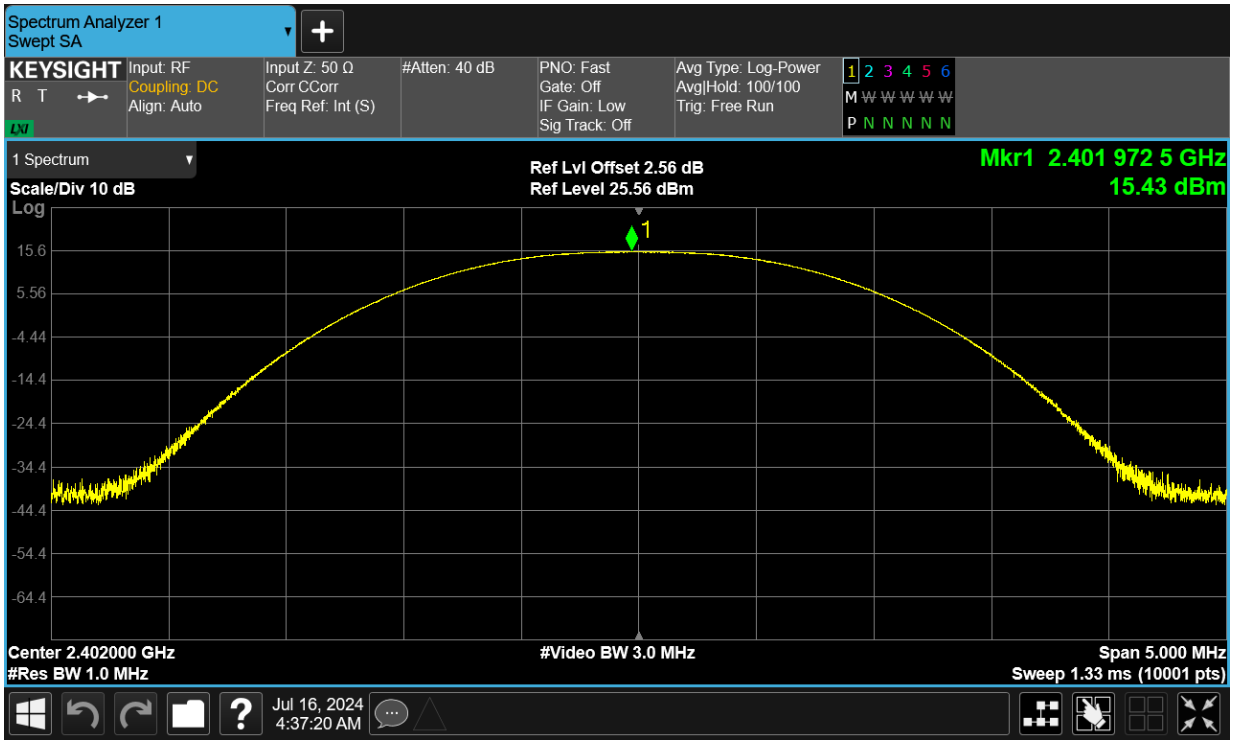
Test Data

Maximum Conducted Output Power

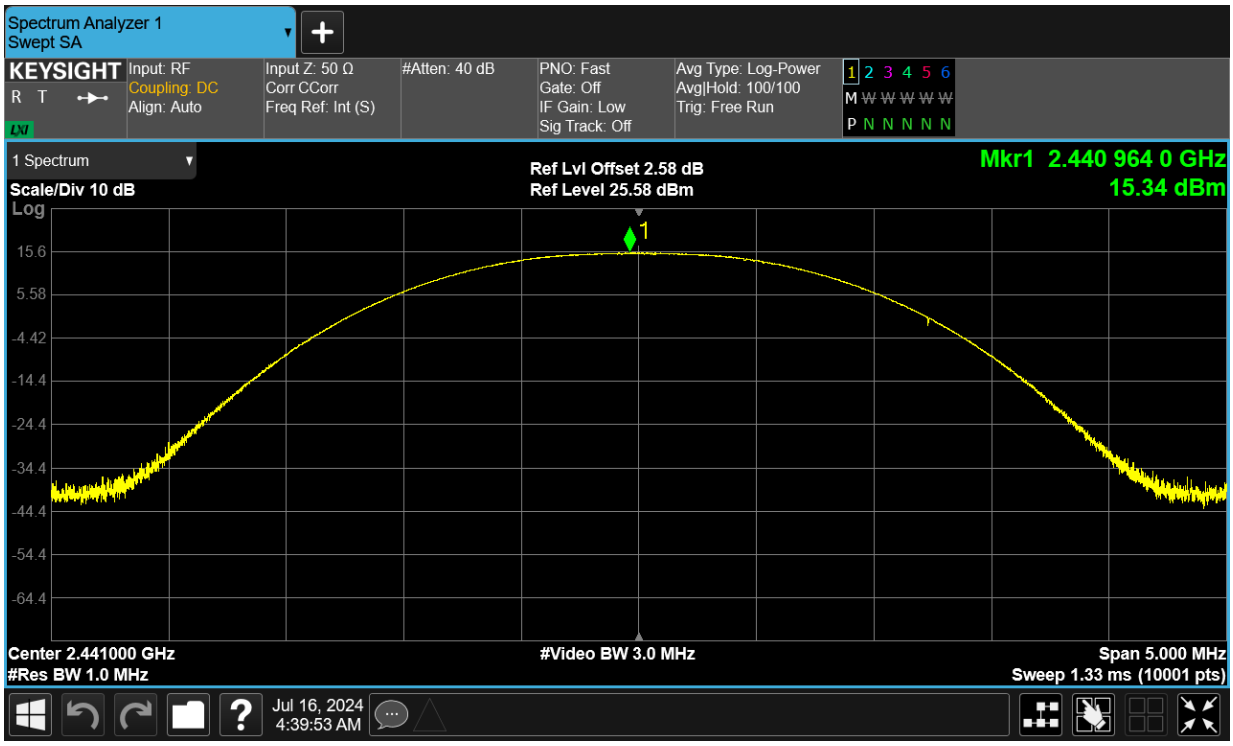
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	ANT14	15.428	30	Pass
NVNT	1-DH1	2441	ANT14	15.342	30	Pass
NVNT	1-DH1	2480	ANT14	16.455	30	Pass
NVNT	2-DH1	2402	ANT14	14.922	21	Pass
NVNT	2-DH1	2441	ANT14	14.633	21	Pass
NVNT	2-DH1	2480	ANT14	16.006	21	Pass
NVNT	3-DH1	2402	ANT14	14.972	21	Pass
NVNT	3-DH1	2441	ANT14	14.659	21	Pass
NVNT	3-DH1	2480	ANT14	16.046	21	Pass

Test Graphs

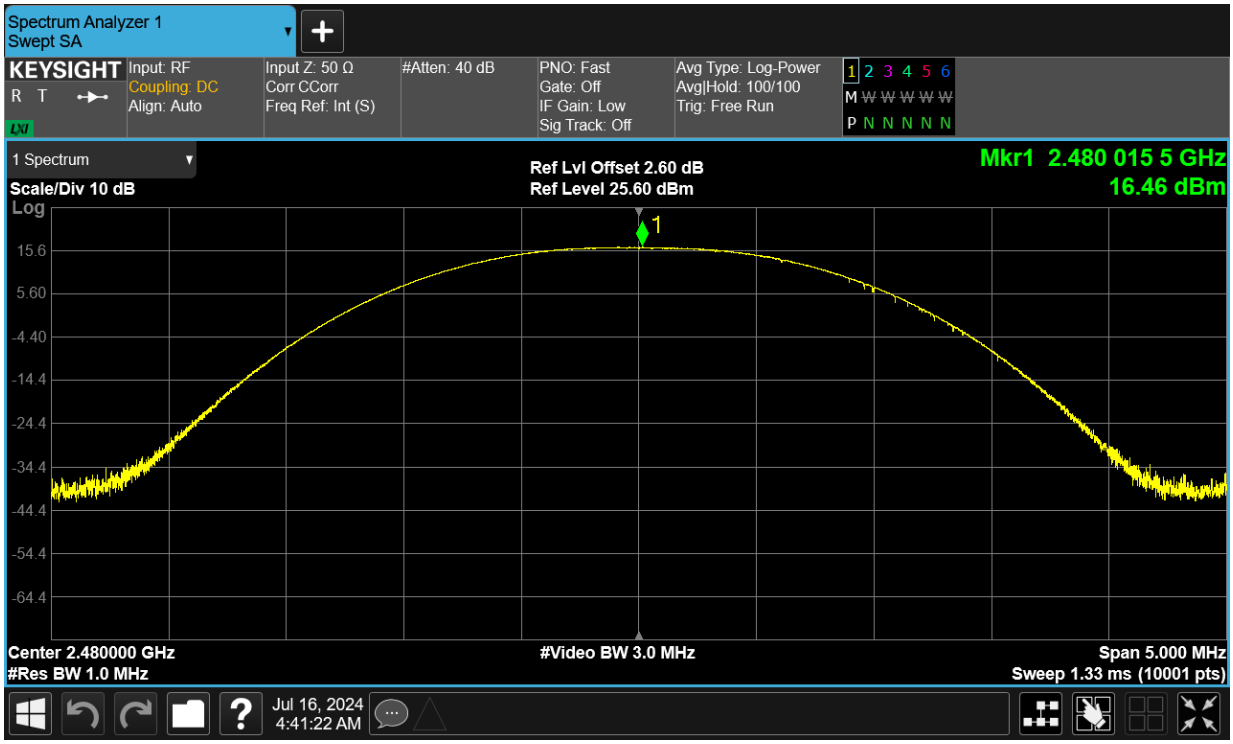
Power NVNT 1-DH1 2402MHz ANT14



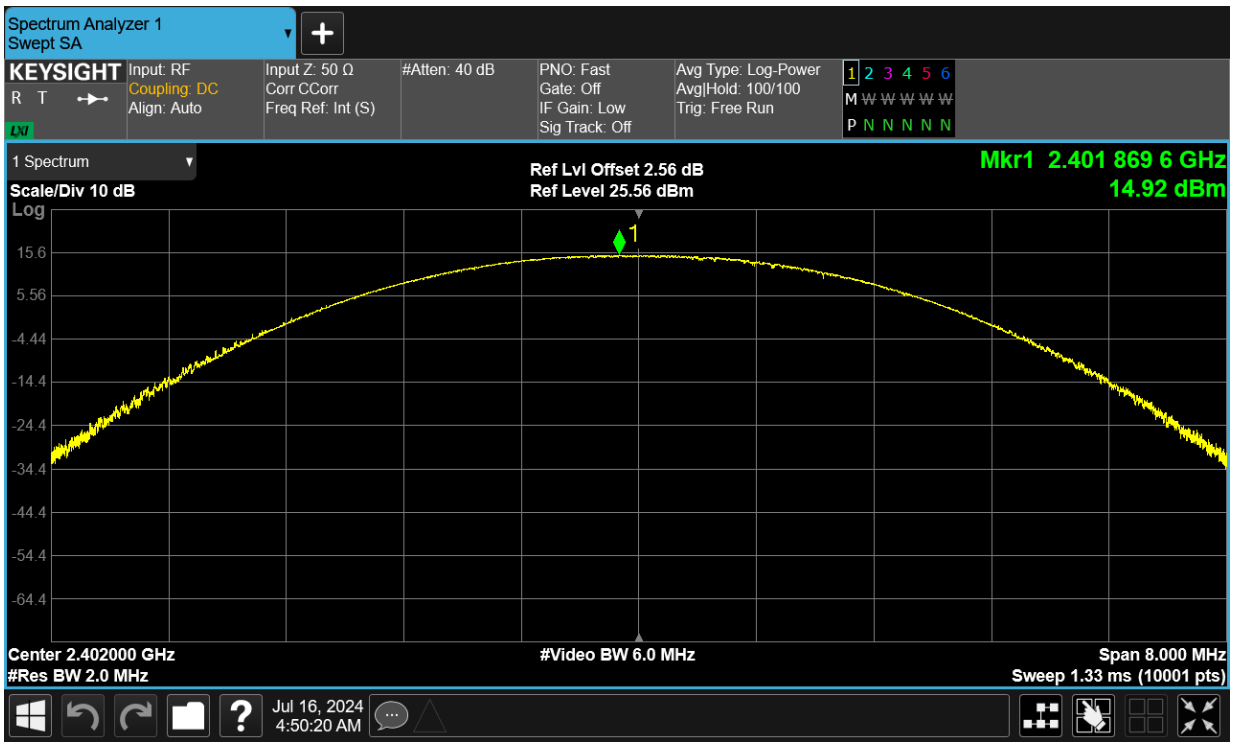
Power NVNT 1-DH1 2441MHz ANT14



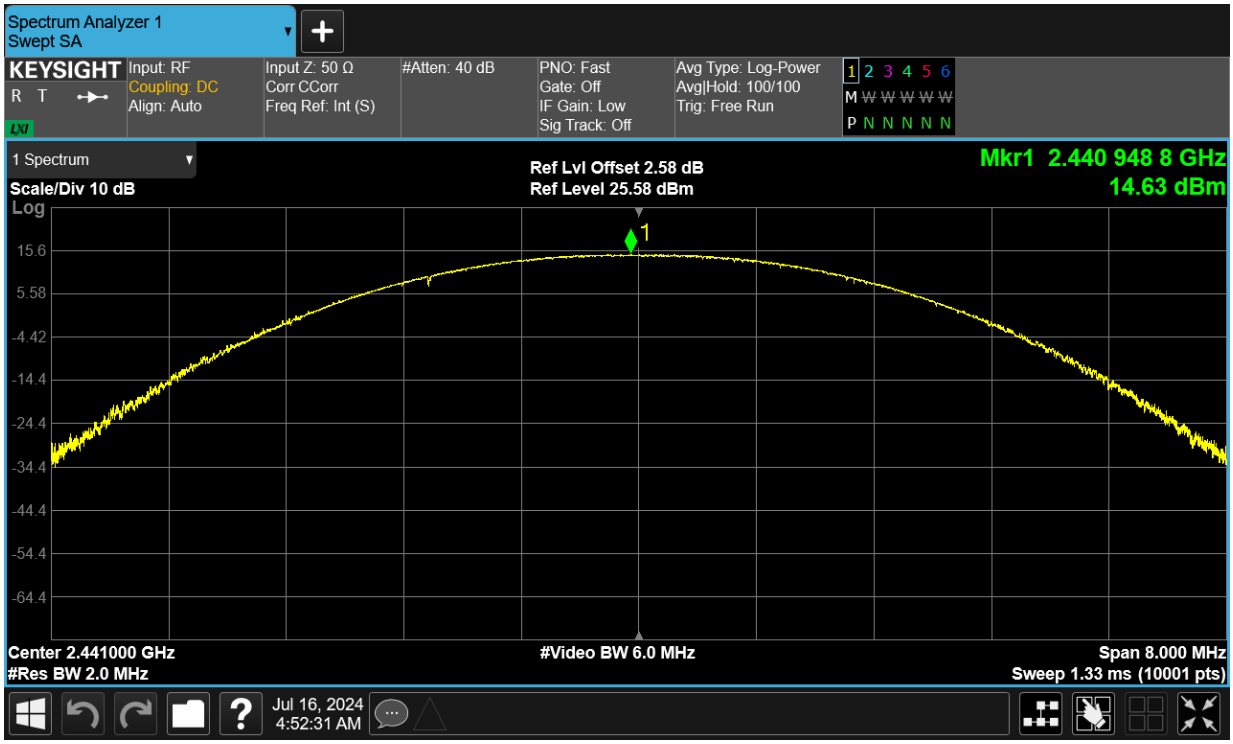
Power NVNT 1-DH1 2480MHz ANT14



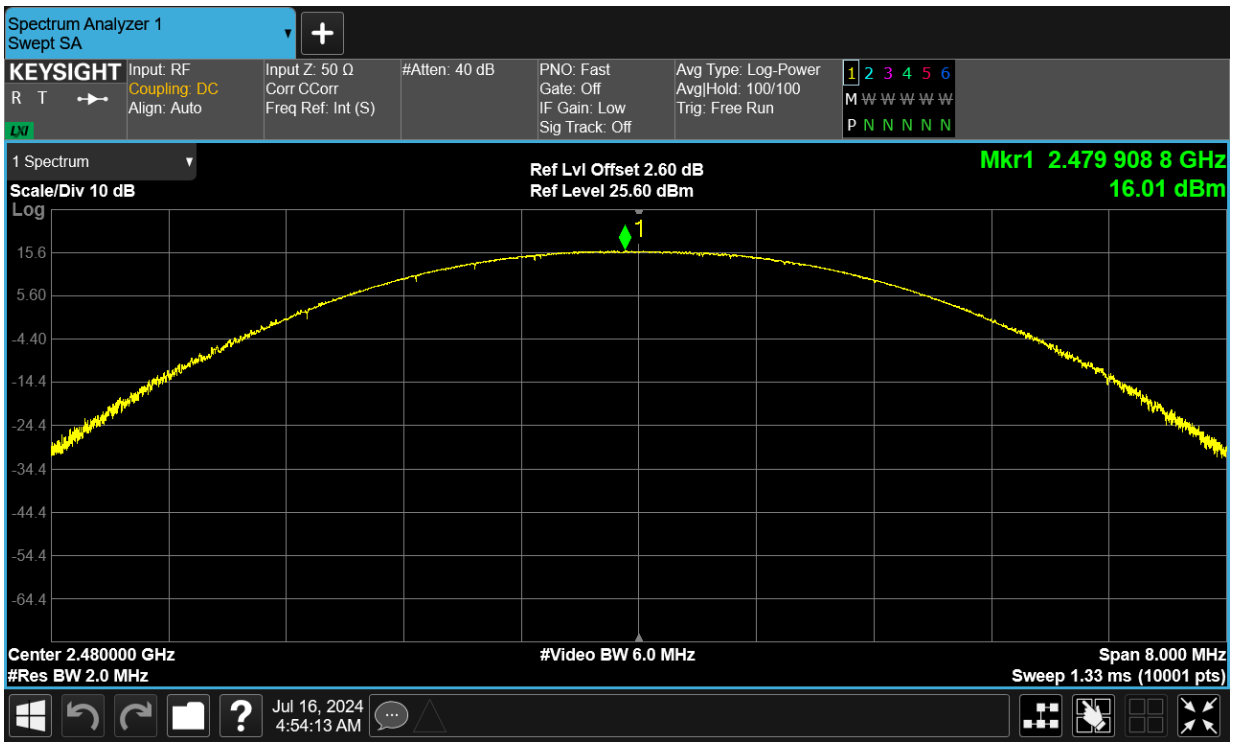
Power NVNT 2-DH1 2402MHz ANT14



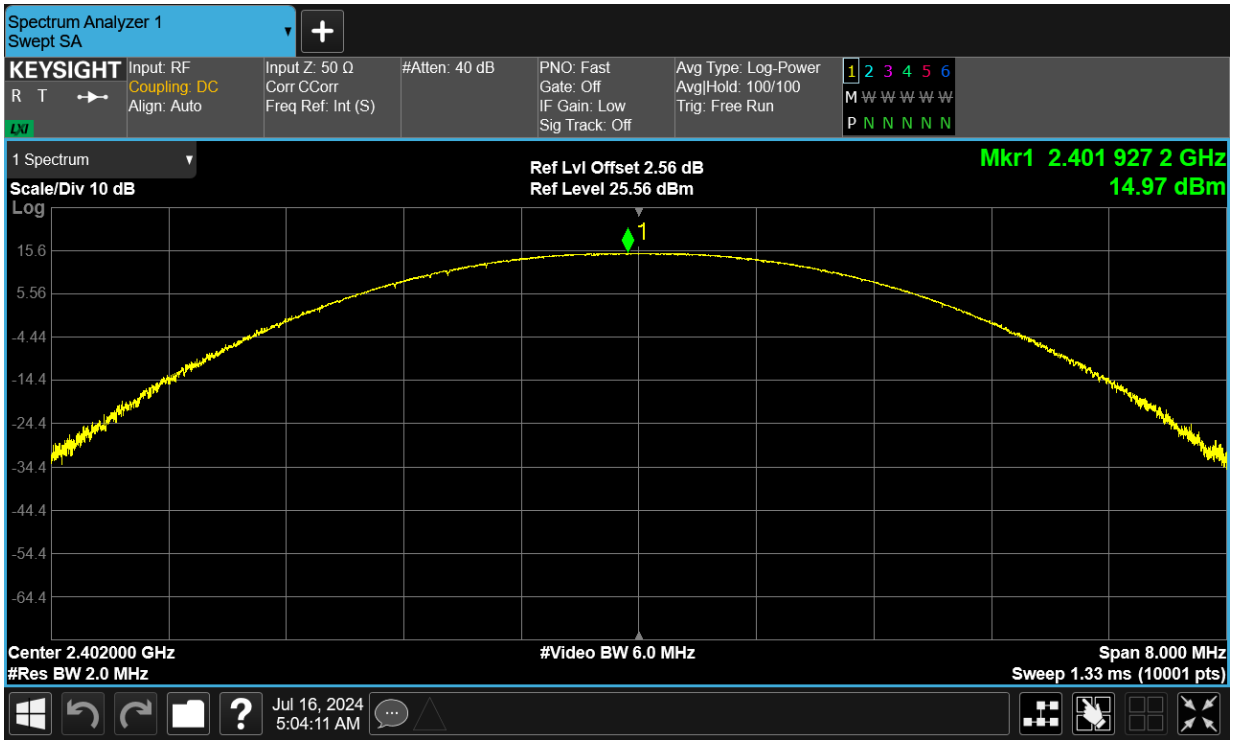
Power NVNT 2-DH1 2441MHz ANT14



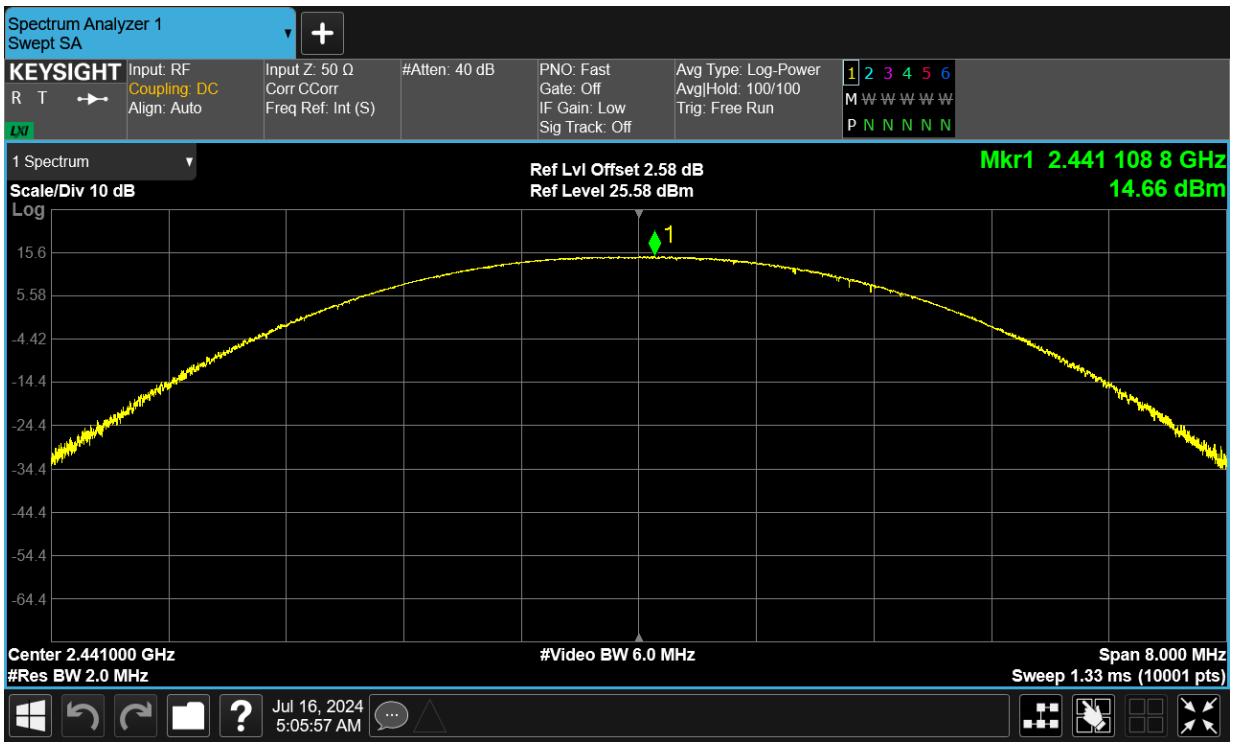
Power NVNT 2-DH1 2480MHz ANT14



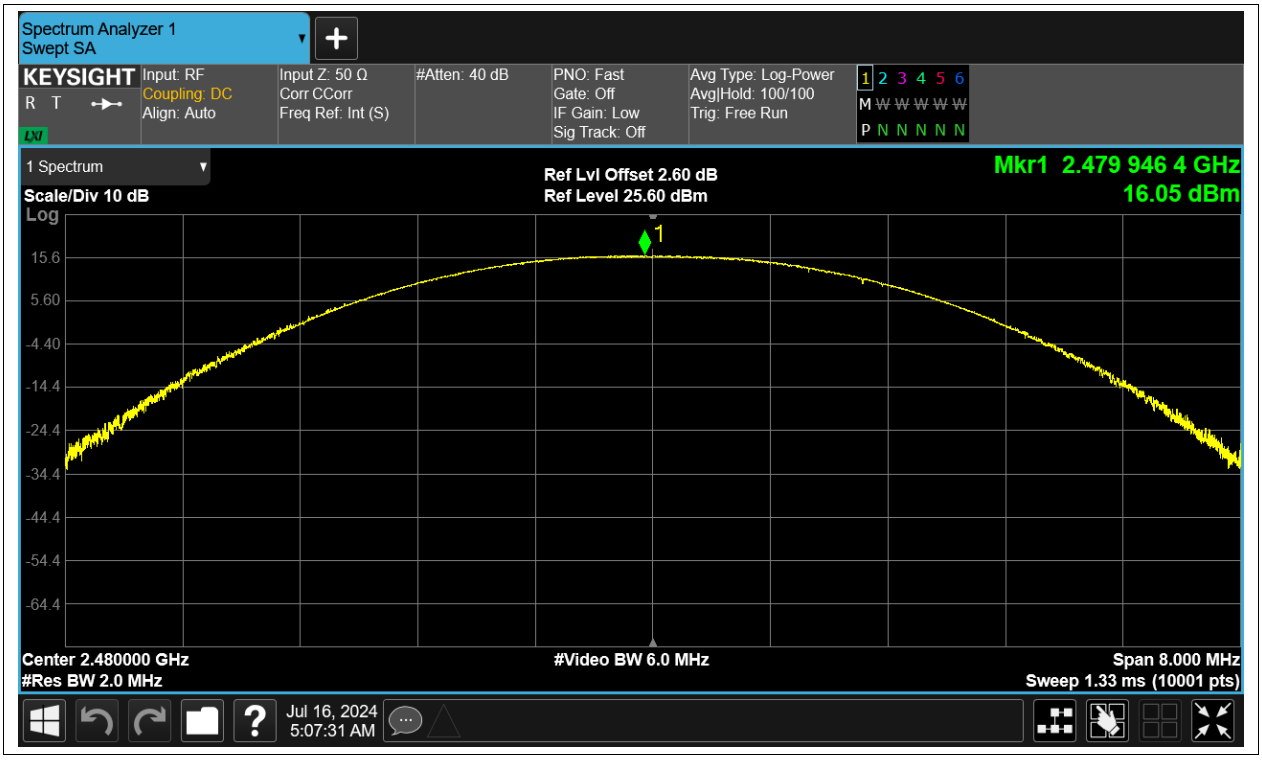
Power NVNT 3-DH1 2402MHz ANT14



Power NVNT 3-DH1 2441MHz ANT14



Power NVNT 3-DH1 2480MHz ANT14

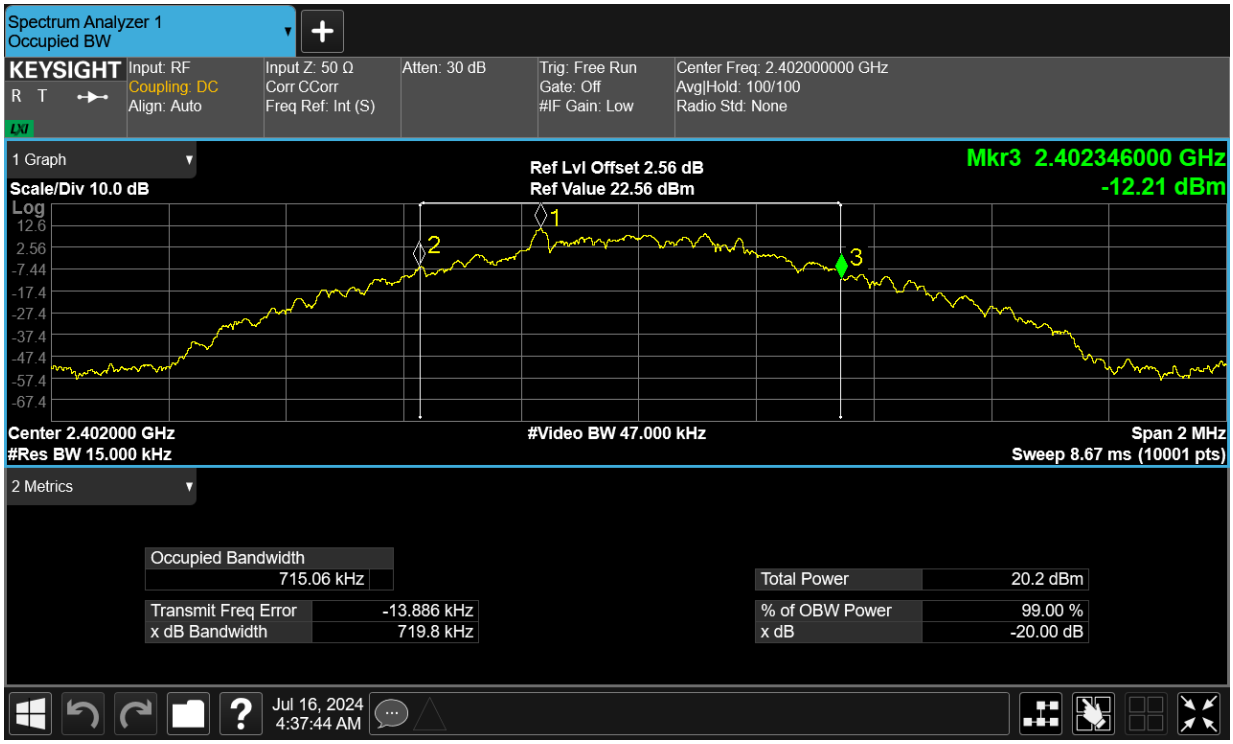

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 40 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 2.60 dB
Ref Level 25.60 dBm
Mkr1 2.479 946 4 GHz
16.05 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)
Jul 16, 2024
5:07:31 AM

