

FCC Appendix RF Test Data for BT

FCC ID : 2BWB7-STYX-01

Company : Quanzhou Taishang Investment Zone Kunyuan Trading Co.,
Ltd.

EUT : Solar-powered Bluetooth speaker

Model Number : STYX-01

Report No. : CTA26051202401

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	0.963	2401.499	2402.462	---	---
		2441	0.963	2440.499	2441.462	---	---
		2480	0.954	2479.499	2480.453	---	---
2DH5	Ant1	2402	1.278	2401.340	2402.618	---	---
		2441	1.266	2440.337	2441.603	---	---
		2480	1.269	2479.343	2480.612	---	---

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	0.86607	2401.5342	2402.4002	---	---
		2441	0.85846	2440.5356	2441.3940	---	---
		2480	0.86839	2479.5353	2480.4037	---	---
2DH5	Ant1	2402	1.1912	2401.3746	2402.5658	---	---
		2441	1.1719	2440.3845	2441.5564	---	---
		2480	1.1886	2479.3730	2480.5616	---	---

Test Graphs

DH5_Ant1_2402



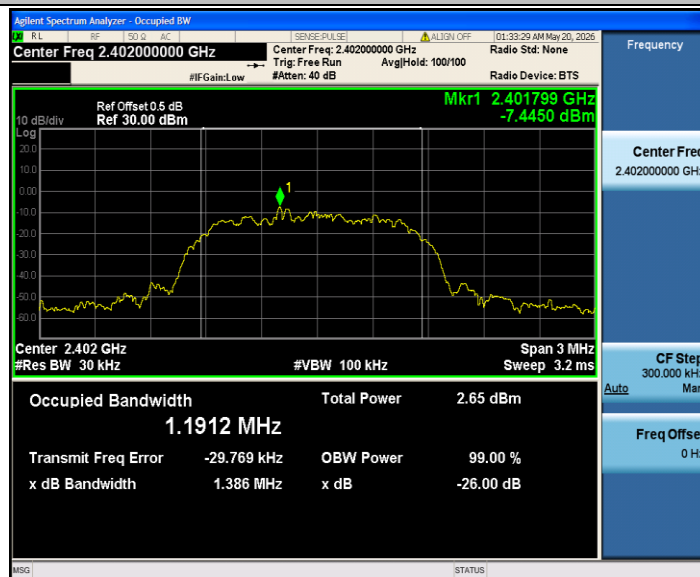
DH5_Ant1_2441



DH5_Ant1_2480



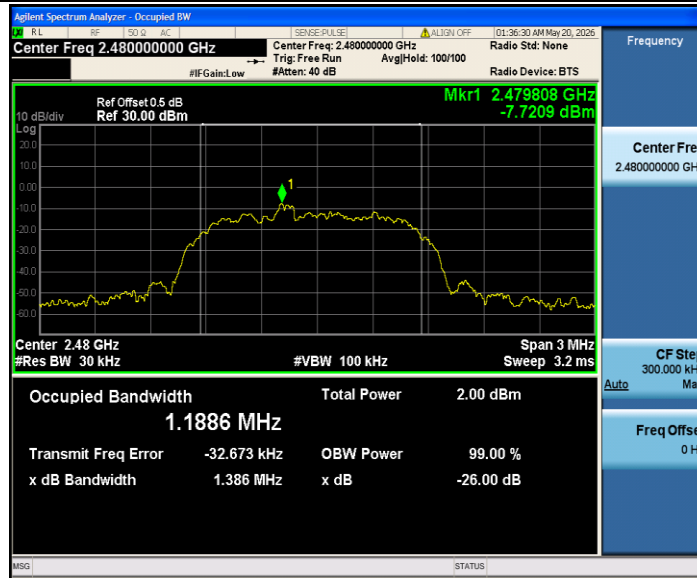
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result

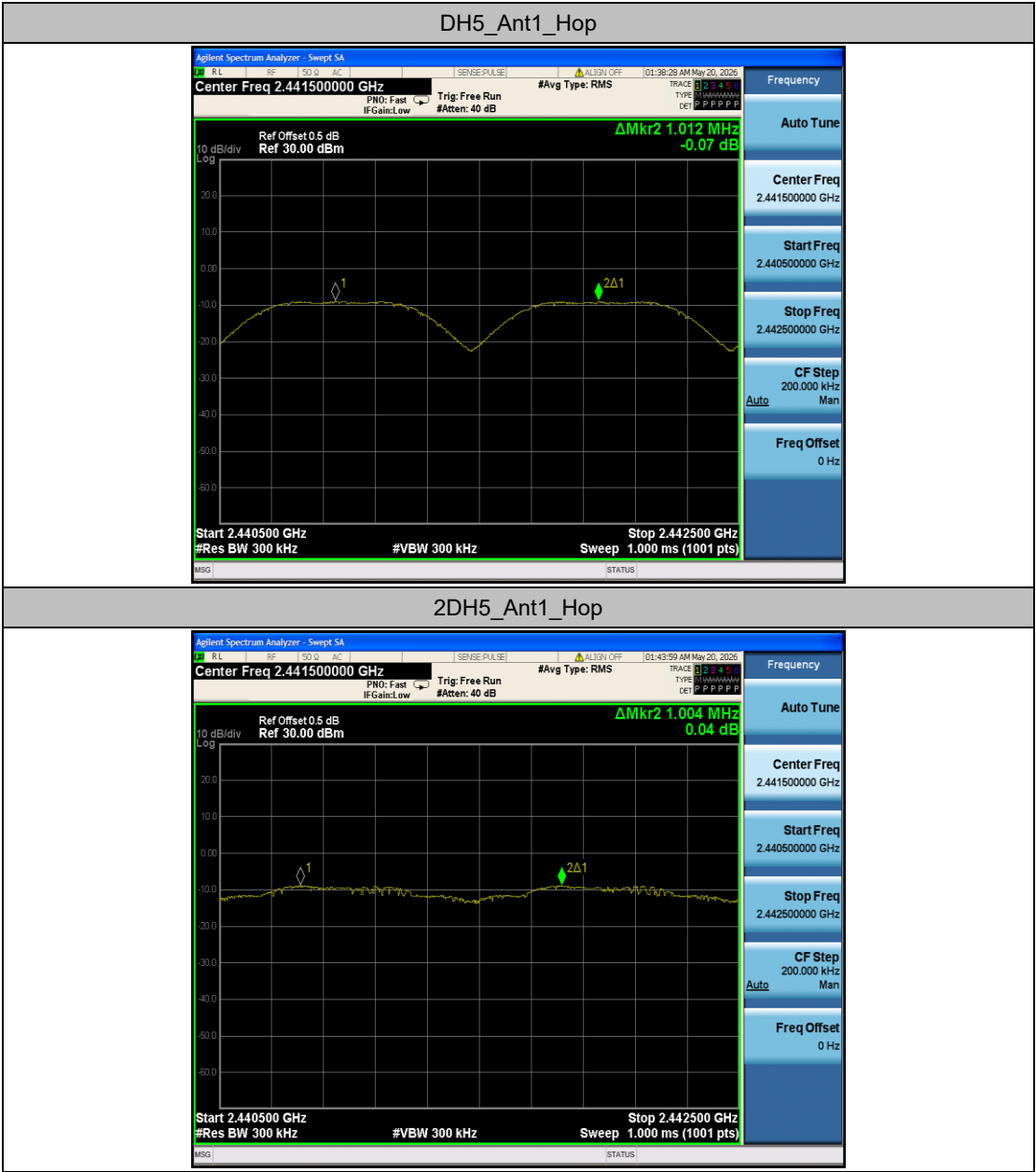
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.46	≤20.97	PASS
		2441	0.23	≤20.97	PASS
		2480	-0.37	≤20.97	PASS
2DH5	Ant1	2402	-1.79	≤20.97	PASS
		2441	-2.02	≤20.97	PASS
		2480	-2.50	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.012	≥ 0.963	PASS
2DH5	Ant1	Hop	1.004	≥ 0.852	PASS

