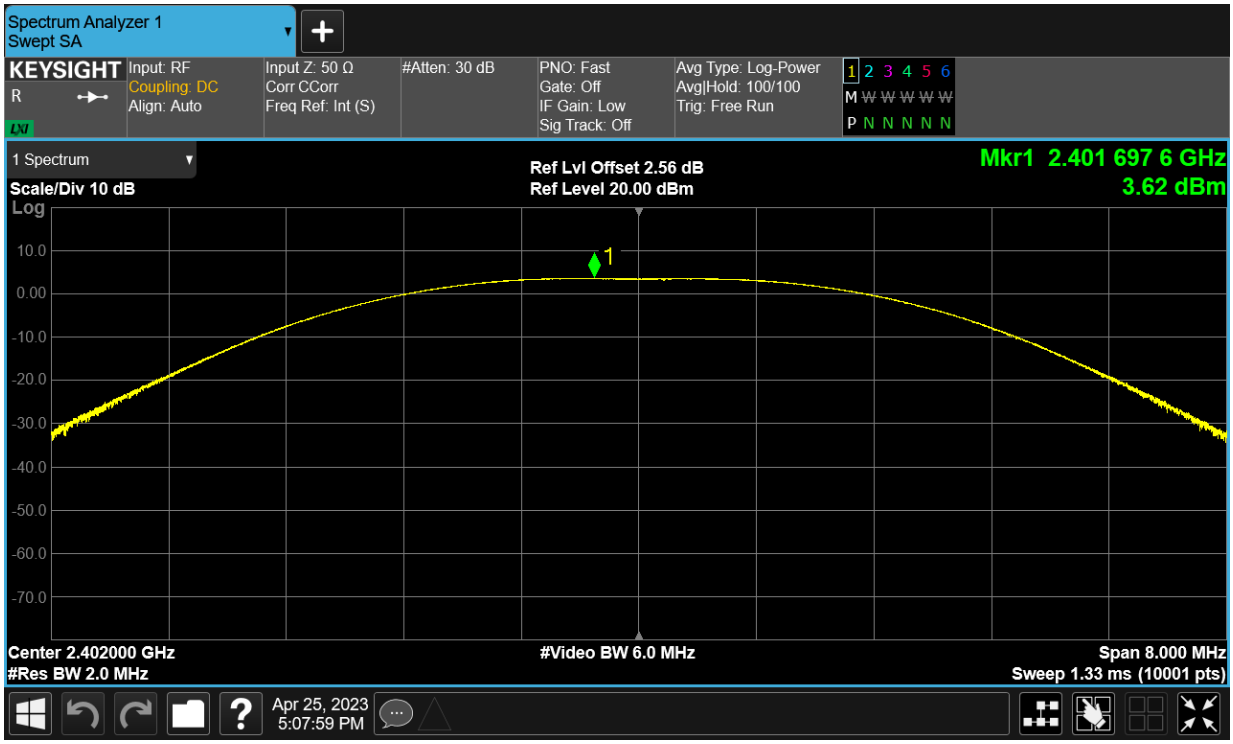
# Test Data

## Maximum Conducted Output Power

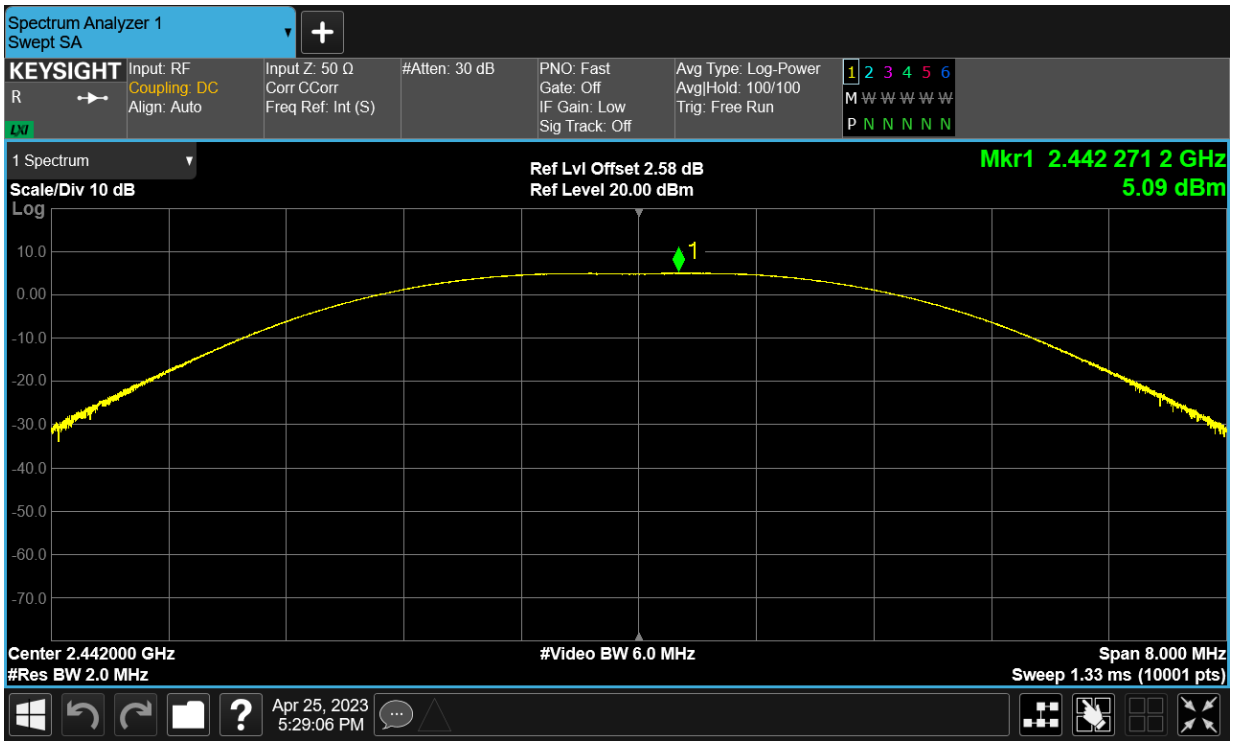
| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | BLE | 2402 | Ant6 | 3.624 | 30 | Pass |
| NVNT | BLE | 2442 | Ant6 | 5.085 | 30 | Pass |
| NVNT | BLE | 2480 | Ant6 | 4.325 | 30 | Pass |

