

# RF Test Data for 2.4G WiFi (Conducted Measurements)

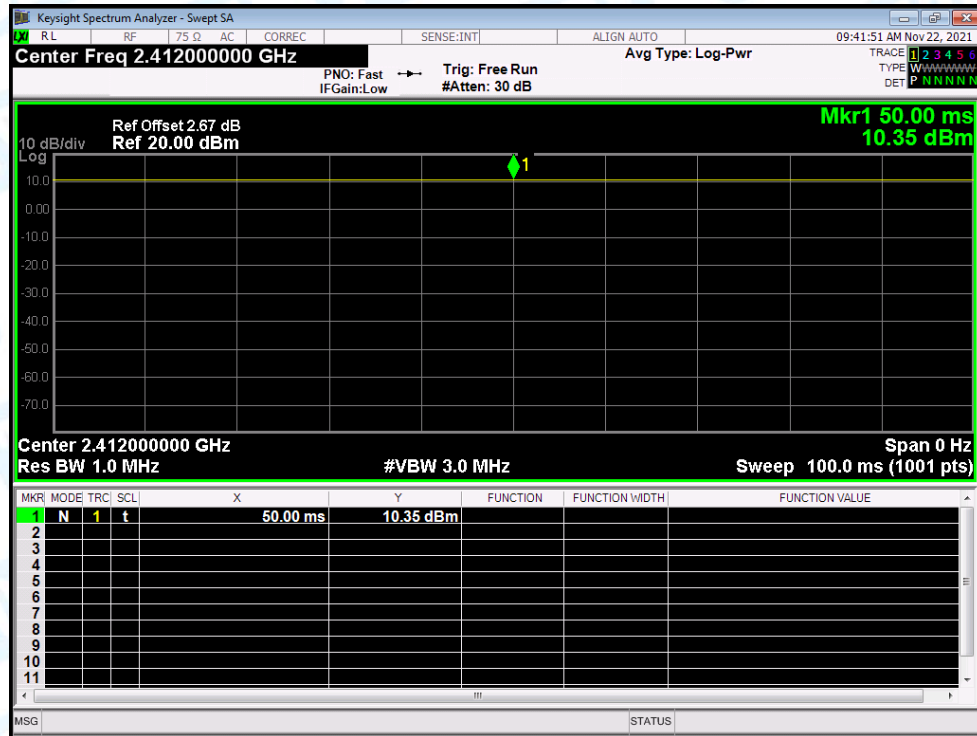
| General Description of EUT                                                             |                 |
|----------------------------------------------------------------------------------------|-----------------|
| Product Name:                                                                          | Wireless Camera |
| Test Model:                                                                            | CA544           |
| Sample ID:                                                                             | 20211014-10-2#  |
| Environmental Conditions                                                               |                 |
| Temperature:                                                                           | 24°C            |
| Relative Humidity:                                                                     | 50%             |
| Test Voltage:                                                                          | DC 5V           |
| Test Engineer:                                                                         | Hejingchang     |
| Note: For a more detailed features description, please refer to the report TB-RF184778 |                 |

## 1.Duty Cycle

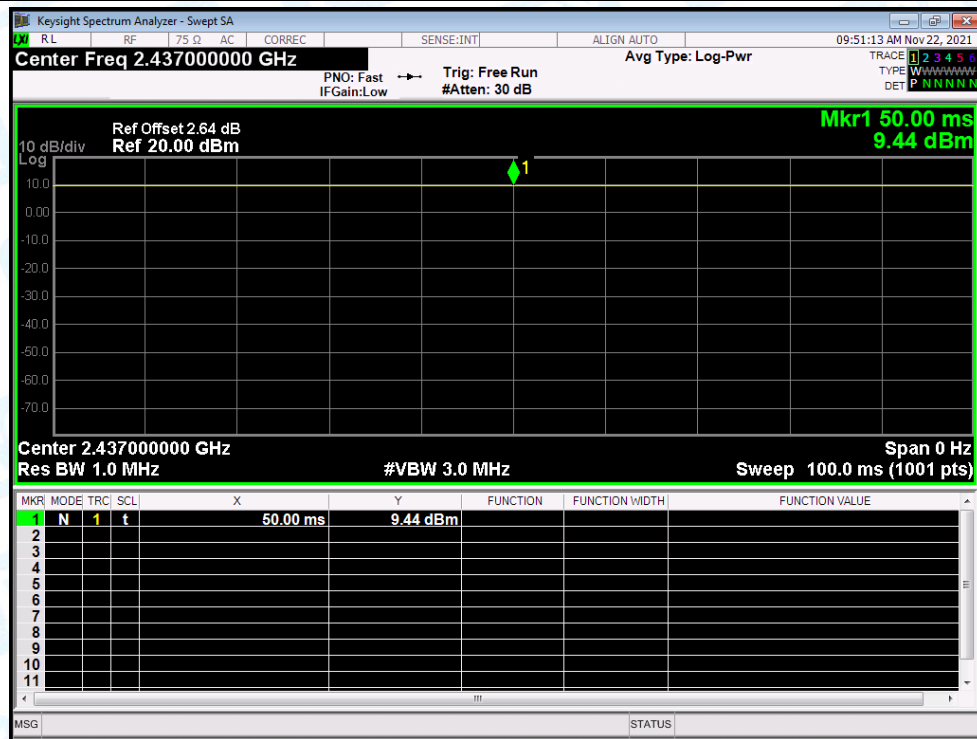
| Condition | Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | b    | 2412            | Ant1    | 100            | 0                      | 0         |
| NVNT      | b    | 2437            | Ant1    | 100            | 0                      | 0         |
| NVNT      | b    | 2462            | Ant1    | 100            | 0                      | 0         |
| NVNT      | g    | 2412            | Ant1    | 100            | 0                      | 0         |
| NVNT      | g    | 2437            | Ant1    | 100            | 0                      | 0         |
| NVNT      | g    | 2462            | Ant1    | 100            | 0                      | 0         |