Test Graphs

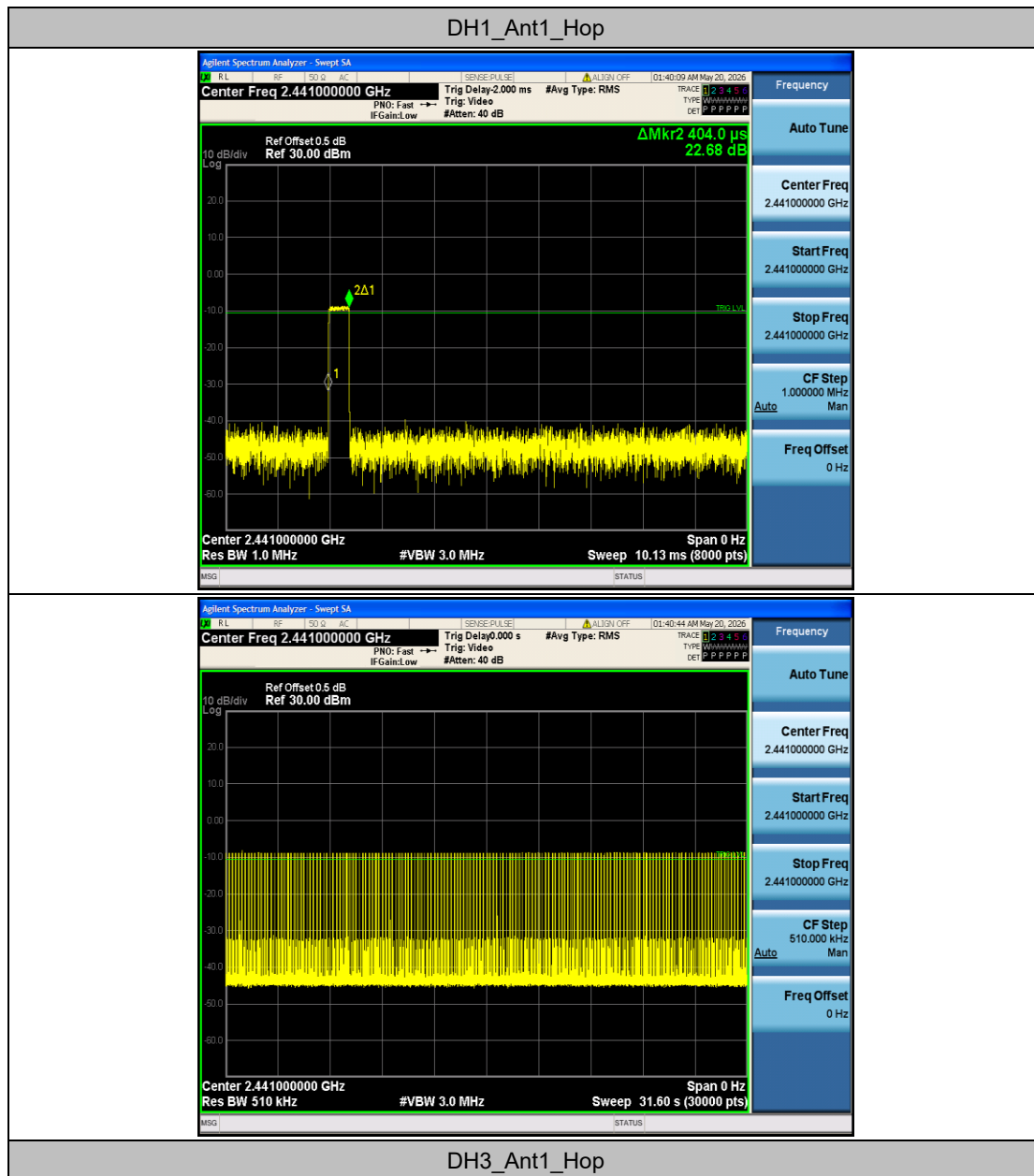


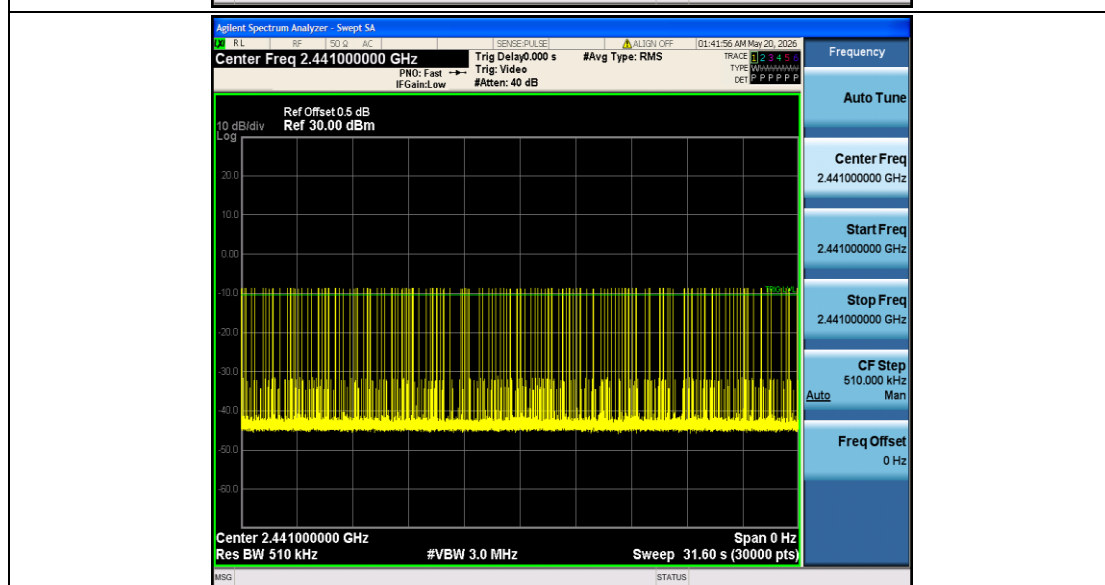
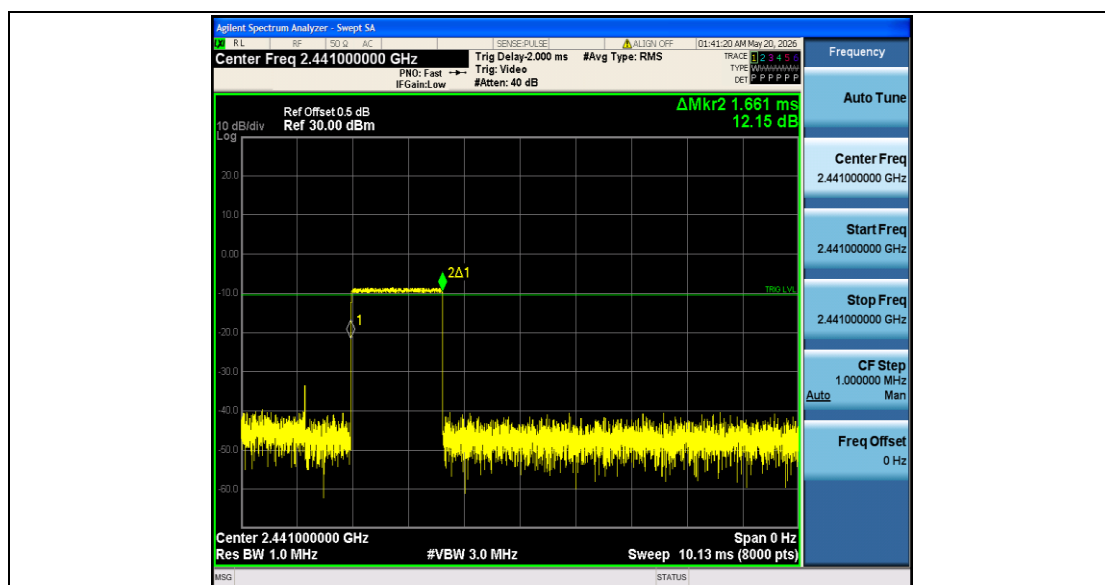
Appendix E: Time of occupancy

Test Result

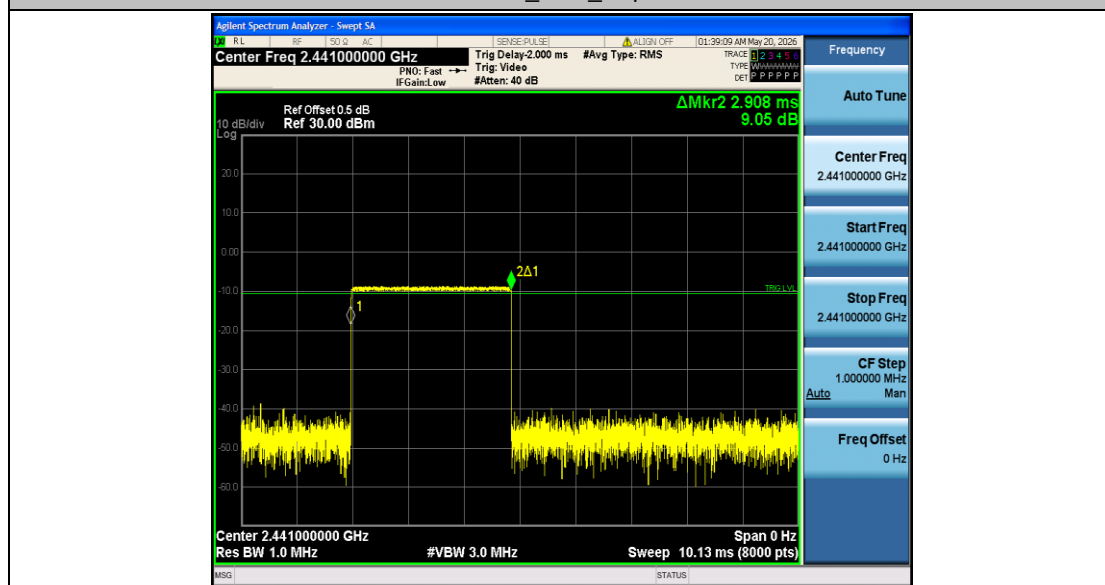
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.404	317	0.128	≤0.4	PASS
DH3	Ant1	Hop	1.661	160	0.266	≤0.4	PASS
DH5	Ant1	Hop	2.908	110	0.32	≤0.4	PASS
2DH1	Ant1	Hop	0.414	315	0.13	≤0.4	PASS
2DH3	Ant1	Hop	1.666	160	0.267	≤0.4	PASS
2DH5	Ant1	Hop	2.915	106	0.309	≤0.4	PASS

