



## Appendix B

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

Product Name: projector

Test Model: Sun700

#### Environmental Conditions

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



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## B.1 -6dB Bandwidth

| Condition | Mode   | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|--------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | BLE 1M | 2402            | Ant3    | 0.653                 | 0.5                         | Pass    |
| NVNT      | BLE 1M | 2440            | Ant3    | 0.647                 | 0.5                         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant3    | 0.66                  | 0.5                         | Pass    |

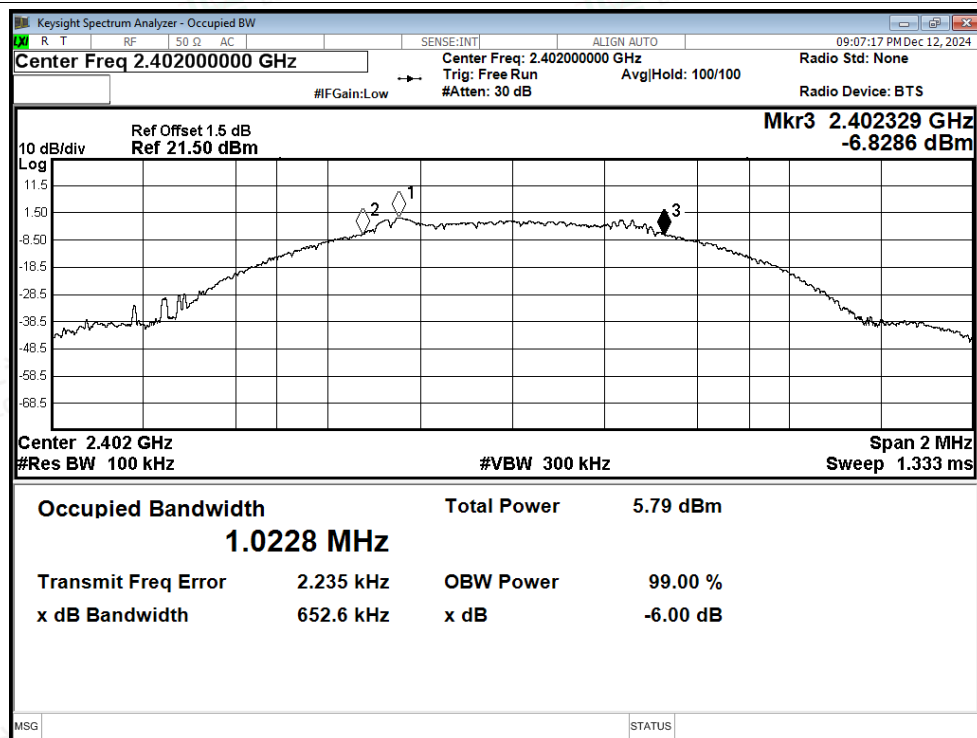


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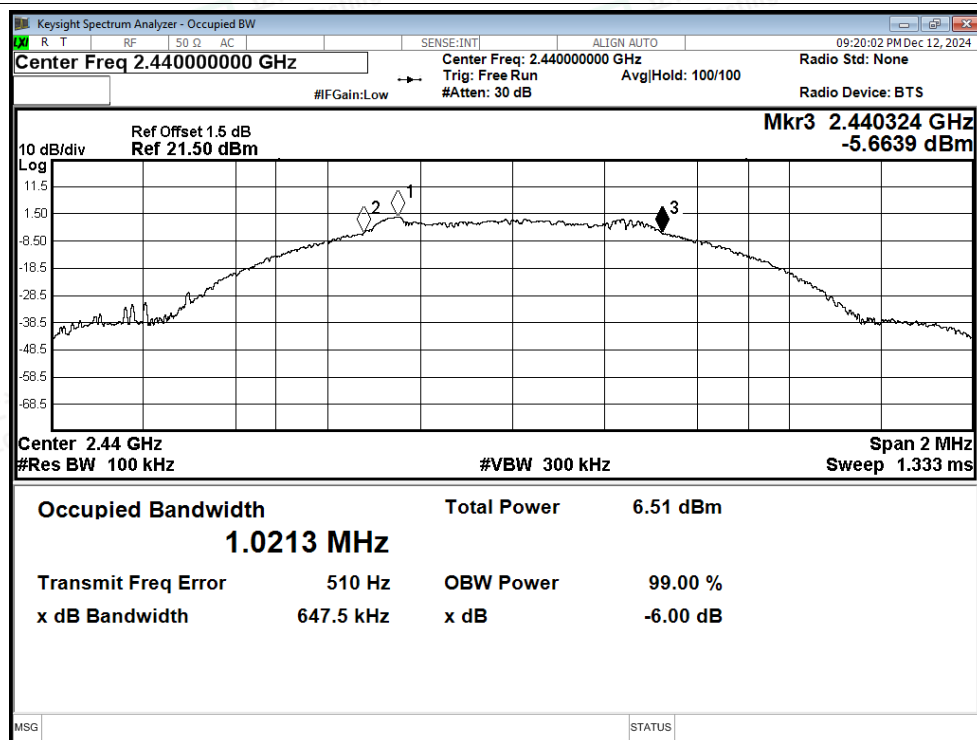


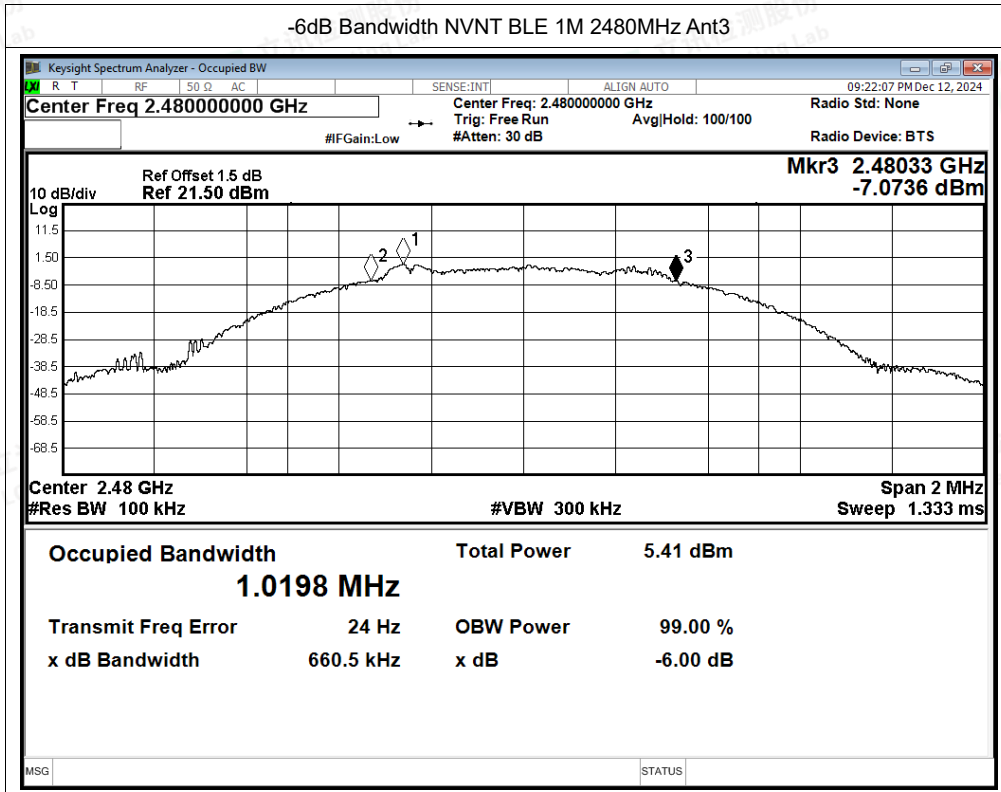
## Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant3



