

## Appendix A

### RF Test Data for BT LE(Conducted Measurement)

**Product Name: Magnetic Mobile Screen**

**Test Model: VMP002**

**Environmental Conditions**

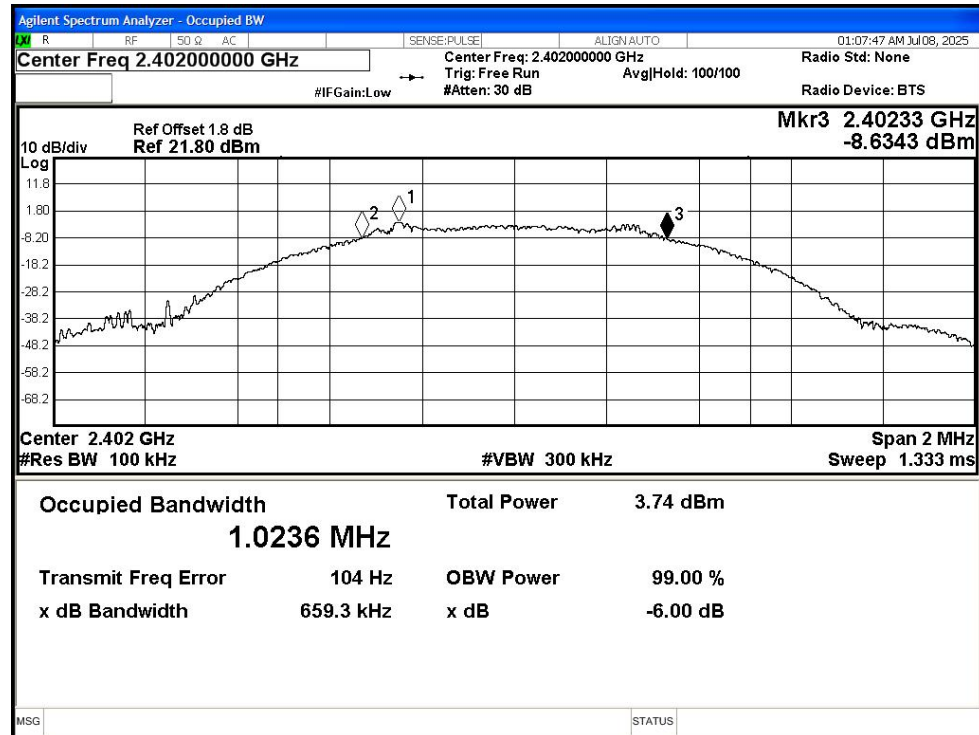
|                    |             |
|--------------------|-------------|
| Temperature:       | 23.8°C      |
| Relative Humidity: | 52.5%       |
| ATM Pressure:      | 100.0 kPa   |
| Test Engineer:     | Suichao Lai |
| Supervised by:     | Yan Chen    |

## A.1 -6dB Bandwidth

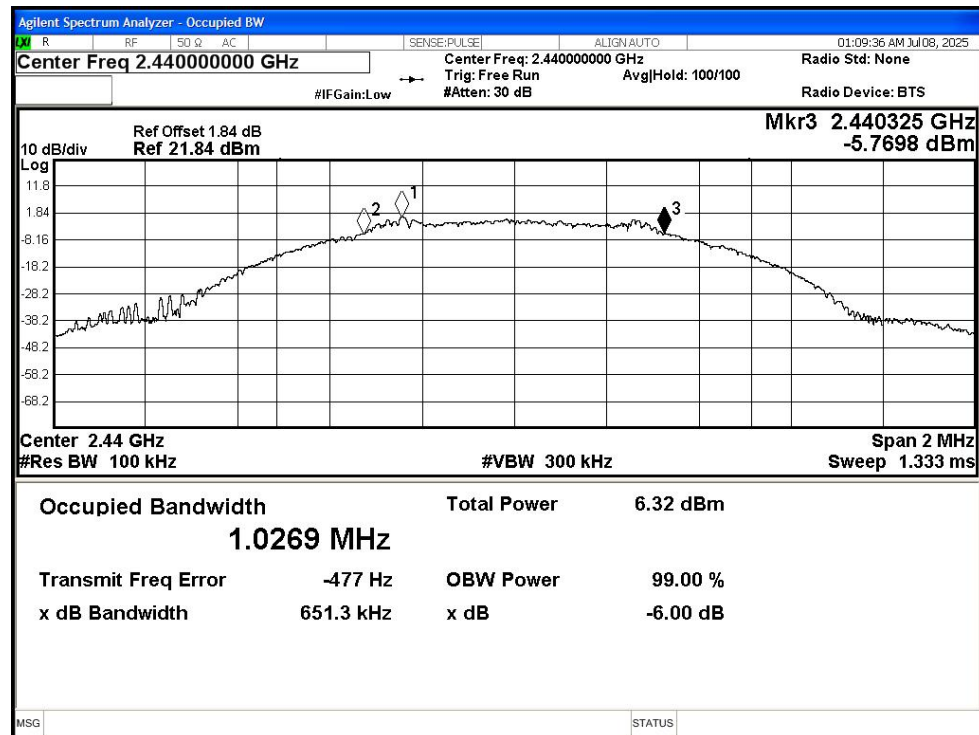
| Condition | Mode   | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|--------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | 0.659                 | $\geq 0.5$                  | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | 0.651                 | $\geq 0.5$                  | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 0.661                 | $\geq 0.5$                  | Pass    |

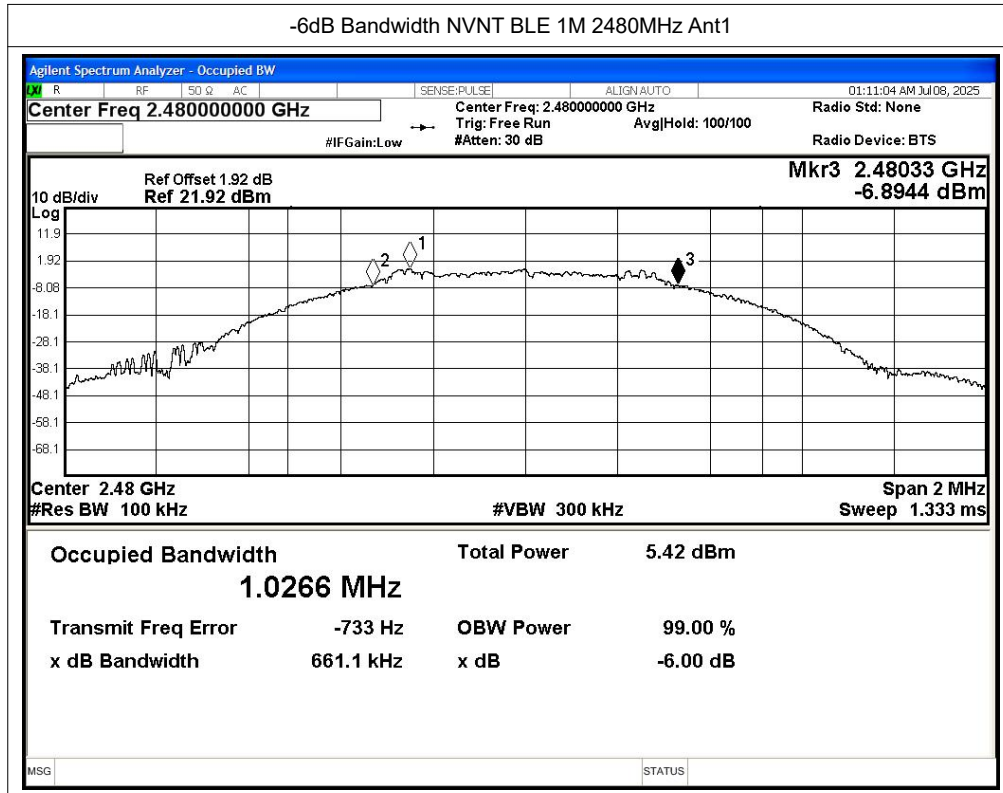
## Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1