-20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)
NVNT	1-DH1	2402	ANT14	0.72
NVNT	1-DH1	2441	ANT14	0.715
NVNT	1-DH1	2480	ANT14	0.717
NVNT	2-DH1	2402	ANT14	1.25
NVNT	2-DH1	2441	ANT14	1.18
NVNT	2-DH1	2480	ANT14	1.173
NVNT	3-DH1	2402	ANT14	1.2
NVNT	3-DH1	2441	ANT14	1.186
NVNT	3-DH1	2480	ANT14	1.2

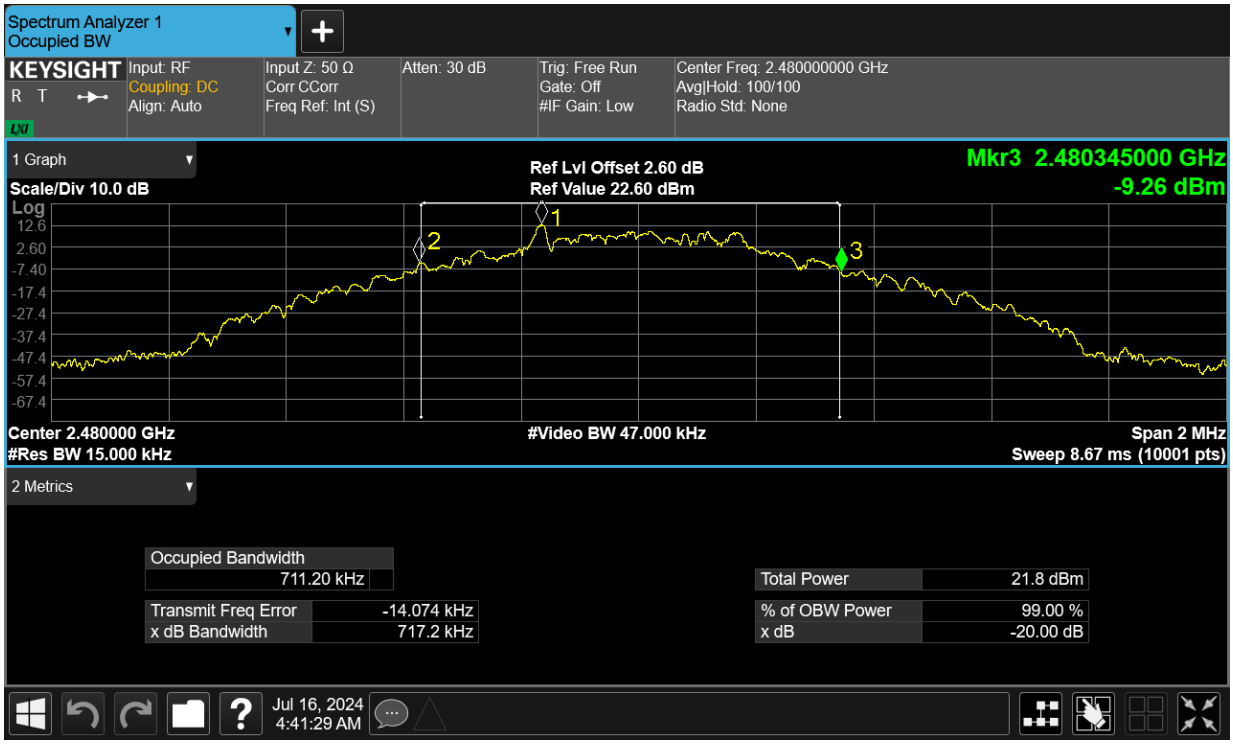
Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz ANT14

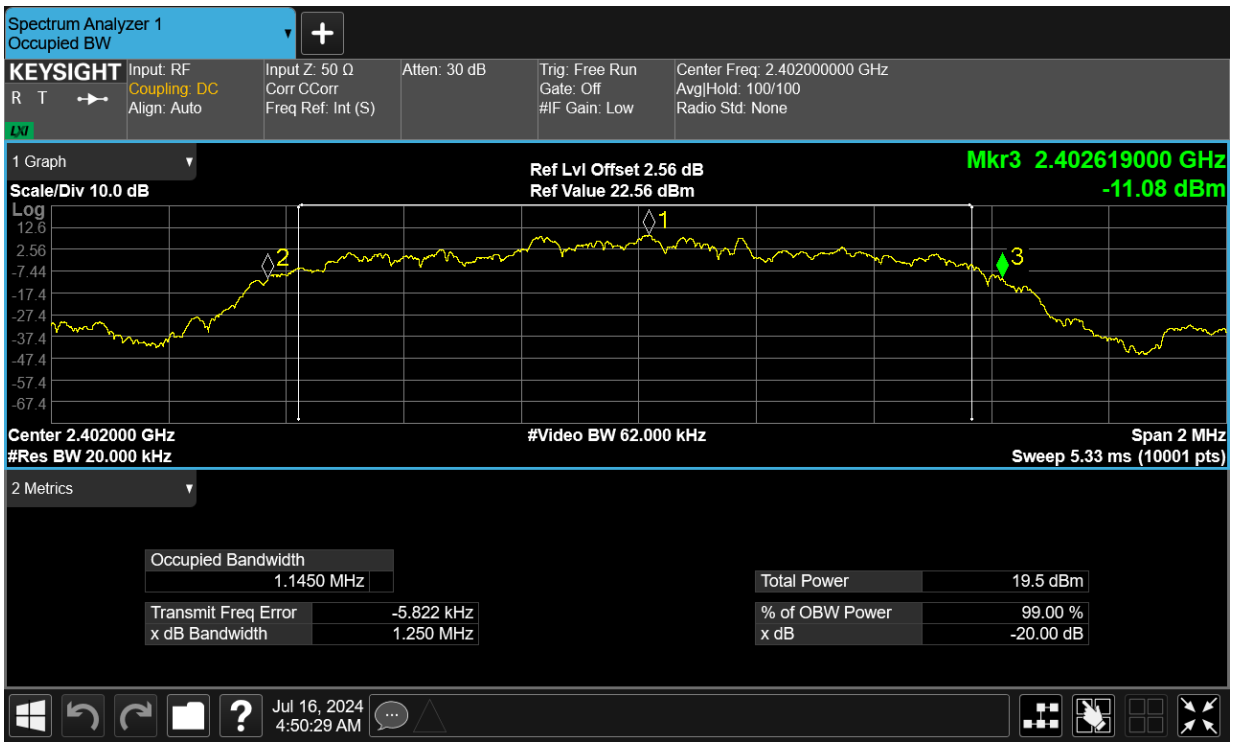


-20dB Bandwidth NVNT 1-DH1 2441MHz ANT14

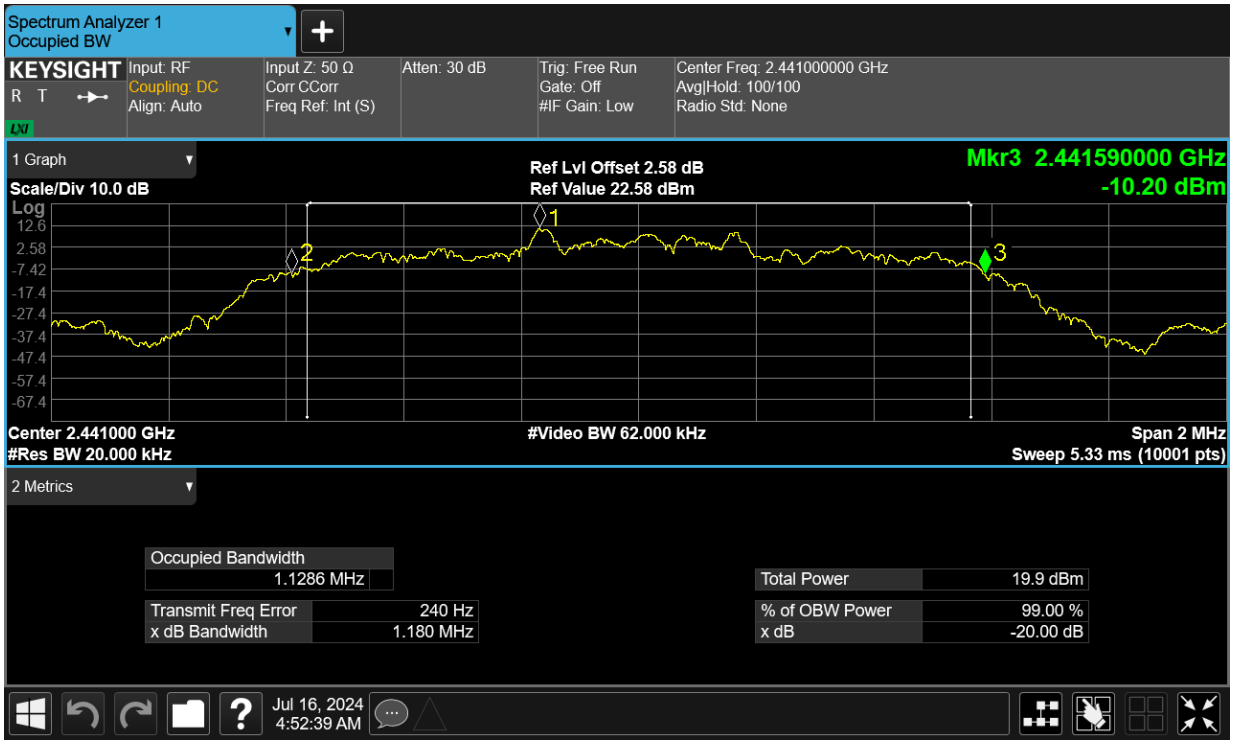
-20dB Bandwidth NVNT 1-DH1 2480MHz ANT14



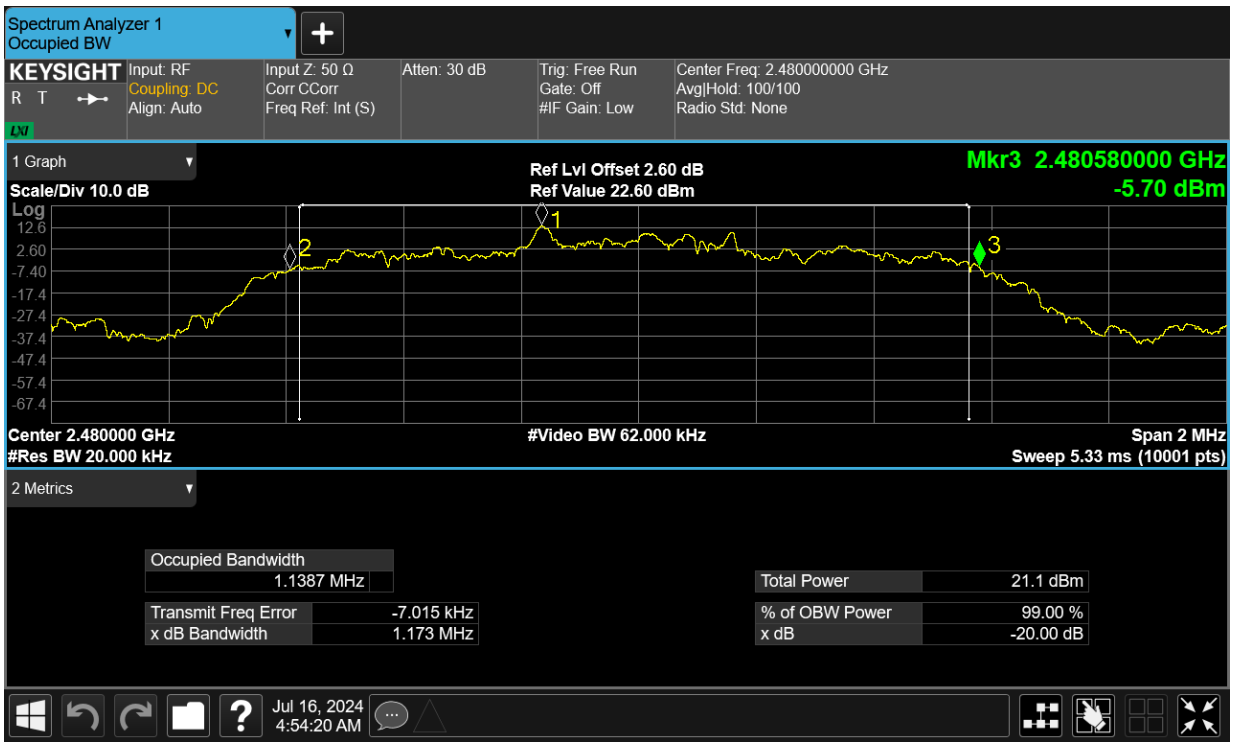
-20dB Bandwidth NVNT 2-DH1 2402MHz ANT14



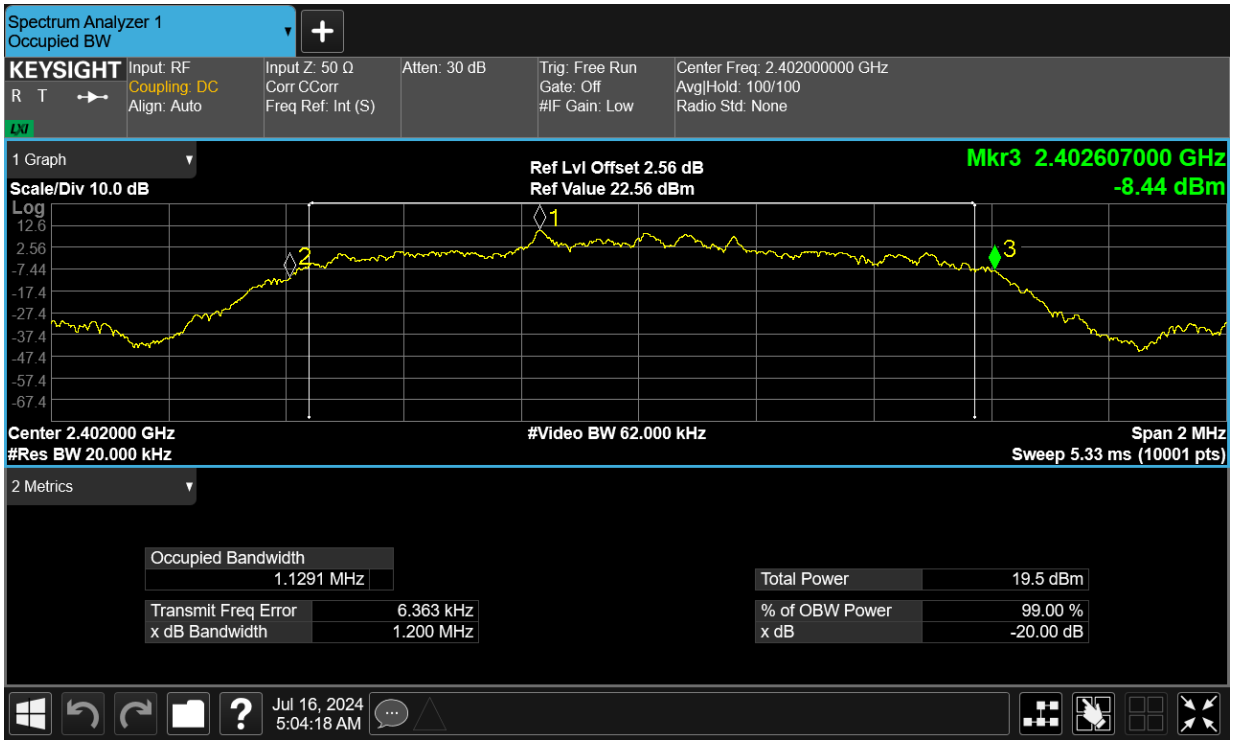
-20dB Bandwidth NVNT 2-DH1 2441MHz ANT14



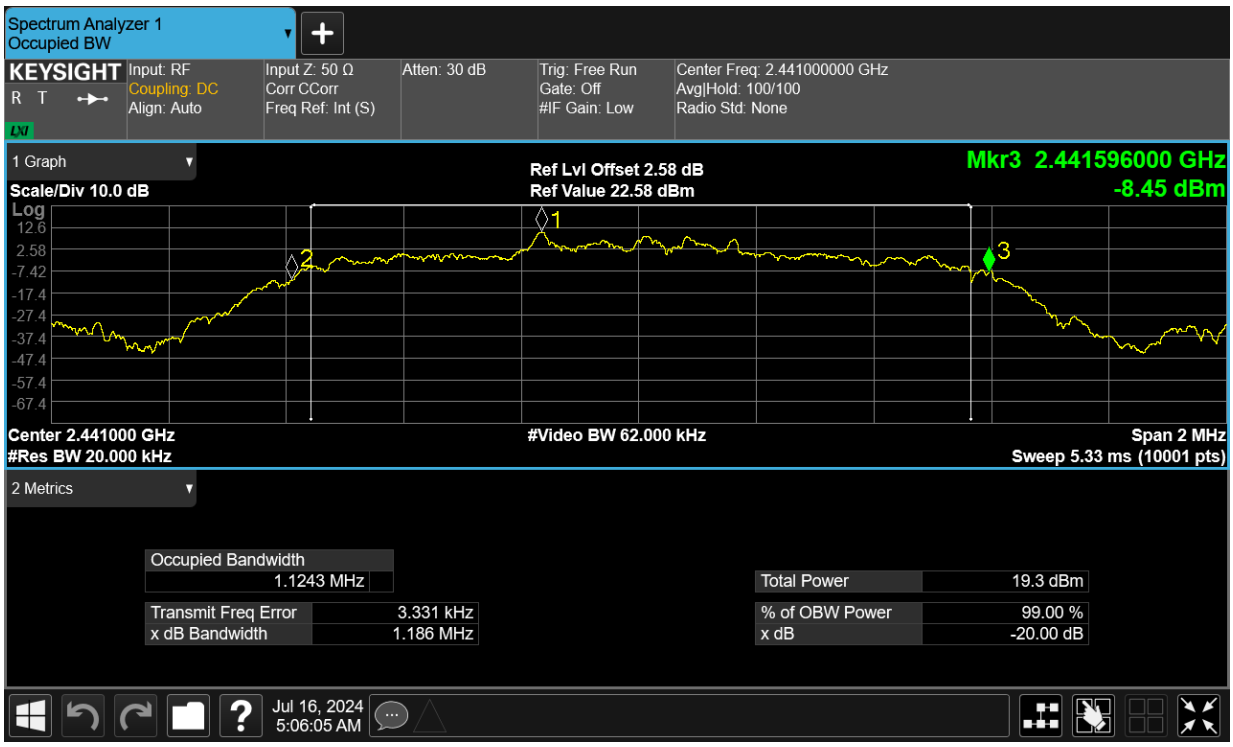
-20dB Bandwidth NVNT 2-DH1 2480MHz ANT14



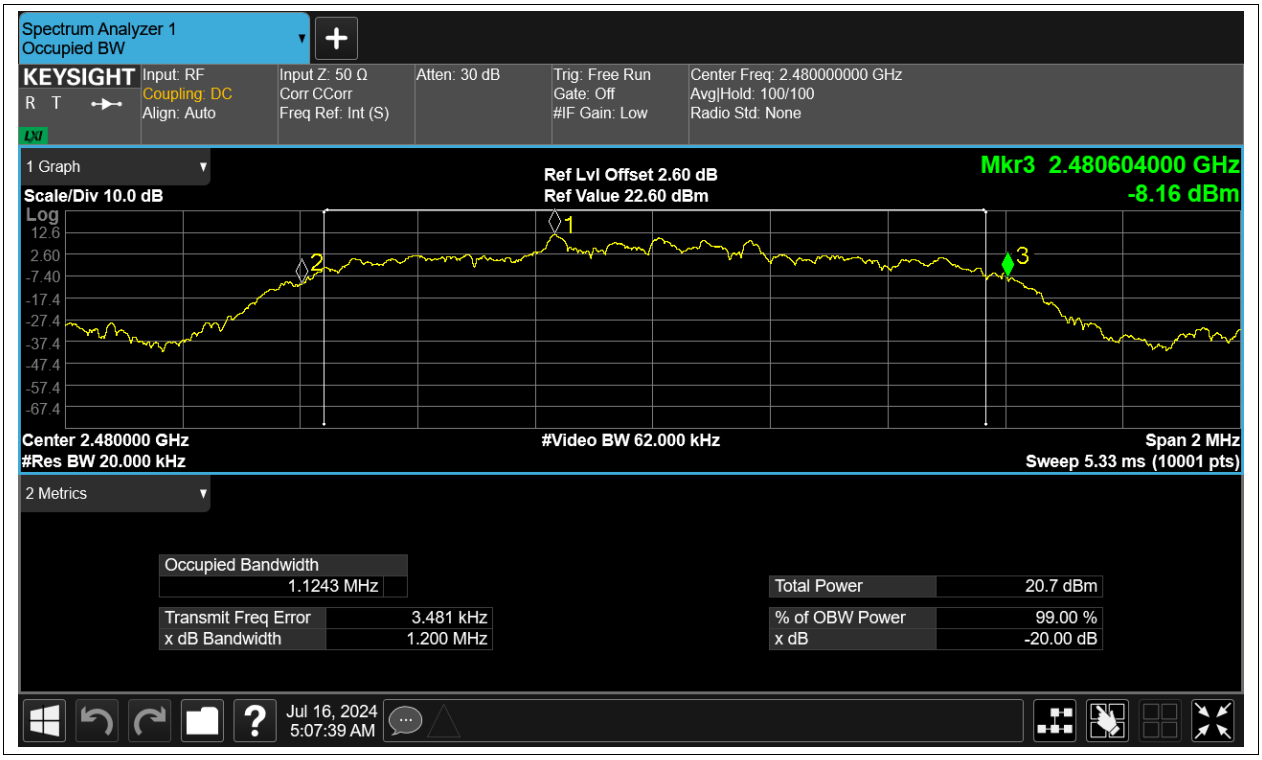
-20dB Bandwidth NVNT 3-DH1 2402MHz ANT14



-20dB Bandwidth NVNT 3-DH1 2441MHz ANT14



-20dB Bandwidth NVNT 3-DH1 2480MHz ANT14

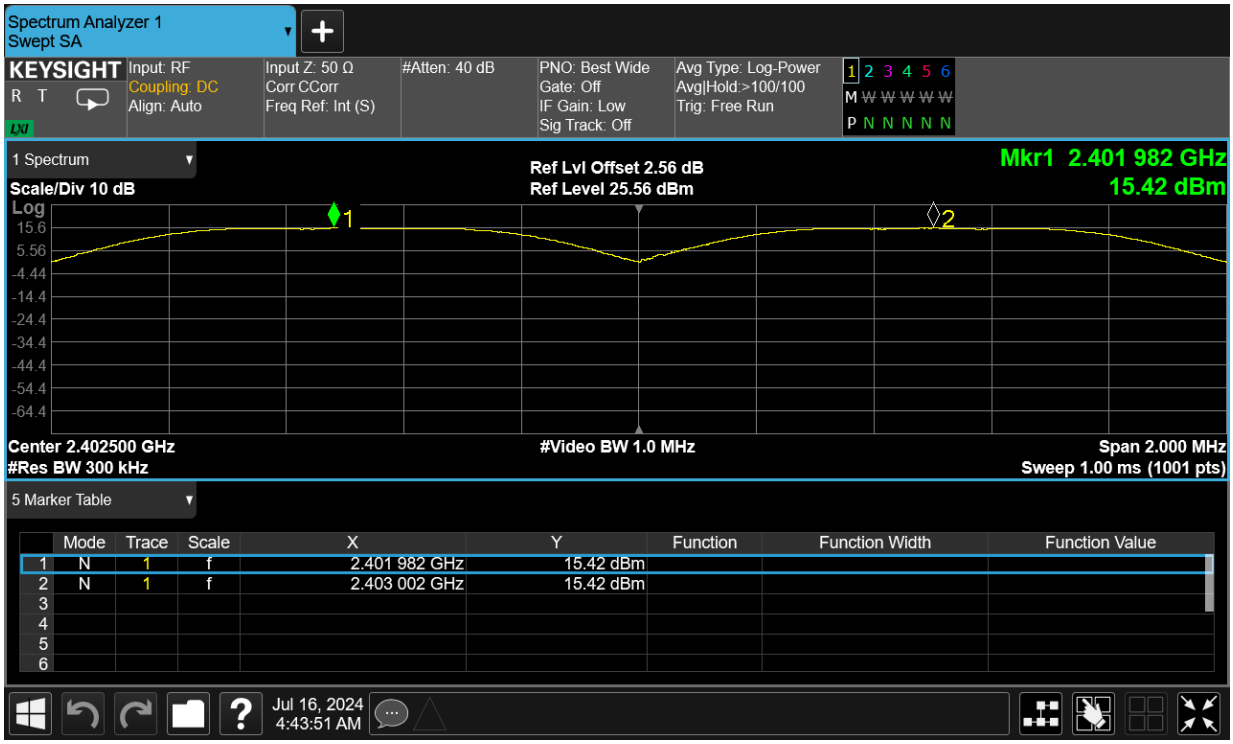

Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 100/100
Radio Std: None
1 Graph
Ref Lvl Offset 2.60 dB
Ref Value 22.60 dBm
Mkr3 2.480604000 GHz
-8.16 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
1.1243 MHz
Transmit Freq Error 3.481 kHz
x dB Bandwidth 1.200 MHz
Total Power 20.7 dBm
% of OBW Power 99.00 %
x dB -20.00 dB
Jul 16, 2024
5:07:39 AM

Carrier Frequencies Separation

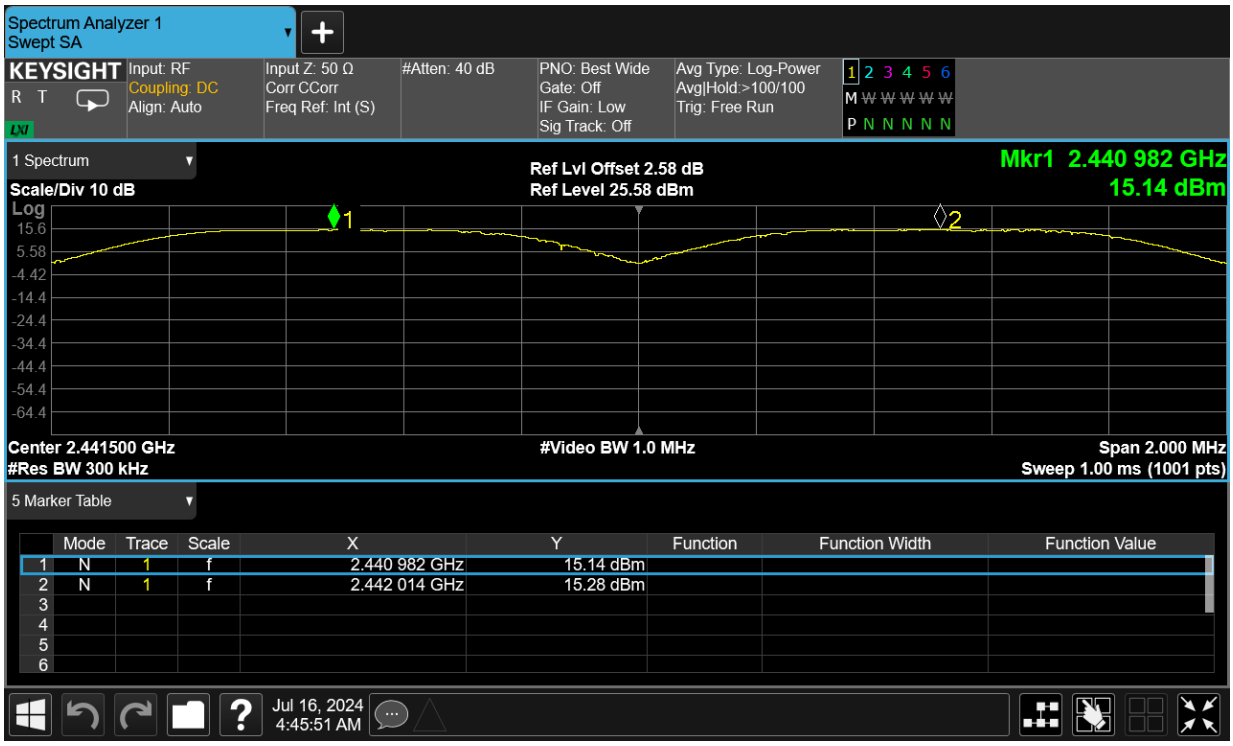
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	ANT14	2401.982	2403.002	1.02	0.72	Pass
NVNT	1-DH1	ANT14	2440.982	2442.014	1.032	0.715	Pass
NVNT	1-DH1	ANT14	2478.992	2479.998	1.006	0.717	Pass
NVNT	2-DH1	ANT14	2401.856	2402.85	0.994	0.833	Pass
NVNT	2-DH1	ANT14	2441.148	2442.16	1.012	0.787	Pass
NVNT	2-DH1	ANT14	2478.832	2479.842	1.01	0.782	Pass
NVNT	3-DH1	ANT14	2401.838	2402.852	1.014	0.8	Pass
NVNT	3-DH1	ANT14	2441.154	2442.146	0.992	0.791	Pass
NVNT	3-DH1	ANT14	2478.85	2479.834	0.984	0.8	Pass

