FCC Appendix RF Test Data

FCC ID	**:**	**2BQD4-K900**
Company	**:**	**Shenzhen Xingyi Intelligent Technology Co., Ltd.**
EUT	**:**	**K900**
Model Number	**:**	**K900**
Report No.	**:**	**CTA25060302402**
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	0.939	2401.547	2402.486	---	---
		2441	0.936	2440.550	2441.486	---	---
		2480	0.948	2479.550	2480.498	---	---
2DH5	Ant1	2402	1.317	2401.352	2402.669	---	---
		2441	1.314	2440.349	2441.663	---	---
		2480	1.263	2479.397	2480.660	---	---
3DH5	Ant1	2402	1.311	2401.364	2402.675	---	---
		2441	1.266	2440.370	2441.636	---	---
		2480	1.287	2479.370	2480.657	---	---

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

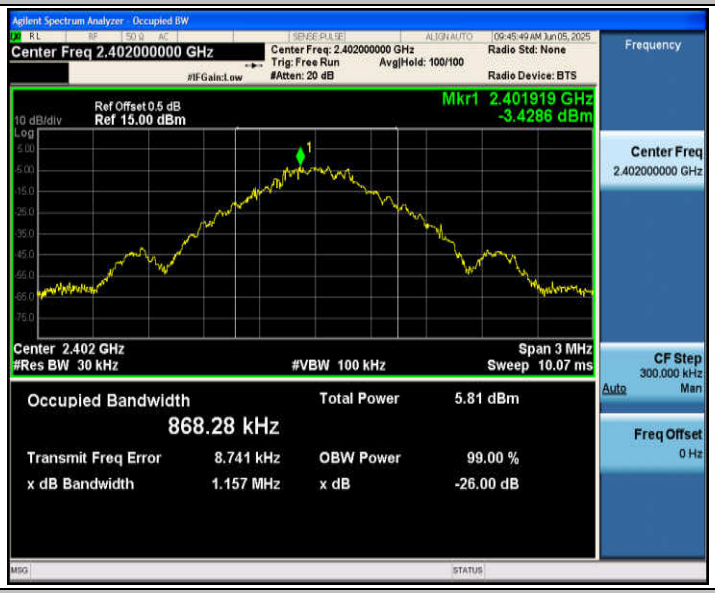
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86828	2401.5746	2402.4429	---	---
		2441	0.87581	2440.5698	2441.4456	---	---
		2480	0.87384	2479.5735	2480.4473	---	---
2DH5	Ant1	2402	1.1876	2401.4163	2402.6039	---	---
		2441	1.1848	2440.4183	2441.6031	---	---
		2480	1.1911	2479.4154	2480.6065	---	---
3DH5	Ant1	2402	1.1841	2401.4187	2402.6028	---	---
		2441	1.1857	2440.4170	2441.6027	---	---
		2480	1.1840	2479.4193	2480.6033	---	---

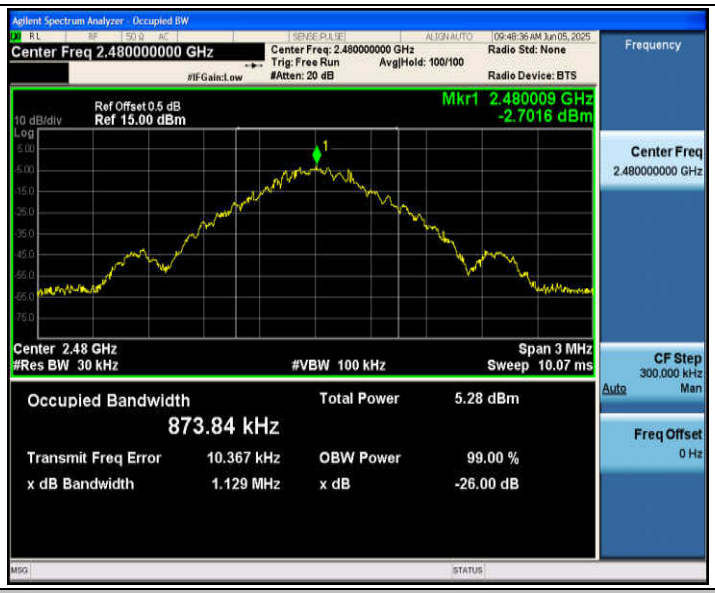
Test Graphs

DH5_Ant1_2402

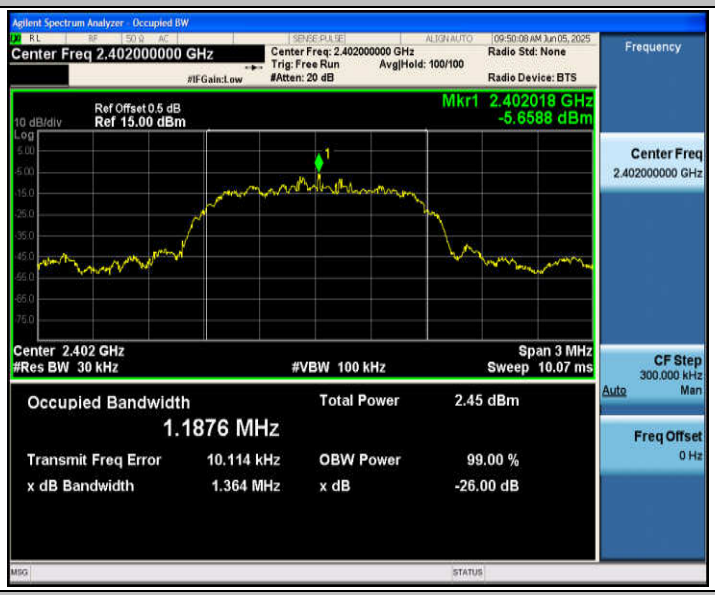


DH5_Ant1_2441

DH5_Ant1_2480

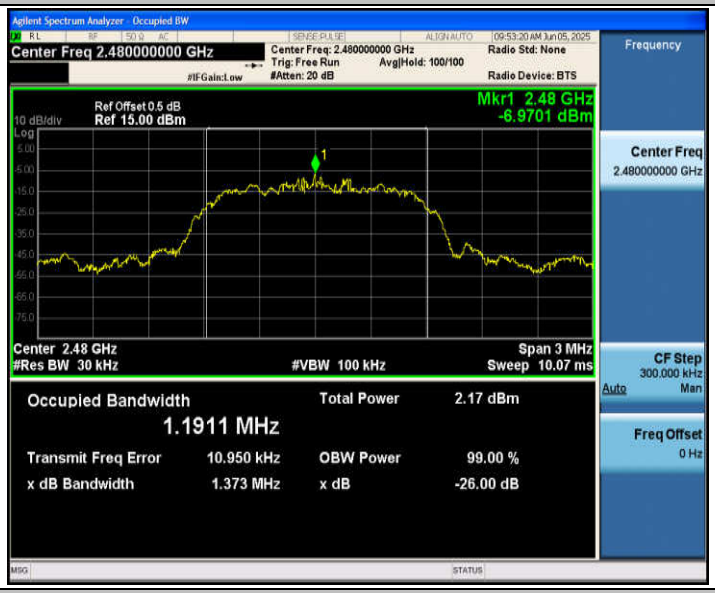


2DH5_Ant1_2402

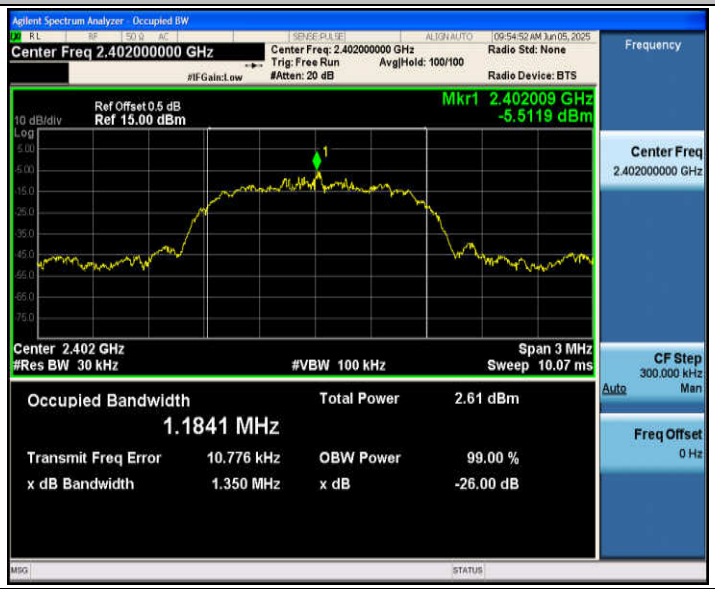


2DH5_Ant1_2441

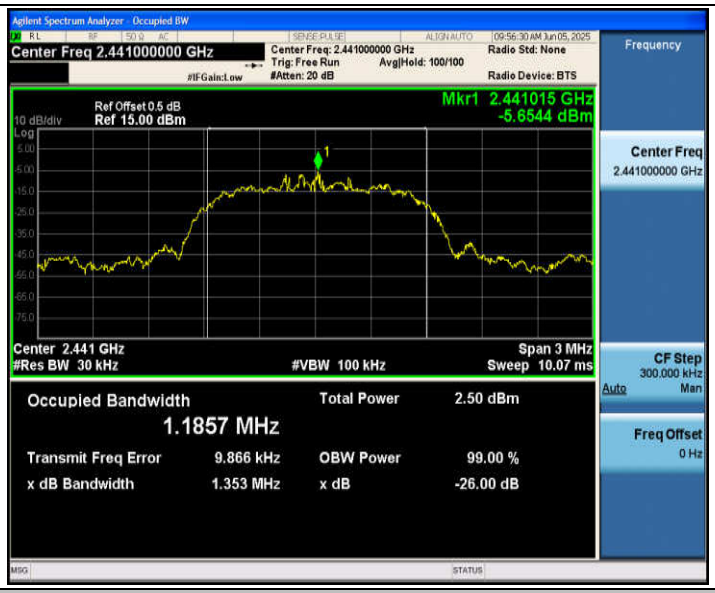
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

Appendix C: Maximum conducted output power

Test Result Peak

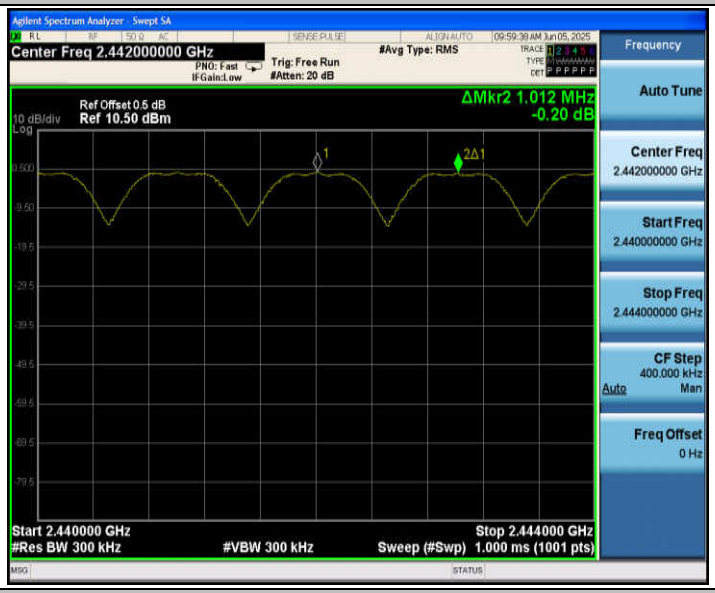
Test Mode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-0.21	≤30.0	PASS
		2441	-0.41	≤30.0	PASS
		2480	-0.54	≤30.0	PASS
2DH5	Ant1	2402	-0.96	≤20.97	PASS
		2441	-1.15	≤20.97	PASS
		2480	-1.24	≤20.97	PASS
3DH5	Ant1	2402	-0.50	≤20.97	PASS
		2441	-0.76	≤20.97	PASS
		2480	-0.86	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.012	≥0.948	PASS
2DH5	Ant1	Hop	1.168	≥0.878	PASS
3DH5	Ant1	Hop	0.992	≥0.874	PASS

