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# FCC/IC WIFI2.4

## Test Data

### 1. -6dB Bandwidth

| Condition | Antenna | Modulation    | Frequency (MHz) | -6dB BW(MHz) | limit(kHz) | Result |
|-----------|---------|---------------|-----------------|--------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 8.55         | 500        | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 8.55         | 500        | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 8.59         | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00         | 15.59        | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00         | 16.12        | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00         | 16.45        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | 16.23        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | 16.70        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | 17.71        | 500        | Pass   |



**-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11b\_2437**



-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11b\_2462



-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11g\_2412



-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11g\_2437



-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11g\_2462



-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11n(HT20)\_2412



-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11n(HT20)\_2437

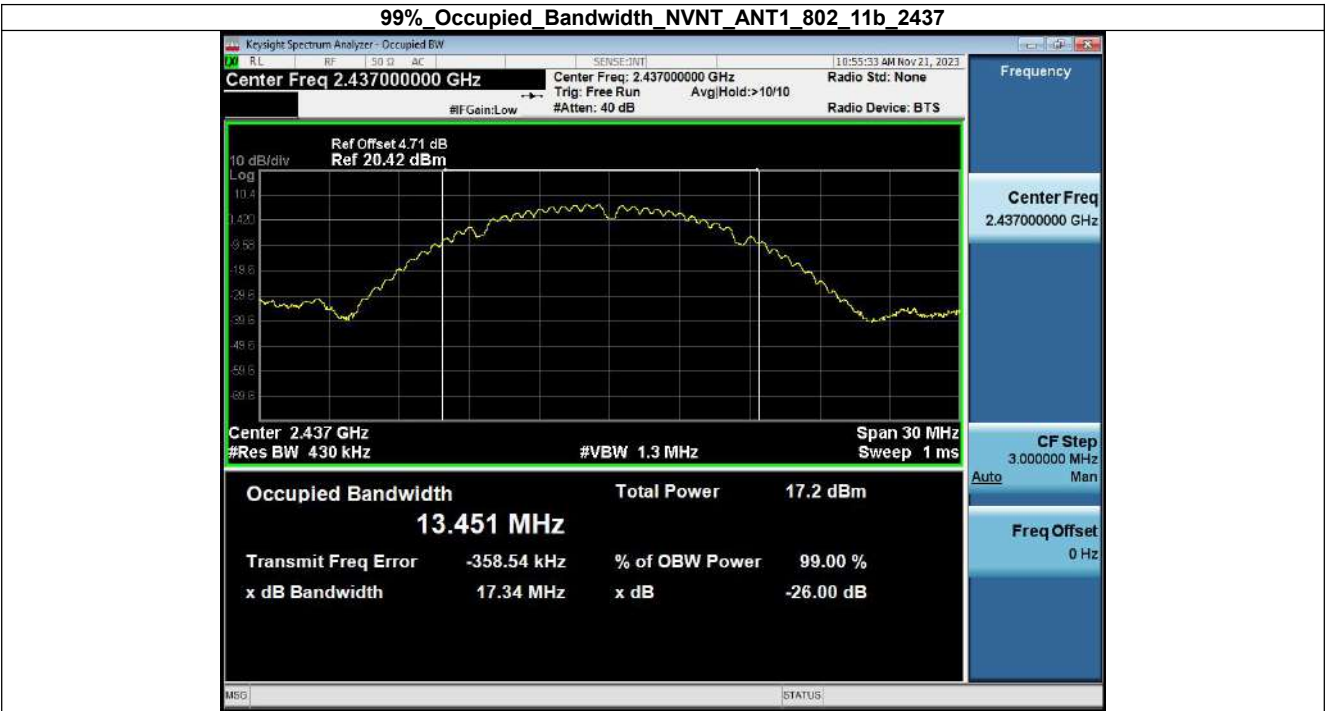
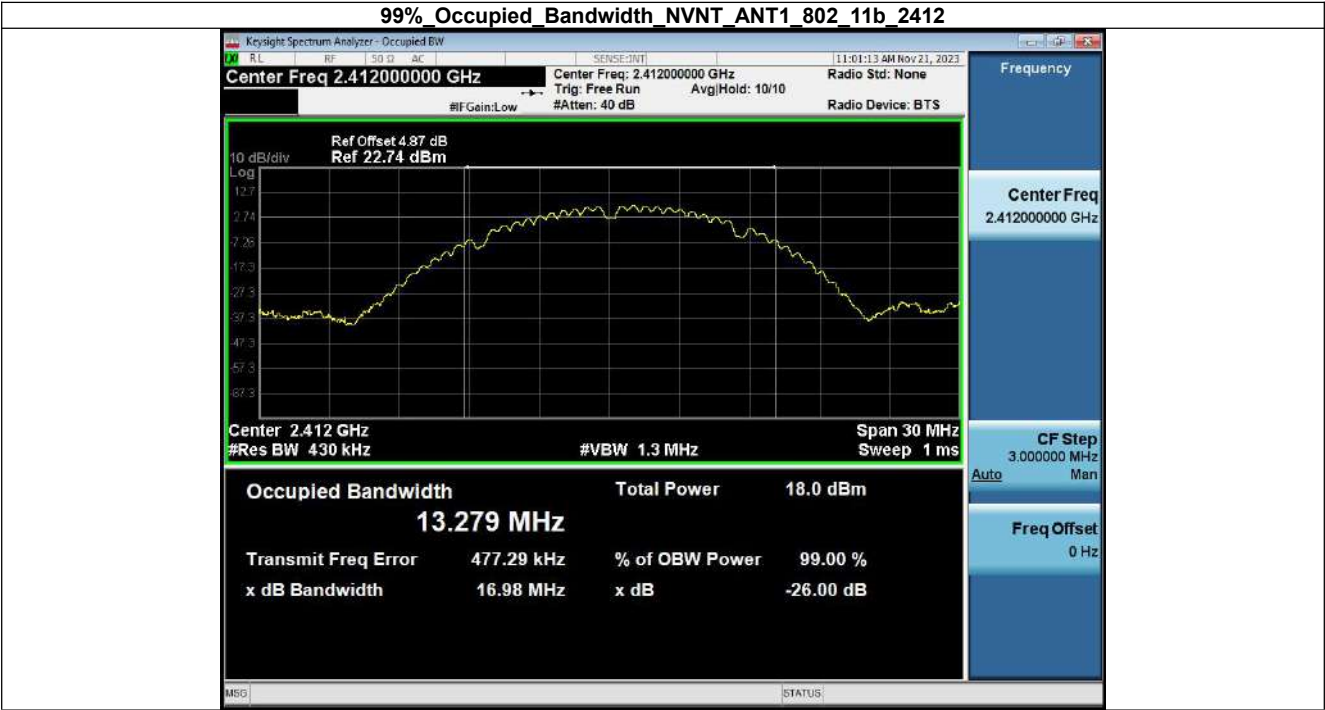


-6dB Bandwidth NVNT\_ANT1\_802\_11n(HT20)\_2462



2. 99% Occupied Bandwidth

| Condition | Antenna | Modulation    | Frequency (MHz) | 99% BW(MHz) |
|-----------|---------|---------------|-----------------|-------------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 13.279      |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 13.451      |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 13.601      |
| NVNT      | ANT1    | 802.11g       | 2412.00         | 17.551      |
| NVNT      | ANT1    | 802.11g       | 2437.00         | 17.759      |
| NVNT      | ANT1    | 802.11g       | 2462.00         | 17.385      |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | 18.314      |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | 18.390      |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | 18.185      |



### 99% Occupied Bandwidth NVNT\_ANT1\_802\_11b\_2462



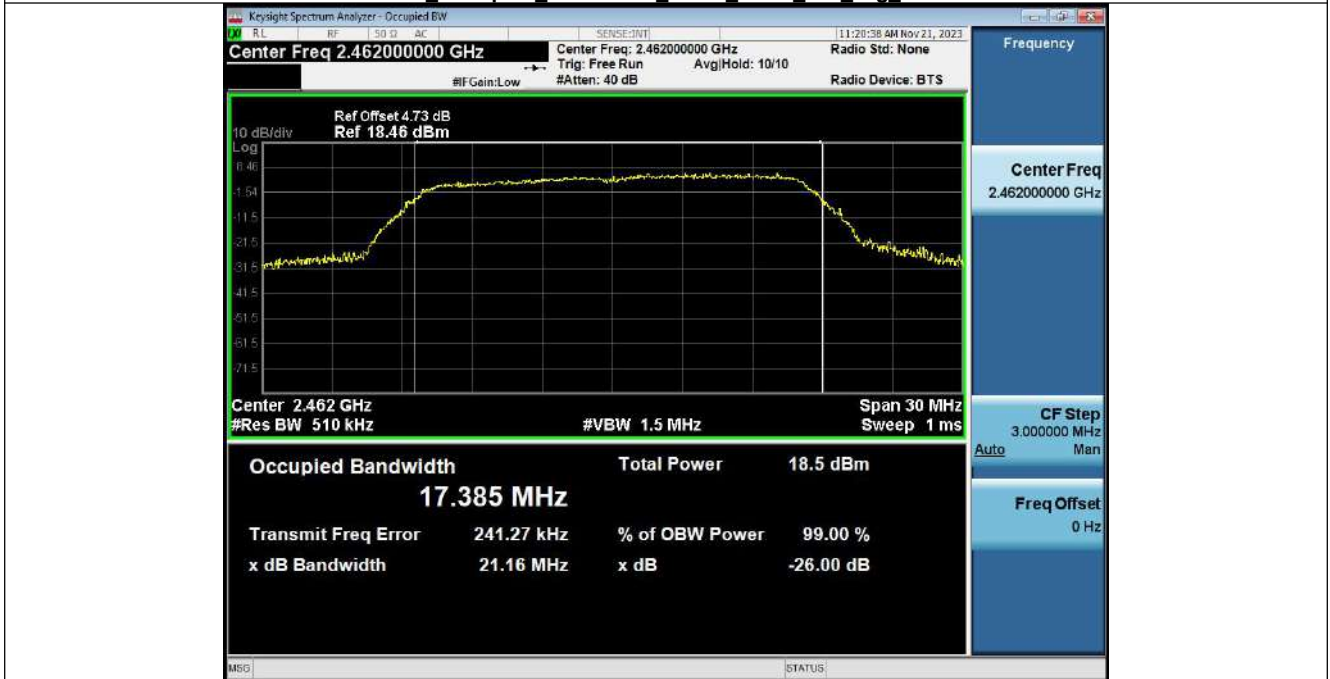
### 99% Occupied Bandwidth NVNT\_ANT1\_802\_11g\_2412



