FCC Appendix RF Test Data

FCC ID	**:**	**2BP8L-SGS-A6**
Company:	**:**	**Wuhan Simifly Electronics Co.,Ltd.**
EUT	**:**	**Bluetooth earphone TWS earbuds**
Model Number	**:**	**SGS-A6**
Report No.	**:**	**CTA25052600301**
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	0.951	2401.550	2402.501	---	---
		2441	0.942	2440.553	2441.495	---	---
		2480	0.942	2479.550	2480.492	---	---
2DH5	Ant1	2402	1.329	2401.343	2402.672	---	---
		2441	1.326	2440.343	2441.669	---	---
		2480	1.317	2479.346	2480.663	---	---
3DH5	Ant1	2402	1.281	2401.382	2402.663	---	---
		2441	1.323	2440.346	2441.669	---	---
		2480	1.308	2479.355	2480.663	---	---

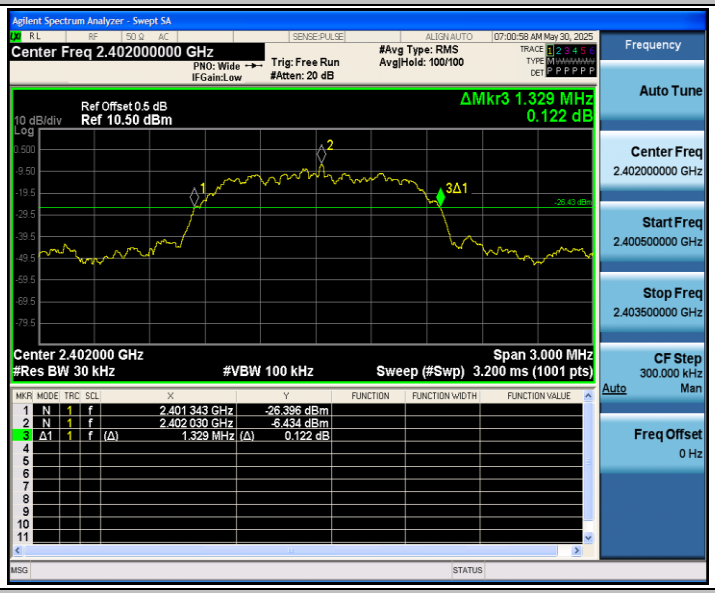
Test Graphs

DH5_Ant1_2402

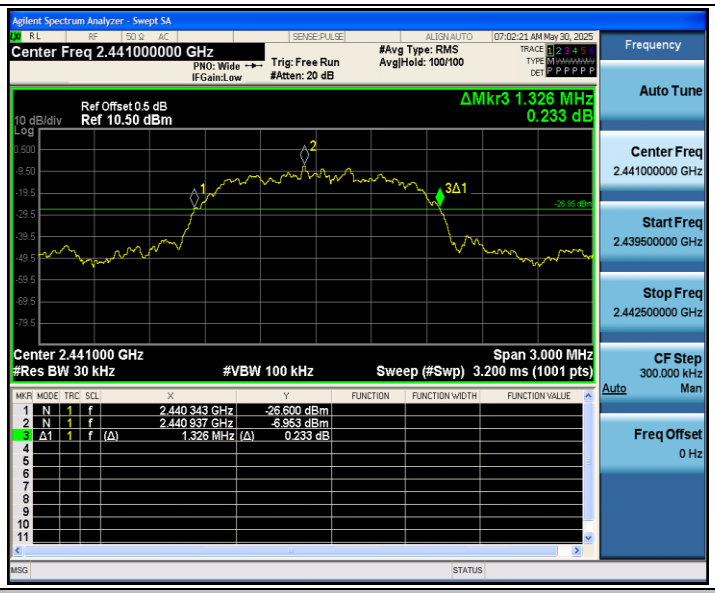
DH5_Ant1_2441

DH5_Ant1_2480

2DH5_Ant1_2402

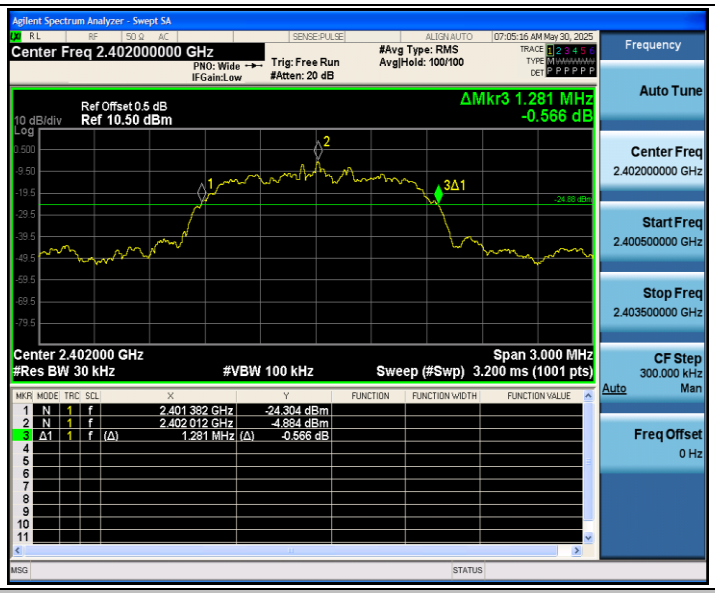


2DH5_Ant1_2441

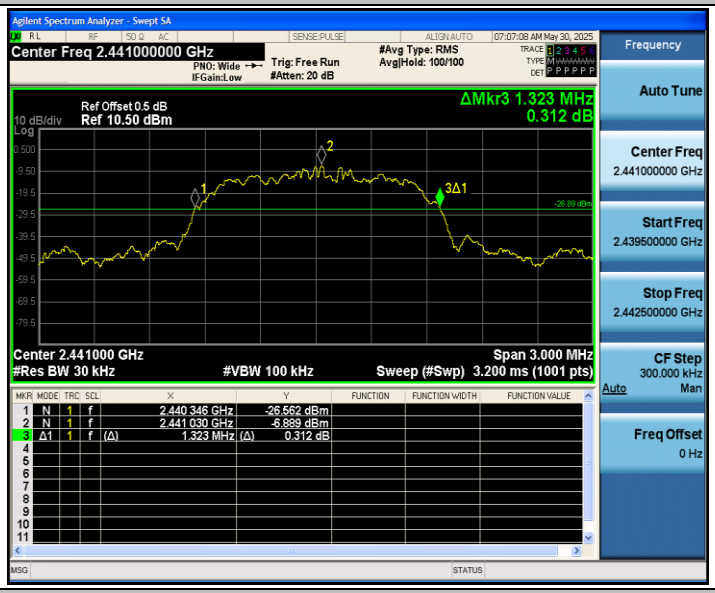


2DH5_Ant1_2480

3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 100/100
07:08:49 AM May 30, 2025
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
ΔMkr3 1.308 MHz
0.339 dB
-25.78 dBm
Center 2.480000 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3.000 MHz
Sweep (#Swp) 3.200 ms (1001 pts)
1 N 1 f 2.479 355 GHz -25.566 dBm
2 N 1 f 2.480 024 GHz -5.784 dBm
3 Δ1 1 f (Δ) 1.308 MHz (Δ) 0.339 dB
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.478500000 GHz
Stop Freq
2.481500000 GHz
CF Step
300.000 kHz
Auto
Man
Freq Offset
0 Hz

Appendix B: Occupied Channel Bandwidth

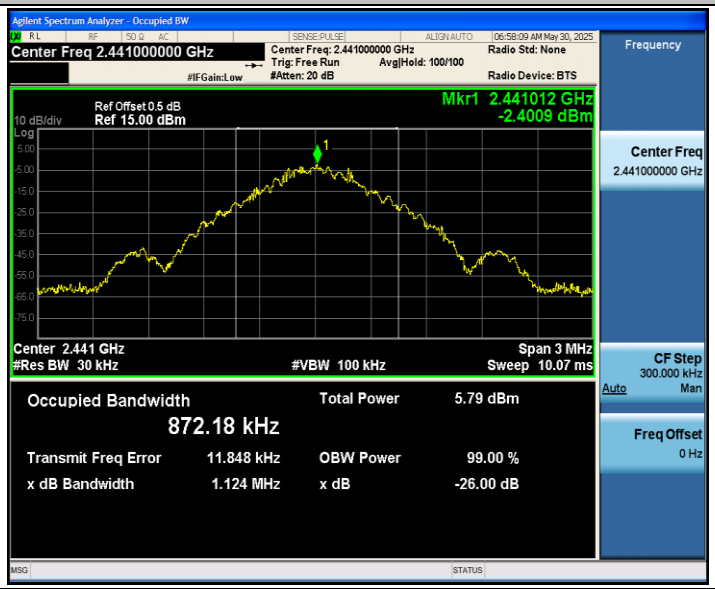
Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86904	2401.5734	2402.4424	---	---
		2441	0.87218	2440.5758	2441.4479	---	---
		2480	0.86316	2479.5746	2480.4378	---	---
2DH5	Ant1	2402	1.1881	2401.4169	2402.6050	---	---
		2441	1.1906	2440.4147	2441.6053	---	---
		2480	1.1870	2479.4183	2480.6053	---	---
3DH5	Ant1	2402	1.1879	2401.4174	2402.6053	---	---
		2441	1.1879	2440.4167	2441.6046	---	---
		2480	1.1827	2479.4187	2480.6014	---	---

