Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.957	2401.535	2402.492	---	---
DH5	Ant1	2441	0.948	2440.529	2441.477	---	---
DH5	Ant1	2480	0.954	2479.532	2480.486	---	---
2DH5	Ant1	2402	1.359	2401.319	2402.678	---	---
2DH5	Ant1	2441	1.341	2440.325	2441.666	---	---
2DH5	Ant1	2480	1.347	2479.322	2480.669	---	---
3DH5	Ant1	2402	1.311	2401.343	2402.654	---	---
3DH5	Ant1	2441	1.314	2440.340	2441.654	---	---
3DH5	Ant1	2480	1.341	2479.319	2480.660	---	---

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

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 20 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS
Trig: Free Run
Frequency
Center Frequency
2.480000000 GHz
Settings
Span
3.00000000 MHz
Swept Span
Zero Span
Full Span
Start Freq
2.478500000 GHz
Stop Freq
2.481500000 GHz
AUTO TUNE
CF Step
300.000 kHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Local
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 18.90 dB
Ref Level 20.00 dBm
ΔMkr3 1.341 MHz
-0.27 dB
DL1 -20.23 dBm
Center 2.480000 GHz
#Res BW 30 kHz
#Video BW 100 kHz
Span 3.000 MHz
Sweep 3.20 ms (1001 pts)
5 Marker Table
Mode Trace Scale X Y Function Function Width Function Value
1 N 1 f 2.479 319 GHz -19.58 dBm
2 N 1 f 2.479 988 GHz -0.2279 dBm
3 Δ1 1 f (Δ) 1.341 MHz (Δ) -0.2658 dB
Apr 09, 2025
5:48:32 PM

Appendix B: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	4.22	≤20.97	PASS
DH5	Ant1	2441	3.97	≤20.97	PASS
DH5	Ant1	2480	3.65	≤20.97	PASS
2DH5	Ant1	2402	5.98	≤20.97	PASS
2DH5	Ant1	2441	5.57	≤20.97	PASS
2DH5	Ant1	2480	5.37	≤20.97	PASS
3DH5	Ant1	2402	6.67	≤20.97	PASS
3DH5	Ant1	2441	6.00	≤20.97	PASS
3DH5	Ant1	2480	5.64	≤20.97	PASS

Test Graphs

DH5-Ant1-2402-PASS

DH5-Ant1-2441-PASS

DH5-Ant1-2480-PASS

2DH5-Ant1-2402-PASS

2DH5-Ant1-2441-PASS

2DH5-Ant1-2480-PASS

3DH5-Ant1-2402-PASS

3DH5-Ant1-2441-PASS

3DH5-Ant1-2480-PASS

Appendix C: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.074	≥0.957	PASS
DH5	Ant1	2441	1.02	≥0.957	PASS
DH5	Ant1	2480	1.137	≥0.957	PASS
2DH5	Ant1	2402	1.152	≥0.906	PASS
2DH5	Ant1	2441	0.957	≥0.906	PASS
2DH5	Ant1	2480	1.137	≥0.906	PASS
3DH5	Ant1	2402	0.96	≥0.894	PASS
3DH5	Ant1	2441	1.125	≥0.894	PASS
3DH5	Ant1	2480	1.158	≥0.894	PASS

Test Graphs

DH5-Ant1-2402-PASS

DH5-Ant1-2441-PASS

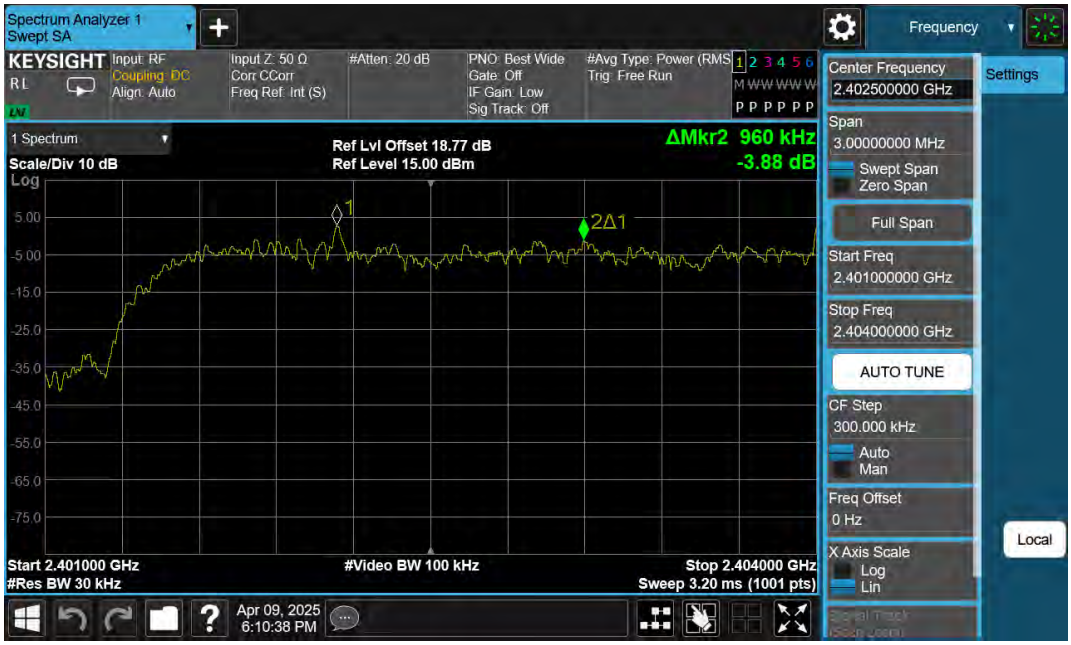
DH5-Ant1-2480-PASS

2DH5-Ant1-2402-PASS

2DH5-Ant1-2441-PASS

2DH5-Ant1-2480-PASS

3DH5-Ant1-2402-PASS



3DH5-Ant1-2441-PASS

3DH5-Ant1-2480-PASS

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 20 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 18.90 dB
Ref Level 15.00 dBm
ΔMkr2 1.158 MHz
-0.54 dB
Log
5.00
-5.00
-15.0
-25.0
-35.0
-45.0
-55.0
-65.0
-75.0
1
2Δ1
Start 2.478000 GHz
#Res BW 30 kHz
#Video BW 100 kHz
Stop 2.481000 GHz
Sweep 3.20 ms (1001 pts)
Apr 09, 2025
6:11:27 PM
Frequency
Center Frequency
2.479500000 GHz
Span
3.00000000 MHz
Swept Span
Zero Span
Full Span
Start Freq
2.478000000 GHz
Stop Freq
2.481000000 GHz
AUTO TUNE
CF Step
300.000 kHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Settings
Local

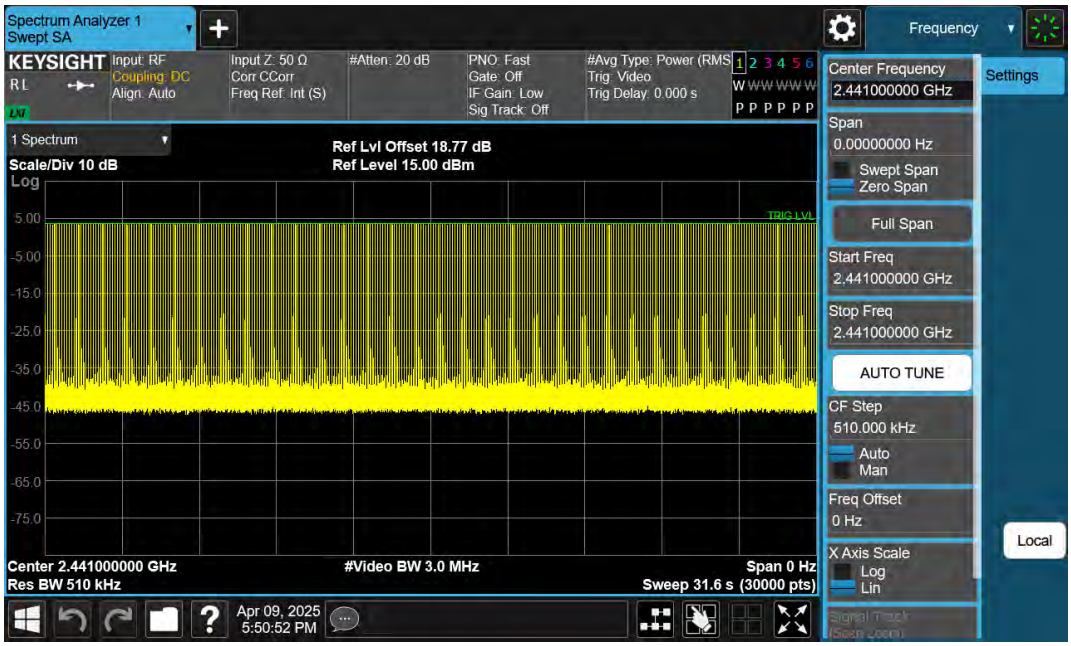
Appendix D: Time of occupancy

Test Result

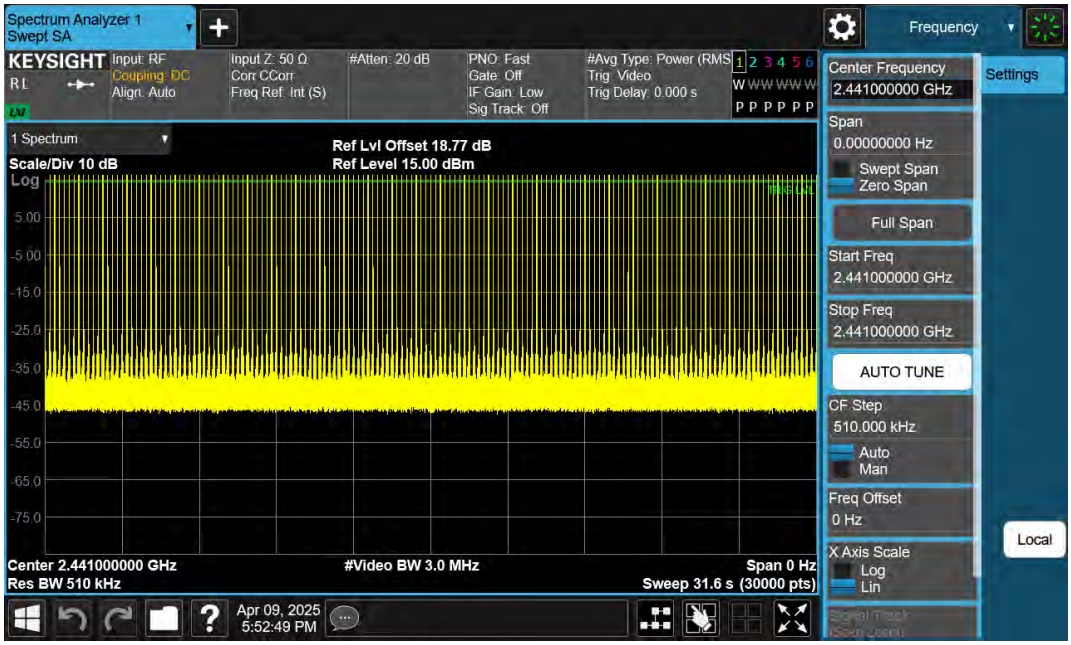
TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.383	319	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.620	159	0.258	≤0.4	PASS
DH5	Ant1	Hop	2.870	107	0.307	≤0.4	PASS
2DH1	Ant1	Hop	0.395	319	0.126	≤0.4	PASS
2DH3	Ant1	Hop	1.630	159	0.259	≤0.4	PASS
2DH5	Ant1	Hop	2.880	107	0.308	≤0.4	PASS
3DH1	Ant1	Hop	0.395	319	0.126	≤0.4	PASS
3DH3	Ant1	Hop	1.630	159	0.259	≤0.4	PASS
3DH5	Ant1	Hop	2.880	107	0.308	≤0.4	PASS

