FCC Appendix RF Test Data

FCC ID	**:**	**2BOU9-R82**
Company:	**:**	**Shenzhen Yuntian Intelligent Terminal Co.,LTD.**
EUT	**:**	**SMART LOCK**
Model Number	**:**	**R82**
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	0.945	2401.544	2402.489	---	---
		2441	0.957	2440.541	2441.498	---	---
		2480	0.948	2479.544	2480.492	---	---
2DH5	Ant1	2402	1.332	2401.337	2402.669	---	---
		2441	1.311	2440.346	2441.657	---	---
		2480	1.326	2479.343	2480.669	---	---
3DH5	Ant1	2402	1.281	2401.376	2402.657	---	---
		2441	1.317	2440.343	2441.660	---	---
		2480	1.323	2479.340	2480.663	---	---

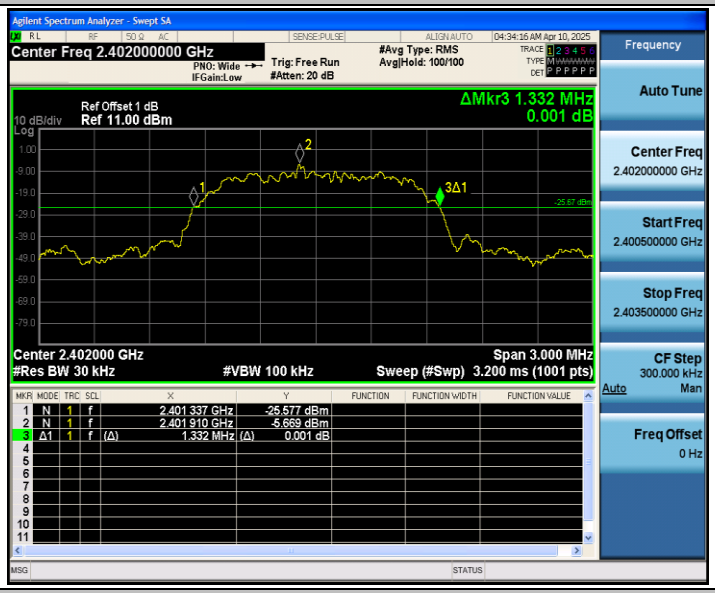
Test Graphs

DH5_Ant1_2402

DH5_Ant1_2441

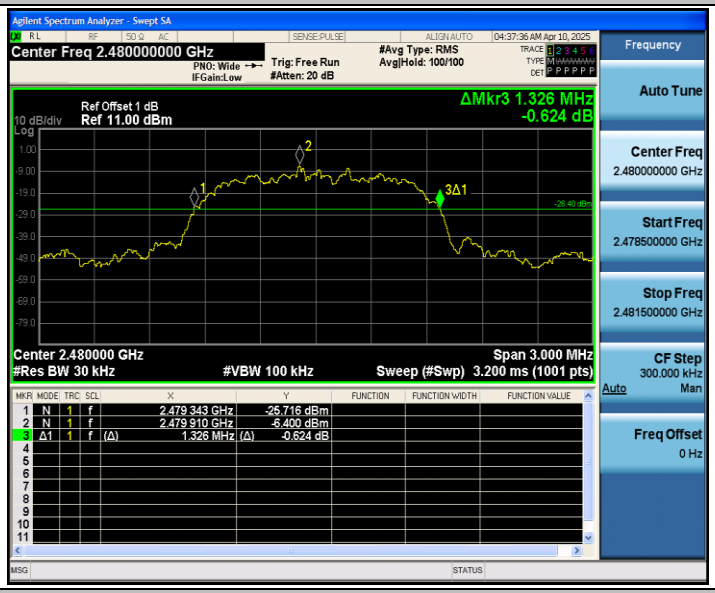
DH5_Ant1_2480

2DH5_Ant1_2402

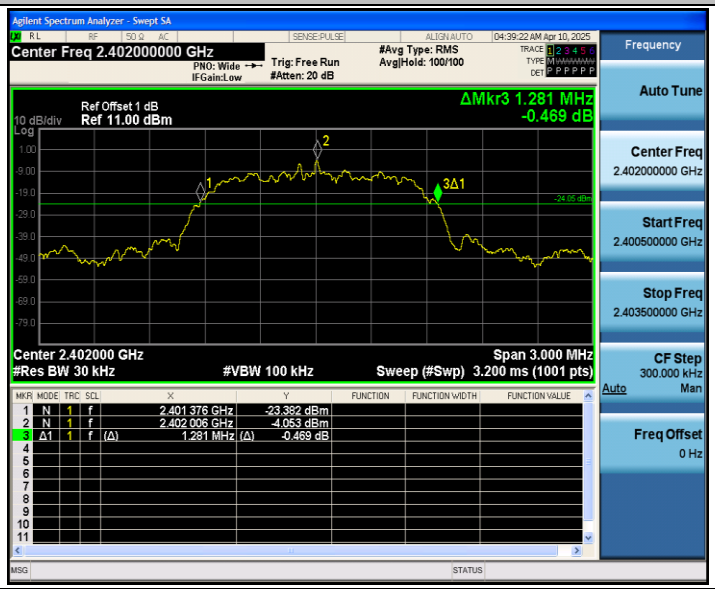


2DH5_Ant1_2441

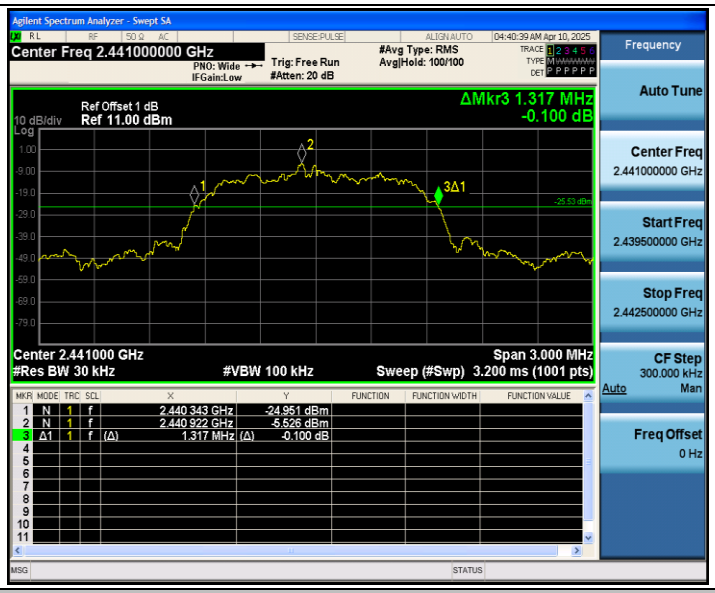
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

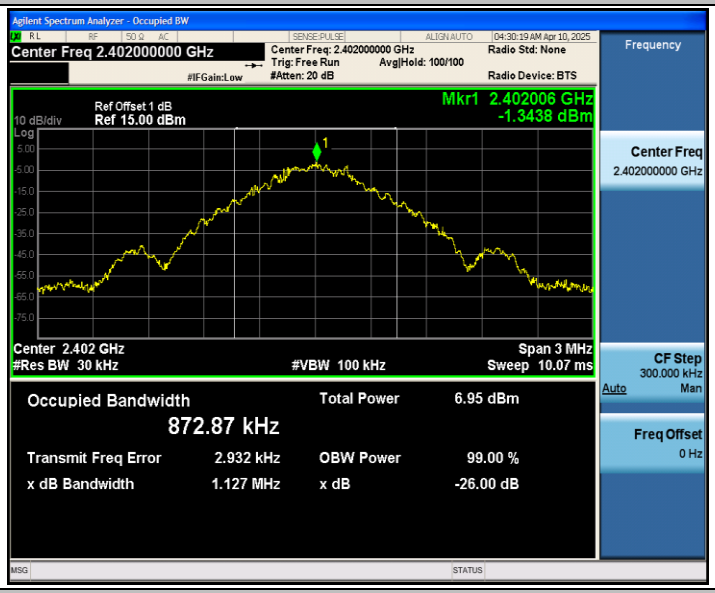
Appendix B: Occupied Channel Bandwidth

Test Result

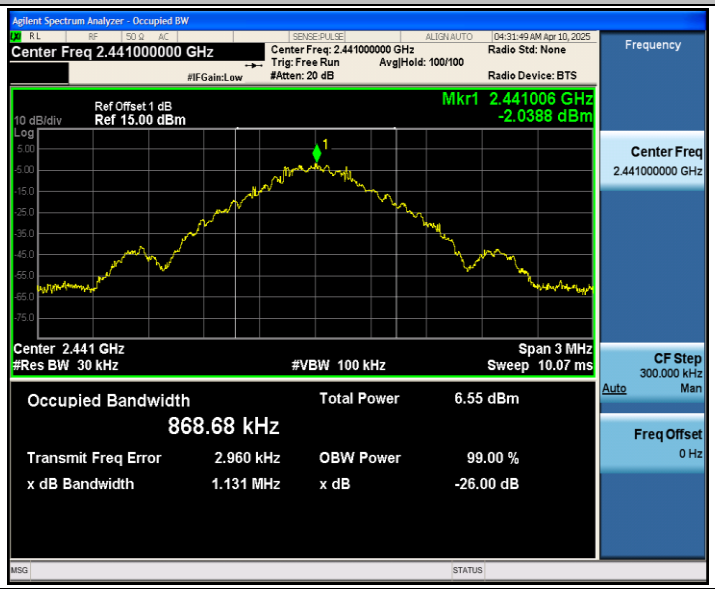
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87287	2401.5665	2402.4394	---	---
		2441	0.86868	2440.5686	2441.4373	---	---
		2480	0.86946	2479.5676	2480.4370	---	---
2DH5	Ant1	2402	1.1883	2401.4100	2402.5983	---	---
		2441	1.1891	2440.4099	2441.5990	---	---
		2480	1.1873	2479.4112	2480.5985	---	---
3DH5	Ant1	2402	1.1870	2401.4114	2402.5984	---	---
		2441	1.1908	2440.4092	2441.6000	---	---
		2480	1.1817	2479.4128	2480.5945	---	---