Test Graphs

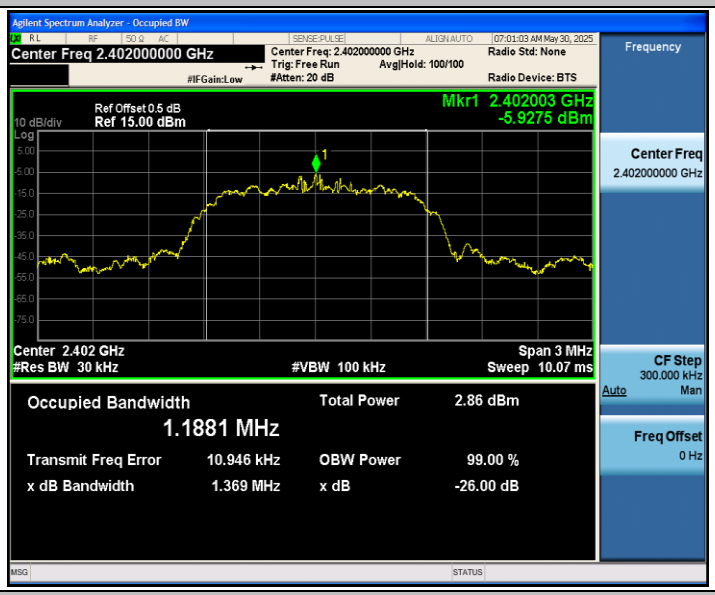
DH5_Ant1_2402

DH5_Ant1_2441

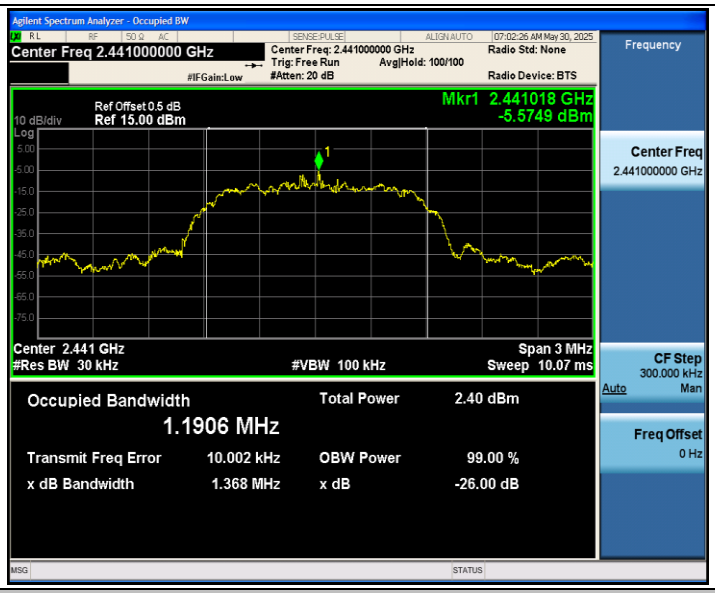


DH5_Ant1_2480

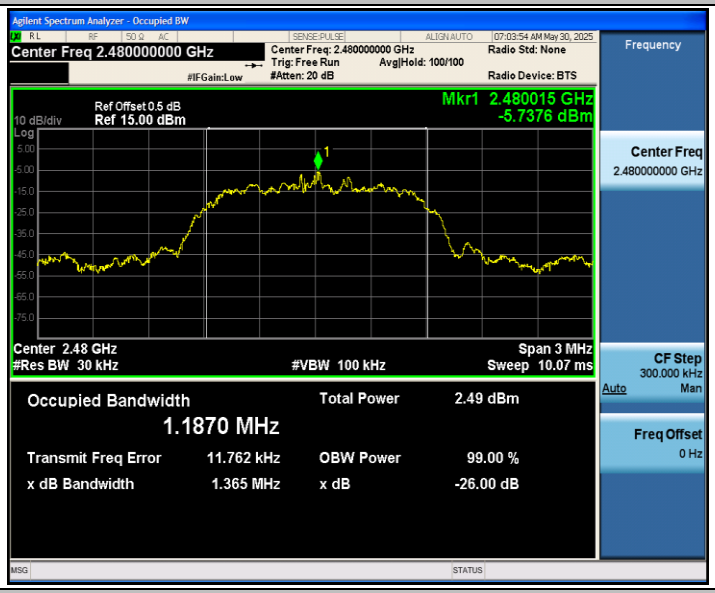
2DH5_Ant1_2402



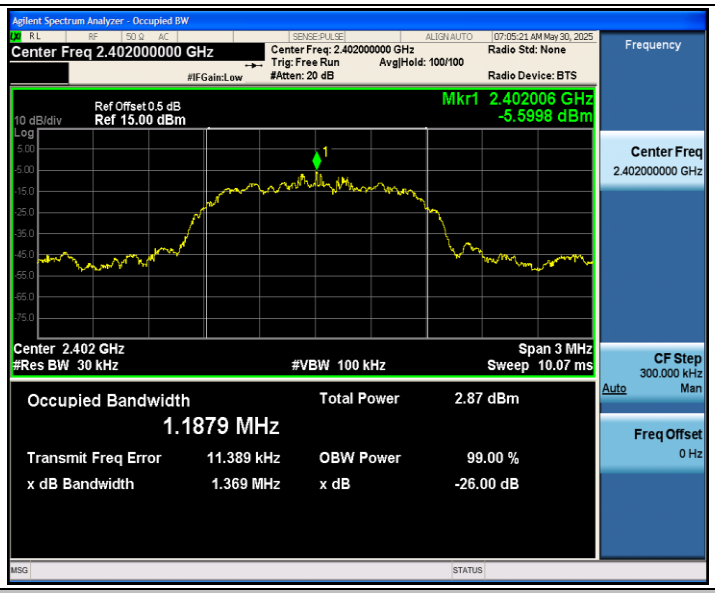
2DH5_Ant1_2441



2DH5_Ant1_2480

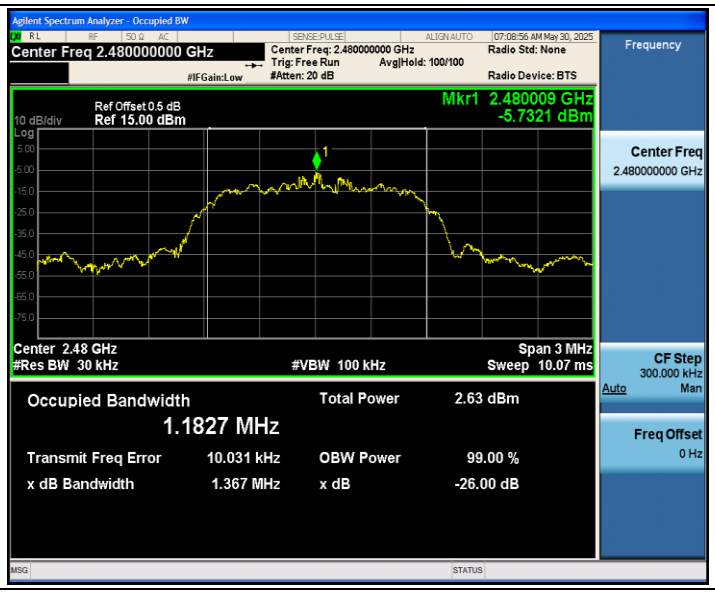


3DH5_Ant1_2402



3DH5_Ant1_2441

3DH5_Ant1_2480


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
07:08:56 AM May 30, 2025
Frequency
Ref Offset 0.5 dB
Ref 15.00 dBm
10 dB/div
Log
Mkr1 2.480009 GHz
-5.7321 dBm
Center 2.48 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 10.07 ms
Occupied Bandwidth
1.1827 MHz
Total Power 2.63 dBm
Transmit Freq Error 10.031 kHz
OBW Power 99.00 %
x dB Bandwidth 1.367 MHz
x dB -26.00 dB
Center Freq
2.480000000 GHz
CF Step
300.000 kHz
Auto Man
Freq Offset
0 Hz
MSG
STATUS

Appendix C: Maximum conducted output power

Test Result Peak

Left:

Test Mode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.10	≤20.97	PASS
		2441	-0.15	≤20.97	PASS
		2480	-0.25	≤20.97	PASS
2DH5	Ant1	2402	-0.65	≤20.97	PASS
		2441	-0.89	≤20.97	PASS
		2480	-1.03	≤20.97	PASS
3DH5	Ant1	2402	-0.67	≤20.97	PASS
		2441	-0.91	≤20.97	PASS
		2480	-1.00	≤20.97	PASS

Right:

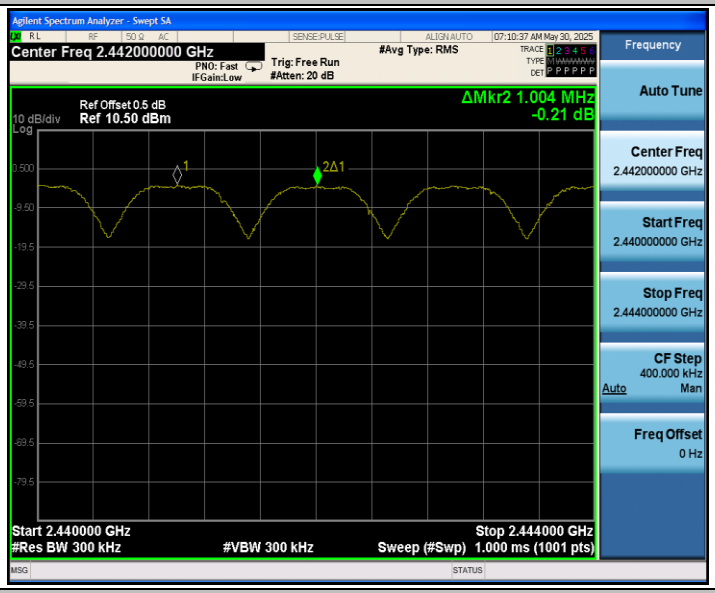
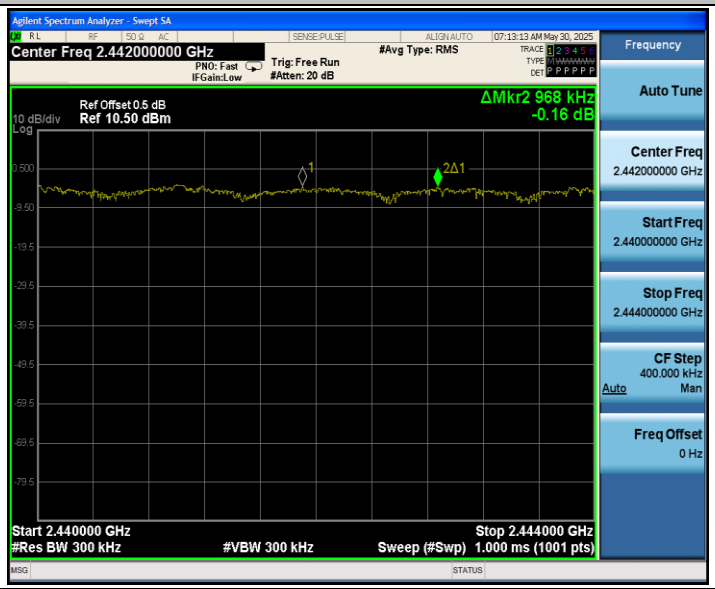
Test Mode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.15	≤20.97	PASS
		2441	-0.11	≤20.97	PASS
		2480	-0.22	≤20.97	PASS
2DH5	Ant1	2402	-0.46	≤20.97	PASS
		2441	-0.76	≤20.97	PASS
		2480	-1.35	≤20.97	PASS
3DH5	Ant1	2402	-0.87	≤20.97	PASS
		2441	-0.98	≤20.97	PASS
		2480	-1.25	≤20.97	PASS

