



## Appendix B

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

Product Name: Focus Plus and Focus Color

Test Model: R0782

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 23.8°C    |
| Relative Humidity: | 52.1%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jay Luo   |
| Supervised by:     | Nick Peng |





## B.2 -6dB Bandwidth

| Condition | Mode   | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|--------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | 0.671                 | $\geq 0.5$                  | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | 0.659                 | $\geq 0.5$                  | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 0.66                  | $\geq 0.5$                  | Pass    |



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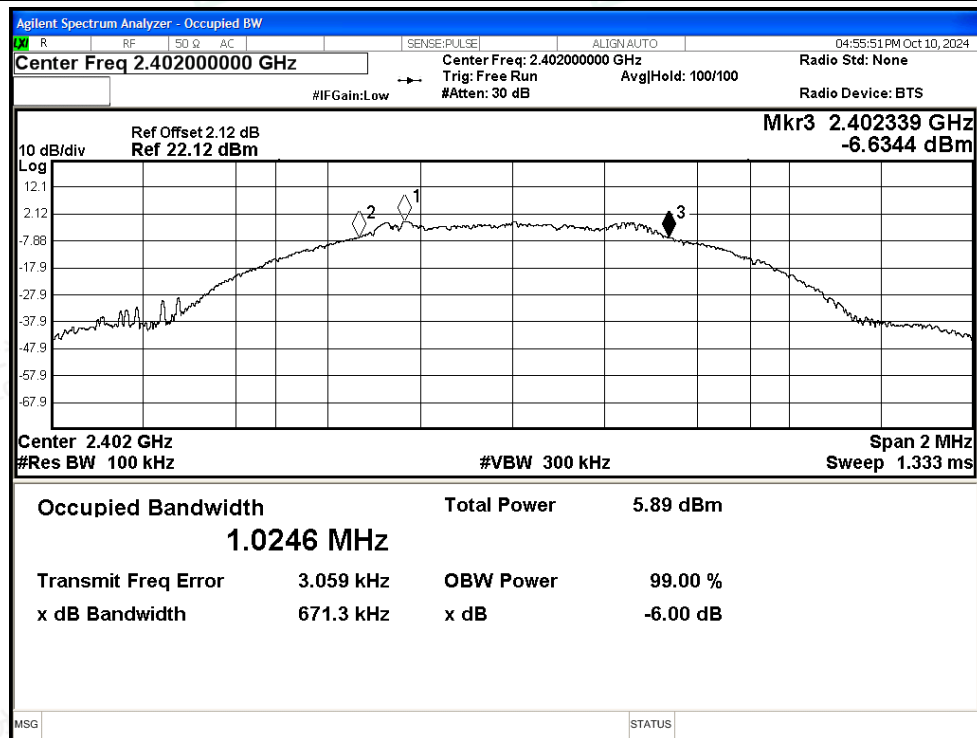
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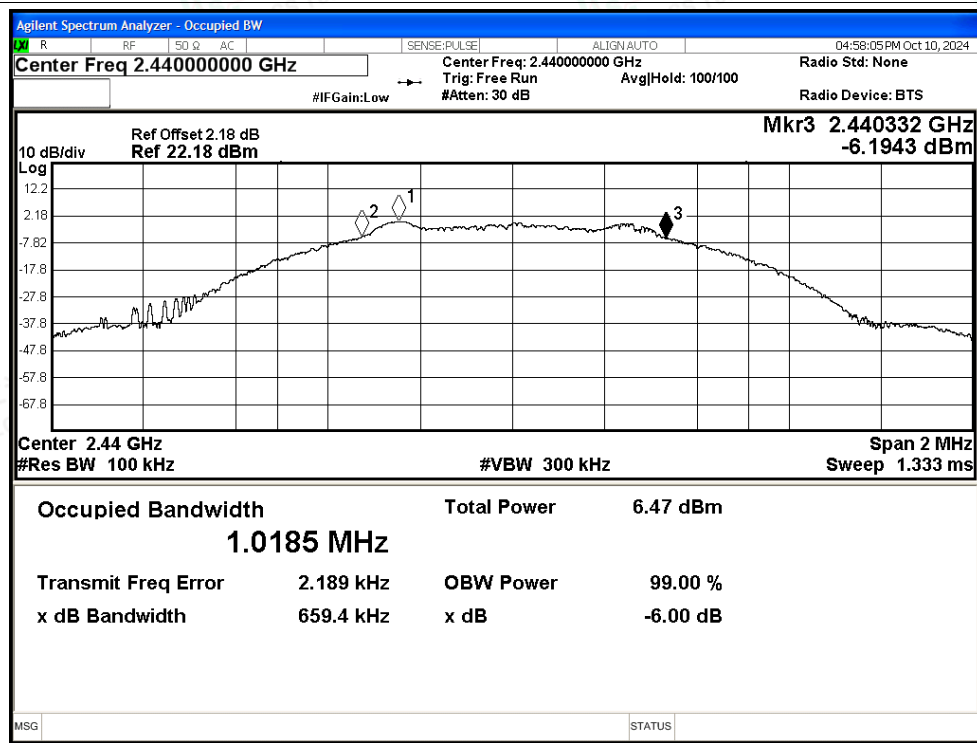


## Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

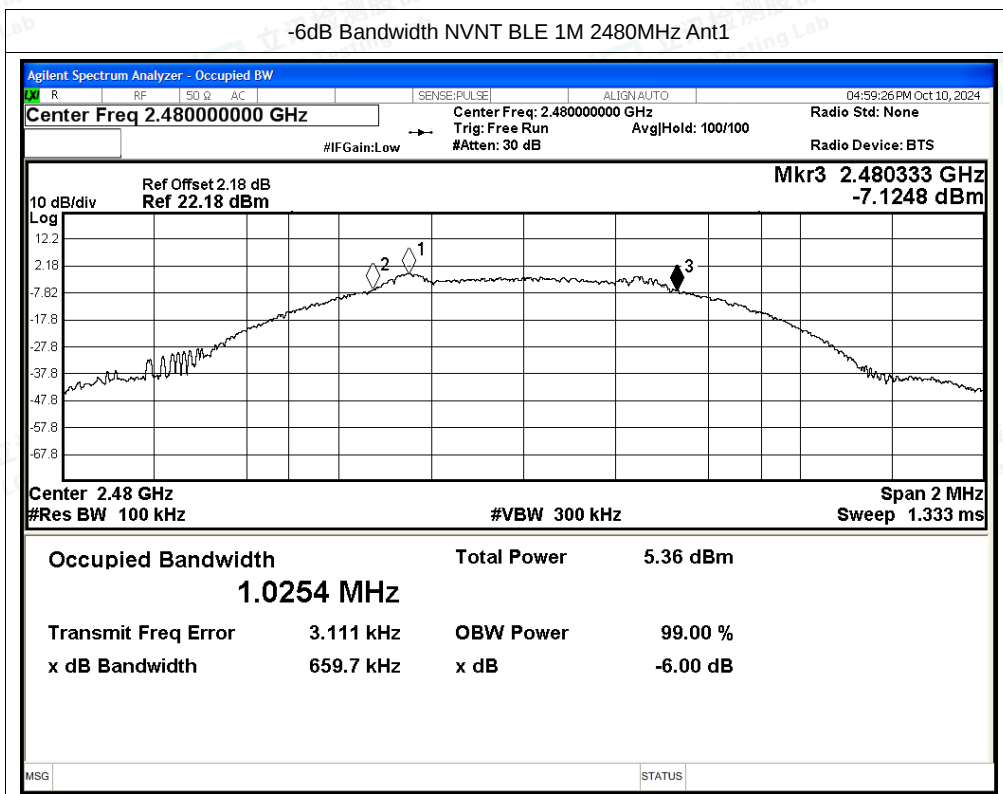


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## B.2 Maximum Conducted Output Power

| Condition | Mode   | Frequency<br>(MHz) | Antenna | Total Power<br>(dBm) | Limit (dBm) | Verdict |
|-----------|--------|--------------------|---------|----------------------|-------------|---------|
| NVNT      | BLE 1M | 2402               | Ant1    | 0.07                 | 30          | Pass    |
| NVNT      | BLE 1M | 2440               | Ant1    | 0.53                 | 30          | Pass    |
| NVNT      | BLE 1M | 2480               | Ant1    | -0.49                | 30          | Pass    |



