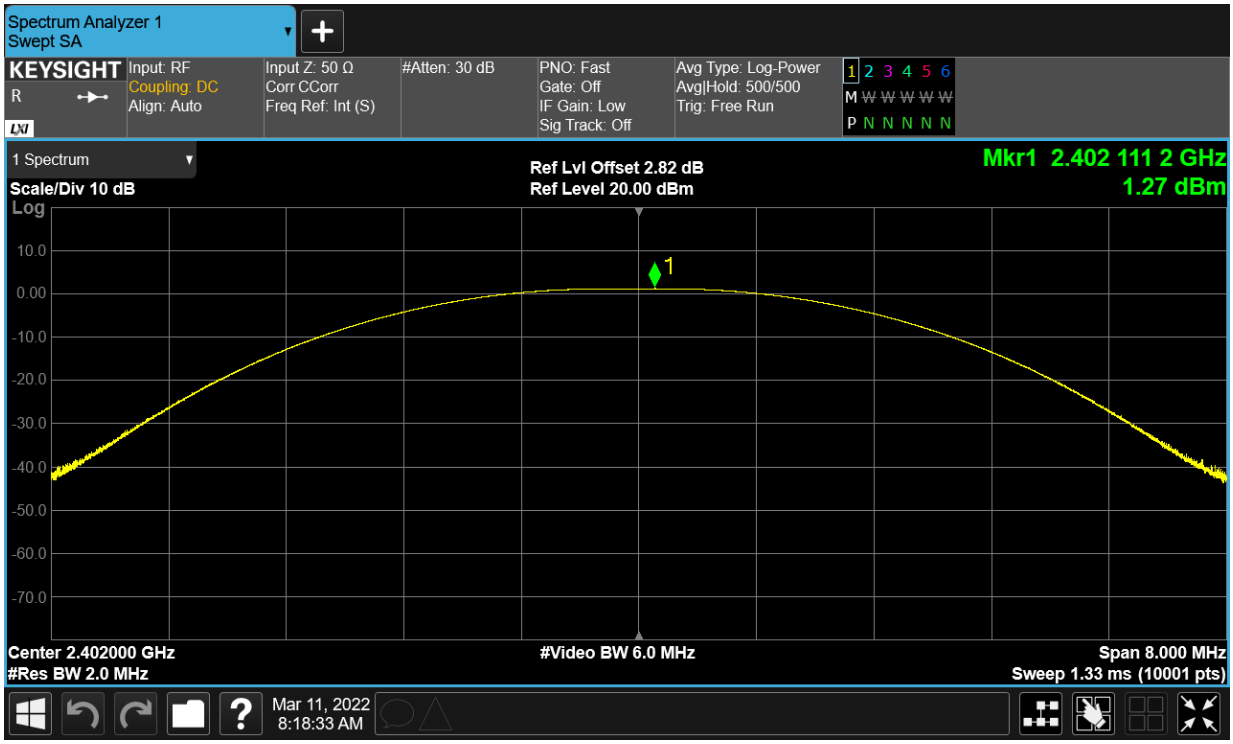
Test Data

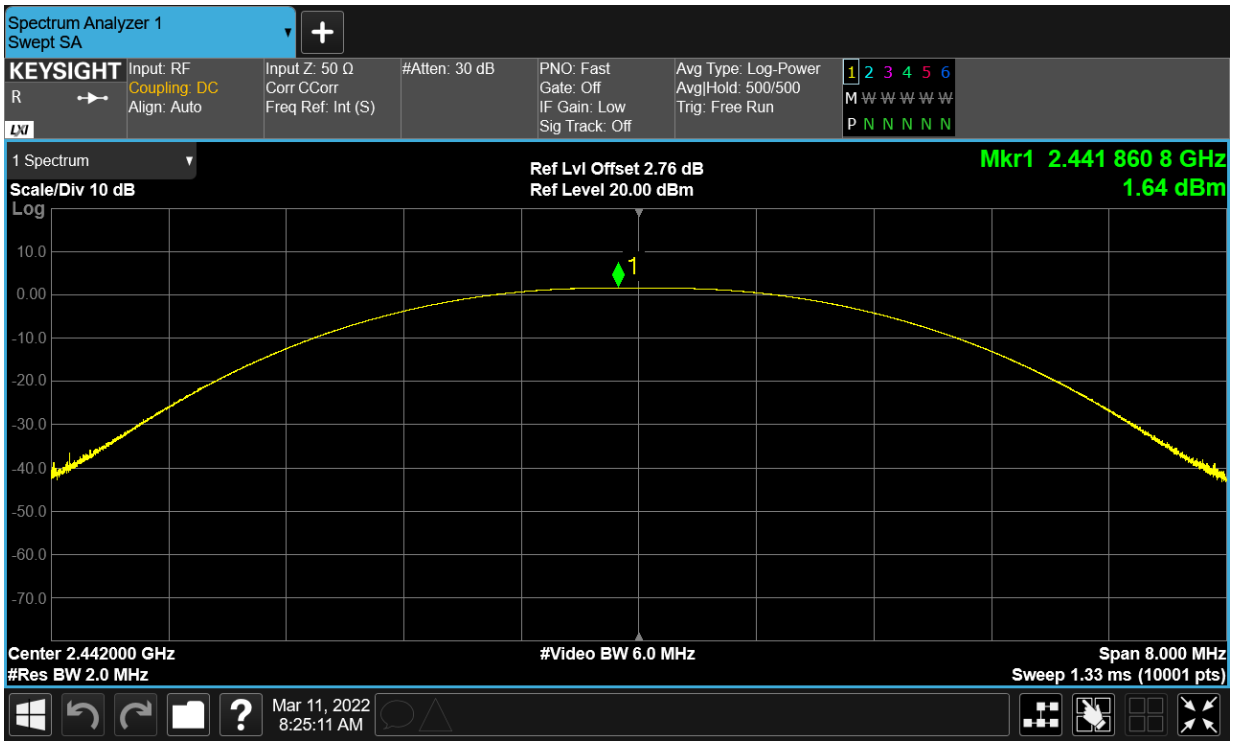
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	1.273	0	1.273	30	Pass
NVNT	BLE	2442	Ant1	1.638	0	1.638	30	Pass
NVNT	BLE	2480	Ant1	0.88	0	0.88	30	Pass

