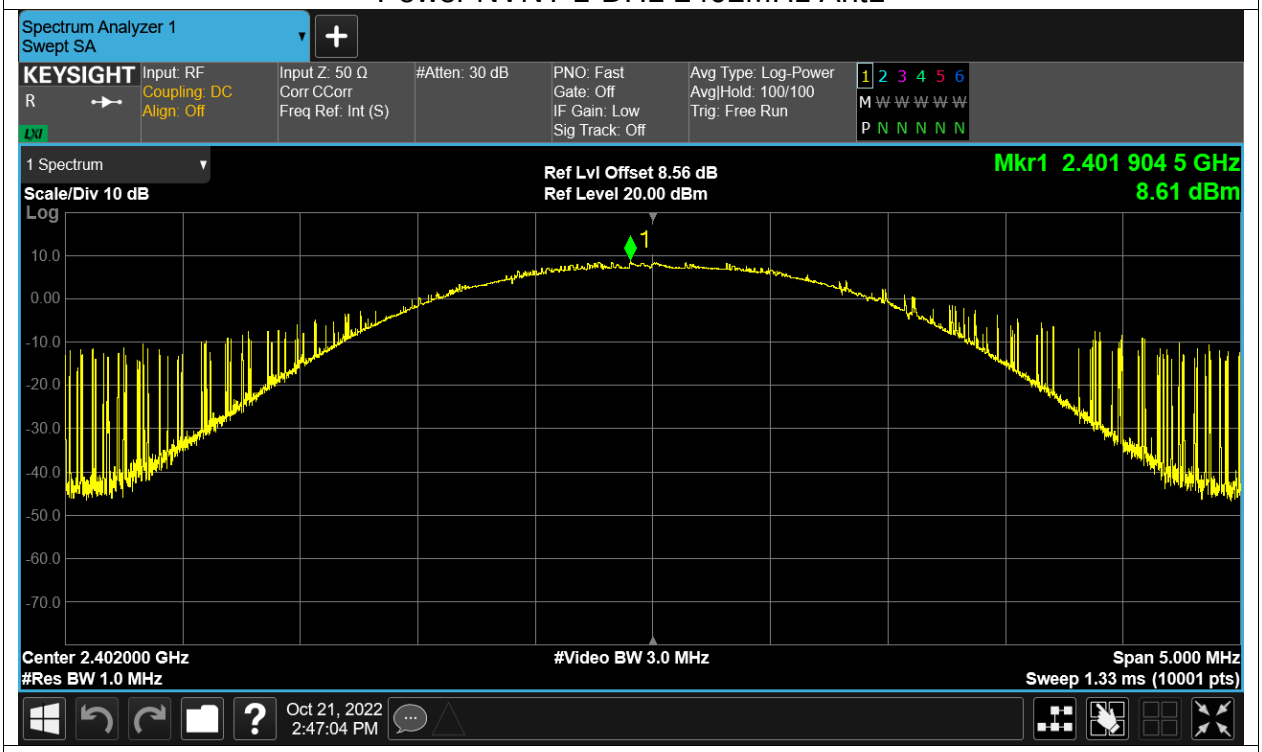
Appendix A – BT

Maximum Conducted Output Power

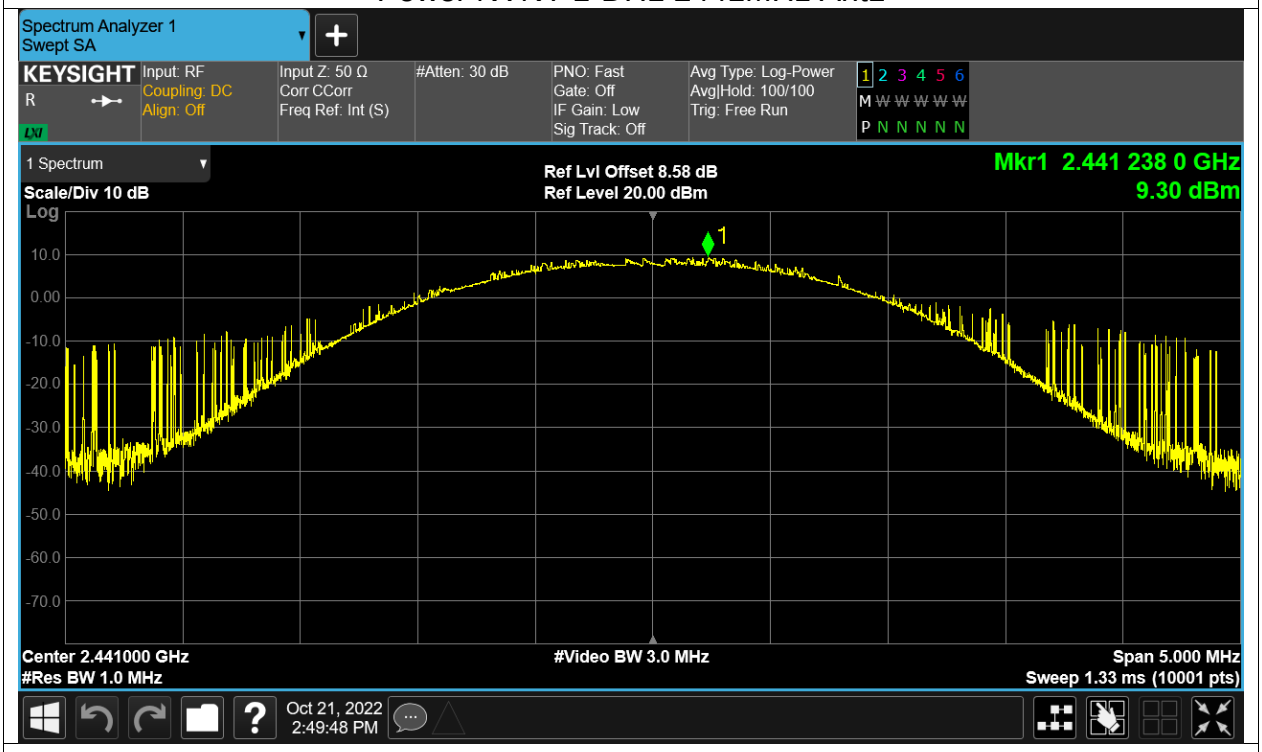
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	8.611	30	Pass
NVNT	1-DH1	2441	Ant1	9.301	30	Pass
NVNT	1-DH1	2480	Ant1	9.438	30	Pass
NVNT	2-DH1	2402	Ant1	8.717	21	Pass
NVNT	2-DH1	2441	Ant1	9.306	21	Pass
NVNT	2-DH1	2480	Ant1	9.464	21	Pass
NVNT	3-DH1	2402	Ant1	8.808	21	Pass
NVNT	3-DH1	2441	Ant1	9.252	21	Pass
NVNT	3-DH1	2480	Ant1	9.455	21	Pass

Test Graphs

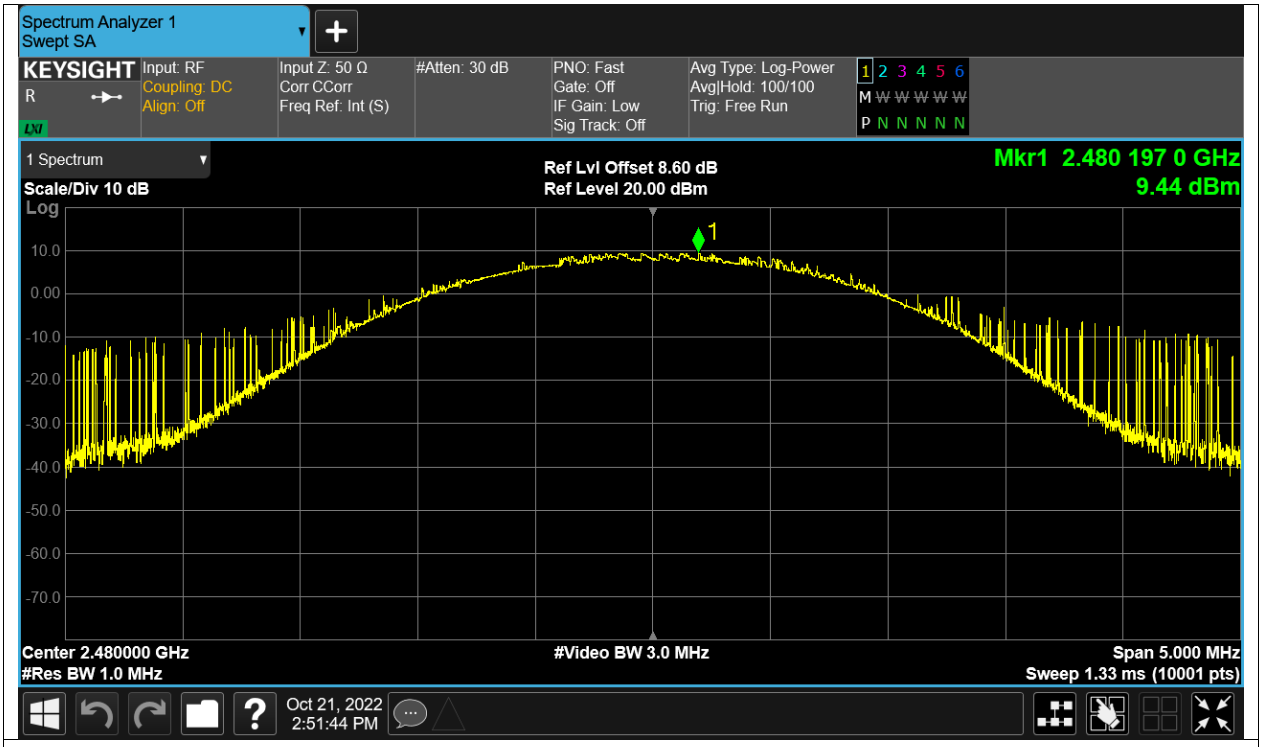
Power NVNT 1-DH1 2402MHz Ant1



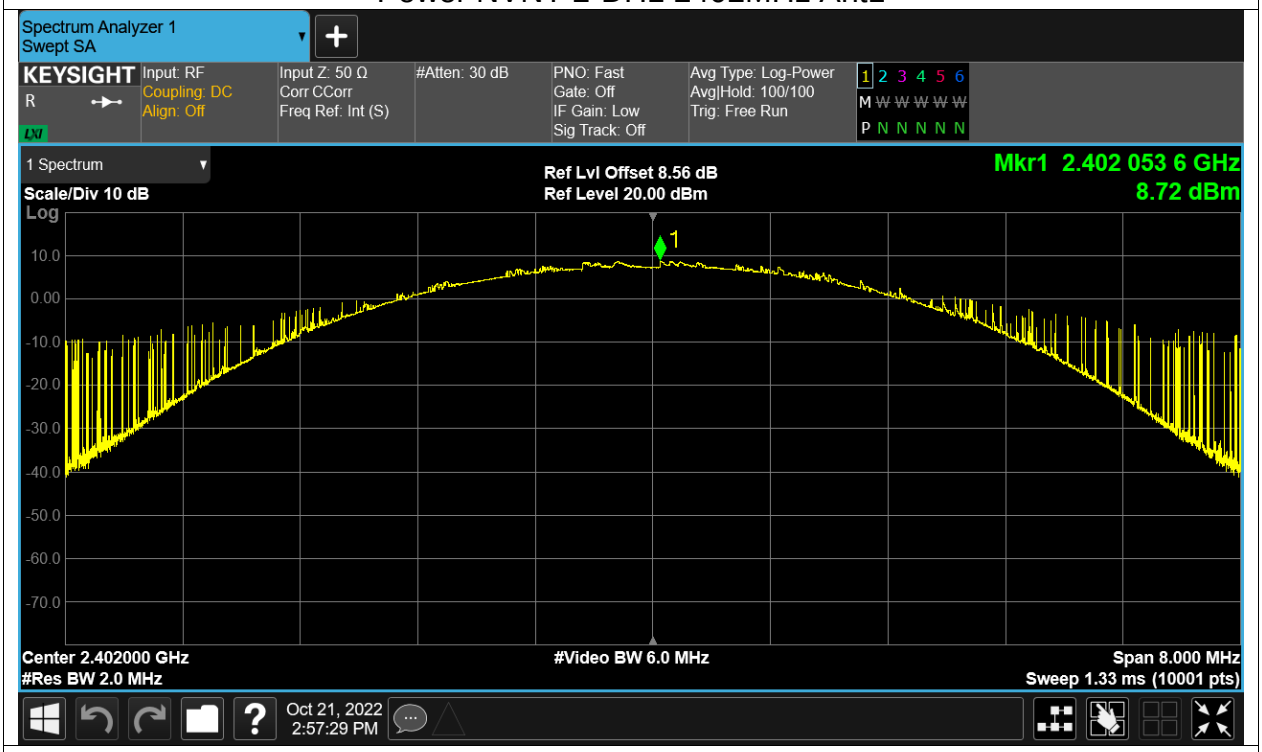
Power NVNT 1-DH1 2441MHz Ant1



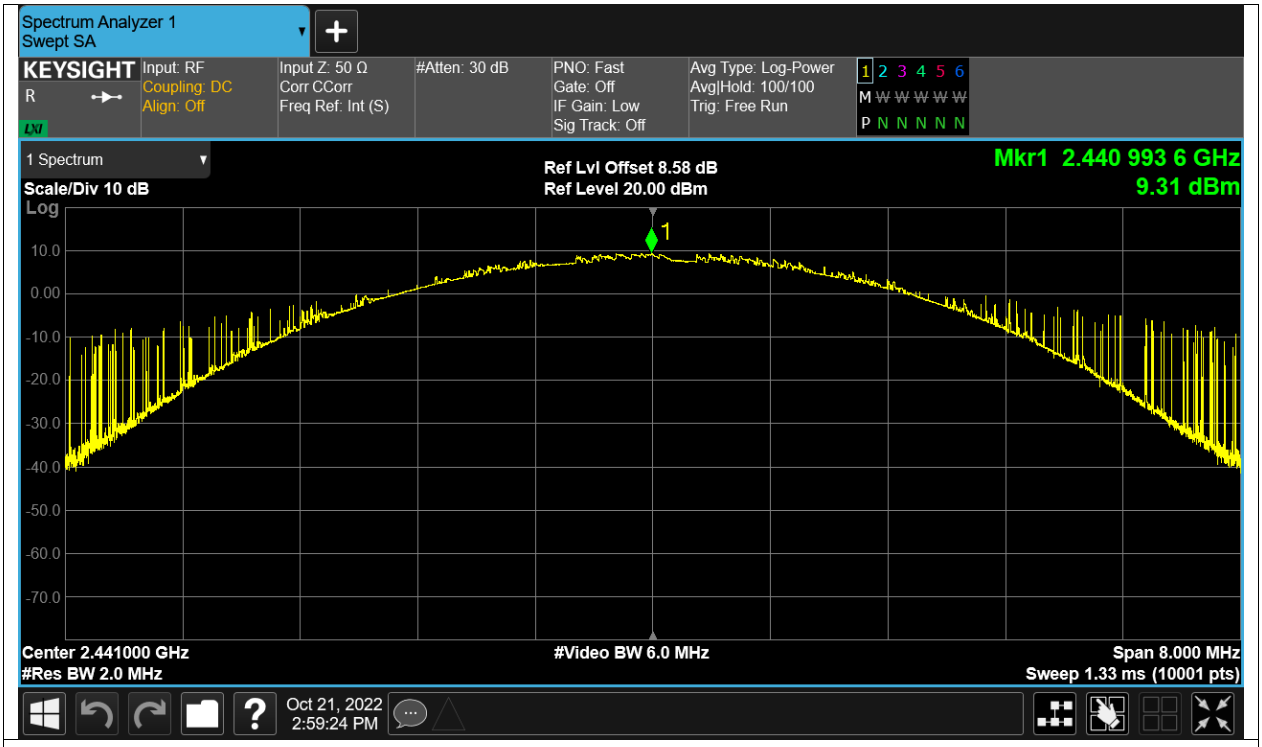
Power NVNT 1-DH1 2480MHz Ant1



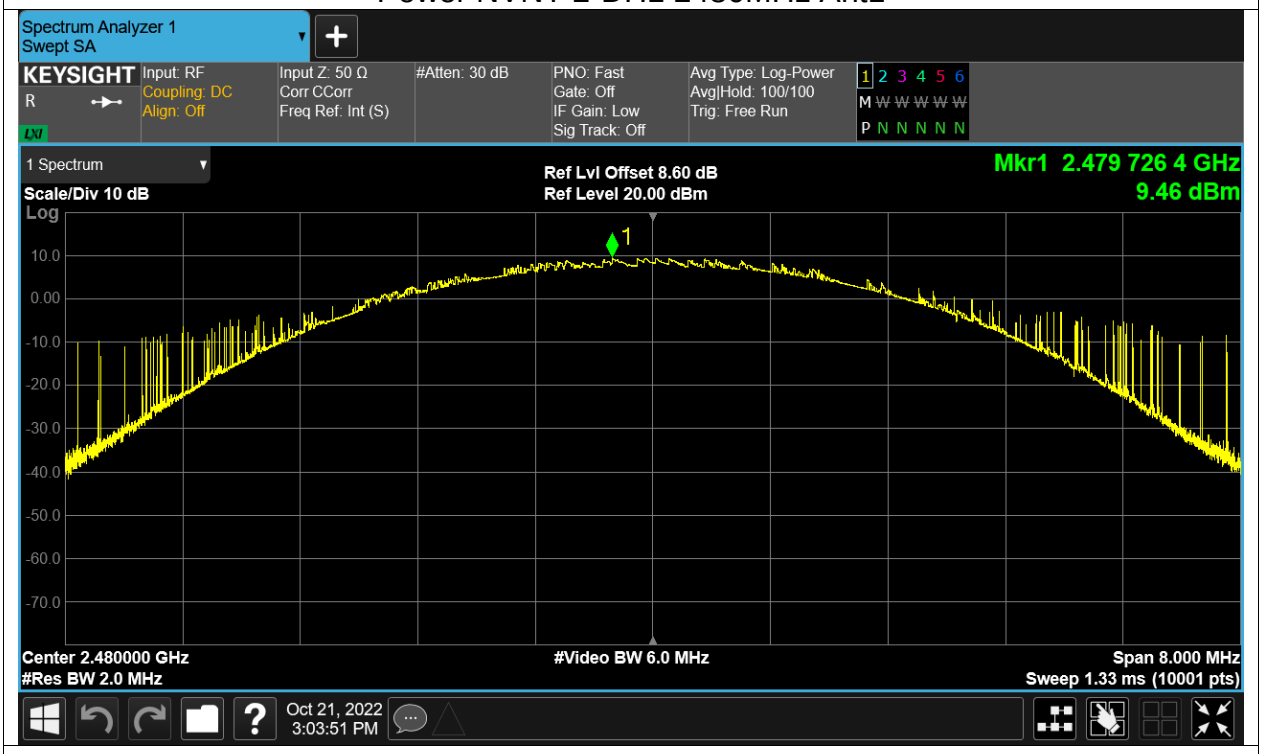
Power NVNT 2-DH1 2402MHz Ant1



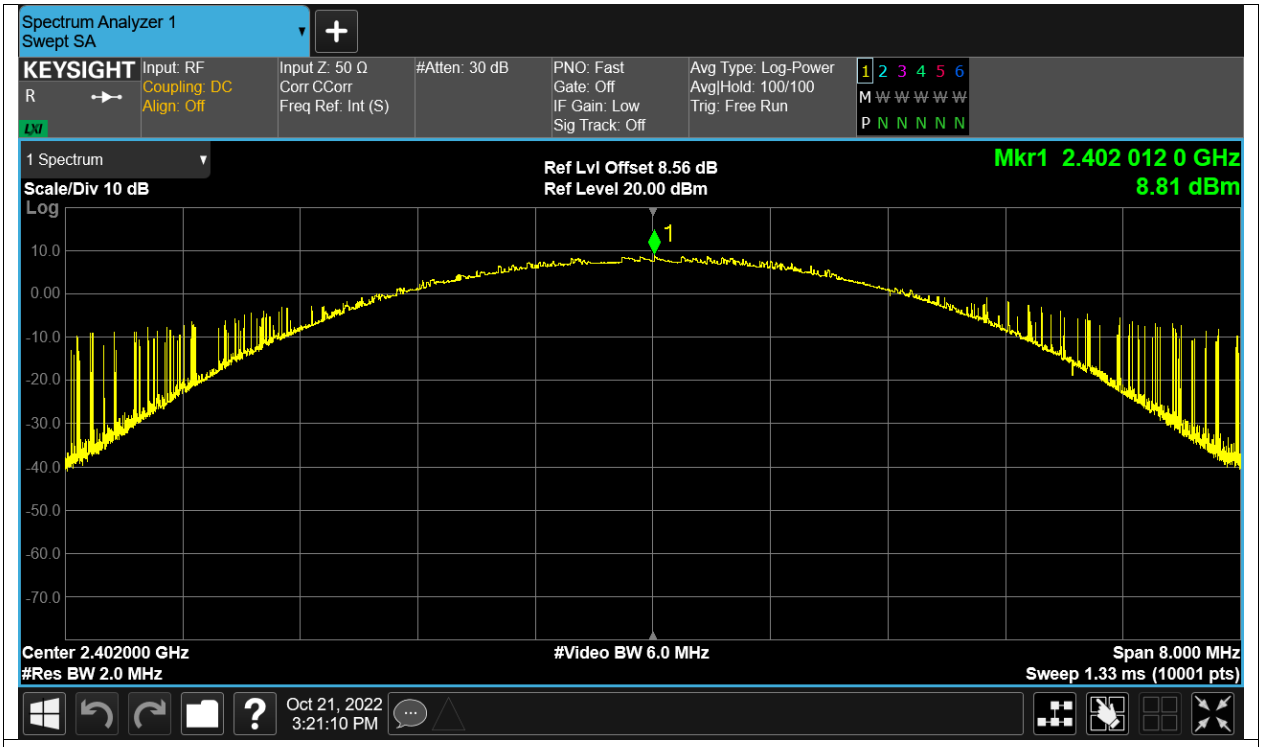
Power NVNT 2-DH1 2441MHz Ant1



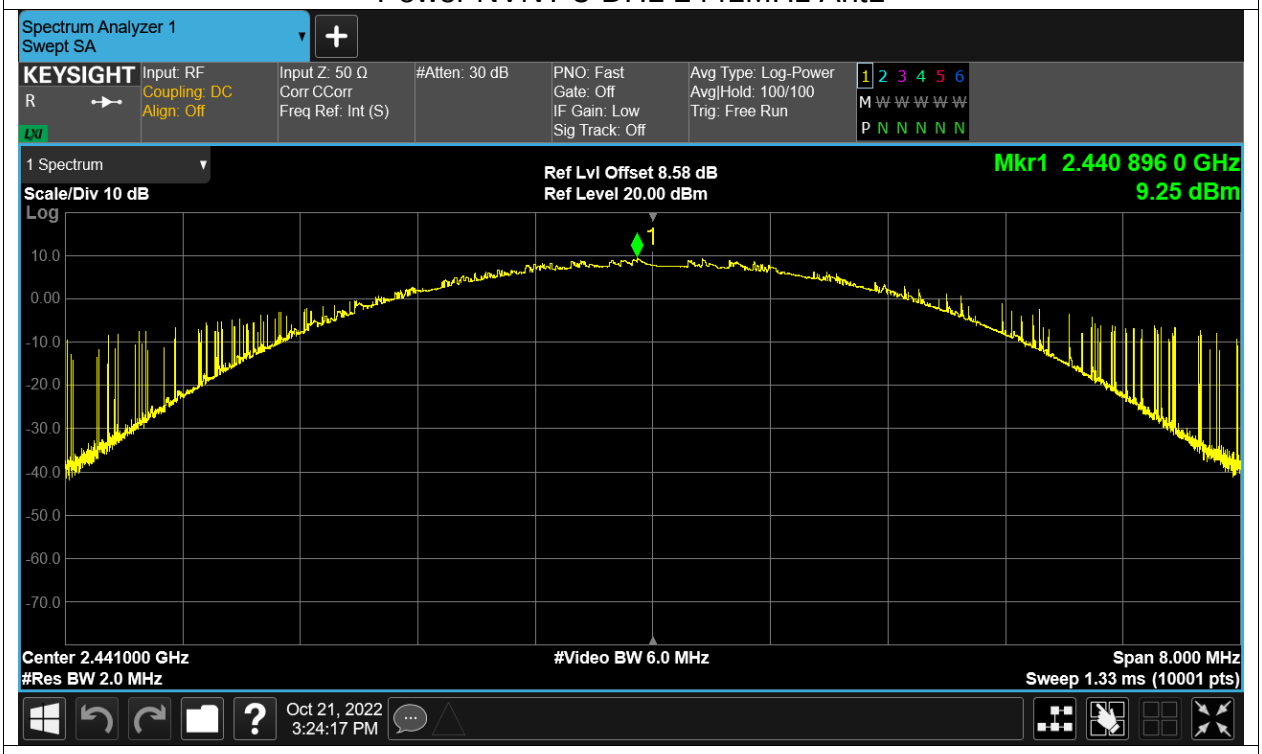
Power NVNT 2-DH1 2480MHz Ant1



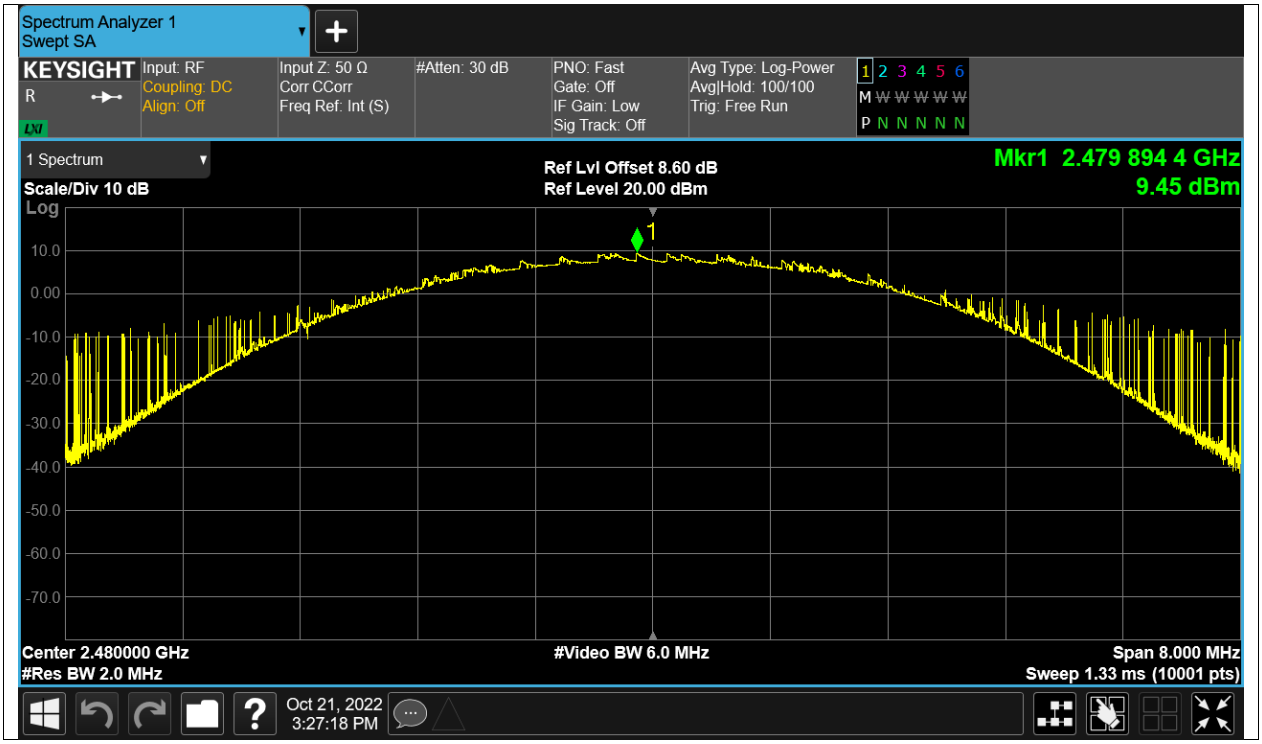
Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



Power NVNT 3-DH1 2480MHz Ant1


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Off
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: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 8.60 dB
Ref Level 20.00 dBm
Mkr1 2.479 894 4 GHz
9.45 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 2.480000 GHz
#Res BW 2.0 MHz
#Video BW 6.0 MHz
Span 8.000 MHz
Sweep 1.33 ms (10001 pts)
Oct 21, 2022
3:27:18 PM

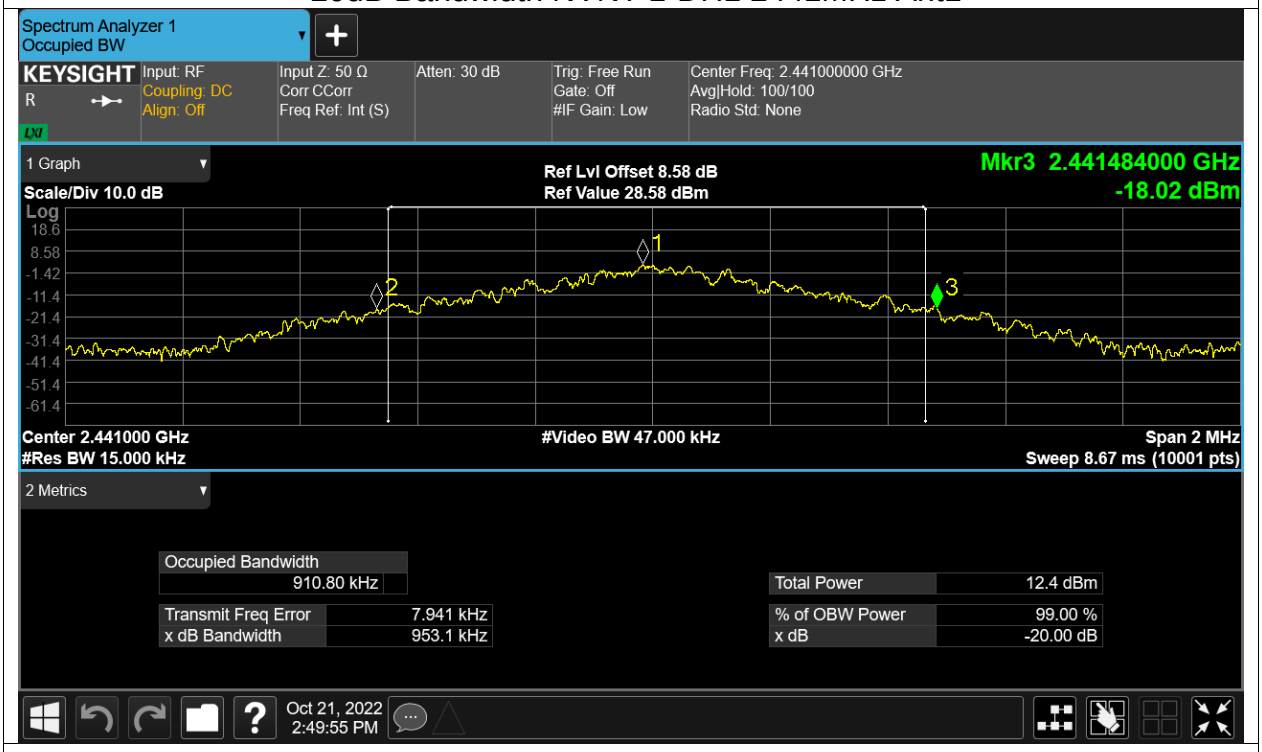
-20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)
NVNT	1-DH1	2402	Ant1	0.922
NVNT	1-DH1	2441	Ant1	0.953
NVNT	1-DH1	2480	Ant1	0.923
NVNT	2-DH1	2402	Ant1	0.936
NVNT	2-DH1	2441	Ant1	0.936
NVNT	2-DH1	2480	Ant1	0.932
NVNT	3-DH1	2402	Ant1	0.93
NVNT	3-DH1	2441	Ant1	0.936
NVNT	3-DH1	2480	Ant1	0.951