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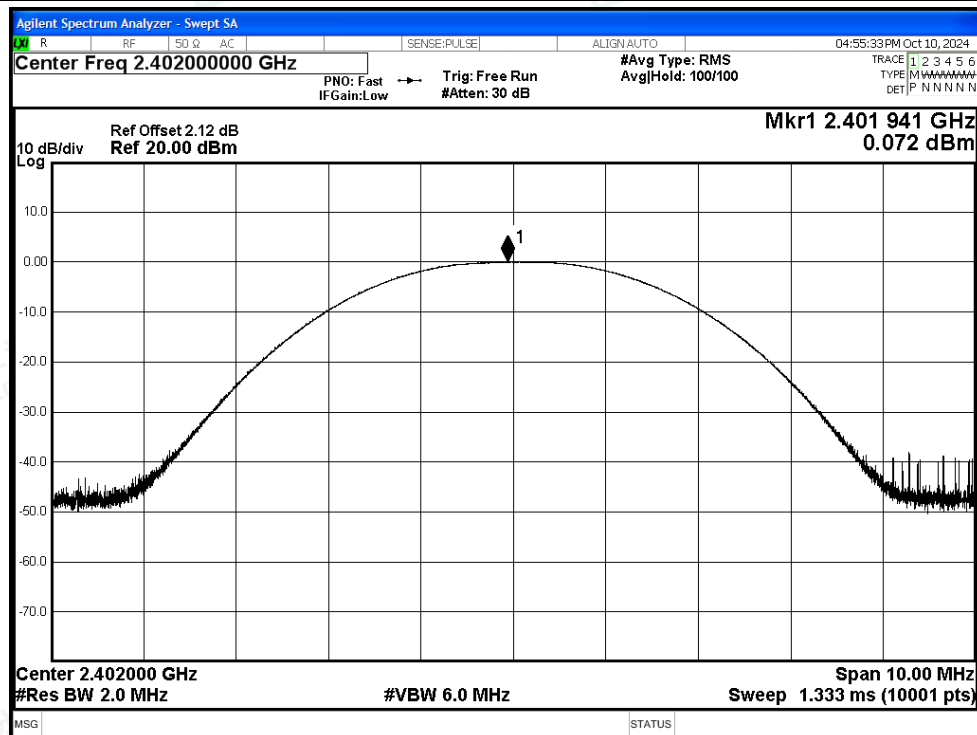
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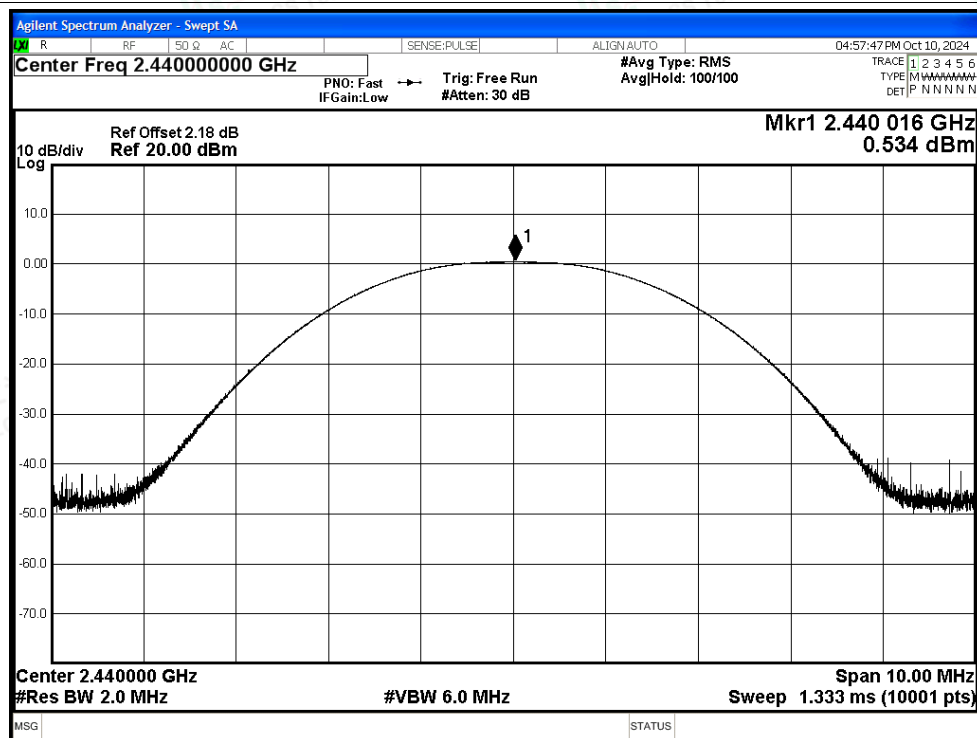


## Test Graphs

## Power NVNT BLE 1M 2402MHz Ant1



## Power NVNT BLE 1M 2440MHz Ant1



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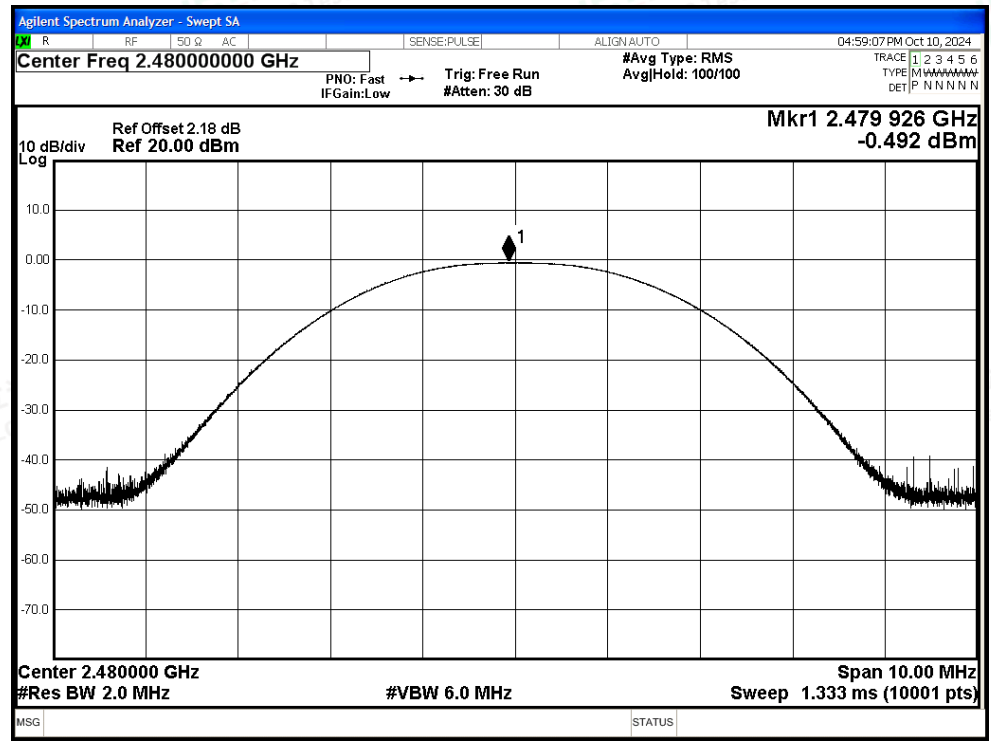
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## Power NVNT BLE 1M 2480MHz Ant1



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### B.3 Maximum Power Spectral Density Level

| Condition | Mode   | Frequency<br>(MHz) | Antenna | Total PSD<br>(dBm/3kHz) | Limit<br>(dBm/3kHz) | Verdict |
|-----------|--------|--------------------|---------|-------------------------|---------------------|---------|
| NVNT      | BLE 1M | 2402               | Ant1    | -16.64                  | 8                   | Pass    |
| NVNT      | BLE 1M | 2440               | Ant1    | -16.45                  | 8                   | Pass    |
| NVNT      | BLE 1M | 2480               | Ant1    | -17.42                  | 8                   | Pass    |



