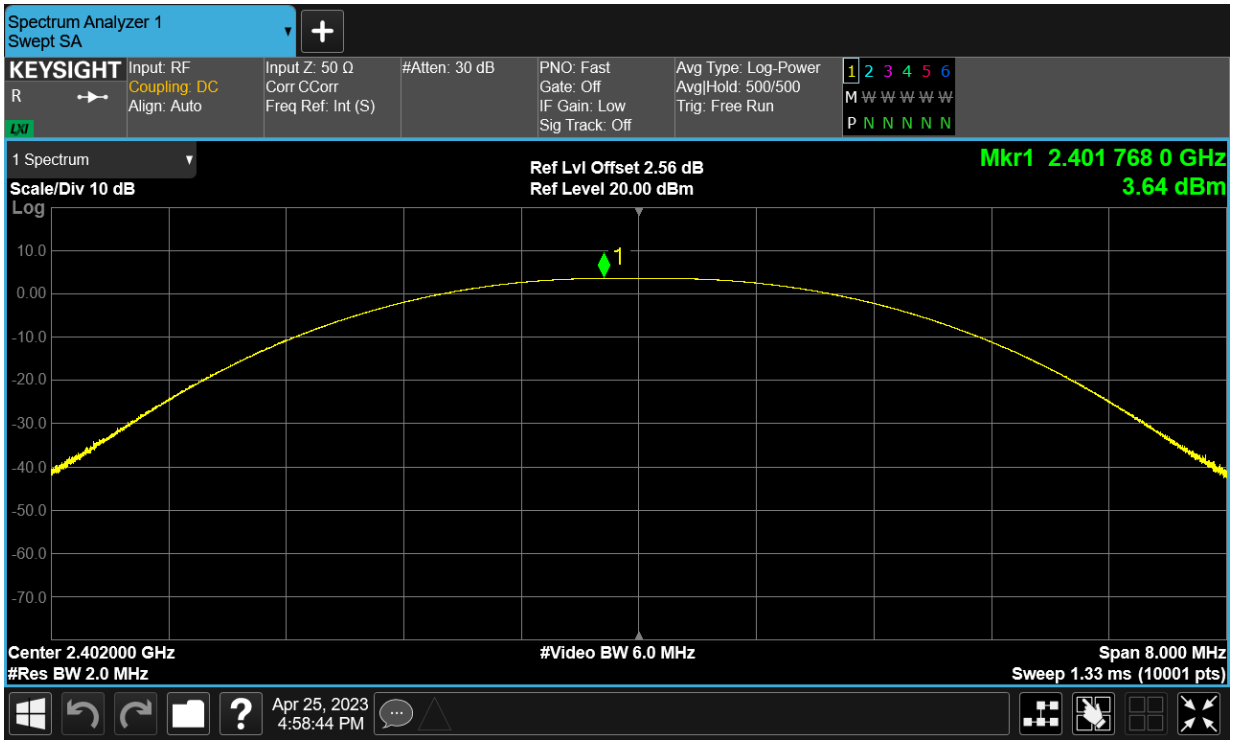
Test Data

Maximum Conducted Output Power

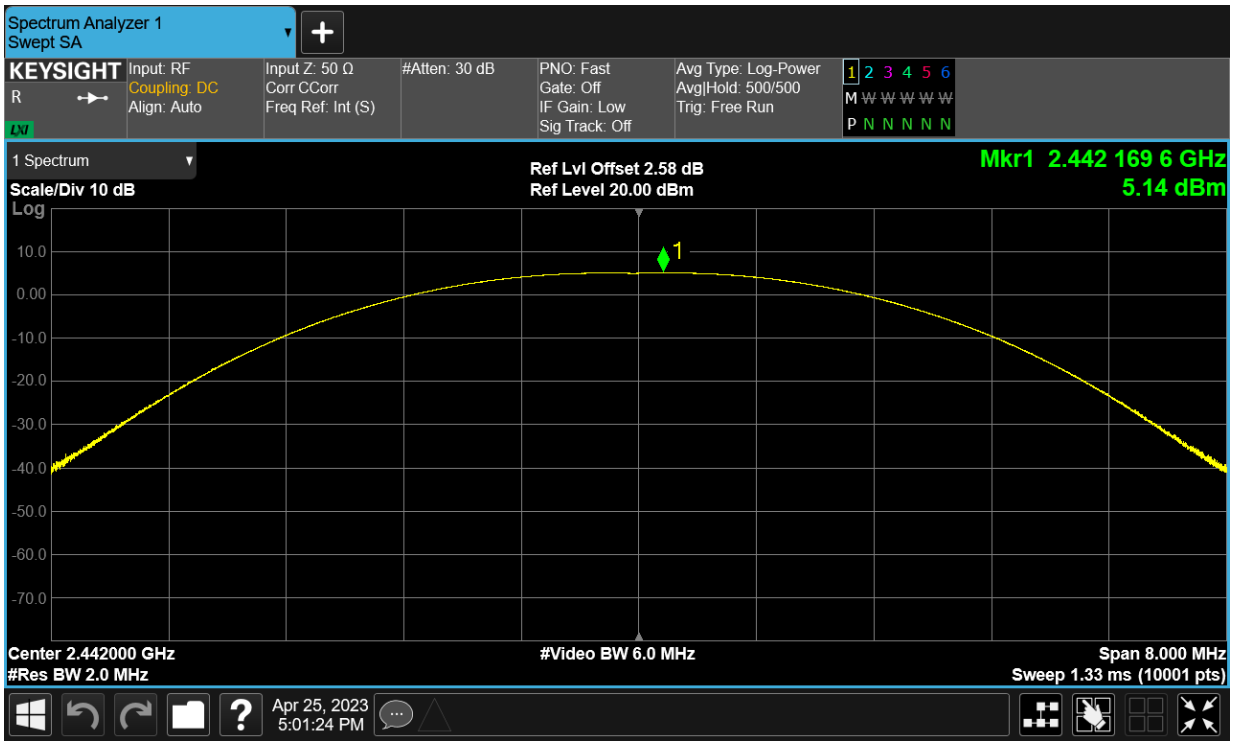
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant6	3.641	30	Pass
NVNT	BLE	2442	Ant6	5.144	30	Pass
NVNT	BLE	2480	Ant6	4.14	30	Pass