Test Graphs

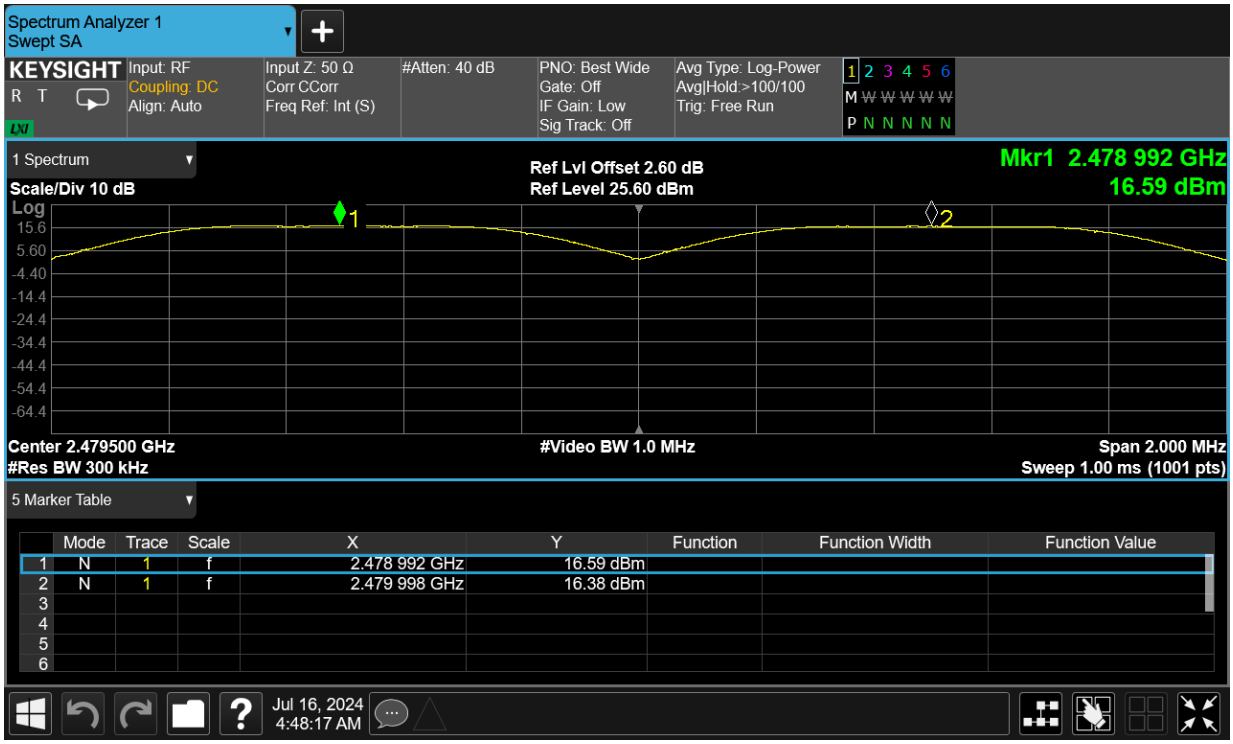
CFS NVNT 1-DH1 2402MHz ANT14



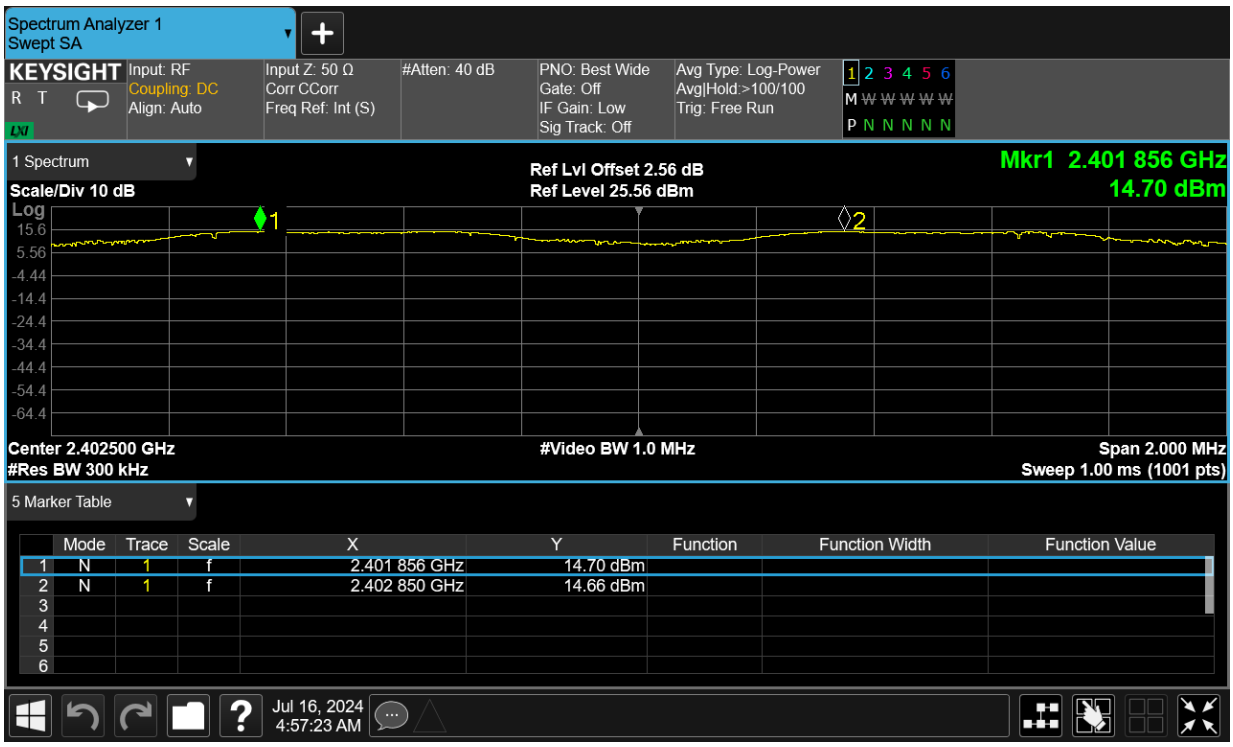
CFS NVNT 1-DH1 2441MHz ANT14



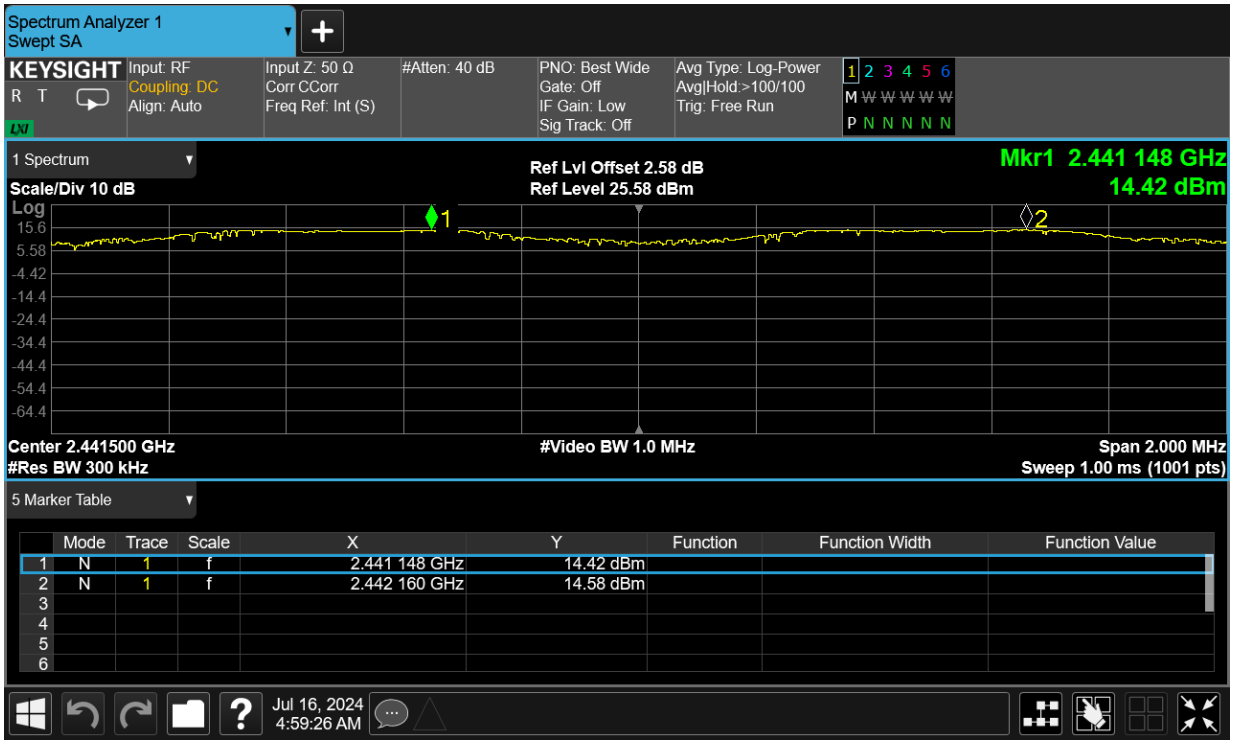
CFS NVNT 1-DH1 2480MHz ANT14



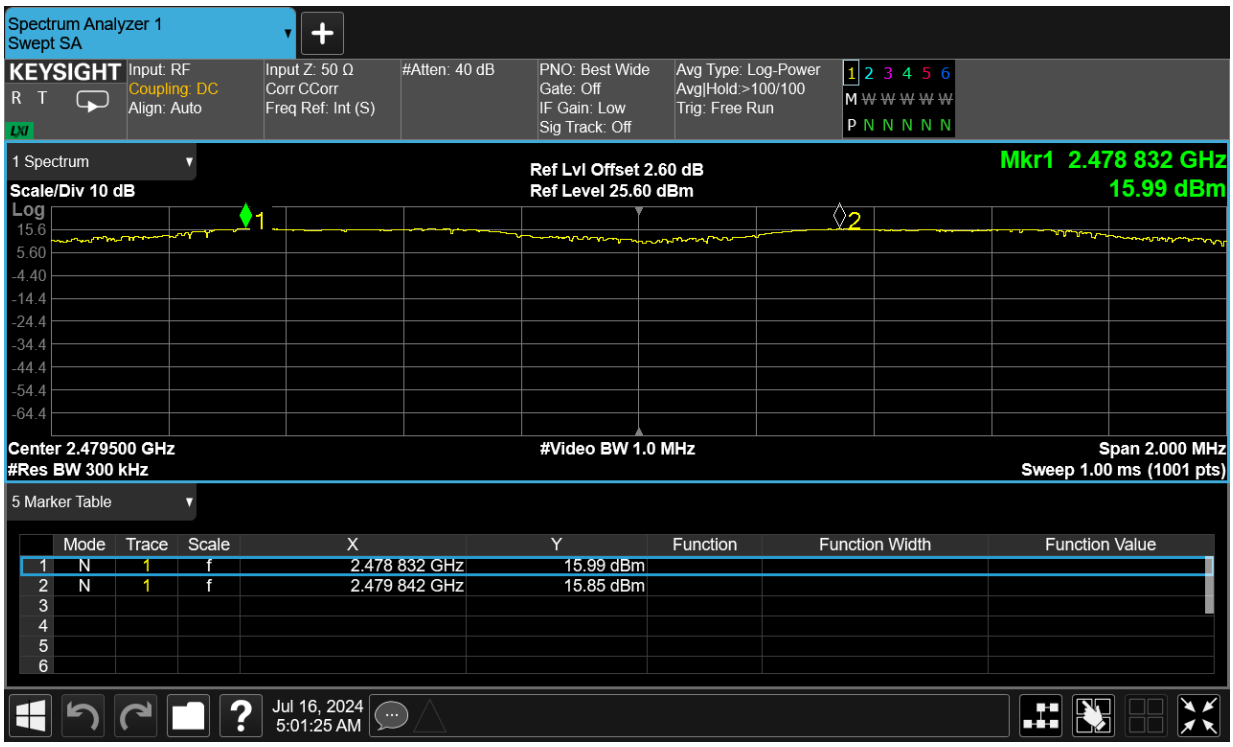
CFS NVNT 2-DH1 2402MHz ANT14



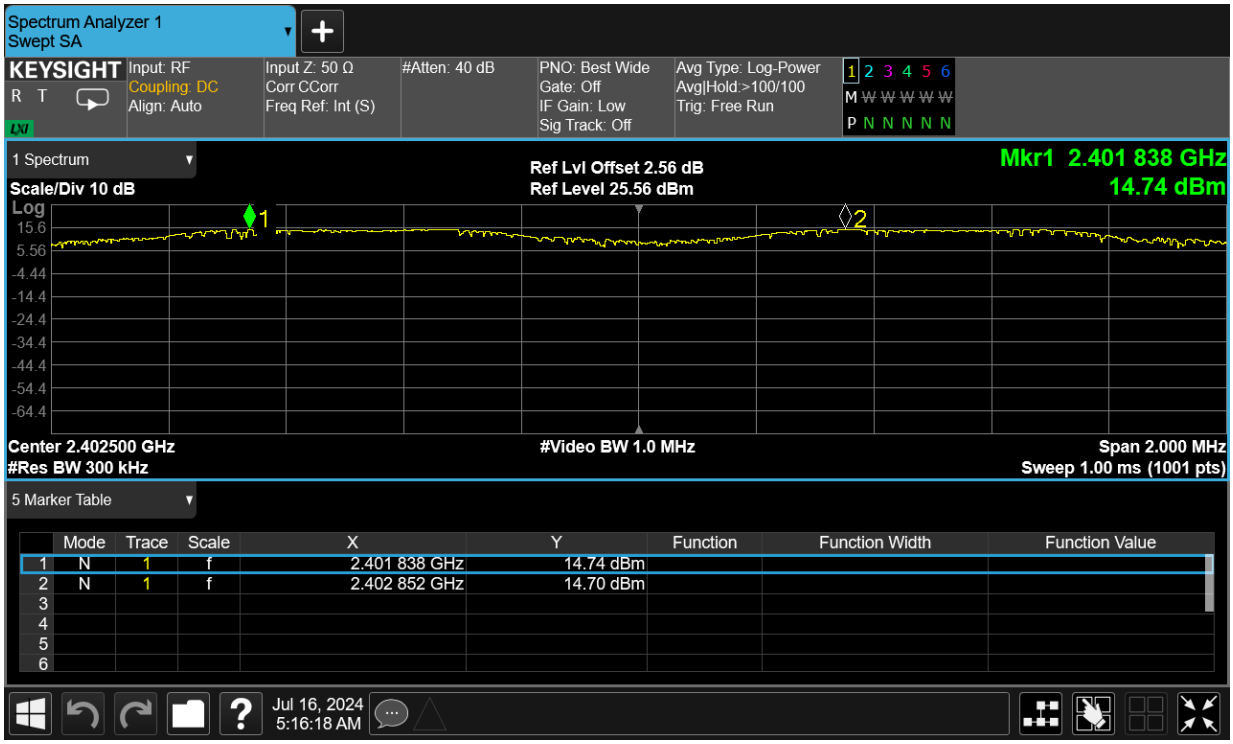
CFS NVNT 2-DH1 2441MHz ANT14



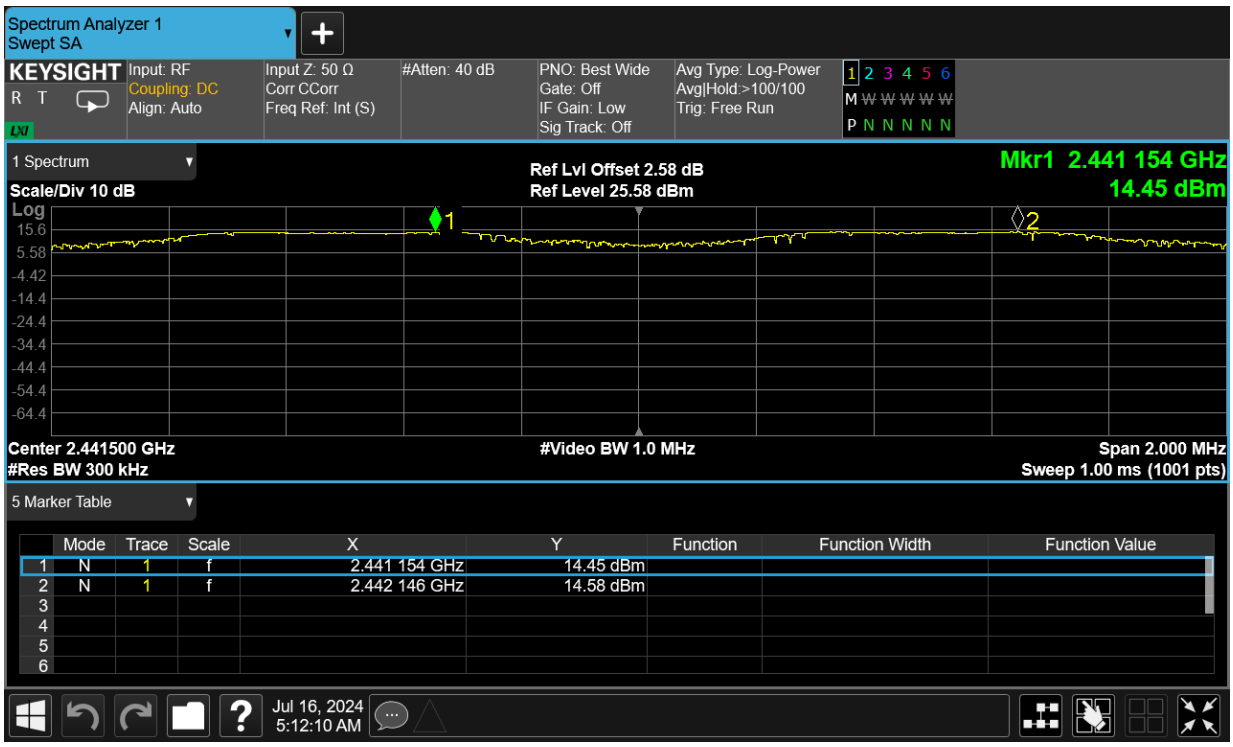
CFS NVNT 2-DH1 2480MHz ANT14



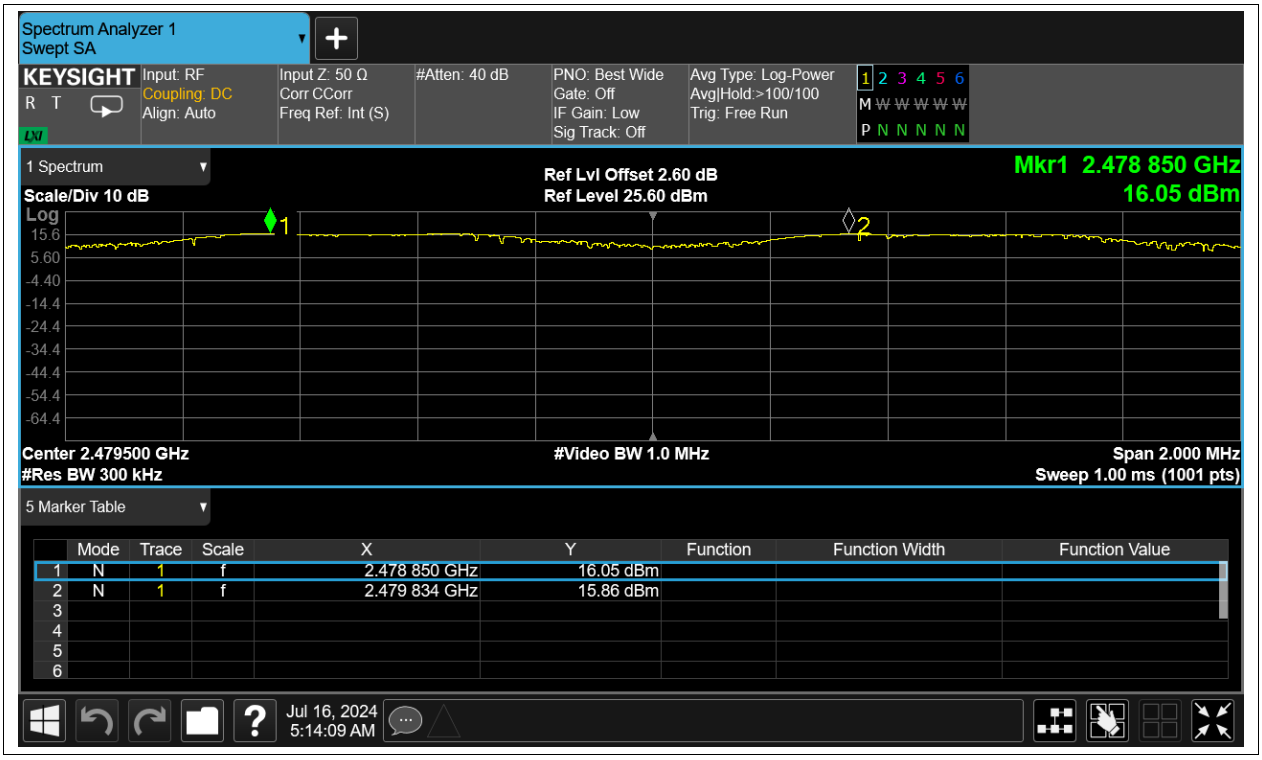
CFS NVNT 3-DH1 2402MHz ANT14



CFS NVNT 3-DH1 2441MHz ANT14



CFS NVNT 3-DH1 2480MHz ANT14

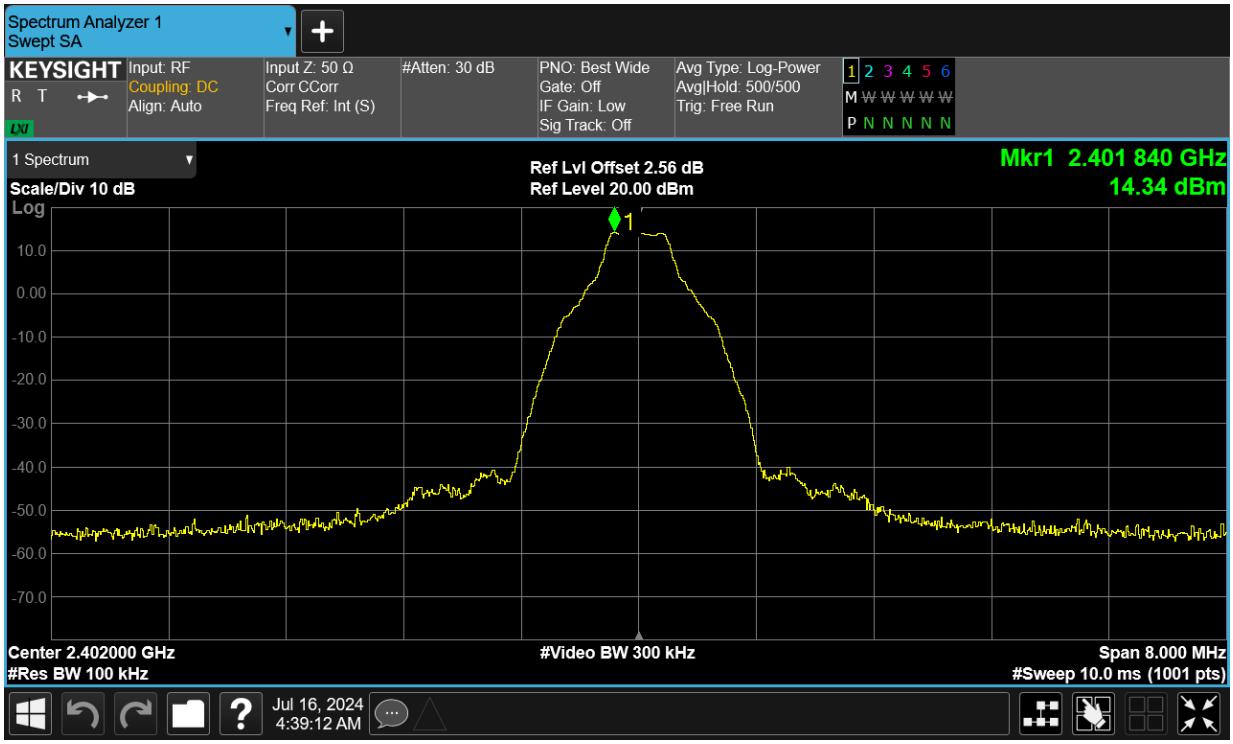

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 40 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold:>100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.60 dB
Ref Level 25.60 dBm
Mkr1 2.478 850 GHz
16.05 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 2.478 850 GHz 16.05 dBm
2 N 1 f 2.479 834 GHz 15.86 dBm
Jul 16, 2024
5:14:09 AM

Band Edge

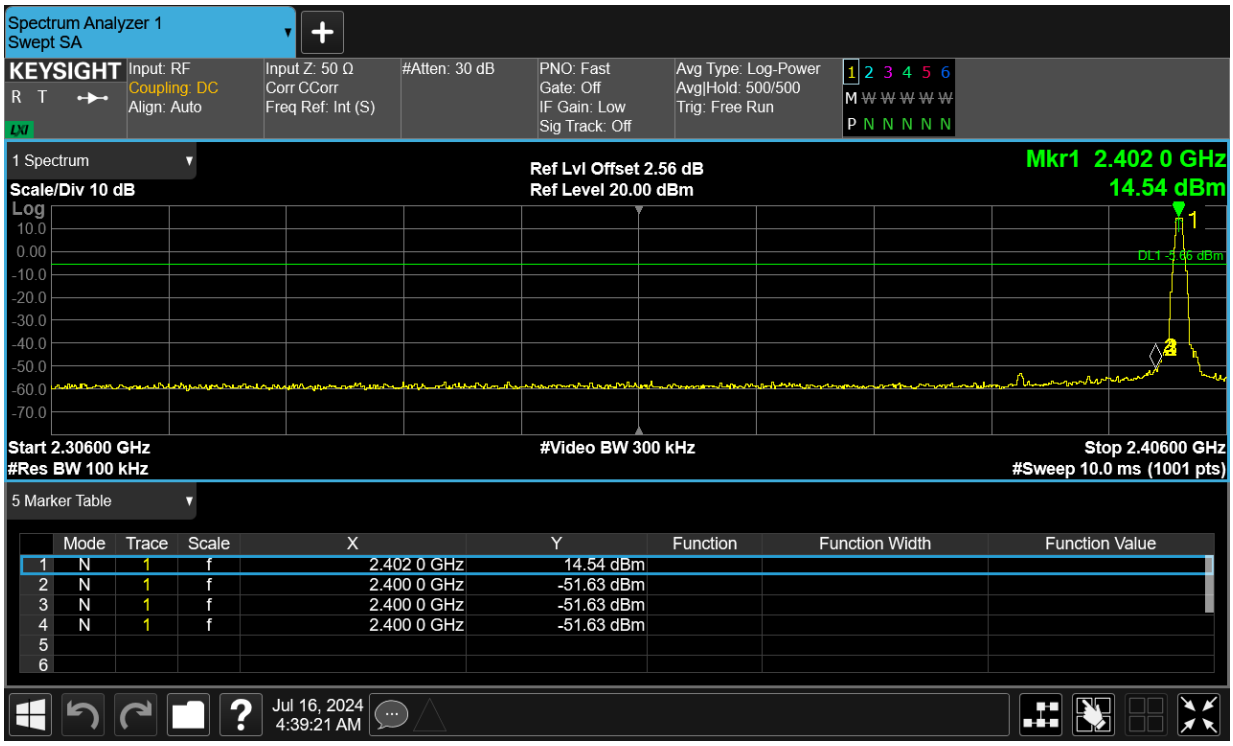
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	ANT14	No-Hopping	-65.97	-20	Pass
NVNT	1-DH1	2480	ANT14	No-Hopping	-69.32	-20	Pass
NVNT	2-DH1	2402	ANT14	No-Hopping	-62.74	-20	Pass
NVNT	2-DH1	2480	ANT14	No-Hopping	-70.15	-20	Pass
NVNT	3-DH1	2402	ANT14	No-Hopping	-60.64	-20	Pass
NVNT	3-DH1	2480	ANT14	No-Hopping	-68.99	-20	Pass

Test Graphs

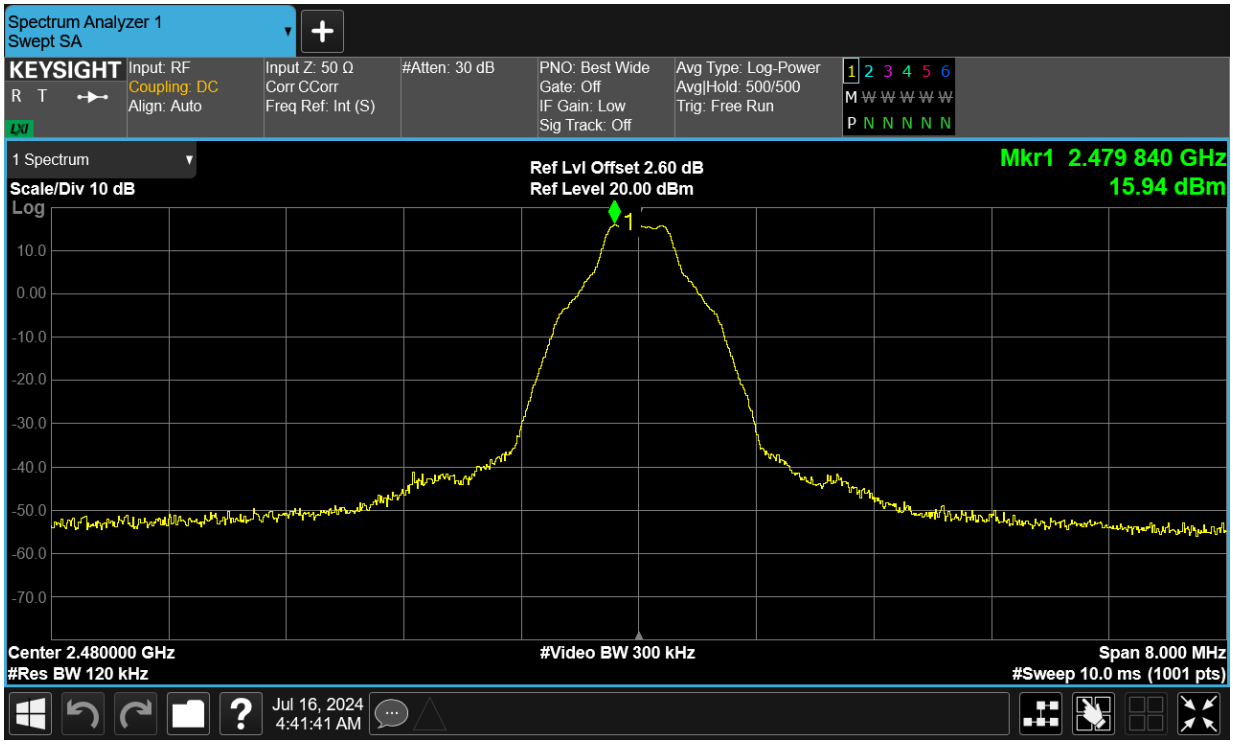
Band Edge NVNT 1-DH1 2402MHz ANT14 No-Hopping Ref