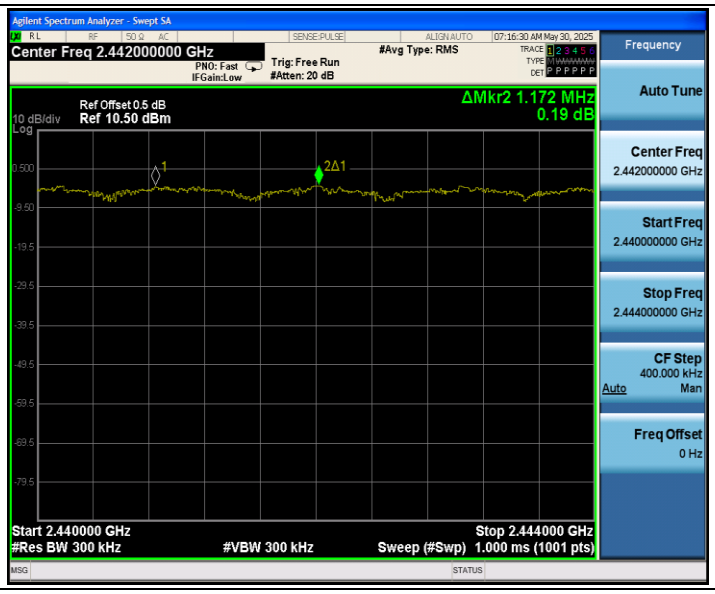
Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.004	≥0.951	PASS
2DH5	Ant1	Hop	0.968	≥0.886	PASS
3DH5	Ant1	Hop	1.172	≥0.882	PASS

Test Graphs

DH5_Ant1_Hop

2DH5_Ant1_Hop

3DH5_Ant1_Hop

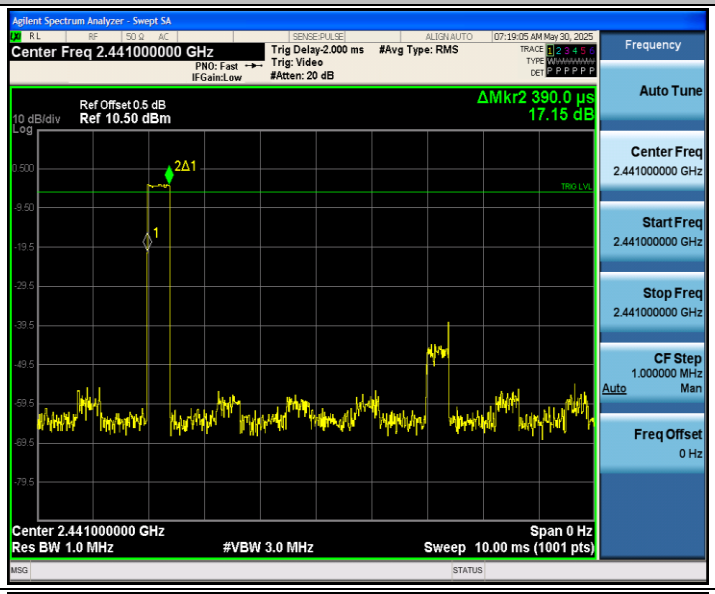
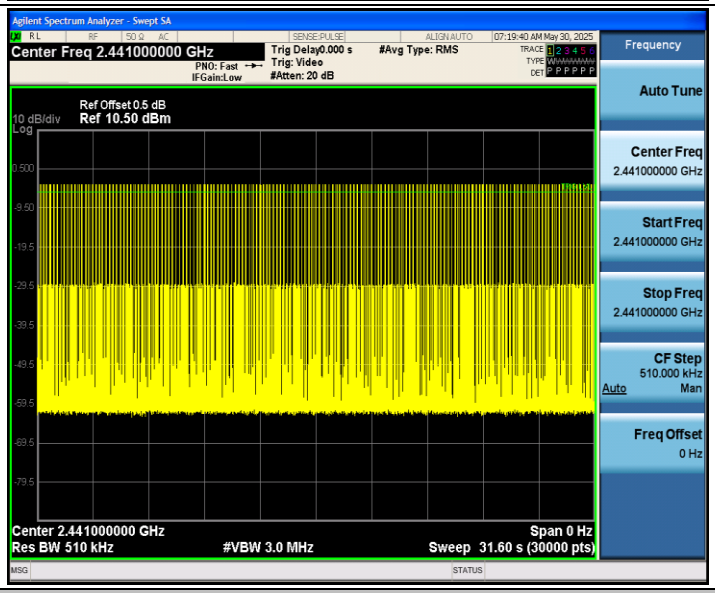

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.442000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
07:16:30 AM May 30, 2025
Frequency
Auto Tune
Center Freq
2.442000000 GHz
Start Freq
2.440000000 GHz
Stop Freq
2.444000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
Log
ΔMkr2 1.172 MHz
0.19 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)

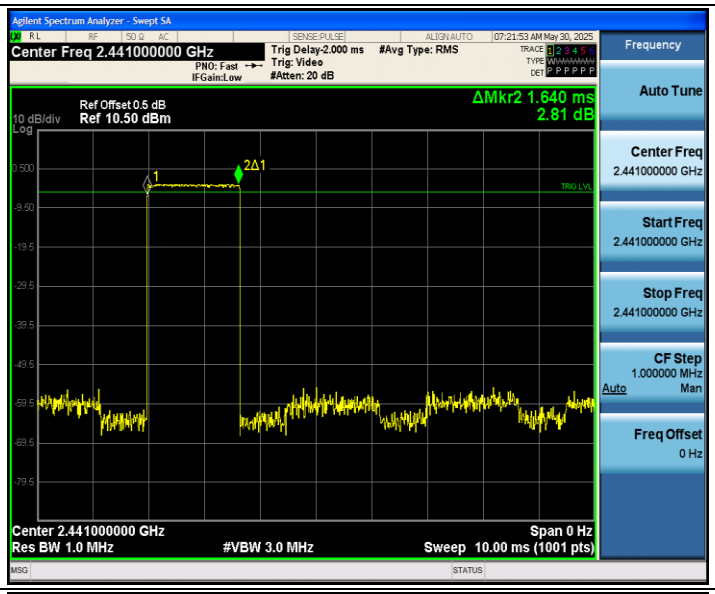
Appendix E: Time of occupancy

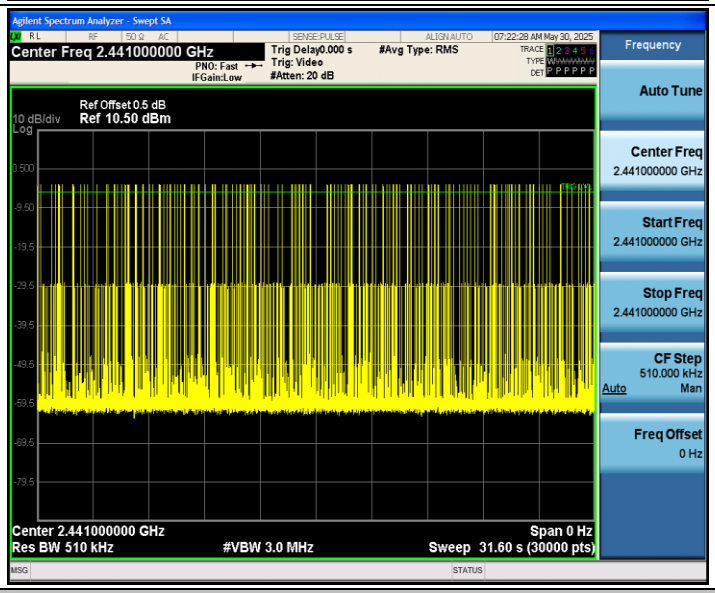
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	315	0.123	≤0.4	PASS
DH3	Ant1	Hop	1.640	160	0.262	≤0.4	PASS
DH5	Ant1	Hop	2.890	100	0.289	≤0.4	PASS
2DH1	Ant1	Hop	0.390	317	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.640	155	0.254	≤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	1.640	151	0.248	≤0.4	PASS
3DH5	Ant1	Hop	2.890	98	0.283	≤0.4	PASS

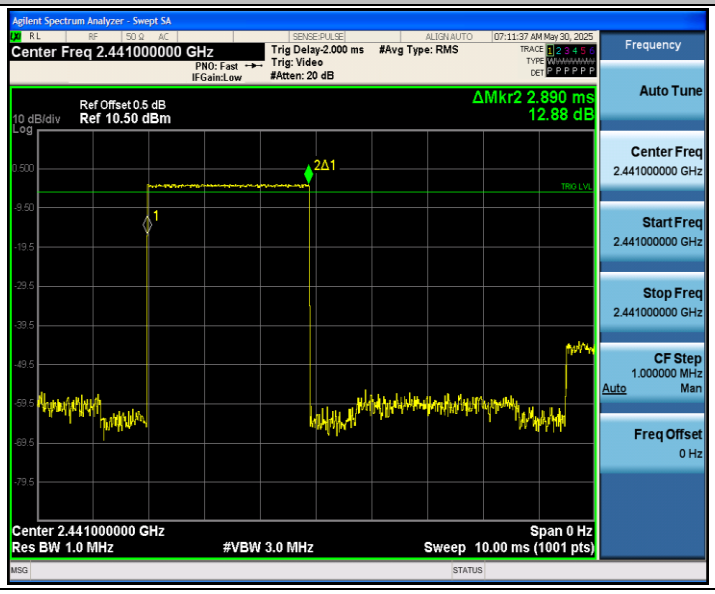
Test Graphs

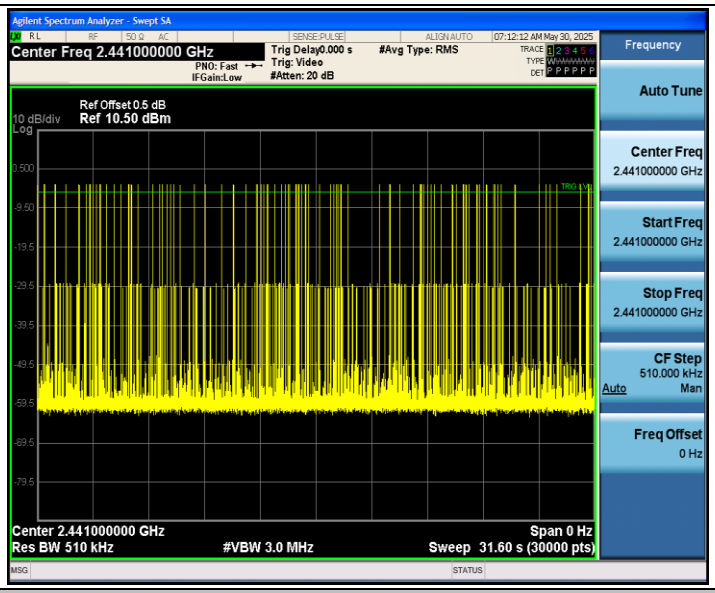
DH1_Ant1_Hop


DH3_Ant1_Hop


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay-2.000 ms
#Avg Type: RMS
Trig: Video
#Atten: 20 dB
07:21:53 AM May 30, 2025
Frequency
Auto Tune
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
ΔMkr2 1.640 ms
2.81 dB
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz
Center 2.441000000 GHz
Span 0 Hz
Res BW 1.0 MHz
#VBW 3.0 MHz
Sweep 10.00 ms (1001 pts)