Test Graphs

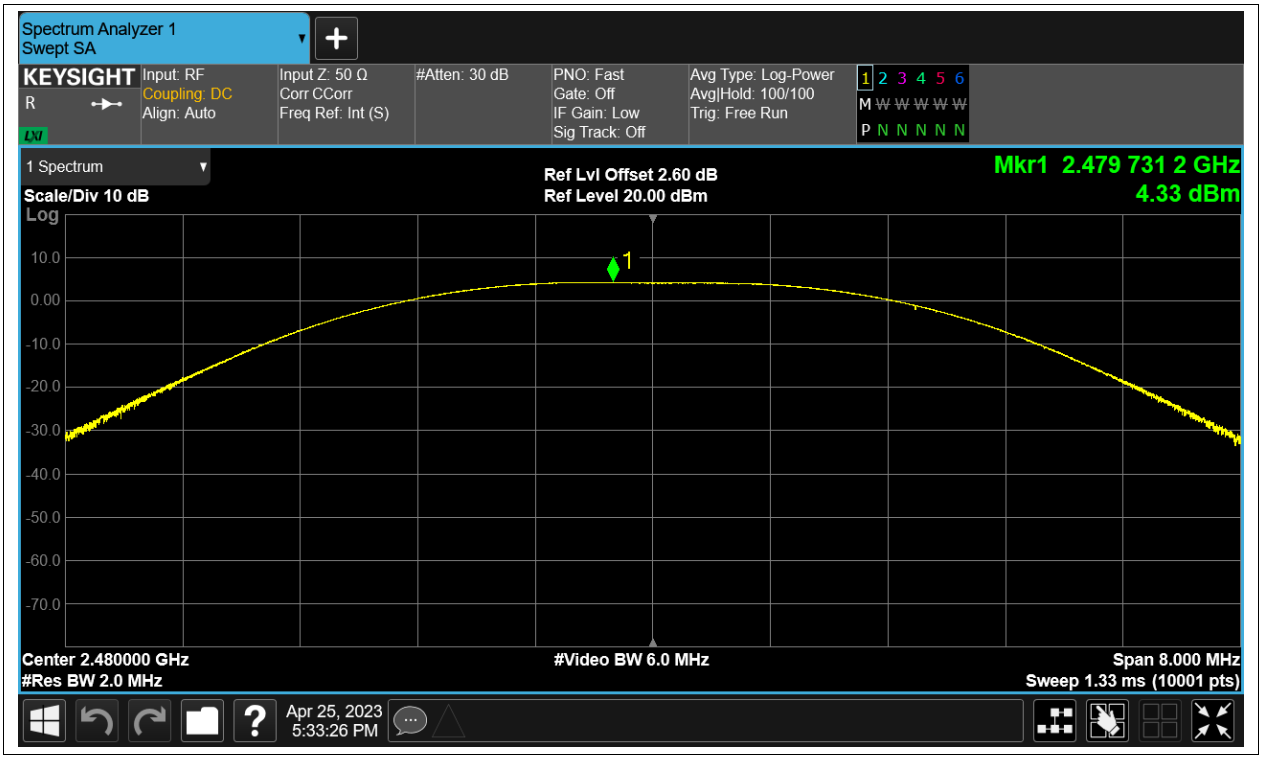
Power NVNT BLE 2402MHz Ant6




Power NVNT BLE 2442MHz Ant6




Power NVNT BLE 2480MHz Ant6

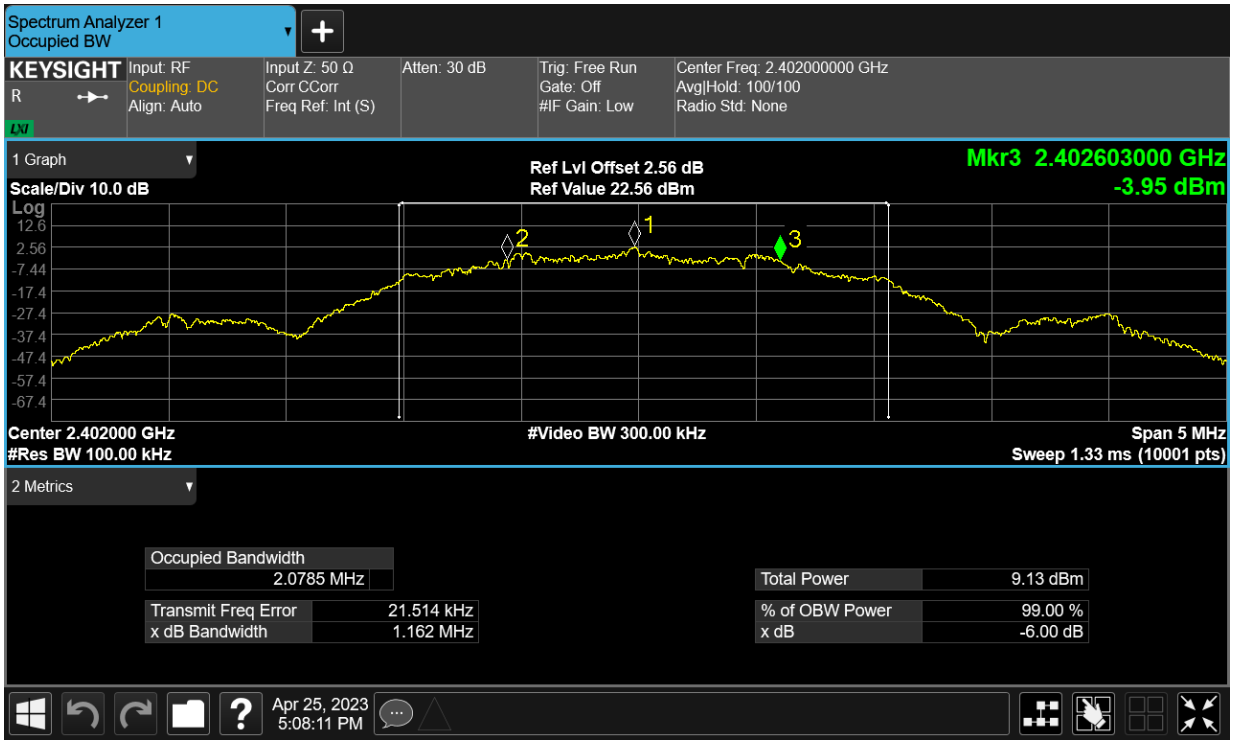

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 2.60 dB
Ref Level 20.00 dBm
Mkr1 2.479 731 2 GHz
4.33 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)
Apr 25, 2023
5:33:26 PM

# -6dB Bandwidth

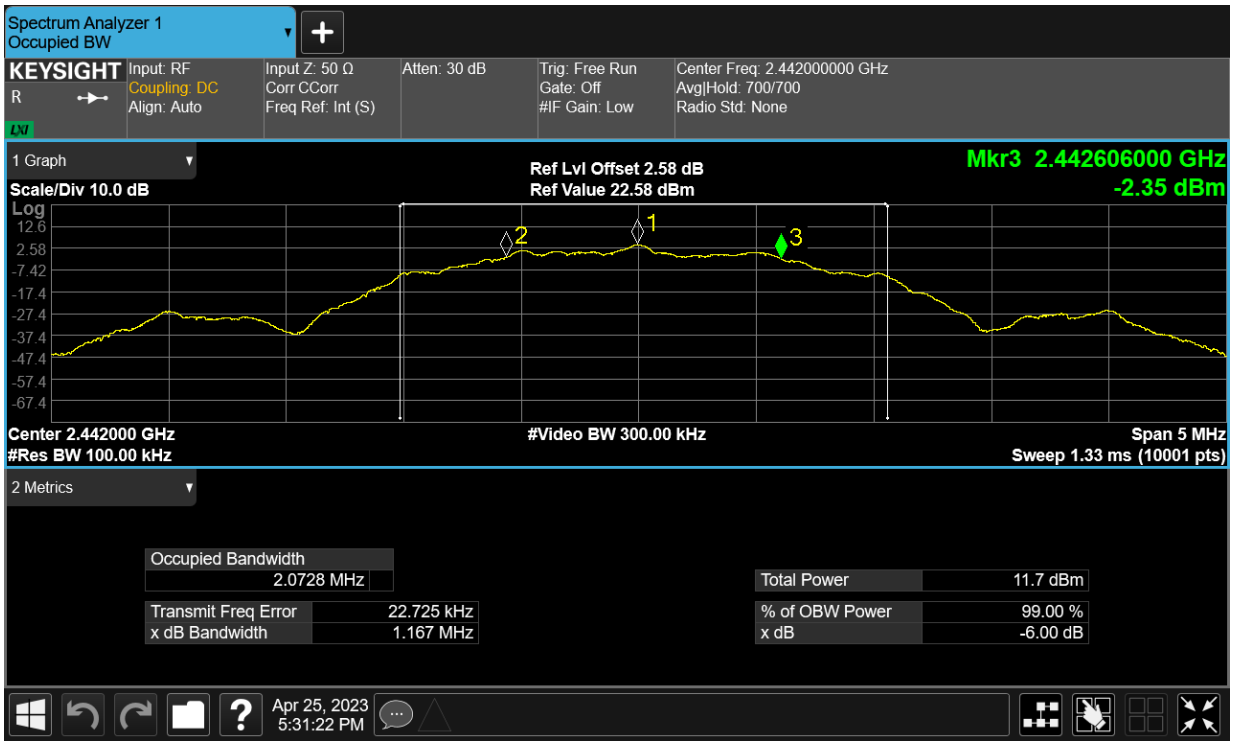
| Condition | Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | limit | Verdic |
|---|---|---|---|---|---|---|
| NVNT | BLE | 2402 | Ant6 | 1.162 | 0.5 | Pass |
| NVNT | BLE | 2442 | Ant6 | 1.167 | 0.5 | Pass |
| NVNT | BLE | 2480 | Ant6 | 1.134 | 0.5 | Pass |

