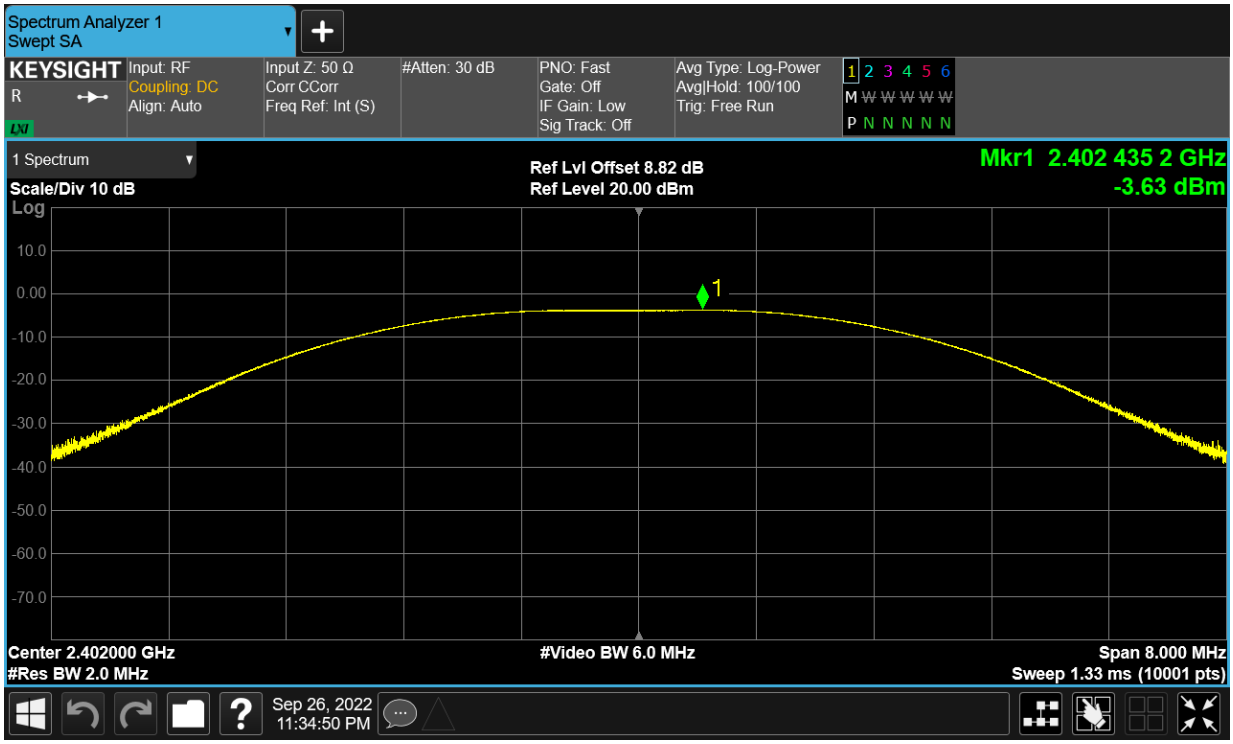
Test Data

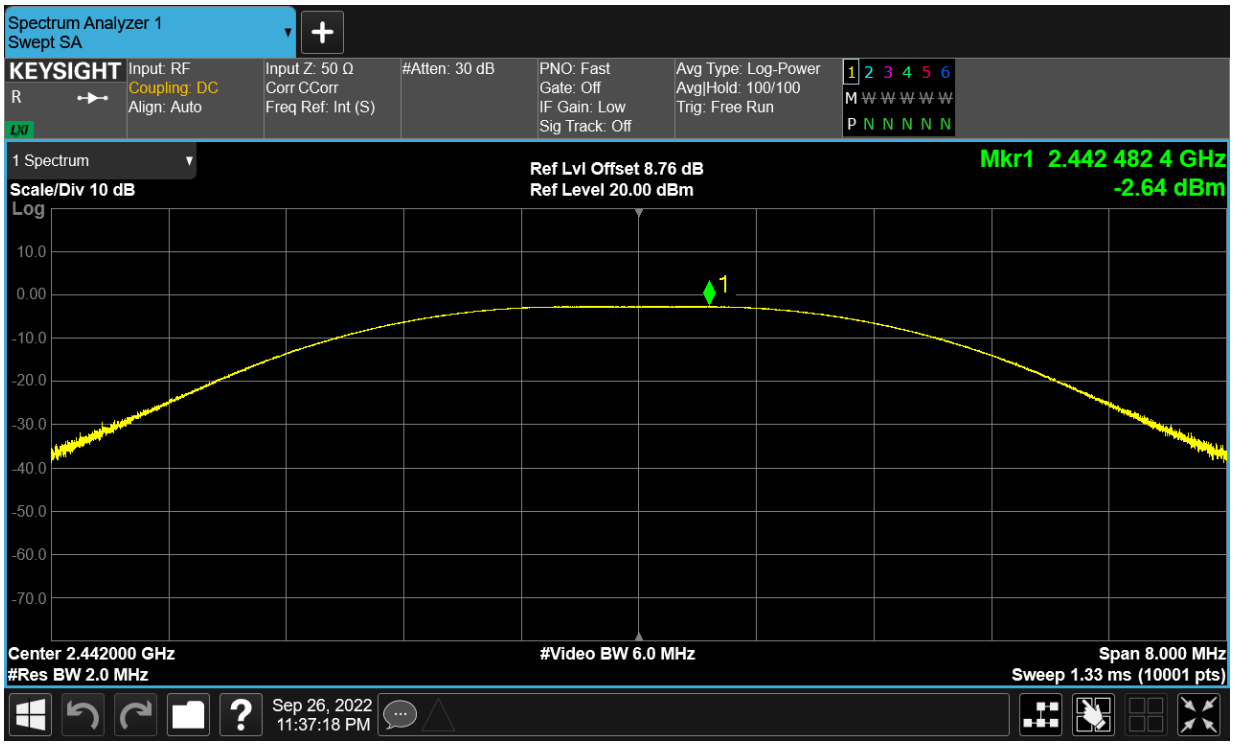
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	-3.628	30	Pass
NVNT	BLE	2442	Ant1	-2.644	30	Pass
NVNT	BLE	2480	Ant1	-3.477	30	Pass

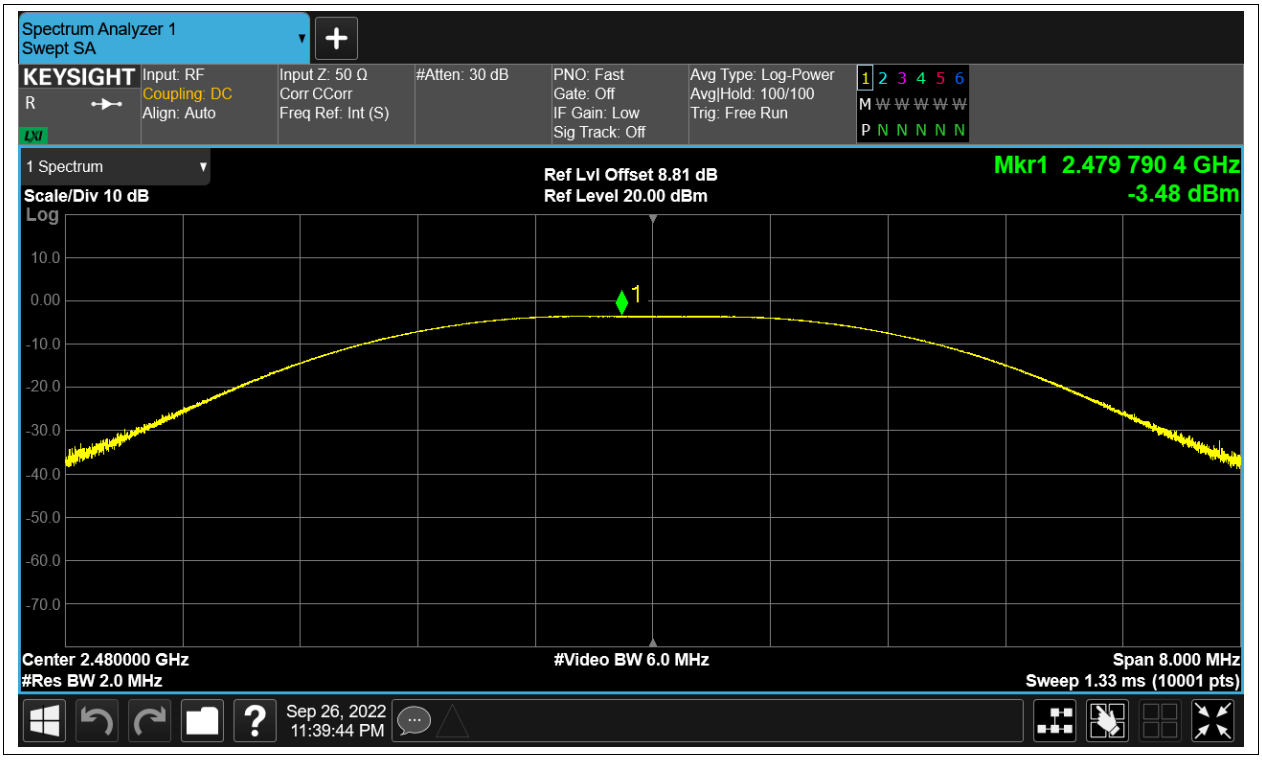
Test Graphs
Power NVNT BLE 2402MHz Ant1



Power NVNT BLE 2442MHz Ant1



Power NVNT BLE 2480MHz Ant1

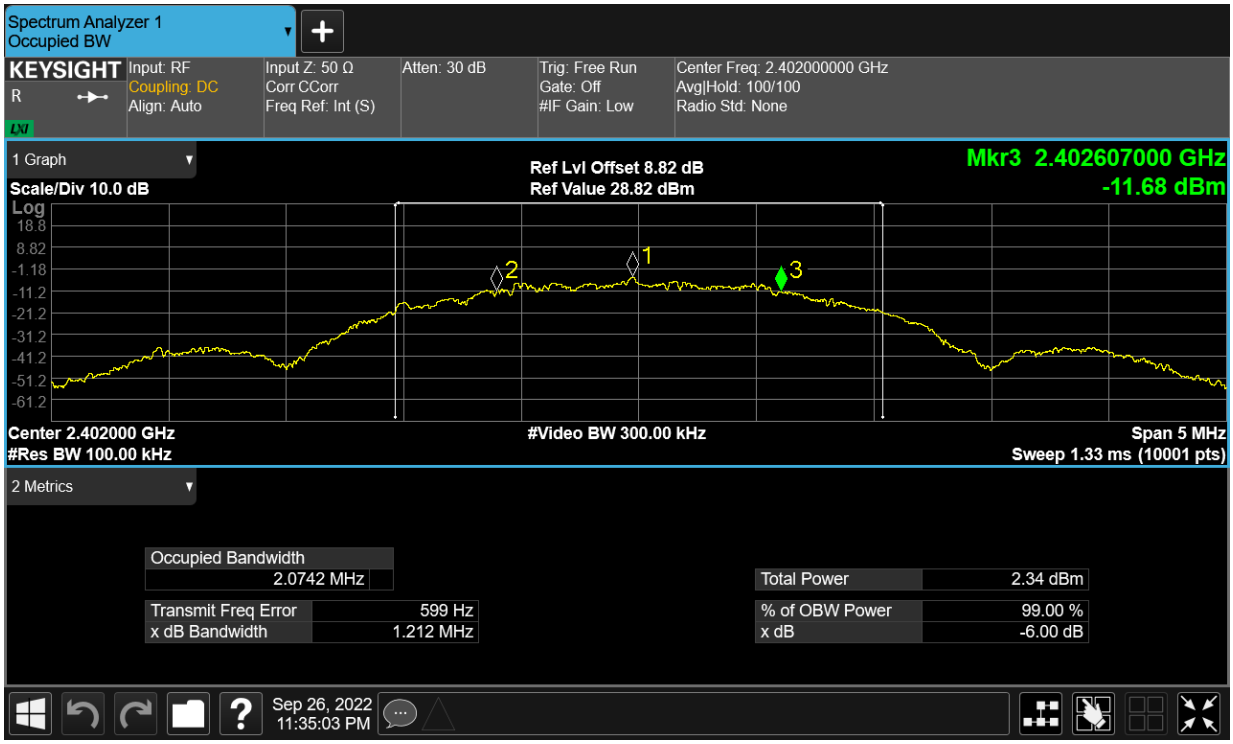

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 8.81 dB
Ref Level 20.00 dBm
Mkr1 2.479 790 4 GHz
-3.48 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)
Sep 26, 2022
11:39:44 PM

-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	limit	Verdic
NVNT	BLE	2402	Ant1	1.212	0.5	Pass
NVNT	BLE	2442	Ant1	1.385	0.5	Pass
NVNT	BLE	2480	Ant1	1.222	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: 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 8.81 dB
Ref Value 28.81 dBm
Mkr3 2.480608000 GHz
-11.87 dBm
Scale/Div 10.0 dB
Log
18.8
8.81
-1.19
-11.2
-21.2
-31.2
-41.2
-51.2
-61.2
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
2.0746 MHz
Transmit Freq Error -3.402 kHz
x dB Bandwidth 1.222 MHz
Total Power 2.38 dBm
% of OBW Power 99.00 %
x dB -6.00 dB
Sep 26, 2022
11:39:57 PM

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2402	Ant1	2.079835513
NVNT	BLE	2442	Ant1	2.074122046
NVNT	BLE	2480	Ant1	2.07947825

Test Graphs
OBW NVNT BLE 2402MHz Ant1

OBW NVNT BLE 2442MHz Ant1

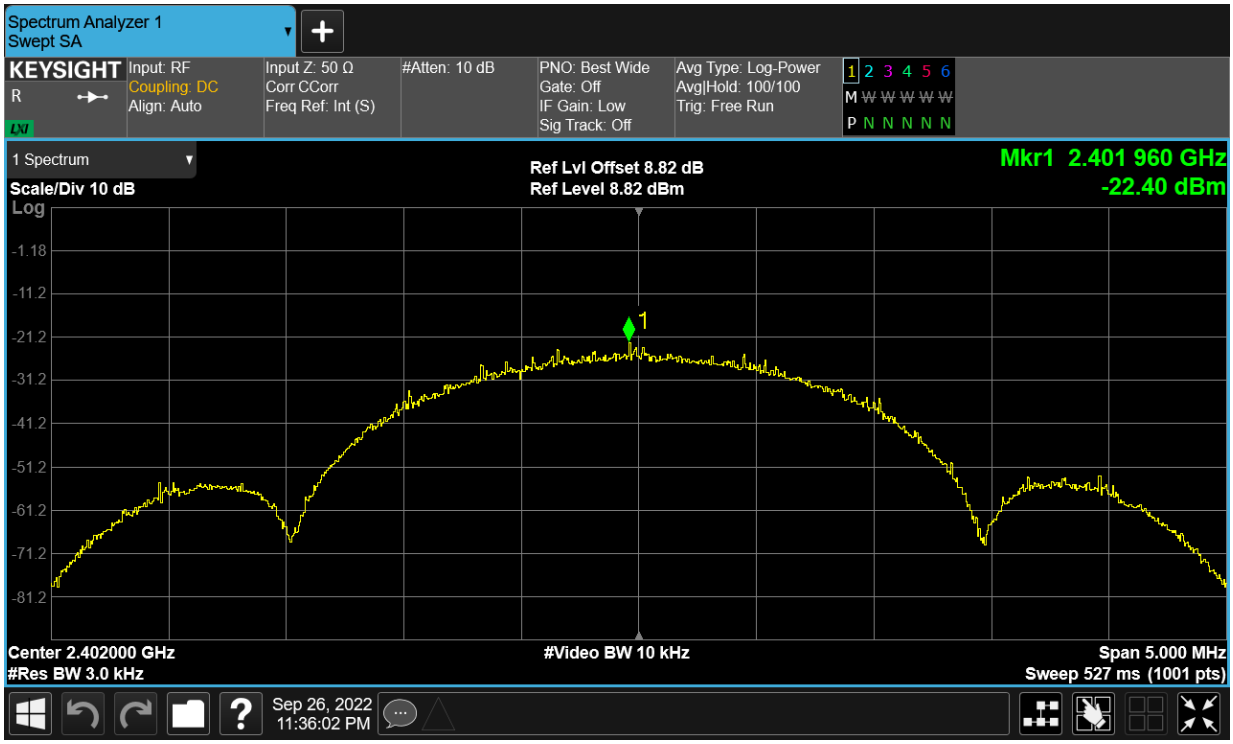
OBW NVNT BLE 2480MHz Ant1

Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: 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 8.81 dB
Ref Value 28.81 dBm
Scale/Div 10.0 dB
Log
18.8
8.81
-1.19
-11.2
-21.2
-31.2
-41.2
-51.2
-61.2
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
2.0795 MHz
Transmit Freq Error 7.982 kHz
x dB Bandwidth 2.510 MHz
Total Power 2.54 dBm
% of OBW Power 99.00 %
x dB -26.00 dB
Sep 26, 2022
11:39:50 PM

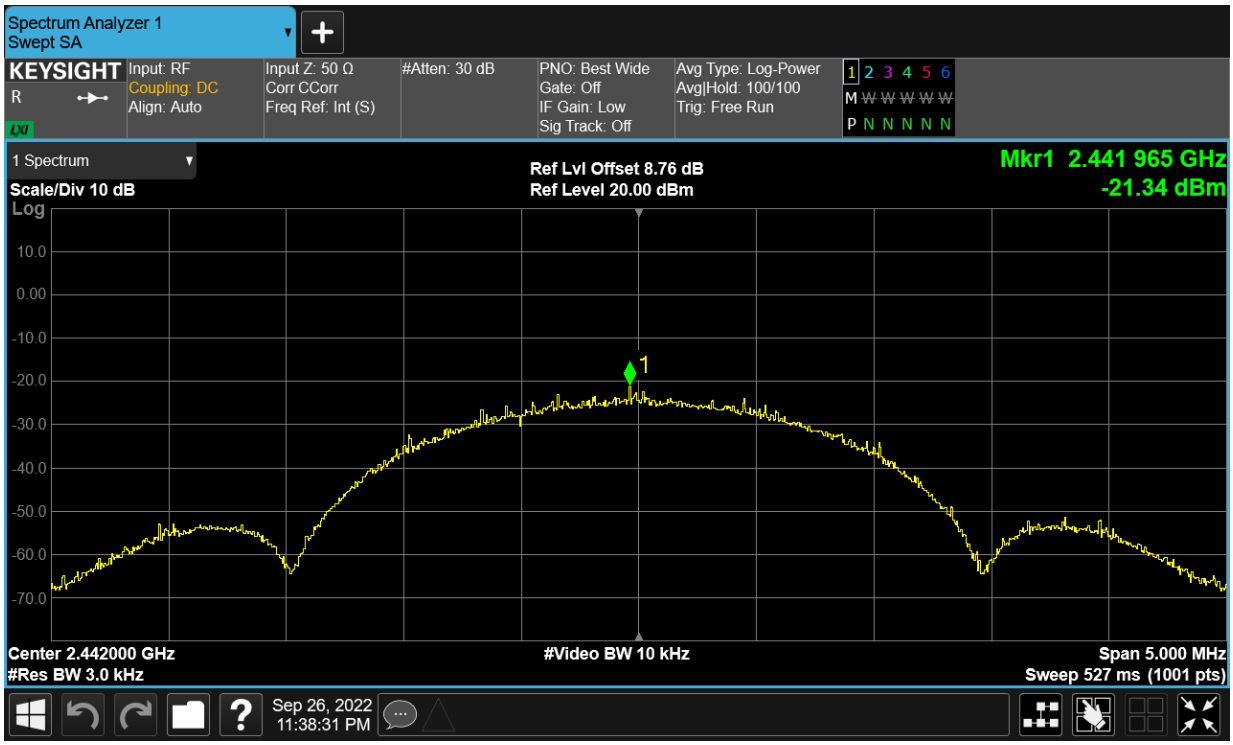
Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	-22.396	8	Pass
NVNT	BLE	2442	Ant1	-21.34	8	Pass
NVNT	BLE	2480	Ant1	-22.182	8	Pass

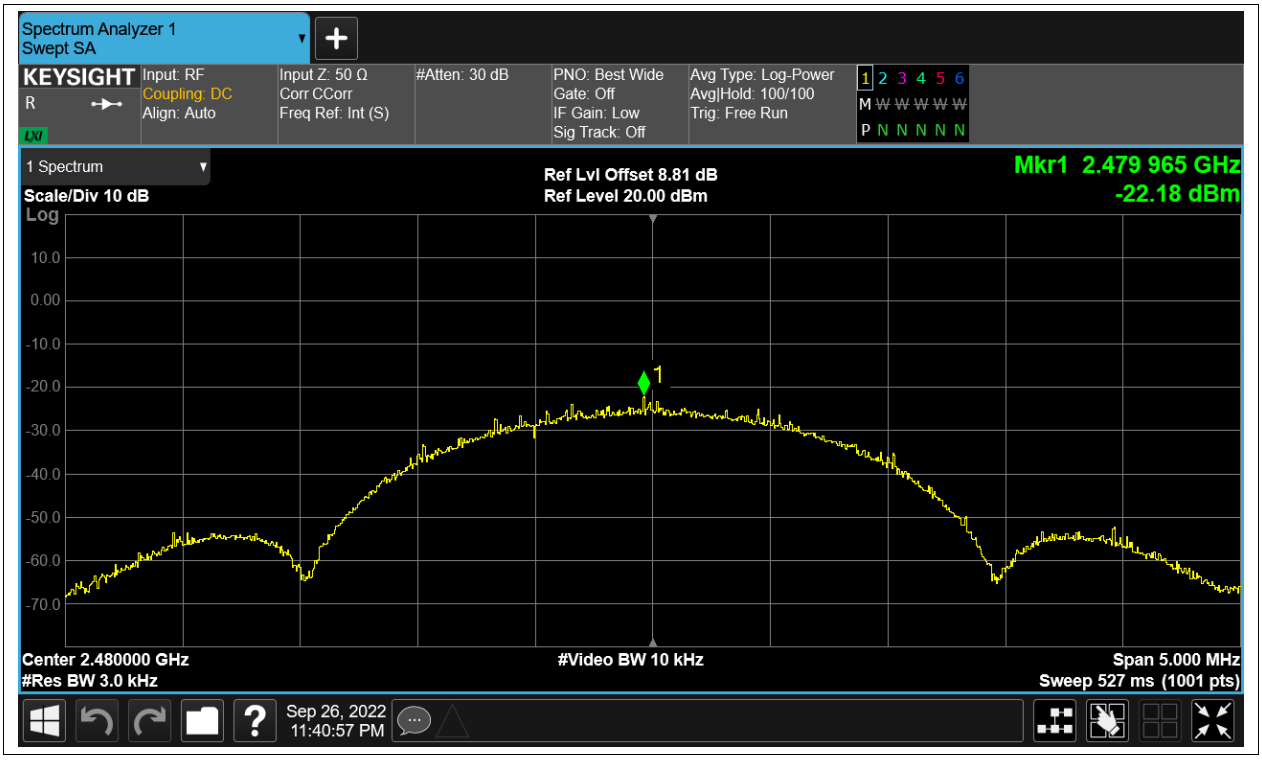
Test Graphs
PSD NVNT BLE 2402MHz Ant1



PSD NVNT BLE 2442MHz Ant1



PSD NVNT BLE 2480MHz Ant1

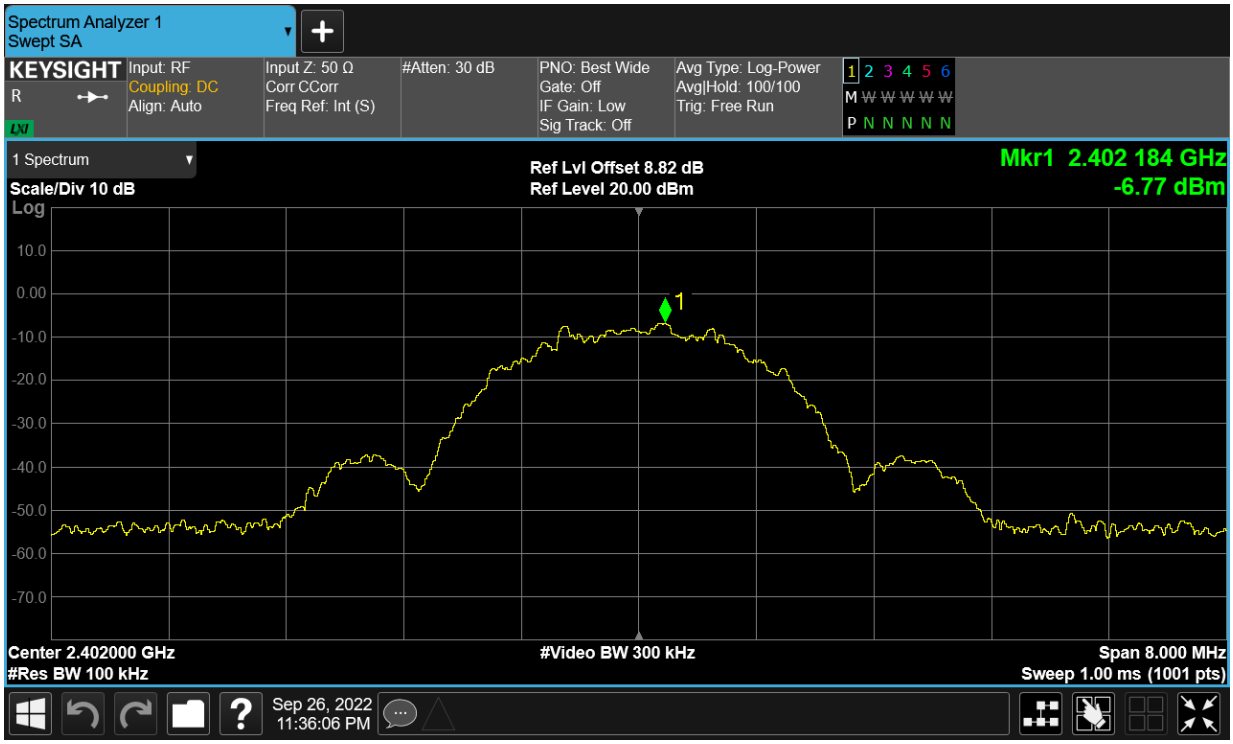

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 8.81 dB
Ref Level 20.00 dBm
Mkr1 2.479 965 GHz
-22.18 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)
Sep 26, 2022
11:40:57 PM

Band Edge

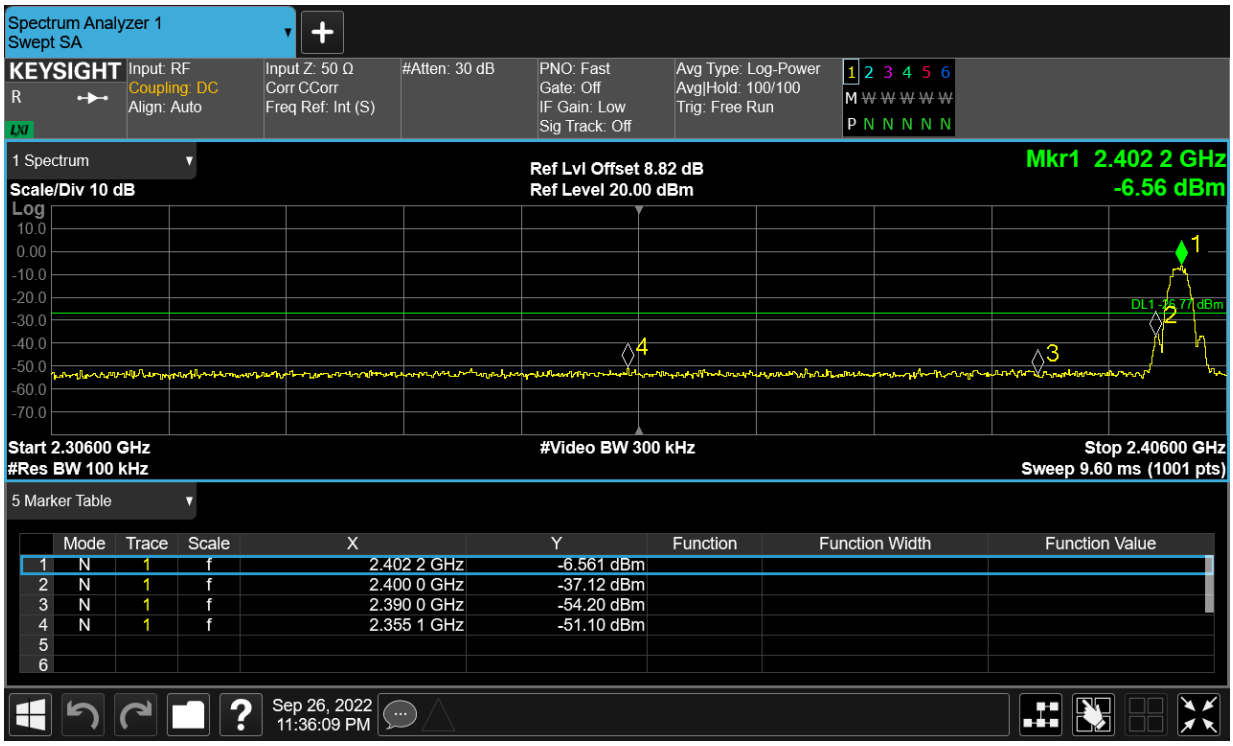
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-44.33	-20	Pass
NVNT	BLE	2480	Ant1	-43.71	-20	Pass

Test Graphs

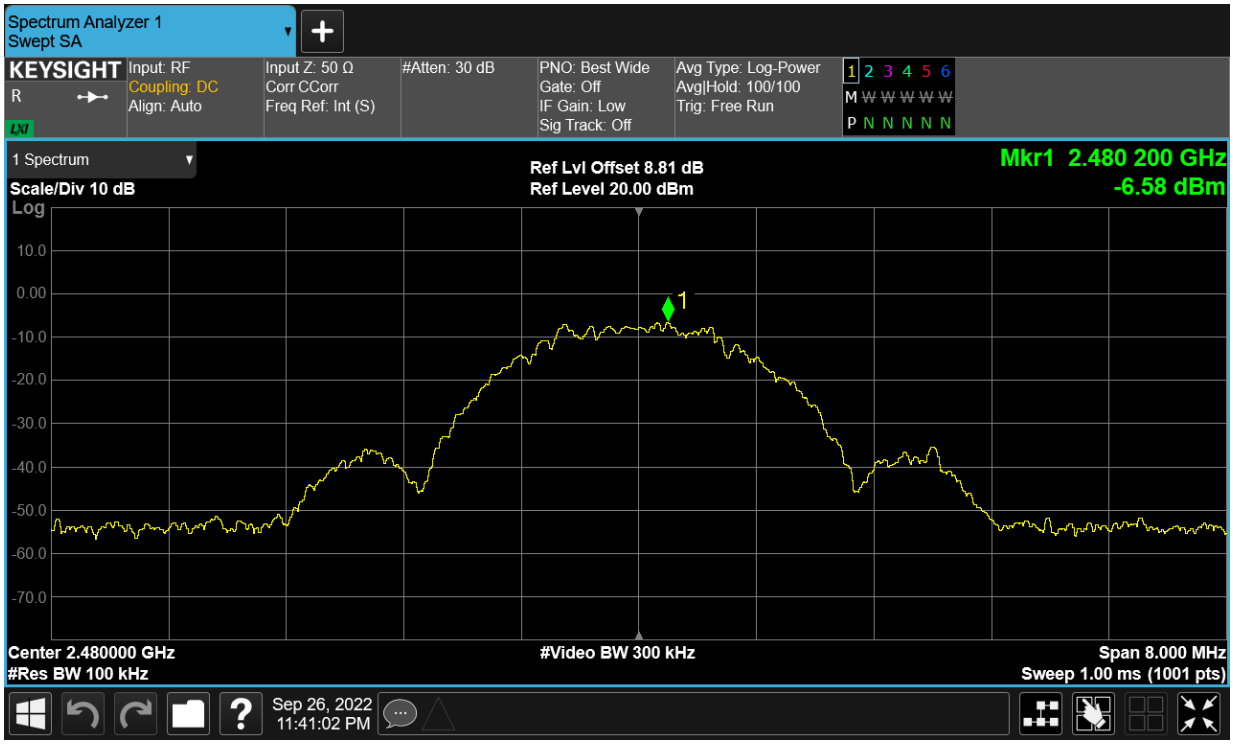
Band Edge NVNT BLE 2402MHz Ant1 Ref



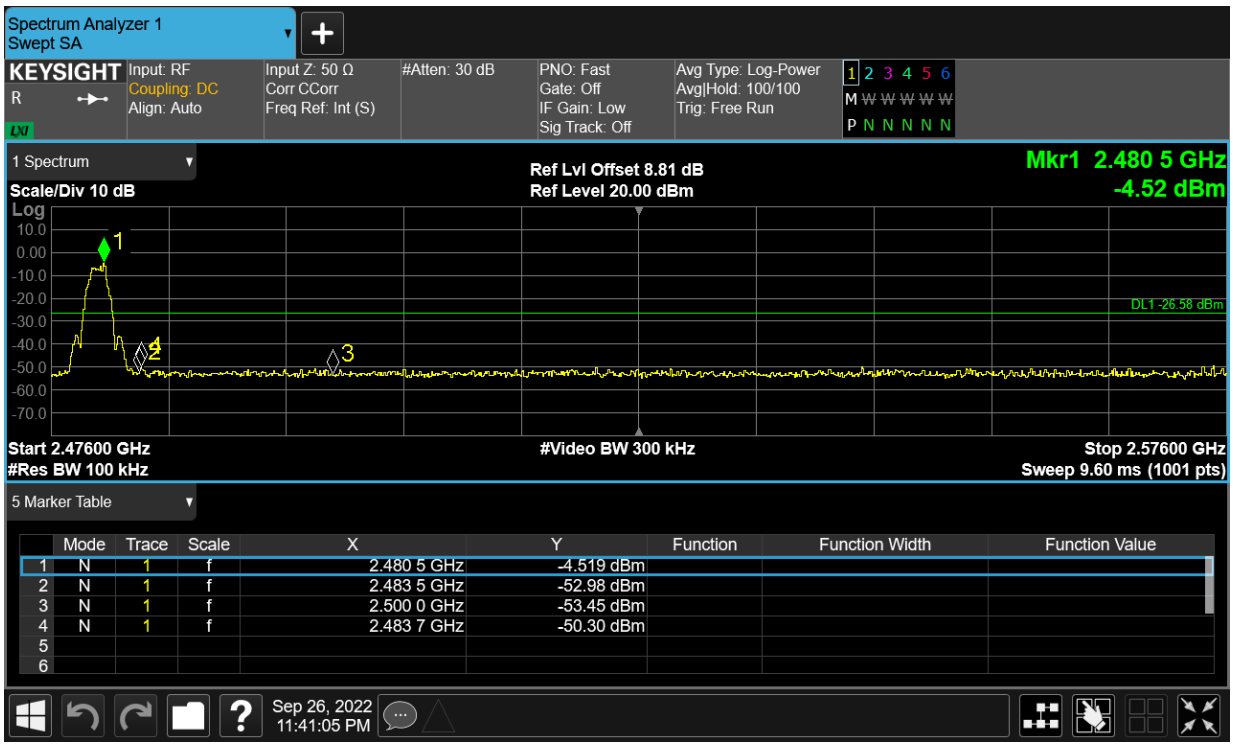
Band Edge NVNT BLE 2402MHz Ant1 Emission



Band Edge NVNT BLE 2480MHz Ant1 Ref



Band Edge NVNT BLE 2480MHz Ant1 Emission

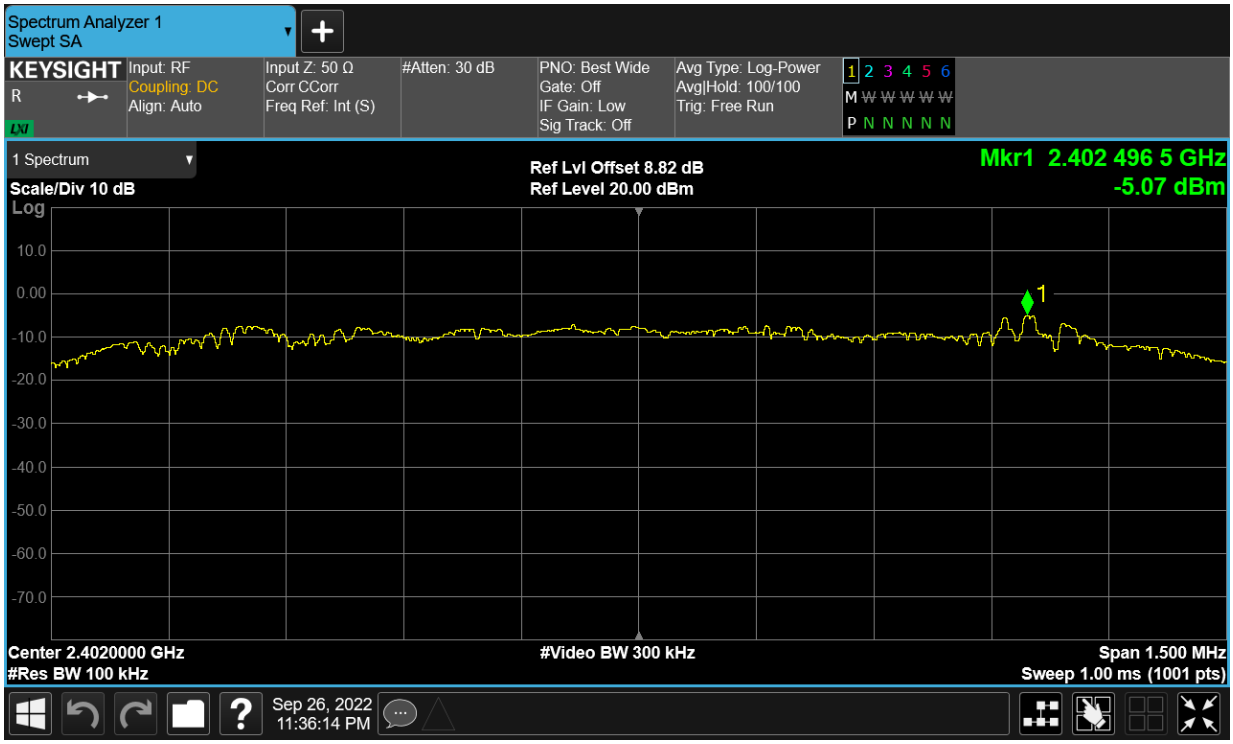


Conducted RF Spurious Emission

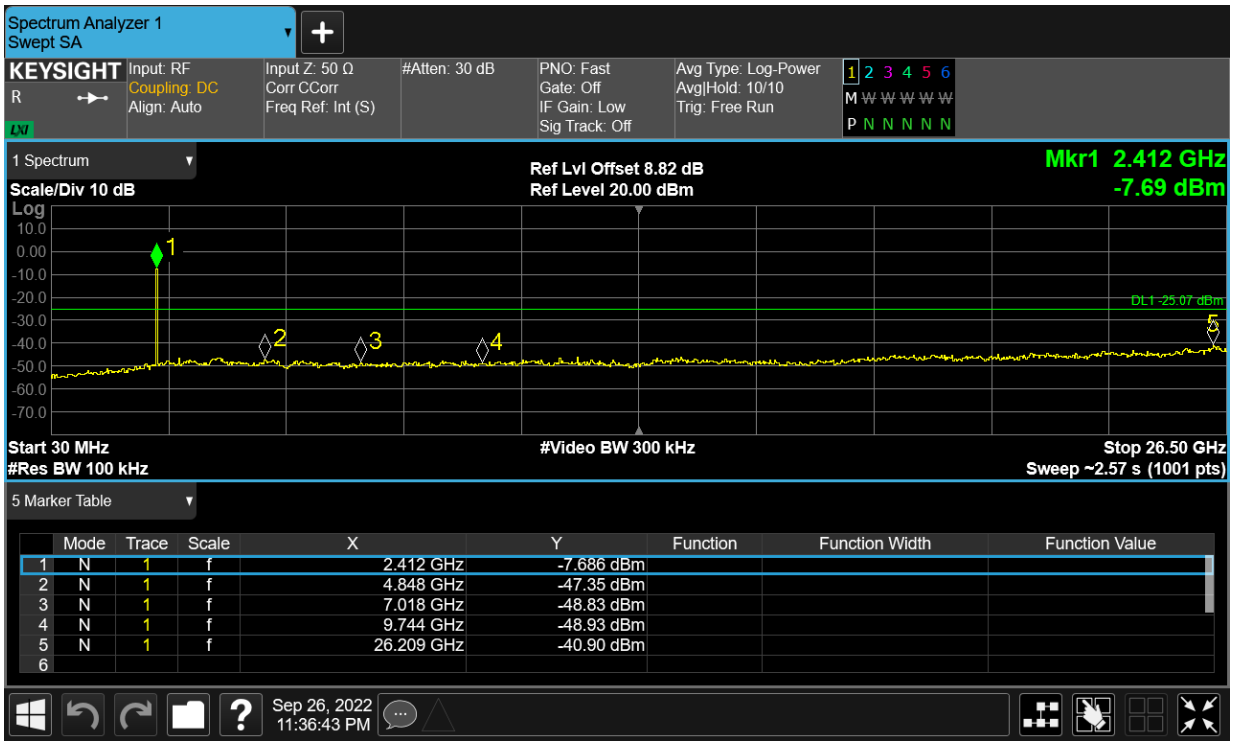
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-35.84	-20	Pass
NVNT	BLE	2442	Ant1	-37.24	-20	Pass
NVNT	BLE	2480	Ant1	-37.56	-20	Pass

Test Graphs

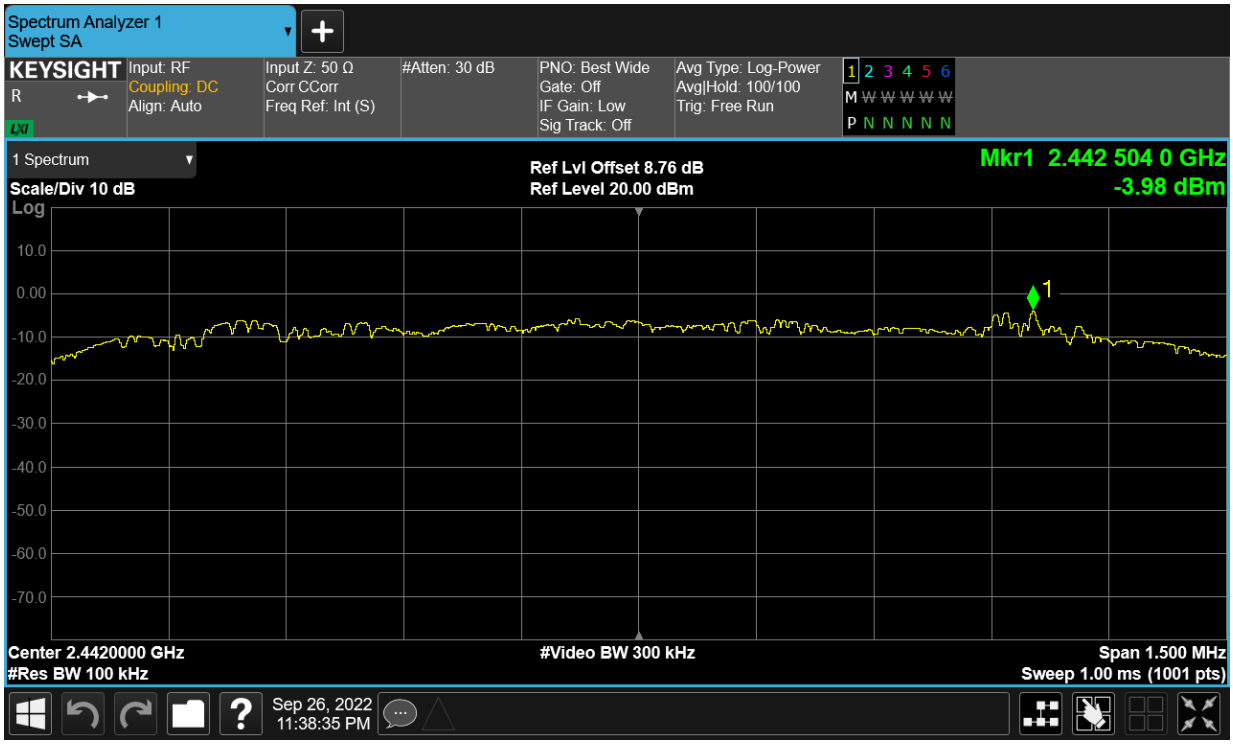
Tx. Spurious NVNT BLE 2402MHz Ant1 Ref



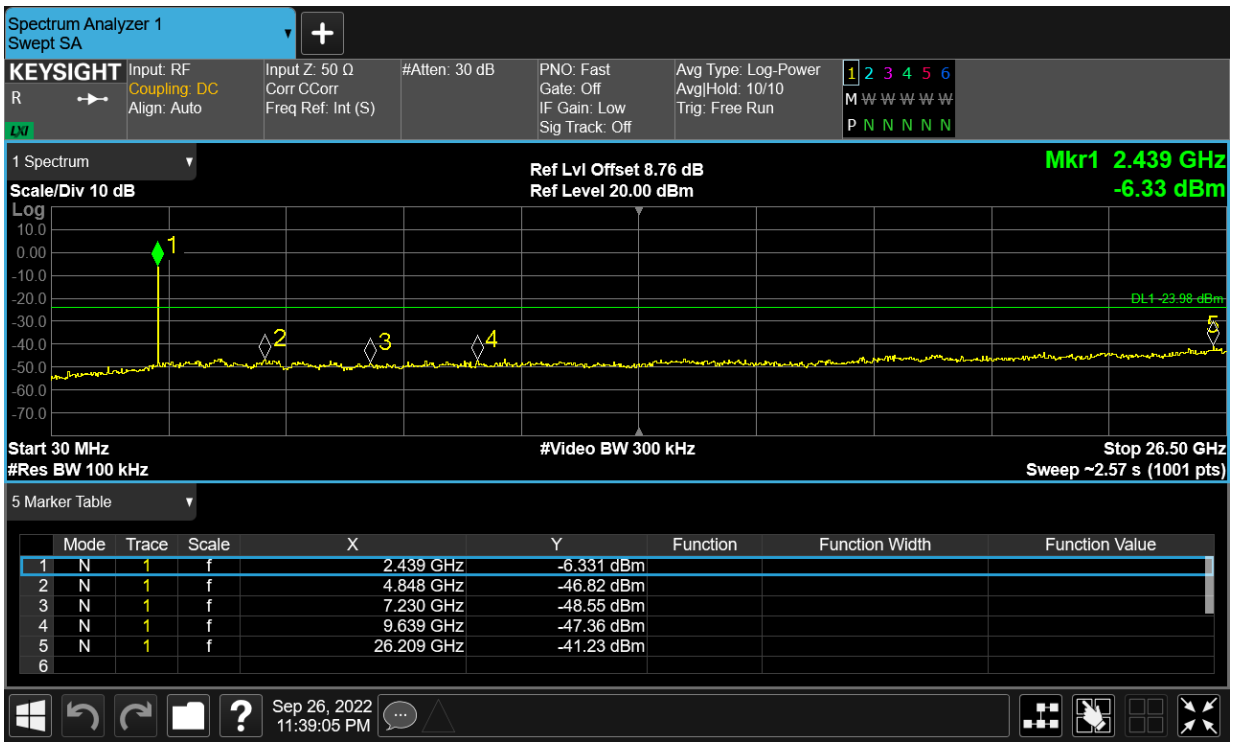
Tx. Spurious NVNT BLE 2402MHz Ant1 Emission



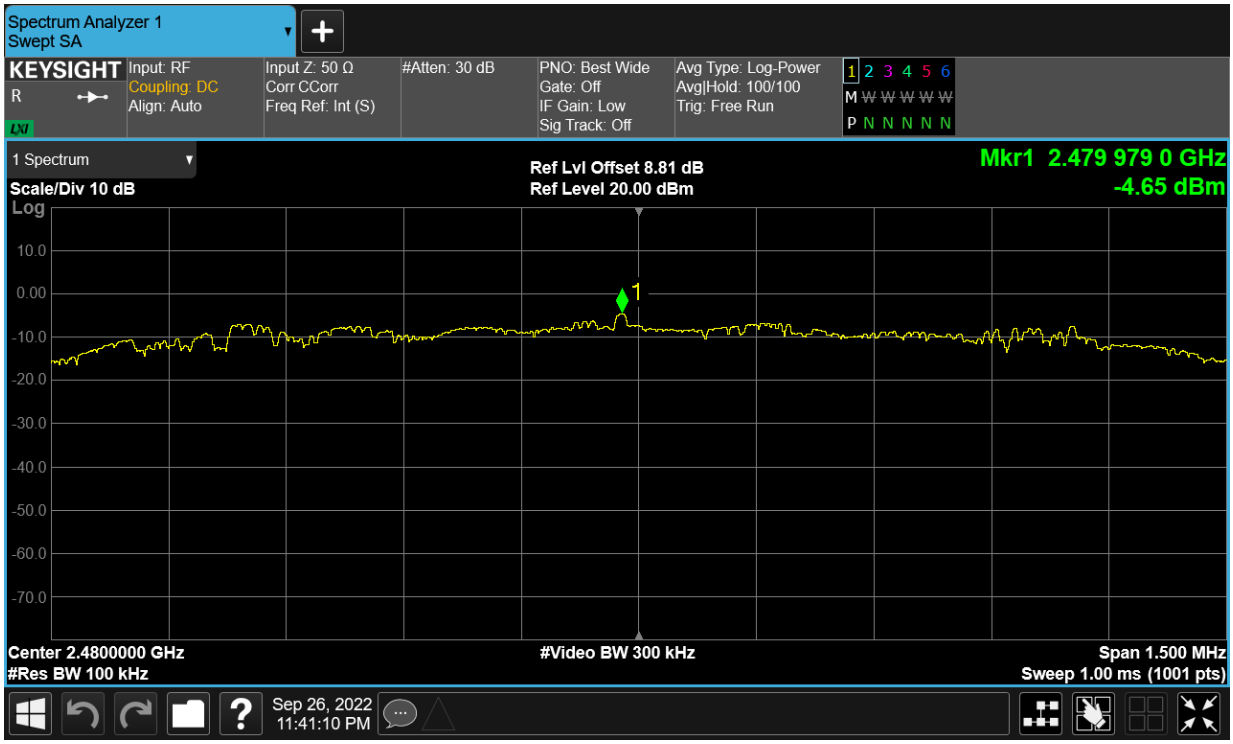
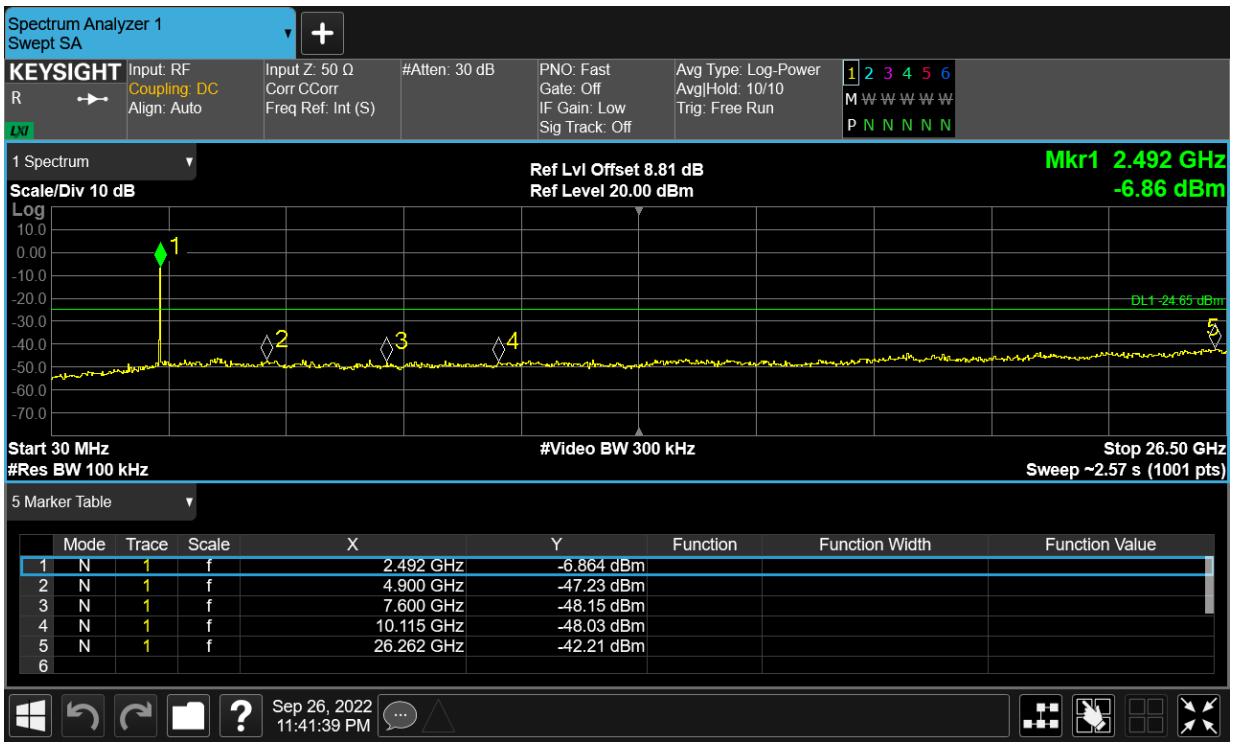
Tx. Spurious NVNT BLE 2442MHz Ant1 Ref



Tx. Spurious NVNT BLE 2442MHz Ant1 Emission



Tx. Spurious NVNT BLE 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2480MHz Ant1 Emission