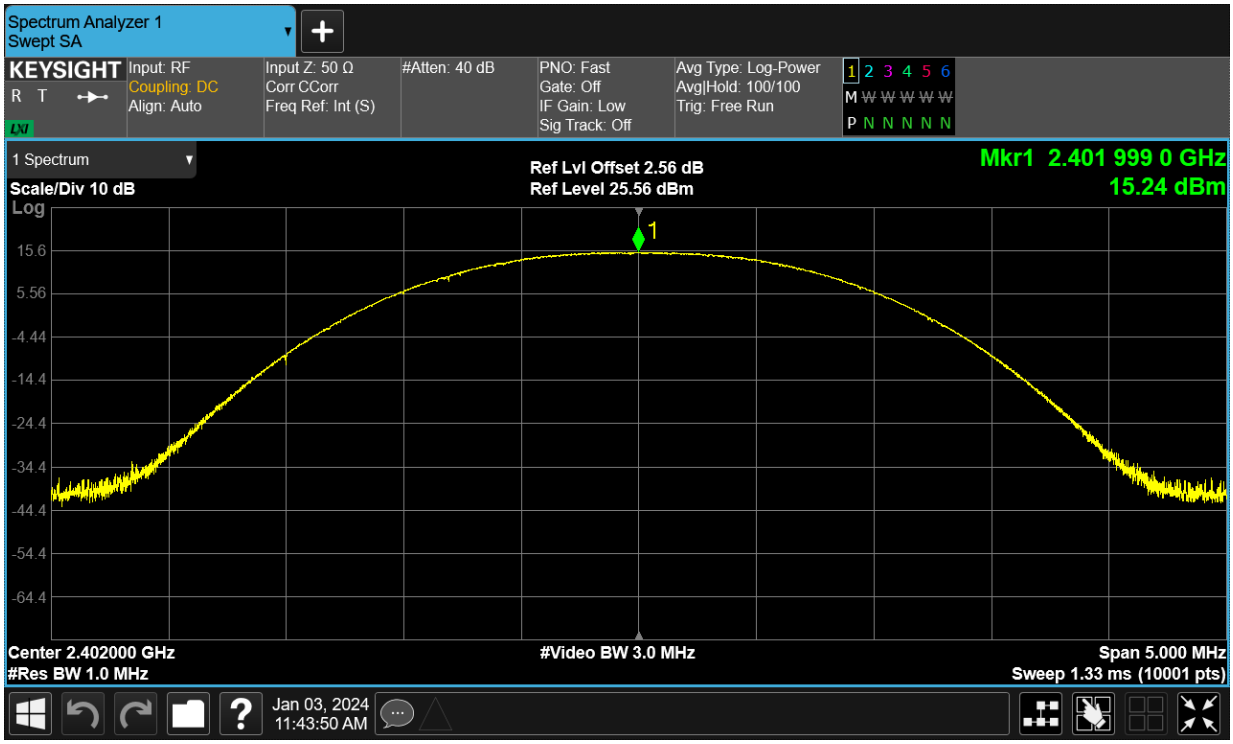
Test Data

Maximum Conducted Output Power

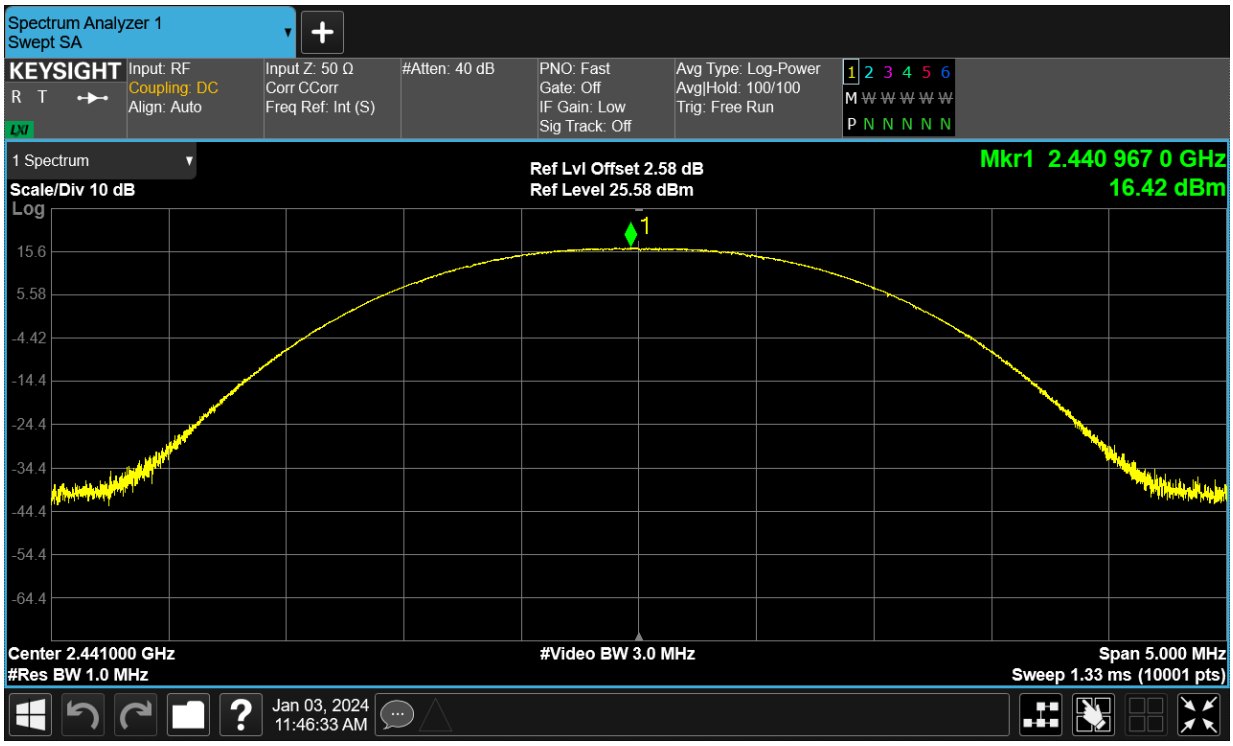
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant0	15.244	30	Pass
NVNT	1-DH1	2441	Ant0	16.42	30	Pass
NVNT	1-DH1	2480	Ant0	15.978	30	Pass
NVNT	2-DH1	2402	Ant0	15.34	21	Pass
NVNT	2-DH1	2441	Ant0	16.173	21	Pass
NVNT	2-DH1	2480	Ant0	15.601	21	Pass
NVNT	3-DH1	2402	Ant0	15.376	21	Pass
NVNT	3-DH1	2441	Ant0	16.515	21	Pass
NVNT	3-DH1	2480	Ant0	16.407	21	Pass

Test Graphs

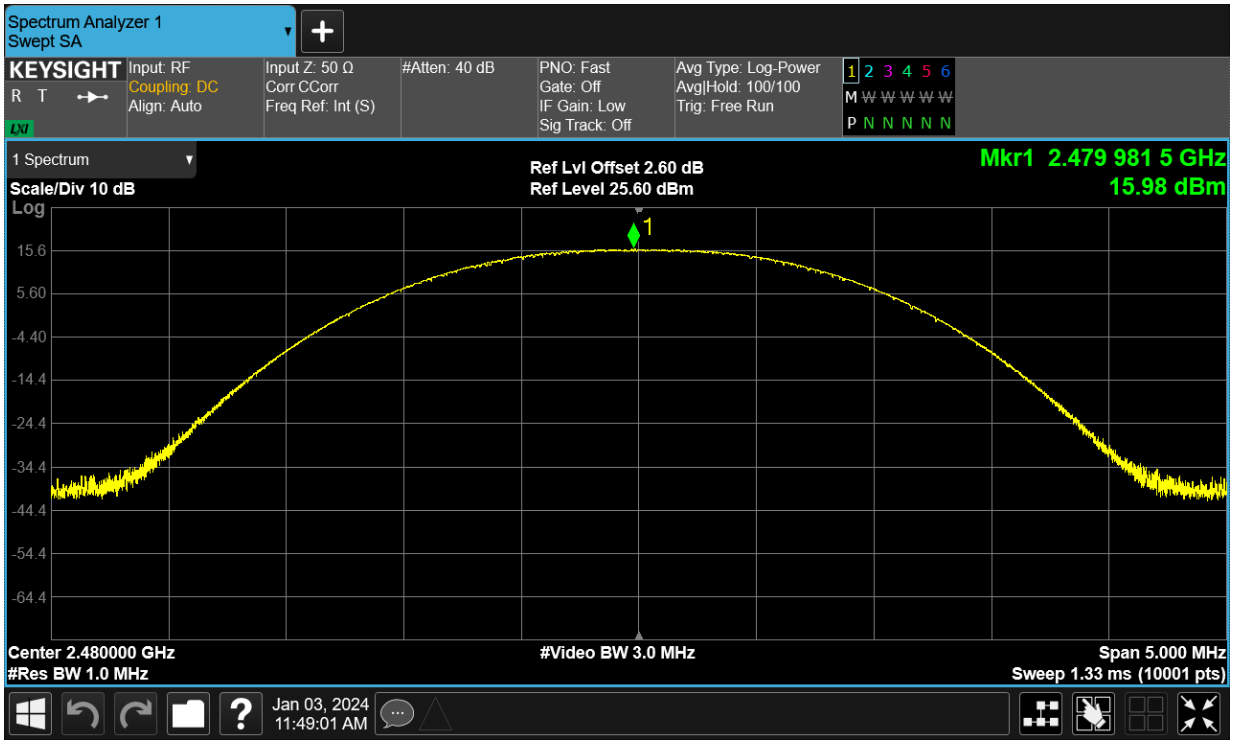
Power NVNT 1-DH1 2402MHz Ant0



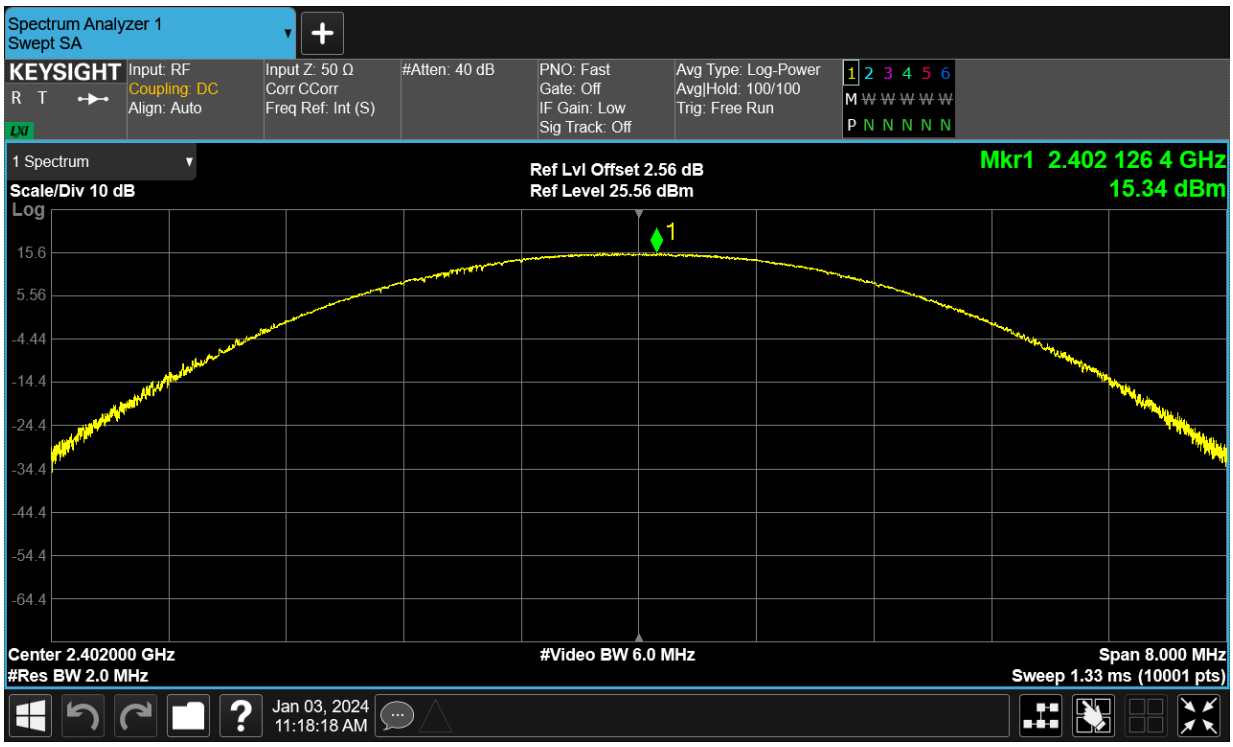
Power NVNT 1-DH1 2441MHz Ant0



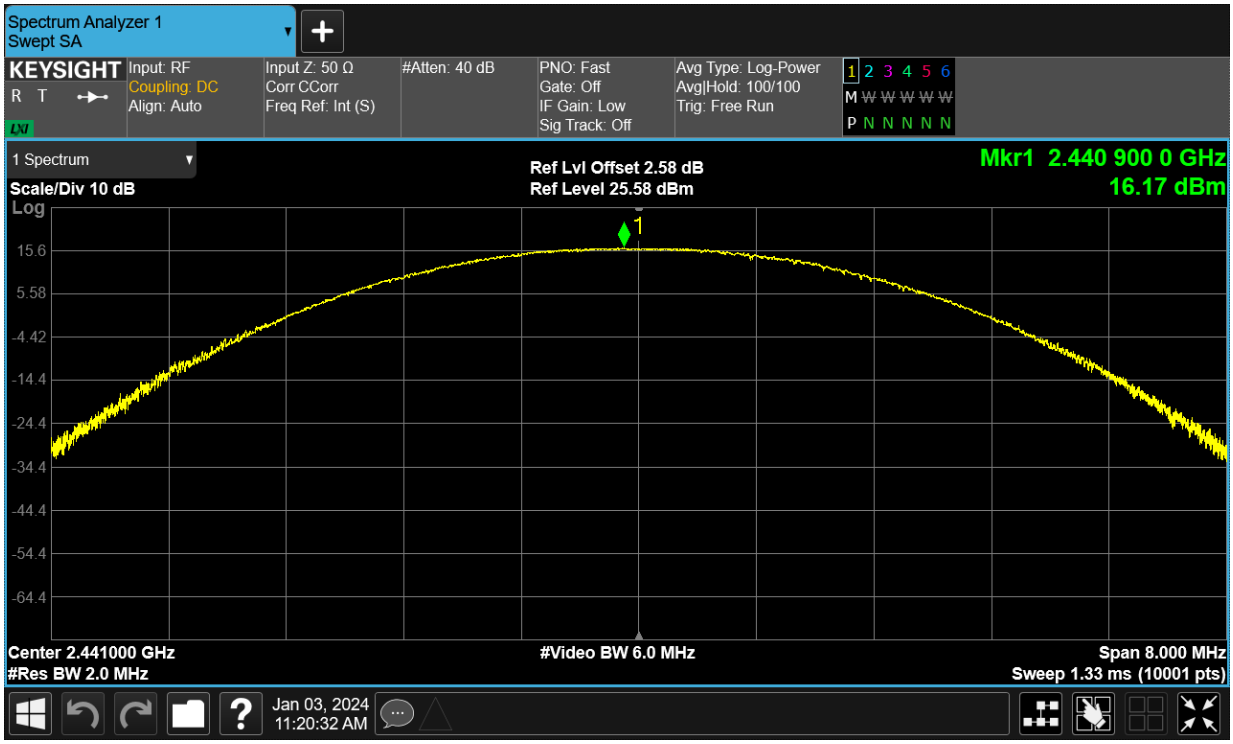
Power NVNT 1-DH1 2480MHz Ant0



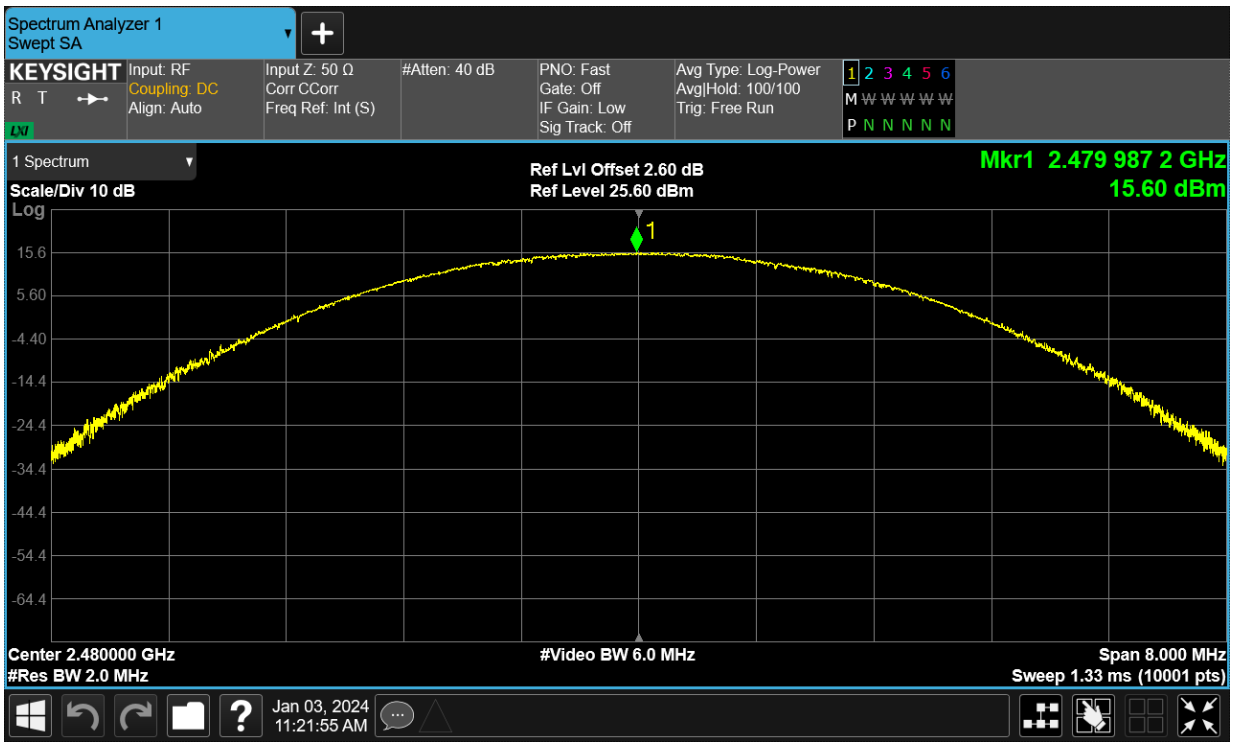
Power NVNT 2-DH1 2402MHz Ant0



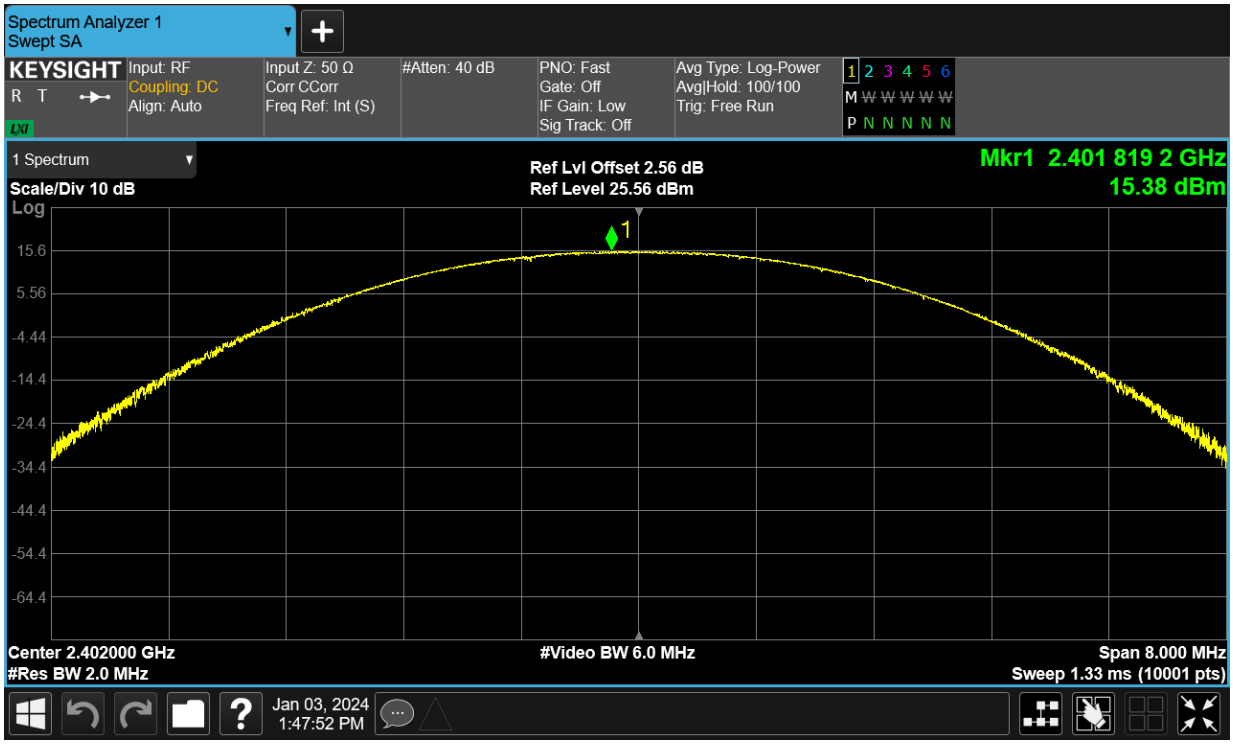
Power NVNT 2-DH1 2441MHz Ant0



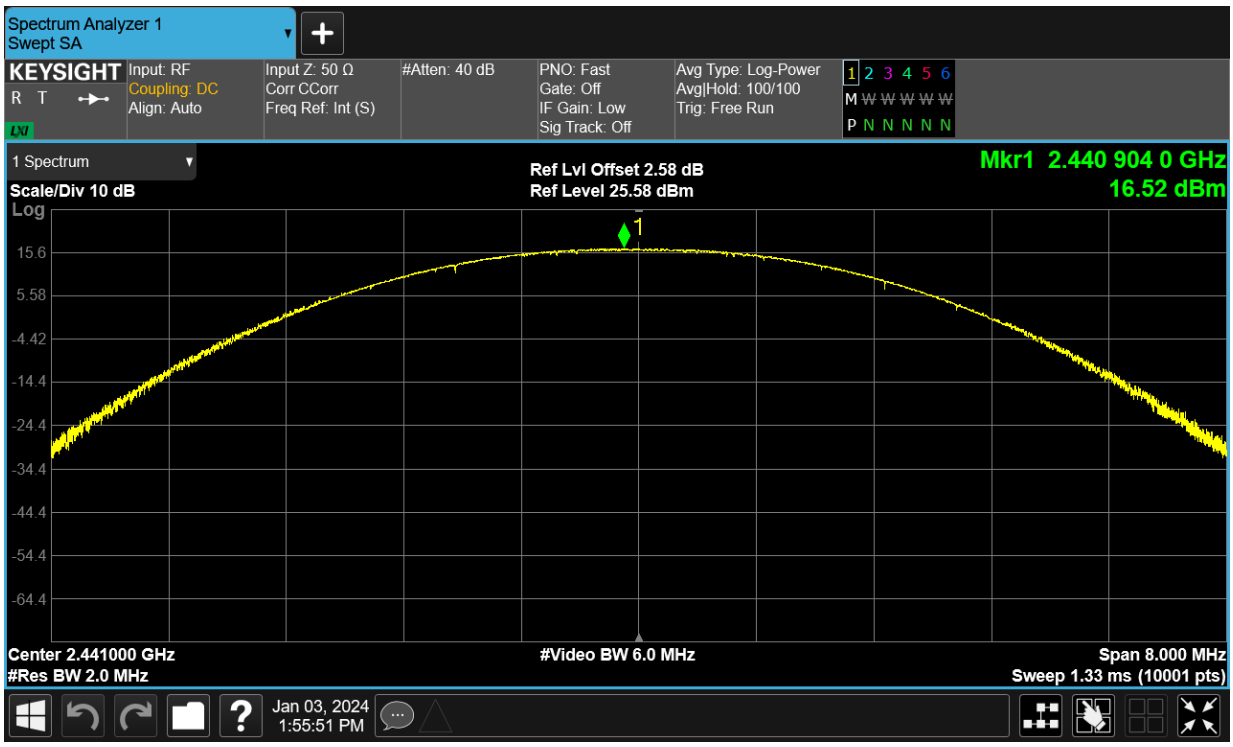
Power NVNT 2-DH1 2480MHz Ant0



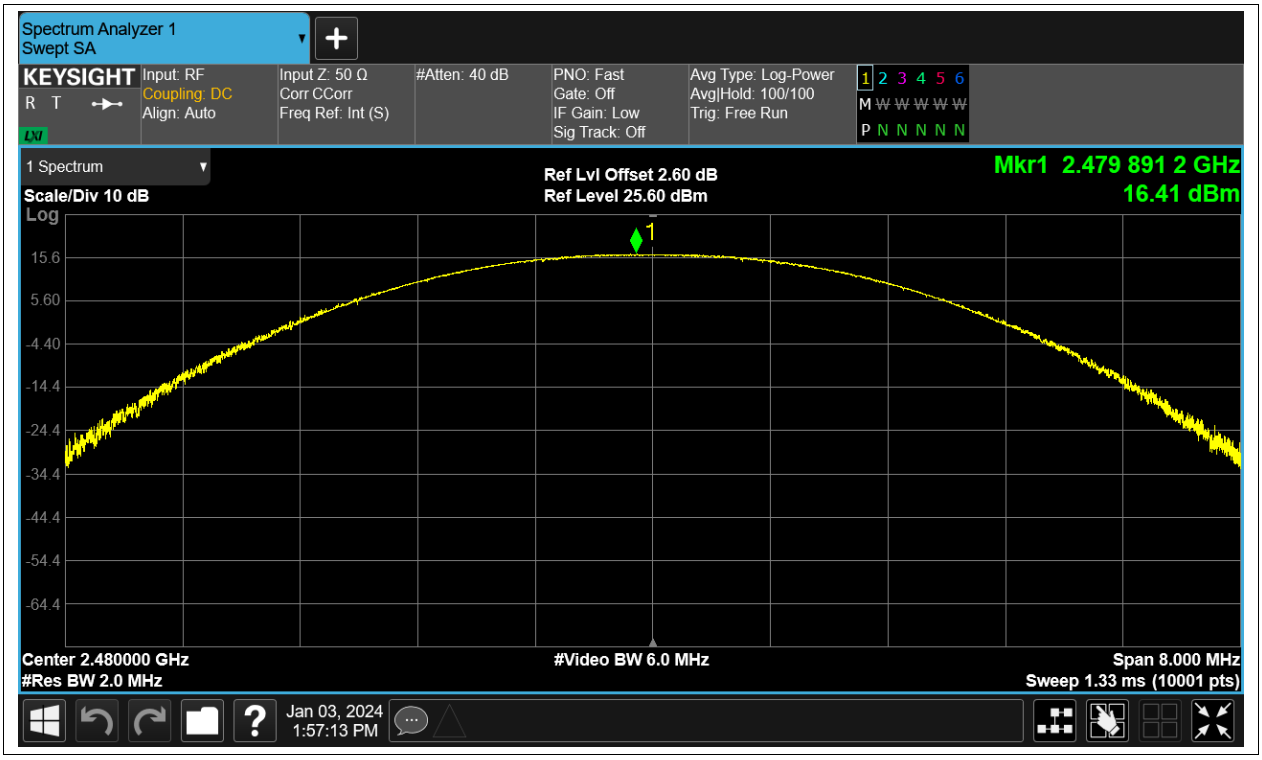
Power NVNT 3-DH1 2402MHz Ant0



Power NVNT 3-DH1 2441MHz Ant0



Power NVNT 3-DH1 2480MHz Ant0

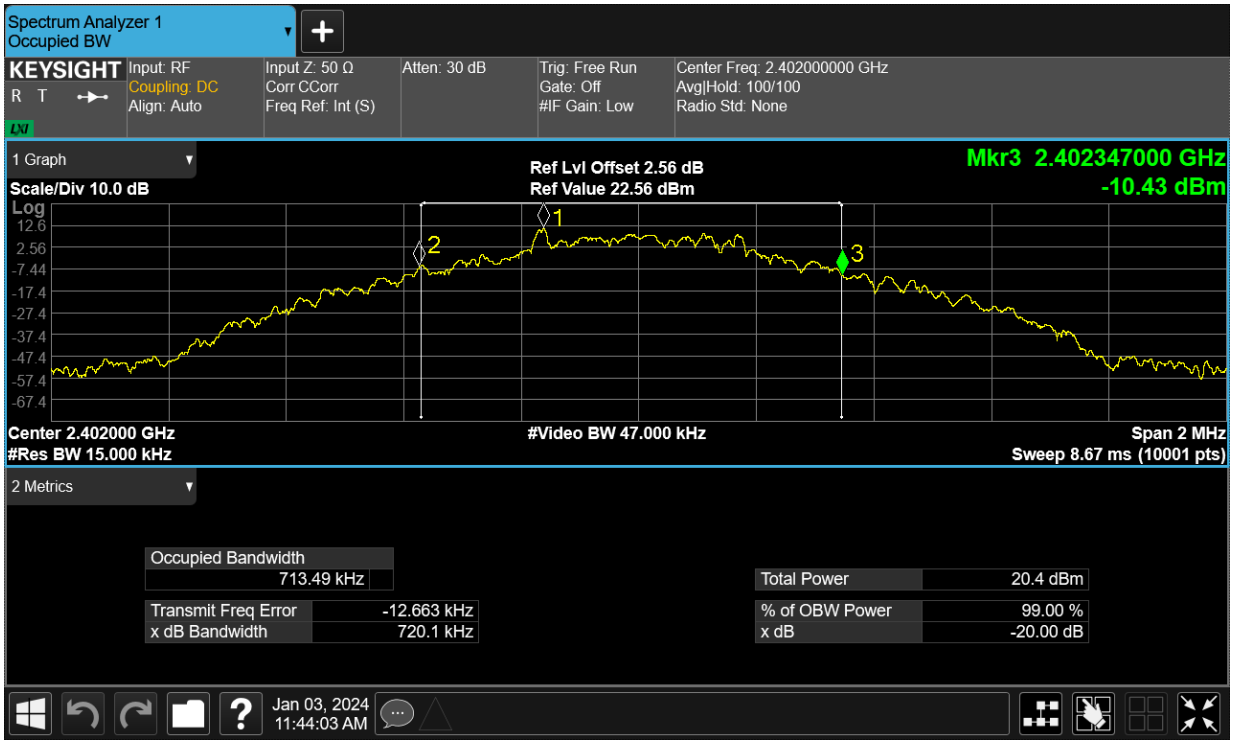

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 40 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 2.60 dB
Ref Level 25.60 dBm
Mkr1 2.479 891 2 GHz
16.41 dBm
15.6
5.60
-4.40
-14.4
-24.4
-34.4
-44.4
-54.4
-64.4
Center 2.480000 GHz
#Res BW 2.0 MHz
#Video BW 6.0 MHz
Span 8.000 MHz
Sweep 1.33 ms (10001 pts)
Jan 03, 2024
1:57:13 PM

