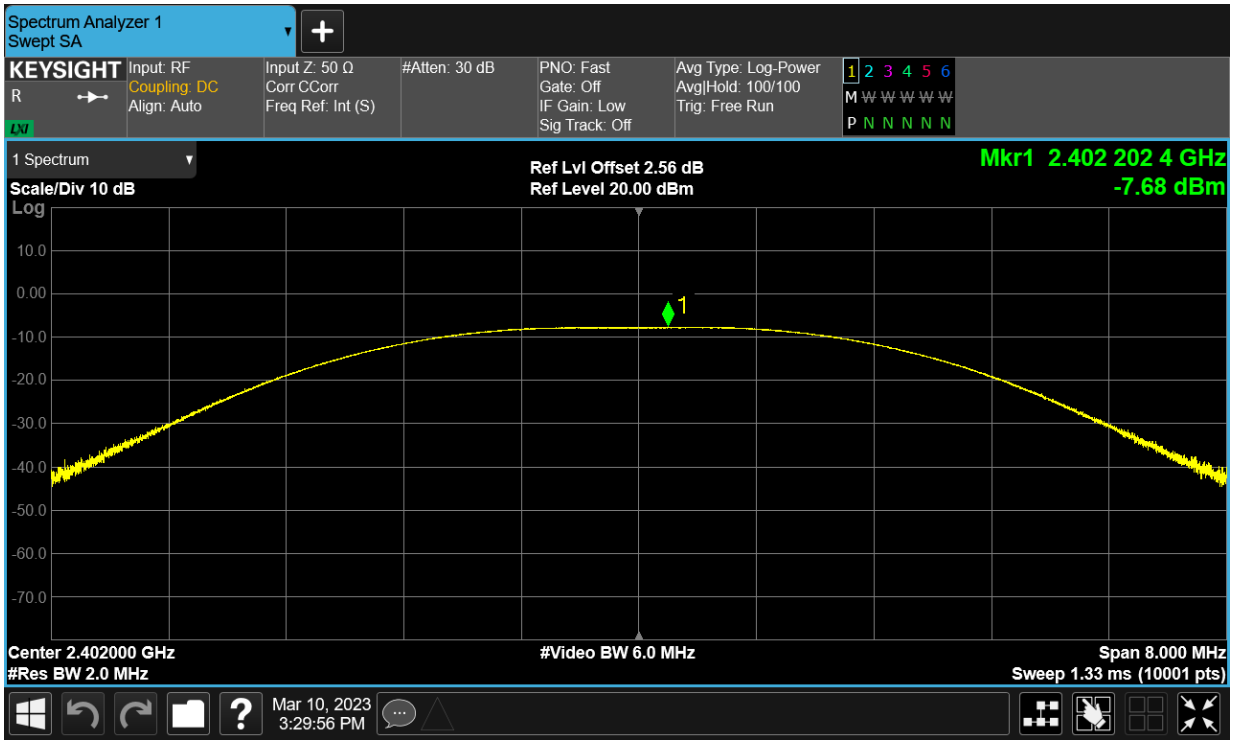
Test Data

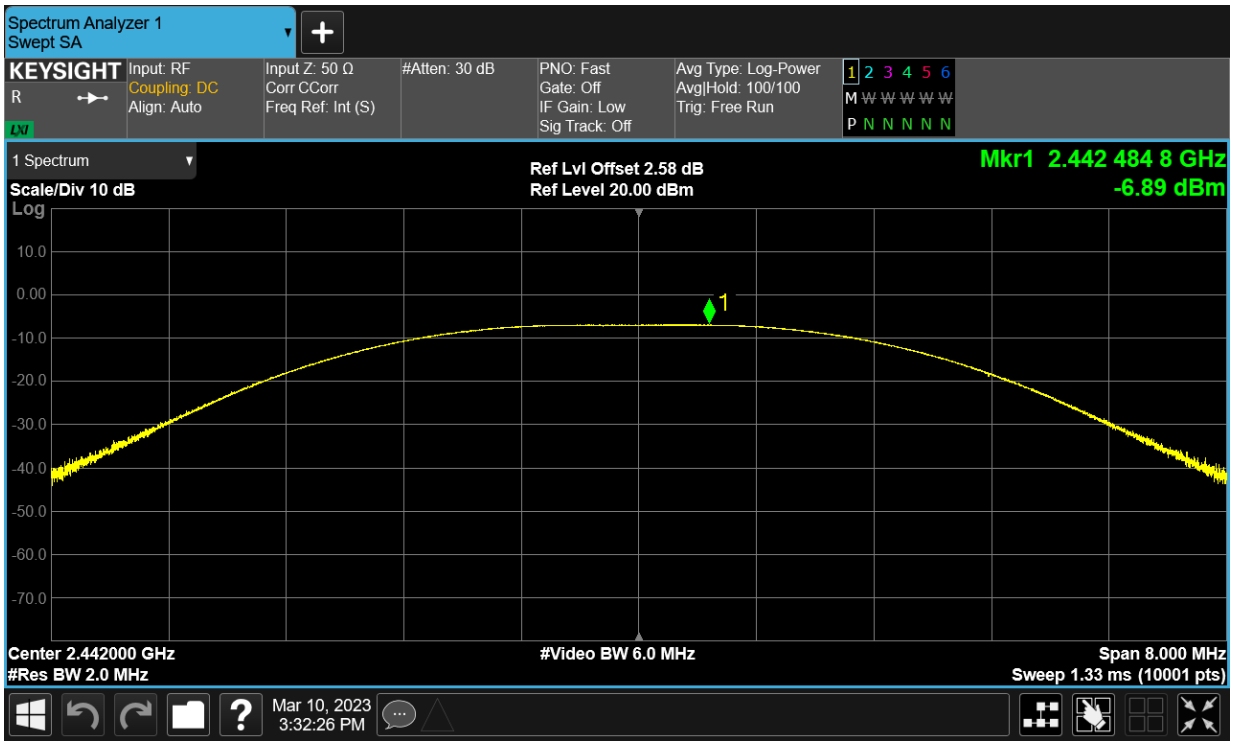
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant7	-7.681	30	Pass
NVNT	BLE	2442	Ant7	-6.895	30	Pass
NVNT	BLE	2480	Ant7	-7.037	30	Pass