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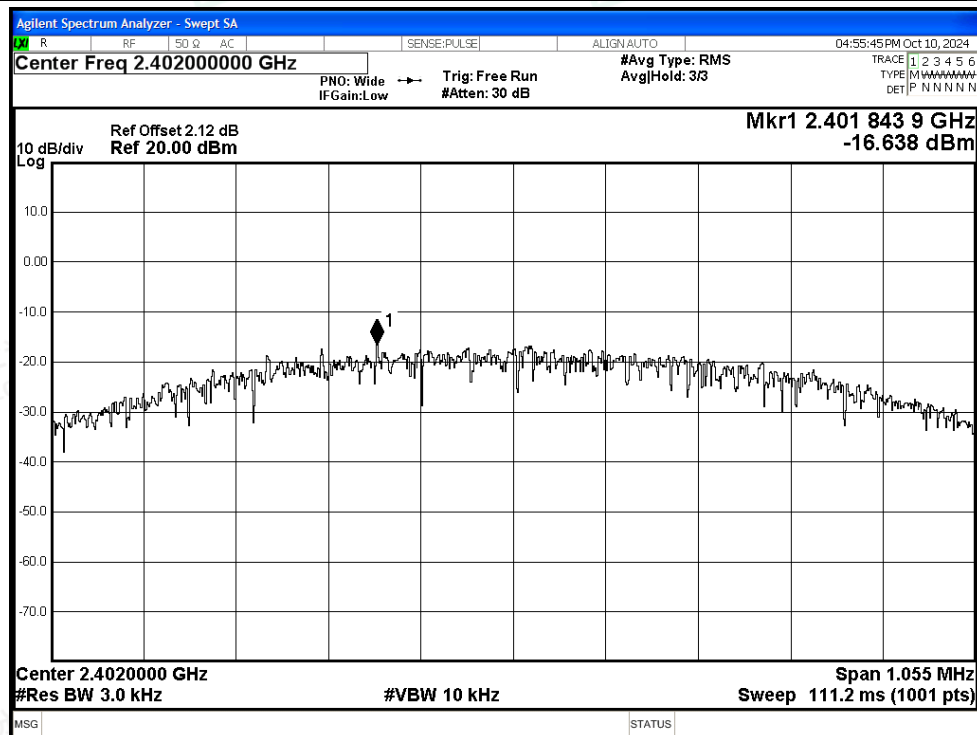
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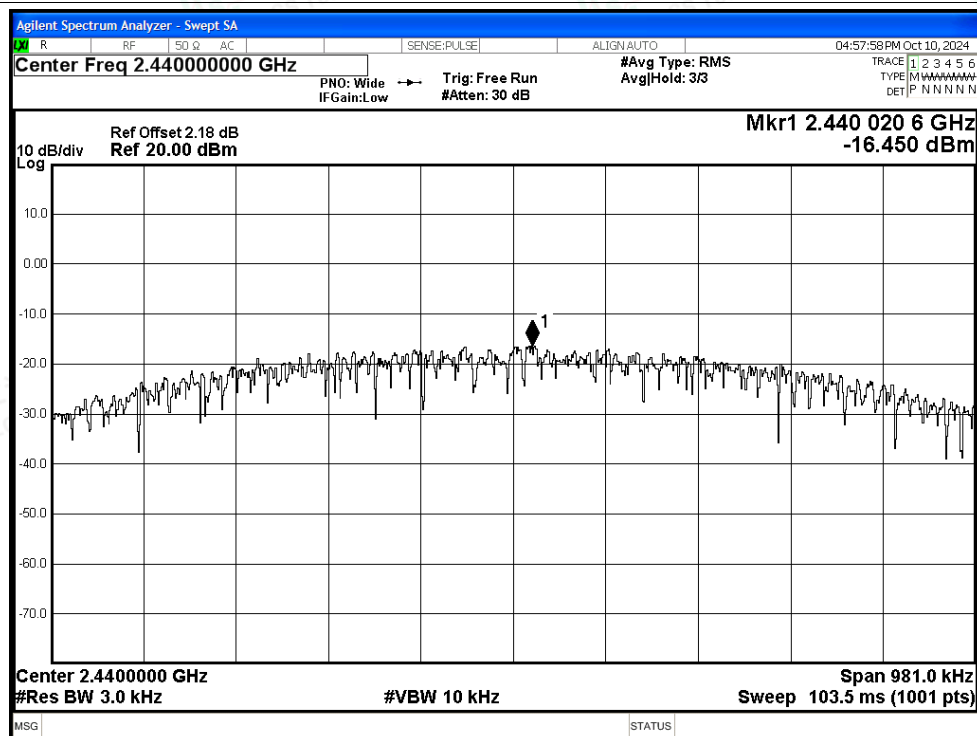


## Test Graphs

## PSD NVNT BLE 1M 2402MHz Ant1



## PSD NVNT BLE 1M 2440MHz Ant1



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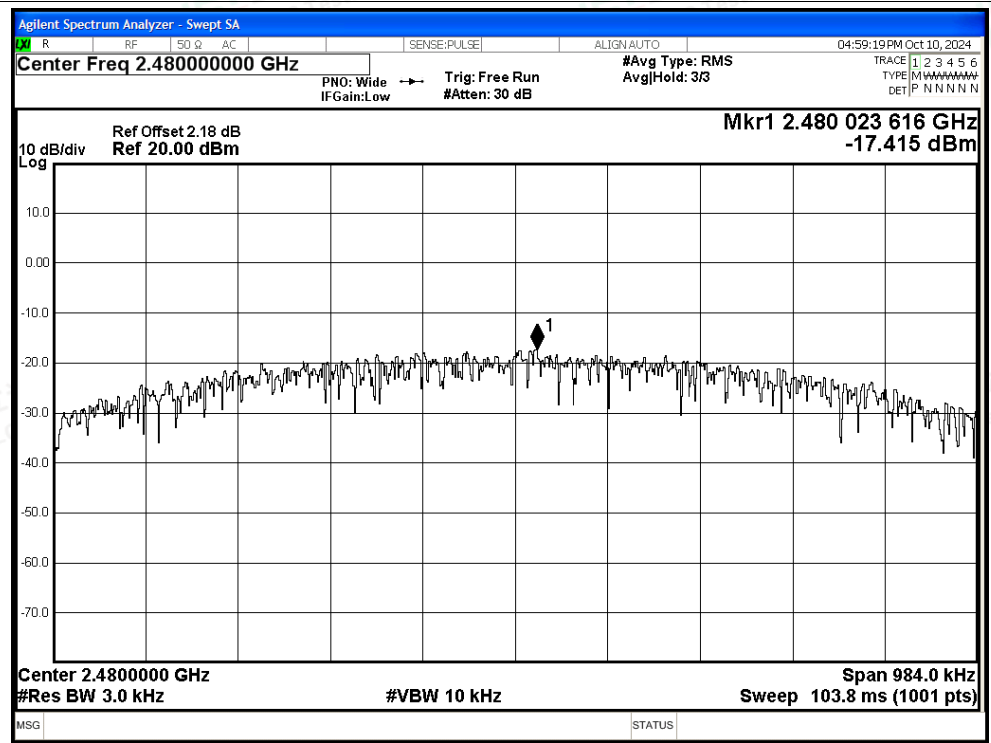
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## PSD NVNT BLE 1M 2480MHz Ant1