Test Graphs

-6dB Bandwidth NVNT BLE 2402MHz Ant6




-6dB Bandwidth NVNT BLE 2442MHz Ant6




-6dB Bandwidth NVNT BLE 2480MHz Ant6

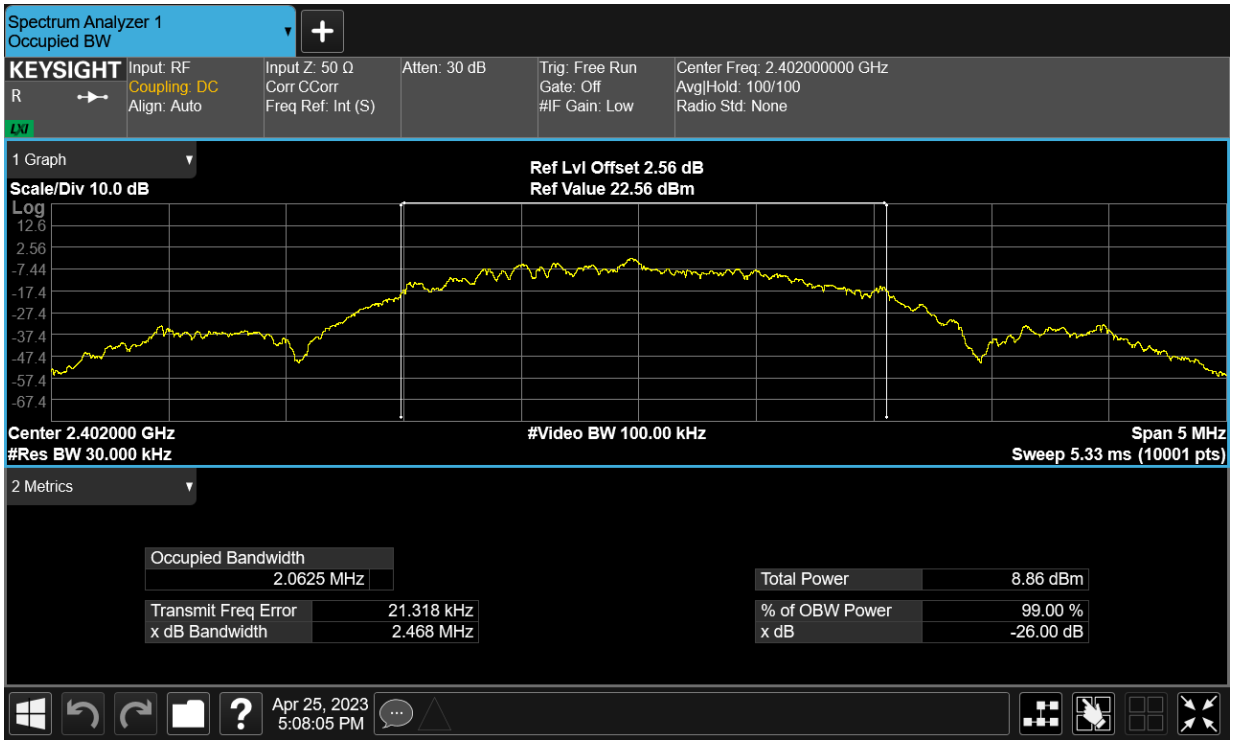
Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 100/100
Radio Std: None
1 Graph
Ref Lvl Offset 2.60 dB
Ref Value 22.60 dBm
Mkr3 2.480593000 GHz
-2.59 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 100.00 kHz
#Video BW 300.00 kHz
Span 5 MHz
Sweep 1.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
2.0740 MHz
Transmit Freq Error 25.651 kHz
x dB Bandwidth 1.134 MHz
Total Power 10.0 dBm
% of OBW Power 99.00 %
x dB -6.00 dB
Apr 25, 2023
5:33:40 PM

# Occupied Channel Bandwidth

| Condition | Mode | Frequency (MHz) | Antenna | 99% OBW (MHz) |
|---|---|---|---|---|
| NVNT | BLE | 2402 | Ant6 | 2.062 |
| NVNT | BLE | 2442 | Ant6 | 2.064 |
| NVNT | BLE | 2480 | Ant6 | 2.061 |

Test Graphs

OBW NVNT BLE 2402MHz Ant6




OBW NVNT BLE 2442MHz Ant6

OBW NVNT BLE 2480MHz Ant6

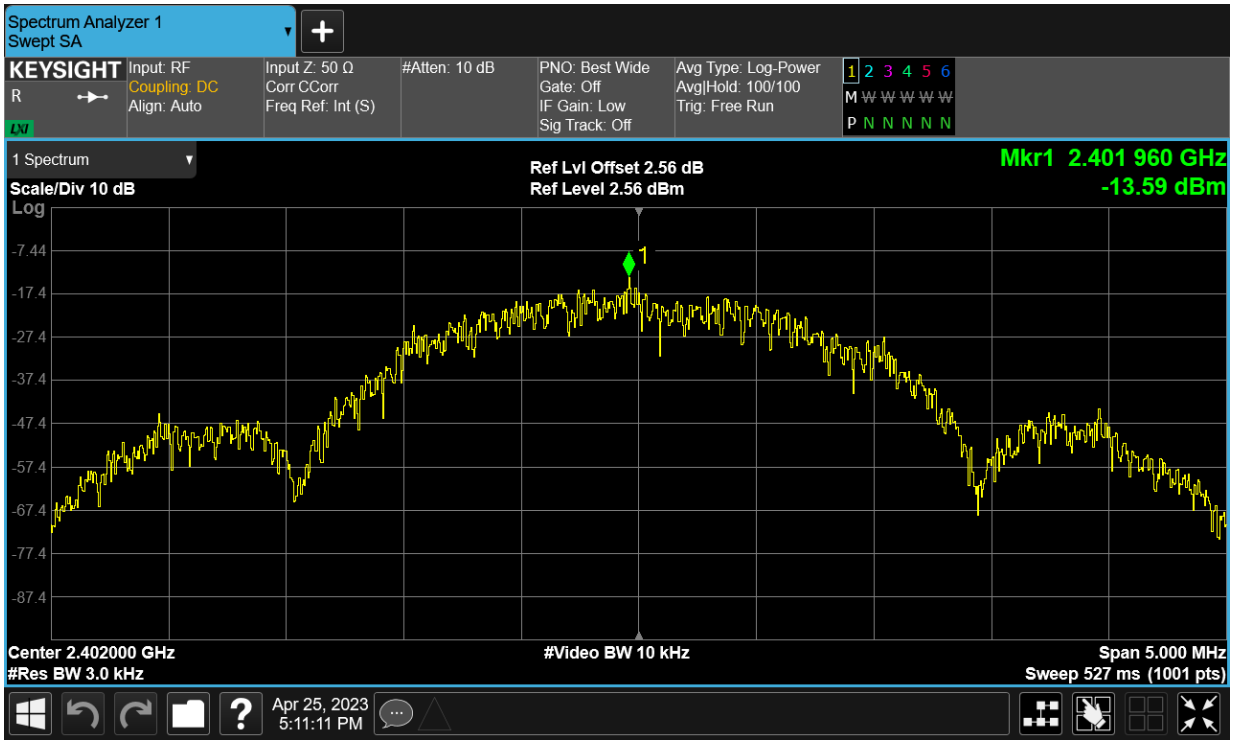
Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 100/100
Radio Std: None
1 Graph
Ref Lvl Offset 2.60 dB
Ref Value 22.60 dBm
Scale/Div 10.0 dB
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 30.000 kHz
#Video BW 100.00 kHz
Span 5 MHz
Sweep 5.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
2.0611 MHz
Transmit Freq Error 25.783 kHz
x dB Bandwidth 2.458 MHz
Total Power 9.52 dBm
% of OBW Power 99.00 %
x dB -26.00 dB
Apr 25, 2023
5:33:32 PM

