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# FCC ID BLE
# FCC_BLE (Part15.247) Test Data

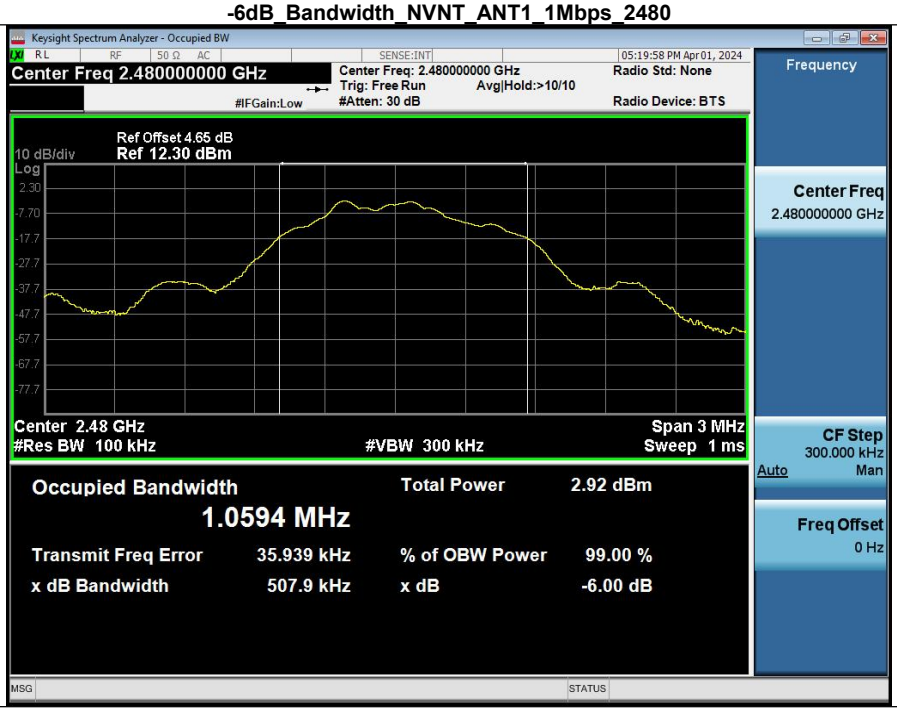
## 1. -6dB Bandwidth

| Condition | Antenna | Rate | Frequency (MHz) | -6dB BW(kHz) | limit(kHz) | Result |
|---|---|---|---|---|---|---|
| NVNT | ANT1 | 1Mbps | 2402 | 508.25 | 500 | Pass |
| NVNT | ANT1 | 1Mbps | 2440.00 | 506.35 | 500 | Pass |
| NVNT | ANT1 | 1Mbps | 2480 | 507.86 | 500 | Pass |

**-6dB_Bandwidth_NVNT_ANT1_1Mbps_2402**

**-6dB_Bandwidth_NVNT_ANT1_1Mbps_2440**

**-6dB_Bandwidth_NVNT_ANT1_1Mbps_2480**



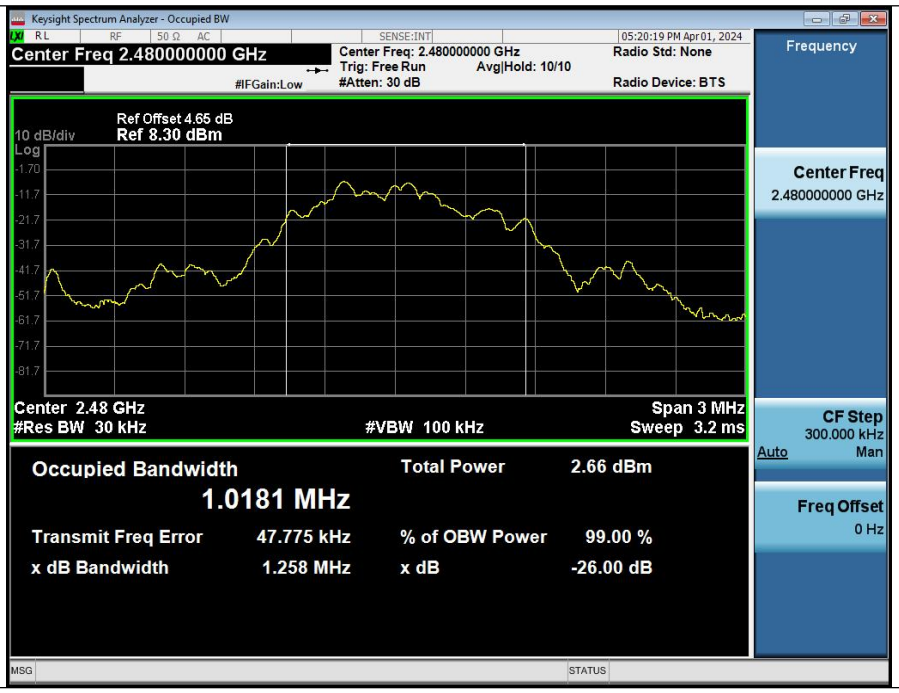
## 2. 99% Occupied Bandwidth

| Condition | Antenna | Rate | Frequency (MHz) | 99%%BW(MHz) |
|---|---|---|---|---|
| NVNT | ANT1 | 1Mbps | 2402 | 1.018 |
| NVNT | ANT1 | 1Mbps | 2440.00 | 1.020 |
| NVNT | ANT1 | 1Mbps | 2480 | 1.018 |

