

# RF Test Data for Bluetooth LE (Conducted Measurements)

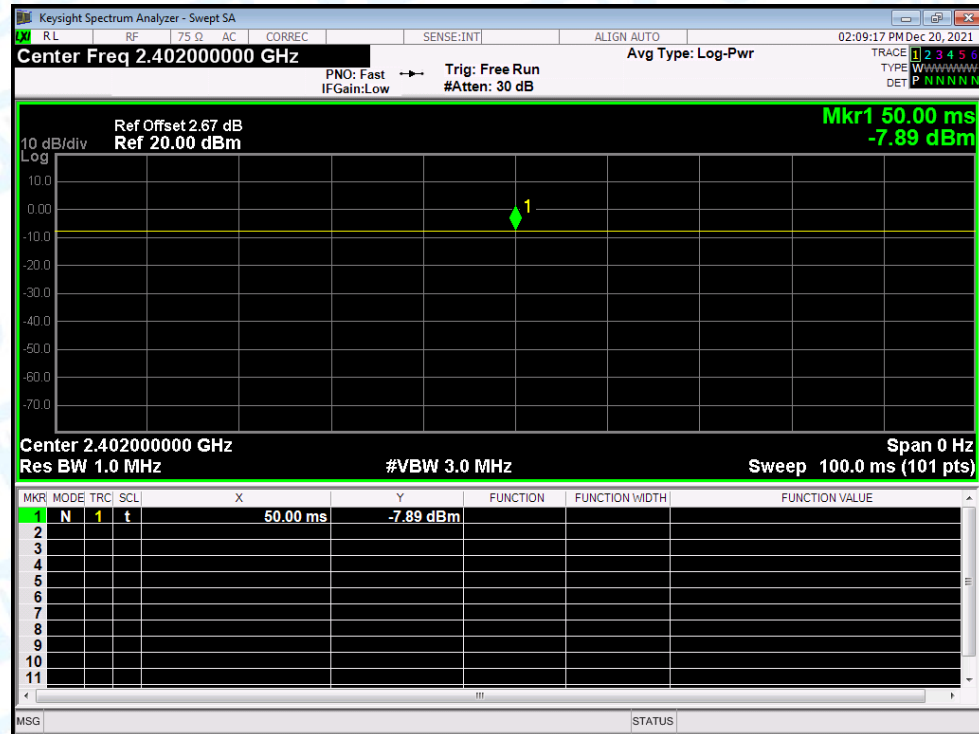
| General Description of EUT                                                             |                 |
|----------------------------------------------------------------------------------------|-----------------|
| Product Name:                                                                          | LED Video Light |
| Test Model/HVIN:                                                                       | RC120D          |
| Sample ID:                                                                             | 20211130-16#2   |
| Environmental Conditions                                                               |                 |
| Temperature:                                                                           | 24°C            |
| Relative Humidity:                                                                     | 50%             |
| Test Voltage:                                                                          | DC19V           |
| Test Engineer:                                                                         | Hejingchang     |
| Note: For a more detailed features description, please refer to the report TB-RF185649 |                 |

## 1.Duty Cycle

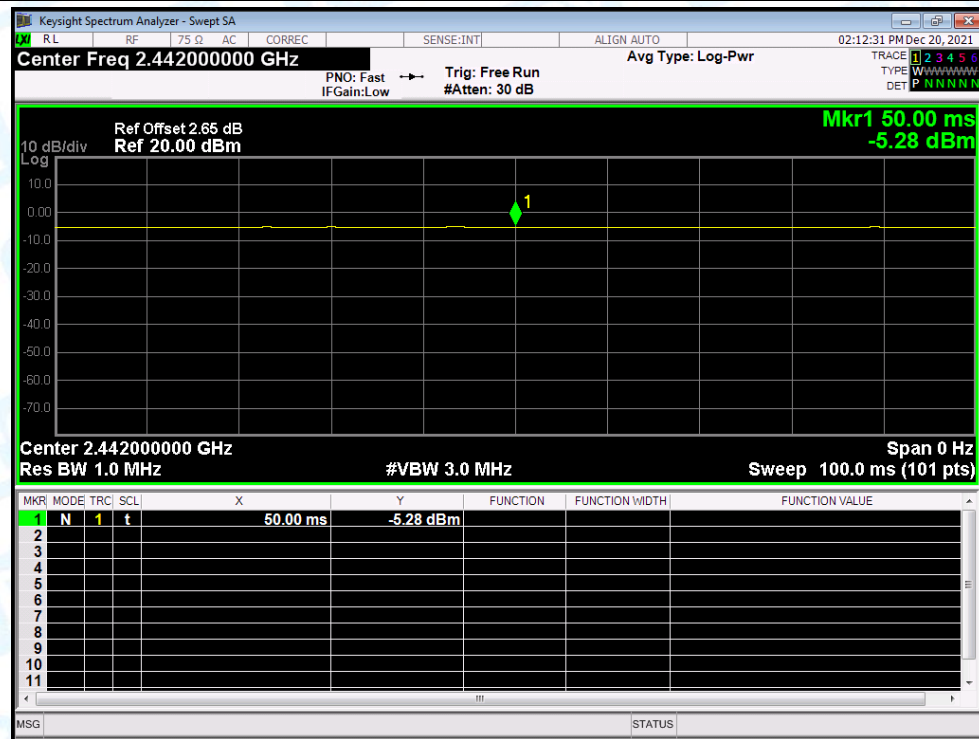
| Condition | Mode      | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|-----------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | BLE 1Mbps | 2402            | Ant1    | 100            | 0                      | 0         |
| NVNT      | BLE 1Mbps | 2442            | Ant1    | 100            | 0                      | 0         |
| NVNT      | BLE 1Mbps | 2480            | Ant1    | 100            | 0                      | 0         |