# Maximum Power Spectral Density Level

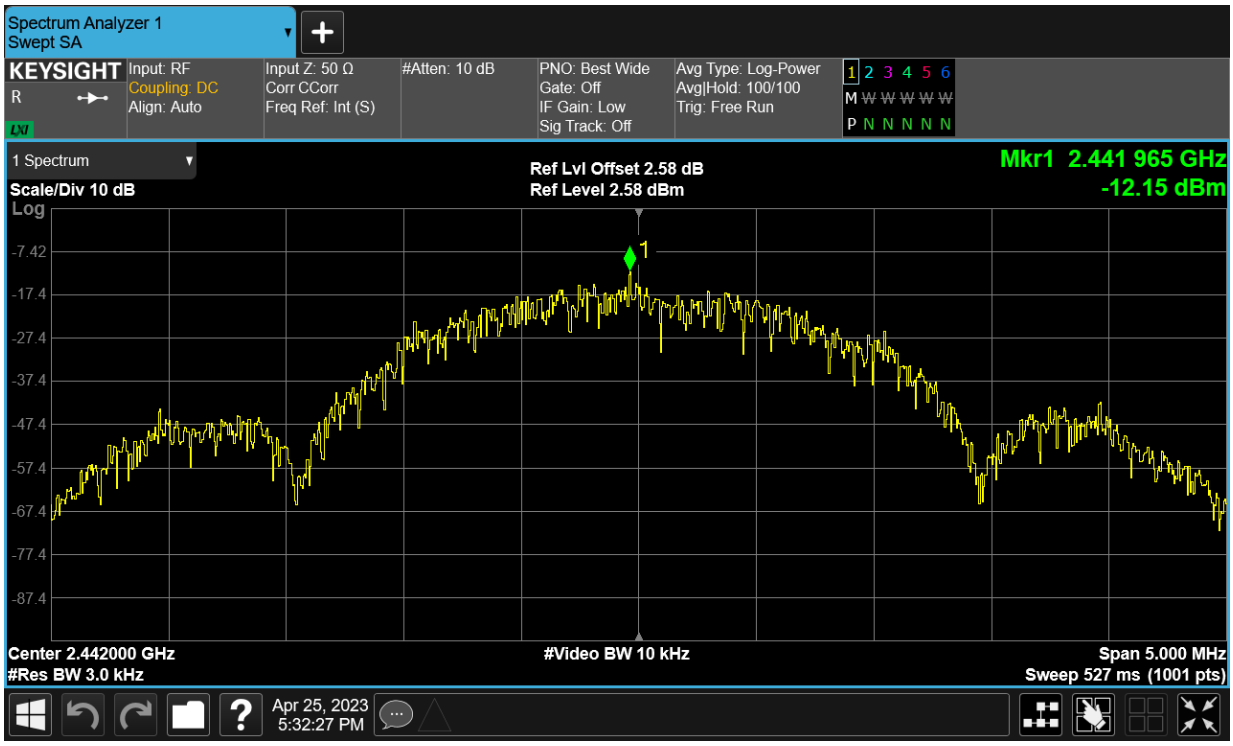
| Condition | Mode | Frequency (MHz) | Antenna | Max PSD (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | BLE | 2402 | Ant6 | -13.586 | 8 | Pass |
| NVNT | BLE | 2442 | Ant6 | -12.148 | 8 | Pass |
| NVNT | BLE | 2480 | Ant6 | -12.851 | 8 | Pass |

