FCC Appendix RF Test Data

FCC ID	**:**	**2BQ5V-MGII**
Company	**:**	**SHENZHEN MAIDEKESI TECHNOLOGY CO., LTD**
EUT	**:**	**Bluetooth Speaker**
Model Number	**:**	**MG II**
Report No.	**:**	**CTA25071701801**
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	0.963	2440.541	2441.504	---	---
		2480	0.930	2479.553	2480.483	---	---
2DH5	Ant1	2402	1.278	2401.382	2402.660	---	---
		2441	1.278	2440.382	2441.660	---	---
		2480	1.278	2479.382	2480.660	---	---
3DH5	Ant1	2402	1.278	2401.382	2402.660	---	---
		2441	1.278	2440.382	2441.660	---	---
		2480	1.281	2479.382	2480.663	---	---

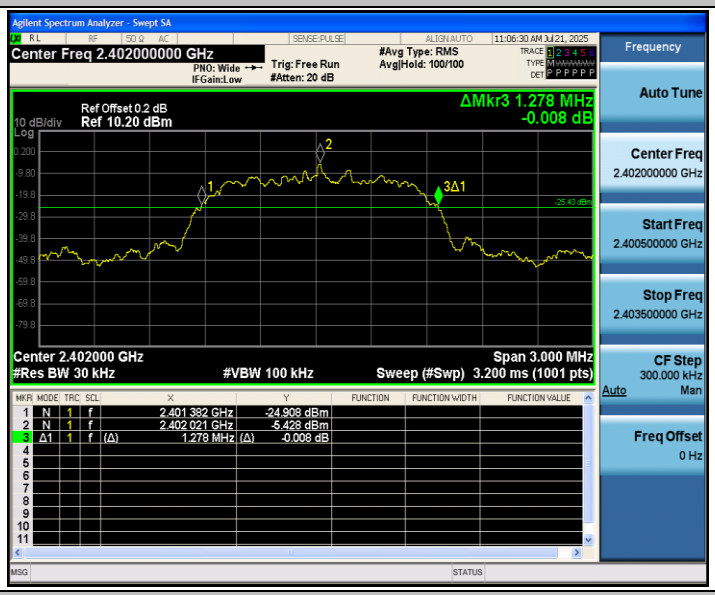
Test Graphs

DH5_Ant1_2402

DH5_Ant1_2441

DH5_Ant1_2480

2DH5_Ant1_2402

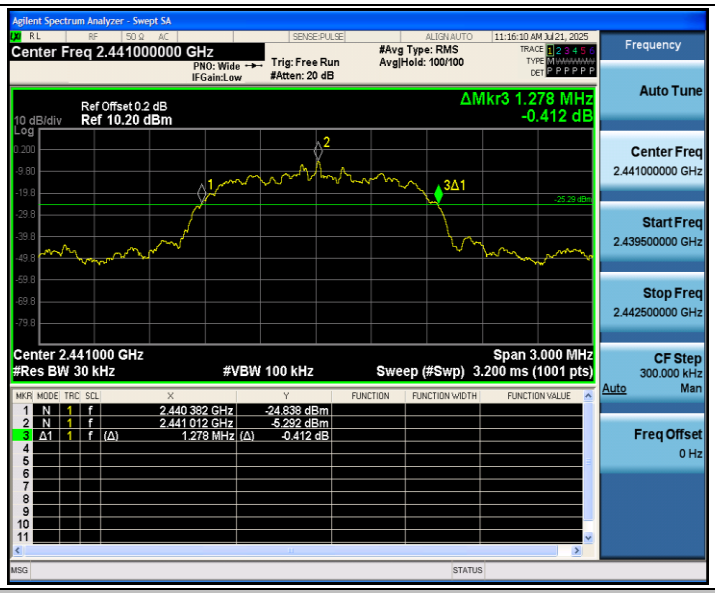


2DH5_Ant1_2441

2DH5_Ant1_2480

3DH5_Ant1_2402

3DH5_Ant1_2441



3DH5_Ant1_2480

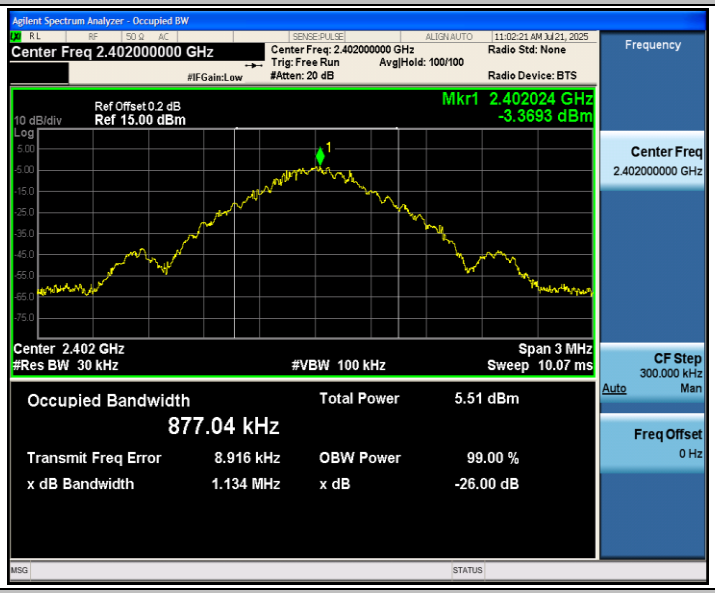
Appendix B: Occupied Channel Bandwidth

Test Result

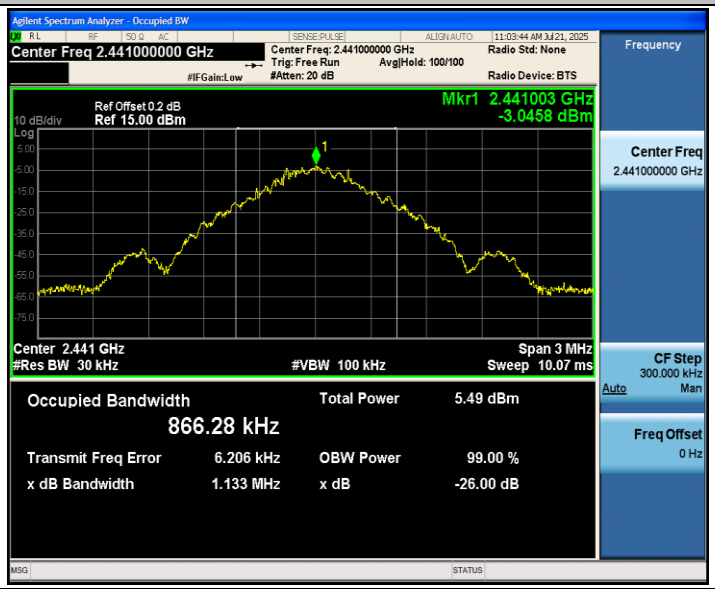
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87704	2401.5704	2402.4474	---	---
		2441	0.86628	2440.5731	2441.4394	---	---
		2480	0.87597	2479.5694	2480.4454	---	---
2DH5	Ant1	2402	1.1892	2401.4150	2402.6042	---	---
		2441	1.1888	2440.4167	2441.6055	---	---
		2480	1.1920	2479.4155	2480.6075	---	---
3DH5	Ant1	2402	1.1819	2401.4187	2402.6006	---	---
		2441	1.1912	2440.4143	2441.6055	---	---
		2480	1.1893	2479.4167	2480.6060	---	---