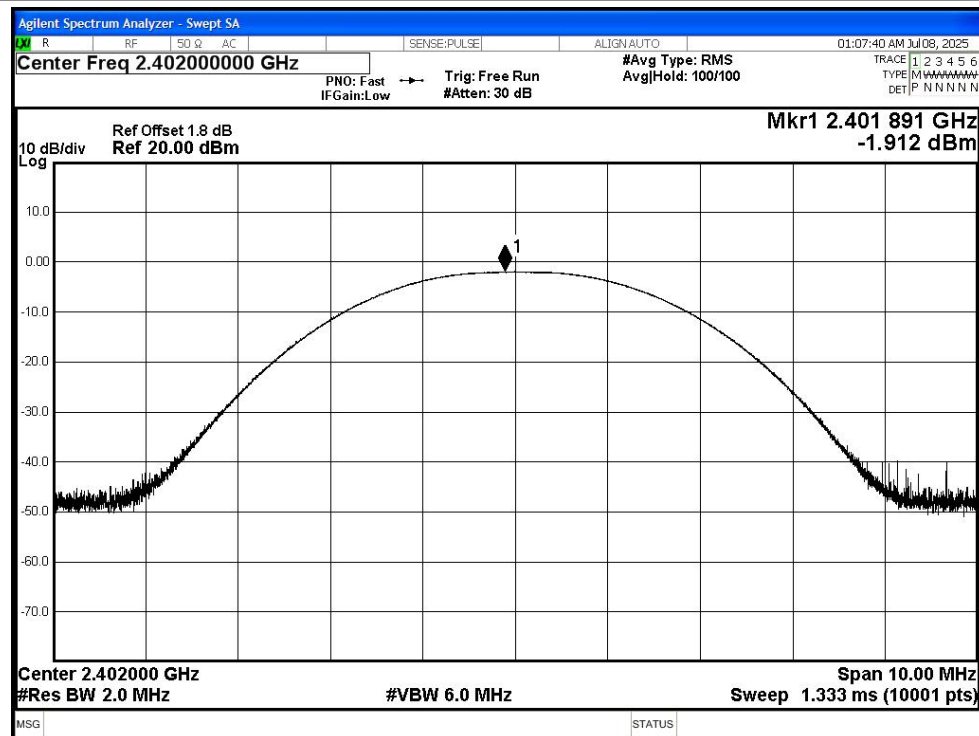


## A.2 Maximum Peak Conducted Output Power

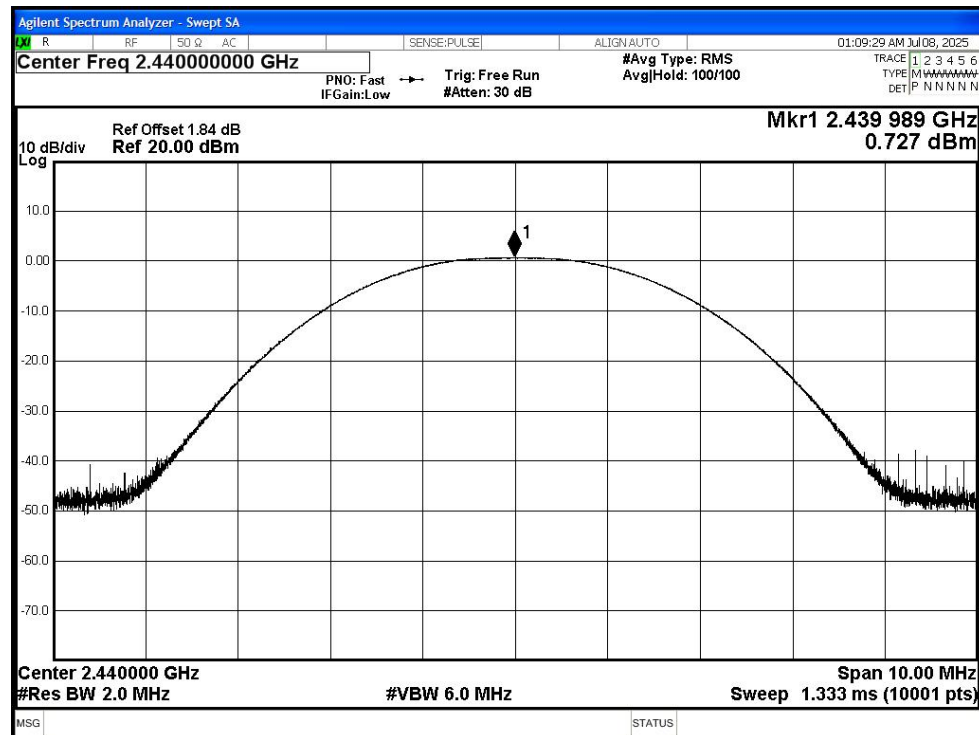
| Condition | Mode   | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|--------|-----------------|---------|-----------------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -1.91                 | 30          | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | 0.73                  | 30          | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -0.18                 | 30          | Pass    |