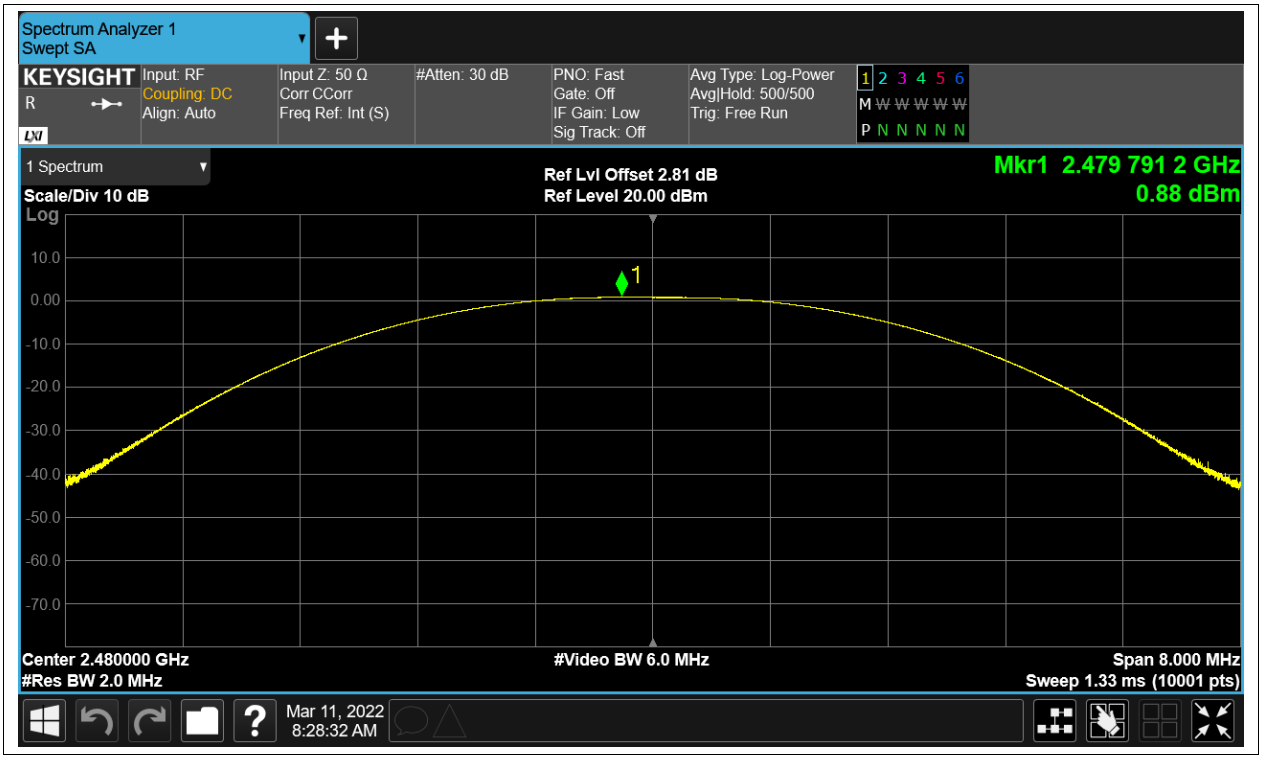
Test Graphs
Power NVNT BLE 2402MHz Ant1



Power NVNT BLE 2442MHz Ant1



Power NVNT BLE 2480MHz Ant1

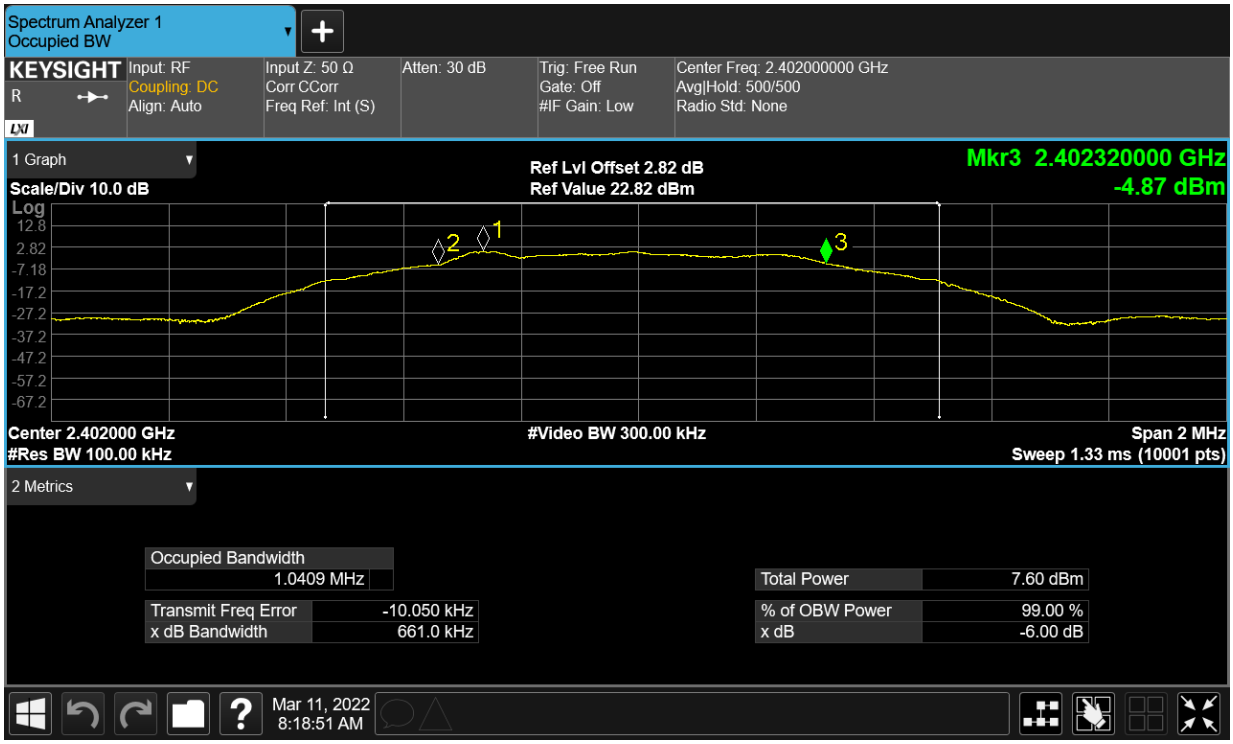

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 500/500
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.81 dB
Ref Level 20.00 dBm
Mkr1 2.479 791 2 GHz
0.88 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 11, 2022
8:28:32 AM

-6dB Bandwidth

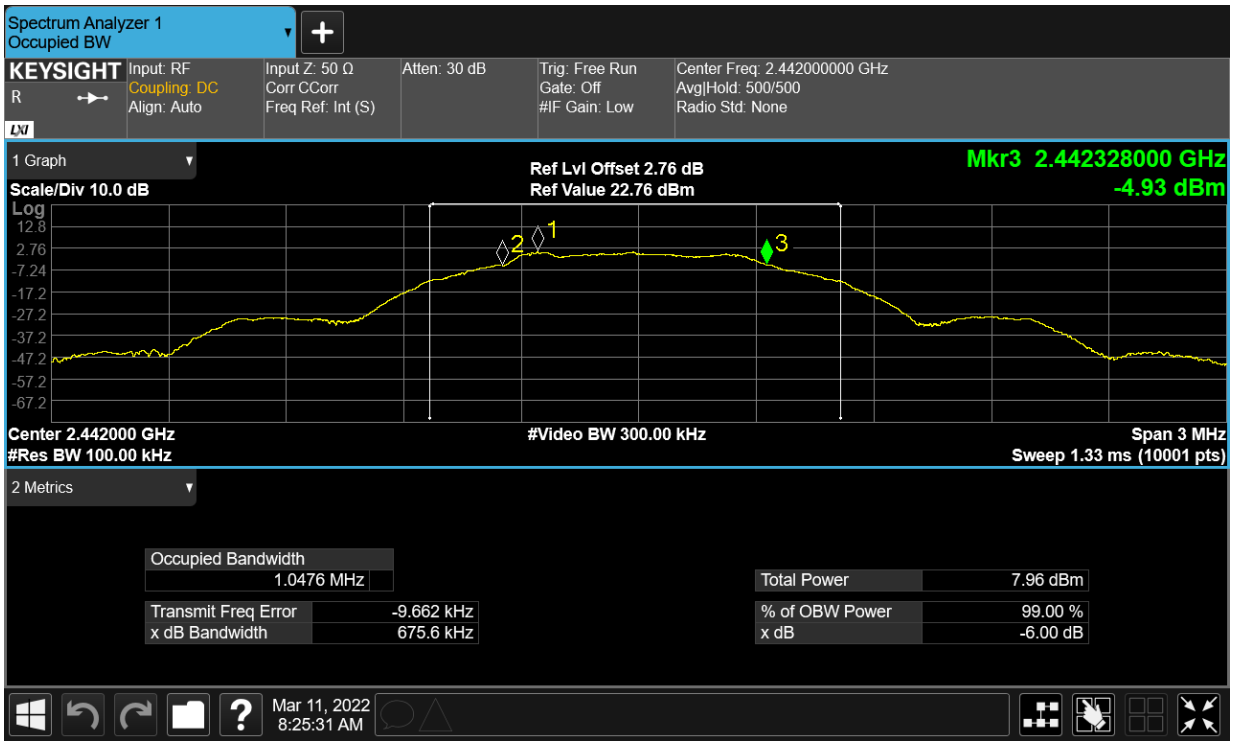
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE	2402	Ant1	0.661	0.5	Pass
NVNT	BLE	2442	Ant1	0.676	0.5	Pass
NVNT	BLE	2480	Ant1	0.669	0.5	Pass