**99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2402**

**99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2440**

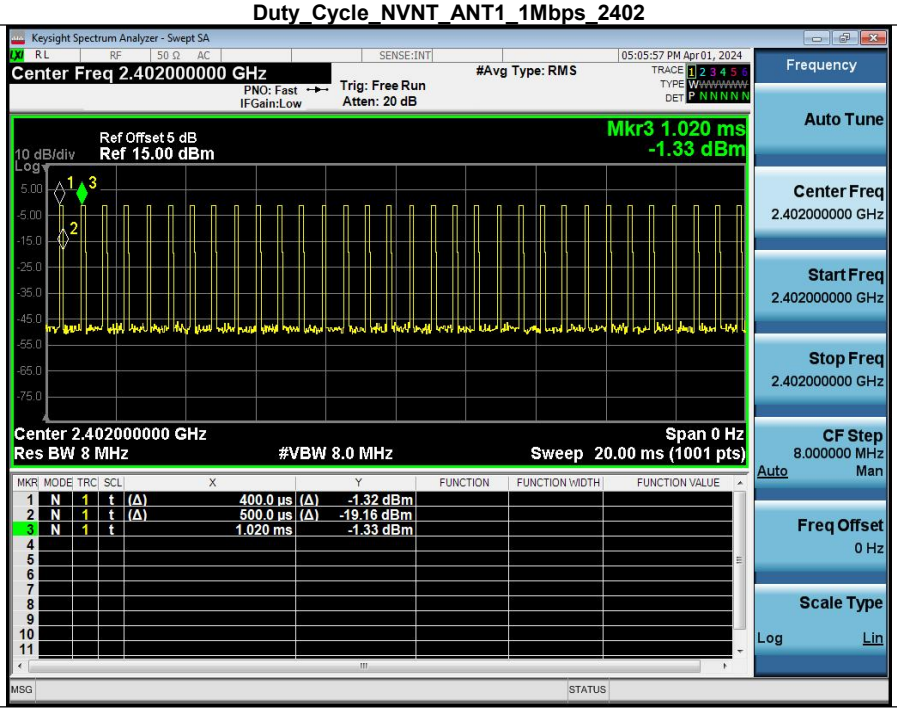
**99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2480**


Keysight Spectrum Analyzer - Occupied BW
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
05:20:19 PM Apr 01, 2024
#IFGain:Low
Ref Offset 4.65 dB
10 dB/div
Ref 8.30 dBm
Log
Center 2.48 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
1.0181 MHz
Total Power 2.66 dBm
Transmit Freq Error 47.775 kHz
% of OBW Power 99.00 %
x dB Bandwidth 1.258 MHz
x dB -26.00 dB
Frequency
Center Freq
2.480000000 GHz
CF Step
300.000 kHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

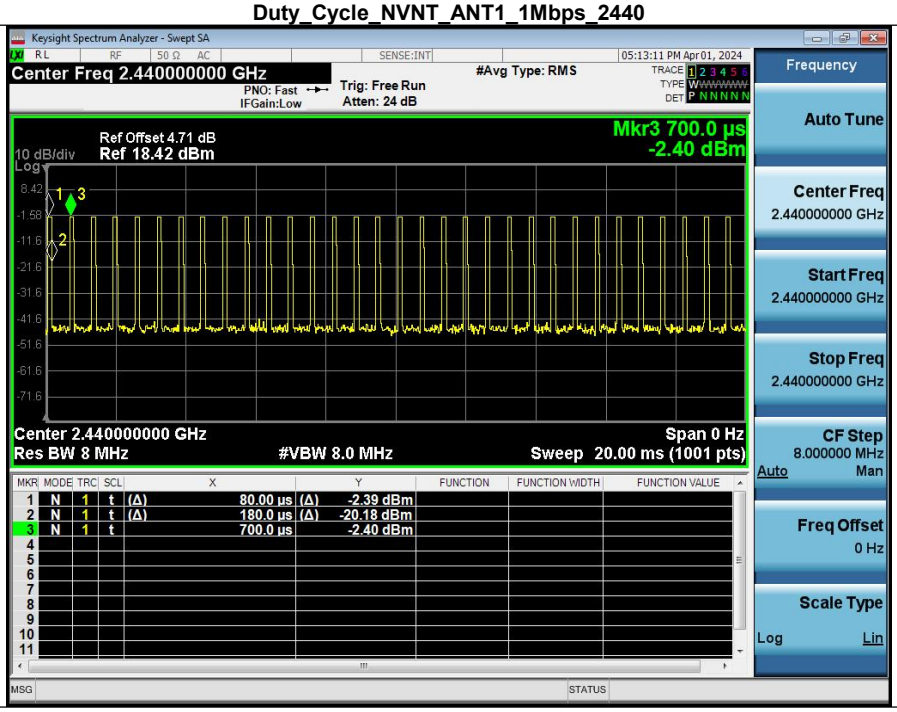
# 3. Duty Cycle

| Condition | Antenna | Rate | Frequency (MHz) | Dutycycle(%) | Duty_factor |
|---|---|---|---|---|---|
| NVNT | ANT1 | 1Mbps | 2402 | 16.13 | 7.92 |
| NVNT | ANT1 | 1Mbps | 2440.00 | 16.13 | 7.92 |
| NVNT | ANT1 | 1Mbps | 2480 | 19.35 | 7.13 |

