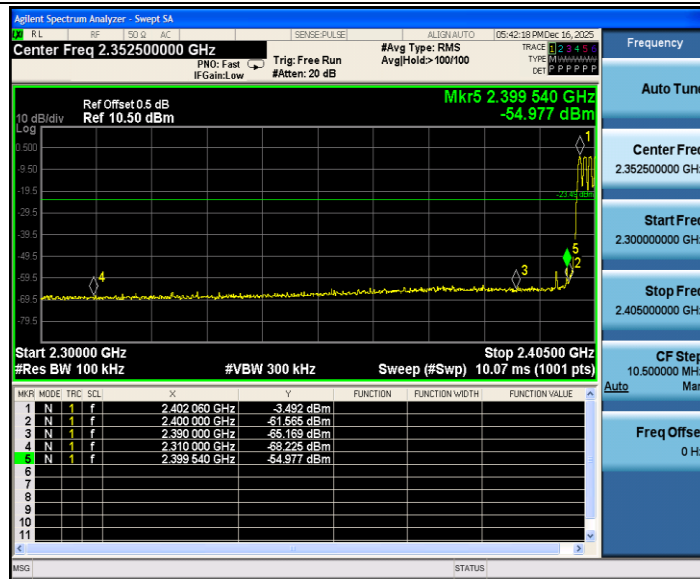
Appendix G: Band edge measurements

Test Result

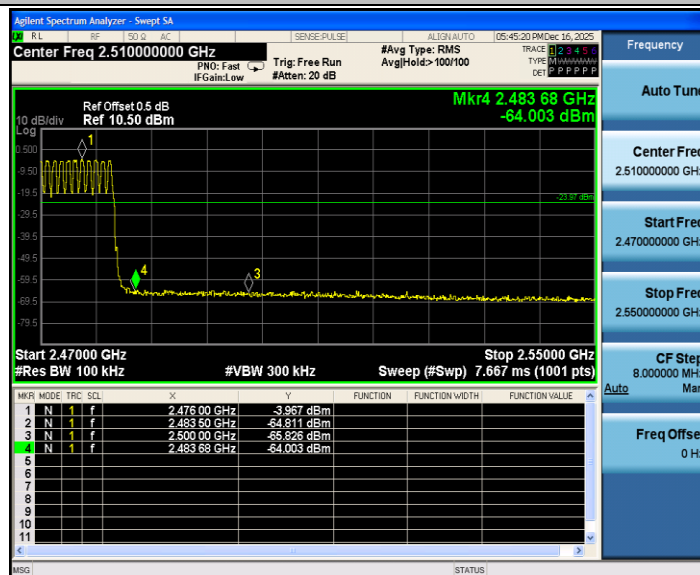
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.60	-57.14	≤-20.6	PASS
		High	2480	-1.10	-51.79	≤-21.1	PASS
		Low	Hop_2402	-3.49	-54.98	≤-23.49	PASS
		High	Hop_2480	-3.97	-64	≤-23.97	PASS
2DH5	Ant1	Low	2402	-6.03	-56.13	≤-26.03	PASS
		High	2480	-5.40	-56.43	≤-25.4	PASS
		Low	Hop_2402	-4.59	-62.56	≤-24.59	PASS
		High	Hop_2480	-5.28	-64.07	≤-25.28	PASS
3DH5	Ant1	Low	2402	-4.60	-60.52	≤-24.6	PASS
		High	2480	-5.41	-58.48	≤-25.41	PASS
		Low	Hop_2402	-5.05	-62.38	≤-25.05	PASS
		High	Hop_2480	-5.85	-57.66	≤-25.85	PASS

