

FCC Appendix RF Test Data for BT

FCC ID : 2BRFT-LB-OWS-AE-D1

Company : Shenzhen Ruimingda Electronic Communication
Co., Ltd.

EUT : OWS Earphone

Model Number : LB-OWS-AE-D1

Report No. : CTA25072800801

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	0.954	2440.547	2441.501	---	---
		2480	0.945	2479.550	2480.495	---	---
2DH5	Ant1	2402	1.326	2401.343	2402.669	---	---
		2441	1.341	2440.337	2441.678	---	---
		2480	1.311	2479.352	2480.663	---	---
3DH5	Ant1	2402	1.281	2401.382	2402.663	---	---
		2441	1.314	2440.355	2441.669	---	---
		2480	1.272	2479.382	2480.654	---	---

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.40200000 GHz

Ref Offset 0.6 dB
Ref 10.60 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
0.003 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 0.6 dB
Ref 10.60 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 954 kHz
0.369 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





3DH5_Ant1_2480

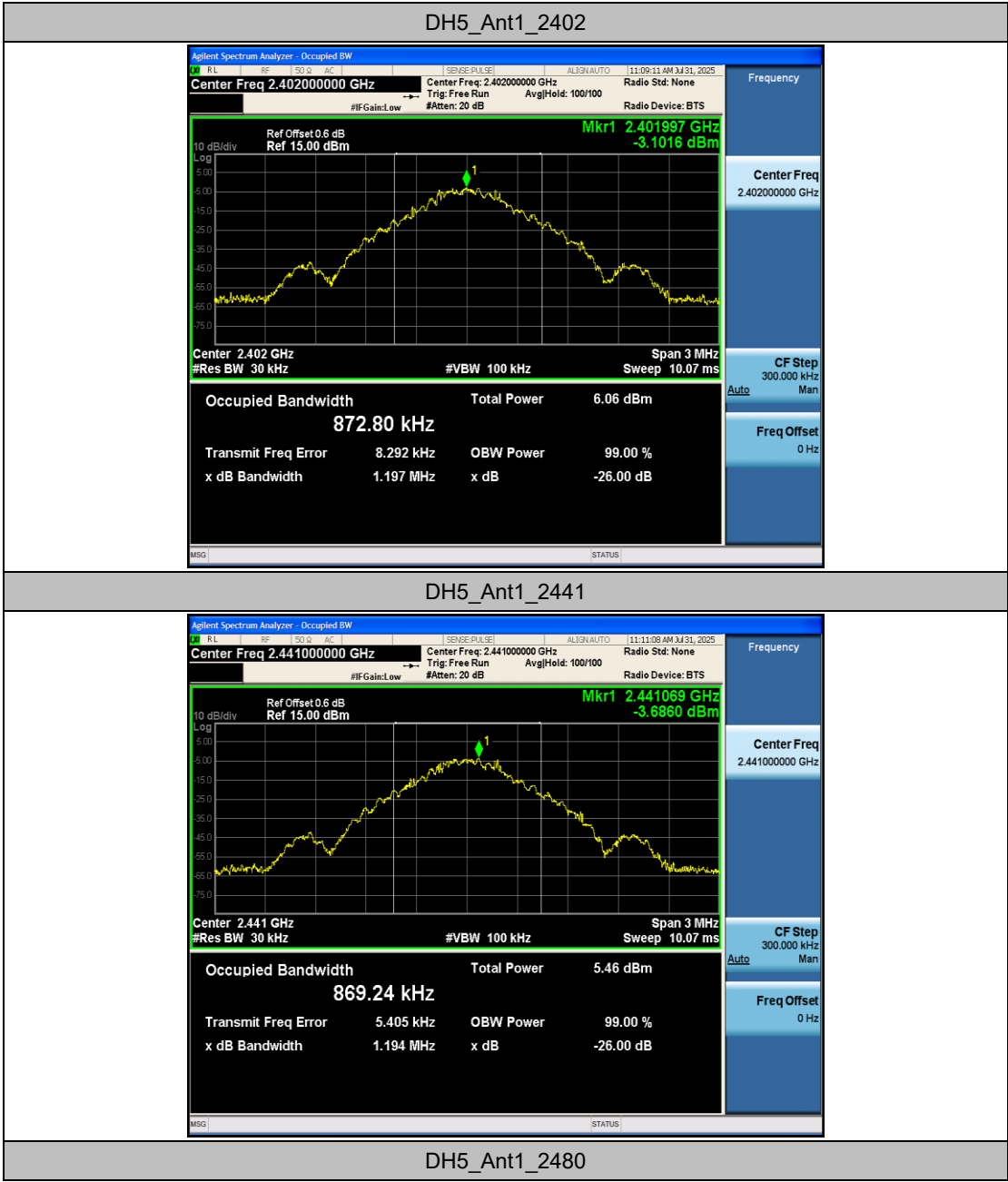


Appendix B: Occupied Channel Bandwidth

Test Result

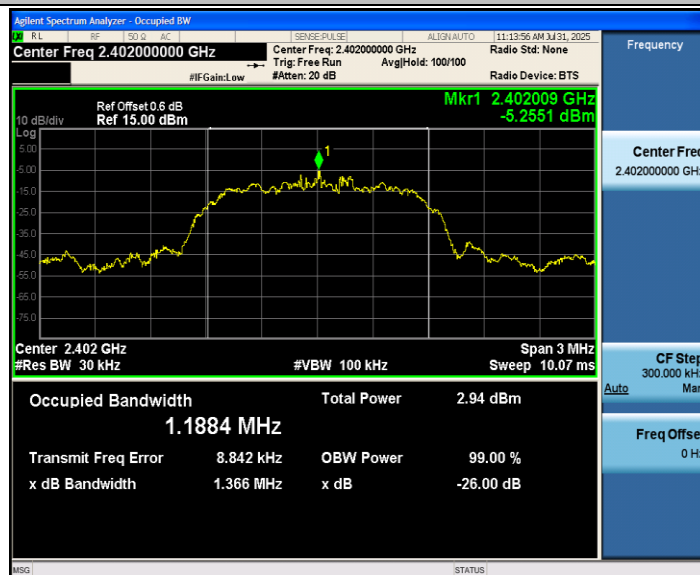
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87280	2401.5719	2402.4447	---	---
		2441	0.86924	2440.5708	2441.4400	---	---
		2480	0.87312	2479.5692	2480.4423	---	---
2DH5	Ant1	2402	1.1884	2401.4146	2402.6030	---	---
		2441	1.1877	2440.4143	2441.6020	---	---
		2480	1.1886	2479.4153	2480.6039	---	---
3DH5	Ant1	2402	1.1885	2401.4145	2402.6030	---	---
		2441	1.1833	2440.4171	2441.6004	---	---
		2480	1.1856	2479.4173	2480.6029	---	---

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

Left:

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.17	≤20.97	PASS
		2441	-0.46	≤20.97	PASS
		2480	-0.82	≤20.97	PASS
2DH5	Ant1	2402	-0.66	≤20.97	PASS
		2441	-1.27	≤20.97	PASS
		2480	-1.59	≤20.97	PASS
3DH5	Ant1	2402	-0.68	≤20.97	PASS
		2441	-1.27	≤20.97	PASS
		2480	-1.61	≤20.97	PASS

