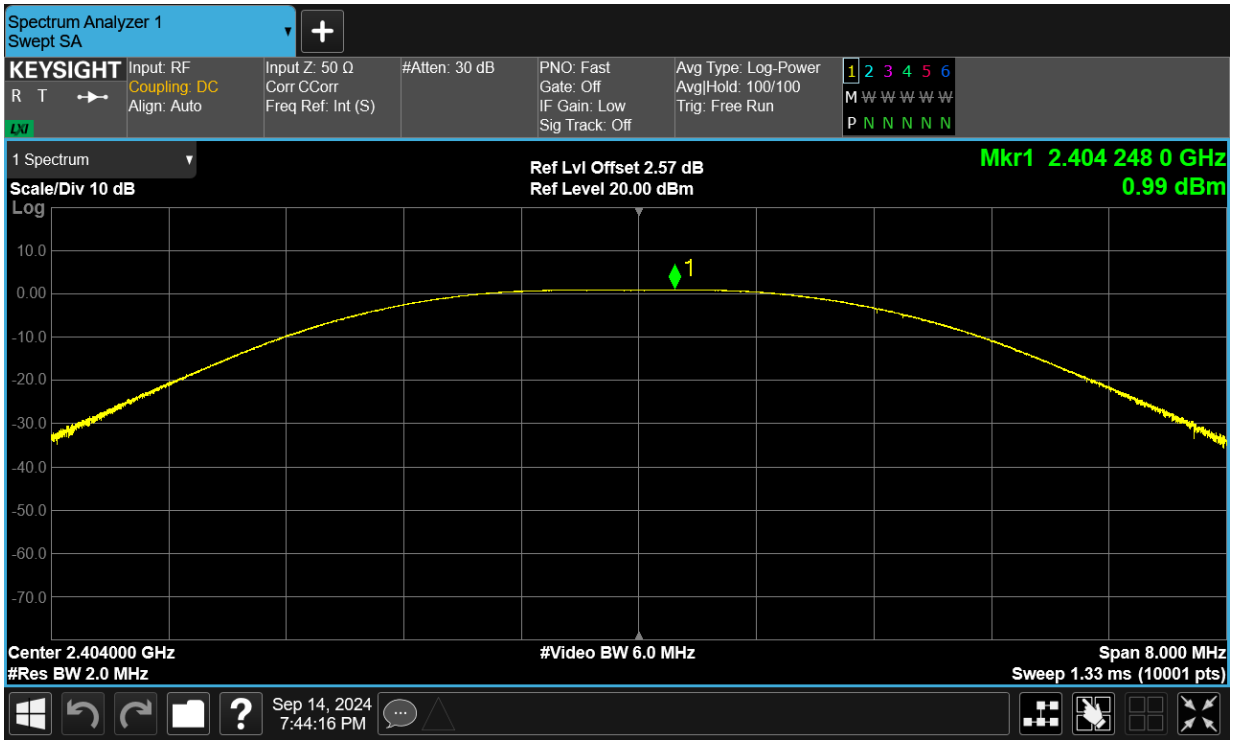
Test Data

Maximum Conducted Output Power

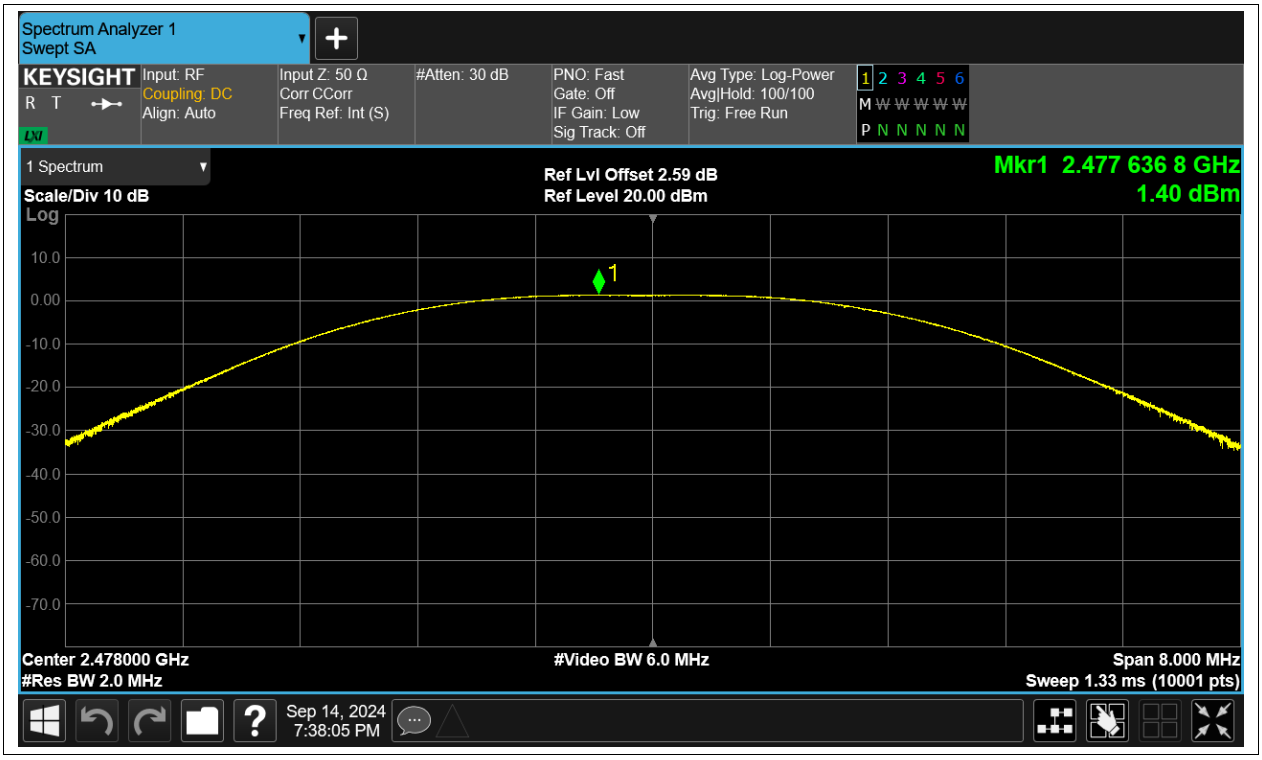
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2404	Ant0	0.993	30	Pass
NVNT	BLE	2442	Ant0	2.1	30	Pass
NVNT	BLE	2478	Ant0	1.401	30	Pass