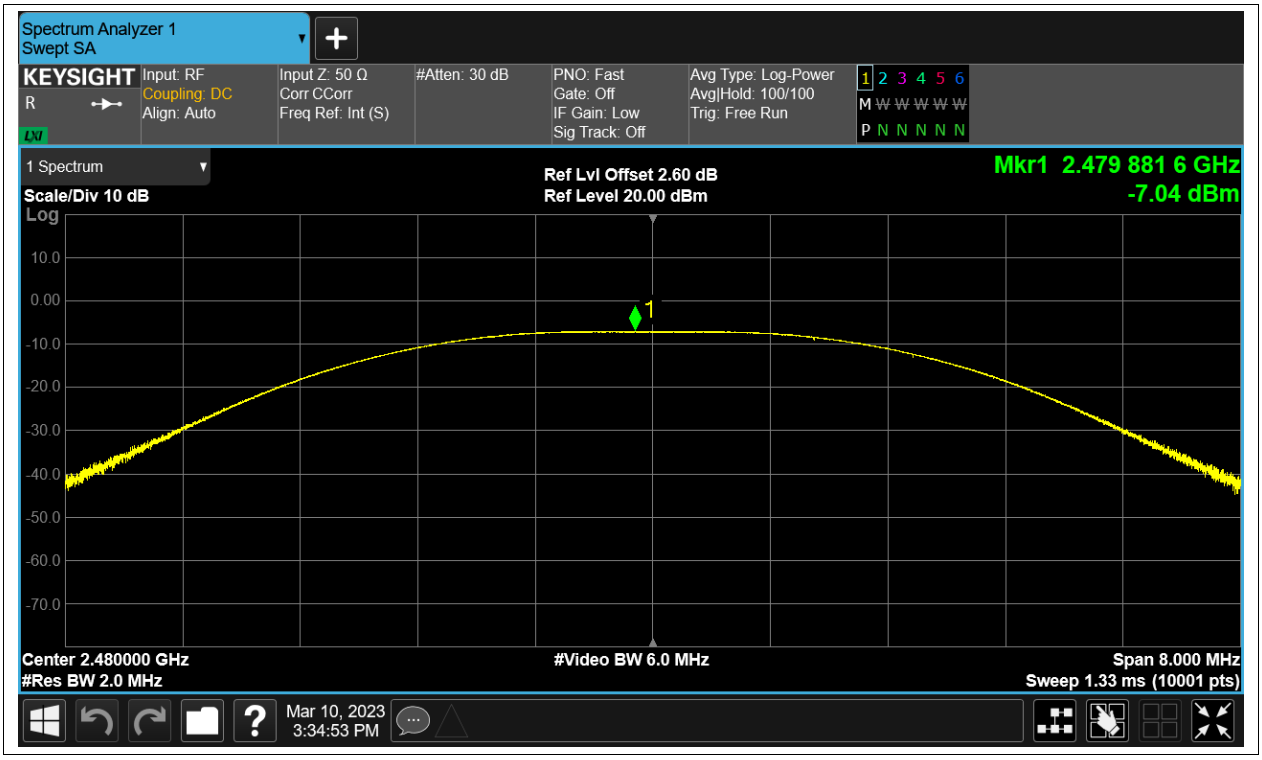
Test Graphs
Power NVNT BLE 2402MHz Ant7



Power NVNT BLE 2442MHz Ant7



Power NVNT BLE 2480MHz Ant7

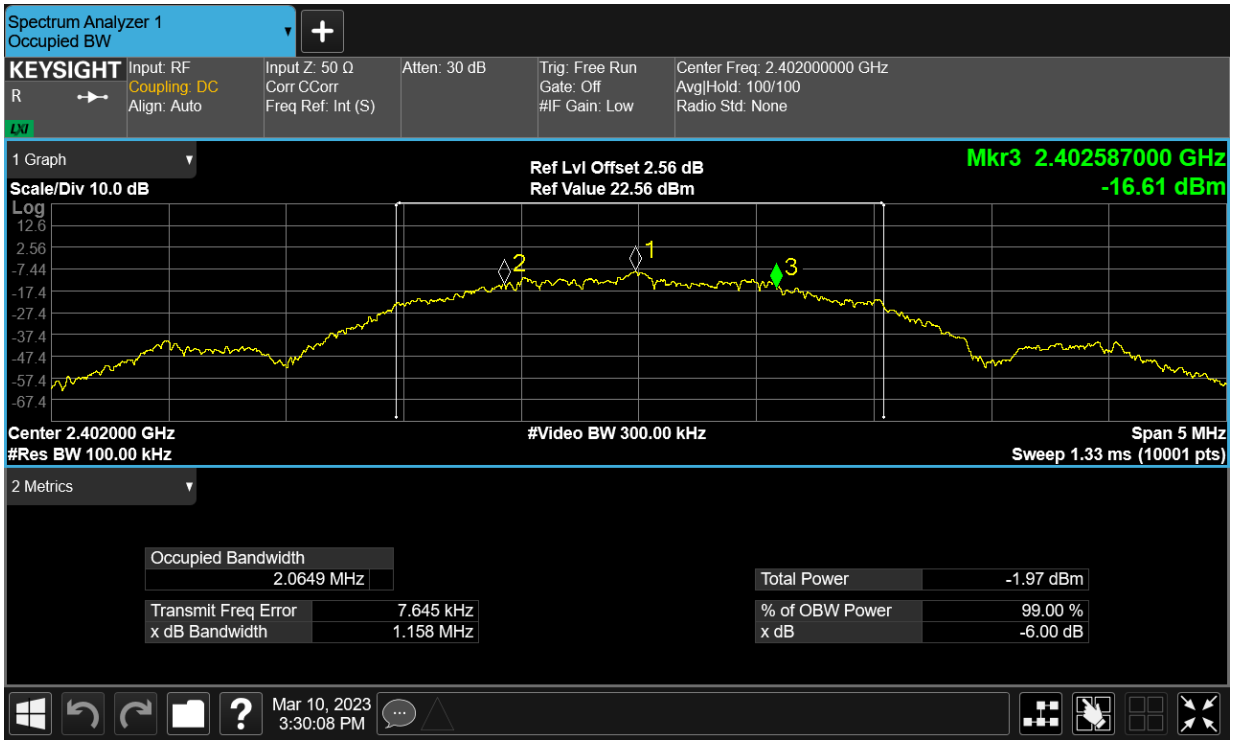

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.60 dB
Ref Level 20.00 dBm
Mkr1 2.479 881 6 GHz
-7.04 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)
Mar 10, 2023
3:34:53 PM

-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	limit	Verdic
NVNT	BLE	2402	Ant7	1.158	0.5	Pass
NVNT	BLE	2442	Ant7	1.169	0.5	Pass
NVNT	BLE	2480	Ant7	1.129	0.5	Pass