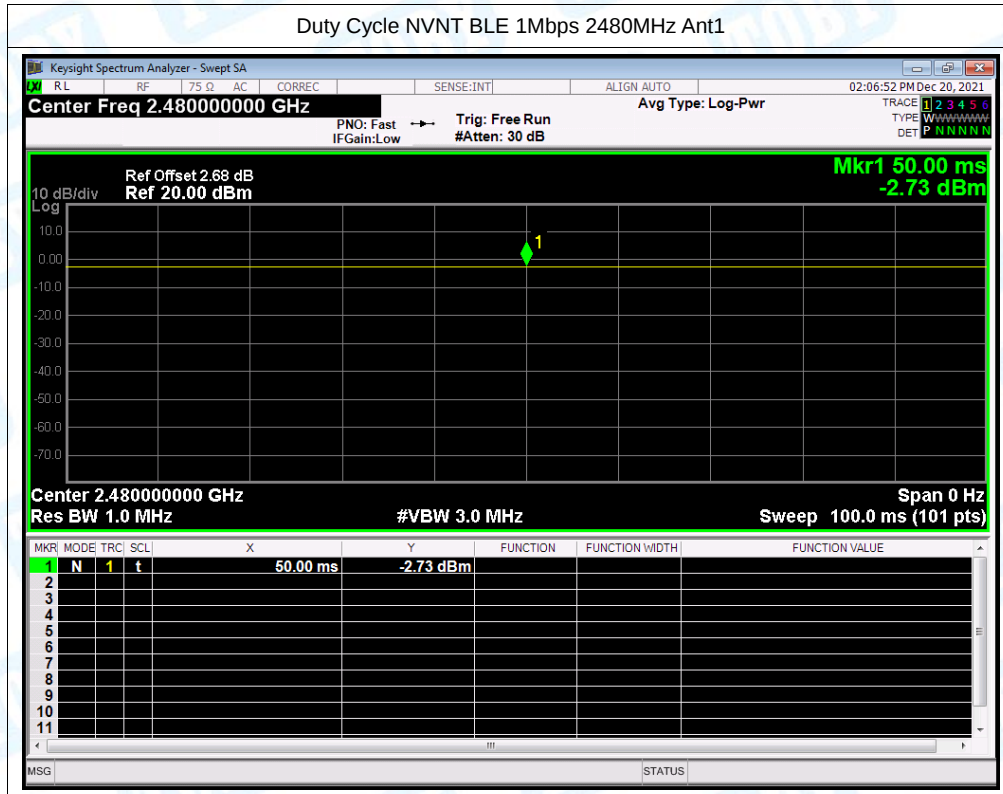
## Test Graphs

## Duty Cycle NVNT BLE 1Mbps 2402MHz Ant1



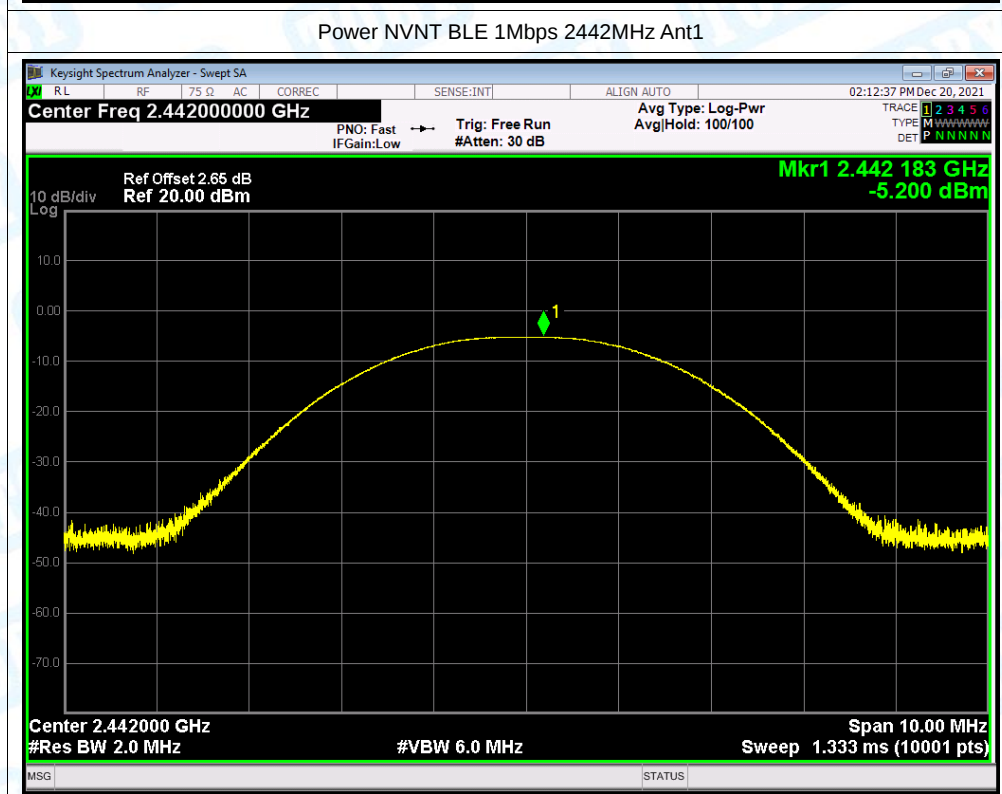
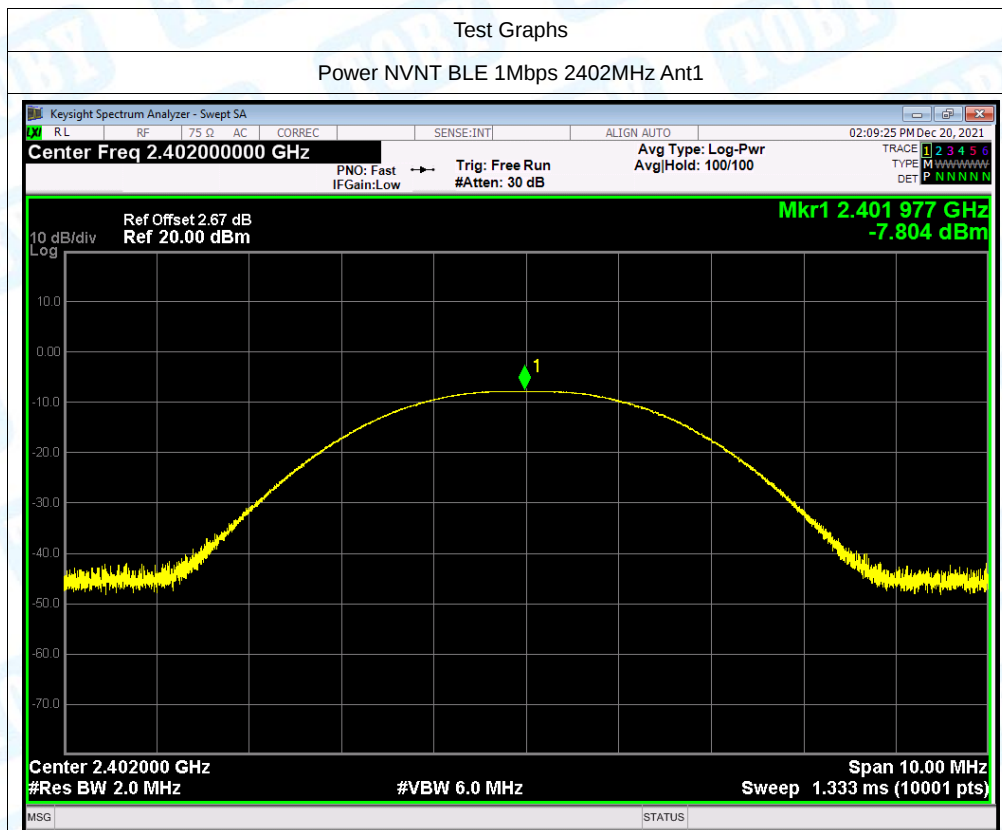
## Duty Cycle NVNT BLE 1Mbps 2442MHz Ant1

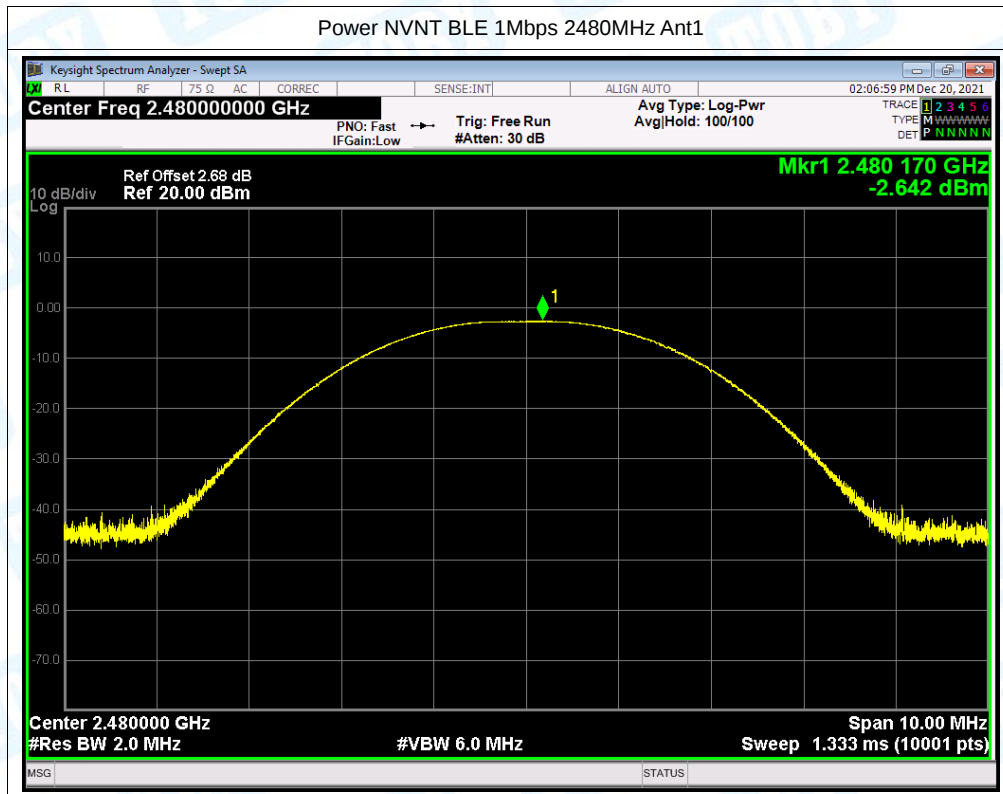




## 2.Maximum Conducted Output Power

| Condition | Mode         | Frequency<br>(MHz) | Antenna | Conducted Power<br>(dBm) | Duty Factor<br>(dB) | Total Power<br>(dBm) | Limit<br>(dBm) | Verdict |
|-----------|--------------|--------------------|---------|--------------------------|---------------------|----------------------|----------------|---------|
| NVNT      | BLE<br>1Mbps | 2402               | Ant1    | -7.804                   | 0                   | -7.804               | 30             | Pass    |
| NVNT      | BLE<br>1Mbps | 2442               | Ant1    | -5.2                     | 0                   | -5.2                 | 30             | Pass    |
| NVNT      | BLE<br>1Mbps | 2480               | Ant1    | -2.642                   | 0                   | -2.642               | 30             | Pass    |