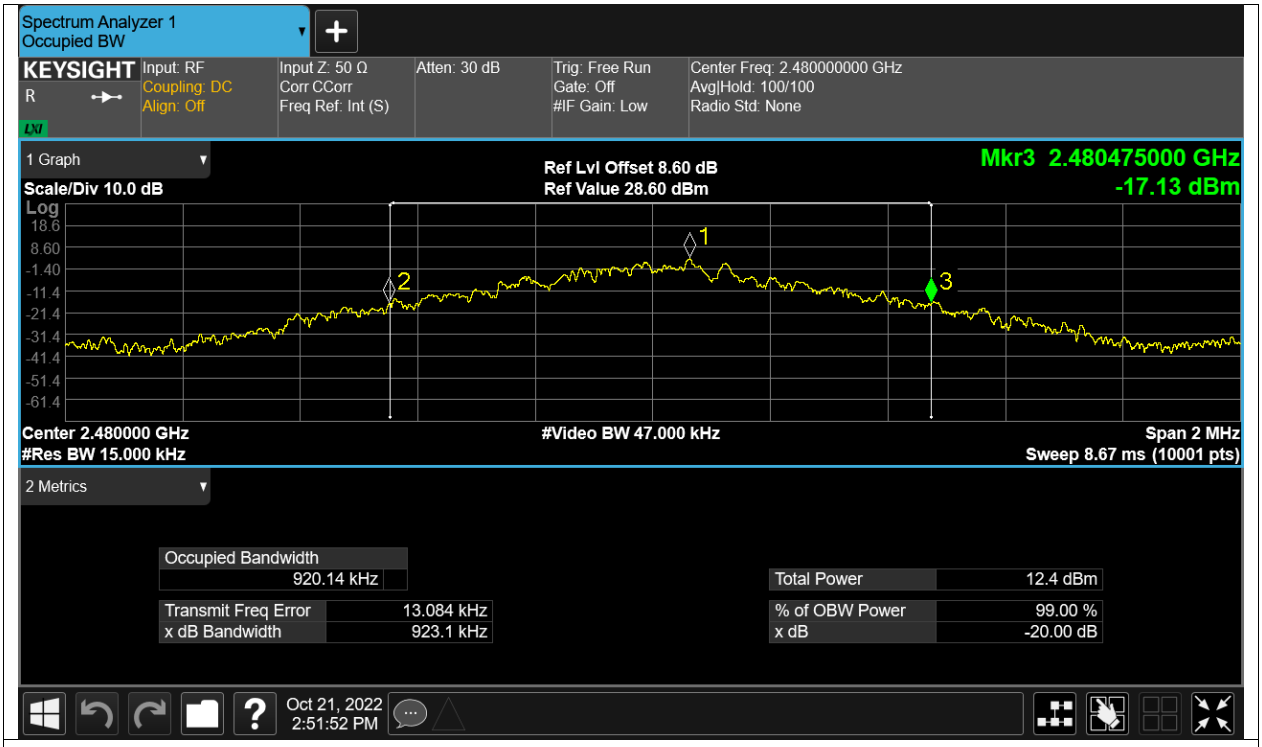
Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1

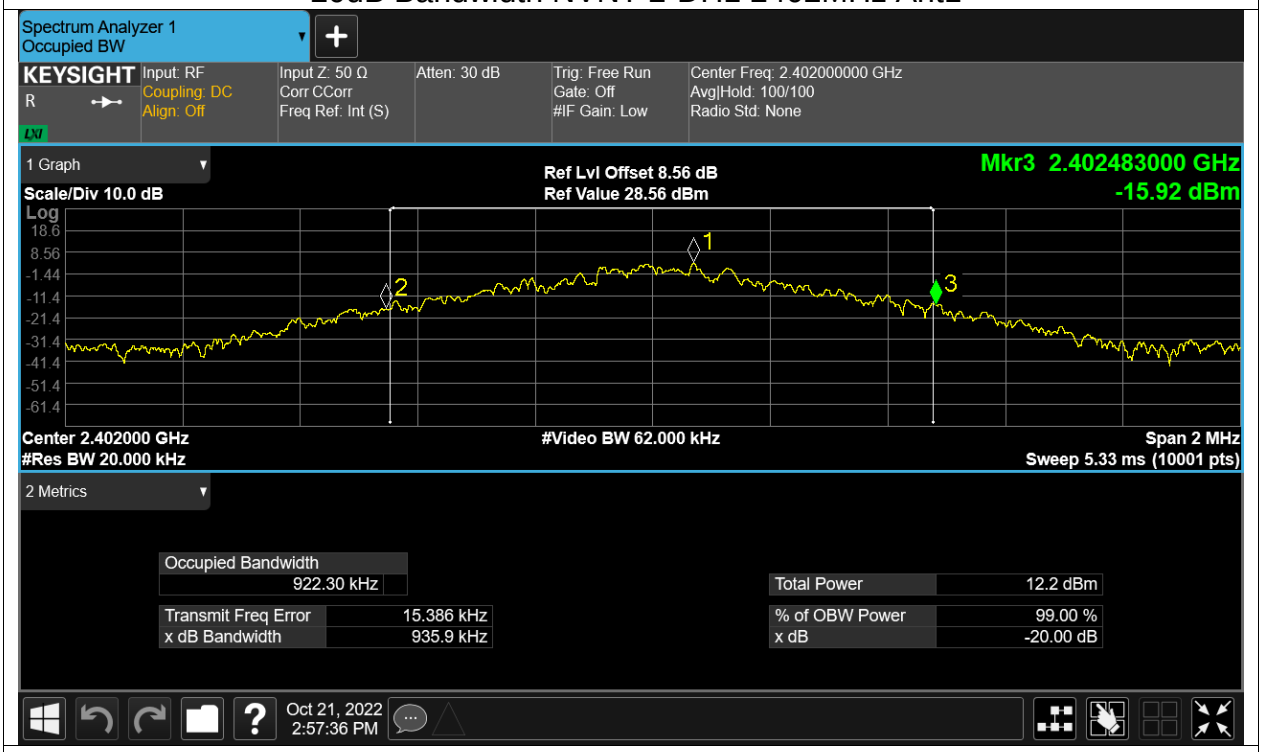
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



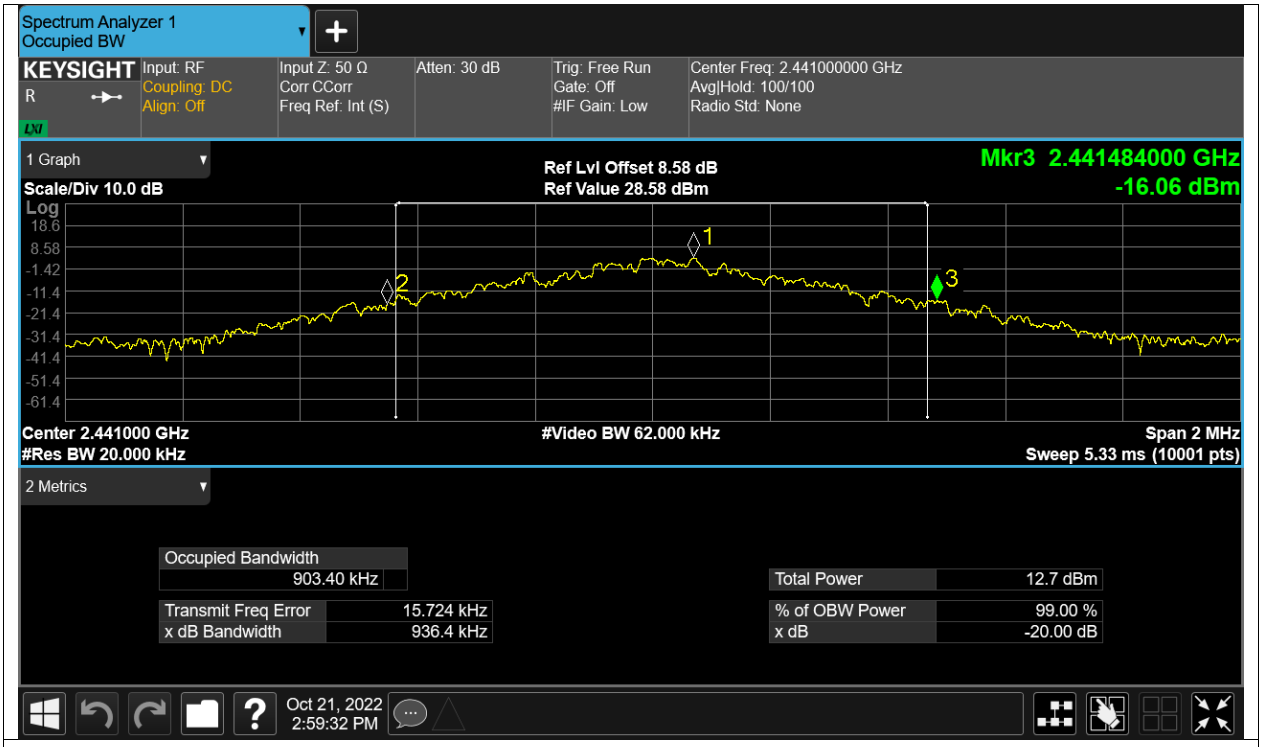
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



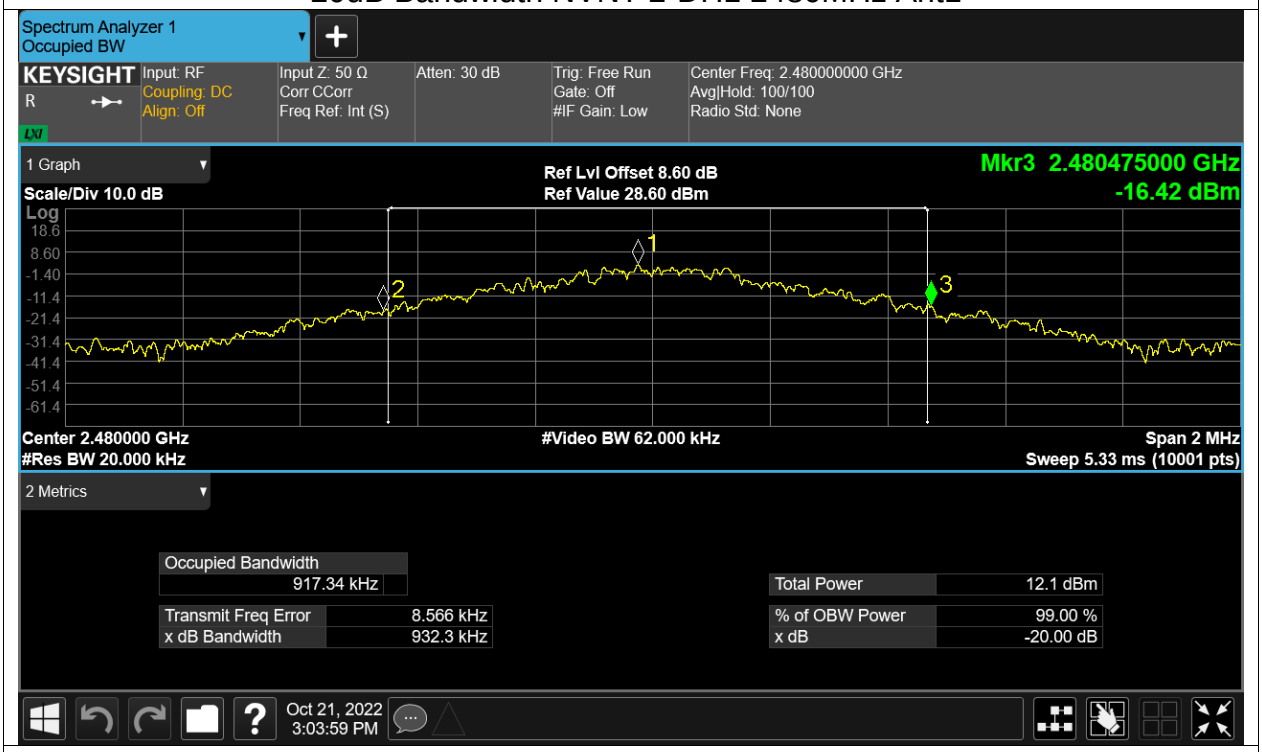
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



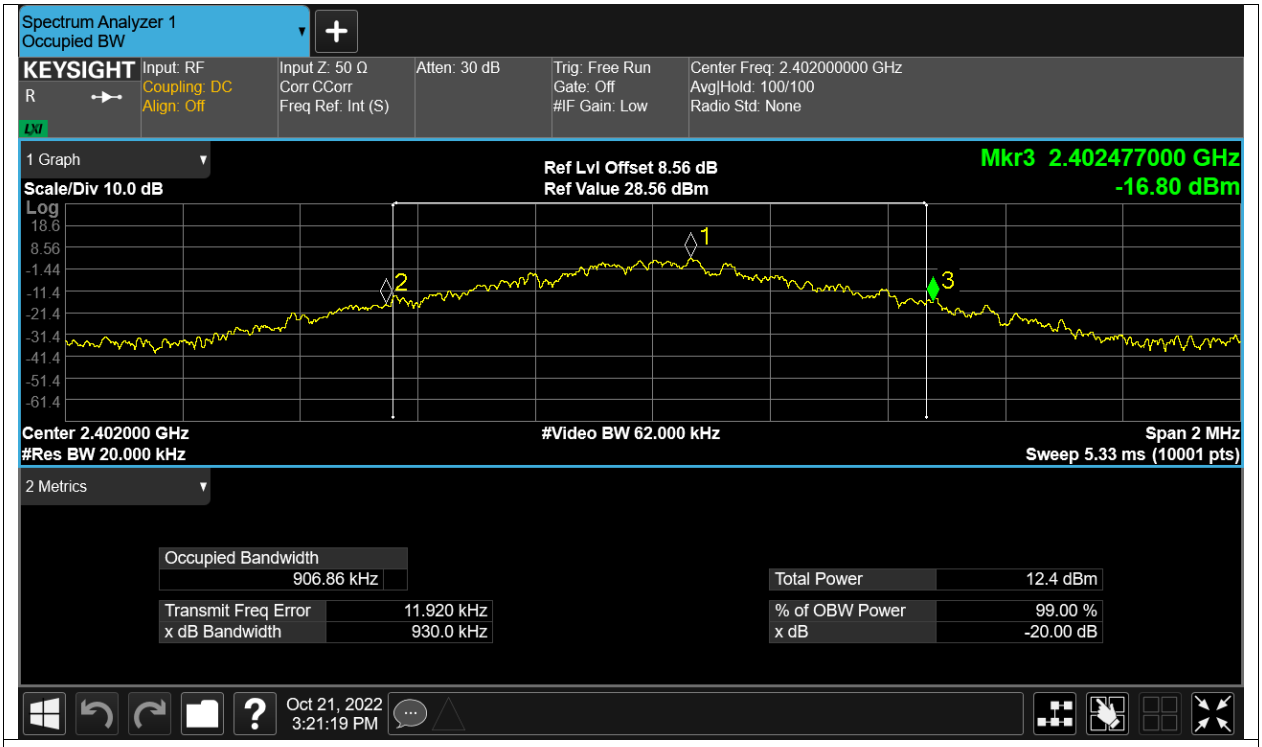
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

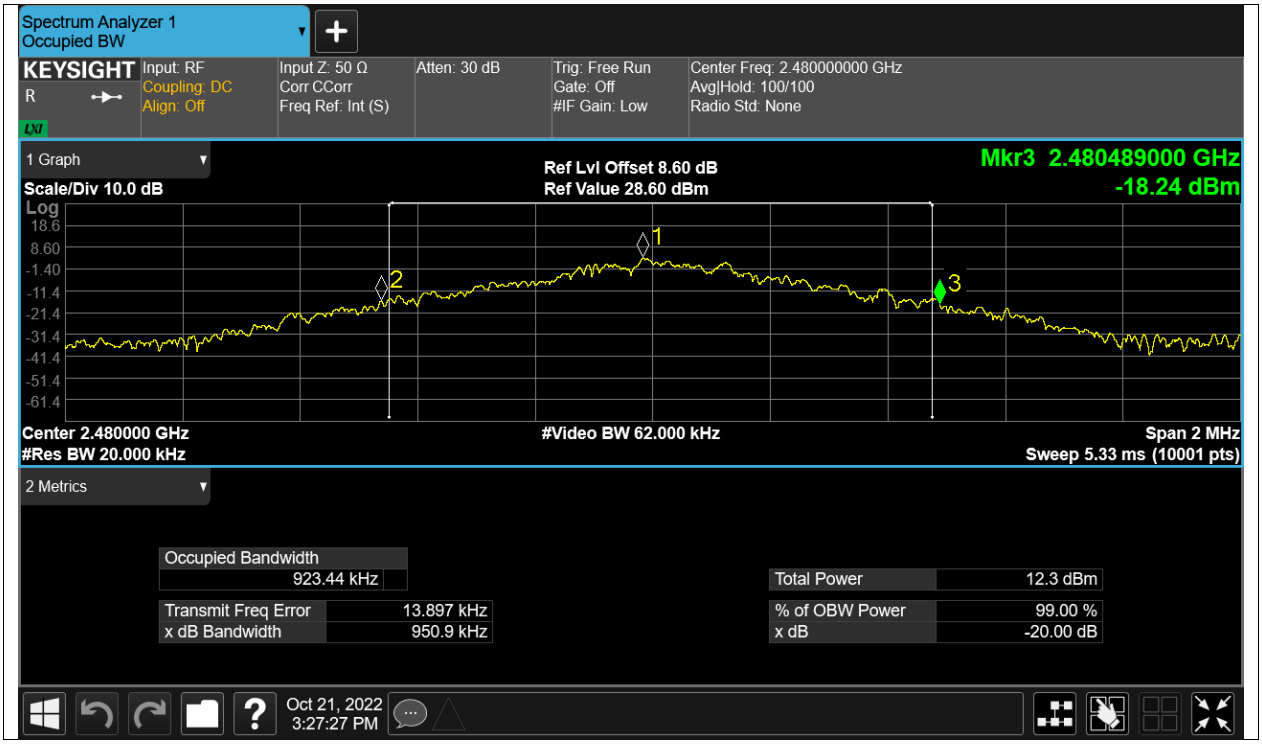


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1

-20dB Bandwidth NVNT 3-DH1 2480MHz Ant1

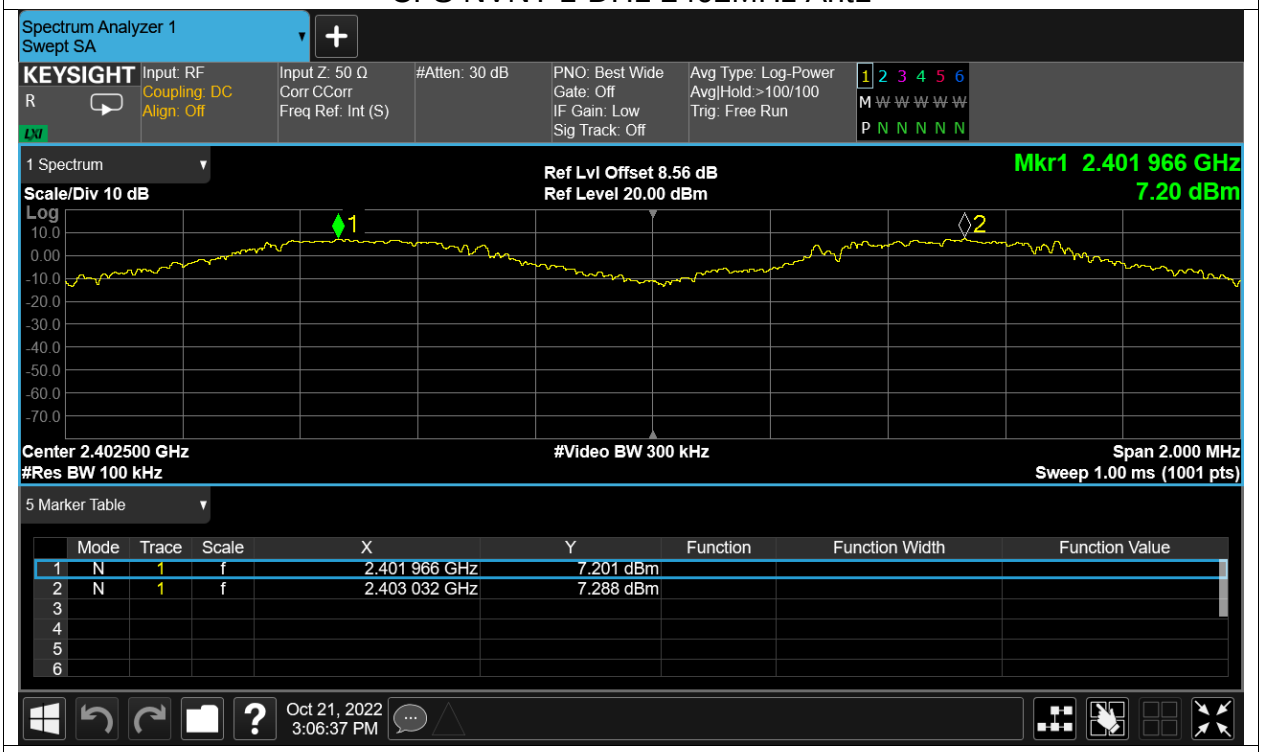

Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Off
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 100/100
Radio Std: None
1 Graph
Ref Lvl Offset 8.60 dB
Ref Value 28.60 dBm
Mkr3 2.480489000 GHz
-18.24 dBm
Scale/Div 10.0 dB
Log
18.6
8.60
-1.40
-11.4
-21.4
-31.4
-41.4
-51.4
-61.4
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
923.44 kHz
Transmit Freq Error 13.897 kHz
x dB Bandwidth 950.9 kHz
Total Power 12.3 dBm
% of OBW Power 99.00 %
x dB -20.00 dB
Oct 21, 2022
3:27:27 PM

Carrier Frequencies Separation

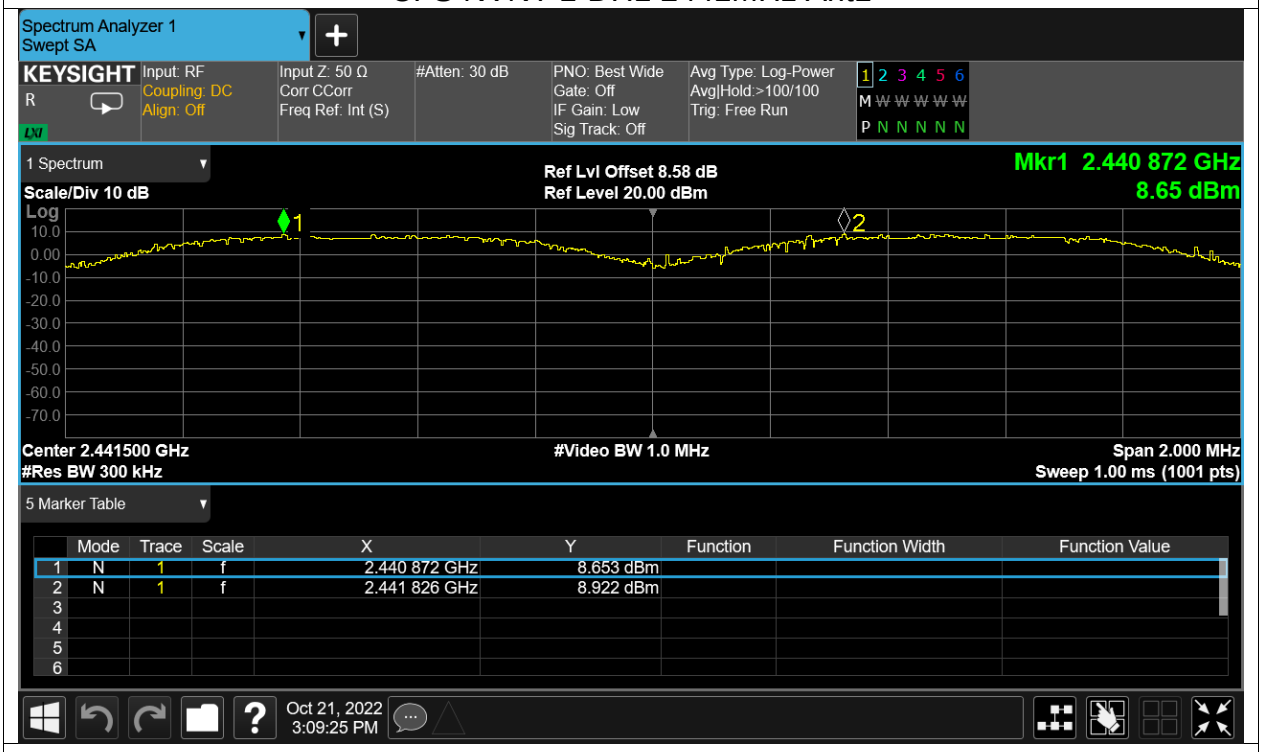
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2401.966	2403.032	1.066	0.922	Pass
NVNT	1-DH1	Ant1	2440.872	2441.826	0.954	0.953	Pass
NVNT	1-DH1	Ant1	2478.9	2479.848	0.948	0.923	Pass
NVNT	2-DH1	Ant1	2401.97	2402.99	1.02	0.624	Pass
NVNT	2-DH1	Ant1	2441.192	2442.124	0.932	0.624	Pass
NVNT	2-DH1	Ant1	2479.16	2479.88	0.72	0.621	Pass
NVNT	3-DH1	Ant1	2402.154	2403.114	0.96	0.62	Pass
NVNT	3-DH1	Ant1	2440.954	2441.946	0.992	0.624	Pass
NVNT	3-DH1	Ant1	2478.946	2480.038	1.092	0.634	Pass