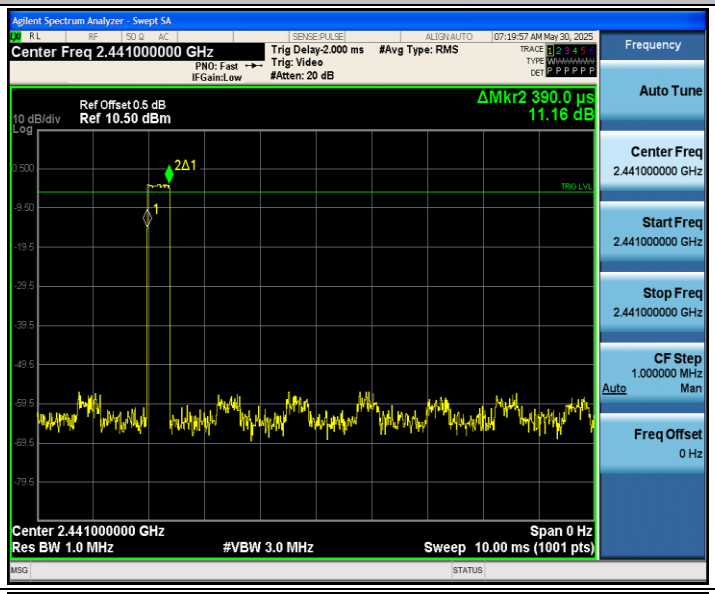

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay0.000 s
#Avg Type: RMS
Trig: Video
#Atten: 20 dB
07:22:28 AM May 30, 2025
Frequency
Auto Tune
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
510.000 kHz
Auto
Man
Freq Offset
0 Hz
Center 2.441000000 GHz
Span 0 Hz
Res BW 510 kHz
#VBW 3.0 MHz
Sweep 31.60 s (30000 pts)

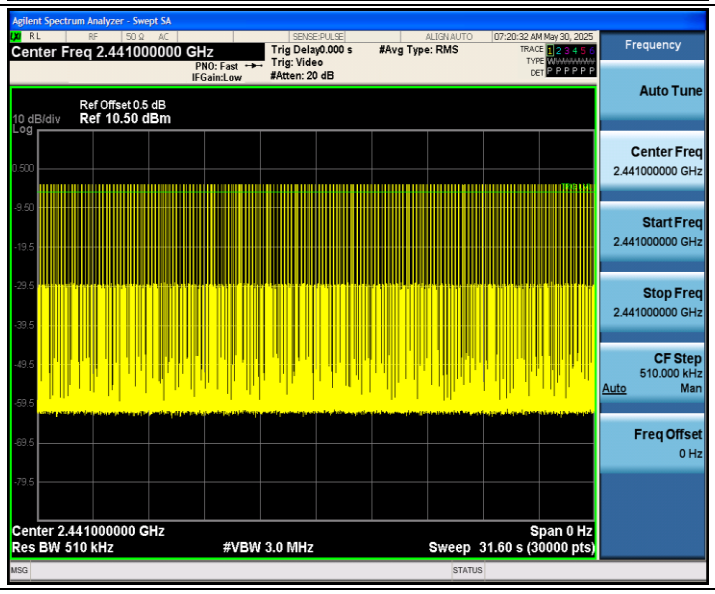
DH5_Ant1_Hop

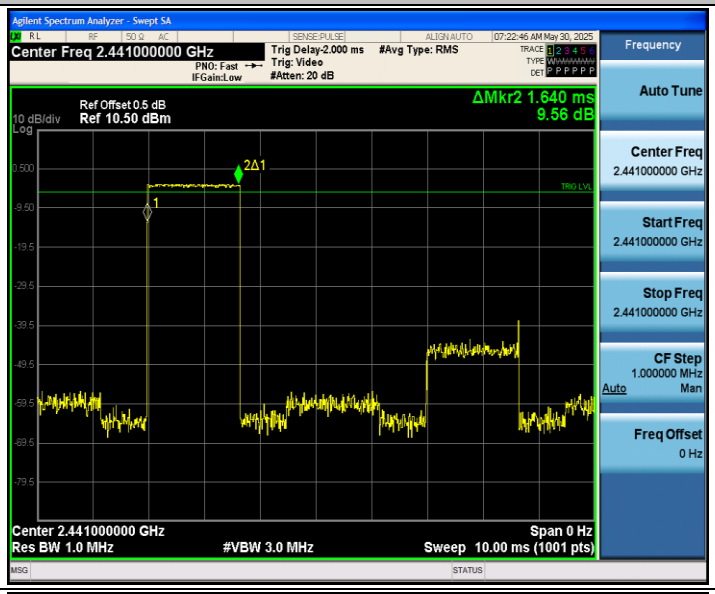
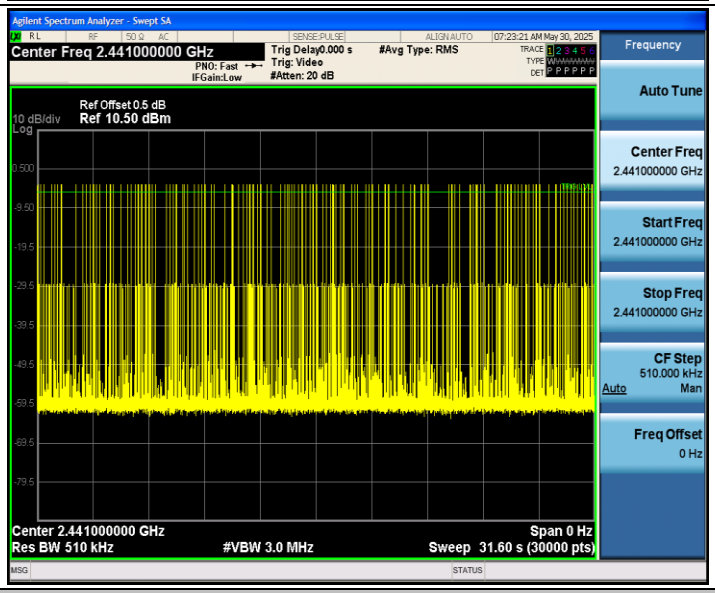

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay-2.000 ms
#Avg Type: RMS
Trig: Video
#Atten: 20 dB
07:11:37 AM May 30, 2025
Frequency
Auto Tune
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
ΔMkr2 2.890 ms
12.88 dB
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz
Center 2.441000000 GHz
Span 0 Hz
Res BW 1.0 MHz
#VBW 3.0 MHz
Sweep 10.00 ms (1001 pts)