Test Graphs
Power NVNT BLE 2404MHz Ant0



Power NVNT BLE 2442MHz Ant0

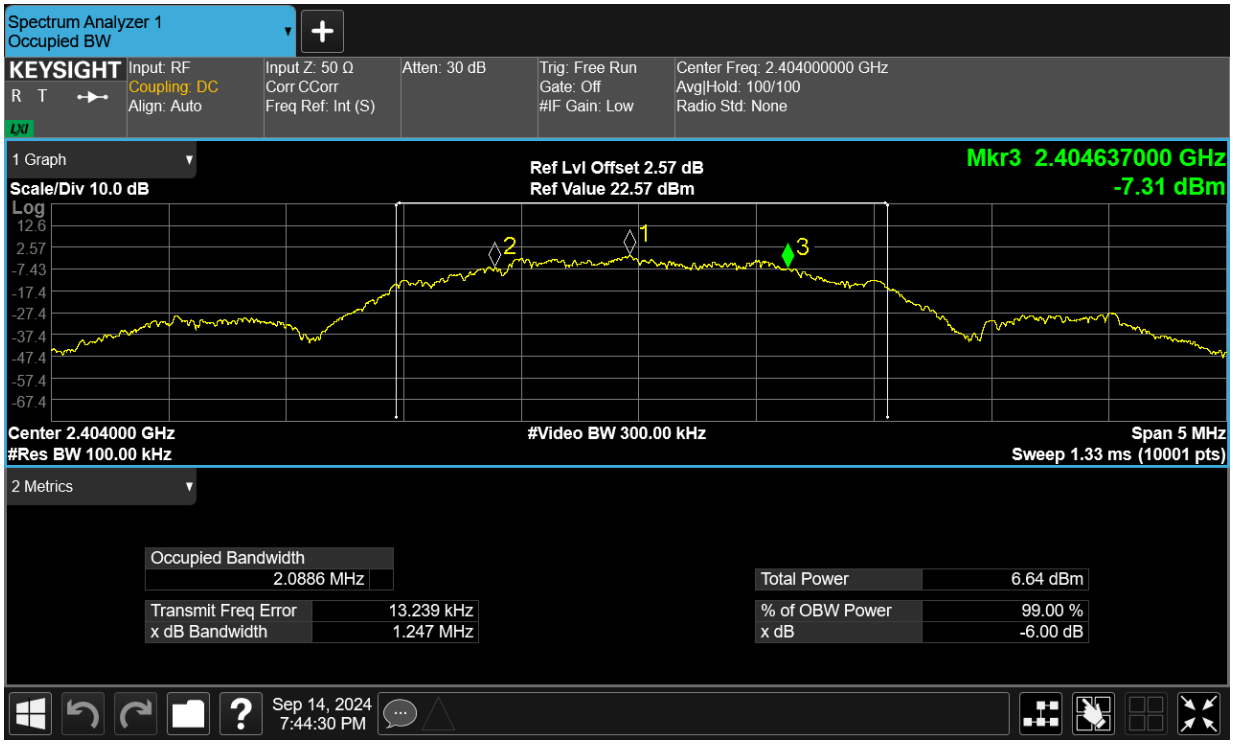
Power NVNT BLE 2478MHz Ant0


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
Ref Lvl Offset 2.59 dB
Ref Level 20.00 dBm
Mkr1 2.477 636 8 GHz
1.40 dBm
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 2.478000 GHz
#Res BW 2.0 MHz
#Video BW 6.0 MHz
Span 8.000 MHz
Sweep 1.33 ms (10001 pts)
Sep 14, 2024
7:38:05 PM

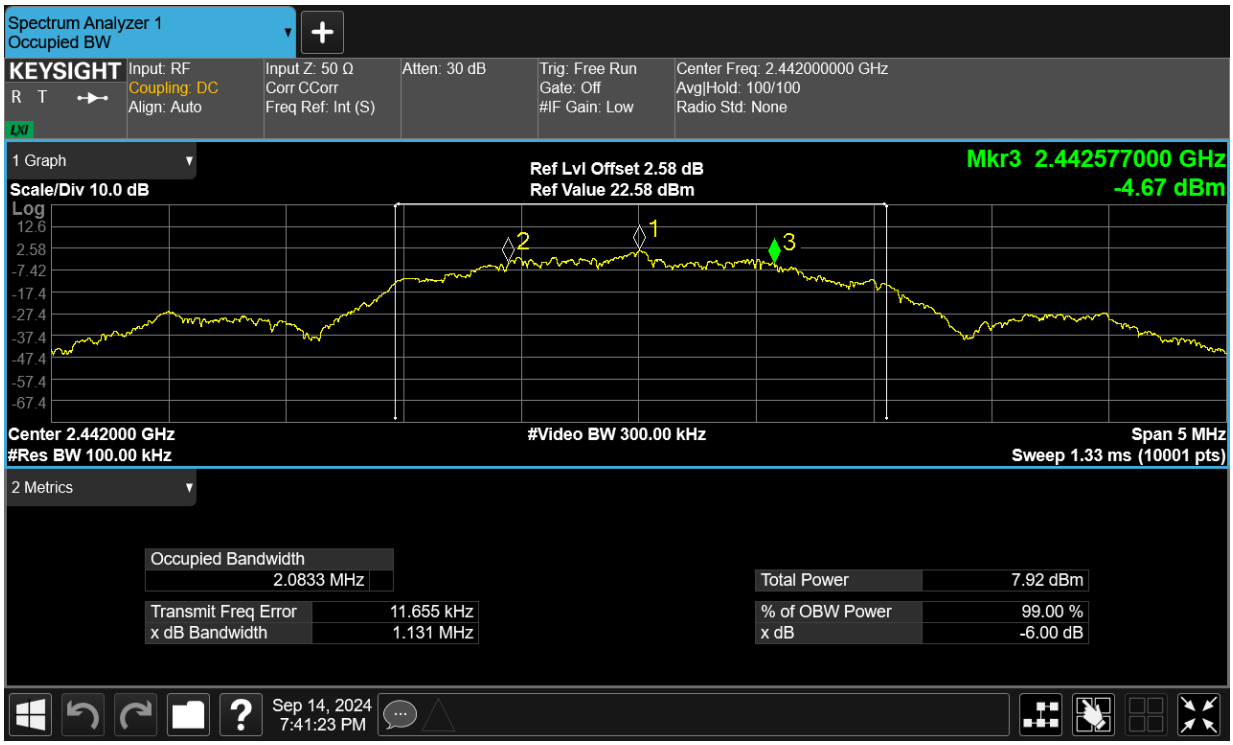
-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	limit	Verdic
NVNT	BLE	2404	Ant0	1.247	0.5	Pass
NVNT	BLE	2442	Ant0	1.131	0.5	Pass
NVNT	BLE	2478	Ant0	1.139	0.5	Pass

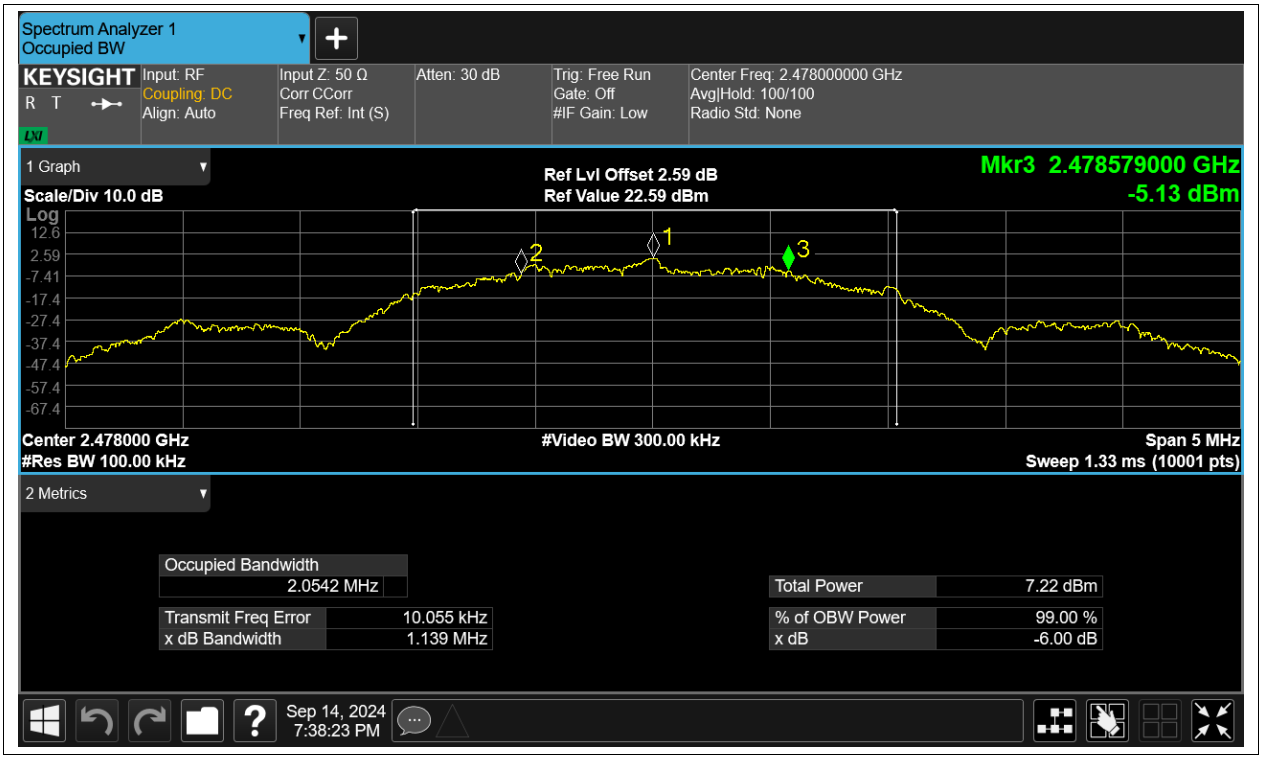
Test Graphs
-6dB Bandwidth NVNT BLE 2404MHz Ant0



