

FCC Appendix RF Test Data for BT

FCC ID : 2AYZG-DS236

Company : ShenZhen litian technology Co.,Ltd

EUT : Alarm clock with Bluetooth

Model Number : DS236

Report No. : CTA25093000301

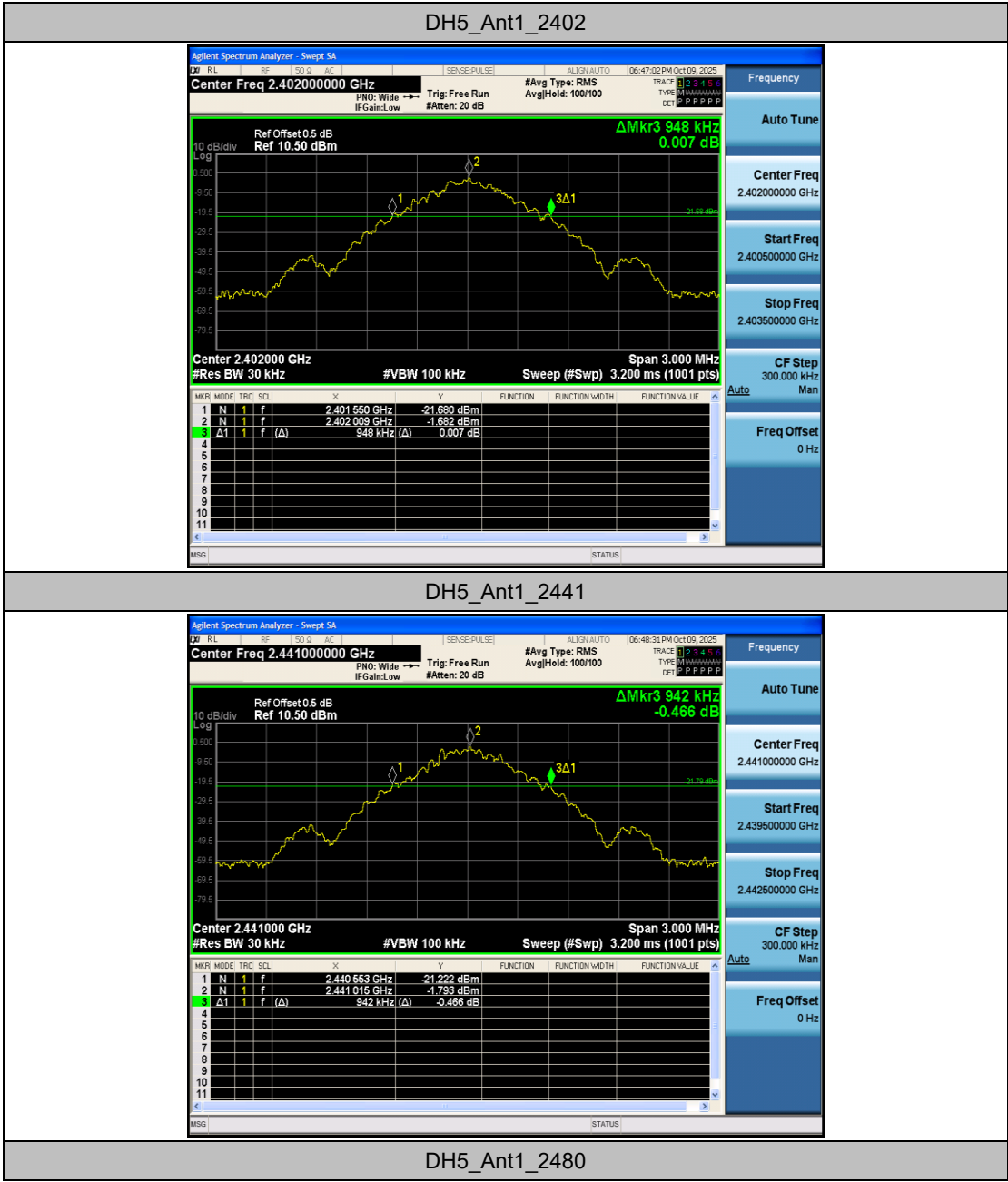
Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.948	2401.550	2402.498	---	---
		2441	0.942	2440.553	2441.495	---	---
		2480	0.942	2479.553	2480.495	---	---
2DH5	Ant1	2402	1.284	2401.379	2402.663	---	---
		2441	1.266	2440.397	2441.663	---	---
		2480	1.281	2479.379	2480.660	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

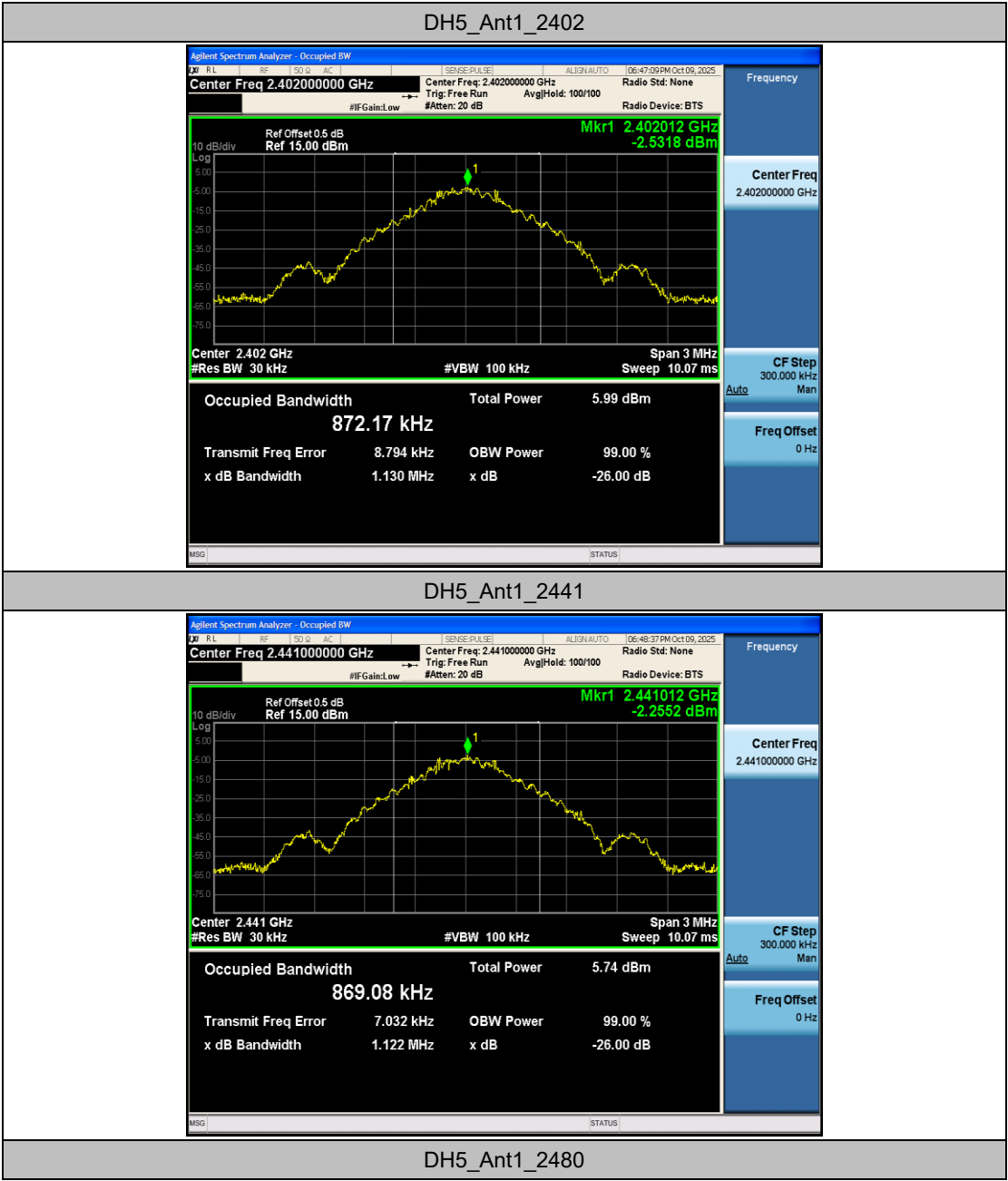


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87217	2401.5727	2402.4449	---	---
		2441	0.86908	2440.5725	2441.4416	---	---
		2480	0.87364	2479.5712	2480.4448	---	---
2DH5	Ant1	2402	1.1873	2401.4156	2402.6029	---	---
		2441	1.1937	2440.4141	2441.6078	---	---
		2480	1.1881	2479.4155	2480.6036	---	---

