

FCC Appendix RF Test Data

FCC ID : 2BPBG-ARY001

Company: : The Data Driven Company

EUT : ARY INERACTIVE

Model Number : ARY001

Report No. : CTA25051201102

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	0.960	2401.544	2402.504	---	---
		2441	0.945	2440.553	2441.498	---	---
		2480	0.942	2479.550	2480.492	---	---
2DH5	Ant1	2402	1.260	2401.394	2402.654	---	---
		2441	1.326	2440.343	2441.669	---	---
		2480	1.338	2479.340	2480.678	---	---
3DH5	Ant1	2402	1.296	2401.361	2402.657	---	---
		2441	1.299	2440.367	2441.666	---	---
		2480	1.308	2479.361	2480.669	---	---

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.40200000 GHz

Ref Offset 0.3 dB
Ref 10.30 dBm

Trig: Free Run
#Atten: 20 dB

#Avg Type: RMS
Avg/Hold: 100/100

Span 3.000 MHz
#Res BW 30 kHz
#VBW 100 kHz
Sweep (#Swp) 3.200 ms (1001 pts)

ΔMkr3 960 kHz
0.099 dB

Frequency

Auto Tune

Center Freq
2.40200000 GHz

Start Freq
2.40050000 GHz

Stop Freq
2.40350000 GHz

CF Step
300.000 kHz
Man

Freq Offset
0 Hz

MSO

STATUS

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.441000000 GHz

Ref Offset 0.3 dB
Ref 10.30 dBm

Trig: Free Run
#Atten: 20 dB

#Avg Type: RMS
Avg/Hold: 100/100

Span 3.000 MHz
#Res BW 30 kHz
#VBW 100 kHz
Sweep (#Swp) 3.200 ms (1001 pts)

ΔMkr3 945 kHz
-0.674 dB

Frequency

Auto Tune

Center Freq
2.441000000 GHz

Start Freq
2.439500000 GHz

Stop Freq
2.442500000 GHz

CF Step
300.000 kHz
Man

Freq Offset
0 Hz

MSO

STATUS



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

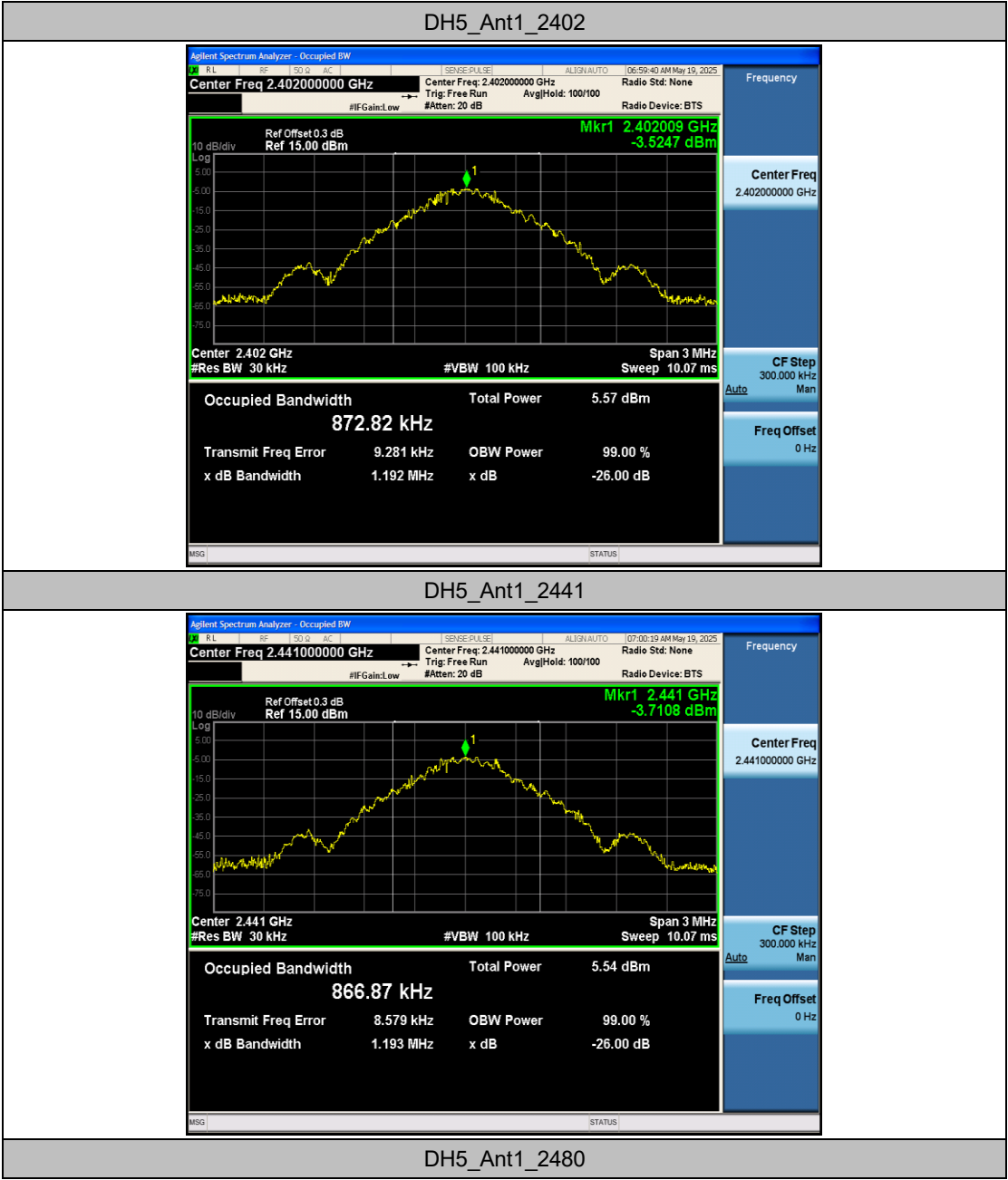


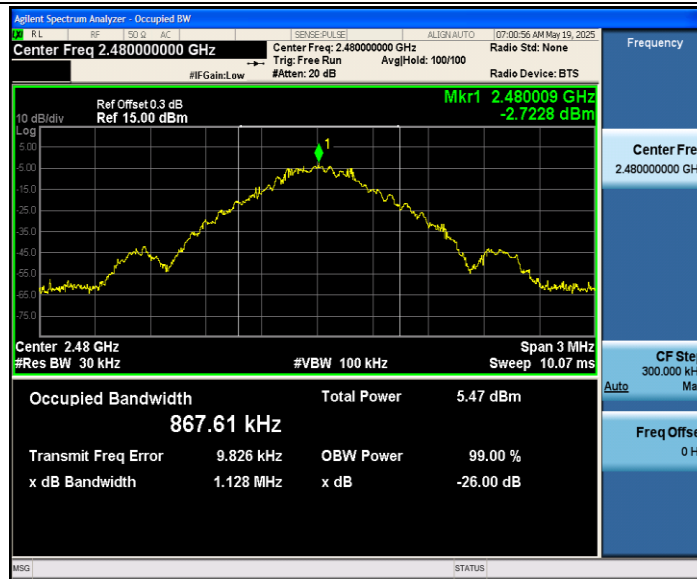
Appendix B: Occupied Channel Bandwidth

Test Result

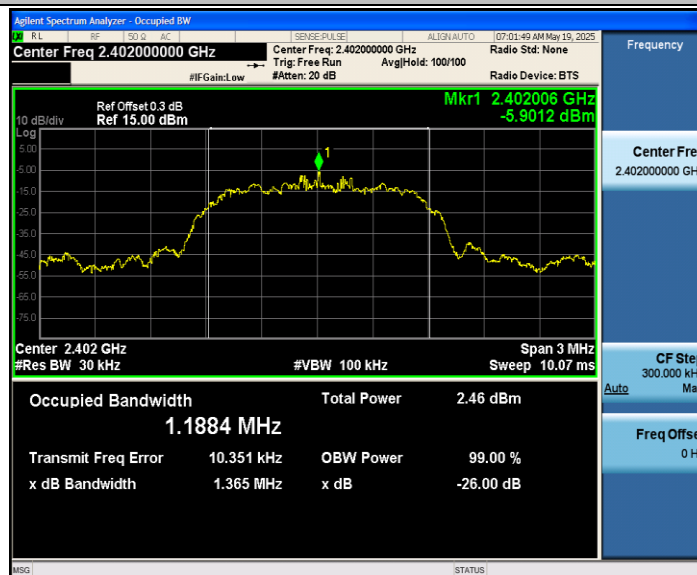
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87282	2401.5729	2402.4457	---	---
		2441	0.86687	2440.5751	2441.4420	---	---
		2480	0.86761	2479.5760	2480.4436	---	---
2DH5	Ant1	2402	1.1884	2401.4162	2402.6046	---	---
		2441	1.1883	2440.4161	2441.6044	---	---
		2480	1.1906	2479.4155	2480.6061	---	---
3DH5	Ant1	2402	1.1855	2401.4173	2402.6028	---	---
		2441	1.1887	2440.4148	2441.6035	---	---
		2480	1.1846	2479.4185	2480.6031	---	---