Test Graphs

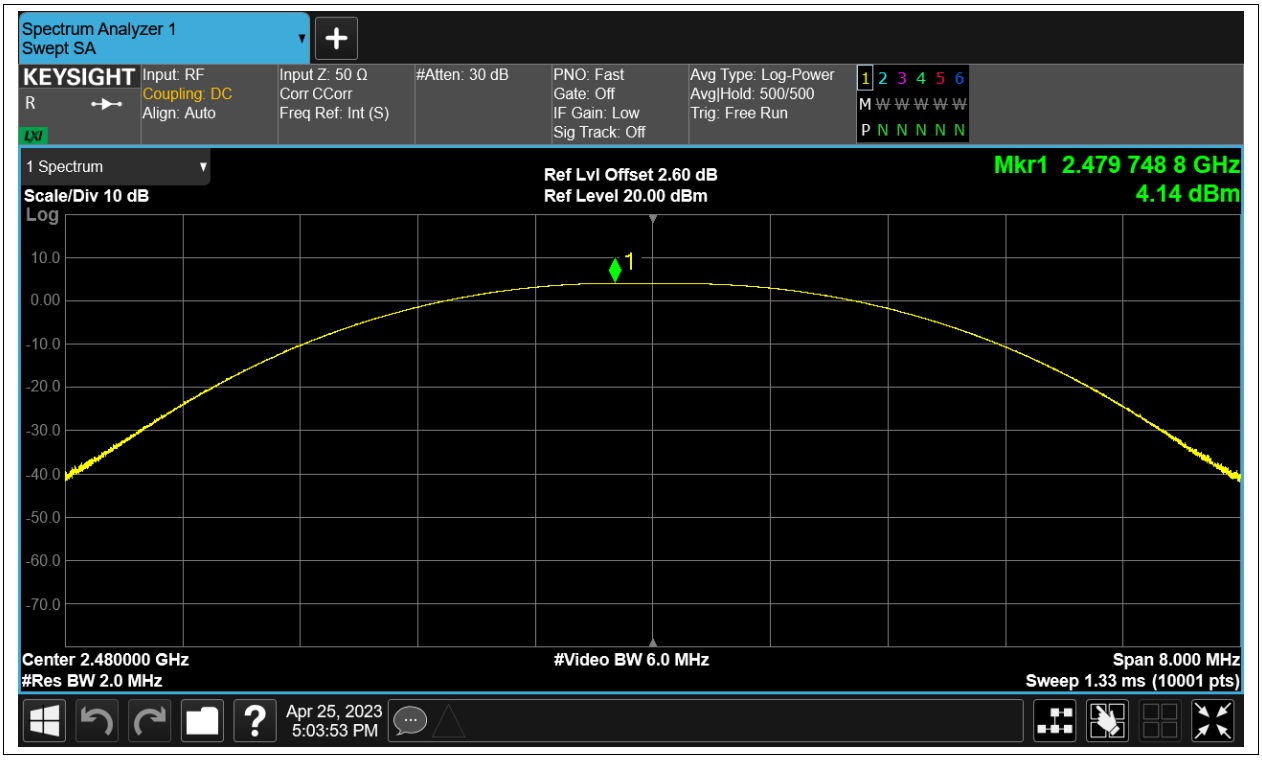
Power NVNT BLE 2402MHz Ant6



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: 500/500
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 2.60 dB
Ref Level 20.00 dBm
Mkr1 2.479 748 8 GHz
4.14 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 2.0 MHz
#Video BW 6.0 MHz
Span 8.000 MHz
Sweep 1.33 ms (10001 pts)
Apr 25, 2023
5:03:53 PM

-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	limit	Verdic
NVNT	BLE	2402	Ant6	0.66	0.5	Pass
NVNT	BLE	2442	Ant6	0.663	0.5	Pass
NVNT	BLE	2480	Ant6	0.661	0.5	Pass

Test Graphs

-6dB Bandwidth NVNT BLE 2402MHz Ant6

-6dB Bandwidth NVNT BLE 2442MHz Ant6

-6dB Bandwidth NVNT BLE 2480MHz Ant6

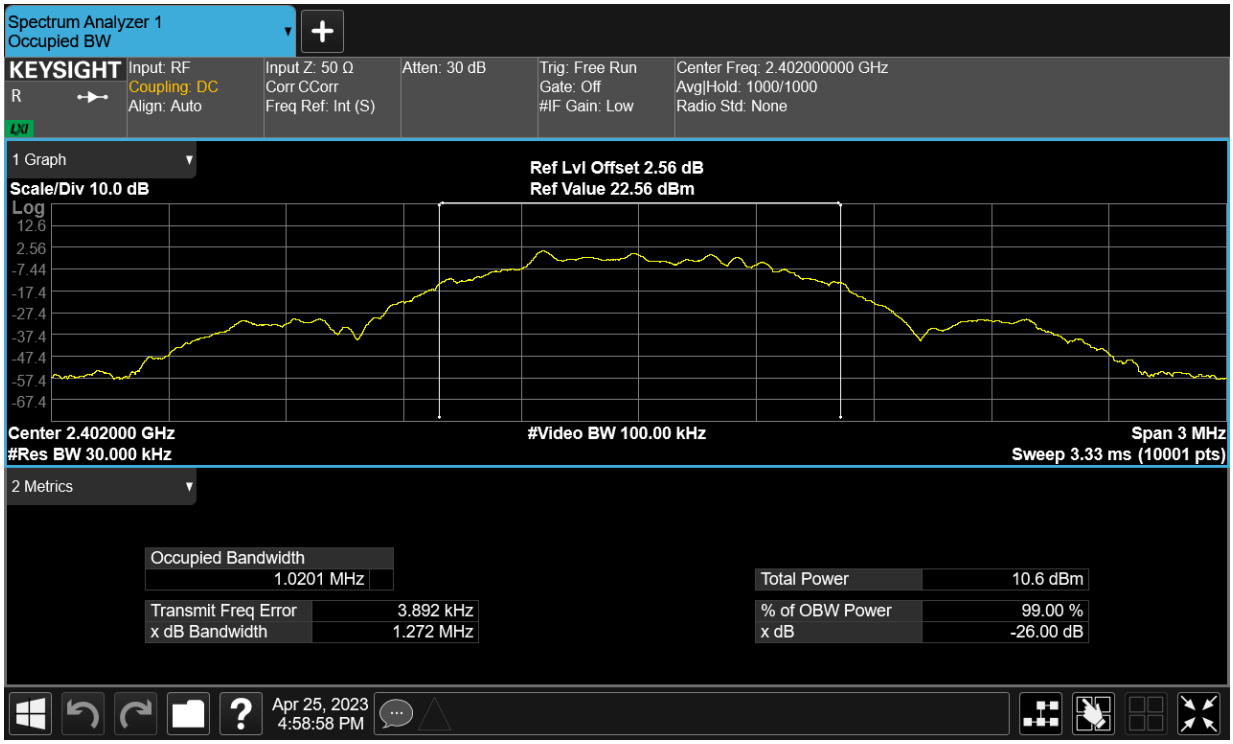
Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 1000/1000
Radio Std: None
1 Graph
Scale/Div 10.0 dB
Log
12.6
2.60
-7.40
-17.4
-27.4
-37.4
-47.4
-57.4
-67.4
Ref Lvl Offset 2.60 dB
Ref Value 22.60 dBm
Mkr3 2.480335000 GHz
-1.88 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
1.0527 MHz
Transmit Freq Error 4.298 kHz
x dB Bandwidth 661.4 kHz
Total Power 10.2 dBm
% of OBW Power 99.00 %
x dB -6.00 dB
Apr 25, 2023
5:04:21 PM

