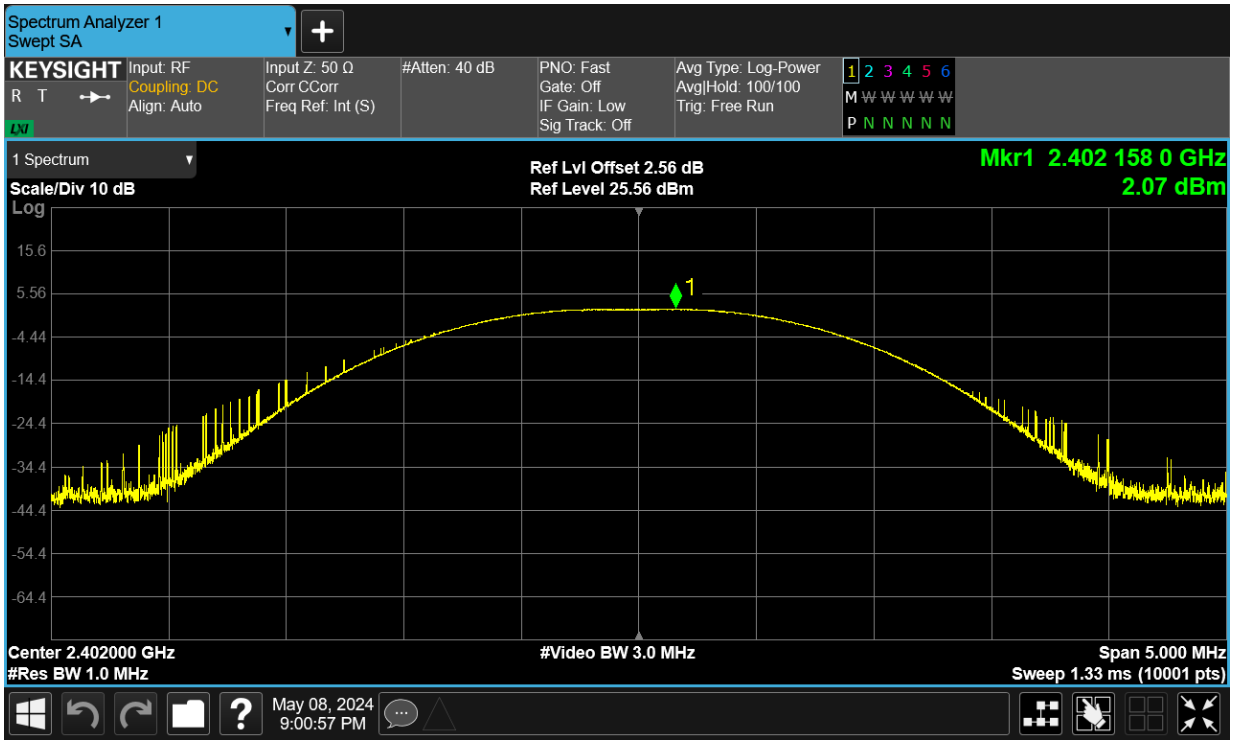
Test Data

Maximum Conducted Output Power

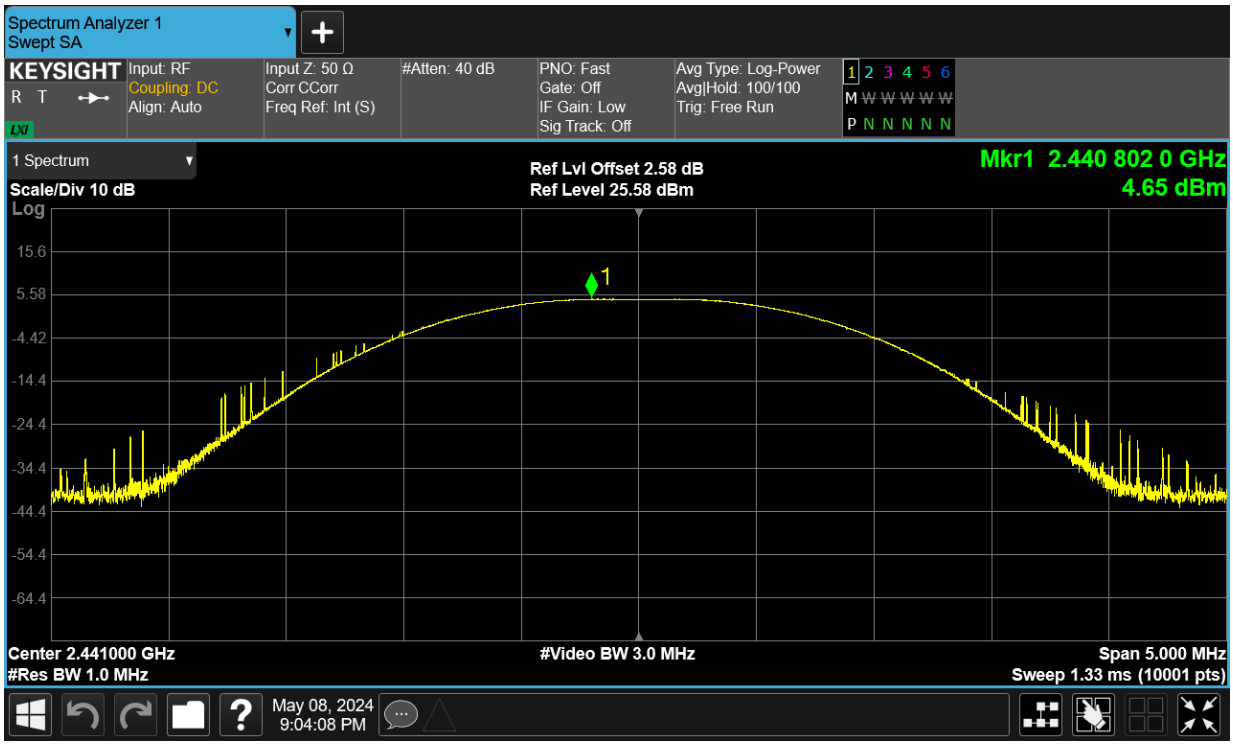
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	2.074	30	Pass
NVNT	1-DH1	2441	Ant1	4.646	30	Pass
NVNT	1-DH1	2480	Ant1	4.619	30	Pass
NVNT	2-DH1	2402	Ant1	3.813	21	Pass
NVNT	2-DH1	2441	Ant1	6.411	21	Pass
NVNT	2-DH1	2480	Ant1	6.311	21	Pass
NVNT	3-DH1	2402	Ant1	4.449	21	Pass
NVNT	3-DH1	2441	Ant1	6.94	21	Pass
NVNT	3-DH1	2480	Ant1	6.959	21	Pass

Test Graphs

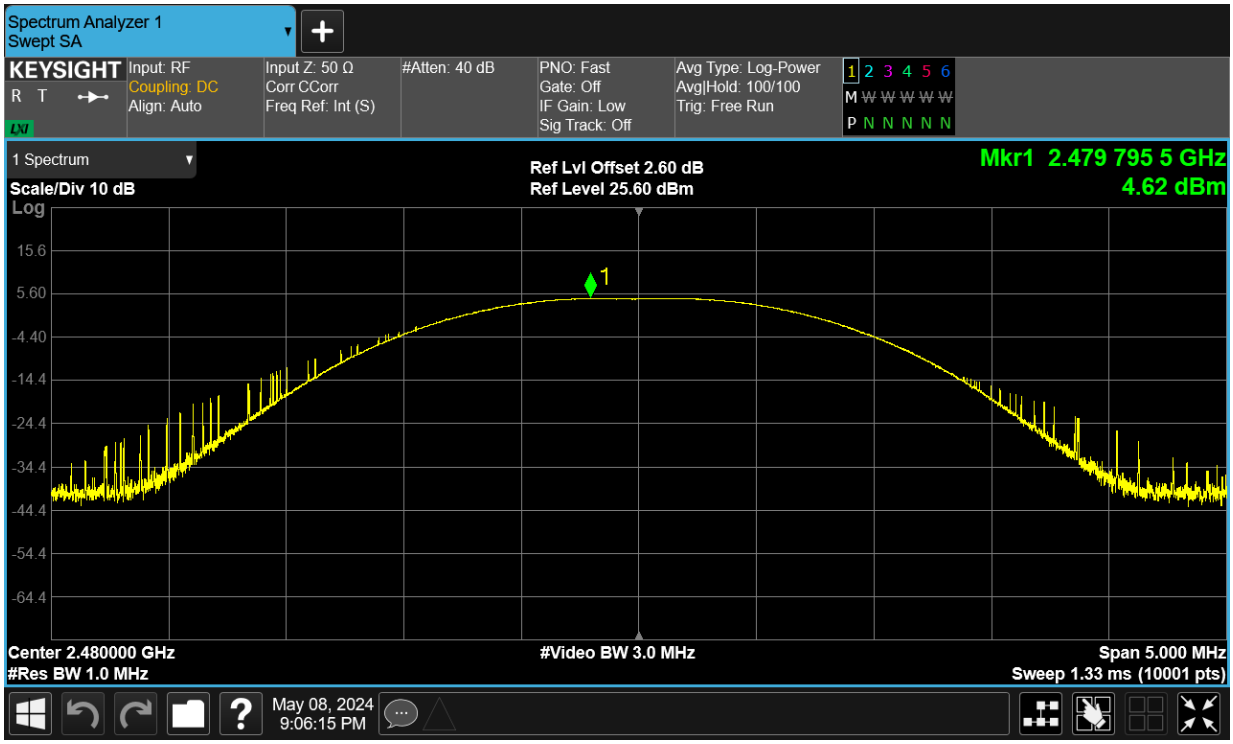
Power NVNT 1-DH1 2402MHz Ant1



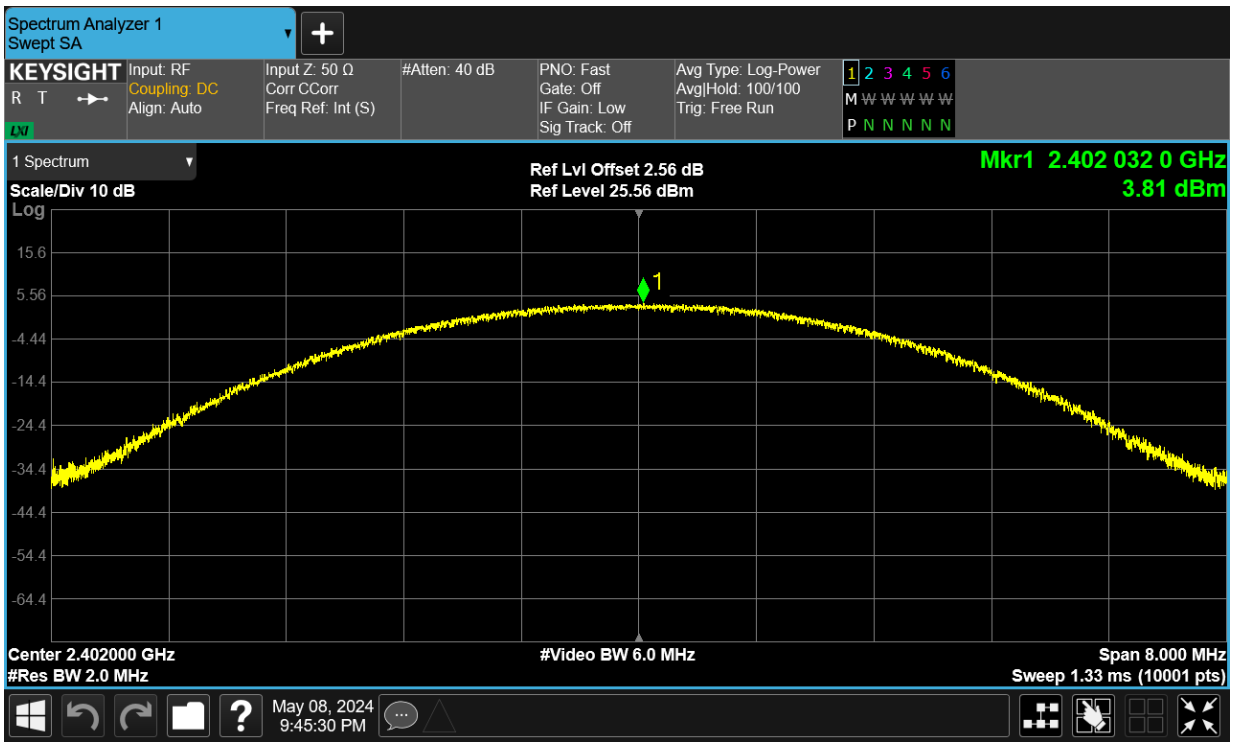
Power NVNT 1-DH1 2441MHz Ant1



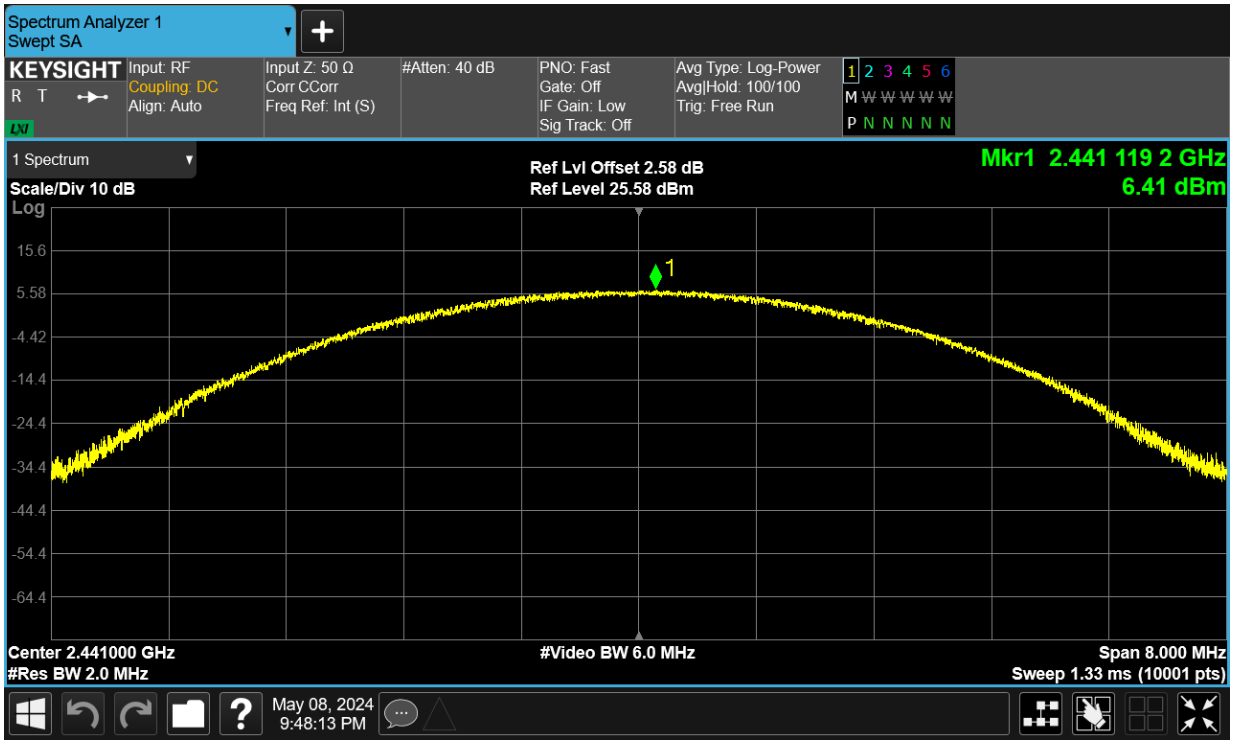
Power NVNT 1-DH1 2480MHz Ant1



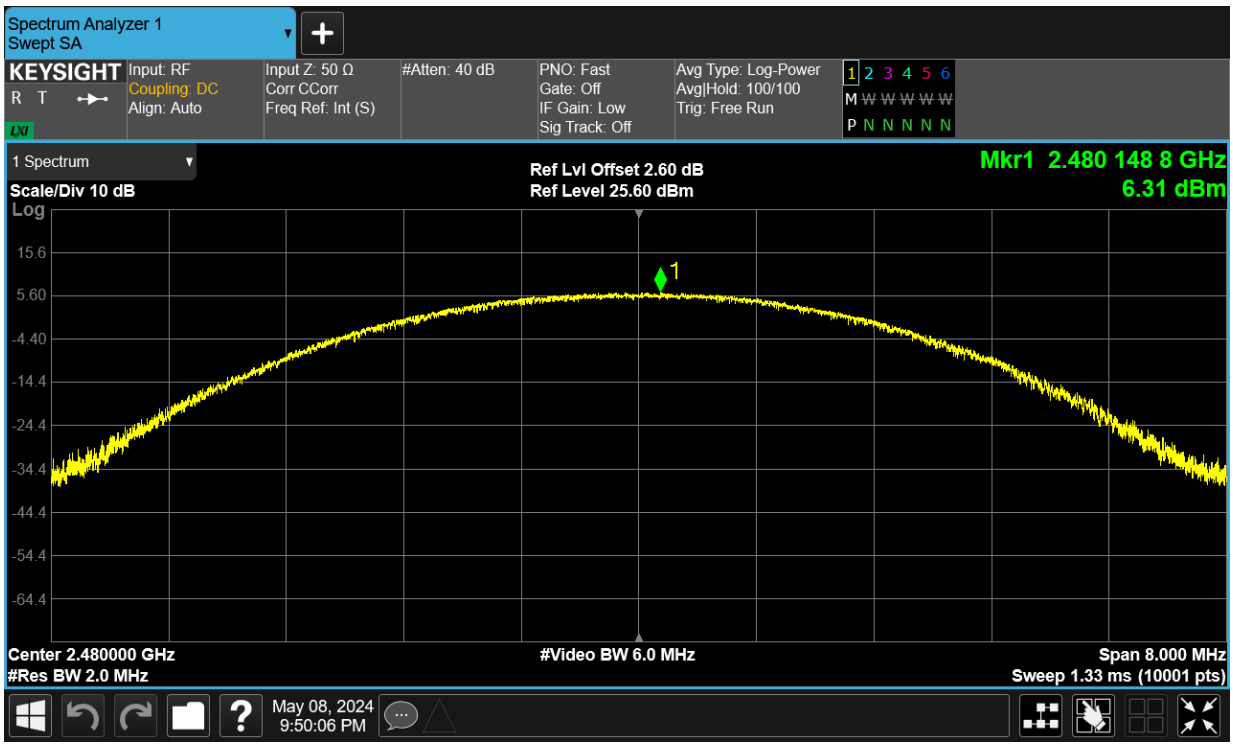
Power NVNT 2-DH1 2402MHz Ant1



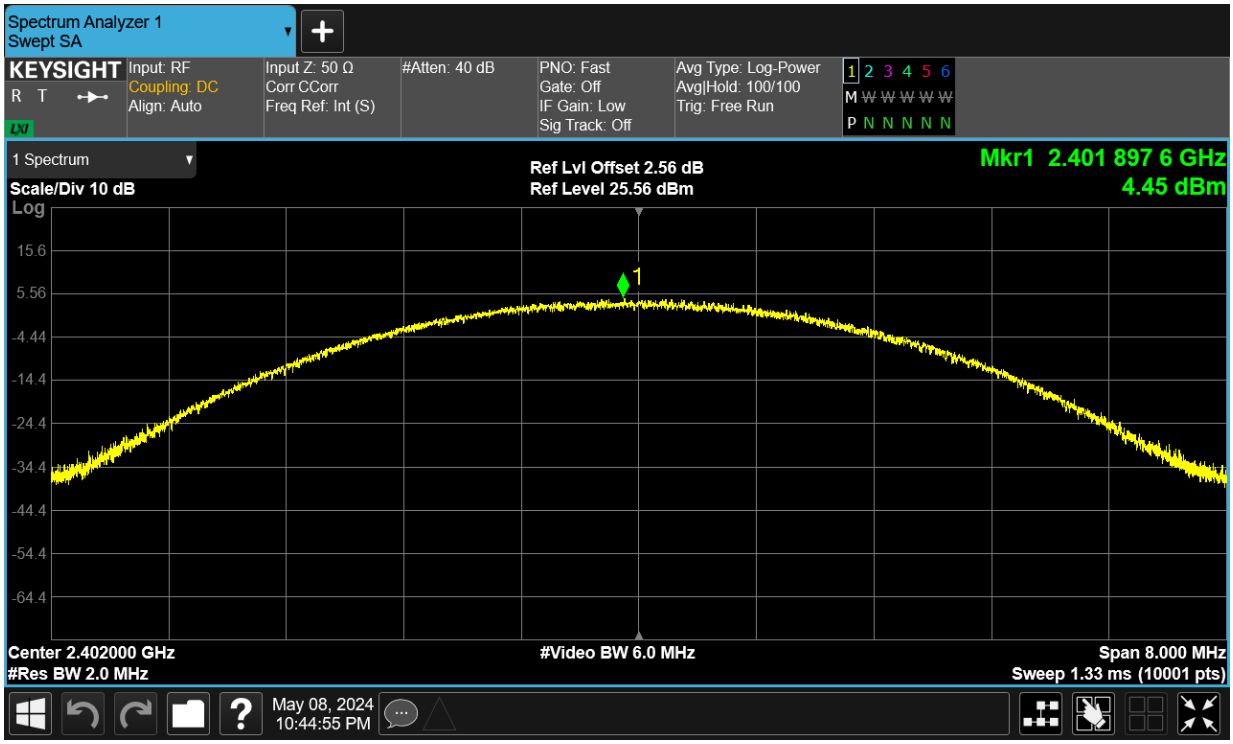
Power NVNT 2-DH1 2441MHz Ant1



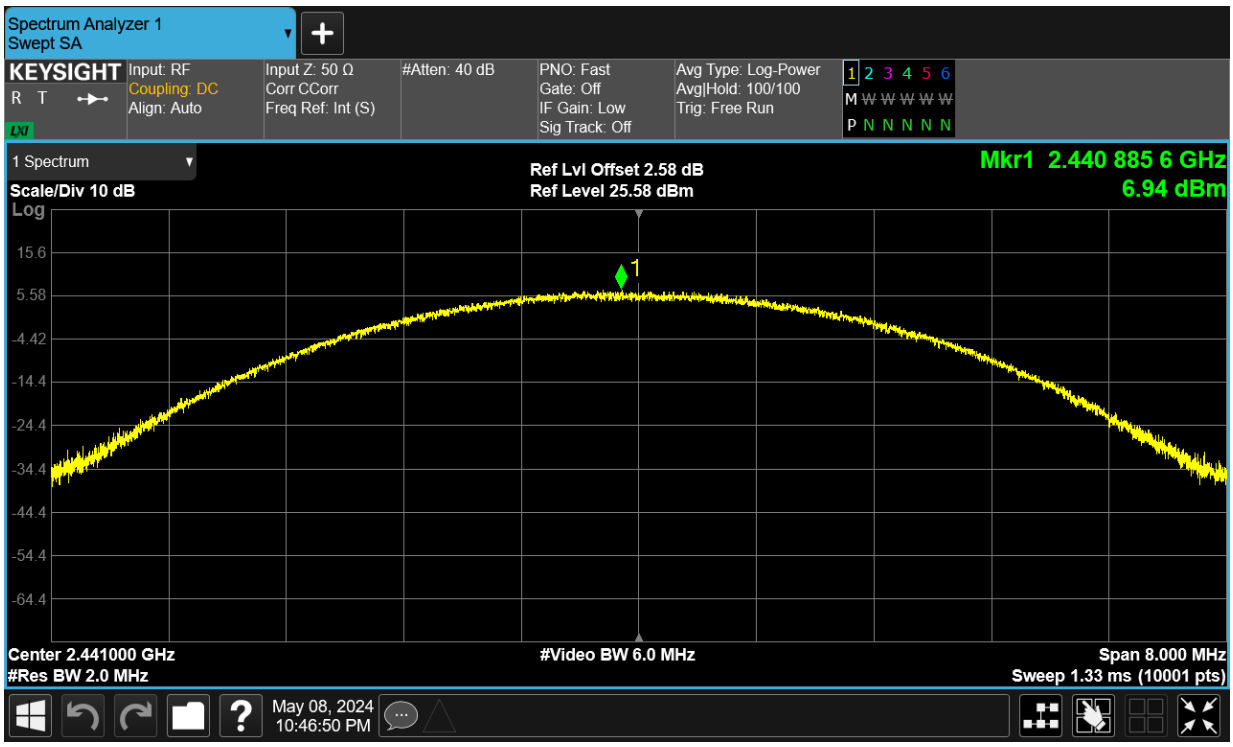
Power NVNT 2-DH1 2480MHz Ant1



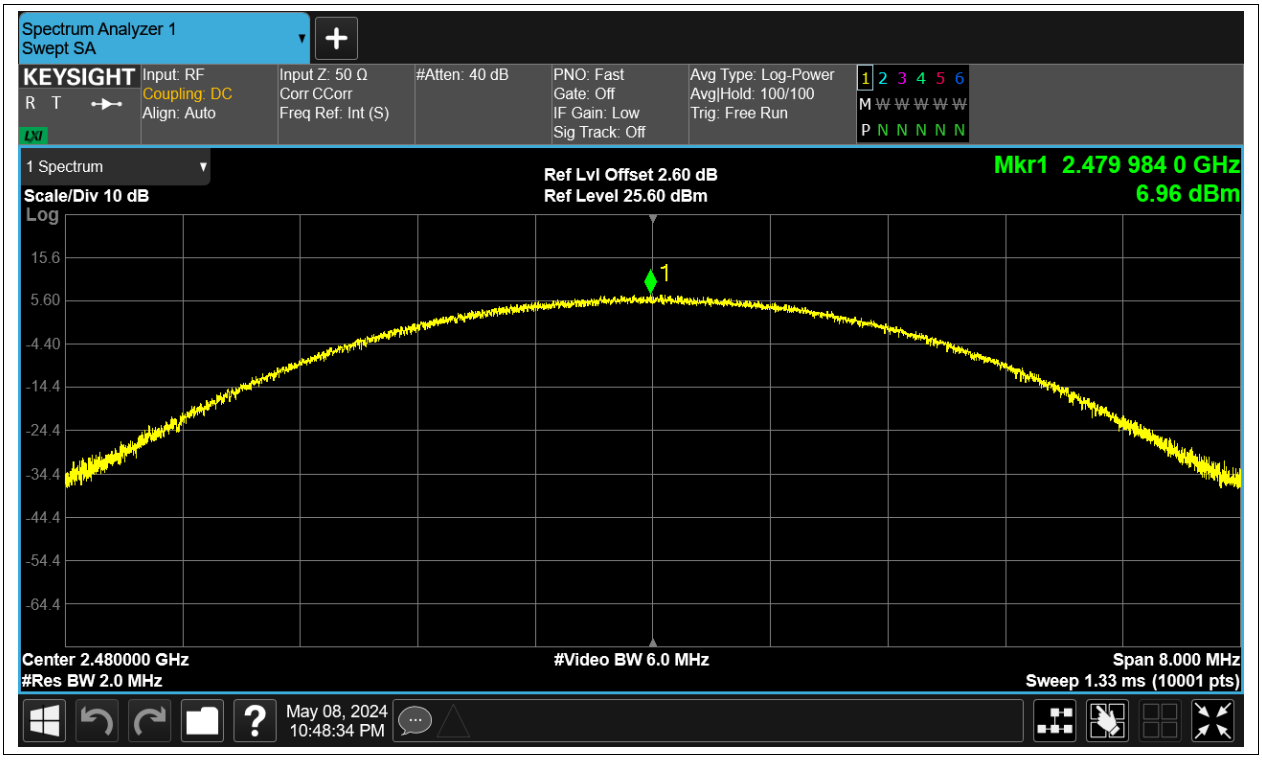
Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



Power NVNT 3-DH1 2480MHz Ant1

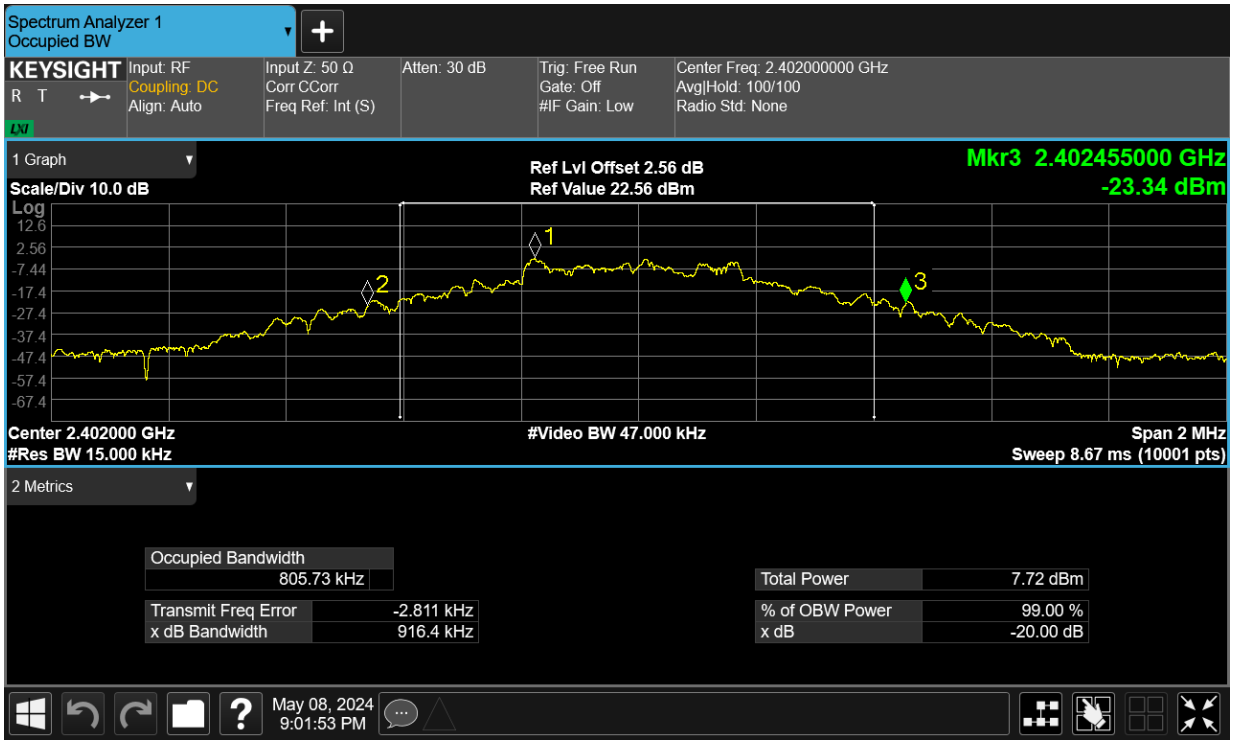

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 40 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 2.60 dB
Ref Level 25.60 dBm
Mkr1 2.479 984 0 GHz
6.96 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)
May 08, 2024
10:48:34 PM