Test Graphs

DH5_Ant1_Hop

2DH5_Ant1_Hop
3DH5_Ant1_Hop

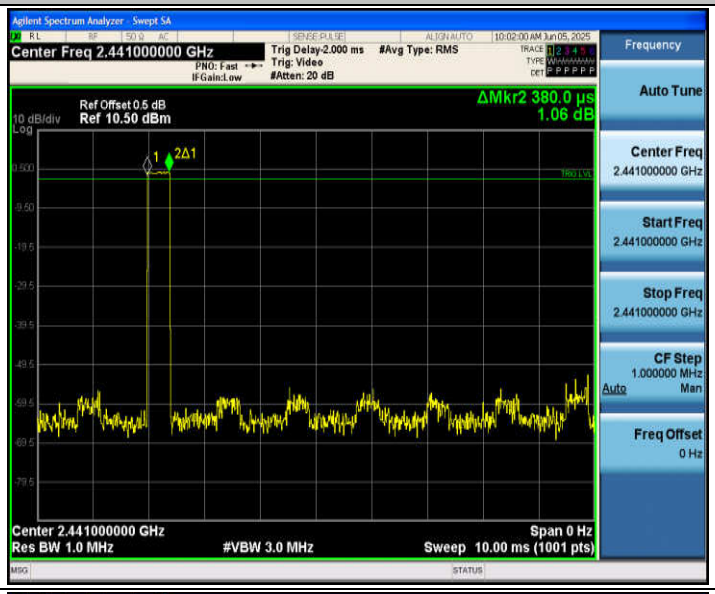
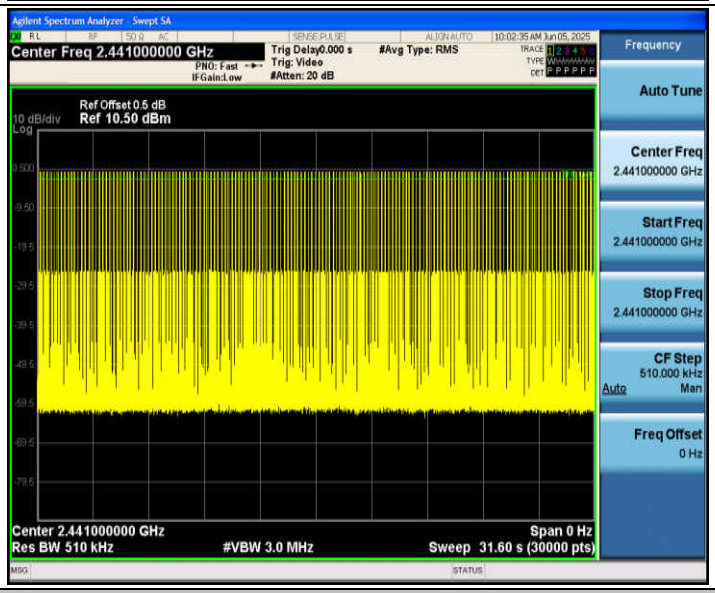
Agilent Spectrum Analyzer - Swept SA
Center Freq 2.442000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
10:10:15 AM Jun 05, 2025
Frequency
Auto Tune
Center Freq
2.442000000 GHz
Start Freq
2.440000000 GHz
Stop Freq
2.444000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
Log
ΔMkr2 992 kHz
-0.26 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)
MSG
STATUS

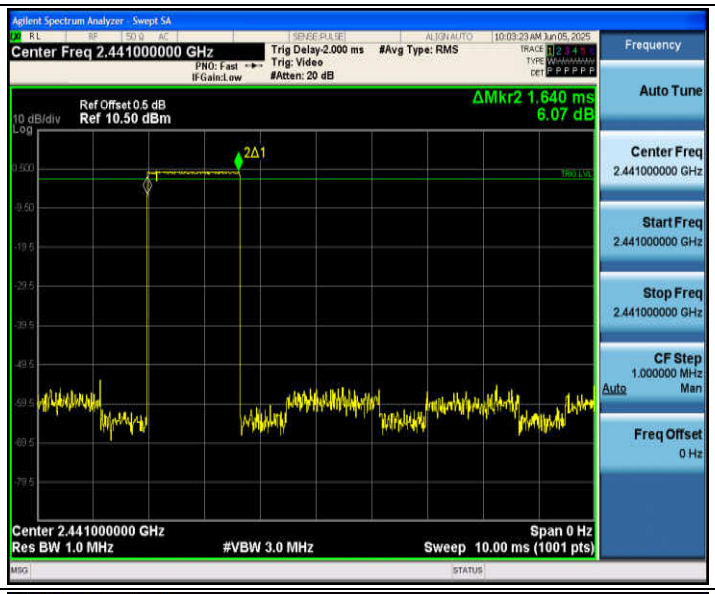
Appendix E: Time of occupancy

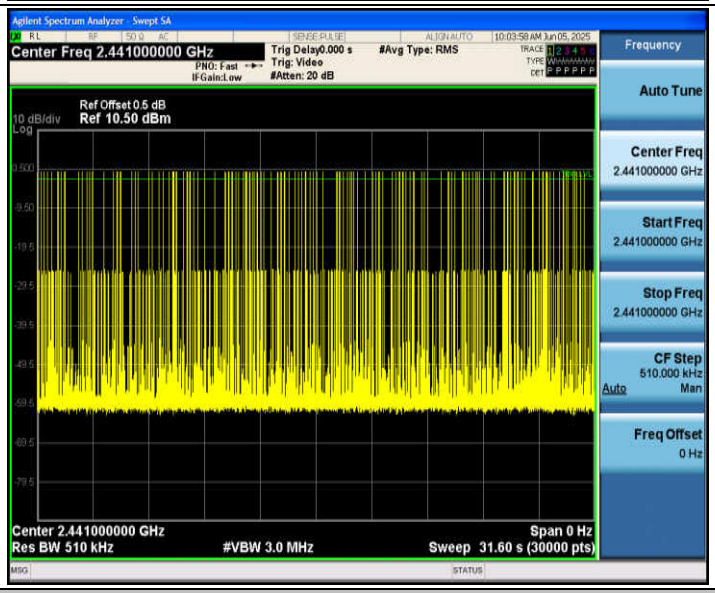
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.380	319	0.121	≤0.4	PASS
DH3	Ant1	Hop	1.640	152	0.249	≤0.4	PASS
DH5	Ant1	Hop	2.900	117	0.339	≤0.4	PASS
2DH1	Ant1	Hop	0.390	319	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.650	160	0.264	≤0.4	PASS
2DH5	Ant1	Hop	2.900	110	0.319	≤0.4	PASS
3DH1	Ant1	Hop	0.400	317	0.127	≤0.4	PASS
3DH3	Ant1	Hop	1.640	158	0.259	≤0.4	PASS
3DH5	Ant1	Hop	2.900	113	0.328	≤0.4	PASS

Test Graphs

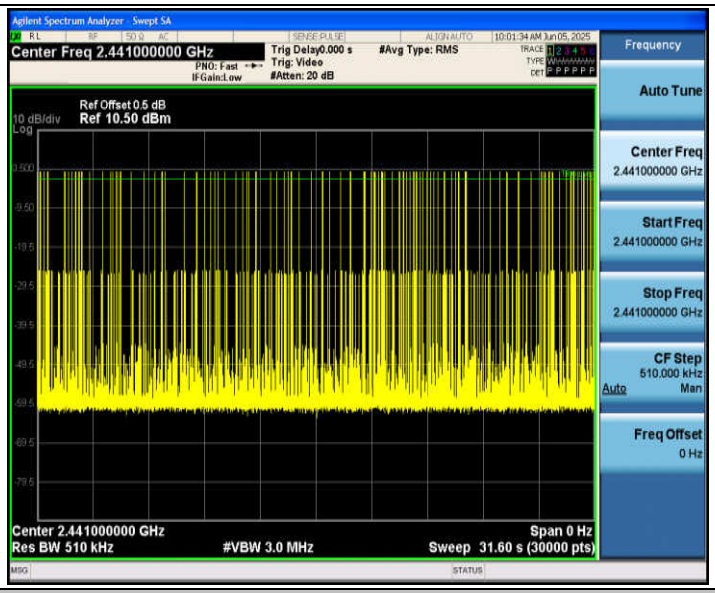
DH1_Ant1_Hop


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
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
ΔMkr2 1.640 ms
6.07 dB
Center 2.441000000 GHz
Span 0 Hz
Res BW 1.0 MHz
#VBW 3.0 MHz
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
Freq Offset
0 Hz

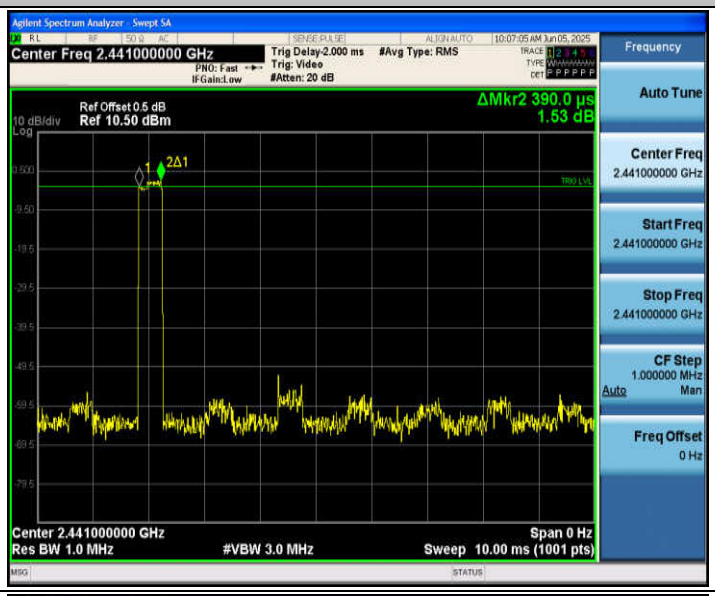

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay0.000 s
#Avg Type: RMS
Trig: Video
#Atten: 20 dB
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
Center 2.441000000 GHz
Span 0 Hz
Res BW 510 kHz
#VBW 3.0 MHz
Sweep 31.60 s (30000 pts)
Frequency
Auto Tune
Center Freq
2.441000000 GHz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

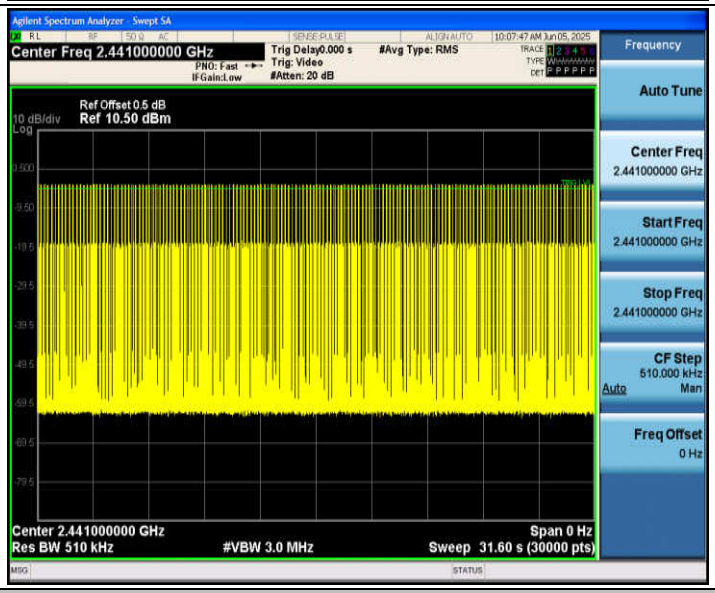
DH5_Ant1_Hop

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay-2.000 ms
#Avg Type: RMS
Trig: Video
#Atten: 20 dB
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
ΔMkr2 2.900 ms
22.11 dB
Center 2.441000000 GHz
Span 0 Hz
Res BW 1.0 MHz
#VBW 3.0 MHz
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
Freq Offset
0 Hz