Test Graphs

-6dB Bandwidth NVNT BLE 2402MHz Ant7



-6dB Bandwidth NVNT BLE 2442MHz Ant7

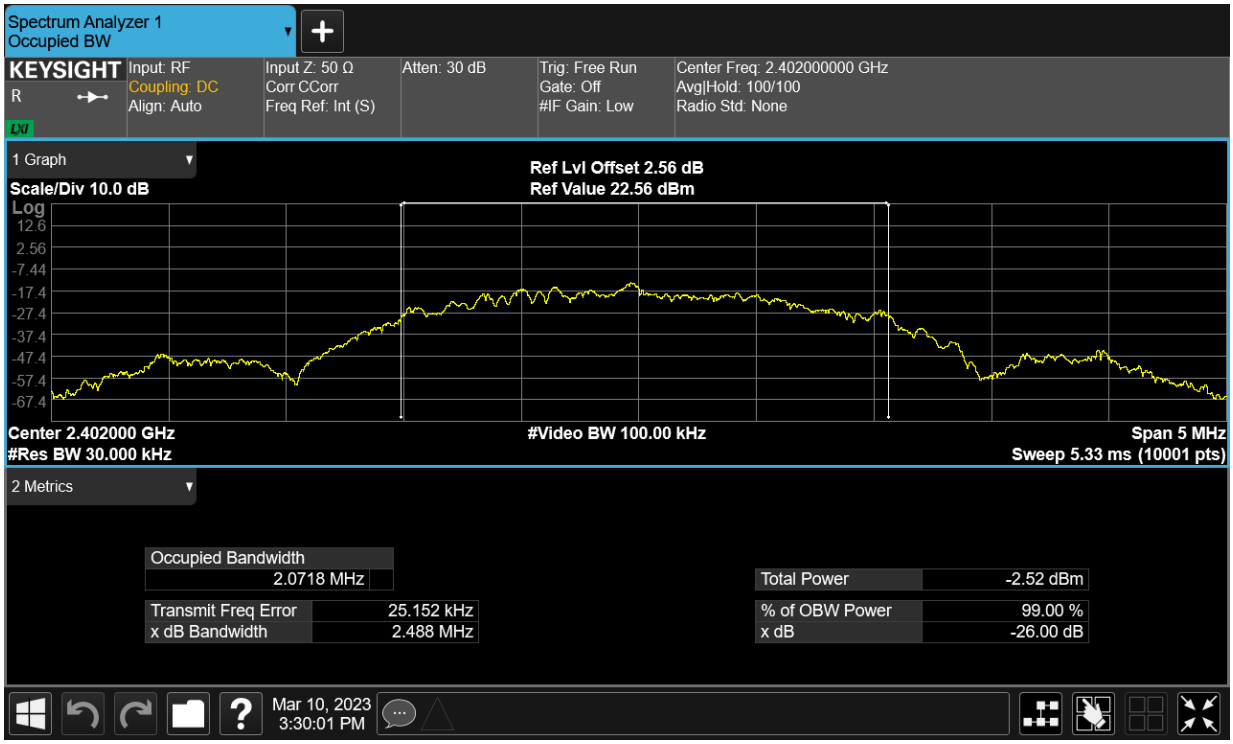
-6dB Bandwidth NVNT BLE 2480MHz Ant7

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 2.60 dB
Ref Value 22.60 dBm
Mkr3 2.480579000 GHz
-14.52 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 100.00 kHz
#Video BW 300.00 kHz
Span 5 MHz
Sweep 1.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
2.0700 MHz
Transmit Freq Error 14.705 kHz
x dB Bandwidth 1.129 MHz
Total Power -1.16 dBm
% of OBW Power 99.00 %
x dB -6.00 dB
Mar 10, 2023
3:35:07 PM

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2402	Ant7	2.072
NVNT	BLE	2442	Ant7	2.067
NVNT	BLE	2480	Ant7	2.068

Test Graphs
OBW NVNT BLE 2402MHz Ant7



OBW NVNT BLE 2442MHz Ant7

OBW NVNT BLE 2480MHz Ant7

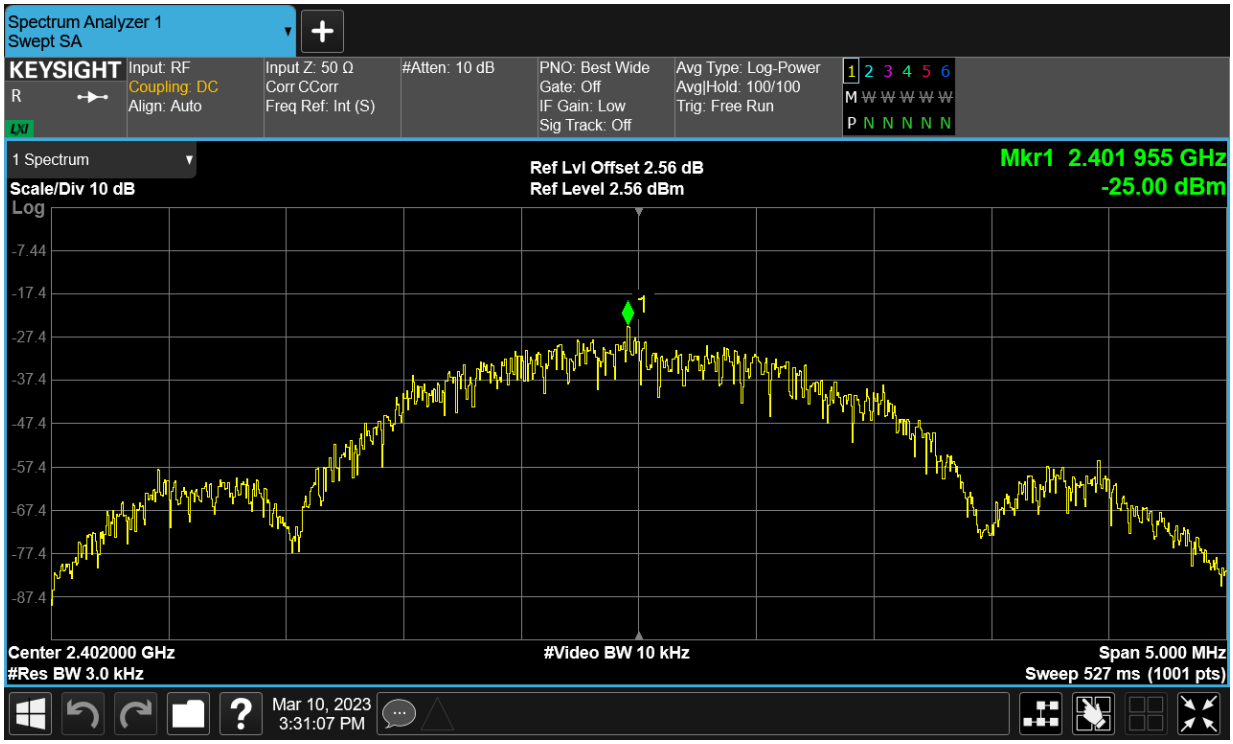
Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 100/100
Radio Std: None
1 Graph
Ref Lvl Offset 2.60 dB
Ref Value 22.60 dBm
Scale/Div 10.0 dB
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 5 MHz
Sweep 5.33 ms (10001 pts)
2 Metrics
Occupied Bandwidth
2.0677 MHz
Total Power
-1.97 dBm
Transmit Freq Error
25.343 kHz
% of OBW Power
99.00 %
x dB Bandwidth
2.466 MHz
x dB
-26.00 dB
Mar 10, 2023
3:35:00 PM