-20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)
NVNT	1-DH1	2402	Ant1	0.916
NVNT	1-DH1	2441	Ant1	0.878
NVNT	1-DH1	2480	Ant1	0.879
NVNT	2-DH1	2402	Ant1	1.247
NVNT	2-DH1	2441	Ant1	1.278
NVNT	2-DH1	2480	Ant1	1.269
NVNT	3-DH1	2402	Ant1	1.217
NVNT	3-DH1	2441	Ant1	1.225
NVNT	3-DH1	2480	Ant1	1.224

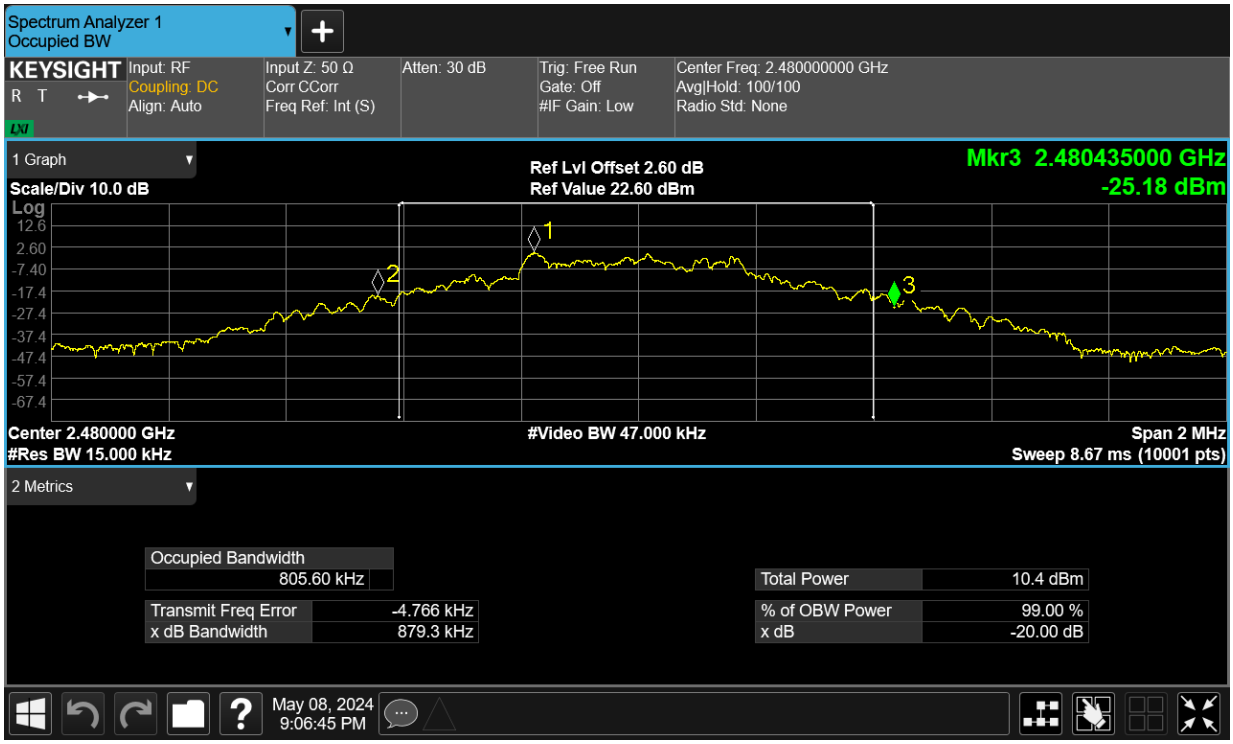
Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1

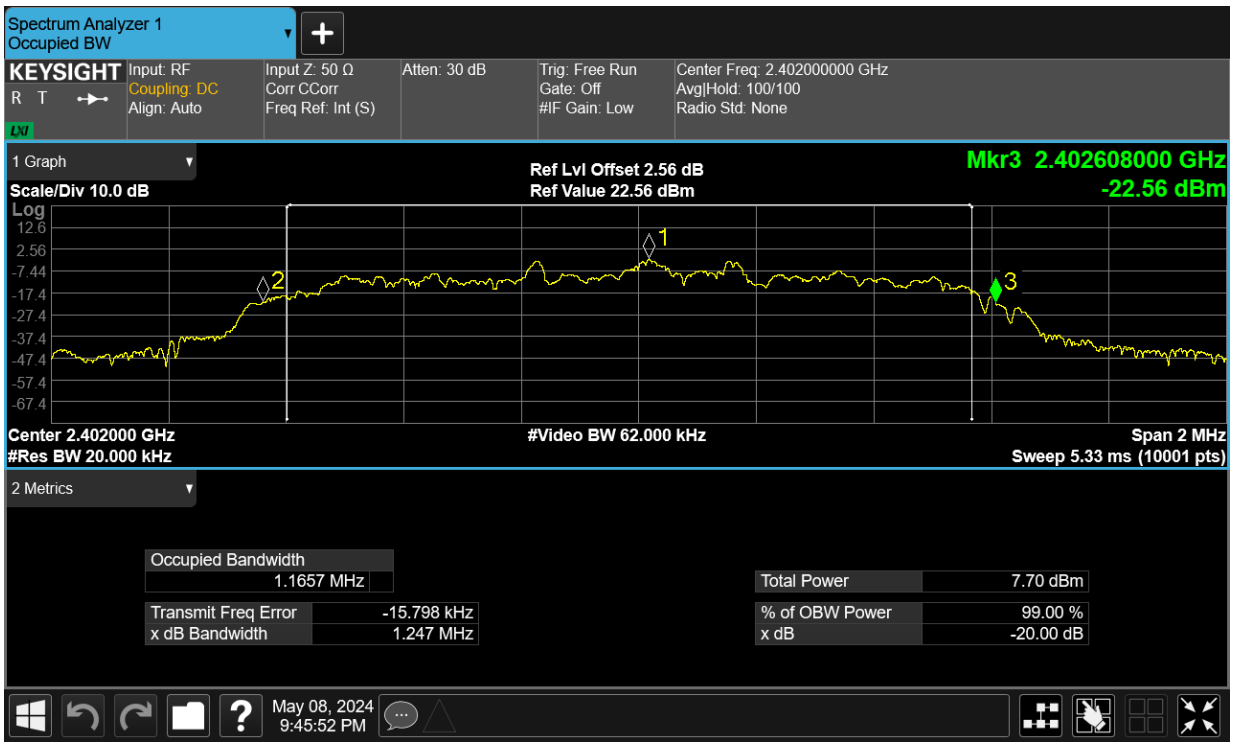


-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1

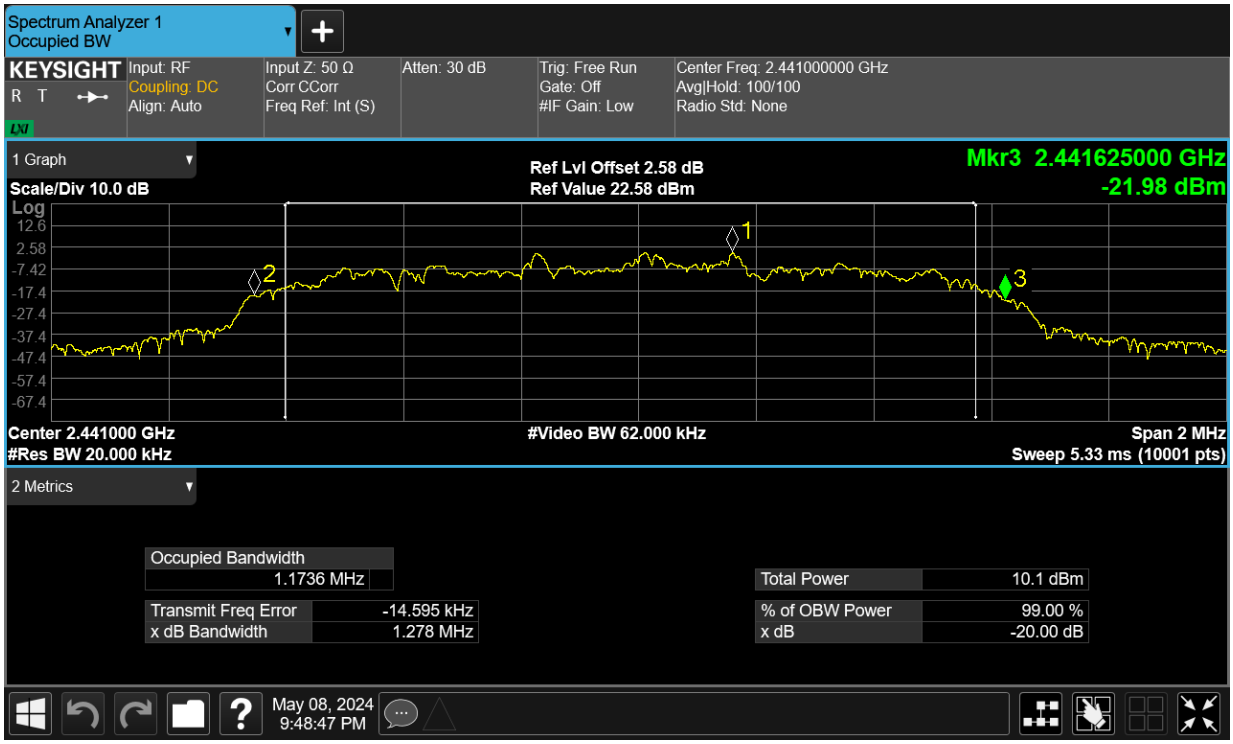
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



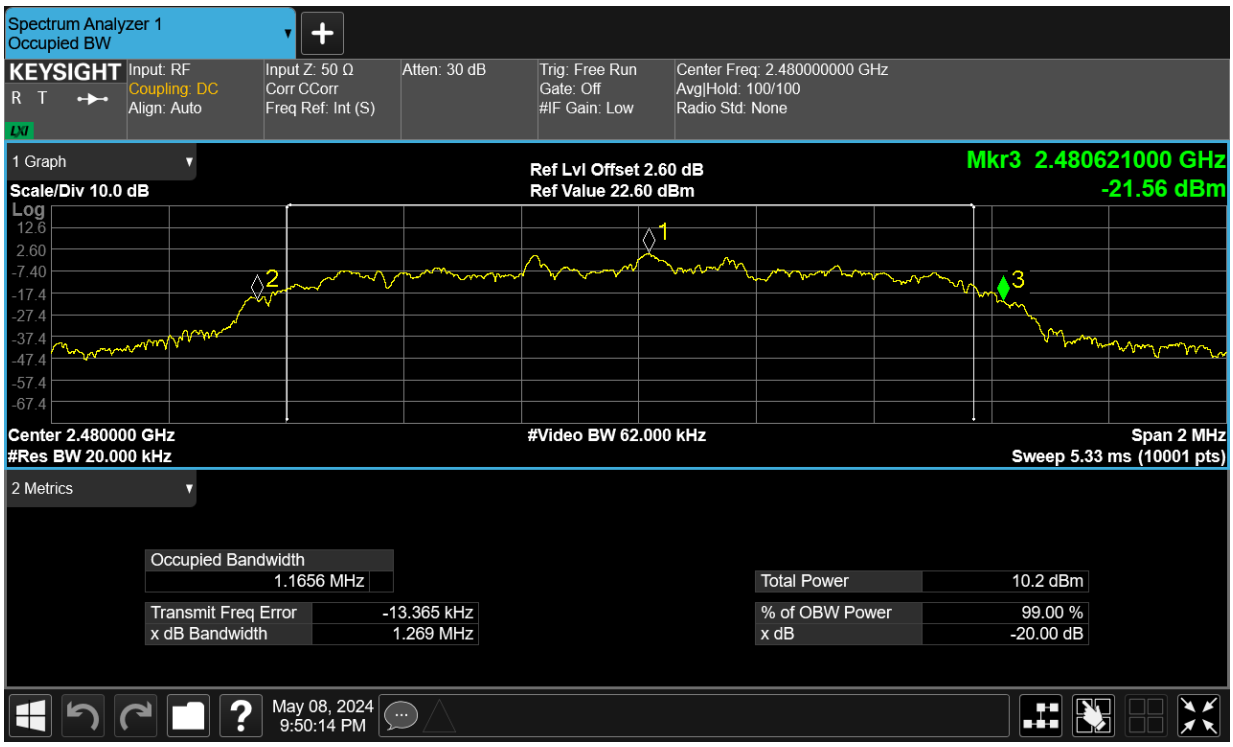
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



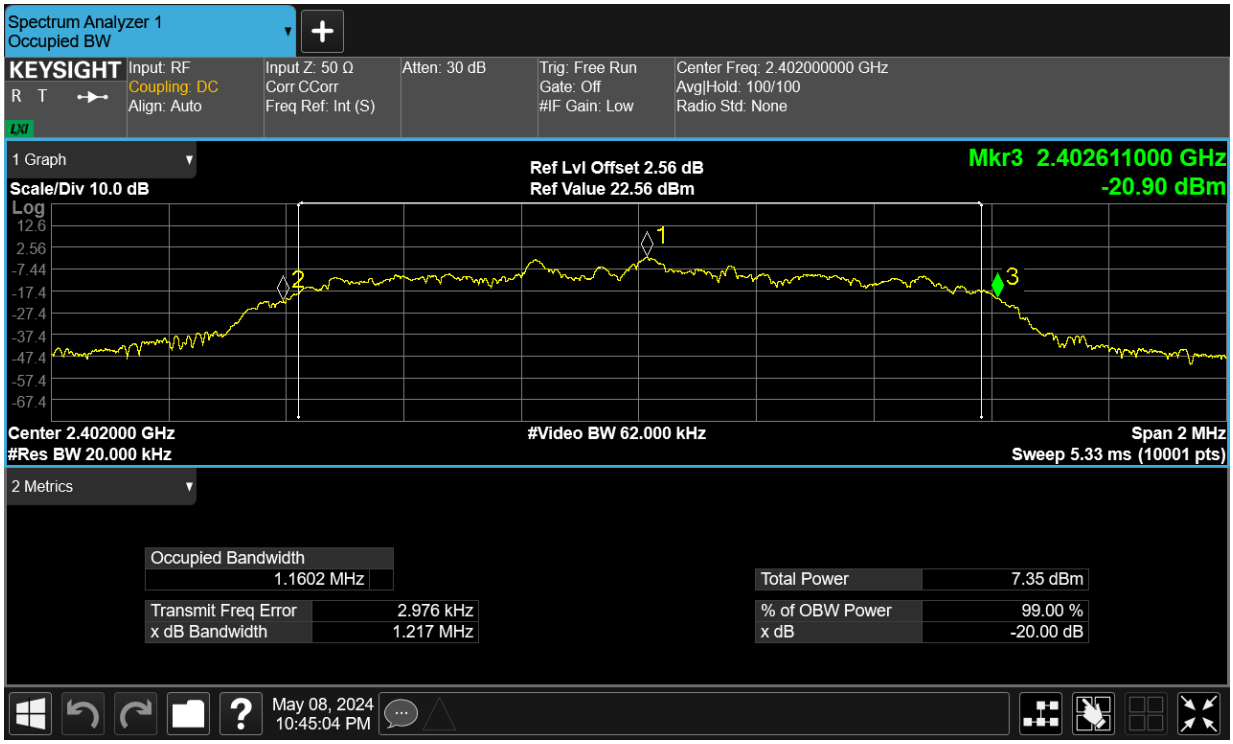
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



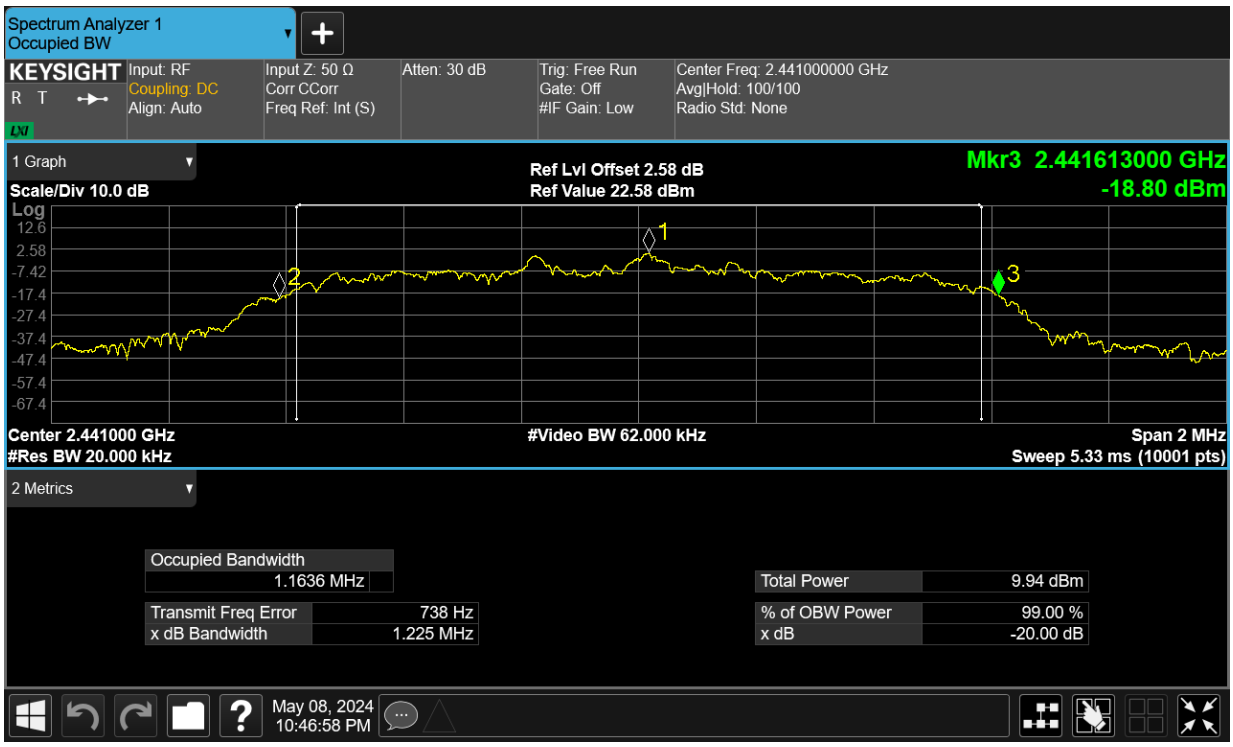
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1



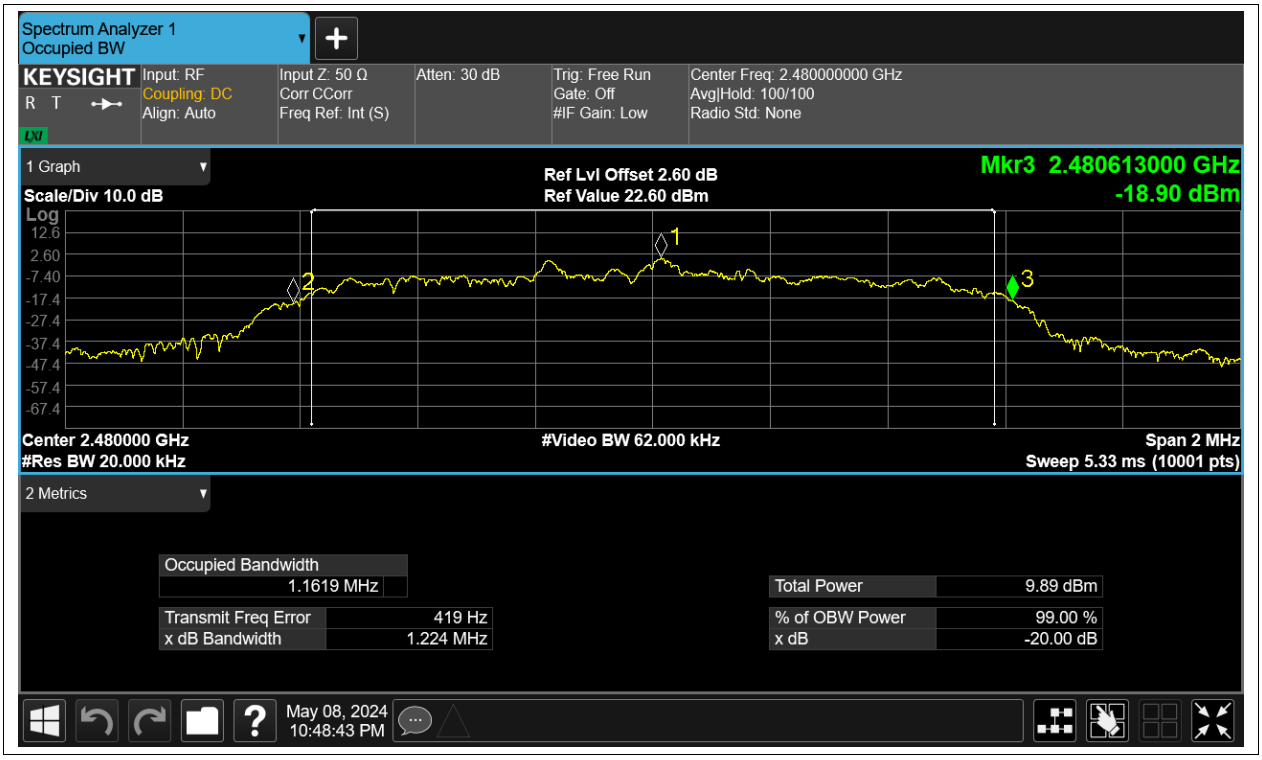
-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2480MHz Ant1

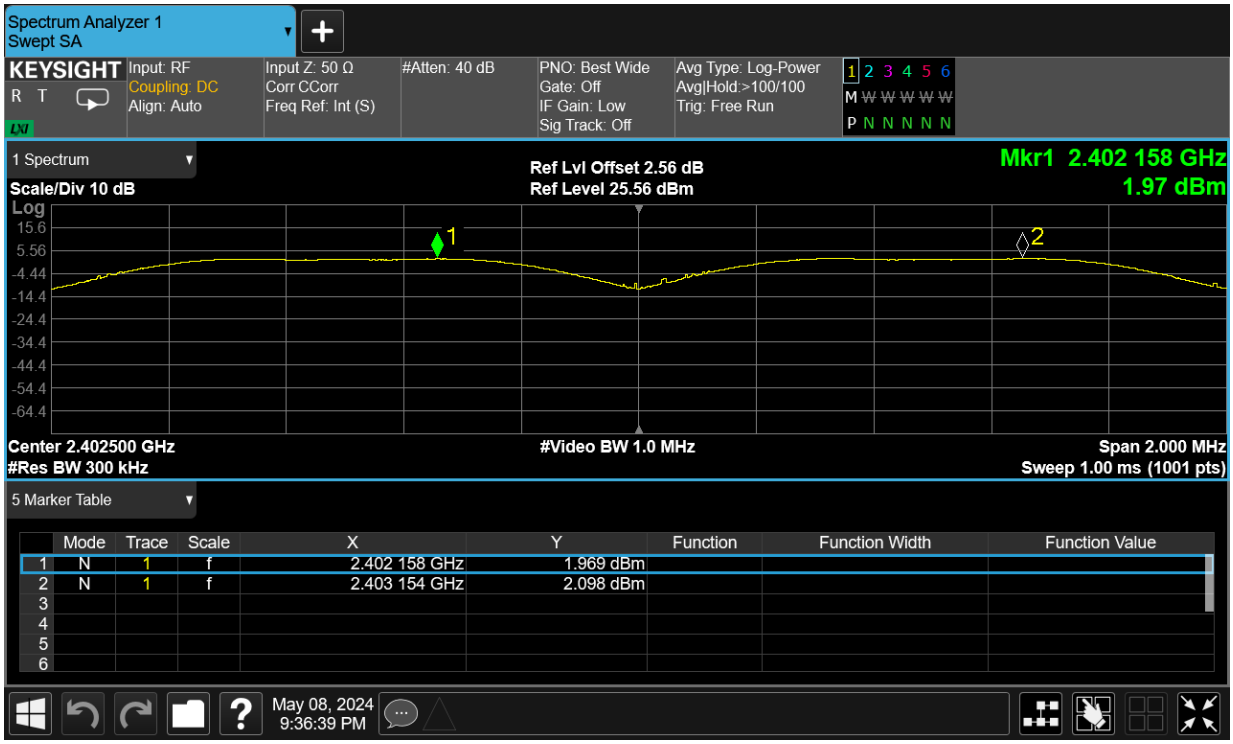

Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 100/100
Radio Std: None
1 Graph
Scale/Div 10.0 dB
Ref Lvl Offset 2.60 dB
Ref Value 22.60 dBm
Mkr3 2.480613000 GHz
-18.90 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
1.1619 MHz
Transmit Freq Error 419 Hz
x dB Bandwidth 1.224 MHz
Total Power 9.89 dBm
% of OBW Power 99.00 %
x dB -20.00 dB
May 08, 2024
10:48:43 PM

Carrier Frequencies Separation

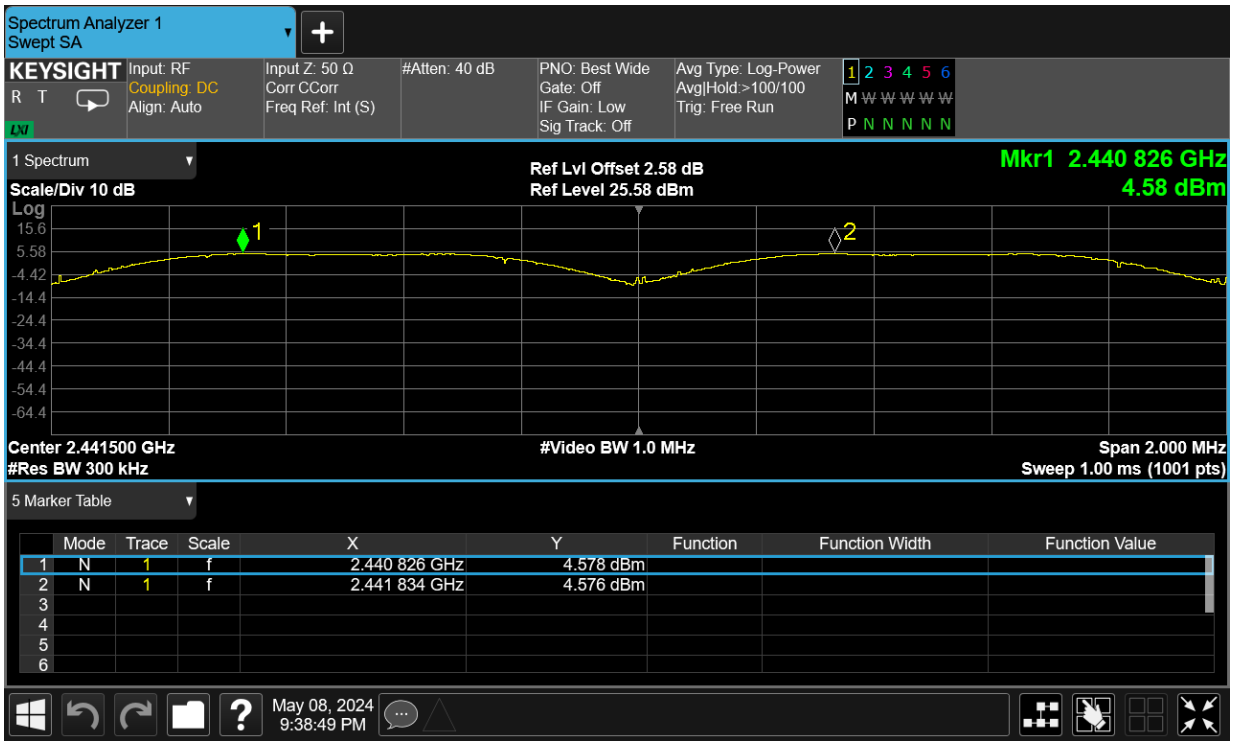
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2402.158	2403.154	0.996	0.916	Pass
NVNT	1-DH1	Ant1	2440.826	2441.834	1.008	0.878	Pass
NVNT	1-DH1	Ant1	2478.82	2479.834	1.014	0.879	Pass
NVNT	2-DH1	Ant1	2402.172	2403.152	0.98	0.831	Pass
NVNT	2-DH1	Ant1	2441.156	2442.154	0.998	0.852	Pass
NVNT	2-DH1	Ant1	2478.838	2479.83	0.992	0.846	Pass
NVNT	3-DH1	Ant1	2401.83	2402.832	1.002	0.811	Pass
NVNT	3-DH1	Ant1	2440.818	2441.818	1	0.817	Pass
NVNT	3-DH1	Ant1	2478.818	2479.82	1.002	0.816	Pass