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant3







## B.2 Maximum Peak Conducted Output Power

| Condition | Mode   | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|--------|-----------------|---------|-----------------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant3    | -0.02                 | 30          | Pass    |
| NVNT      | BLE 1M | 2440            | Ant3    | 0.62                  | 30          | Pass    |
| NVNT      | BLE 1M | 2480            | Ant3    | -0.45                 | 30          | Pass    |

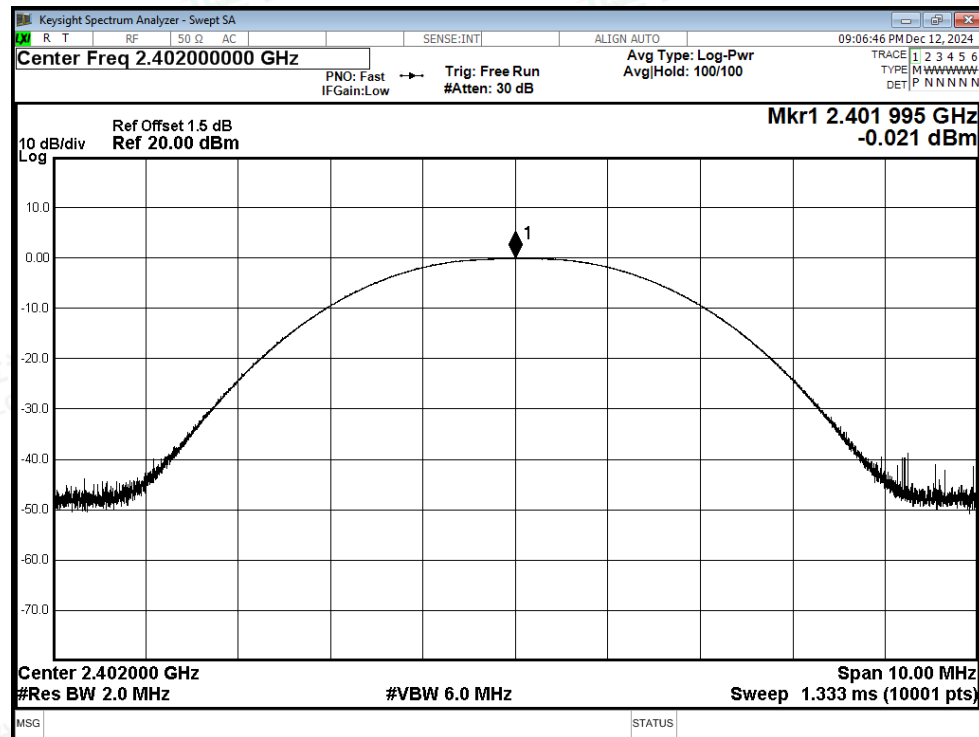


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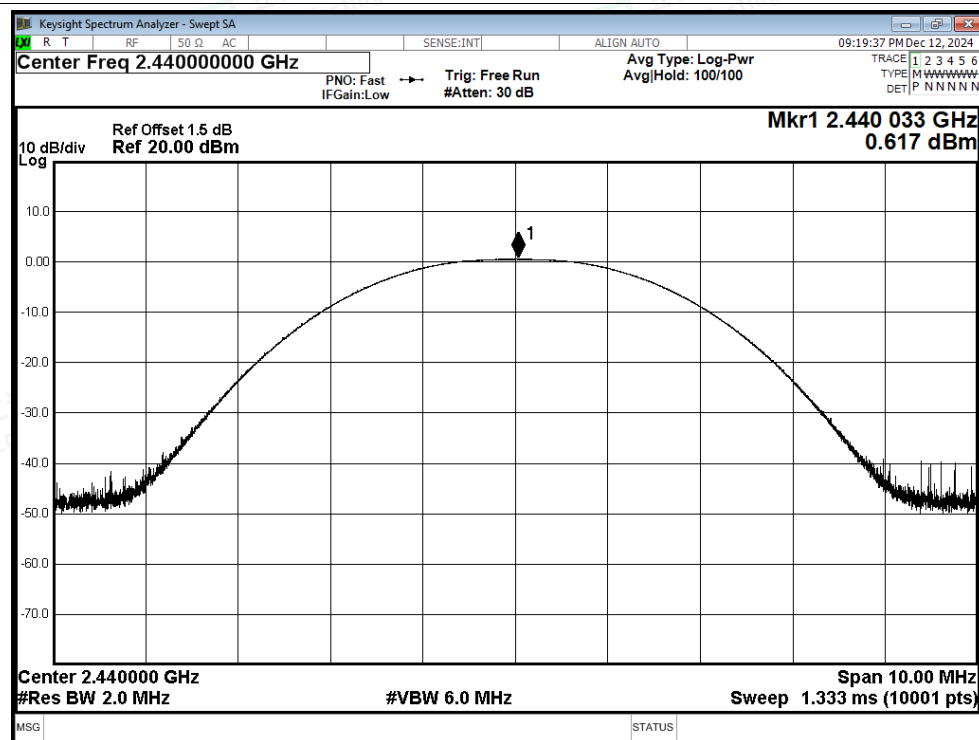


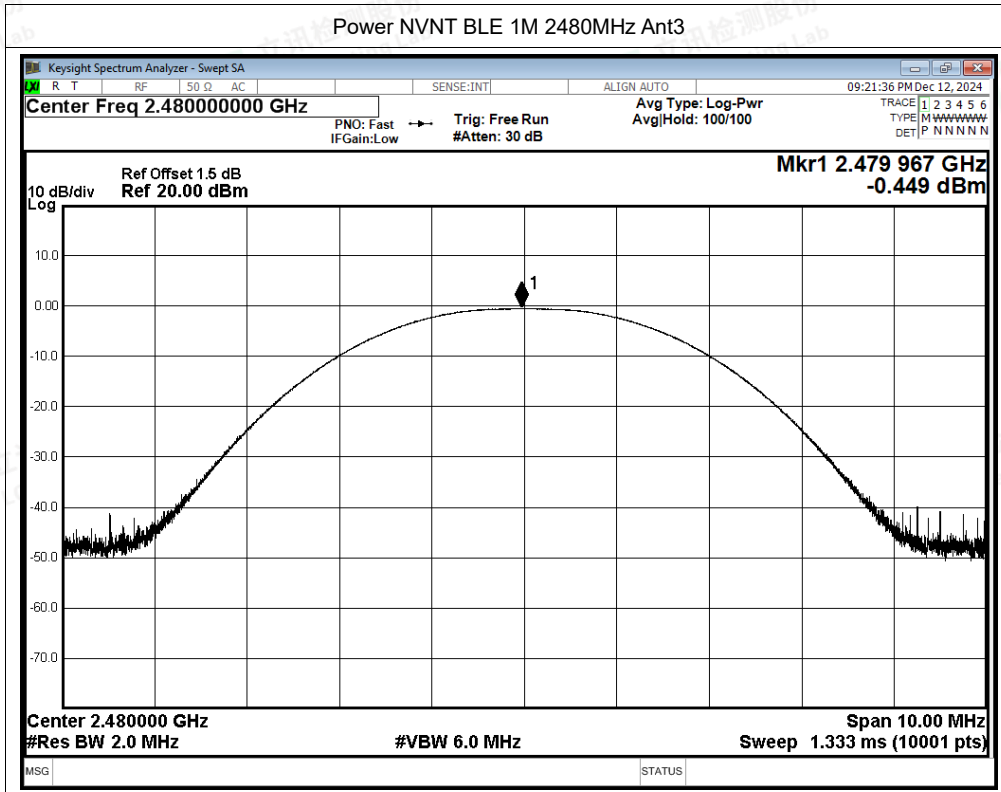
## Test Graphs

Power NVNT BLE 1M 2402MHz Ant3



Power NVNT BLE 1M 2440MHz Ant3







### B.3 Maximum Power Spectral Density Level

| Condition | Mode   | Frequency (MHz) | Antenna | Conducted PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|-----------|--------|-----------------|---------|--------------------------|------------------|---------|
| NVNT      | BLE 1M | 2402            | Ant3    | -16.54                   | 8                | Pass    |
| NVNT      | BLE 1M | 2440            | Ant3    | -15.94                   | 8                | Pass    |
| NVNT      | BLE 1M | 2480            | Ant3    | -17.29                   | 8                | Pass    |