Test Graphs

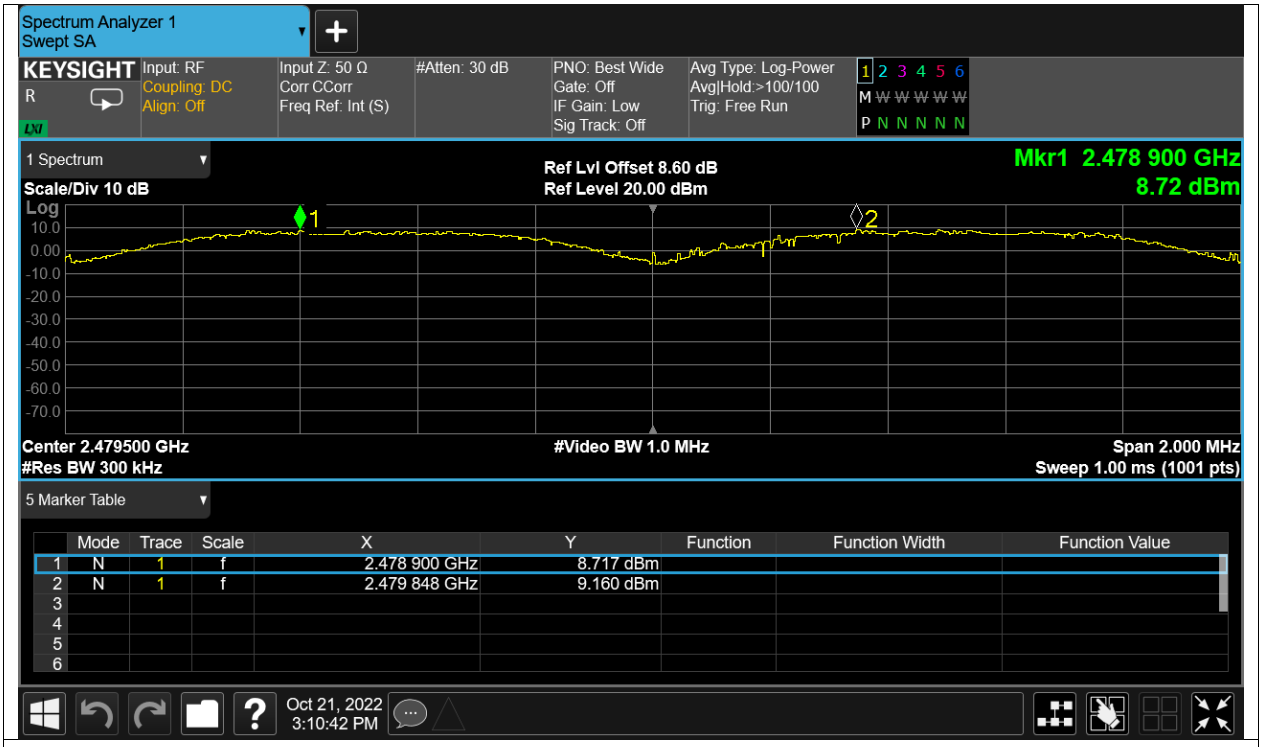
CFS NVNT 1-DH1 2402MHz Ant1



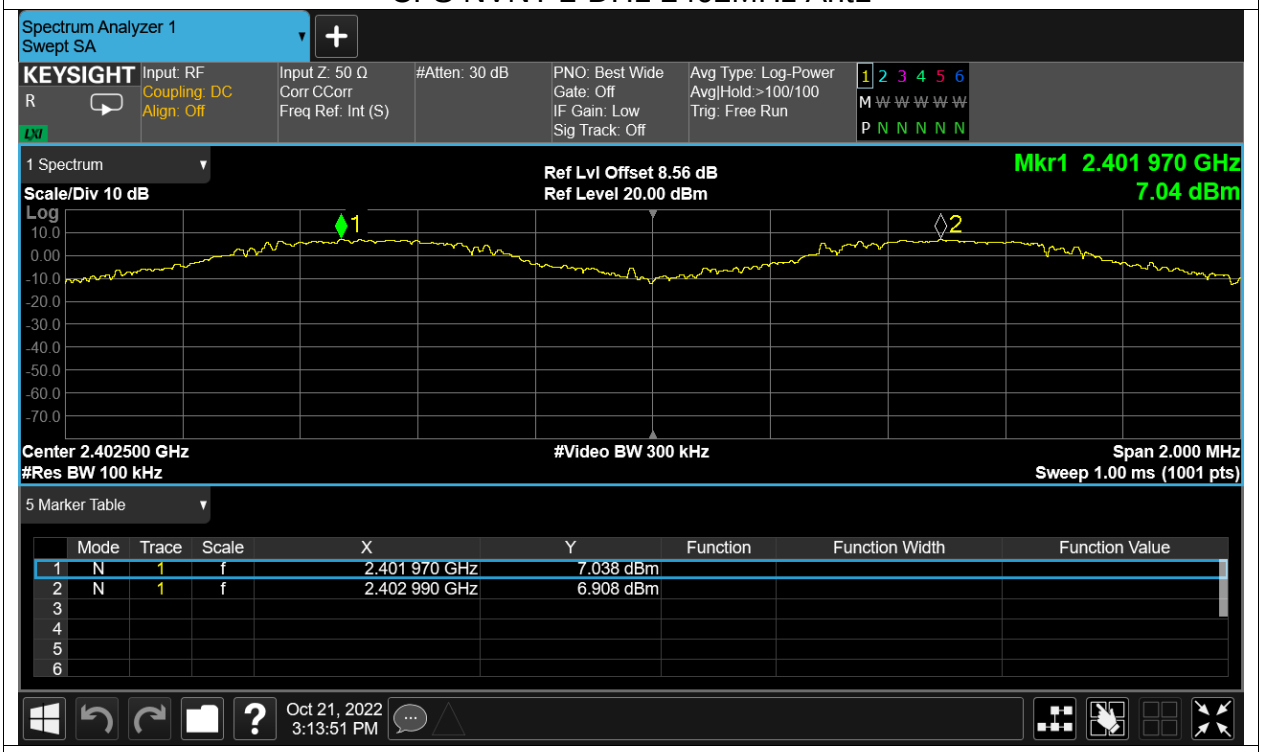
CFS NVNT 1-DH1 2441MHz Ant1



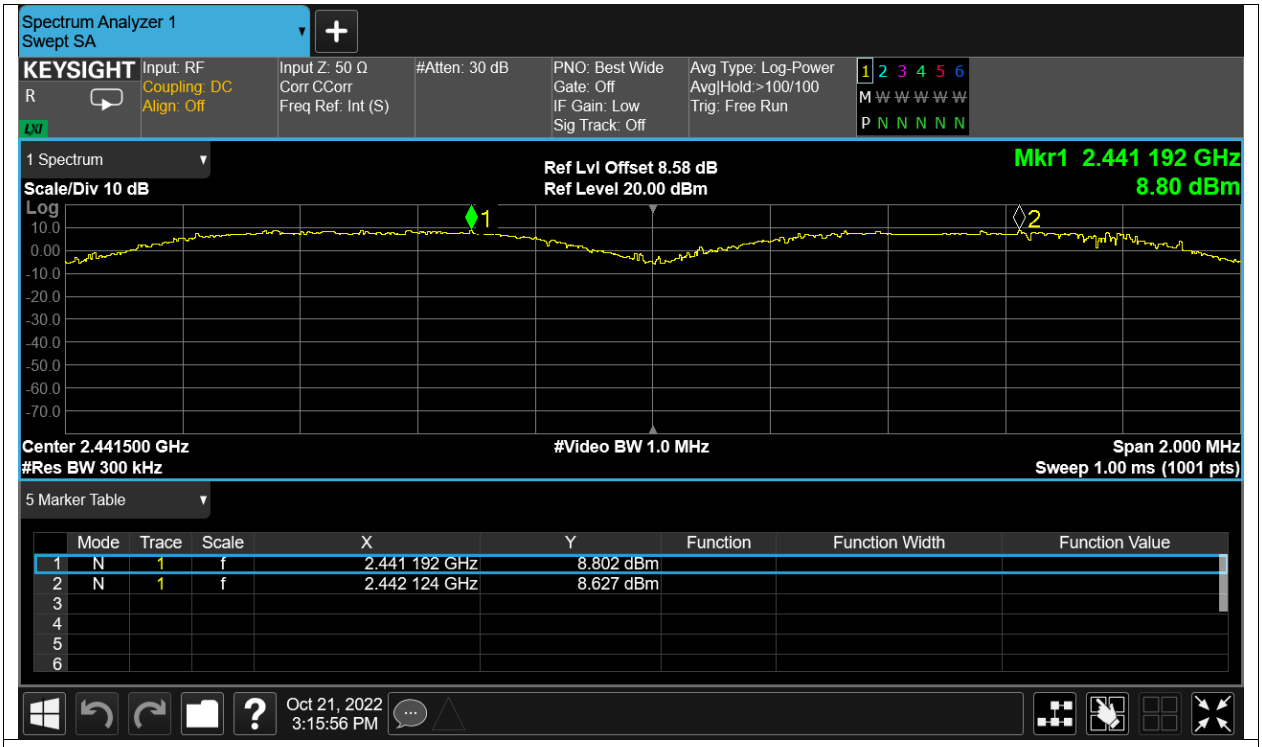
CFS NVNT 1-DH1 2480MHz Ant1



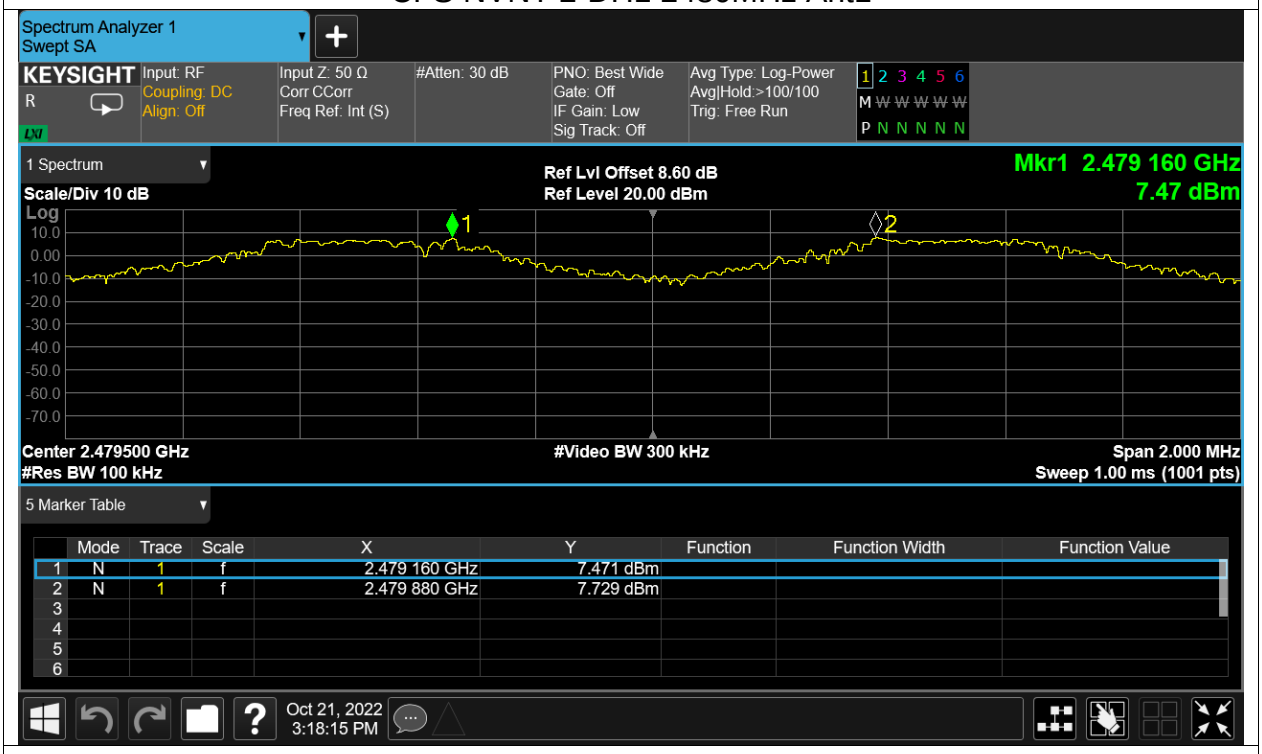
CFS NVNT 2-DH1 2402MHz Ant1



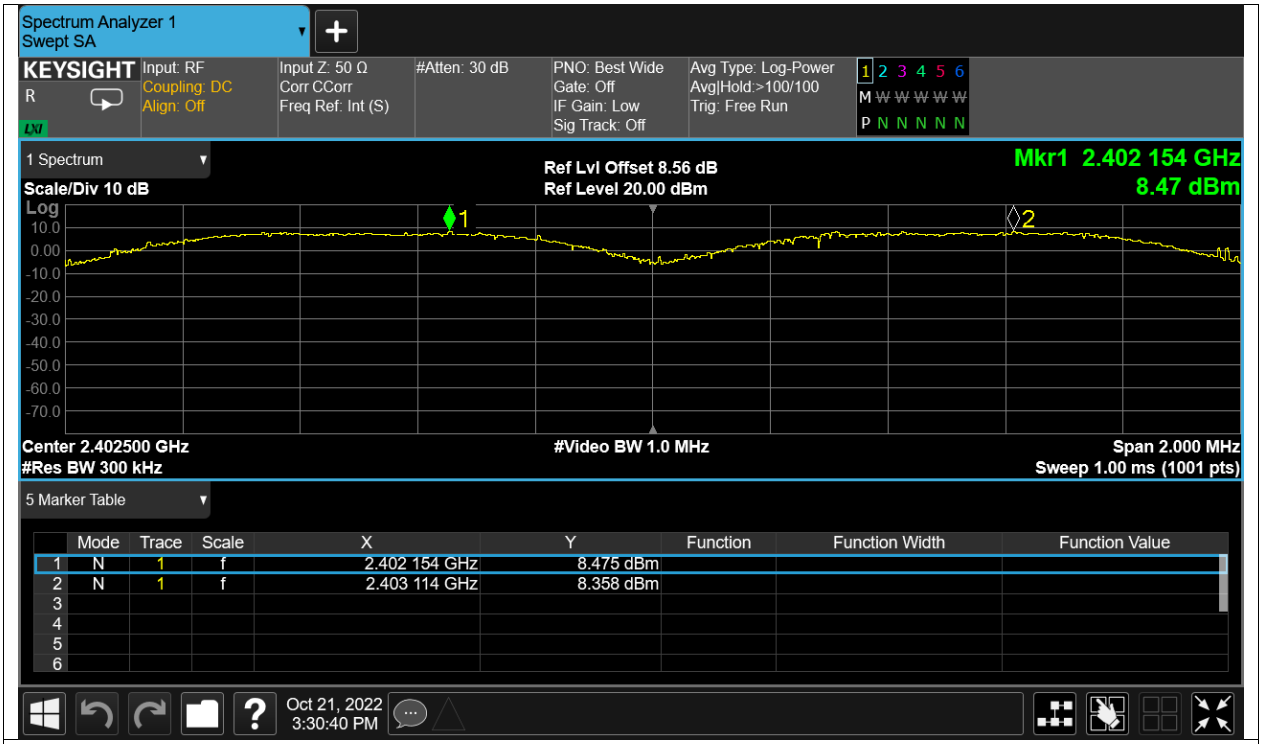
CFS NVNT 2-DH1 2441MHz Ant1



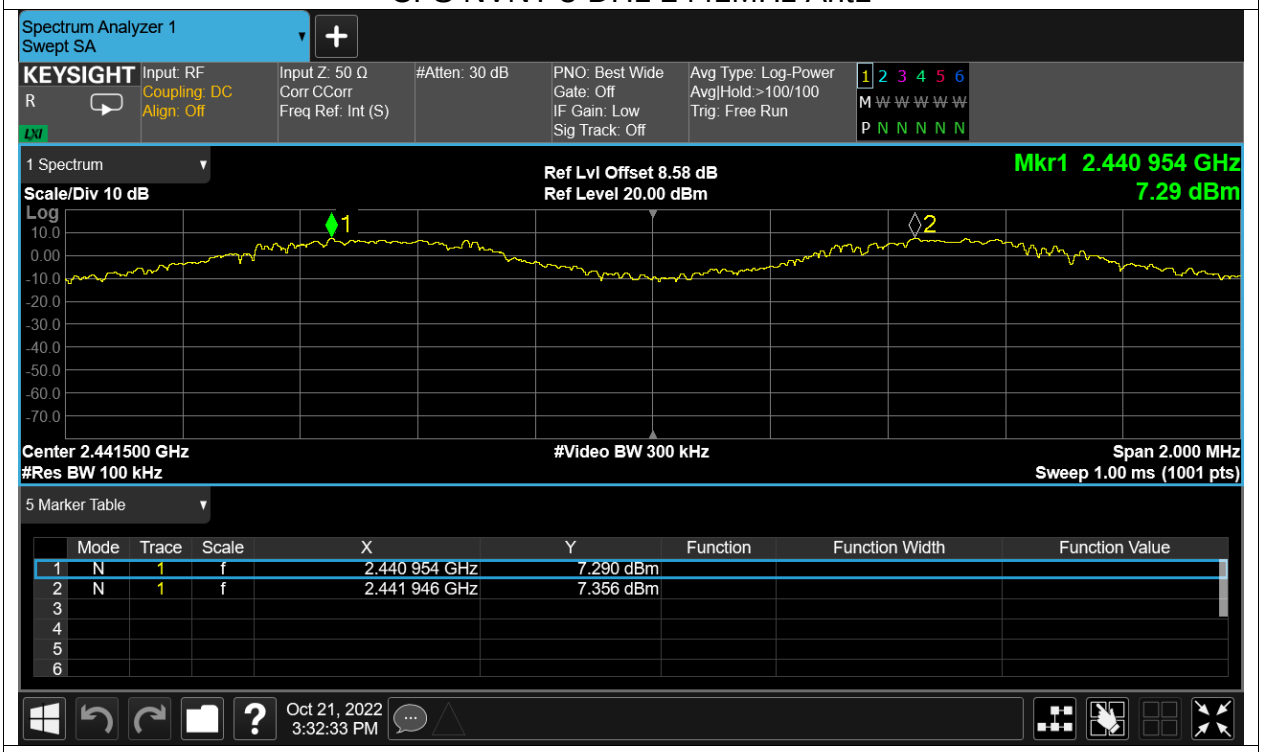
CFS NVNT 2-DH1 2480MHz Ant1



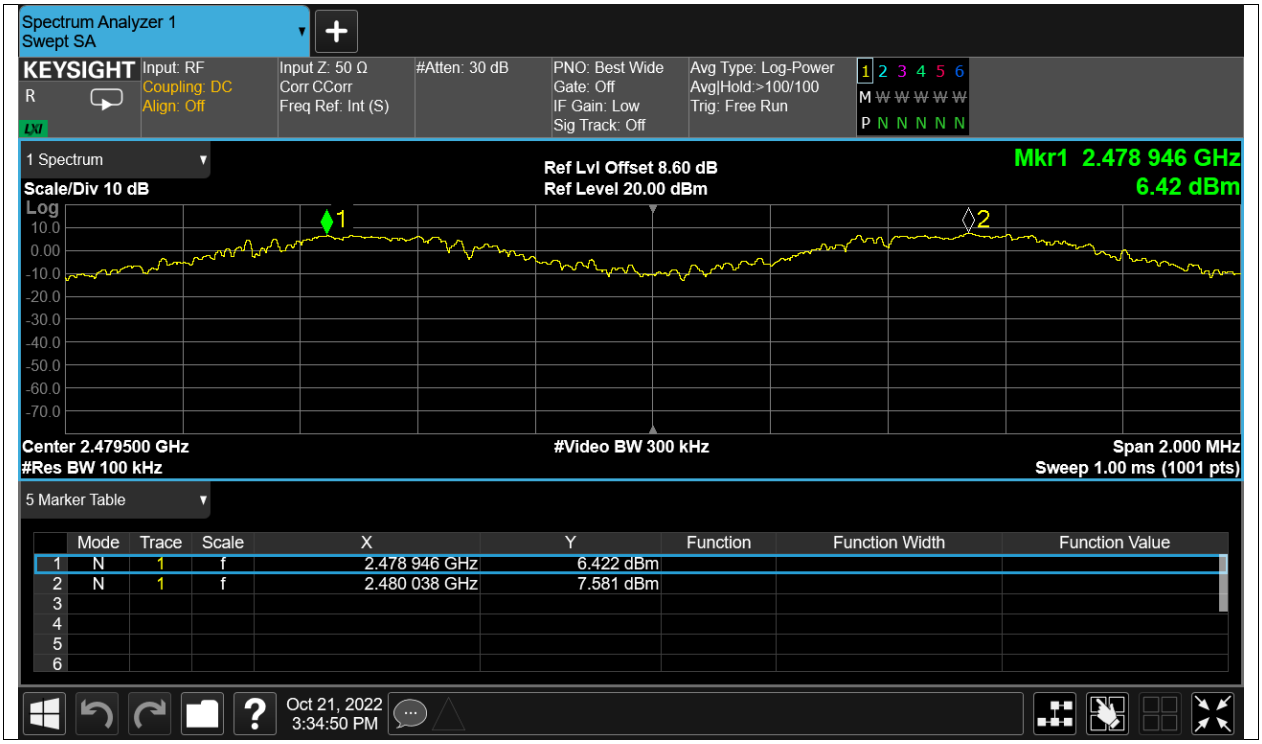
CFS NVNT 3-DH1 2402MHz Ant1



CFS NVNT 3-DH1 2441MHz Ant1



CFS NVNT 3-DH1 2480MHz Ant1

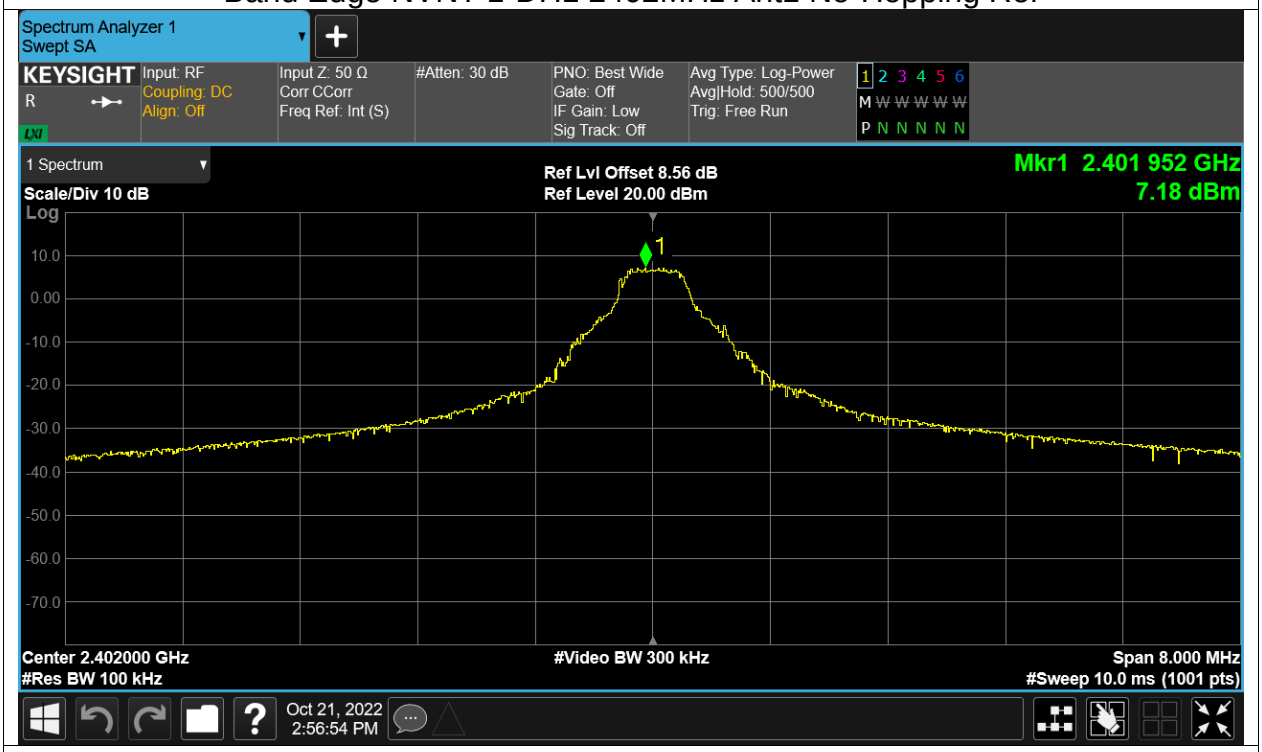

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Off
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold:>100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 8.60 dB
Ref Level 20.00 dBm
Mkr1 2.478 946 GHz
6.42 dBm
Center 2.479500 GHz
#Res BW 100 kHz
#Video BW 300 kHz
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 2.478 946 GHz 6.422 dBm
2 N 1 f 2.480 038 GHz 7.581 dBm
Oct 21, 2022
3:34:50 PM

Band Edge

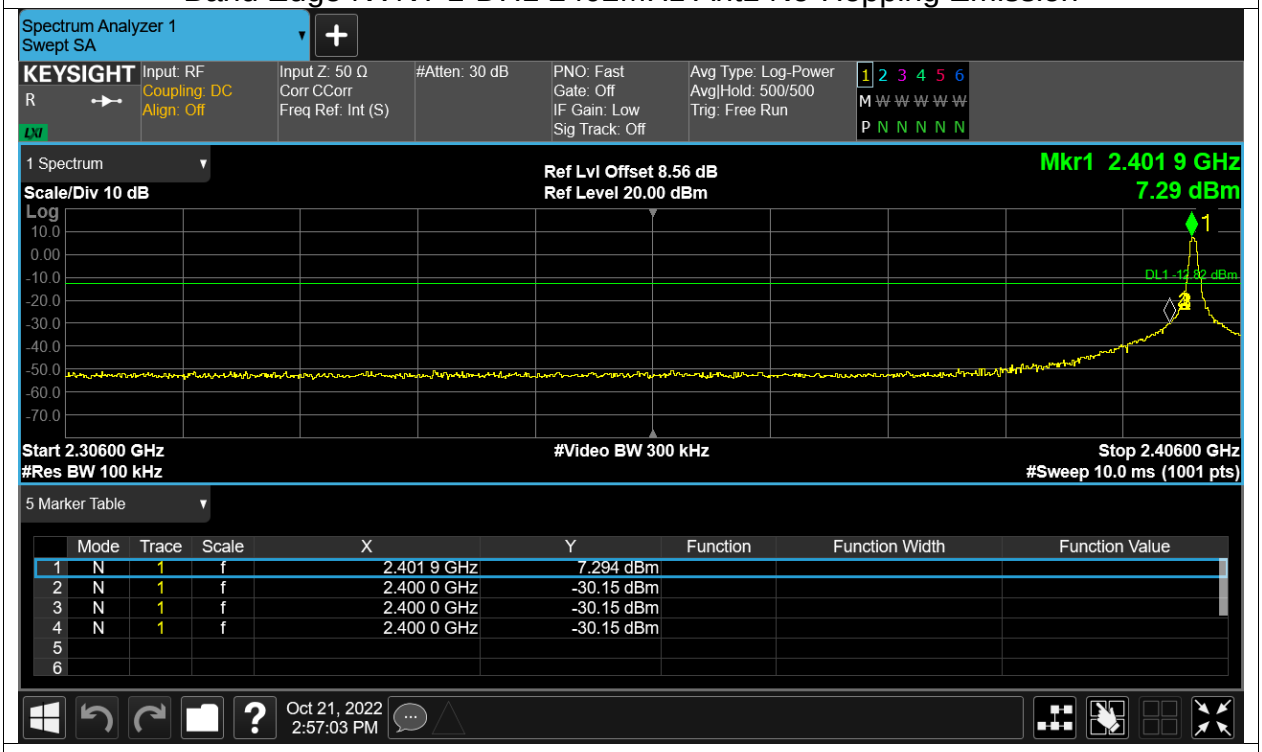
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-37.33	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-40.59	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-37.39	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-42.06	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-37.72	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-41.99	-20	Pass

Test Graphs

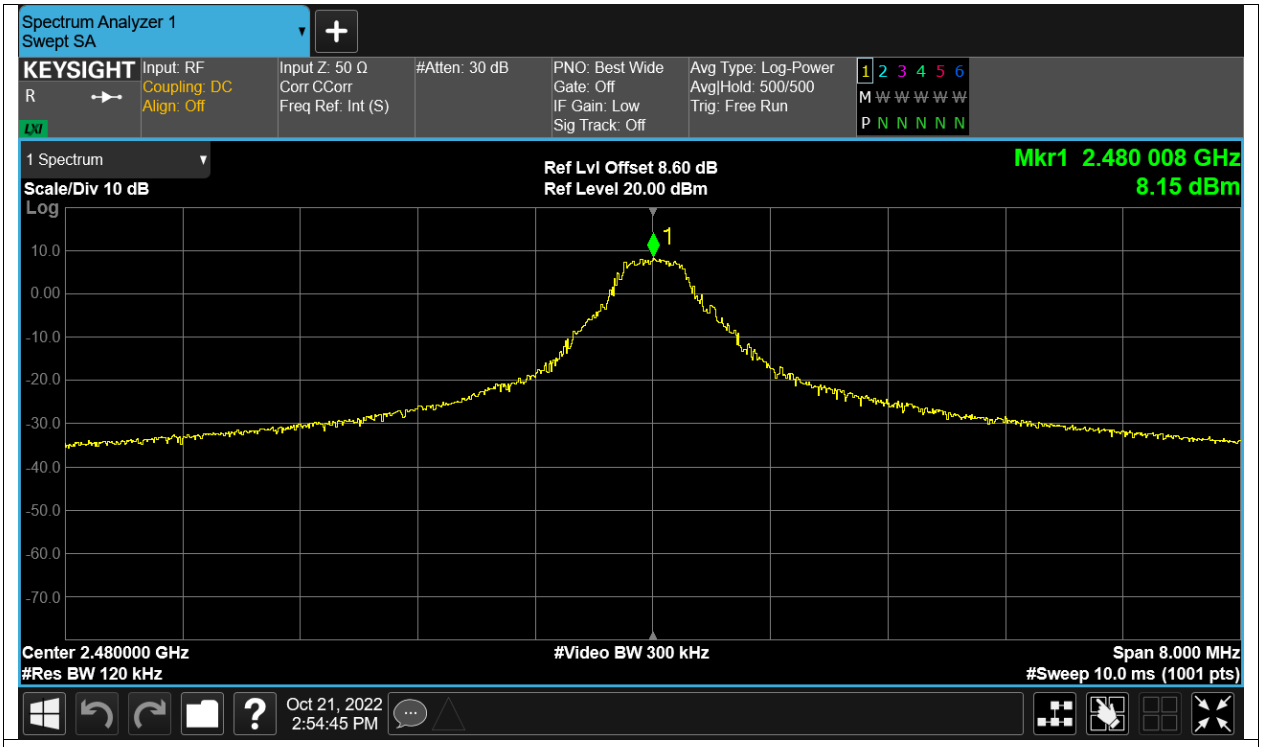
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



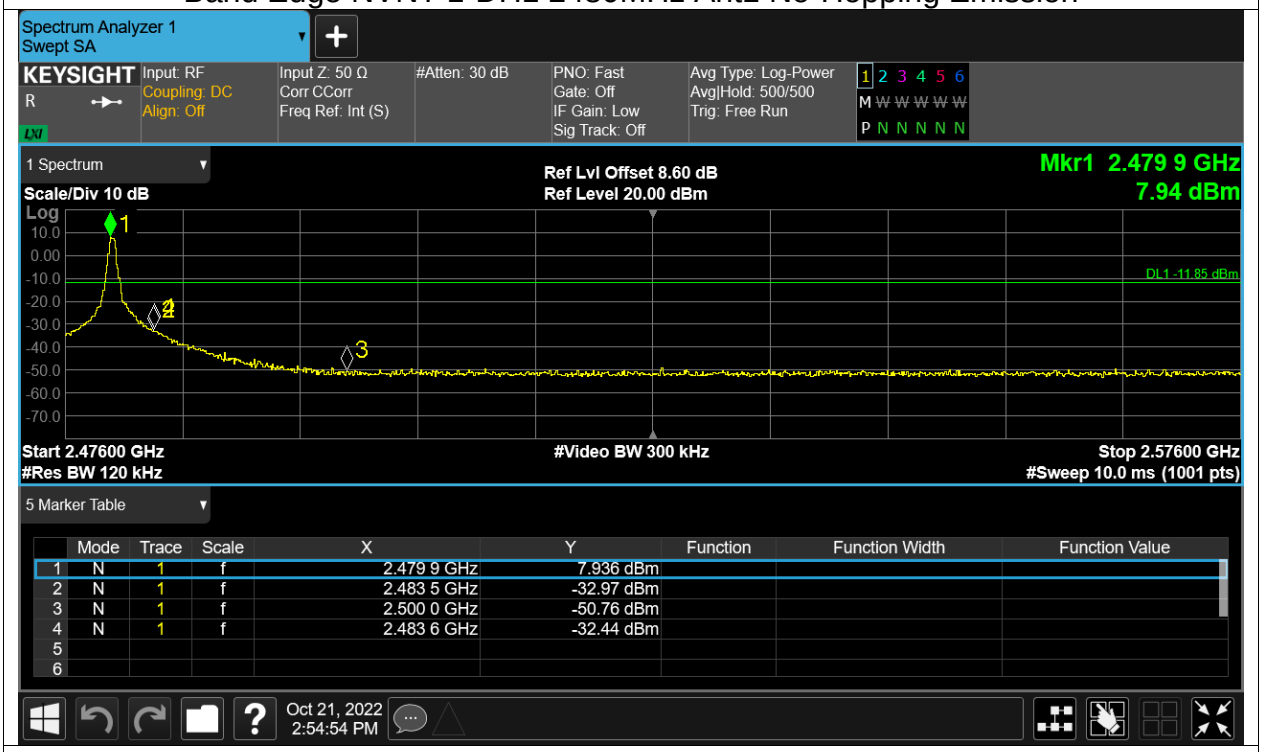
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



