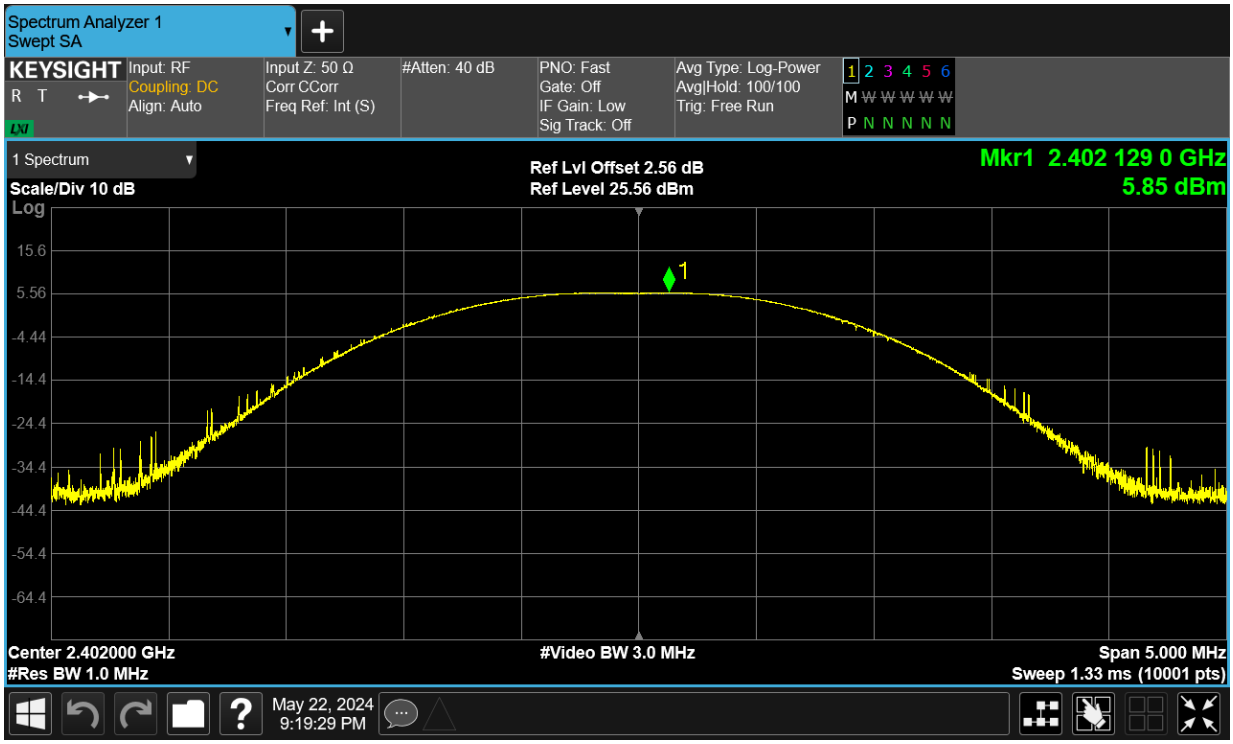
Test Data

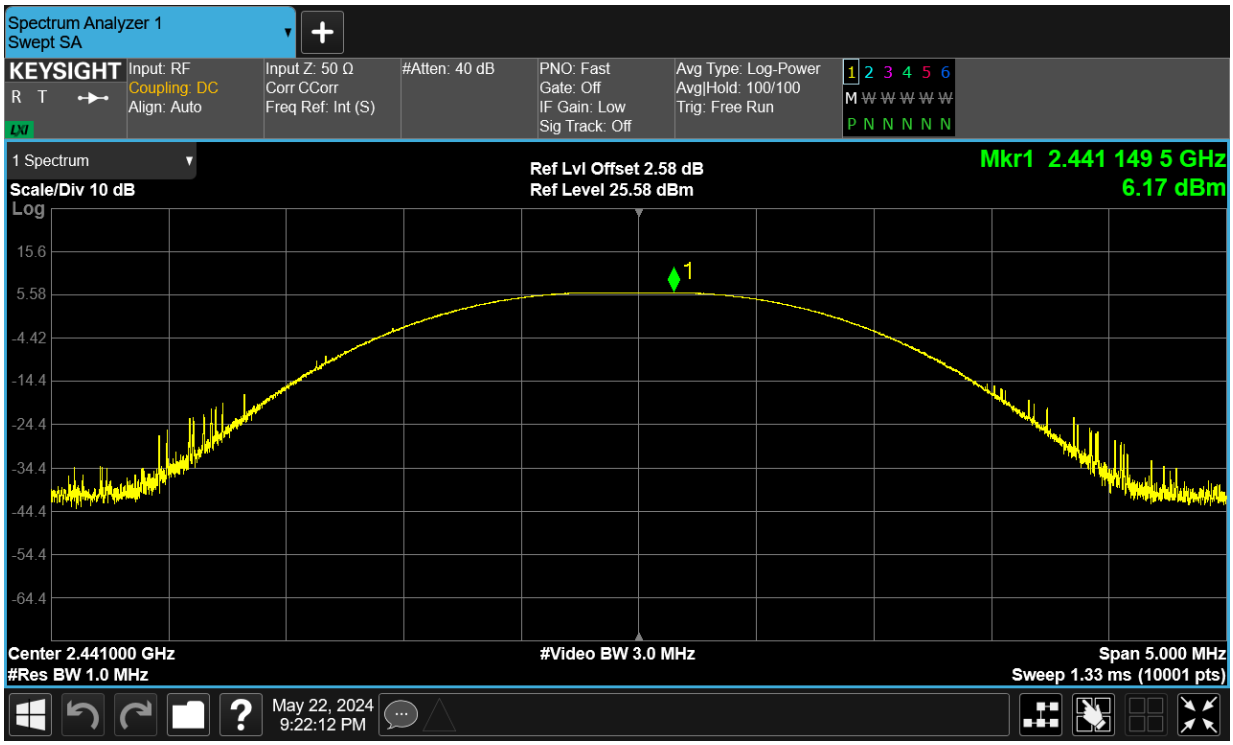
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	5.85	30	Pass
NVNT	1-DH1	2441	Ant1	6.17	30	Pass
NVNT	1-DH1	2480	Ant1	6.438	30	Pass
NVNT	2-DH1	2402	Ant1	6.718	21	Pass
NVNT	2-DH1	2441	Ant1	7.153	21	Pass
NVNT	2-DH1	2480	Ant1	7.531	21	Pass
NVNT	3-DH1	2402	Ant1	6.83	21	Pass
NVNT	3-DH1	2441	Ant1	7.406	21	Pass
NVNT	3-DH1	2480	Ant1	7.779	21	Pass

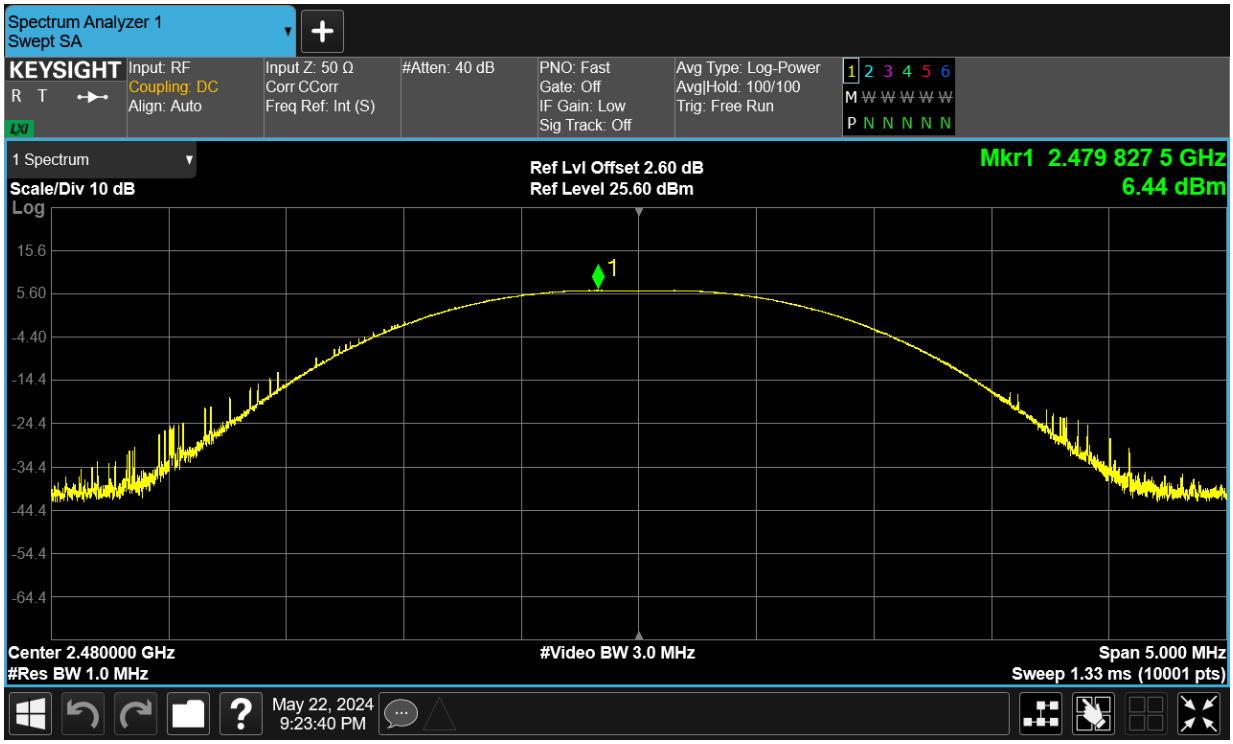
Test Graphs
Power NVNT 1-DH1 2402MHz Ant1



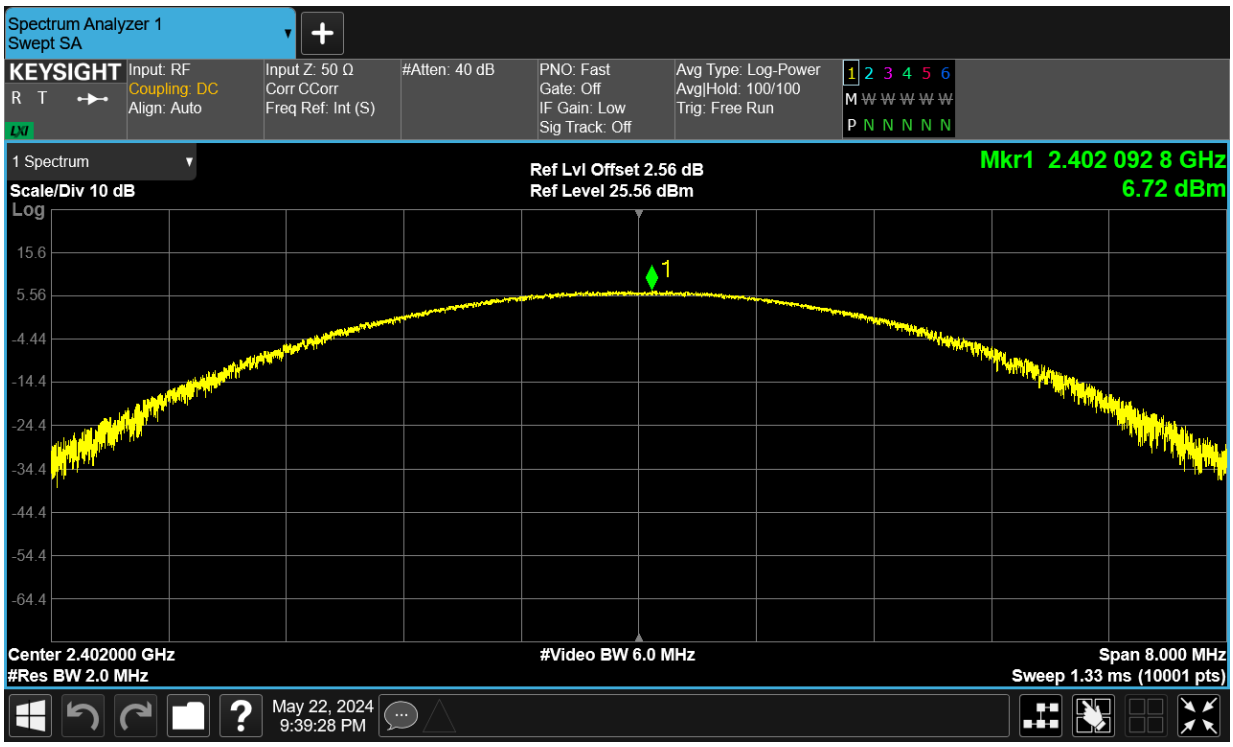
Power NVNT 1-DH1 2441MHz Ant1



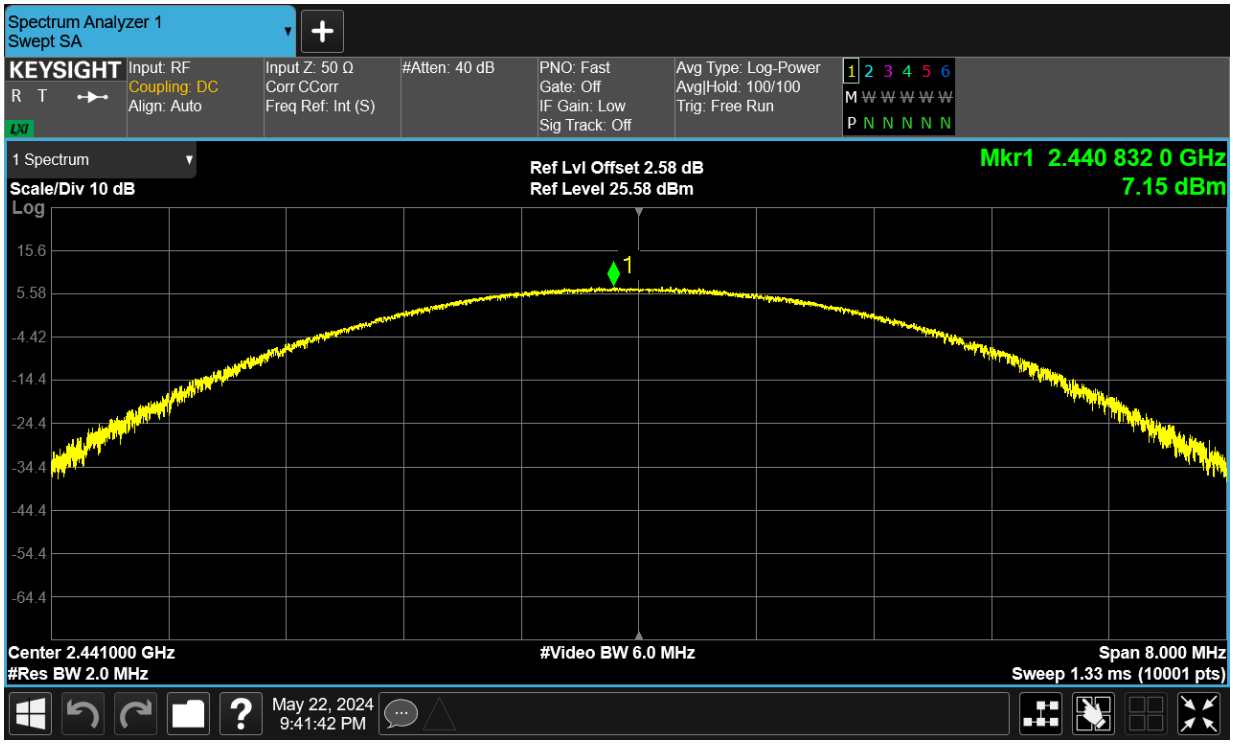
Power NVNT 1-DH1 2480MHz Ant1



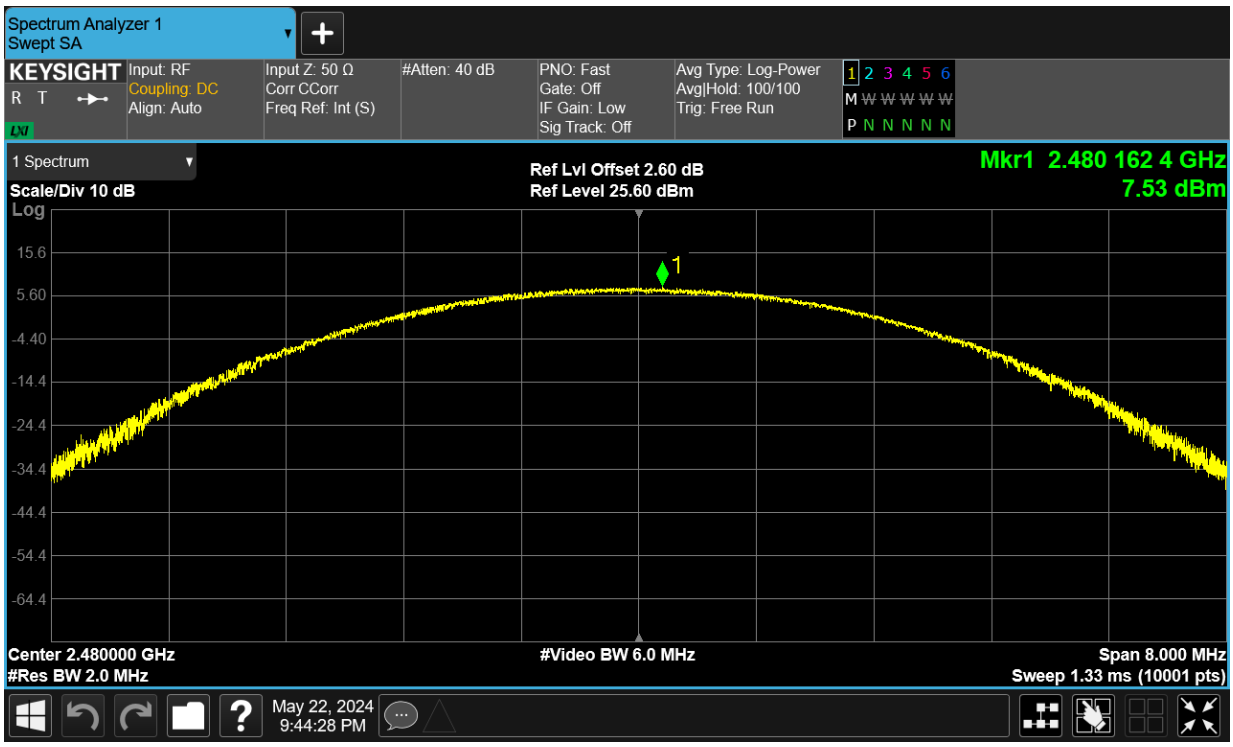
Power NVNT 2-DH1 2402MHz Ant1



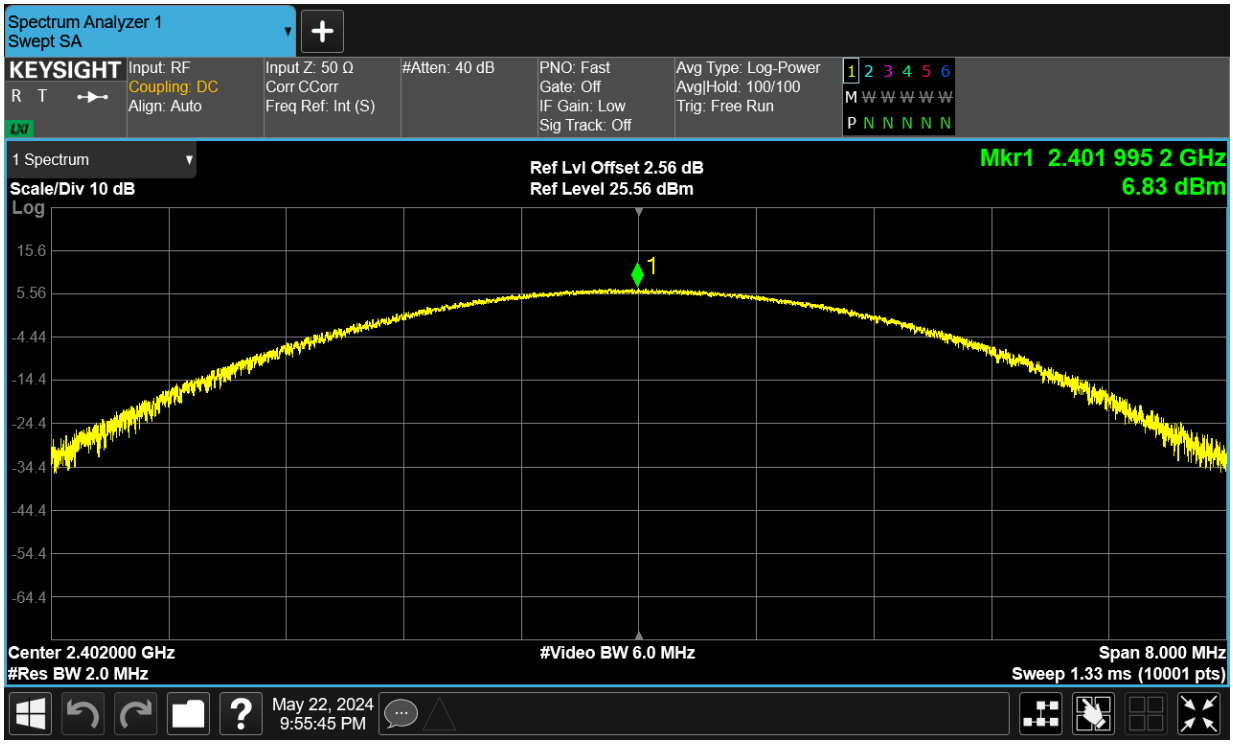
Power NVNT 2-DH1 2441MHz Ant1



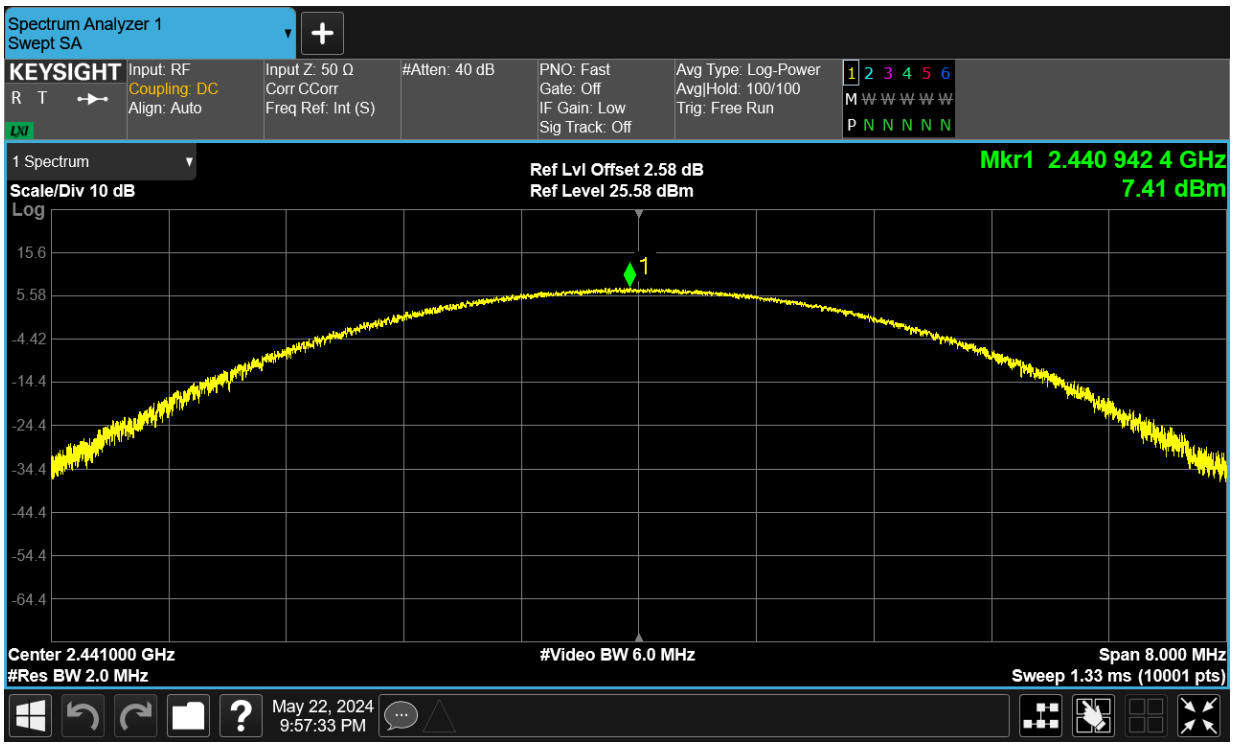
Power NVNT 2-DH1 2480MHz Ant1



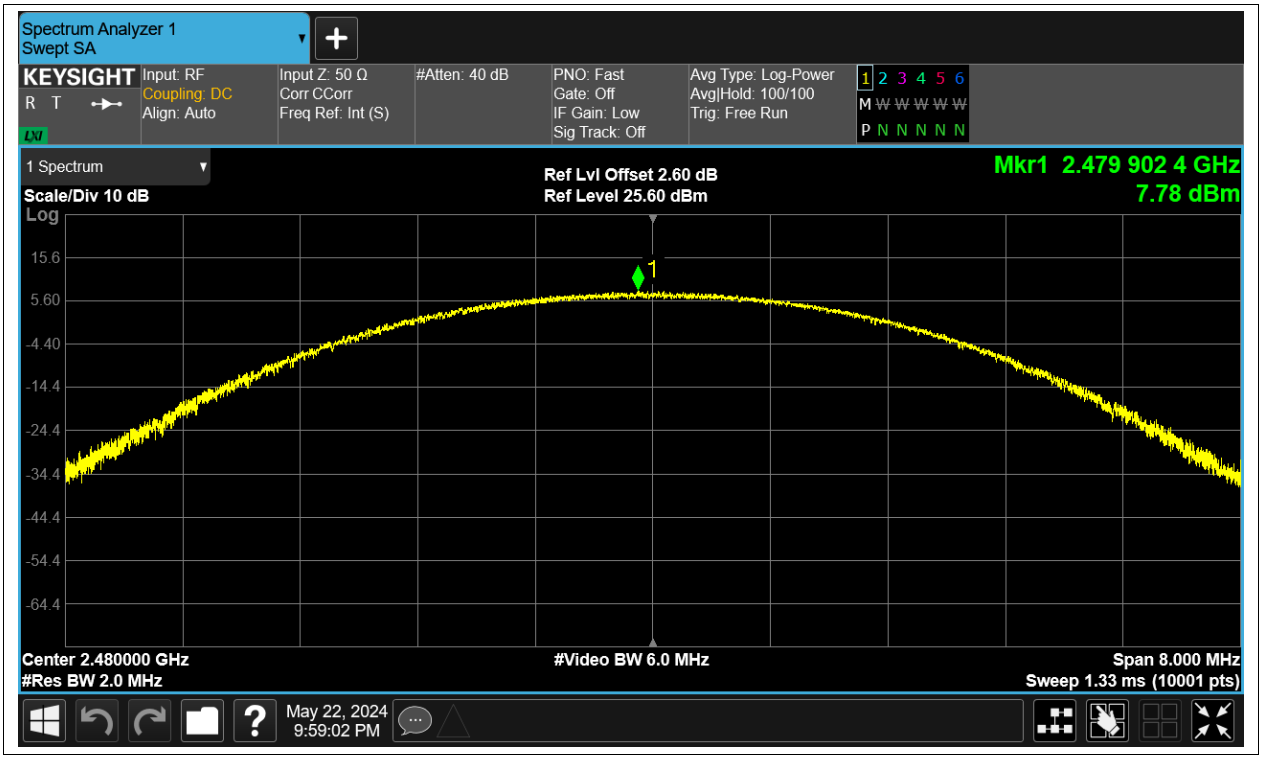
Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



Power NVNT 3-DH1 2480MHz Ant1

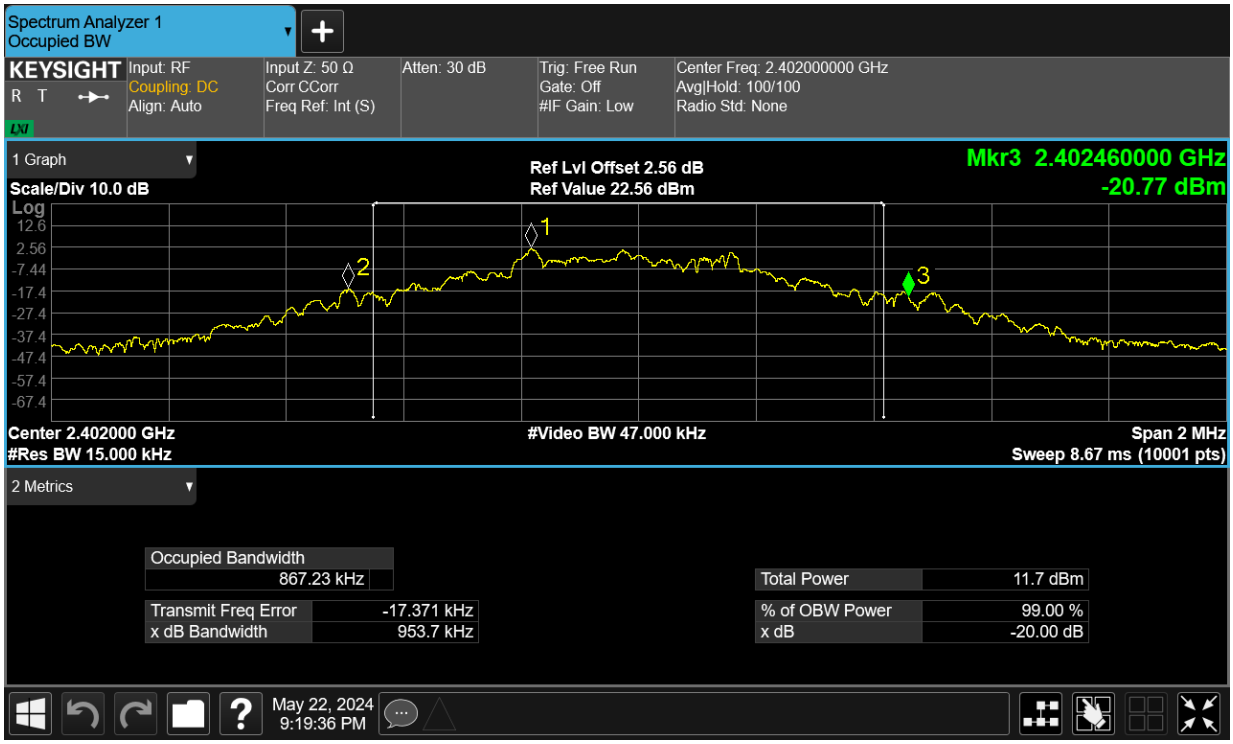

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 40 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.60 dB
Ref Level 25.60 dBm
Mkr1 2.479 902 4 GHz
7.78 dBm
Log
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 22, 2024
9:59:02 PM