Test Graphs

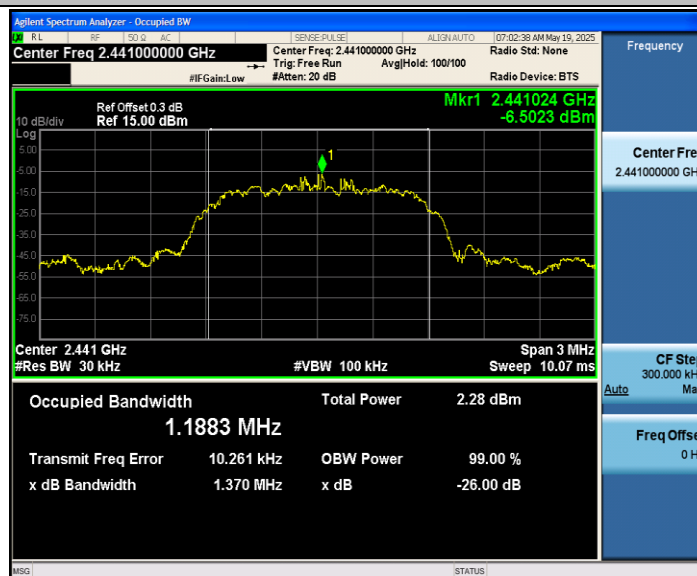




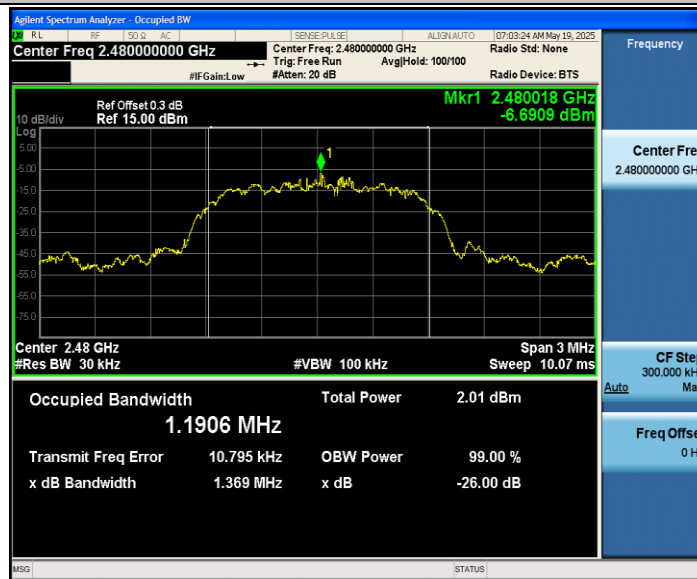
2DH5_Ant1_2402



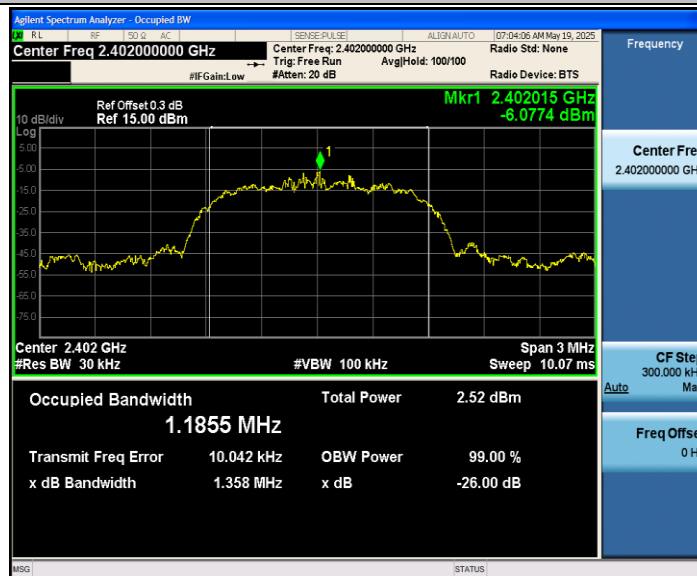
2DH5_Ant1_2441



2DH5_Ant1_2480



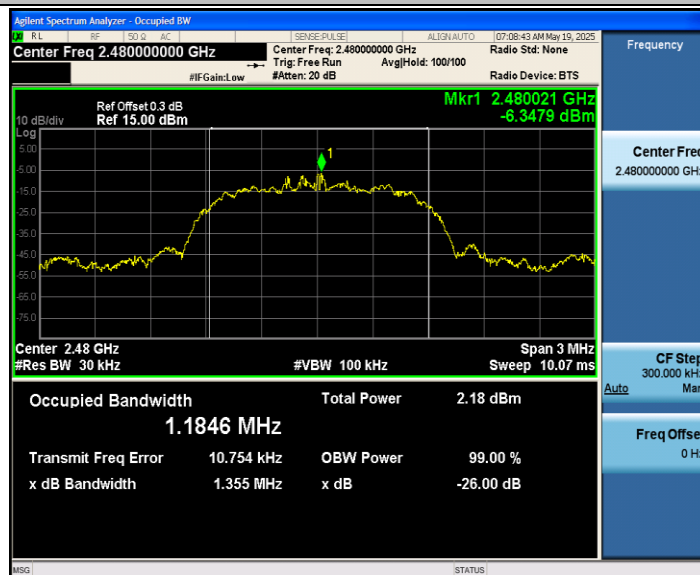
3DH5_Ant1_2402



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	-0.17	≤20.97	PASS
		2441	-0.37	≤20.97	PASS
		2480	-0.49	≤20.97	PASS
2DH5	Ant1	2402	-0.97	≤20.97	PASS
		2441	-1.19	≤20.97	PASS
		2480	-1.31	≤20.97	PASS
3DH5	Ant1	2402	-0.59	≤20.97	PASS
		2441	-0.80	≤20.97	PASS
		2480	-0.93	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.992	≥ 0.960	PASS
2DH5	Ant1	Hop	1.164	≥ 0.892	PASS
3DH5	Ant1	Hop	0.996	≥ 0.872	PASS