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## B.4 Band Edge

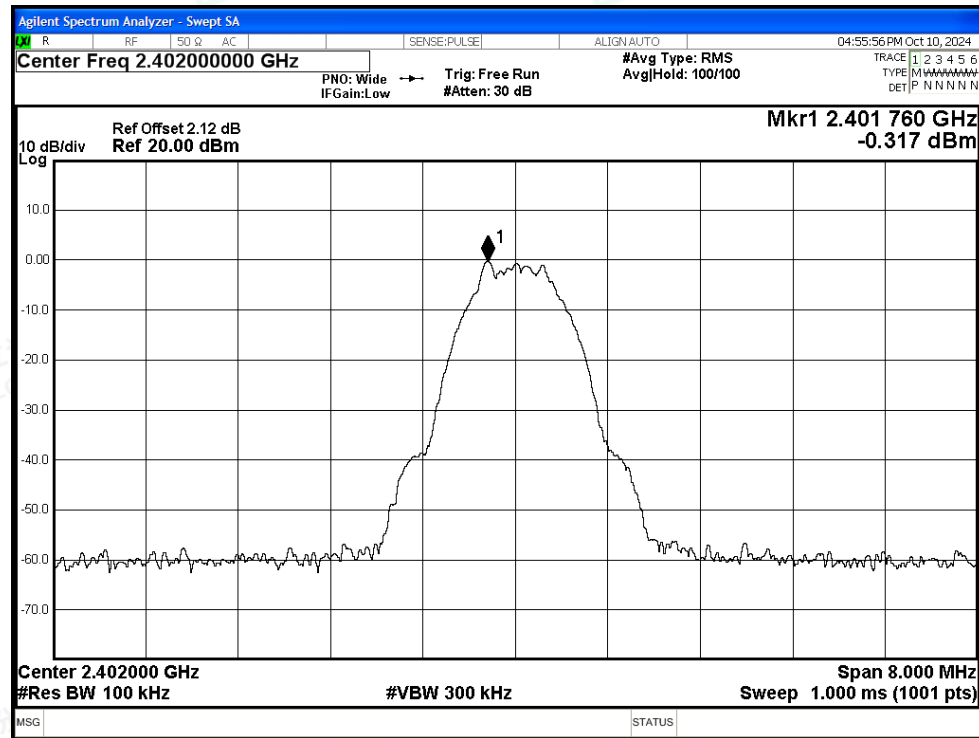
| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -56.41          | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -56.15          | -20         | Pass    |



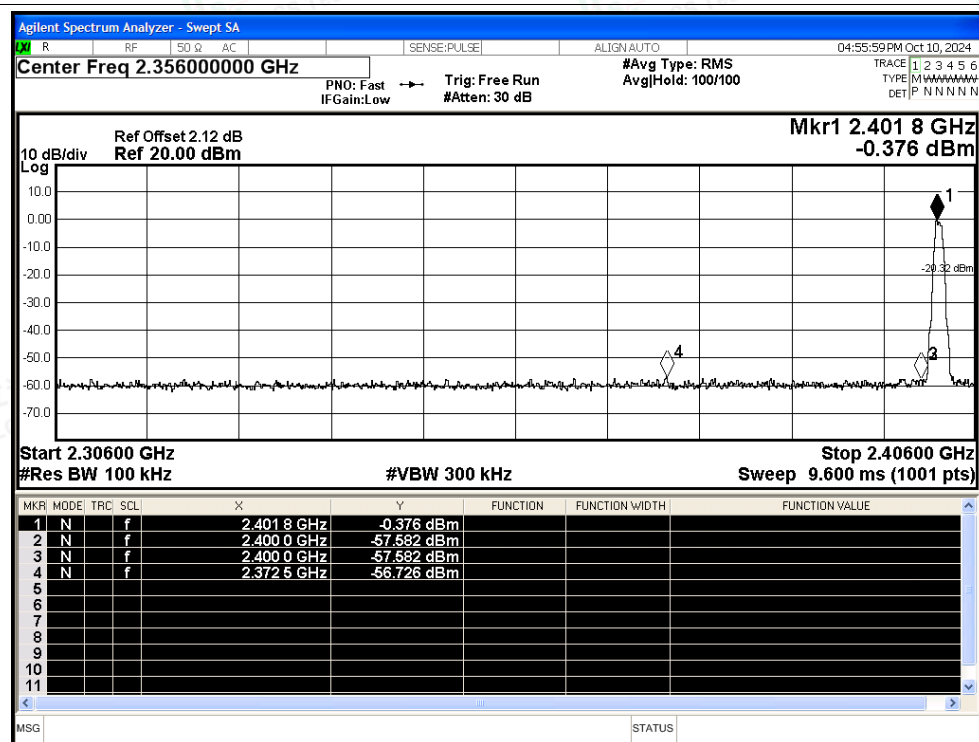


## Test Graphs

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



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



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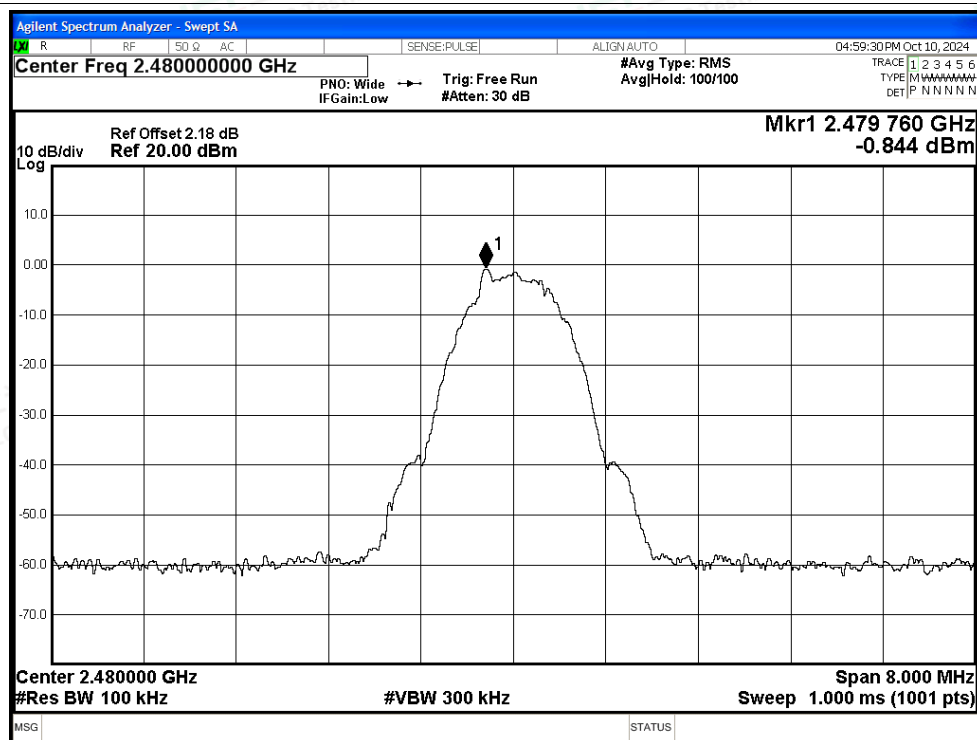
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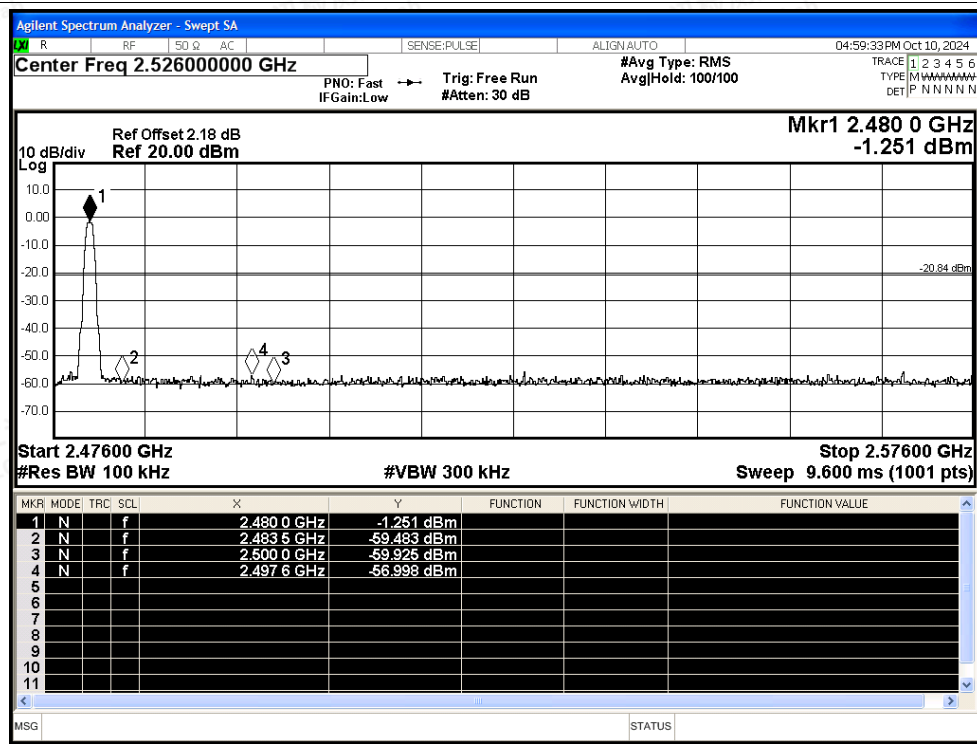
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## Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



## Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



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## B.5 Conducted RF Spurious Emission

| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant1    | -54.88          | -20         | Pass    |
| NVNT      | BLE 1M | 2440            | Ant1    | -54.37          | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | -54.76          | -20         | Pass    |



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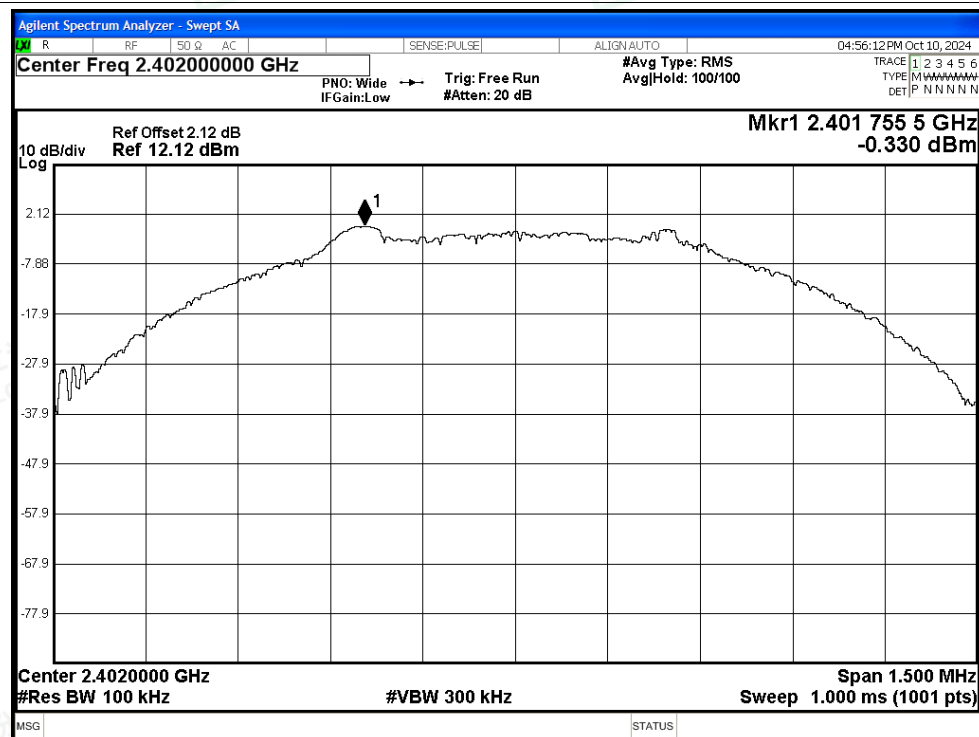
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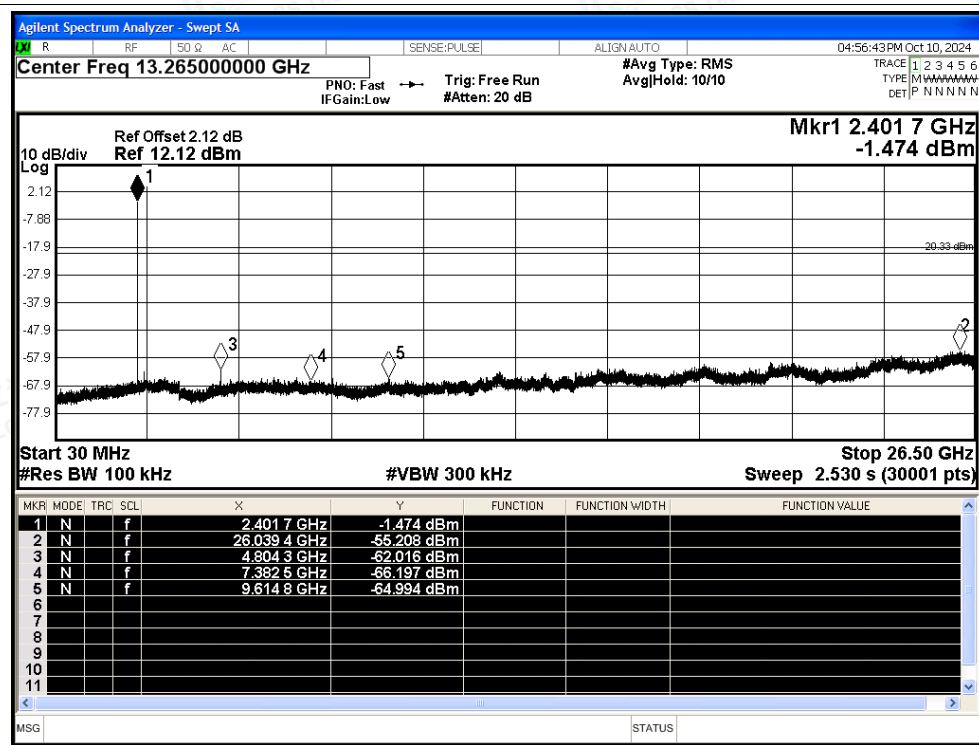


## Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



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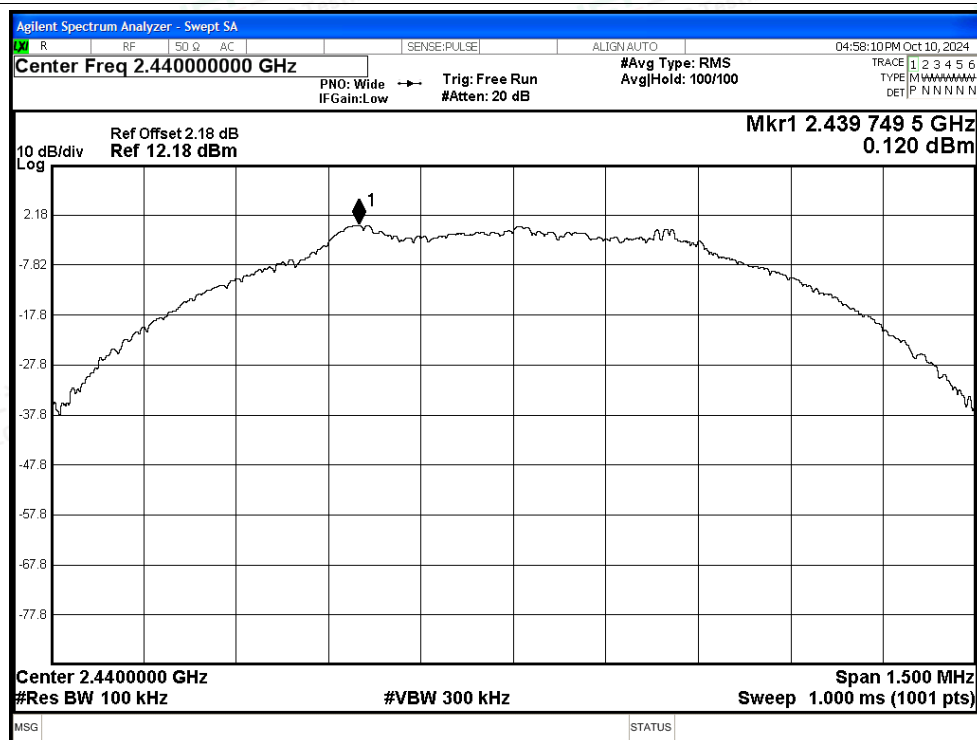
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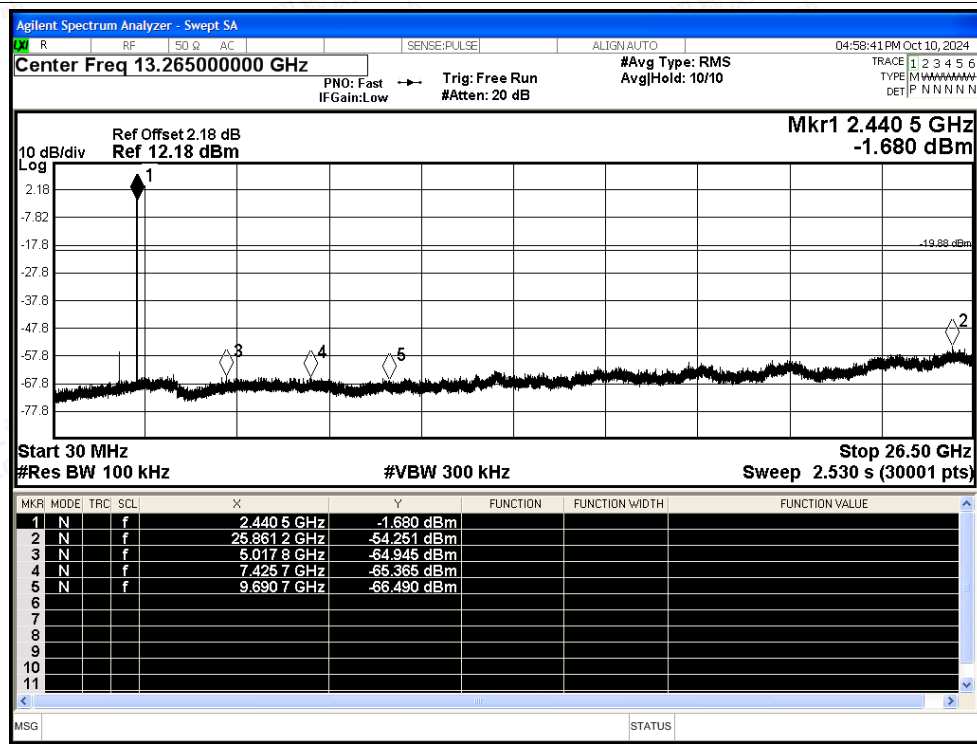
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## Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