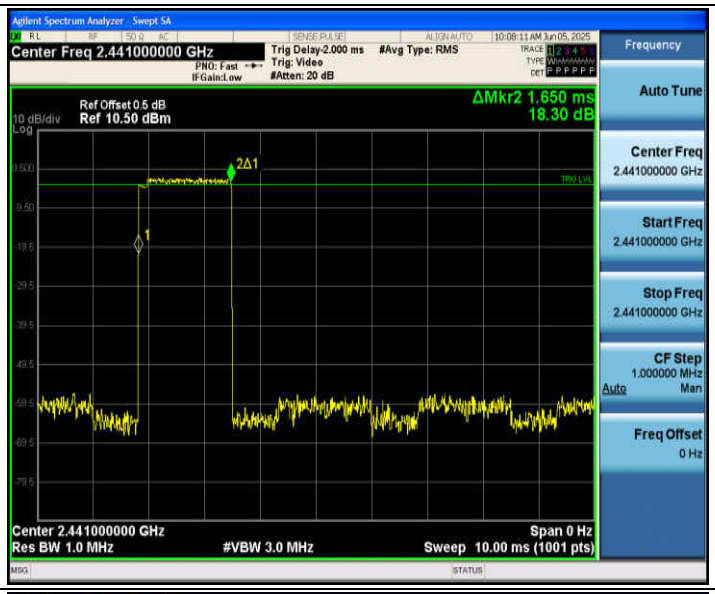


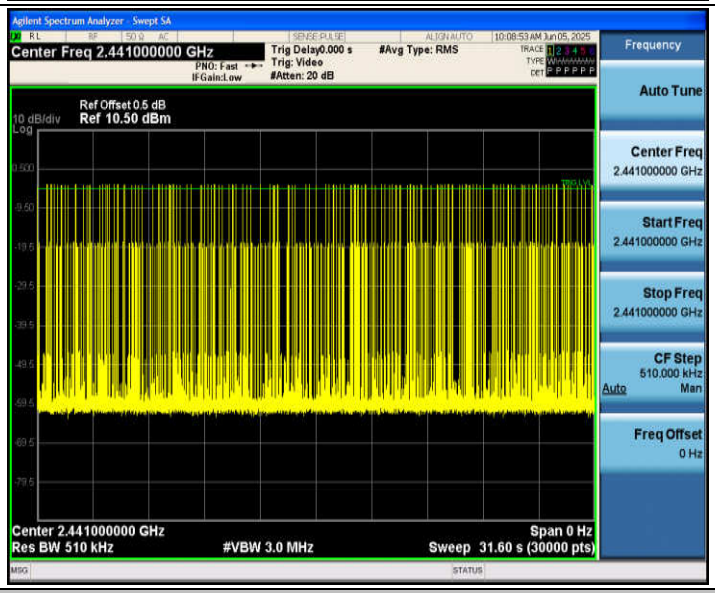
2DH1_Ant1_Hop



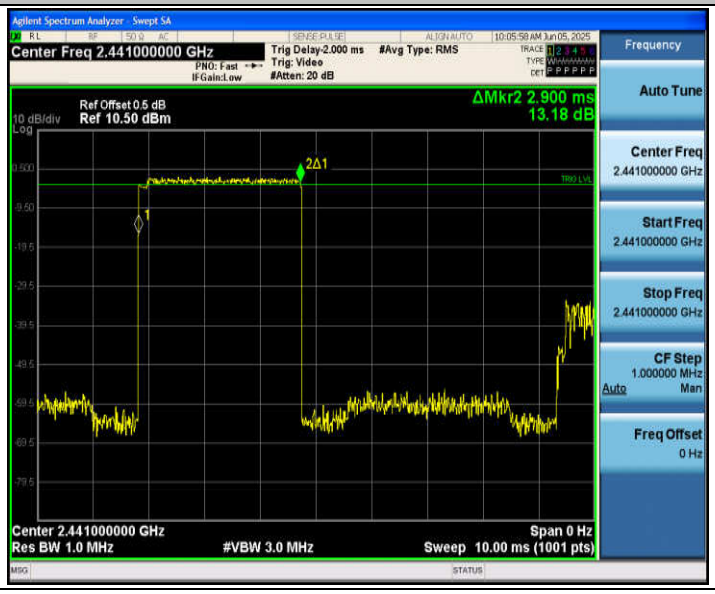


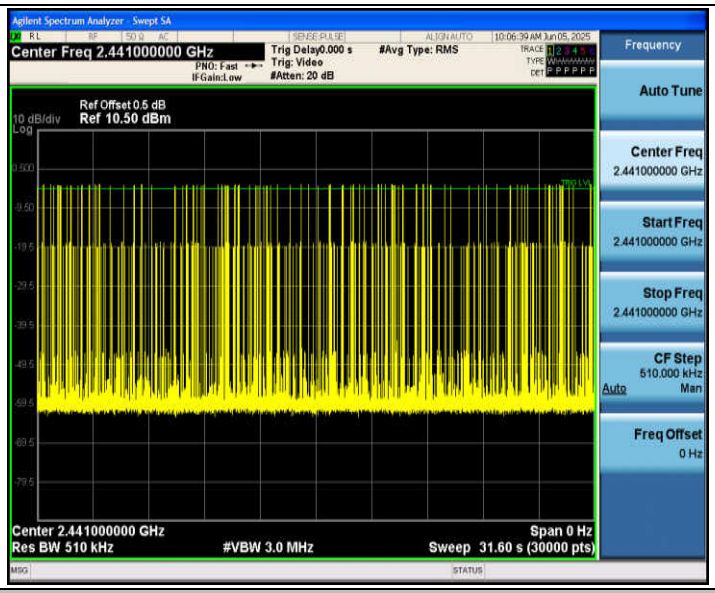
2DH3_Ant1_Hop



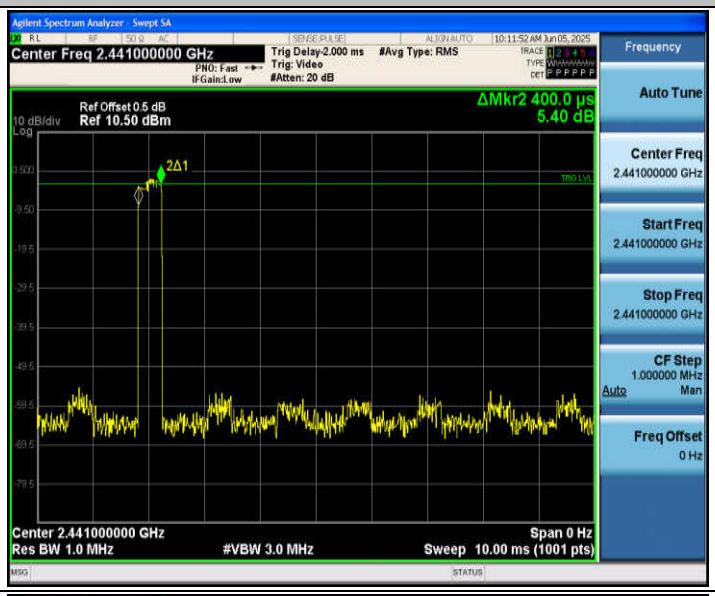


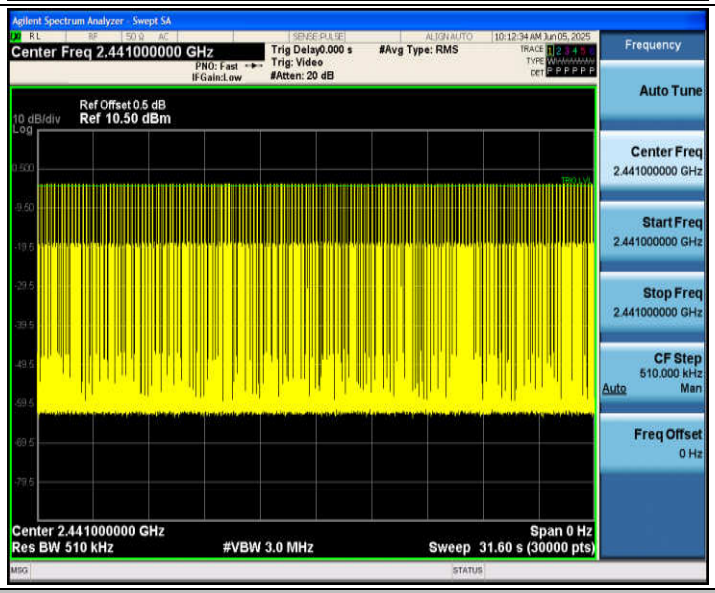
2DH5_Ant1_Hop



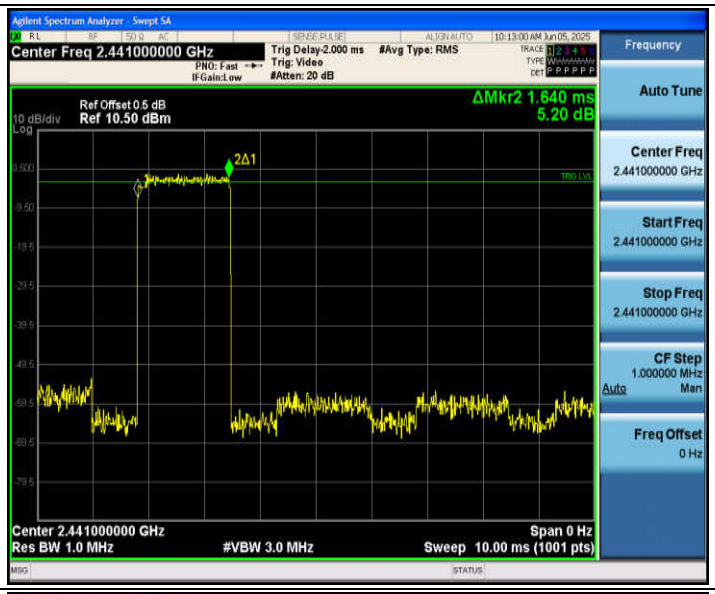


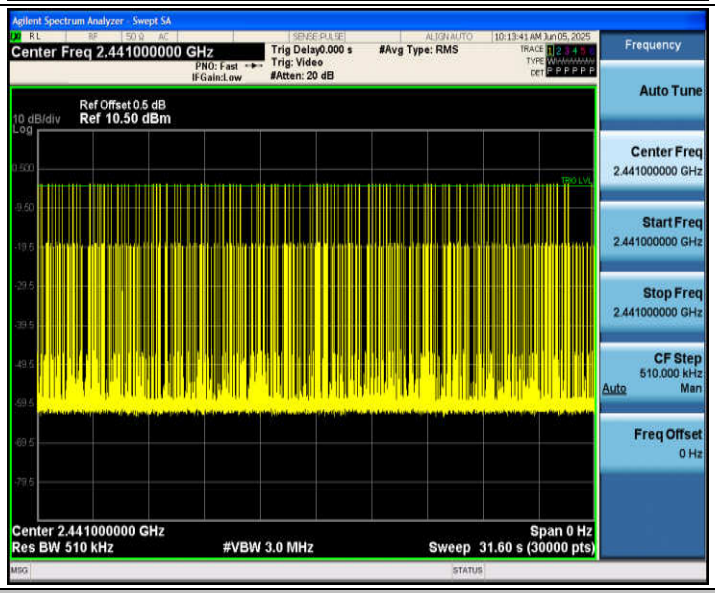
3DH1_Ant1_Hop



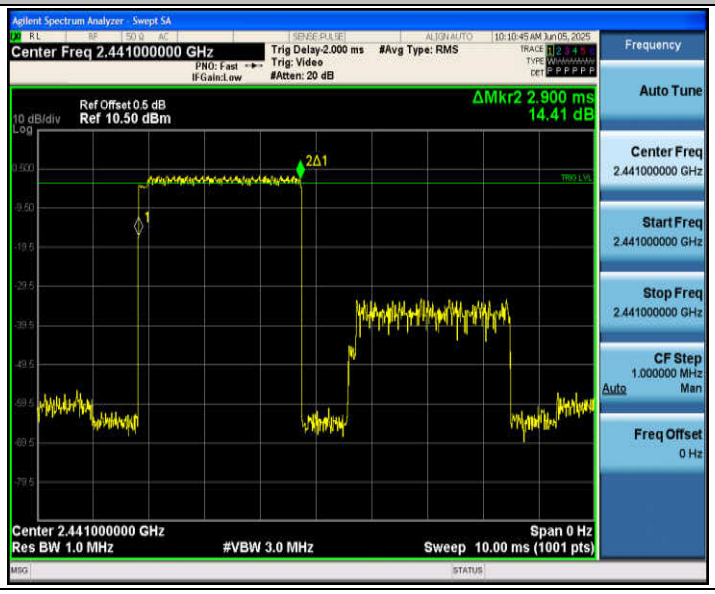


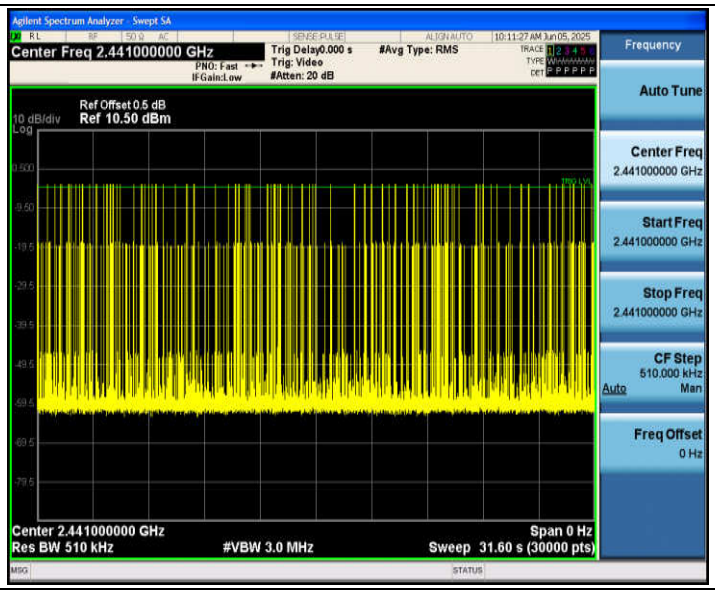
3DH3_Ant1_Hop





3DH5_Ant1_Hop



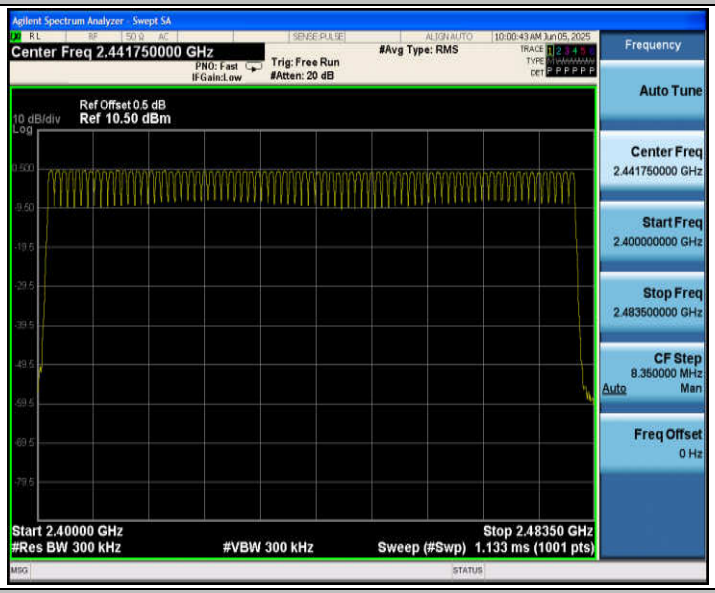
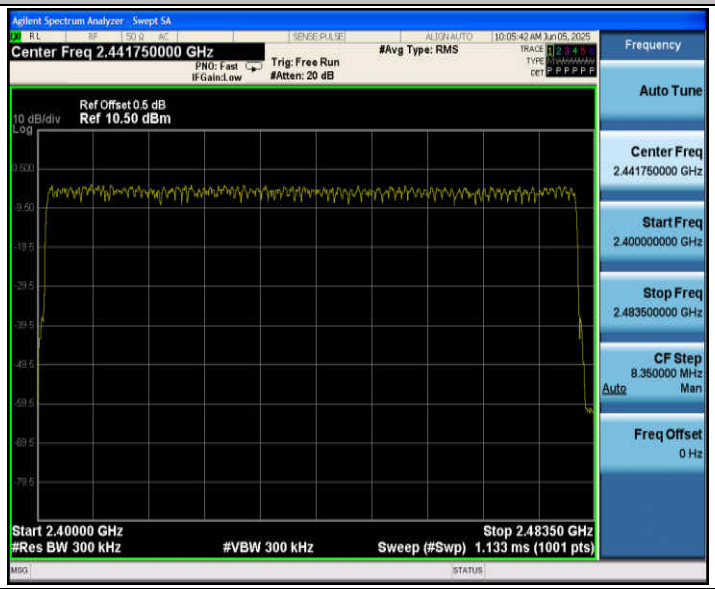