Test Graphs

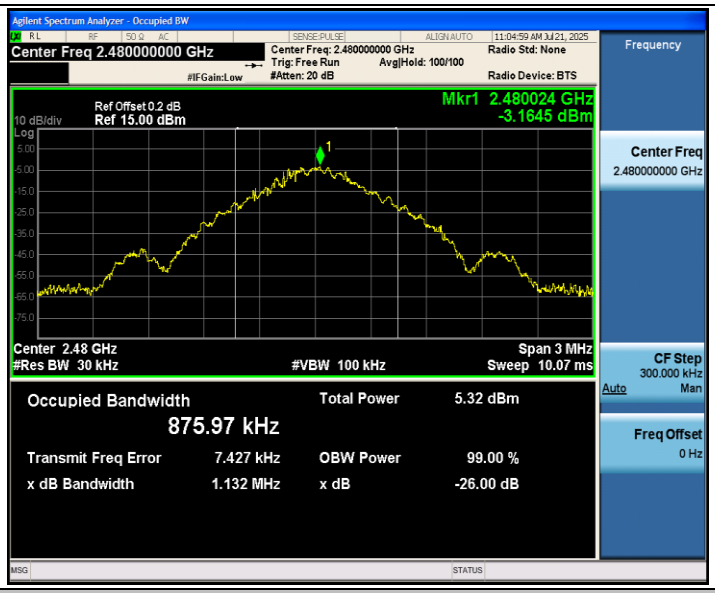
DH5_Ant1_2402



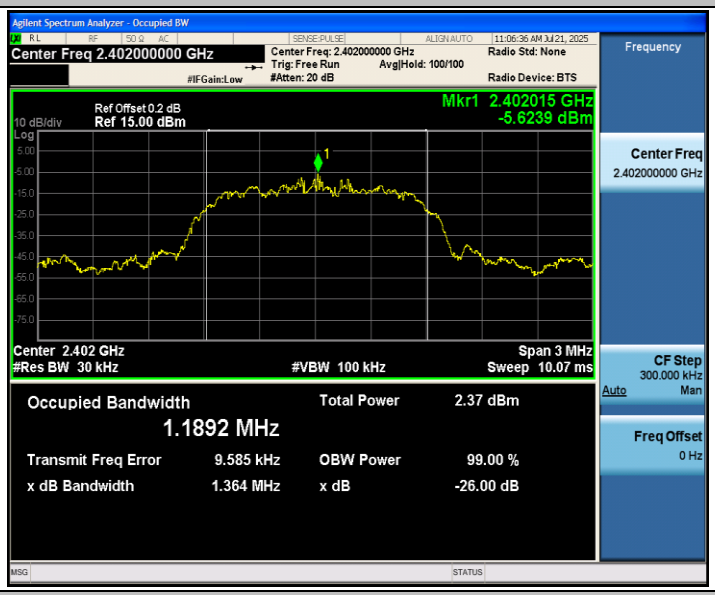
DH5_Ant1_2441



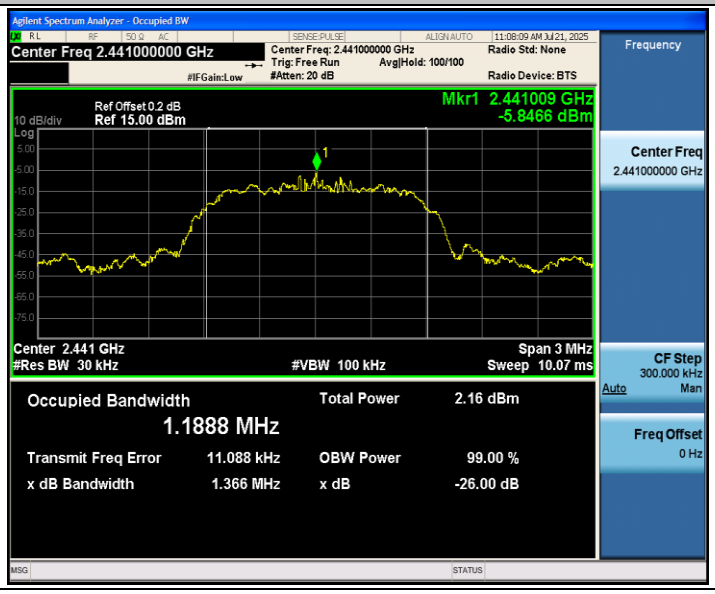
DH5_Ant1_2480



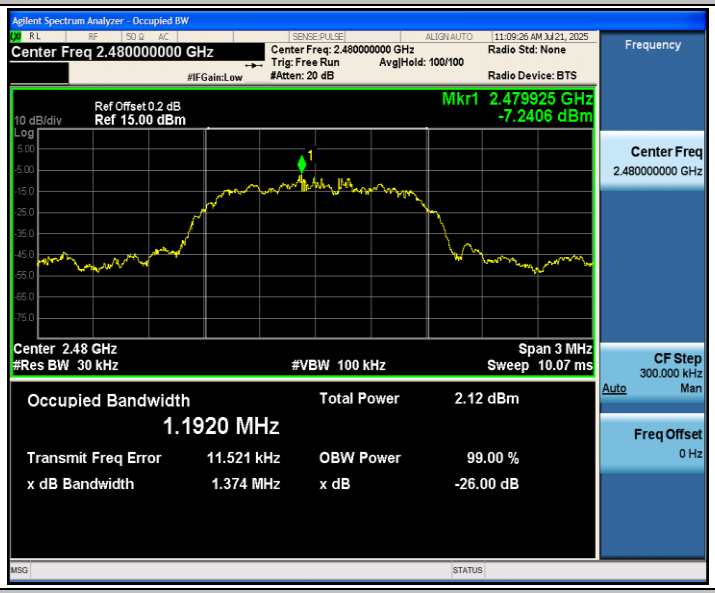
2DH5_Ant1_2402



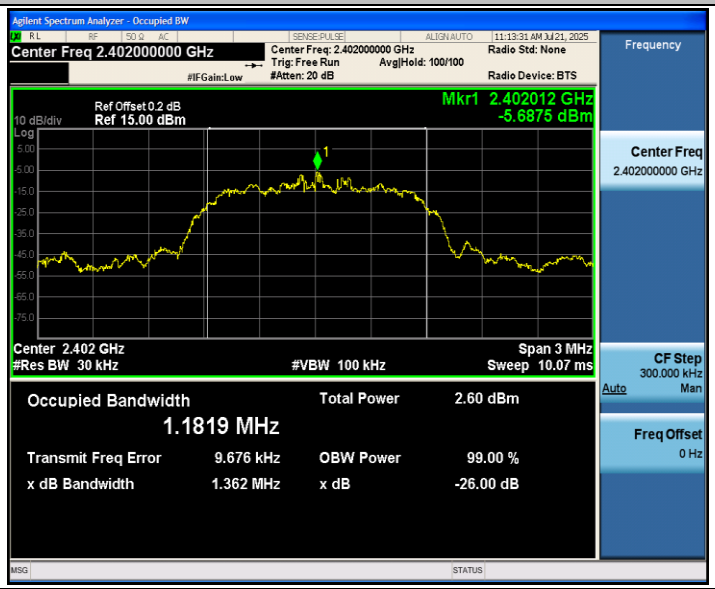
2DH5_Ant1_2441



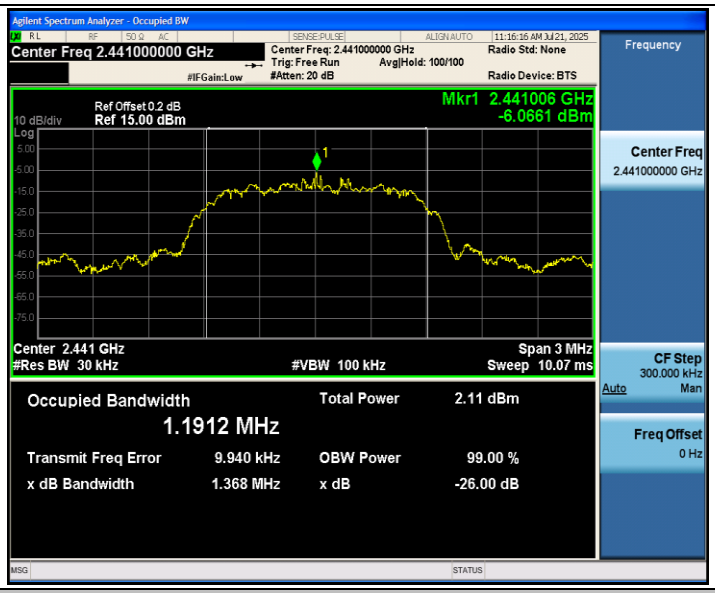
2DH5_Ant1_2480



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	-0.30	≤20.97	PASS
		2441	-0.44	≤20.97	PASS
		2480	-0.45	≤20.97	PASS
2DH5	Ant1	2402	-1.07	≤20.97	PASS
		2441	-1.23	≤20.97	PASS
		2480	-1.24	≤20.97	PASS
3DH5	Ant1	2402	-1.10	≤20.97	PASS
		2441	-1.26	≤20.97	PASS
		2480	-1.24	≤20.97	PASS

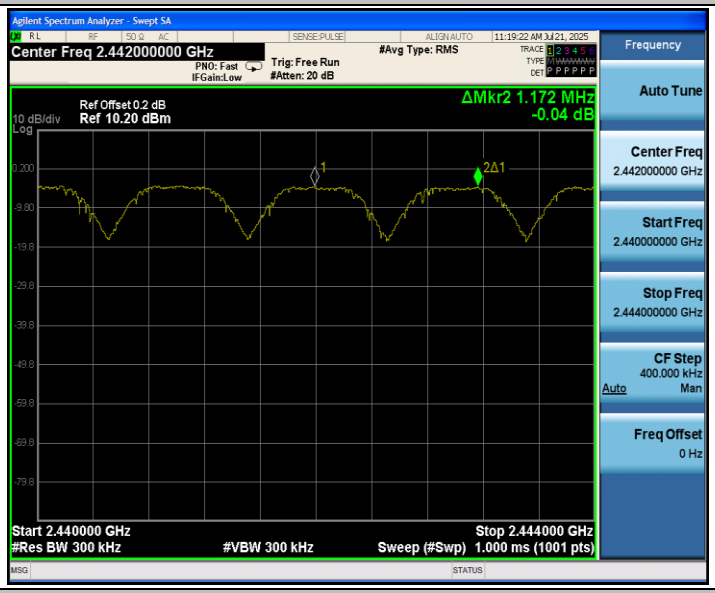
Appendix D: Carrier frequency separation

Test Result

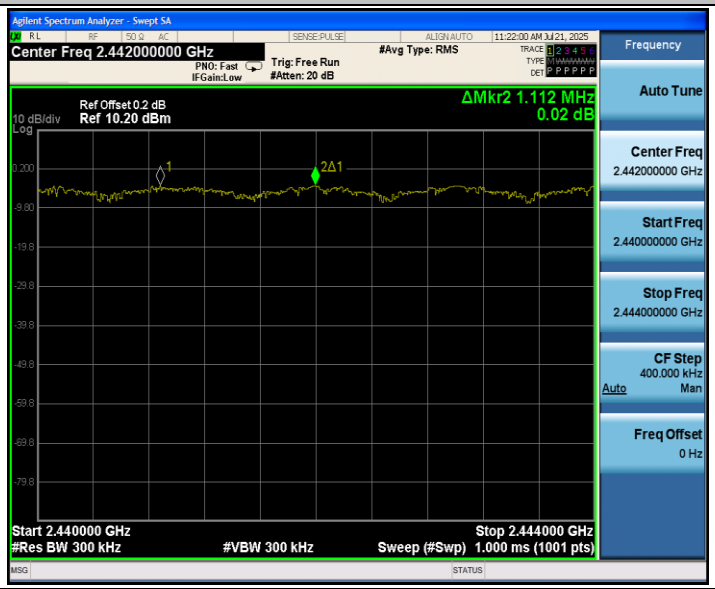
TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.172	≥0.963	PASS
2DH5	Ant1	Hop	1.112	≥0.852	PASS
3DH5	Ant1	Hop	1.004	≥0.854	PASS

Test Graphs

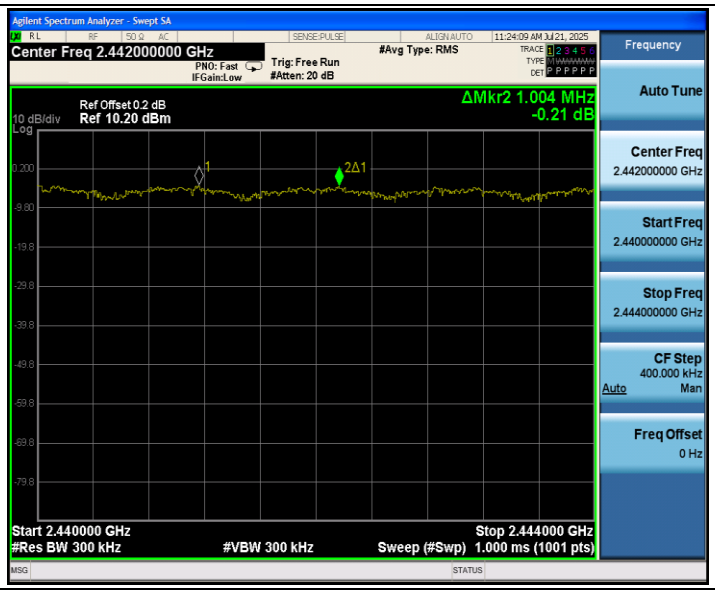
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop

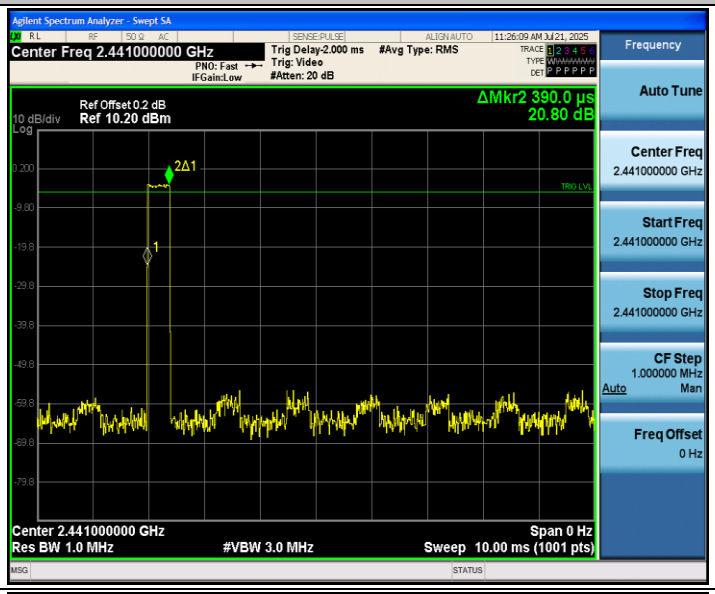
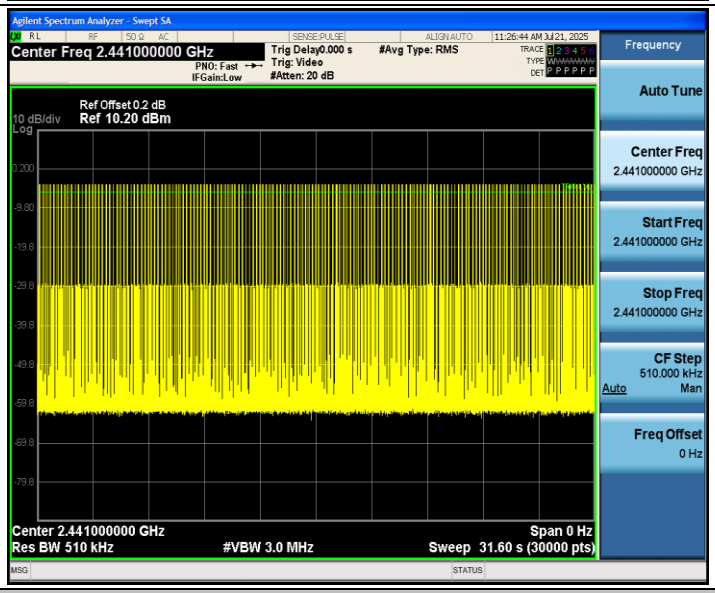

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.442000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
11:24:09 AM Jul 21, 2025
Frequency
Auto Tune
Center Freq
2.442000000 GHz
Start Freq
2.440000000 GHz
Stop Freq
2.444000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz
Ref Offset 0.2 dB
10 dB/div
Ref 10.20 dBm
Log
ΔMkr2 1.004 MHz
-0.21 dB
Start 2.440000 GHz
#Res BW 300 kHz
#VBW 300 kHz
Stop 2.444000 GHz
Sweep (#Swp) 1.000 ms (1001 pts)

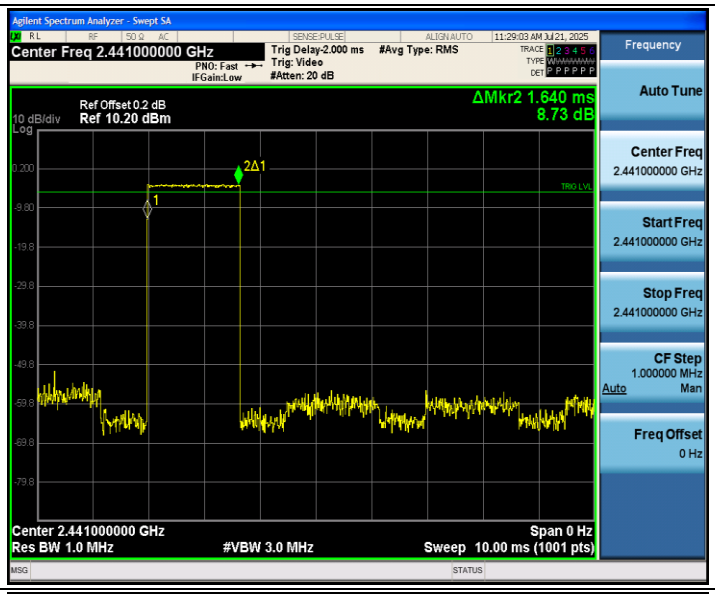
Appendix E: Time of occupancy

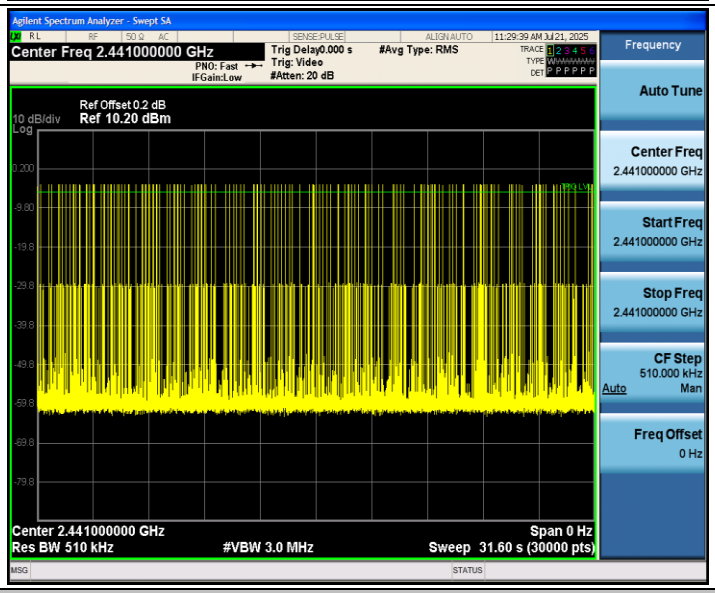
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	319	0.124	≤0.4	PASS
DH3	Ant1	Hop	1.640	161	0.264	≤0.4	PASS
DH5	Ant1	Hop	2.900	104	0.302	≤0.4	PASS
2DH1	Ant1	Hop	0.390	320	0.125	≤0.4	PASS
2DH3	Ant1	Hop	1.640	153	0.251	≤0.4	PASS
2DH5	Ant1	Hop	2.900	103	0.299	≤0.4	PASS
3DH1	Ant1	Hop	0.390	320	0.125	≤0.4	PASS
3DH3	Ant1	Hop	1.650	165	0.272	≤0.4	PASS
3DH5	Ant1	Hop	2.900	105	0.305	≤0.4	PASS

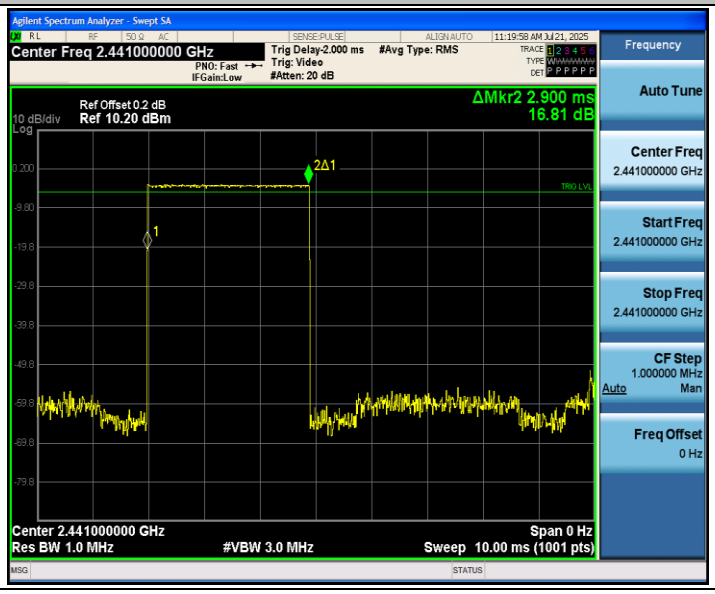
Test Graphs

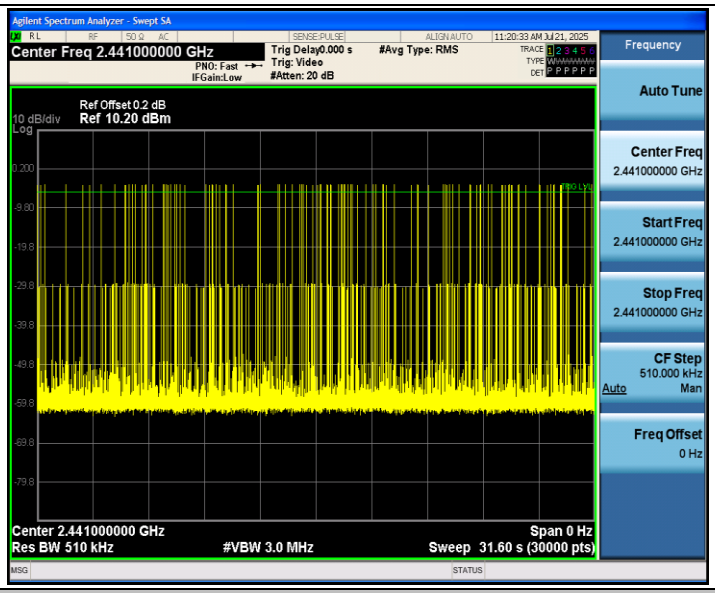
DH1_Ant1_Hop


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
PNO: Fast
IFGain:Low
11:29:03 AM Jul 21, 2025
Ref Offset 0.2 dB
10 dB/div
Ref 10.20 dBm
ΔMkr2 1.640 ms
8.73 dB
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 10.00 ms (1001 pts)
Frequency
Auto Tune
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

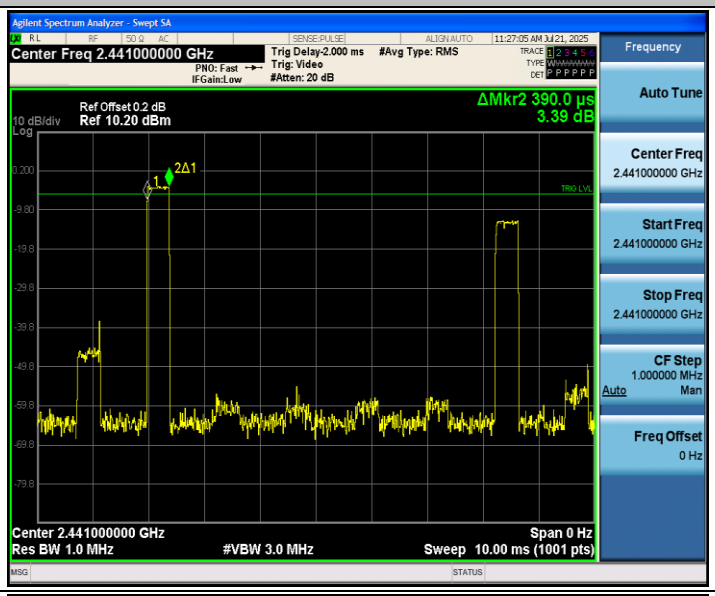

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay0.000 s
#Avg Type: RMS
Trig: Video
#Atten: 20 dB
PNO: Fast
IFGain:Low
11:29:39 AM Jul 21, 2025
Ref Offset 0.2 dB
10 dB/div
Ref 10.20 dBm
Center 2.441000000 GHz
Res BW 510 kHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 31.60 s (30000 pts)
Frequency
Auto Tune
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