Test Graphs

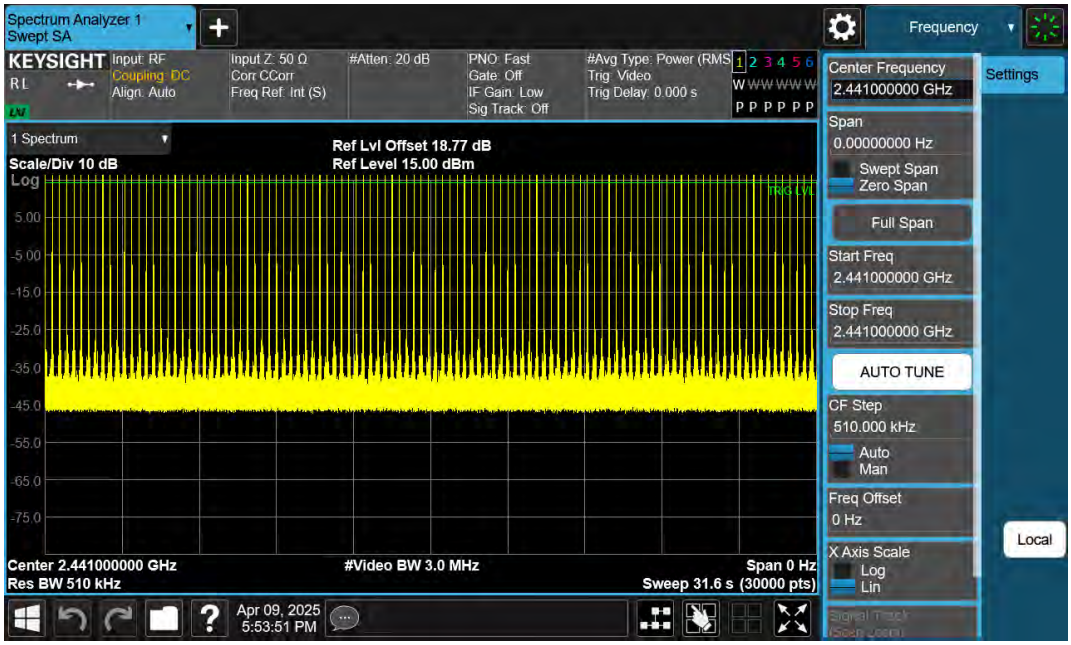
DH1-Ant1-Hop-PASS



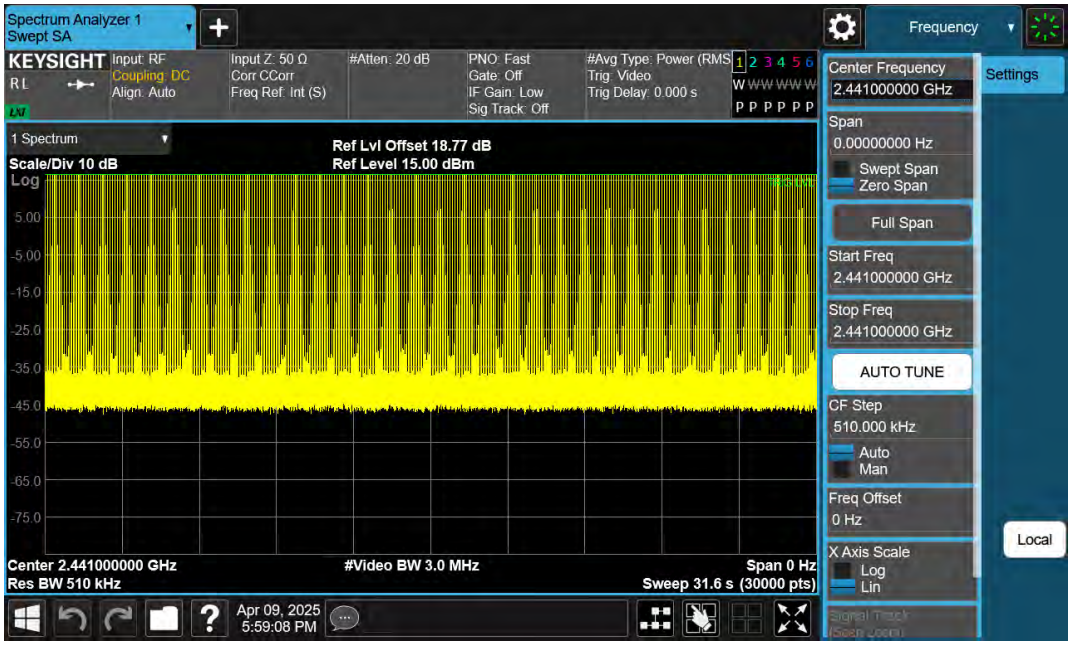
DH3-Ant1-Hop-PASS



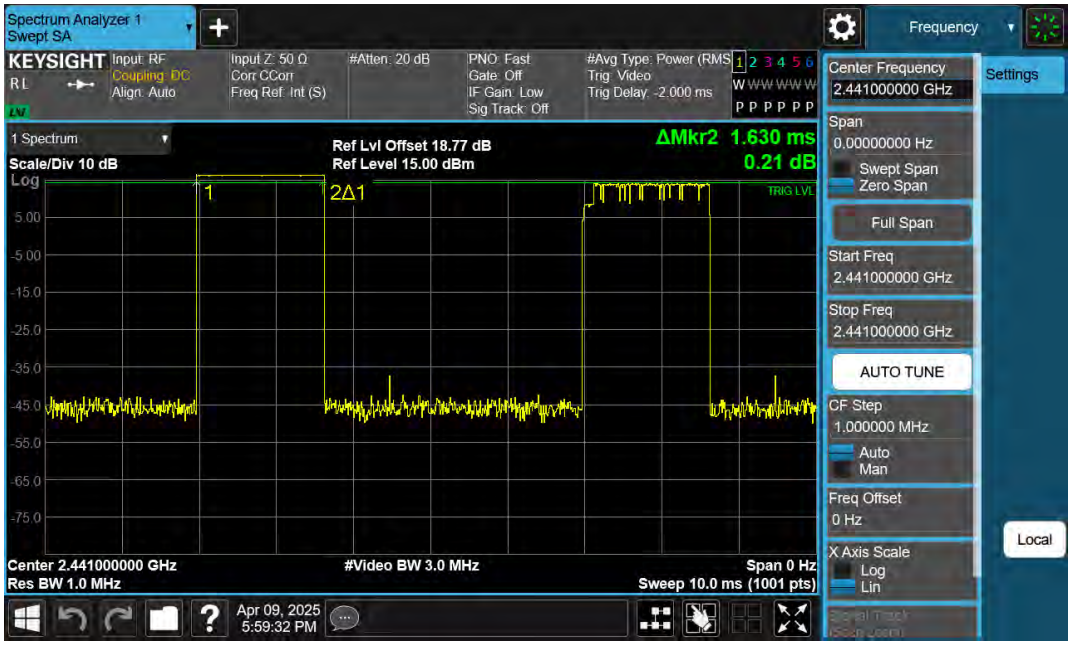
DH5-Ant1-Hop-PASS

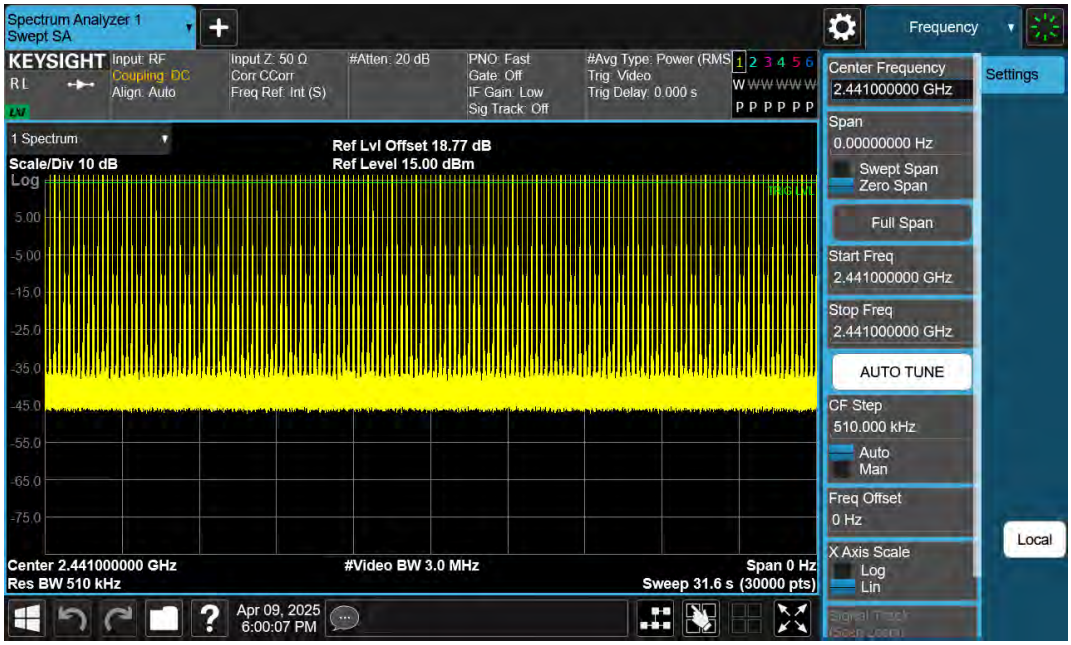


2DH1-Ant1-Hop-PASS

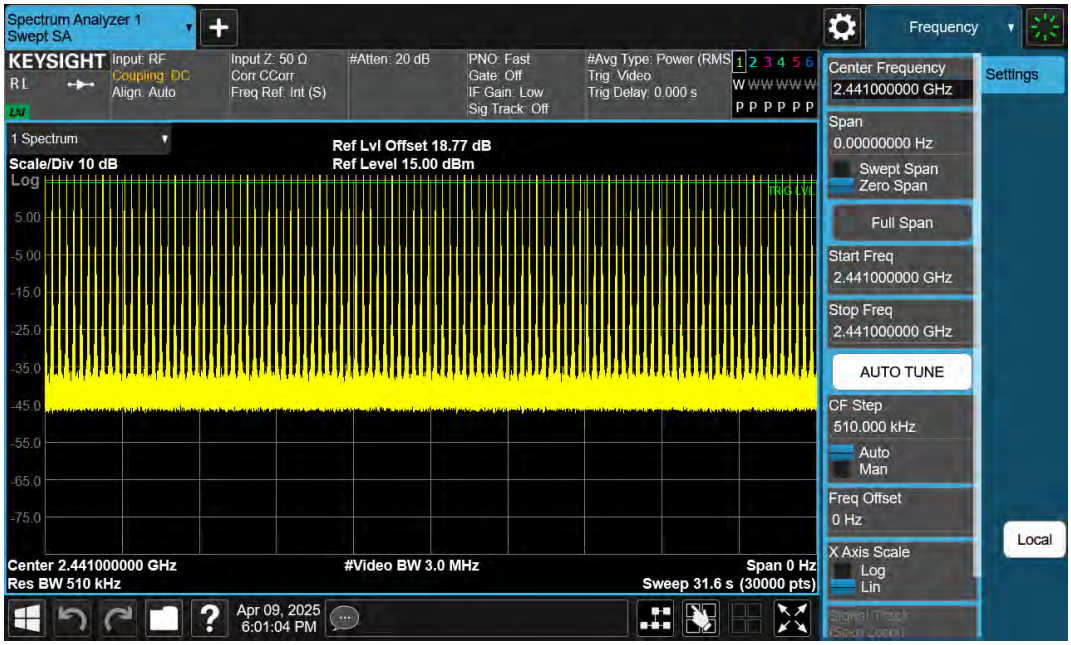


2DH3-Ant1-Hop-PASS

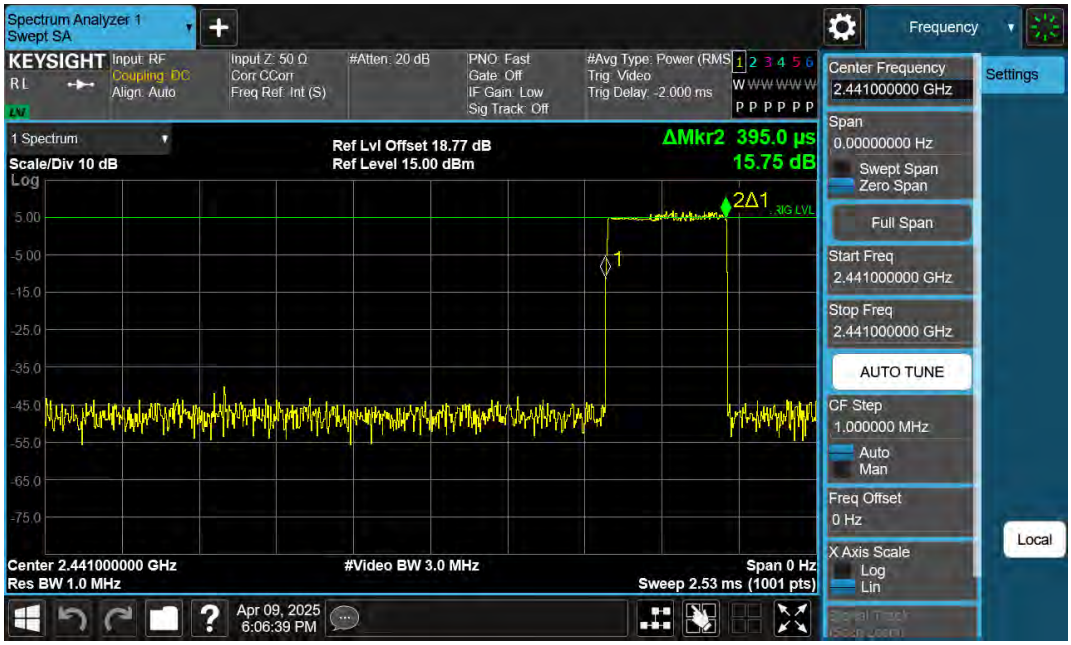


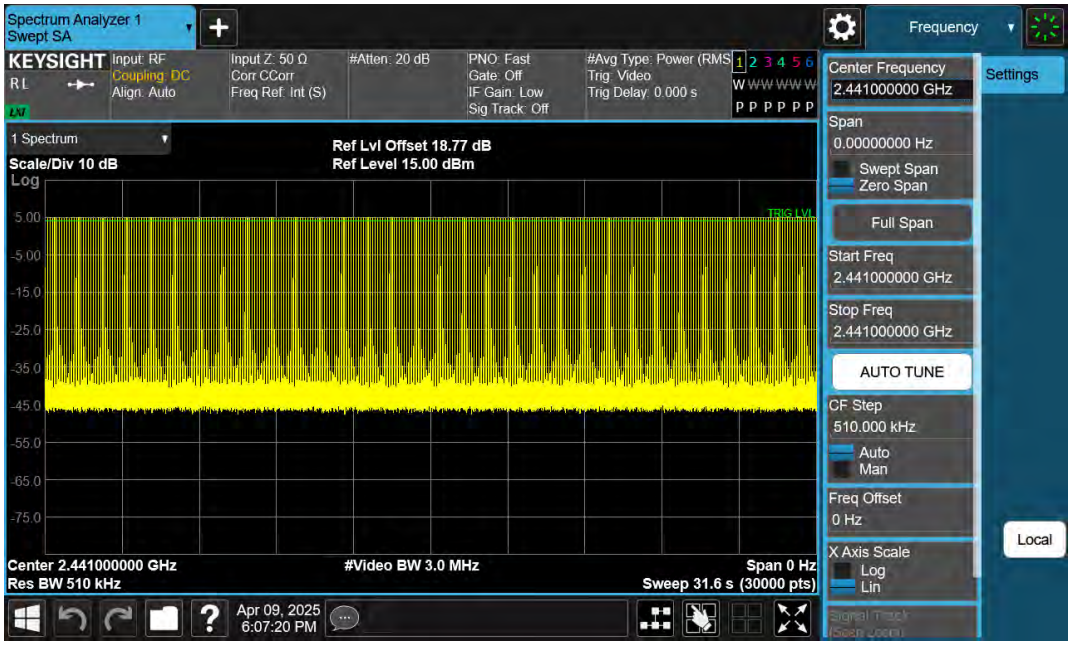


2DH5-Ant1-Hop-PASS

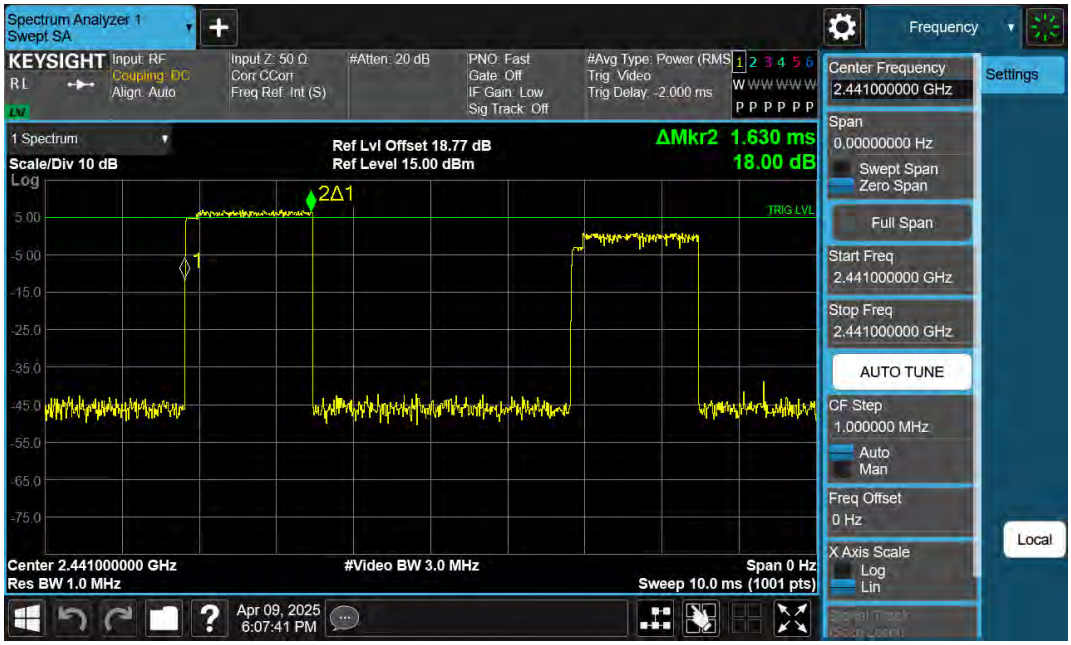


3DH1-Ant1-Hop-PASS

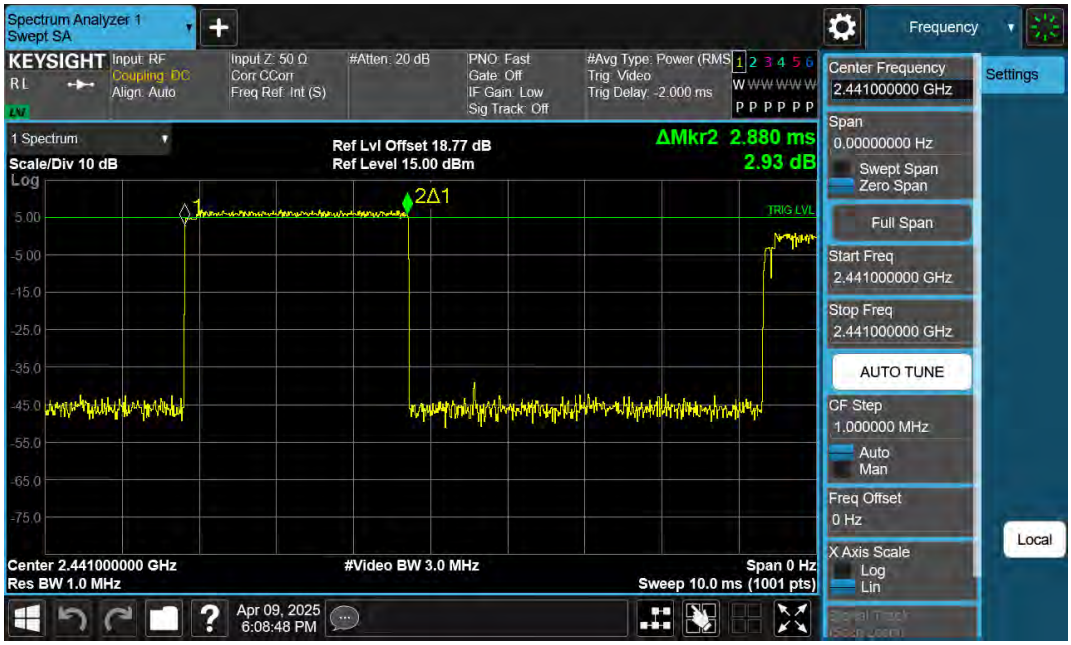




3DH3-Ant1-Hop-PASS



3DH5-Ant1-Hop-PASS


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 20 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS
Trig: Video
Trig Delay: -2.000 ms
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 18.77 dB
Ref Level 15.00 dBm
ΔMkr2 2.880 ms
2.93 dB
2Δ1
TRIG LVL
Center 2.441000000 GHz
Res BW 1.0 MHz
#Video BW 3.0 MHz
Span 0 Hz
Sweep 10.0 ms (1001 pts)
Apr 09, 2025
6:08:48 PM
Frequency
Center Frequency
2.441000000 GHz
Settings
Span
0.00000000 Hz
Swept Span
Zero Span
Full Span
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
AUTO TUNE
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Local