-20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)
NVNT	1-DH1	2402	Ant0	0.72
NVNT	1-DH1	2441	Ant0	0.719
NVNT	1-DH1	2480	Ant0	0.72
NVNT	2-DH1	2402	Ant0	1.194
NVNT	2-DH1	2441	Ant0	1.165
NVNT	2-DH1	2480	Ant0	1.178
NVNT	3-DH1	2402	Ant0	1.201
NVNT	3-DH1	2441	Ant0	1.204
NVNT	3-DH1	2480	Ant0	1.201

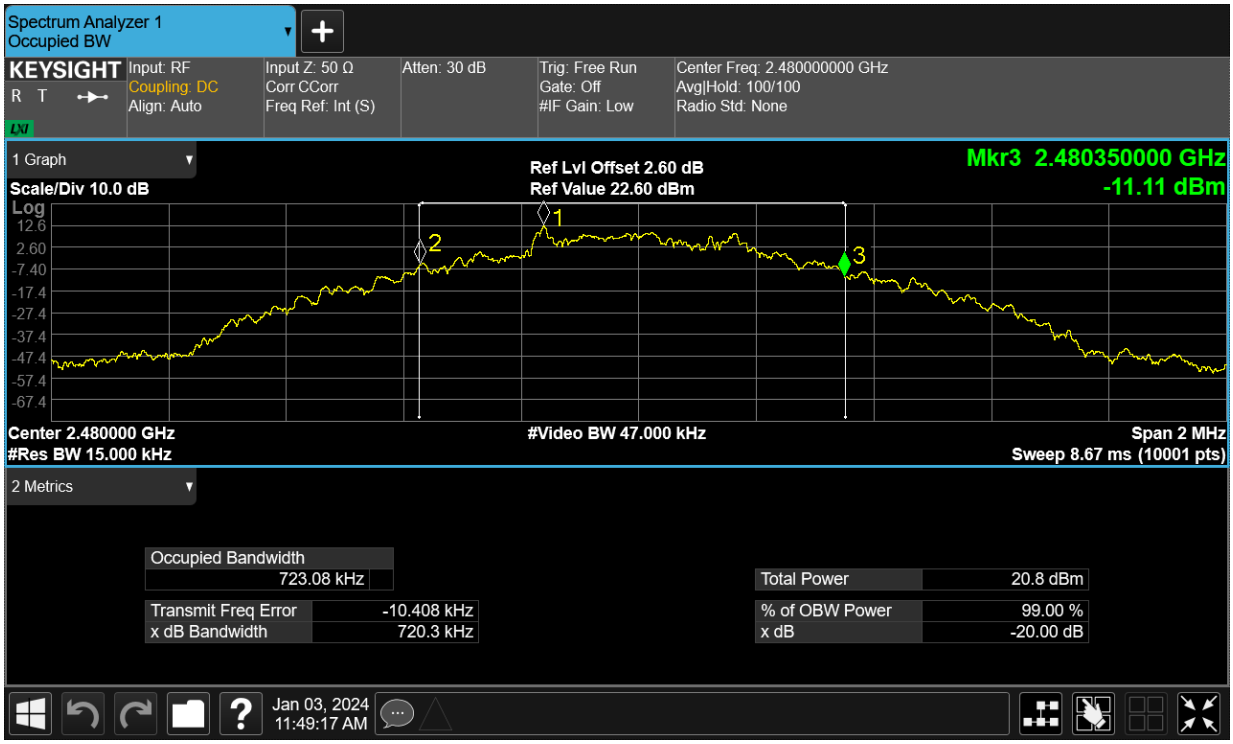
Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant0

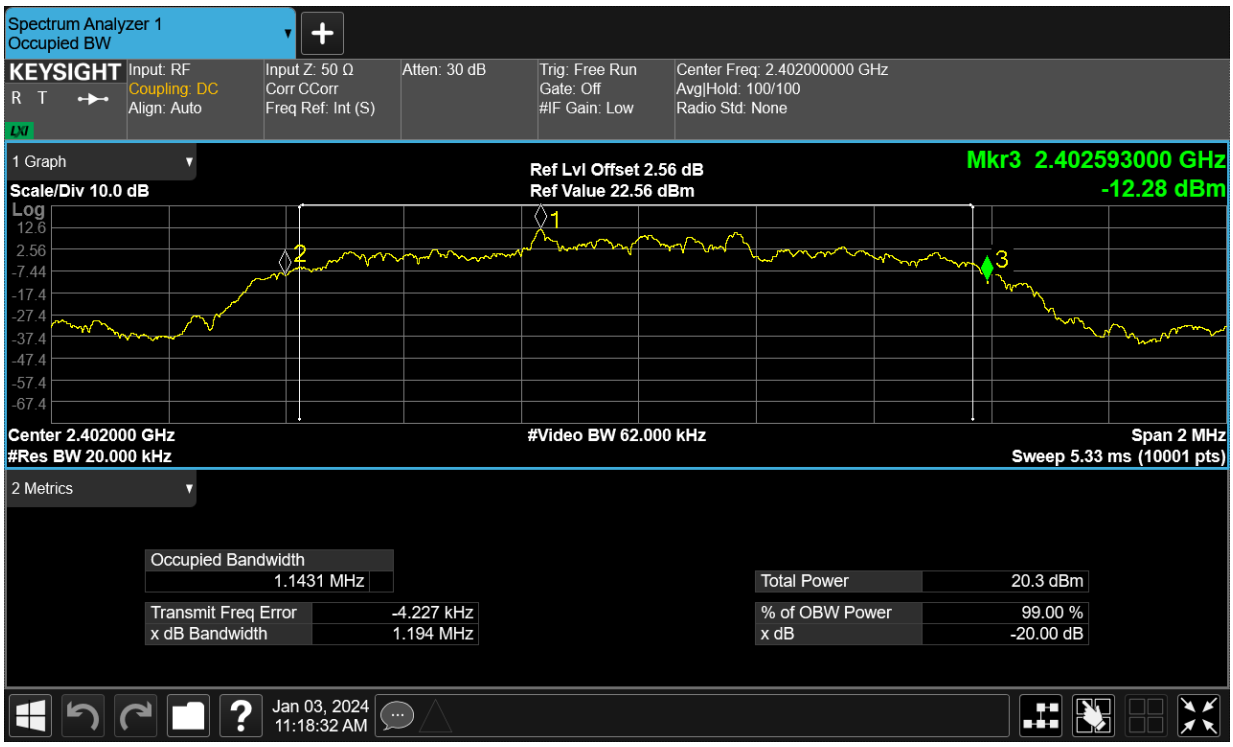


-20dB Bandwidth NVNT 1-DH1 2441MHz Ant0

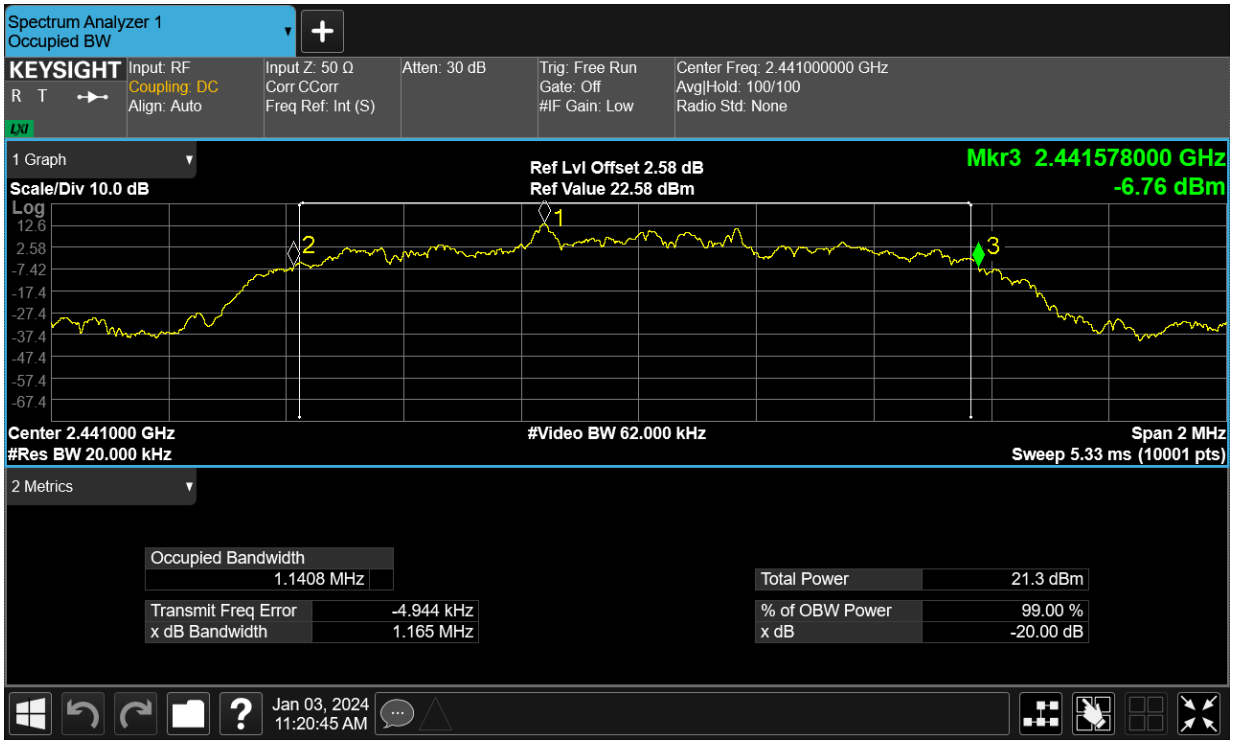
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant0



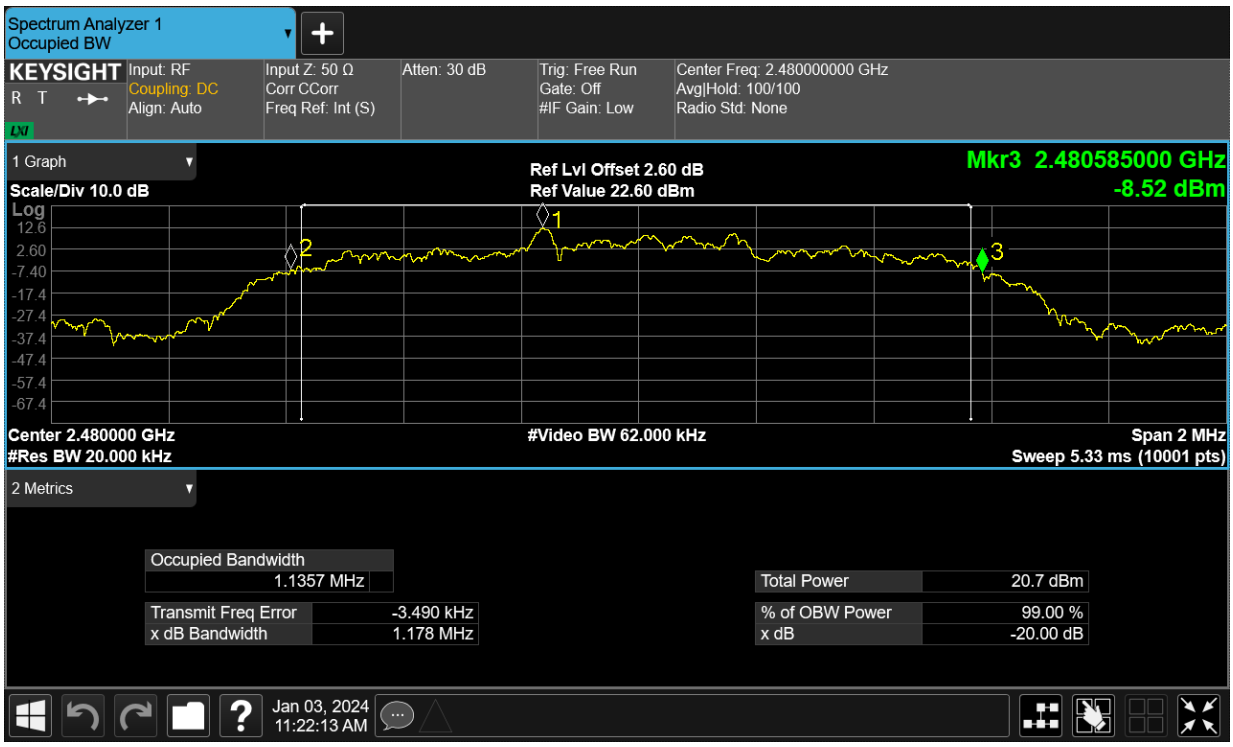
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant0



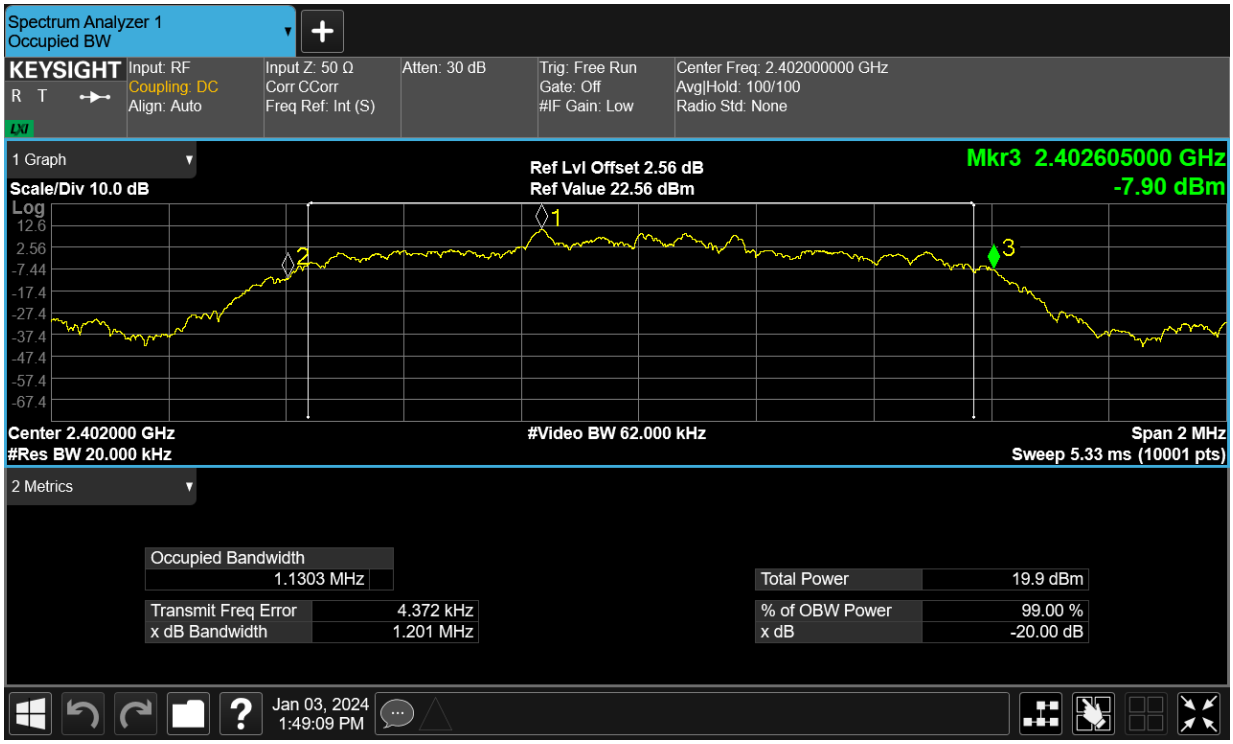
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant0



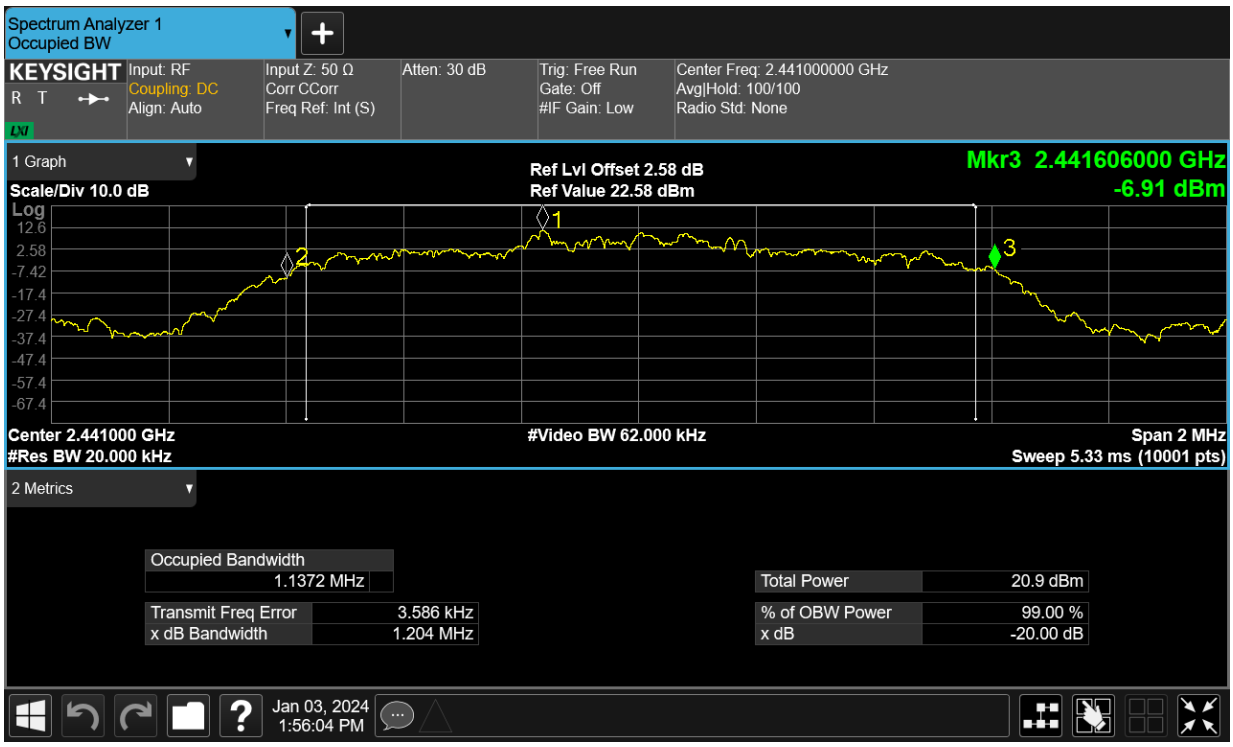
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant0



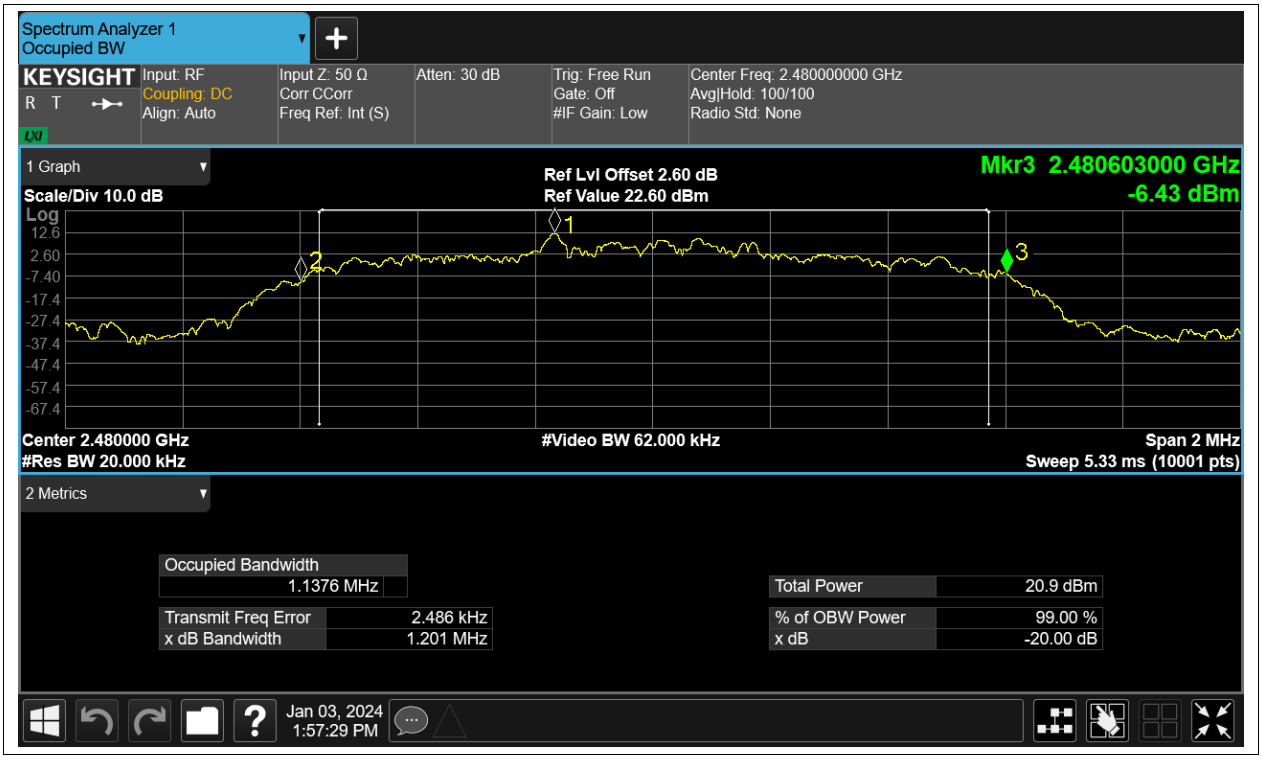
-20dB Bandwidth NVNT 3-DH1 2402MHz Ant0



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant0



-20dB Bandwidth NVNT 3-DH1 2480MHz Ant0

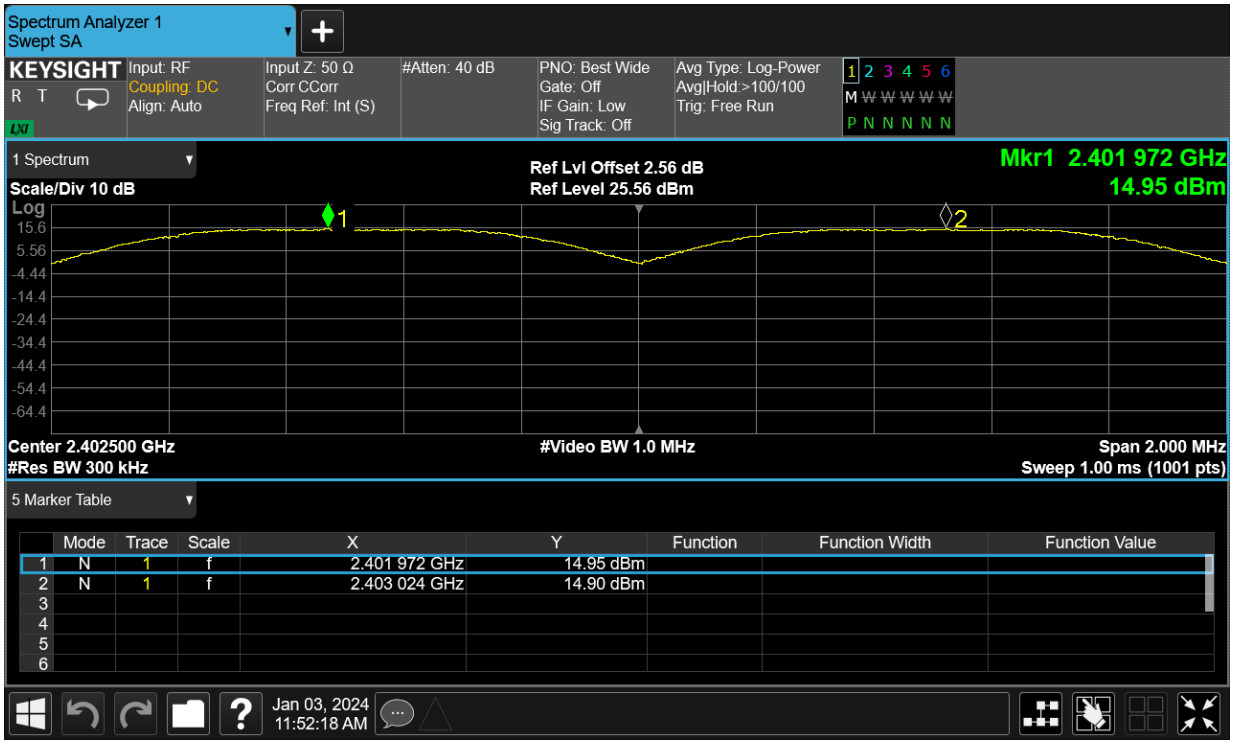

Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 100/100
Radio Std: None
1 Graph
Scale/Div 10.0 dB
Log
12.6
2.60
-7.40
-17.4
-27.4
-37.4
-47.4
-57.4
-67.4
Ref Lvl Offset 2.60 dB
Ref Value 22.60 dBm
Mkr3 2.480603000 GHz
-6.43 dBm
Center 2.480000 GHz
#Res BW 20.000 kHz
#Video BW 62.000 kHz
Span 2 MHz
Sweep 5.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
1.1376 MHz
Transmit Freq Error 2.486 kHz
x dB Bandwidth 1.201 MHz
Total Power 20.9 dBm
% of OBW Power 99.00 %
x dB -20.00 dB
Jan 03, 2024
1:57:29 PM

Carrier Frequencies Separation

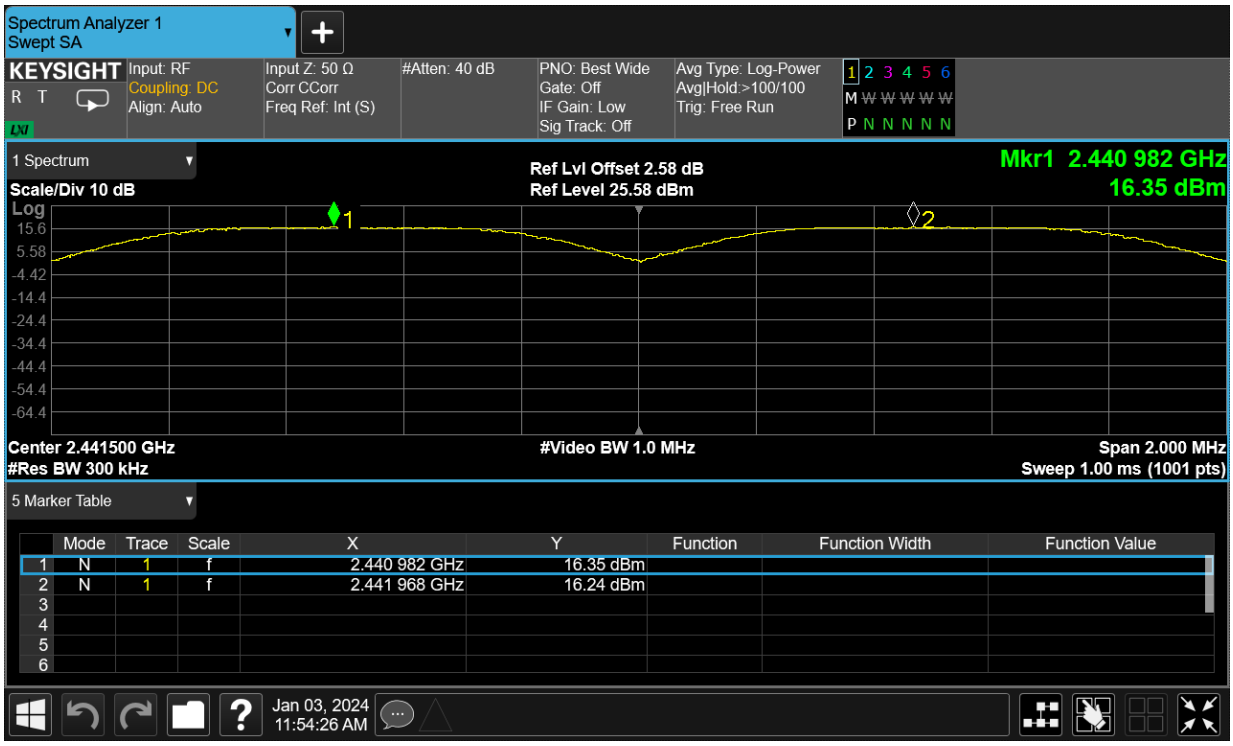
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant0	2401.972	2403.024	1.052	0.72	Pass
NVNT	1-DH1	Ant0	2440.982	2441.968	0.986	0.719	Pass
NVNT	1-DH1	Ant0	2478.976	2480.018	1.042	0.72	Pass
NVNT	2-DH1	Ant0	2401.848	2402.822	0.974	0.796	Pass
NVNT	2-DH1	Ant0	2440.834	2441.838	1.004	0.777	Pass
NVNT	2-DH1	Ant0	2478.832	2479.844	1.012	0.785	Pass
NVNT	3-DH1	Ant0	2401.834	2402.852	1.018	0.801	Pass
NVNT	3-DH1	Ant0	2440.828	2442.16	1.332	0.803	Pass
NVNT	3-DH1	Ant0	2478.848	2479.84	0.992	0.801	Pass