Test Graphs

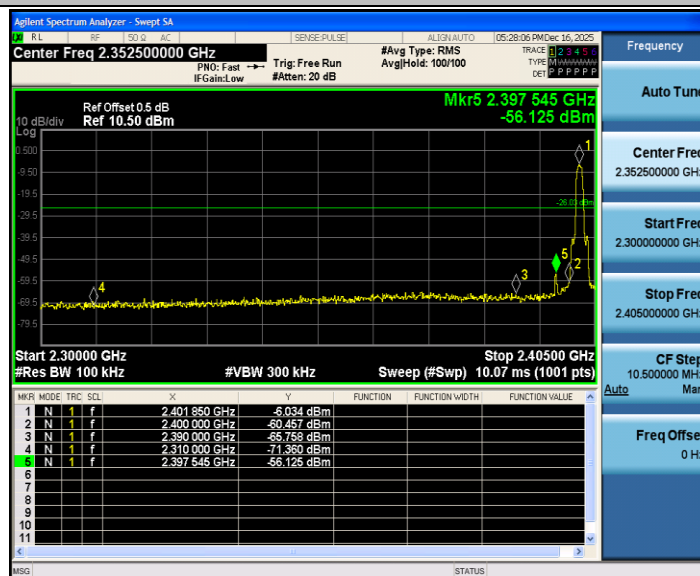




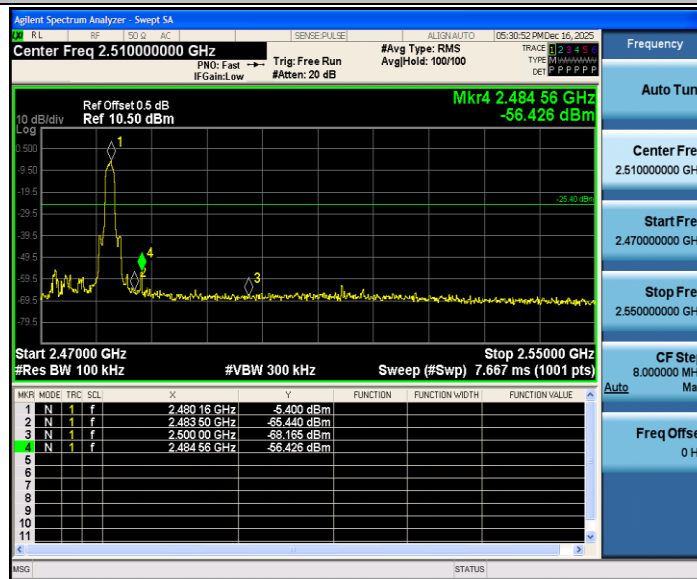
DH5_Ant1_High_Hop_2480



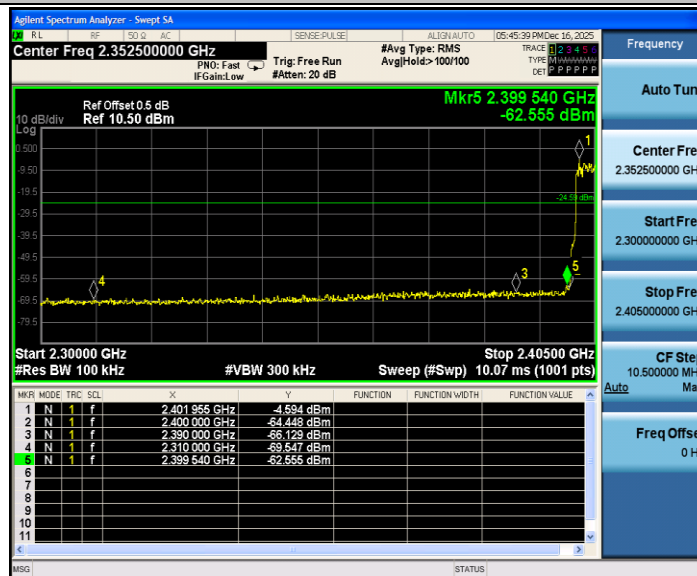
2DH5_Ant1_Low_2402



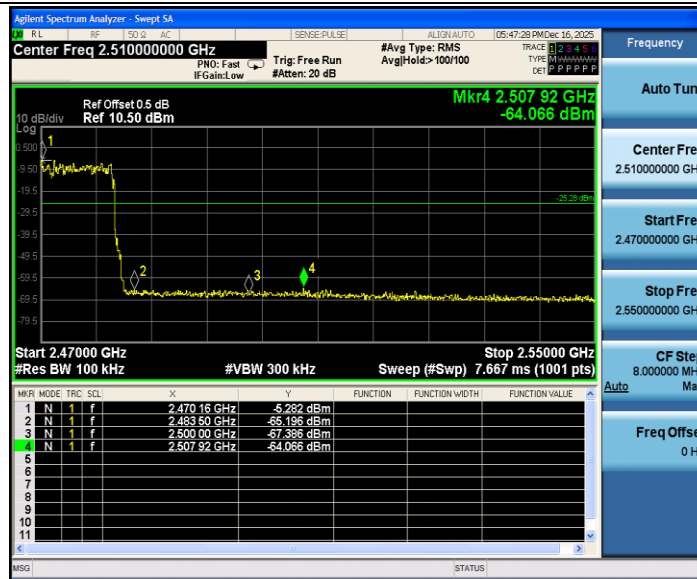
2DH5_Ant1_High_2480



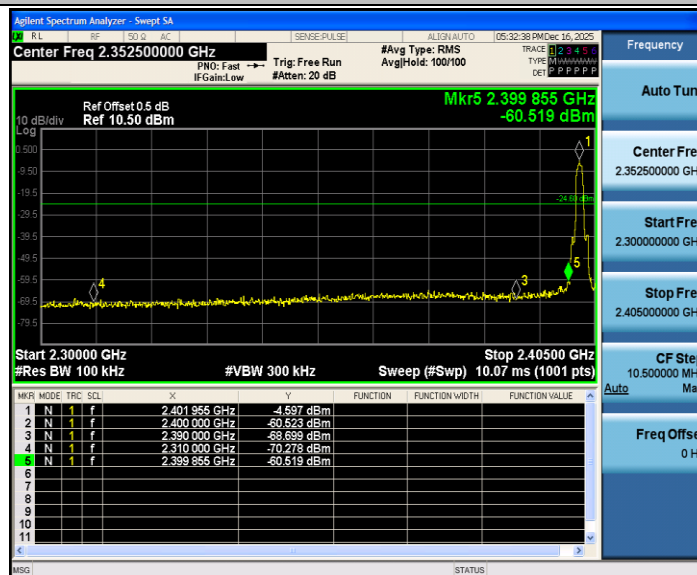
