



## Appendix A

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

Product Name: GNSS Receiver

Test Model: A100 Pro

#### 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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## A.1 -6dB Bandwidth

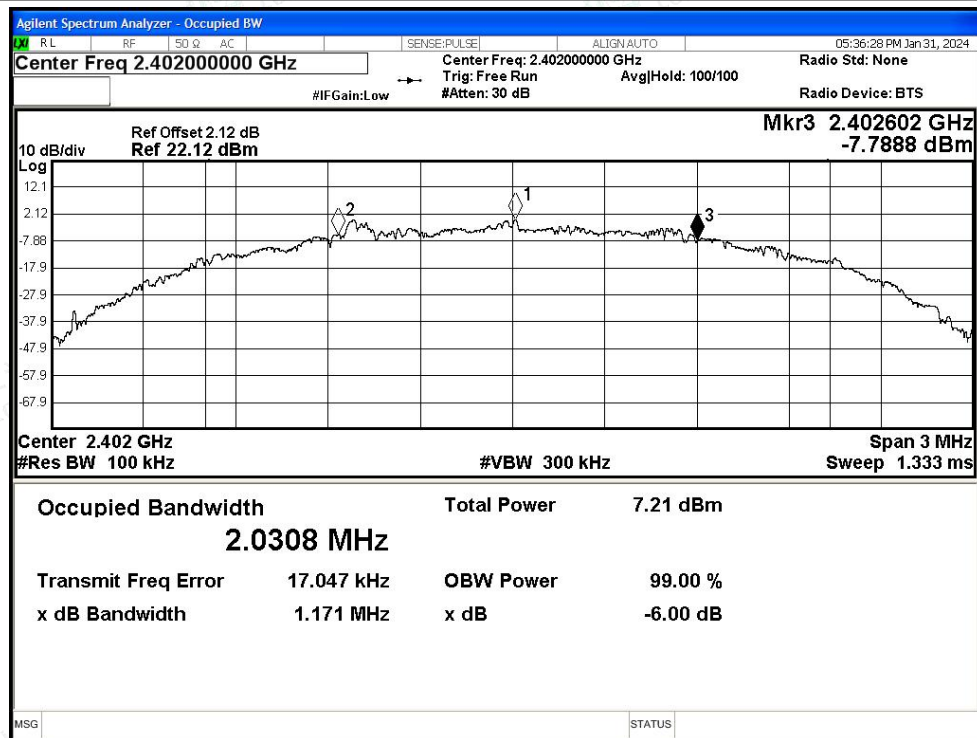
| Condition | Mode   | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|--------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | BLE 2M | 2402            | Ant1    | 1.171                 | $\geq 0.5$                  | Pass    |
| NVNT      | BLE 2M | 2440            | Ant1    | 1.156                 | $\geq 0.5$                  | Pass    |
| NVNT      | BLE 2M | 2480            | Ant1    | 1.158                 | $\geq 0.5$                  | Pass    |



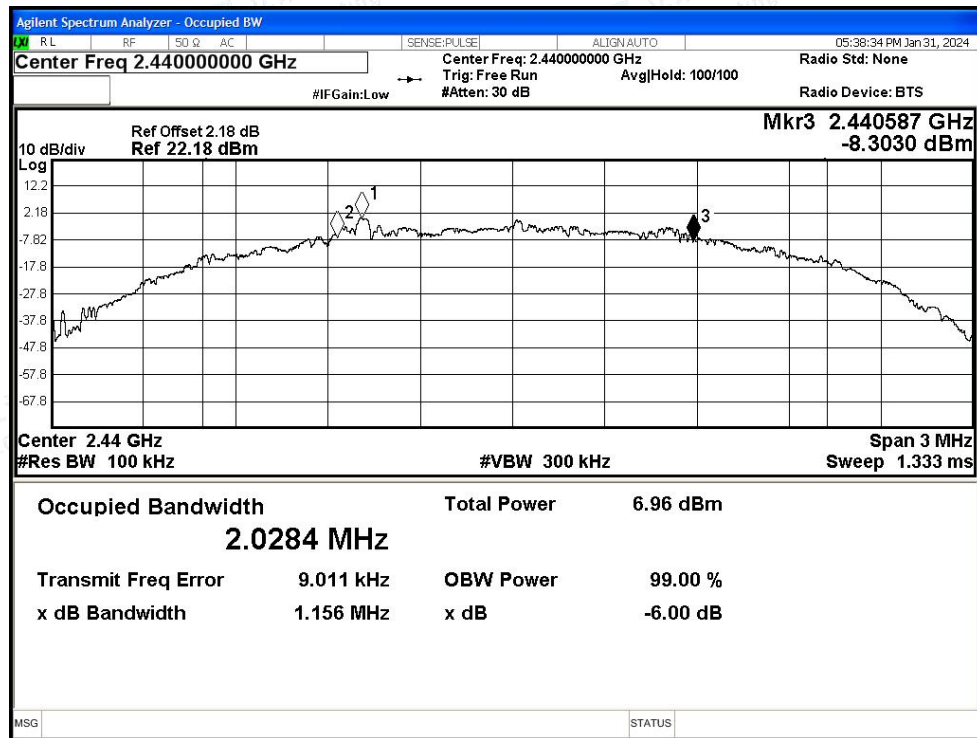


## Test Graphs

-6dB Bandwidth NVNT BLE 2M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2440MHz Ant1

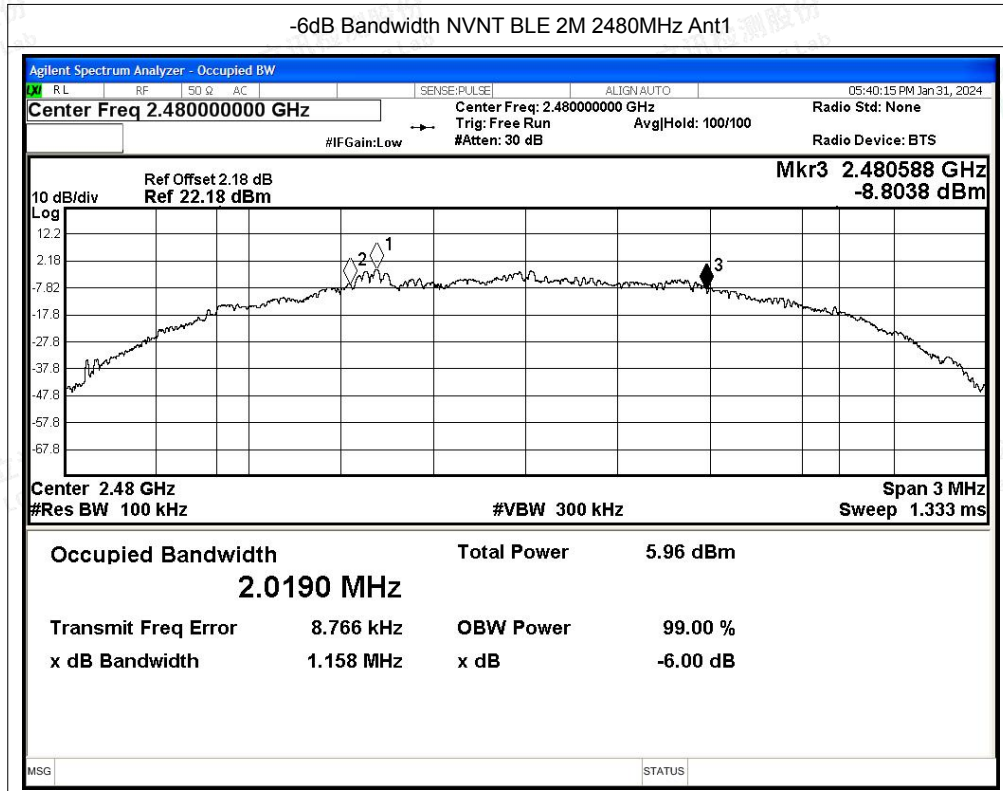


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## A.2 Maximum Peak Conducted Output Power

| Condition | Mode   | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|--------|-----------------|---------|-----------------------|-------------|---------|
| NVNT      | BLE 2M | 2402            | Ant1    | 1.05                  | 30          | Pass    |
| NVNT      | BLE 2M | 2440            | Ant1    | 0.68                  | 30          | Pass    |
| NVNT      | BLE 2M | 2480            | Ant1    | -0.4                  | 30          | Pass    |

