

FCC Appendix RF Test Data

FCC ID : **2BOSR-DDZM-001**

Company: : **Dongguan Jierui Optoelectronics Technology Co., Ltd.**

EUT : **WiFi Bluetooth LED strip**

Model Number : **DDZM-001**

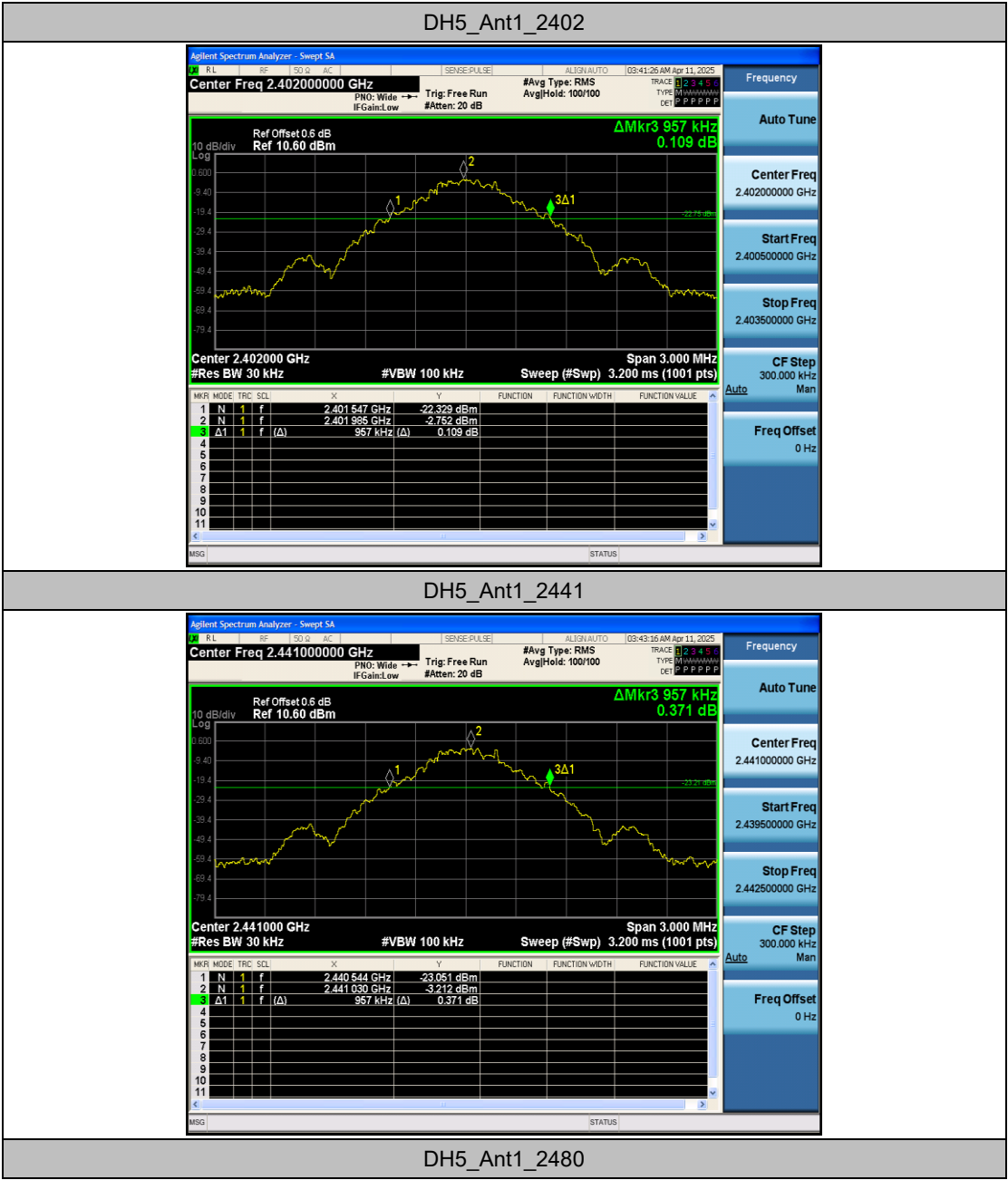
Reviewed By : **Eric Wang**

Appendix A: 20dB Emission Bandwidth

Test Result

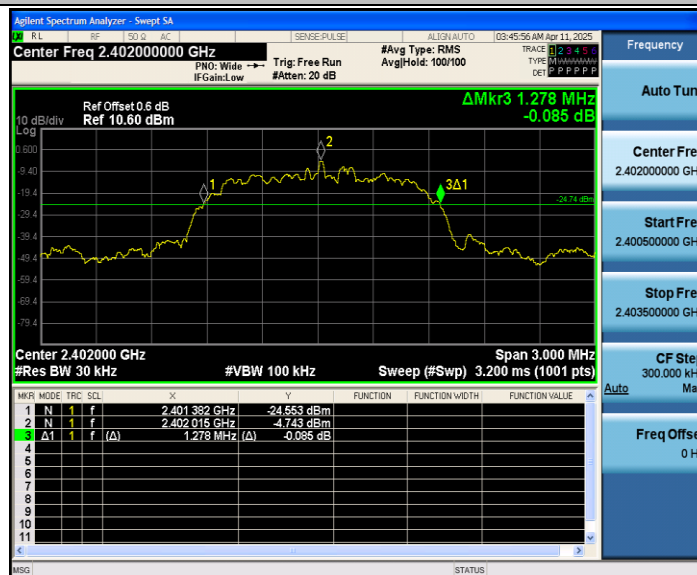
TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.957	2401.547	2402.504	---	---
		2441	0.957	2440.544	2441.501	---	---
		2480	0.939	2479.547	2480.486	---	---
2DH5	Ant1	2402	1.278	2401.382	2402.660	---	---
		2441	1.311	2440.349	2441.660	---	---
		2480	1.323	2479.346	2480.669	---	---
3DH5	Ant1	2402	1.284	2401.379	2402.663	---	---
		2441	1.323	2440.346	2441.669	---	---
		2480	1.341	2479.340	2480.681	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441





3DH5_Ant1_2480



Appendix B: Occupied Channel Bandwidth

Test Result

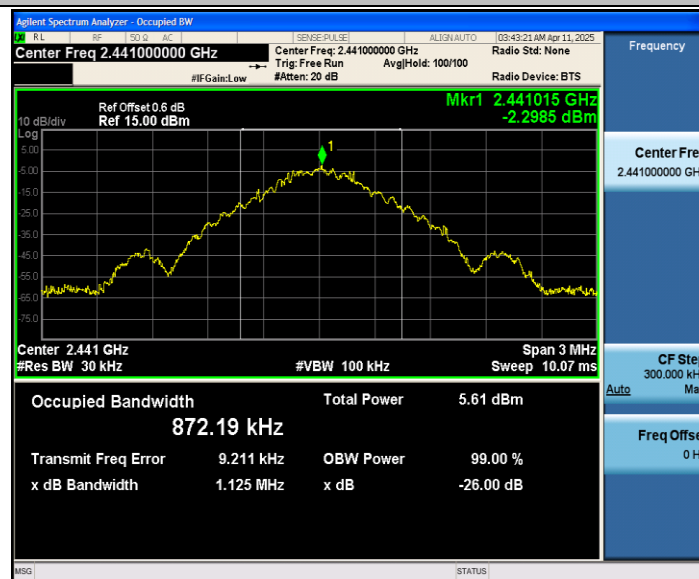
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86360	2401.5806	2402.4442	---	---
		2441	0.87219	2440.5731	2441.4453	---	---
		2480	0.87718	2479.5698	2480.4470	---	---
2DH5	Ant1	2402	1.1892	2401.4161	2402.6053	---	---
		2441	1.1850	2440.4166	2441.6016	---	---
		2480	1.1922	2479.4146	2480.6068	---	---
3DH5	Ant1	2402	1.1818	2401.4189	2402.6007	---	---
		2441	1.1902	2440.4161	2441.6063	---	---
		2480	1.1866	2479.4175	2480.6041	---	---

Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



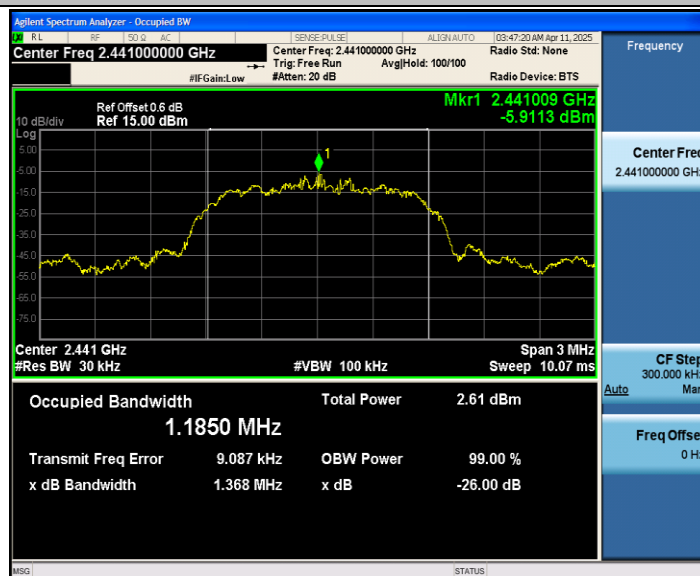
DH5_Ant1_2480



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

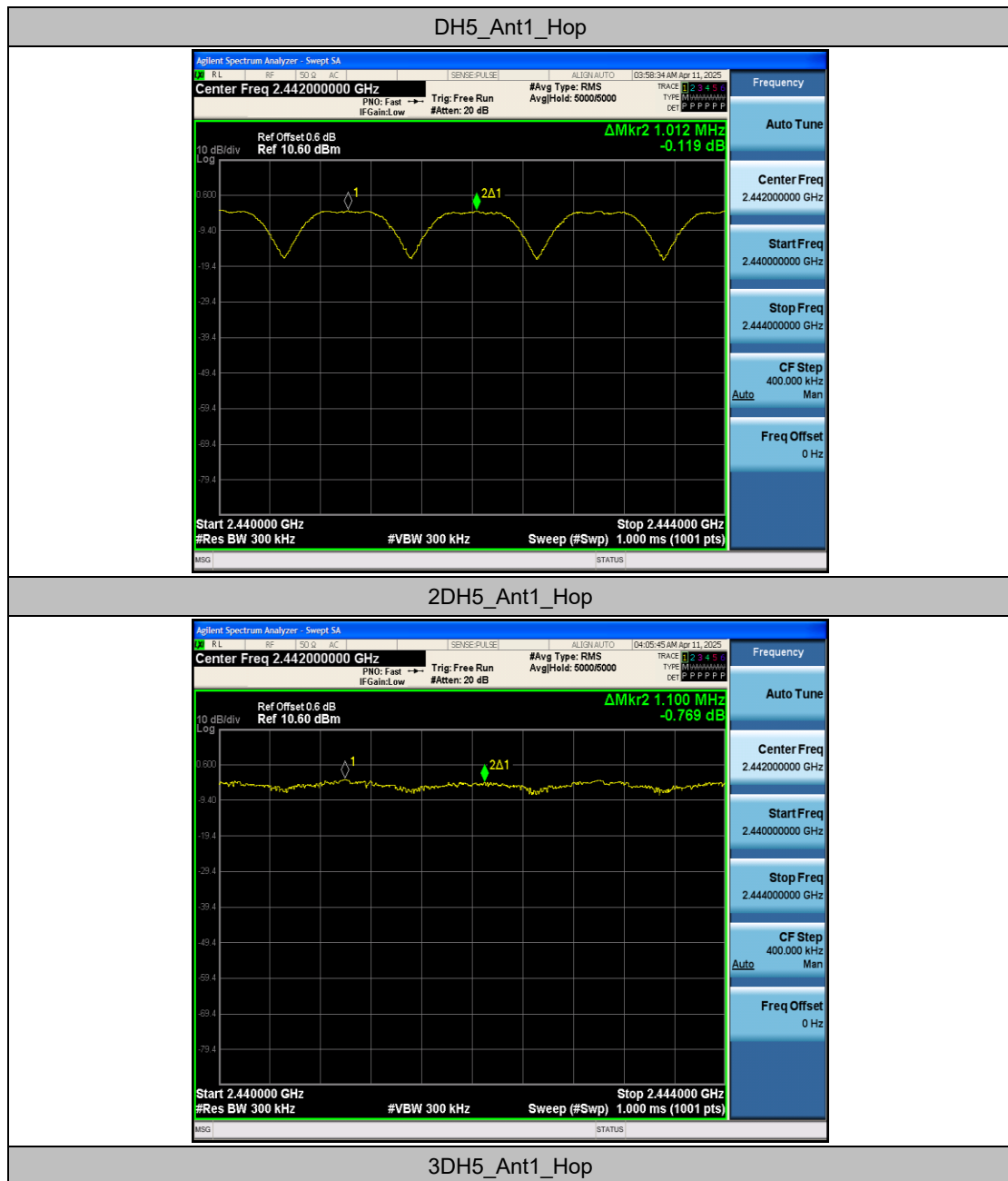
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.23	≤20.97	PASS
		2441	-0.21	≤20.97	PASS
		2480	-0.42	≤20.97	PASS
2DH5	Ant1	2402	-0.58	≤20.97	PASS
		2441	-1.03	≤20.97	PASS
		2480	-1.20	≤20.97	PASS
3DH5	Ant1	2402	-0.59	≤20.97	PASS
		2441	-0.97	≤20.97	PASS
		2480	-1.18	≤20.97	PASS

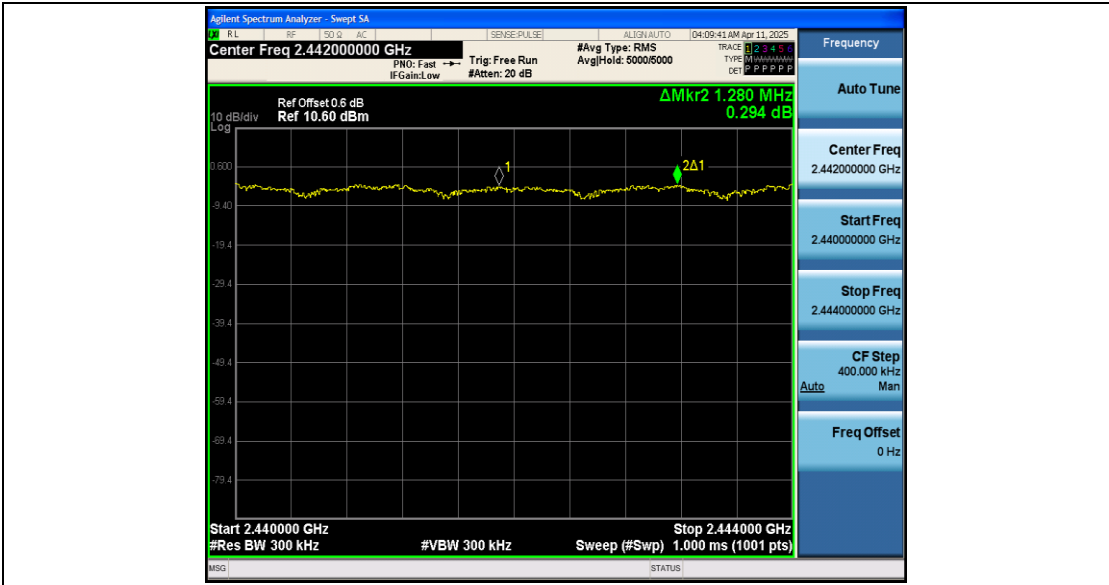
Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.012	≥ 0.957	PASS
2DH5	Ant1	Hop	1.1	≥ 0.882	PASS
3DH5	Ant1	Hop	1.28	≥ 0.894	PASS