Test Graphs

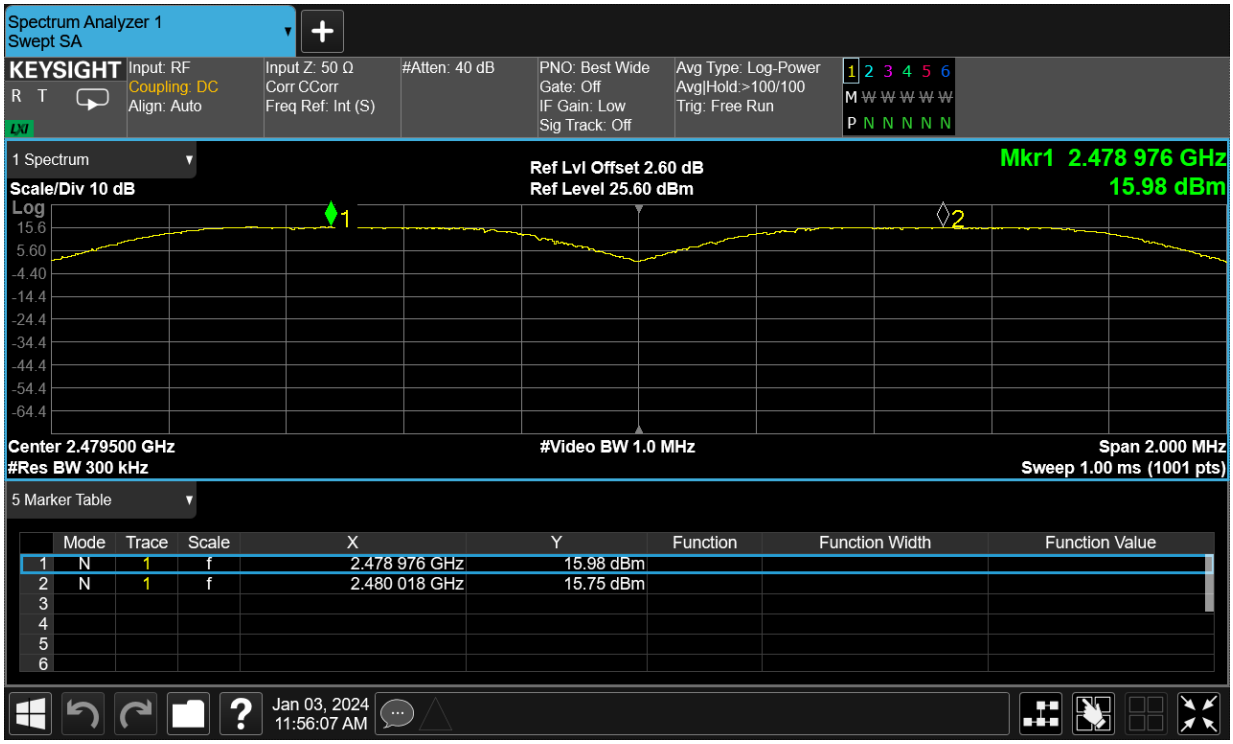
CFS NVNT 1-DH1 2402MHz Ant0



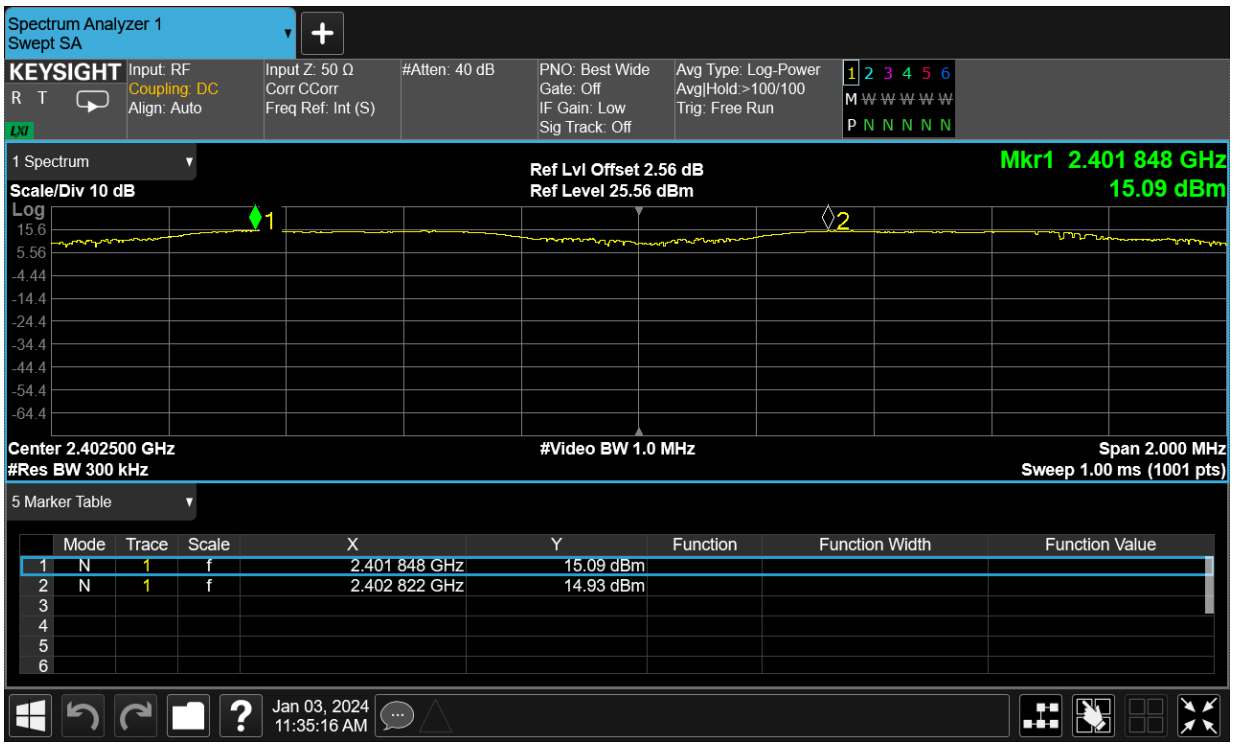
CFS NVNT 1-DH1 2441MHz Ant0



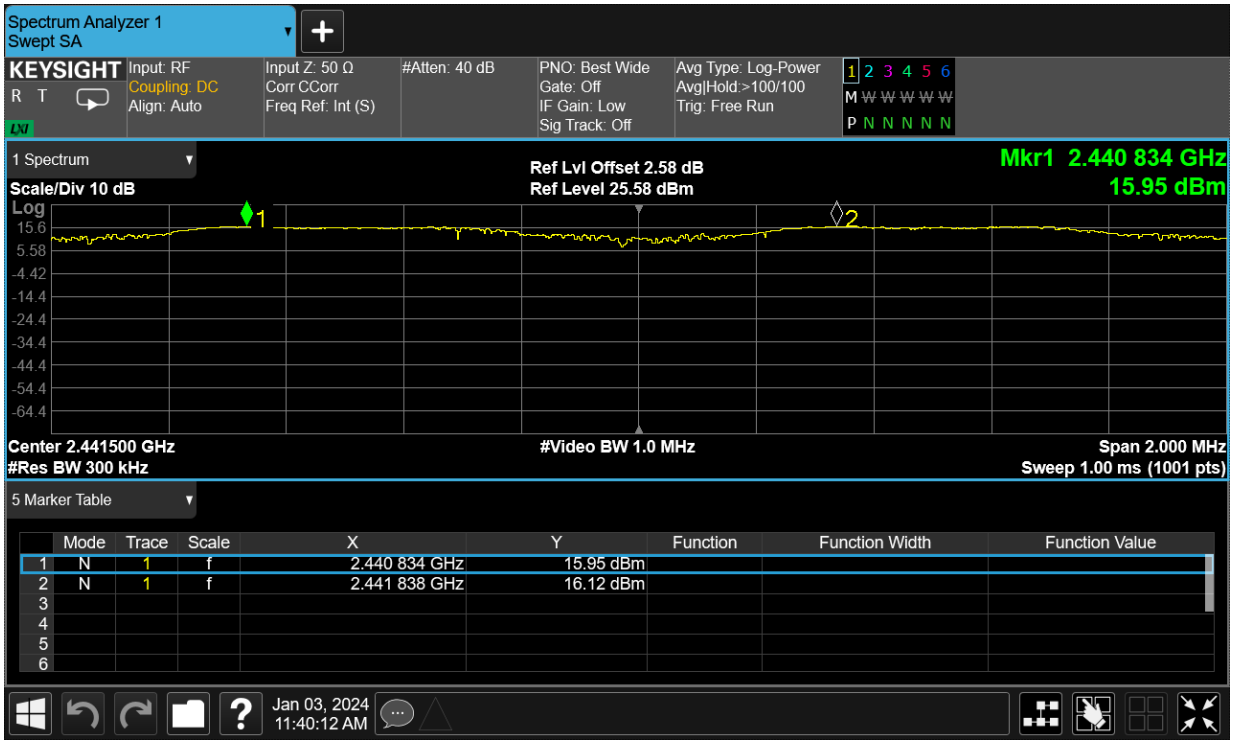
CFS NVNT 1-DH1 2480MHz Ant0



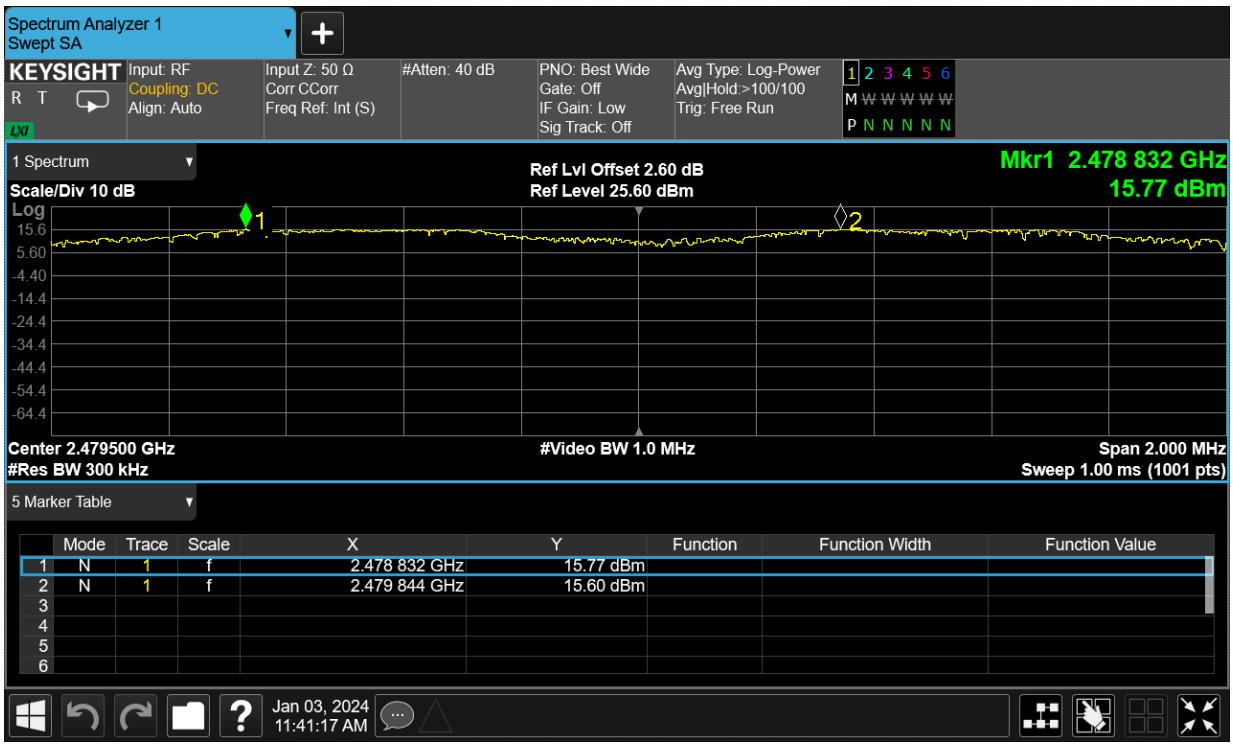
CFS NVNT 2-DH1 2402MHz Ant0



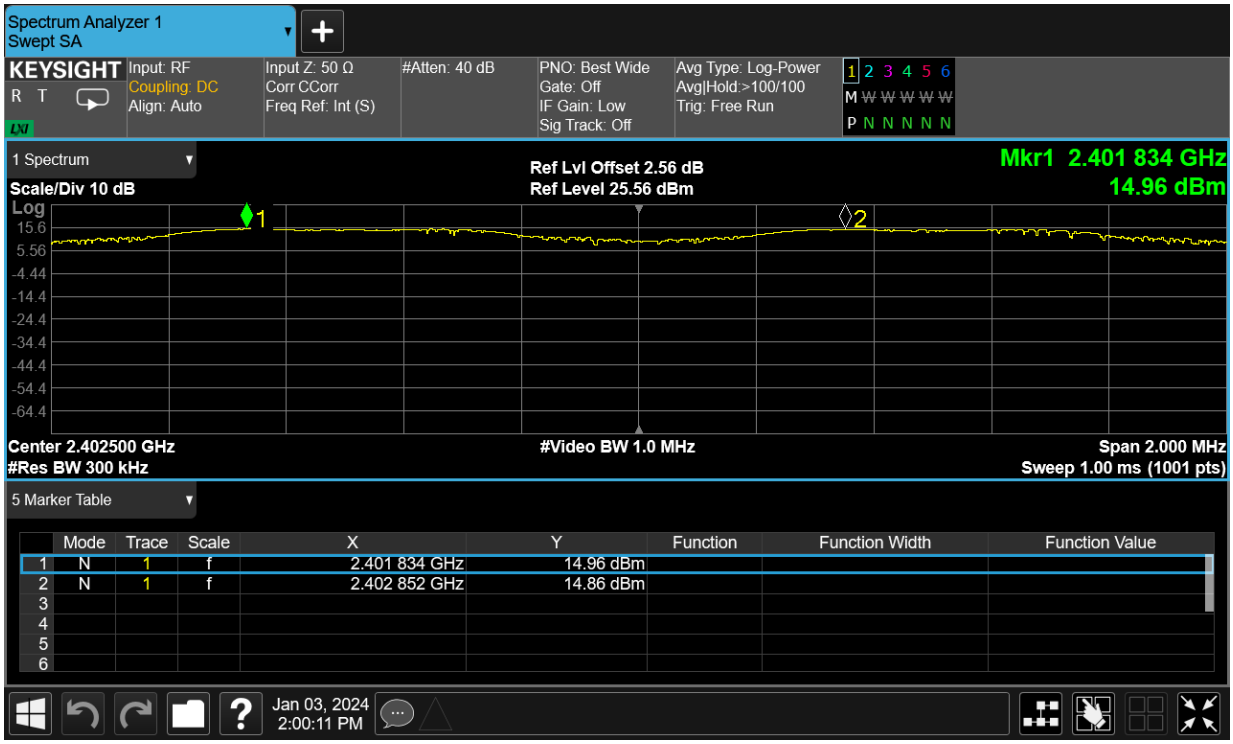
CFS NVNT 2-DH1 2441MHz Ant0



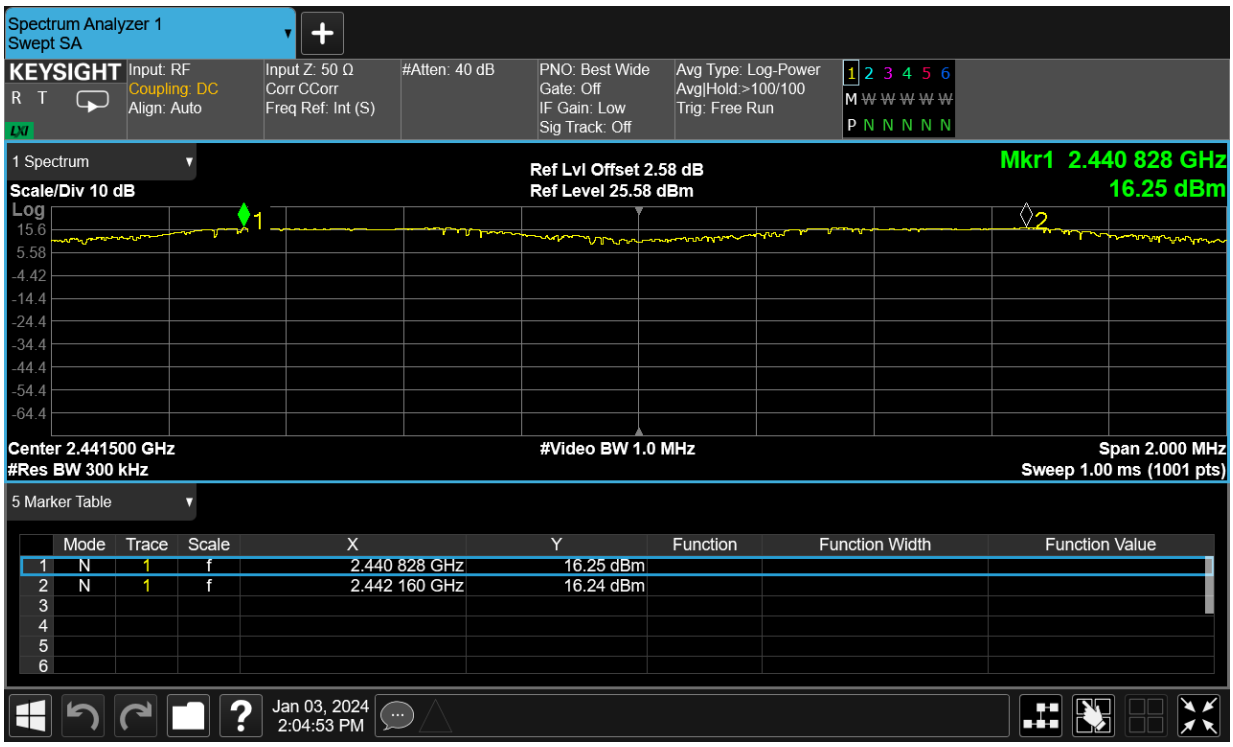
CFS NVNT 2-DH1 2480MHz Ant0



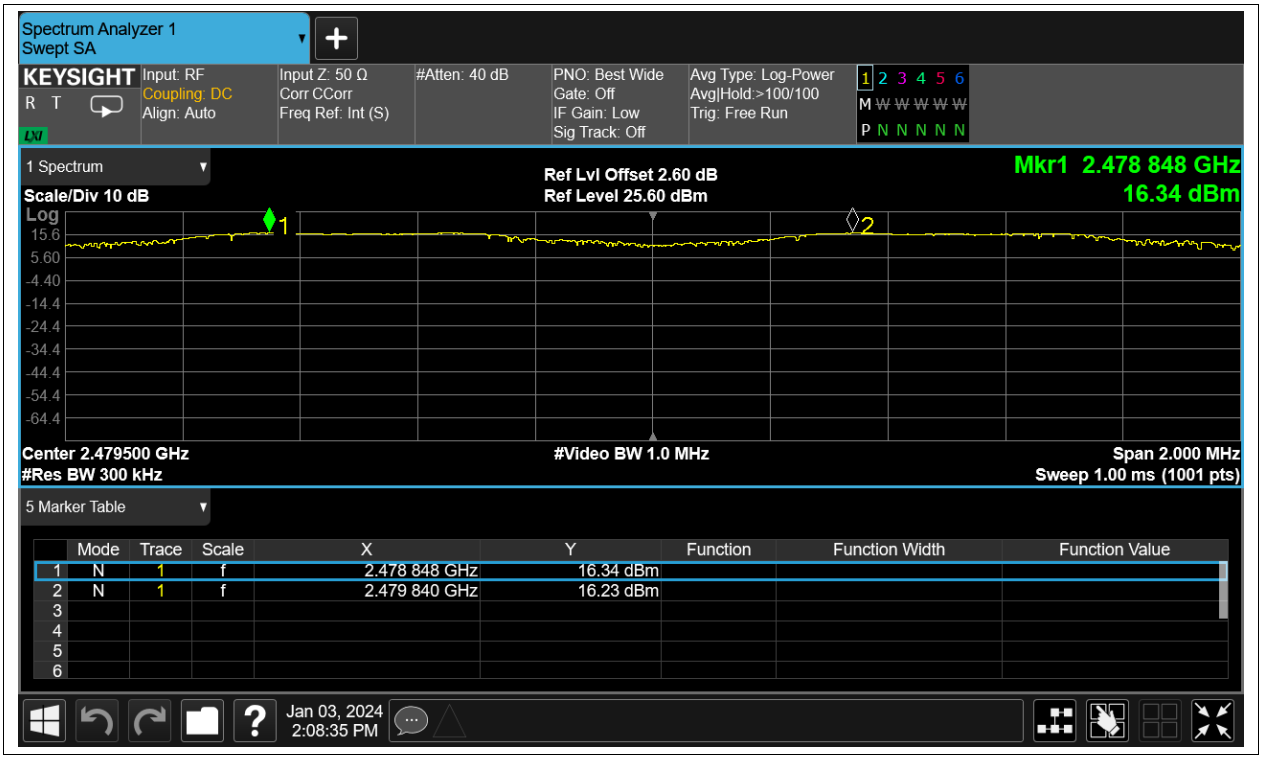
CFS NVNT 3-DH1 2402MHz Ant0



CFS NVNT 3-DH1 2441MHz Ant0



CFS NVNT 3-DH1 2480MHz Ant0

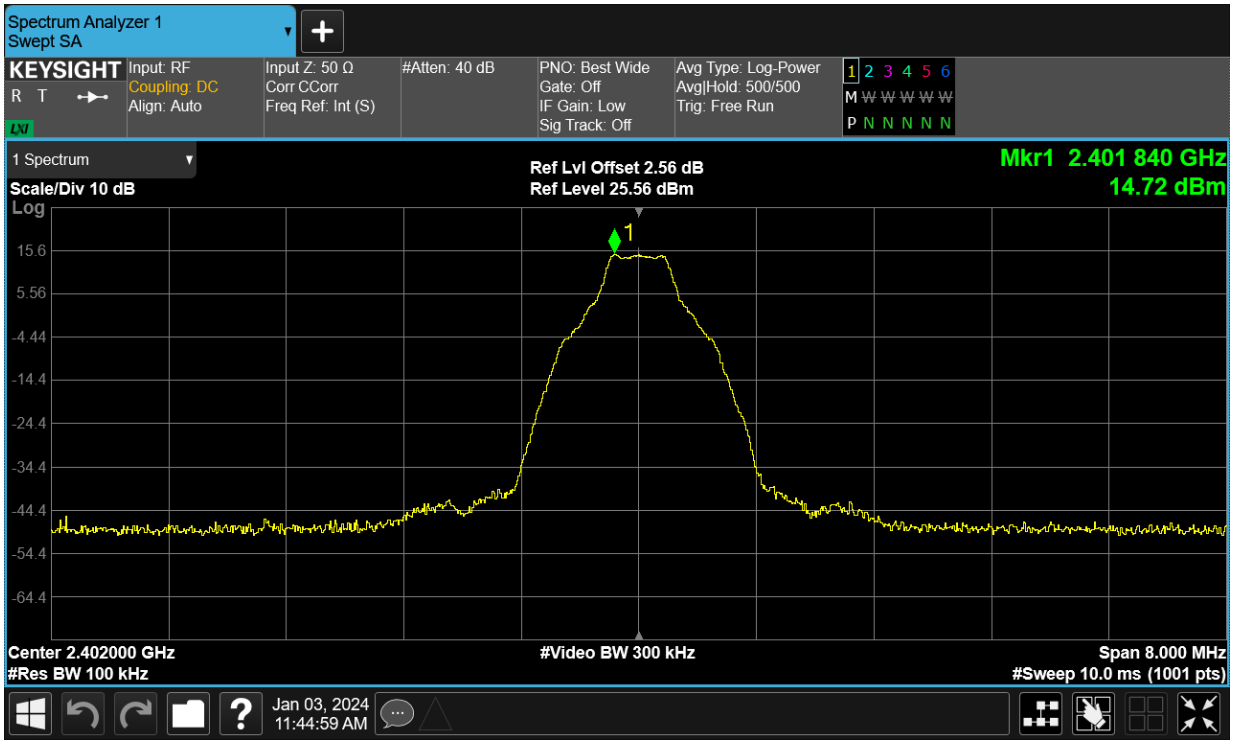

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 40 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold:>100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.60 dB
Ref Level 25.60 dBm
Mkr1 2.478 848 GHz
16.34 dBm
Center 2.479500 GHz
#Res BW 300 kHz
#Video BW 1.0 MHz
Span 2.000 MHz
Sweep 1.00 ms (1001 pts)
5 Marker Table
Mode Trace Scale X Y Function Function Width Function Value
1 N 1 f 2.478 848 GHz 16.34 dBm
2 N 1 f 2.479 840 GHz 16.23 dBm
Jan 03, 2024
2:08:35 PM

Band Edge

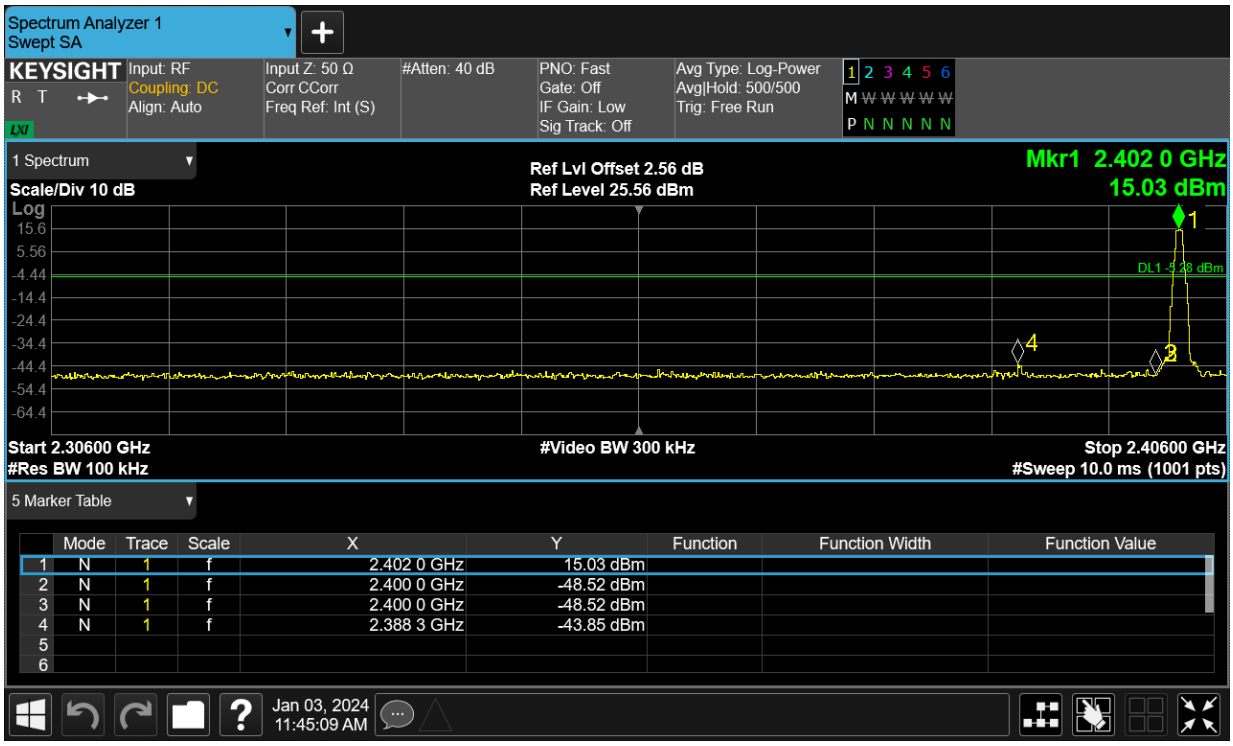
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant0	No-Hopping	-58.57	-20	Pass
NVNT	1-DH1	2480	Ant0	No-Hopping	-60.96	-20	Pass
NVNT	2-DH1	2402	Ant0	No-Hopping	-56.76	-20	Pass
NVNT	2-DH1	2480	Ant0	No-Hopping	-61.92	-20	Pass
NVNT	3-DH1	2402	Ant0	No-Hopping	-60.68	-20	Pass
NVNT	3-DH1	2480	Ant0	No-Hopping	-61.94	-20	Pass

Test Graphs

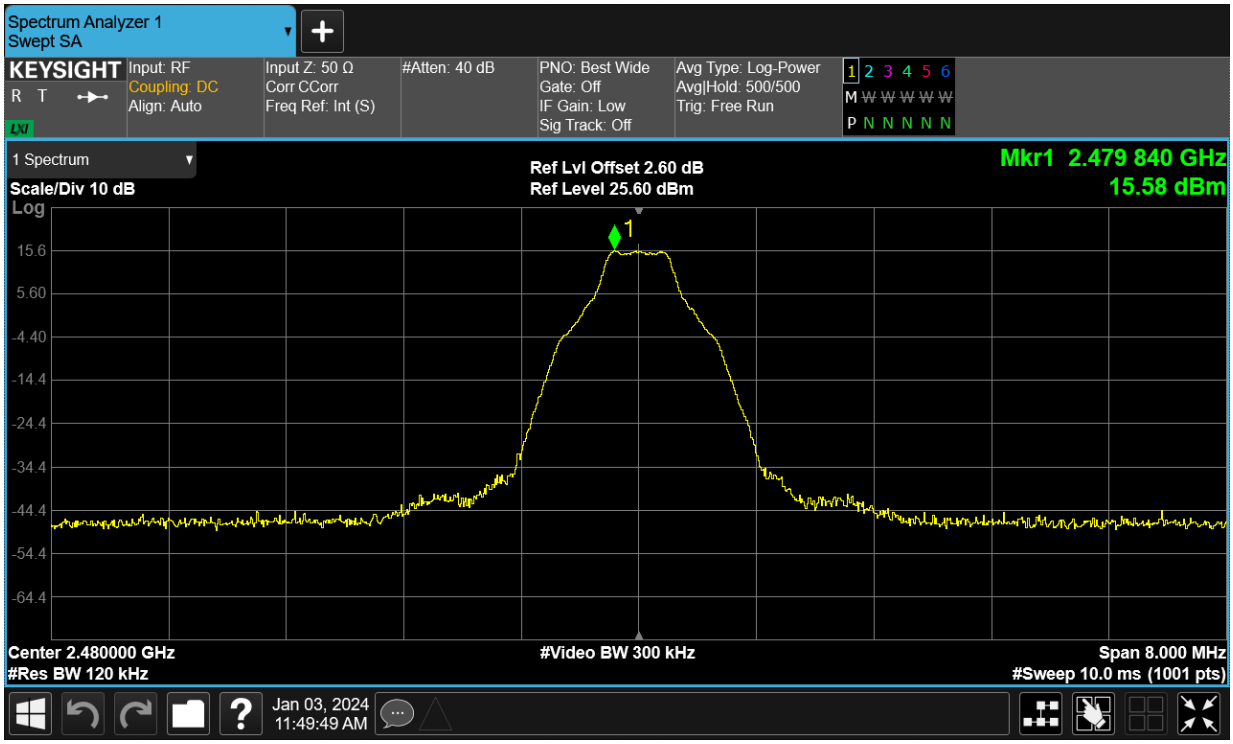
Band Edge NVNT 1-DH1 2402MHz Ant0 No-Hopping Ref



