

FCC Appendix RF Test Data for BT

FCC ID : 2AOQF-FS-R118

Company : DongGuan Huahong Electrical Appliances Co.,Ltd

EUT : Portable Bluetooth Speaker

Model Number : FS-R118

Report No. : CTA26092900301

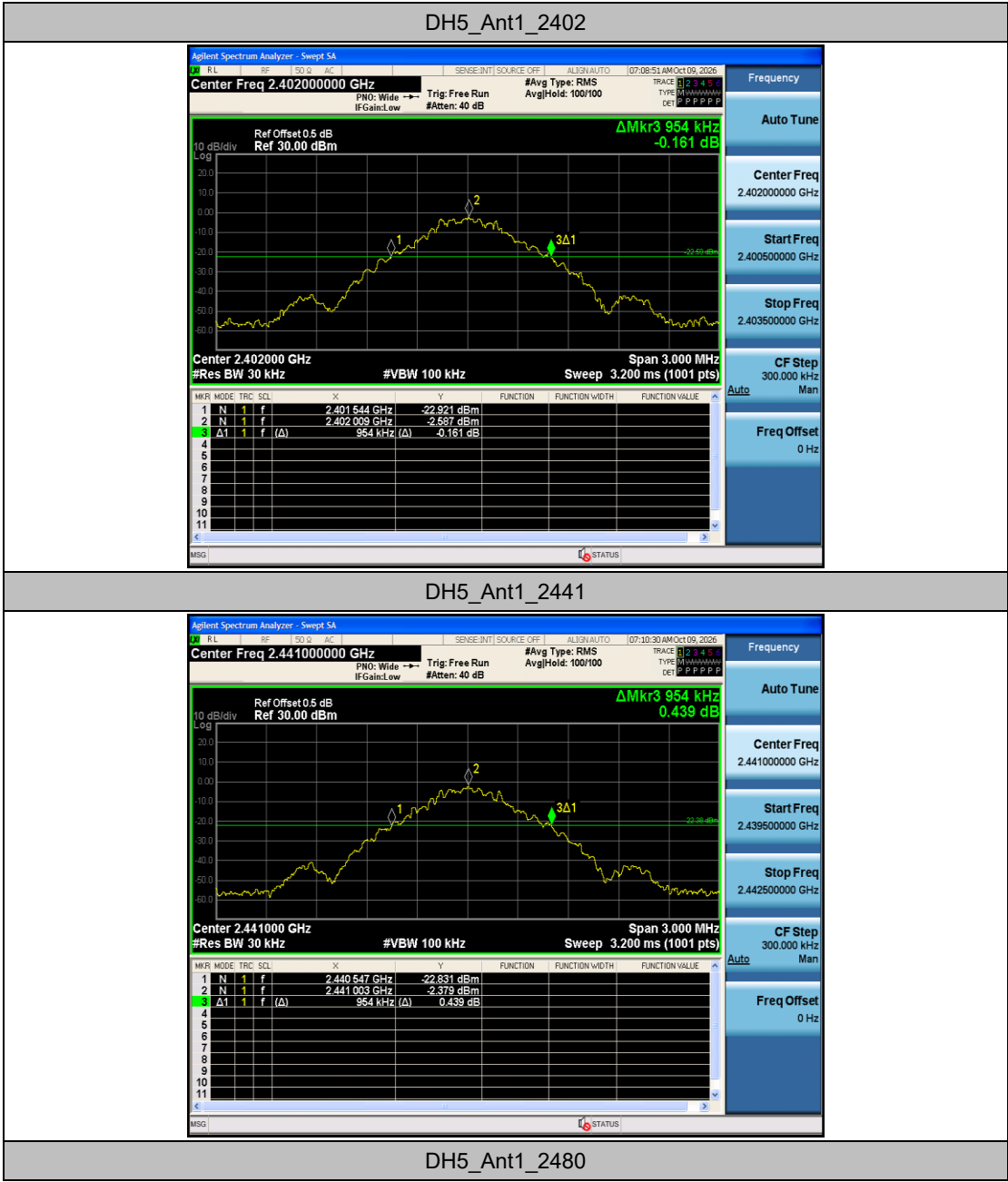
Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.954	2401.544	2402.498	---	---
		2441	0.954	2440.547	2441.501	---	---
		2480	0.948	2479.550	2480.498	---	---
2DH5	Ant1	2402	1.335	2401.340	2402.675	---	---
		2441	1.284	2440.379	2441.663	---	---
		2480	1.284	2479.379	2480.663	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

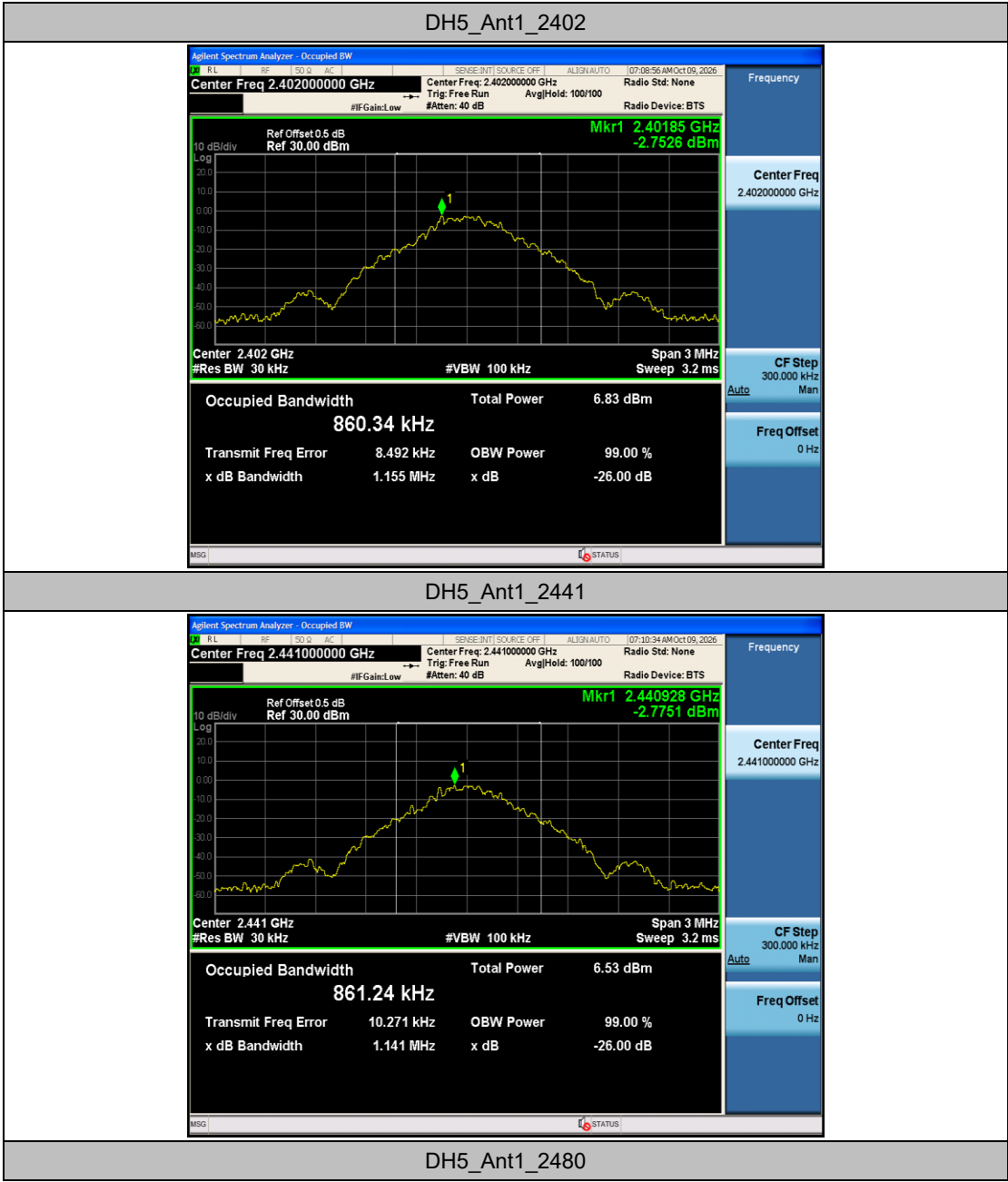


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86034	2401.5783	2402.4387	---	---
		2441	0.86124	2440.5797	2441.4409	---	---
		2480	0.85983	2479.5777	2480.4375	---	---
2DH5	Ant1	2402	1.1881	2401.4153	2402.6034	---	---
		2441	1.1824	2440.4181	2441.6005	---	---
		2480	1.1953	2479.4129	2480.6082	---	---

Test Graphs





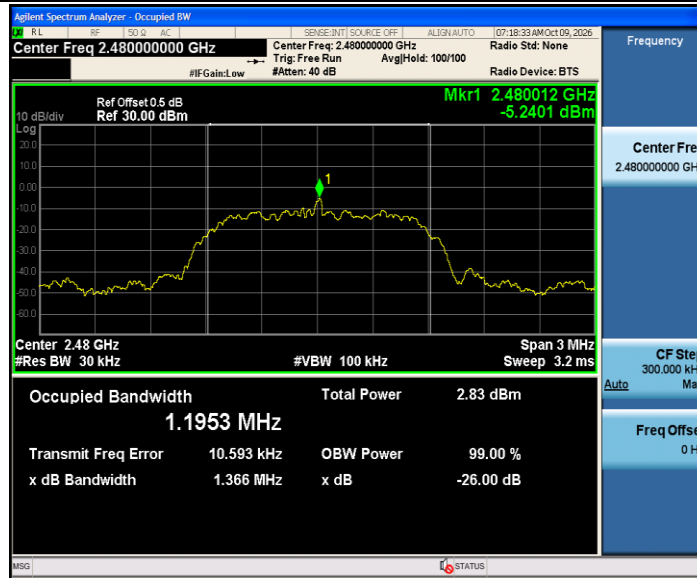
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