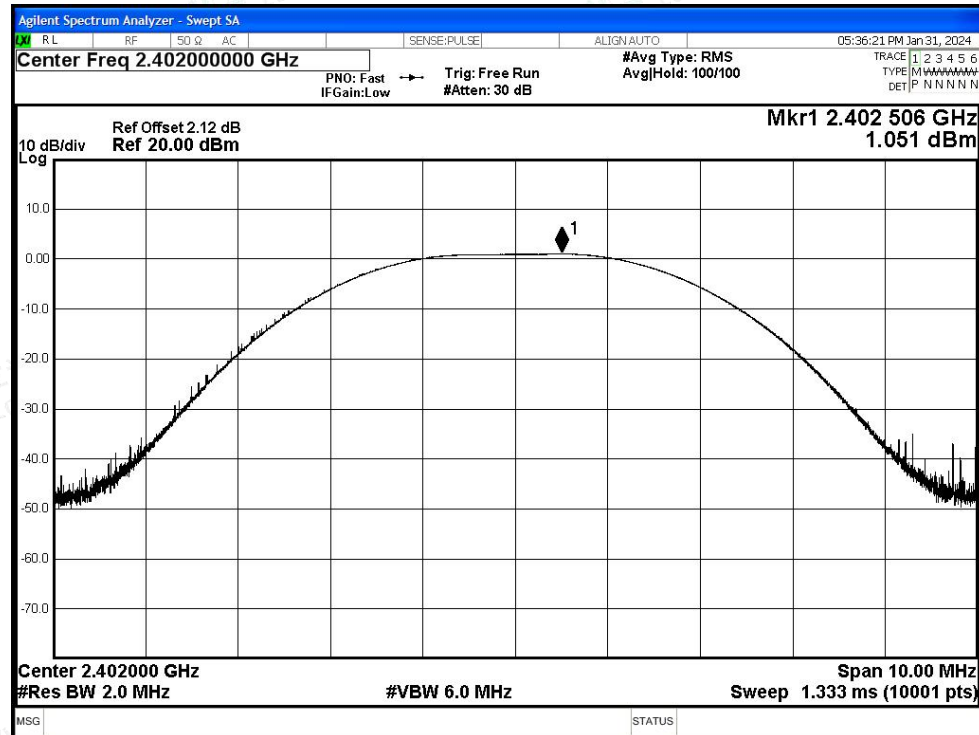


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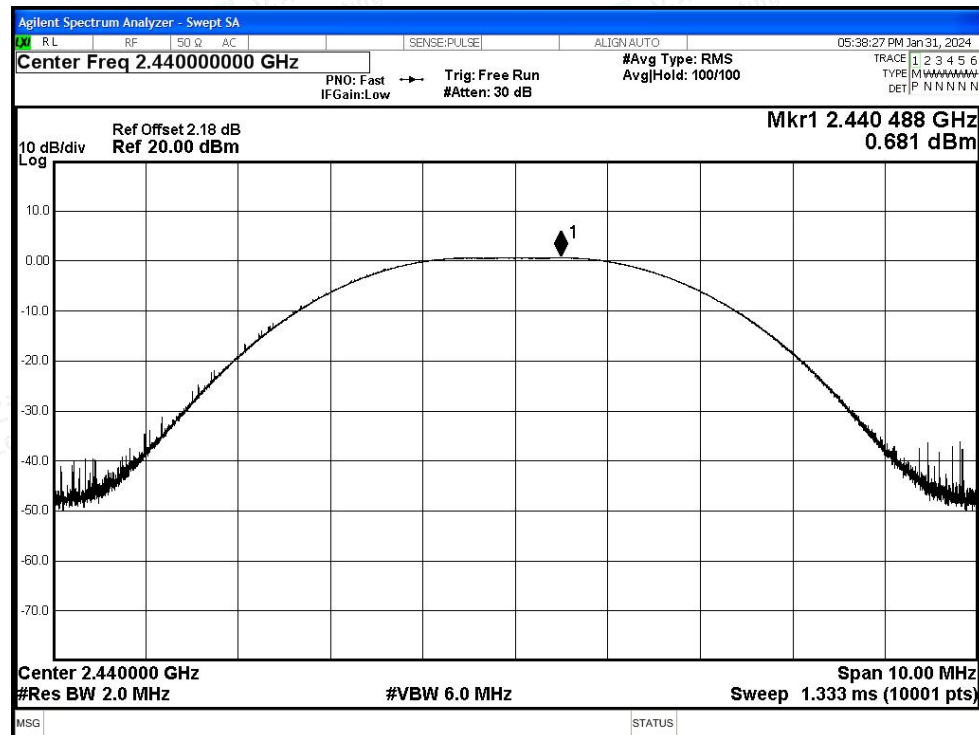


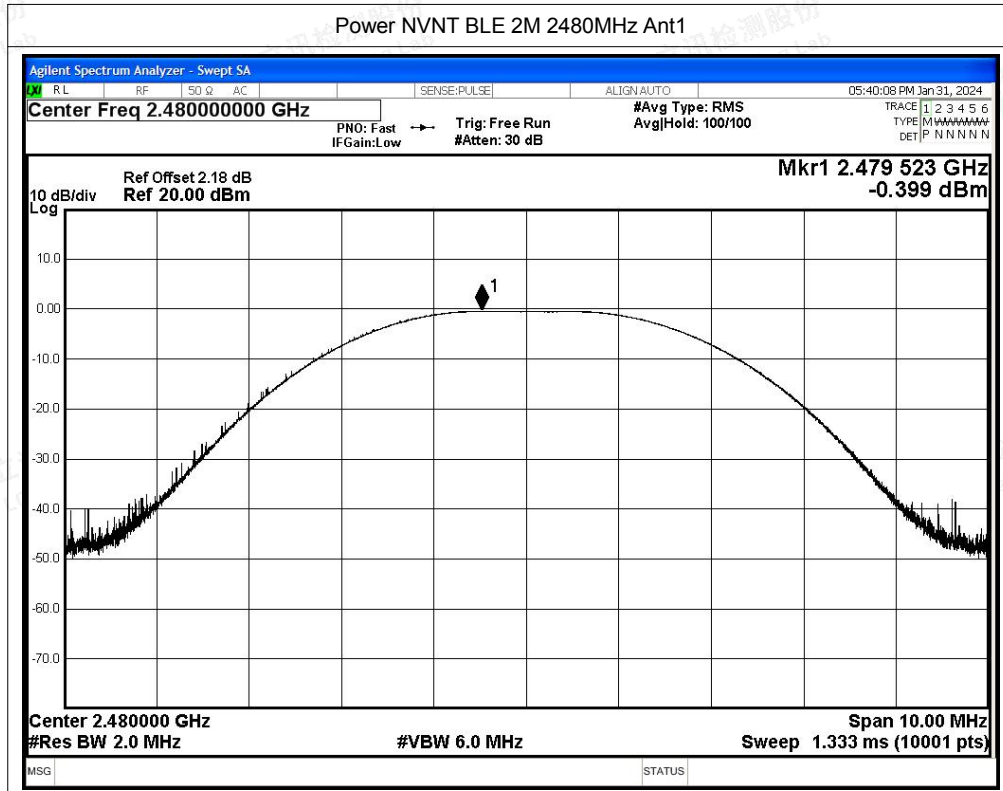
## Test Graphs

## Power NVNT BLE 2M 2402MHz Ant1



## Power NVNT BLE 2M 2440MHz Ant1







### A.3 Maximum Power Spectral Density Level

| Condition | Mode   | Frequency (MHz) | Antenna | Conducted PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|-----------|--------|-----------------|---------|--------------------------|------------------|---------|
| NVNT      | BLE 2M | 2402            | Ant1    | -19.01                   | 8                | Pass    |
| NVNT      | BLE 2M | 2440            | Ant1    | -19.19                   | 8                | Pass    |
| NVNT      | BLE 2M | 2480            | Ant1    | -19.81                   | 8                | Pass    |