-20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)
NVNT	1-DH1	2402	Ant1	0.954
NVNT	1-DH1	2441	Ant1	0.915
NVNT	1-DH1	2480	Ant1	0.91
NVNT	2-DH1	2402	Ant1	1.27
NVNT	2-DH1	2441	Ant1	1.264
NVNT	2-DH1	2480	Ant1	1.248
NVNT	3-DH1	2402	Ant1	1.216
NVNT	3-DH1	2441	Ant1	1.206
NVNT	3-DH1	2480	Ant1	1.211

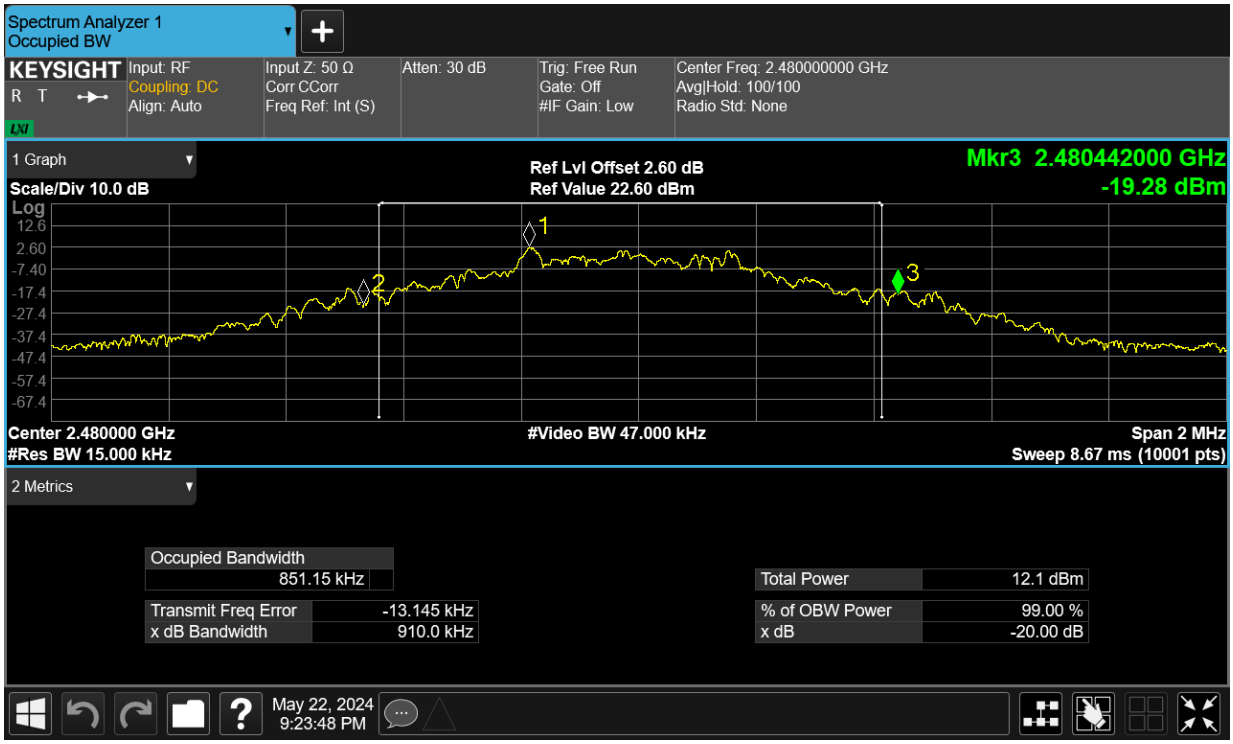
Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1

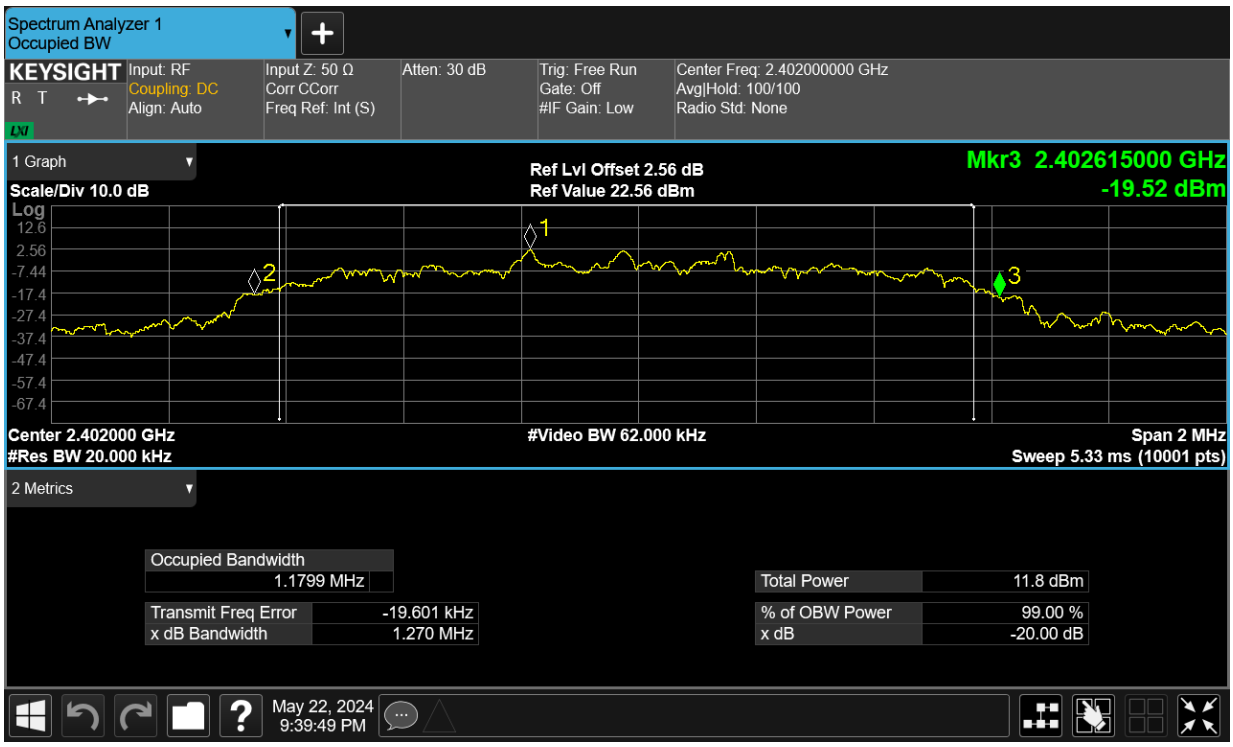


-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1

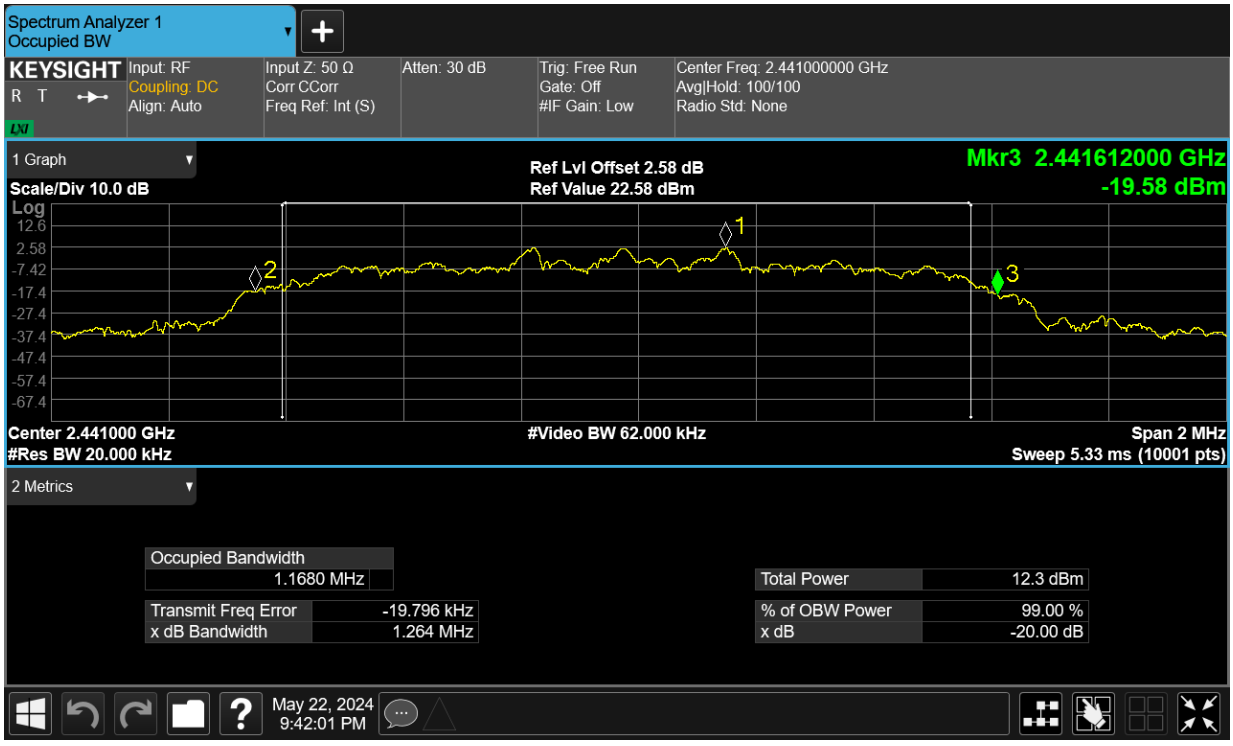
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



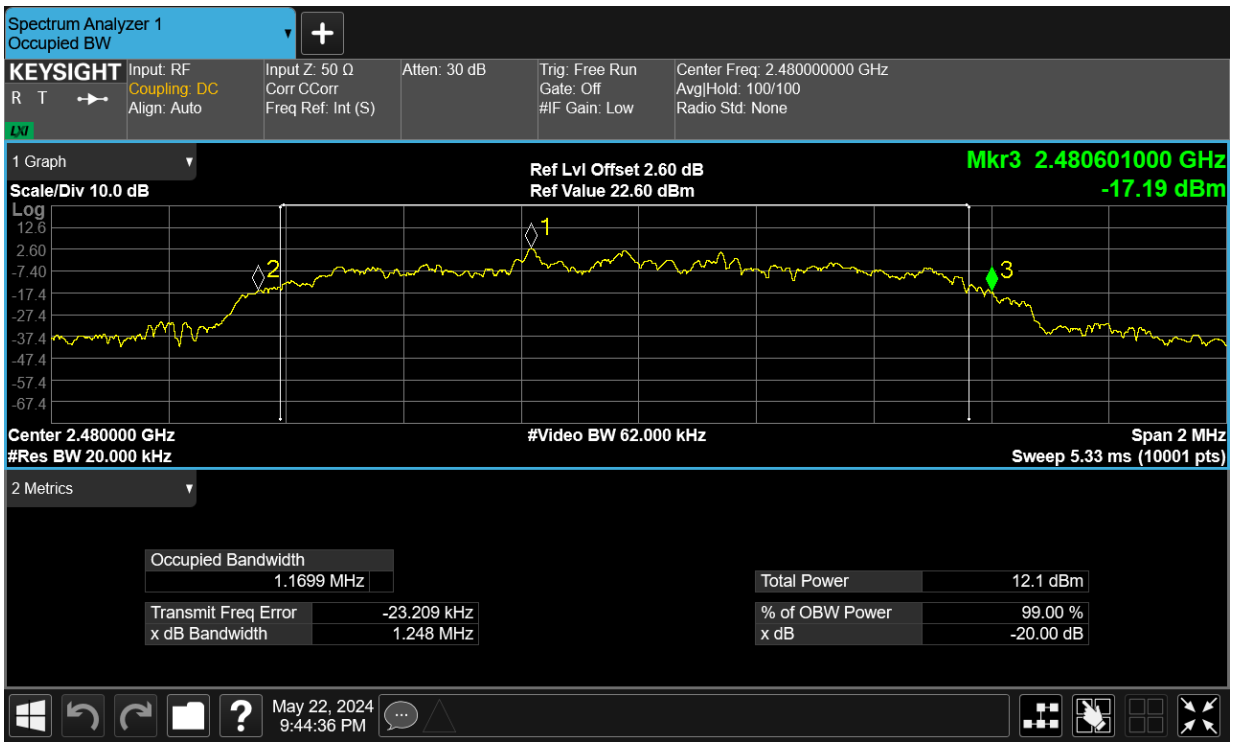
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



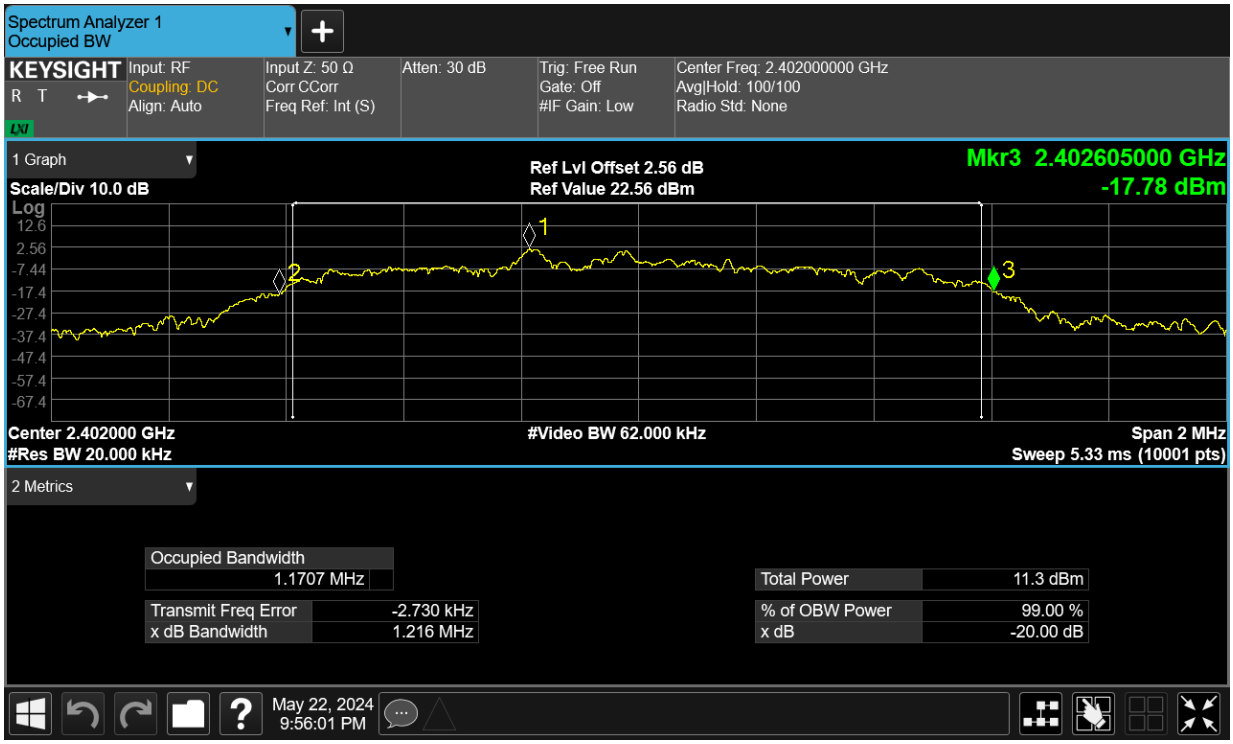
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



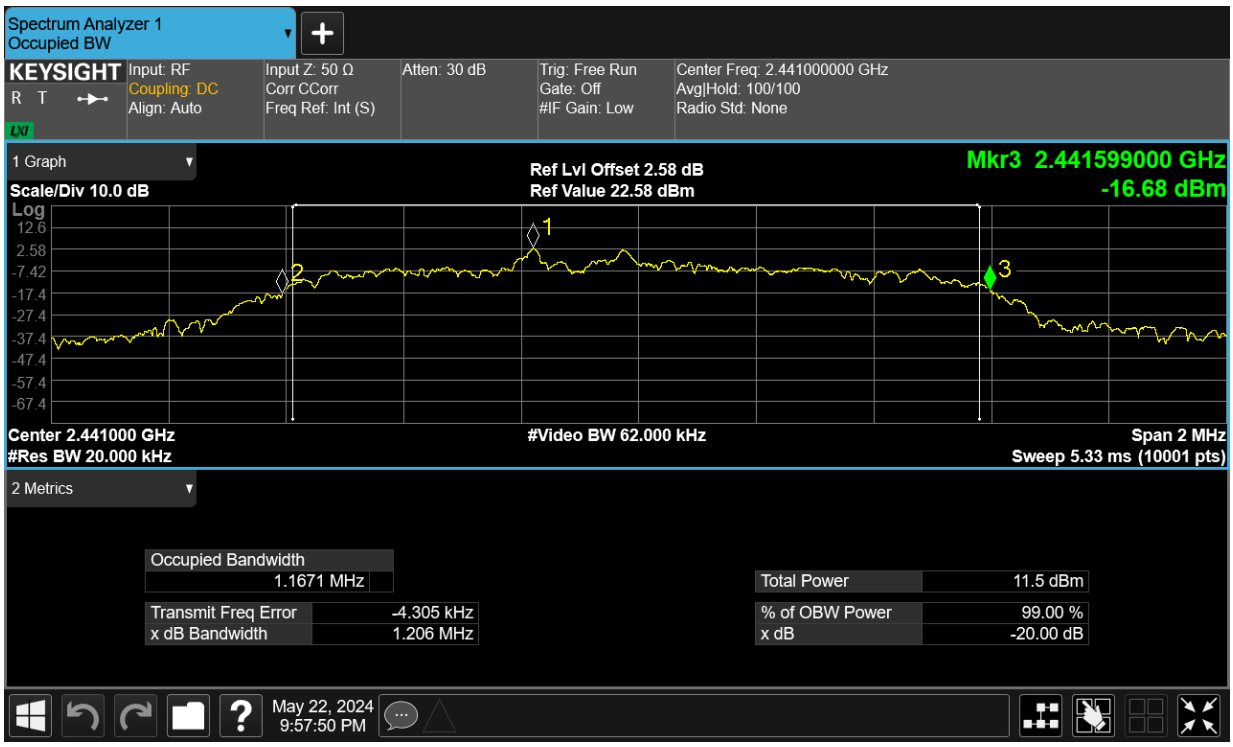
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1



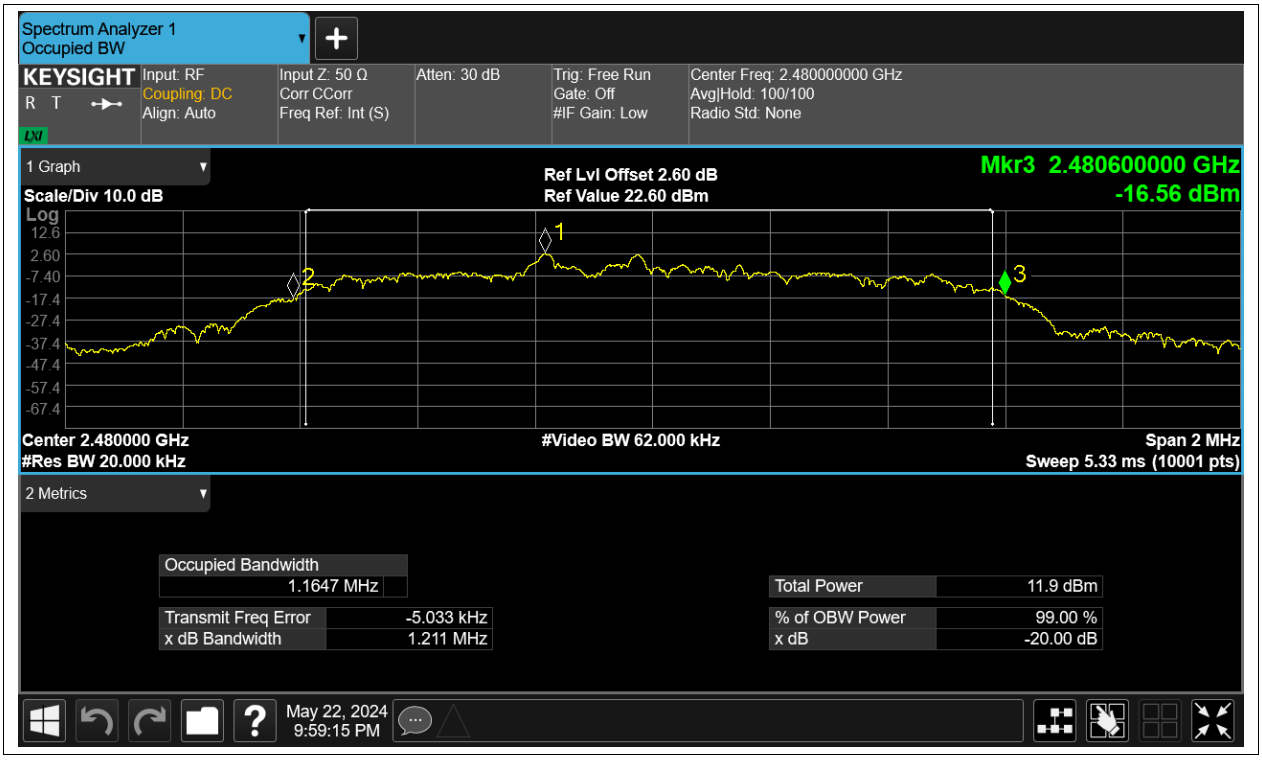
-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2480MHz Ant1

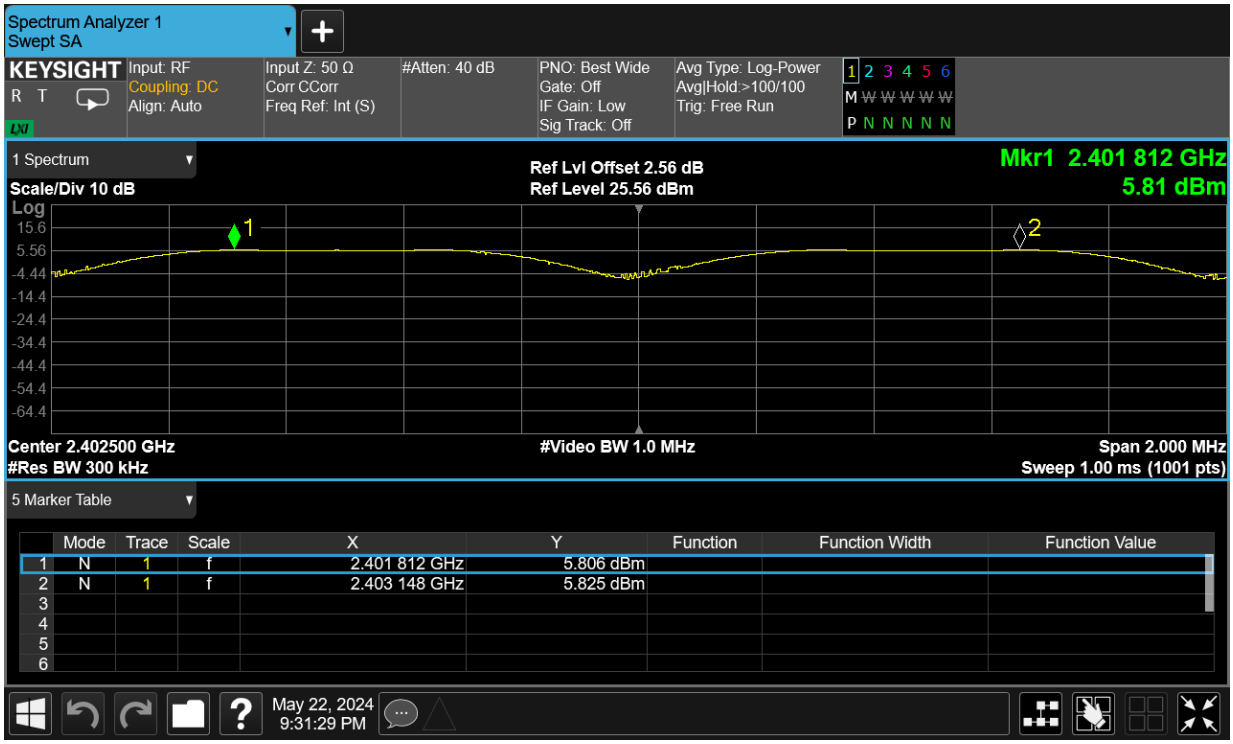

Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 100/100
Radio Std: None
1 Graph
Ref Lvl Offset 2.60 dB
Ref Value 22.60 dBm
Mkr3 2.480600000 GHz
-16.56 dBm
Scale/Div 10.0 dB
Log
12.6
2.60
-7.40
-17.4
-27.4
-37.4
-47.4
-57.4
-67.4
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
1.1647 MHz
Transmit Freq Error
-5.033 kHz
x dB Bandwidth
1.211 MHz
Total Power
11.9 dBm
% of OBW Power
99.00 %
x dB
-20.00 dB
May 22, 2024
9:59:15 PM

Carrier Frequencies Separation

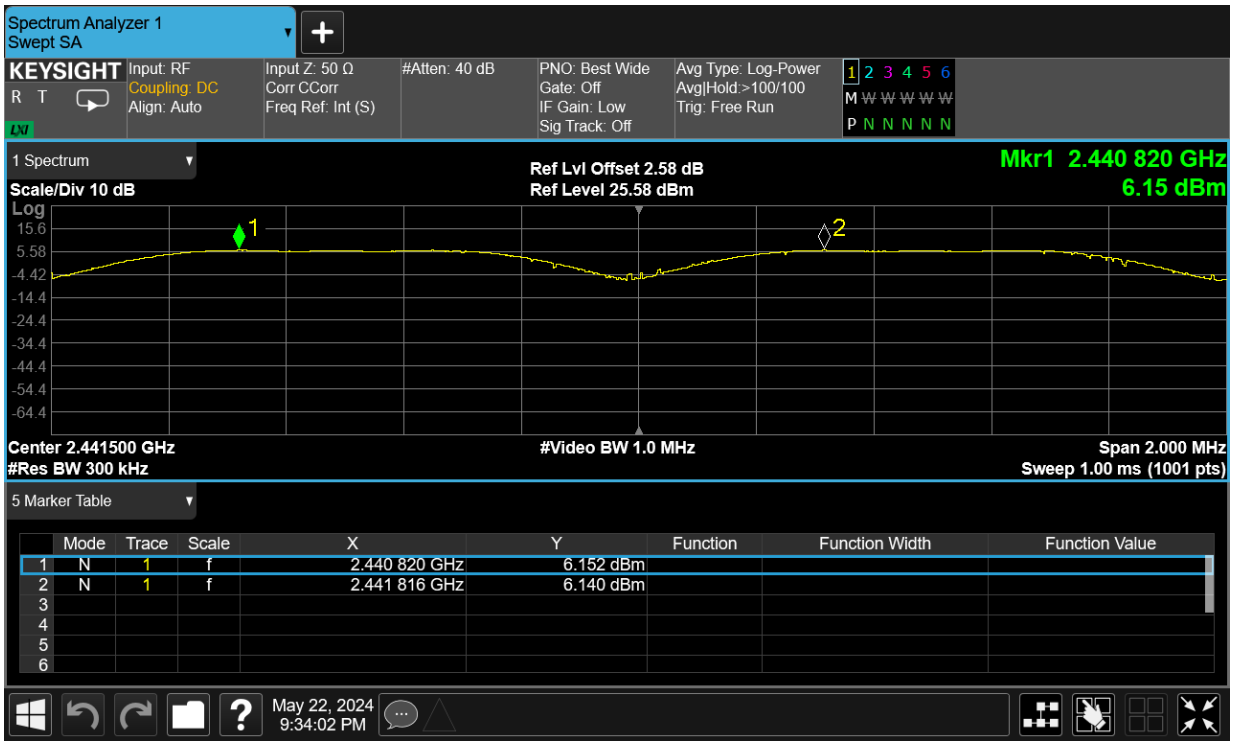
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2401.812	2403.148	1.336	0.954	Pass
NVNT	1-DH1	Ant1	2440.82	2441.816	0.996	0.915	Pass
NVNT	1-DH1	Ant1	2478.816	2479.818	1.002	0.91	Pass
NVNT	2-DH1	Ant1	2401.81	2403.154	1.344	0.847	Pass
NVNT	2-DH1	Ant1	2440.816	2441.826	1.01	0.843	Pass
NVNT	2-DH1	Ant1	2478.826	2480.156	1.33	0.832	Pass
NVNT	3-DH1	Ant1	2401.836	2403.14	1.304	0.811	Pass
NVNT	3-DH1	Ant1	2440.828	2441.816	0.988	0.804	Pass
NVNT	3-DH1	Ant1	2478.812	2479.814	1.002	0.807	Pass