Test Graphs

DH5_Ant1_2402



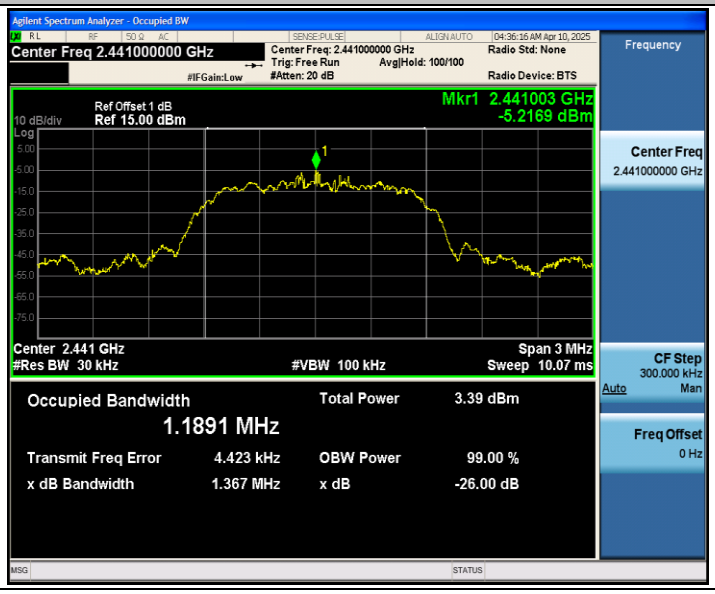
DH5_Ant1_2441



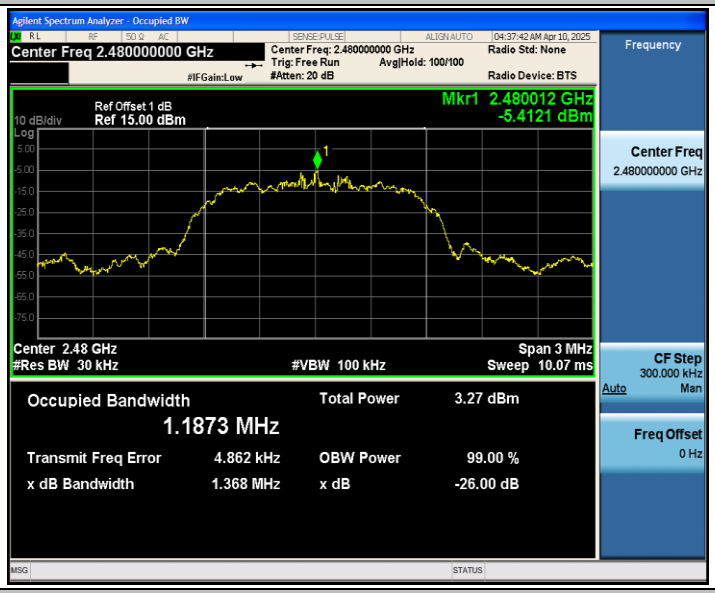
DH5_Ant1_2480

2DH5_Ant1_2402

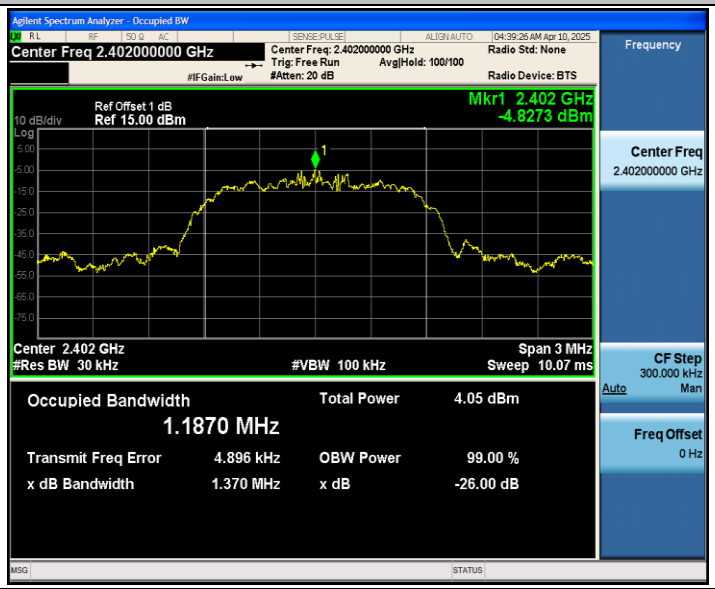
2DH5_Ant1_2441



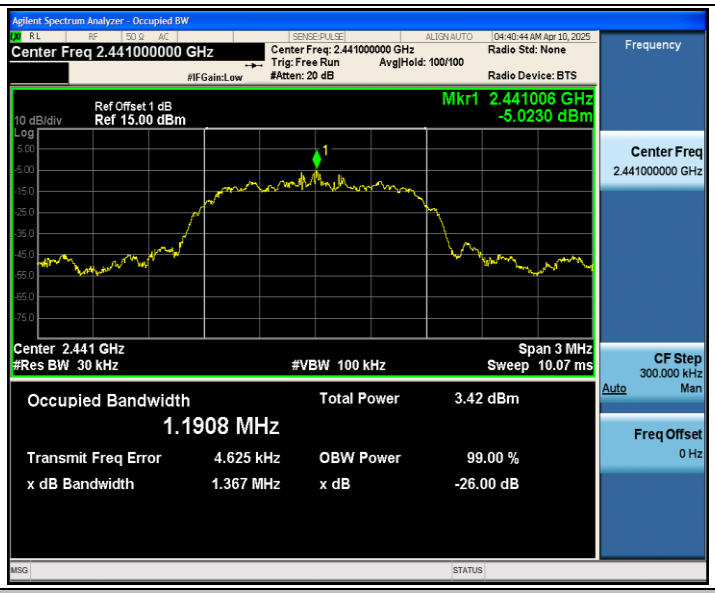
2DH5_Ant1_2480



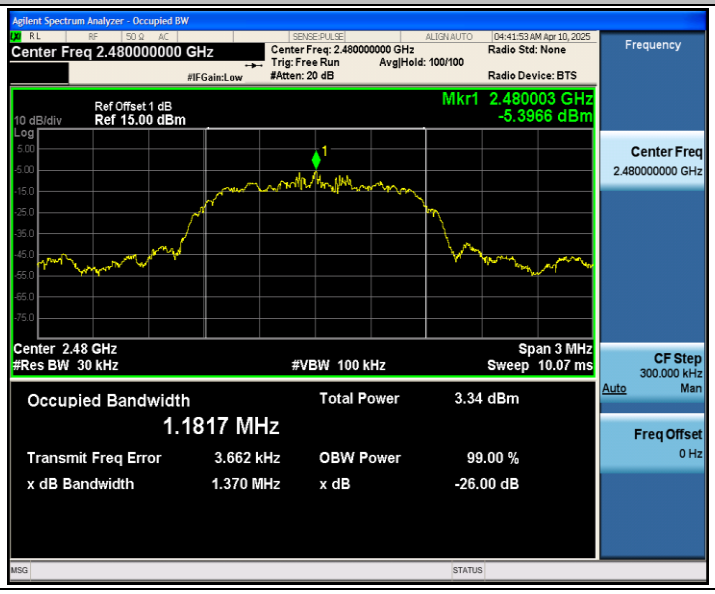
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	1.06	≤20.97	PASS
		2441	0.46	≤20.97	PASS
		2480	0.28	≤20.97	PASS
2DH5	Ant1	2402	0.28	≤20.97	PASS
		2441	-0.32	≤20.97	PASS
		2480	-0.45	≤20.97	PASS
3DH5	Ant1	2402	0.27	≤20.97	PASS
		2441	-0.29	≤20.97	PASS
		2480	-0.43	≤20.97	PASS

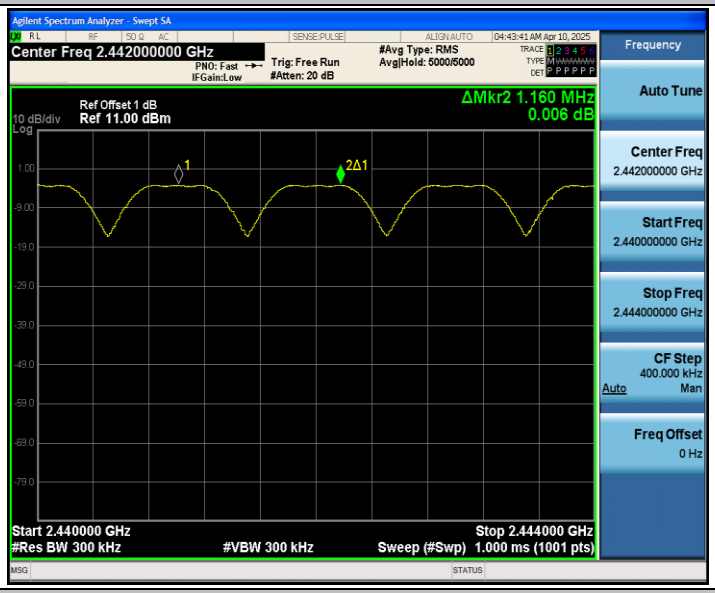
Appendix D: Carrier frequency separation