Test Graphs

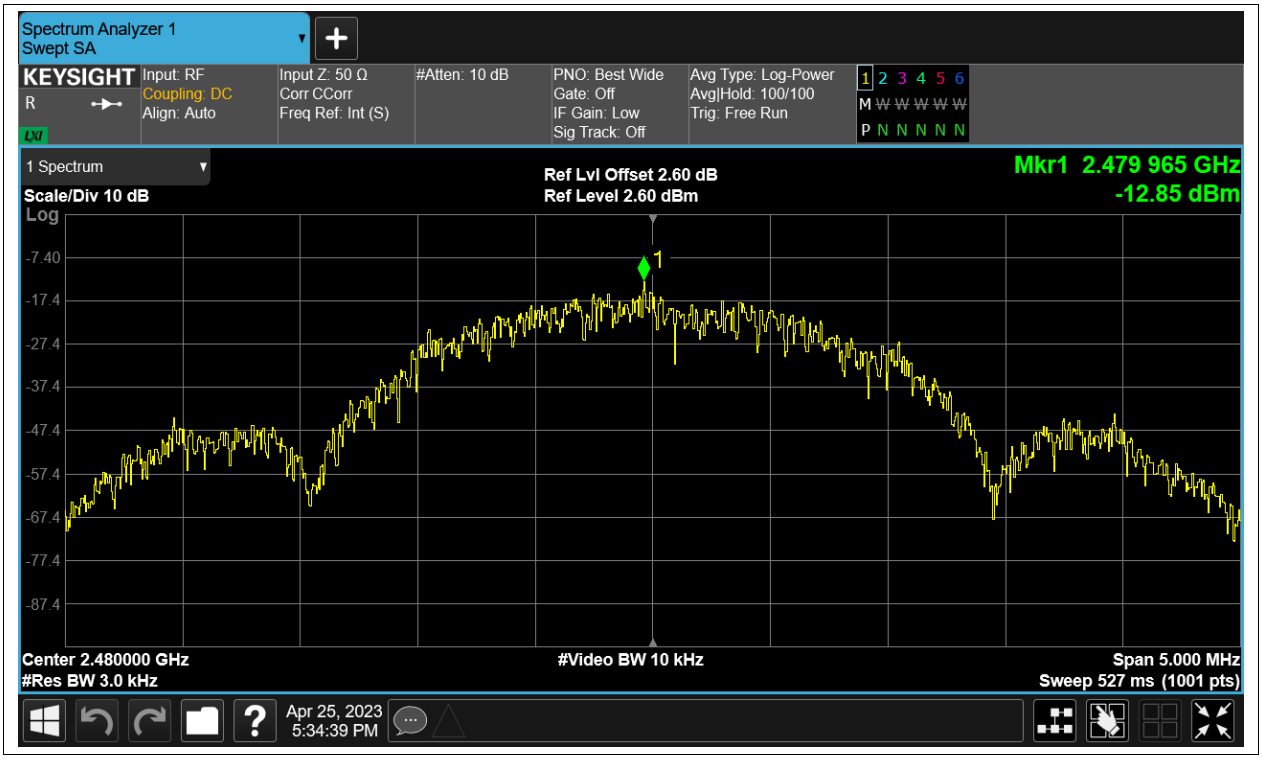
PSD NVNT BLE 2402MHz Ant6




PSD NVNT BLE 2442MHz Ant6




PSD NVNT BLE 2480MHz Ant6

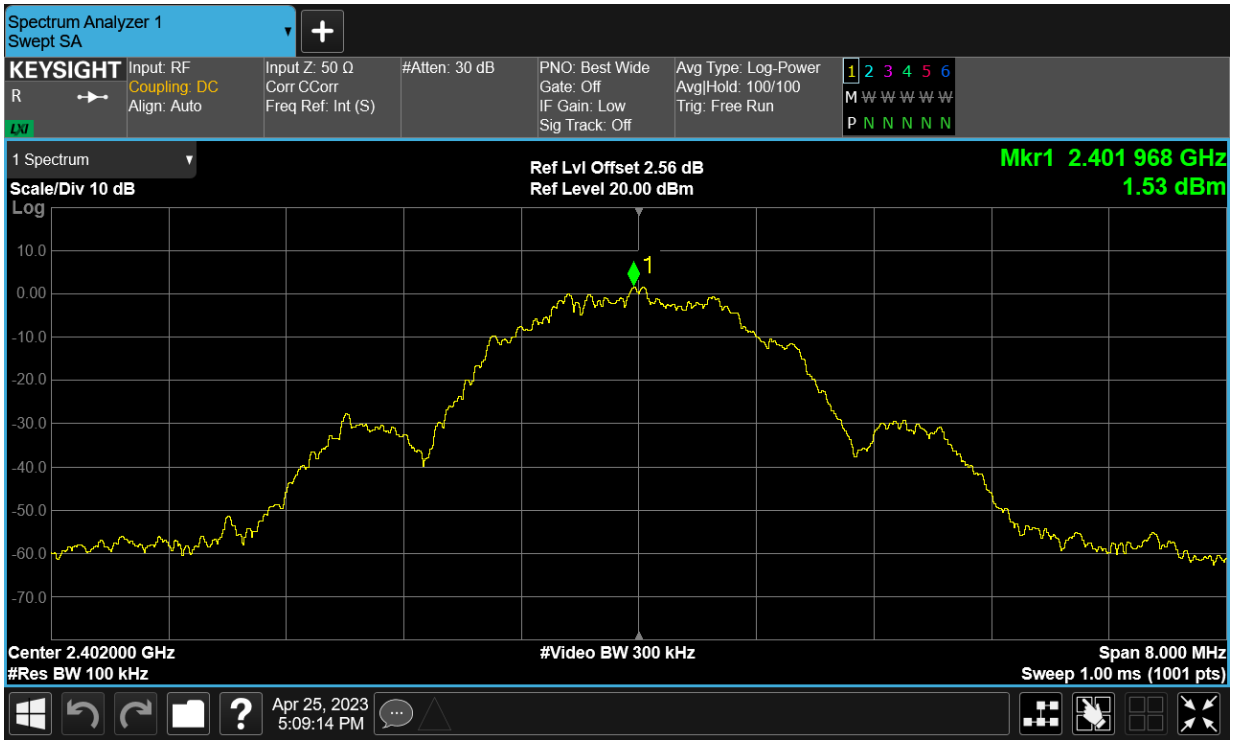

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 10 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 2.60 dB
Ref Level 2.60 dBm
Mkr1 2.479 965 GHz
-12.85 dBm
-7.40
-17.4
-27.4
-37.4
-47.4
-57.4
-67.4
-77.4
-87.4
Center 2.480000 GHz
#Res BW 3.0 kHz
#Video BW 10 kHz
Span 5.000 MHz
Sweep 527 ms (1001 pts)
Apr 25, 2023
5:34:39 PM

# Band Edge

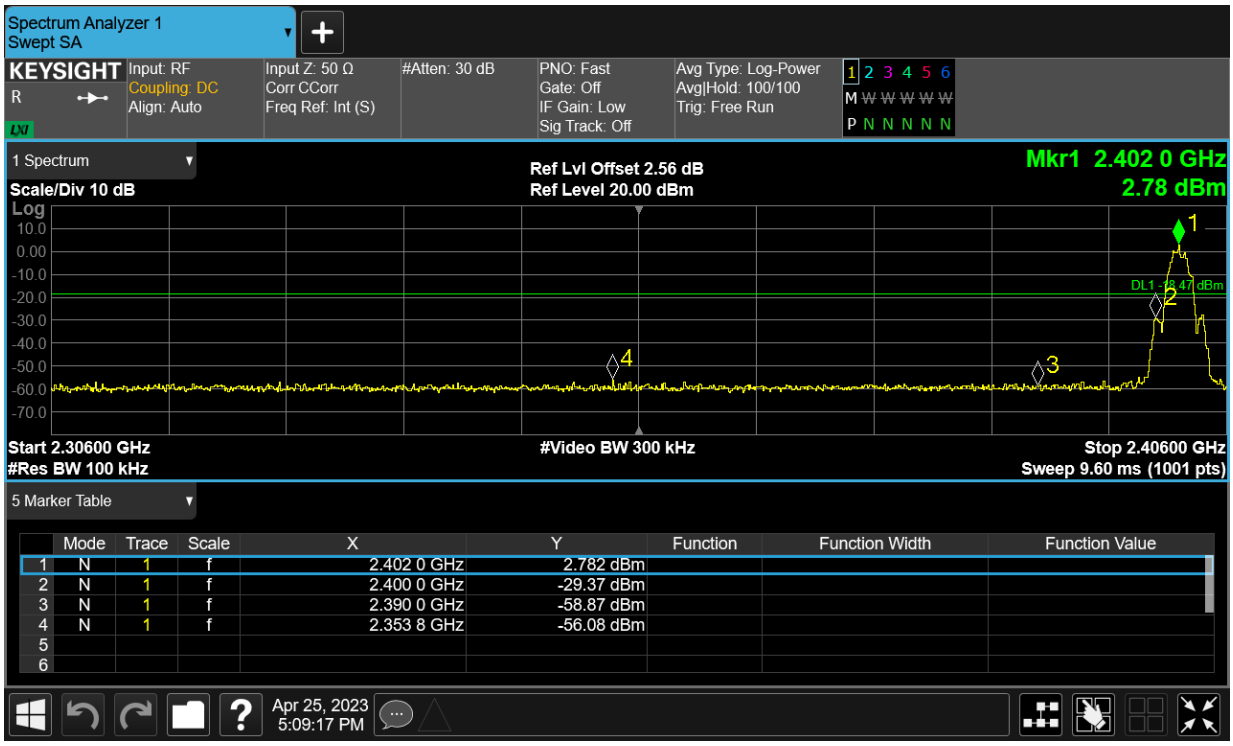
| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | BLE | 2402 | Ant6 | -57.61 | -20 | Pass |
| NVNT | BLE | 2480 | Ant6 | -57.4 | -20 | Pass |

Test Graphs

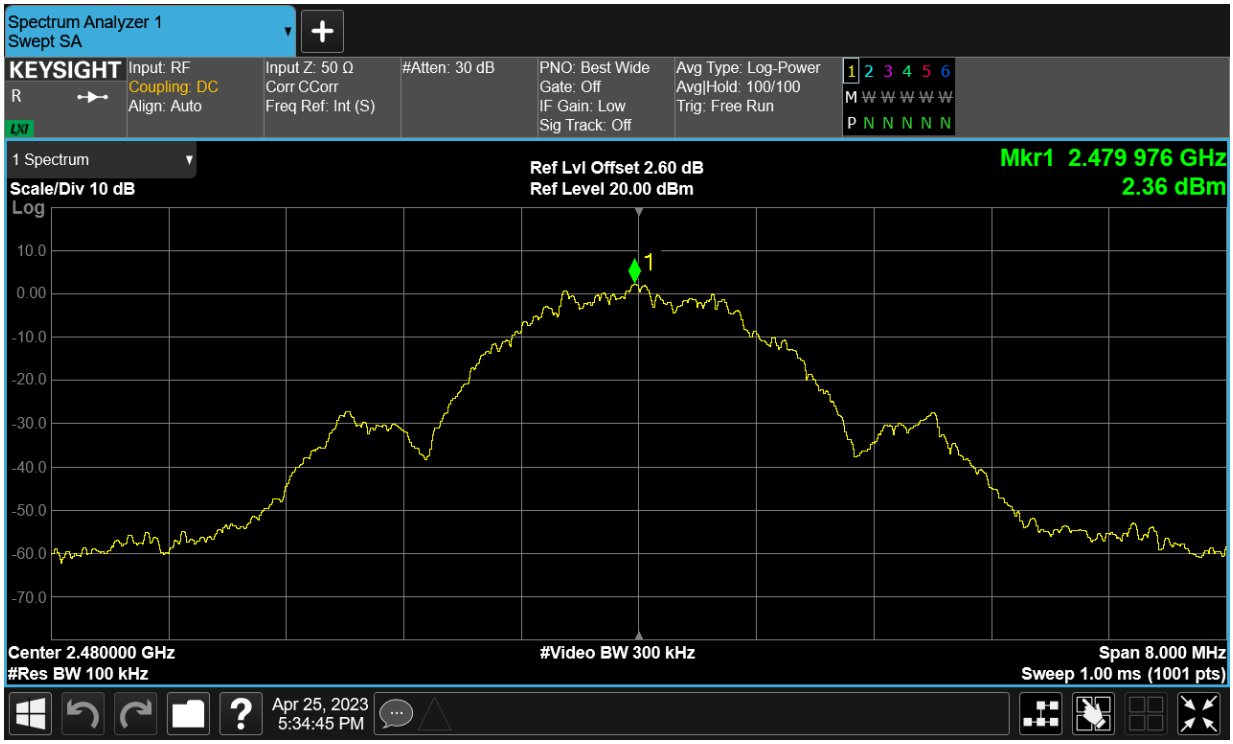
Band Edge NVNT BLE 2402MHz Ant6 Ref



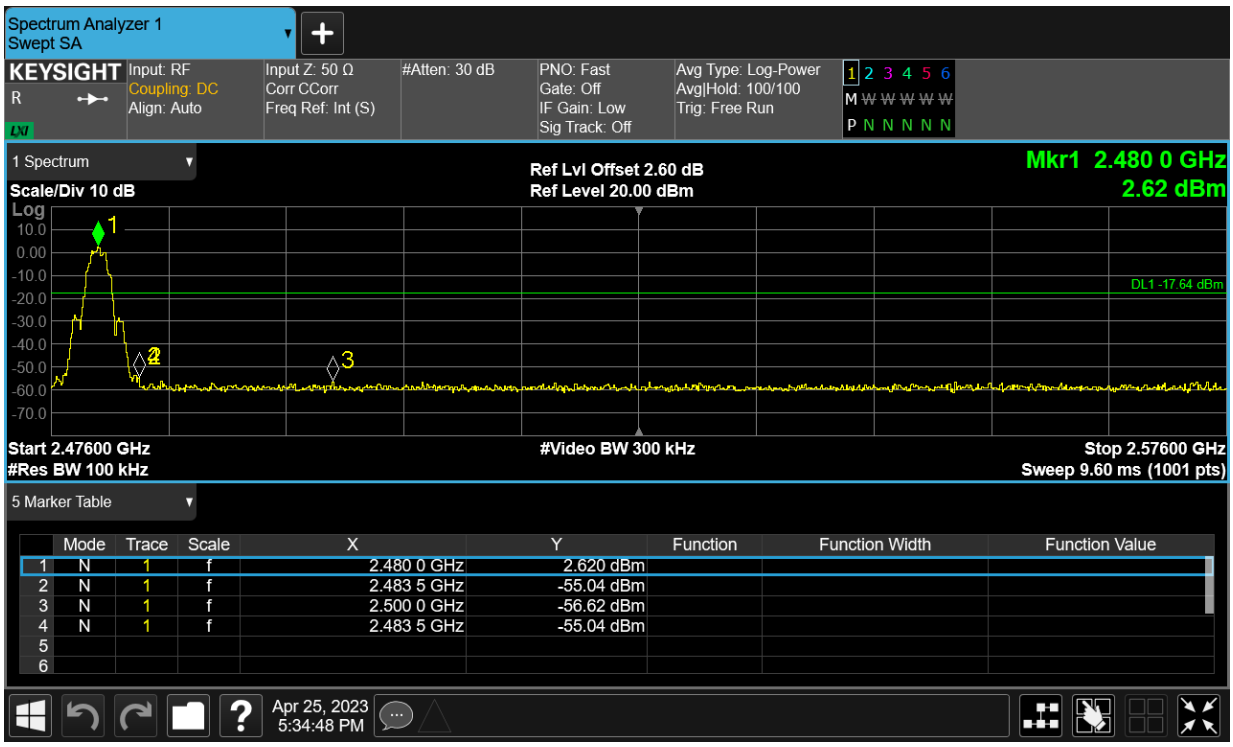

Band Edge NVNT BLE 2402MHz Ant6 Emission




Band Edge NVNT BLE 2480MHz Ant6 Ref




Band Edge NVNT BLE 2480MHz Ant6 Emission

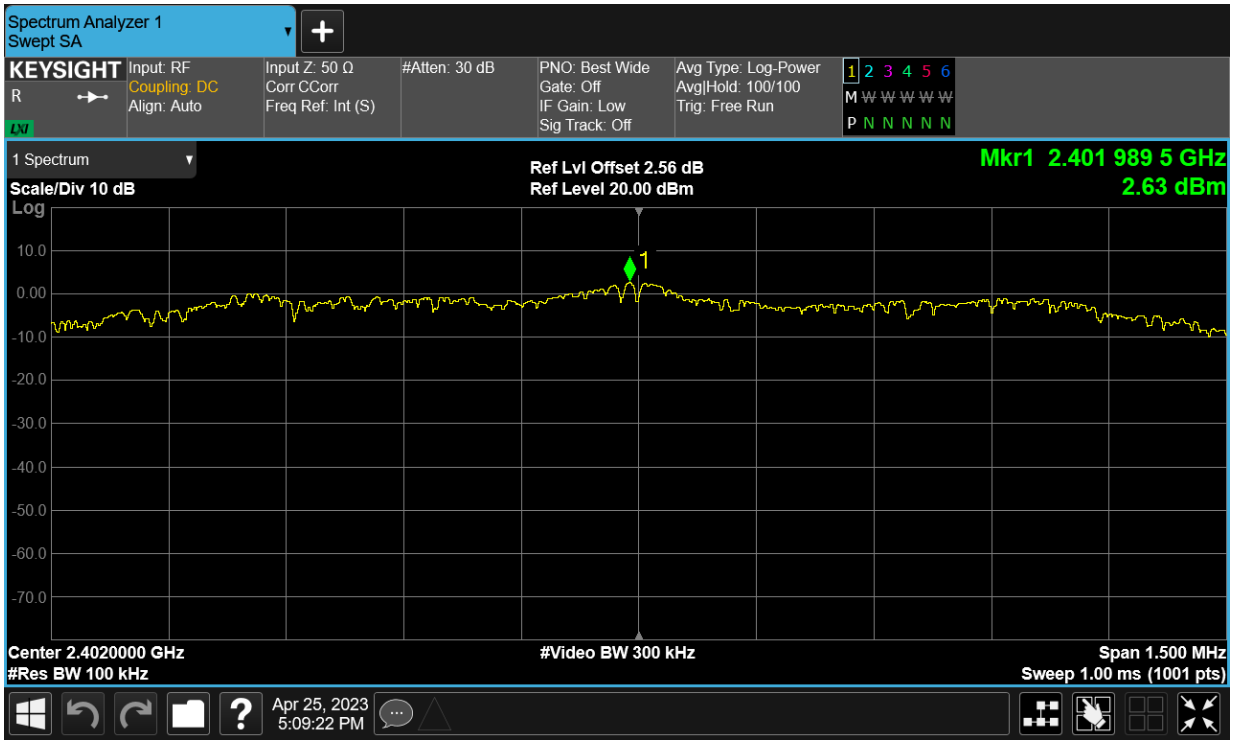