Test Graphs



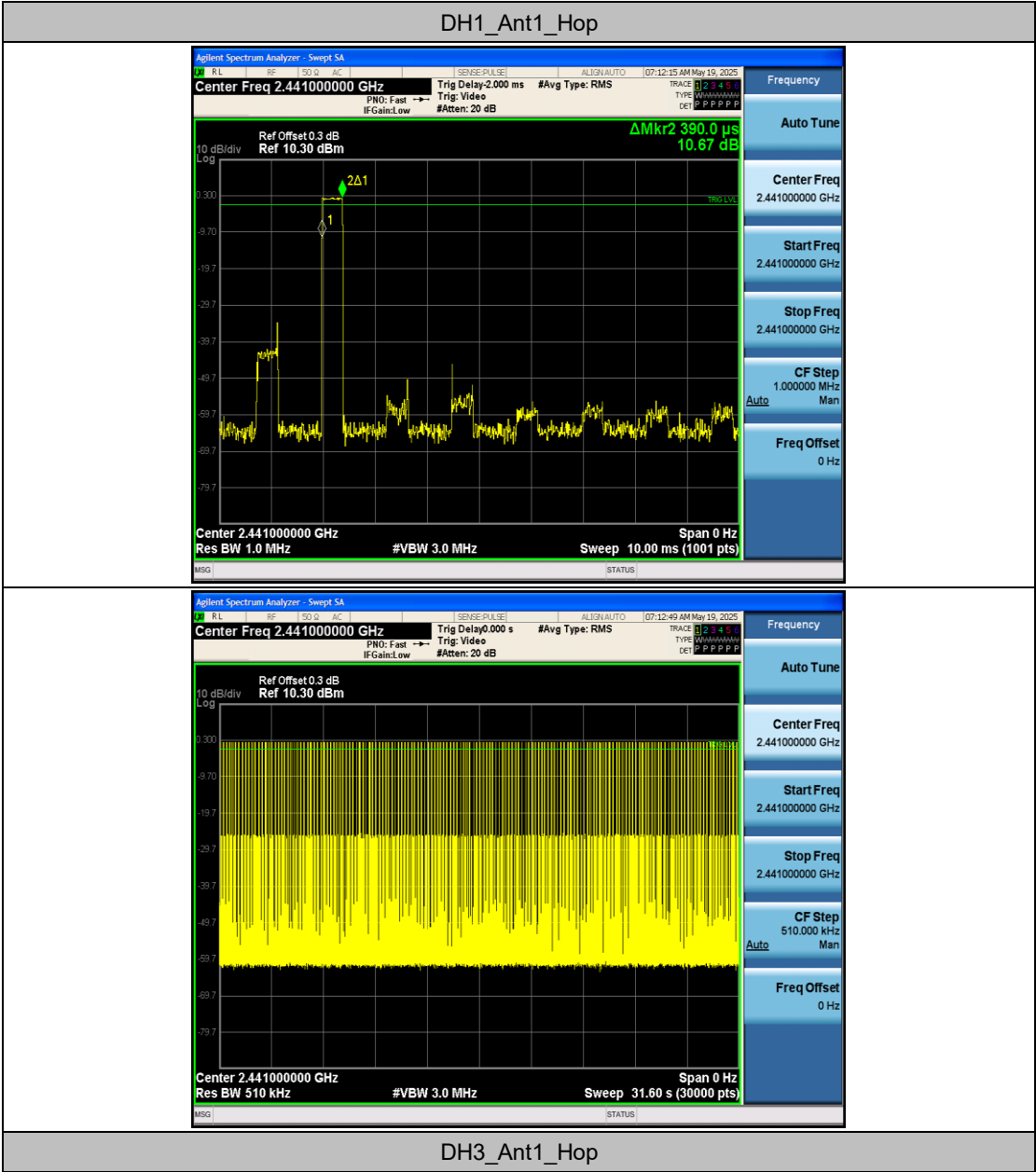


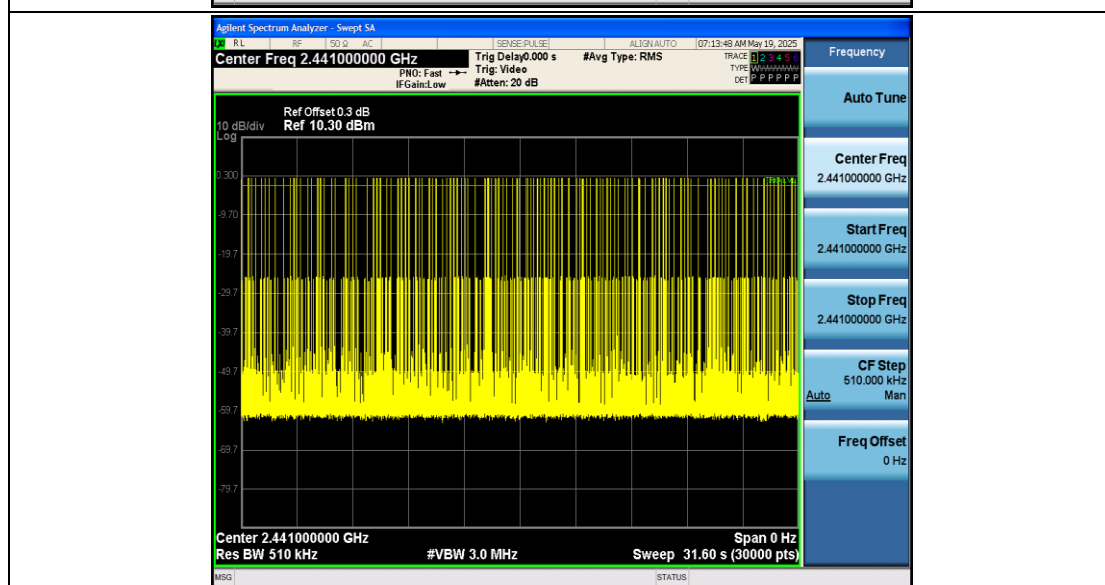
Appendix E: Time of occupancy

Test Result

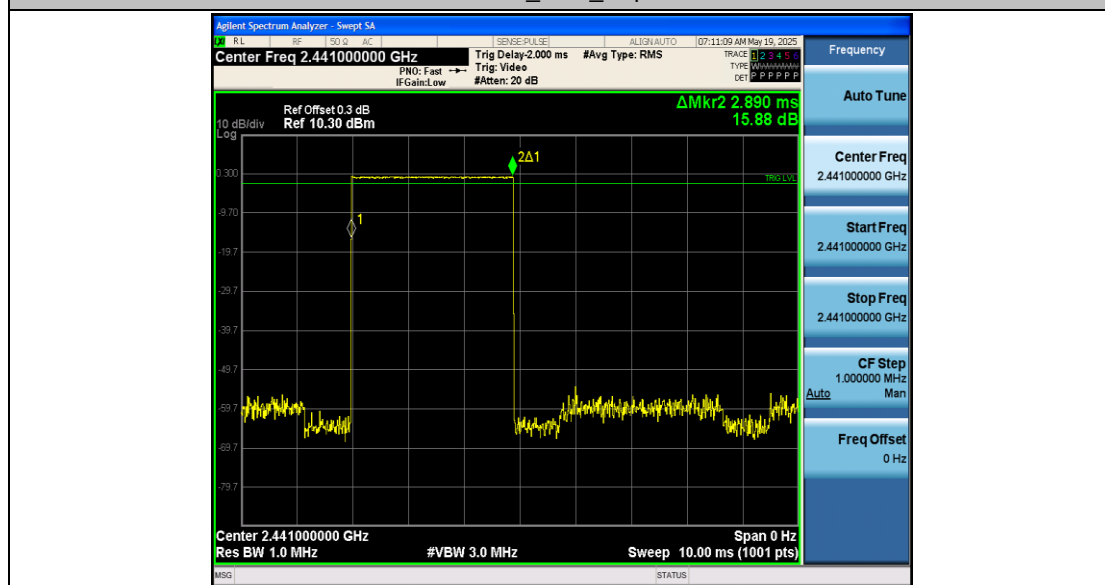
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	316	0.123	≤0.4	PASS
DH3	Ant1	Hop	1.650	165	0.272	≤0.4	PASS
DH5	Ant1	Hop	2.890	93	0.269	≤0.4	PASS
2DH1	Ant1	Hop	0.400	318	0.127	≤0.4	PASS
2DH3	Ant1	Hop	1.650	159	0.262	≤0.4	PASS
2DH5	Ant1	Hop	2.900	102	0.296	≤0.4	PASS
3DH1	Ant1	Hop	0.400	318	0.127	≤0.4	PASS
3DH3	Ant1	Hop	1.640	158	0.259	≤0.4	PASS
3DH5	Ant1	Hop	2.900	99	0.287	≤0.4	PASS

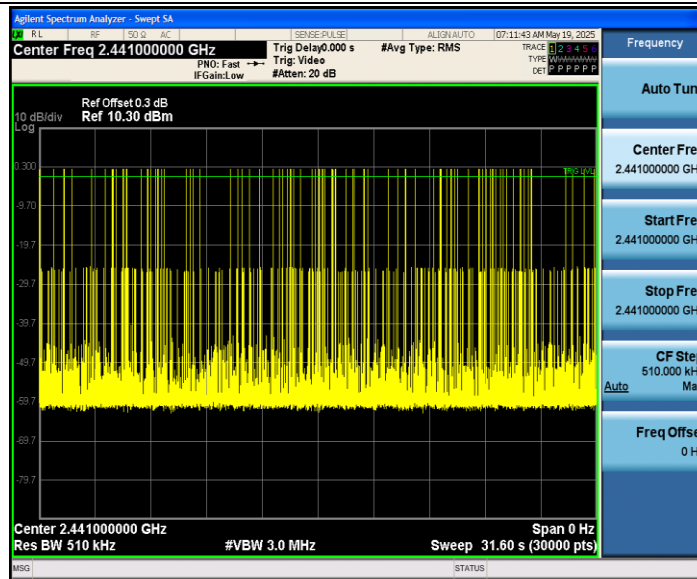
Test Graphs



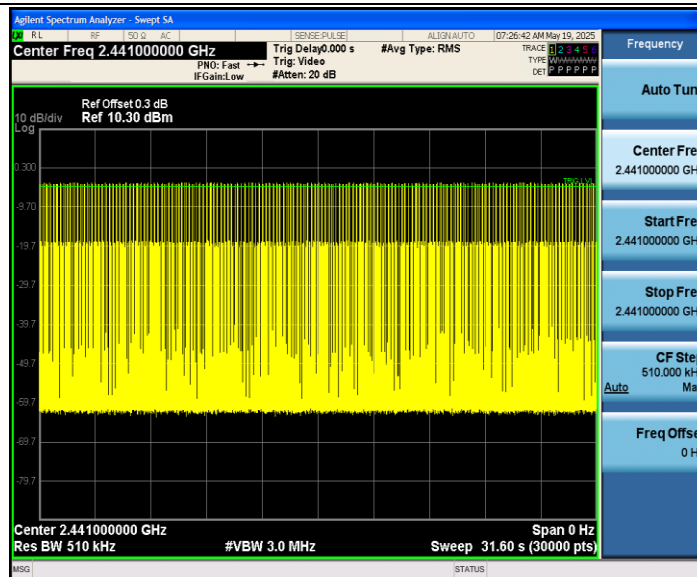
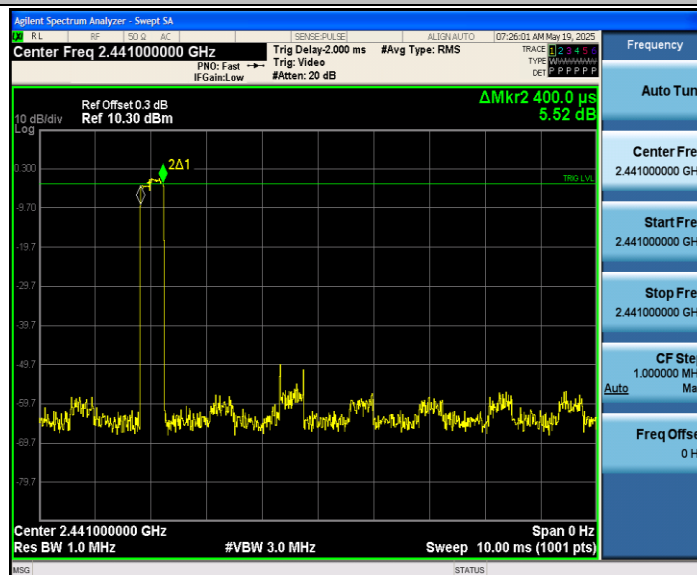