Test Graphs

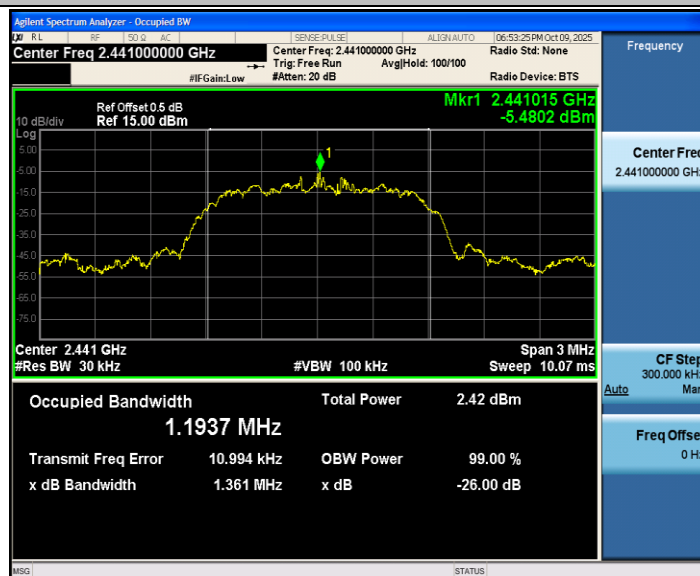




2DH5_Ant1_2402



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	0.10	≤20.97	PASS
		2441	-0.17	≤20.97	PASS
		2480	-0.21	≤20.97	PASS
2DH5	Ant1	2402	-0.75	≤20.97	PASS
		2441	-0.96	≤20.97	PASS
		2480	-1.03	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.188	≥ 0.948	PASS
2DH5	Ant1	Hop	1.188	≥ 0.856	PASS

Test Graphs

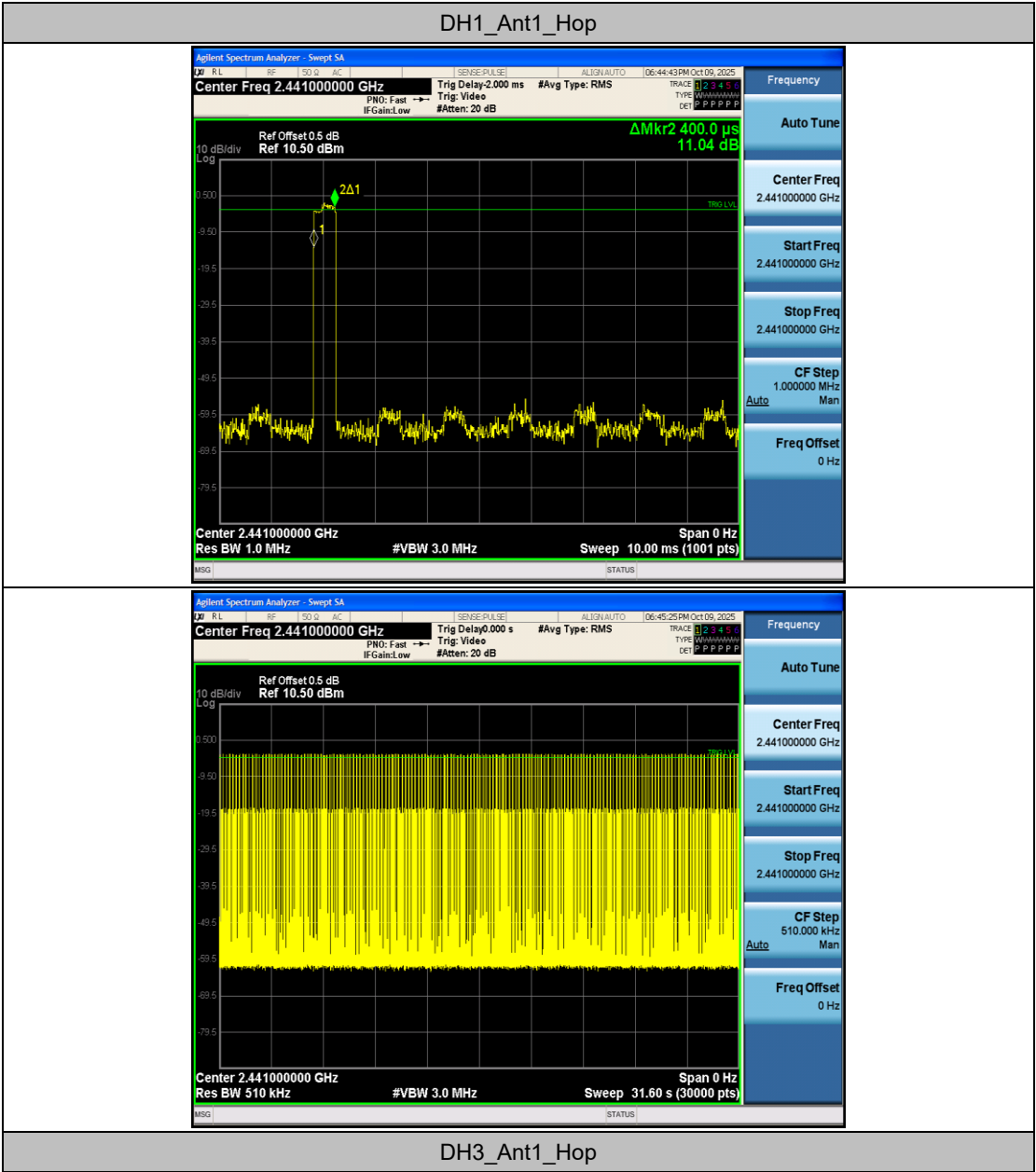


Appendix E: Time of occupancy

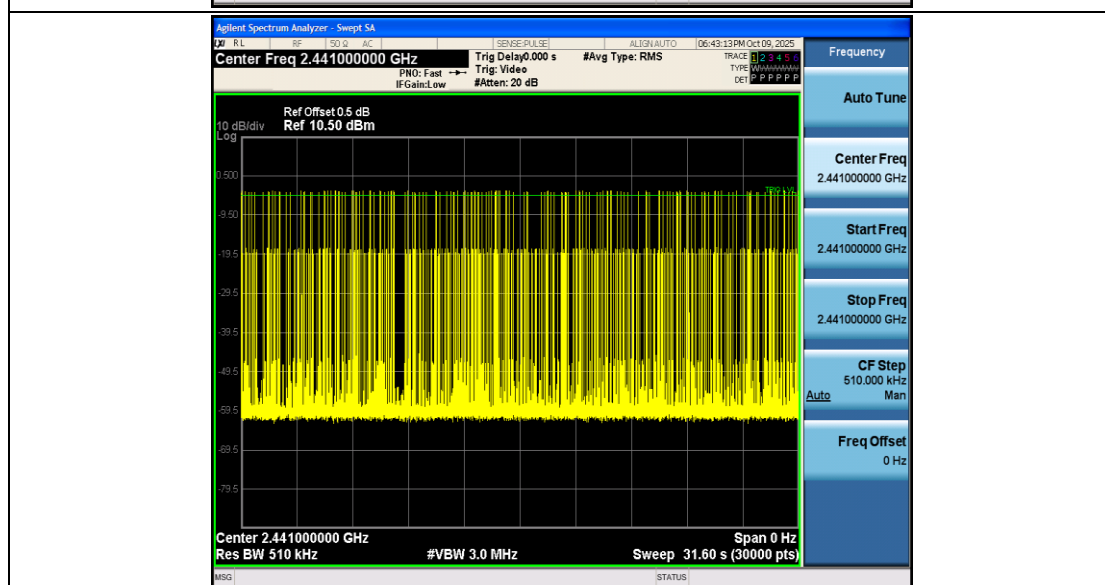
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.400	318	0.127	≤0.4	PASS
DH3	Ant1	Hop	1.650	161	0.266	≤0.4	PASS
DH5	Ant1	Hop	2.890	110	0.318	≤0.4	PASS
2DH1	Ant1	Hop	0.400	319	0.128	≤0.4	PASS
2DH3	Ant1	Hop	1.650	156	0.257	≤0.4	PASS
2DH5	Ant1	Hop	2.900	101	0.293	≤0.4	PASS