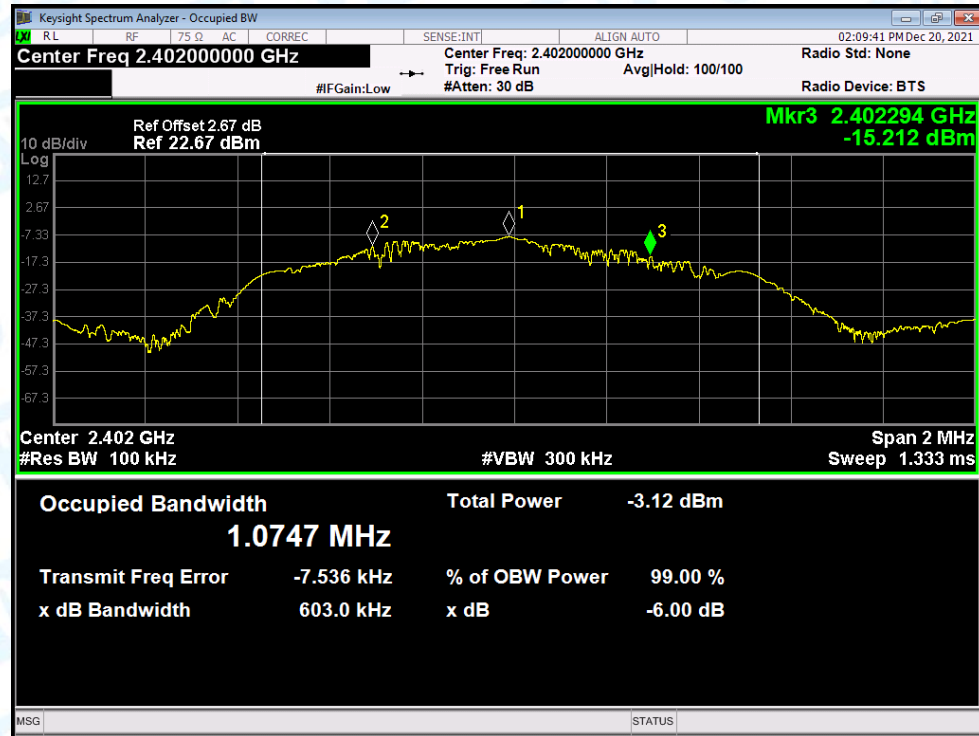


### 3.-6dB Bandwidth

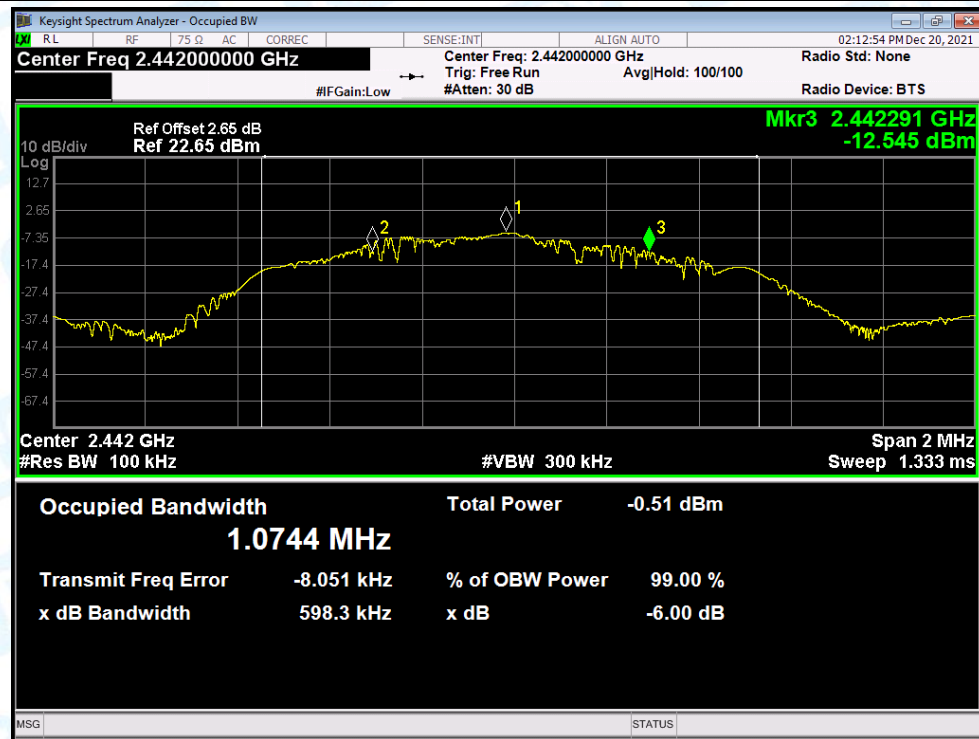
| Condition | Mode      | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|-----------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | BLE 1Mbps | 2402            | Ant1    | 0.6                   | 0.5                         | Pass    |
| NVNT      | BLE 1Mbps | 2442            | Ant1    | 0.6                   | 0.5                         | Pass    |
| NVNT      | BLE 1Mbps | 2480            | Ant1    | 0.6                   | 0.5                         | Pass    |