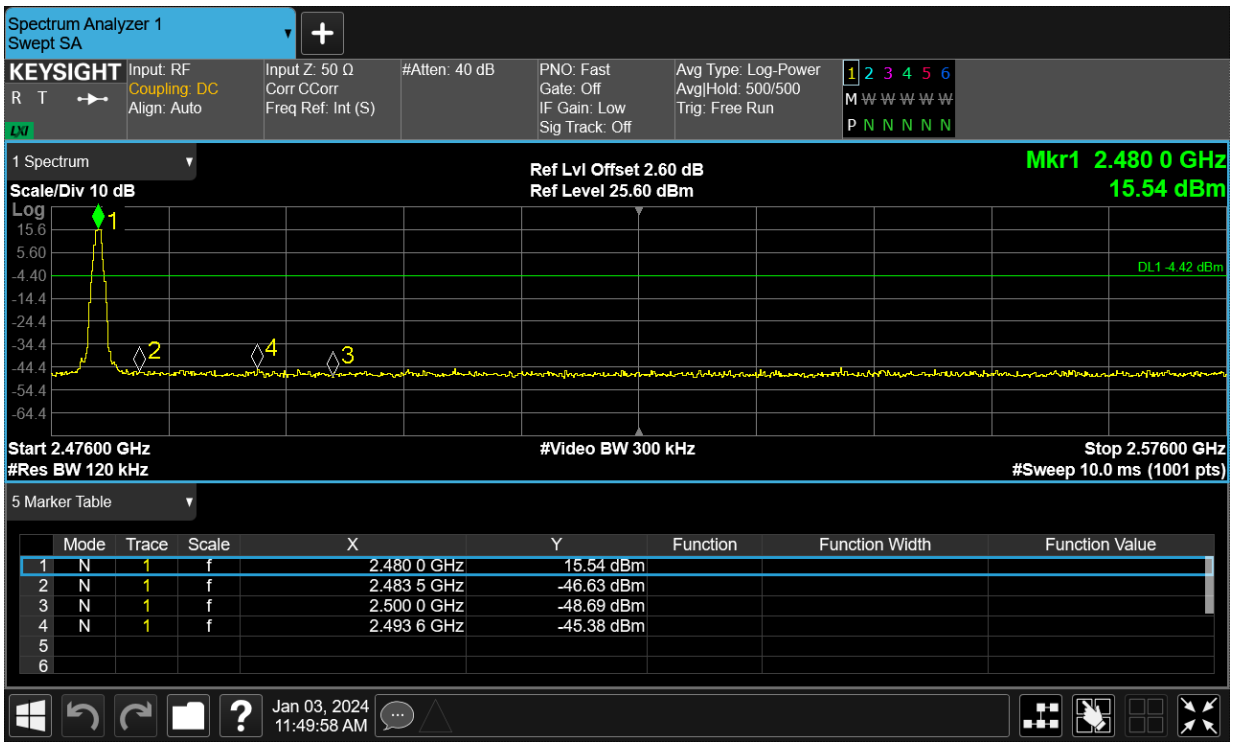
Band Edge NVNT 1-DH1 2402MHz Ant0 No-Hopping Emission



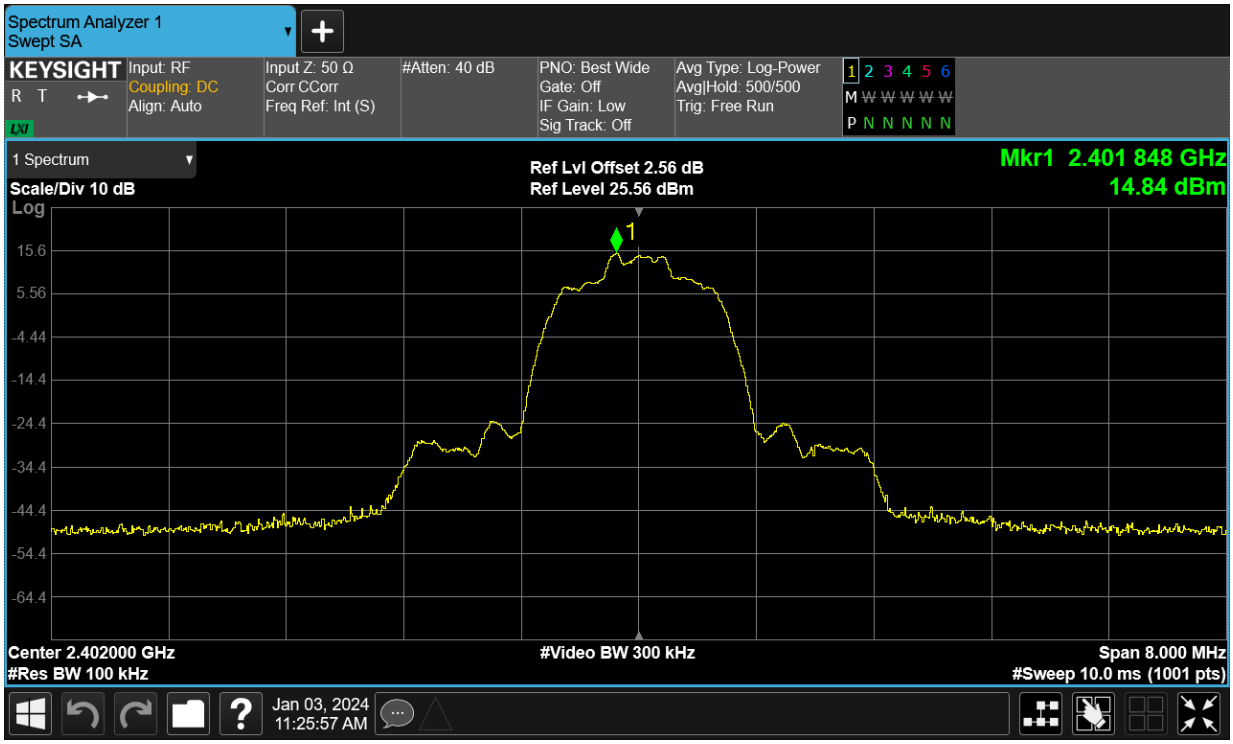
Band Edge NVNT 1-DH1 2480MHz Ant0 No-Hopping Ref



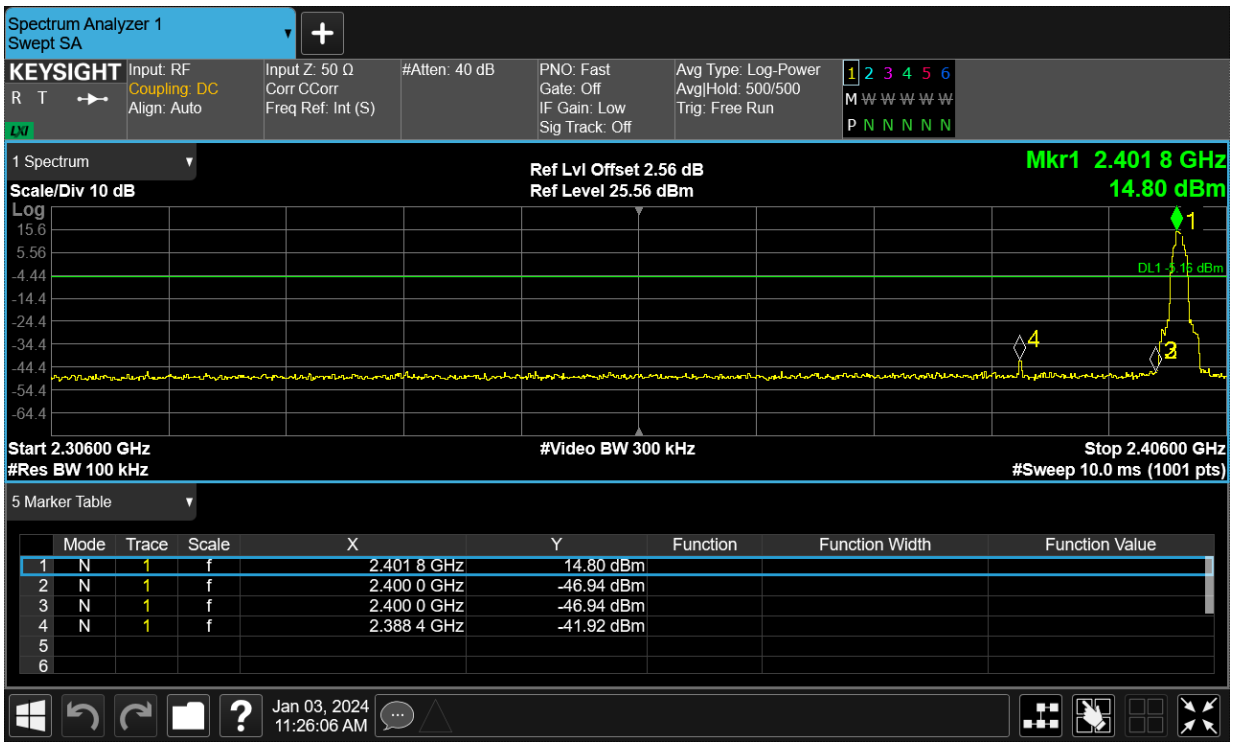
Band Edge NVNT 1-DH1 2480MHz Ant0 No-Hopping Emission



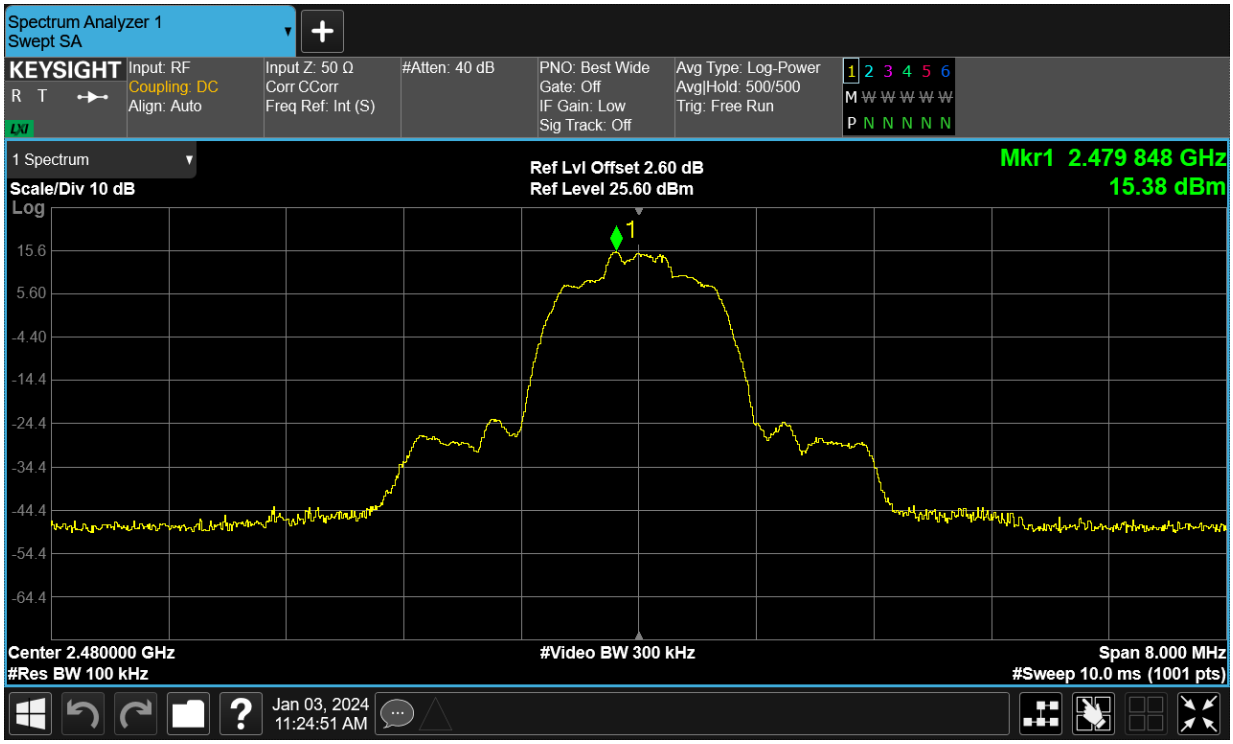
Band Edge NVNT 2-DH1 2402MHz Ant0 No-Hopping Ref



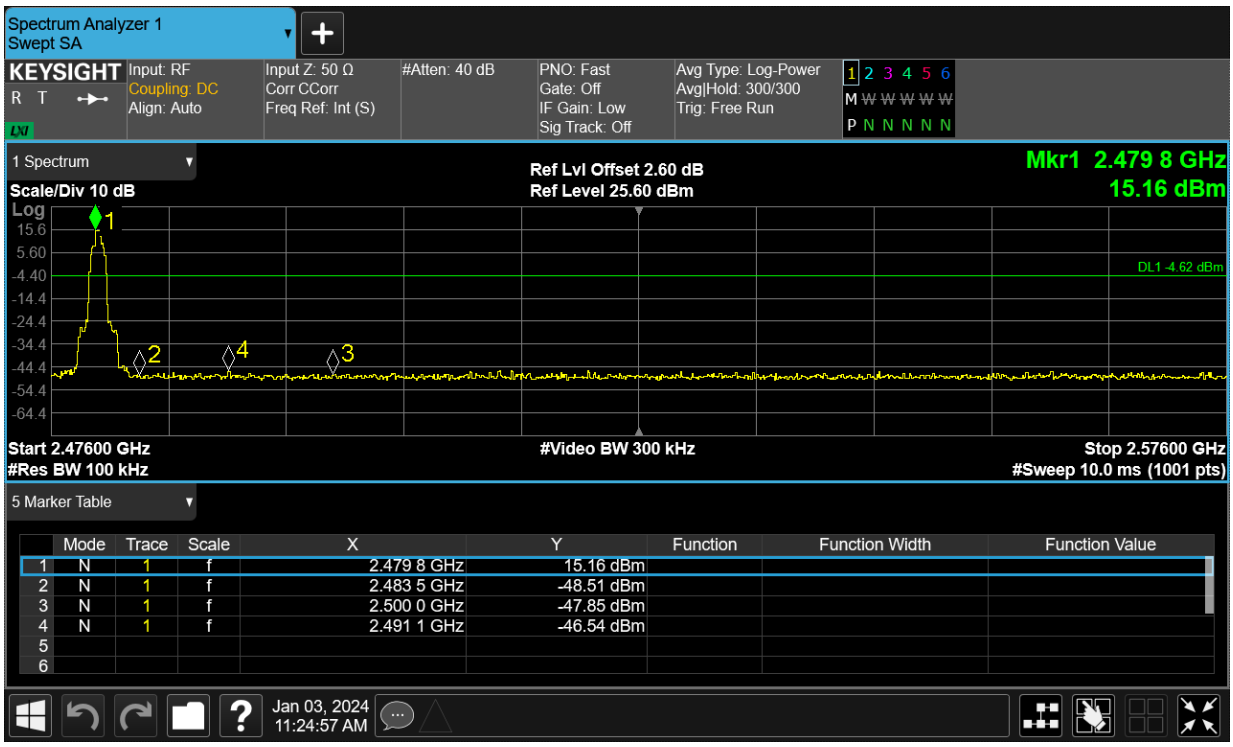
Band Edge NVNT 2-DH1 2402MHz Ant0 No-Hopping Emission



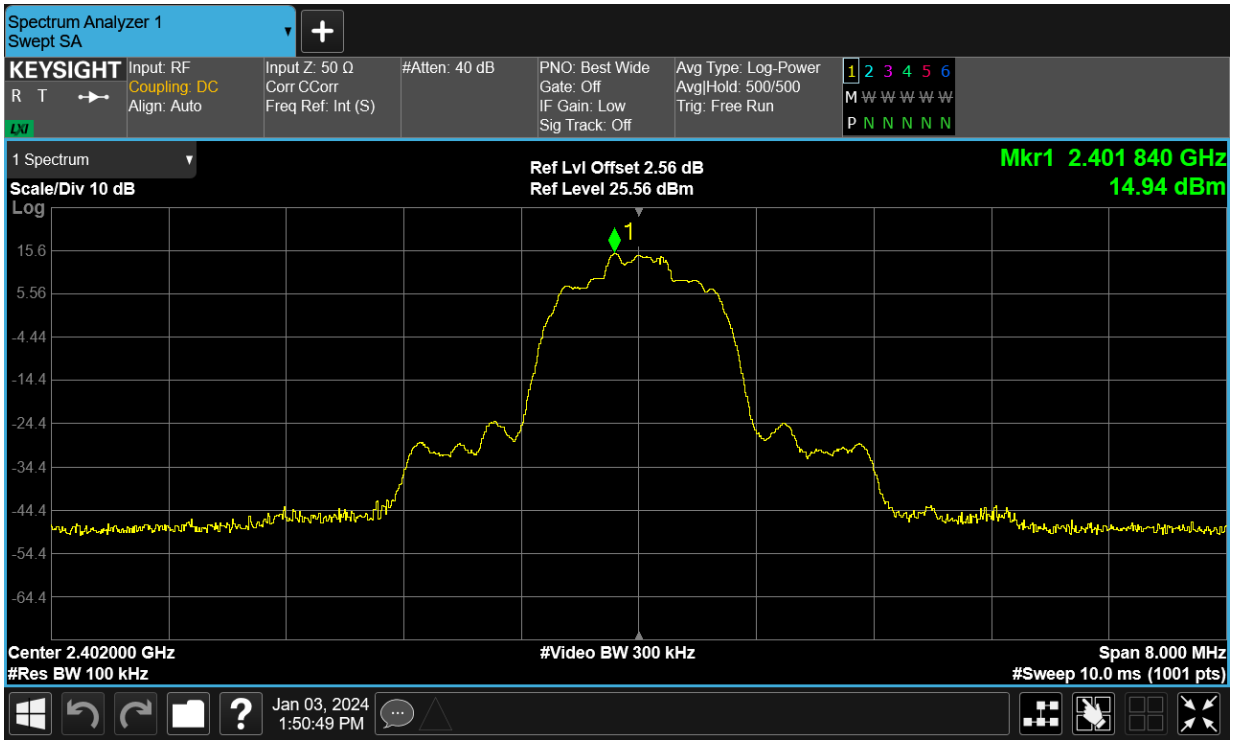
Band Edge NVNT 2-DH1 2480MHz Ant0 No-Hopping Ref



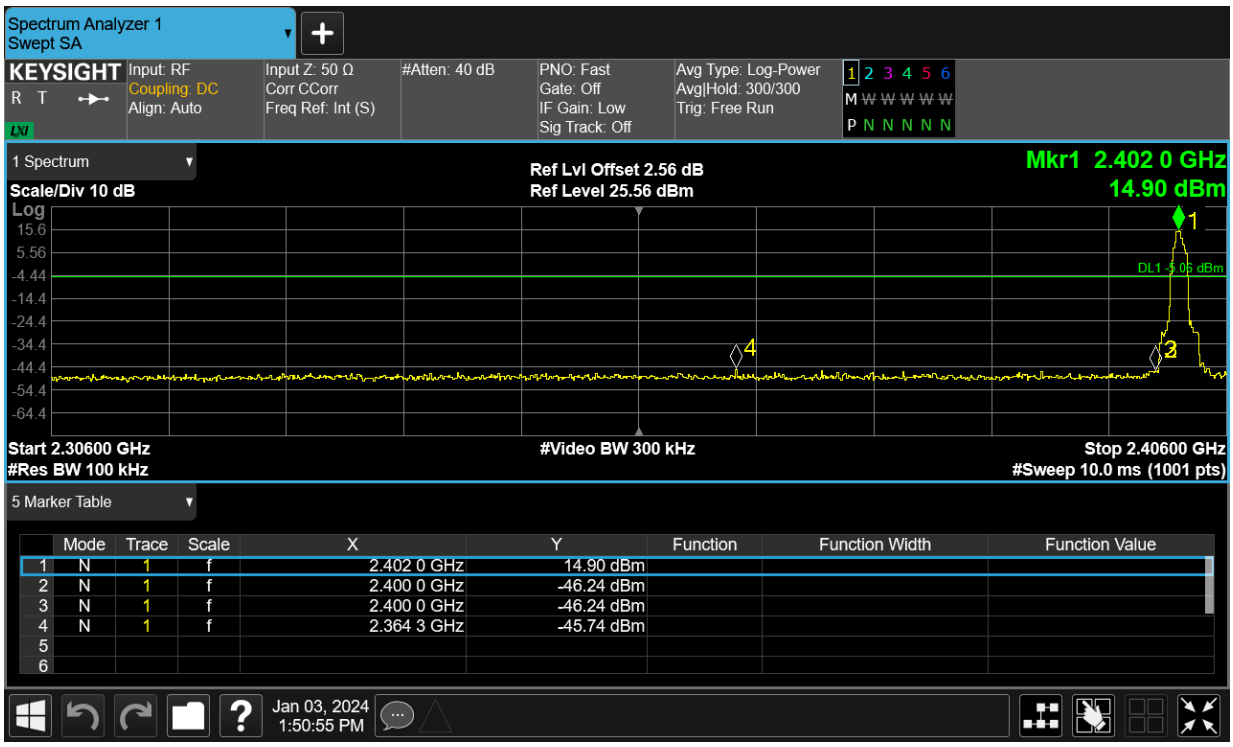
Band Edge NVNT 2-DH1 2480MHz Ant0 No-Hopping Emission



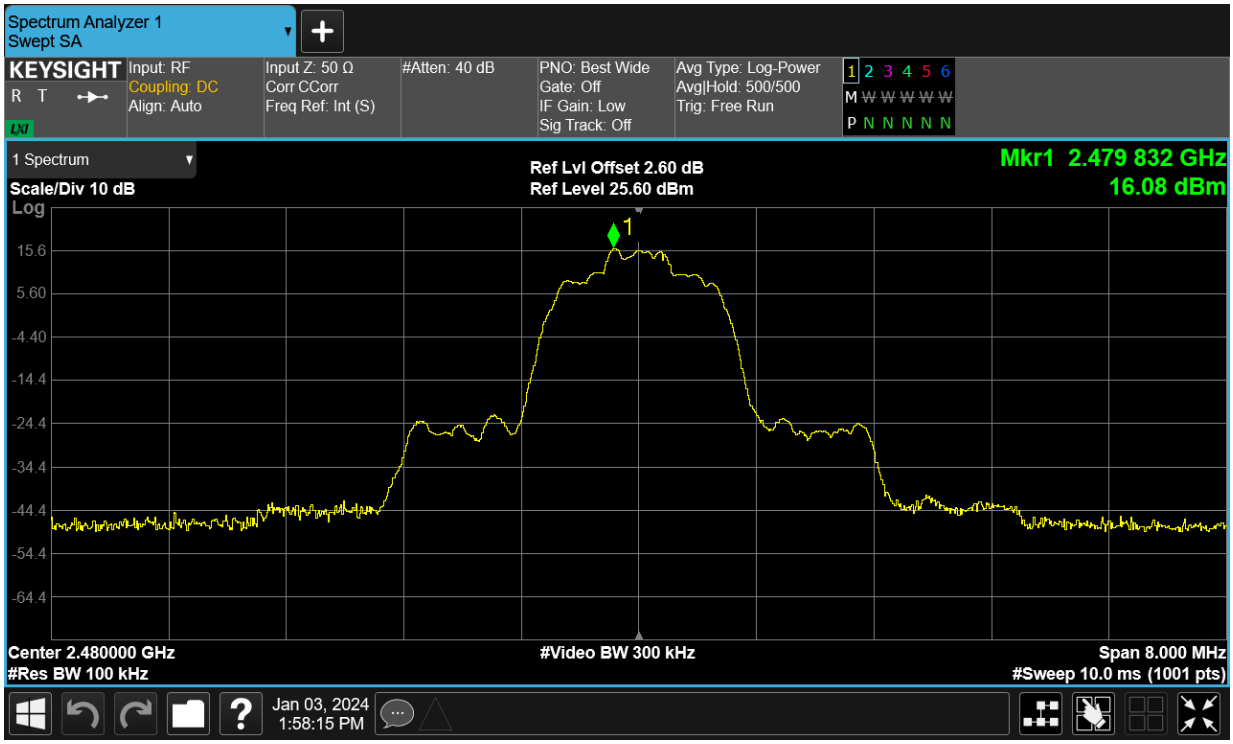
Band Edge NVNT 3-DH1 2402MHz Ant0 No-Hopping Ref



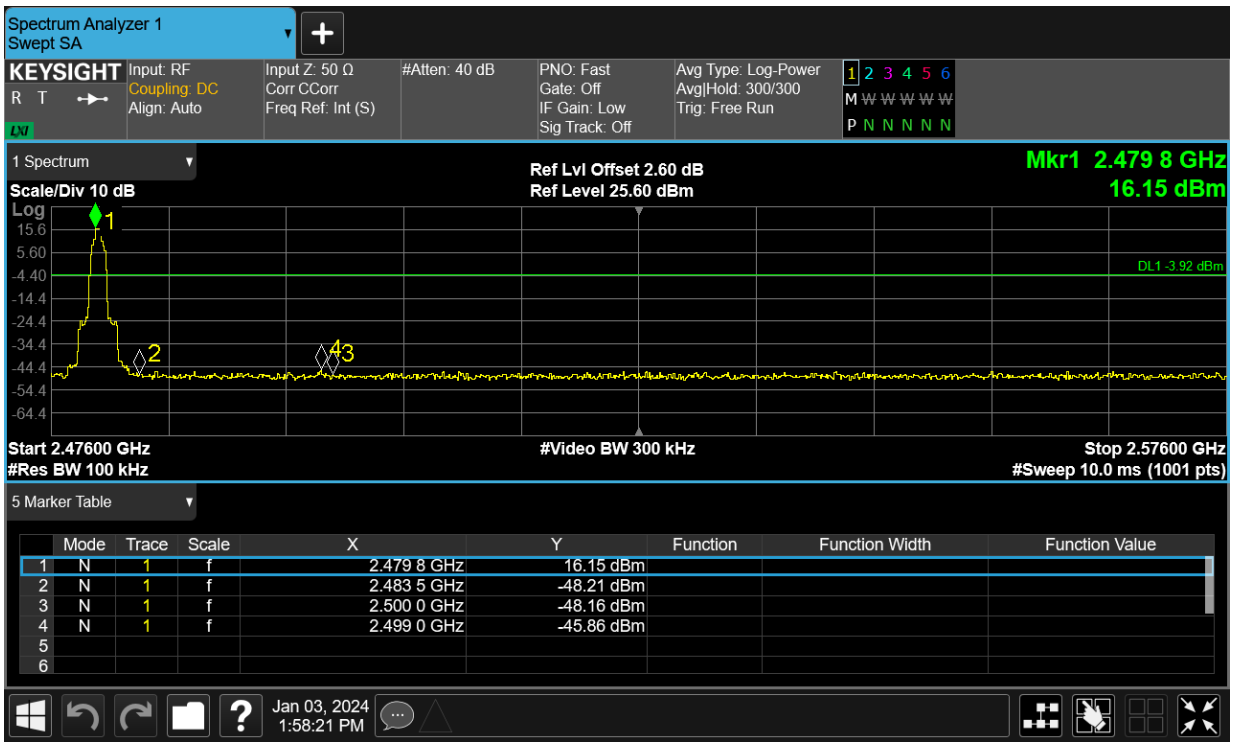
Band Edge NVNT 3-DH1 2402MHz Ant0 No-Hopping Emission



Band Edge NVNT 3-DH1 2480MHz Ant0 No-Hopping Ref



Band Edge NVNT 3-DH1 2480MHz Ant0 No-Hopping Emission

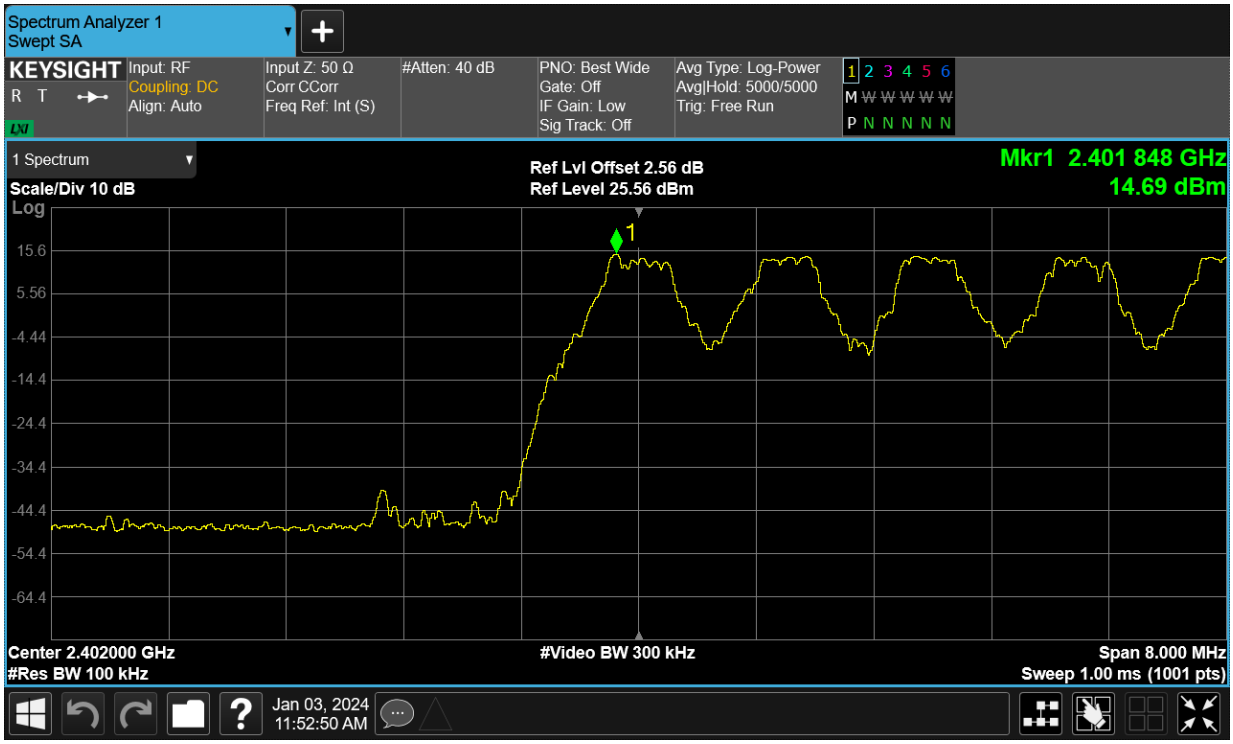


Band Edge(Hopping)