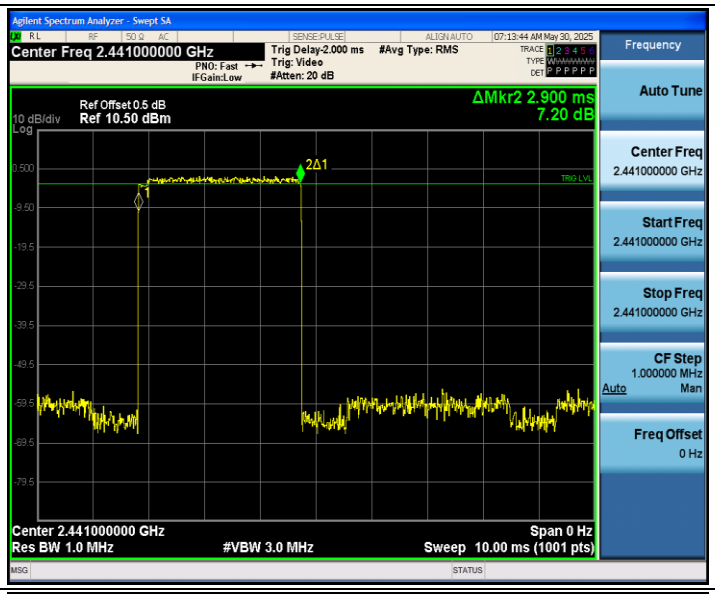


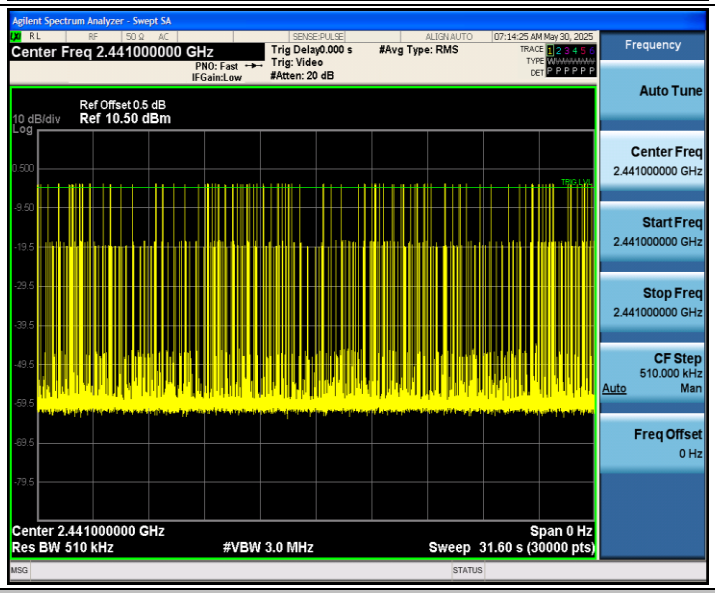
2DH1_Ant1_Hop



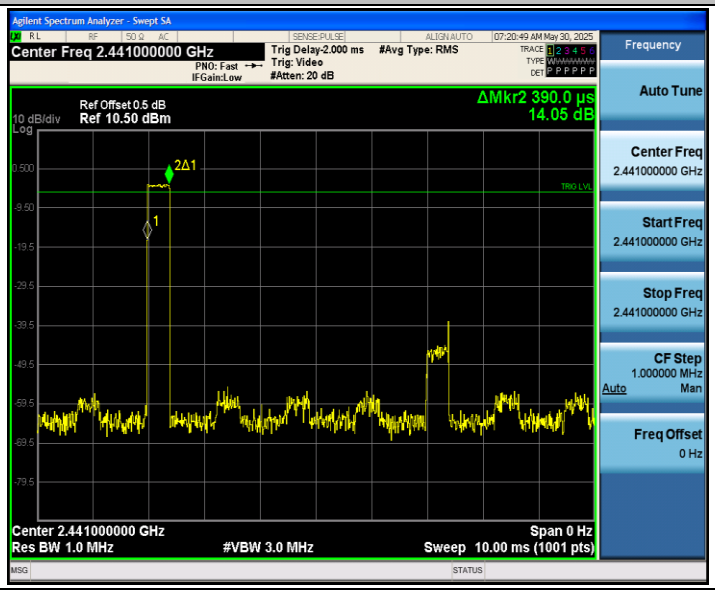


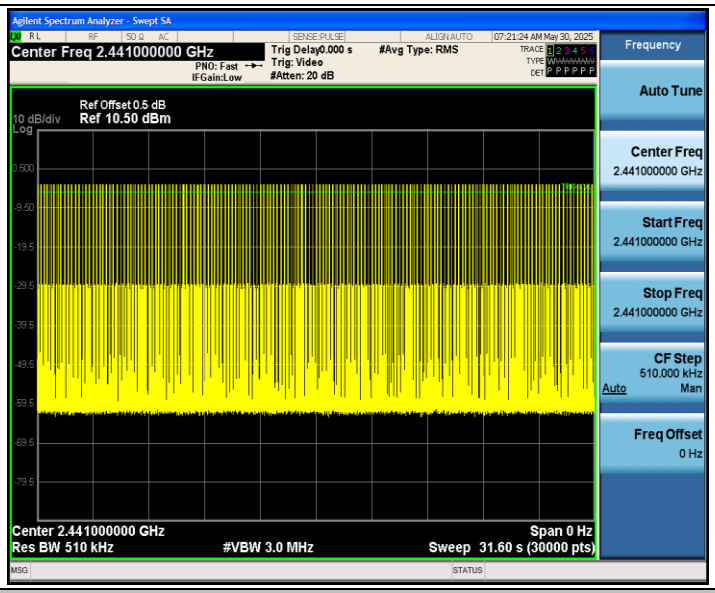
2DH3_Ant1_Hop


2DH5_Ant1_Hop



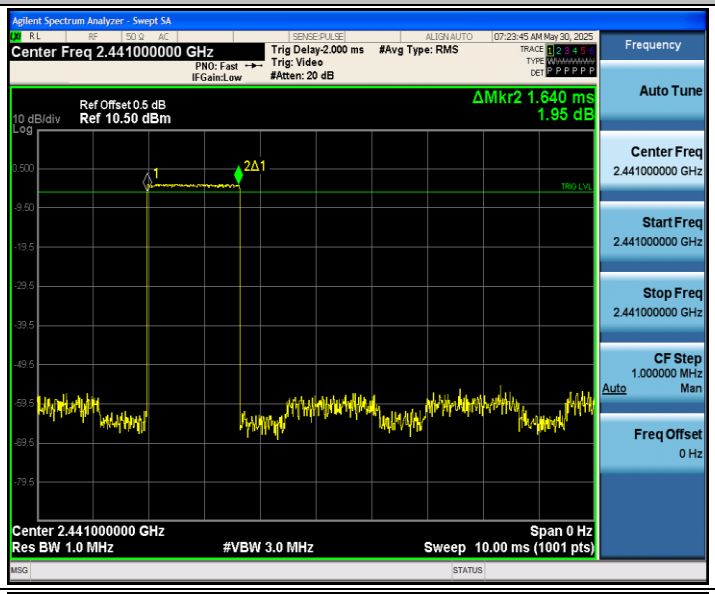


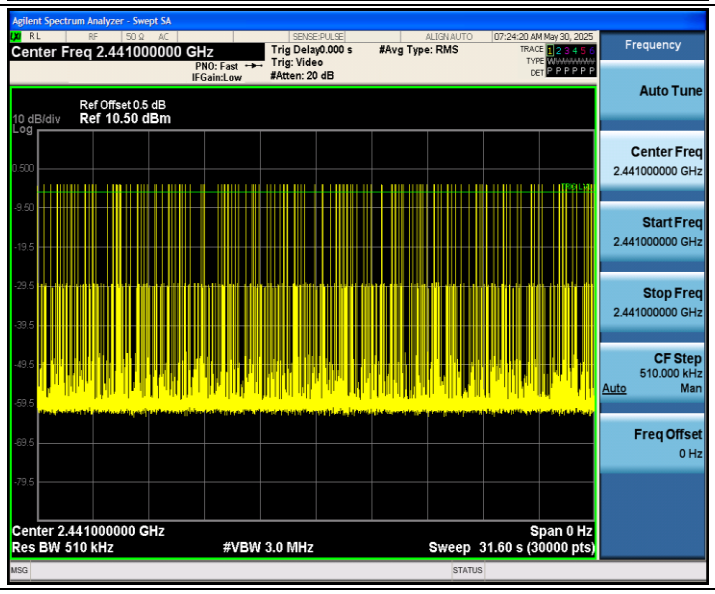
3DH1_Ant1_Hop

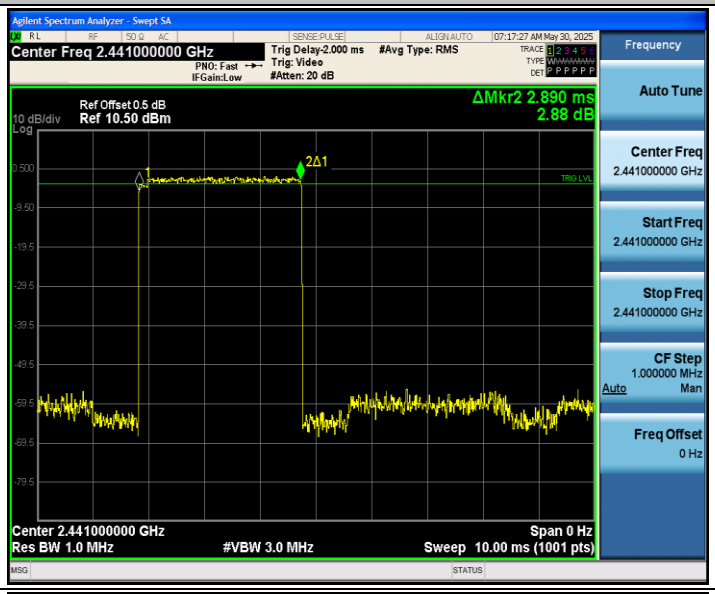
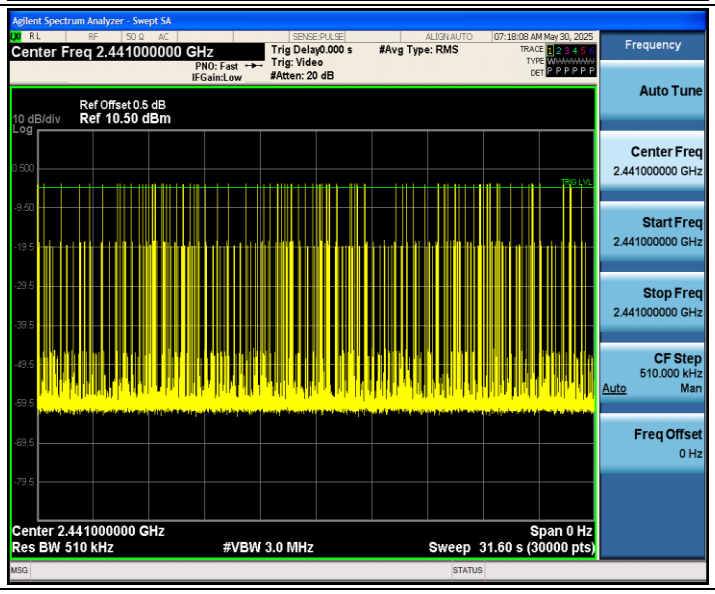




3DH3_Ant1_Hop





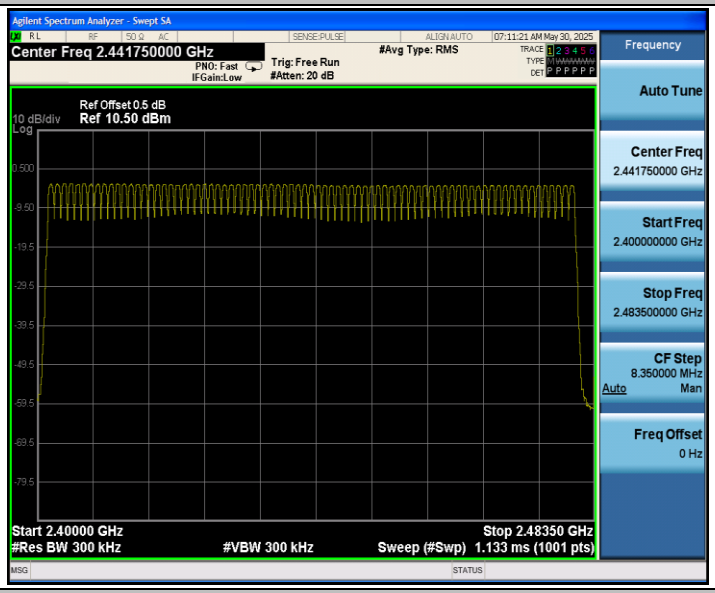
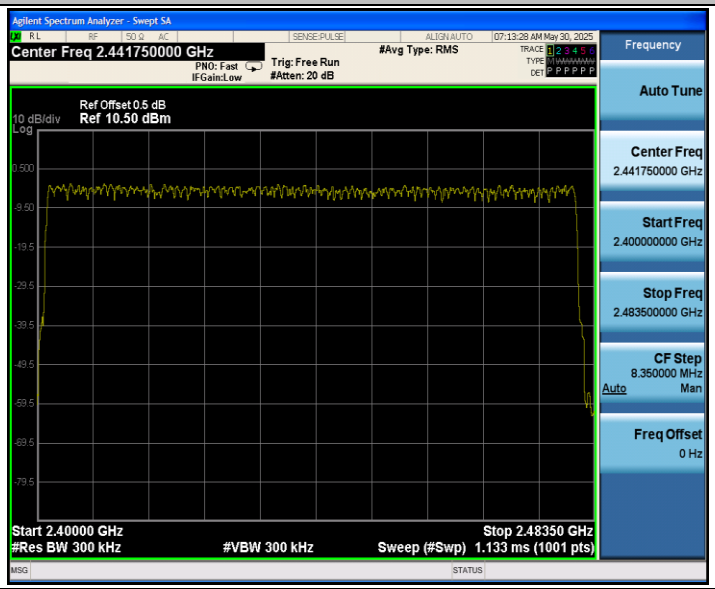
3DH5_Ant1_Hop