DH5_Ant1_Hop

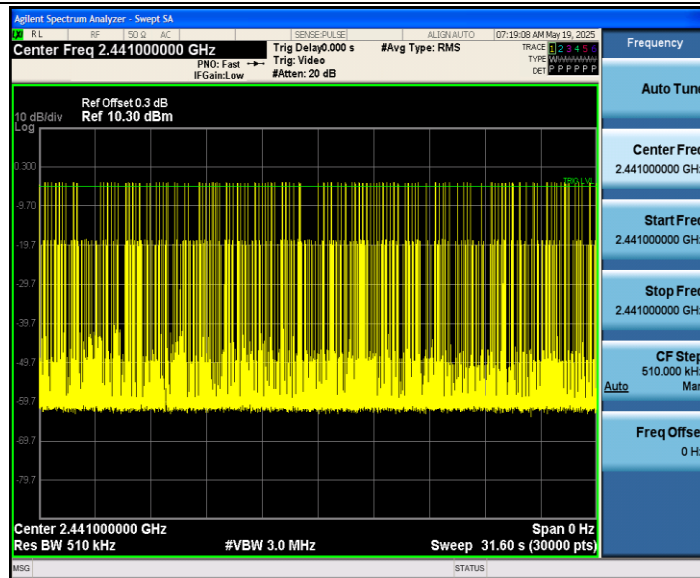
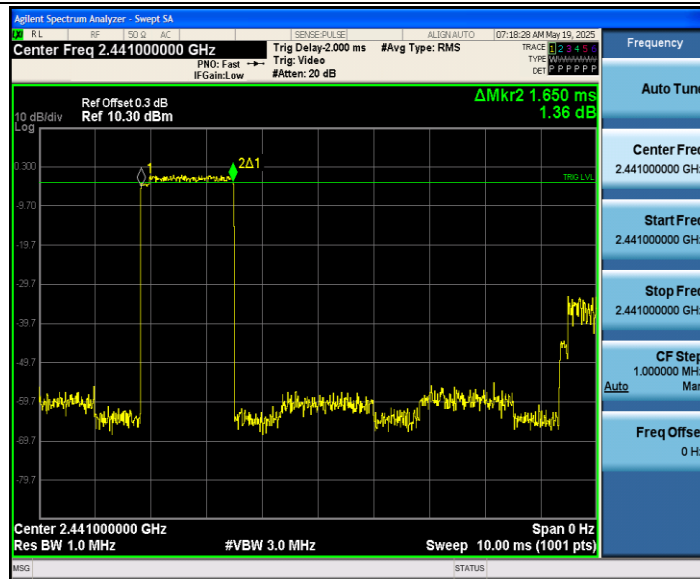




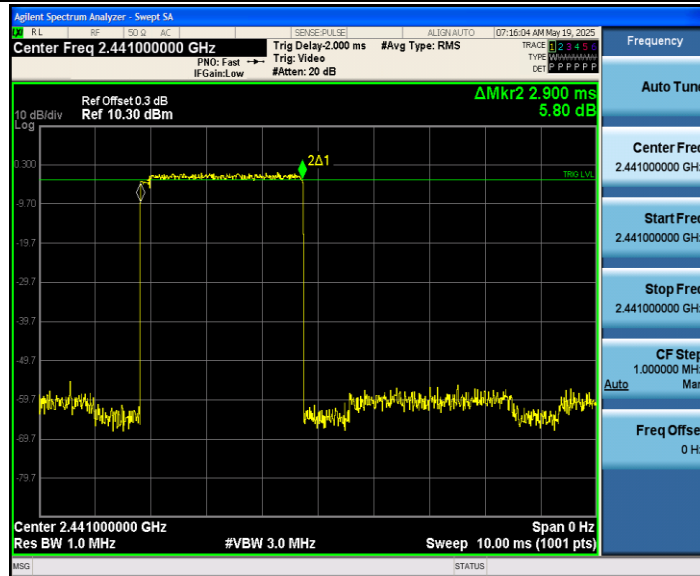
2DH1_Ant1_Hop

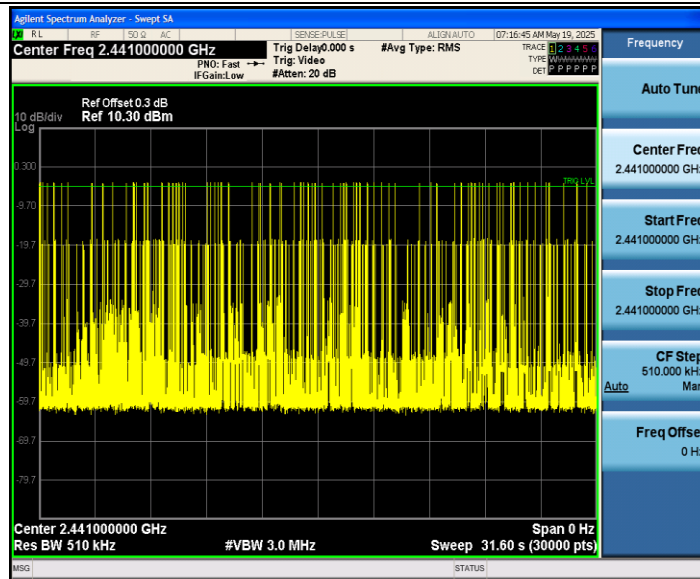


2DH3_Ant1_Hop

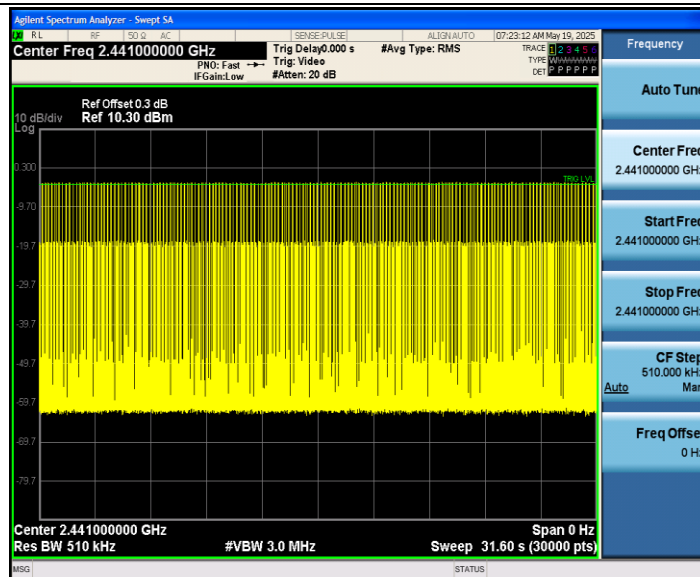
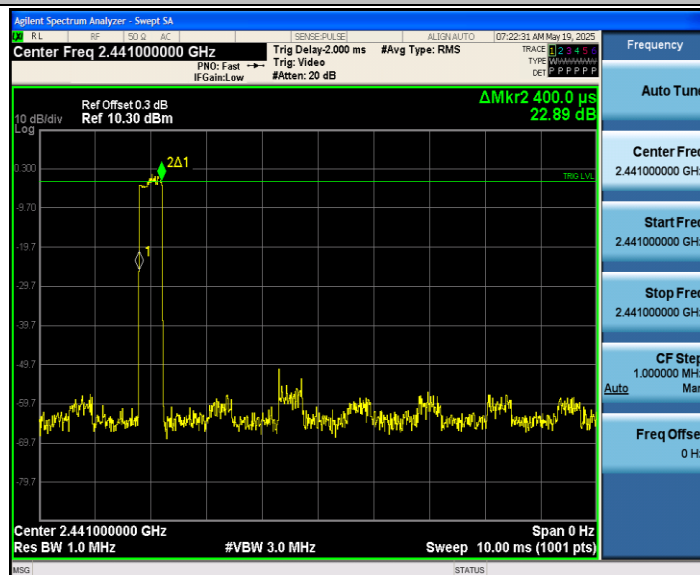