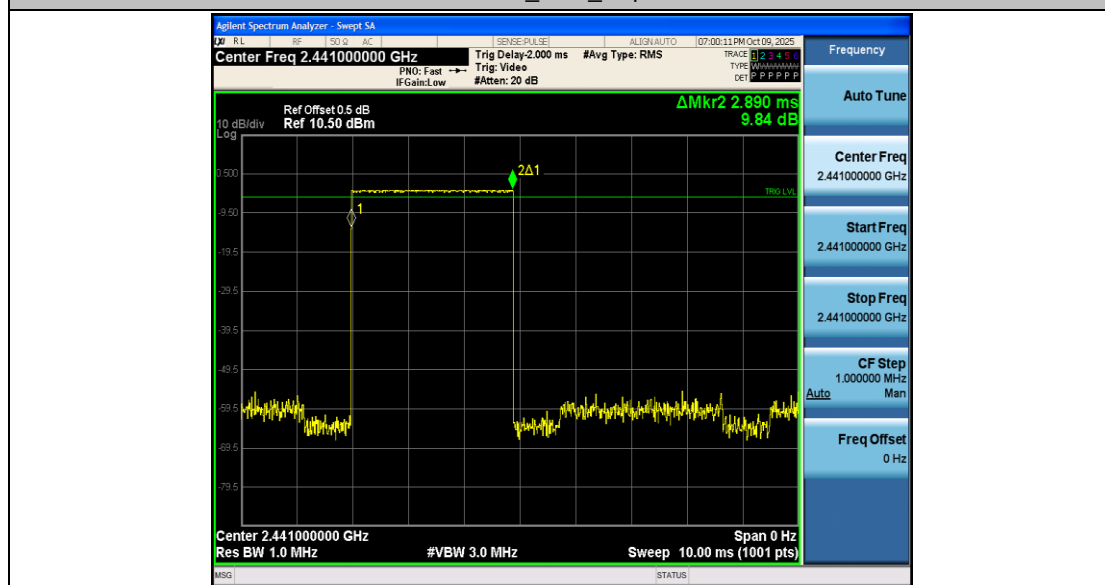
Test Graphs

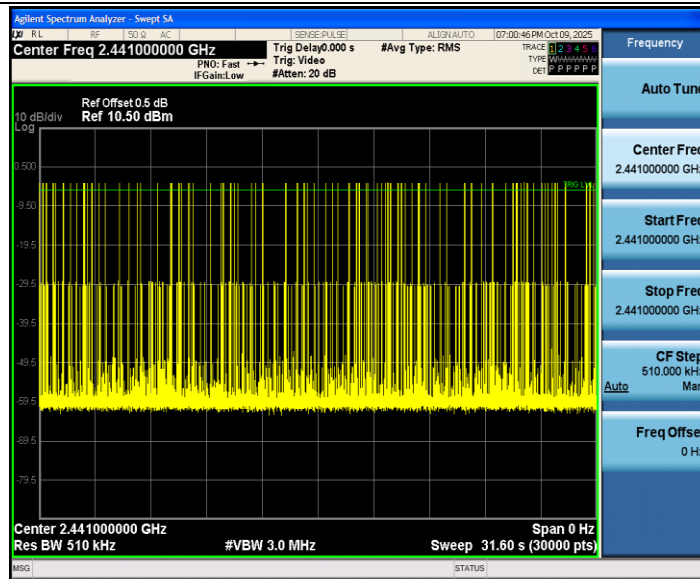


DH3_Ant1_Hop

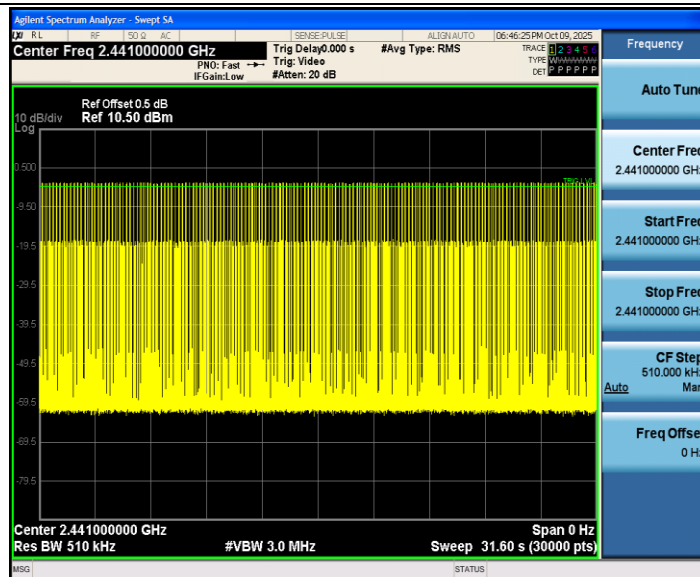
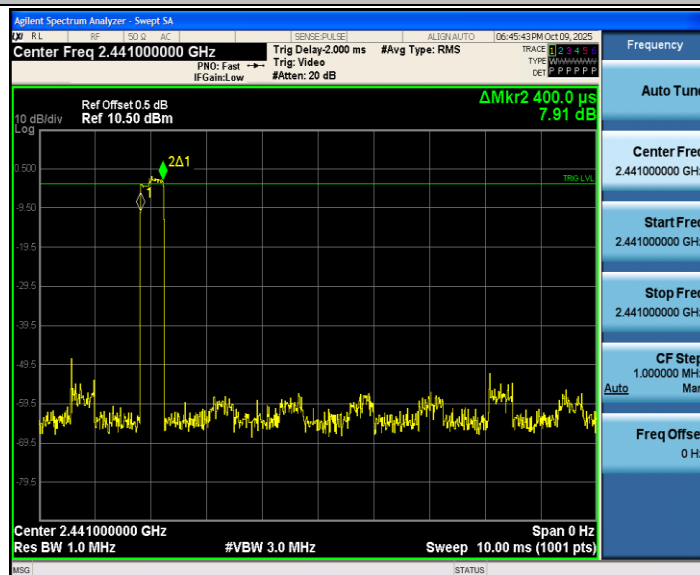


DH5_Ant1_Hop

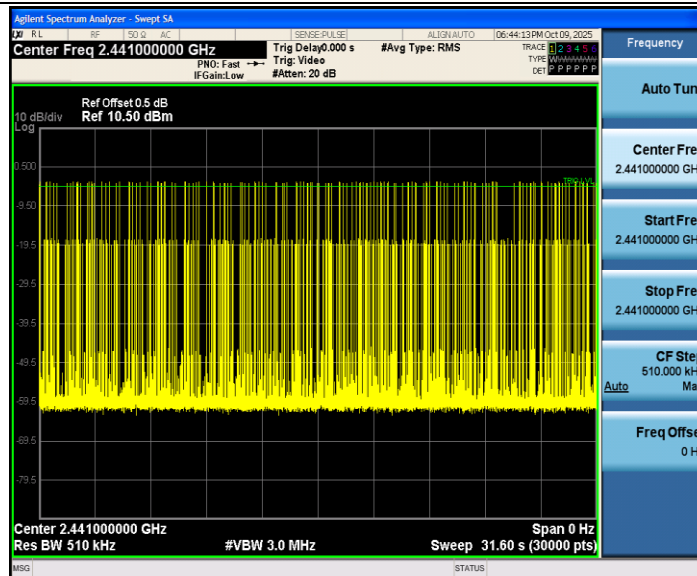
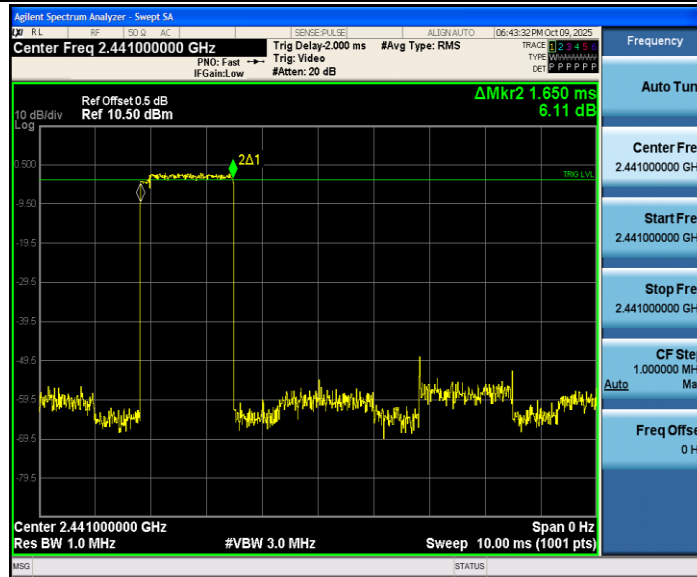