Test Graphs

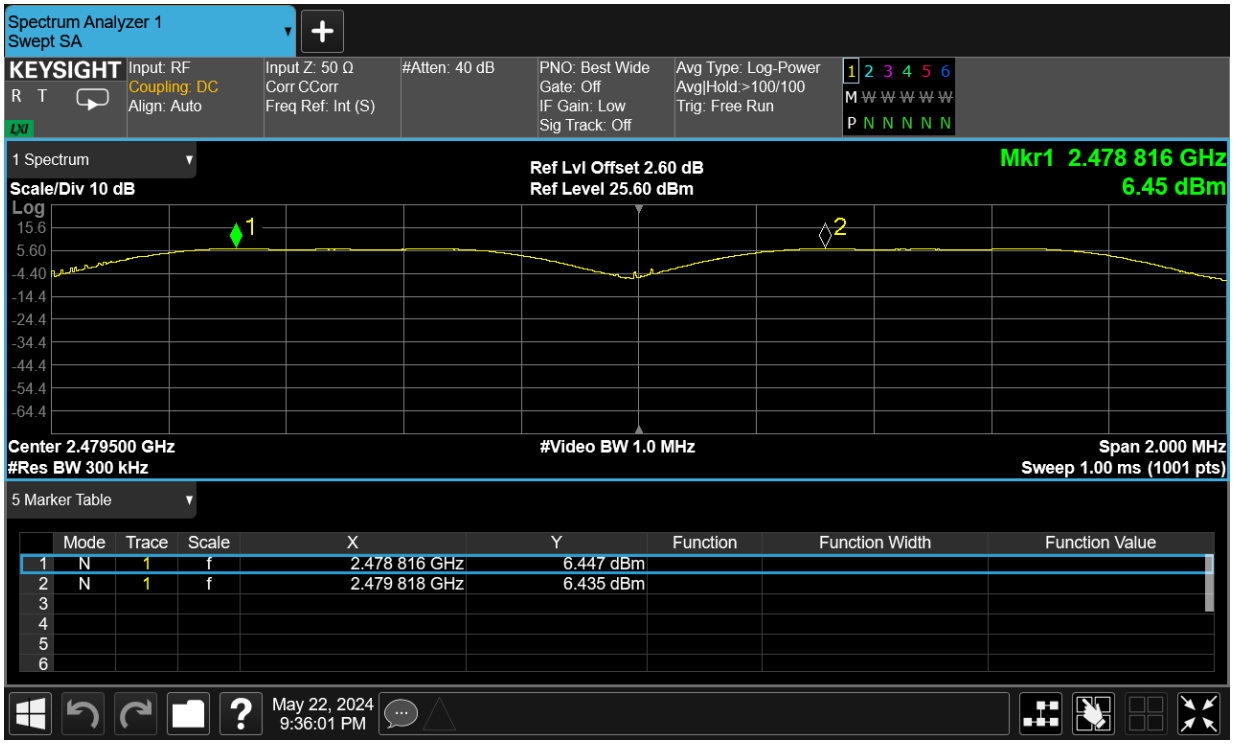
CFS NVNT 1-DH1 2402MHz Ant1



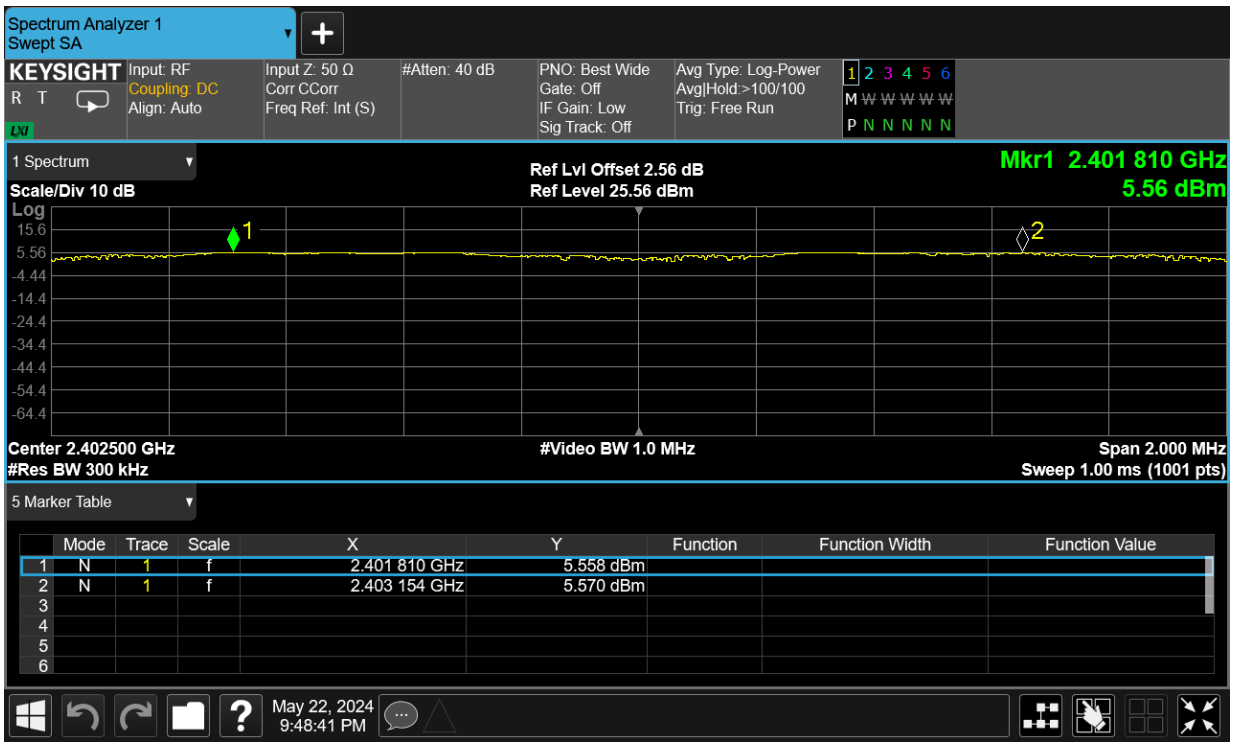
CFS NVNT 1-DH1 2441MHz Ant1



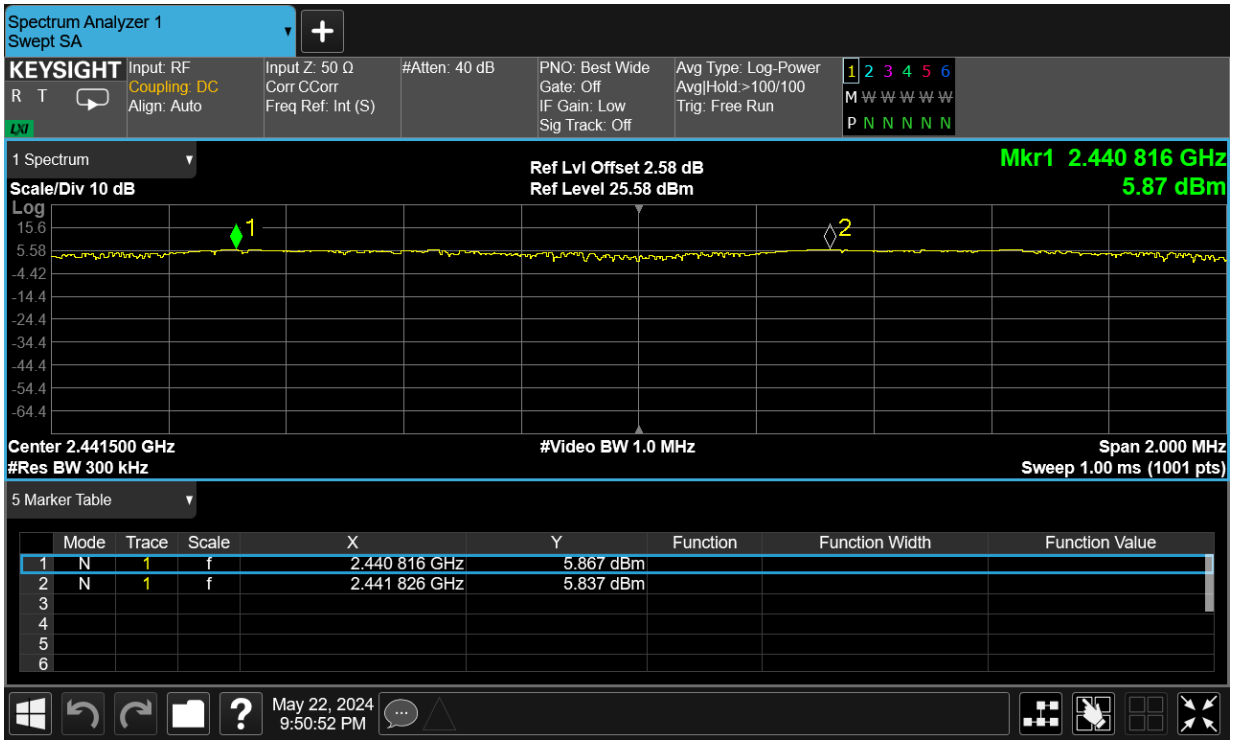
CFS NVNT 1-DH1 2480MHz Ant1



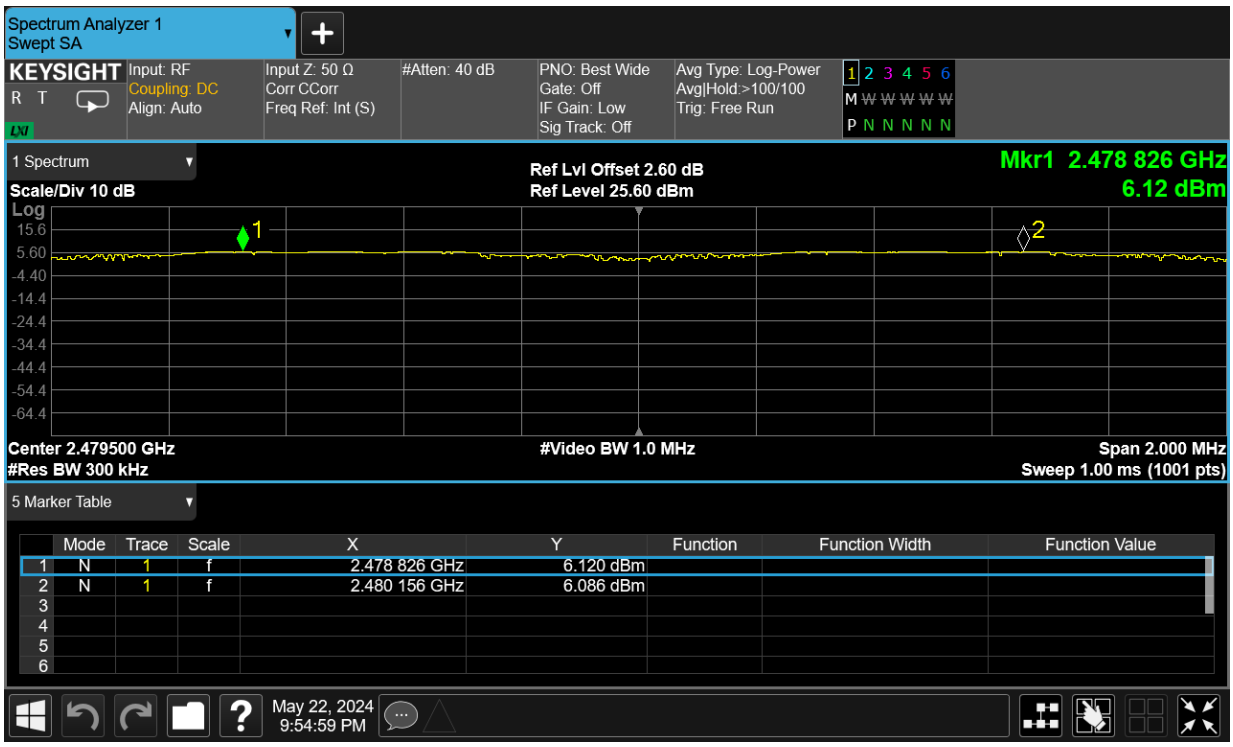
CFS NVNT 2-DH1 2402MHz Ant1



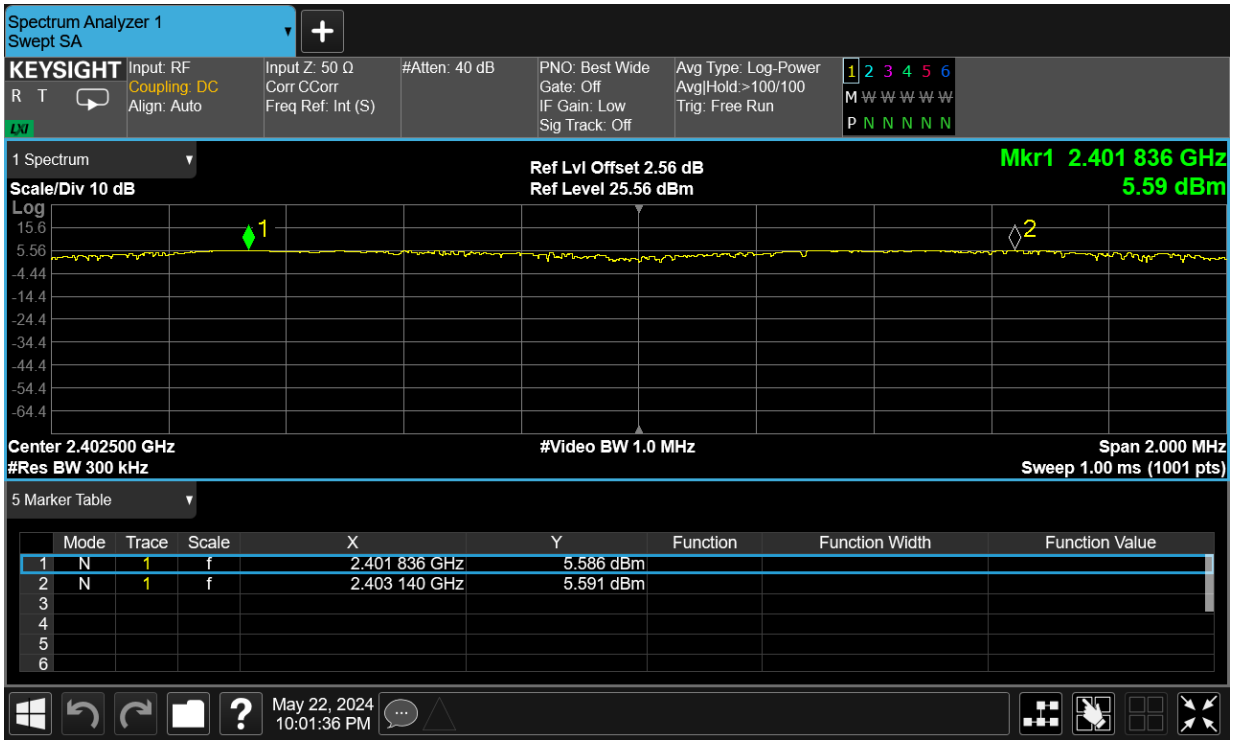
CFS NVNT 2-DH1 2441MHz Ant1



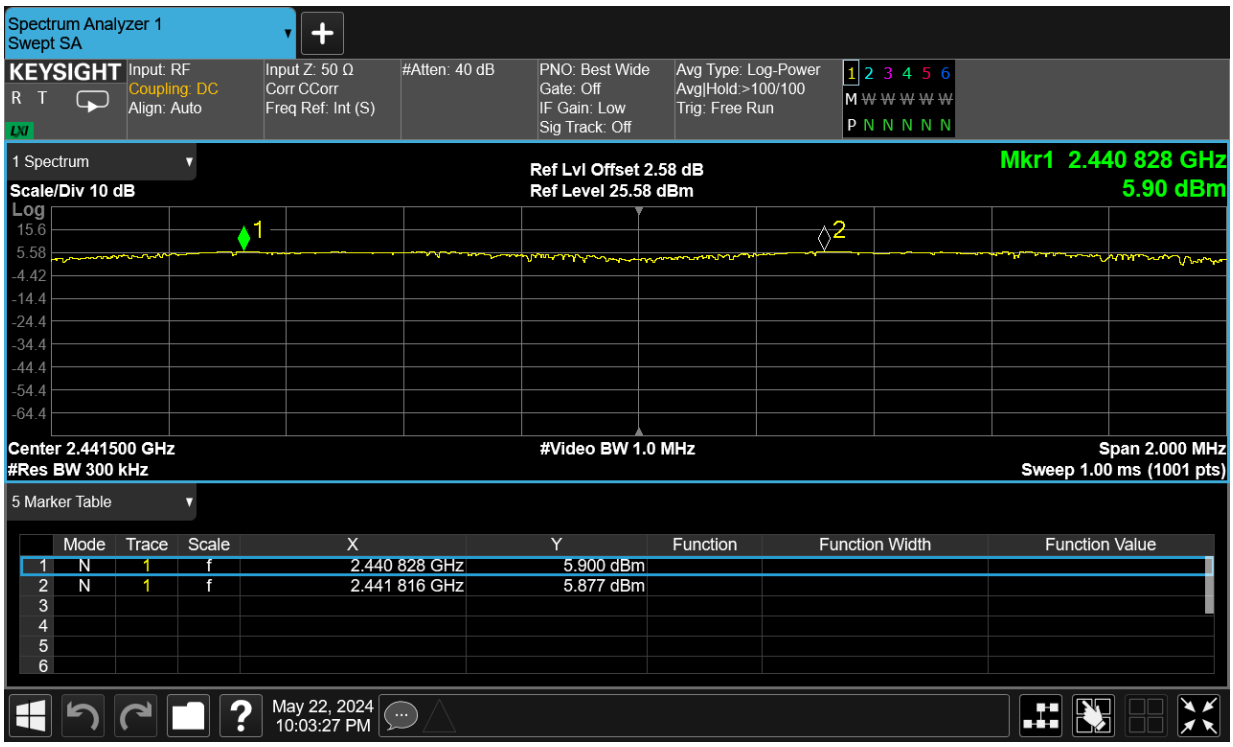
CFS NVNT 2-DH1 2480MHz Ant1



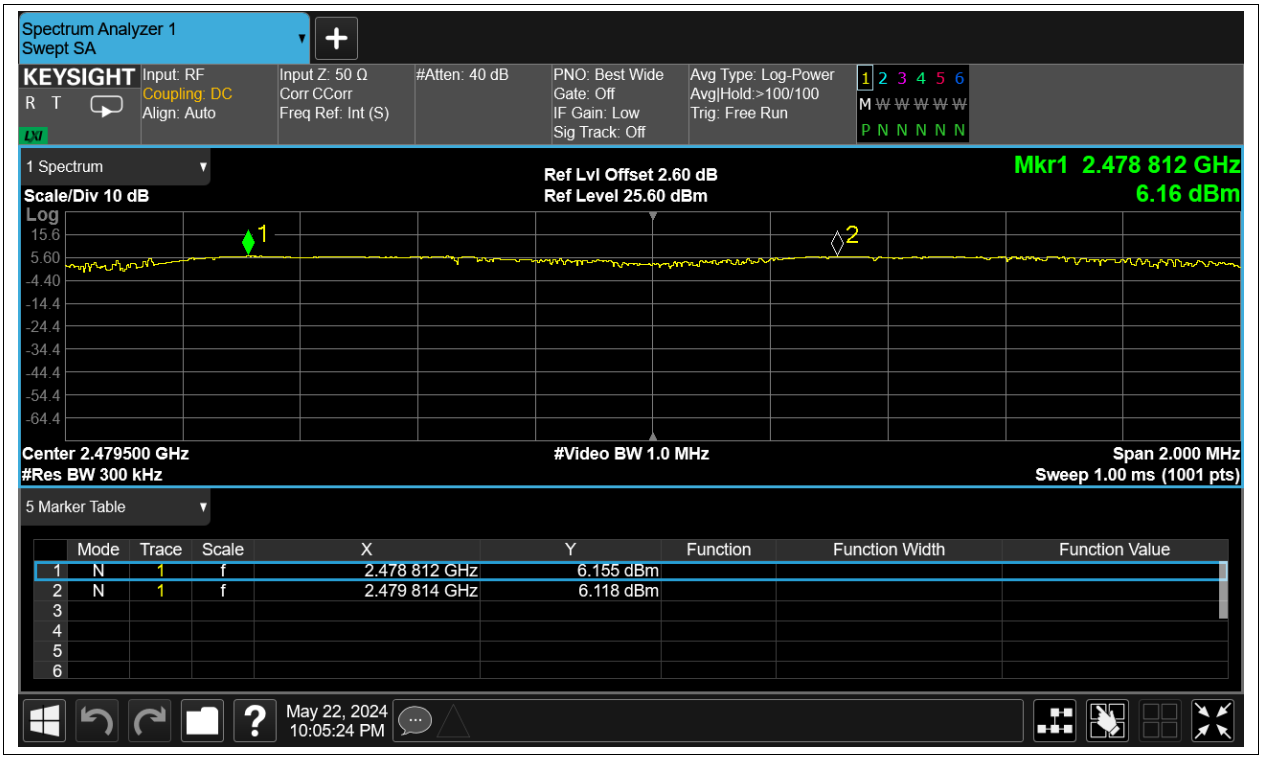
CFS NVNT 3-DH1 2402MHz Ant1



CFS NVNT 3-DH1 2441MHz Ant1



CFS NVNT 3-DH1 2480MHz Ant1

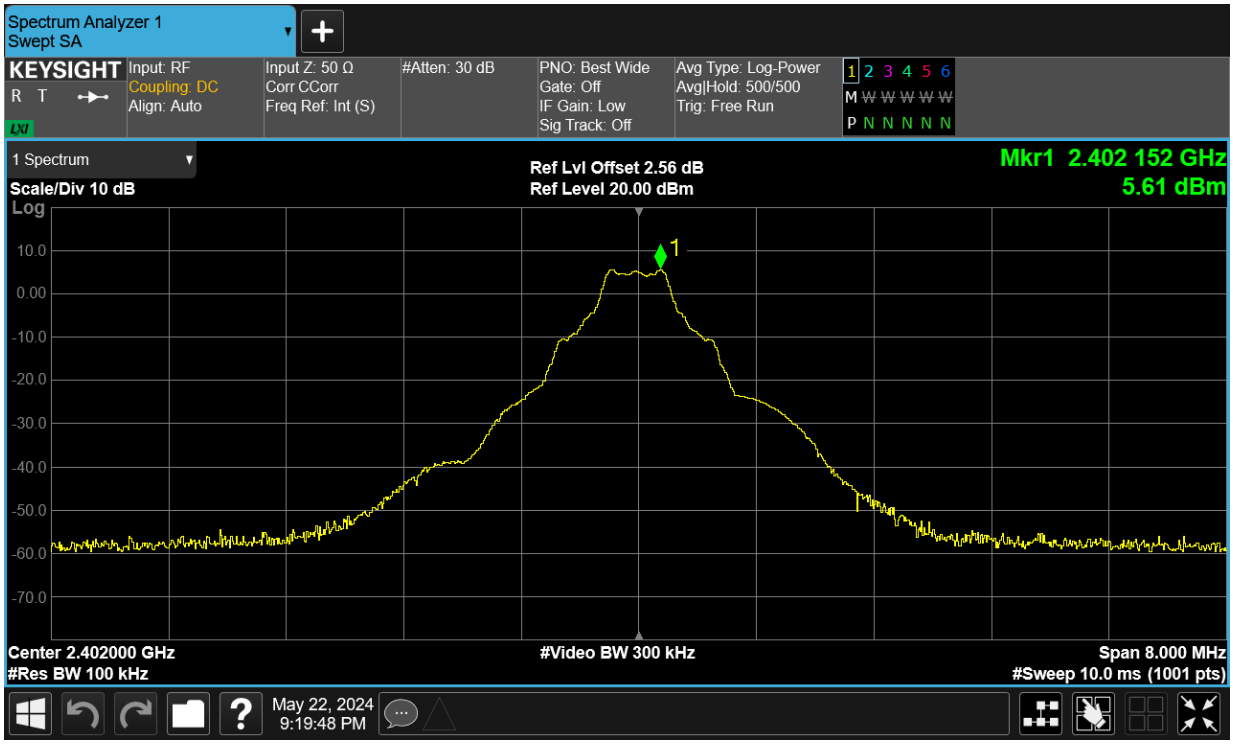

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 40 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold:>100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.60 dB
Ref Level 25.60 dBm
Mkr1 2.478 812 GHz
6.16 dBm
Log
15.6
5.60
-4.40
-14.4
-24.4
-34.4
-44.4
-54.4
-64.4
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 2.478 812 GHz 6.155 dBm
2 N 1 f 2.479 814 GHz 6.118 dBm
3
4
5
6
May 22, 2024
10:05:24 PM

Band Edge

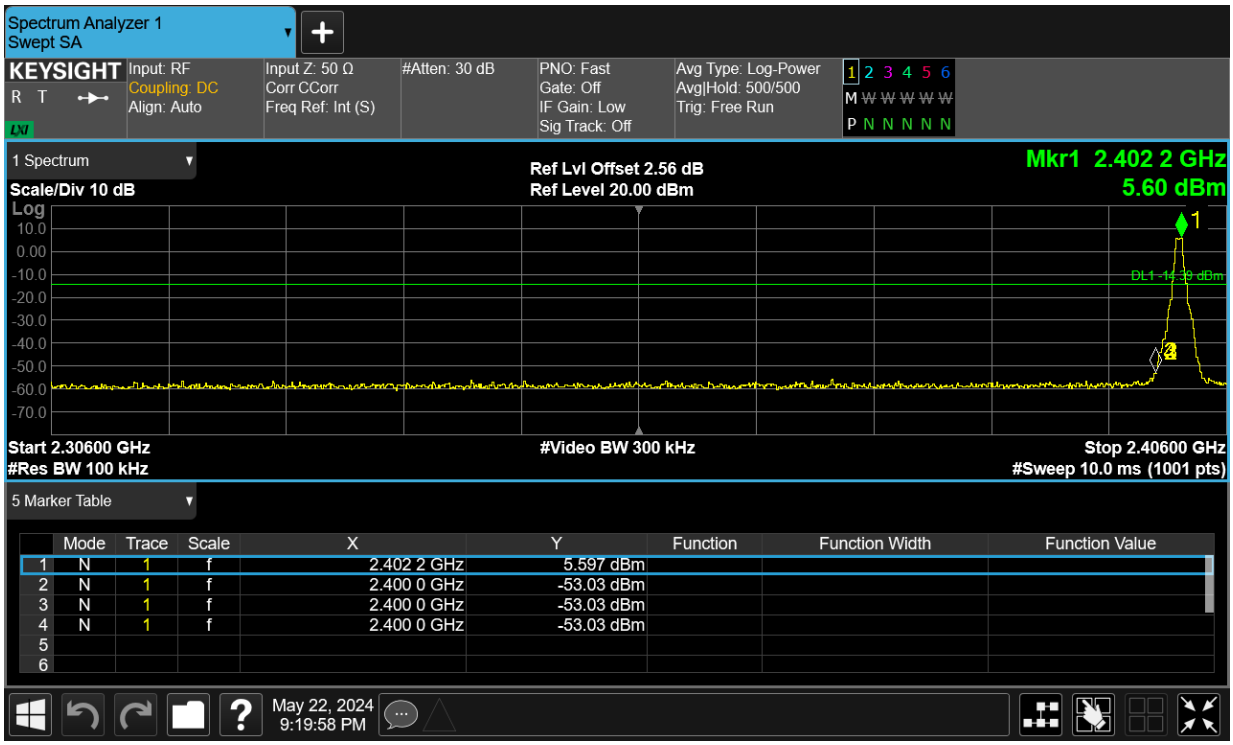
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-58.64	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-61.13	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-44.53	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-61.31	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-44.98	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-61.76	-20	Pass

Test Graphs

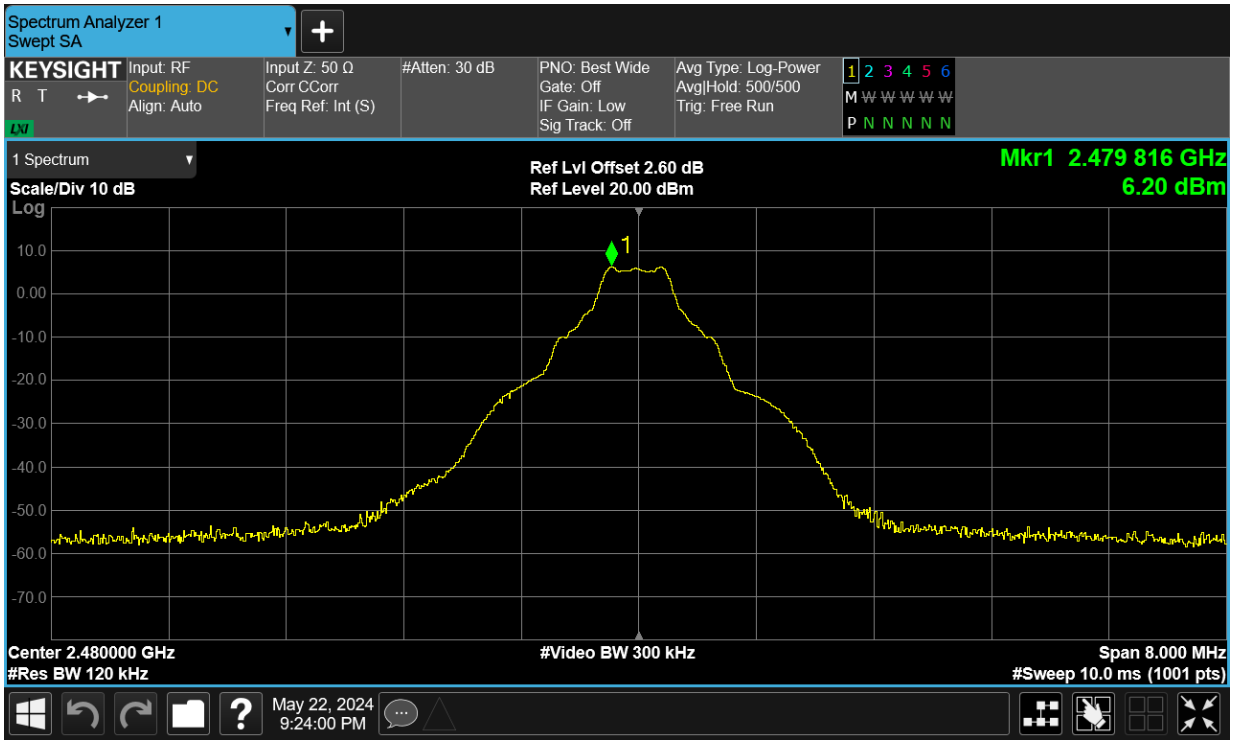
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