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay0.000 s
Trig: Video
#Atten: 20 dB
#Avg Type: RMS
10:11:27 AM Jun 05, 2025
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
Log
Center 2.441000000 GHz
Span 0 Hz
Res BW 510 kHz
#VBW 3.0 MHz
Sweep 31.60 s (30000 pts)
Frequency
Auto Tune
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

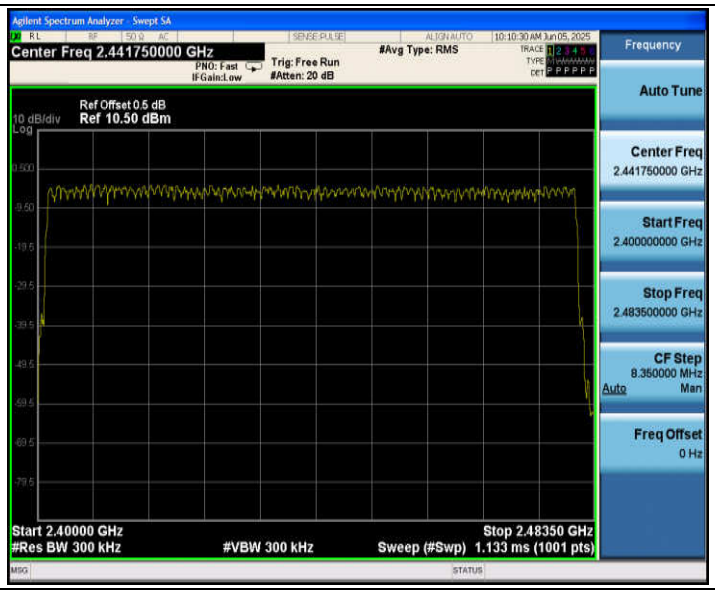
Appendix F: Number of hopping channels

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
10:10:30 AM Jun 05, 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
#Res BW 300 kHz
#VBW 300 kHz
Stop 2.48350 GHz
Sweep (#Swp) 1.133 ms (1001 pts)

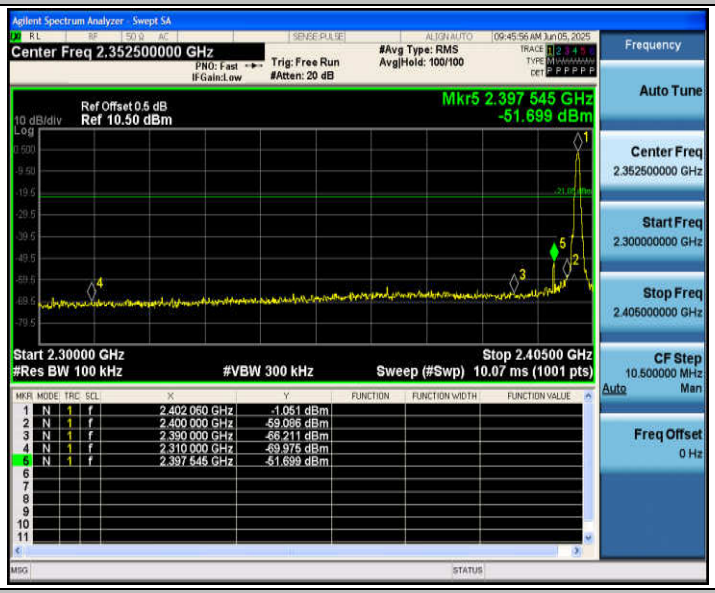
Appendix G: Band edge measurements

Test Result

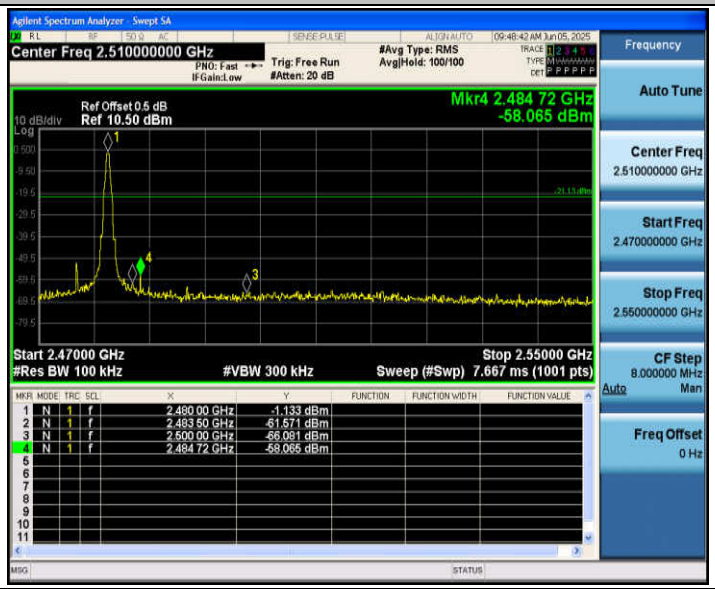
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-1.05	-51.7	≤-21.05	PASS
		High	2480	-1.13	-58.07	≤-21.13	PASS
		Low	Hop_2402	-0.67	-56.06	≤-20.67	PASS
		High	Hop_2480	-1.16	-63.51	≤-21.16	PASS
2DH5	Ant1	Low	2402	-4.35	-61.27	≤-24.35	PASS
		High	2480	-4.31	-63.21	≤-24.31	PASS
		Low	Hop_2402	-5.43	-62.13	≤-25.43	PASS
		High	Hop_2480	-4.68	-63.48	≤-24.68	PASS
3DH5	Ant1	Low	2402	-4.39	-59.4	≤-24.39	PASS
		High	2480	-5.31	-56.25	≤-25.31	PASS
		Low	Hop_2402	-4.21	-62.64	≤-24.21	PASS
		High	Hop_2480	-4.49	-63.84	≤-24.49	PASS