2DH1_Ant1_Hop

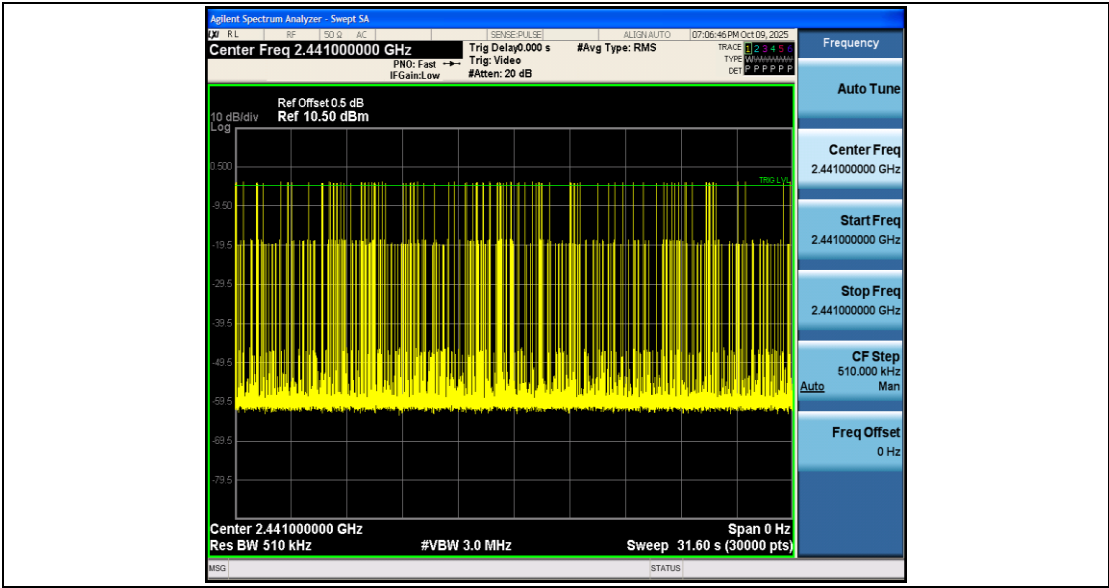


2DH3_Ant1_Hop



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

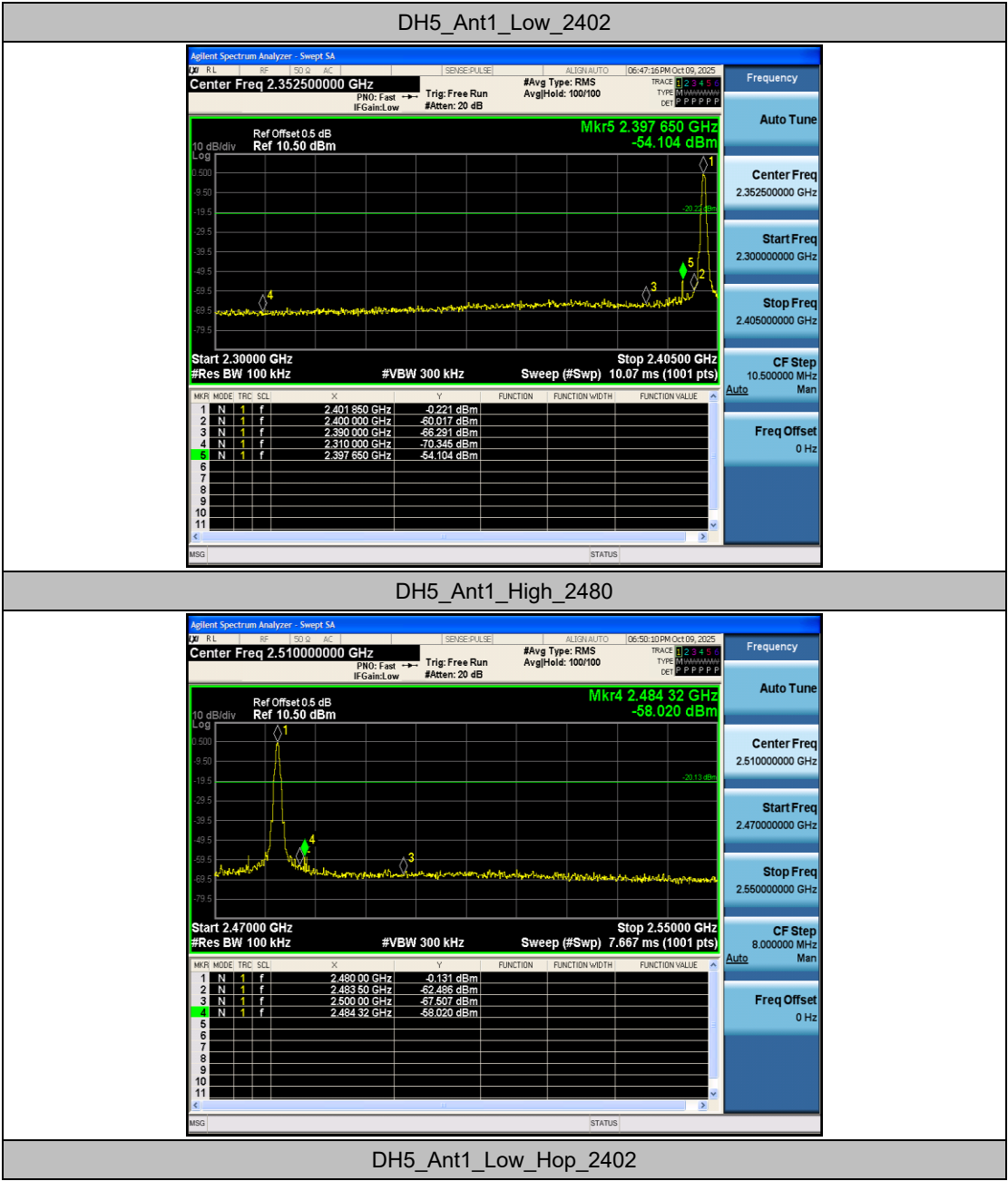


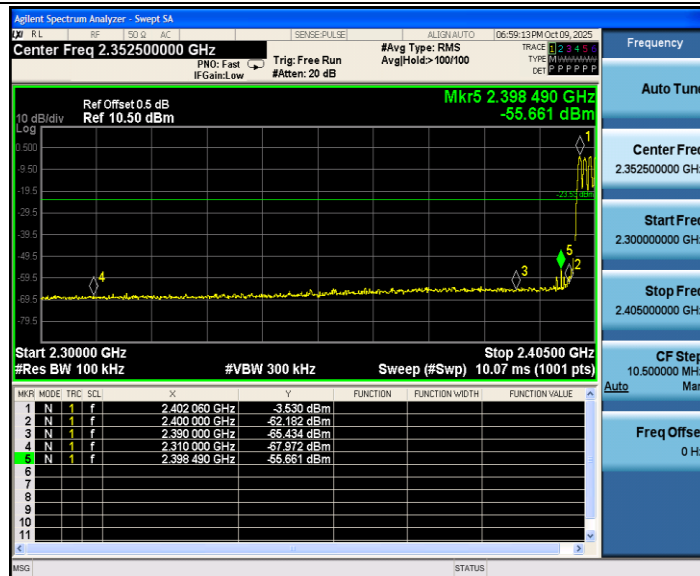
Appendix G: Band edge measurements

Test Result

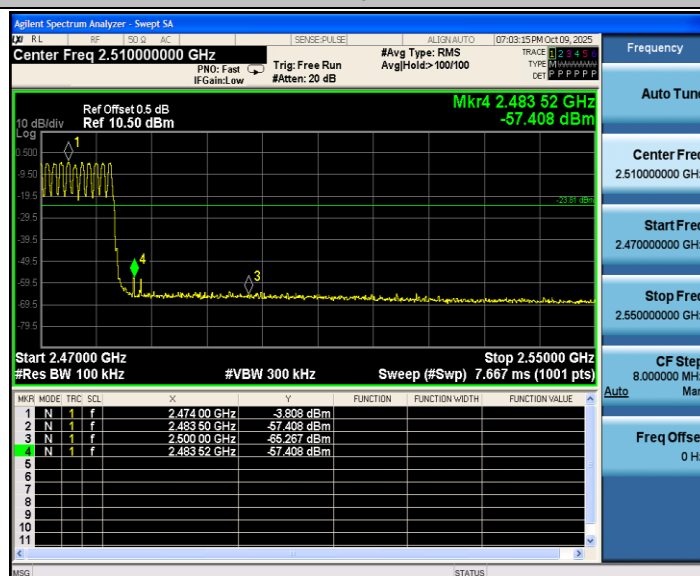
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.22	-54.1	≤ -20.22	PASS
		High	2480	-0.13	-58.02	≤ -20.13	PASS
		Low	Hop_2402	-3.53	-55.66	≤ -23.53	PASS
		High	Hop_2480	-3.81	-57.41	≤ -23.81	PASS
2DH5	Ant1	Low	2402	-3.34	-60.58	≤ -23.34	PASS
		High	2480	-4.36	-64.5	≤ -24.36	PASS
		Low	Hop_2402	-3.65	-54.97	≤ -23.65	PASS
		High	Hop_2480	-3.68	-55.07	≤ -23.68	PASS