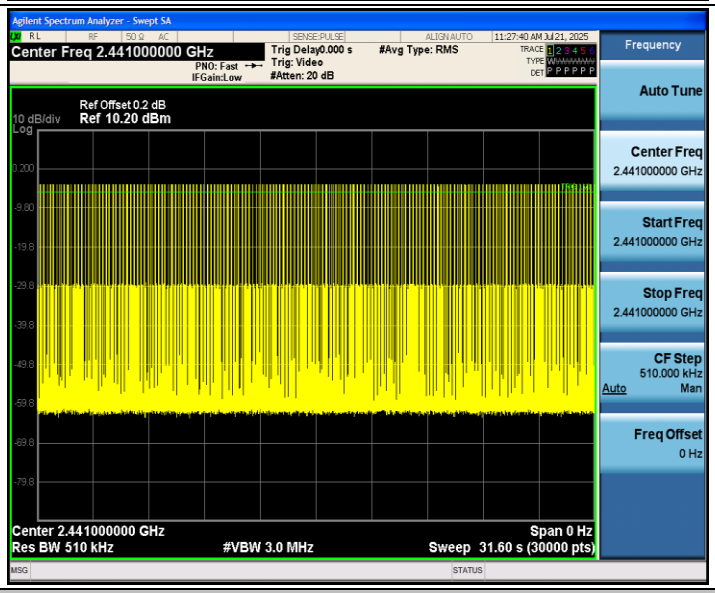
DH5_Ant1_Hop


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay-2.000 ms
#Avg Type: RMS
Trig: Video
#Atten: 20 dB
PNO: Fast
IFGain:Low
11:19:58 AM Jul 21, 2025
Ref Offset 0.2 dB
10 dB/div
Ref 10.20 dBm
ΔMkr2 2.900 ms
16.81 dB
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 10.00 ms (1001 pts)
Frequency
Auto Tune
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