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 20 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS
Trig: Video
Trig Delay: 0.000 s
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 18.77 dB
Ref Level 15.00 dBm
TRIG LVL
Center 2.441000000 GHz
Res BW 510 kHz
#Video BW 3.0 MHz
Span 0 Hz
Sweep 31.6 s (30000 pts)
Apr 09, 2025
6:09:29 PM
Frequency
Center Frequency
2.441000000 GHz
Settings
Span
0.00000000 Hz
Swept Span
Zero Span
Full Span
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
AUTO TUNE
CF Step
510.000 kHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Local

Appendix E: Number of hopping channels

Test Result

TestMode	Antenna	Frequency[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-PASS

2DH5-Ant1-Hop-PASS

3DH5-Ant1-Hop-PASS

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 20 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 18.63 dB
Ref Level 15.00 dBm
5.00
-5.00
-15.0
-25.0
-35.0
-45.0
-55.0
-65.0
-75.0
Start 2.40000 GHz
#Res BW 300 kHz
#Video BW 300 kHz
Stop 2.48350 GHz
Sweep 1.13 ms (1001 pts)
Apr 09, 2025
6:11:41 PM
Frequency
Center Frequency
2.441750000 GHz
Span
83.5000000 MHz
Swept Span
Zero Span
Full Span
Start Freq
2.400000000 GHz
Stop Freq
2.483500000 GHz
AUTO TUNE
CF Step
8.350000 MHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Settings
Local

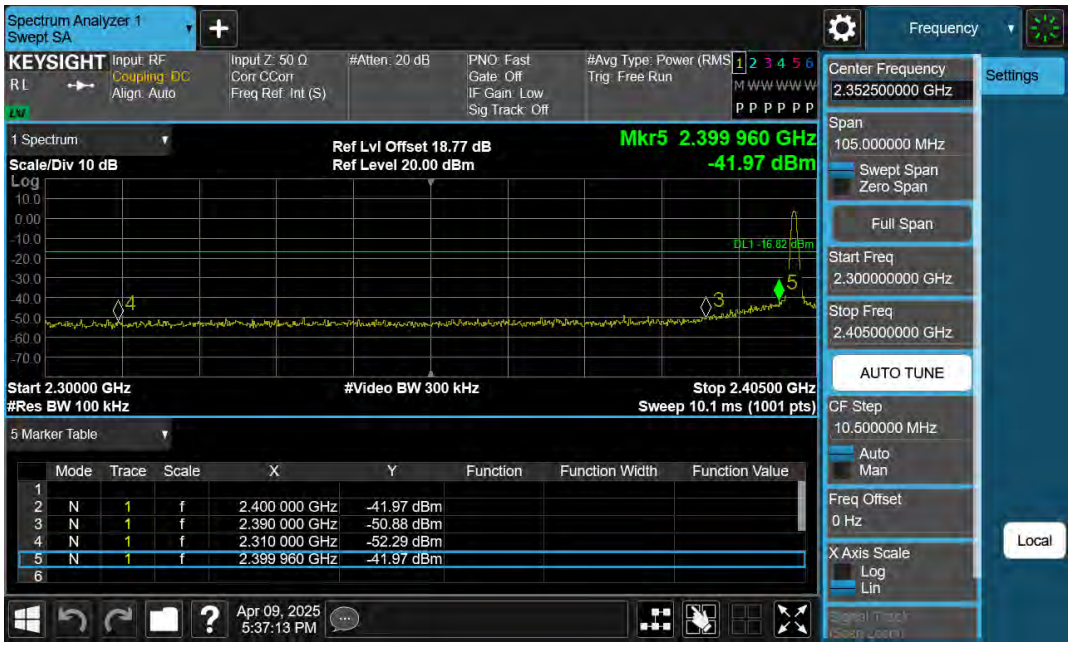
Appendix F: Band edge measurements

Test Result

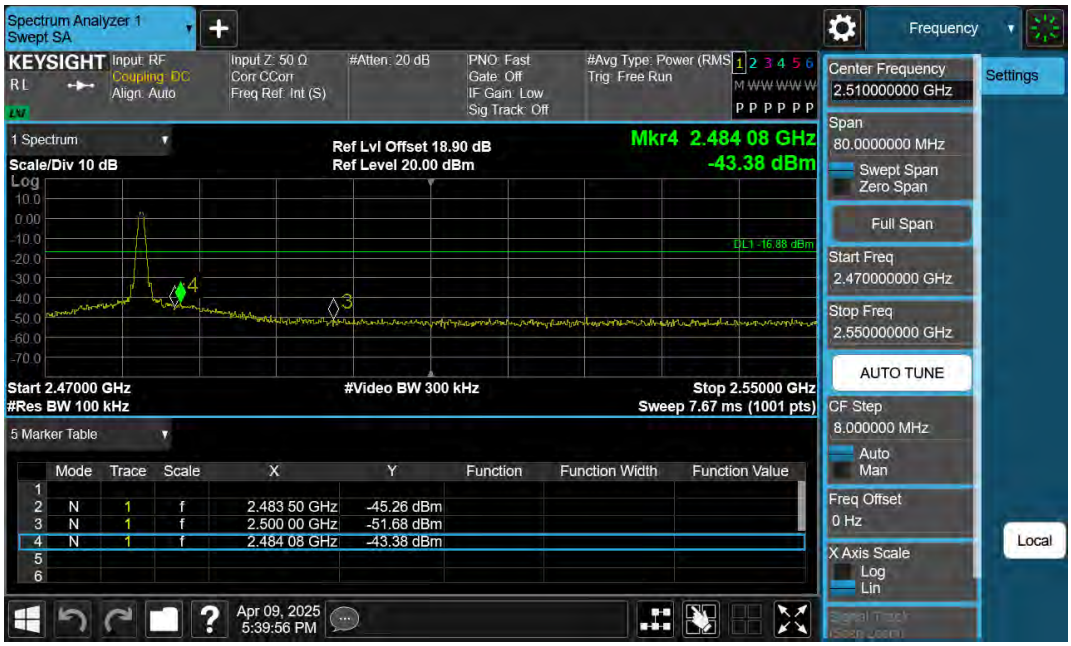
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	3.18	-41.97	≤-16.82	PASS
DH5	Ant1	High	2480	3.12	-43.38	≤-16.88	PASS
DH5	Ant1	Low	Hop_2402	17.00	-40.31	≤-3	PASS
DH5	Ant1	High	Hop_2480	16.16	-43.7	≤-3.84	PASS
2DH5	Ant1	Low	2402	2.81	-38.18	≤-17.19	PASS
2DH5	Ant1	High	2480	2.17	-41.31	≤-17.83	PASS
2DH5	Ant1	Low	Hop_2402	17.10	-10.76	≤-2.9	PASS
2DH5	Ant1	High	Hop_2480	16.29	-27.57	≤-3.71	PASS
3DH5	Ant1	Low	2402	3.50	-37.68	≤-16.5	PASS
3DH5	Ant1	High	2480	2.79	-37.82	≤-17.21	PASS
3DH5	Ant1	Low	Hop_2402	2.51	-39.65	≤-17.49	PASS
3DH5	Ant1	High	Hop_2480	4.80	-41.62	≤-15.2	PASS