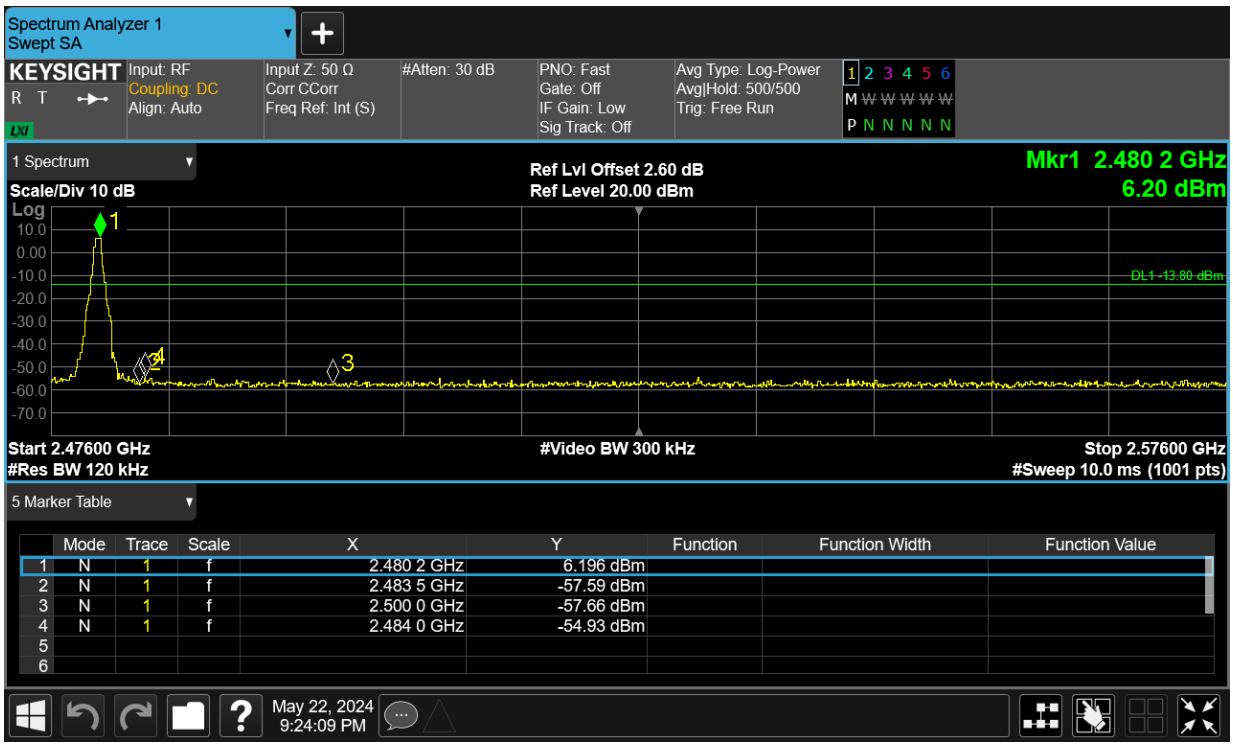
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



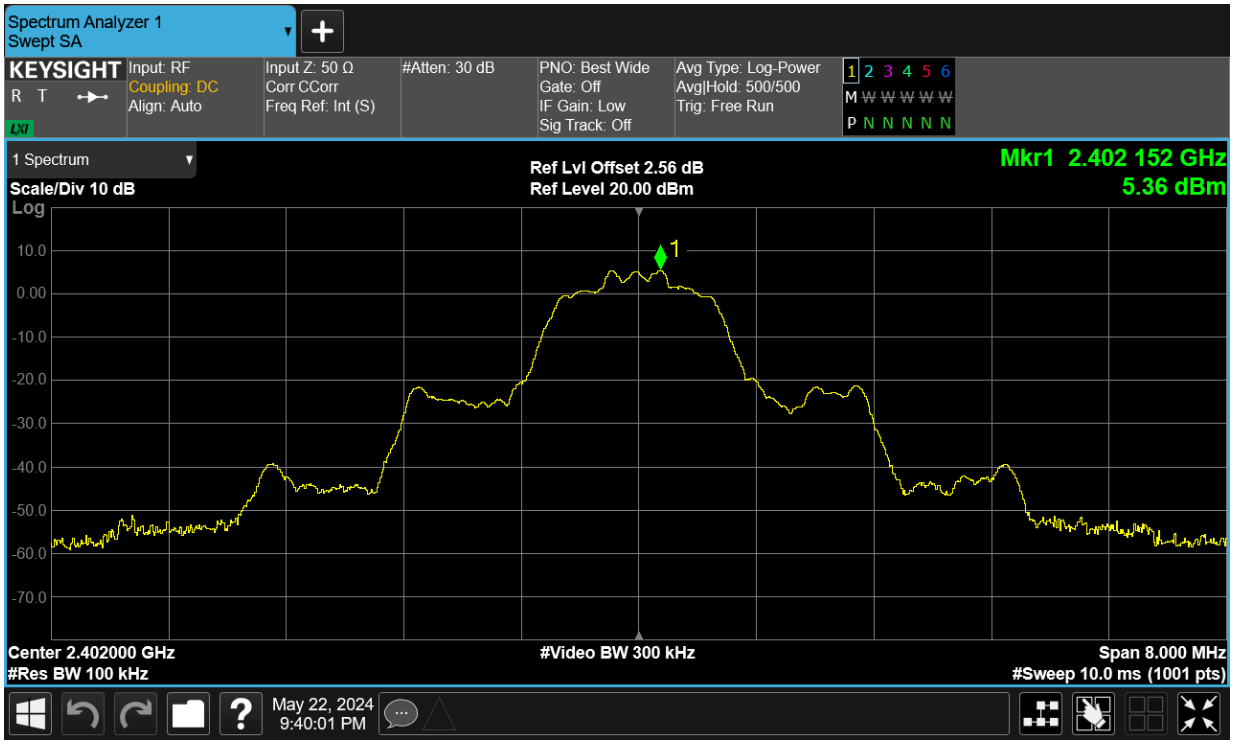
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



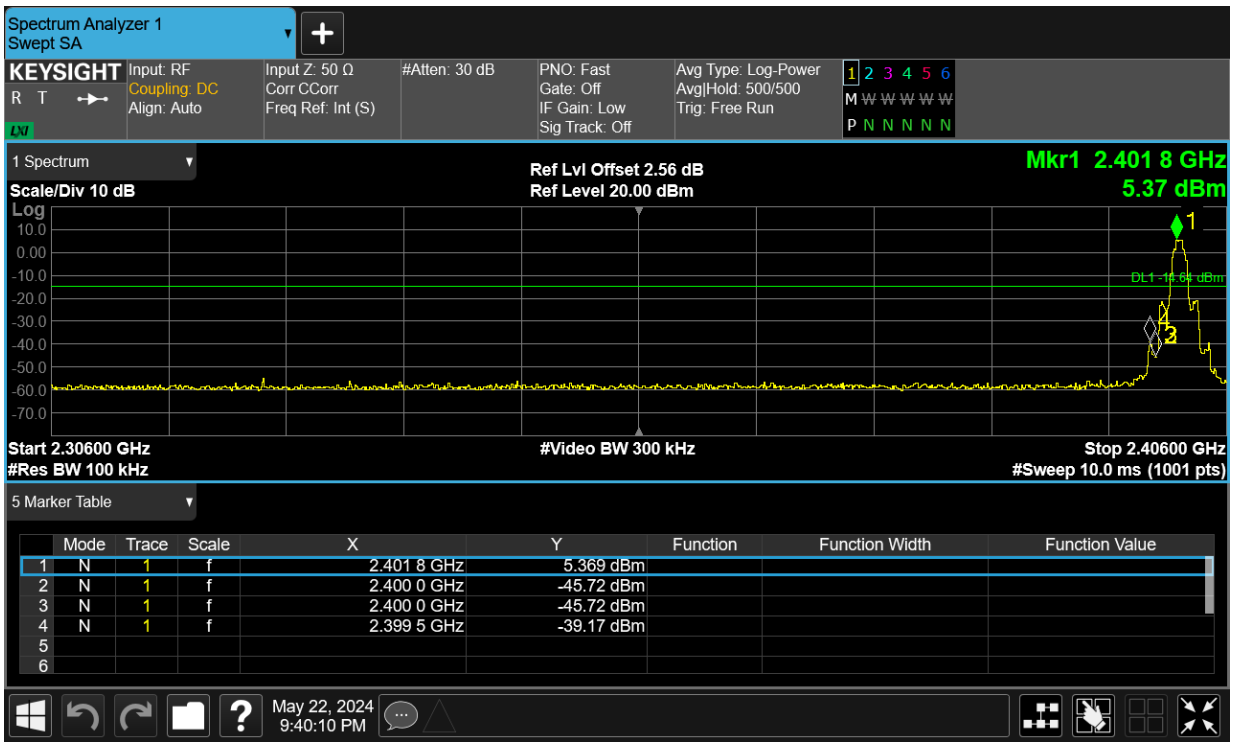
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



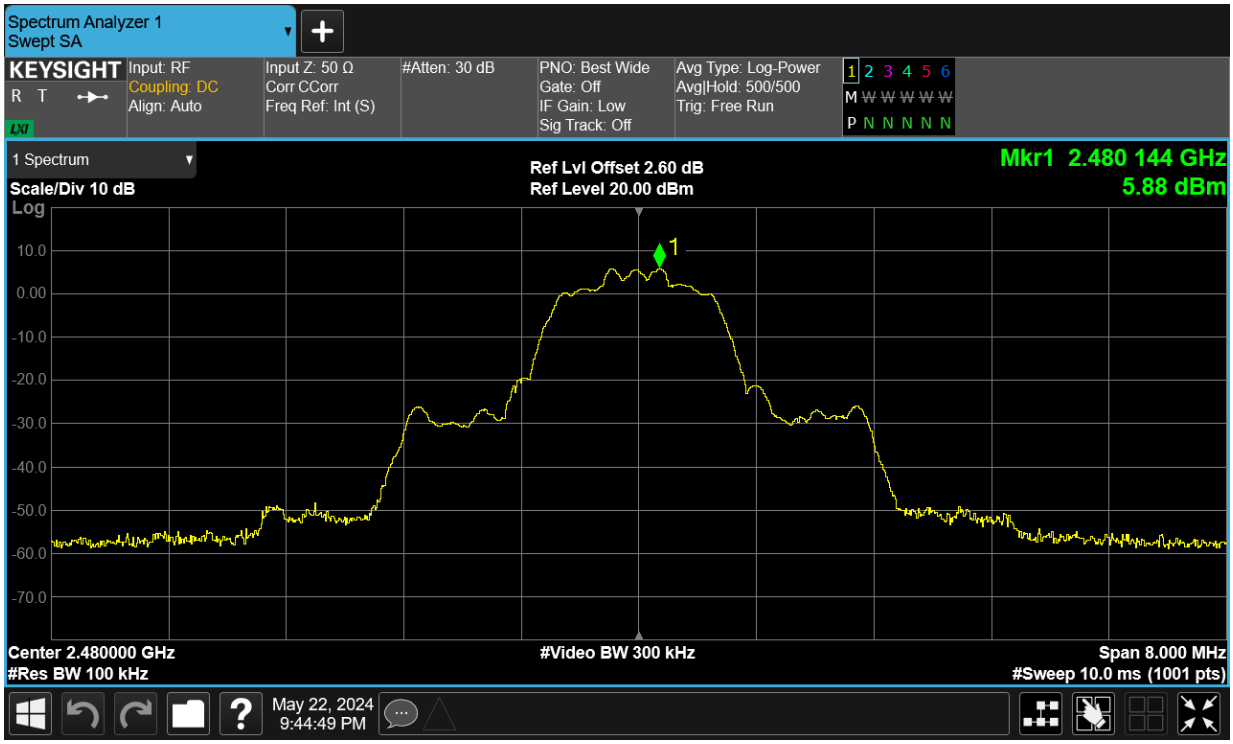
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



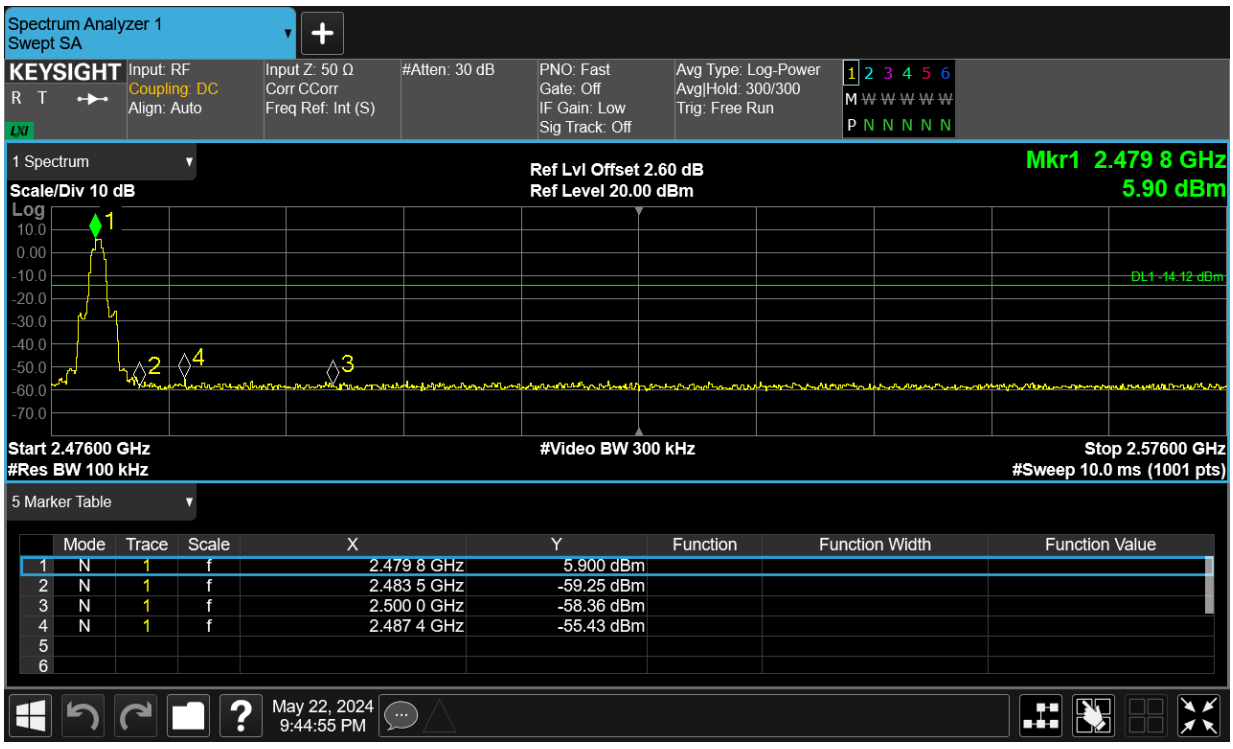
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



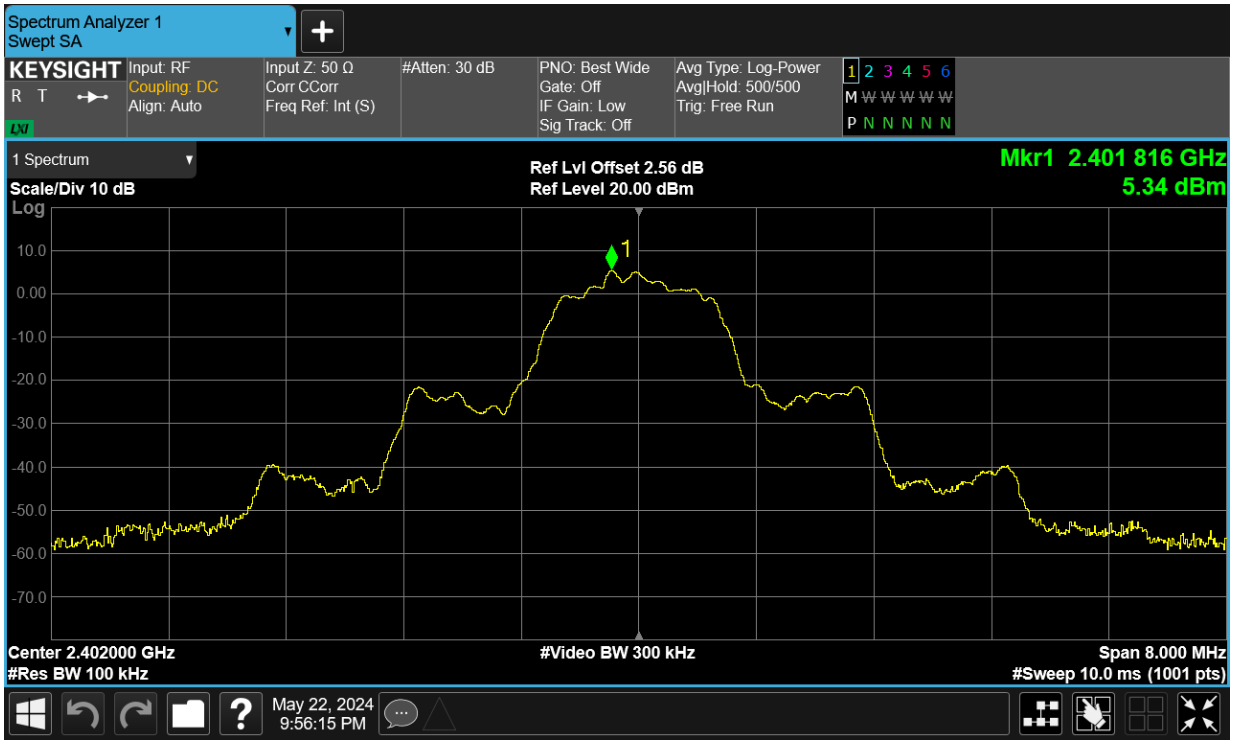
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



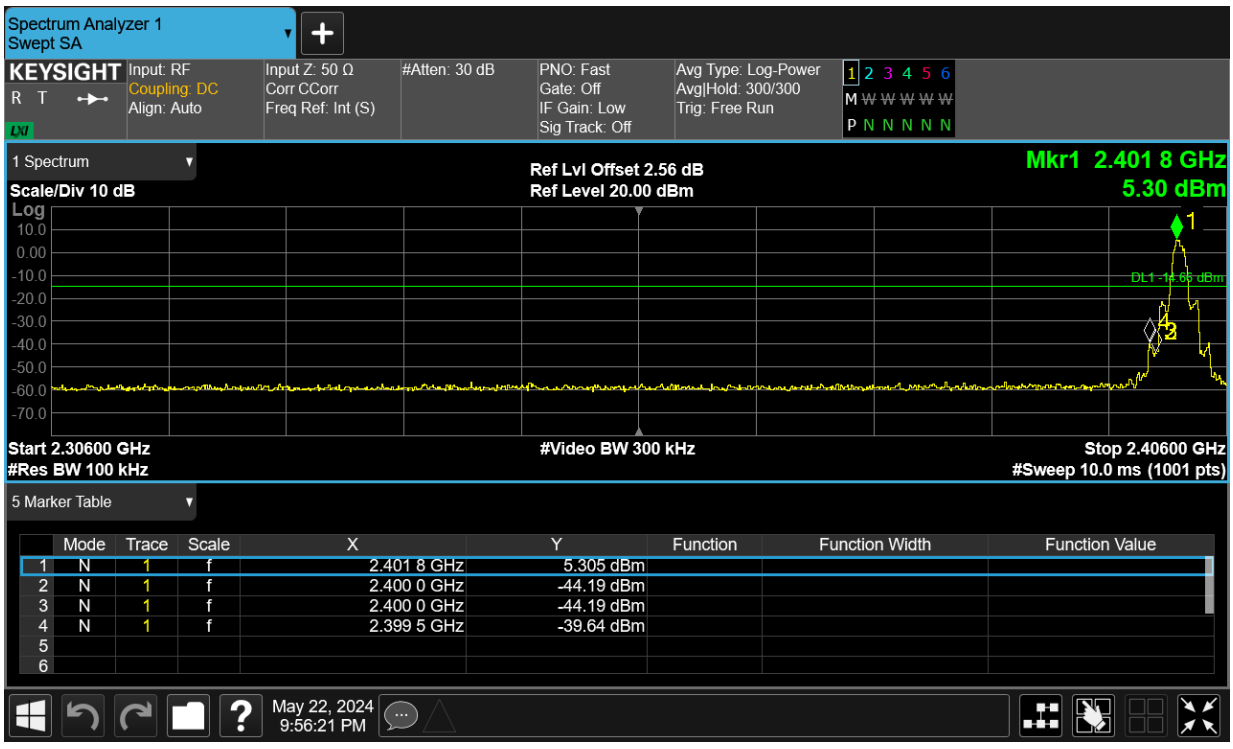
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



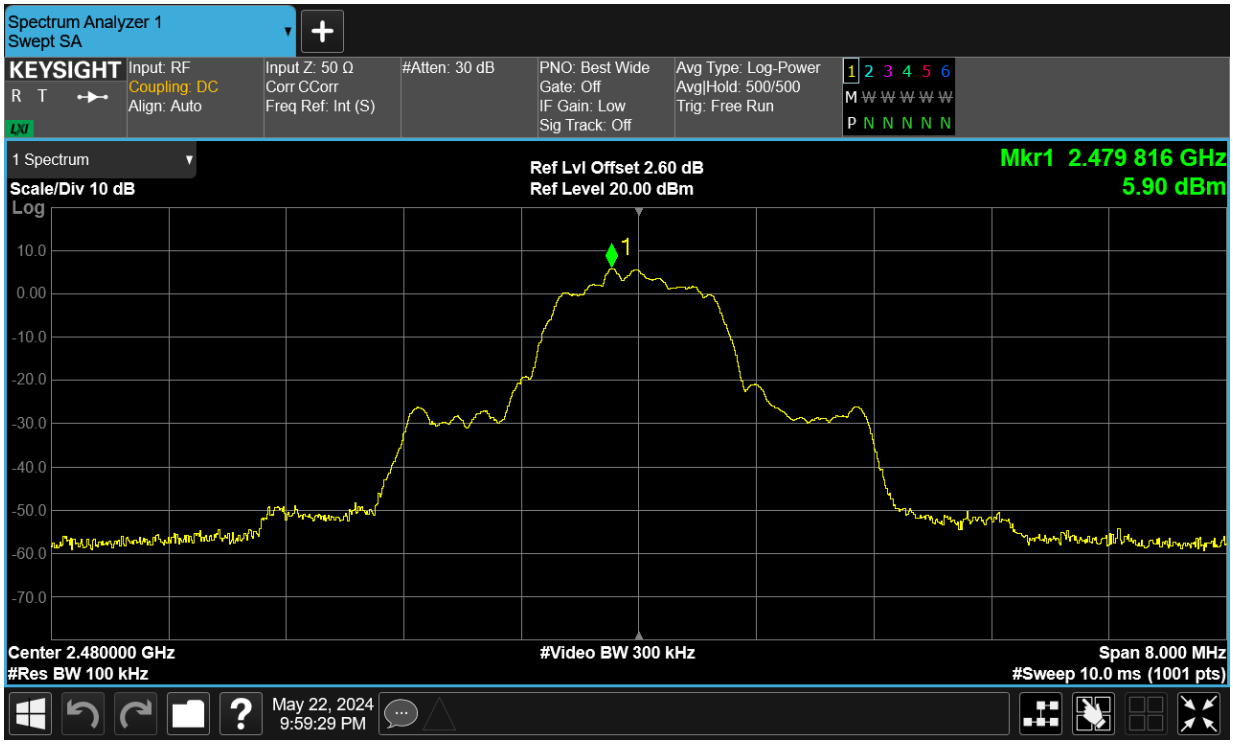
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



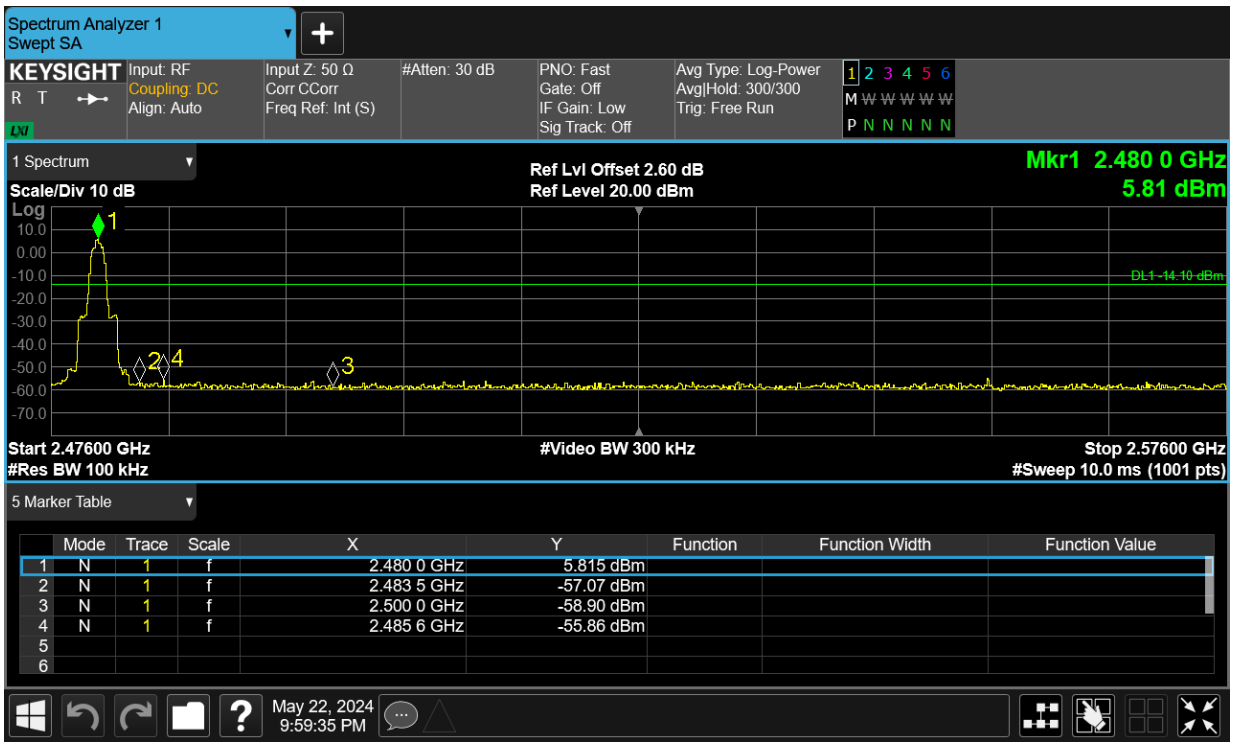
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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

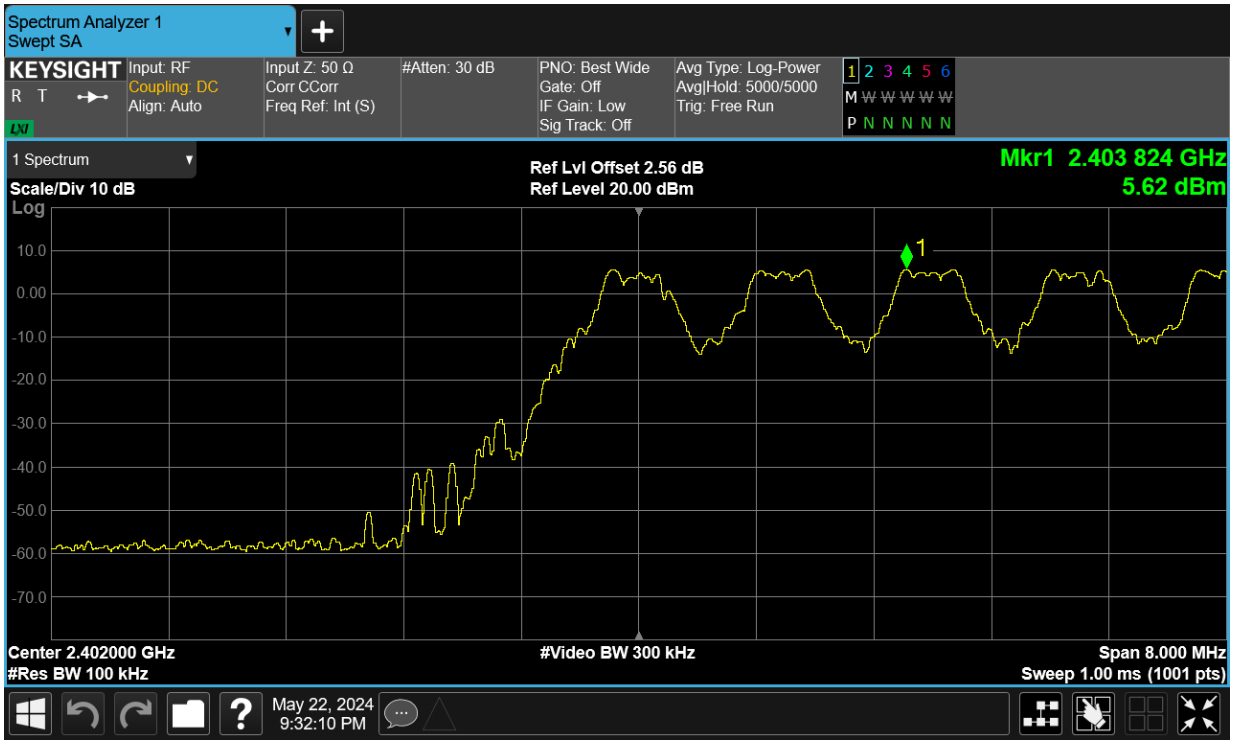


Band Edge(Hopping)