Test Graphs



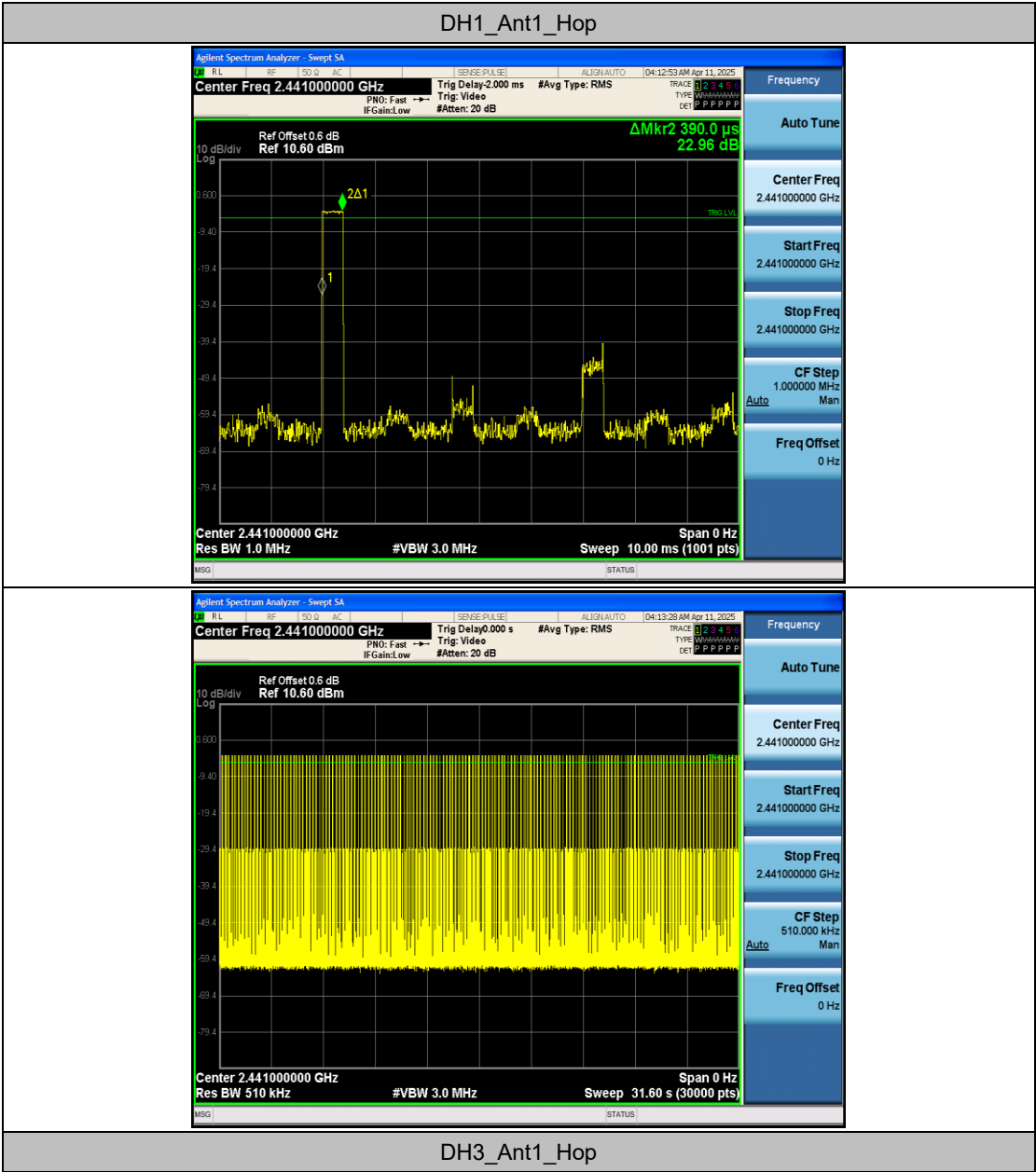


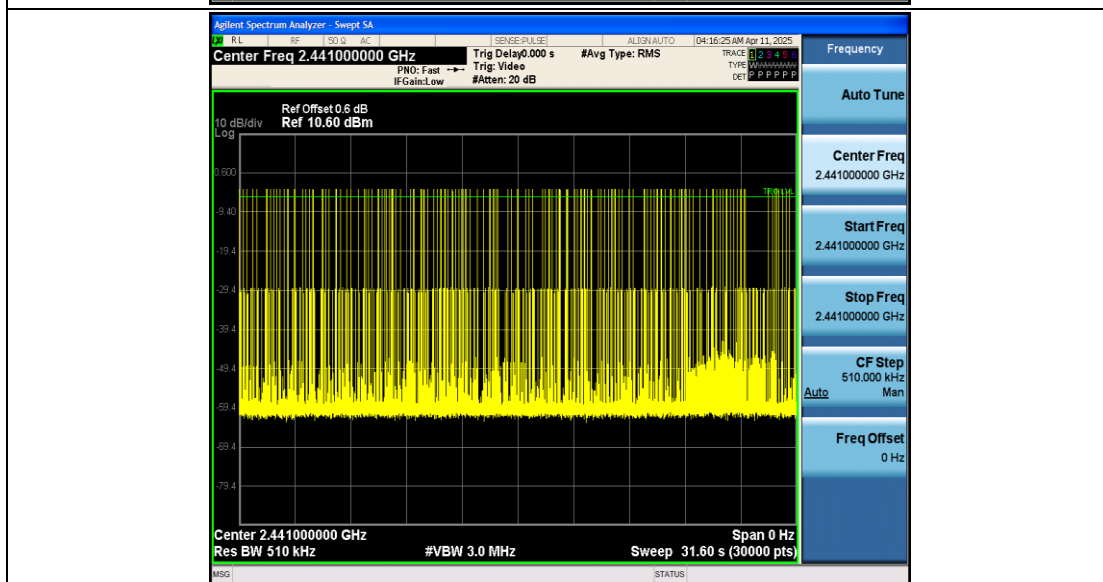
Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	320	0.125	≤0.4	PASS
DH3	Ant1	Hop	1.650	155	0.256	≤0.4	PASS
DH5	Ant1	Hop	2.890	116	0.335	≤0.4	PASS
2DH1	Ant1	Hop	0.390	319	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.640	154	0.253	≤0.4	PASS
2DH5	Ant1	Hop	2.900	99	0.287	≤0.4	PASS
3DH1	Ant1	Hop	0.390	319	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.640	163	0.267	≤0.4	PASS
3DH5	Ant1	Hop	2.900	114	0.331	≤0.4	PASS