Right:

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.24	≤20.97	PASS
		2441	-0.15	≤20.97	PASS
		2480	-0.45	≤20.97	PASS
2DH5	Ant1	2402	-0.48	≤20.97	PASS
		2441	-1.36	≤20.97	PASS
		2480	-1.45	≤20.97	PASS
3DH5	Ant1	2402	-0.45	≤20.97	PASS
		2441	-1.18	≤20.97	PASS
		2480	-1.46	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.016	≥ 0.960	PASS
2DH5	Ant1	Hop	1.164	≥ 0.894	PASS
3DH5	Ant1	Hop	1.148	≥ 0.876	PASS

Test Graphs



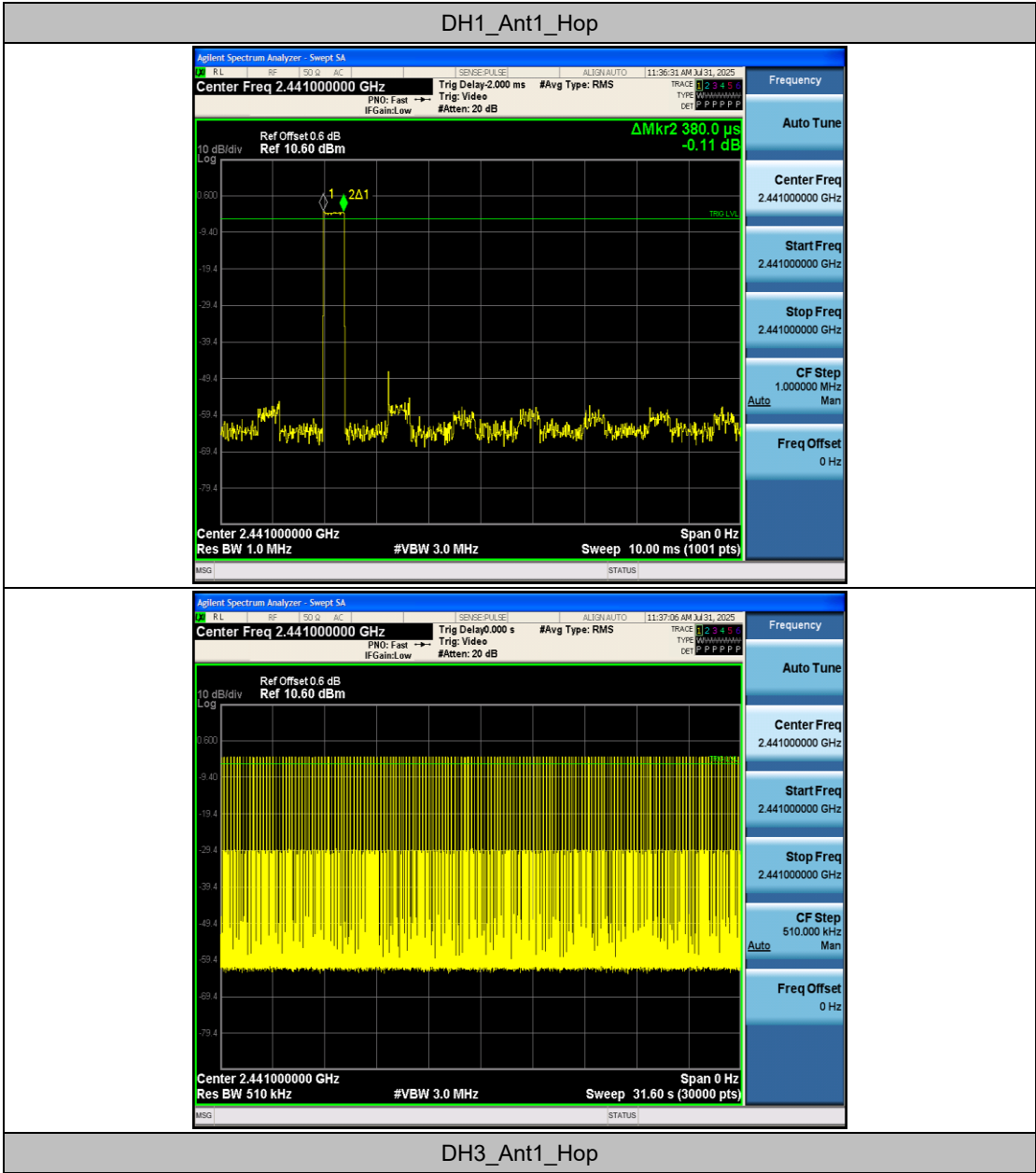


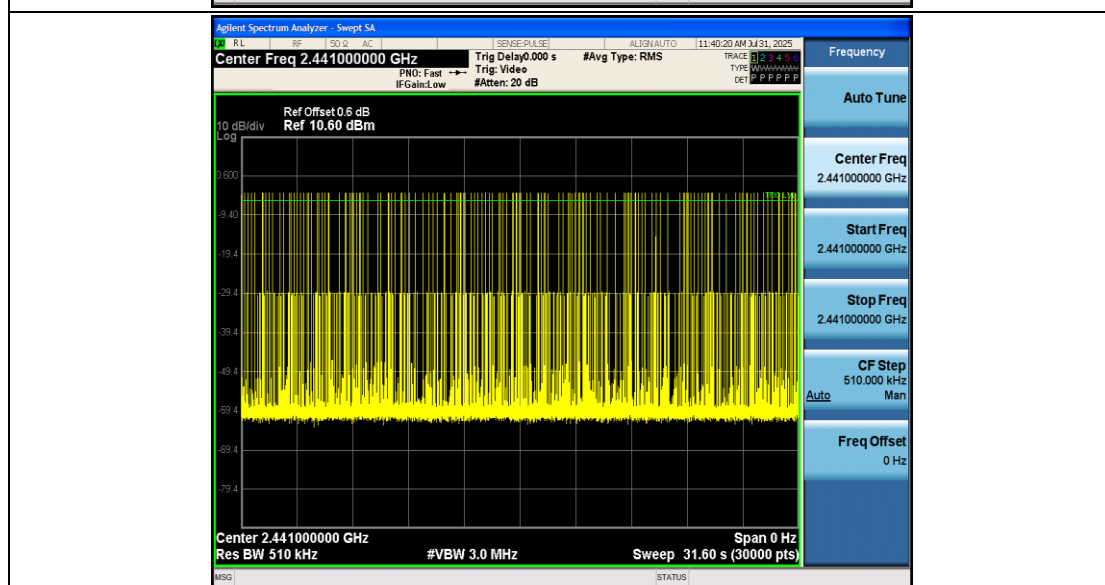
Appendix E: Time of occupancy

Test Result

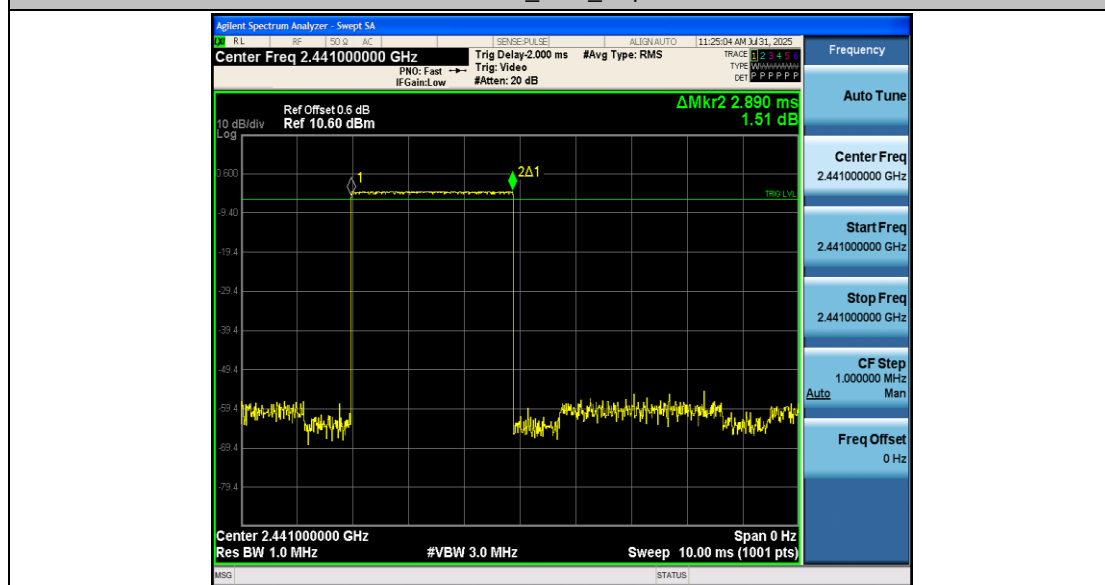