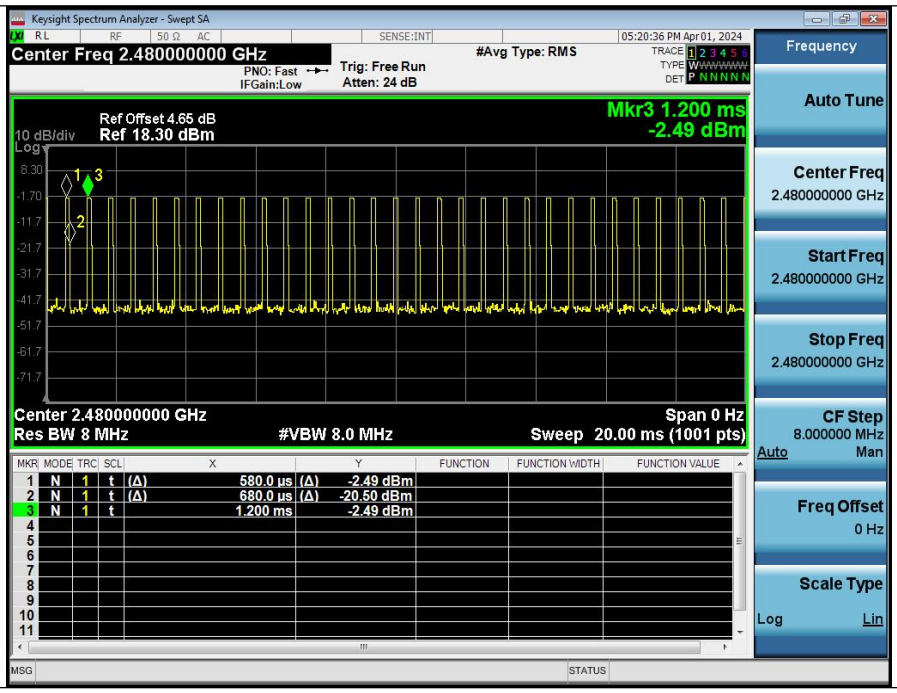
**Duty_Cycle_NVNT_ANT1_1Mbps_2402**




**Duty_Cycle_NVNT_ANT1_1Mbps_2440**




**Duty_Cycle_NVNT_ANT1_1Mbps_2480**

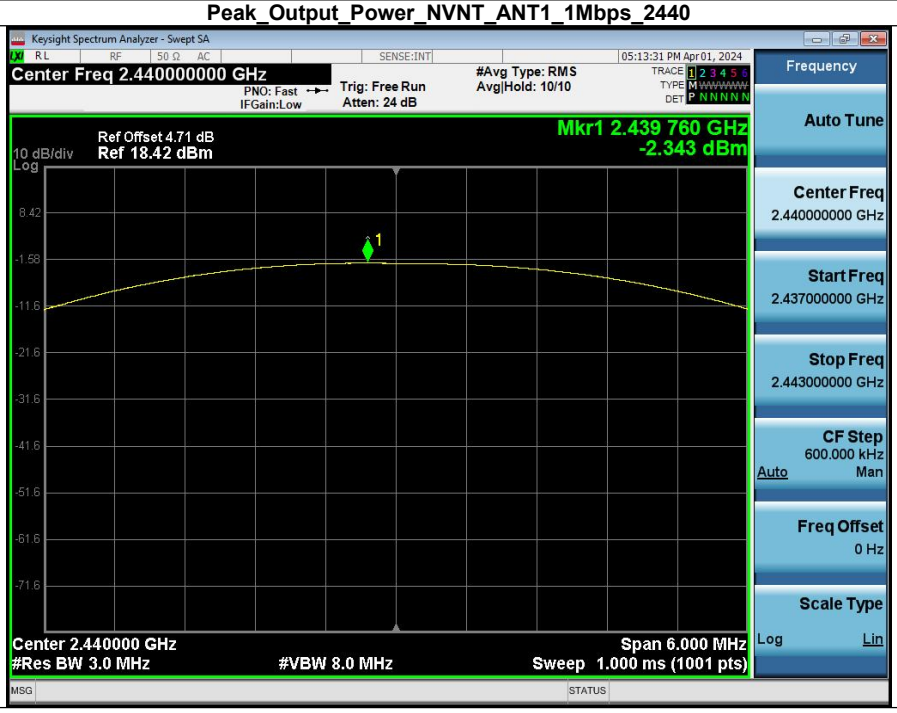

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 24 dB
#Avg Type: RMS
05:20:36 PM Apr 01, 2024
Ref Offset 4.65 dB
10 dB/div
Ref 18.30 dBm
Mkr3 1.200 ms
-2.49 dBm
Center 2.480000000 GHz
Span 0 Hz
Res BW 8 MHz
#VBW 8.0 MHz
Sweep 20.00 ms (1001 pts)
1 N 1 t (Δ) 580.0 µs (Δ) -2.49 dBm
2 N 1 t (Δ) 680.0 µs (Δ) -20.50 dBm
3 N 1 t 1.200 ms -2.49 dBm
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.480000000 GHz
Stop Freq
2.480000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