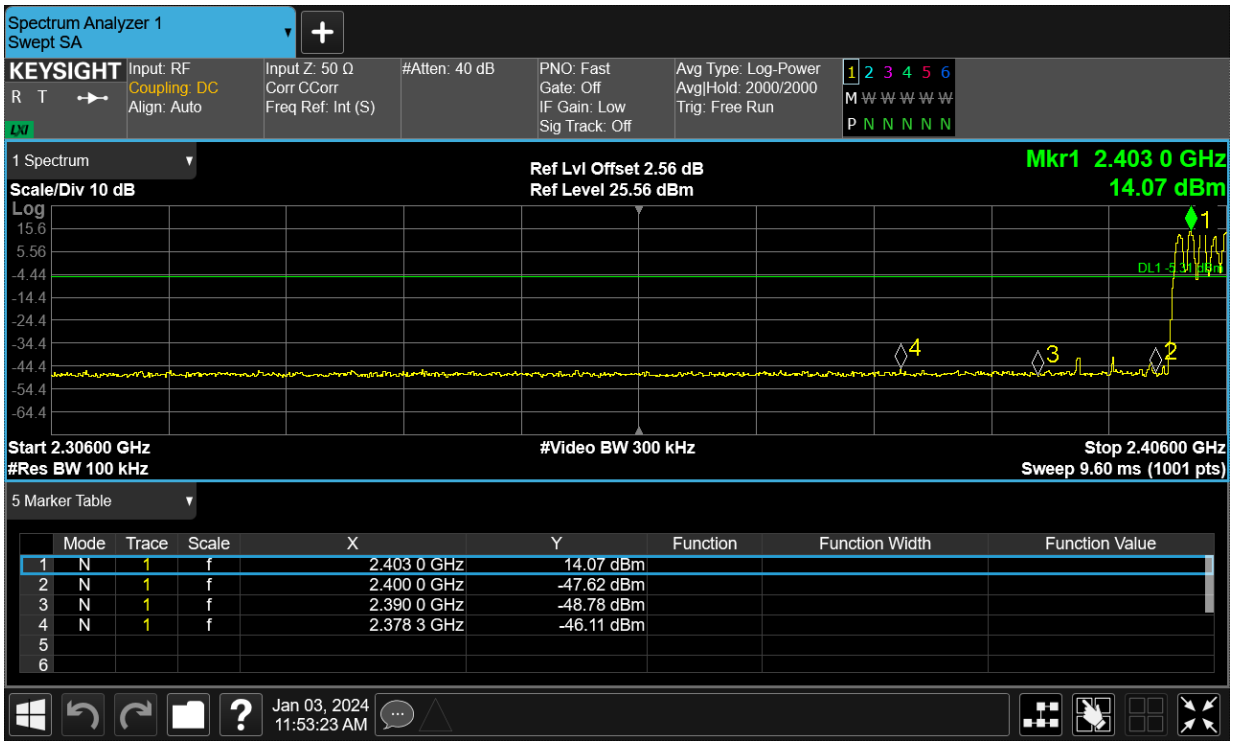
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant0	Hopping	-60.8	-20	Pass
NVNT	1-DH1	2480	Ant0	Hopping	-57.72	-20	Pass
NVNT	2-DH1	2402	Ant0	Hopping	-60.65	-20	Pass
NVNT	2-DH1	2480	Ant0	Hopping	-61.17	-20	Pass
NVNT	3-DH1	2402	Ant0	Hopping	-57.28	-20	Pass
NVNT	3-DH1	2480	Ant0	Hopping	-59.48	-20	Pass

Test Graphs

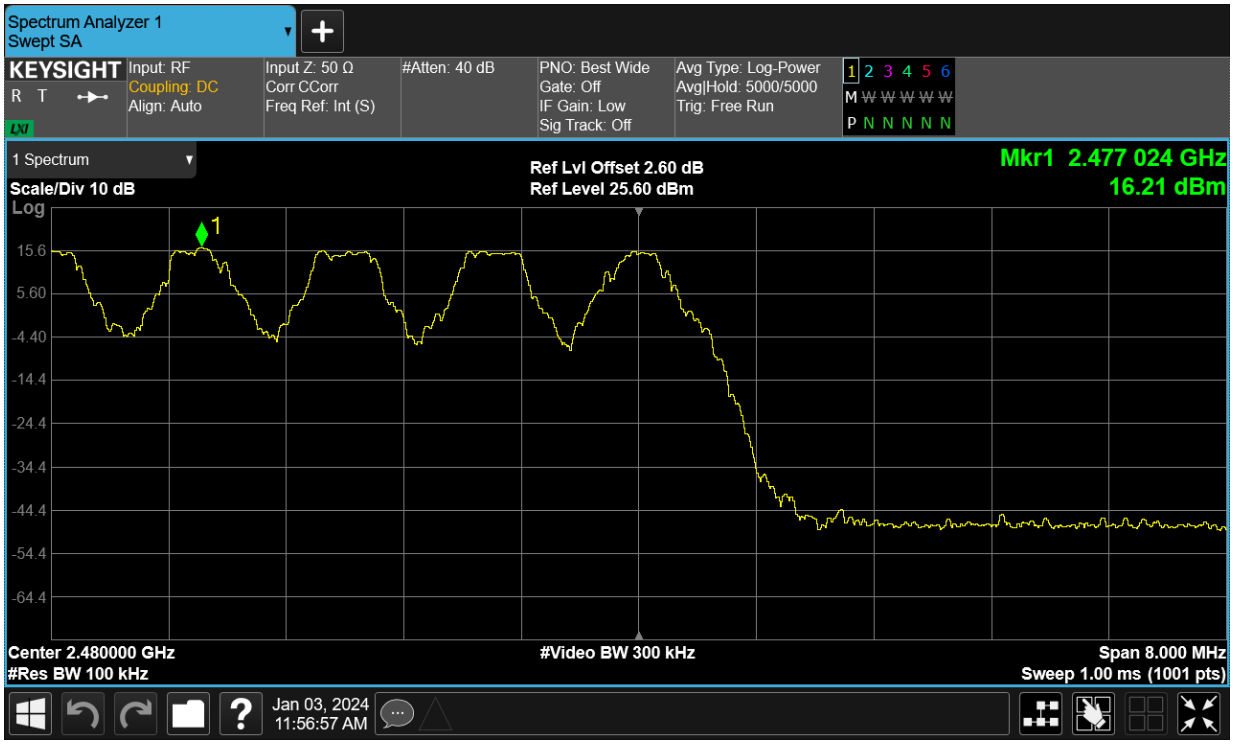
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant0 Hopping Ref



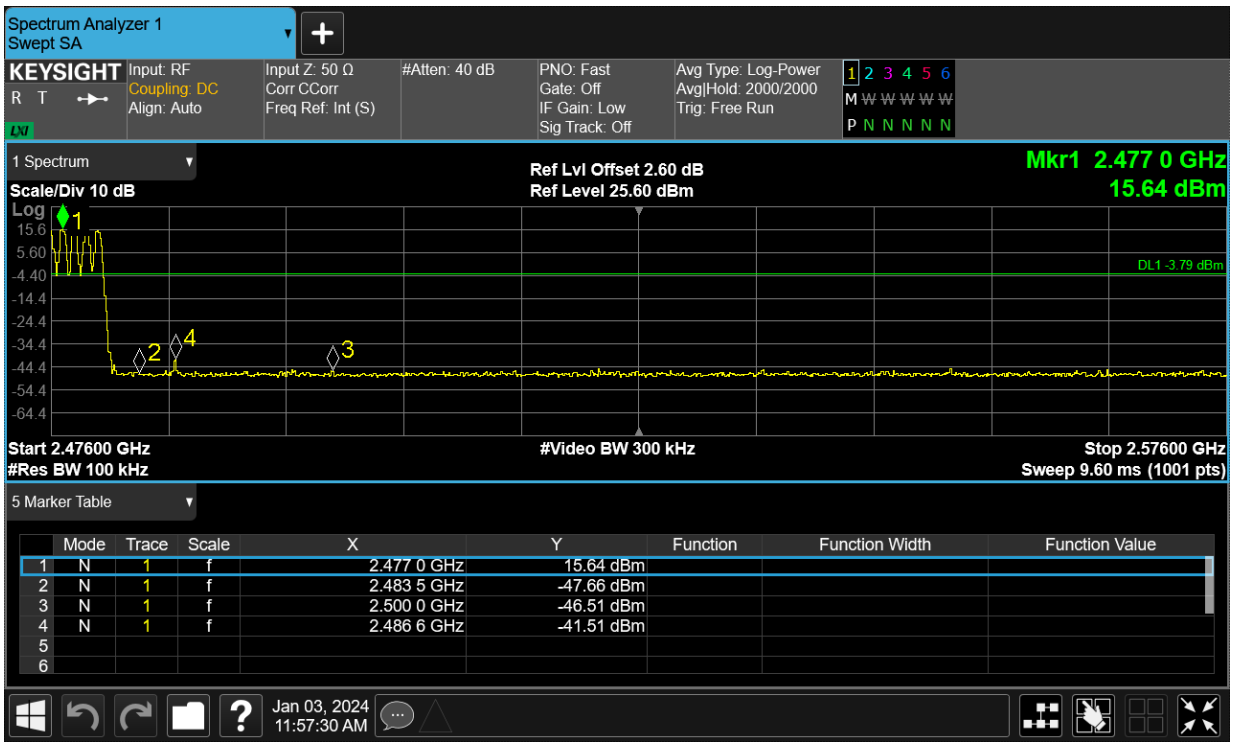
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant0 Hopping Emission



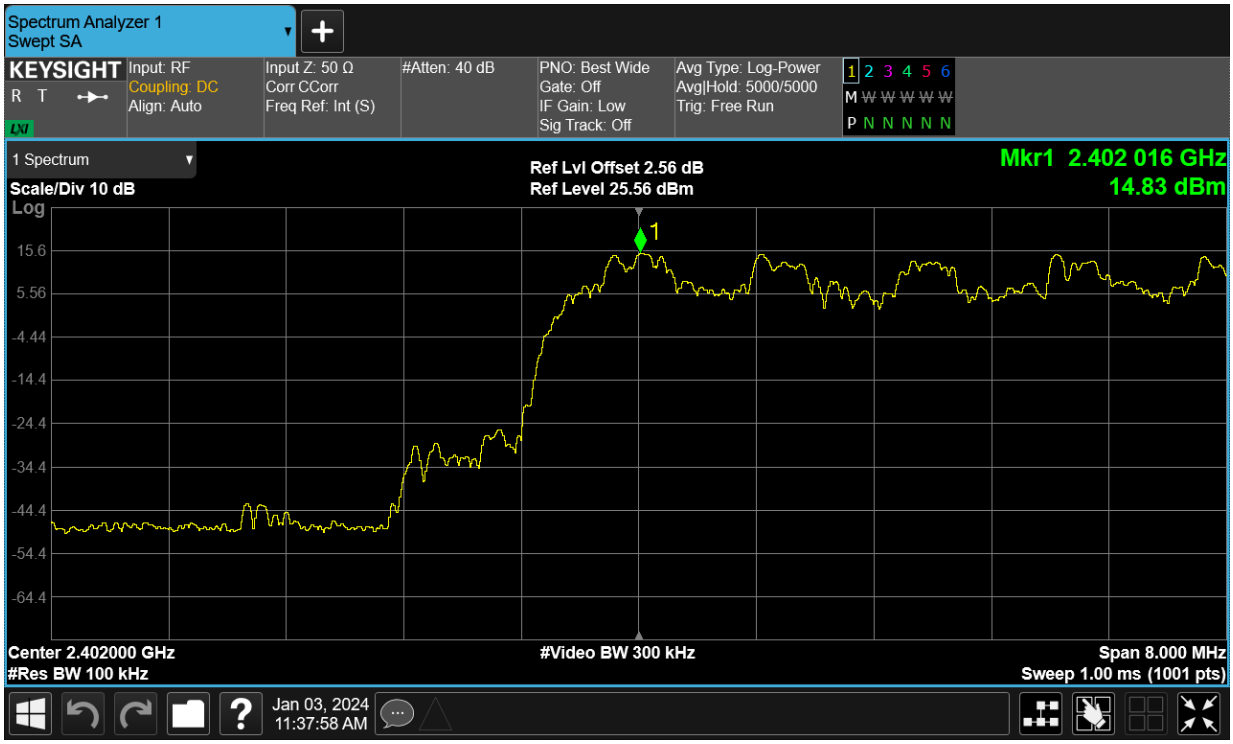
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant0 Hopping Ref



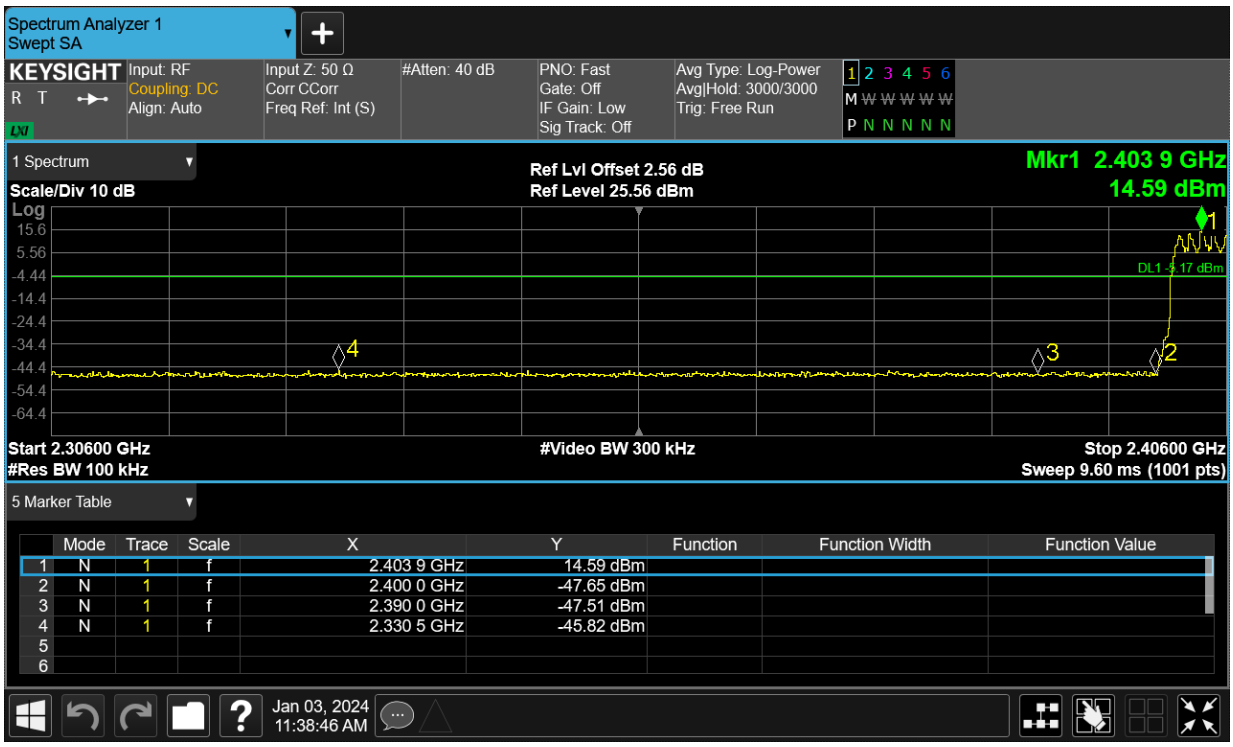
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant0 Hopping Emission



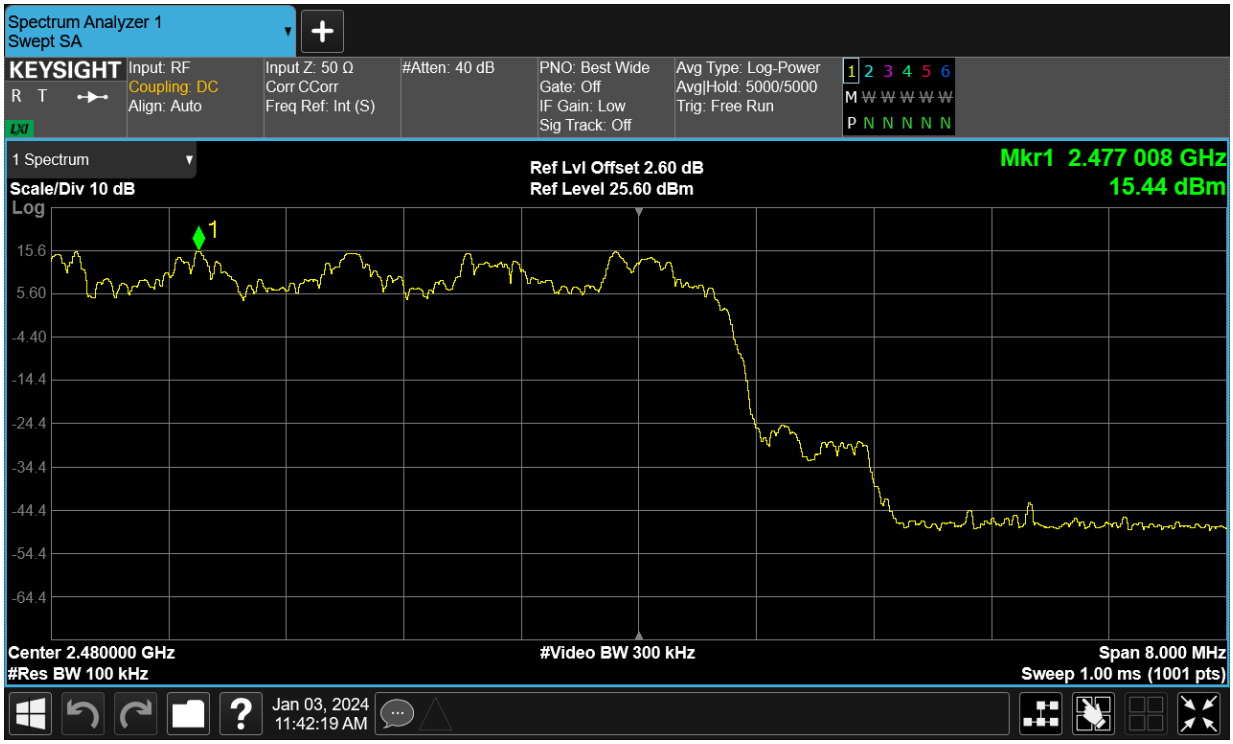
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant0 Hopping Ref



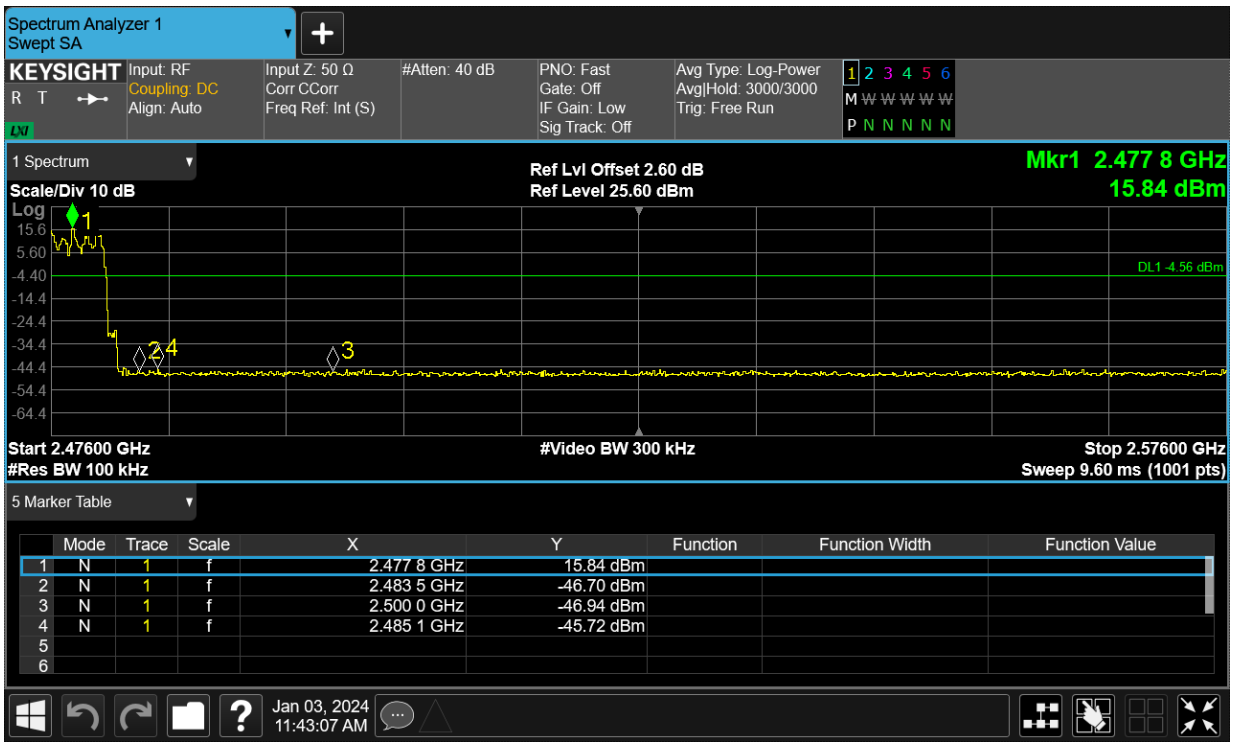
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant0 Hopping Emission



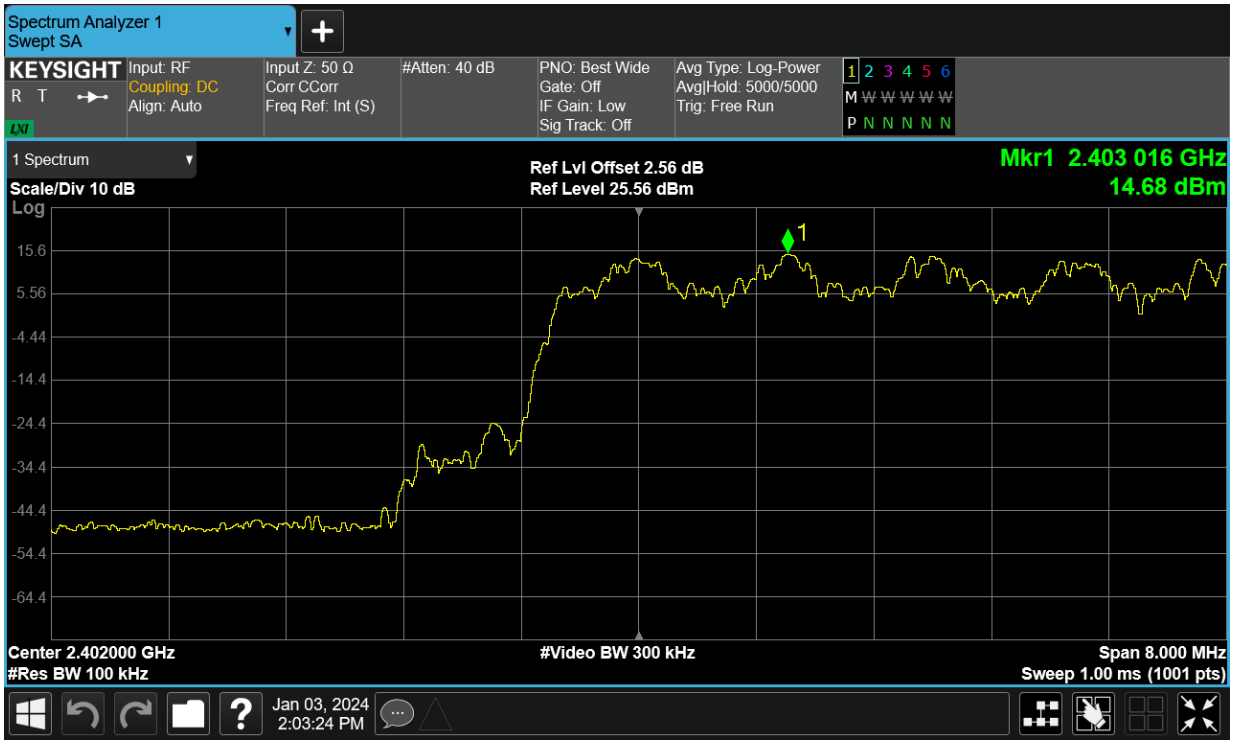
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant0 Hopping Ref



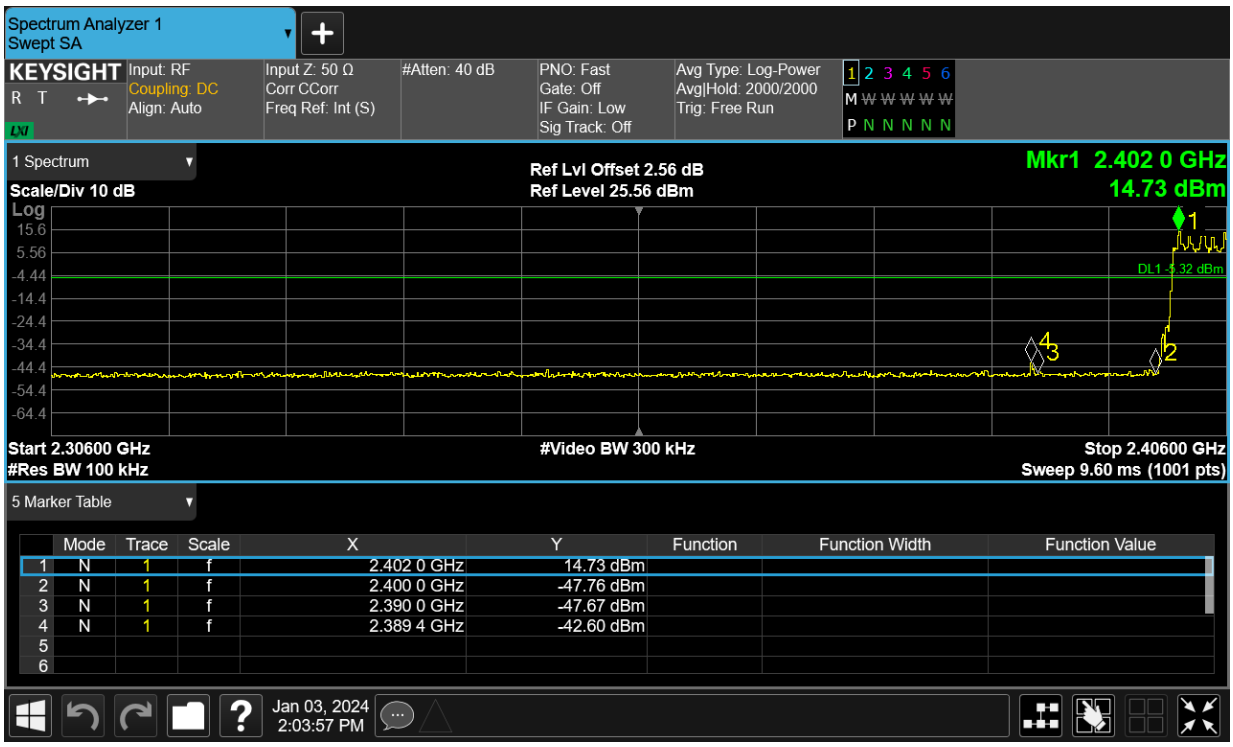
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant0 Hopping Emission



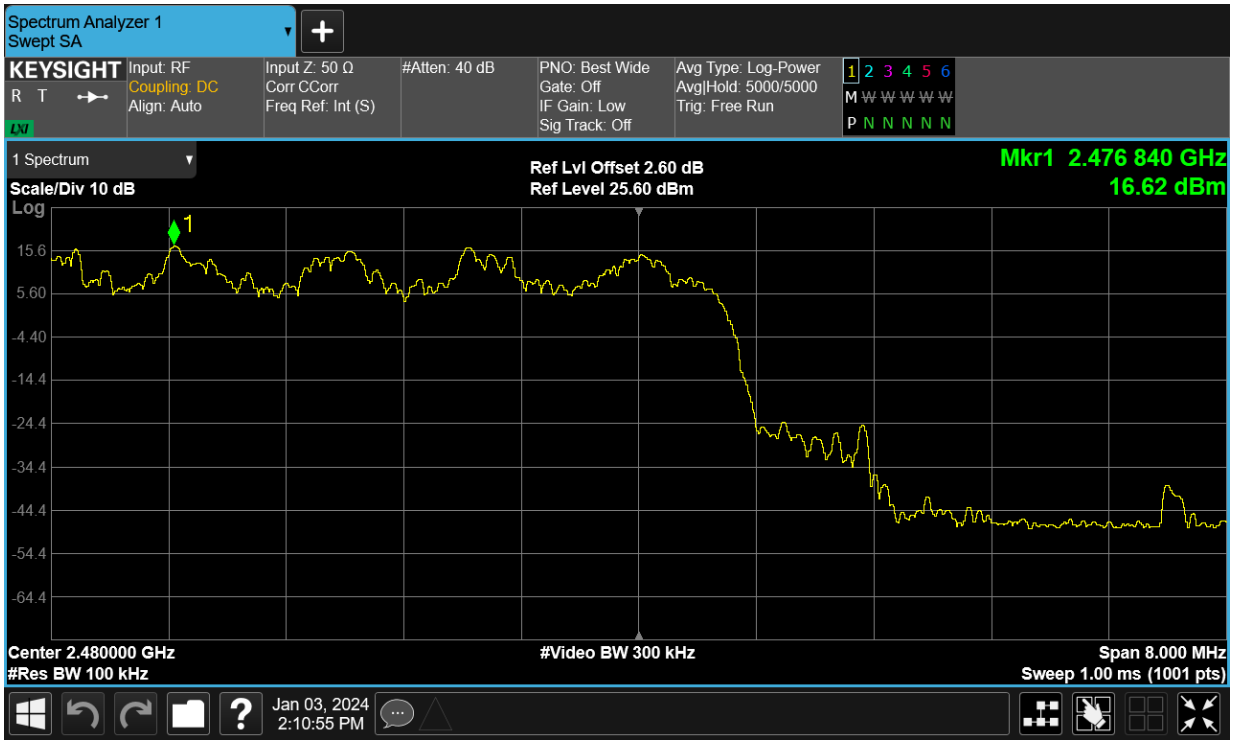
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant0 Hopping Ref