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.380	317	0.12	≤0.4	PASS
DH3	Ant1	Hop	1.650	153	0.252	≤0.4	PASS
DH5	Ant1	Hop	2.890	111	0.321	≤0.4	PASS
2DH1	Ant1	Hop	0.390	317	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.650	159	0.262	≤0.4	PASS
2DH5	Ant1	Hop	2.900	114	0.331	≤0.4	PASS
3DH1	Ant1	Hop	0.390	319	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.650	154	0.254	≤0.4	PASS
3DH5	Ant1	Hop	2.900	108	0.313	≤0.4	PASS

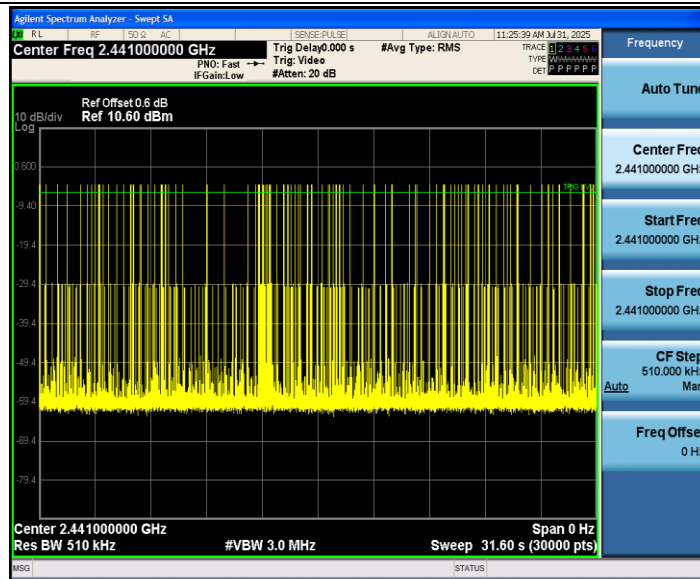
Test Graphs



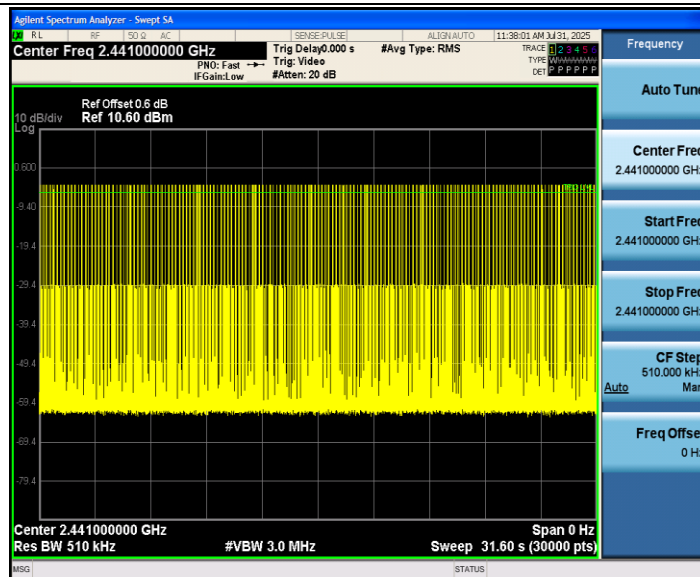
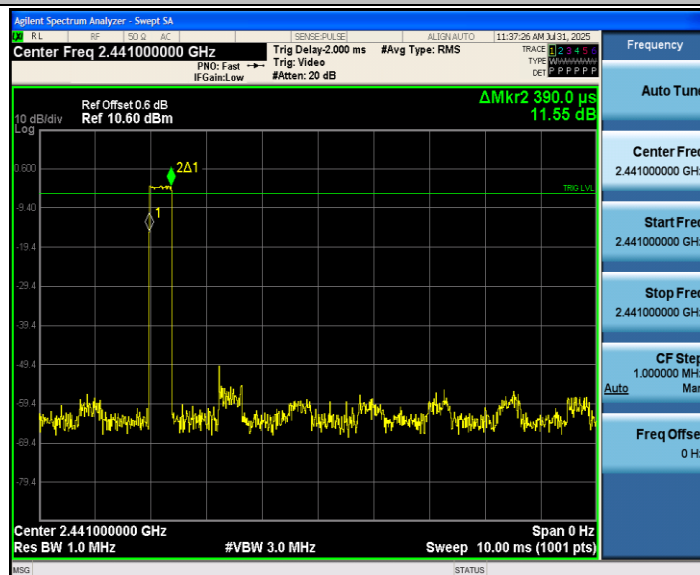