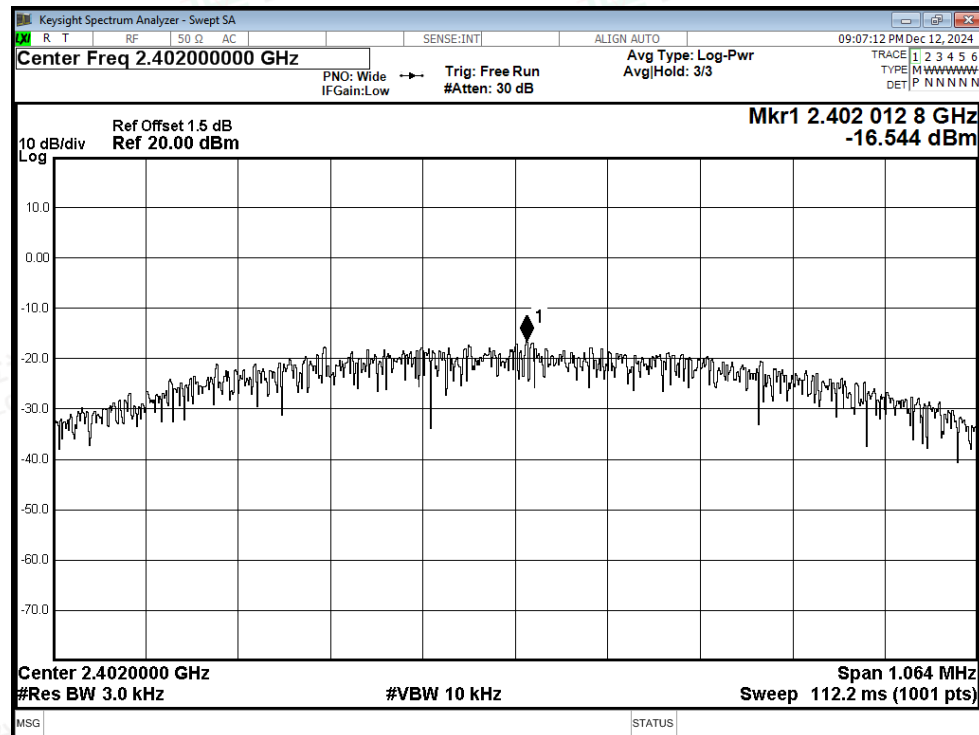


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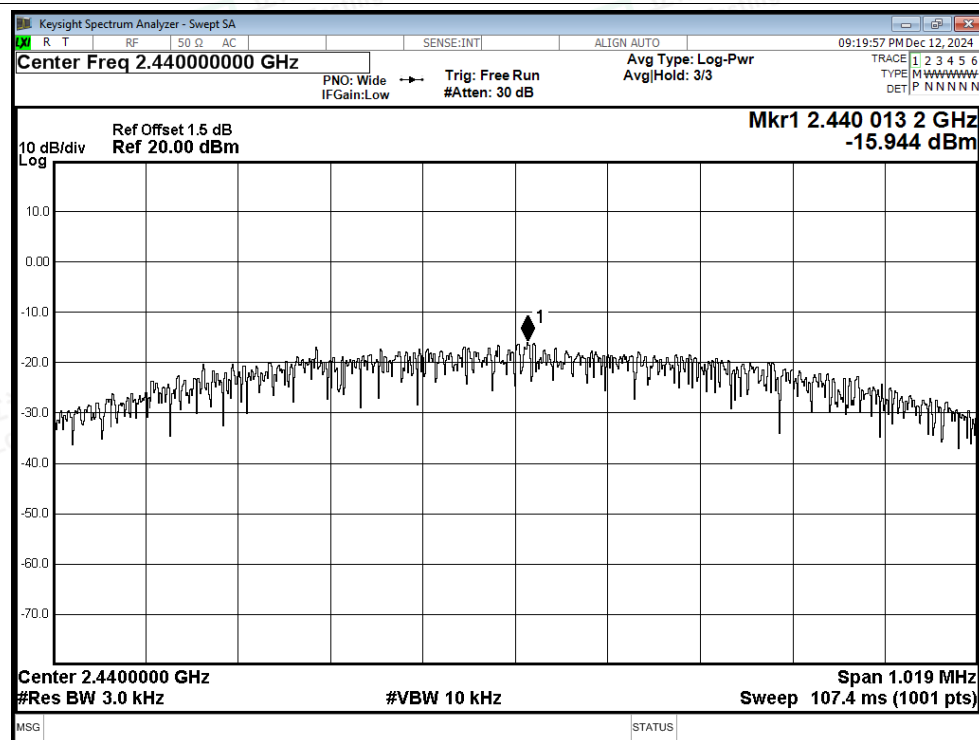


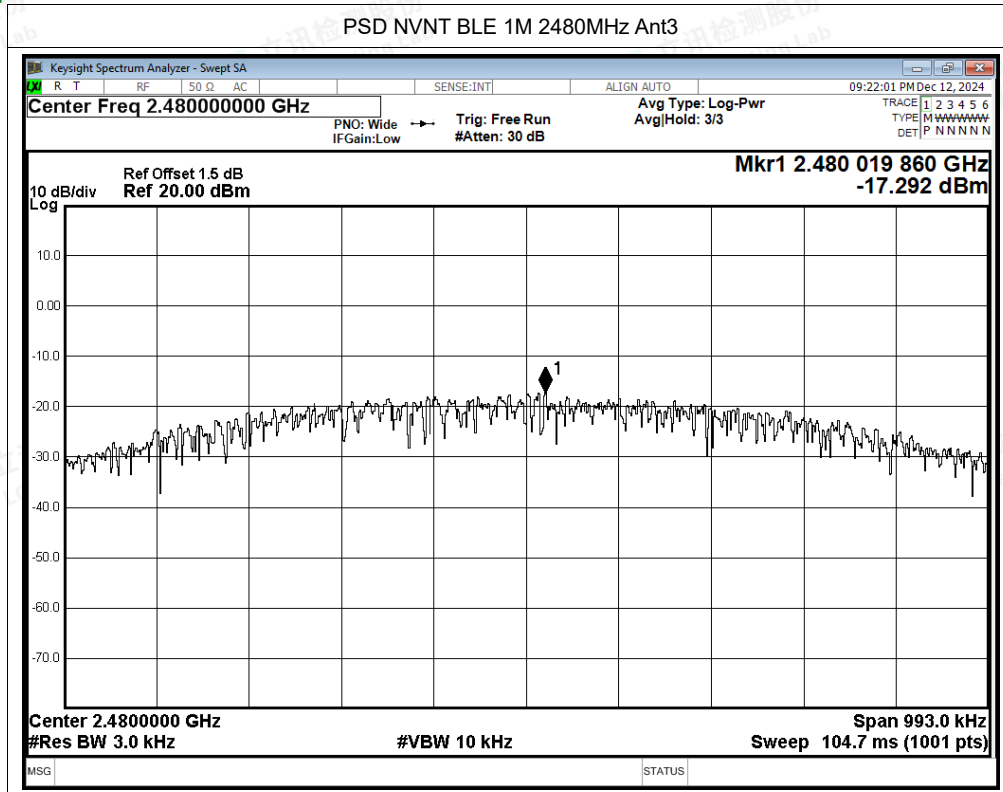
## Test Graphs

PSD NVNT BLE 1M 2402MHz Ant3



PSD NVNT BLE 1M 2440MHz Ant3







## B.4 Band Edge

| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant3    | -55.7           | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant3    | -56.71          | -20         | Pass    |

