

FCC Appendix RF Test Data for BT

FCC ID : 2BWDQ-PULAOECHOP1

Company : Beijing Zhixue Vision Management Consulting
Co., Ltd.

EUT : PulaoEcho

Model Number : PulaoEcho P1

Report No. : CTA26051802102

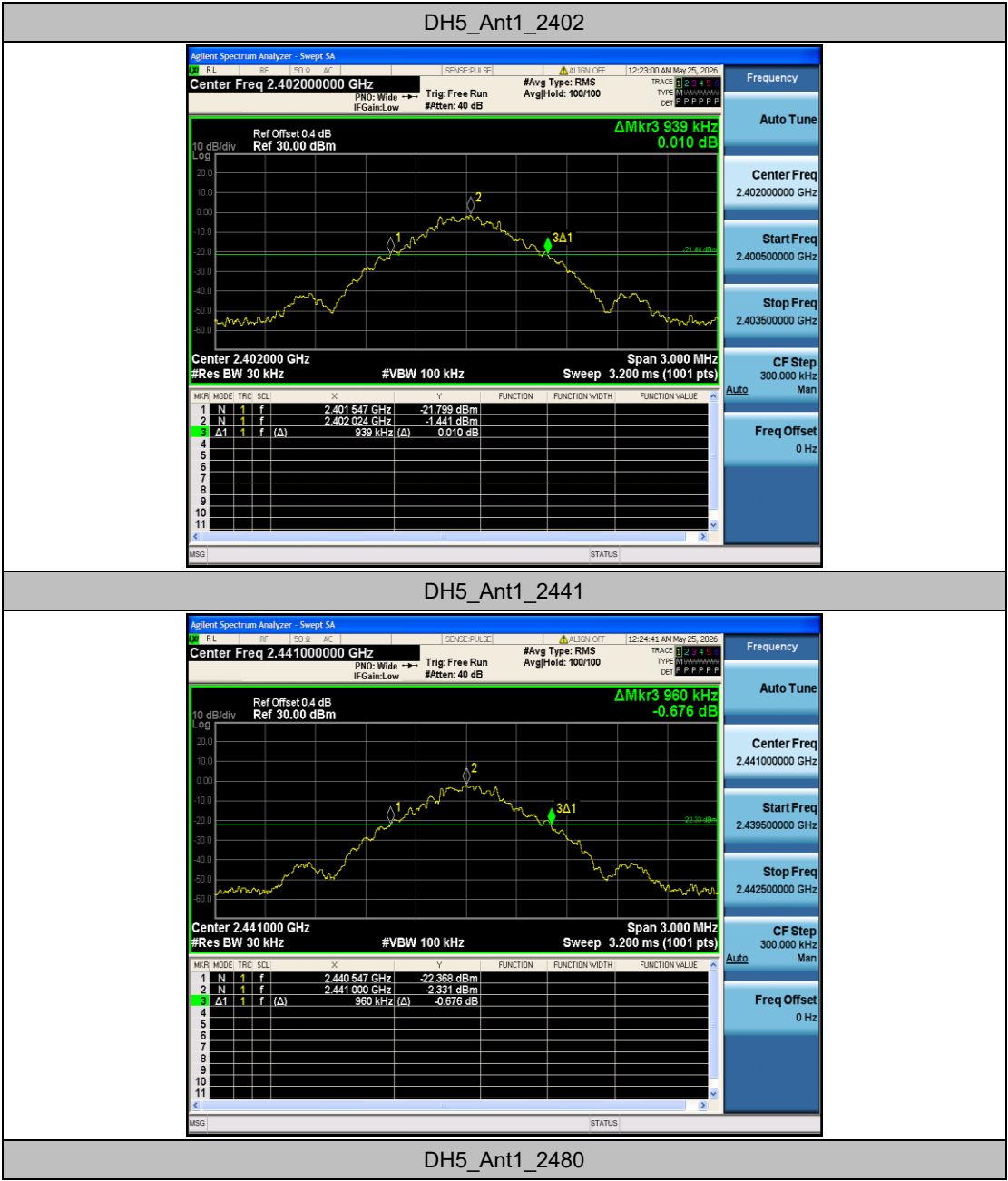
Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.939	2401.547	2402.486	---	---
		2441	0.960	2440.547	2441.507	---	---
		2480	0.963	2479.544	2480.507	---	---
2DH5	Ant1	2402	1.287	2401.379	2402.666	---	---
		2441	1.317	2440.352	2441.669	---	---
		2480	1.326	2479.346	2480.672	---	---
3DH5	Ant1	2402	1.317	2401.358	2402.675	---	---
		2441	1.296	2440.367	2441.663	---	---
		2480	1.326	2479.352	2480.678	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

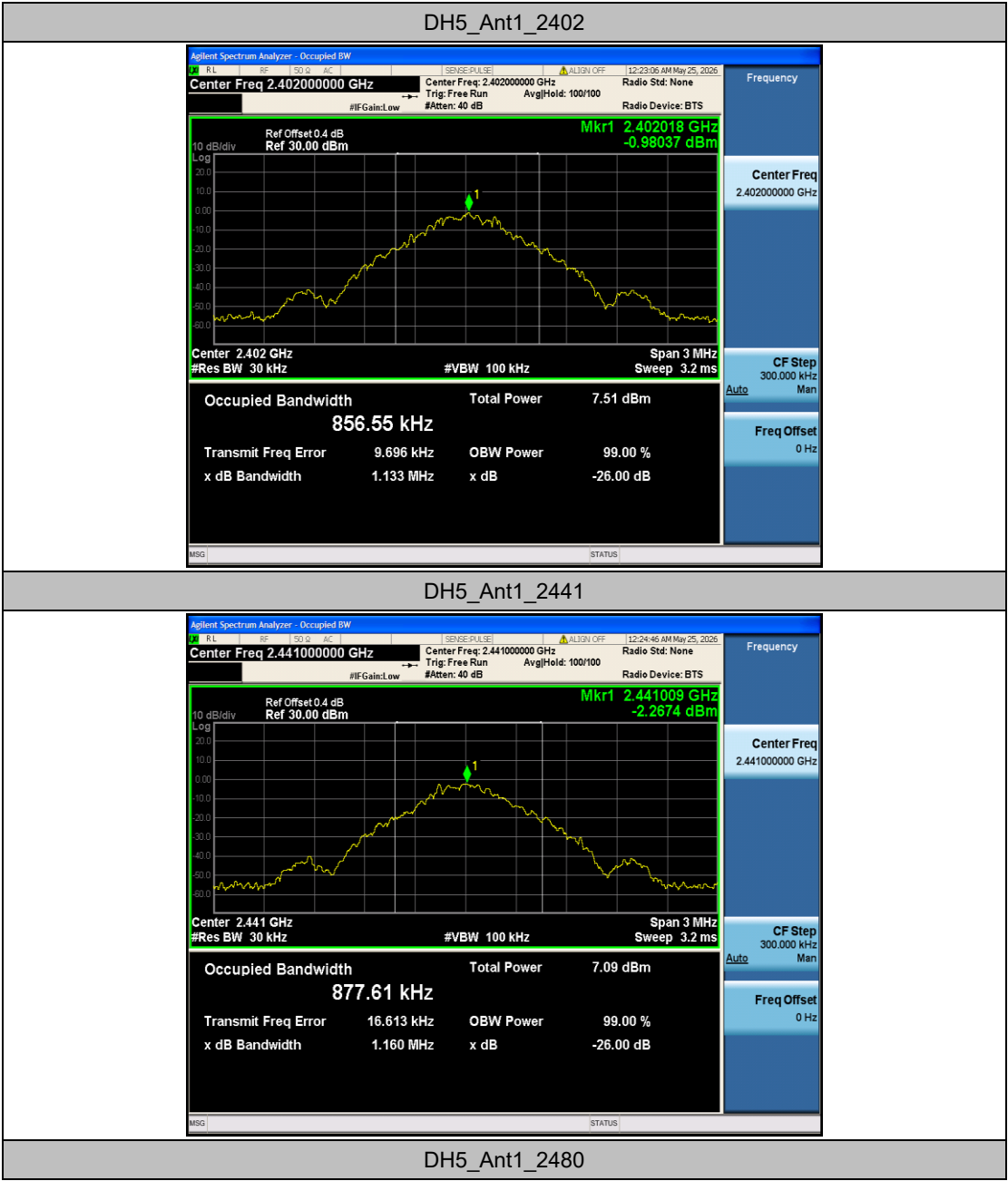


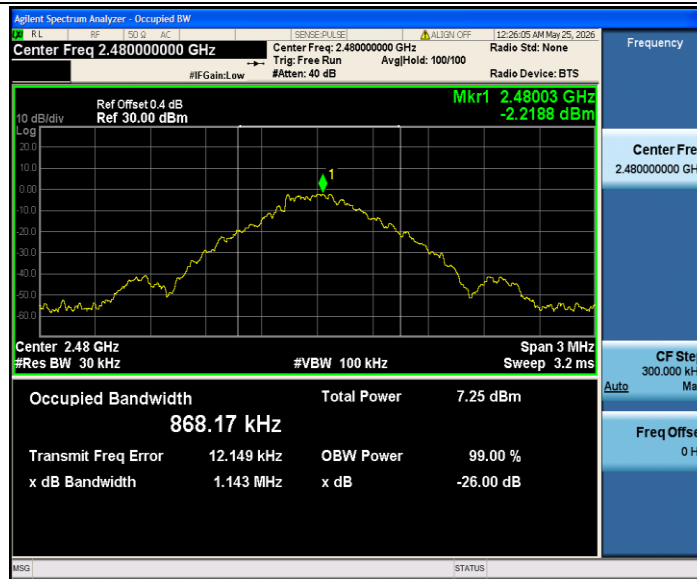
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.85655	2401.5814	2402.4380	---	---
		2441	0.87761	2440.5778	2441.4554	---	---
		2480	0.86817	2479.5781	2480.4462	---	---
2DH5	Ant1	2402	1.1921	2401.4159	2402.6080	---	---
		2441	1.2001	2440.4113	2441.6114	---	---
		2480	1.1940	2479.4149	2480.6089	---	---
3DH5	Ant1	2402	1.1712	2401.4293	2402.6005	---	---
		2441	1.1879	2440.4180	2441.6059	---	---
		2480	1.1877	2479.4171	2480.6048	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



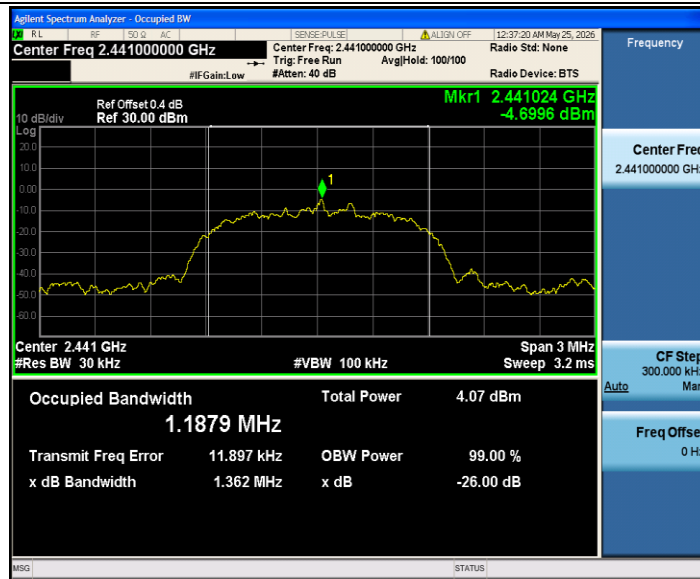
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