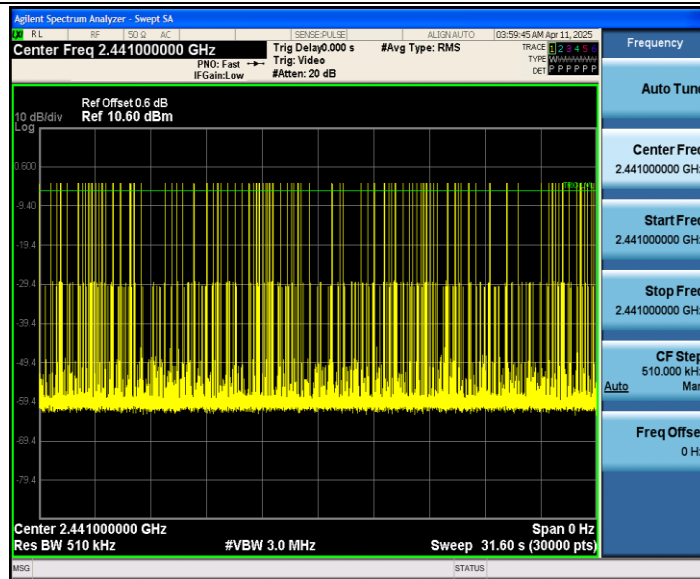
Test Graphs



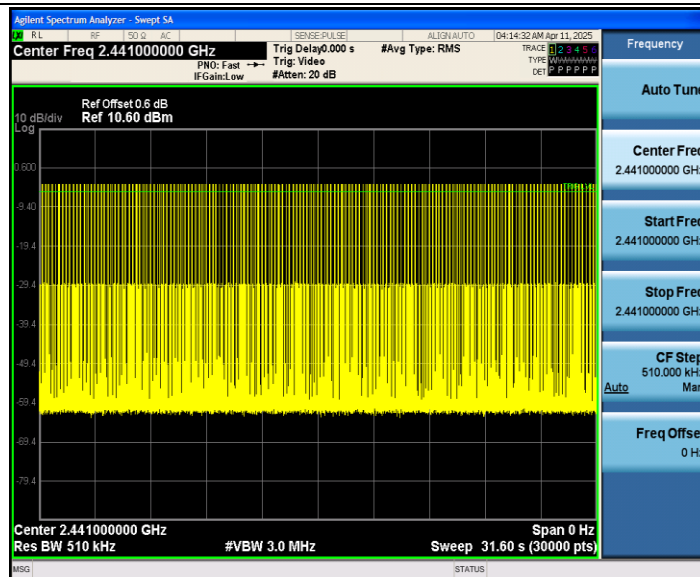
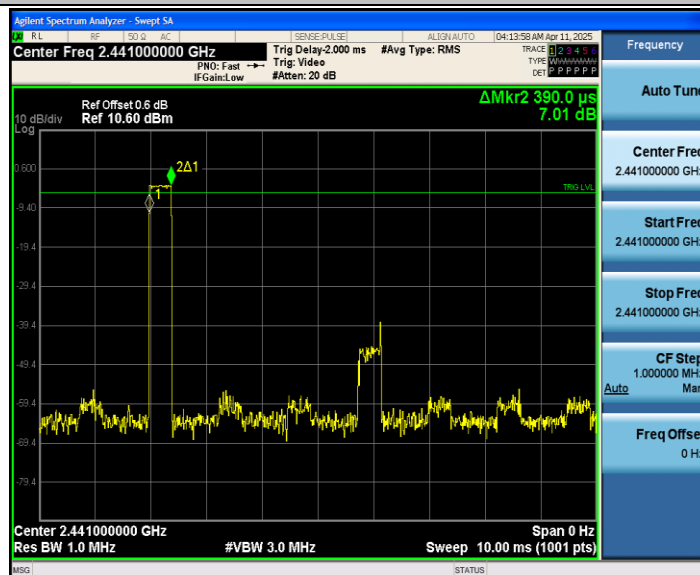