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2402	Ant6	1.02
NVNT	BLE	2442	Ant6	1.02
NVNT	BLE	2480	Ant6	1.022

Test Graphs

OBW NVNT BLE 2402MHz Ant6



OBW NVNT BLE 2442MHz Ant6

OBW NVNT BLE 2480MHz Ant6

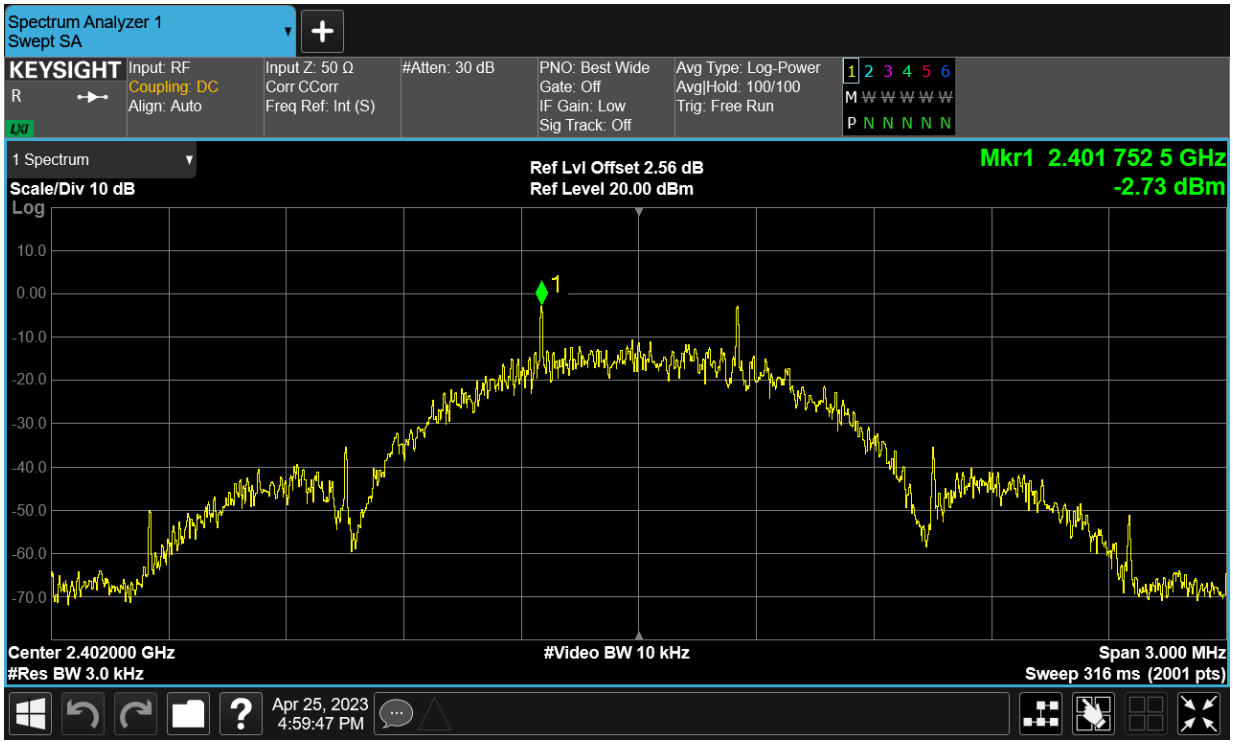
Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 1000/1000
Radio Std: None
1 Graph
Ref Lvl Offset 2.60 dB
Ref Value 22.60 dBm
Scale/Div 10.0 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
1.0215 MHz
Transmit Freq Error 3.170 kHz
x dB Bandwidth 1.274 MHz
Total Power 11.1 dBm
% of OBW Power 99.00 %
x dB -26.00 dB
Apr 25, 2023
5:04:07 PM

Maximum Power Spectral Density Level

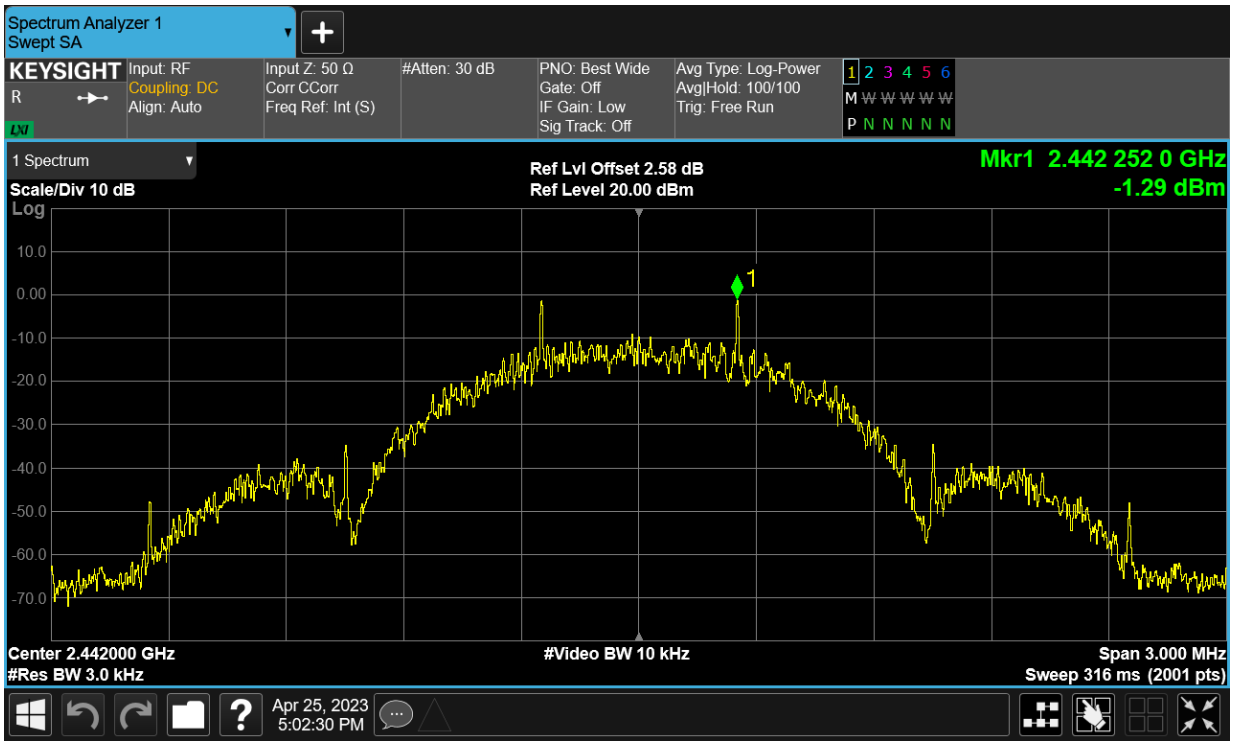
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant6	-2.733	8	Pass
NVNT	BLE	2442	Ant6	-1.29	8	Pass
NVNT	BLE	2480	Ant6	-2.224	8	Pass