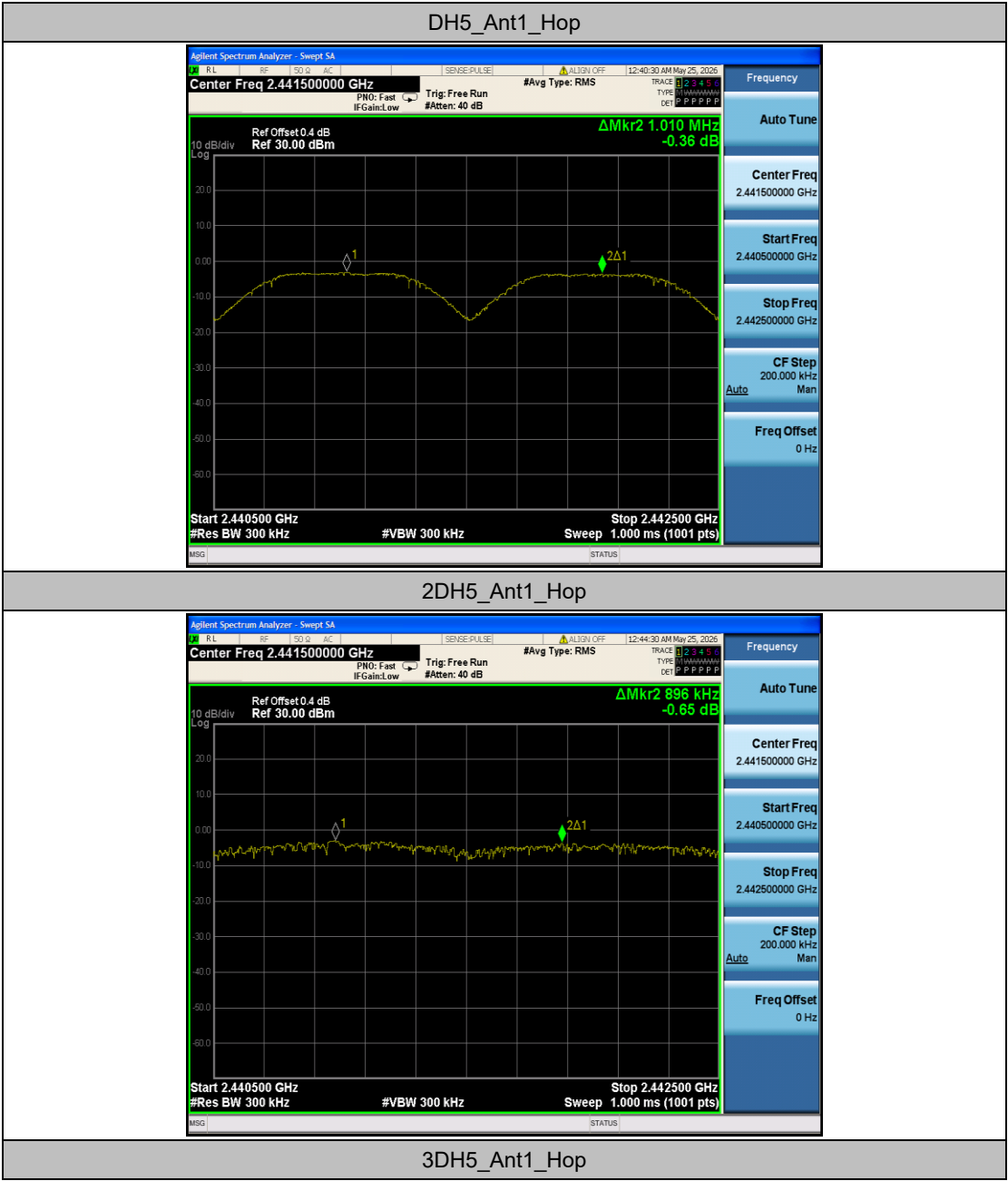
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.79	≤20.97	PASS
		2441	0.67	≤20.97	PASS
		2480	0.78	≤20.97	PASS
2DH5	Ant1	2402	-0.07	≤20.97	PASS
		2441	-0.17	≤20.97	PASS
		2480	-0.07	≤20.97	PASS
3DH5	Ant1	2402	0.30	≤20.97	PASS
		2441	0.18	≤20.97	PASS
		2480	0.24	≤20.97	PASS

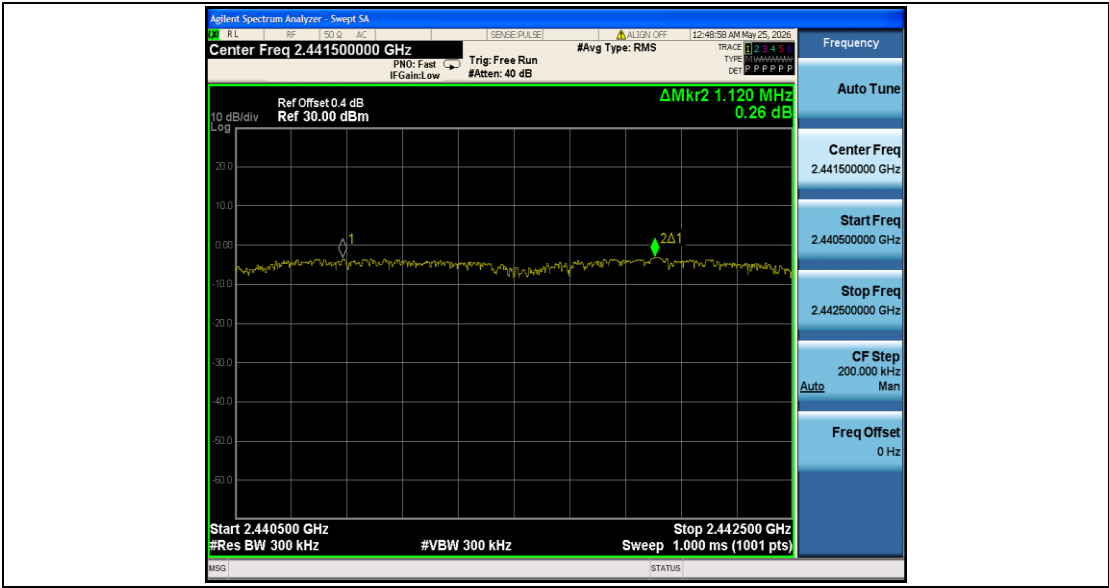
Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.01	≥ 0.963	PASS
2DH5	Ant1	Hop	0.896	≥ 0.884	PASS
3DH5	Ant1	Hop	1.12	≥ 0.884	PASS

