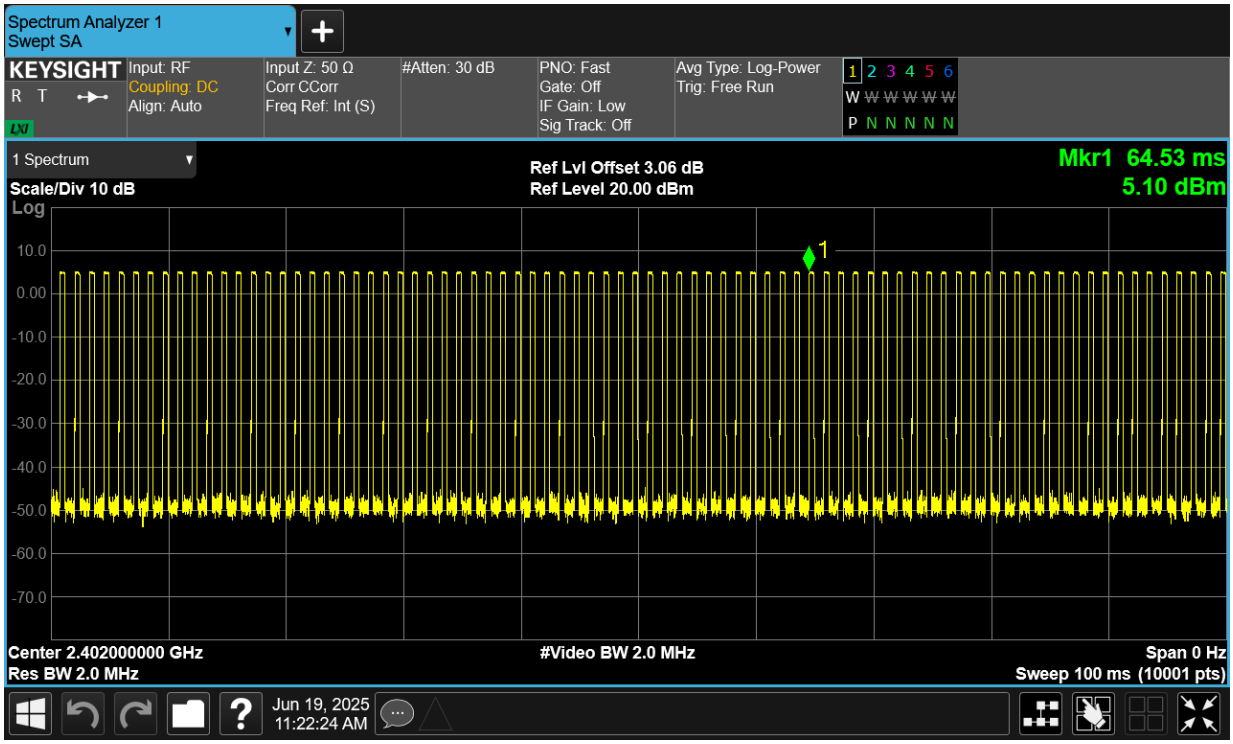
Test Data

Duty Cycle

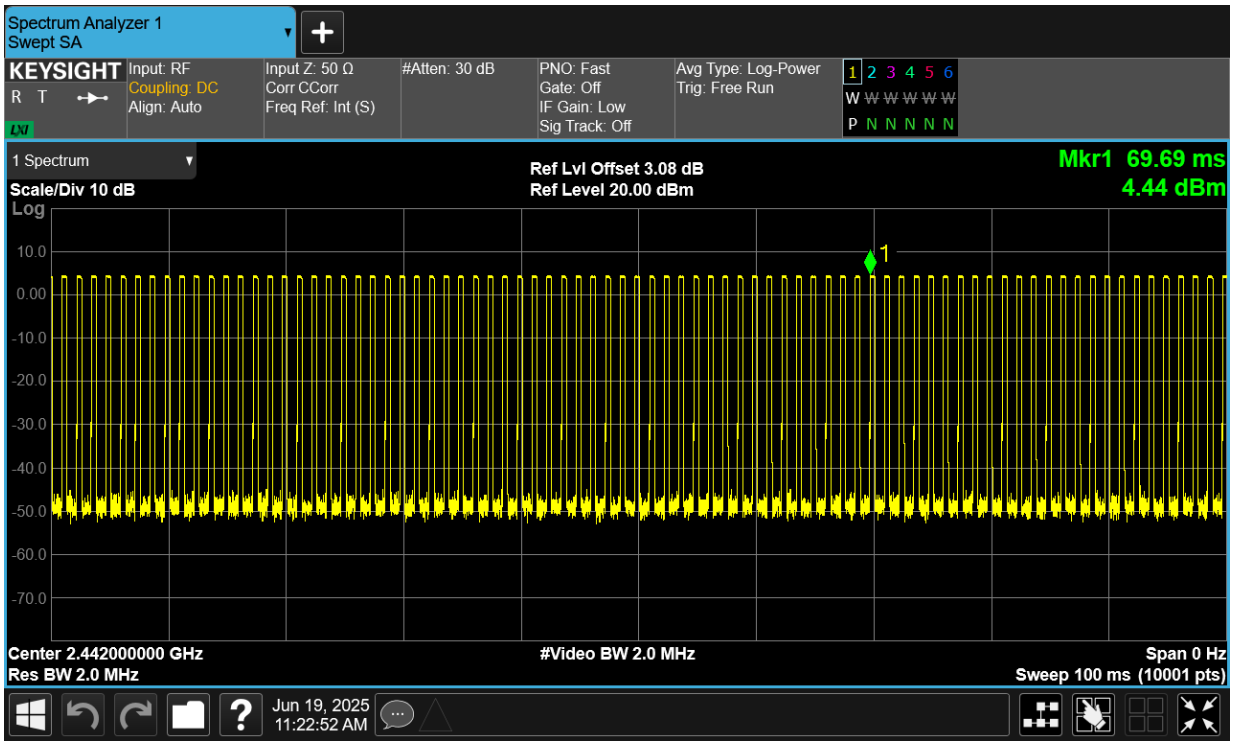
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	BLE	2402	Ant1	36	4.44
NVNT	BLE	2442	Ant1	35.95	4.44
NVNT	BLE	2480	Ant1	36.01	4.44

Test Graphs

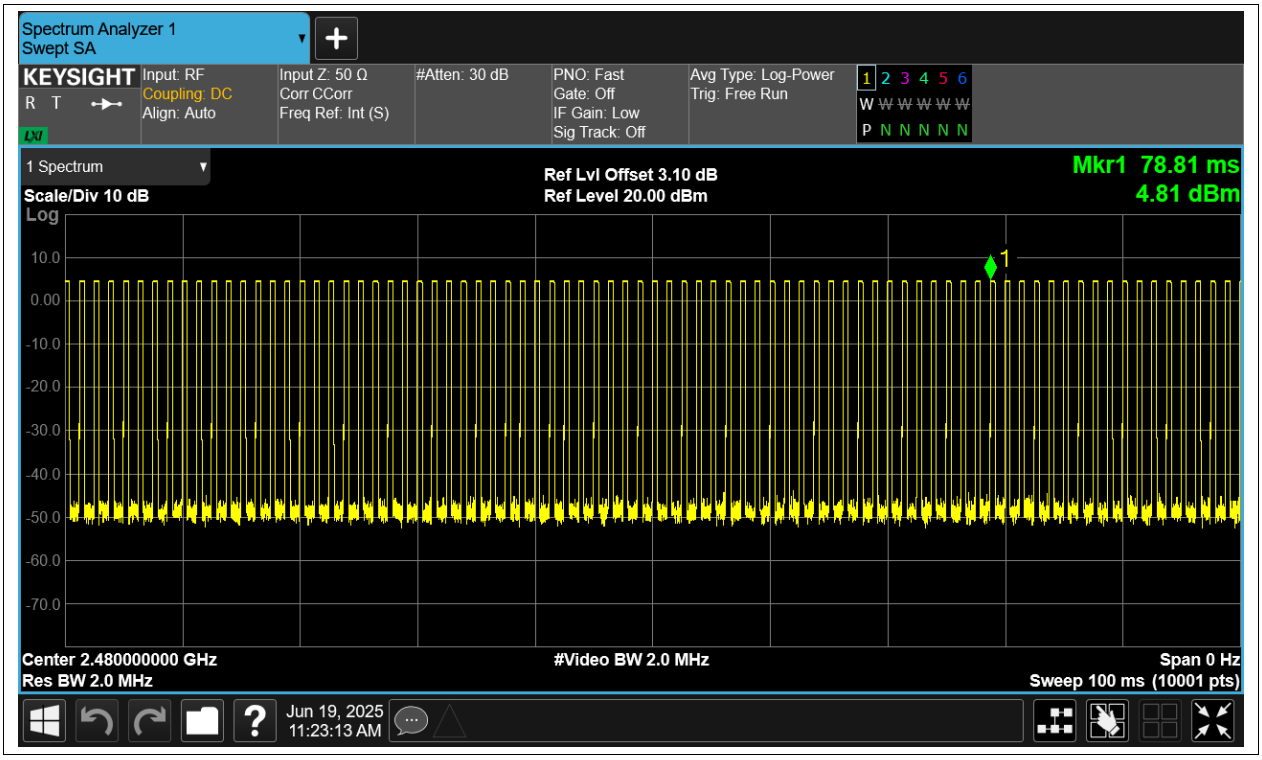
Duty Cycle NVNT BLE 2402MHz Ant1



Duty Cycle NVNT BLE 2442MHz Ant1



Duty Cycle NVNT BLE 2480MHz Ant1

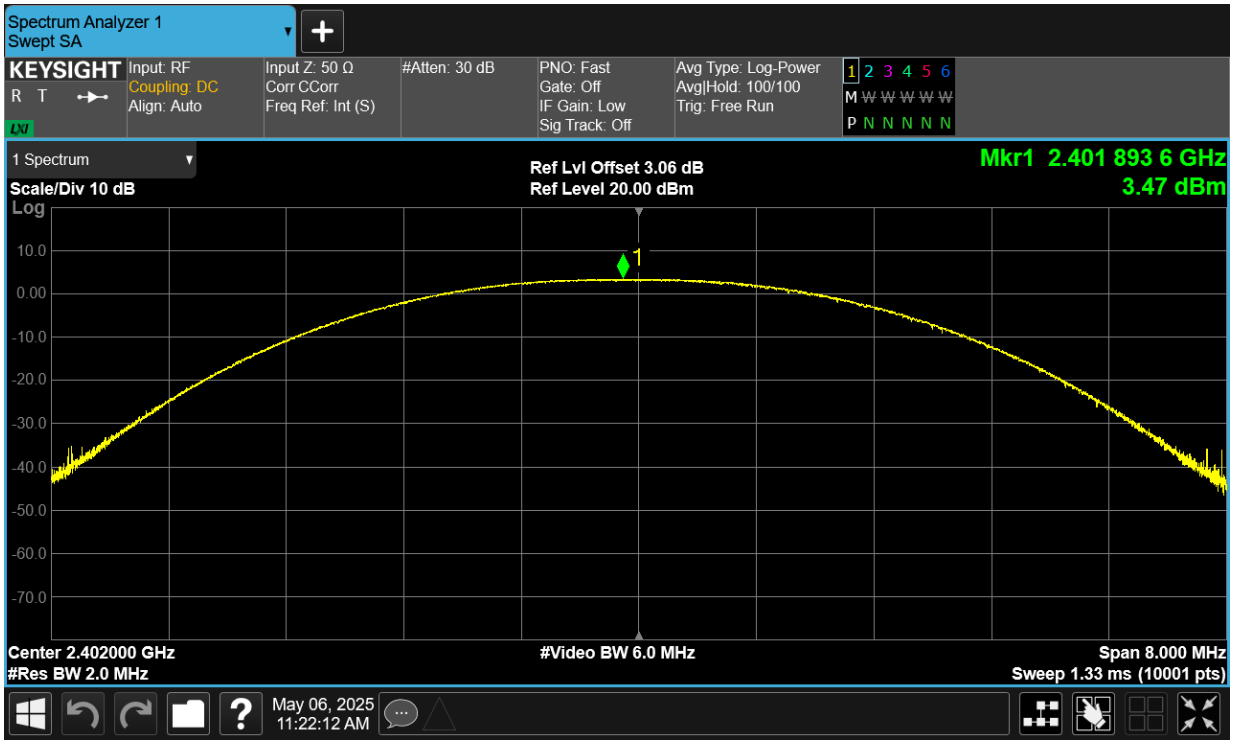

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 3.10 dB
Ref Level 20.00 dBm
Mkr1 78.81 ms
4.81 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 2.480000000 GHz
Res BW 2.0 MHz
#Video BW 2.0 MHz
Span 0 Hz
Sweep 100 ms (10001 pts)
Jun 19, 2025
11:23:13 AM

Maximum Conducted Output Power

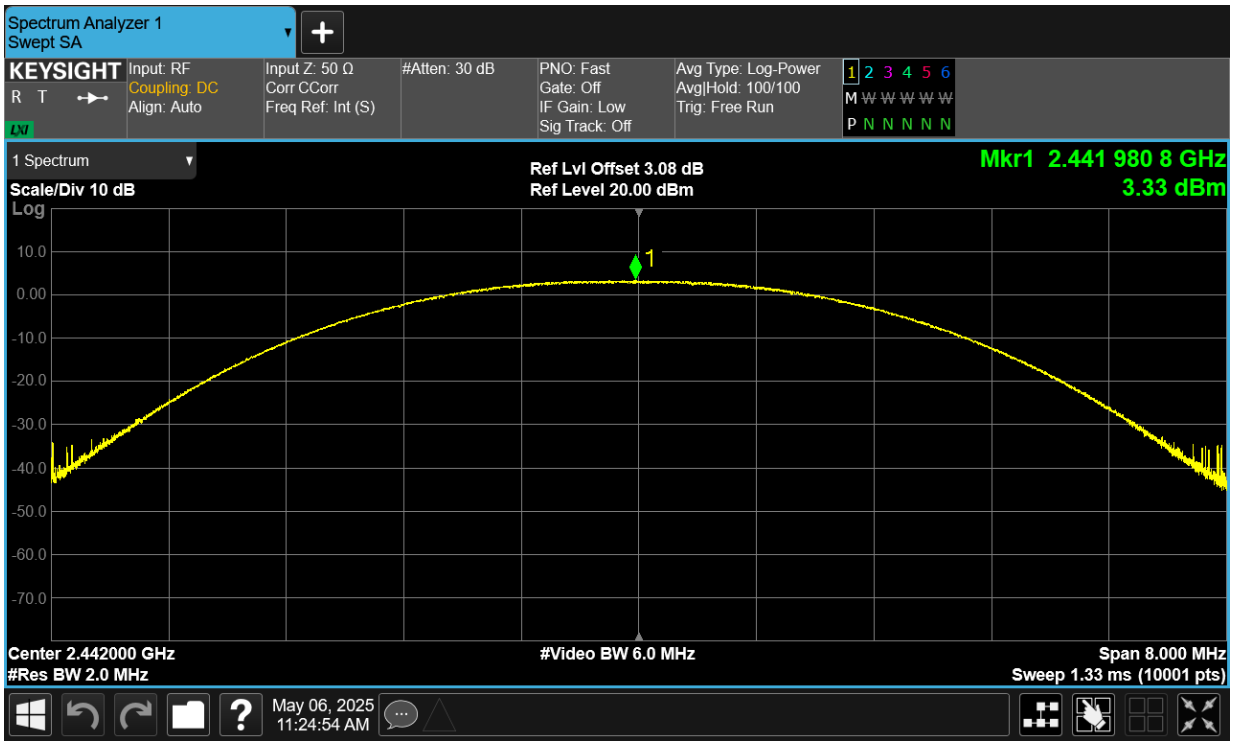
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	3.473	30	Pass
NVNT	BLE	2442	Ant1	3.33	30	Pass
NVNT	BLE	2480	Ant1	4.416	30	Pass

Test Graphs

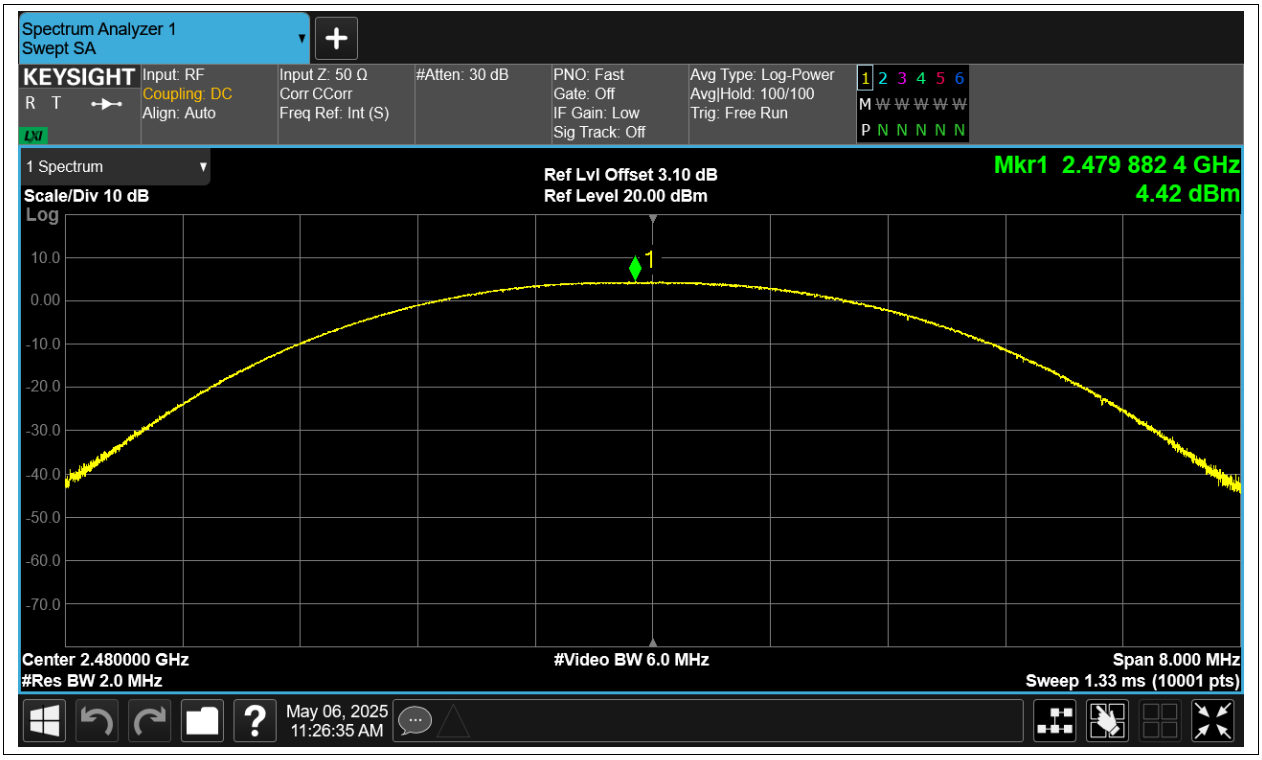
Power NVNT BLE 2402MHz Ant1



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
Log
Ref Lvl Offset 3.10 dB
Ref Level 20.00 dBm
Mkr1 2.479 882 4 GHz
4.42 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)
May 06, 2025
11:26:35 AM

-6dB Bandwidth

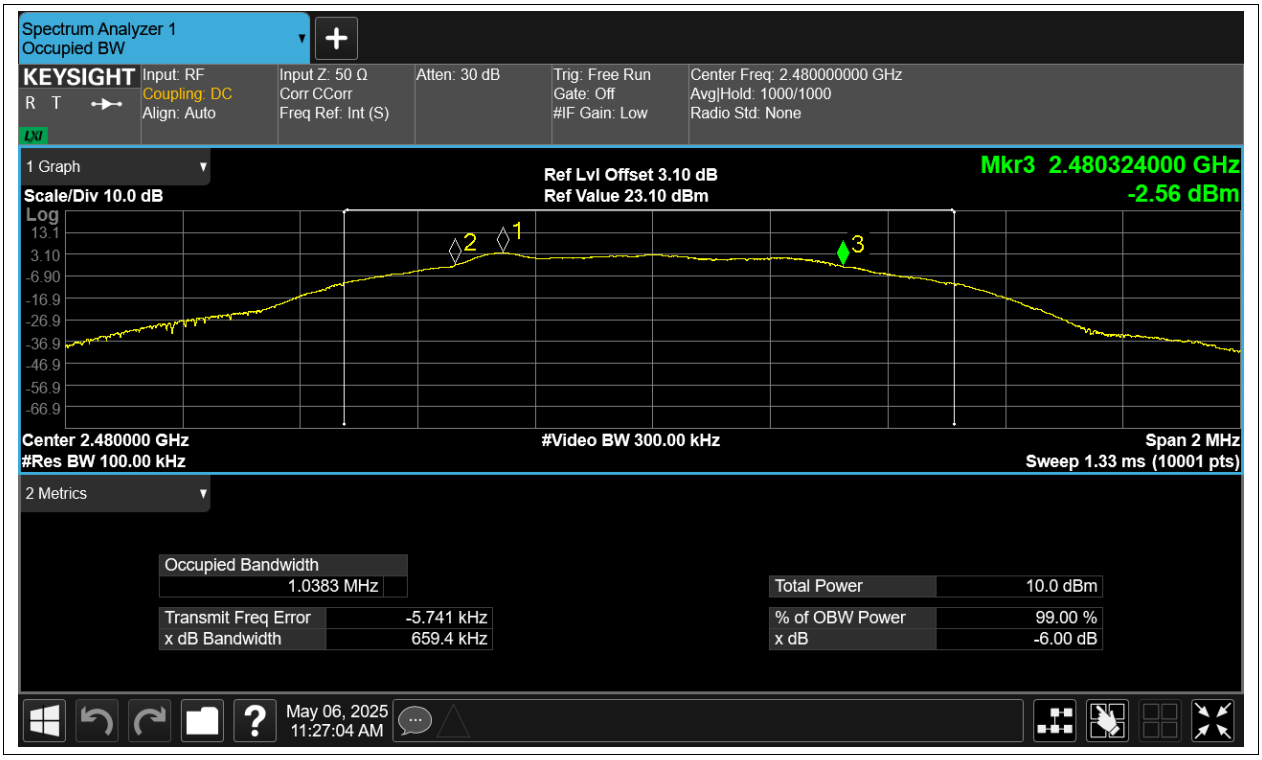
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	limit(MHz)	Verdic
NVNT	BLE	2402	Ant1	0.66	0.5	Pass
NVNT	BLE	2442	Ant1	0.66	0.5	Pass
NVNT	BLE	2480	Ant1	0.659	0.5	Pass

Test Graphs

-6dB Bandwidth NVNT BLE 2402MHz Ant1

-6dB Bandwidth NVNT BLE 2442MHz Ant1

-6dB Bandwidth NVNT BLE 2480MHz Ant1

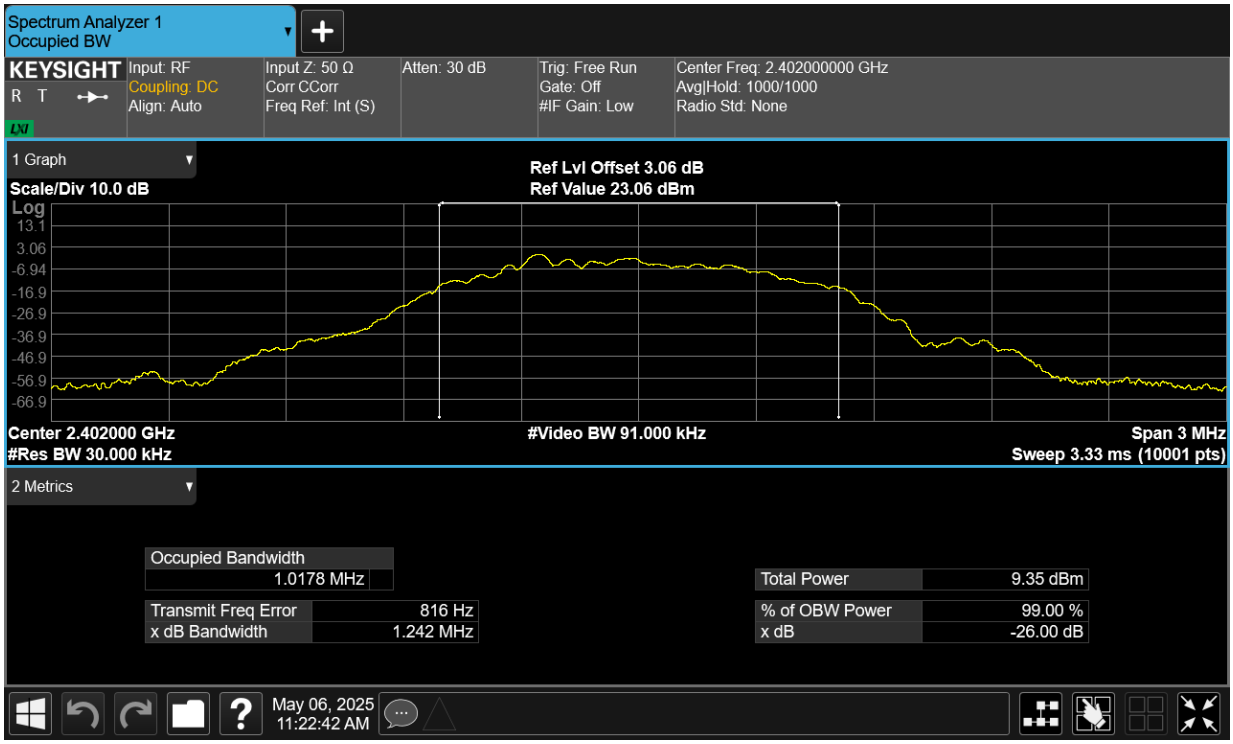

Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 1000/1000
Radio Std: None
1 Graph
Ref Lvl Offset 3.10 dB
Ref Value 23.10 dBm
Mkr3 2.480324000 GHz
-2.56 dBm
Scale/Div 10.0 dB
Log
13.1
3.10
-6.90
-16.9
-26.9
-36.9
-46.9
-56.9
-66.9
Center 2.480000 GHz
#Res BW 100.00 kHz
#Video BW 300.00 kHz
Span 2 MHz
Sweep 1.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
1.0383 MHz
Transmit Freq Error -5.741 kHz
x dB Bandwidth 659.4 kHz
Total Power 10.0 dBm
% of OBW Power 99.00 %
x dB -6.00 dB
May 06, 2025
11:27:04 AM

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2402	Ant1	1.018
NVNT	BLE	2442	Ant1	1.019
NVNT	BLE	2480	Ant1	1.021

Test Graphs

OBW NVNT BLE 2402MHz Ant1



OBW NVNT BLE 2442MHz Ant1

OBW NVNT BLE 2480MHz Ant1

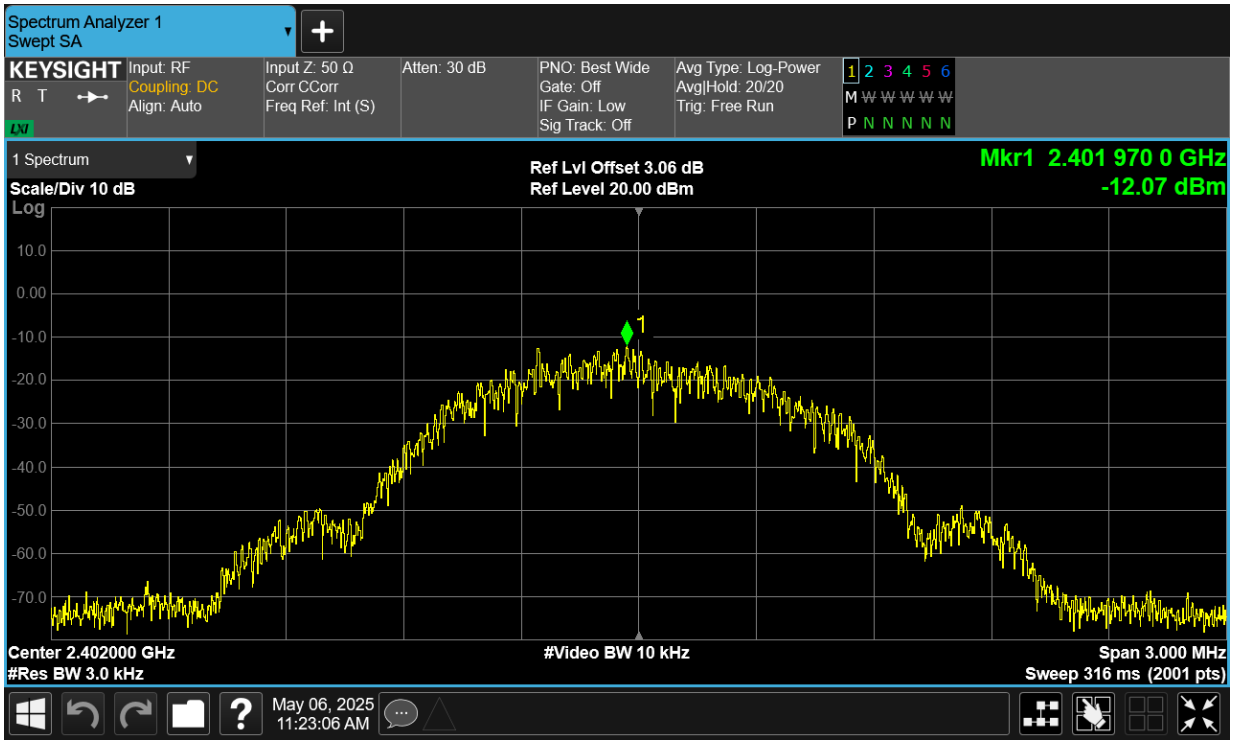
Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 1000/1000
Radio Std: None
1 Graph
Ref Lvl Offset 3.10 dB
Ref Value 23.10 dBm
Scale/Div 10.0 dB
Log
13.1
3.10
-6.90
-16.9
-26.9
-36.9
-46.9
-56.9
-66.9
Center 2.480000 GHz
#Res BW 30.000 kHz
#Video BW 91.000 kHz
Span 3 MHz
Sweep 3.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
1.0206 MHz
Transmit Freq Error -591 Hz
x dB Bandwidth 1.245 MHz
Total Power 10.3 dBm
% of OBW Power 99.00 %
x dB -26.00 dB
May 06, 2025
11:26:51 AM

Maximum Power Spectral Density Level

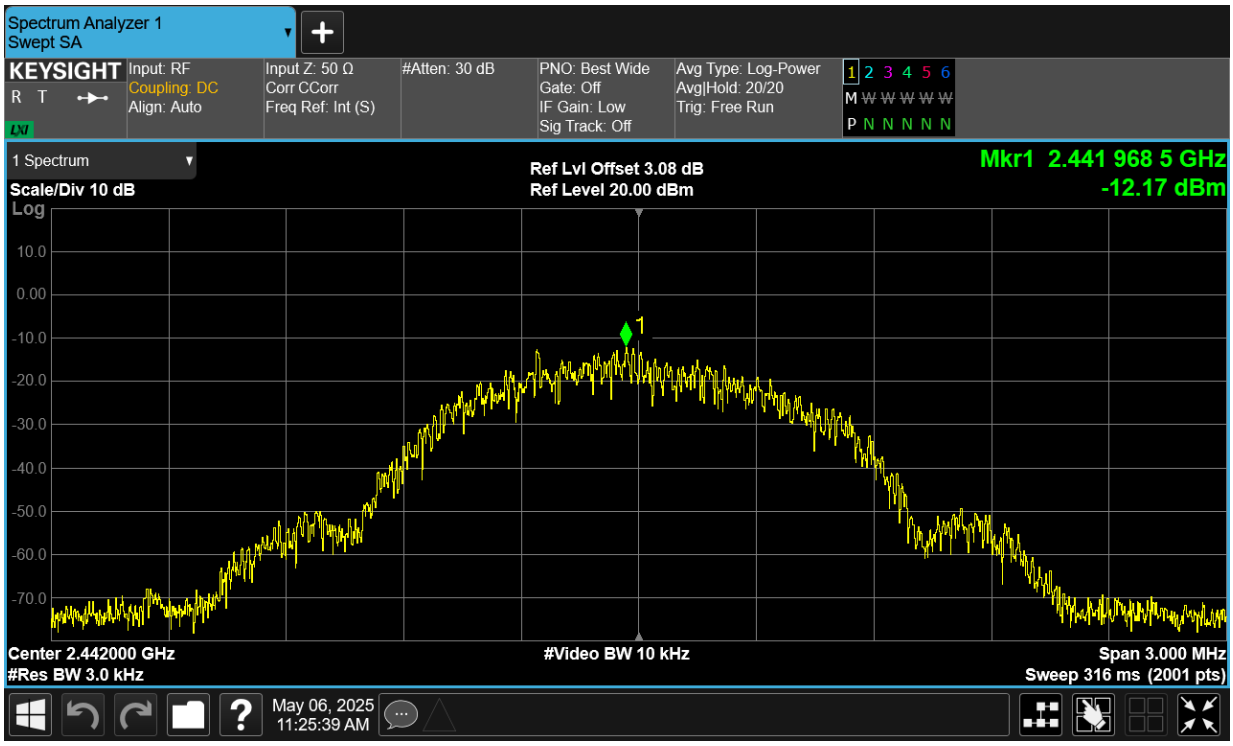
Condition	Mode	Frequency (MHz)	Antenna	Max PSD(dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE	2402	Ant1	-12.075	8	Pass
NVNT	BLE	2442	Ant1	-12.174	8	Pass
NVNT	BLE	2480	Ant1	-11.14	8	Pass

Test Graphs

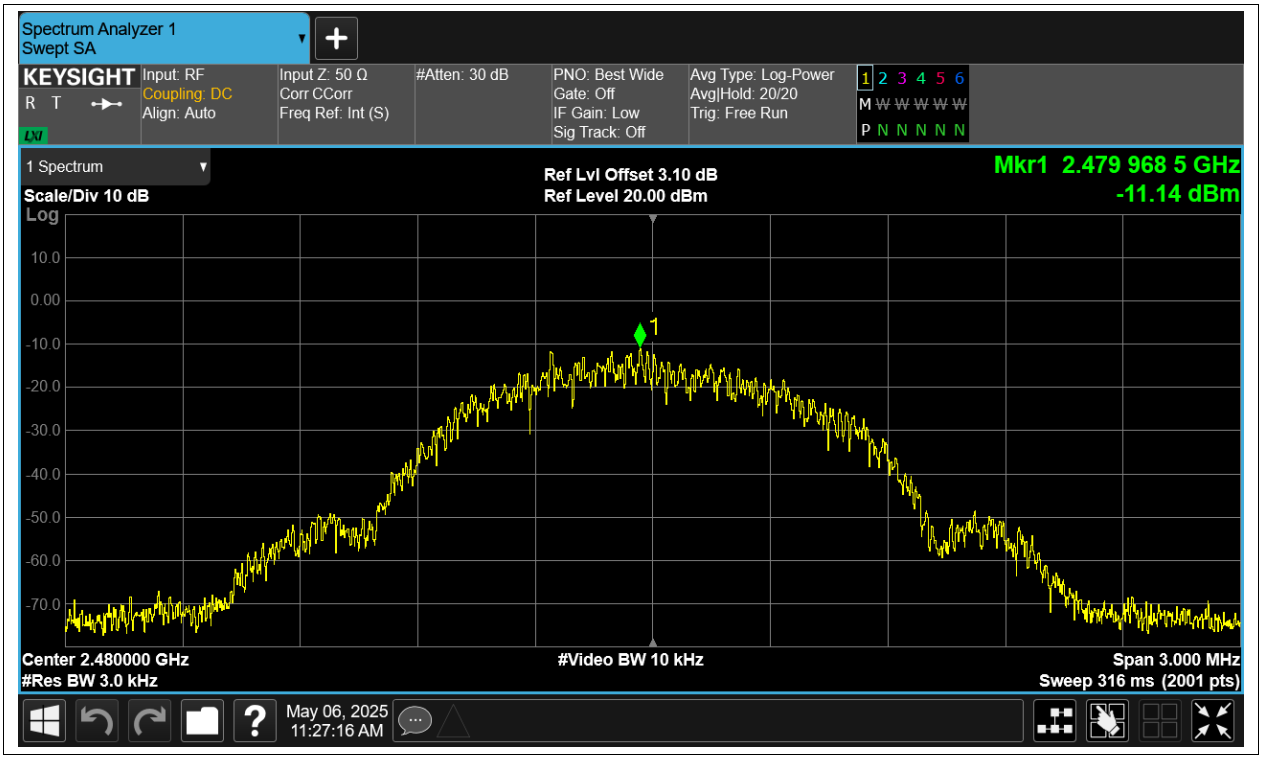
PSD NVNT BLE 2402MHz Ant1



PSD NVNT BLE 2442MHz Ant1



PSD NVNT BLE 2480MHz Ant1

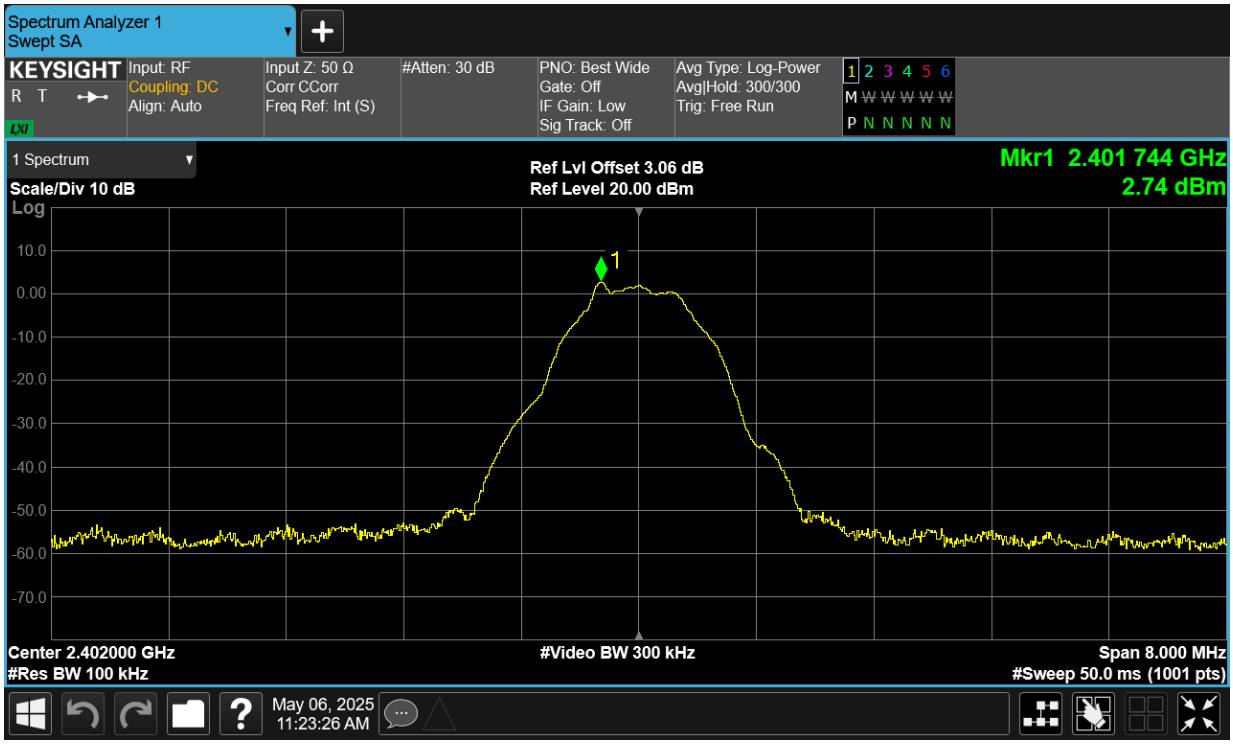

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 20/20
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 3.10 dB
Ref Level 20.00 dBm
Mkr1 2.479 968 5 GHz
-11.14 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 3.0 kHz
#Video BW 10 kHz
Span 3.000 MHz
Sweep 316 ms (2001 pts)
May 06, 2025
11:27:16 AM

Band Edge

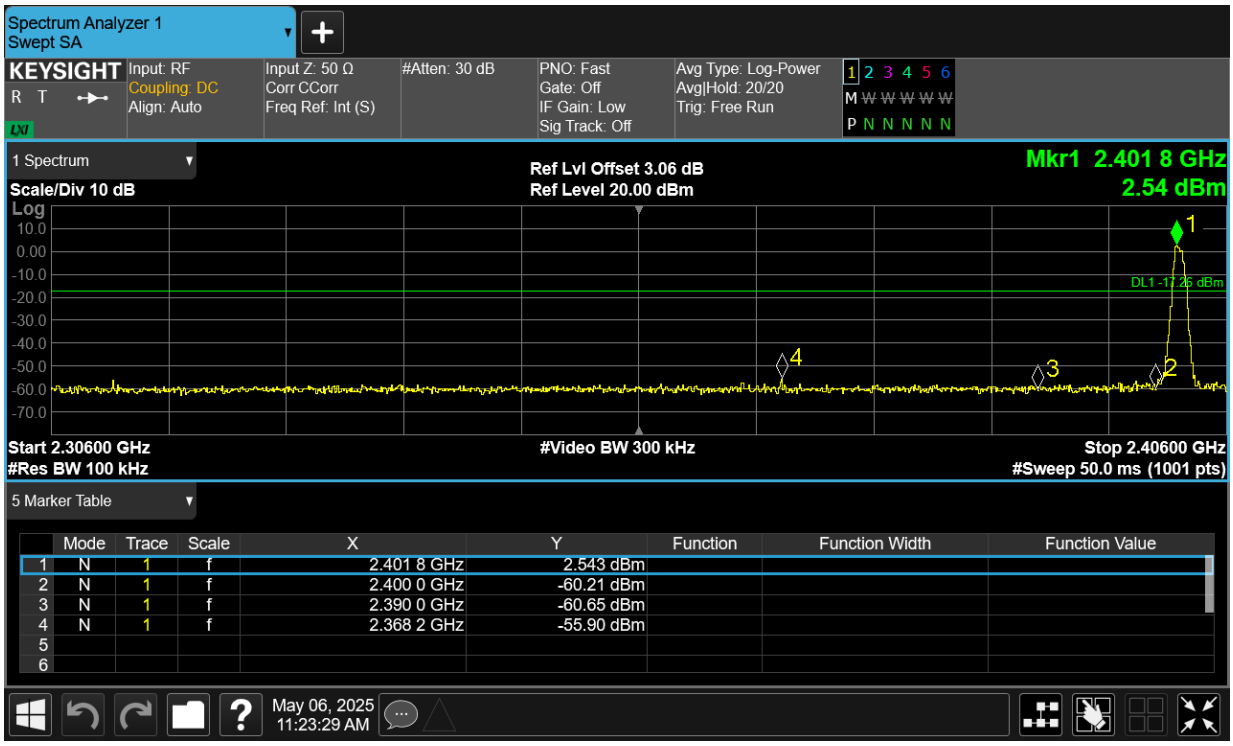
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-58.64	-20	Pass
NVNT	BLE	2480	Ant1	-60.3	-20	Pass

Test Graphs

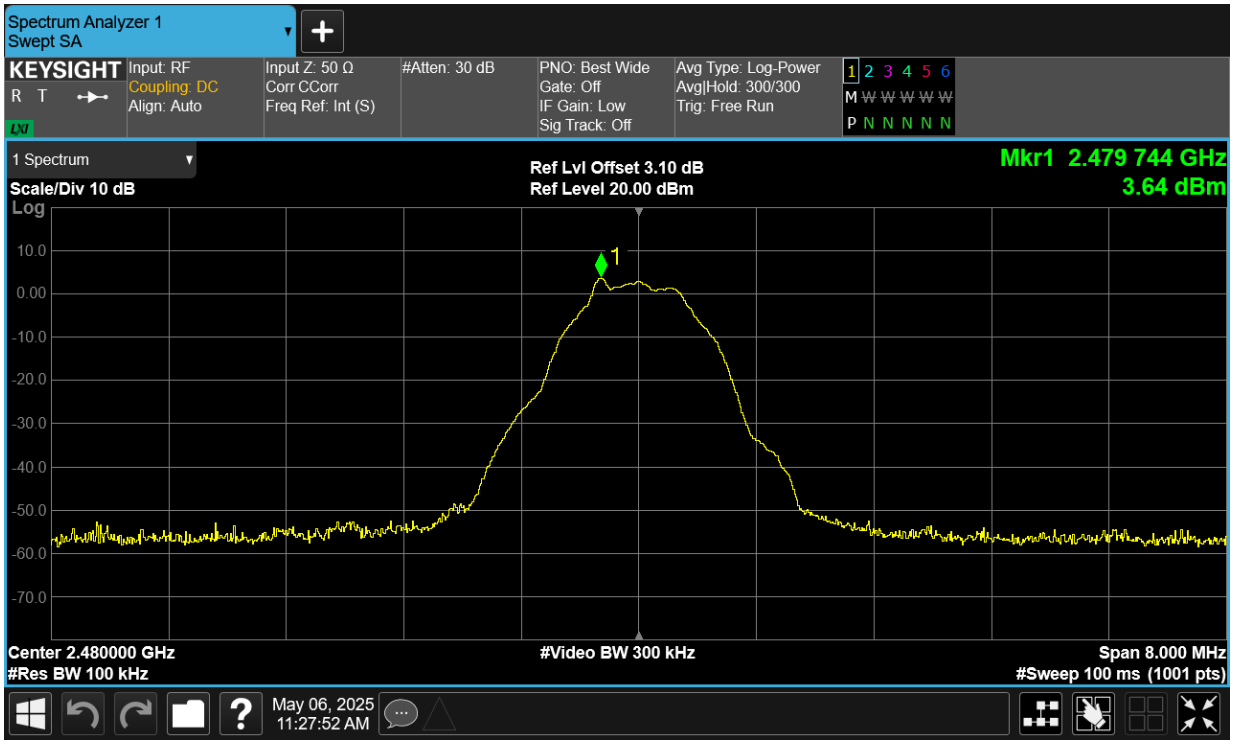
Band Edge NVNT BLE 2402MHz Ant1 Ref



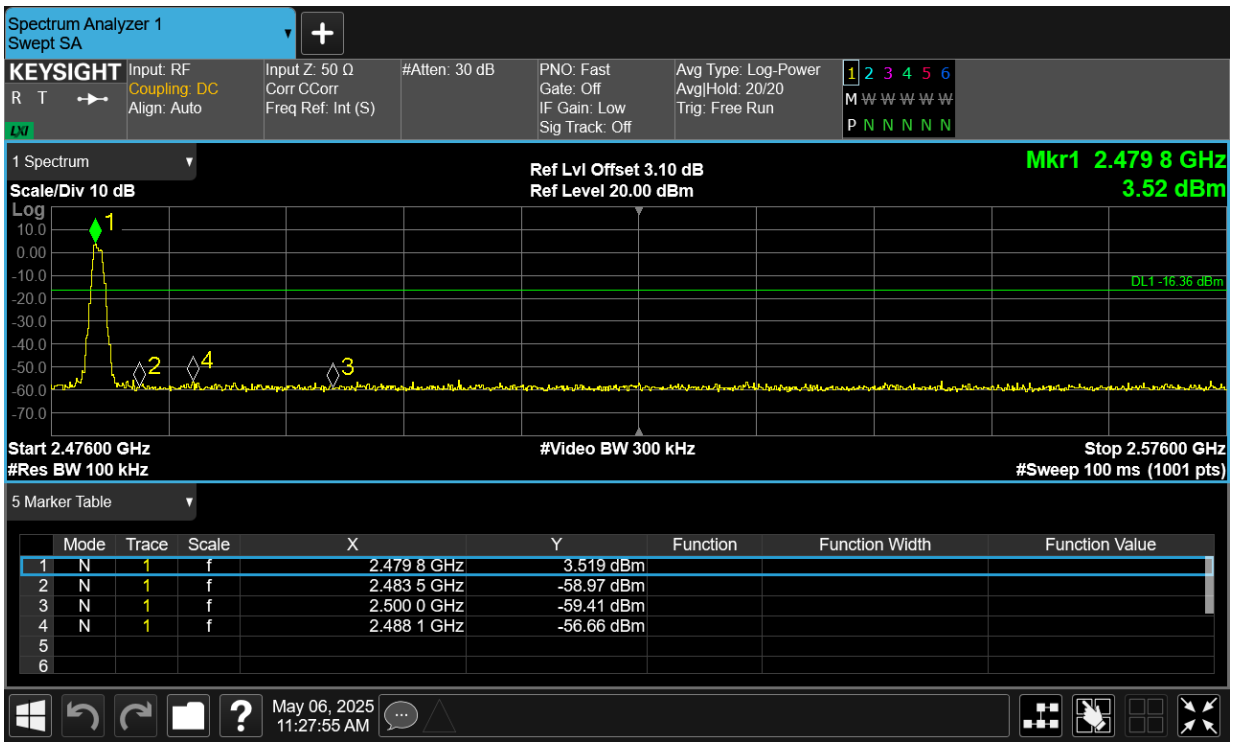
Band Edge NVNT BLE 2402MHz Ant1 Emission



Band Edge NVNT BLE 2480MHz Ant1 Ref



Band Edge NVNT BLE 2480MHz Ant1 Emission

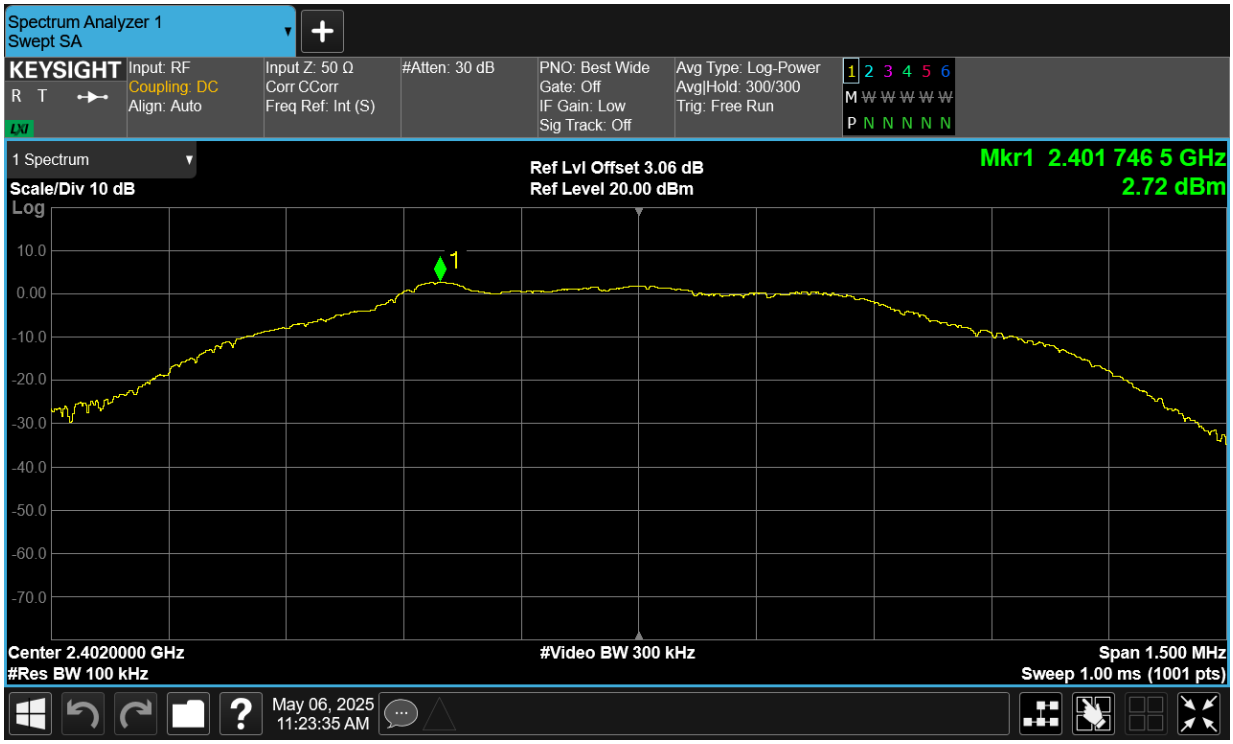


Conducted RF Spurious Emission

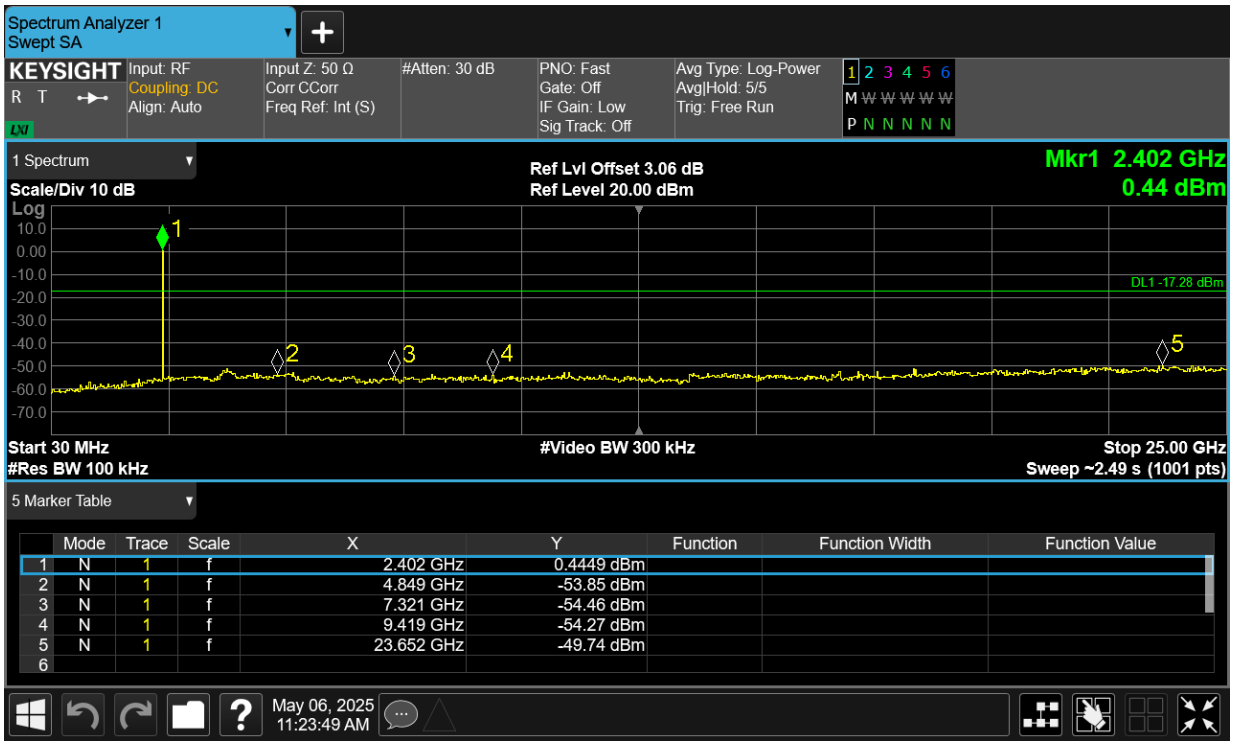
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-52.46	-20	Pass
NVNT	BLE	2442	Ant1	-52.31	-20	Pass
NVNT	BLE	2480	Ant1	-52.3	-20	Pass

Test Graphs

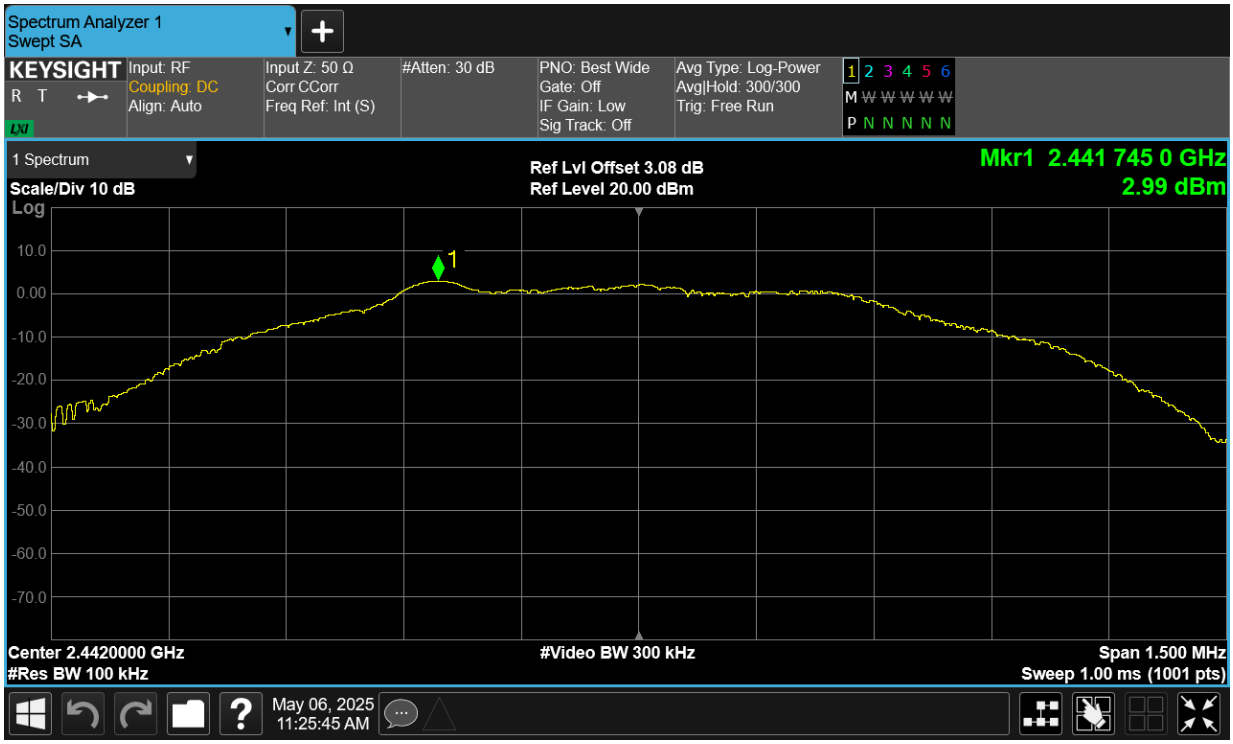
Tx. Spurious NVNT BLE 2402MHz Ant1 Ref



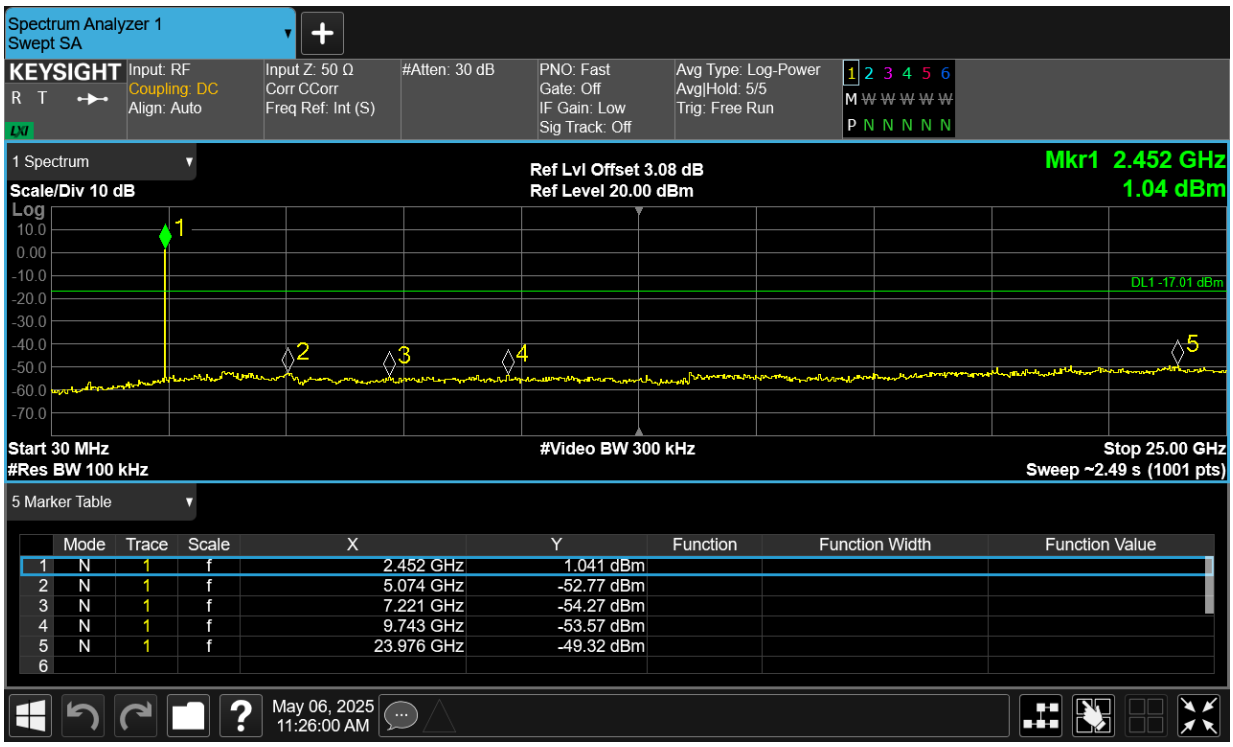
Tx. Spurious NVNT BLE 2402MHz Ant1 Emission



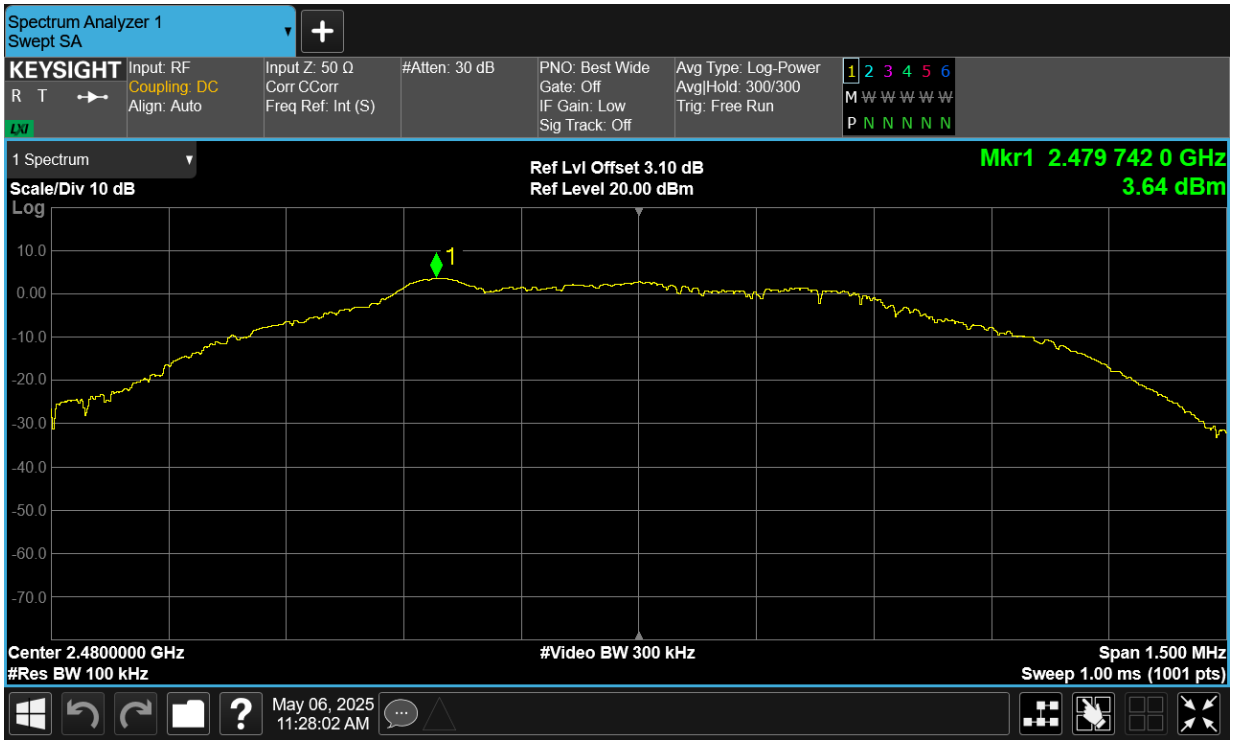
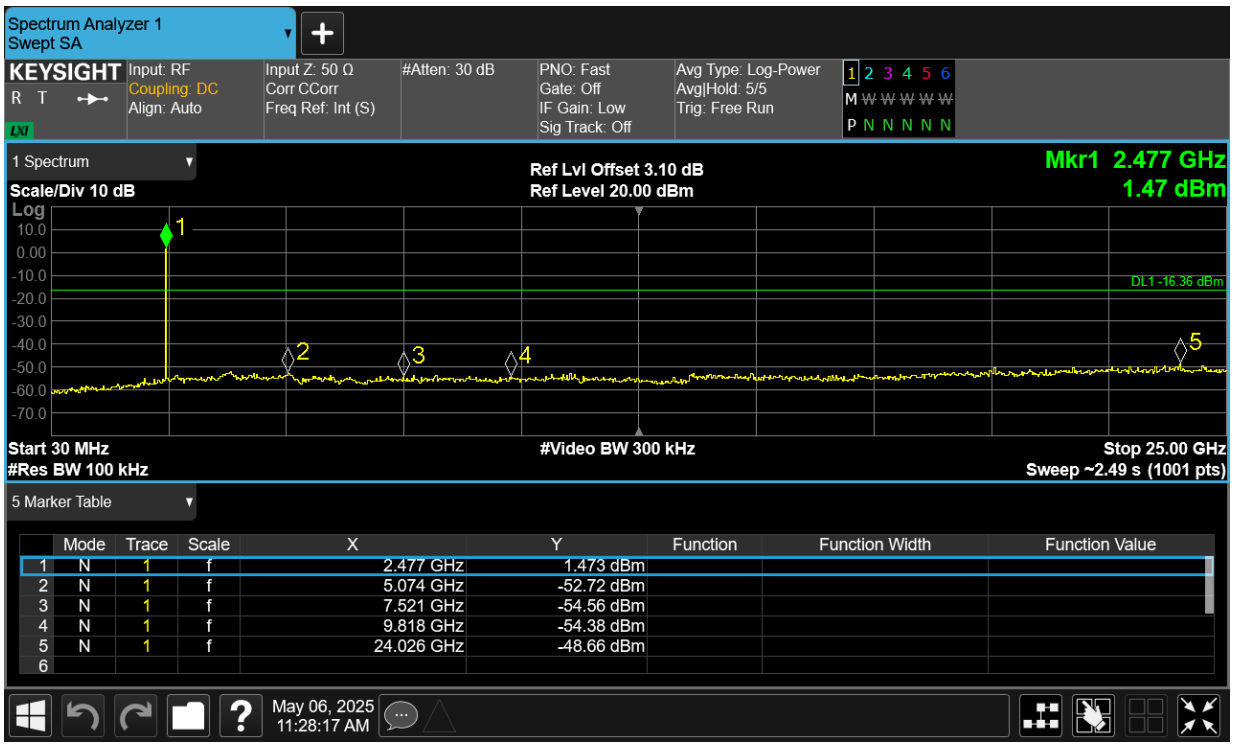
Tx. Spurious NVNT BLE 2442MHz Ant1 Ref



Tx. Spurious NVNT BLE 2442MHz Ant1 Emission



Tx. Spurious NVNT BLE 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2480MHz Ant1 Emission