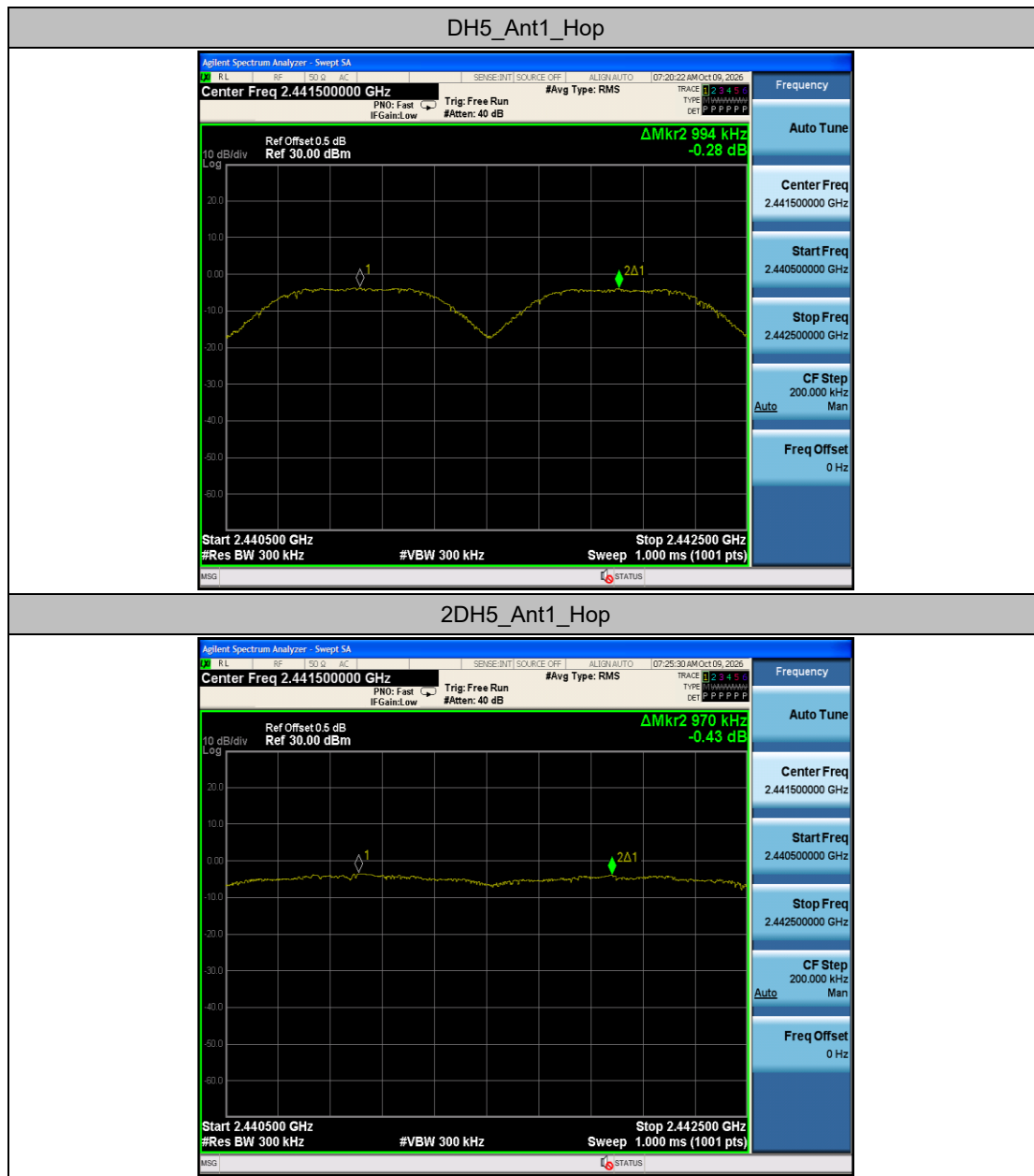
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.15	≤20.97	PASS
		2441	0.07	≤20.97	PASS
		2480	-0.21	≤20.97	PASS
2DH5	Ant1	2402	-0.77	≤20.97	PASS
		2441	-0.77	≤20.97	PASS
		2480	-1.03	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.994	≥ 0.954	PASS
2DH5	Ant1	Hop	0.97	≥ 0.890	PASS

Test Graphs

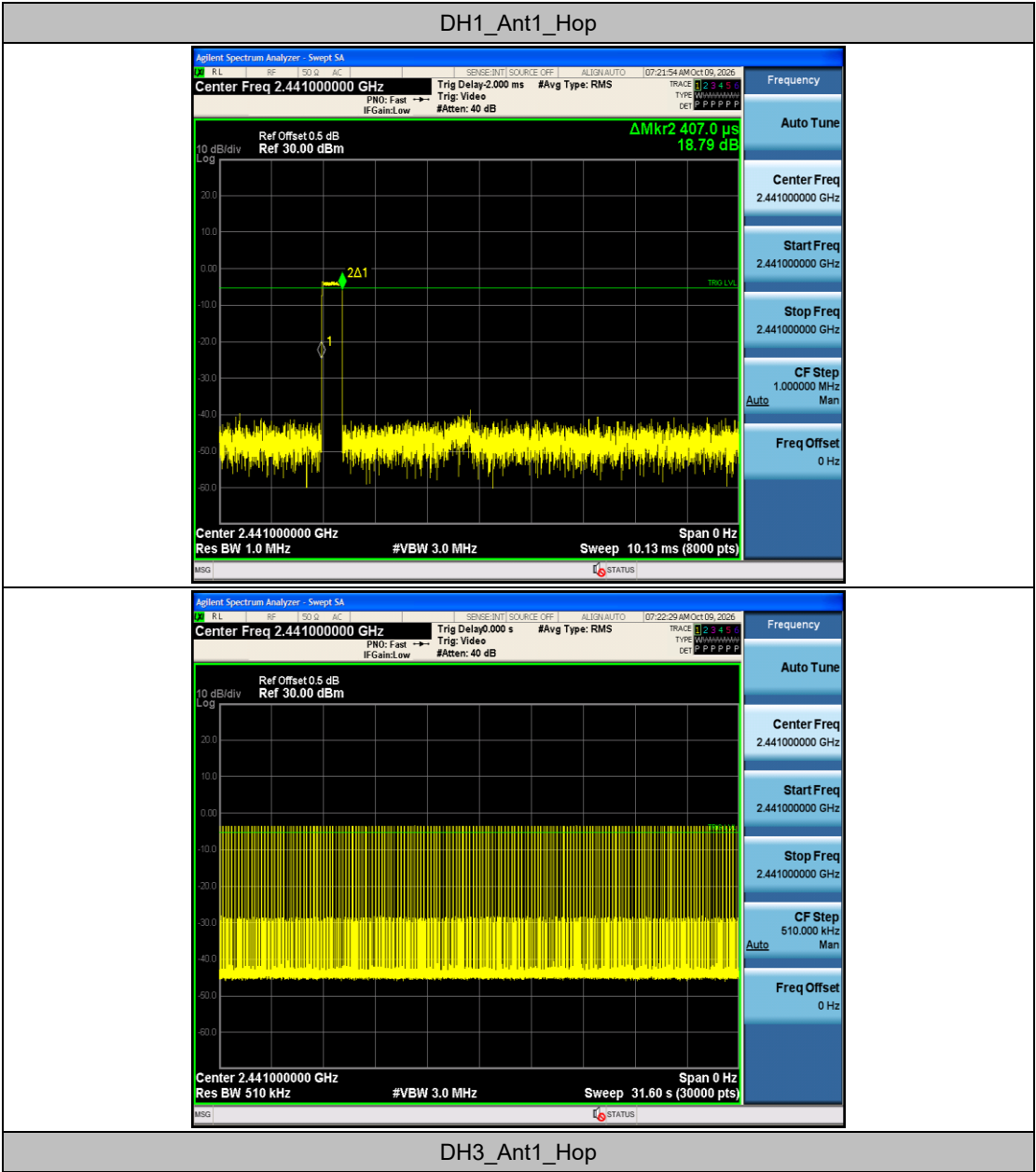


Appendix E: Time of occupancy

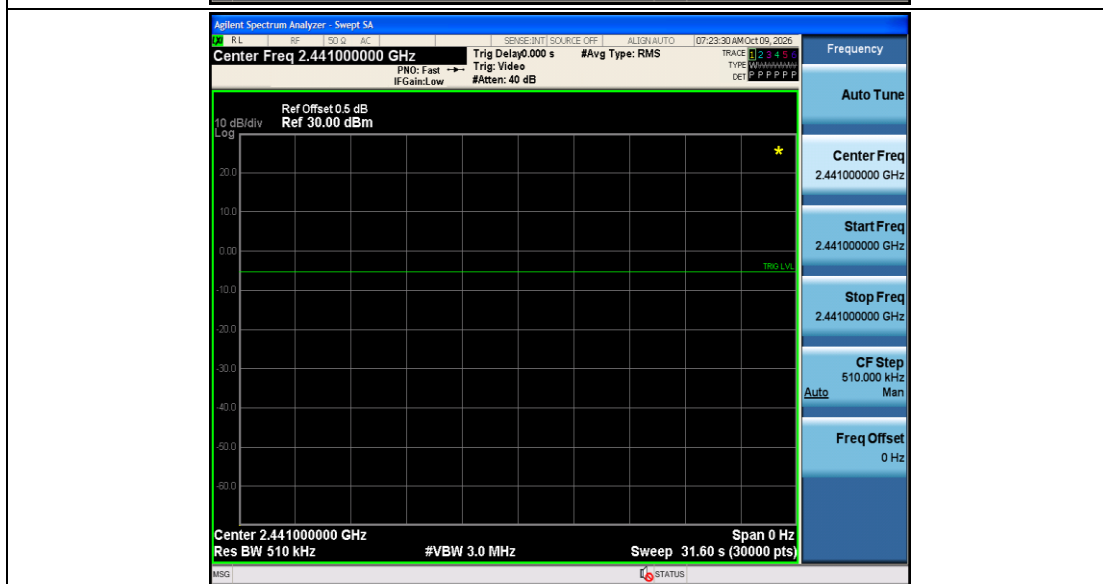
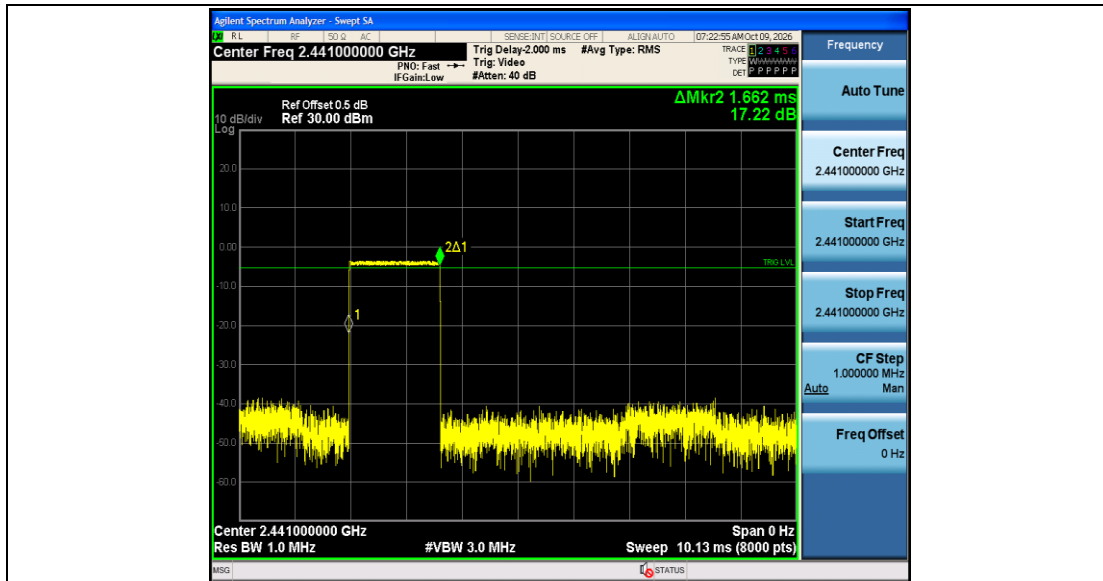
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.407	318	0.129	≤0.4	PASS
DH3	Ant1	Hop	1.662	0	0	≤0.4	PASS
DH5	Ant1	Hop	2.911	0	0	≤0.4	PASS
2DH1	Ant1	Hop	0.415	319	0.132	≤0.4	PASS
2DH3	Ant1	Hop	1.667	157	0.262	≤0.4	PASS
2DH5	Ant1	Hop	2.916	106	0.309	≤0.4	PASS