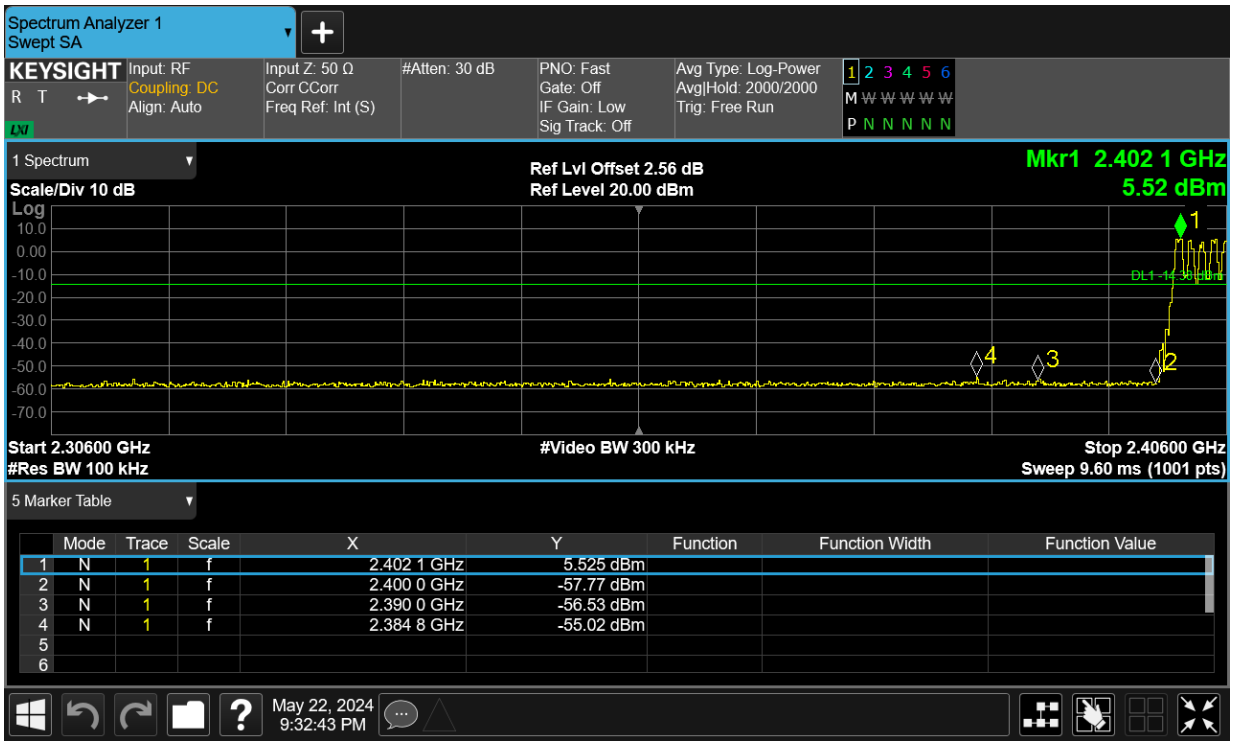
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-60.64	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-61.44	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-60.23	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-61.24	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-60.83	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-61.43	-20	Pass

Test Graphs

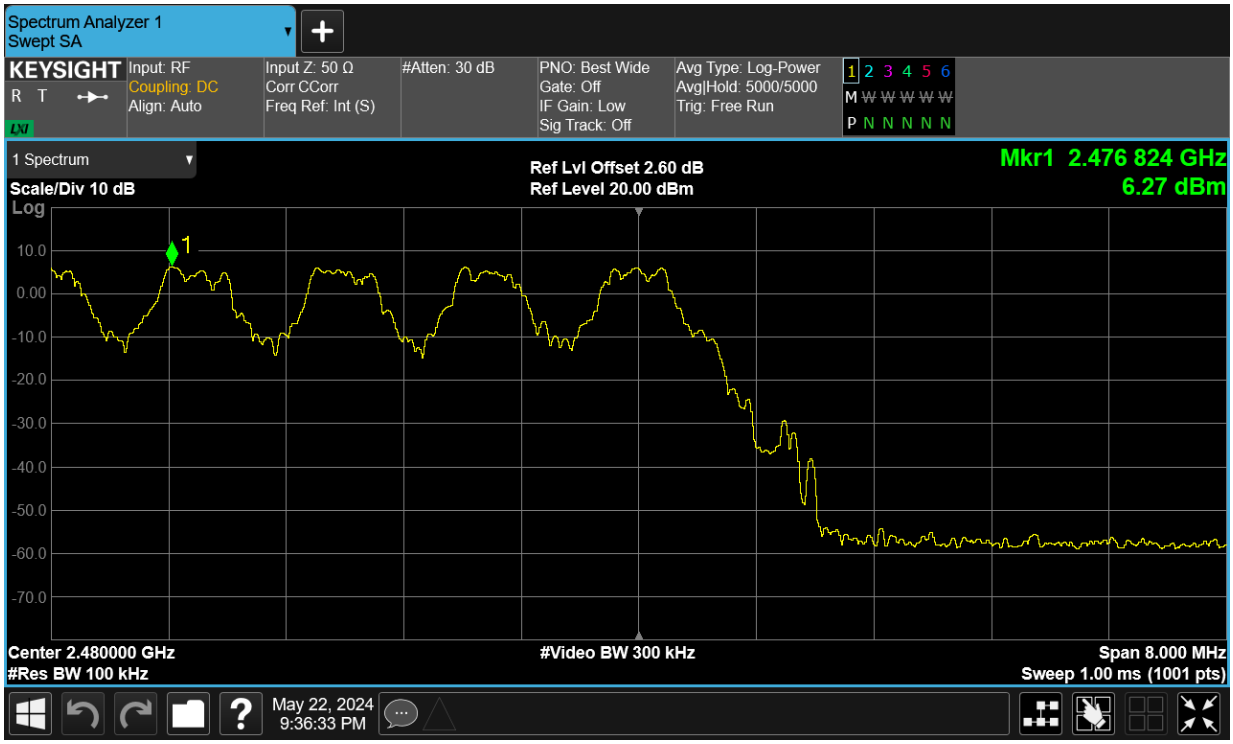
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



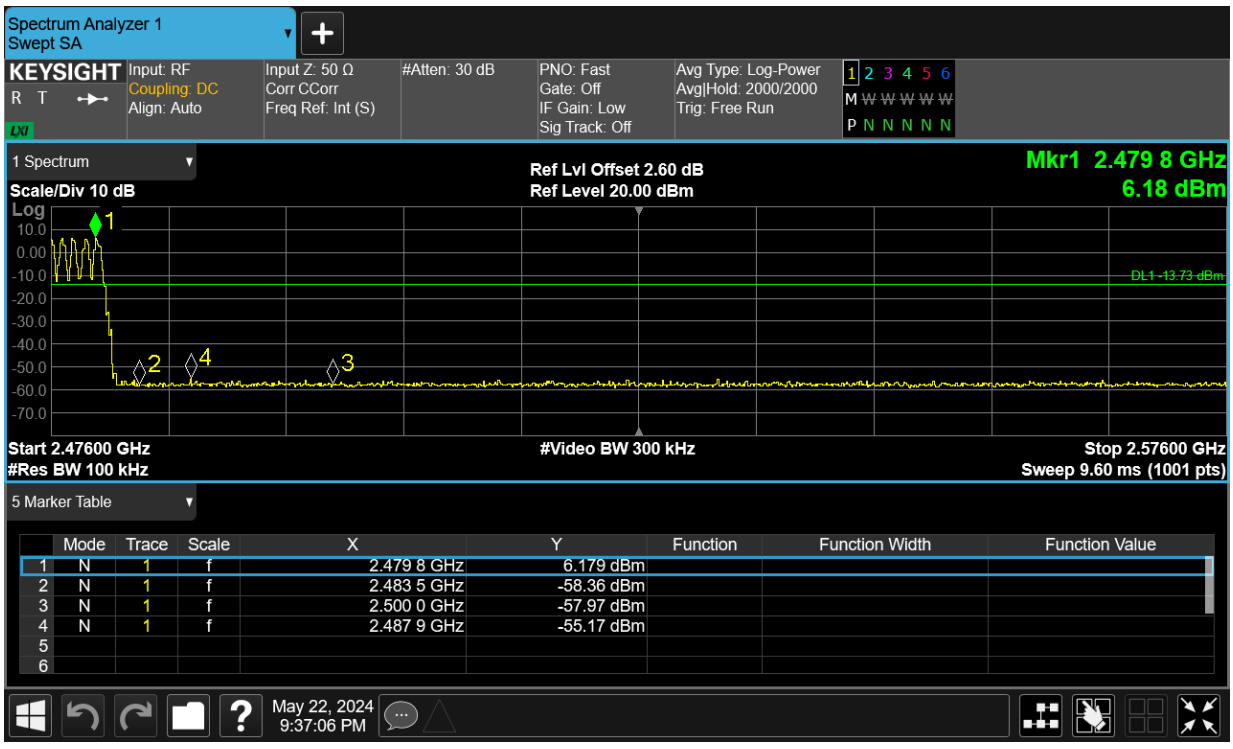
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



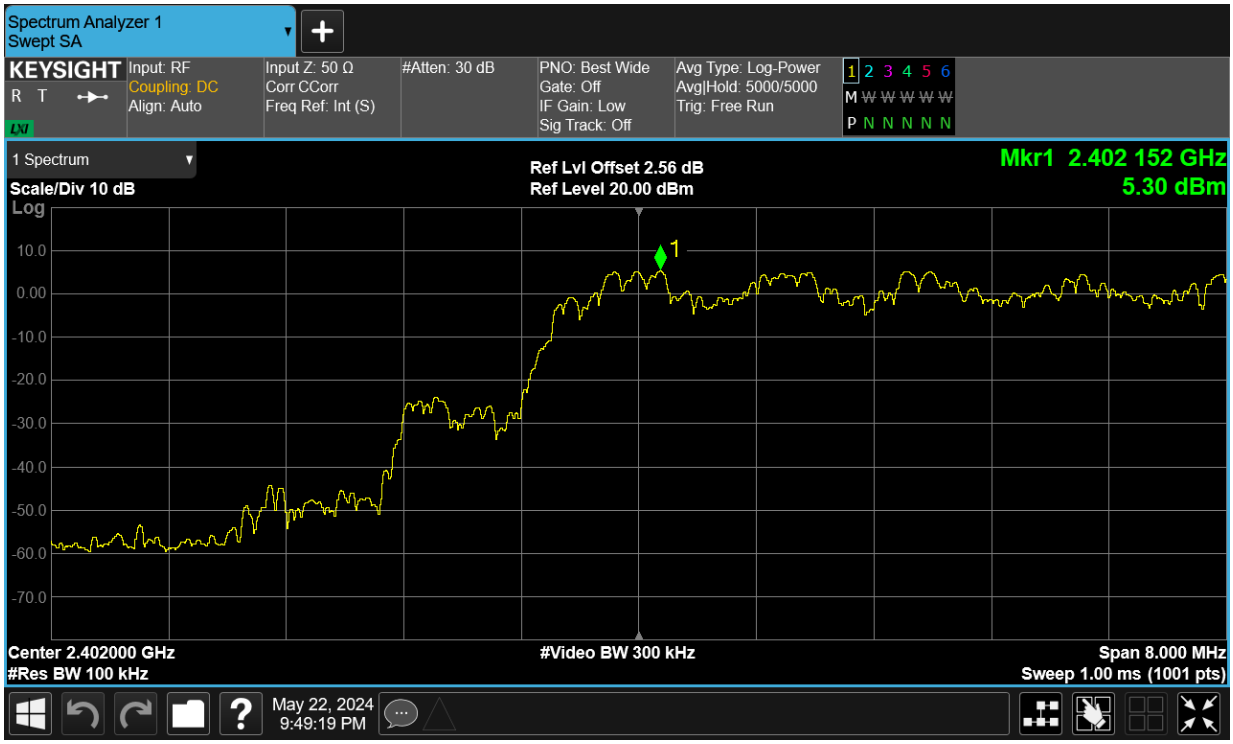
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



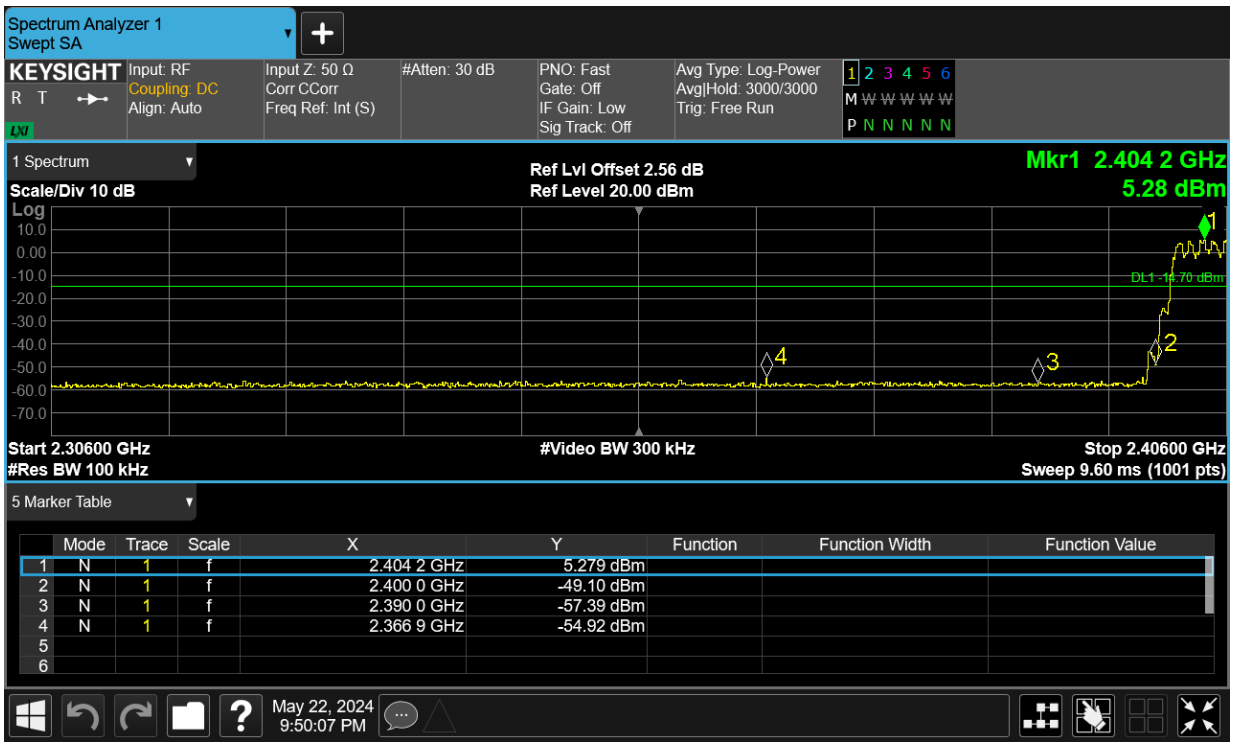
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



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

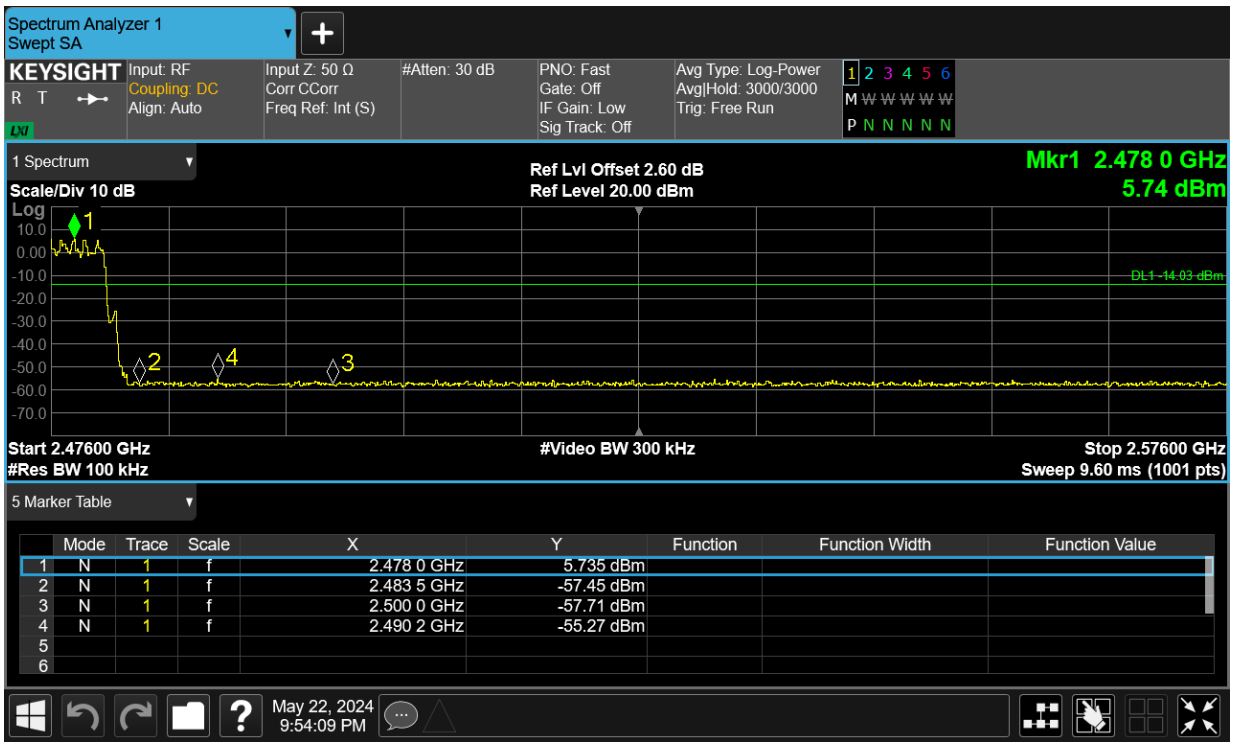


Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission

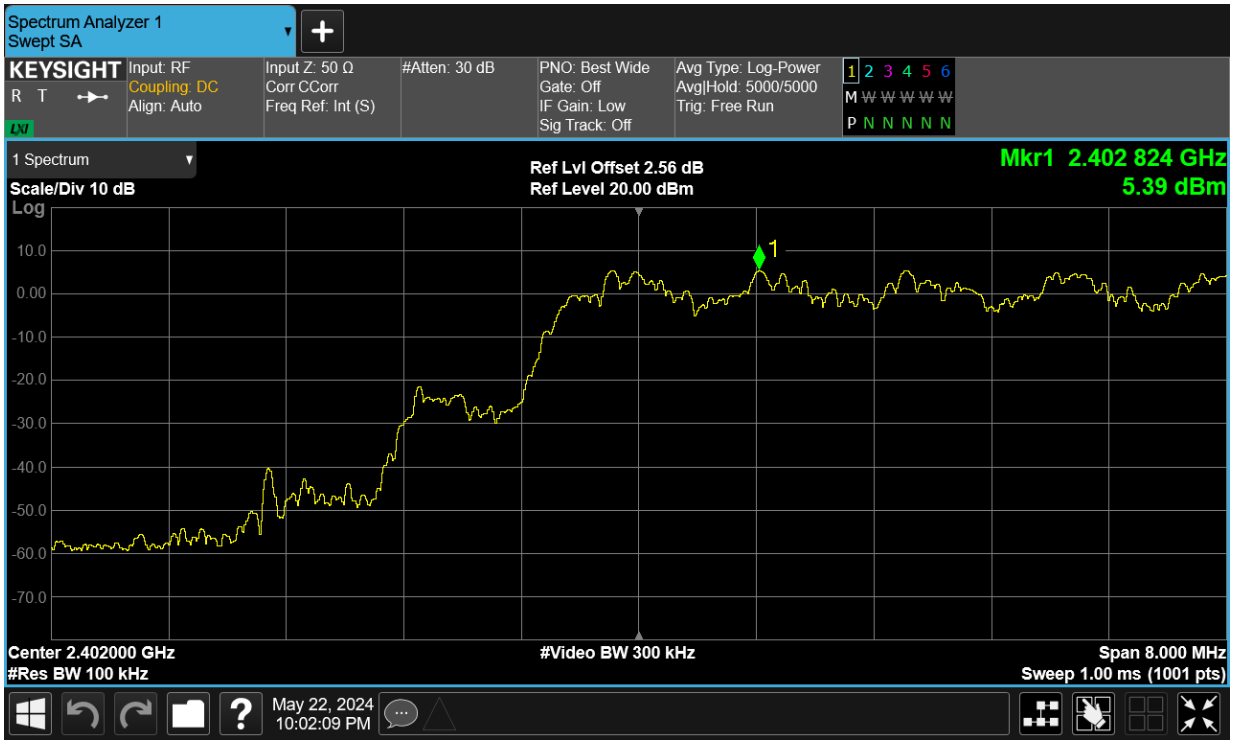


Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref

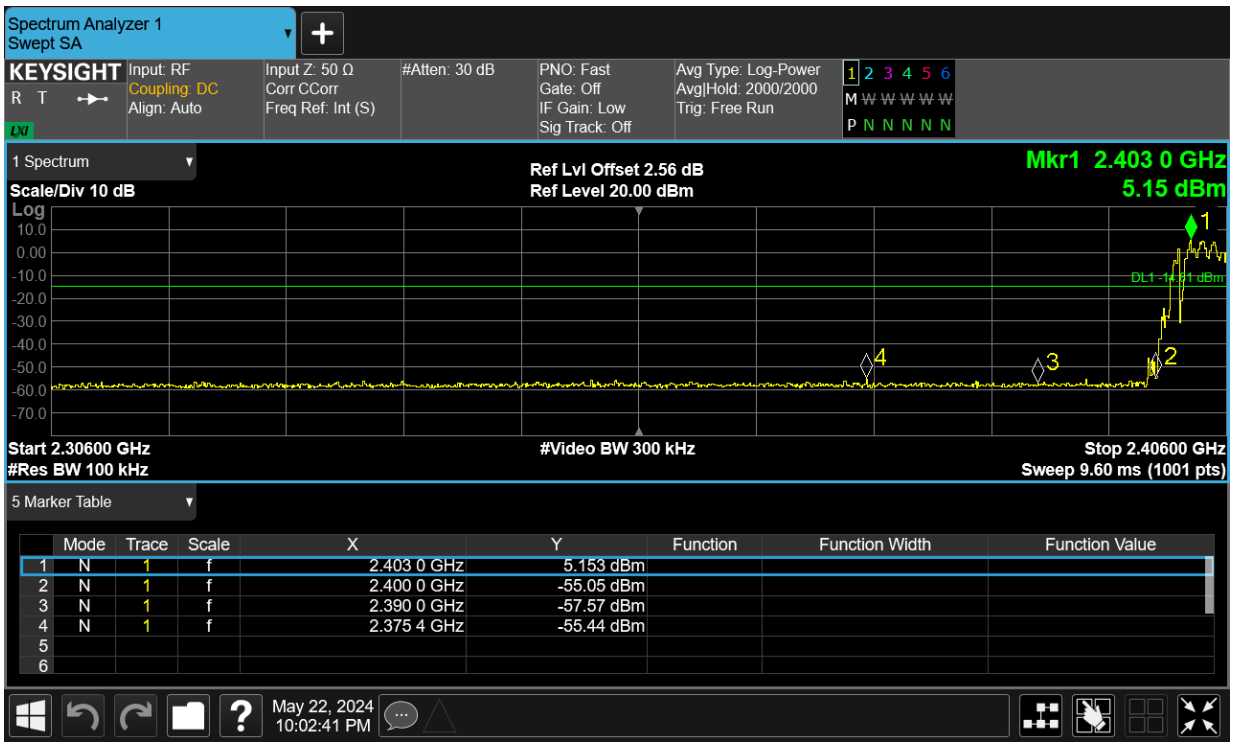
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



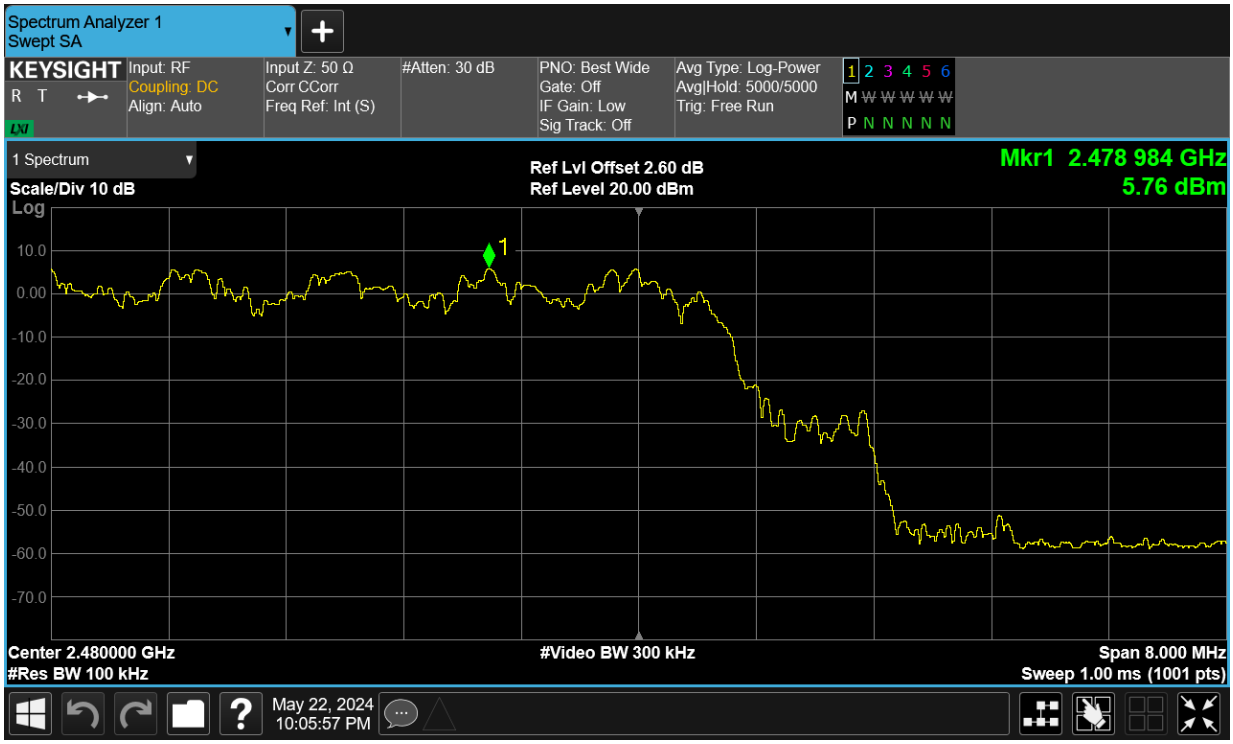
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



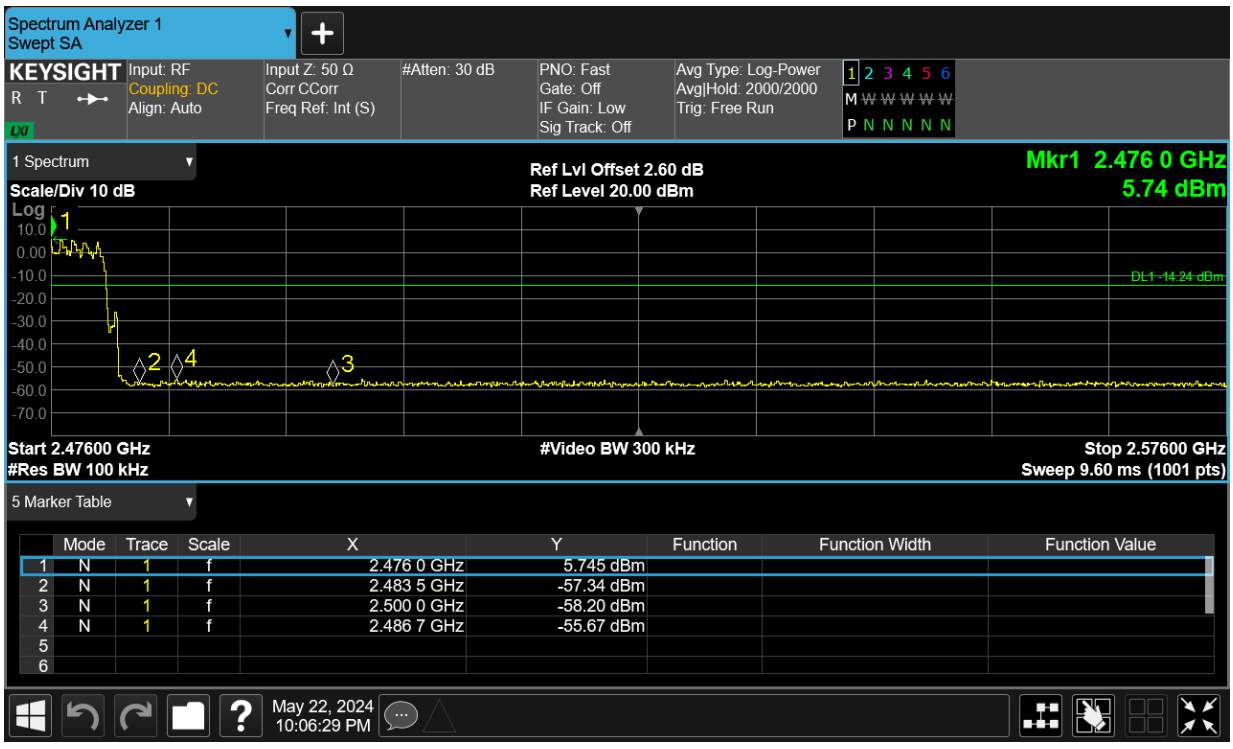
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