Test Graphs

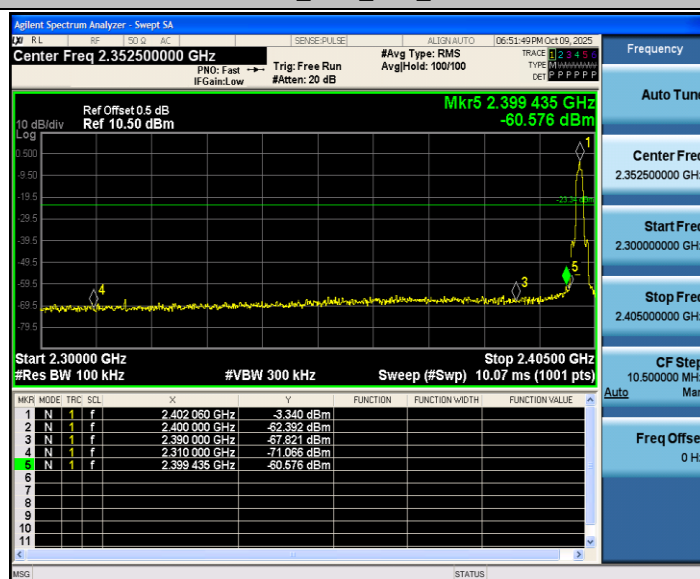




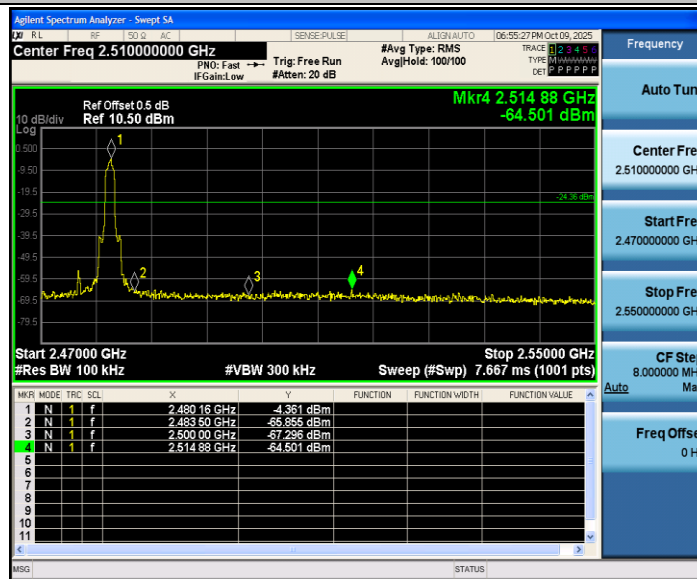
DH5_Ant1_High_Hop_2480



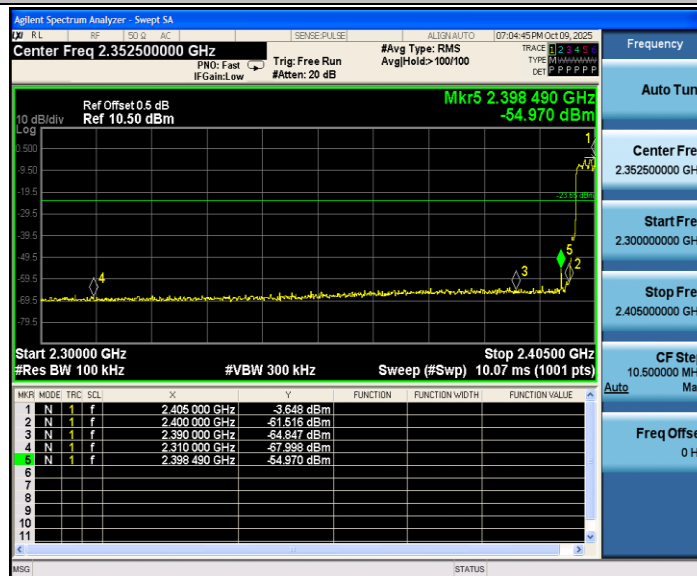
2DH5_Ant1_Low_2402



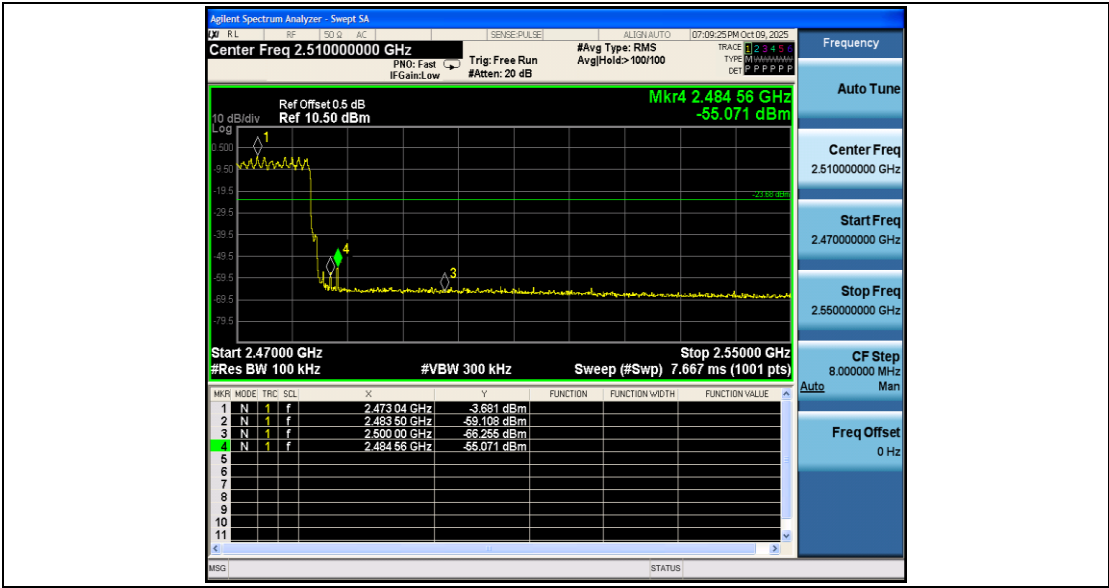
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480