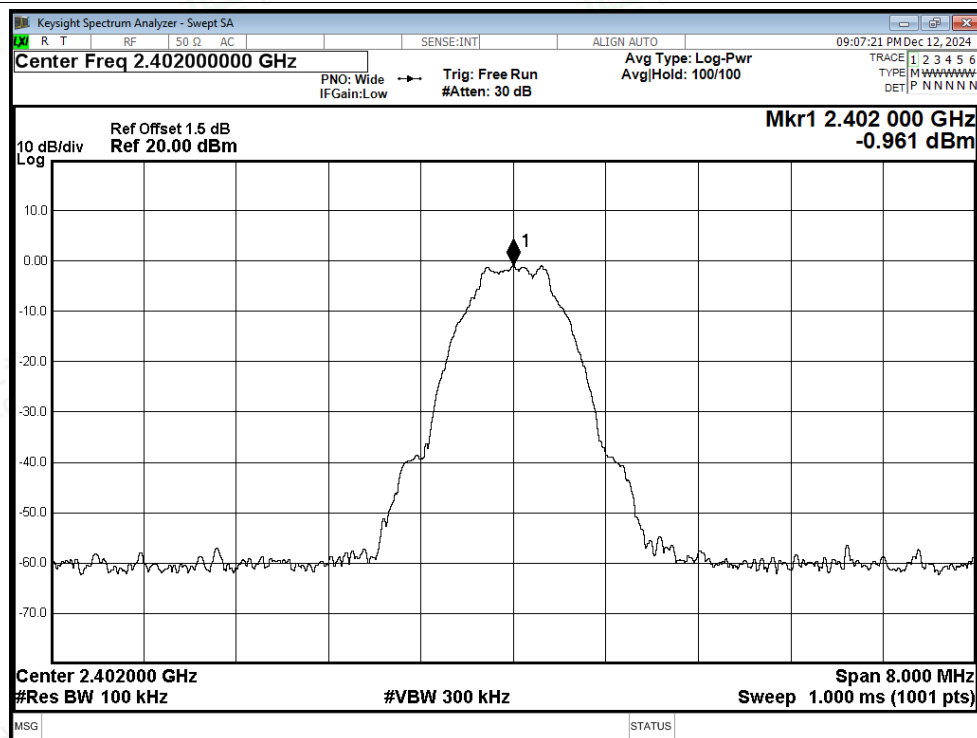


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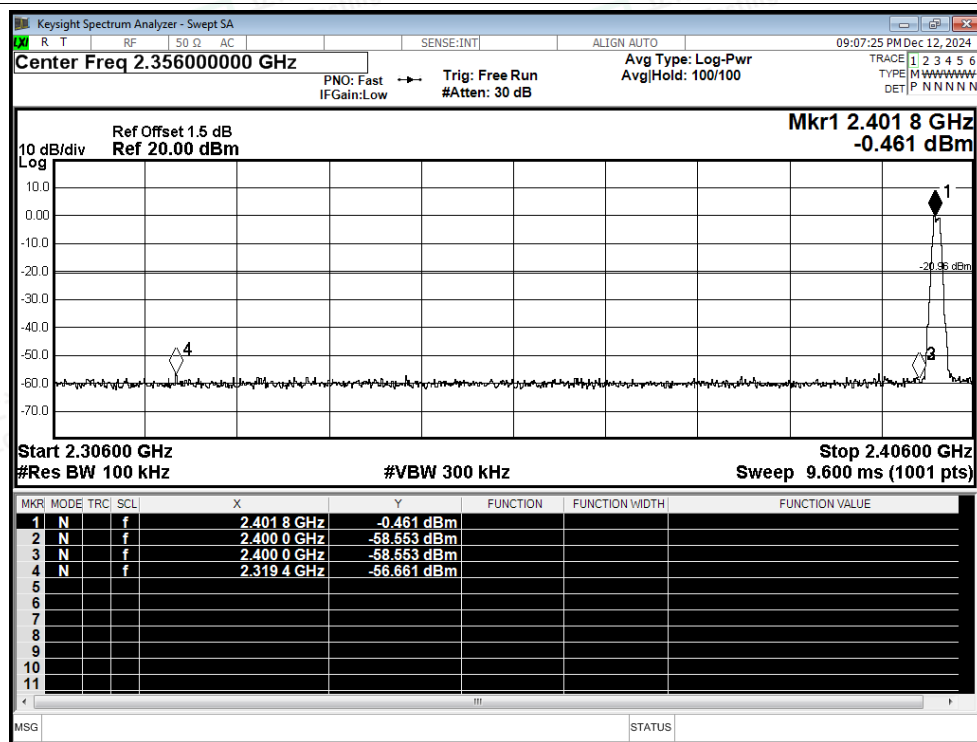


## Test Graphs

## Band Edge NVNT BLE 1M 2402MHz Ant3 Ref



## Band Edge NVNT BLE 1M 2402MHz Ant3 Emission



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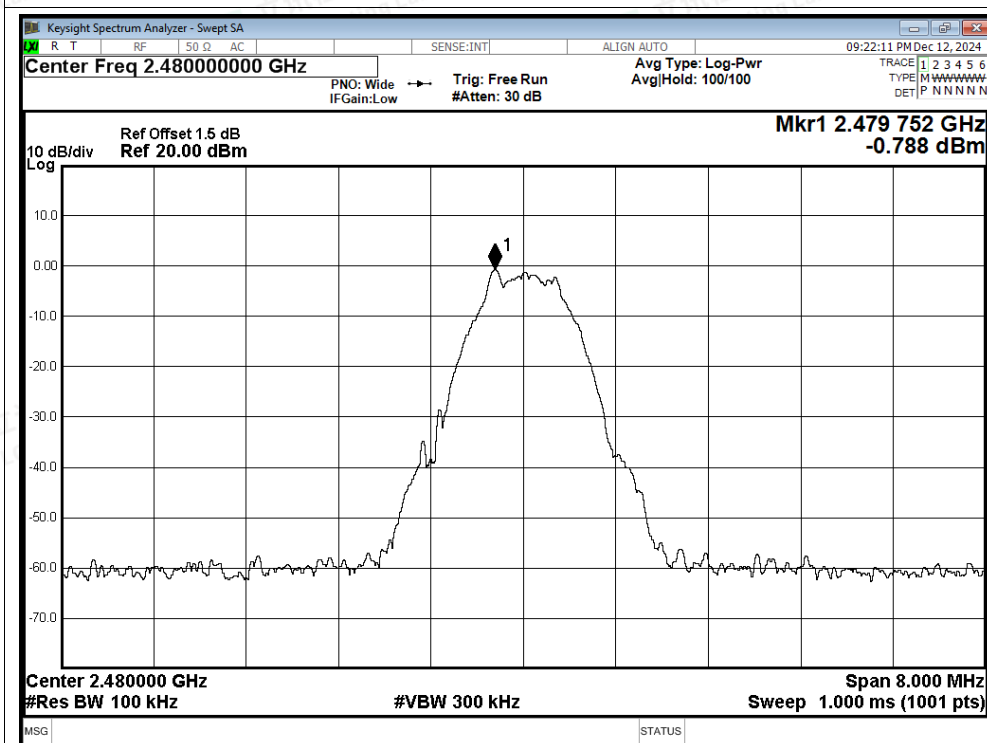
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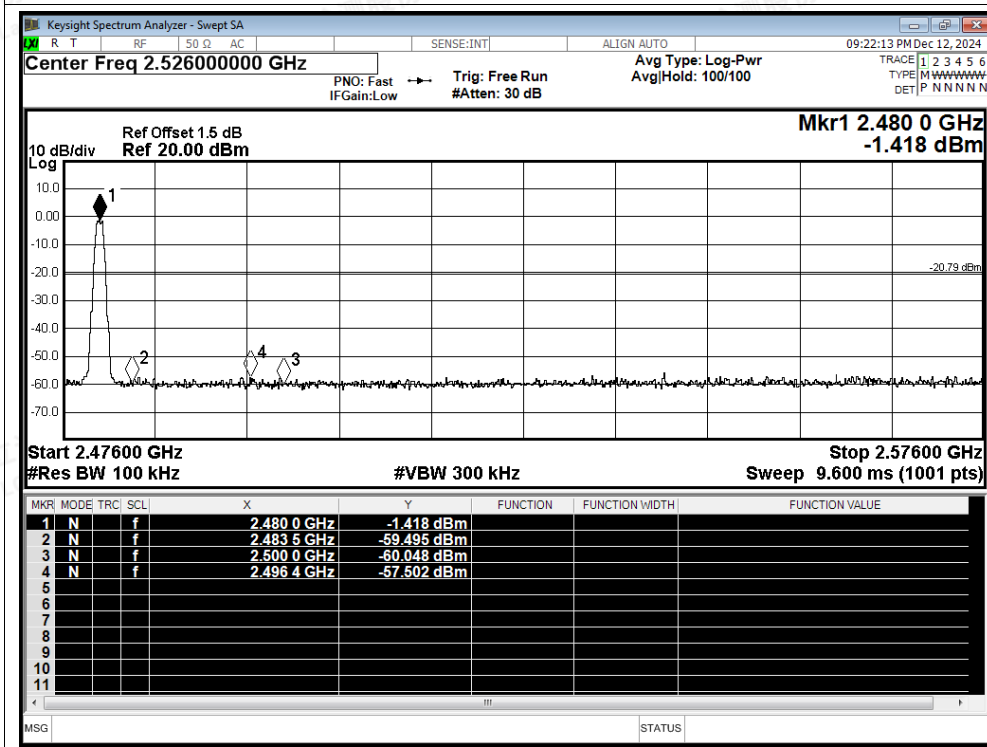
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## Band Edge NVNT BLE 1M 2480MHz Ant3 Ref