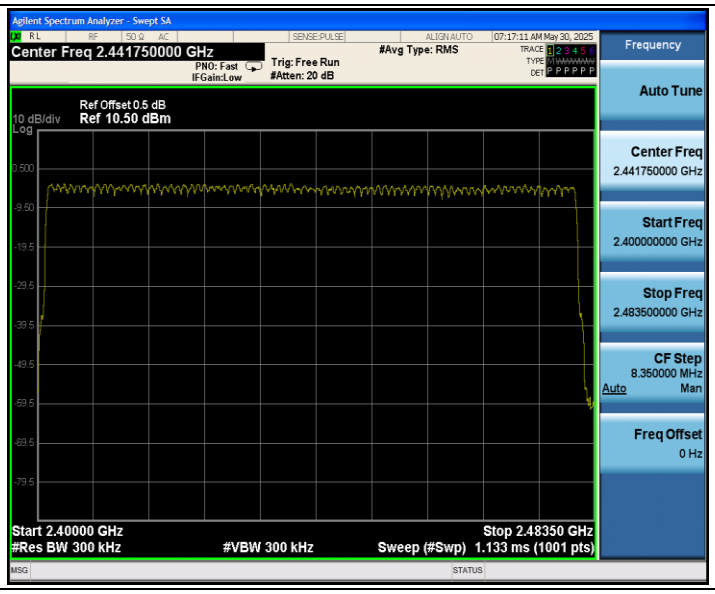
Appendix F: Number of hopping channels

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
07:17:11 AM May 30, 2025
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
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
Log
Start 2.40000 GHz
Stop 2.48350 GHz
#Res BW 300 kHz
#VBW 300 kHz
Sweep (#Swp) 1.133 ms (1001 pts)

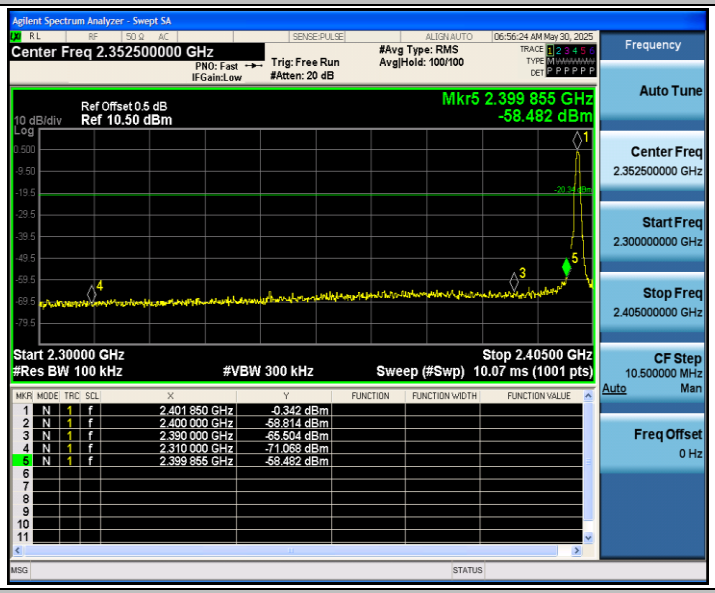
Appendix G: Band edge measurements

Test Result

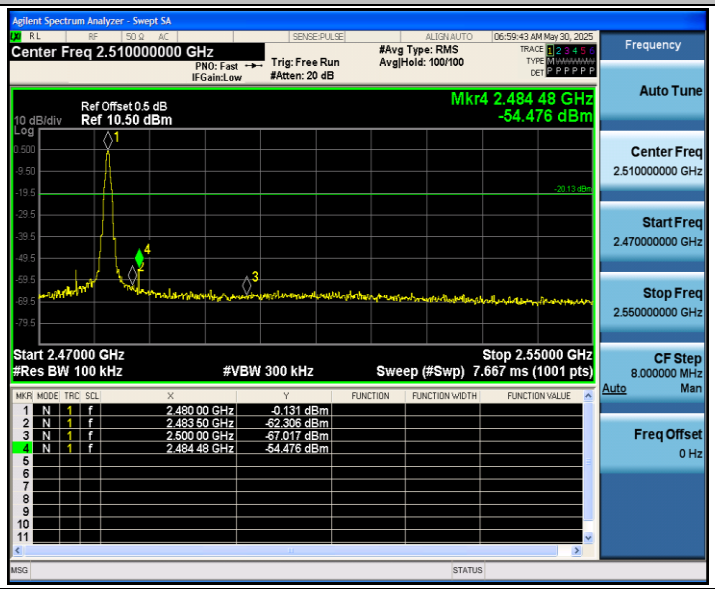
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.34	-58.48	≤-20.34	PASS
		High	2480	-0.13	-54.48	≤-20.13	PASS
		Low	Hop_2402	-4.49	-60.95	≤-24.49	PASS
		High	Hop_2480	-4.67	-64.54	≤-24.67	PASS
2DH5	Ant1	Low	2402	-3.29	-60.72	≤-23.29	PASS
		High	2480	-3.81	-63.85	≤-23.81	PASS
		Low	Hop_2402	-5.61	-62.77	≤-25.61	PASS
		High	Hop_2480	-5.01	-63.72	≤-25.01	PASS
3DH5	Ant1	Low	2402	-5.66	-61.15	≤-25.66	PASS
		High	2480	-4.38	-64.47	≤-24.38	PASS
		Low	Hop_2402	-4.95	-58.49	≤-24.95	PASS
		High	Hop_2480	-4.95	-64.43	≤-24.95	PASS