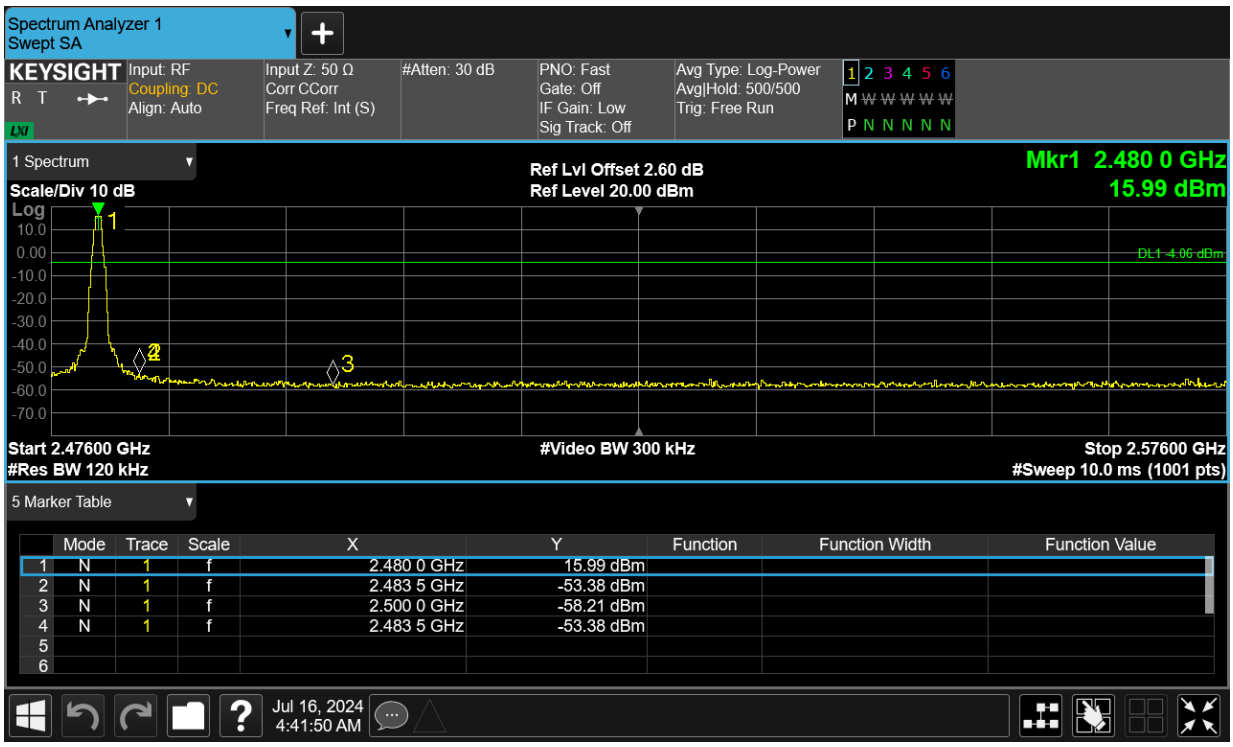
Band Edge NVNT 1-DH1 2402MHz ANT14 No-Hopping Emission



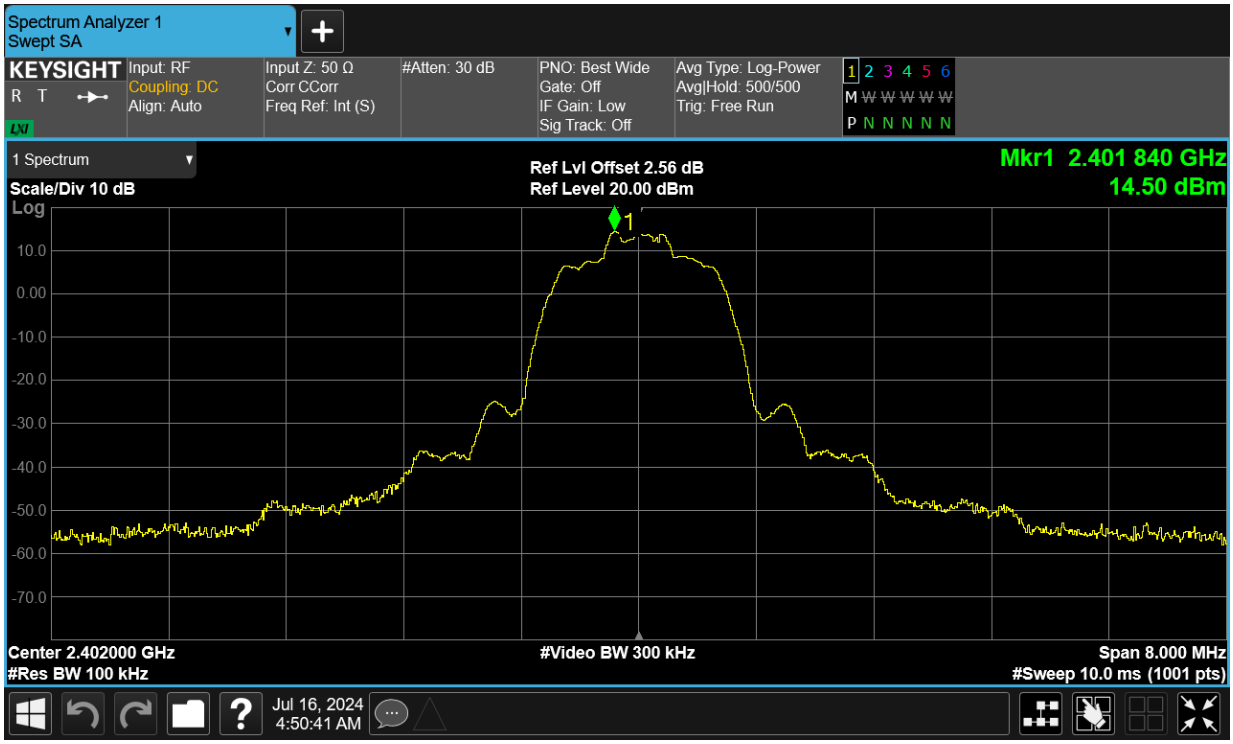
Band Edge NVNT 1-DH1 2480MHz ANT14 No-Hopping Ref



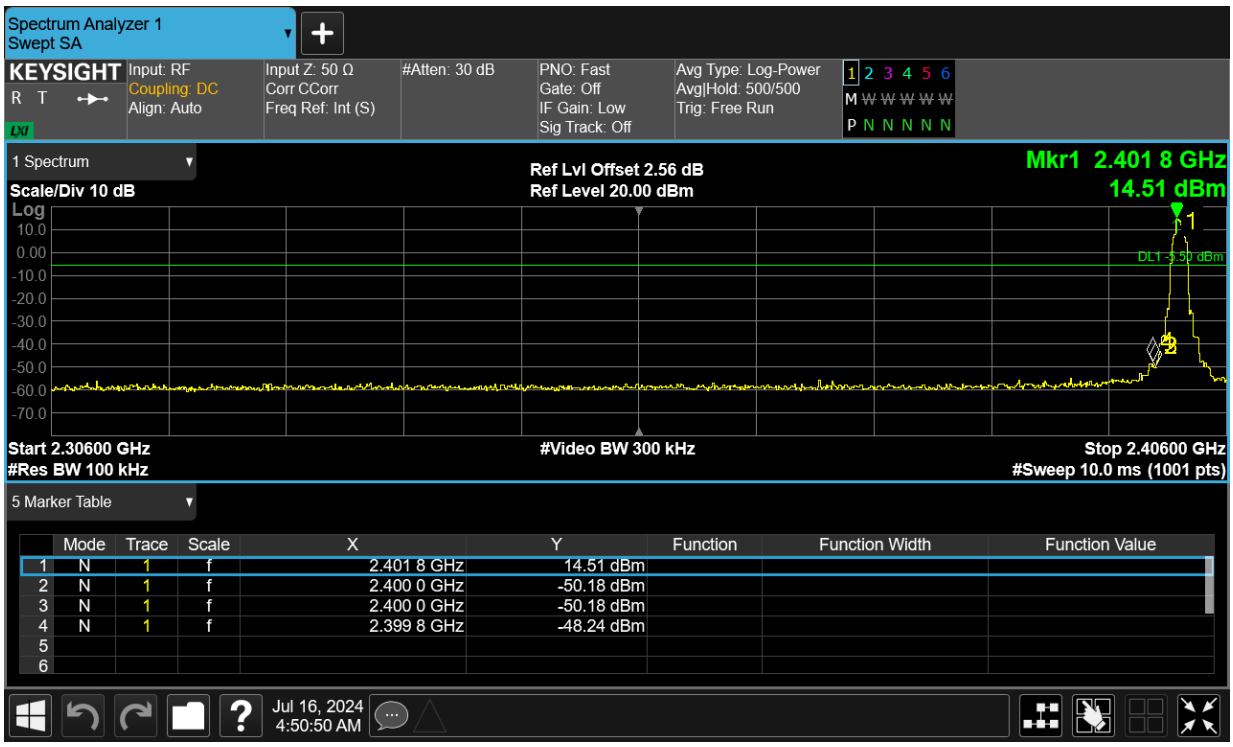
Band Edge NVNT 1-DH1 2480MHz ANT14 No-Hopping Emission



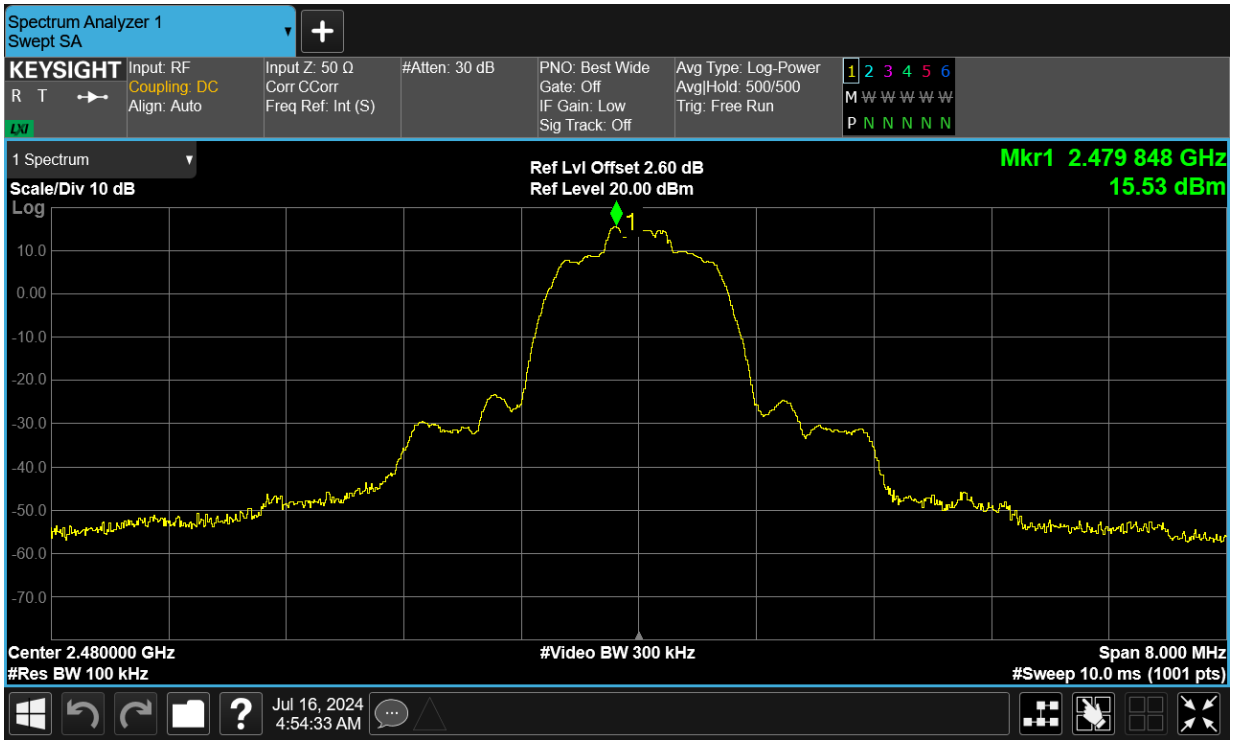
Band Edge NVNT 2-DH1 2402MHz ANT14 No-Hopping Ref



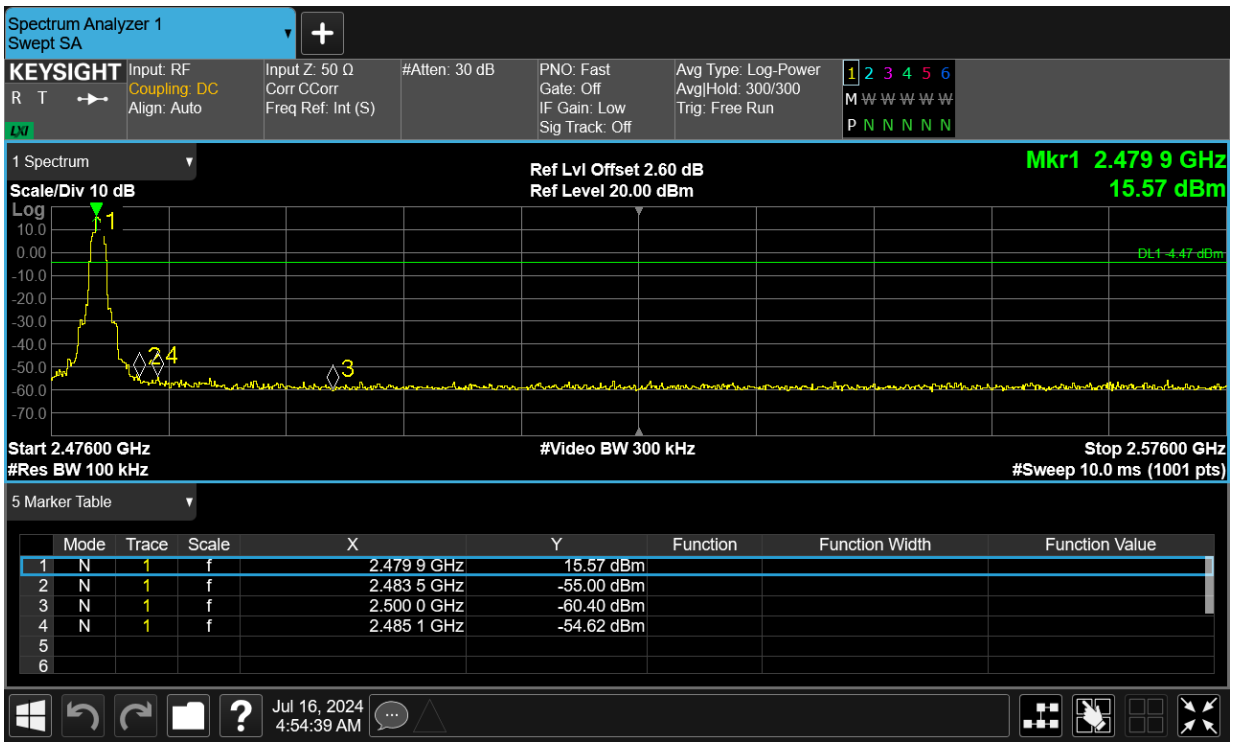
Band Edge NVNT 2-DH1 2402MHz ANT14 No-Hopping Emission



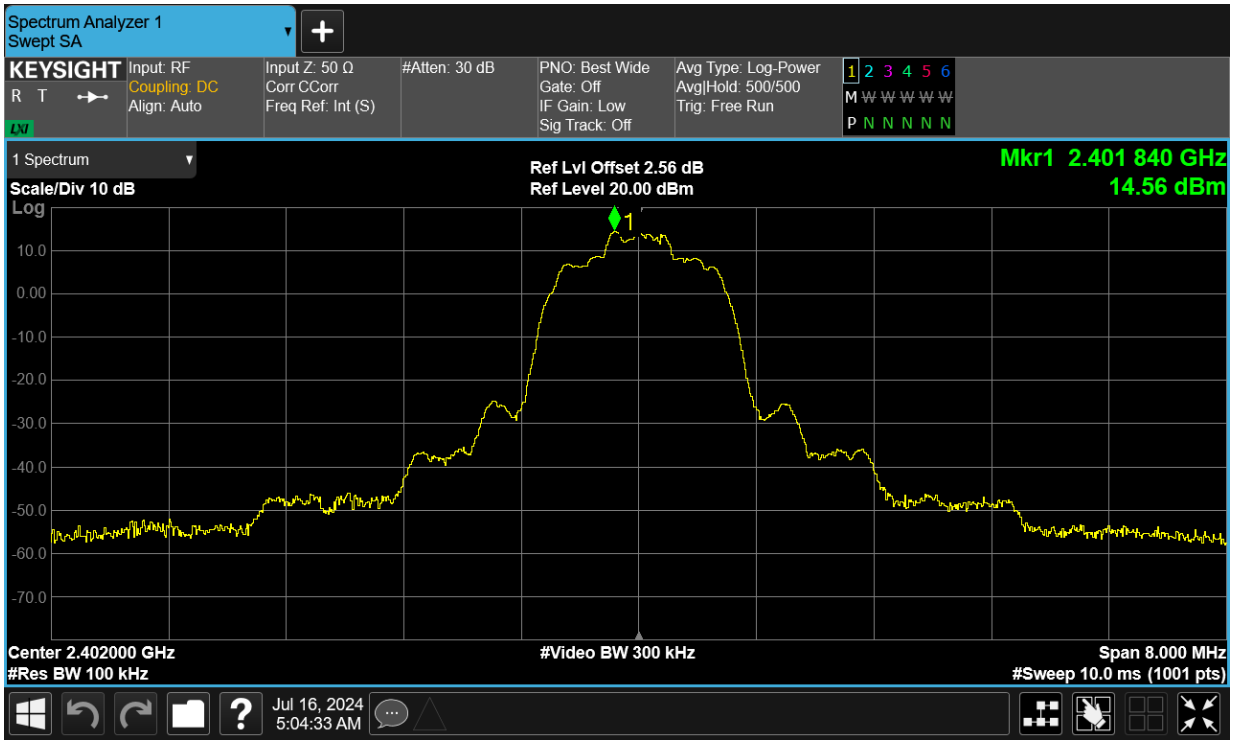
Band Edge NVNT 2-DH1 2480MHz ANT14 No-Hopping Ref



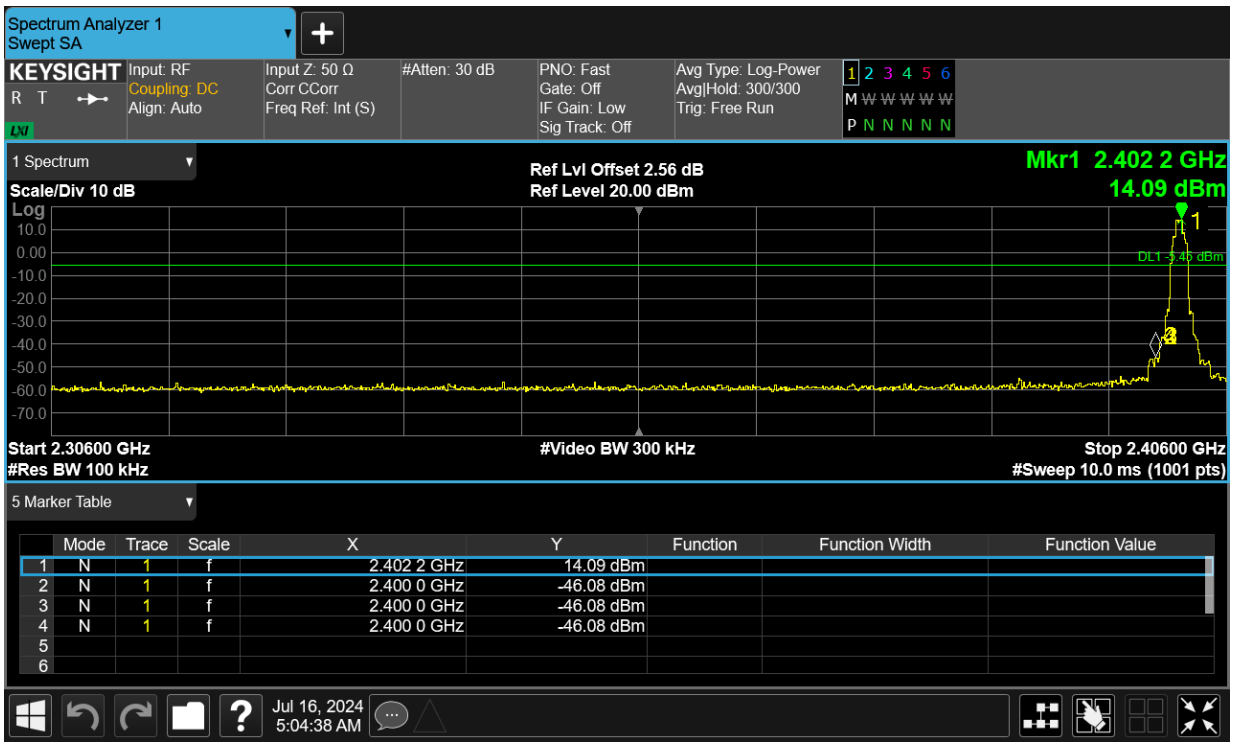
Band Edge NVNT 2-DH1 2480MHz ANT14 No-Hopping Emission



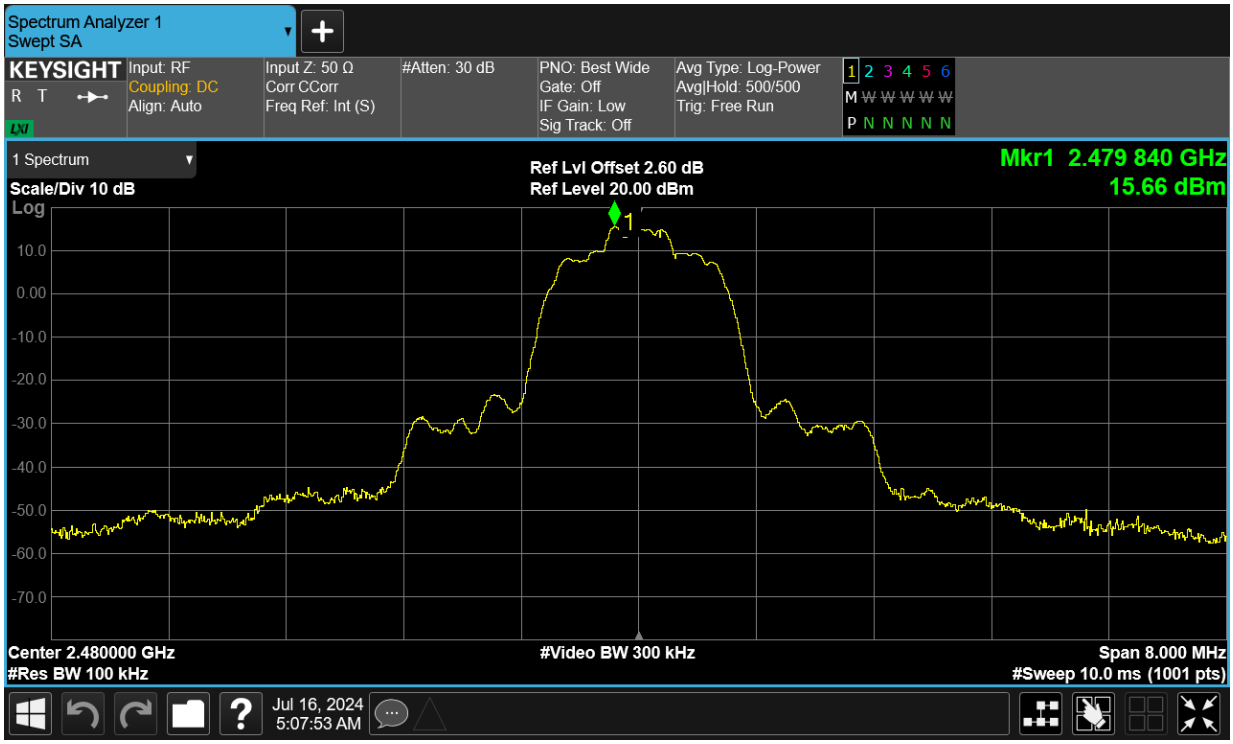
Band Edge NVNT 3-DH1 2402MHz ANT14 No-Hopping Ref



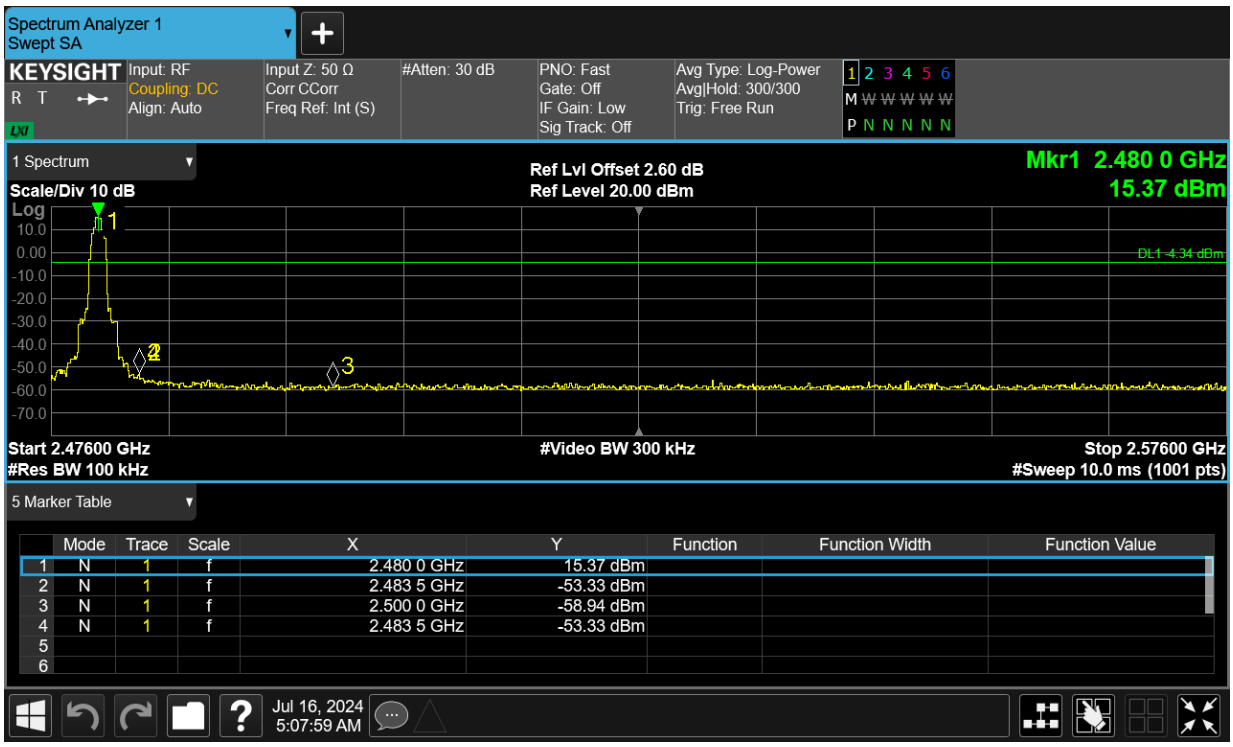
Band Edge NVNT 3-DH1 2402MHz ANT14 No-Hopping Emission



Band Edge NVNT 3-DH1 2480MHz ANT14 No-Hopping Ref



Band Edge NVNT 3-DH1 2480MHz ANT14 No-Hopping Emission

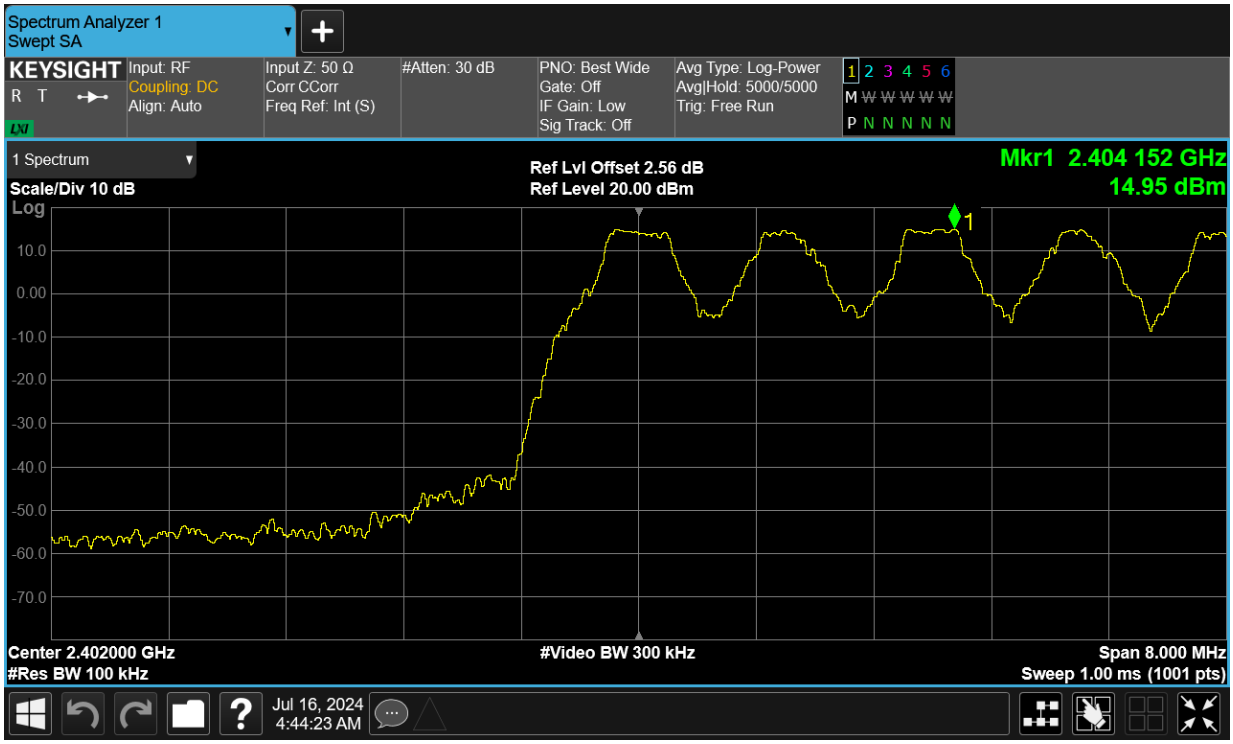


Band Edge(Hopping)