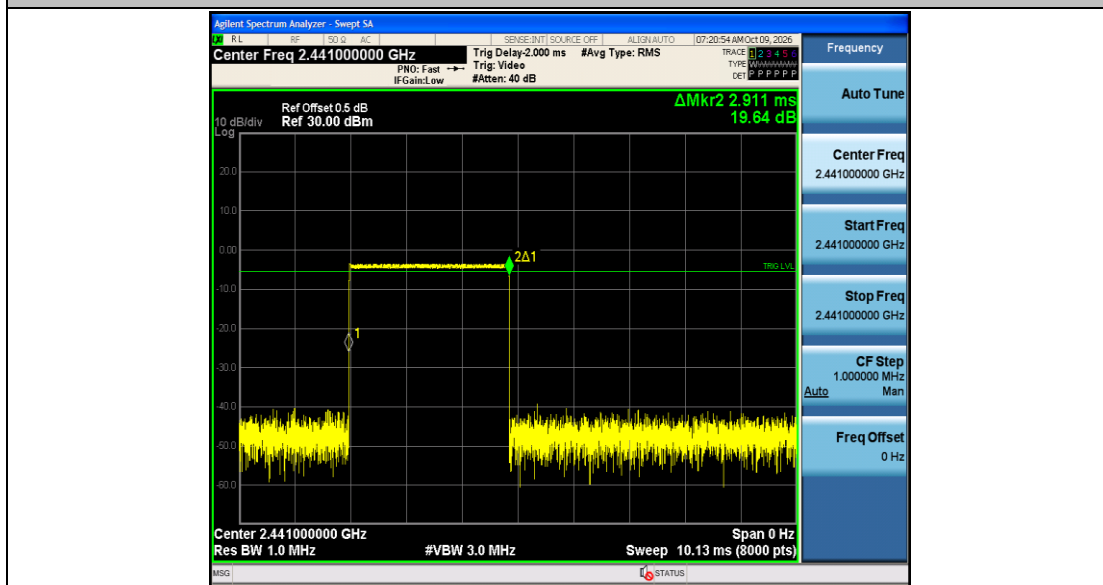
Test Graphs

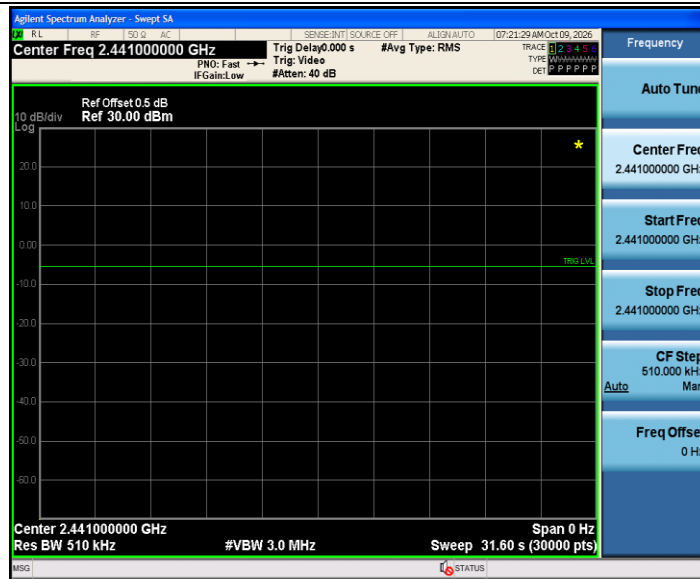


DH3_Ant1_Hop

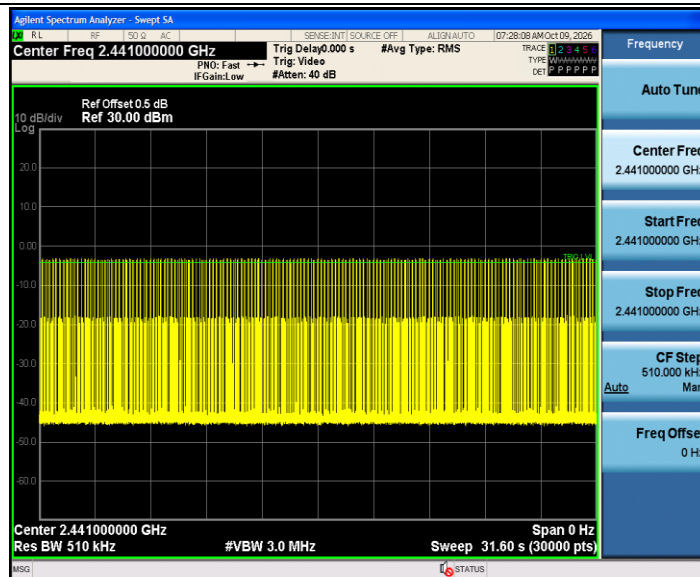
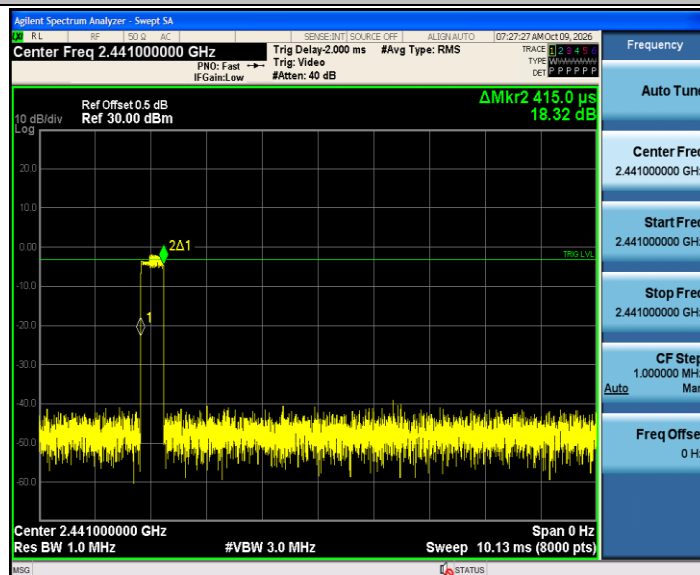


DH5_Ant1_Hop

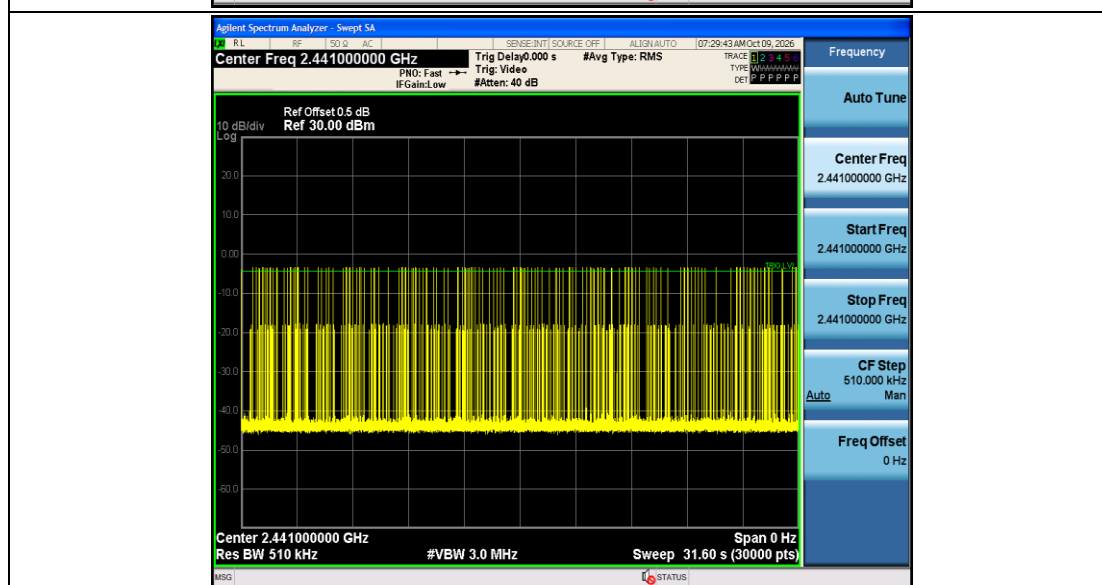
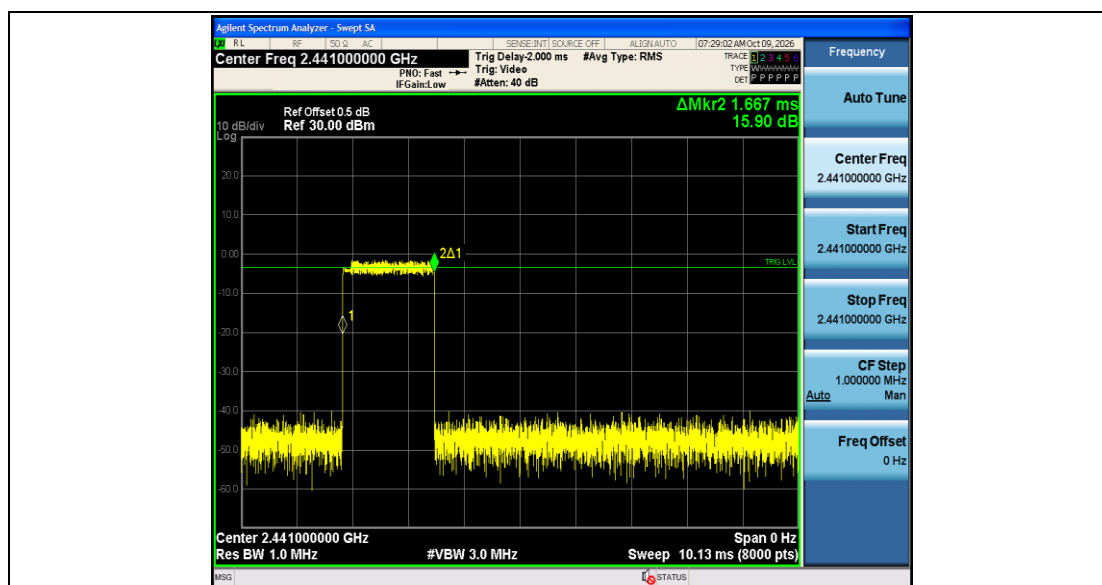