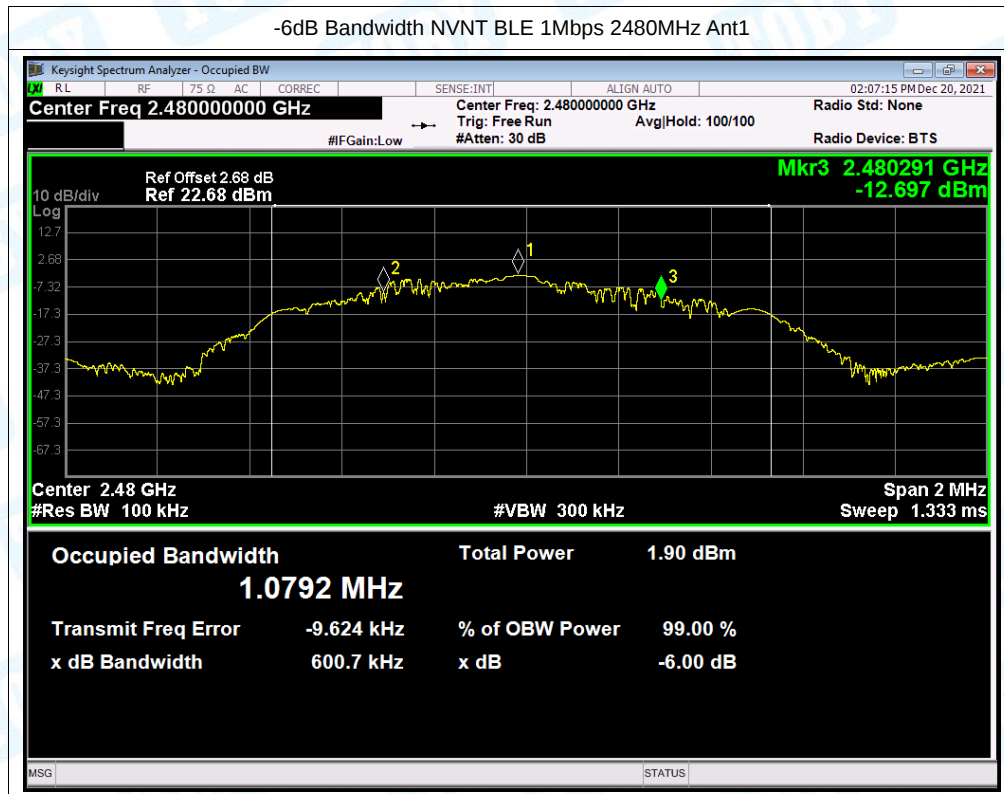
## Test Graphs

### -6dB Bandwidth NVNT BLE 1Mbps 2402MHz Ant1



### -6dB Bandwidth NVNT BLE 1Mbps 2442MHz Ant1



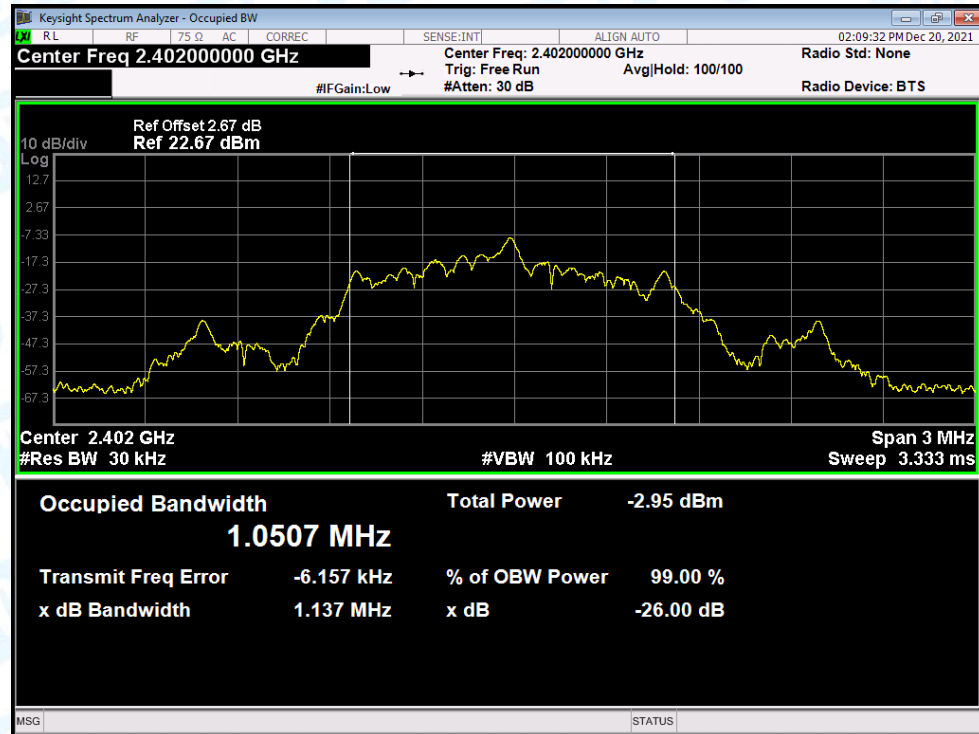


## 4.Occupied Channel Bandwidth

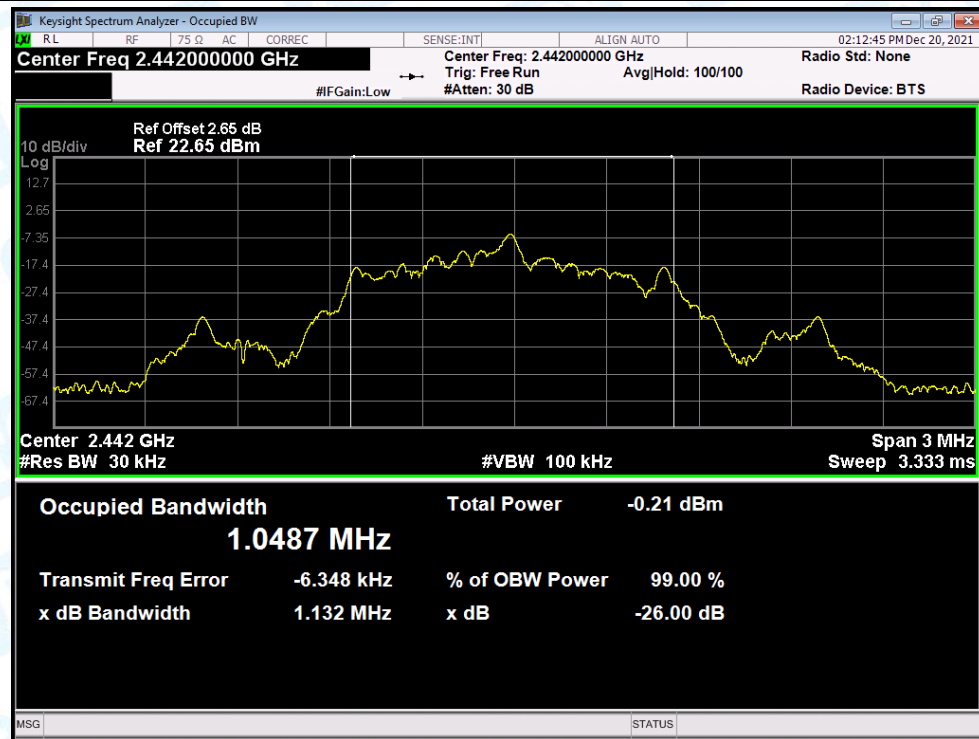
| Condition | Mode      | Frequency (MHz) | Antenna | 99% OBW (MHz) |
|-----------|-----------|-----------------|---------|---------------|
| NVNT      | BLE 1Mbps | 2402            | Ant1    | 1.051         |
| NVNT      | BLE 1Mbps | 2442            | Ant1    | 1.049         |
| NVNT      | BLE 1Mbps | 2480            | Ant1    | 1.049         |