Test Graphs

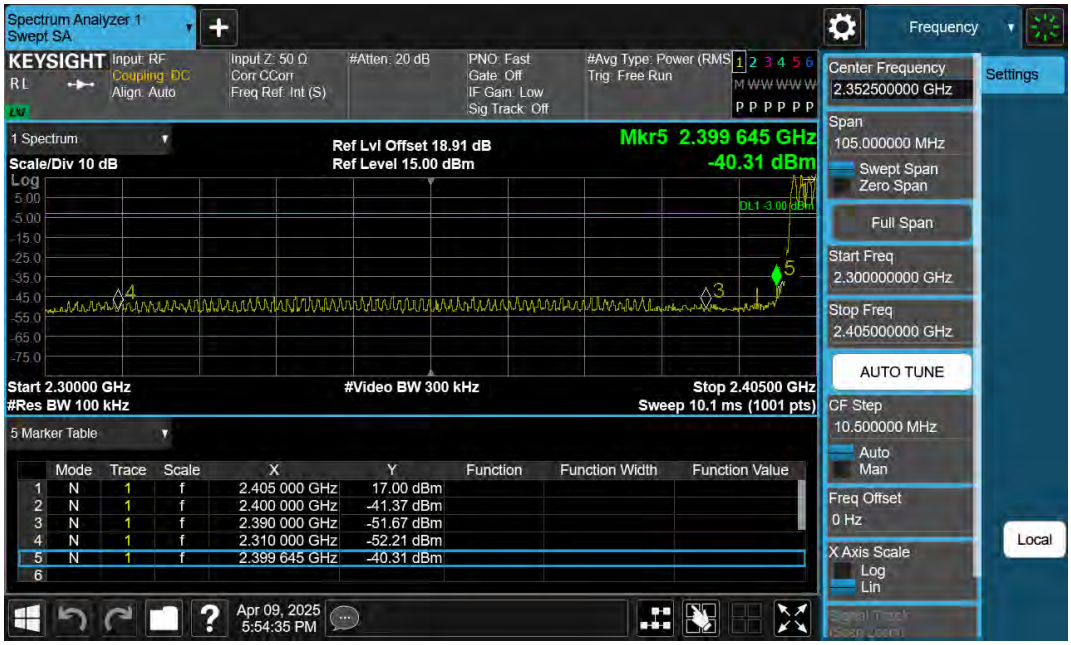
DH5-Ant1-2402-PASS



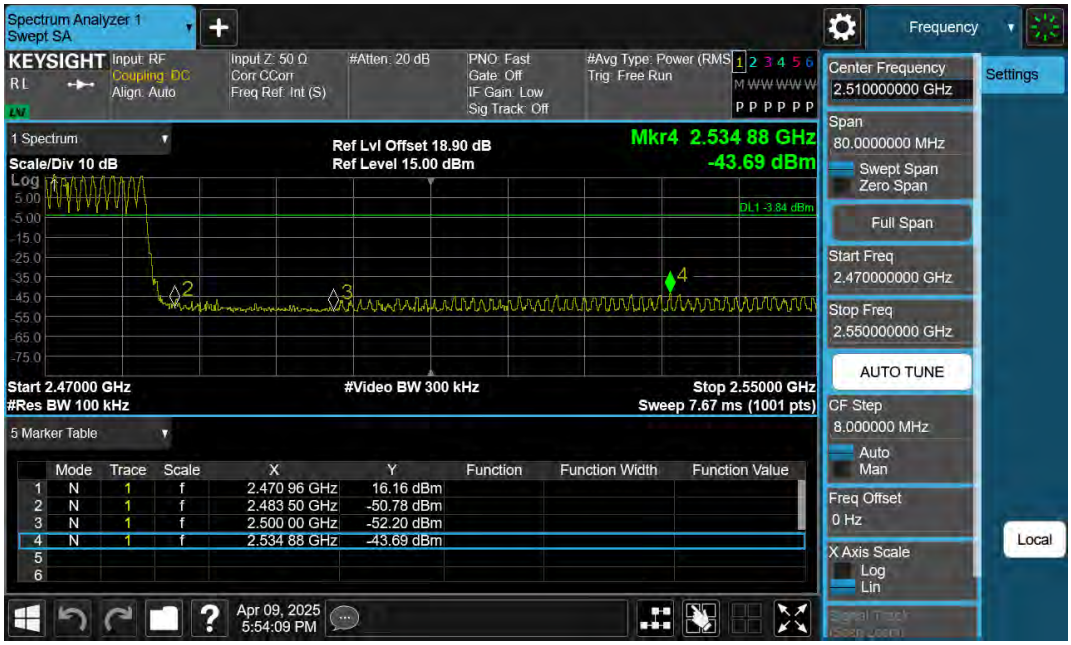
DH5-Ant1-2480-PASS



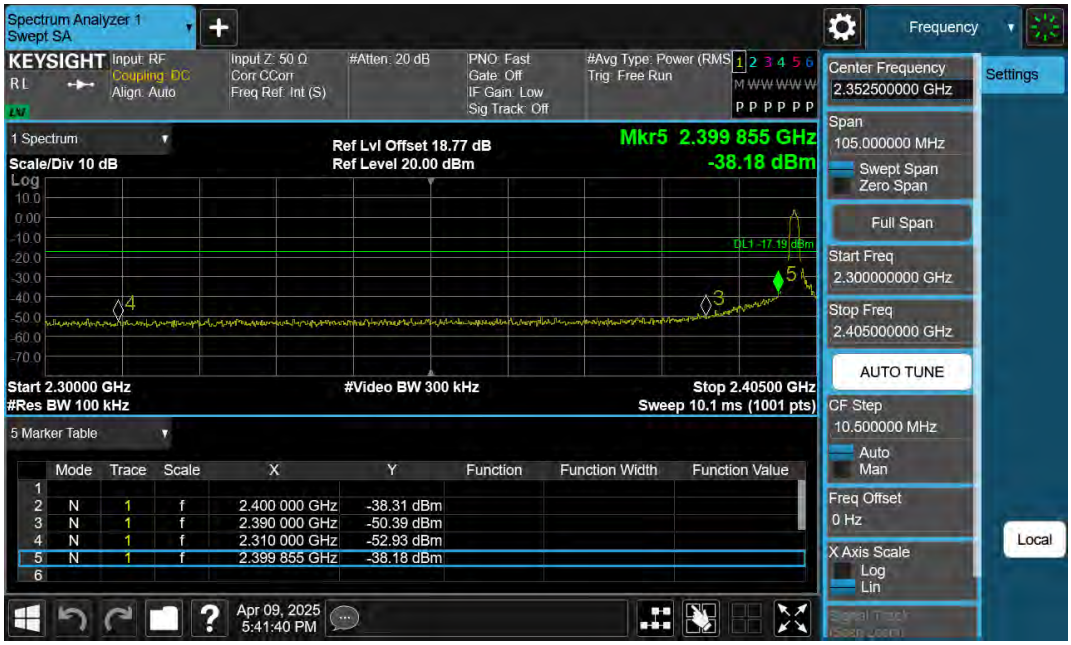
DH5-Ant1-Hop_2402-PASS



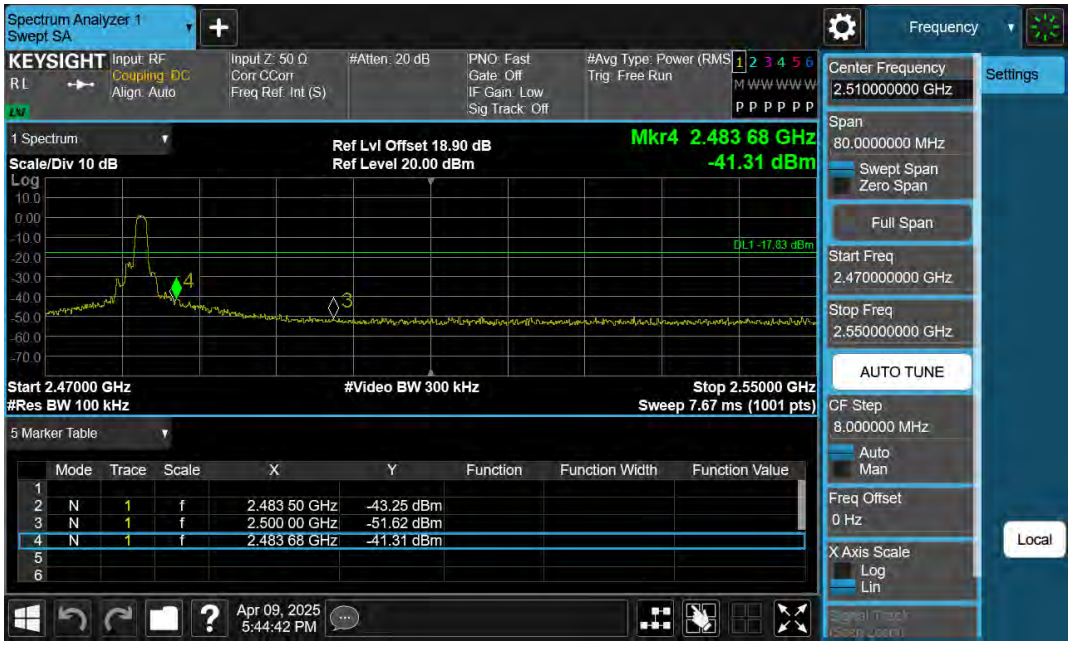
DH5-Ant1-Hop_2480-PASS



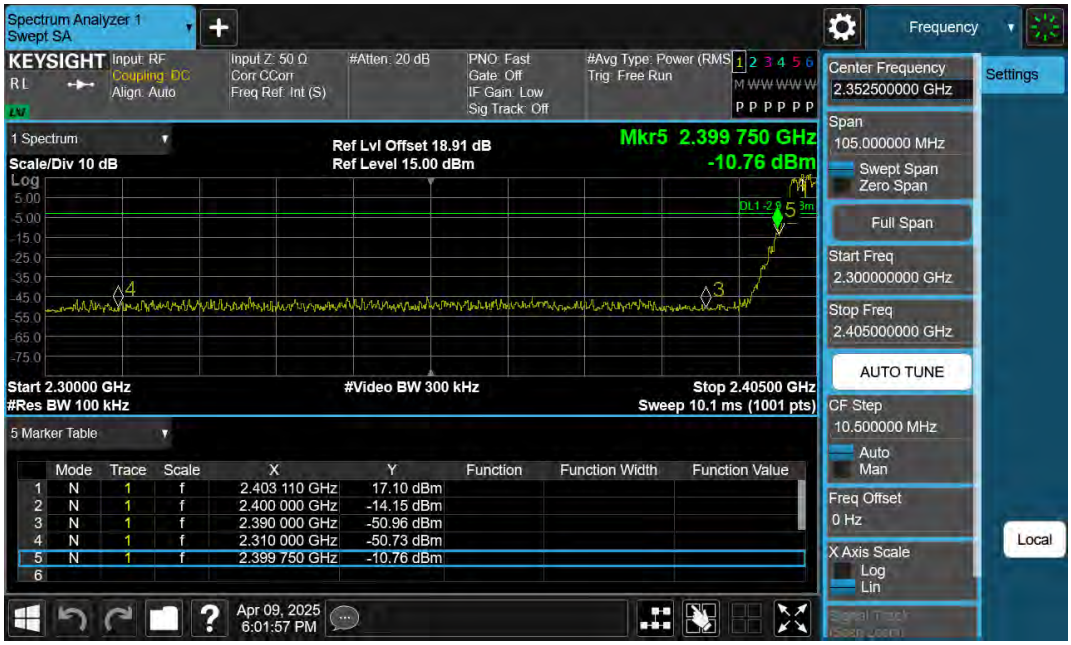
2DH5-Ant1-2402-PASS



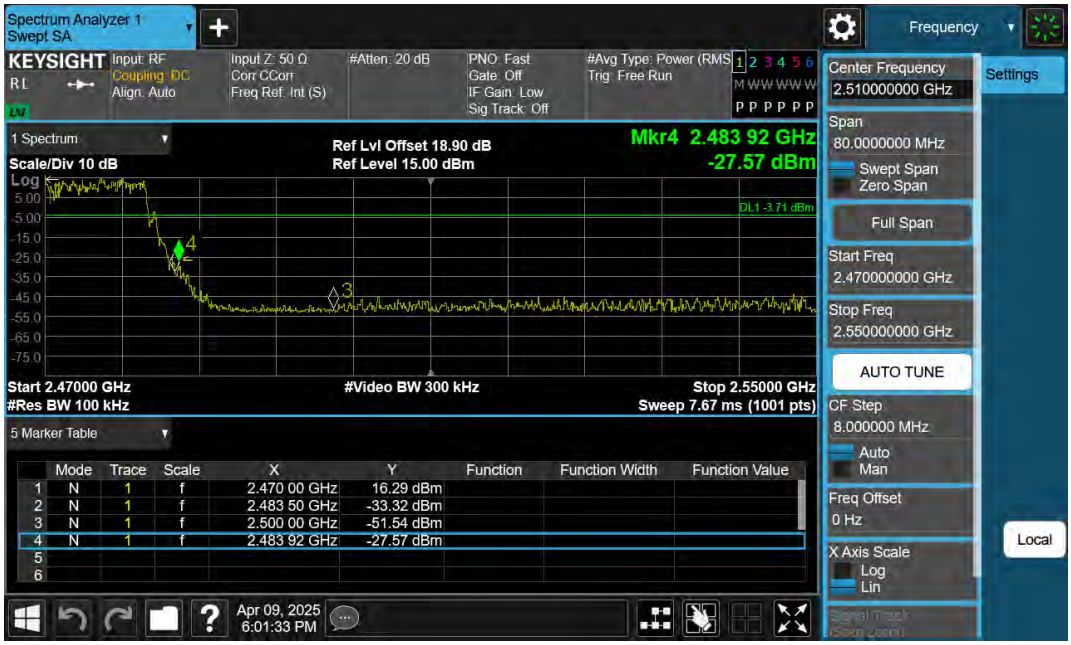
2DH5-Ant1-2480-PASS



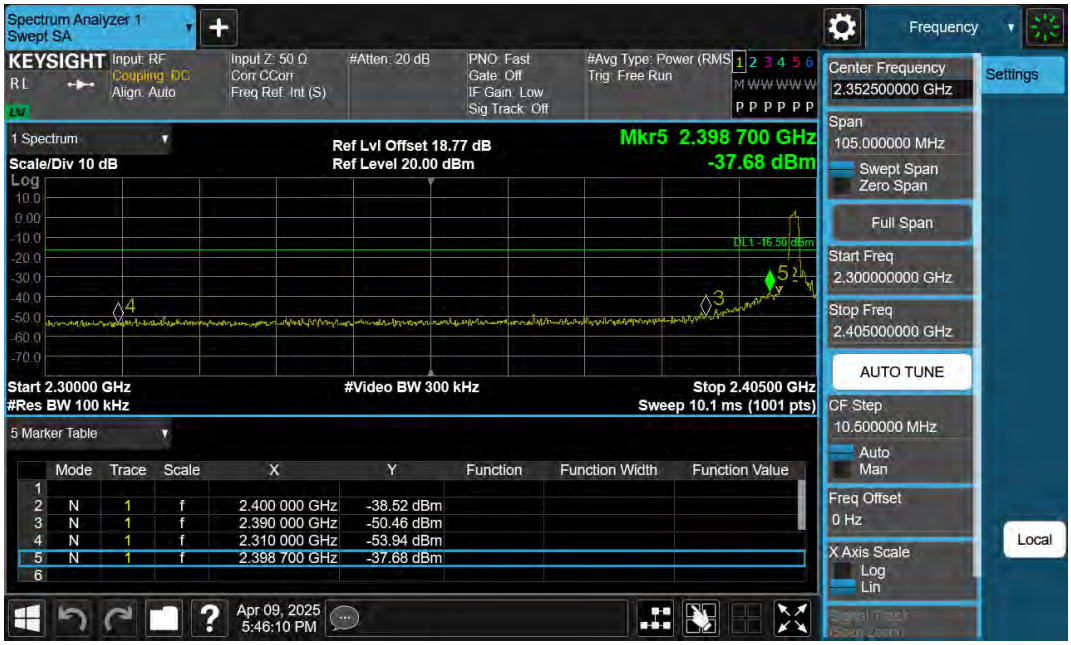
2DH5-Ant1-Hop_2402-PASS



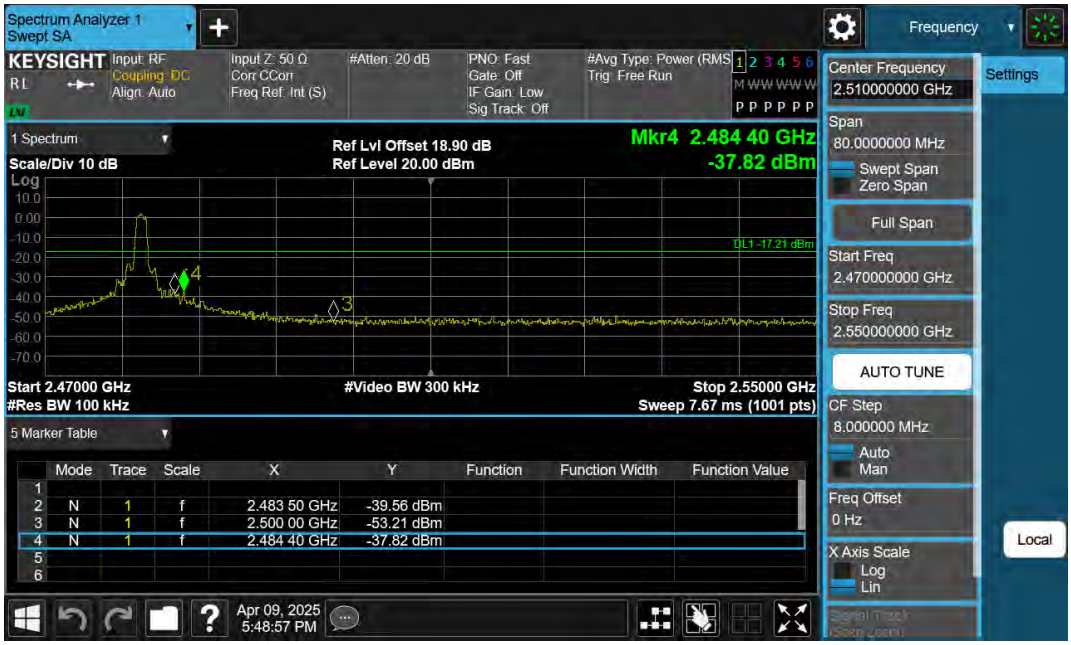
2DH5-Ant1-Hop_2480-PASS



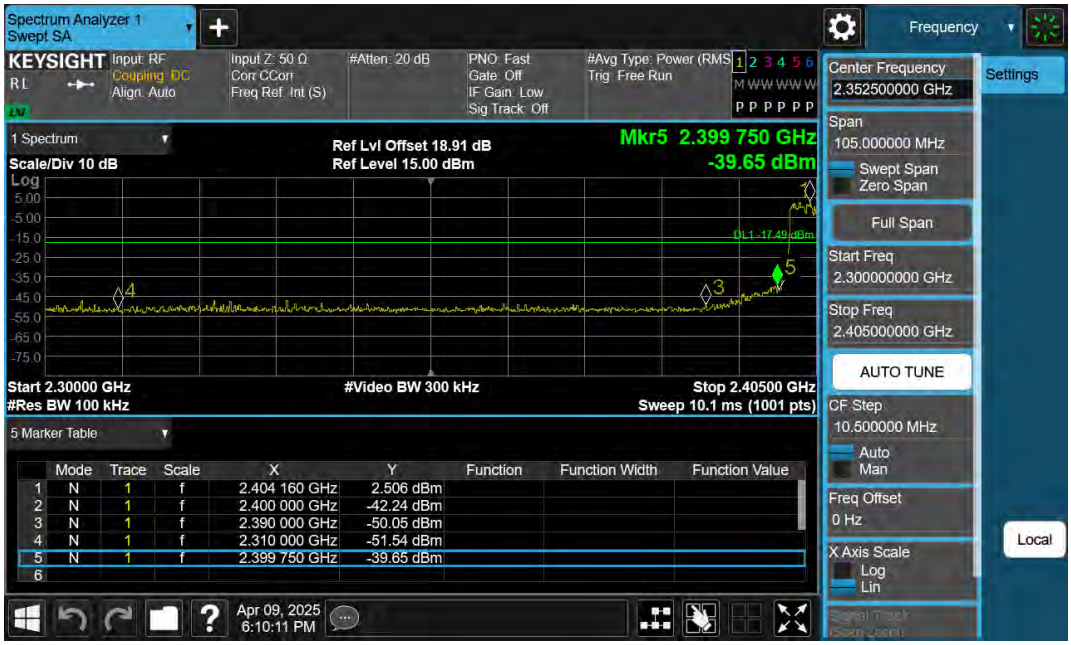
3DH5-Ant1-2402-PASS



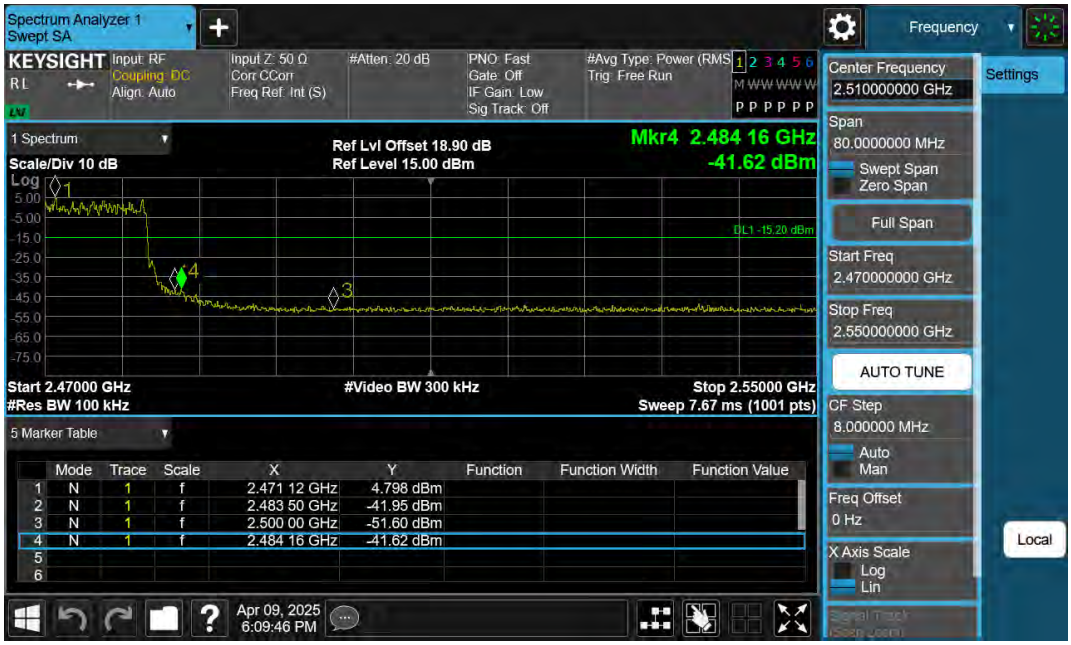
3DH5-Ant1-2480-PASS