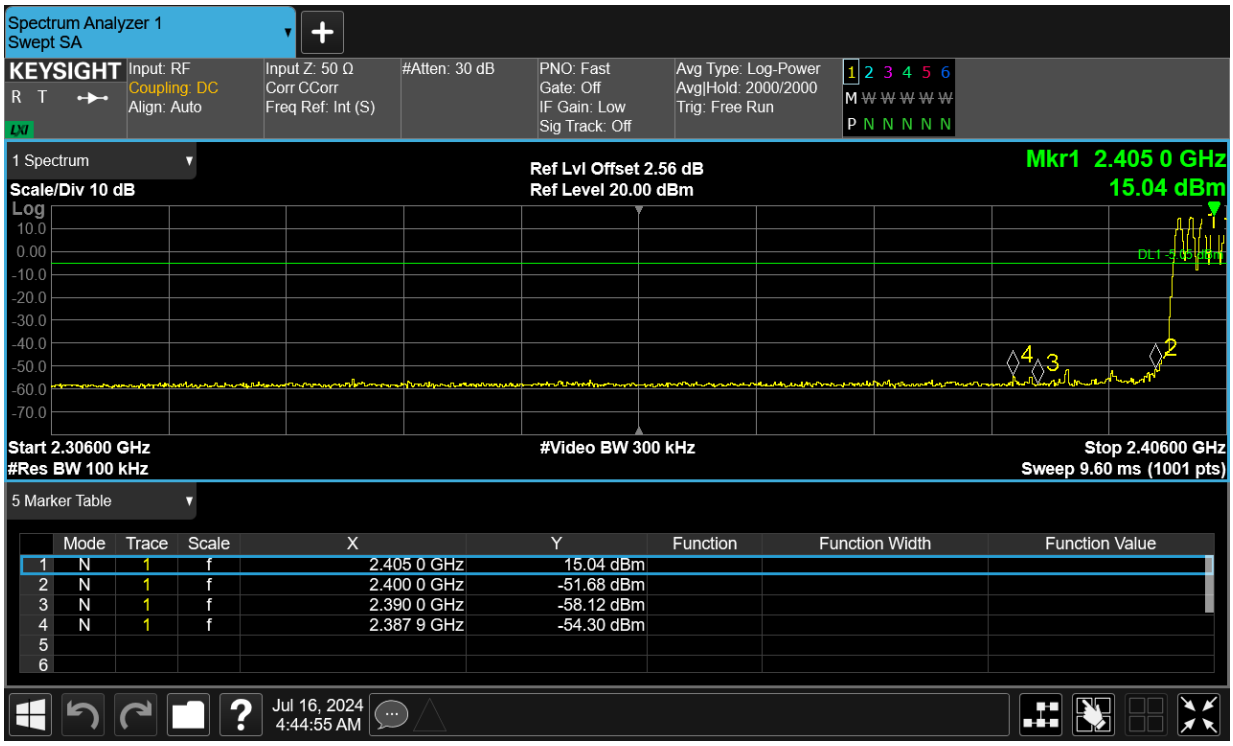
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	ANT14	Hopping	-69.25	-20	Pass
NVNT	1-DH1	2480	ANT14	Hopping	-70.21	-20	Pass
NVNT	2-DH1	2402	ANT14	Hopping	-69.9	-20	Pass
NVNT	2-DH1	2480	ANT14	Hopping	-69.23	-20	Pass
NVNT	3-DH1	2402	ANT14	Hopping	-70.29	-20	Pass
NVNT	3-DH1	2480	ANT14	Hopping	-72	-20	Pass

Test Graphs

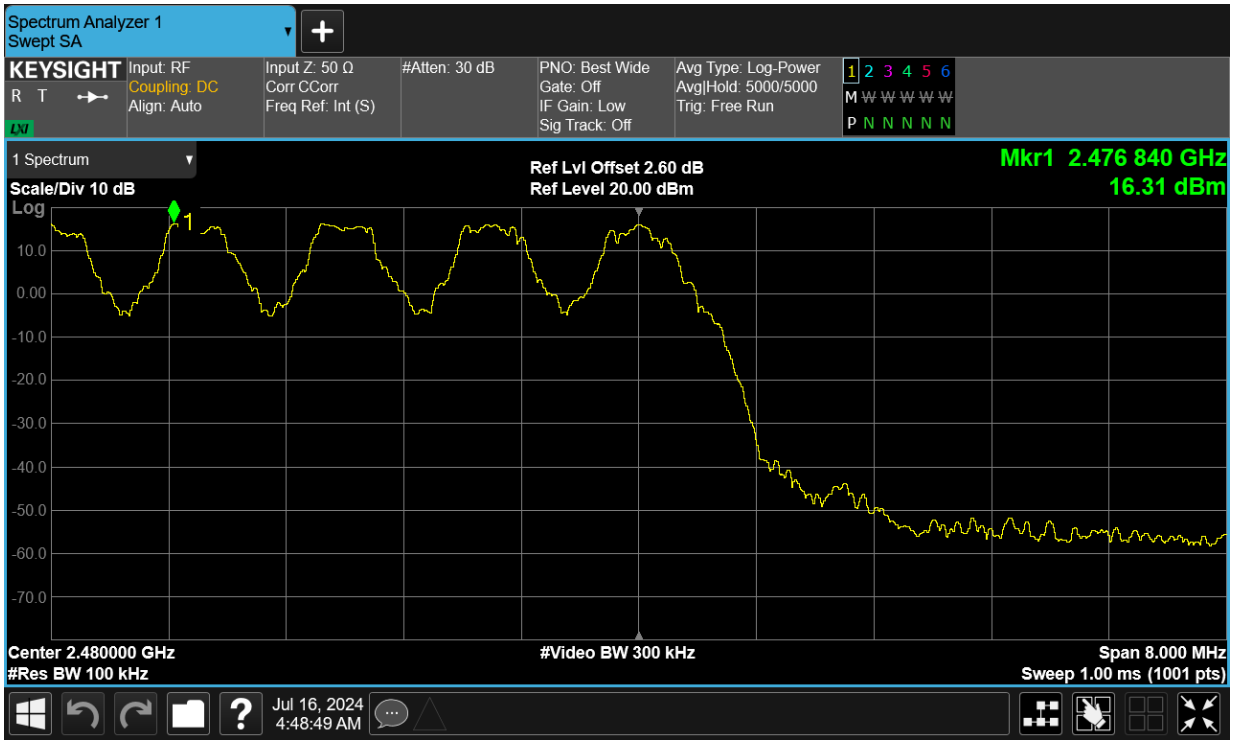
Band Edge(Hopping) NVNT 1-DH1 2402MHz ANT14 Hopping Ref



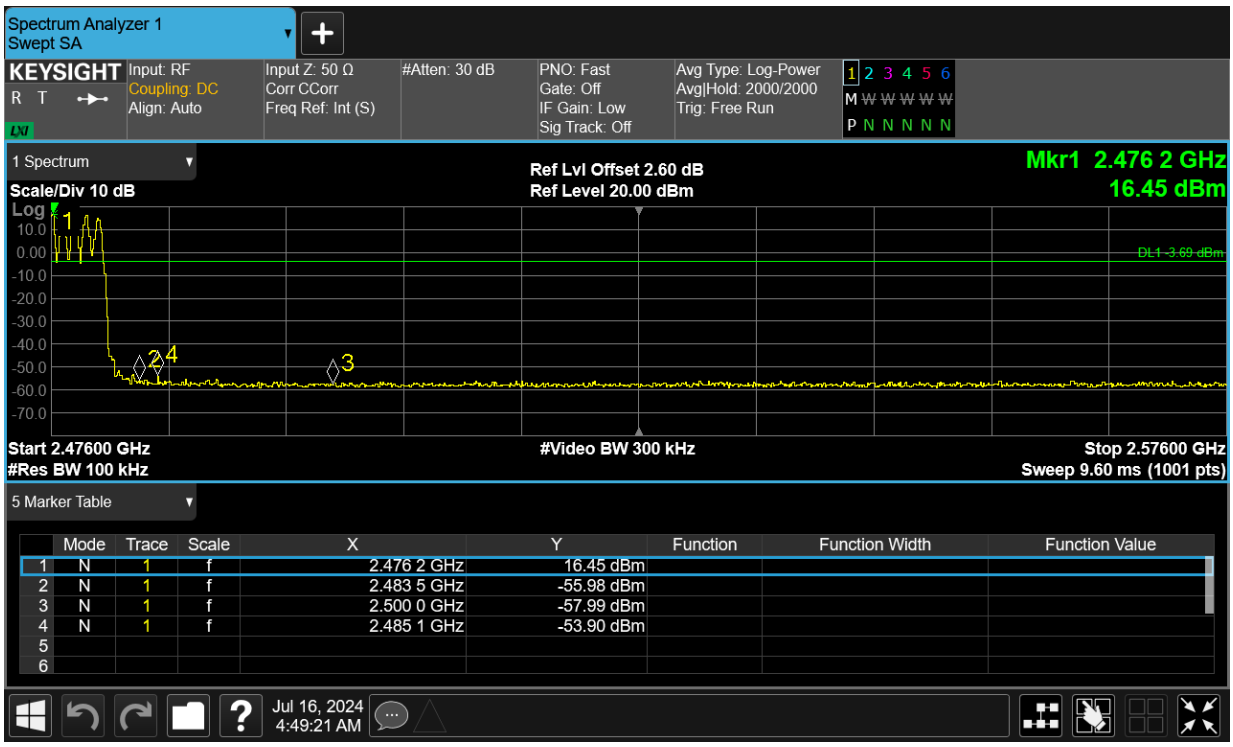
Band Edge(Hopping) NVNT 1-DH1 2402MHz ANT14 Hopping Emission



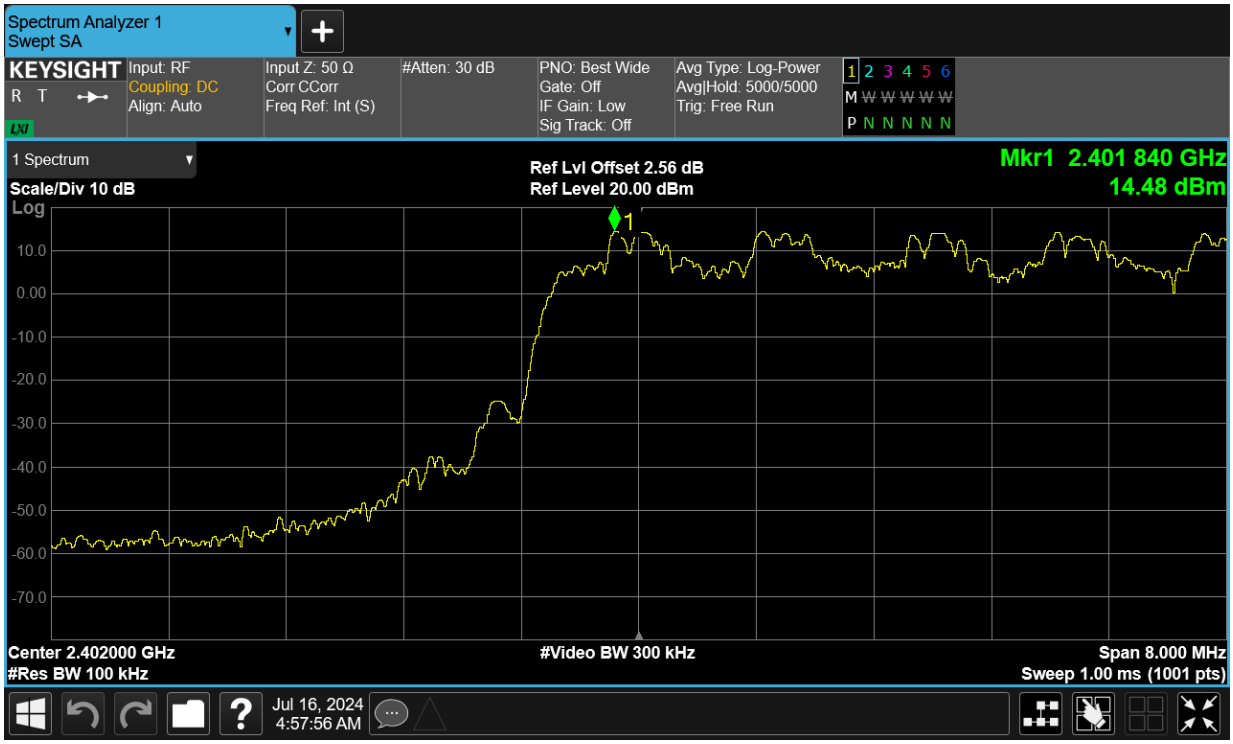
Band Edge(Hopping) NVNT 1-DH1 2480MHz ANT14 Hopping Ref



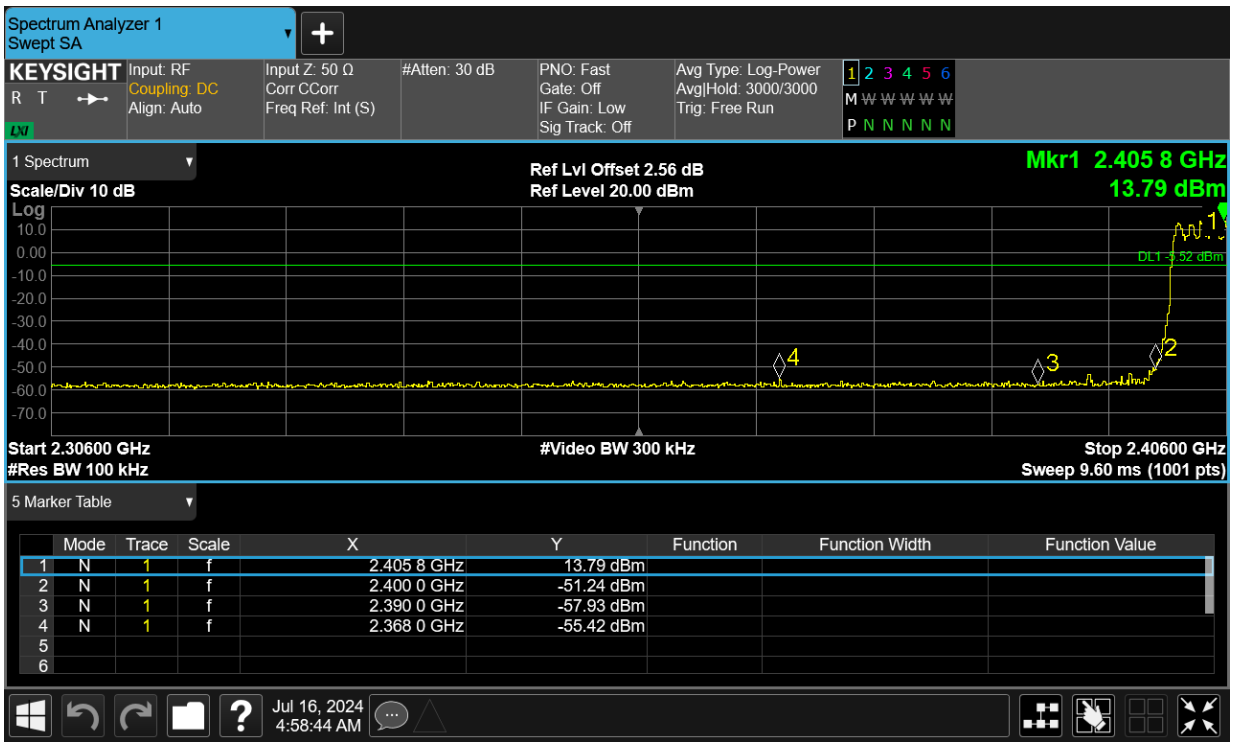
Band Edge(Hopping) NVNT 1-DH1 2480MHz ANT14 Hopping Emission



Band Edge(Hopping) NVNT 2-DH1 2402MHz ANT14 Hopping Ref

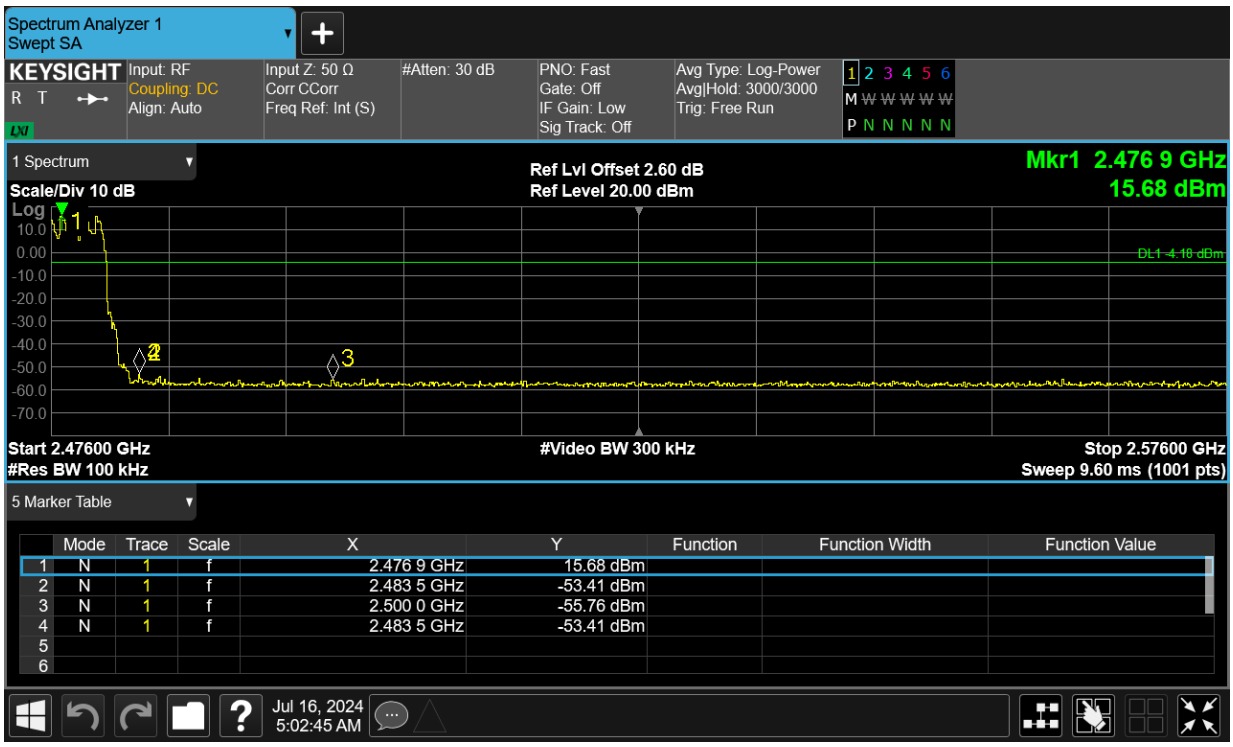


Band Edge(Hopping) NVNT 2-DH1 2402MHz ANT14 Hopping Emission

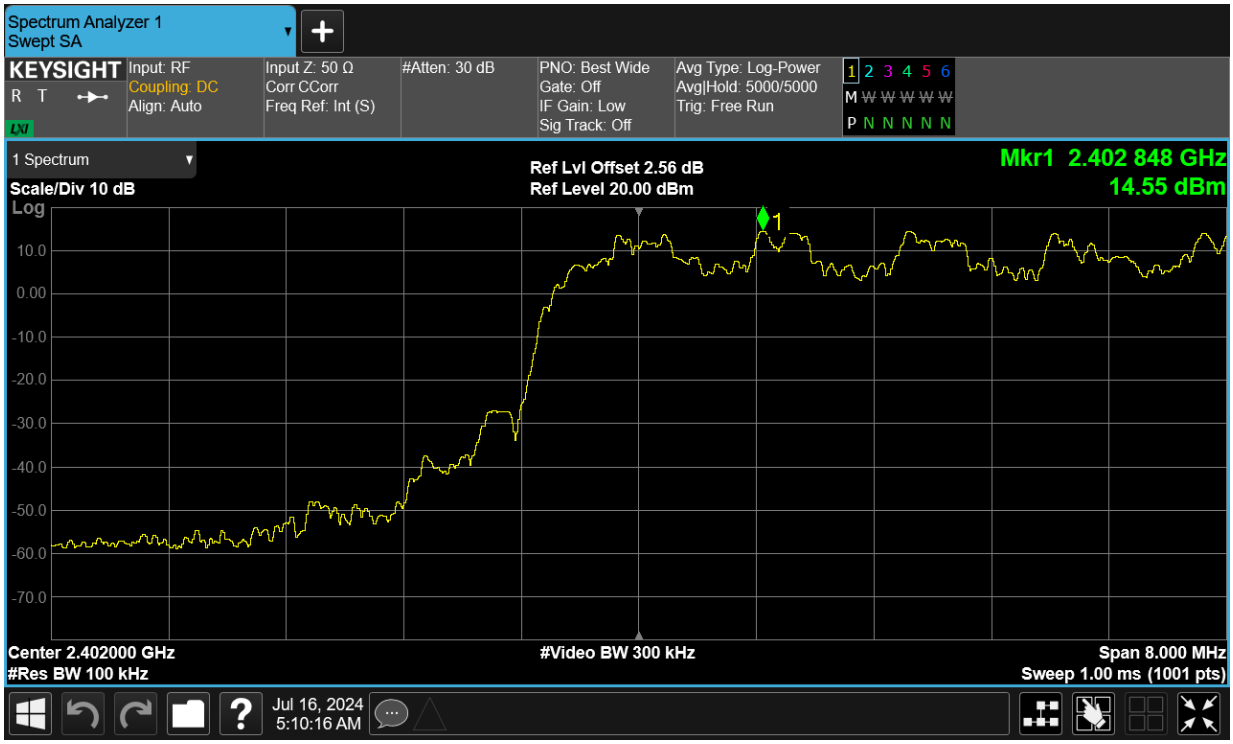


Band Edge(Hopping) NVNT 2-DH1 2480MHz ANT14 Hopping Ref

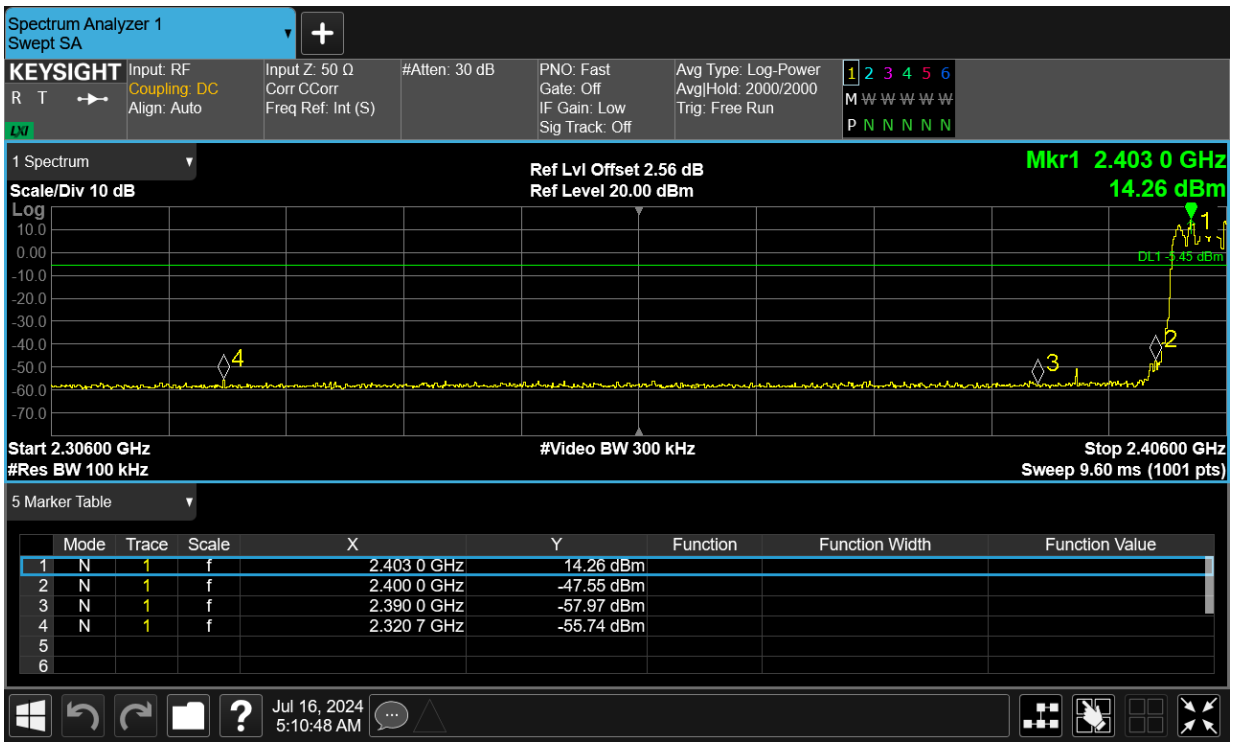
Band Edge(Hopping) NVNT 2-DH1 2480MHz ANT14 Hopping Emission