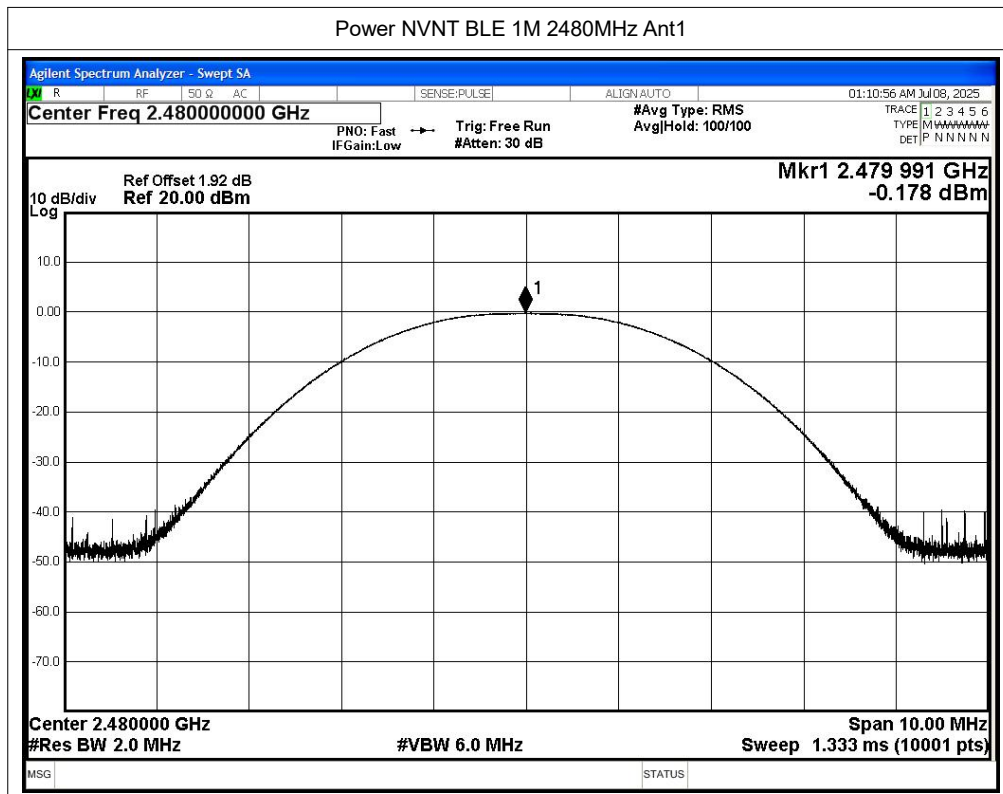
## Test Graphs

Power NVNT BLE 1M 2402MHz Ant1



Power NVNT BLE 1M 2440MHz Ant1



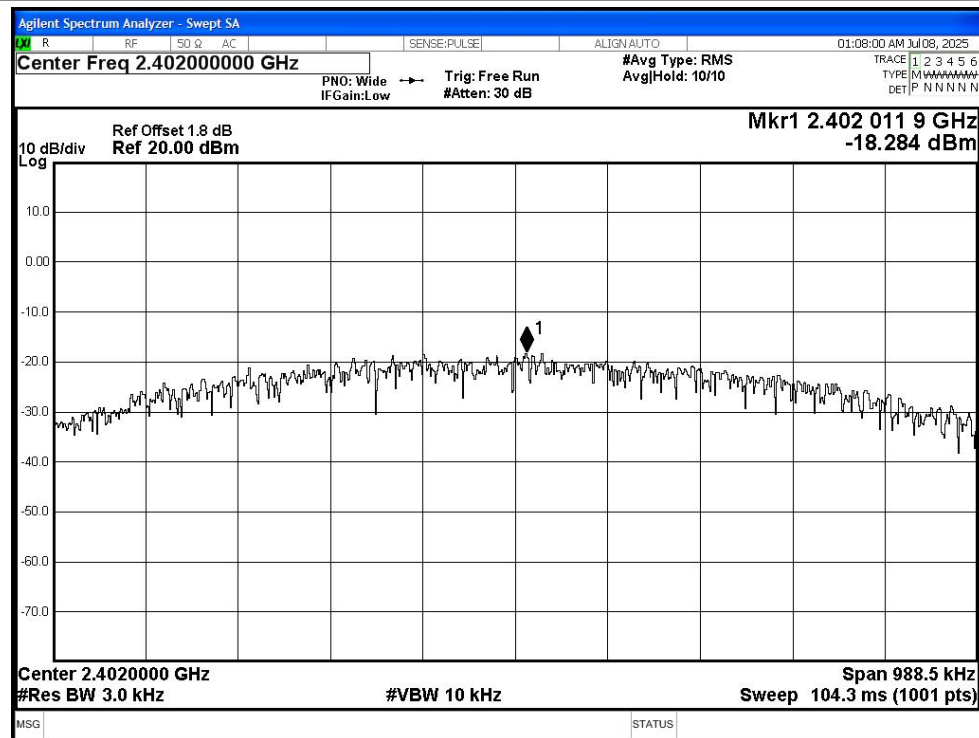


### A.3 Maximum Power Spectral Density Level

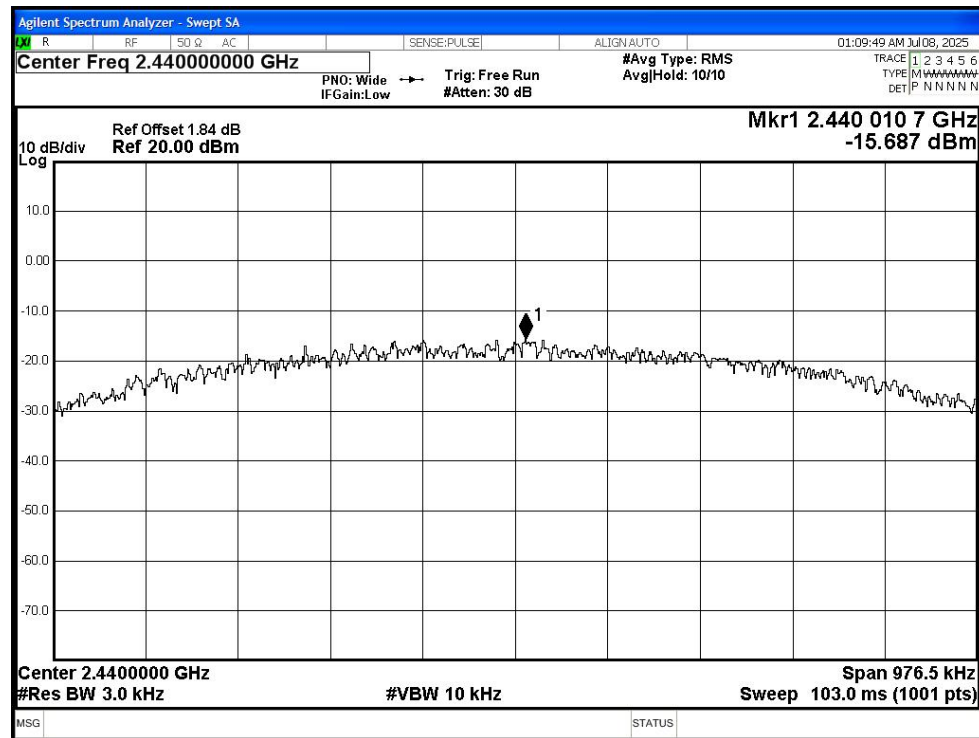
| Condition | Mode   | Frequency (MHz) | Antenna | Conducted PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|-----------|--------|-----------------|---------|--------------------------|------------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -18.28                   | 8                | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | -15.69                   | 8                | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -16.57                   | 8                | Pass    |

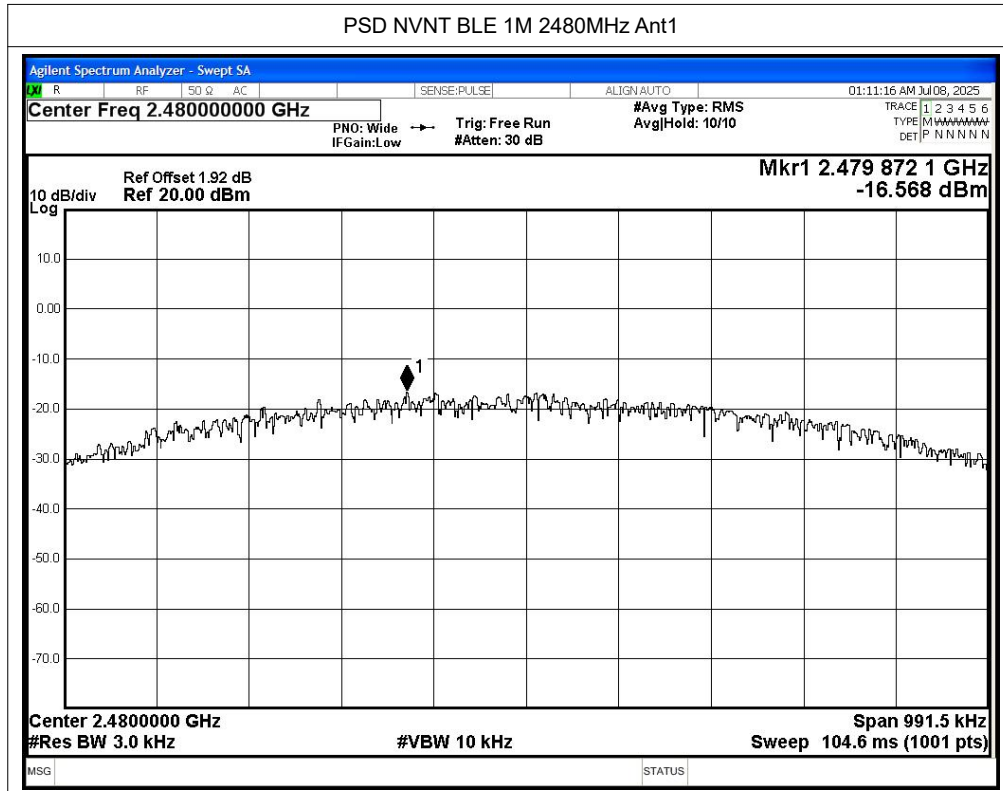
## Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