### 99% Occupied Bandwidth NVNT\_ANT1\_802\_11g\_2437



99% Occupied Bandwidth\_NVNT\_ANT1\_802\_11g\_2462



99%\_Occupied\_Bandwidth\_NVNT\_ANT1\_802\_11n(HT20)\_2412



99% Occupied Bandwidth\_NVNT\_ANT1\_802\_11n(HT20)\_2437

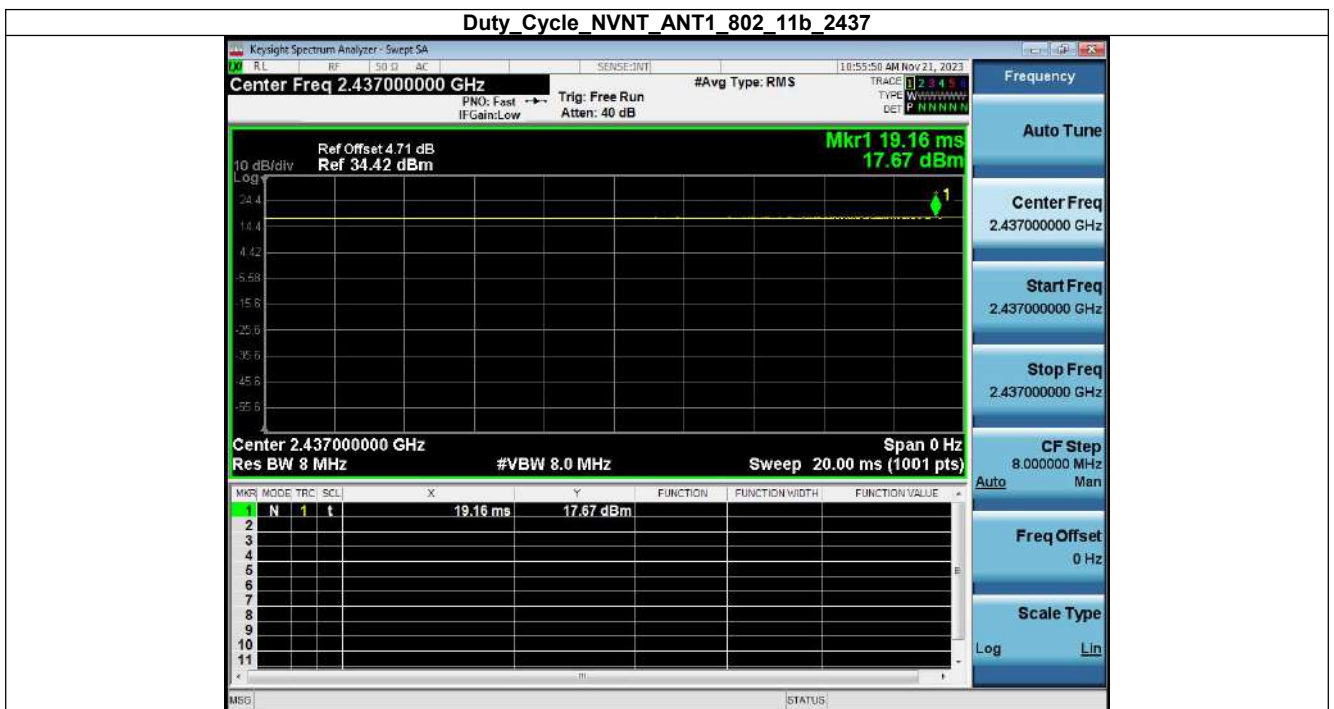
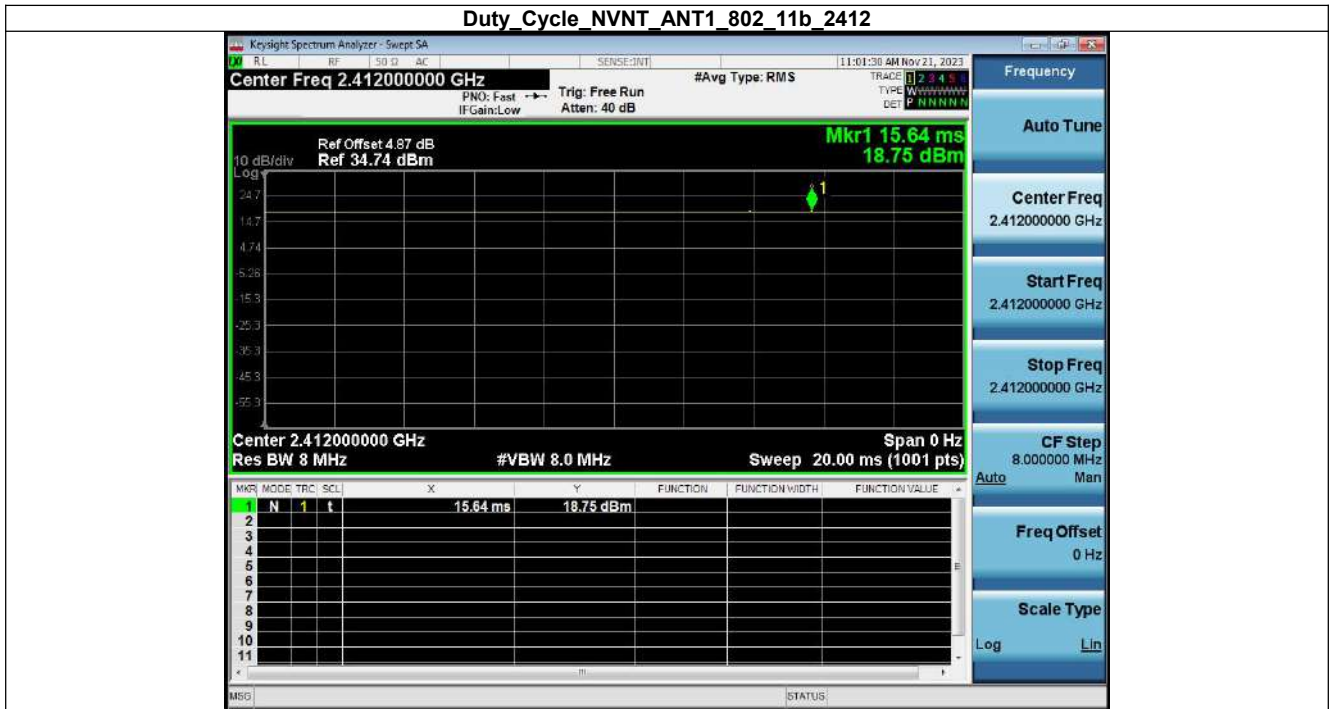


99%\_Occupied\_Bandwidth\_NVNT\_ANT1\_802\_11n(HT20)\_2462



### 3. Duty Cycle

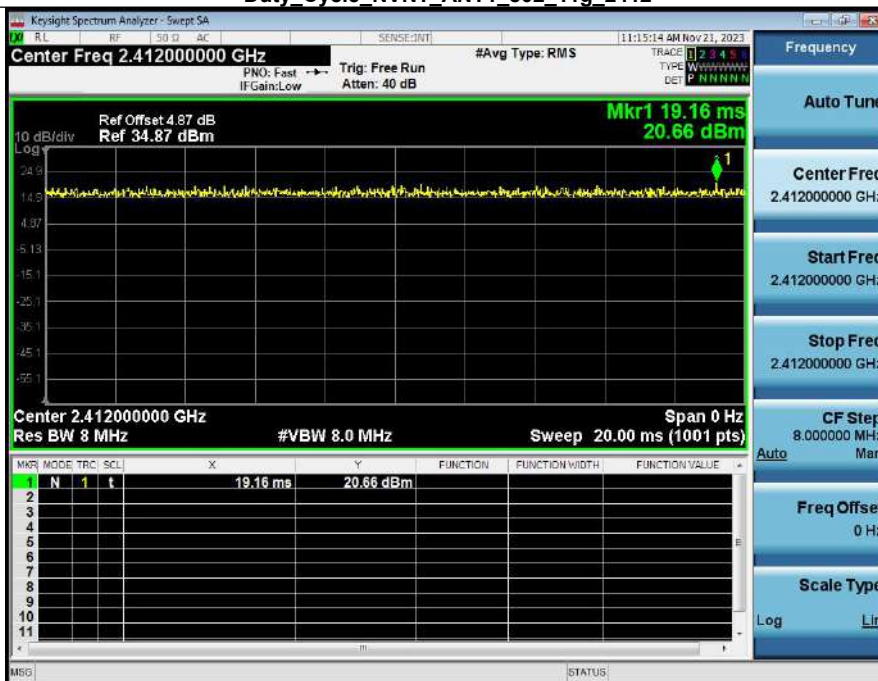
| Condition | Antenna | Modulation    | Frequency (MHz) | Duty cycle(%) | Duty factor(dB) |
|-----------|---------|---------------|-----------------|---------------|-----------------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 100           | 0.00            |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 100           | 0.00            |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 100           | 0.00            |
| NVNT      | ANT1    | 802.11g       | 2412.00         | 100           | 0.00            |
| NVNT      | ANT1    | 802.11g       | 2437.00         | 100           | 0.00            |
| NVNT      | ANT1    | 802.11g       | 2462.00         | 100           | 0.00            |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | 100           | 0.00            |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | 100           | 0.00            |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | 100           | 0.00            |



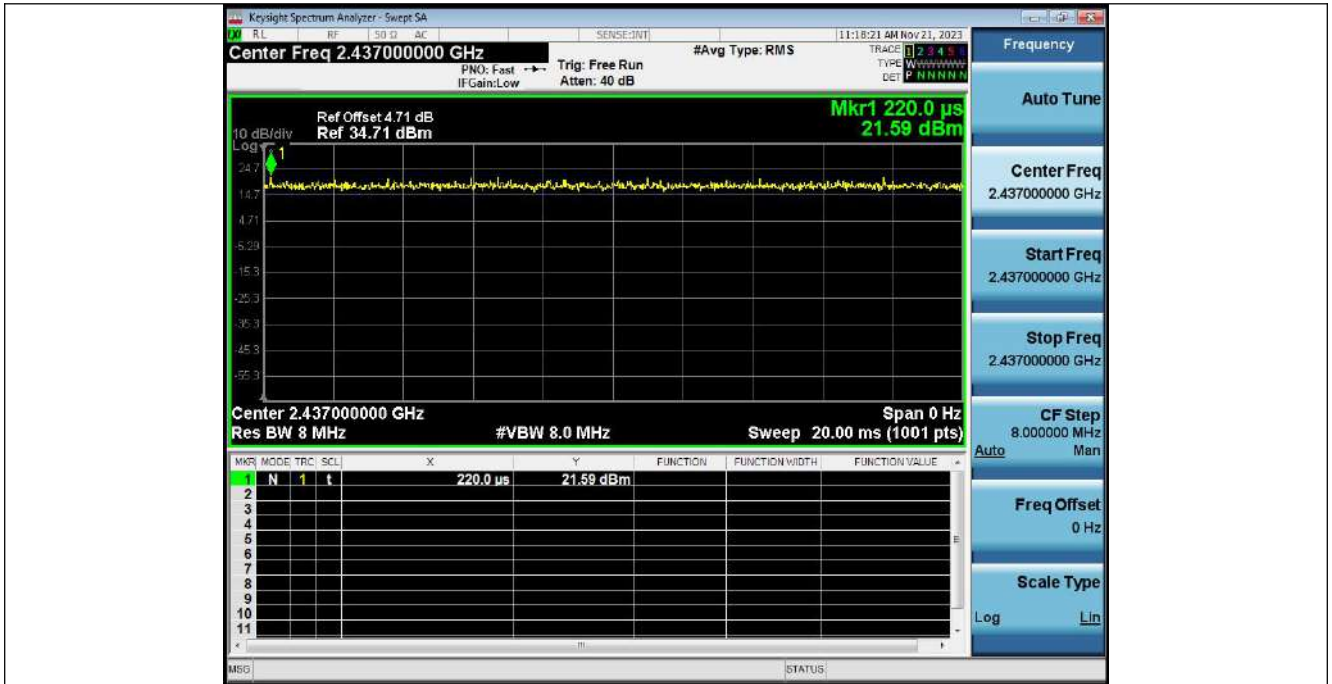
# Duty Cycle NVNT\_ANT1\_802\_11b\_2462



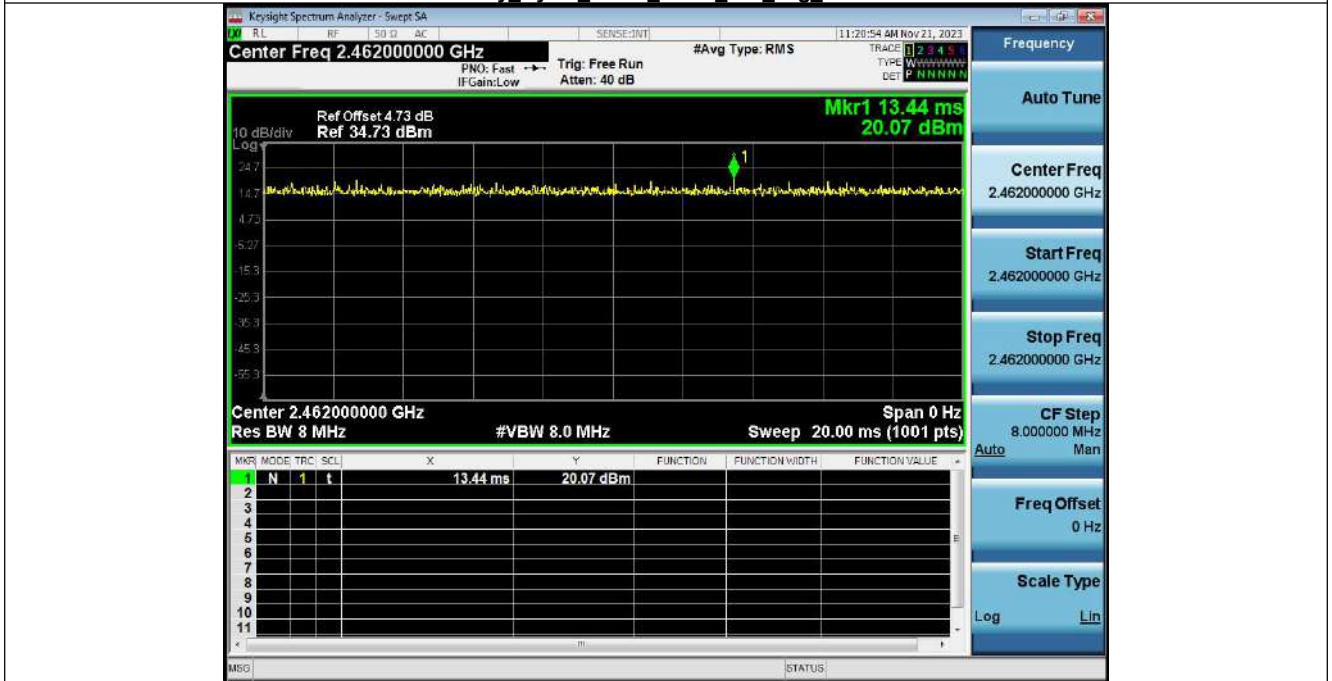
# Duty Cycle NVNT\_ANT1\_802\_11g\_2412



# Duty Cycle NVNT\_ANT1\_802\_11g\_2437



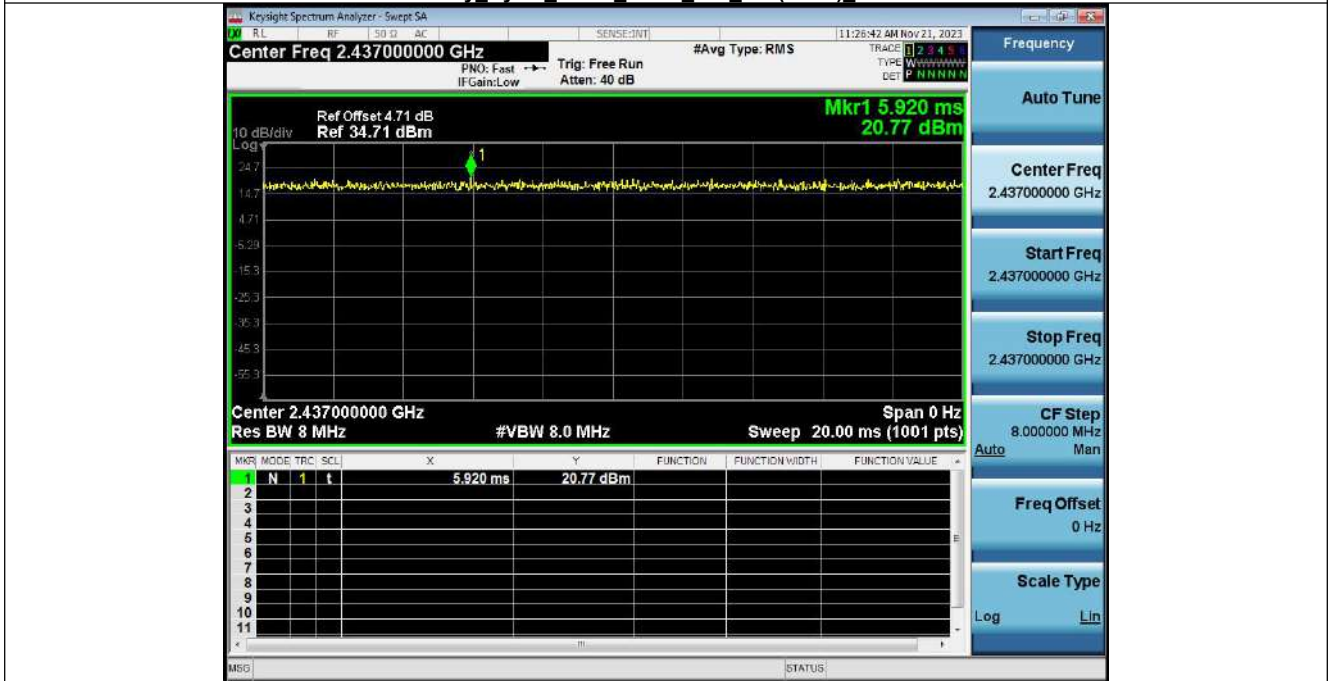
Duty\_Cycle\_NVNT\_ANT1\_802\_11g\_2462



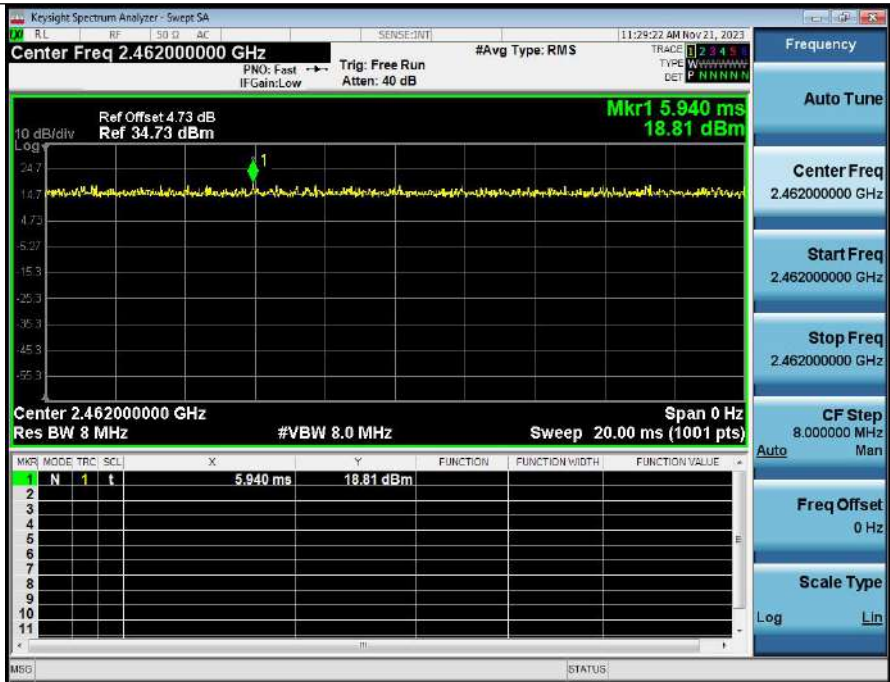
Duty\_Cycle\_NVNT\_ANT1\_802\_11n(HT20)\_2412



Duty\_Cycle\_NVNT\_ANT1\_802\_11n(HT20)\_2437



Duty\_Cycle\_NVNT\_ANT1\_802\_11n(HT20)\_2462



## 4. MAX. Output Power

| Modulation    | Frequency (MHz) | Detector | Conducted Power(dBm) | Total Power(dBm) | Limit (dBm) | Ant gain (dBi) | EIRP (dBm) | Limit (dBm) | Result |
|---------------|-----------------|----------|----------------------|------------------|-------------|----------------|------------|-------------|--------|
| 802.11b       | 2412.00         | Peak     | 18.01                | 18.01            | 30          | 3.82           | 21.83      | 36          | Pass   |
| 802.11b       | 2437.00         | Peak     | 17.24                | 17.24            | 30          | 3.82           | 21.06      | 36          | Pass   |
| 802.11b       | 2462.00         | Peak     | 17.94                | 17.94            | 30          | 3.82           | 21.76      | 36          | Pass   |
| 802.11g       | 2412.00         | Peak     | 20.22                | 20.22            | 30          | 3.82           | 24.04      | 36          | Pass   |
| 802.11g       | 2437.00         | Peak     | 21.65                | 21.65            | 30          | 3.82           | 25.47      | 36          | Pass   |
| 802.11g       | 2462.00         | Peak     | 19.13                | 19.13            | 30          | 3.82           | 22.95      | 36          | Pass   |
| 802.11n(HT20) | 2412.00         | Peak     | 20.07                | 20.07            | 30          | 3.82           | 23.89      | 36          | Pass   |
| 802.11n(HT20) | 2437.00         | Peak     | 21.56                | 21.56            | 30          | 3.82           | 25.38      | 36          | Pass   |
| 802.11n(HT20) | 2462.00         | Peak     | 19.16                | 19.16            | 30          | 3.82           | 22.98      | 36          | Pass   |

MAX\_Output\_Power\_NVNT\_ANT1\_802\_11b\_2412



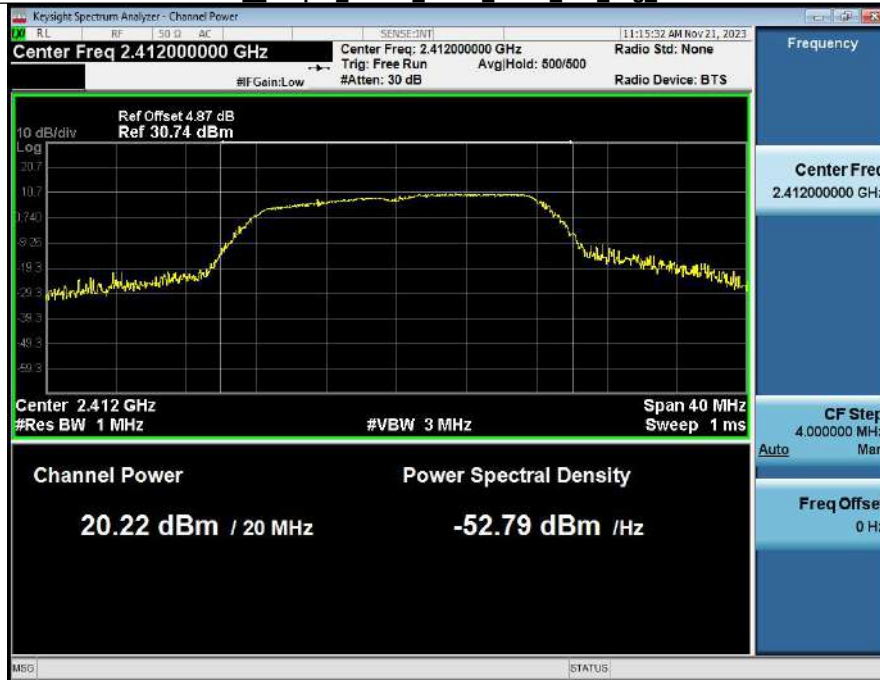
MAX\_Output\_Power\_NVNT\_ANT1\_802\_11b\_2437



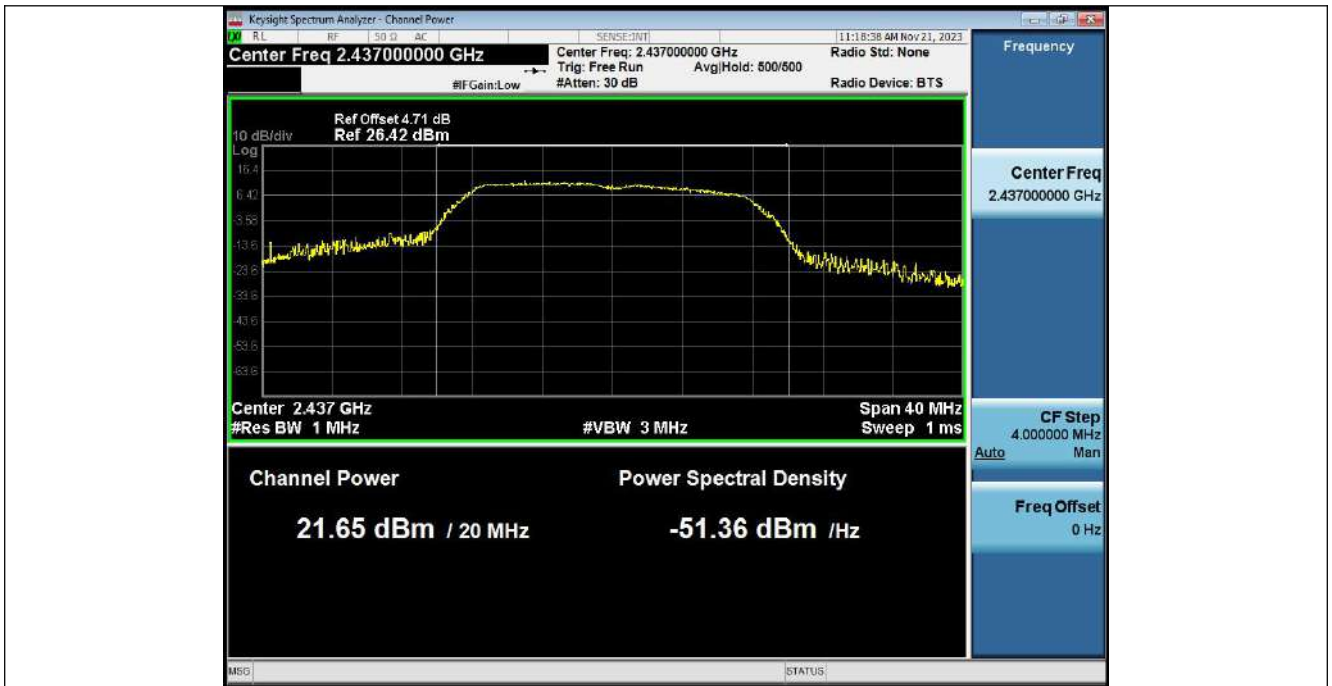
# MAX Output Power NVNT\_ANT1\_802\_11b\_2462



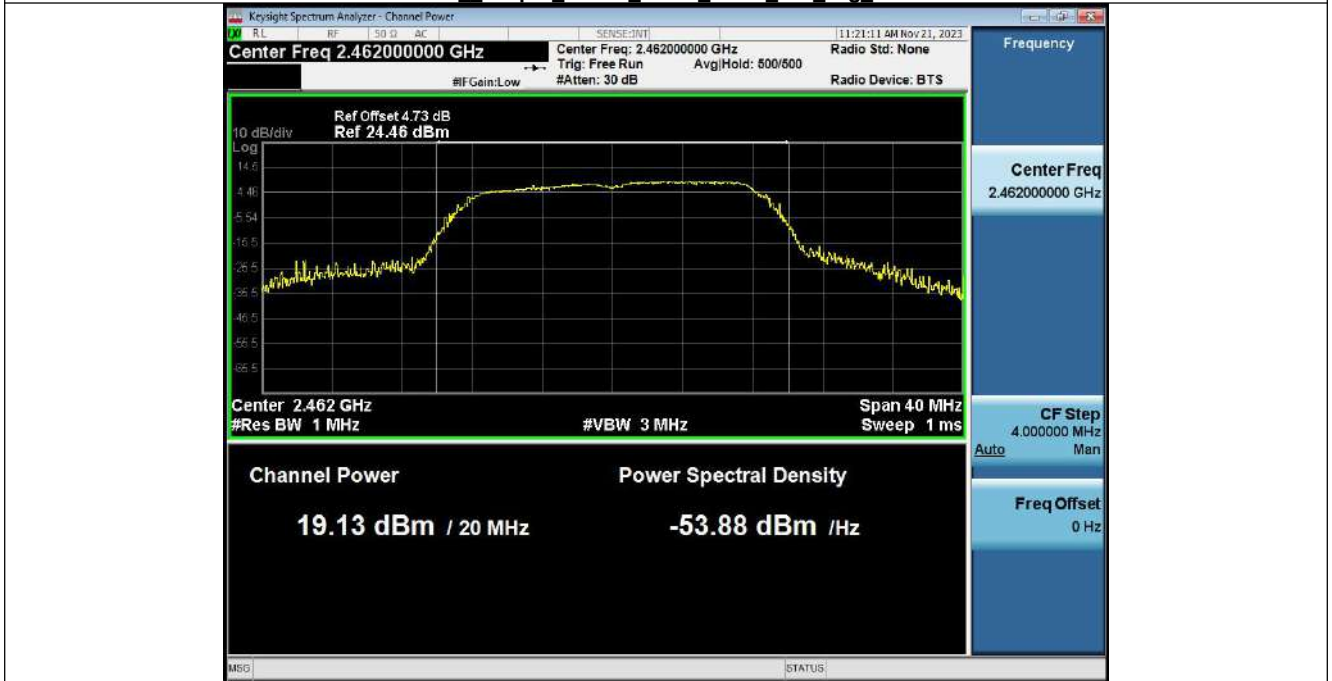
# MAX Output Power NVNT\_ANT1\_802\_11g\_2412



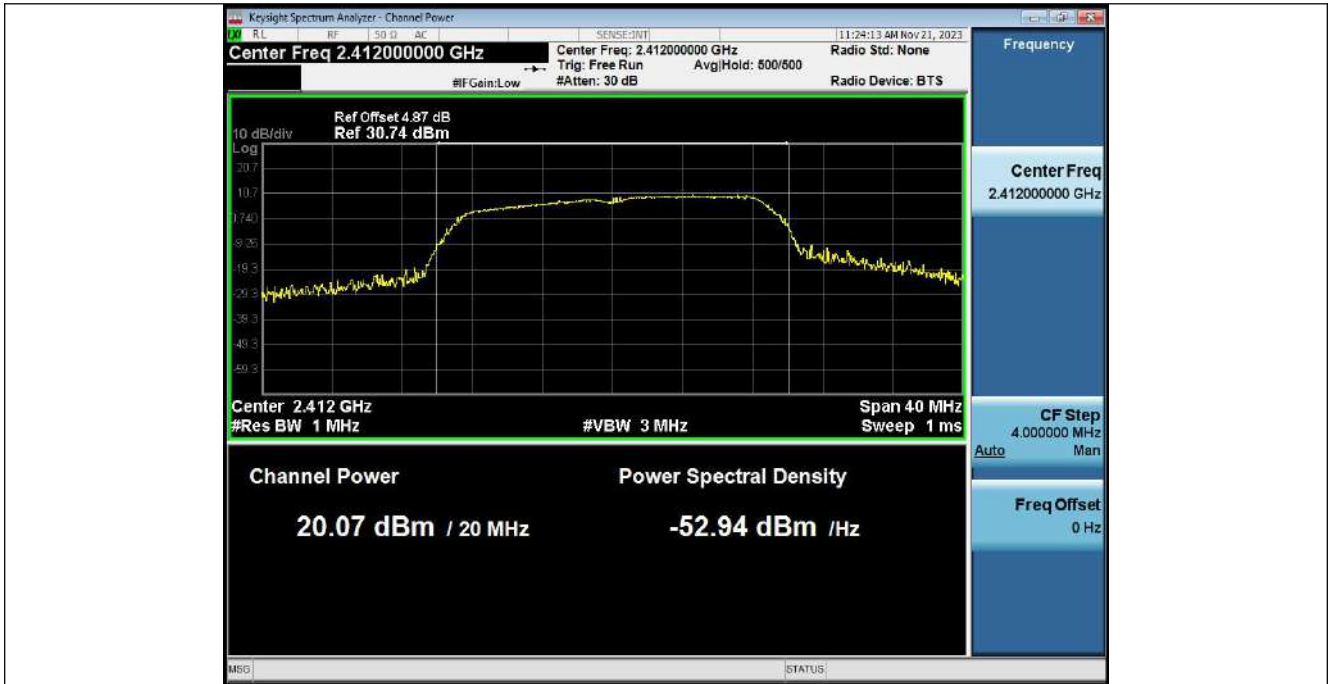
# MAX Output Power NVNT\_ANT1\_802\_11g\_2437



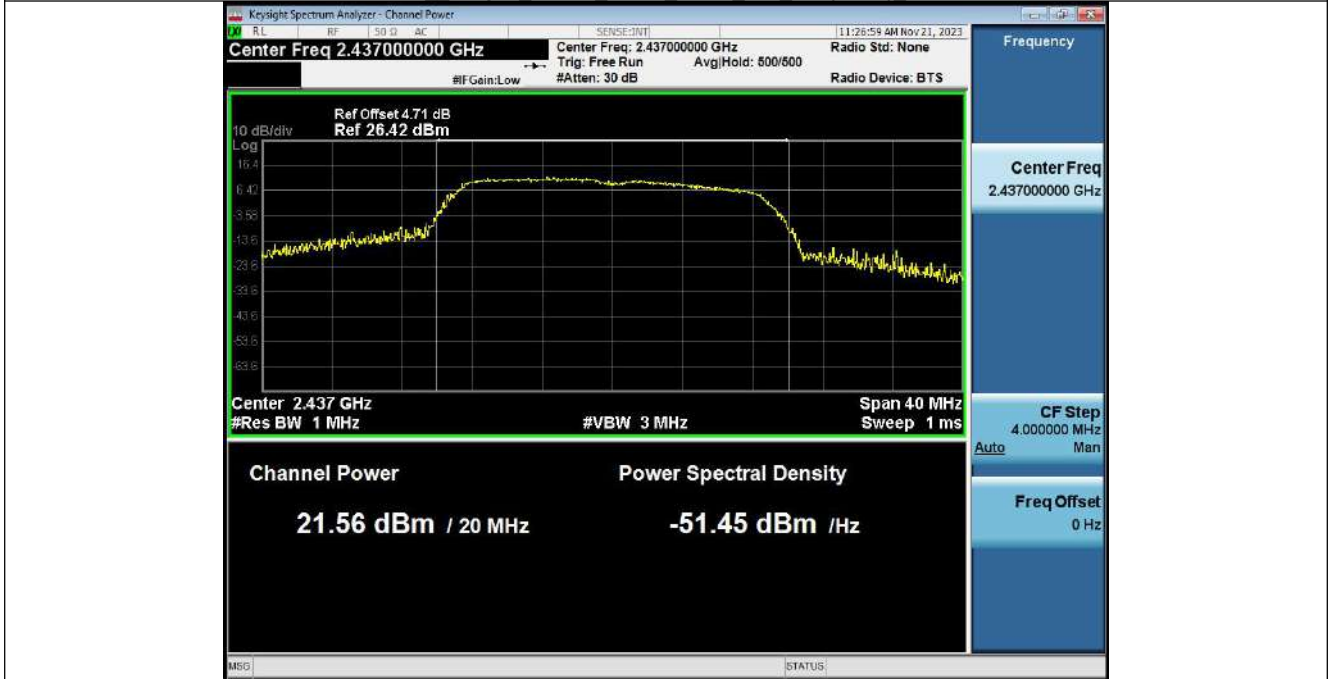
MAX Output Power\_NVNT\_ANT1\_802\_11g\_2462



MAX Output Power\_NVNT\_ANT1\_802\_11n(HT20)\_2412



MAX Output Power\_NVNT\_ANT1\_802\_11n(HT20)\_2437



MAX Output Power\_NVNT\_ANT1\_802\_11n(HT20)\_2462



5. Power Spectral Density

| Condition | Antenna | Modulation    | Frequency (MHz) | PSD(dBm/30kHz) | RB factor(dB) | PSD(dBm/3kHz) | limit(dBm/3kHz) | Result |
|-----------|---------|---------------|-----------------|----------------|---------------|---------------|-----------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 3.34           | -10.00        | -6.66         | 8               |        |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 1.94           | -10.00        | -8.06         | 8               |        |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 2.01           | -10.00        | -7.99         | 8               |        |
| NVNT      | ANT1    | 802.11g       | 2412.00         | -2.91          | -10.00        | -12.91        | 8               |        |
| NVNT      | ANT1    | 802.11g       | 2437.00         | -1.10          | -10.00        | -11.10        | 8               |        |
| NVNT      | ANT1    | 802.11g       | 2462.00         | -4.13          | -10.00        | -14.13        | 8               |        |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | -2.81          | -10.00        | -12.81        | 8               |        |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | -1.23          | -10.00        | -11.23        | 8               |        |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | -4.33          | -10.00        | -14.32        | 8               |        |



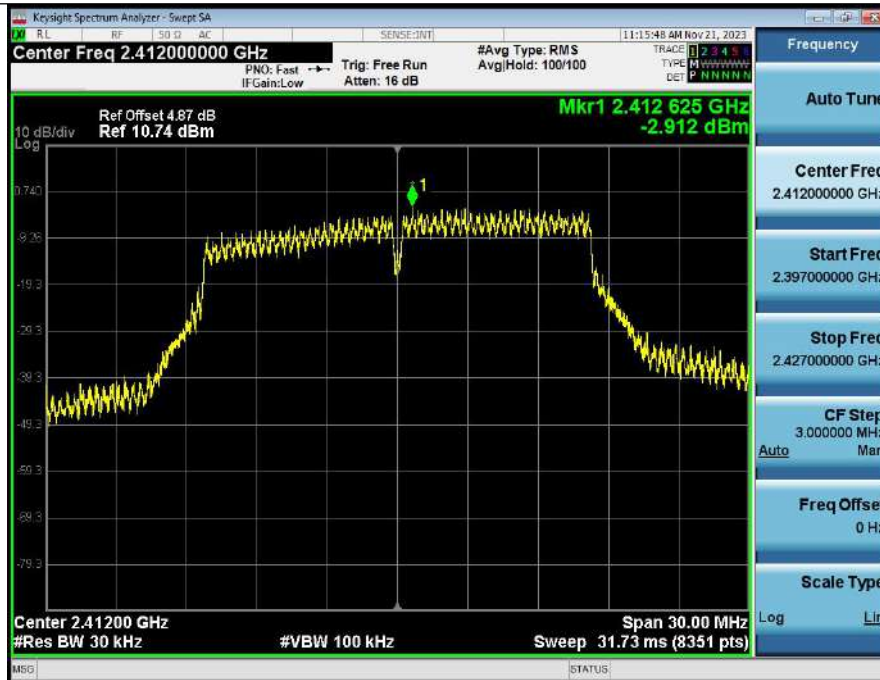
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11b\_2437



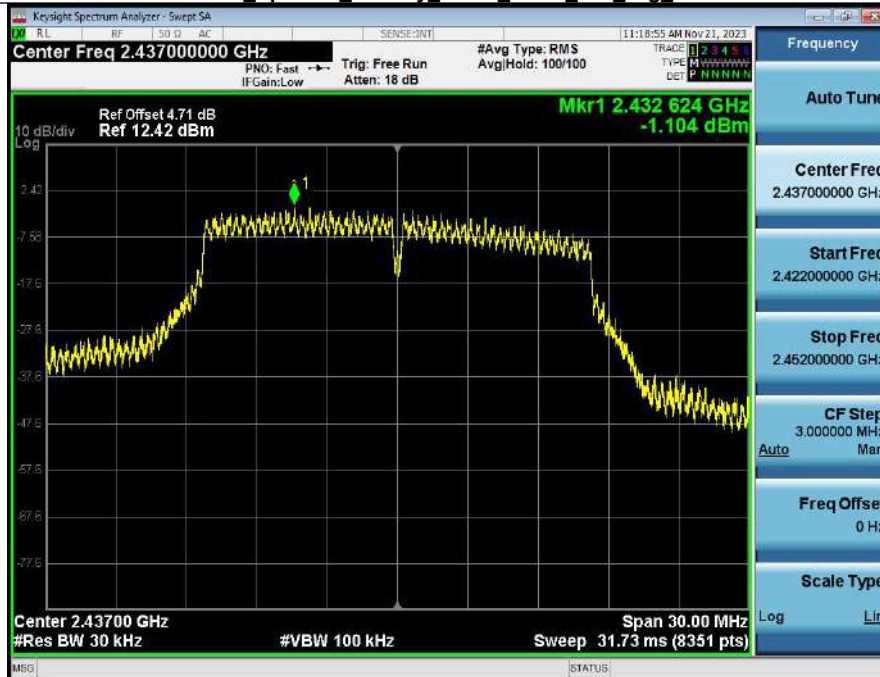
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11b\_2462



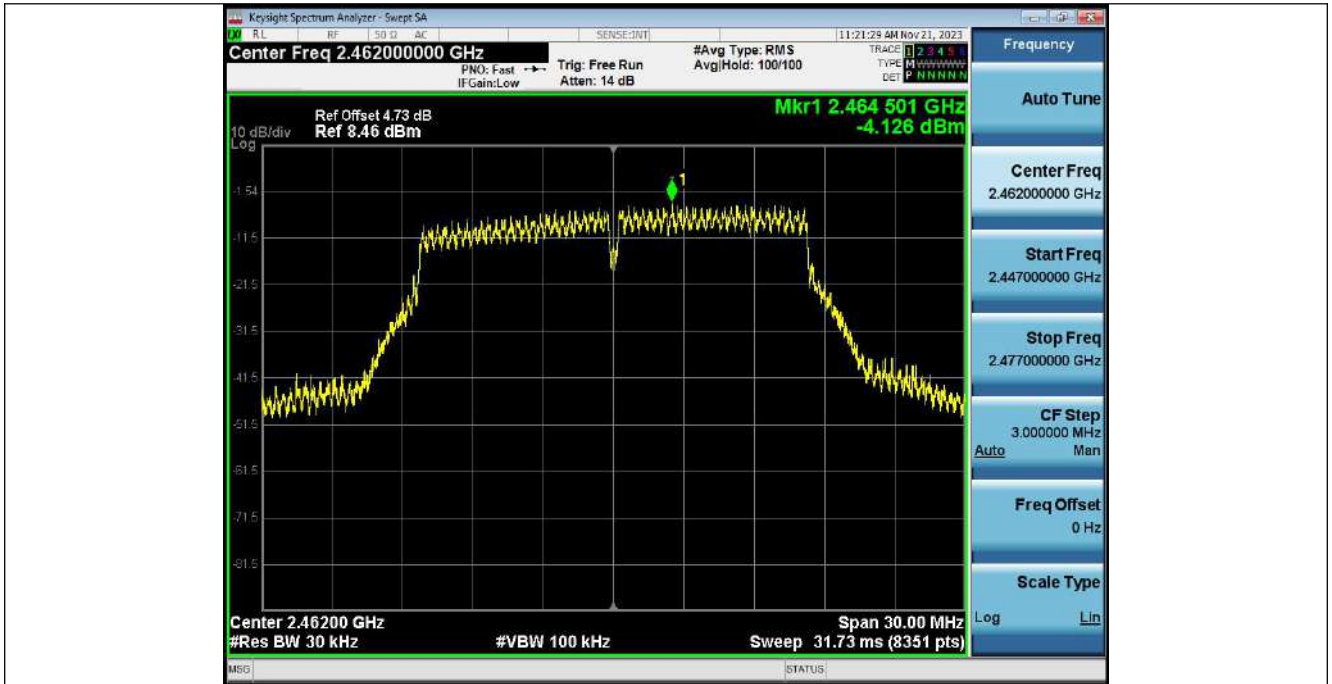
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11g\_2412



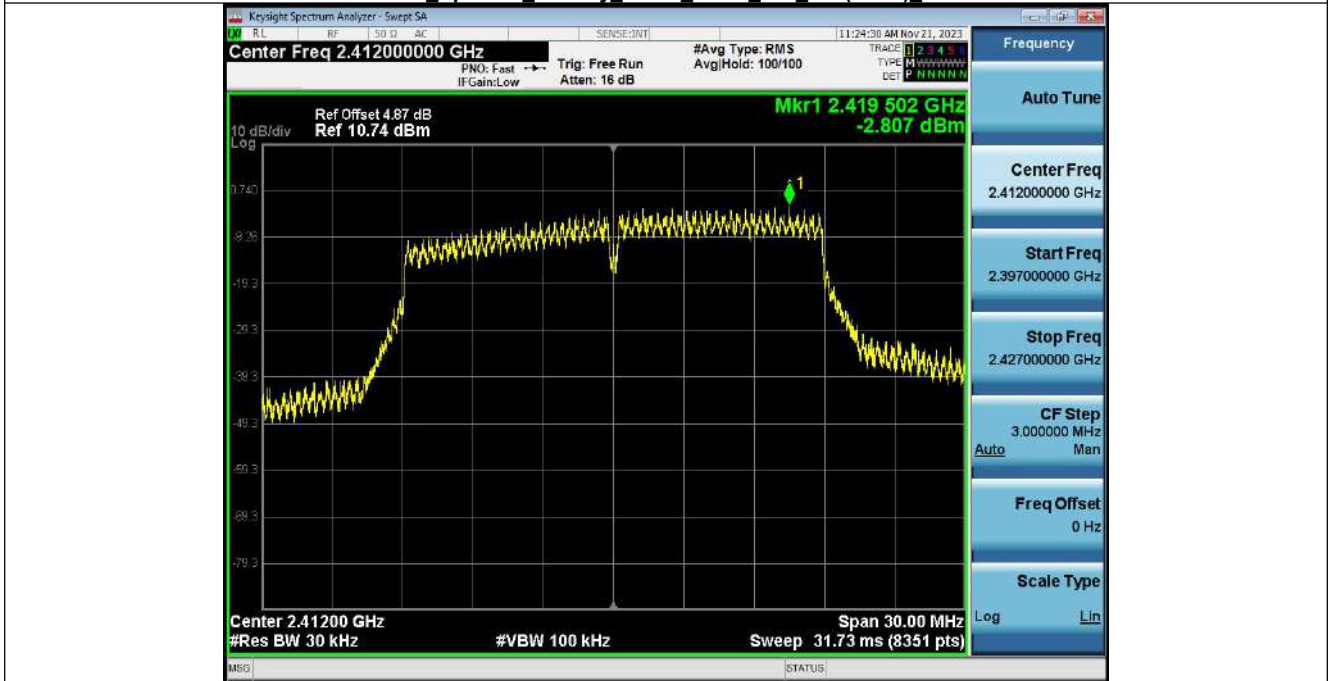
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11g\_2437



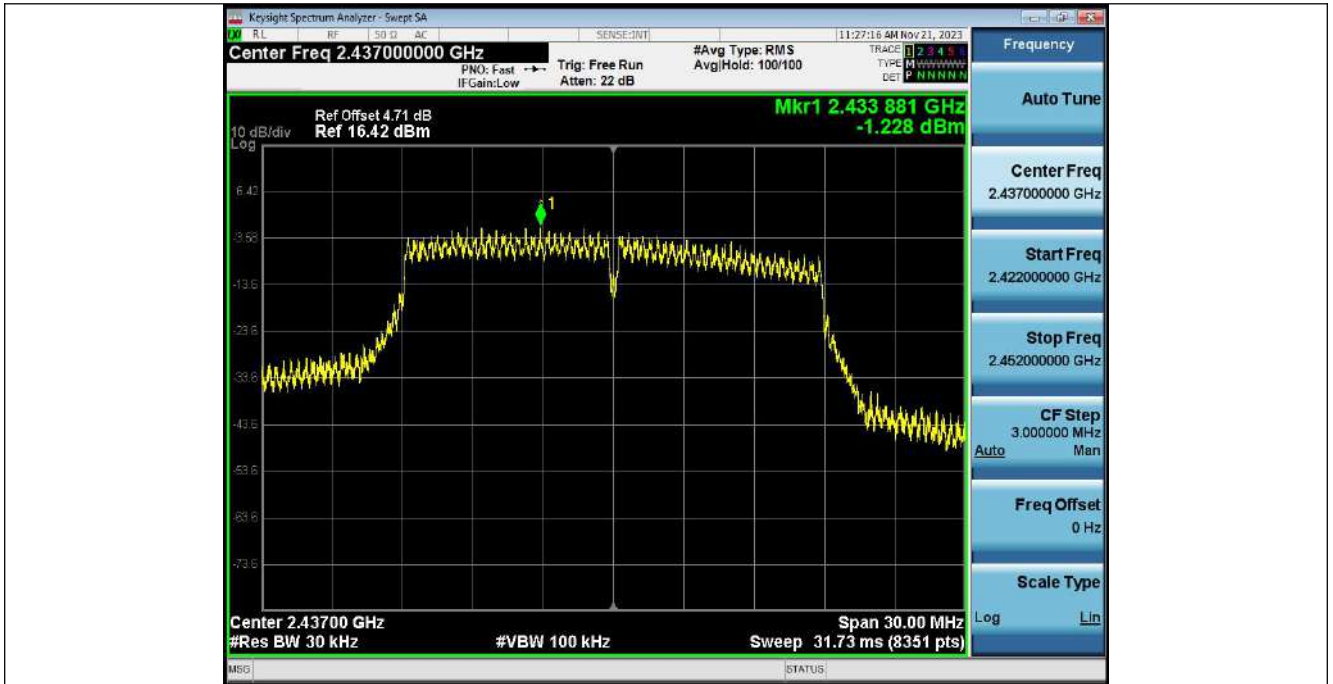
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11g\_2462



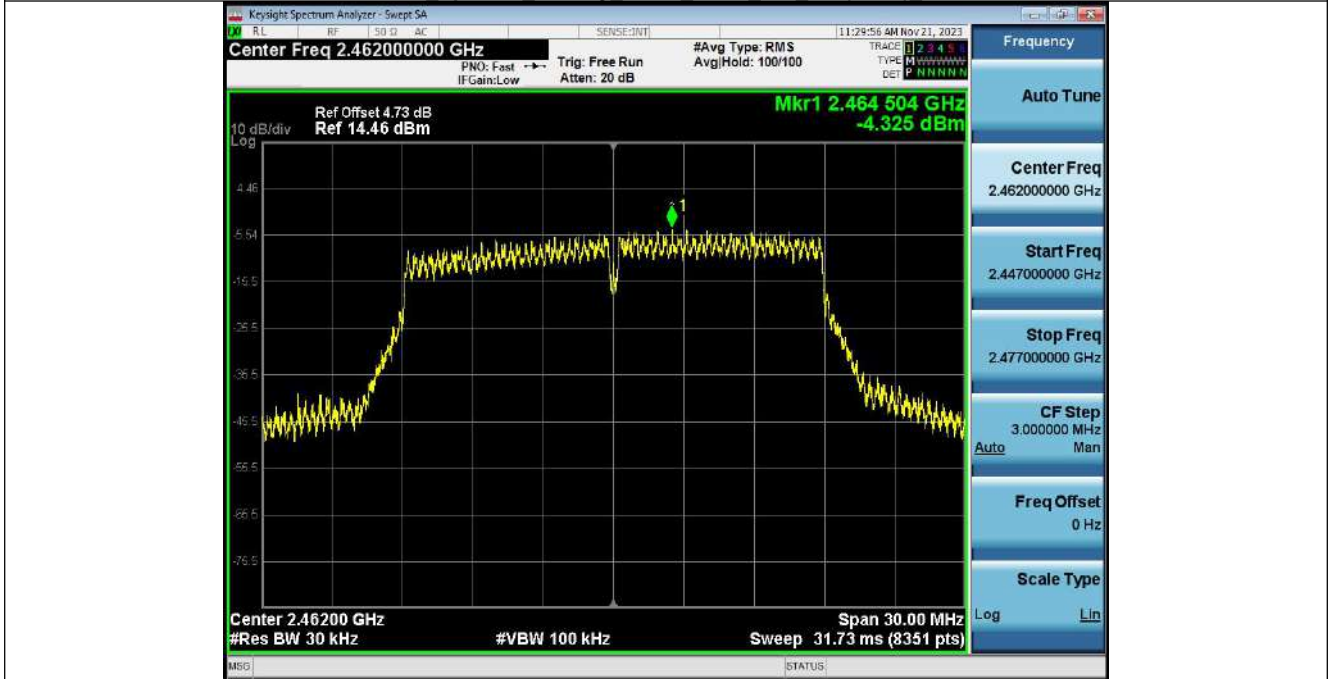
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11n(HT20)\_2412



Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11n(HT20)\_2437



Power Spectral Density NVNT ANT1 802\_11n(HT20)\_2462



6. Bandedge

| Condition | Antenna | Modulation    | TX_Frequency (MHz) | Max. Mark_frequency(MHz) | Spurious level(dBm) | limit(dBm) | Result |
|-----------|---------|---------------|--------------------|--------------------------|---------------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00            | 2399.488                 | -39.571             | -12.894    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00            | 2487.136                 | -55.390             | -13.402    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00            | 2399.488                 | -35.172             | -20.260    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00            | 2483.536                 | -53.116             | -21.967    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00            | 2398.816                 | -35.911             | -21.146    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00            | 2483.824                 | -48.999             | -21.944    | Pass   |

1 Reference Level NVNT\_ANT1\_802\_11b\_2412



2 Bandedge\_NVNT\_ANT1\_802\_11b\_2412



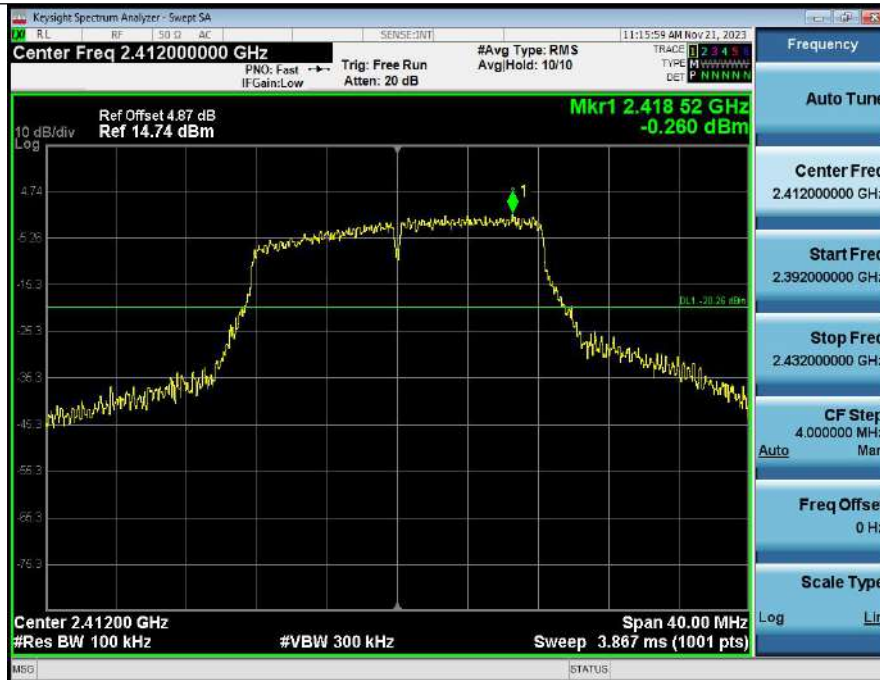
1 Reference Level NVNT\_ANT1\_802\_11b\_2462



## 2\_Bandedge\_NVNT\_ANT1\_802\_11b\_2462



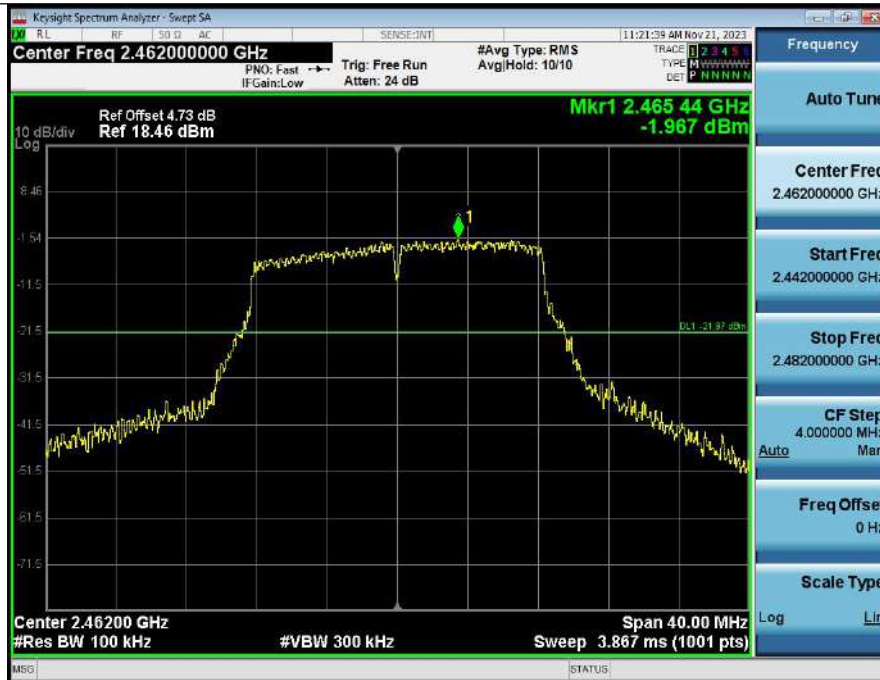
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2\_Bandedge\_NVNT\_ANT1\_802\_11g\_2412



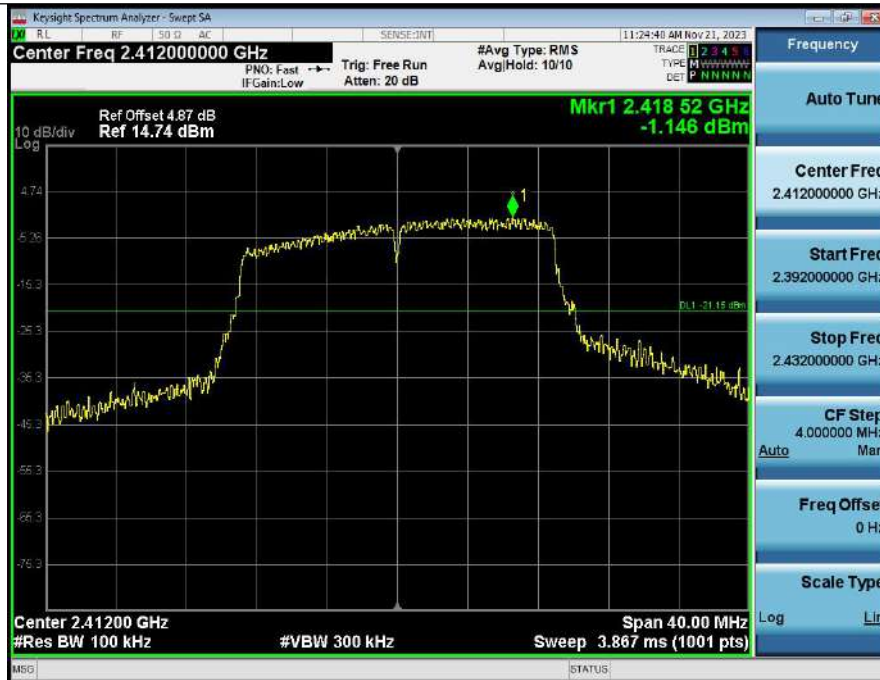
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2\_Bandedge\_NVNT\_ANT1\_802\_11g\_2462



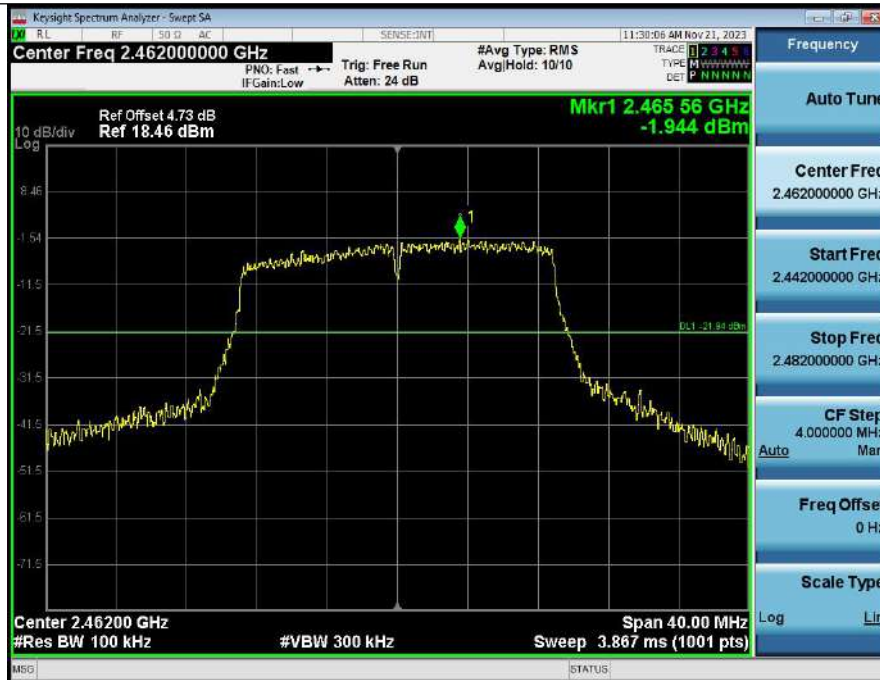
1\_Reference\_Level\_NVNT\_ANT1\_802\_11n(HT20)\_2412



2\_Bandedge\_NVNT\_ANT1\_802\_11n(HT20)\_2412



1\_Reference\_Level\_NVNT\_ANT1\_802\_11n(HT20)\_2462



## 2\_Bandedge\_NVNT\_ANT1\_802\_11n(HT20)\_2462



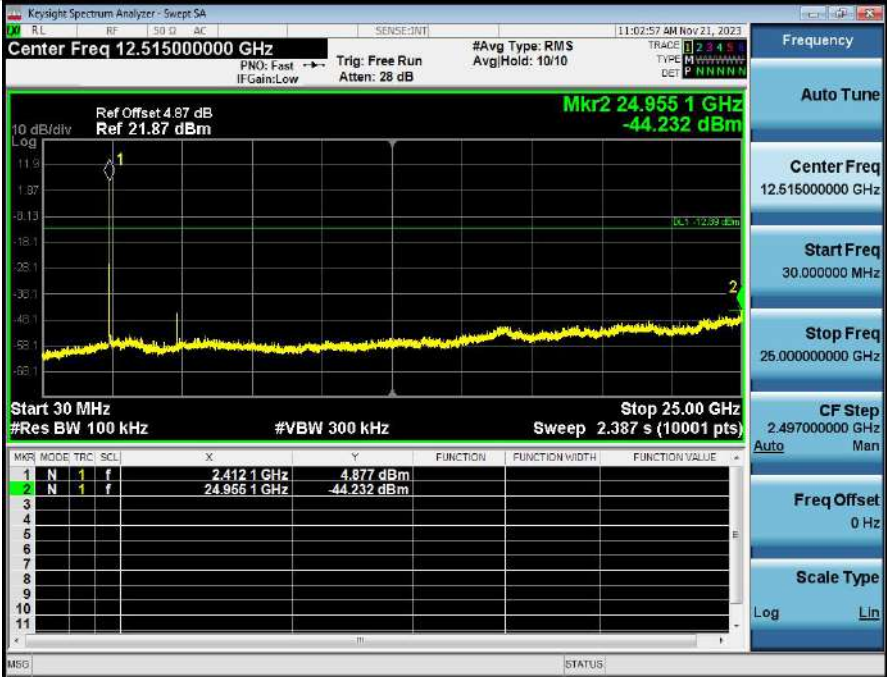
7. Spurious Emission

| Condition | Antenna | Modulation    | TX_Frequency (MHz) | Max. Mark_frequency(MHz) | Spurious level(dBm) | limit(dBm) | Result |
|-----------|---------|---------------|--------------------|--------------------------|---------------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00            | 24955.054                | -44.232             | -12.894    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00            | 4874.180                 | -49.524             | -14.104    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00            | 24947.563                | -45.817             | -13.402    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00            | 24465.642                | -57.668             | -20.260    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00            | 24870.156                | -52.381             | -19.088    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00            | 24922.593                | -53.889             | -21.967    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00            | 24977.527                | -58.243             | -21.146    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00            | 24967.539                | -52.109             | -19.409    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00            | 24418.199                | -54.015             | -21.944    | Pass   |

1\_Reference\_Level\_NVNT\_ANT1\_802\_11b\_2412



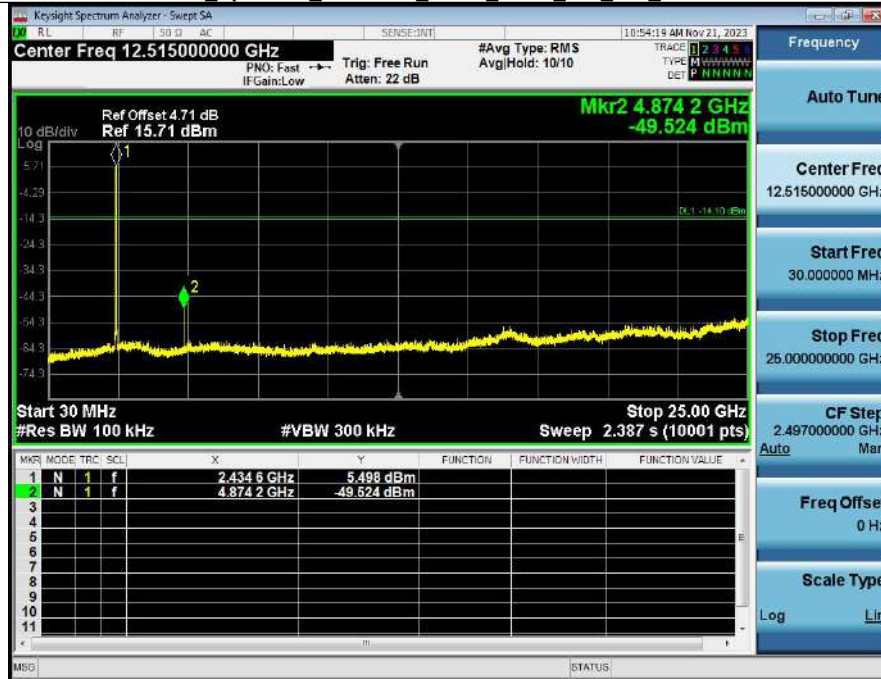
2\_Spurious Emission\_NVNT\_ANT1\_802\_11b\_2412



# 1 Reference Level NVNT\_ANT1\_802\_11b\_2437



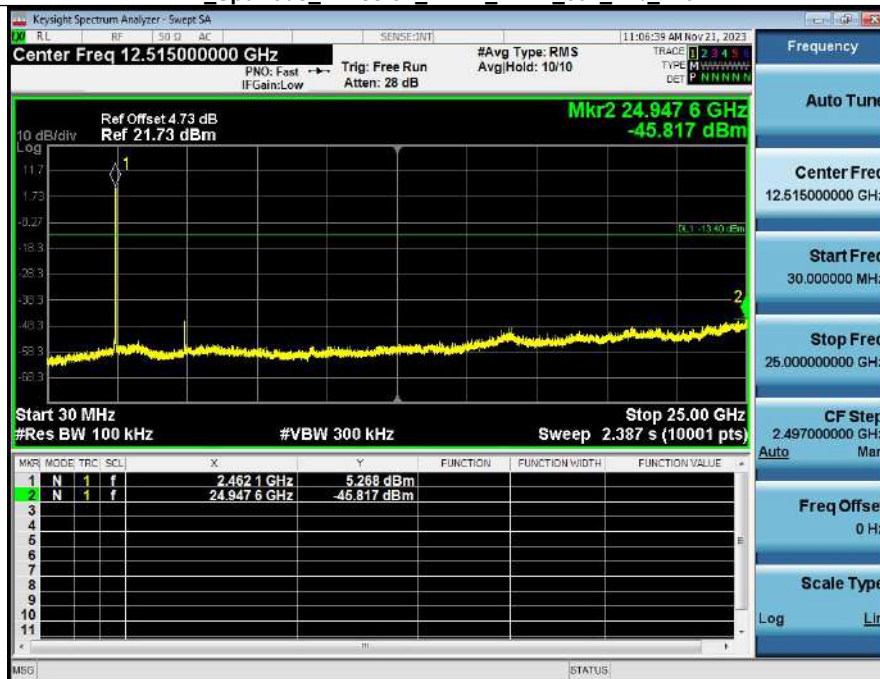
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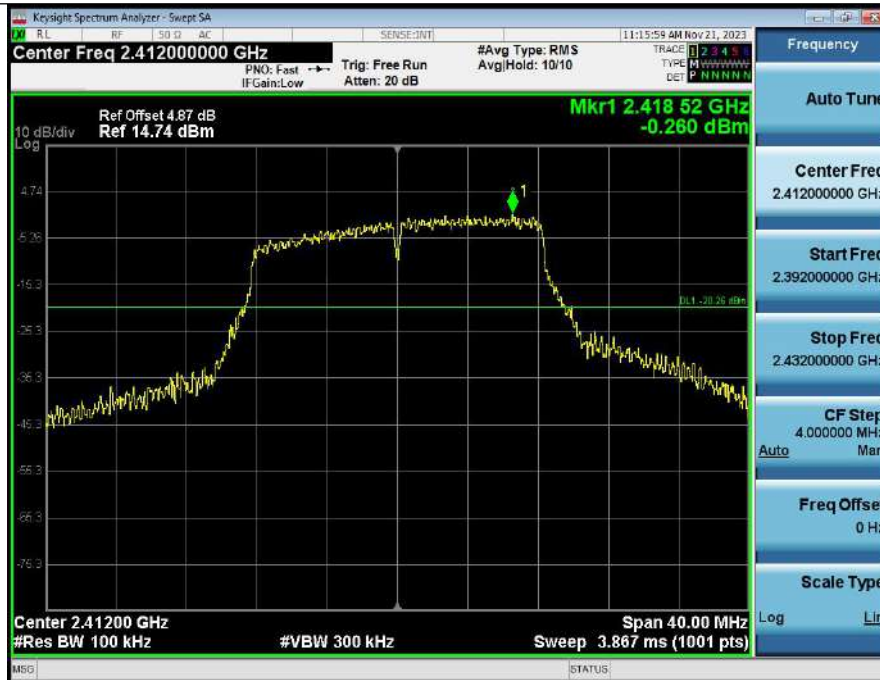
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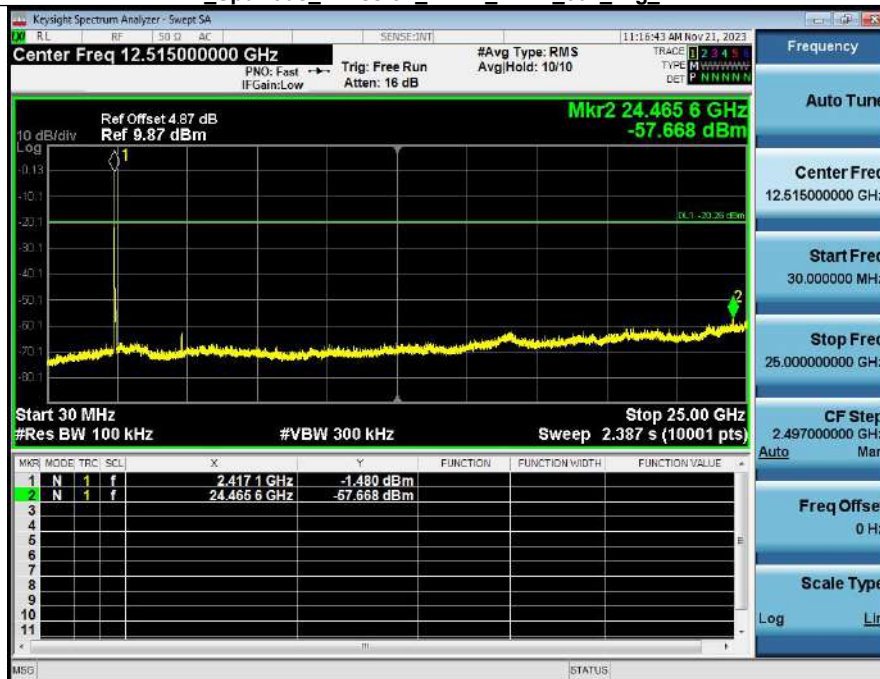
2\_Spurious\_Emission\_NVNT\_ANT1\_802\_11b\_2462



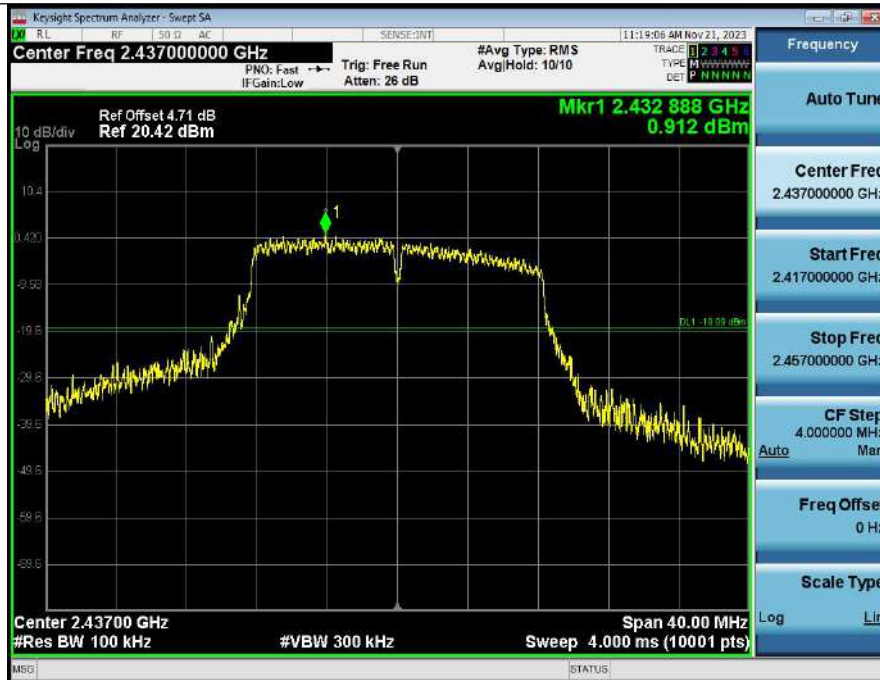
1\_Reference\_Level\_NVNT\_ANT1\_802\_11g\_2412



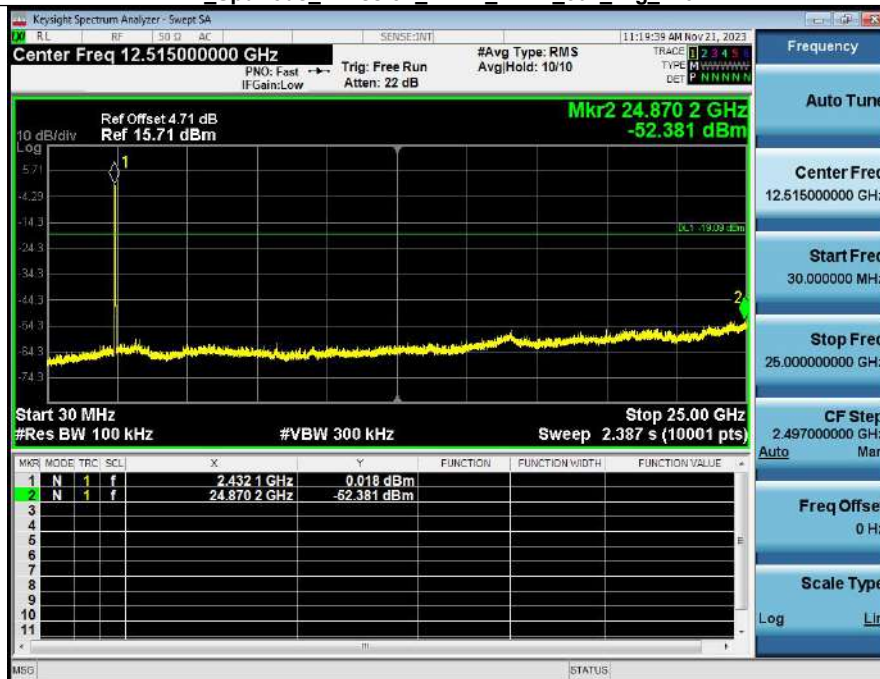
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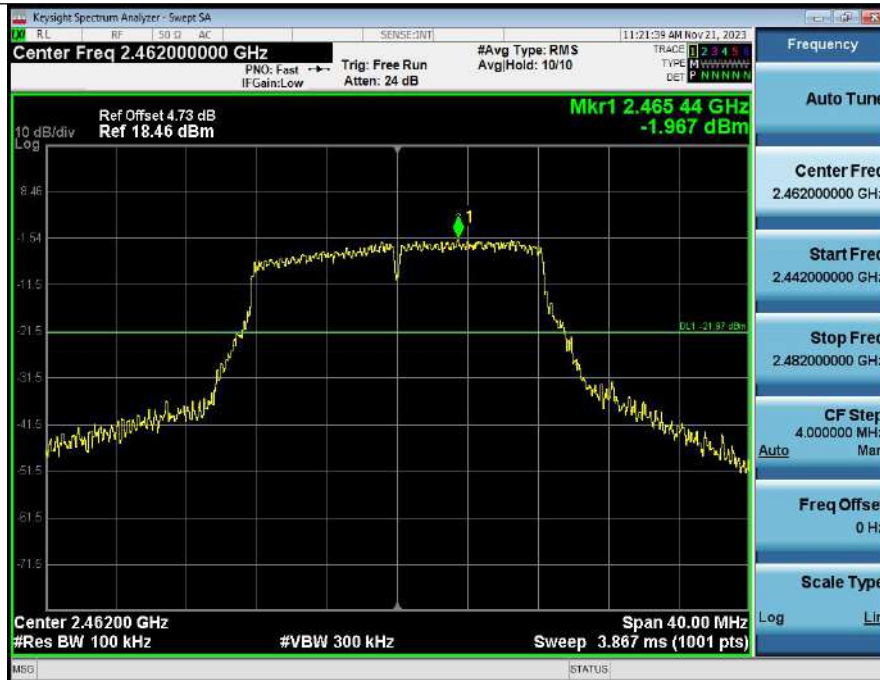
## 1\_Reference\_Level\_NVNT\_ANT1\_802\_11g\_2437



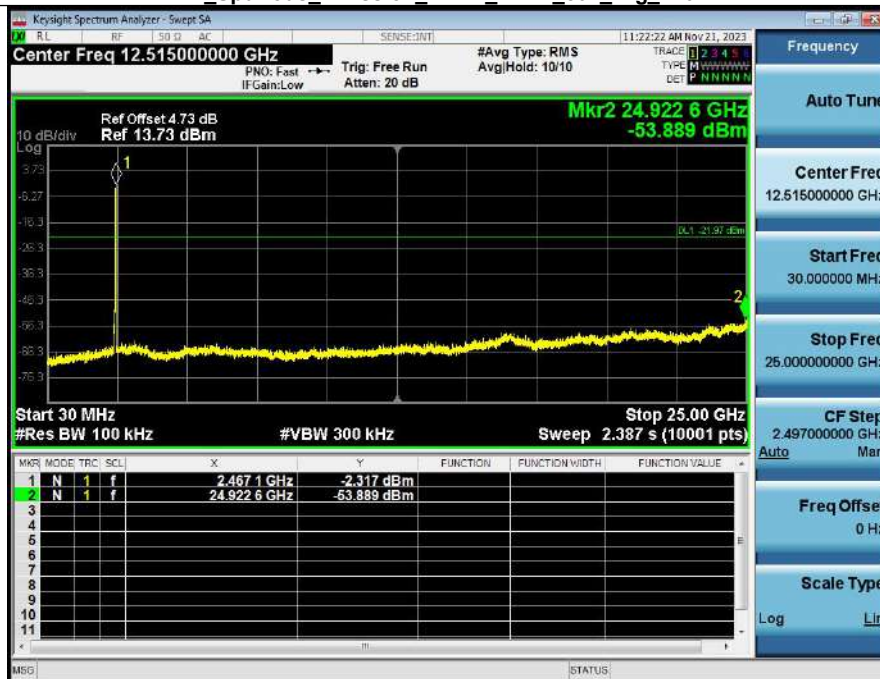
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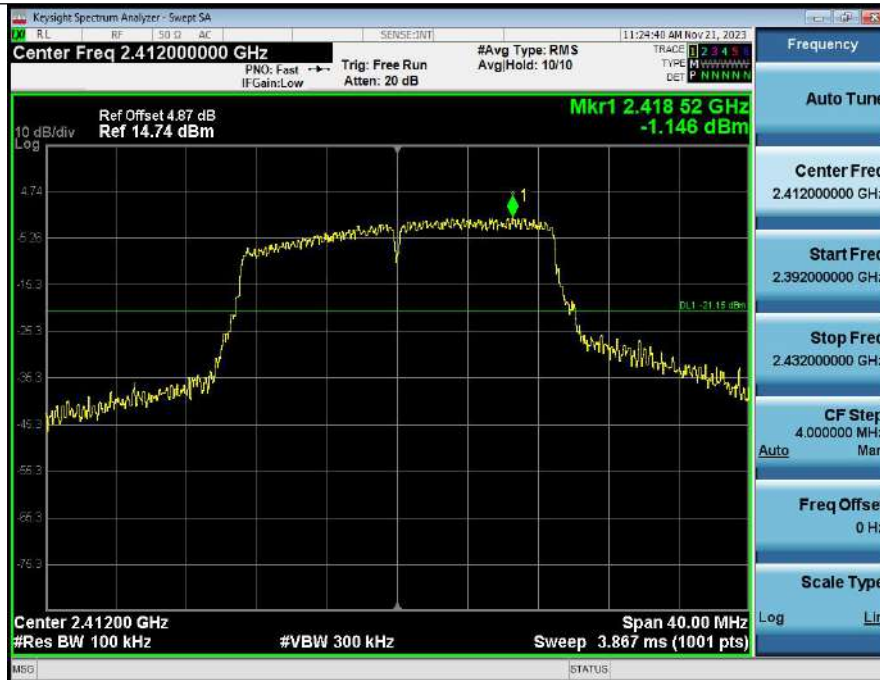
## 1\_Reference\_Level\_NVNT\_ANT1\_802\_11g\_2462



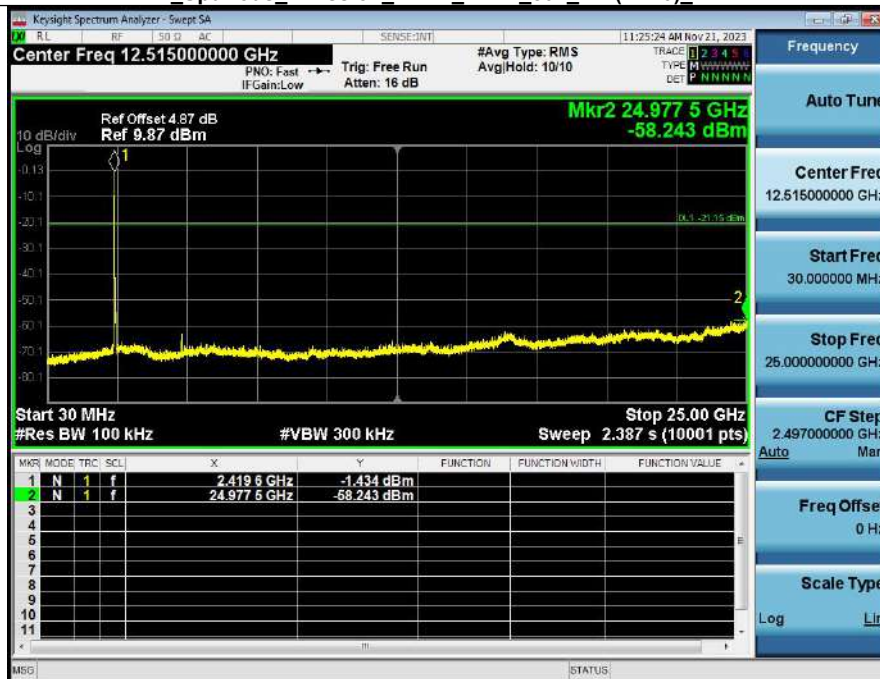
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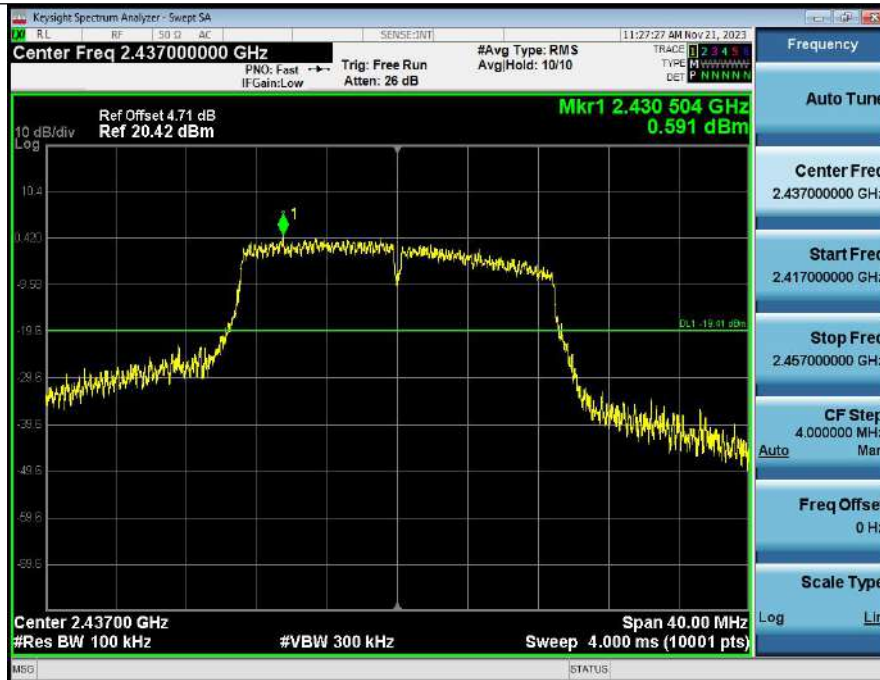
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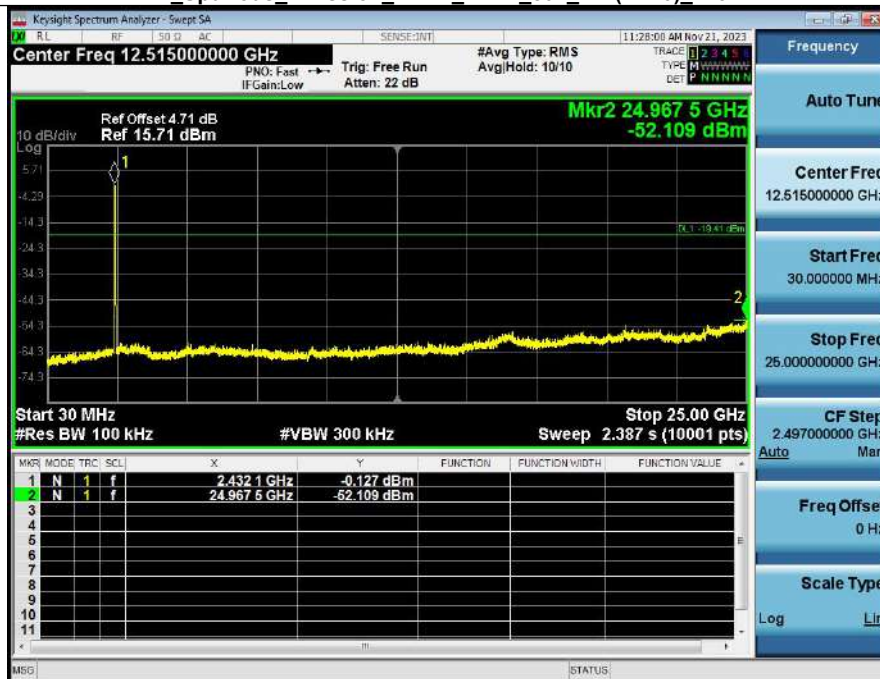
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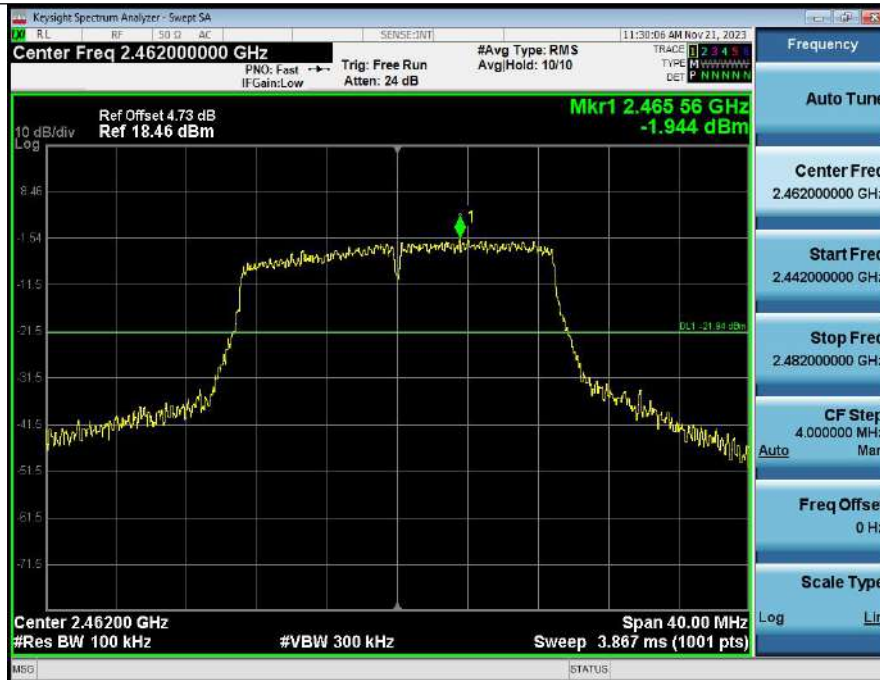
## 1 Reference\_Level\_NVNT\_ANT1\_802\_11n(HT20)\_2437



## 2 Spurious Emission\_NVNT\_ANT1\_802\_11n(HT20)\_2437



## 1 Reference\_Level\_NVNT\_ANT1\_802\_11n(HT20)\_2462



## 2 Spurious Emission\_NVNT\_ANT1\_802\_11n(HT20)\_2462