Test Graphs

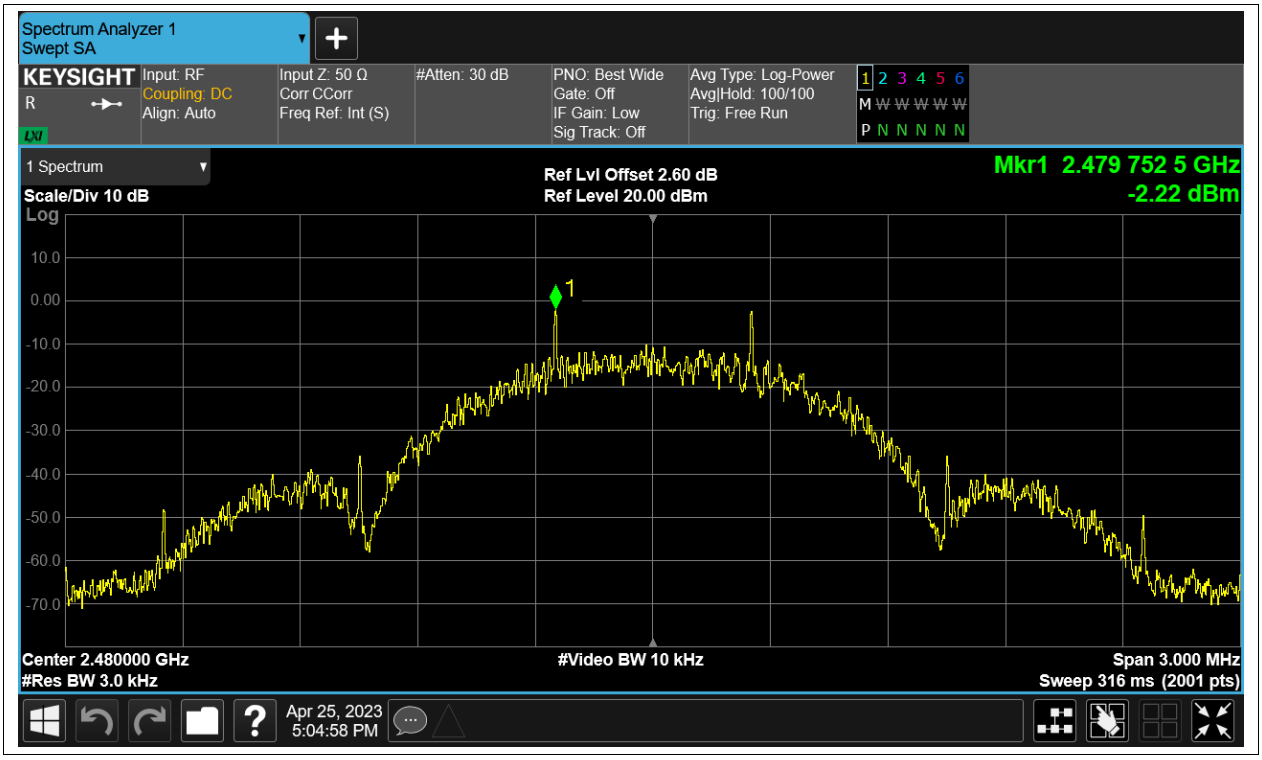
PSD NVNT BLE 2402MHz Ant6



PSD NVNT BLE 2442MHz Ant6



PSD NVNT BLE 2480MHz Ant6

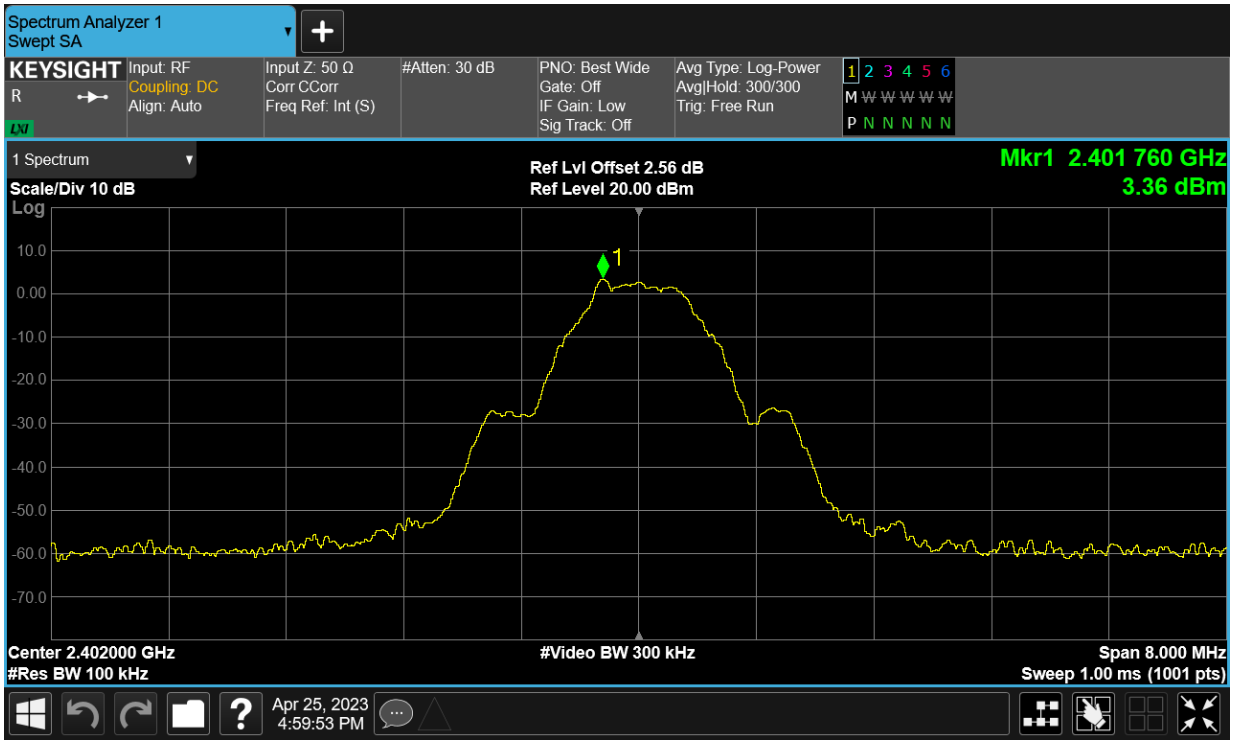

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 2.60 dB
Ref Level 20.00 dBm
Mkr1 2.479 752 5 GHz
-2.22 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)
Apr 25, 2023
5:04:58 PM