Test Graphs

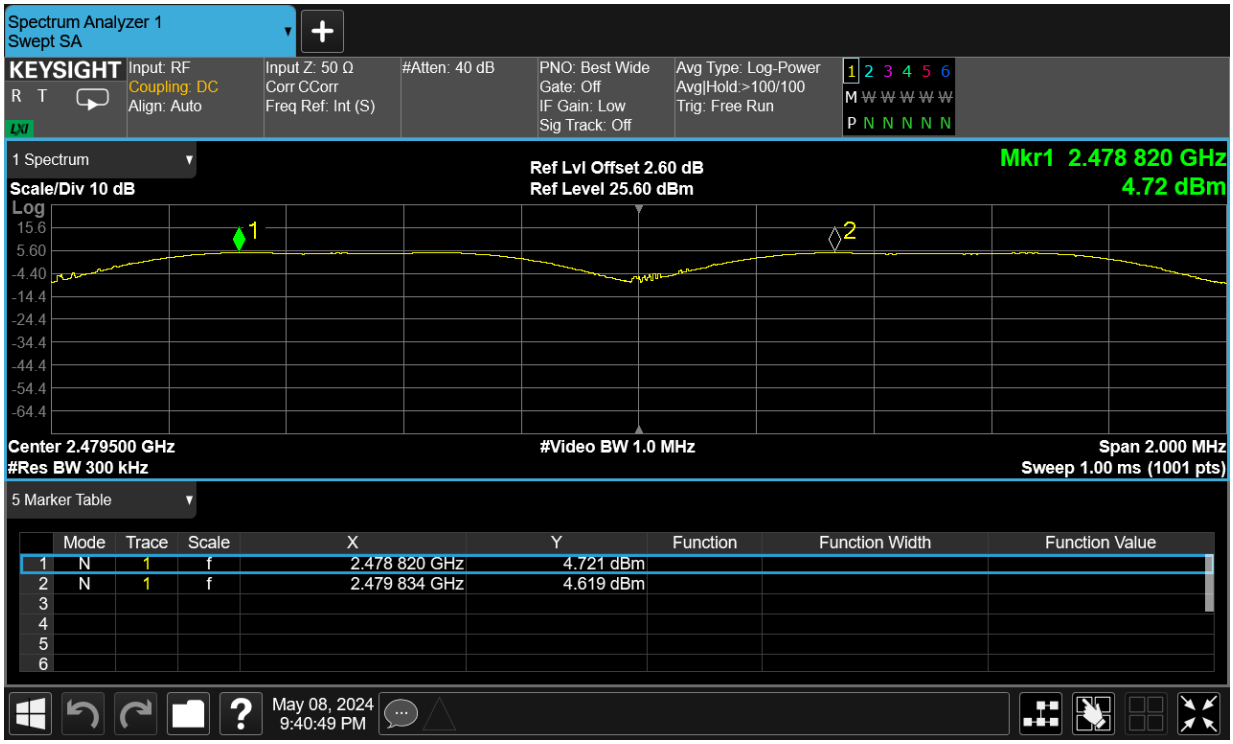
CFS NVNT 1-DH1 2402MHz Ant1



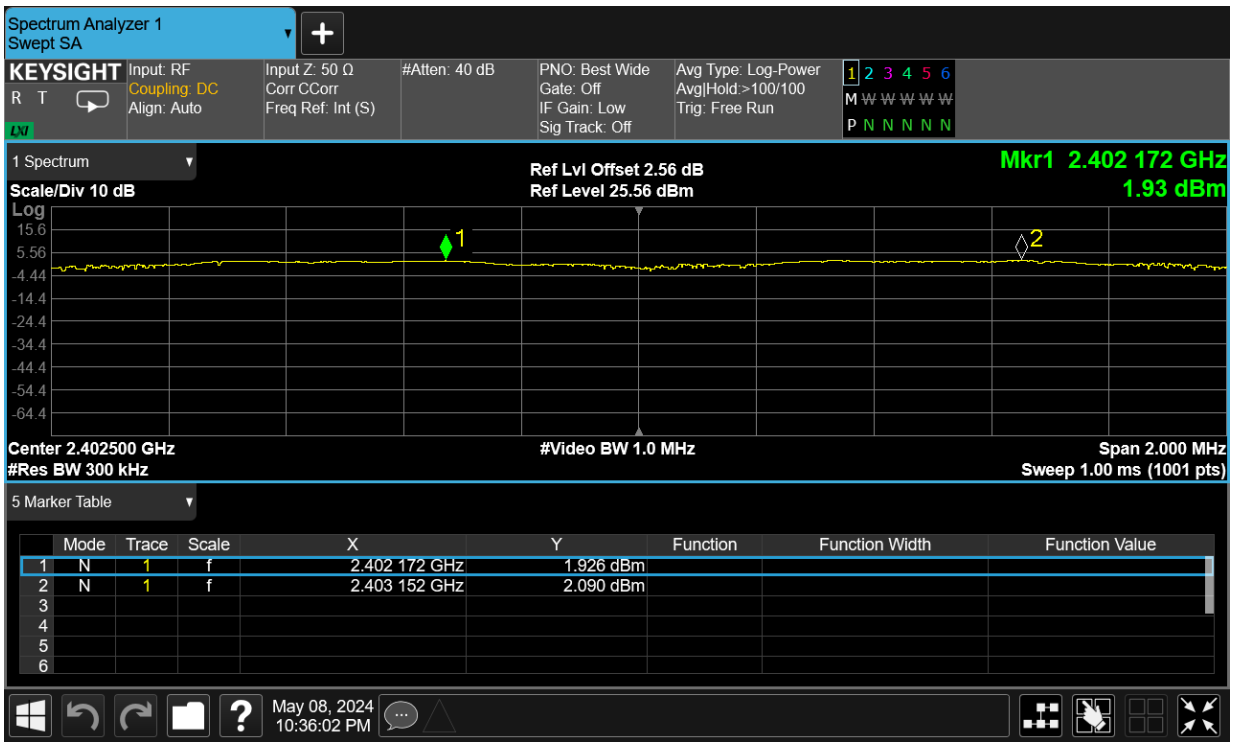
CFS NVNT 1-DH1 2441MHz Ant1



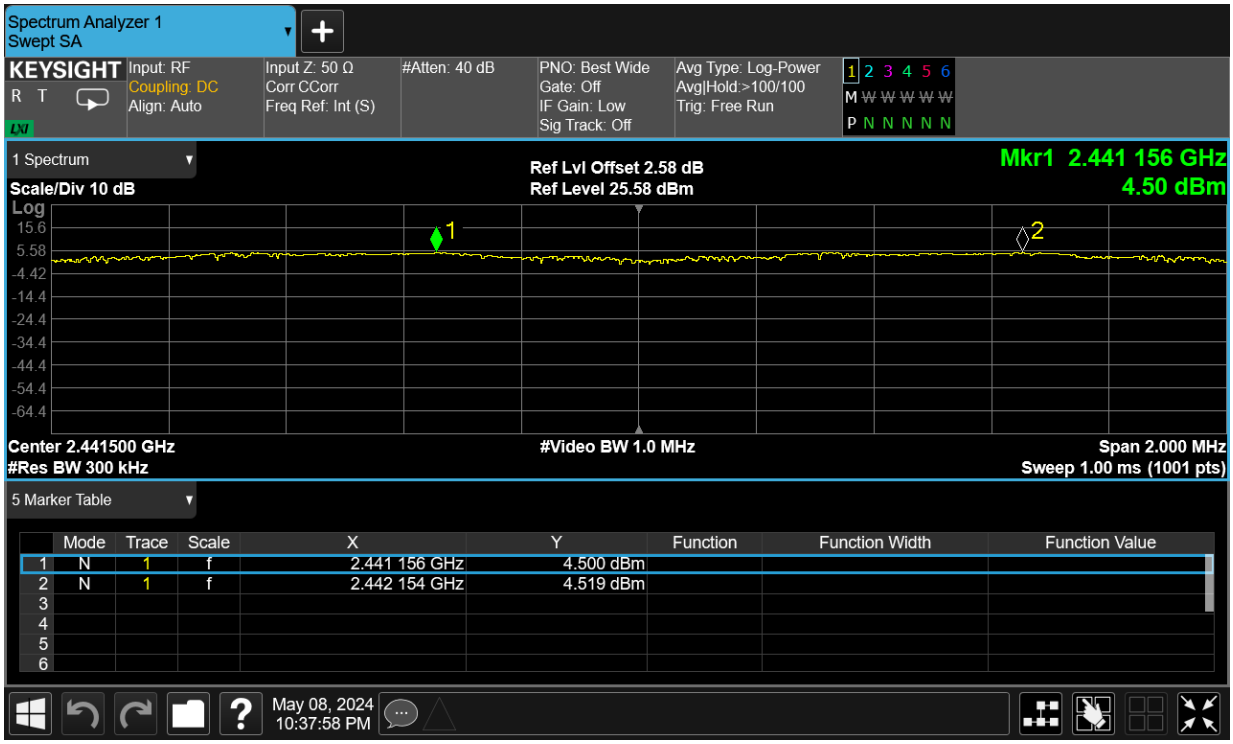
CFS NVNT 1-DH1 2480MHz Ant1



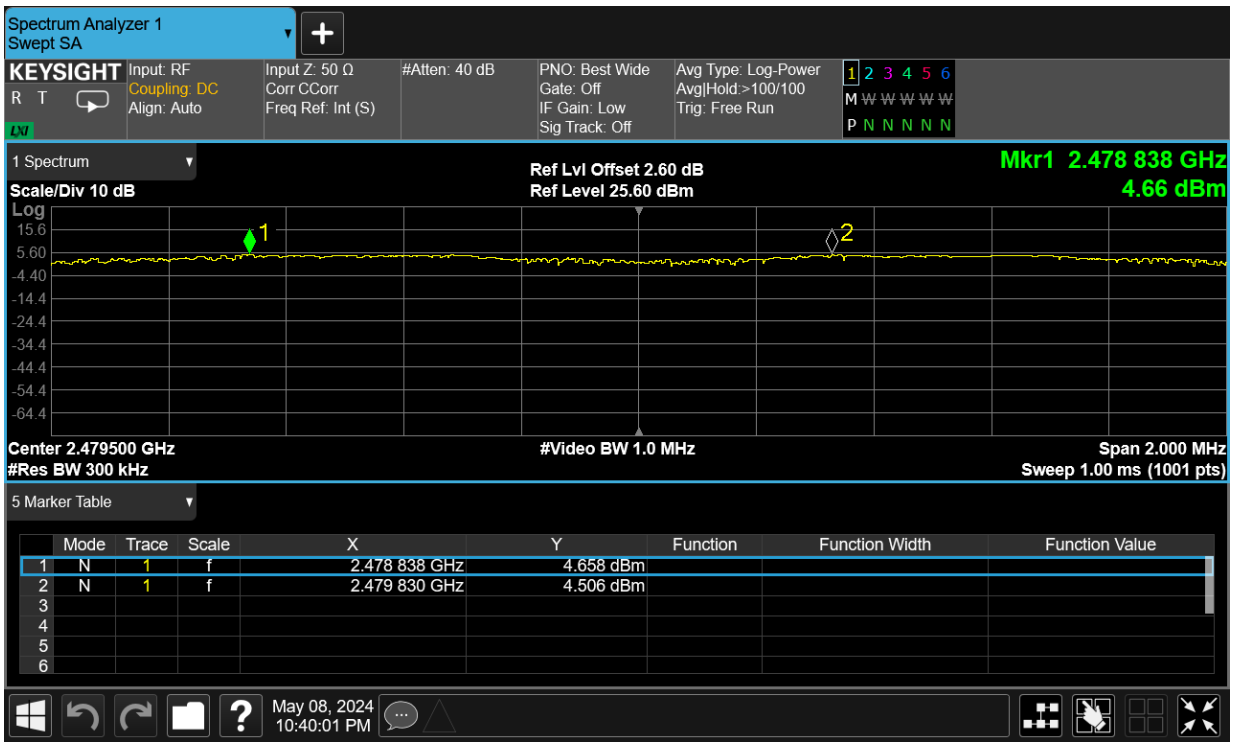
CFS NVNT 2-DH1 2402MHz Ant1



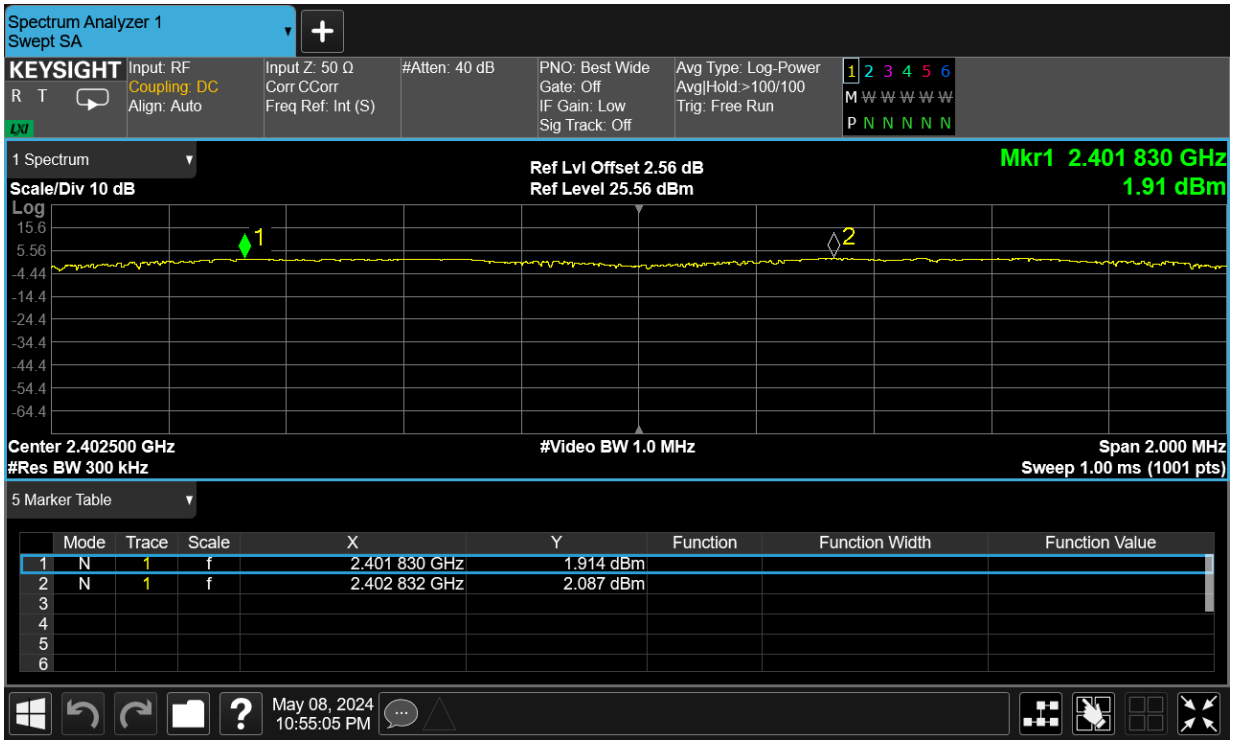
CFS NVNT 2-DH1 2441MHz Ant1



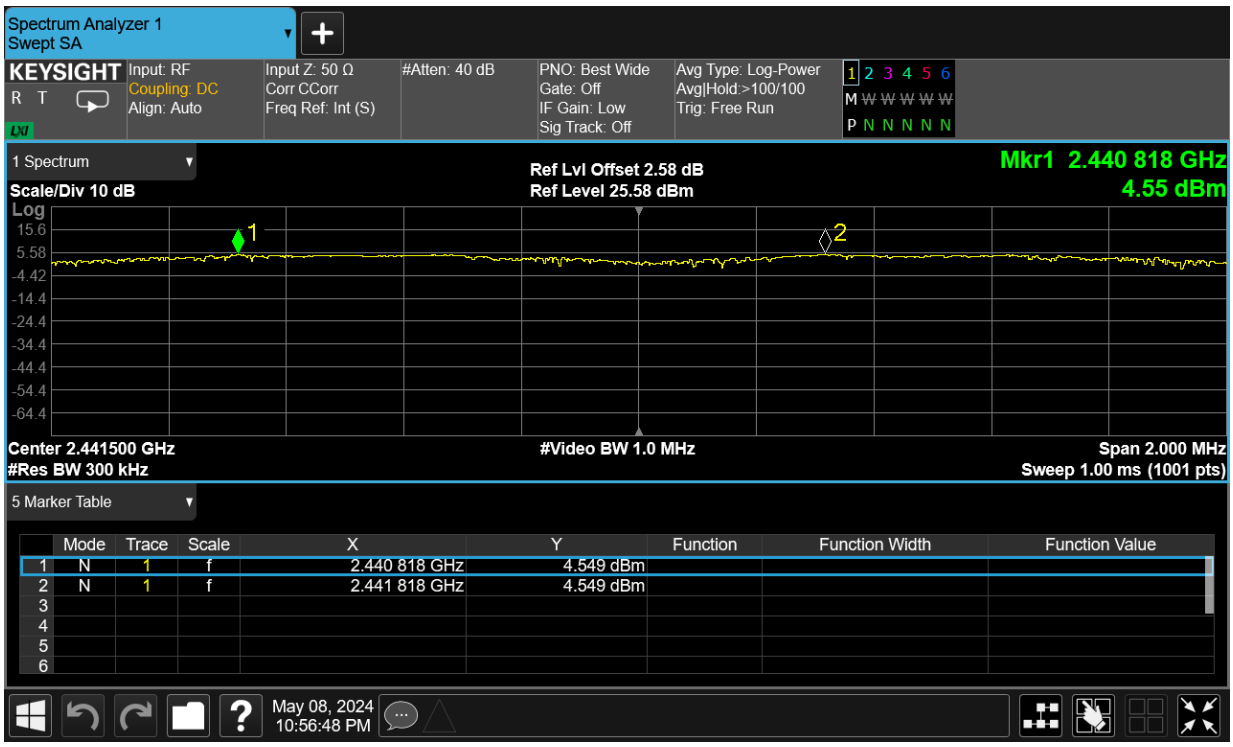
CFS NVNT 2-DH1 2480MHz Ant1



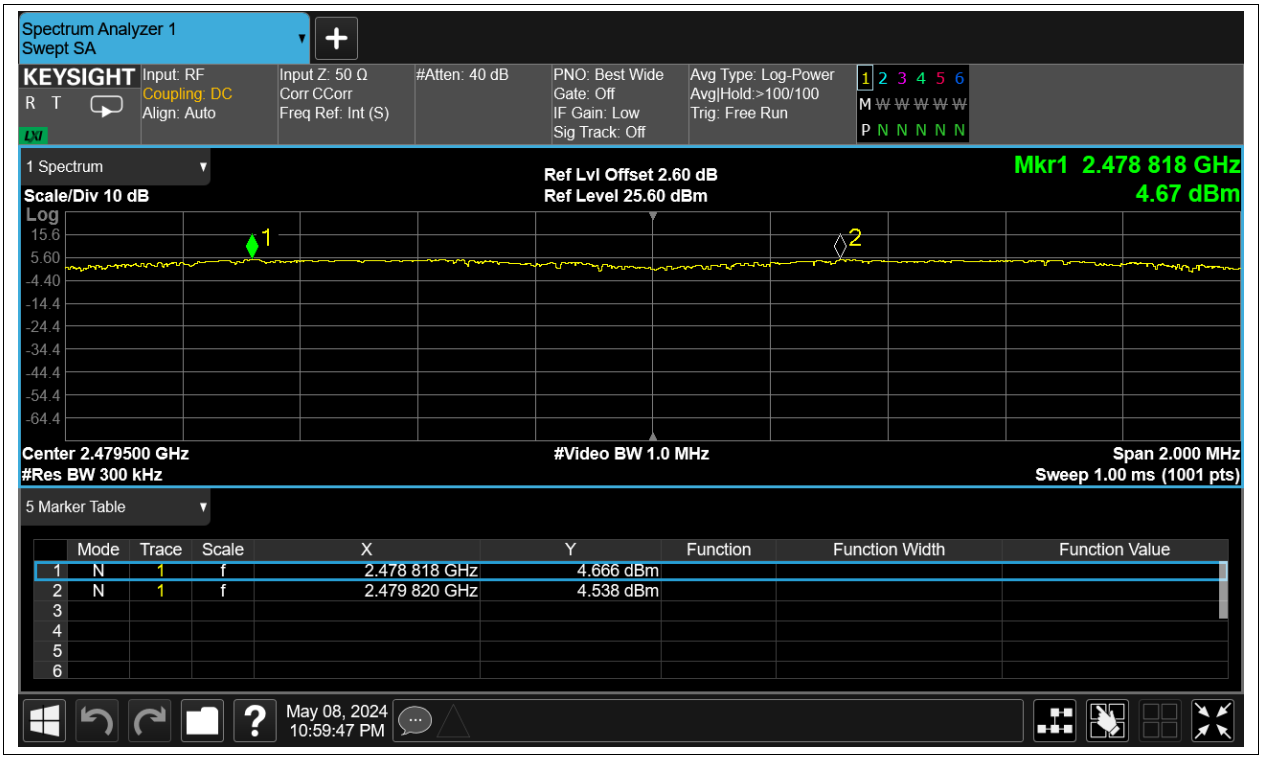
CFS NVNT 3-DH1 2402MHz Ant1



CFS NVNT 3-DH1 2441MHz Ant1



CFS NVNT 3-DH1 2480MHz Ant1

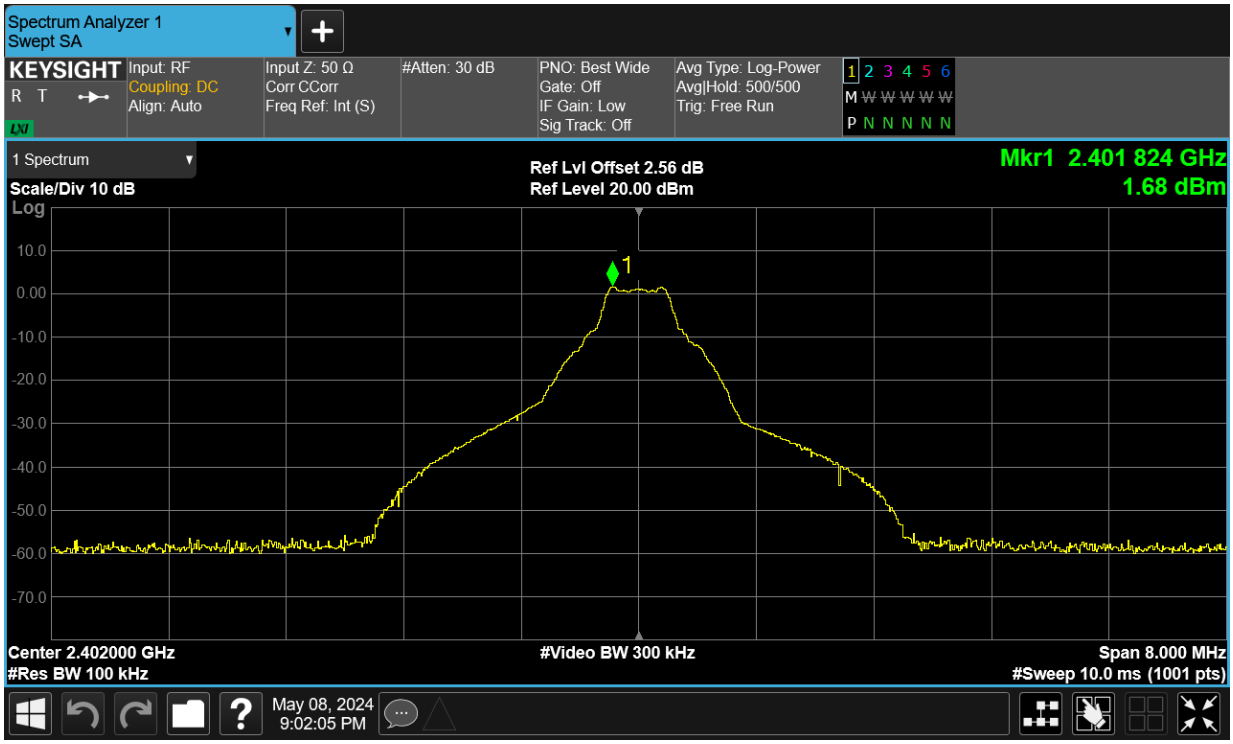

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 40 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold:>100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.60 dB
Ref Level 25.60 dBm
Mkr1 2.478 818 GHz
4.67 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 2.478 818 GHz 4.666 dBm
2 N 1 f 2.479 820 GHz 4.538 dBm
May 08, 2024
10:59:47 PM

Band Edge

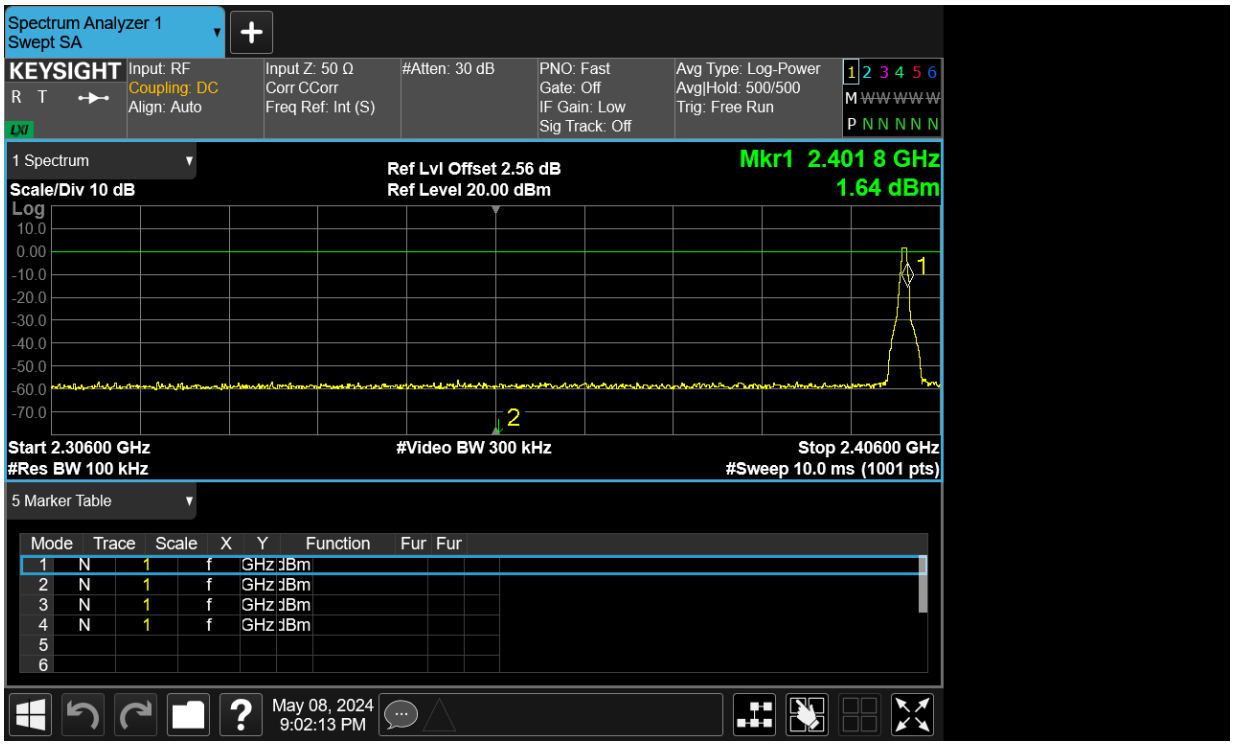
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-57.74	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-60.39	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-56.31	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-60.71	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-57.21	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-59.94	-20	Pass

Test Graphs

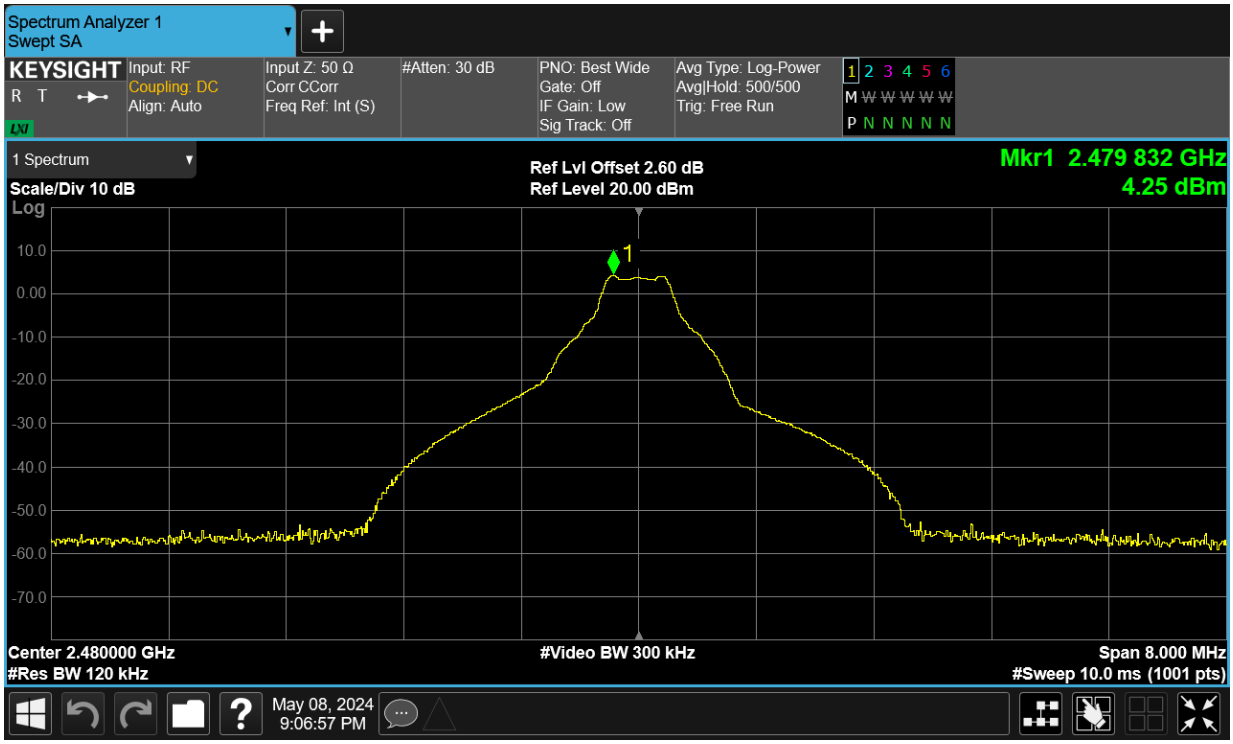
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