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



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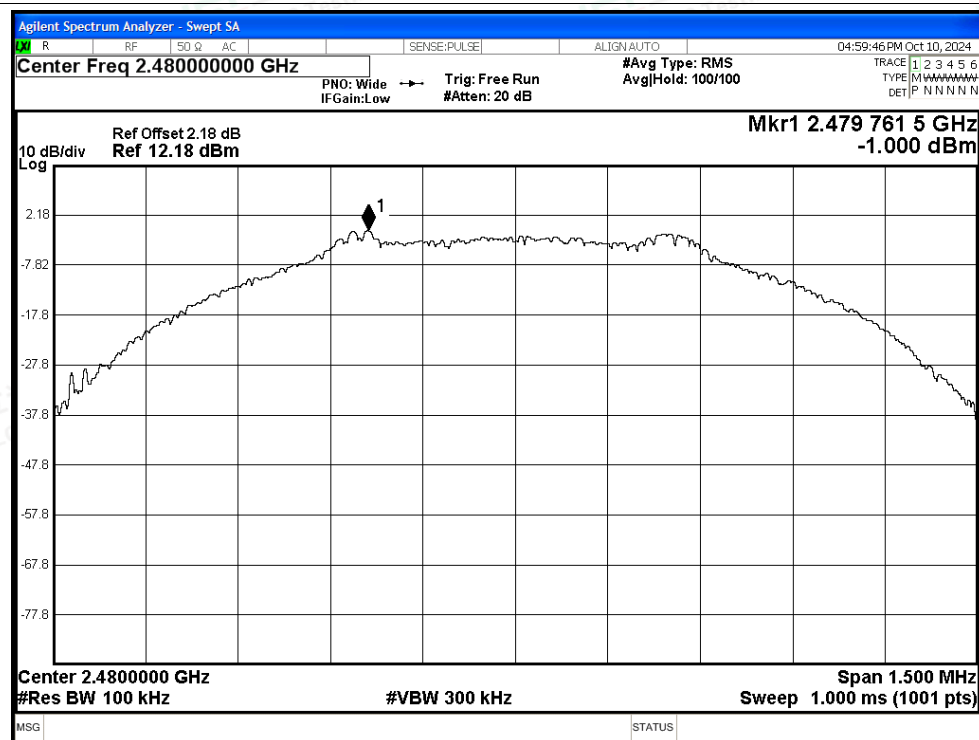
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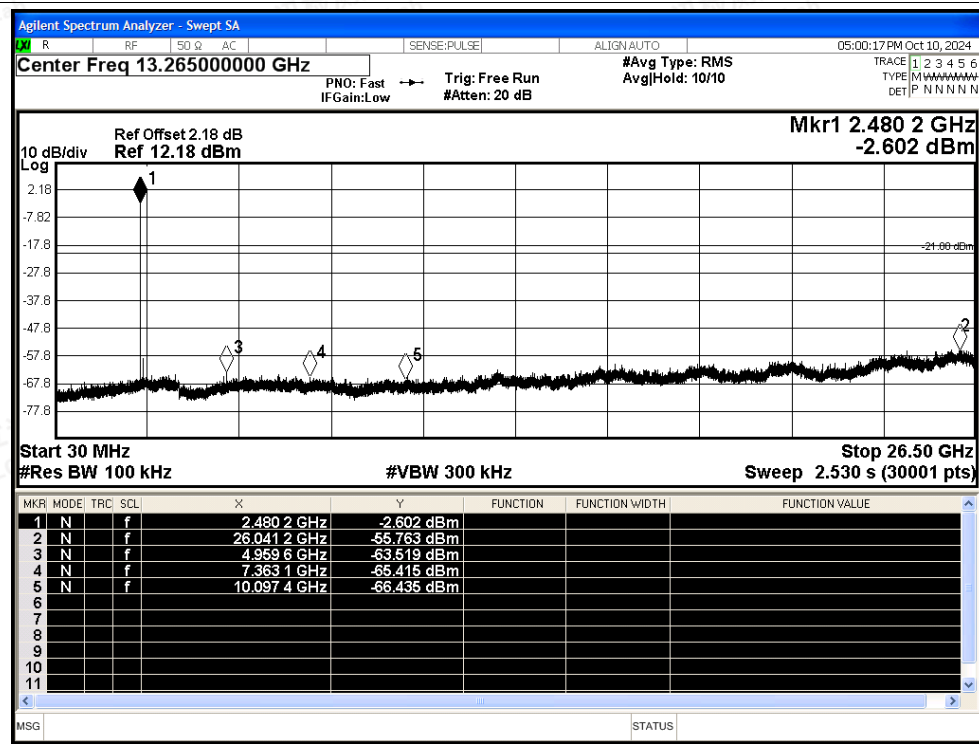
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## Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



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



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## B.6 Duty Cycle

| Condition | Mode   | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|--------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | BLE 1M | 2402            | Ant1    | 87.39          | 0.59                   | 0.61      |
| NVNT      | BLE 1M | 2440            | Ant1    | 87.39          | 0.59                   | 0.61      |
| NVNT      | BLE 1M | 2480            | Ant1    | 87.41          | 0.58                   | 0.61      |