## Test Graphs

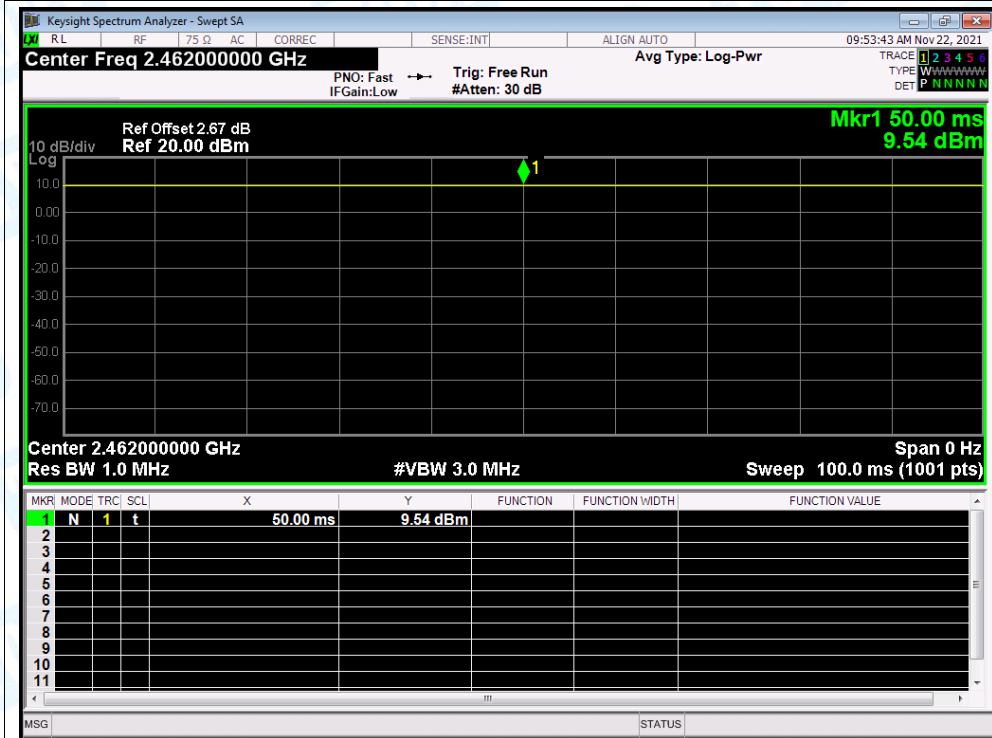
### Duty Cycle NVNT b 2412MHz Ant1



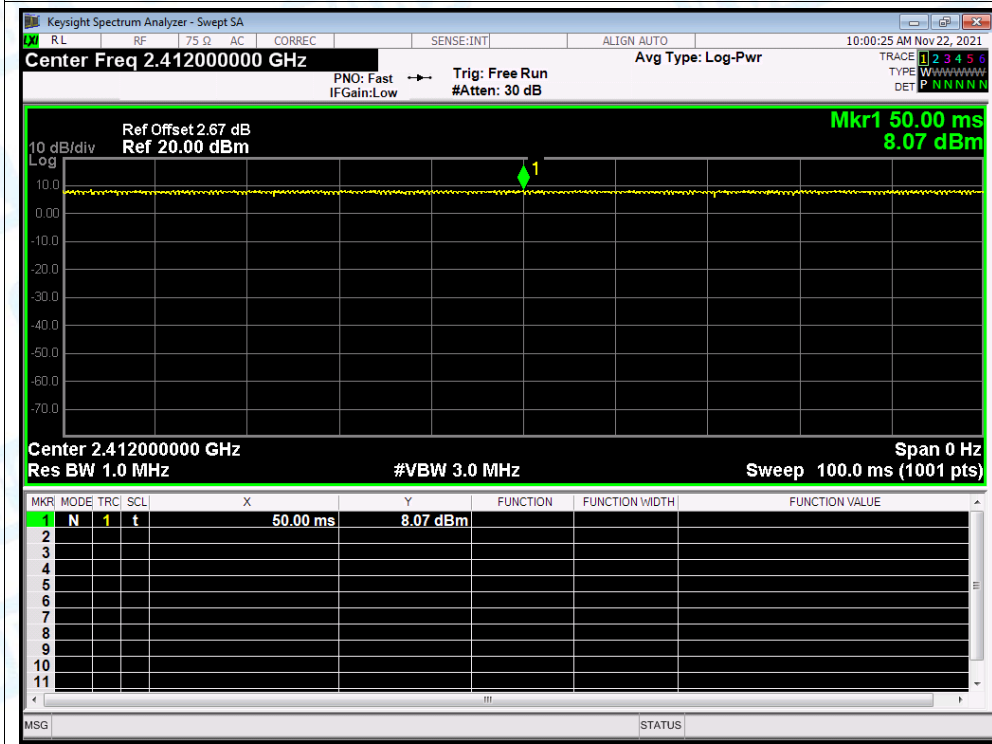
### Duty Cycle NVNT b 2437MHz Ant1



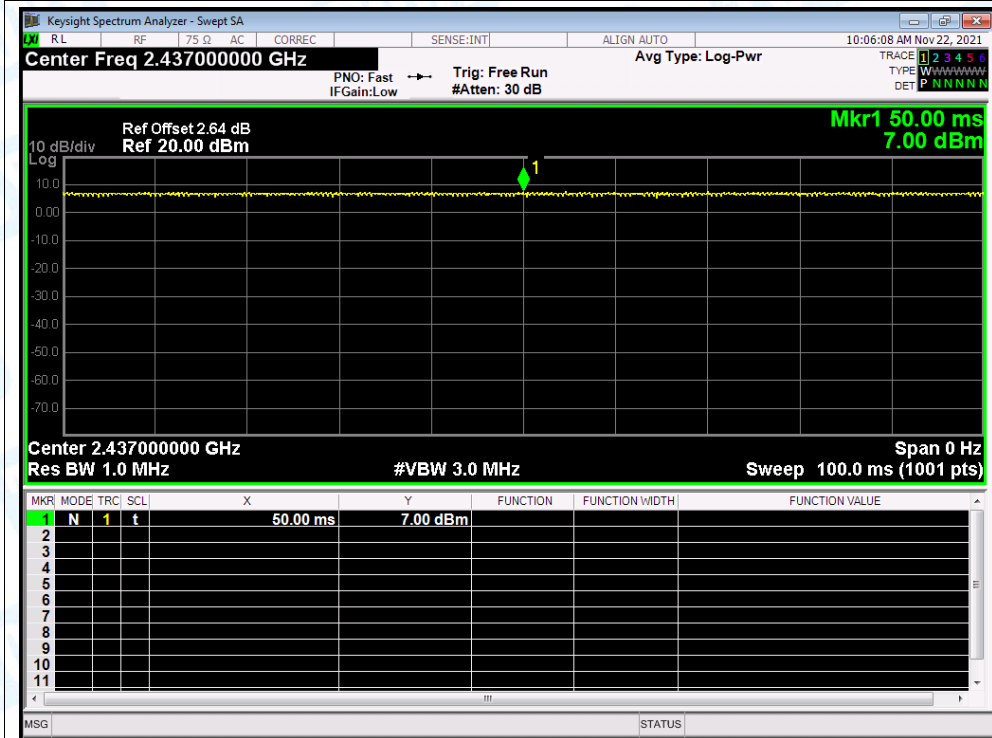
## Duty Cycle NVNT b 2462MHz Ant1



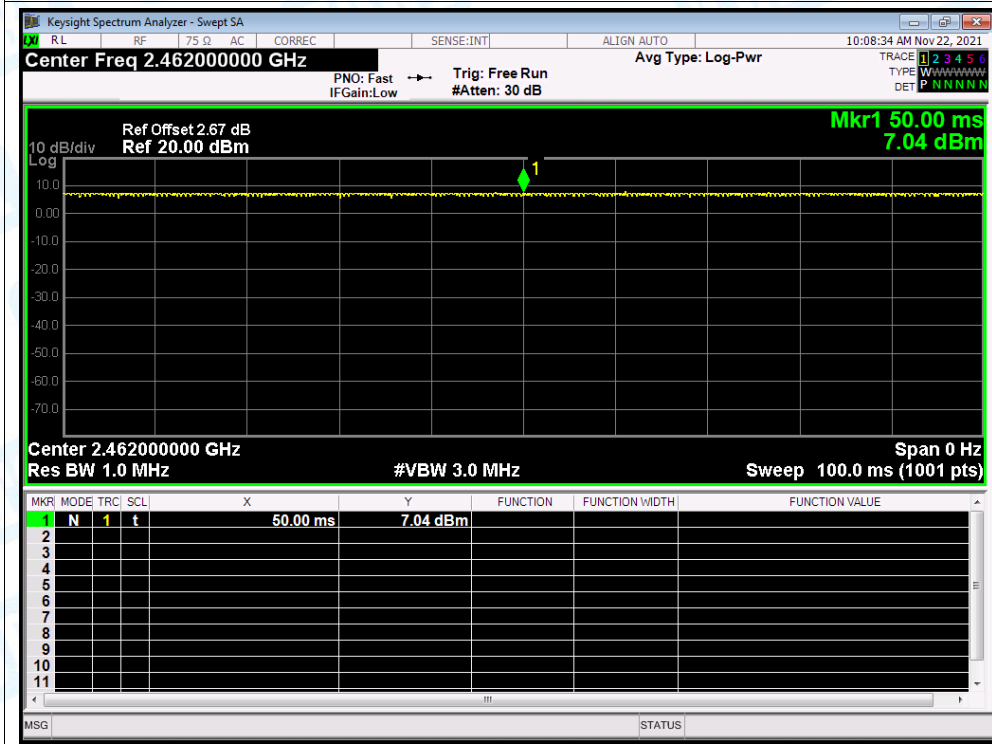
## Duty Cycle NVNT g 2412MHz Ant1



Duty Cycle NVNT g 2437MHz Ant1



Duty Cycle NVNT g 2462MHz Ant1



## 2.Maximum Conducted Output Power

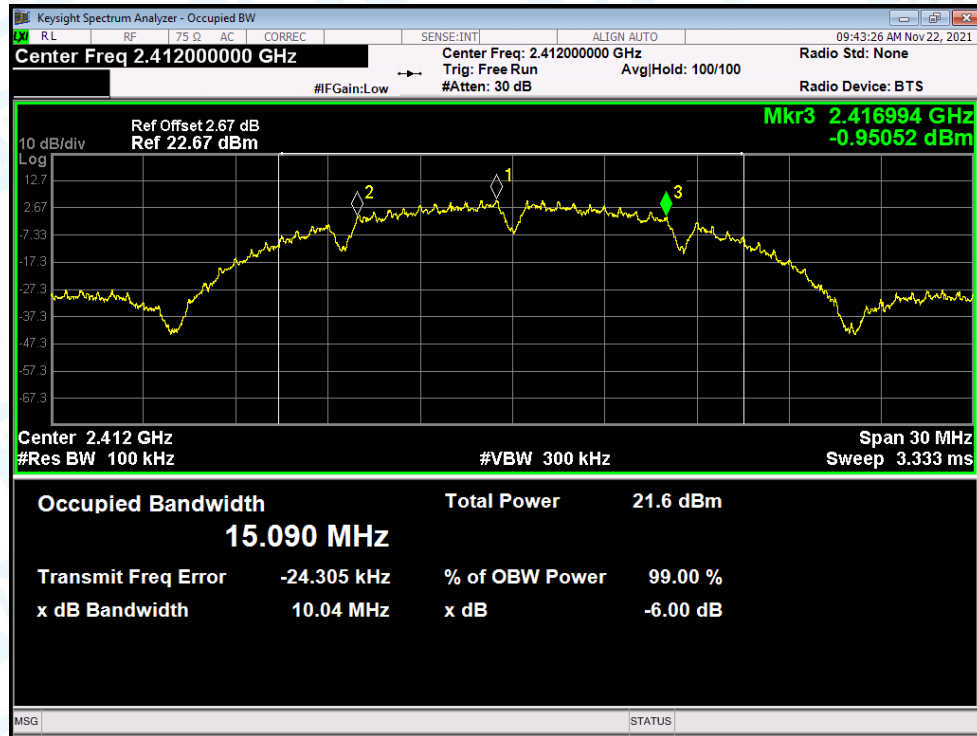
| Condition | Mode | Frequency<br>(MHz) | Antenna | Conducted Power<br>(dBm) | Duty Factor<br>(dB) | Total Power<br>(dBm) | Limit<br>(dBm) | Verdict |
|-----------|------|--------------------|---------|--------------------------|---------------------|----------------------|----------------|---------|
| NVNT      | b    | 2412               | Ant1    | 16.679                   | 0                   | 16.679               | 30             | Pass    |
| NVNT      | b    | 2437               | Ant1    | 16.698                   | 0                   | 16.698               | 30             | Pass    |
| NVNT      | b    | 2462               | Ant1    | 16.794                   | 0                   | 16.794               | 30             | Pass    |
| NVNT      | g    | 2412               | Ant1    | 17.539                   | 0                   | 17.539               | 30             | Pass    |
| NVNT      | g    | 2437               | Ant1    | 17.482                   | 0                   | 17.482               | 30             | Pass    |
| NVNT      | g    | 2462               | Ant1    | 17.713                   | 0                   | 17.713               | 30             | Pass    |

### 3.-6dB Bandwidth

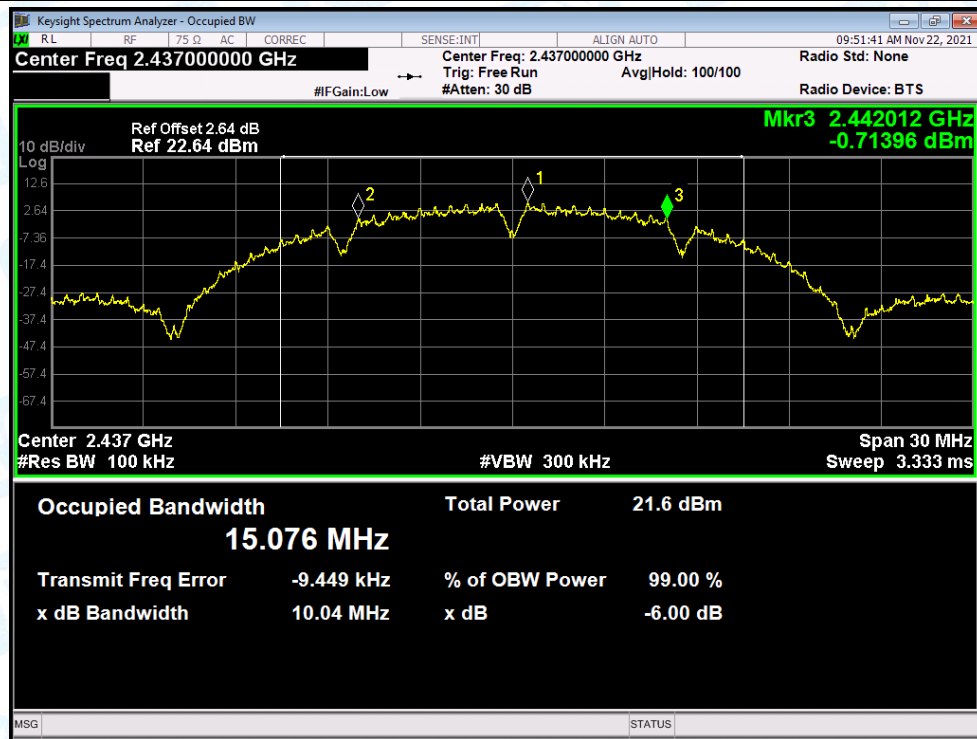
| Condition | Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | b    | 2412            | Ant1    | 10.04                 | 0.5                         | Pass    |
| NVNT      | b    | 2437            | Ant1    | 10.04                 | 0.5                         | Pass    |
| NVNT      | b    | 2462            | Ant1    | 10.05                 | 0.5                         | Pass    |
| NVNT      | g    | 2412            | Ant1    | 16.34                 | 0.5                         | Pass    |
| NVNT      | g    | 2437            | Ant1    | 16.34                 | 0.5                         | Pass    |
| NVNT      | g    | 2462            | Ant1    | 16.34                 | 0.5                         | Pass    |

