

FCC Appendix RF Test Data for BT

FCC ID : 2AYZG-CL9002

Company : ShenZhen litian technology Co.,Ltd

EUT : Alarm Clock with Wireless Charging

Model Number : CL9002

Report No. : CTA26092002301

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	0.951	2401.544	2402.495	---	---
		2441	0.945	2440.550	2441.495	---	---
		2480	0.954	2479.544	2480.498	---	---
2DH5	Ant1	2402	1.317	2401.352	2402.669	---	---
		2441	1.317	2440.349	2441.666	---	---
		2480	1.329	2479.343	2480.672	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

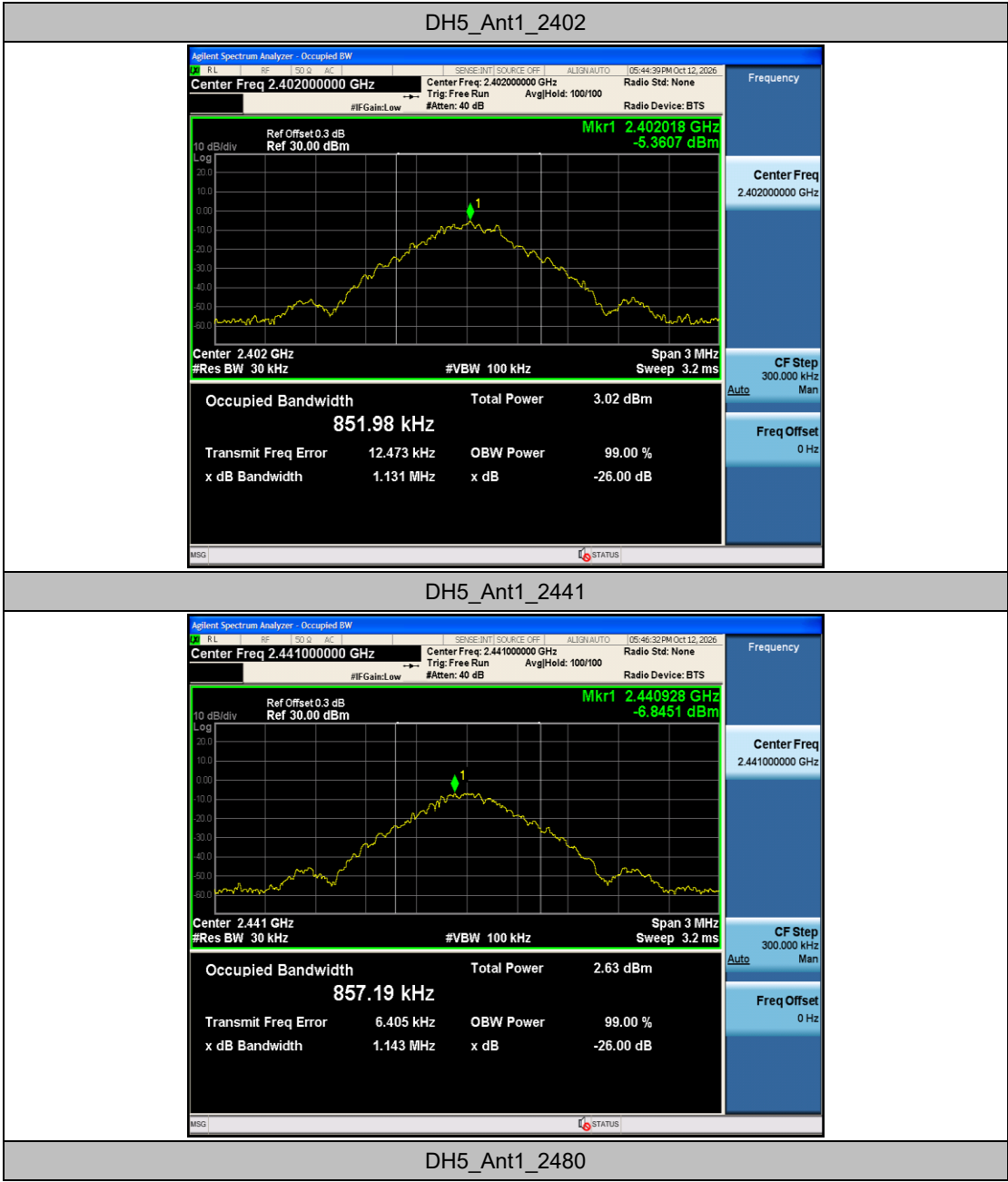


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.85198	2401.5865	2402.4385	---	---
		2441	0.85719	2440.5778	2441.4350	---	---
		2480	0.86193	2479.5783	2480.4402	---	---
2DH5	Ant1	2402	1.1861	2401.4170	2402.6031	---	---
		2441	1.1912	2440.4126	2441.6038	---	---
		2480	1.1953	2479.4115	2480.6068	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

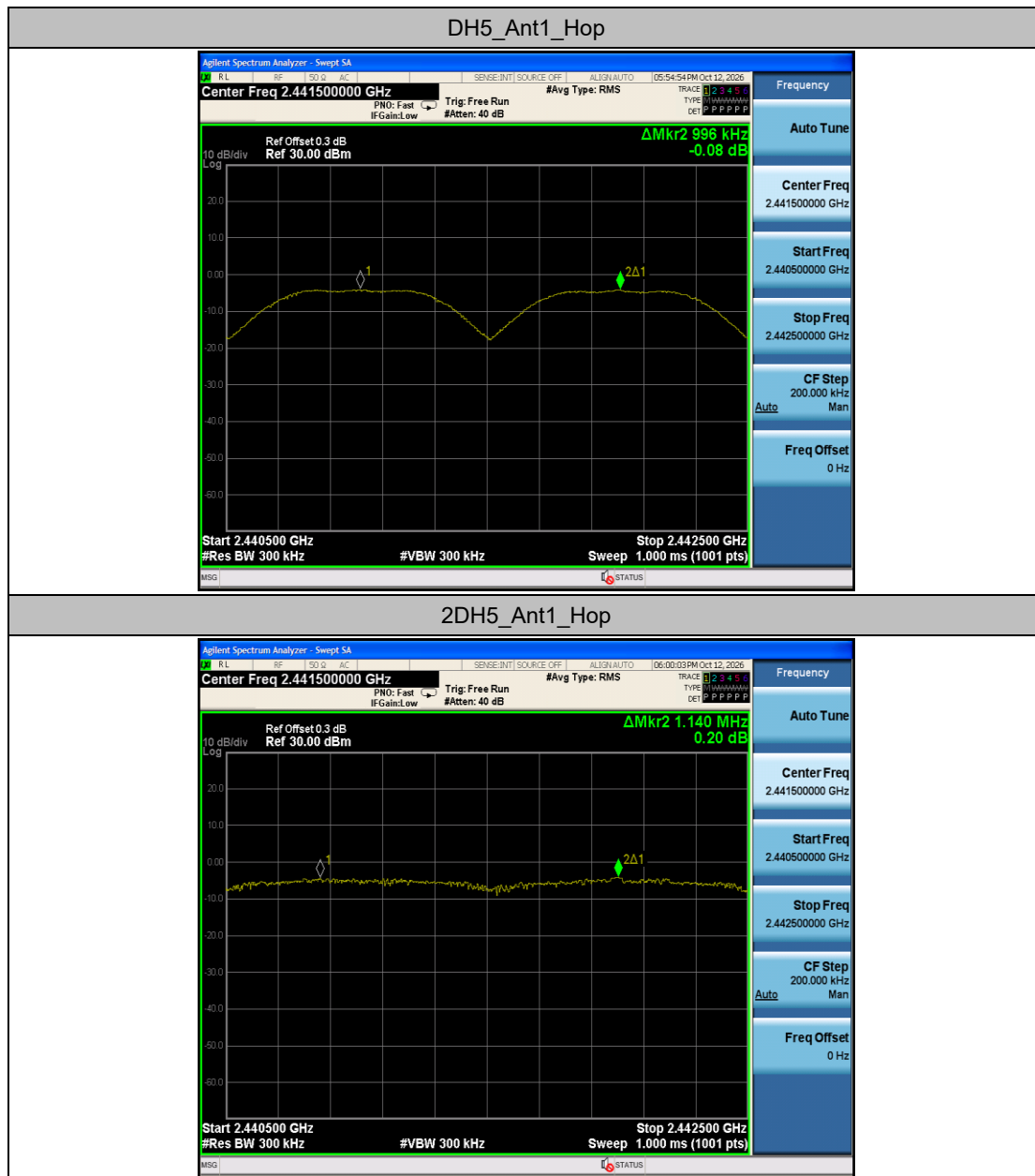
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-3.74	≤20.97	PASS
		2441	-3.79	≤20.97	PASS
		2480	-4.06	≤20.97	PASS
2DH5	Ant1	2402	-1.12	≤20.97	PASS
		2441	-1.18	≤20.97	PASS
		2480	-1.38	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.996	≥ 0.954	PASS
2DH5	Ant1	Hop	1.14	≥ 0.886	PASS