2DH5_Ant1_Hop

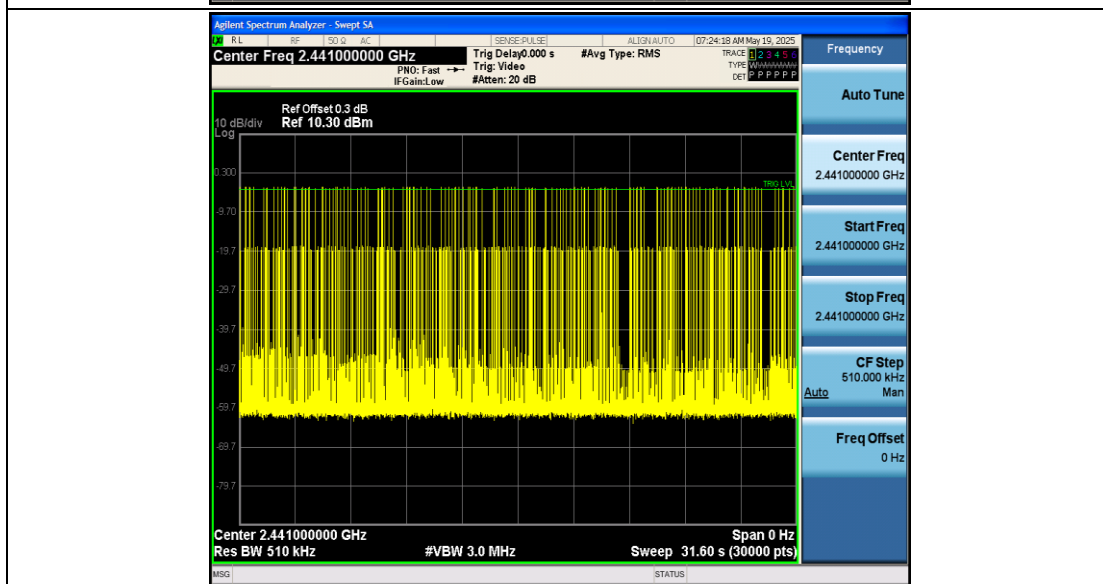




3DH1_Ant1_Hop

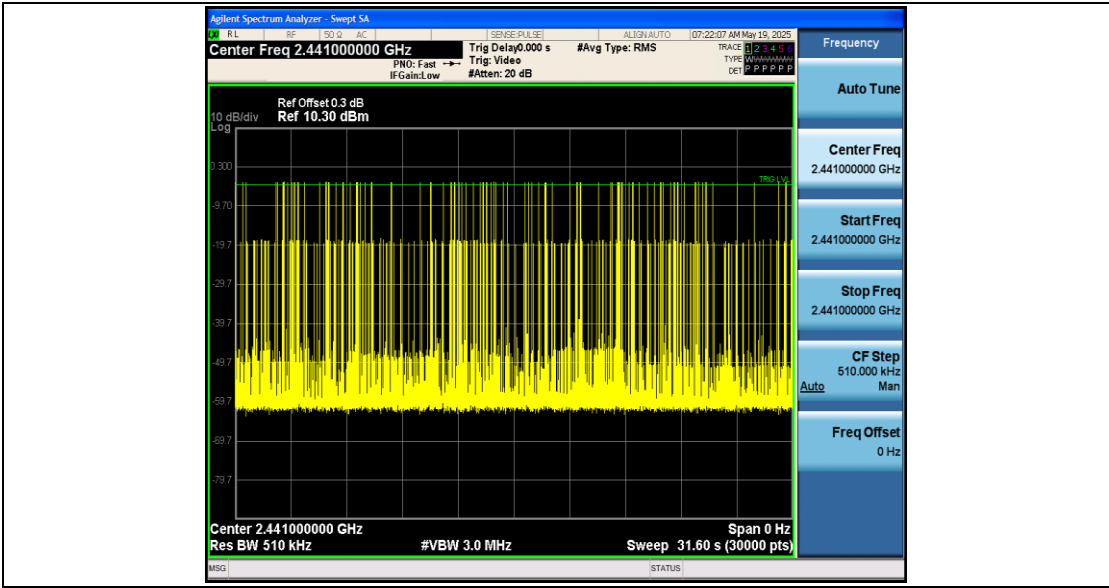


3DH3_Ant1_Hop



3DH5_Ant1_Hop



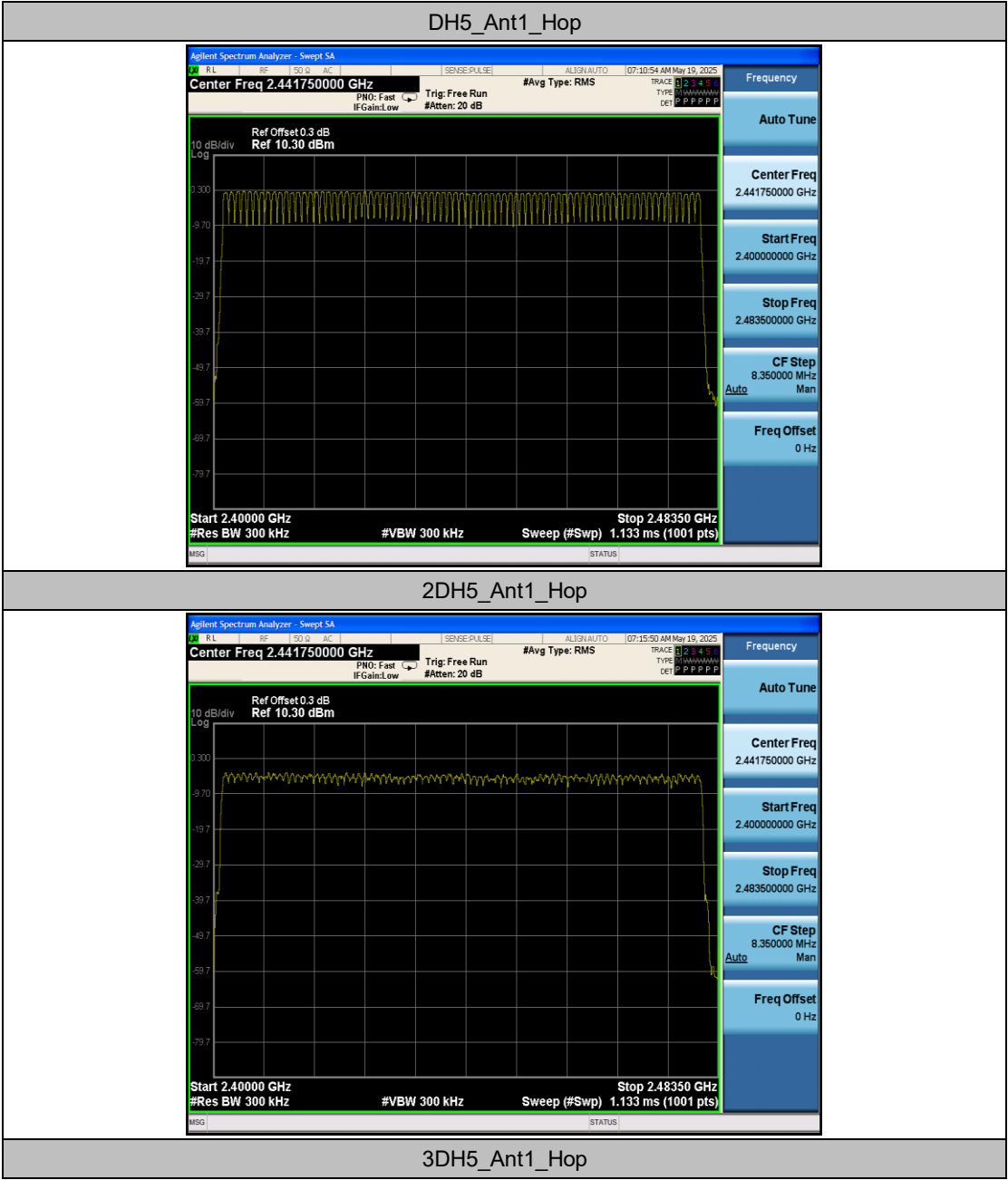


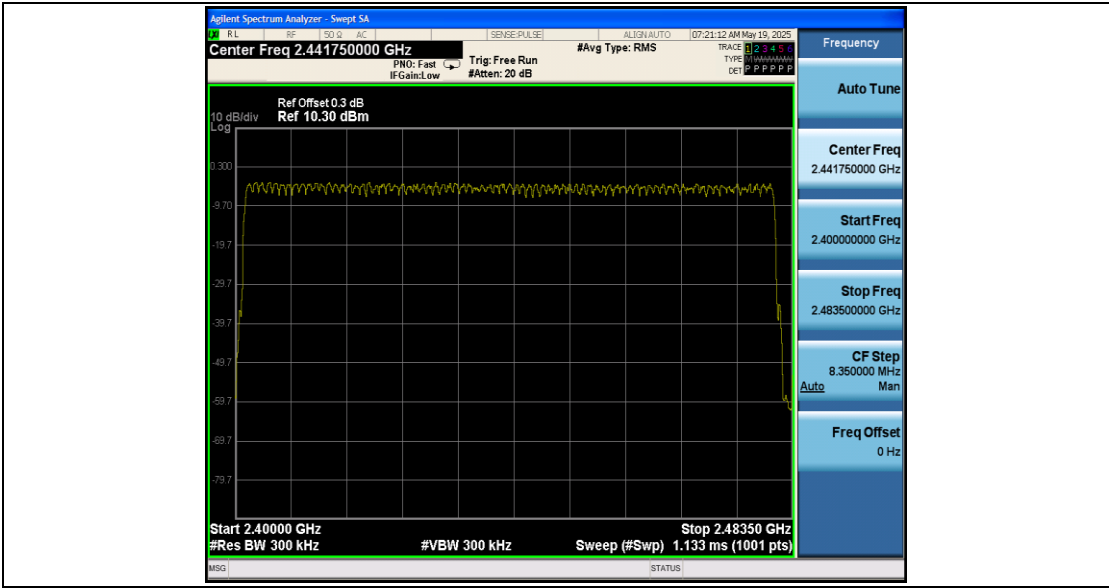
Appendix F: Number of hopping channels

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



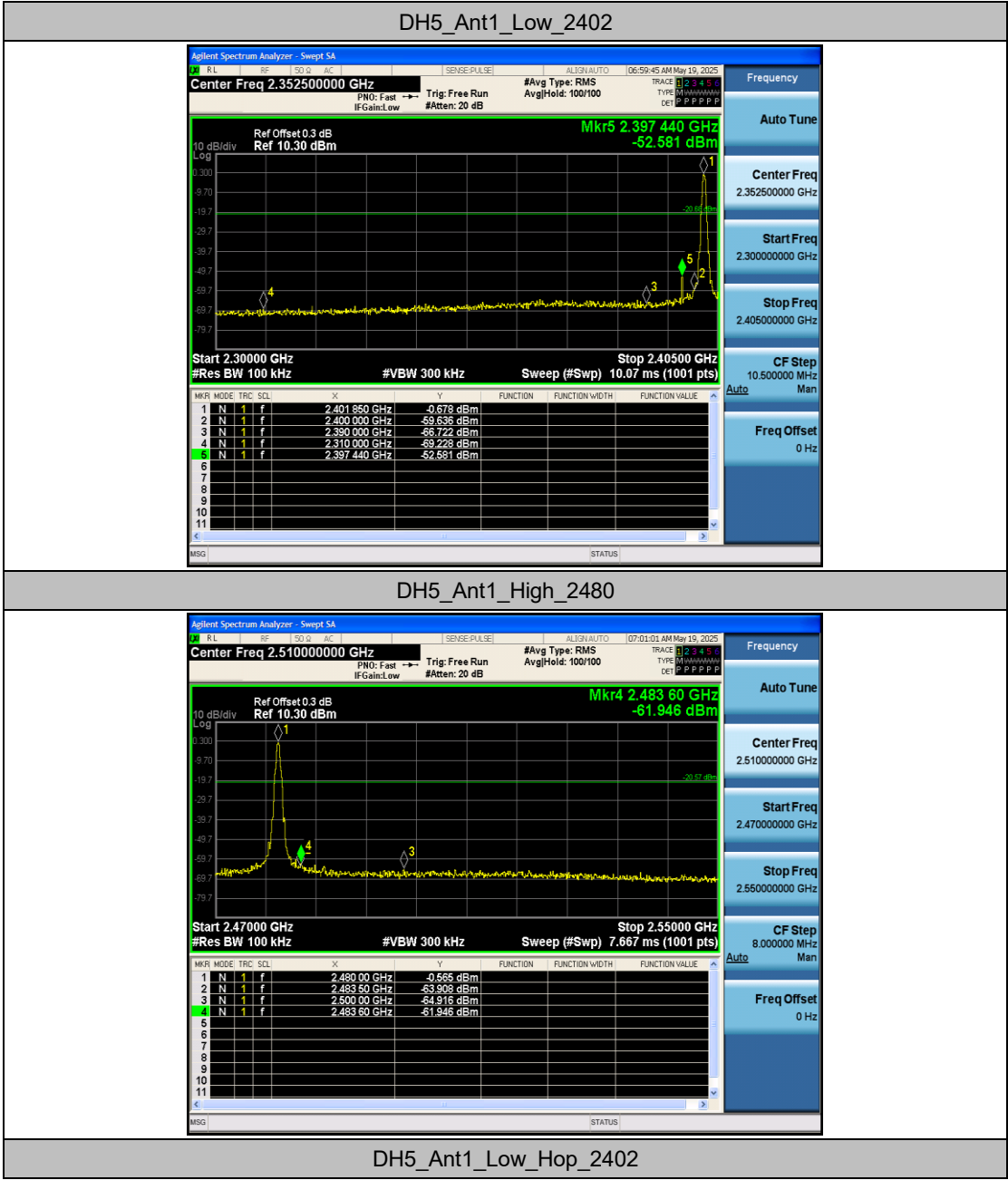


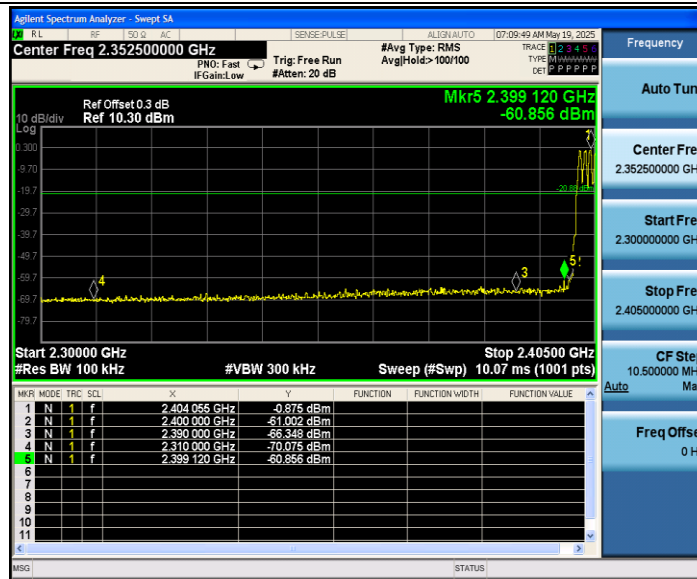
Appendix G: Band edge measurements

Test Result

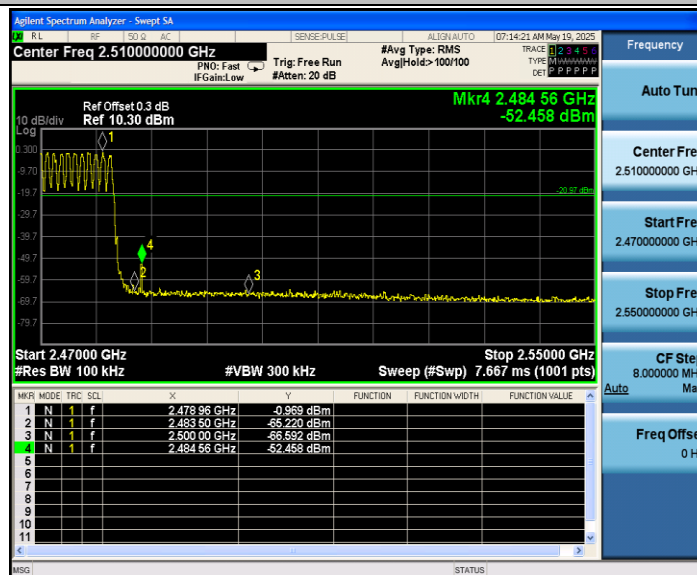
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.68	-52.58	≤-20.68	PASS
		High	2480	-0.57	-61.95	≤-20.57	PASS
		Low	Hop_2402	-0.88	-60.86	≤-20.88	PASS
		High	Hop_2480	-0.97	-52.46	≤-20.97	PASS
2DH5	Ant1	Low	2402	-4.46	-60.5	≤-24.46	PASS
		High	2480	-4.89	-58.11	≤-24.89	PASS
		Low	Hop_2402	-4.86	-60.33	≤-24.86	PASS
		High	Hop_2480	-4.19	-63.87	≤-24.19	PASS
3DH5	Ant1	Low	2402	-3.68	-59.51	≤-23.68	PASS
		High	2480	-4.54	-63.89	≤-24.54	PASS
		Low	Hop_2402	-6.55	-62.02	≤-26.55	PASS
		High	Hop_2480	-4.09	-64.32	≤-24.09	PASS