## Test Graphs

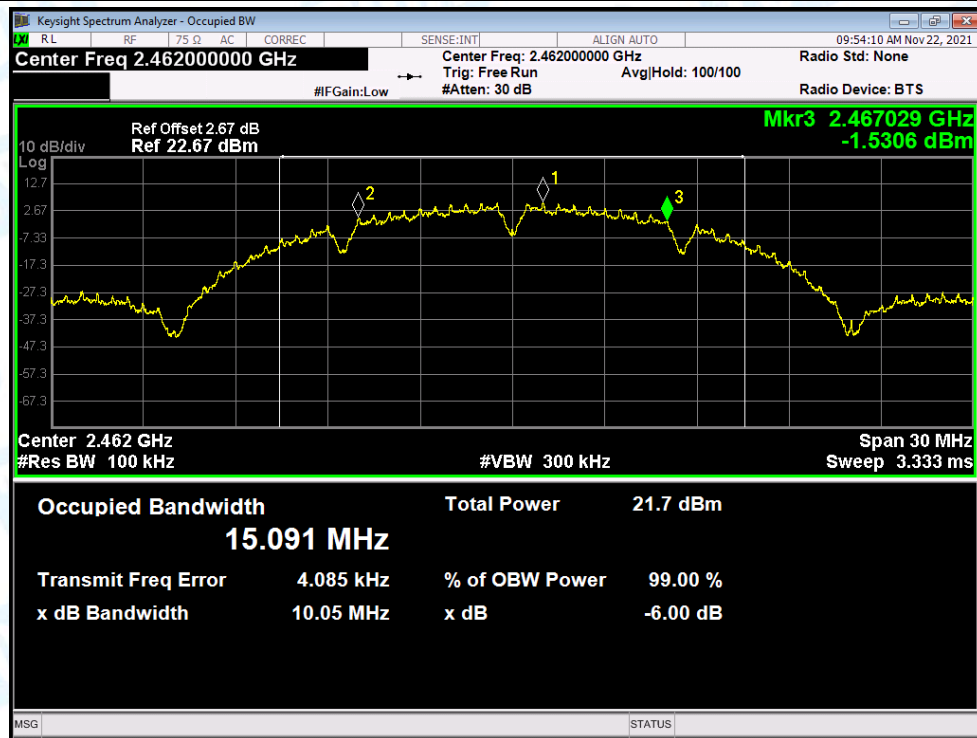
### -6dB Bandwidth NVNT b 2412MHz Ant1



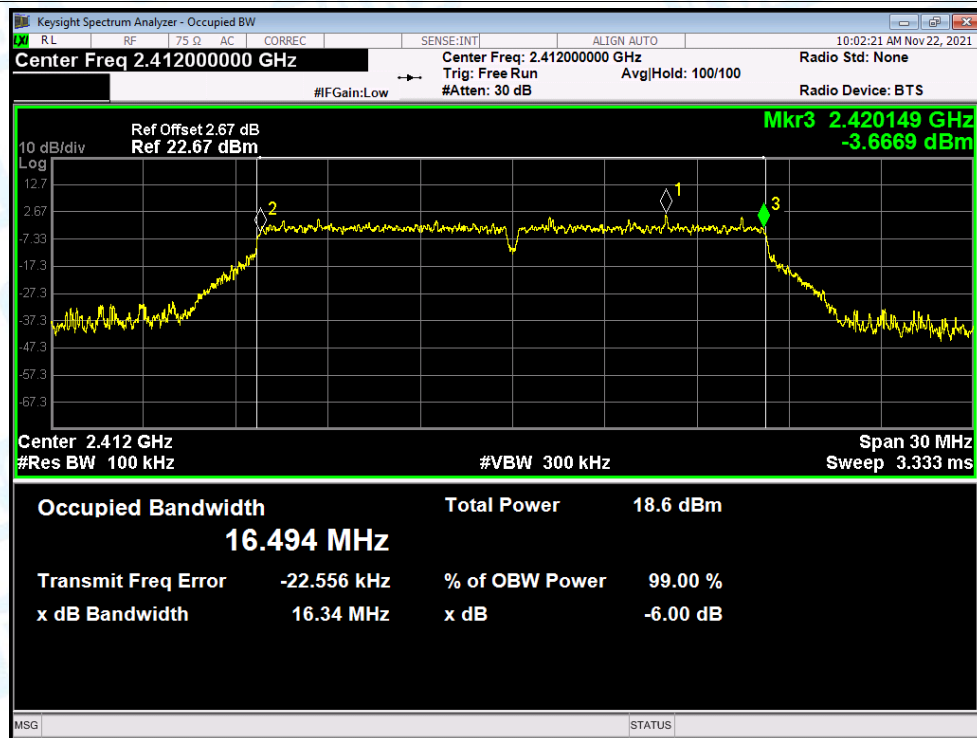
### -6dB Bandwidth NVNT b 2437MHz Ant1



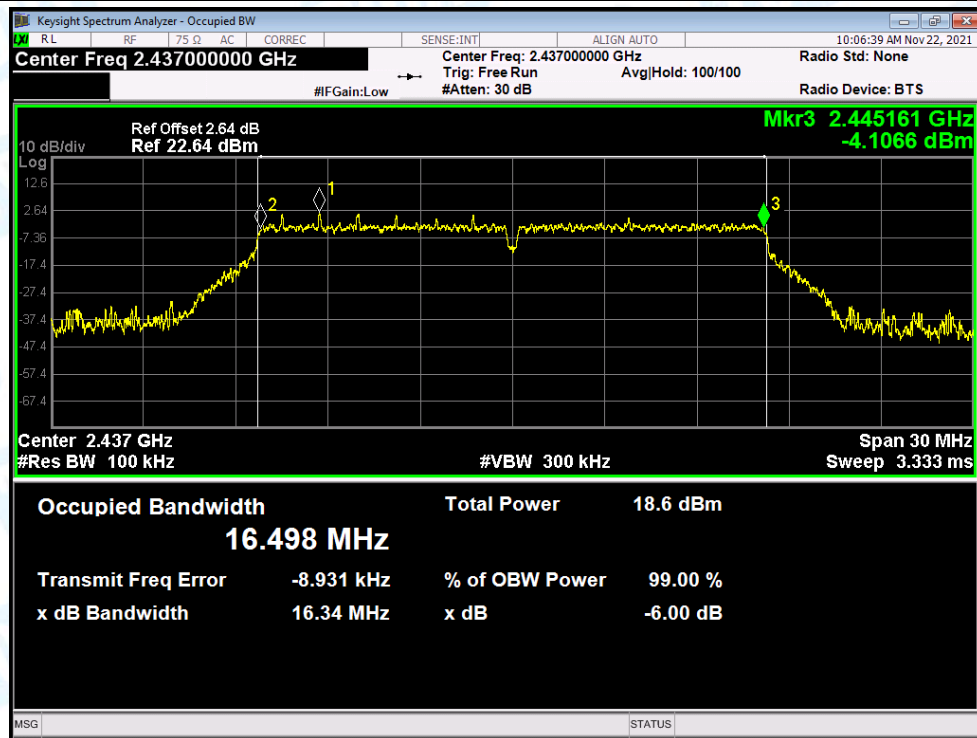
## -6dB Bandwidth NVNT b 2462MHz Ant1



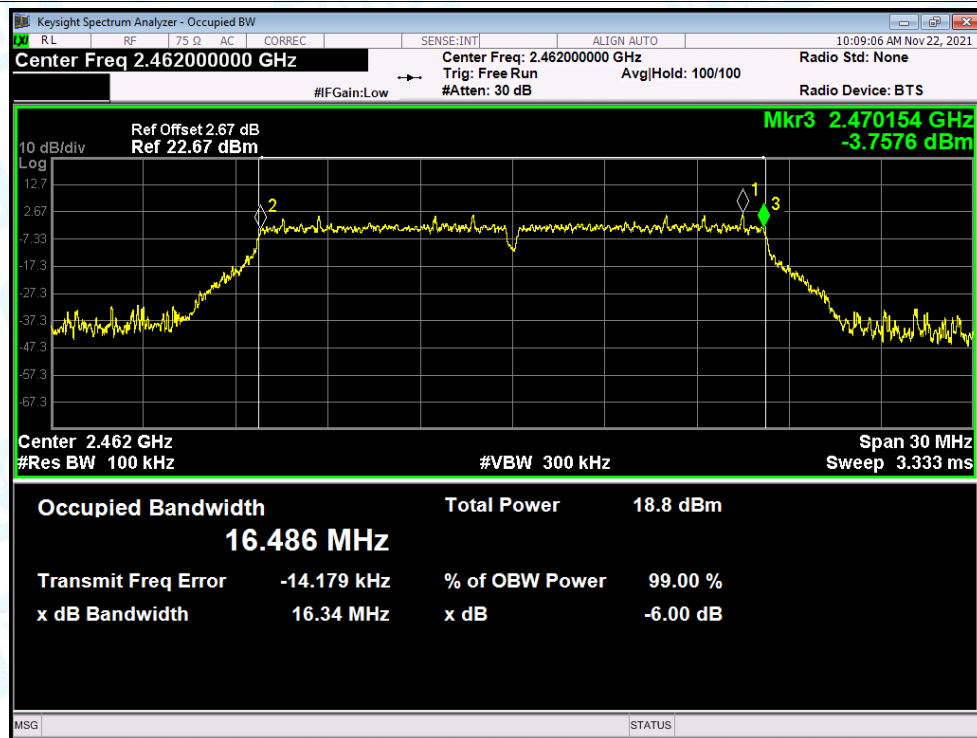
## -6dB Bandwidth NVNT g 2412MHz Ant1



## -6dB Bandwidth NVNT g 2437MHz Ant1



## -6dB Bandwidth NVNT g 2462MHz Ant1

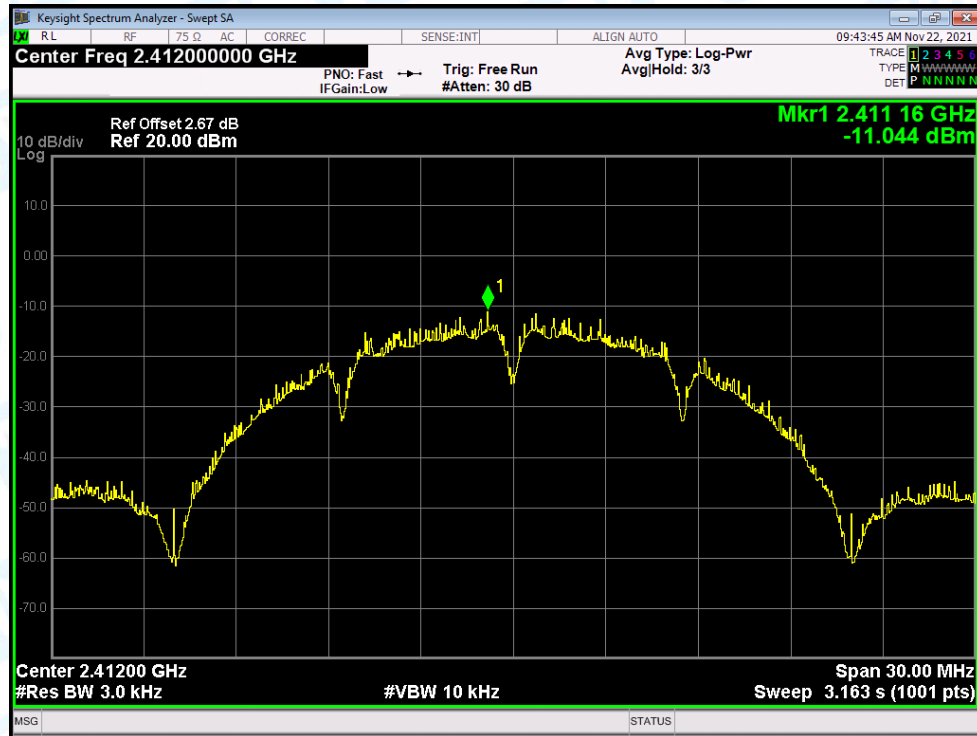


## 4.Maximum Power Spectral Density Level

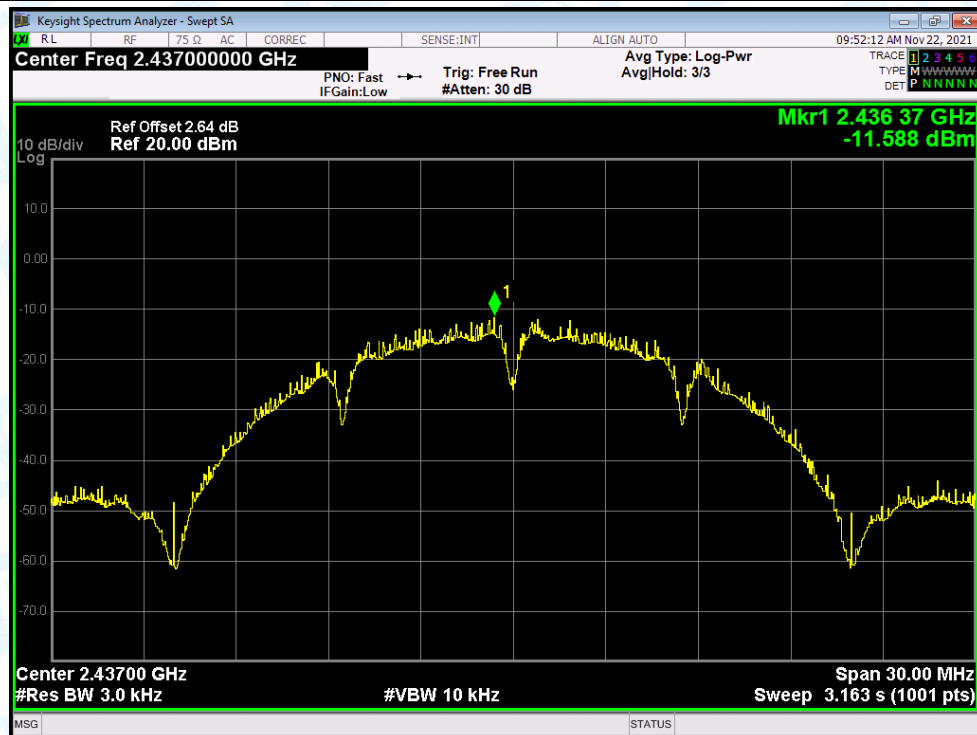
| Condition | Mode | Frequency (MHz) | Antenna | Max PSD (dBm) | Limit (dBm) | Verdict |
|-----------|------|-----------------|---------|---------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | -11.044       | 8           | Pass    |
| NVNT      | b    | 2437            | Ant1    | -11.588       | 8           | Pass    |
| NVNT      | b    | 2462            | Ant1    | -11.524       | 8           | Pass    |
| NVNT      | g    | 2412            | Ant1    | -14.042       | 8           | Pass    |
| NVNT      | g    | 2437            | Ant1    | -13.112       | 8           | Pass    |
| NVNT      | g    | 2462            | Ant1    | -14.807       | 8           | Pass    |