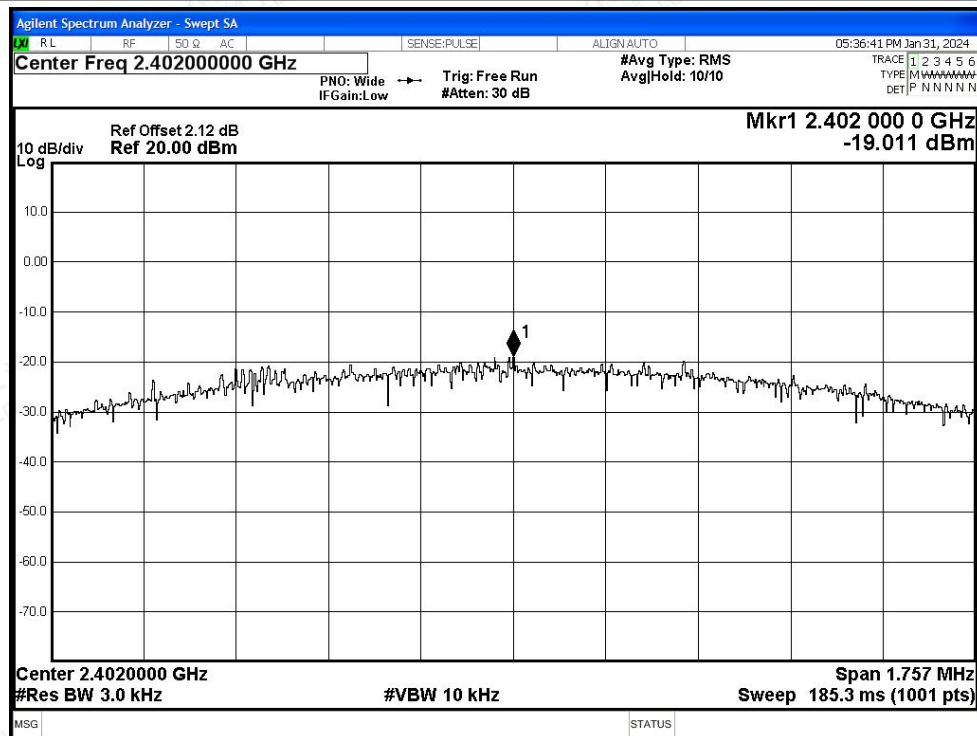




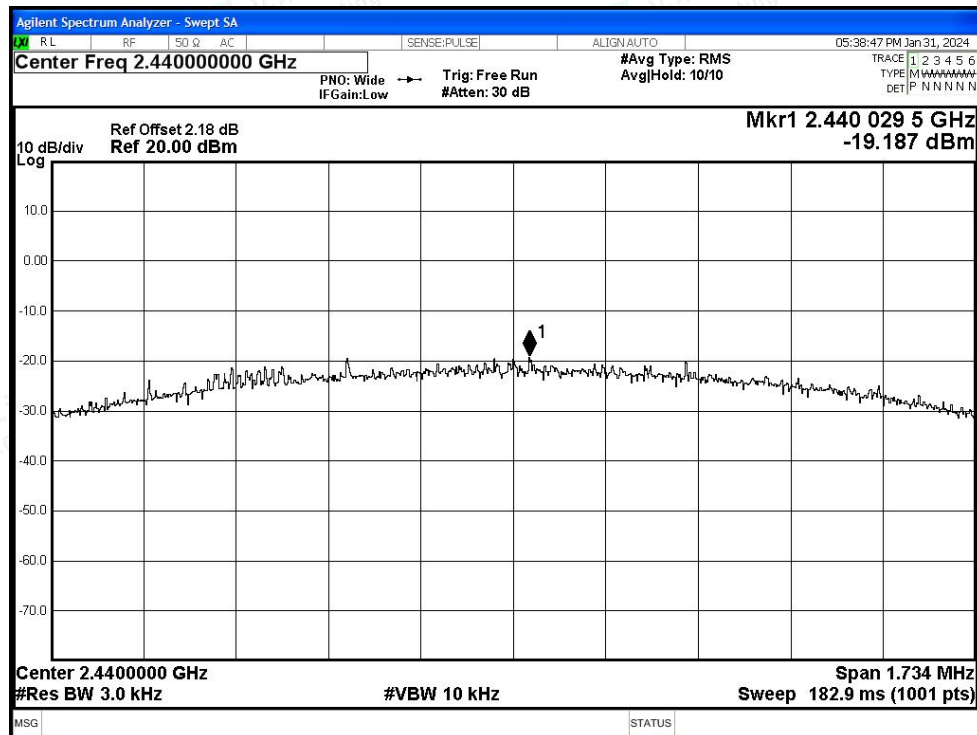


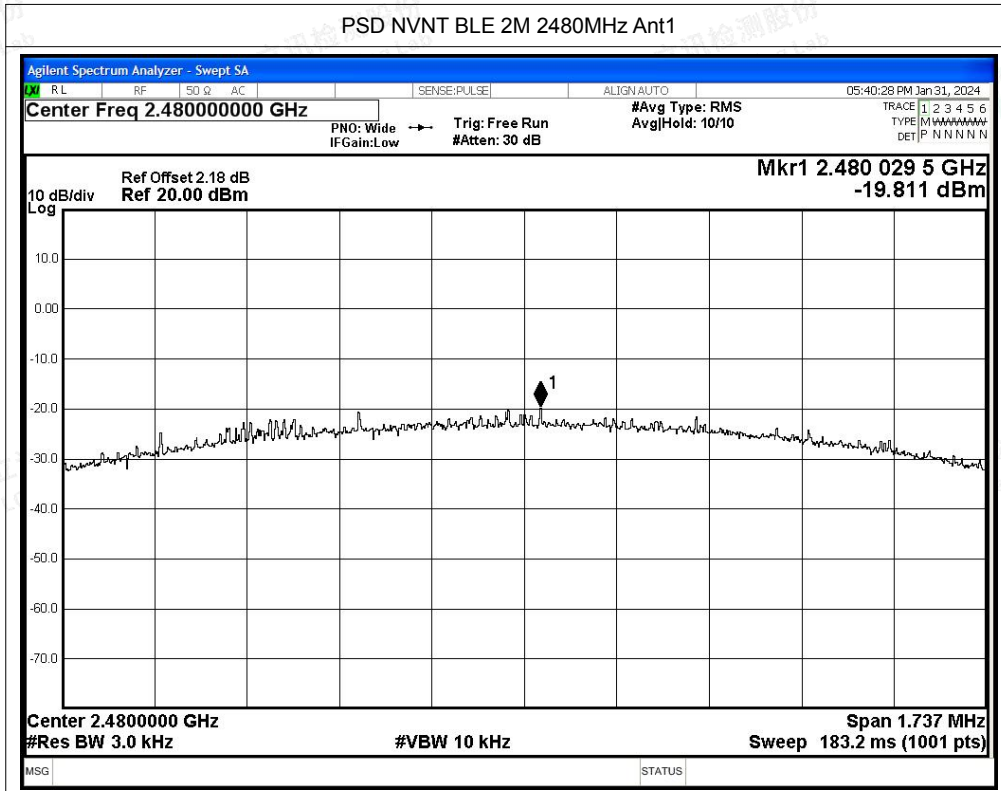
## Test Graphs

PSD NVNT BLE 2M 2402MHz Ant1



PSD NVNT BLE 2M 2440MHz Ant1







A.4 Band Edge

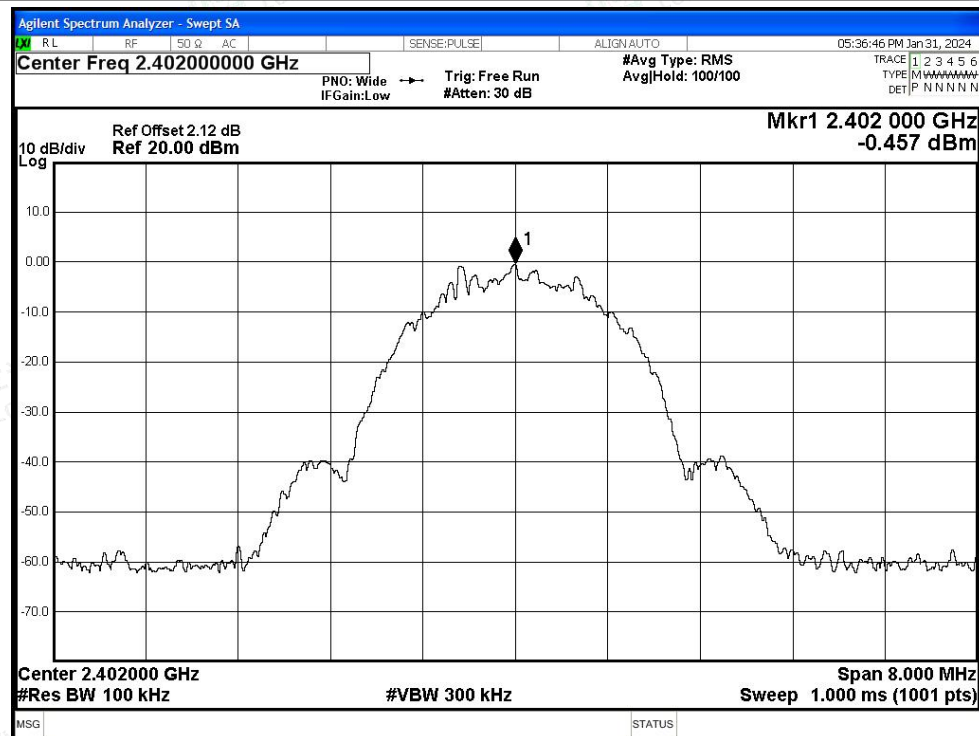
| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 2M | 2402            | Ant1    | -42.52          | -20         | Pass    |
