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# FCC ID:2BBWN-LEF02 Test Data

## 1. -6dB Bandwidth

| Condition | Antenna | Modulation    | Frequency (MHz) | -6dB BW(MHz) | limit(kHz) | Result |
|-----------|---------|---------------|-----------------|--------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 9.19         | 500        | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 9.16         | 500        | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 9.22         | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00         | 16.39        | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00         | 16.52        | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00         | 16.32        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | 17.31        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | 17.42        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | 17.22        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2422.00         | 36.05        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2437.00         | 36.05        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2452.00         | 35.89        | 500        | Pass   |

-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11b\_2412



-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



-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11n(HT40)\_2422



-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11n(HT40)\_2437



-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11n(HT40)\_2452







2. 99% Occupied Bandwidth

| Condition | Antenna | Modulation    | Frequency (MHz) | 99%%BW(MHz) |
|-----------|---------|---------------|-----------------|-------------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 12.379      |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 13.326      |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 12.446      |
| NVNT      | ANT1    | 802.11g       | 2412.00         | 17.180      |
| NVNT      | ANT1    | 802.11g       | 2437.00         | 17.363      |
| NVNT      | ANT1    | 802.11g       | 2462.00         | 17.096      |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | 17.901      |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | 17.874      |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | 17.837      |
| NVNT      | ANT1    | 802.11n(HT40) | 2422.00         | 36.534      |
| NVNT      | ANT1    | 802.11n(HT40) | 2437.00         | 36.436      |
| NVNT      | ANT1    | 802.11n(HT40) | 2452.00         | 36.550      |



99% Occupied Bandwidth NVNT ANT1 802\_11b\_2437



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



99%\_Occupied\_Bandwidth\_NVNT\_ANT1\_802\_11n(HT40)\_2422



99% Occupied Bandwidth\_NVNT\_ANT1\_802\_11n(HT40)\_2437



99%\_Occupied\_Bandwidth\_NVNT\_ANT1\_802\_11n(HT40)\_2452

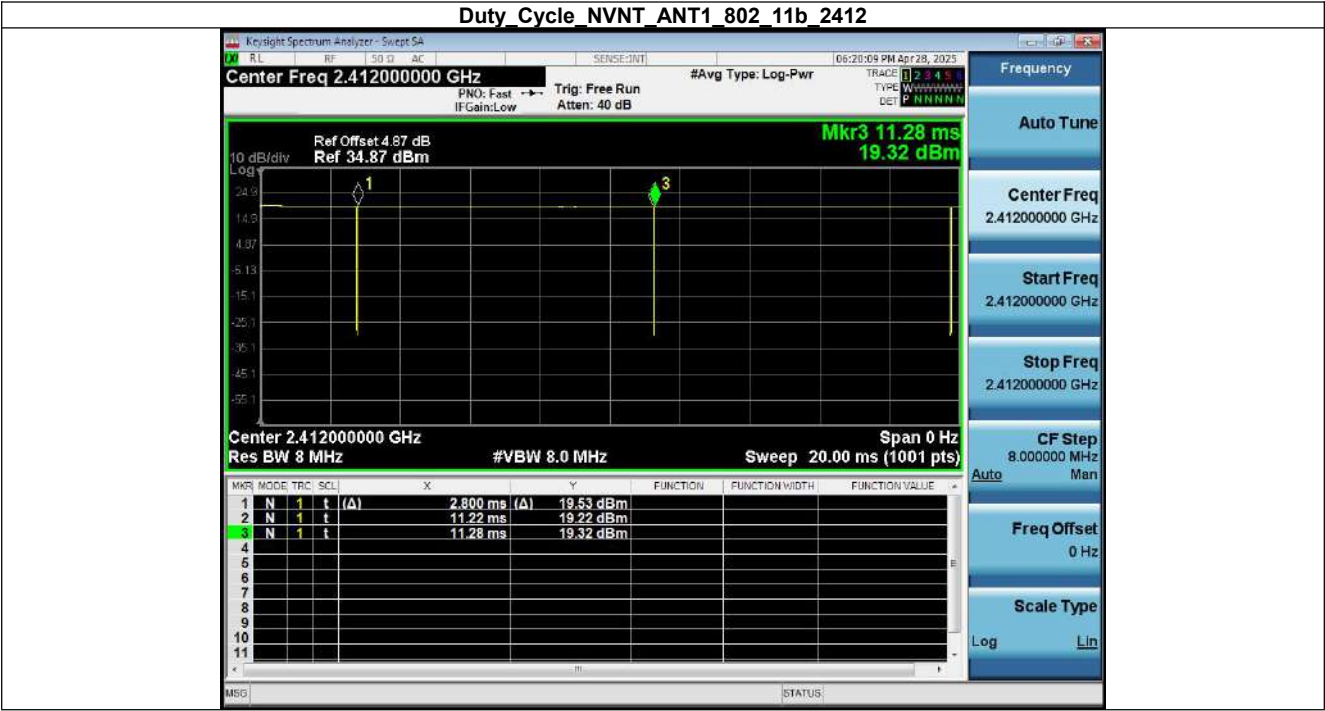






3. Duty Cycle

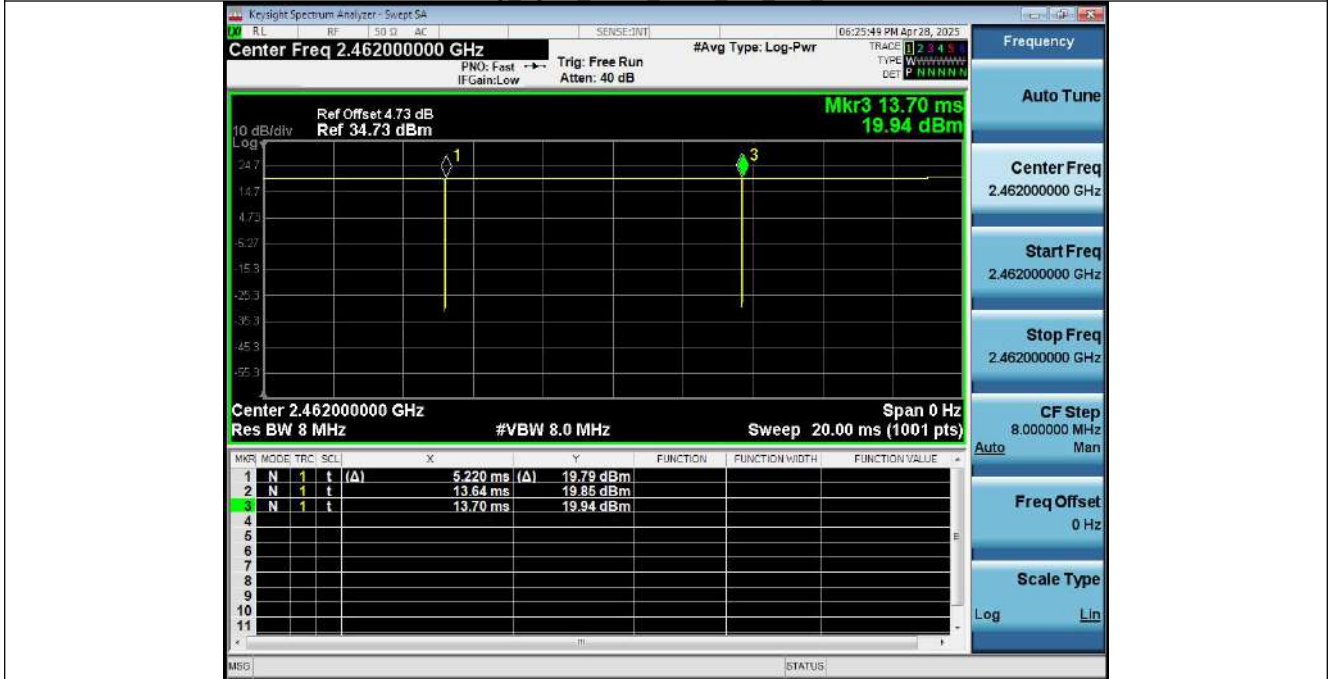
| Condition | Antenna | Modulation    | Frequency (MHz) | Duty cycle(%) | Duty factor(dB) |
|-----------|---------|---------------|-----------------|---------------|-----------------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 99.53         | 0.00            |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 99.53         | 0.00            |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 99.53         | 0.00            |
| NVNT      | ANT1    | 802.11g       | 2412.00         | 97.22         | 0.12            |
| NVNT      | ANT1    | 802.11g       | 2437.00         | 97.26         | 0.12            |
| NVNT      | ANT1    | 802.11g       | 2462.00         | 97.26         | 0.12            |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | 96.77         | 0.14            |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | 96.77         | 0.14            |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | 96.77         | 0.14            |
| NVNT      | ANT1    | 802.11n(HT40) | 2422.00         | 93.75         | 0.28            |
| NVNT      | ANT1    | 802.11n(HT40) | 2437.00         | 93.75         | 0.28            |
| NVNT      | ANT1    | 802.11n(HT40) | 2452.00         | 93.75         | 0.28            |