Maximum Power Spectral Density Level

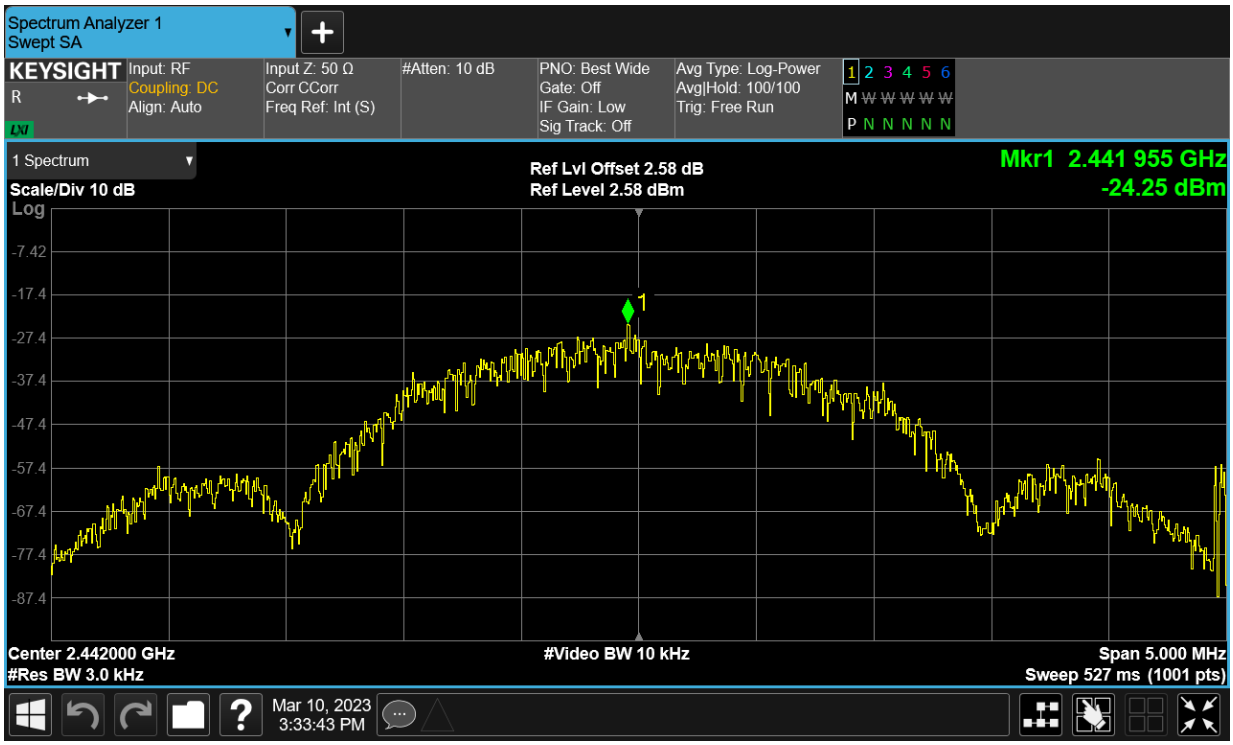
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant7	-25.001	8	Pass
NVNT	BLE	2442	Ant7	-24.249	8	Pass
NVNT	BLE	2480	Ant7	-24.355	8	Pass