Test Graphs



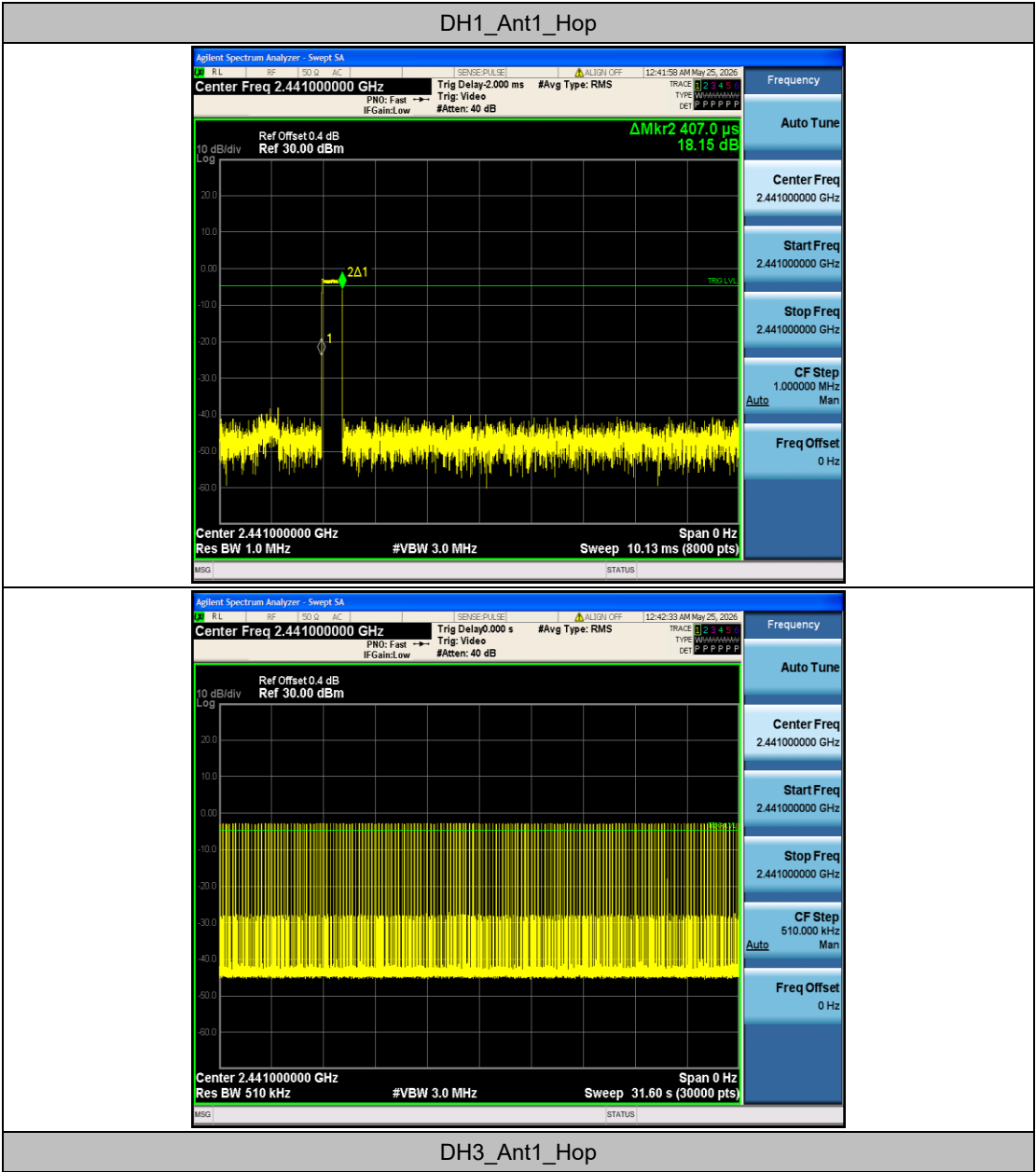


Appendix E: Time of occupancy

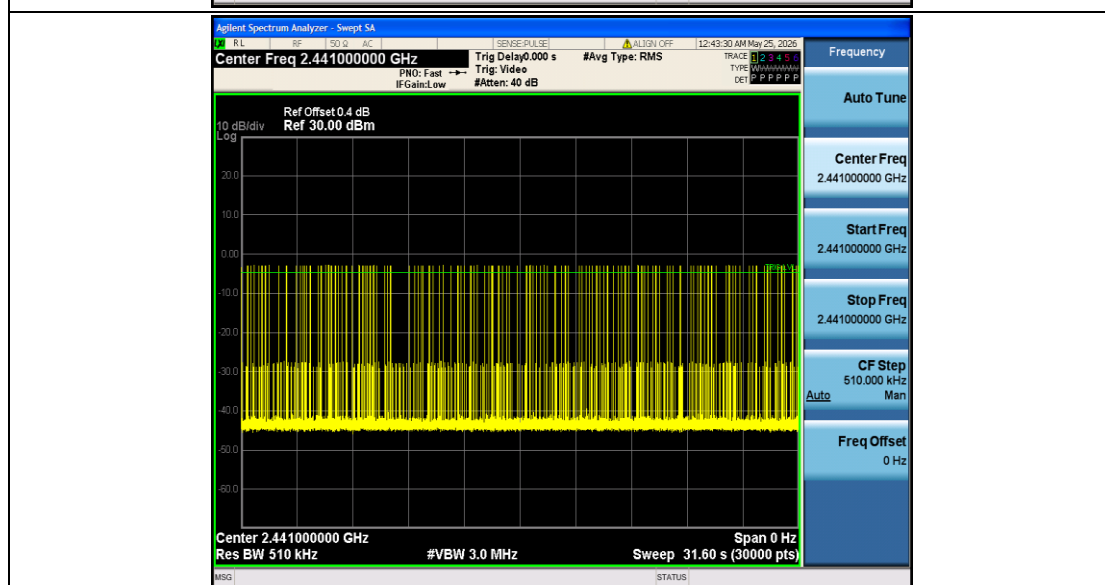
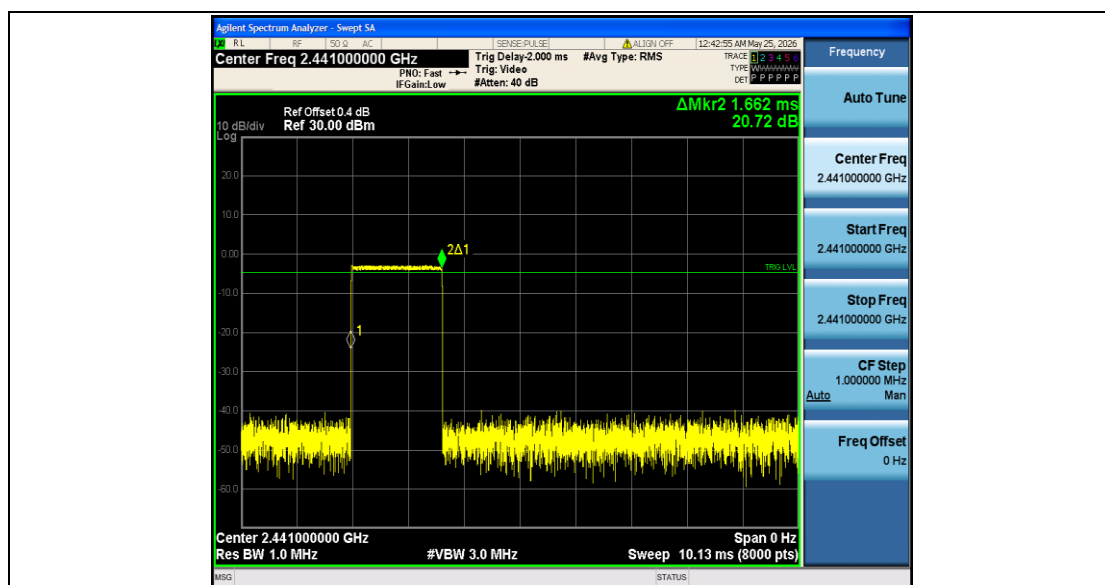
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.407	315	0.128	≤0.4	PASS
DH3	Ant1	Hop	1.662	154	0.256	≤0.4	PASS
DH5	Ant1	Hop	2.910	96	0.279	≤0.4	PASS
2DH1	Ant1	Hop	0.417	316	0.132	≤0.4	PASS
2DH3	Ant1	Hop	1.668	160	0.267	≤0.4	PASS
2DH5	Ant1	Hop	2.916	109	0.318	≤0.4	PASS
3DH1	Ant1	Hop	0.414	315	0.13	≤0.4	PASS
3DH3	Ant1	Hop	1.664	159	0.265	≤0.4	PASS
3DH5	Ant1	Hop	2.916	118	0.344	≤0.4	PASS

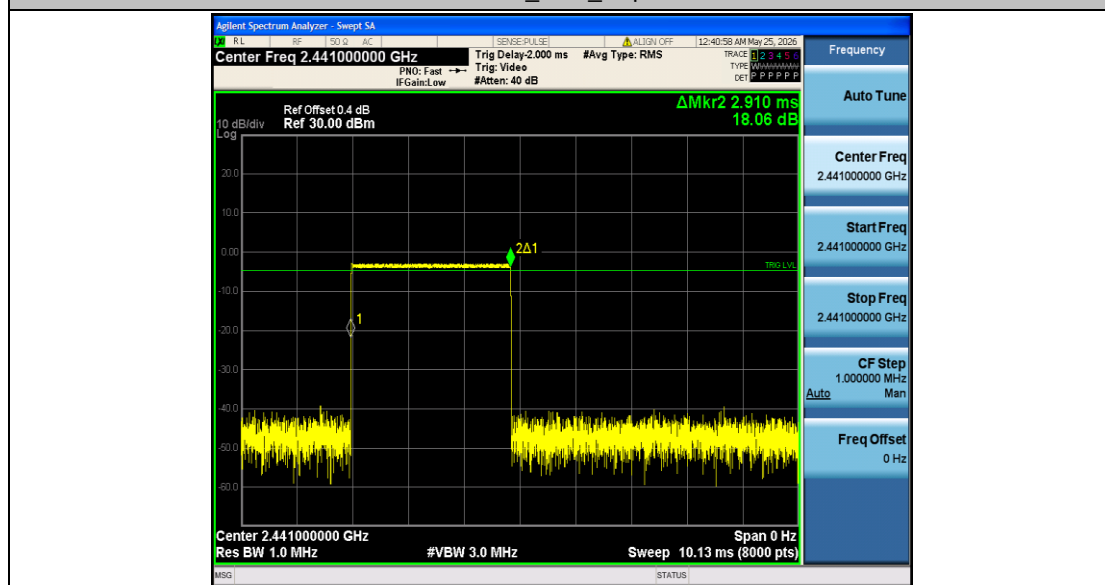
Test Graphs

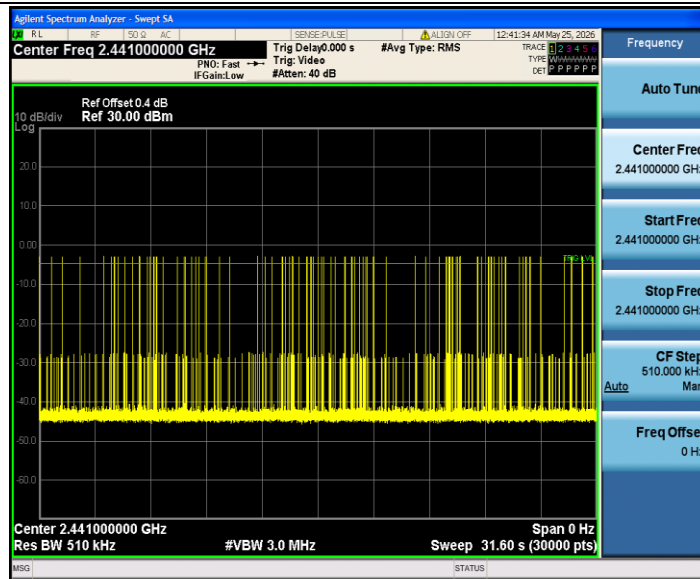


DH3_Ant1_Hop

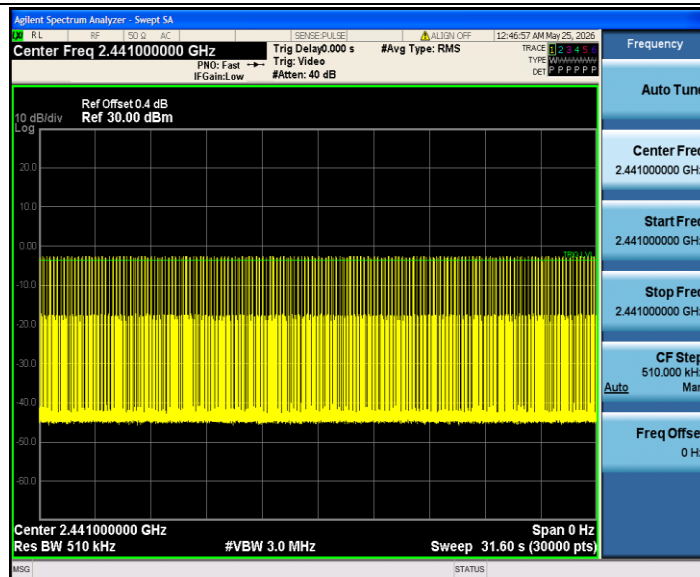
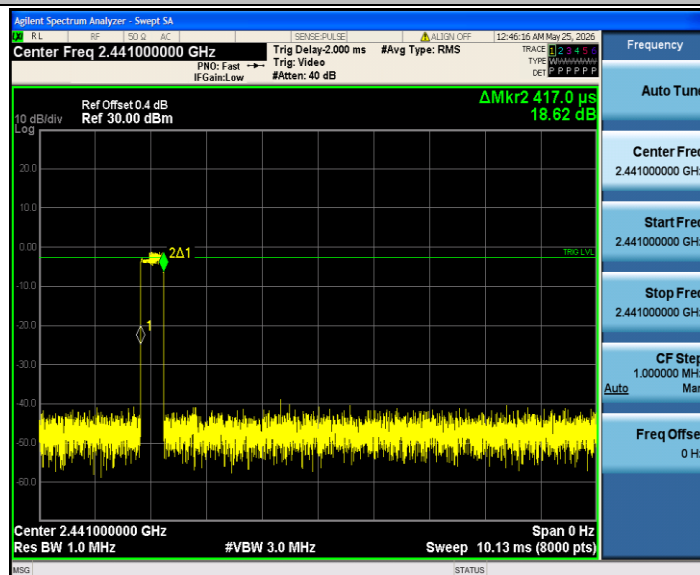