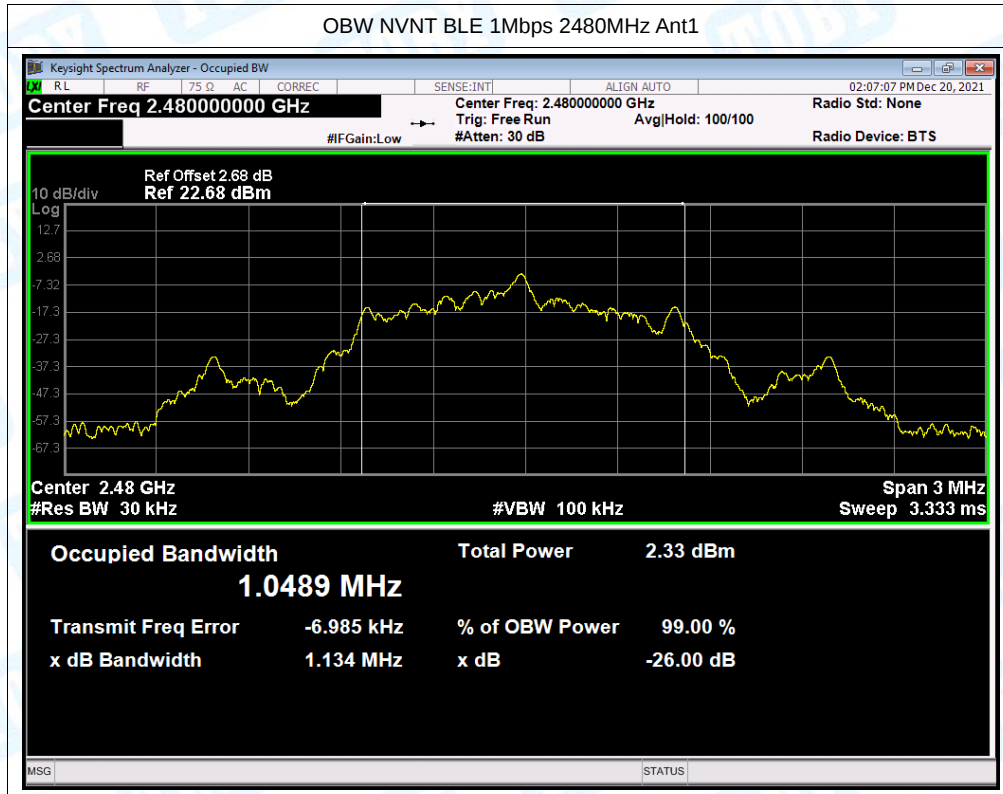
## Test Graphs

## OBW NVNT BLE 1Mbps 2402MHz Ant1



## OBW NVNT BLE 1Mbps 2442MHz Ant1





## 5.Maximum Power Spectral Density Level

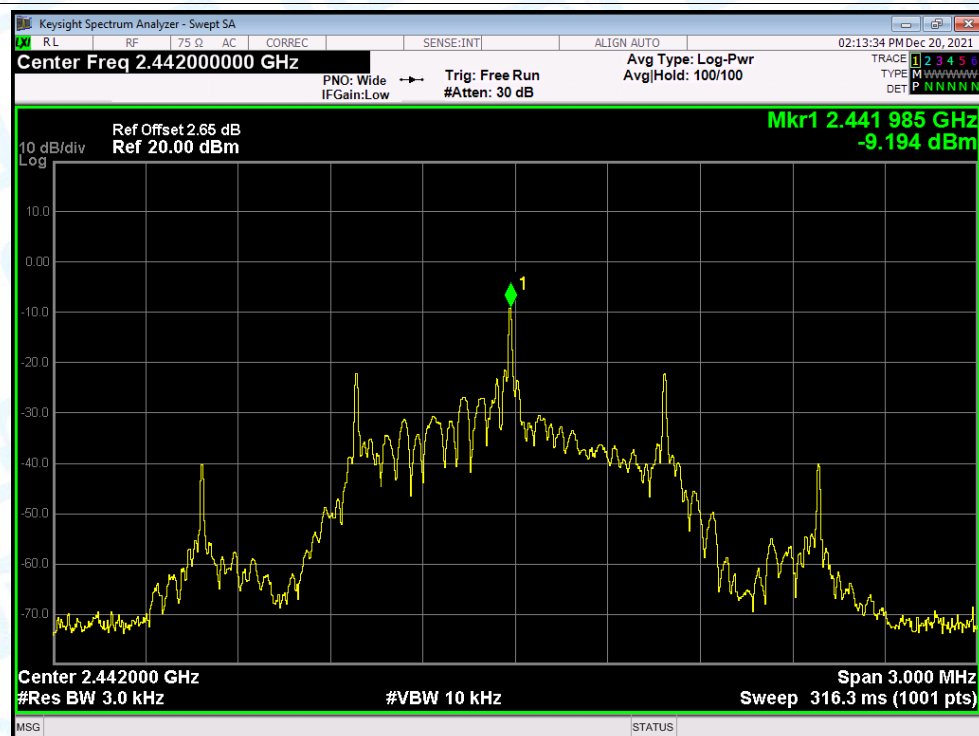
| Condition | Mode      | Frequency (MHz) | Antenna | Max PSD (dBm) | Limit (dBm) | Verdict |
|-----------|-----------|-----------------|---------|---------------|-------------|---------|
| NVNT      | BLE 1Mbps | 2402            | Ant1    | -11.784       | 8           | Pass    |
| NVNT      | BLE 1Mbps | 2442            | Ant1    | -9.194        | 8           | Pass    |
| NVNT      | BLE 1Mbps | 2480            | Ant1    | -6.672        | 8           | Pass    |