Test Graphs

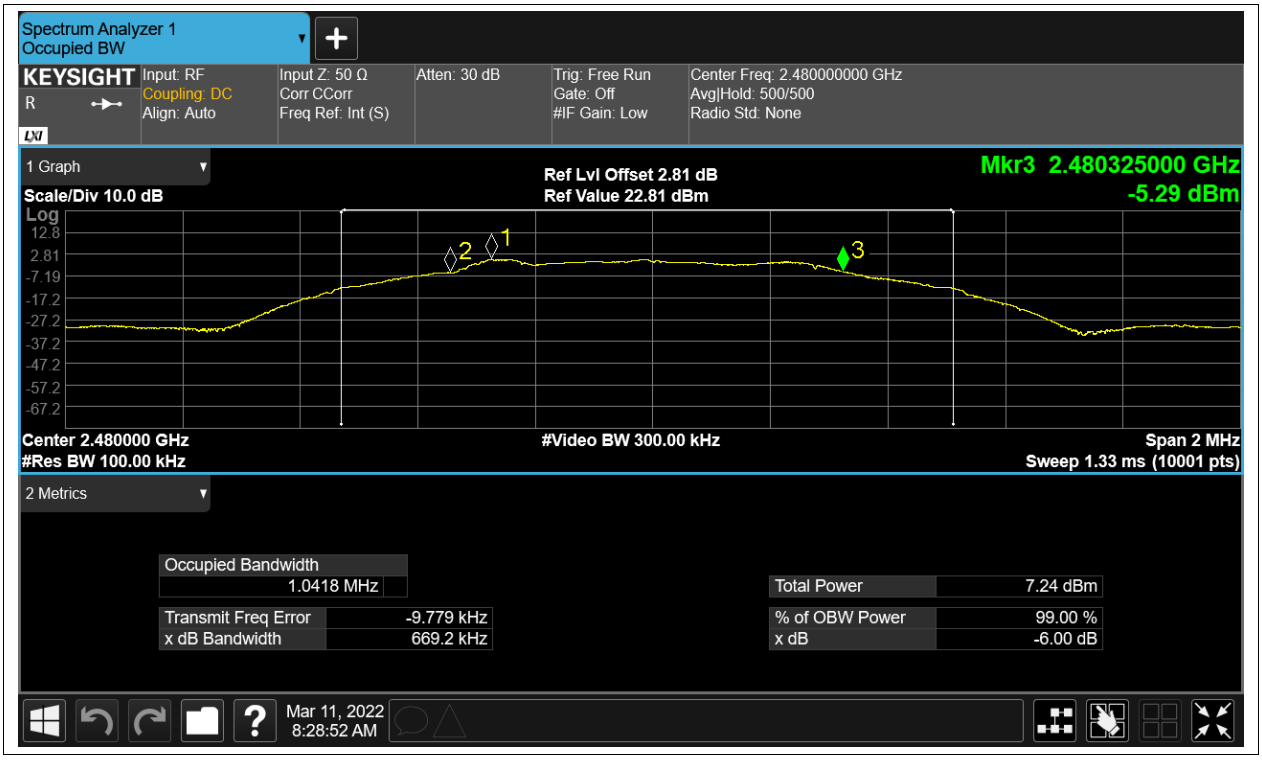
-6dB Bandwidth NVNT BLE 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2442MHz Ant1



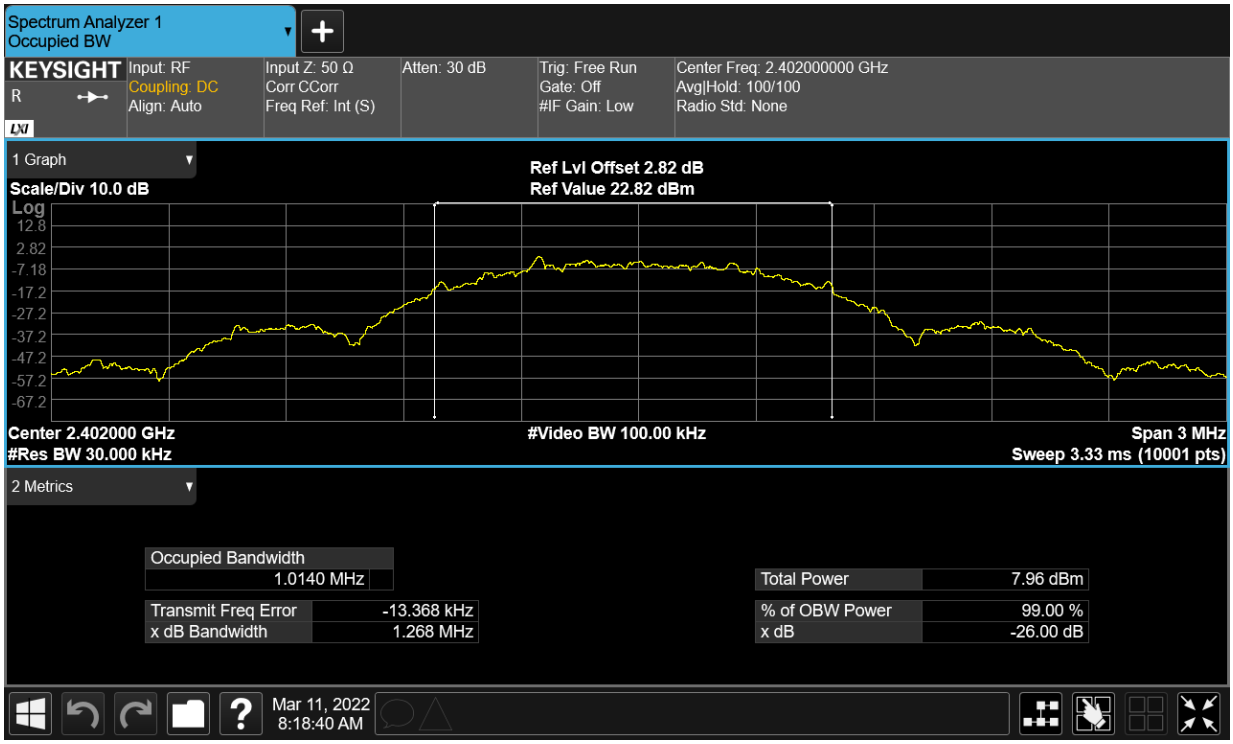
-6dB Bandwidth NVNT BLE 2480MHz Ant1


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: 500/500
Radio Std: None
1 Graph
Ref Lvl Offset 2.81 dB
Ref Value 22.81 dBm
Mkr3 2.480325000 GHz
-5.29 dBm
Scale/Div 10.0 dB
Log
12.8
2.81
-7.19
-17.2
-27.2
-37.2
-47.2
-57.2
-67.2
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
1.0418 MHz
Transmit Freq Error
-9.779 kHz
x dB Bandwidth
669.2 kHz
Total Power
7.24 dBm
% of OBW Power
99.00 %
x dB
-6.00 dB
Mar 11, 2022
8:28:52 AM

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2402	Ant1	1.013992136
NVNT	BLE	2442	Ant1	1.011201932
NVNT	BLE	2480	Ant1	1.012115614