DH5_Ant1_Hop

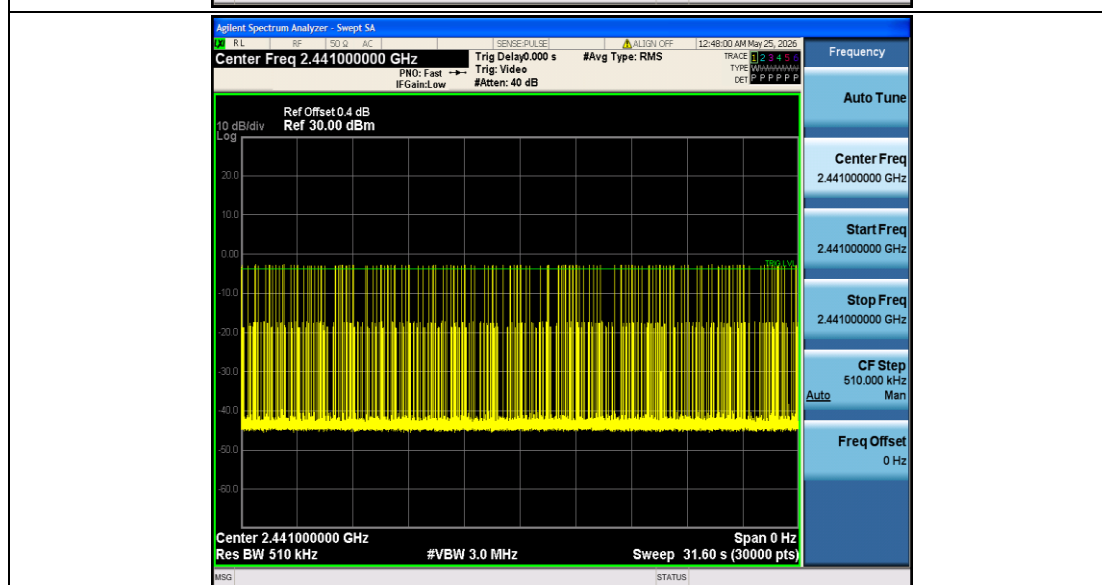
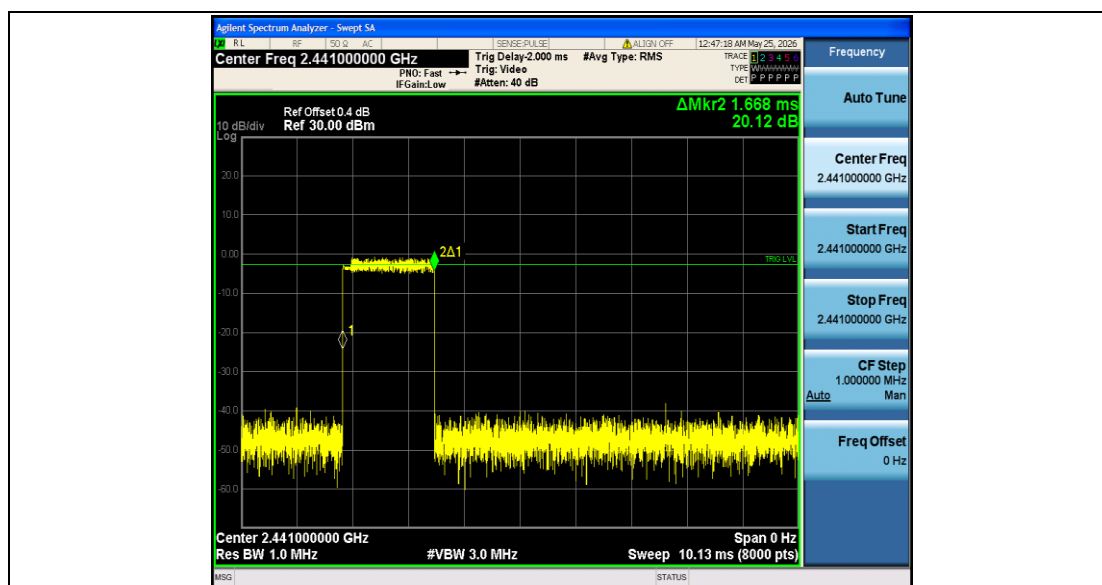




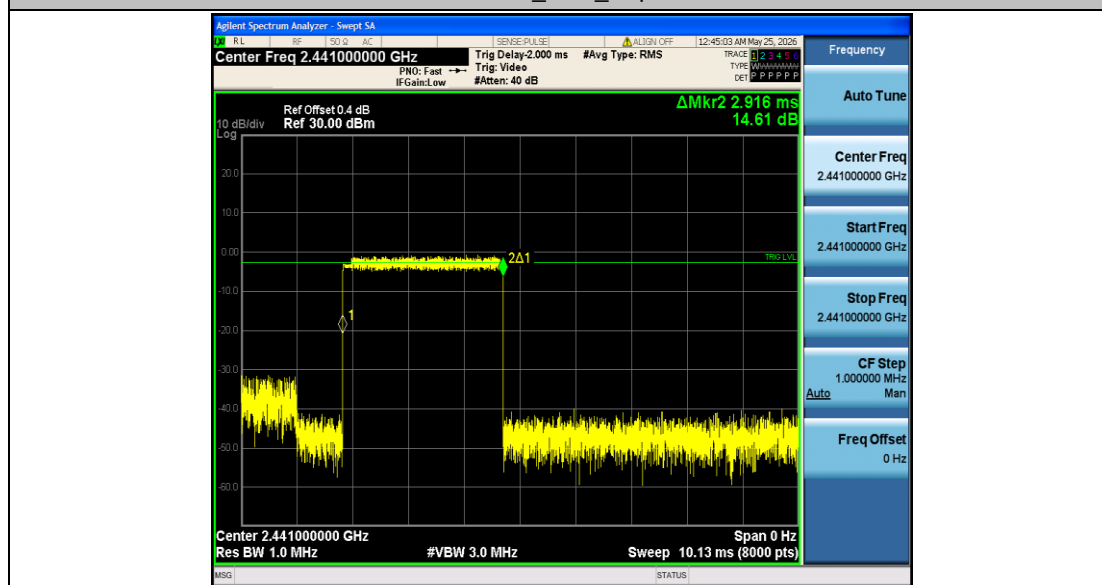
2DH1_Ant1_Hop

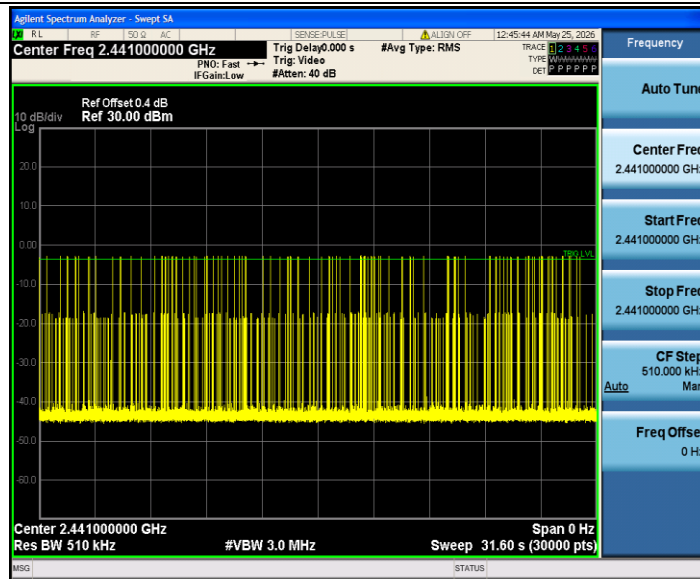


2DH3_Ant1_Hop

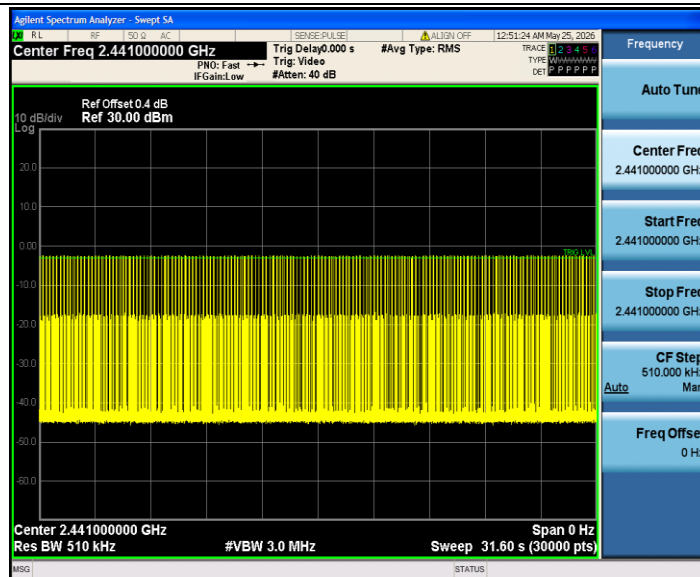
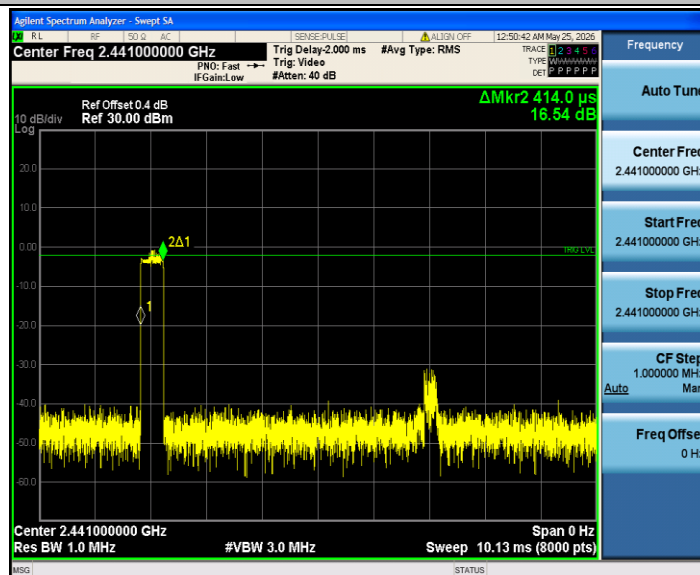


2DH5_Ant1_Hop

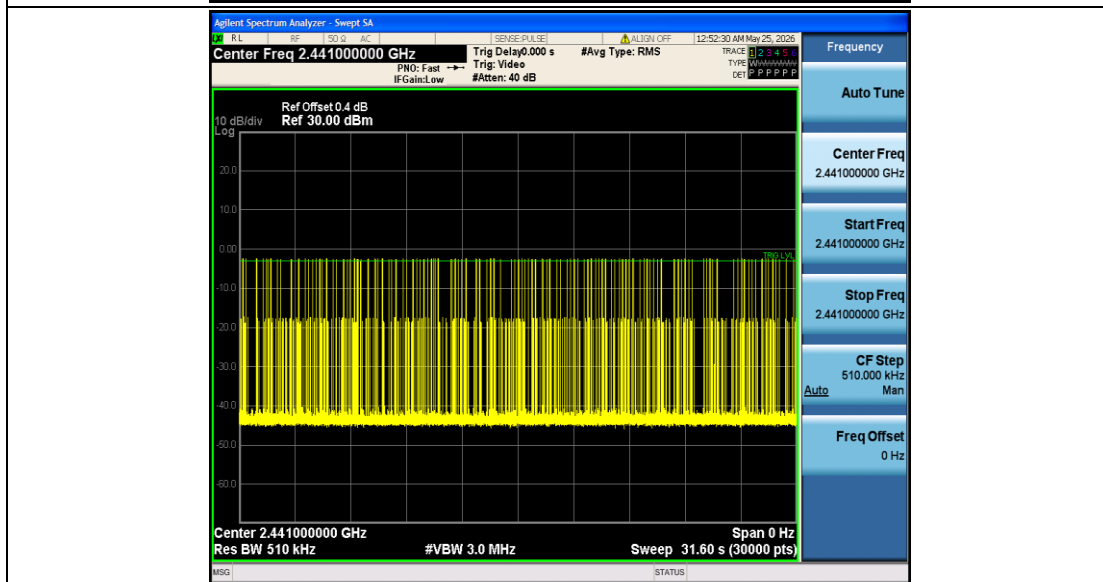
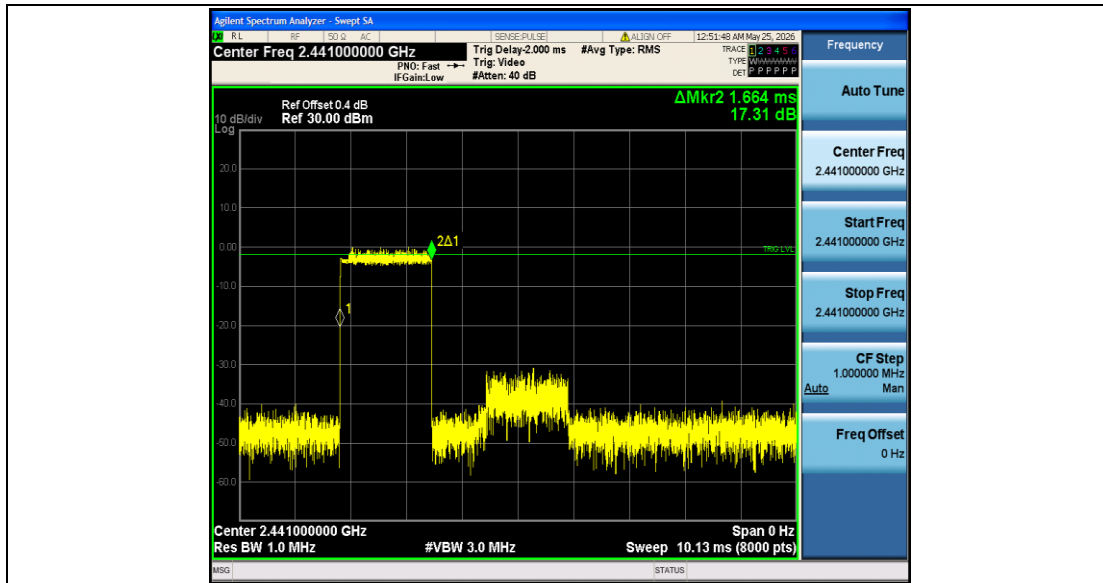