Test Graphs

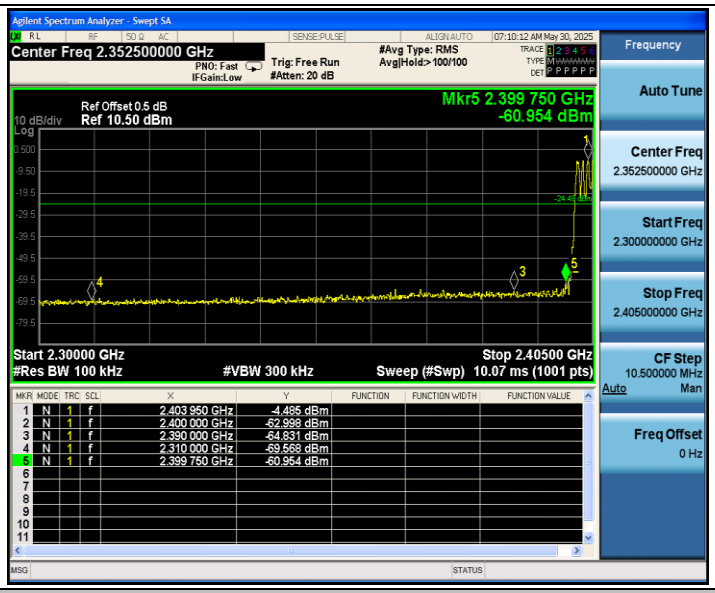
DH5_Ant1_Low_2402



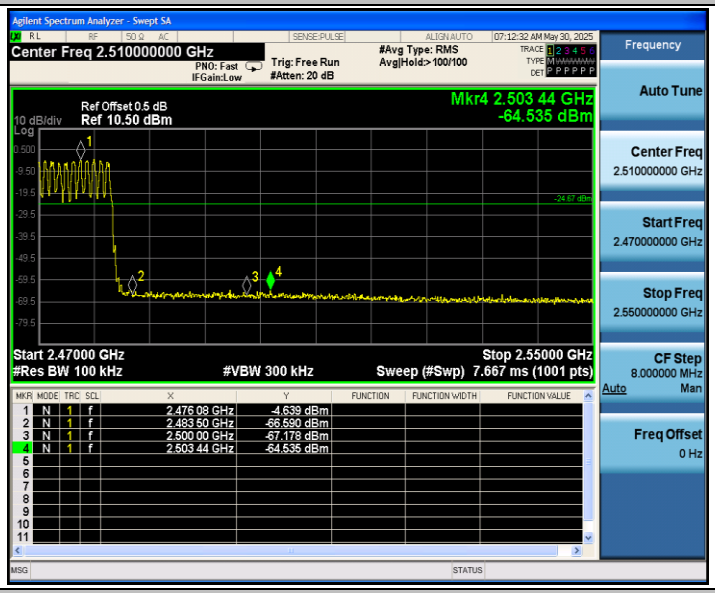
DH5_Ant1_High_2480



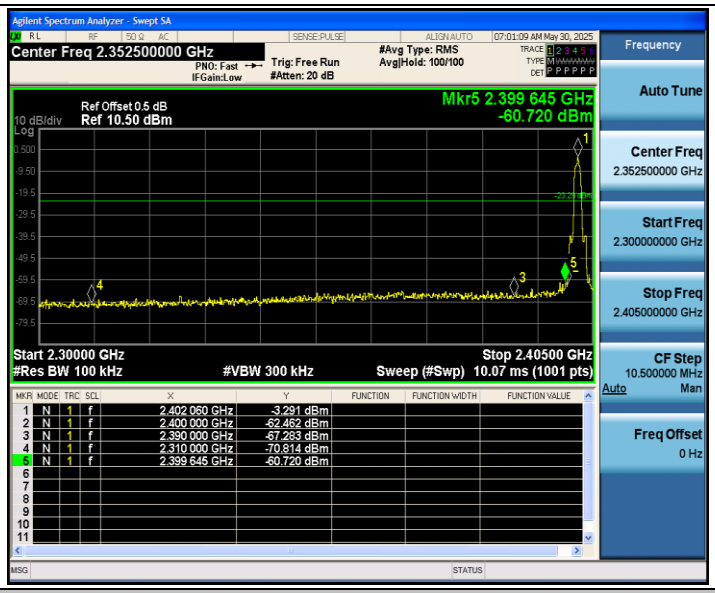
DH5_Ant1_Low_Hop_2402



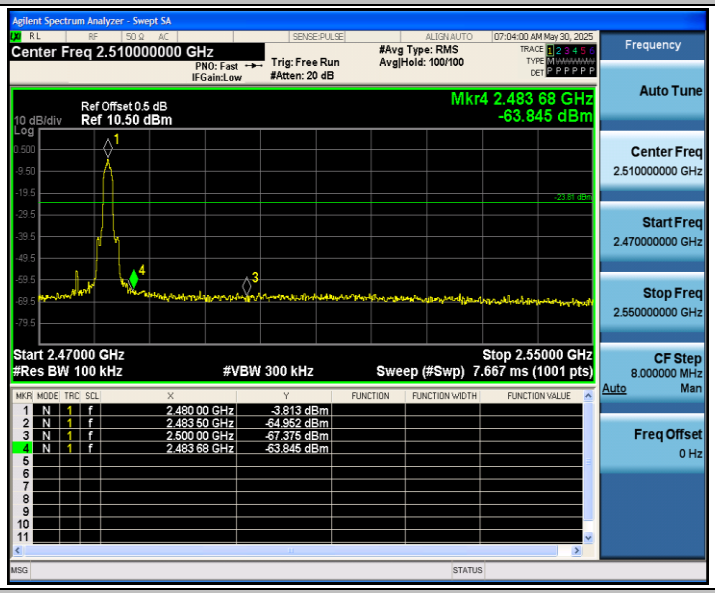
DH5_Ant1_High_Hop_2480



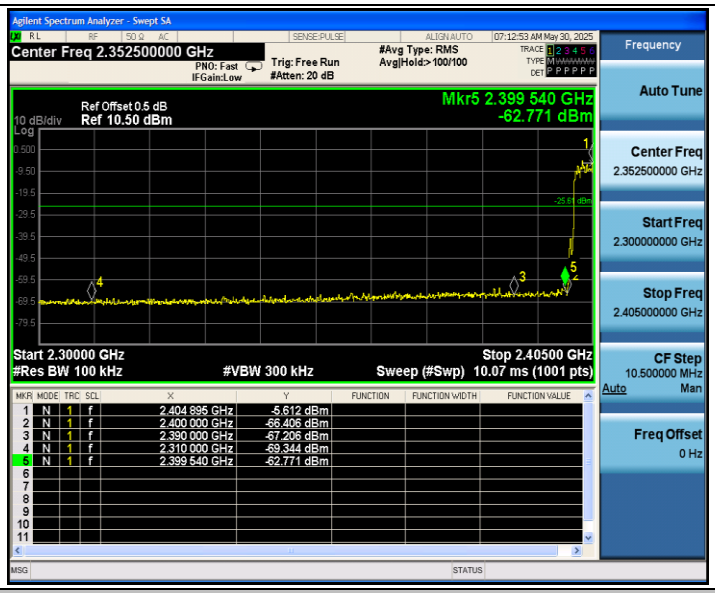
2DH5_Ant1_Low_2402



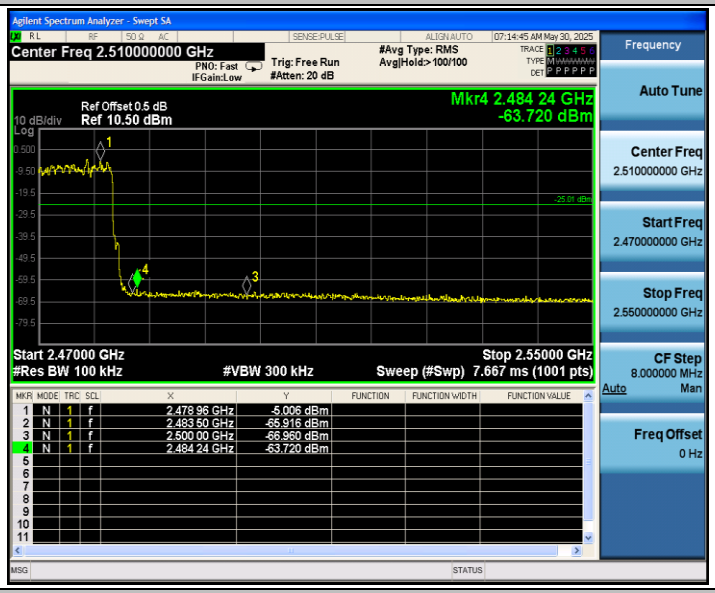
2DH5_Ant1_High_2480



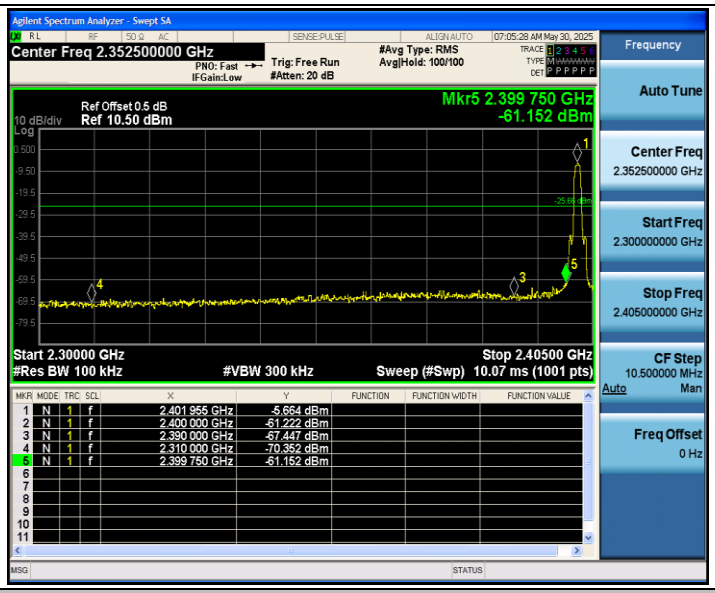
2DH5_Ant1_Low_Hop_2402



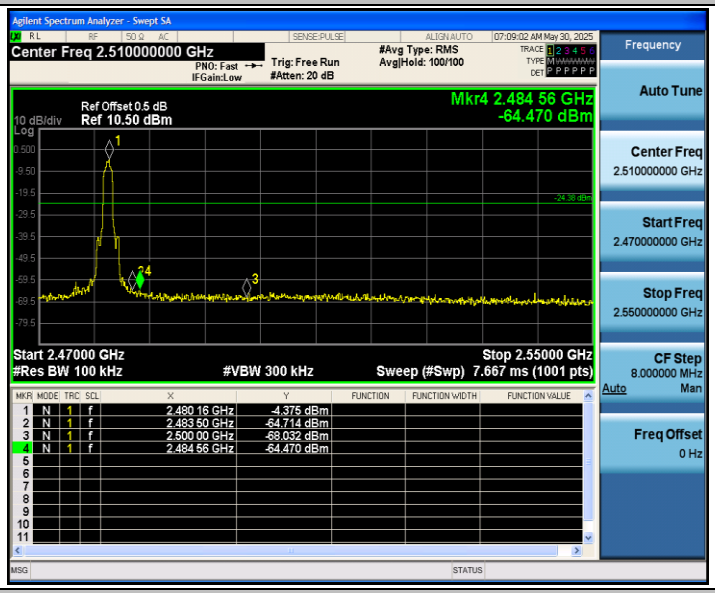
2DH5_Ant1_High_Hop_2480



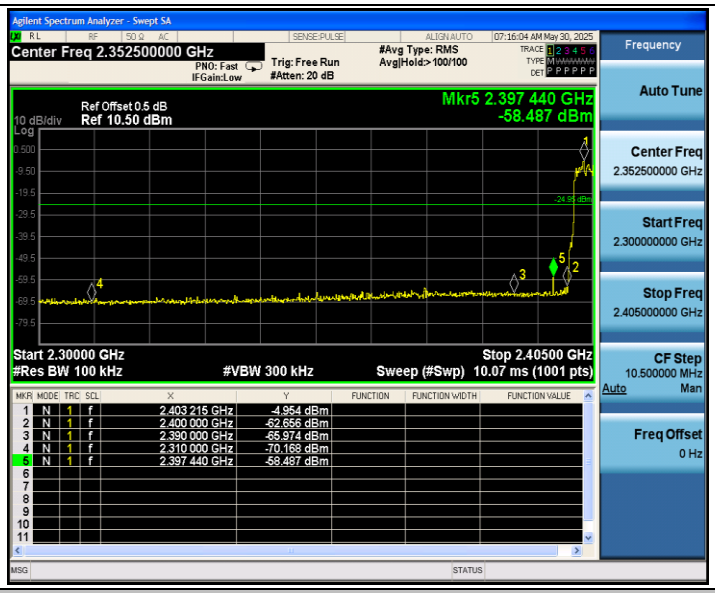
3DH5_Ant1_Low_2402



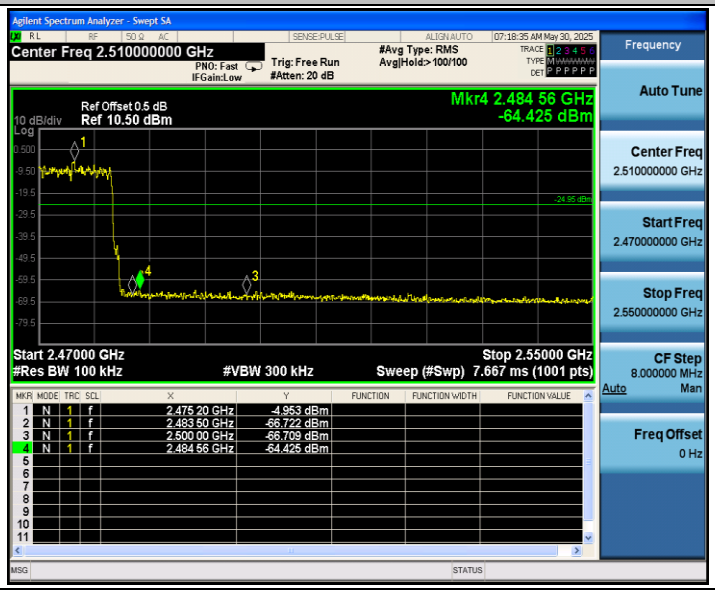
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