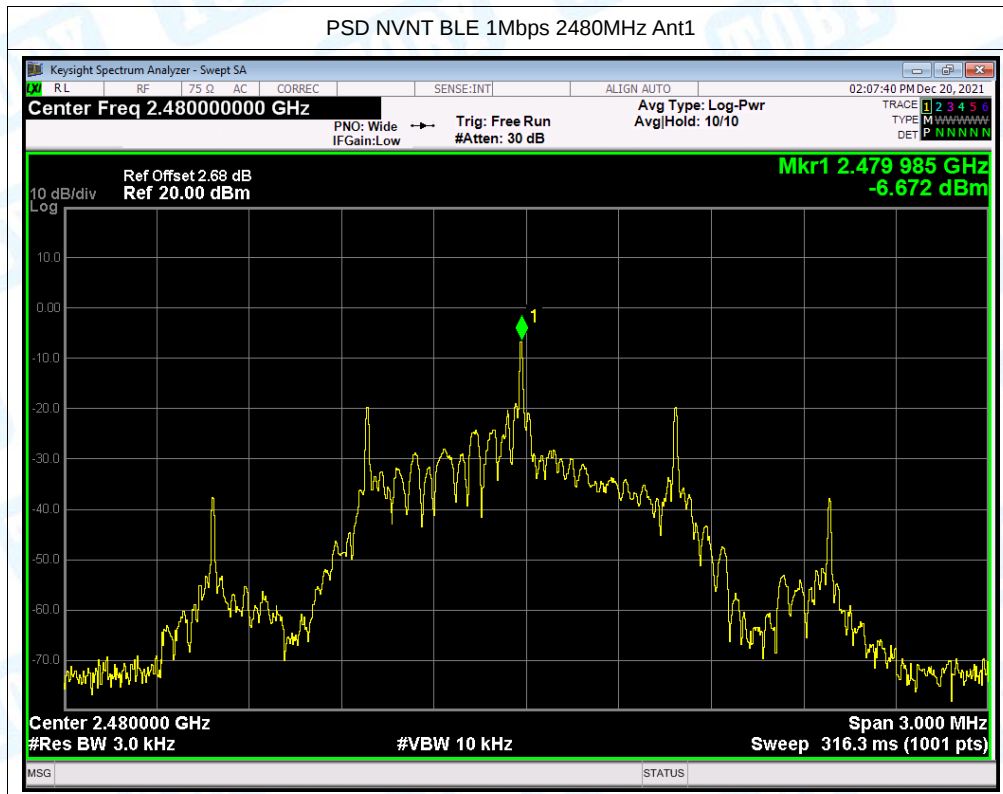
## Test Graphs

## PSD NVNT BLE 1Mbps 2402MHz Ant1



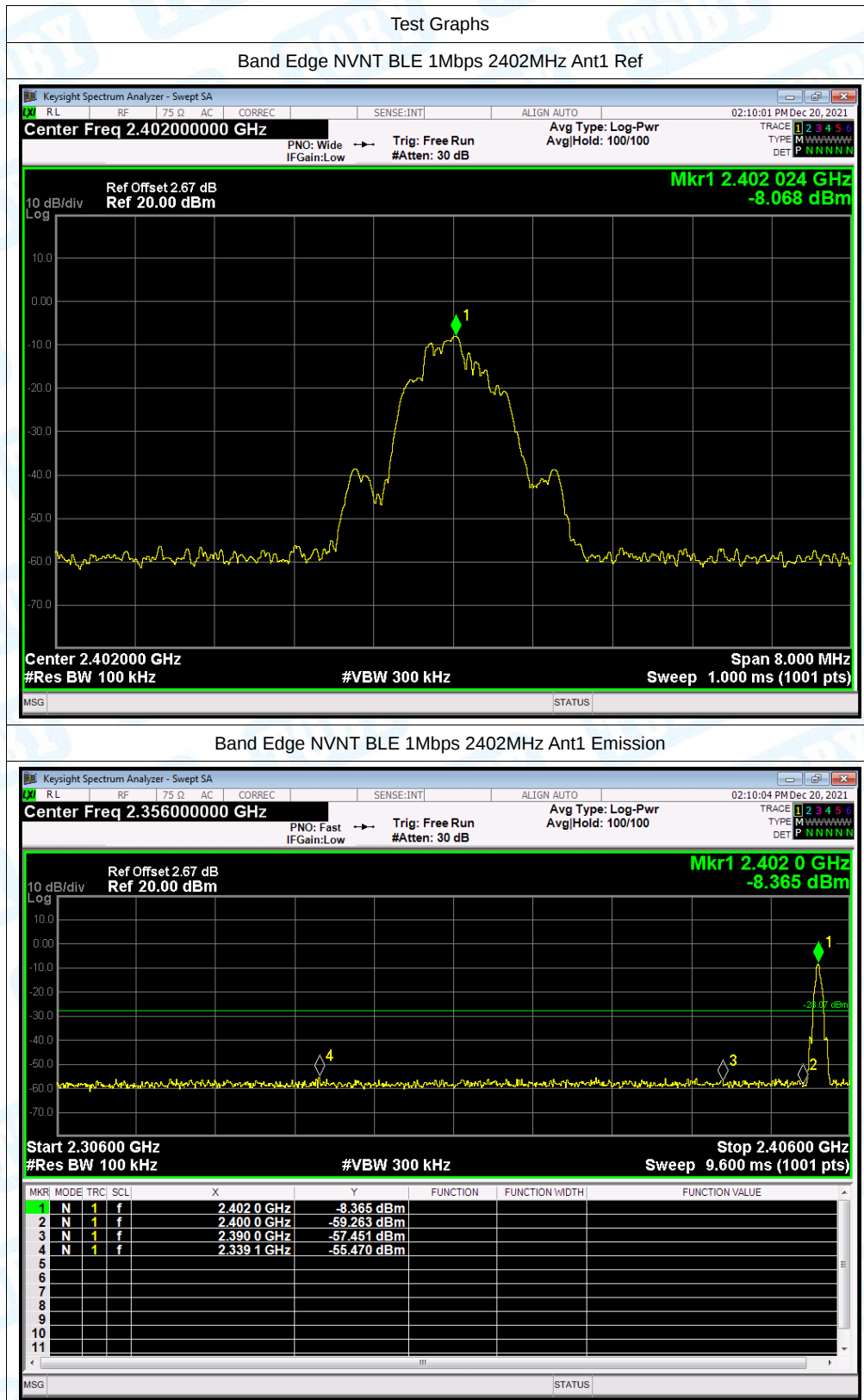
## PSD NVNT BLE 1Mbps 2442MHz Ant1



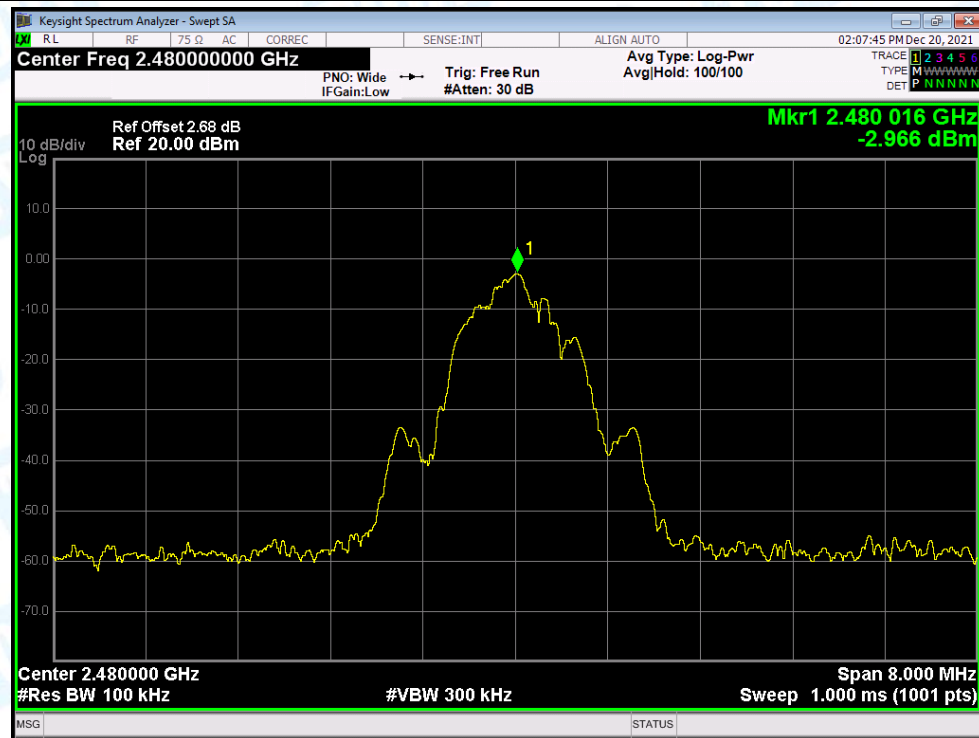


## 6.Band Edge

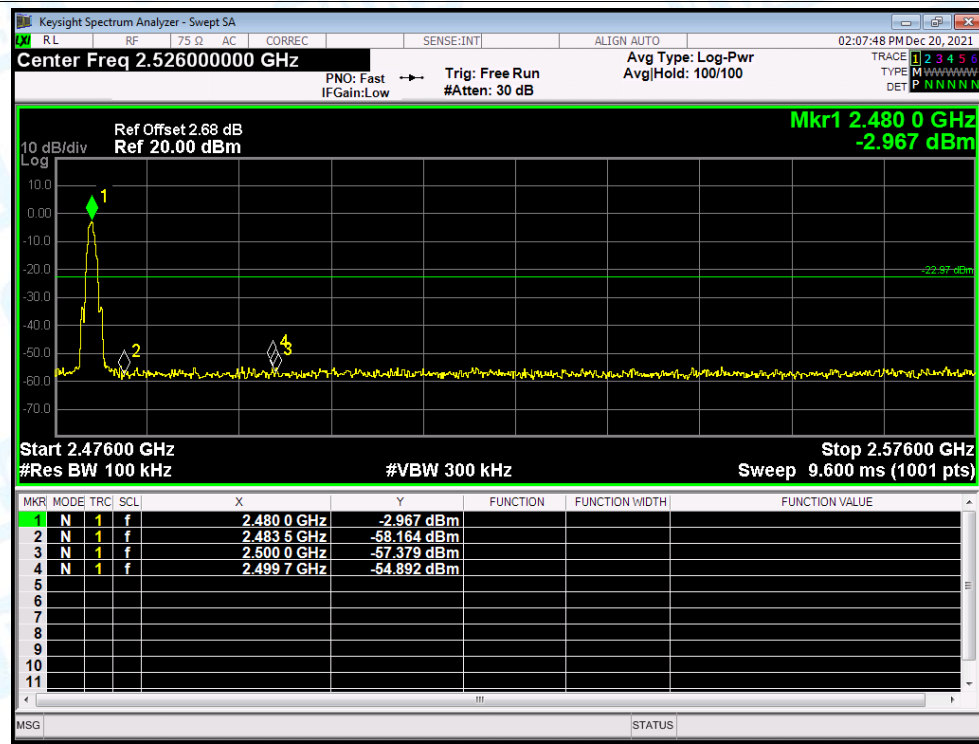
| Condition | Mode      | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-----------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1Mbps | 2402            | Ant1    | -47.4           | -20         | Pass    |
| NVNT      | BLE 1Mbps | 2480            | Ant1    | -51.92          | -20         | Pass    |



Band Edge NVNT BLE 1Mbps 2480MHz Ant1 Ref

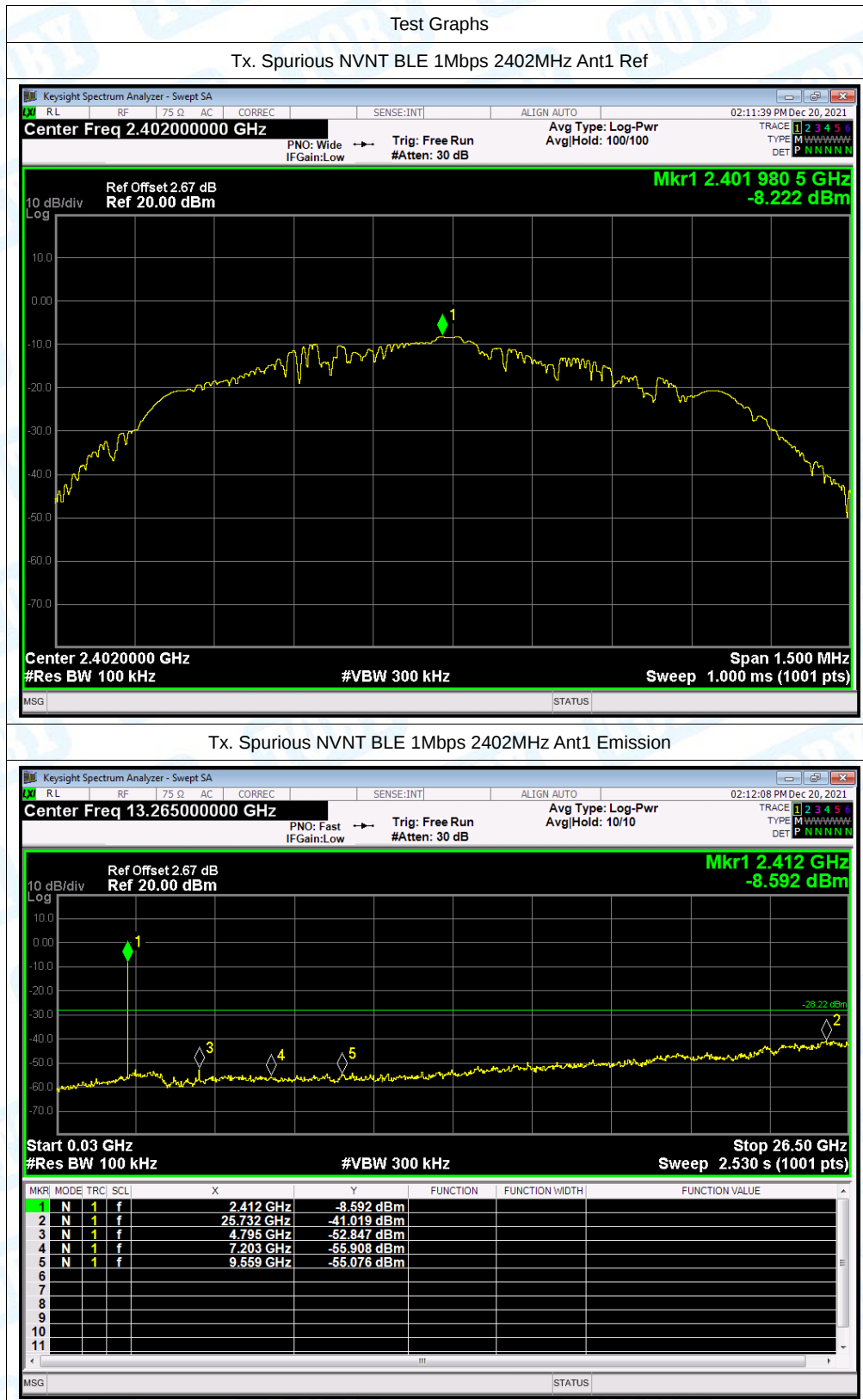


Band Edge NVNT BLE 1Mbps 2480MHz Ant1 Emission



## 7. Conducted RF Spurious Emission

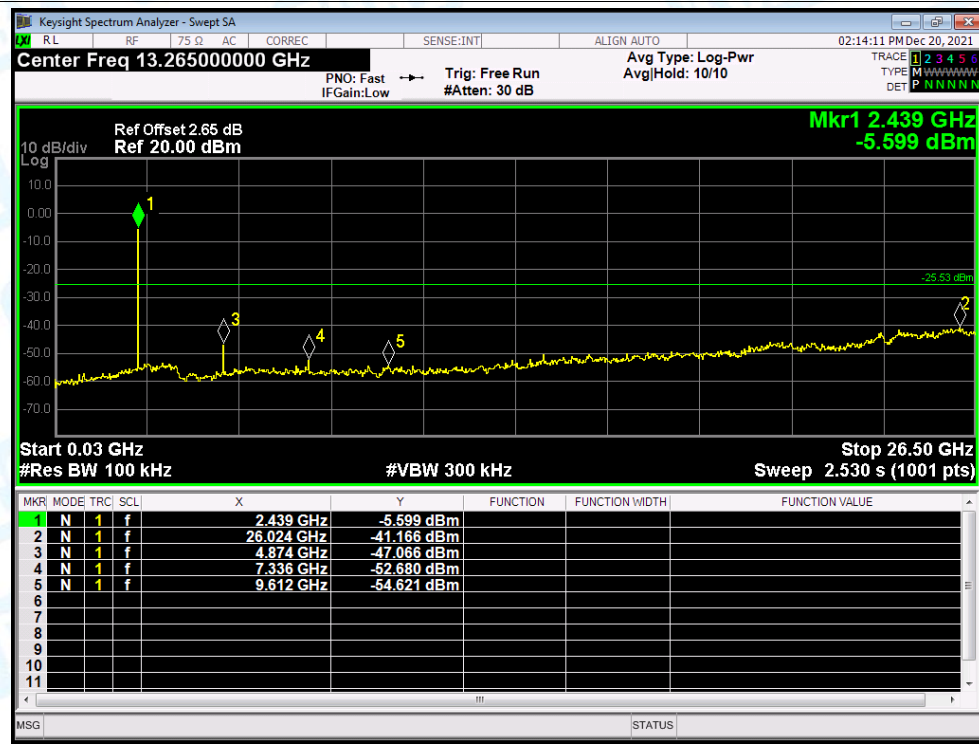
| Condition | Mode      | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|-----------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1Mbps | 2402            | Ant1    | -32.8           | -20         | Pass    |
| NVNT      | BLE 1Mbps | 2442            | Ant1    | -35.64          | -20         | Pass    |
| NVNT      | BLE 1Mbps | 2480            | Ant1    | -36.53          | -20         | Pass    |



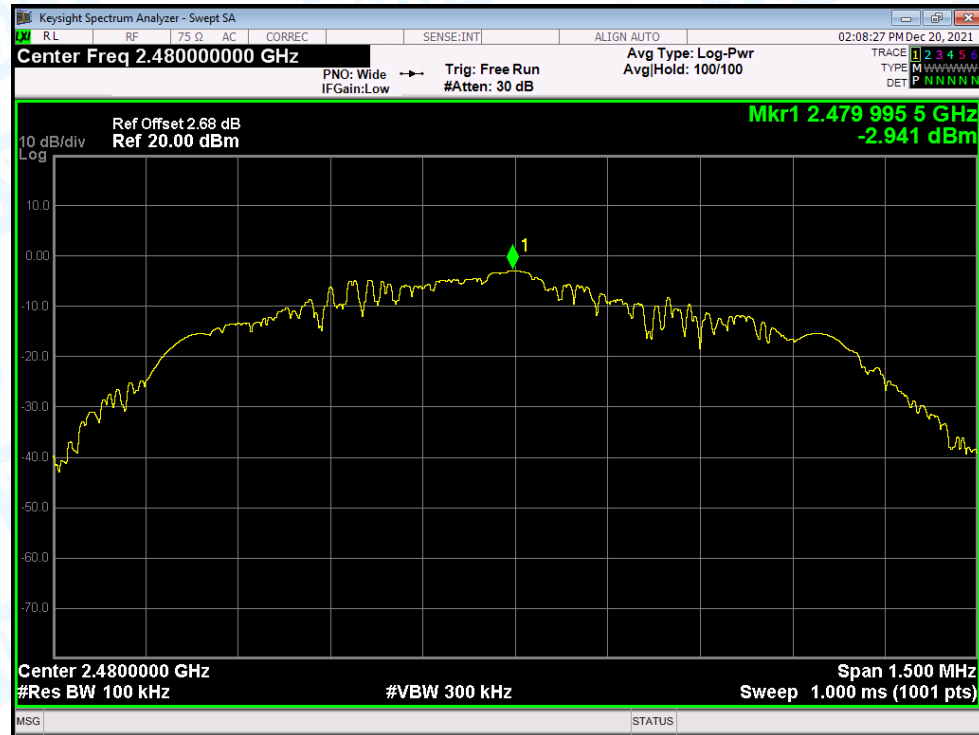
## Tx. Spurious NVNT BLE 1Mbps 2442MHz Ant1 Ref



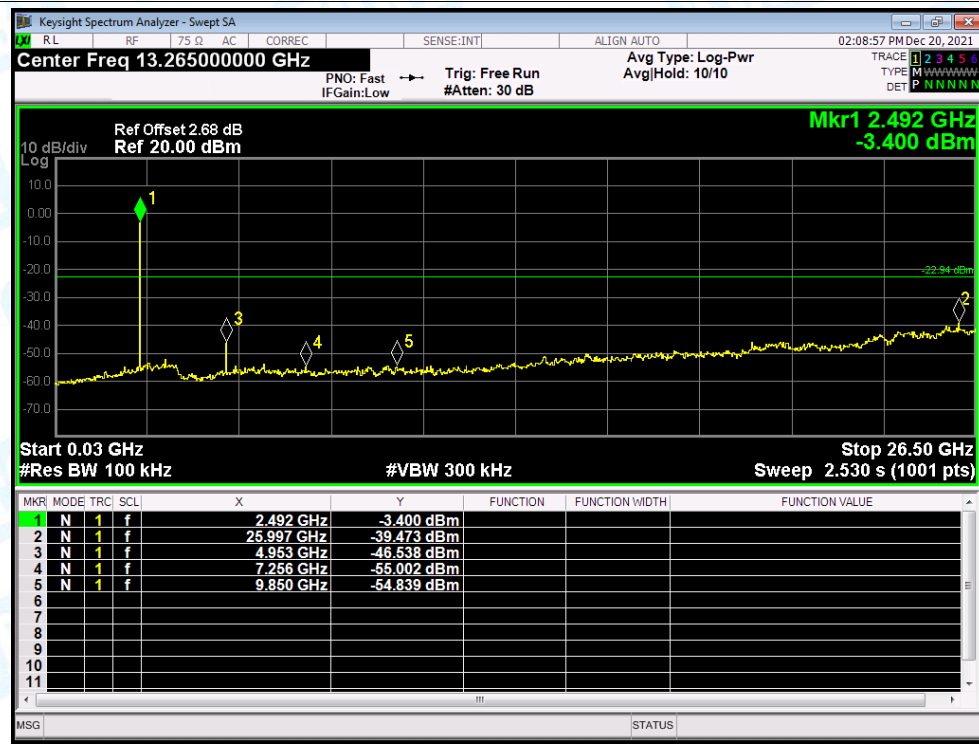
## Tx. Spurious NVNT BLE 1Mbps 2442MHz Ant1 Emission



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



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

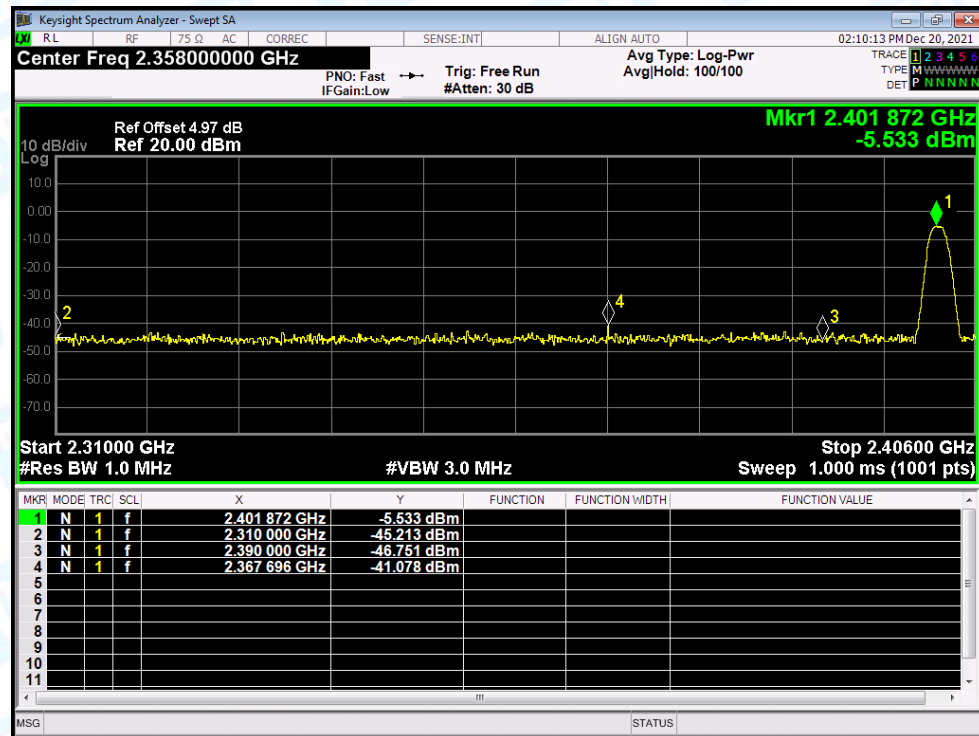


## 8.Restrict Band

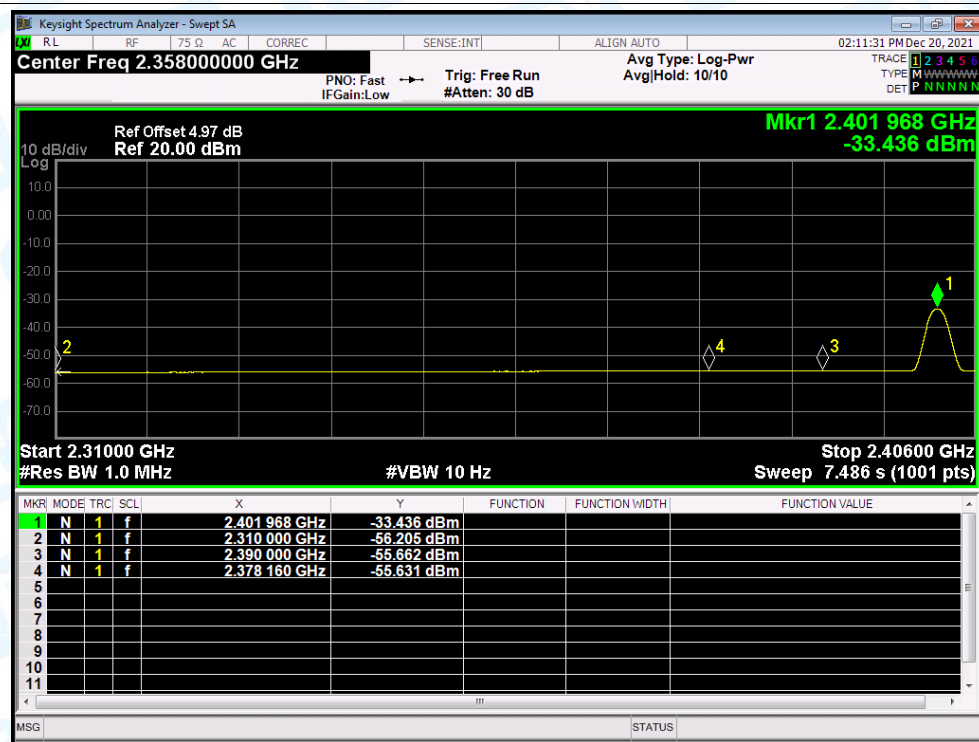
| Condition | Mode         | Frequency<br>(MHz) | Antenna | Spur Freq<br>(MHz) | Power<br>(dBm) | Gain<br>(dBi) | E<br>(dBuV/m) | Detector | Limit<br>(dBuV/m) | Verdict |
|-----------|--------------|--------------------|---------|--------------------|----------------|---------------|---------------|----------|-------------------|---------|
| NVNT      | BLE<br>1Mbps | 2402               | Ant1    | 2310               | -45.21         | 2.3           | 52.35         | Peak     | 74                | Pass    |
| NVNT      | BLE<br>1Mbps | 2402               | Ant1    | 2310               | -56.2          | 2.3           | 41.36         | Average  | 54                | Pass    |
| NVNT      | BLE<br>1Mbps | 2402               | Ant1    | 2367.696           | -41.08         | 2.3           | 56.48         | Peak     | 74                | Pass    |
| NVNT      | BLE<br>1Mbps | 2402               | Ant1    | 2378.16            | -55.63         | 2.3           | 41.93         | Average  | 54                | Pass    |
| NVNT      | BLE<br>1Mbps | 2402               | Ant1    | 2390               | -45.92         | 2.3           | 51.64         | Peak     | 74                | Pass    |
| NVNT      | BLE<br>1Mbps | 2402               | Ant1    | 2390               | -55.66         | 2.3           | 41.9          | Average  | 54                | Pass    |
| NVNT      | BLE<br>1Mbps | 2480               | Ant1    | 2483.5             | -43.18         | 2.3           | 54.38         | Peak     | 74                | Pass    |
| NVNT      | BLE<br>1Mbps | 2480               | Ant1    | 2483.5             | -54.92         | 2.3           | 42.64         | Average  | 54                | Pass    |
| NVNT      | BLE<br>1Mbps | 2480               | Ant1    | 2491.768           | -42.5          | 2.3           | 55.06         | Peak     | 74                | Pass    |
| NVNT      | BLE<br>1Mbps | 2480               | Ant1    | 2483.512           | -54.92         | 2.3           | 42.64         | Average  | 54                | Pass    |
| NVNT      | BLE<br>1Mbps | 2480               | Ant1    | 2500               | -43.16         | 2.3           | 54.4          | Peak     | 74                | Pass    |
| NVNT      | BLE<br>1Mbps | 2480               | Ant1    | 2500               | -54.99         | 2.3           | 42.57         | Average  | 54                | Pass    |

## Test Graphs

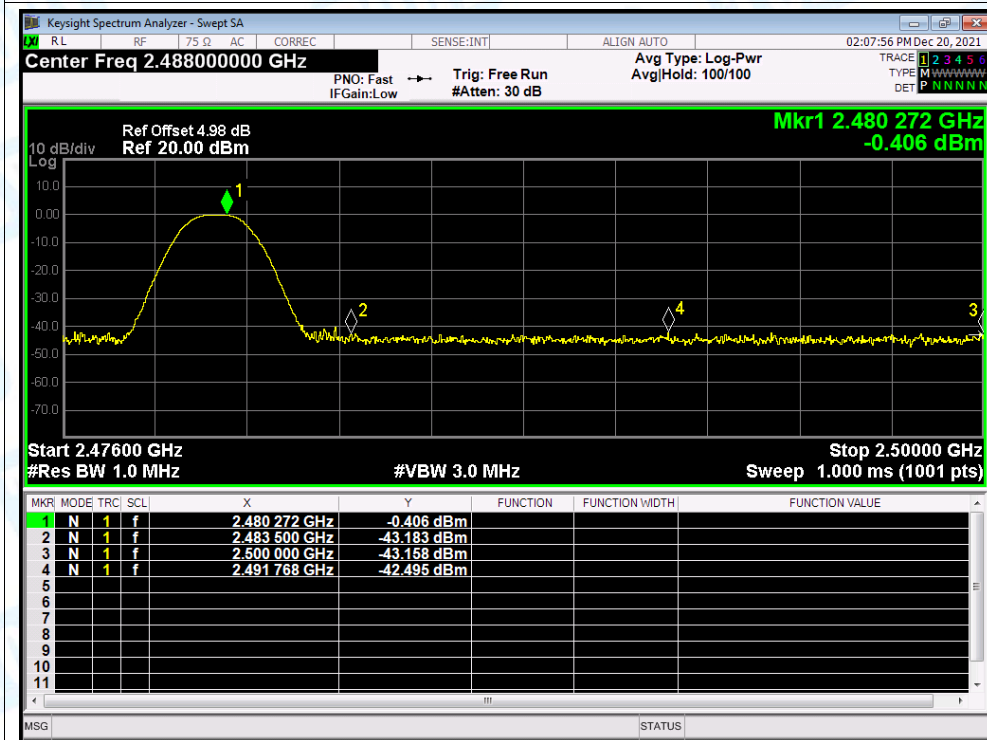
## Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Peak



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



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



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