| NVNT      | BLE 2M | 2480            | Ant1    | -55.69          | -20         | Pass    |



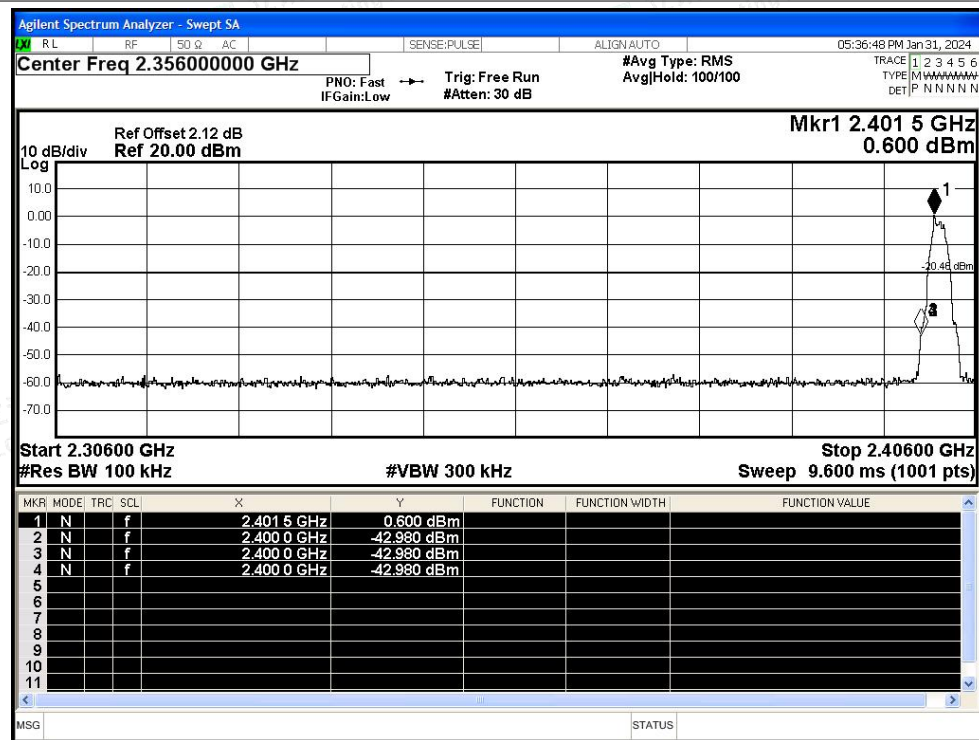


## Test Graphs

## Band Edge NVNT BLE 2M 2402MHz Ant1 Ref



## Band Edge NVNT BLE 2M 2402MHz Ant1 Emission

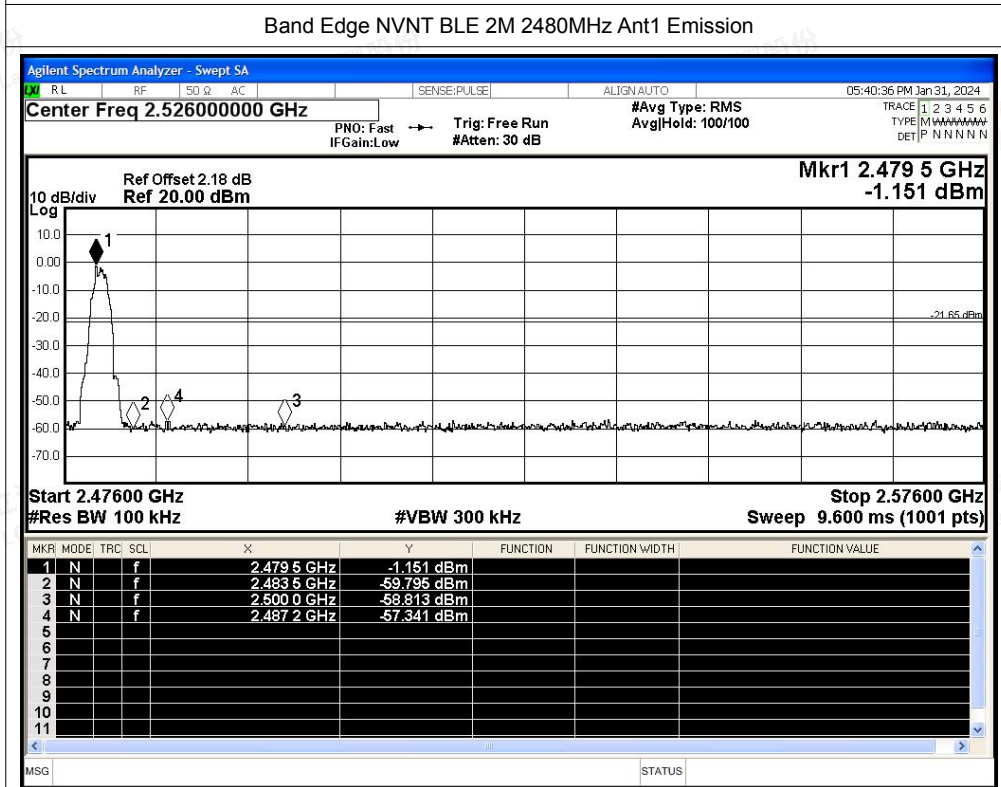
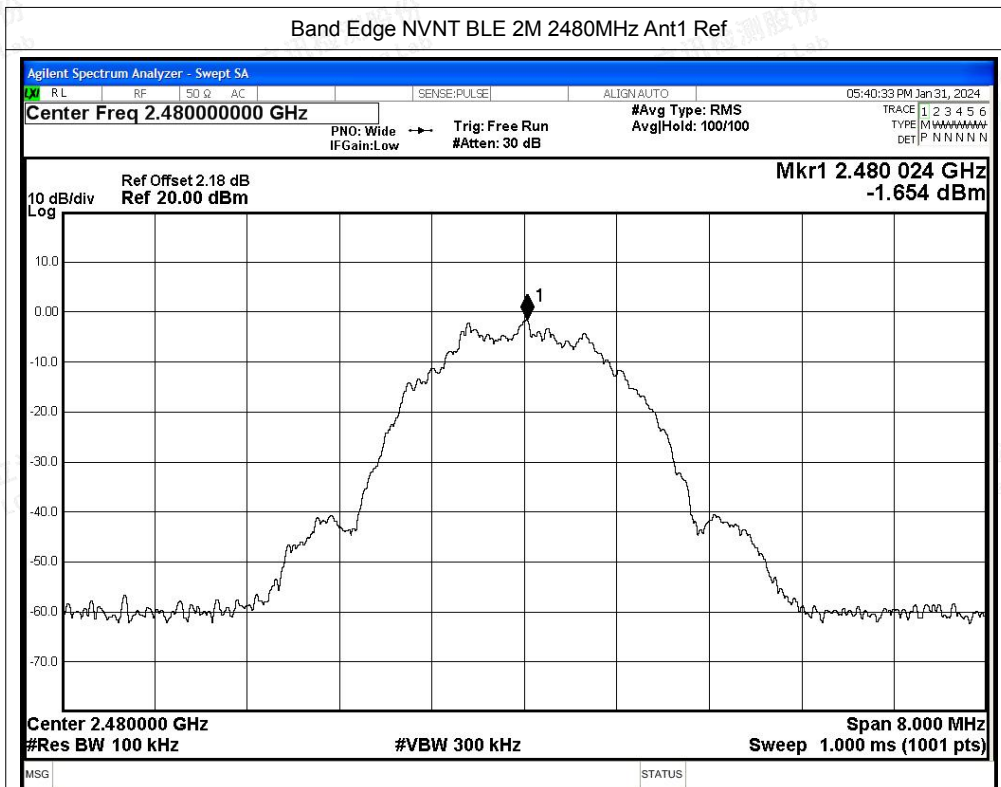