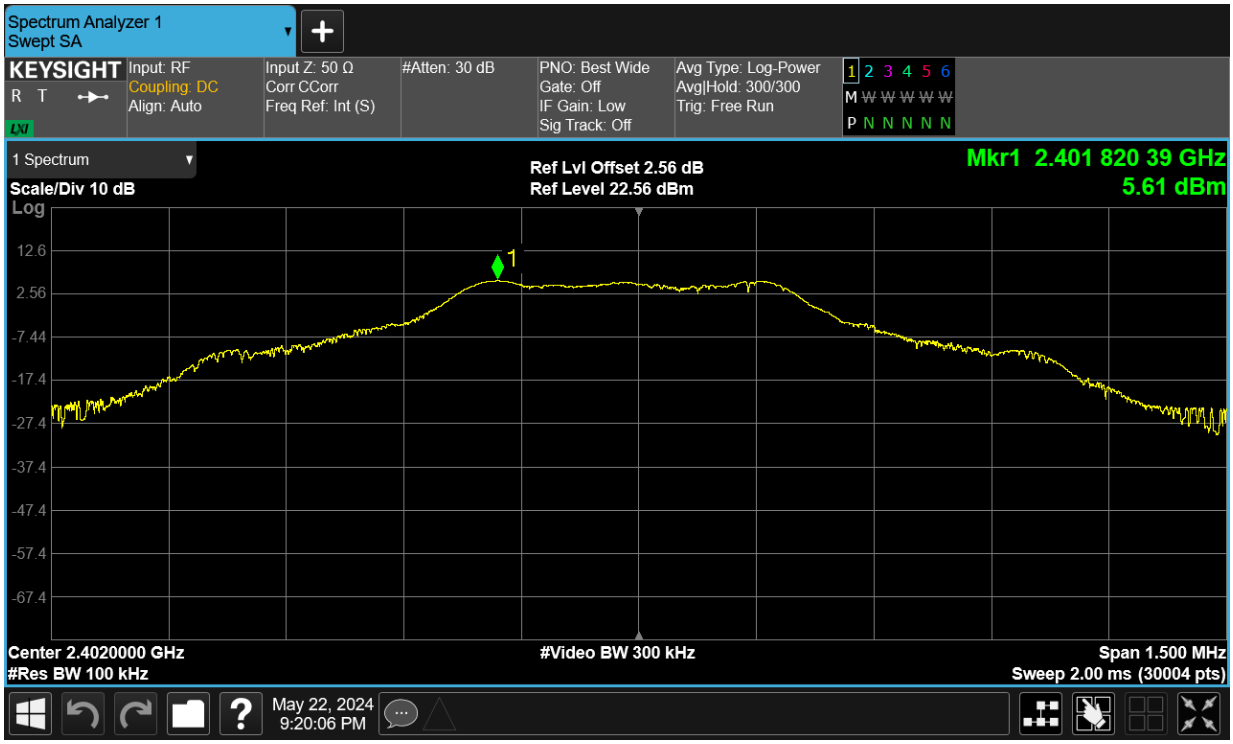
Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Emission



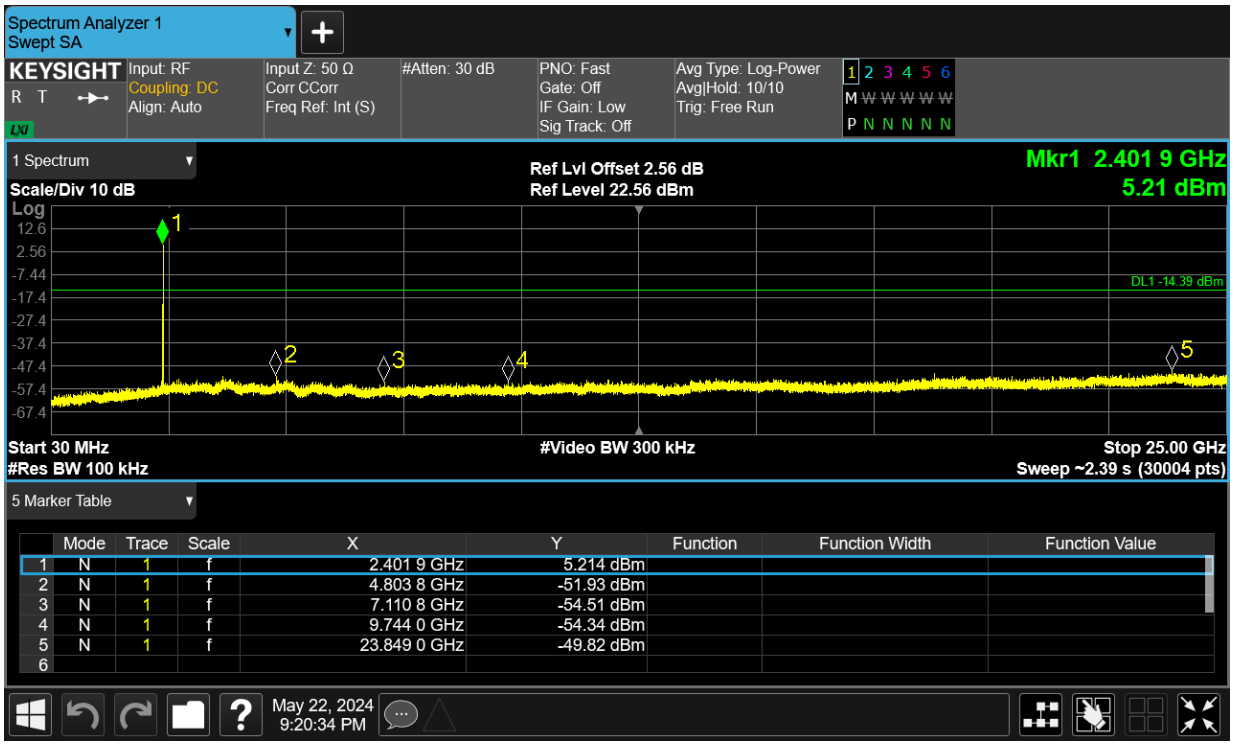
Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-55.43	-20	Pass
NVNT	1-DH1	2441	Ant1	-55.57	-20	Pass
NVNT	1-DH1	2480	Ant1	-54.68	-20	Pass
NVNT	2-DH1	2402	Ant1	-55.44	-20	Pass
NVNT	2-DH1	2441	Ant1	-55.7	-20	Pass
NVNT	2-DH1	2480	Ant1	-55.54	-20	Pass
NVNT	3-DH1	2402	Ant1	-54.73	-20	Pass
NVNT	3-DH1	2441	Ant1	-55.24	-20	Pass
NVNT	3-DH1	2480	Ant1	-55.29	-20	Pass

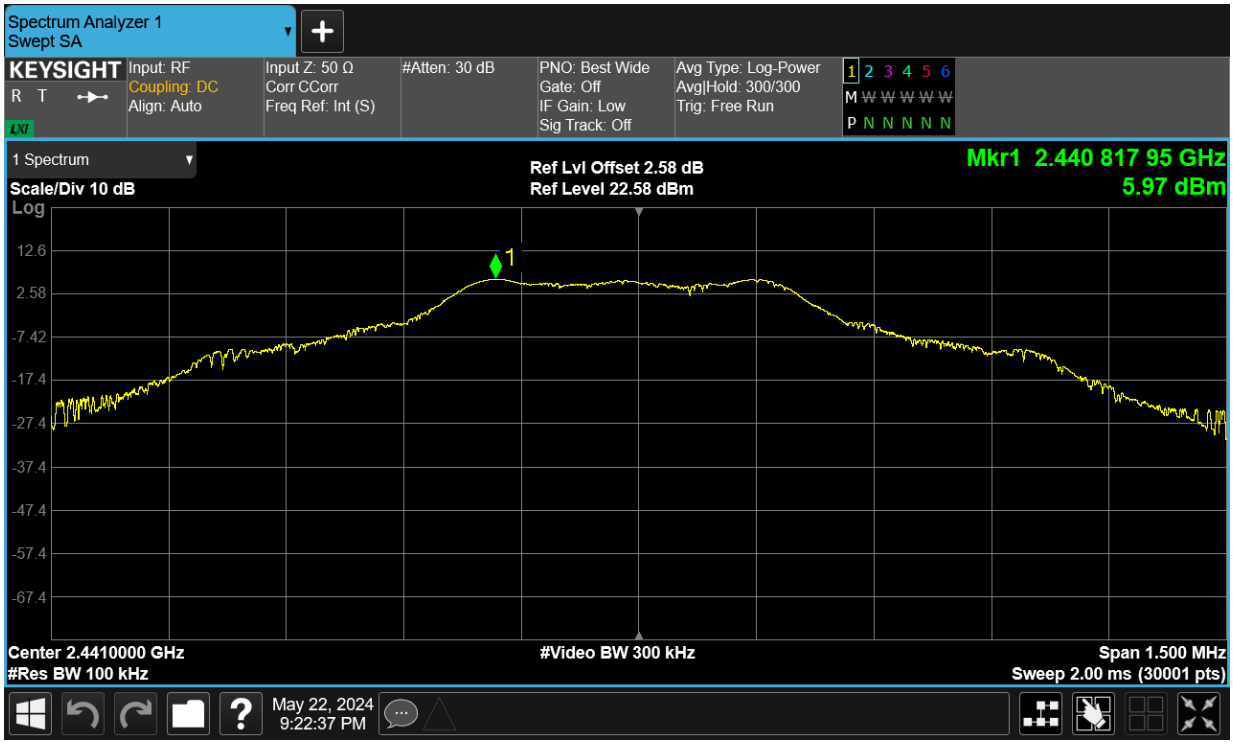
Test Graphs
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



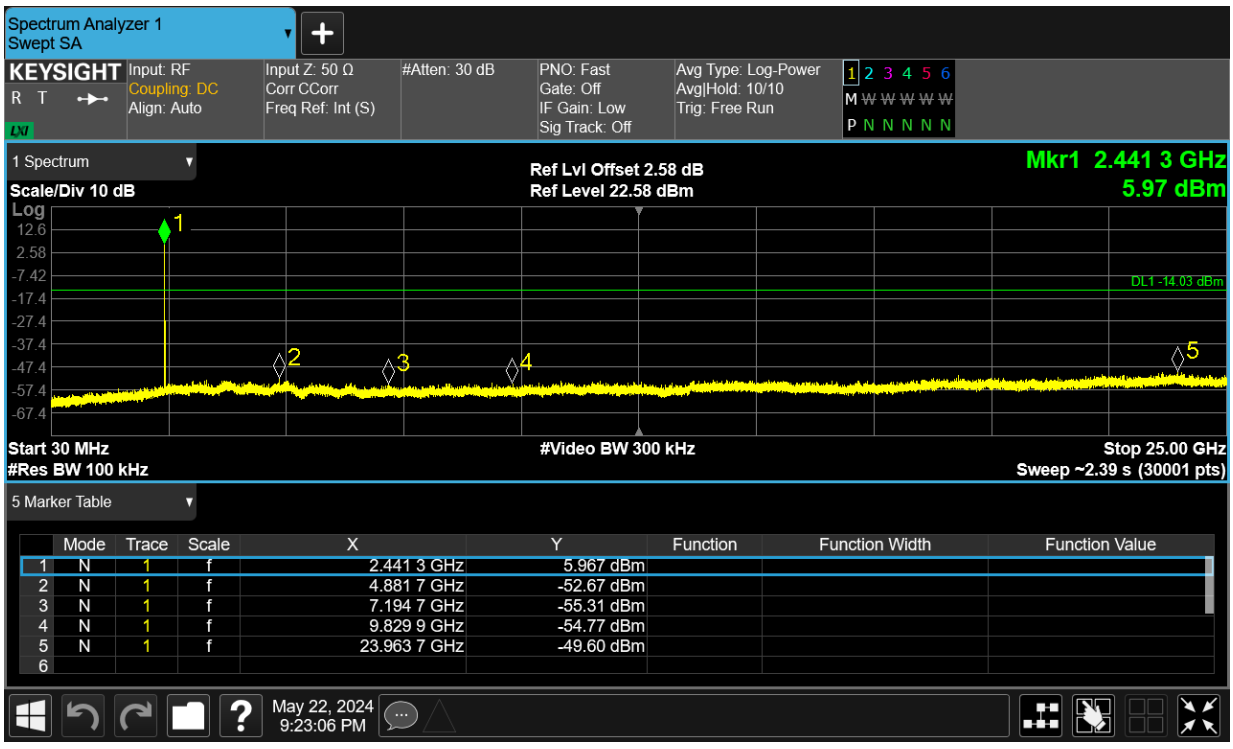
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



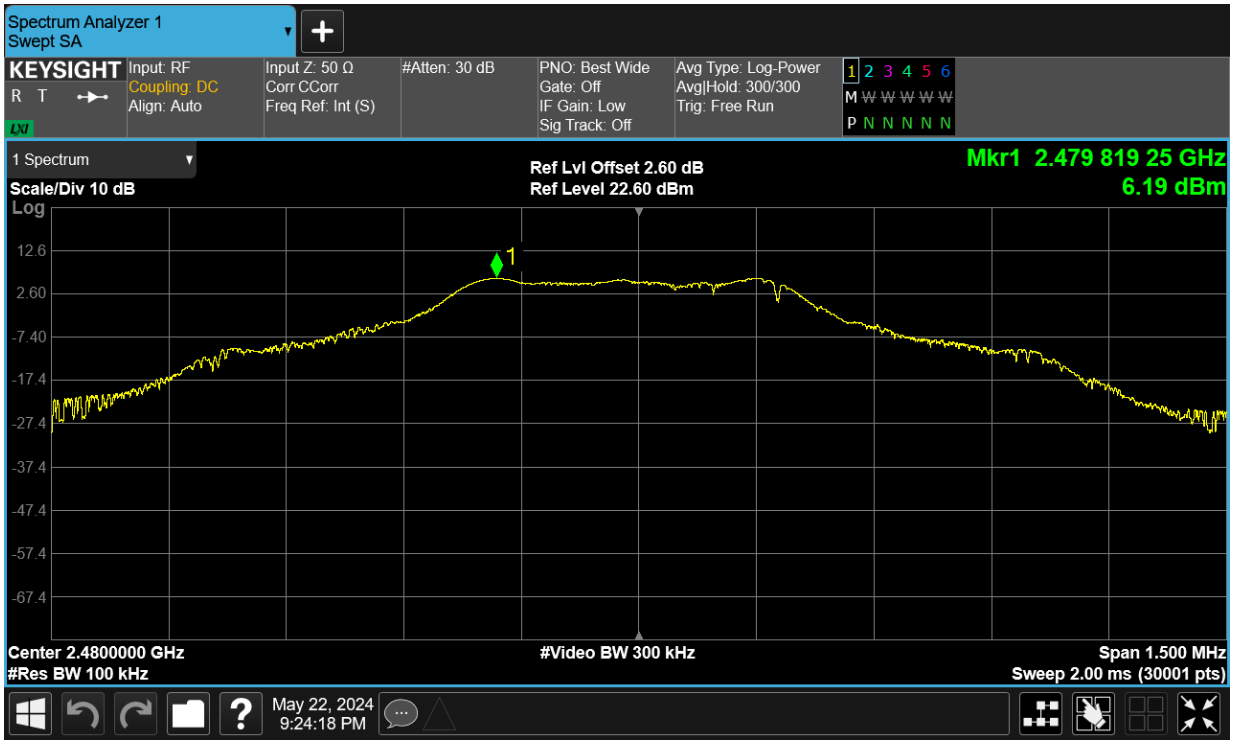
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



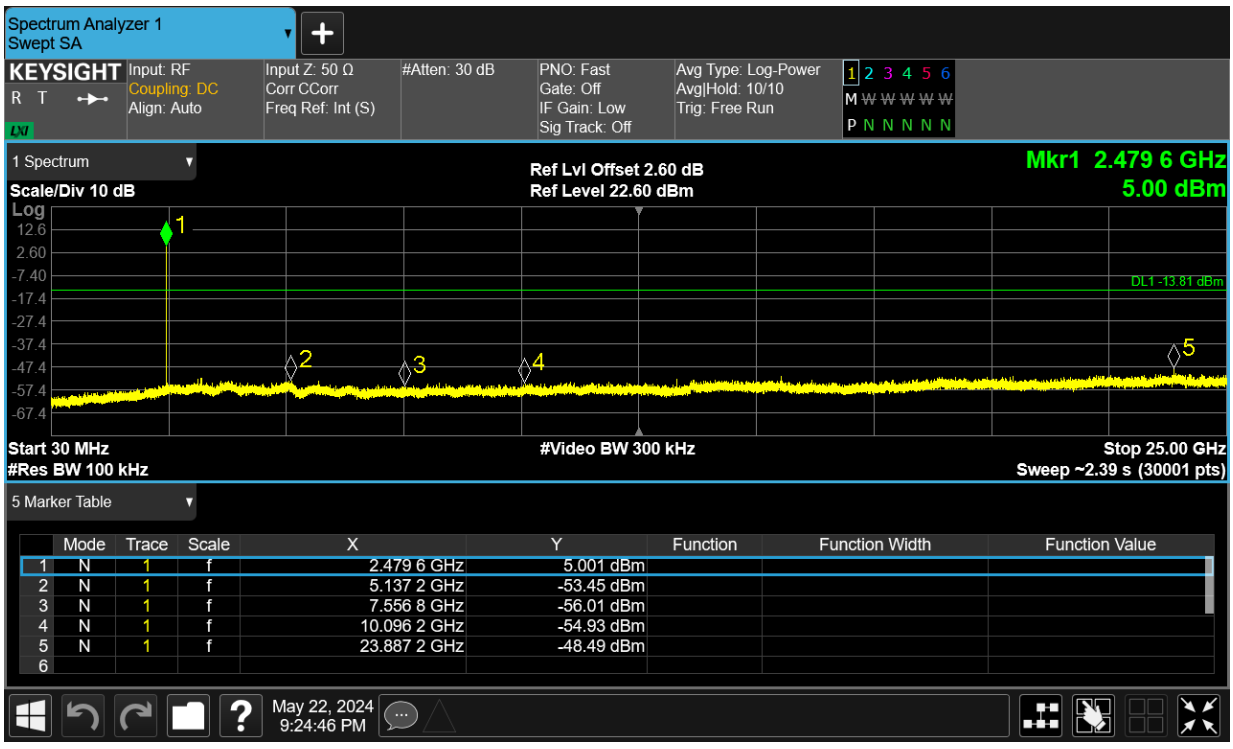
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



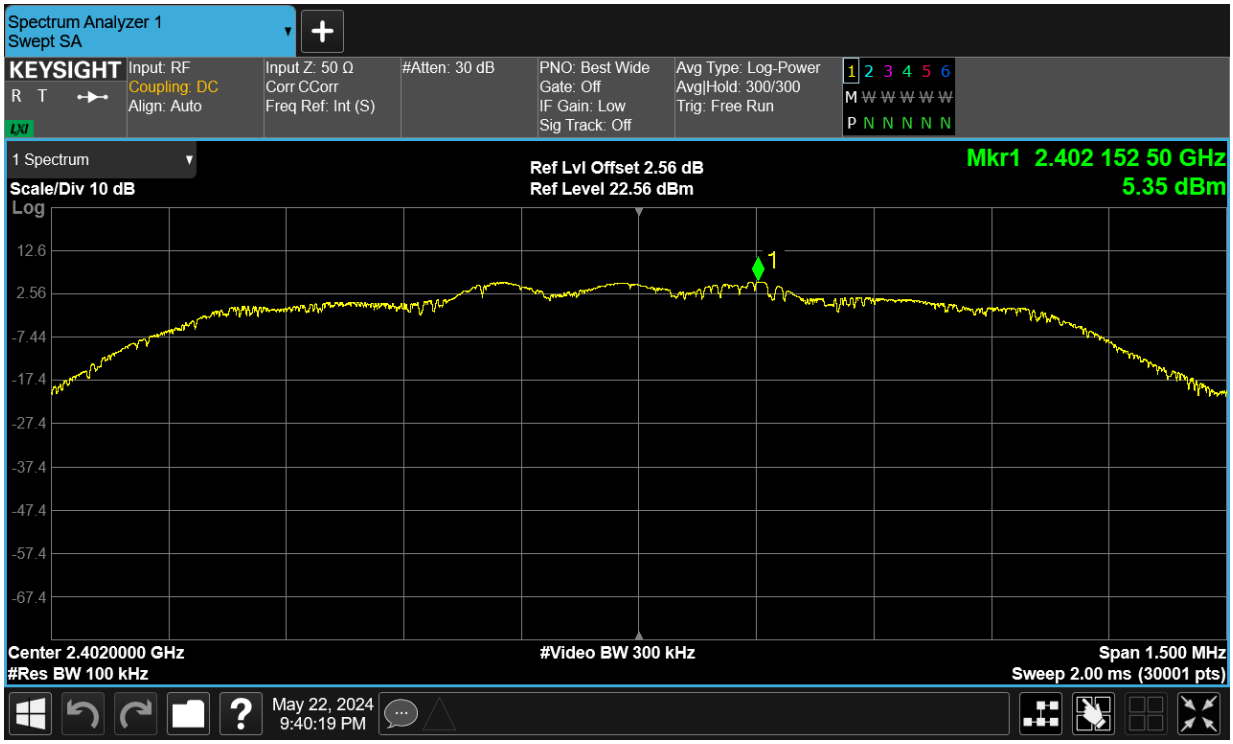
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



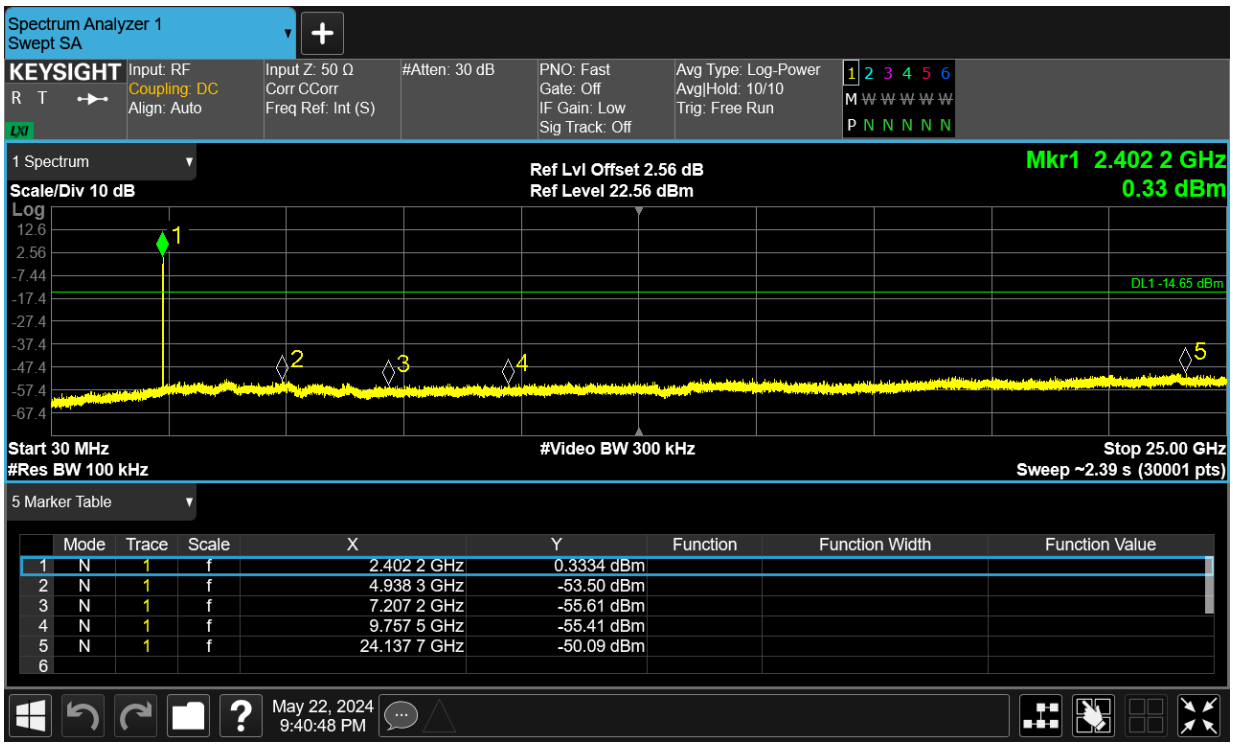
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



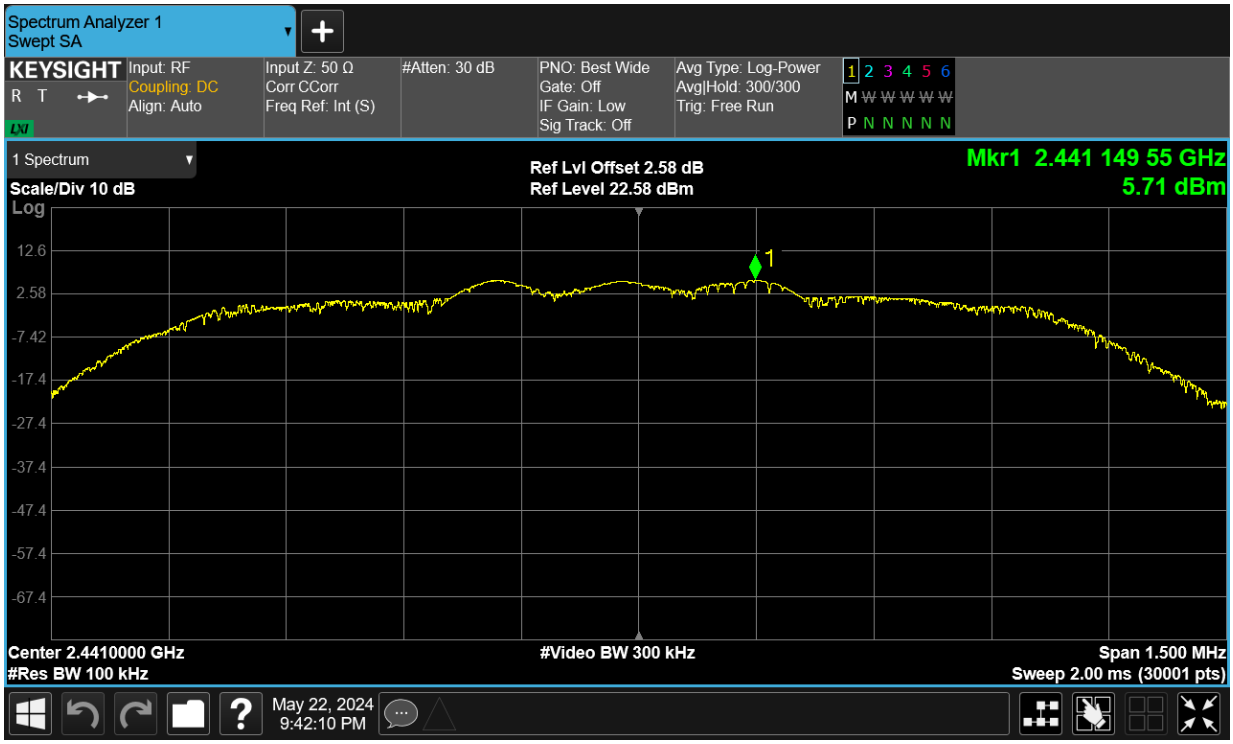
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