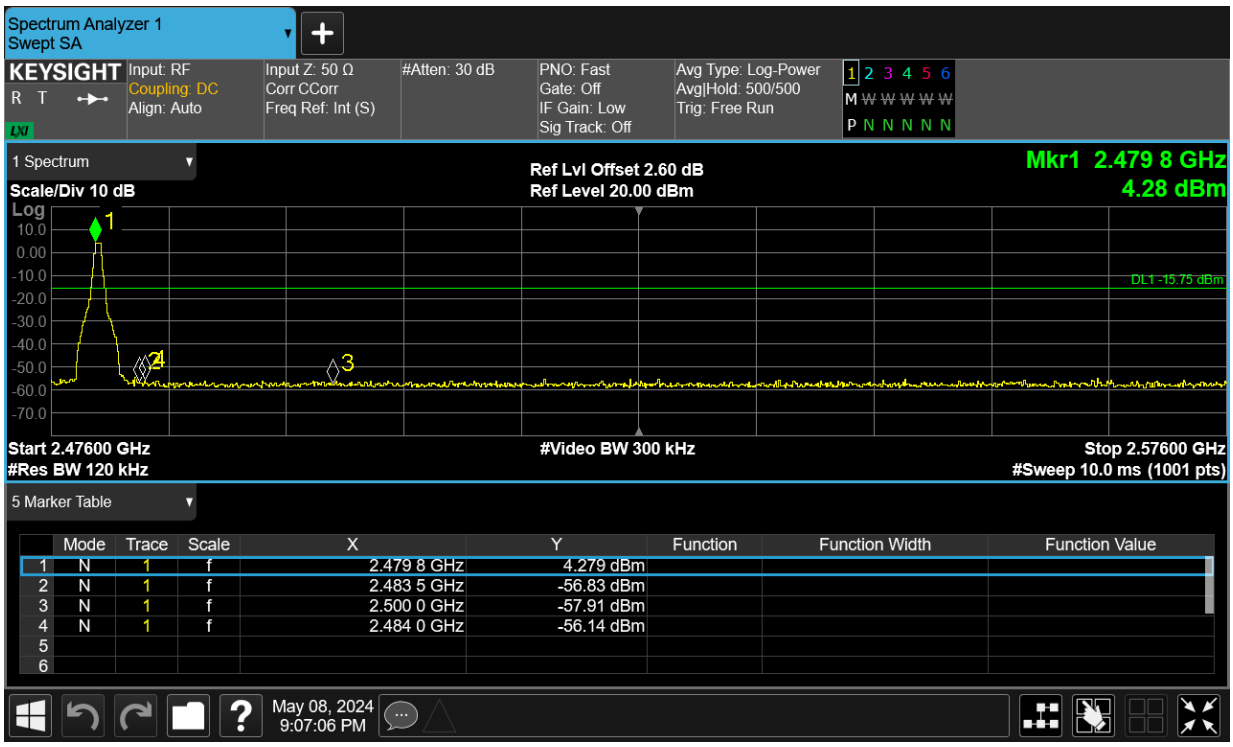
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



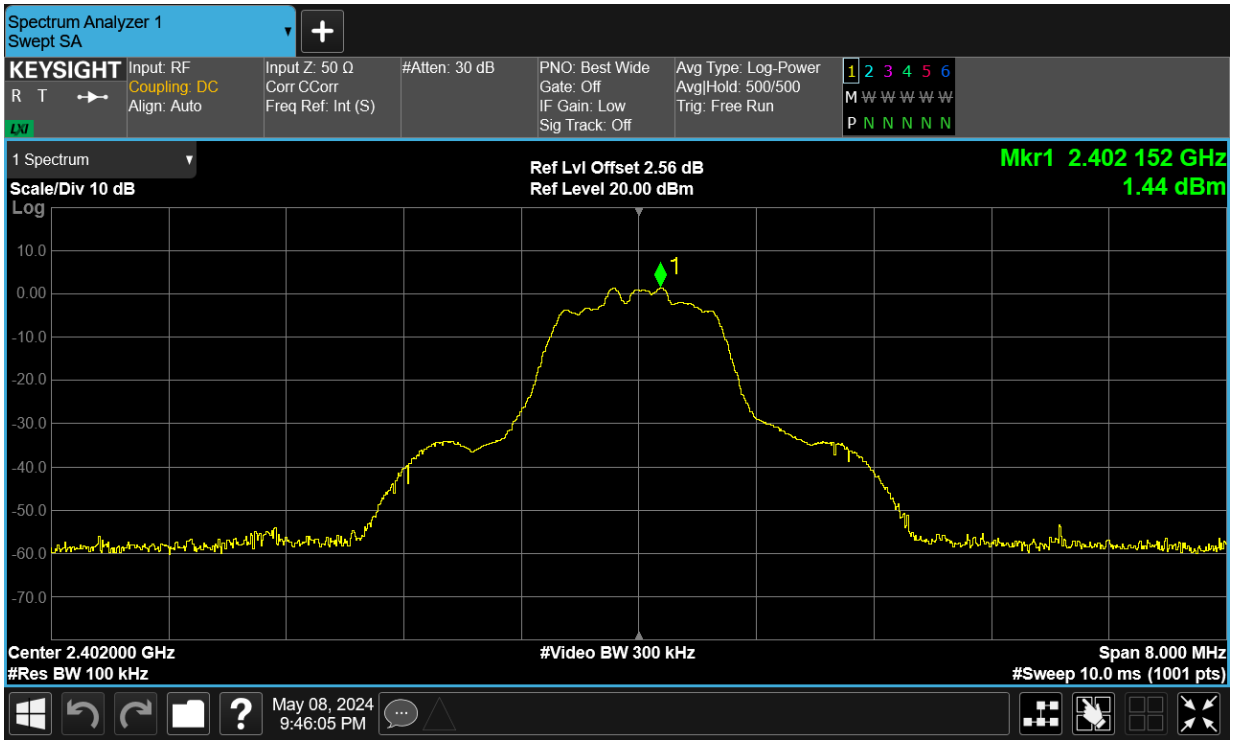
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



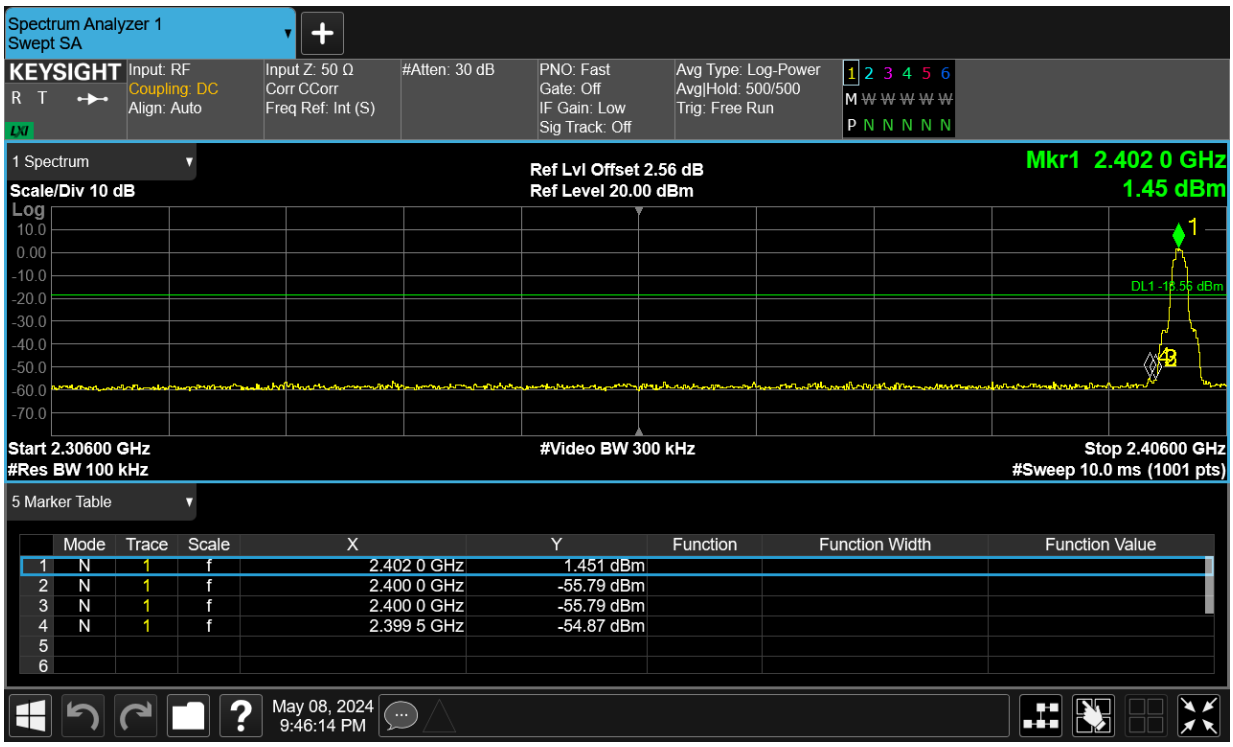
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



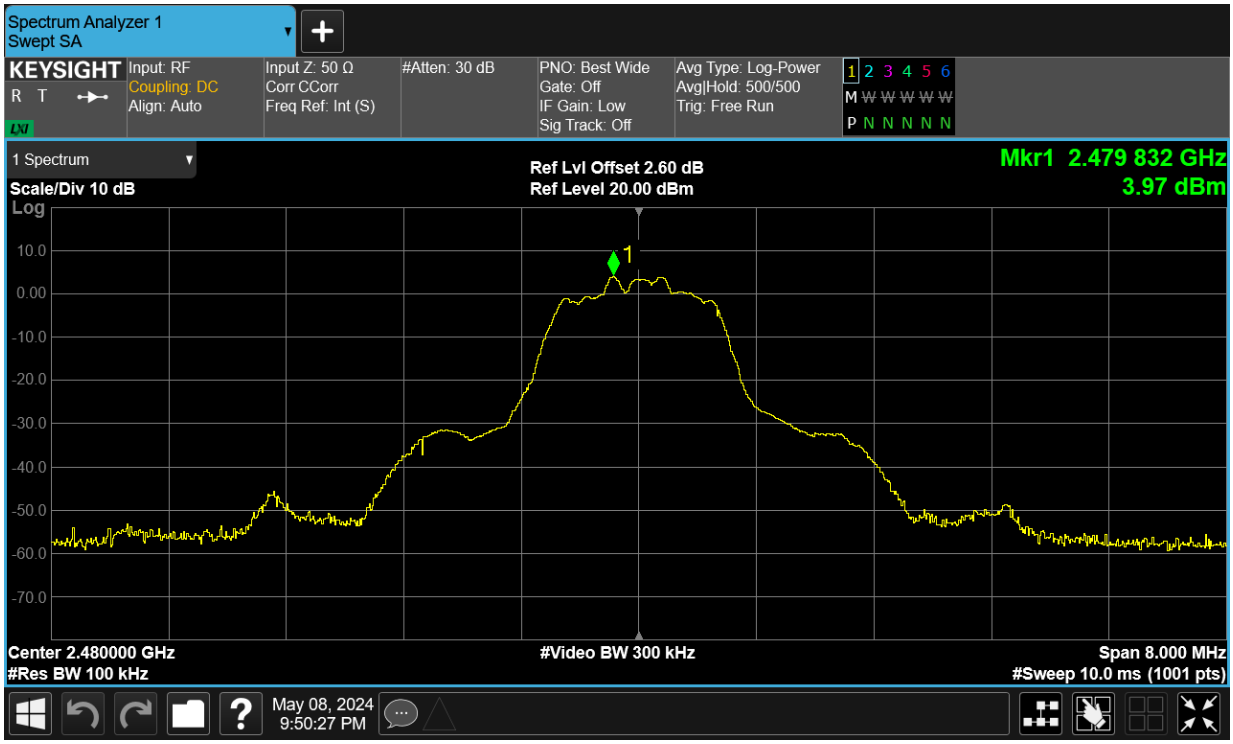
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



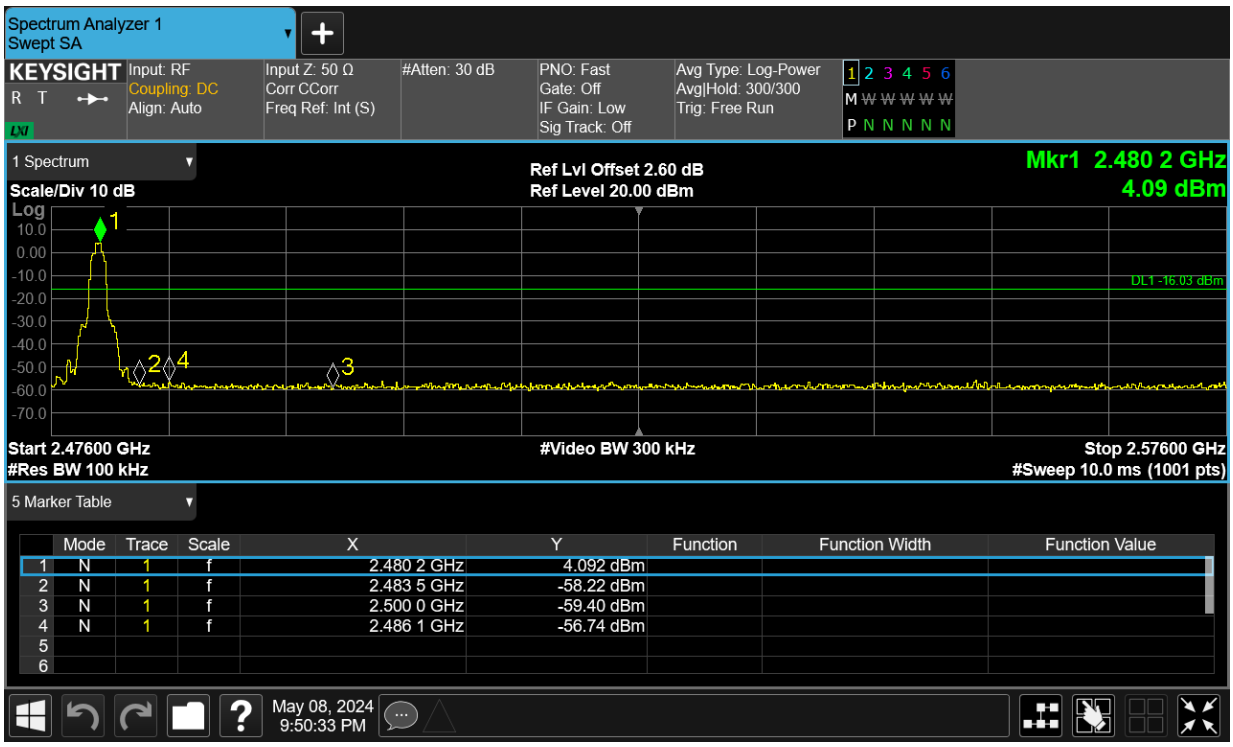
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



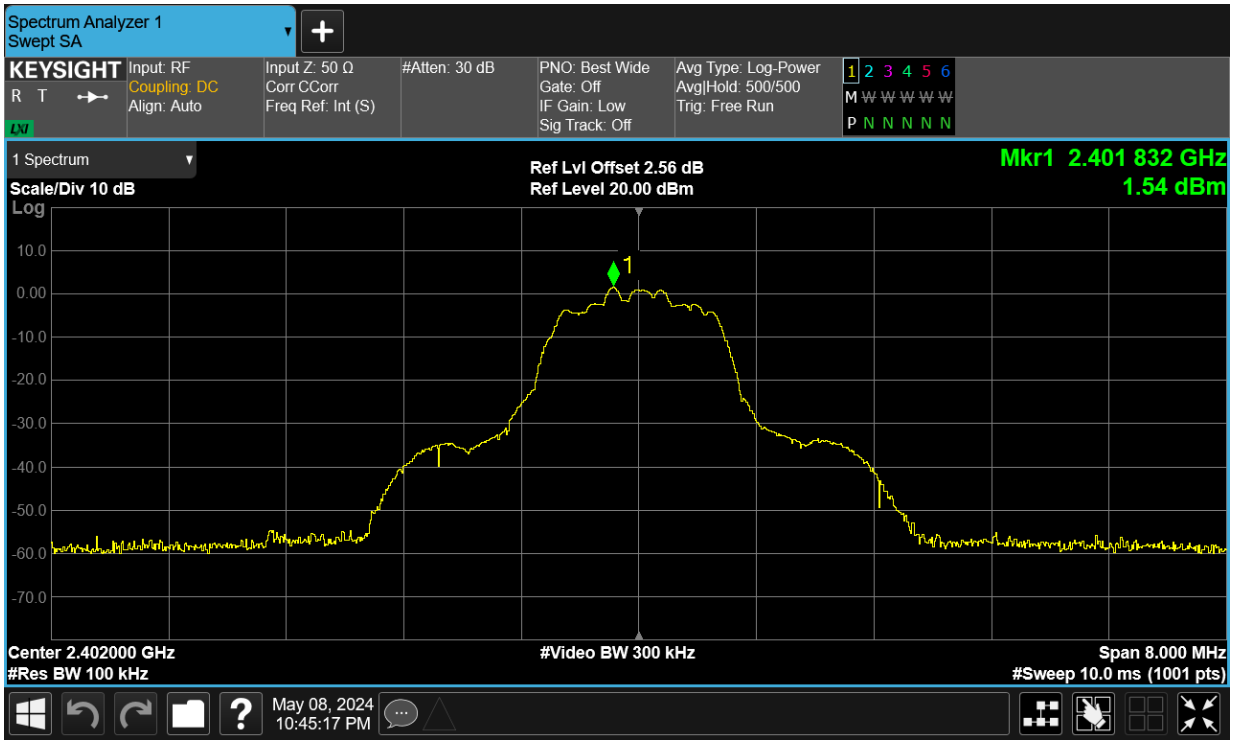
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



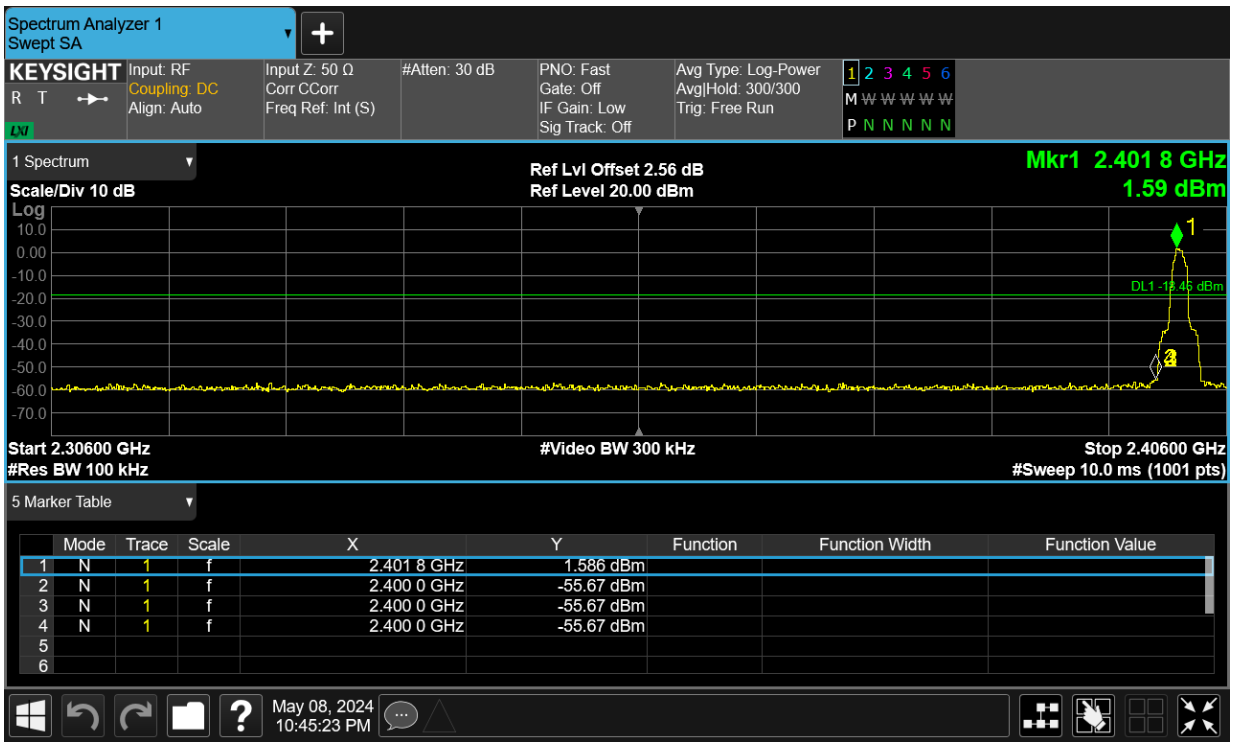
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref

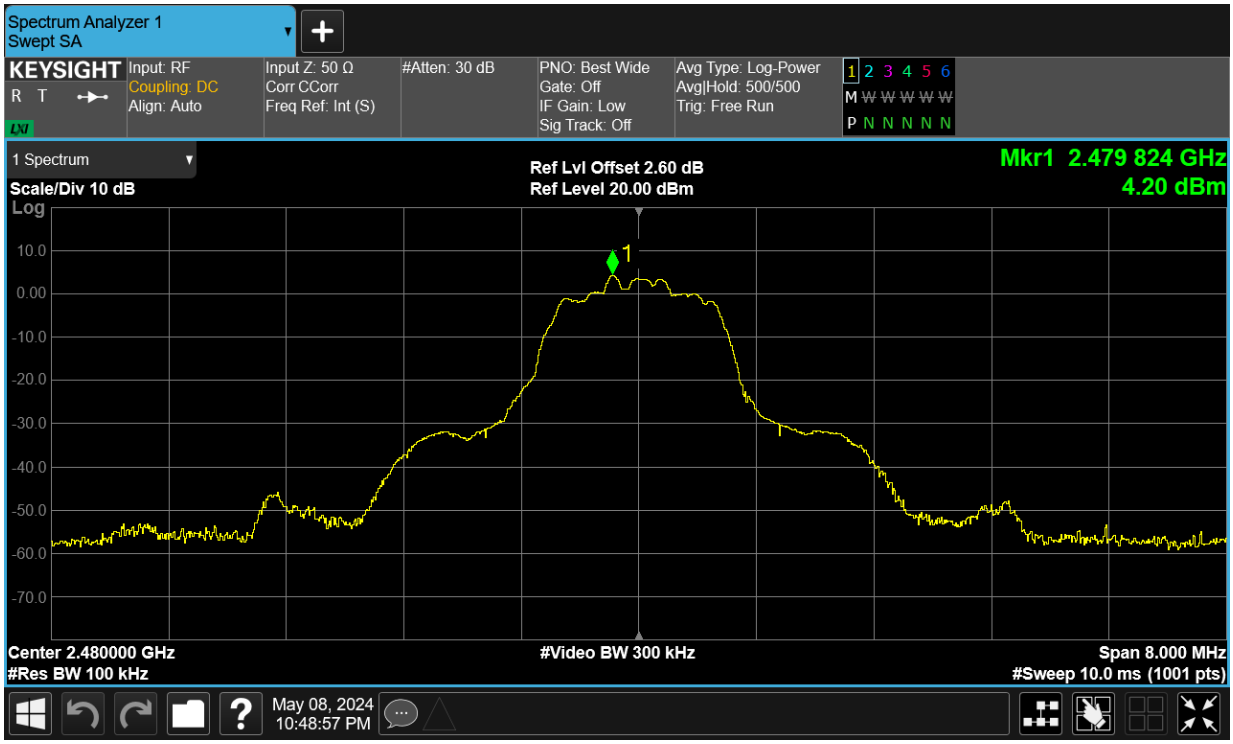


Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission

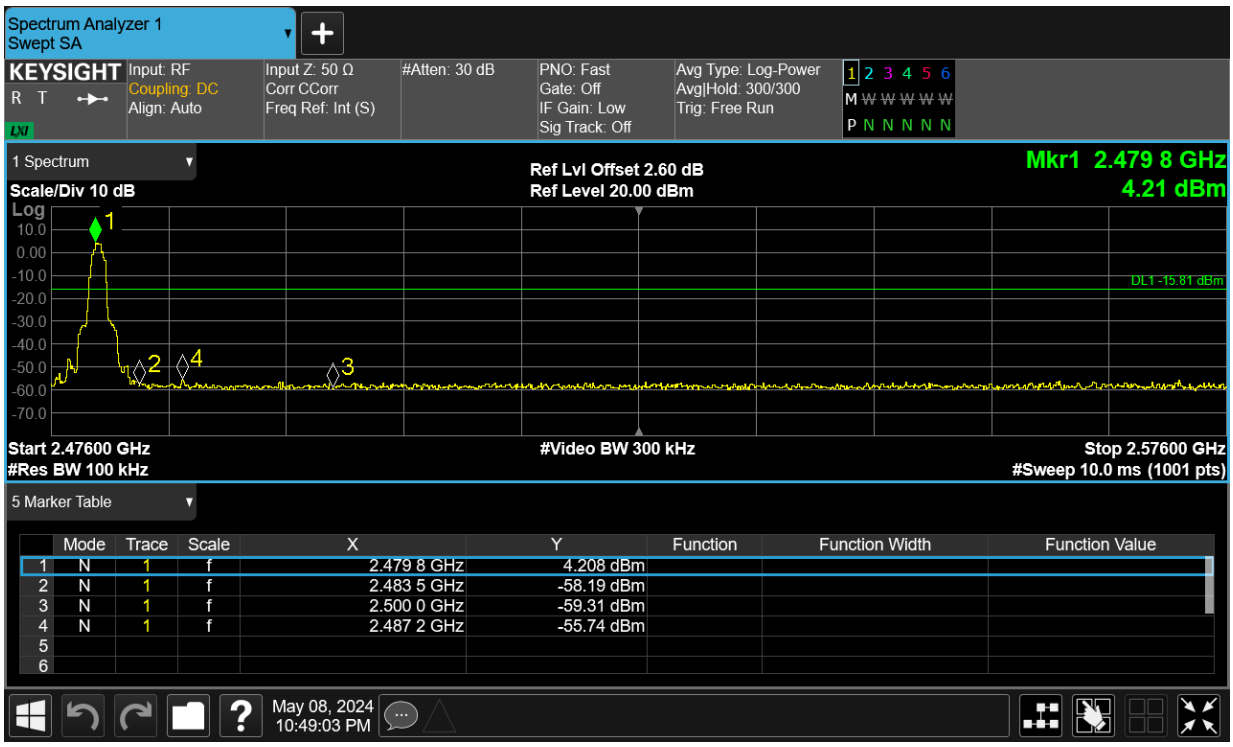


	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.401 8 GHz	1.586 dBm			
2	N	1	f	2.400 0 GHz	-55.67 dBm			
3	N	1	f	2.400 0 GHz	-55.67 dBm			
4	N	1	f	2.400 0 GHz	-55.67 dBm			
5								
6								

Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Emission

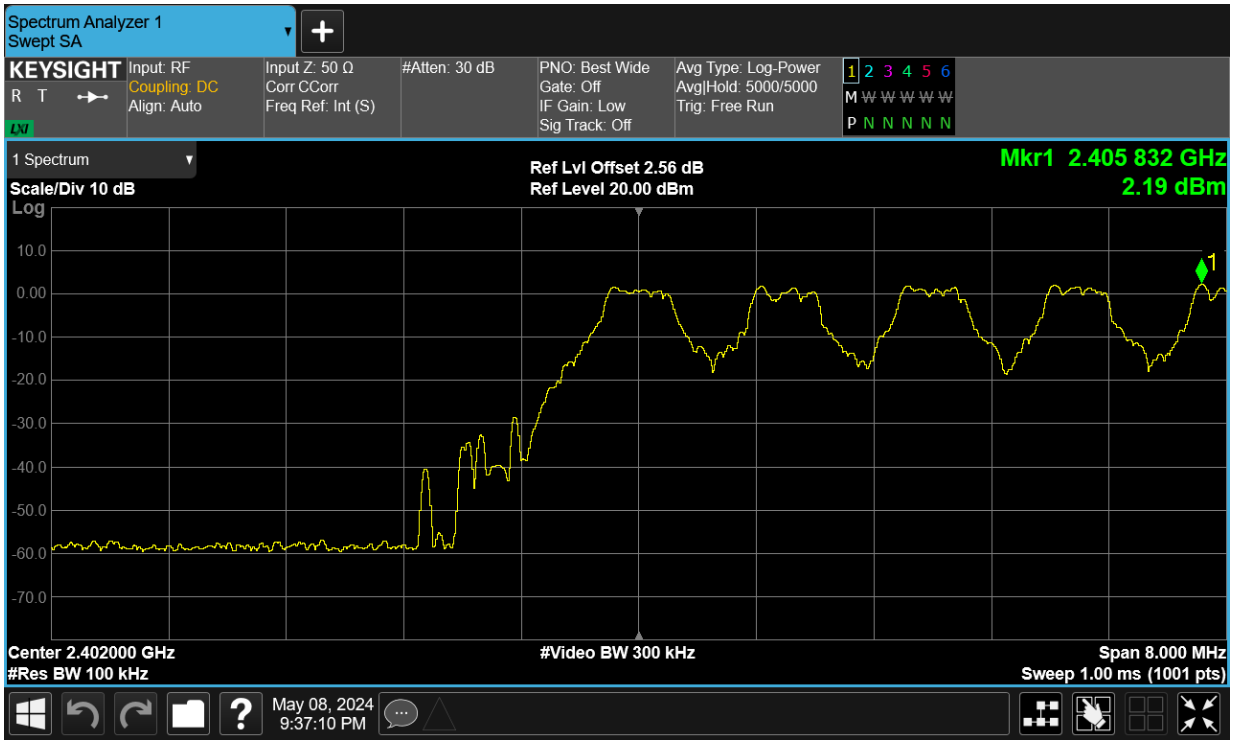


Band Edge(Hopping)