# 4. Peak Output Power

| Condition | Antenna | Rate | Frequency (MHz) | Max. Conducted Power(dBm) | Max. Conducted Power(mW) | Limit(mW) | Result |
|---|---|---|---|---|---|---|---|
| NVNT | ANT1 | 1Mbps | 2402 | -1.24 | 0.75 | 1000 | Pass |
| NVNT | ANT1 | 1Mbps | 2440.00 | -2.34 | 0.58 | 1000 | Pass |
| NVNT | ANT1 | 1Mbps | 2480 | -2.47 | 0.57 | 1000 | Pass |

**Peak_Output_Power_NVNT_ANT1_1Mbps_2402**

**Peak_Output_Power_NVNT_ANT1_1Mbps_2440**



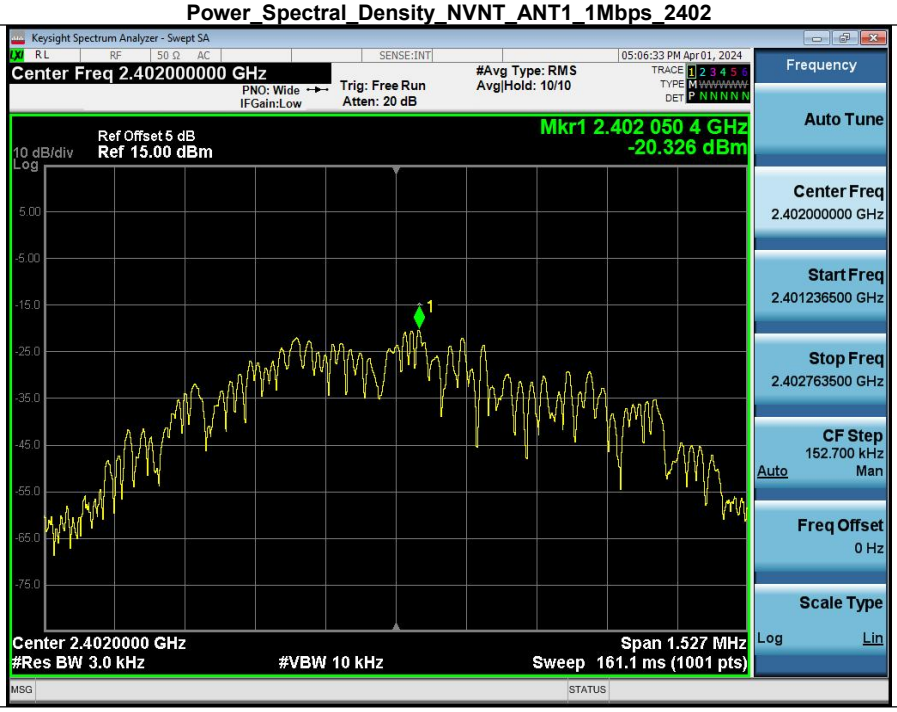

**Peak_Output_Power_NVNT_ANT1_1Mbps_2480**

Keysight Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
05:20:57 PM Apr 01, 2024
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 18 dB
#Avg Type: RMS
Avg|Hold: 10/10
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 4.65 dB
10 dB/div
Ref 12.30 dBm
Log
Mkr1 2.479 712 GHz
-2.473 dBm
2.30
-7.70
-17.7
-27.7
-37.7
-47.7
-57.7
-67.7
-77.7
Center 2.480000 GHz
#Res BW 3.0 MHz
#VBW 8.0 MHz
Span 6.000 MHz
Sweep 1.000 ms (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.477000000 GHz
Stop Freq
2.483000000 GHz
CF Step
600.000 kHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