PSD NVNT BLE 1M 2440MHz Ant1



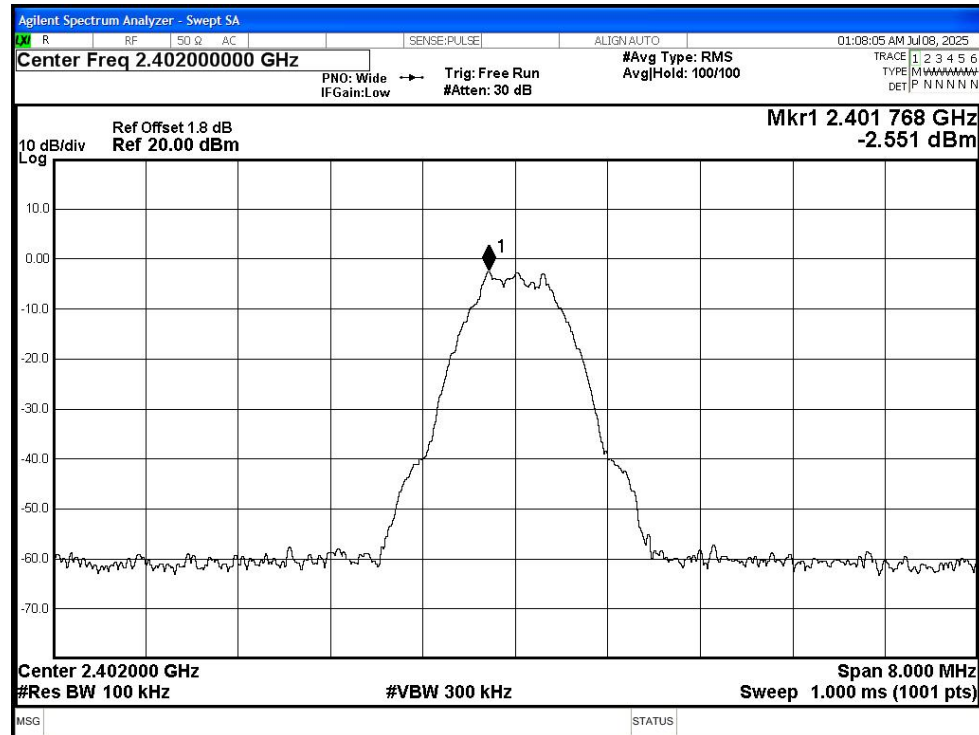


## A.4 Band Edge

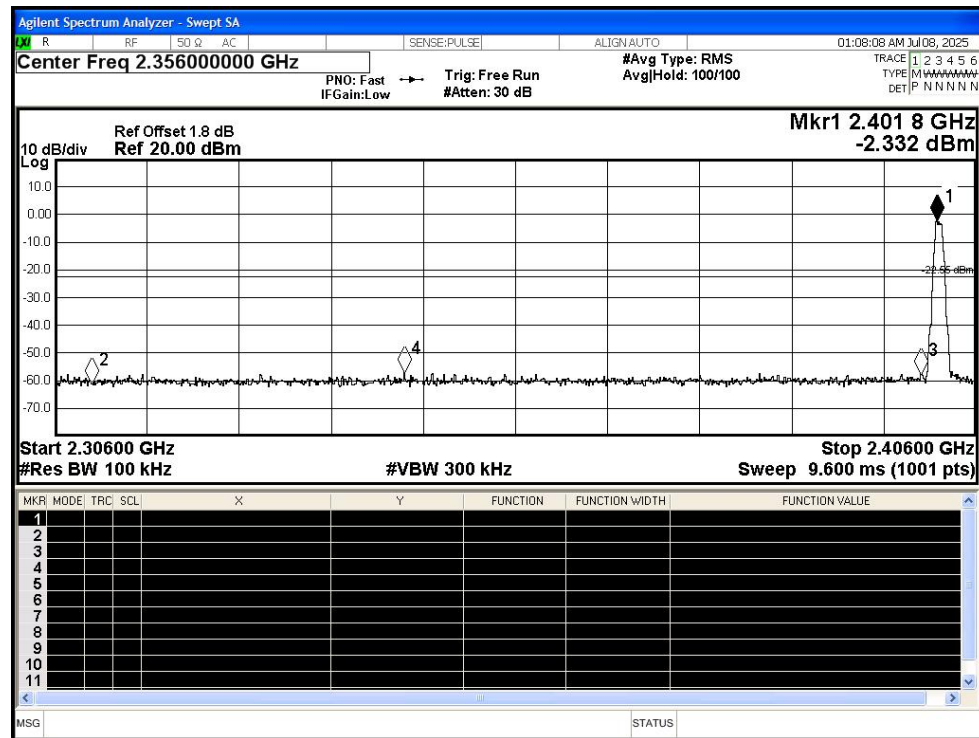
| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -54.66          | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -56.07          | -20         | Pass    |