Test Graphs

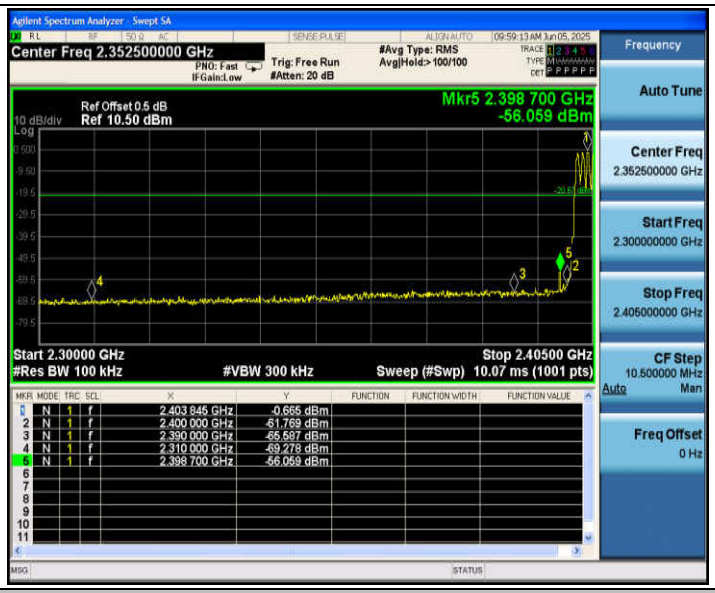
DH5_Ant1_Low_2402



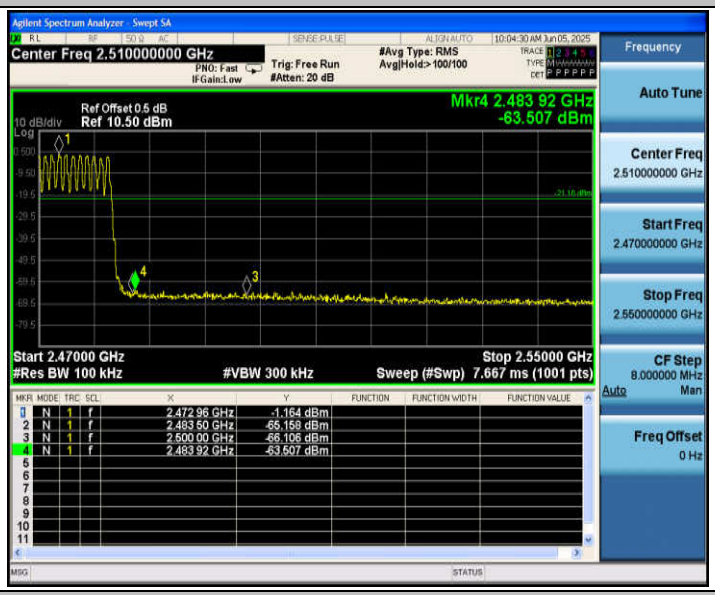
DH5_Ant1_High_2480



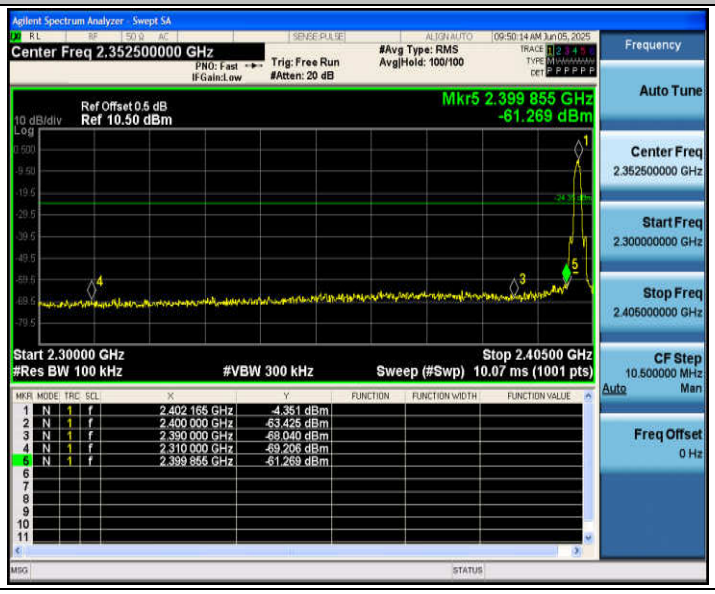
DH5_Ant1_Low_Hop_2402



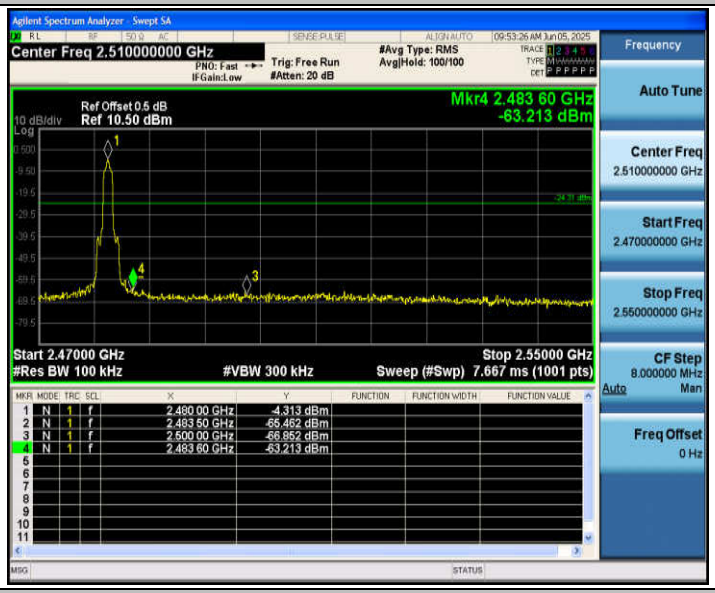
DH5_Ant1_High_Hop_2480



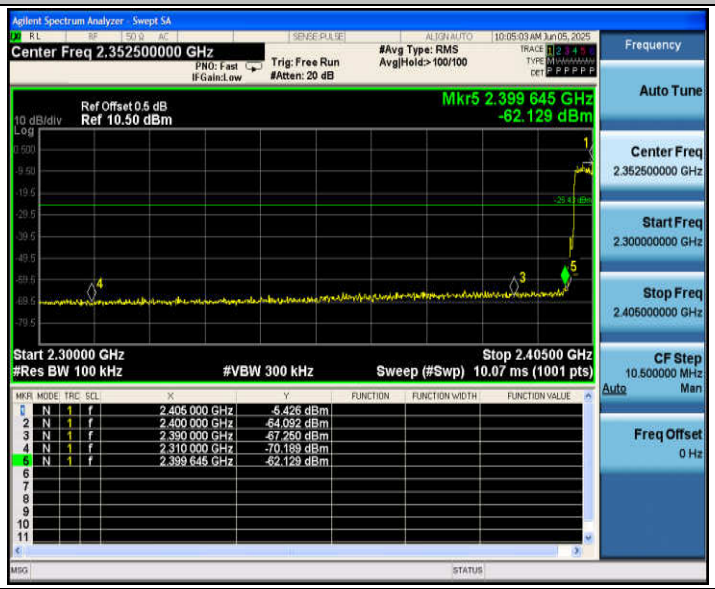
2DH5_Ant1_Low_2402



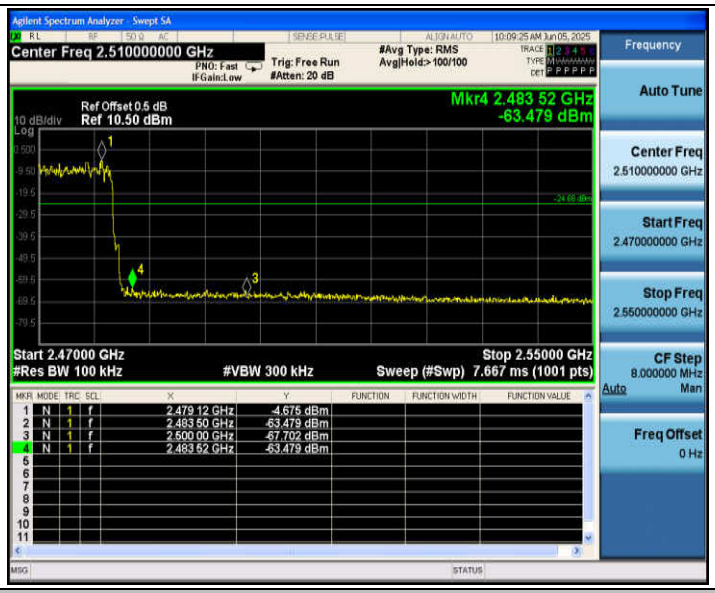
2DH5_Ant1_High_2480



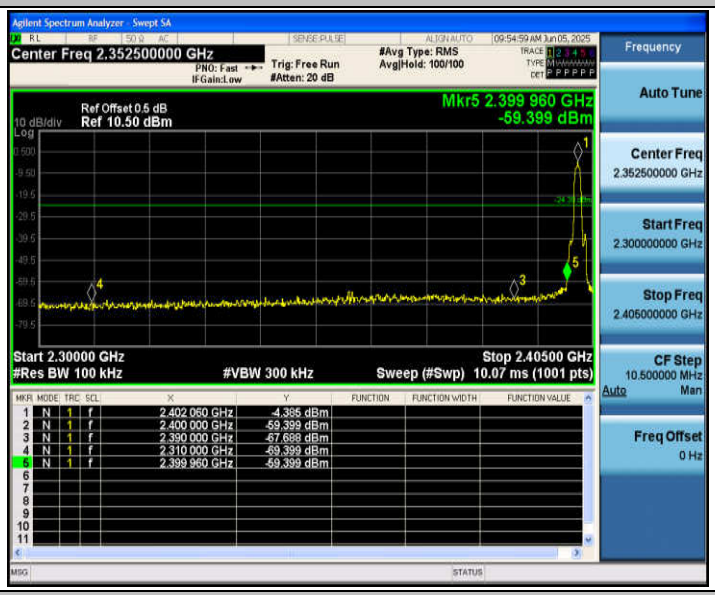
2DH5_Ant1_Low_Hop_2402



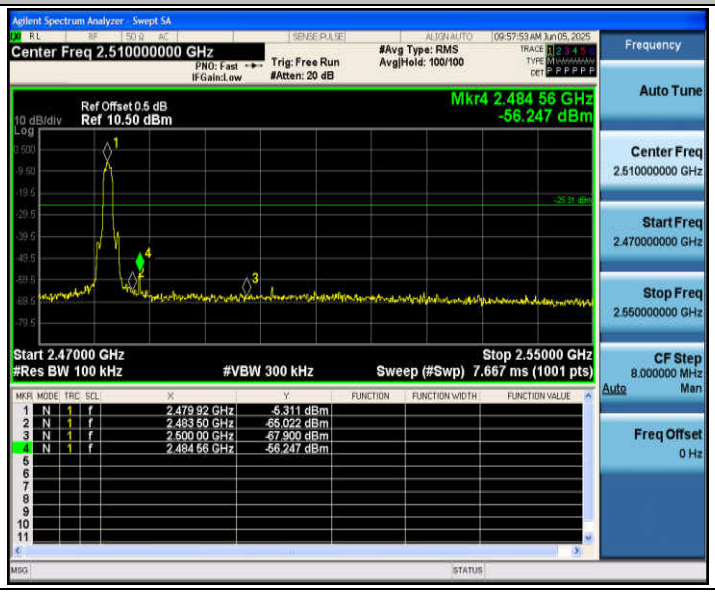
2DH5_Ant1_High_Hop_2480



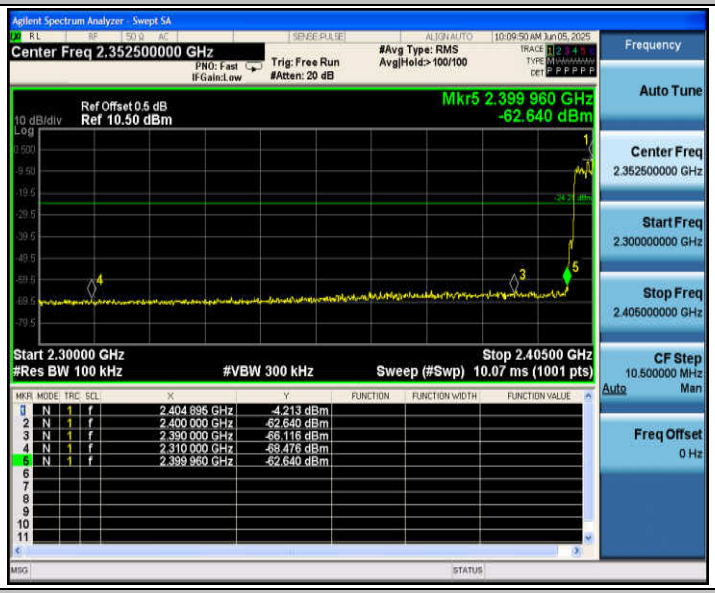
3DH5_Ant1_Low_2402



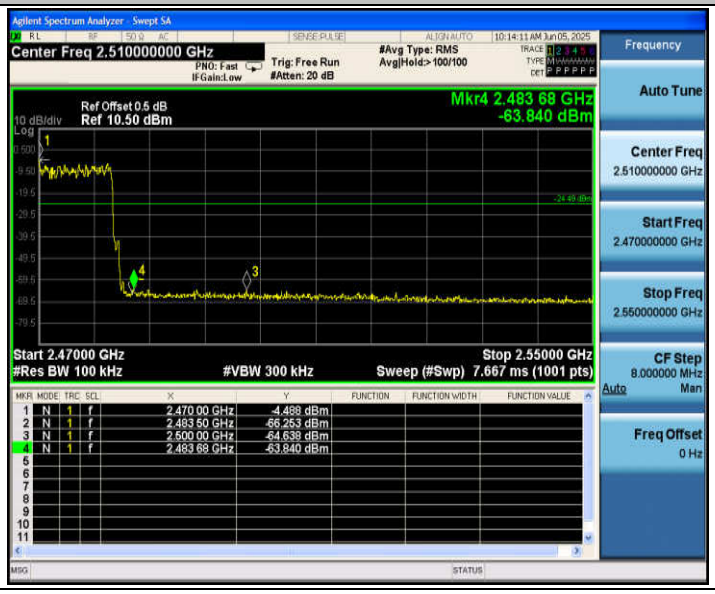
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



Appendix H: Conducted Spurious Emission

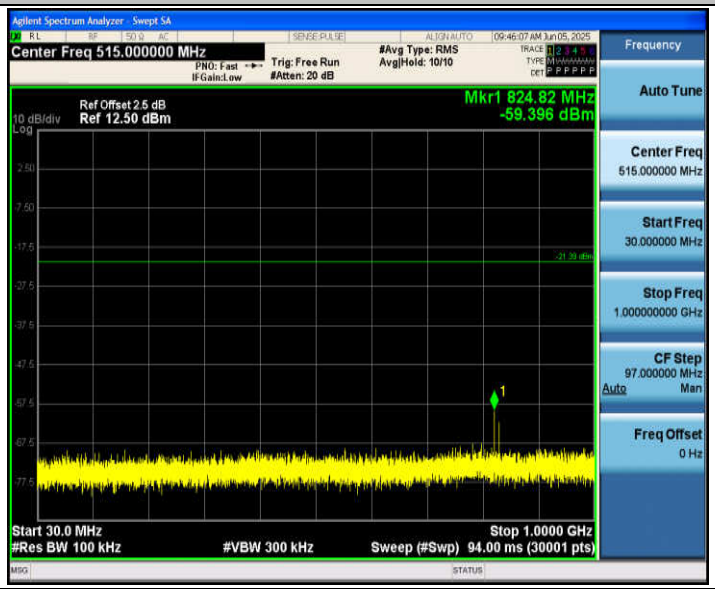
Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.39	-1.39	---	PASS
			30~1000	-1.39	-59.4	≤-21.39	PASS
			1000~26500	-1.39	-44.22	≤-21.39	PASS
		2441	Reference	-1.22	-1.22	---	PASS
			30~1000	-1.22	-61.21	≤-21.22	PASS
			1000~26500	-1.22	-44.44	≤-21.22	PASS
		2480	Reference	-1.83	-1.83	---	PASS
			30~1000	-1.83	-58.05	≤-21.83	PASS
			1000~26500	-1.83	-44.25	≤-21.83	PASS
2DH5	Ant1	2402	Reference	-4.32	-4.32	---	PASS
			30~1000	-4.32	-49.69	≤-24.32	PASS
			1000~26500	-4.32	-48.87	≤-24.32	PASS
		2441	Reference	-5.01	-5.01	---	PASS
			30~1000	-5.01	-68.16	≤-25.01	PASS
			1000~26500	-5.01	-44.59	≤-25.01	PASS
		2480	Reference	-5.24	-5.24	---	PASS
			30~1000	-5.24	-67.98	≤-25.24	PASS
			1000~26500	-5.24	-51.69	≤-25.24	PASS
3DH5	Ant1	2402	Reference	-6.41	-6.41	---	PASS
			30~1000	-6.41	-67.27	≤-26.41	PASS
			1000~26500	-6.41	-48.71	≤-26.41	PASS
		2441	Reference	-4.93	-4.93	---	PASS
			30~1000	-4.93	-68.38	≤-24.93	PASS
			1000~26500	-4.93	-49.13	≤-24.93	PASS
		2480	Reference	-5.86	-5.86	---	PASS
			30~1000	-5.86	-53.6	≤-25.86	PASS
			1000~26500	-5.86	-51.38	≤-25.86	PASS

