

# Appendix

## 2.4G\_WIFI Test Data for BTEK240522001AE



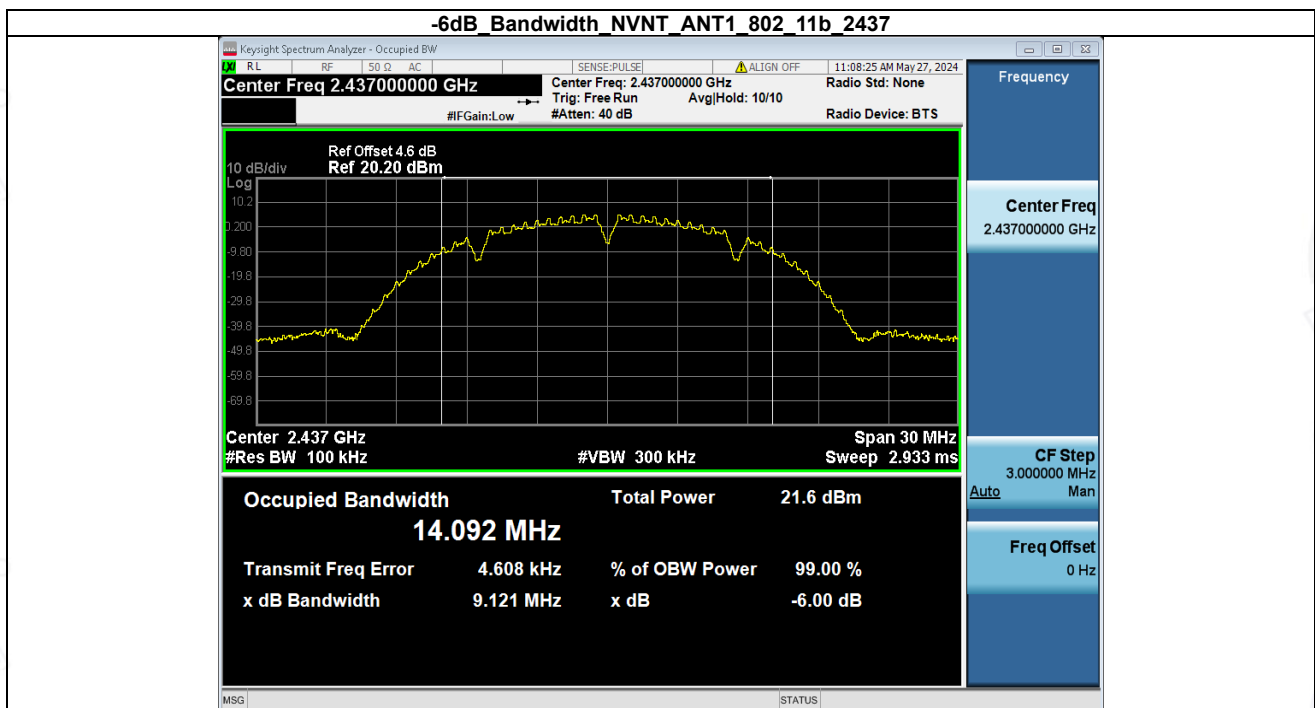
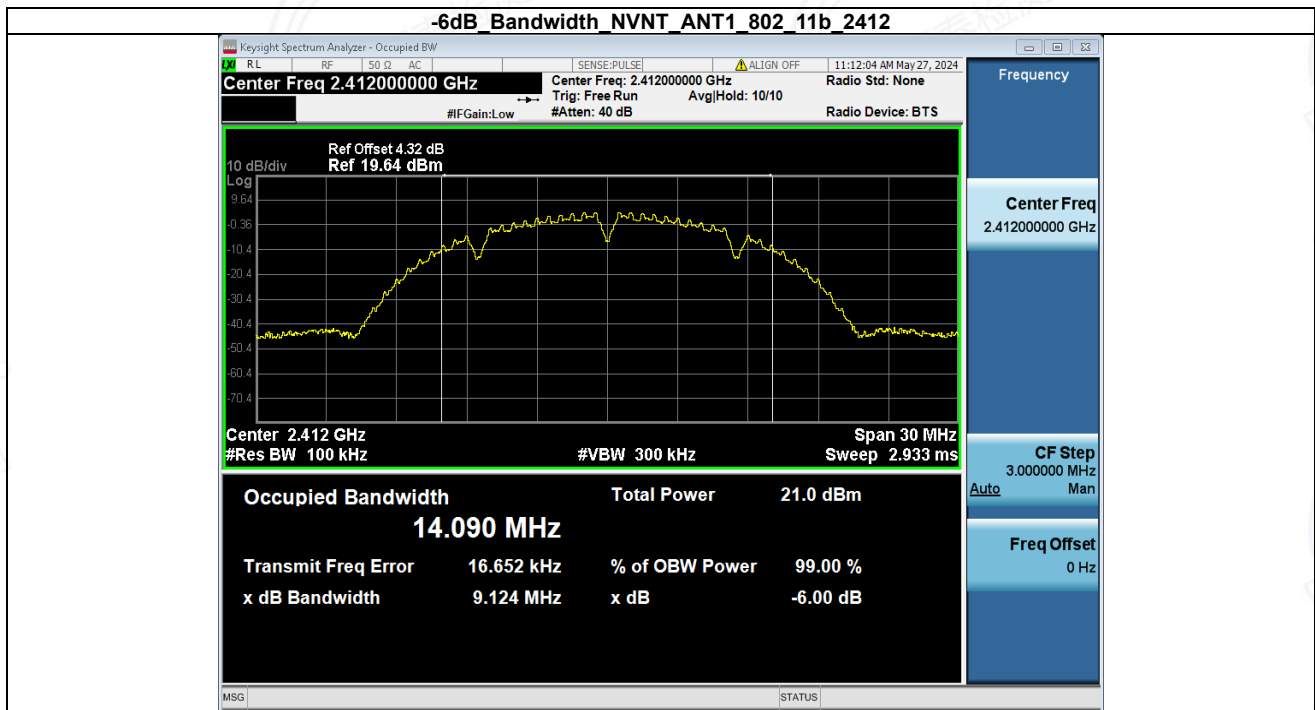
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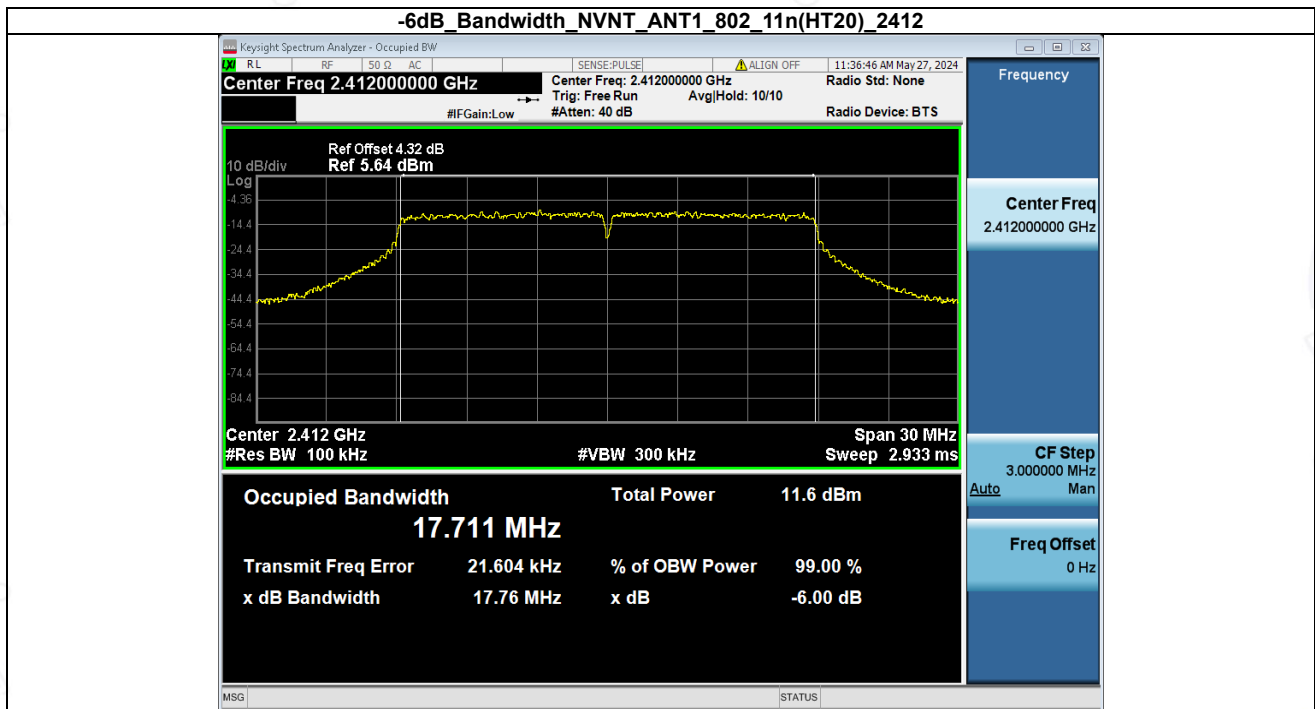
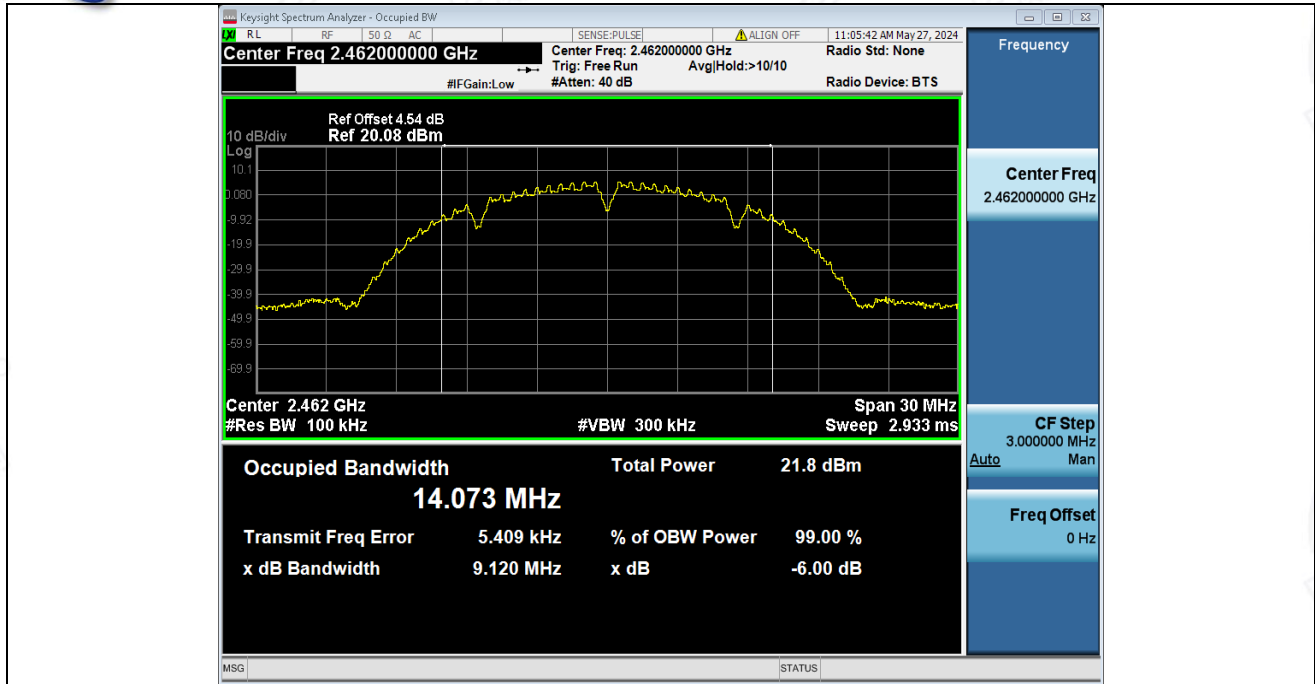
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## 1. -6dB Bandwidth