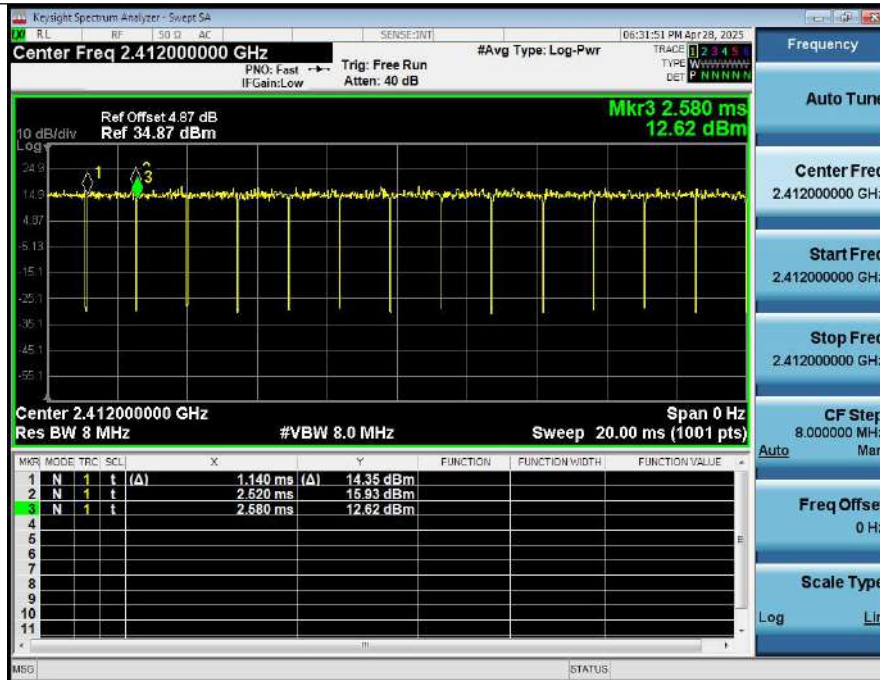
Duty Cycle NVNT ANT1 802 11b 2437



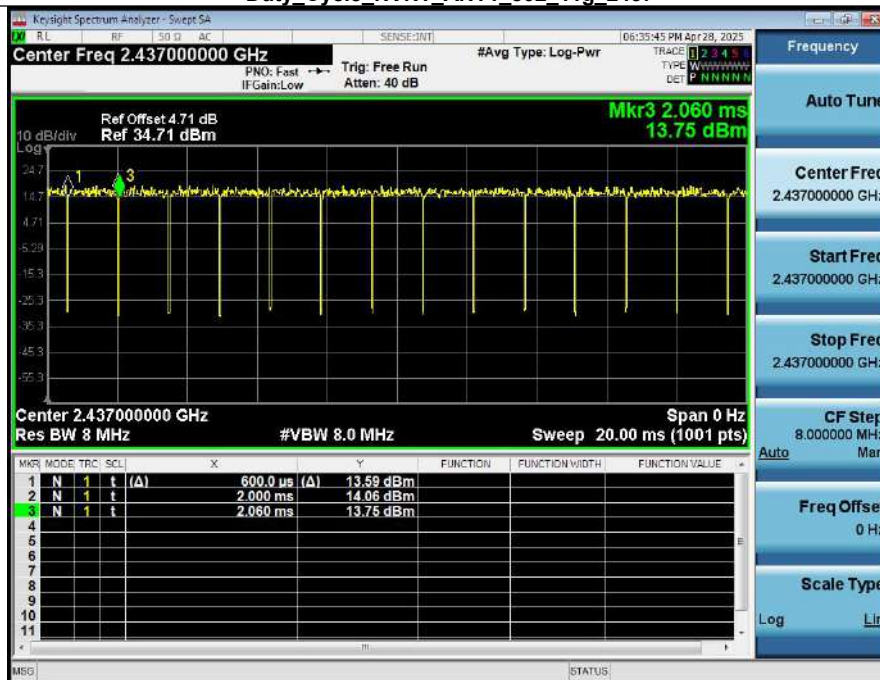
Duty\_Cycle\_NVNT\_ANT1\_802\_11b\_2462



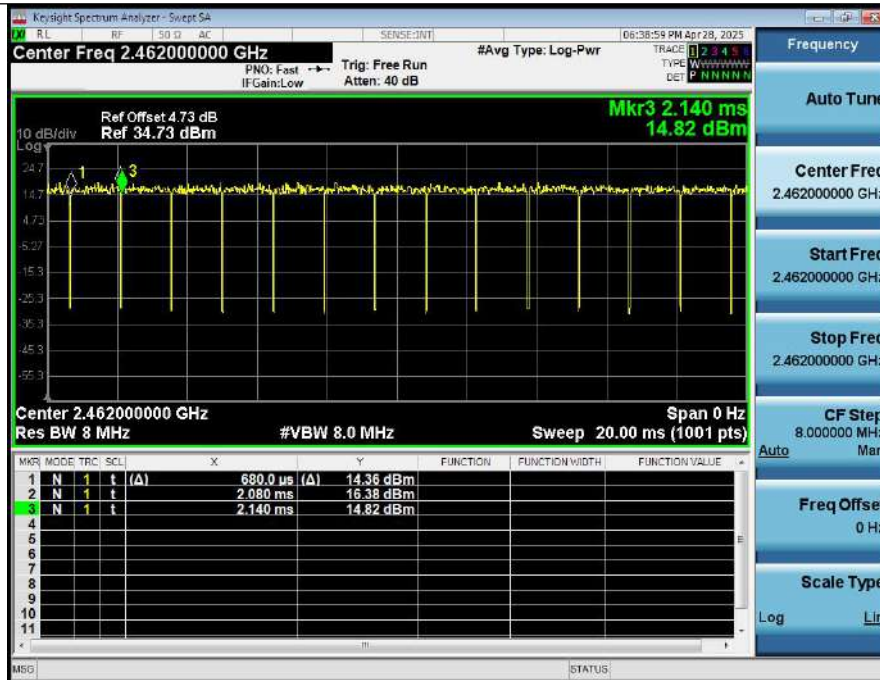
Duty\_Cycle\_NVNT\_ANT1\_802\_11g\_2412



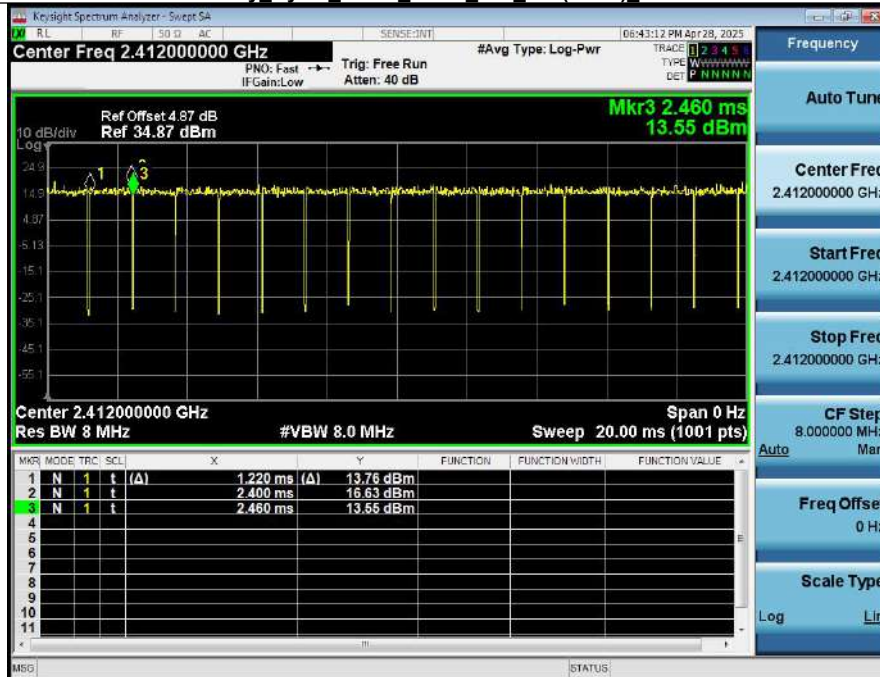
Duty\_Cycle\_NVNT\_ANT1\_802\_11g\_2437



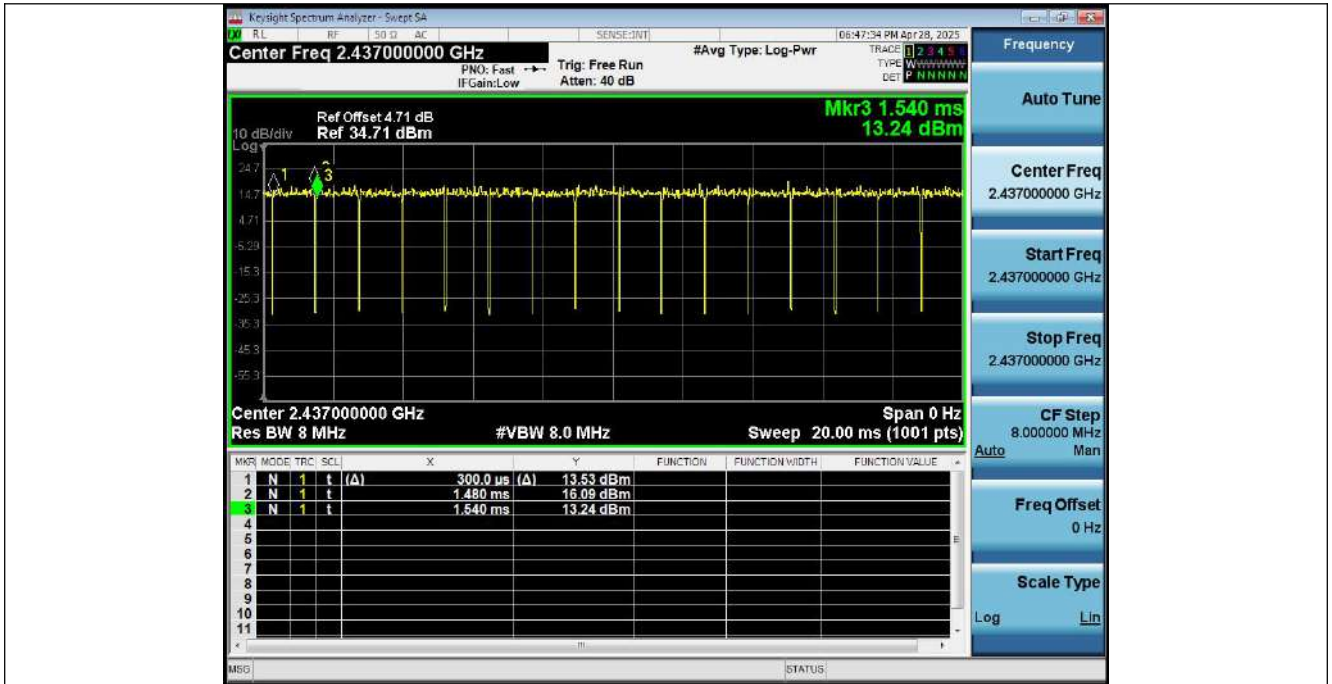
Duty\_Cycle\_NVNT\_ANT1\_802\_11g\_2462



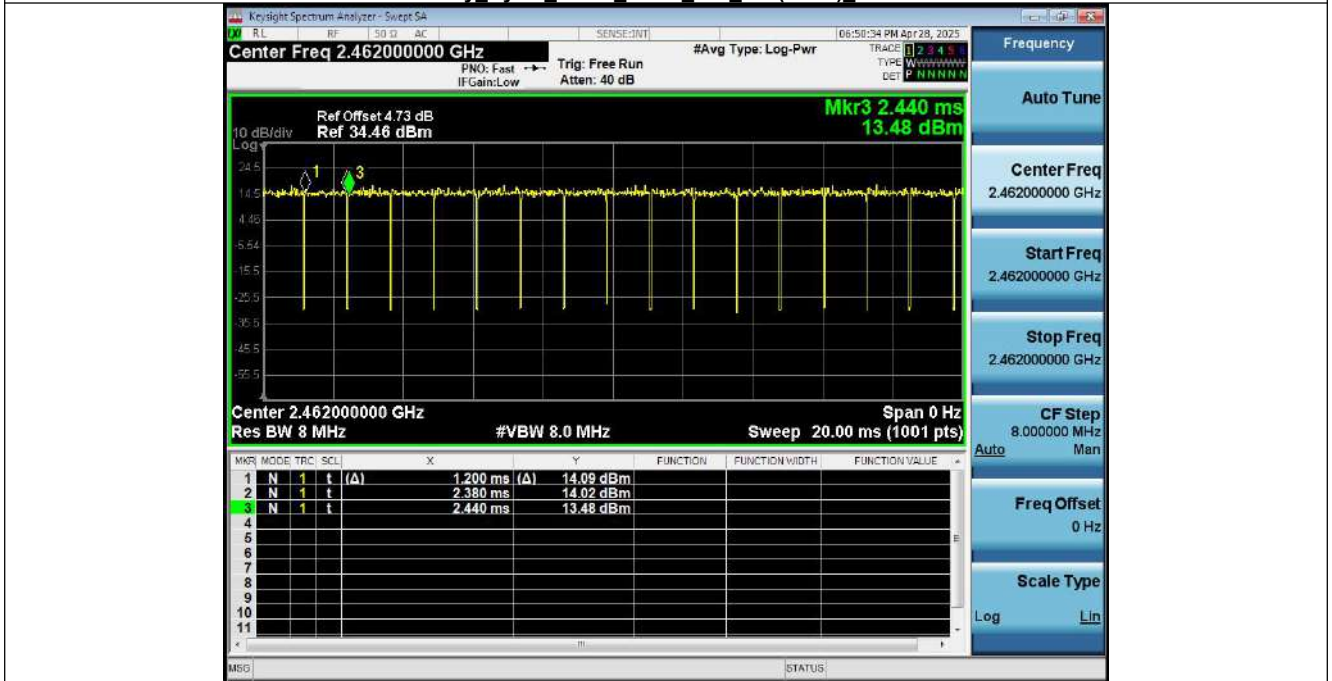
Duty\_Cycle\_NVNT\_ANT1\_802\_11n(HT20)\_2412