DH5_Ant1_Hop

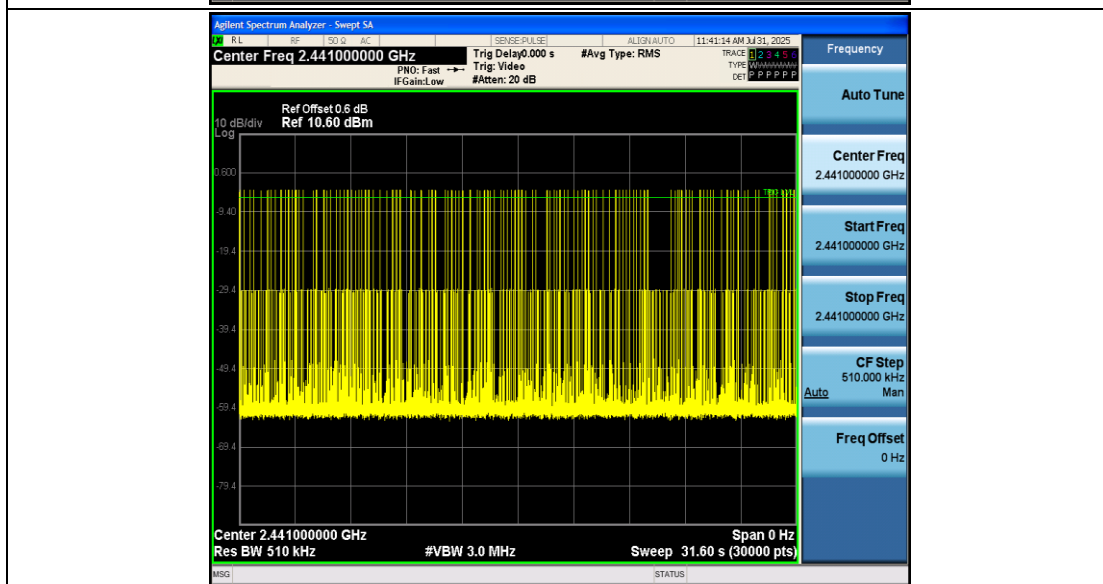
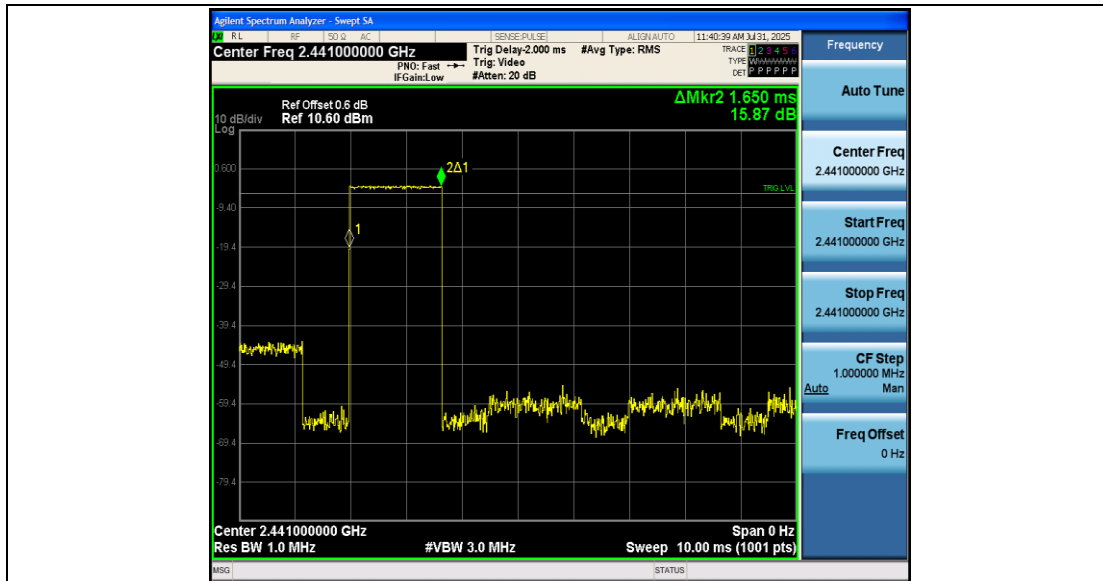




2DH1_Ant1_Hop

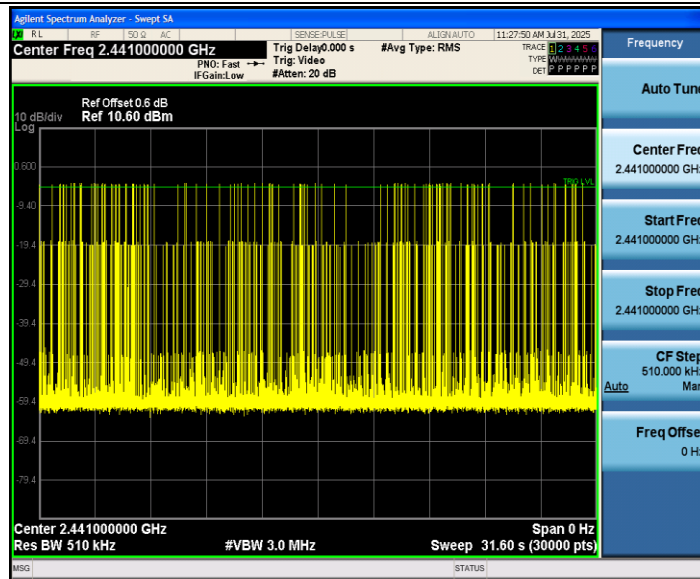


2DH3_Ant1_Hop

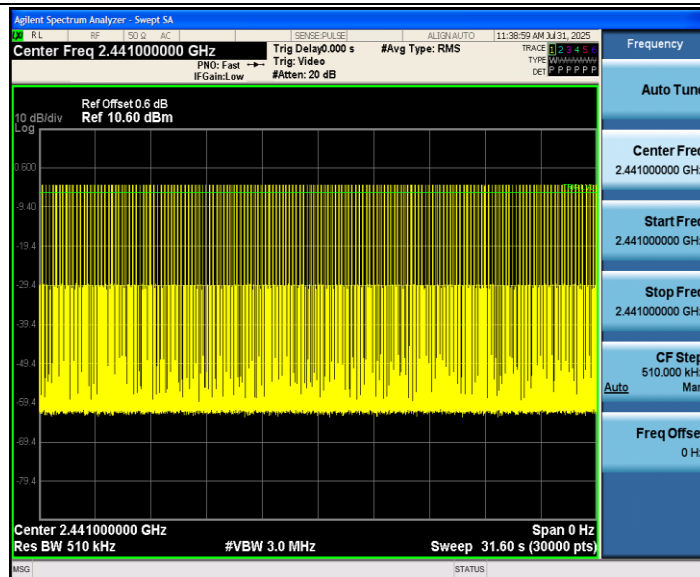
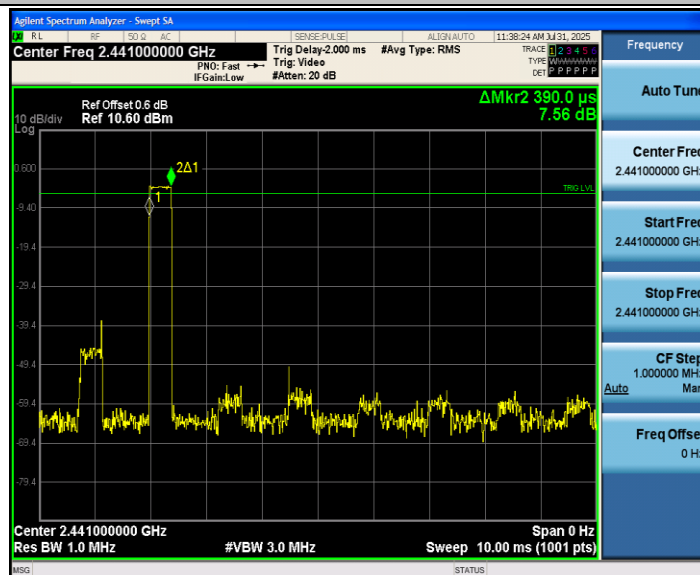