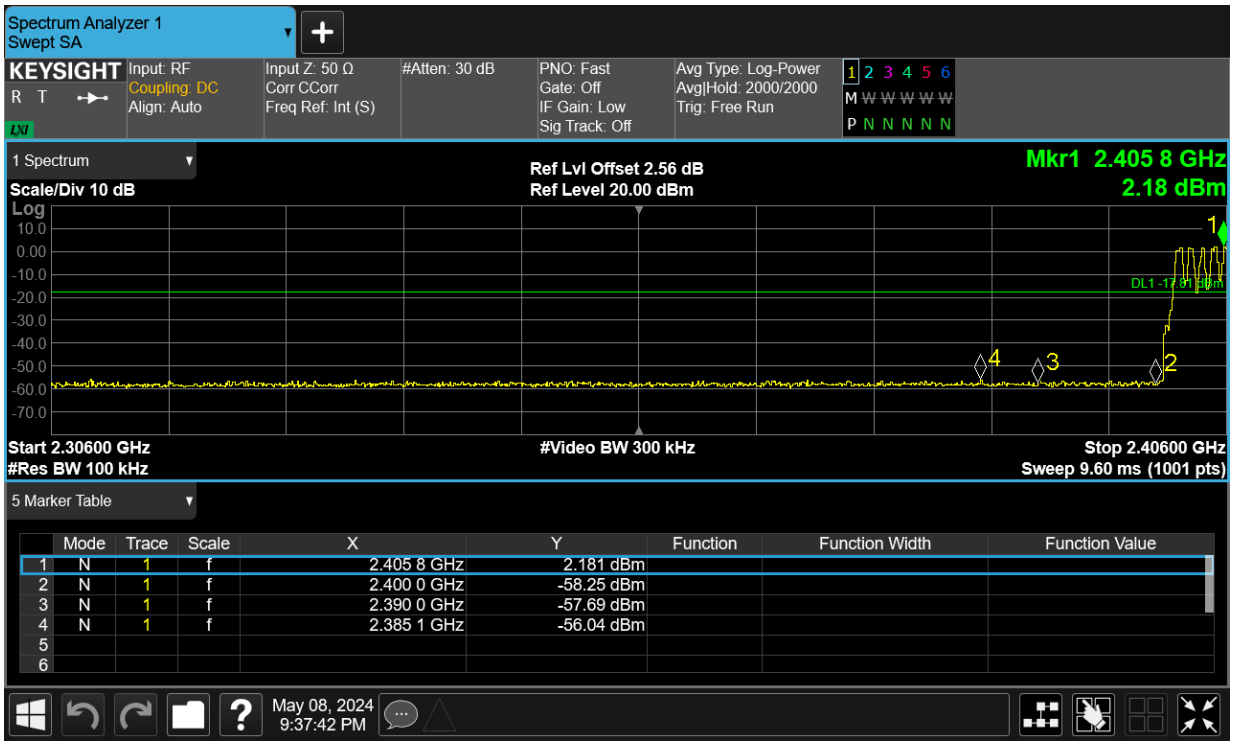
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-58.23	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-60.66	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-57.3	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-60.04	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-58.17	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-60.33	-20	Pass

Test Graphs

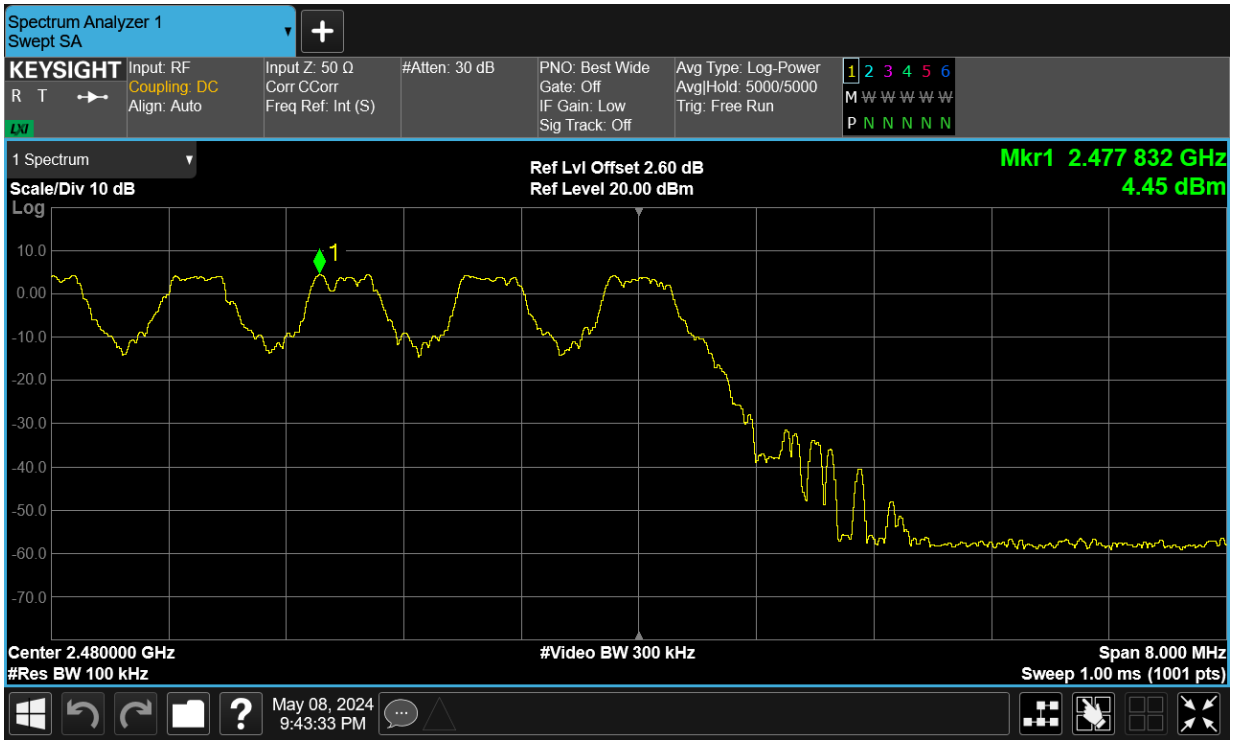
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



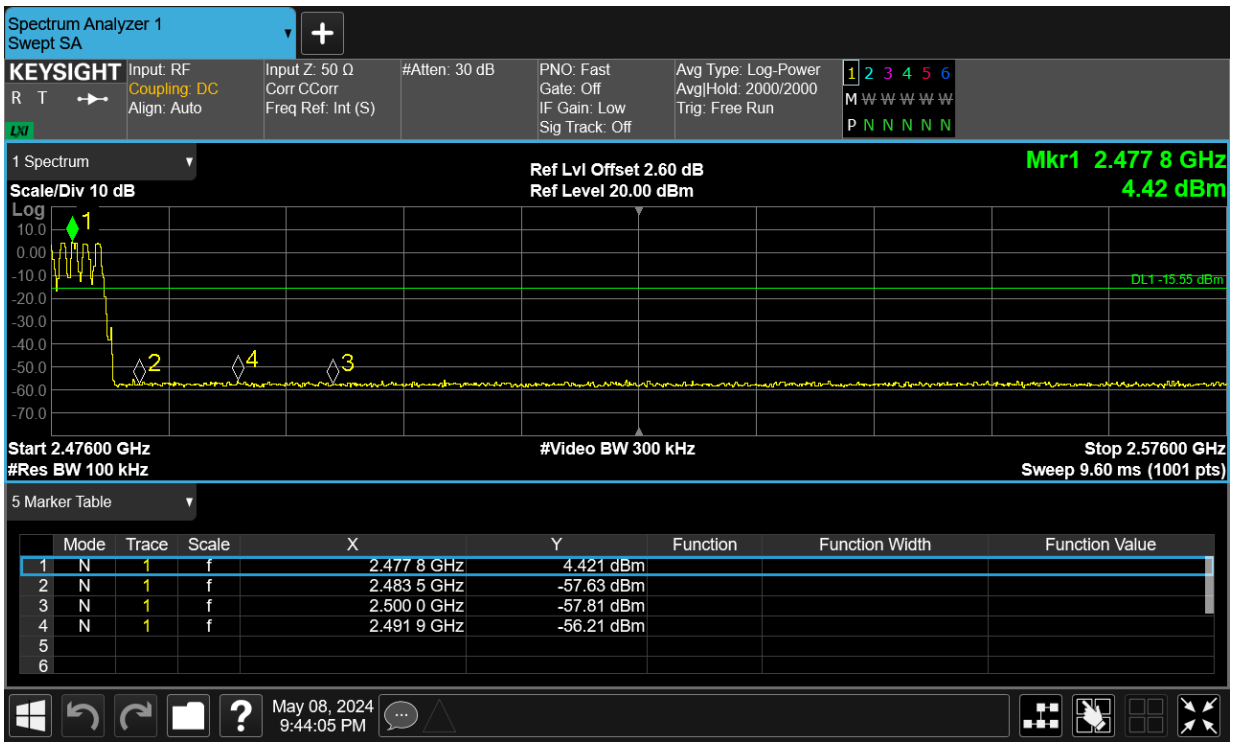
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



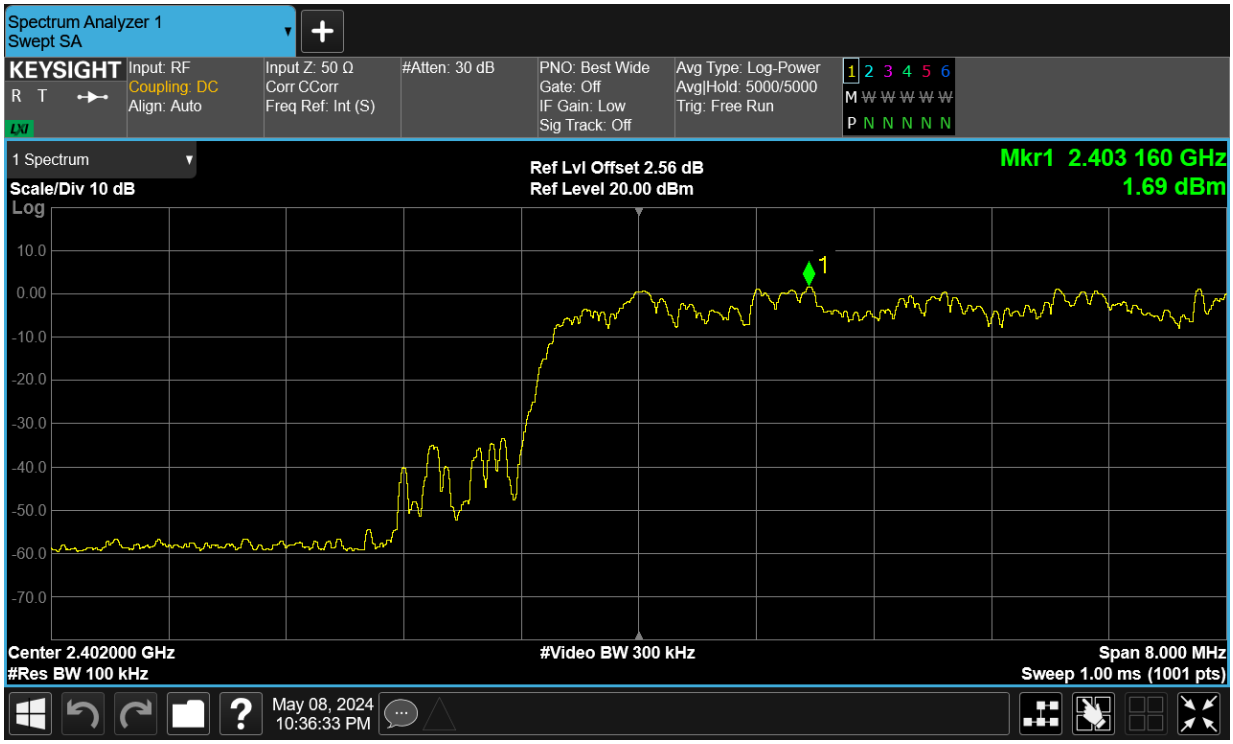
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



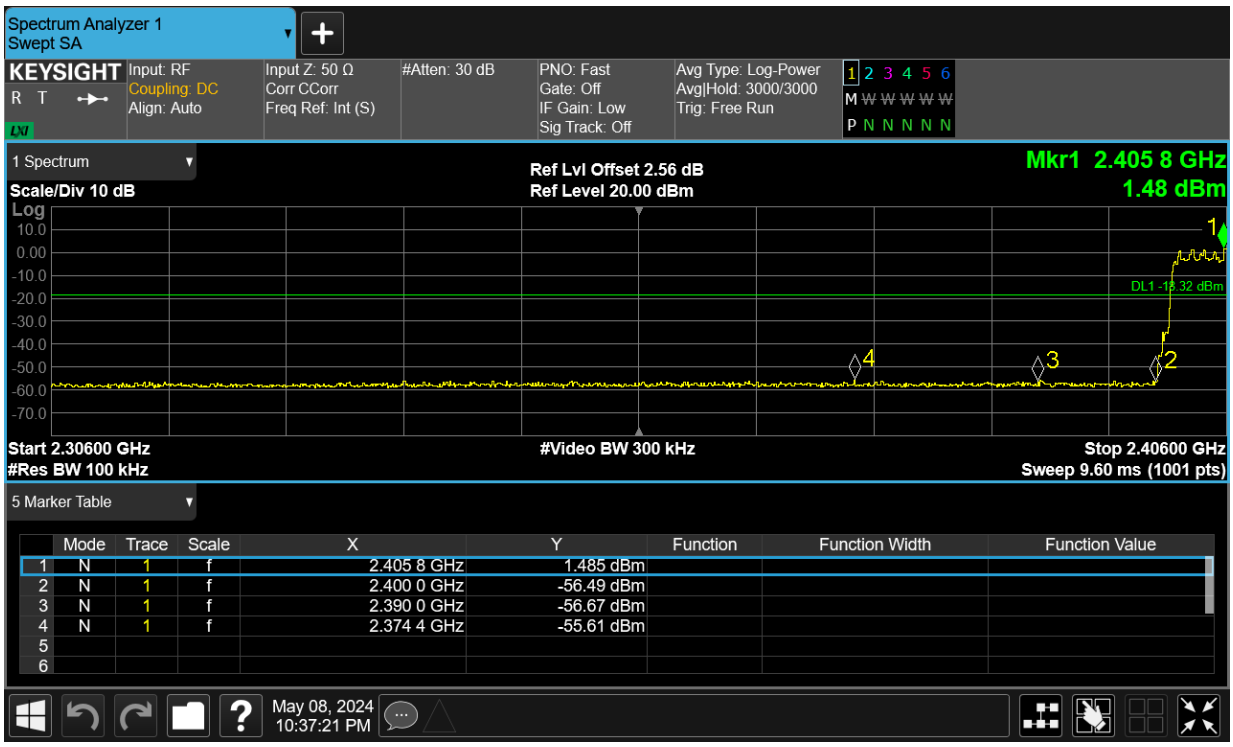
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



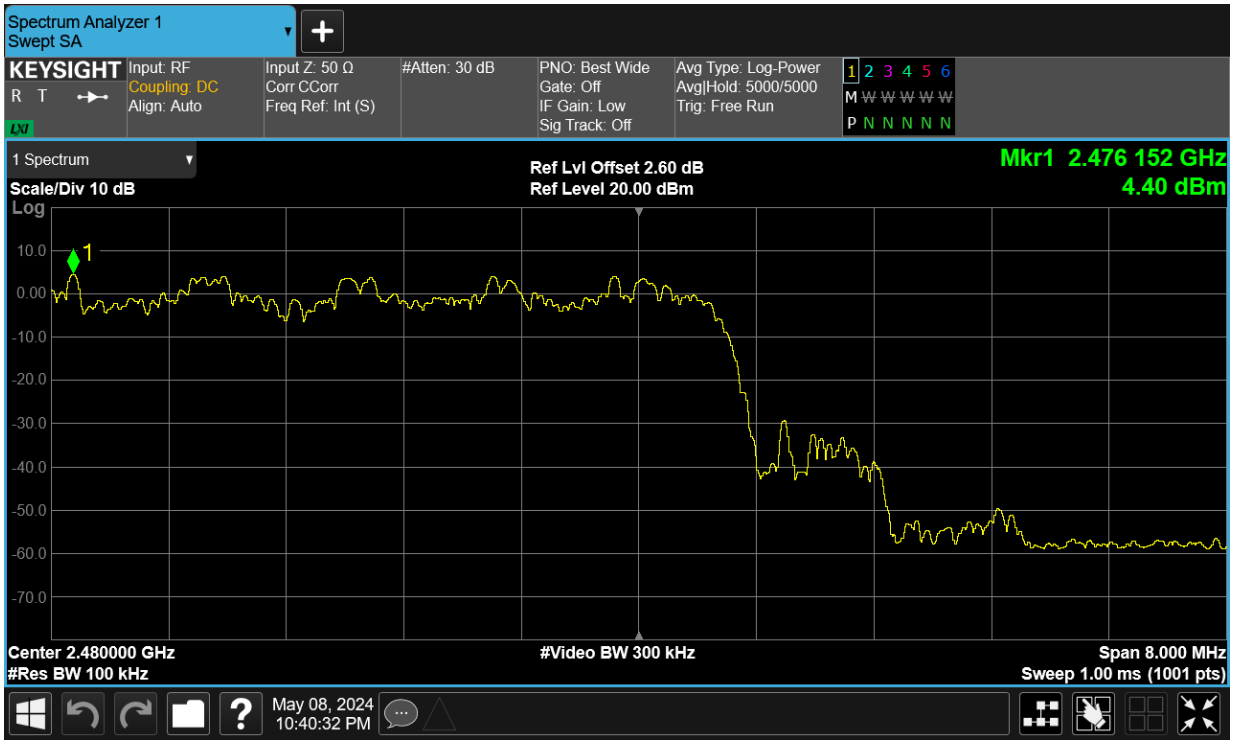
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



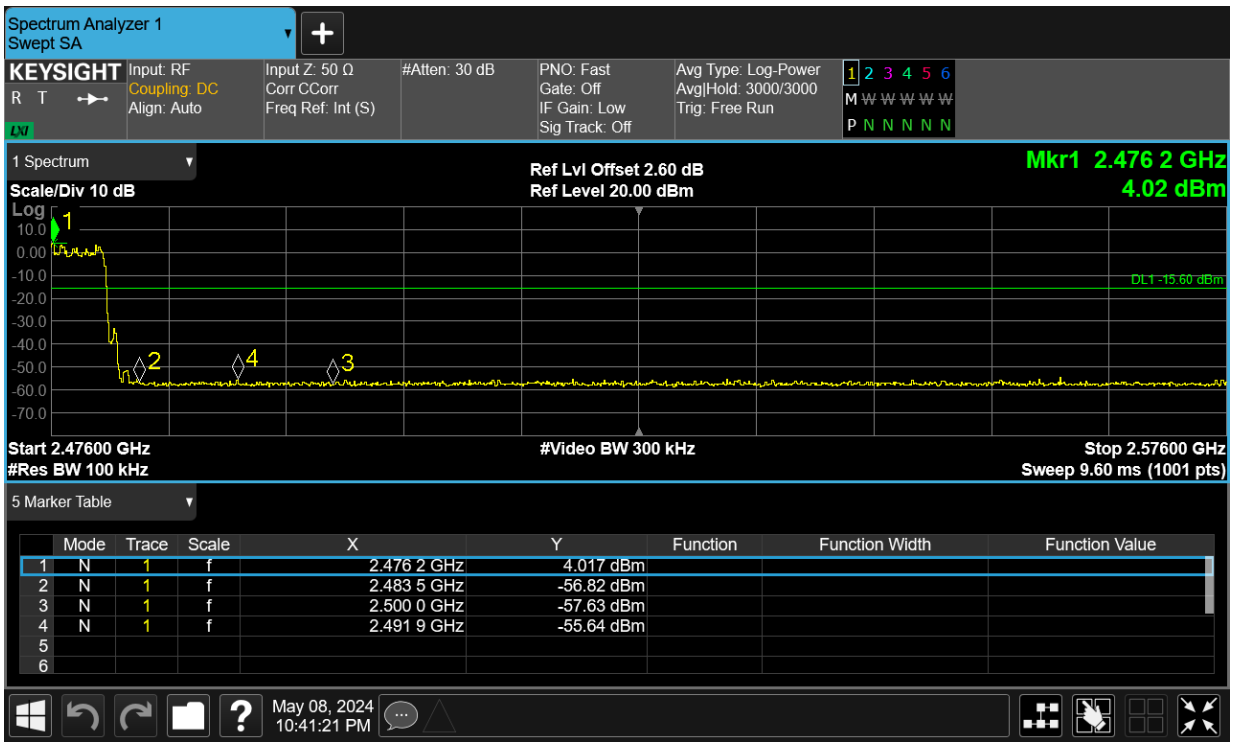
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref

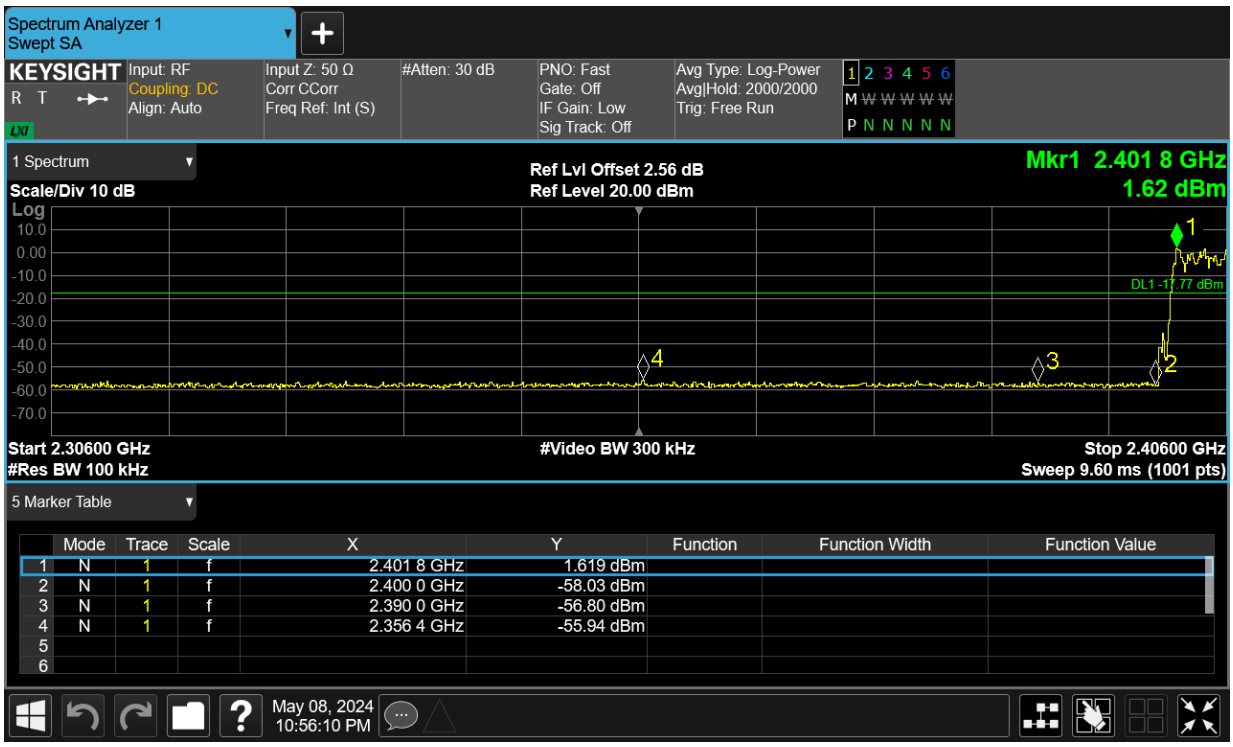


Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission

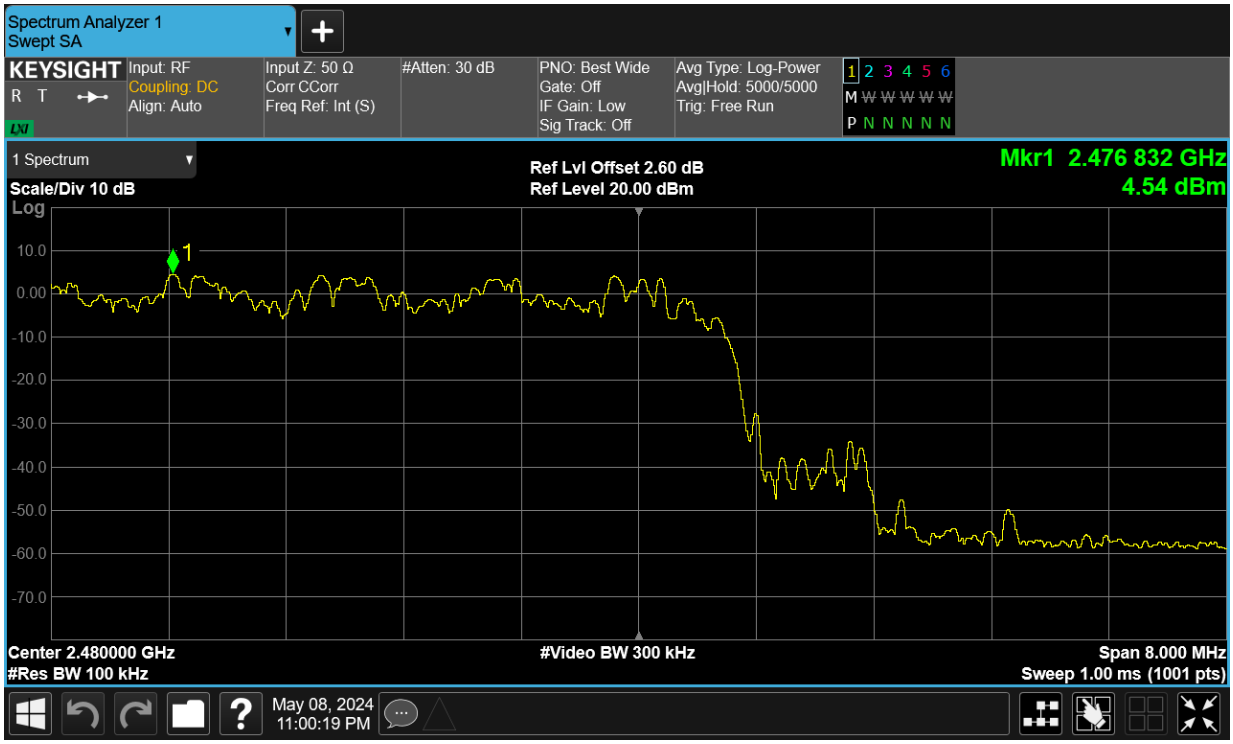


Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref

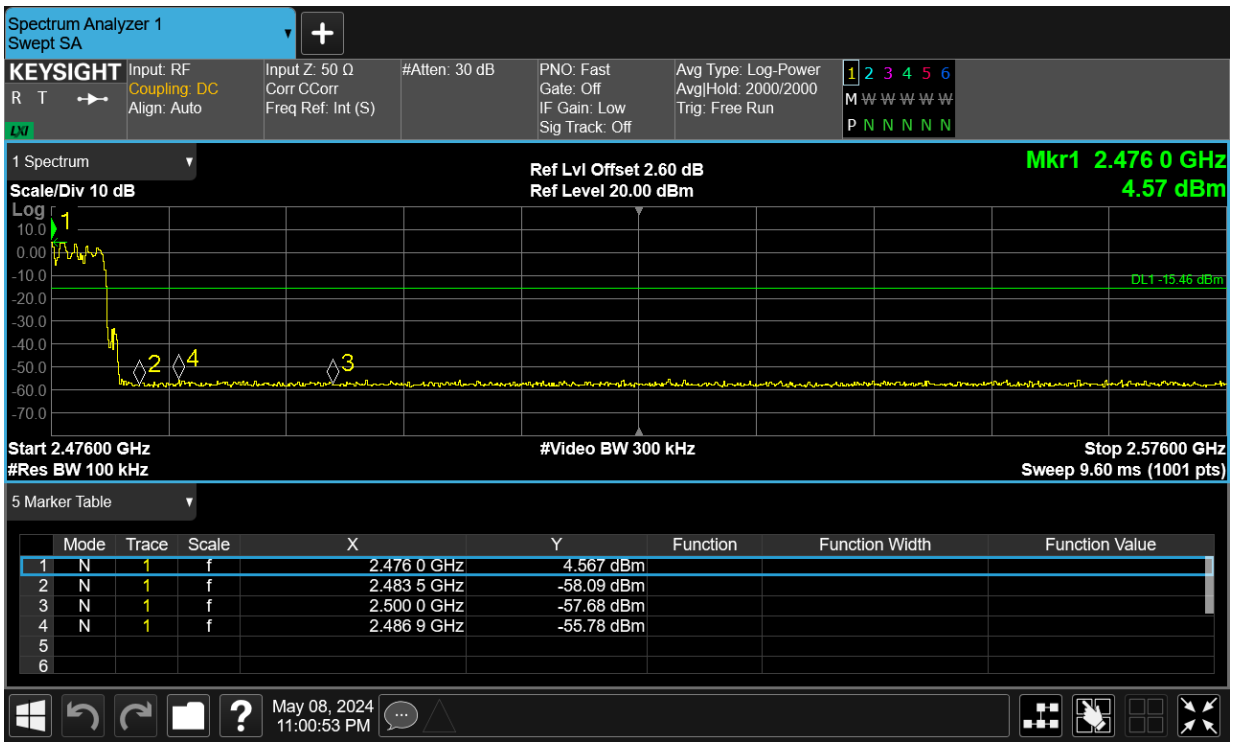
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Emission