Test Graphs
OBW NVNT BLE 2402MHz Ant1



OBW NVNT BLE 2442MHz Ant1

OBW NVNT BLE 2480MHz Ant1

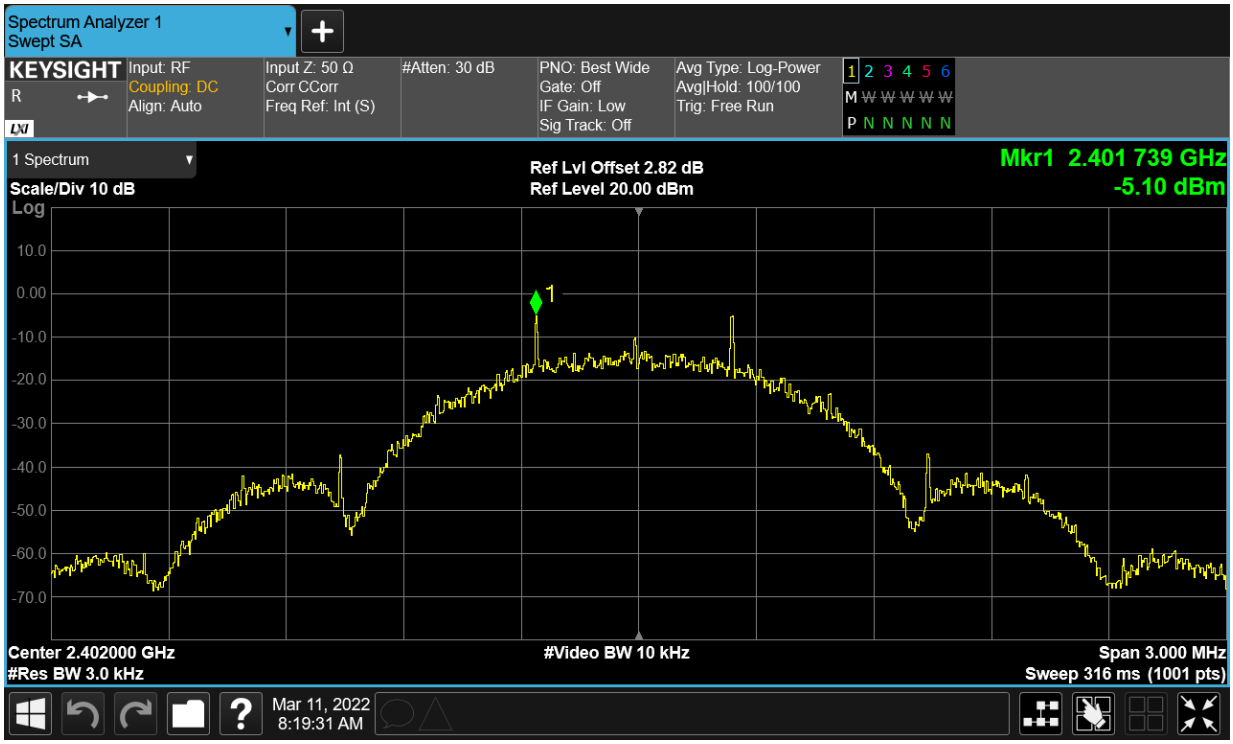
Spectrum Analyzer 1
Occupied BW
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 2.480000000 GHz
Avg|Hold: 100/100
Radio Std: None
1 Graph
Ref Lvl Offset 2.81 dB
Ref Value 22.81 dBm
Scale/Div 10.0 dB
Log
12.8
2.81
-7.19
-17.2
-27.2
-37.2
-47.2
-57.2
-67.2
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
1.0121 MHz
Total Power
7.66 dBm
Transmit Freq Error
-18.676 kHz
% of OBW Power
99.00 %
x dB Bandwidth
1.256 MHz
x dB
-26.00 dB
Mar 11, 2022
8:28:40 AM

Maximum Power Spectral Density Level

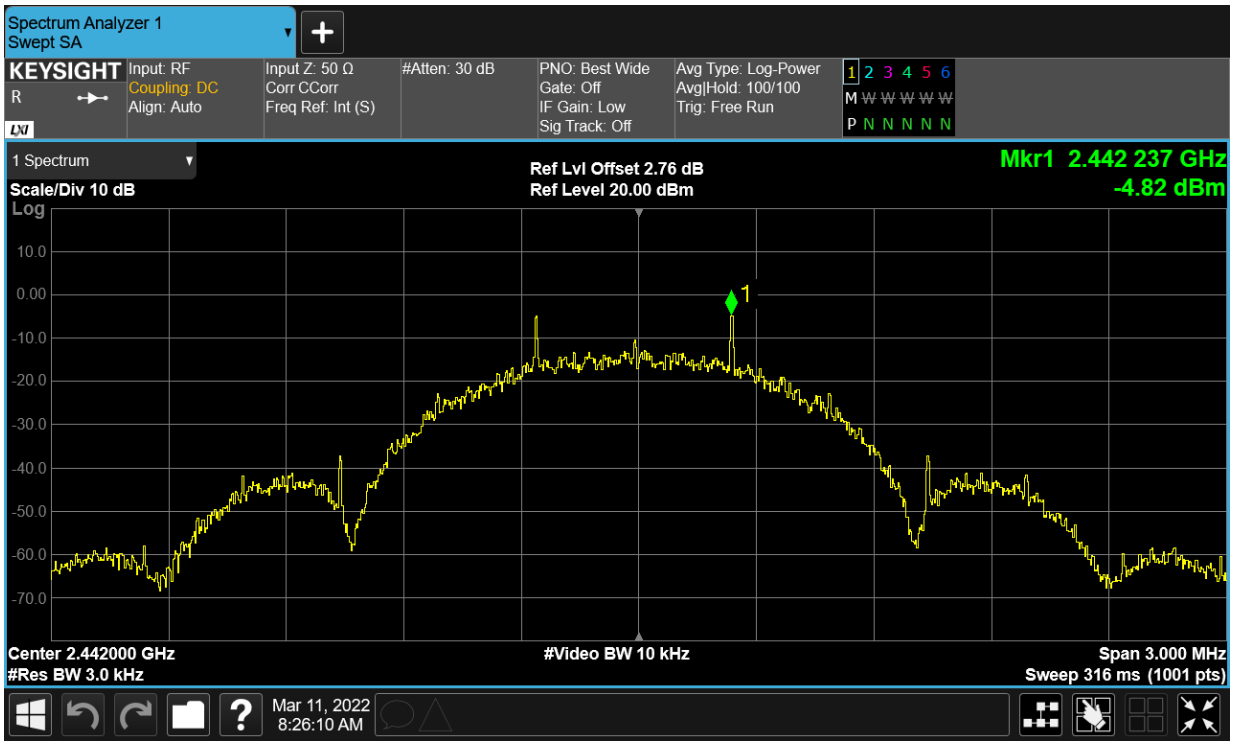
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	-5.1	8	Pass
NVNT	BLE	2442	Ant1	-4.82	8	Pass
NVNT	BLE	2480	Ant1	-5.349	8	Pass

Test Graphs

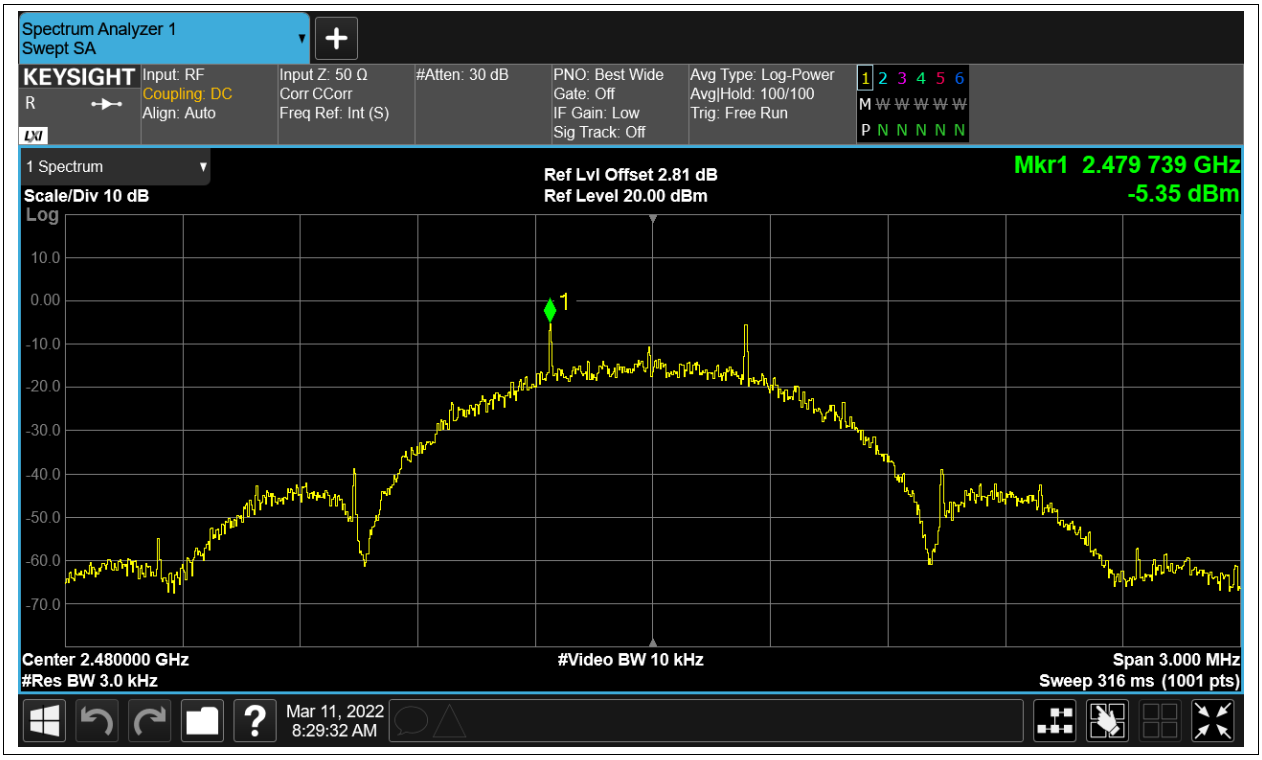
PSD NVNT BLE 2402MHz Ant1



PSD NVNT BLE 2442MHz Ant1



PSD NVNT BLE 2480MHz Ant1

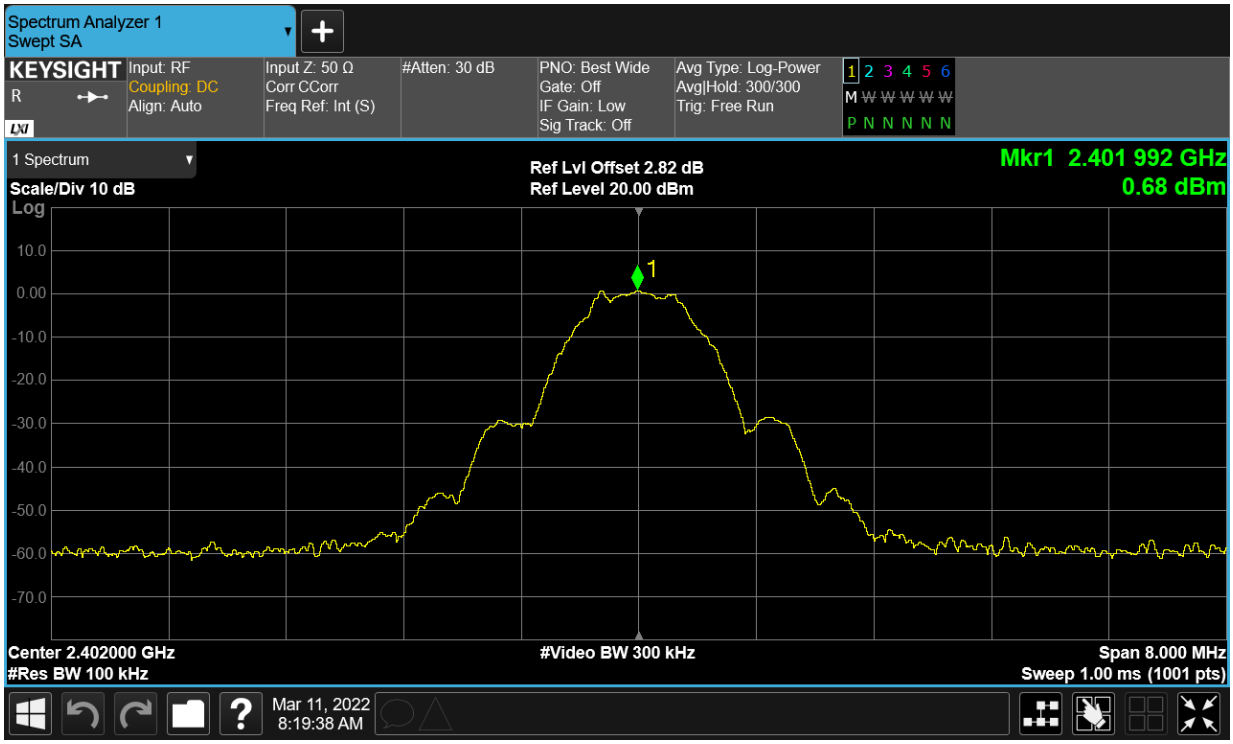

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 100/100
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.81 dB
Ref Level 20.00 dBm
Mkr1 2.479 739 GHz
-5.35 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 3.000 MHz
Sweep 316 ms (1001 pts)
Mar 11, 2022
8:29:32 AM

Band Edge

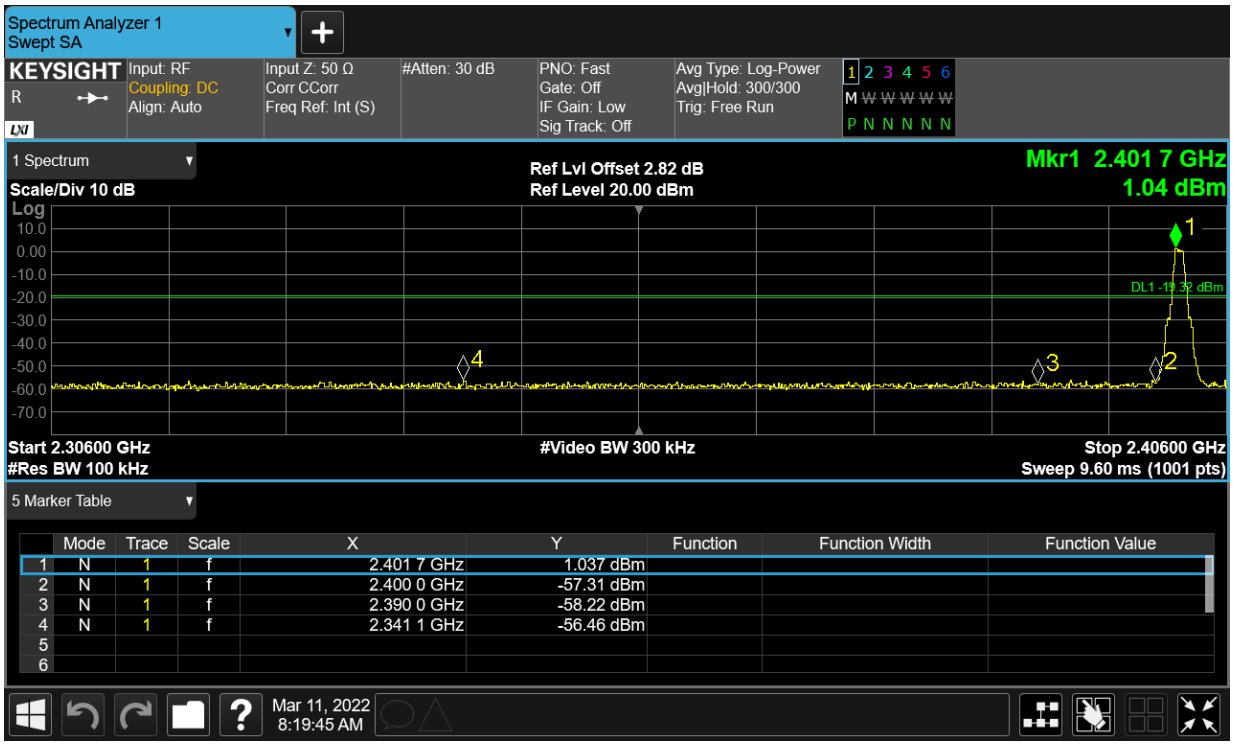
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-57.14	-20	Pass
NVNT	BLE	2480	Ant1	-56.78	-20	Pass