Test Graphs

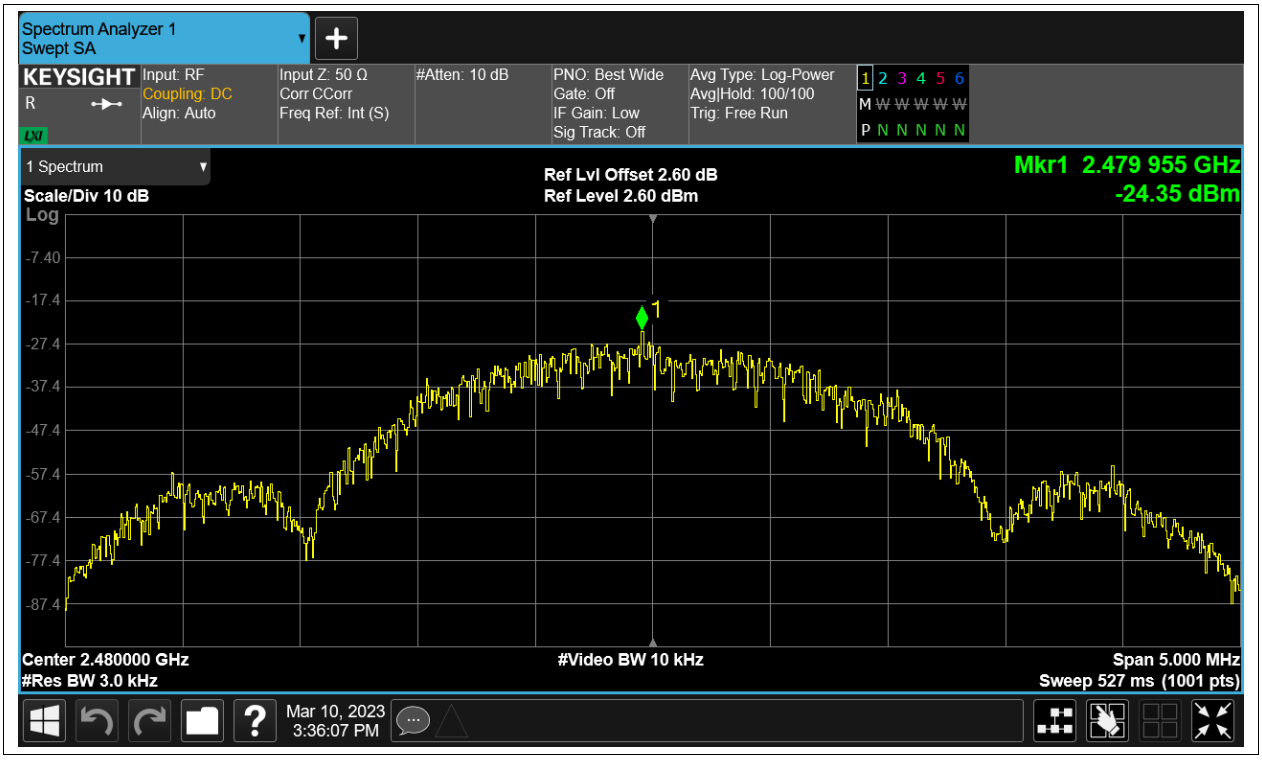
PSD NVNT BLE 2402MHz Ant7



PSD NVNT BLE 2442MHz Ant7



PSD NVNT BLE 2480MHz Ant7

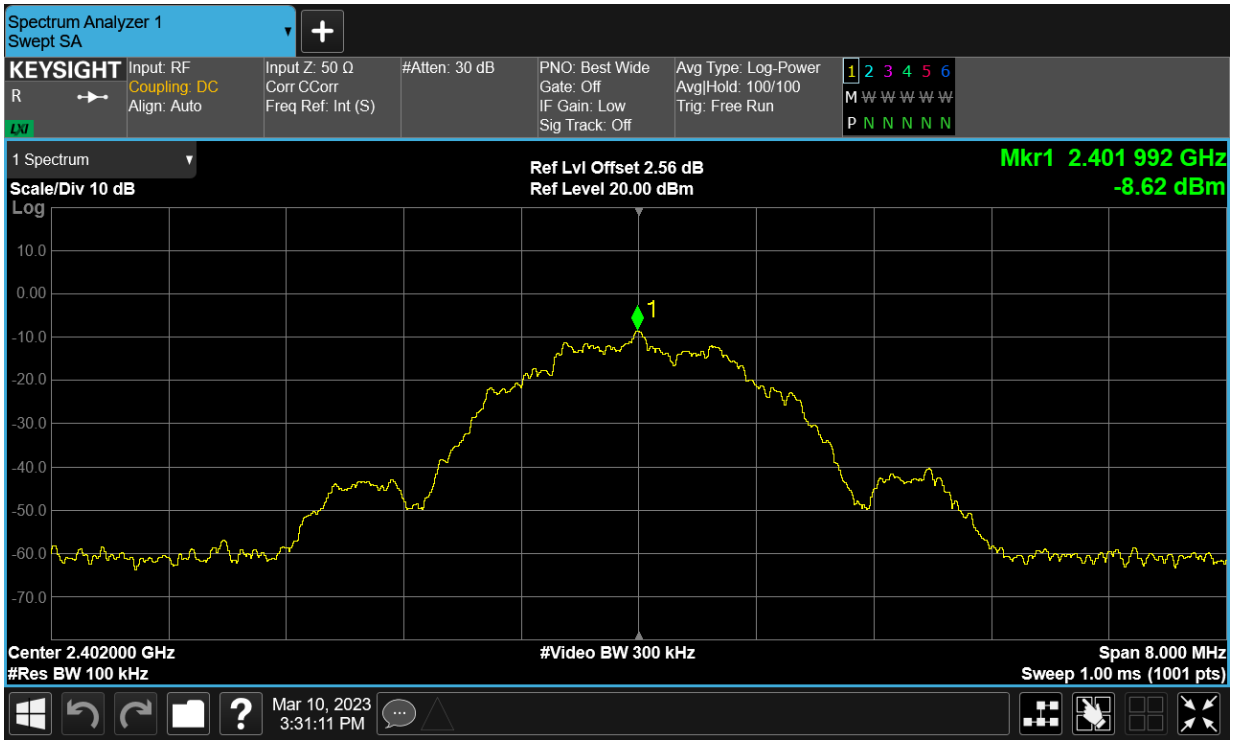

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 10 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.60 dB
Ref Level 2.60 dBm
Mkr1 2.479 955 GHz
-24.35 dBm
Log
-7.40
-17.4
-27.4
-37.4
-47.4
-57.4
-67.4
-77.4
-87.4
Center 2.480000 GHz
#Res BW 3.0 kHz
#Video BW 10 kHz
Span 5.000 MHz
Sweep 527 ms (1001 pts)
Mar 10, 2023
3:36:07 PM

Band Edge

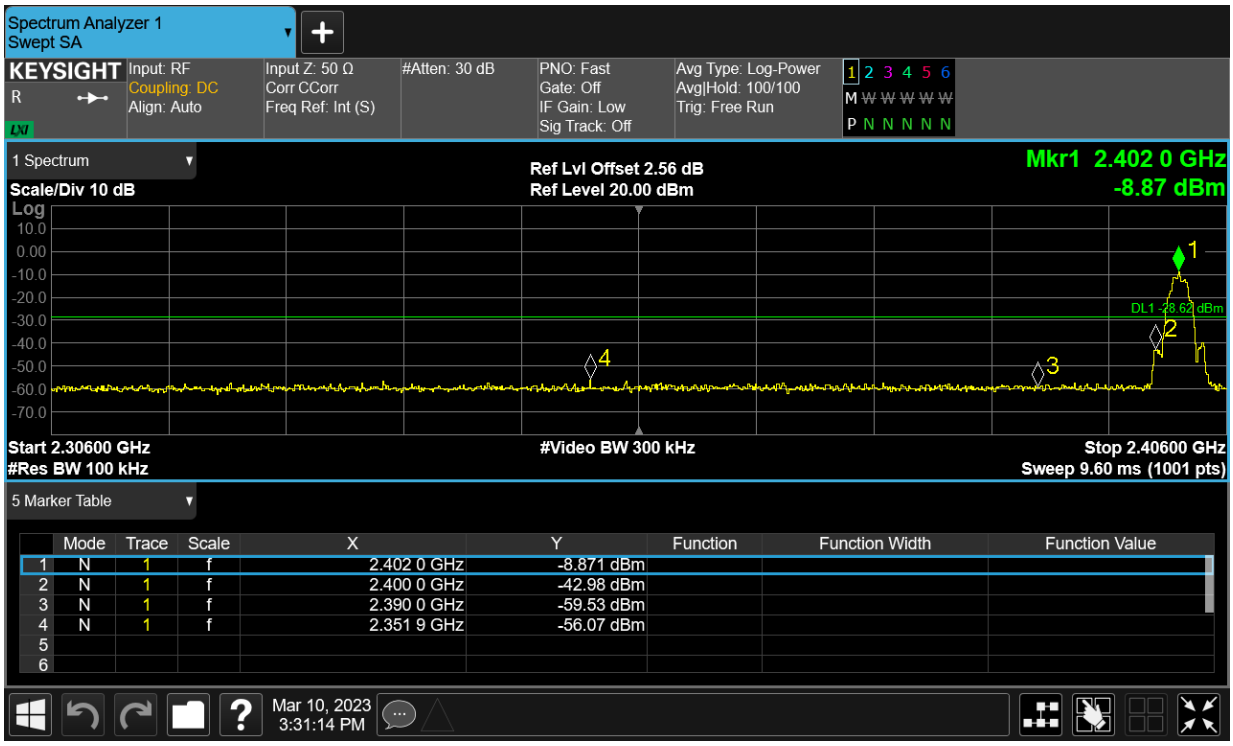
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant7	-47.45	-20	Pass
NVNT	BLE	2480	Ant7	-49.3	-20	Pass