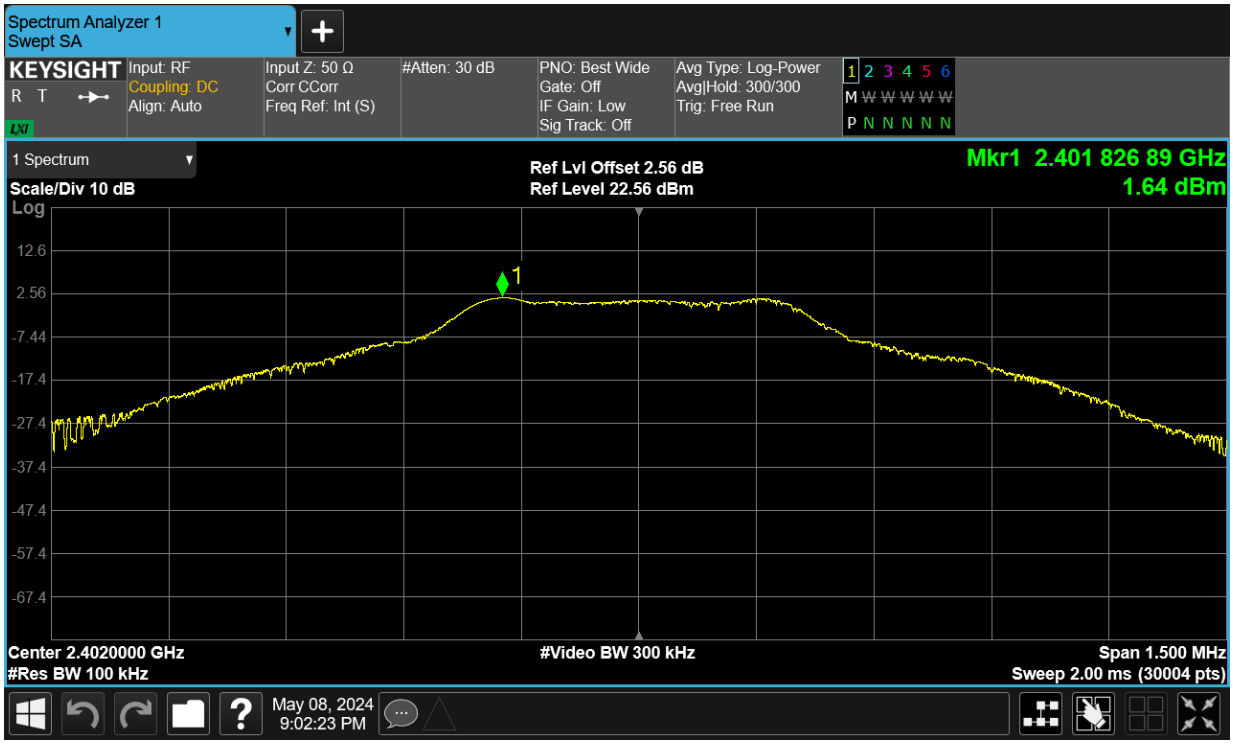


Conducted RF Spurious Emission

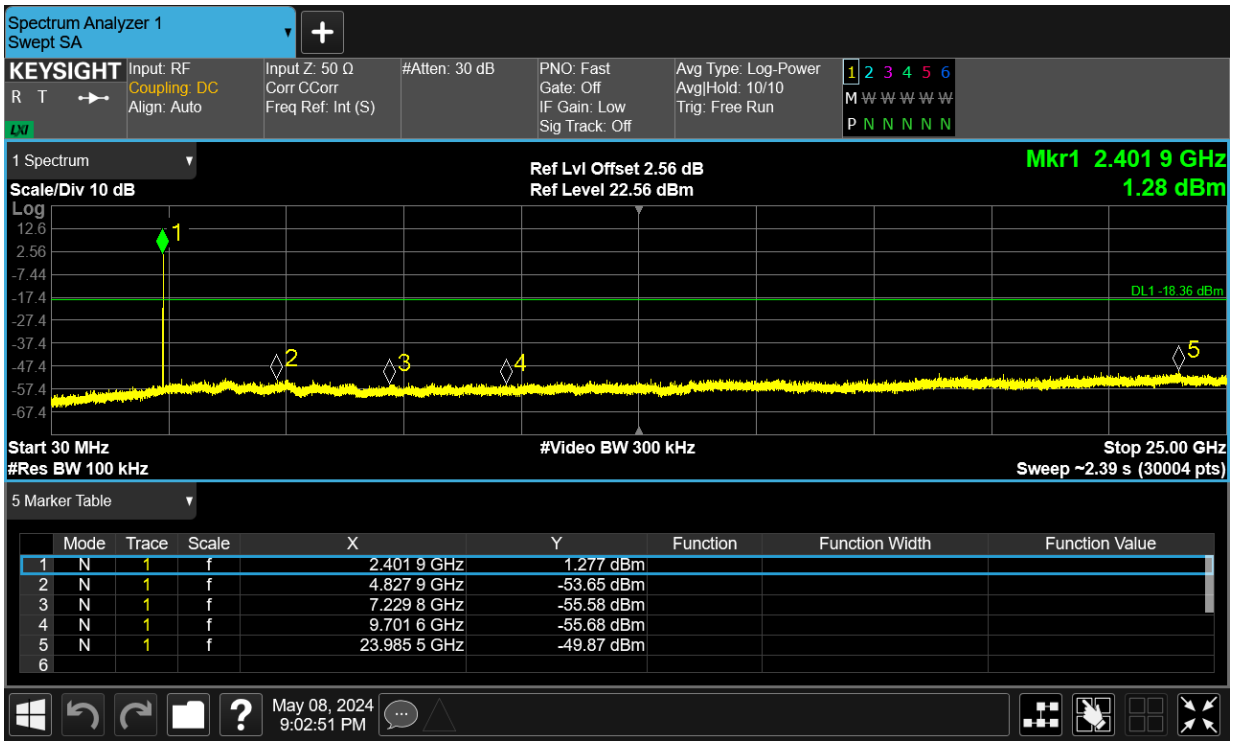
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-51.51	-20	Pass
NVNT	1-DH1	2441	Ant1	-54.25	-20	Pass
NVNT	1-DH1	2480	Ant1	-54.3	-20	Pass
NVNT	2-DH1	2402	Ant1	-50.15	-20	Pass
NVNT	2-DH1	2441	Ant1	-52.95	-20	Pass
NVNT	2-DH1	2480	Ant1	-53.6	-20	Pass
NVNT	3-DH1	2402	Ant1	-51.09	-20	Pass
NVNT	3-DH1	2441	Ant1	-54.32	-20	Pass
NVNT	3-DH1	2480	Ant1	-53.73	-20	Pass

Test Graphs

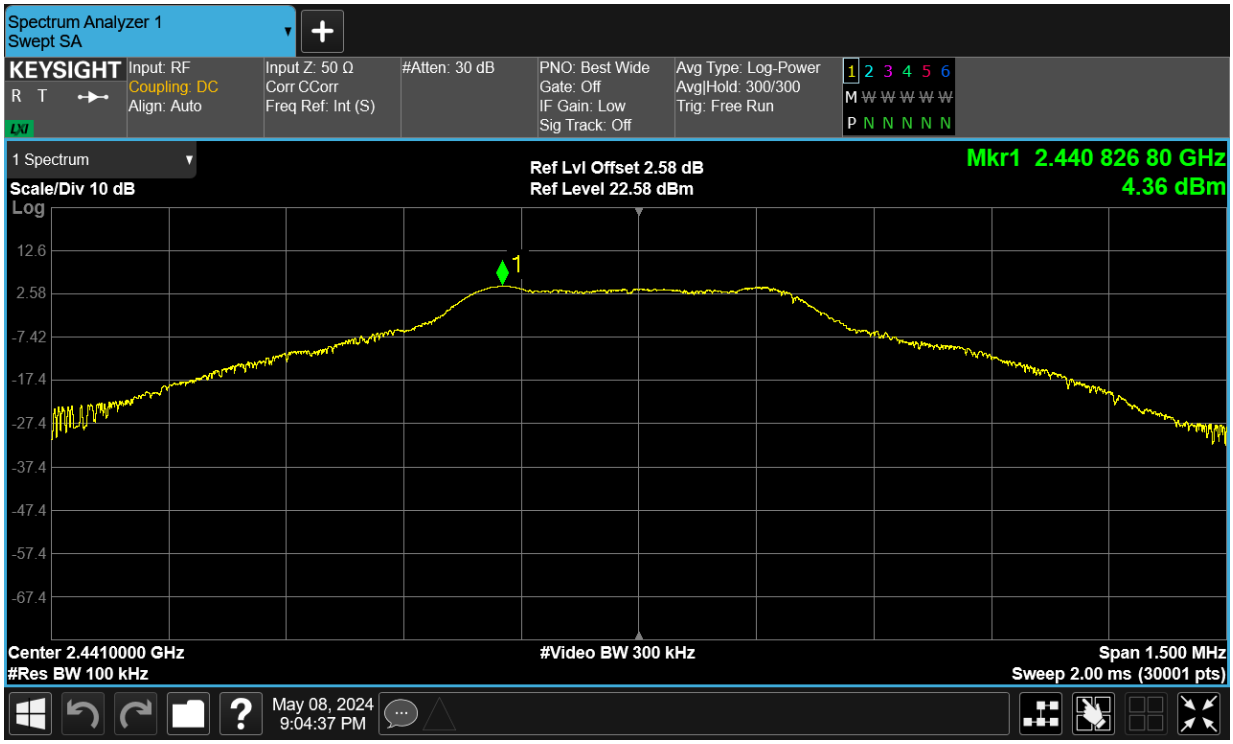
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



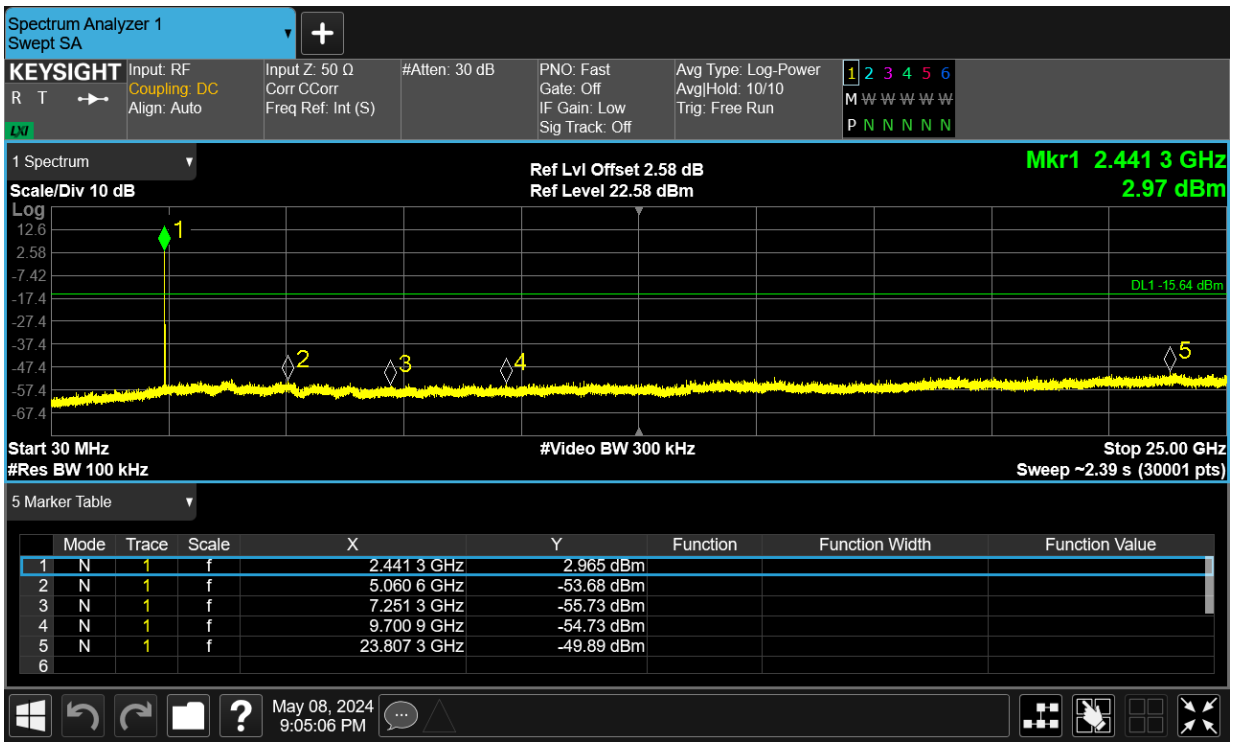
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



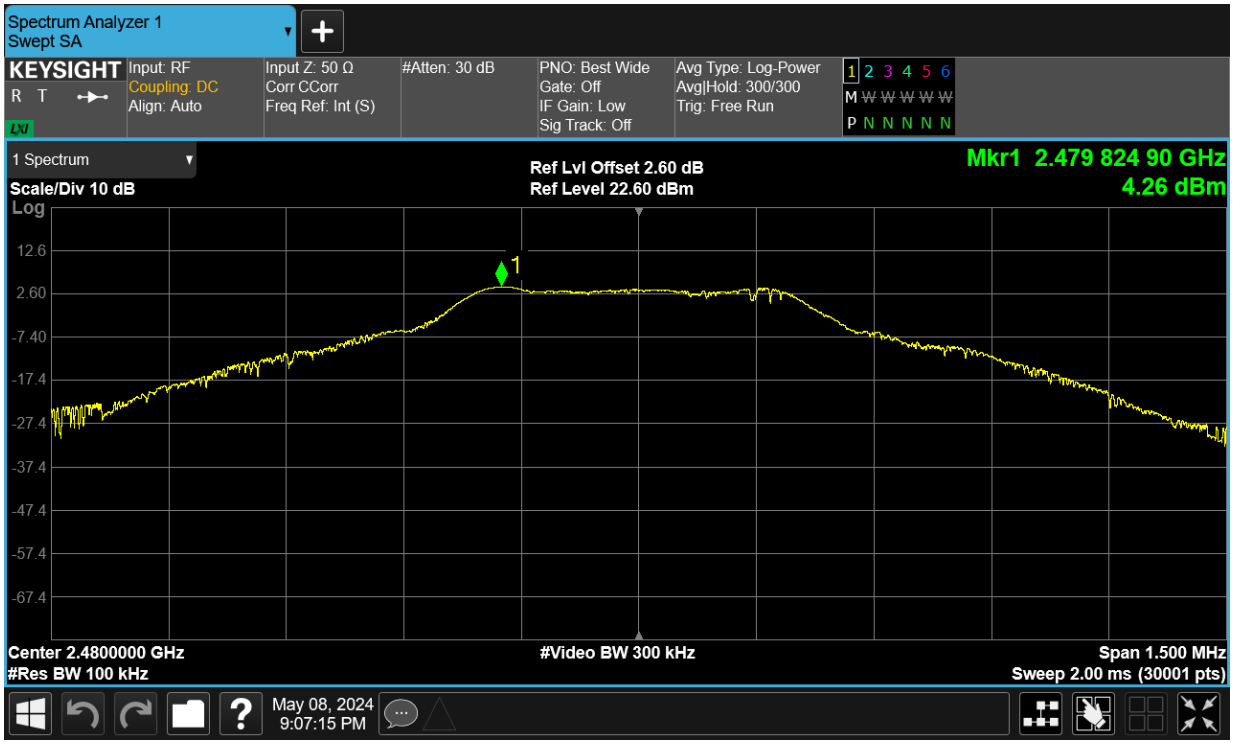
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



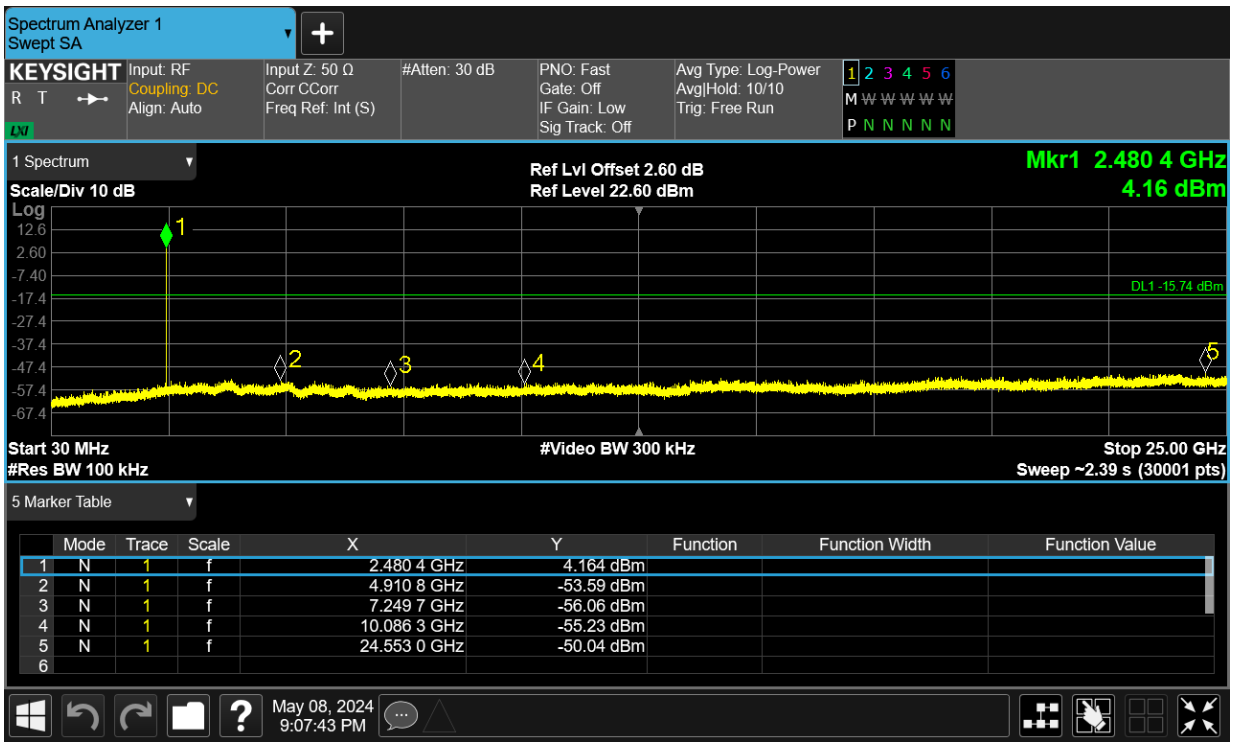
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



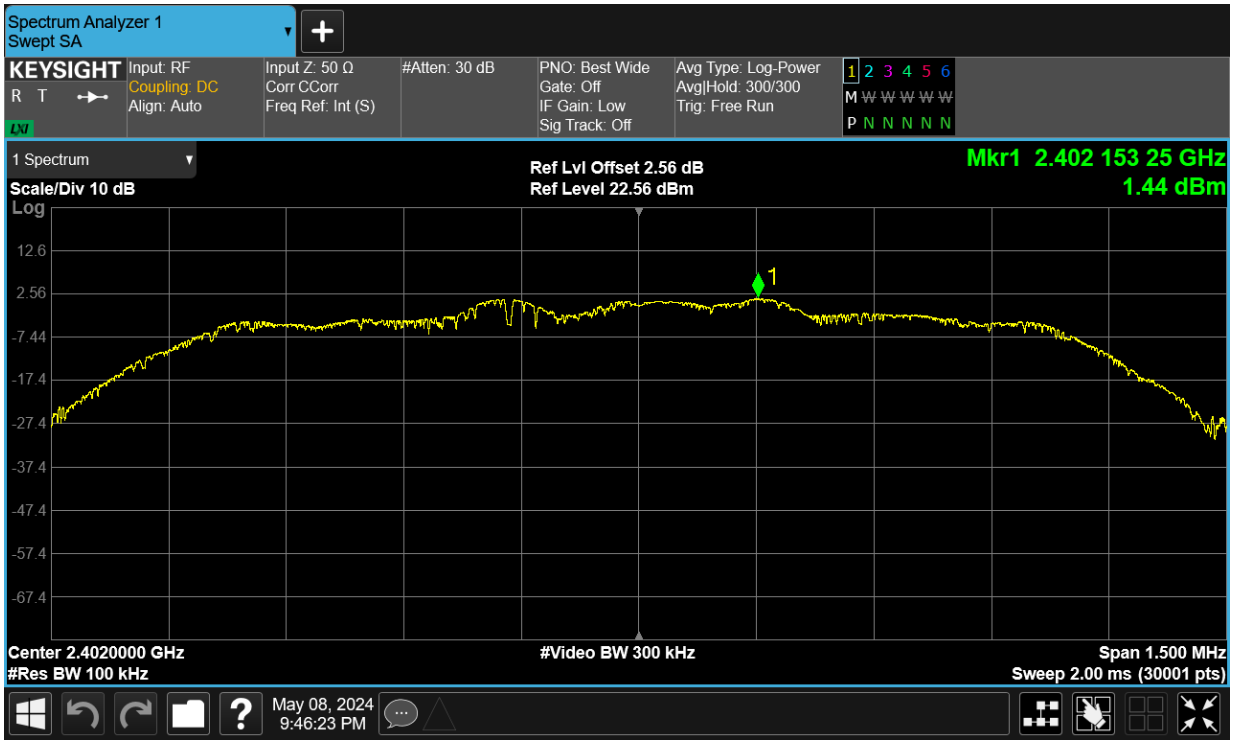
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



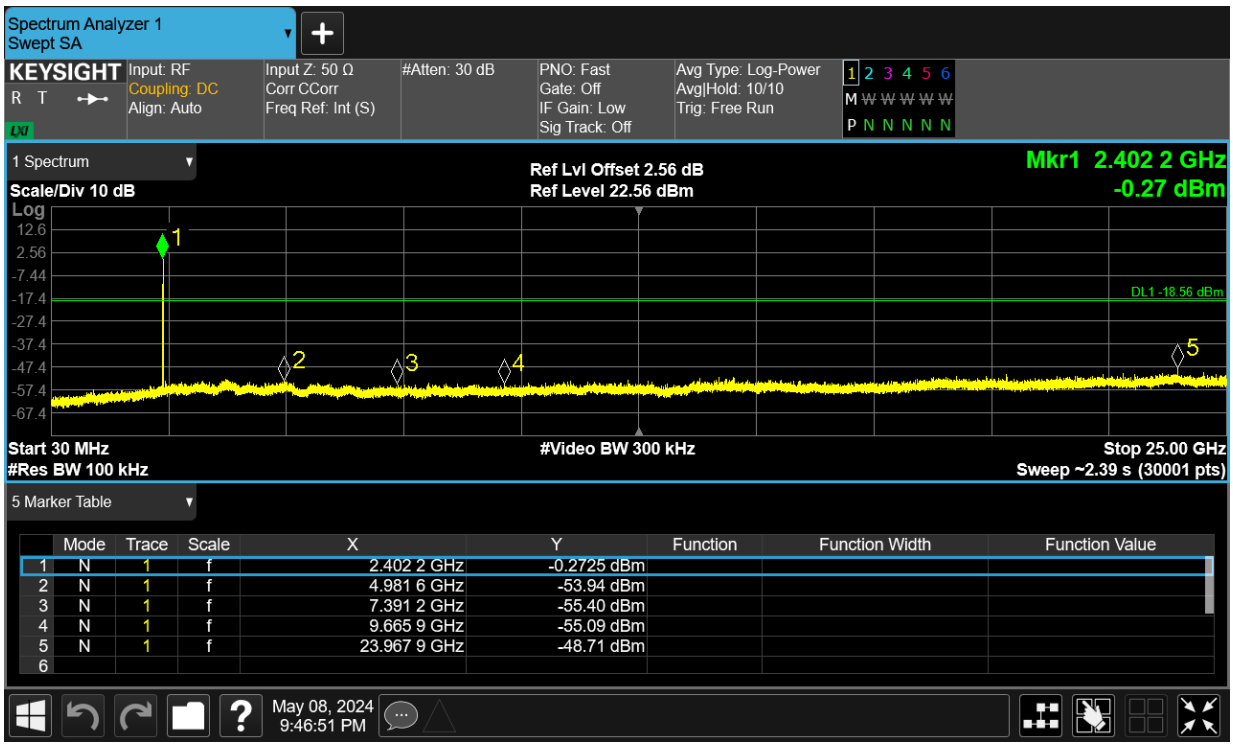
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



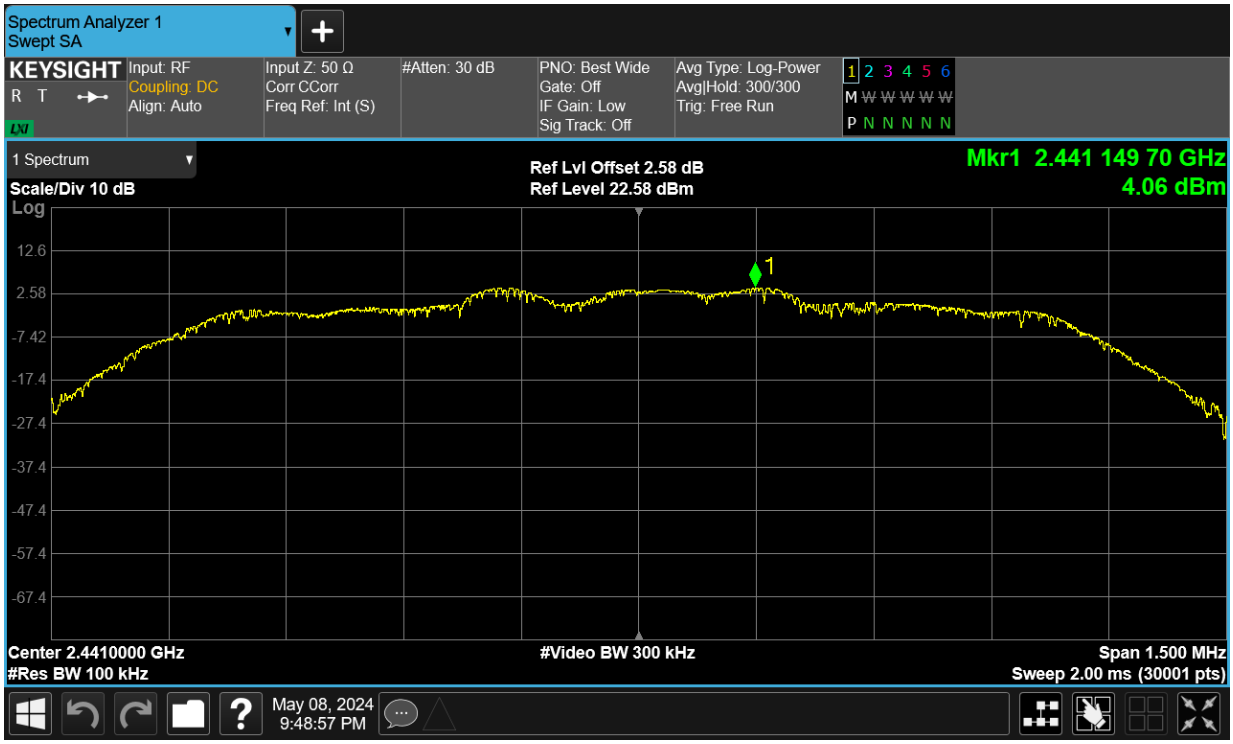
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