Test Result

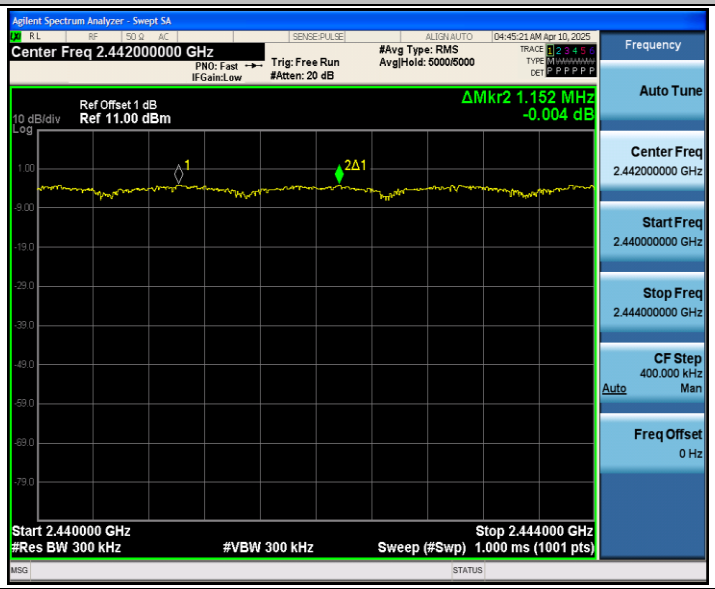
TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.16	≥0.957	PASS
2DH5	Ant1	Hop	1.152	≥0.888	PASS
3DH5	Ant1	Hop	1.152	≥0.882	PASS

Test Graphs

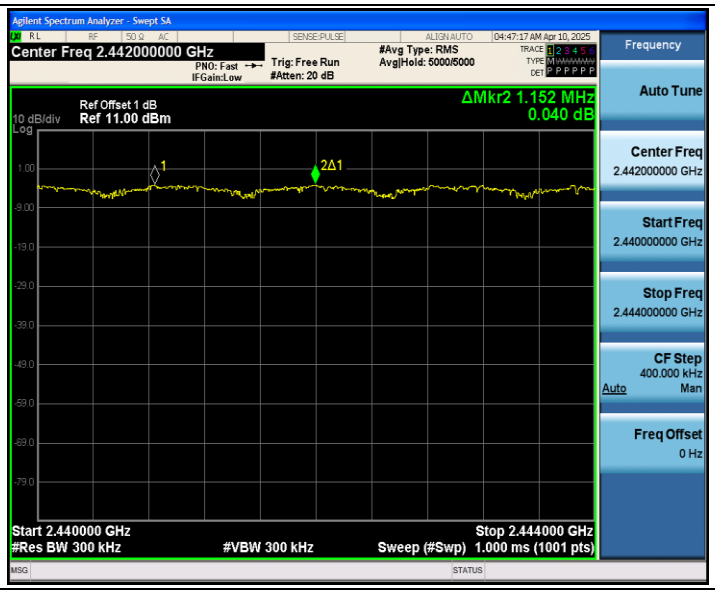
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.442000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 5000/5000
04:47:17 AM Apr 10, 2025
Ref Offset 1 dB
10 dB/div
Ref 11.00 dBm
Log
ΔMkr2 1.152 MHz
0.040 dB
1
2Δ1
Start 2.440000 GHz
#Res BW 300 kHz
#VBW 300 kHz
Stop 2.444000 GHz
Sweep (#Swp) 1.000 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.442000000 GHz
Start Freq
2.440000000 GHz
Stop Freq
2.444000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz

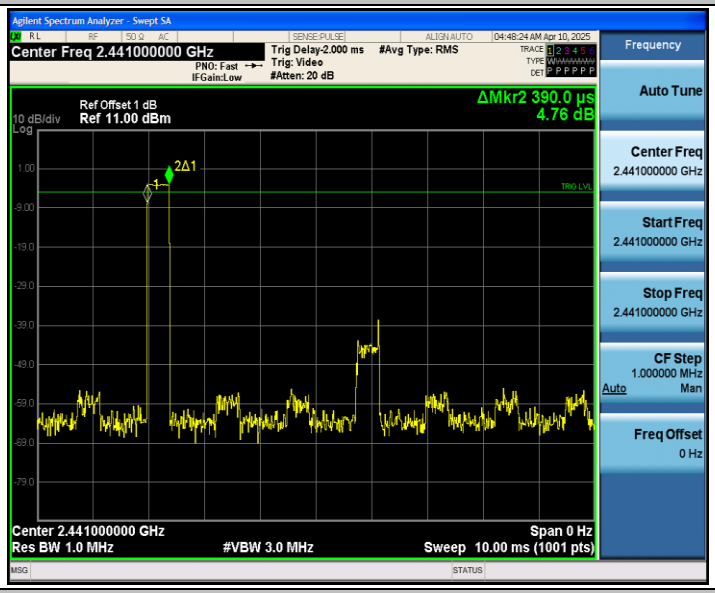
Appendix E: Time of occupancy

Test Result

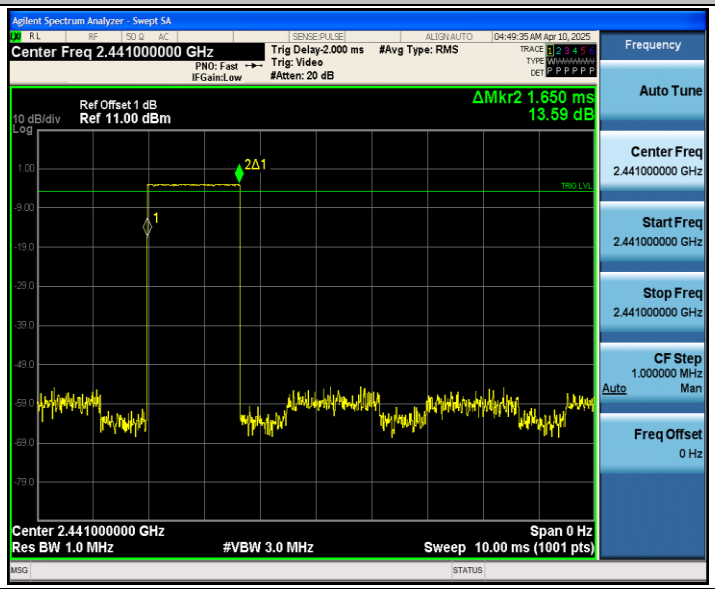
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	320	0.125	≤0.4	PASS
DH3	Ant1	Hop	1.650	160	0.264	≤0.4	PASS
DH5	Ant1	Hop	2.890	106.67	0.308	≤0.4	PASS
2DH1	Ant1	Hop	0.380	320	0.122	≤0.4	PASS
2DH3	Ant1	Hop	1.650	160	0.264	≤0.4	PASS
2DH5	Ant1	Hop	2.900	106.67	0.309	≤0.4	PASS
3DH1	Ant1	Hop	0.390	320	0.125	≤0.4	PASS
3DH3	Ant1	Hop	1.650	160	0.264	≤0.4	PASS
3DH5	Ant1	Hop	2.900	106.67	0.309	≤0.4	PASS