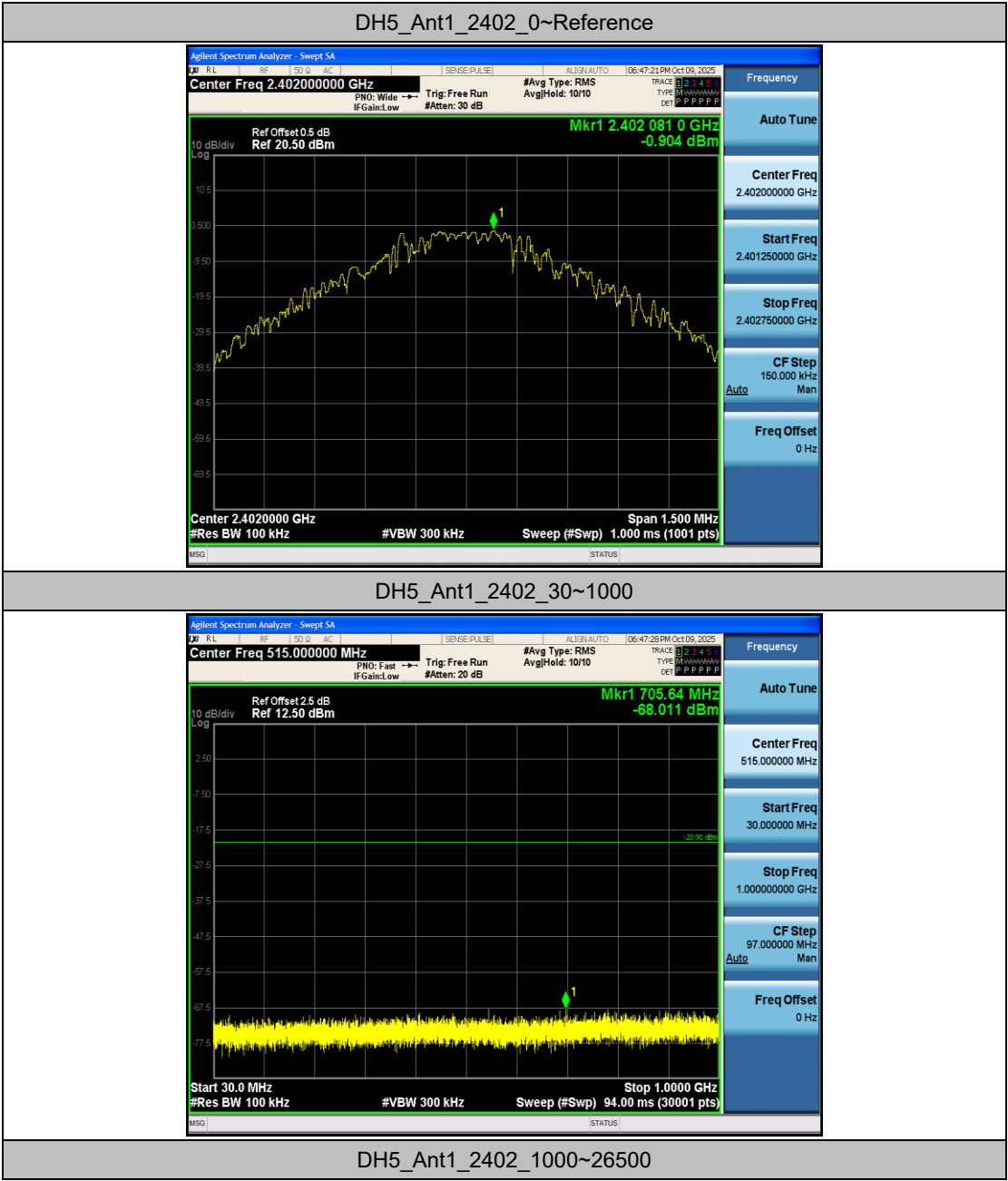


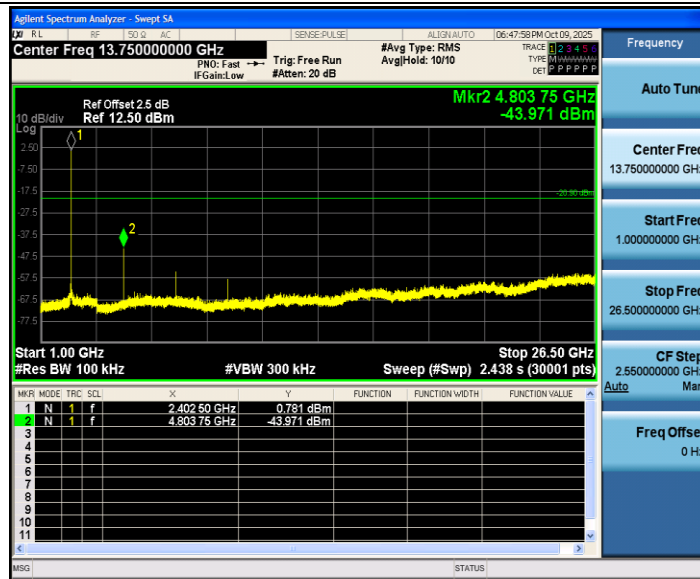
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.90	-0.90	---	PASS
			30~1000	-0.90	-68.01	≤-20.9	PASS
			1000~26500	-0.90	-43.97	≤-20.9	PASS
		2441	Reference	-1.10	-1.10	---	PASS
			30~1000	-1.10	-67.89	≤-21.1	PASS
			1000~26500	-1.10	-44.19	≤-21.1	PASS
		2480	Reference	-0.97	-0.97	---	PASS
			30~1000	-0.97	-67.53	≤-20.97	PASS
			1000~26500	-0.97	-44.82	≤-20.97	PASS
2DH5	Ant1	2402	Reference	-5.75	-5.75	---	PASS
			30~1000	-5.75	-67.25	≤-25.75	PASS
			1000~26500	-5.75	-51.62	≤-25.75	PASS
		2441	Reference	-6.83	-6.83	---	PASS
			30~1000	-6.83	-58.32	≤-26.83	PASS
			1000~26500	-6.83	-46.94	≤-26.83	PASS
		2480	Reference	-6.92	-6.92	---	PASS
			30~1000	-6.92	-67.95	≤-26.92	PASS
			1000~26500	-6.92	-50.97	≤-26.92	PASS

Test Graphs

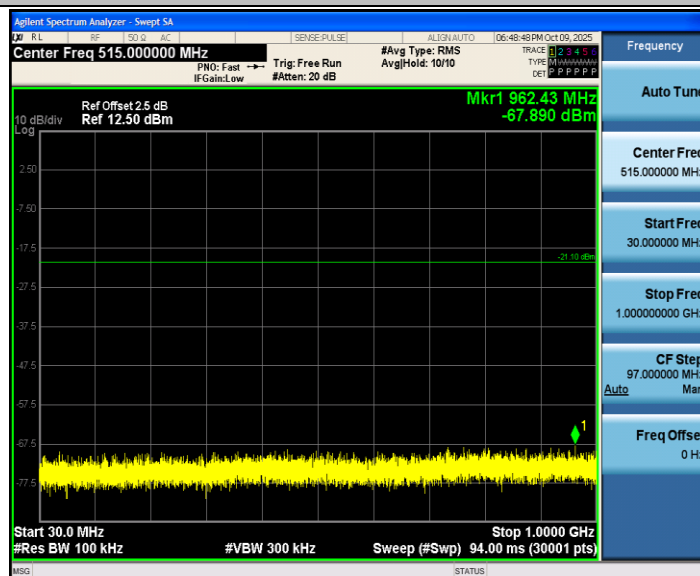




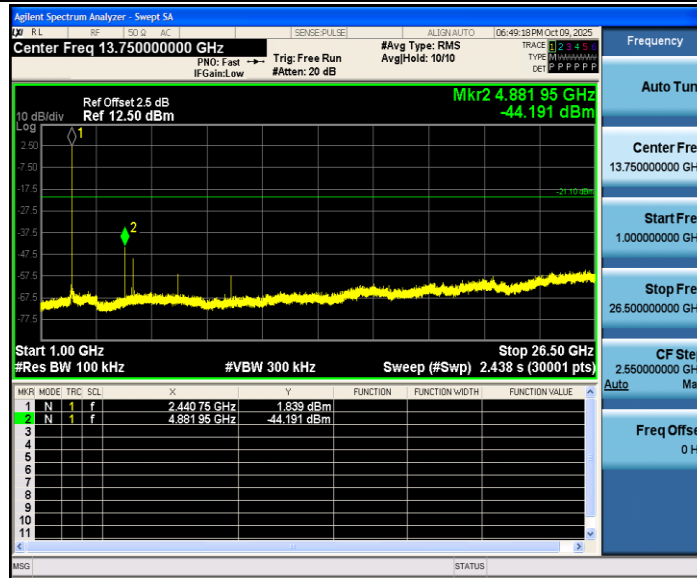
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