Test Graphs

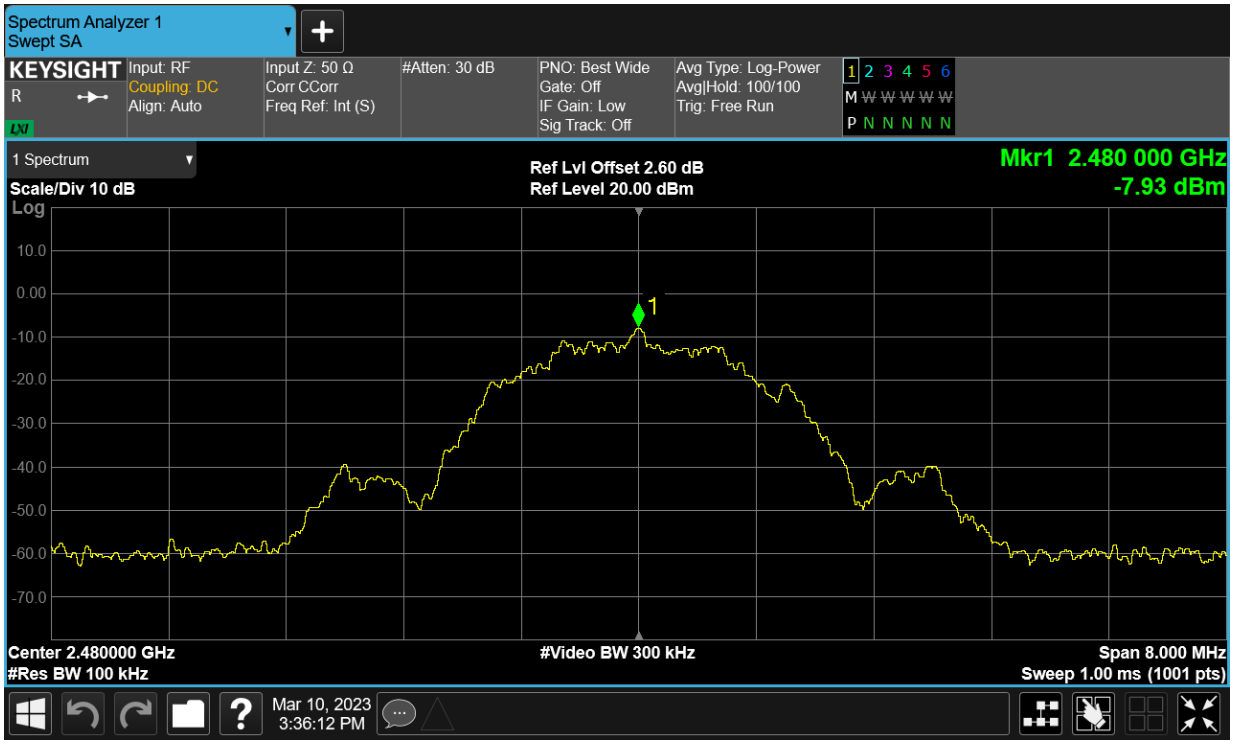
Band Edge NVNT BLE 2402MHz Ant7 Ref



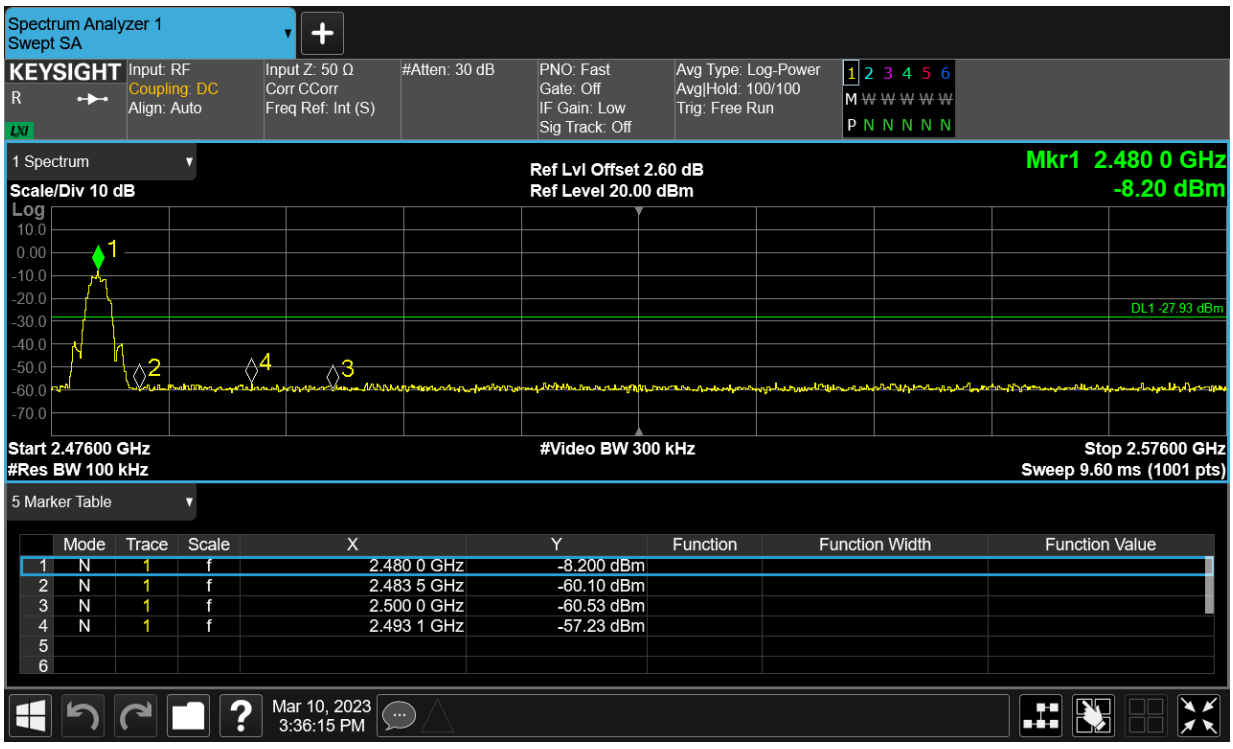
Band Edge NVNT BLE 2402MHz Ant7 Emission