Test Graphs

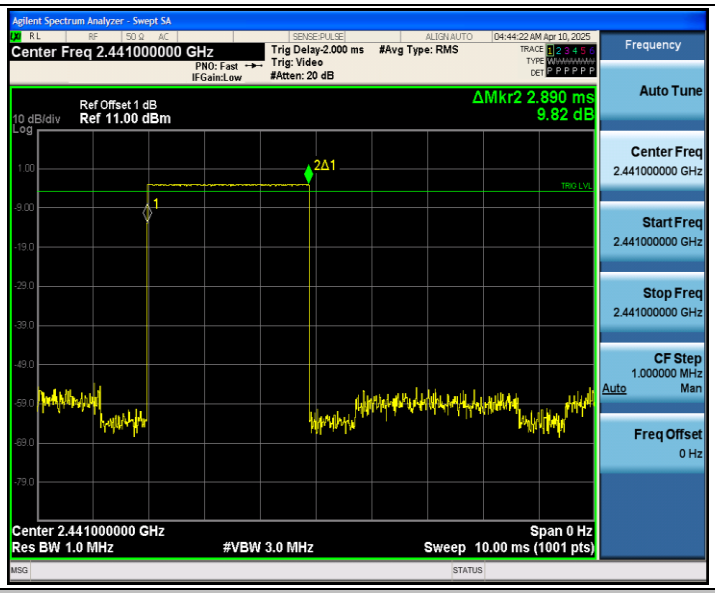
DH1_Ant1_Hop



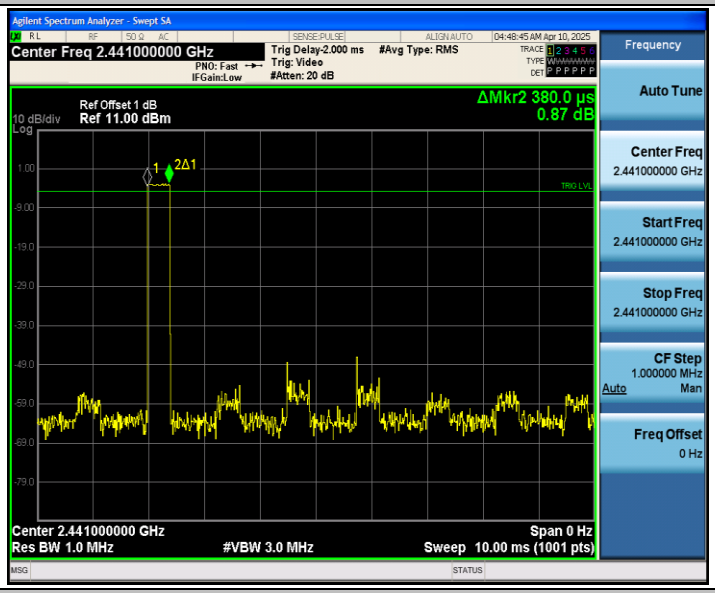
DH3_Ant1_Hop



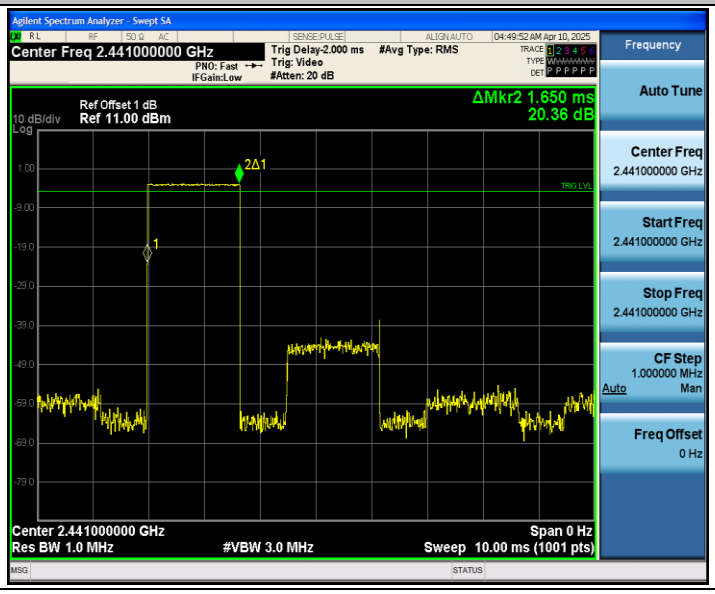
DH5_Ant1_Hop



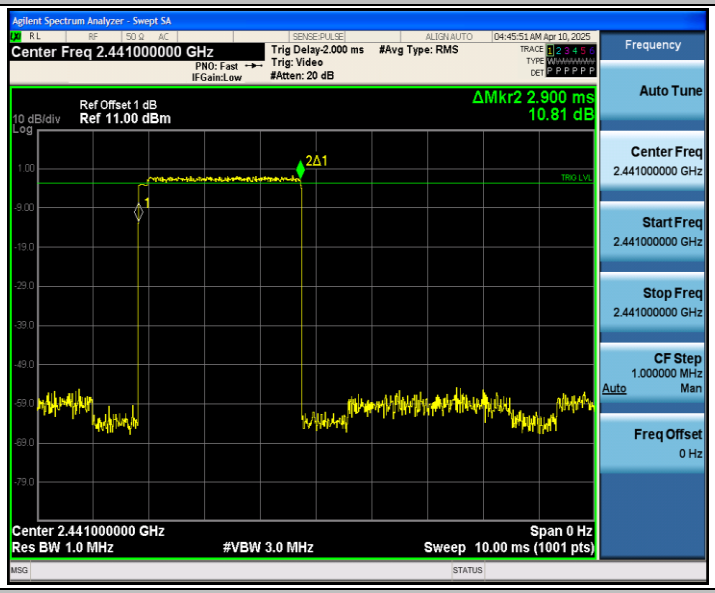
2DH1_Ant1_Hop



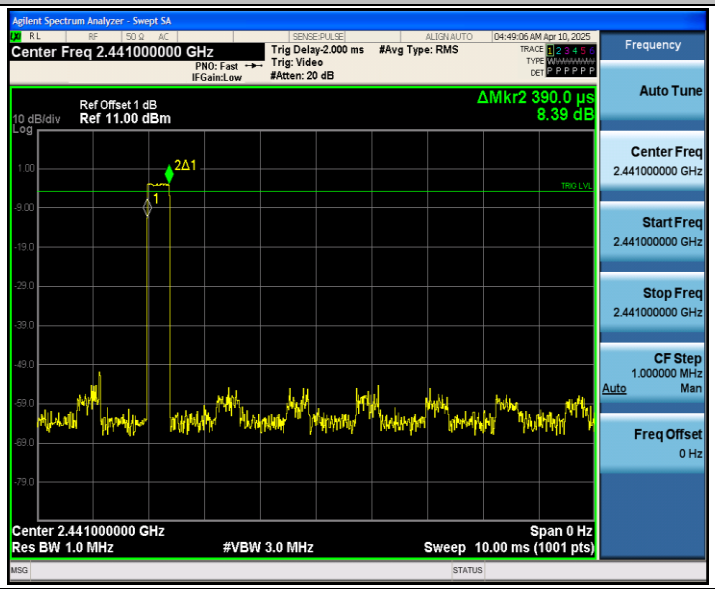
2DH3_Ant1_Hop



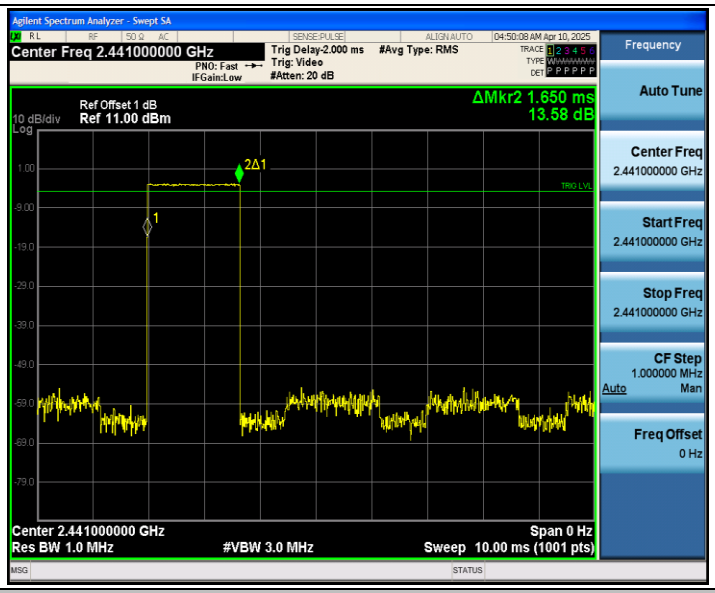
2DH5_Ant1_Hop



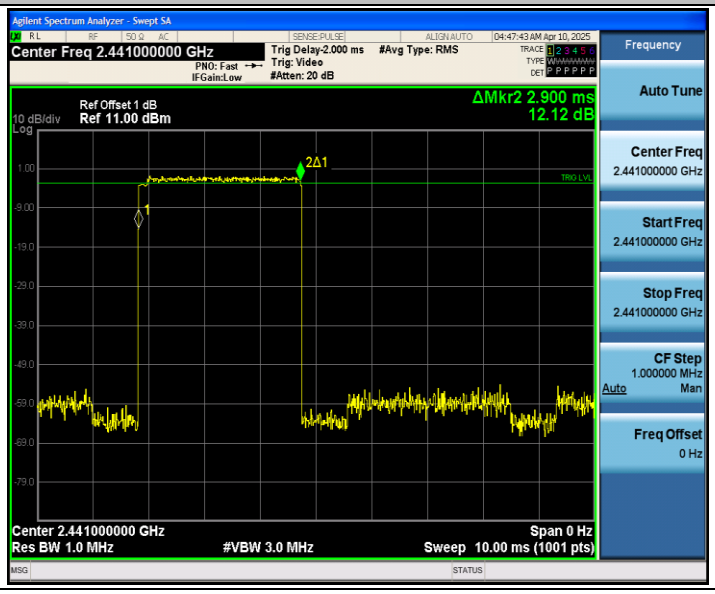
3DH1_Ant1_Hop



3DH3_Ant1_Hop



3DH5_Ant1_Hop



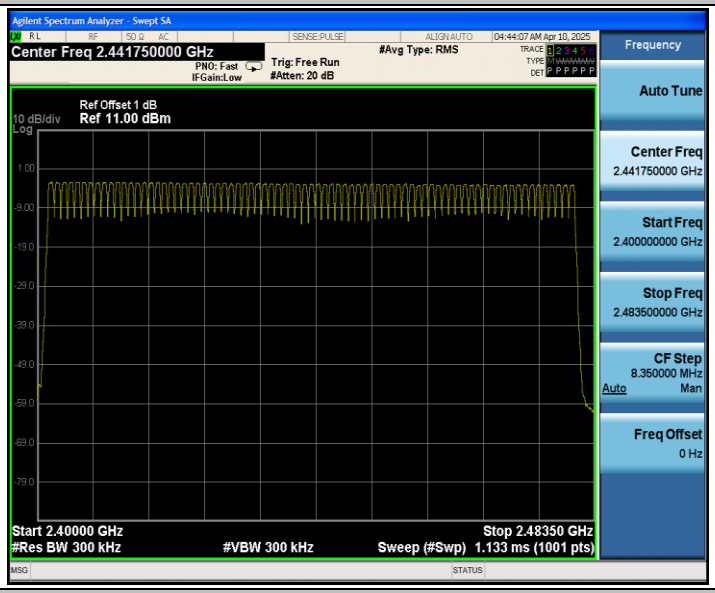
Appendix F: Number of hopping channels

Test Result

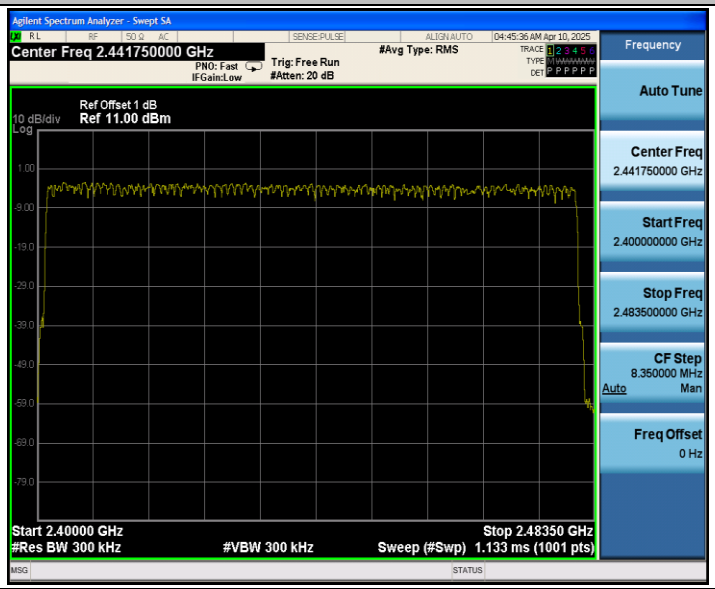
TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

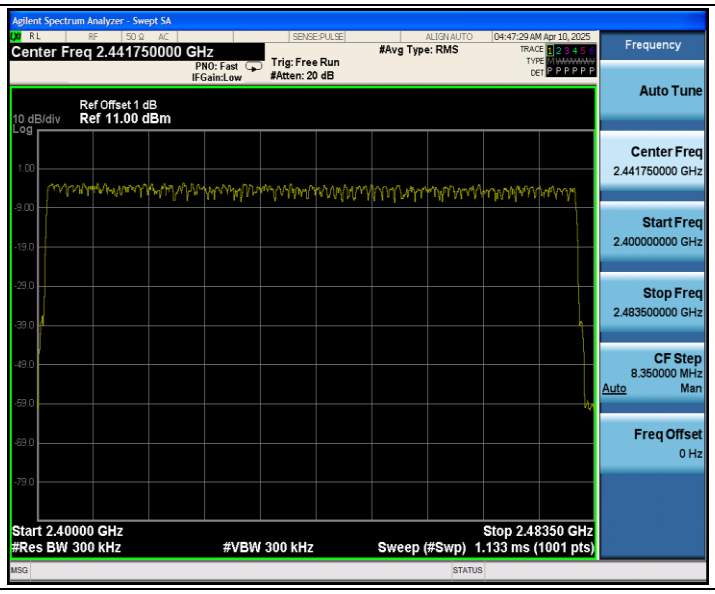
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441750000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
04:47:29 AM Apr 10, 2025
Ref Offset 1 dB