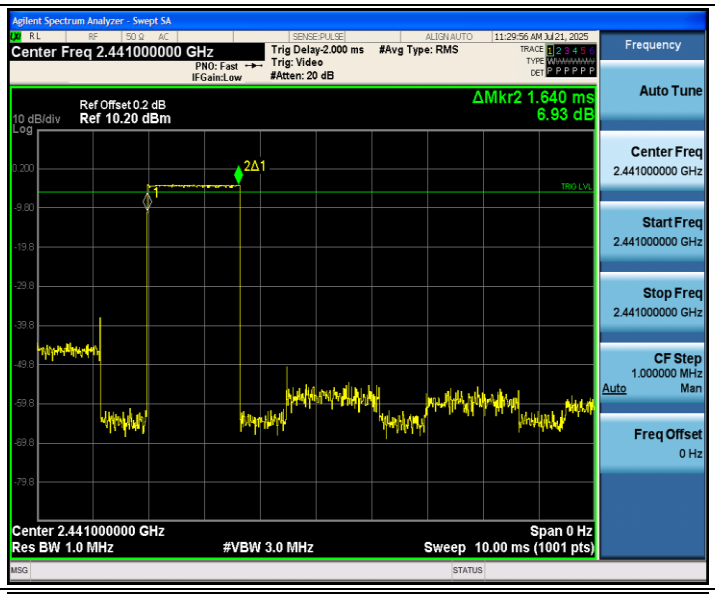


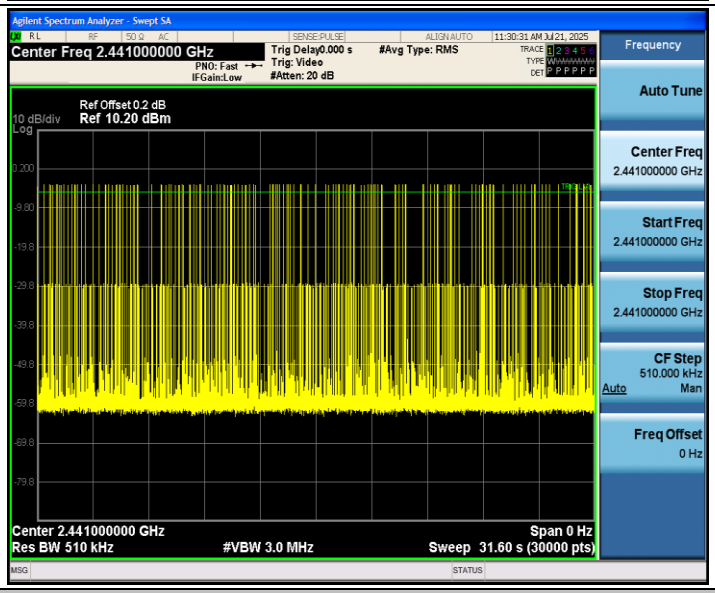
2DH1_Ant1_Hop



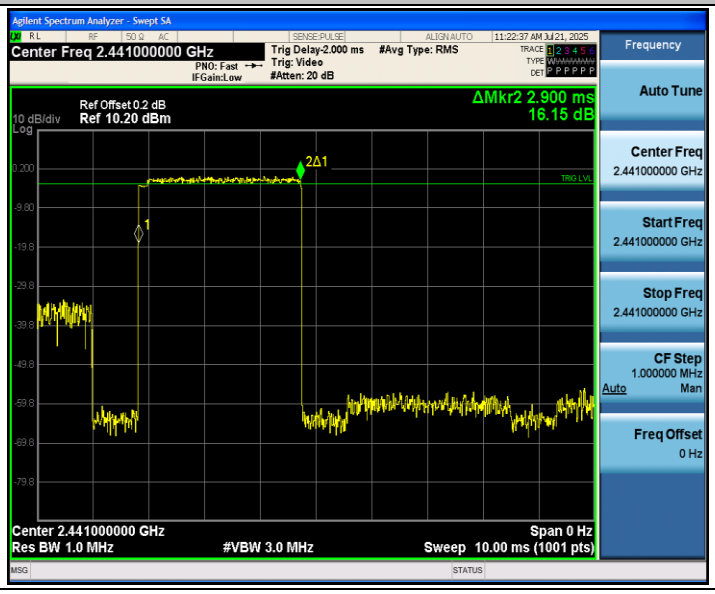


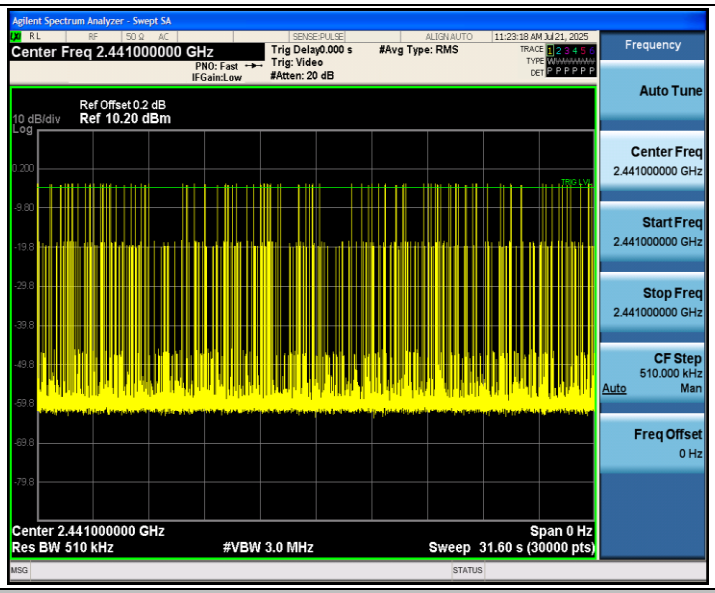
2DH3_Ant1_Hop



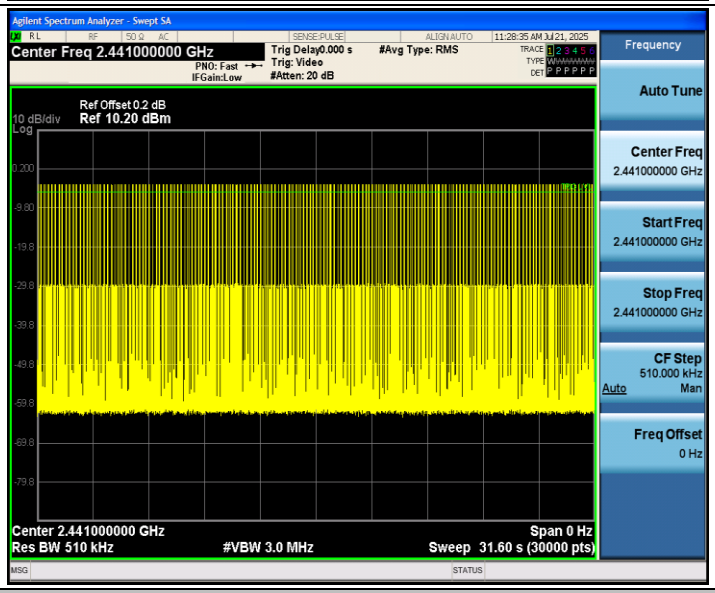


2DH5_Ant1_Hop

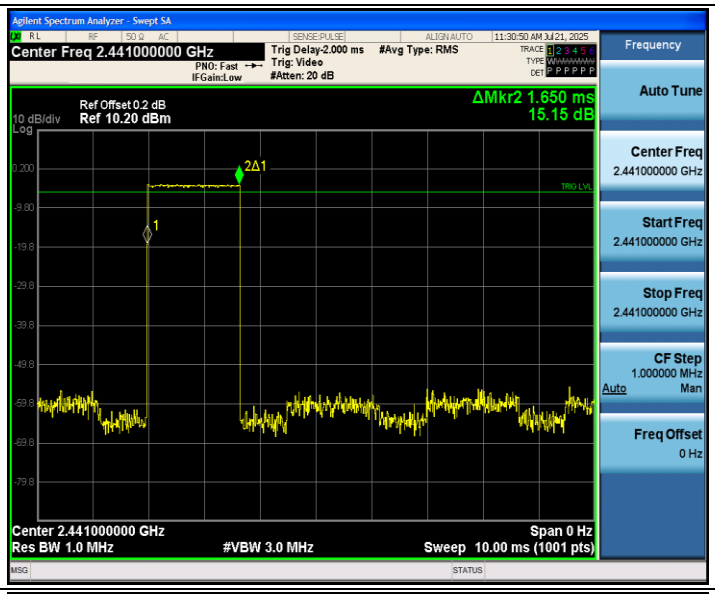


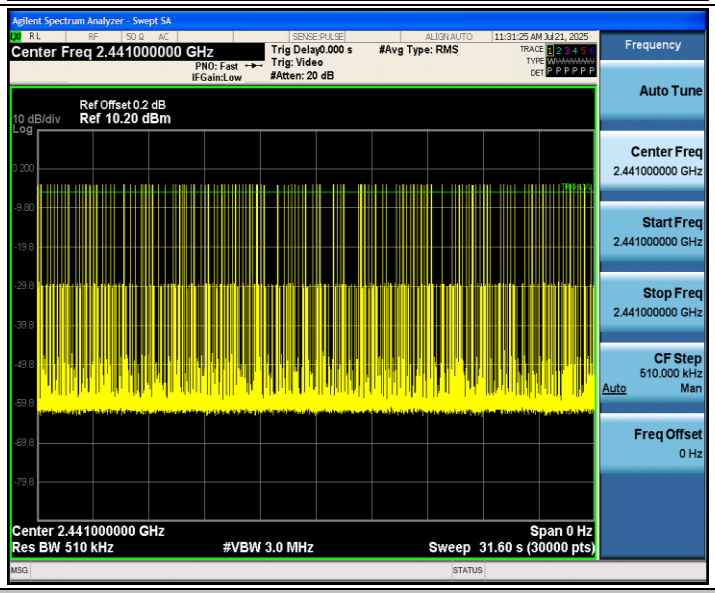


3DH1_Ant1_Hop

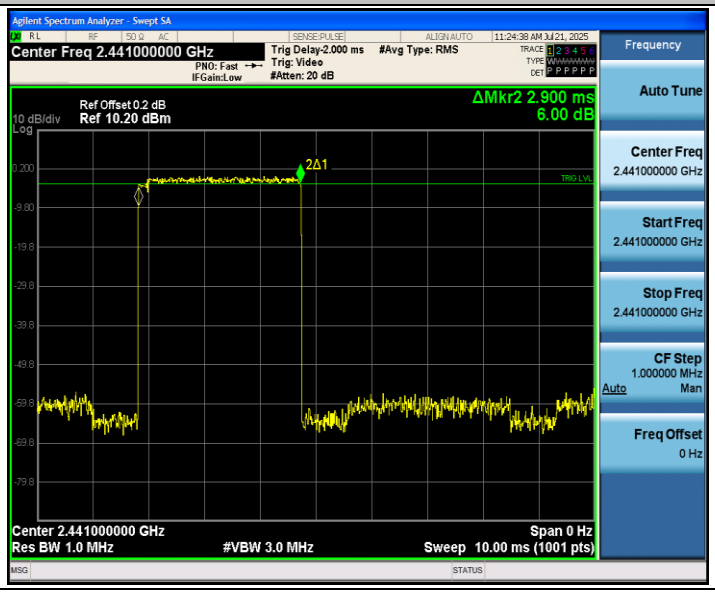


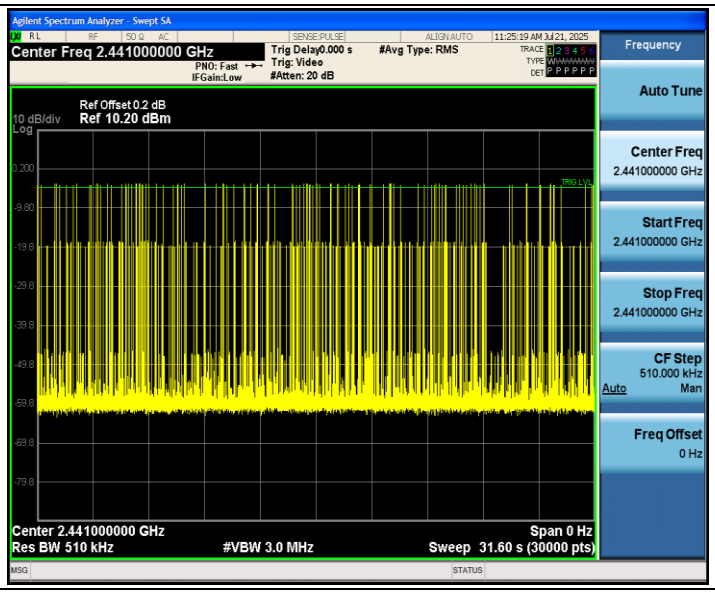
3DH3_Ant1_Hop





3DH5_Ant1_Hop



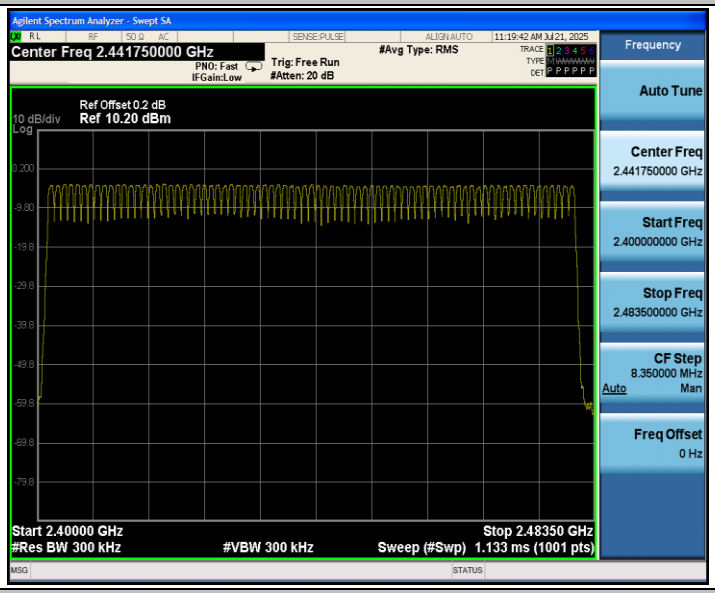
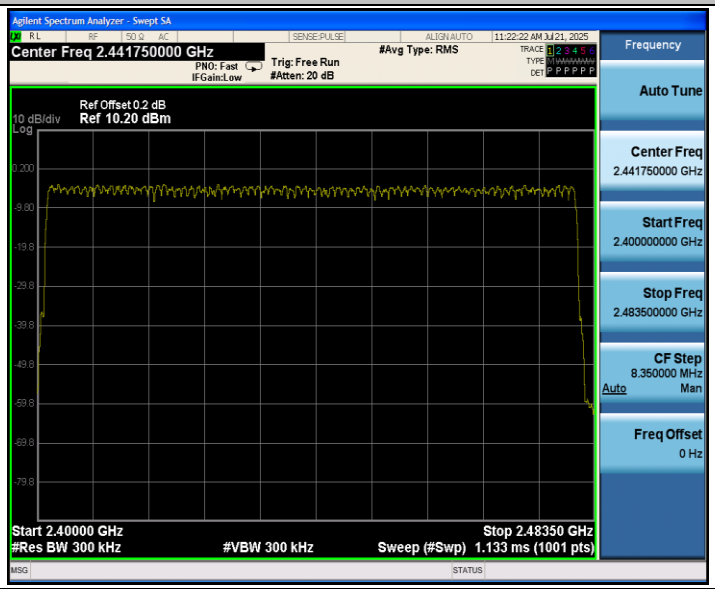

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay0.000 s
Trig: Video
#Atten: 20 dB
#Avg Type: RMS
11:25:19 AM Jul 21, 2025
Ref Offset 0.2 dB
10 dB/div
Ref 10.20 dBm
Log
Center 2.441000000 GHz
Span 0 Hz
Res BW 510 kHz
#VBW 3.0 MHz
Sweep 31.60 s (30000 pts)
Frequency
Auto Tune
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

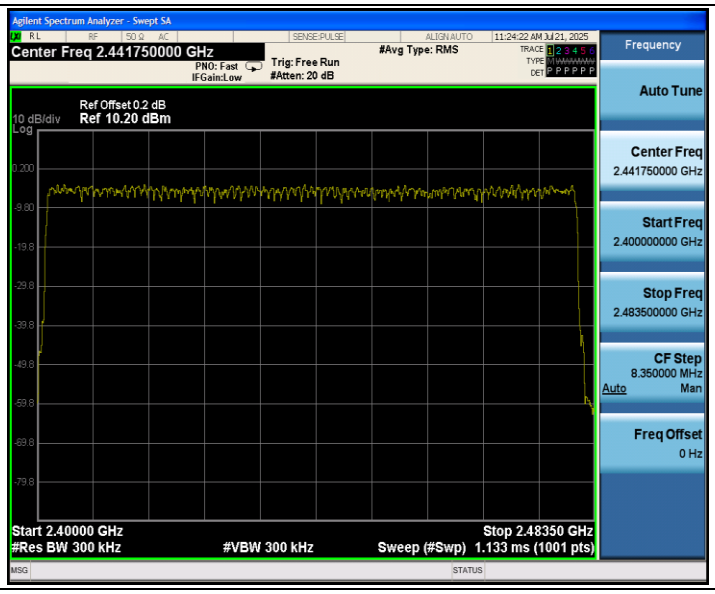
Appendix F: Number of hopping channels

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
11:24:22 AM Jul 21, 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 0.2 dB
10 dB/div
Ref 10.20 dBm
Log
Start 2.40000 GHz
Stop 2.48350 GHz
#Res BW 300 kHz
#VBW 300 kHz
Sweep (#Swp) 1.133 ms (1001 pts)