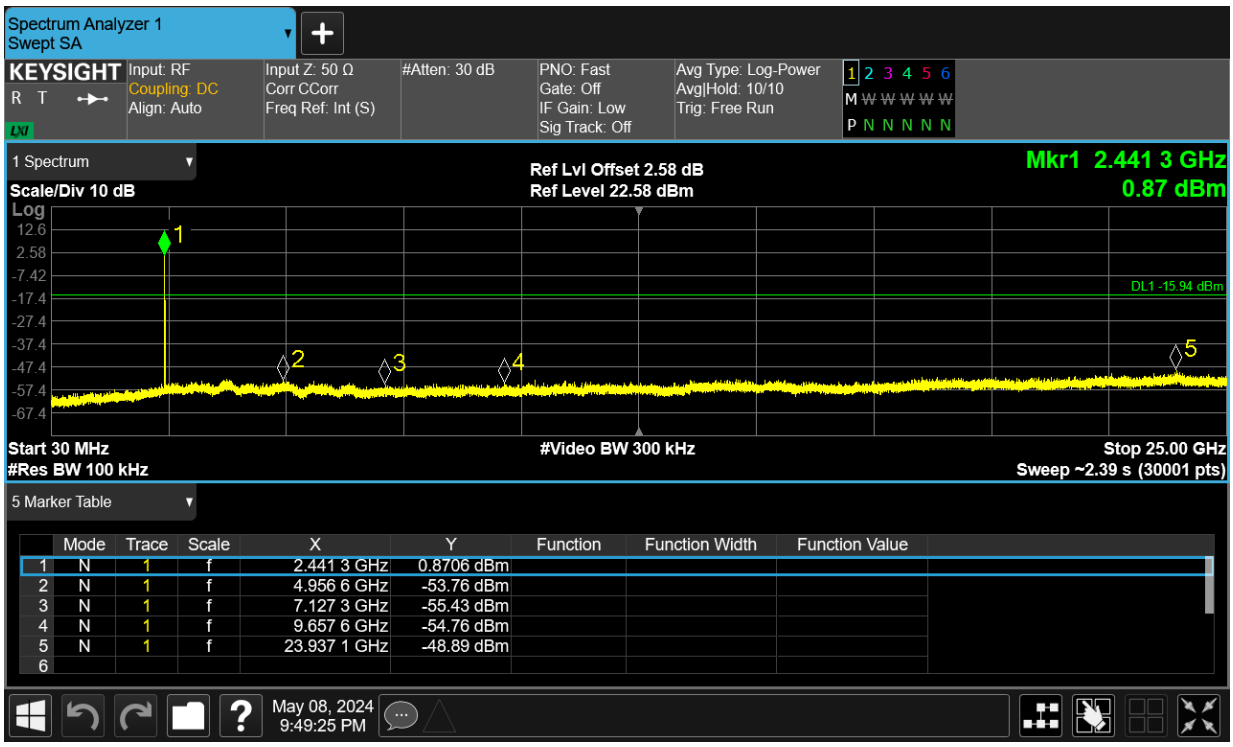
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



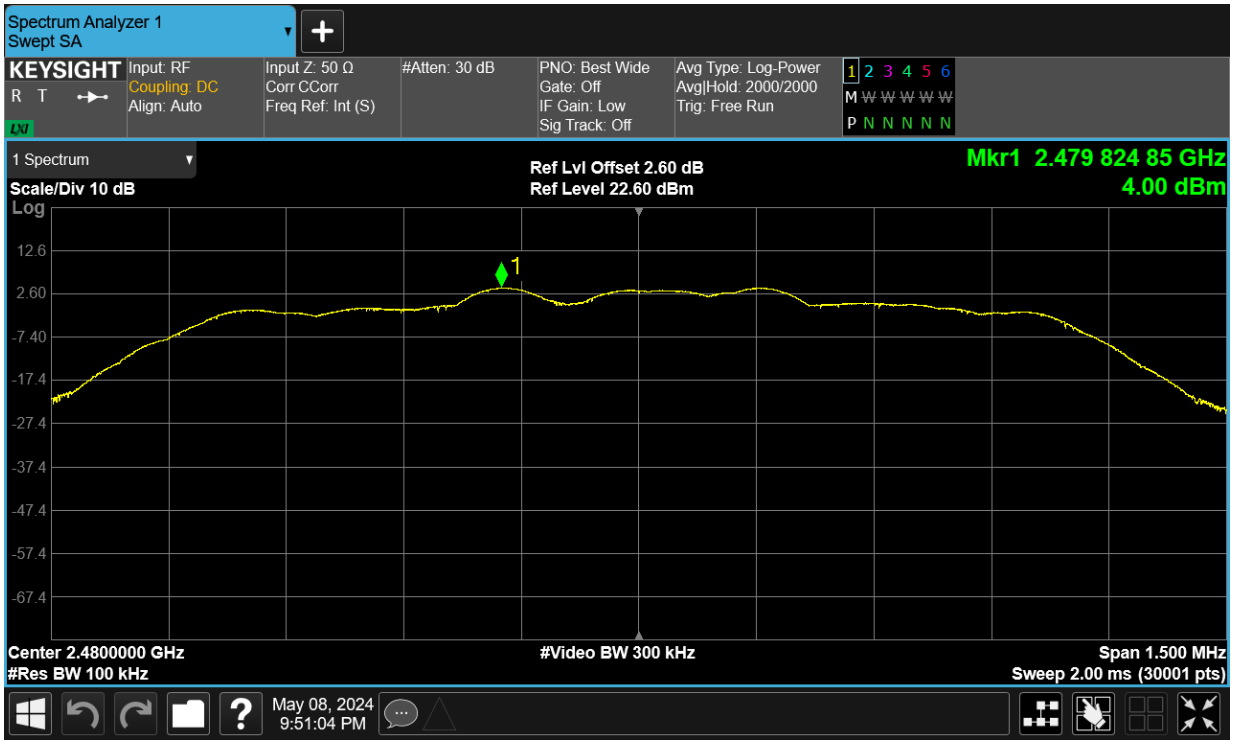
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



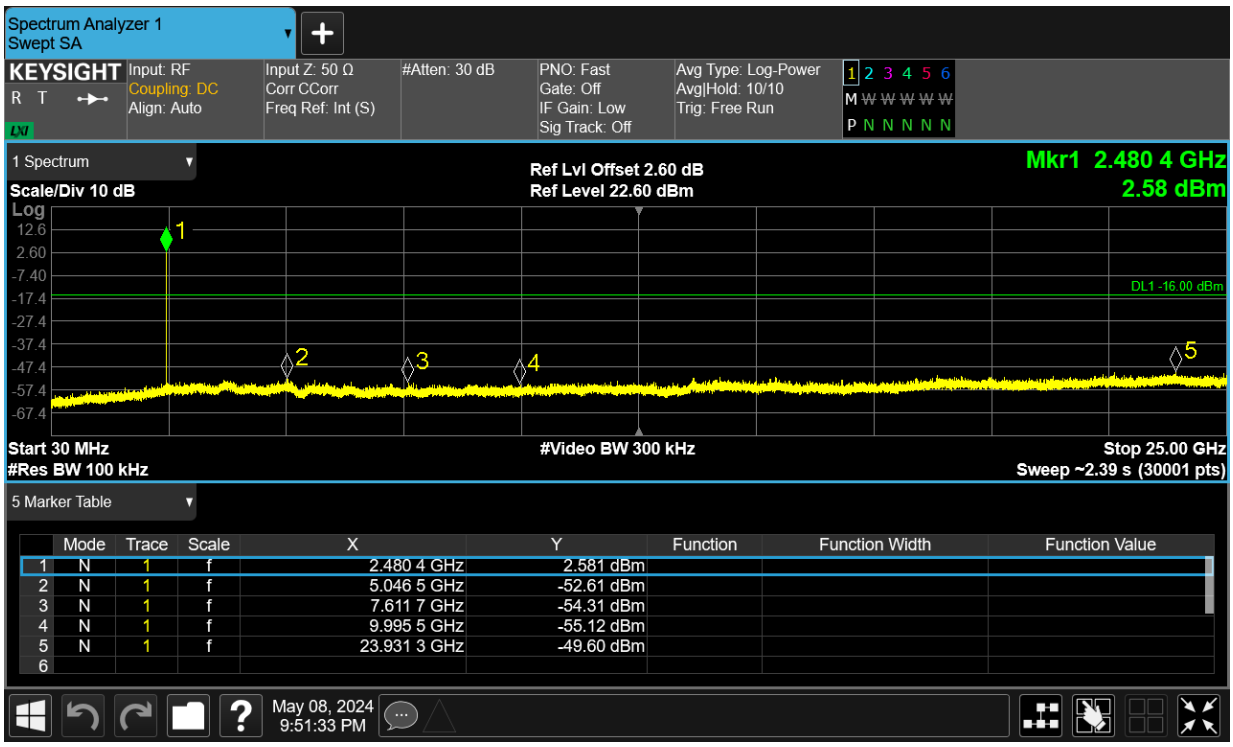
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



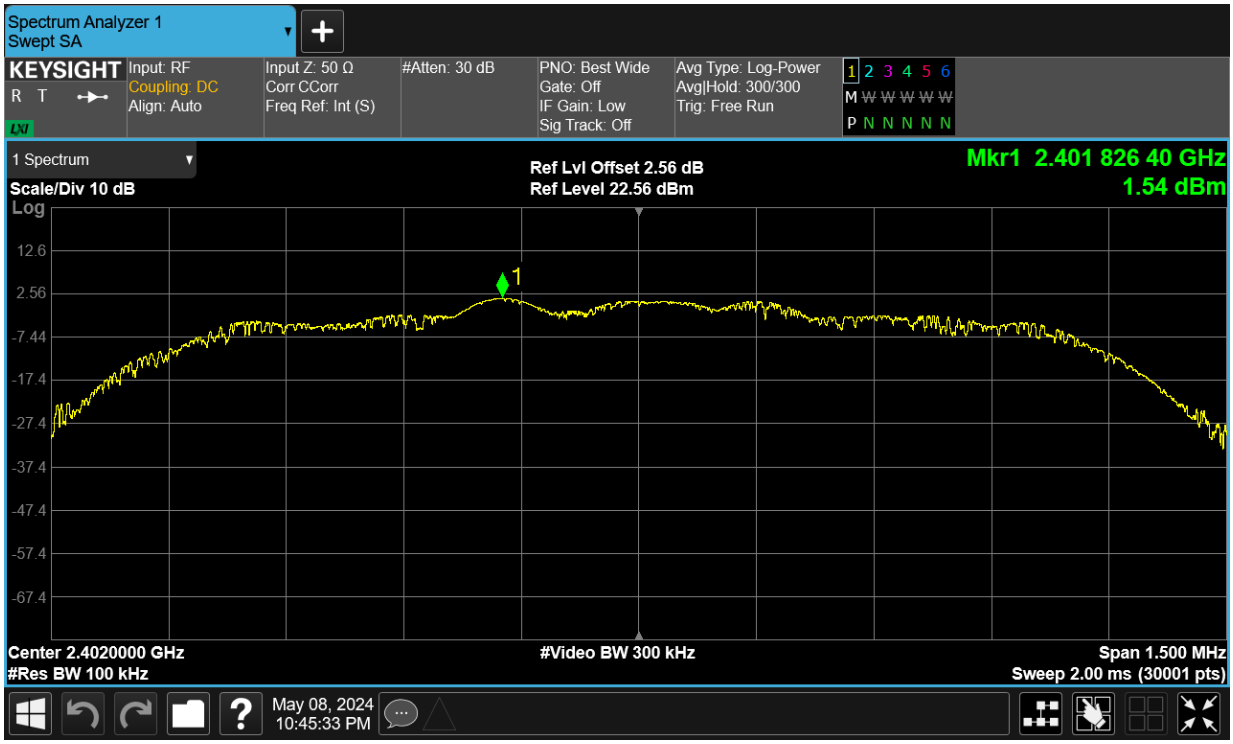
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



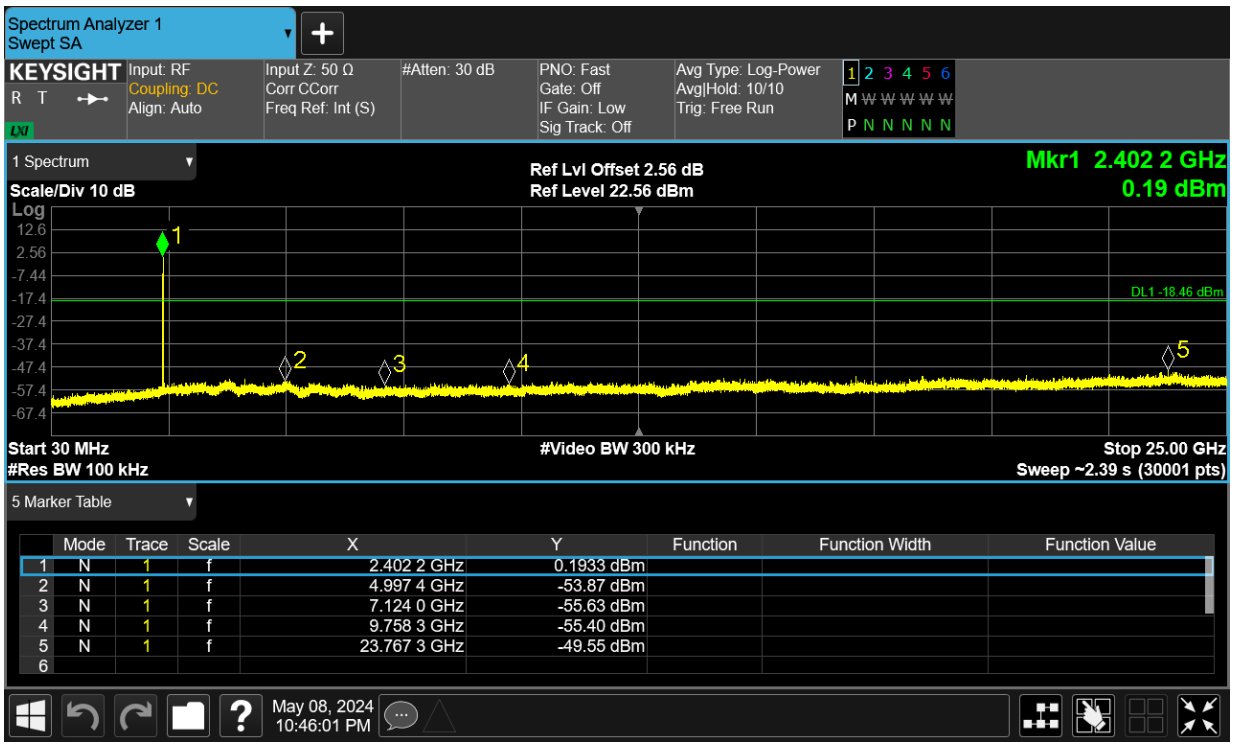
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



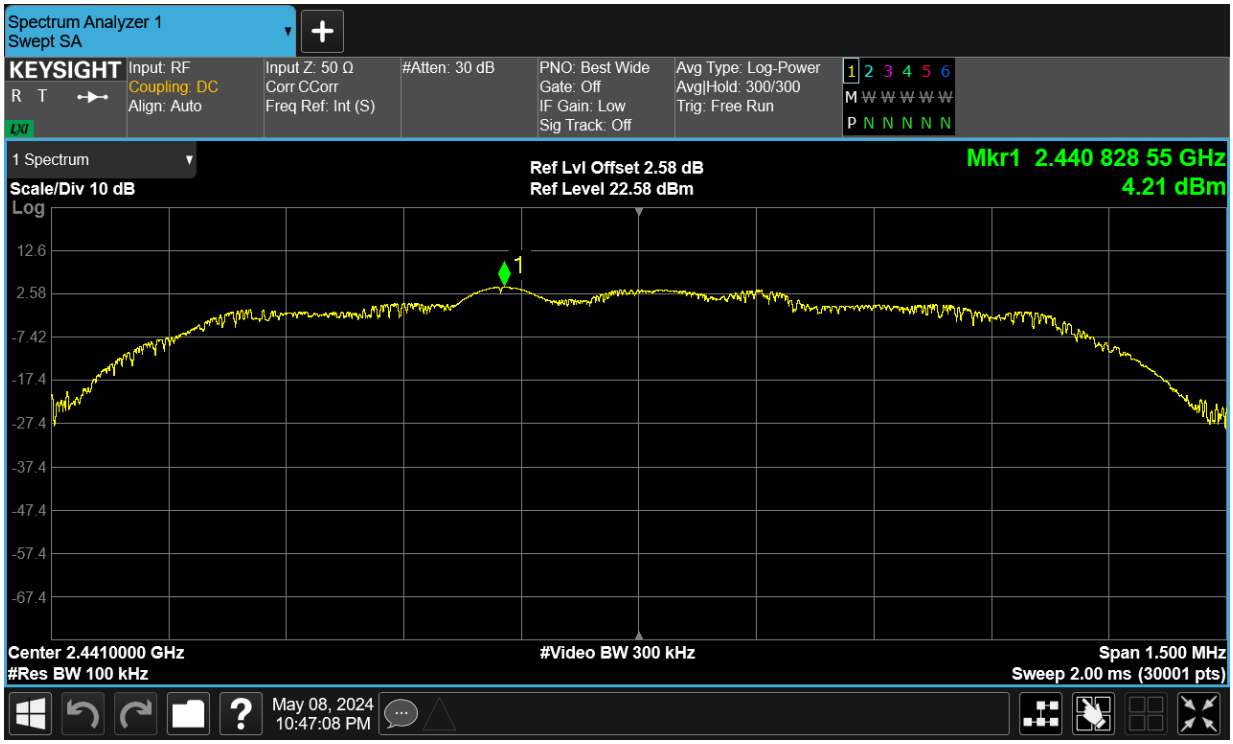
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



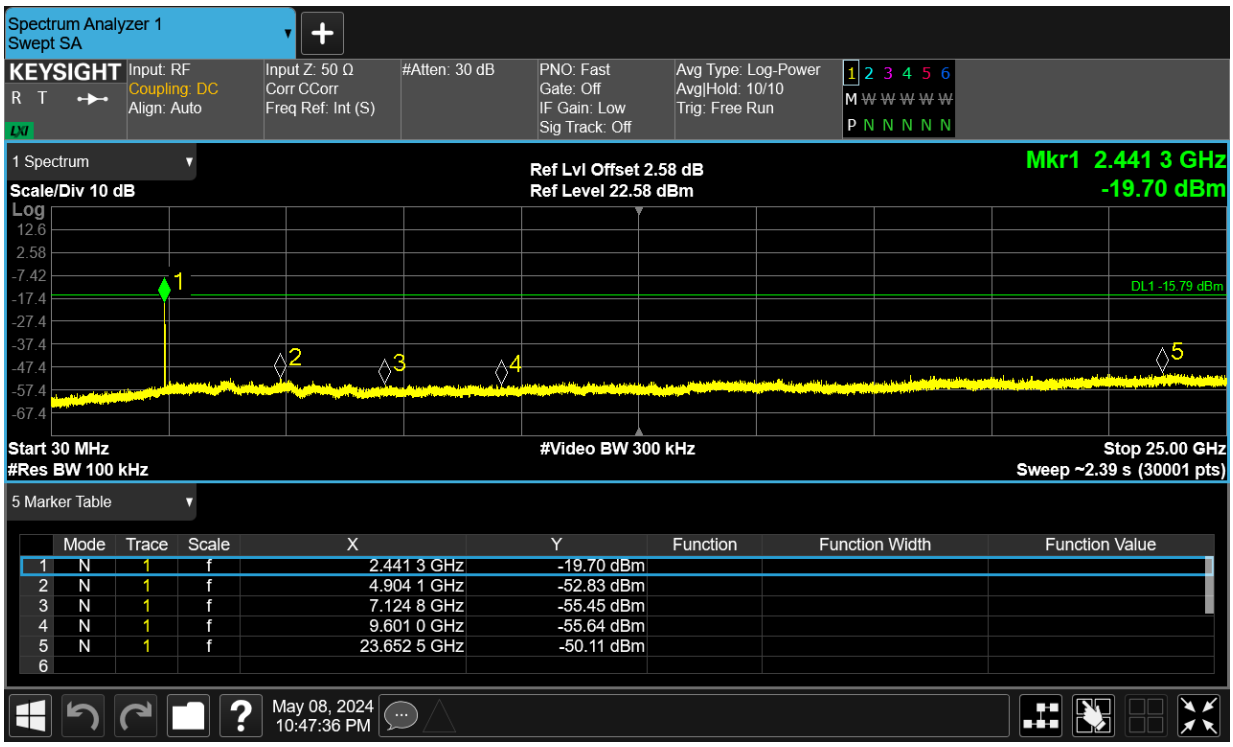
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



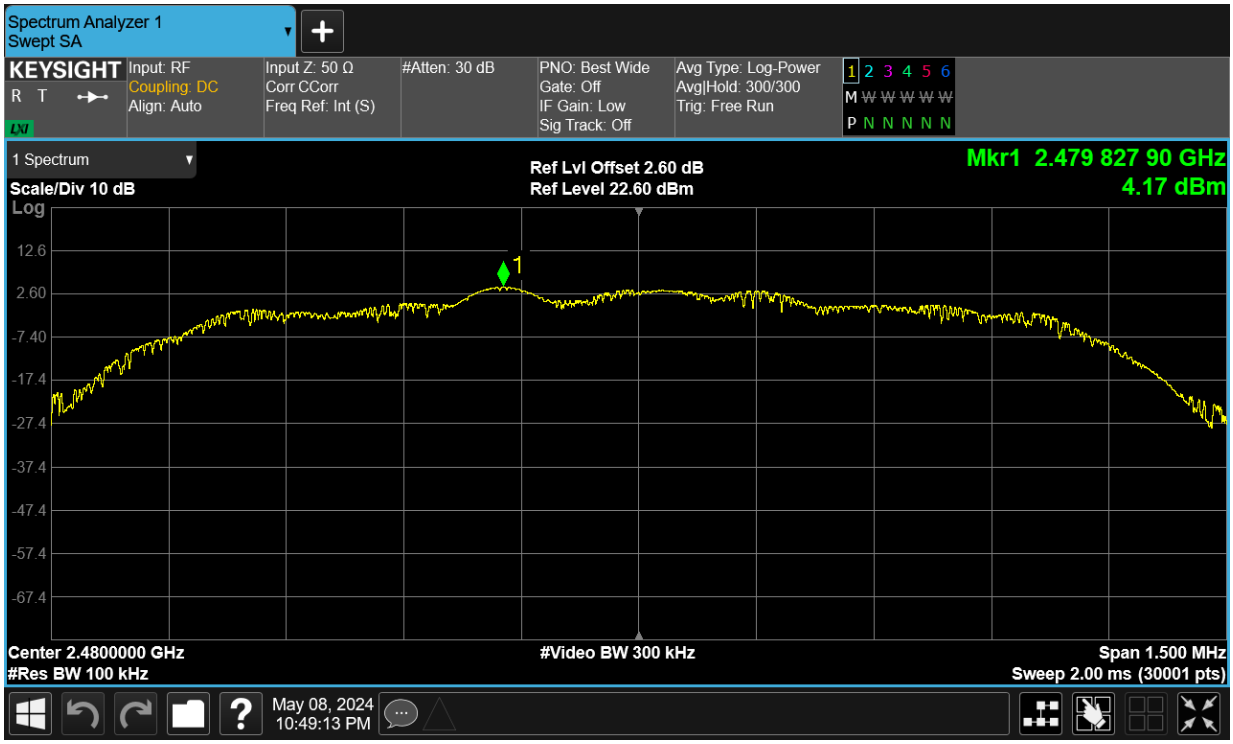
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



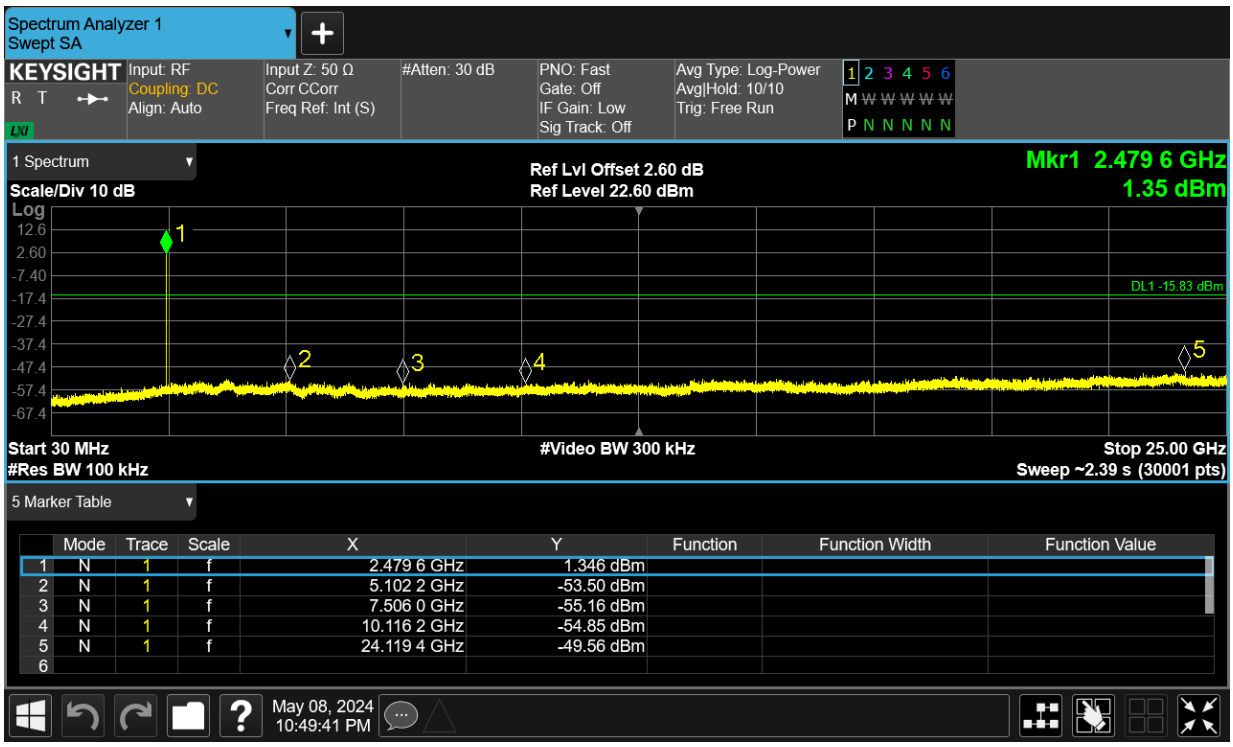
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

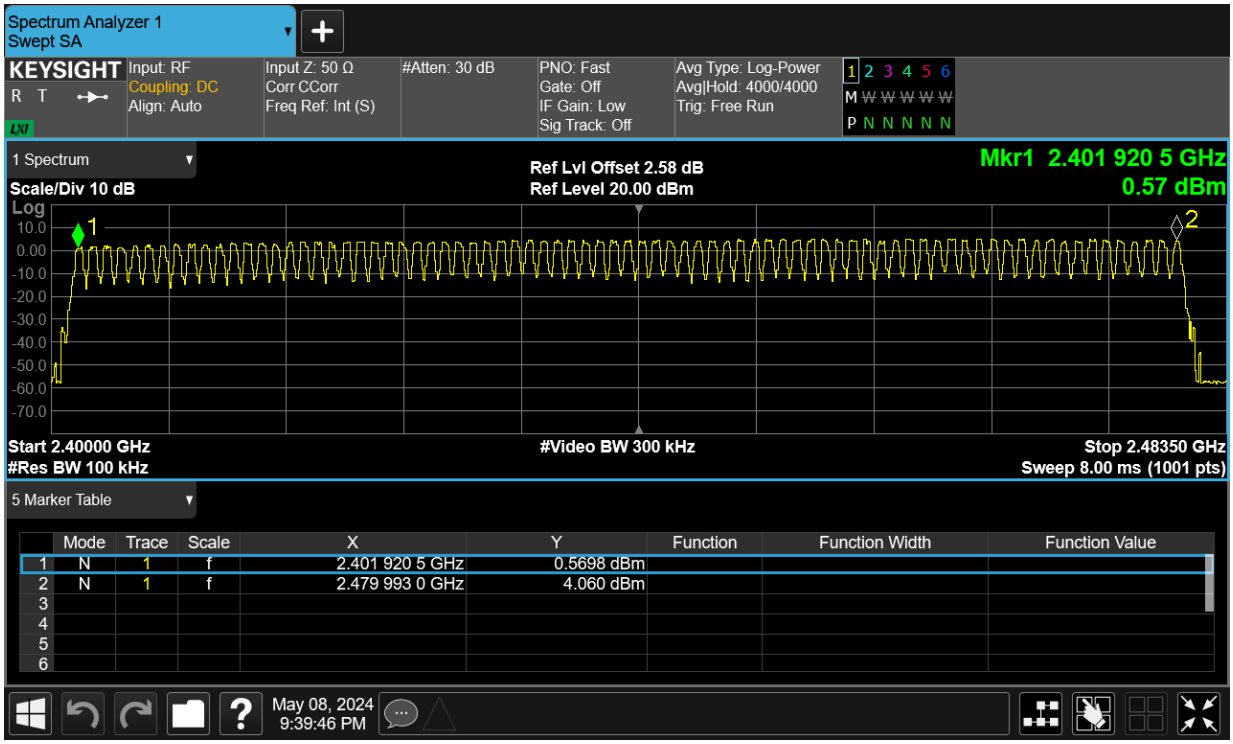


Number of Hopping Channel

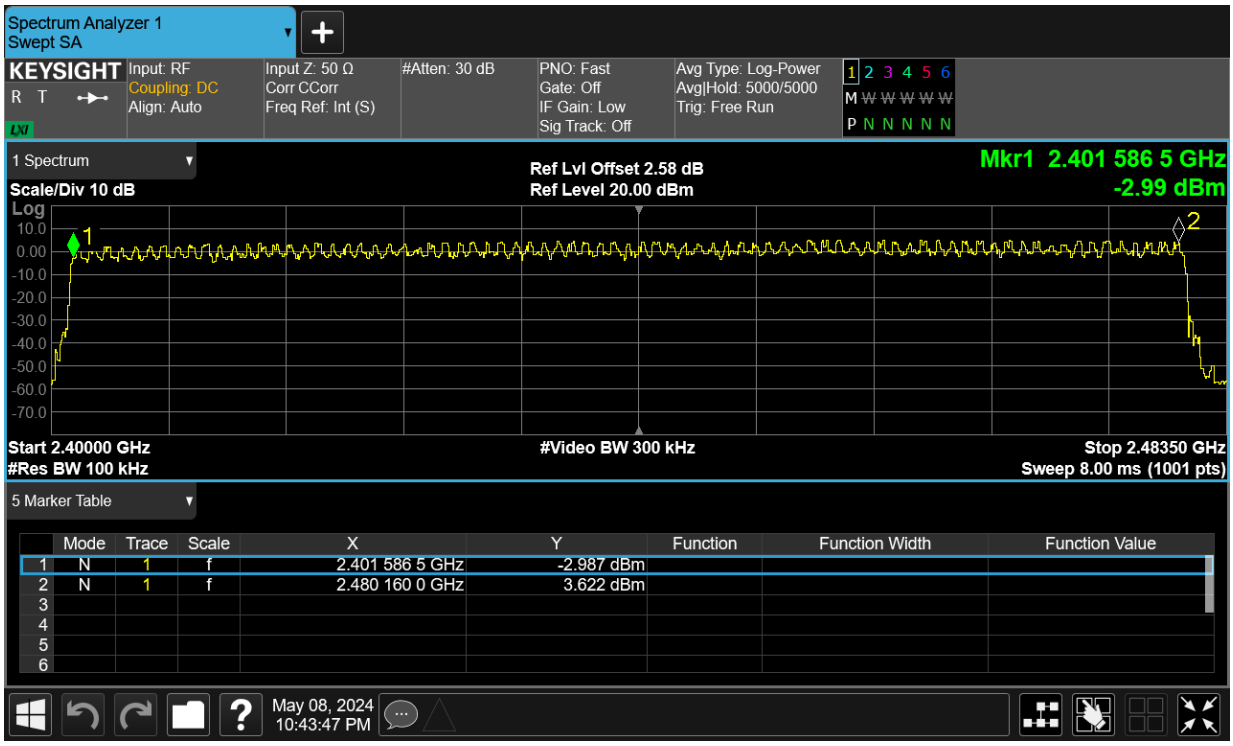
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