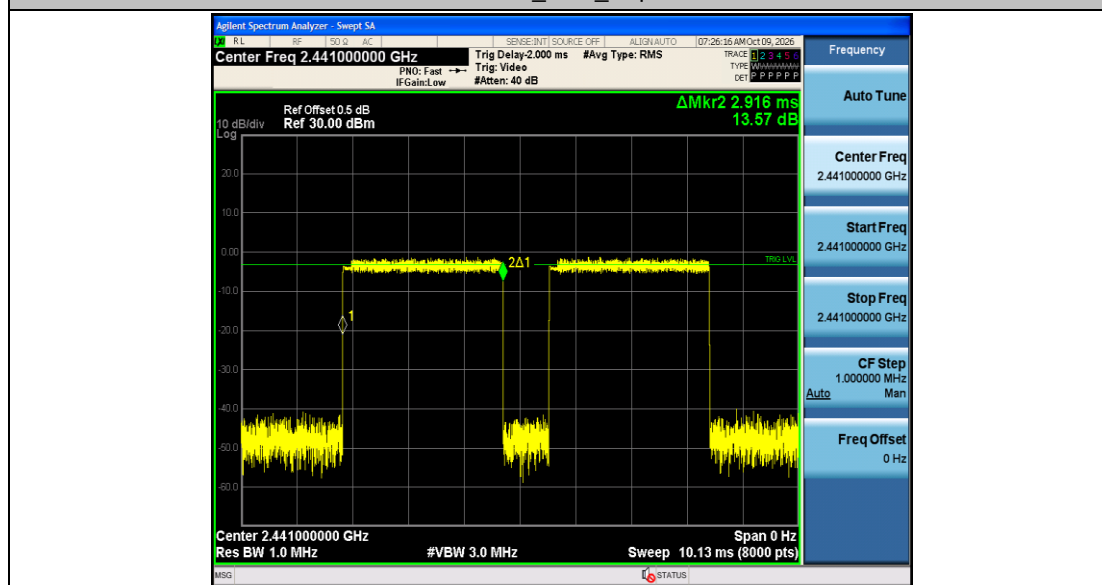
2DH1_Ant1_Hop

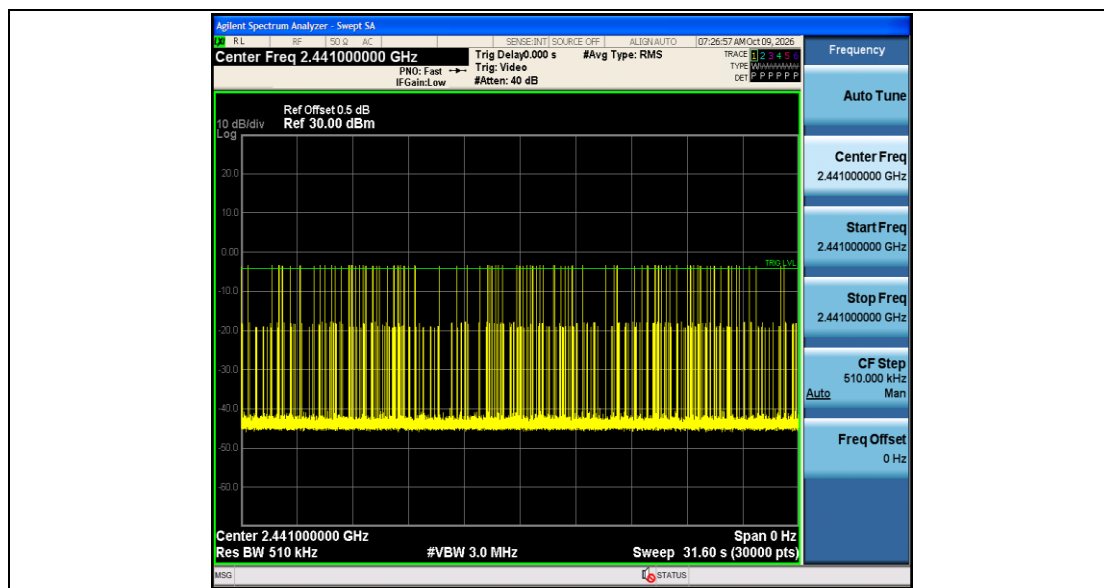


2DH3_Ant1_Hop



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

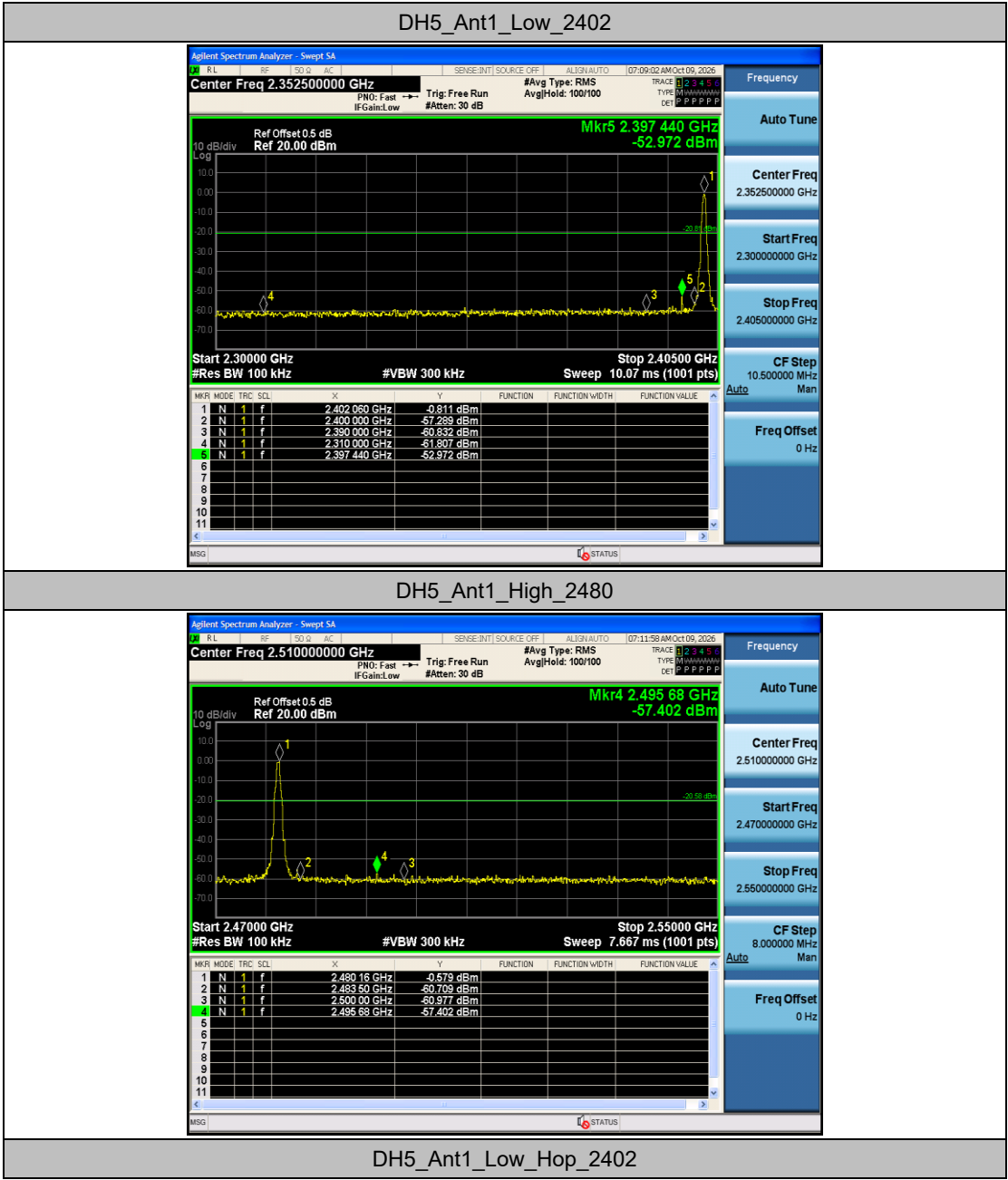


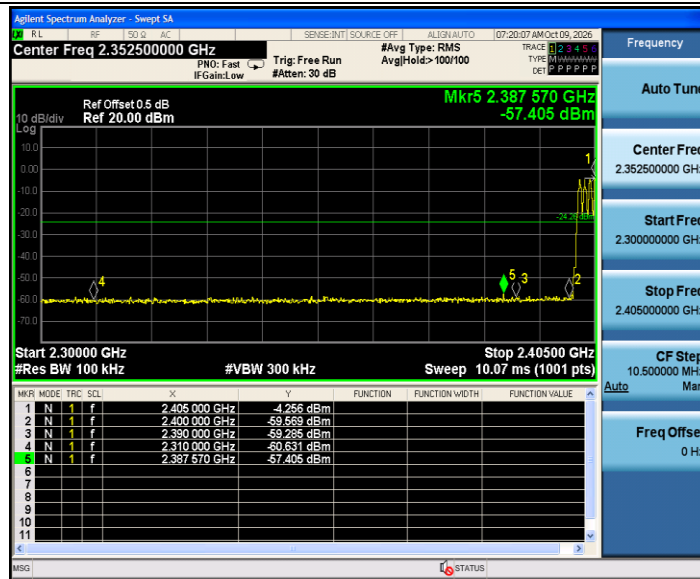
Appendix G: Band edge measurements

Test Result

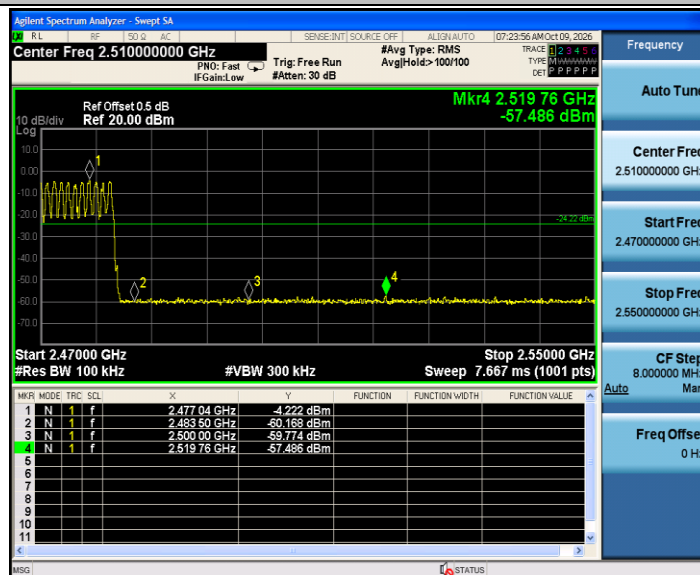
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.81	-52.97	≤-20.81	PASS
		High	2480	-0.58	-57.4	≤-20.58	PASS
		Low	Hop_2402	-4.26	-57.41	≤-24.26	PASS