Band Edge(Hopping) NVNT 3-DH1 2402MHz ANT14 Hopping Ref

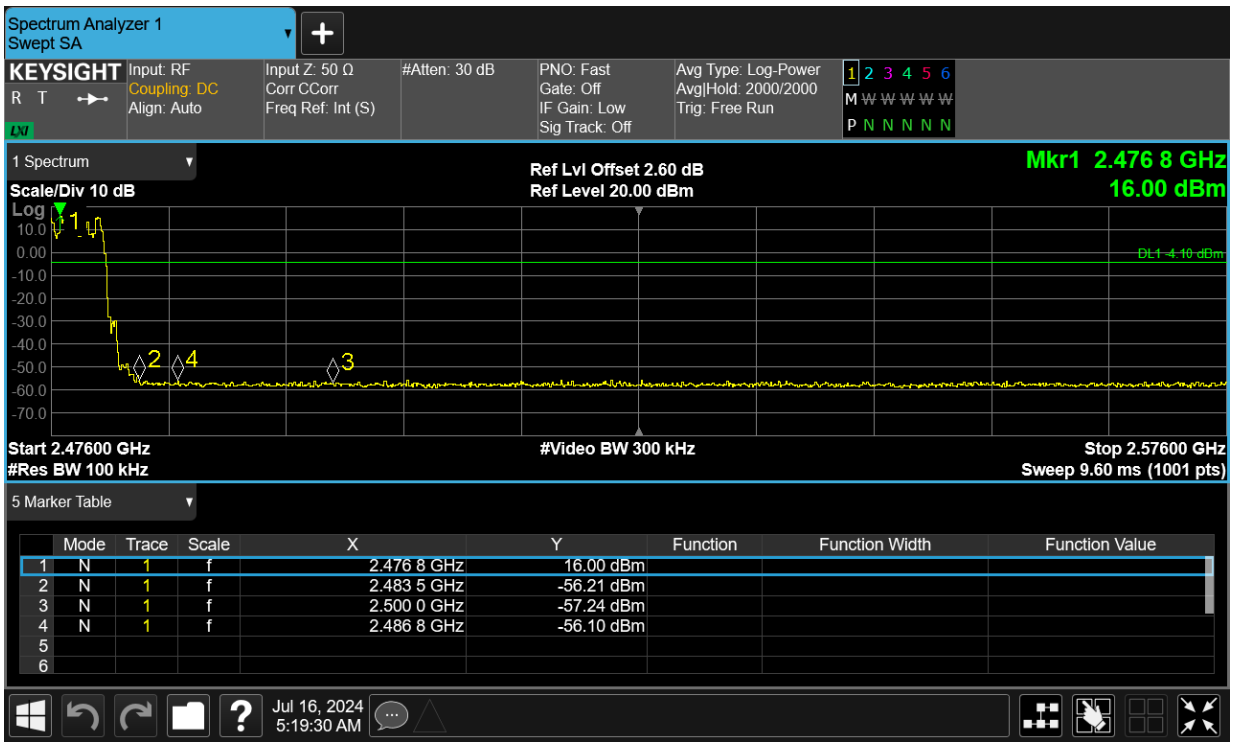


Band Edge(Hopping) NVNT 3-DH1 2402MHz ANT14 Hopping Emission



Band Edge(Hopping) NVNT 3-DH1 2480MHz ANT14 Hopping Ref

Band Edge(Hopping) NVNT 3-DH1 2480MHz ANT14 Hopping Emission

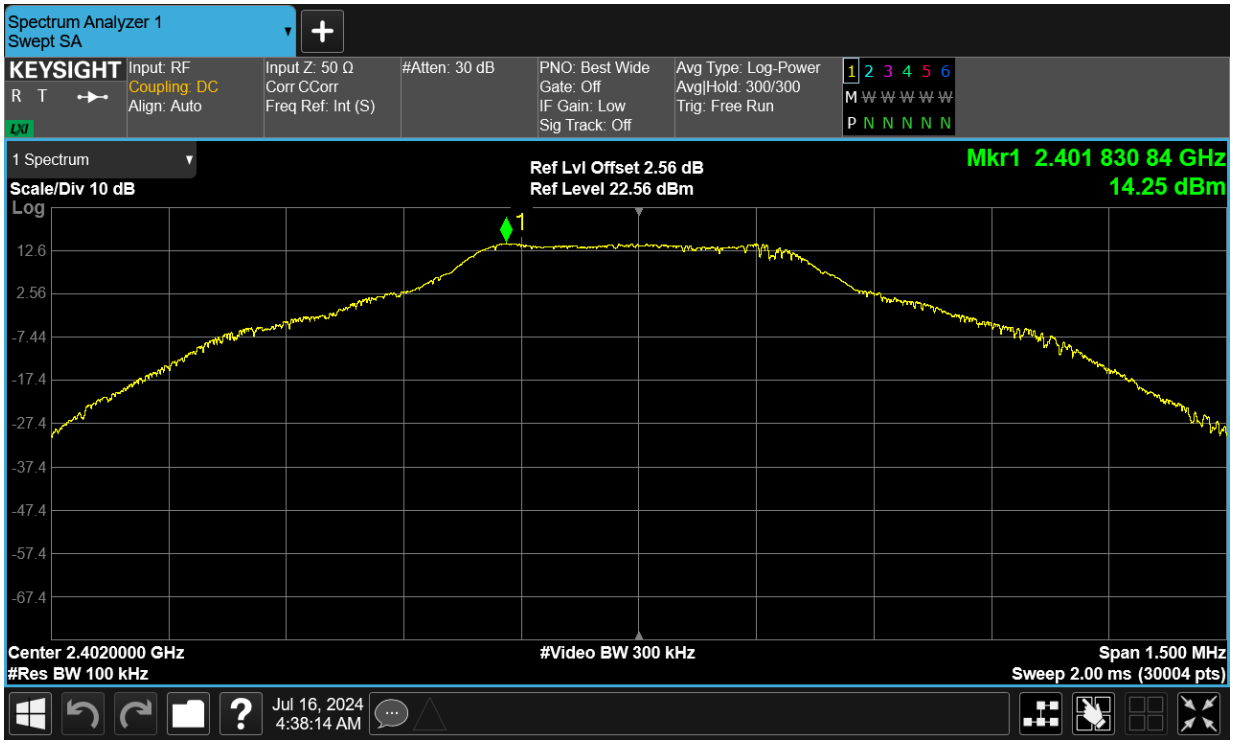


Conducted RF Spurious Emission

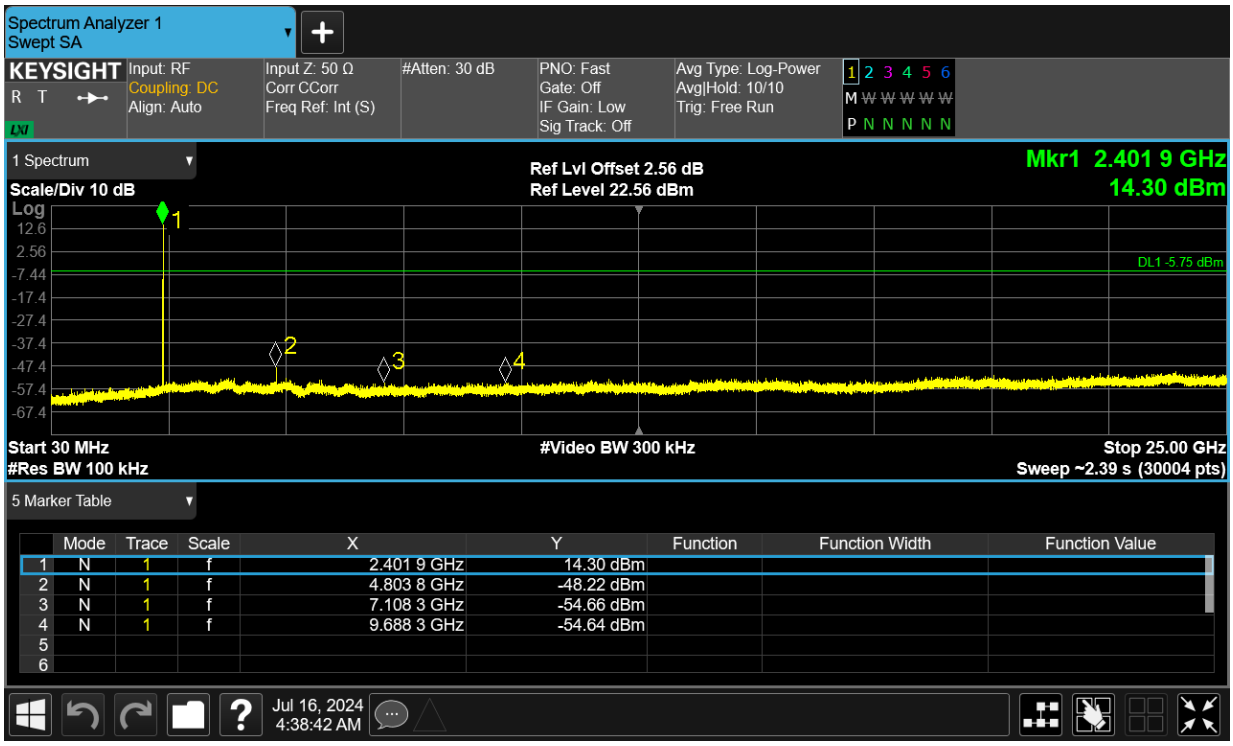
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	ANT14	-62.47	-20	Pass
NVNT	1-DH1	2441	ANT14	-62.92	-20	Pass
NVNT	1-DH1	2480	ANT14	-63.87	-20	Pass
NVNT	2-DH1	2402	ANT14	-64.77	-20	Pass
NVNT	2-DH1	2441	ANT14	-63.86	-20	Pass
NVNT	2-DH1	2480	ANT14	-65.78	-20	Pass
NVNT	3-DH1	2402	ANT14	-64.12	-20	Pass
NVNT	3-DH1	2441	ANT14	-63.98	-20	Pass
NVNT	3-DH1	2480	ANT14	-65.09	-20	Pass

Test Graphs

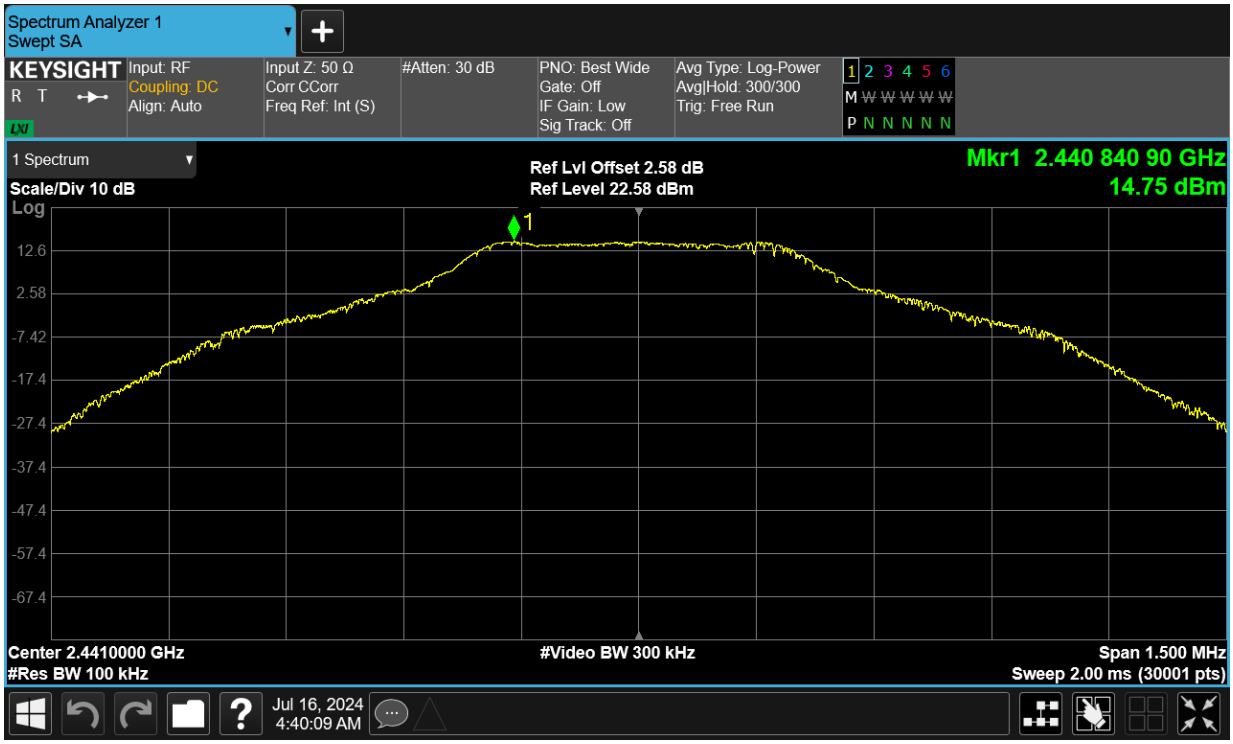
Tx. Spurious NVNT 1-DH1 2402MHz ANT14 Ref



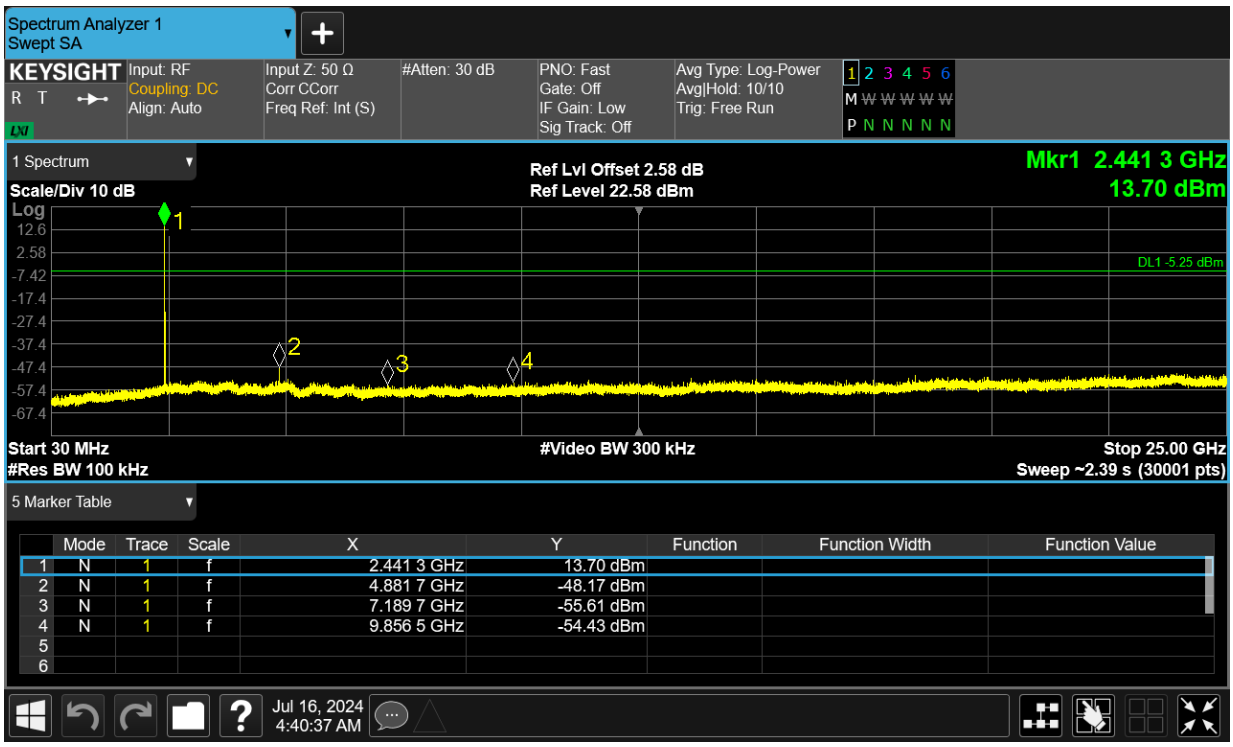
Tx. Spurious NVNT 1-DH1 2402MHz ANT14 Emission



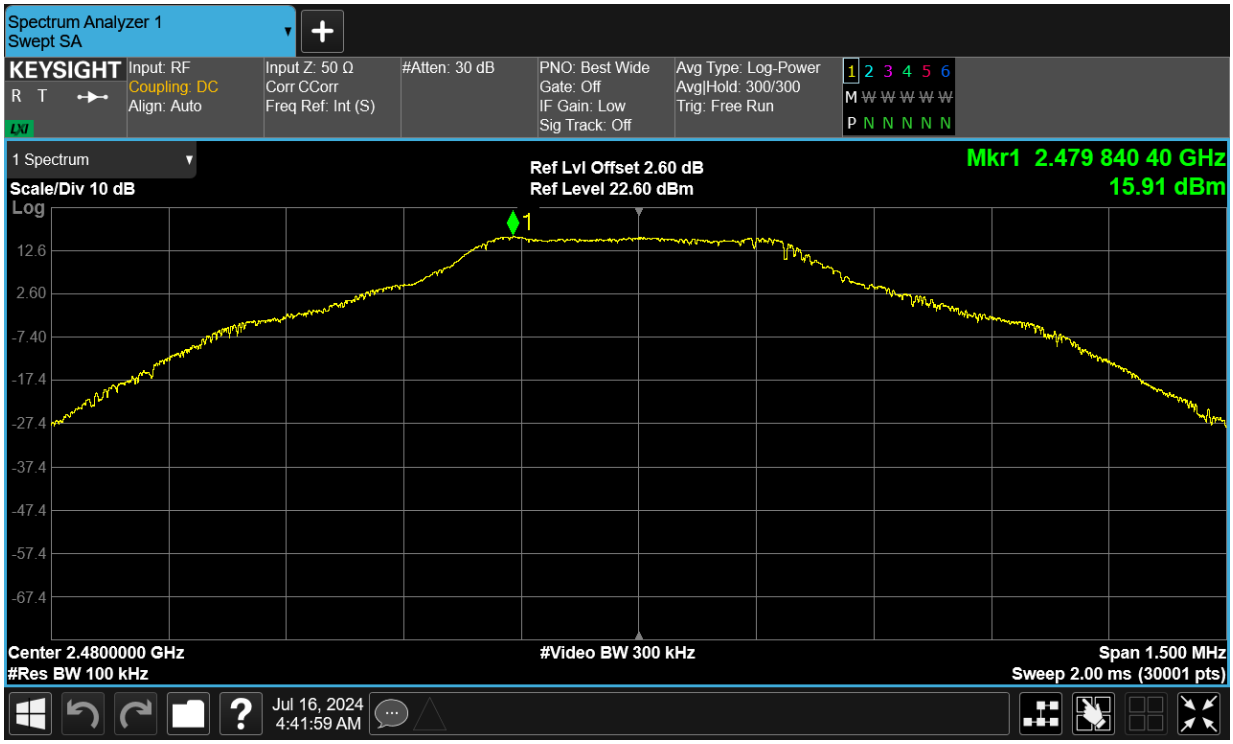
Tx. Spurious NVNT 1-DH1 2441MHz ANT14 Ref



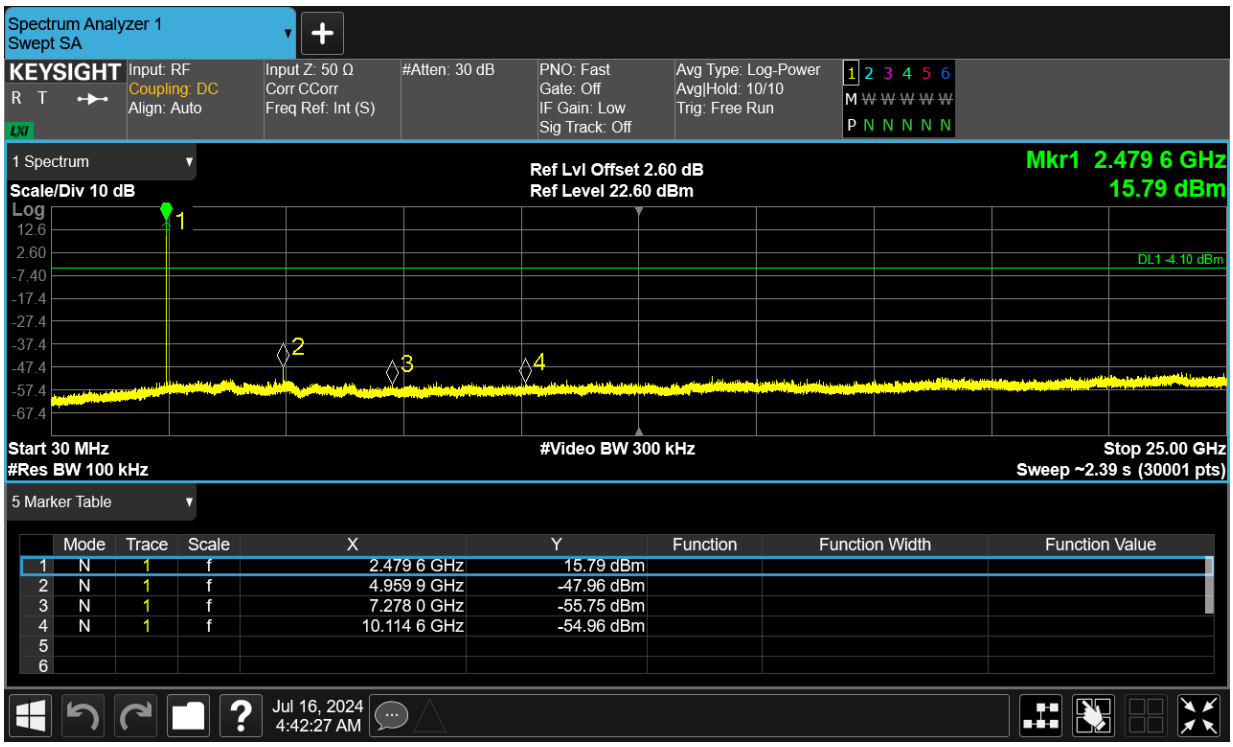
Tx. Spurious NVNT 1-DH1 2441MHz ANT14 Emission



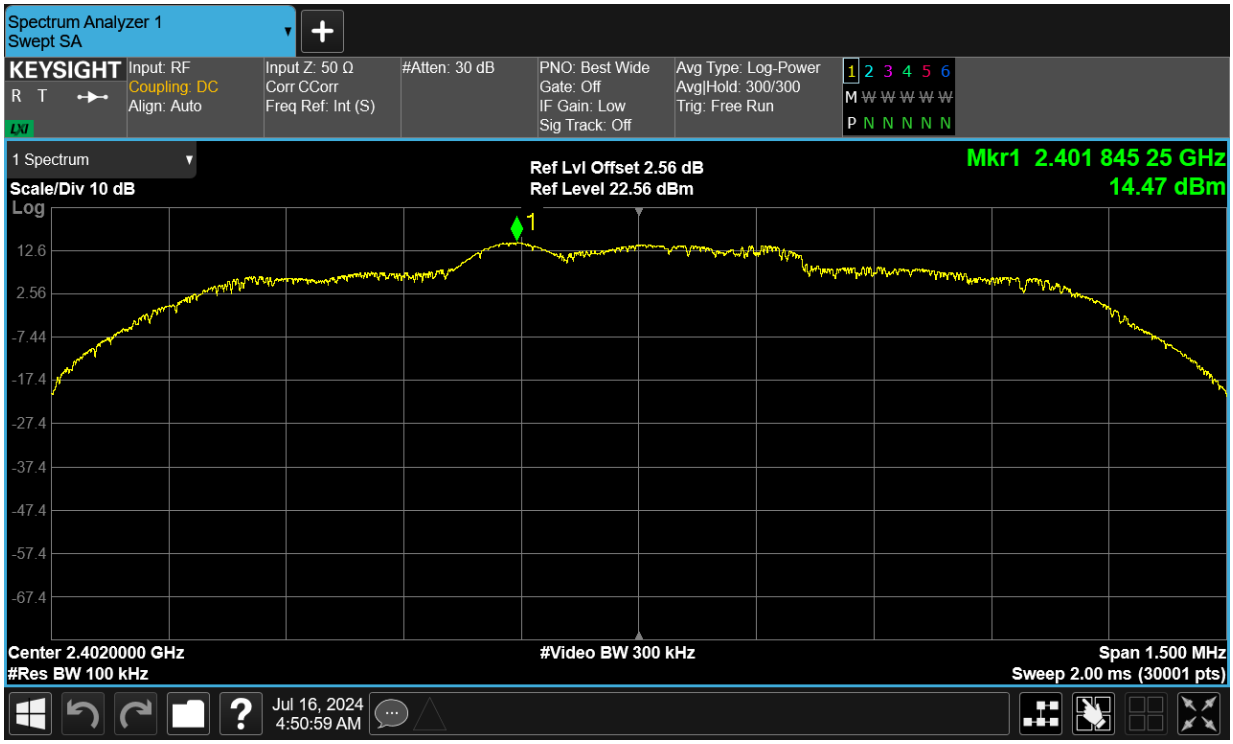
Tx. Spurious NVNT 1-DH1 2480MHz ANT14 Ref



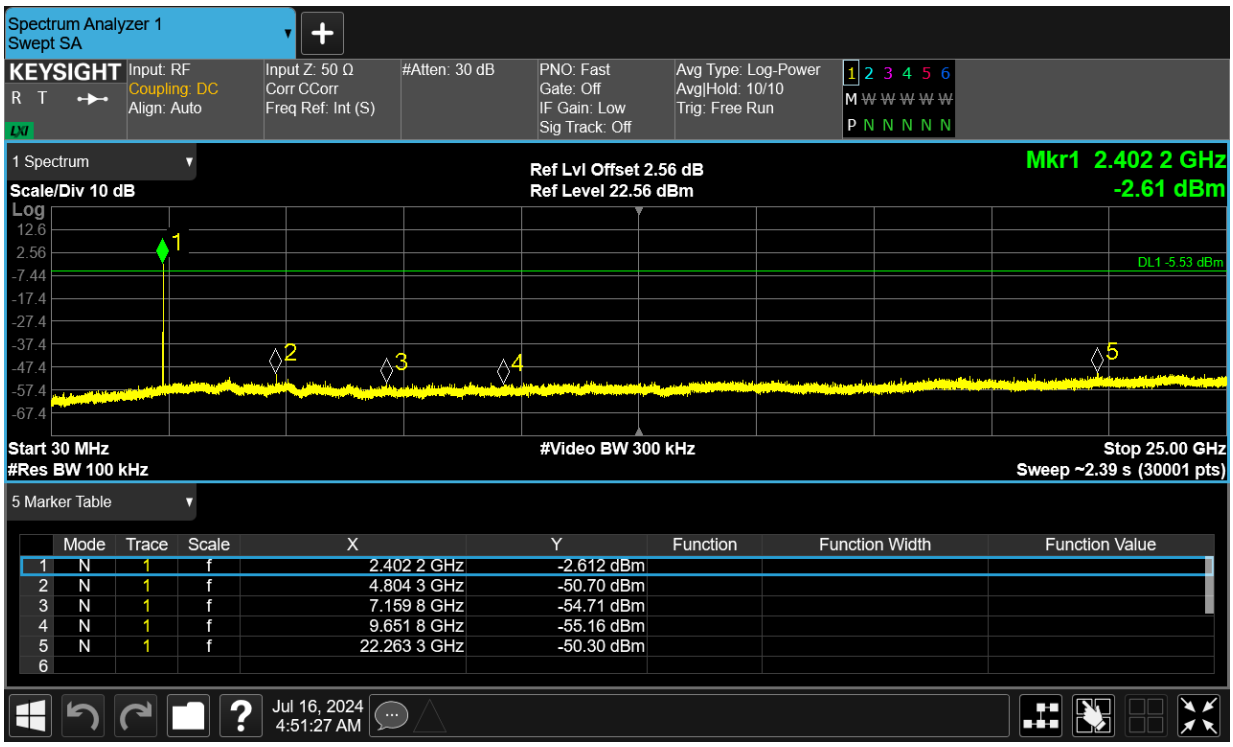
Tx. Spurious NVNT 1-DH1 2480MHz ANT14 Emission



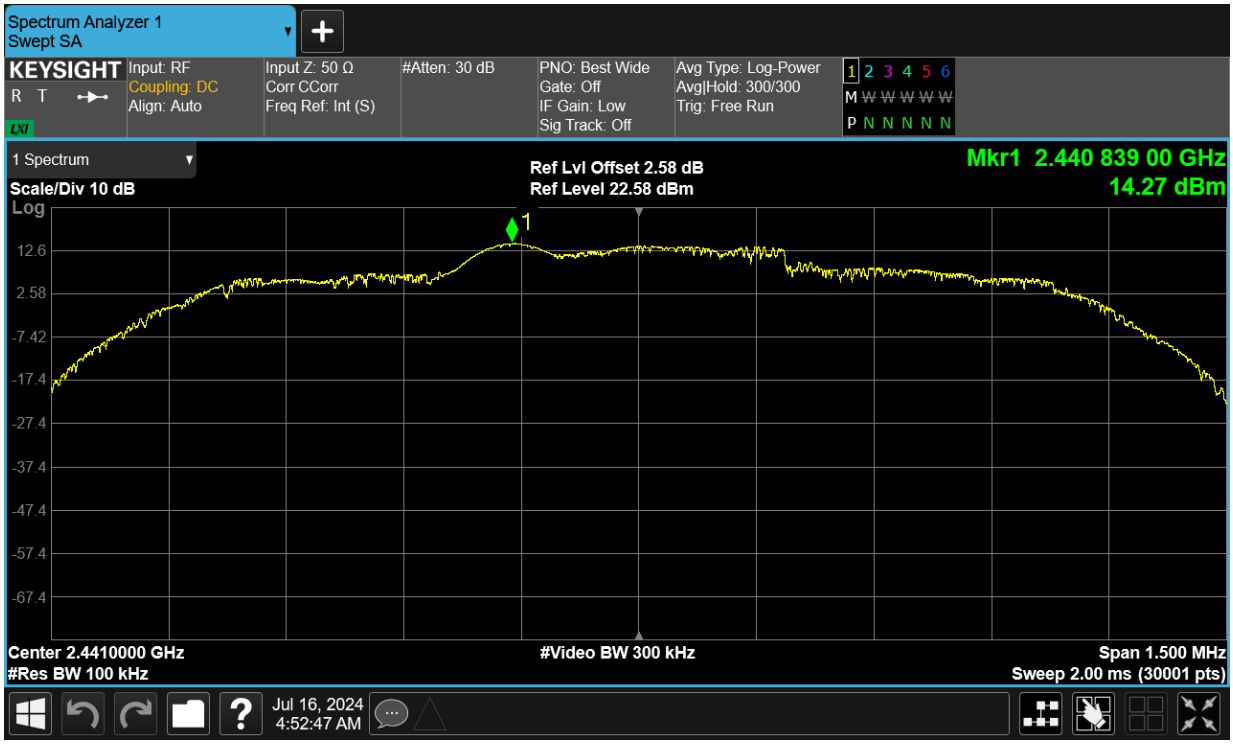
Tx. Spurious NVNT 2-DH1 2402MHz ANT14 Ref



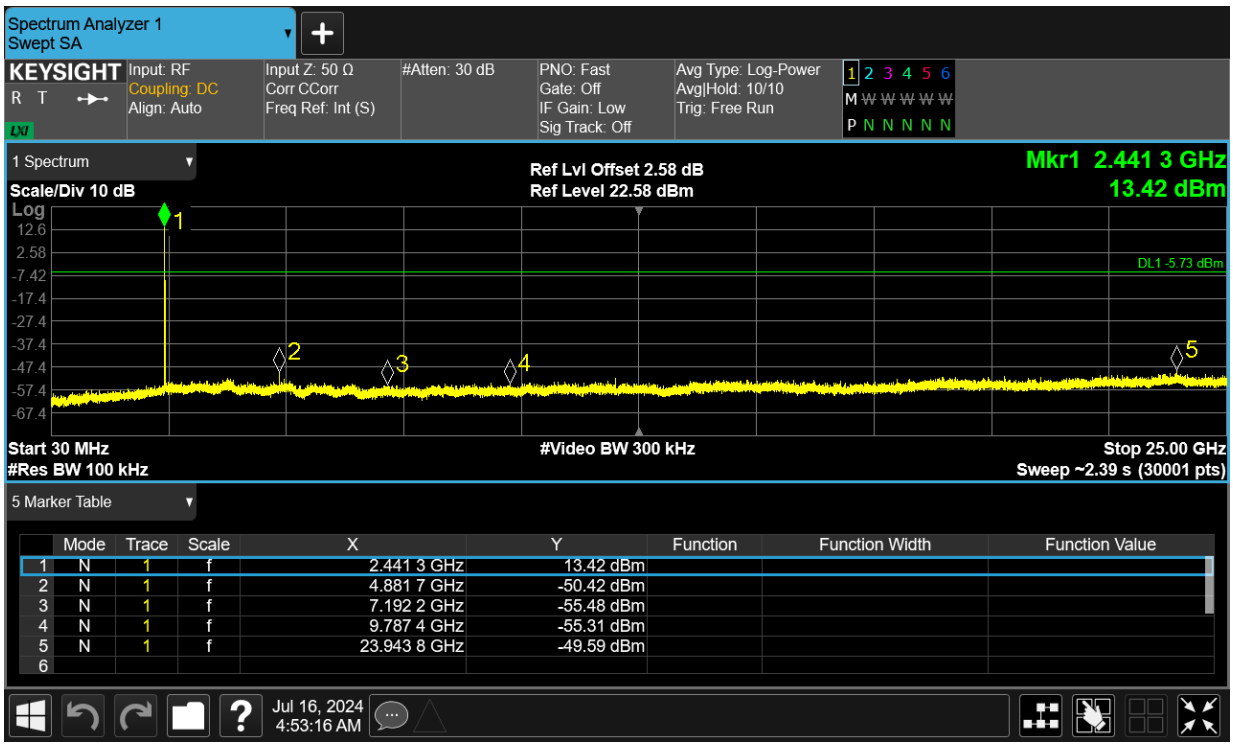
Tx. Spurious NVNT 2-DH1 2402MHz ANT14 Emission



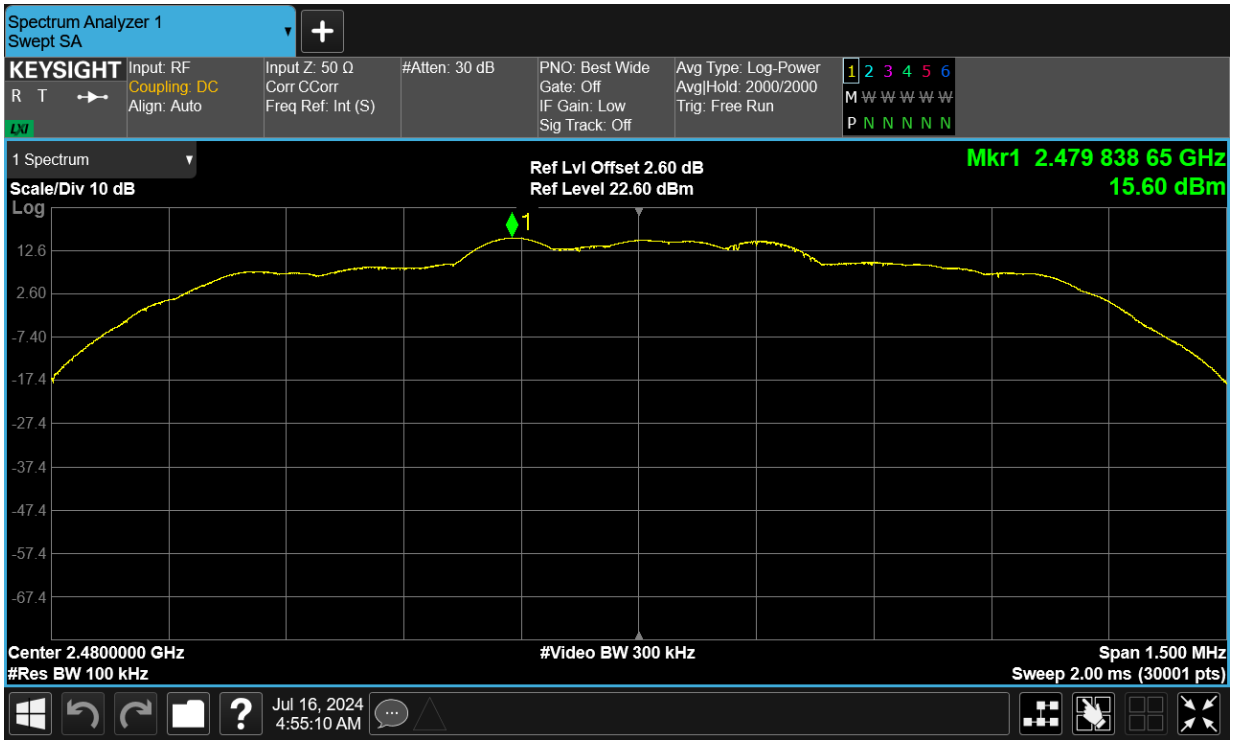
Tx. Spurious NVNT 2-DH1 2441MHz ANT14 Ref