Test Graphs

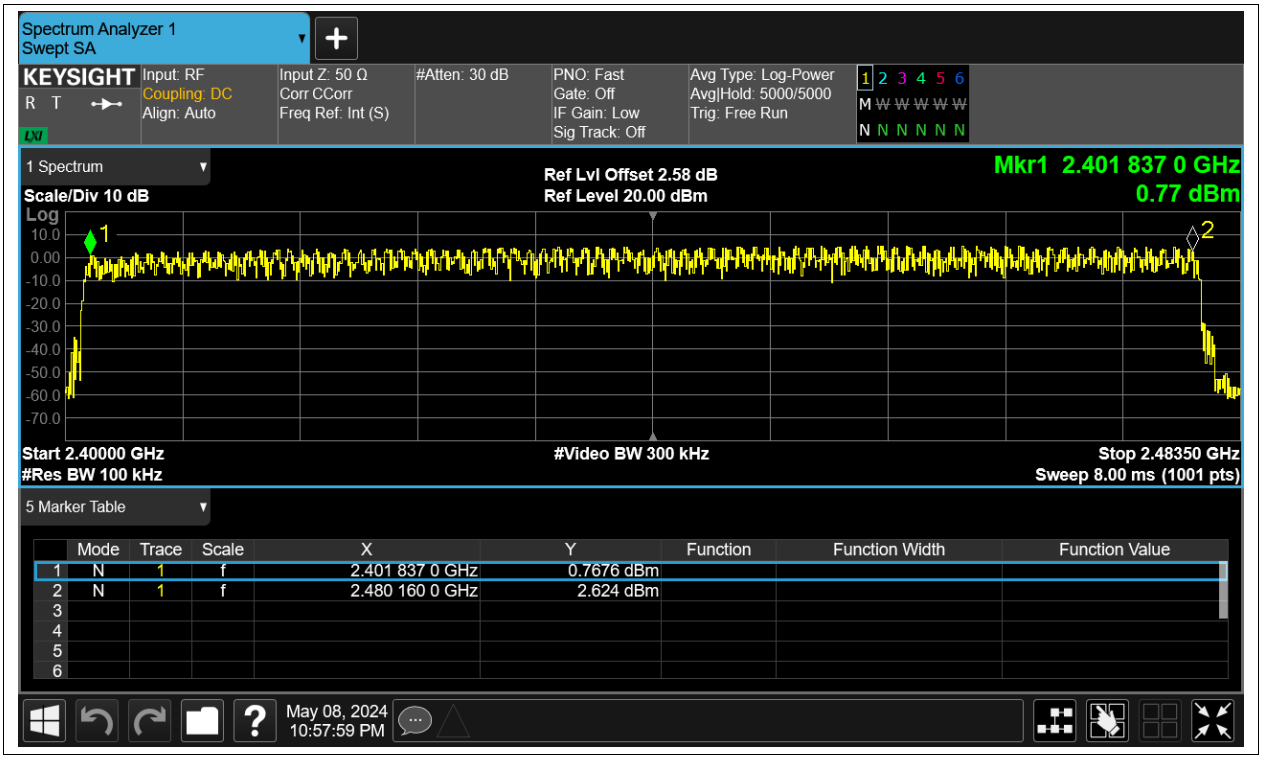
Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



Hopping No. NVNT 3-DH1 2441MHz Ant1

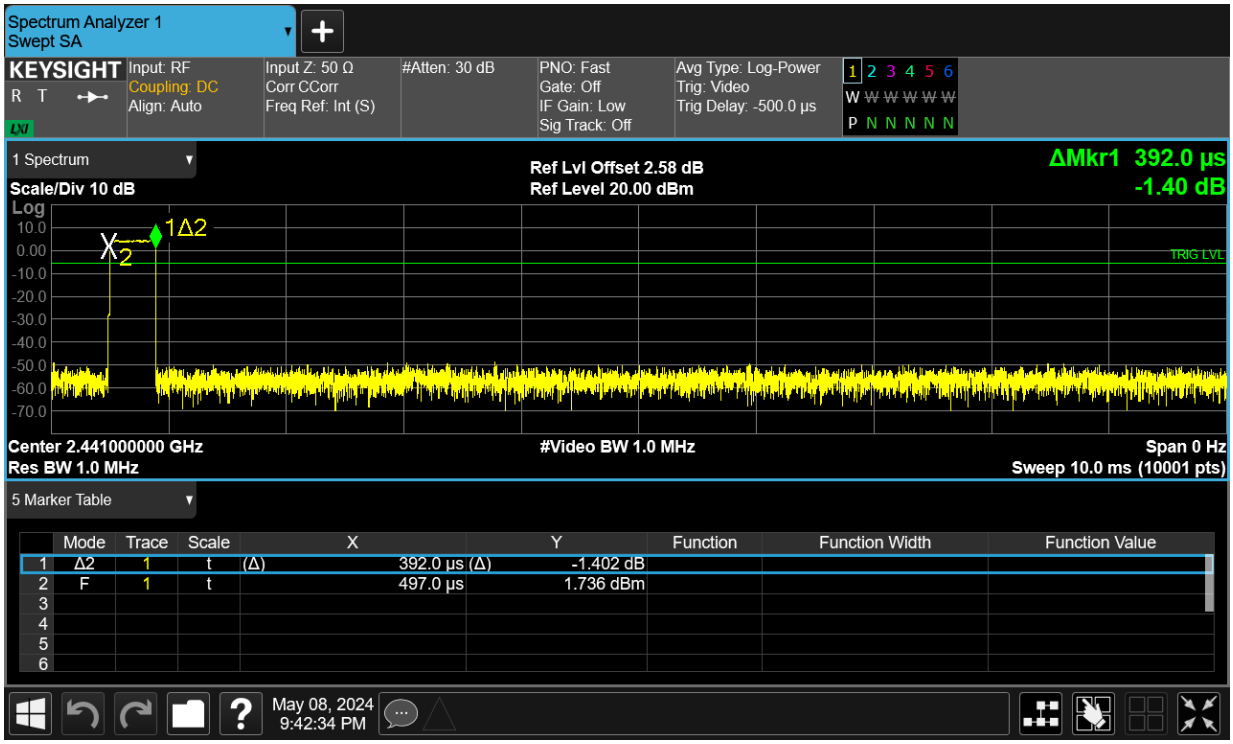

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 5000/5000
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.58 dB
Ref Level 20.00 dBm
Mkr1 2.401 837 0 GHz
0.77 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 2.401 837 0 GHz 0.7676 dBm
2 N 1 f 2.480 160 0 GHz 2.624 dBm
May 08, 2024
10:57:59 PM

Dwell Time

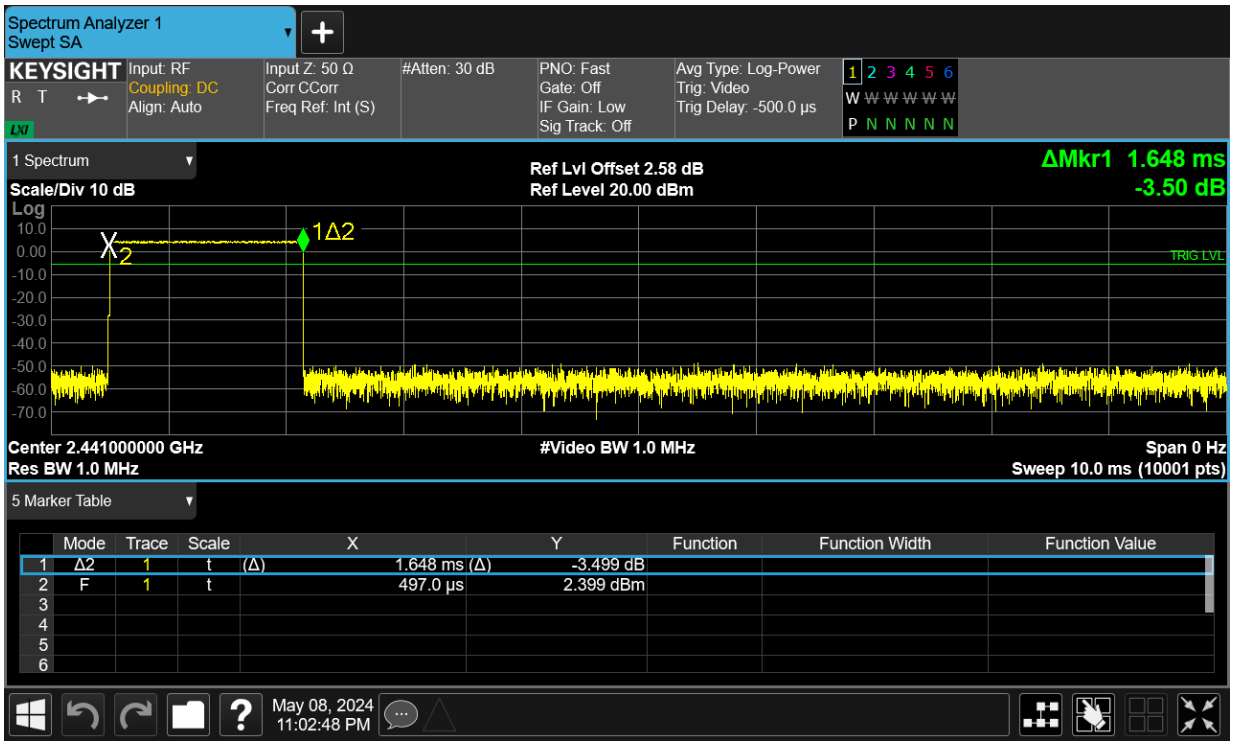
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.648	263.68	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.895	308.8	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.384	122.88	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.635	261.6	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.884	307.627	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.382	122.24	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.632	261.12	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.882	307.413	31600	400	Pass

Test Graphs

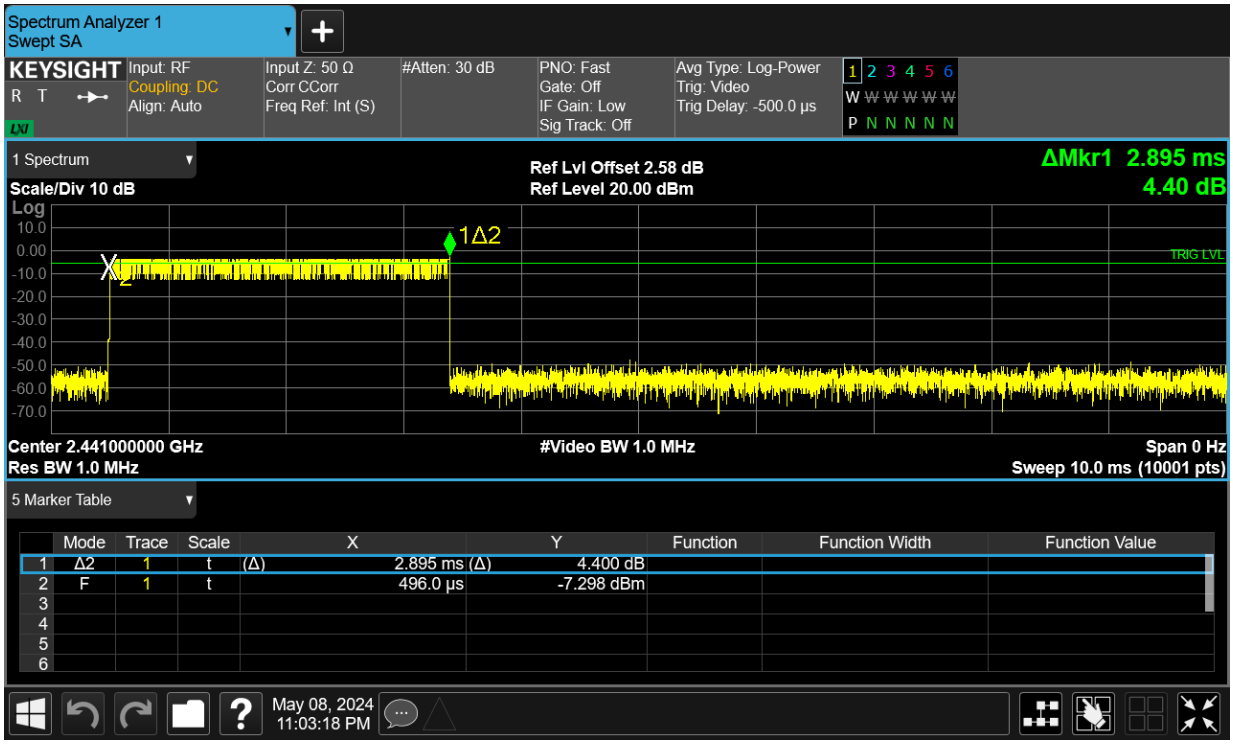
Dwell NVNT 1-DH1 2441MHz Ant1



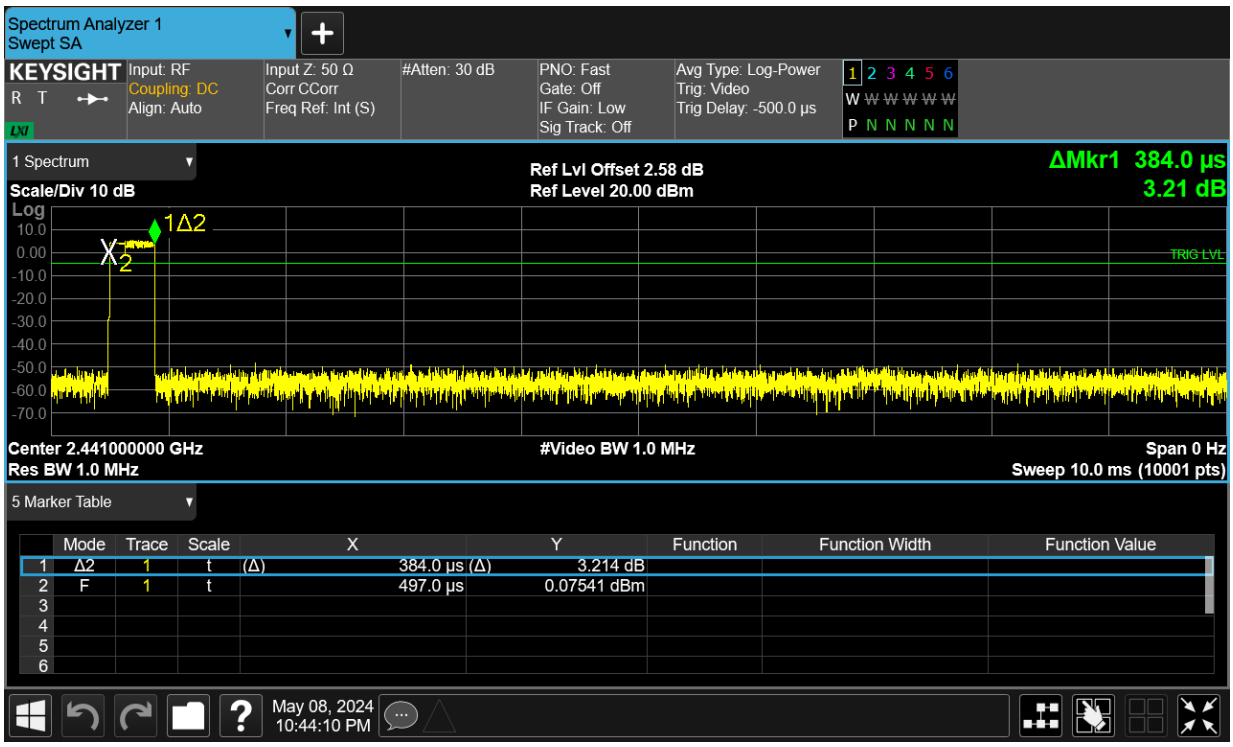
Dwell NVNT 1-DH3 2441MHz Ant1



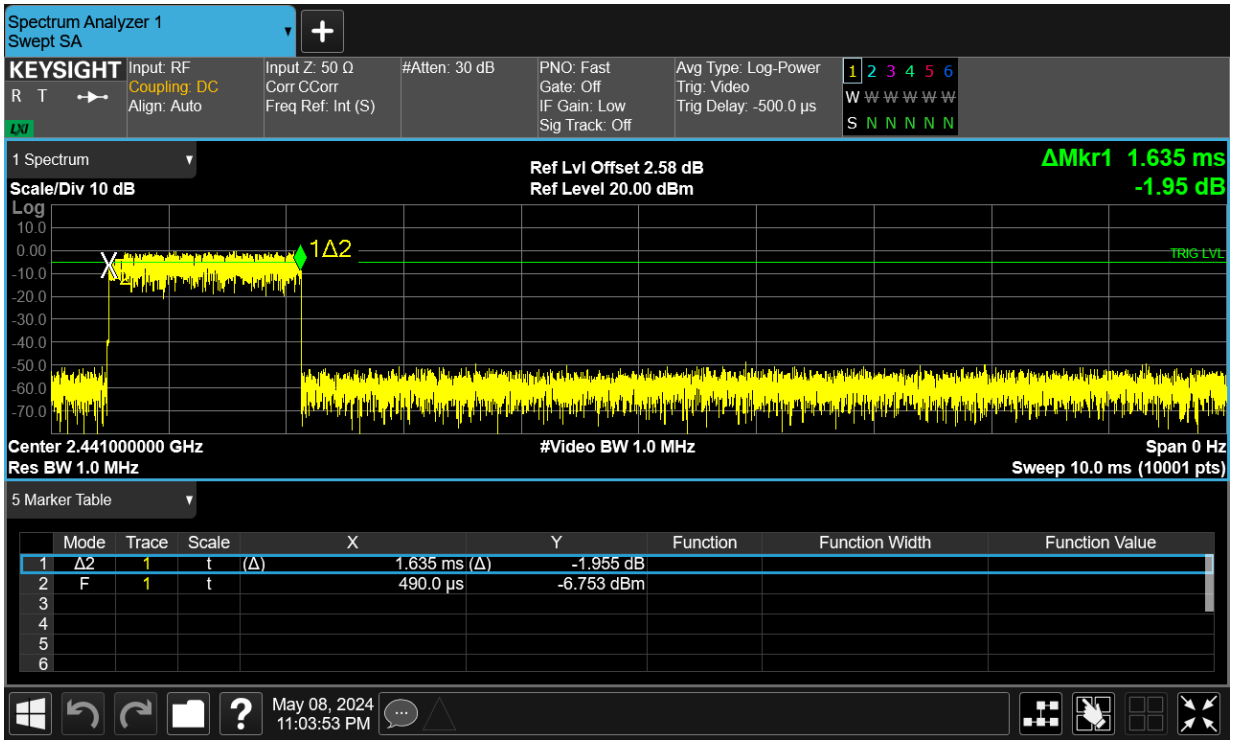
Dwell NVNT 1-DH5 2441MHz Ant1



Dwell NVNT 2-DH1 2441MHz Ant1

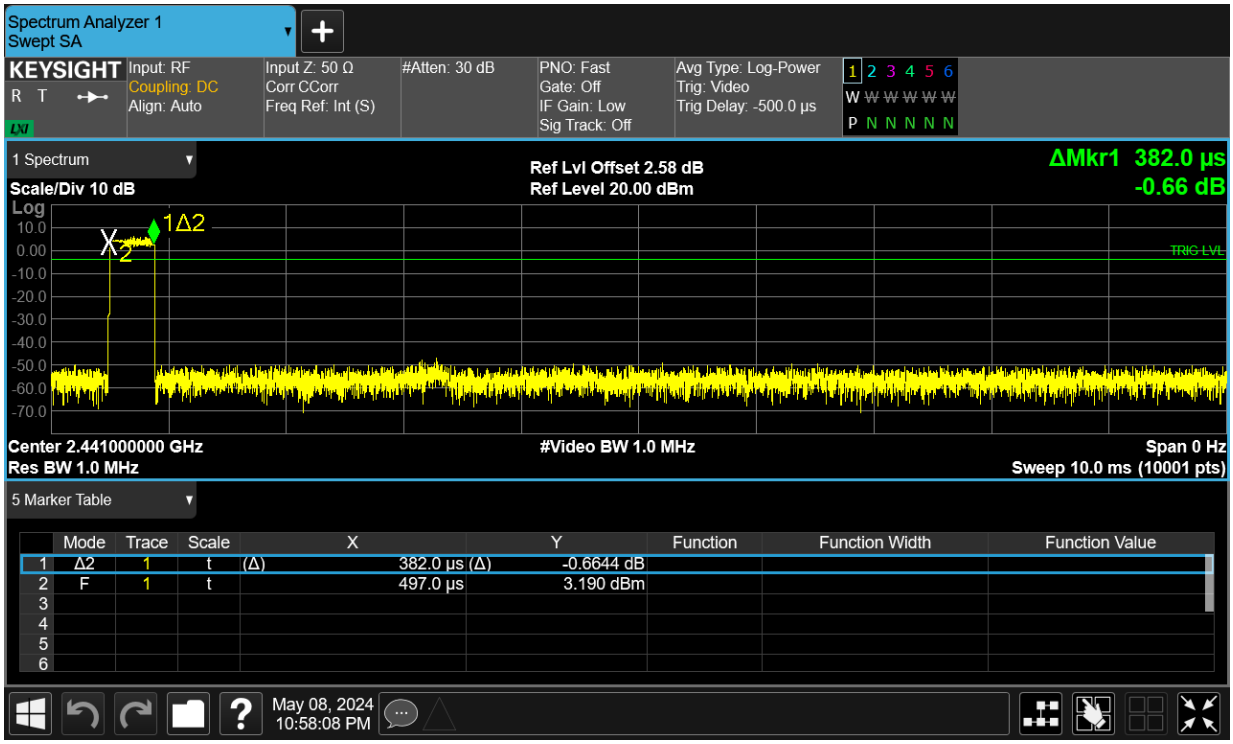


Dwell NVNT 2-DH3 2441MHz Ant1

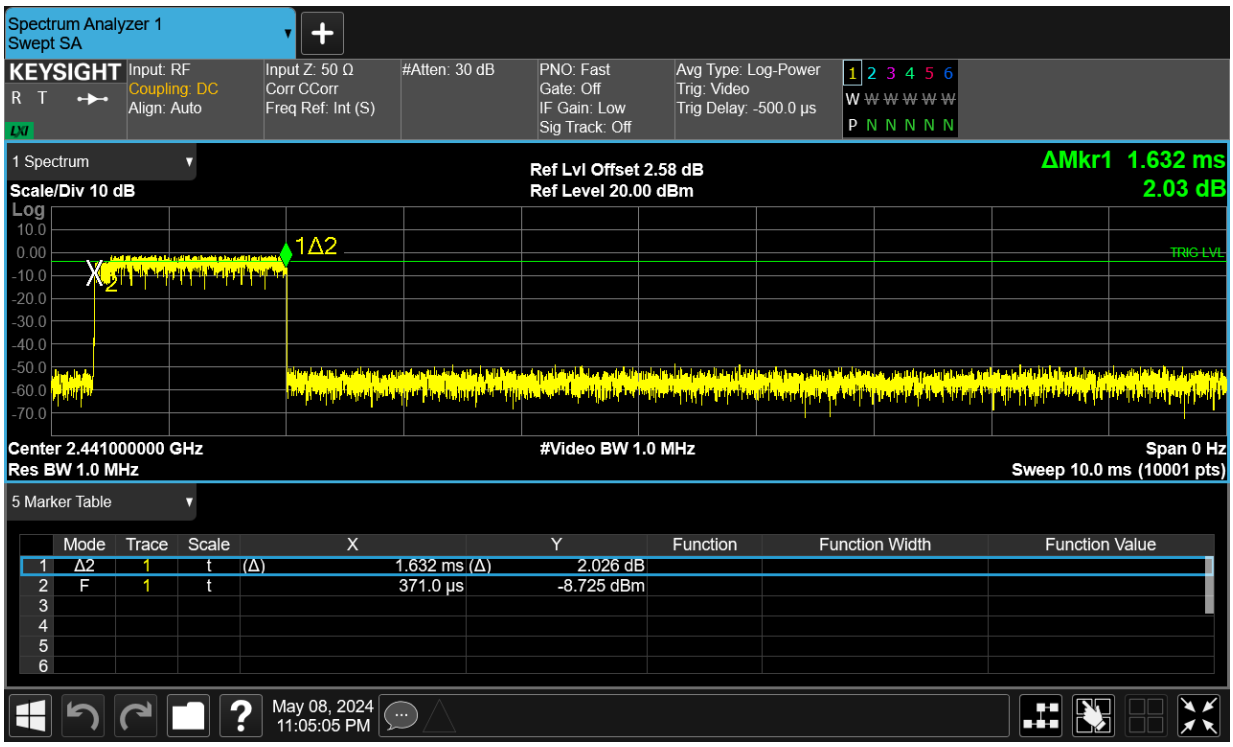


Dwell NVNT 2-DH5 2441MHz Ant1

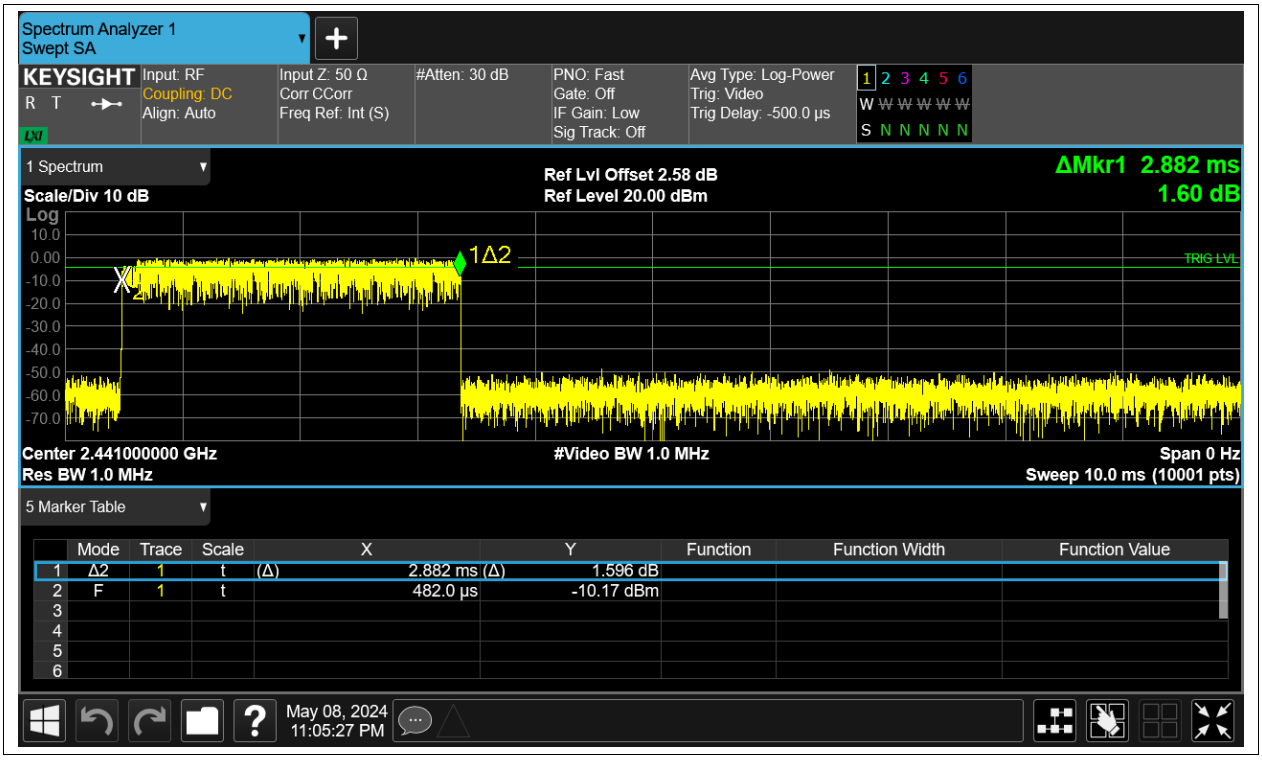
Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1



Dwell NVNT 3-DH5 2441MHz Ant1


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
1.60 dB
1Δ2
TRIG LVL
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) 1.596 dB
2 F 1 t 482.0 µs -10.17 dBm
May 08, 2024
11:05:27 PM