		High	Hop_2480	-4.22	-57.49	≤-24.22	PASS
2DH5	Ant1	Low	2402	-3.70	-56.79	≤-23.7	PASS
		High	2480	-4.93	-58.08	≤-24.93	PASS
		Low	Hop_2402	-4.74	-57.67	≤-24.74	PASS
		High	Hop_2480	-3.80	-57.96	≤-23.8	PASS

Test Graphs

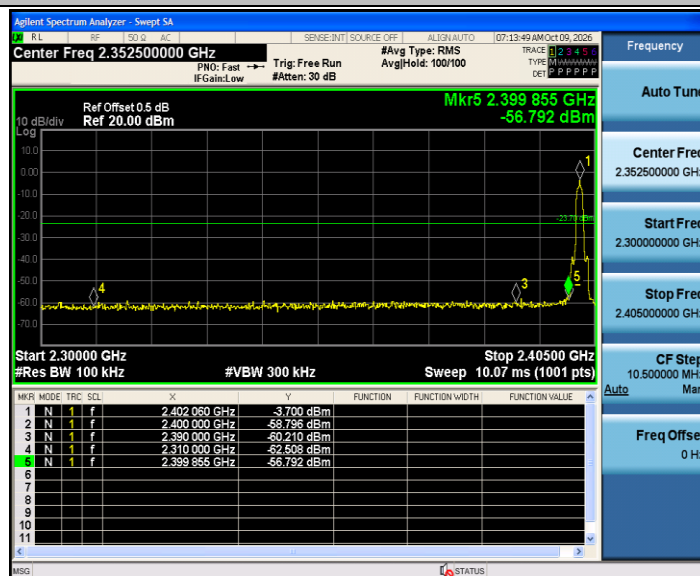




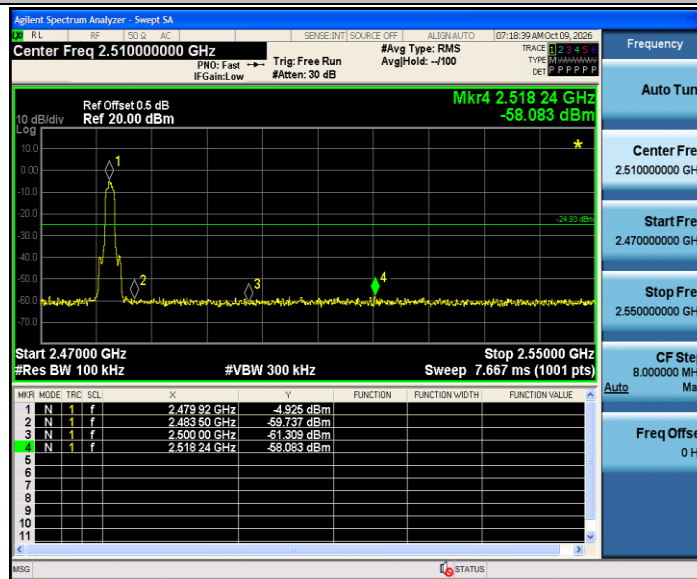
DH5_Ant1_High_Hop_2480



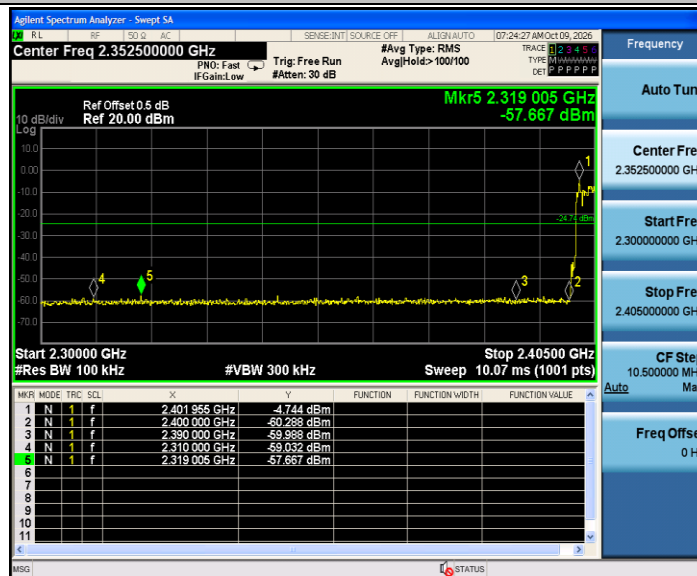
2DH5_Ant1_Low_2402



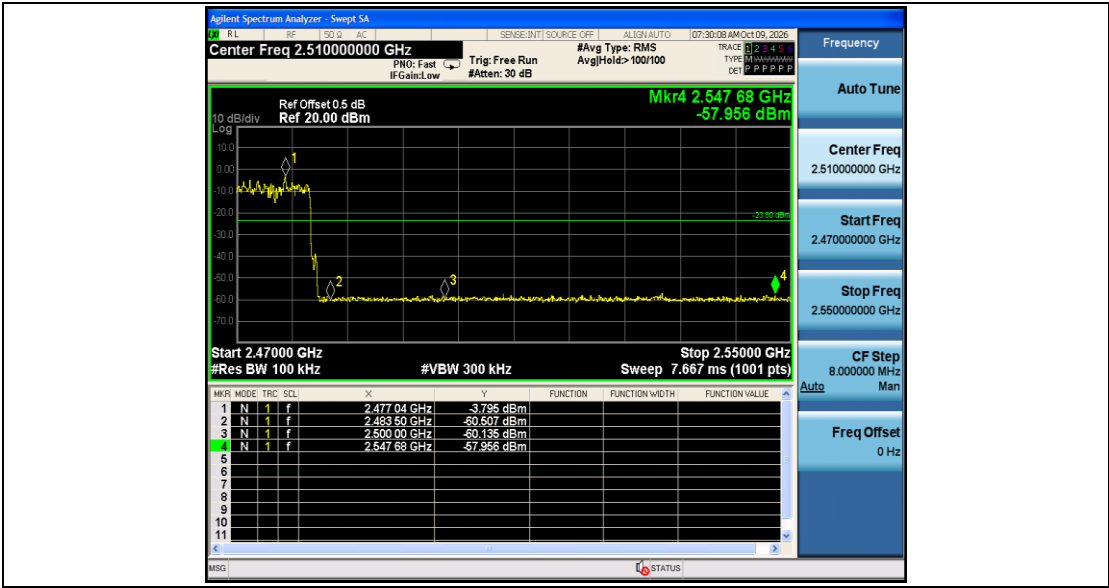
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480