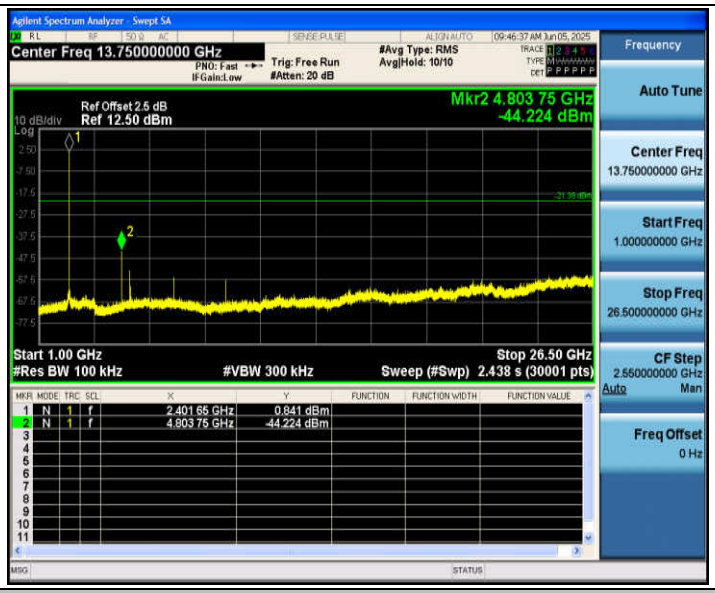
Test Graphs

DH5_Ant1_2402_0~Reference

DH5_Ant1_2402_30~1000

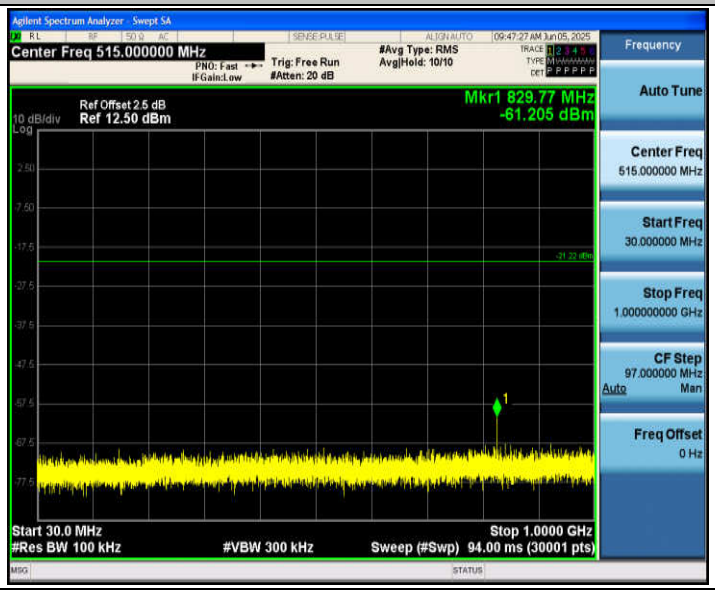


DH5_Ant1_2402_1000~26500

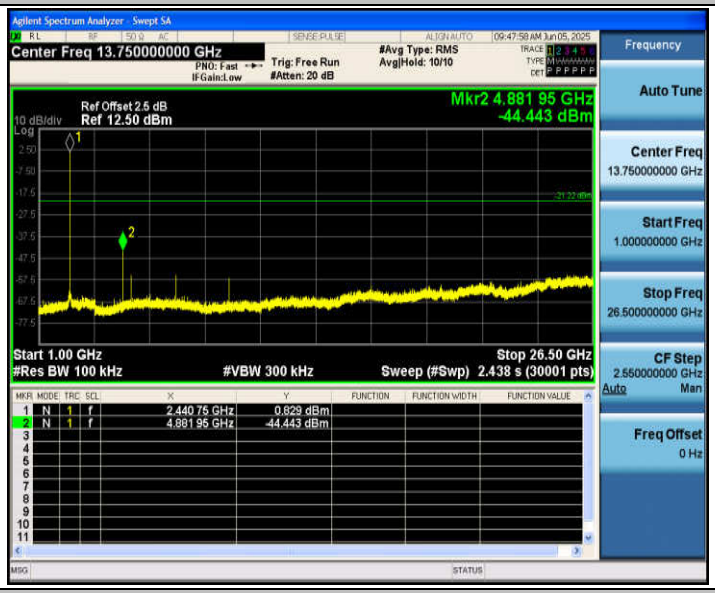


DH5_Ant1_2441_0~Reference

DH5_Ant1_2441_30~1000

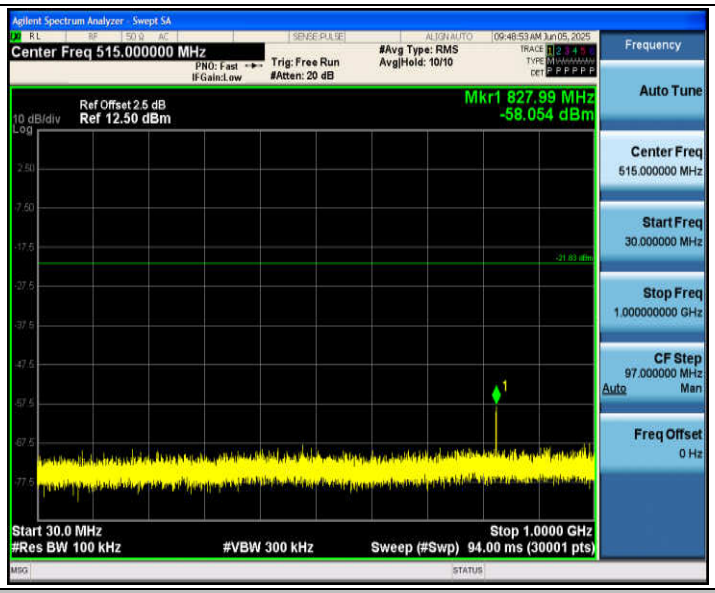


DH5_Ant1_2441_1000~26500

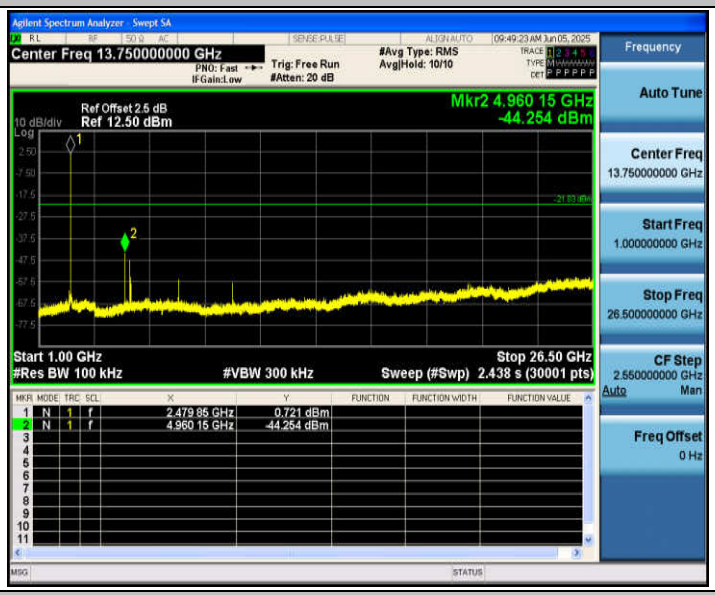


DH5_Ant1_2480_0~Reference

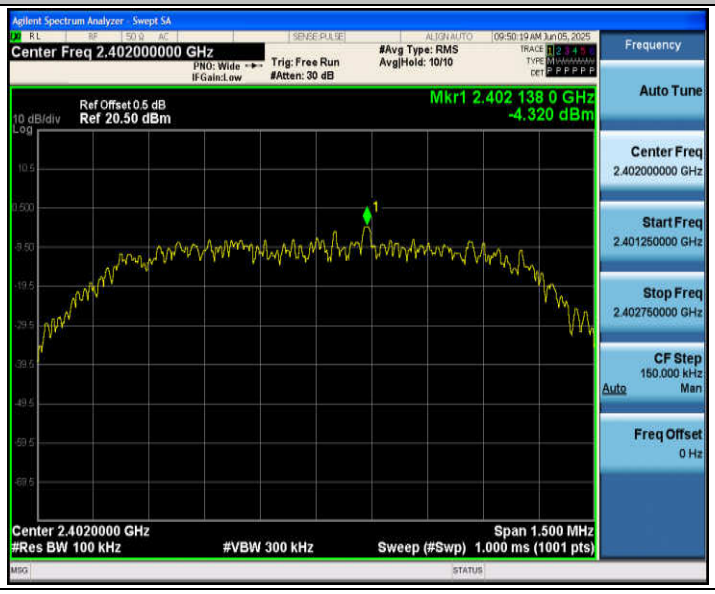
DH5_Ant1_2480_30~1000



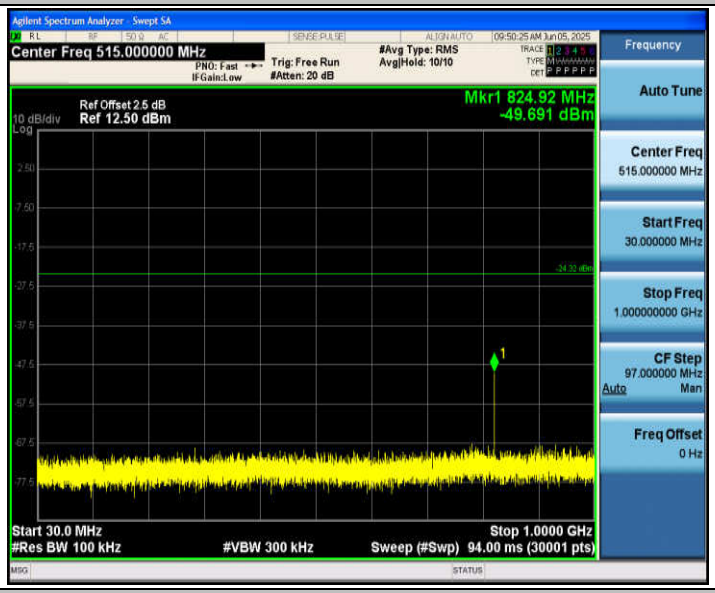
DH5_Ant1_2480_1000~26500



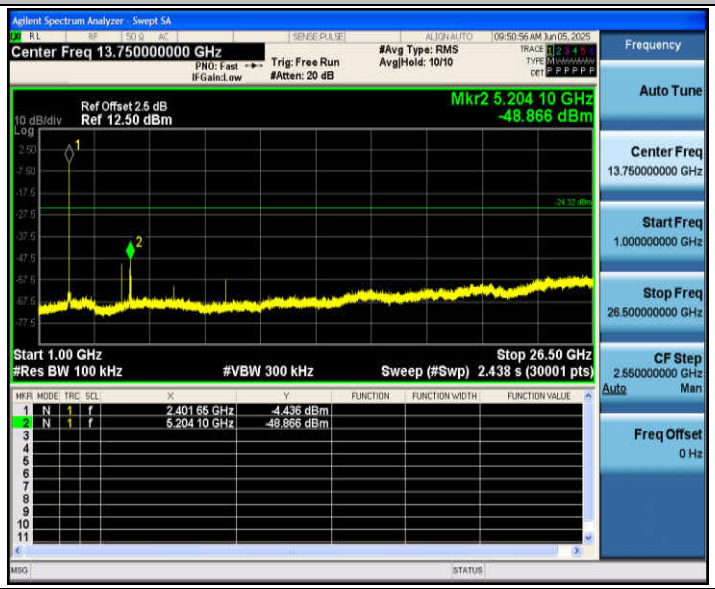
2DH5_Ant1_2402_0~Reference



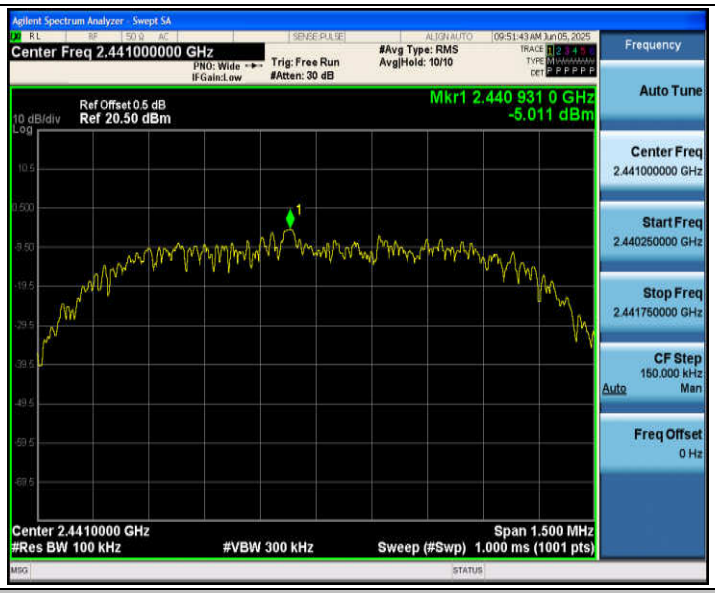
2DH5_Ant1_2402_30~1000



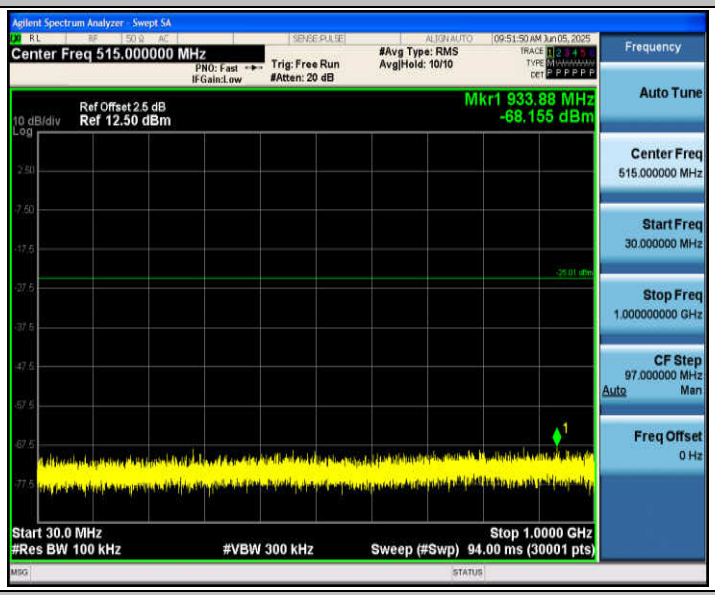
2DH5_Ant1_2402_1000~26500



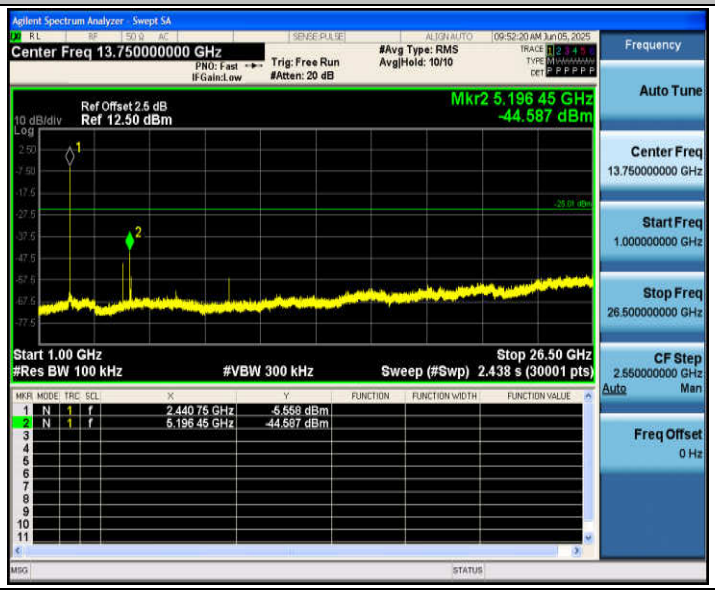
2DH5_Ant1_2441_0~Reference



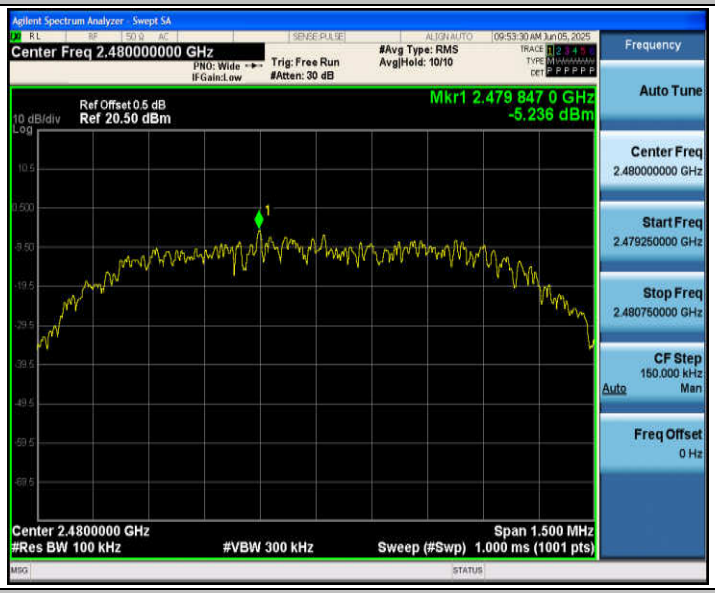
2DH5_Ant1_2441_30~1000



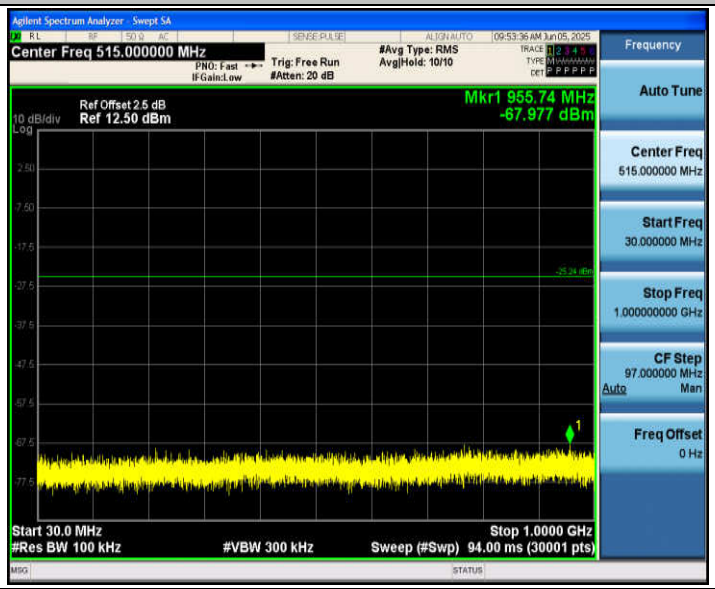
2DH5_Ant1_2441_1000~26500



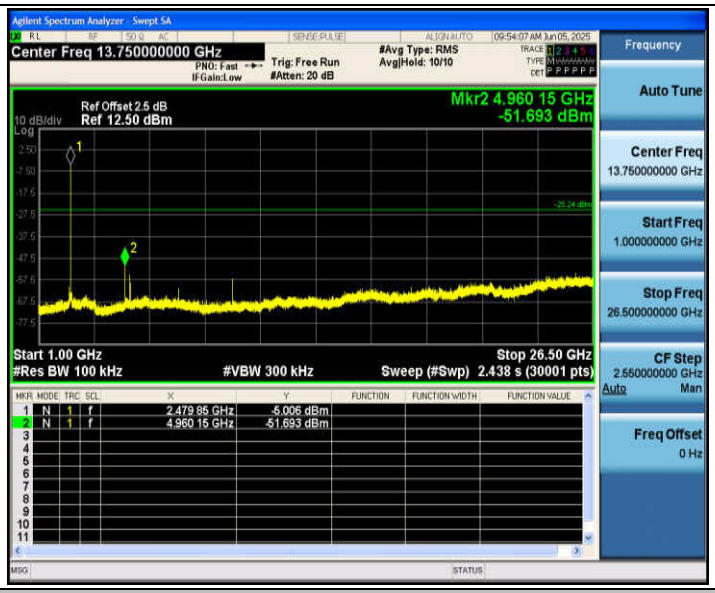
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000