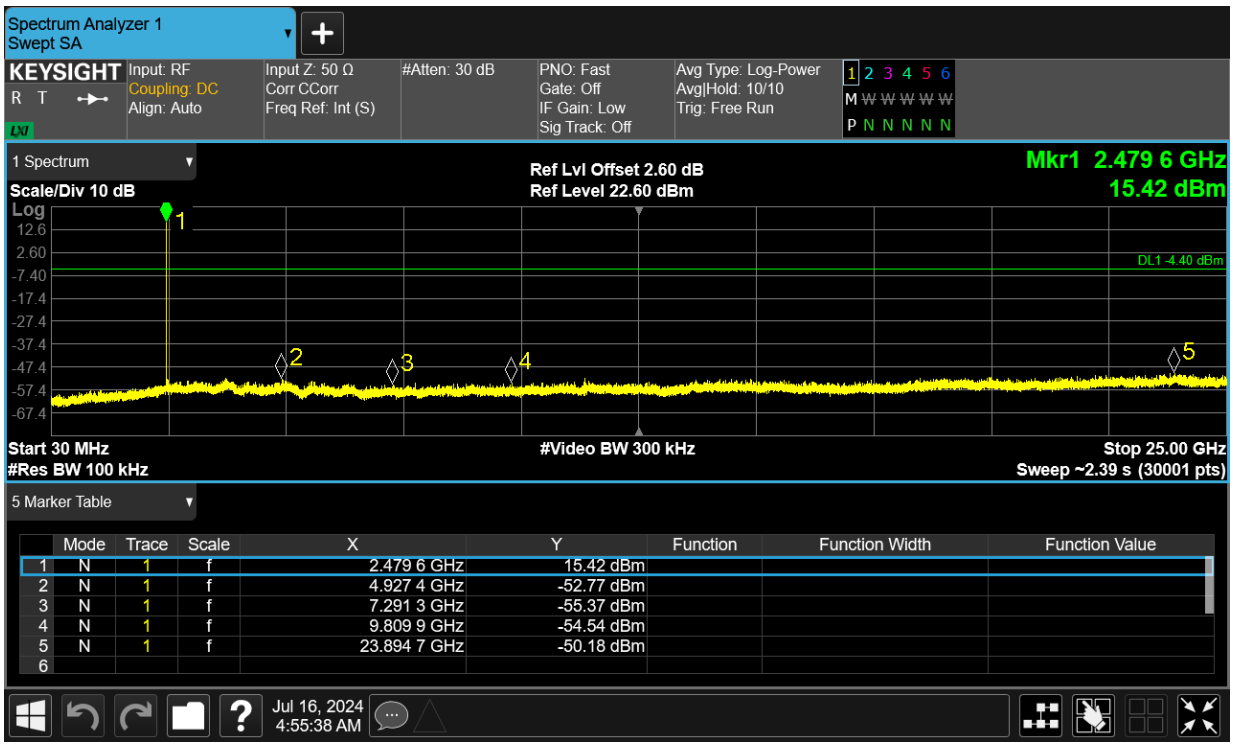
Tx. Spurious NVNT 2-DH1 2441MHz ANT14 Emission



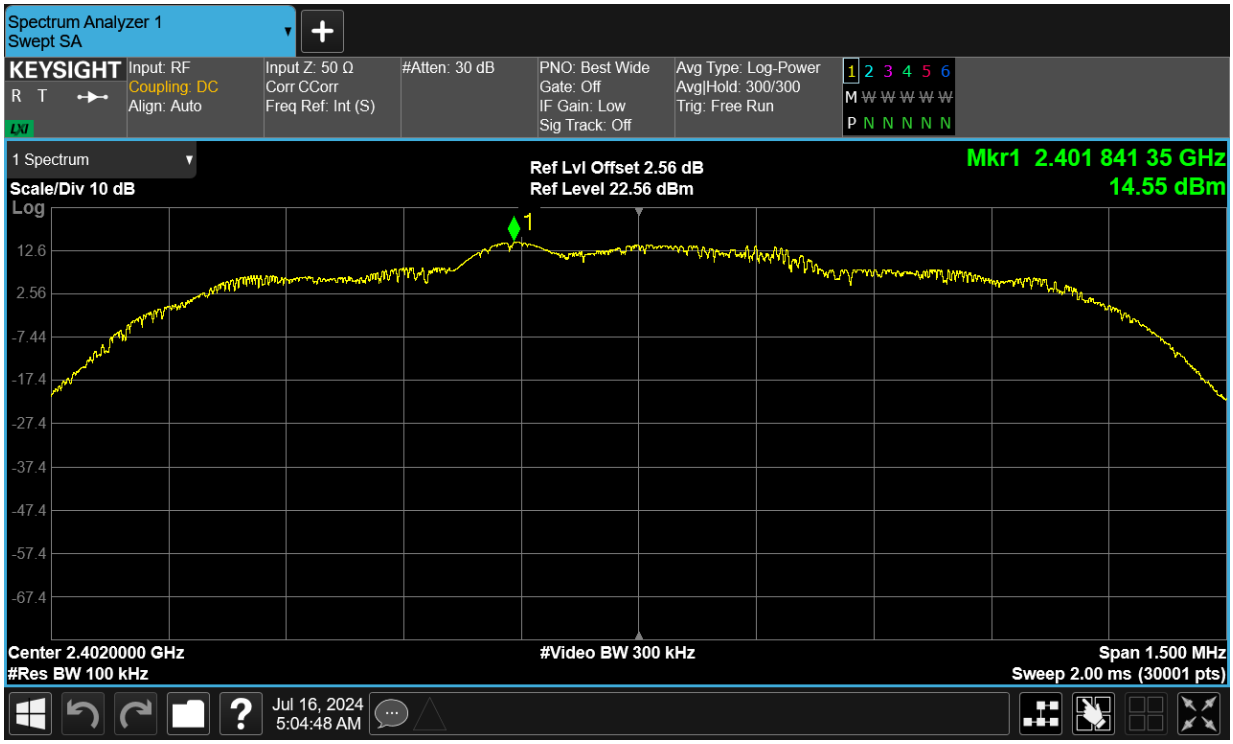
Tx. Spurious NVNT 2-DH1 2480MHz ANT14 Ref



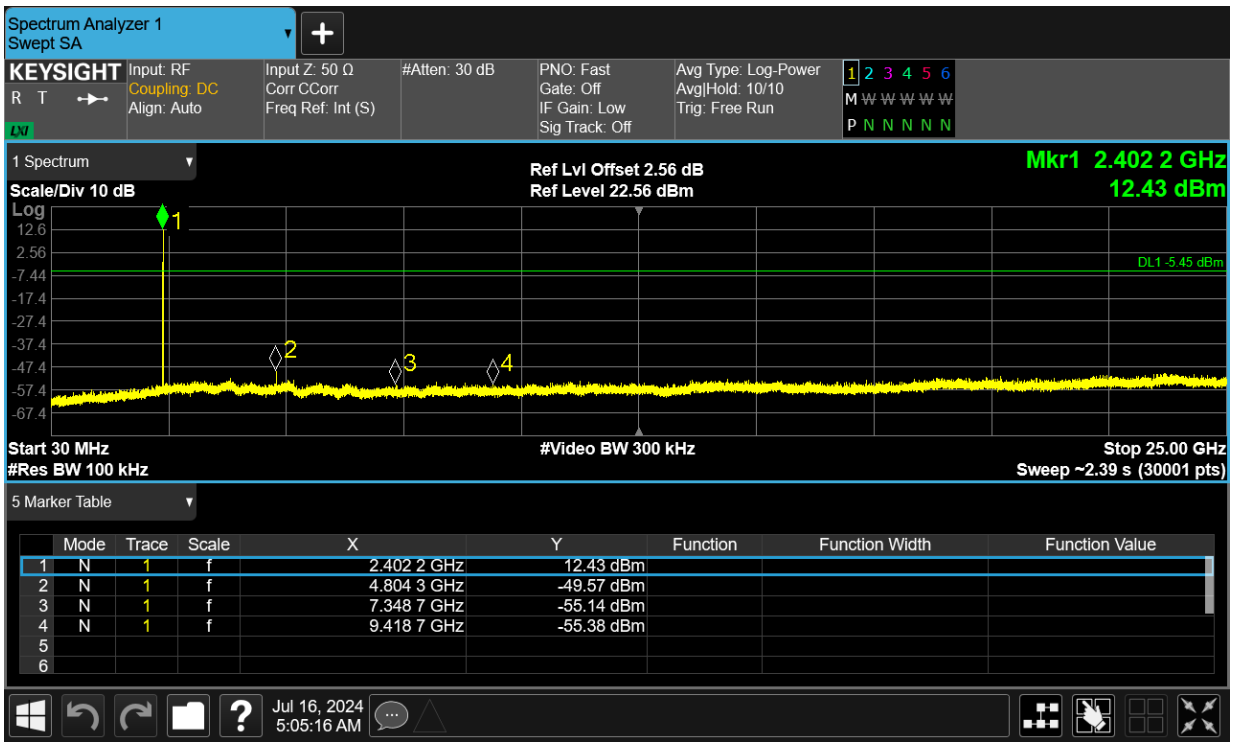
Tx. Spurious NVNT 2-DH1 2480MHz ANT14 Emission



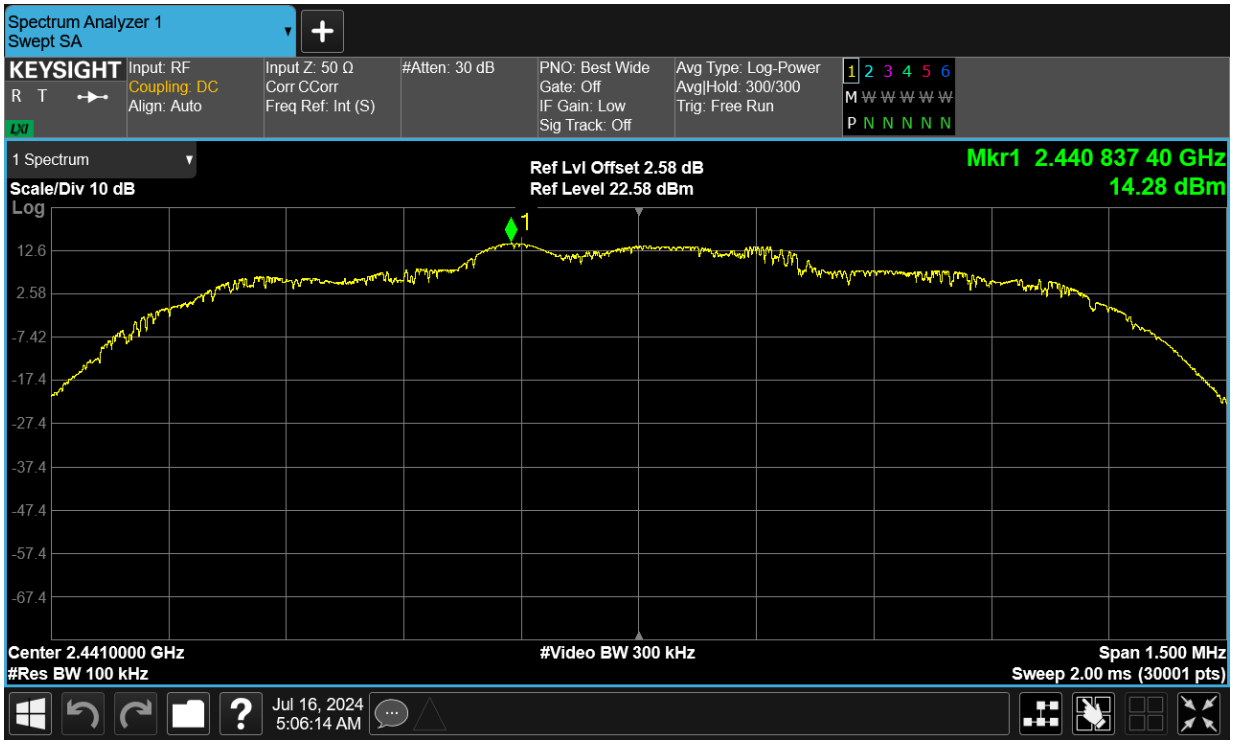
Tx. Spurious NVNT 3-DH1 2402MHz ANT14 Ref



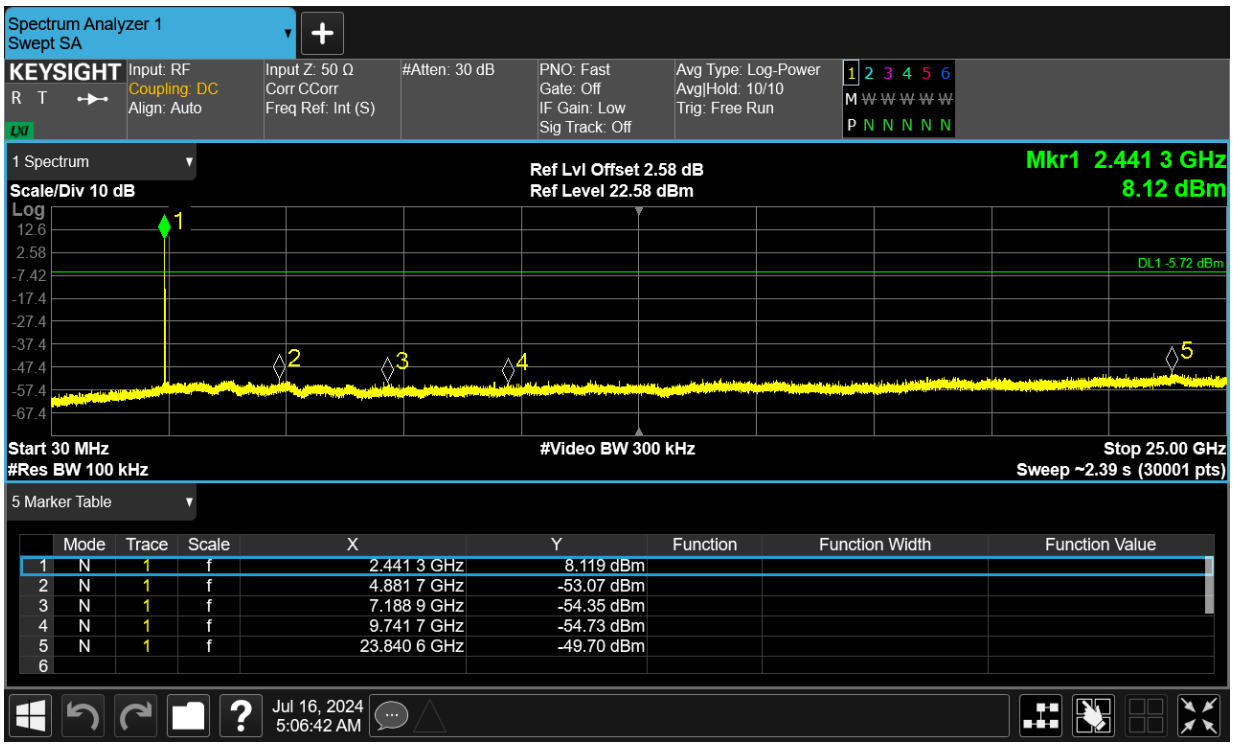
Tx. Spurious NVNT 3-DH1 2402MHz ANT14 Emission



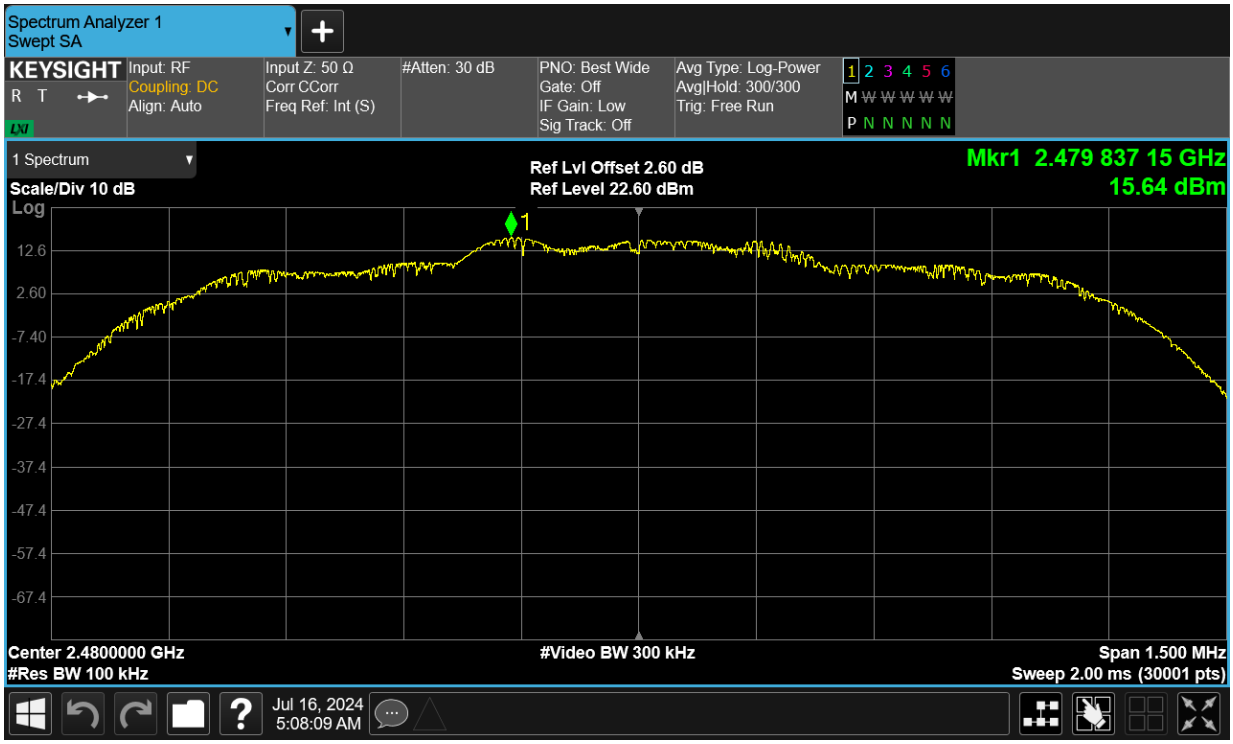
Tx. Spurious NVNT 3-DH1 2441MHz ANT14 Ref



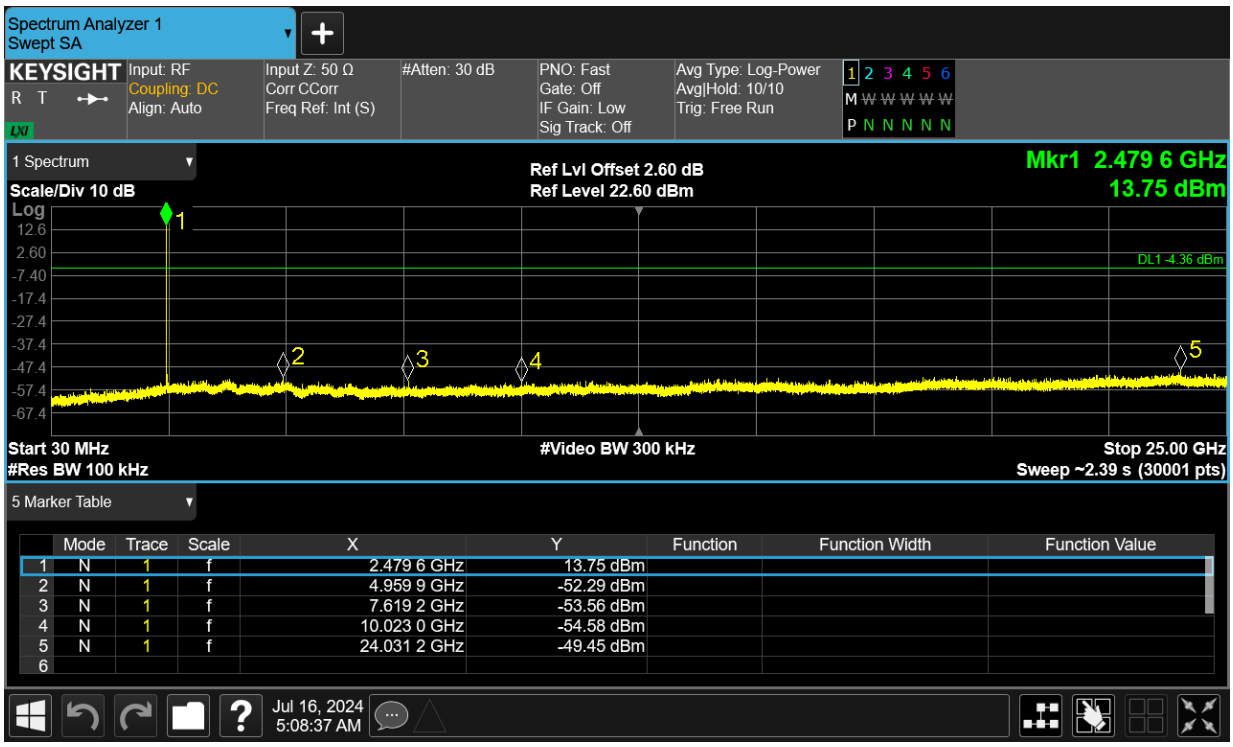
Tx. Spurious NVNT 3-DH1 2441MHz ANT14 Emission



Tx. Spurious NVNT 3-DH1 2480MHz ANT14 Ref



Tx. Spurious NVNT 3-DH1 2480MHz ANT14 Emission

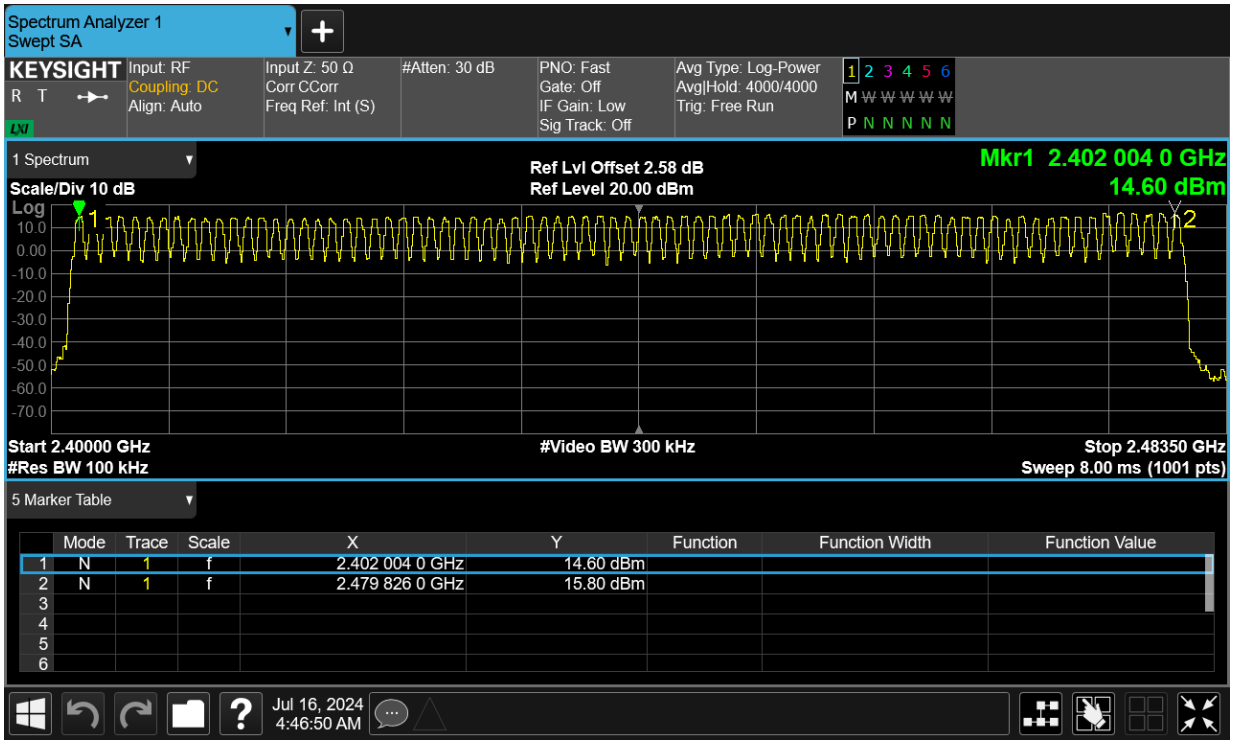


Number of Hopping Channel

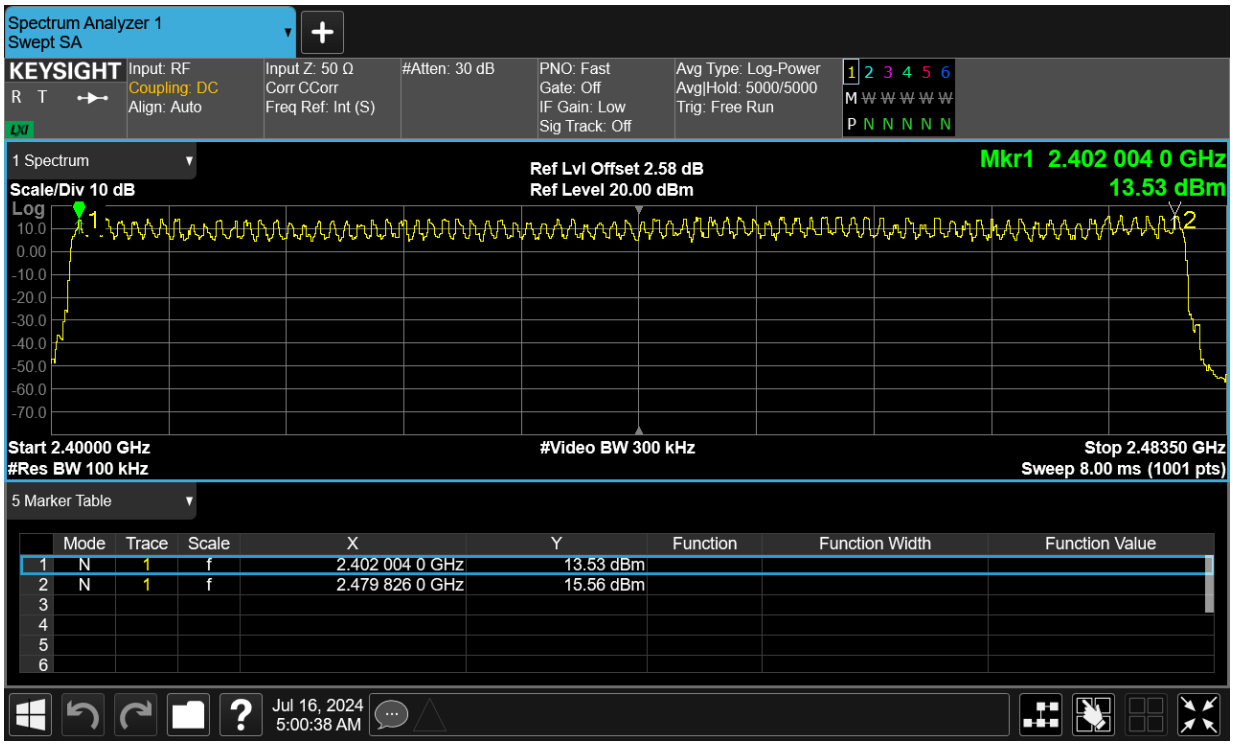
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	ANT14	79	15	Pass
NVNT	2-DH1	ANT14	79	15	Pass
NVNT	3-DH1	ANT14	79	15	Pass

