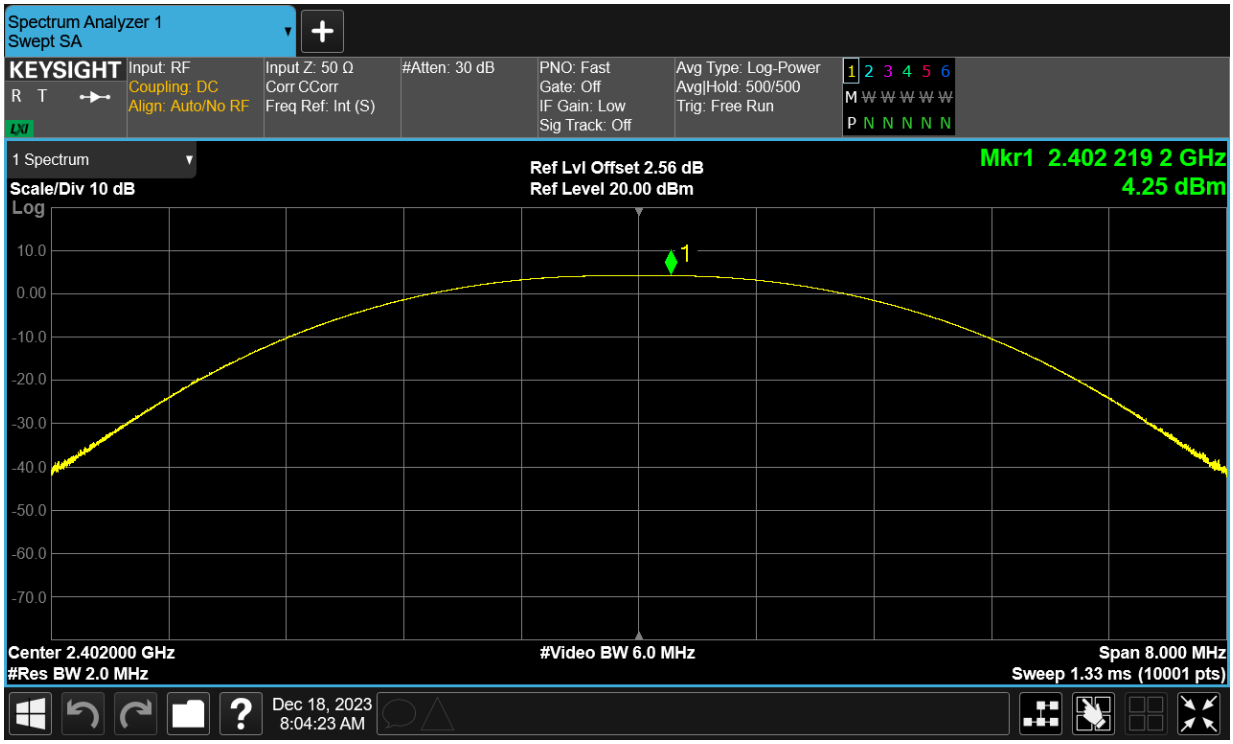
Test Data

Maximum Conducted Output Power

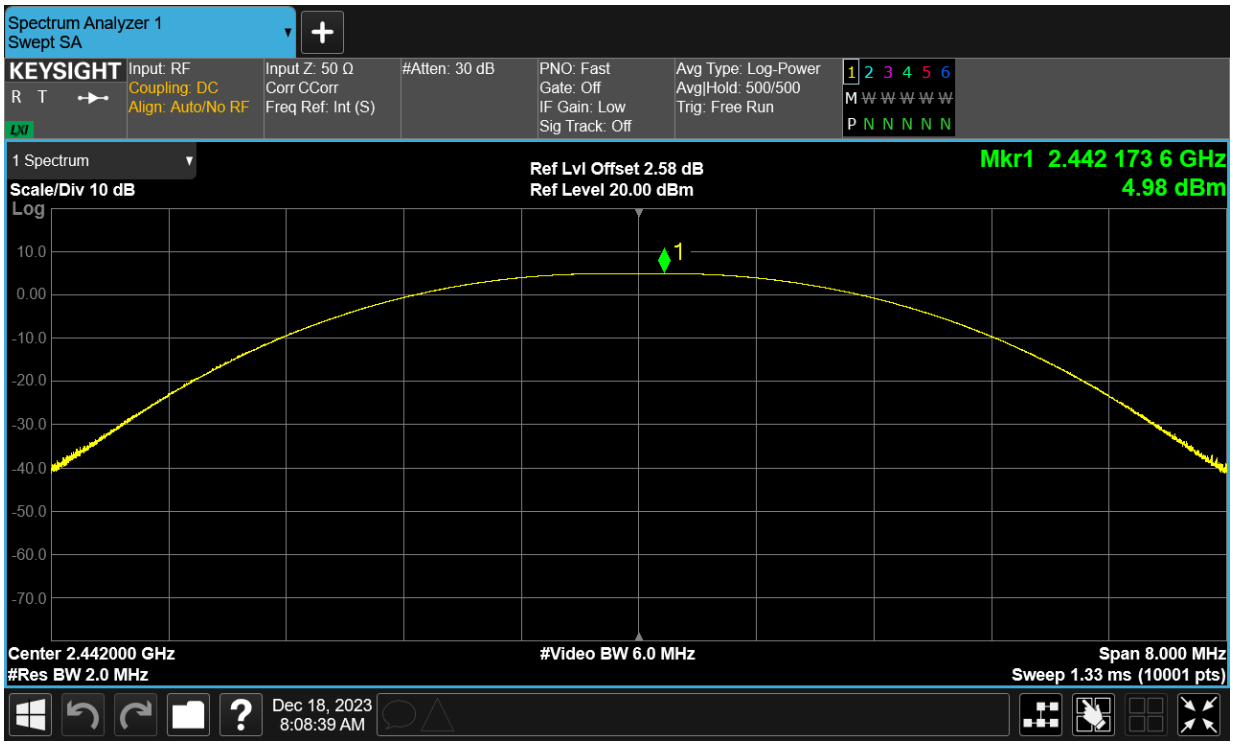
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant12	4.246	30	Pass
NVNT	BLE	2442	Ant12	4.979	30	Pass
NVNT	BLE	2480	Ant12	5.439	30	Pass

Test Graphs

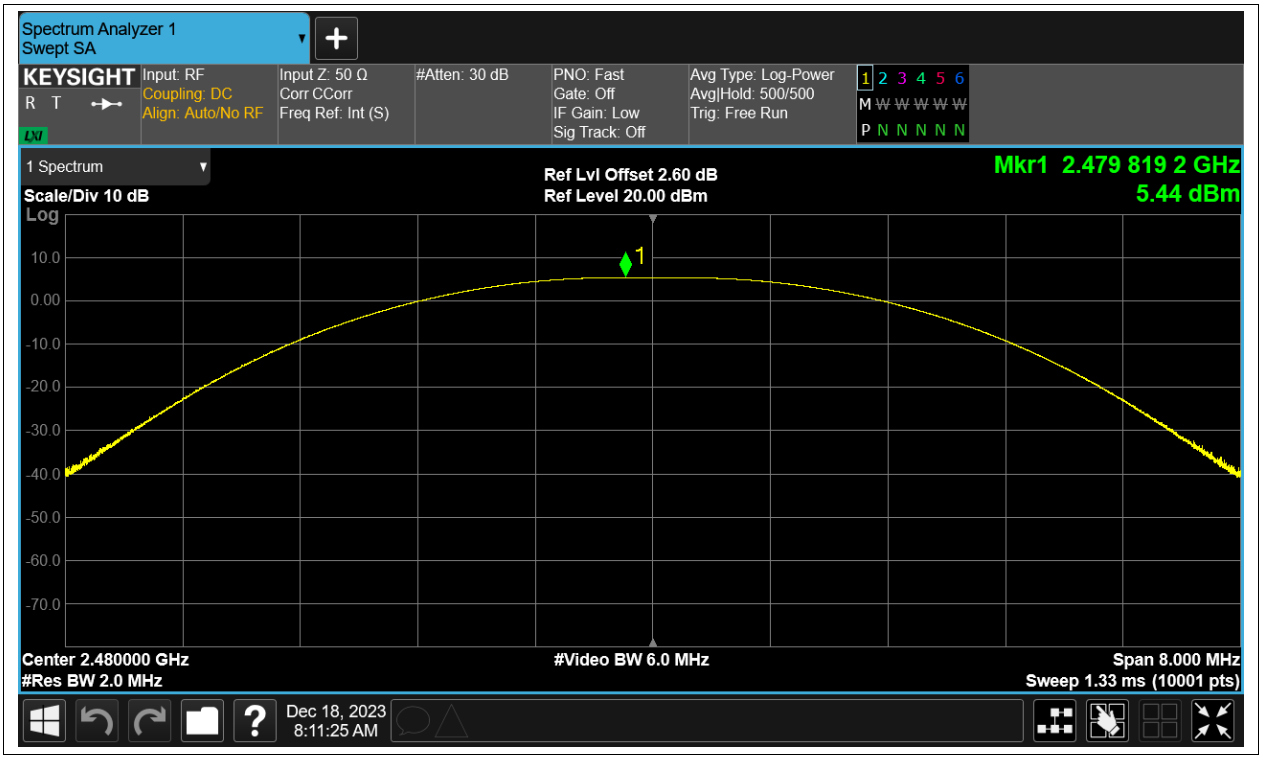
Power NVNT BLE 2402MHz Ant12



Power NVNT BLE 2442MHz Ant12



Power NVNT BLE 2480MHz Ant12

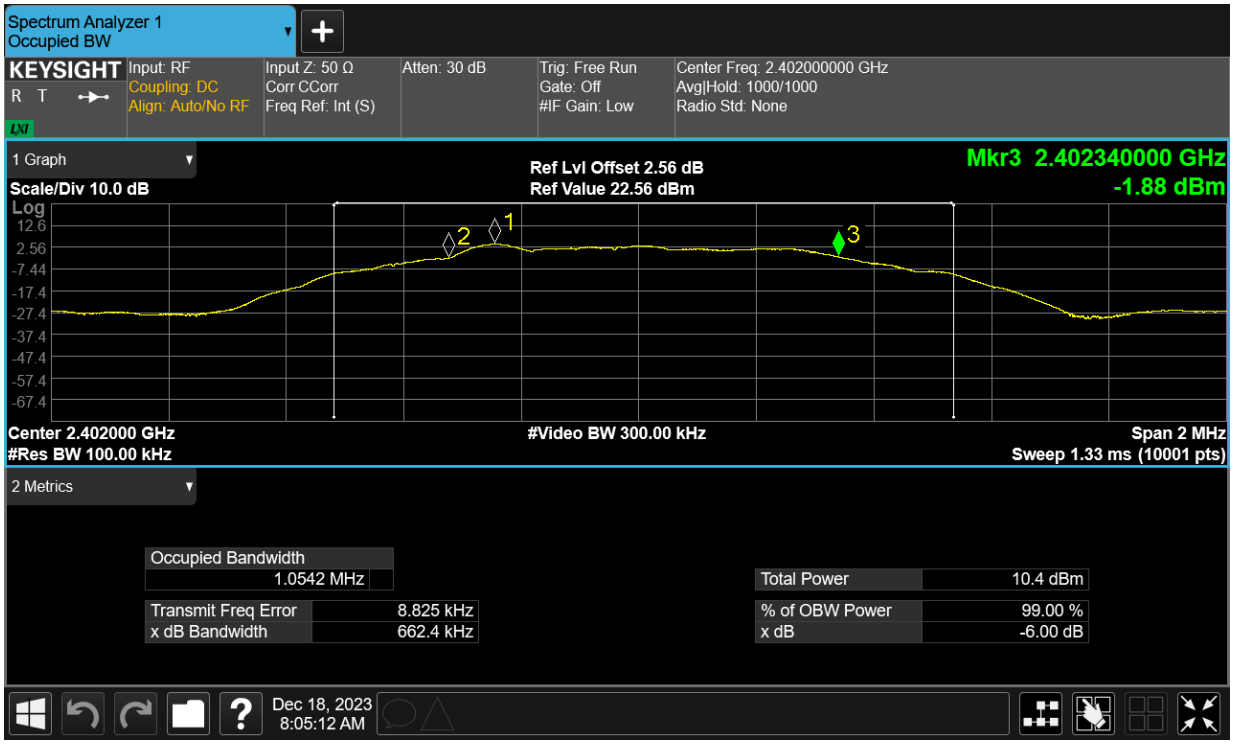

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto/No RF
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 500/500
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 2.60 dB
Ref Level 20.00 dBm
Mkr1 2.479 819 2 GHz
5.44 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)
Dec 18, 2023
8:11:25 AM

-6dB Bandwidth

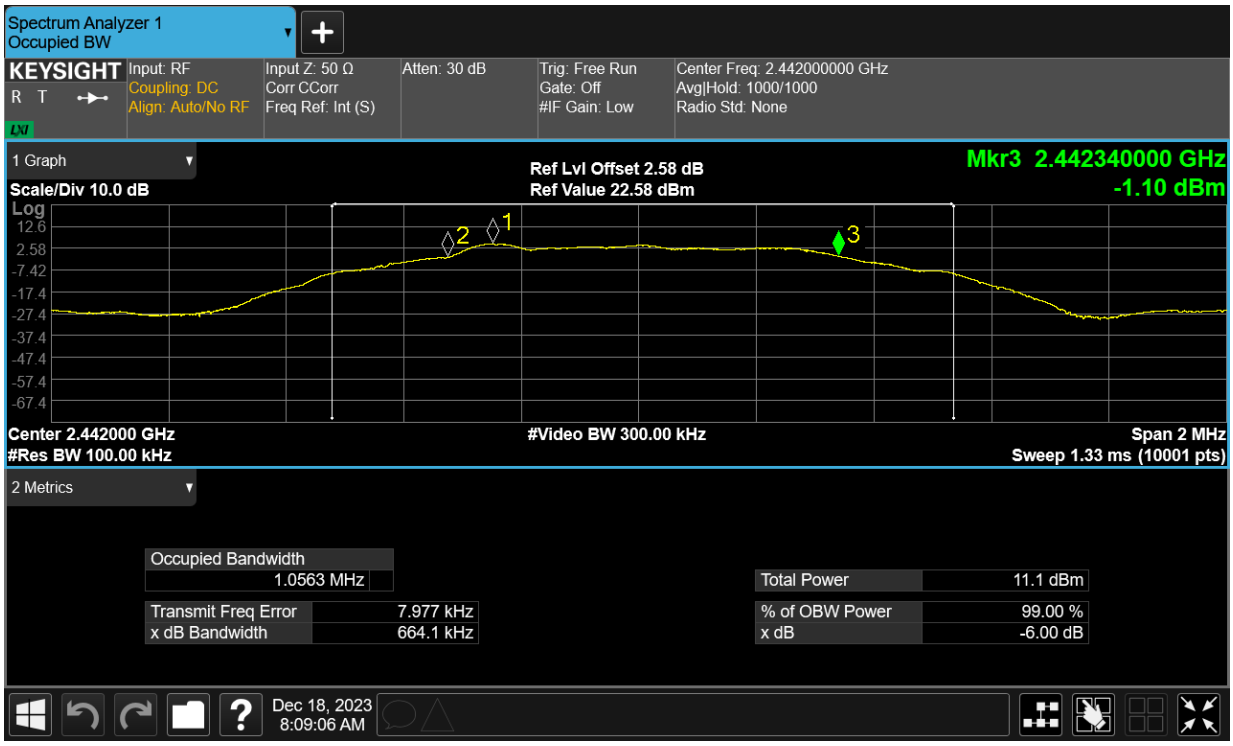
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	limit	Verdic
NVNT	BLE	2402	Ant12	0.662	0.5	Pass
NVNT	BLE	2442	Ant12	0.664	0.5	Pass
NVNT	BLE	2480	Ant12	0.663	0.5	Pass

Test Graphs

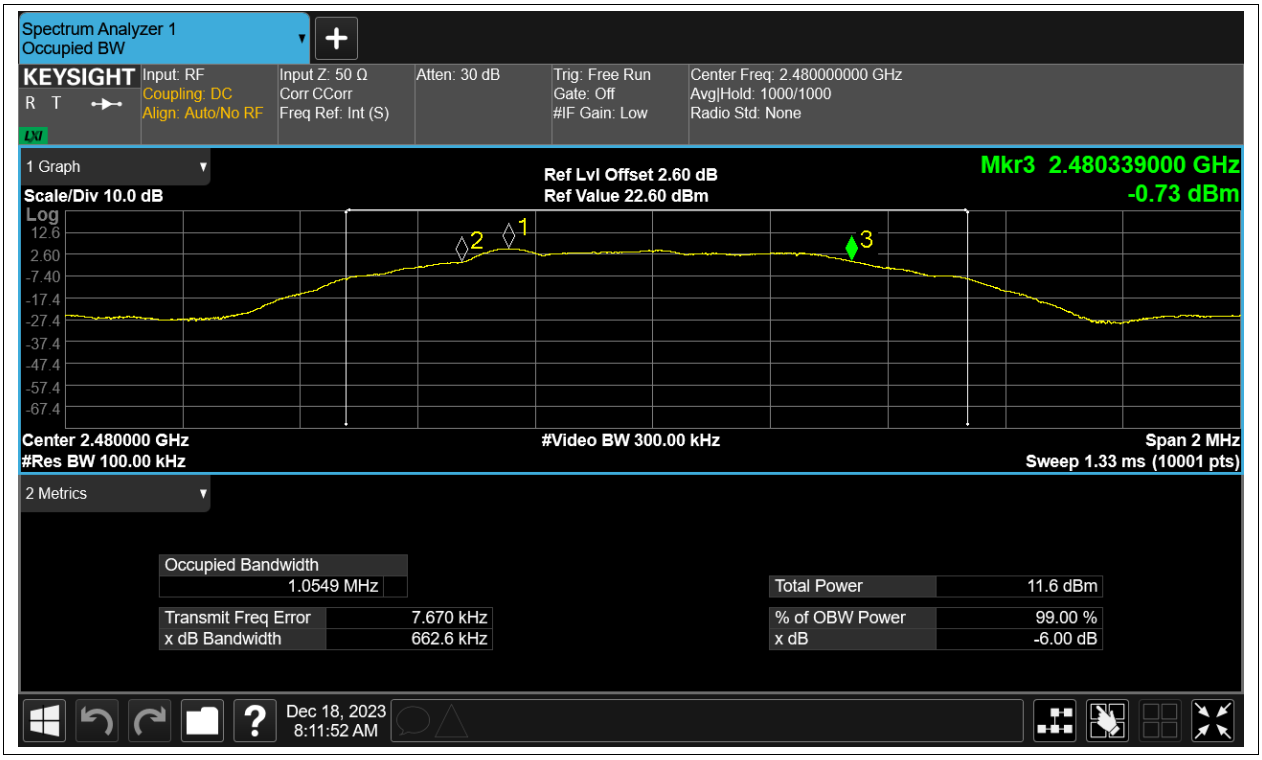
-6dB Bandwidth NVNT BLE 2402MHz Ant12



-6dB Bandwidth NVNT BLE 2442MHz Ant12



-6dB Bandwidth NVNT BLE 2480MHz Ant12

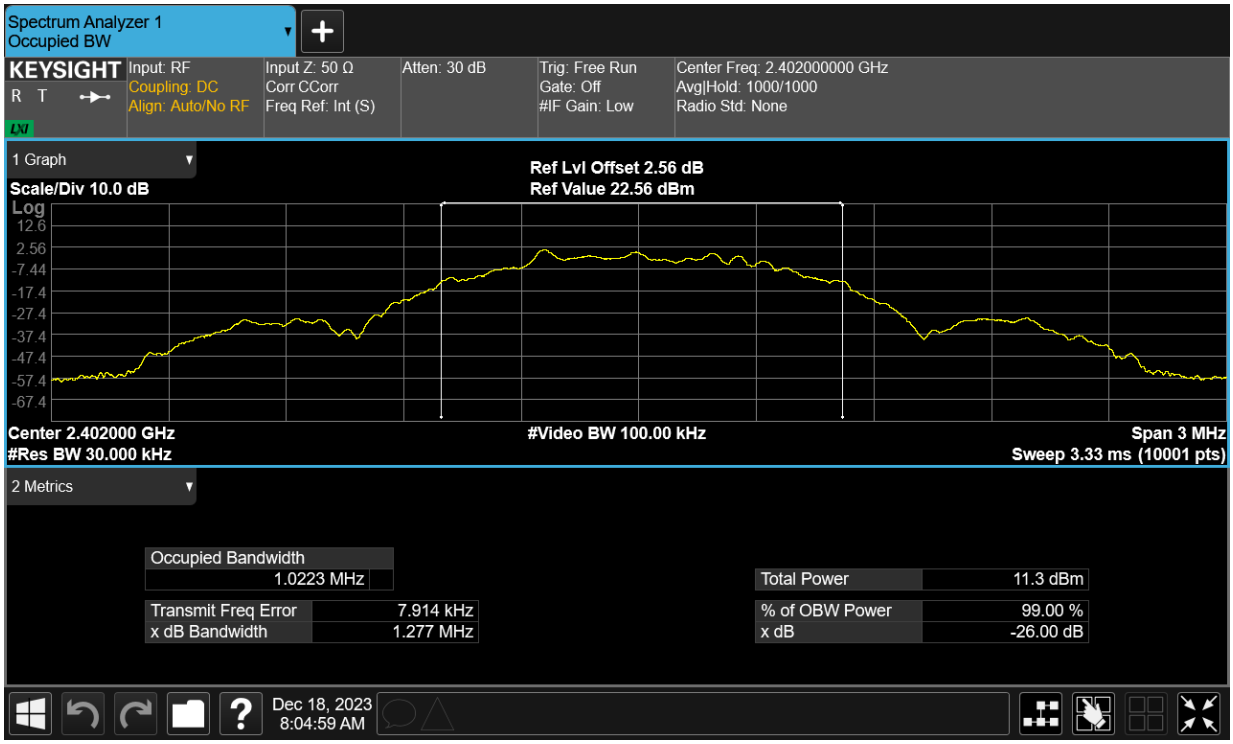

Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto/No RF
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 1000/1000
Radio Std: None
1 Graph
Scale/Div 10.0 dB
Log
12.6
2.60
-7.40
-17.4
-27.4
-37.4
-47.4
-57.4
-67.4
Ref Lvl Offset 2.60 dB
Ref Value 22.60 dBm
Mkr3 2.480339000 GHz
-0.73 dBm
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
1.0549 MHz
Transmit Freq Error 7.670 kHz
x dB Bandwidth 662.6 kHz
Total Power 11.6 dBm
% of OBW Power 99.00 %
x dB -6.00 dB
Dec 18, 2023
8:11:52 AM

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2402	Ant12	1.022
NVNT	BLE	2442	Ant12	1.025
NVNT	BLE	2480	Ant12	1.023

Test Graphs

OBW NVNT BLE 2402MHz Ant12



OBW NVNT BLE 2442MHz Ant12

OBW NVNT BLE 2480MHz Ant12

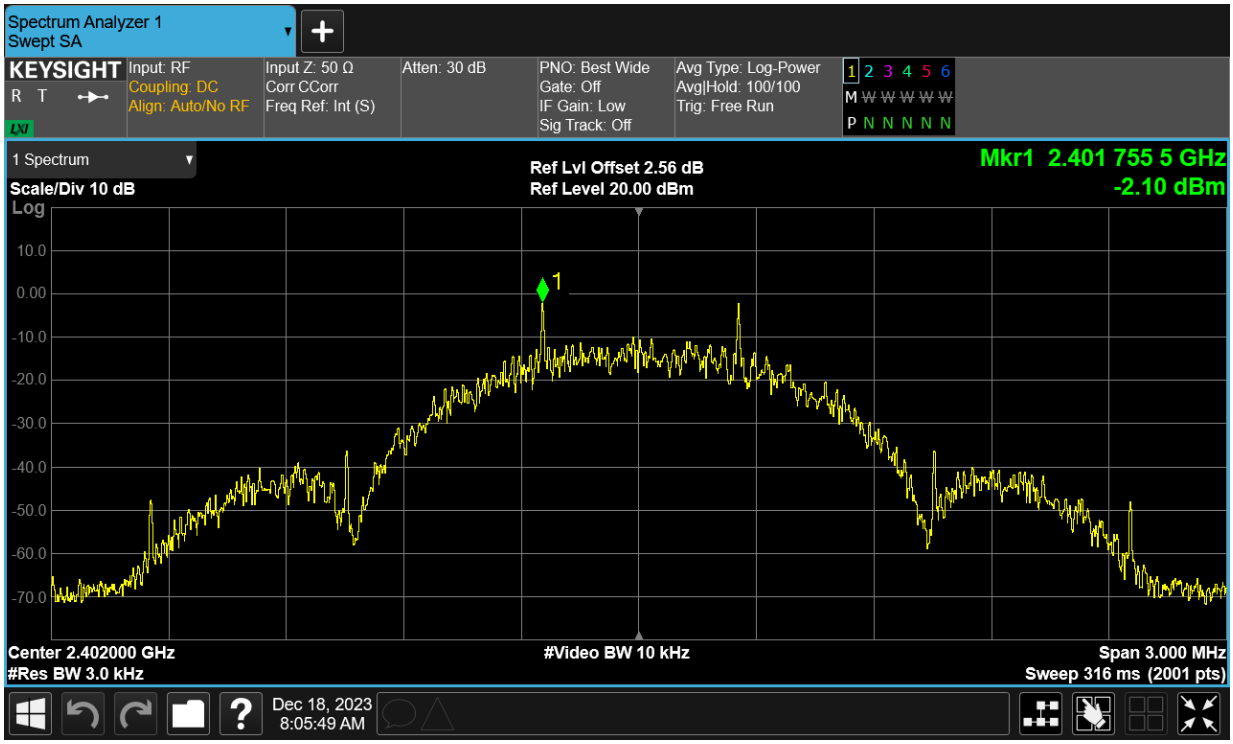
Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto/No RF
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 1000/1000
Radio Std: None
1 Graph
Ref Lvl Offset 2.60 dB
Ref Value 22.60 dBm
Scale/Div 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 3 MHz
Sweep 3.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
1.0234 MHz
Transmit Freq Error 6.651 kHz
x dB Bandwidth 1.278 MHz
Total Power 12.5 dBm
% of OBW Power 99.00 %
x dB -26.00 dB
Dec 18, 2023
8:11:39 AM

Maximum Power Spectral Density Level

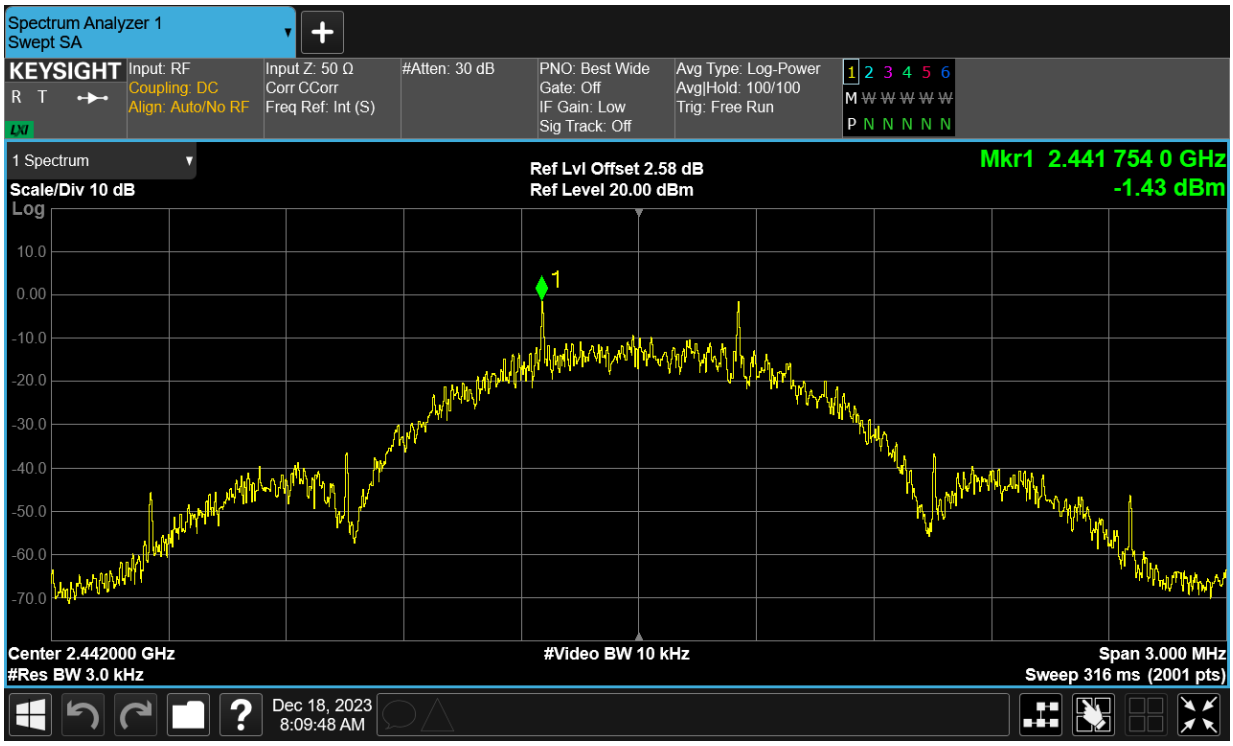
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant12	-2.096	8	Pass
NVNT	BLE	2442	Ant12	-1.425	8	Pass
NVNT	BLE	2480	Ant12	-0.947	8	Pass

Test Graphs

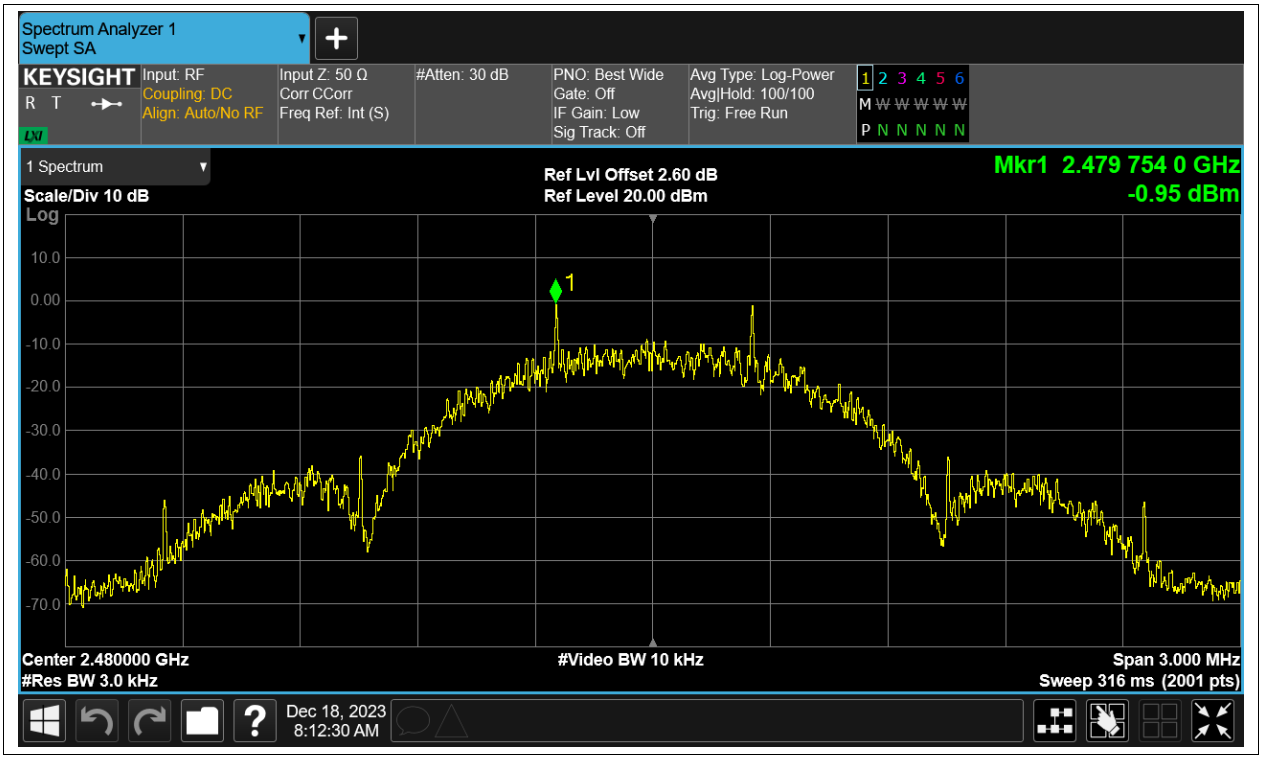
PSD NVNT BLE 2402MHz Ant12



PSD NVNT BLE 2442MHz Ant12



PSD NVNT BLE 2480MHz Ant12

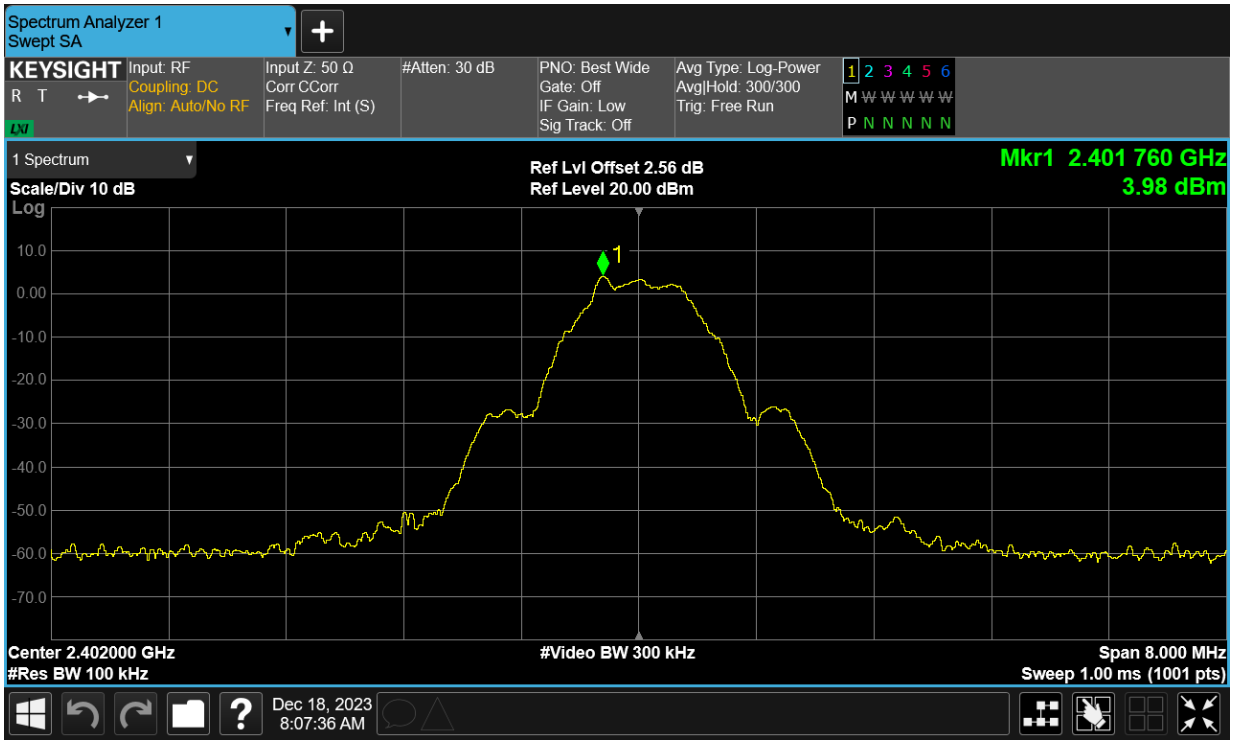

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto/No RF
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 2.60 dB
Ref Level 20.00 dBm
Mkr1 2.479 754 0 GHz
-0.95 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)
Dec 18, 2023
8:12:30 AM

Band Edge

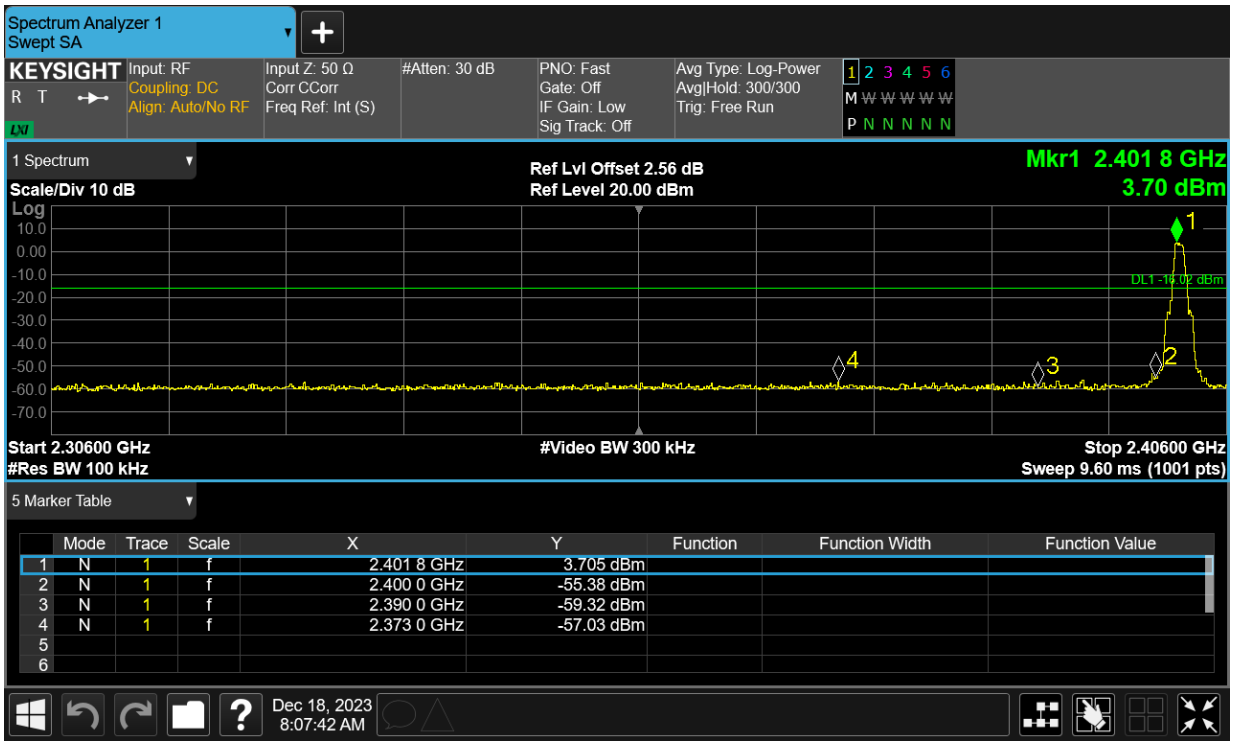
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant12	-61.01	-20	Pass
NVNT	BLE	2480	Ant12	-61.47	-20	Pass

Test Graphs

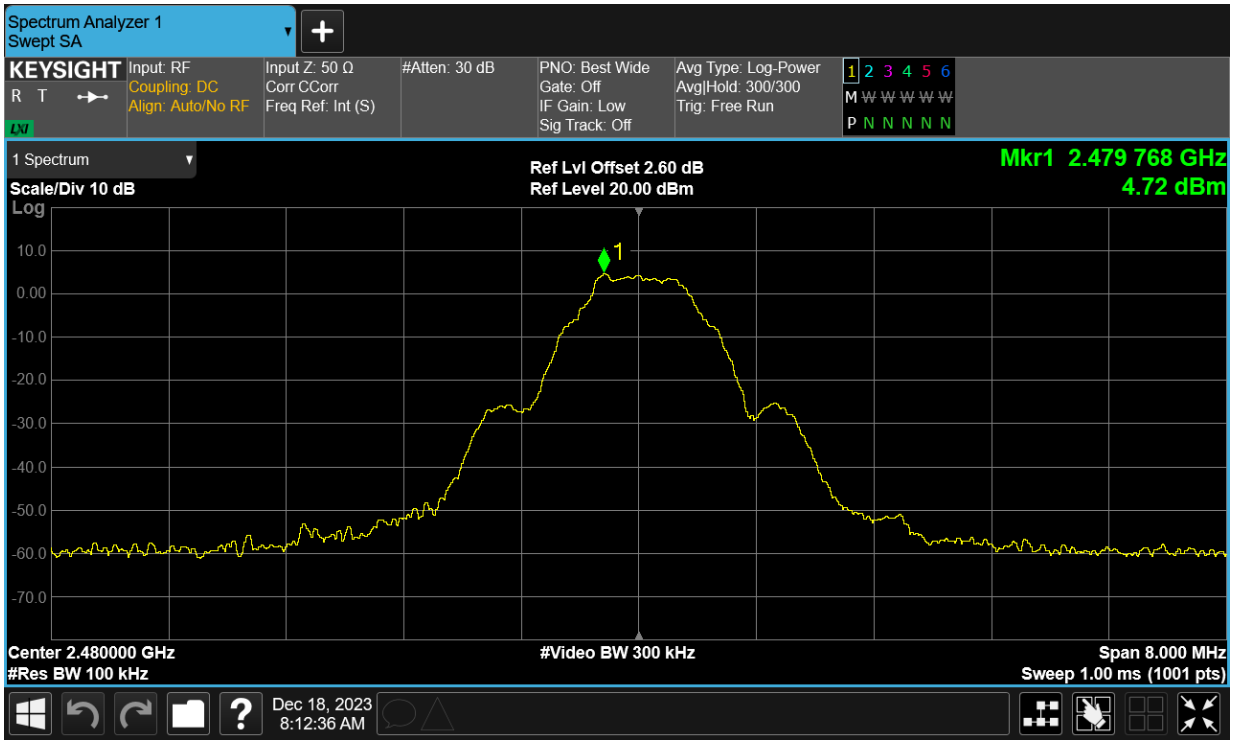
Band Edge NVNT BLE 2402MHz Ant12 Ref



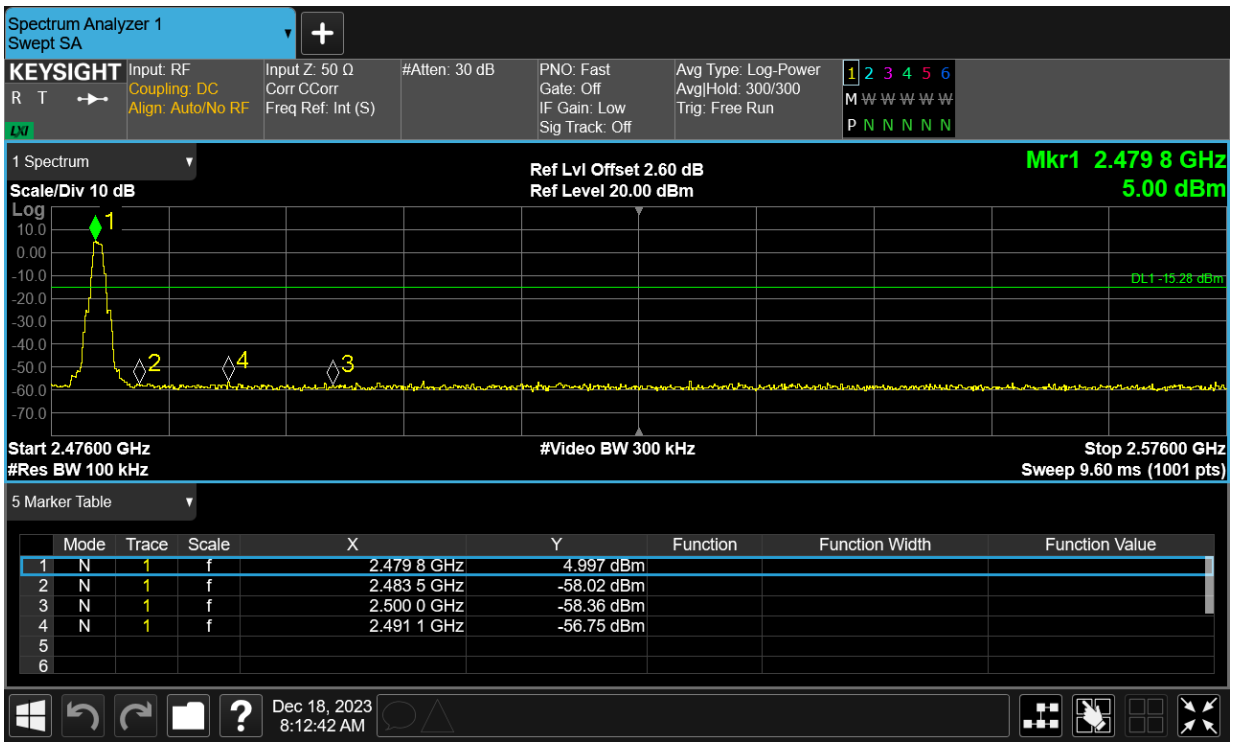
Band Edge NVNT BLE 2402MHz Ant12 Emission



Band Edge NVNT BLE 2480MHz Ant12 Ref



Band Edge NVNT BLE 2480MHz Ant12 Emission

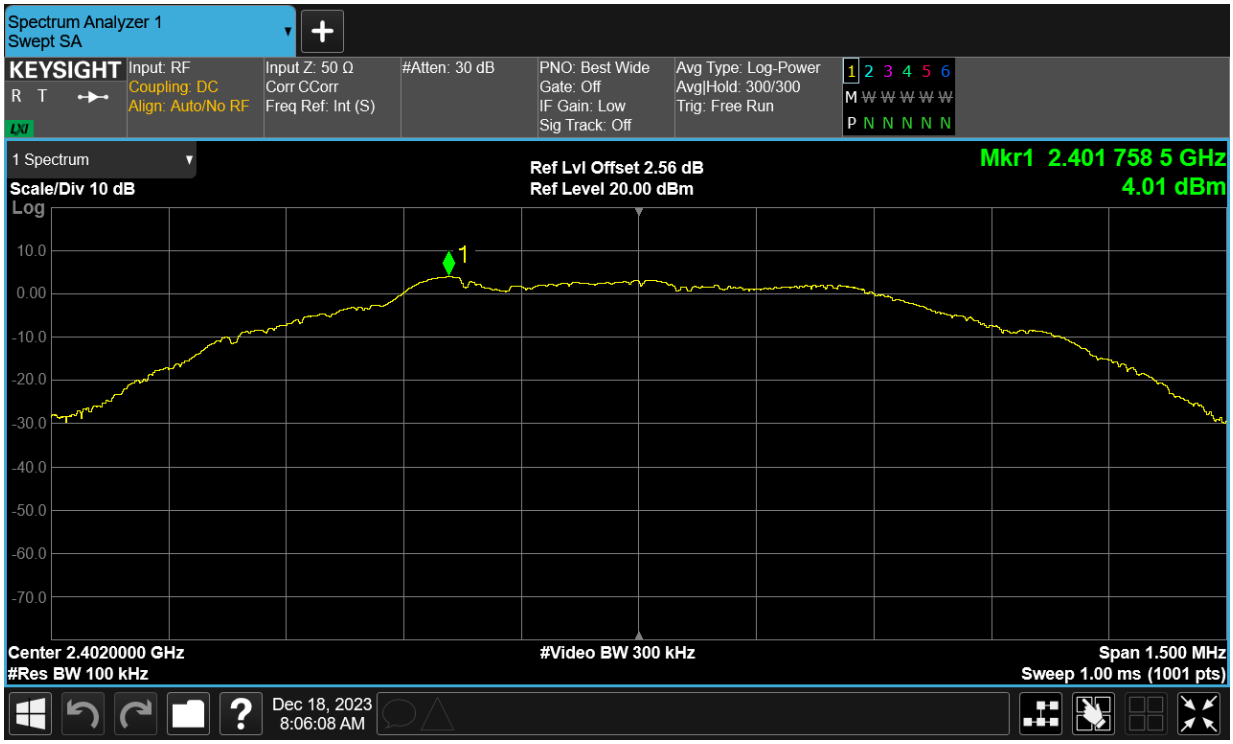


Conducted RF Spurious Emission

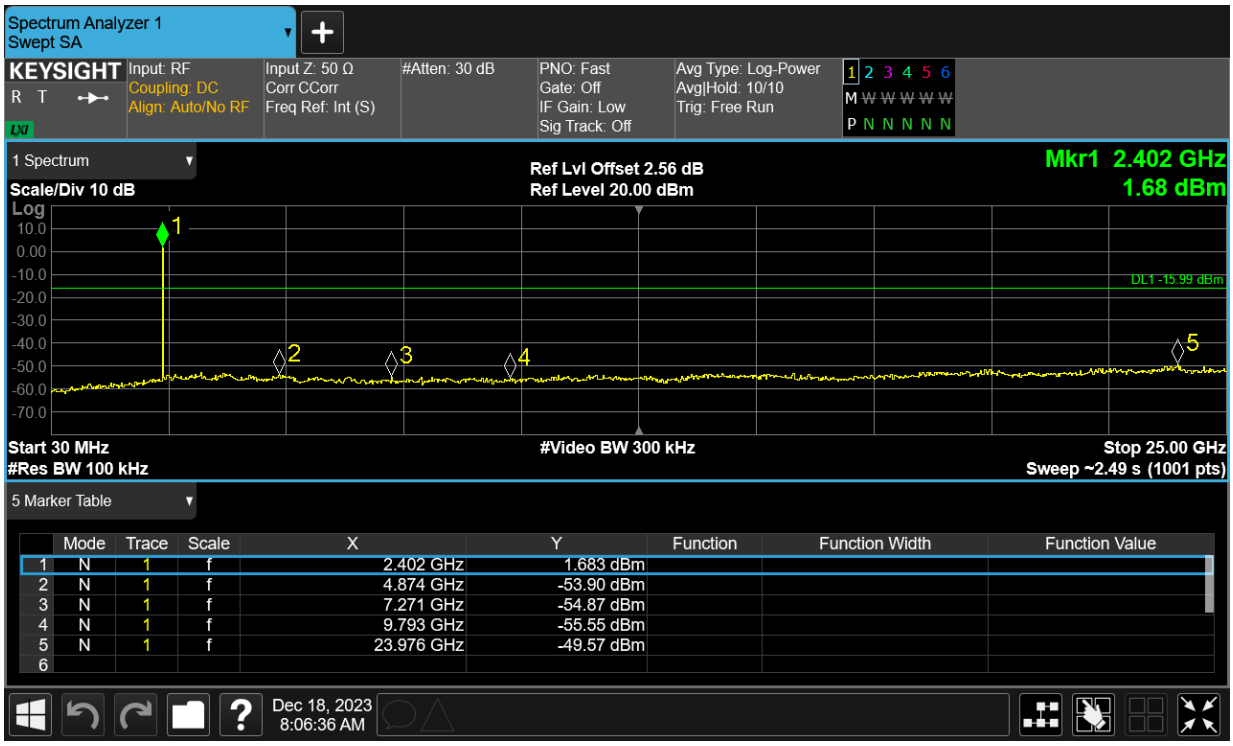
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant12	-53.58	-20	Pass
NVNT	BLE	2442	Ant12	-54.21	-20	Pass
NVNT	BLE	2480	Ant12	-54.2	-20	Pass

Test Graphs

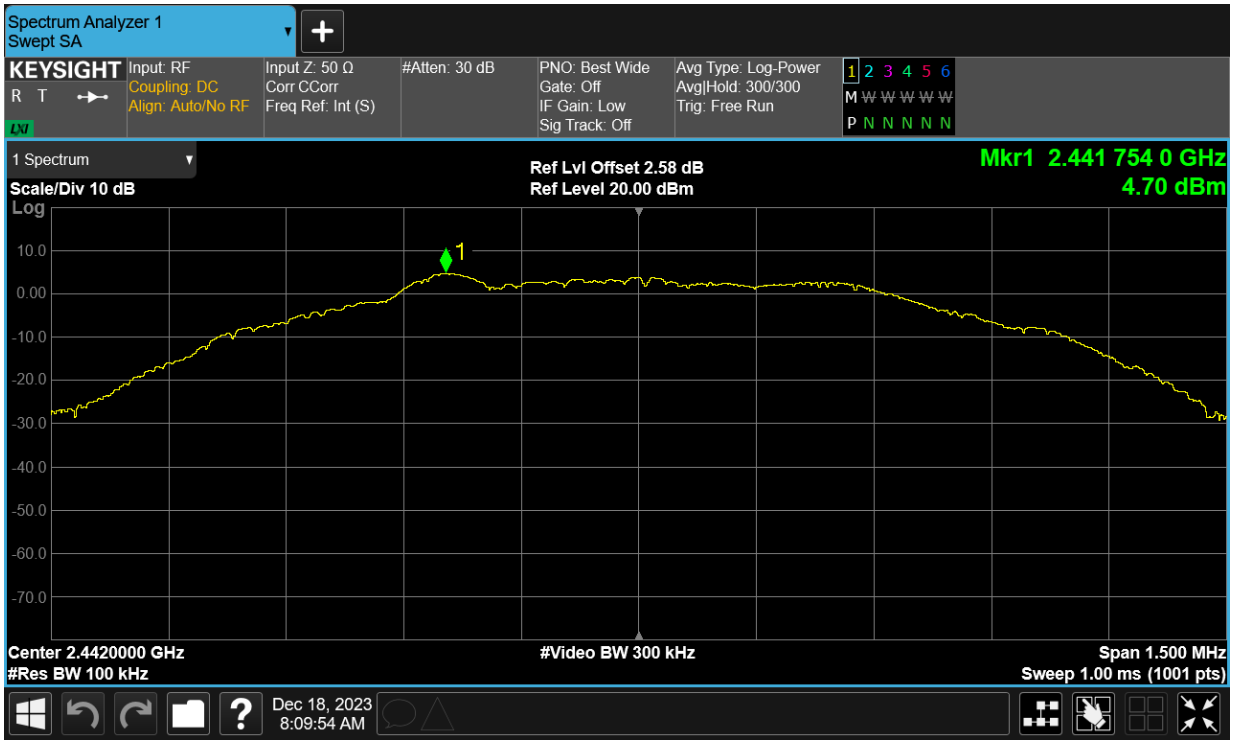
Tx. Spurious NVNT BLE 2402MHz Ant12 Ref



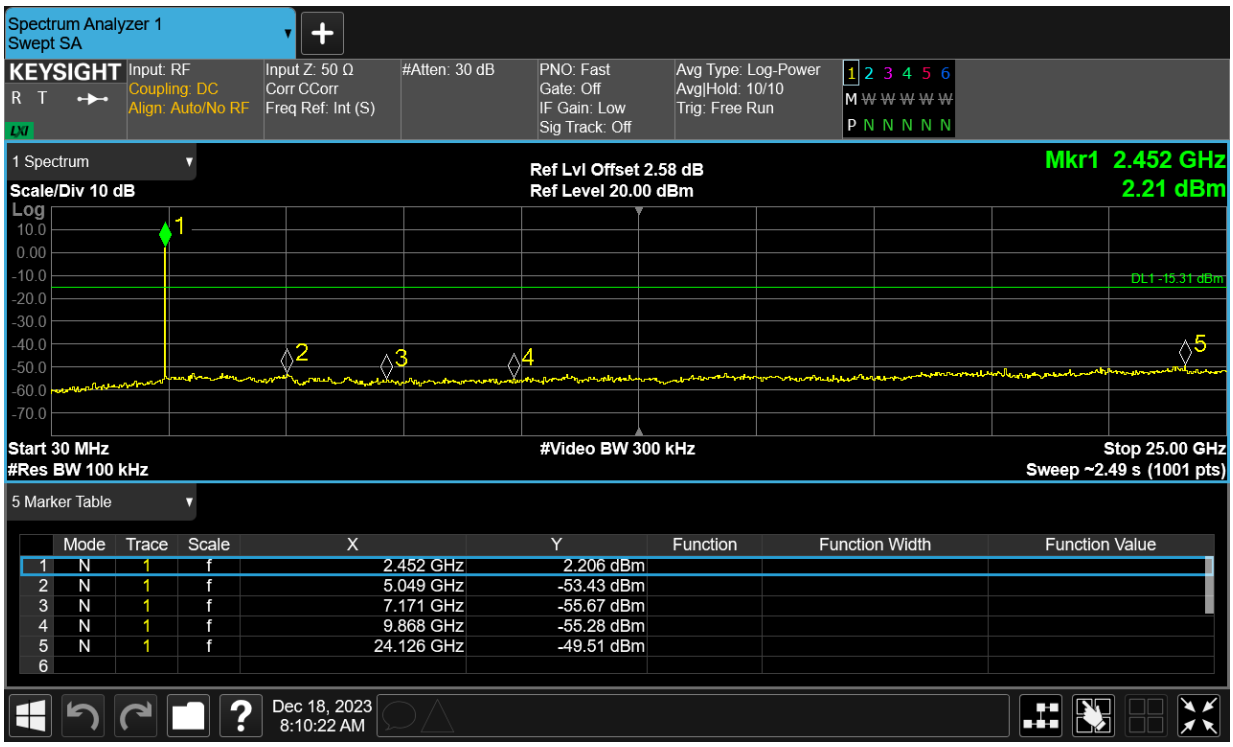
Tx. Spurious NVNT BLE 2402MHz Ant12 Emission



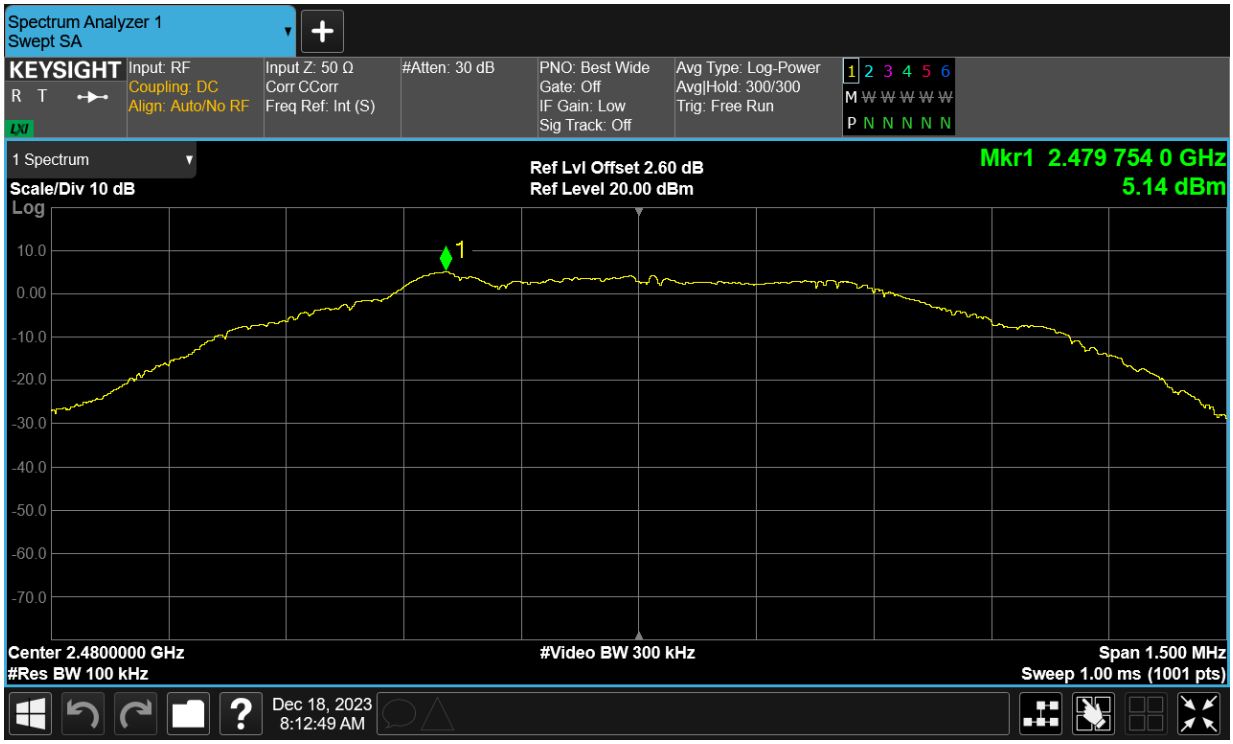
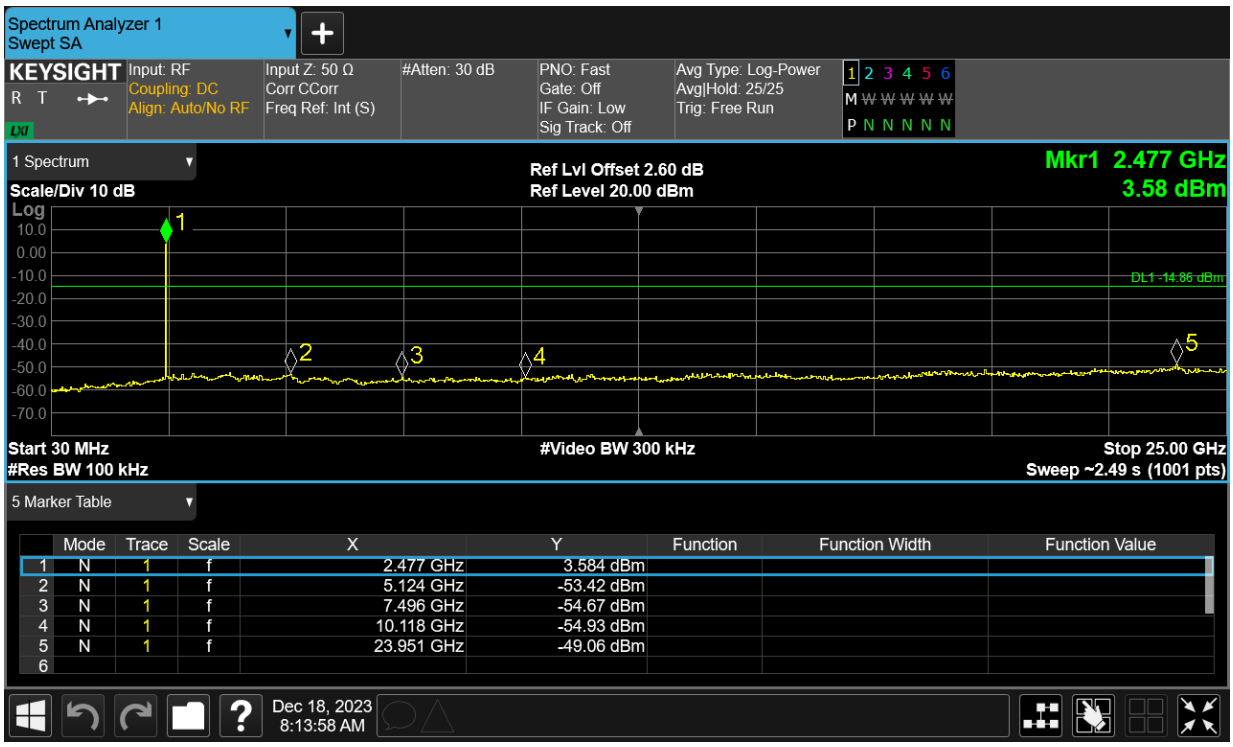
Tx. Spurious NVNT BLE 2442MHz Ant12 Ref



Tx. Spurious NVNT BLE 2442MHz Ant12 Emission



Tx. Spurious NVNT BLE 2480MHz Ant12 Ref



Tx. Spurious NVNT BLE 2480MHz Ant12 Emission