Band Edge NVNT BLE 2480MHz Ant7 Ref



Band Edge NVNT BLE 2480MHz Ant7 Emission

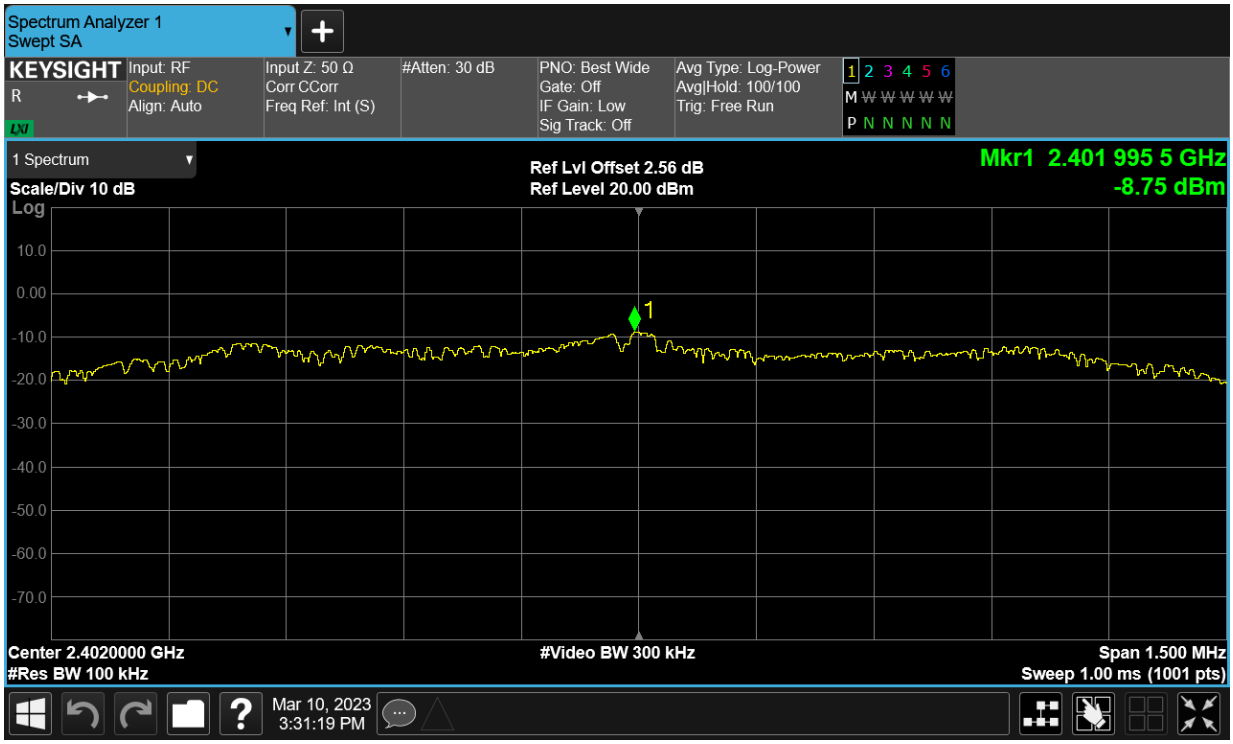


Conducted RF Spurious Emission

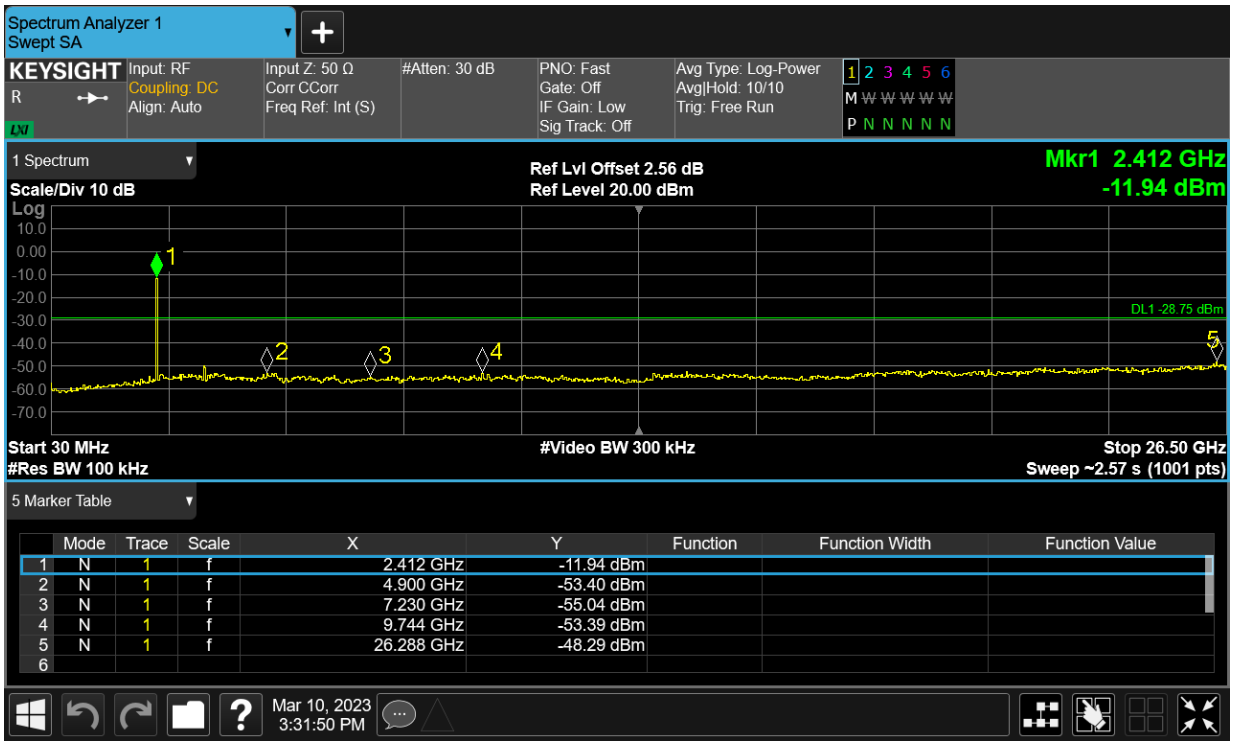
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant7	-39.54	-20	Pass
NVNT	BLE	2442	Ant7	-26.67	-20	Pass
NVNT	BLE	2480	Ant7	-40.78	-20	Pass

Test Graphs

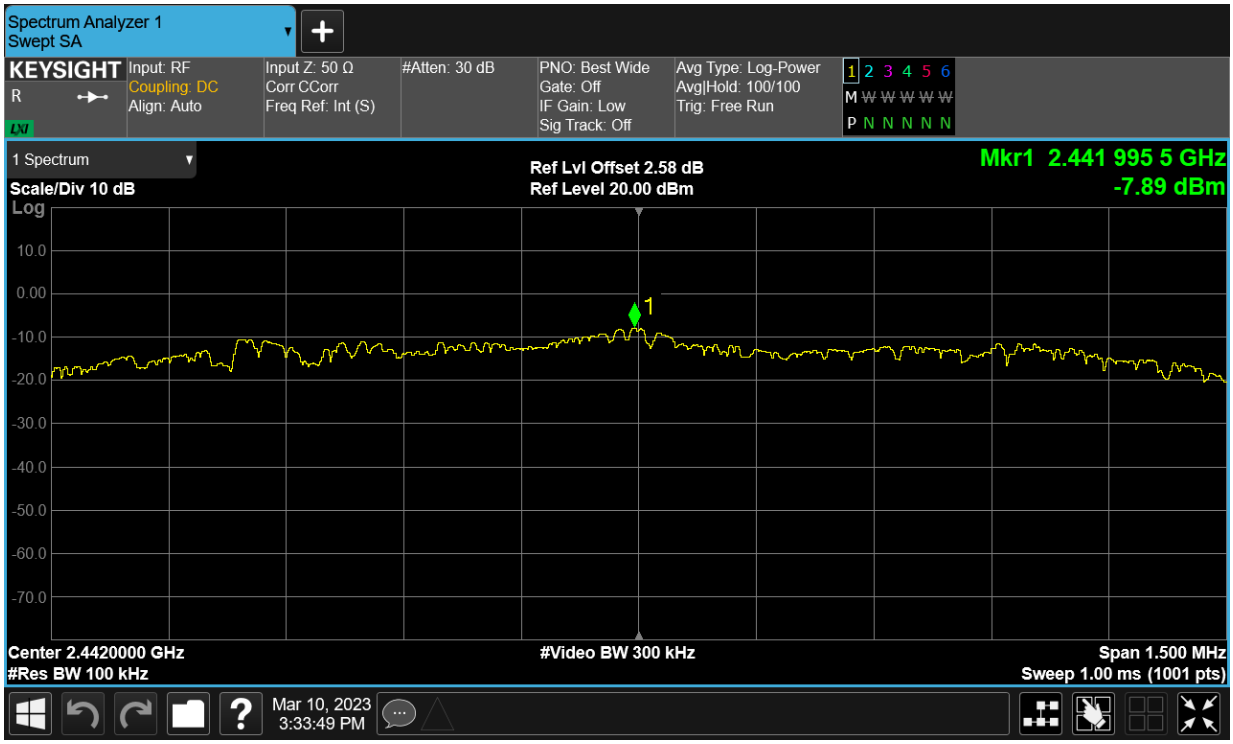
Tx. Spurious NVNT BLE 2402MHz Ant7 Ref



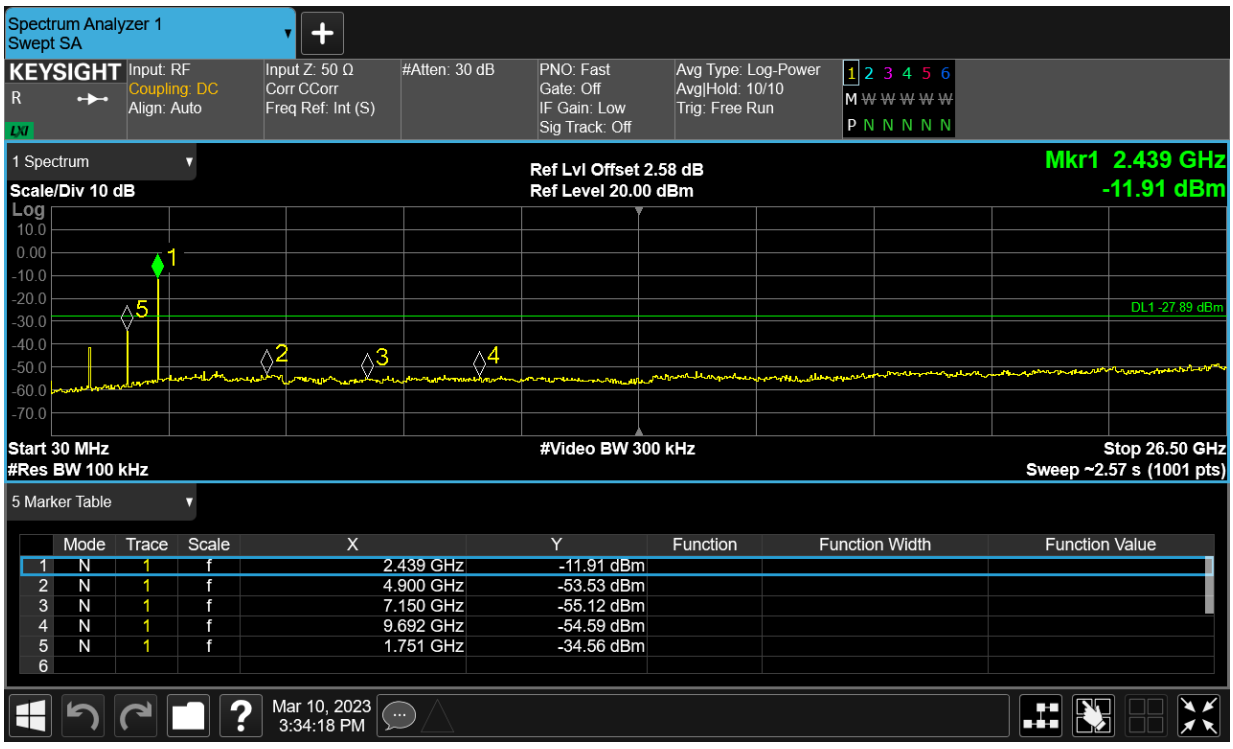
Tx. Spurious NVNT BLE 2402MHz Ant7 Emission