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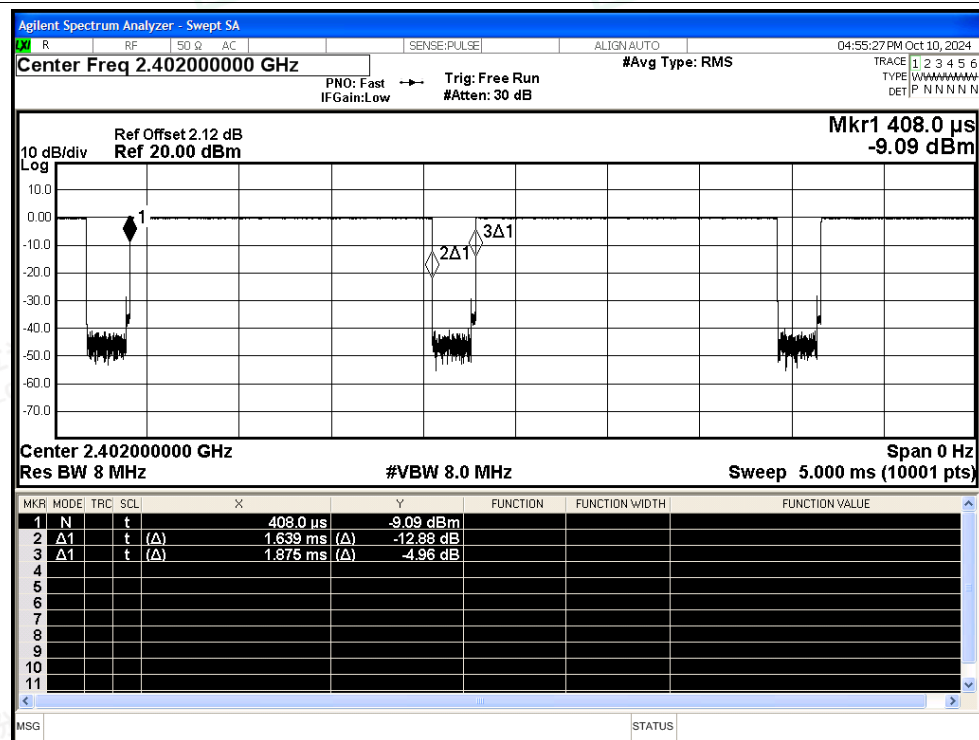
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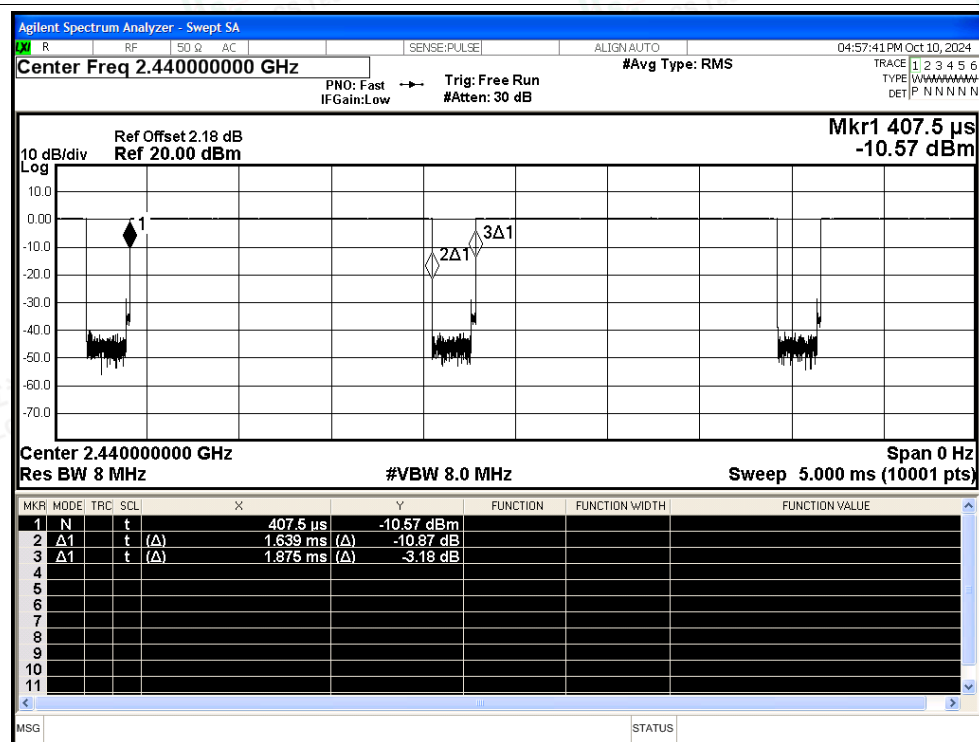


## Test Graphs

## Duty Cycle NVNT BLE 1M 2402MHz Ant1



## Duty Cycle NVNT BLE 1M 2440MHz Ant1



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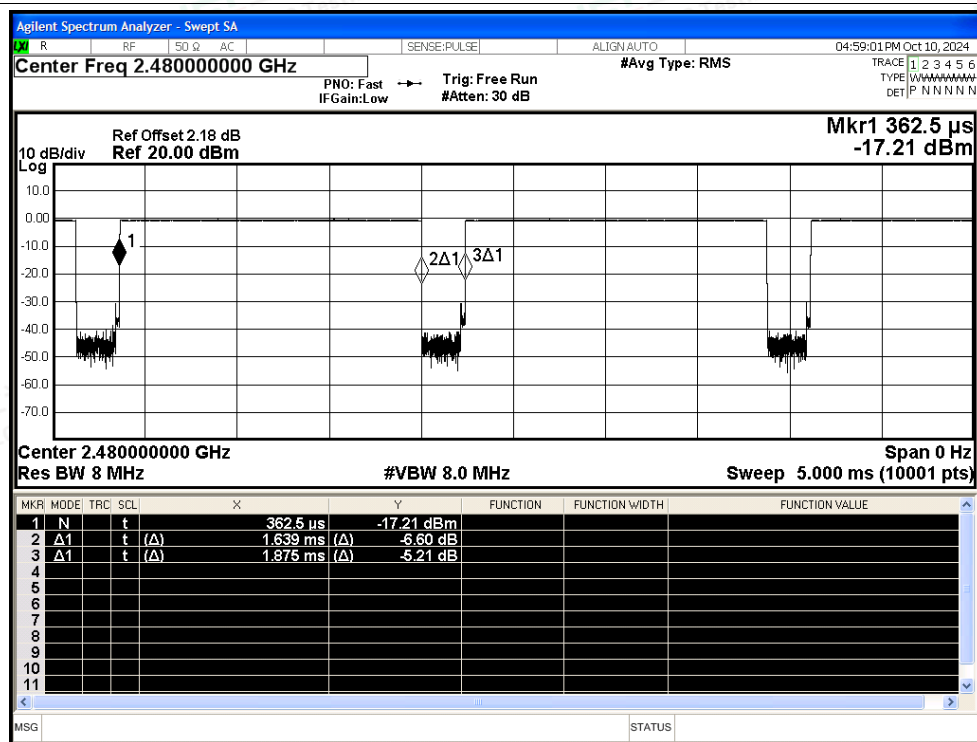
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## Duty Cycle NVNT BLE 1M 2480MHz Ant1



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## B.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            | -50.63      | 2          | -                | 46.63      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2310            | -58.37      | 2          | 0.59             | 39.48      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2337.072        | -47.1       | 2          | -                | 50.16      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2382.576        | -57.44      | 2          | 0.59             | 40.41      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2390            | -50.14      | 2          | -                | 47.12      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant1    | 2390            | -58.62      | 2          | 0.59             | 39.23      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.5          | -49.61      | 2          | -                | 47.65      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.5          | -57.8       | 2          | 0.58             | 40.04      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2483.608        | -45.89      | 2          | -                | 51.37      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2484.376        | -56.96      | 2          | 0.58             | 40.88      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2500            | -50.9       | 2          | -                | 46.36      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant1    | 2500            | -57.98      | 2          | 0.58             | 39.86      | Average  | 54             | Pass    |