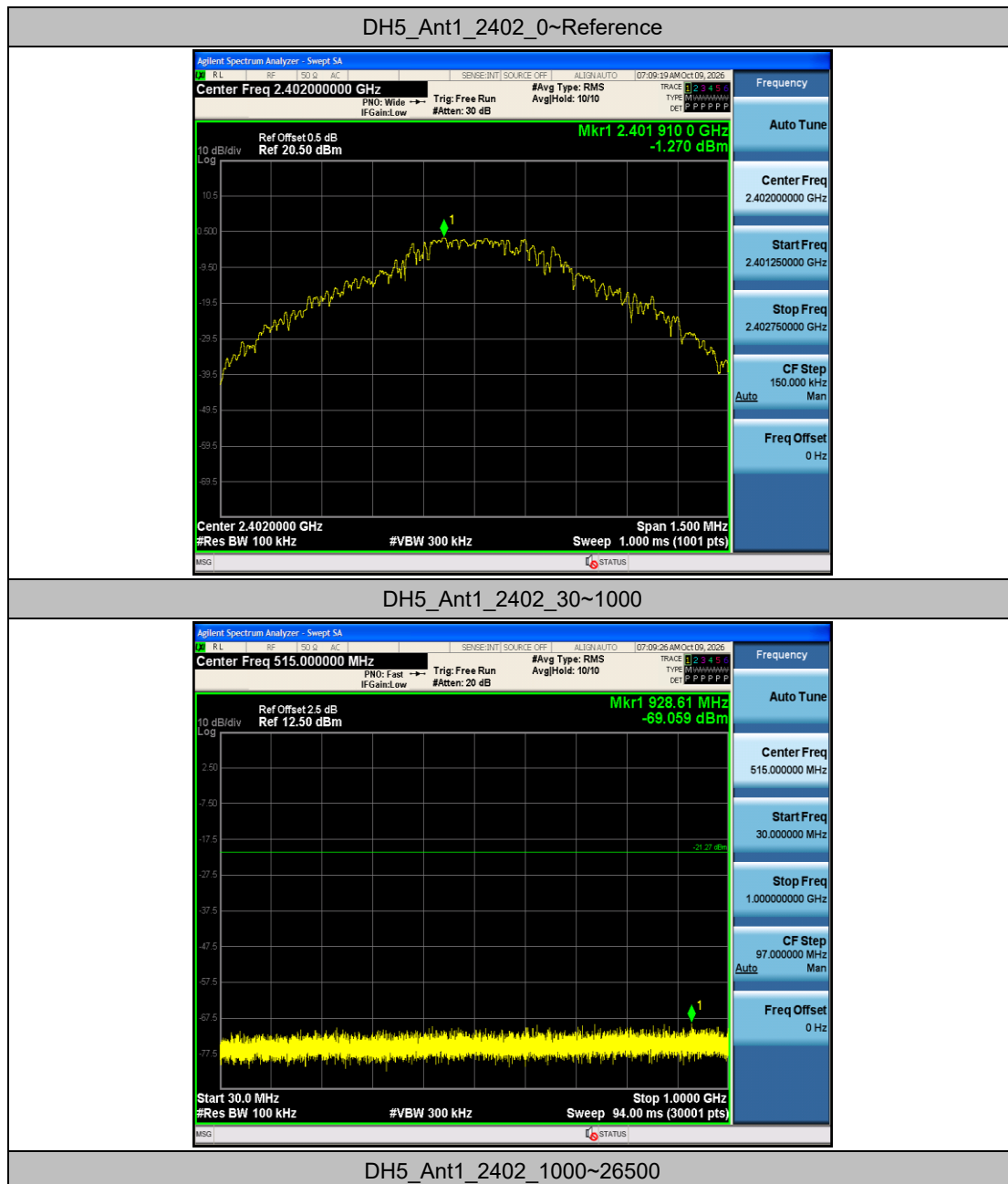


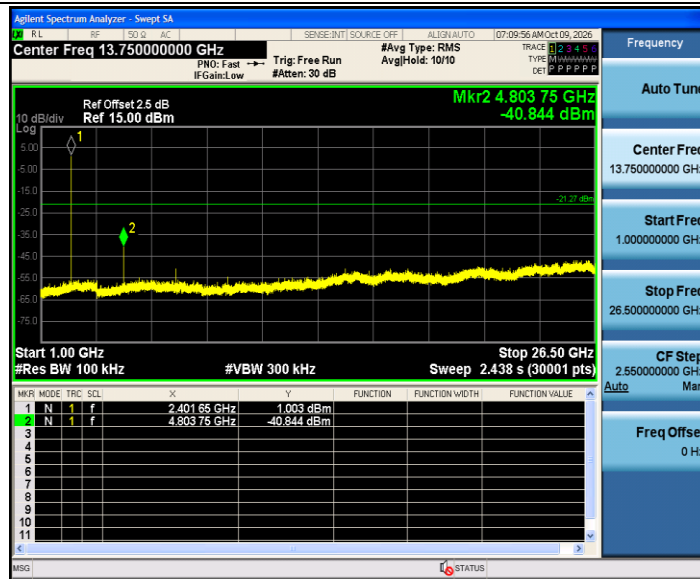
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.27	-1.27	---	PASS
			30~1000	-1.27	-69.06	≤-21.27	PASS
			1000~26500	-1.27	-40.84	≤-21.27	PASS
		2441	Reference	-0.77	-0.77	---	PASS
			30~1000	-0.77	-68.75	≤-20.77	PASS
			1000~26500	-0.77	-42.94	≤-20.77	PASS
		2480	Reference	-1.31	-1.31	---	PASS
			30~1000	-1.31	-68.93	≤-21.31	PASS
			1000~26500	-1.31	-40.55	≤-21.31	PASS
2DH5	Ant1	2402	Reference	-5.38	-5.38	---	PASS
			30~1000	-5.38	-69.06	≤-25.38	PASS
			1000~26500	-5.38	-44.01	≤-25.38	PASS
		2441	Reference	-5.76	-5.76	---	PASS
			30~1000	-5.76	-68.01	≤-25.76	PASS
			1000~26500	-5.76	-46.6	≤-25.76	PASS
		2480	Reference	-6.43	-6.43	---	PASS
			30~1000	-6.43	-68.85	≤-26.43	PASS
			1000~26500	-6.43	-46.81	≤-26.43	PASS

Test Graphs

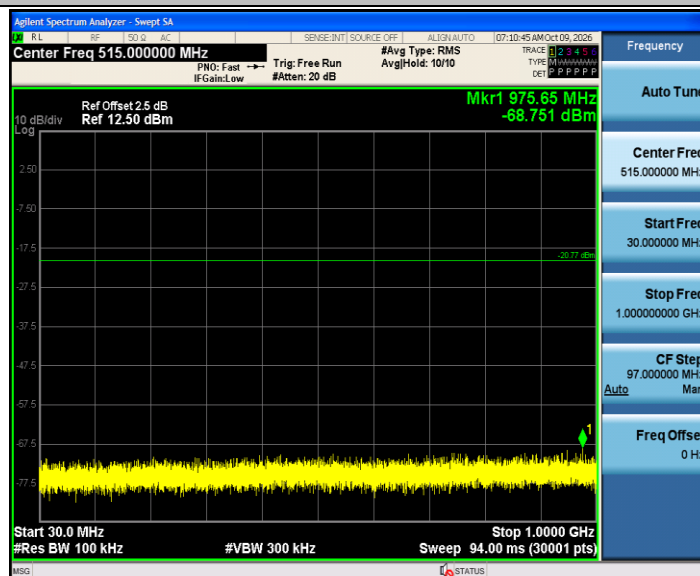




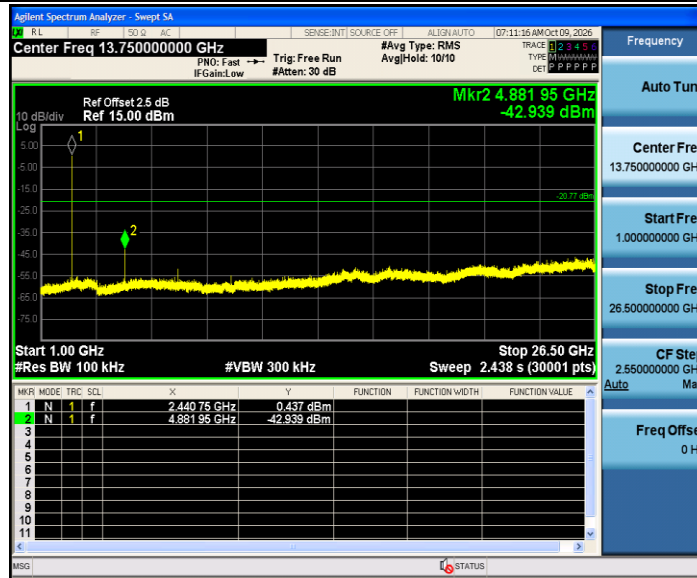
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