DH5_Ant1_Hop

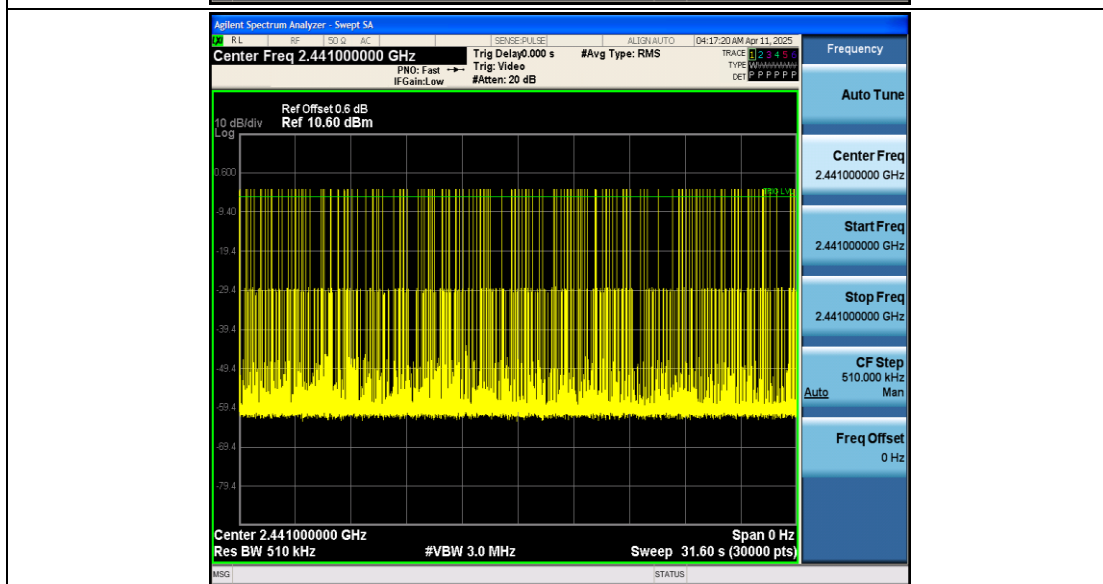




2DH1_Ant1_Hop

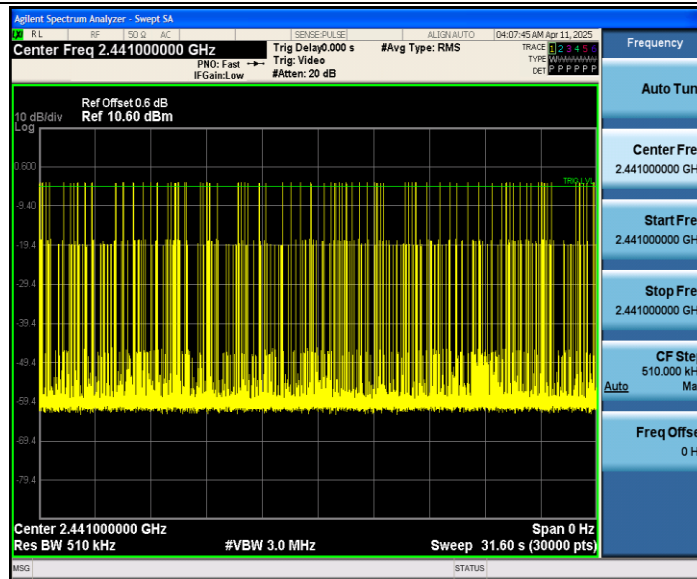


2DH3_Ant1_Hop

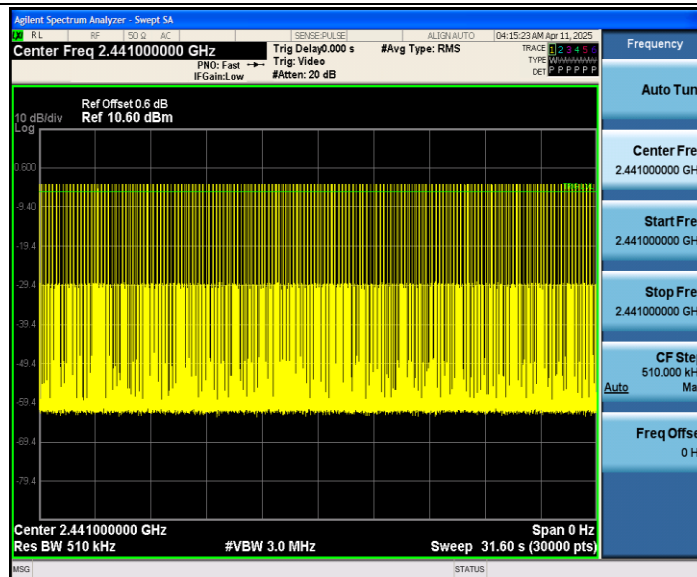
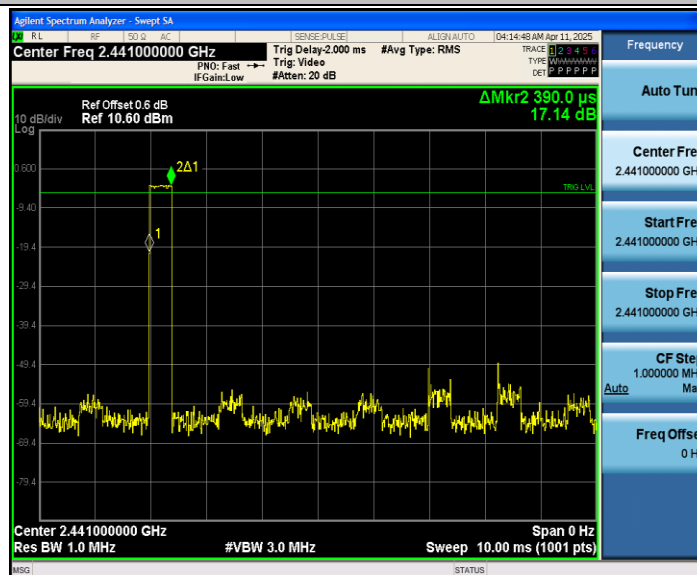


2DH5_Ant1_Hop

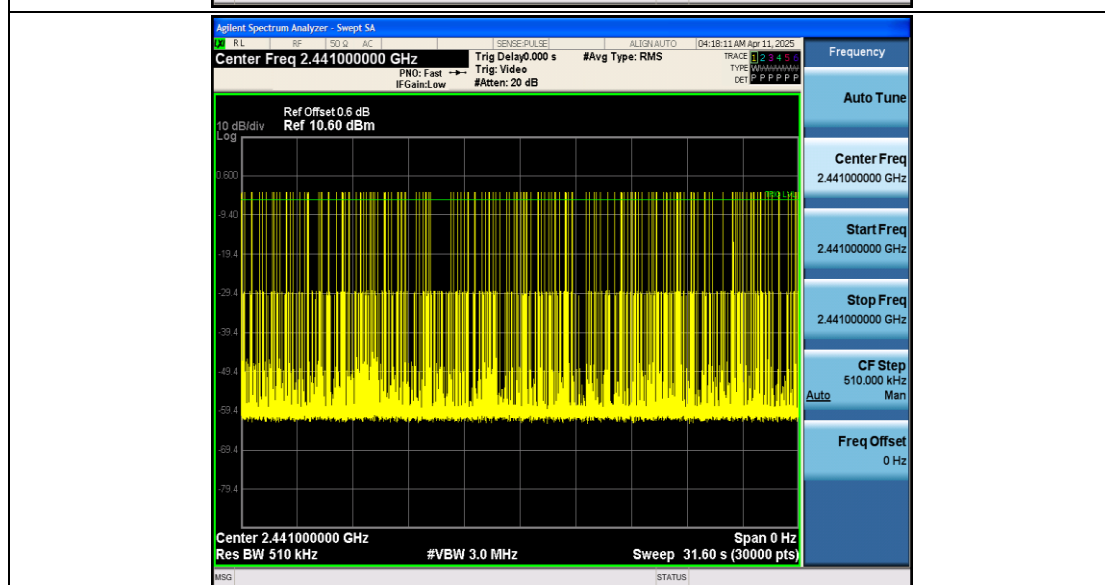




3DH1_Ant1_Hop

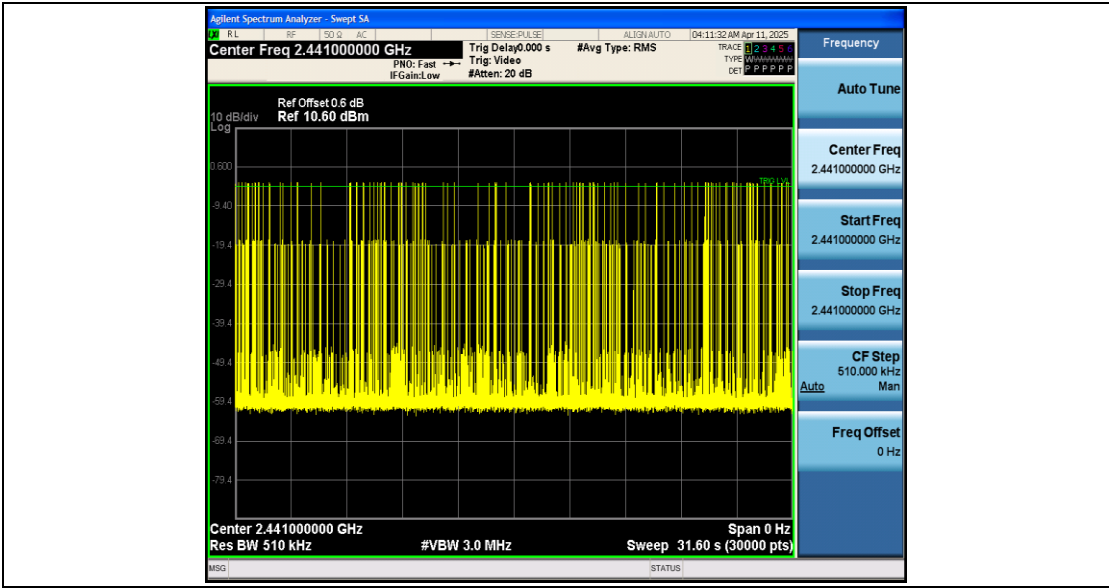


3DH3_Ant1_Hop



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



2DH5_Ant1_Hop

Agilent Spectrum Analyzer - Swept SA

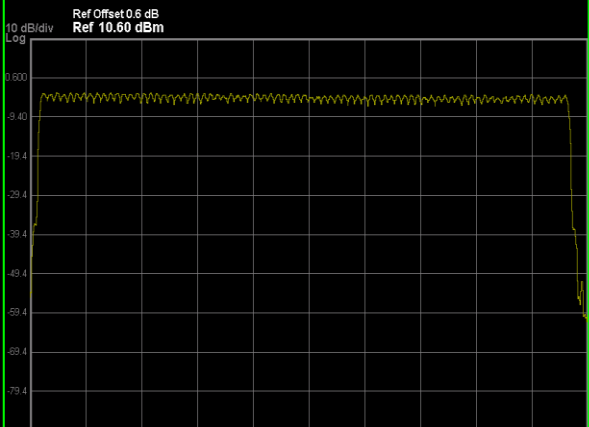
Center Freq 2.441750000 GHz

Ref Offset 0.6 dB
Ref 10.60 dBm

Start 2.400000 GHz
#Res BW 300 kHz

Stop 2.48350 GHz
#VBW 300 kHz
Sweep (#Swp) 1.133 ms (1001 pts)