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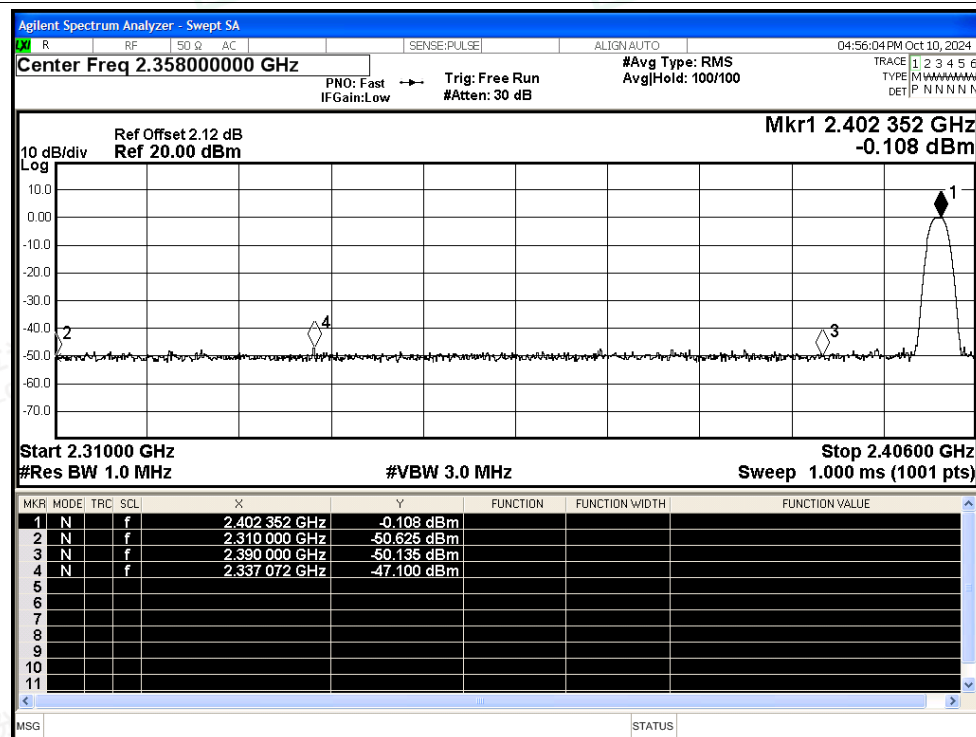
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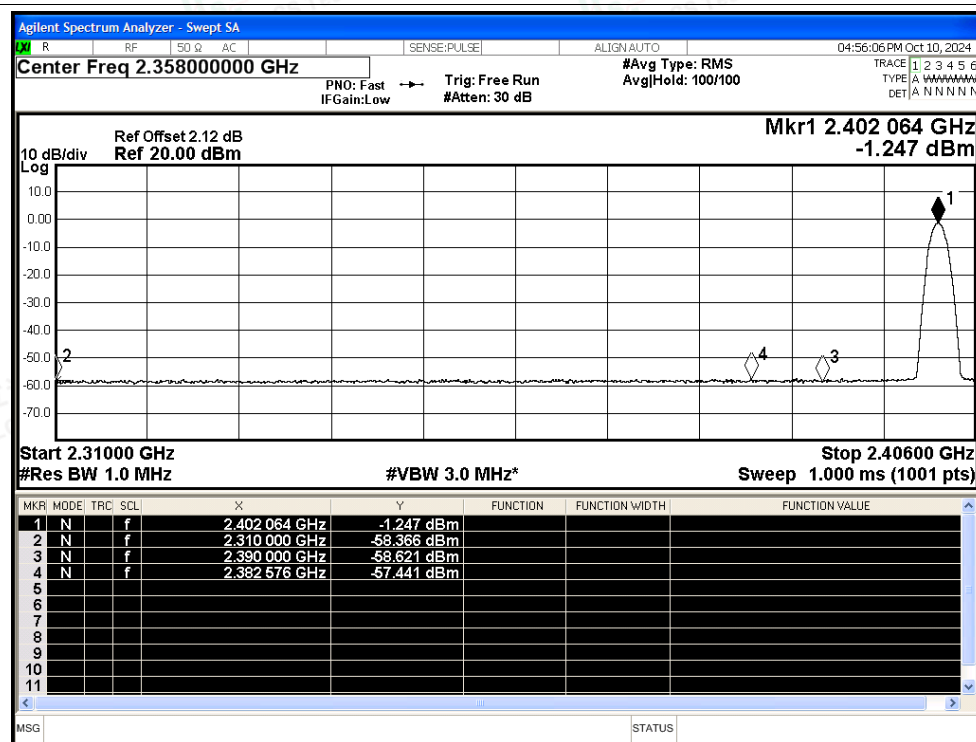


## Test Graphs

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



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



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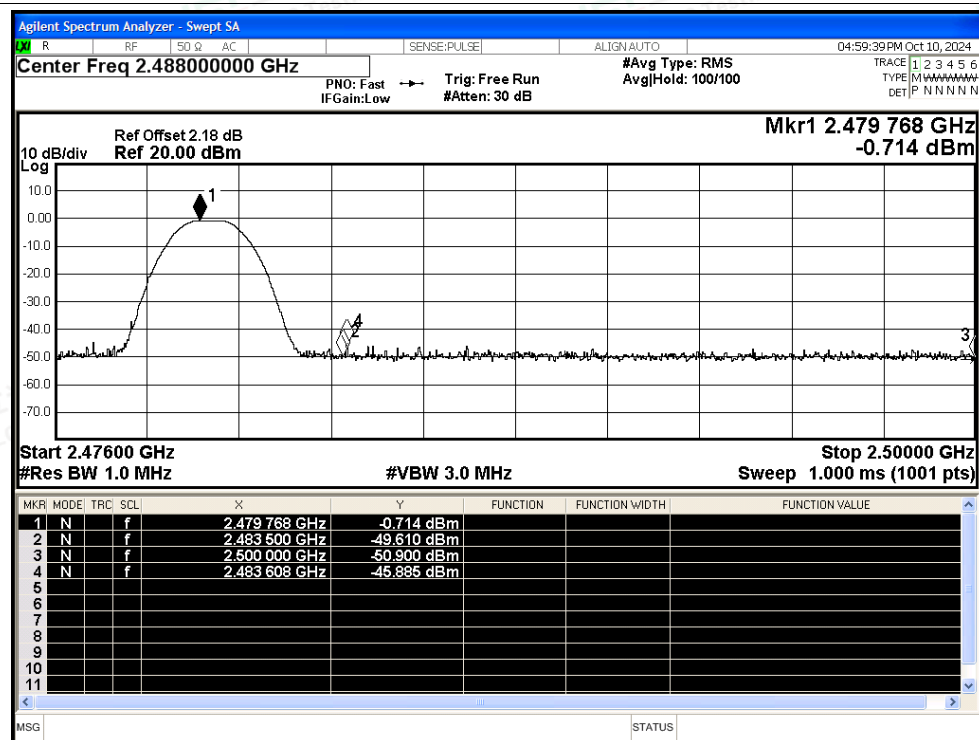
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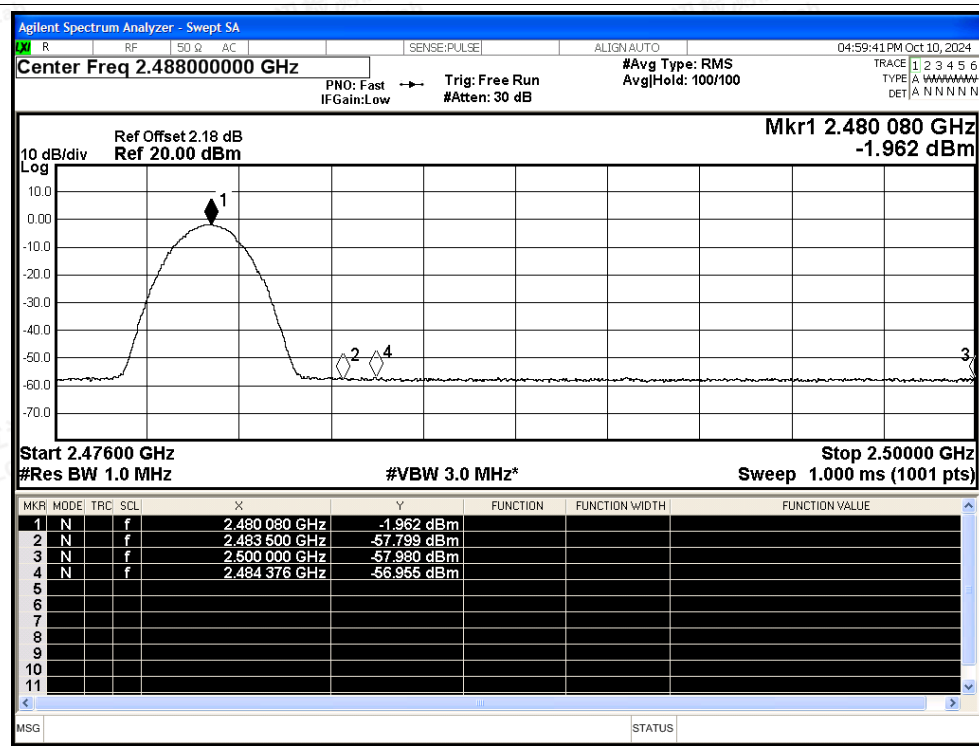
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## Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



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



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