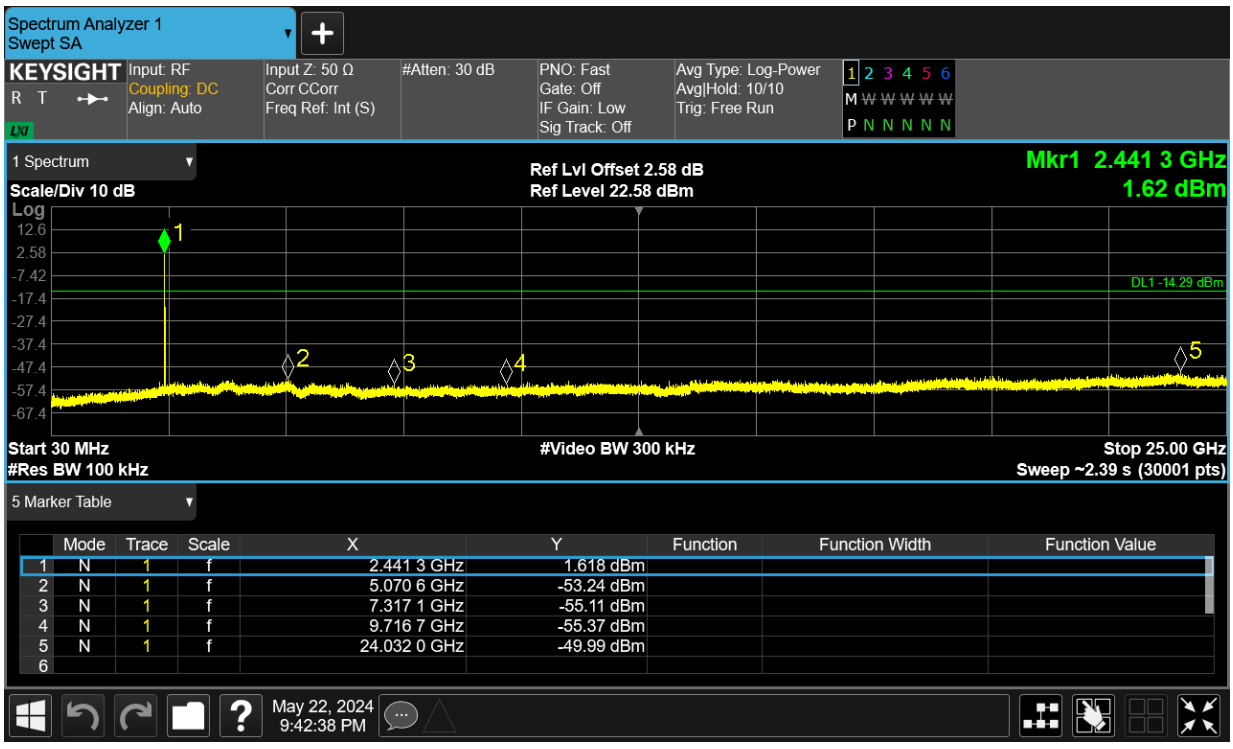
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



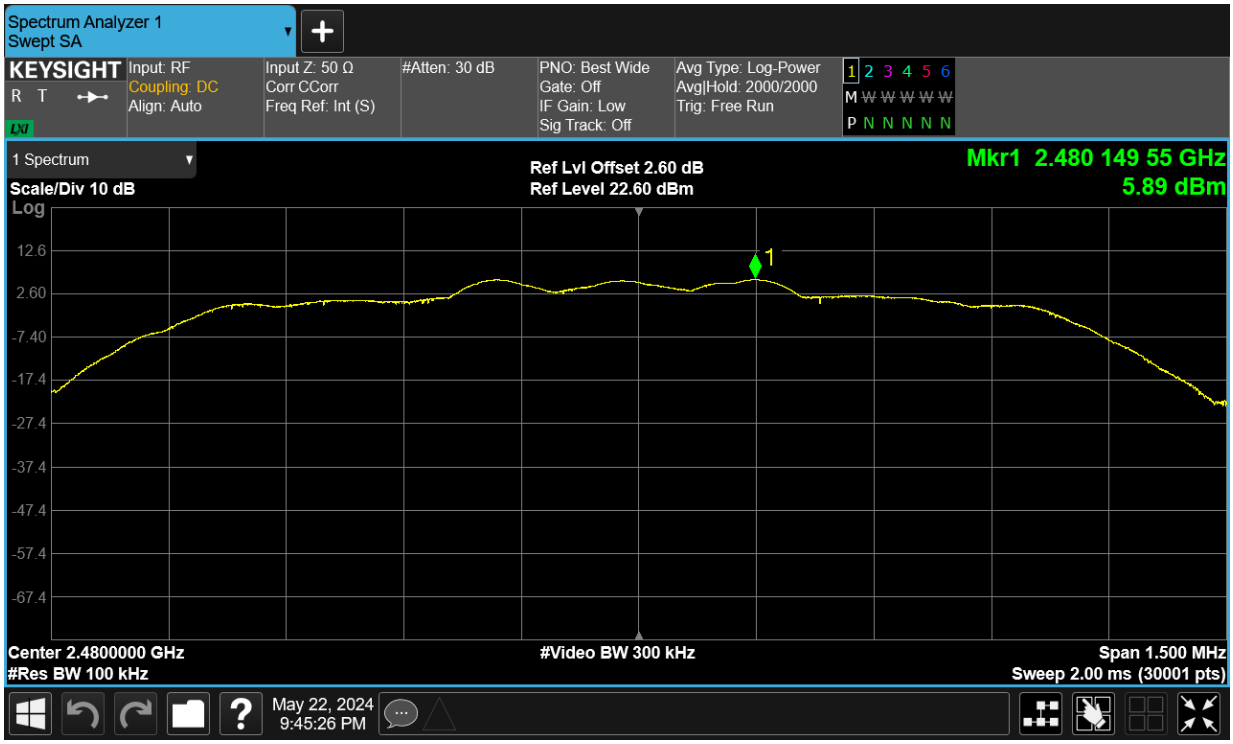
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



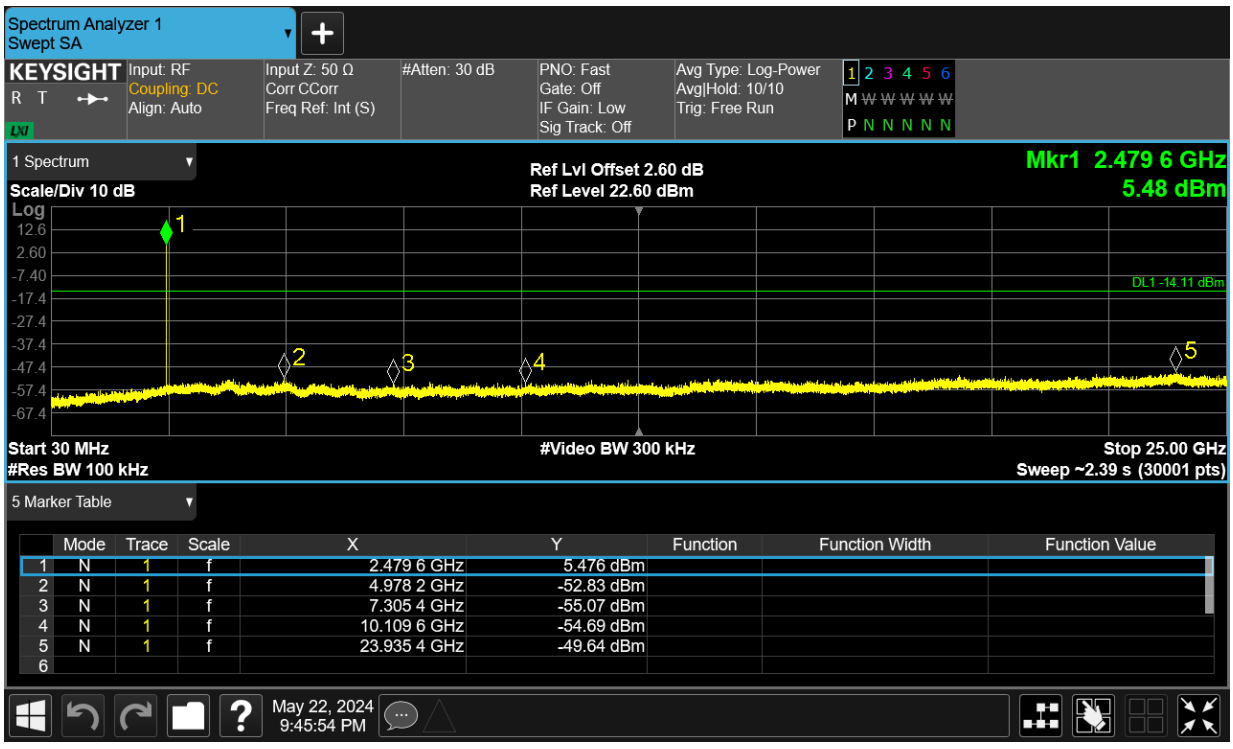
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



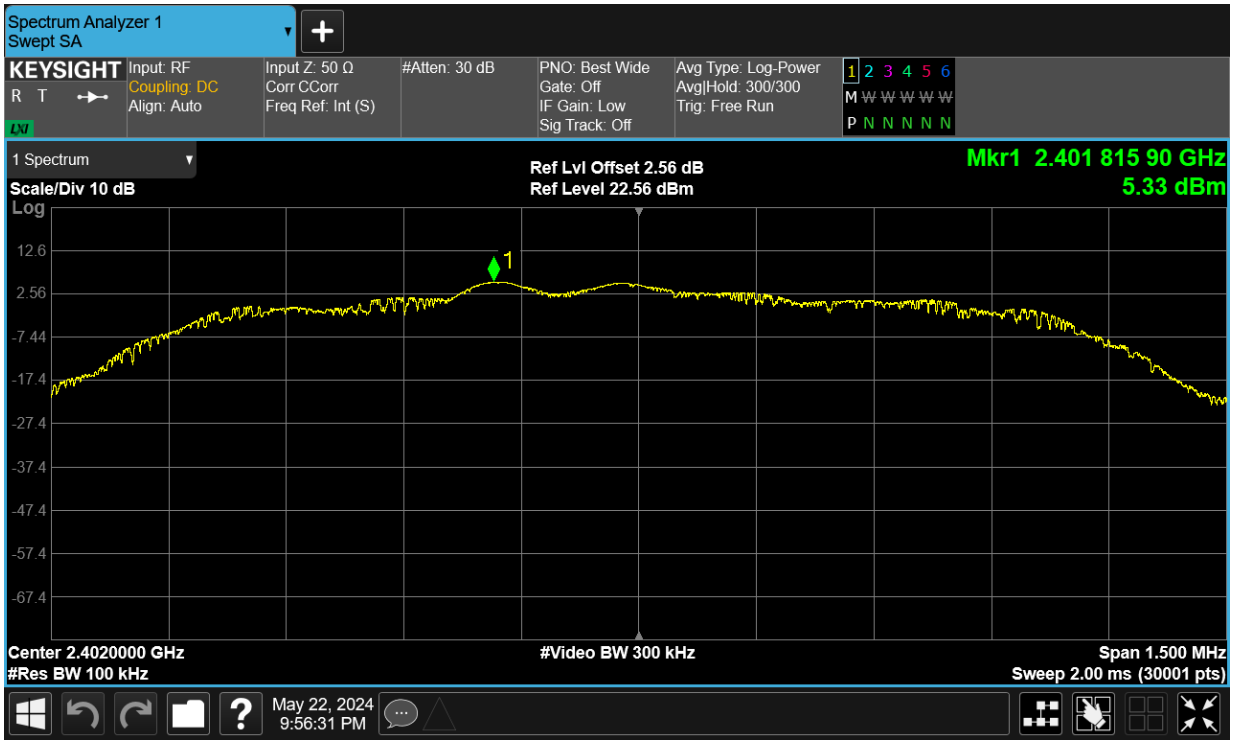
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



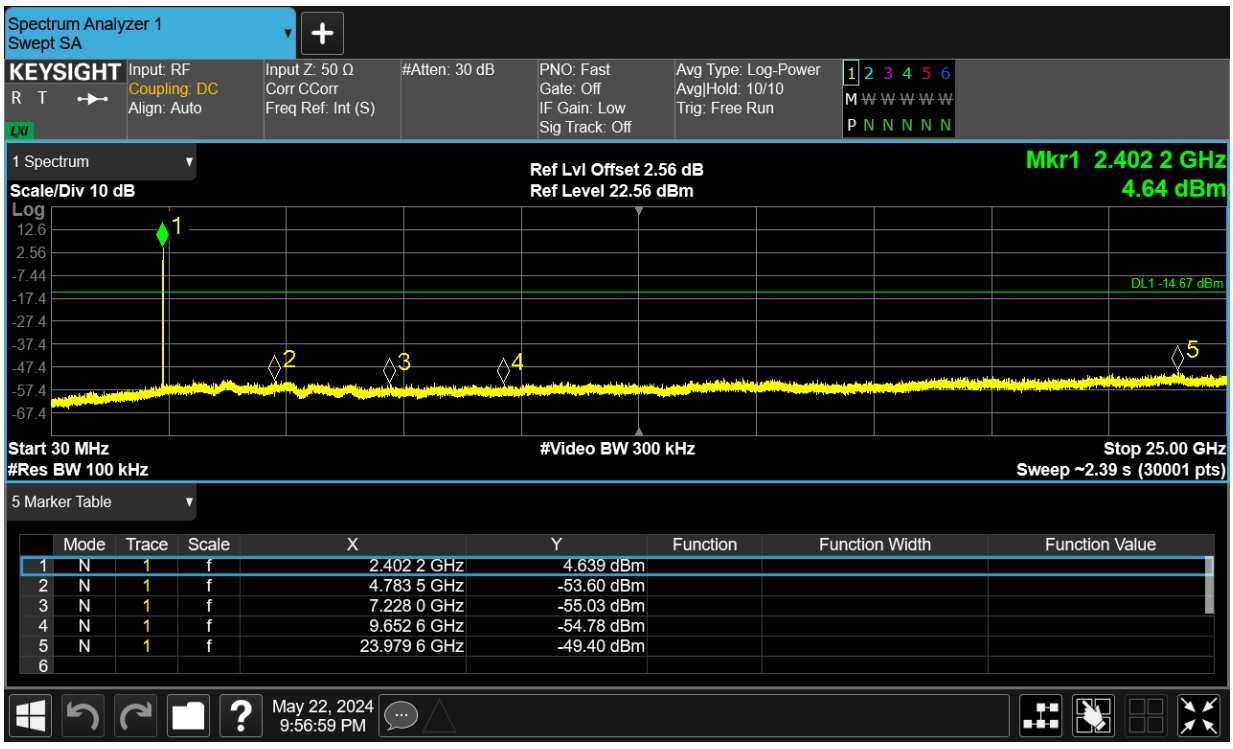
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



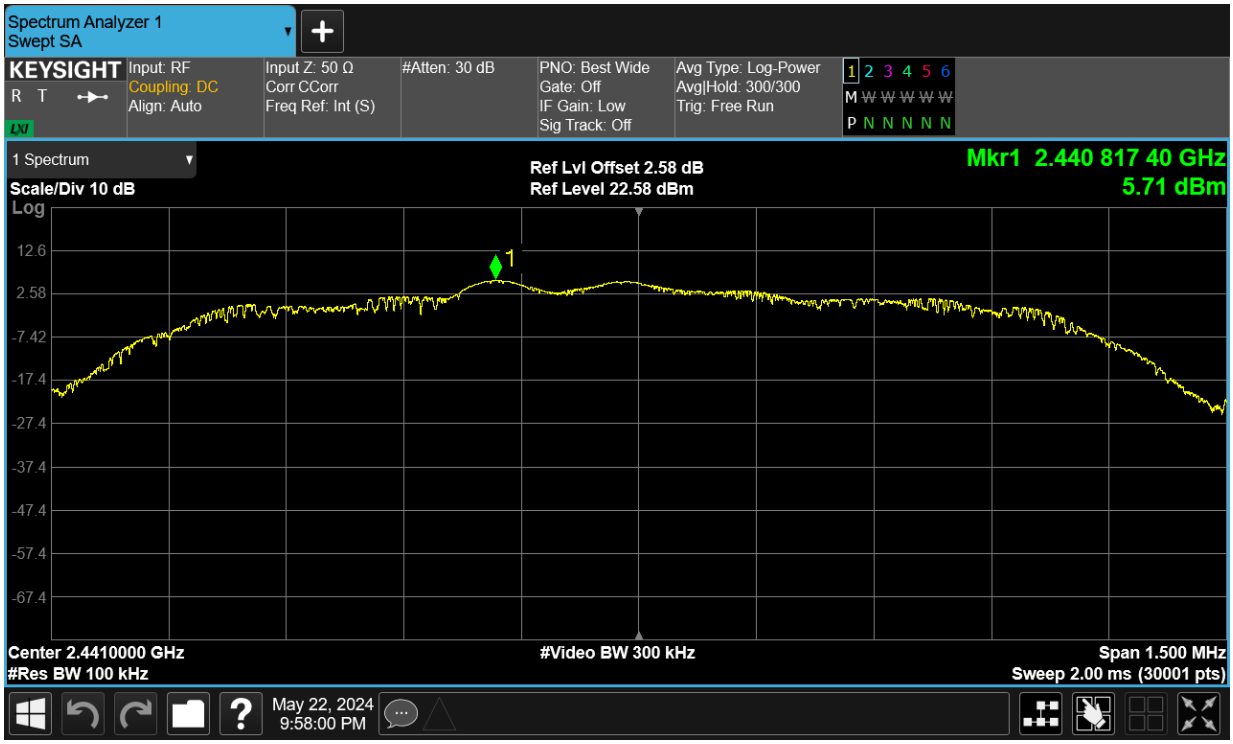
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



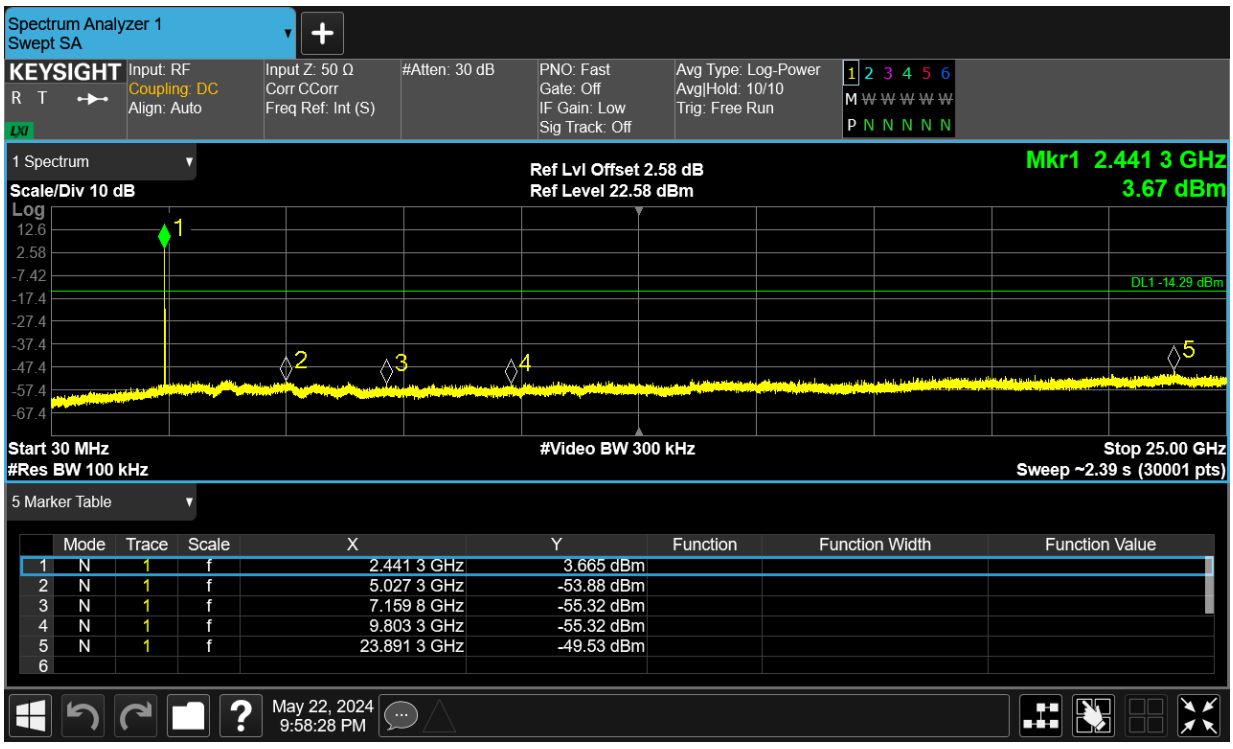
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



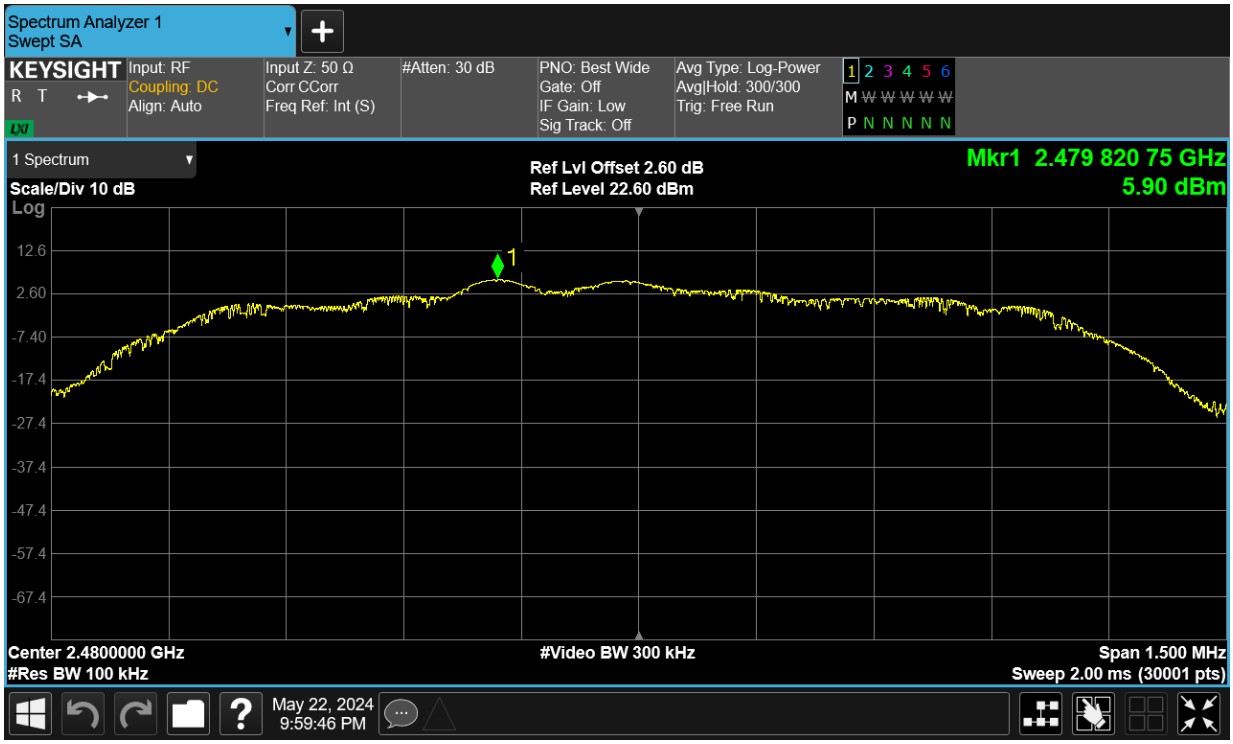
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



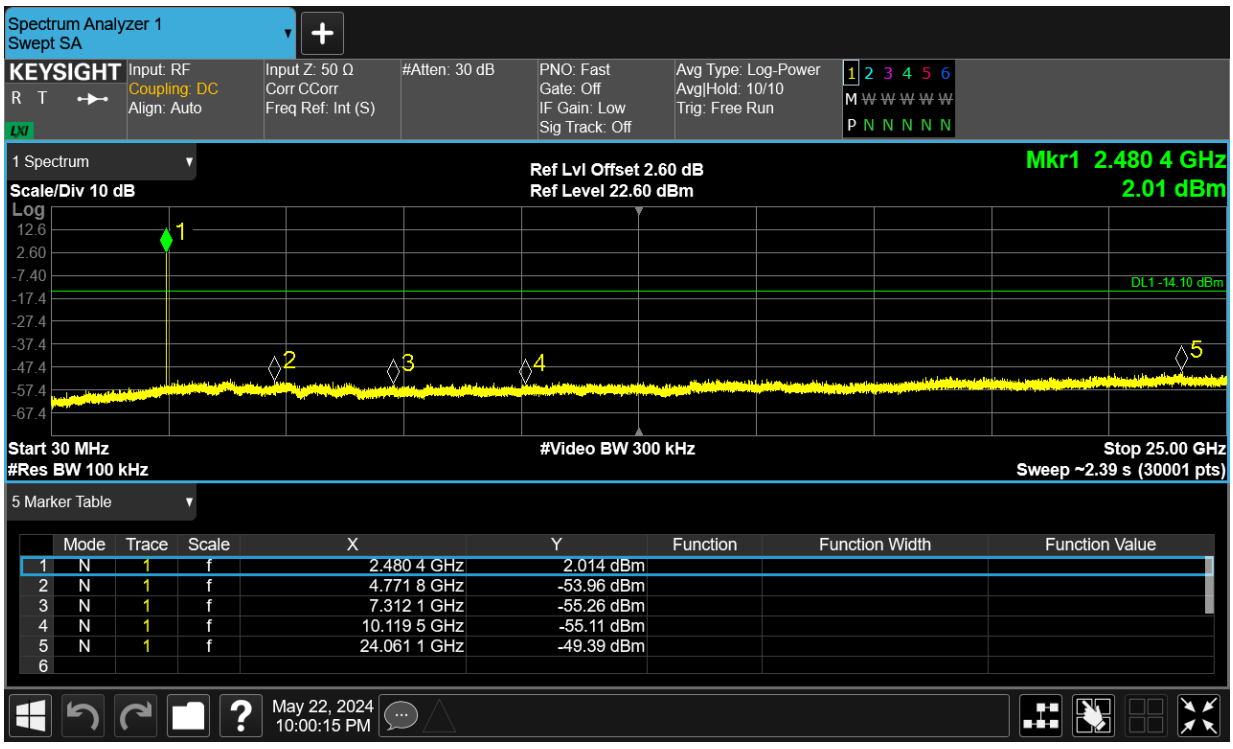
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

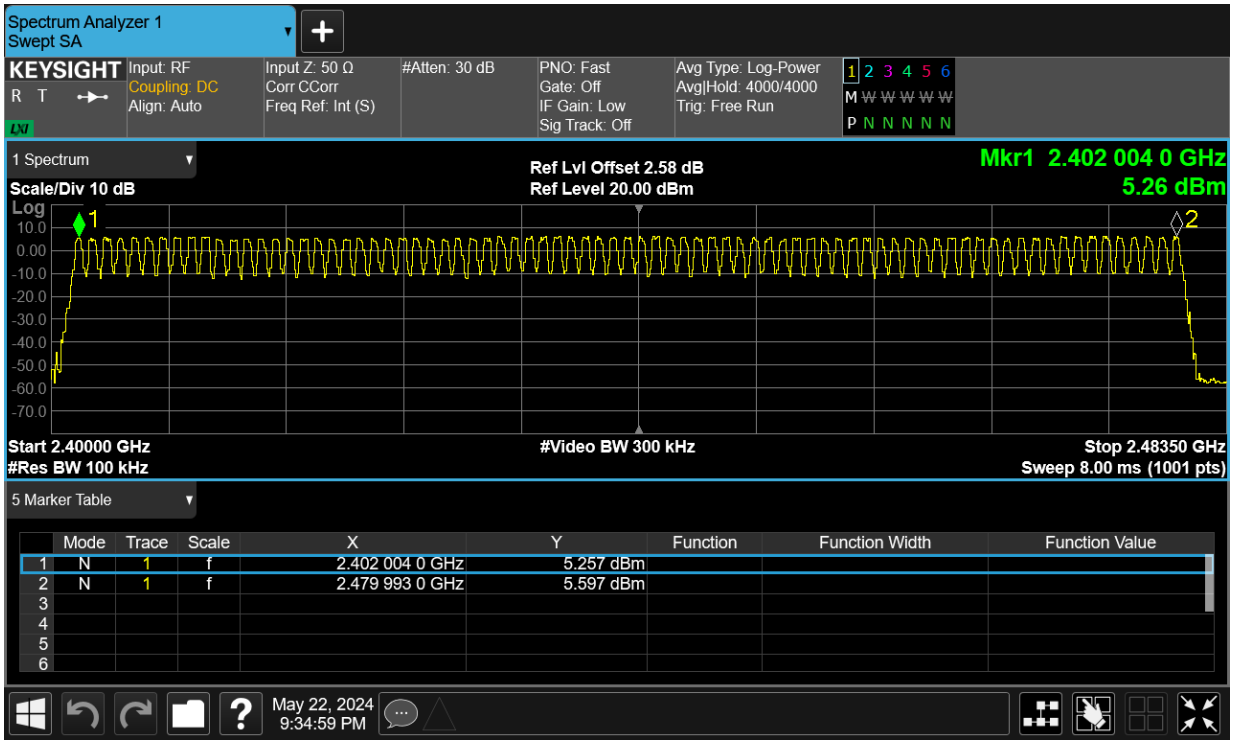


Number of Hopping Channel

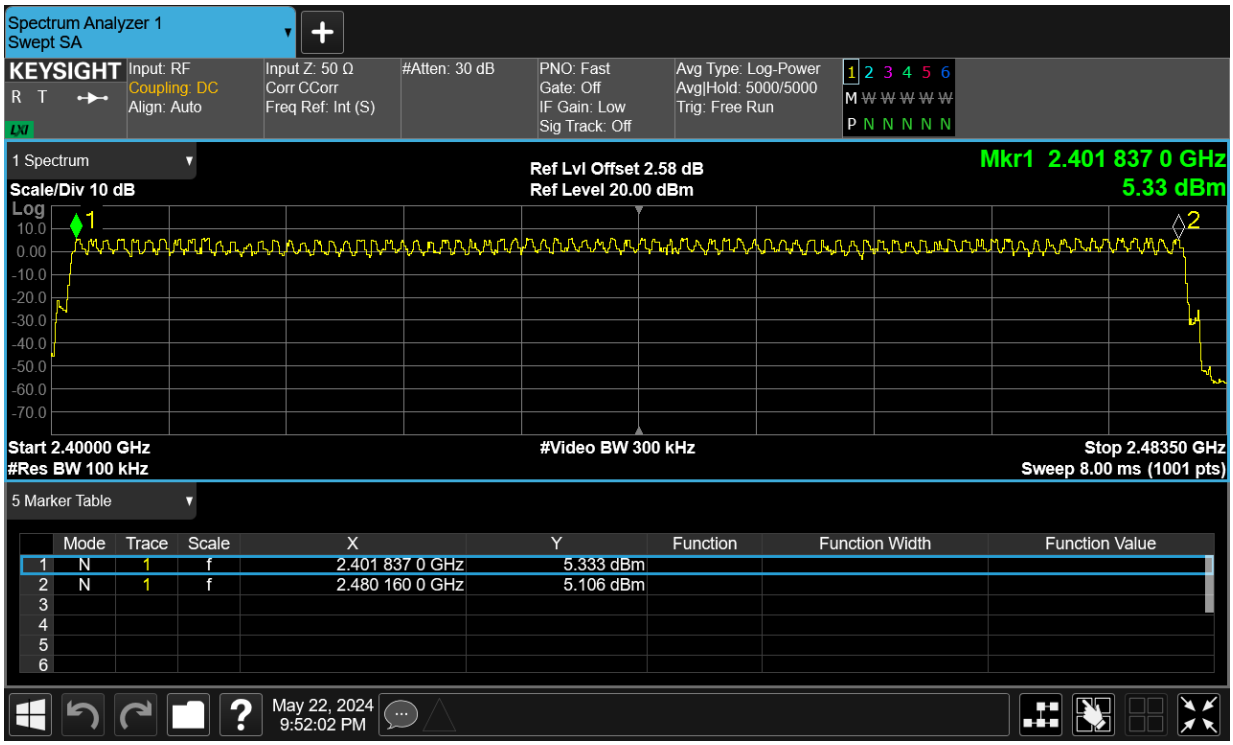
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