2DH5_Ant1_Hop

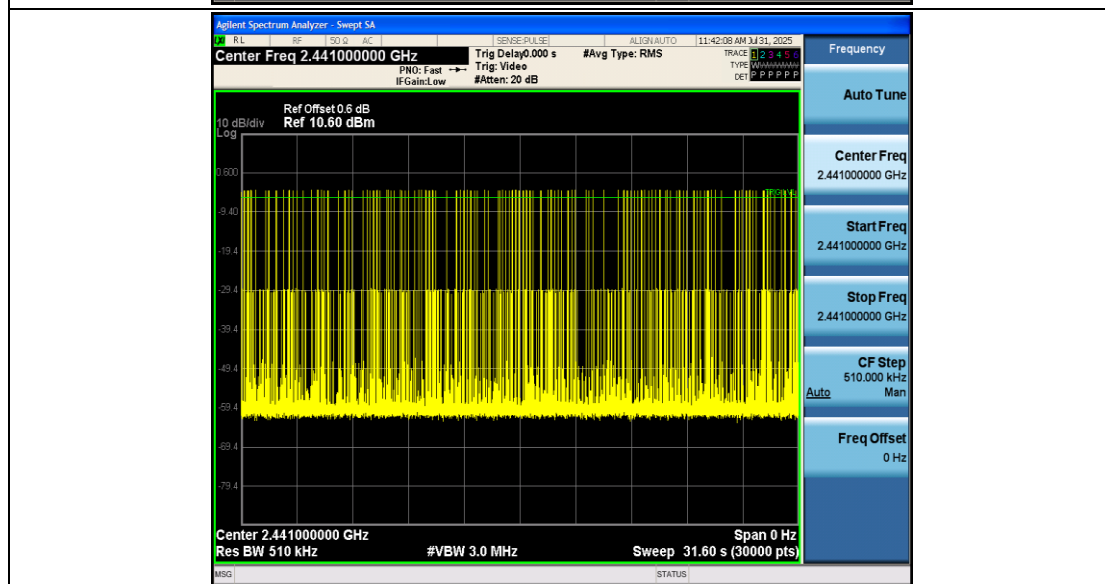




3DH1_Ant1_Hop

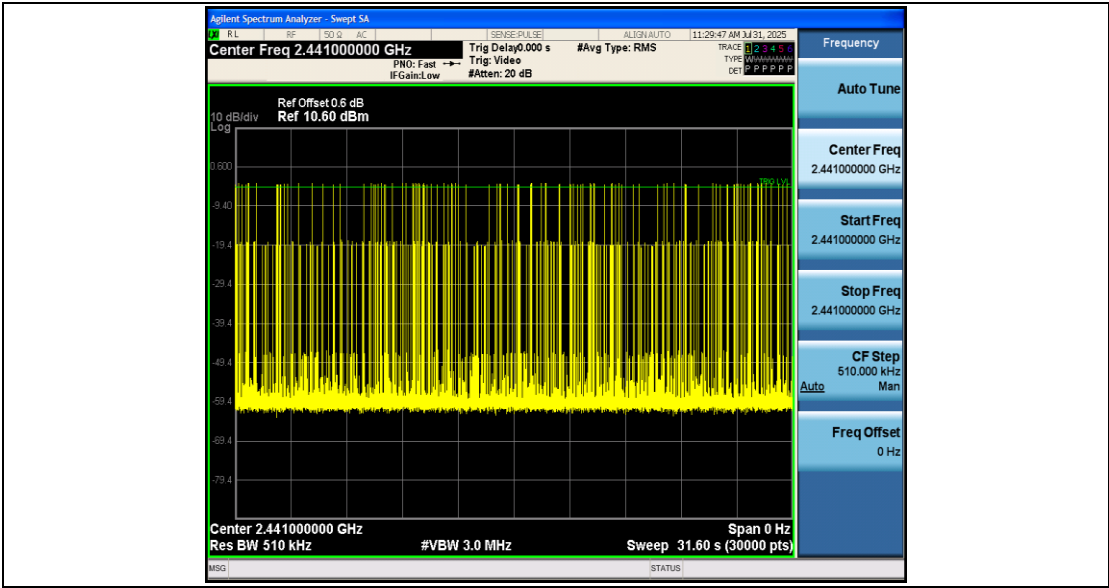


3DH3_Ant1_Hop



3DH5_Ant1_Hop





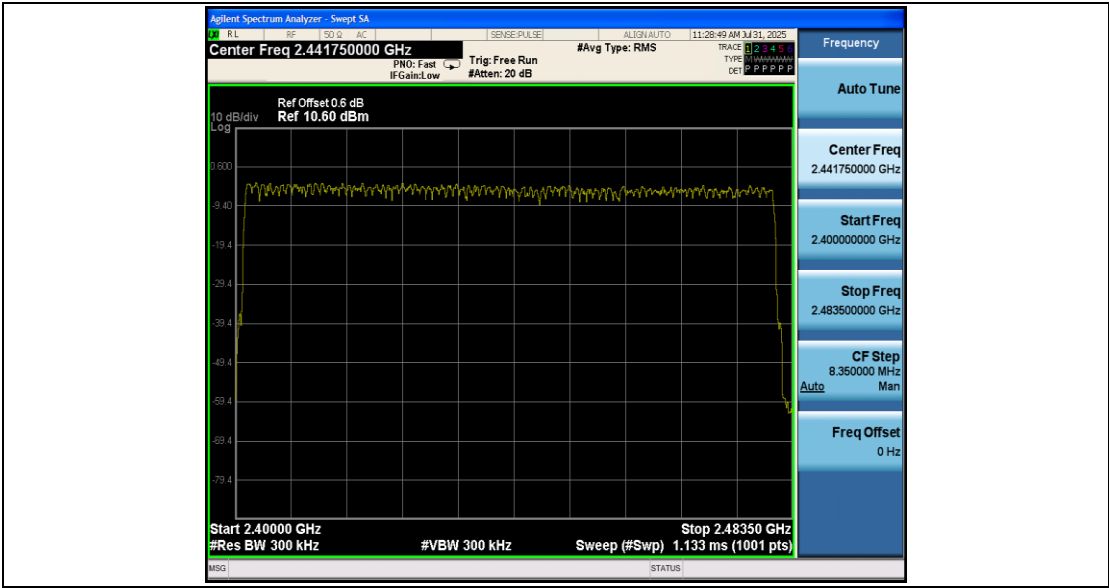
Appendix F: Number of hopping channels

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



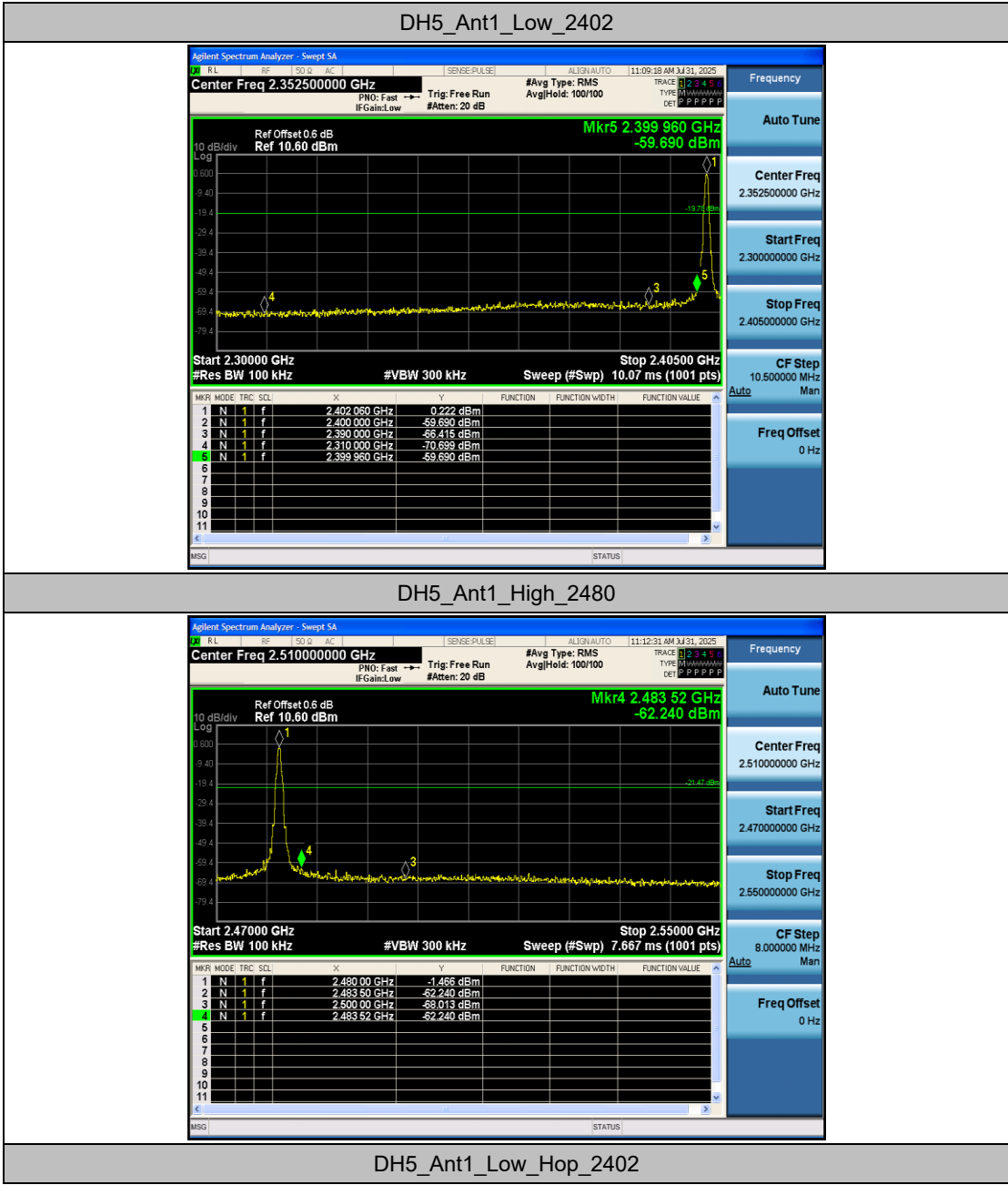


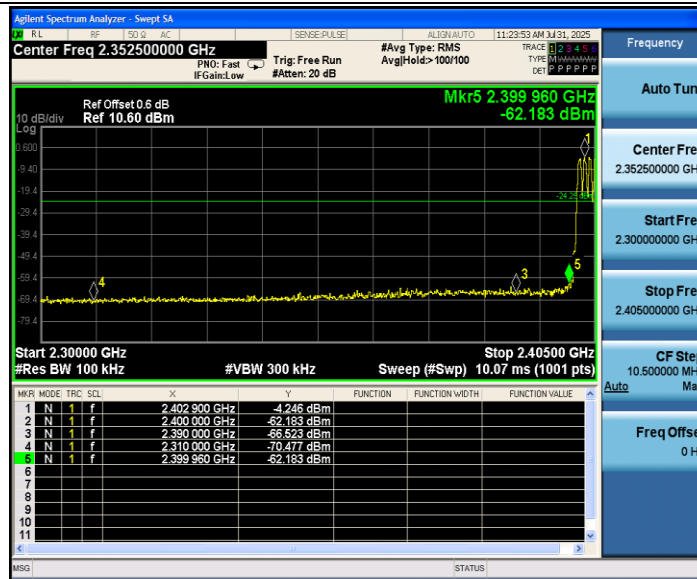
Appendix G: Band edge measurements

Test Result

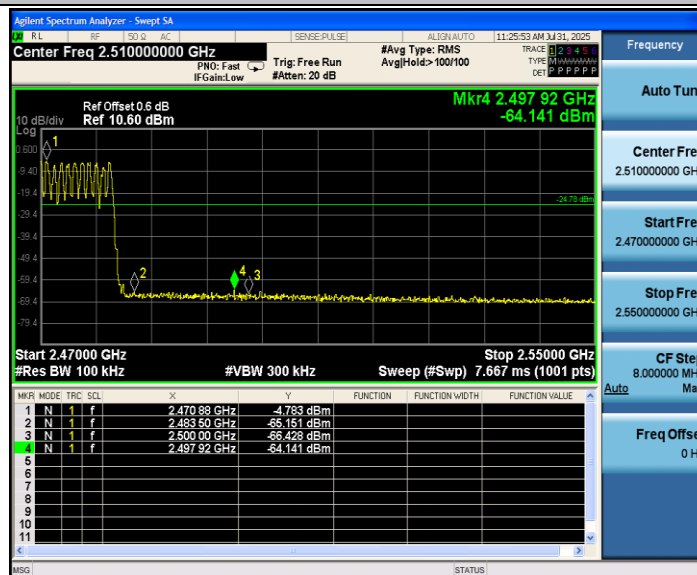
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.22	-59.69	≤-19.78	PASS
		High	2480	-1.47	-62.24	≤-21.47	PASS
		Low	Hop_2402	-4.25	-62.18	≤-24.25	PASS
		High	Hop_2480	-4.78	-64.14	≤-24.78	PASS
2DH5	Ant1	Low	2402	-3.45	-55.12	≤-23.45	PASS
		High	2480	-4.47	-56.97	≤-24.47	PASS
		Low	Hop_2402	-4.42	-57.86	≤-24.42	PASS
		High	Hop_2480	-5.98	-64.39	≤-25.98	PASS
3DH5	Ant1	Low	2402	-3.37	-57.5	≤-23.37	PASS
		High	2480	-5.16	-63	≤-25.16	PASS
		Low	Hop_2402	-5.60	-60.61	≤-25.6	PASS
		High	Hop_2480	-6.74	-64.77	≤-26.74	PASS