Appendix H: Conducted Spurious Emission

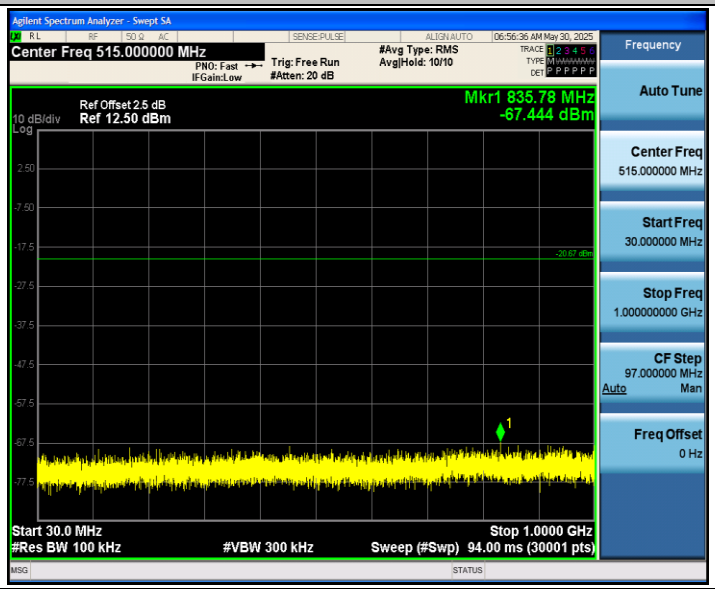
Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.67	-0.67	---	PASS
			30~1000	-0.67	-67.44	≤-20.67	PASS
			1000~26500	-0.67	-44.93	≤-20.67	PASS
		2441	Reference	-1.37	-1.37	---	PASS
			30~1000	-1.37	-68.13	≤-21.37	PASS
			1000~26500	-1.37	-44.1	≤-21.37	PASS
		2480	Reference	-1.03	-1.03	---	PASS
			30~1000	-1.03	-67.03	≤-21.03	PASS
			1000~26500	-1.03	-43.86	≤-21.03	PASS
2DH5	Ant1	2402	Reference	-3.69	-3.69	---	PASS
			30~1000	-3.69	-67.69	≤-23.69	PASS
			1000~26500	-3.69	-41.14	≤-23.69	PASS
		2441	Reference	-5.84	-5.84	---	PASS
			30~1000	-5.84	-68.01	≤-25.84	PASS
			1000~26500	-5.84	-43.96	≤-25.84	PASS
		2480	Reference	-5.92	-5.92	---	PASS
			30~1000	-5.92	-66.64	≤-25.92	PASS
			1000~26500	-5.92	-39.58	≤-25.92	PASS
3DH5	Ant1	2402	Reference	-6.98	-6.98	---	PASS
			30~1000	-6.98	-67.65	≤-26.98	PASS
			1000~26500	-6.98	-45.69	≤-26.98	PASS
		2441	Reference	-3.74	-3.74	---	PASS
			30~1000	-3.74	-67.9	≤-23.74	PASS
			1000~26500	-3.74	-46.34	≤-23.74	PASS
		2480	Reference	-4.60	-4.60	---	PASS
			30~1000	-4.60	-67.59	≤-24.6	PASS
			1000~26500	-4.60	-49.5	≤-24.6	PASS

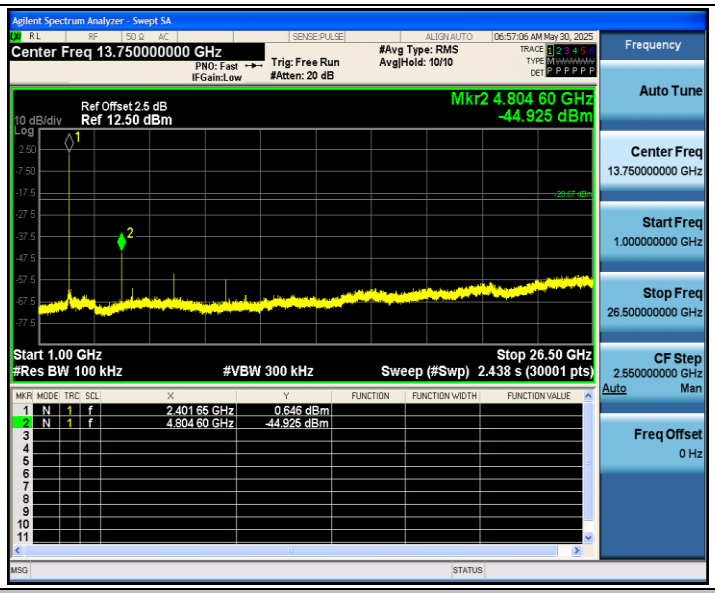
Test Graphs

DH5_Ant1_2402_0~Reference

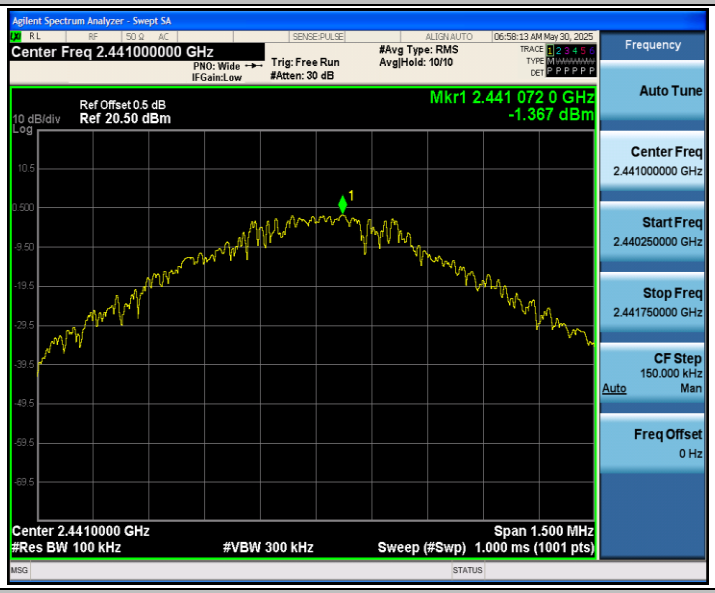
DH5_Ant1_2402_30~1000



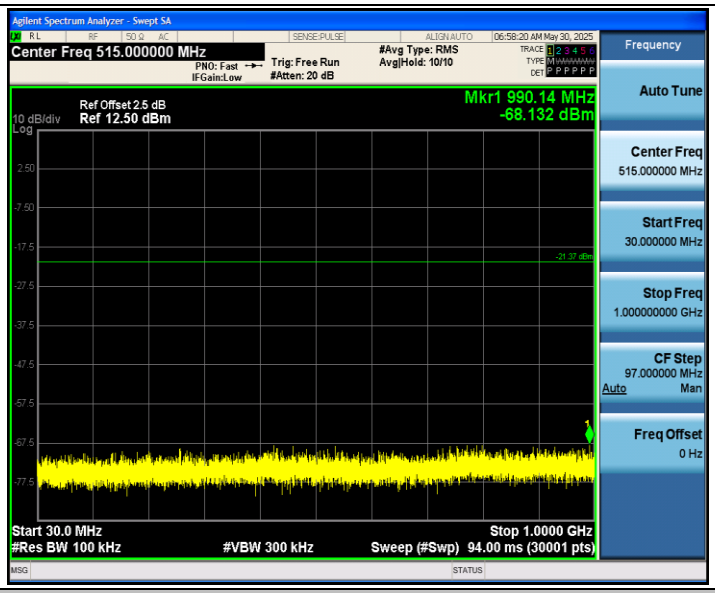
DH5_Ant1_2402_1000~26500



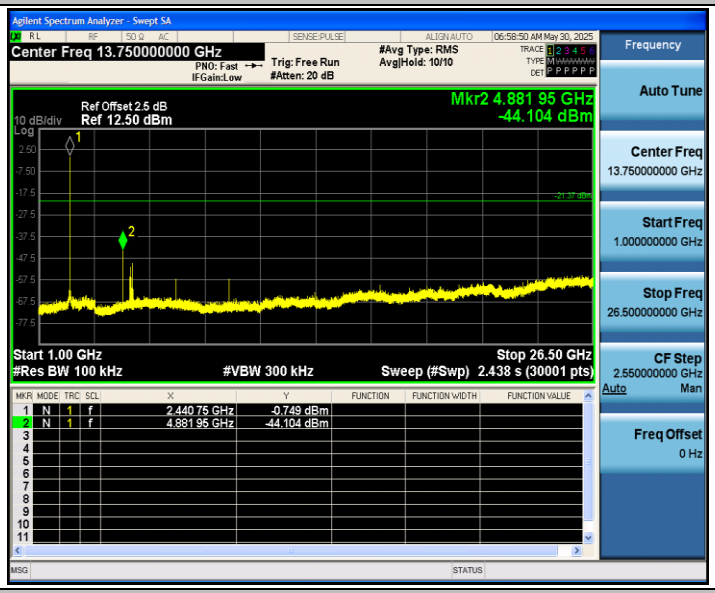
DH5_Ant1_2441_0~Reference



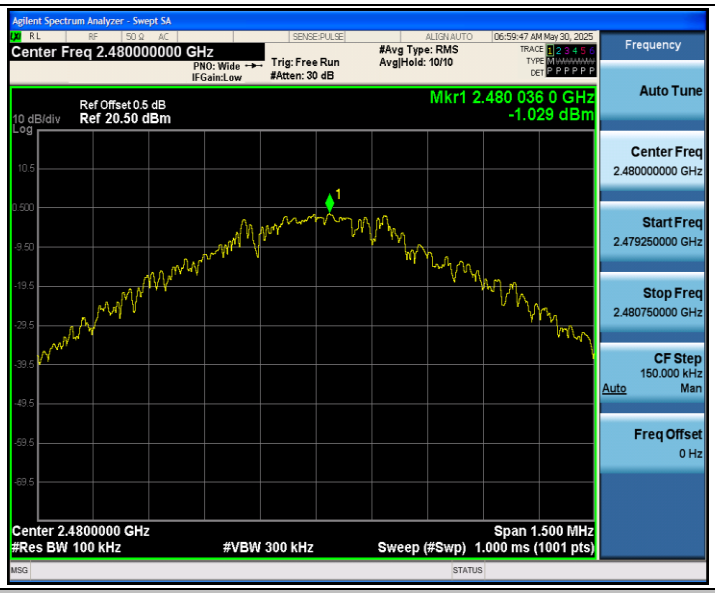
DH5_Ant1_2441_30~1000



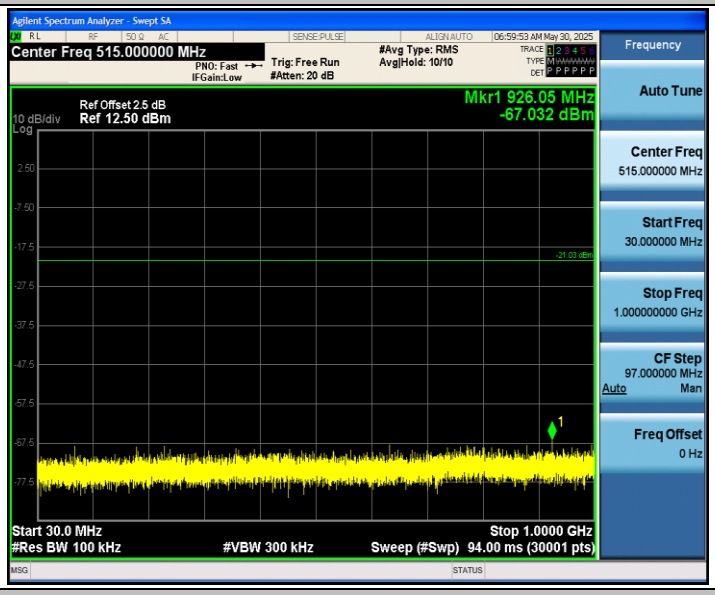
DH5_Ant1_2441_1000~26500



DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500