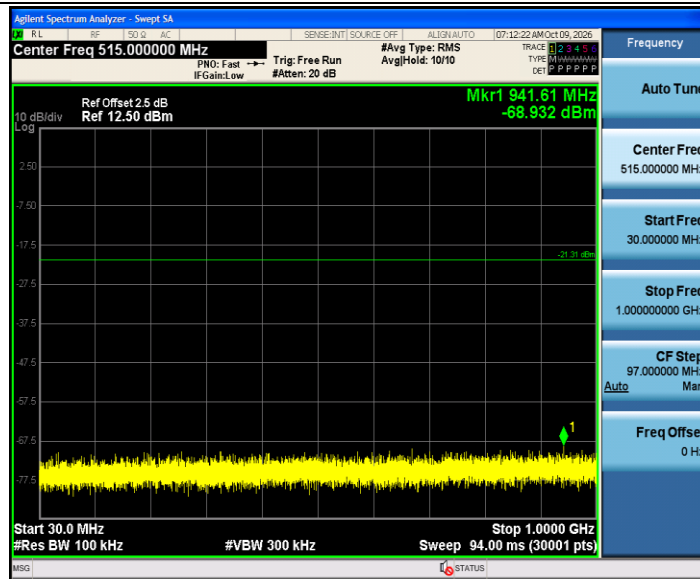
DH5_Ant1_2441_1000~26500



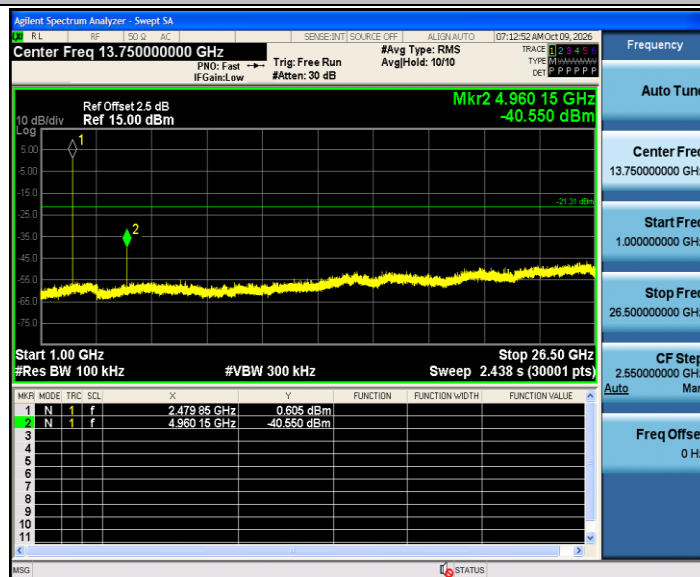
DH5_Ant1_2480_0~Reference



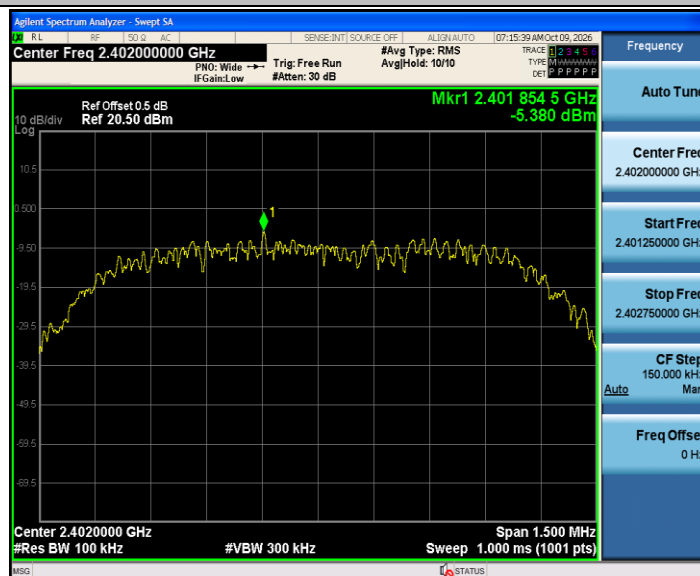
DH5_Ant1_2480_30~1000



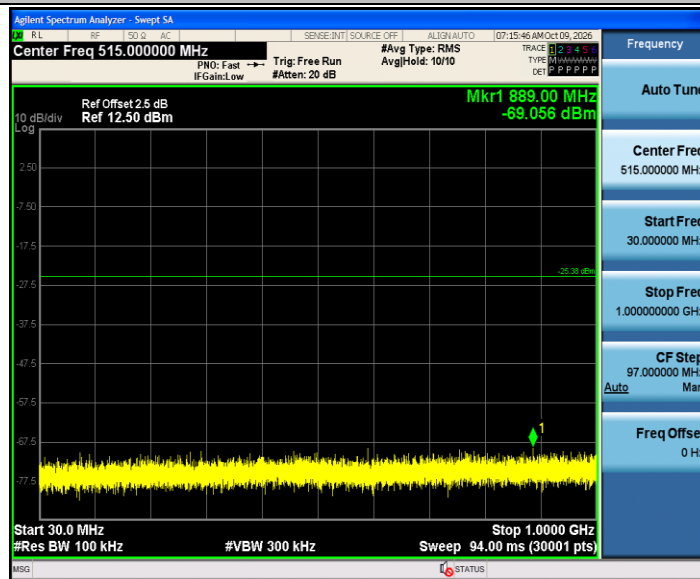
DH5_Ant1_2480_1000~26500



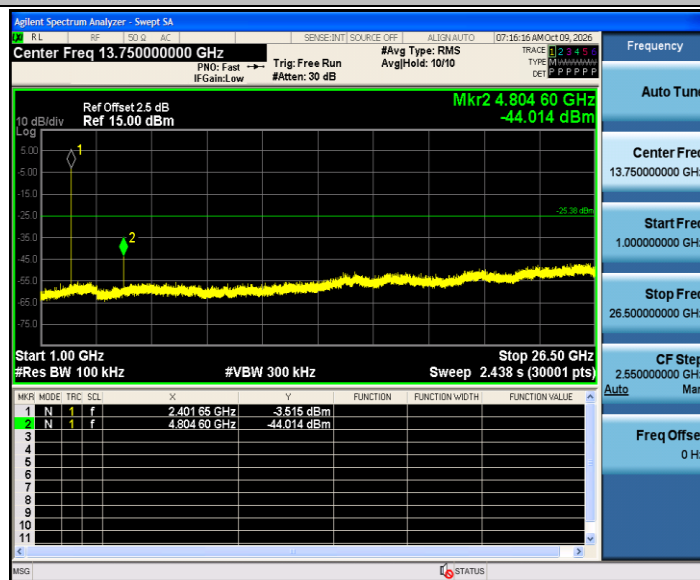
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



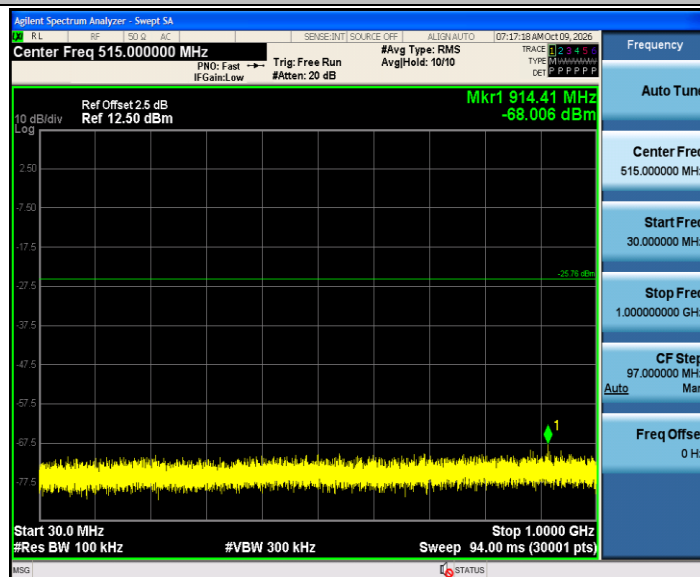
2DH5_Ant1_2402_1000~26500



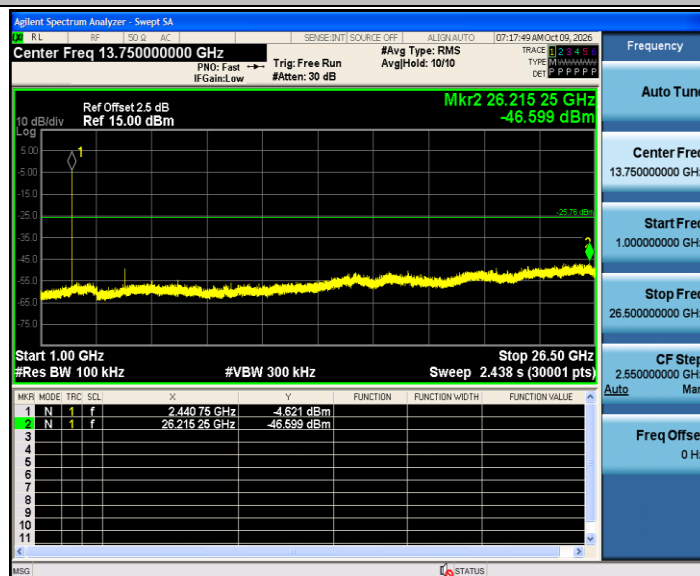
2DH5_Ant1_2441_0~Reference



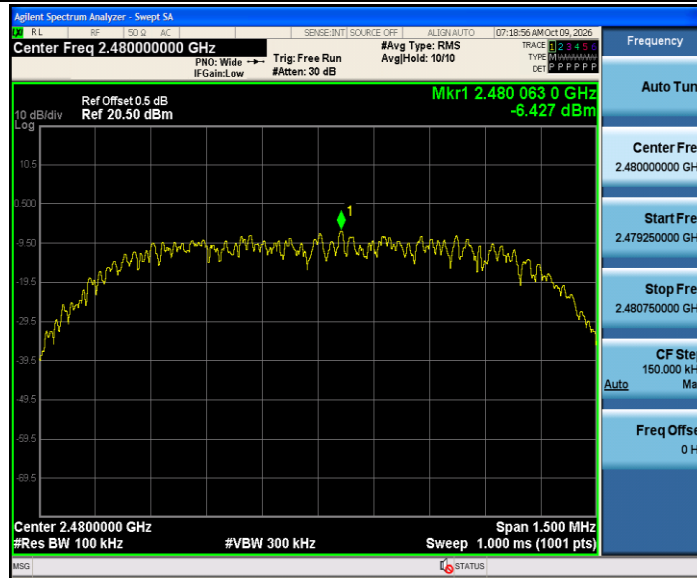
2DH5_Ant1_2441_30~1000



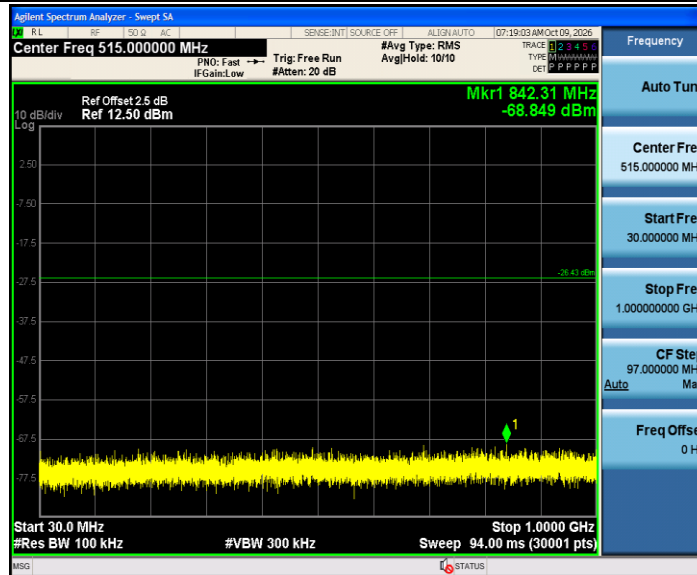
2DH5_Ant1_2441_1000~26500



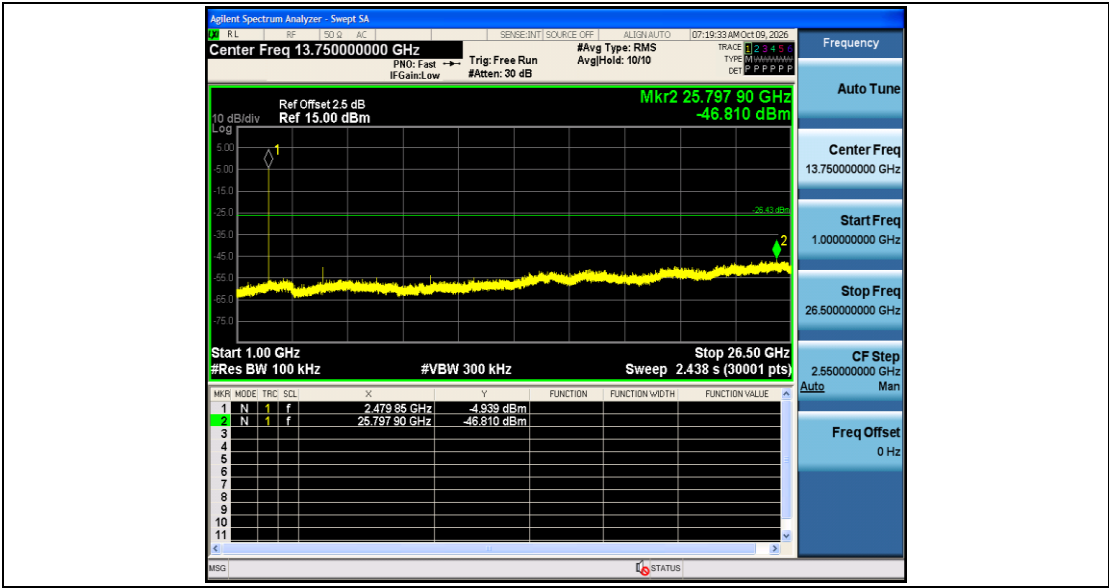
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500