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

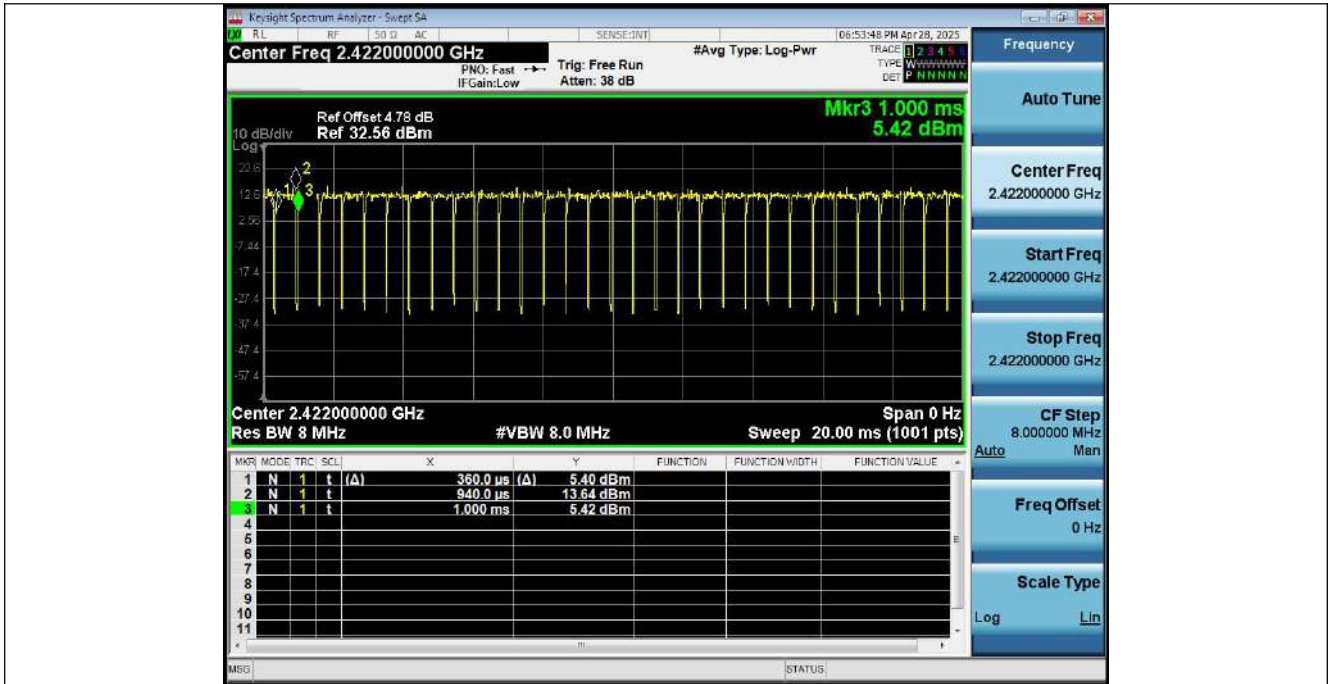


Duty\_Cycle\_NVNT\_ANT1\_802\_11n(HT20)\_2462

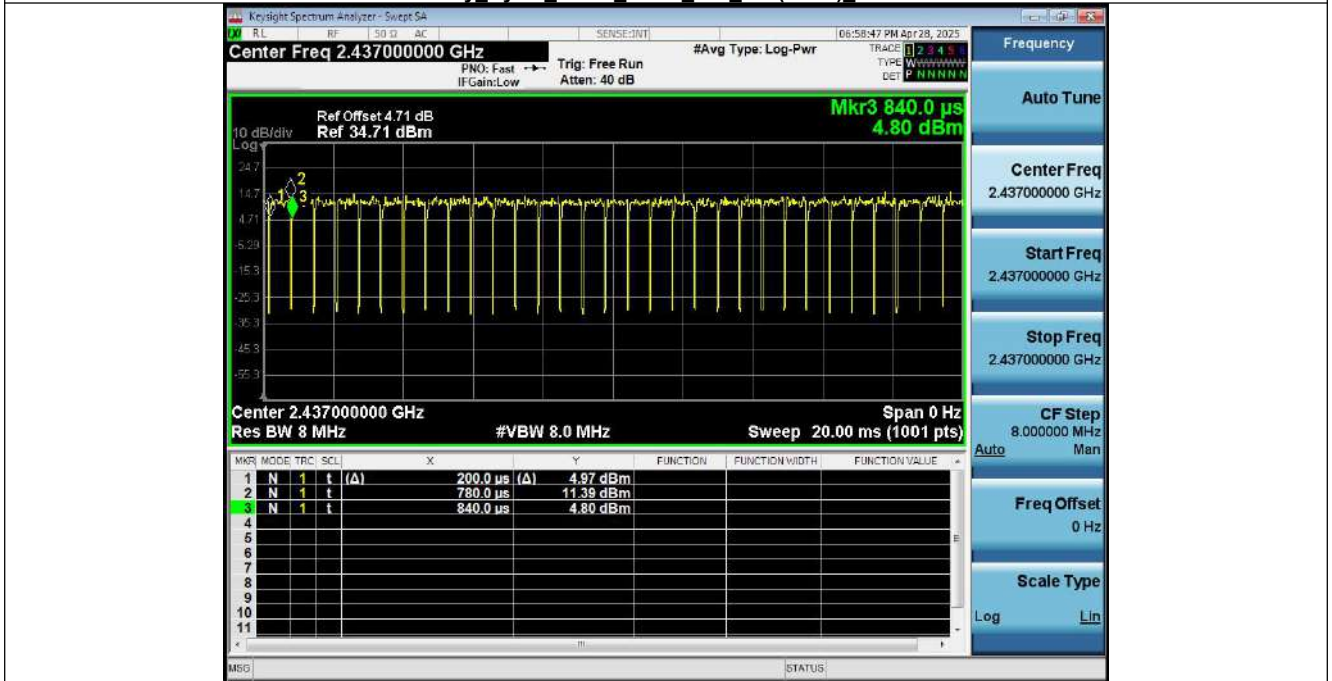


Duty\_Cycle\_NVNT\_ANT1\_802\_11n(HT40)\_2422



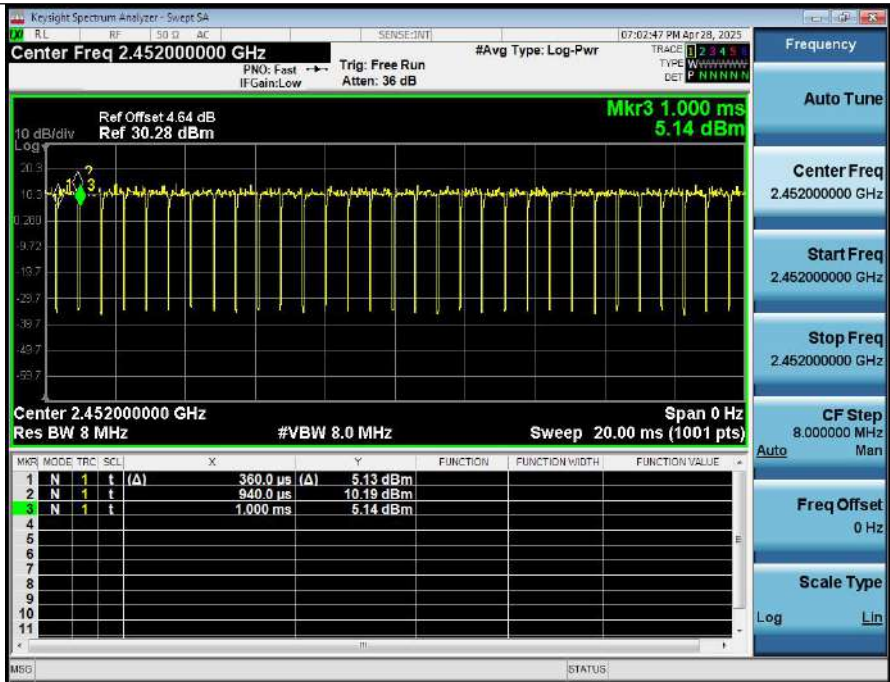


Duty\_Cycle\_NVNT\_ANT1\_802\_11n(HT40)\_2437



Duty\_Cycle\_NVNT\_ANT1\_802\_11n(HT40)\_2452





#### 4. MAX. Output Power

| Condition | Antenna | Modulation    | Frequency (MHz) | Detector | Conducted Power(dBm) | limit(dBm) | Result |
|-----------|---------|---------------|-----------------|----------|----------------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | Peak     | 18.34                | 30         | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00         | Peak     | 18.99                | 30         | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00         | Peak     | 18.90                | 30         | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00         | Peak     | 18.36                | 30         | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00         | Peak     | 18.92                | 30         | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00         | Peak     | 18.34                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | Peak     | 18.34                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | Peak     | 18.93                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | Peak     | 18.44                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2422.00         | Peak     | 18.02                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2437.00         | Peak     | 19.02                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2452.00         | Peak     | 18.95                | 30         | Pass   |

5. Power Spectral Density

| Condition | Antenna | Modulation    | Frequency (MHz) | SA_PSD(dBm/30kHz) | RB factor(dB) | PSD(dBm/3kHz) | limit(dBm/3kHz) | Result |
|-----------|---------|---------------|-----------------|-------------------|---------------|---------------|-----------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 3.13              | -10.00        | -6.87         | 8               | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 4.48              | -10.00        | -5.52         | 8               | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 3.70              | -10.00        | -6.30         | 8               | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00         | -5.22             | -10.00        | -15.22        | 8               | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00         | -3.39             | -10.00        | -13.39        | 8               | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00         | -2.73             | -10.00        | -12.73        | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | -3.64             | -10.00        | -13.64        | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | -4.62             | -10.00        | -14.62        | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | -4.60             | -10.00        | -14.60        | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2422.00         | -7.51             | -10.00        | -17.51        | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2437.00         | -8.49             | -10.00        | -18.49        | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2452.00         | -8.69             | -10.00        | -18.69        | 8               | Pass   |



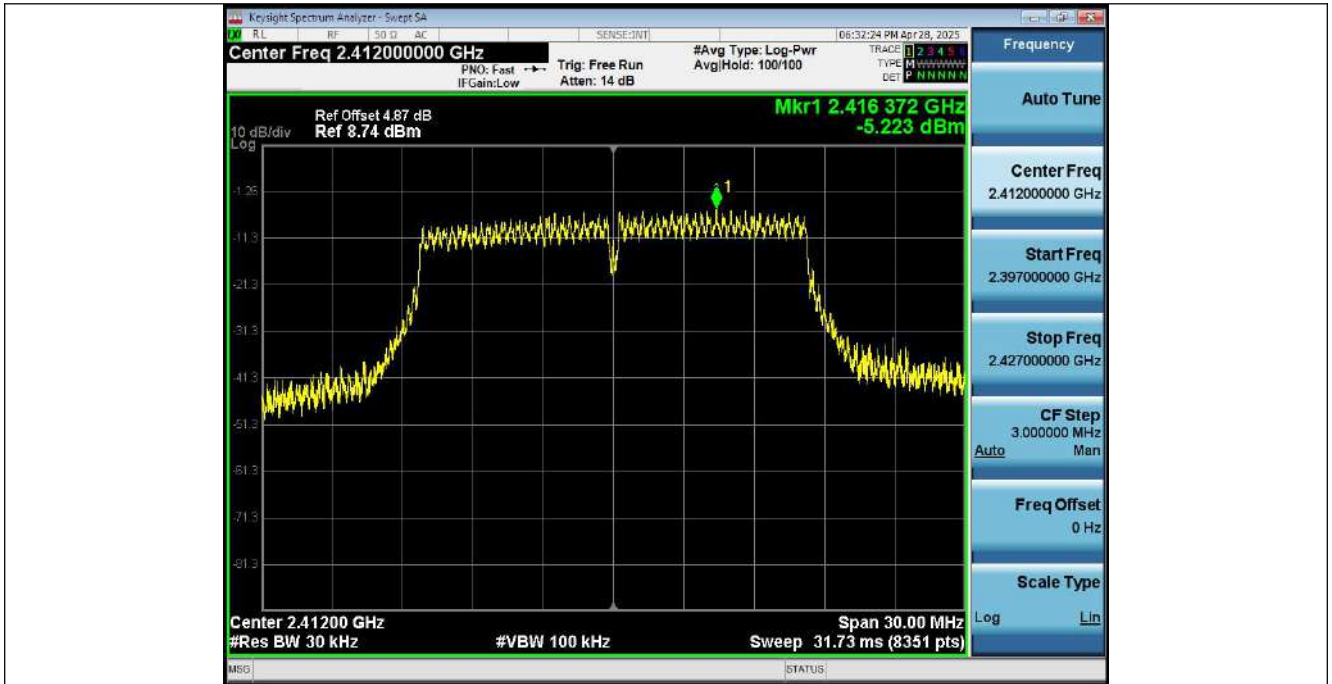
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11b\_2437



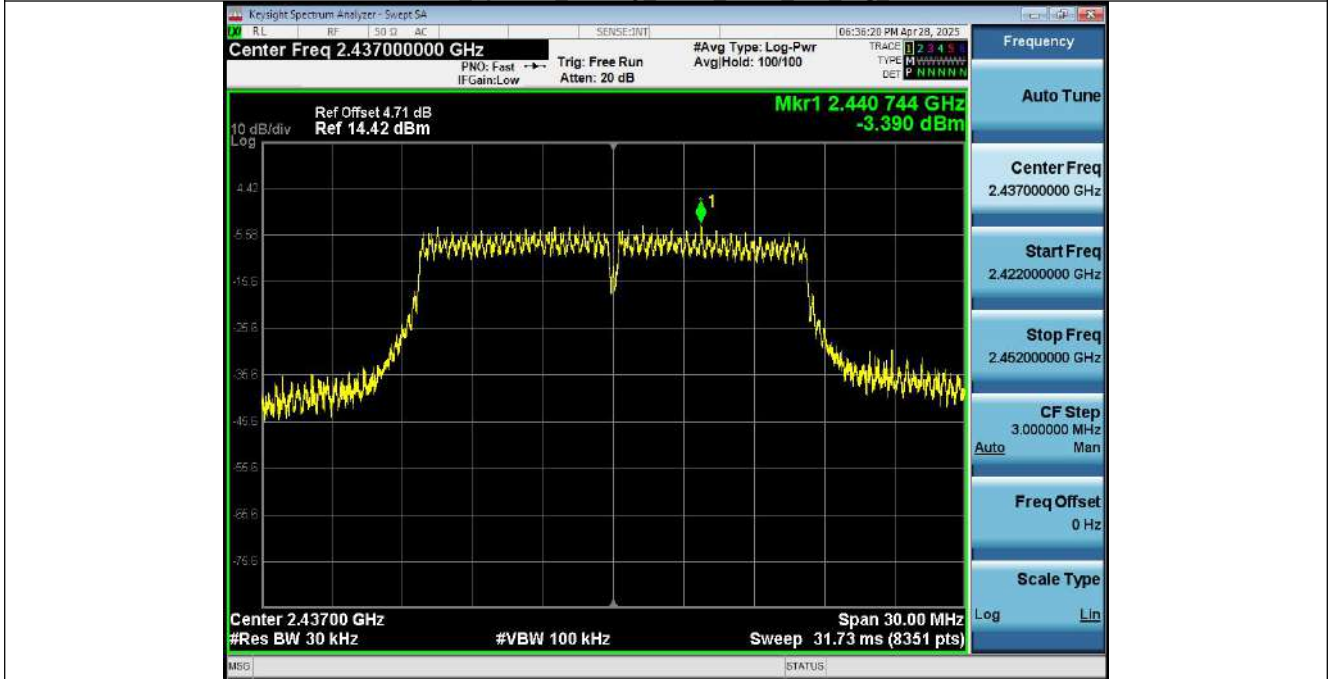
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11b\_2462



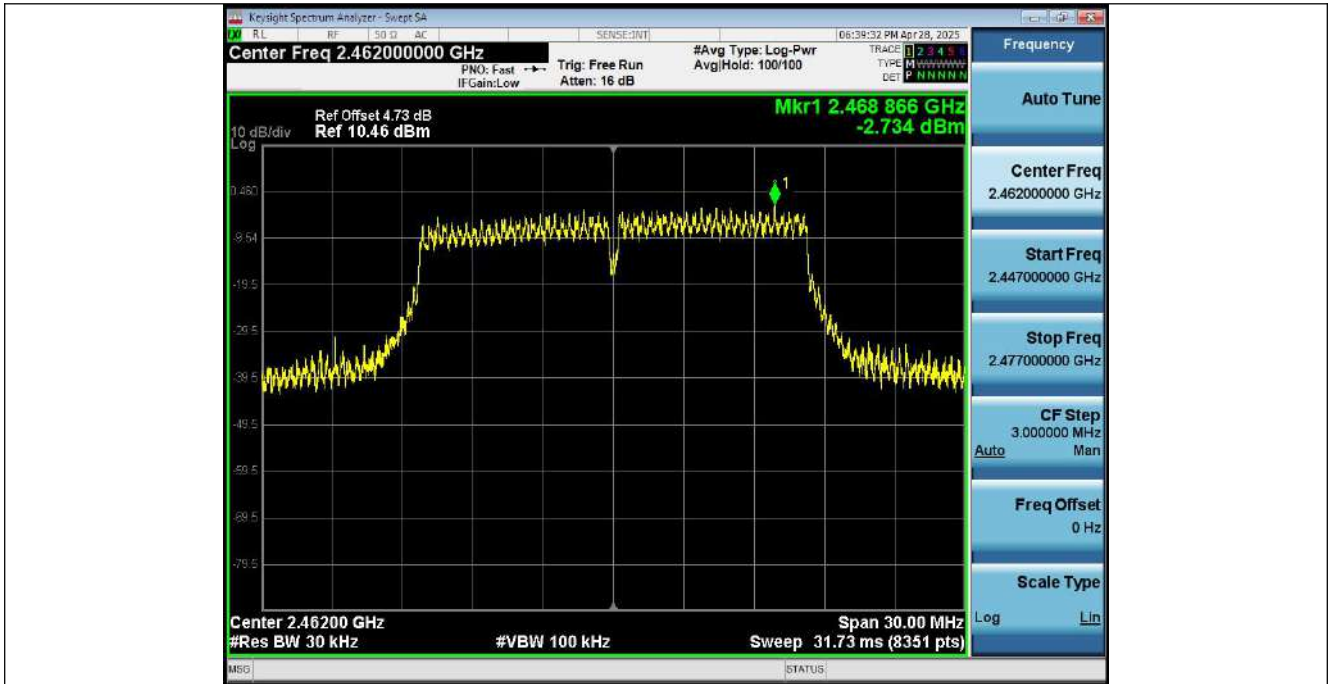
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11g\_2412