10 dB/div
Ref 11.00 dBm
Log
Start 2.40000 GHz
#Res BW 300 kHz
#VBW 300 kHz
Stop 2.48350 GHz
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
Man
Freq Offset
0 Hz

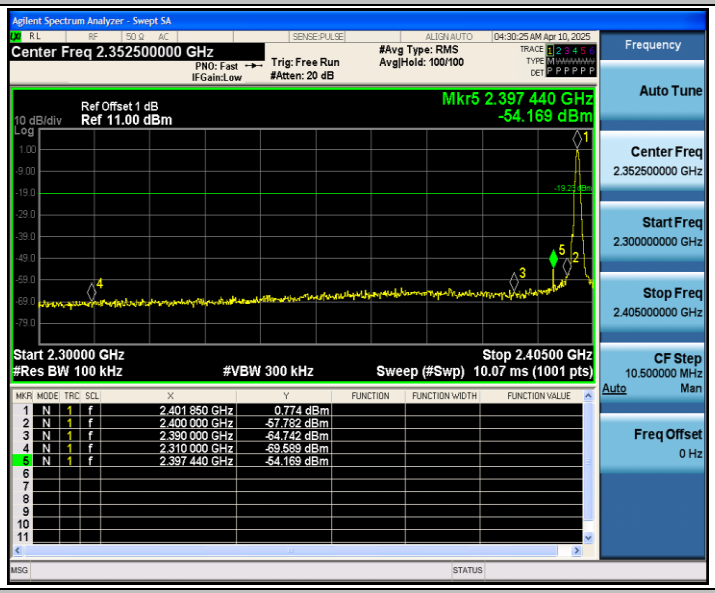
Appendix G: Band edge measurements

Test Result

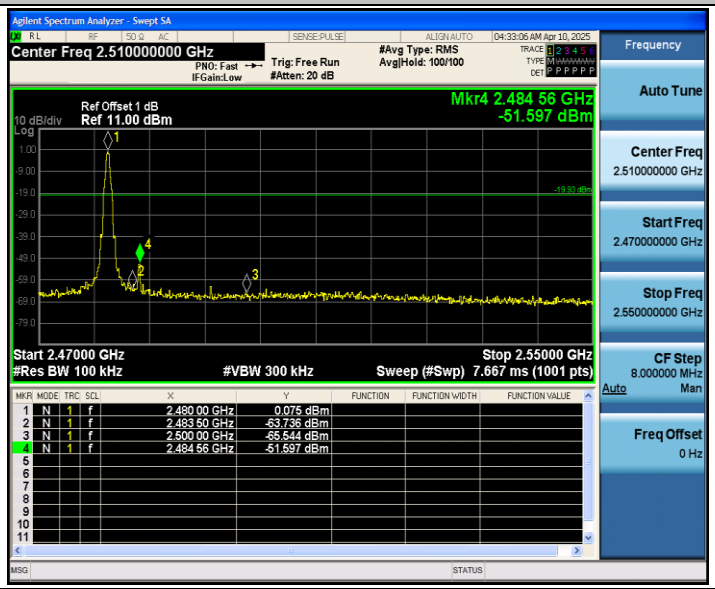
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.77	-54.17	≤-19.23	PASS
		High	2480	0.08	-51.6	≤-19.93	PASS
		Low	Hop_2402	-3.62	-62.68	≤-23.62	PASS
		High	Hop_2480	-3.62	-63.37	≤-23.62	PASS
2DH5	Ant1	Low	2402	-2.58	-55.39	≤-22.58	PASS
		High	2480	-5.16	-56.66	≤-25.16	PASS
		Low	Hop_2402	-5.47	-54.58	≤-25.47	PASS
		High	Hop_2480	-3.38	-63.74	≤-23.38	PASS
3DH5	Ant1	Low	2402	-3.45	-55.42	≤-23.45	PASS
		High	2480	-3.24	-59.41	≤-23.24	PASS
		Low	Hop_2402	-5.04	-61.3	≤-25.04	PASS
		High	Hop_2480	-5.21	-63.1	≤-25.21	PASS