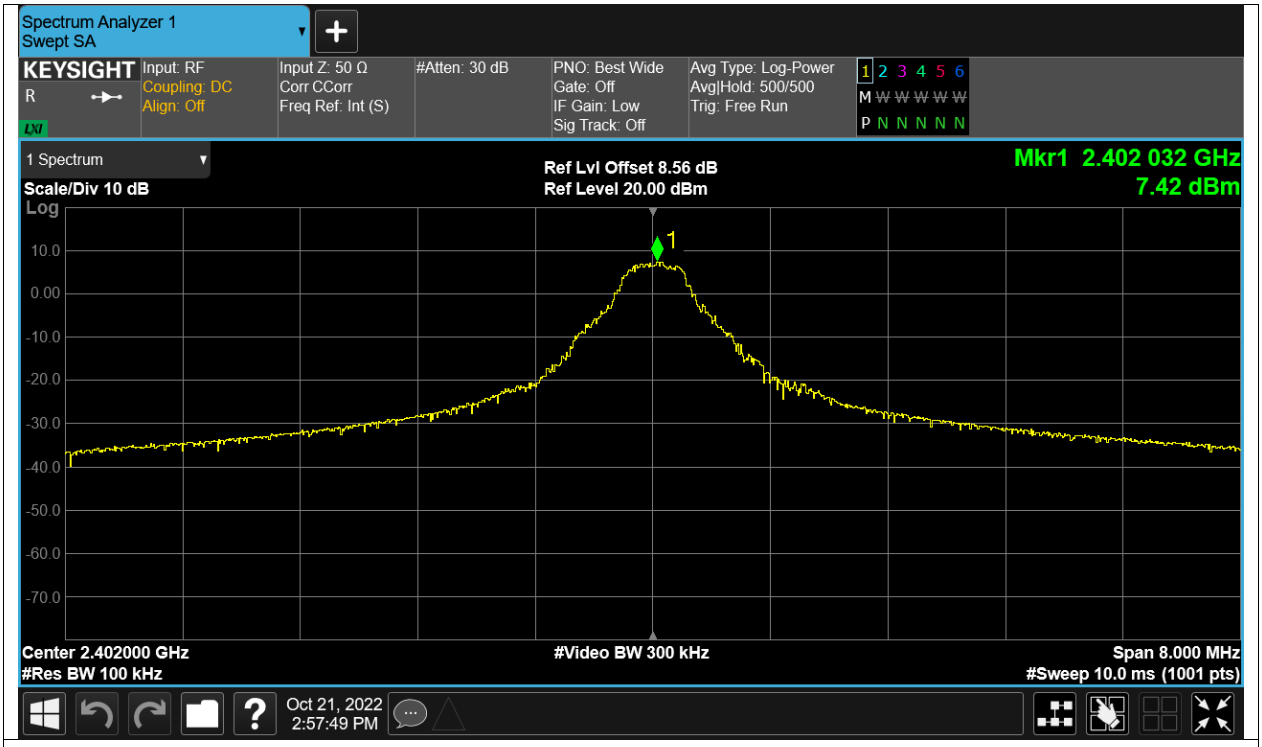
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



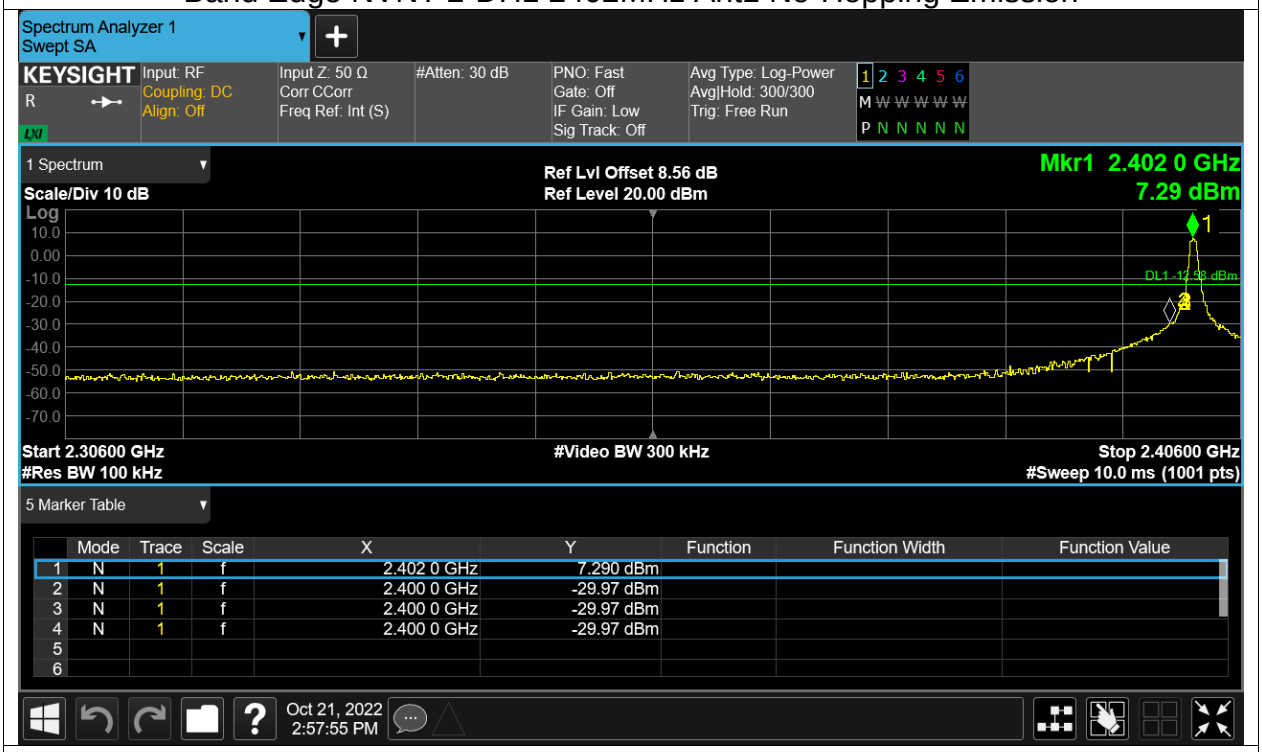
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



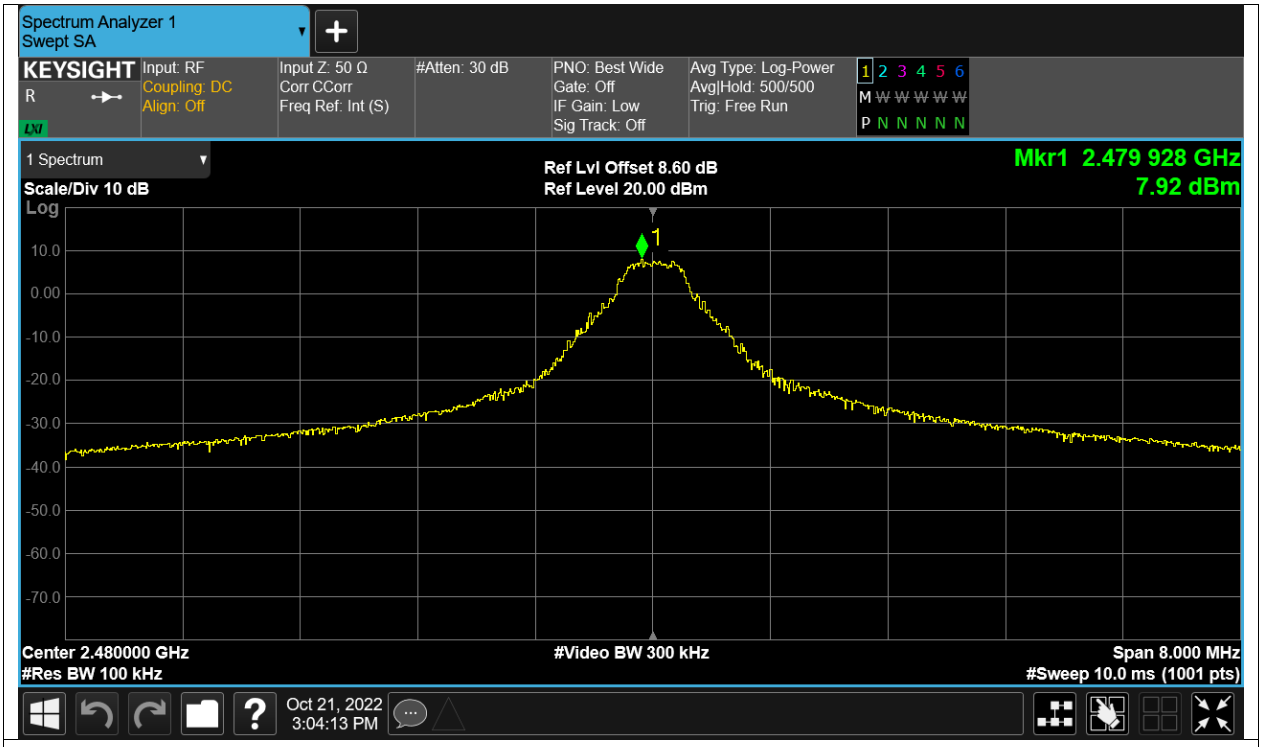
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



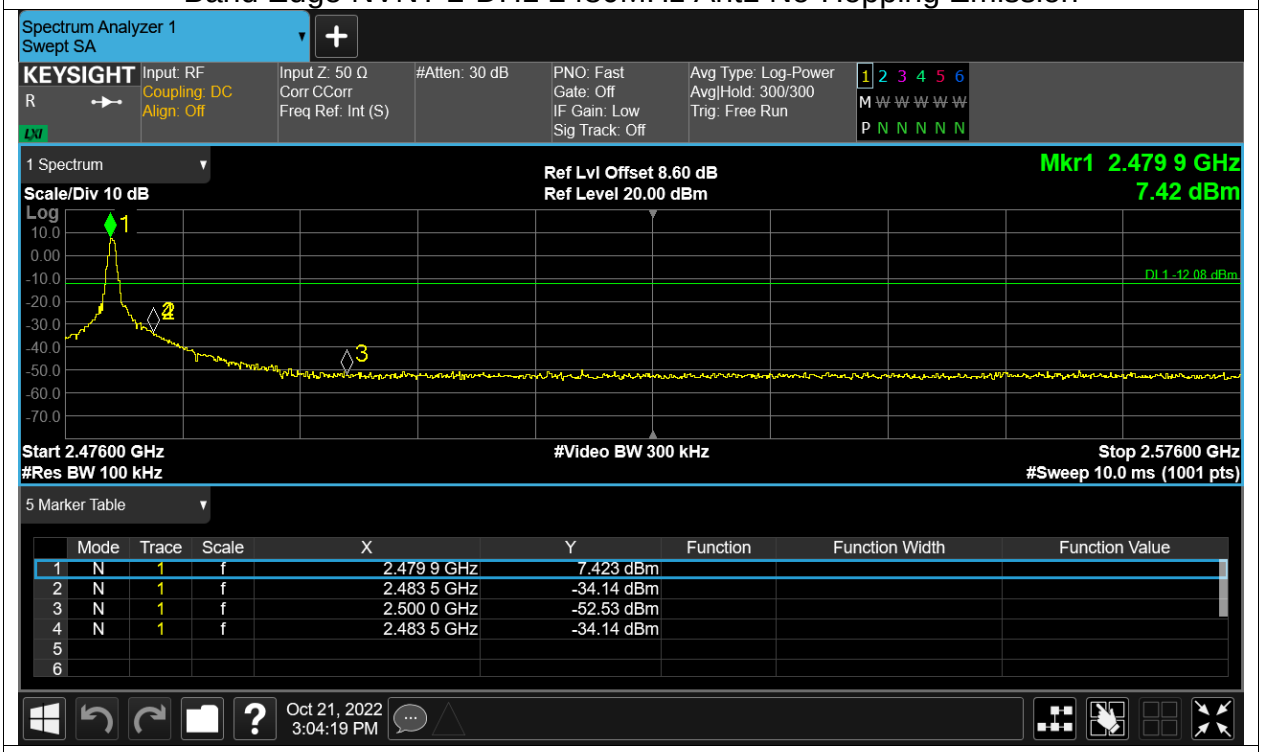
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



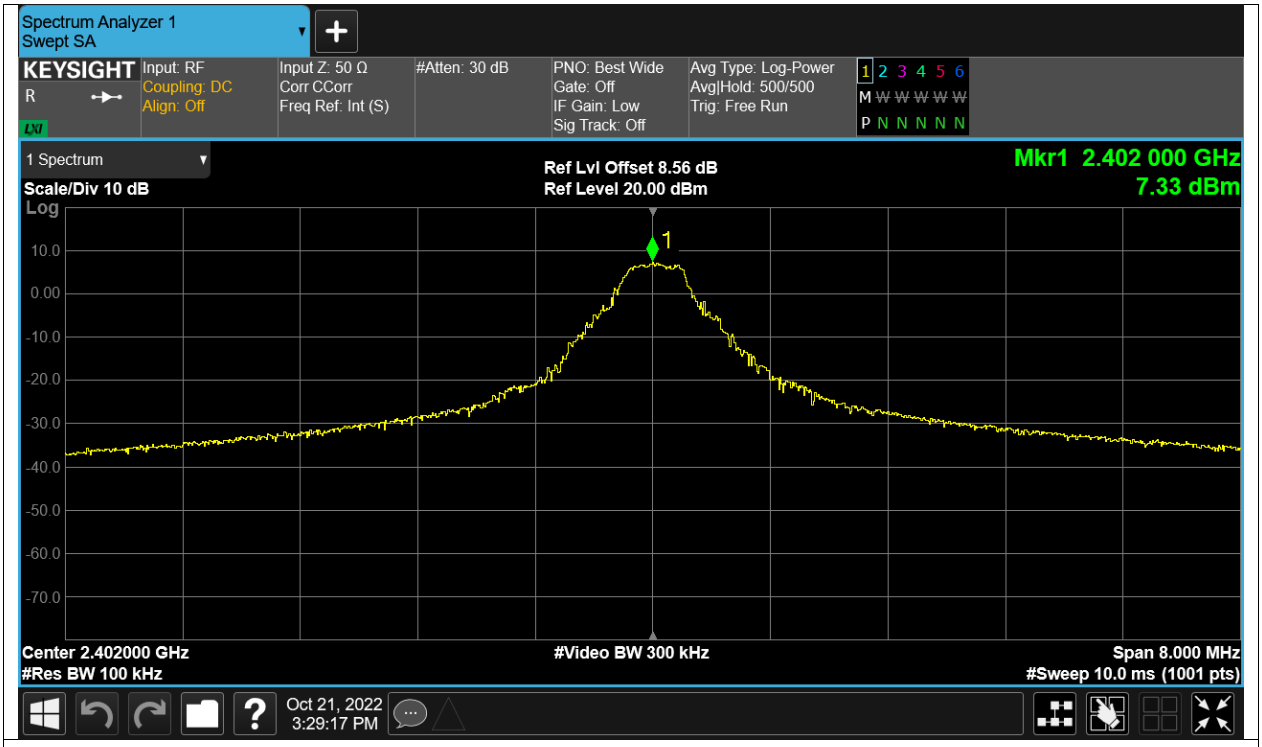
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



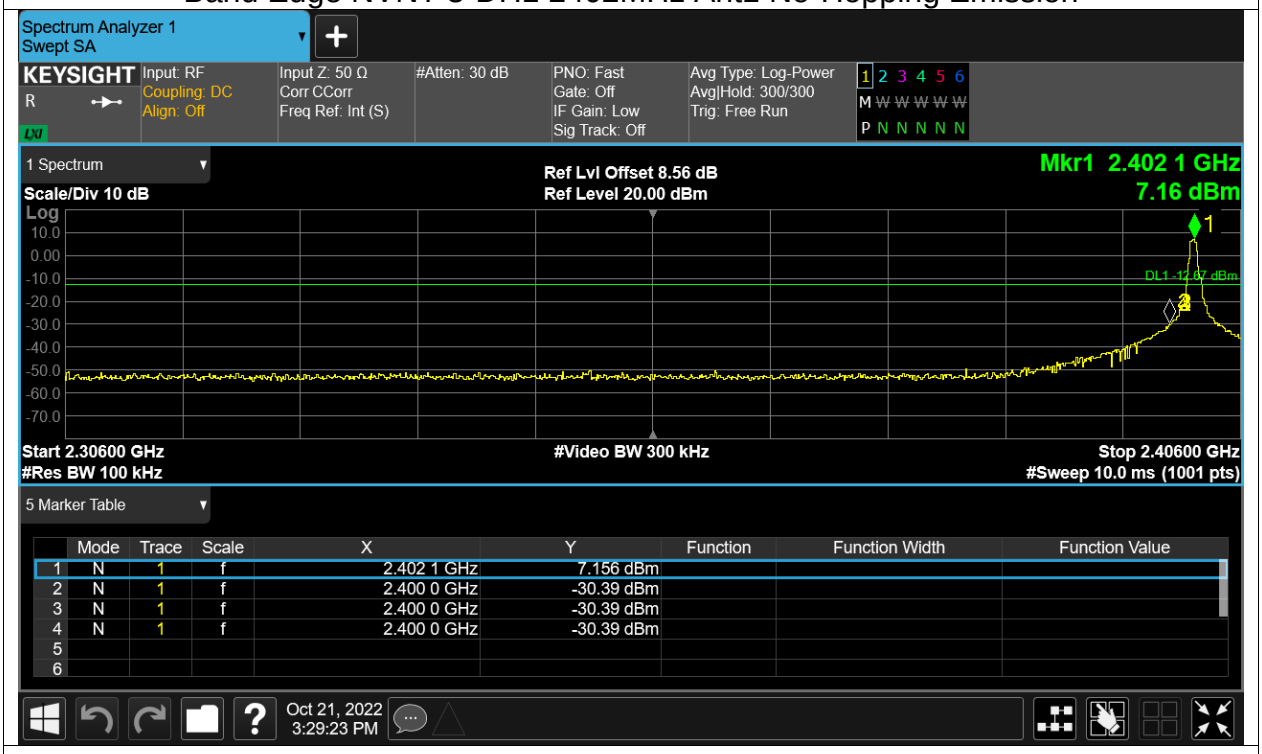
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



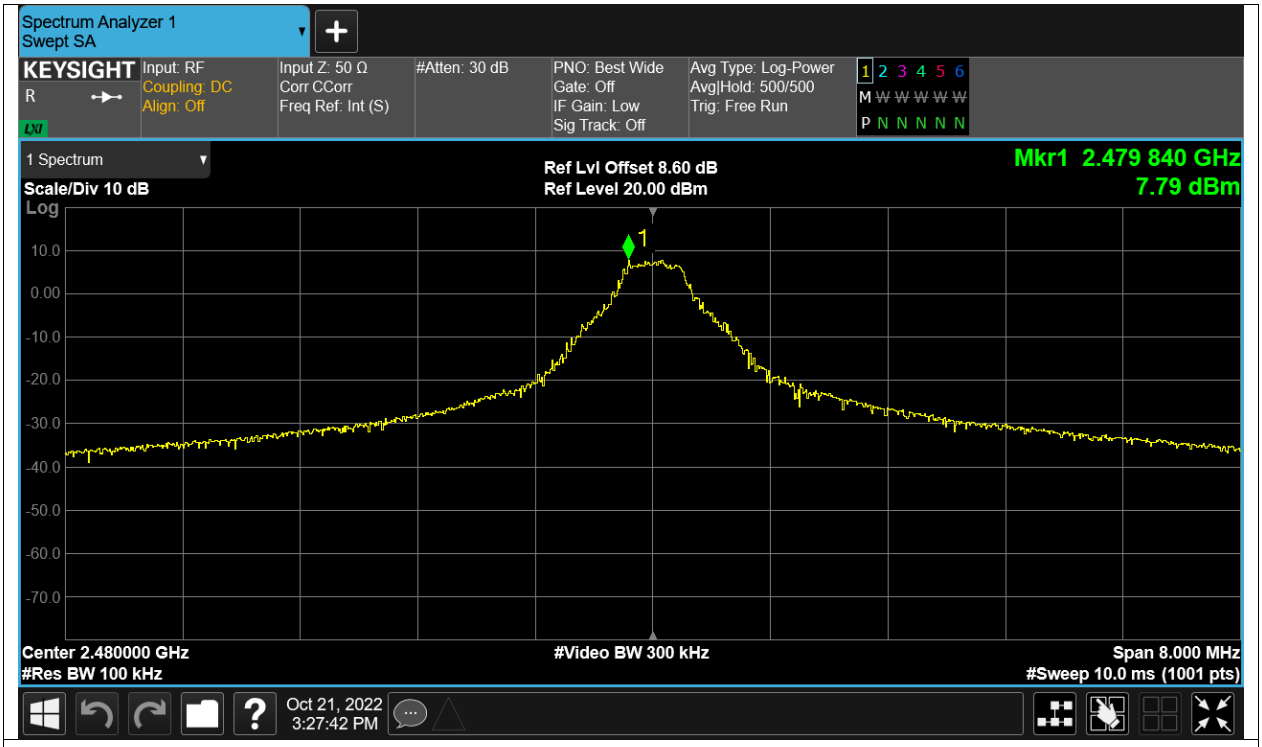
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



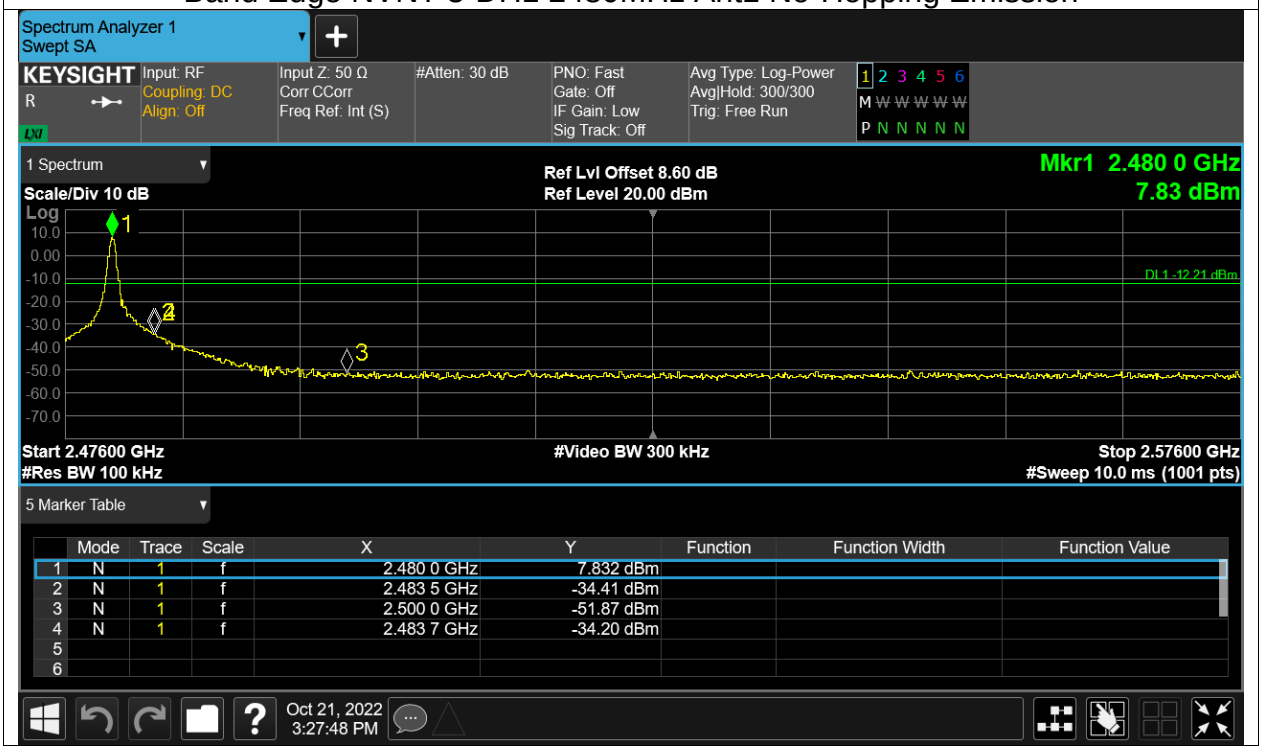
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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

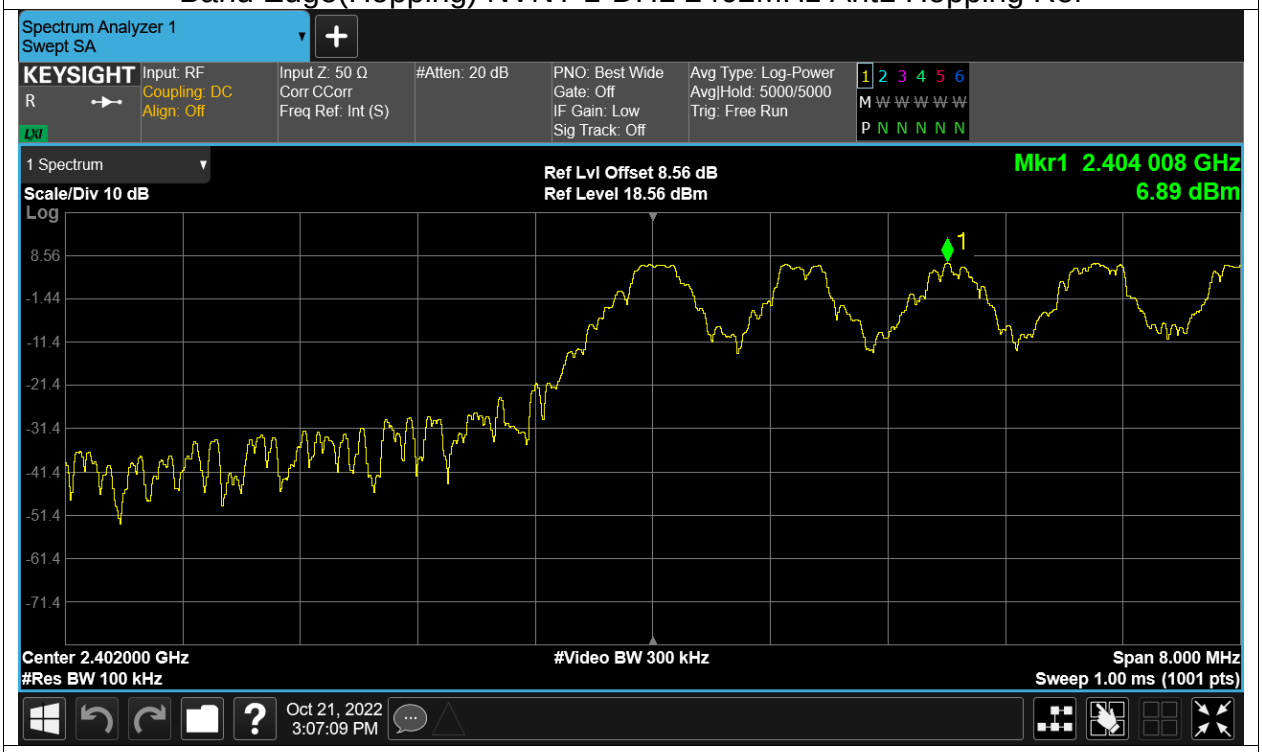


Band Edge(Hopping)

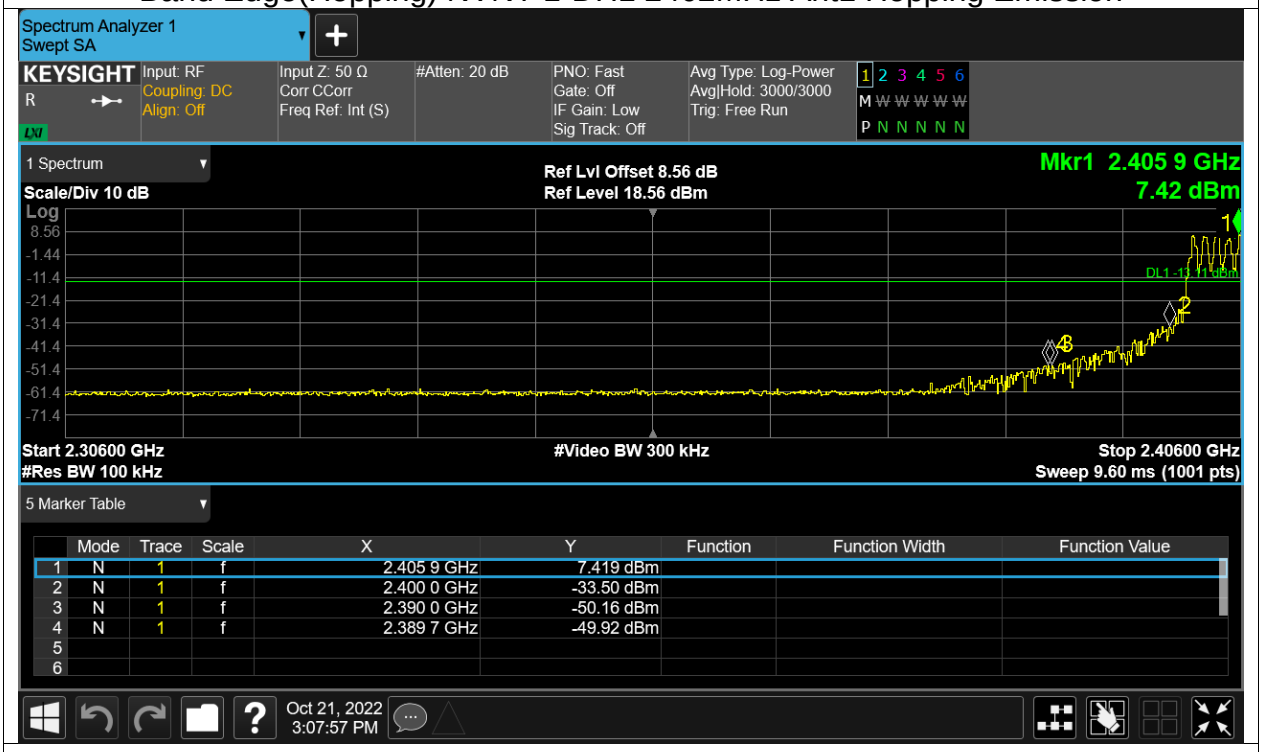
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-56.81	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-43.85	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-56.32	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-43.56	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-54.42	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-45.32	-20	Pass