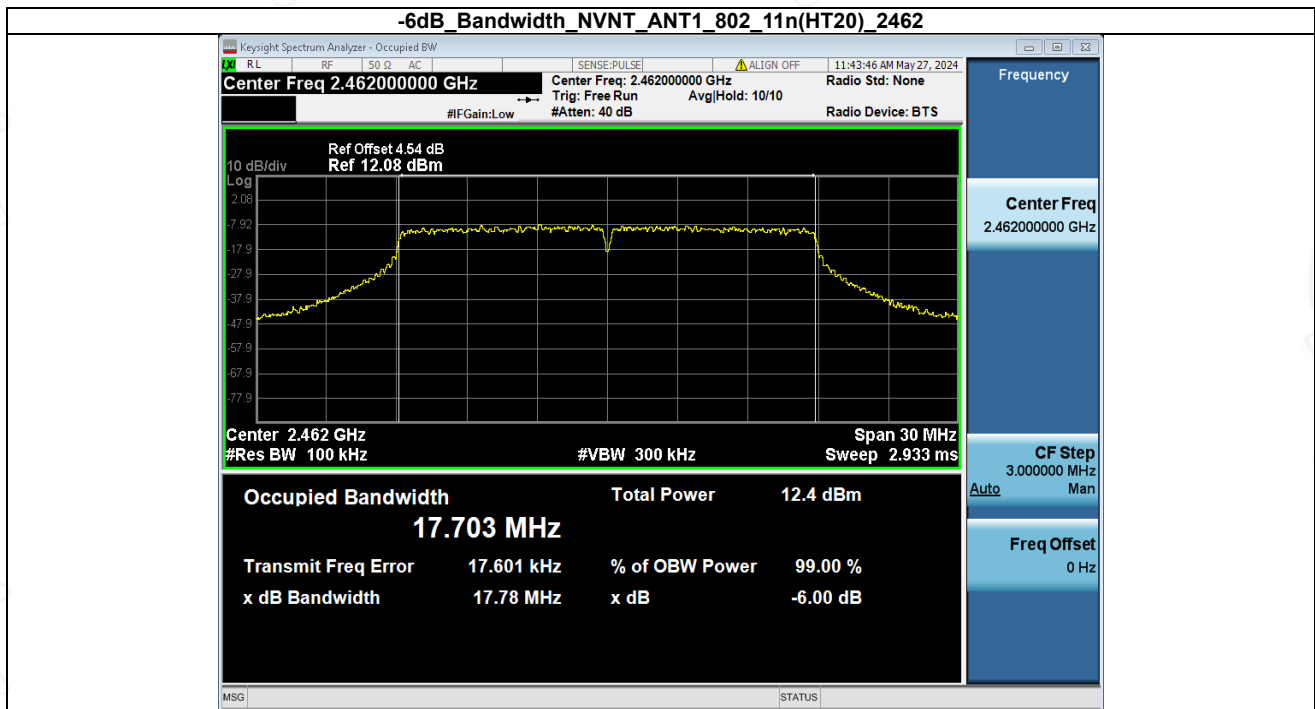
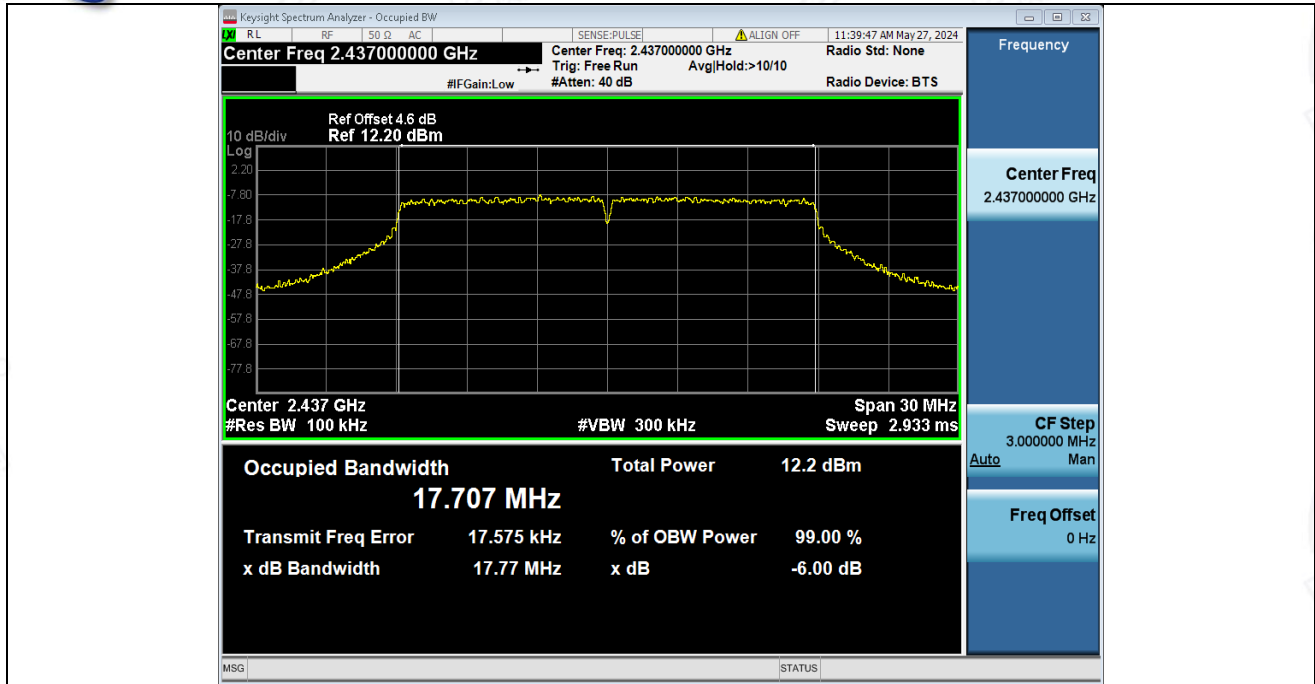
| Condition | Antenna | Modulation    | Frequency (MHz) | -6dB BW(MHz) | limit(kHz) | Result |
|-----------|---------|---------------|-----------------|--------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 9.12         | 500        | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 