Test Graphs

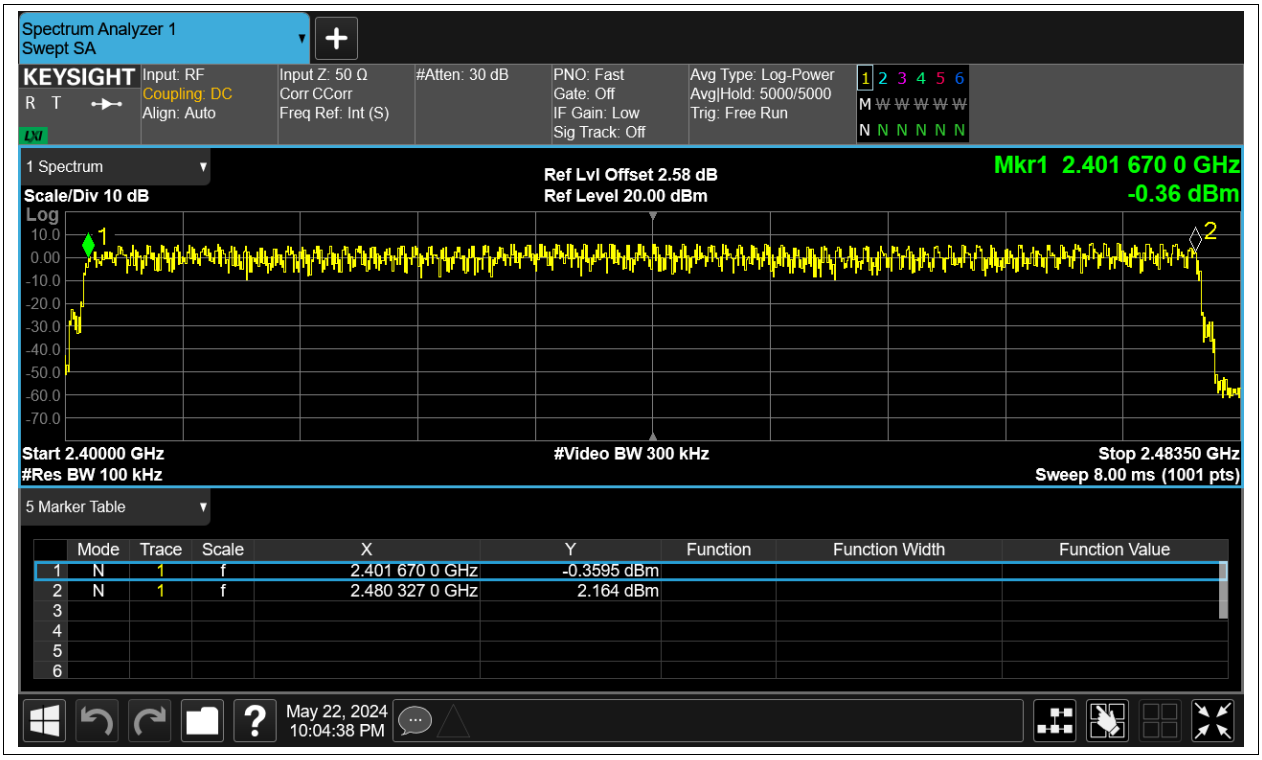
Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



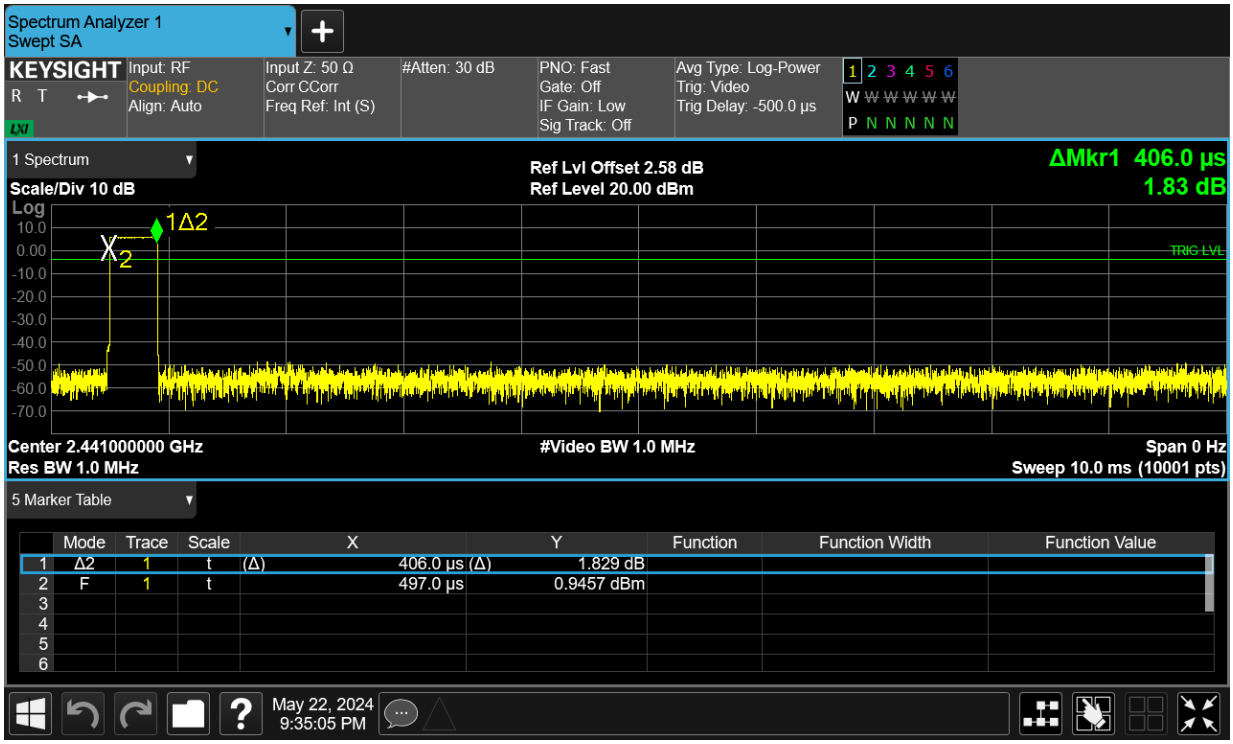
Hopping No. NVNT 3-DH1 2441MHz Ant1


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
Ref Lvl Offset 2.58 dB
Ref Level 20.00 dBm
Mkr1 2.401 670 0 GHz
-0.36 dBm
Scale/Div 10 dB
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
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 -0.3595 dBm
2 N 1 f 2.480 327 0 GHz 2.164 dBm
3
4
5
6
May 22, 2024
10:04:38 PM

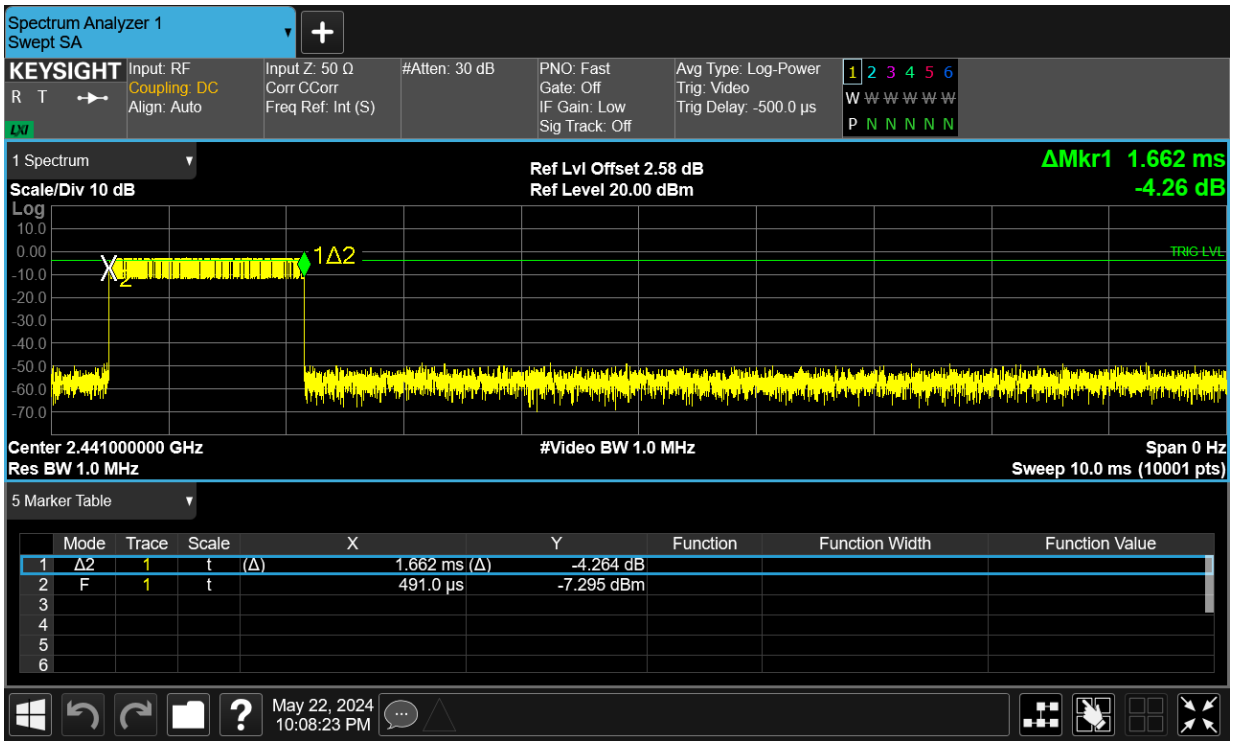
Dwell Time

Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.406	129.92	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.662	265.92	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.909	310.293	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.398	127.36	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.65	264	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.898	309.12	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.396	126.72	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.647	263.52	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.896	308.907	31600	400	Pass

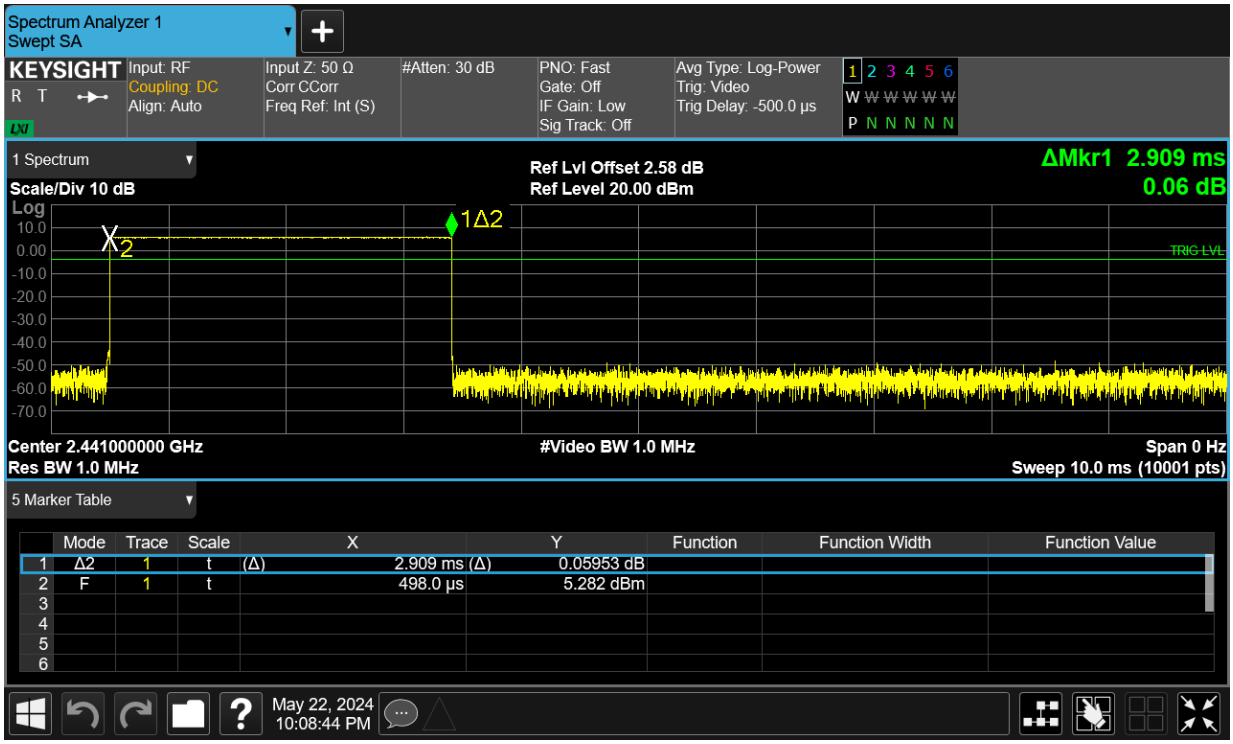
Test Graphs
Dwell NVNT 1-DH1 2441MHz Ant1



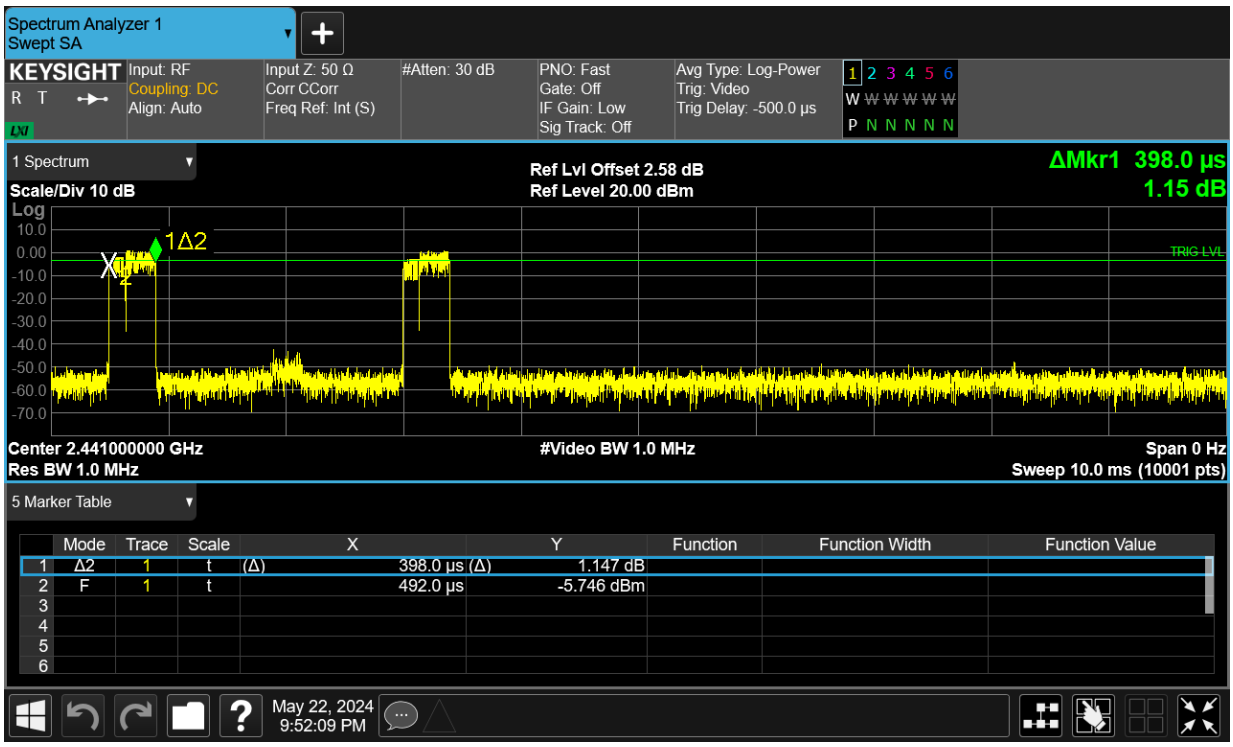
Dwell NVNT 1-DH3 2441MHz Ant1



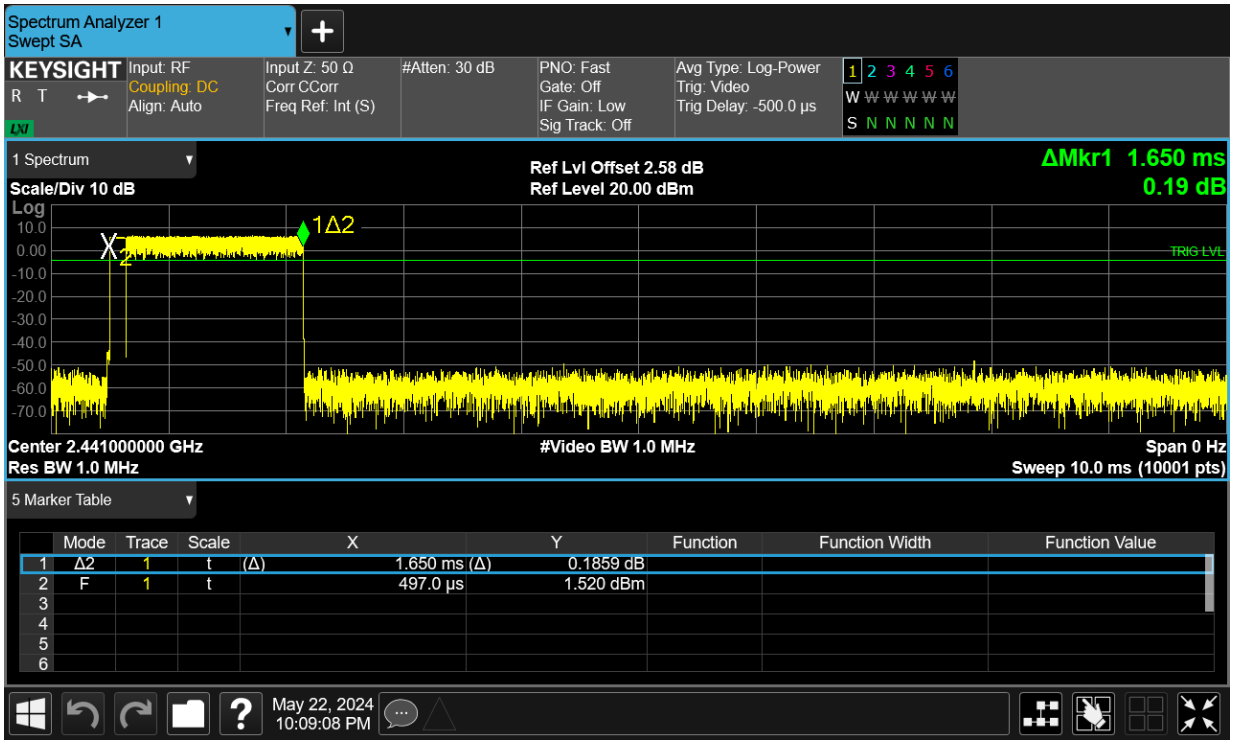
Dwell NVNT 1-DH5 2441MHz Ant1



Dwell NVNT 2-DH1 2441MHz Ant1

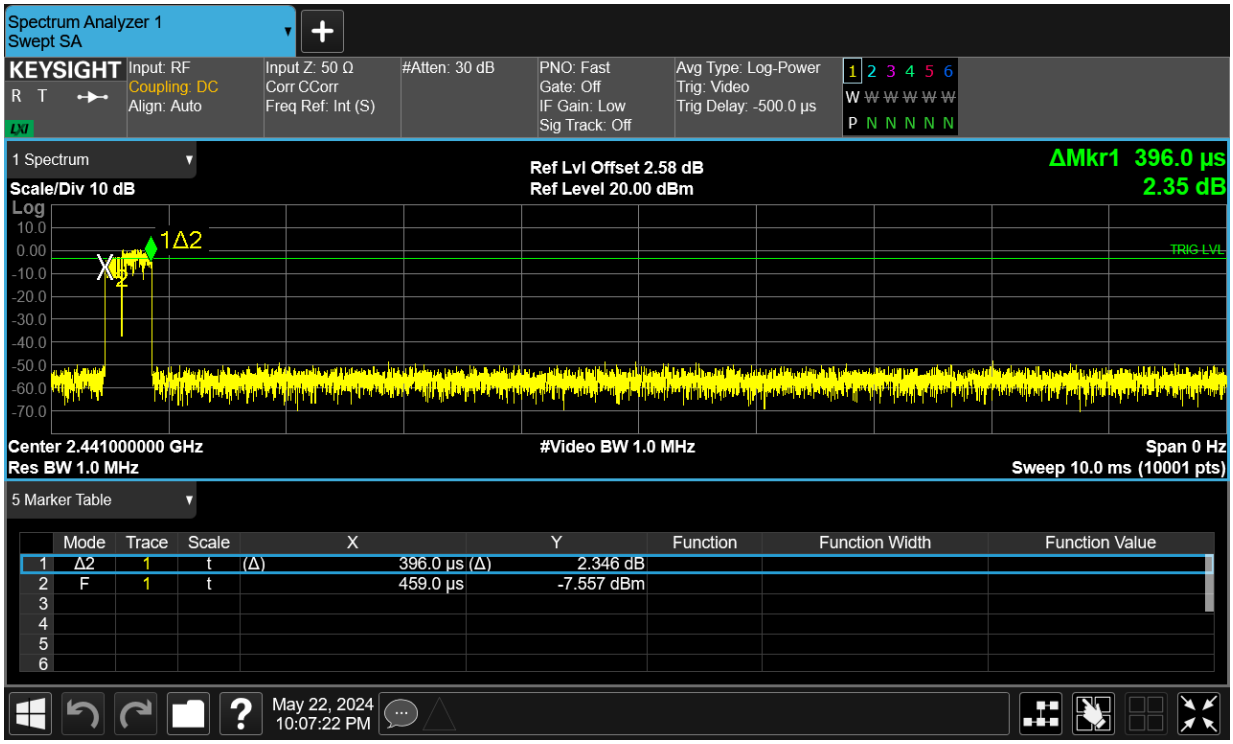


Dwell NVNT 2-DH3 2441MHz Ant1

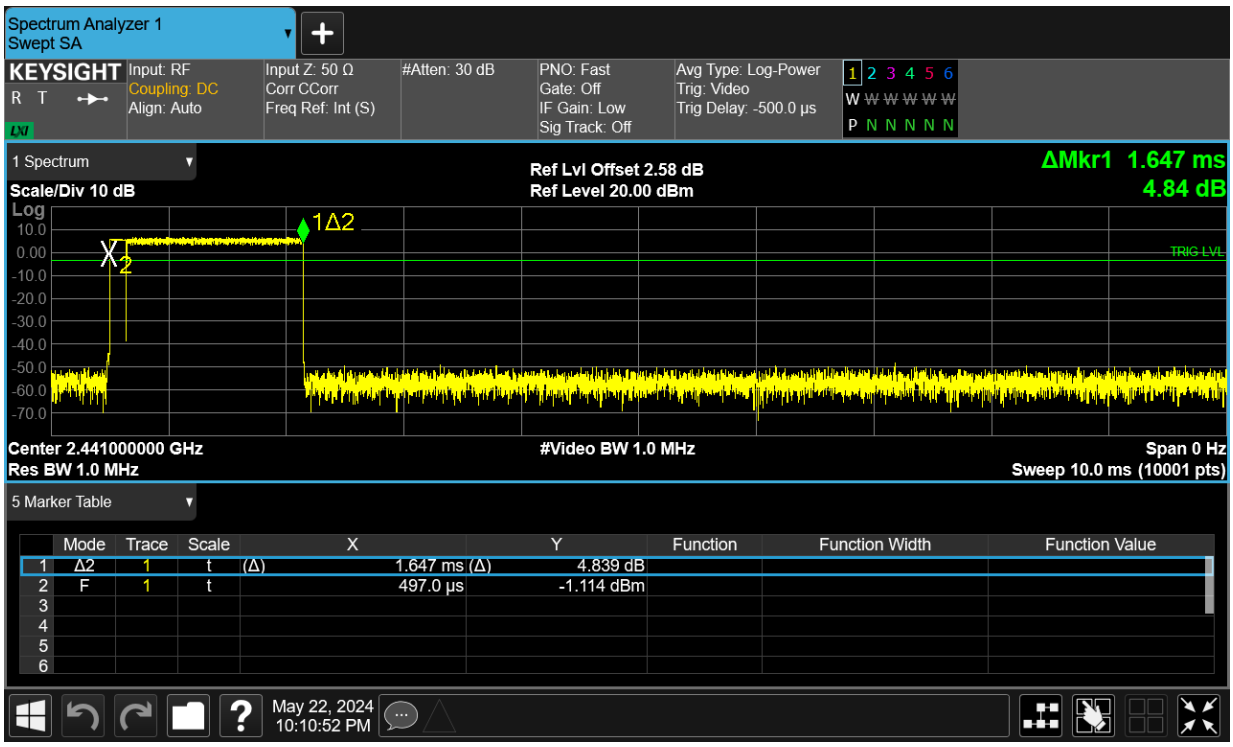


Dwell NVNT 2-DH5 2441MHz Ant1

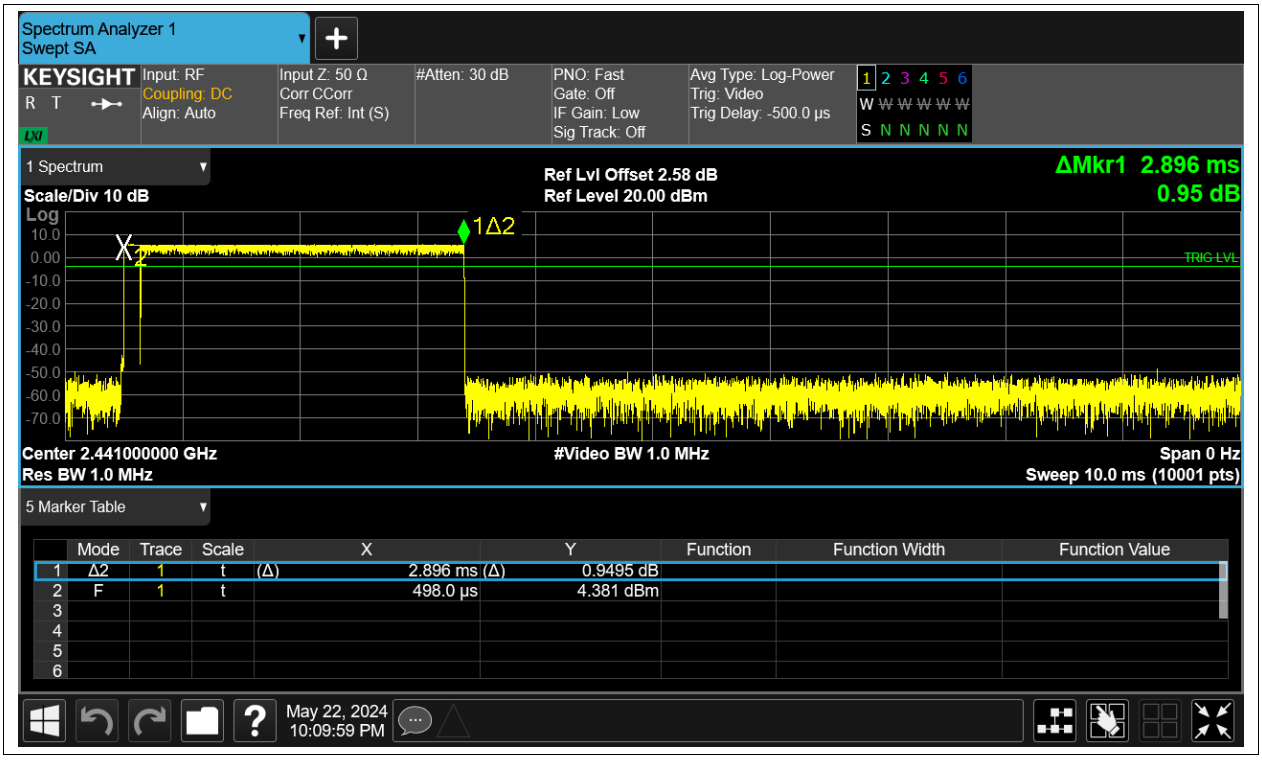
Dwell NVNT 3-DH1 2441MHz Ant1



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 2.896 ms
0.95 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) 2.896 ms (Δ) 0.9495 dB
2 F 1 t 498.0 µs 4.381 dBm
May 22, 2024
10:09:59 PM