Test Graphs

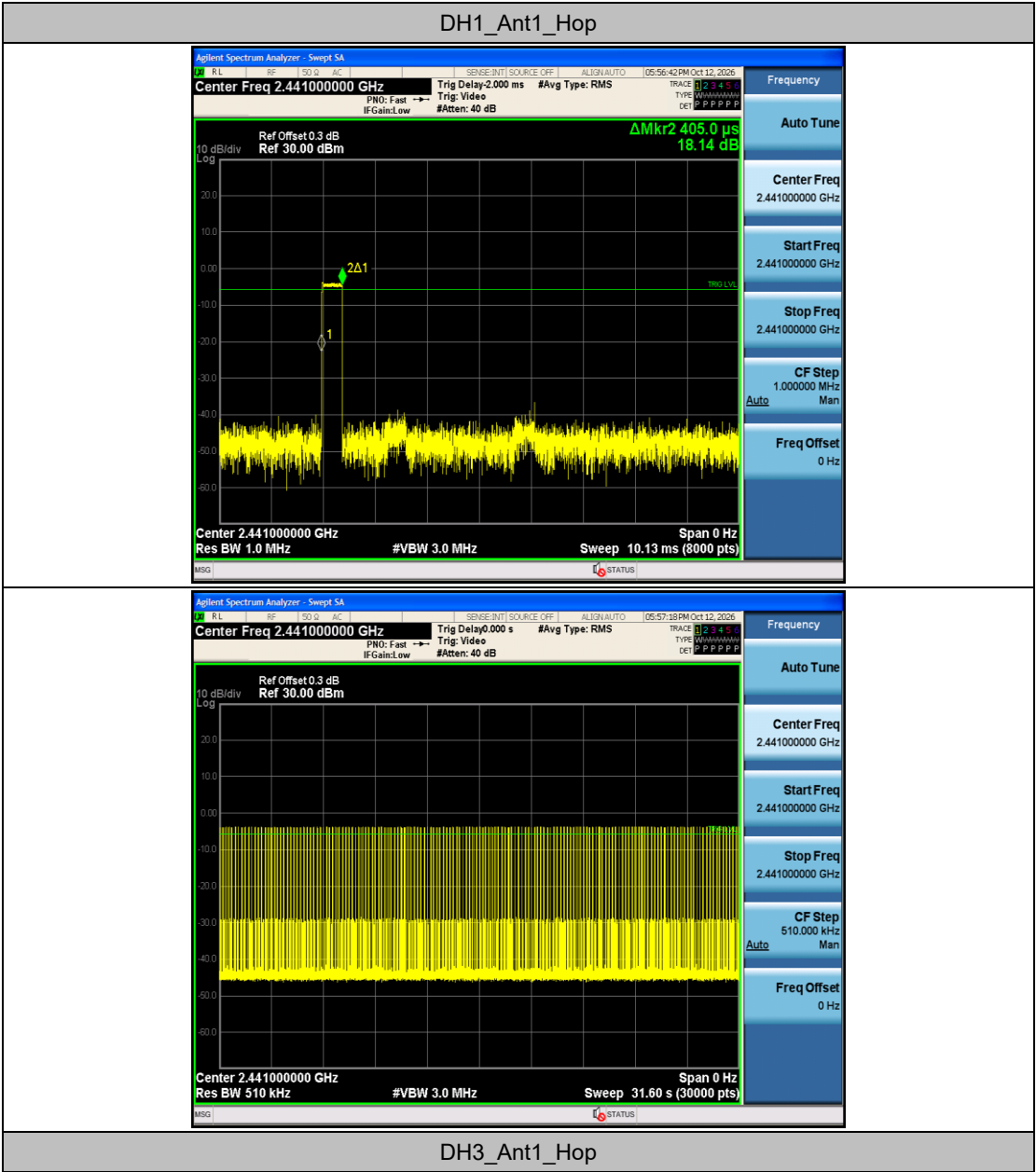


Appendix E: Time of occupancy

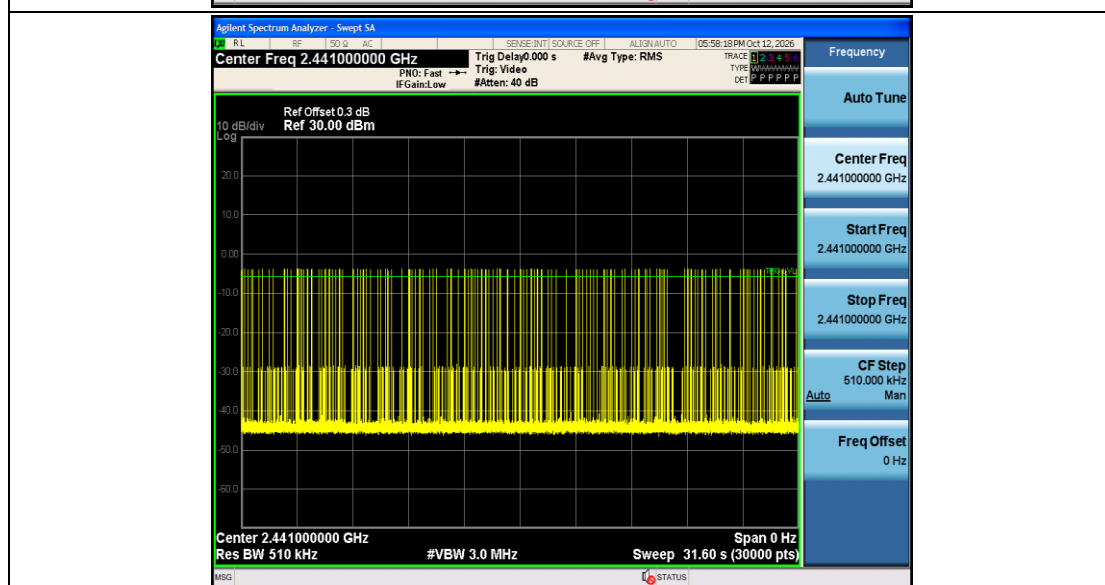
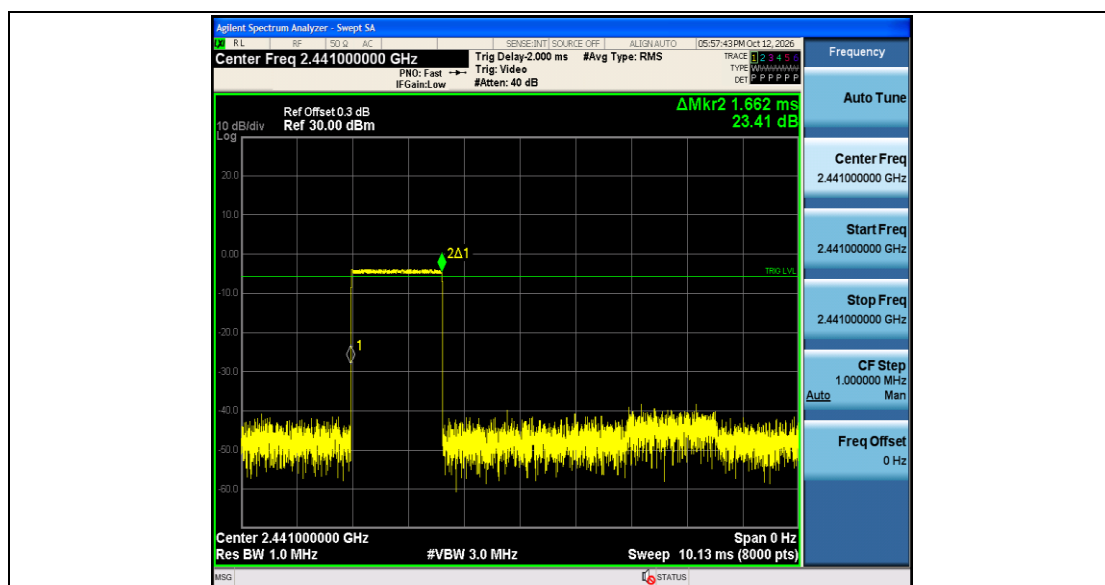
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.405	315	0.128	≤0.4	PASS
DH3	Ant1	Hop	1.662	155	0.258	≤0.4	PASS
DH5	Ant1	Hop	2.910	107	0.311	≤0.4	PASS
2DH1	Ant1	Hop	0.415	316	0.131	≤0.4	PASS
2DH3	Ant1	Hop	1.668	151	0.252	≤0.4	PASS
2DH5	Ant1	Hop	2.916	107	0.312	≤0.4	PASS