10 dB/div
Log



Start 2.400000 GHz
#Res BW 300 kHz

Stop 2.48350 GHz
#VBW 300 kHz
Sweep (#Swp) 1.133 ms (1001 pts)

Frequency

Auto Tune

Center Freq
2.441750000 GHz

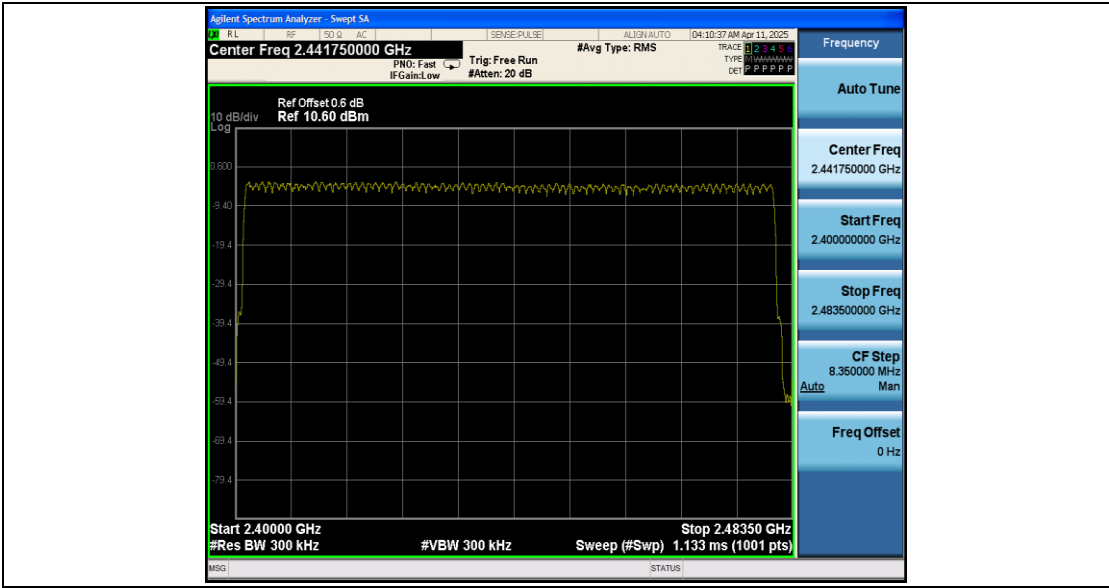
Start Freq
2.400000000 GHz

Stop Freq
2.483500000 GHz

CF Step
8.350000 MHz
Auto

Freq Offset
0 Hz

3DH5_Ant1_Hop

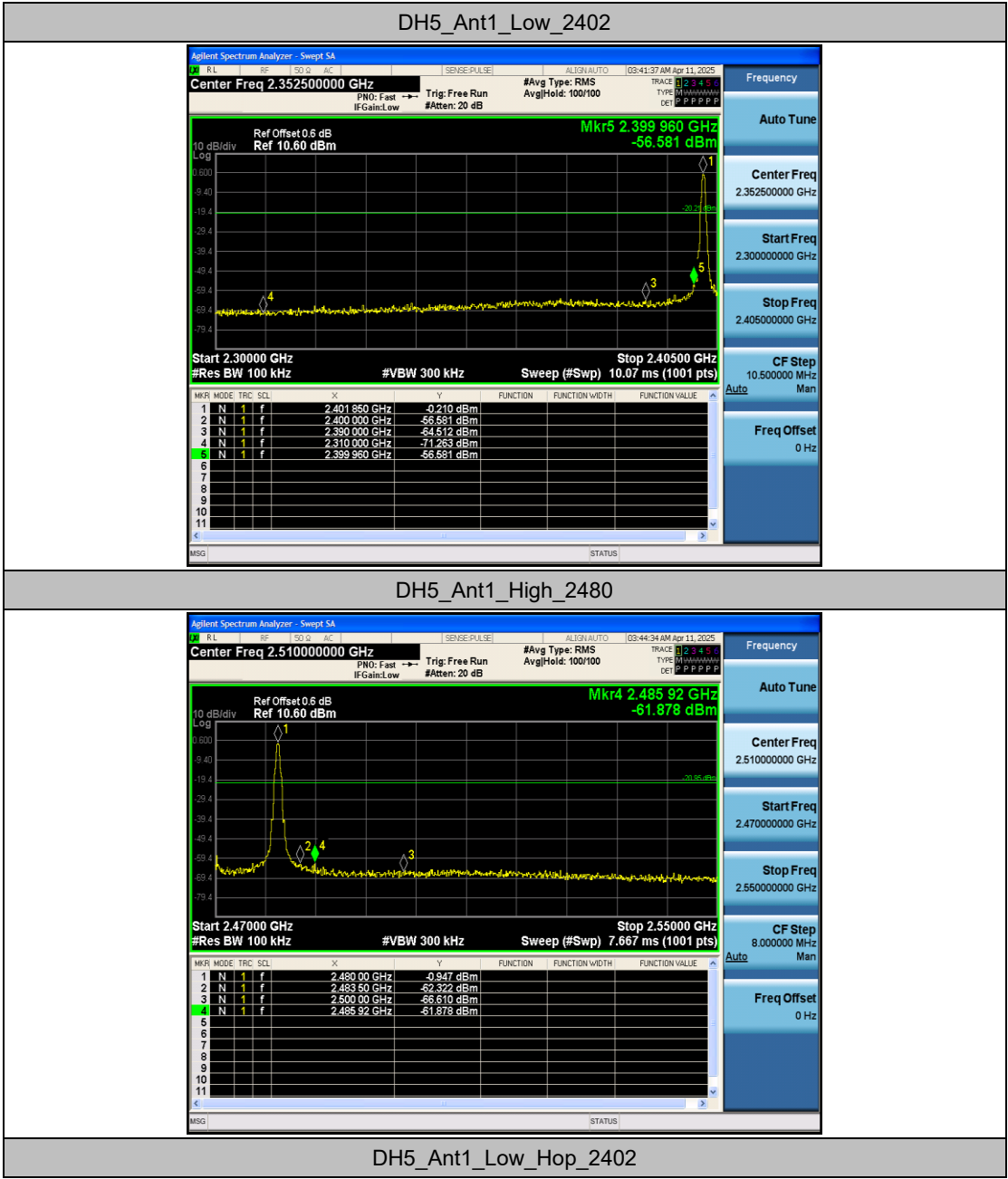


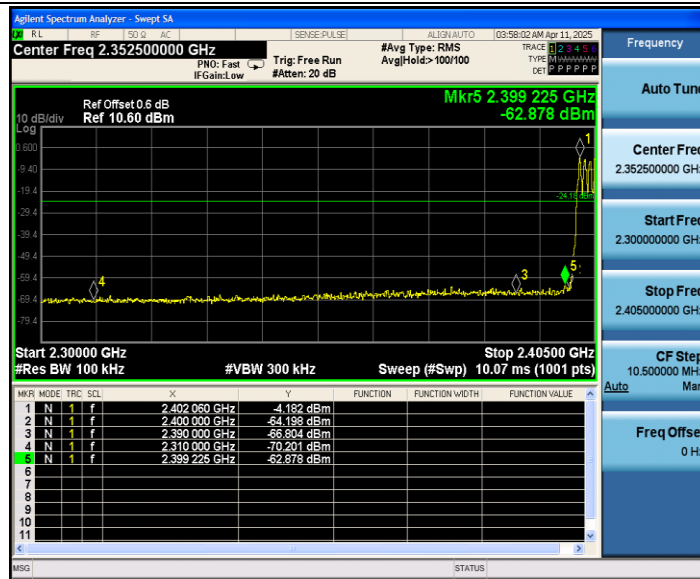
Appendix G: Band edge measurements

Test Result

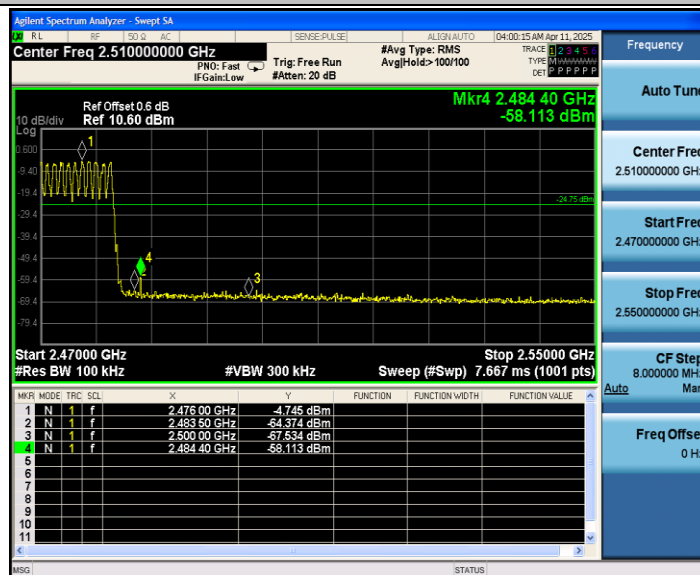
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.21	-56.58	≤-20.21	PASS
		High	2480	-0.95	-61.88	≤-20.95	PASS
		Low	Hop_2402	-4.18	-62.88	≤-24.18	PASS
		High	Hop_2480	-4.75	-58.11	≤-24.75	PASS
2DH5	Ant1	Low	2402	-5.04	-56.78	≤-25.04	PASS
		High	2480	-6.38	-61.48	≤-26.38	PASS
		Low	Hop_2402	-6.65	-63.41	≤-26.65	PASS
		High	Hop_2480	-4.88	-64.23	≤-24.88	PASS
3DH5	Ant1	Low	2402	-4.07	-59.99	≤-24.07	PASS
		High	2480	-4.81	-63.13	≤-24.81	PASS
		Low	Hop_2402	-4.75	-62.7	≤-24.75	PASS
		High	Hop_2480	-4.79	-63.21	≤-24.79	PASS