Test Graphs

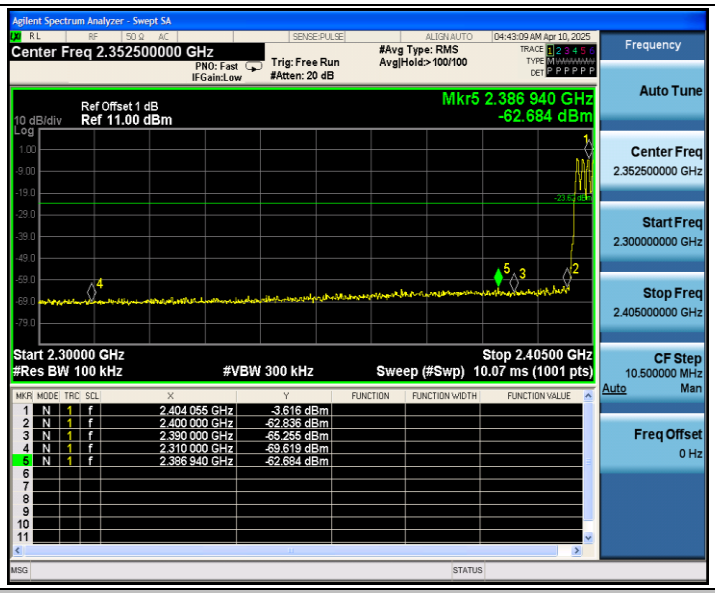
DH5_Ant1_Low_2402



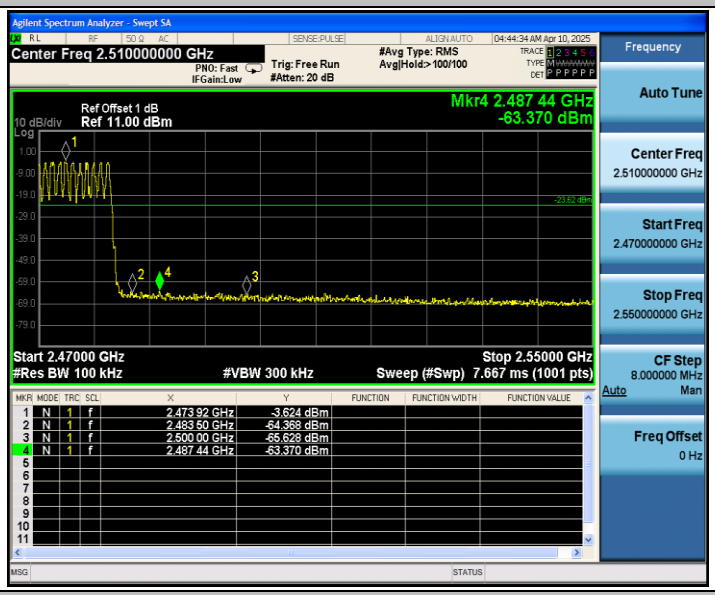
DH5_Ant1_High_2480



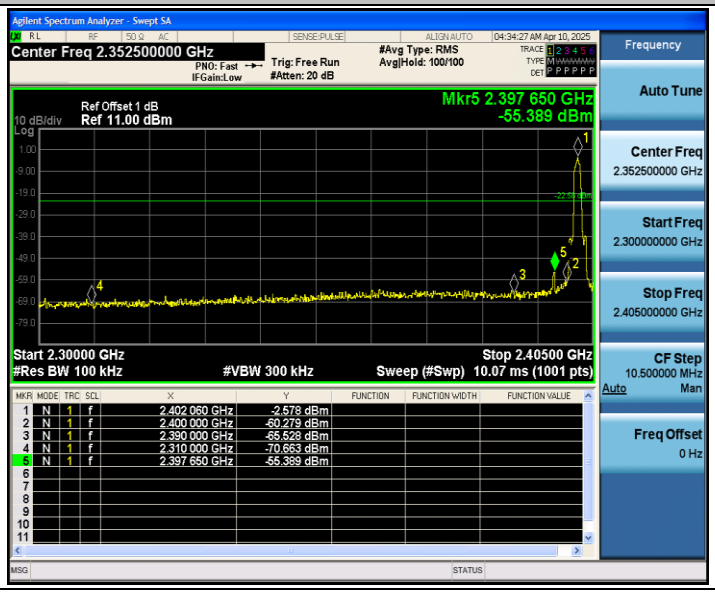
DH5_Ant1_Low_Hop_2402



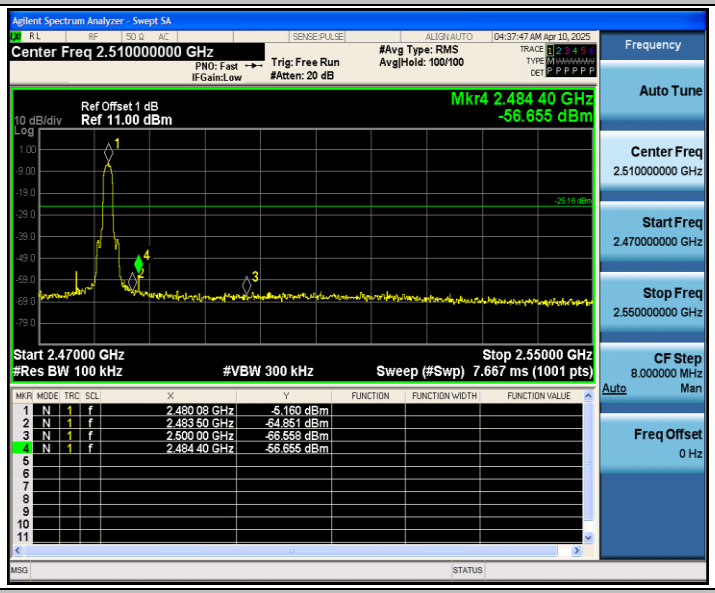
DH5_Ant1_High_Hop_2480



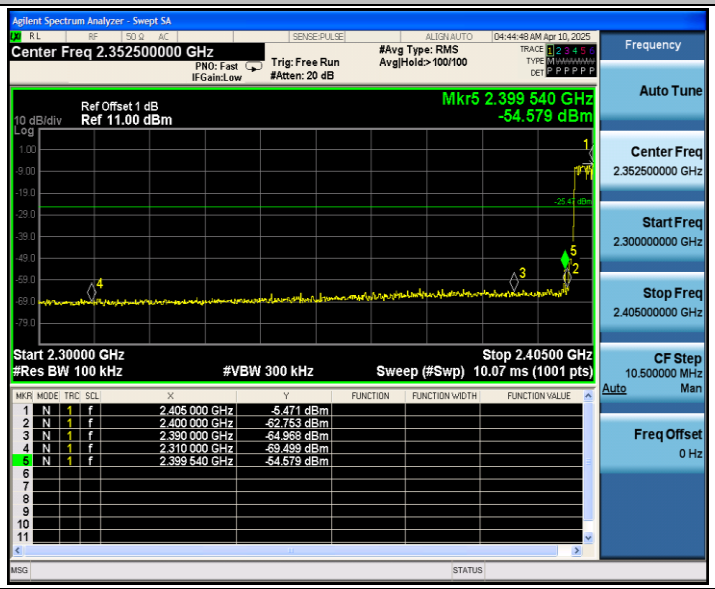
2DH5_Ant1_Low_2402



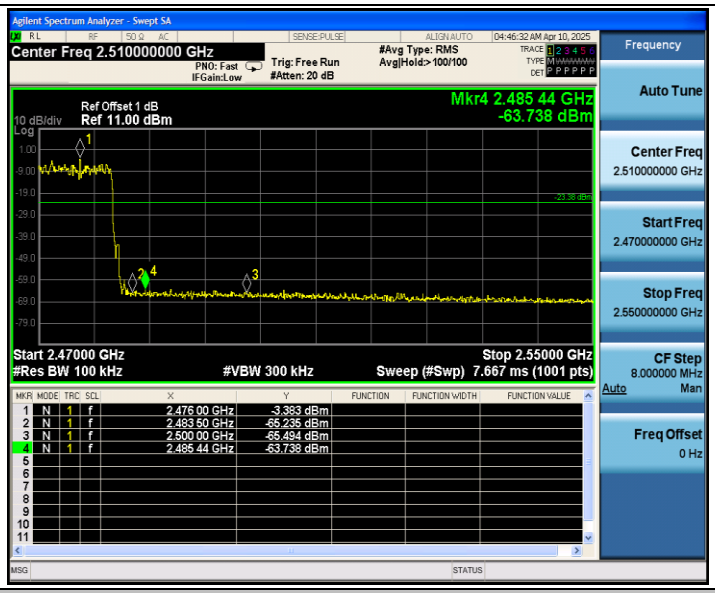
2DH5_Ant1_High_2480



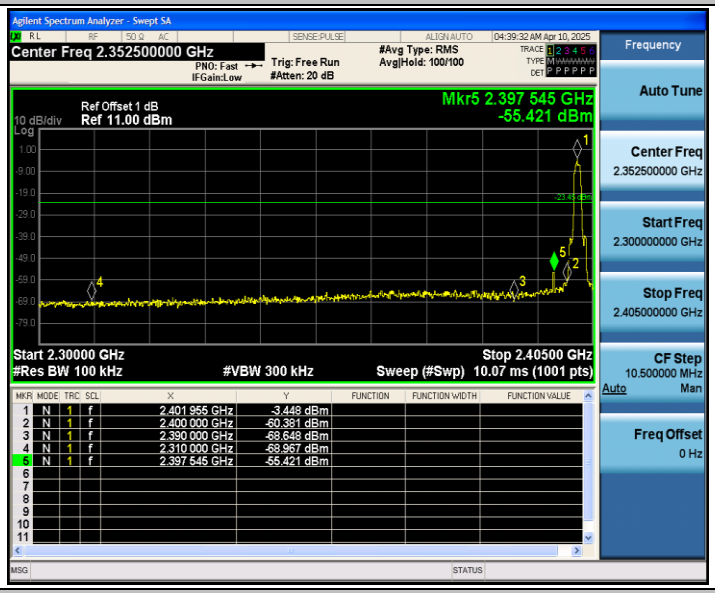
2DH5_Ant1_Low_Hop_2402



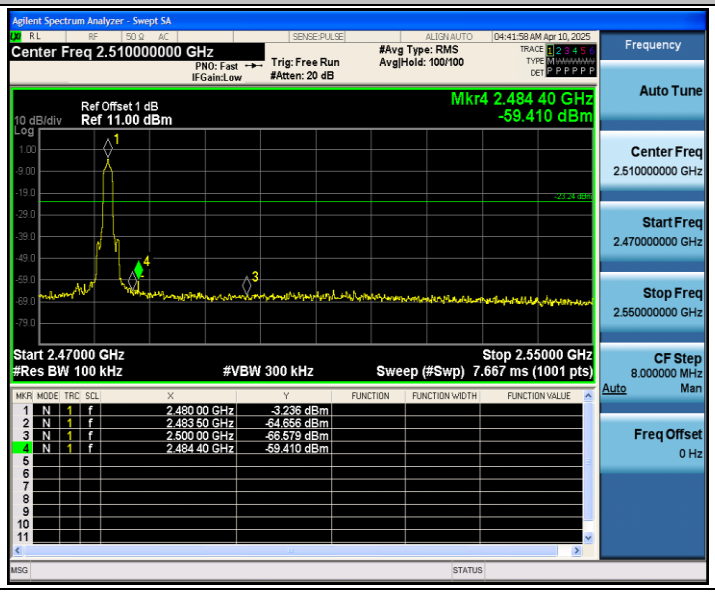
2DH5_Ant1_High_Hop_2480



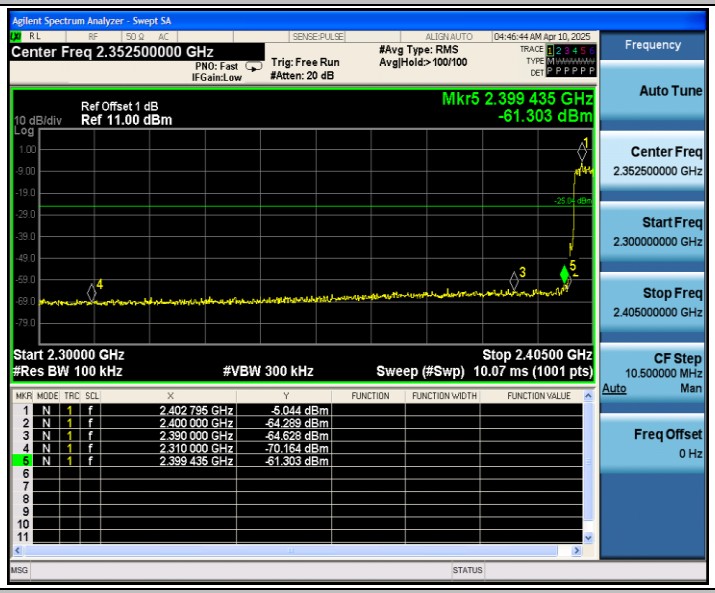
3DH5_Ant1_Low_2402



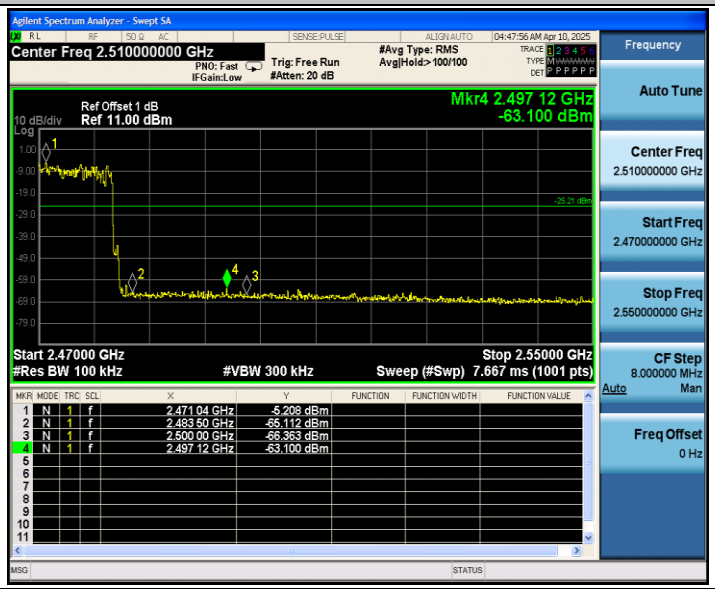
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



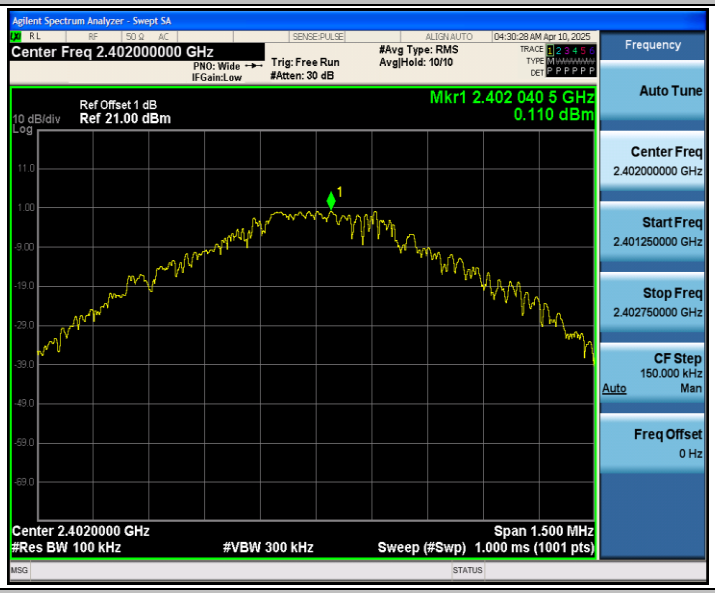
Appendix H: Conducted Spurious Emission

Test Result

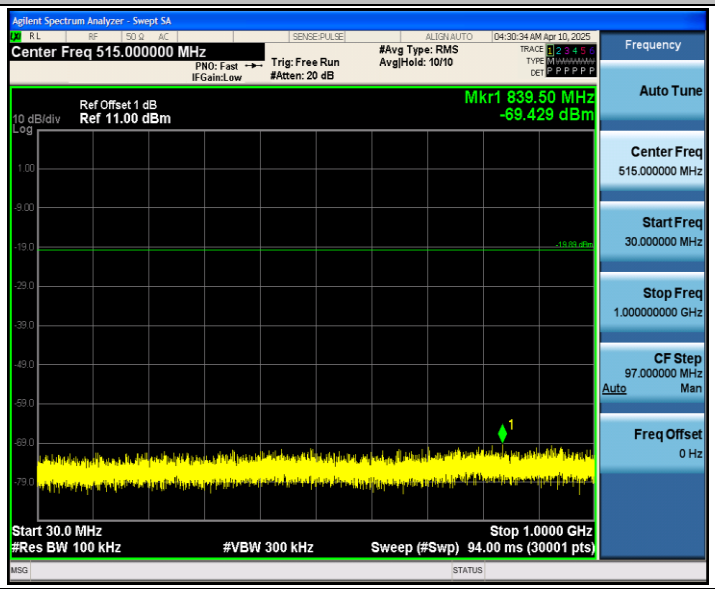
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	0.11	0.11	---	PASS
			30~1000	0.11	-69.43	≤-19.89	PASS