9.12         | 500        | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 9.12         | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | 17.76        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | 17.77        | 500        | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | 17.78        | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00         | 16.58        | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00         | 16.59        | 500        | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00         | 16.58        | 500        | Pass   |





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

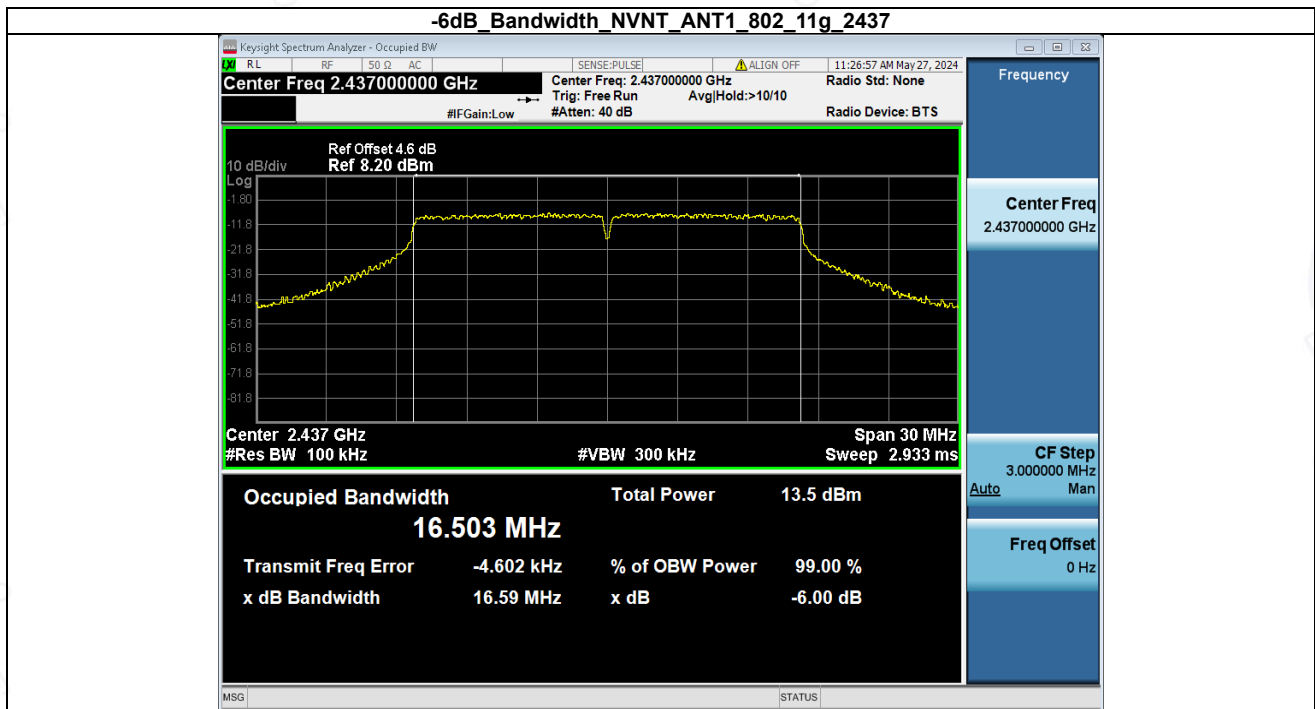