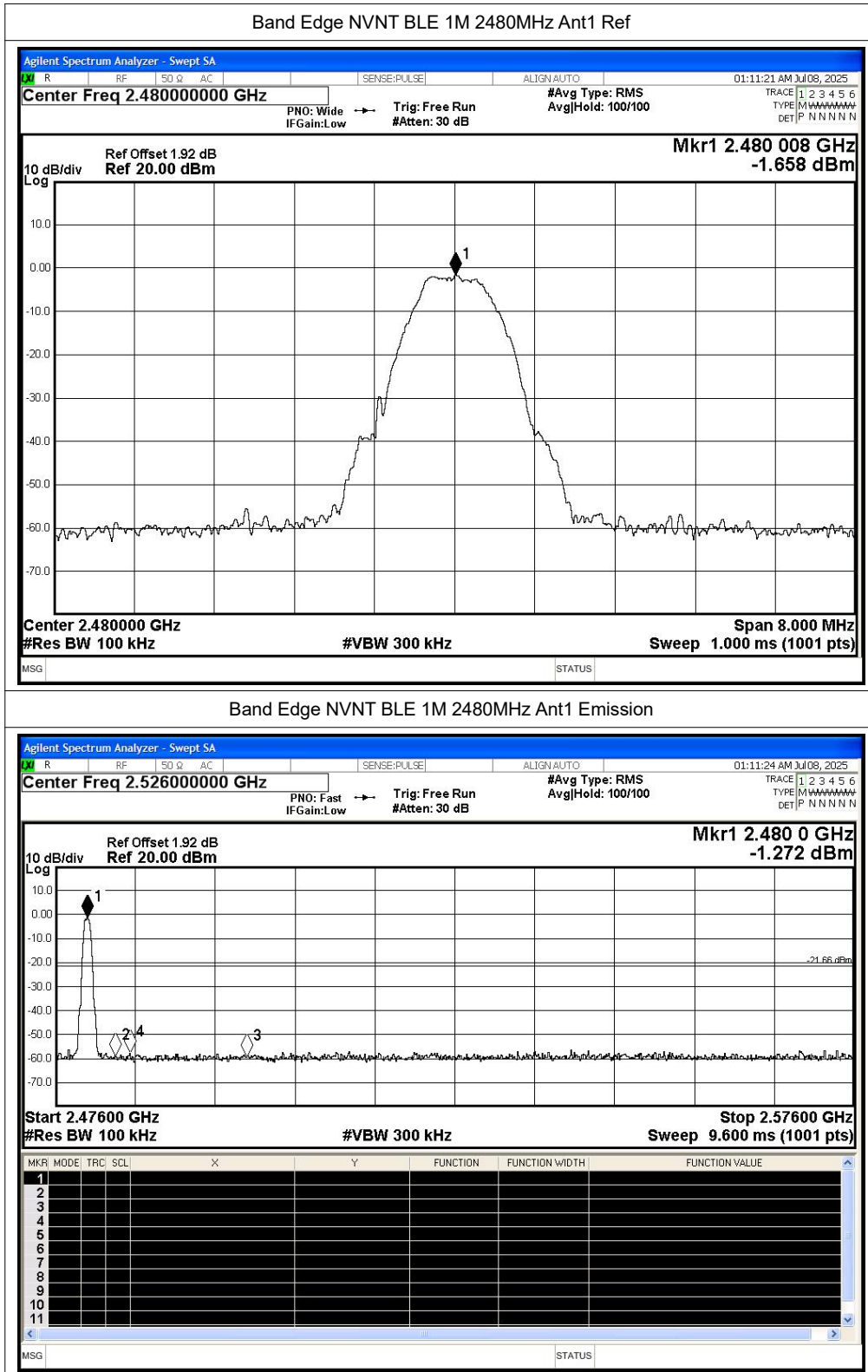
## Test Graphs

## Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



## Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



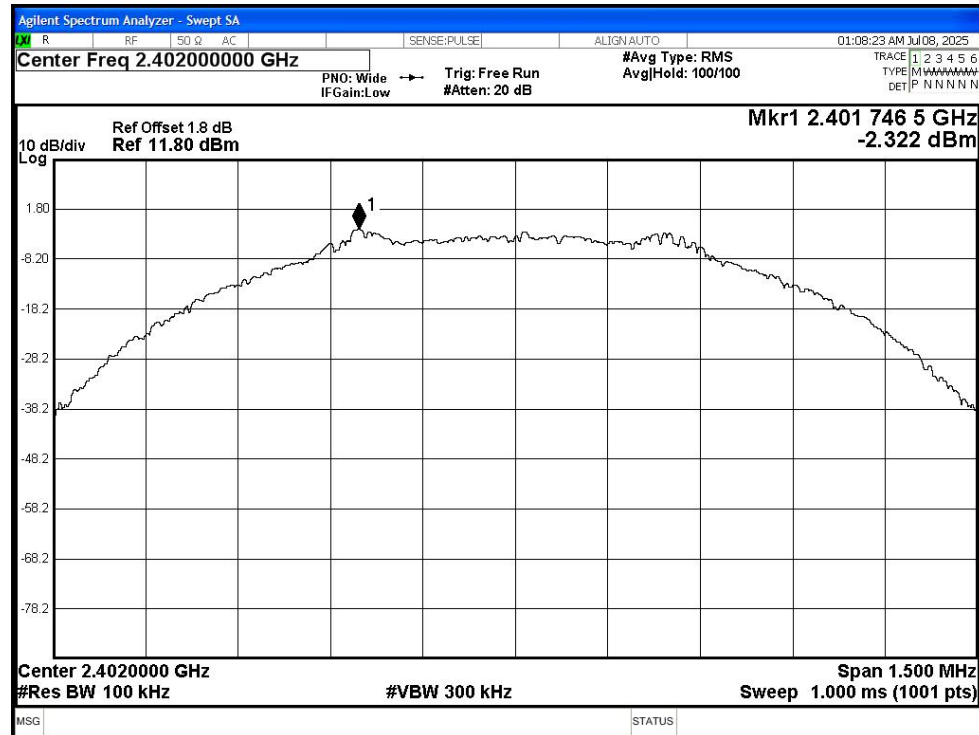


## A.5 Conducted RF Spurious Emission

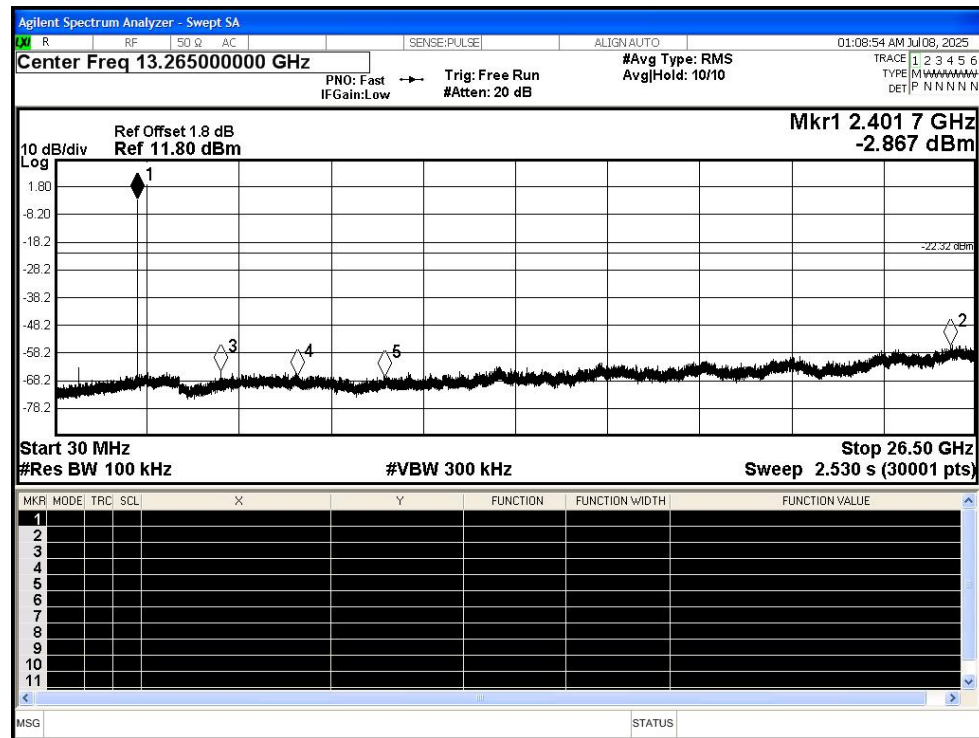
| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -53.04          | -20         | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | -47.67          | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -53.16          | -20         | Pass    |