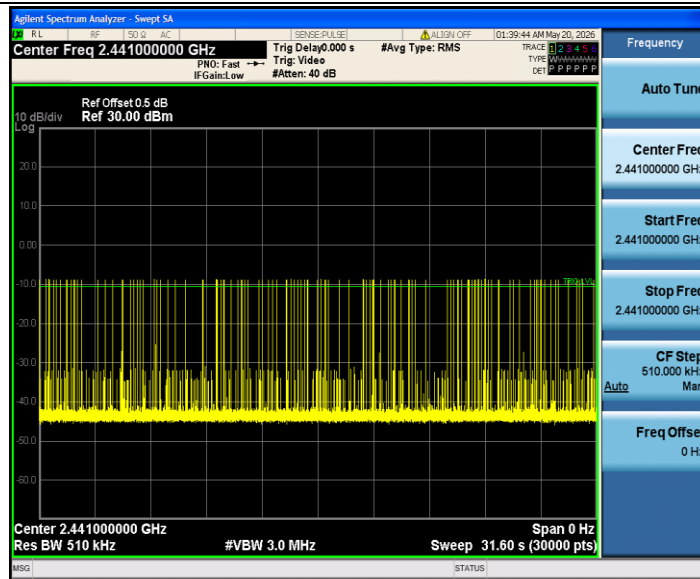
Test Graphs



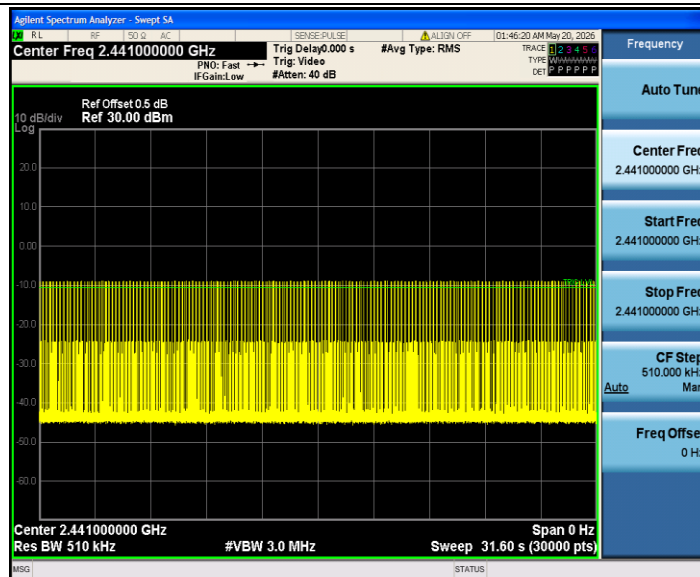
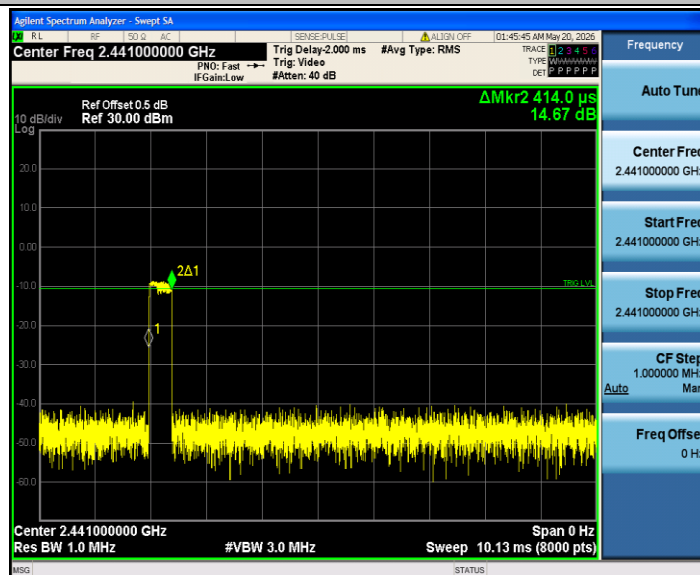


DH5_Ant1_Hop

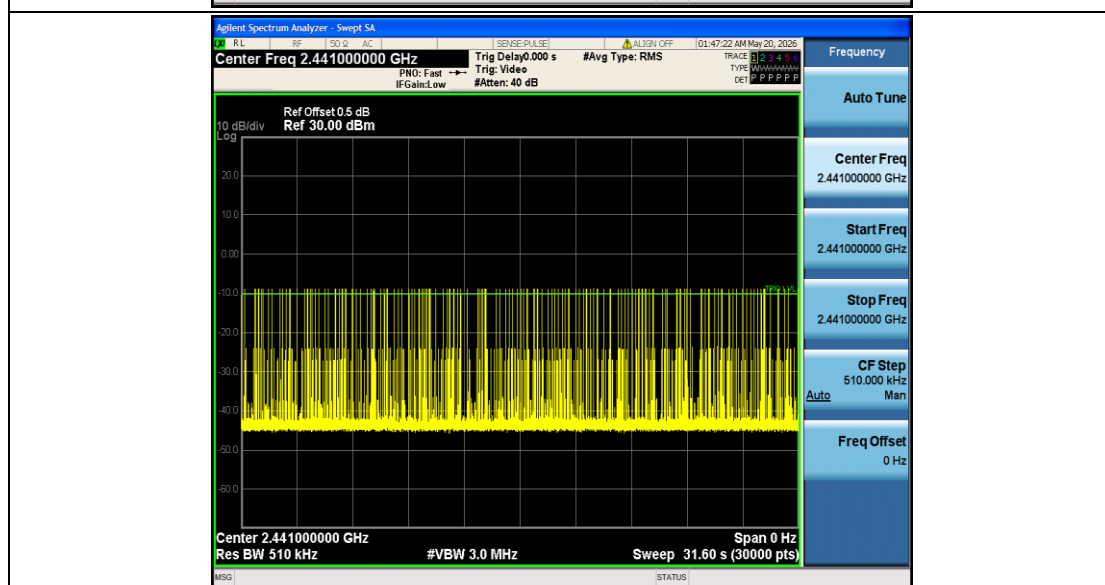
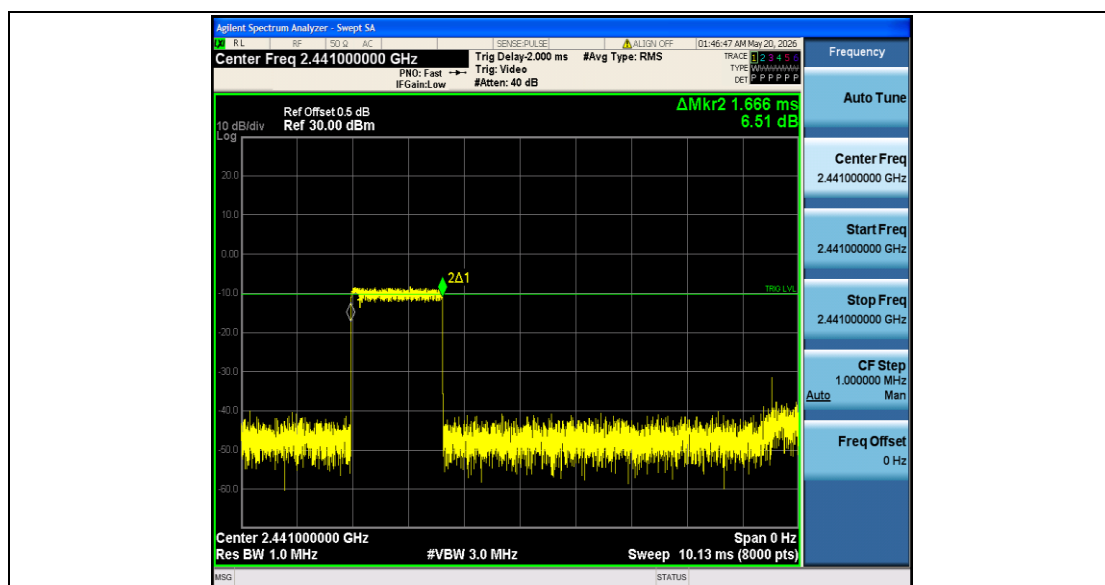