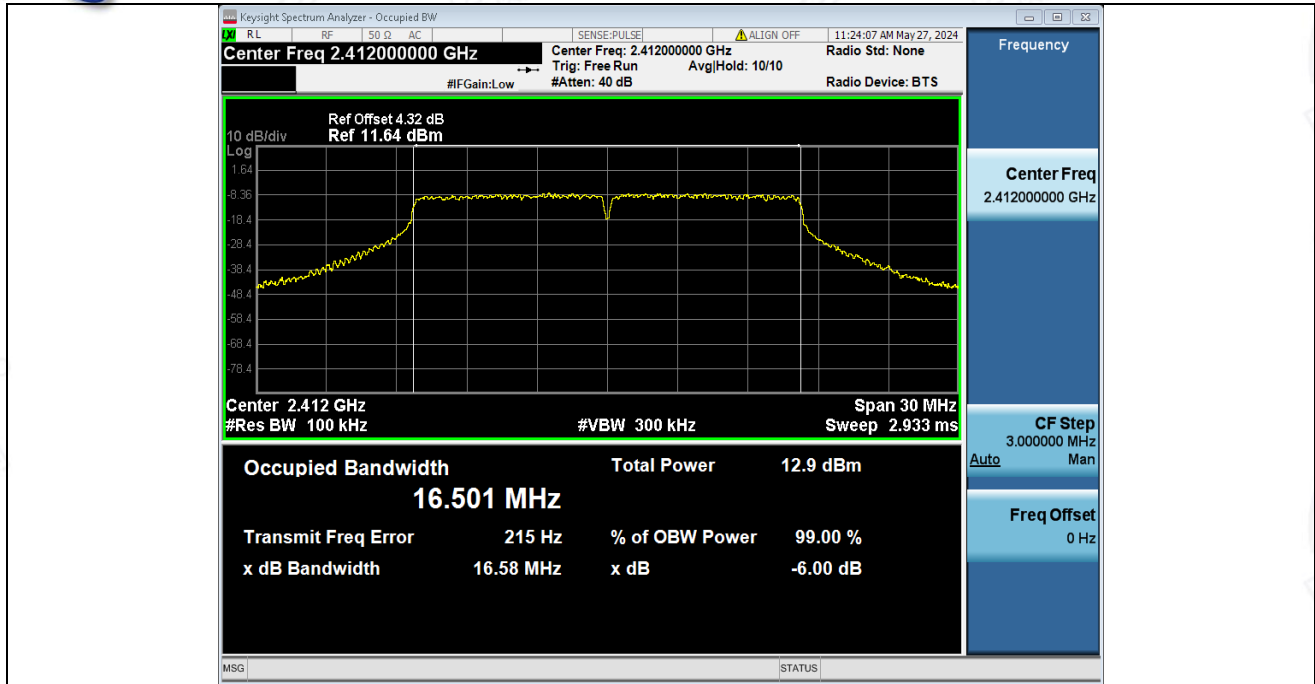




-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11g\_2412

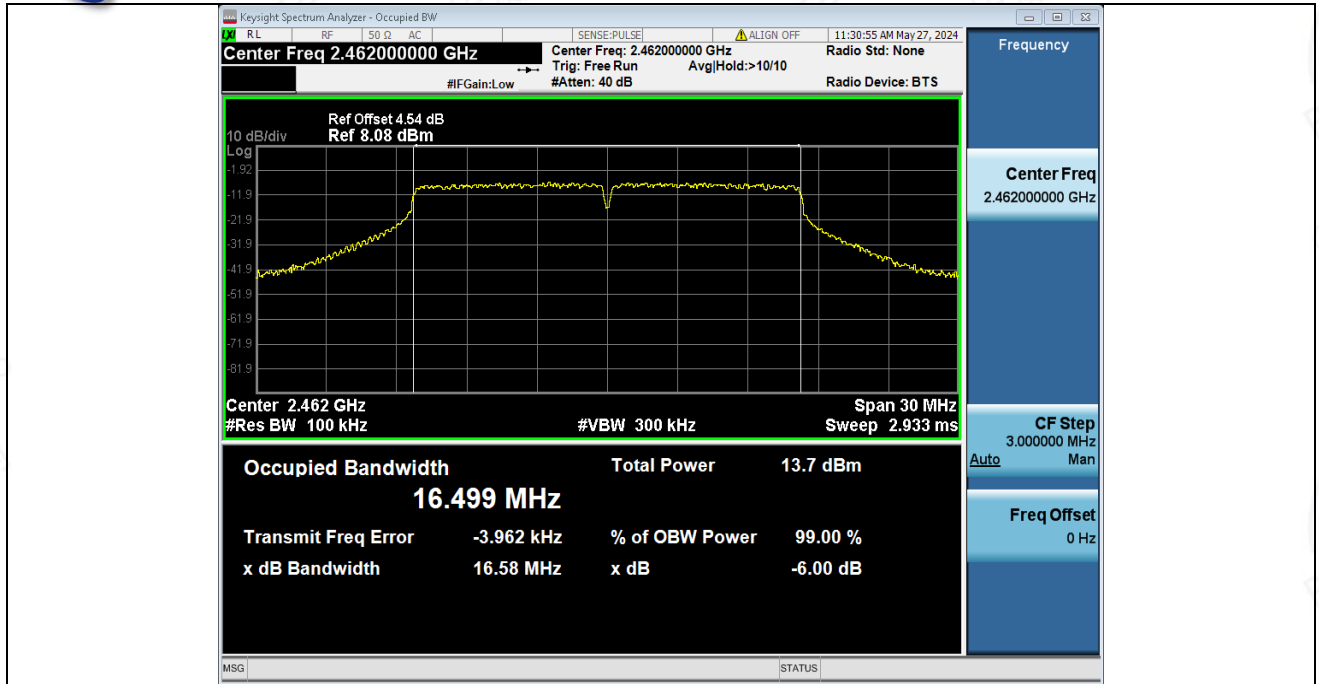






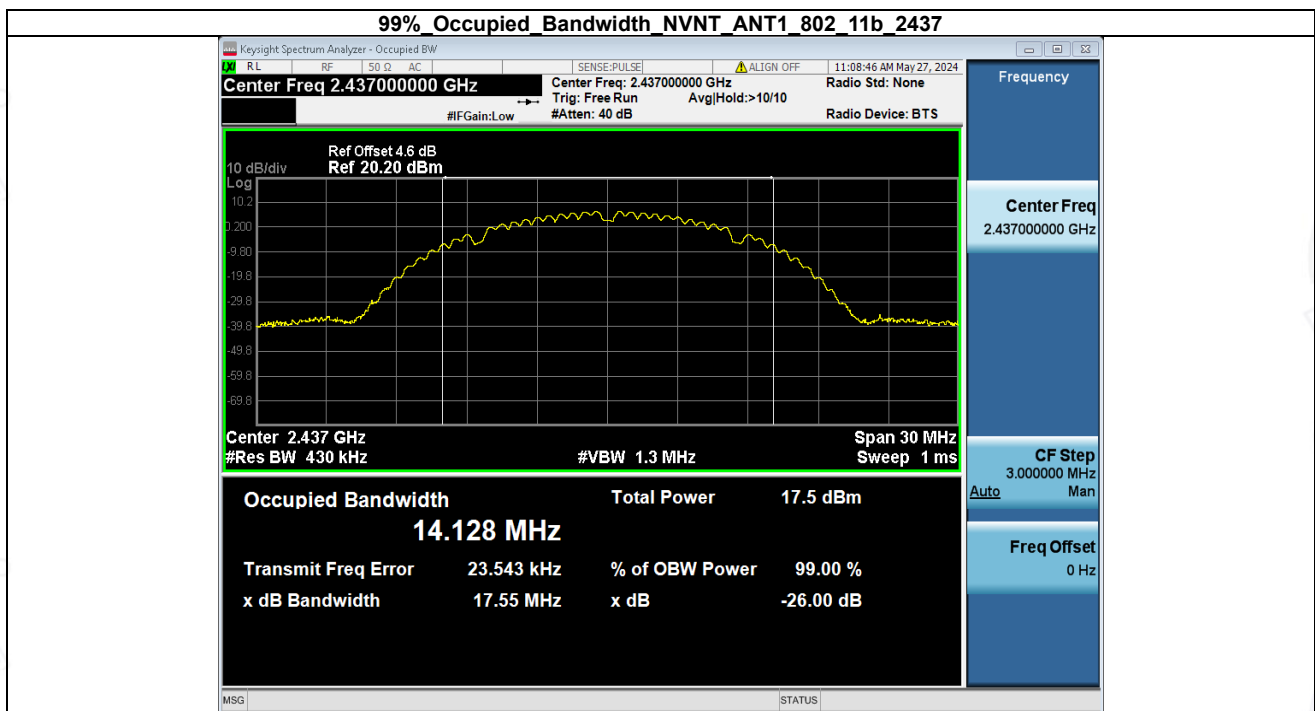
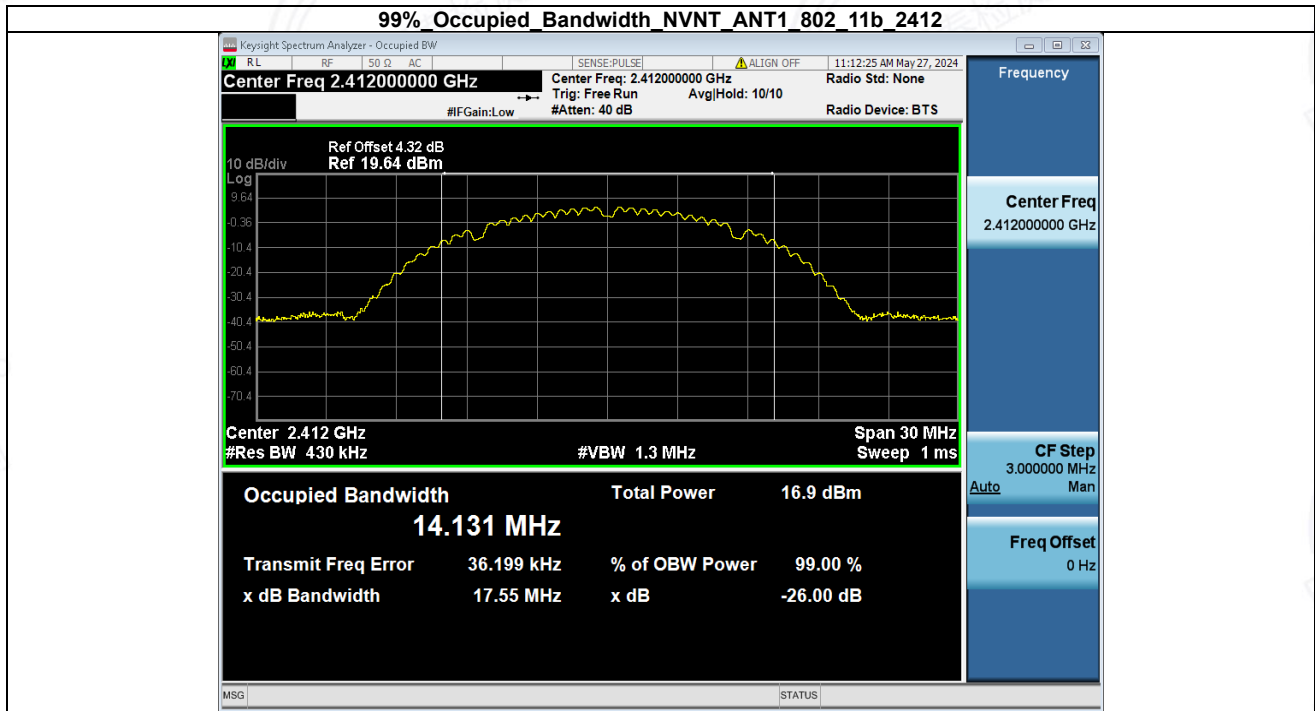
-6dB\_Bandwidth\_NVNT\_ANT1\_802\_11g\_2462



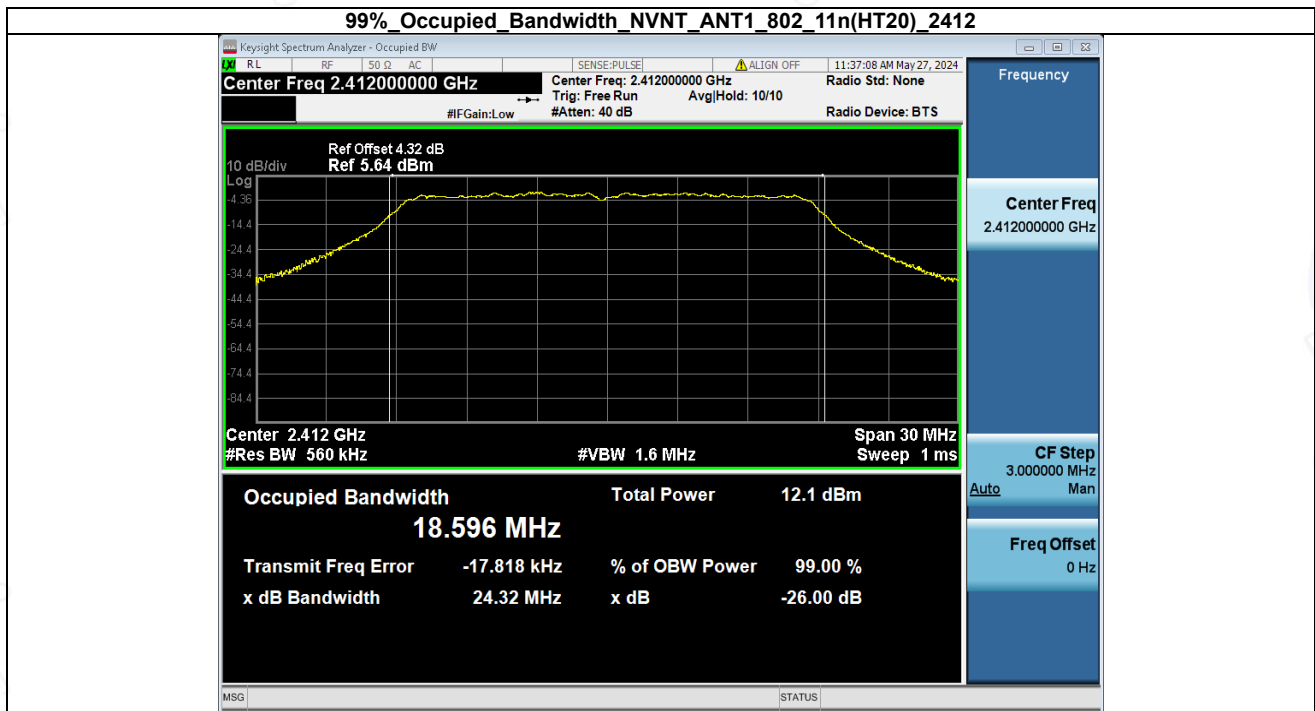
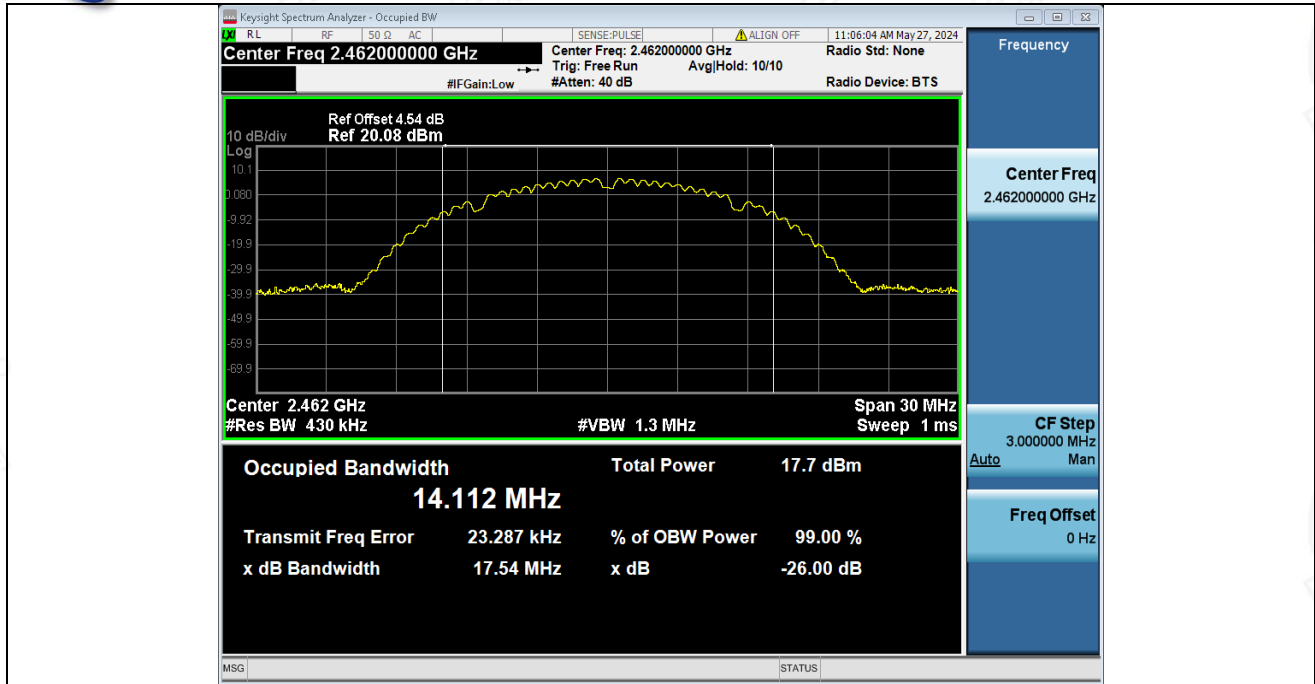