			1000~26500	0.11	-42.59	≤-19.89	PASS
		2441	Reference	-0.58	-0.58	---	PASS
			30~1000	-0.58	-69.22	≤-20.58	PASS
			1000~26500	-0.58	-43.26	≤-20.58	PASS
		2480	Reference	-0.83	-0.83	---	PASS
			30~1000	-0.83	-69.27	≤-20.83	PASS
			1000~26500	-0.83	-42.72	≤-20.83	PASS
2DH5	Ant1	2402	Reference	-3.36	-3.36	---	PASS
			30~1000	-3.36	-69.34	≤-23.36	PASS
			1000~26500	-3.36	-47.43	≤-23.36	PASS
		2441	Reference	-4.78	-4.78	---	PASS
			30~1000	-4.78	-69.52	≤-24.78	PASS
			1000~26500	-4.78	-48.3	≤-24.78	PASS
		2480	Reference	-4.58	-4.58	---	PASS
			30~1000	-4.58	-69.05	≤-24.58	PASS
			1000~26500	-4.58	-47.33	≤-24.58	PASS
3DH5	Ant1	2402	Reference	-3.27	-3.27	---	PASS
			30~1000	-3.27	-68.76	≤-23.27	PASS
			1000~26500	-3.27	-46.13	≤-23.27	PASS
		2441	Reference	-5.57	-5.57	---	PASS
			30~1000	-5.57	-69.6	≤-25.57	PASS
			1000~26500	-5.57	-48.84	≤-25.57	PASS
		2480	Reference	-4.67	-4.67	---	PASS
			30~1000	-4.67	-68.85	≤-24.67	PASS
			1000~26500	-4.67	-48.9	≤-24.67	PASS