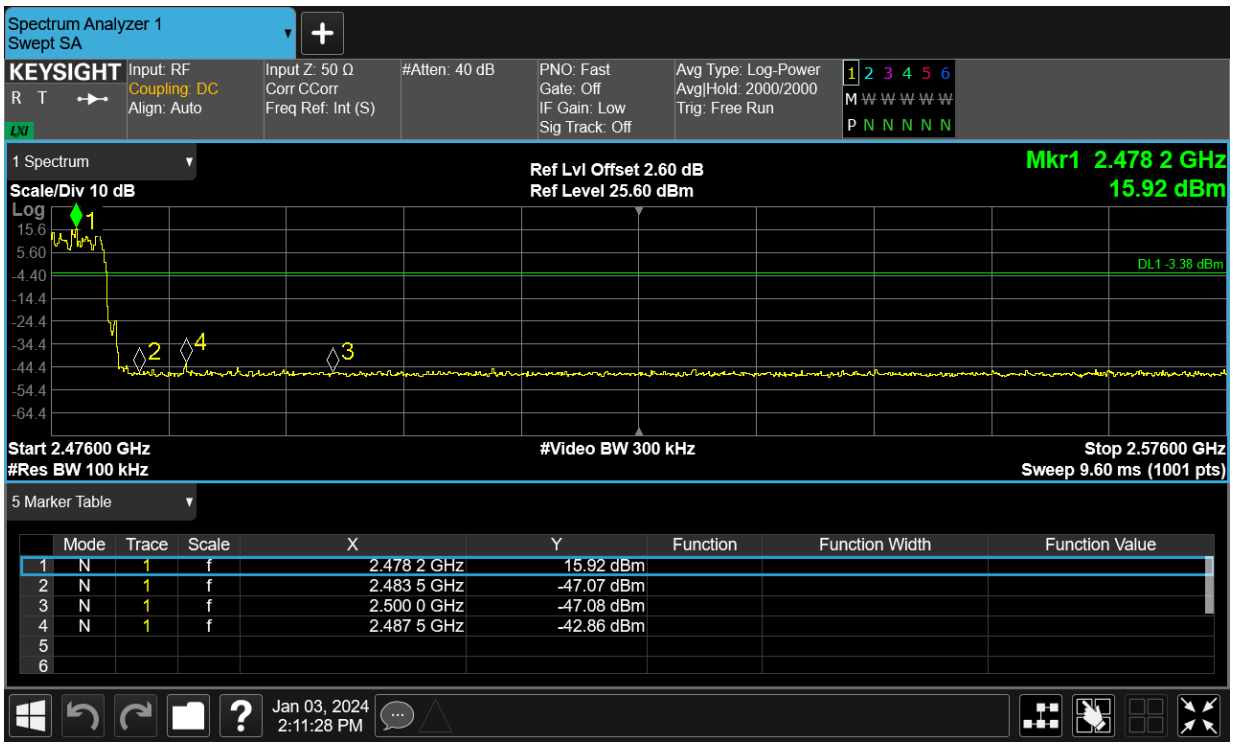
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant0 Hopping Emission



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant0 Hopping Ref



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant0 Hopping Emission

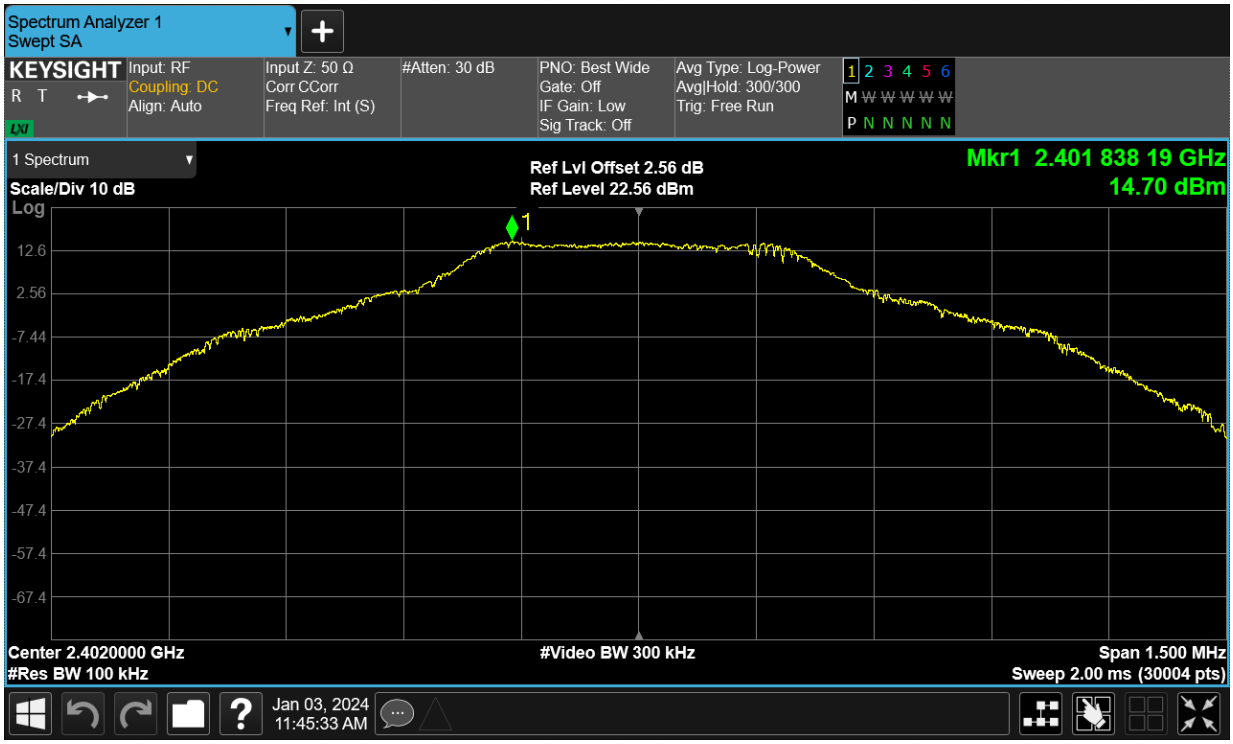


Conducted RF Spurious Emission

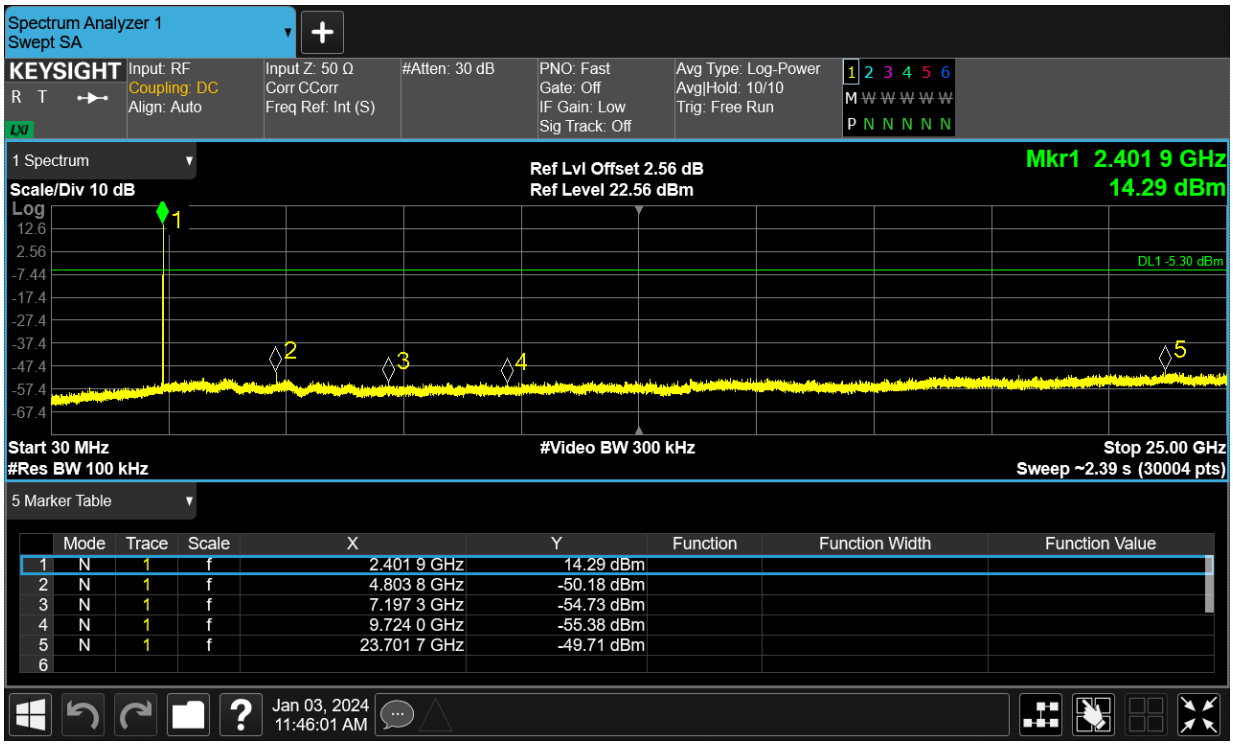
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant0	-64.41	-20	Pass
NVNT	1-DH1	2441	Ant0	-54.89	-20	Pass
NVNT	1-DH1	2480	Ant0	-62.83	-20	Pass
NVNT	2-DH1	2402	Ant0	-64.52	-20	Pass
NVNT	2-DH1	2441	Ant0	-65.52	-20	Pass
NVNT	2-DH1	2480	Ant0	-64.86	-20	Pass
NVNT	3-DH1	2402	Ant0	-64.81	-20	Pass
NVNT	3-DH1	2441	Ant0	-65.79	-20	Pass
NVNT	3-DH1	2480	Ant0	-65.18	-20	Pass

Test Graphs

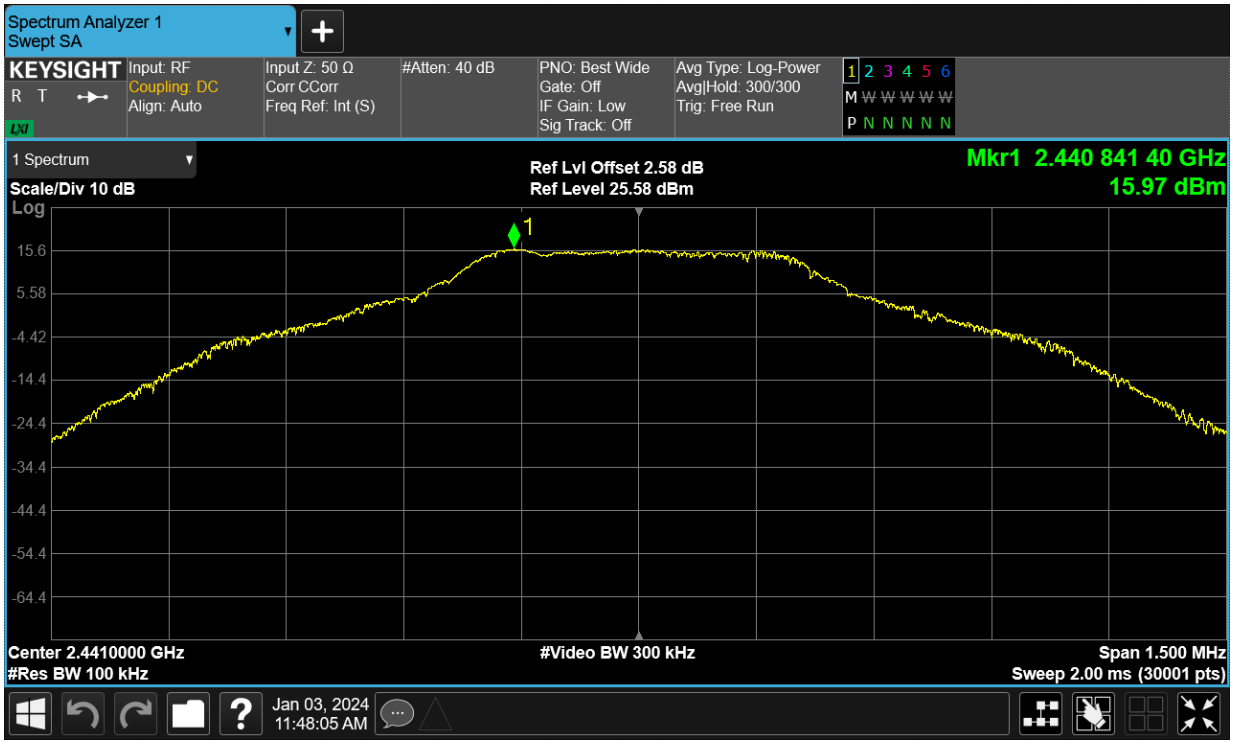
Tx. Spurious NVNT 1-DH1 2402MHz Ant0 Ref



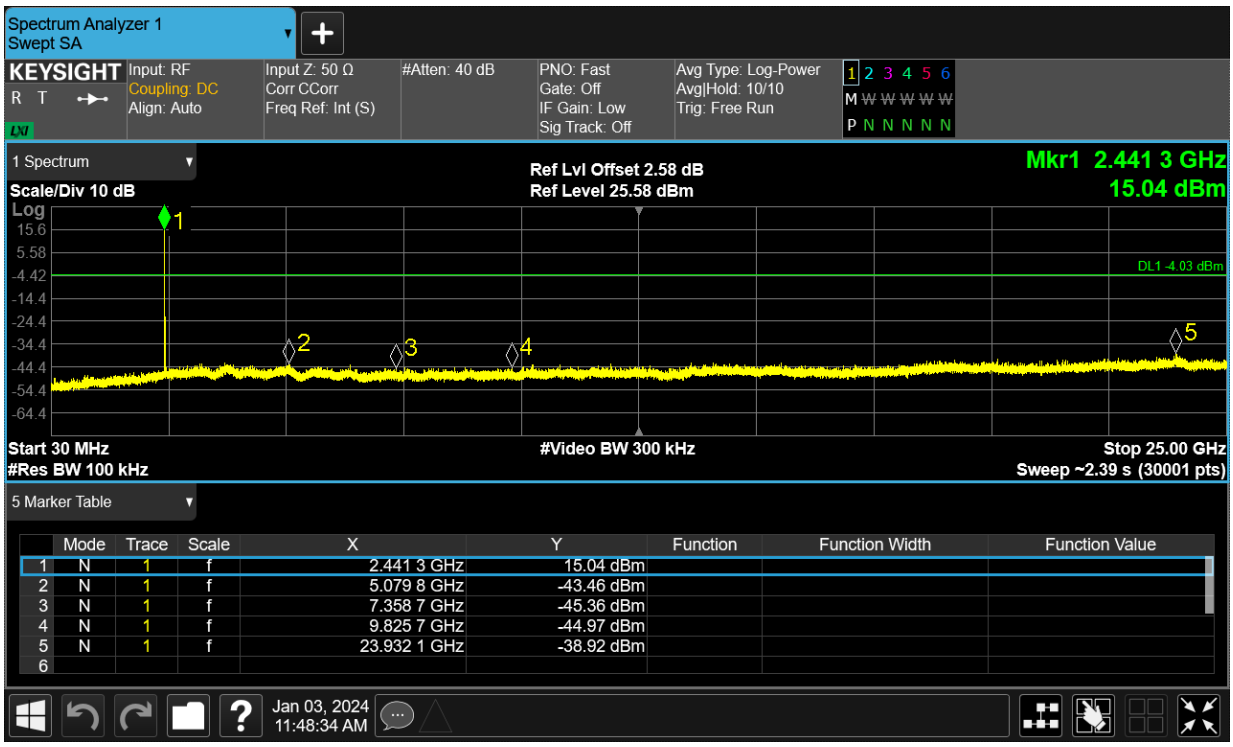
Tx. Spurious NVNT 1-DH1 2402MHz Ant0 Emission



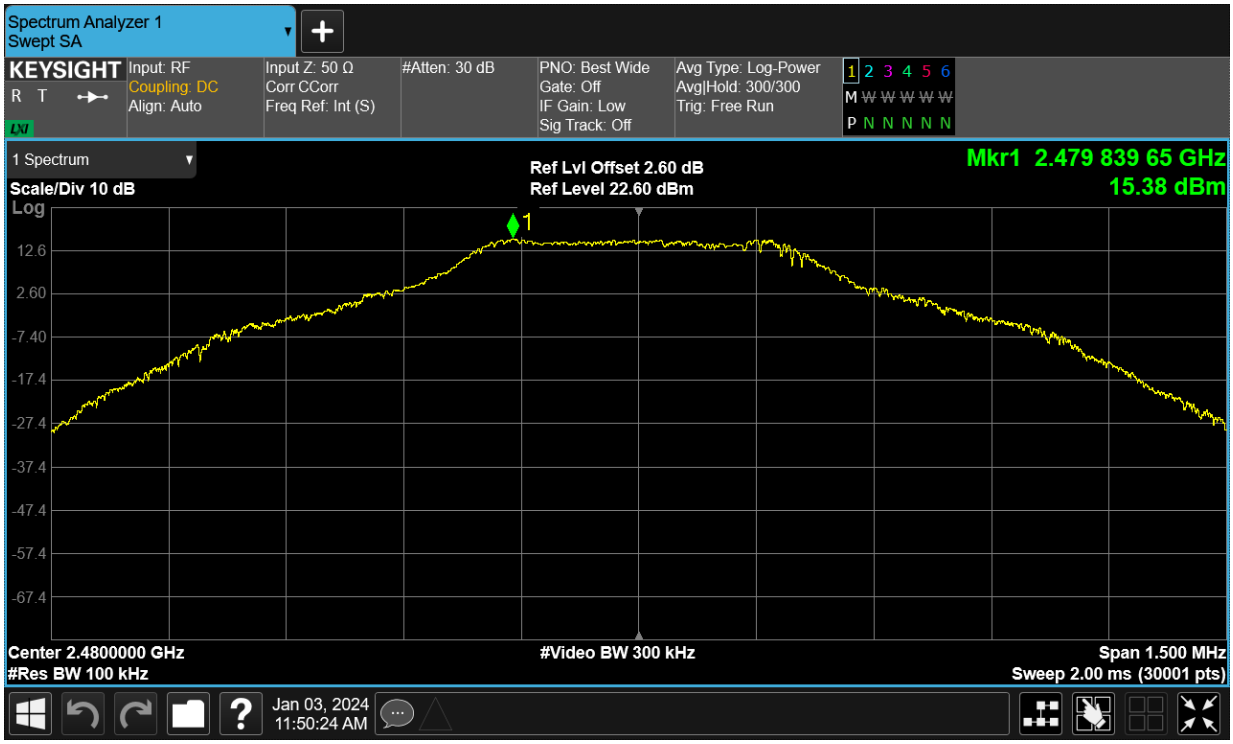
Tx. Spurious NVNT 1-DH1 2441MHz Ant0 Ref



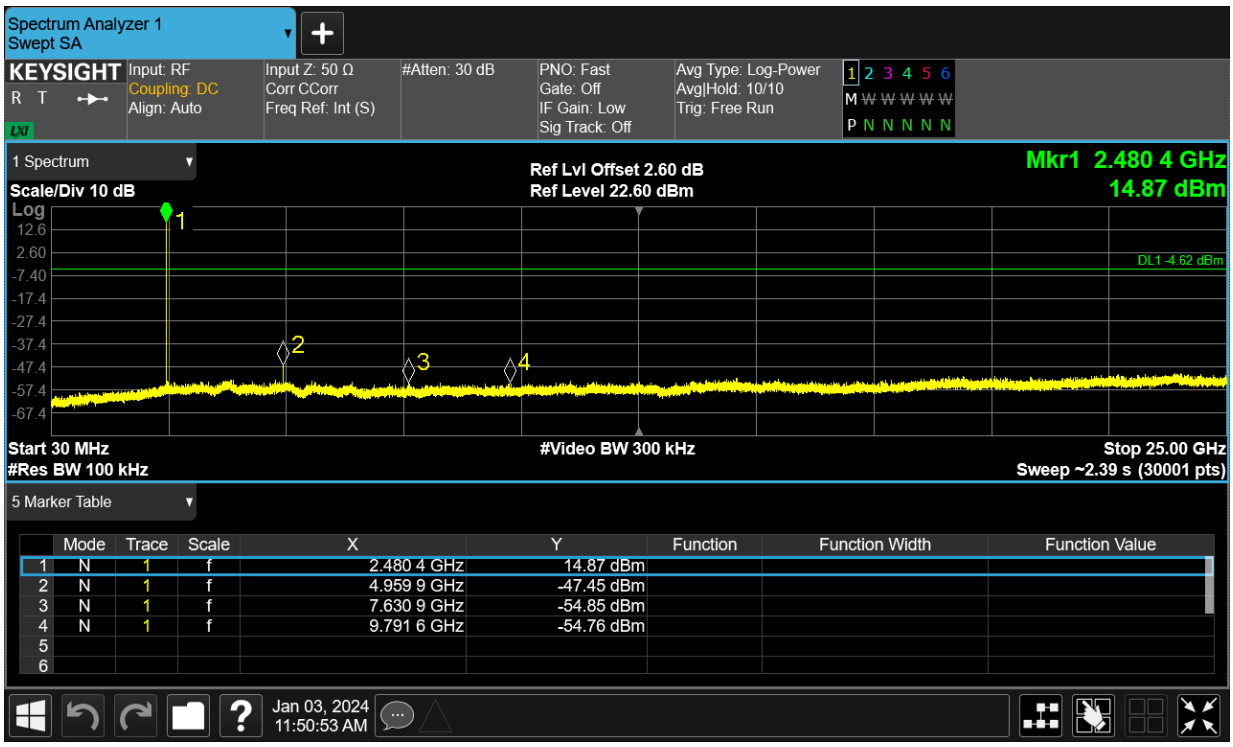
Tx. Spurious NVNT 1-DH1 2441MHz Ant0 Emission



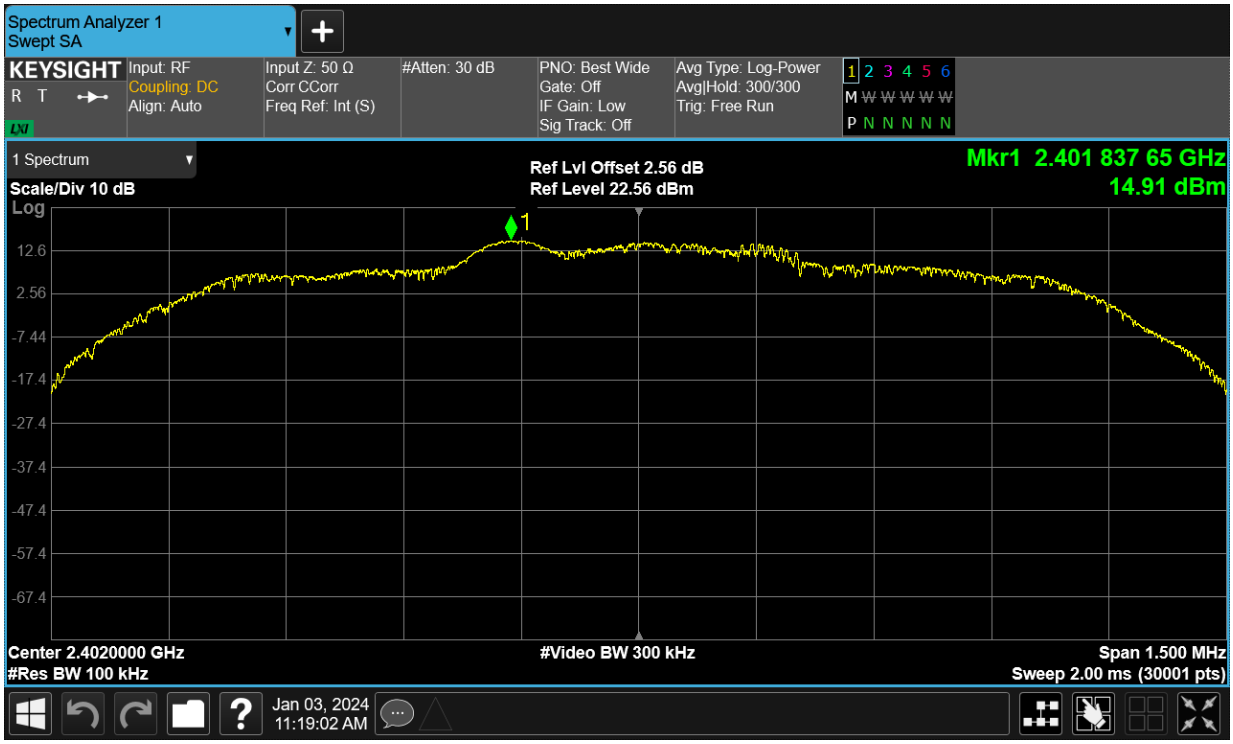
Tx. Spurious NVNT 1-DH1 2480MHz Ant0 Ref



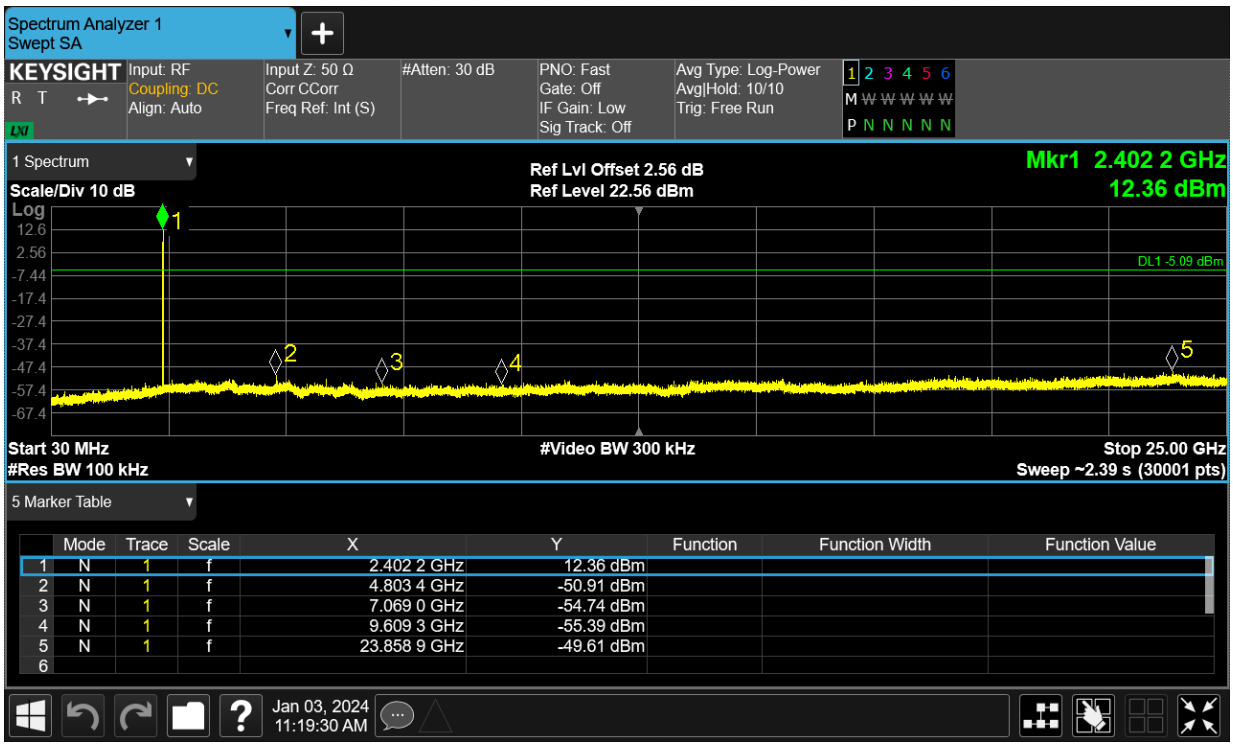
Tx. Spurious NVNT 1-DH1 2480MHz Ant0 Emission



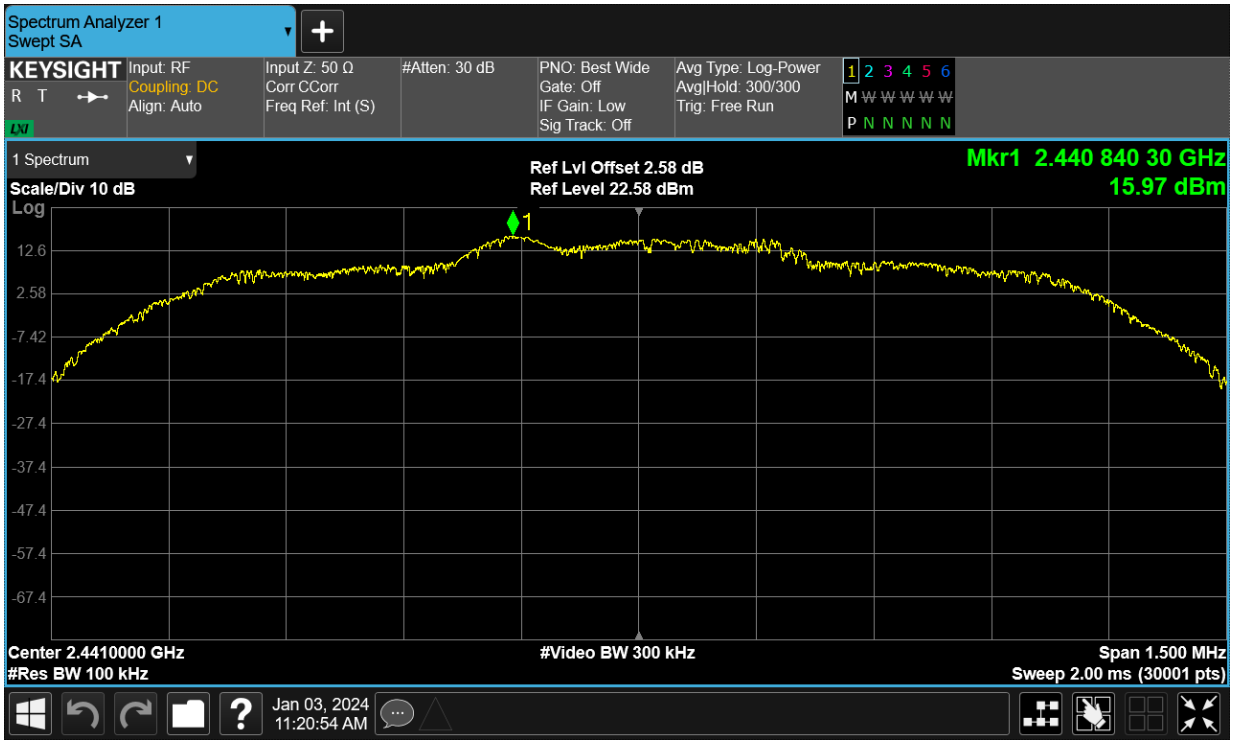
Tx. Spurious NVNT 2-DH1 2402MHz Ant0 Ref