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### A.5 Conducted RF Spurious Emission

| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 2M | 2402            | Ant1    | -54.6           | -20         | Pass    |
| NVNT      | BLE 2M | 2440            | Ant1    | -55.35          | -20         | Pass    |
| NVNT      | BLE 2M | 2480            | Ant1    | -54.65          | -20         | Pass    |

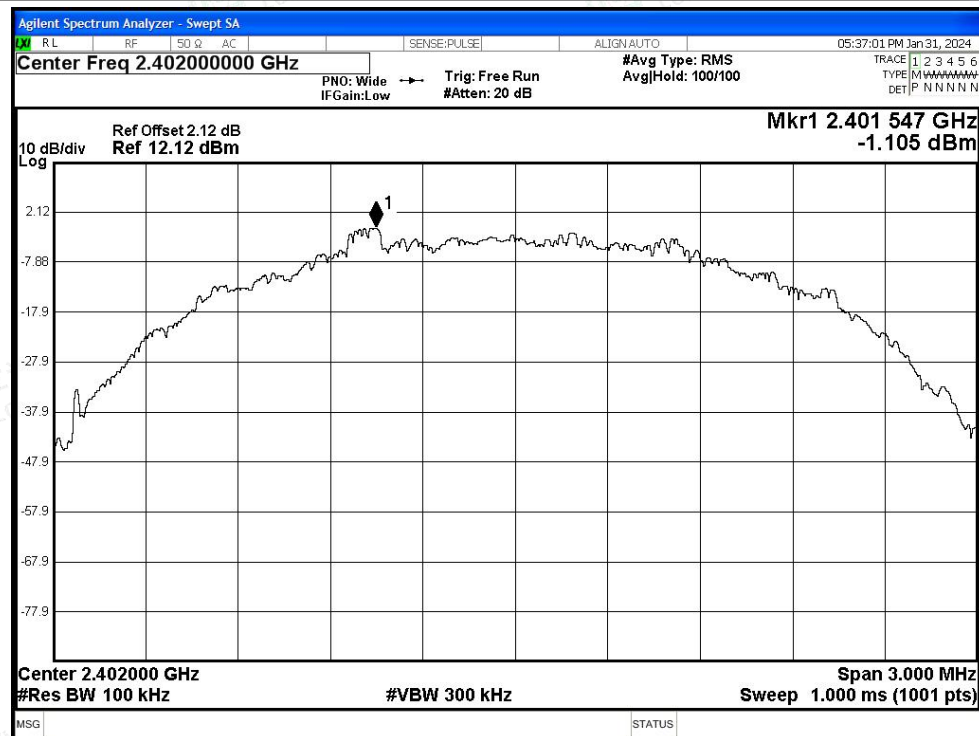


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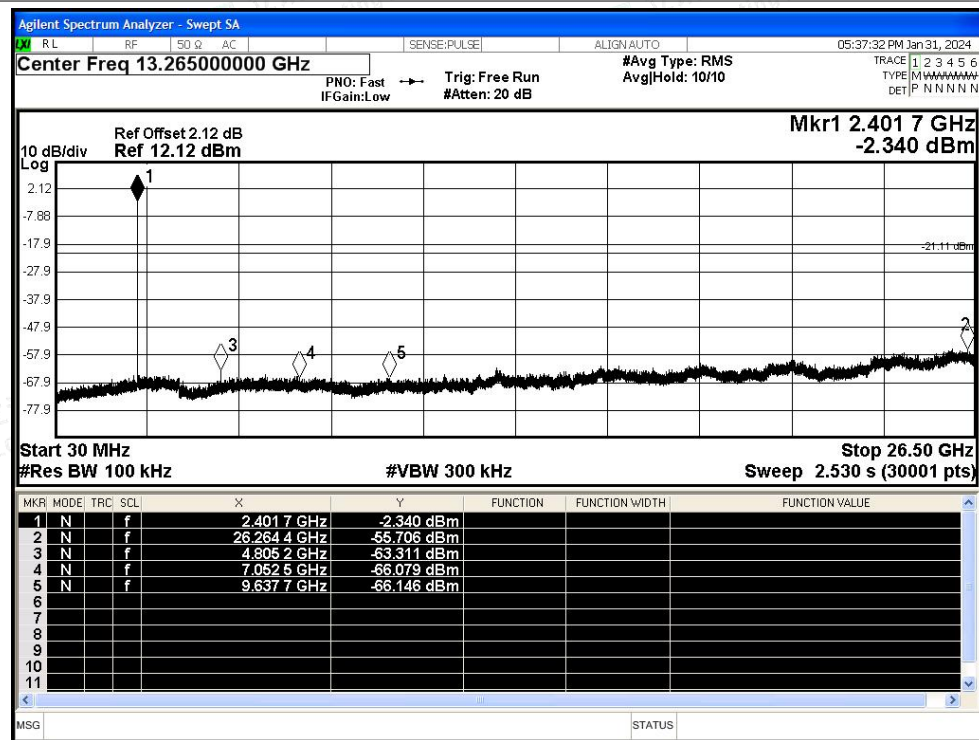