Test Graphs

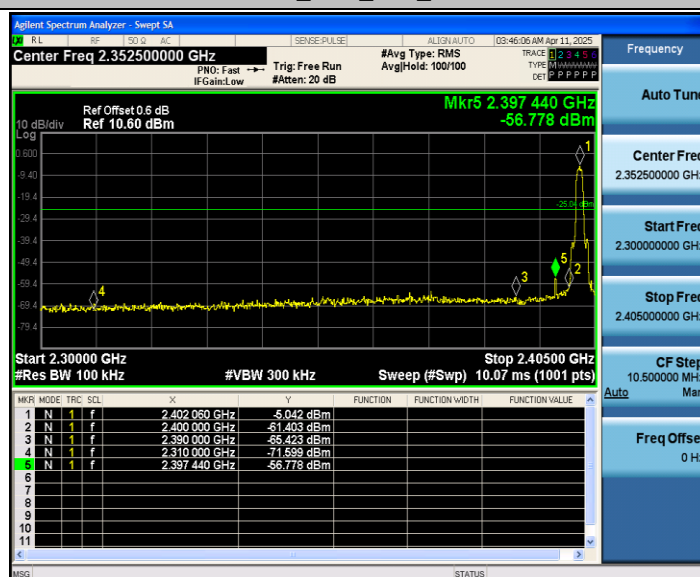




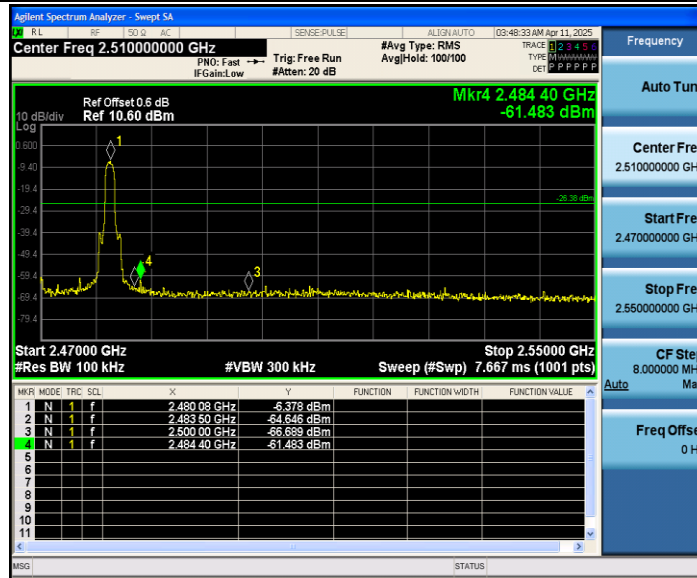
DH5_Ant1_High_Hop_2480



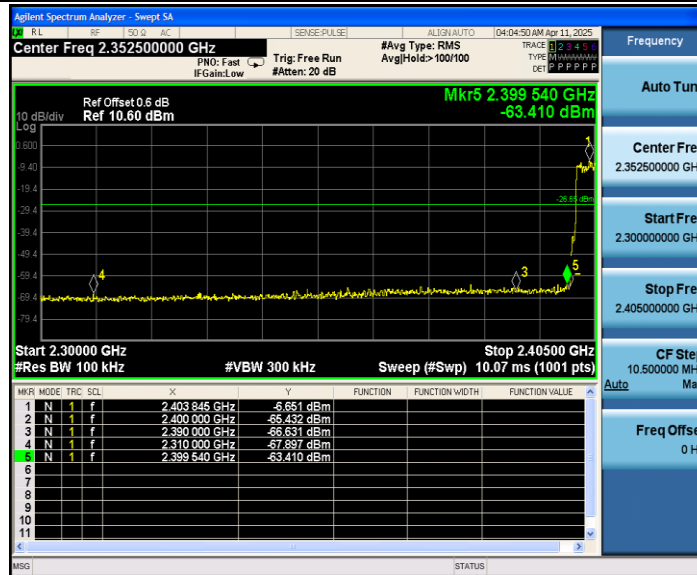
2DH5_Ant1_Low_2402



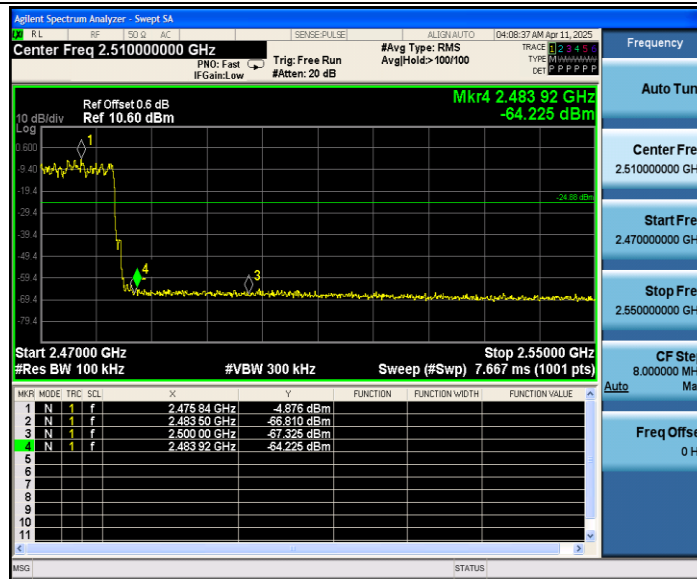
2DH5_Ant1_High_2480



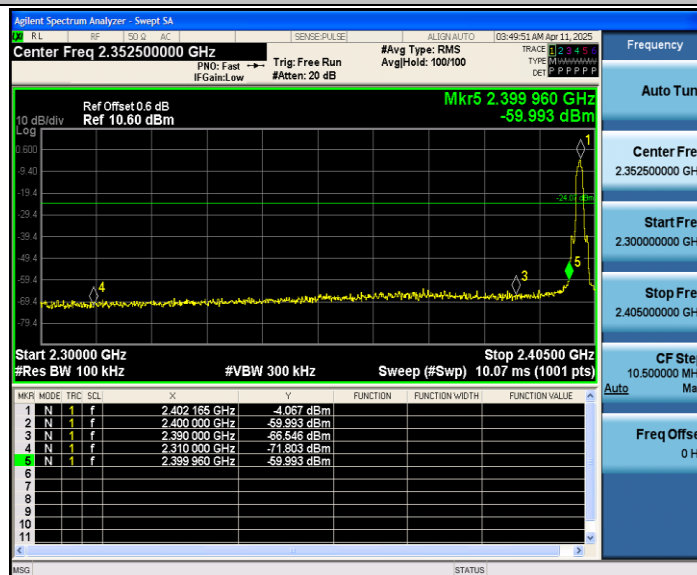
2DH5_Ant1_Low_Hop_2402



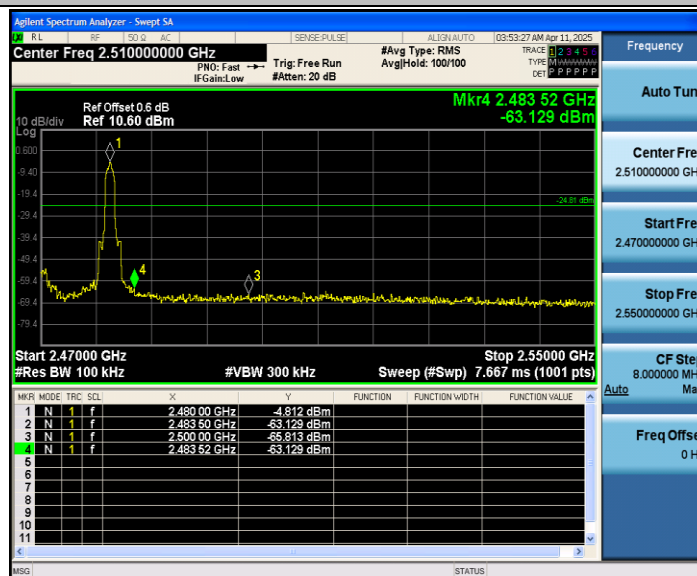
2DH5_Ant1_High_Hop_2480



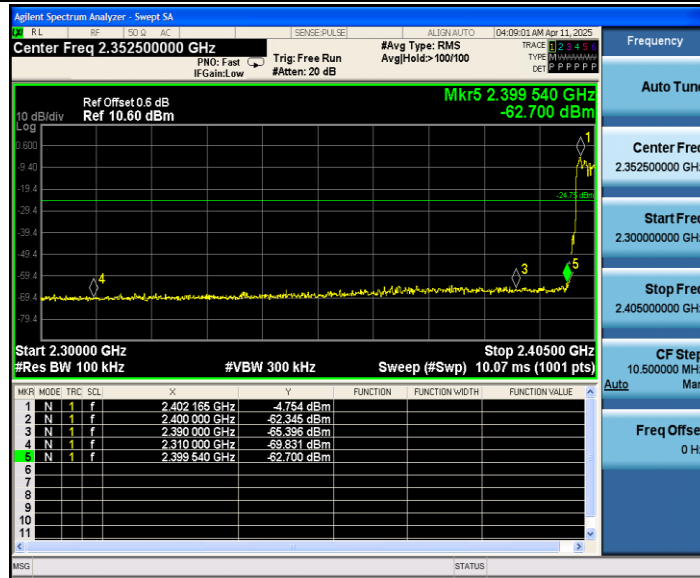
3DH5_Ant1_Low_2402



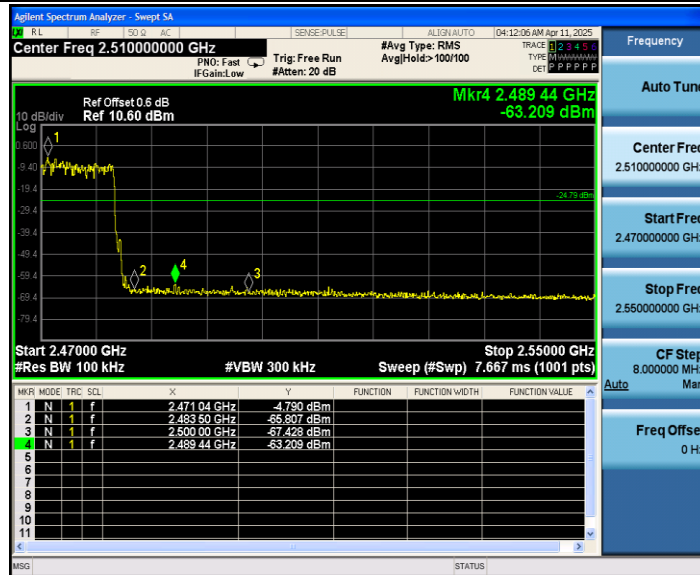
3DH5_Ant1_High_2480



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	-0.82	-0.82	---	PASS
			30~1000	-0.82	-69.47	≤-20.82	PASS
			1000~26500	-0.82	-44.11	≤-20.82	PASS
		2441	Reference	-0.92	-0.92	---	PASS
			30~1000	-0.92	-69.72	≤-20.92	PASS
			1000~26500	-0.92	-43.92	≤-20.92	PASS