Test Graphs

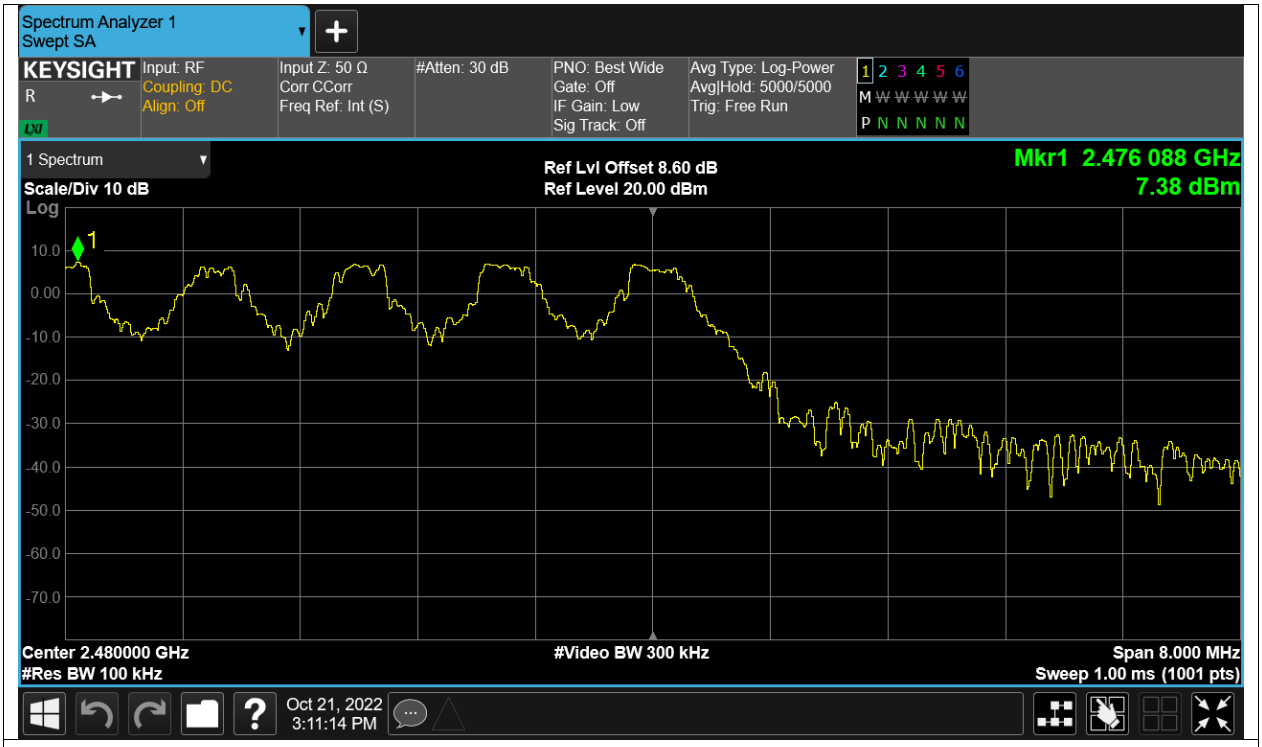
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



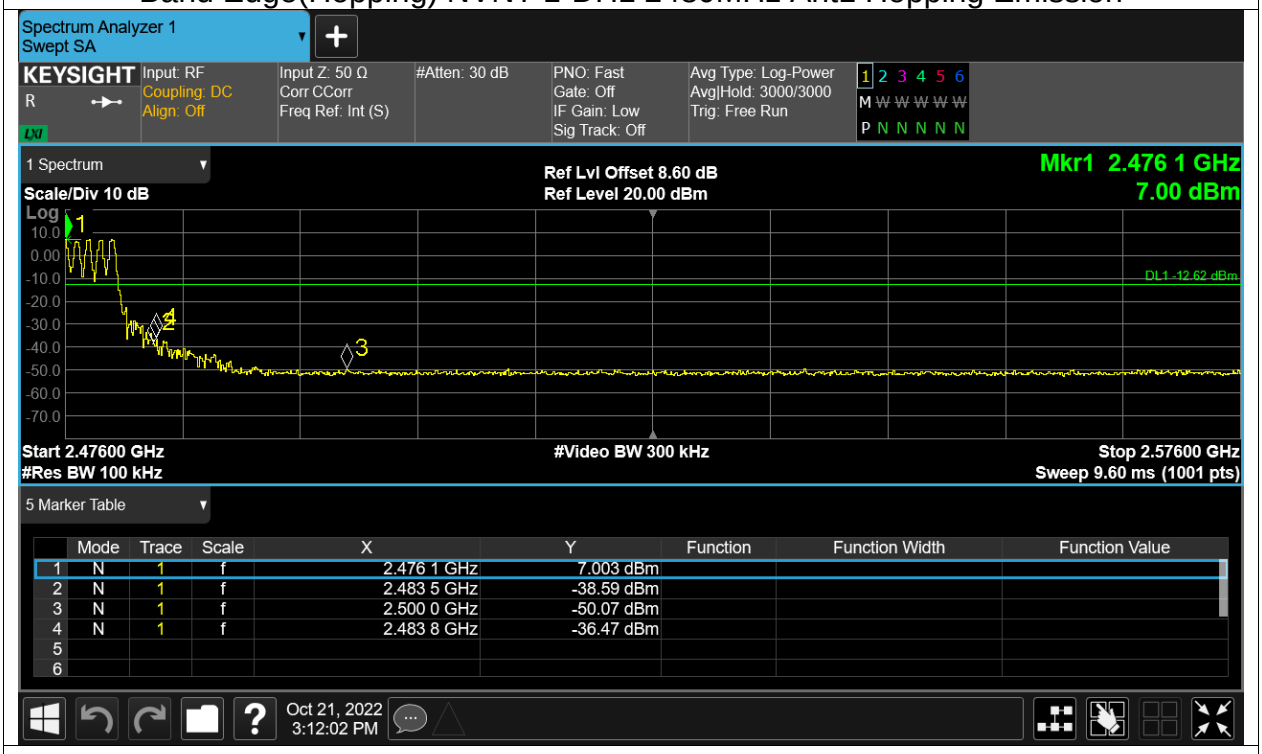
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



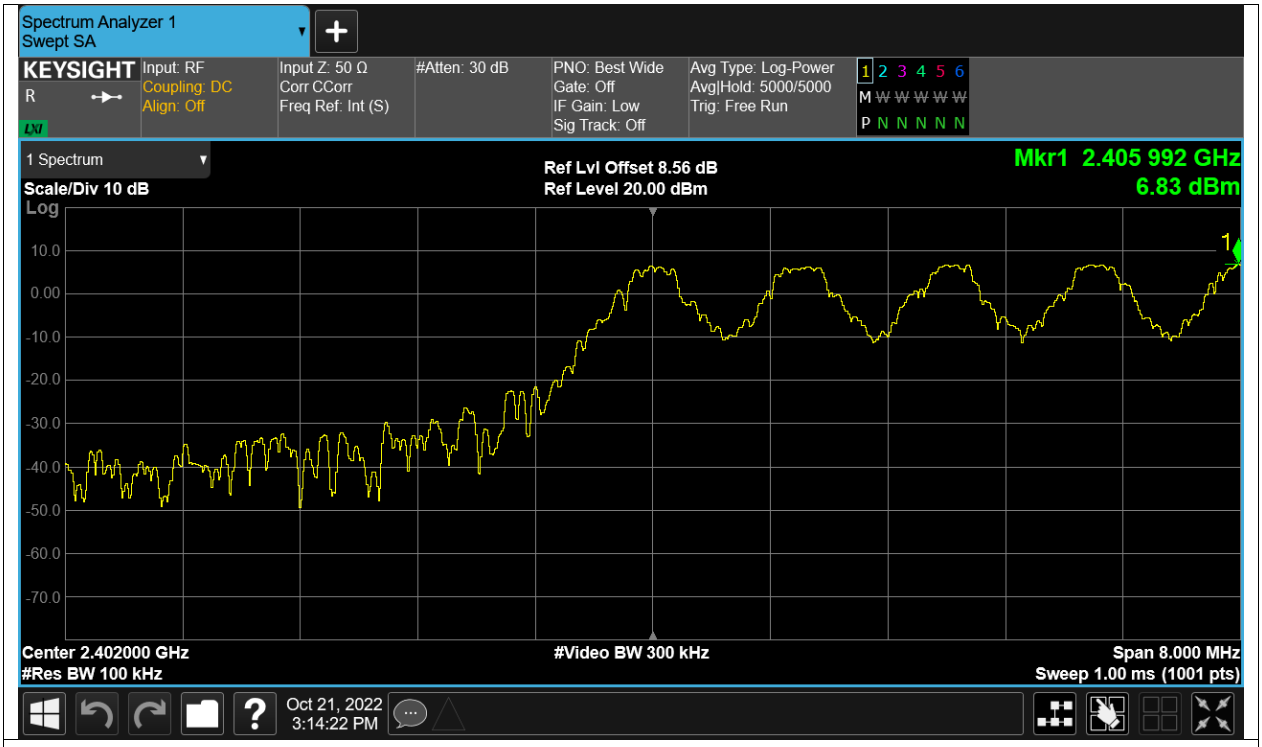
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



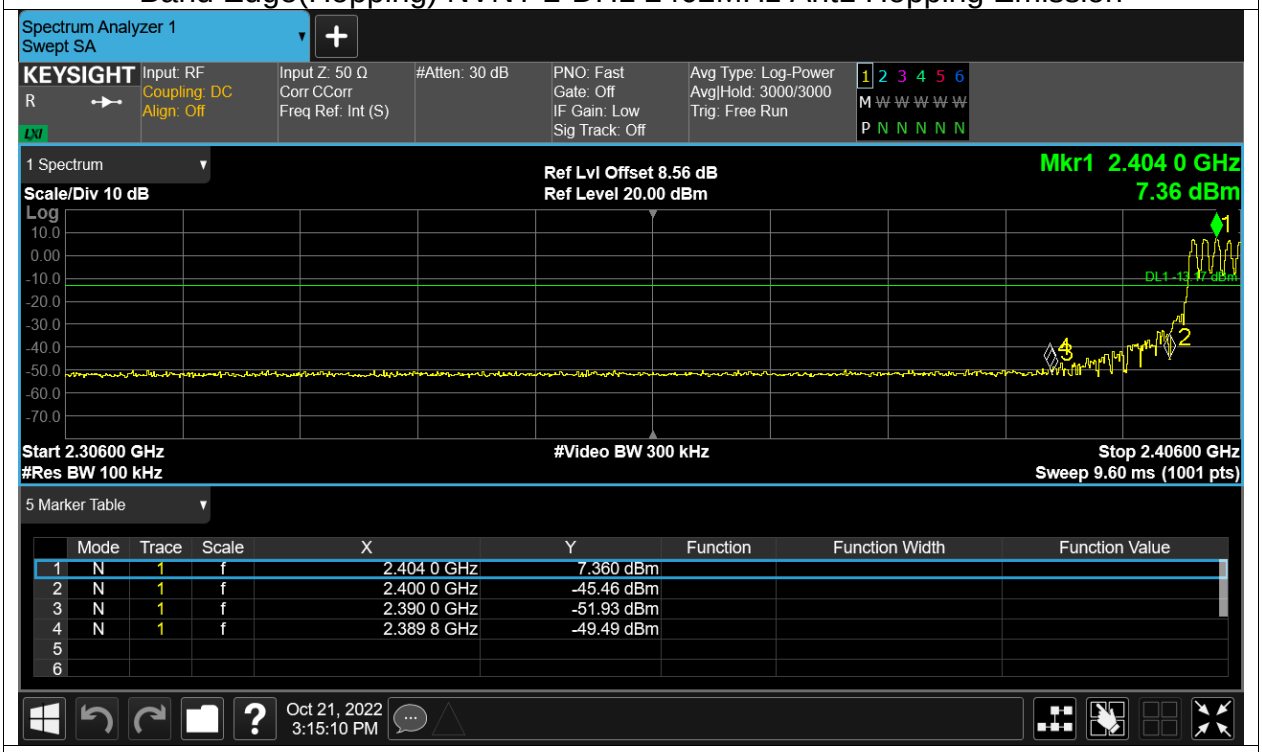
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



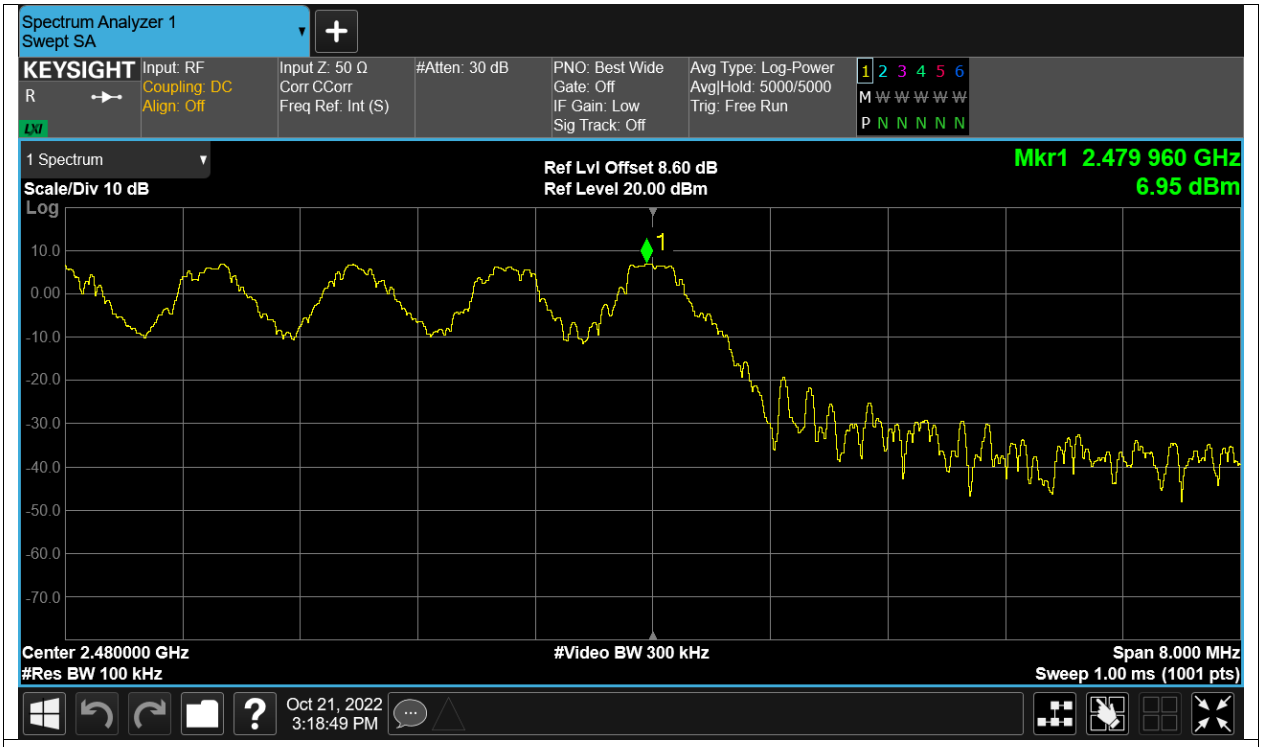
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



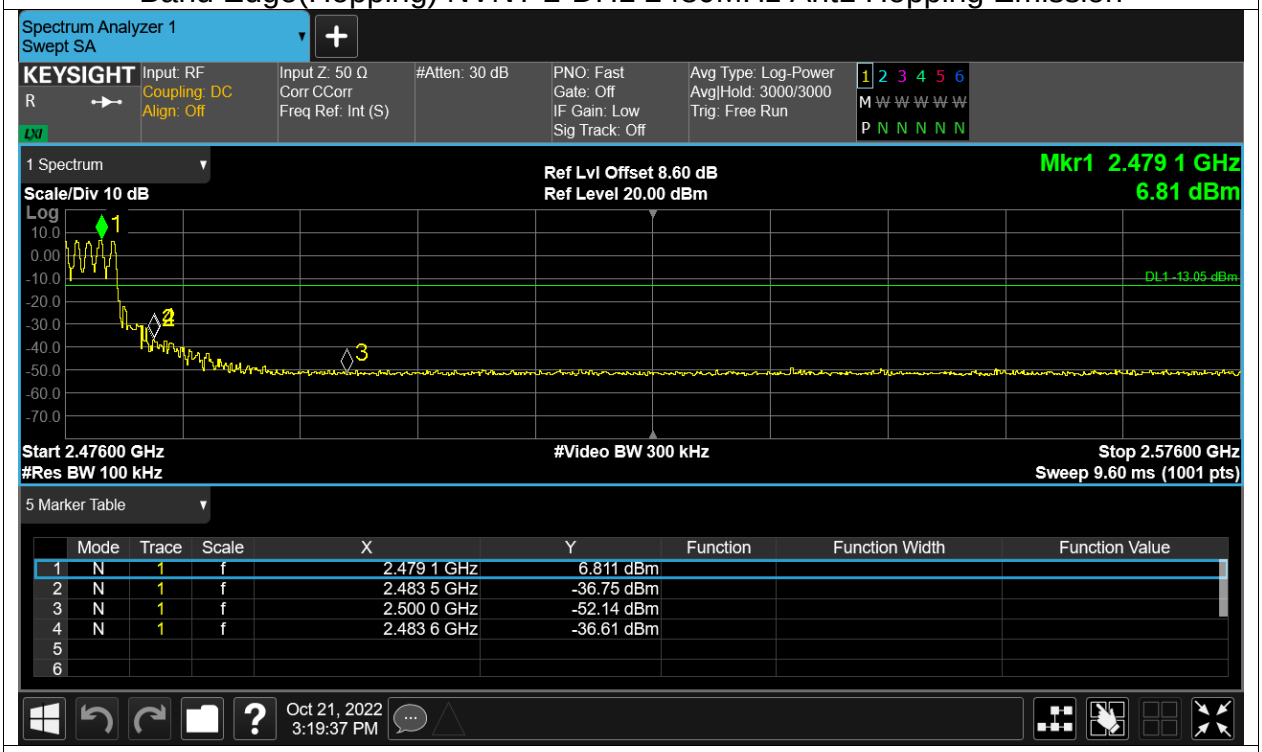
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



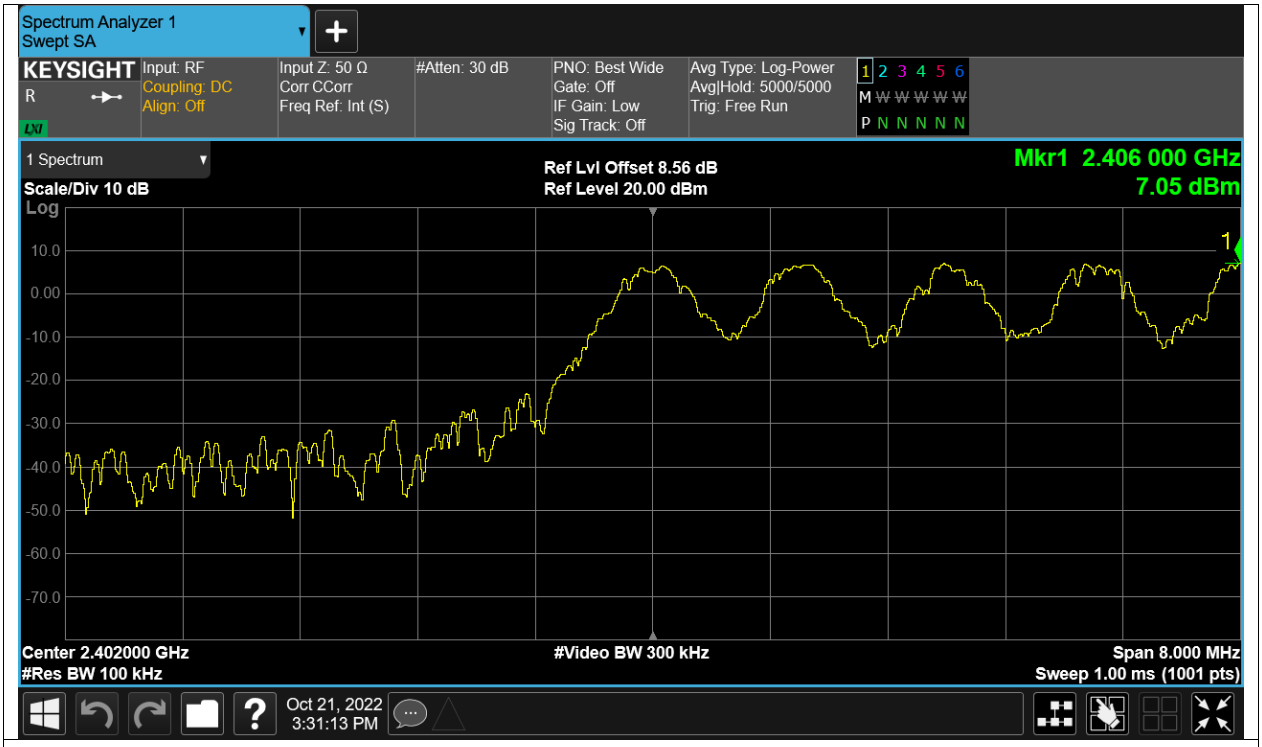
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



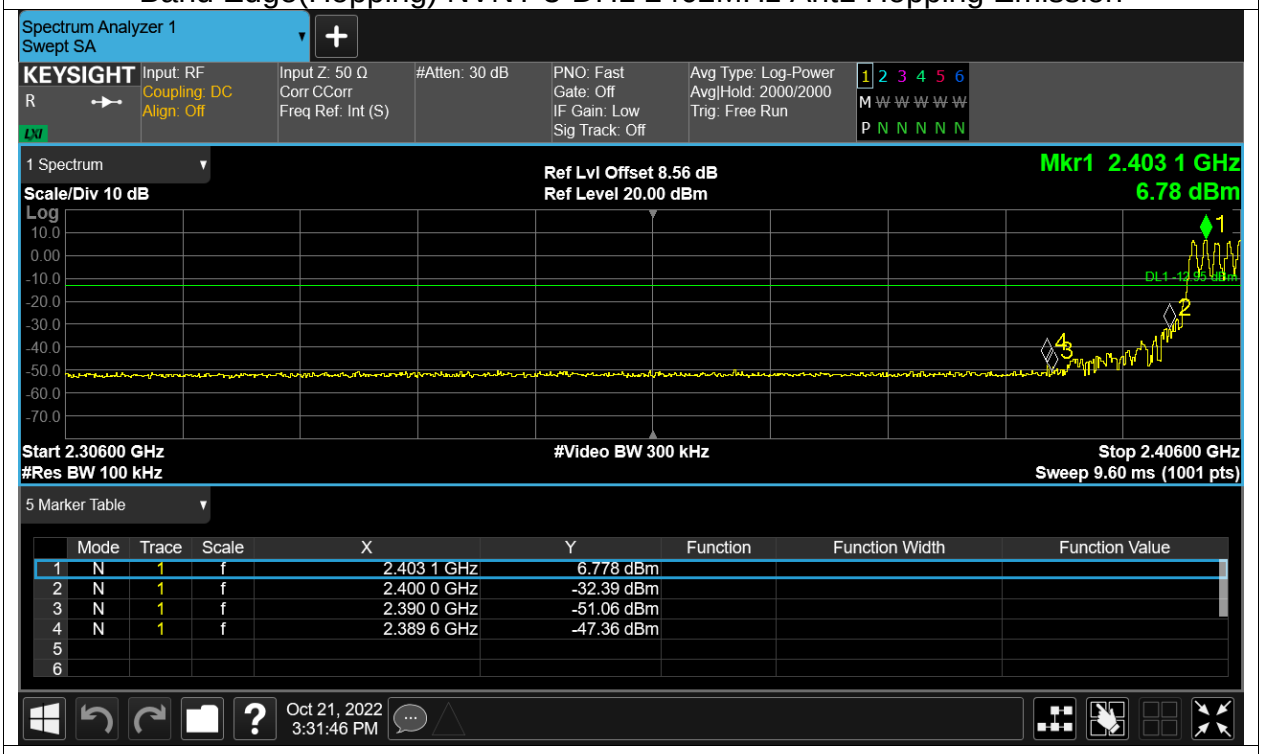
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



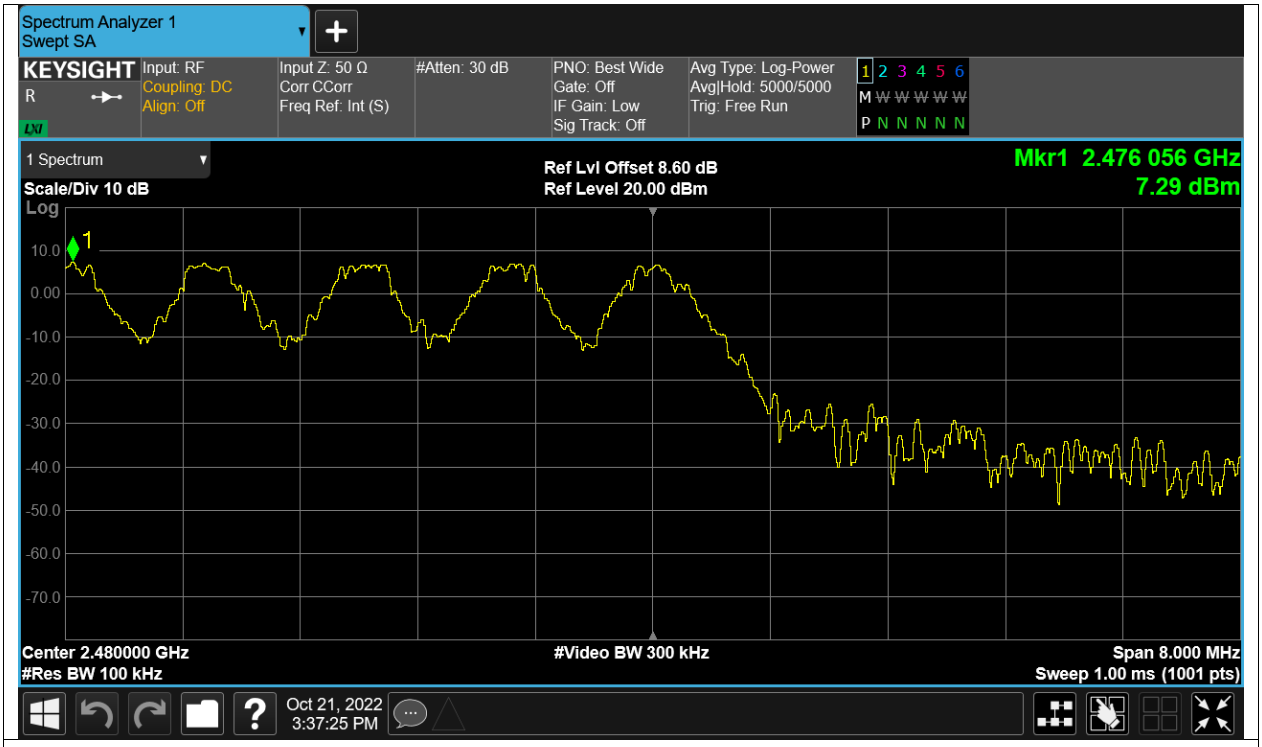
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



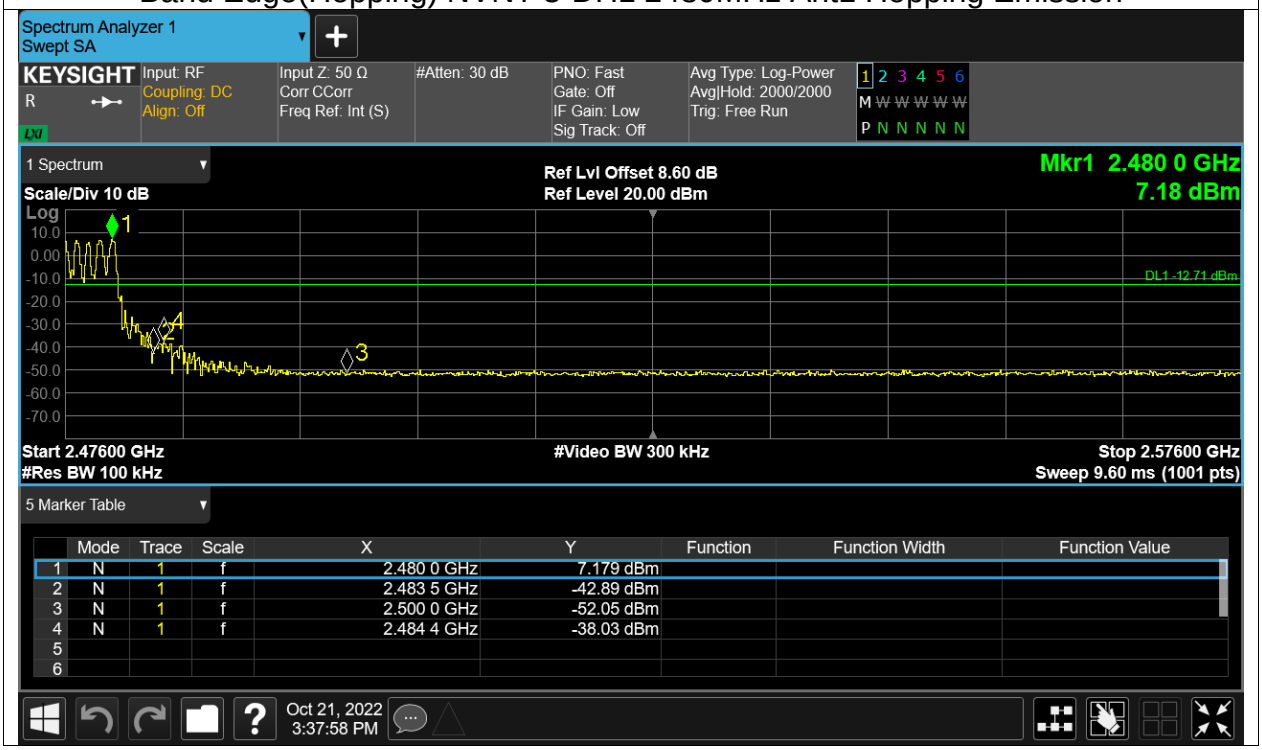
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