Test Graphs

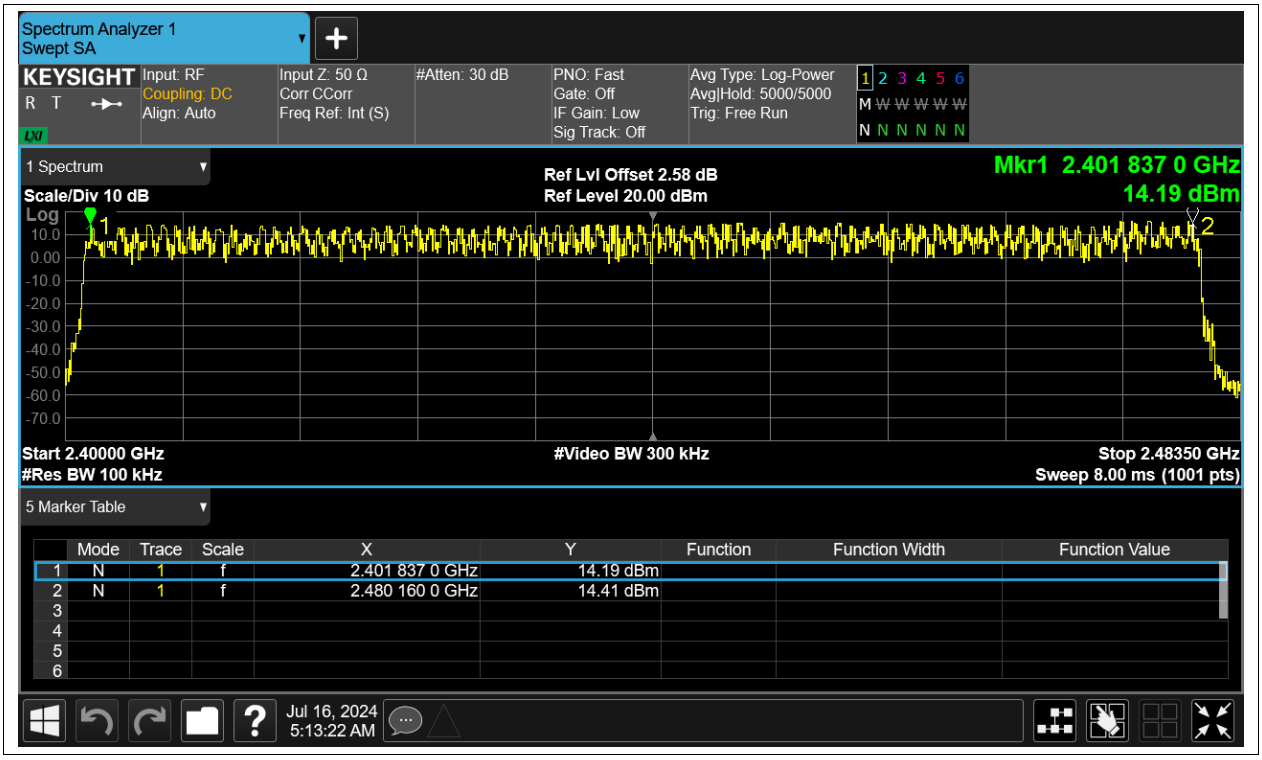
Hopping No. NVNT 1-DH1 2441MHz ANT14



Hopping No. NVNT 2-DH1 2441MHz ANT14



Hopping No. NVNT 3-DH1 2441MHz ANT14

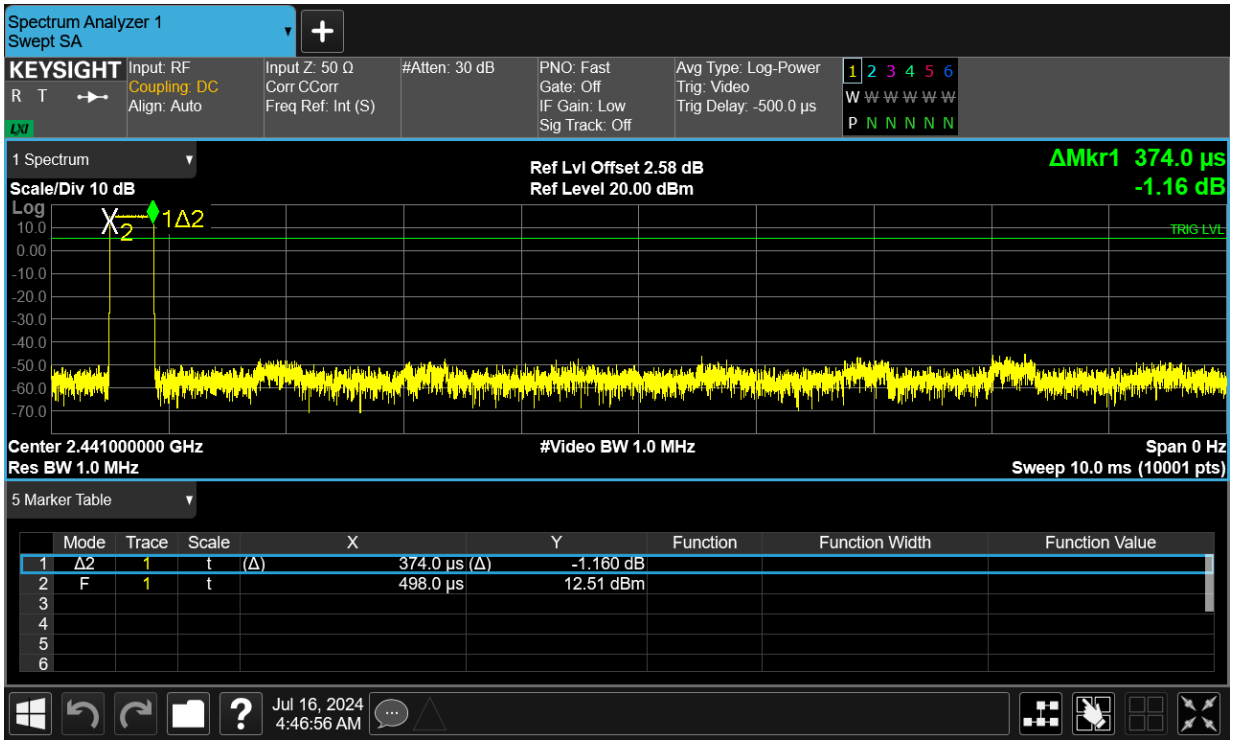

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 5000/5000
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.58 dB
Ref Level 20.00 dBm
Mkr1 2.401 837 0 GHz
14.19 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 14.19 dBm
2 N 1 f 2.480 160 0 GHz 14.41 dBm
Jul 16, 2024
5:13:22 AM

Dwell Time

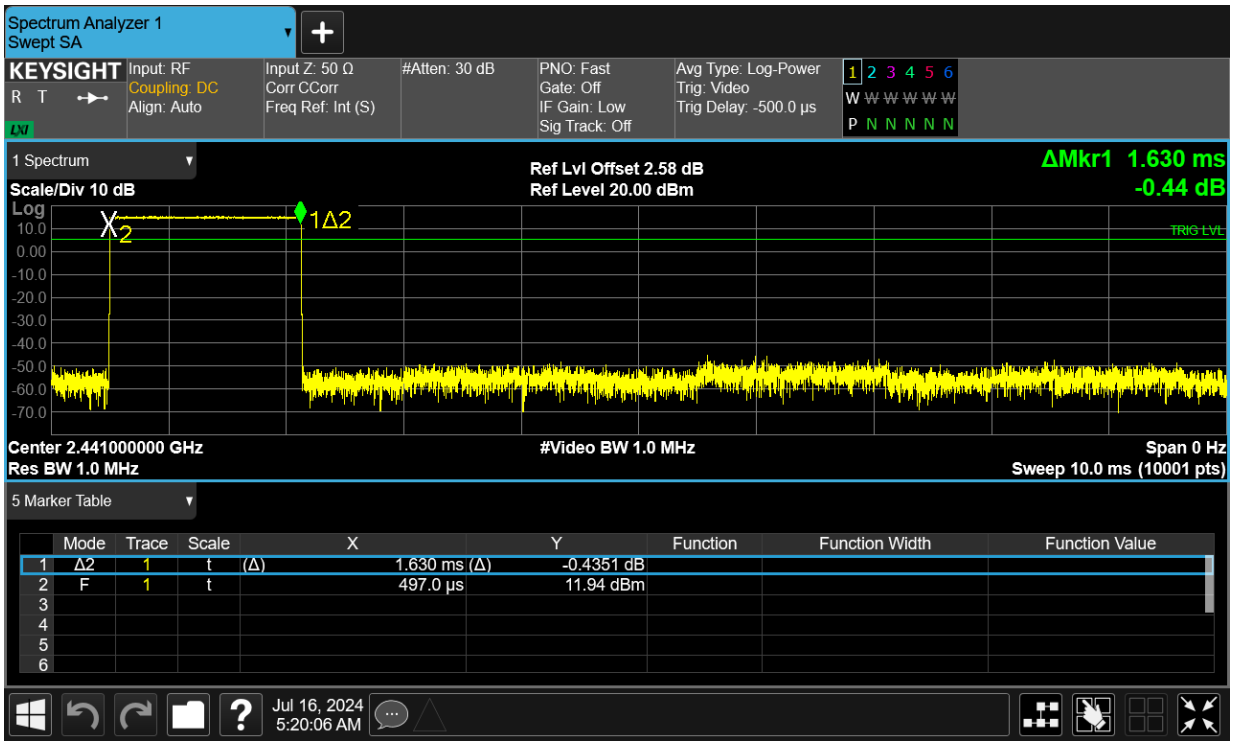
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	ANT14	0.374	119.68	31600	400	Pass
NVNT	1-DH3	2441	ANT14	1.63	260.8	31600	400	Pass
NVNT	1-DH5	2441	ANT14	2.877	306.88	31600	400	Pass
NVNT	2-DH1	2441	ANT14	0.38	121.6	31600	400	Pass
NVNT	2-DH3	2441	ANT14	1.631	260.96	31600	400	Pass
NVNT	2-DH5	2441	ANT14	2.883	307.52	31600	400	Pass
NVNT	3-DH1	2441	ANT14	0.381	121.92	31600	400	Pass
NVNT	3-DH3	2441	ANT14	1.634	261.44	31600	400	Pass
NVNT	3-DH5	2441	ANT14	2.884	307.627	31600	400	Pass

Test Graphs

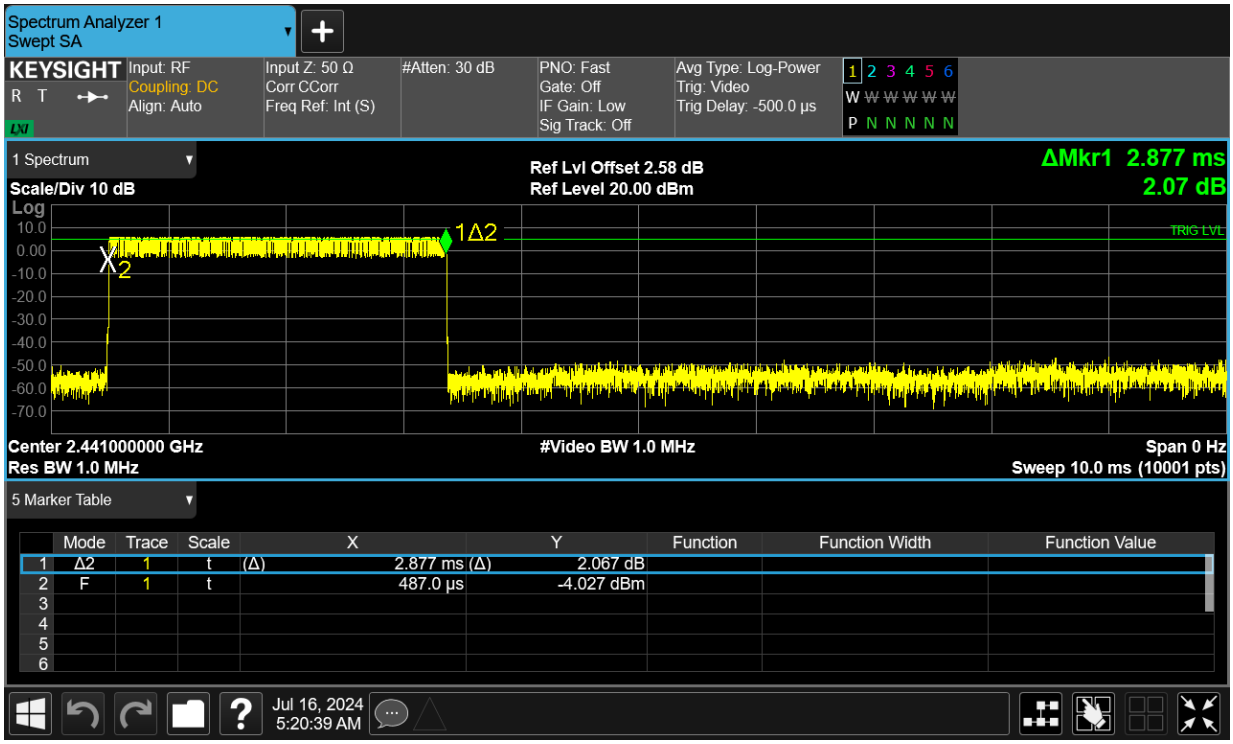
Dwell NVNT 1-DH1 2441MHz ANT14



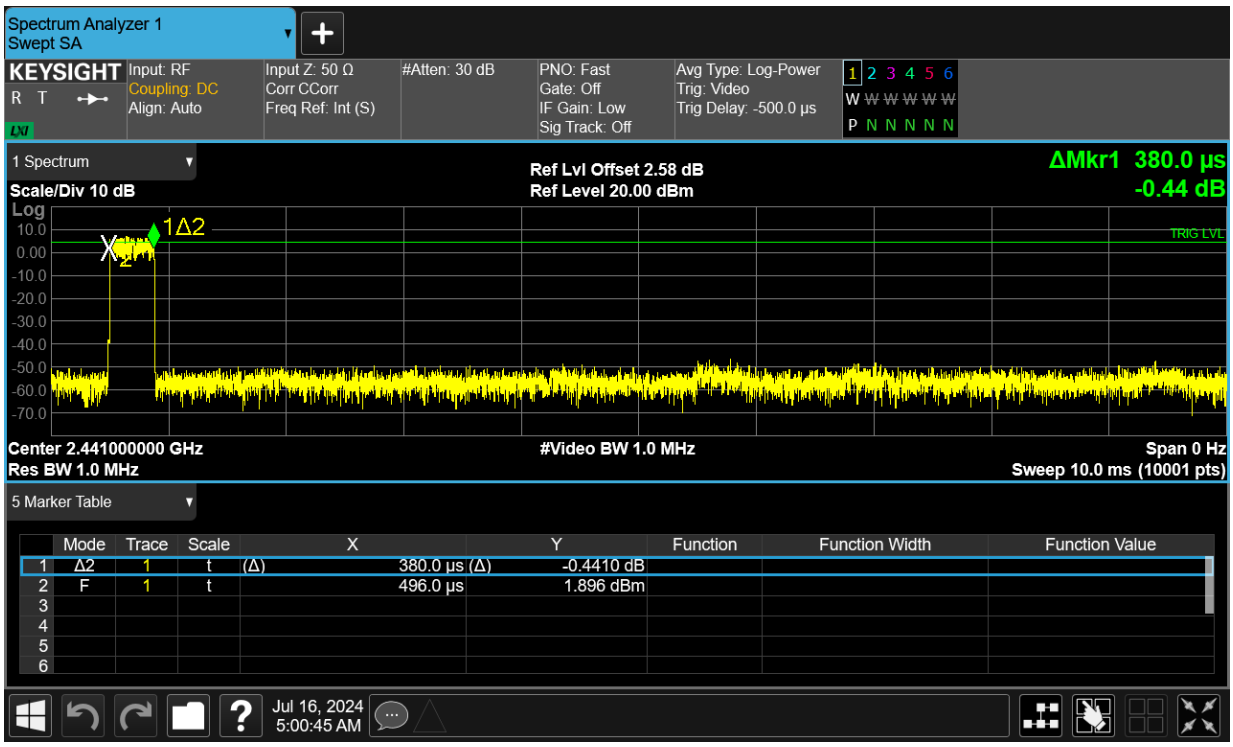
Dwell NVNT 1-DH3 2441MHz ANT14



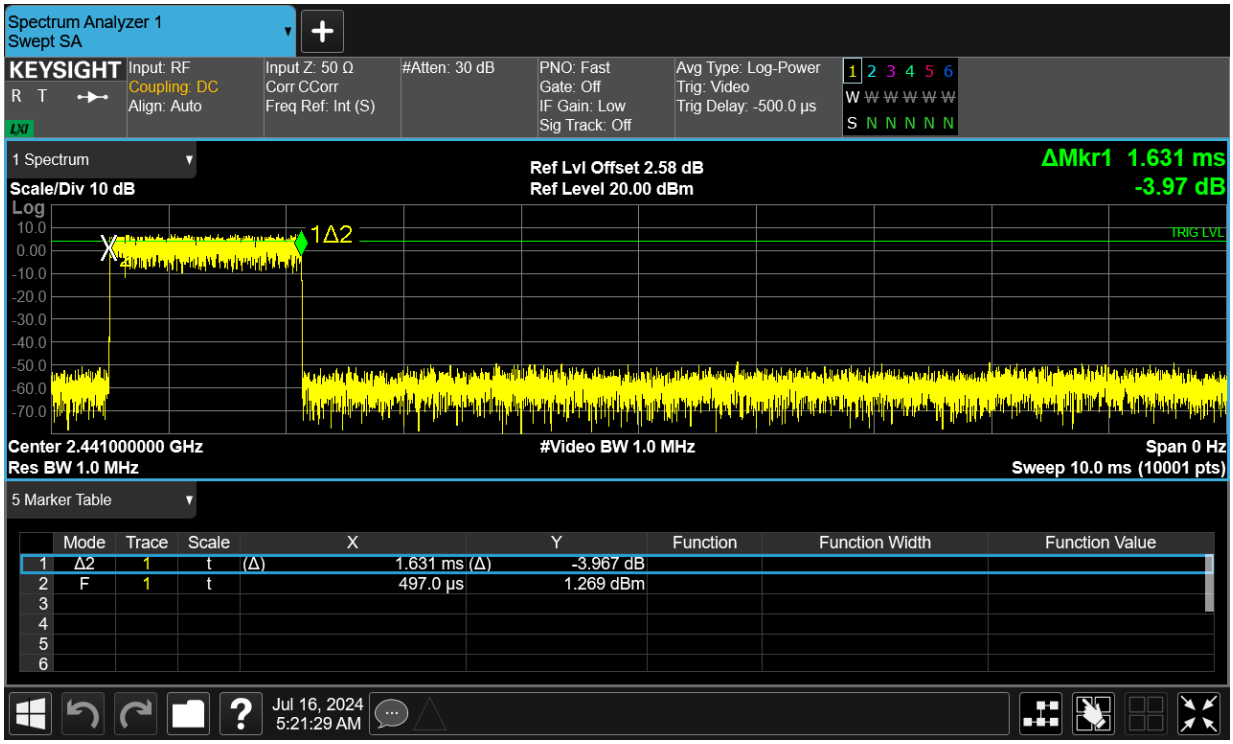
Dwell NVNT 1-DH5 2441MHz ANT14



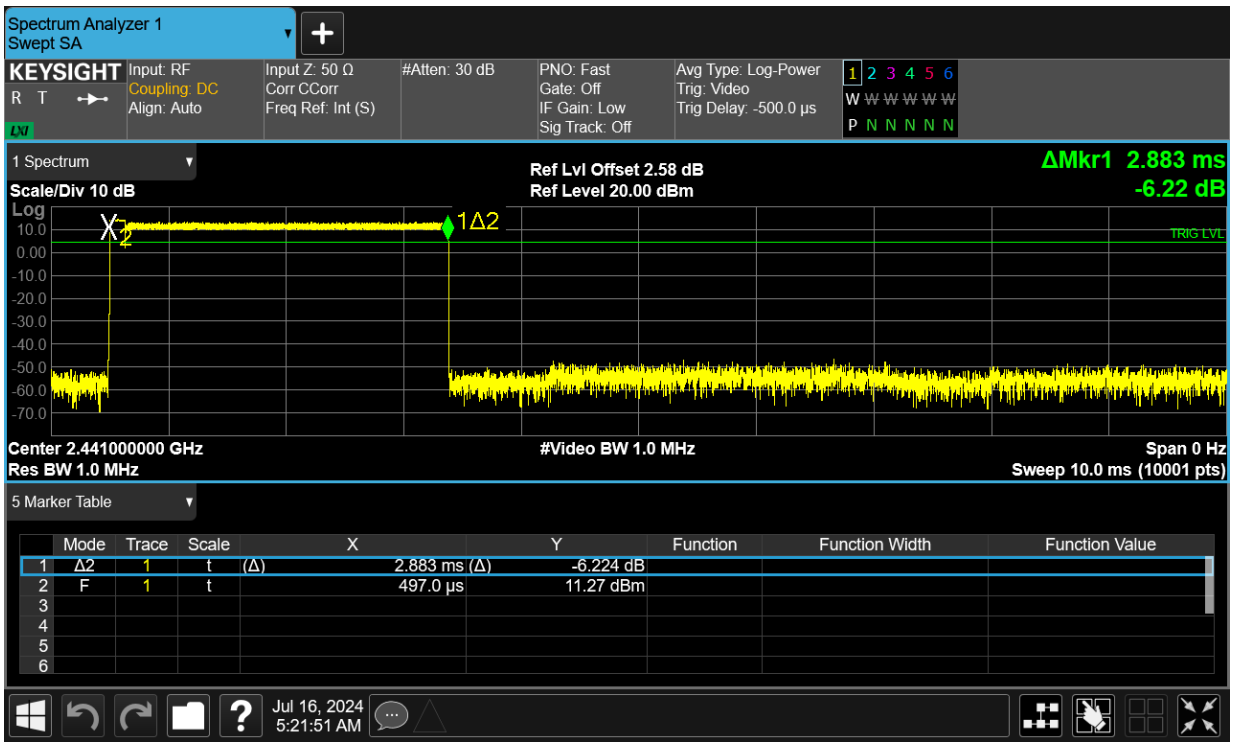
Dwell NVNT 2-DH1 2441MHz ANT14



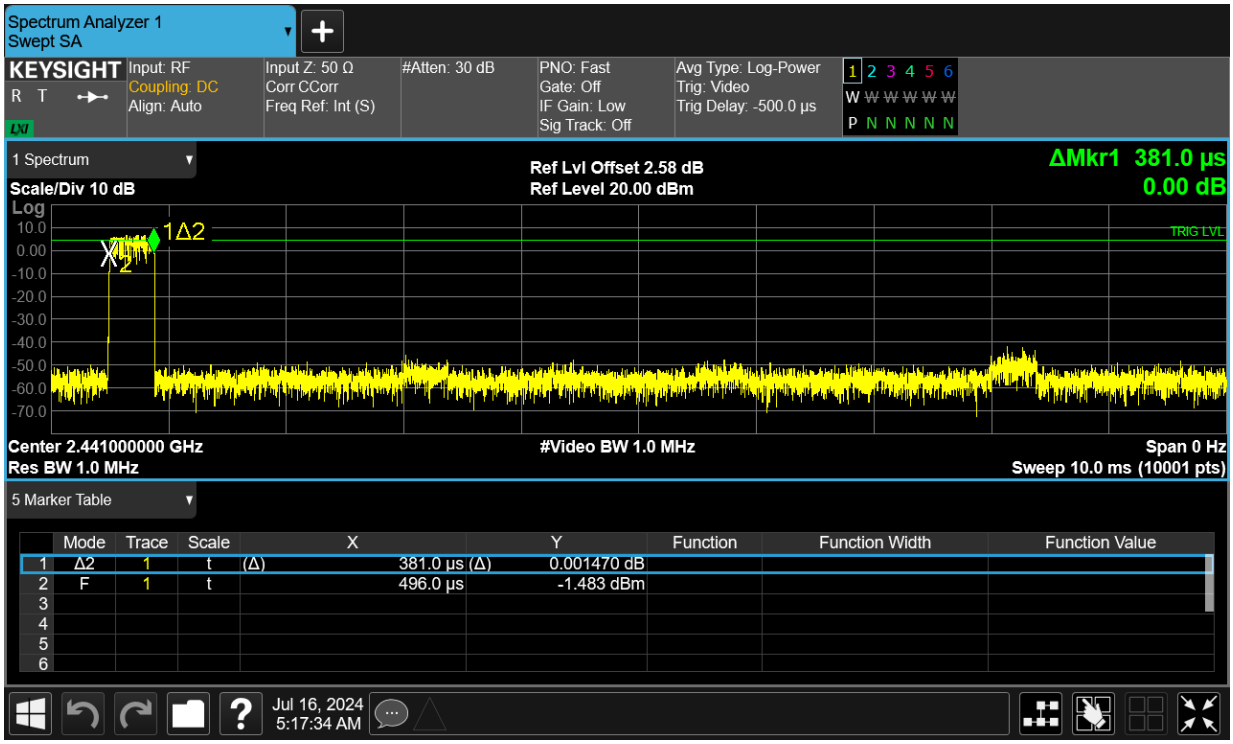
Dwell NVNT 2-DH3 2441MHz ANT14



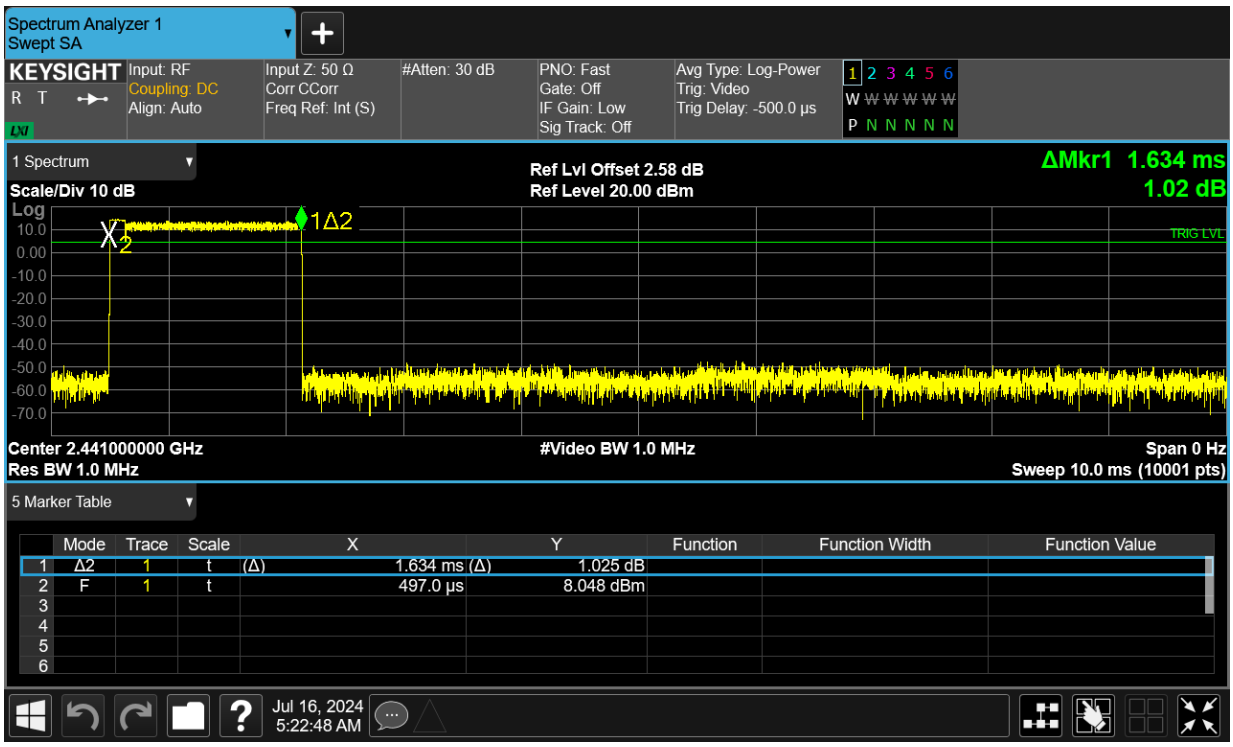
Dwell NVNT 2-DH5 2441MHz ANT14



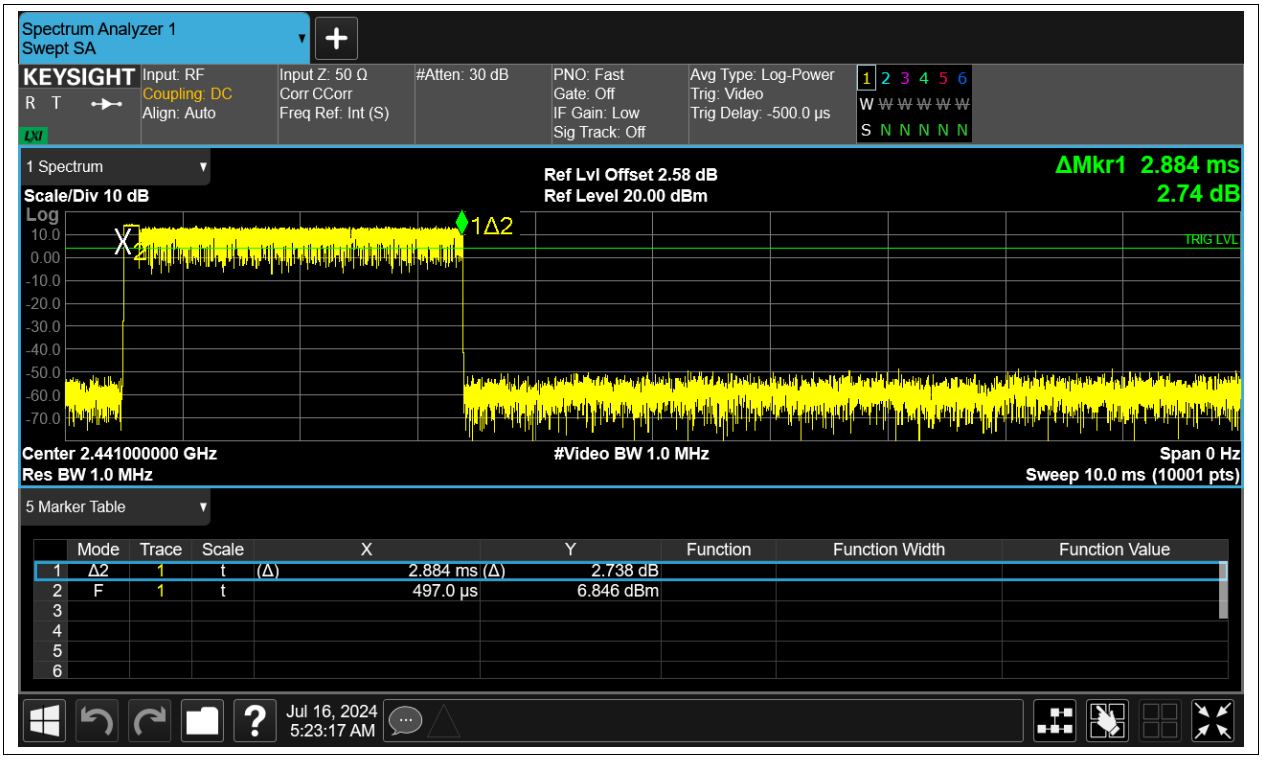
Dwell NVNT 3-DH1 2441MHz ANT14



Dwell NVNT 3-DH3 2441MHz ANT14



Dwell NVNT 3-DH5 2441MHz ANT14


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 2.884 ms
2.74 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) 2.884 ms (Δ) 2.738 dB
2 F 1 t 497.0 µs 6.846 dBm
Jul 16, 2024
5:23:17 AM