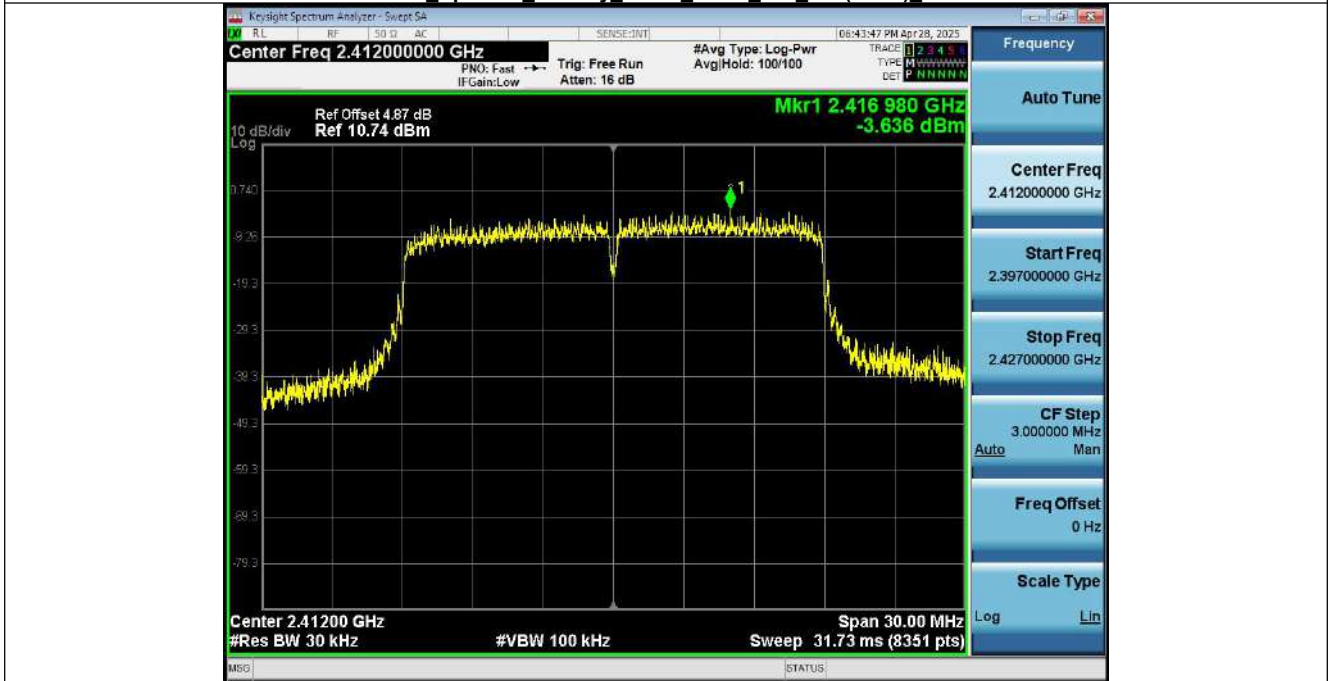
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11g\_2437



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

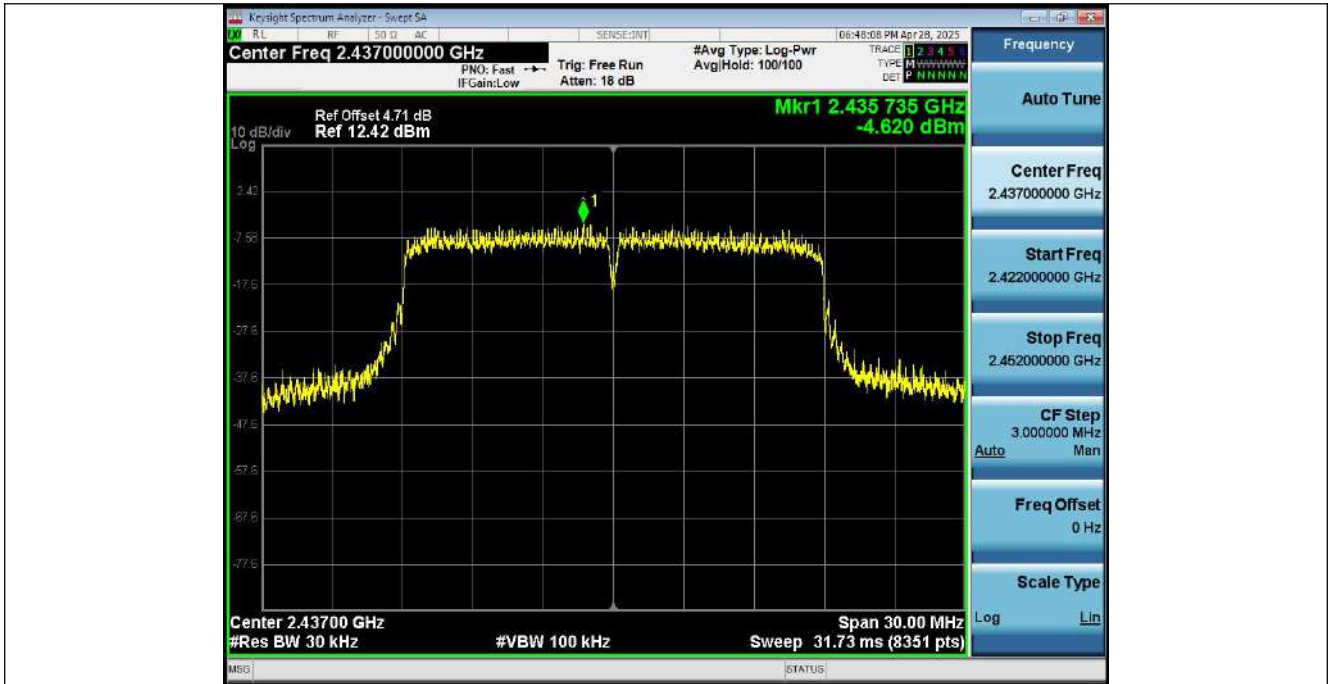


Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11n(HT20)\_2412

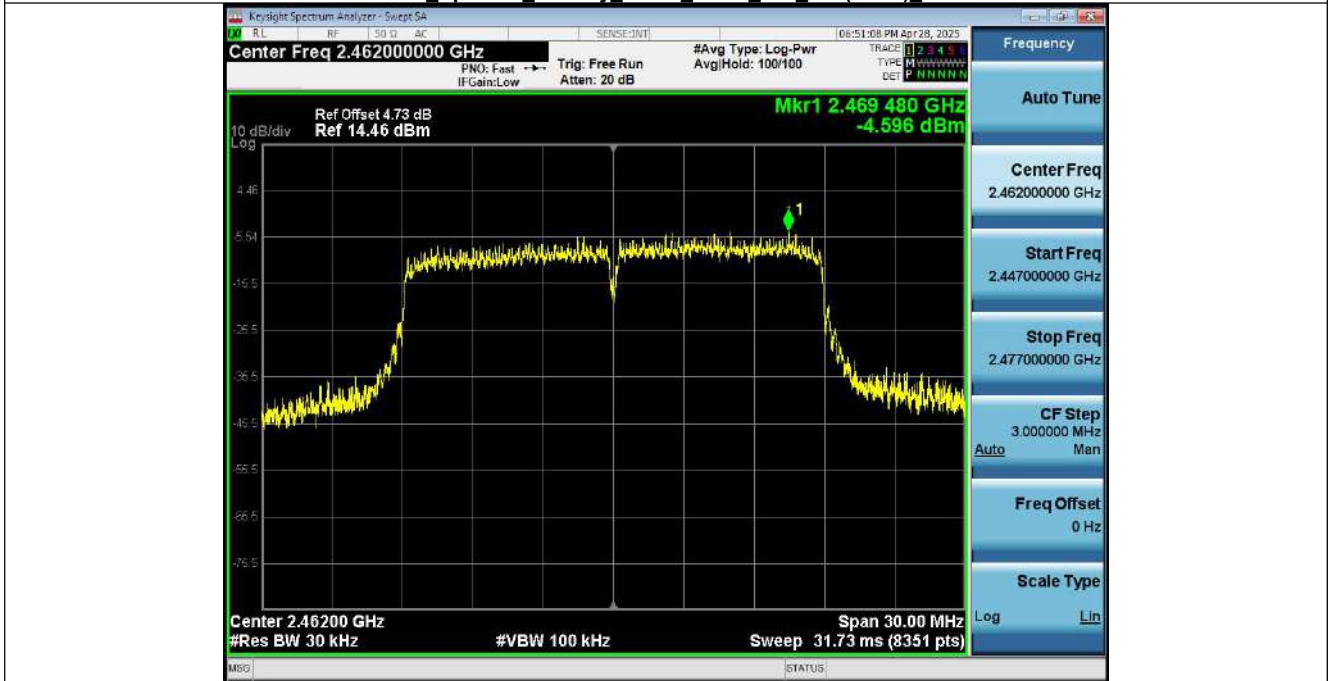


Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11n(HT20)\_2437

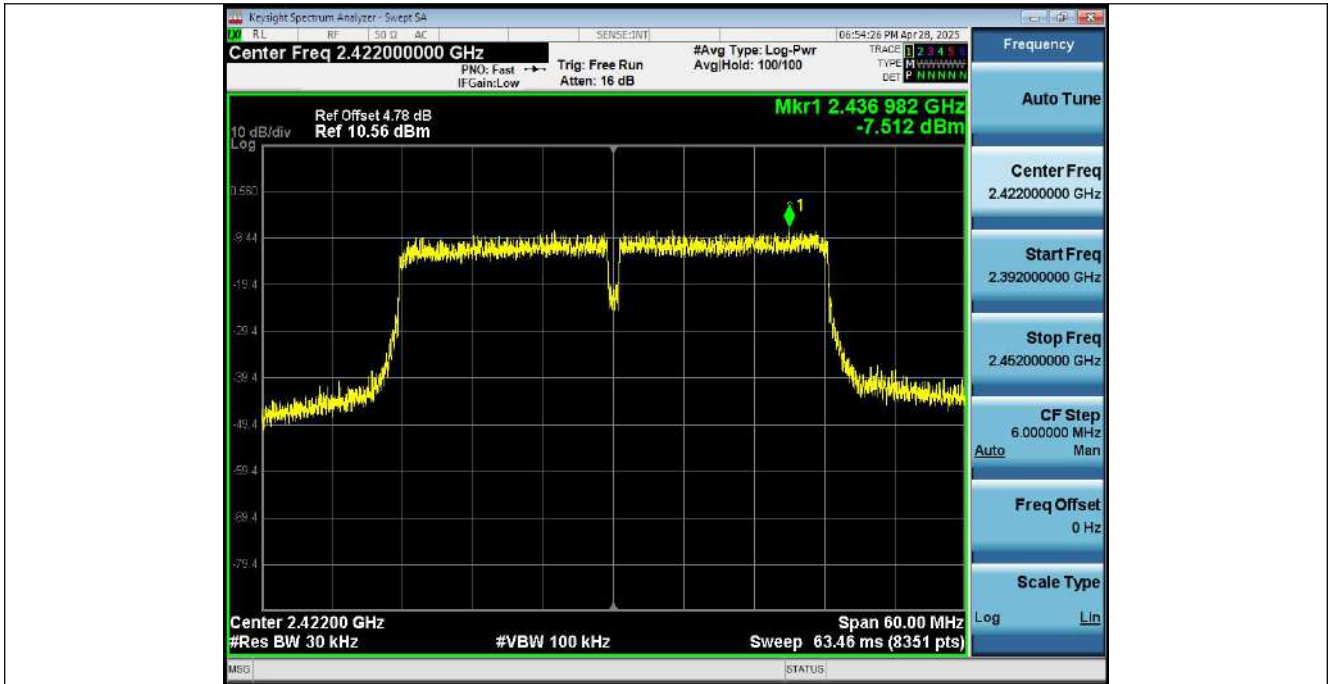




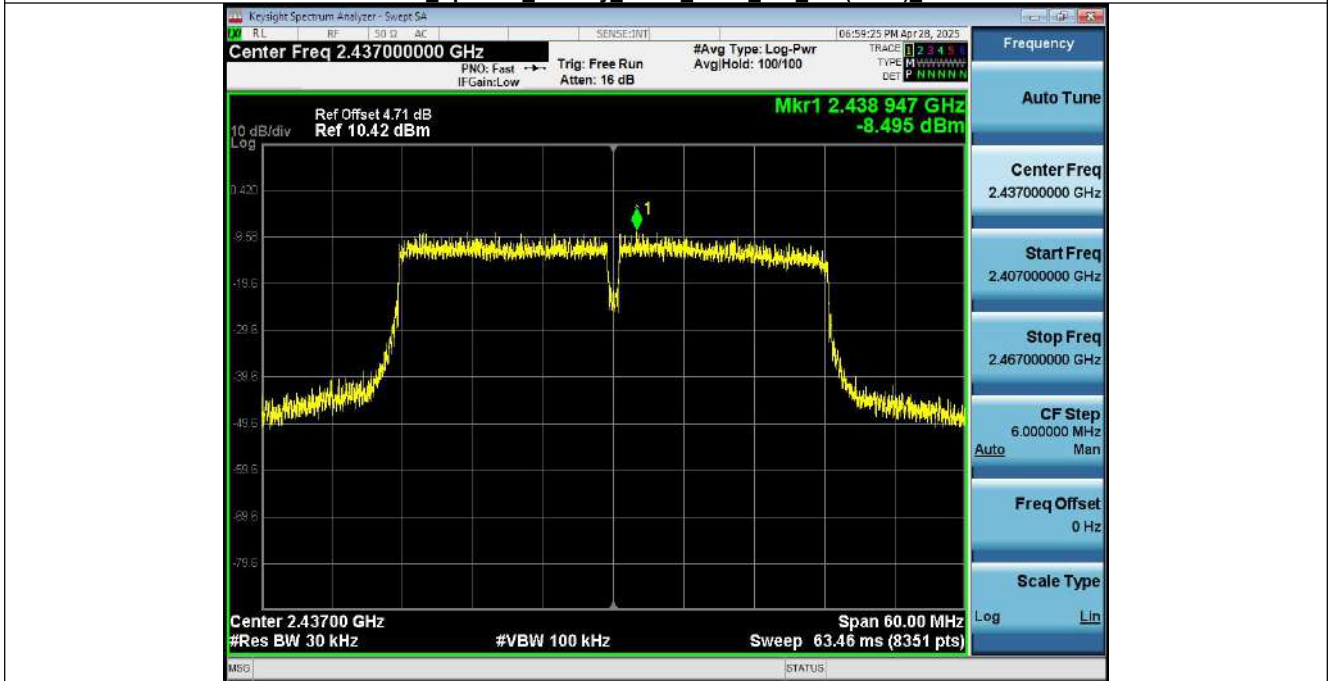
Power Spectral Density NVNT ANT1 802\_11n(HT20)\_2462