## Test Graphs

## PSD NVNT b 2412MHz Ant1



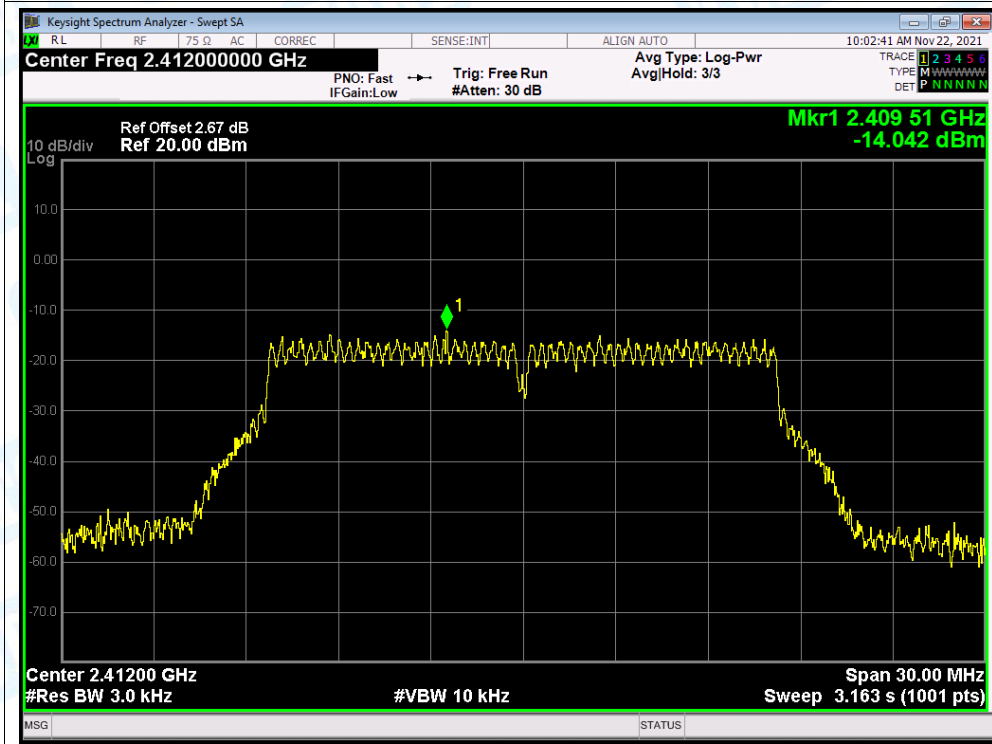
## PSD NVNT b 2437MHz Ant1



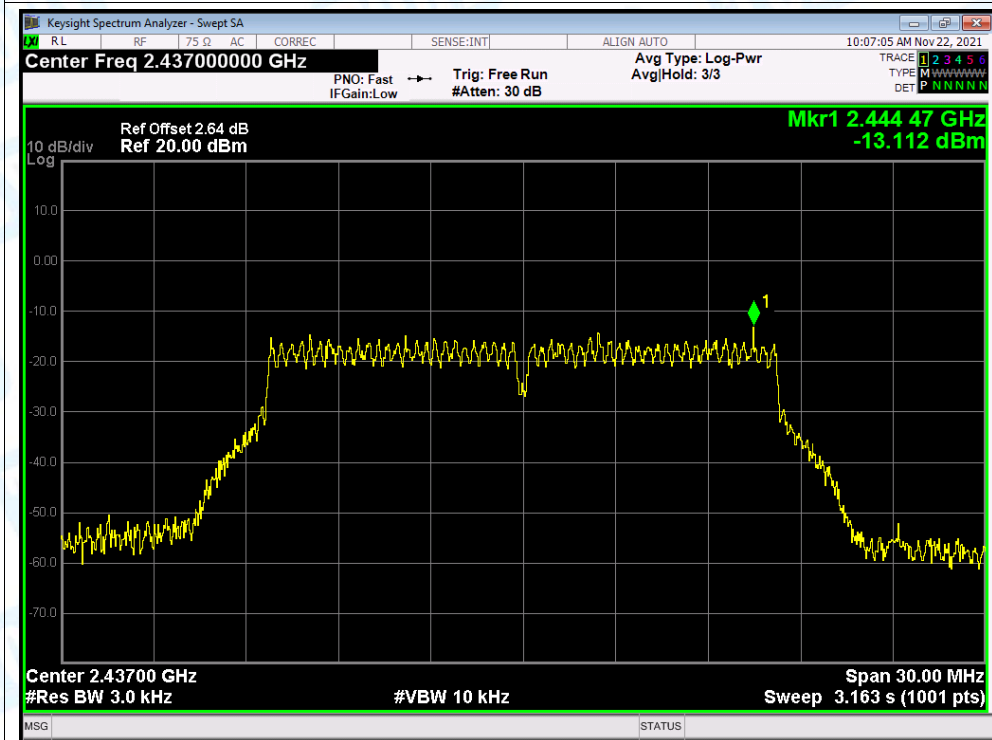
PSD NVNT b 2462MHz Ant1



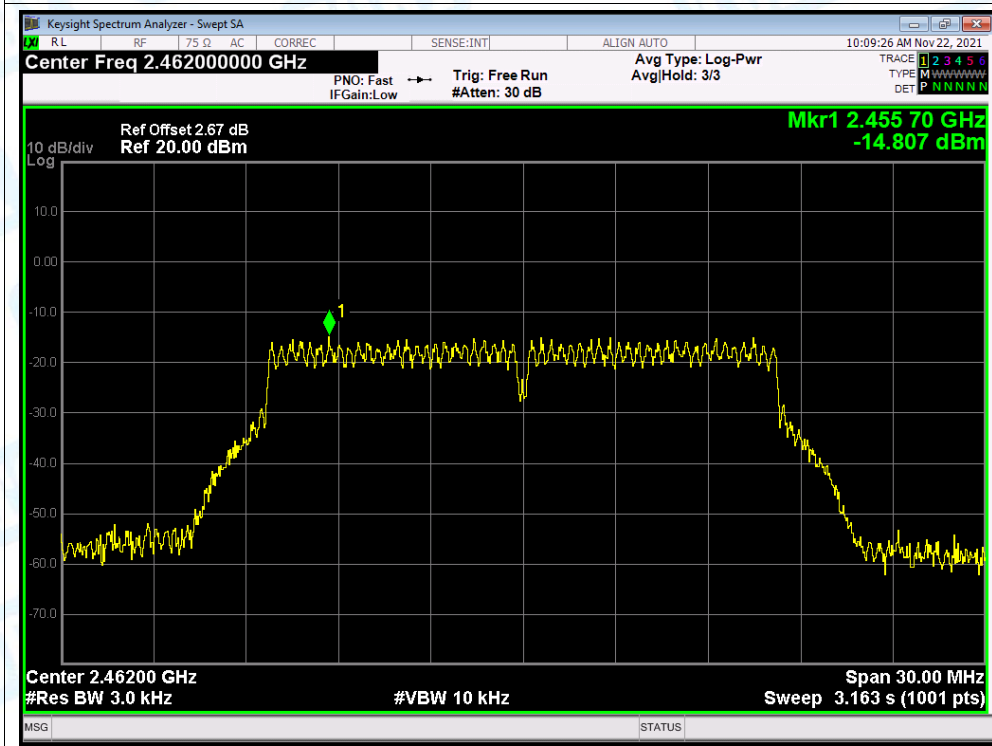
PSD NVNT g 2412MHz Ant1



PSD NVNT g 2437MHz Ant1



PSD NVNT g 2462MHz Ant1

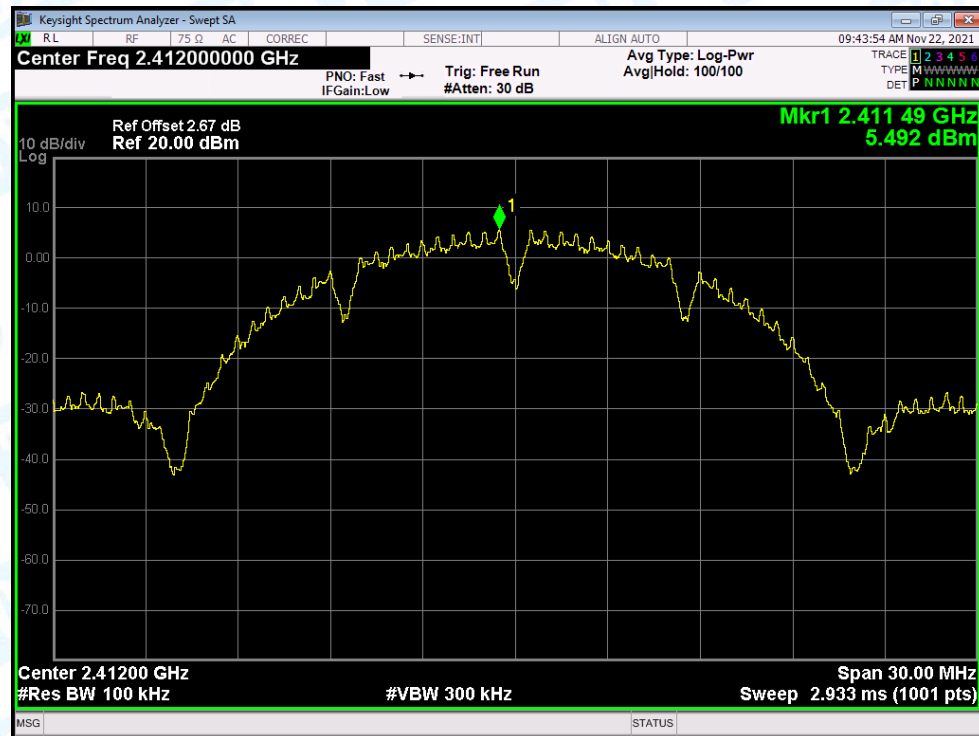


## 5.Band Edge

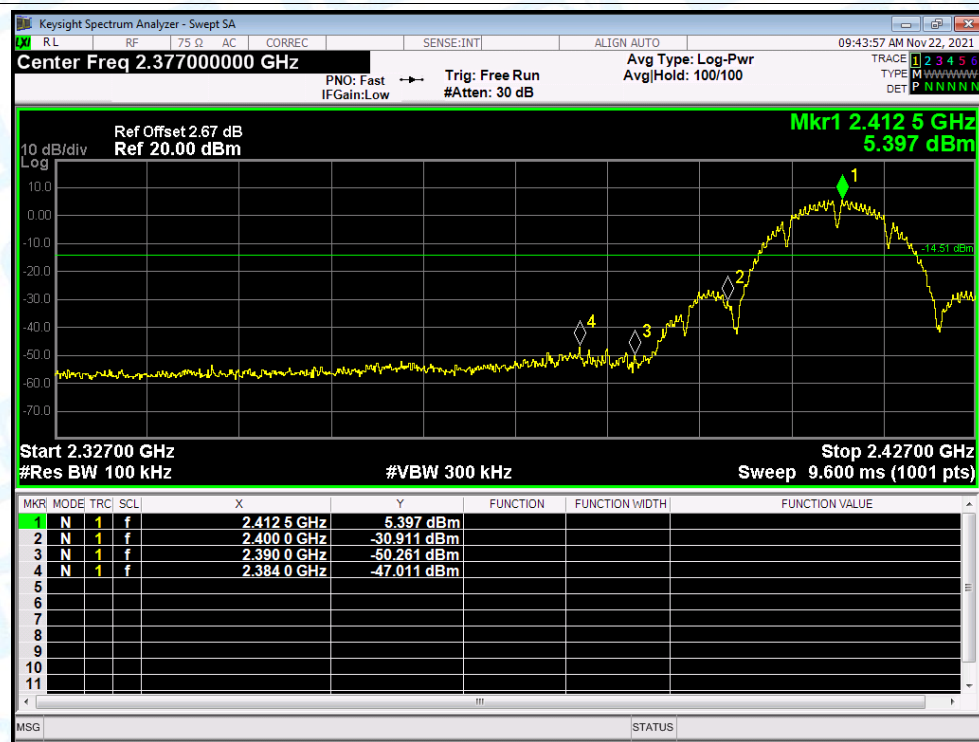
| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | -52.5           | -20         | Pass    |
| NVNT      | b    | 2462            | Ant1    | -53.87          | -20         | Pass    |
| NVNT      | g    | 2412            | Ant1    | -47.21          | -20         | Pass    |
| NVNT      | g    | 2462            | Ant1    | -50.35          | -20         | Pass    |

## Test Graphs

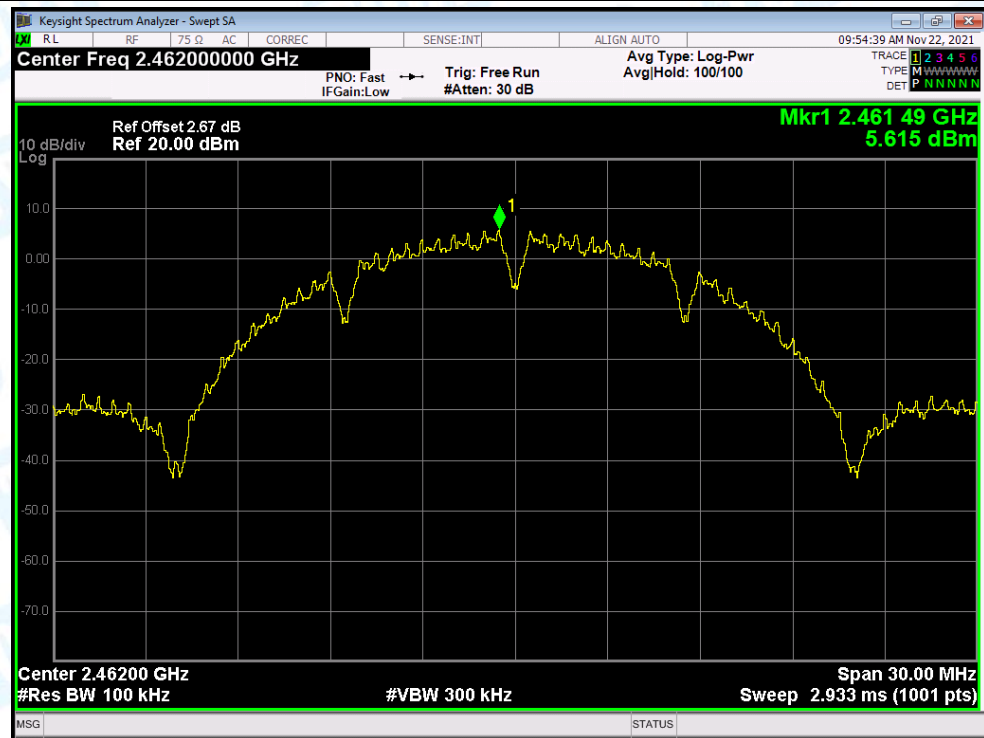
## Band Edge NVNT b 2412MHz Ant1 Ref



## Band Edge NVNT b 2412MHz Ant1 Emission



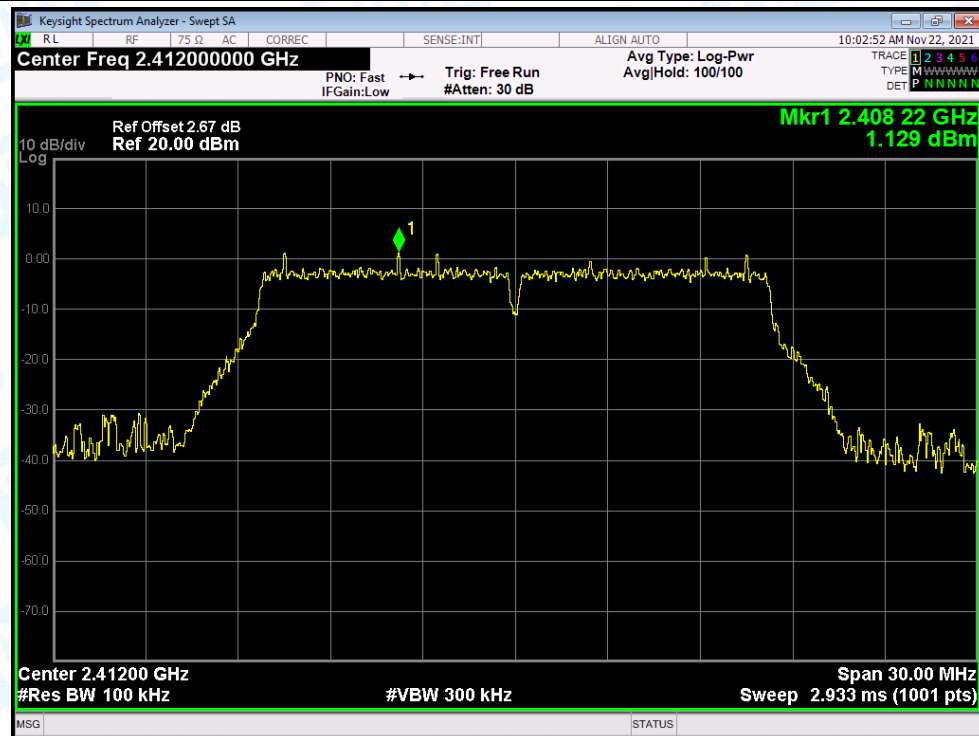
Band Edge NVNT b 2462MHz Ant1 Ref



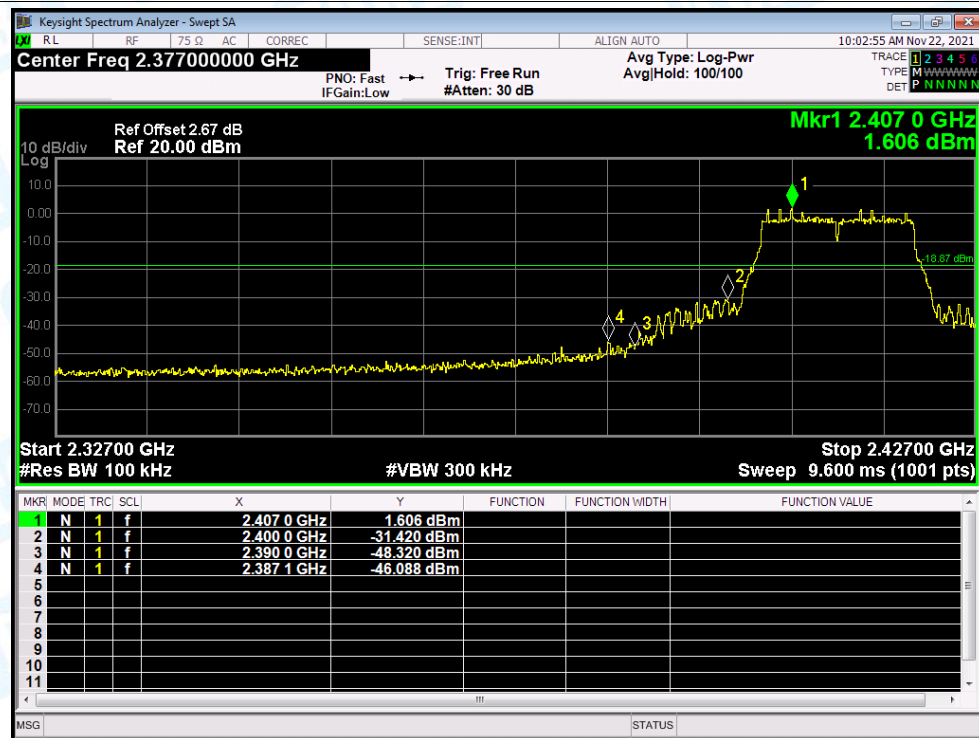
Band Edge NVNT b 2462MHz Ant1 Emission



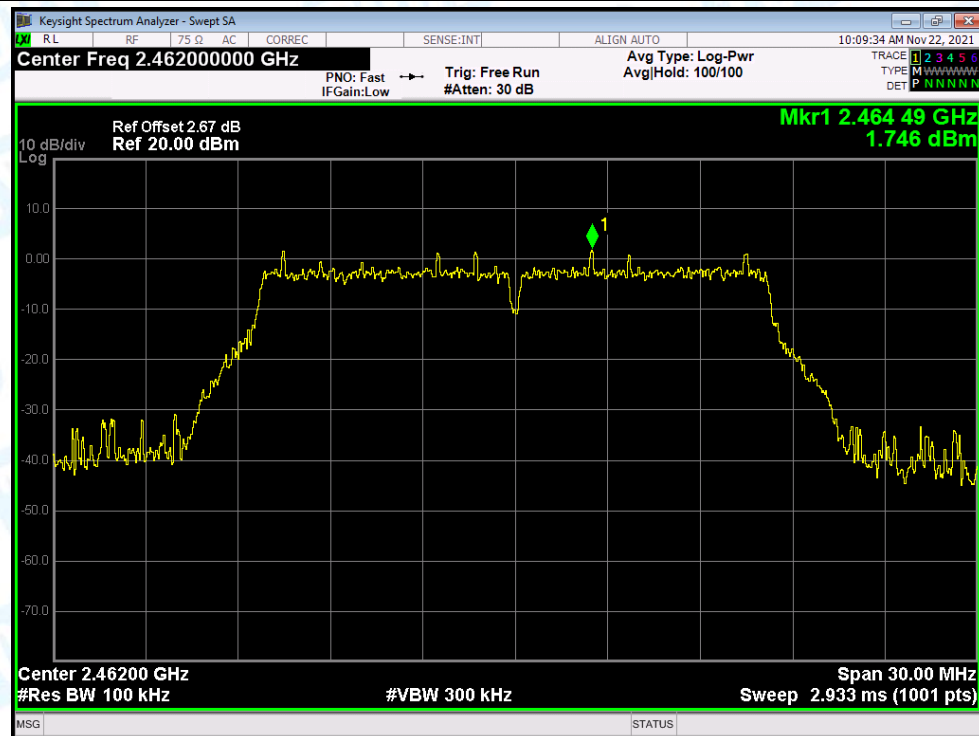
## Band Edge NVNT g 2412MHz Ant1 Ref



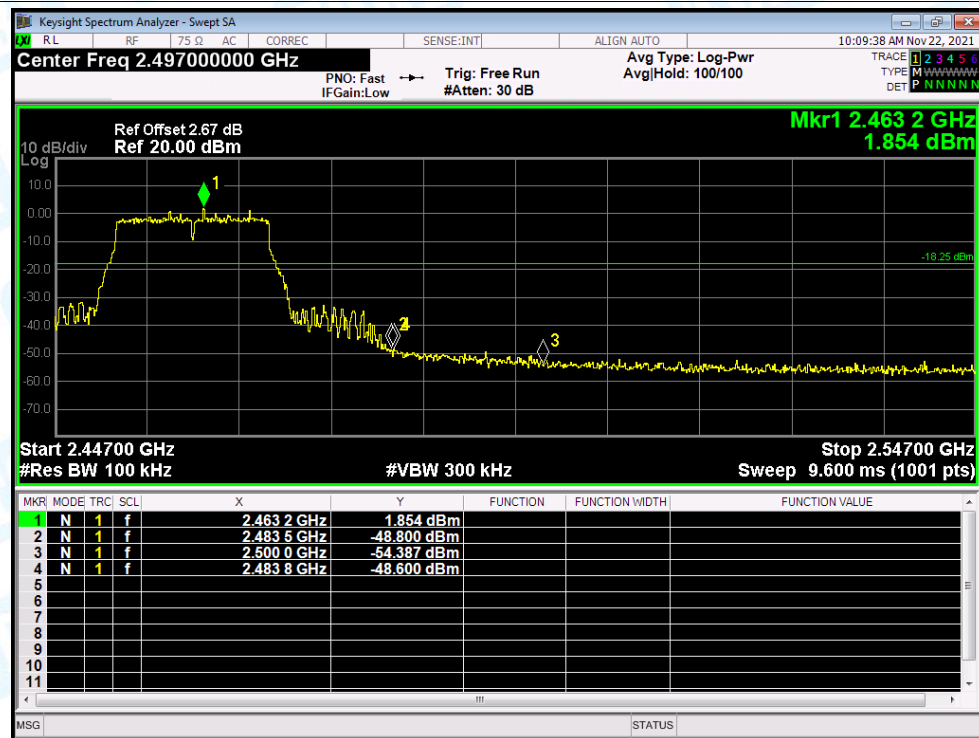
## Band Edge NVNT g 2412MHz Ant1 Emission



## Band Edge NVNT g 2462MHz Ant1 Ref



## Band Edge NVNT g 2462MHz Ant1 Emission

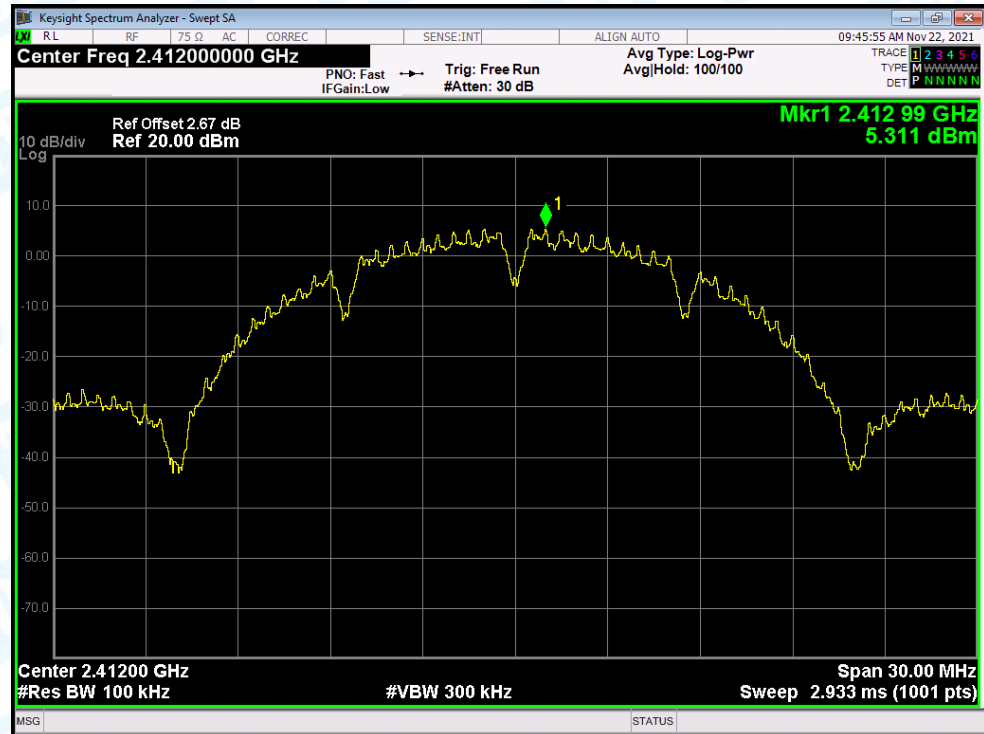


## 6. Conducted RF Spurious Emission

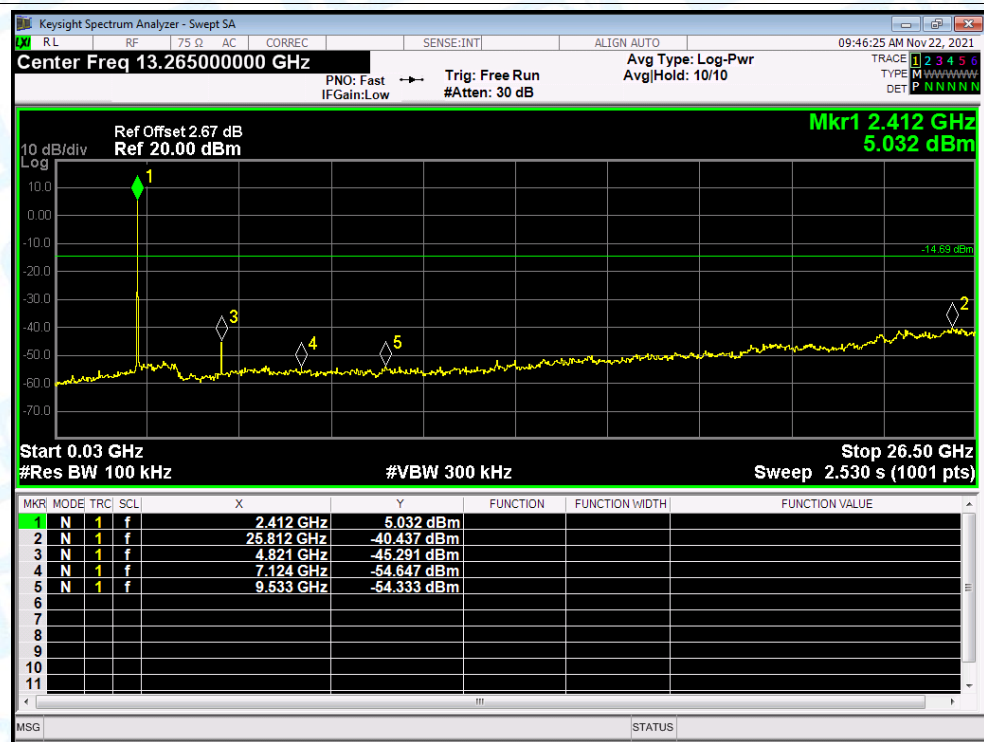
| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | -45.74          | -20         | Pass    |
| NVNT      | b    | 2437            | Ant1    | -45.88          | -20         | Pass    |
| NVNT      | b    | 2462            | Ant1    | -45.71          | -20         | Pass    |
| NVNT      | g    | 2412            | Ant1    | -41.97          | -20         | Pass    |
| NVNT      | g    | 2437            | Ant1    | -41.3           | -20         | Pass    |
| NVNT      | g    | 2462            | Ant1    | -41.87          | -20         | Pass    |

## Test Graphs

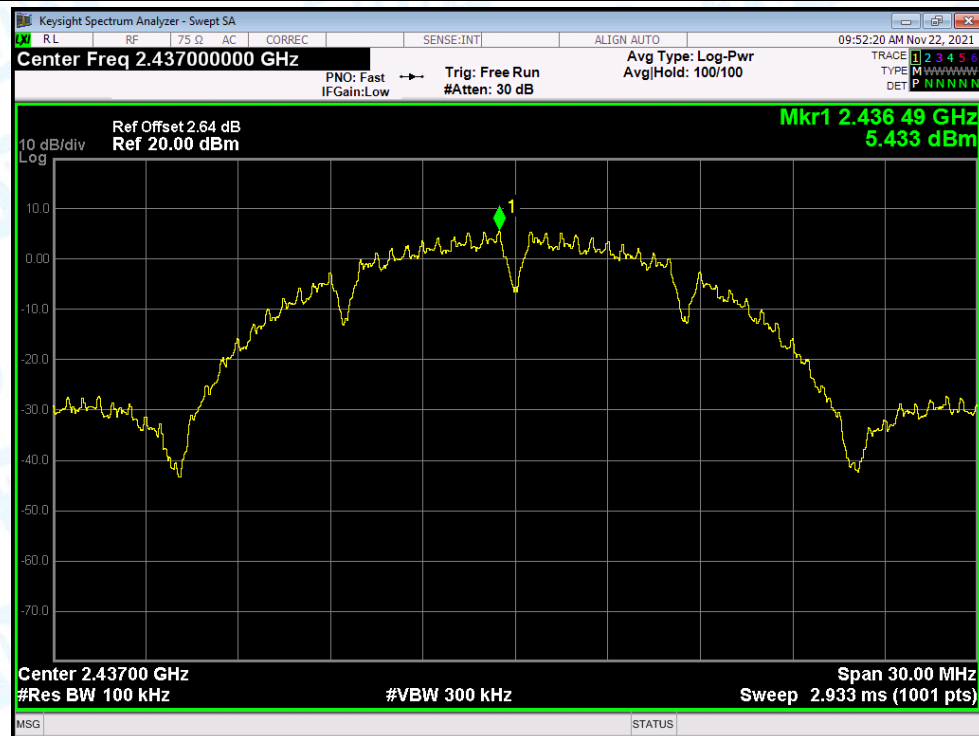
Tx. Spurious NVNT b 2412MHz Ant1 Ref



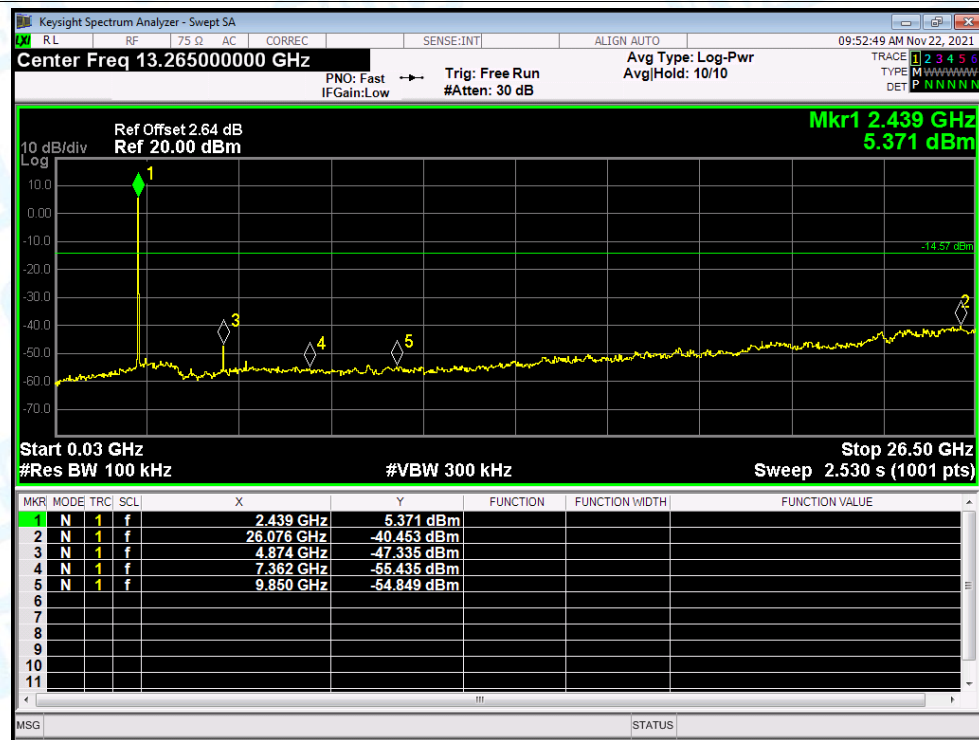
Tx. Spurious NVNT b 2412MHz Ant1 Emission



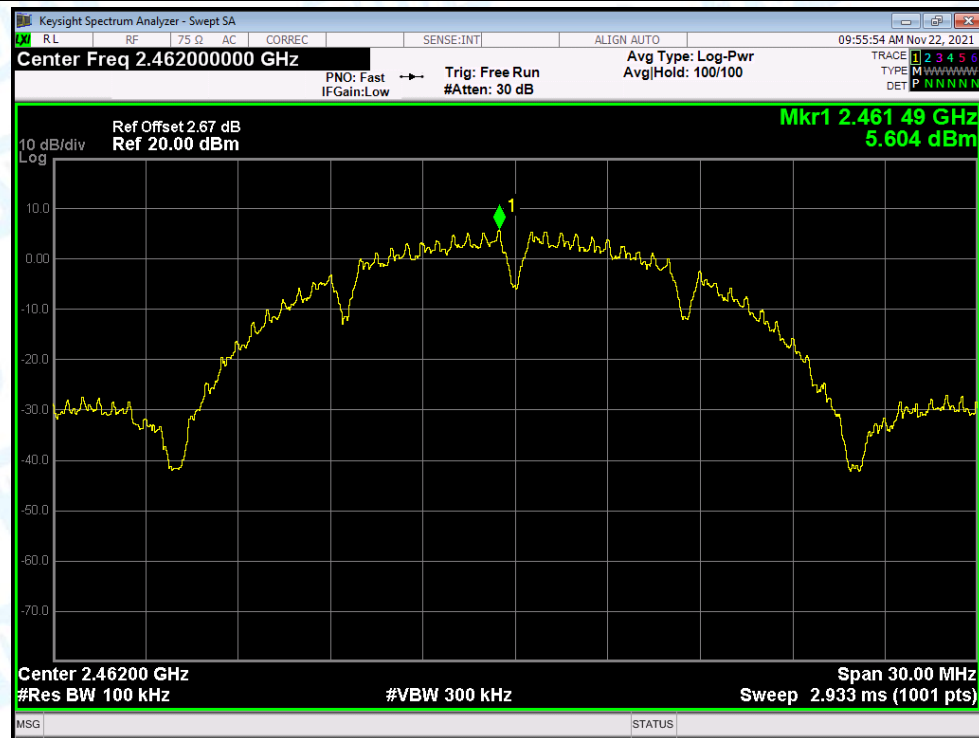
## Tx. Spurious NVNT b 2437MHz Ant1 Ref



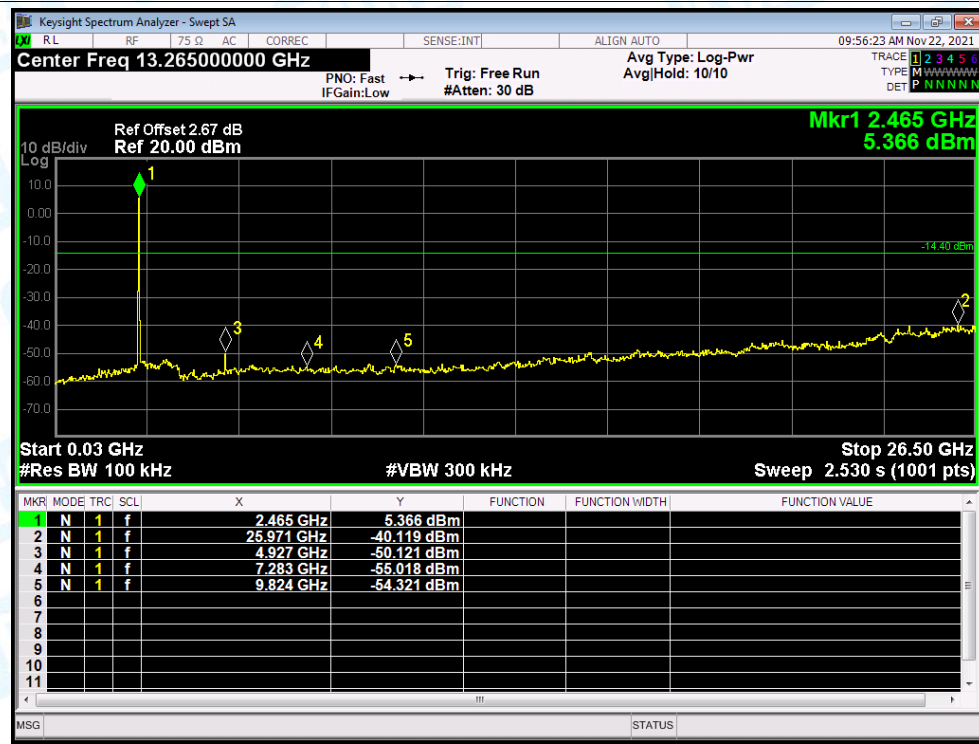
## Tx. Spurious NVNT b 2437MHz Ant1 Emission



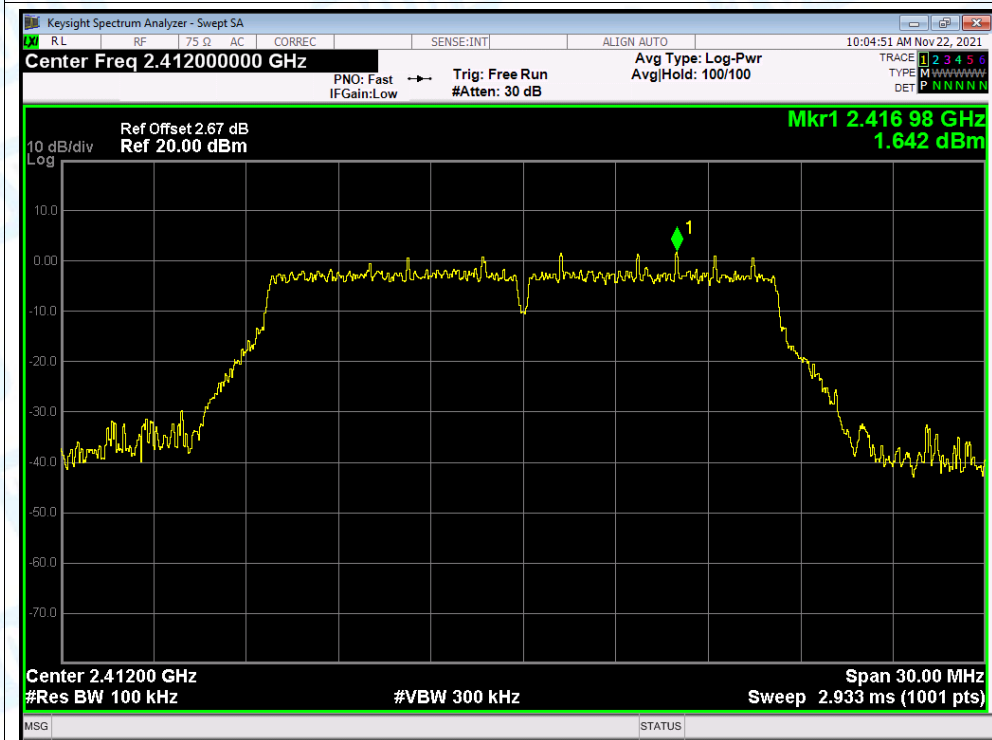
Tx. Spurious NVNT b 2462MHz Ant1 Ref



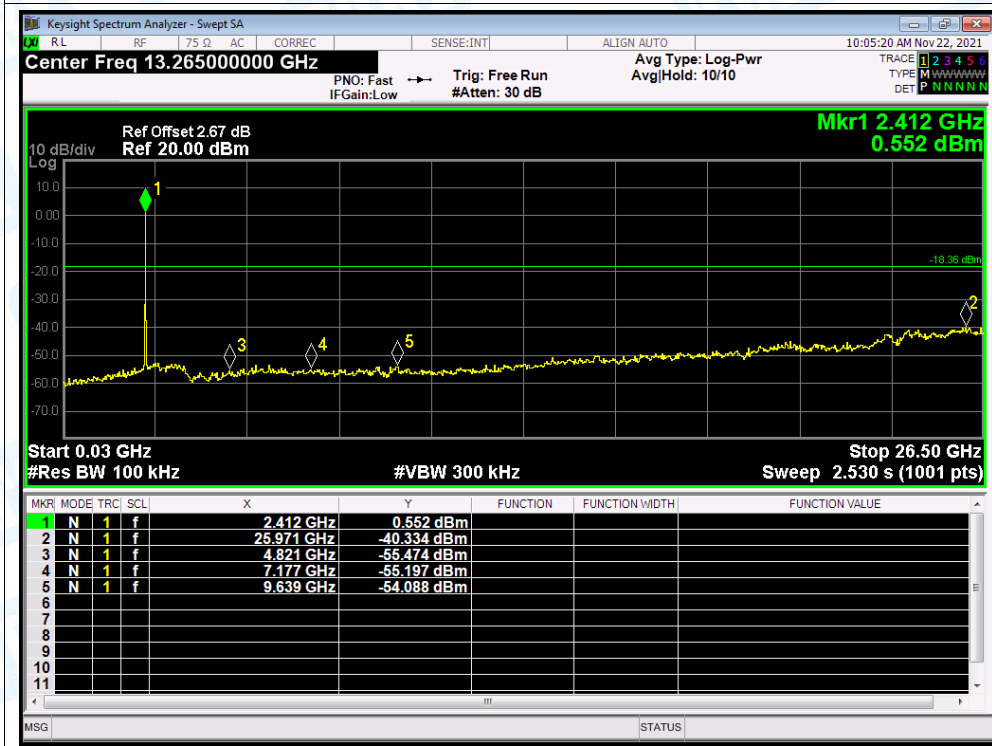
Tx. Spurious NVNT b 2462MHz Ant1 Emission



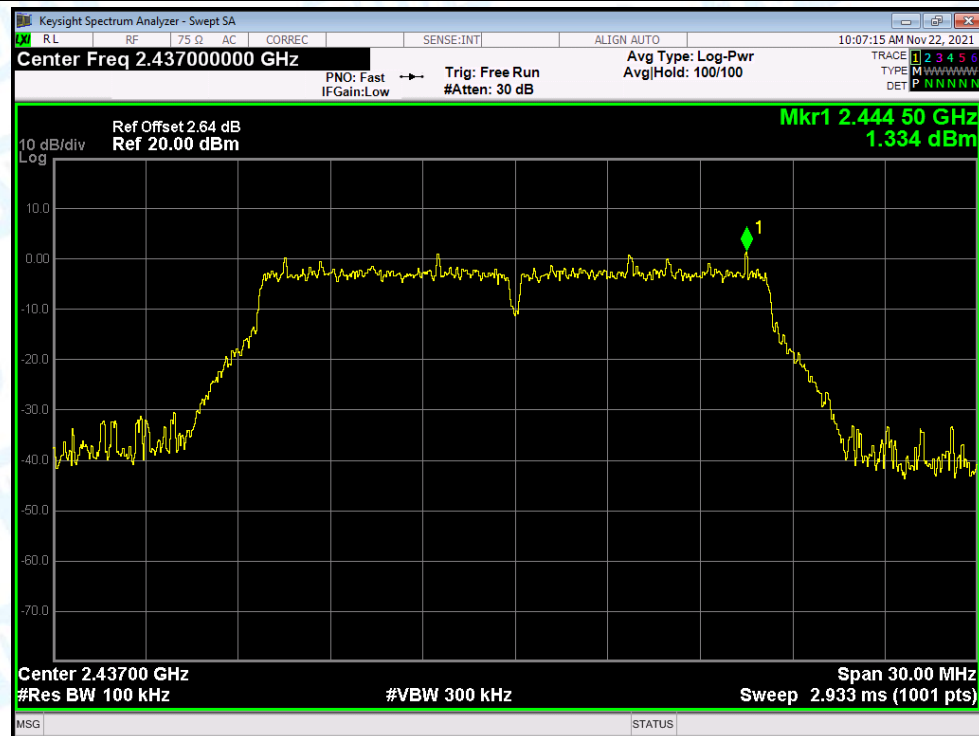
## Tx. Spurious NVNT g 2412MHz Ant1 Ref



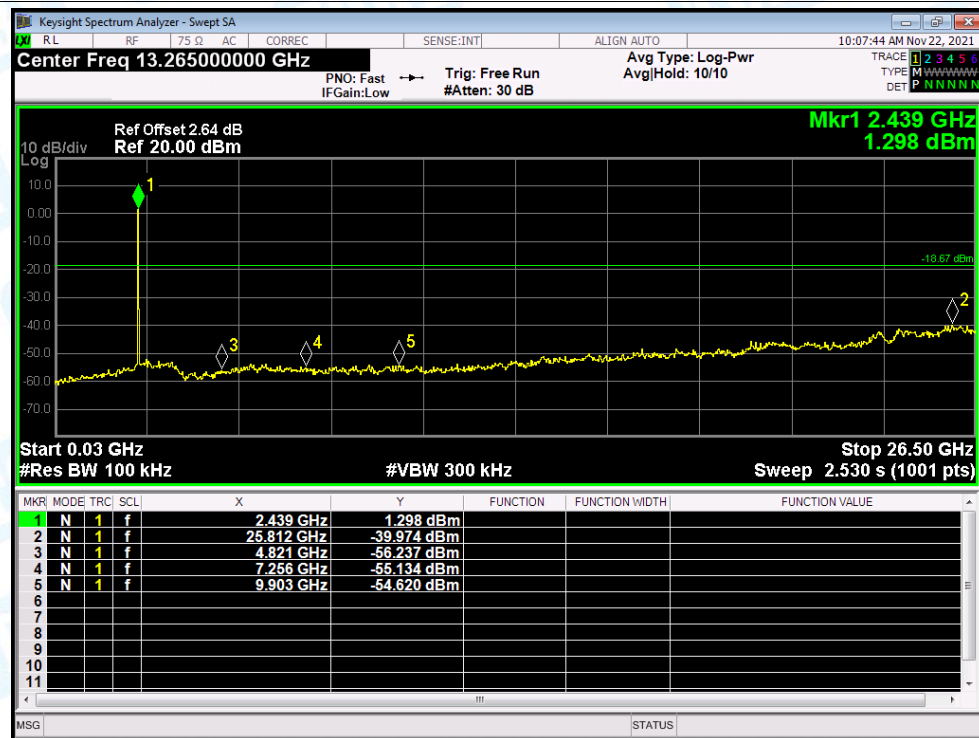
## Tx. Spurious NVNT g 2412MHz Ant1 Emission



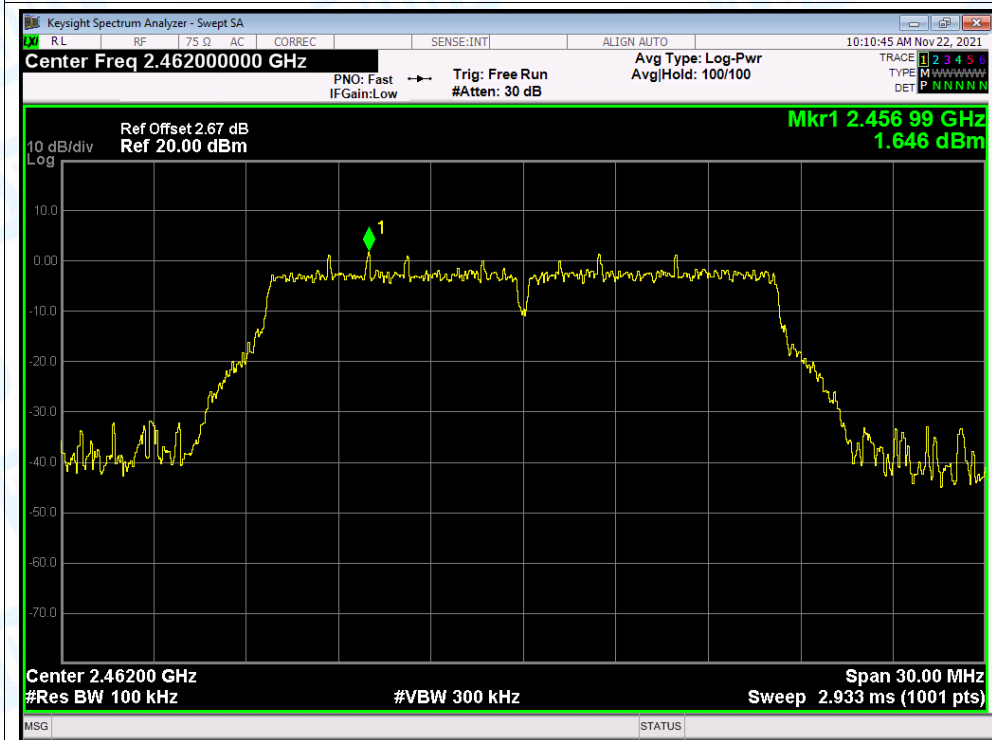
## Tx. Spurious NVNT g 2437MHz Ant1 Ref



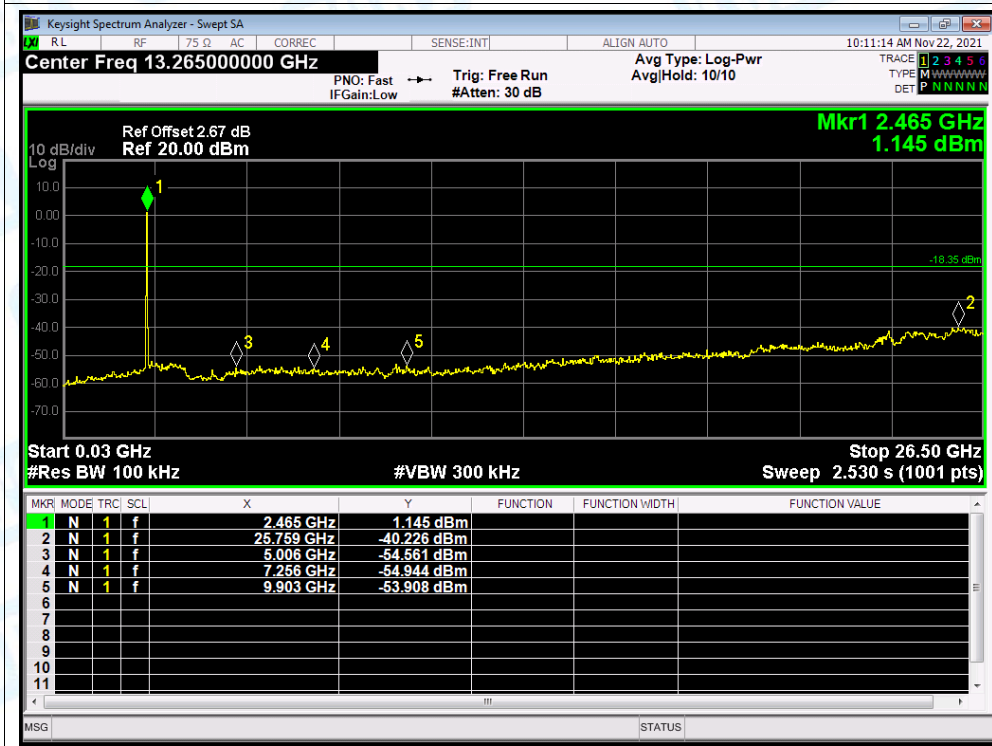
## Tx. Spurious NVNT g 2437MHz Ant1 Emission



Tx. Spurious NVNT g 2462MHz Ant1 Ref



Tx. Spurious NVNT g 2462MHz Ant1 Emission

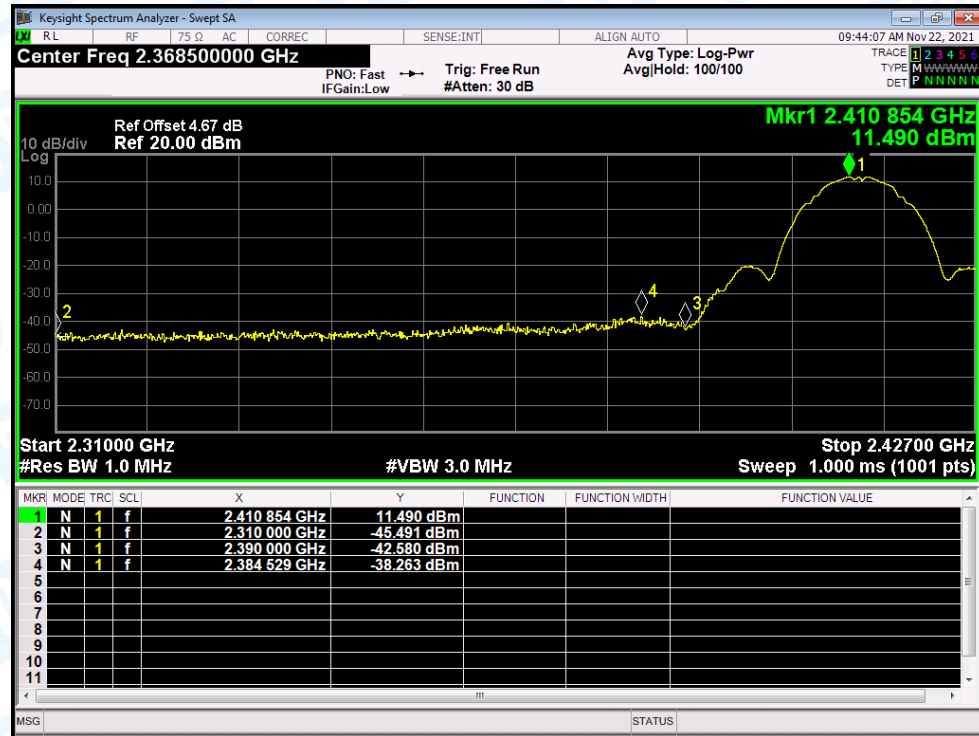


## 7.Restrict Band

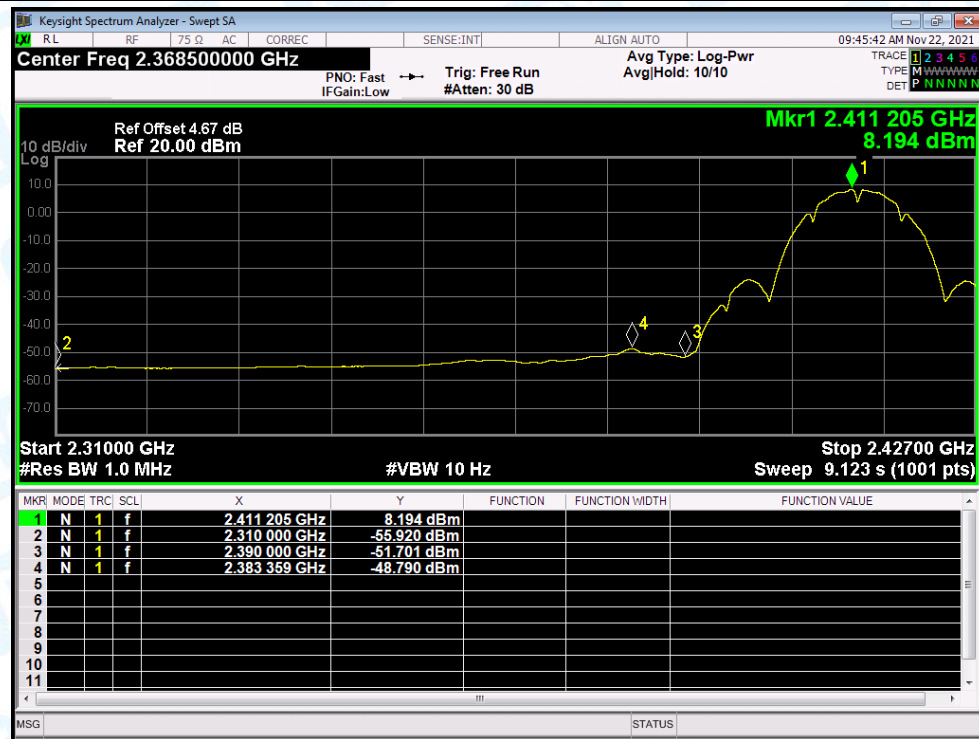
| Condition | Mode | Frequency<br>(MHz) | Antenna | Spur Freq<br>(MHz) | Power<br>(dBm) | Gain<br>(dBi) | E<br>(dBuV/m) | Detector | Limit<br>(dBuV/m) | Verdict |
|-----------|------|--------------------|---------|--------------------|----------------|---------------|---------------|----------|-------------------|---------|
| NVNT      | b    | 2412               | Ant1    | 2310               | -44.24         | 2             | 53.02         | Peak     | 74                | Pass    |
| NVNT      | b    | 2412               | Ant1    | 2310               | -55.9          | 2             | 41.36         | Average  | 54                | Pass    |
| NVNT      | b    | 2412               | Ant1    | 2384.529           | -38.26         | 2             | 59            | Peak     | 74                | Pass    |
| NVNT      | b    | 2412               | Ant1    | 2383.359           | -48.79         | 2             | 48.47         | Average  | 54                | Pass    |
| NVNT      | b    | 2412               | Ant1    | 2390               | -42.57         | 2             | 54.69         | Peak     | 74                | Pass    |
| NVNT      | b    | 2412               | Ant1    | 2390               | -51.7          | 2             | 45.56         | Average  | 54                | Pass    |
| NVNT      | b    | 2462               | Ant1    | 2483.5             | -41.61         | 2             | 55.65         | Peak     | 74                | Pass    |
| NVNT      | b    | 2462               | Ant1    | 2483.5             | -51.09         | 2             | 46.17         | Average  | 54                | Pass    |
| NVNT      | b    | 2462               | Ant1    | 2490.354           | -37.15         | 2             | 60.11         | Peak     | 74                | Pass    |
| NVNT      | b    | 2462               | Ant1    | 2490.619           | -48.57         | 2             | 48.69         | Average  | 54                | Pass    |
| NVNT      | b    | 2462               | Ant1    | 2500               | -42.1          | 2             | 55.16         | Peak     | 74                | Pass    |
| NVNT      | b    | 2462               | Ant1    | 2500               | -52.76         | 2             | 44.5          | Average  | 54                | Pass    |
| NVNT      | g    | 2412               | Ant1    | 2310               | -44.65         | 2             | 52.61         | Peak     | 74                | Pass    |
| NVNT      | g    | 2412               | Ant1    | 2310               | -55.78         | 2             | 41.48         | Average  | 54                | Pass    |
| NVNT      | g    | 2412               | Ant1    | 2389.209           | -30.17         | 2             | 67.09         | Peak     | 74                | Pass    |
| NVNT      | g    | 2412               | Ant1    | 2389.911           | -46.67         | 2             | 50.59         | Average  | 54                | Pass    |
| NVNT      | g    | 2412               | Ant1    | 2390               | -33.11         | 2             | 64.15         | Peak     | 74                | Pass    |
| NVNT      | g    | 2412               | Ant1    | 2390               | -46.49         | 2             | 50.77         | Average  | 54                | Pass    |
| NVNT      | g    | 2462               | Ant1    | 2483.5             | -36.37         | 2             | 60.89         | Peak     | 74                | Pass    |
| NVNT      | g    | 2462               | Ant1    | 2483.5             | -47.94         | 2             | 49.32         | Average  | 54                | Pass    |
| NVNT      | g    | 2462               | Ant1    | 2484.577           | -32.72         | 2             | 64.54         | Peak     | 74                | Pass    |
| NVNT      | g    | 2462               | Ant1    | 2483.517           | -47.94         | 2             | 49.32         | Average  | 54                | Pass    |
| NVNT      | g    | 2462               | Ant1    | 2500               | -43.83         | 2             | 53.43         | Peak     | 74                | Pass    |
| NVNT      | g    | 2462               | Ant1    | 2500               | -52.37         | 2             | 44.89         | Average  | 54                | Pass    |

## Test Graphs

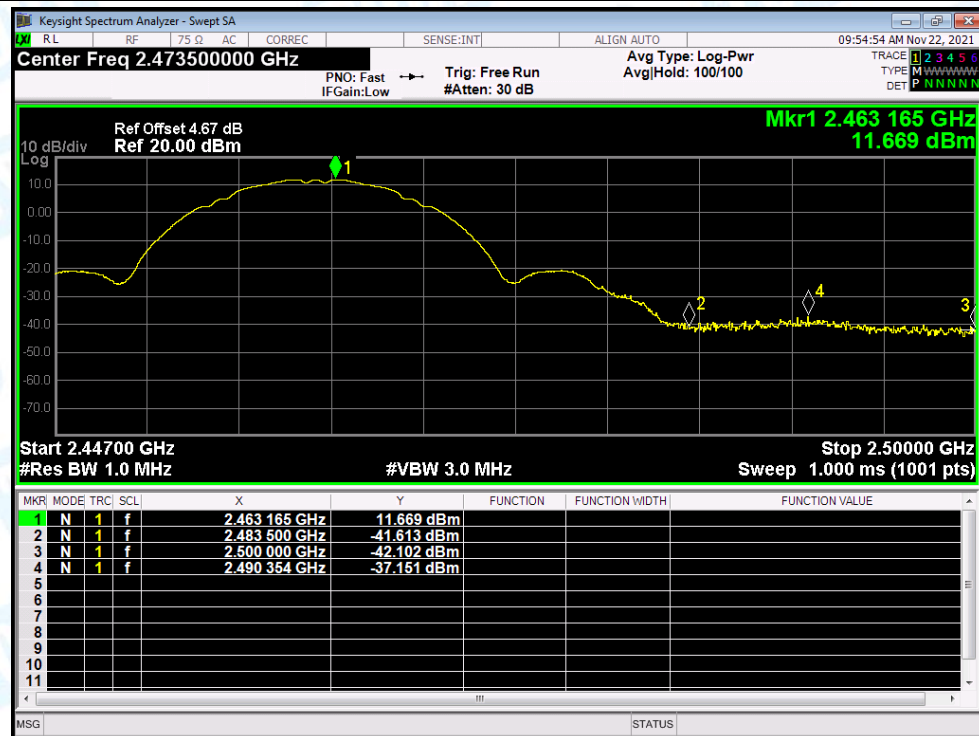
## Restrict Band NVNT b 2412MHz Ant1 Peak



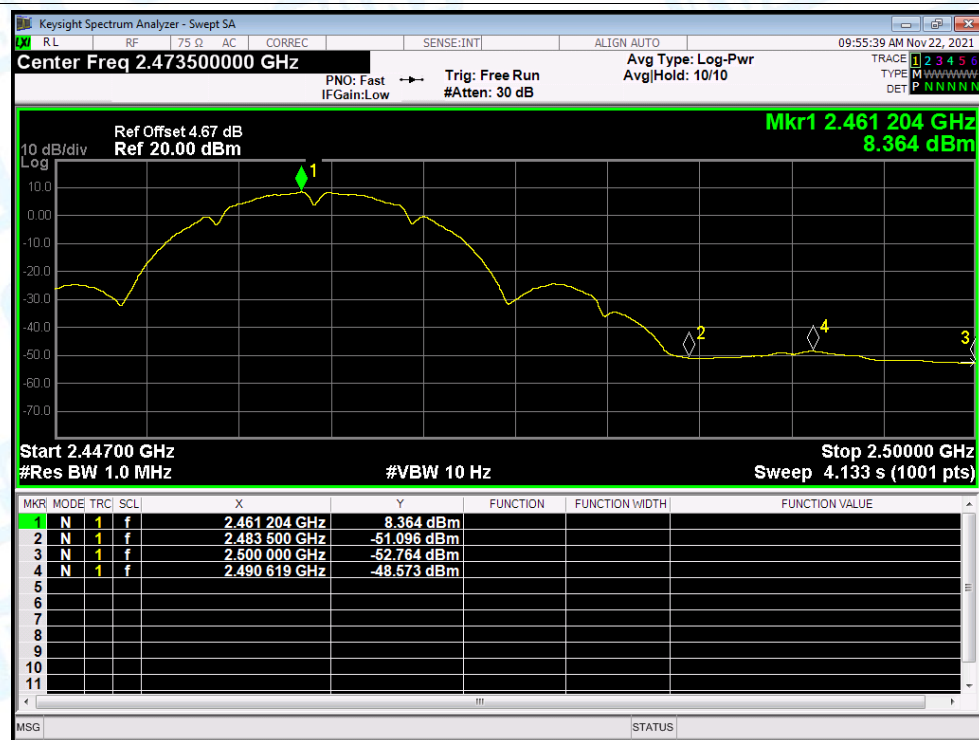
## Restrict Band NVNT b 2412MHz Ant1 Average



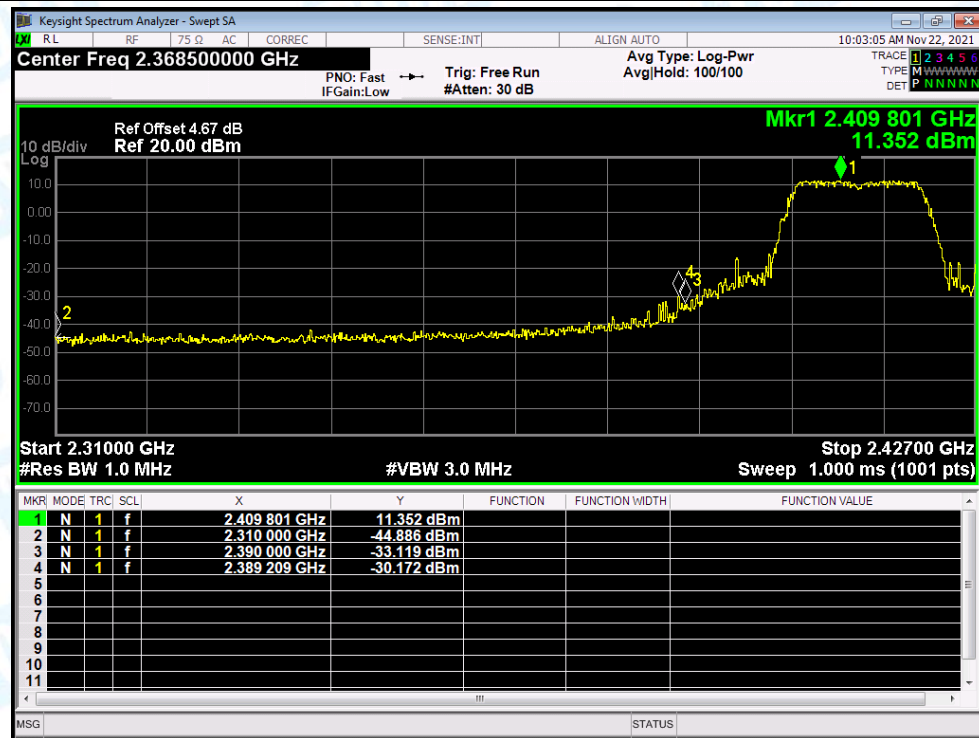
## Restrict Band NVNT b 2462MHz Ant1 Peak



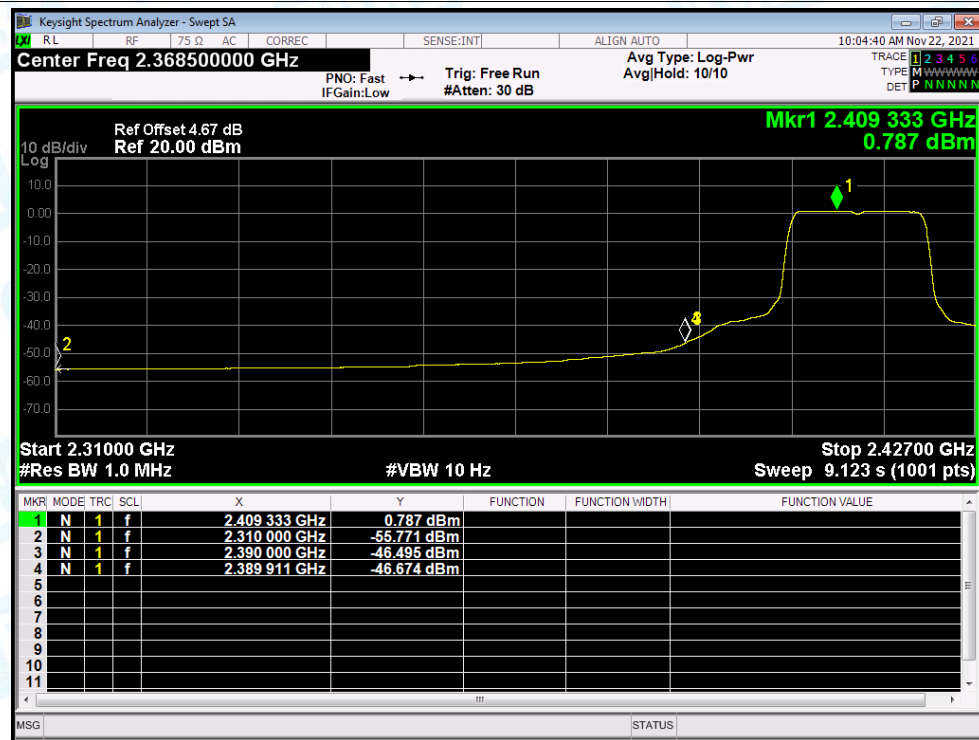
## Restrict Band NVNT b 2462MHz Ant1 Average



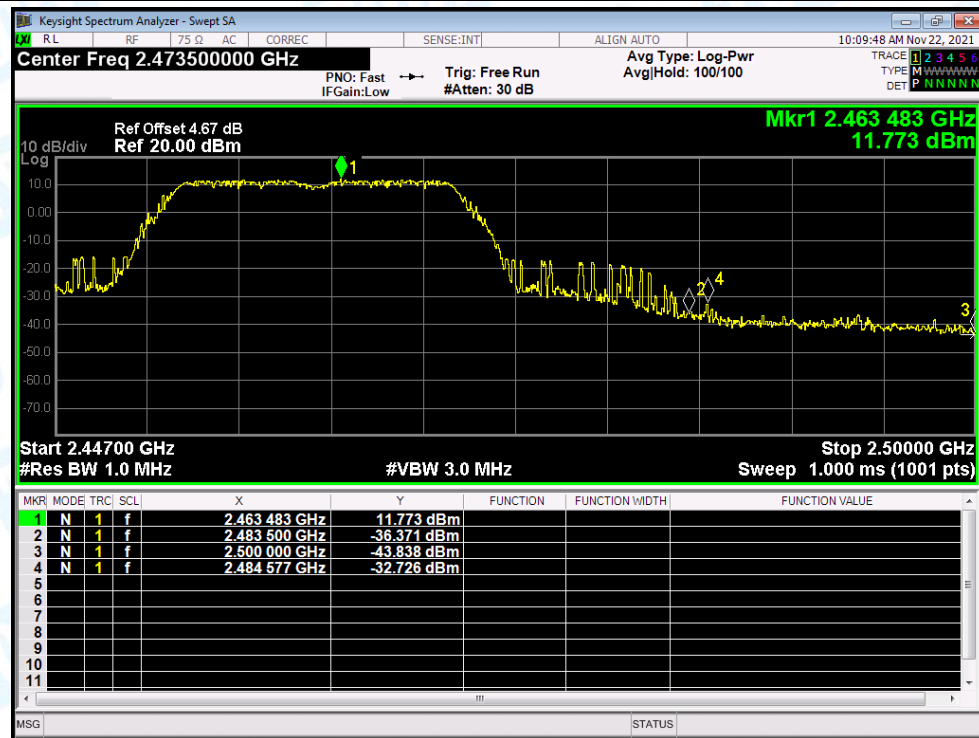
## Restrict Band NVNT g 2412MHz Ant1 Peak



## Restrict Band NVNT g 2412MHz Ant1 Average



## Restrict Band NVNT g 2462MHz Ant1 Peak



## Restrict Band NVNT g 2462MHz Ant1 Average