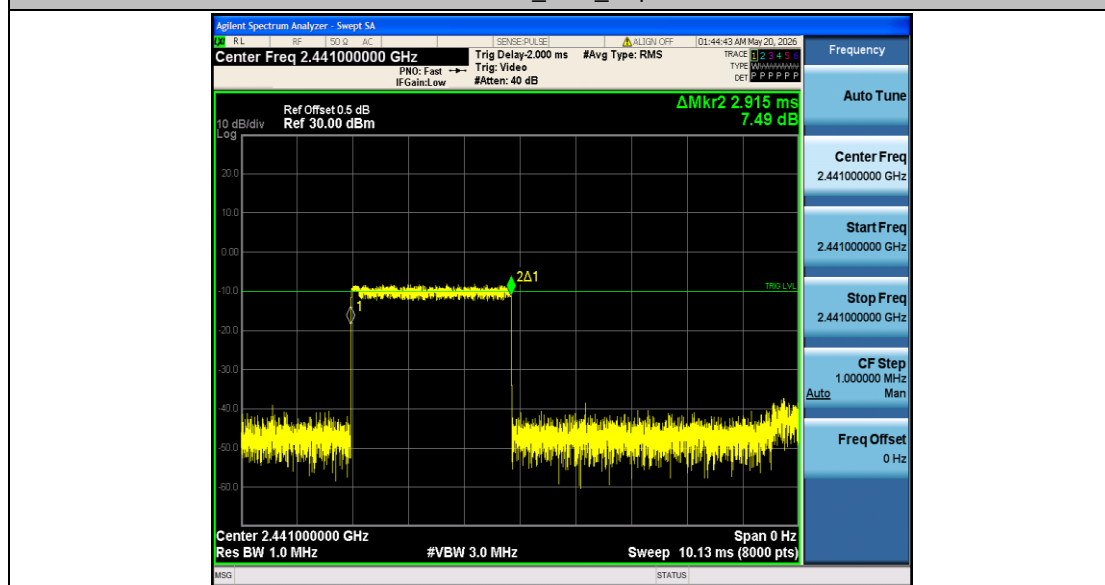
2DH1_Ant1_Hop

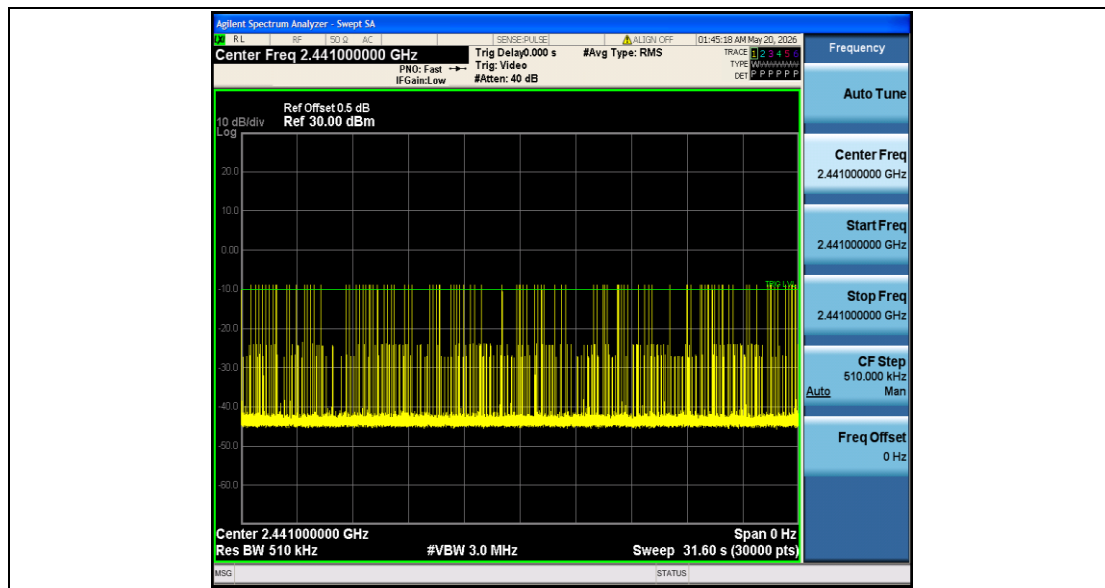


2DH3_Ant1_Hop



2DH5_Ant1_Hop



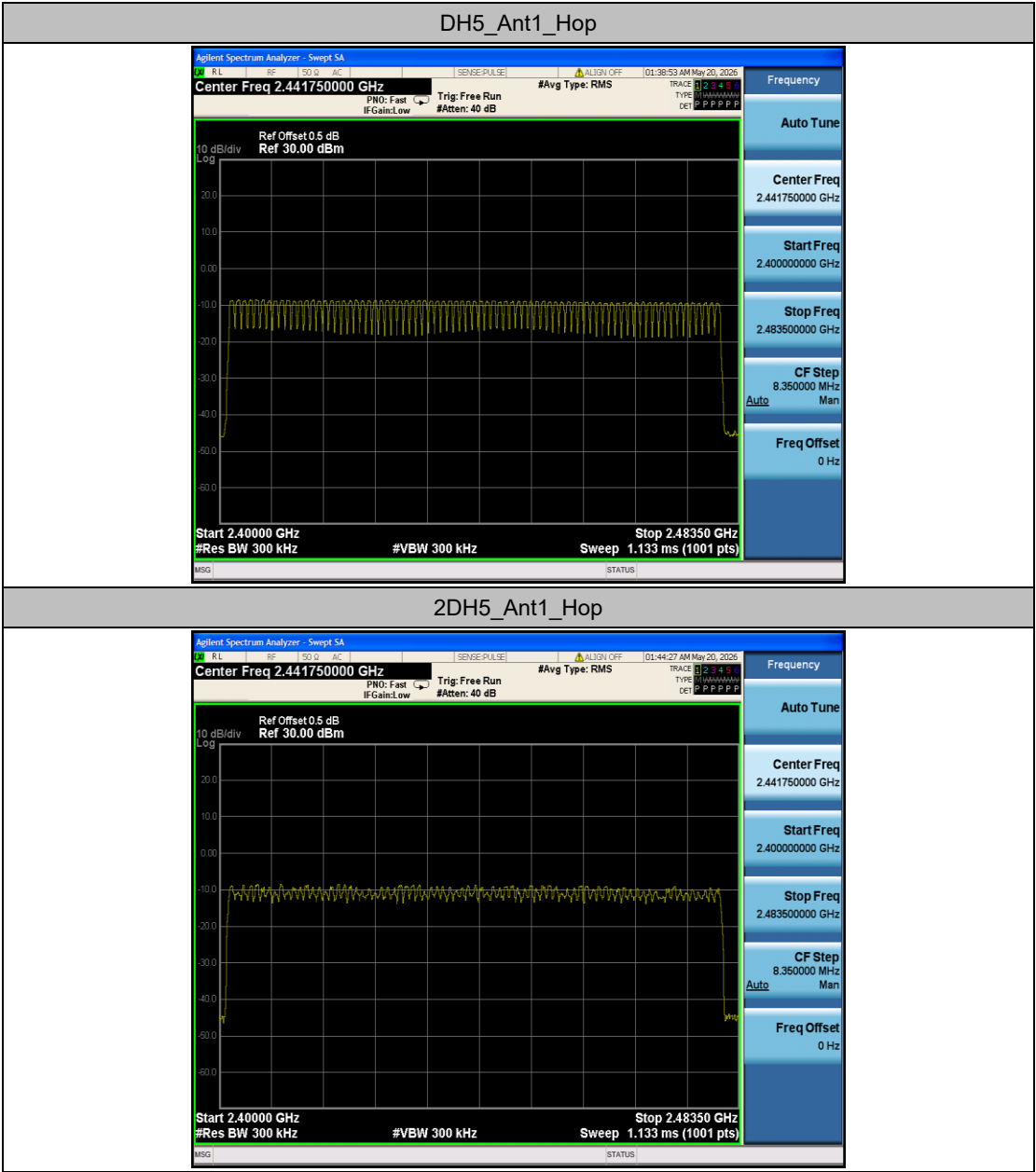


Appendix F: Number of hopping channels

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

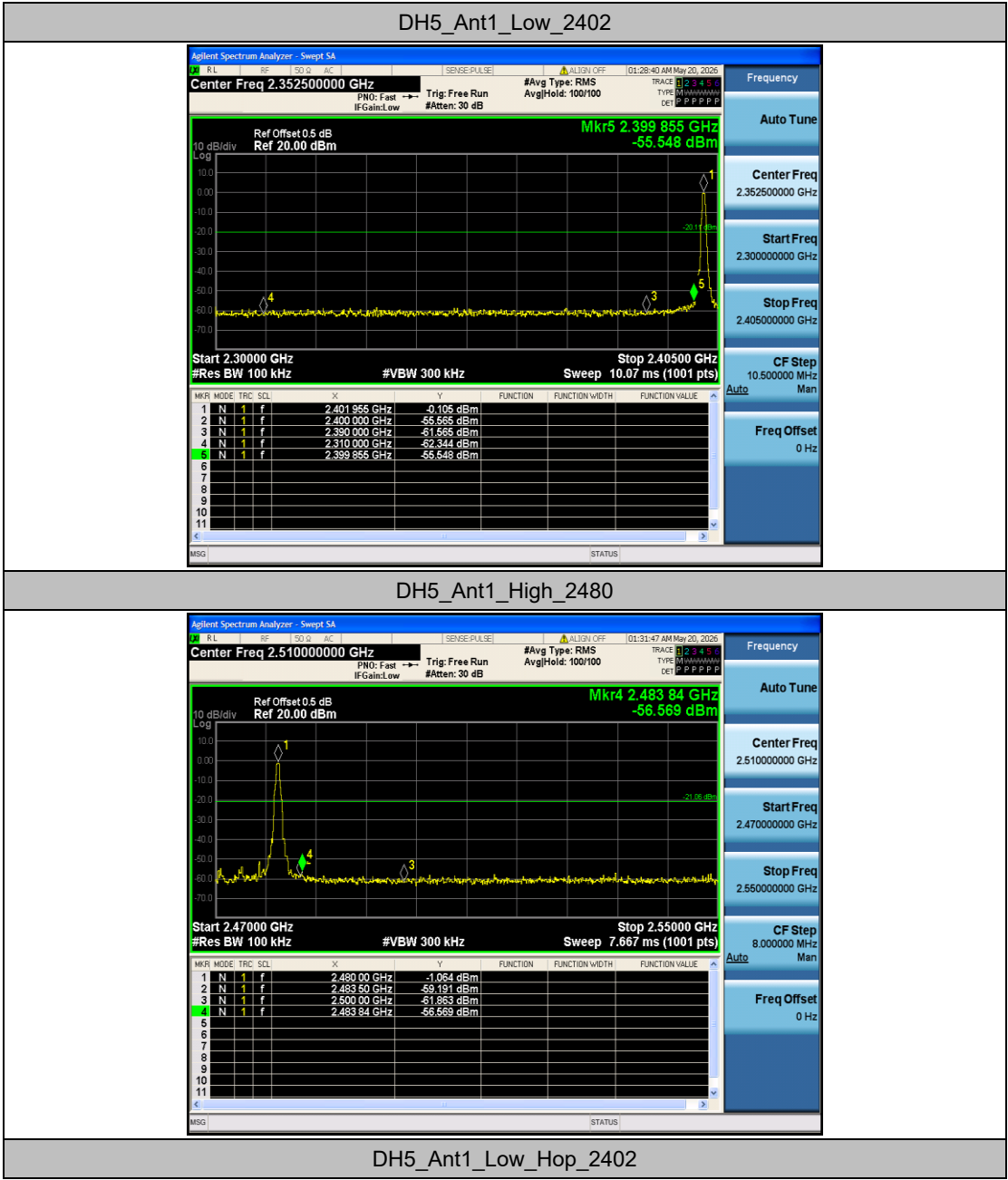


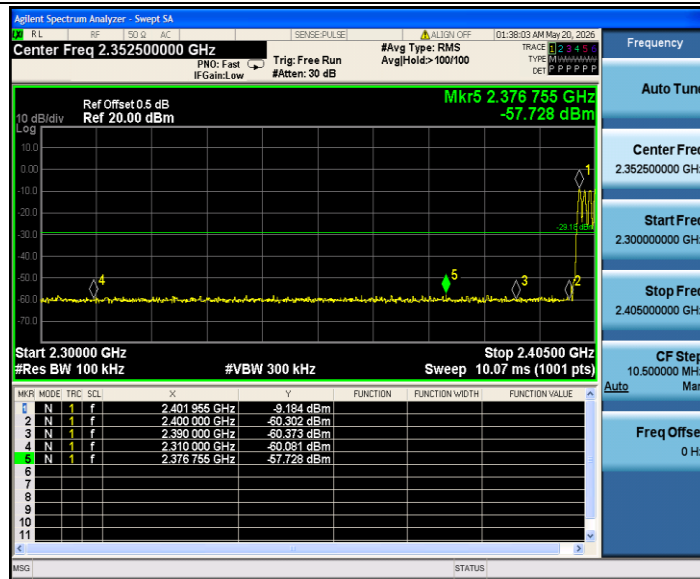
Appendix G: Band edge measurements

Test Result