## Band Edge NVNT BLE 1M 2480MHz Ant3 Emission





## B.5 Conducted RF Spurious Emission

| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant3    | -54.44          | -20         | Pass    |
| NVNT      | BLE 1M | 2440            | Ant3    | -54.92          | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant3    | -54.15          | -20         | Pass    |

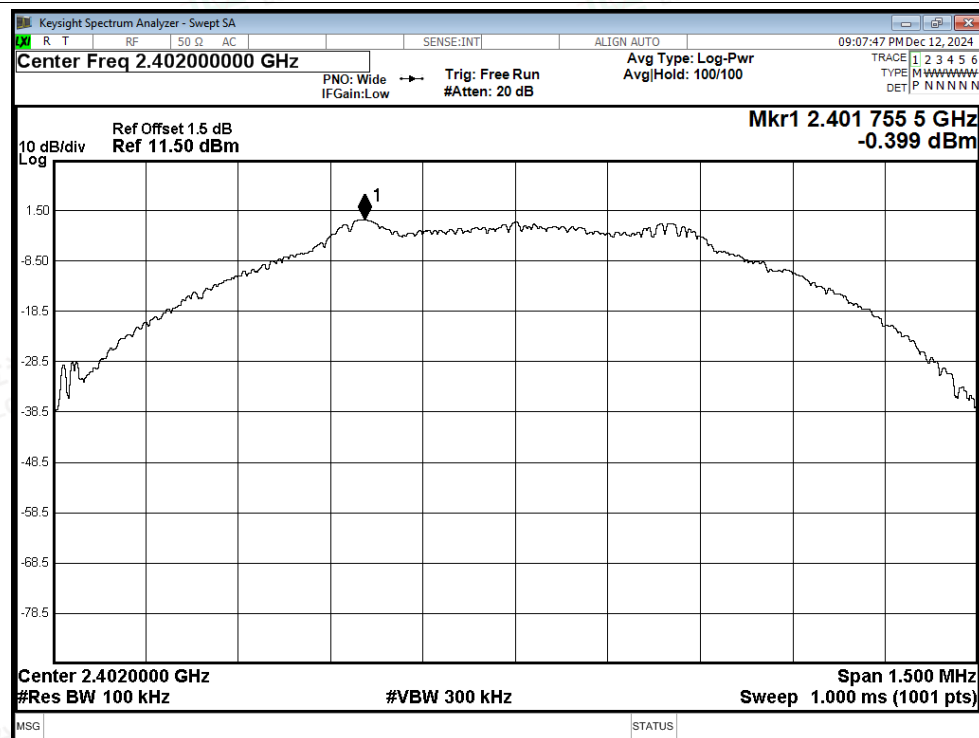


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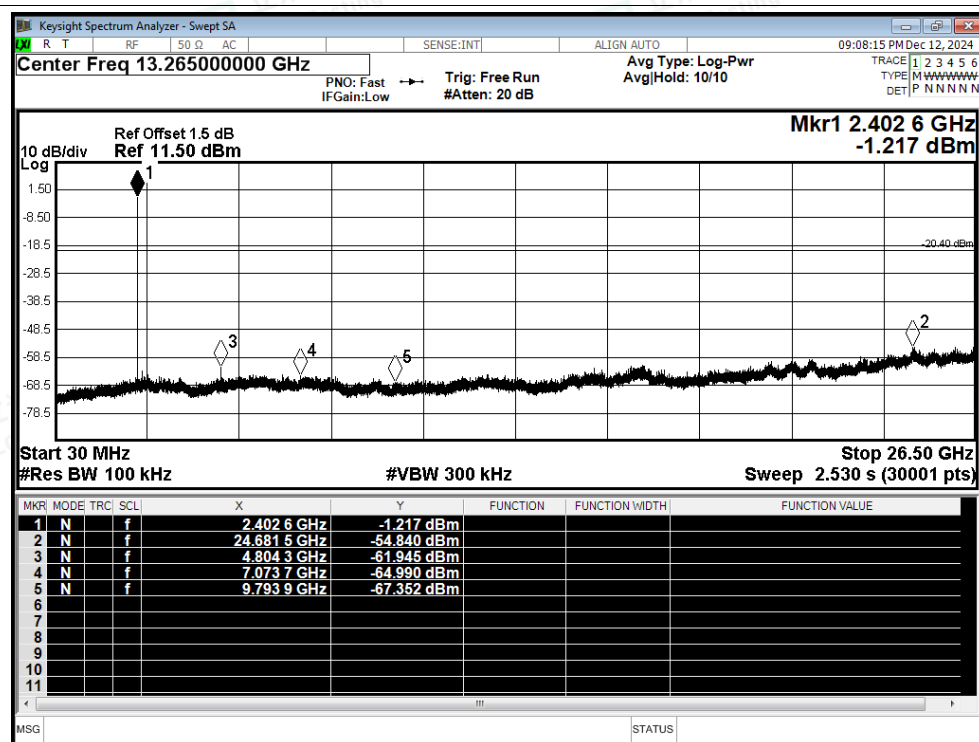