-6dB Bandwidth NVNT BLE 2442MHz Ant0



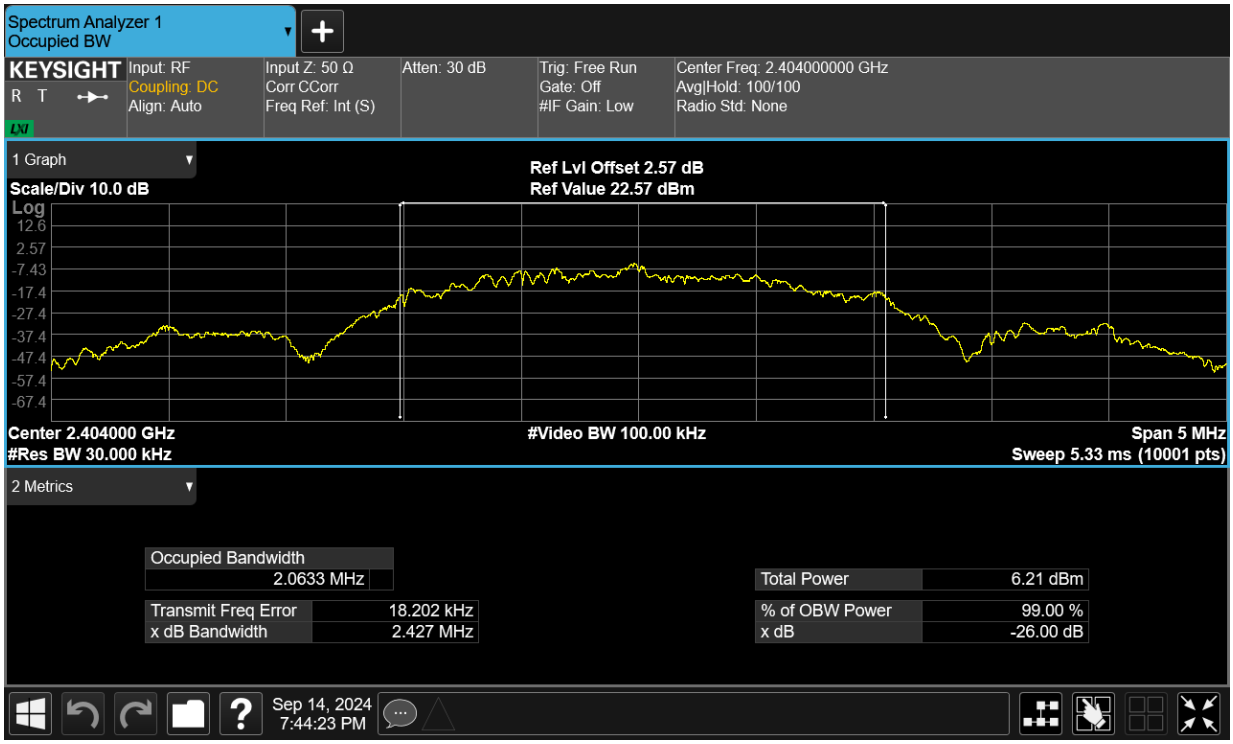
-6dB Bandwidth NVNT BLE 2478MHz Ant0


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: 2.478000000 GHz
Avg|Hold: 100/100
Radio Std: None
1 Graph
Ref Lvl Offset 2.59 dB
Ref Value 22.59 dBm
Mkr3 2.478579000 GHz
-5.13 dBm
Scale/Div 10.0 dB
Log
12.6
2.59
-7.41
-17.4
-27.4
-37.4
-47.4
-57.4
-67.4
Center 2.478000 GHz
#Res BW 100.00 kHz
#Video BW 300.00 kHz
Span 5 MHz
Sweep 1.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
2.0542 MHz
Transmit Freq Error 10.055 kHz
x dB Bandwidth 1.139 MHz
Total Power 7.22 dBm
% of OBW Power 99.00 %
x dB -6.00 dB
Sep 14, 2024
7:38:23 PM

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2404	Ant0	2.063
NVNT	BLE	2442	Ant0	2.062
NVNT	BLE	2478	Ant0	2.06

Test Graphs
OBW NVNT BLE 2404MHz Ant0



OBW NVNT BLE 2442MHz Ant0

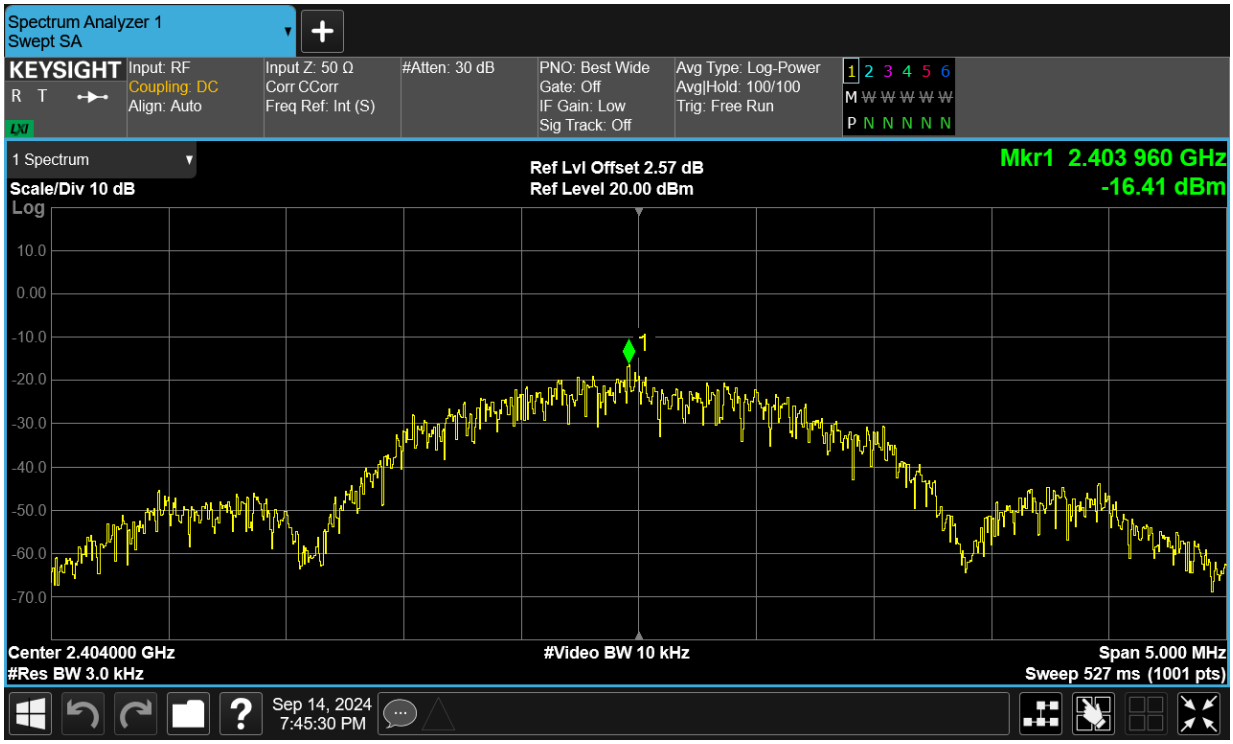
OBW NVNT BLE 2478MHz Ant0

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: 2.478000000 GHz
Avg|Hold: 100/100
Radio Std: None
1 Graph
Ref Lvl Offset 2.59 dB
Ref Value 22.59 dBm
Scale/Div 10.0 dB
Log
12.6
2.59
-7.41
-17.4
-27.4
-37.4
-47.4
-57.4
-67.4
Center 2.478000 GHz
#Res BW 30.000 kHz
#Video BW 100.00 kHz
Span 5 MHz
Sweep 5.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
2.0605 MHz
Transmit Freq Error 17.579 kHz
x dB Bandwidth 2.427 MHz
Total Power 6.67 dBm
% of OBW Power 99.00 %
x dB -26.00 dB
Sep 14, 2024
7:38:17 PM