2DH5_Ant1_Low_Hop_2402



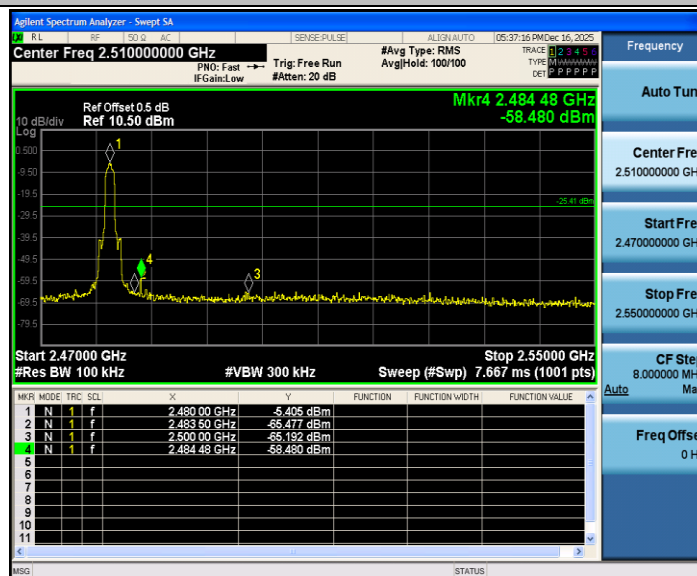
2DH5_Ant1_High_Hop_2480



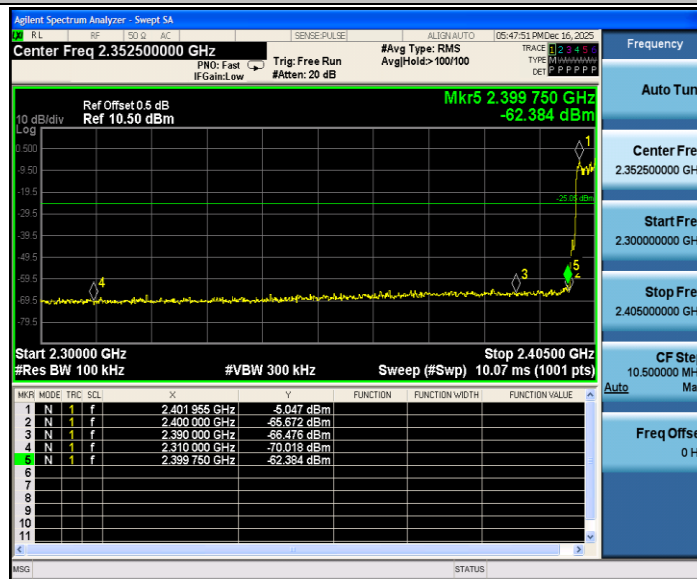
3DH5_Ant1_Low_2402



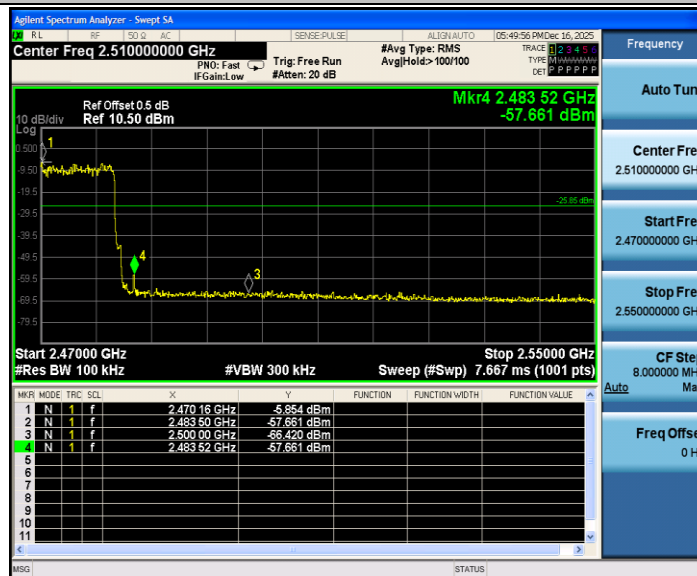
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