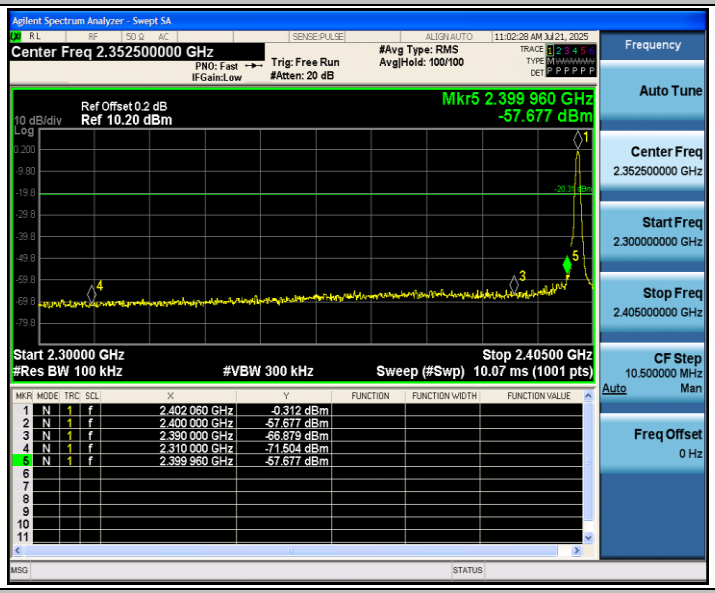
Appendix G: Band edge measurements

Test Result

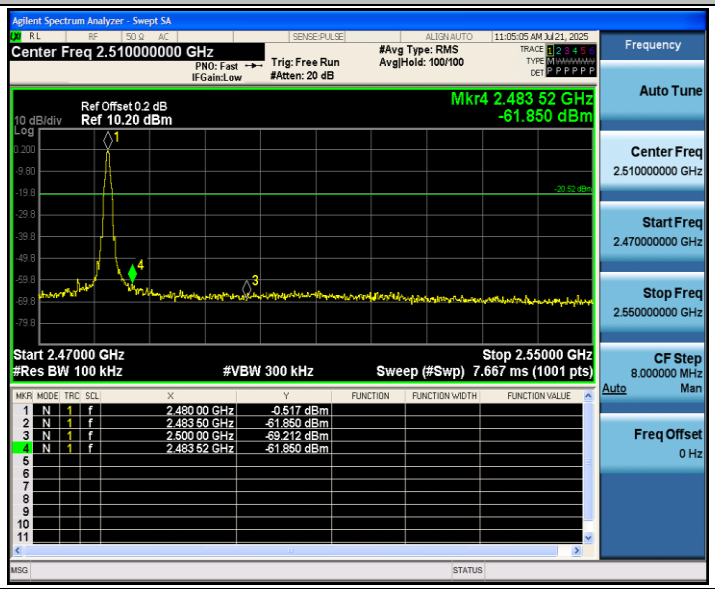
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.31	-57.68	≤-20.31	PASS
		High	2480	-0.52	-61.85	≤-20.52	PASS
		Low	Hop_2402	-4.66	-63.27	≤-24.66	PASS
		High	Hop_2480	-3.93	-64.14	≤-23.93	PASS
2DH5	Ant1	Low	2402	-4.09	-55.54	≤-24.09	PASS
		High	2480	-6.56	-62.62	≤-26.56	PASS
		Low	Hop_2402	-4.71	-60.04	≤-24.71	PASS
		High	Hop_2480	-4.96	-64.38	≤-24.96	PASS
3DH5	Ant1	Low	2402	-4.76	-61.86	≤-24.76	PASS
		High	2480	-6.17	-59.32	≤-26.17	PASS
		Low	Hop_2402	-5.05	-61.03	≤-25.05	PASS
		High	Hop_2480	-4.90	-64.37	≤-24.9	PASS

Test Graphs

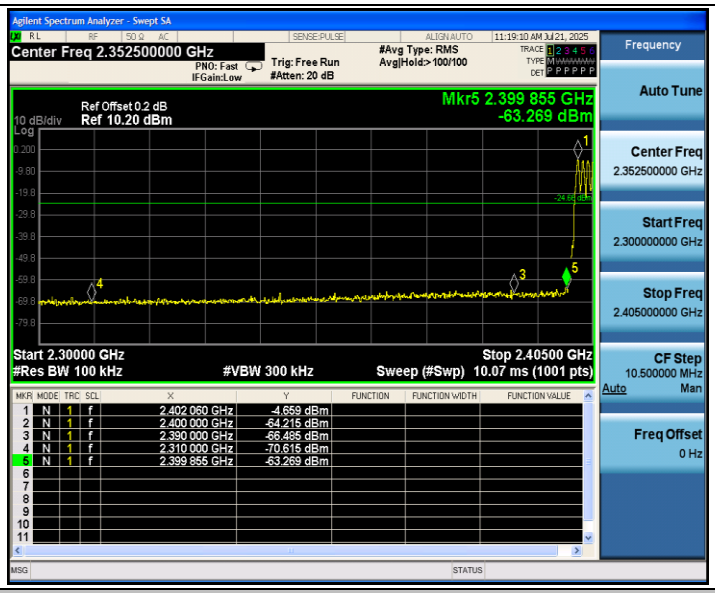
DH5_Ant1_Low_2402



DH5_Ant1_High_2480



DH5_Ant1_Low_Hop_2402



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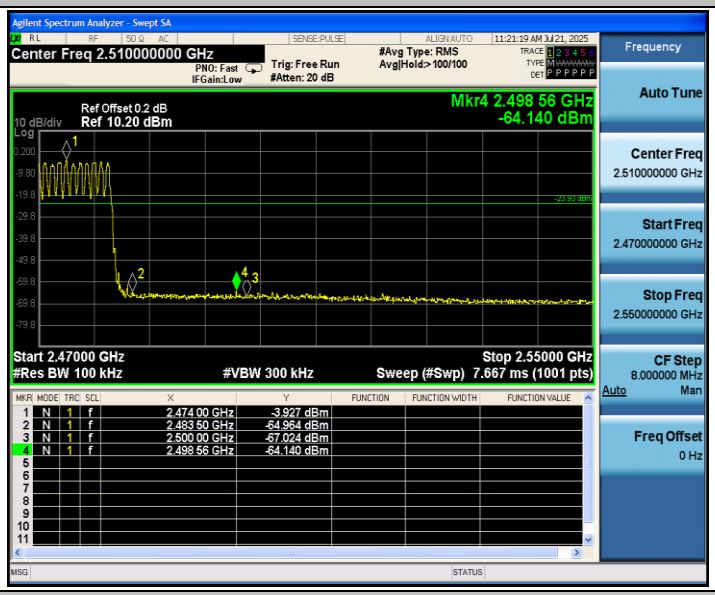
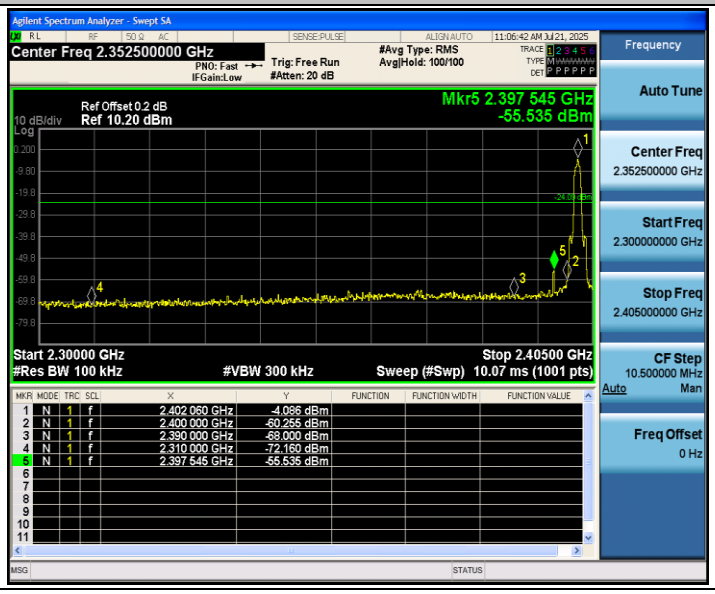


2DH5_Ant1_Low_2402



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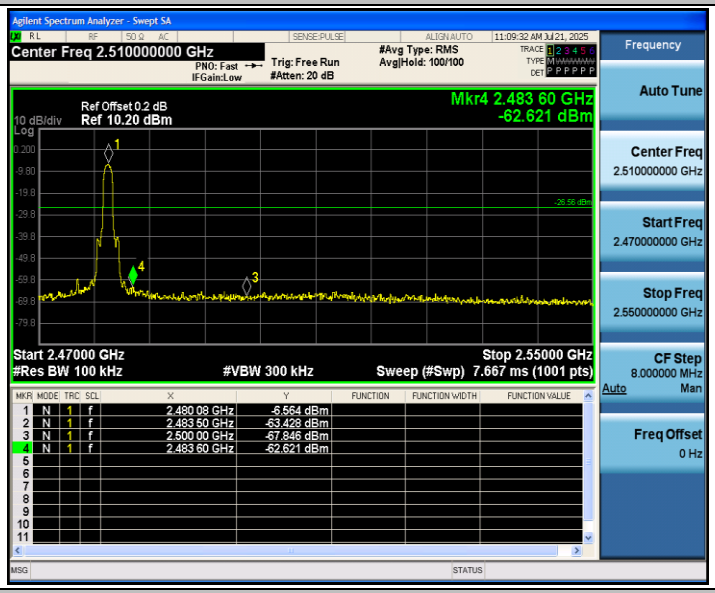

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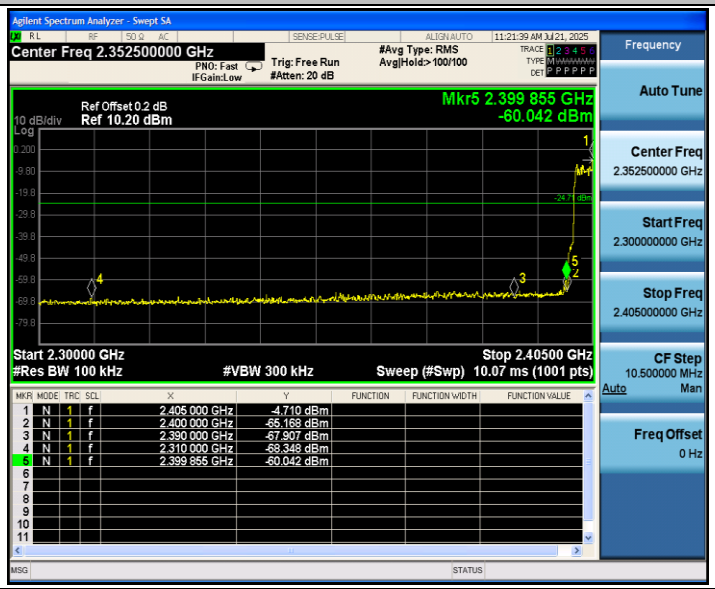