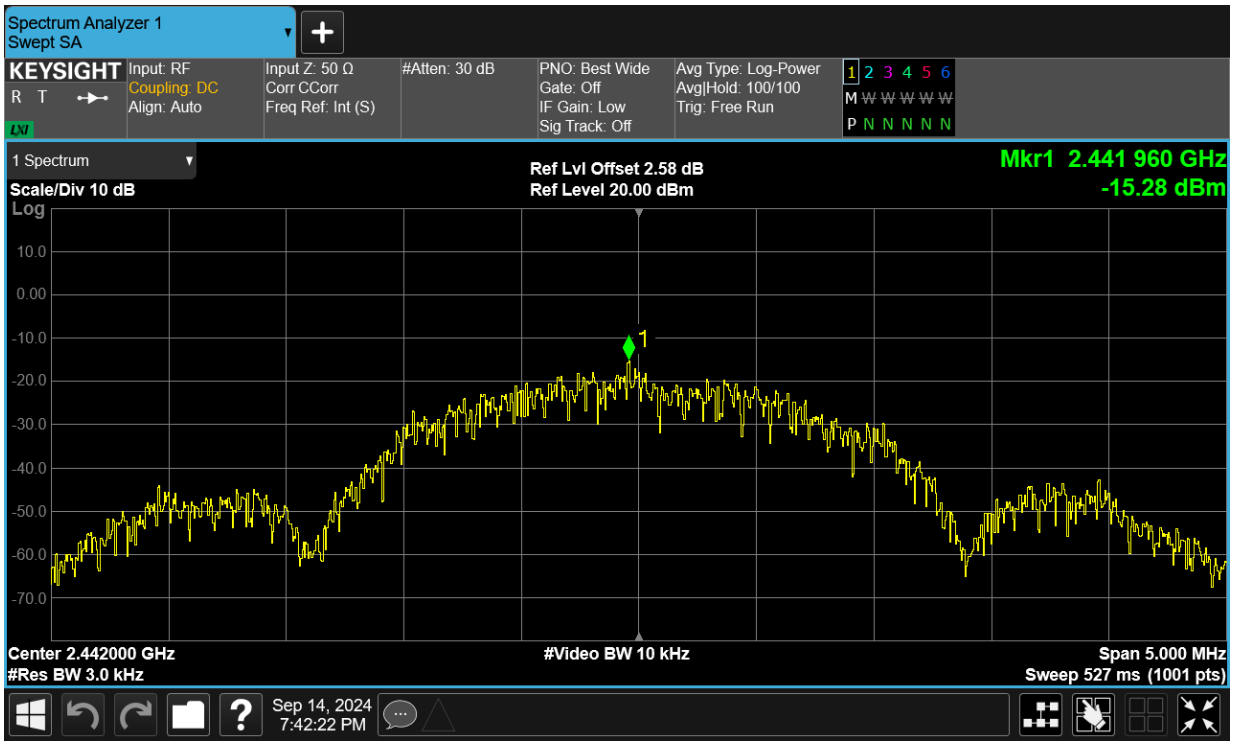
Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2404	Ant0	-16.412	8	Pass
NVNT	BLE	2442	Ant0	-15.281	8	Pass
NVNT	BLE	2478	Ant0	-15.973	8	Pass