## Test Graphs

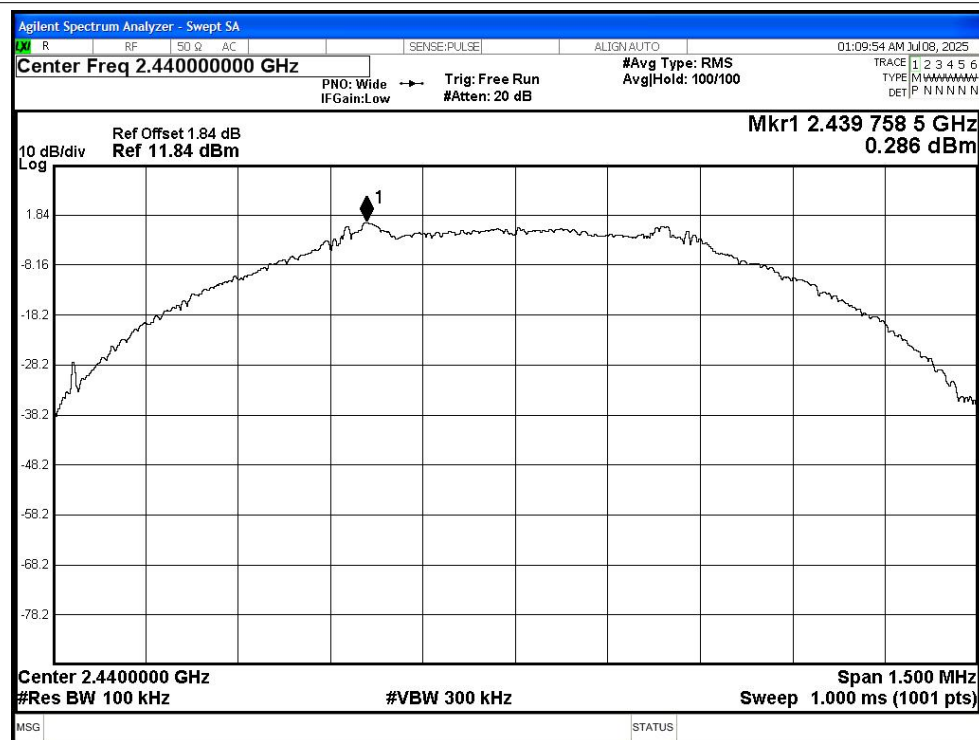
## Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



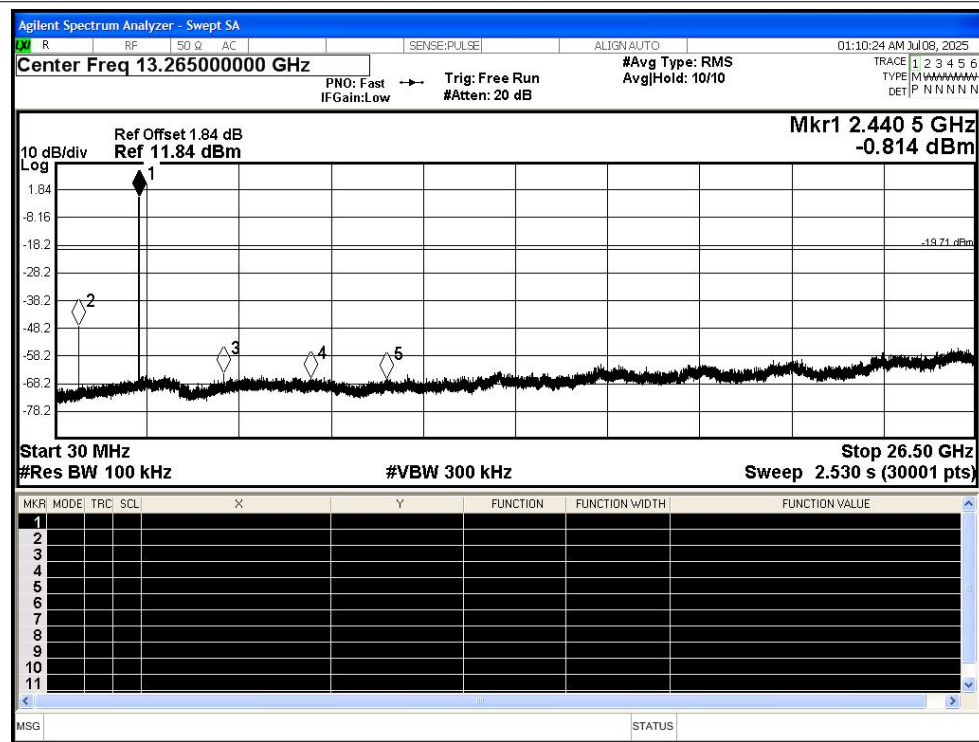
## Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



## Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



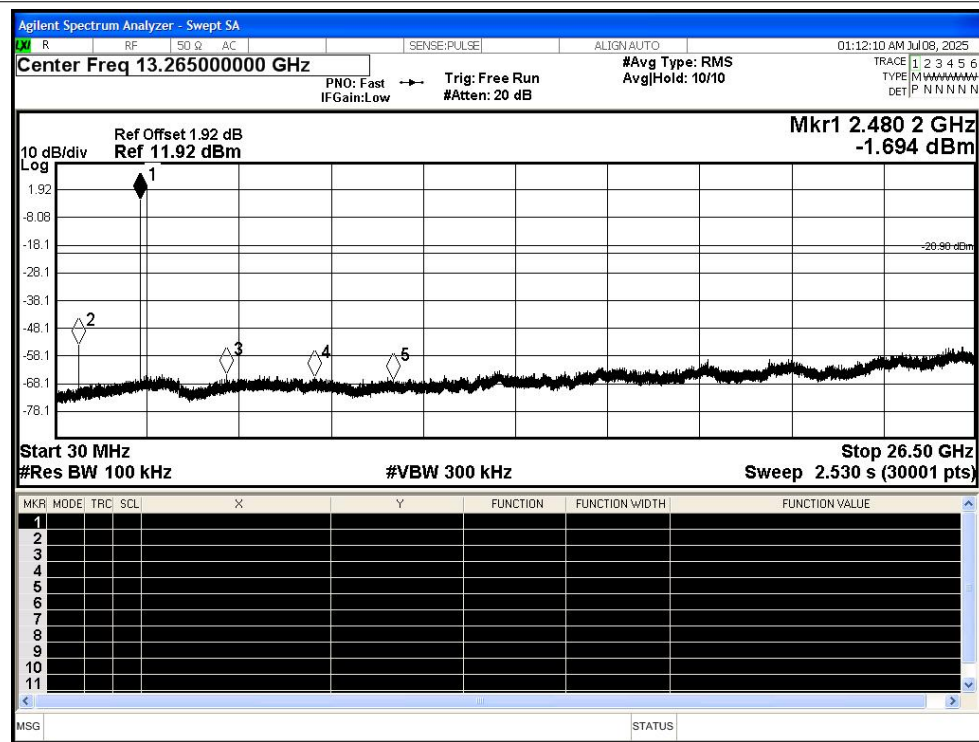
## Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



## Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



## Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission

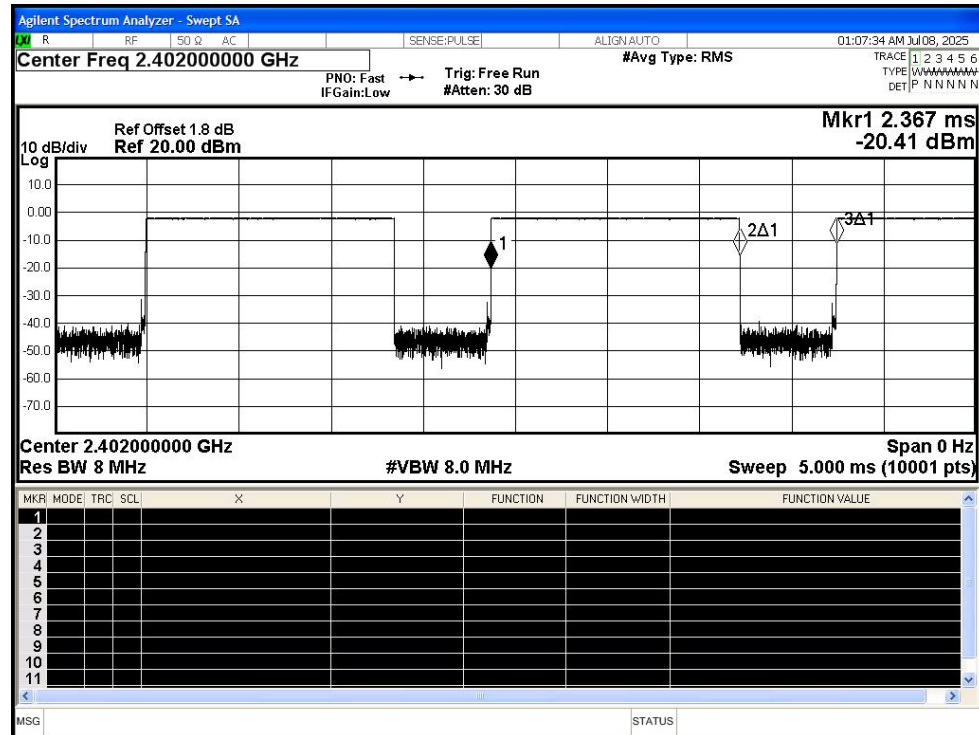


## A.6 Duty Cycle

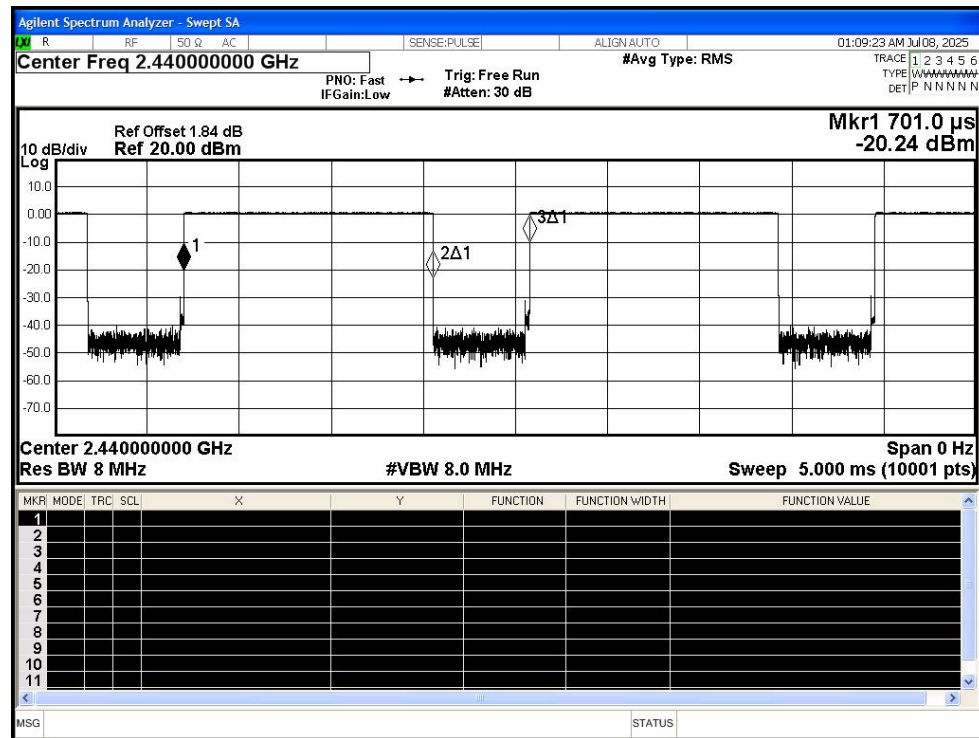
| Condition | Mode   | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|--------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | BLE 1M | 2402            | Ant1    | 72.01          | 1.43                   | 0.74      |
| NVNT      | BLE 1M | 2440            | Ant1    | 72.03          | 1.42                   | 0.74      |
| NVNT      | BLE 1M | 2480            | Ant1    | 72.03          | 1.42                   | 0.74      |

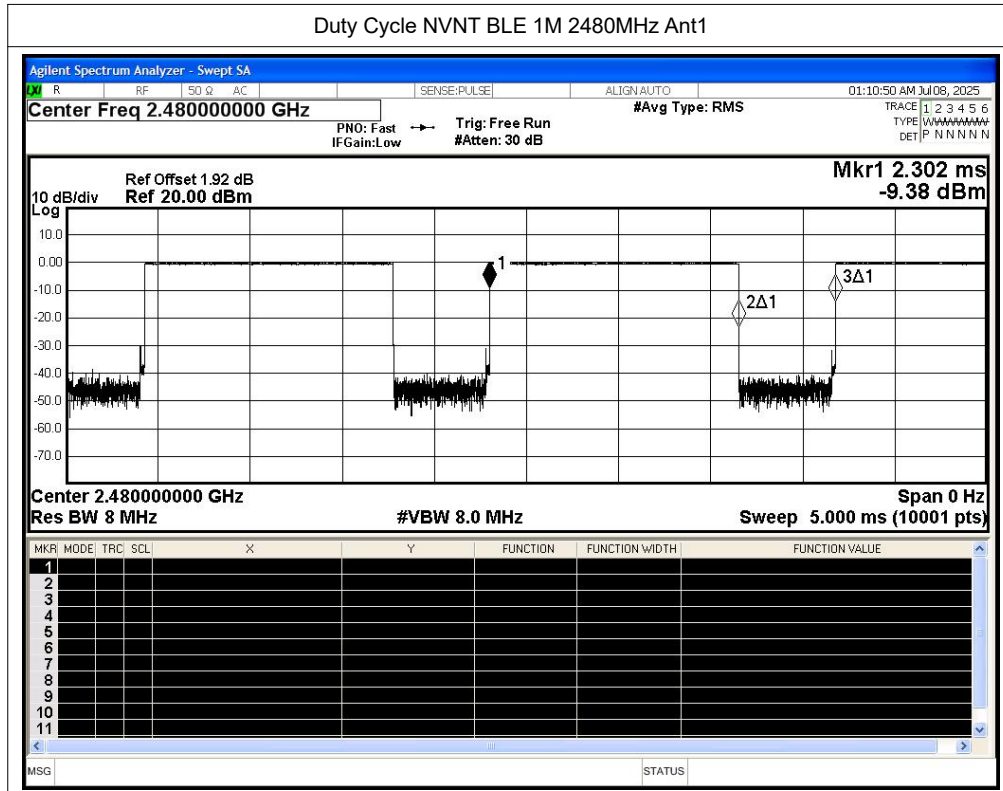
## Test Graphs

## Duty Cycle NVNT BLE 1M 2402MHz Ant1



## Duty Cycle NVNT BLE 1M 2440MHz Ant1



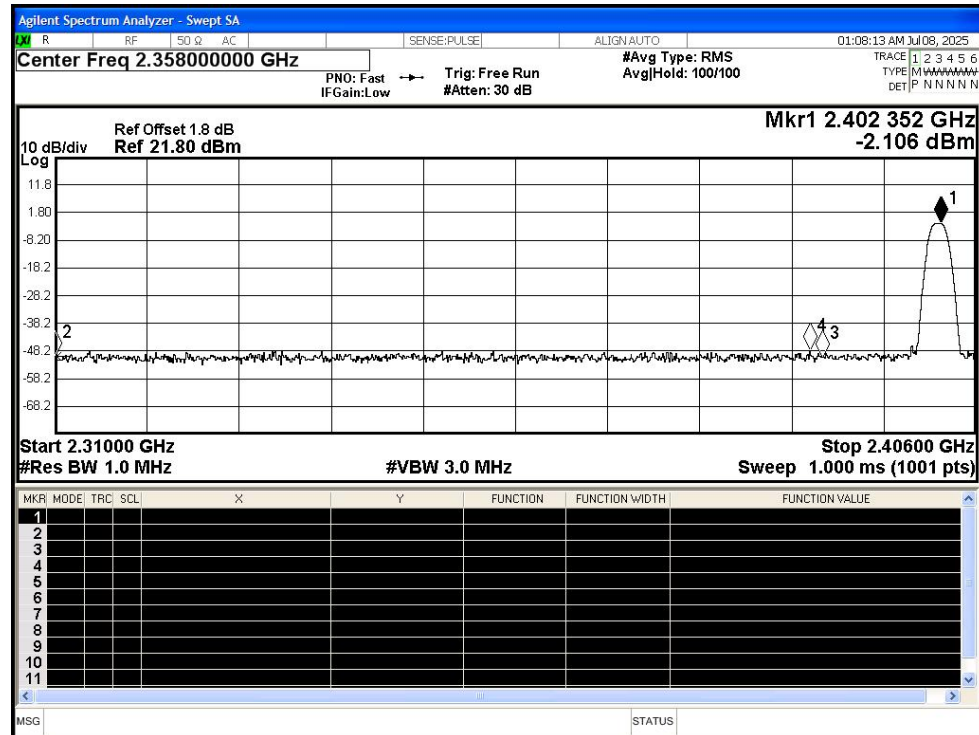


## A.7 Restrict Band

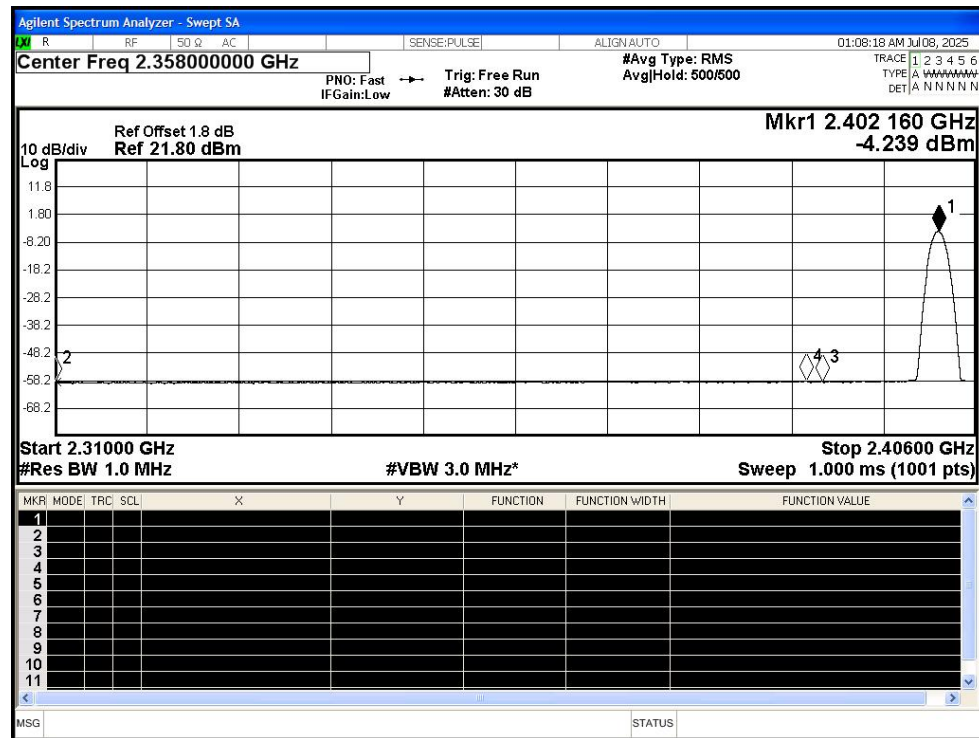
| Condition | Mode   | Frequency (MHz) | Antenna | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | Duty Factor (dB) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|------------|------------------|------------|----------|----------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | 2310            | -50.25      | 2.95       | -                | 47.96      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2310            | -58.92      | 2.95       | 1.43             | 40.72      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2388.72         | -47.9       | 2.95       | -                | 50.31      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2388.336        | -58.32      | 2.95       | 1.43             | 41.32      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2390            | -50.53      | 2.95       | -                | 47.68      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2390            | -58.48      | 2.95       | 1.43             | 41.16      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.5          | -49.98      | 2.95       | -                | 48.23      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.5          | -57.95      | 2.95       | 1.42             | 41.68      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.8          | -43.81      | 2.95       | -                | 54.40      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2486.32         | -57.75      | 2.95       | 1.42             | 41.88      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2500            | -50.86      | 2.95       | -                | 47.35      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2500            | -58.14      | 2.95       | 1.42             | 41.49      | Average  | 54             | Pass    |

## Test Graphs

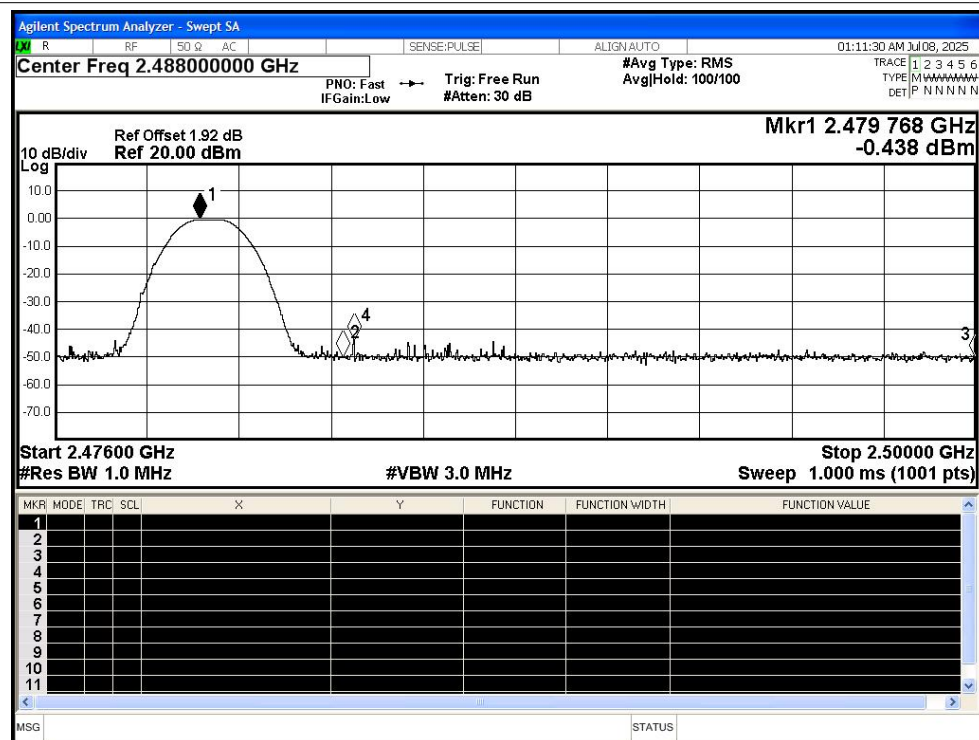
## Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



## Restrict Band NVNT BLE 1M 2402MHz Ant1 Average



## Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



## Restrict Band NVNT BLE 1M 2480MHz Ant1 Average