3DH5-Ant1-Hop_2402-PASS



3DH5-Ant1-Hop_2480-PASS



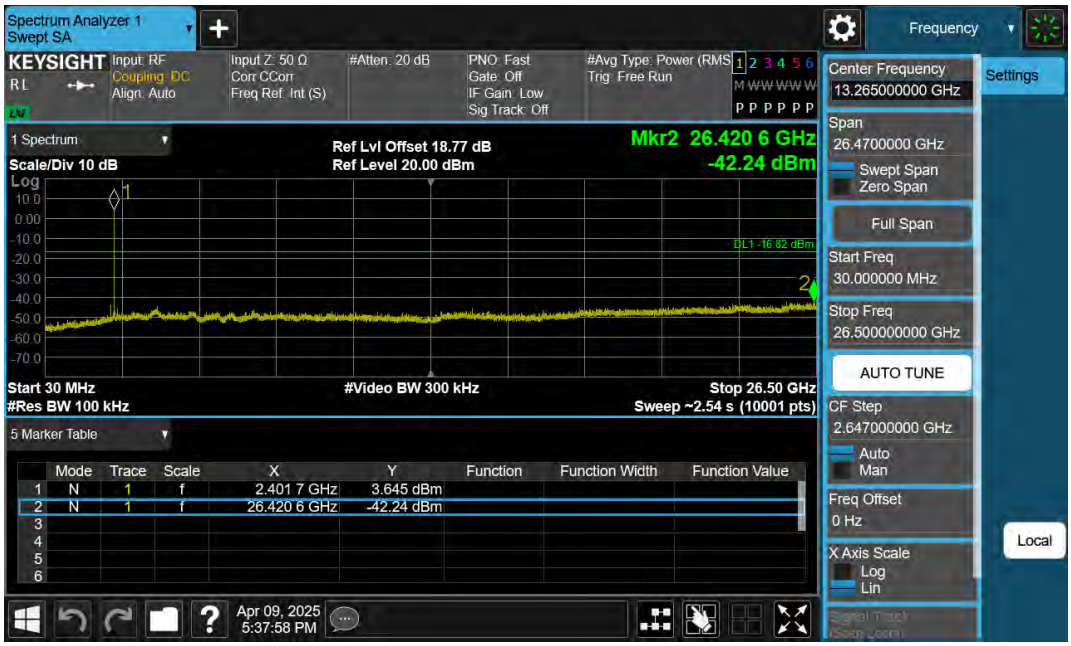
Appendix G: Conducted Spurious Emission

Test Result

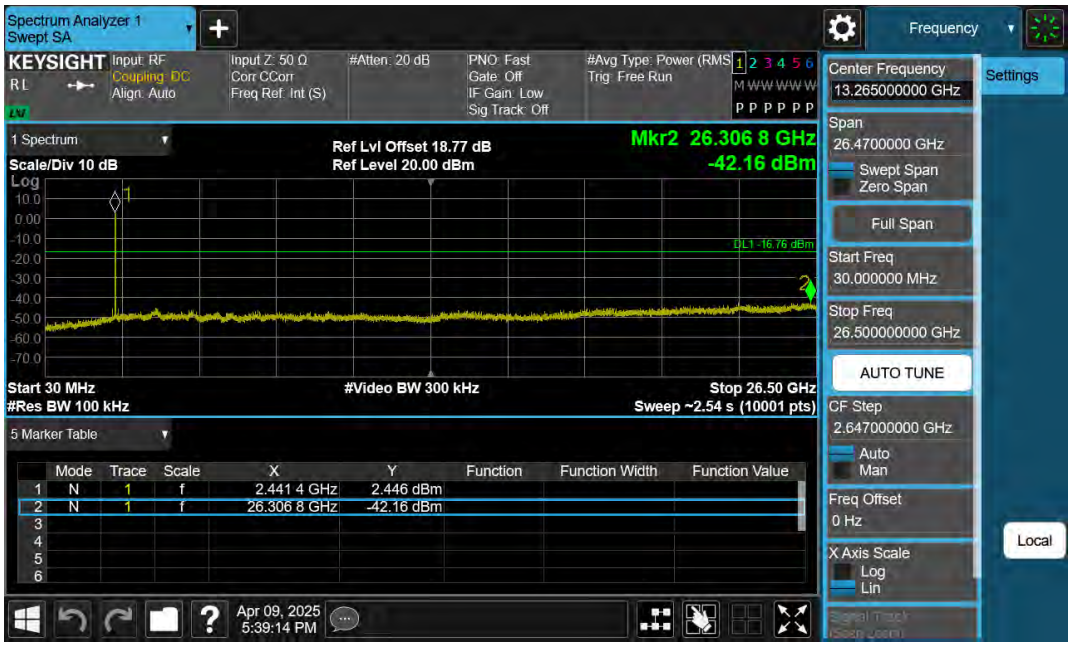
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	30~26500	3.18	-42.24	≤-16.82	PASS
DH5	Ant1	2441	30~26500	3.24	-42.16	≤-16.76	PASS
DH5	Ant1	2480	30~26500	3.12	-42.04	≤-16.88	PASS
2DH5	Ant1	2402	30~26500	2.81	-42.08	≤-17.19	PASS
2DH5	Ant1	2441	30~26500	2.88	-41.71	≤-17.12	PASS
2DH5	Ant1	2480	30~26500	2.17	-42.13	≤-17.83	PASS
3DH5	Ant1	2402	30~26500	3.50	-41.75	≤-16.5	PASS
3DH5	Ant1	2441	30~26500	3.13	-41.78	≤-16.87	PASS
3DH5	Ant1	2480	30~26500	2.79	-40.93	≤-17.21	PASS