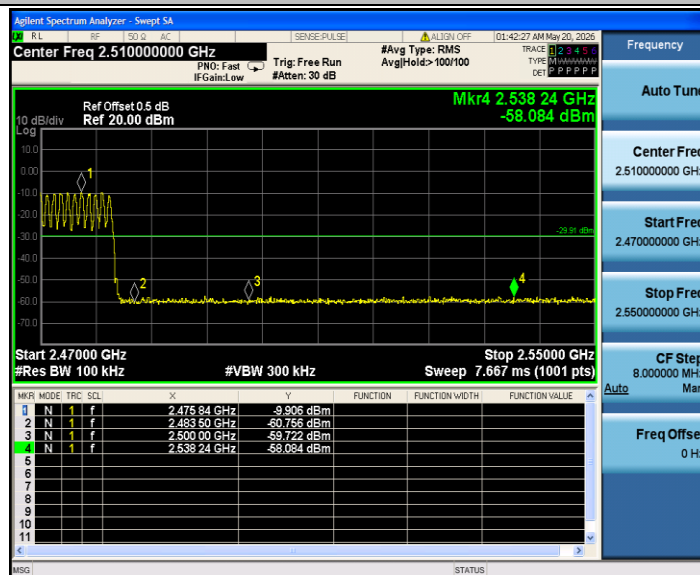
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.11	-55.55	≤-20.11	PASS
		High	2480	-1.06	-56.57	≤-21.06	PASS
		Low	Hop_2402	-9.18	-57.73	≤-29.18	PASS
		High	Hop_2480	-9.91	-58.08	≤-29.91	PASS
2DH5	Ant1	Low	2402	-5.99	-54.05	≤-25.99	PASS
		High	2480	-4.47	-56.53	≤-24.47	PASS
		Low	Hop_2402	-12.12	-57.76	≤-32.12	PASS
		High	Hop_2480	-9.86	-57.07	≤-29.86	PASS