Band Edge

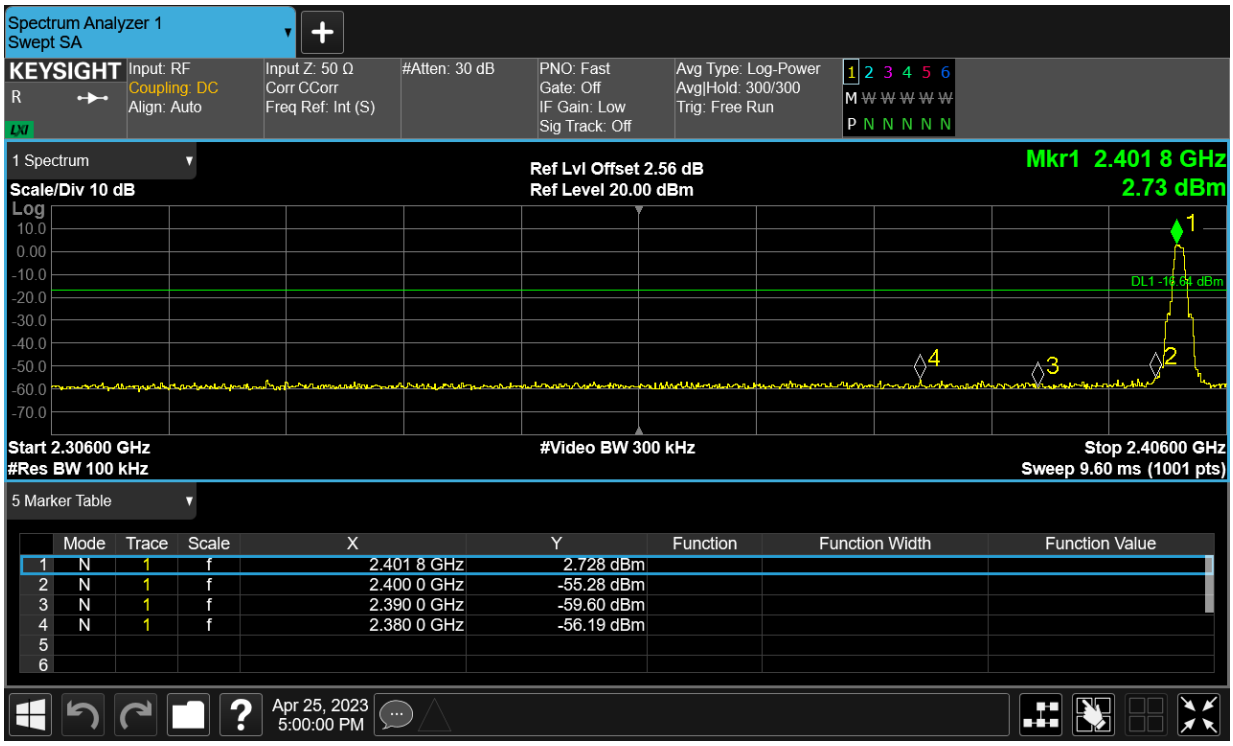
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant6	-59.55	-20	Pass
NVNT	BLE	2480	Ant6	-58.94	-20	Pass