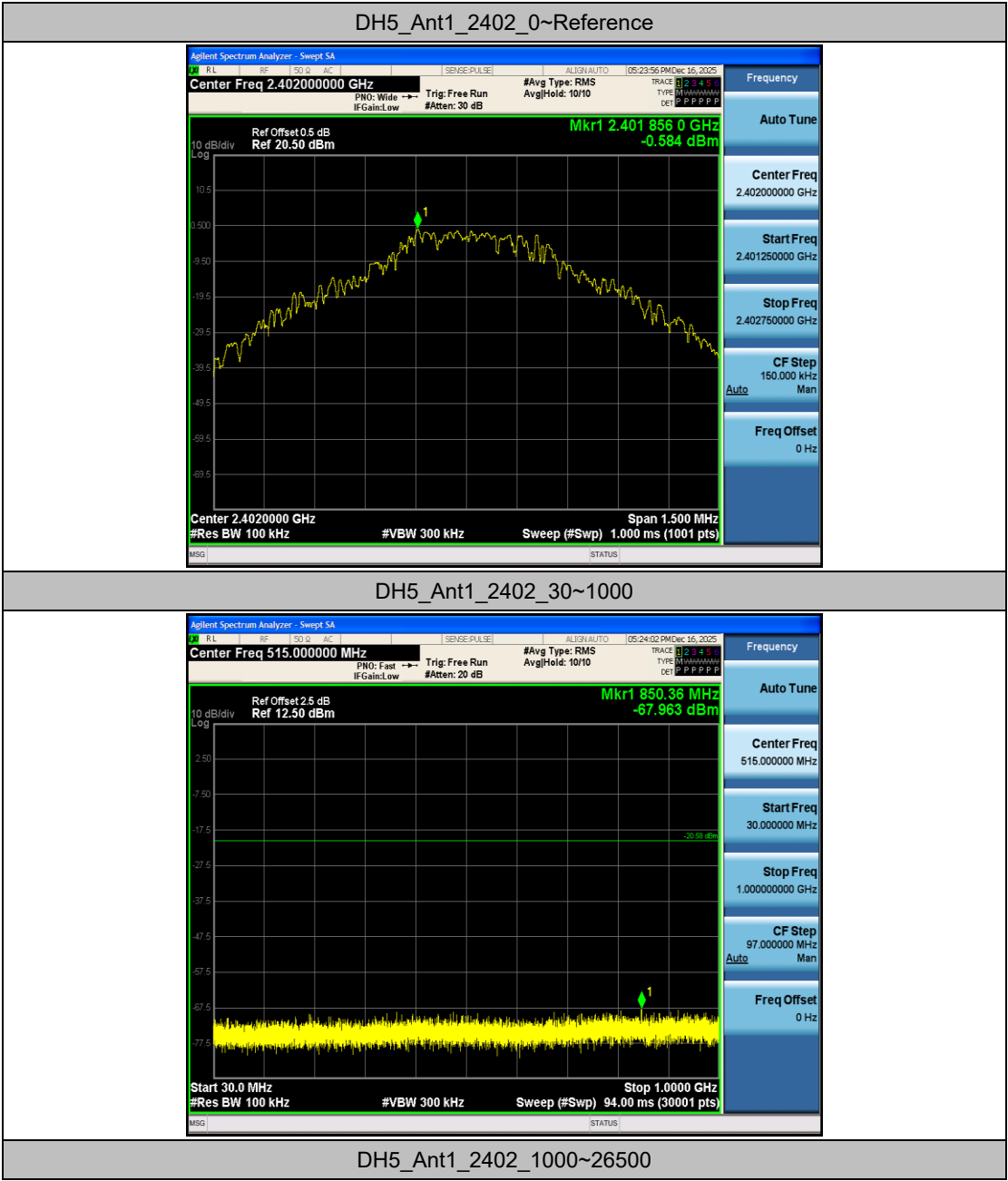


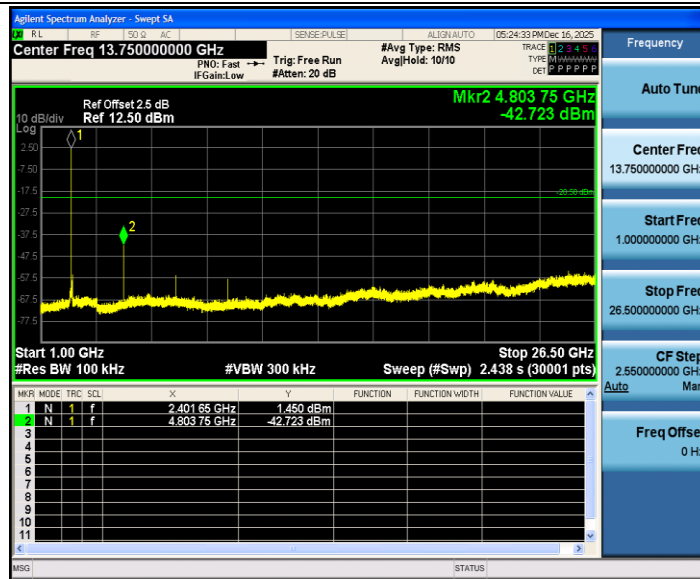
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.58	-0.58	---	PASS
			30~1000	-0.58	-67.96	≤-20.58	PASS
			1000~26500	-0.58	-42.72	≤-20.58	PASS
		2441	Reference	-1.27	-1.27	---	PASS
			30~1000	-1.27	-66.98	≤-21.27	PASS
			1000~26500	-1.27	-44.09	≤-21.27	PASS
		2480	Reference	-1.39	-1.39	---	PASS
			30~1000	-1.39	-68.03	≤-21.39	PASS
			1000~26500	-1.39	-44.65	≤-21.39	PASS
2DH5	Ant1	2402	Reference	-5.17	-5.17	---	PASS
			30~1000	-5.17	-67.94	≤-25.17	PASS
			1000~26500	-5.17	-49.32	≤-25.17	PASS
		2441	Reference	-6.47	-6.47	---	PASS
			30~1000	-6.47	-67.81	≤-26.47	PASS
			1000~26500	-6.47	-49.92	≤-26.47	PASS
		2480	Reference	-6.52	-6.52	---	PASS
			30~1000	-6.52	-67.65	≤-26.52	PASS
			1000~26500	-6.52	-50.65	≤-26.52	PASS
3DH5	Ant1	2402	Reference	-6.62	-6.62	---	PASS
			30~1000	-6.62	-67.31	≤-26.62	PASS
			1000~26500	-6.62	-50.08	≤-26.62	PASS
		2441	Reference	-3.83	-3.83	---	PASS
			30~1000	-3.83	-68.08	≤-23.83	PASS
			1000~26500	-3.83	-44.83	≤-23.83	PASS
		2480	Reference	-5.64	-5.64	---	PASS
			30~1000	-5.64	-68.21	≤-25.64	PASS
			1000~26500	-5.64	-50.71	≤-25.64	PASS

Test Graphs





DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000