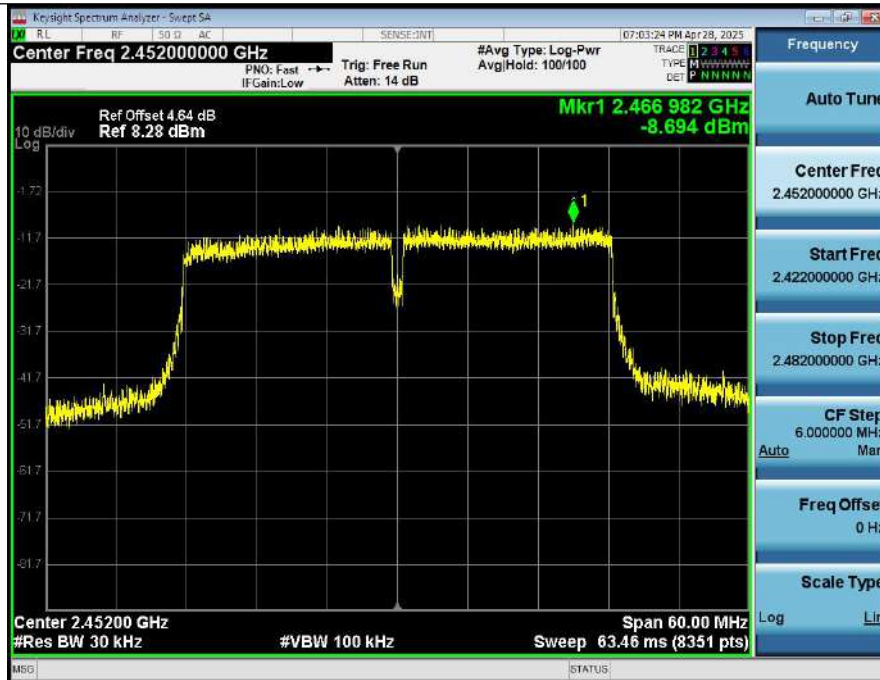
Power Spectral Density NVNT ANT1 802\_11n(HT40)\_2422



Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11n(HT40)\_2437



Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11n(HT40)\_2452



6. Bandedge

| Condition | Antenna | Modulation    | TX_Frequency (MHz) | Max. Mark_freq(MHz) | Ref_level(dBm) | Spurious level(dBm) | limit(dBm) | Result |
|-----------|---------|---------------|--------------------|---------------------|----------------|---------------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00            | 2399.936            | 7.319          | -30.819             | -12.681    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00            | 2483.536            | 7.781          | -45.598             | -12.219    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00            | 2399.824            | -0.435         | -31.529             | -20.435    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00            | 2484.160            | 1.863          | -38.275             | -18.137    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00            | 2399.936            | 0.778          | -31.484             | -19.222    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00            | 2483.536            | -0.110         | -38.719             | -20.110    | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2422.00            | 2399.760            | -2.541         | -34.795             | -22.541    | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2452.00            | 2484.496            | -3.753         | -37.804             | -23.753    | Pass   |



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

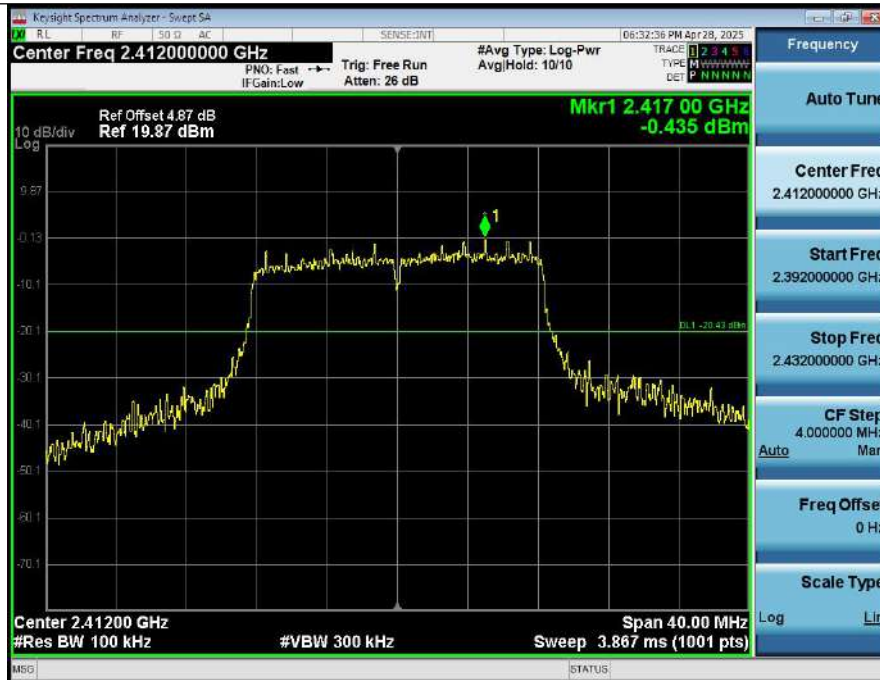


2\_Bandedge\_NVNT\_ANT1\_802\_11b\_2462



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



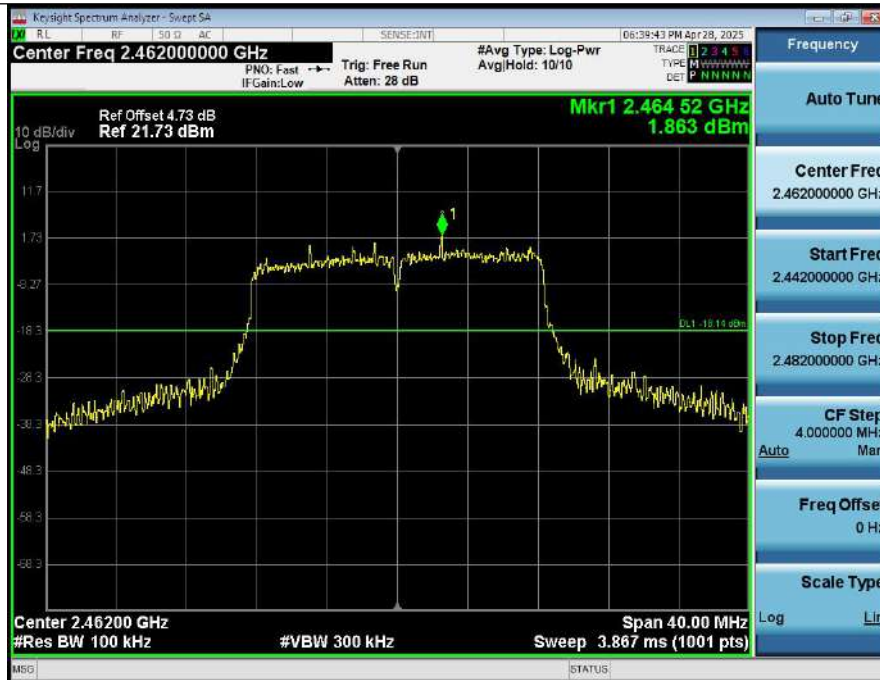


2\_Bandedge\_NVNT\_ANT1\_802\_11g\_2412



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

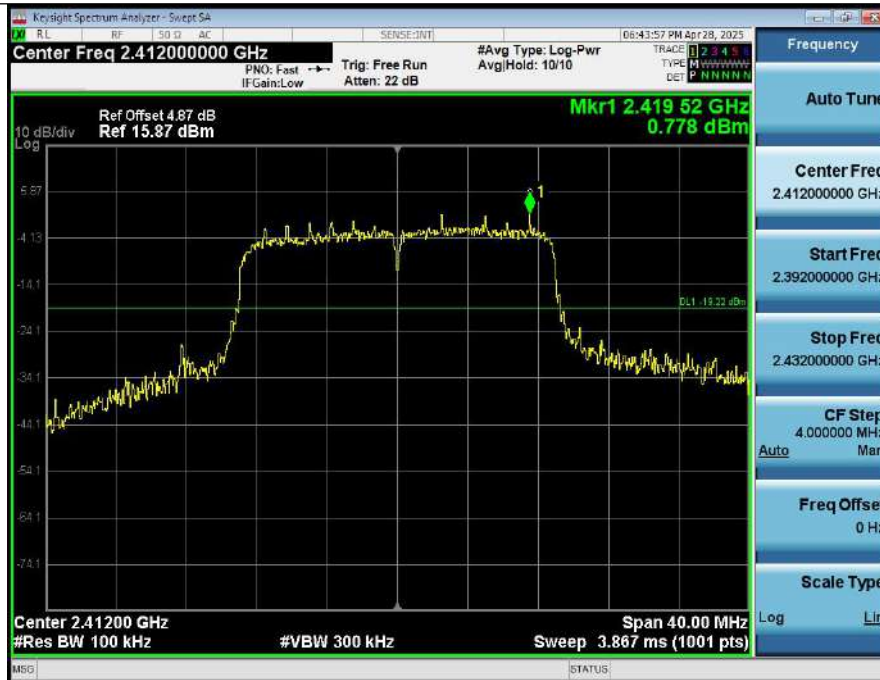




2\_Bandedge\_NVNT\_ANT1\_802\_11g\_2462



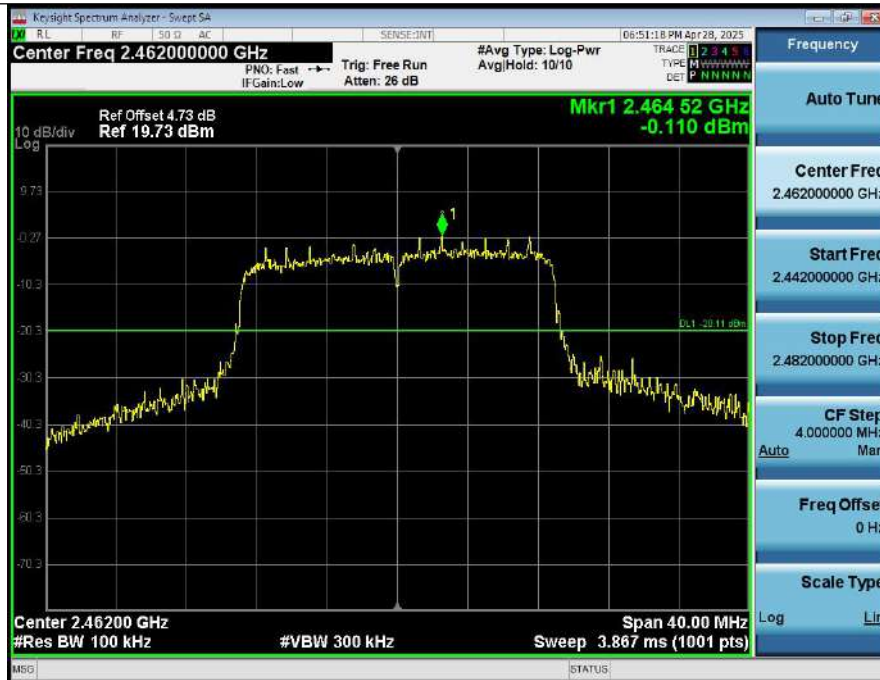
1\_Reference\_Level\_NVNT\_ANT1\_802\_11n(HT20)\_2412



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



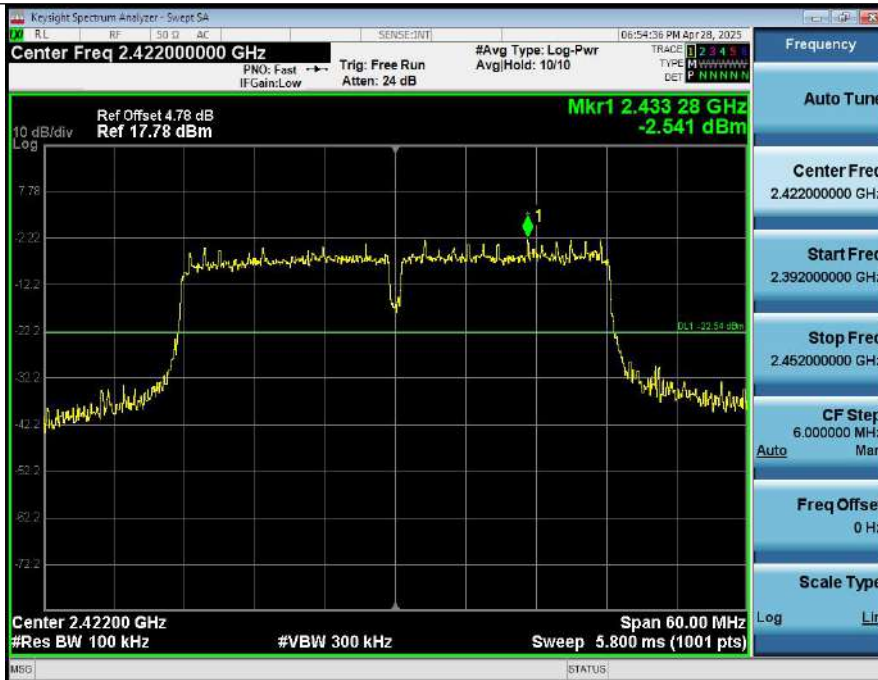
1\_Reference\_Level\_NVNT\_ANT1\_802\_11n(HT20)\_2462