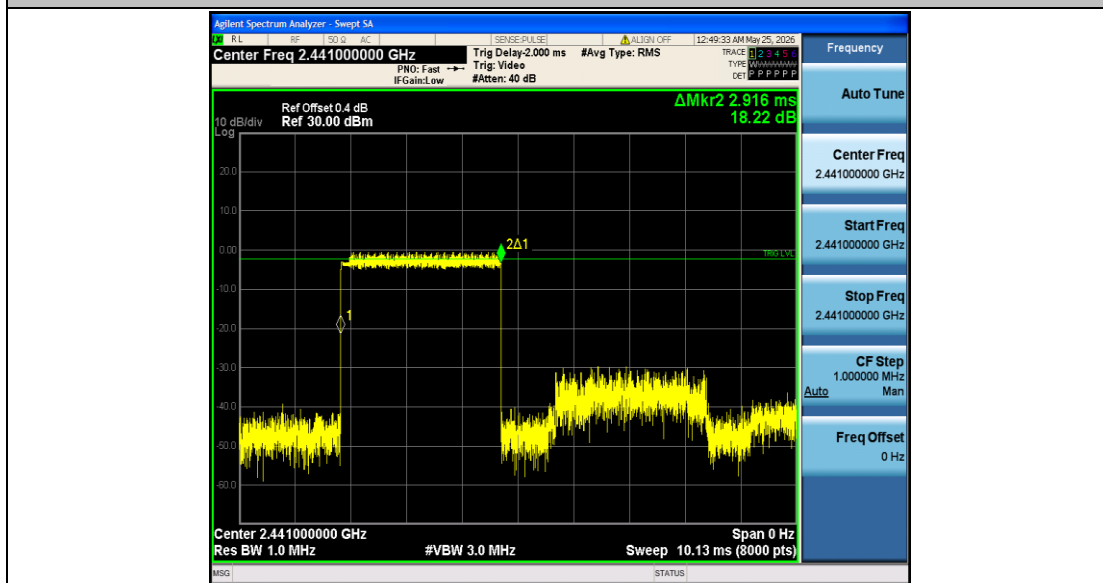
3DH1_Ant1_Hop

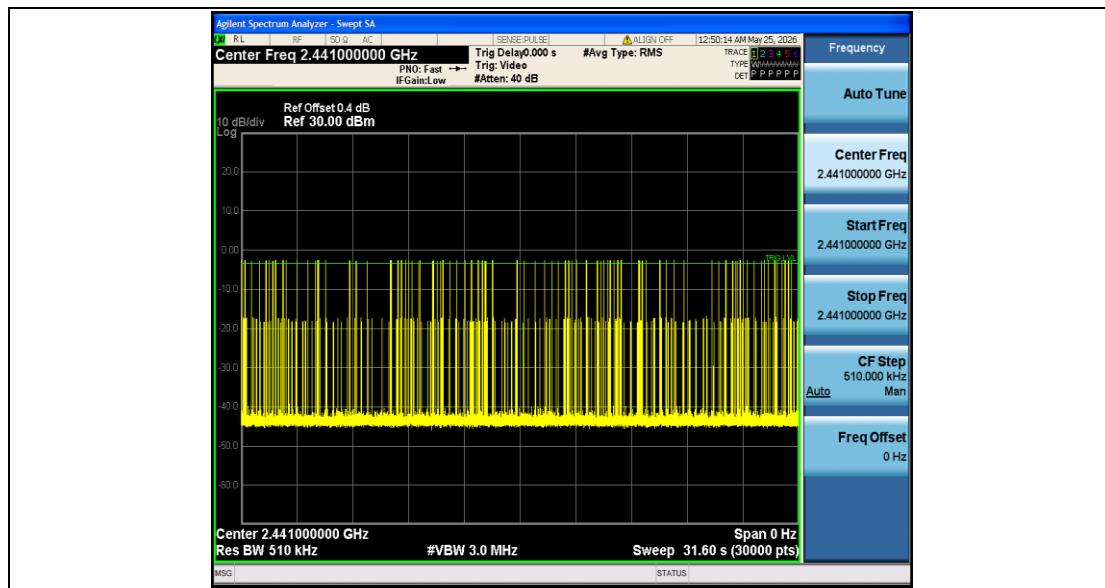


3DH3_Ant1_Hop



3DH5_Ant1_Hop



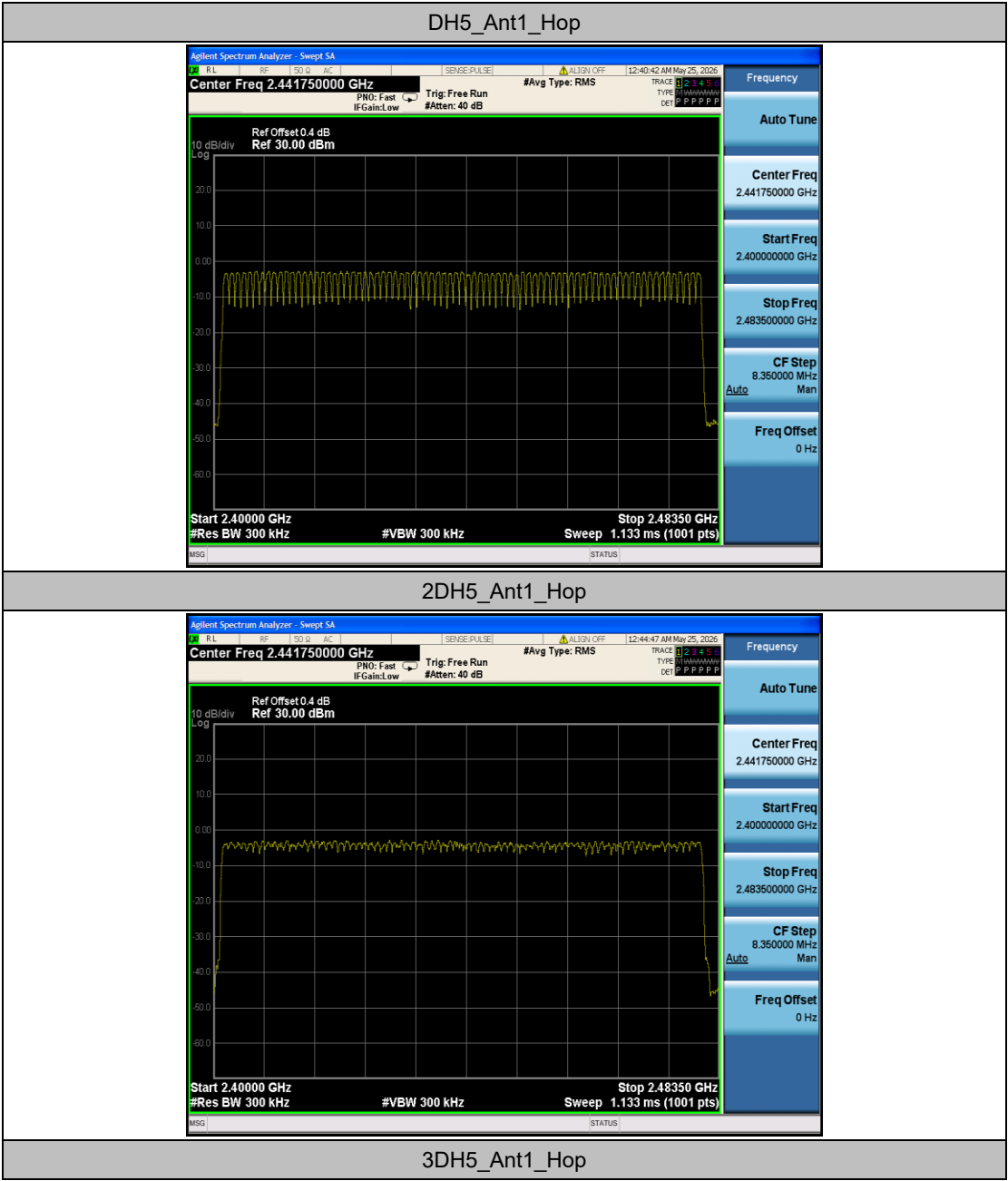


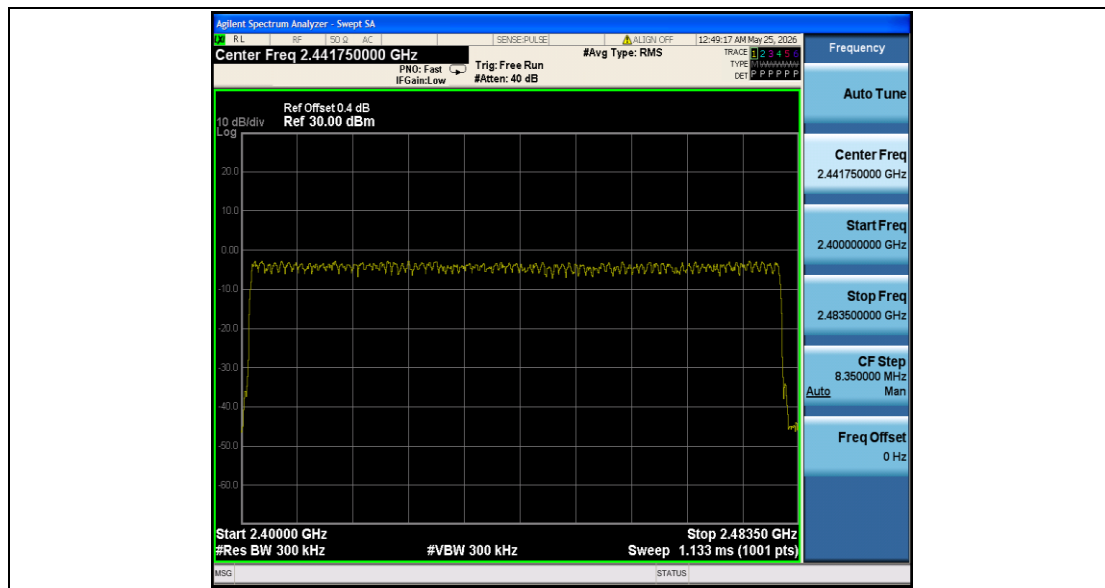
Appendix F: Number of hopping channels

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



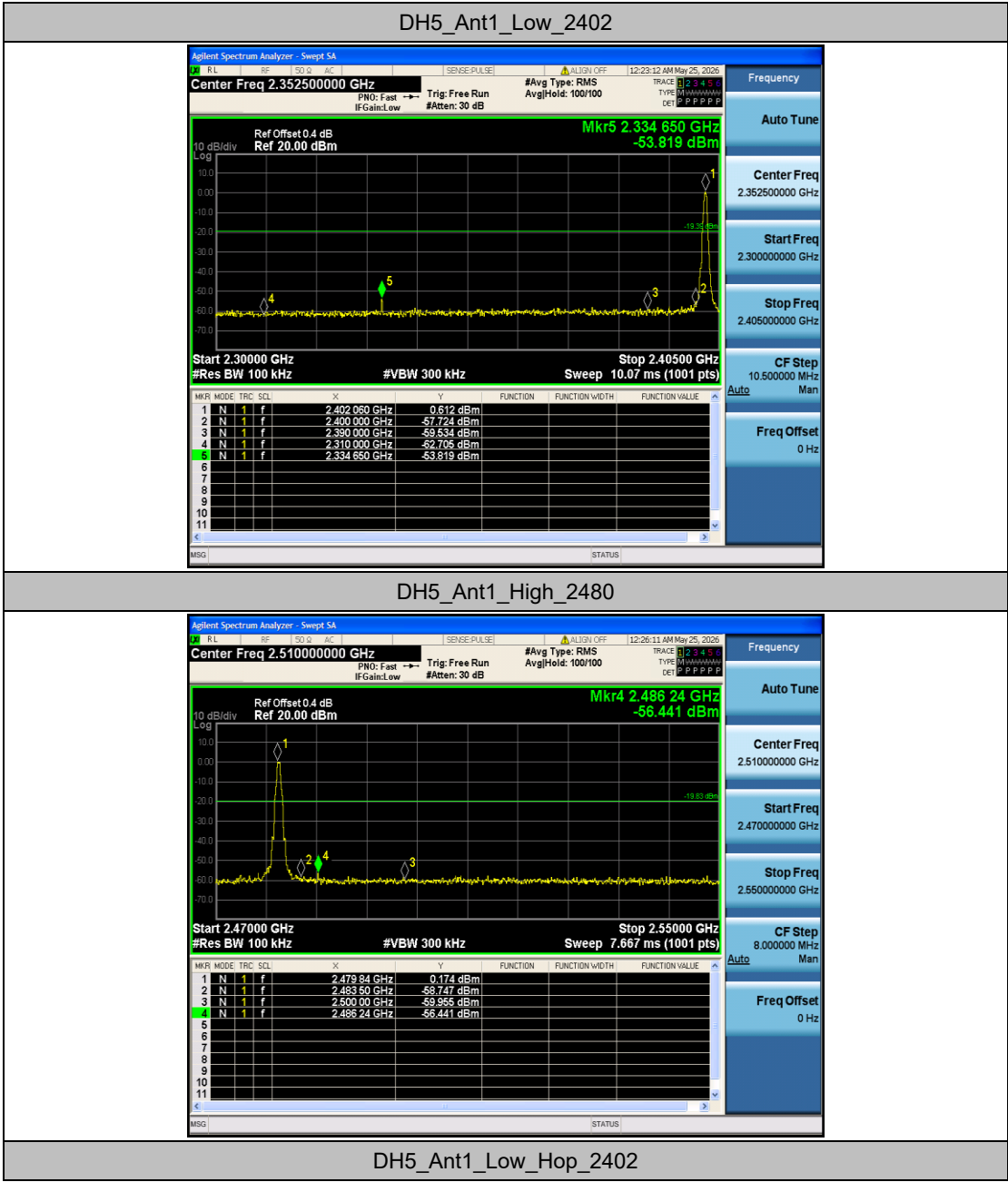


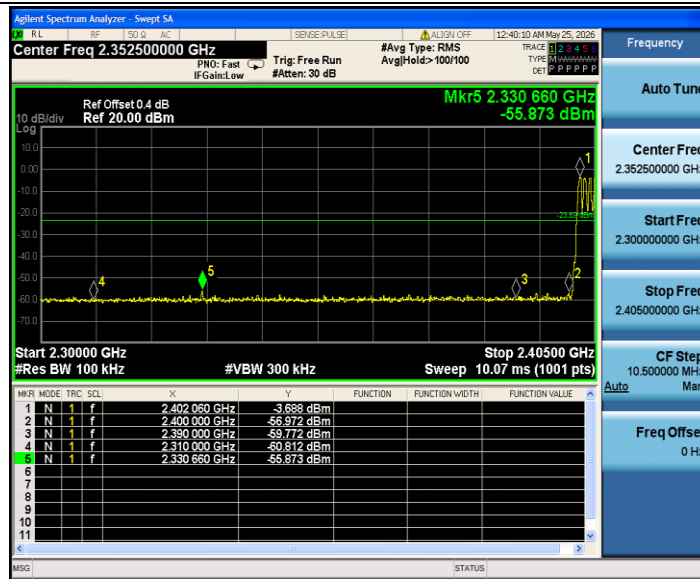
Appendix G: Band edge measurements

Test Result

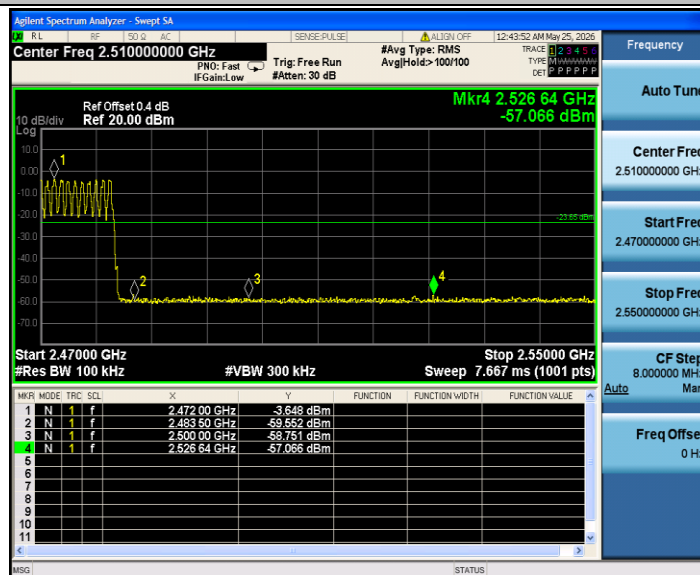
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.61	-53.82	≤ -19.39	PASS
		High	2480	0.17	-56.44	≤ -19.83	PASS
		Low	Hop_2402	-3.69	-55.87	≤ -23.69	PASS
		High	Hop_2480	-3.65	-57.07	≤ -23.65	PASS
2DH5	Ant1	Low	2402	-3.00	-57.22	≤ -23	PASS
		High	2480	-3.70	-57.53	≤ -23.7	PASS
		Low	Hop_2402	-2.92	-50.36	≤ -22.92	PASS
		High	Hop_2480	-6.03	-56.63	≤ -26.03	PASS
3DH5	Ant1	Low	2402	-4.92	-56.21	≤ -24.92	PASS
		High	2480	-4.69	-56.86	≤ -24.69	PASS
		Low	Hop_2402	-3.42	-57.52	≤ -23.42	PASS
		High	Hop_2480	-5.21	-57.16	≤ -25.21	PASS