## Test Graphs

## Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Ref



## Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Emission



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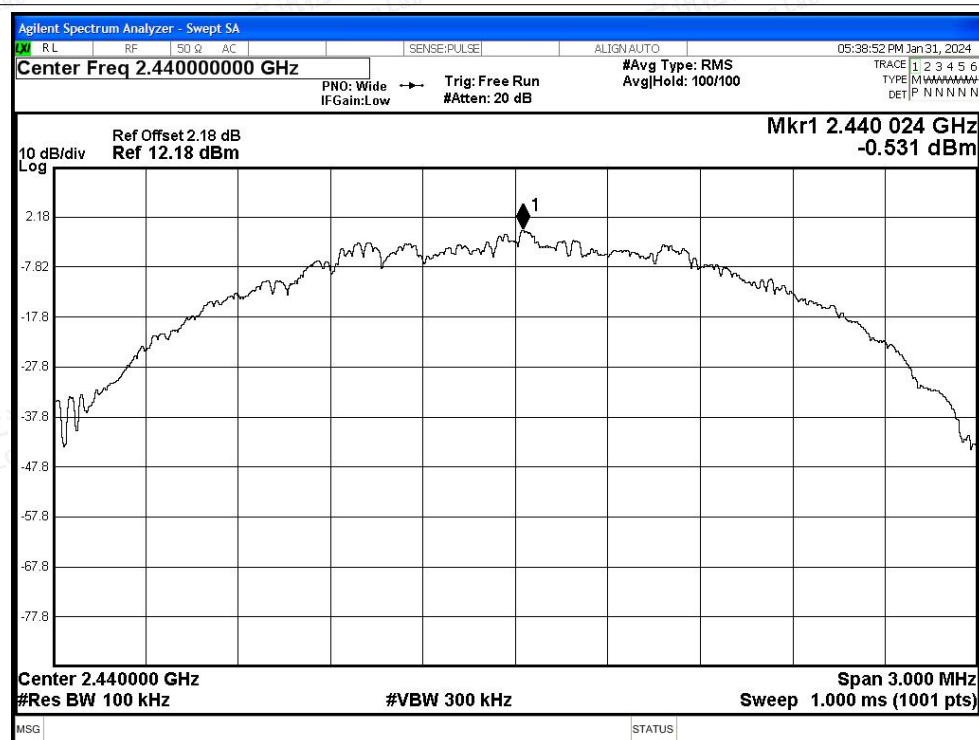
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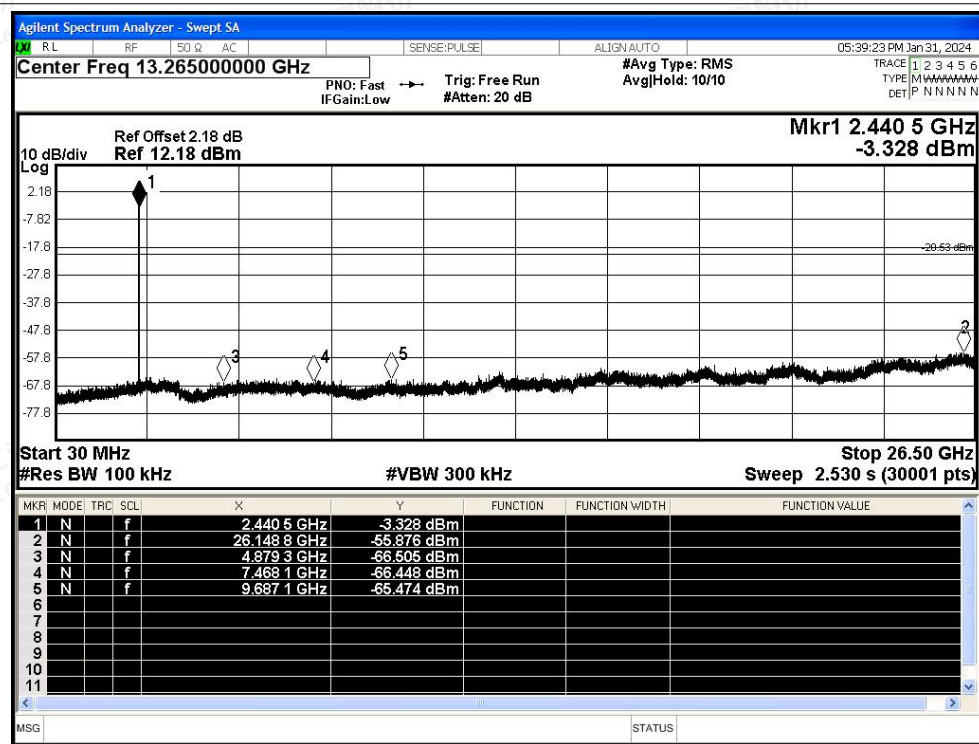




## Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Ref



## Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Emission



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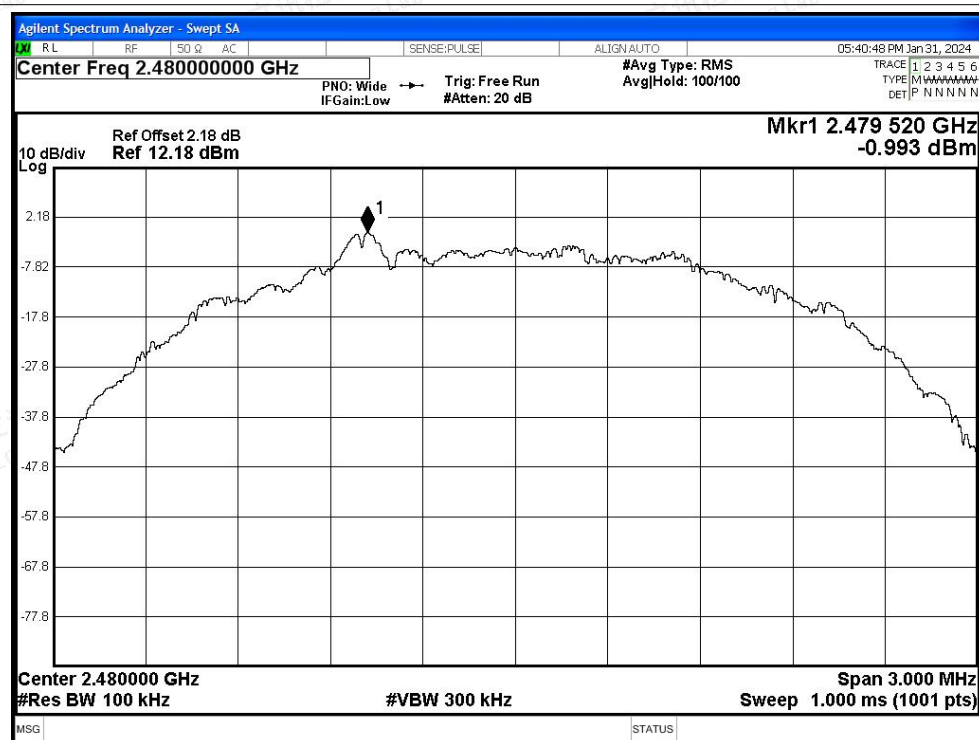
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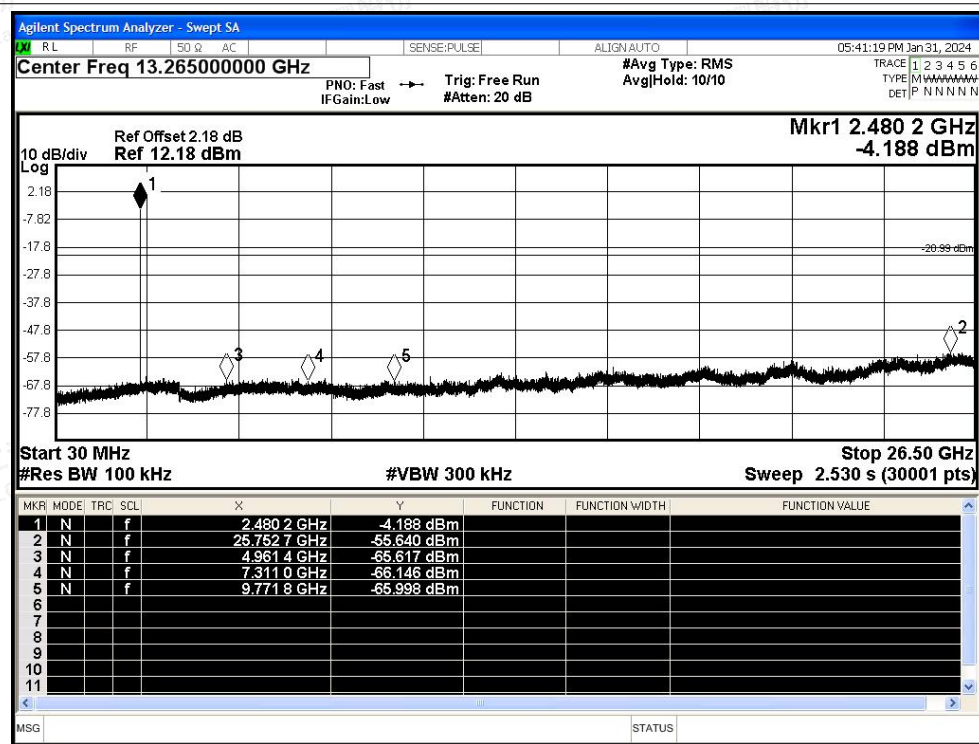




## Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Ref



## Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Emission





### A.6 Duty Cycle

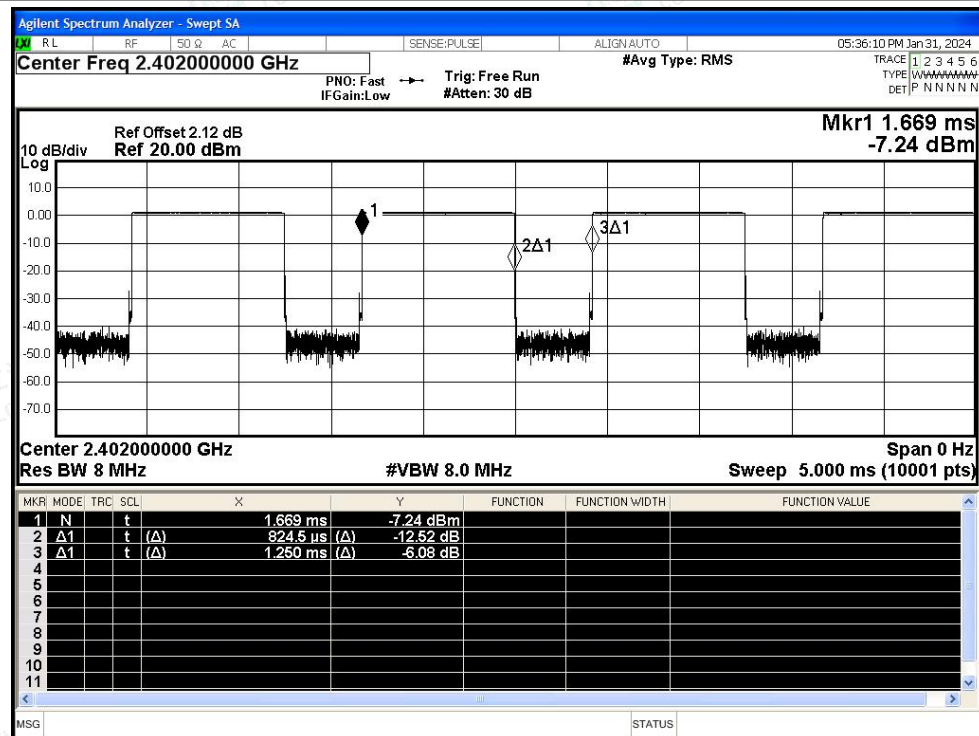
| Condition | Mode   | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|--------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | BLE 2M | 2402            | Ant1    | 65.96          | 1.81                   | 1.21      |
| NVNT      | BLE 2M | 2440            | Ant1    | 65.93          | 1.81                   | 1.21      |
| NVNT      | BLE 2M | 2480            | Ant1    | 65.96          | 1.81                   | 1.21      |