Test Graphs

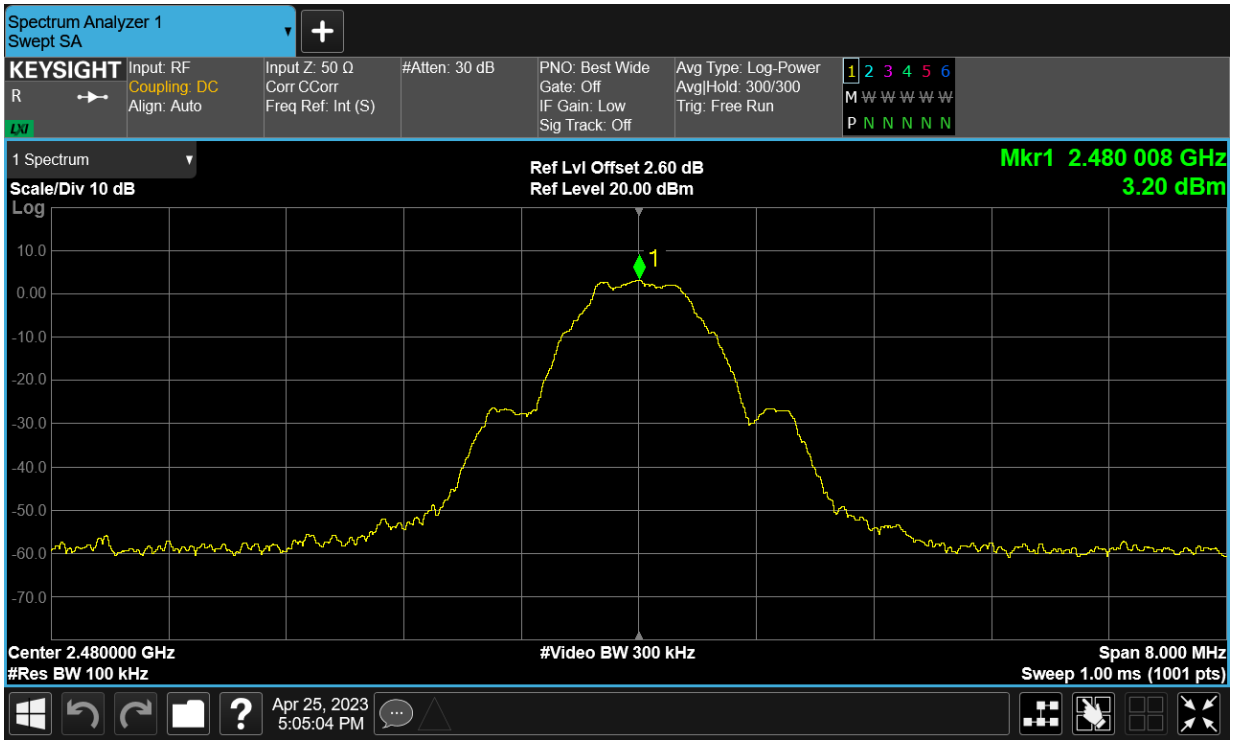
Band Edge NVNT BLE 2402MHz Ant6 Ref



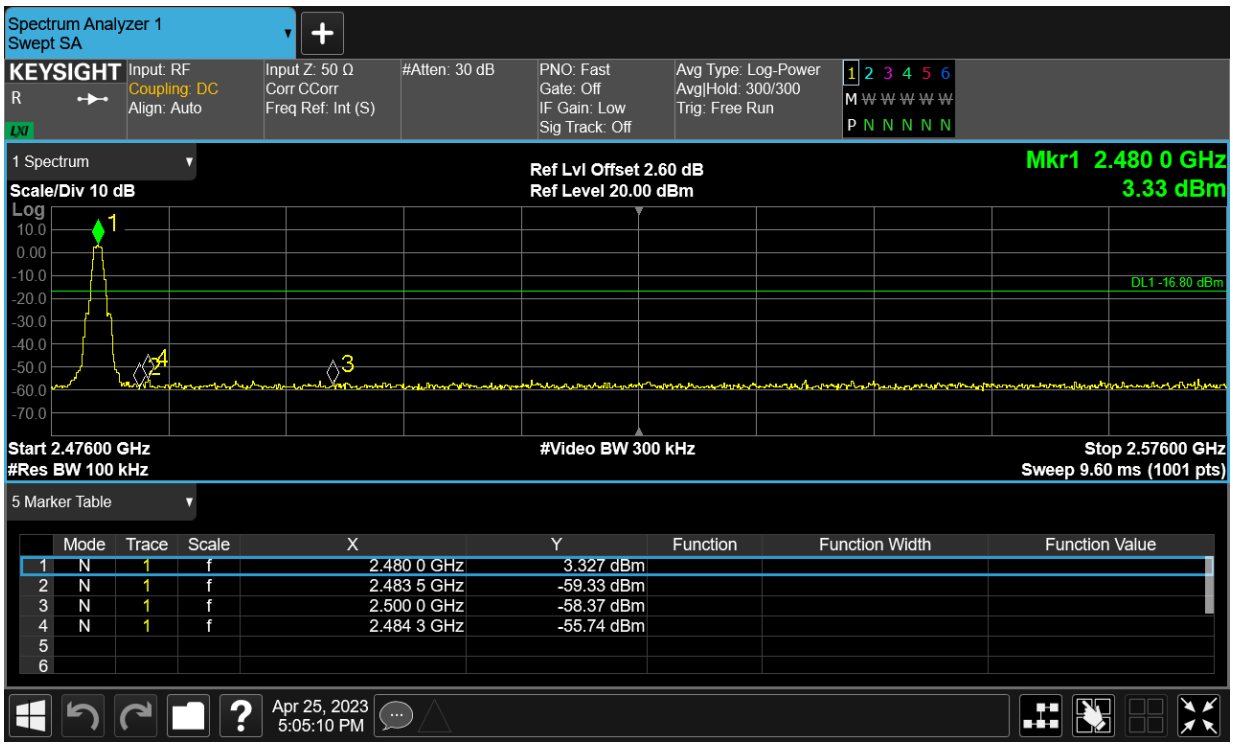
Band Edge NVNT BLE 2402MHz Ant6 Emission



Band Edge NVNT BLE 2480MHz Ant6 Ref



Band Edge NVNT BLE 2480MHz Ant6 Emission

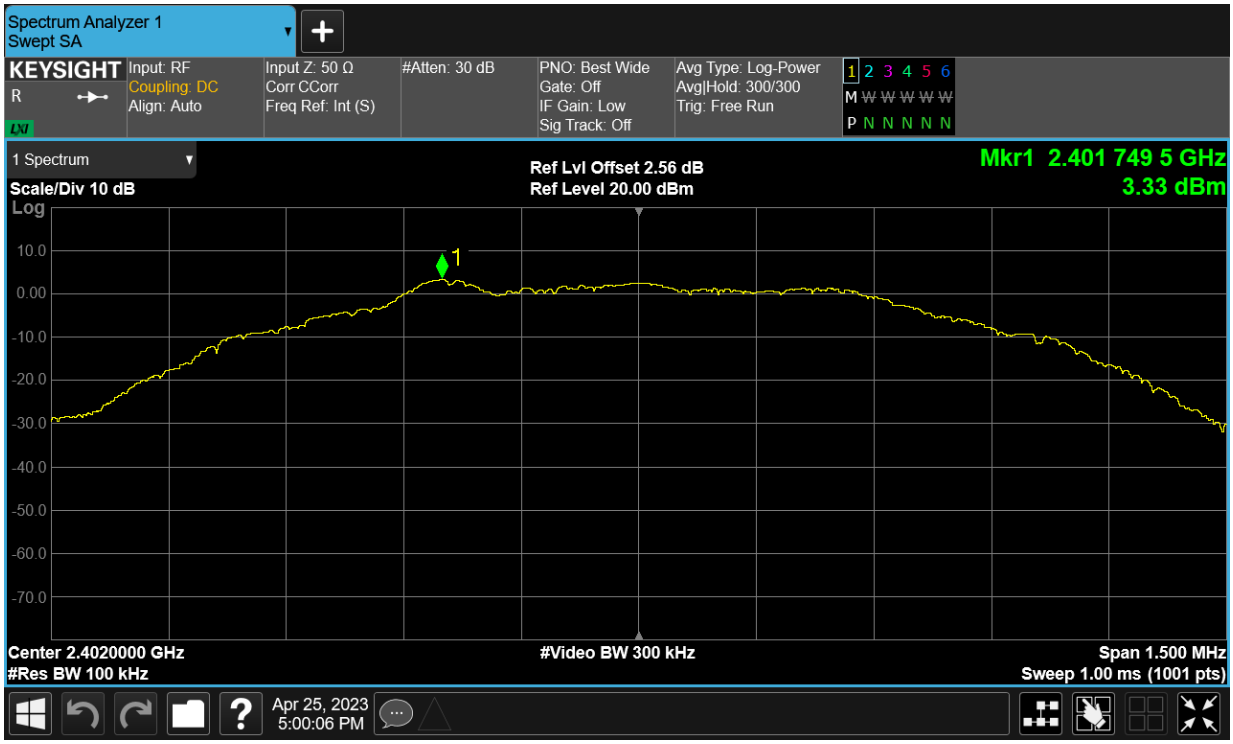


Conducted RF Spurious Emission

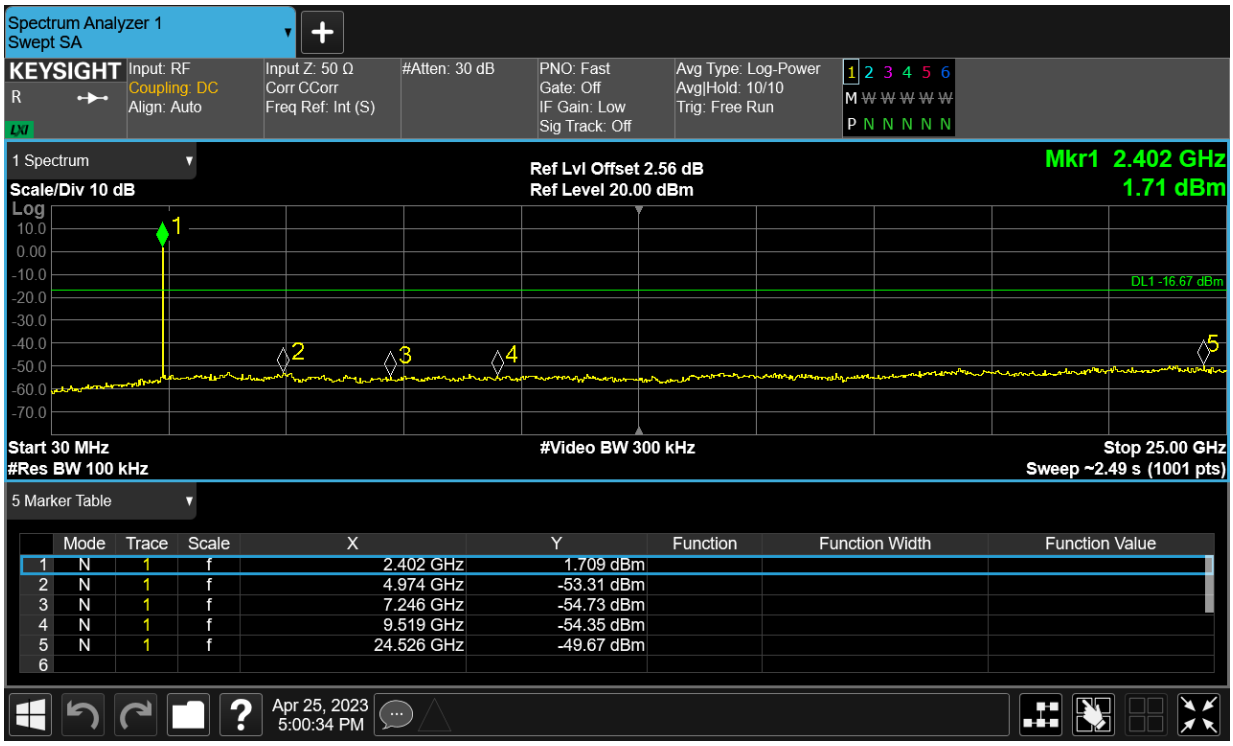
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant6	-53	-20	Pass
NVNT	BLE	2442	Ant6	-54.37	-20	Pass
NVNT	BLE	2480	Ant6	-54.03	-20	Pass

Test Graphs

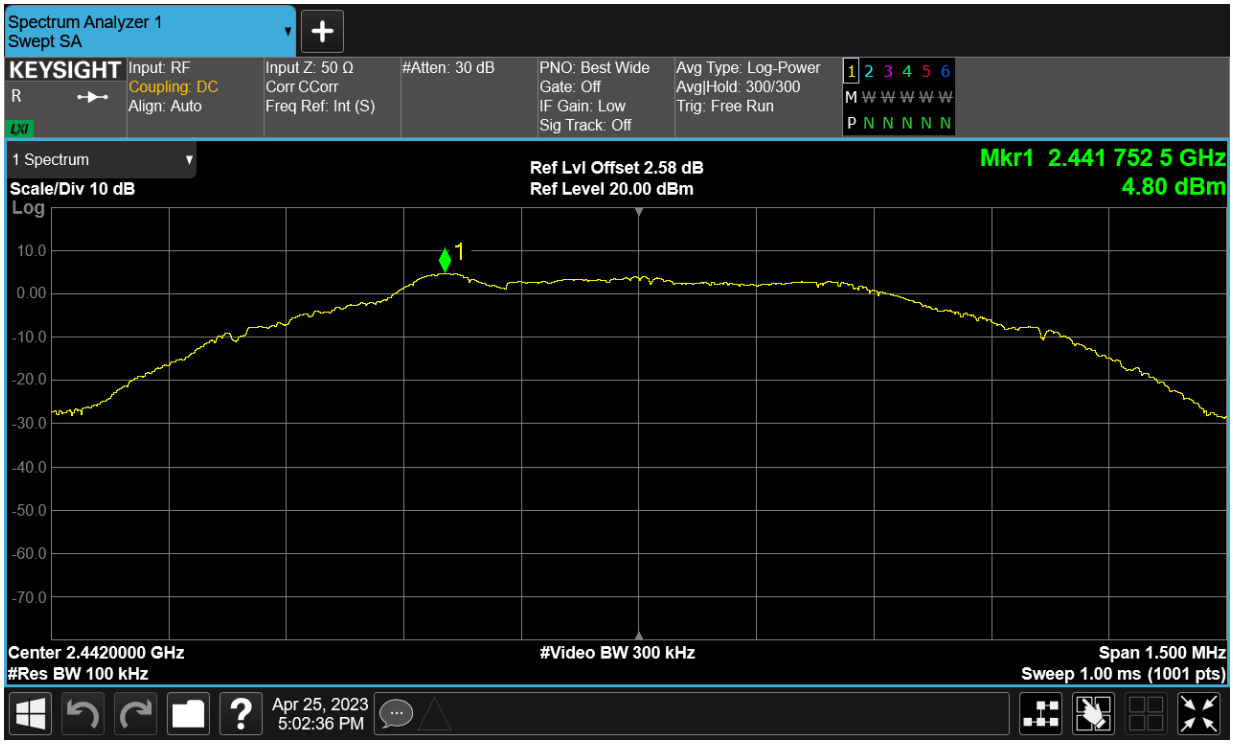
Tx. Spurious NVNT BLE 2402MHz Ant6 Ref



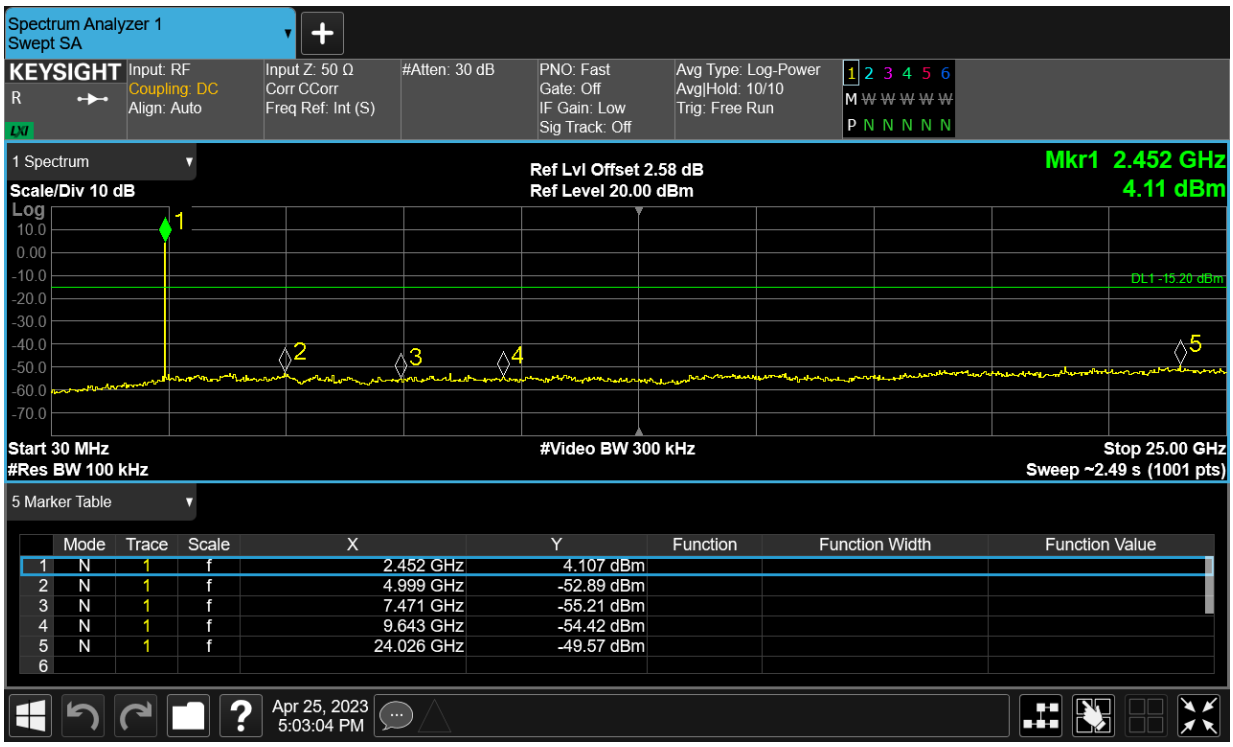
Tx. Spurious NVNT BLE 2402MHz Ant6 Emission



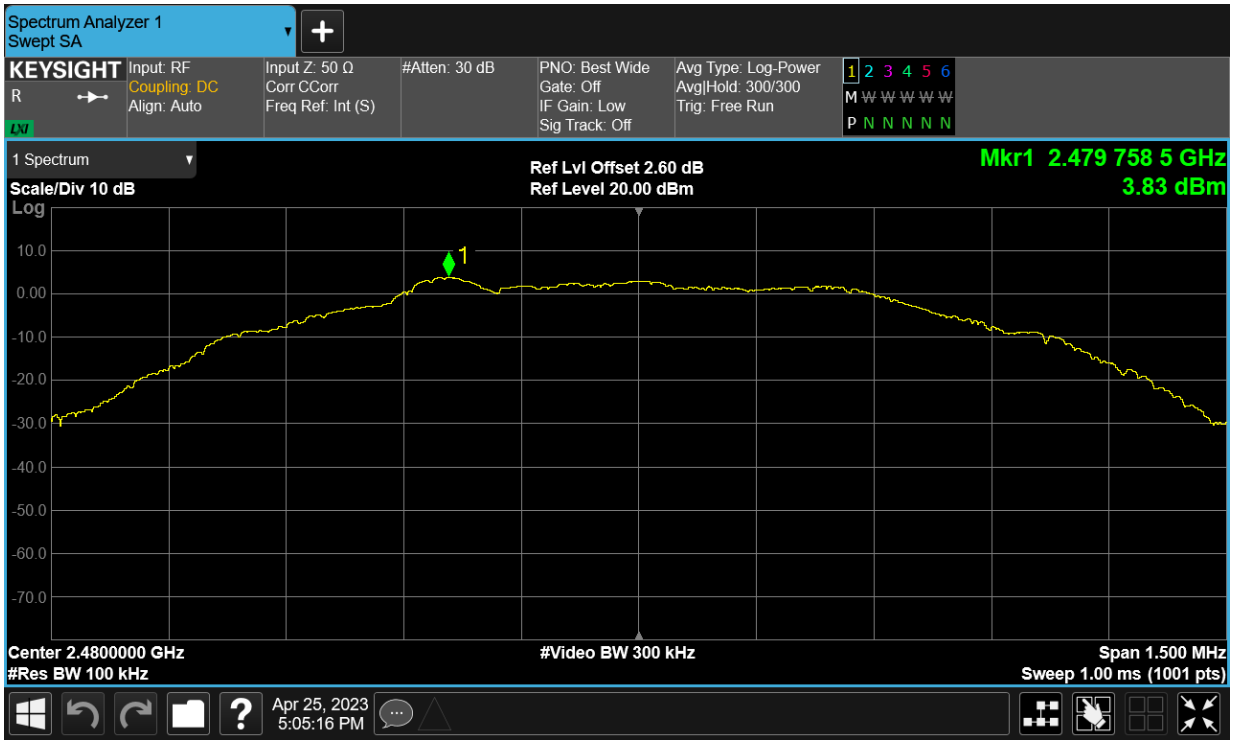
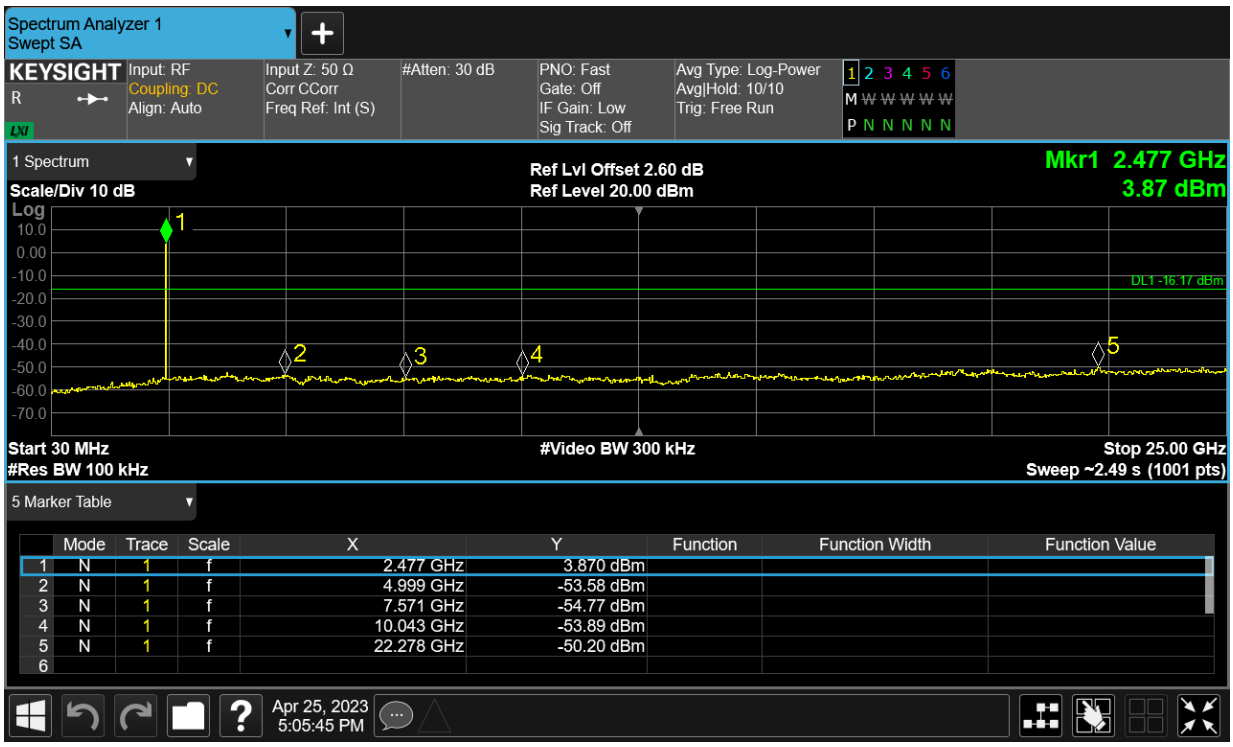
Tx. Spurious NVNT BLE 2442MHz Ant6 Ref



Tx. Spurious NVNT BLE 2442MHz Ant6 Emission



Tx. Spurious NVNT BLE 2480MHz Ant6 Ref



Tx. Spurious NVNT BLE 2480MHz Ant6 Emission