Test Graphs

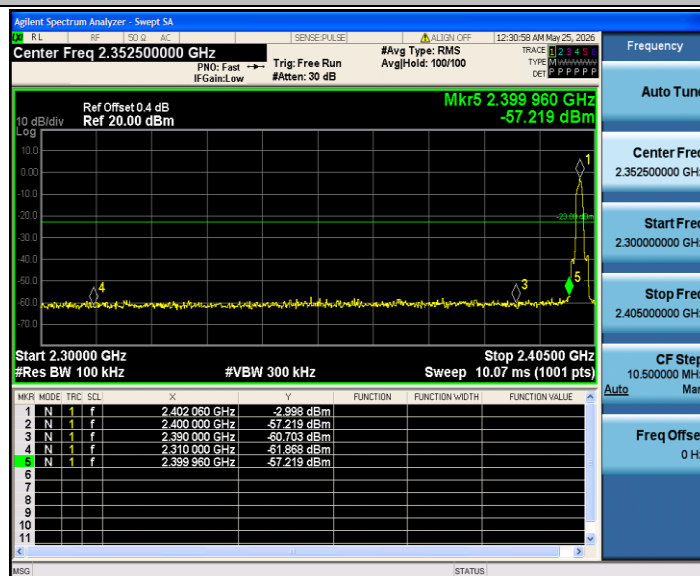




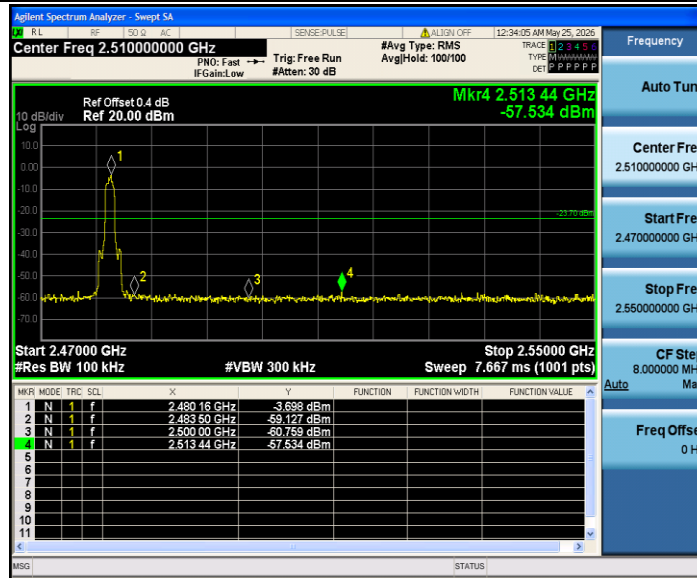
DH5_Ant1_High_Hop_2480



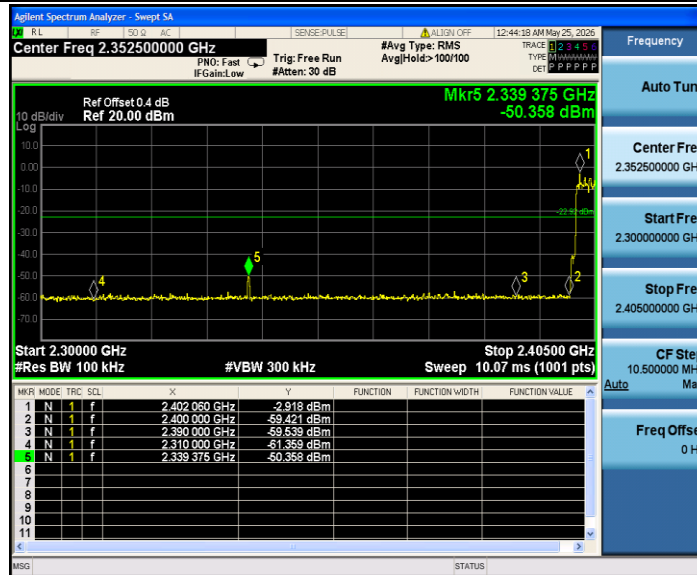
2DH5_Ant1_Low_2402



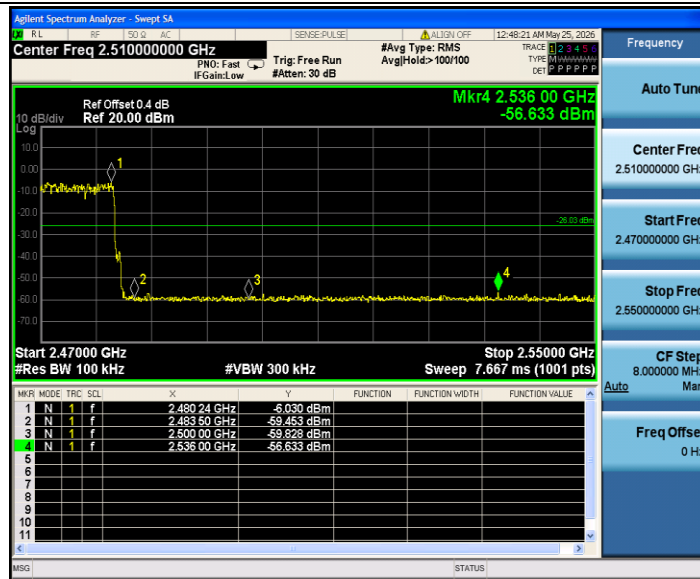
2DH5_Ant1_High_2480



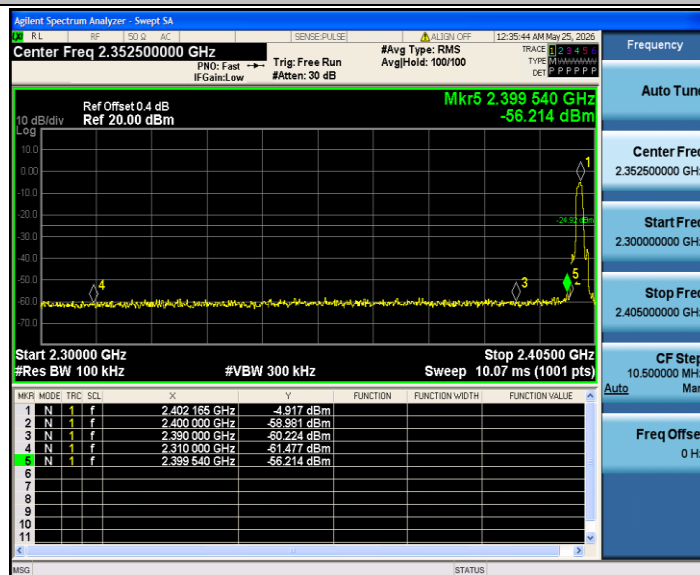
2DH5_Ant1_Low_Hop_2402



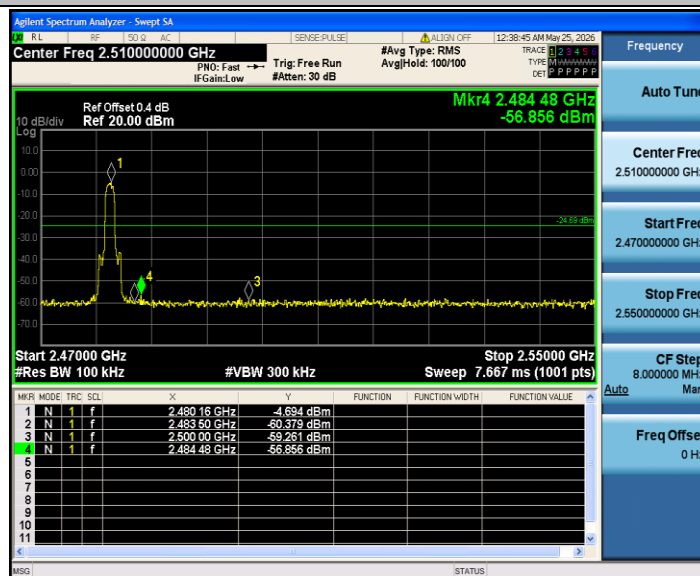
2DH5_Ant1_High_Hop_2480



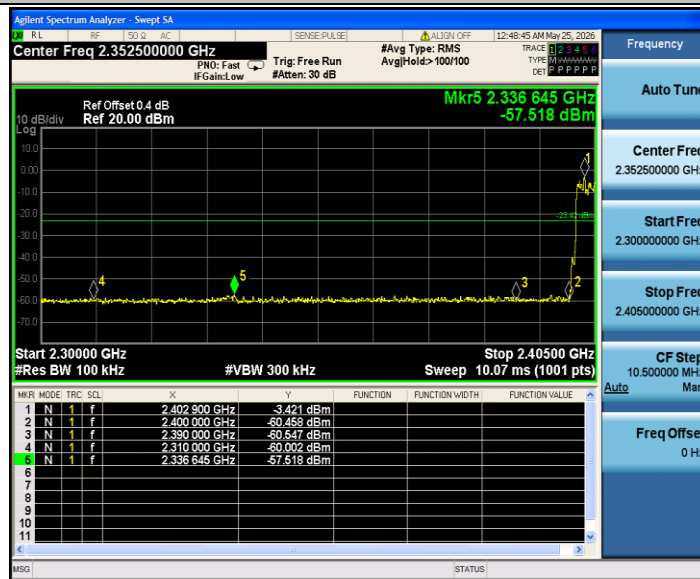
3DH5_Ant1_Low_2402



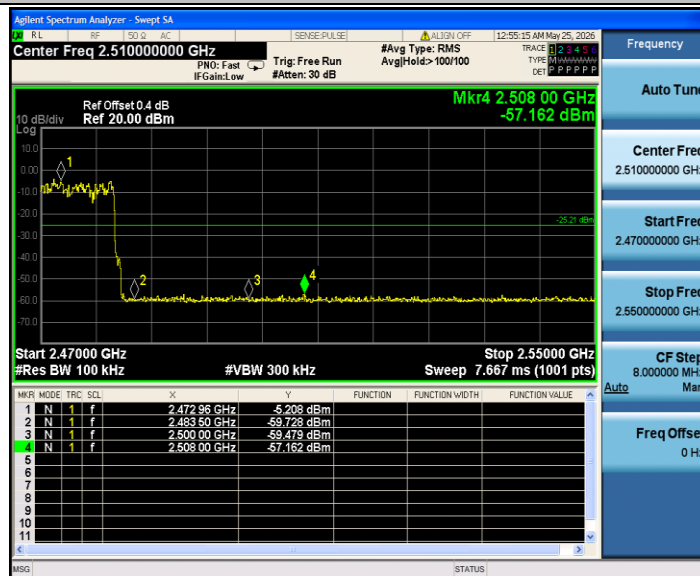
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