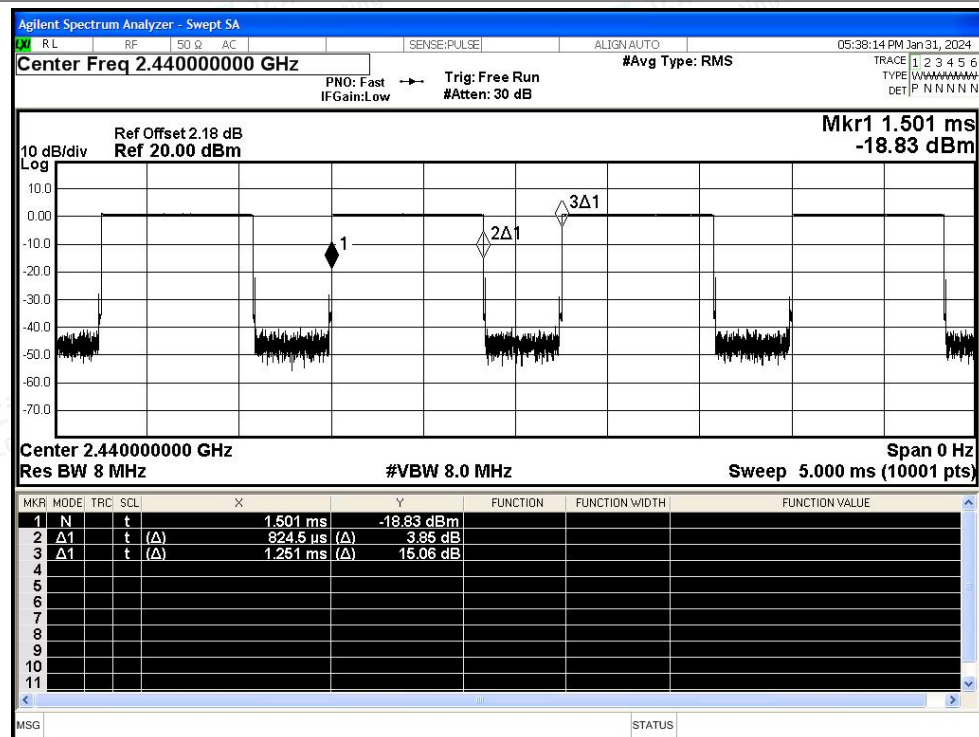


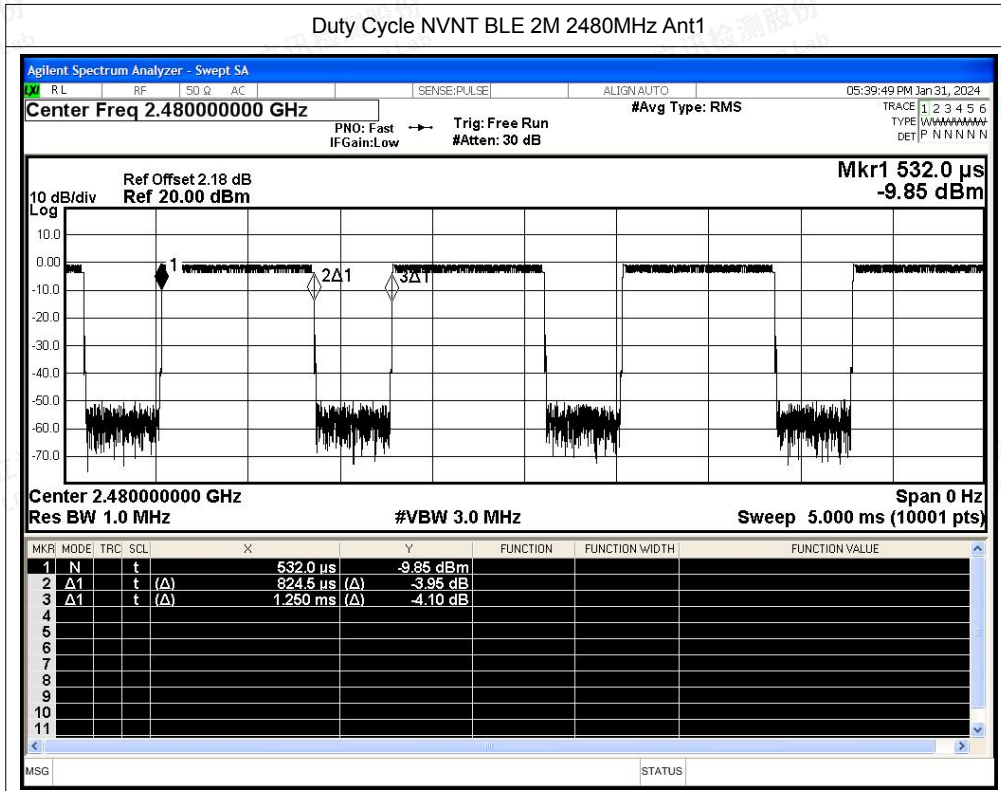
## Test Graphs

## Duty Cycle NVNT BLE 2M 2402MHz Ant1



## Duty Cycle NVNT BLE 2M 2440MHz Ant1







## A.7 Restrict Band

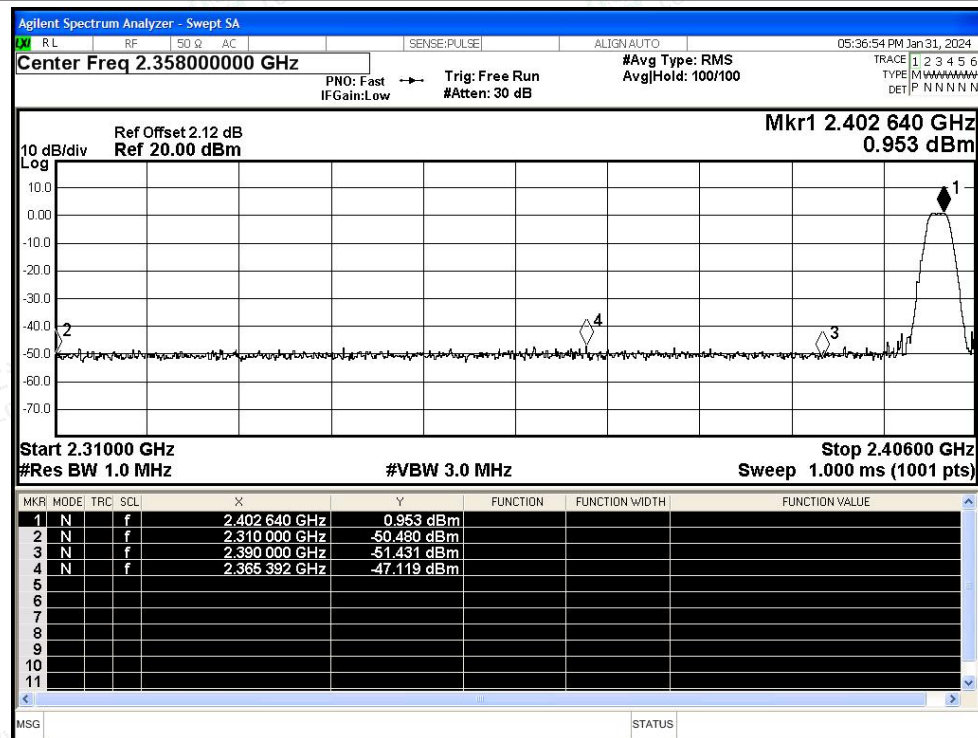
| Condition | Mode   | Frequency (MHz) | Antenna | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | Duty Factor (dB) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|------------|------------------|------------|----------|----------------|---------|
| NVNT      | BLE 2M | 2402            | Ant1    | 2310            | -50.48      | 2          | -                | 46.78      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2402            | Ant1    | 2310            | -59         | 2          | 1.81             | 40.07      | Average  | 54             | Pass    |
| NVNT      | BLE 2M | 2402            | Ant1    | 2365.392        | -47.12      | 2          | -                | 50.14      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2402            | Ant1    | 2381.712        | -57.46      | 2          | 1.81             | 41.61      | Average  | 54             | Pass    |
| NVNT      | BLE 2M | 2402            | Ant1    | 2390            | -51.43      | 2          | -                | 45.83      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2402            | Ant1    | 2390            | -58.24      | 2          | 1.81             | 40.83      | Average  | 54             | Pass    |
| NVNT      | BLE 2M | 2480            | Ant1    | 2483.5          | -48.17      | 2          | -                | 49.09      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2480            | Ant1    | 2483.5          | -58.08      | 2          | 1.81             | 40.99      | Average  | 54             | Pass    |
| NVNT      | BLE 2M | 2480            | Ant1    | 2484.52         | -43.31      | 2          | -                | 53.95      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2480            | Ant1    | 2483.824        | -57.06      | 2          | 1.81             | 42.01      | Average  | 54             | Pass    |
| NVNT      | BLE 2M | 2480            | Ant1    | 2500            | -48.03      | 2          | -                | 49.23      | Peak     | 74             | Pass    |
| NVNT      | BLE 2M | 2480            | Ant1    | 2500            | -58         | 2          | 1.81             | 41.07      | Average  | 54             | Pass    |



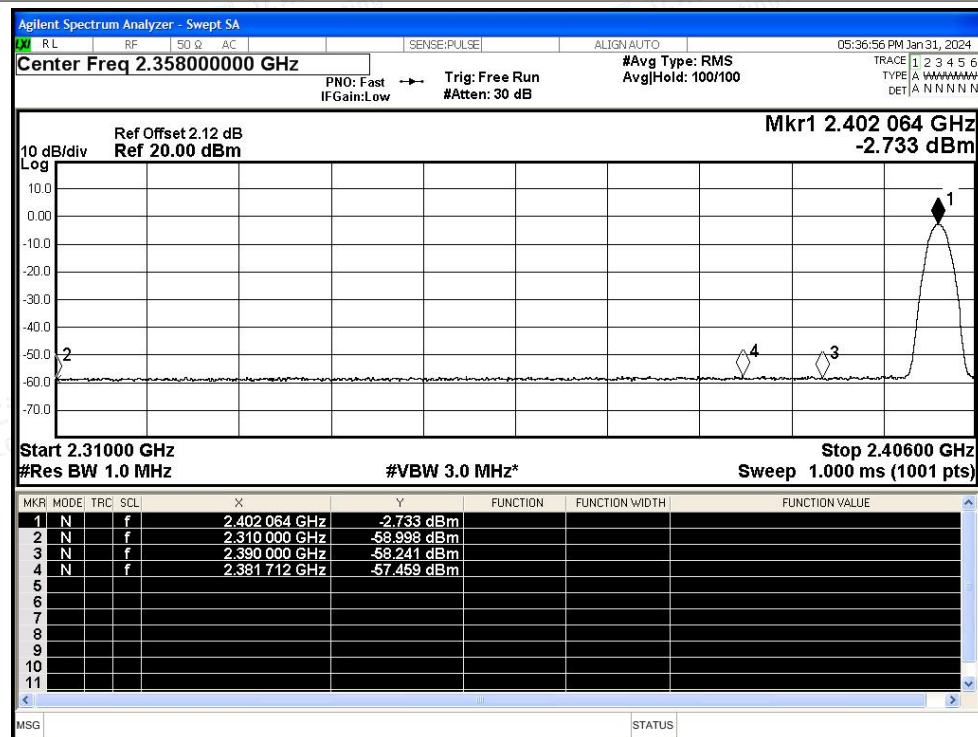


## Test Graphs

## Restrict Band NVNT BLE 2M 2402MHz Ant1 Peak



## Restrict Band NVNT BLE 2M 2402MHz Ant1 Average



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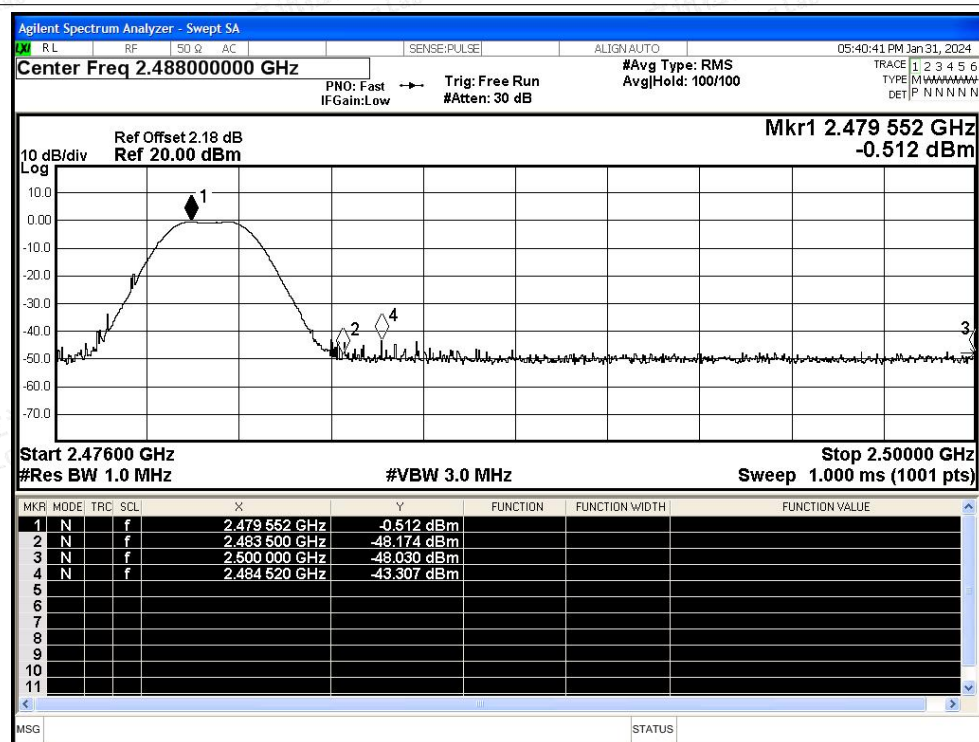
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## Restrict Band NVNT BLE 2M 2480MHz Ant1 Peak



## Restrict Band NVNT BLE 2M 2480MHz Ant1 Average