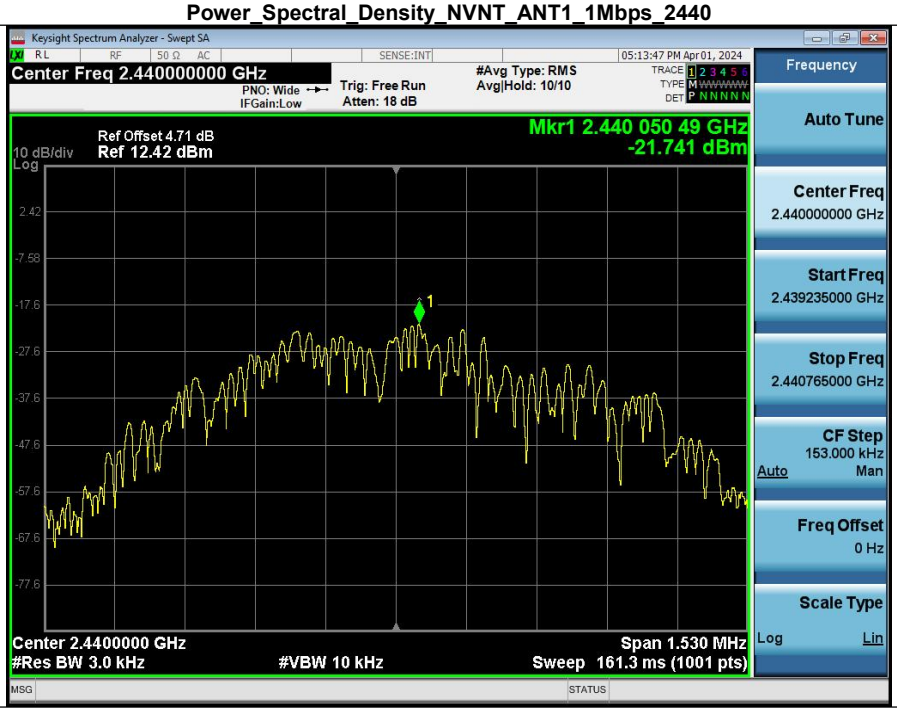
# 5. Power Spectral Density

| Condition | Antenna | Rate | Frequency (MHz) | Power Spectral Density(dBm) | Limit(dBm/3kHz) | Result |
|---|---|---|---|---|---|---|
| NVNT | ANT1 | 1Mbps | 2402 | -20.33 | 8 | Pass |
| NVNT | ANT1 | 1Mbps | 2440.00 | -21.74 | 8 | Pass |
| NVNT | ANT1 | 1Mbps | 2480 | -22.13 | 8 | Pass |

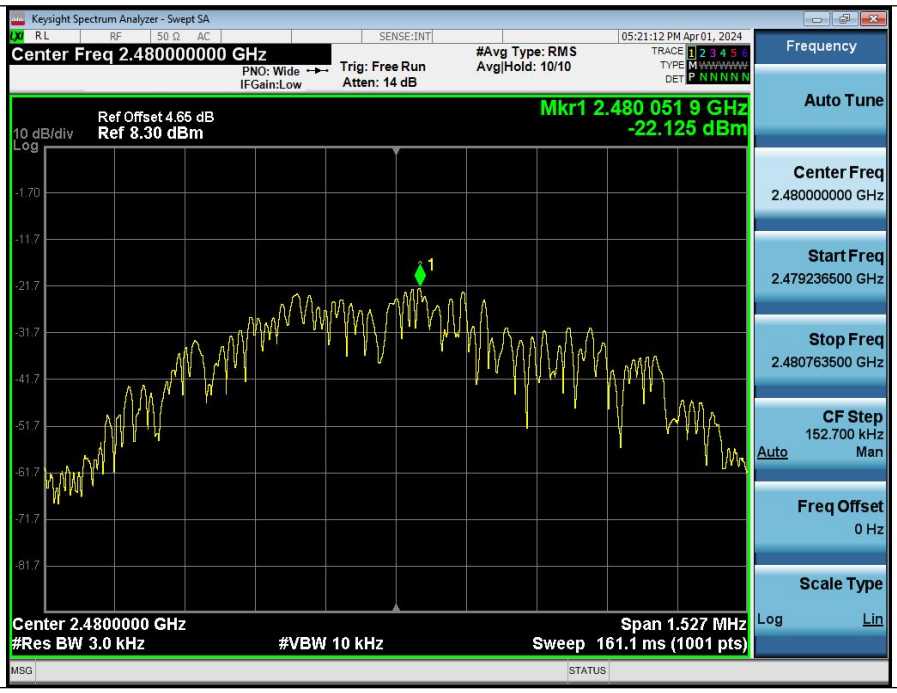
**Power_Spectral_Density_NVNT_ANT1_1Mbps_2402**