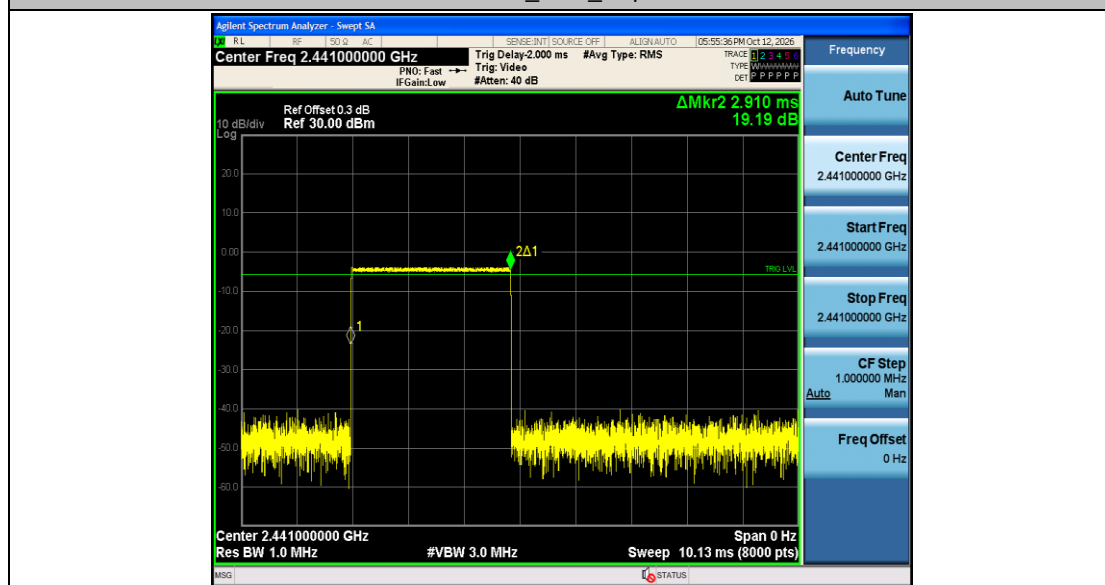
Test Graphs

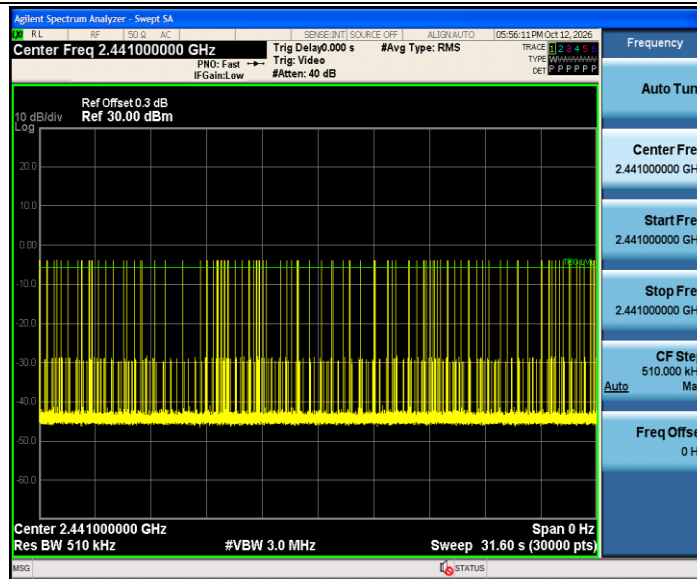


DH3_Ant1_Hop

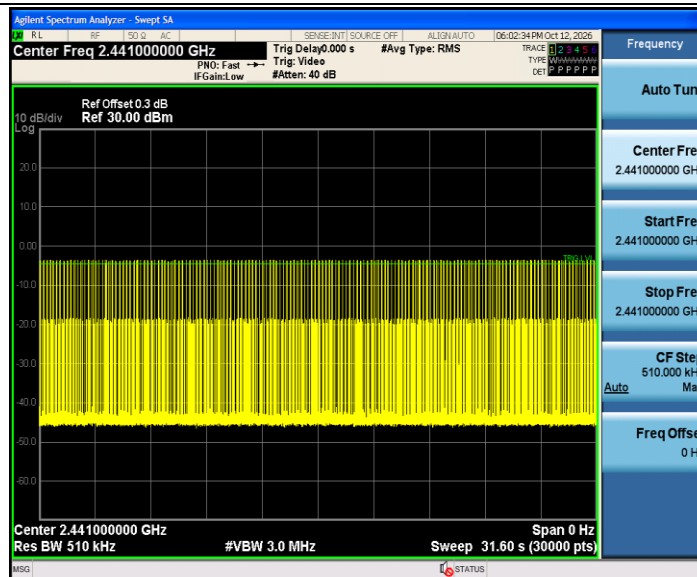
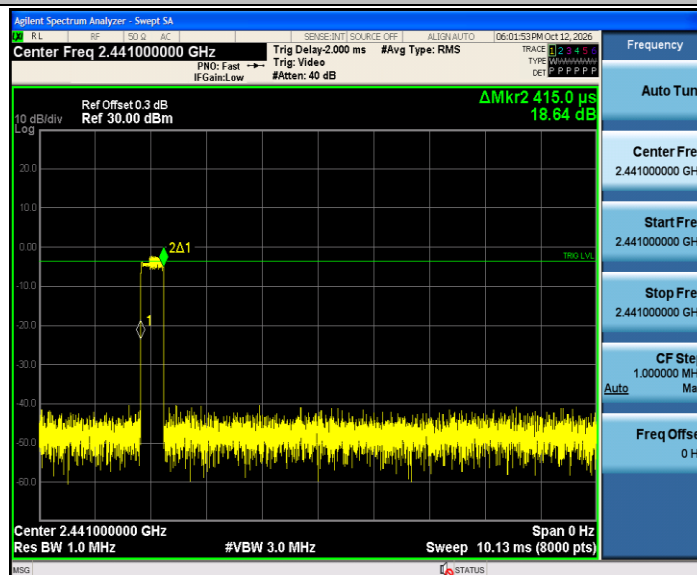