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



1\_Reference\_Level\_NVNT\_ANT1\_802\_11n(HT40)\_2422

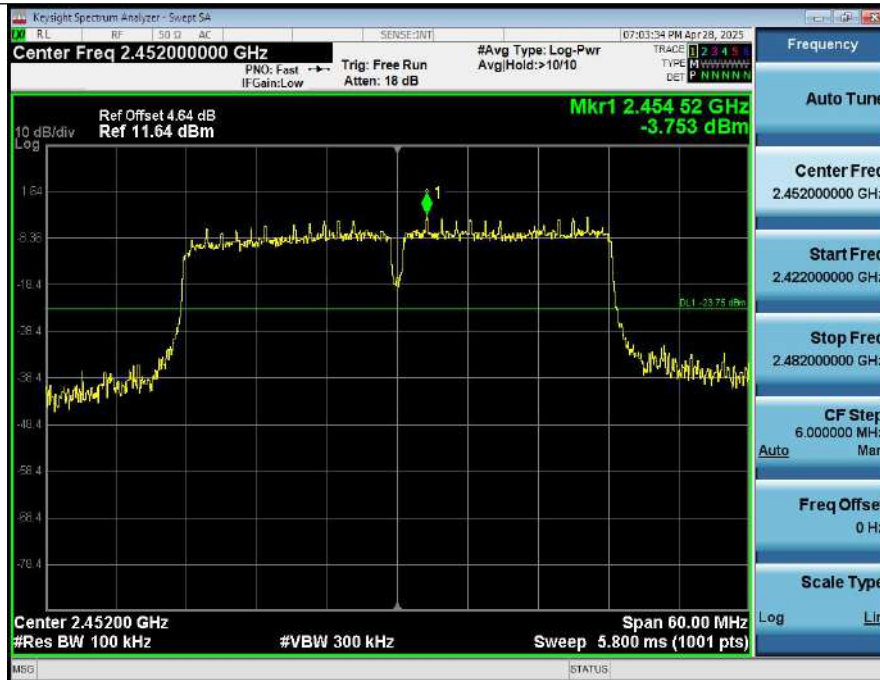


2\_Bandedge\_NVNT\_ANT1\_802\_11n(HT40)\_2422



1\_Reference\_Level\_NVNT\_ANT1\_802\_11n(HT40)\_2452





## 2\_Bandedge\_NVNT\_ANT1\_802\_11n(HT40)\_2452



## 7. Spurious Emission

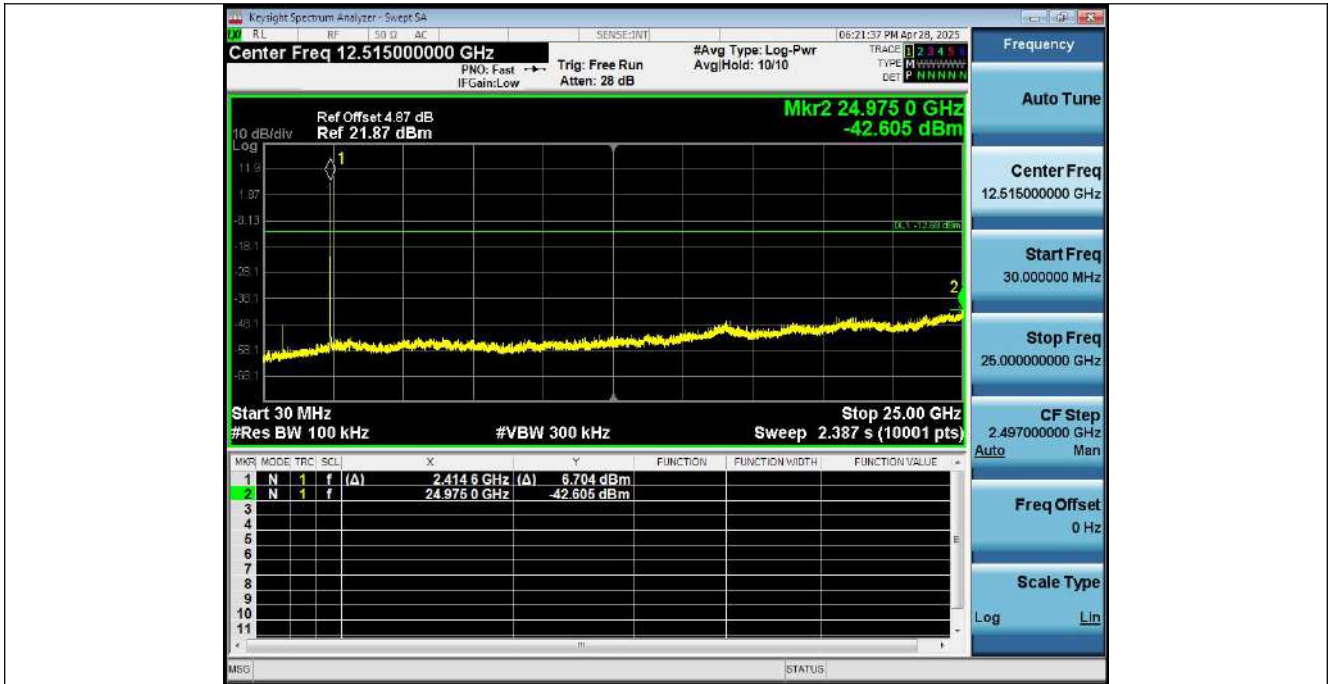
| Condition | Antenna | Modulation    | TX_Frequency (MHz) | Max. Mark_freq(MHz) | Ref_level(dBm) | Spurious level(dBm) | limit(dBm) | Result |
|-----------|---------|---------------|--------------------|---------------------|----------------|---------------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00            | 24975.030           | 7.319          | -42.605             | -12.681    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00            | 721.669             | 8.171          | -35.220             | -11.829    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00            | 24980.024           | 7.781          | -36.996             | -12.219    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00            | 711.681             | -0.435         | -33.369             | -20.435    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00            | 724.166             | 1.106          | -32.576             | -18.894    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00            | 709.184             | 1.863          | -37.312             | -18.137    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00            | 721.669             | 0.778          | -31.800             | -19.222    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00            | 721.669             | -0.038         | -35.686             | -20.038    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00            | 724.166             | -0.110         | -36.557             | -20.110    | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2422.00            | 721.669             | -2.541         | -39.106             | -22.541    | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2437.00            | 706.687             | -3.630         | -35.576             | -23.630    | Pass   |
| NVNT      | ANT1    | 802.11n(HT40) | 2452.00            | 721.669             | -3.753         | -45.400             | -23.753    | Pass   |

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



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

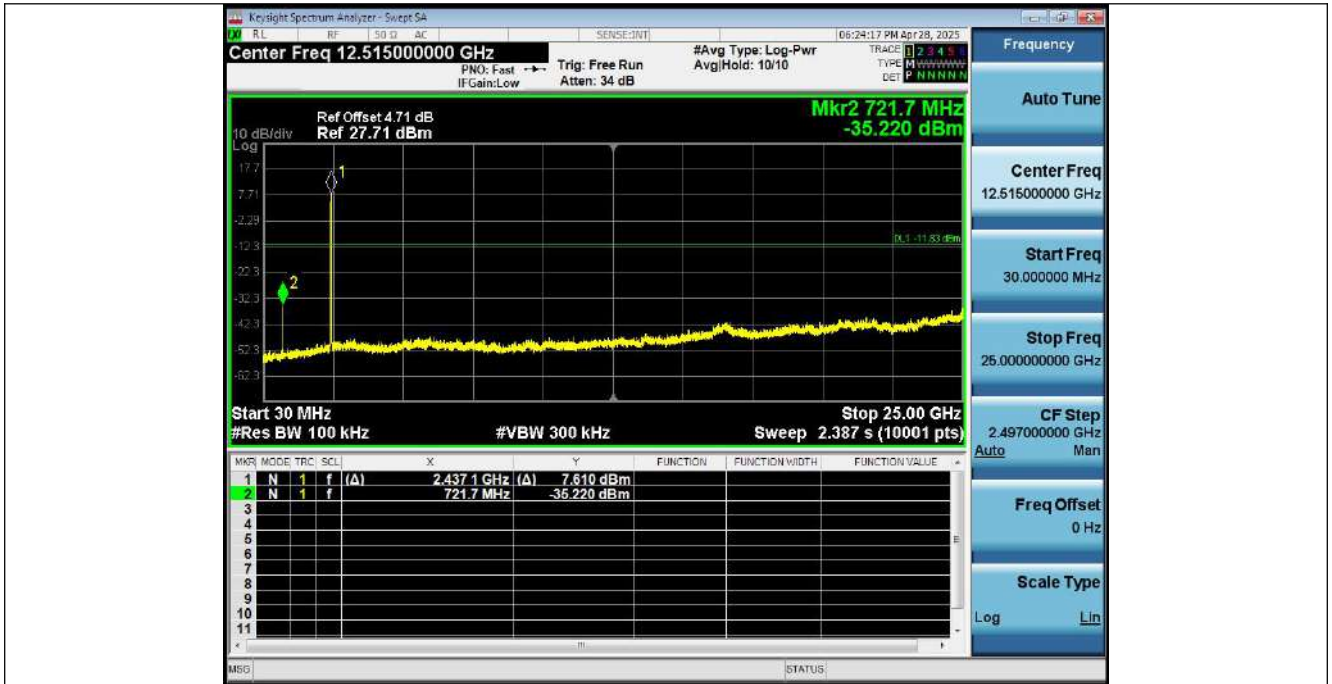




### 1 Reference Level NVNT ANT1 802 11b 2437



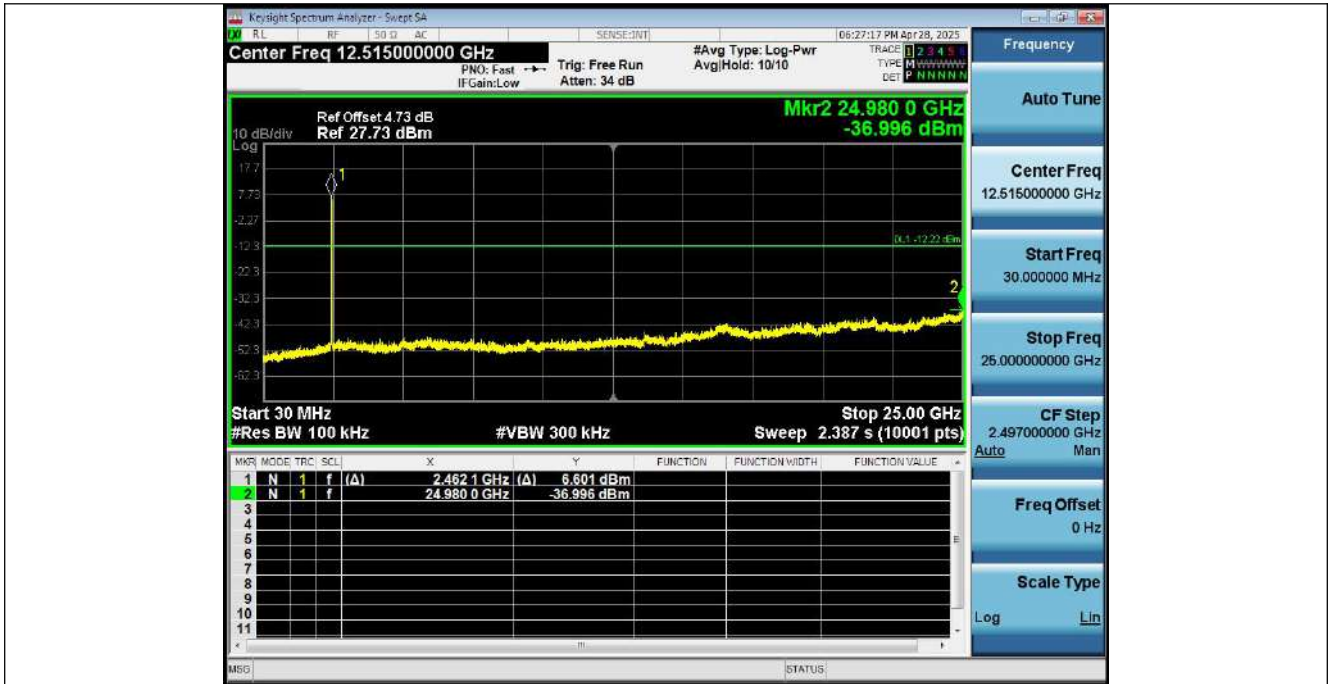
### 2 Spurious Emission NVNT ANT1 802 11b 2437



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



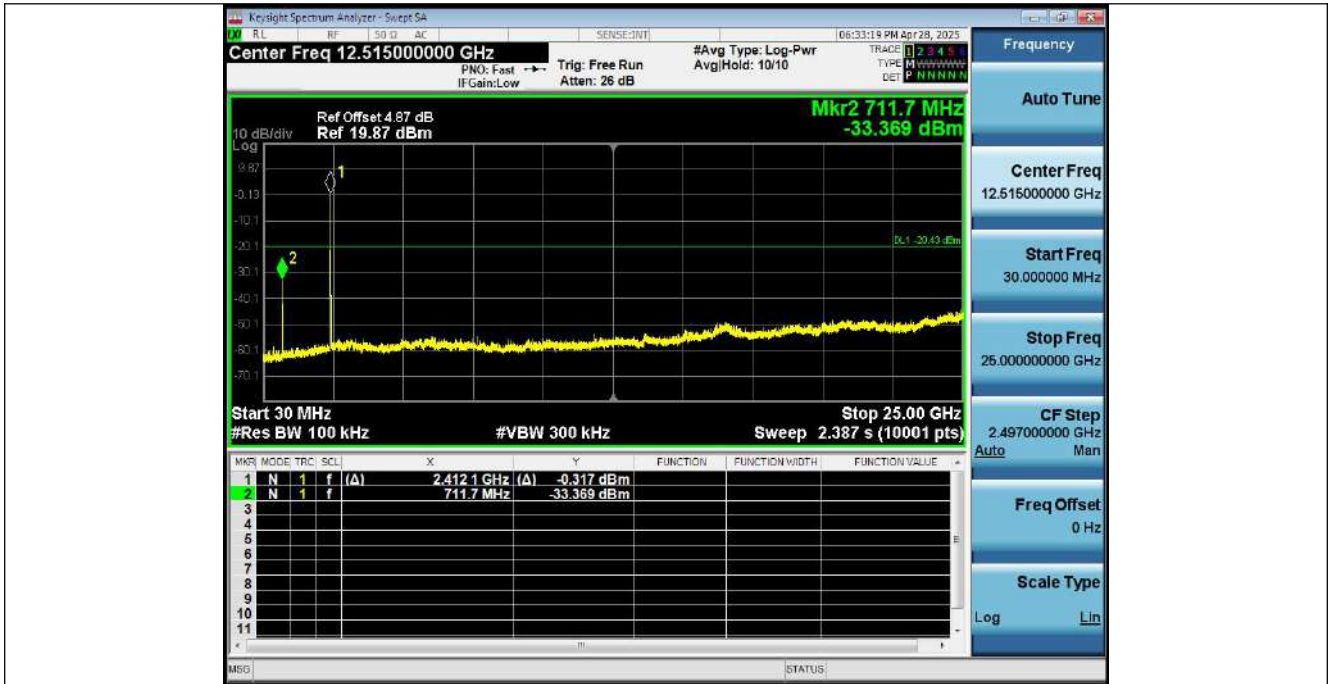
### 2 Spurious Emission\_NVNT\_ANT1\_802\_11b\_2462