Test Graphs

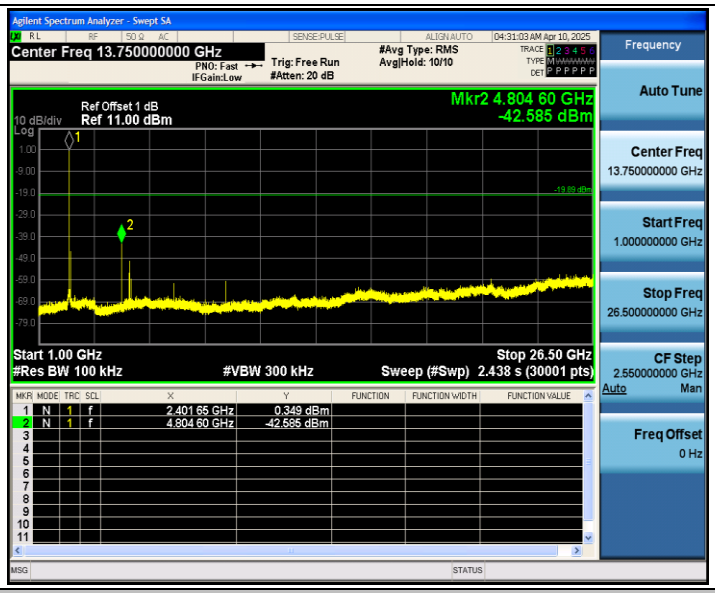
DH5_Ant1_2402_0~Reference



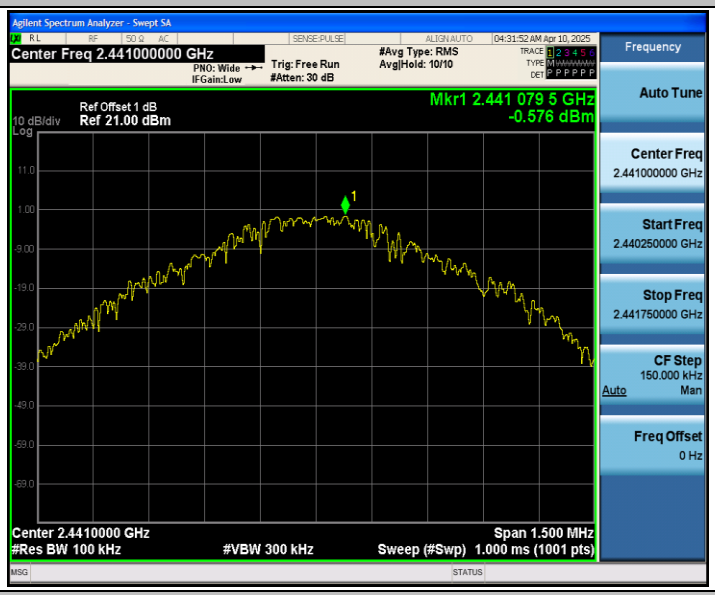
DH5_Ant1_2402_30~1000



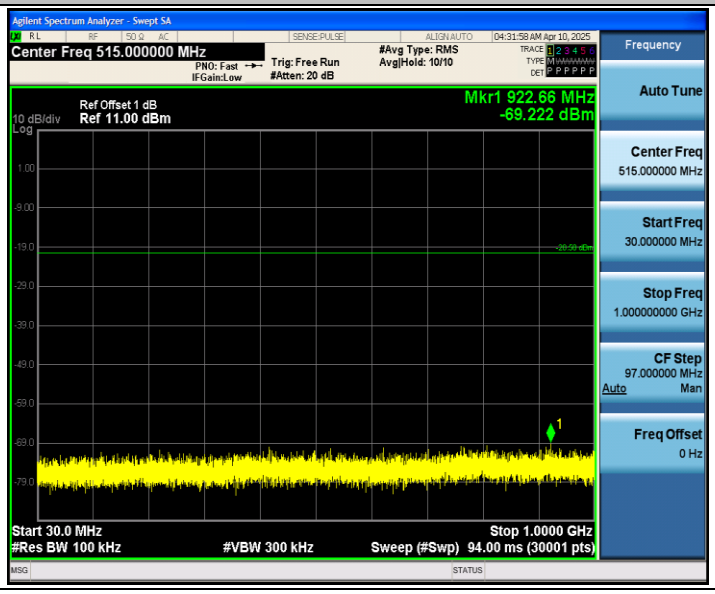
DH5_Ant1_2402_1000~26500



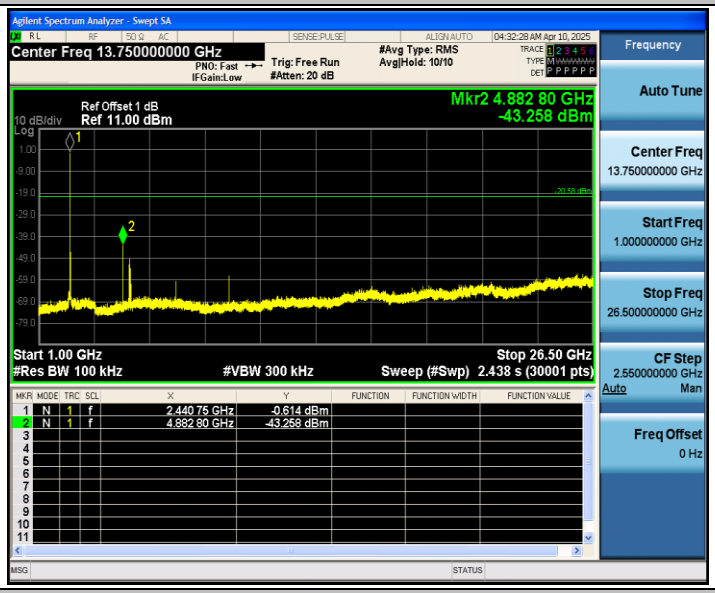
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000

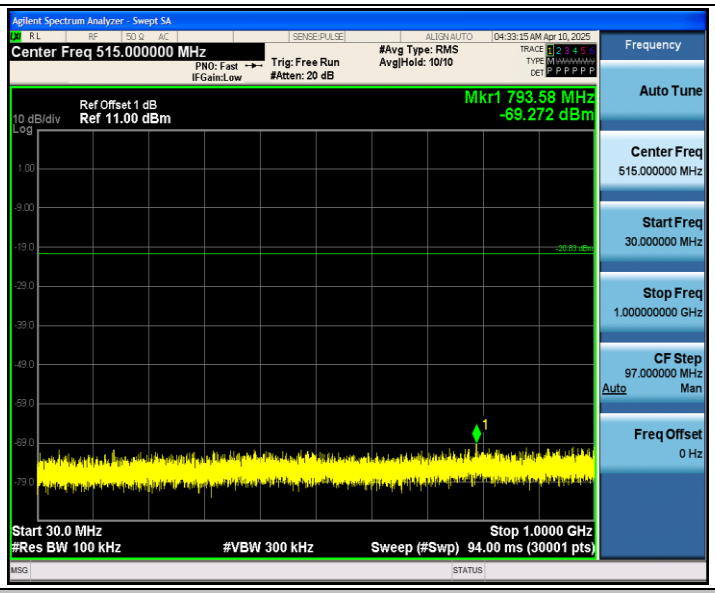


DH5_Ant1_2441_1000~26500

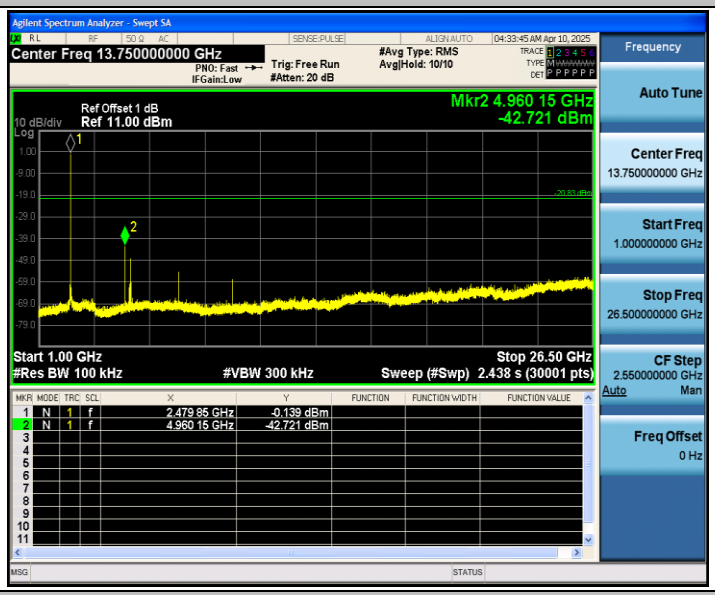
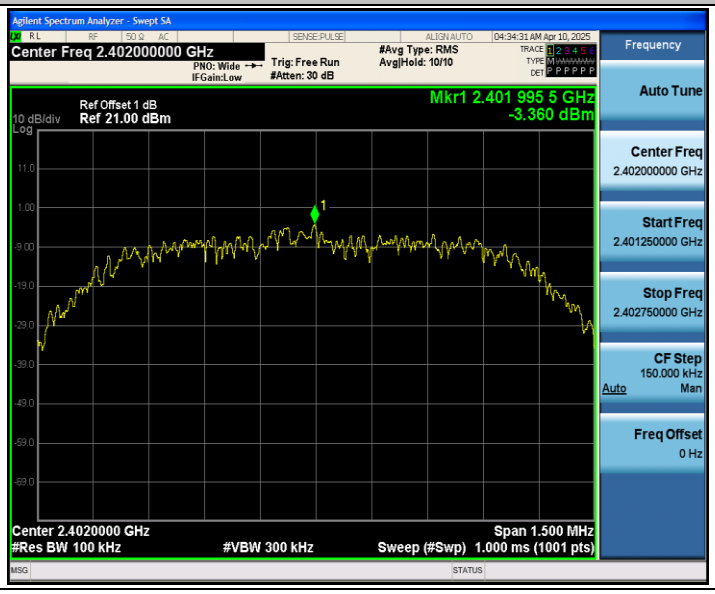


DH5_Ant1_2480_0~Reference

DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500



2DH5_Ant1_2402_0~Reference