Test Graphs

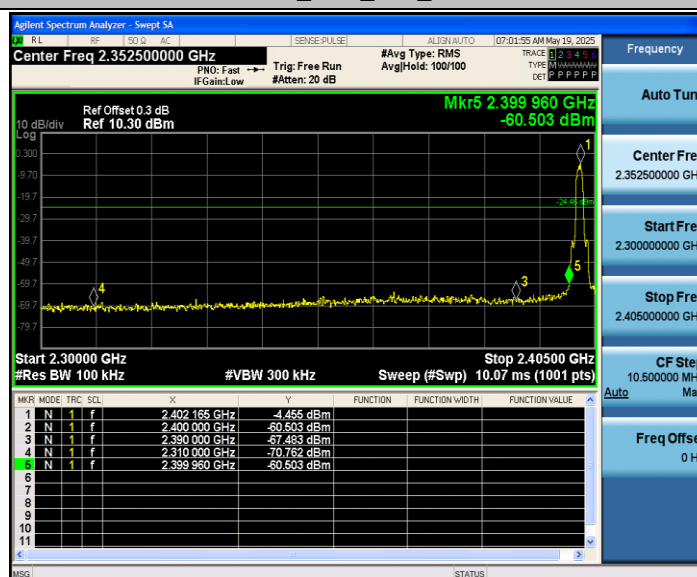




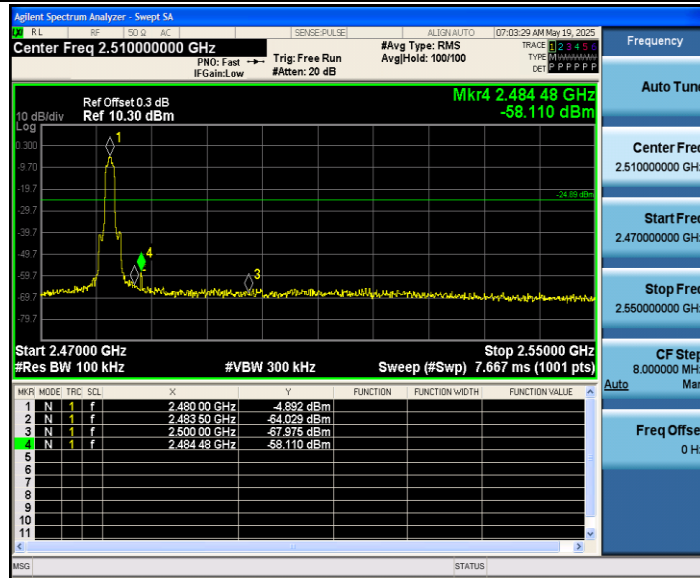
DH5_Ant1_High_Hop_2480



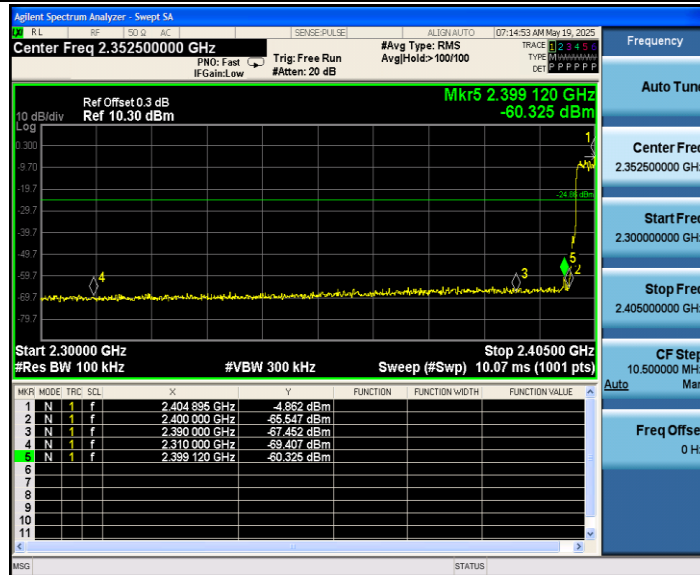
2DH5_Ant1_Low_2402



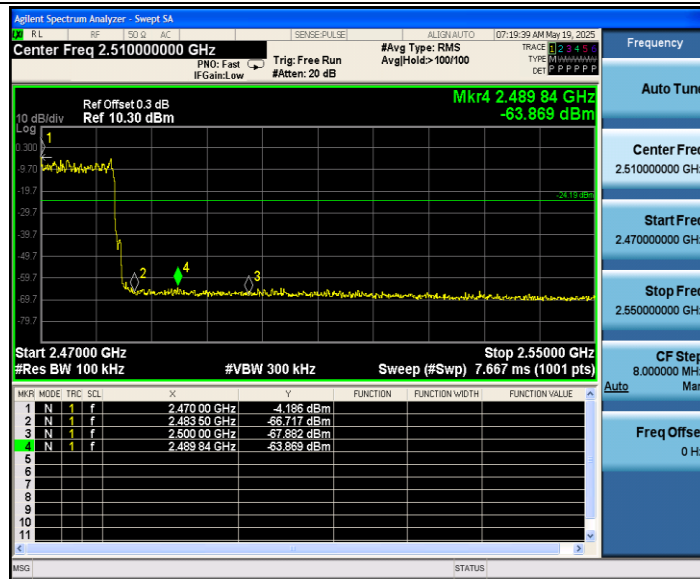
2DH5_Ant1_High_2480



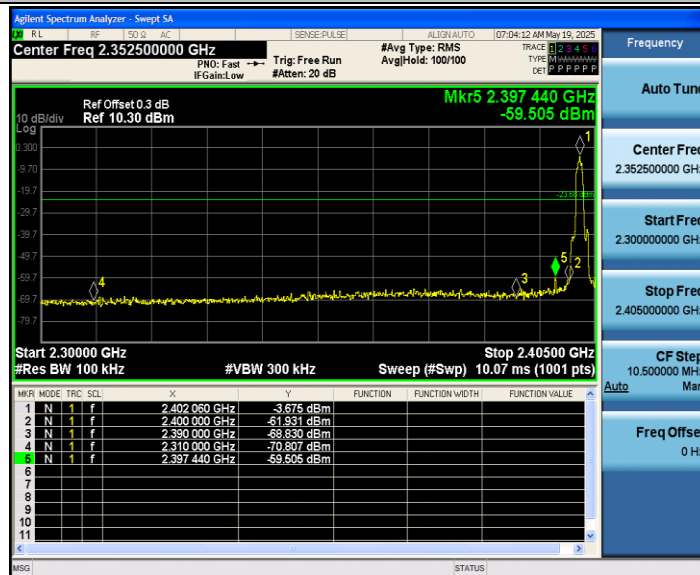
2DH5_Ant1_Low_Hop_2402



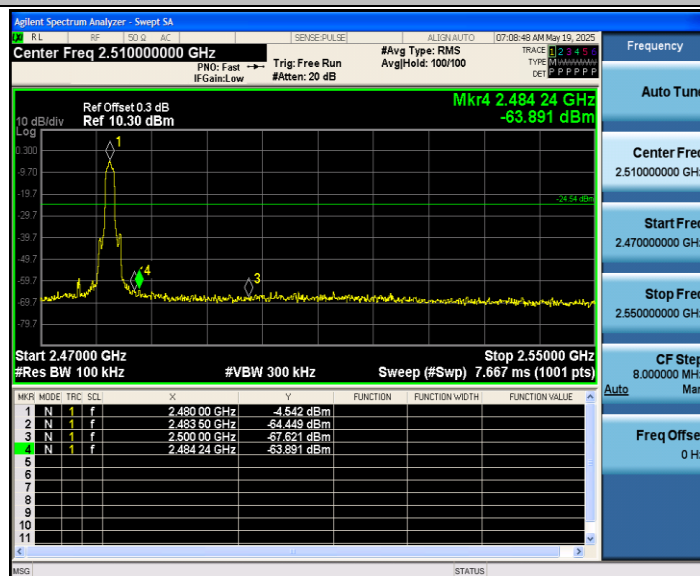
2DH5_Ant1_High_Hop_2480



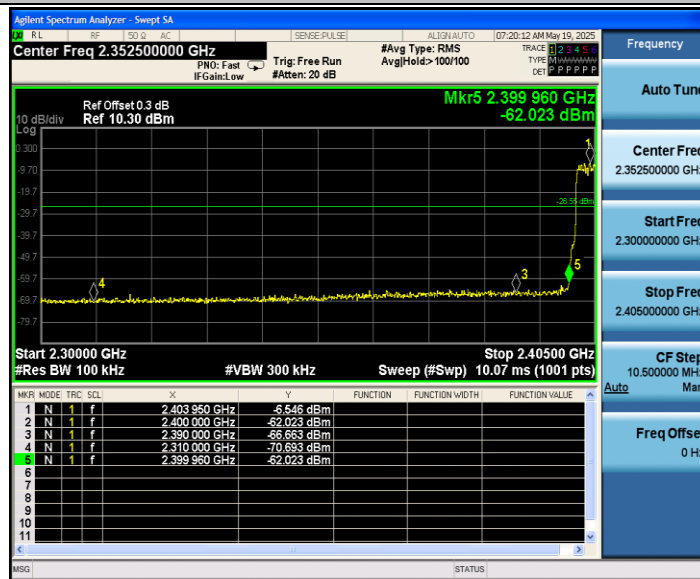
3DH5_Ant1_Low_2402



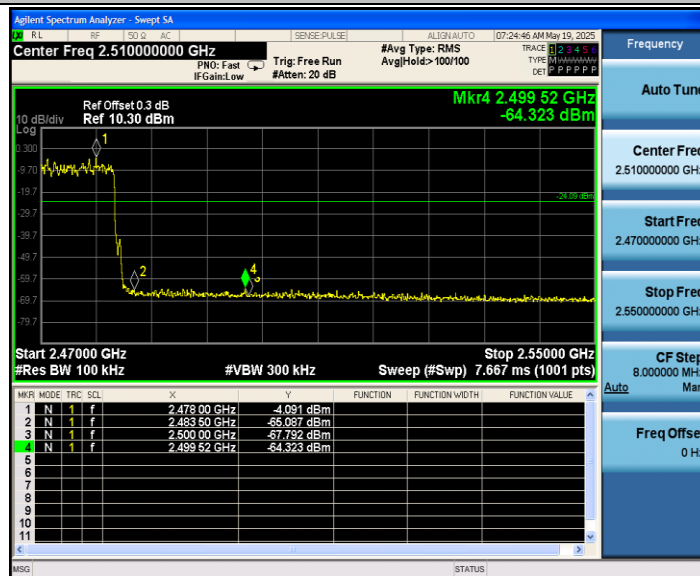
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