Test Graphs

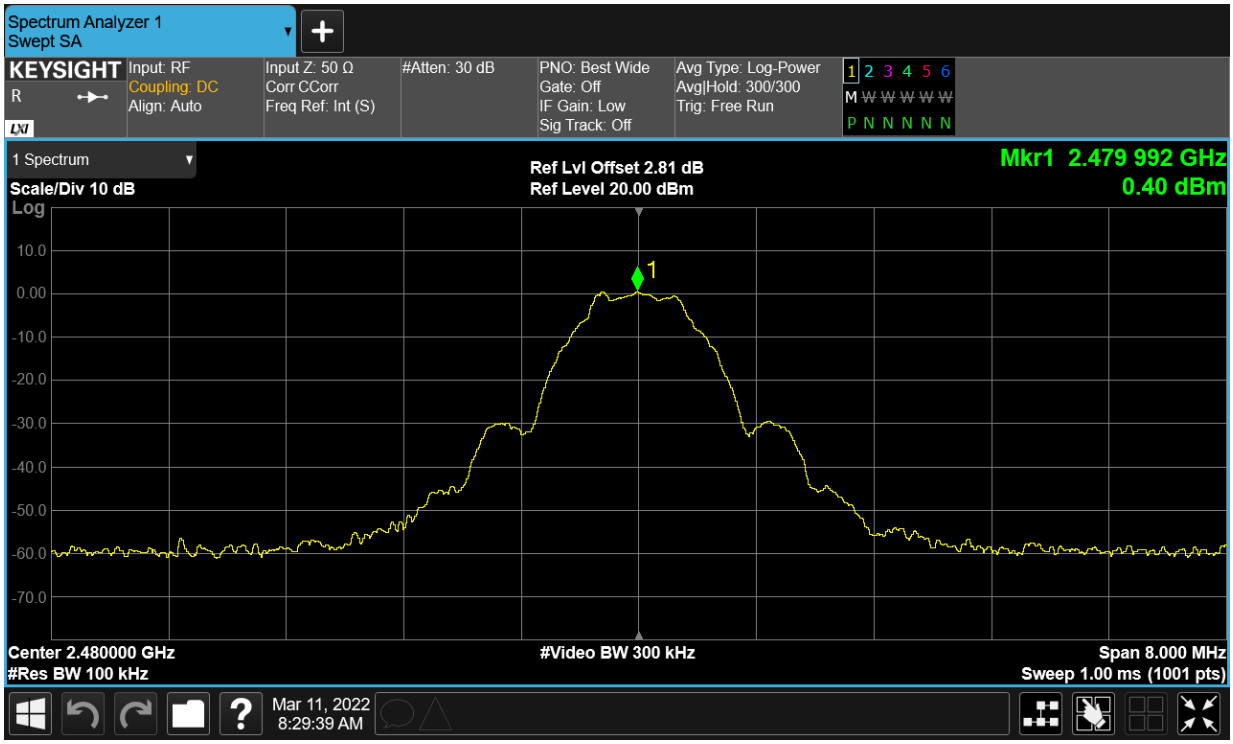
Band Edge NVNT BLE 2402MHz Ant1 Ref



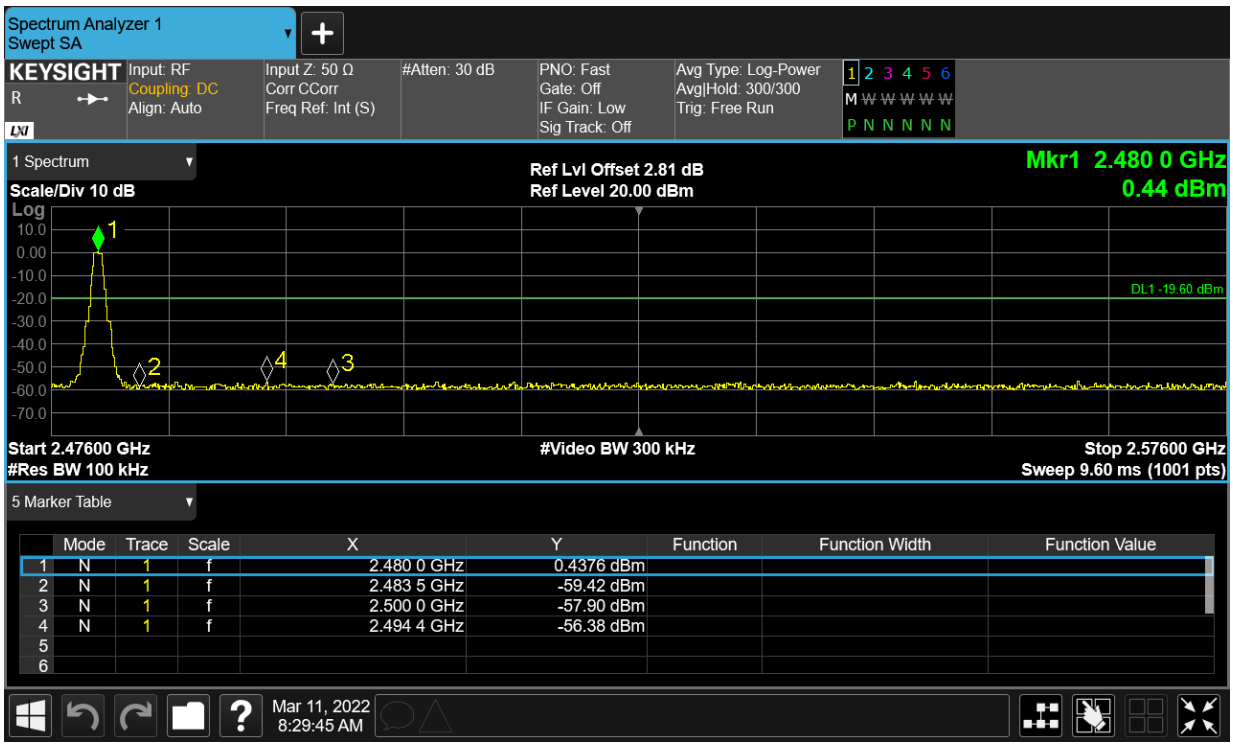
Band Edge NVNT BLE 2402MHz Ant1 Emission