### 1 Reference Level NVNT\_ANT1\_802\_11g\_2412



### 2 Spurious Emission NVNT\_ANT1\_802\_11g\_2412

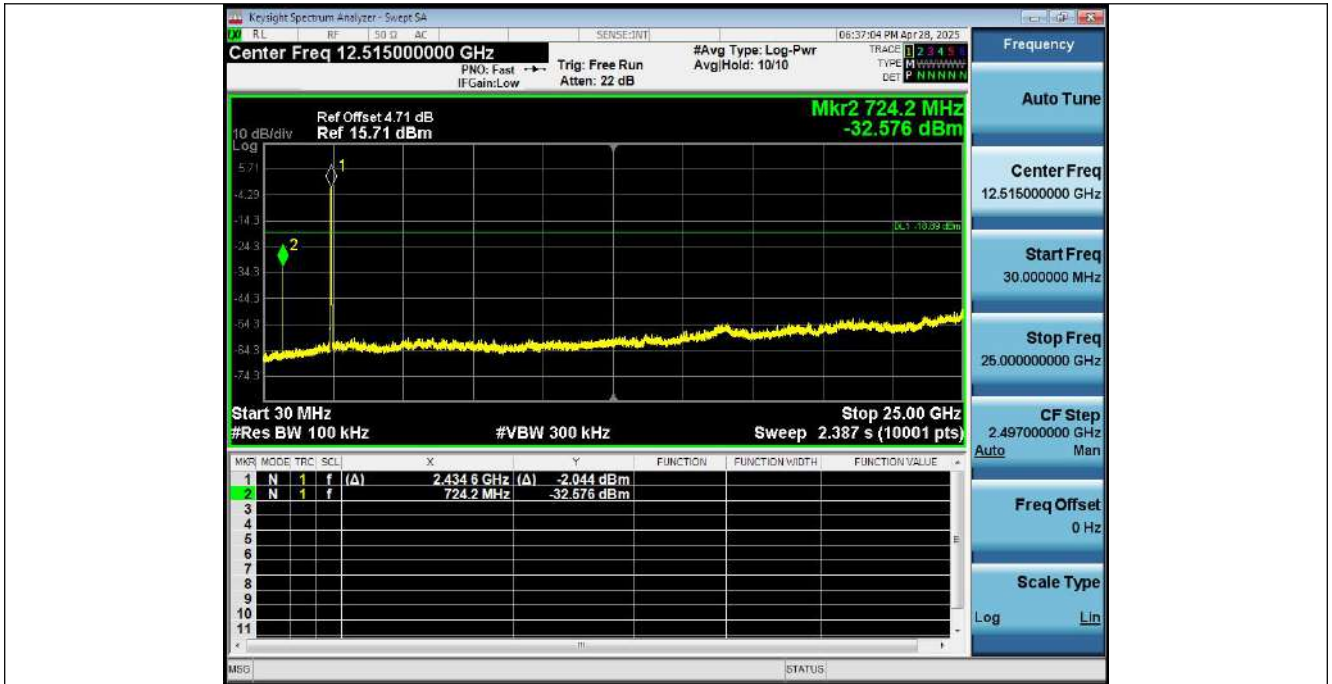


### 1 Reference Level NVNT ANT1 802 11g 2437



### 2 Spurious Emission NVNT ANT1 802 11g 2437

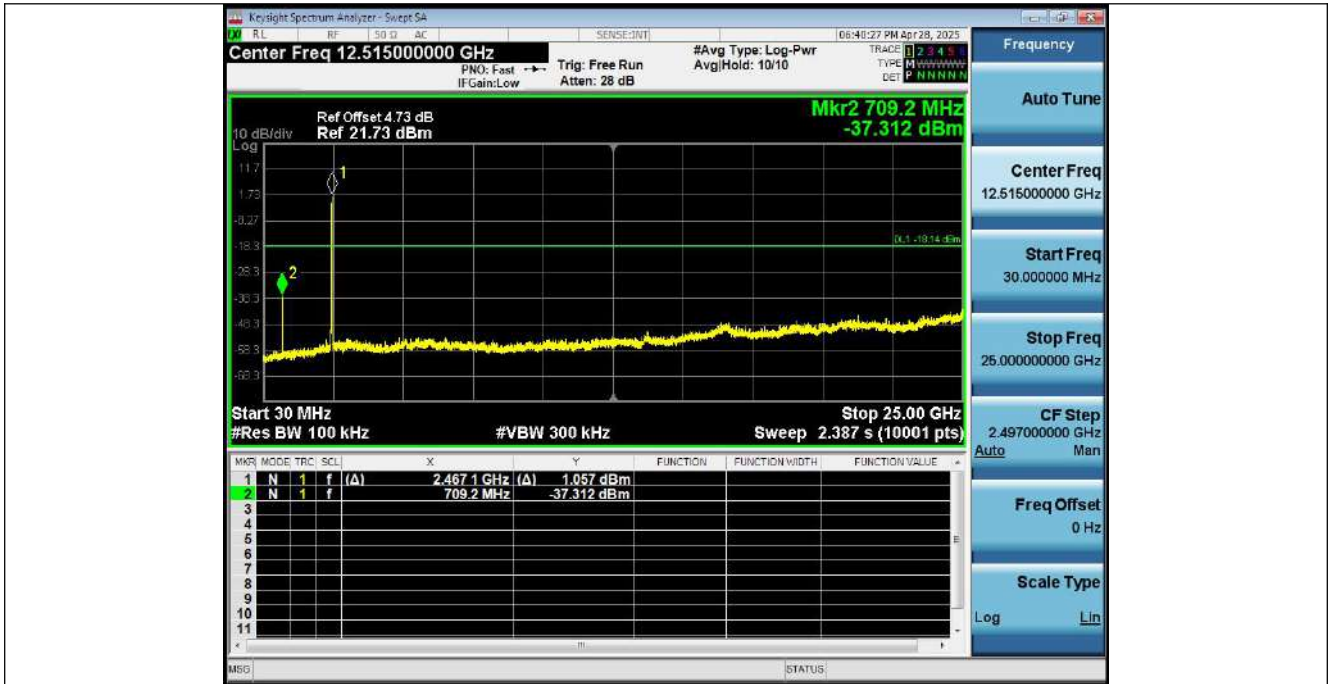




### 1 Reference Level NVNT\_ANT1\_802\_11g\_2462



### 2 Spurious Emission\_NVNT\_ANT1\_802\_11g\_2462

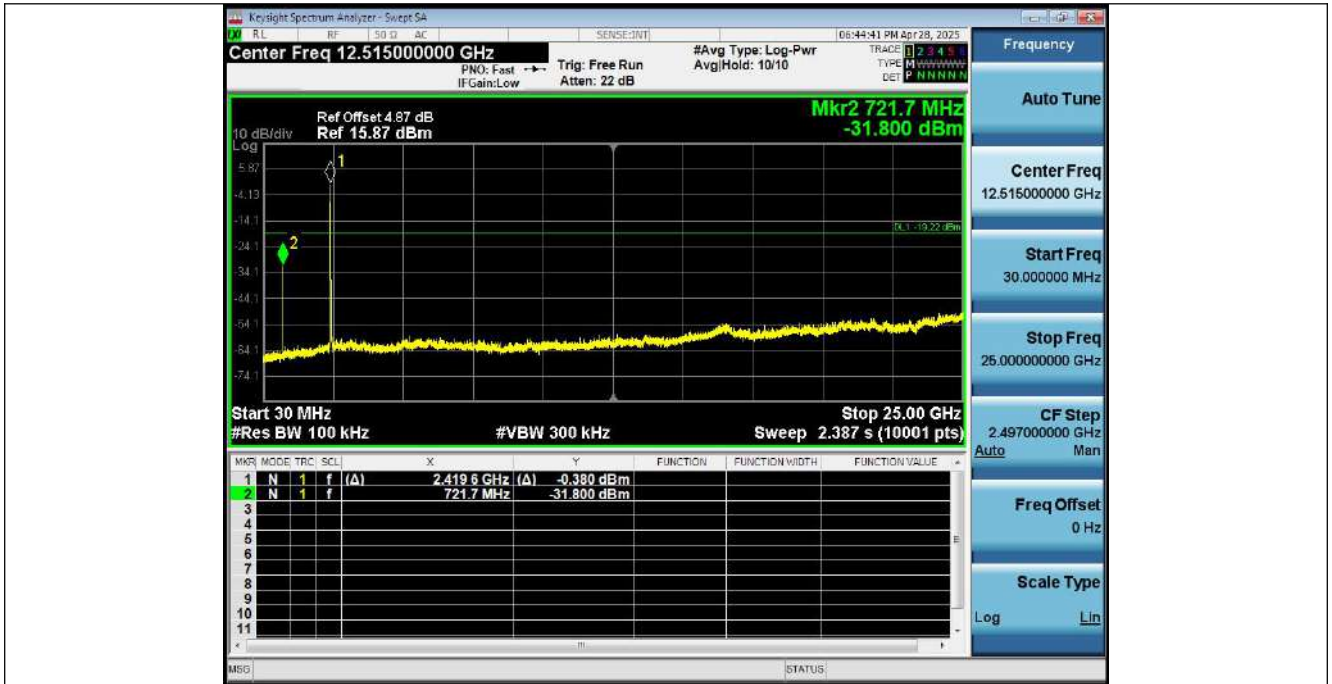


### 1 Reference Level NVNT ANT1 802 11n(HT20) 2412

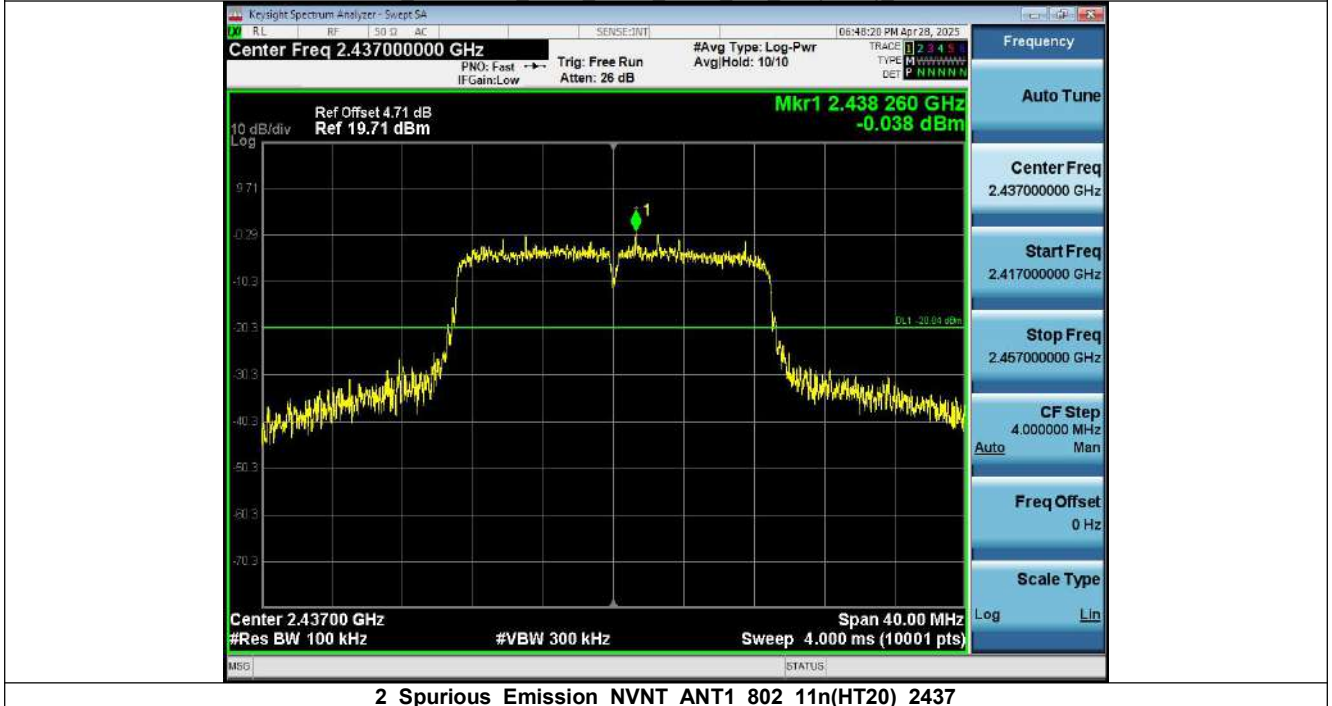


### 2 Spurious Emission NVNT ANT1 802 11n(HT20) 2412

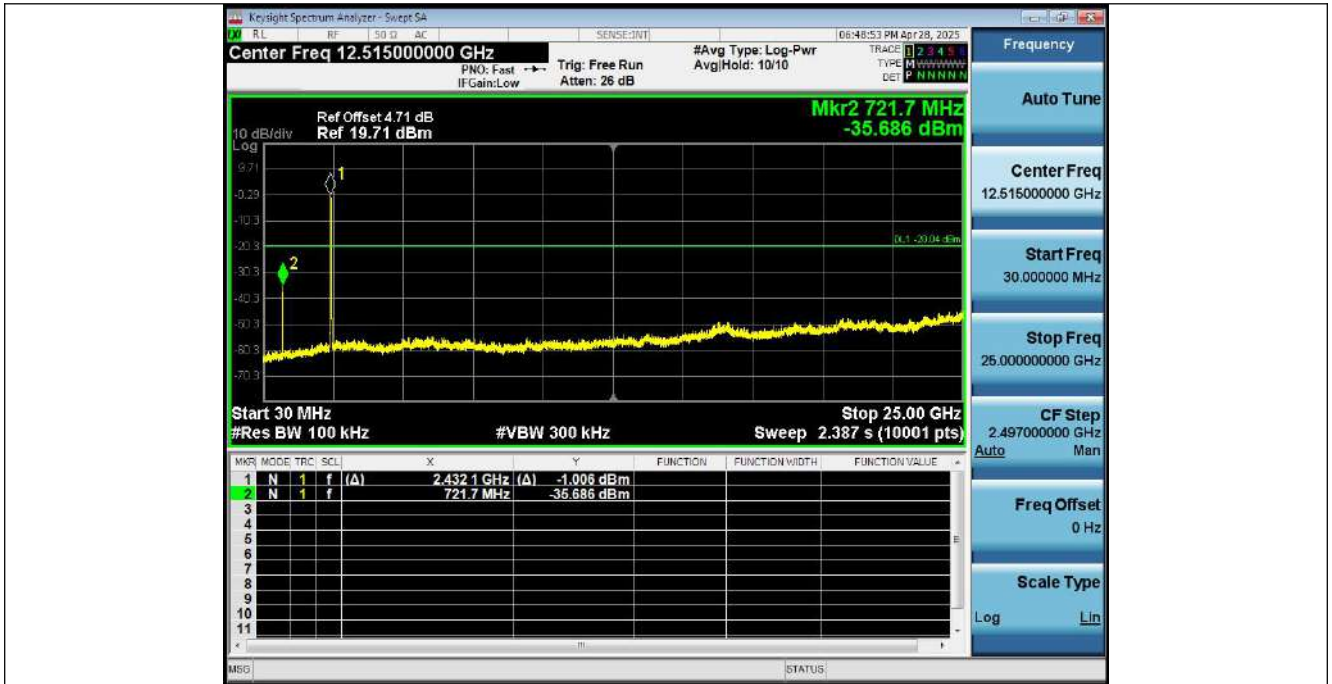




### 1 Reference Level NVNT\_ANT1\_802\_11n(HT20)\_2437



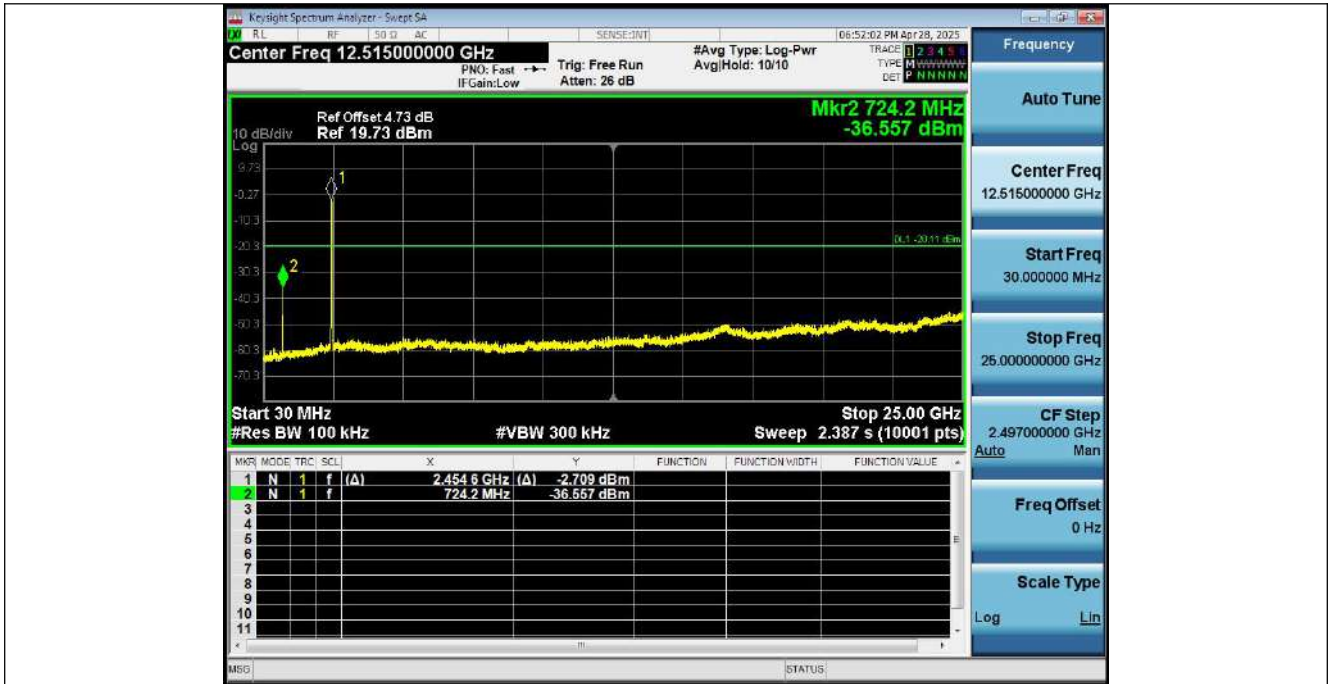
### 2 Spurious Emission NVNT\_ANT1\_802\_11n(HT20)\_2437



### 1 Reference Level NVNT\_ANT1\_802\_11n(HT20)\_2462



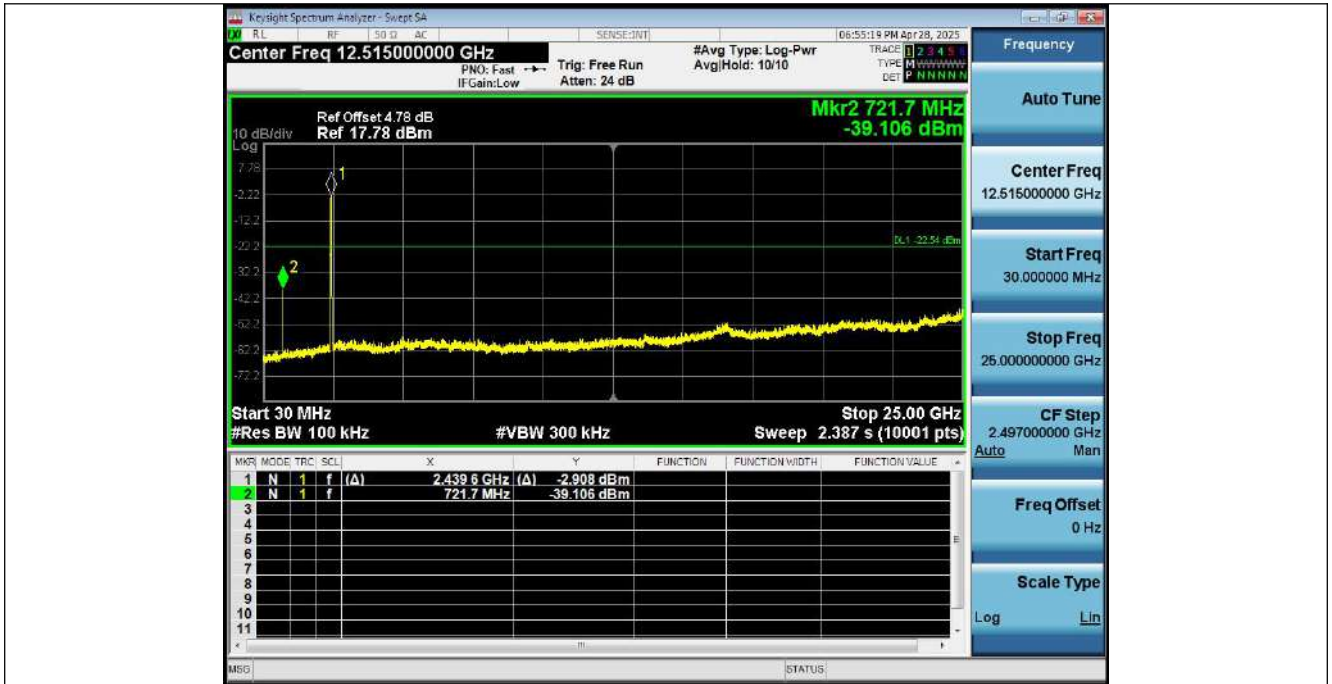
### 2 Spurious Emission NVNT\_ANT1\_802\_11n(HT20)\_2462



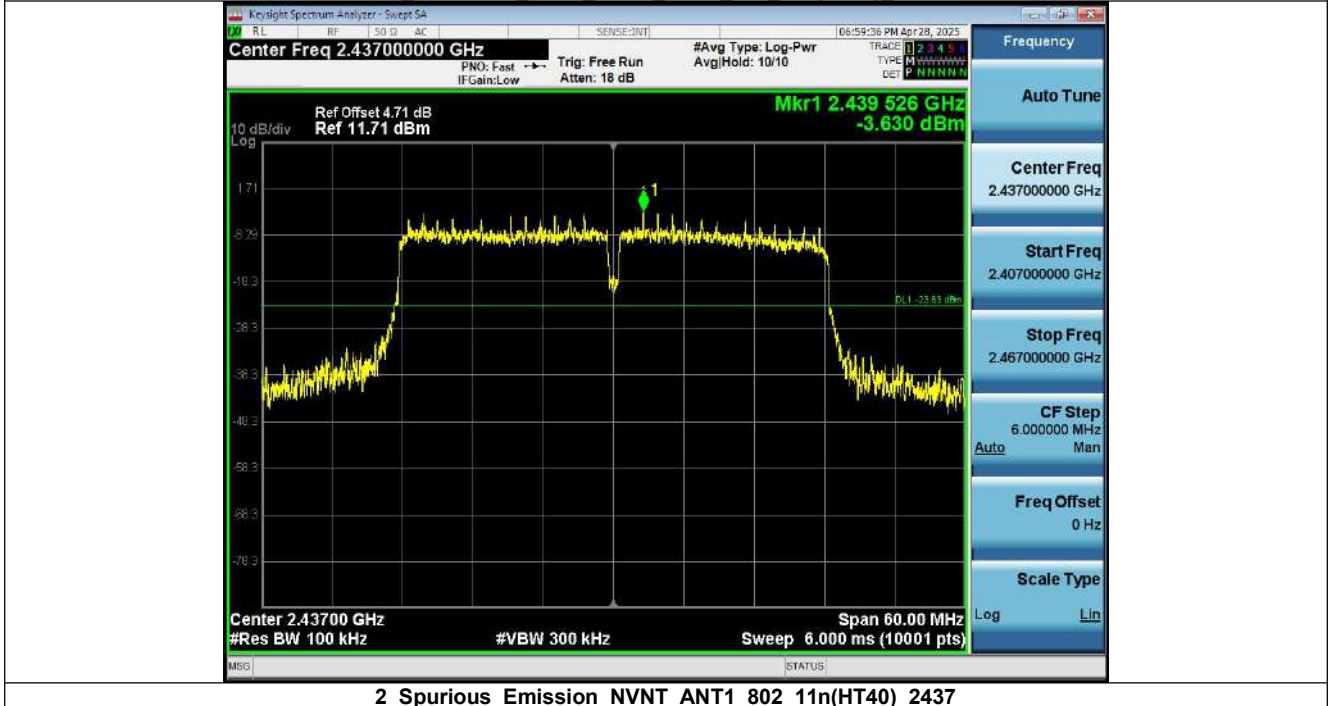
### 1 Reference Level NVNT\_ANT1\_802\_11n(HT40)\_2422



### 2 Spurious Emission NVNT\_ANT1\_802\_11n(HT40)\_2422

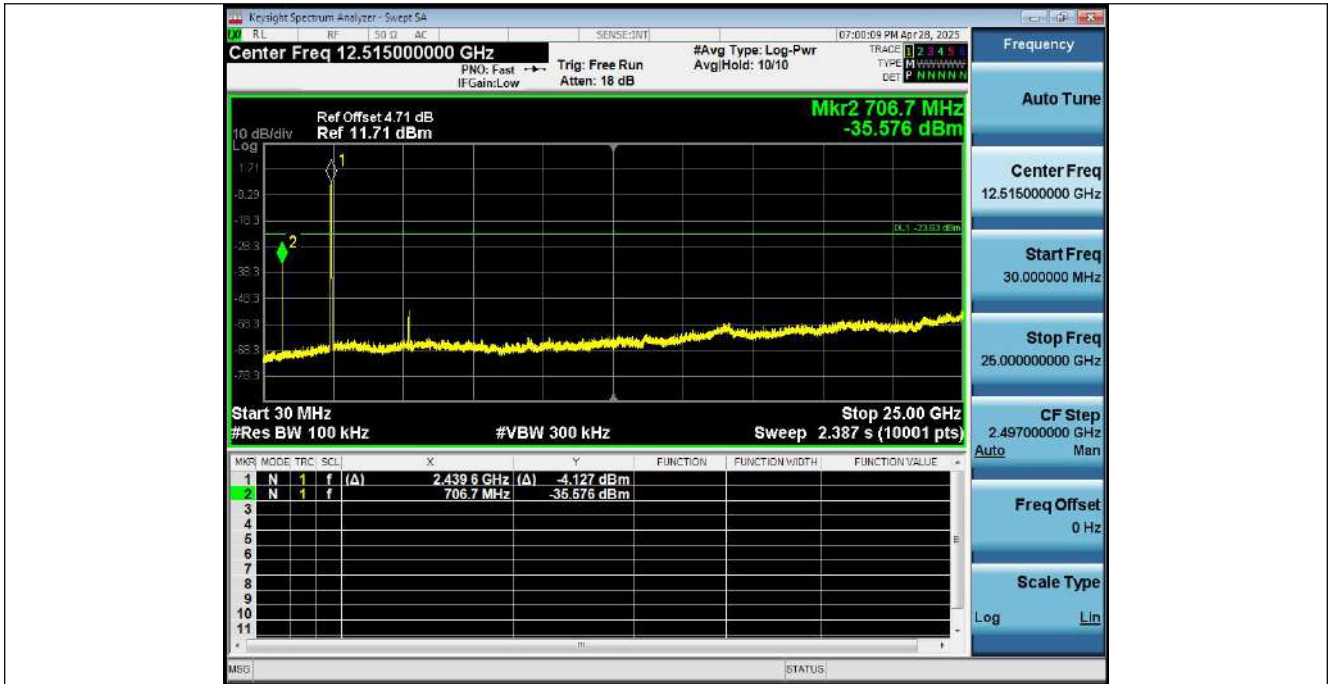


### 1 Reference Level NVNT\_ANT1\_802\_11n(HT40)\_2437



### 2 Spurious Emission NVNT\_ANT1\_802\_11n(HT40)\_2437





### 1 Reference Level NVNT\_ANT1\_802\_11n(HT40)\_2452



### 2 Spurious Emission NVNT\_ANT1\_802\_11n(HT40)\_2452