Test Graphs

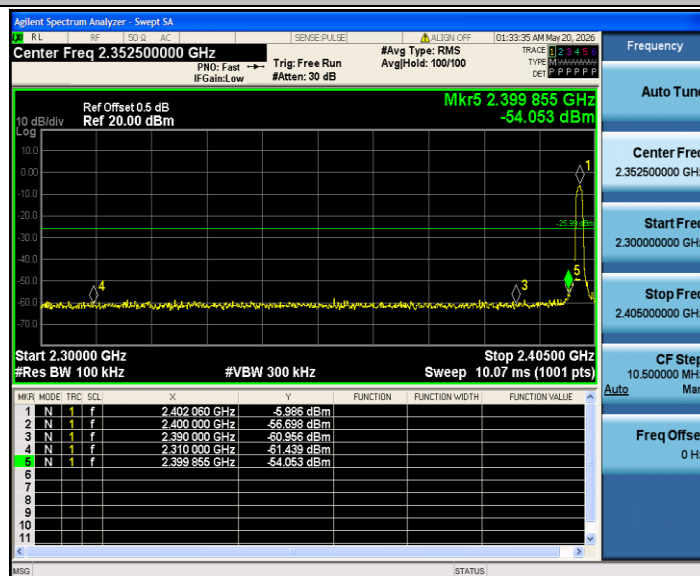




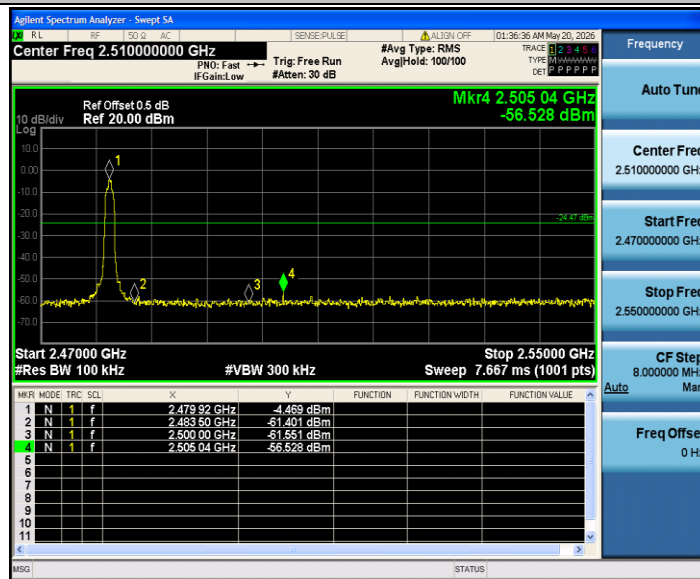
DH5_Ant1_High_Hop_2480



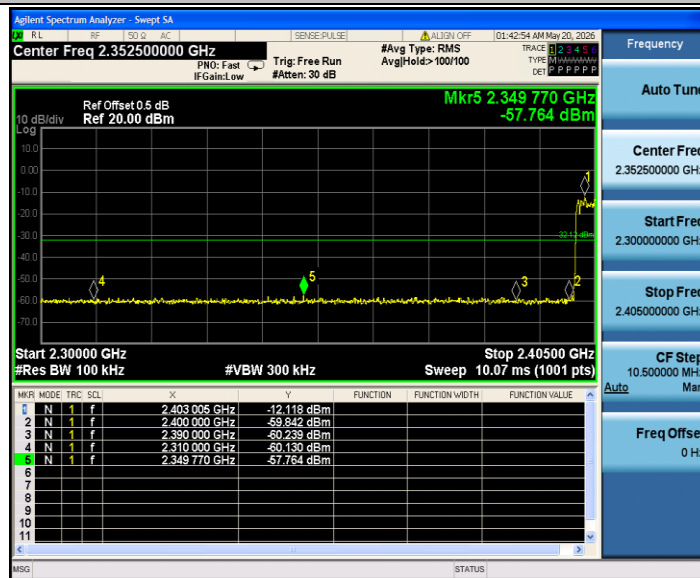
2DH5_Ant1_Low_2402



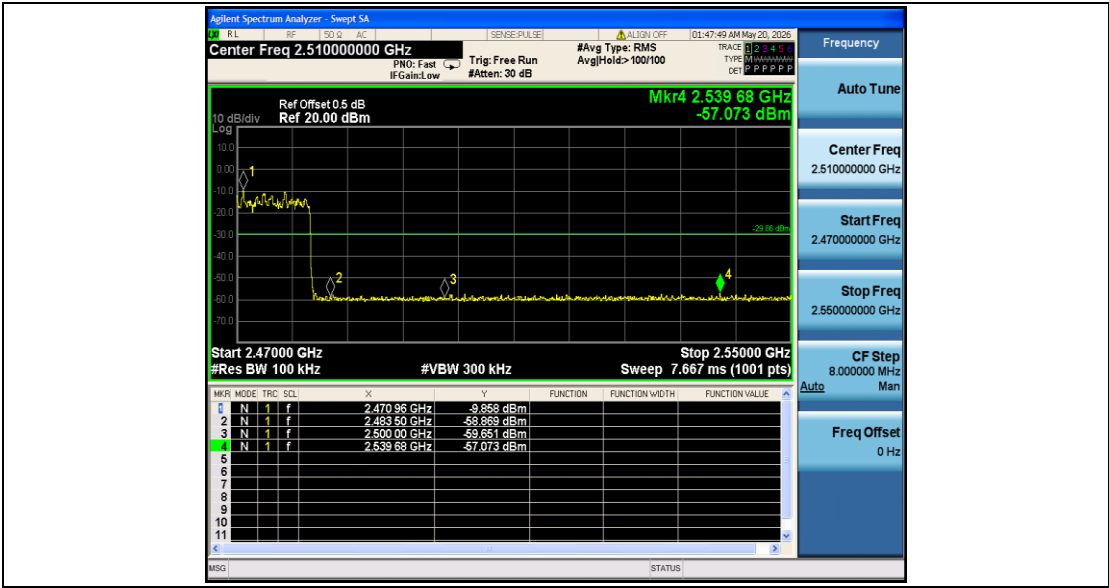
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480

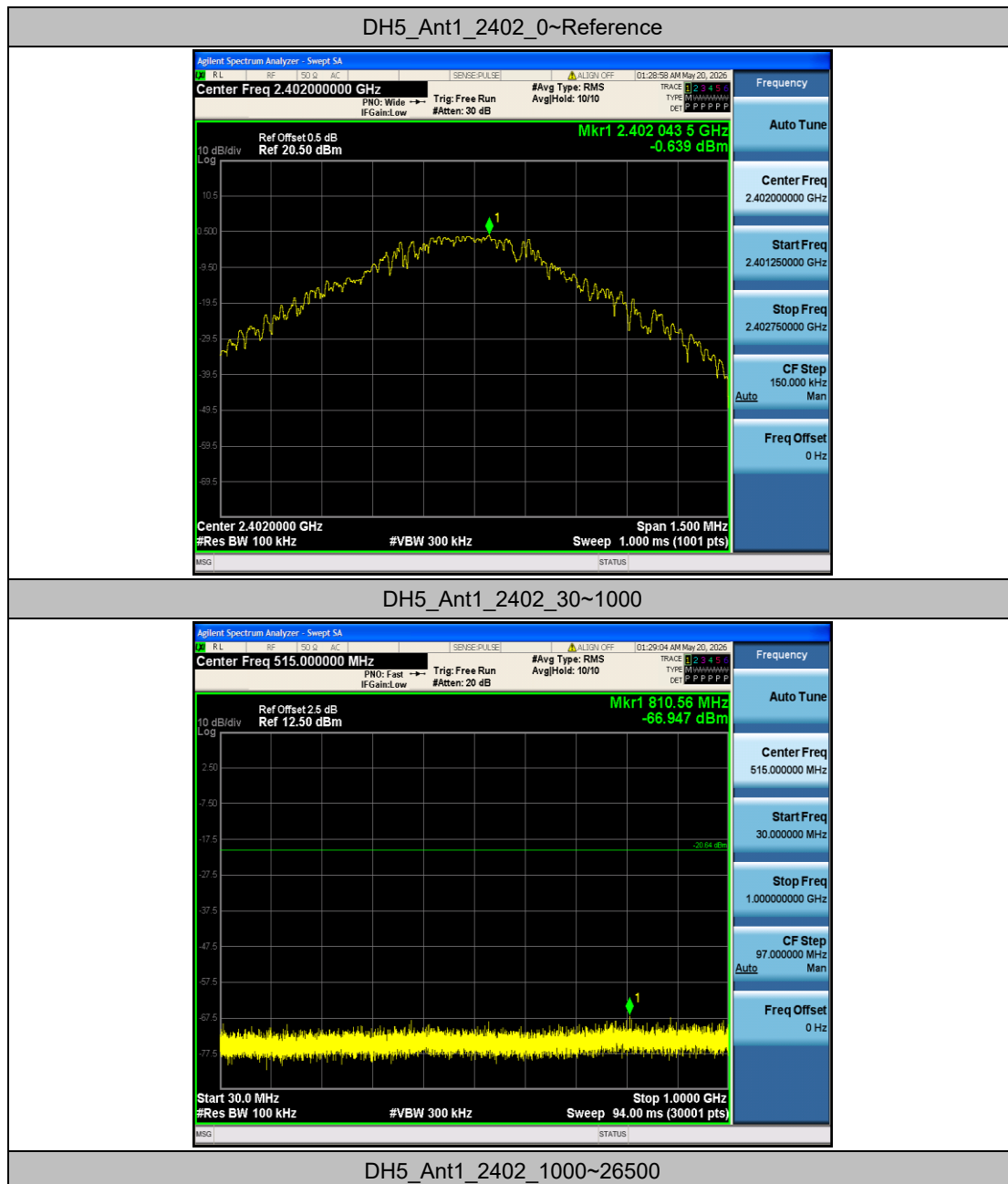


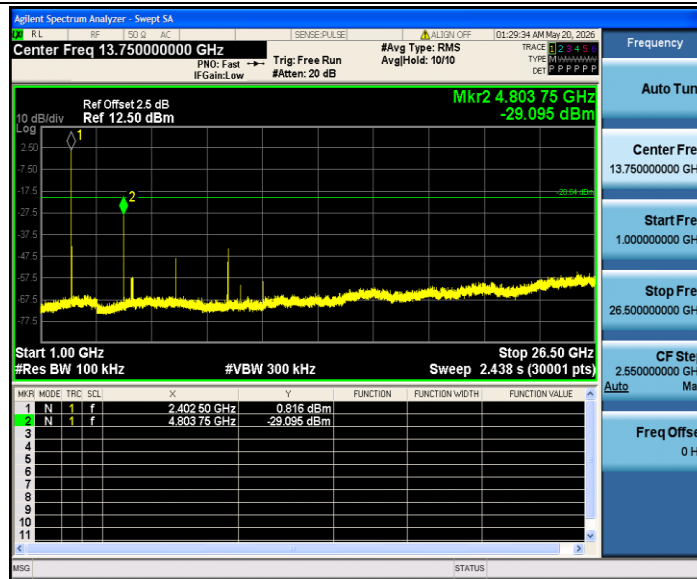
Appendix H: Conducted Spurious Emission

Test Result

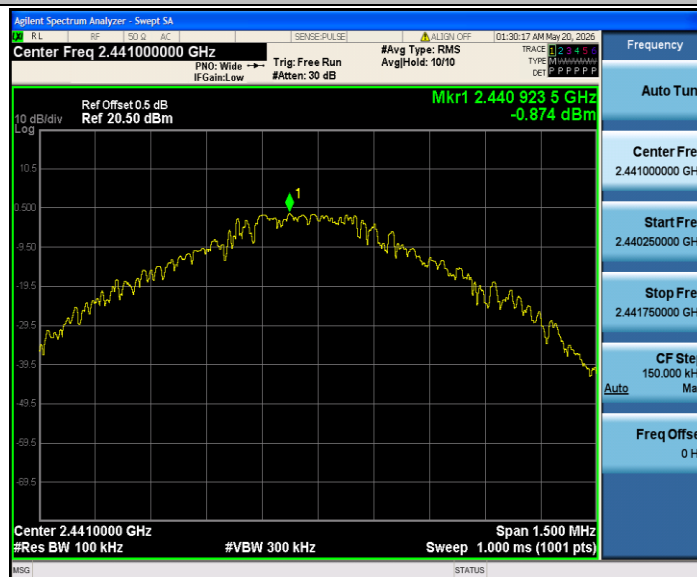
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.64	-0.64	---	PASS
			30~1000	-0.64	-66.95	≤-20.64	PASS
			1000~26500	-0.64	-29.1	≤-20.64	PASS
		2441	Reference	-0.87	-0.87	---	PASS
			30~1000	-0.87	-68.61	≤-20.87	PASS
			1000~26500	-0.87	-29.91	≤-20.87	PASS
		2480	Reference	-1.41	-1.41	---	PASS
			30~1000	-1.41	-67.89	≤-21.41	PASS
			1000~26500	-1.41	-27.85	≤-21.41	PASS
2DH5	Ant1	2402	Reference	-3.81	-3.81	---	PASS
			30~1000	-3.81	-67.92	≤-23.81	PASS
			1000~26500	-3.81	-36.47	≤-23.81	PASS
		2441	Reference	-4.95	-4.95	---	PASS
			30~1000	-4.95	-68.17	≤-24.95	PASS
			1000~26500	-4.95	-36.62	≤-24.95	PASS
		2480	Reference	-8.13	-8.13	---	PASS
			30~1000	-8.13	-68.01	≤-28.13	PASS
			1000~26500	-8.13	-37.26	≤-28.13	PASS