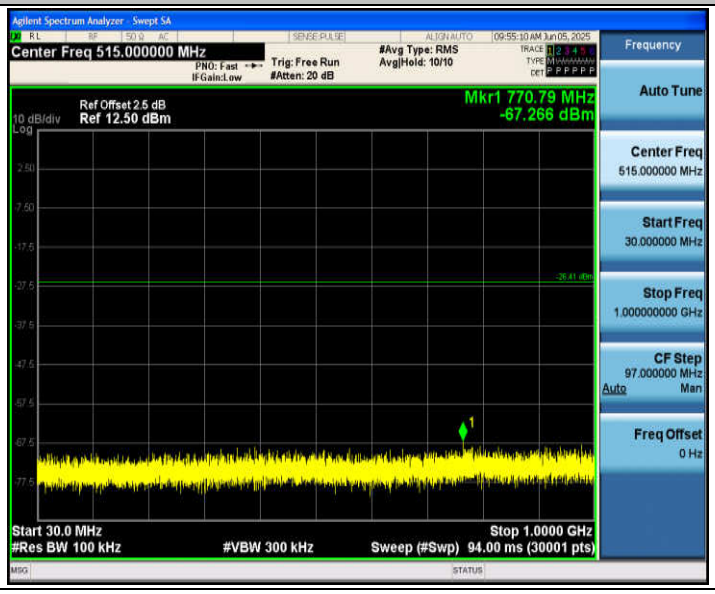


2DH5_Ant1_2480_1000~26500

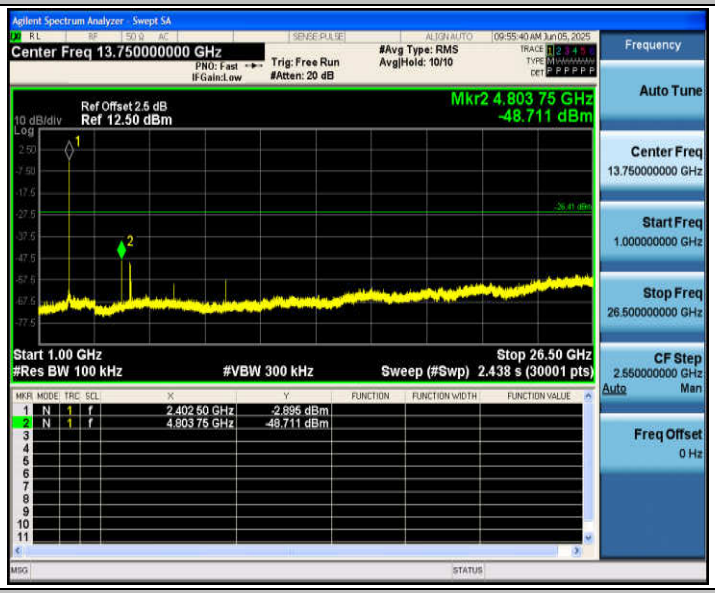


3DH5_Ant1_2402_0~Reference

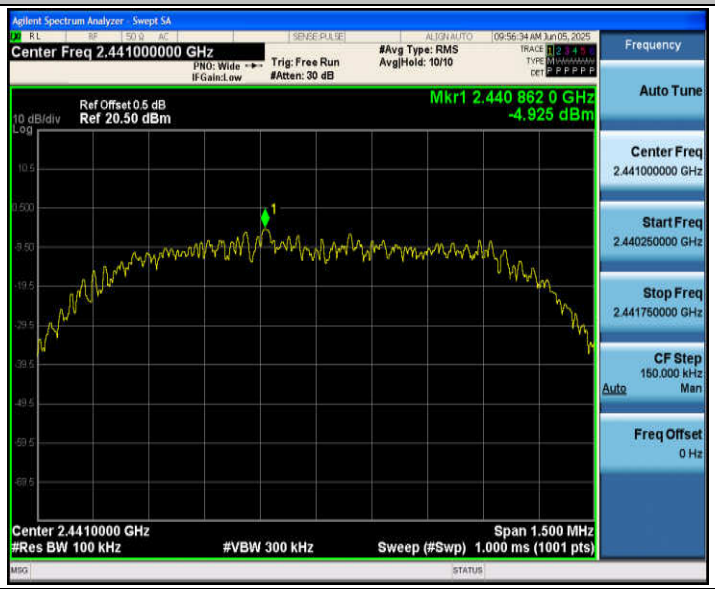
3DH5_Ant1_2402_30~1000



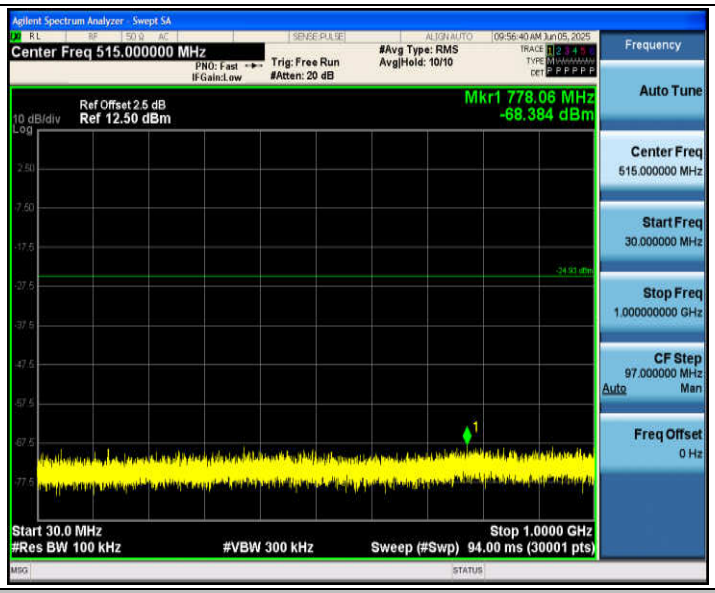
3DH5_Ant1_2402_1000~26500



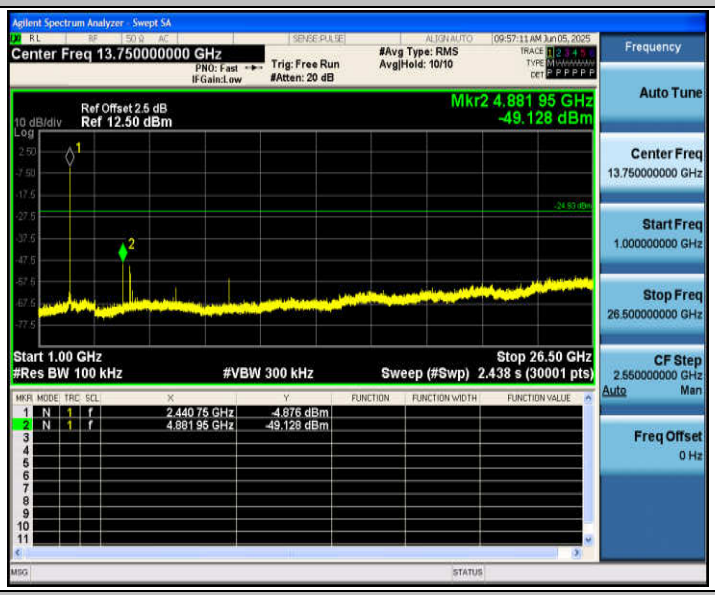
3DH5_Ant1_2441_0~Reference



3DH5_Ant1_2441_30~1000

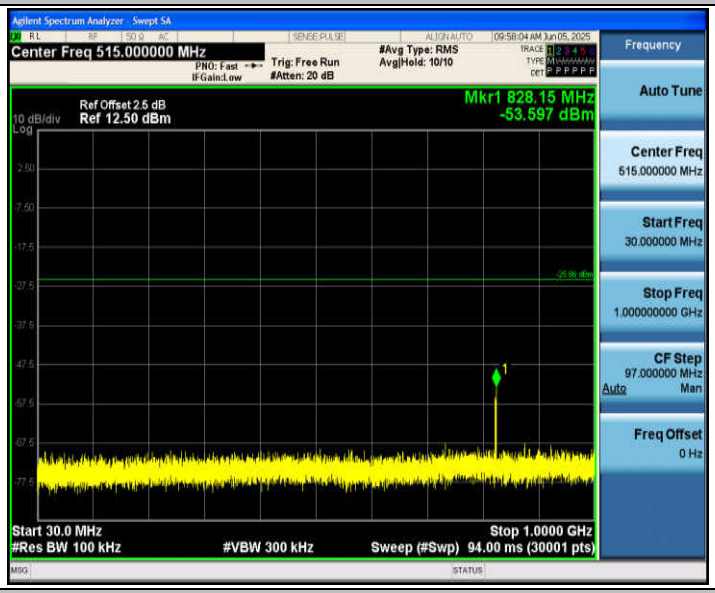


3DH5_Ant1_2441_1000~26500

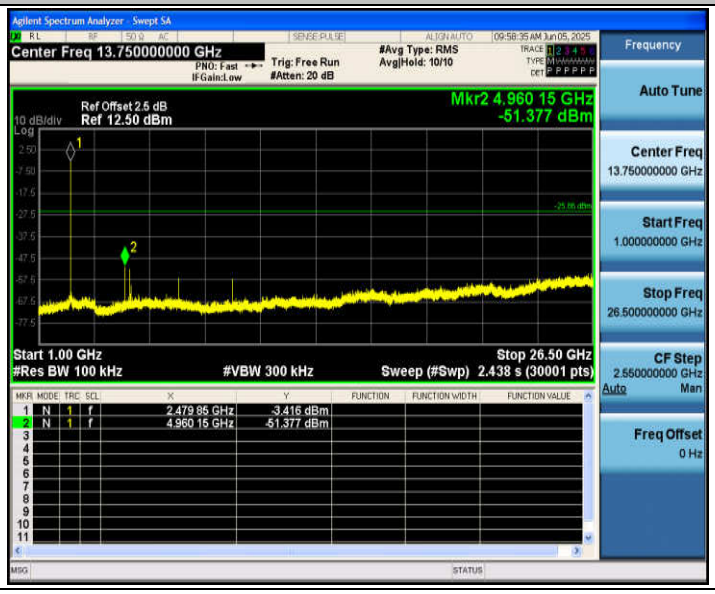


3DH5_Ant1_2480_0~Reference

3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500



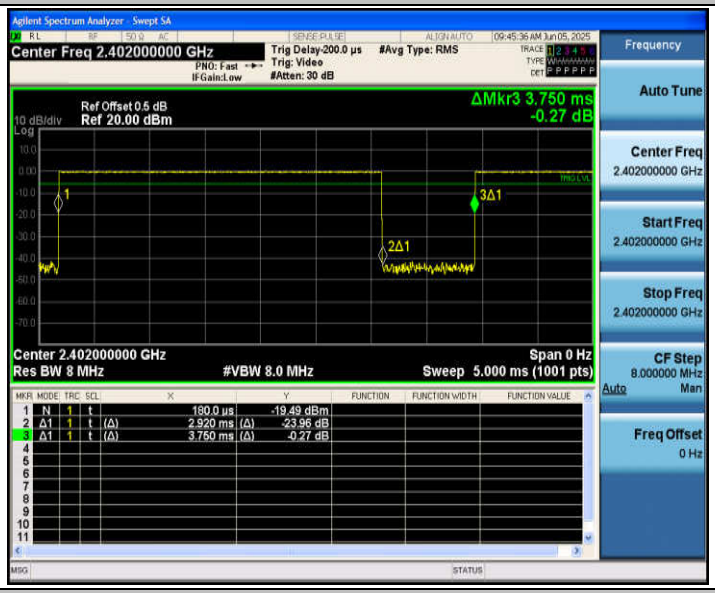
Appendix I: Duty Cycle

Test Result

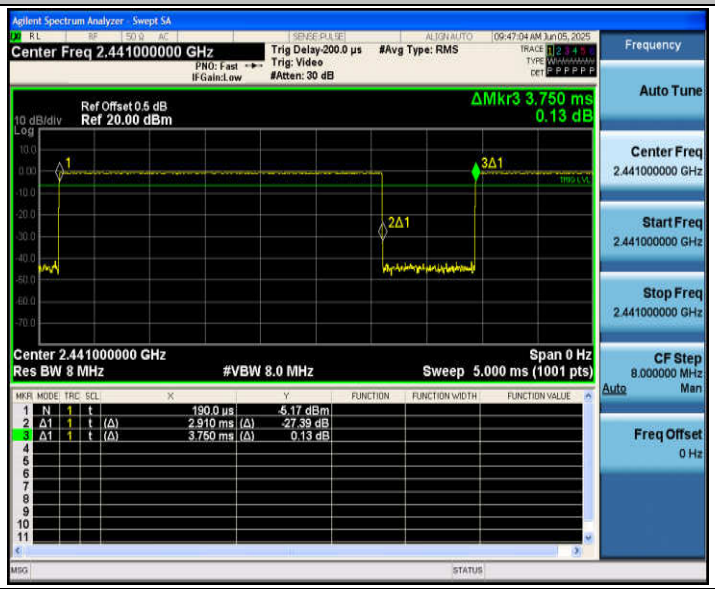
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.92	3.75	77.87	1.09	---	---