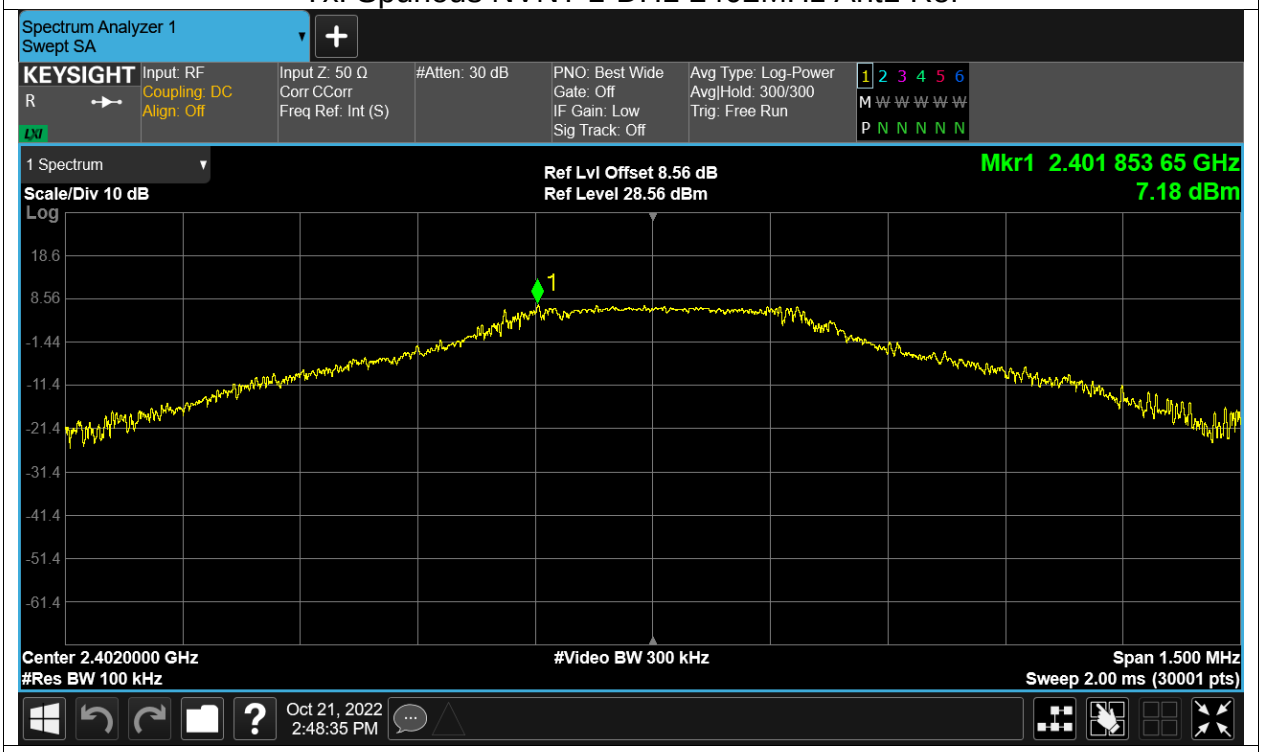


Conducted RF Spurious Emission

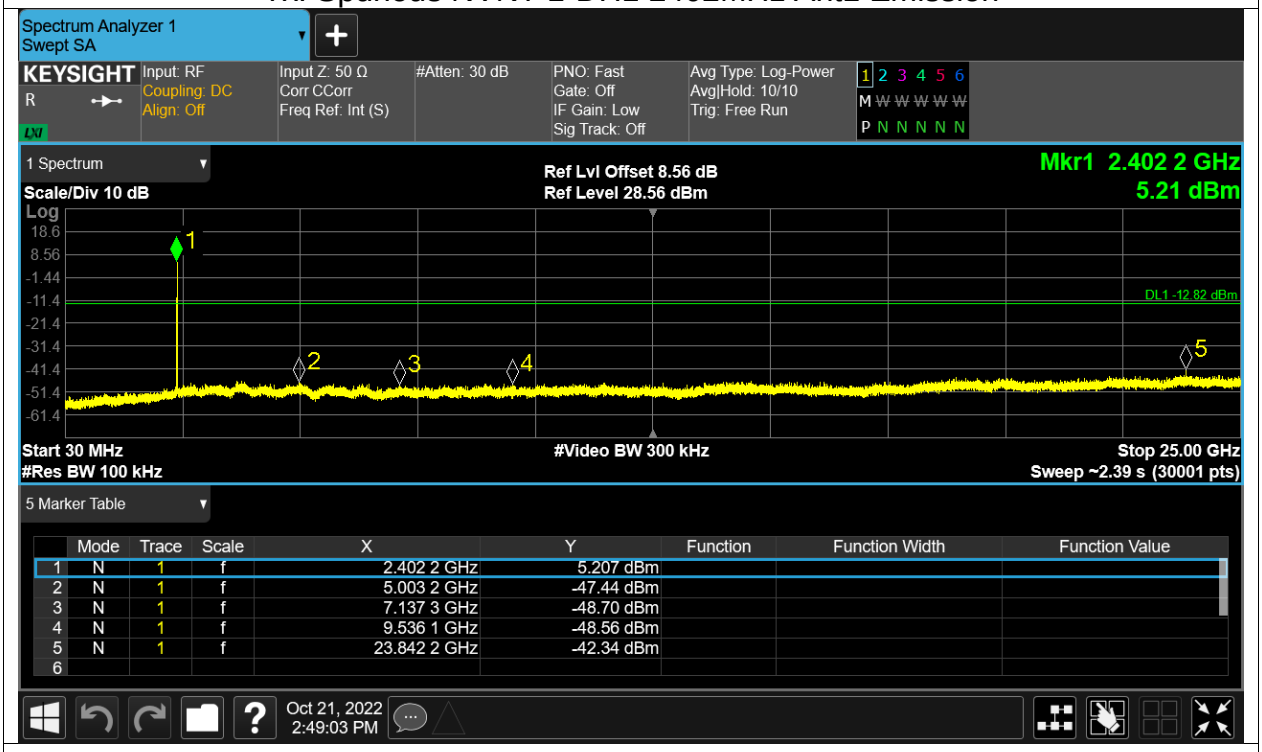
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-49.52	-20	Pass
NVNT	1-DH1	2441	Ant1	-51.36	-20	Pass
NVNT	1-DH1	2480	Ant1	-58.91	-20	Pass
NVNT	2-DH1	2402	Ant1	-49.47	-20	Pass
NVNT	2-DH1	2441	Ant1	-51.81	-20	Pass
NVNT	2-DH1	2480	Ant1	-51.23	-20	Pass
NVNT	3-DH1	2402	Ant1	-50.88	-20	Pass
NVNT	3-DH1	2441	Ant1	-51.11	-20	Pass
NVNT	3-DH1	2480	Ant1	-51.19	-20	Pass

Test Graphs

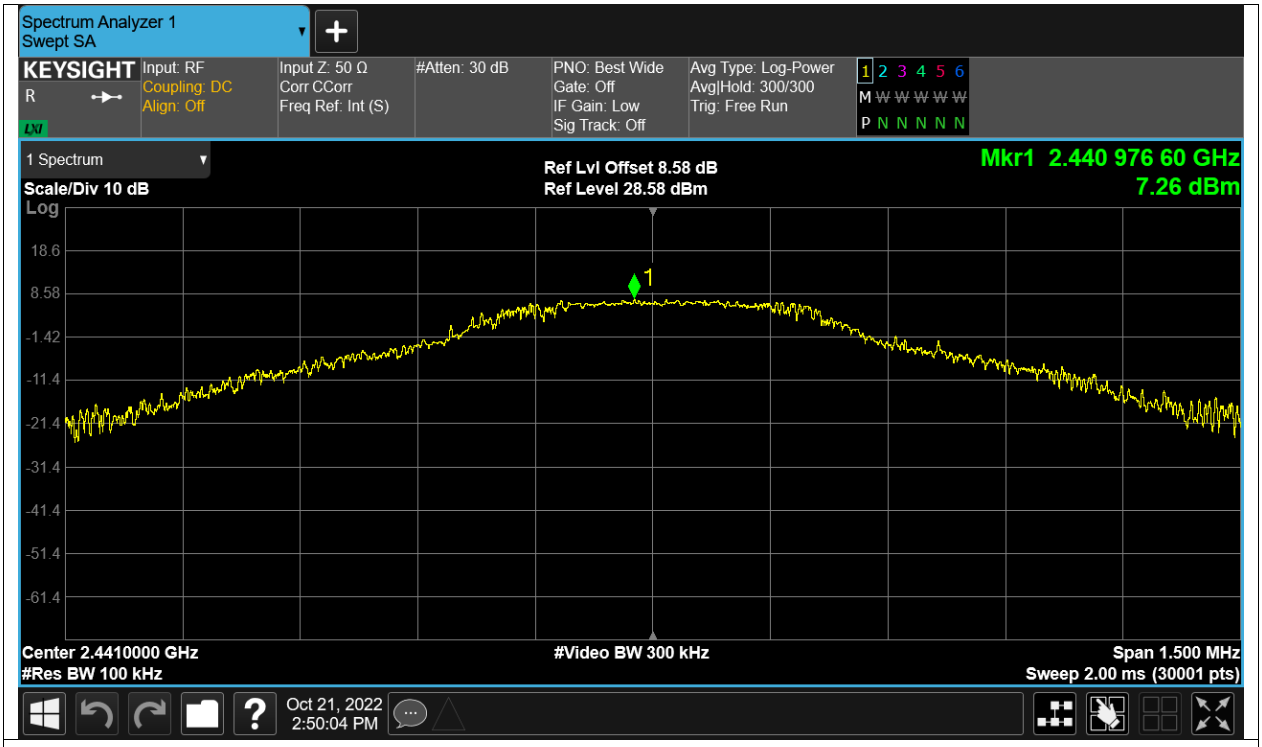
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



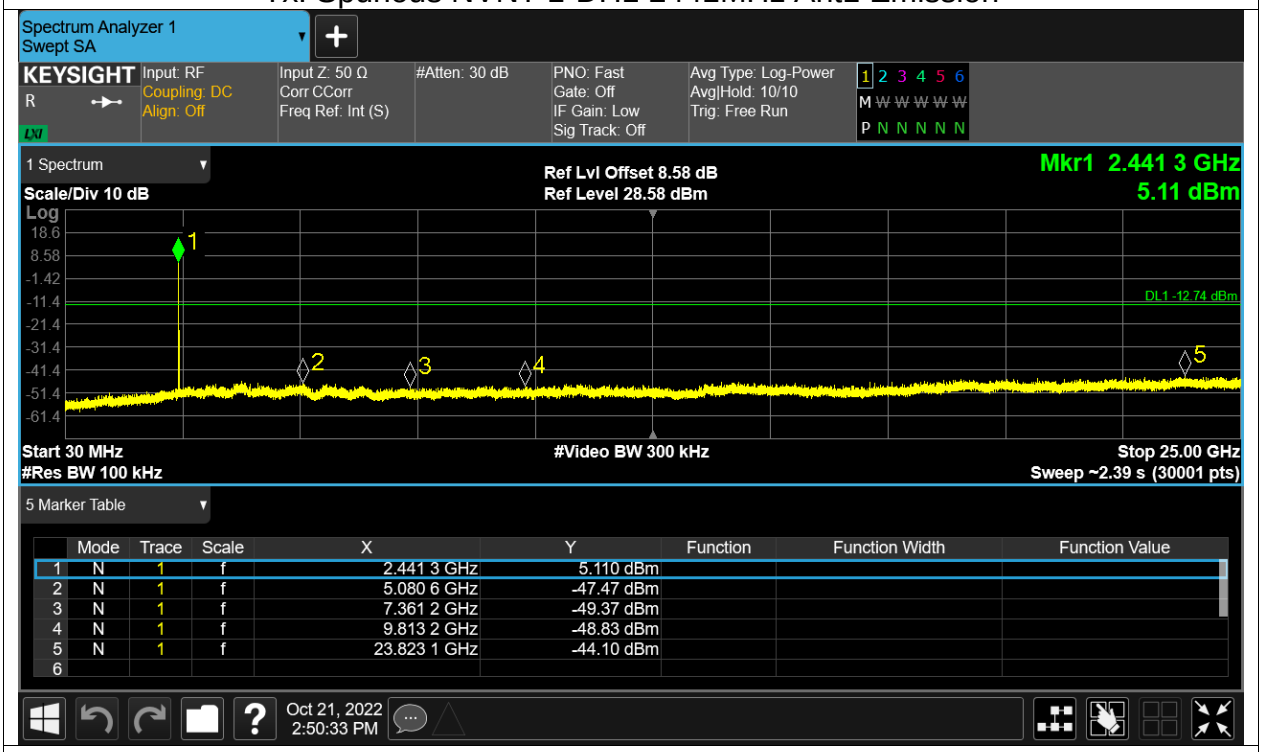
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



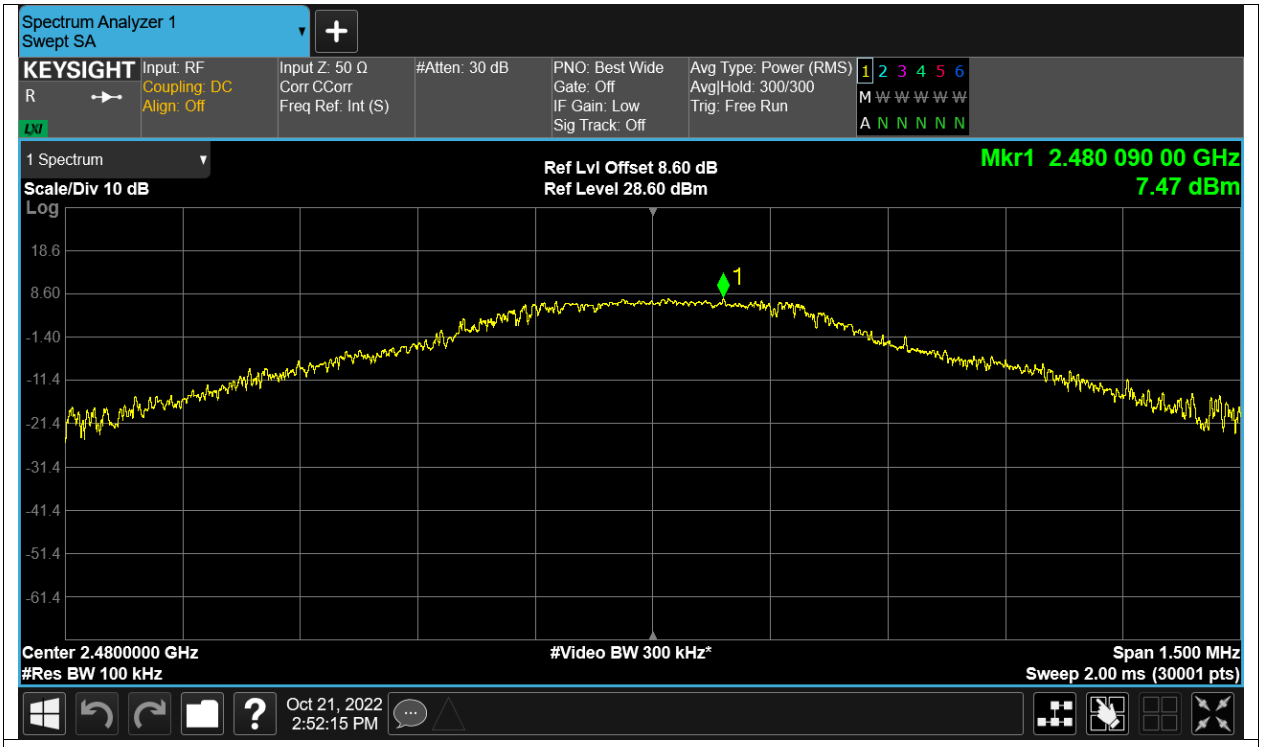
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



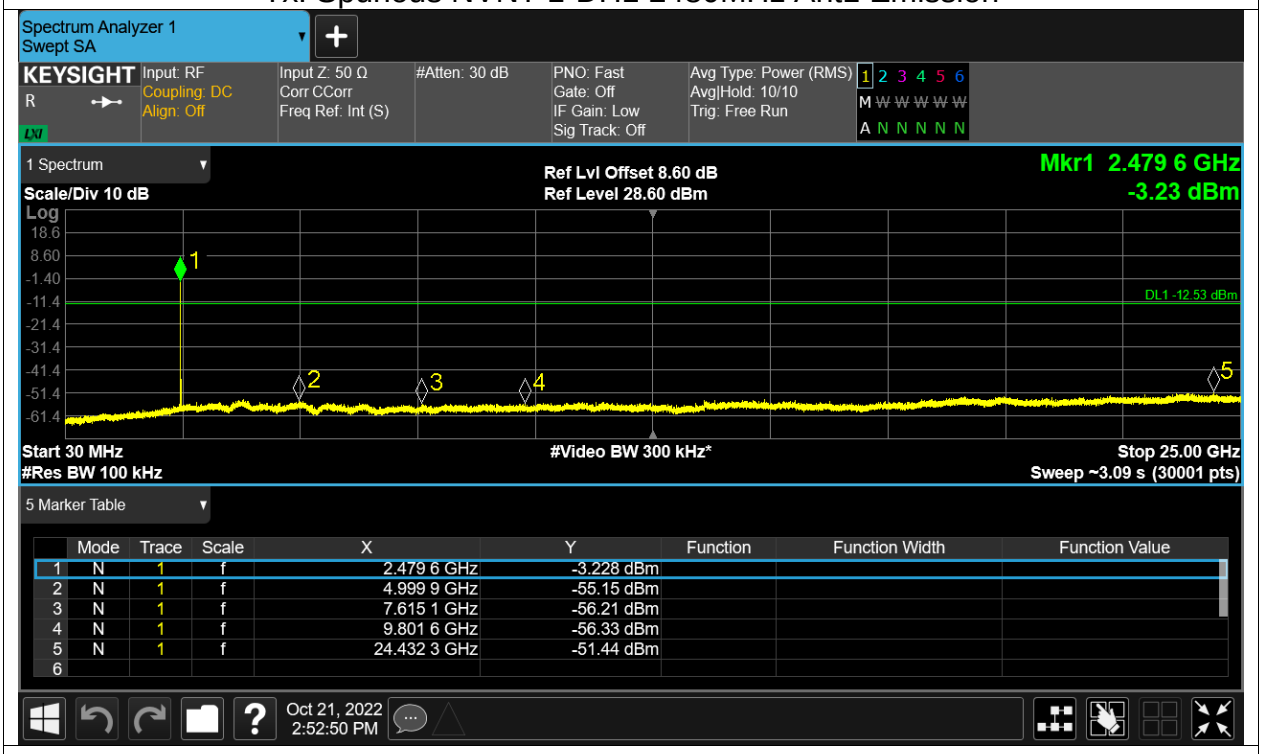
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



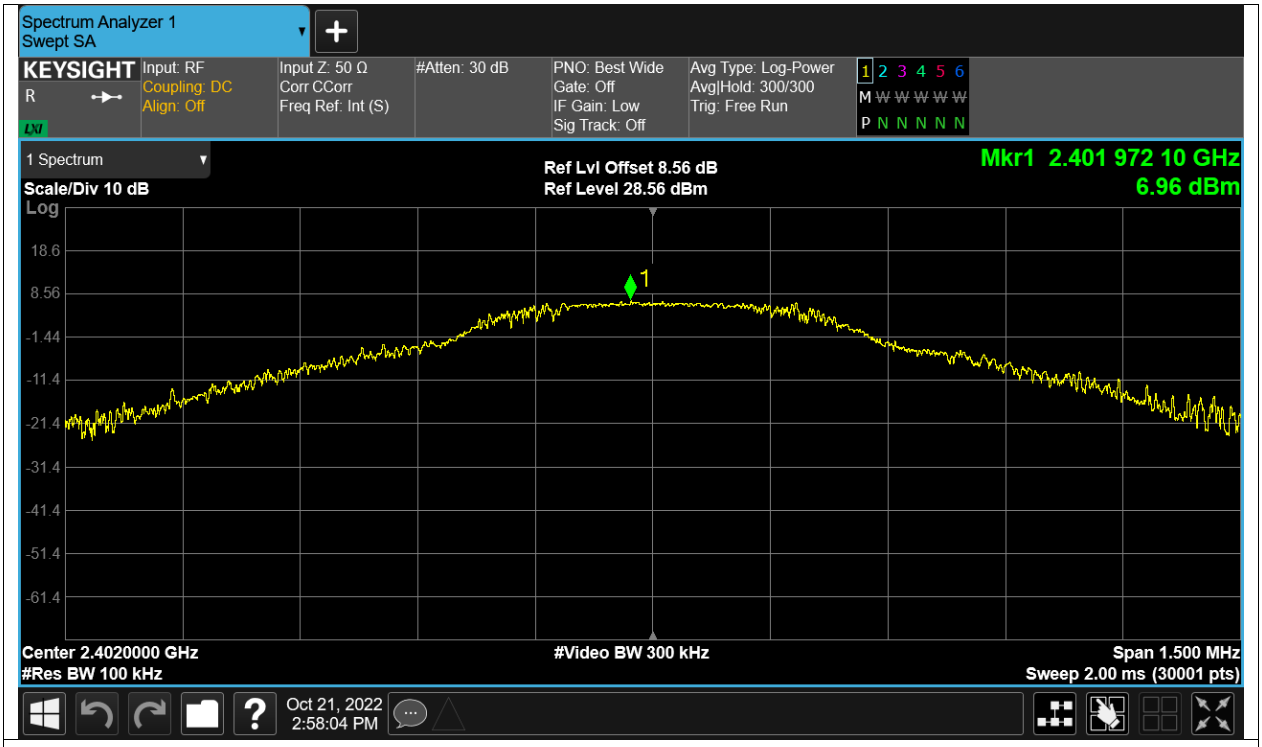
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



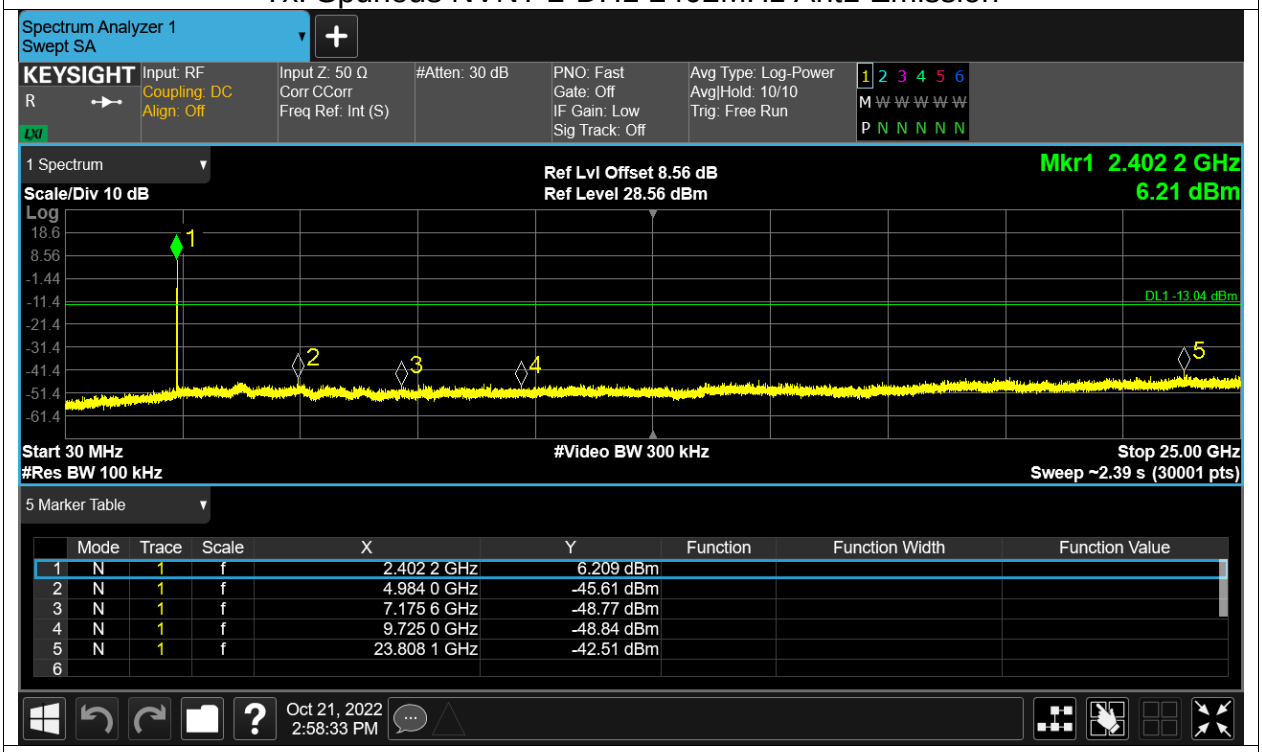
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



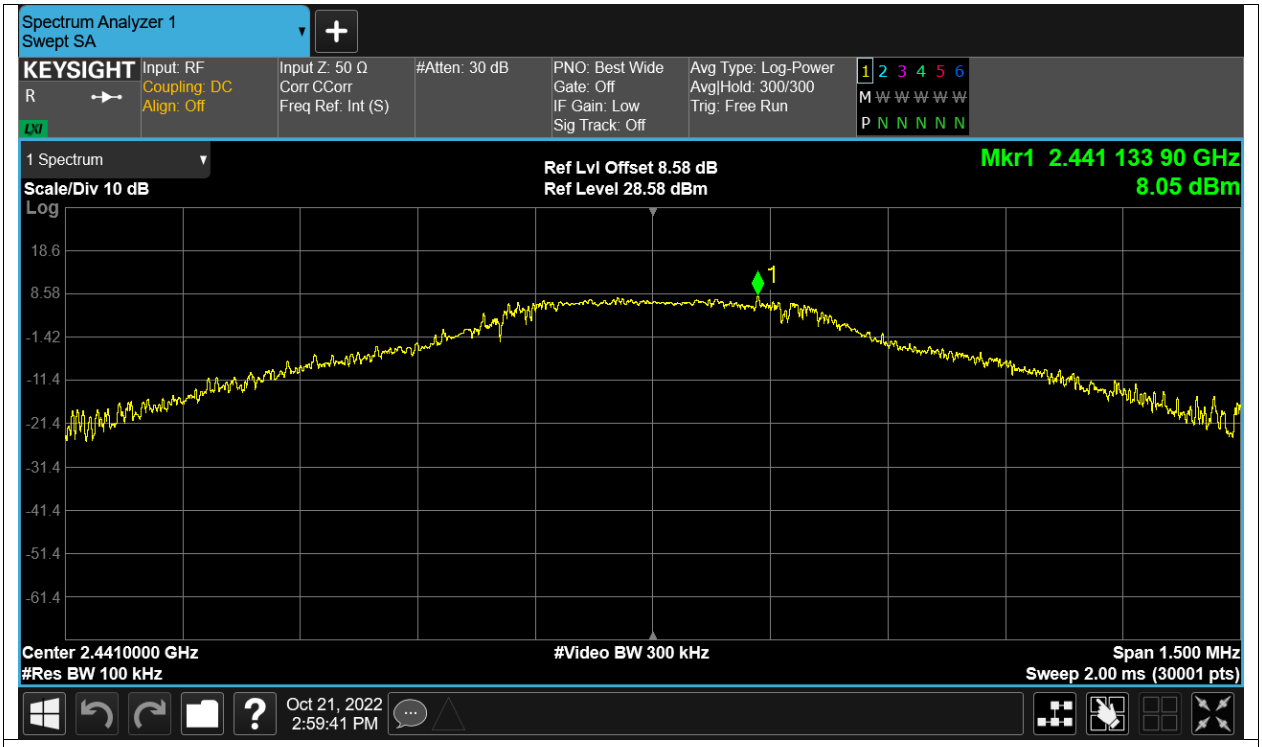
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



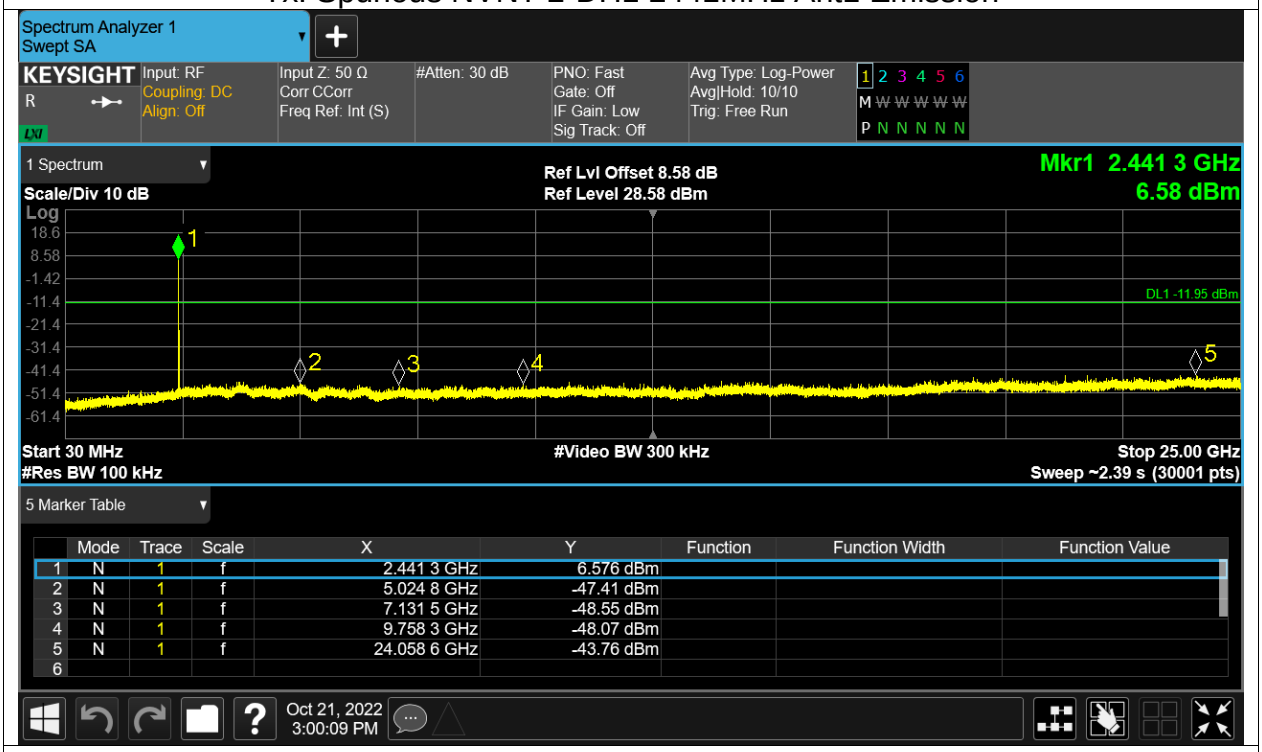
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