## Test Graphs

## Tx. Spurious NVNT BLE 1M 2402MHz Ant3 Ref



## Tx. Spurious NVNT BLE 1M 2402MHz Ant3 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

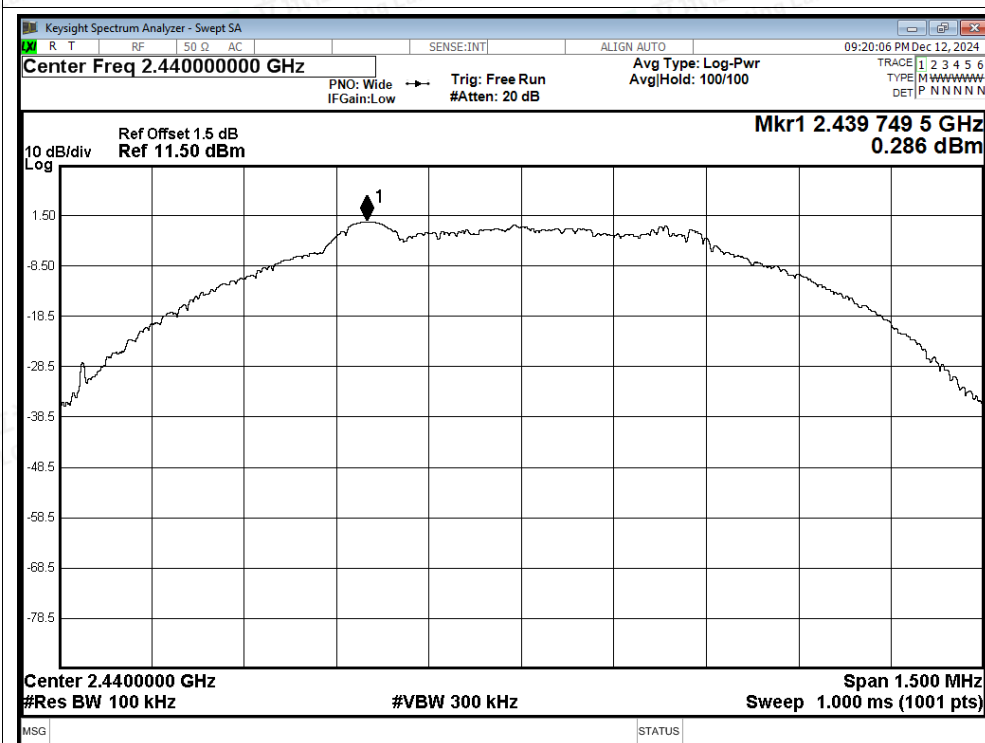
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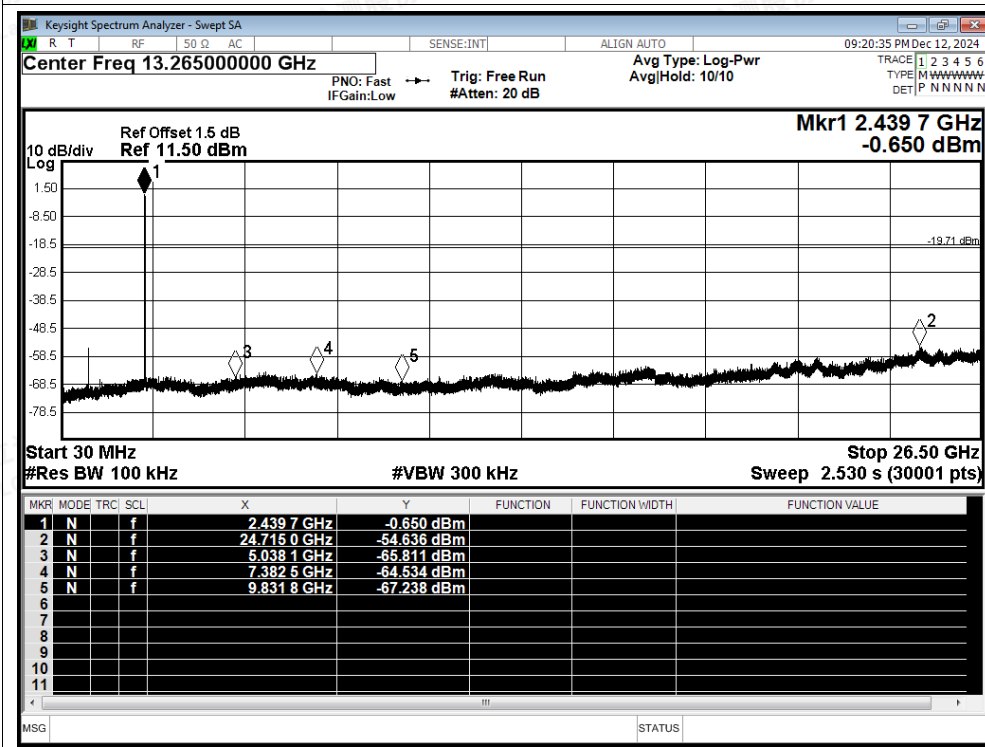
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## Tx. Spurious NVNT BLE 1M 2440MHz Ant3 Ref

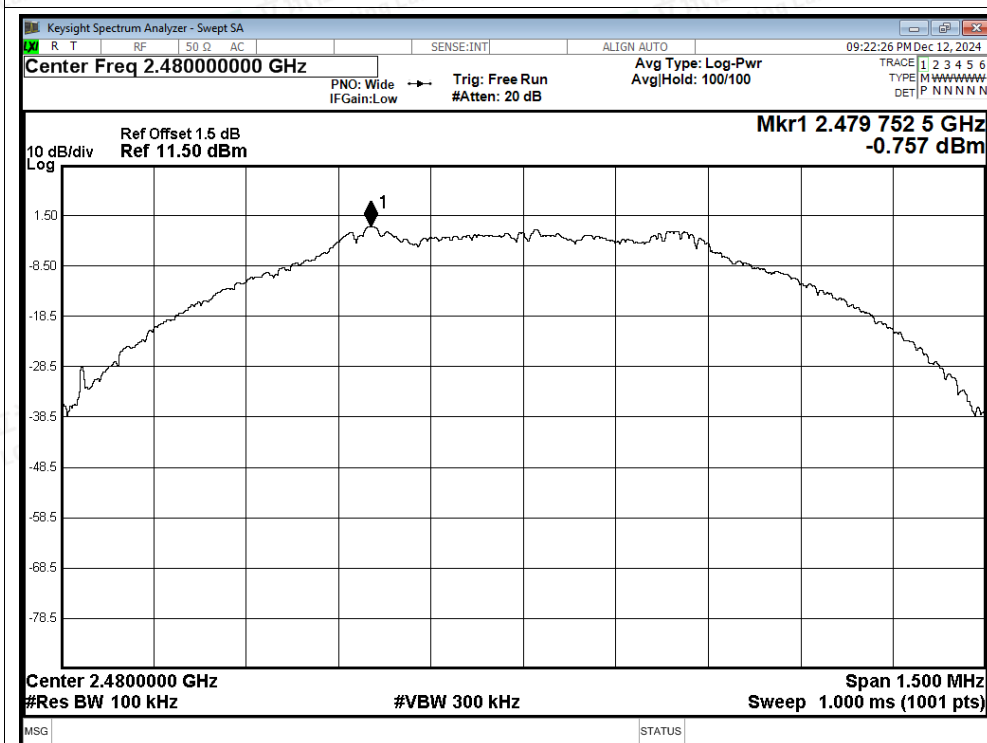


## Tx. Spurious NVNT BLE 1M 2440MHz Ant3 Emission

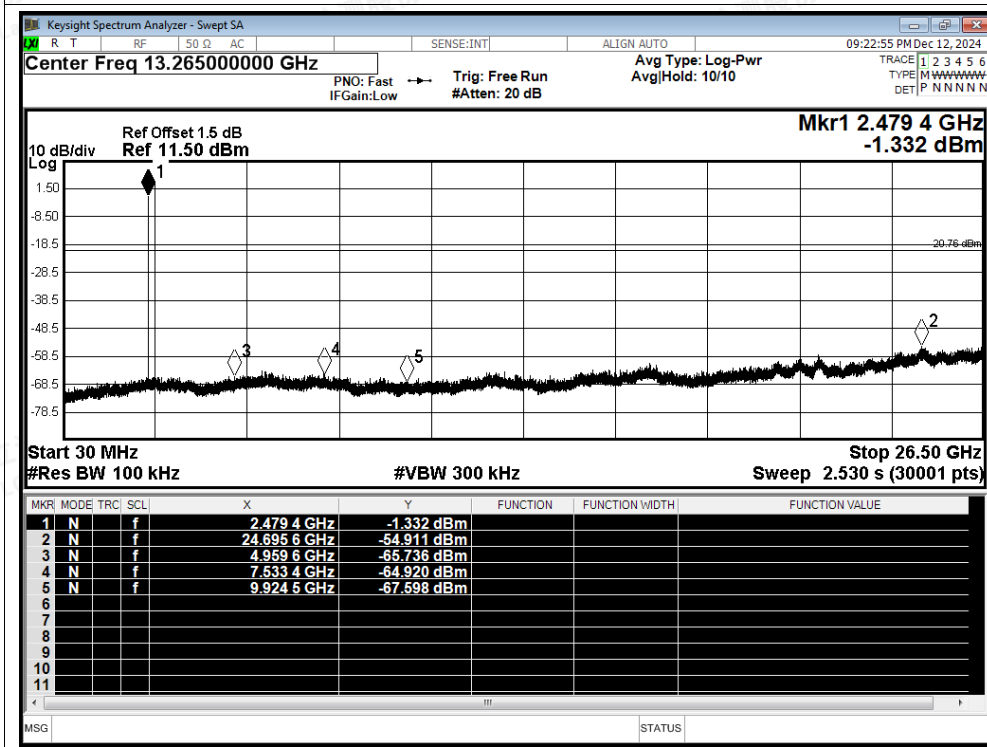




## Tx. Spurious NVNT BLE 1M 2480MHz Ant3 Ref



## Tx. Spurious NVNT BLE 1M 2480MHz Ant3 Emission





### B.6 Duty Cycle

| Condition | Mode   | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|--------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | BLE 1M | 2402            | Ant3    | 87.39          | 0.59                   | 0.61      |
| NVNT      | BLE 1M | 2440            | Ant3    | 87.39          | 0.59                   | 0.61      |
| NVNT      | BLE 1M | 2480            | Ant3    | 87.36          | 0.59                   | 0.61      |

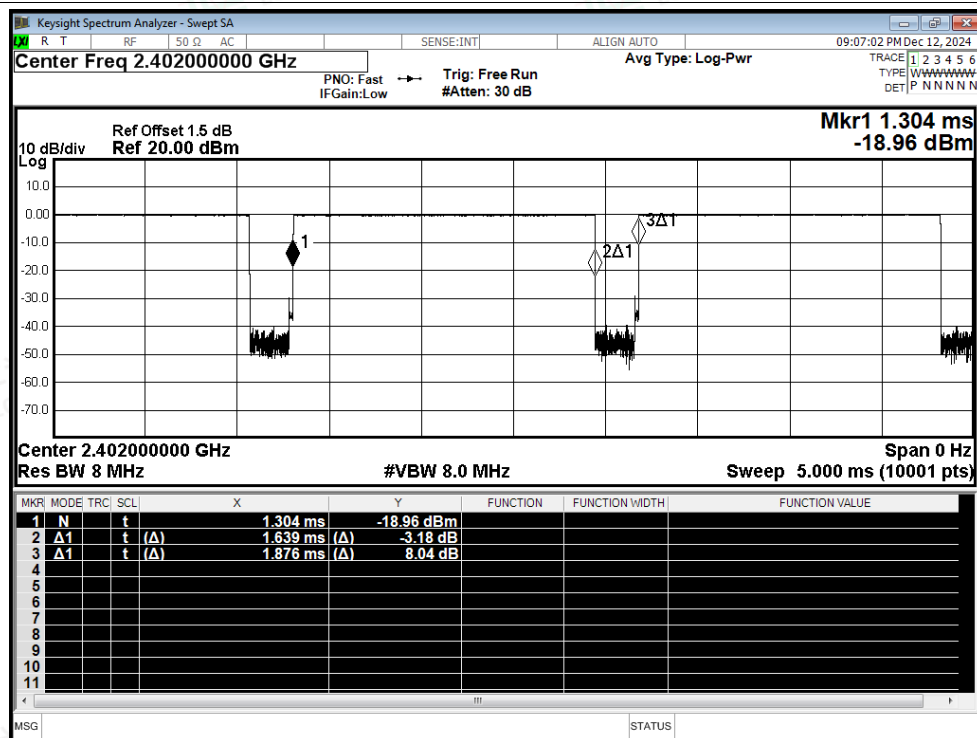


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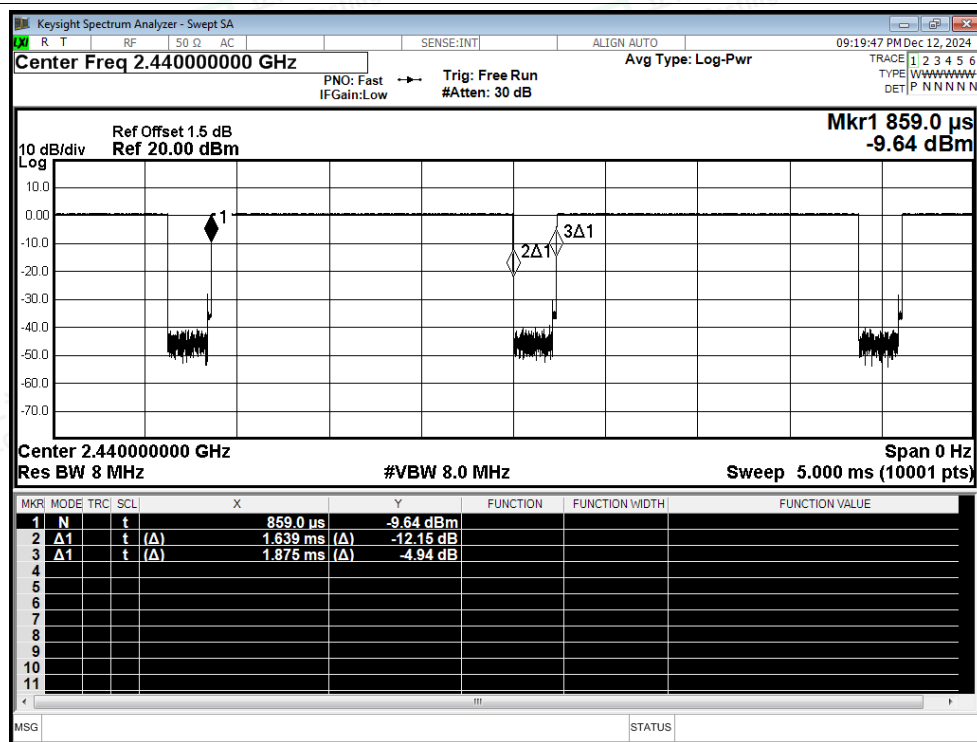