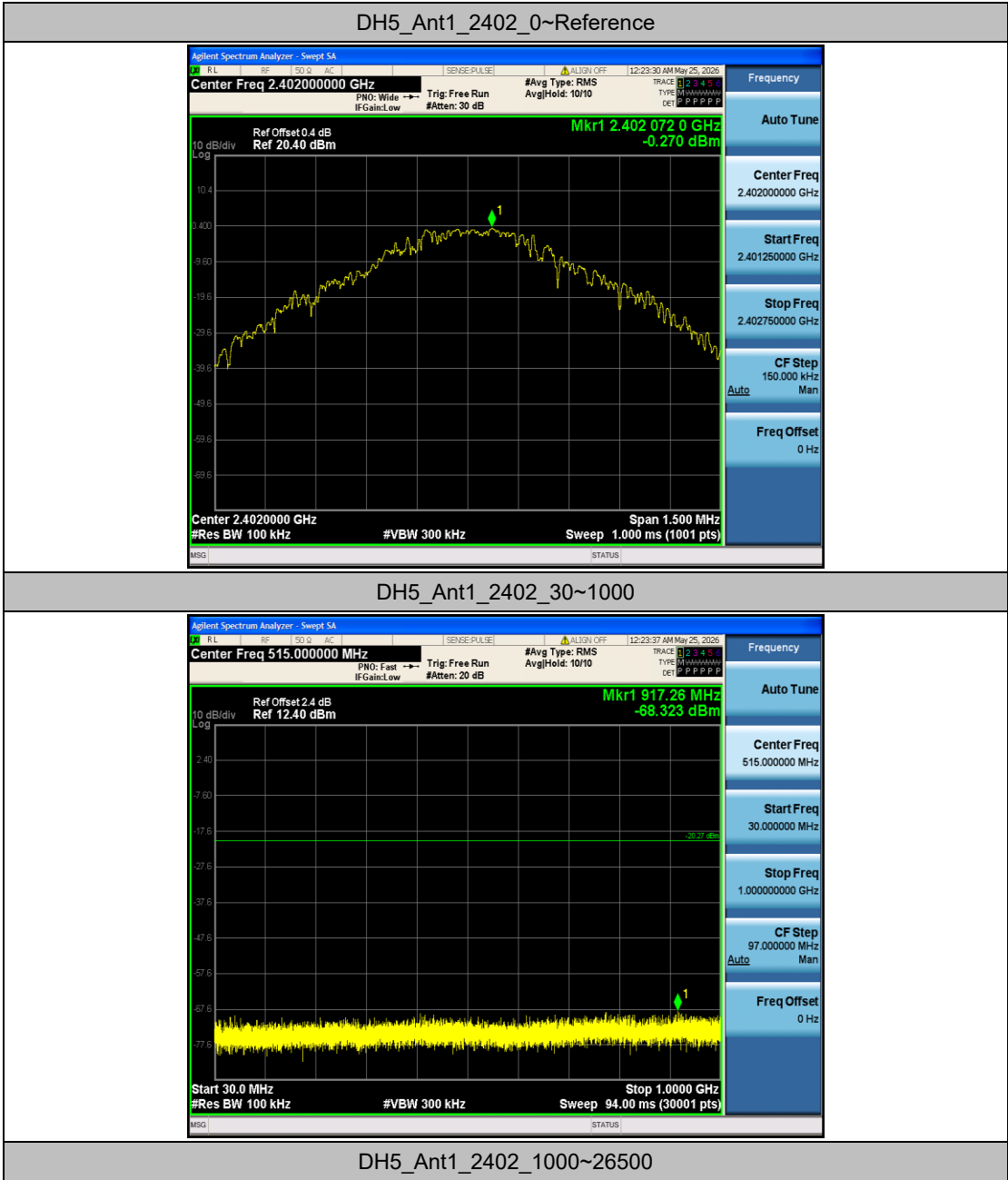


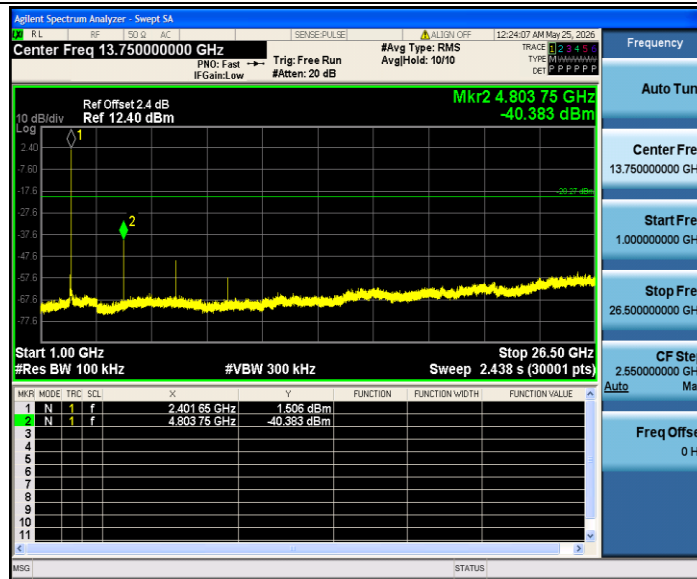
Appendix H: Conducted Spurious Emission

Test Result

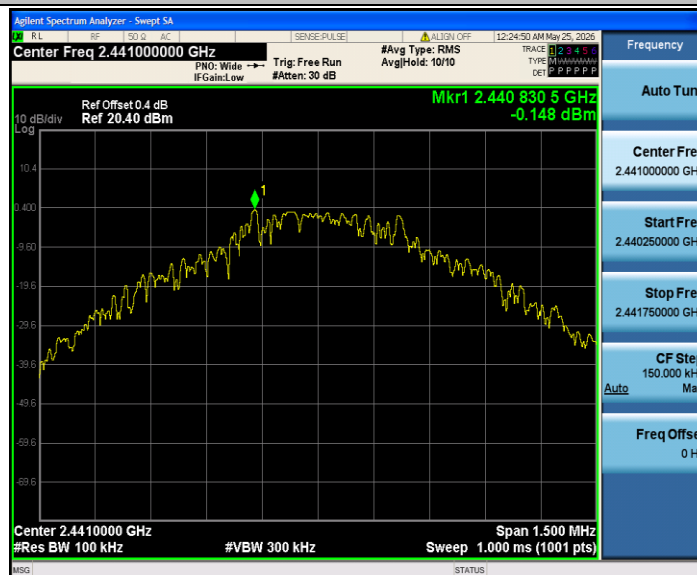
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.27	-0.27	---	PASS
			30~1000	-0.27	-68.32	≤-20.27	PASS
			1000~26500	-0.27	-40.38	≤-20.27	PASS
		2441	Reference	-0.15	-0.15	---	PASS
			30~1000	-0.15	-67.87	≤-20.15	PASS
			1000~26500	-0.15	-40.08	≤-20.15	PASS
		2480	Reference	-0.47	-0.47	---	PASS
			30~1000	-0.47	-68.02	≤-20.47	PASS
			1000~26500	-0.47	-39.7	≤-20.47	PASS
2DH5	Ant1	2402	Reference	-6.25	-6.25	---	PASS
			30~1000	-6.25	-68.37	≤-26.25	PASS
			1000~26500	-6.25	-46.79	≤-26.25	PASS
		2441	Reference	-5.23	-5.23	---	PASS
			30~1000	-5.23	-68.48	≤-25.23	PASS
			1000~26500	-5.23	-48.58	≤-25.23	PASS
		2480	Reference	-4.26	-4.26	---	PASS
			30~1000	-4.26	-67.93	≤-24.26	PASS
			1000~26500	-4.26	-47.66	≤-24.26	PASS