DH5_Ant1_Hop

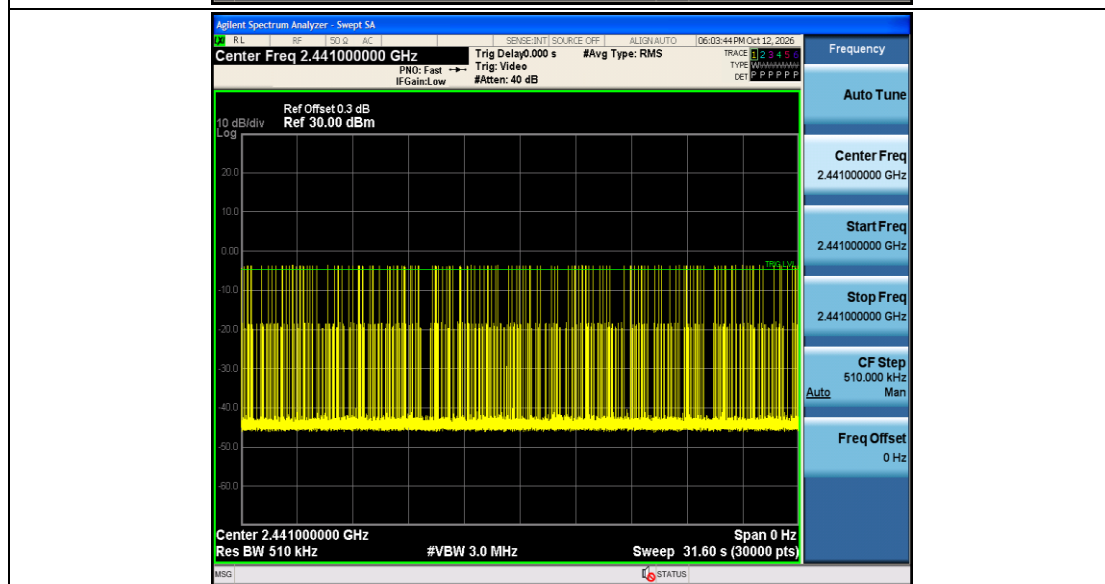
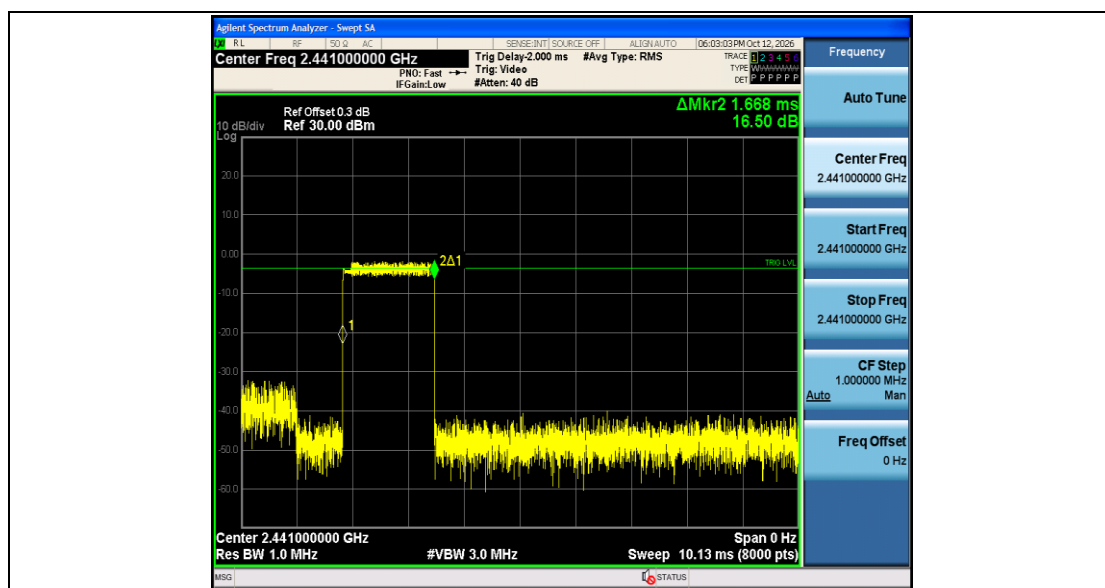




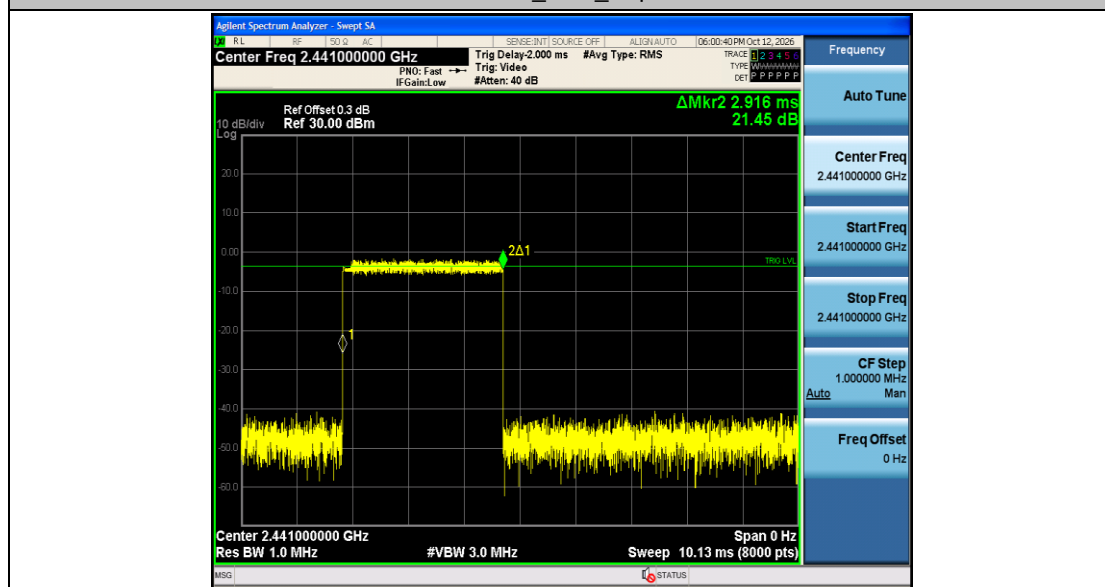
2DH1_Ant1_Hop

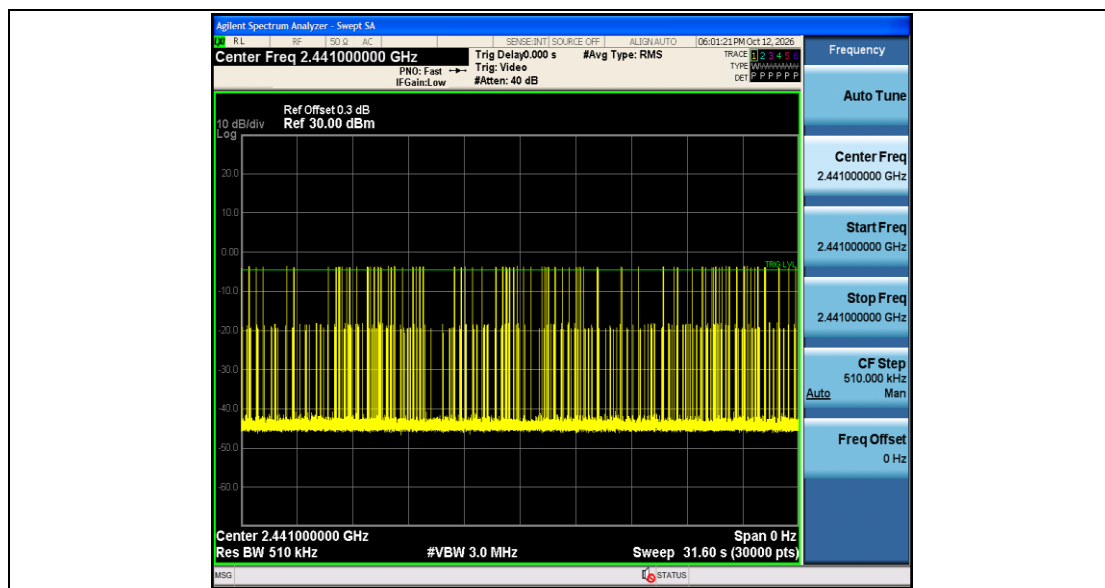


2DH3_Ant1_Hop



2DH5_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

Test Graphs

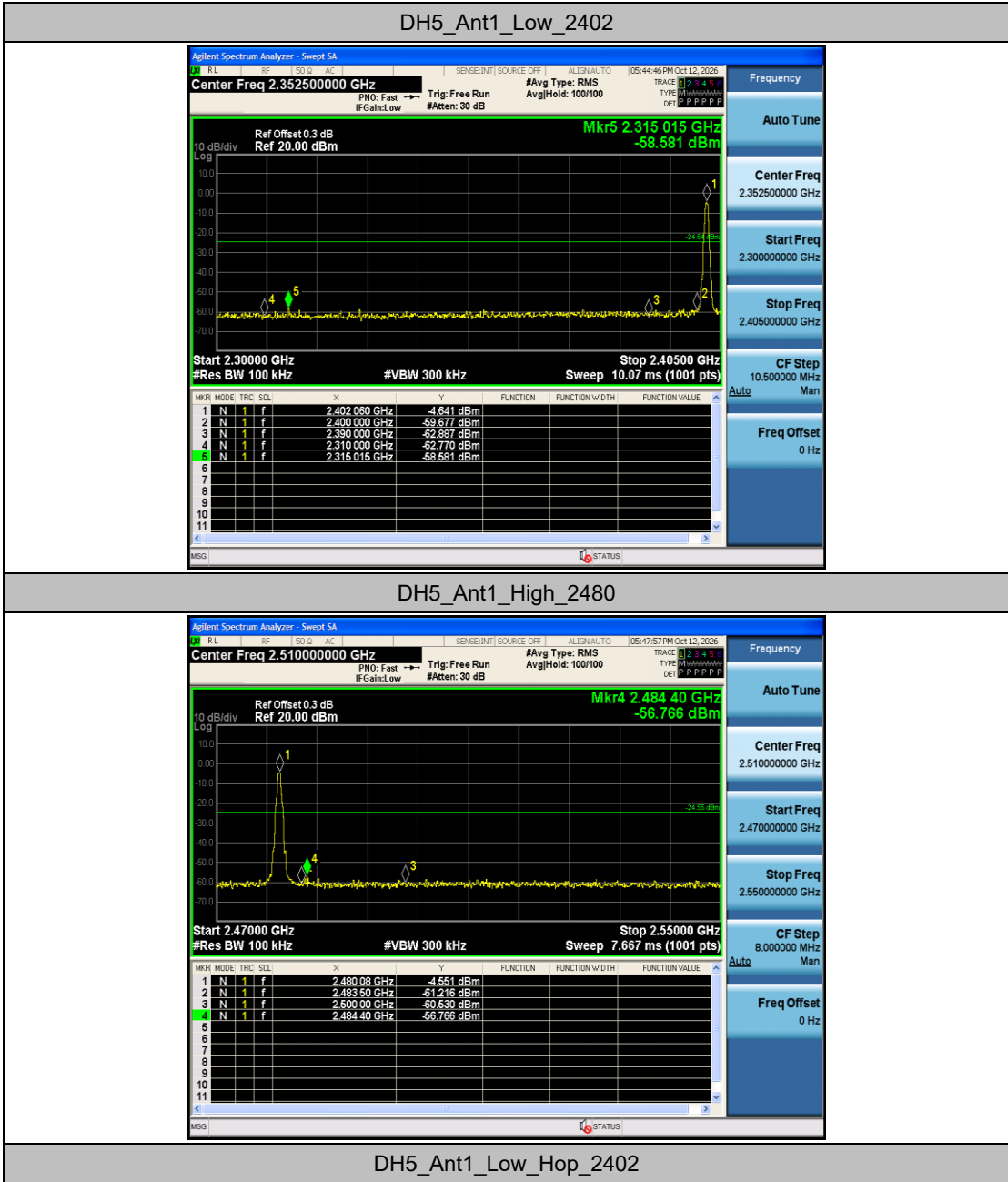


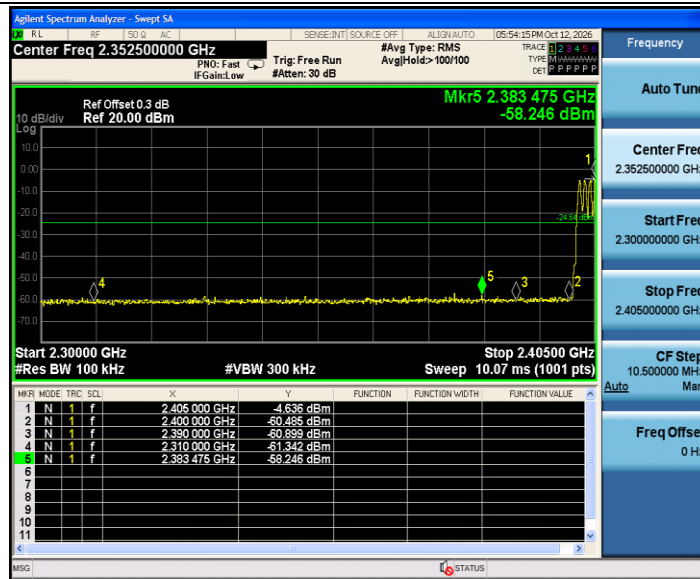
Appendix G: Band edge measurements

Test Result

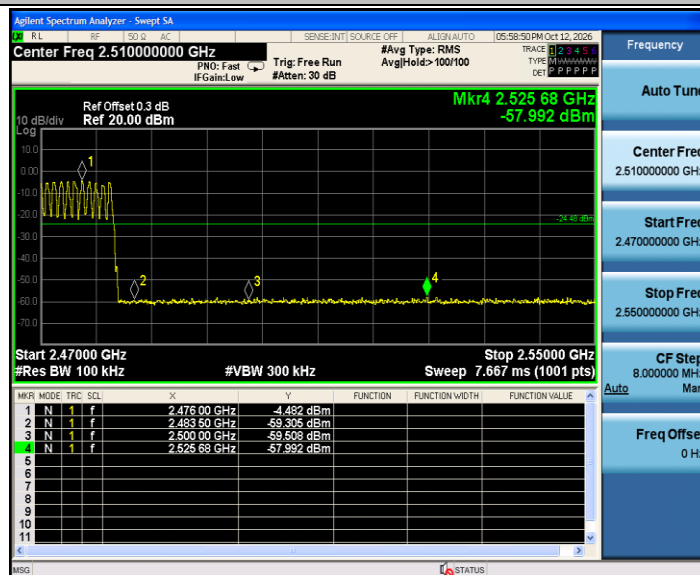
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-4.64	-58.58	≤ -24.64	PASS
		High	2480	-4.55	-56.77	≤ -24.55	PASS
		Low	Hop_2402	-4.64	-58.25	≤ -24.64	PASS
		High	Hop_2480	-4.48	-57.99	≤ -24.48	PASS
2DH5	Ant1	Low	2402	-5.65	-58.29	≤ -25.65	PASS
		High	2480	-5.51	-54.77	≤ -25.51	PASS
		Low	Hop_2402	-7.76	-58.06	≤ -27.76	PASS
		High	Hop_2480	-4.65	-58.02	≤ -24.65	PASS

Test Graphs

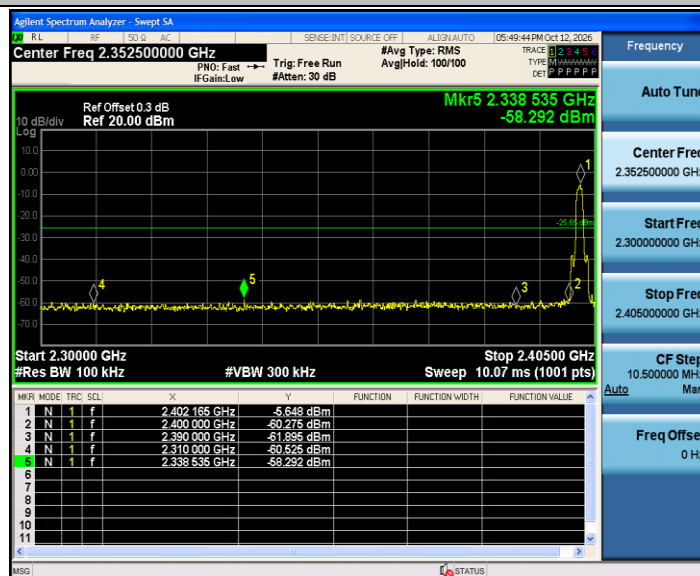




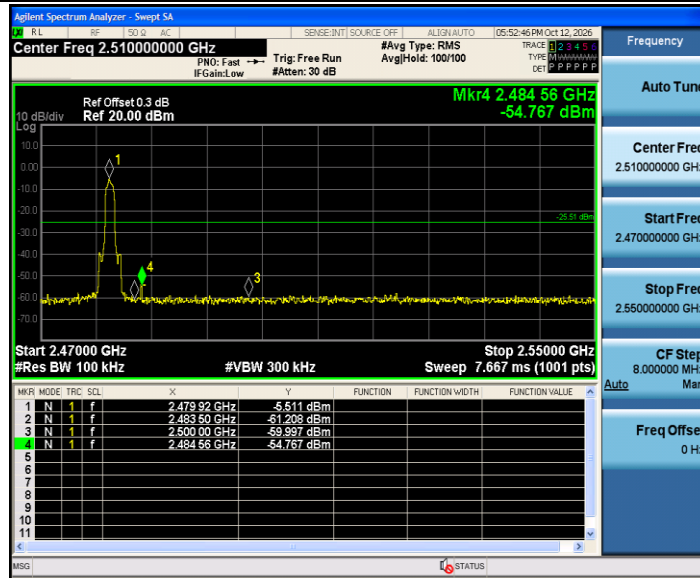
DH5_Ant1_High_Hop_2480



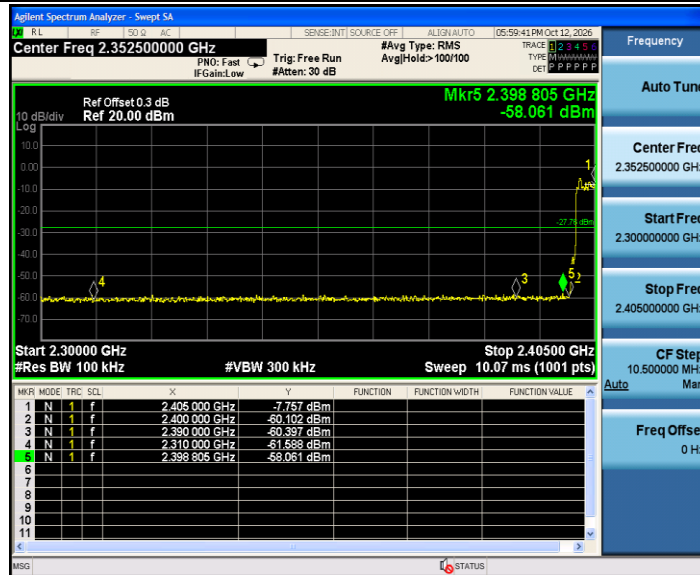
2DH5_Ant1_Low_2402



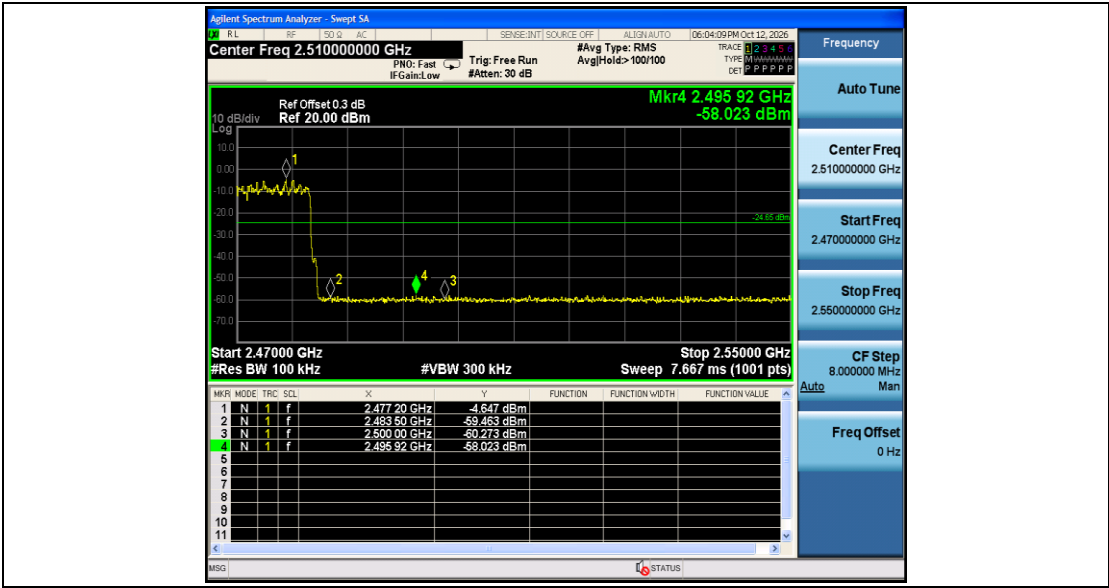
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480

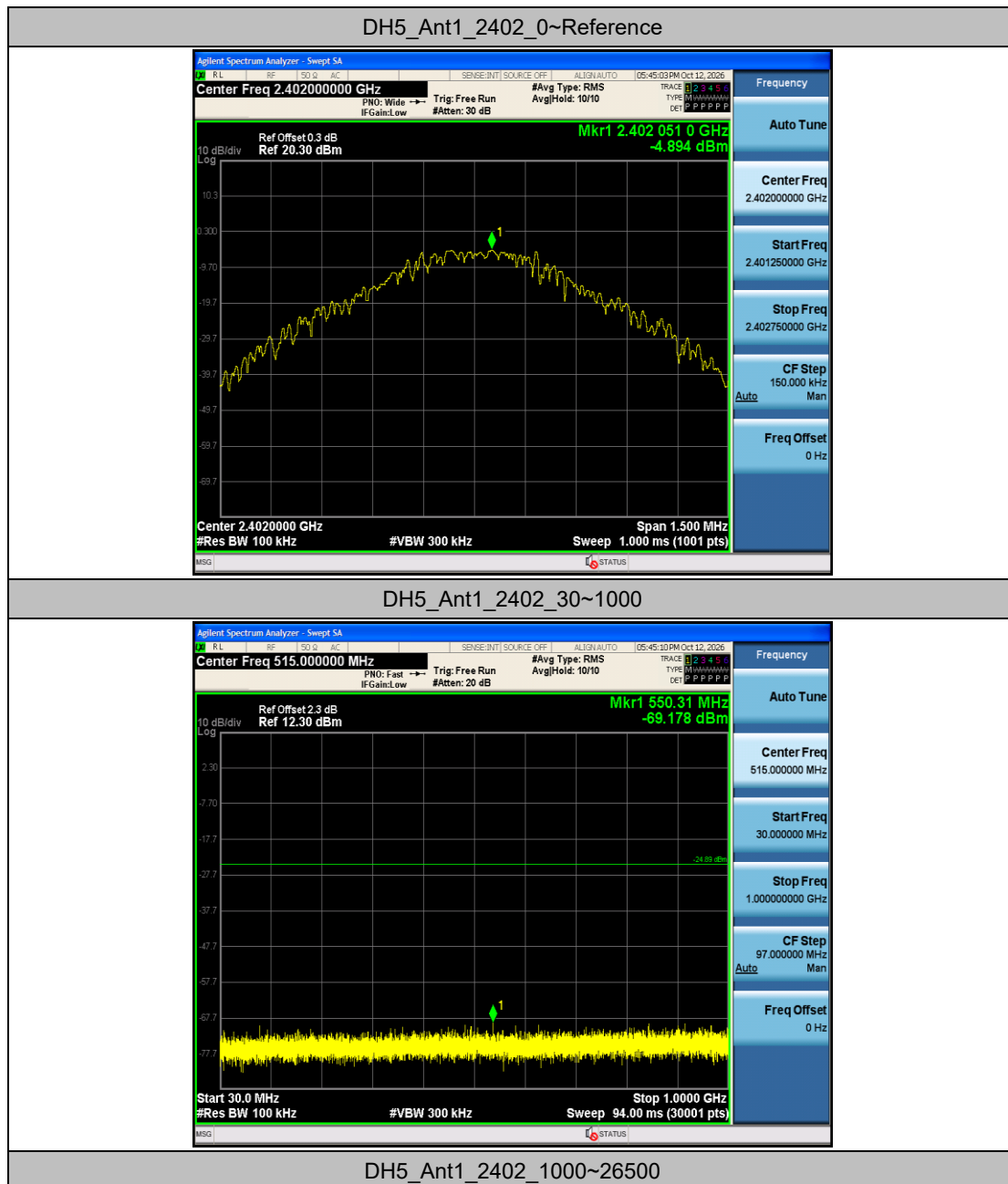


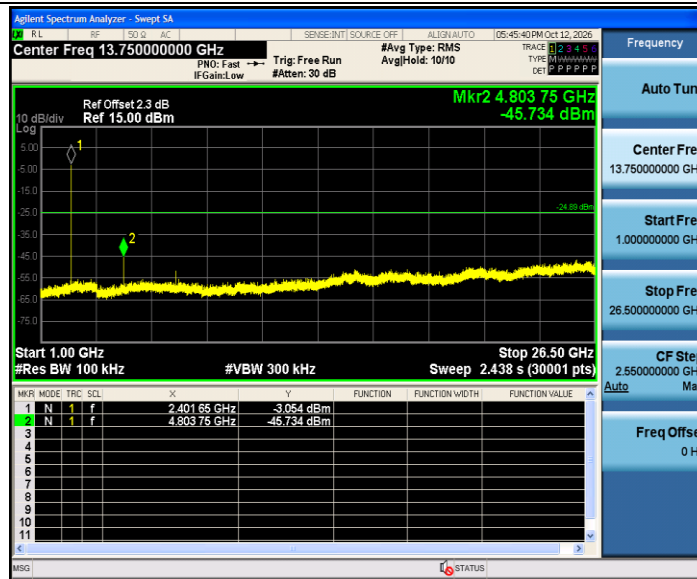
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-4.89	-4.89	---	PASS
			30~1000	-4.89	-69.18	≤-24.89	PASS
			1000~26500	-4.89	-45.73	≤-24.89	PASS
		2441	Reference	-5.26	-5.26	---	PASS
			30~1000	-5.26	-68.74	≤-25.26	PASS
			1000~26500	-5.26	-47	≤-25.26	PASS
		2480	Reference	-5.28	-5.28	---	PASS
			30~1000	-5.28	-68.38	≤-25.28	PASS
			1000~26500	-5.28	-44.89	≤-25.28	PASS
2DH5	Ant1	2402	Reference	-5.72	-5.72	---	PASS
			30~1000	-5.72	-69.33	≤-25.72	PASS
			1000~26500	-5.72	-47.12	≤-25.72	PASS
		2441	Reference	-5.61	-5.61	---	PASS
			30~1000	-5.61	-69.45	≤-25.61	PASS
			1000~26500	-5.61	-46.36	≤-25.61	PASS
		2480	Reference	-6.39	-6.39	---	PASS
			30~1000	-6.39	-69.26	≤-26.39	PASS
			1000~26500	-6.39	-46.16	≤-26.39	PASS

Test Graphs

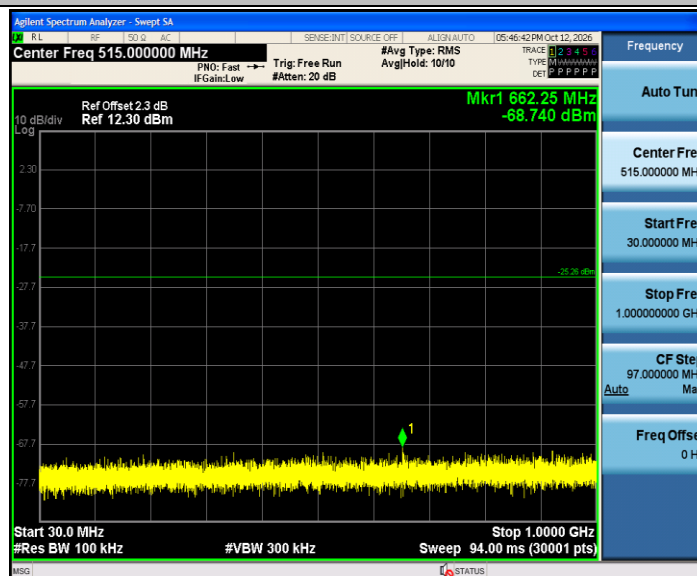




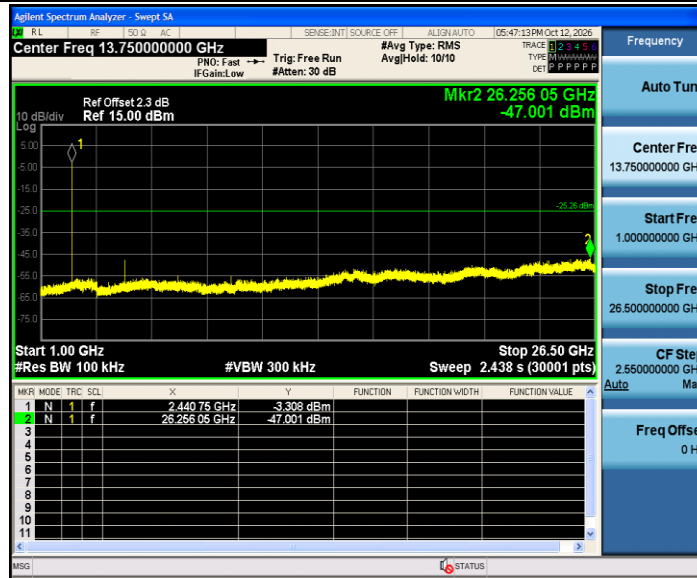
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



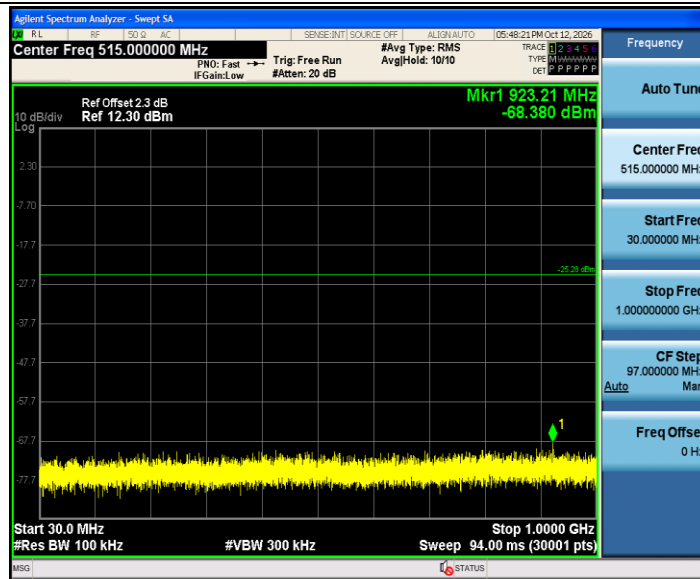
DH5_Ant1_2441_1000~26500



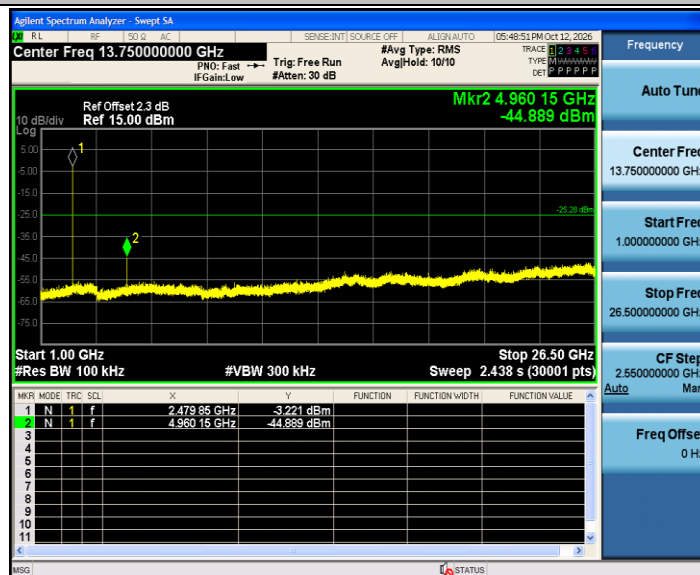
DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



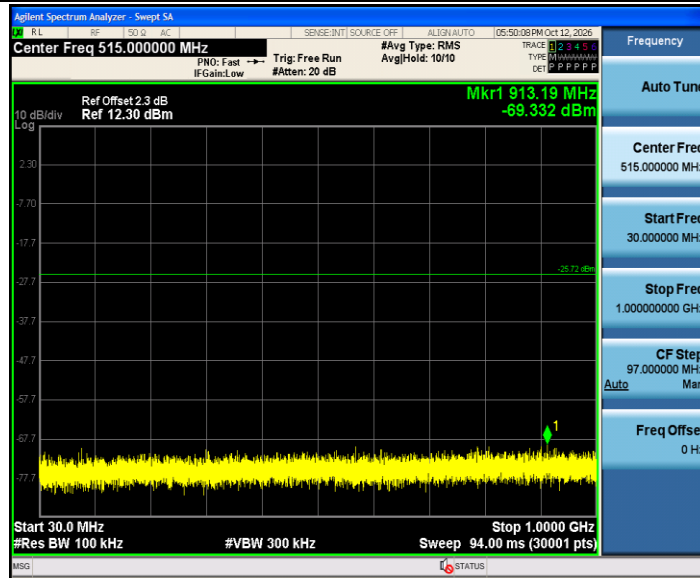
DH5_Ant1_2480_1000~26500



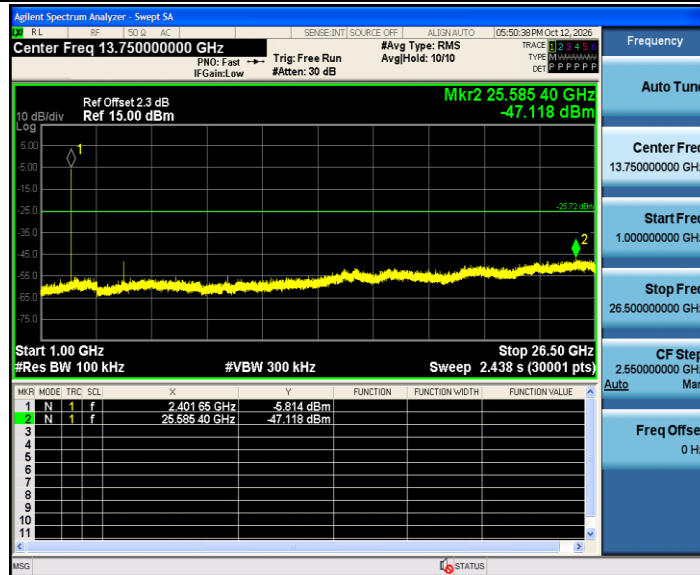
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



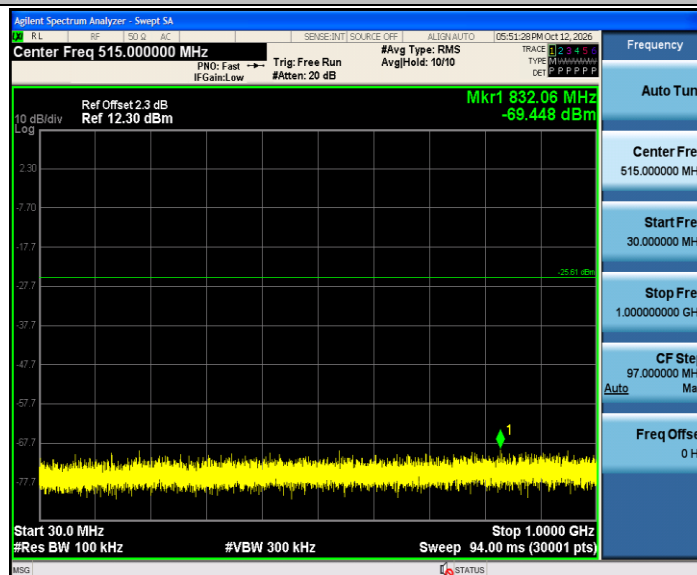
2DH5_Ant1_2402_1000~26500



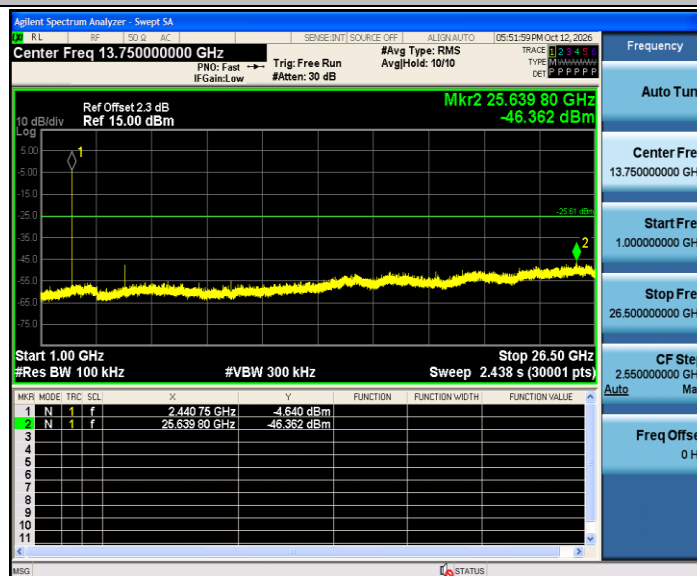
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



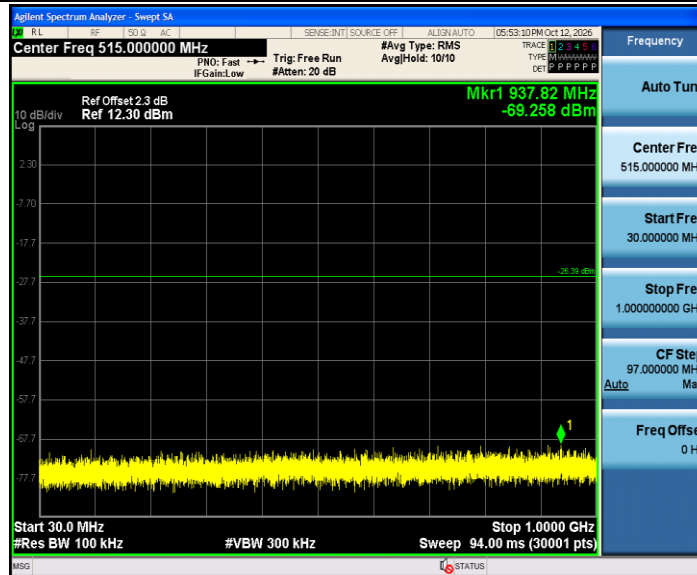
2DH5_Ant1_2441_1000~26500



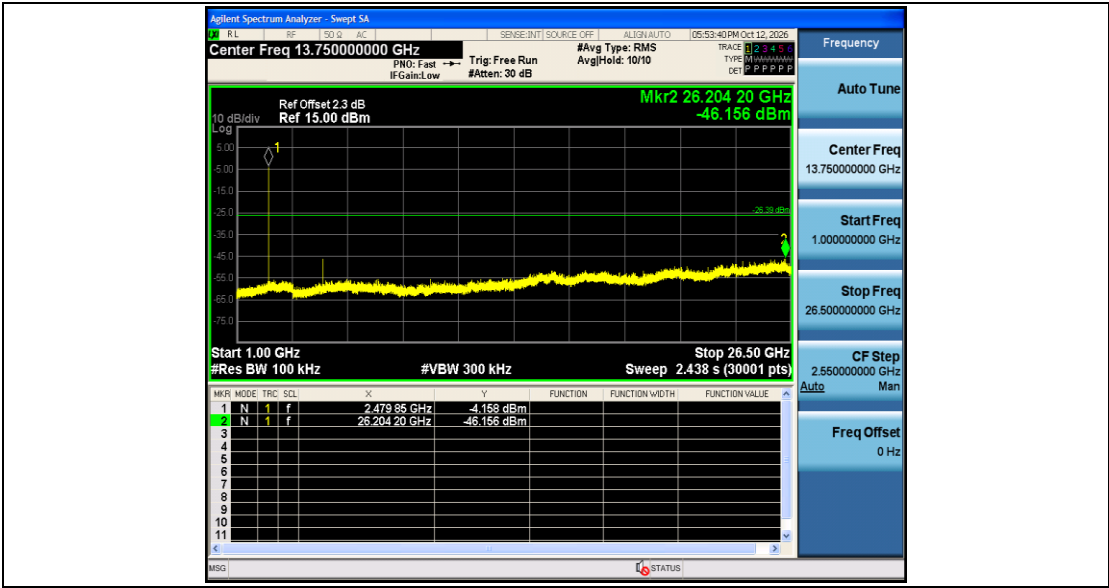
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500



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	2.92	3.75	77.87	1.09	---	---
		2441	2.92	3.76	77.66	1.10	---	---
		2480	2.92	3.76	77.66	1.10	---	---