Band Edge NVNT BLE 2480MHz Ant1 Ref



Band Edge NVNT BLE 2480MHz Ant1 Emission

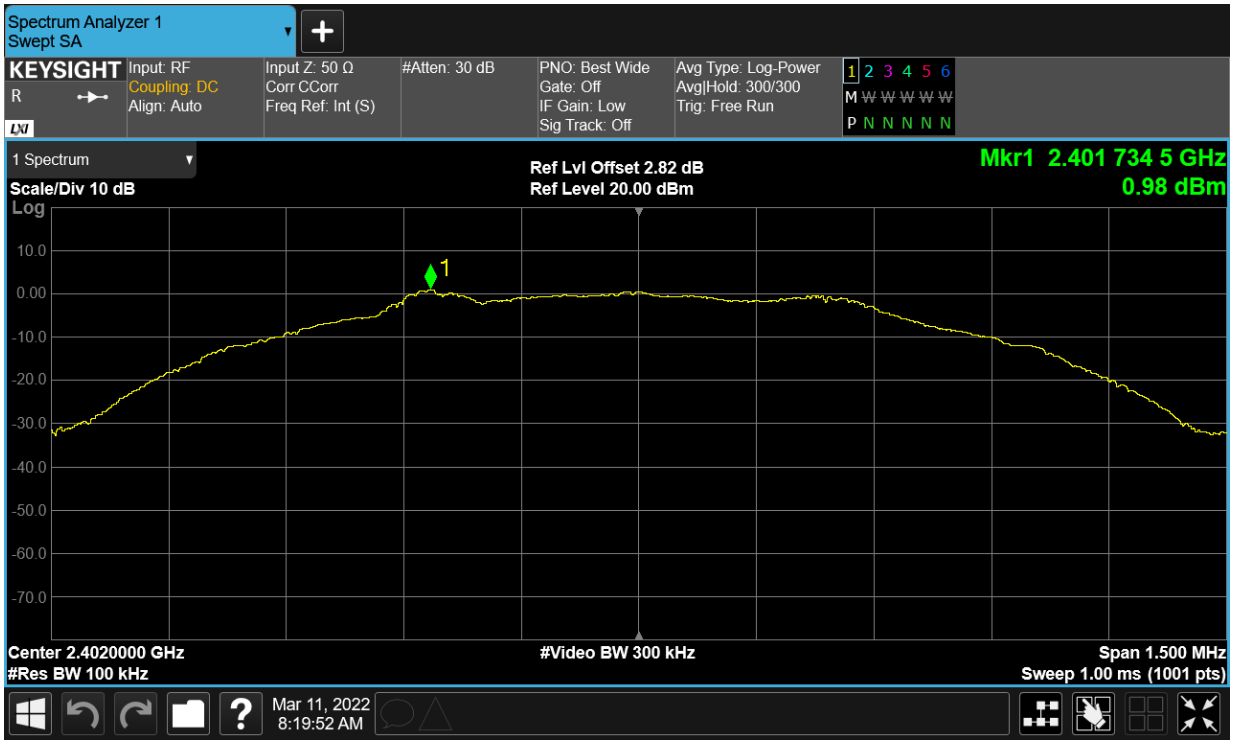


Conducted RF Spurious Emission

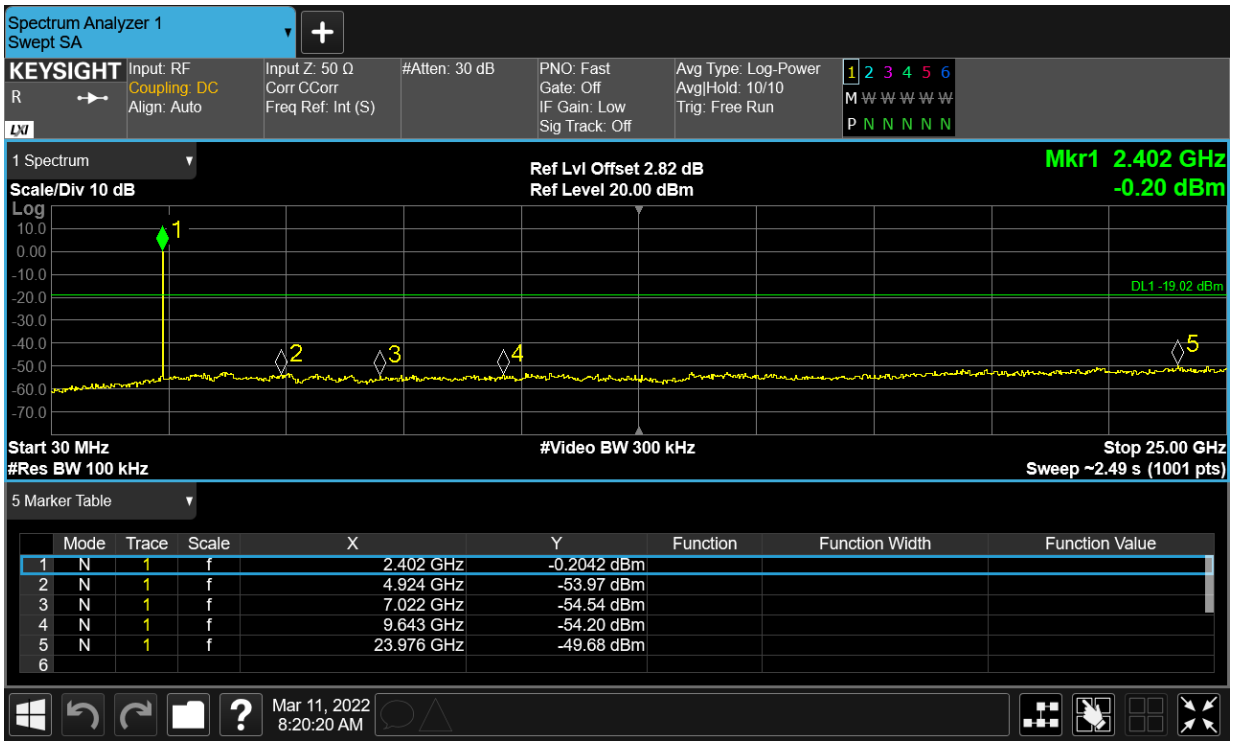
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-50.65	-20	Pass
NVNT	BLE	2442	Ant1	-51.33	-20	Pass
NVNT	BLE	2480	Ant1	-50.77	-20	Pass