Test Graphs

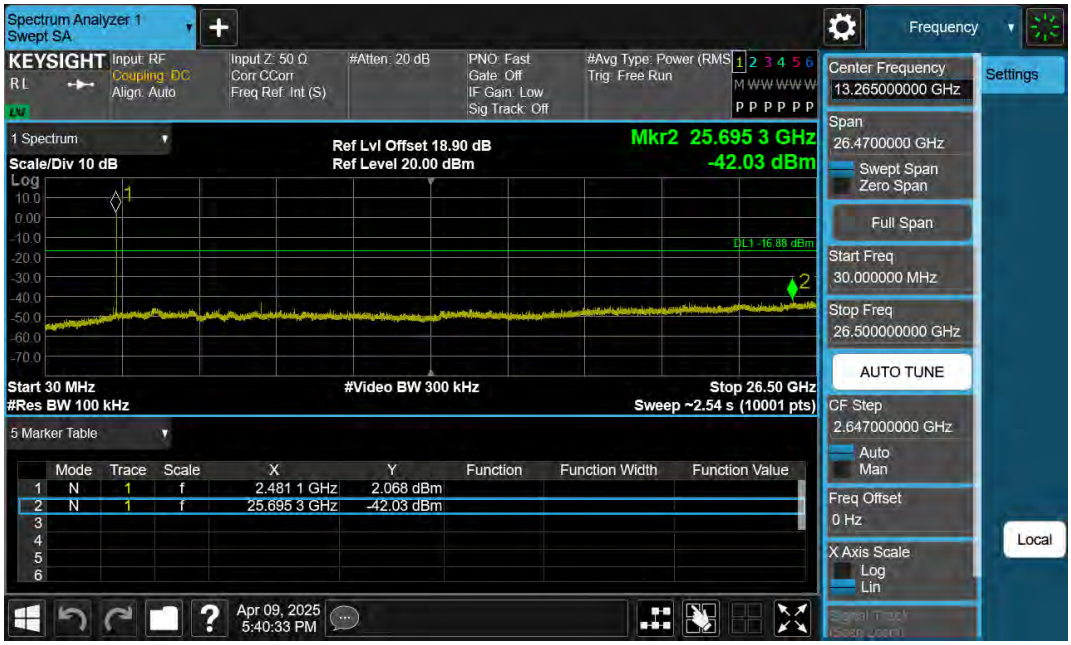
DH5-Ant1-2402-30~26500-PASS



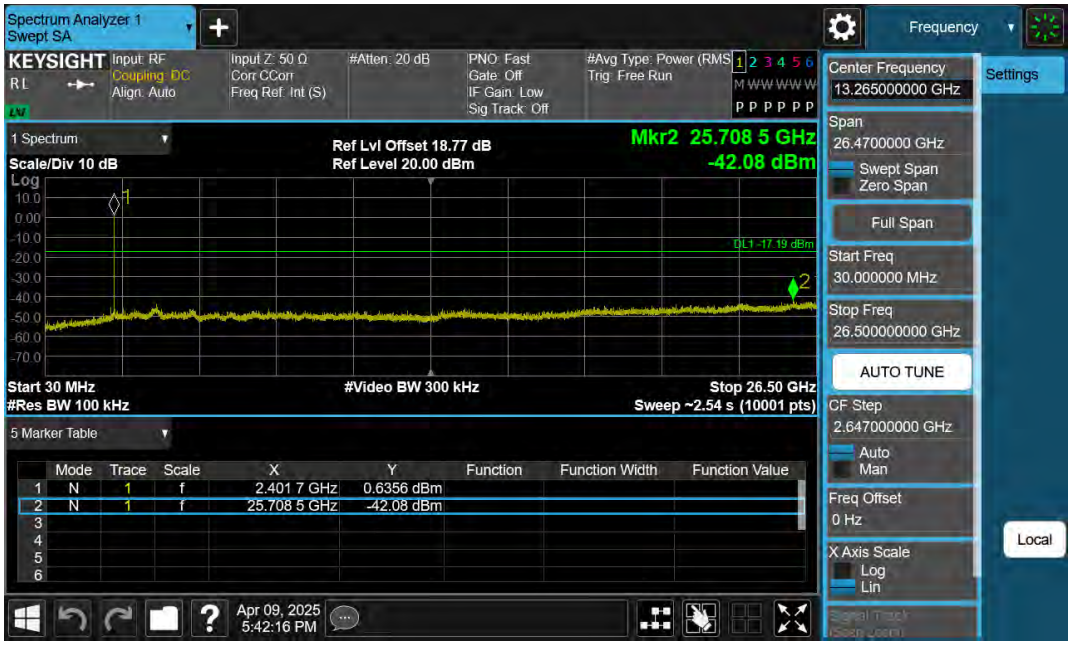
DH5-Ant1-2441-30~26500-PASS



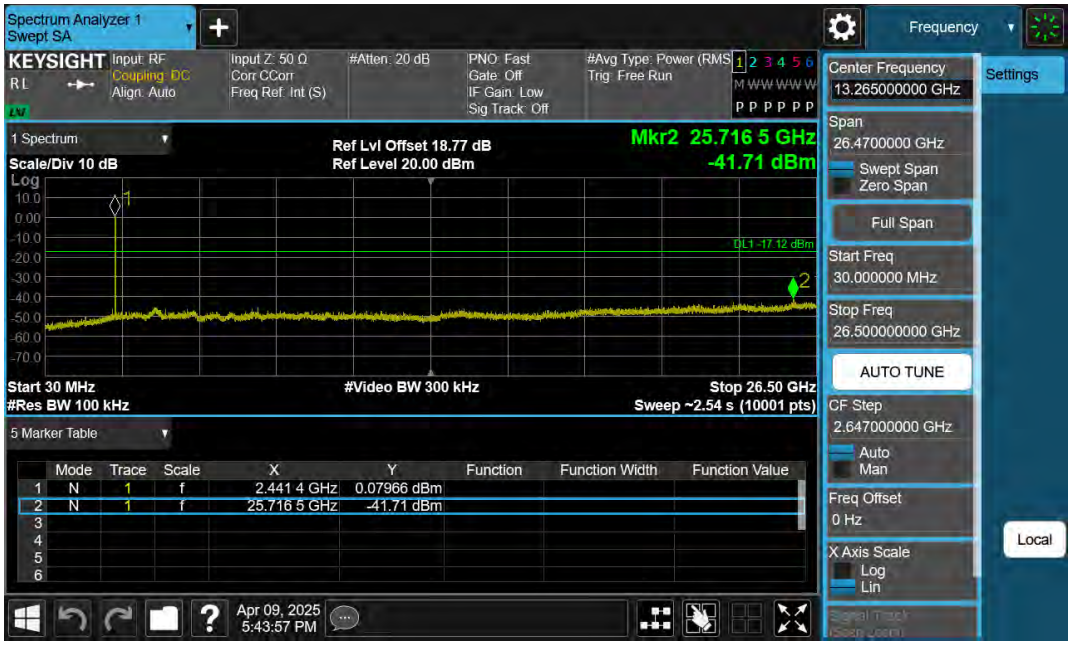
DH5-Ant1-2480-30~26500-PASS



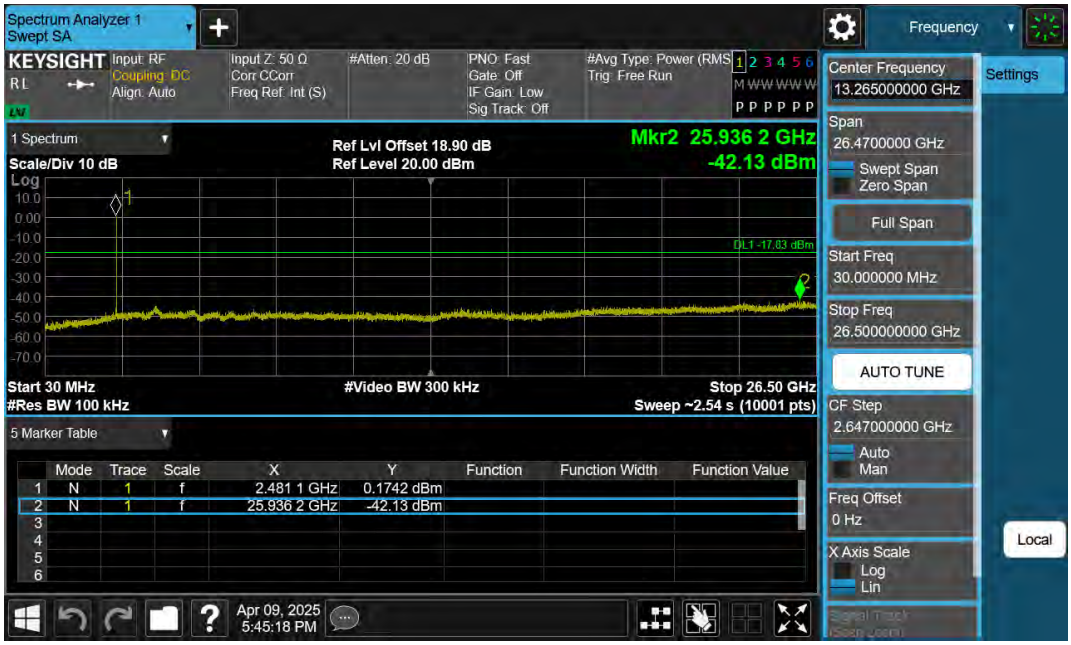
2DH5-Ant1-2402-30~26500-PASS



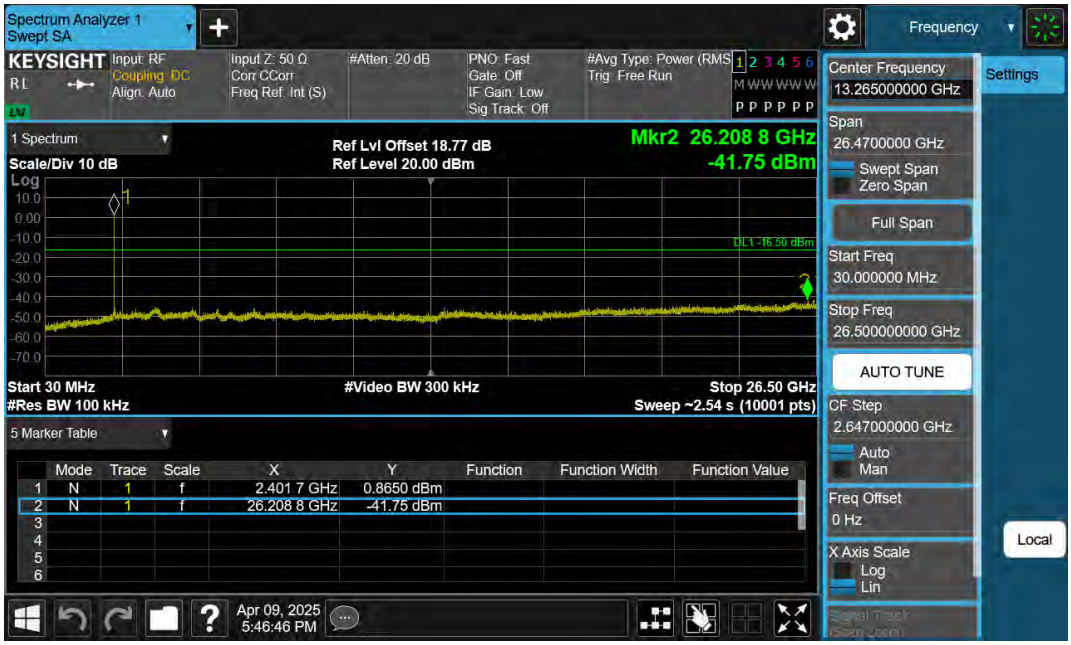
2DH5-Ant1-2441-30~26500-PASS



2DH5-Ant1-2480-30~26500-PASS



3DH5-Ant1-2402-30~26500-PASS



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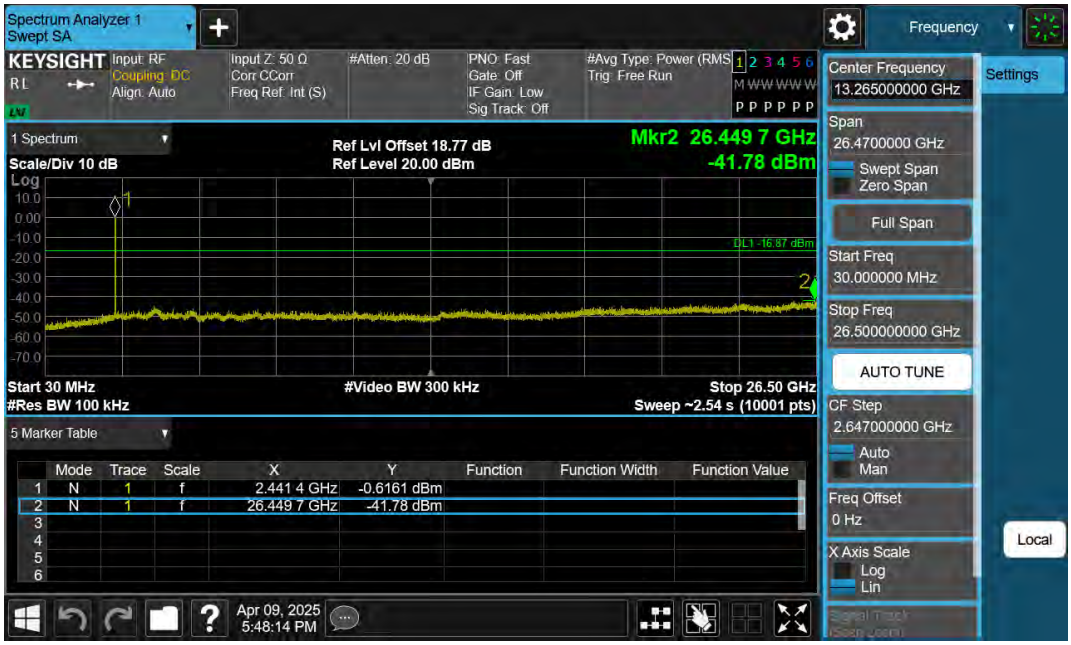
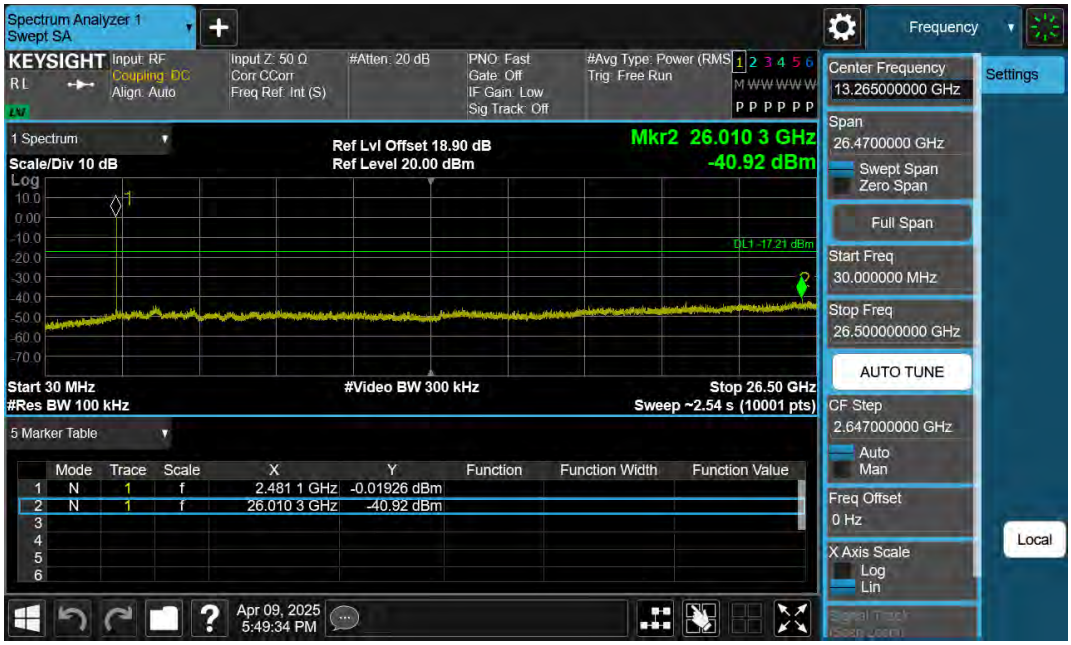


3DH5-Ant1-2480-30~26500-PASS


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 20 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS)
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 18.90 dB
Ref Level 20.00 dBm
Mkr2 26.010 3 GHz
-40.92 dBm
DL1 -17.21 dBm
Start 30 MHz
#Res BW 100 kHz
#Video BW 300 kHz
Stop 26.50 GHz
Sweep ~2.54 s (10001 pts)
5 Marker Table
Mode Trace Scale X Y Function Function Width Function Value
1 N 1 f 2.481 1 GHz -0.01926 dBm
2 N 1 f 26.010 3 GHz -40.92 dBm
Apr 09, 2025
5:49:34 PM
Frequency
Center Frequency
13.265000000 GHz
Span
26.4700000 GHz
Swept Span
Zero Span
Full Span
Start Freq
30.000000 MHz