Test Graphs

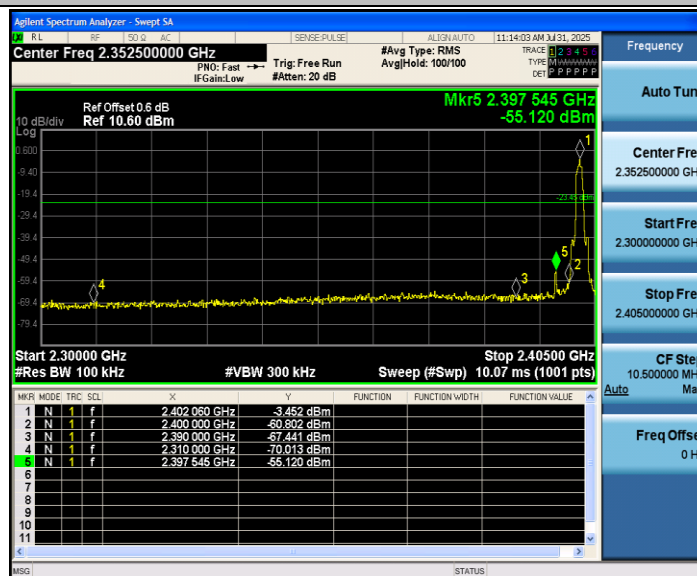




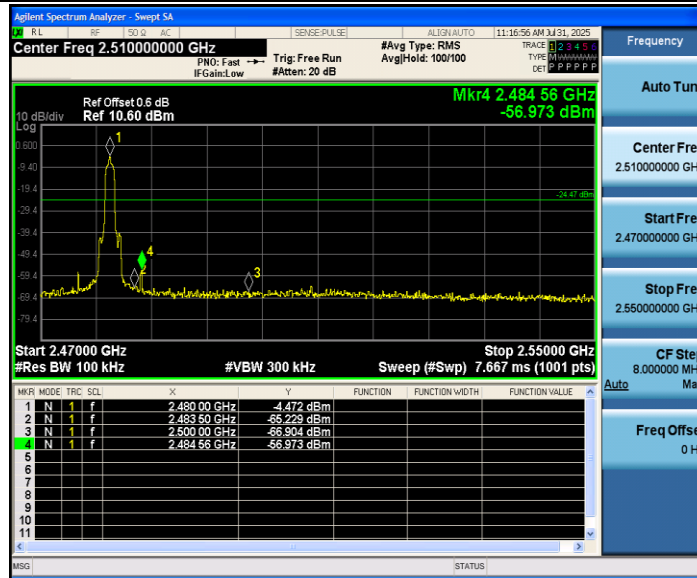
DH5_Ant1_High_Hop_2480



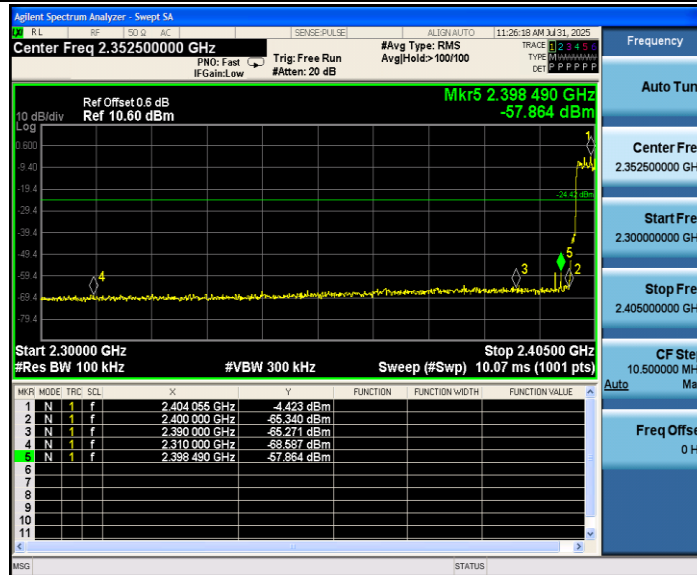
2DH5_Ant1_Low_2402



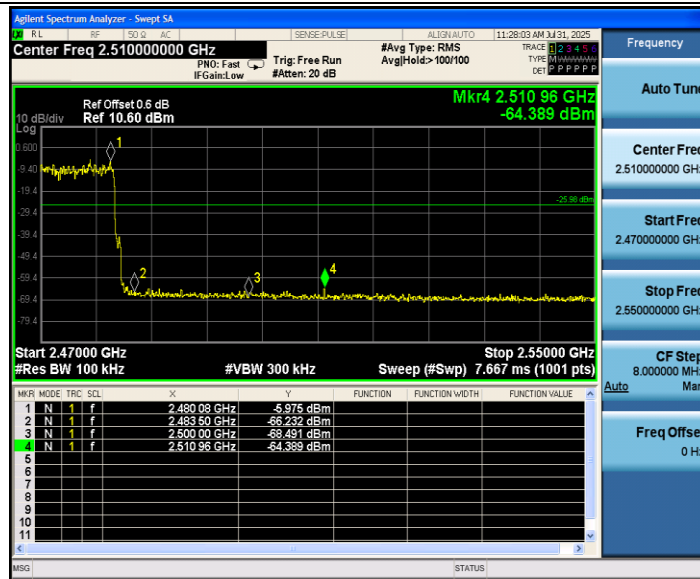
2DH5_Ant1_High_2480



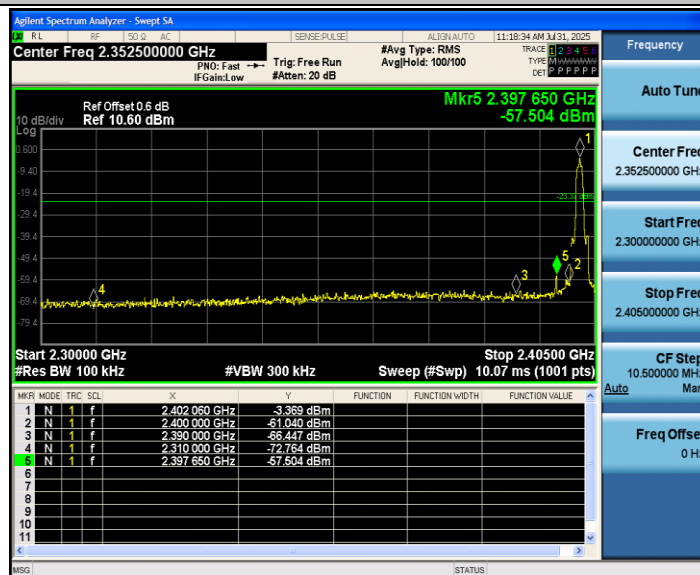
2DH5_Ant1_Low_Hop_2402



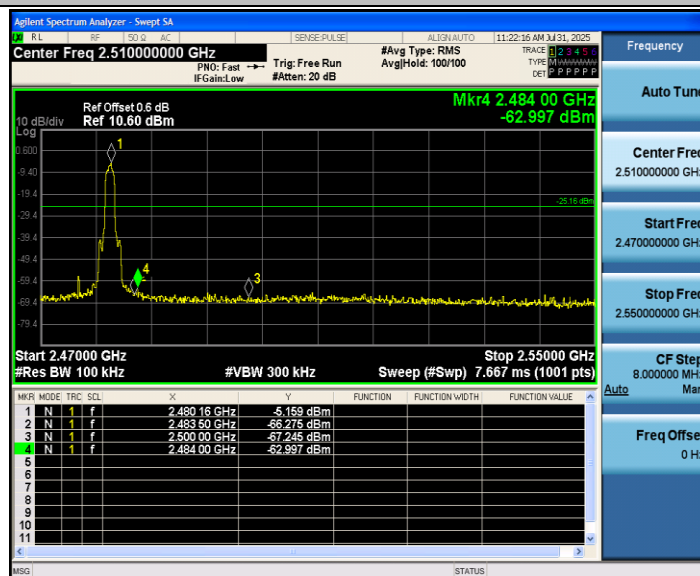
2DH5_Ant1_High_Hop_2480



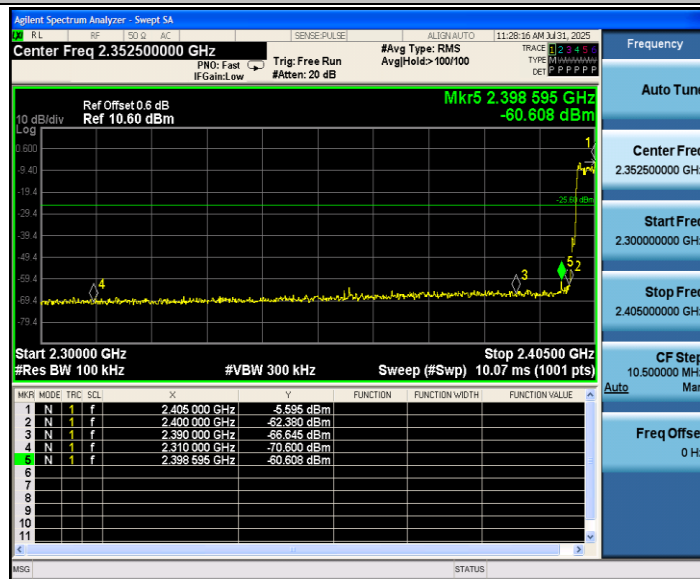
3DH5_Ant1_Low_2402



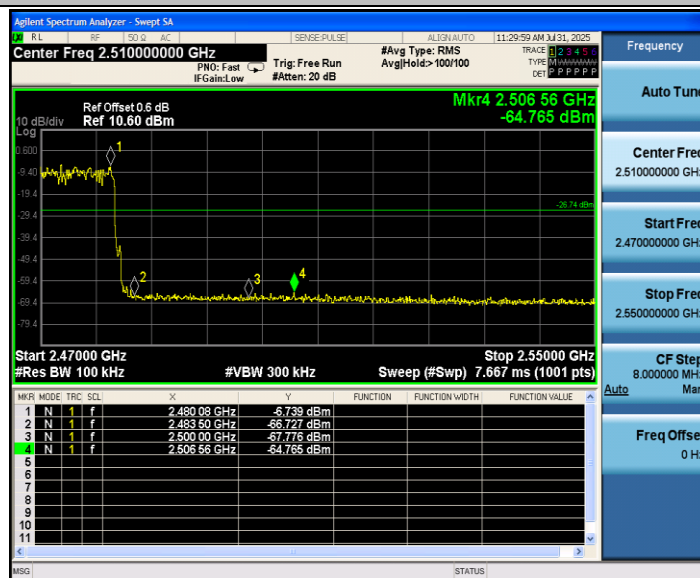
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



Appendix H: Conducted Spurious Emission

Test Result

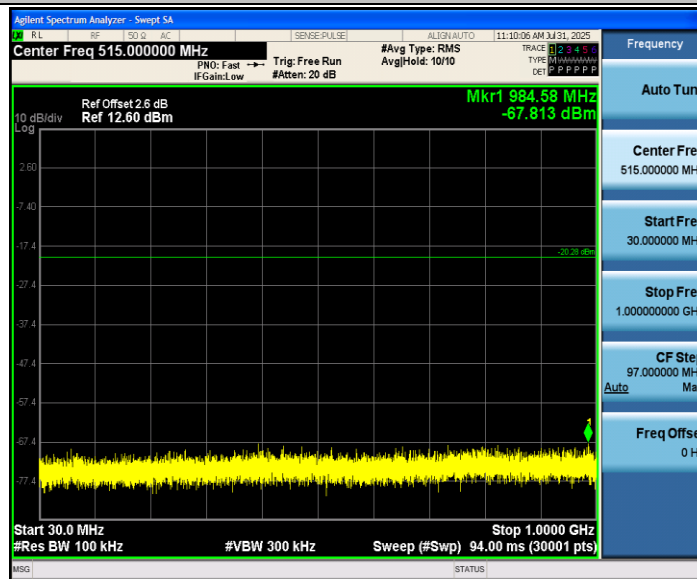
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.28	-0.28	---	PASS
			30~1000	-0.28	-67.81	≤-20.28	PASS
			1000~26500	-0.28	-41.94	≤-20.28	PASS
		2441	Reference	-1.02	-1.02	---	PASS
			30~1000	-1.02	-66.93	≤-21.02	PASS
			1000~26500	-1.02	-43.4	≤-21.02	PASS
		2480	Reference	-1.89	-1.89	---	PASS