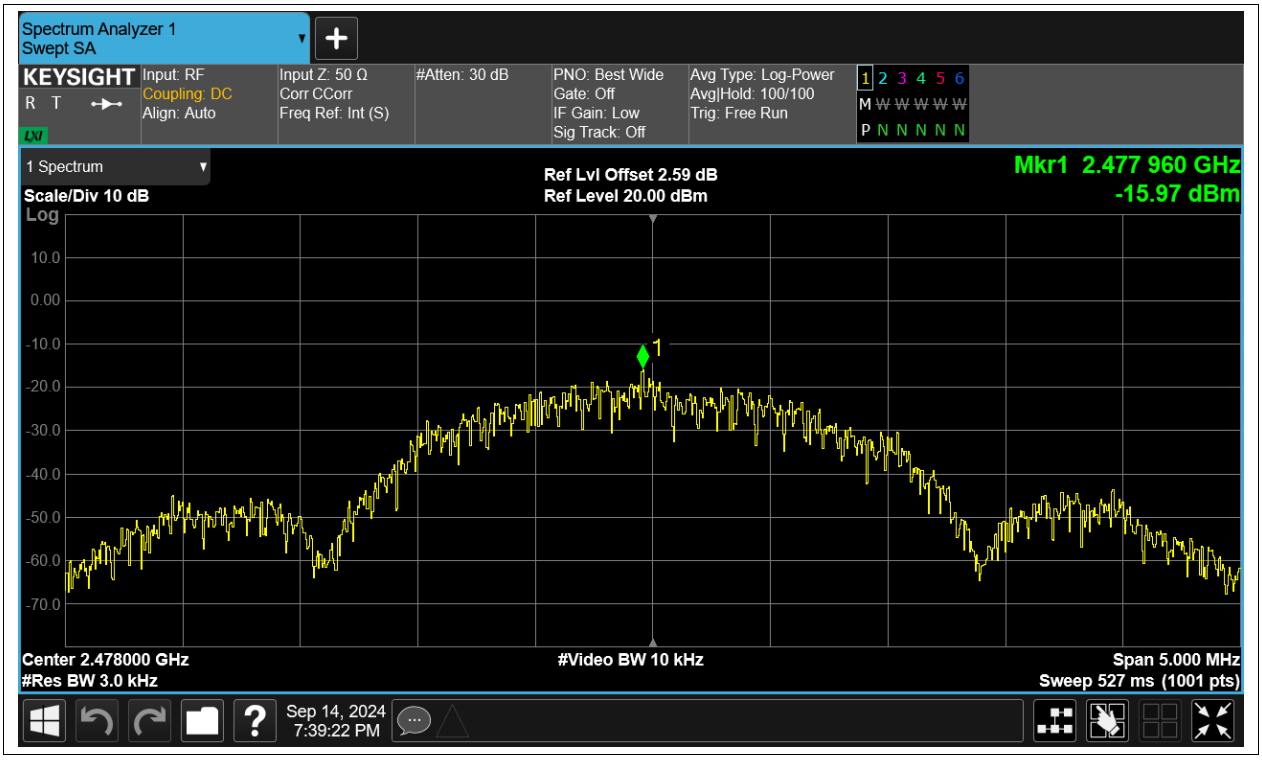
Test Graphs
PSD NVNT BLE 2404MHz Ant0



PSD NVNT BLE 2442MHz Ant0



PSD NVNT BLE 2478MHz Ant0

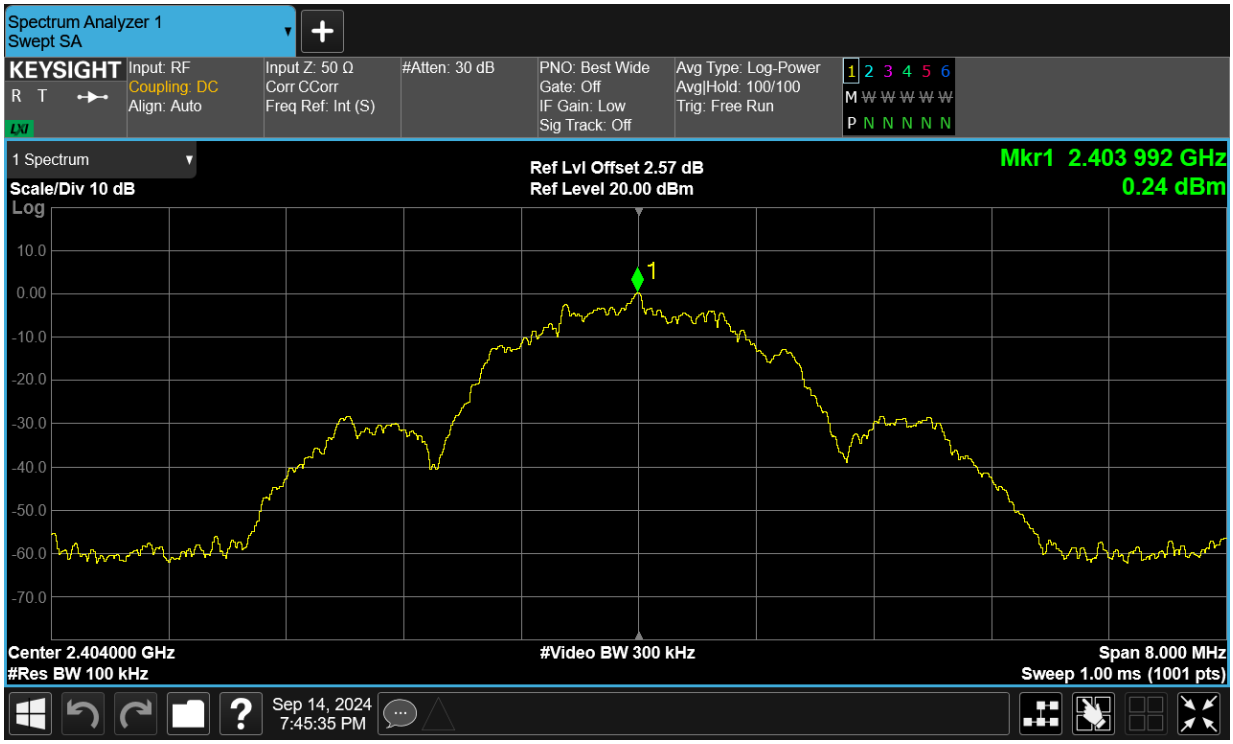

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.59 dB
Ref Level 20.00 dBm
Mkr1 2.477 960 GHz
-15.97 dBm
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 2.478000 GHz
#Res BW 3.0 kHz
#Video BW 10 kHz
Span 5.000 MHz
Sweep 527 ms (1001 pts)
Sep 14, 2024
7:39:22 PM

Band Edge

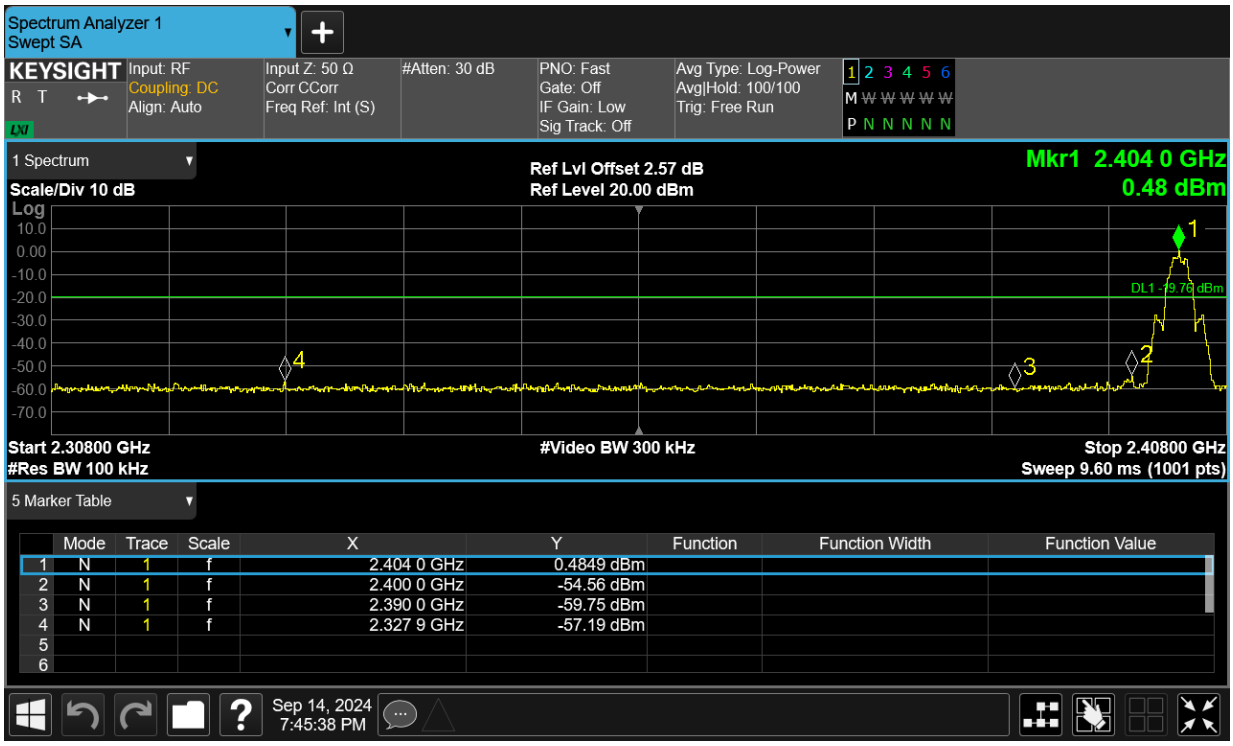
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2404	Ant0	-57.43	-20	Pass
NVNT	BLE	2478	Ant0	-57.57	-20	Pass