**Power_Spectral_Density_NVNT_ANT1_1Mbps_2440**




**Power_Spectral_Density_NVNT_ANT1_1Mbps_2480**

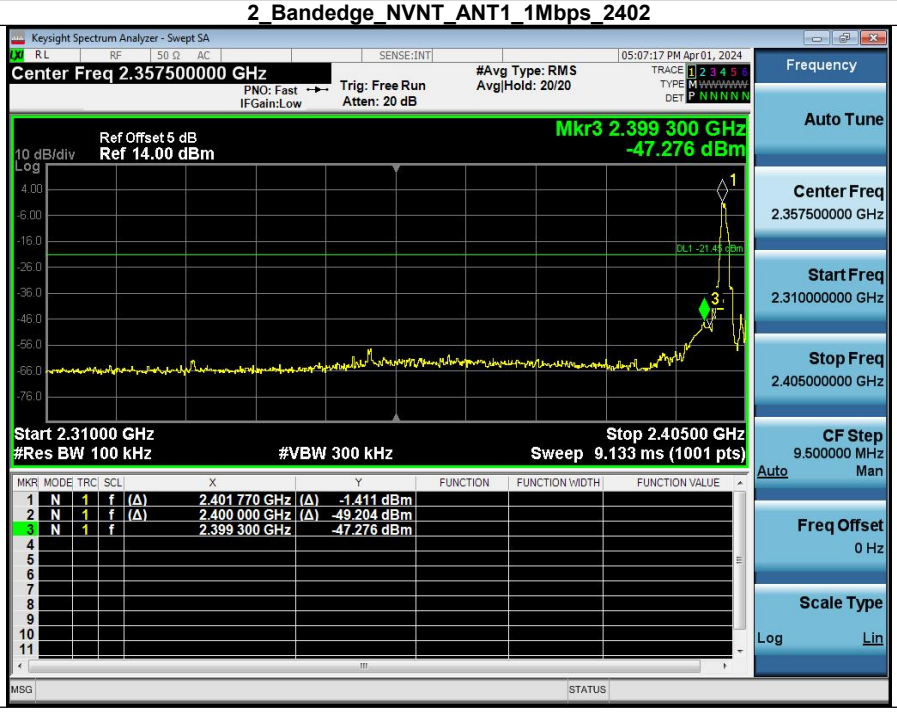

Keysight Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
05:21:12 PM Apr 01, 2024
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 14 dB
#Avg Type: RMS
Avg|Hold: 10/10
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 4.65 dB
10 dB/div
Ref 8.30 dBm
Log
Mkr1 2.480 051 9 GHz
-22.125 dBm
-1.70
-11.7
-21.7
-31.7
-41.7
-51.7
-61.7
-71.7
-81.7
1
Center 2.4800000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 1.527 MHz
Sweep 161.1 ms (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.479236500 GHz
Stop Freq
2.480763500 GHz
CF Step
152.700 kHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

# 6. Bandedge

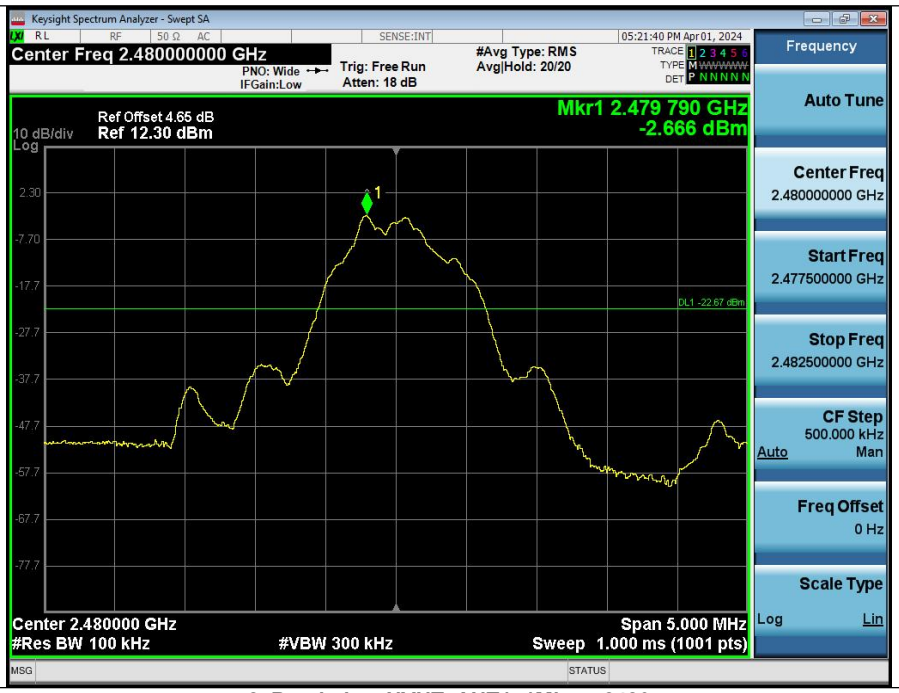
| Condition | Antenna | Rate | TX_Frequency (MHz) | Max. Mark Frequency (MHz) | Spurious level(dBm) | limit(dBm) | Result |
|---|---|---|---|---|---|---|---|
| NVNT | ANT1 | 1Mbps | 2402 | 2399.300 | -47.276 | -21.454 | Pass |
| NVNT | ANT1 | 1Mbps | 2480 | 2483.625 | -53.358 | -22.666 | Pass |