Test Graphs

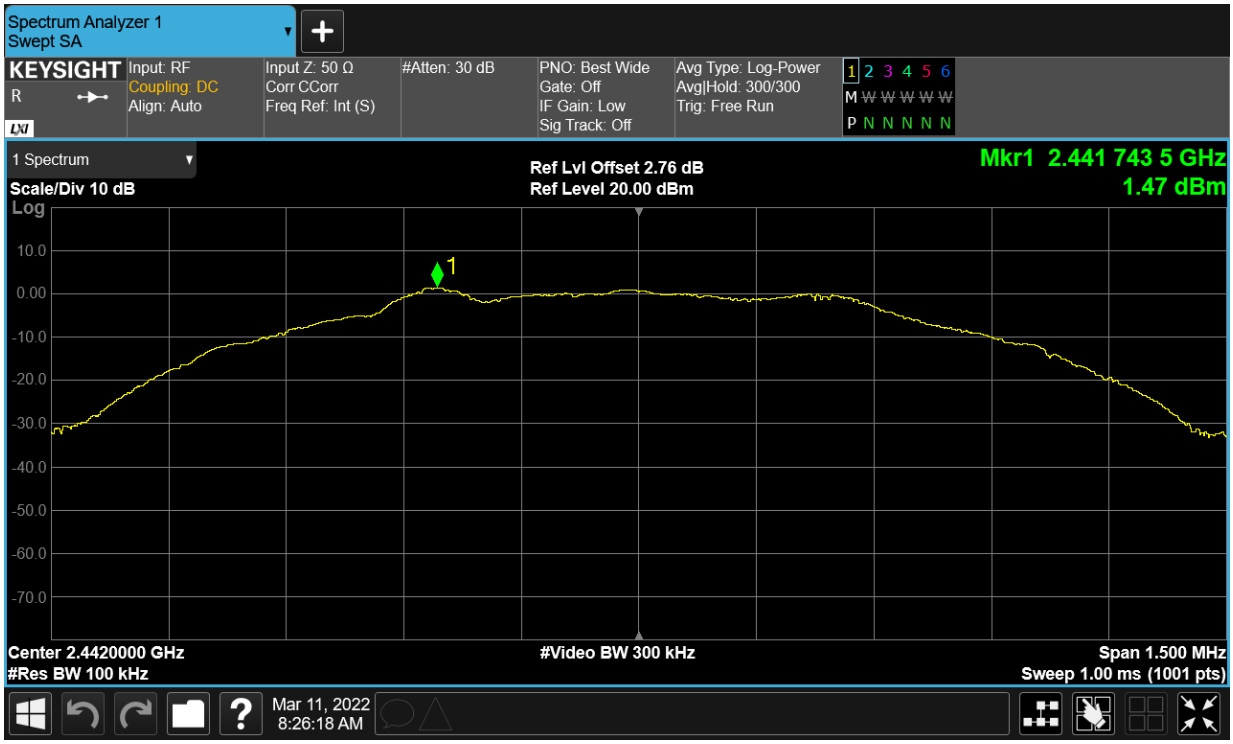
Tx. Spurious NVNT BLE 2402MHz Ant1 Ref



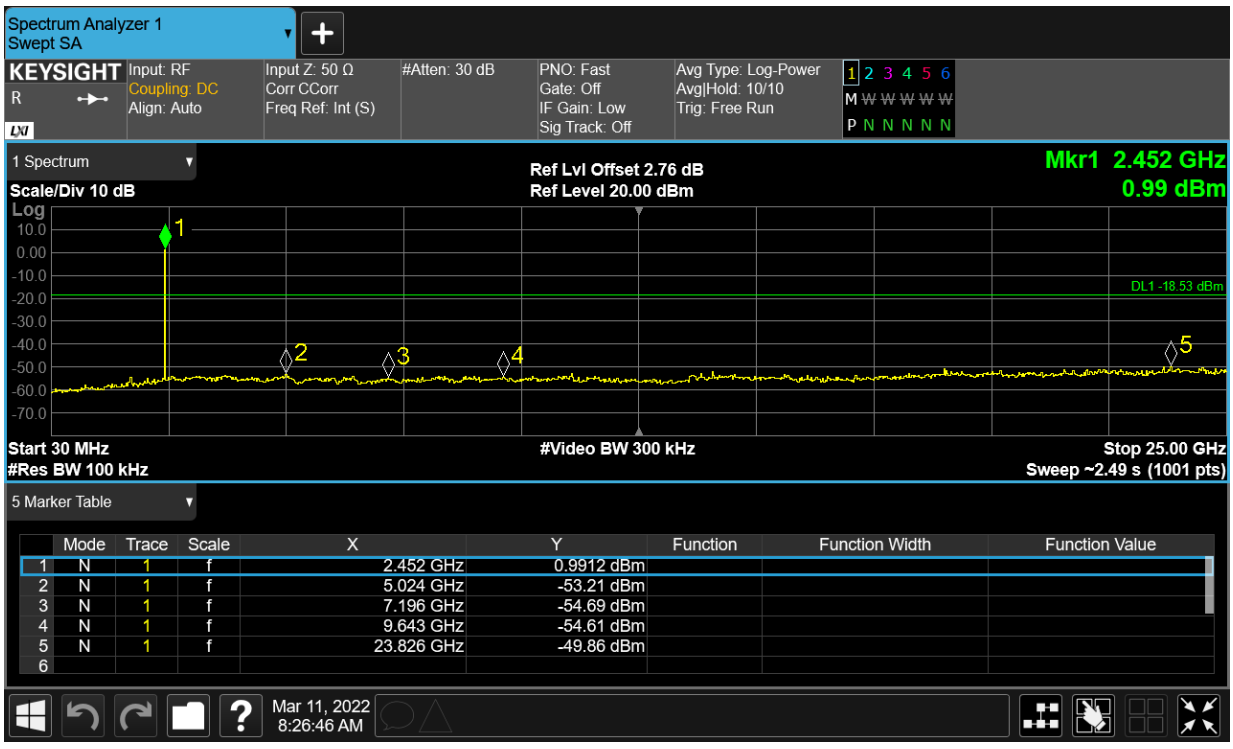
Tx. Spurious NVNT BLE 2402MHz Ant1 Emission



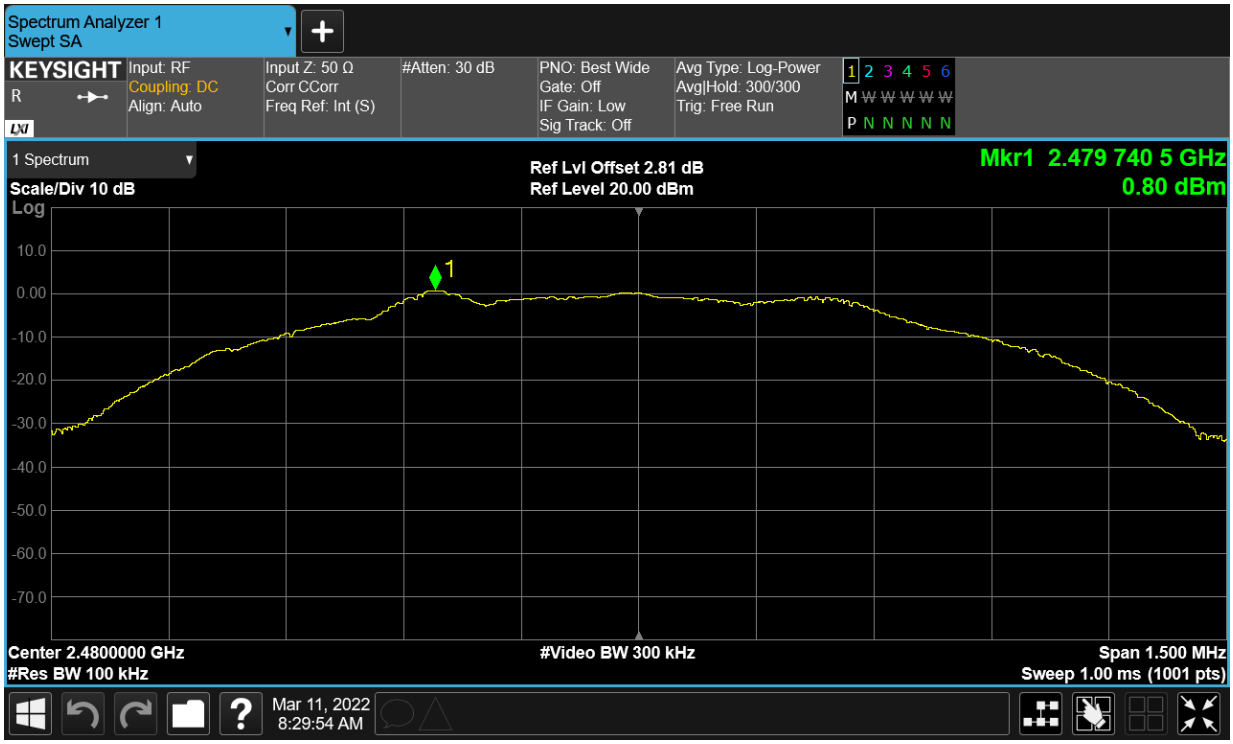
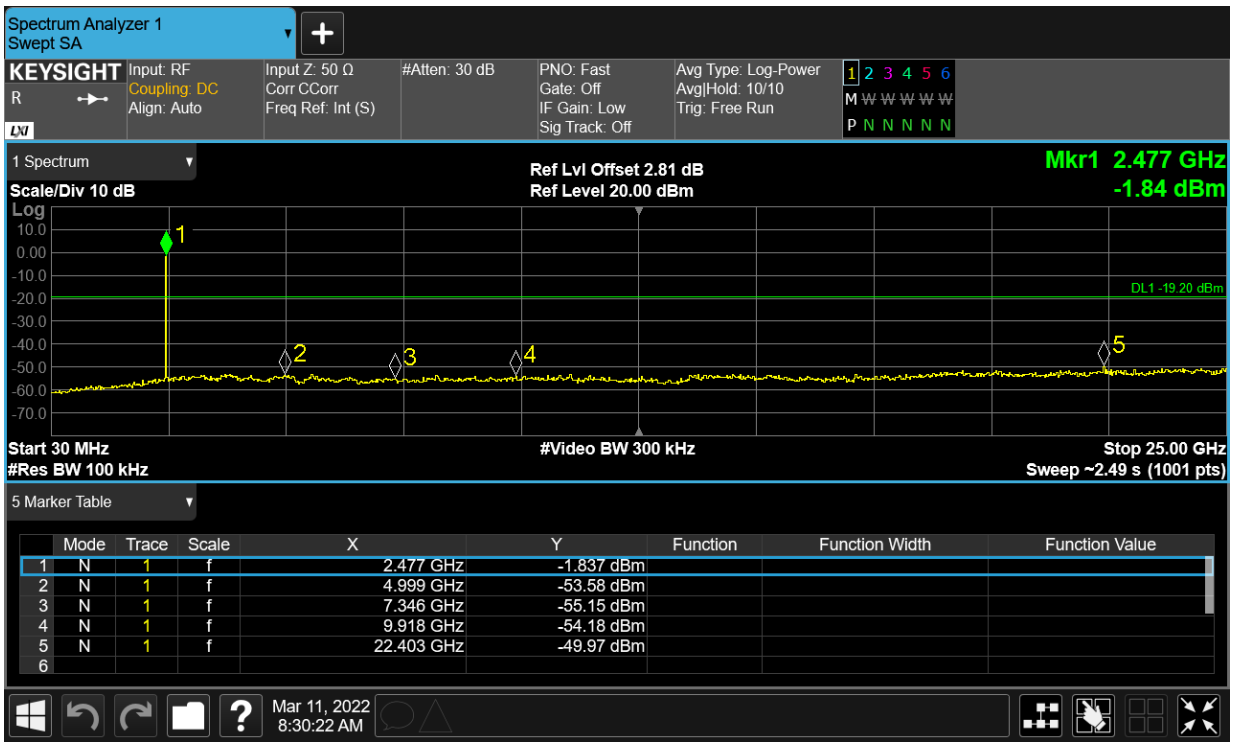
Tx. Spurious NVNT BLE 2442MHz Ant1 Ref



Tx. Spurious NVNT BLE 2442MHz Ant1 Emission



Tx. Spurious NVNT BLE 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2480MHz Ant1 Emission