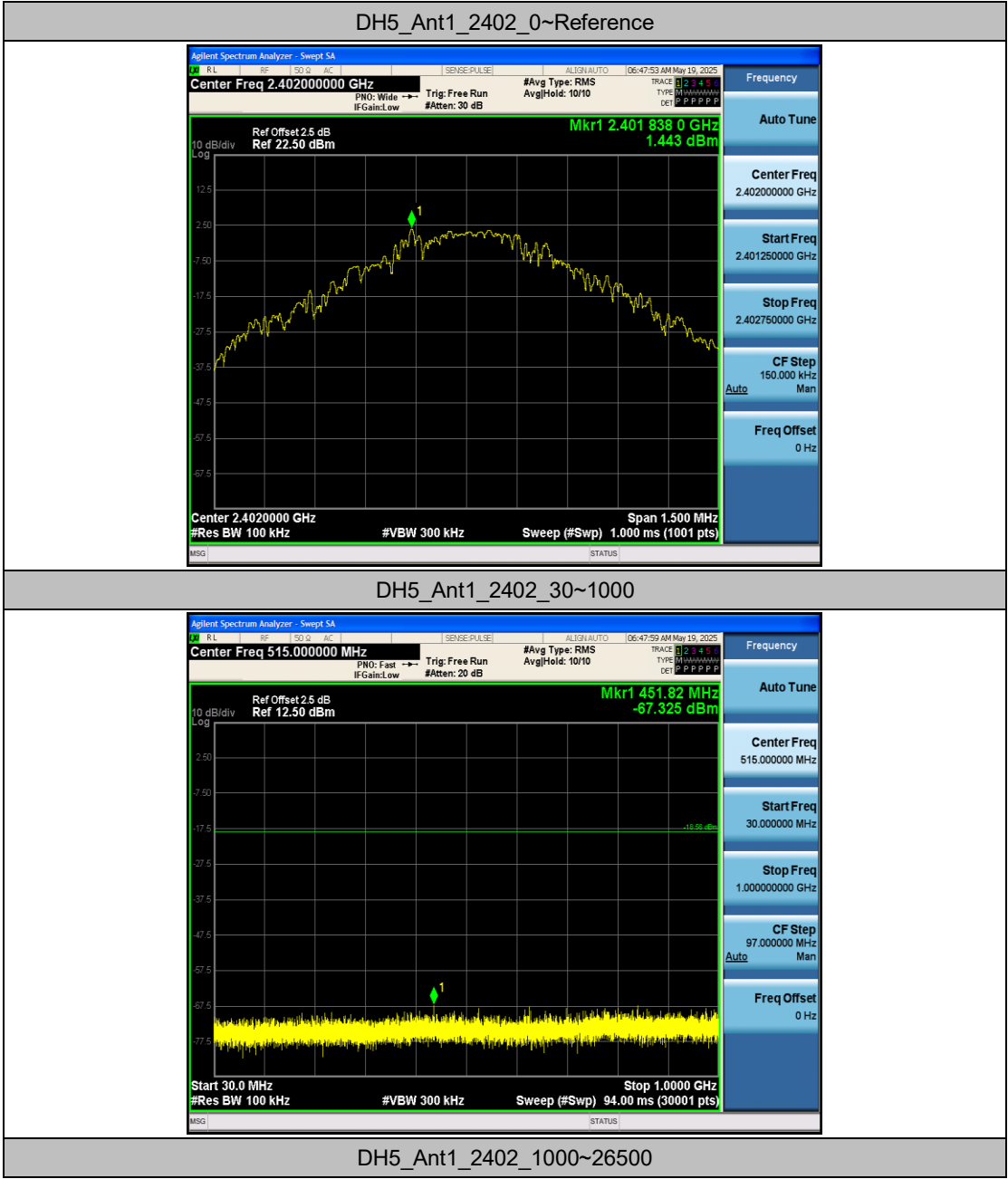


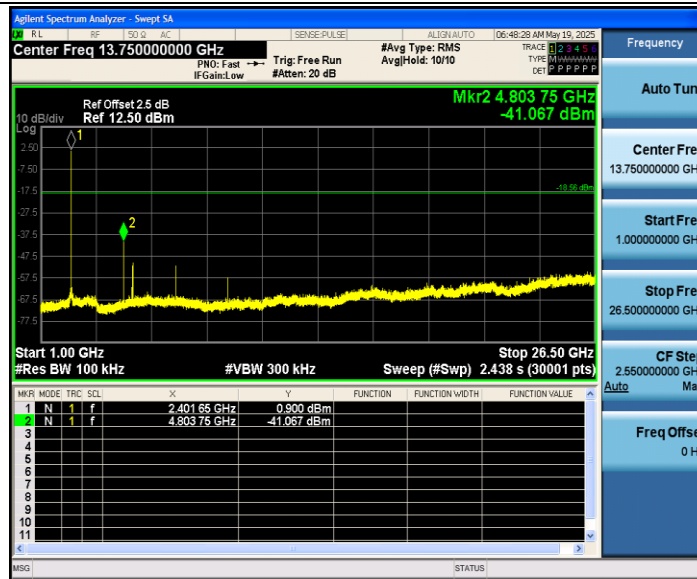
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	1.44	1.44	---	PASS
			30~1000	1.44	-67.33	≤-18.56	PASS
			1000~26500	1.44	-41.07	≤-18.56	PASS
		2441	Reference	0.96	0.96	---	PASS
			30~1000	0.96	-67.66	≤-19.04	PASS
			1000~26500	0.96	-44.51	≤-19.04	PASS
		2480	Reference	1.27	1.27	---	PASS
			30~1000	1.27	-54.36	≤-18.73	PASS
			1000~26500	1.27	-42.58	≤-18.73	PASS
2DH5	Ant1	2402	Reference	-2.27	-2.27	---	PASS
			30~1000	-2.27	-67.83	≤-22.27	PASS
			1000~26500	-2.27	-46.69	≤-22.27	PASS
		2441	Reference	-4.28	-4.28	---	PASS
			30~1000	-4.28	-66.04	≤-24.28	PASS
			1000~26500	-4.28	-47.46	≤-24.28	PASS
		2480	Reference	-2.53	-2.53	---	PASS
			30~1000	-2.53	-66.92	≤-22.53	PASS
			1000~26500	-2.53	-49.38	≤-22.53	PASS
3DH5	Ant1	2402	Reference	-4.06	-4.06	---	PASS
			30~1000	-4.06	-67.93	≤-24.06	PASS
			1000~26500	-4.06	-45.17	≤-24.06	PASS
		2441	Reference	-4.92	-4.92	---	PASS
			30~1000	-4.92	-66.96	≤-24.92	PASS
			1000~26500	-4.92	-49.56	≤-24.92	PASS
		2480	Reference	-2.60	-2.60	---	PASS
			30~1000	-2.60	-67.61	≤-22.6	PASS
			1000~26500	-2.60	-44.24	≤-22.6	PASS

Test Graphs

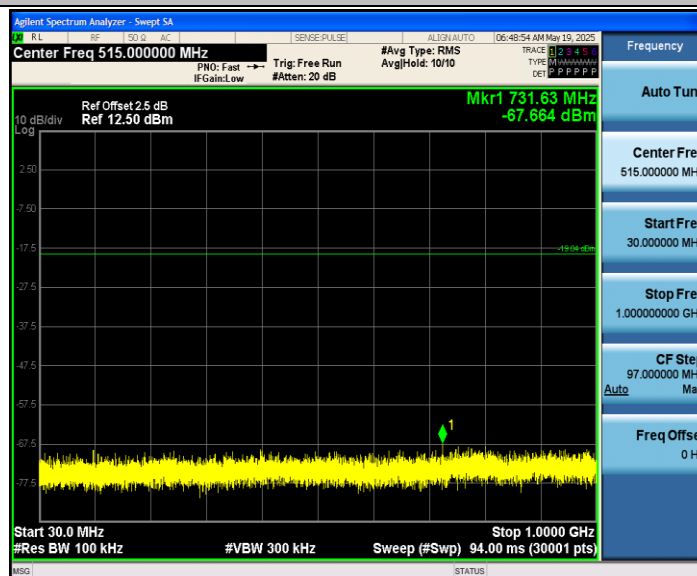




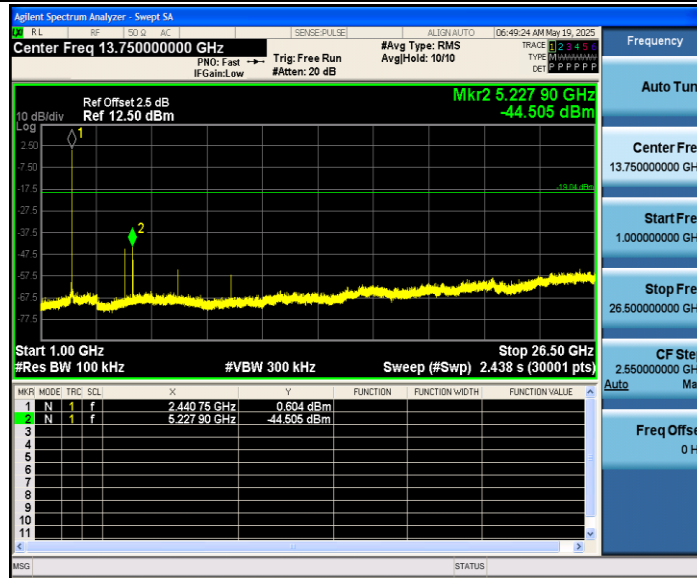
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



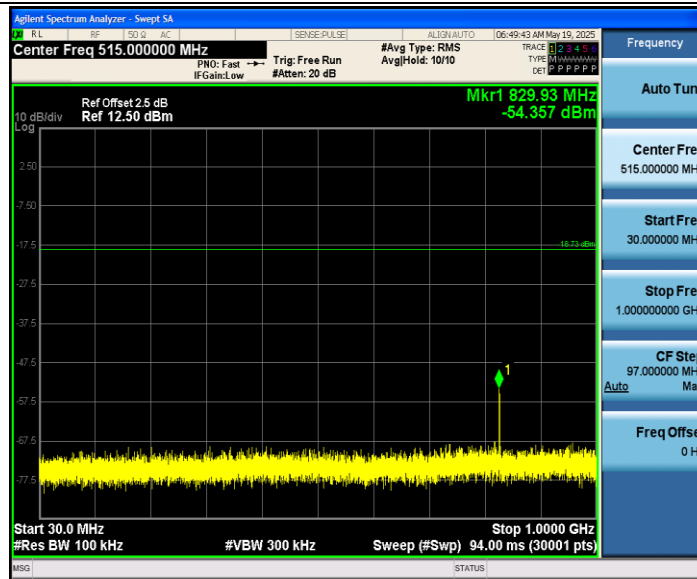
DH5_Ant1_2441_1000~26500



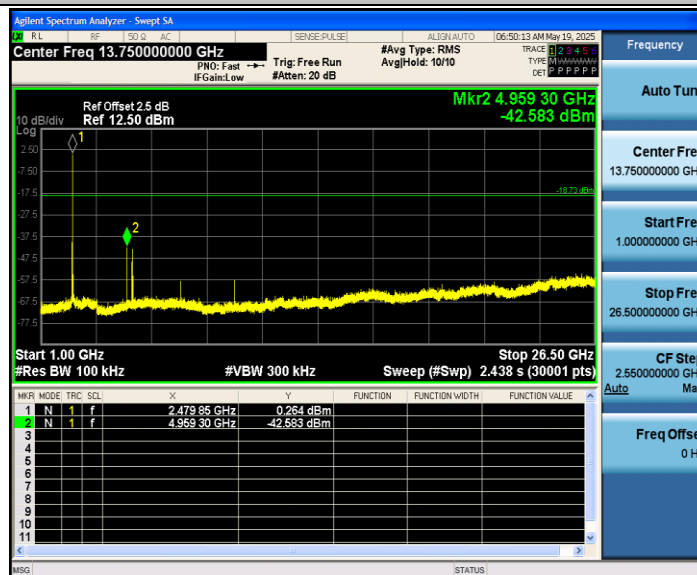
DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500



2DH5_Ant1_2402_0~Reference