		2441	2.91	3.75	77.60	1.10	---	---
		2480	2.91	3.75	77.60	1.10	---	---
2DH5	Ant1	2402	2.91	3.75	77.60	1.10	---	---
		2441	2.92	3.75	77.87	1.09	---	---
		2480	2.92	3.75	77.87	1.09	---	---
3DH5	Ant1	2402	2.92	3.75	77.87	1.09	---	---
		2441	2.92	3.75	77.87	1.09	---	---
		2480	2.92	3.75	77.87	1.09	---	---

Test Graphs

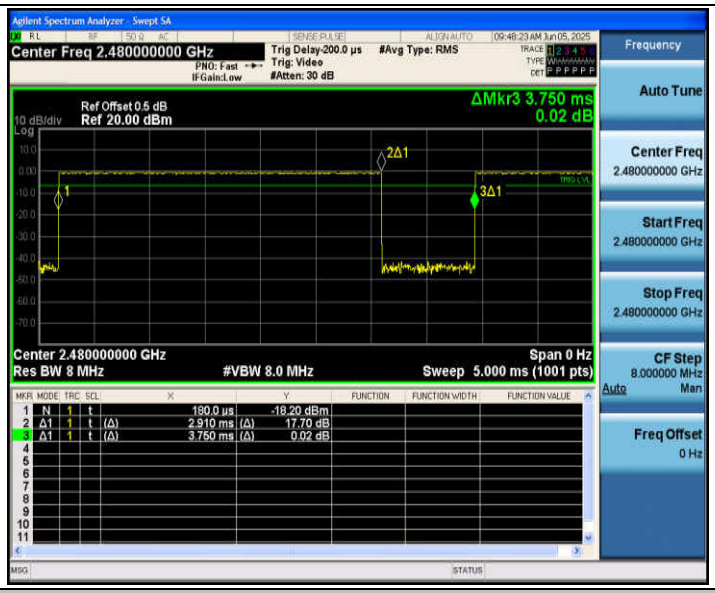
DH5_Ant1_2402



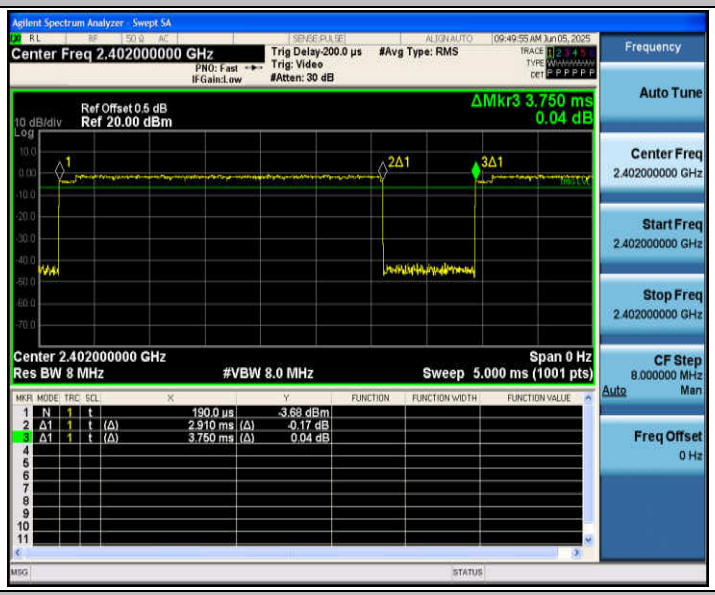
DH5_Ant1_2441



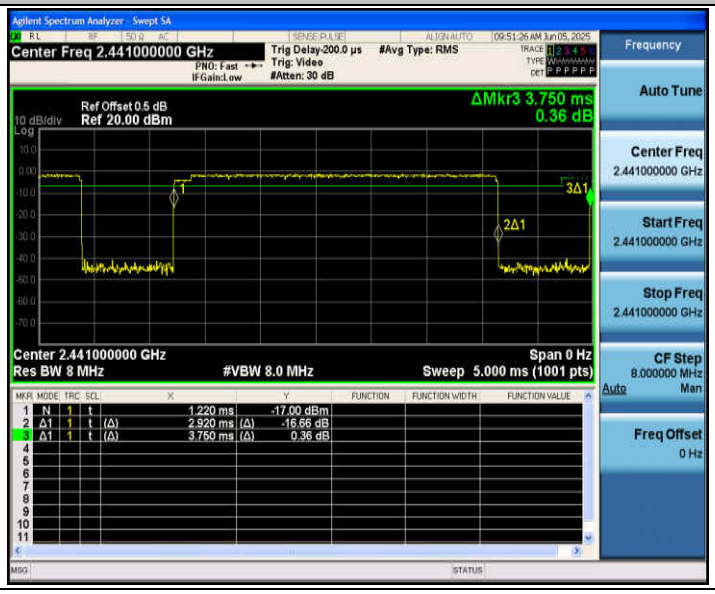
DH5_Ant1_2480



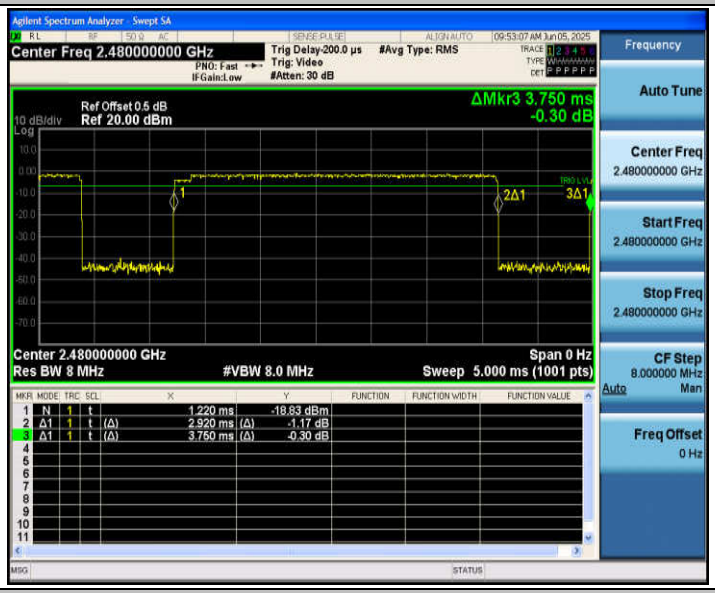
2DH5_Ant1_2402



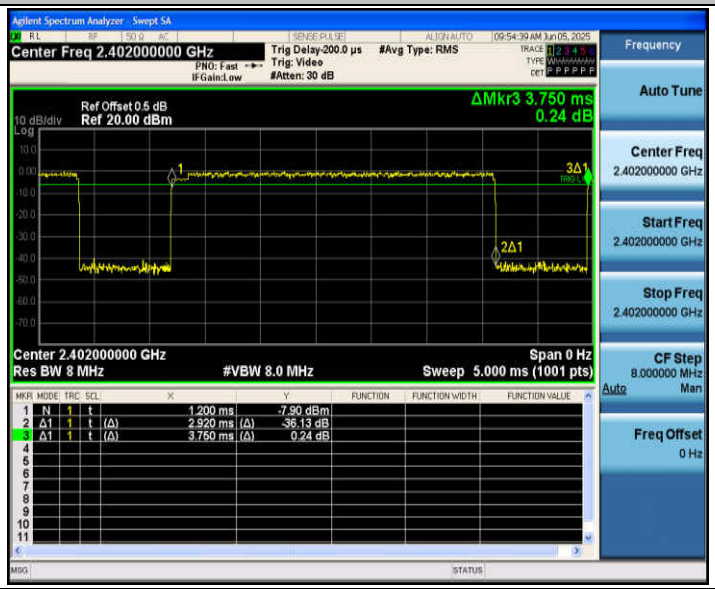
2DH5_Ant1_2441



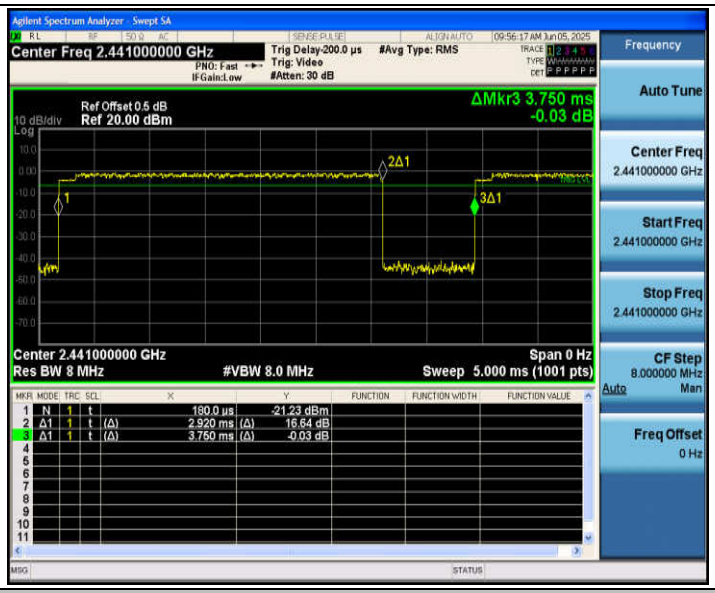
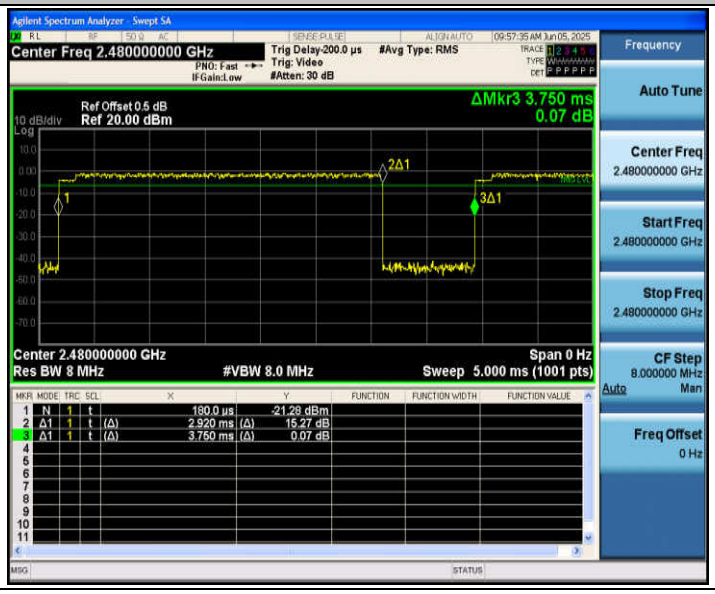
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480