Test Graphs

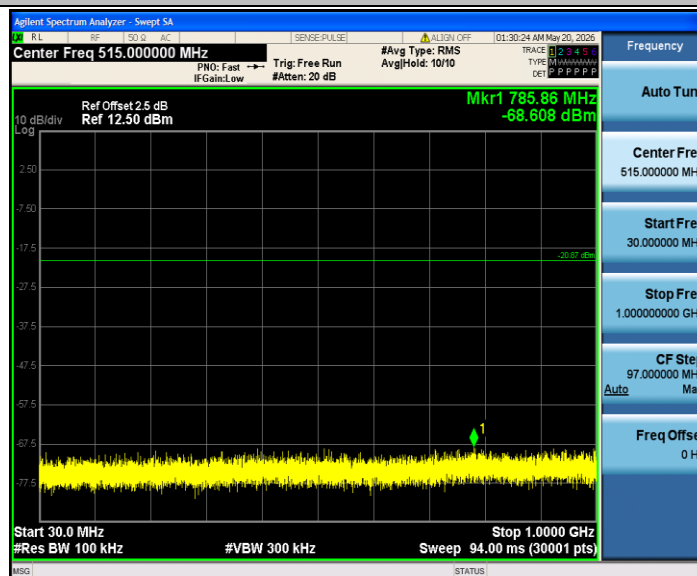




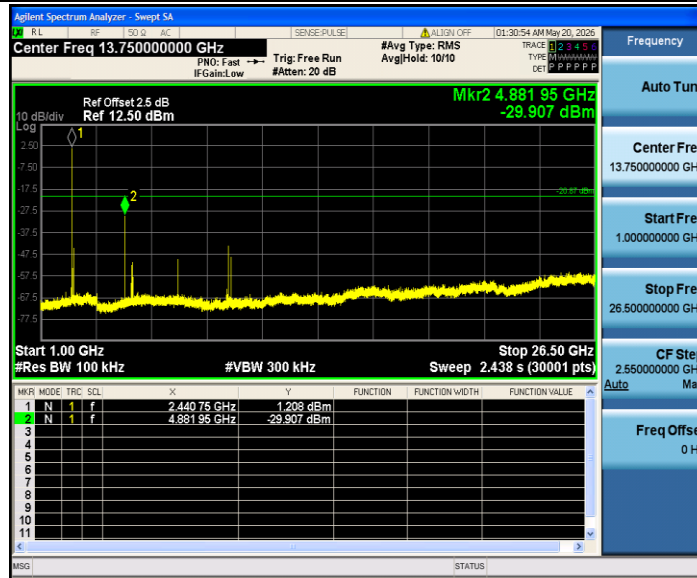
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



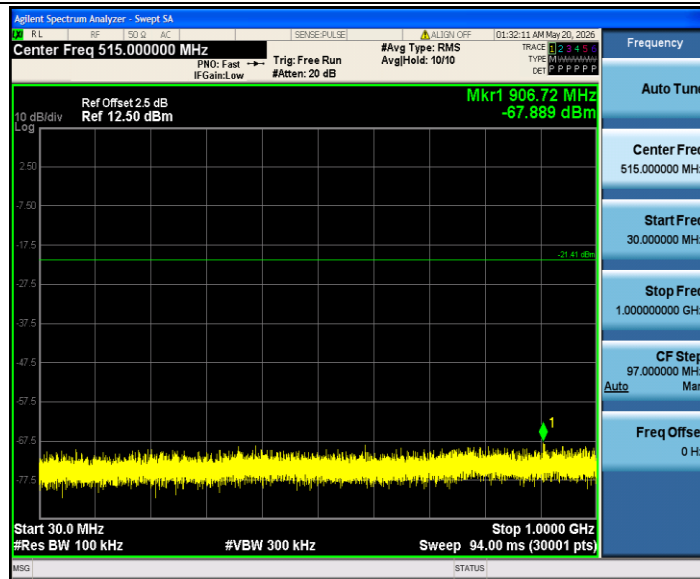
DH5_Ant1_2441_1000~26500



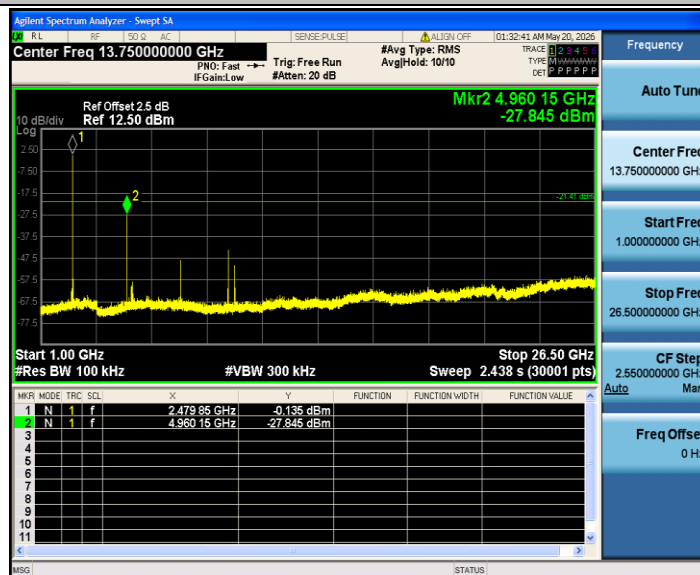
DH5_Ant1_2480_0~Reference



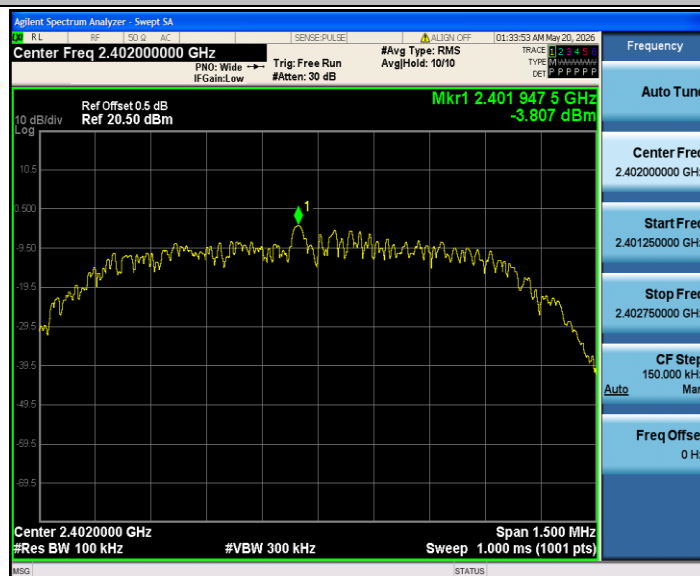
DH5_Ant1_2480_30~1000



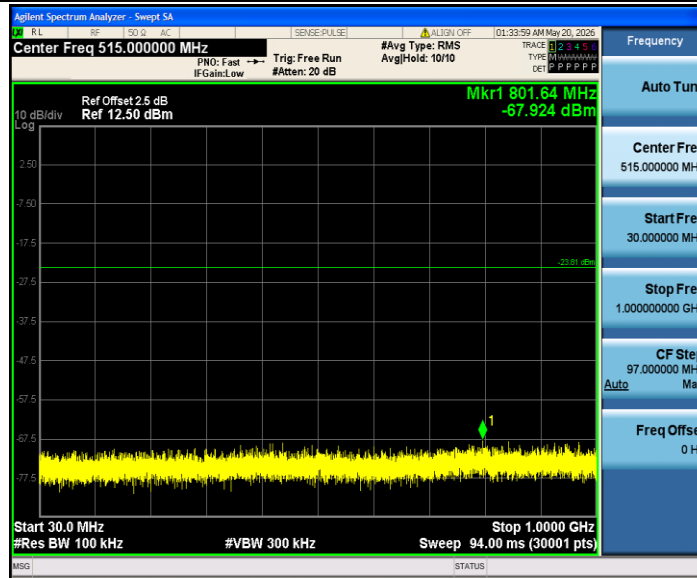
DH5_Ant1_2480_1000~26500



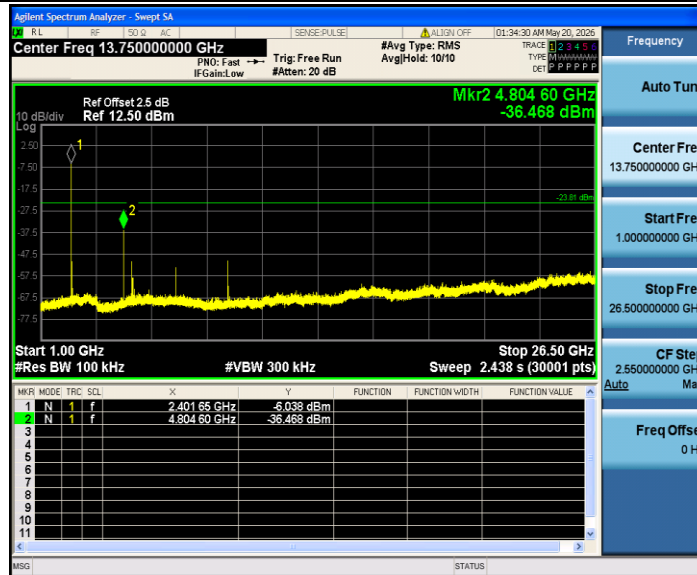
2DH5_Ant1_2402_0~Reference



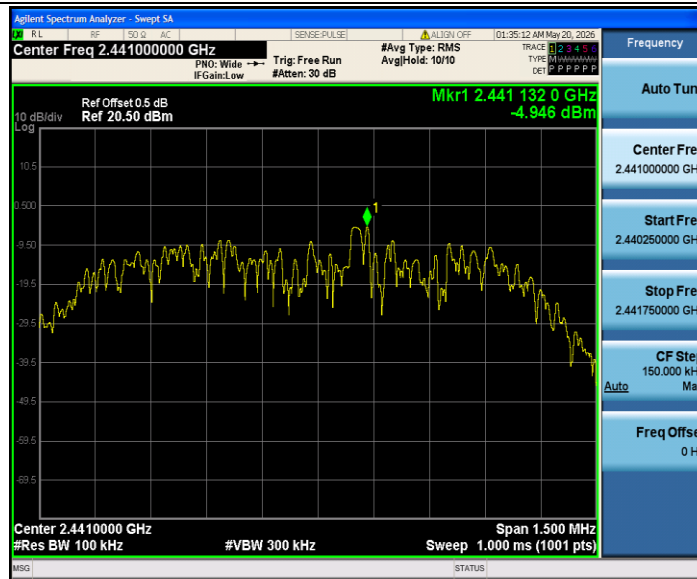
2DH5_Ant1_2402_30~1000



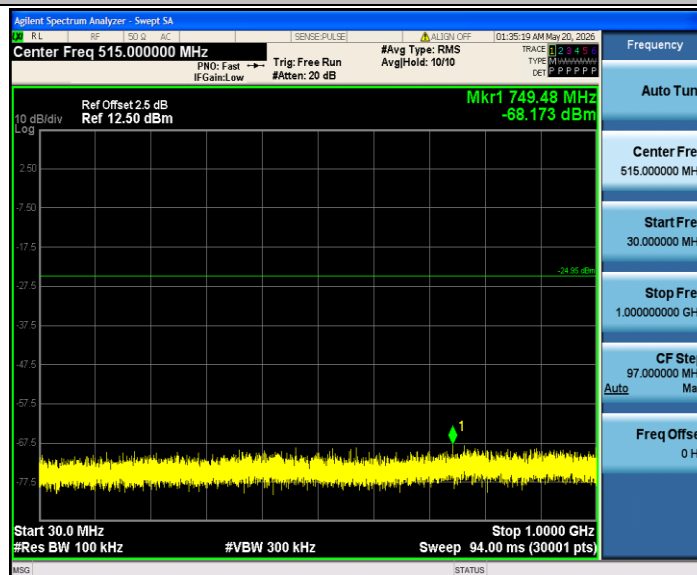
2DH5_Ant1_2402_1000~26500



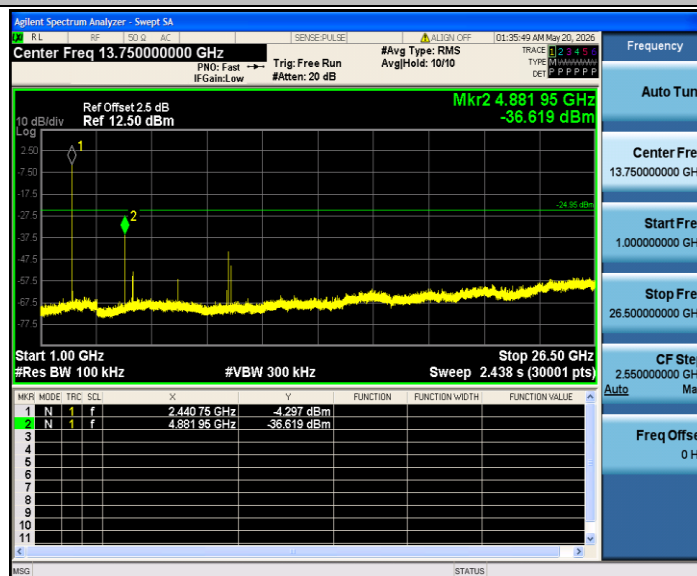
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



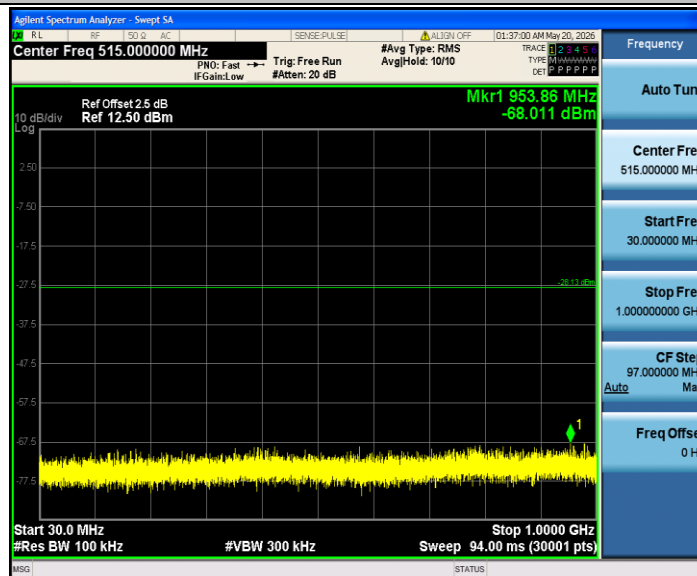
2DH5_Ant1_2441_1000~26500



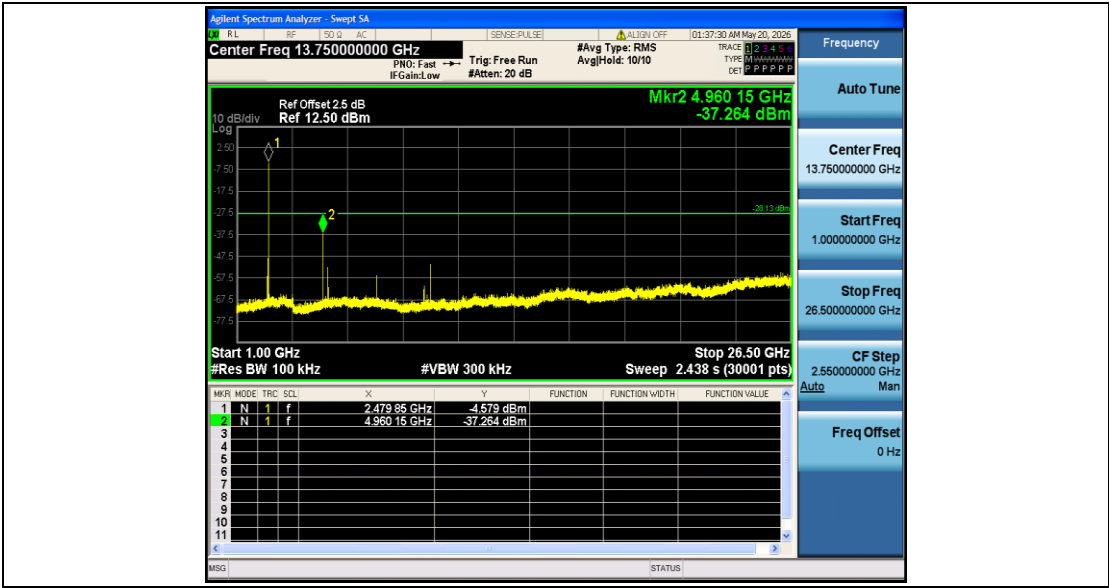
2DH5_Ant1_2480_0~Reference



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	2.91	3.75	77.60	1.10	---	---
		2480	2.92	3.75	77.87	1.09	---	---