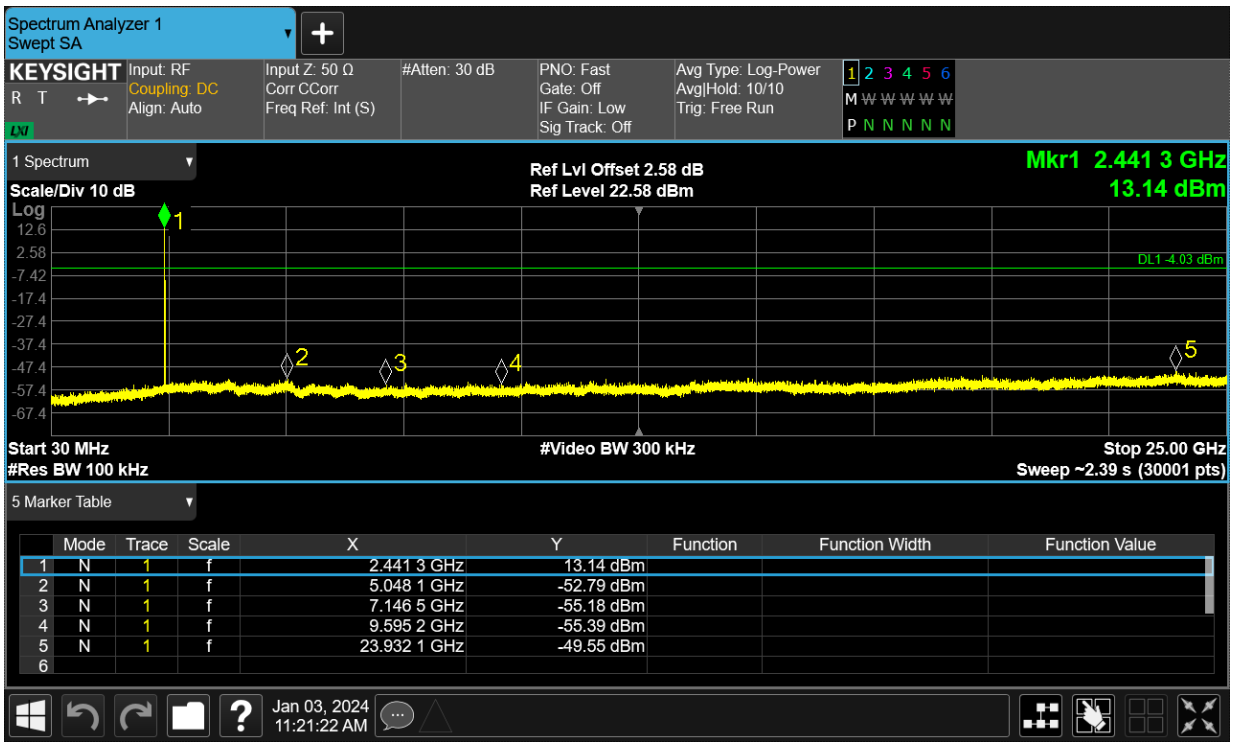
Tx. Spurious NVNT 2-DH1 2402MHz Ant0 Emission



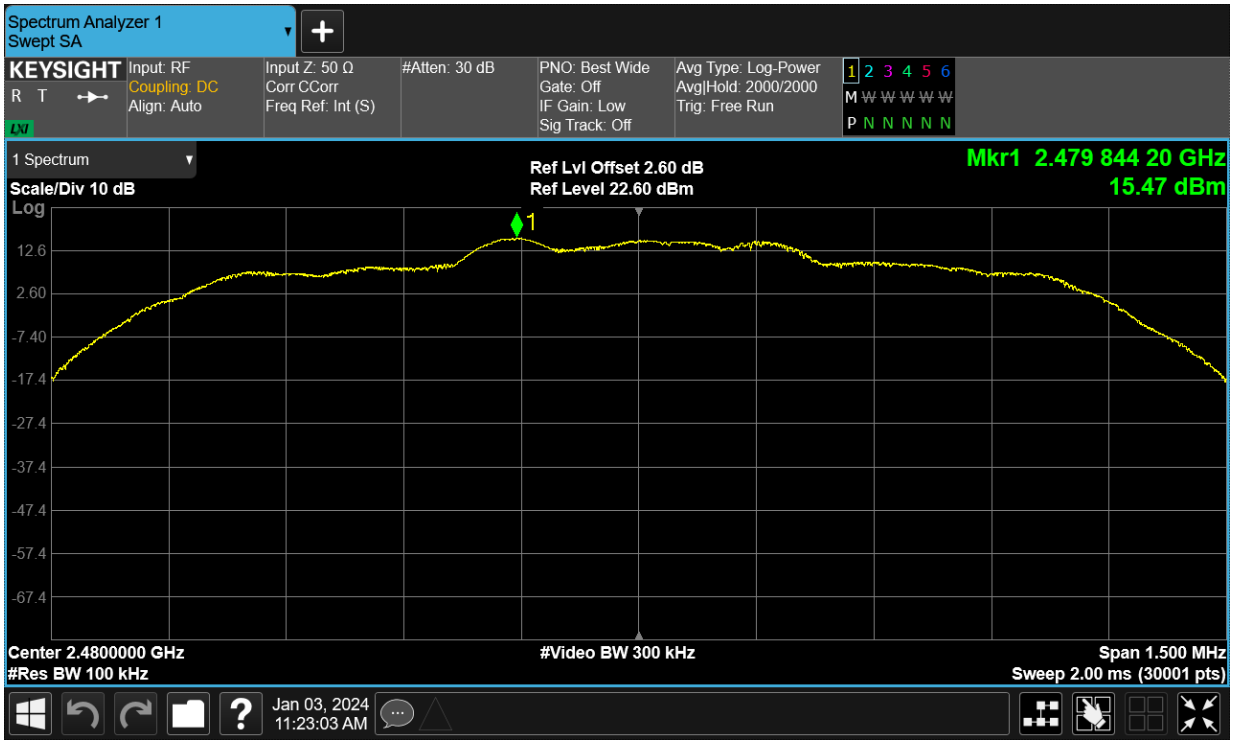
Tx. Spurious NVNT 2-DH1 2441MHz Ant0 Ref



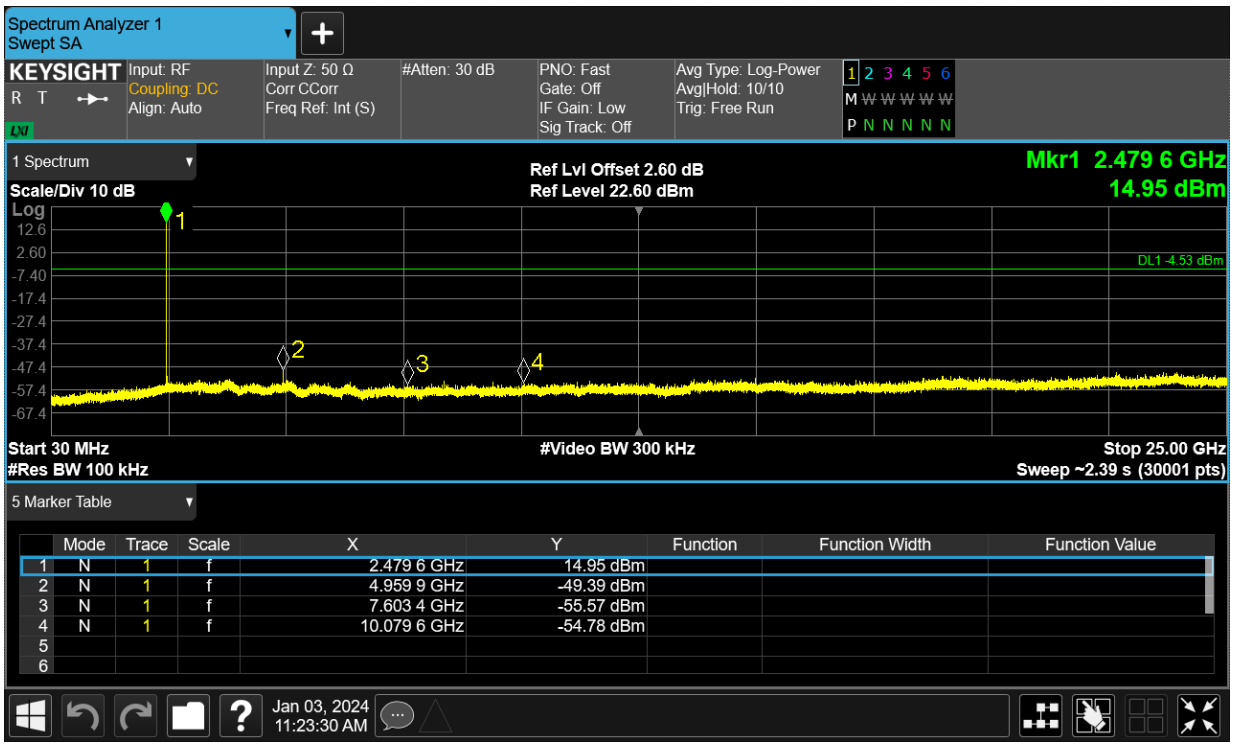
Tx. Spurious NVNT 2-DH1 2441MHz Ant0 Emission



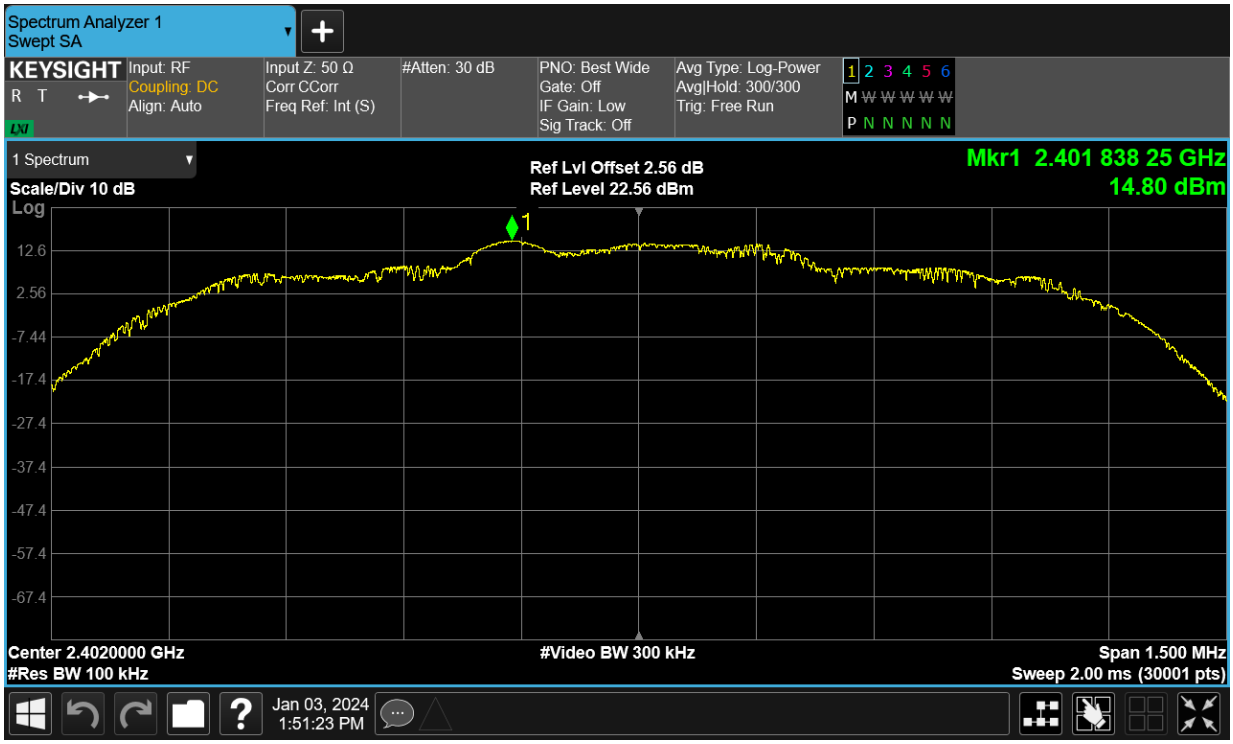
Tx. Spurious NVNT 2-DH1 2480MHz Ant0 Ref



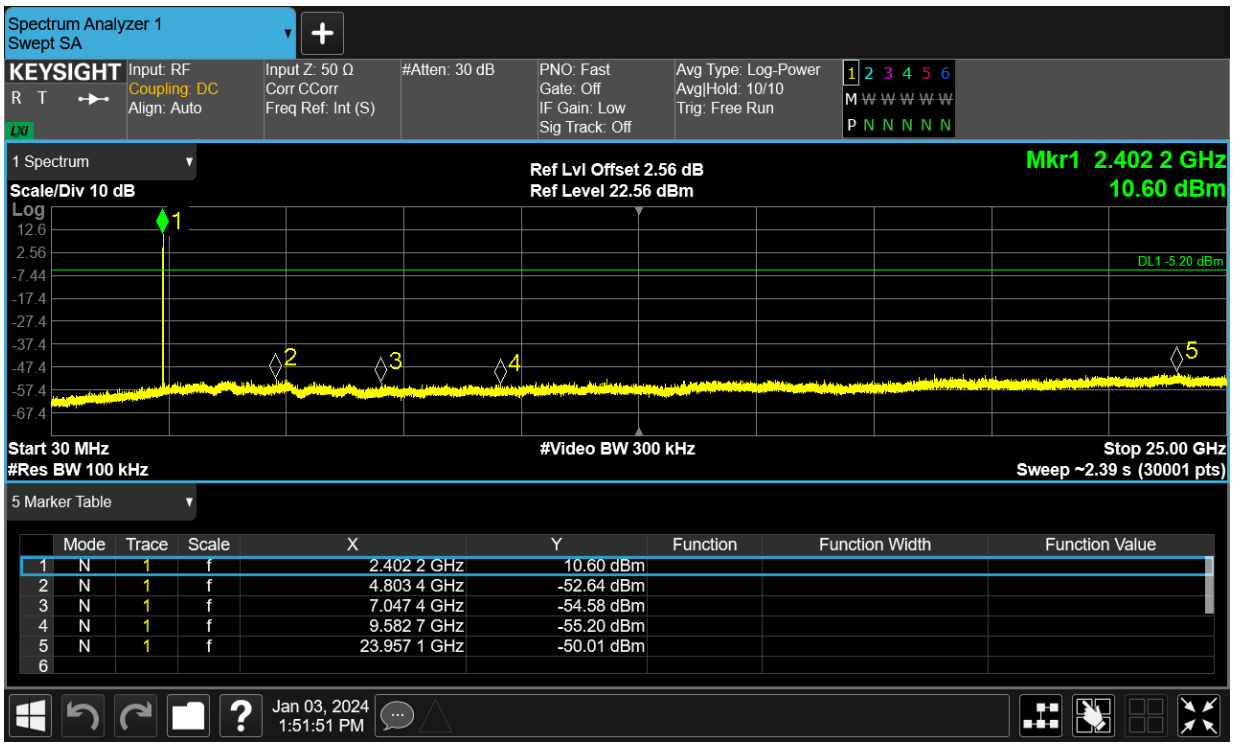
Tx. Spurious NVNT 2-DH1 2480MHz Ant0 Emission



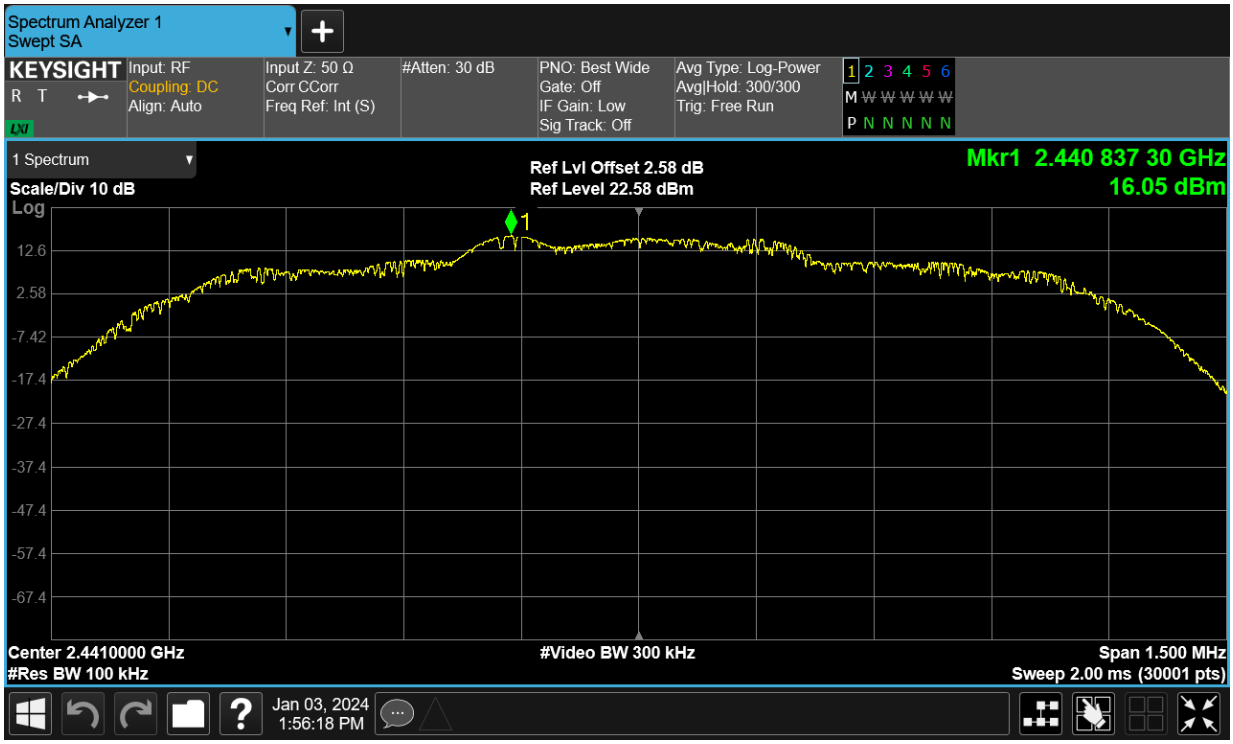
Tx. Spurious NVNT 3-DH1 2402MHz Ant0 Ref



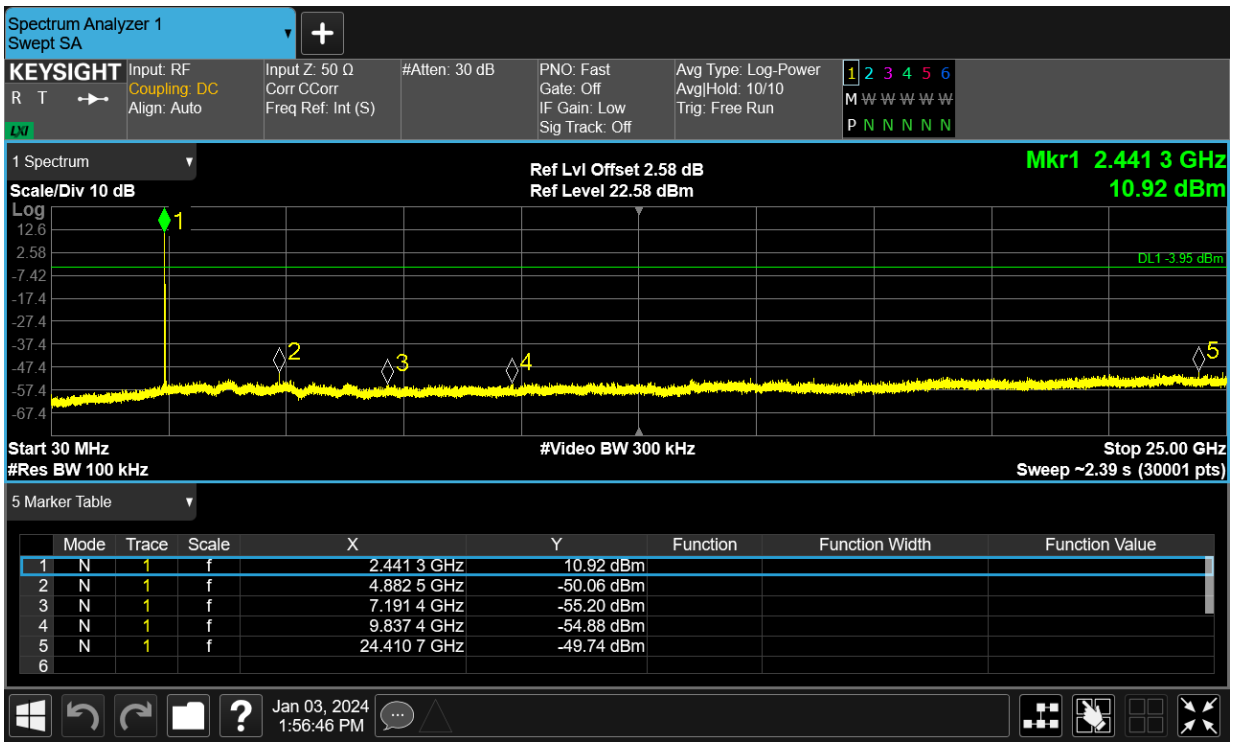
Tx. Spurious NVNT 3-DH1 2402MHz Ant0 Emission



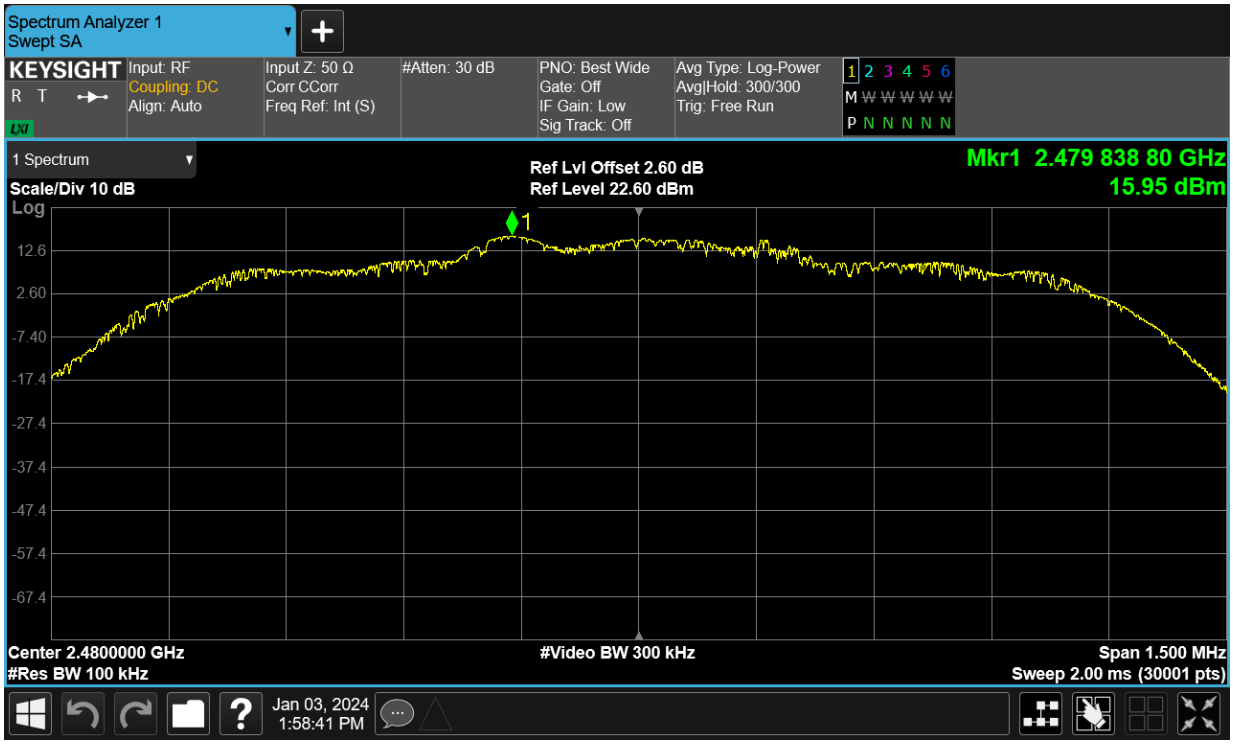
Tx. Spurious NVNT 3-DH1 2441MHz Ant0 Ref



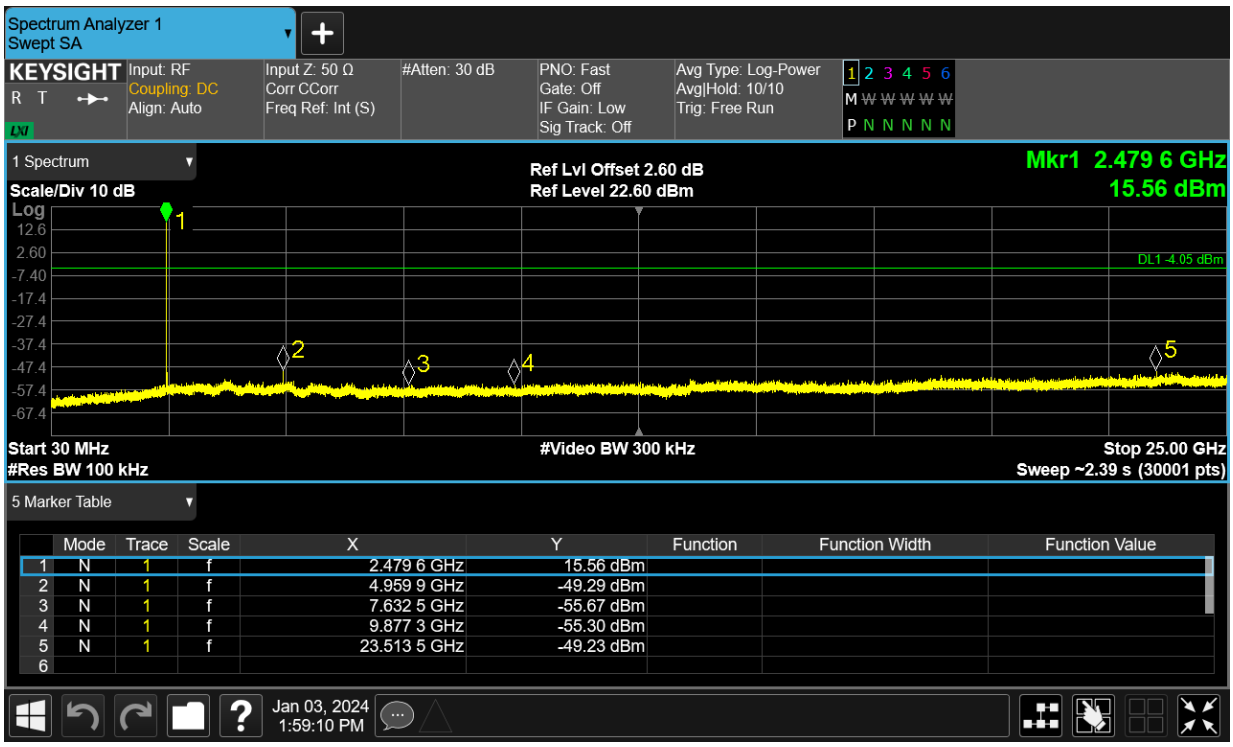
Tx. Spurious NVNT 3-DH1 2441MHz Ant0 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant0 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant0 Emission

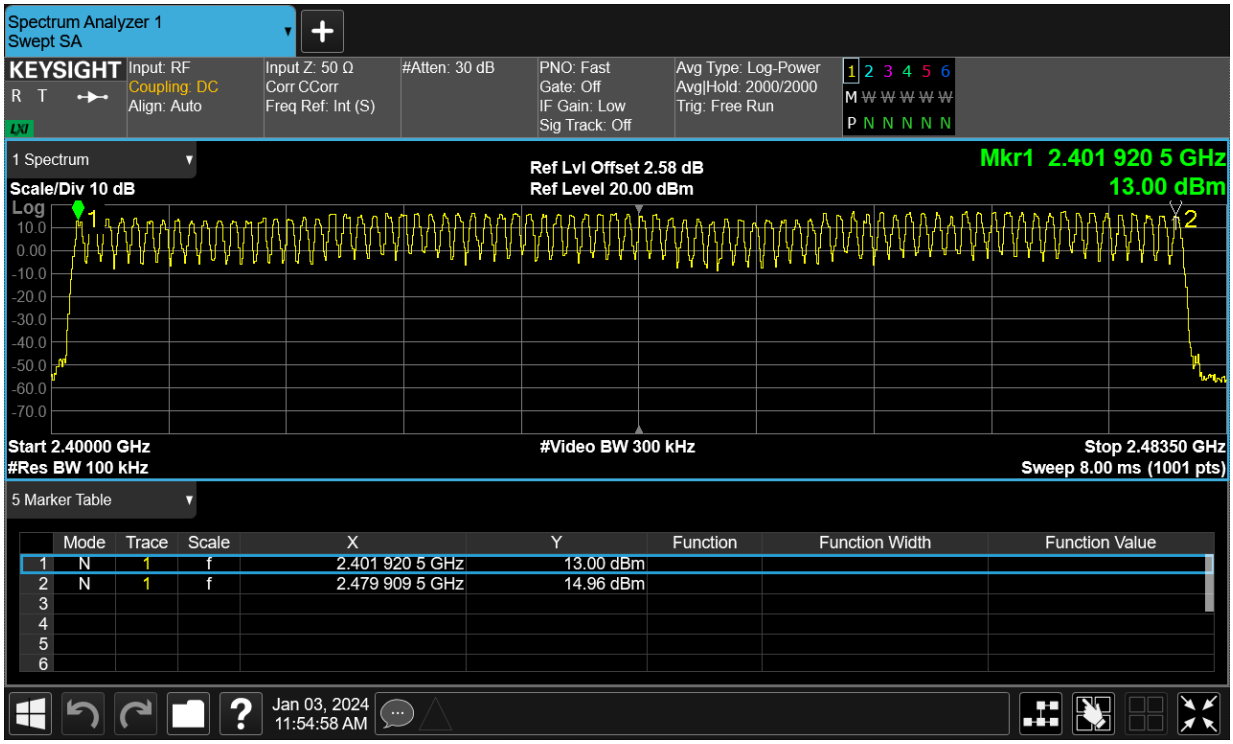


Number of Hopping Channel

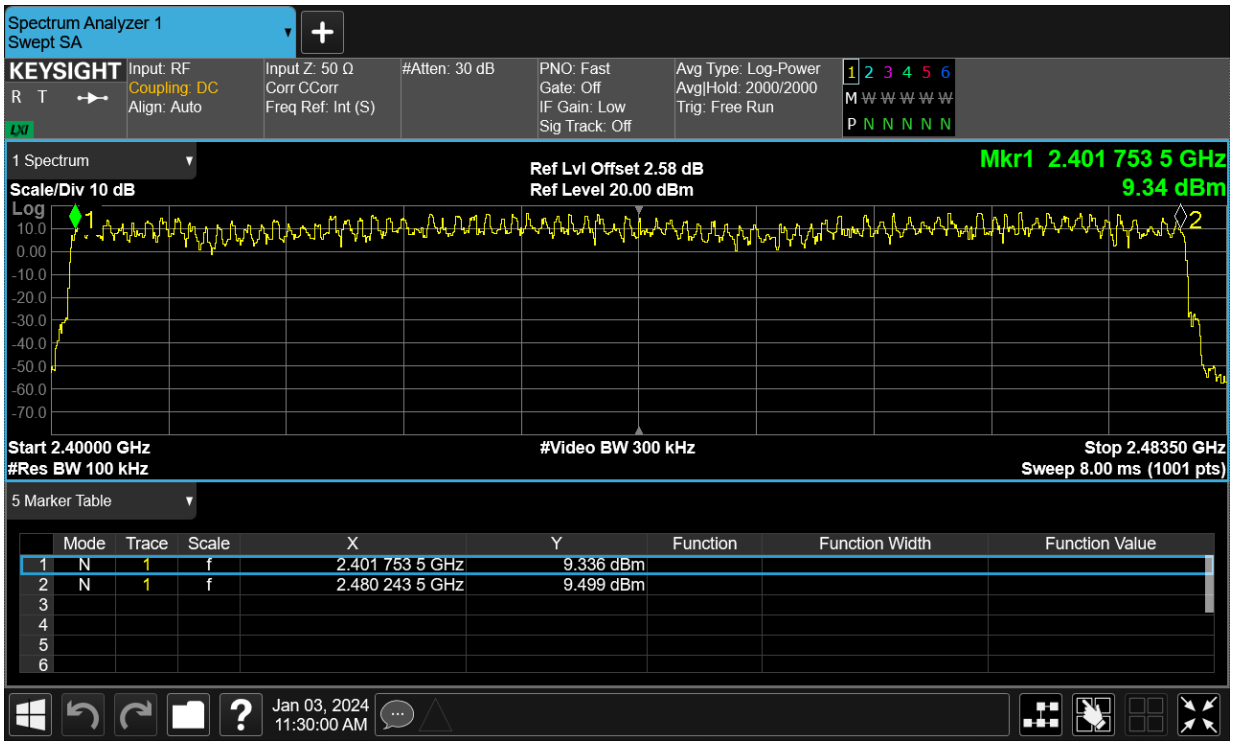
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant0	79	15	Pass
NVNT	2-DH1	Ant0	79	15	Pass
NVNT	3-DH1	Ant0	79	15	Pass