Test Graphs

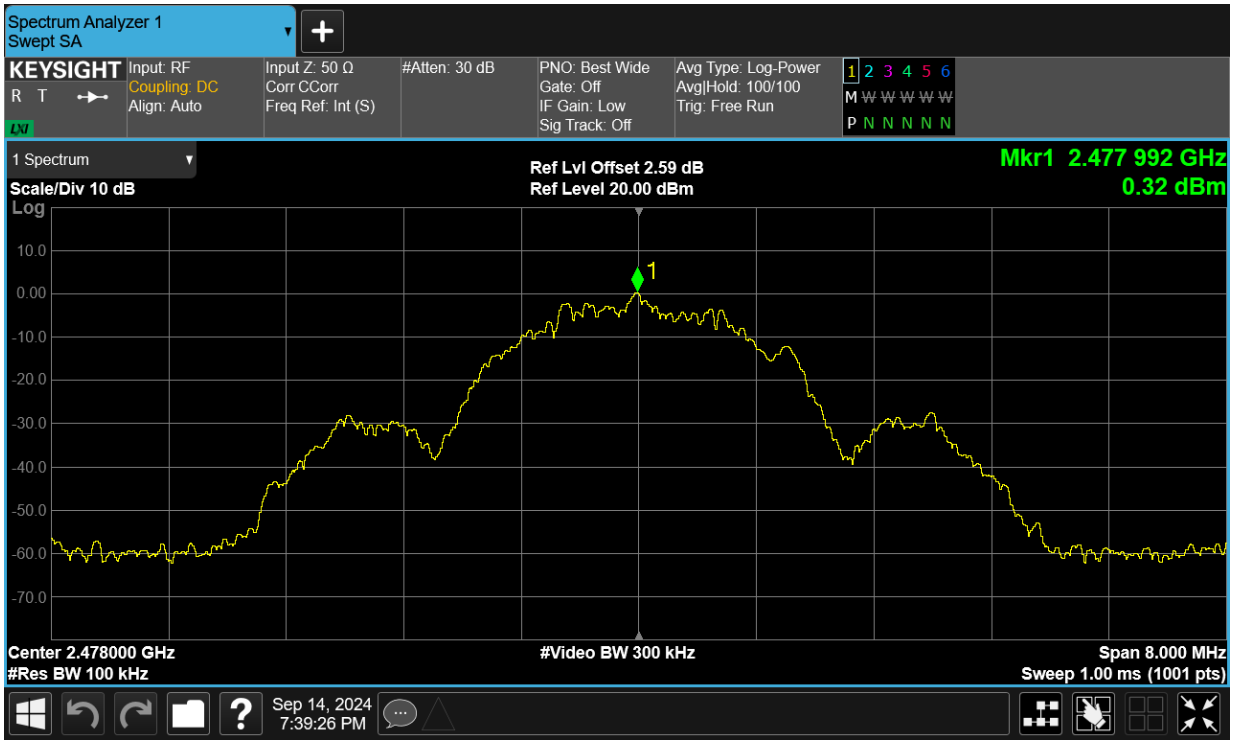
Band Edge NVNT BLE 2404MHz Ant0 Ref



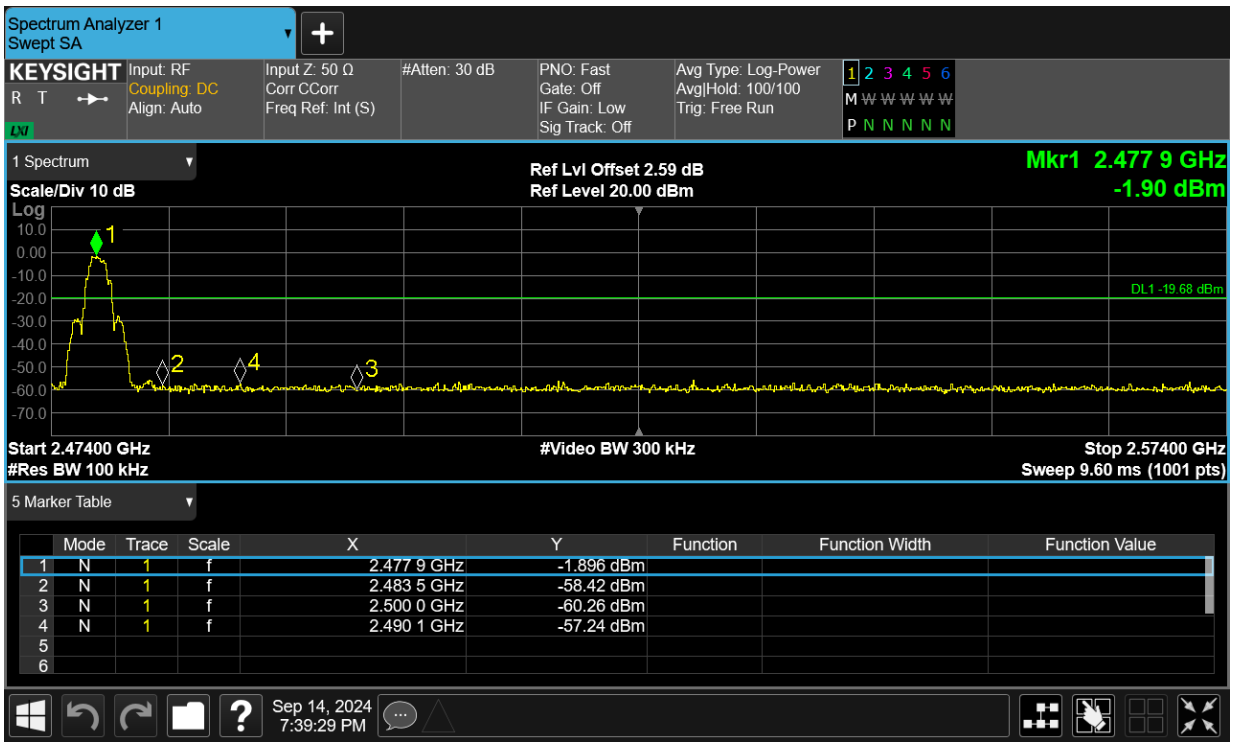
Band Edge NVNT BLE 2404MHz Ant0 Emission



Band Edge NVNT BLE 2478MHz Ant0 Ref



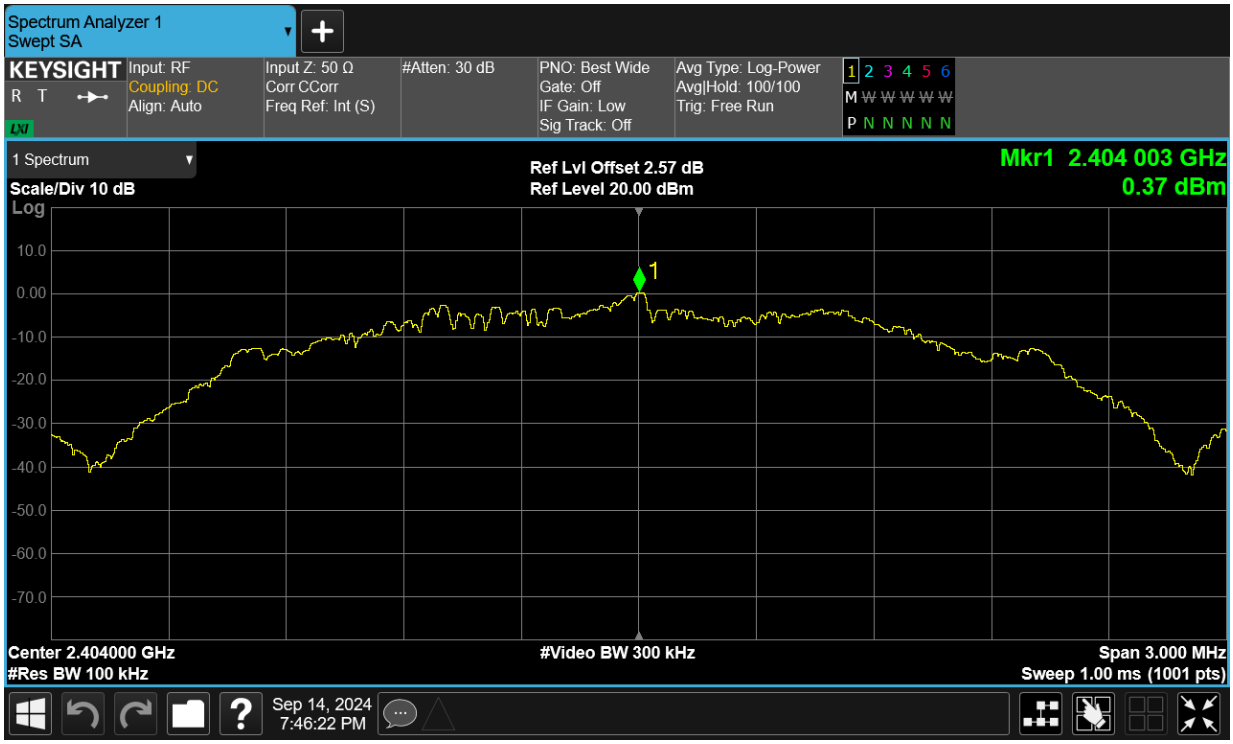
Band Edge NVNT BLE 2478MHz Ant0 Emission



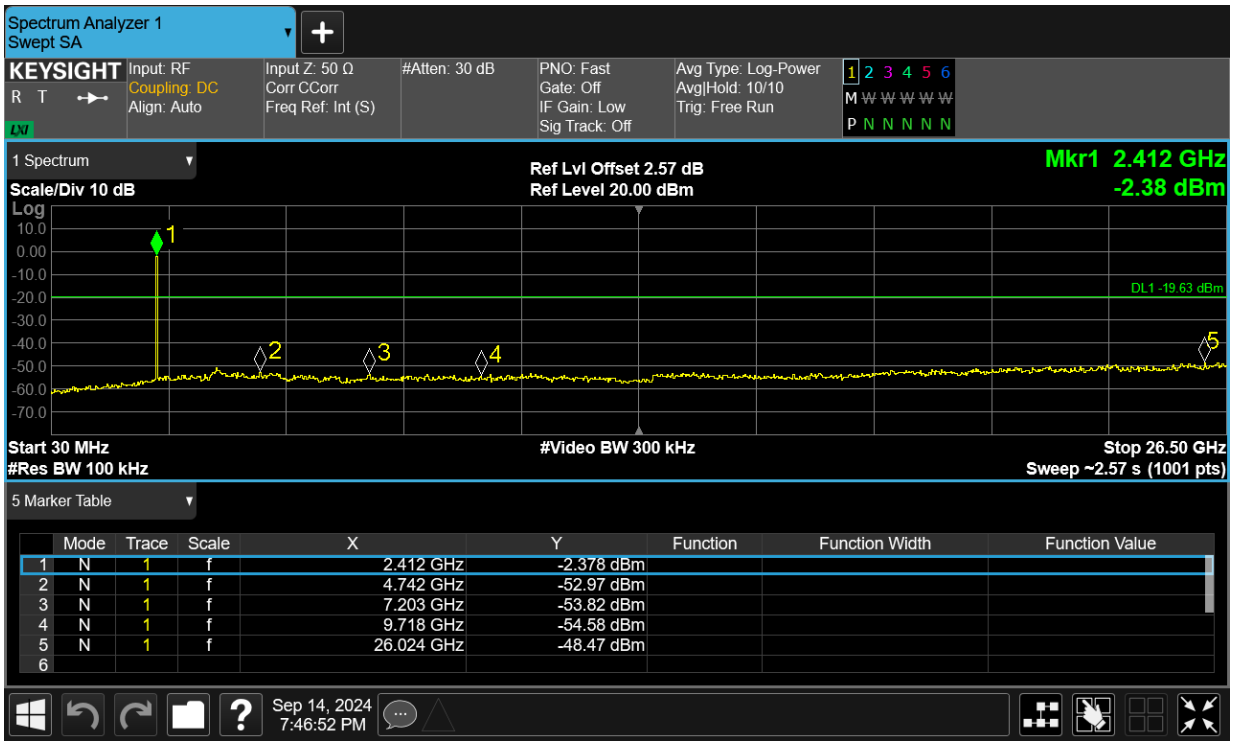
Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2404	Ant0	-48.84	-20	Pass
NVNT	BLE	2442	Ant0	-49.93	-20	Pass
NVNT	BLE	2478	Ant0	-48.29	-20	Pass

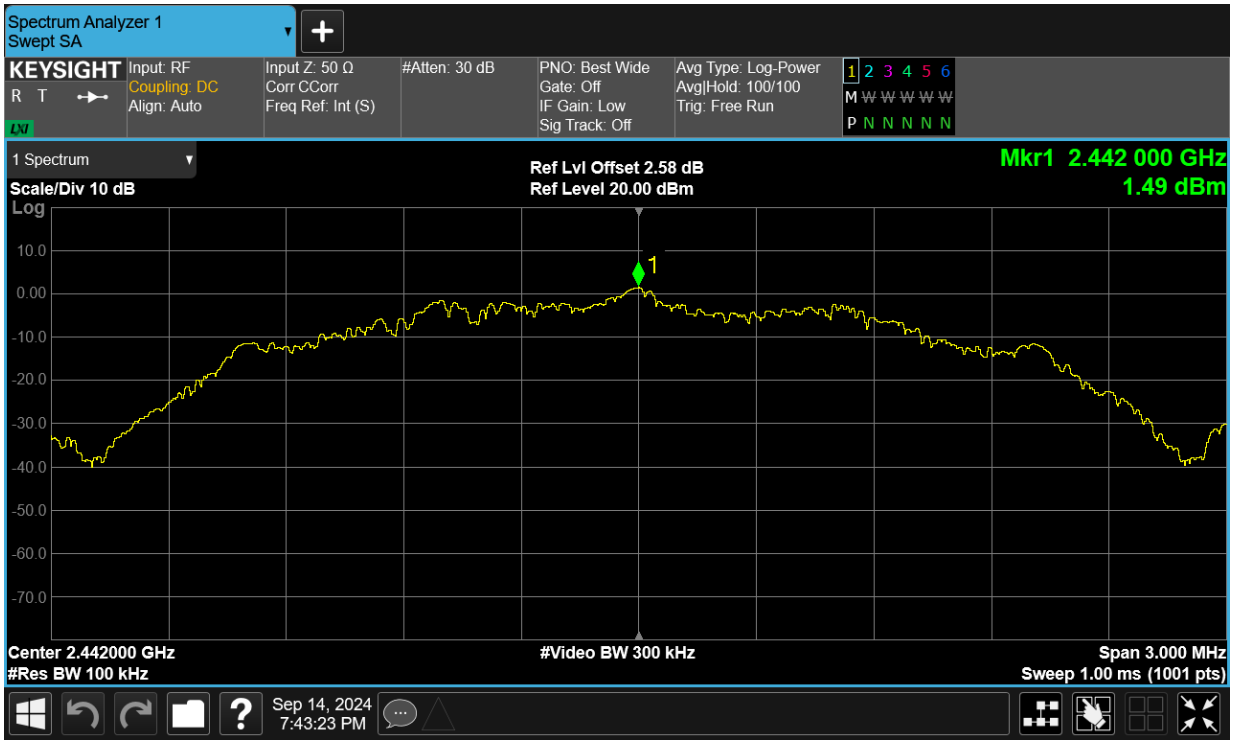
Test Graphs
Tx. Spurious NVNT BLE 2404MHz Ant0 Ref



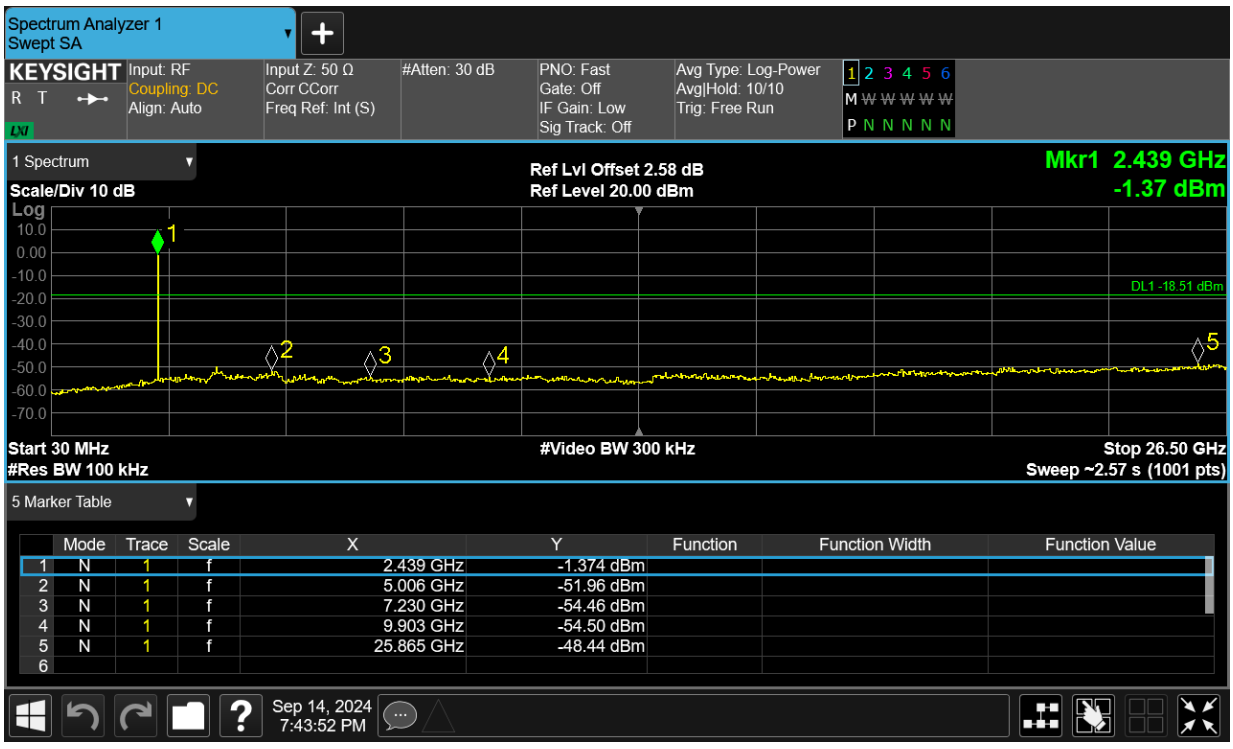
Tx. Spurious NVNT BLE 2404MHz Ant0 Emission



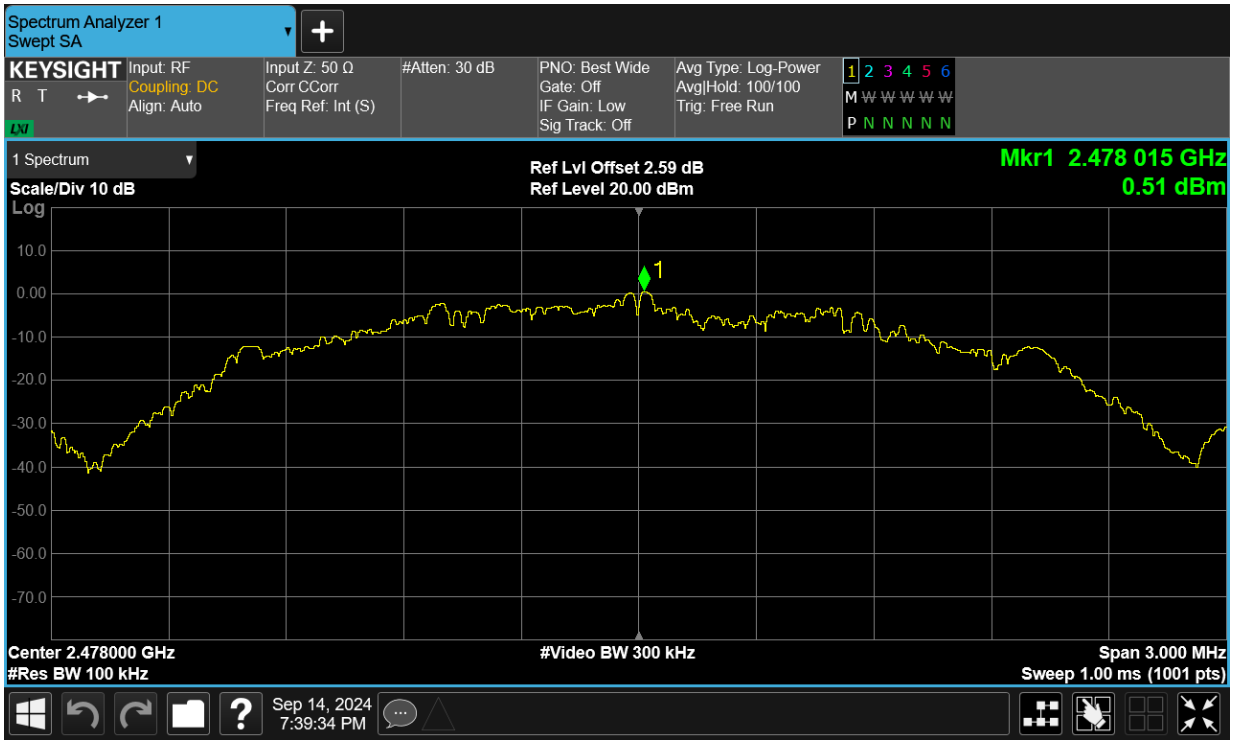
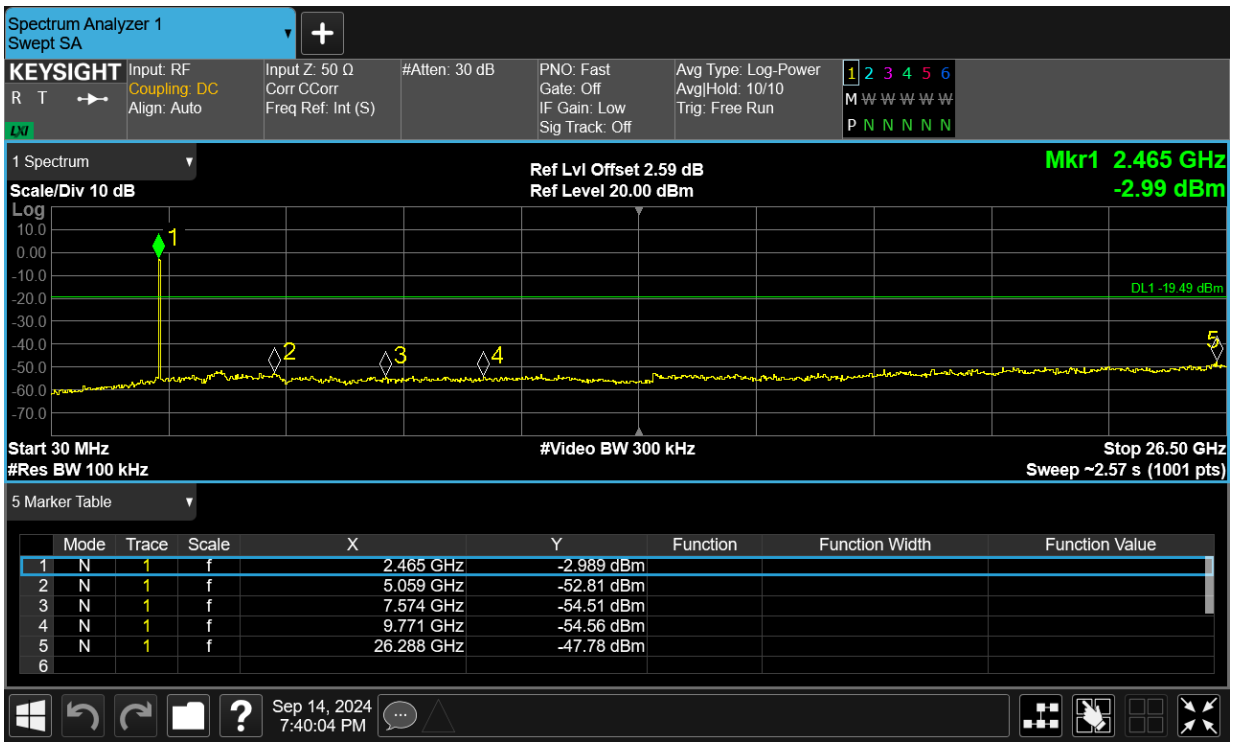
Tx. Spurious NVNT BLE 2442MHz Ant0 Ref



Tx. Spurious NVNT BLE 2442MHz Ant0 Emission



Tx. Spurious NVNT BLE 2478MHz Ant0 Ref



Tx. Spurious NVNT BLE 2478MHz Ant0 Emission