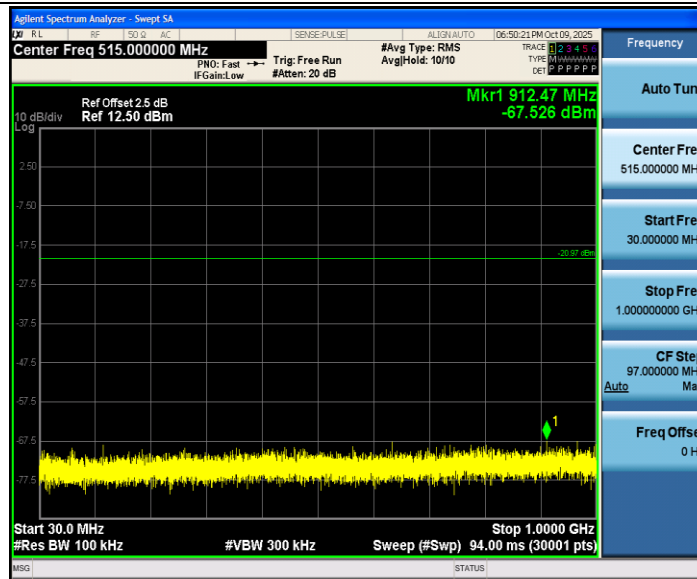
DH5_Ant1_2441_1000~26500



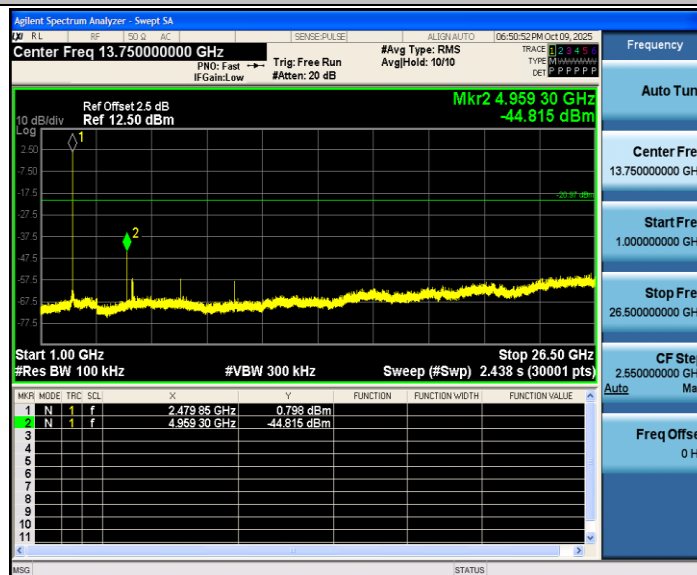
DH5_Ant1_2480_0~Reference



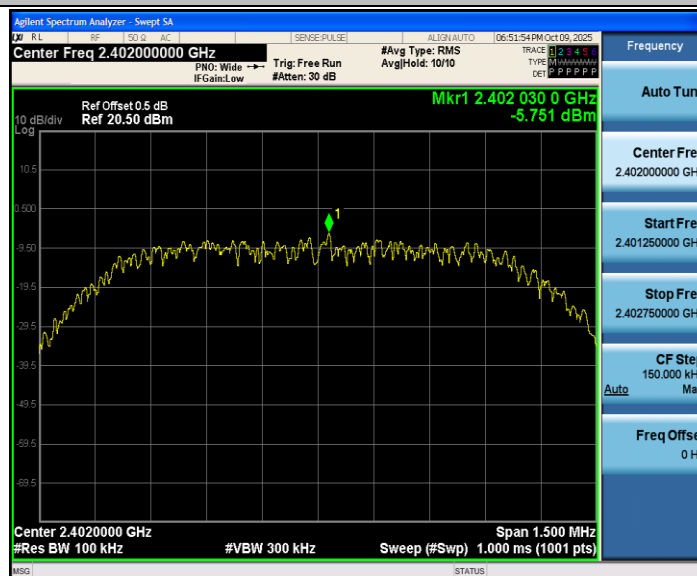
DH5_Ant1_2480_30~1000



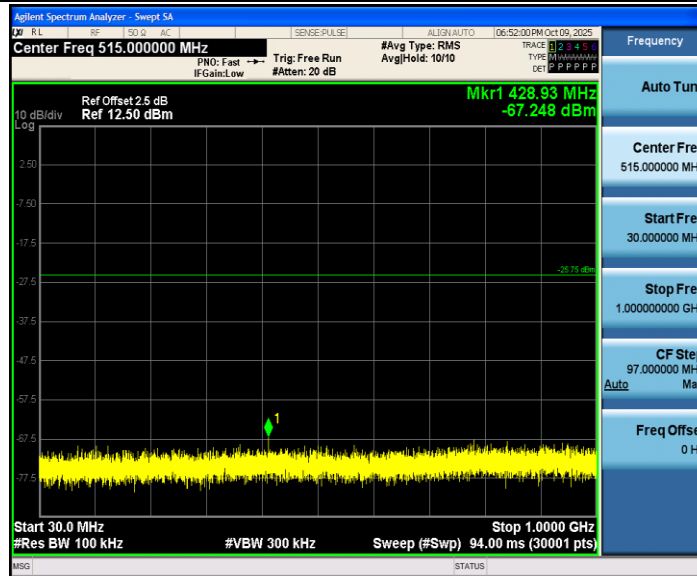
DH5_Ant1_2480_1000~26500



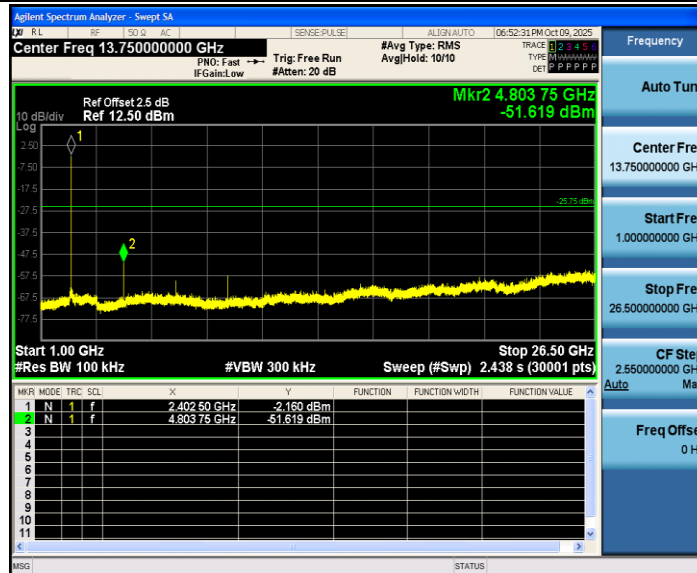
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



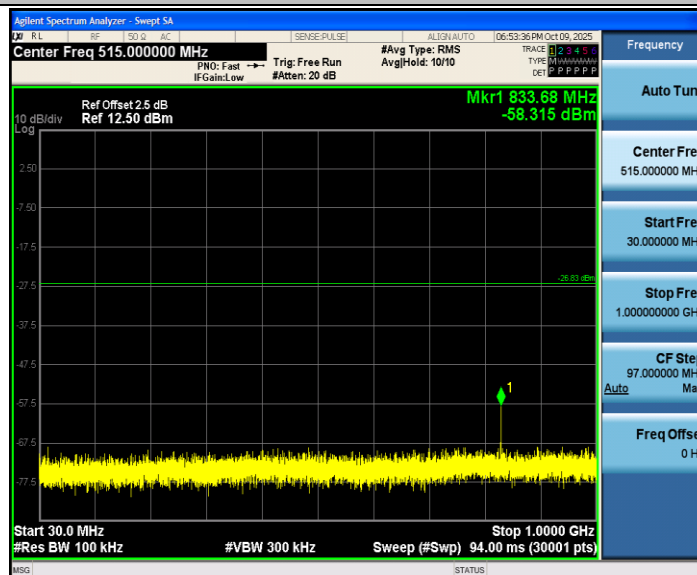
2DH5_Ant1_2402_1000~26500



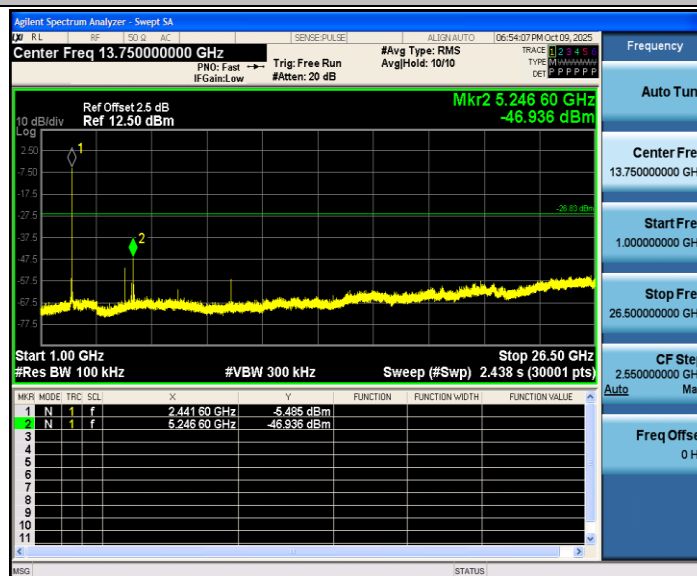
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



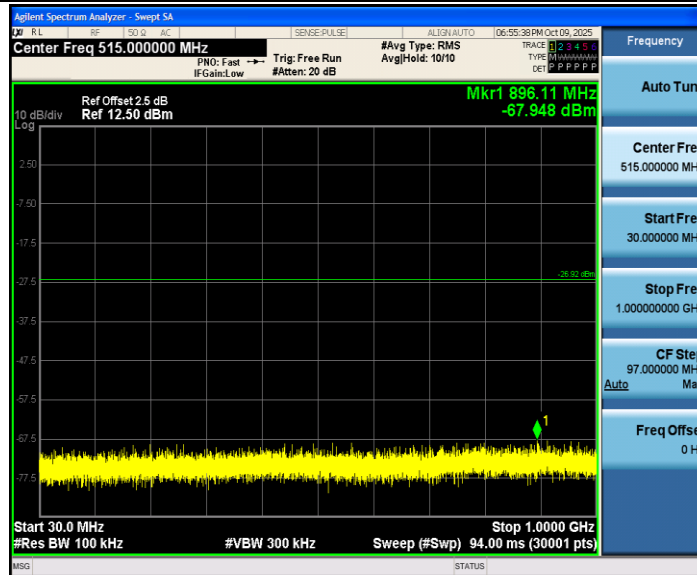
2DH5_Ant1_2441_1000~26500



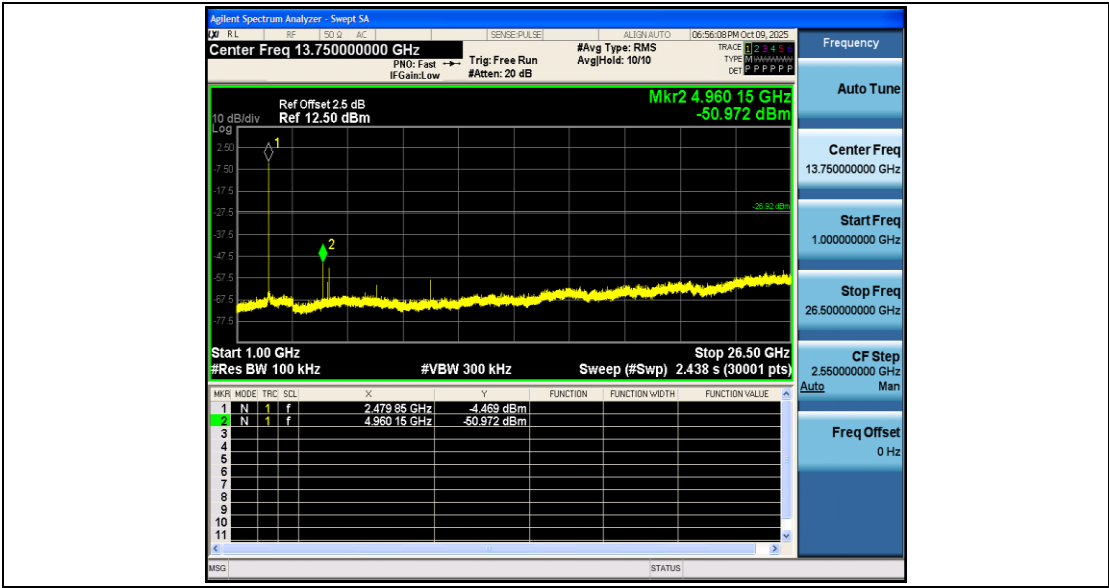
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500

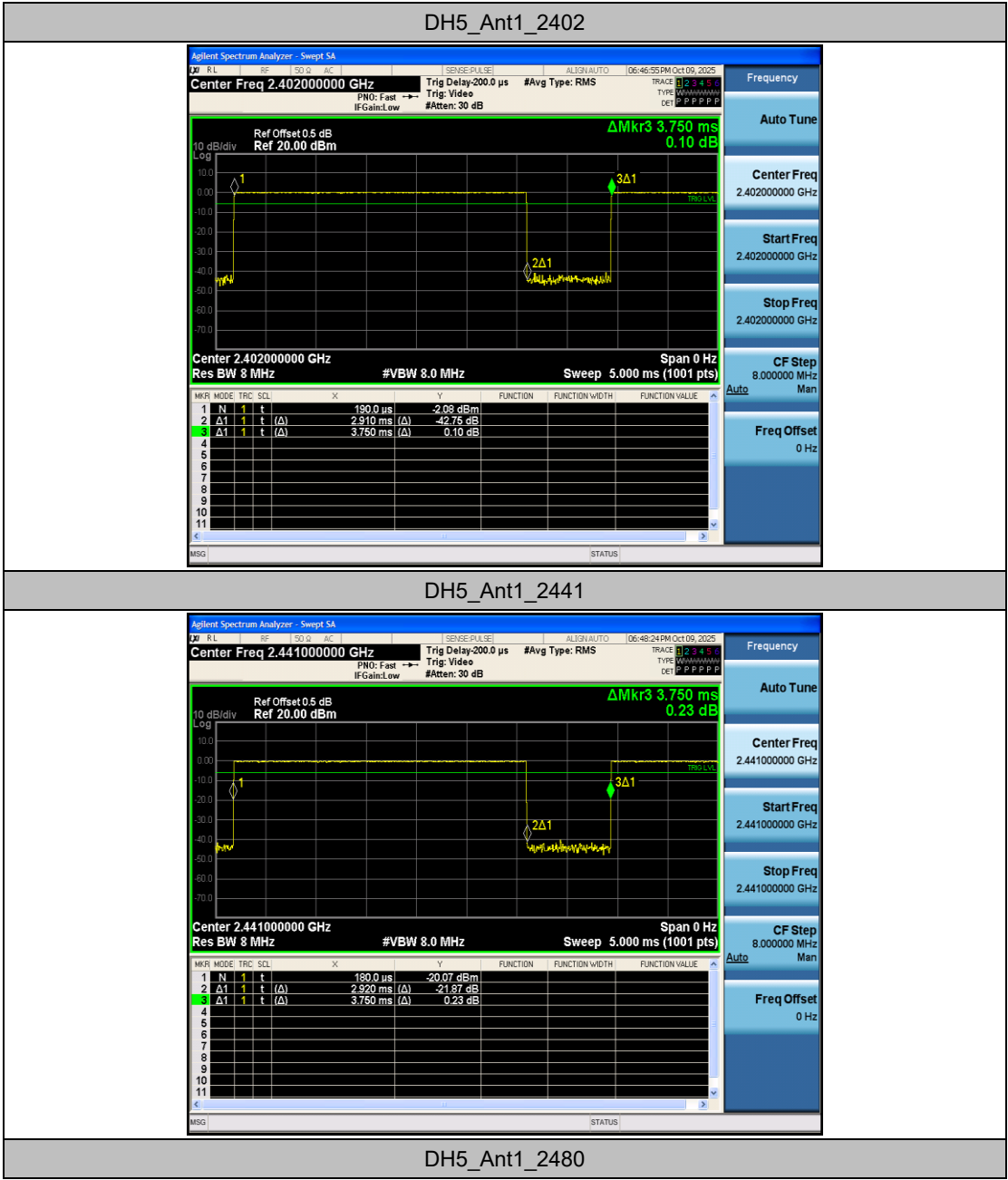


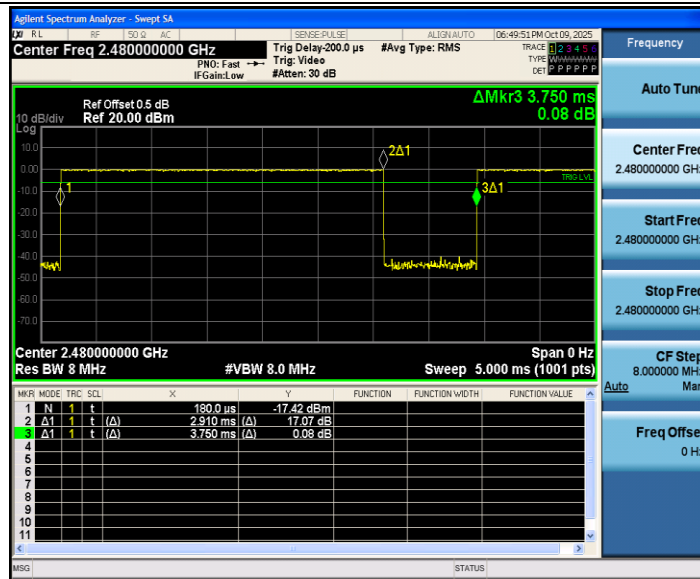
Appendix I: Duty Cycle

Test Result

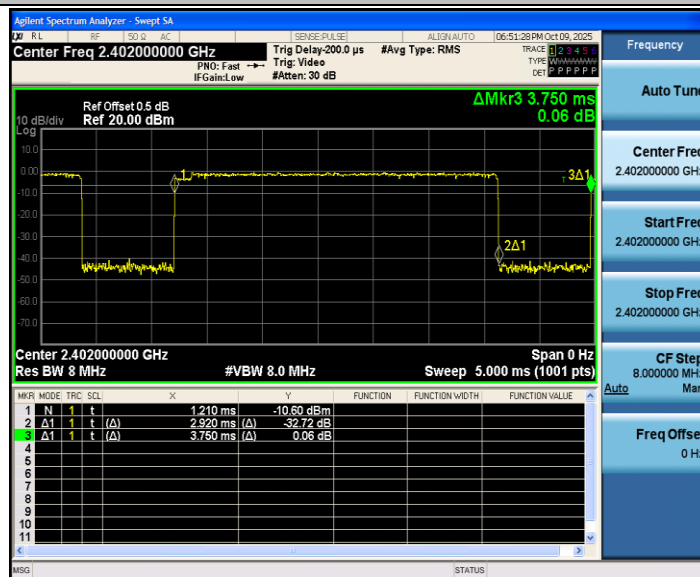
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.91	3.75	77.60	1.10	---	---
		2441	2.92	3.75	77.87	1.09	---	---
		2480	2.91	3.75	77.60	1.10	---	---
2DH5	Ant1	2402	2.92	3.75	77.87	1.09	---	---
		2441	2.91	3.75	77.60	1.10	---	---
		2480	2.91	3.75	77.60	1.10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

Test Graphs

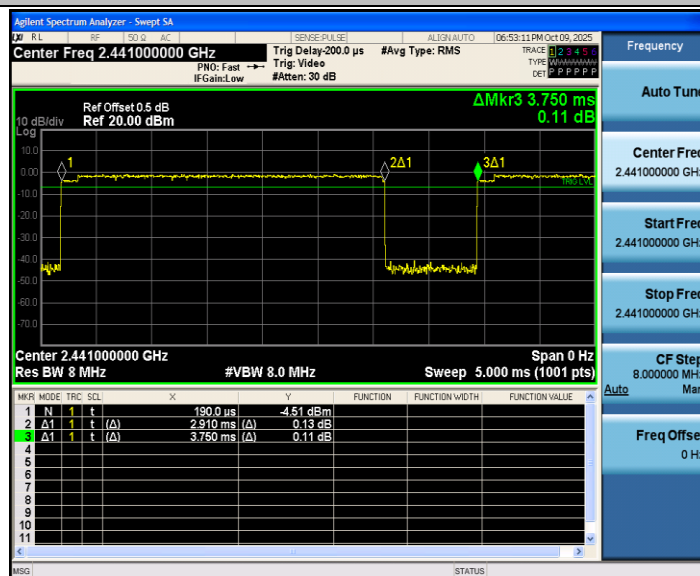




2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