			30~1000	-1.89	-67.89	≤-21.89	PASS
			1000~26500	-1.89	-44.07	≤-21.89	PASS
2DH5	Ant1	2402	Reference	-4.84	-4.84	---	PASS
			30~1000	-4.84	-67.1	≤-24.84	PASS
			1000~26500	-4.84	-47.05	≤-24.84	PASS
		2441	Reference	-4.86	-4.86	---	PASS
			30~1000	-4.86	-67.36	≤-24.86	PASS
			1000~26500	-4.86	-46.98	≤-24.86	PASS
		2480	Reference	-5.37	-5.37	---	PASS
			30~1000	-5.37	-66.96	≤-25.37	PASS
			1000~26500	-5.37	-48.3	≤-25.37	PASS
3DH5	Ant1	2402	Reference	-6.53	-6.53	---	PASS
			30~1000	-6.53	-67.36	≤-26.53	PASS
			1000~26500	-6.53	-45.88	≤-26.53	PASS
		2441	Reference	-5.30	-5.30	---	PASS
			30~1000	-5.30	-68.24	≤-25.3	PASS
			1000~26500	-5.30	-45.49	≤-25.3	PASS
		2480	Reference	-5.83	-5.83	---	PASS
			30~1000	-5.83	-67.92	≤-25.83	PASS
			1000~26500	-5.83	-48.94	≤-25.83	PASS

Test Graphs

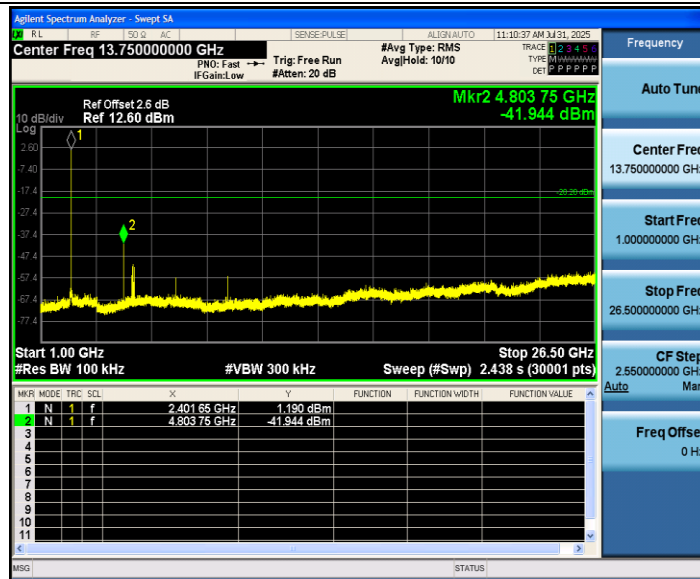
DH5_Ant1_2402_0~Reference



DH5_Ant1_2402_30~1000



DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000