		2480	Reference	-1.48	-1.48	---	PASS
			30~1000	-1.48	-70.08	≤-21.48	PASS
			1000~26500	-1.48	-44.98	≤-21.48	PASS
2DH5	Ant1	2402	Reference	-5.83	-5.83	---	PASS
			30~1000	-5.83	-43.65	≤-25.83	PASS
			1000~26500	-5.83	-48.98	≤-25.83	PASS
		2441	Reference	-5.81	-5.81	---	PASS
			30~1000	-5.81	-68.89	≤-25.81	PASS
			1000~26500	-5.81	-52.16	≤-25.81	PASS
		2480	Reference	-5.24	-5.24	---	PASS
			30~1000	-5.24	-69.75	≤-25.24	PASS
			1000~26500	-5.24	-51.8	≤-25.24	PASS
3DH5	Ant1	2402	Reference	-6.83	-6.83	---	PASS
			30~1000	-6.83	-69.72	≤-26.83	PASS
			1000~26500	-6.83	-49.78	≤-26.83	PASS
		2441	Reference	-5.08	-5.08	---	PASS
			30~1000	-5.08	-69.5	≤-25.08	PASS
			1000~26500	-5.08	-49.36	≤-25.08	PASS
		2480	Reference	-5.02	-5.02	---	PASS
			30~1000	-5.02	-69.38	≤-25.02	PASS
			1000~26500	-5.02	-51.38	≤-25.02	PASS