3DH5	Ant1	2402	Reference	-5.83	-5.83	---	PASS
			30~1000	-5.83	-68.05	≤-25.83	PASS
			1000~26500	-5.83	-46.67	≤-25.83	PASS
		2441	Reference	-3.70	-3.70	---	PASS
			30~1000	-3.70	-67.65	≤-23.7	PASS
			1000~26500	-3.70	-46.54	≤-23.7	PASS
		2480	Reference	-4.13	-4.13	---	PASS
			30~1000	-4.13	-67.6	≤-24.13	PASS
			1000~26500	-4.13	-43.43	≤-24.13	PASS

Test Graphs

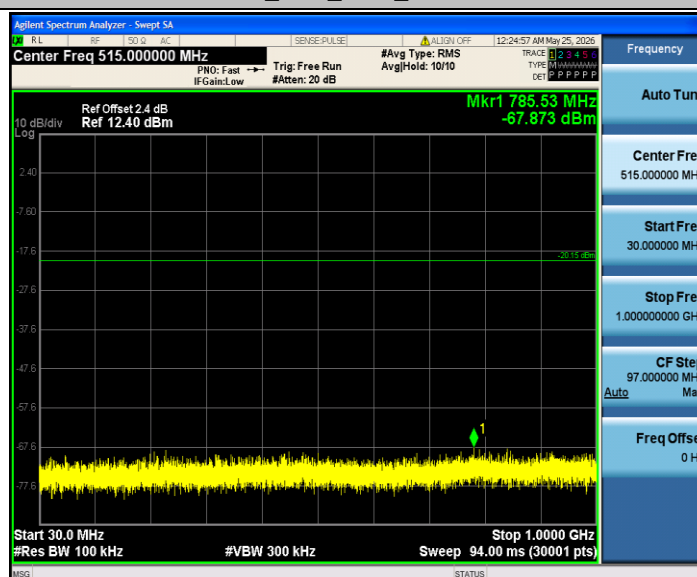




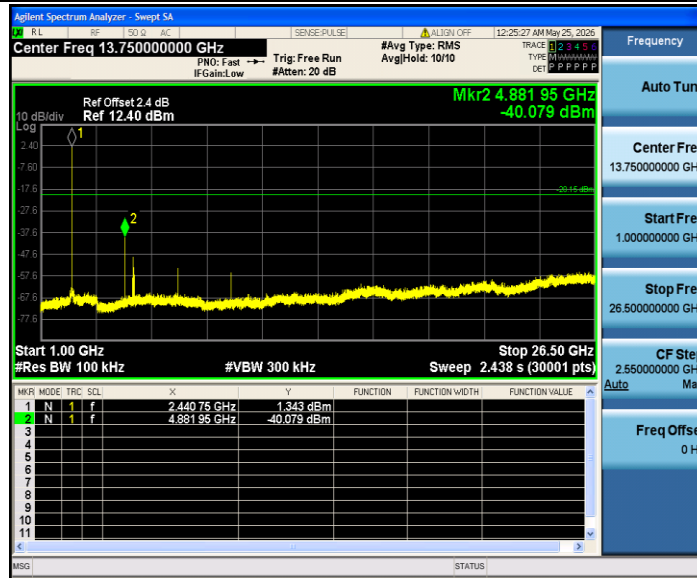
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



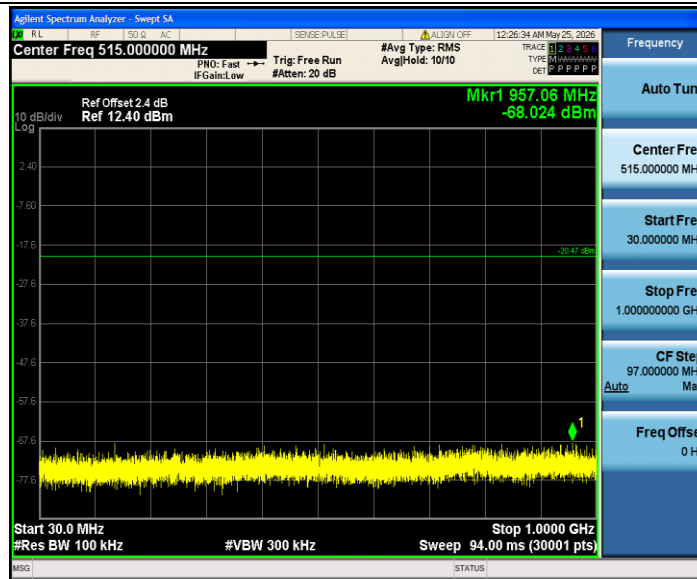
DH5_Ant1_2441_1000~26500



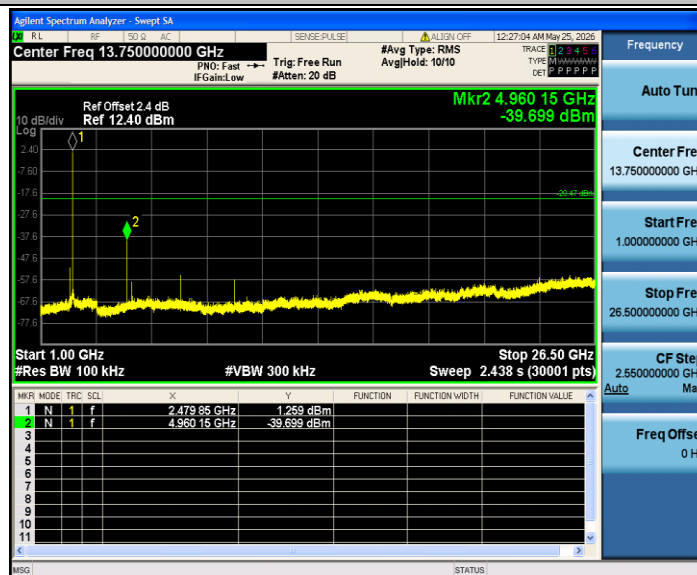
DH5_Ant1_2480_0~Reference



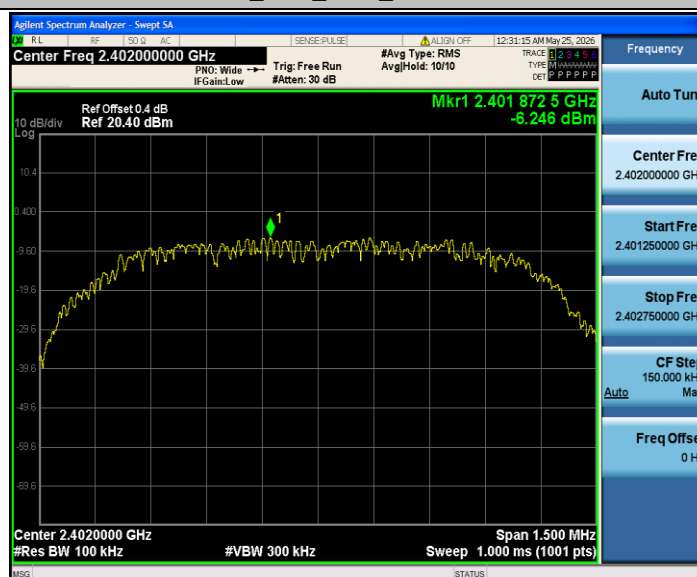
DH5_Ant1_2480_30~1000



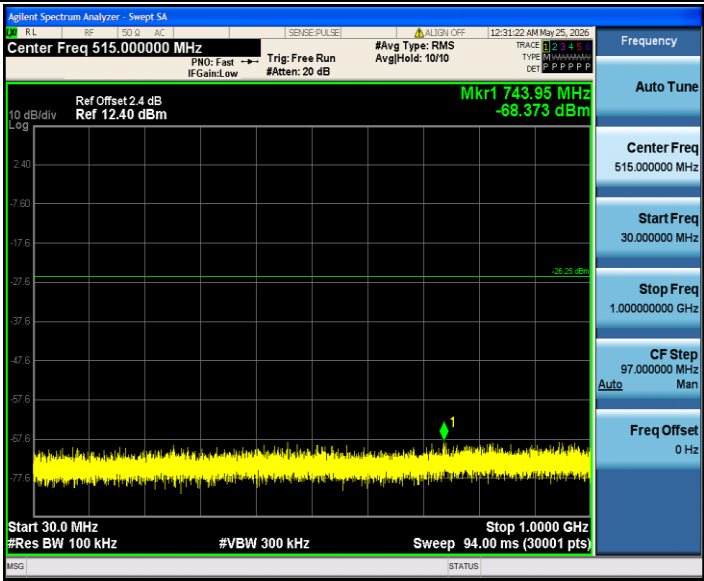
DH5_Ant1_2480_1000~26500



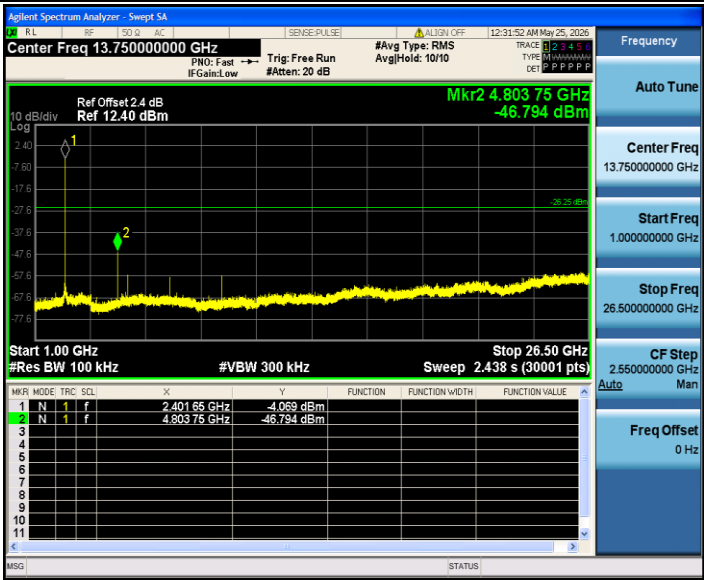
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference