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# FCC ID WIFI2.4

## FCC\_2.4G\_WIFI (Part15.247) Test Data

### 1. -6dB Bandwidth

| Condition | Antenna | Modulation    | Frequency (MHz) | -6dB BW(MHz) | limit(kHz) | Result |
|-----------|---------|---------------|-----------------|--------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 9.06         | 500        | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 8.13         | 500        | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 8.62         | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00         | 16.11        | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00         | 16.36        | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00         | 16.11        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | 17.16        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | 17.43        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | 17.02        | 500        | Pass   |



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





-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

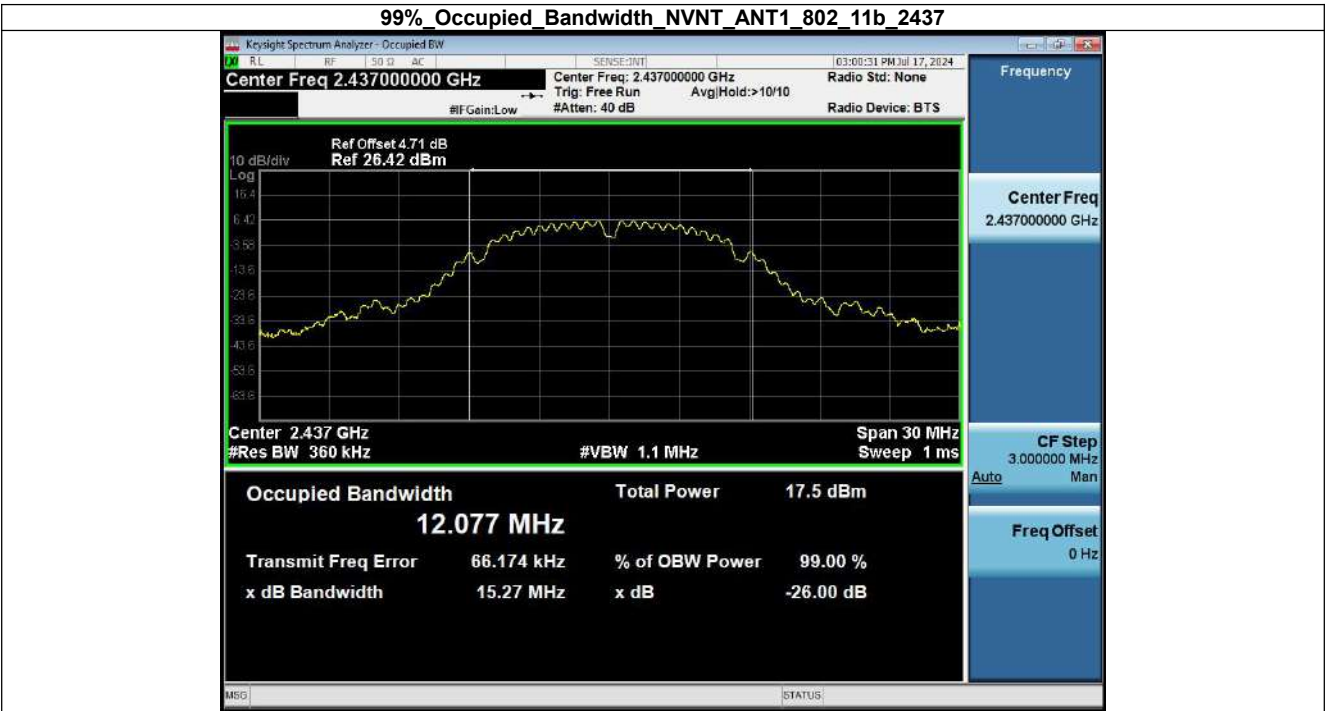
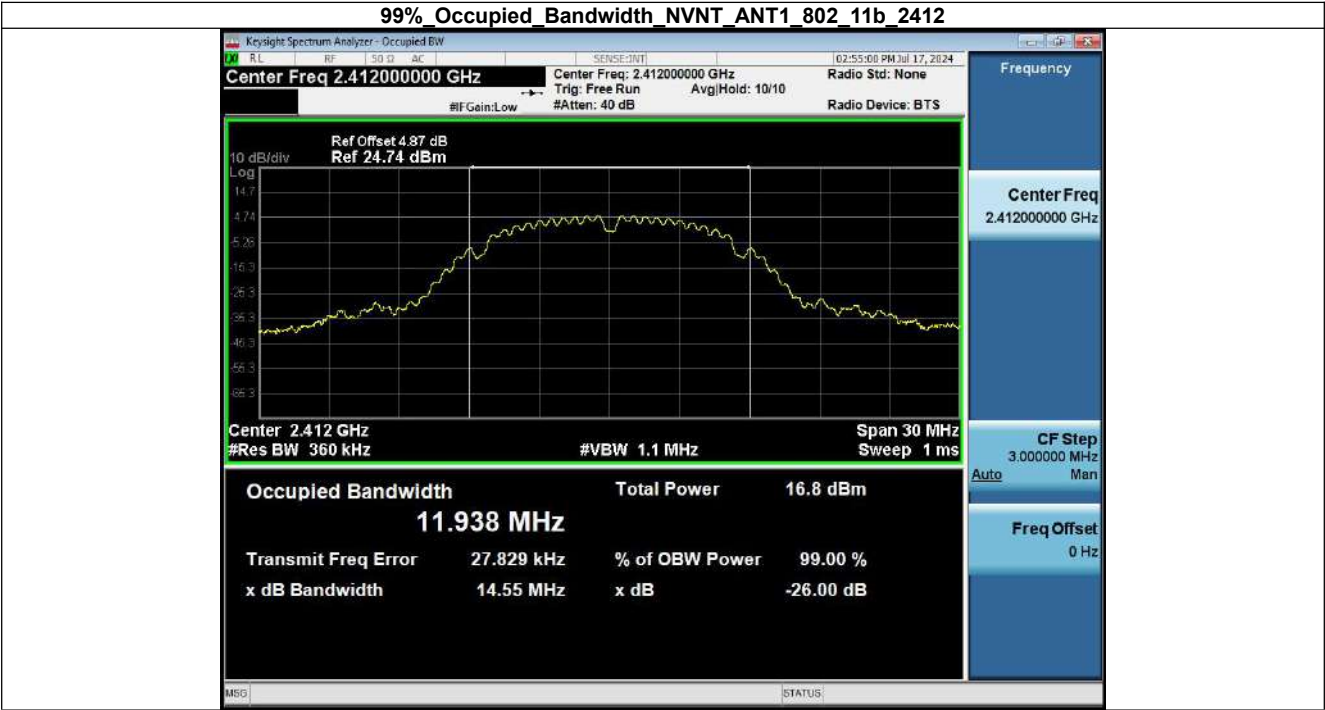


-6dB Bandwidth NVNT\_ANT1\_802\_11n(HT20)\_2462



2. 99% Occupied Bandwidth

| Condition | Antenna | Modulation    | Frequency (MHz) | 99% BW(MHz) |
|-----------|---------|---------------|-----------------|-------------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 11.938      |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 12.077      |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 12.040      |
| NVNT      | ANT1    | 802.11g       | 2412.00         | 17.170      |
| NVNT      | ANT1    | 802.11g       | 2437.00         | 17.131      |
| NVNT      | ANT1    | 802.11g       | 2462.00         | 17.107      |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | 17.847      |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | 17.854      |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | 17.866      |



### 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

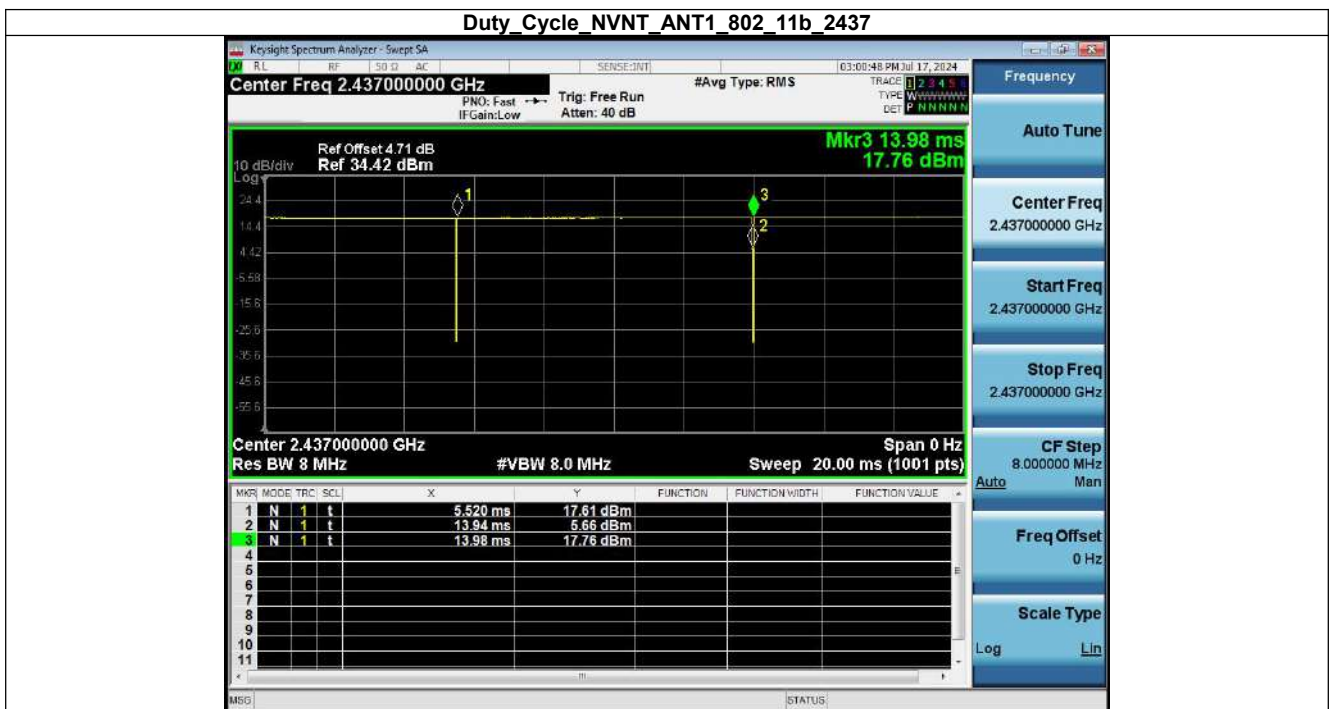
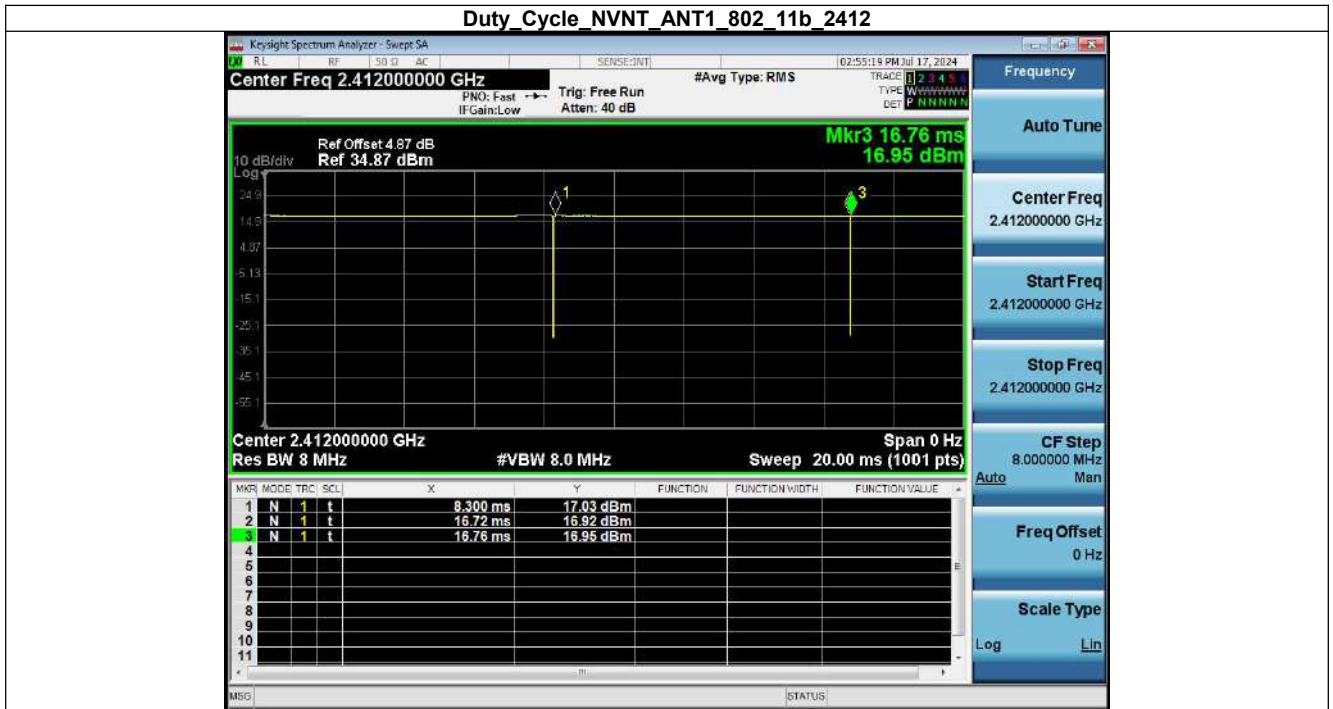


99%\_Occupied\_Bandwidth\_NVNT\_ANT1\_802\_11n(HT20)\_2462

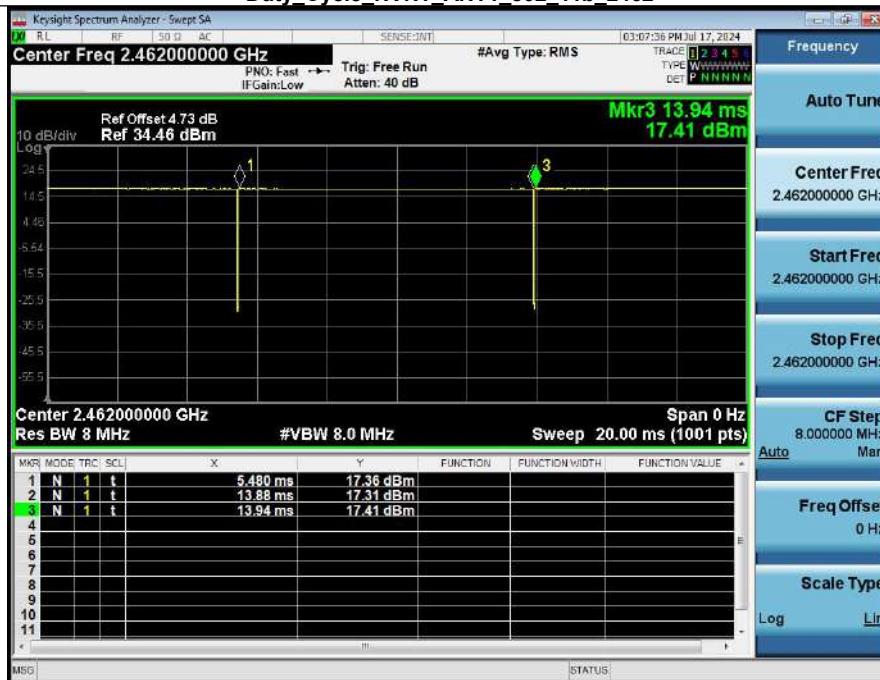


### 3. Duty Cycle

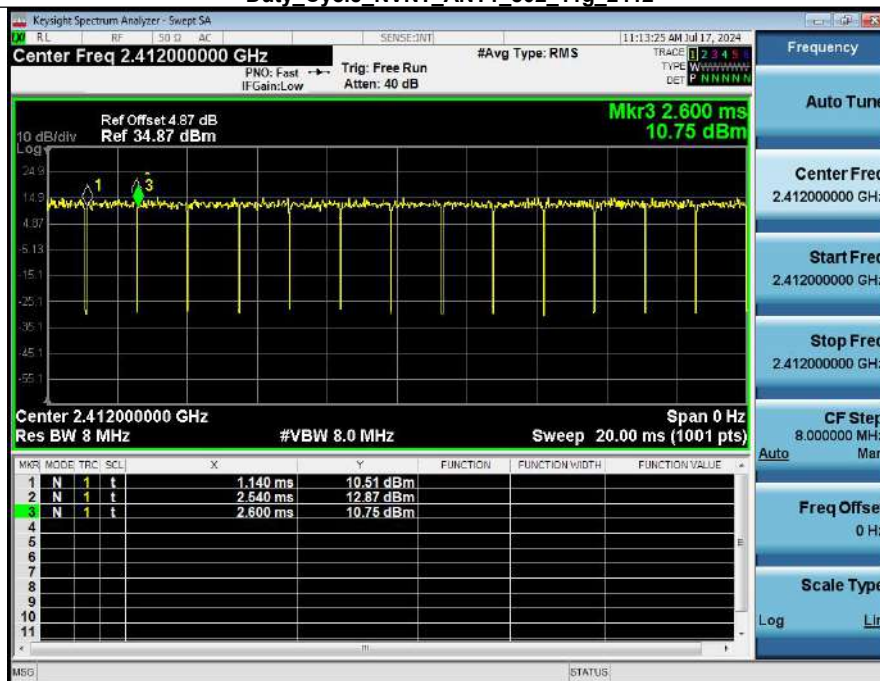
| Condition | Antenna | Modulation    | Frequency (MHz) | Duty cycle(%) | Duty factor(dB) |
|-----------|---------|---------------|-----------------|---------------|-----------------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 99.76         | 0.00            |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 99.76         | 0.00            |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 99.53         | 0.00            |
| NVNT      | ANT1    | 802.11g       | 2412.00         | 97.26         | 0.12            |
| NVNT      | ANT1    | 802.11g       | 2437.00         | 97.26         | 0.12            |
| NVNT      | ANT1    | 802.11g       | 2462.00         | 98.61         | 0.00            |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | 98.36         | 0.00            |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | 95.24         | 0.21            |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | 96.77         | 0.14            |



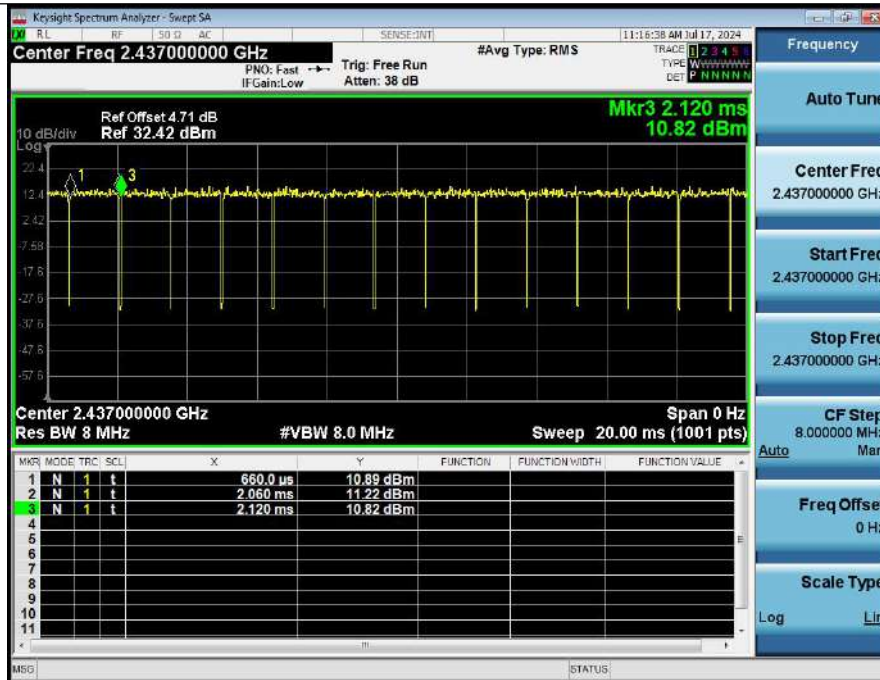
# Duty Cycle NVNT\_ANT1\_802\_11b\_2462



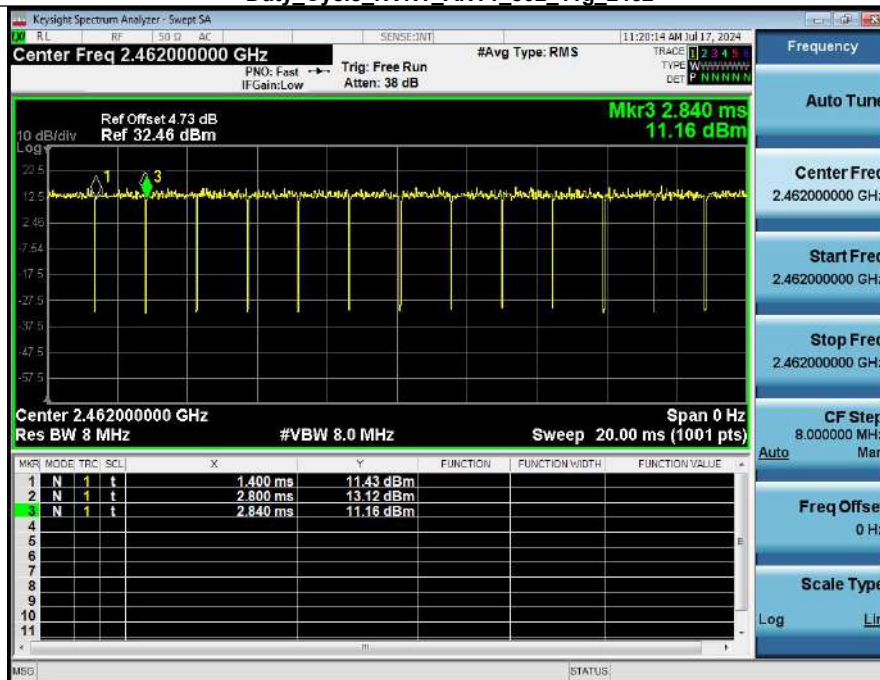
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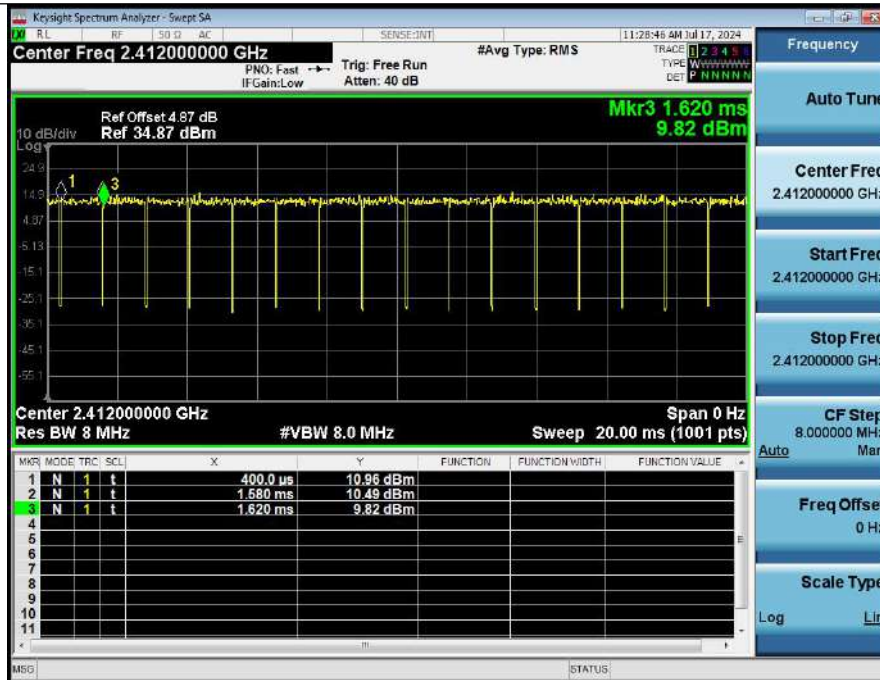
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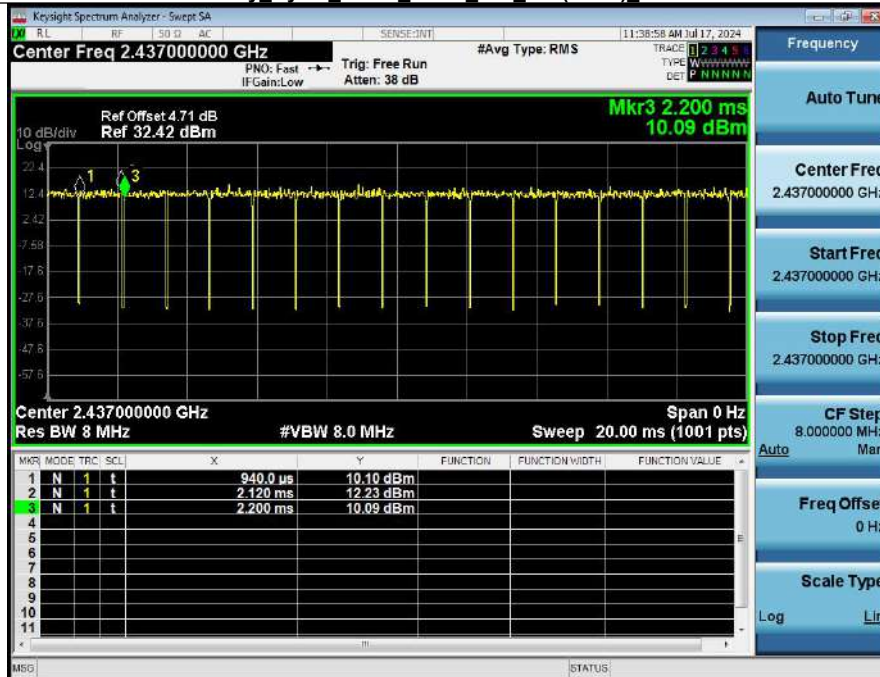
Duty\_Cycle\_NVNT\_ANT1\_802\_11g\_2462



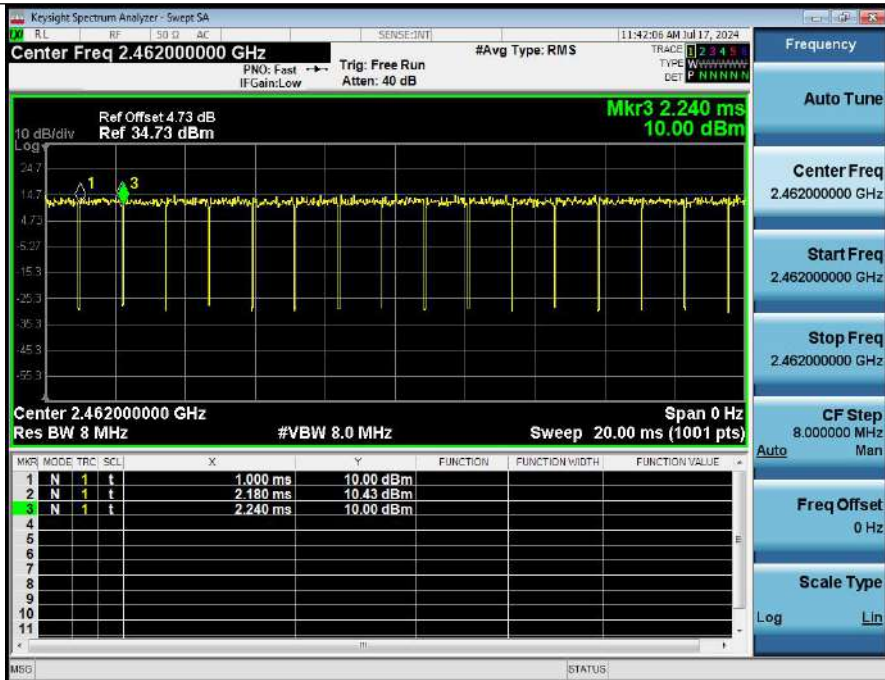
Duty\_Cycle\_NVNT\_ANT1\_802\_11n(HT20)\_2412



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



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



#### 4. MAX. Output Power

| Condition | Antenna | Modulation    | Frequency (MHz) | Detector | Conducted Power(dBm) | limit(dBm) | Result |
|-----------|---------|---------------|-----------------|----------|----------------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | Peak     | 16.35                | 30         | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00         | Peak     | 17.05                | 30         | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00         | Peak     | 17.08                | 30         | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00         | Peak     | 15.75                | 30         | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00         | Peak     | 16.53                | 30         | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00         | Peak     | 16.77                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | Peak     | 16.36                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | Peak     | 16.31                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | Peak     | 16.14                | 30         | Pass   |

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         | 1.02           | -10.00        | -8.98         | 8               | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 1.78           | -10.00        | -8.22         | 8               | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 1.35           | -10.00        | -8.65         | 8               | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00         | -7.30          | -10.00        | -17.30        | 8               | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00         | -6.63          | -10.00        | -16.63        | 8               | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00         | -6.66          | -10.00        | -16.66        | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | -7.53          | -10.00        | -17.53        | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | -8.15          | -10.00        | -18.15        | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | -7.73          | -10.00        | -17.73        | 8               | Pass   |



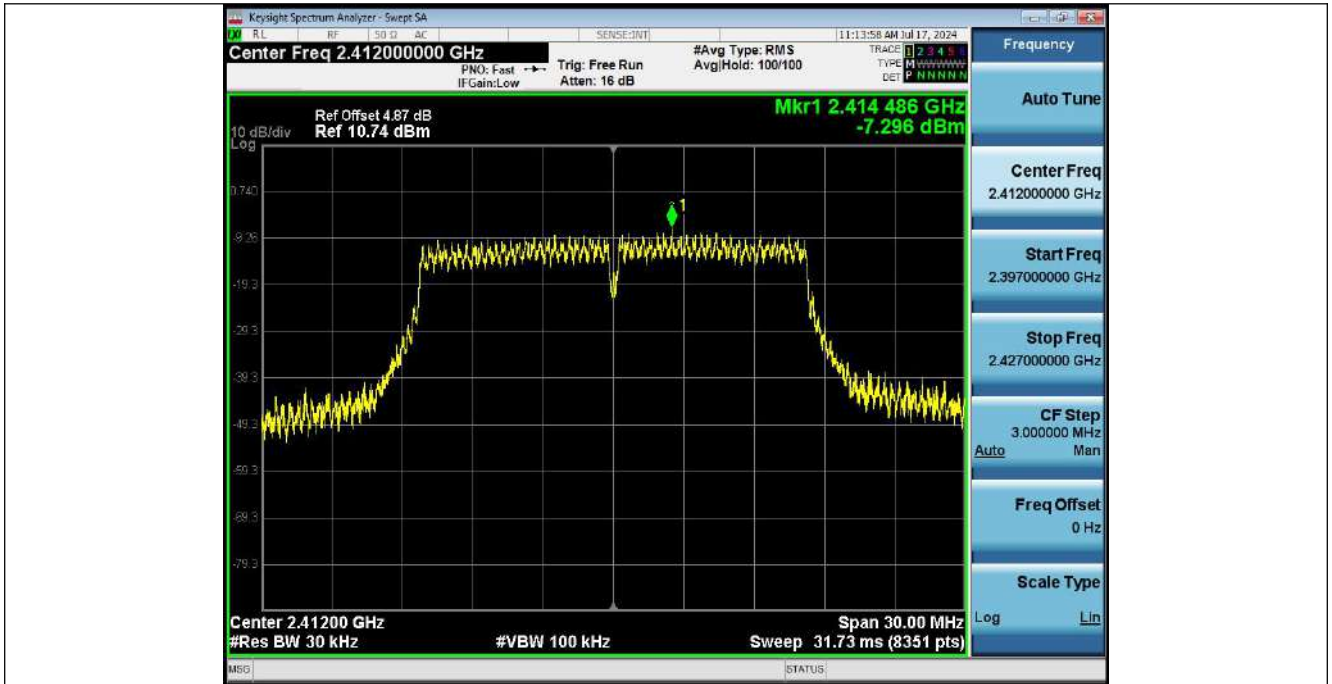
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11b\_2437



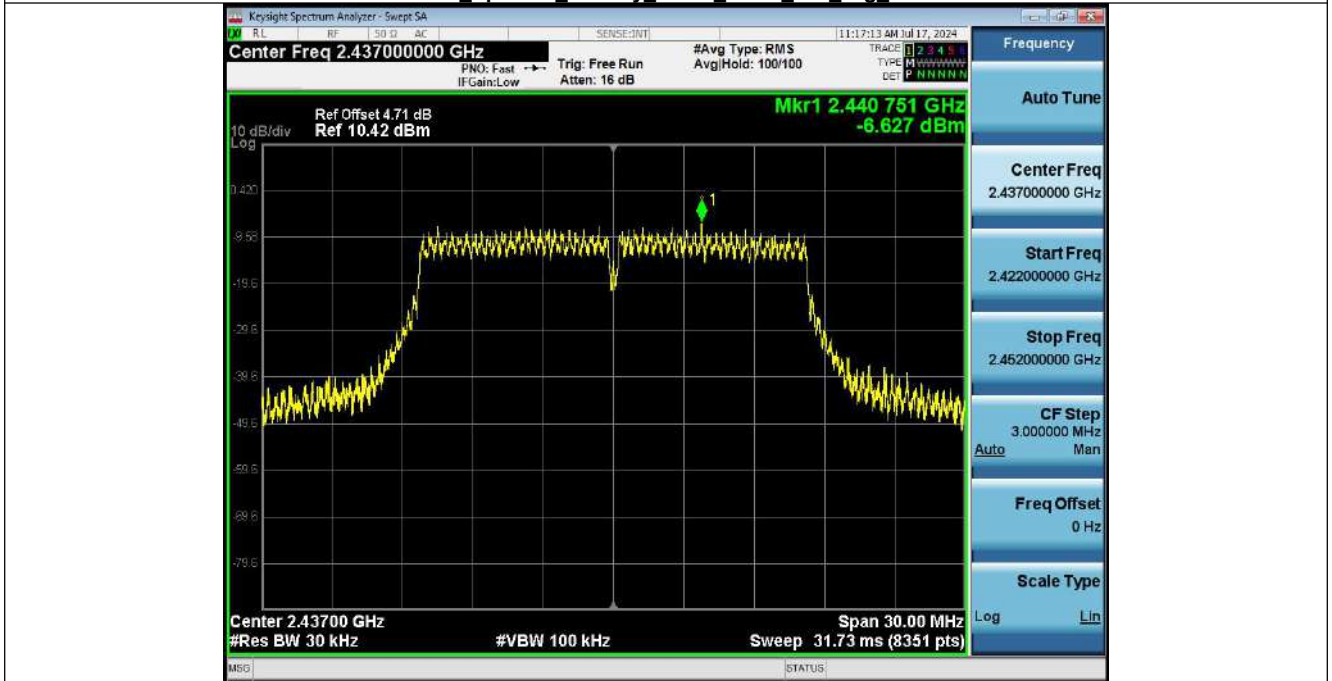
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11b\_2462



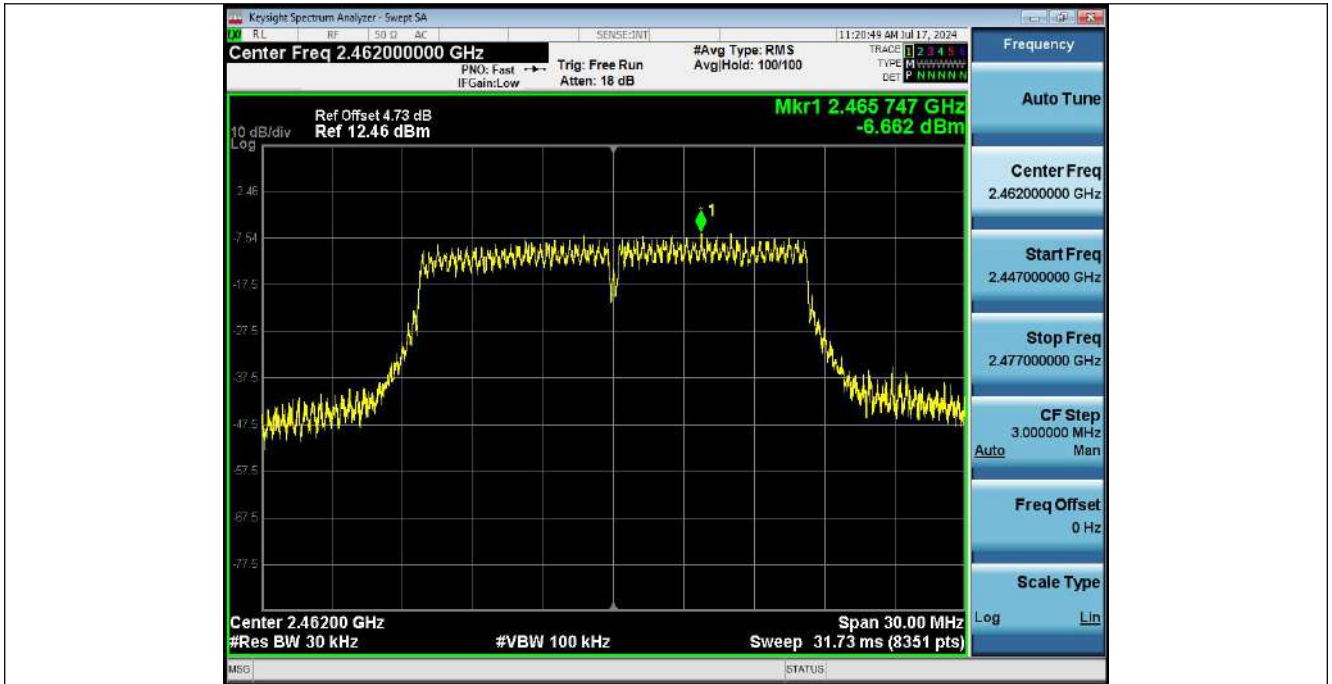
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11g\_2412



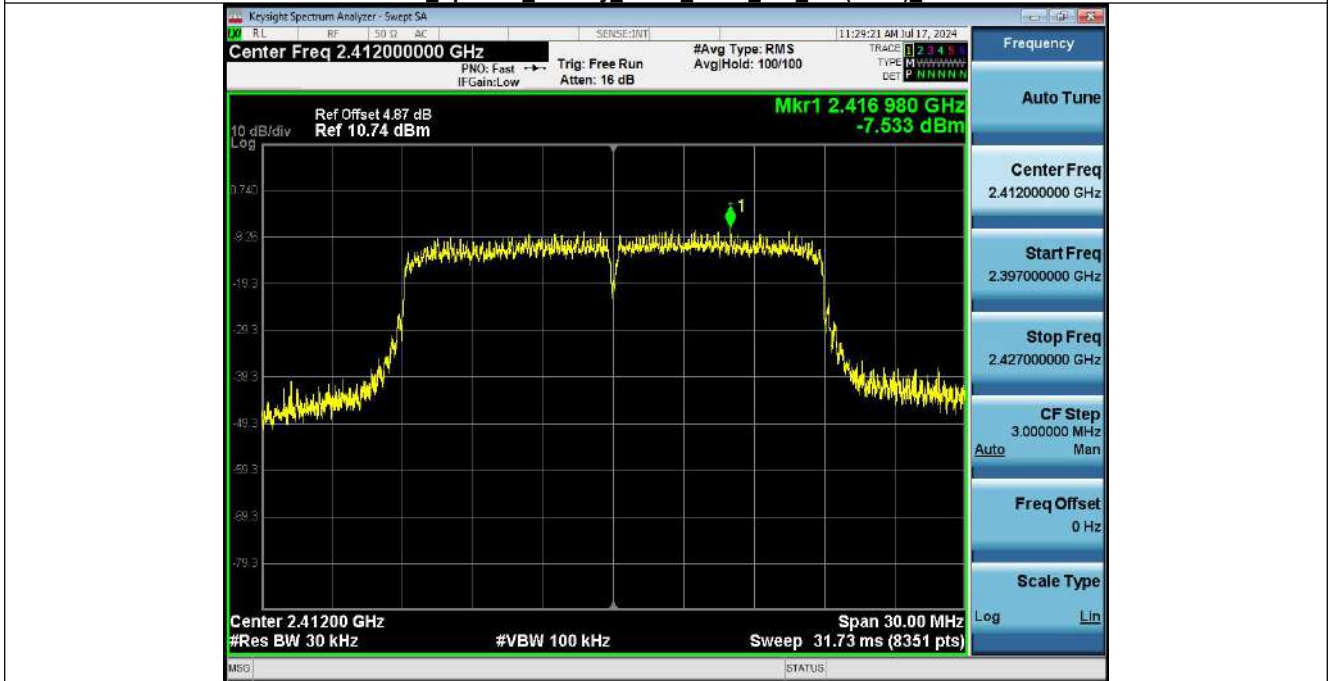
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11g\_2437



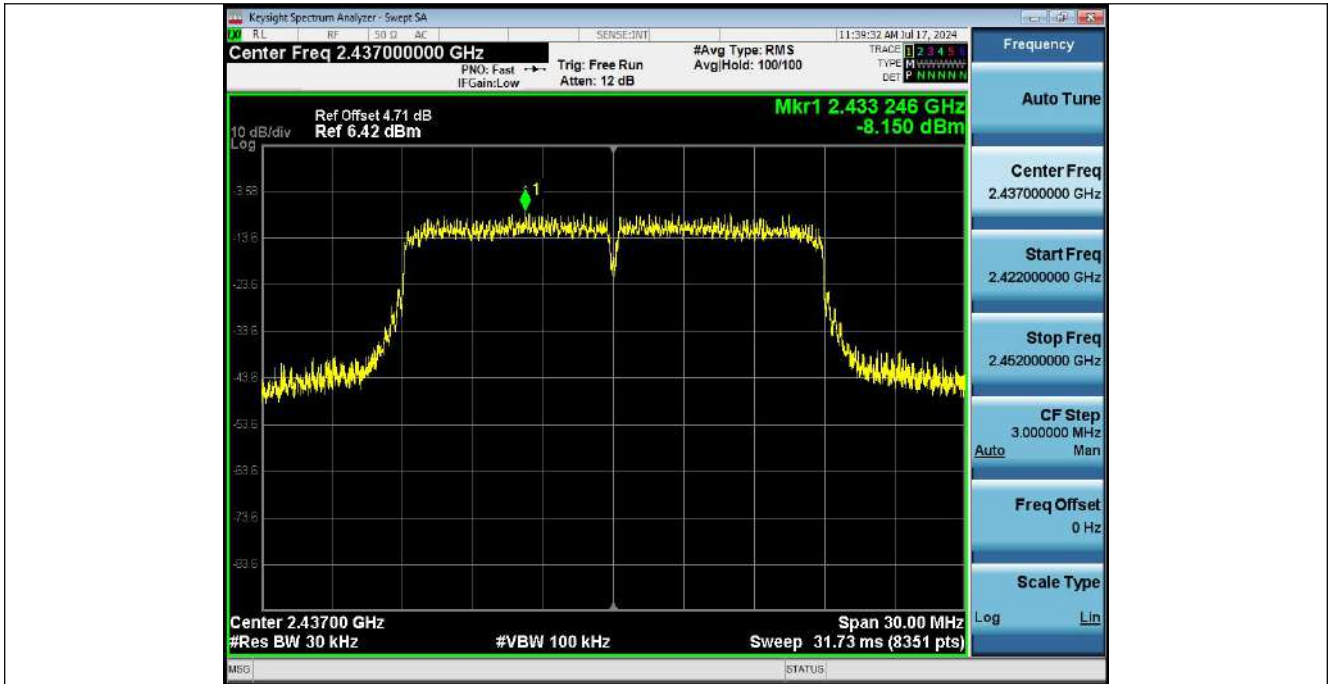
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11g\_2462



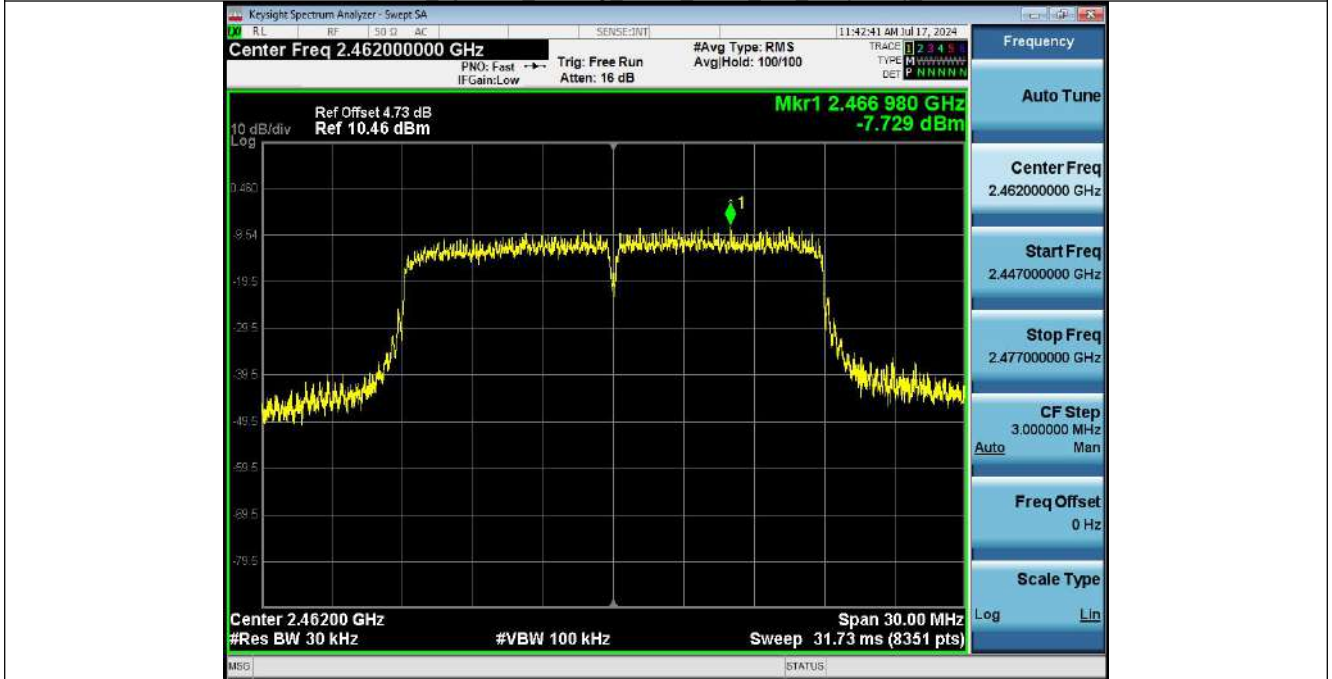
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11n(HT20)\_2412



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            | 2399.936                 | -38.676             | -15.019    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00            | 2483.680                 | -57.508             | -14.919    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00            | 2398.928                 | -35.652             | -22.982    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00            | 2483.920                 | -44.211             | -21.947    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00            | 2399.488                 | -32.474             | -23.017    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00            | 2483.872                 | -44.043             | -23.199    | Pass   |

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



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



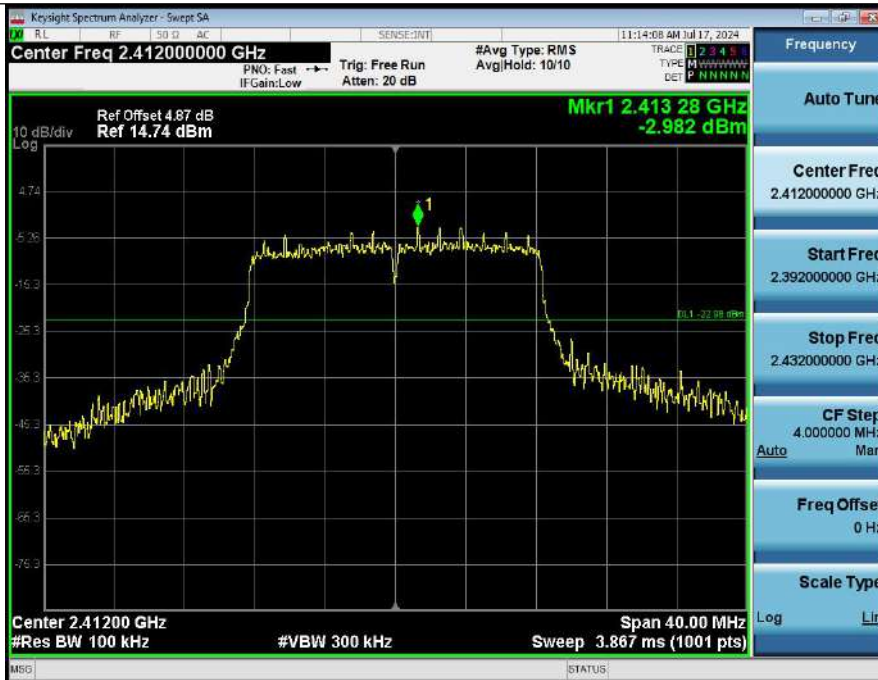
1 Reference\_Level\_NVNT\_ANT1\_802\_11b\_2462



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



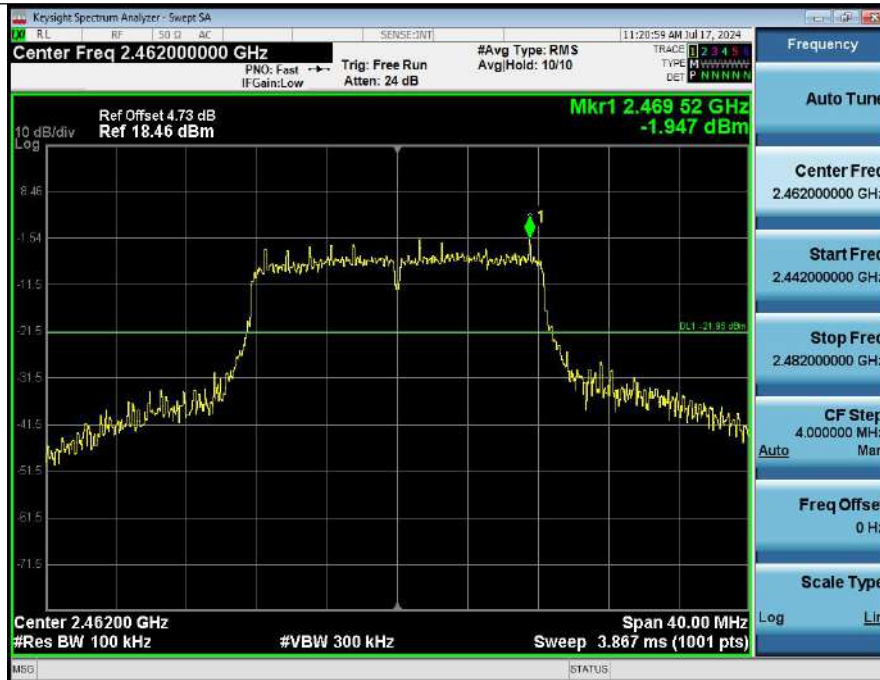
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2\_Bandedge\_NVNT\_ANT1\_802\_11g\_2412



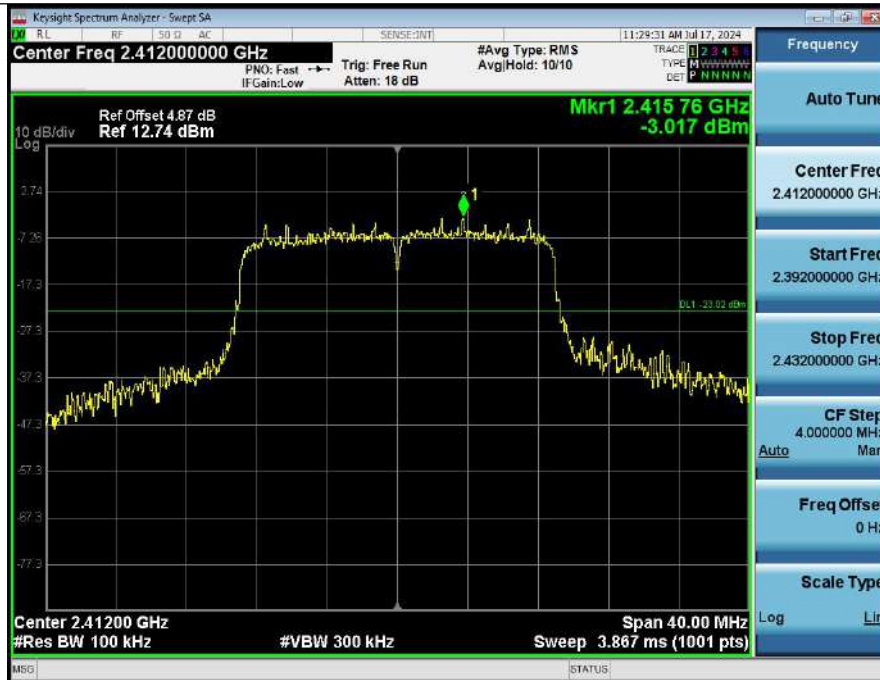
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2\_Bandedge\_NVNT\_ANT1\_802\_11g\_2462



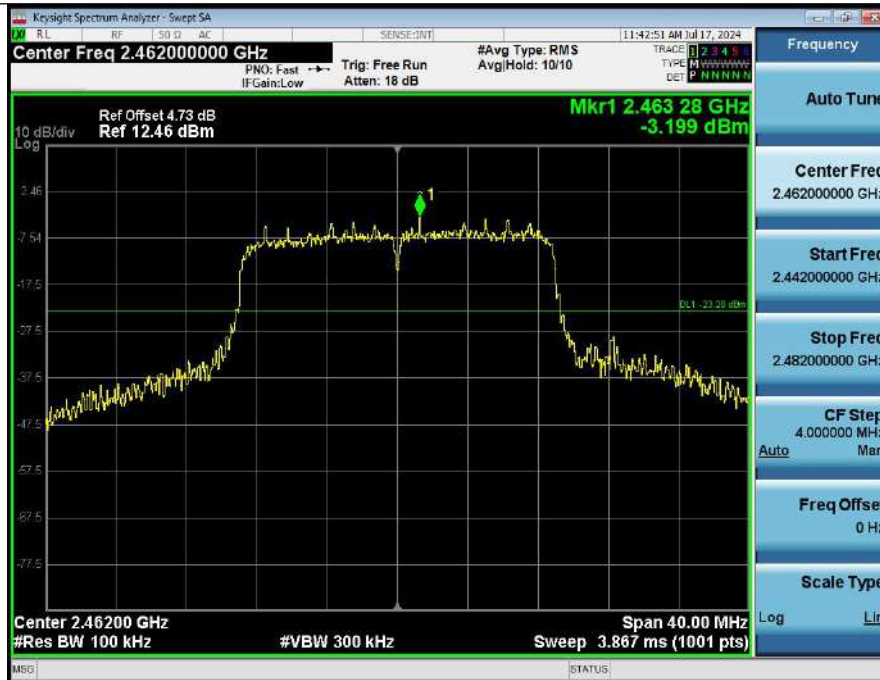
1\_Reference\_Level\_NVNT\_ANT1\_802\_11n(HT20)\_2412



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



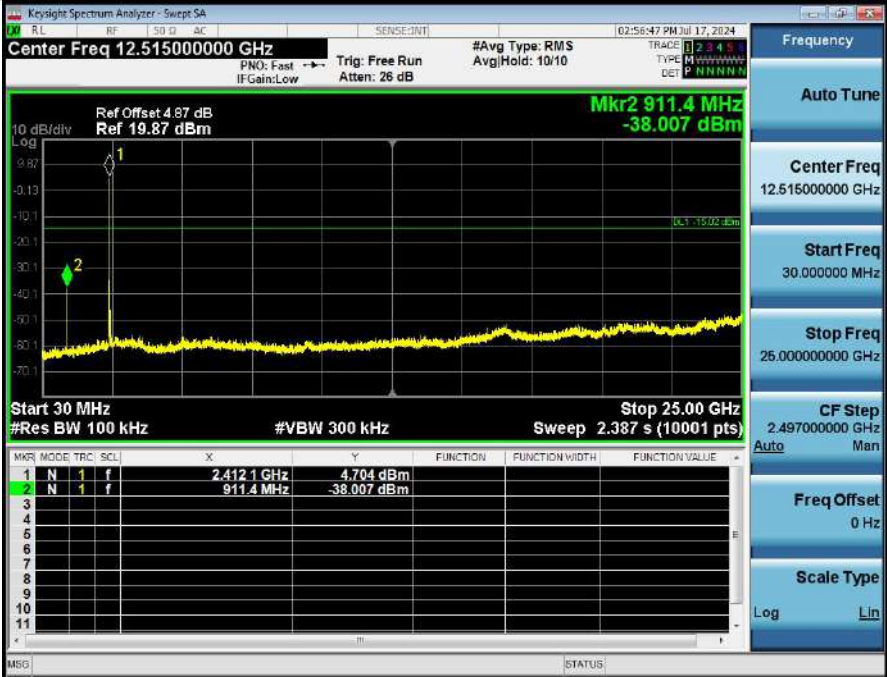
7. Spurious Emission

| Condition | Antenna | Modulation    | TX_Frequency (MHz) | Max. Mark_frequency(MHz) | Spurious level(dBm) | limit(dBm) | Result |
|-----------|---------|---------------|--------------------|--------------------------|---------------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00            | 911.441                  | -38.007             | -15.019    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00            | 911.441                  | -39.431             | -14.353    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00            | 24780.264                | -52.140             | -14.919    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00            | 24982.521                | -57.615             | -22.982    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00            | 711.681                  | -45.415             | -22.661    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00            | 24952.557                | -54.223             | -21.947    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00            | 24902.617                | -60.371             | -23.017    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00            | 24882.641                | -55.009             | -23.568    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00            | 24955.054                | -59.173             | -23.199    | Pass   |

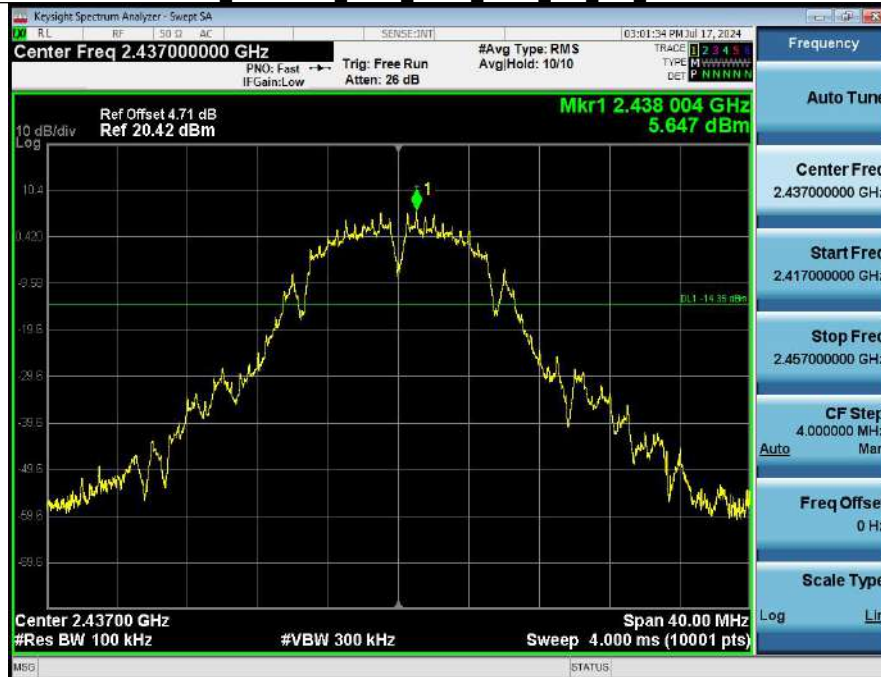
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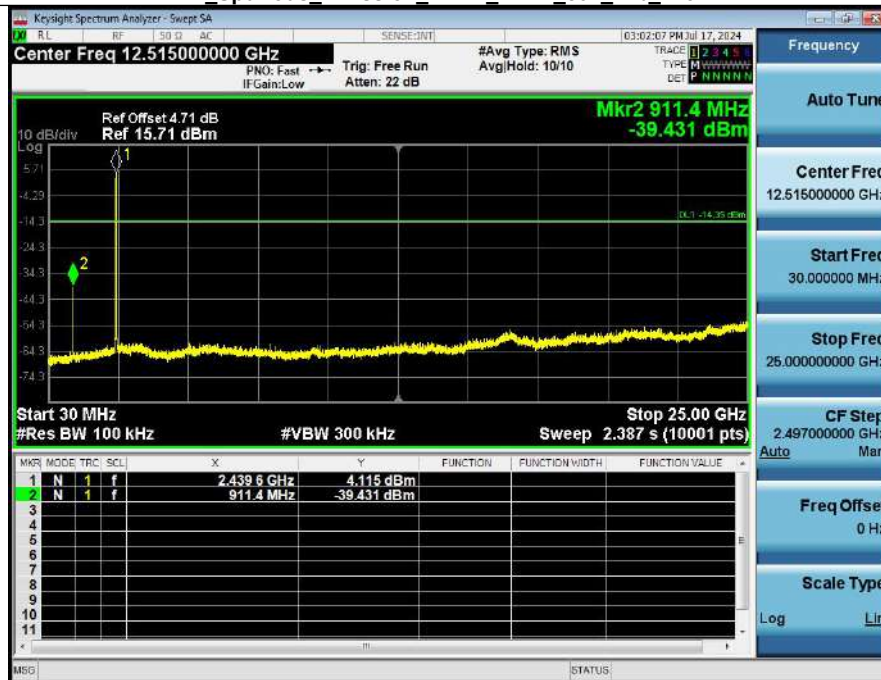
2\_Spurious\_Emission\_NVNT\_ANT1\_802\_11b\_2412



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



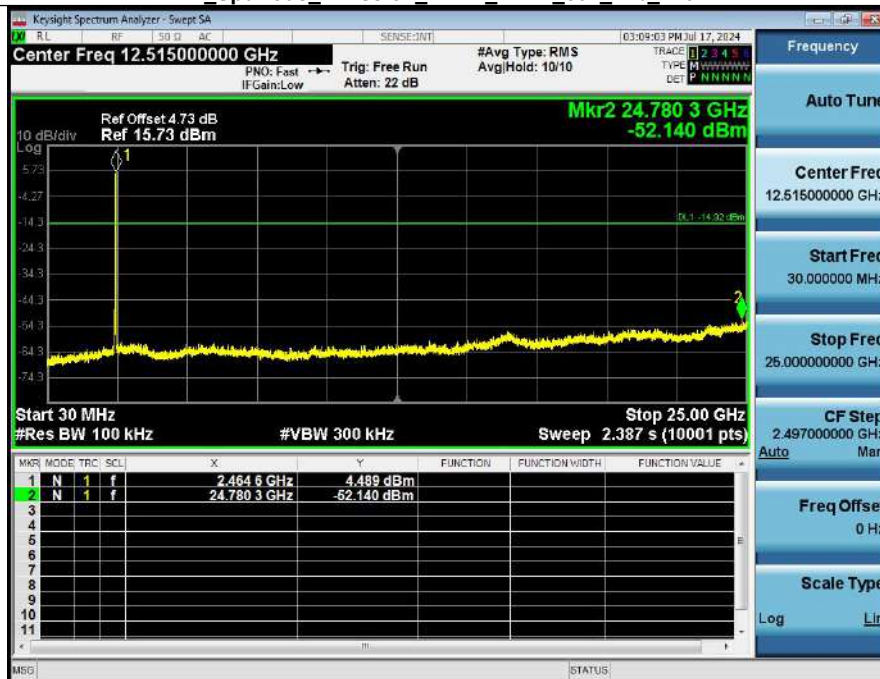
# 2 Spurious Emission NVNT\_ANT1\_802\_11b\_2437



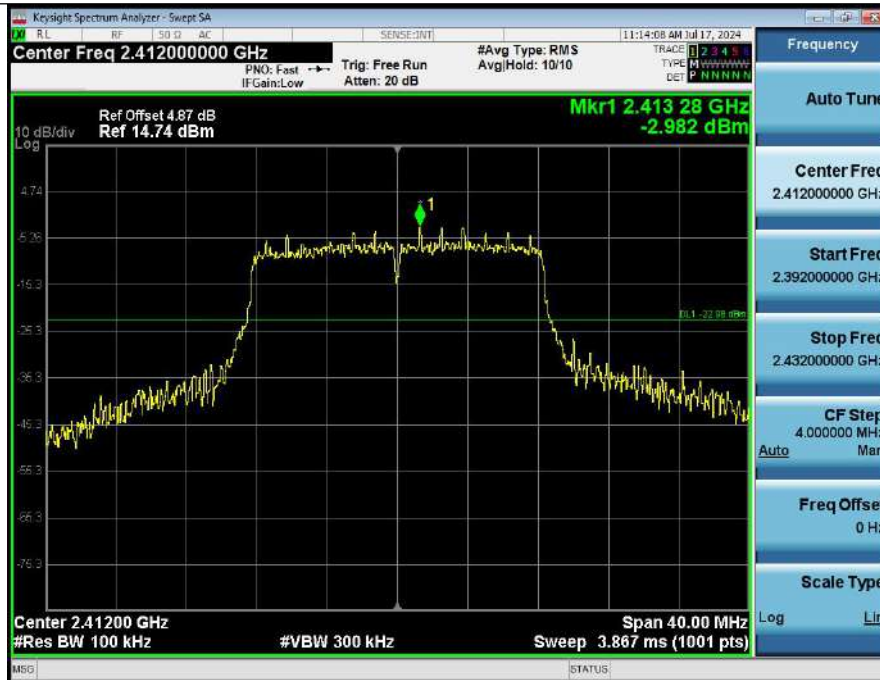
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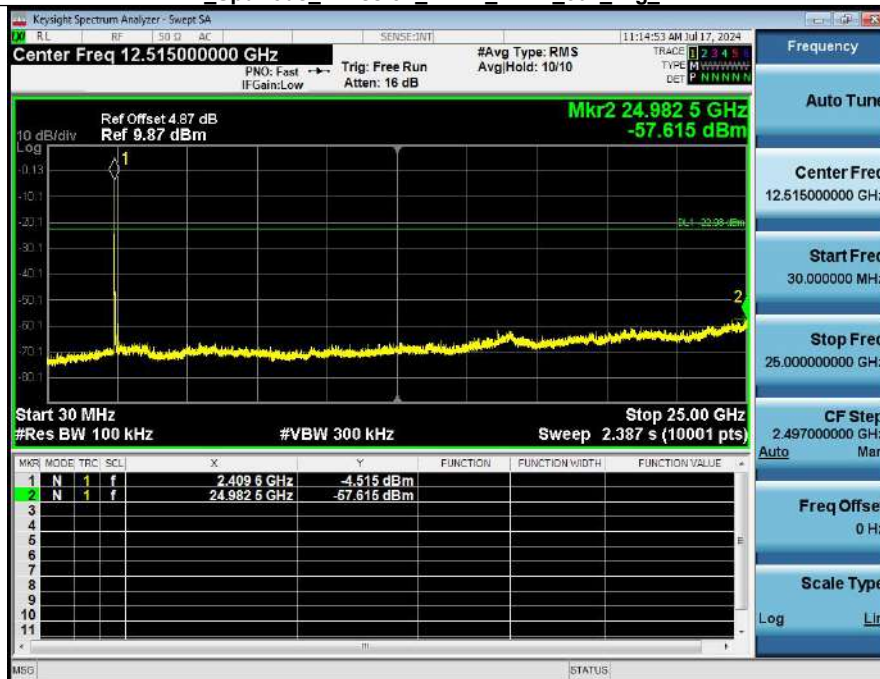
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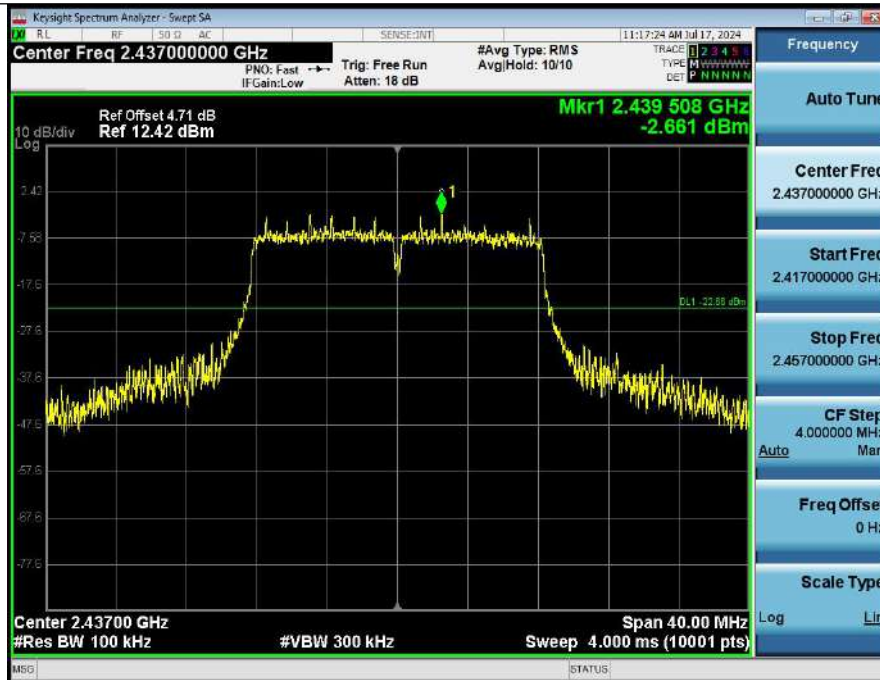
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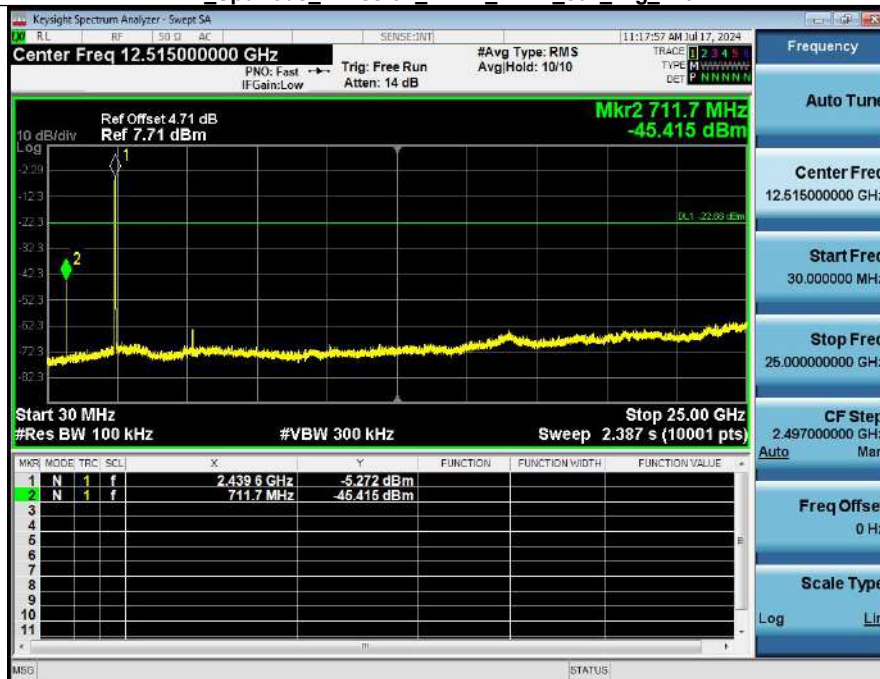
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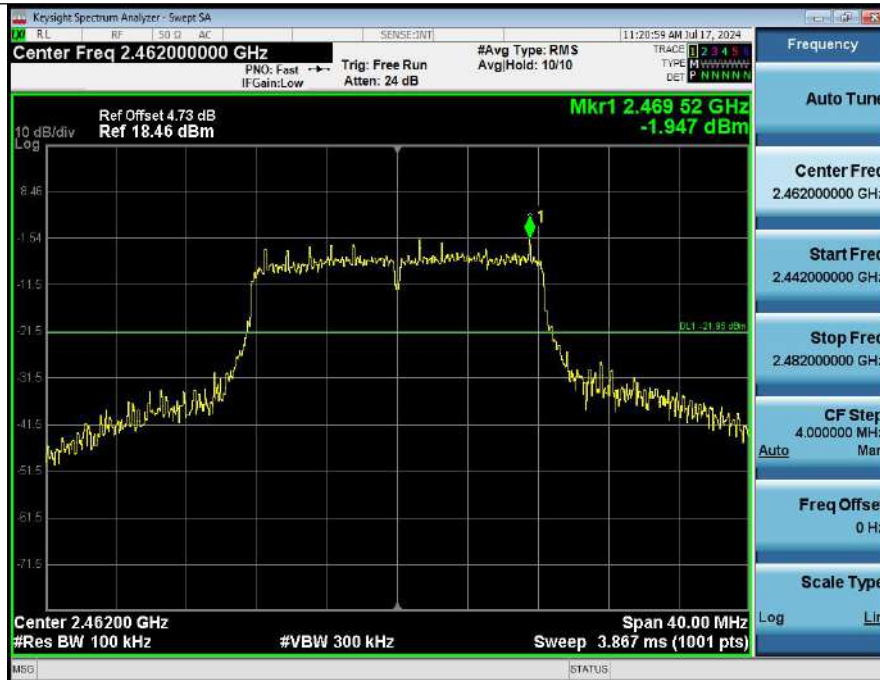
## 1\_Reference\_Level\_NVNT\_ANT1\_802\_11g\_2437



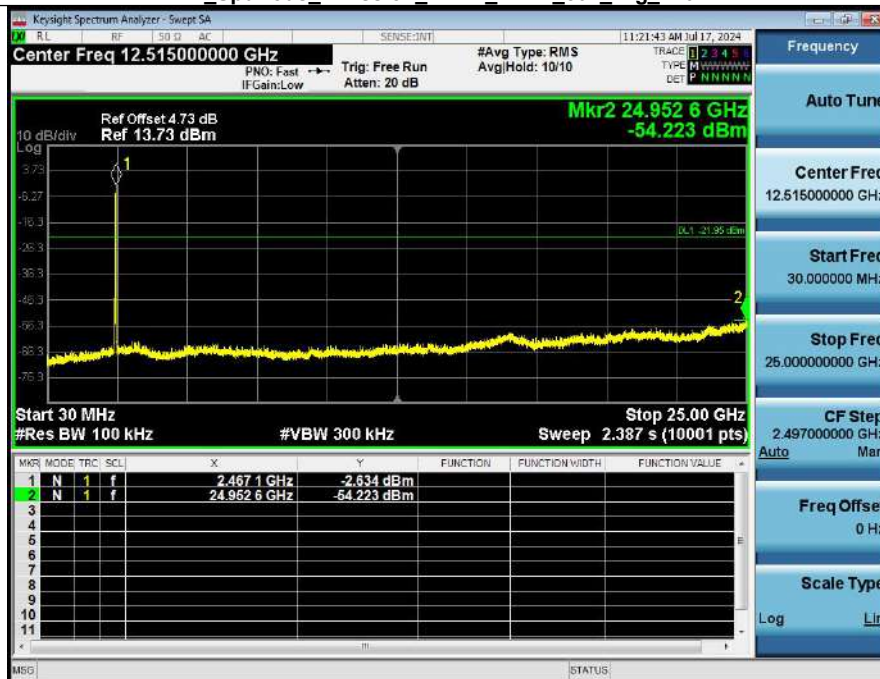
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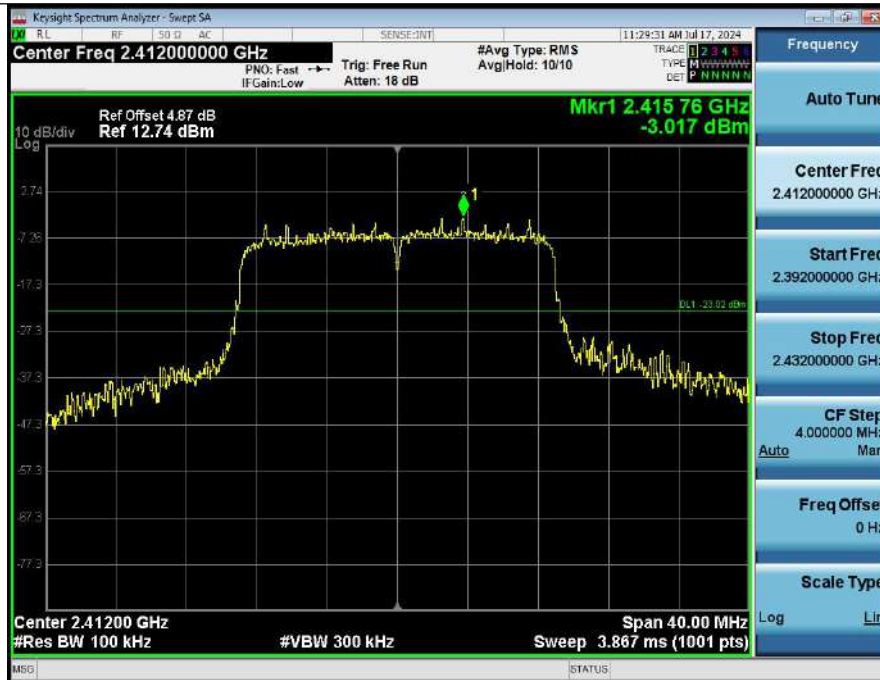
## 1\_Reference\_Level\_NVNT\_ANT1\_802\_11g\_2462



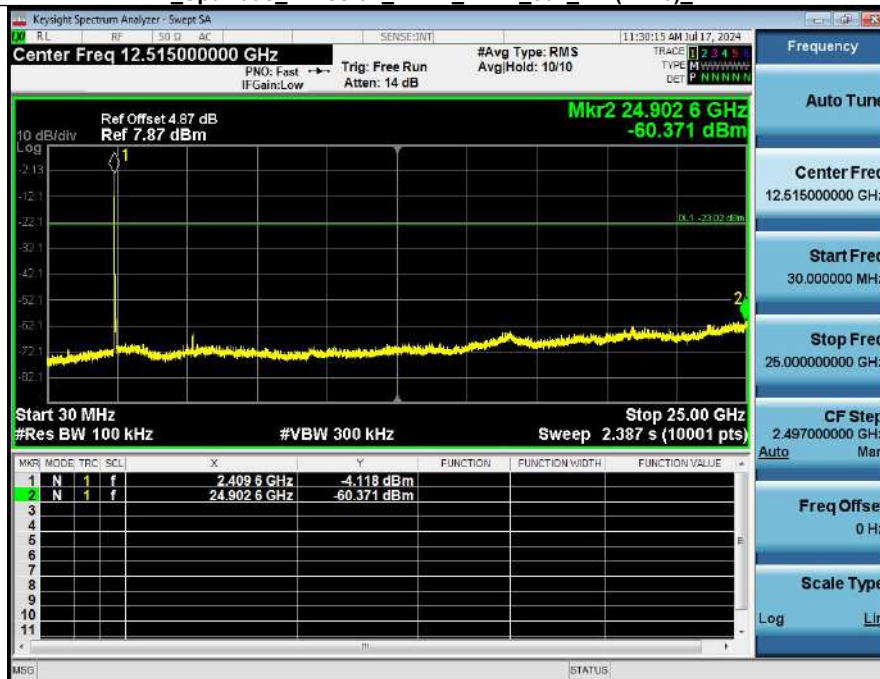
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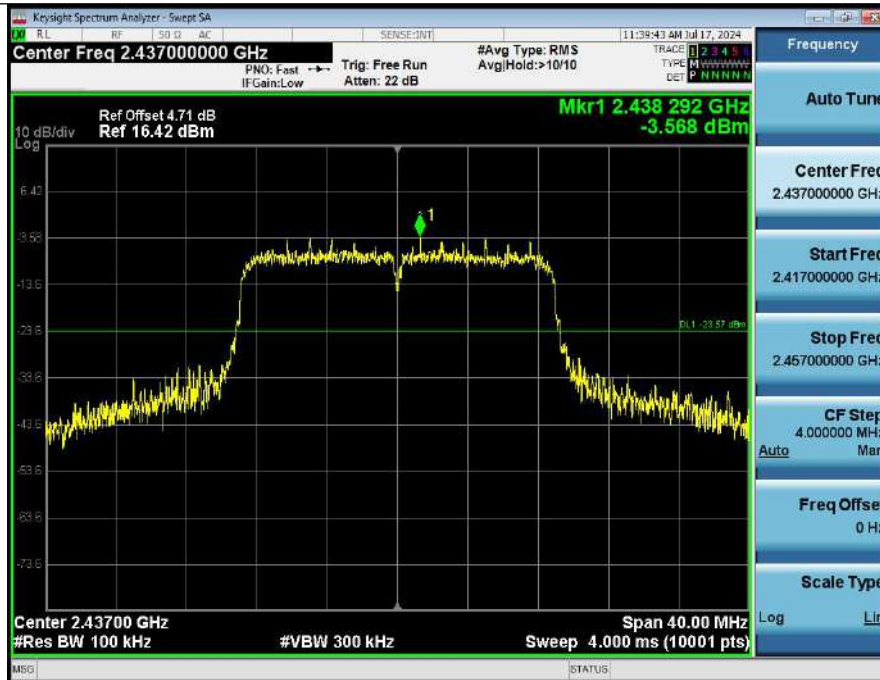
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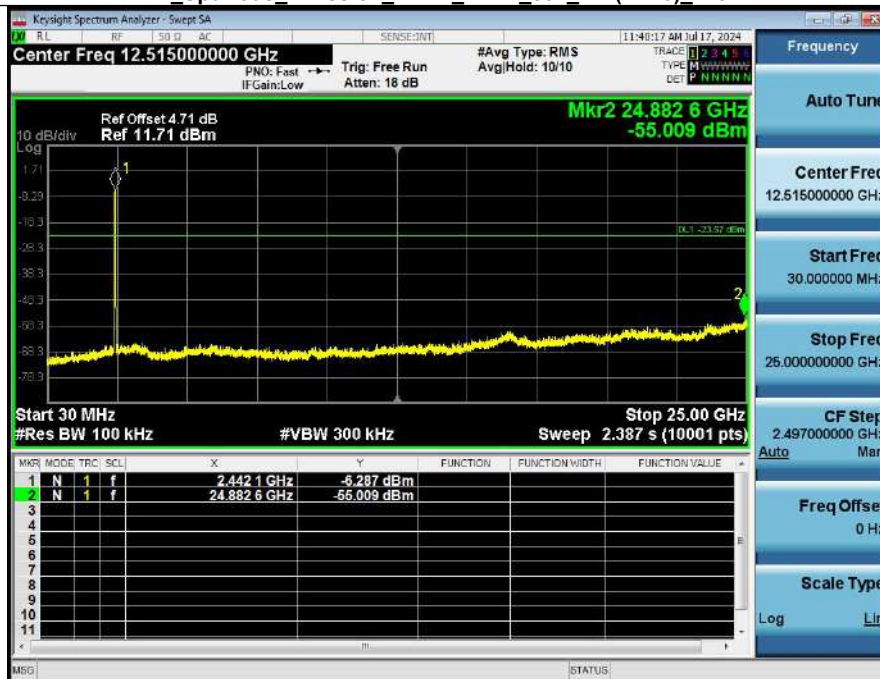
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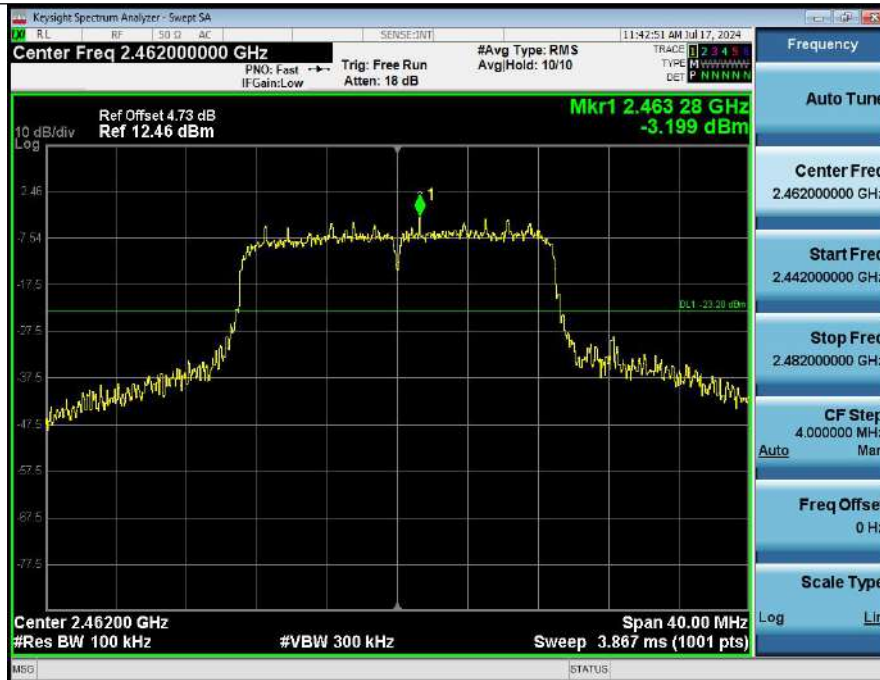
## 1 Reference\_Level\_NVNT\_ANT1\_802\_11n(HT20)\_2437



## 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