## Test Graphs

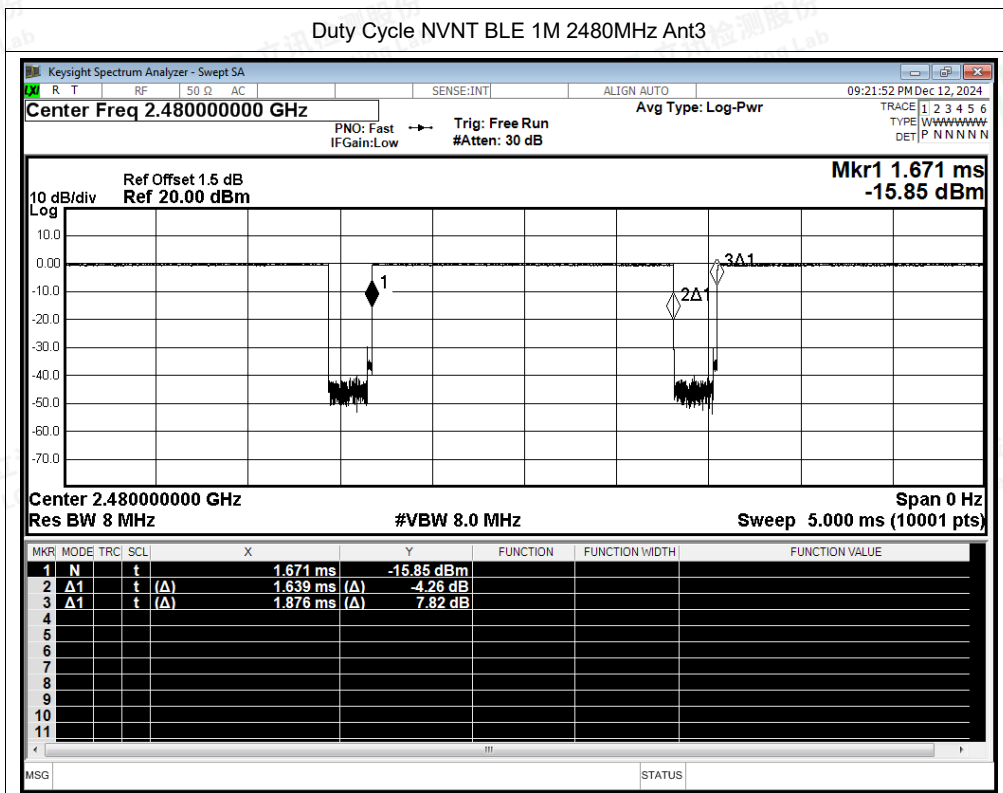
## Duty Cycle NVNT BLE 1M 2402MHz Ant3



## Duty Cycle NVNT BLE 1M 2440MHz Ant3



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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            | Ant3    | 2310            | -49.97      | 2.77       | -                | 48.06      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant3    | 2310            | -60.3       | 2.77       | 0.59             | 38.32      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant3    | 2386.032        | -47.23      | 2.77       | -                | 50.80      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant3    | 2353.872        | -60.06      | 2.77       | 0.59             | 38.56      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant3    | 2390            | -49.63      | 2.77       | -                | 48.40      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant3    | 2390            | -60.18      | 2.77       | 0.59             | 38.44      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant3    | 2483.5          | -48.87      | 2.77       | -                | 49.16      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant3    | 2483.5          | -59.61      | 2.77       | 0.59             | 39.01      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant3    | 2483.92         | -45.98      | 2.77       | -                | 52.05      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant3    | 2483.776        | -59.45      | 2.77       | 0.59             | 39.17      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant3    | 2500            | -50.4       | 2.77       | -                | 47.63      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant3    | 2500            | -60.11      | 2.77       | 0.59             | 38.51      | Average  | 54             | Pass    |

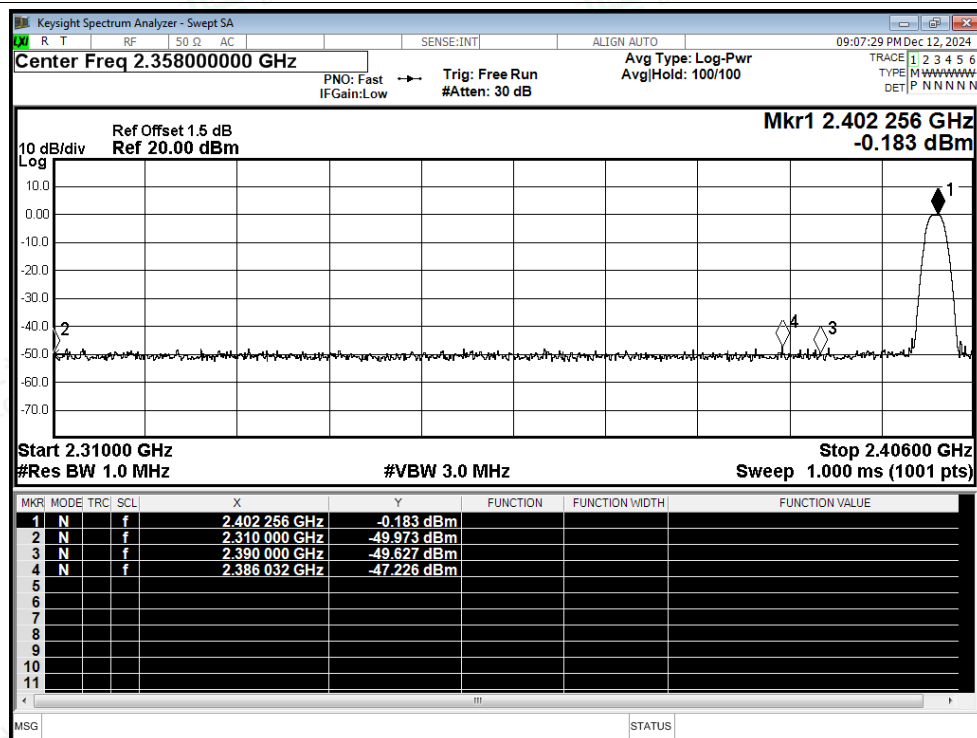


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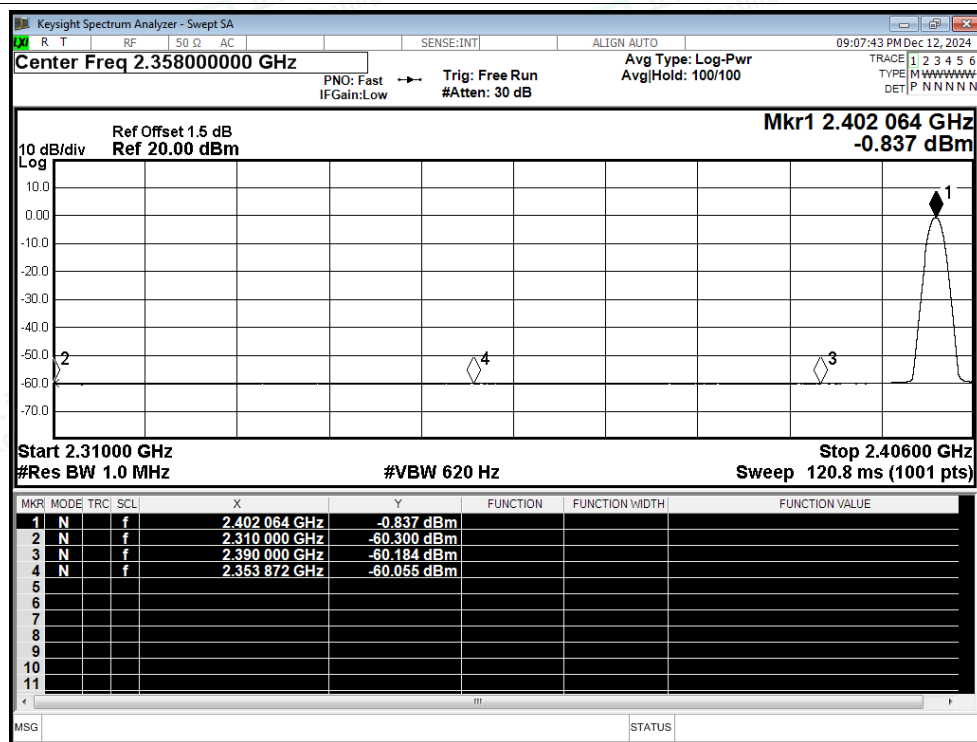


## Test Graphs

## Restrict Band NVNT BLE 1M 2402MHz Ant3 Peak



## Restrict Band NVNT BLE 1M 2402MHz Ant3 Average



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