**1_Reference_Level_NVNT_ANT1_1Mbps_2402**

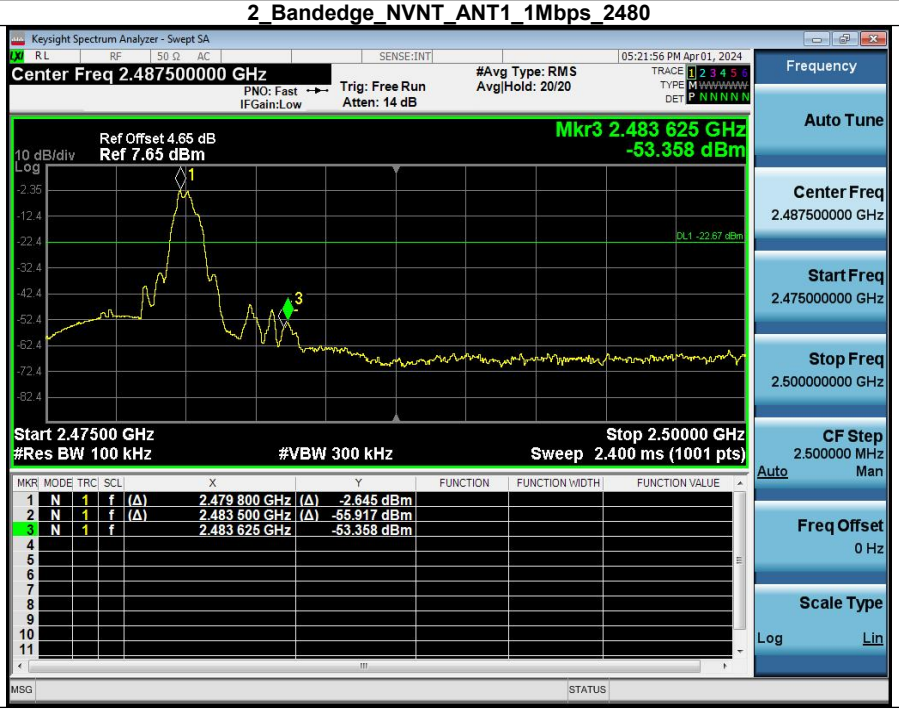
**2_Bandedge_NVNT_ANT1_1Mbps_2402**




**1_Reference_Level_NVNT_ANT1_1Mbps_2480**




2_Bandedge_NVNT_ANT1_1Mbps_2480

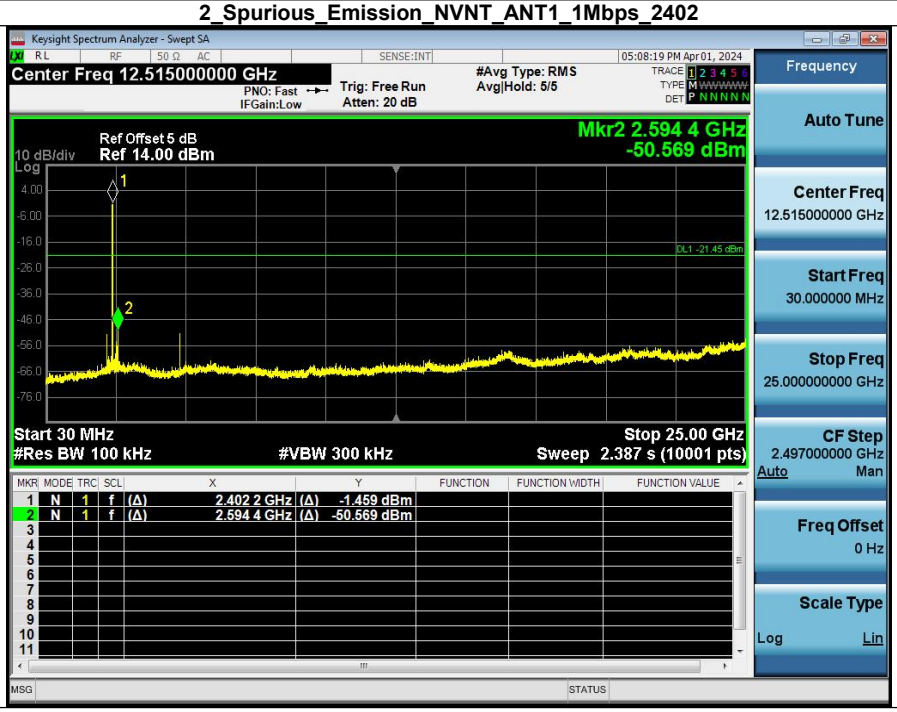


# 7. Spurious Emission

| Condition | Antenna | Rate | TX_Frequency(MHz) | Spurious MAX.Value(dBm) | Limit | Result |
|---|---|---|---|---|---|---|
| NVNT | ANT1 | 1Mbps | 2402 | -50.569 | -21.454 | Pass |
| NVNT | ANT1 | 1Mbps | 2440.00 | -50.163 | -22.518 | Pass |
| NVNT | ANT1 | 1Mbps | 2480 | -45.832 | -22.666 | Pass |

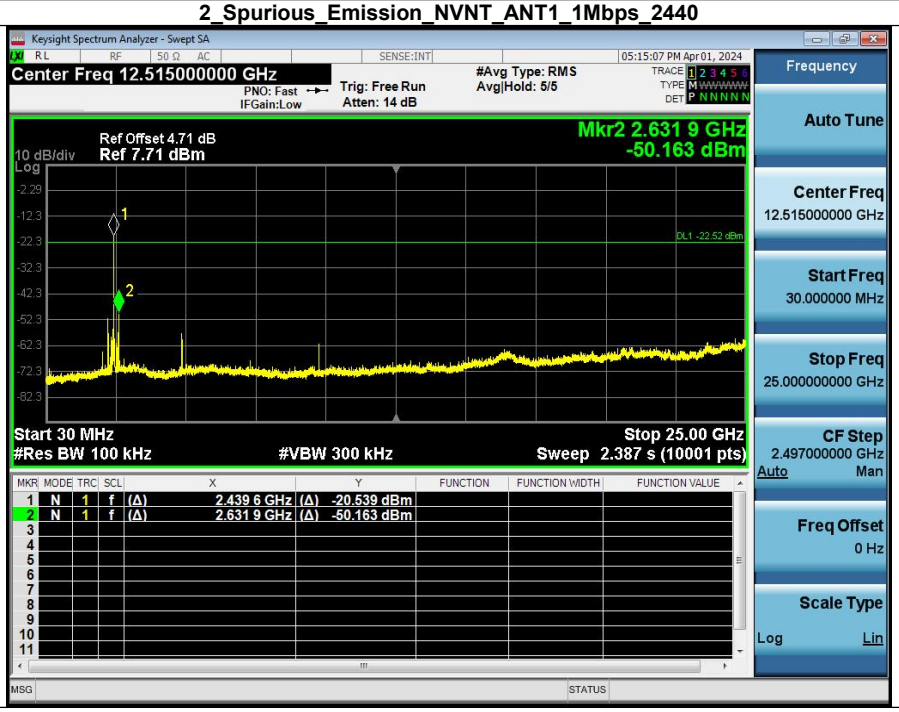
**1_Reference_Level_NVNT_ANT1_1Mbps_2402**

**2_Spurious_Emission_NVNT_ANT1_1Mbps_2402**

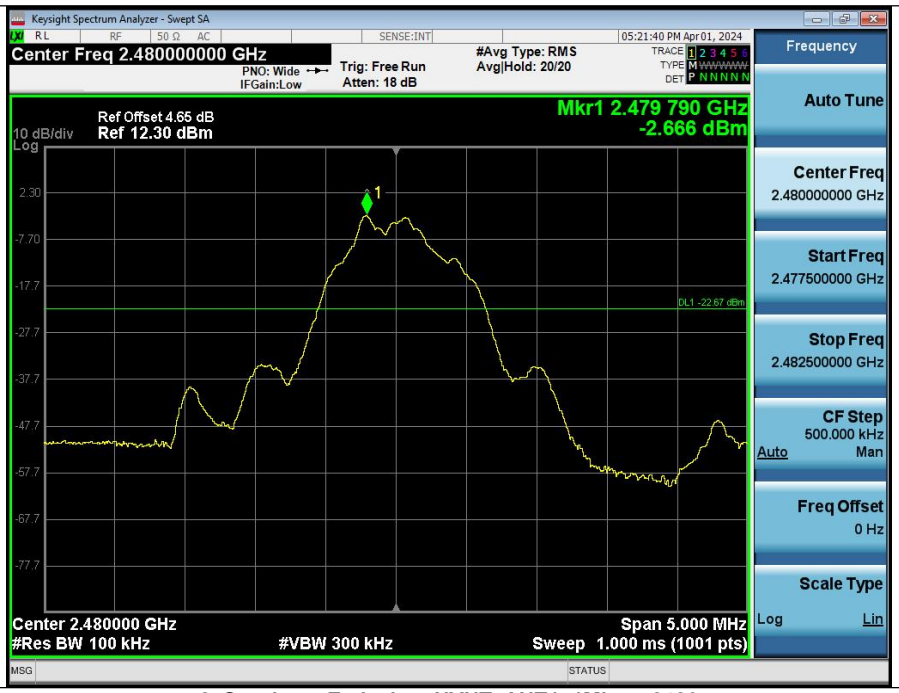


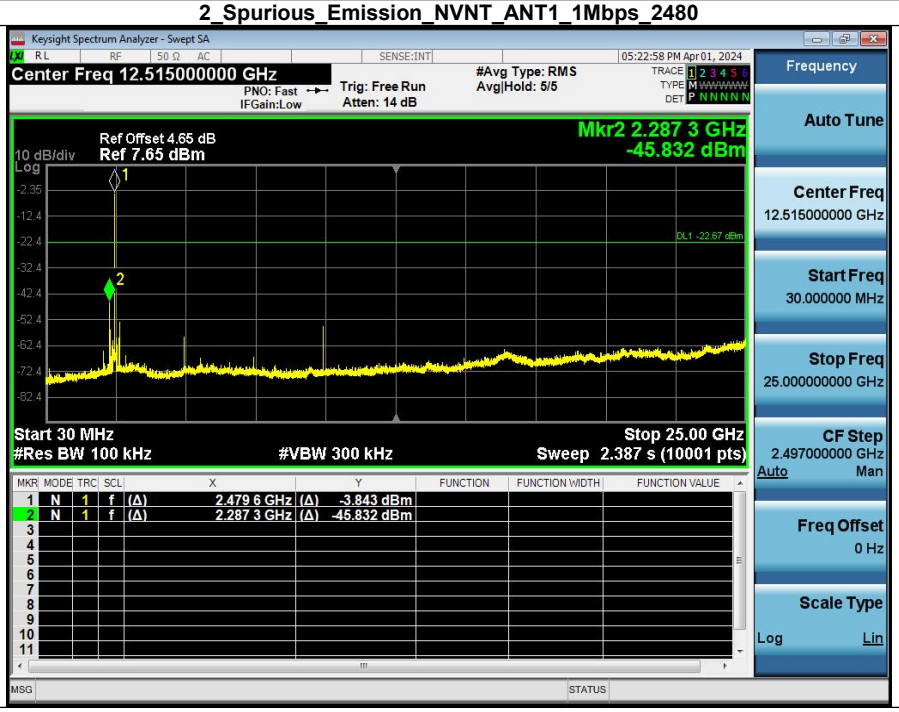

**1_Reference_Level_NVNT_ANT1_1Mbps_2440**

2_Spurious_Emission_NVNT_ANT1_1Mbps_2440




1_Reference_Level_NVNT_ANT1_1Mbps_2480




2_Spurious_Emission_NVNT_ANT1_1Mbps_2480