# Conducted RF Spurious Emission

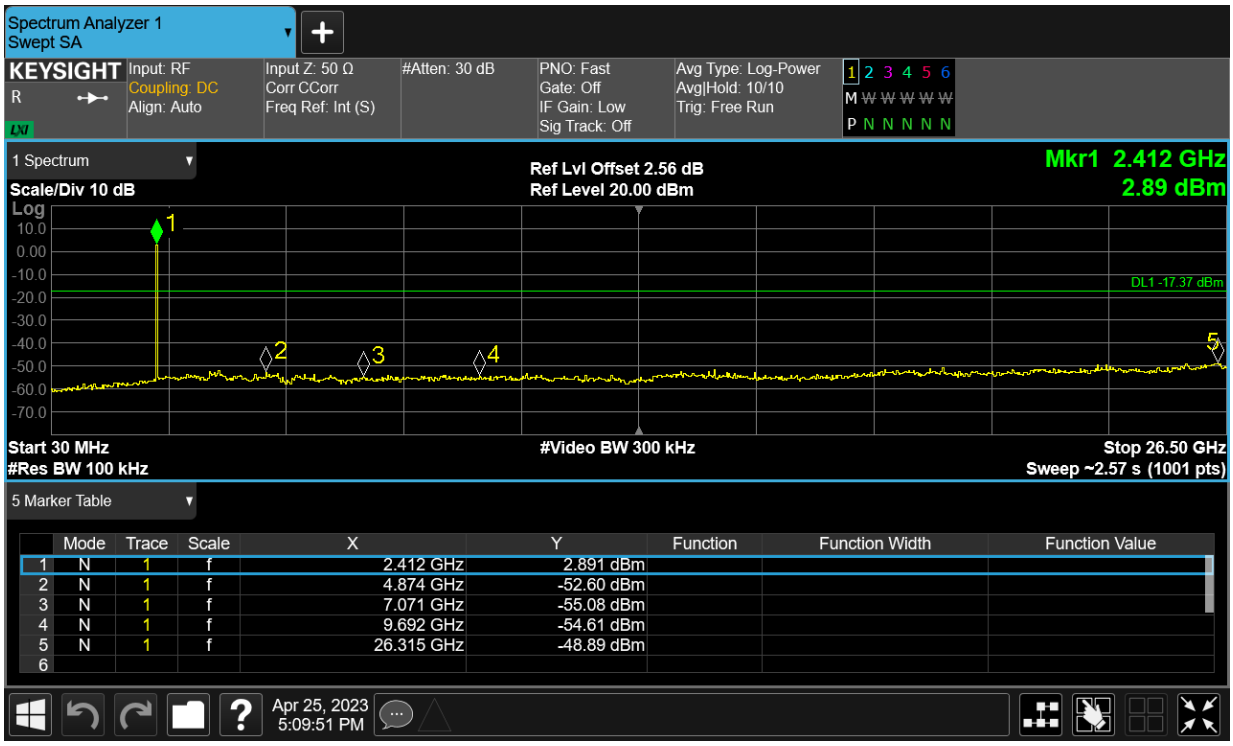
| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|---|---|---|---|---|---|---|
| NVNT | BLE | 2402 | Ant6 | -51.52 | -20 | Pass |
| NVNT | BLE | 2442 | Ant6 | -51.5 | -20 | Pass |
| NVNT | BLE | 2480 | Ant6 | -52.46 | -20 | Pass |