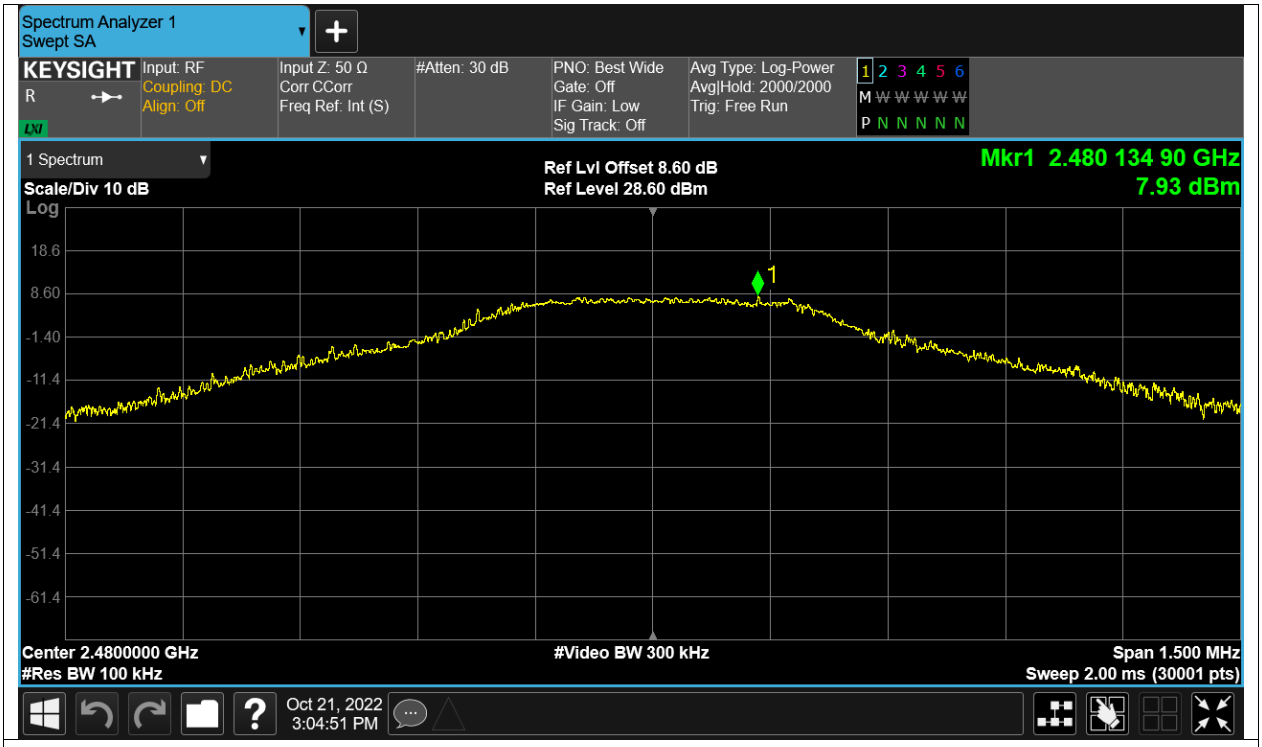
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



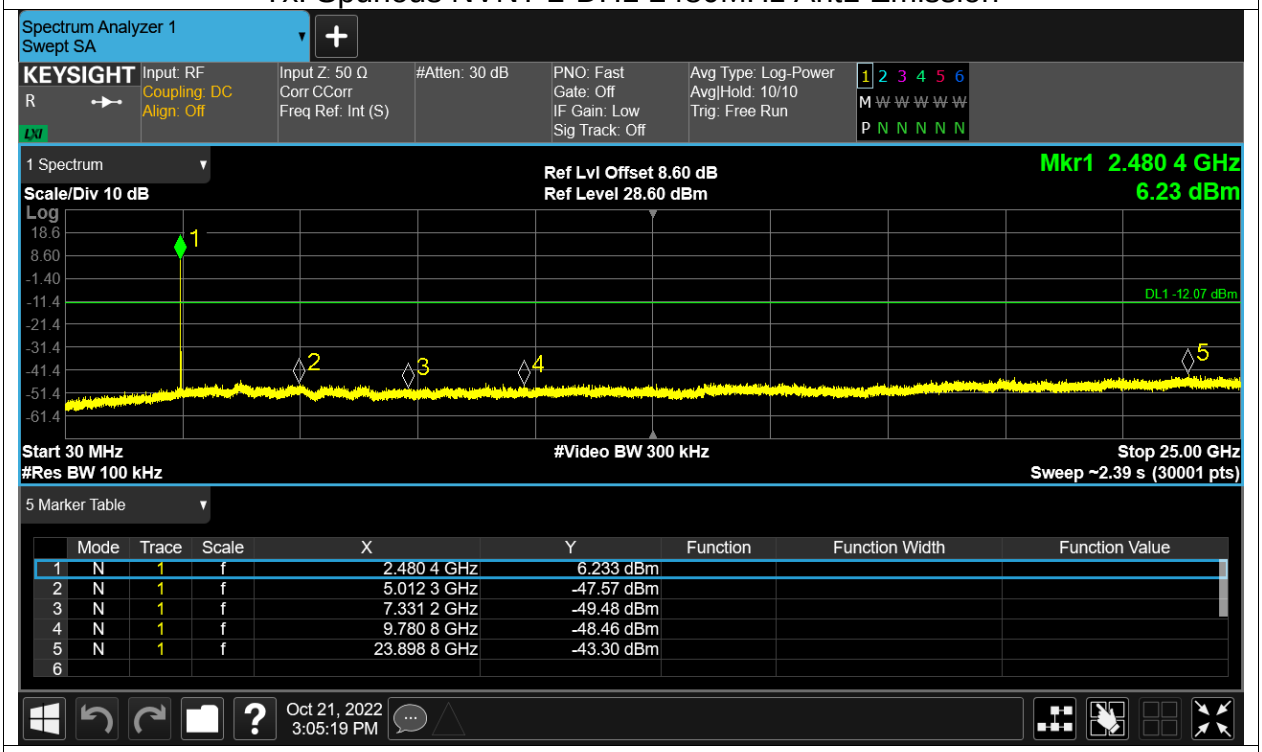
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



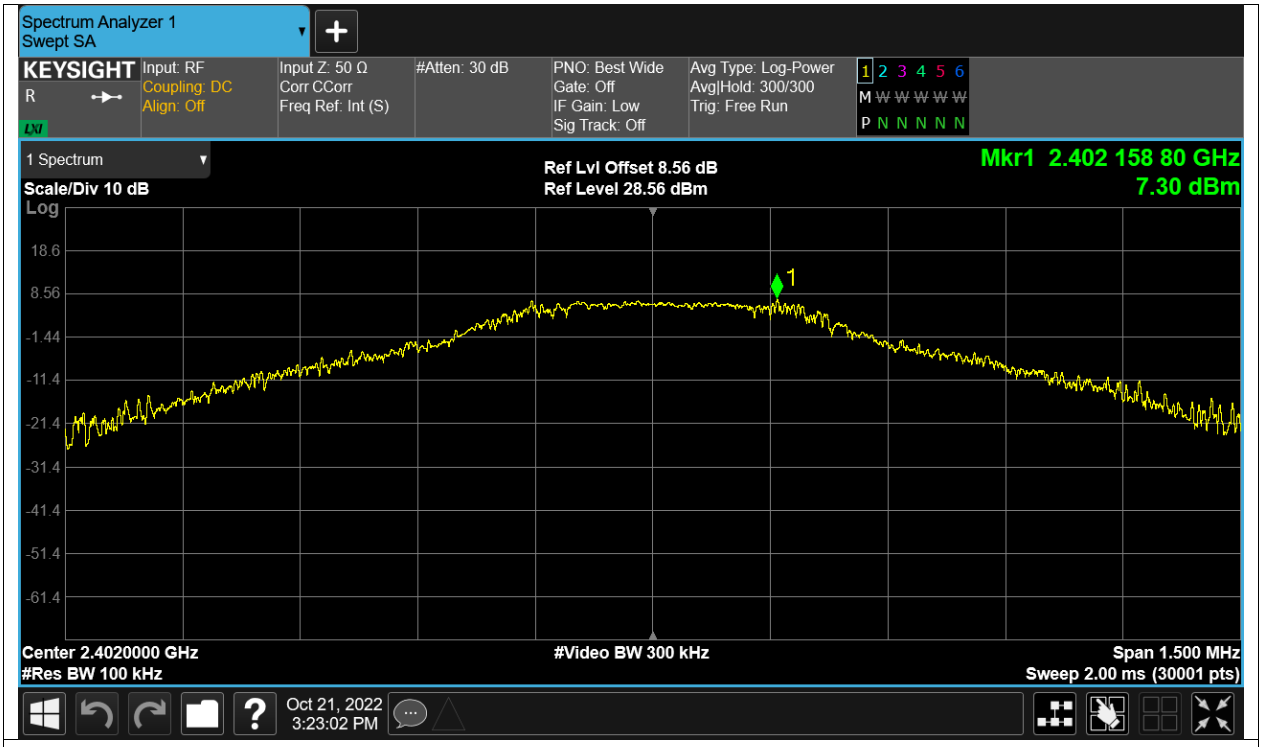
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



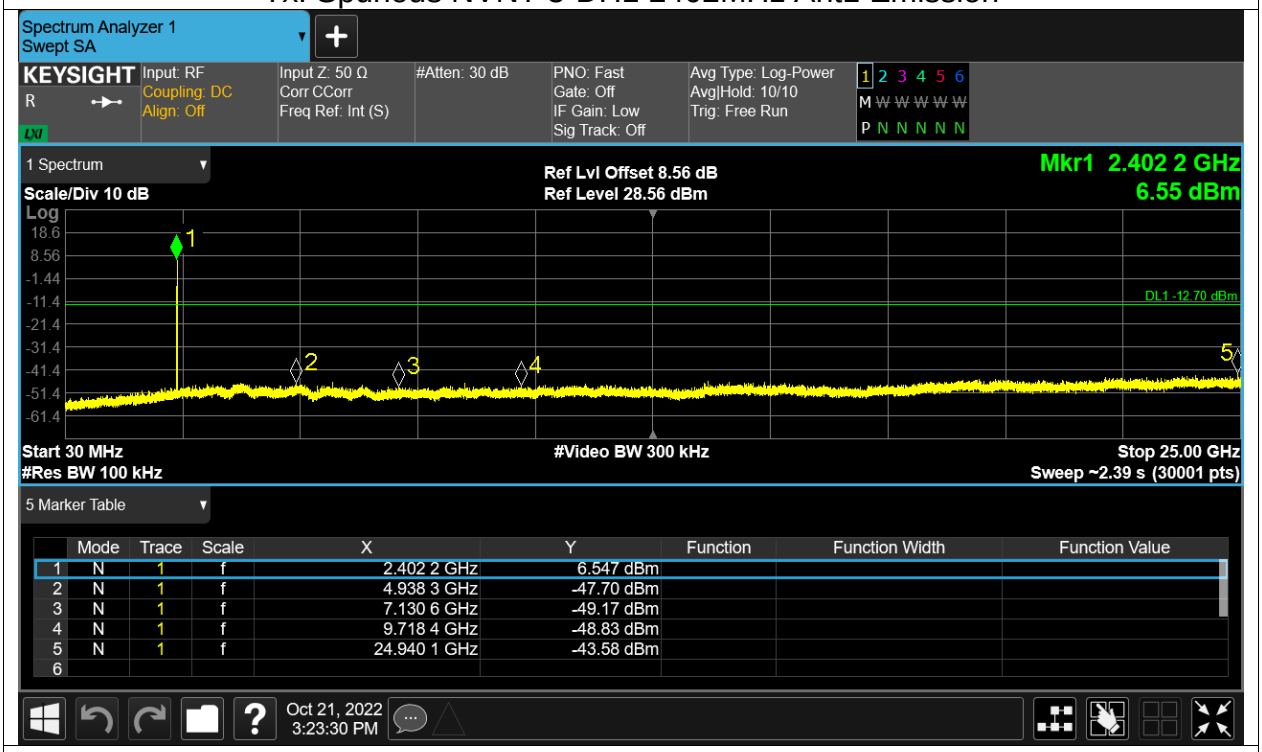
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



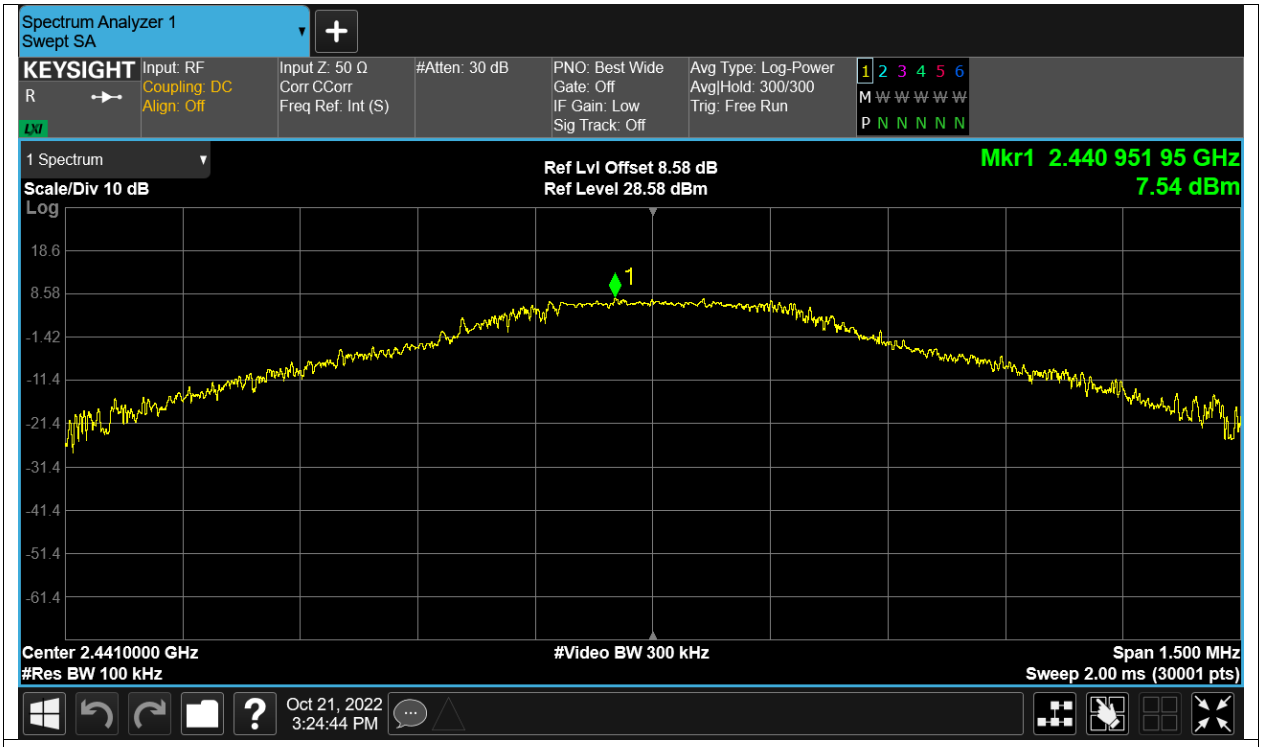
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



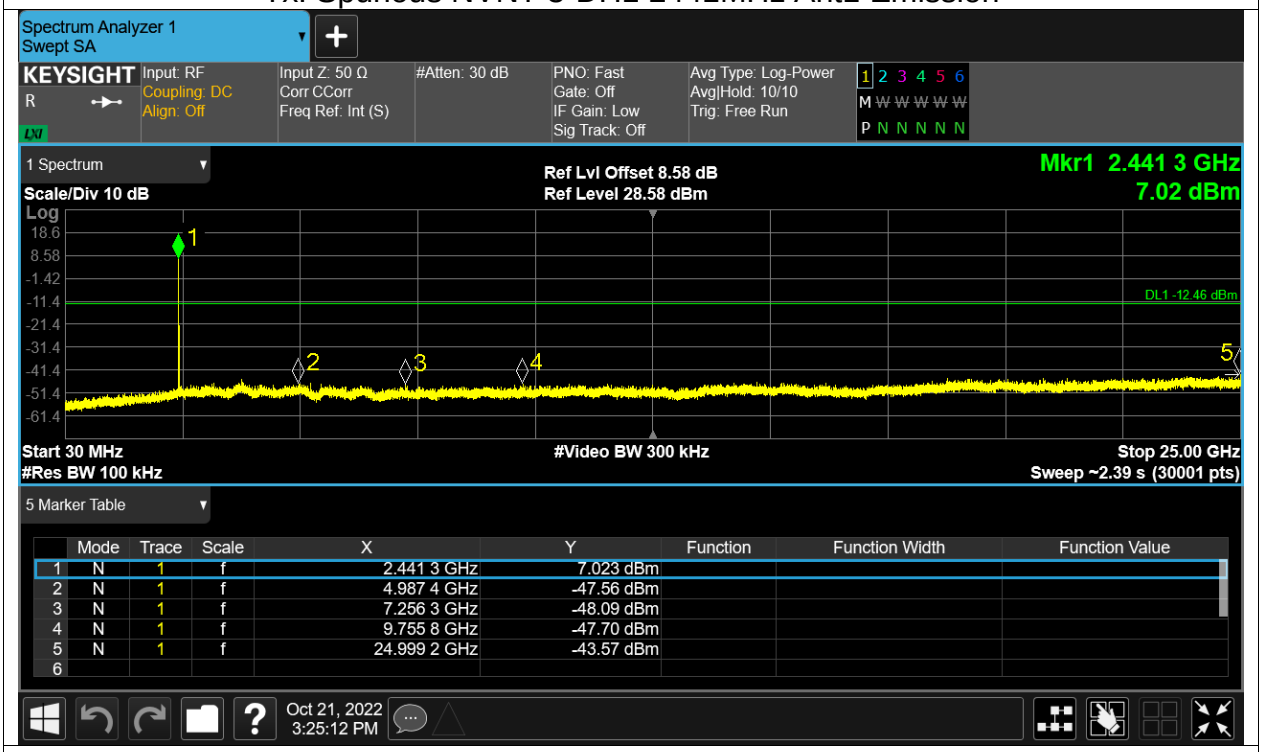
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



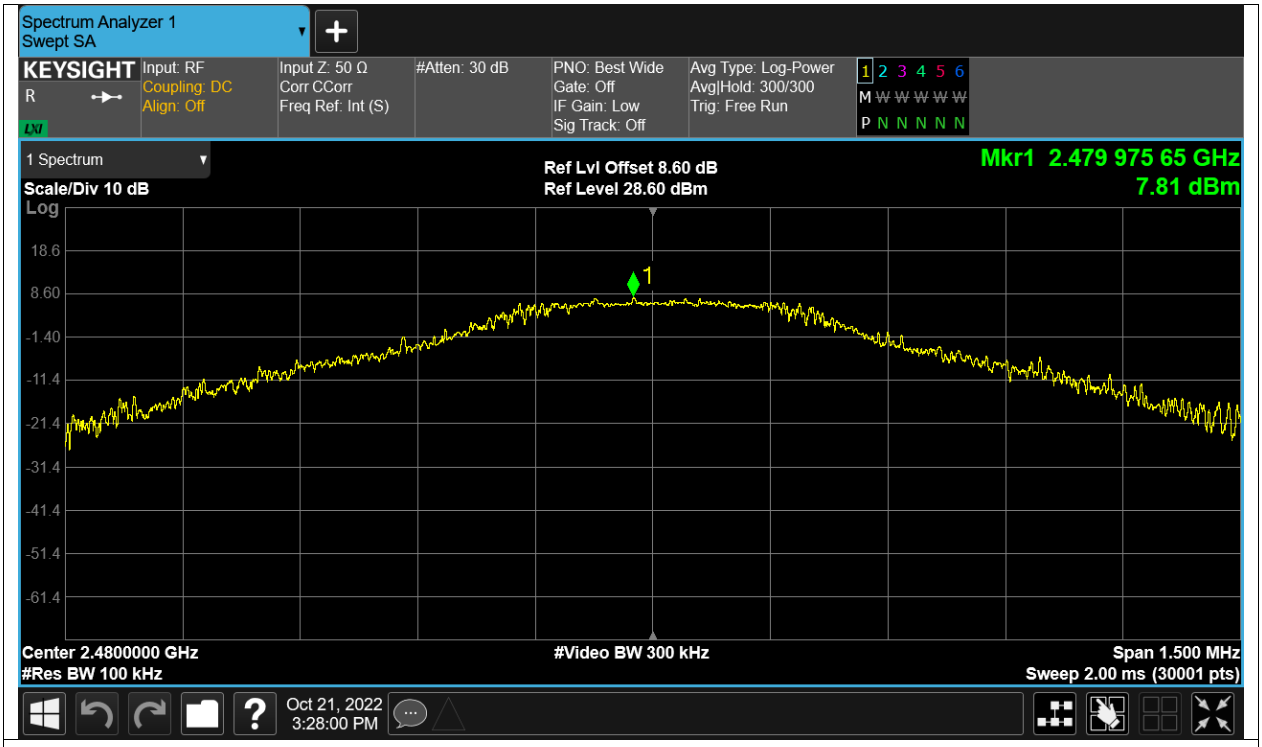
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



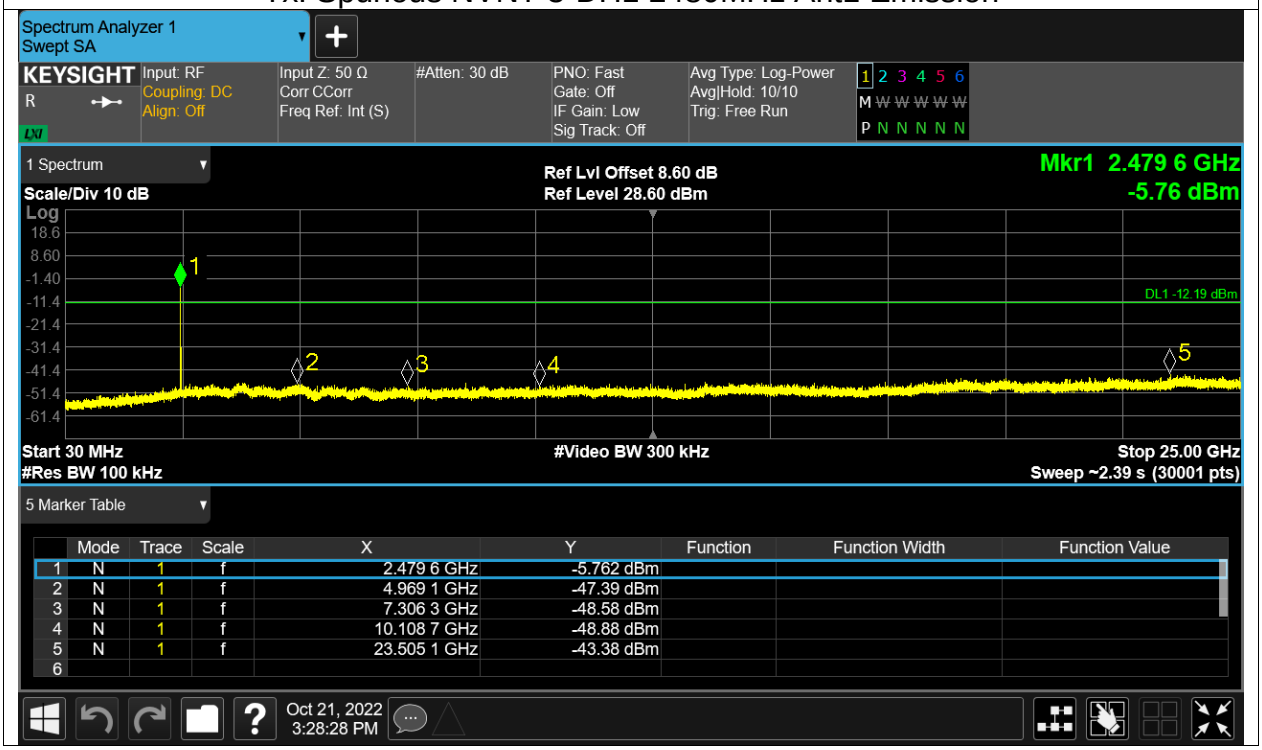
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

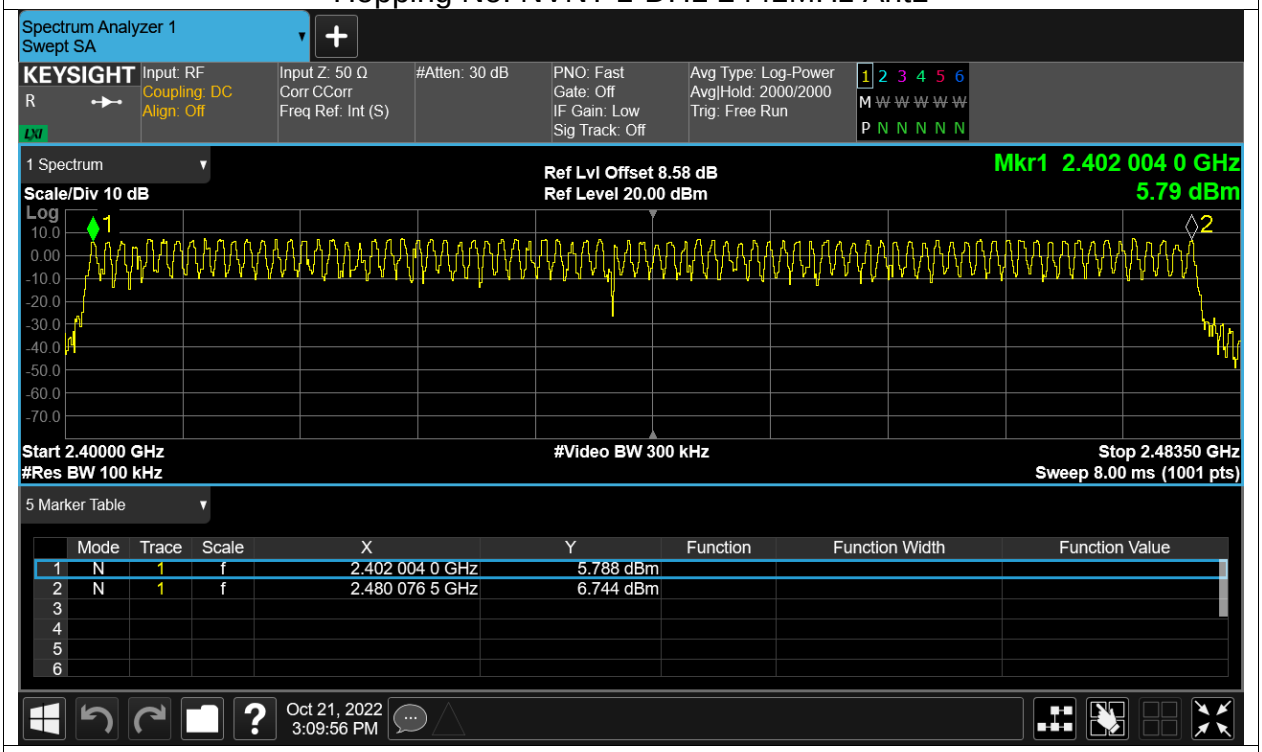


Number of Hopping Channel

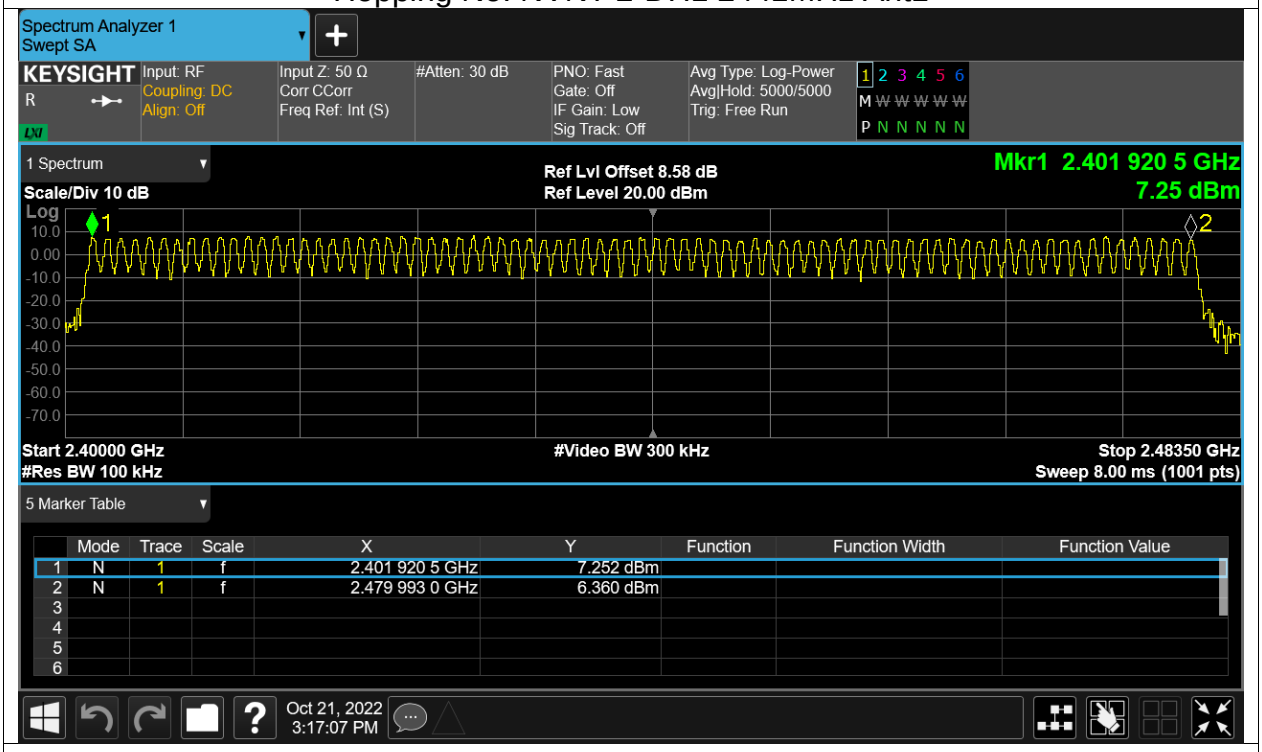
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

Test Graphs

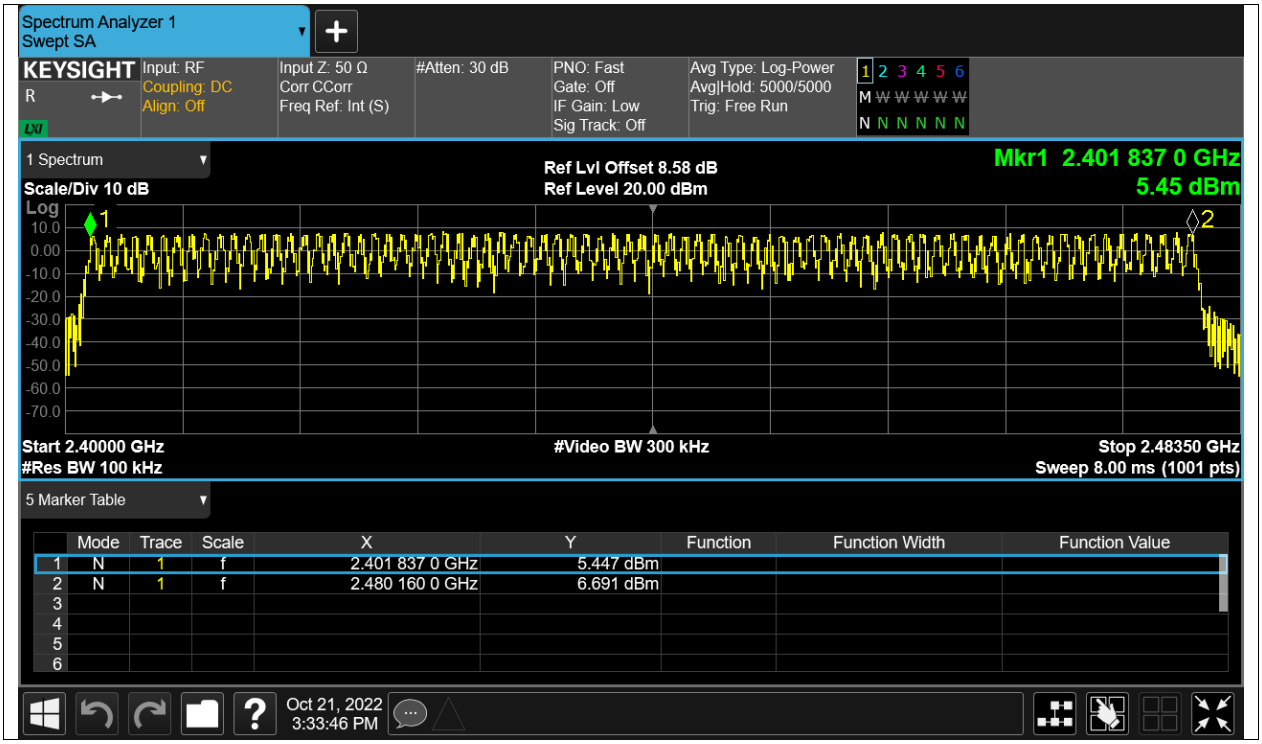
Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



Hopping No. NVNT 3-DH1 2441MHz Ant1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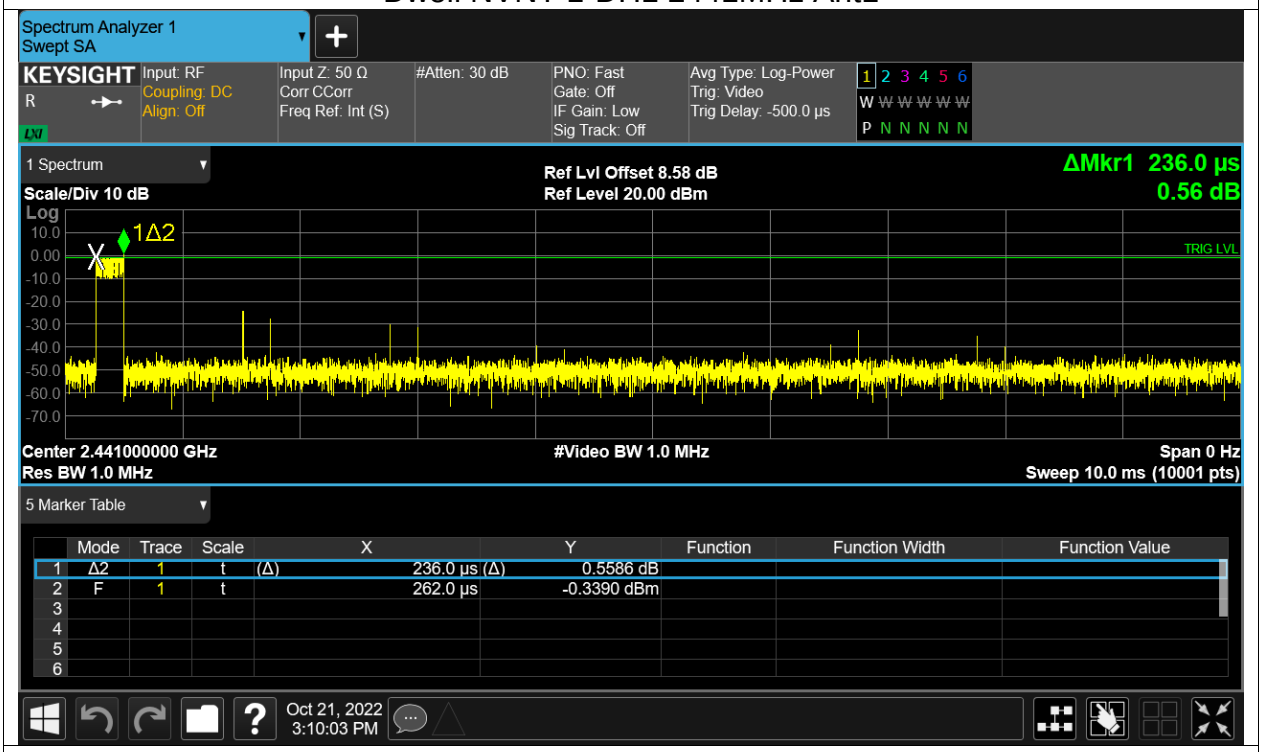
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Off
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 5000/5000
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 8.58 dB
Ref Level 20.00 dBm
Mkr1 2.401 837 0 GHz
5.45 dBm
Start 2.40000 GHz
#Res BW 100 kHz
#Video BW 300 kHz
Stop 2.48350 GHz
Sweep 8.00 ms (1001 pts)
5 Marker Table
Mode Trace Scale X Y Function Function Width Function Value
1 N 1 f 2.401 837 0 GHz 5.447 dBm
2 N 1 f 2.480 160 0 GHz 6.691 dBm
Oct 21, 2022
3:33:46 PM

Dwell Time

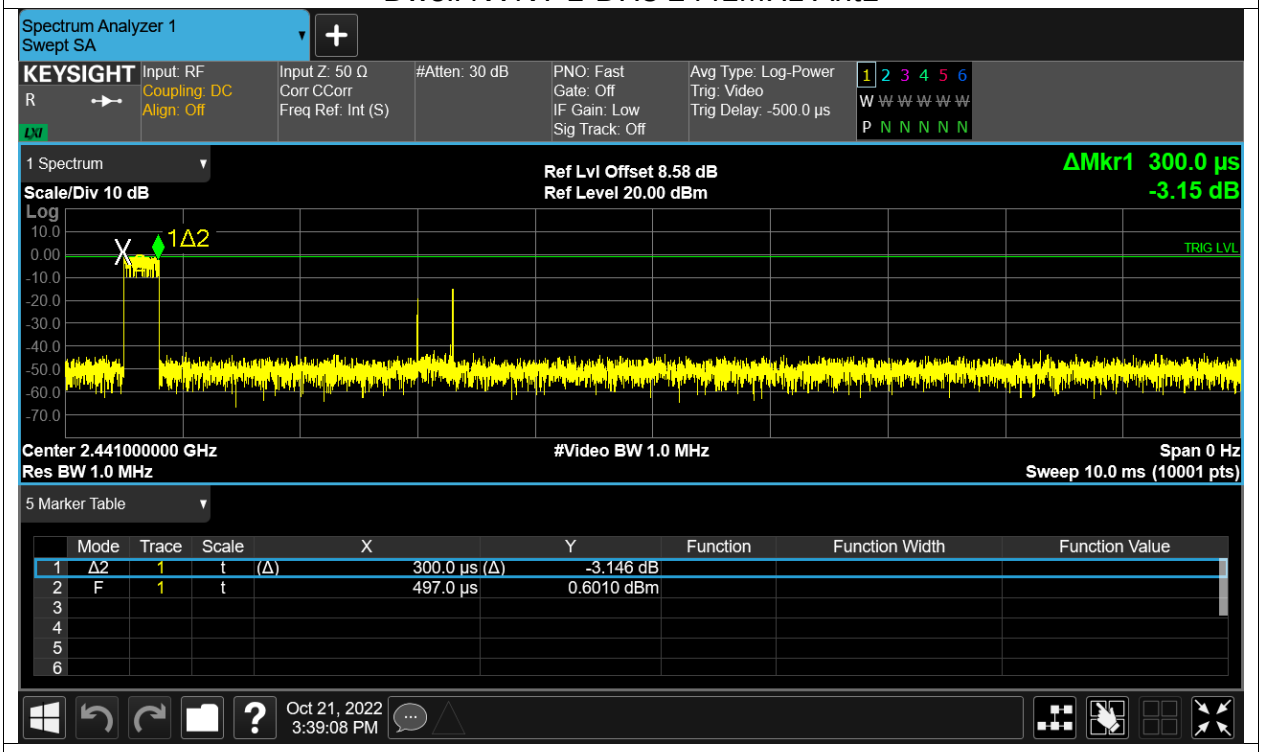
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.236	75.52	31600	400	Pass
NVNT	1-DH3	2441	Ant1	0.3	48	31600	400	Pass
NVNT	1-DH5	2441	Ant1	0.332	35.413	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.236	75.52	31600	400	Pass
NVNT	2-DH3	2441	Ant1	0.359	57.44	31600	400	Pass
NVNT	2-DH5	2441	Ant1	0.405	43.2	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.236	75.52	31600	400	Pass
NVNT	3-DH3	2441	Ant1	0.3	48	31600	400	Pass
NVNT	3-DH5	2441	Ant1	0.331	35.307	31600	400	Pass

Test Graphs

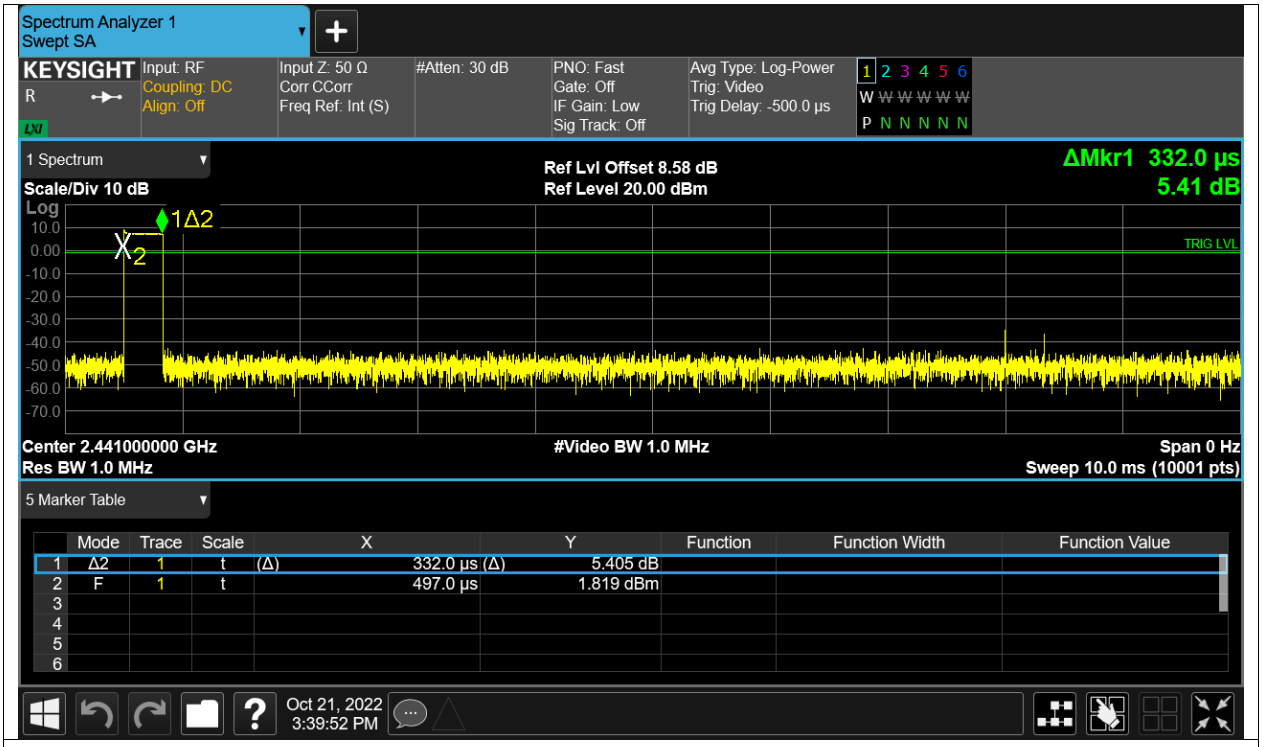
Dwell NVNT 1-DH1 2441MHz Ant1



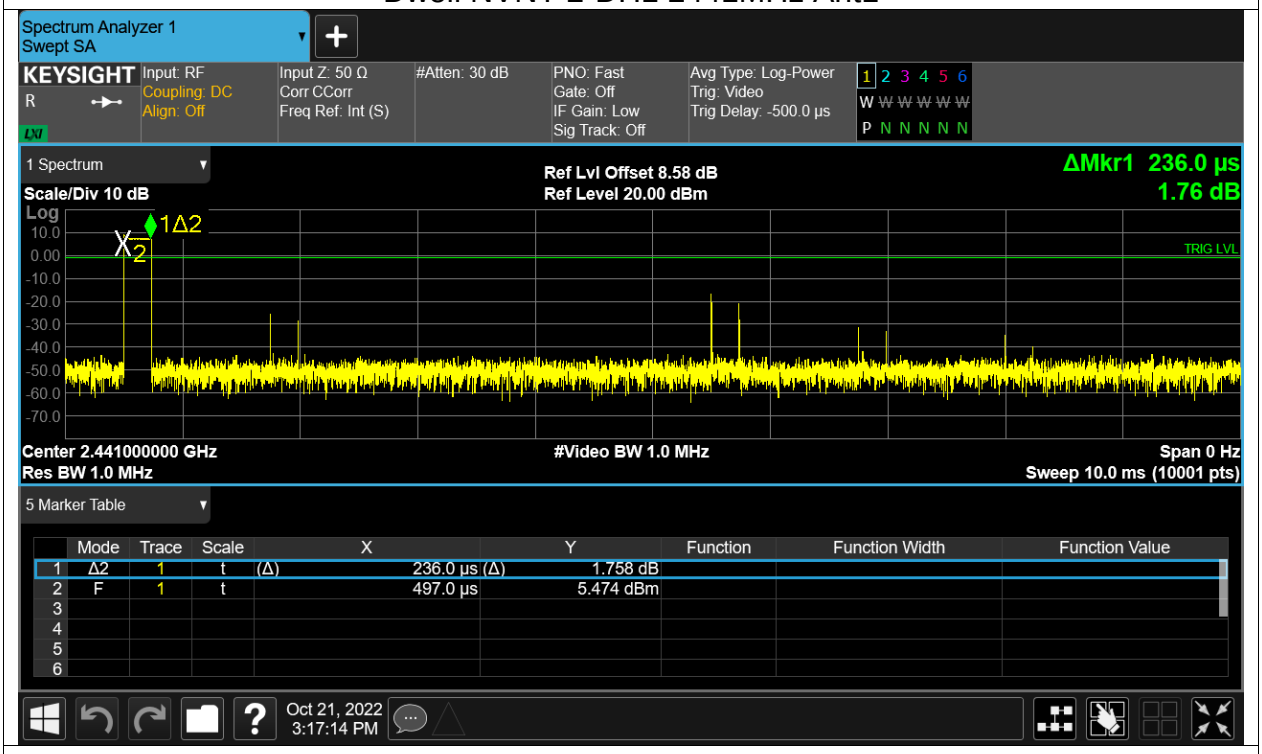
Dwell NVNT 1-DH3 2441MHz Ant1



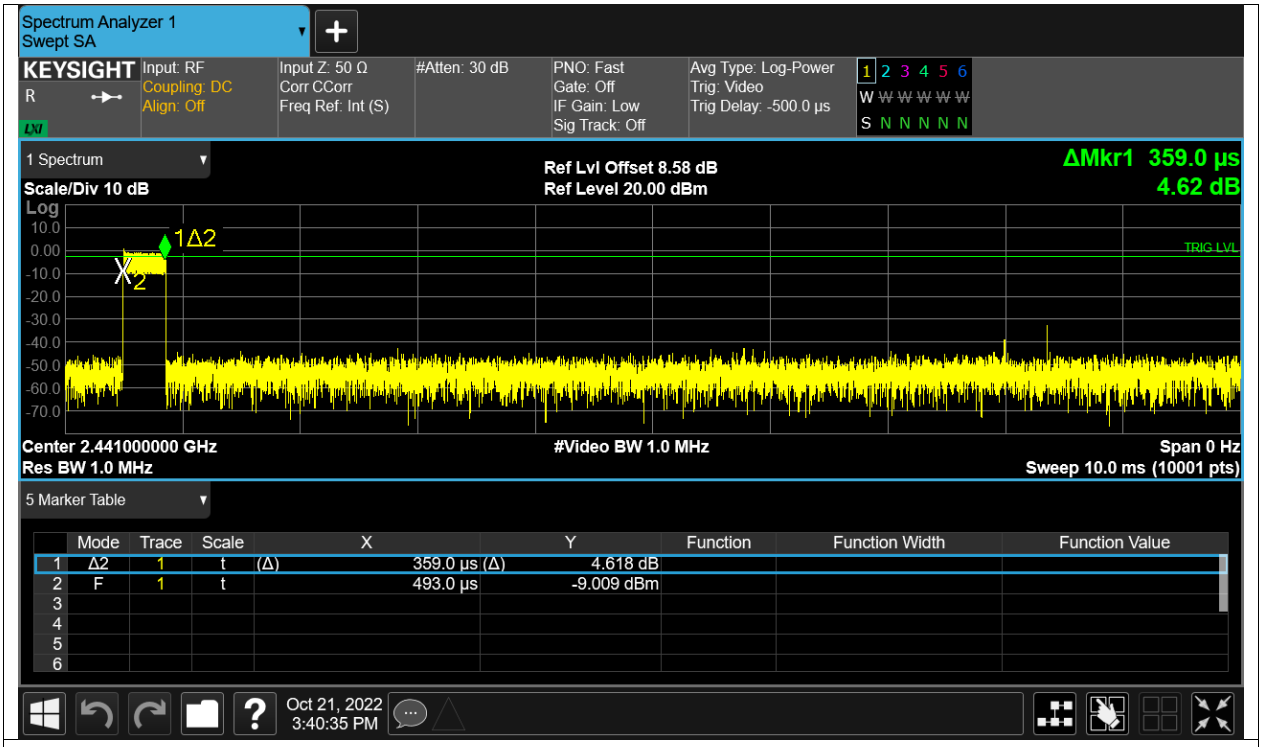
Dwell NVNT 1-DH5 2441MHz Ant1



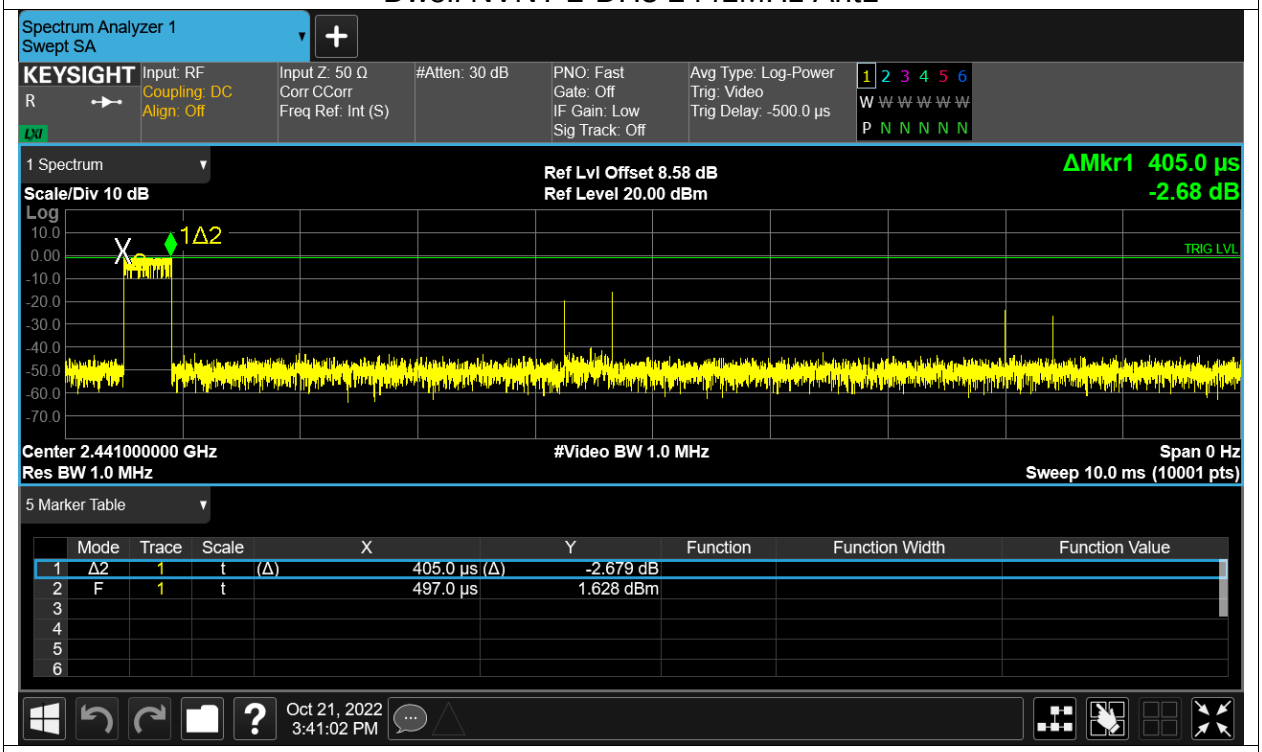
Dwell NVNT 2-DH1 2441MHz Ant1



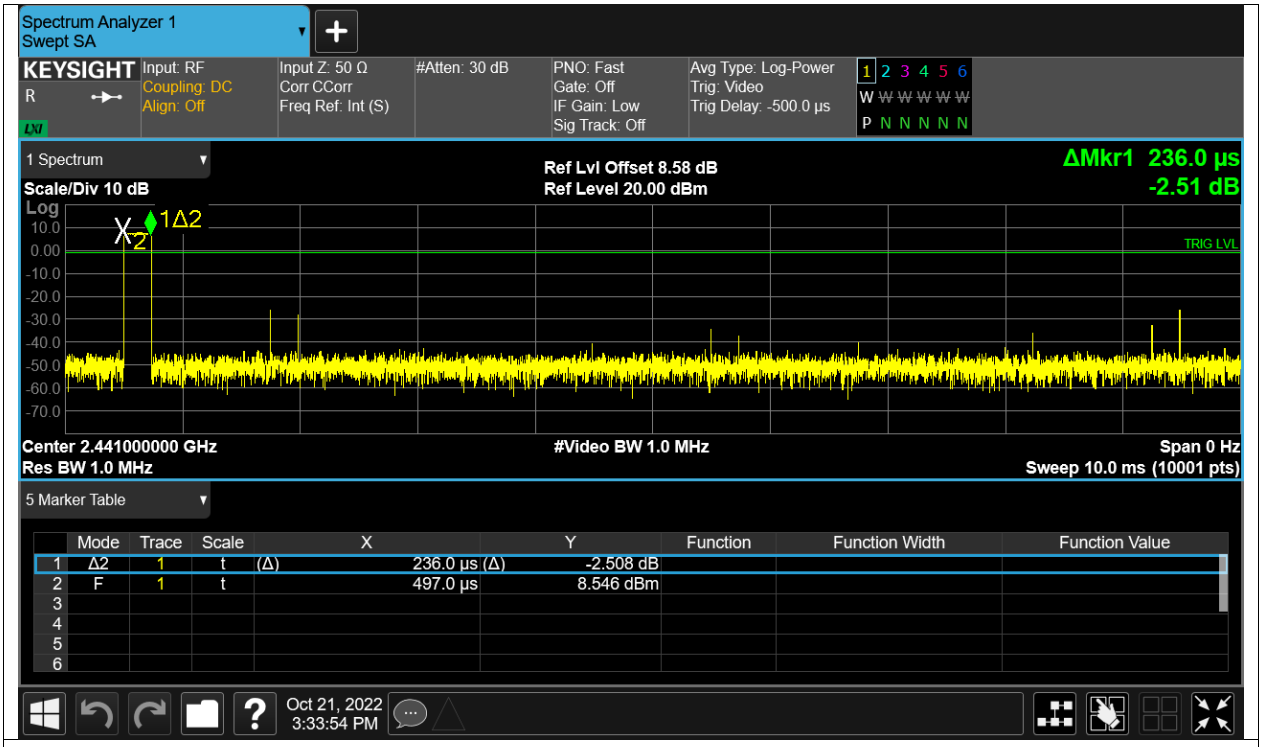
Dwell NVNT 2-DH3 2441MHz Ant1



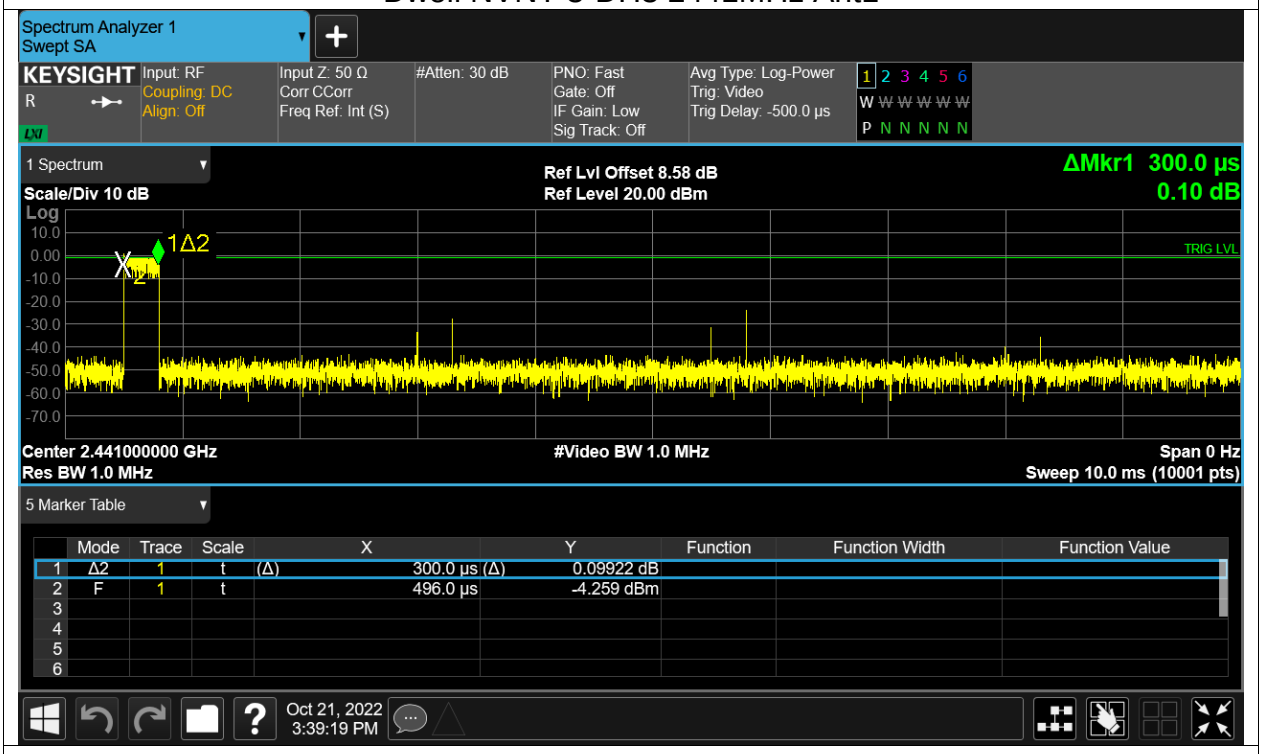
Dwell NVNT 2-DH5 2441MHz Ant1



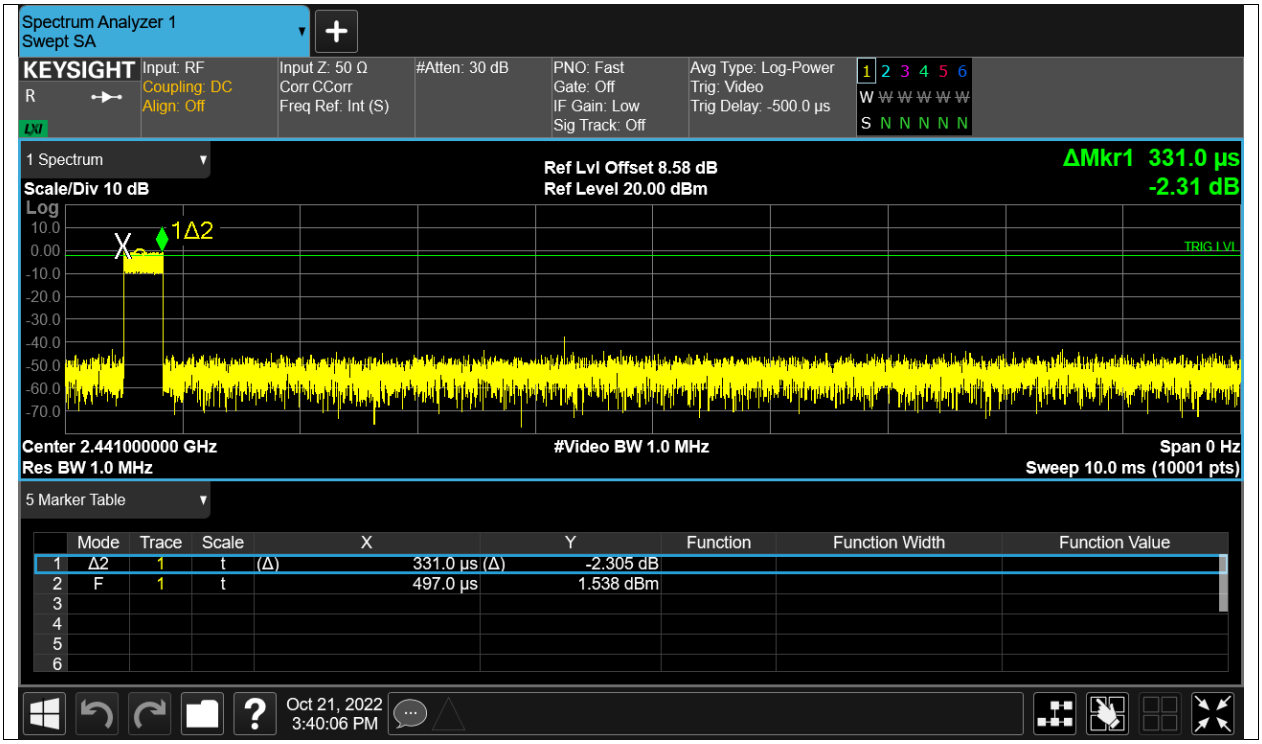
Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1



Dwell NVNT 3-DH5 2441MHz Ant1



------End of report------