Test Graphs

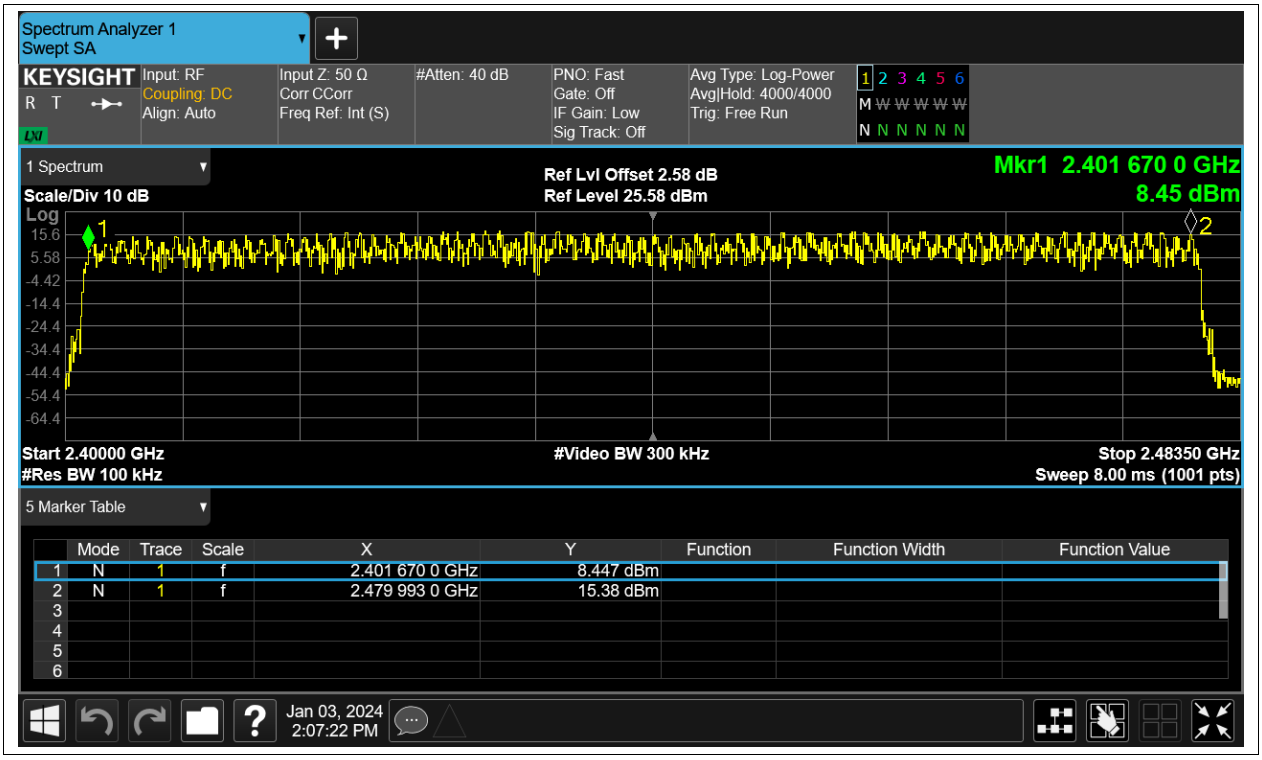
Hopping No. NVNT 1-DH1 2441MHz Ant0



Hopping No. NVNT 2-DH1 2441MHz Ant0



Hopping No. NVNT 3-DH1 2441MHz Ant0

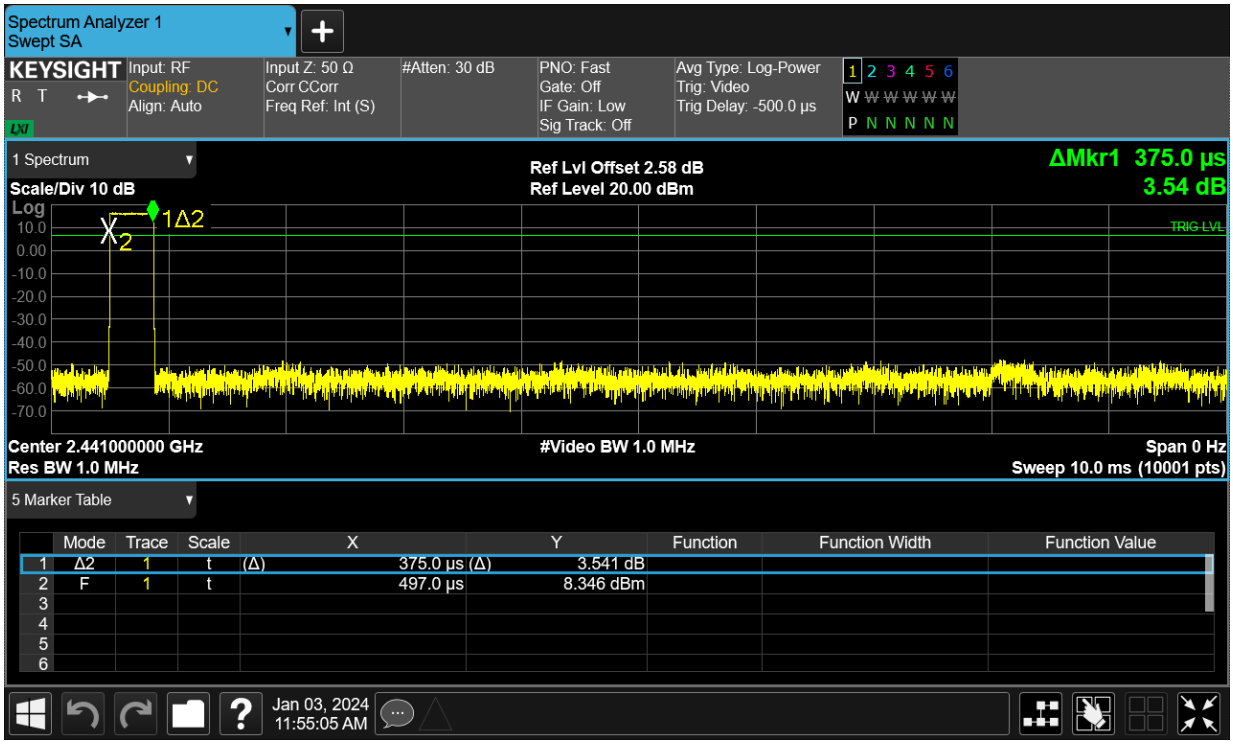

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 40 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 4000/4000
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.58 dB
Ref Level 25.58 dBm
Mkr1 2.401 670 0 GHz
8.45 dBm
Start 2.40000 GHz
#Res BW 100 kHz
#Video BW 300 kHz
Stop 2.48350 GHz
Sweep 8.00 ms (1001 pts)
5 Marker Table
Mode Trace Scale X Y Function Function Width Function Value
1 N 1 f 2.401 670 0 GHz 8.447 dBm
2 N 1 f 2.479 993 0 GHz 15.38 dBm
Jan 03, 2024
2:07:22 PM

Dwell Time

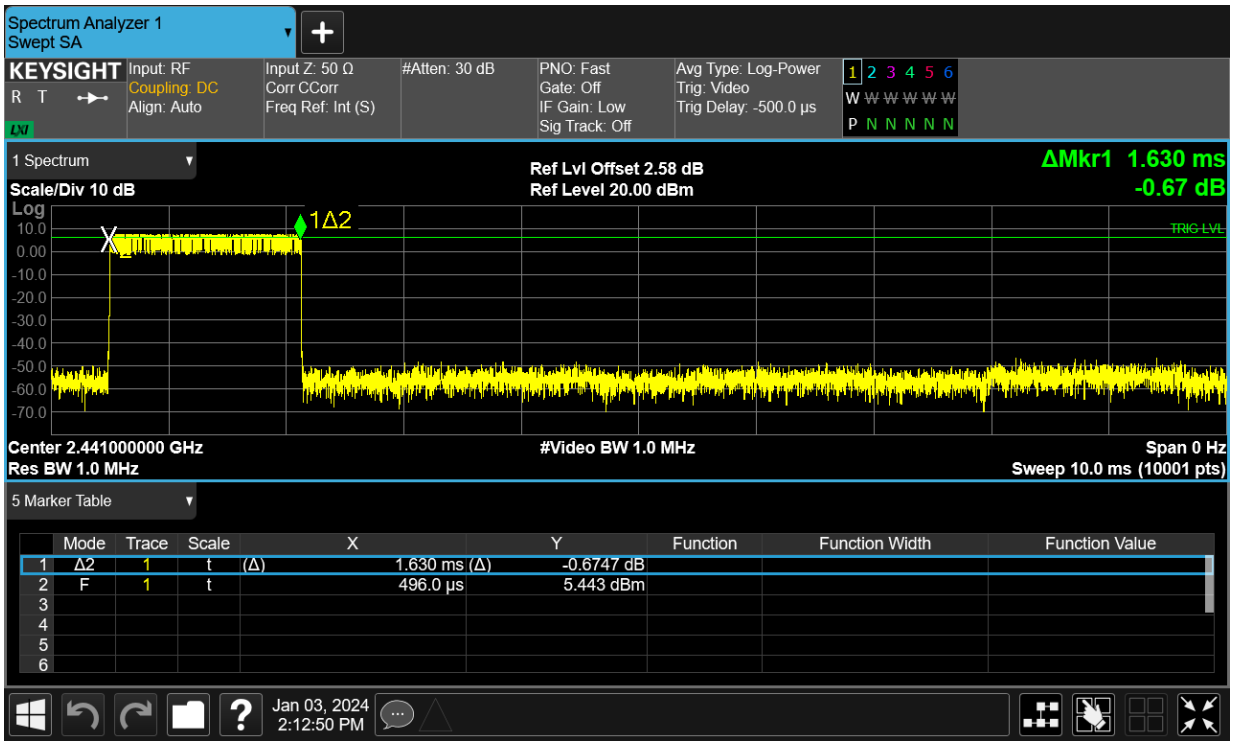
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant0	0.375	120	31600	400	Pass
NVNT	1-DH3	2441	Ant0	1.63	260.8	31600	400	Pass
NVNT	1-DH5	2441	Ant0	2.877	306.88	31600	400	Pass
NVNT	2-DH1	2441	Ant0	0.381	121.92	31600	400	Pass
NVNT	2-DH3	2441	Ant0	1.63	260.8	31600	400	Pass
NVNT	2-DH5	2441	Ant0	2.881	307.307	31600	400	Pass
NVNT	3-DH1	2441	Ant0	0.381	121.92	31600	400	Pass
NVNT	3-DH3	2441	Ant0	1.634	261.44	31600	400	Pass
NVNT	3-DH5	2441	Ant0	2.882	307.413	31600	400	Pass

Test Graphs

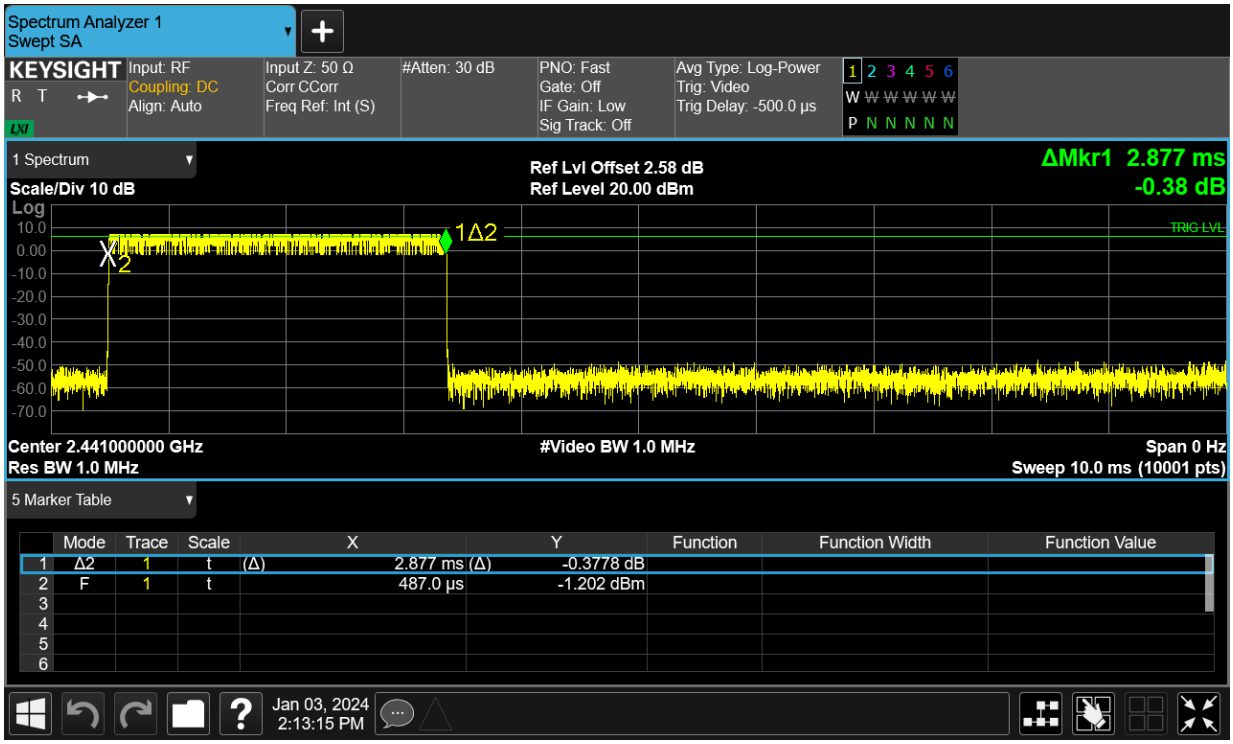
Dwell NVNT 1-DH1 2441MHz Ant0



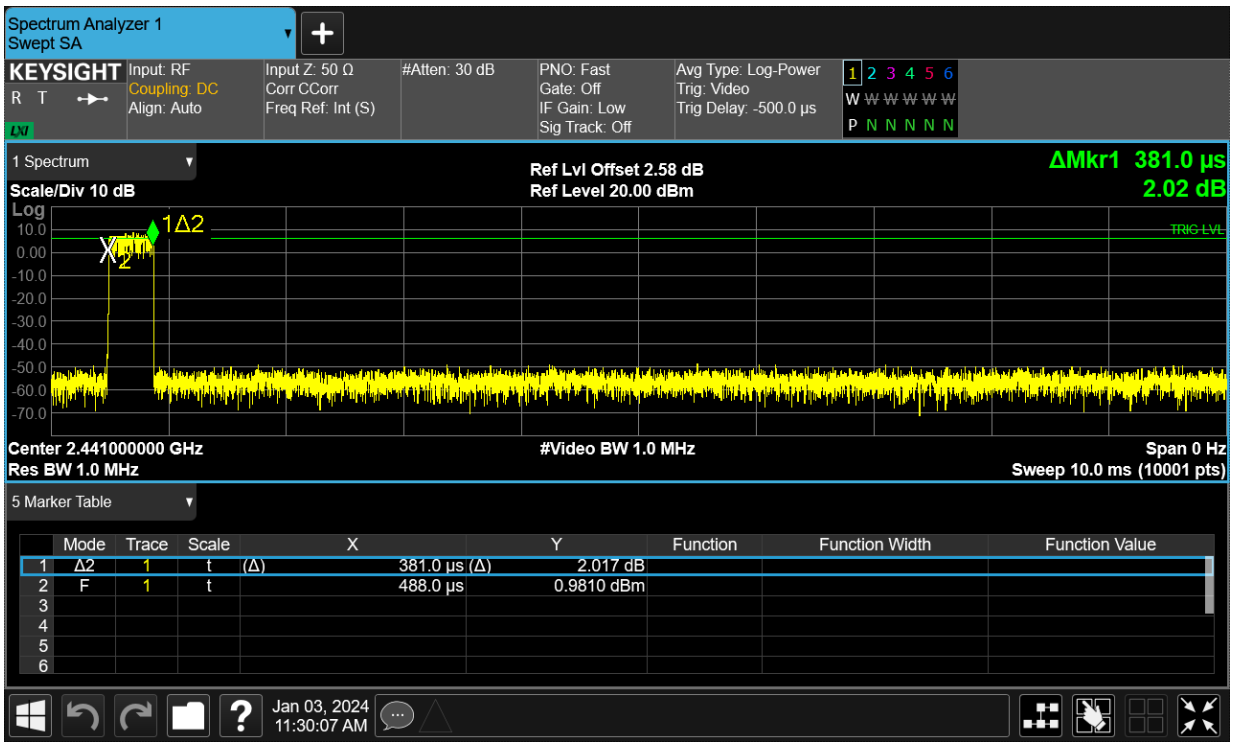
Dwell NVNT 1-DH3 2441MHz Ant0



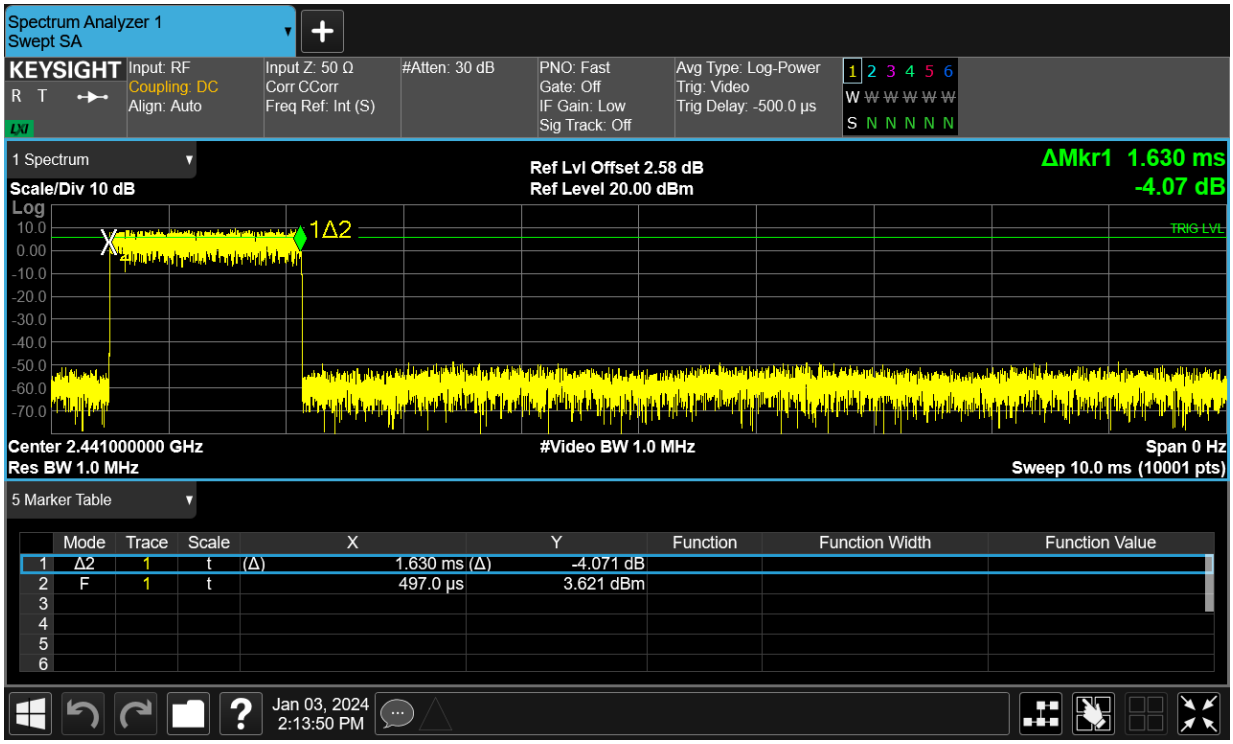
Dwell NVNT 1-DH5 2441MHz Ant0



Dwell NVNT 2-DH1 2441MHz Ant0

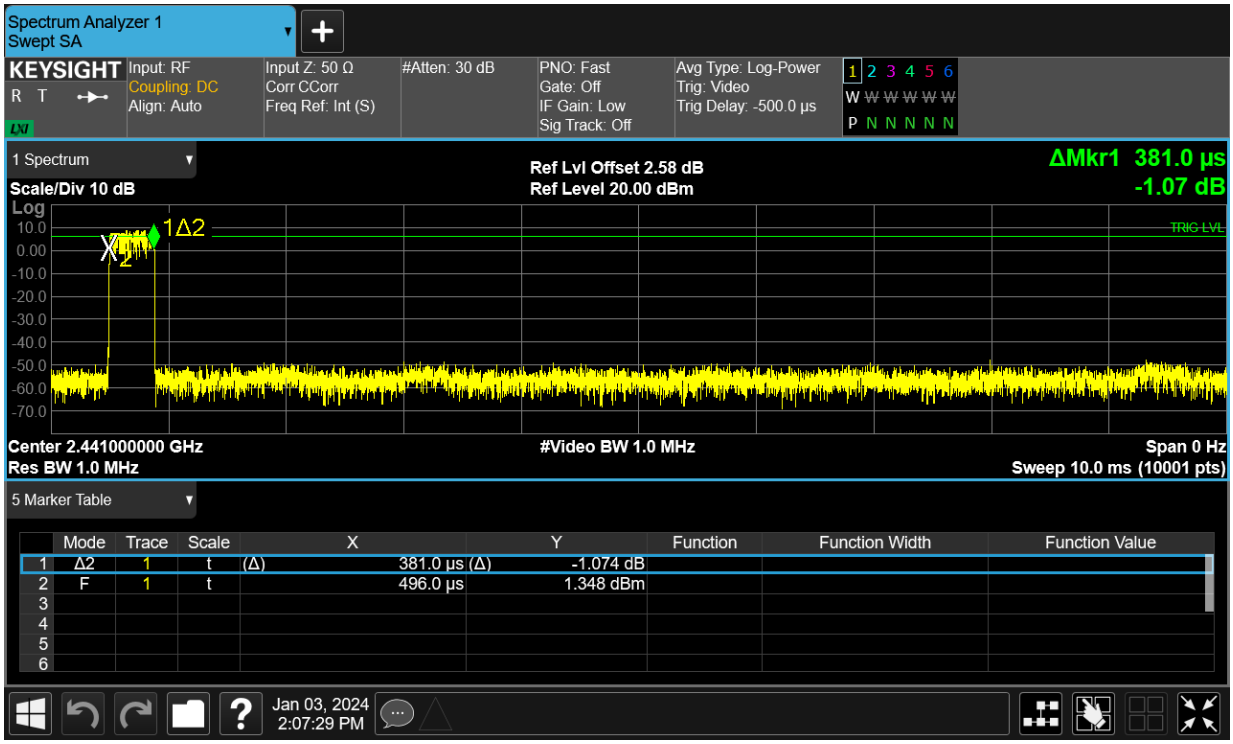


Dwell NVNT 2-DH3 2441MHz Ant0

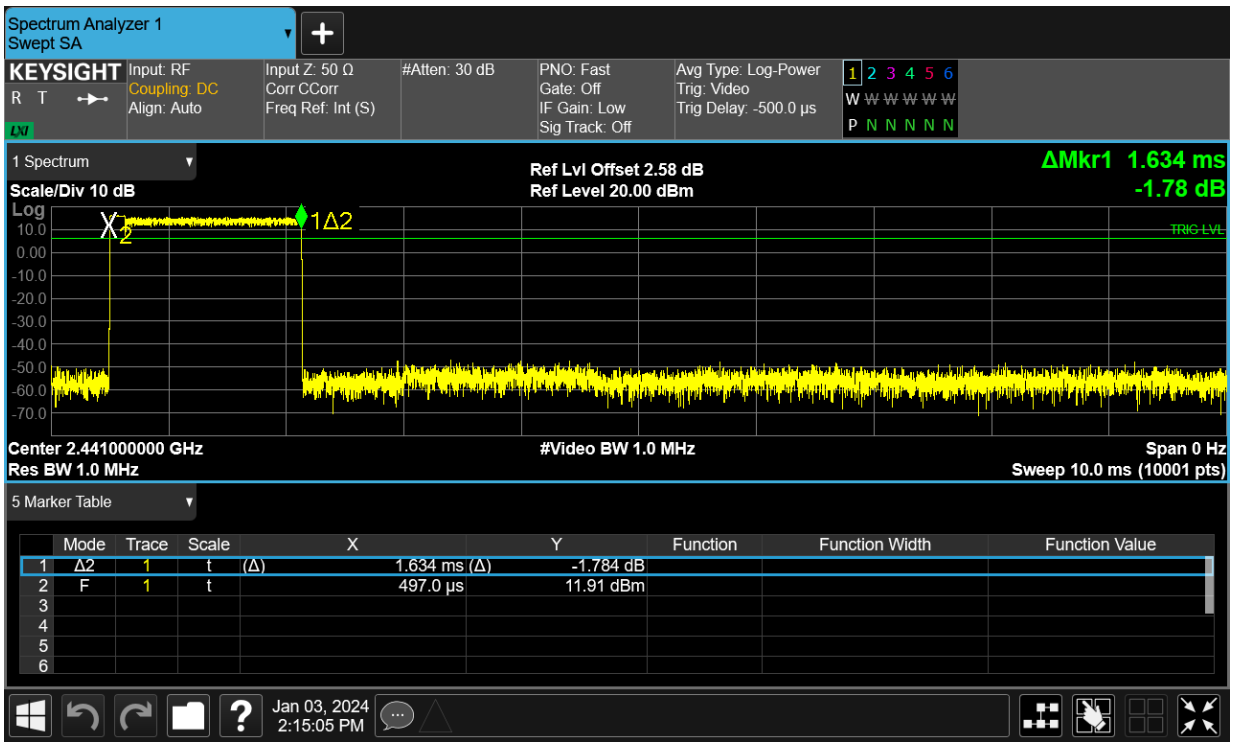


Dwell NVNT 2-DH5 2441MHz Ant0

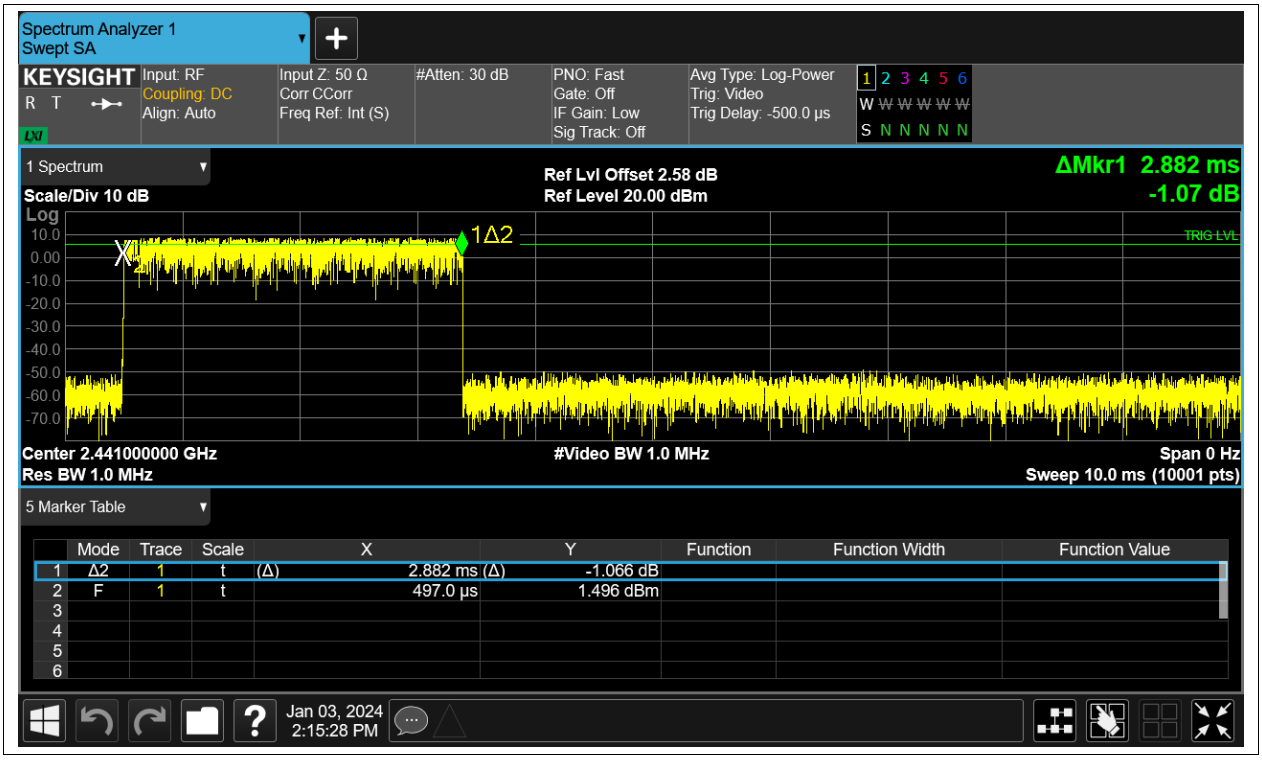
Dwell NVNT 3-DH1 2441MHz Ant0



Dwell NVNT 3-DH3 2441MHz Ant0



Dwell NVNT 3-DH5 2441MHz Ant0


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: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Trig: Video
Trig Delay: -500.0 µs
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.58 dB
Ref Level 20.00 dBm
ΔMkr1 2.882 ms
-1.07 dB
1Δ2
Center 2.441000000 GHz
Res BW 1.0 MHz
#Video BW 1.0 MHz
Span 0 Hz
Sweep 10.0 ms (10001 pts)
5 Marker Table
Mode Trace Scale X Y Function Function Width Function Value
1 Δ2 1 t (Δ) 2.882 ms (Δ) -1.066 dB
2 F 1 t 497.0 µs 1.496 dBm
Jan 03, 2024
2:15:28 PM