Test Graphs

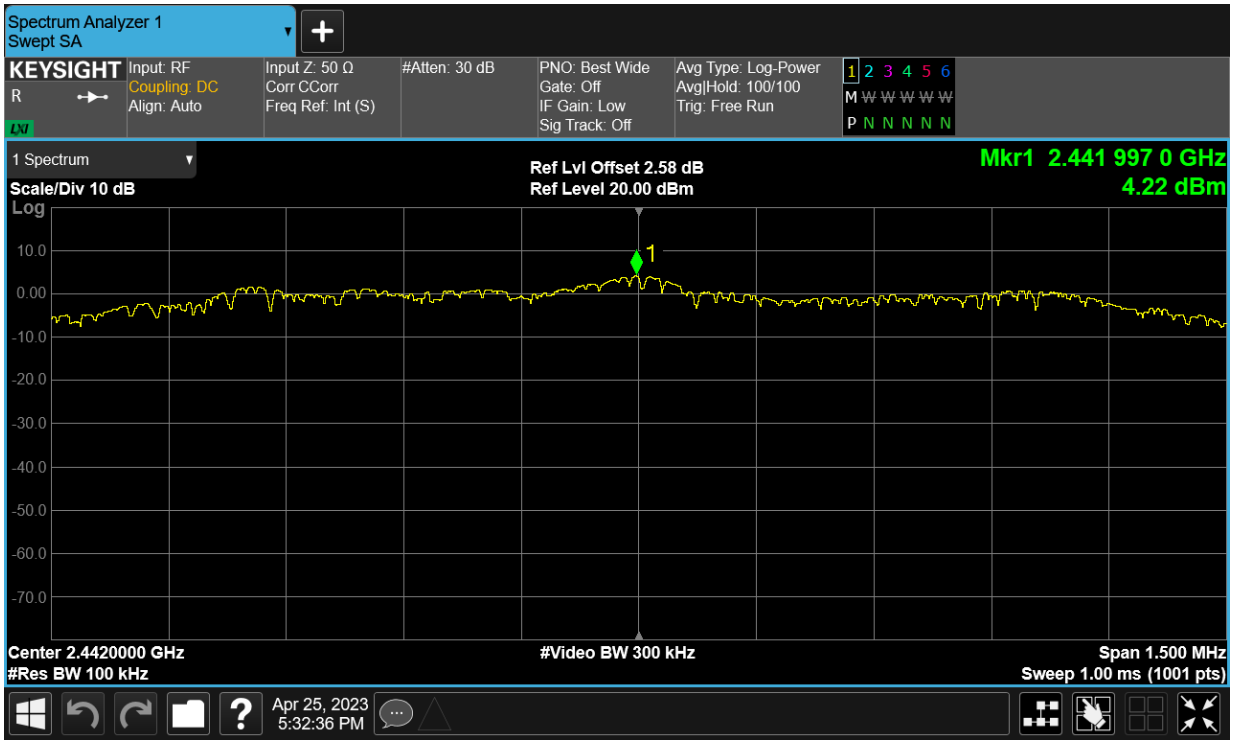
Tx. Spurious NVNT BLE 2402MHz Ant6 Ref



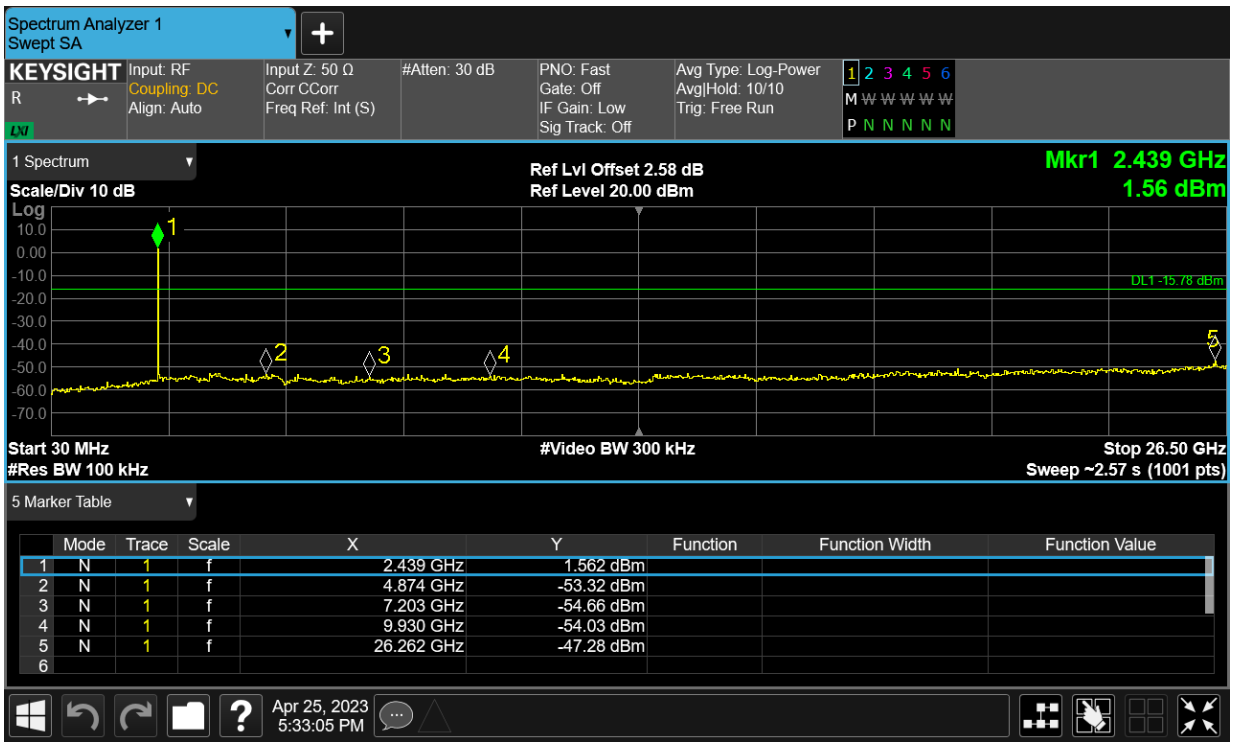

Tx. Spurious NVNT BLE 2402MHz Ant6 Emission



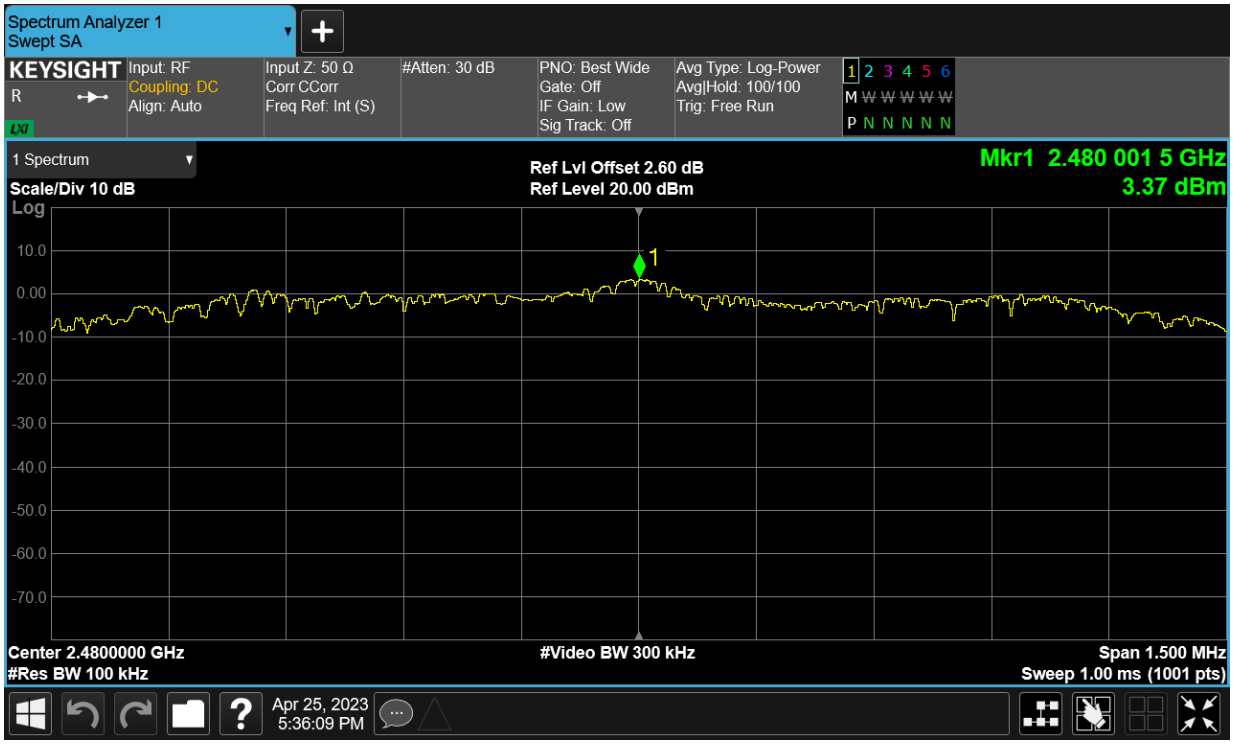

Tx. Spurious NVNT BLE 2442MHz Ant6 Ref

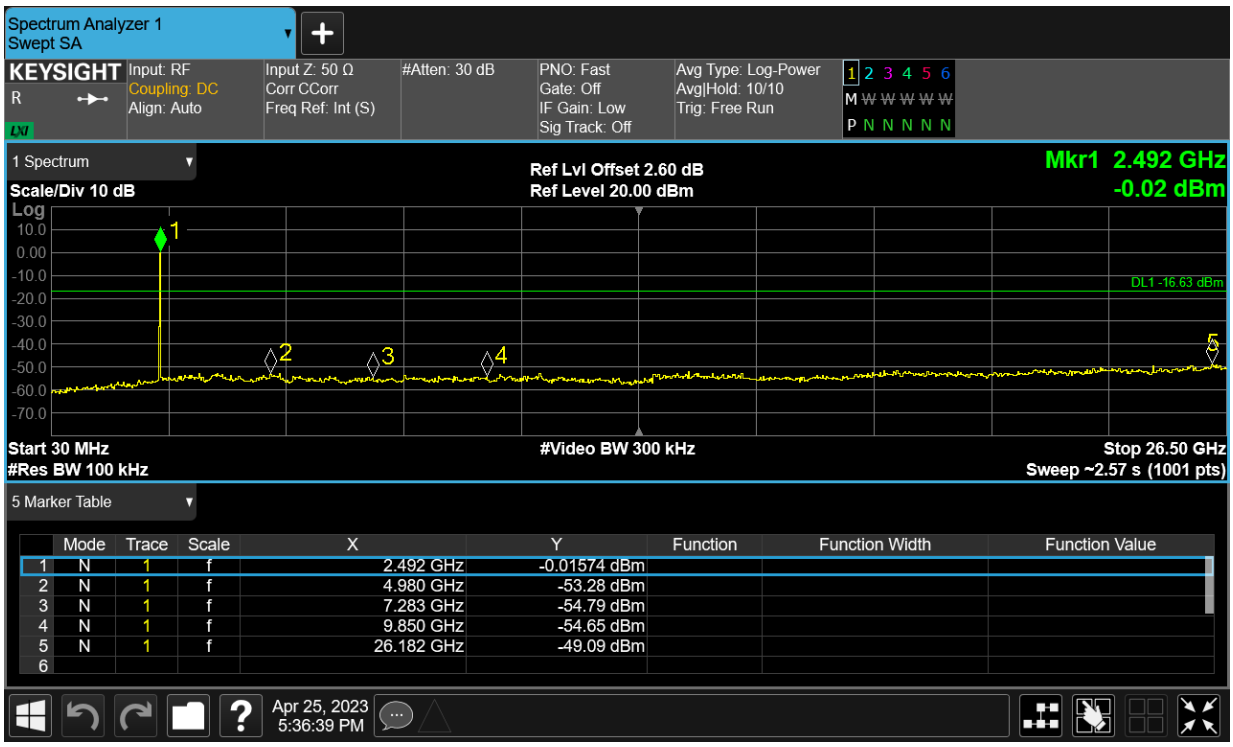



Tx. Spurious NVNT BLE 2442MHz Ant6 Emission




Tx. Spurious NVNT BLE 2480MHz Ant6 Ref




Tx. Spurious NVNT BLE 2480MHz Ant6 Emission