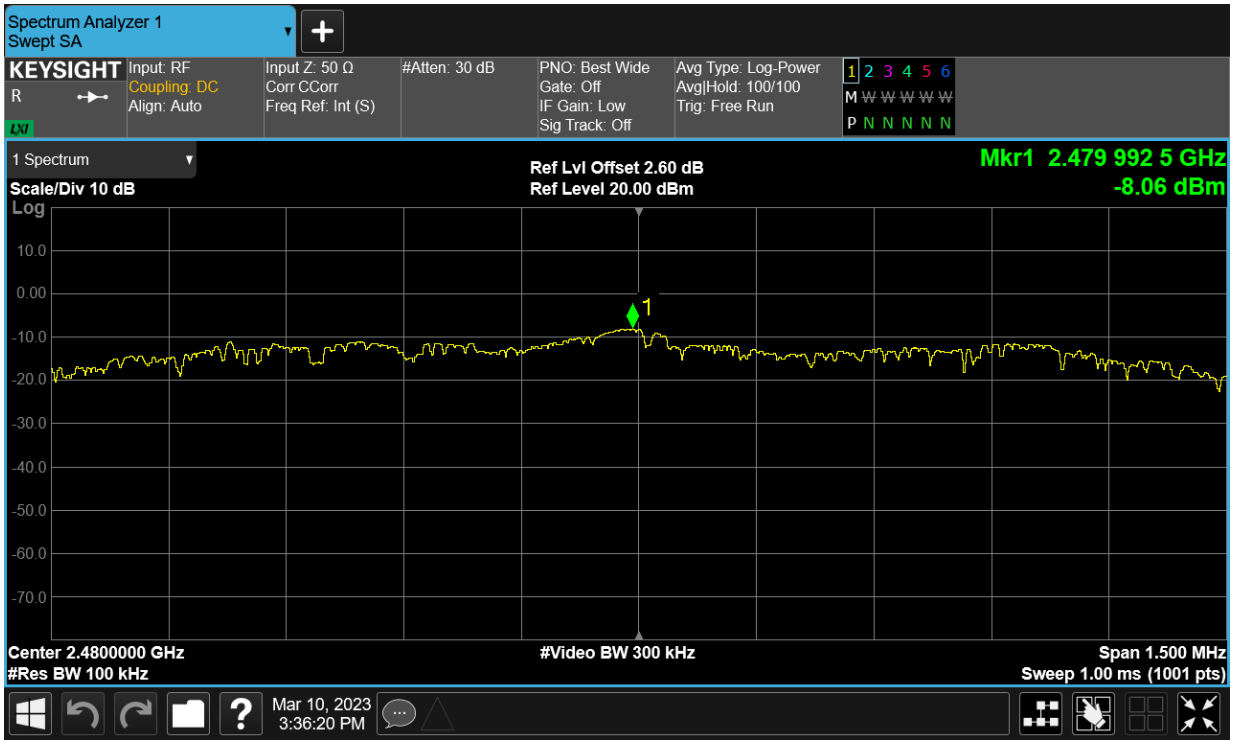
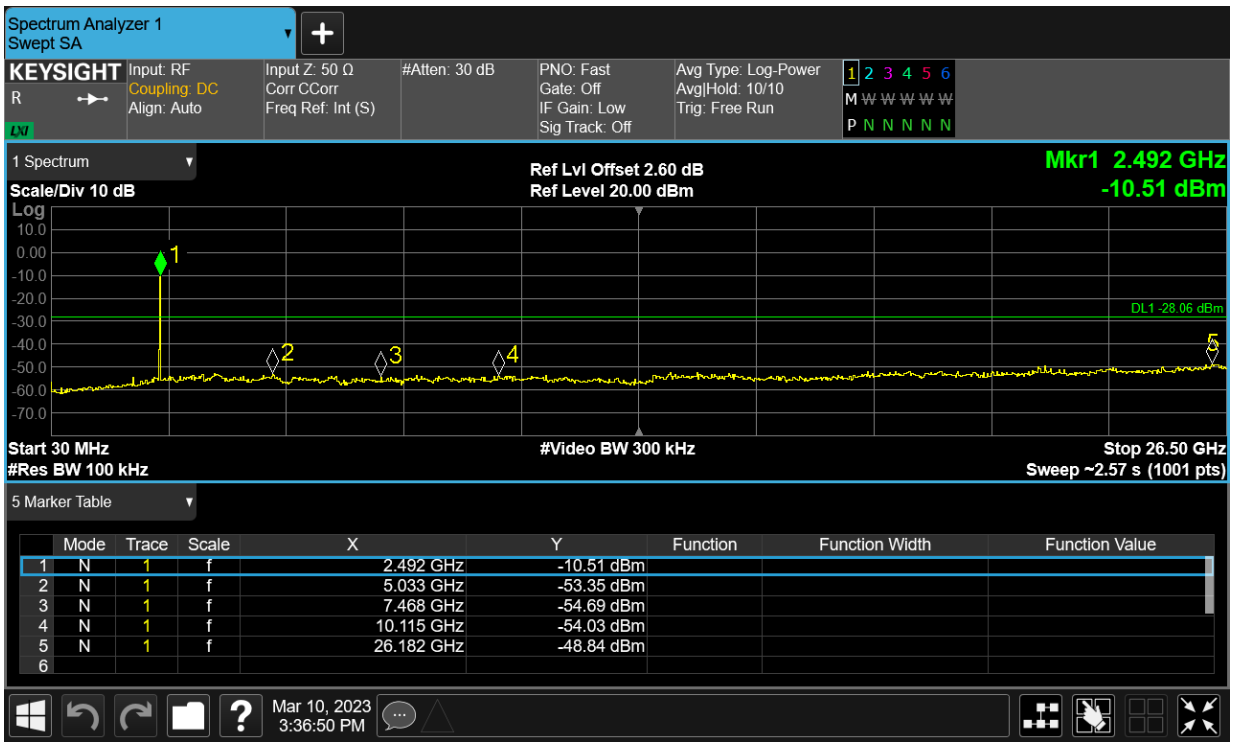
Tx. Spurious NVNT BLE 2442MHz Ant7 Ref



Tx. Spurious NVNT BLE 2442MHz Ant7 Emission



Tx. Spurious NVNT BLE 2480MHz Ant7 Ref



Tx. Spurious NVNT BLE 2480MHz Ant7 Emission