Stop Freq
26.500000000 GHz
AUTO TUNE
CF Step
2.647000000 GHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Settings
Local

Appendix H: Reference level measurement

Test Result

TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
DH5	Ant1	2402	2402.04	3.18
DH5	Ant1	2441	2441.02	3.24
DH5	Ant1	2480	2480.16	3.12
2DH5	Ant1	2402	2401.83	2.81
2DH5	Ant1	2441	2440.98	2.88
2DH5	Ant1	2480	2480.18	2.17
3DH5	Ant1	2402	2402.16	3.50
3DH5	Ant1	2441	2440.83	3.13
3DH5	Ant1	2480	2480.00	2.79

Test Graphs

DH5-Ant1-2402-PASS

DH5-Ant1-2441-PASS

DH5-Ant1-2480-PASS

2DH5-Ant1-2402-PASS

2DH5-Ant1-2441-PASS

2DH5-Ant1-2480-PASS

3DH5-Ant1-2402-PASS

3DH5-Ant1-2441-PASS

3DH5-Ant1-2480-PASS

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS)
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 18.90 dB
Ref Level 30.00 dBm
Mkr1 2.480 004 5 GHz
2.79 dBm
Center 2.4800000 GHz
#Res BW 100 kHz
#Video BW 300 kHz
Span 1.500 MHz
Sweep 1.00 ms (1001 pts)
Apr 09, 2025
5:48:49 PM
Frequency
Center Frequency
2.480000000 GHz
Span
1.50000000 MHz
Swept Span
Zero Span
Full Span
Start Freq
2.479250000 GHz
Stop Freq
2.480750000 GHz
AUTO TUNE
CF Step
150.000 kHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Settings
Local