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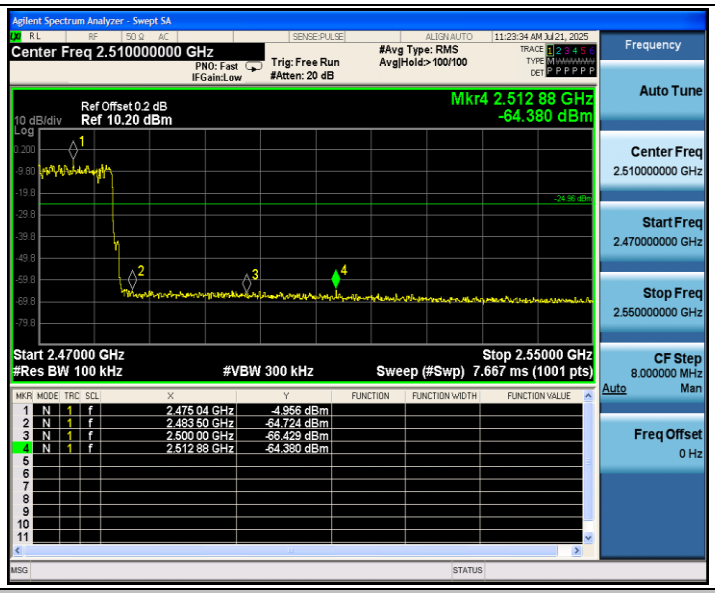
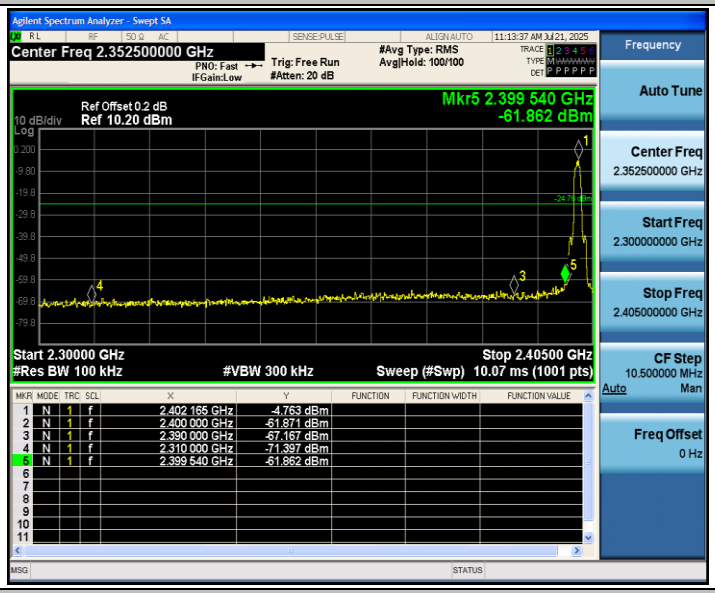
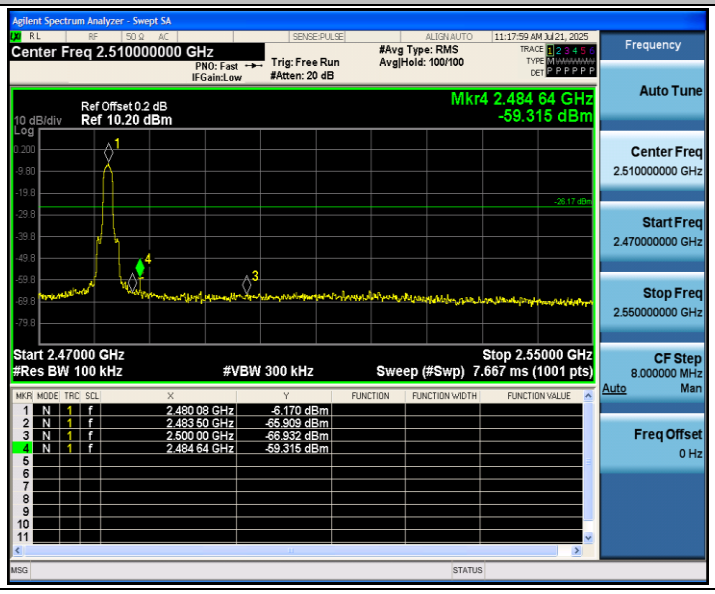


3DH5_Ant1_Low_2402



3DH5_Ant1_High_2480



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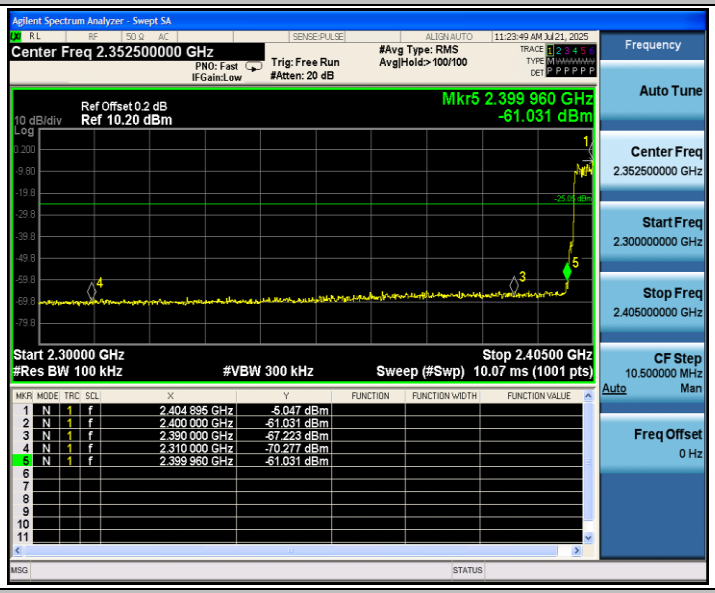

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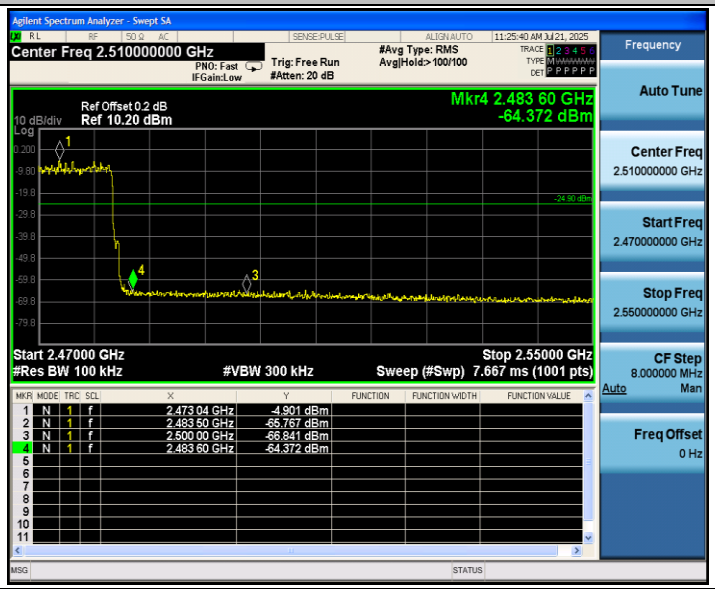


Appendix H: Conducted Spurious Emission

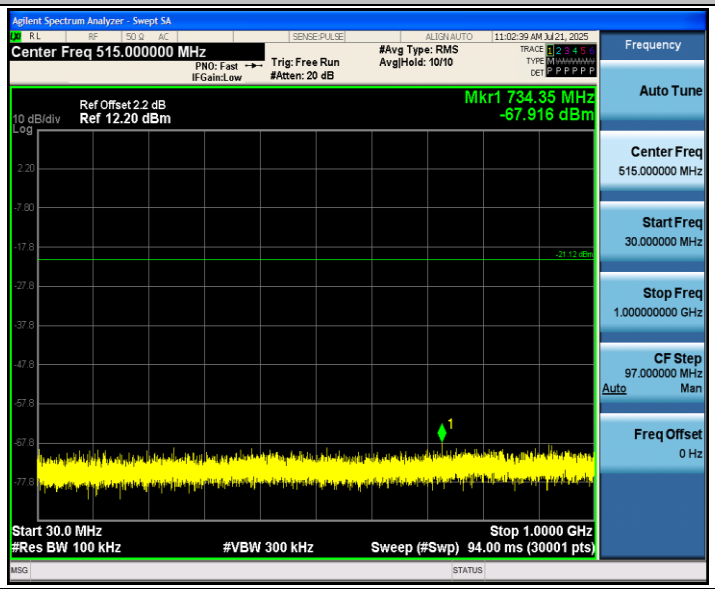
Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.12	-1.12	---	PASS
			30~1000	-1.12	-67.92	≤-21.12	PASS
			1000~26500	-1.12	-42.96	≤-21.12	PASS
		2441	Reference	-0.56	-0.56	---	PASS
			30~1000	-0.56	-68.68	≤-20.56	PASS
			1000~26500	-0.56	-42.65	≤-20.56	PASS
		2480	Reference	-1.25	-1.25	---	PASS
			30~1000	-1.25	-68.02	≤-21.25	PASS
			1000~26500	-1.25	-43.66	≤-21.25	PASS
2DH5	Ant1	2402	Reference	-6.71	-6.71	---	PASS
			30~1000	-6.71	-52.07	≤-26.71	PASS
			1000~26500	-6.71	-47.75	≤-26.71	PASS
		2441	Reference	-5.22	-5.22	---	PASS
			30~1000	-5.22	-68.26	≤-25.22	PASS
			1000~26500	-5.22	-48.07	≤-25.22	PASS
		2480	Reference	-5.98	-5.98	---	PASS
			30~1000	-5.98	-67.96	≤-25.98	PASS
			1000~26500	-5.98	-46.37	≤-25.98	PASS
3DH5	Ant1	2402	Reference	-7.11	-7.11	---	PASS
			30~1000	-7.11	-68.26	≤-27.11	PASS
			1000~26500	-7.11	-44.84	≤-27.11	PASS
		2441	Reference	-5.52	-5.52	---	PASS
			30~1000	-5.52	-68.31	≤-25.52	PASS
			1000~26500	-5.52	-48.2	≤-25.52	PASS
		2480	Reference	-6.58	-6.58	---	PASS
			30~1000	-6.58	-67.99	≤-26.58	PASS
			1000~26500	-6.58	-46.31	≤-26.58	PASS

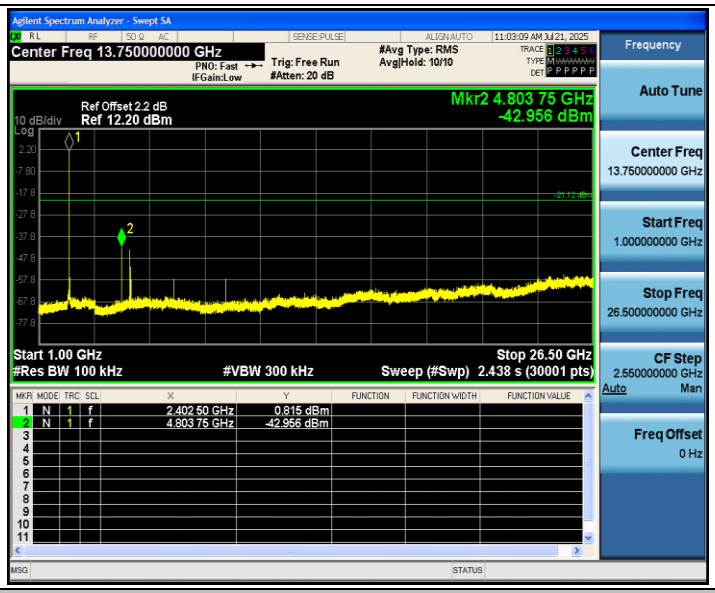
Test Graphs

DH5_Ant1_2402_0~Reference

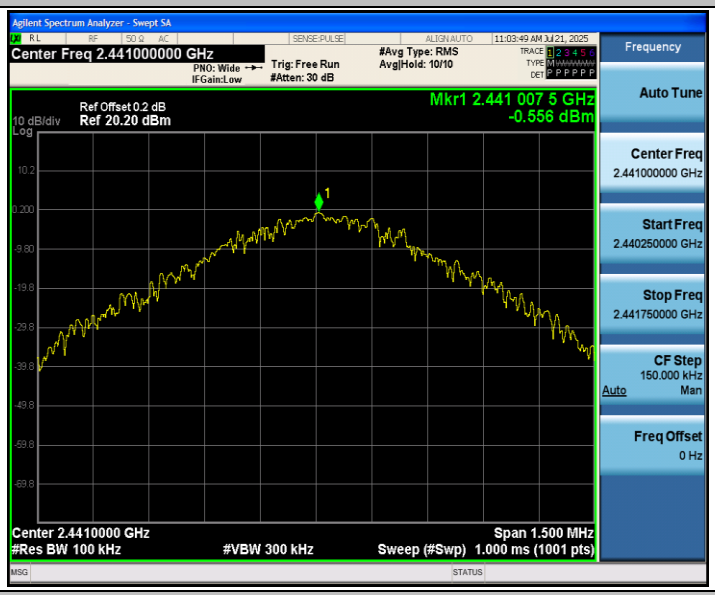
DH5_Ant1_2402_30~1000



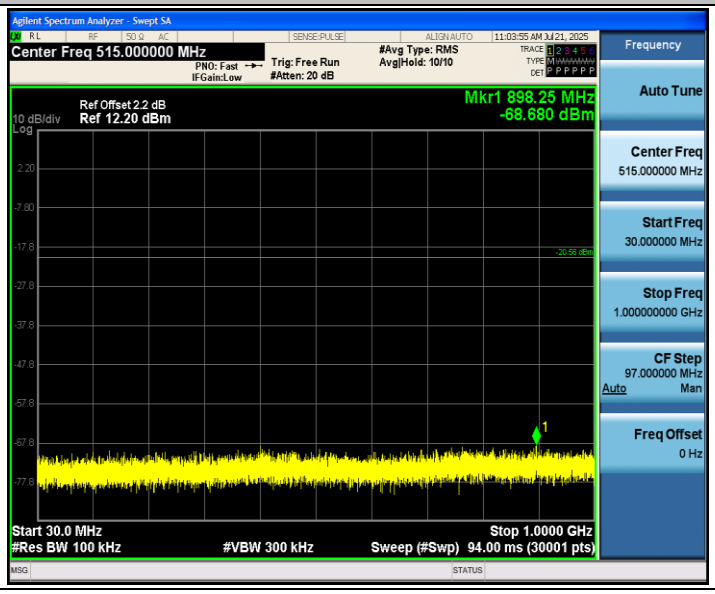
DH5_Ant1_2402_1000~26500



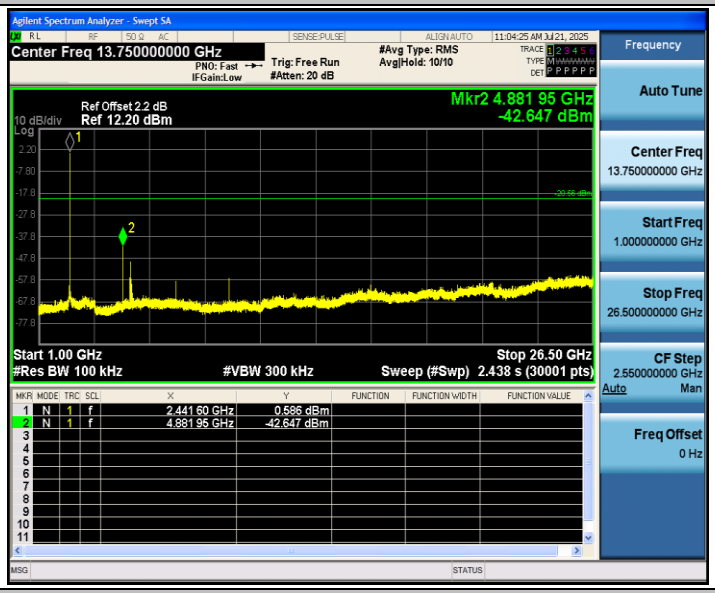
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000

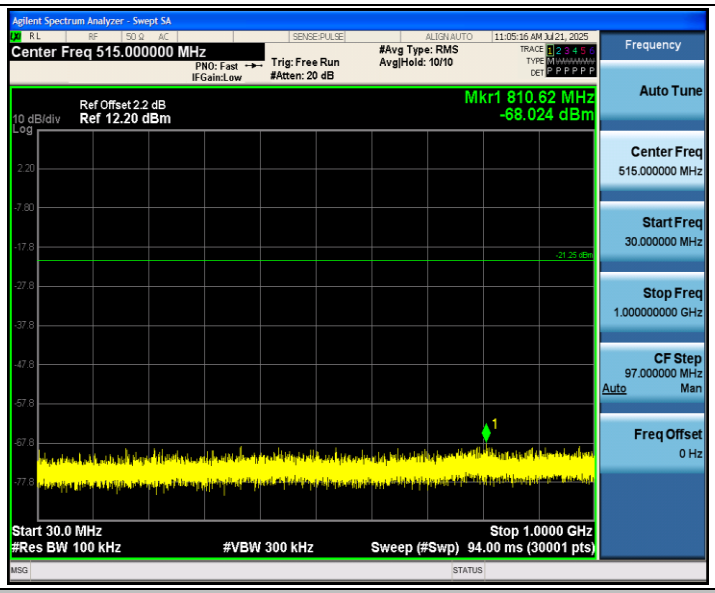


DH5_Ant1_2441_1000~26500

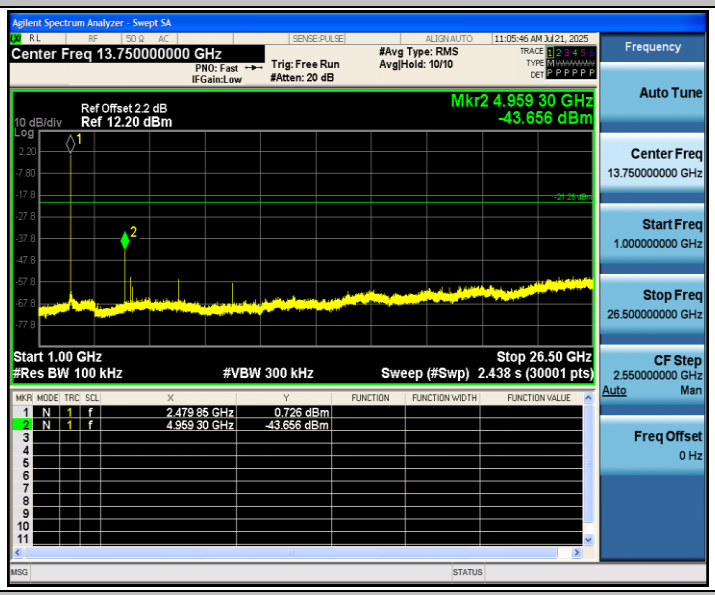


DH5_Ant1_2480_0~Reference

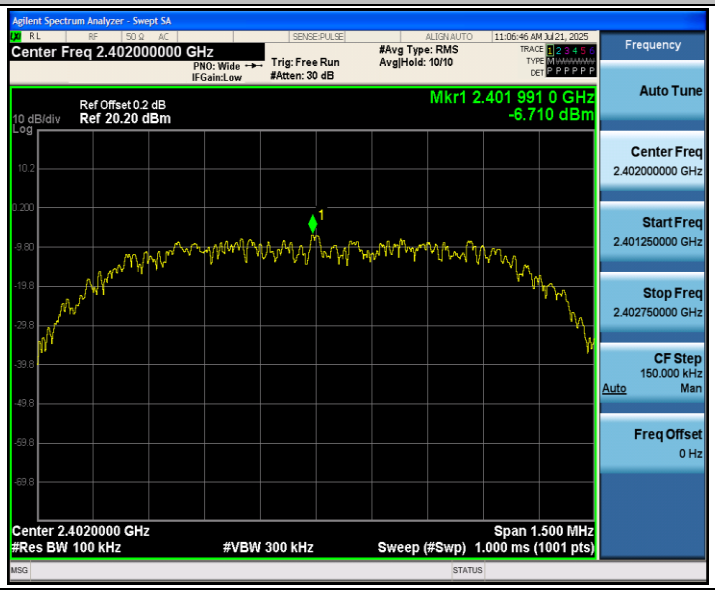
DH5_Ant1_2480_30~1000



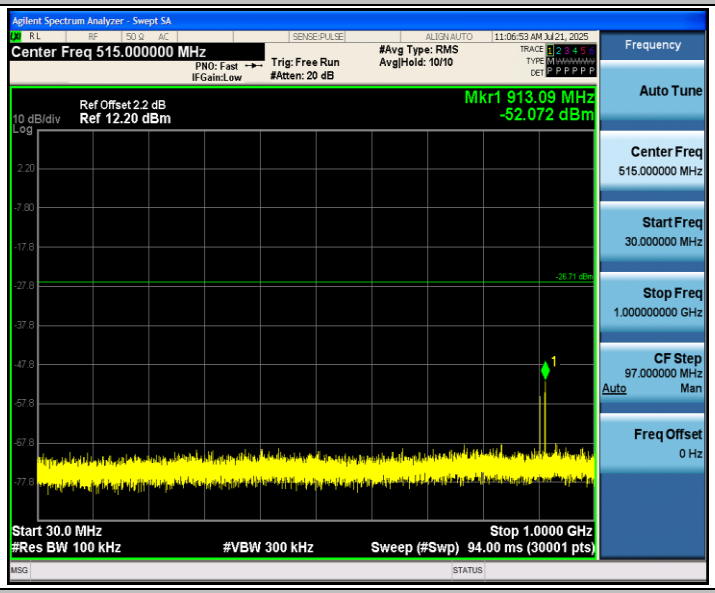
DH5_Ant1_2480_1000~26500



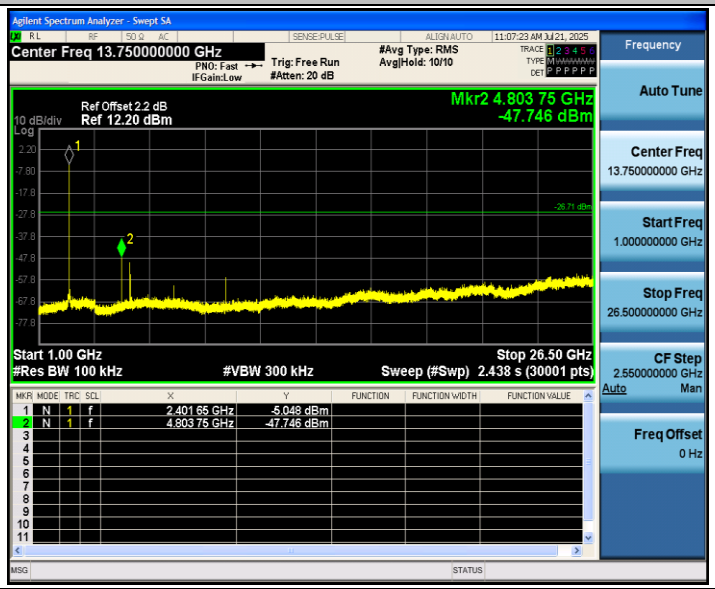
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference