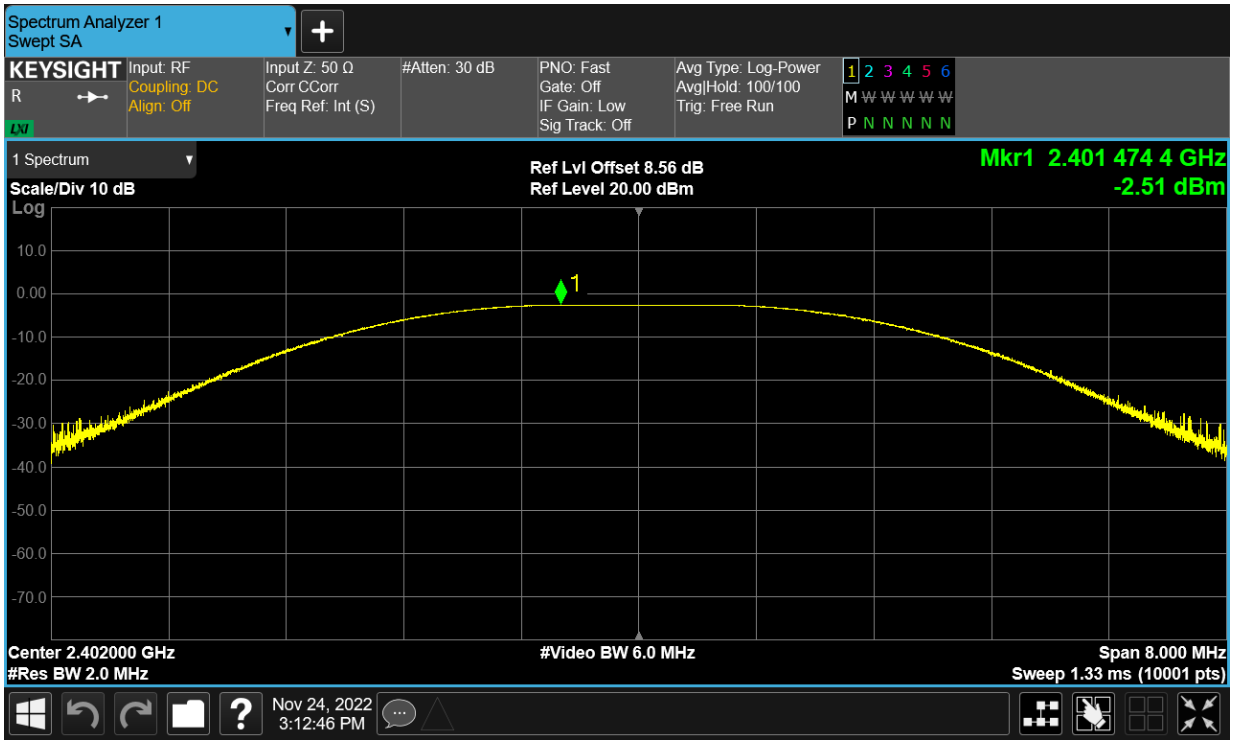
Test Data

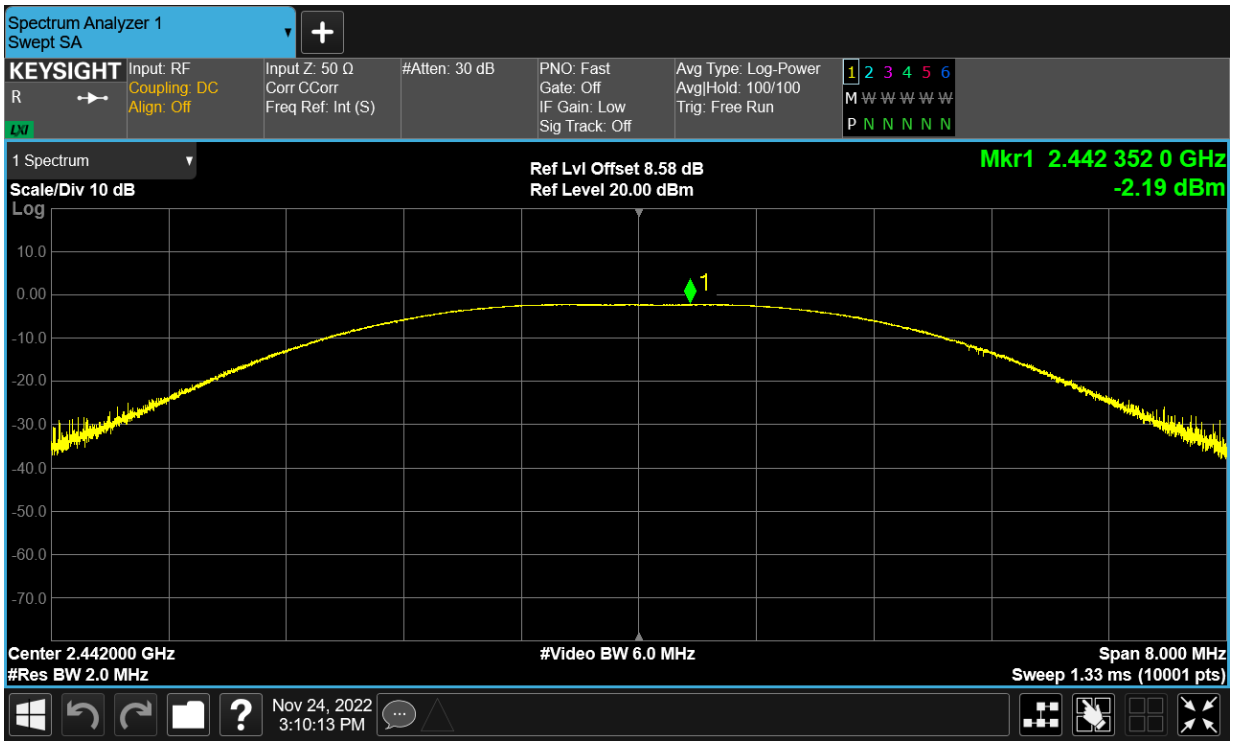
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	-2.514	30	Pass
NVNT	BLE	2442	Ant1	-2.192	30	Pass
NVNT	BLE	2480	Ant1	-2.267	30	Pass

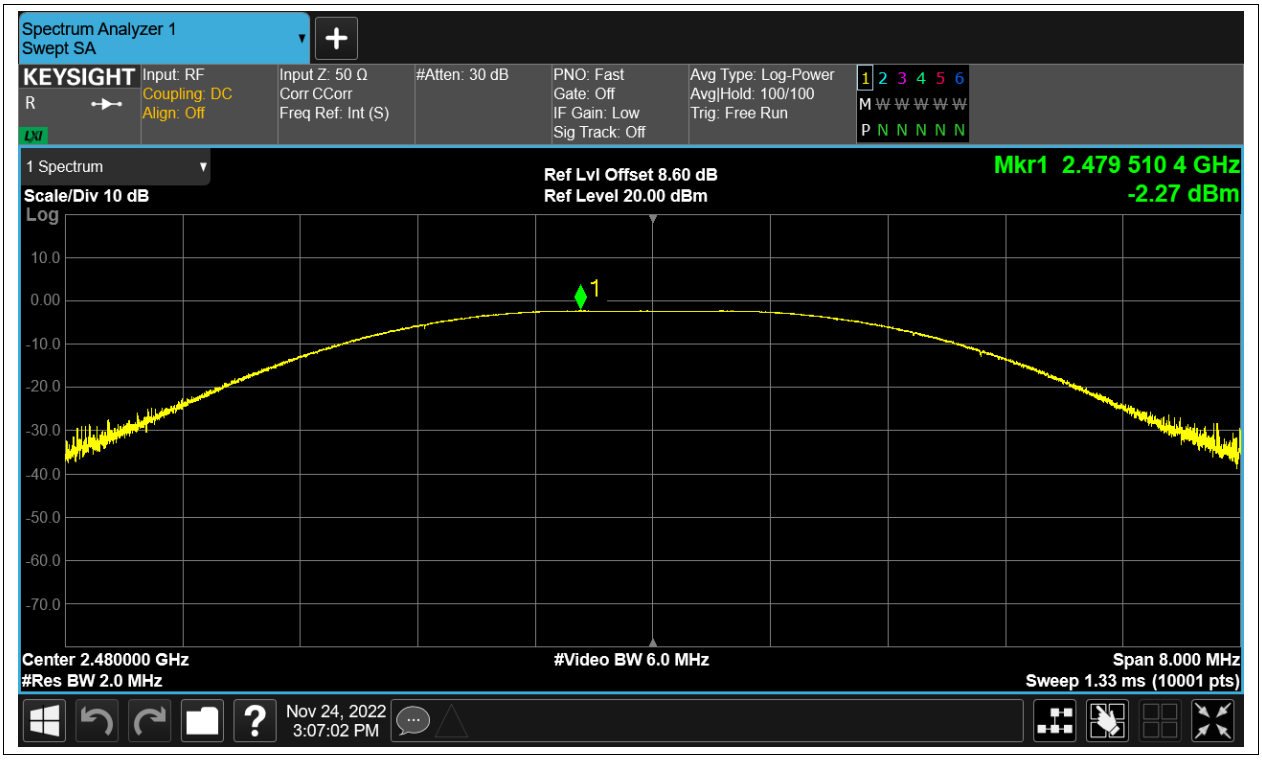
Test Graphs
Power NVNT BLE 2402MHz Ant1



Power NVNT BLE 2442MHz Ant1



Power NVNT BLE 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
Ref Lvl Offset 8.60 dB
Ref Level 20.00 dBm
Mkr1 2.479 510 4 GHz
-2.27 dBm
Log
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)
Nov 24, 2022
3:07:02 PM

-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	limit	Verdic
NVNT	BLE	2402	Ant1	1.119	0.5	Pass
NVNT	BLE	2442	Ant1	1.159	0.5	Pass
NVNT	BLE	2480	Ant1	1.096	0.5	Pass

Test Graphs

-6dB Bandwidth NVNT BLE 2402MHz Ant1

-6dB Bandwidth NVNT BLE 2442MHz Ant1

-6dB Bandwidth NVNT BLE 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 2.480557000 GHz
-11.39 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 100.00 kHz
#Video BW 300.00 kHz
Span 5 MHz
Sweep 1.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
2.0396 MHz
Transmit Freq Error 9.017 kHz
x dB Bandwidth 1.096 MHz
Total Power 4.02 dBm
% of OBW Power 99.00 %
x dB -6.00 dB
Nov 24, 2022
3:07:15 PM

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2402	Ant1	2.032
NVNT	BLE	2442	Ant1	2.029
NVNT	BLE	2480	Ant1	2.034

Test Graphs
OBW NVNT BLE 2402MHz Ant1

OBW NVNT BLE 2442MHz Ant1

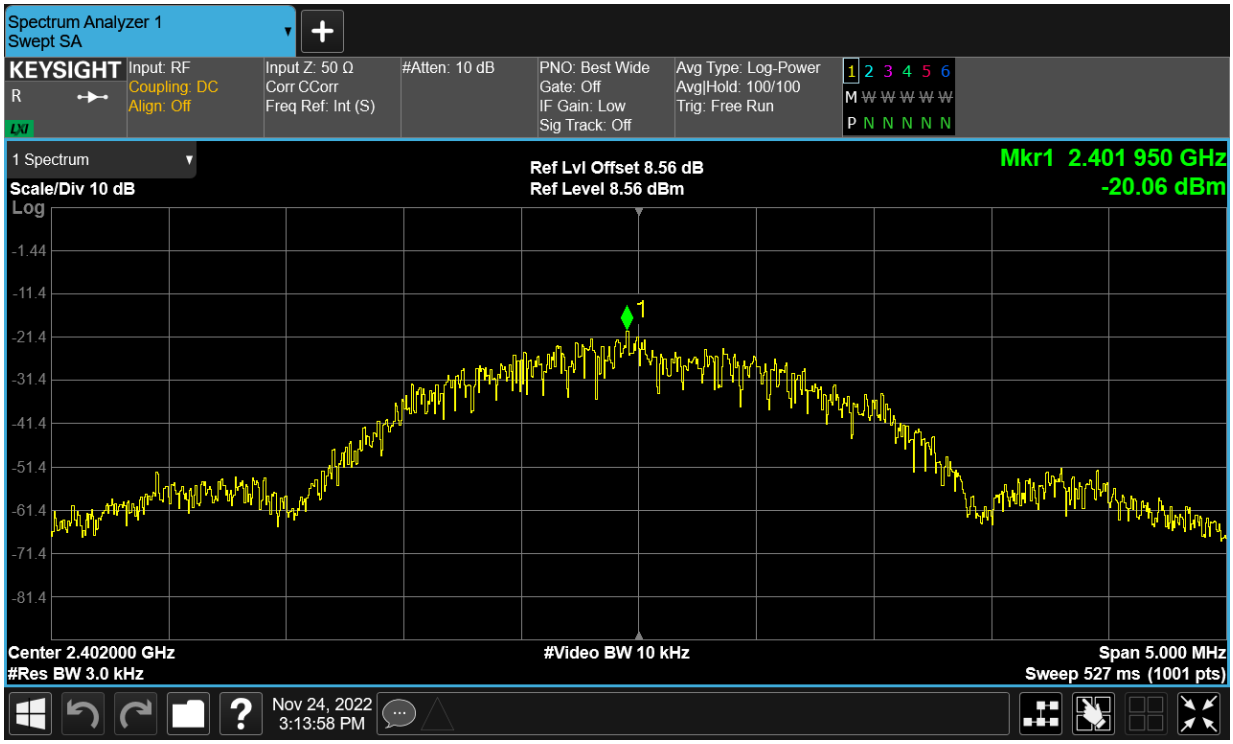
OBW NVNT BLE 2480MHz Ant1


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
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 30.000 kHz
#Video BW 100.00 kHz
Span 5 MHz
Sweep 5.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
2.0341 MHz
Transmit Freq Error 19.659 kHz
x dB Bandwidth 2.435 MHz
Total Power 3.35 dBm
% of OBW Power 99.00 %
x dB -26.00 dB
Nov 24, 2022
3:07:08 PM

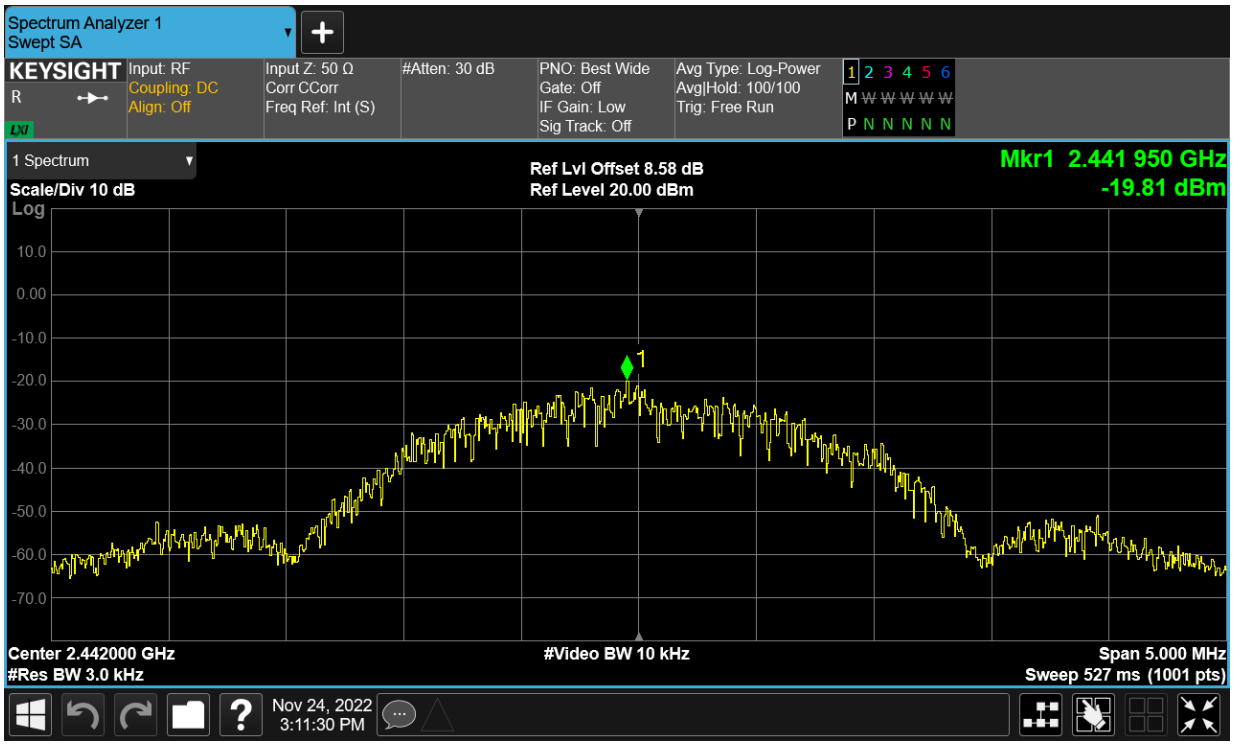
Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	-20.055	8	Pass
NVNT	BLE	2442	Ant1	-19.808	8	Pass
NVNT	BLE	2480	Ant1	-19.823	8	Pass

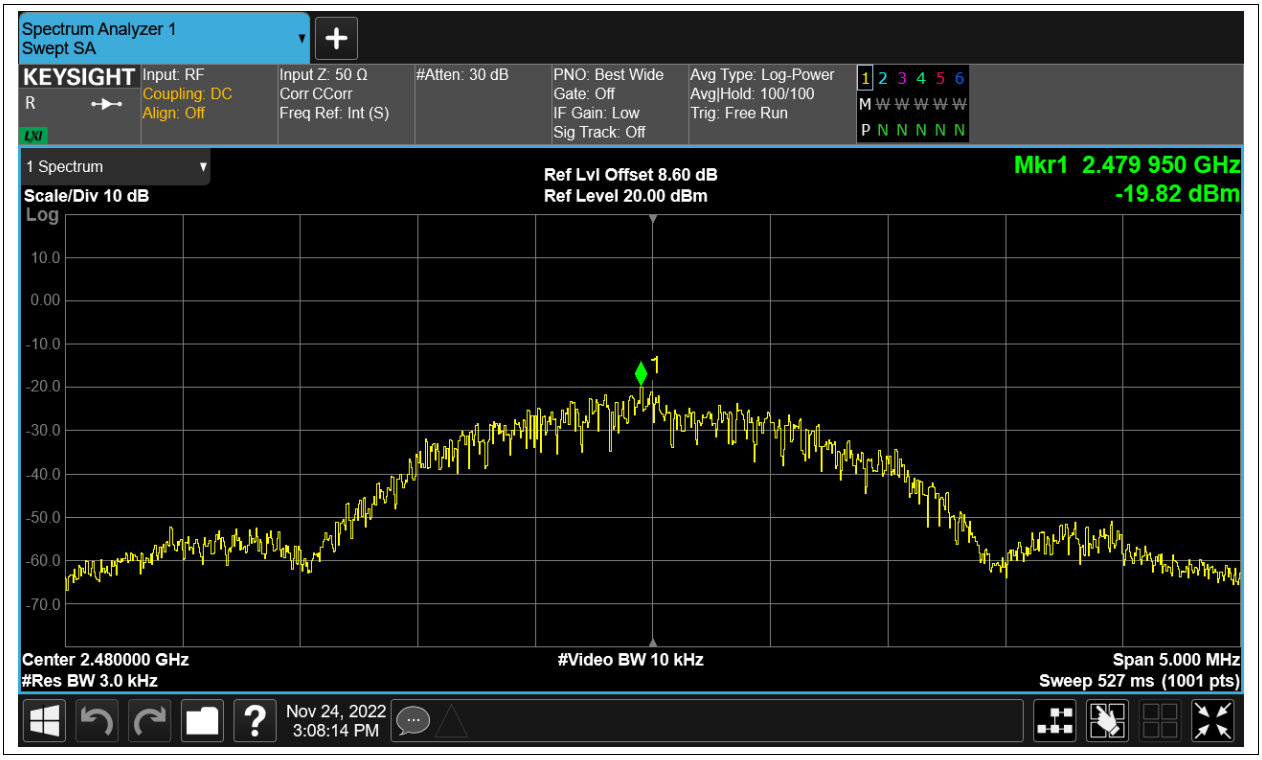
Test Graphs
PSD NVNT BLE 2402MHz Ant1



PSD NVNT BLE 2442MHz Ant1



PSD NVNT BLE 2480MHz Ant1

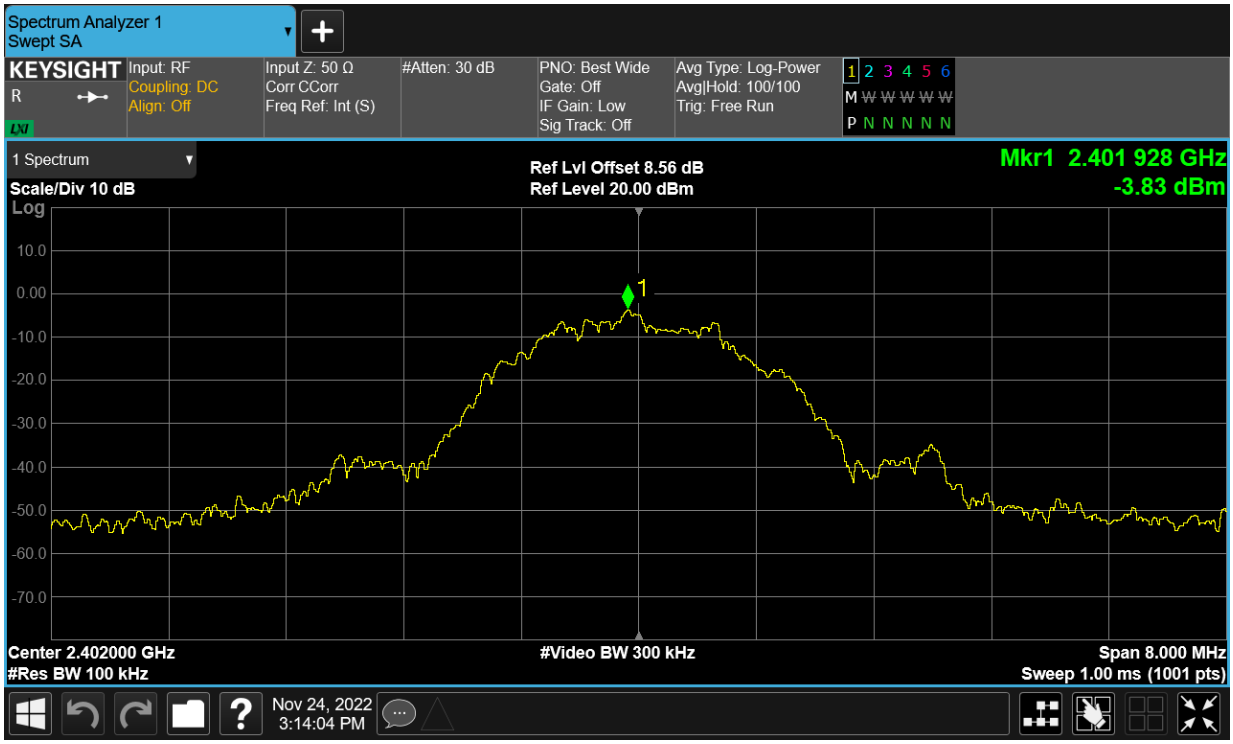

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Off
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 8.60 dB
Ref Level 20.00 dBm
Mkr1 2.479 950 GHz
-19.82 dBm
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 2.480000 GHz
#Res BW 3.0 kHz
#Video BW 10 kHz
Span 5.000 MHz
Sweep 527 ms (1001 pts)
Nov 24, 2022
3:08:14 PM

Band Edge

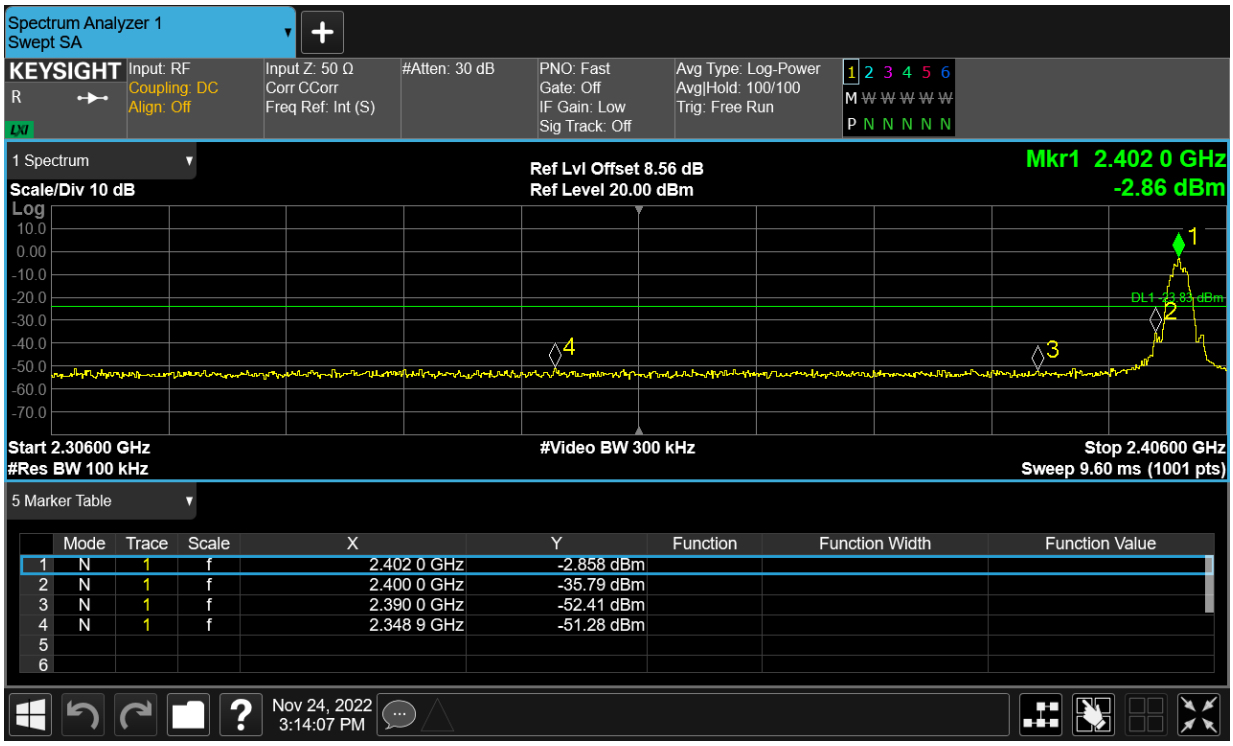
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-47.45	-20	Pass
NVNT	BLE	2480	Ant1	-47.11	-20	Pass

Test Graphs

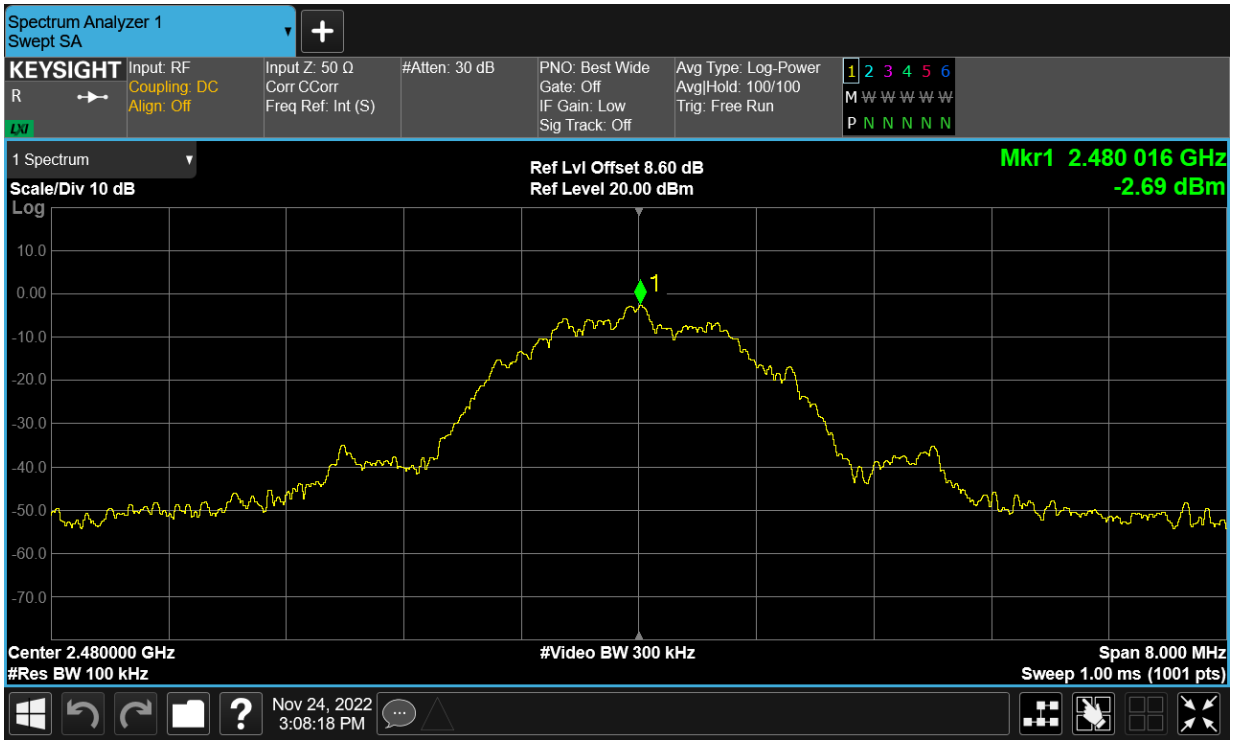
Band Edge NVNT BLE 2402MHz Ant1 Ref



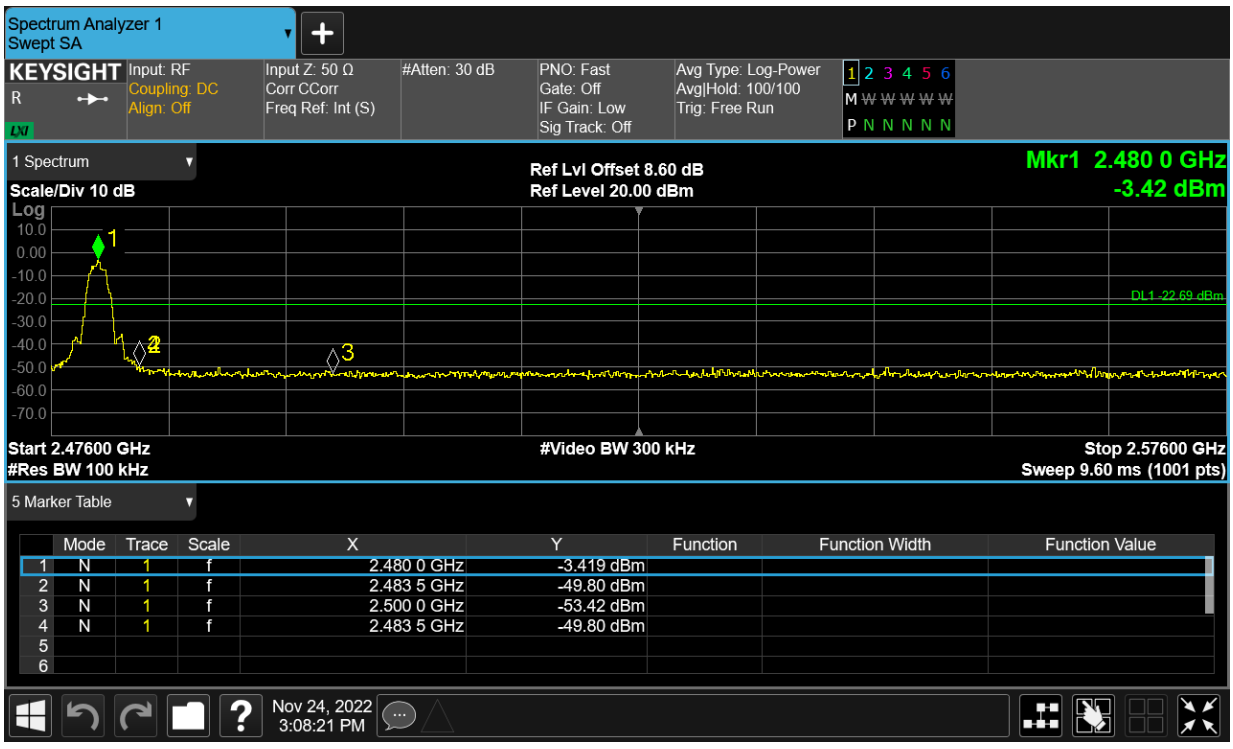
Band Edge NVNT BLE 2402MHz Ant1 Emission



Band Edge NVNT BLE 2480MHz Ant1 Ref



Band Edge NVNT BLE 2480MHz Ant1 Emission

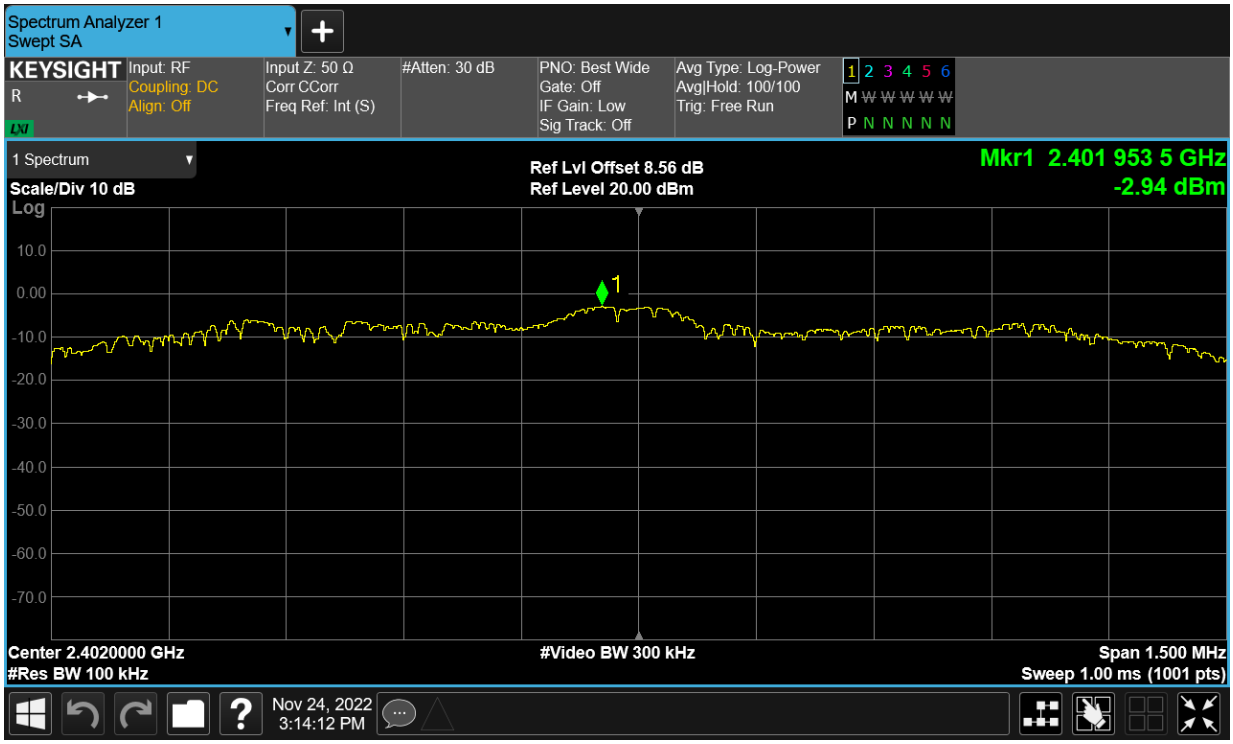


Conducted RF Spurious Emission

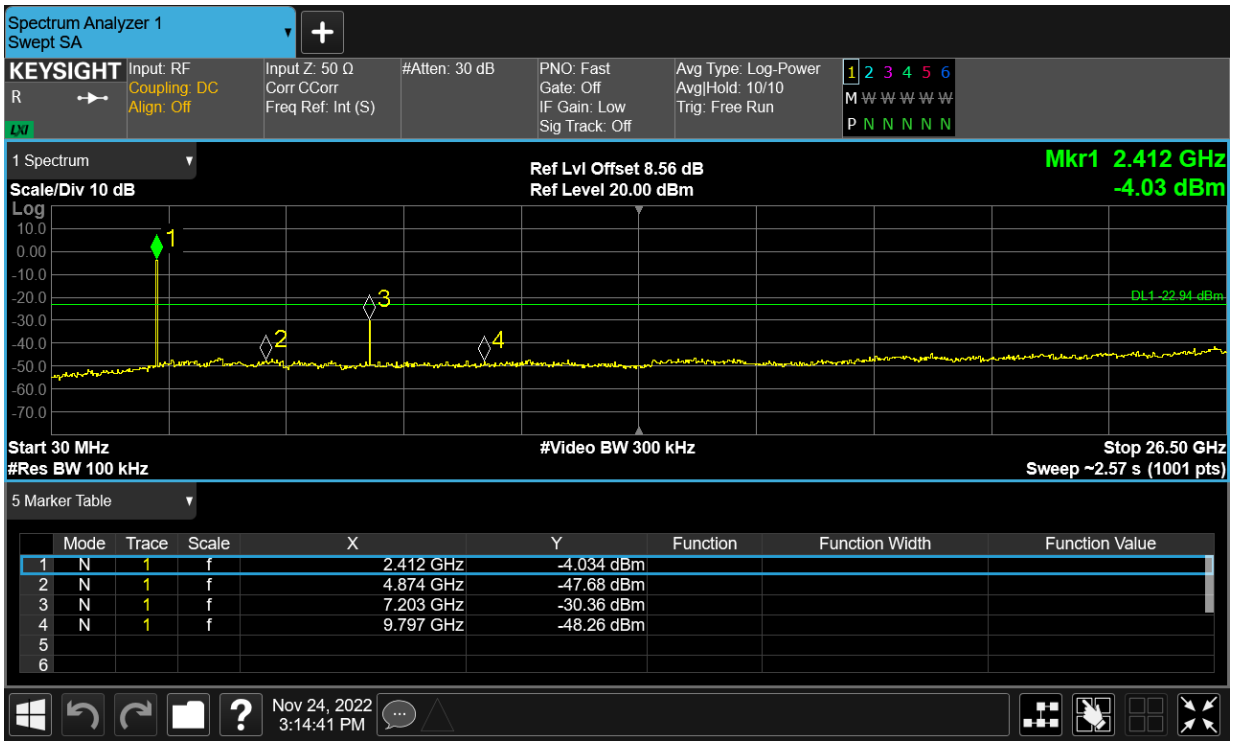
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-27.42	-20	Pass
NVNT	BLE	2442	Ant1	-30.35	-20	Pass
NVNT	BLE	2480	Ant1	-31.94	-20	Pass

Test Graphs

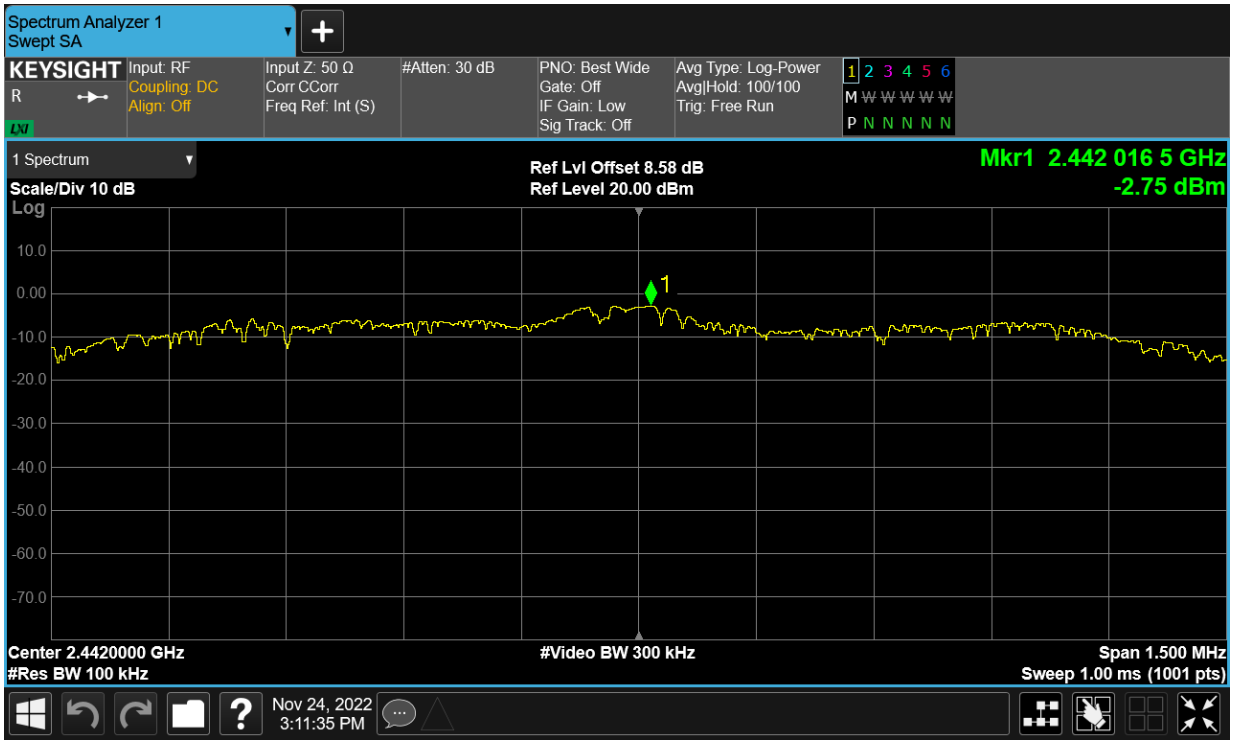
Tx. Spurious NVNT BLE 2402MHz Ant1 Ref



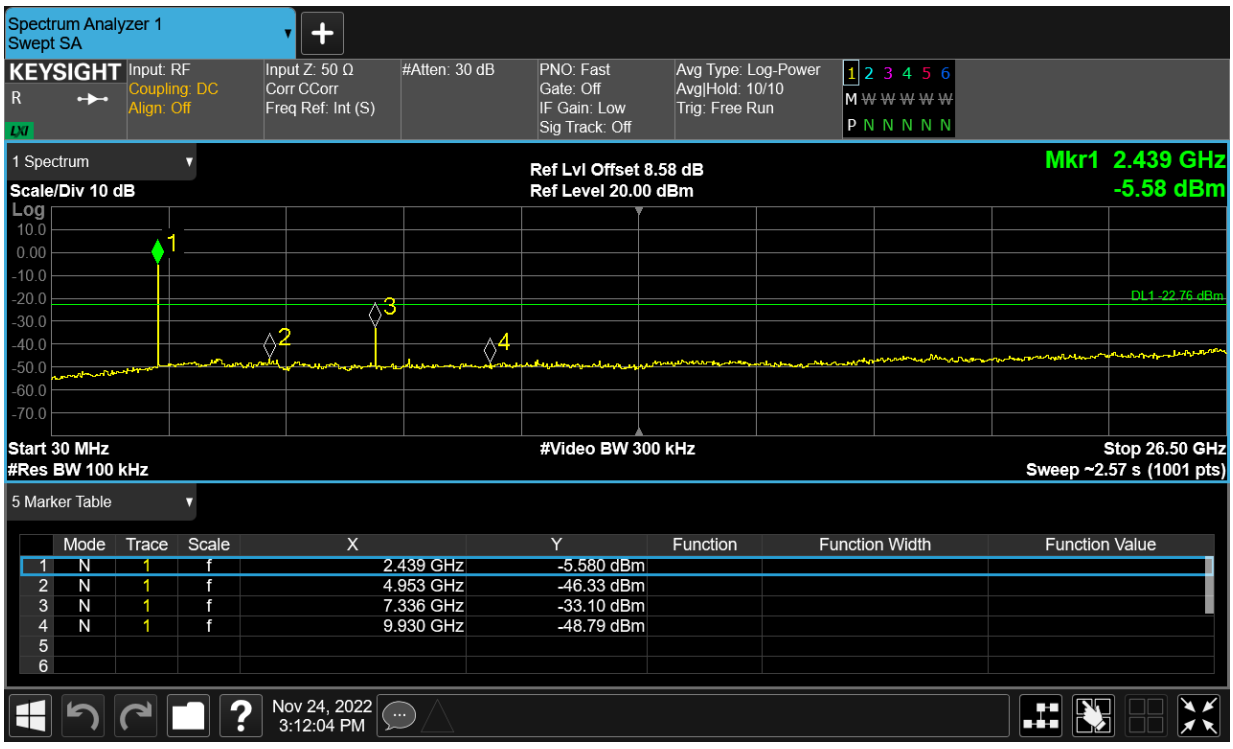
Tx. Spurious NVNT BLE 2402MHz Ant1 Emission



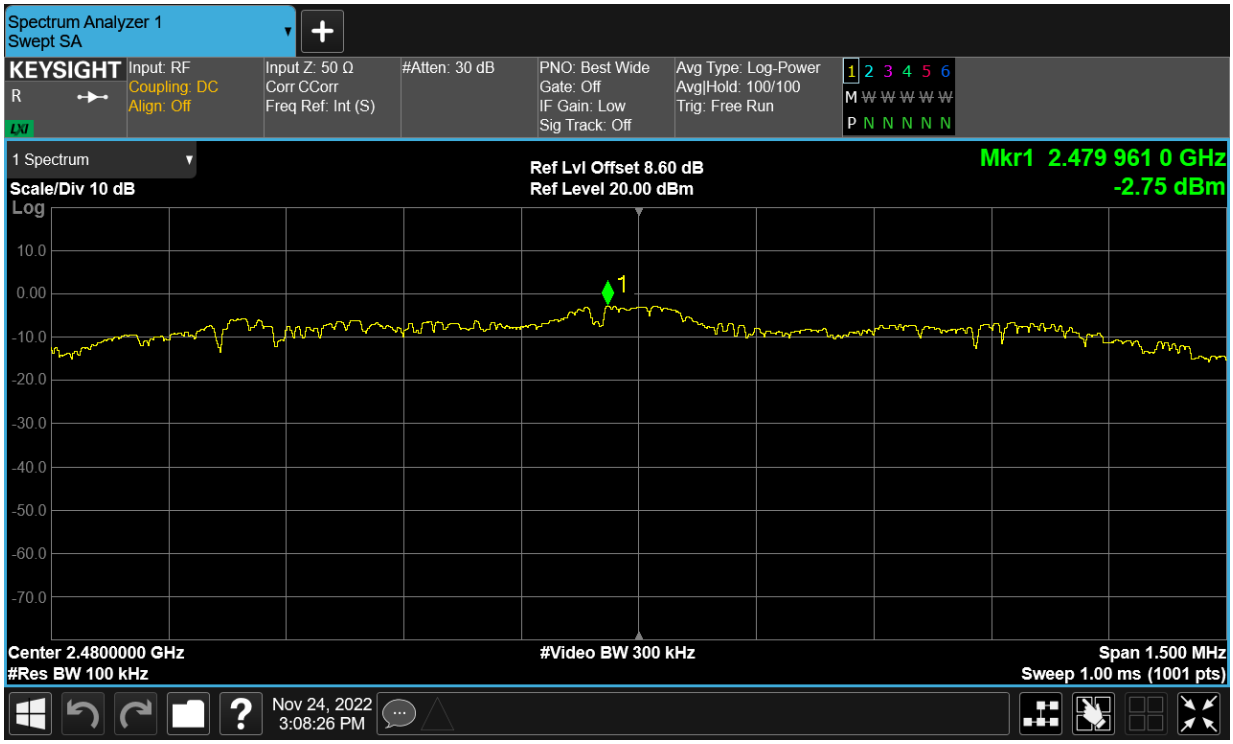
Tx. Spurious NVNT BLE 2442MHz Ant1 Ref



Tx. Spurious NVNT BLE 2442MHz Ant1 Emission



Tx. Spurious NVNT BLE 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2480MHz Ant1 Emission