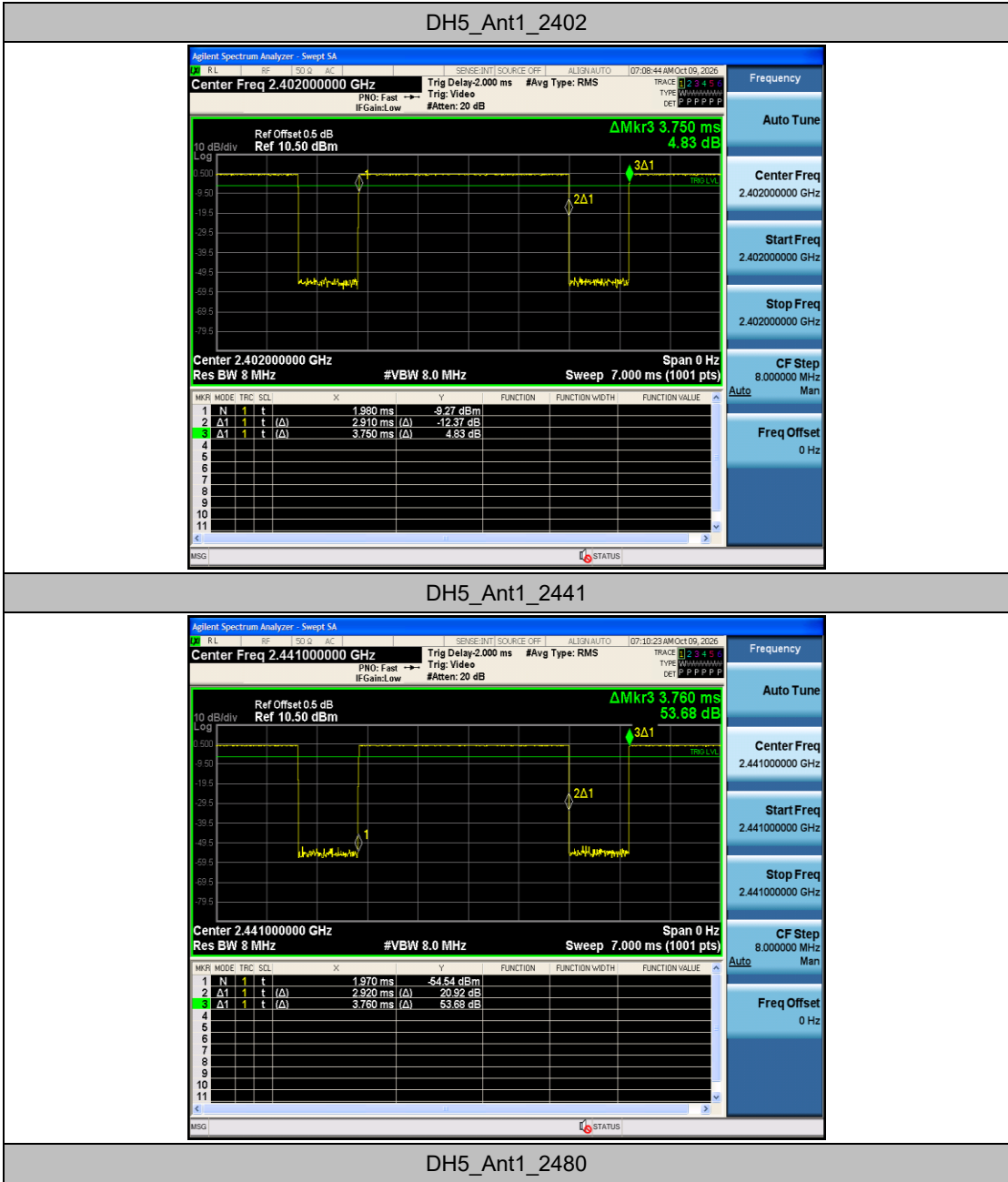


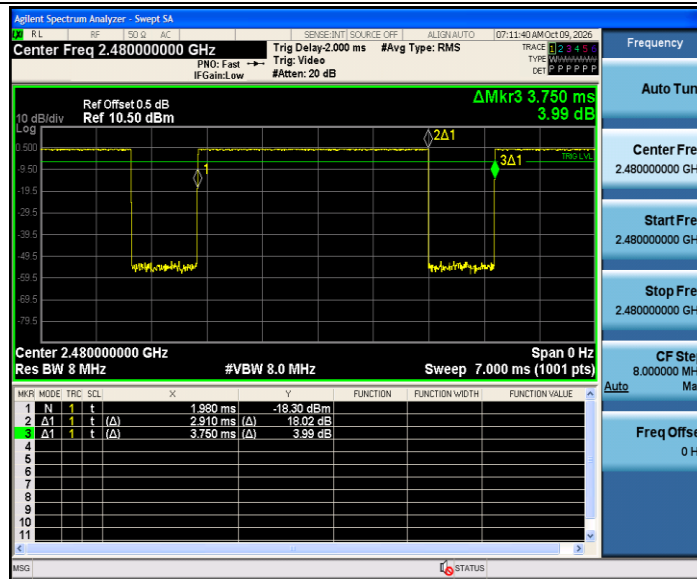
Appendix I: Duty Cycle

Test Result

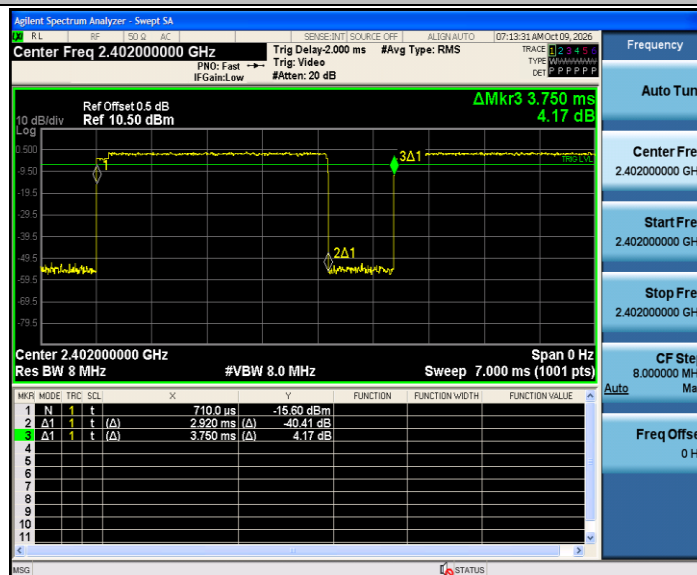
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.91	3.75	77.60	1.10	---	---
		2441	2.92	3.76	77.66	1.10	---	---
		2480	2.91	3.75	77.60	1.10	---	---
2DH5	Ant1	2402	2.92	3.75	77.87	1.09	---	---
		2441	2.91	3.74	77.81	1.09	---	---
		2480	2.92	3.76	77.66	1.10	---	---

Test Graphs

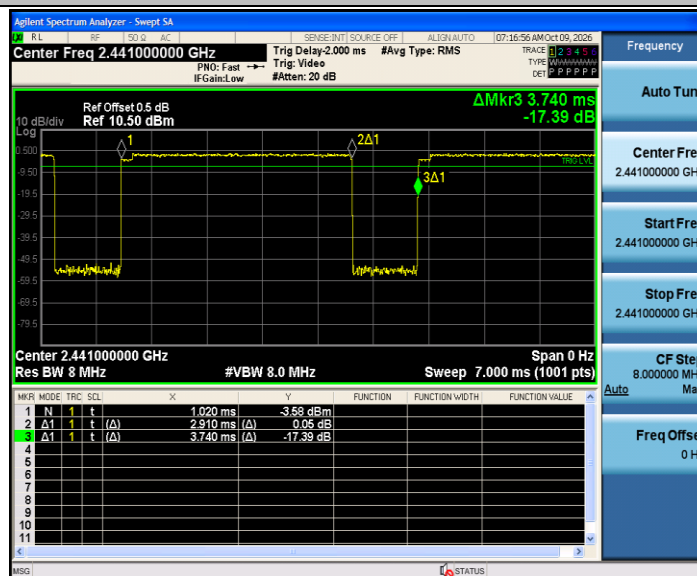




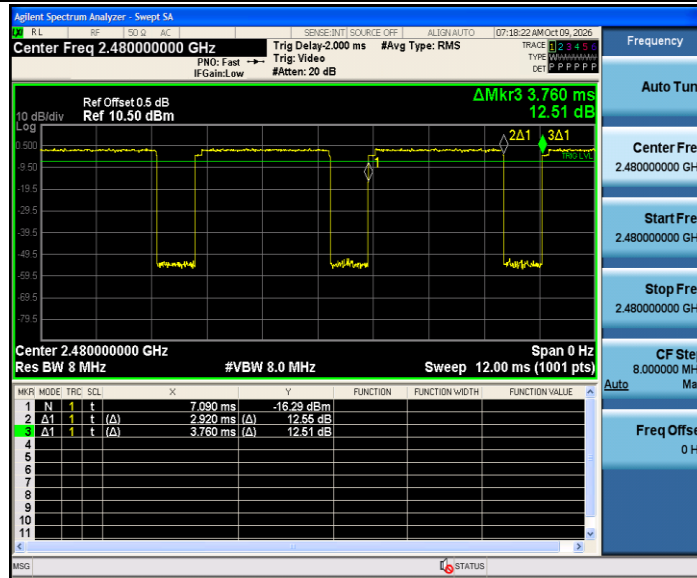
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



Appendix J: Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-60.56	2.00	1.10	37.74	≤54	PASS
				AV	2389.250	-58.95	2.00	1.10	39.35	≤54	PASS
				AV	2390.000	-59.53	2.00	1.10	38.77	≤54	PASS
				Peak	2310.000	-52.2	2.00	0.00	45.00	≤74	PASS
				Peak	2378.120	-49.02	2.00	0.00	48.18	≤74	PASS
				Peak	2390.000	-51.8	2.00	0.00	45.40	≤74	PASS
		High	2480	AV	2483.500	-58.09	2.00	1.10	40.21	≤54	PASS
				AV	2484.720	-58.03	2.00	1.10	40.27	≤54	PASS
				AV	2500.000	-58.82	2.00	1.10	39.48	≤54	PASS
				Peak	2483.500	-50.08	2.00	0.00	47.12	≤74	PASS
				Peak	2483.920	-48.17	2.00	0.00	49.03	≤74	PASS
				Peak	2500.000	-48.7	2.00	0.00	48.50	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-60.63	2.00	1.09	37.66	≤54	PASS
				AV	2378.750	-58.83	2.00	1.09	39.46	≤54	PASS
				AV	2390.000	-59.61	2.00	1.09	38.68	≤54	PASS
				Peak	2310.000	-53.37	2.00	0.00	43.83	≤74	PASS
				Peak	2372.240	-49.37	2.00	0.00	47.83	≤74	PASS
				Peak	2390.000	-52.25	2.00	0.00	44.95	≤74	PASS
		High	2480	AV	2483.500	-58.35	2.00	1.10	39.95	≤54	PASS
				AV	2483.520	-58.35	2.00	1.10	39.95	≤54	PASS
				AV	2500.000	-59.59	2.00	1.10	38.71	≤54	PASS
				Peak	2483.500	-50.48	2.00	0.00	46.72	≤74	PASS
				Peak	2484.240	-45.44	2.00	0.00	51.76	≤74	PASS
				Peak	2500.000	-50.76	2.00	0.00	46.44	≤74	PASS

Note:

The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.