## 2. 99% Occupied Bandwidth

| Condition | Antenna | Modulation    | Frequency (MHz) | 99% BW (MHz) |
|-----------|---------|---------------|-----------------|--------------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | 14.131       |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 14.128       |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 14.112       |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | 18.596       |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | 18.599       |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | 18.590       |
| NVNT      | ANT1    | 802.11g       | 2412.00         | 17.773       |
| NVNT      | ANT1    | 802.11g       | 2437.00         | 17.776       |
| NVNT      | ANT1    | 802.11g       | 2462.00         | 17.757       |

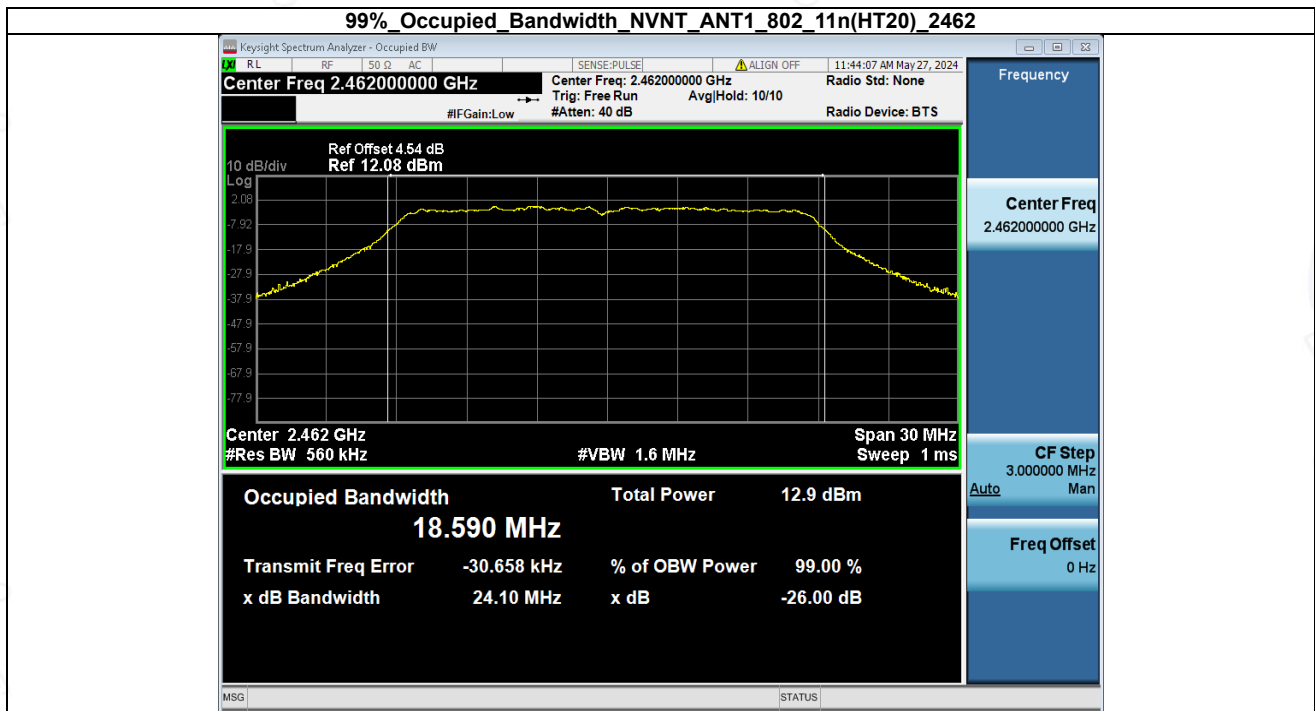
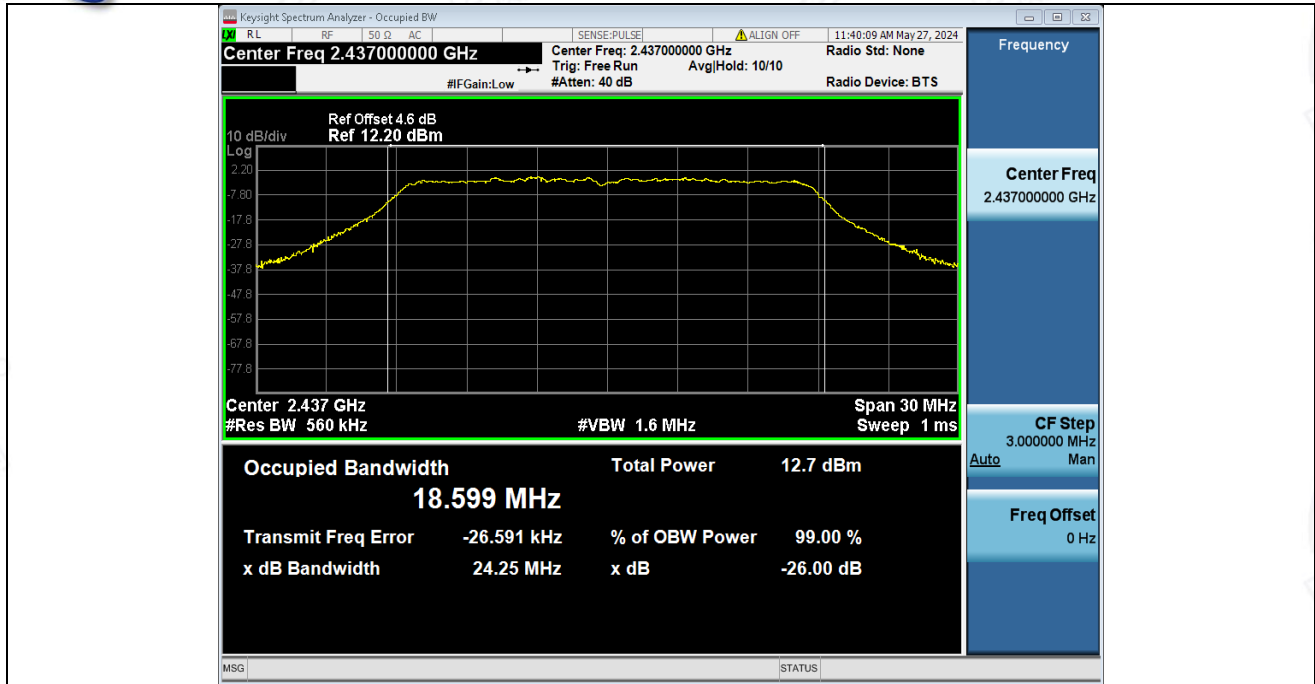






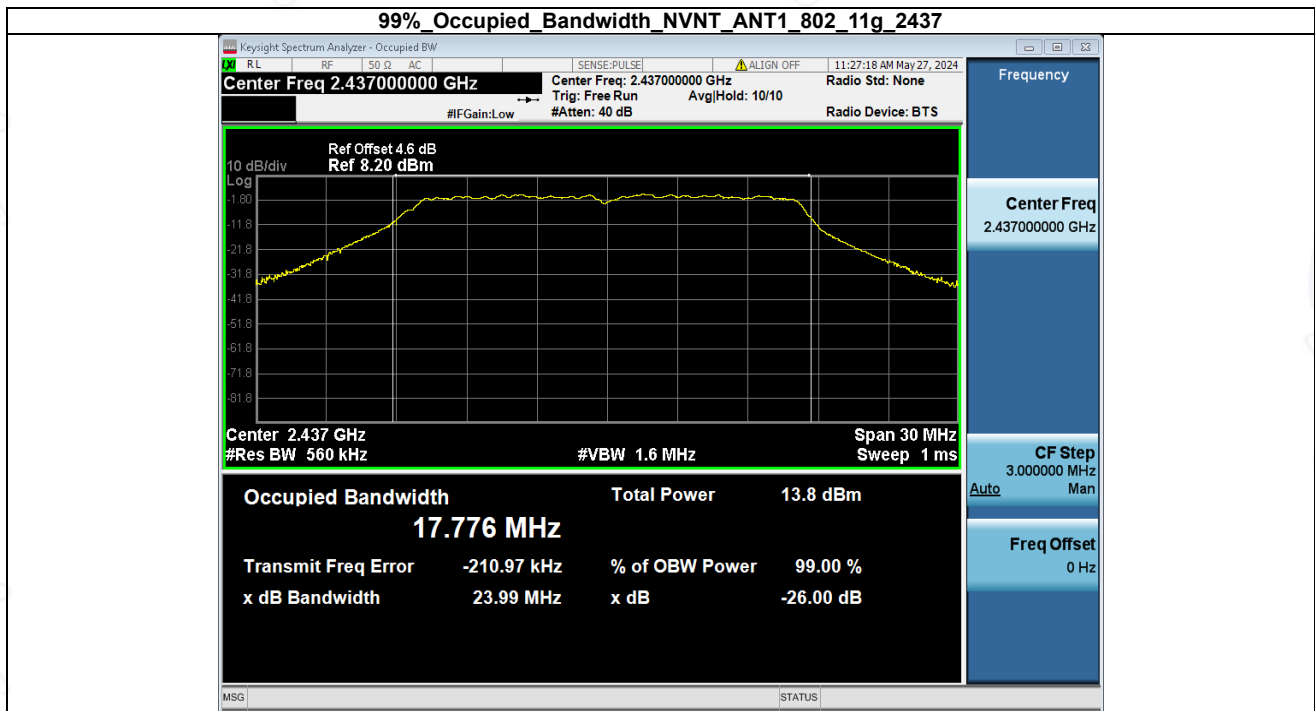
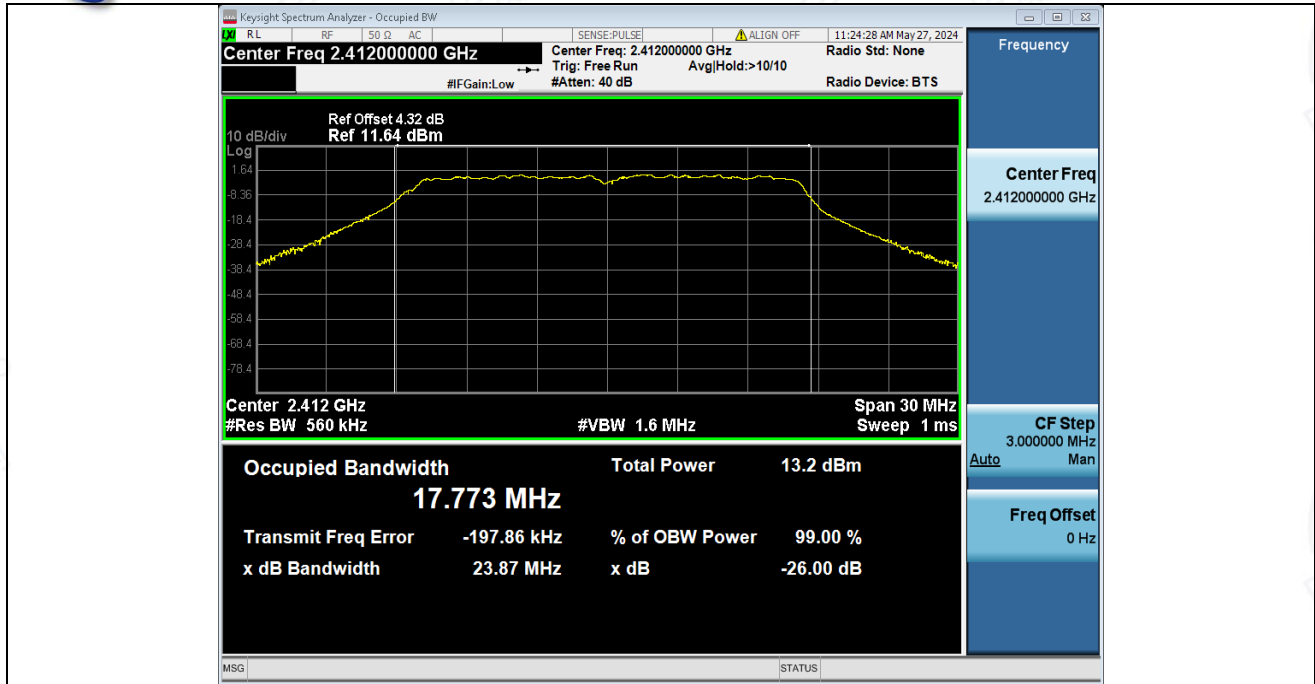
99%\_Occupied\_Bandwidth\_NVNT\_ANT1\_802\_11n(HT20)\_2437





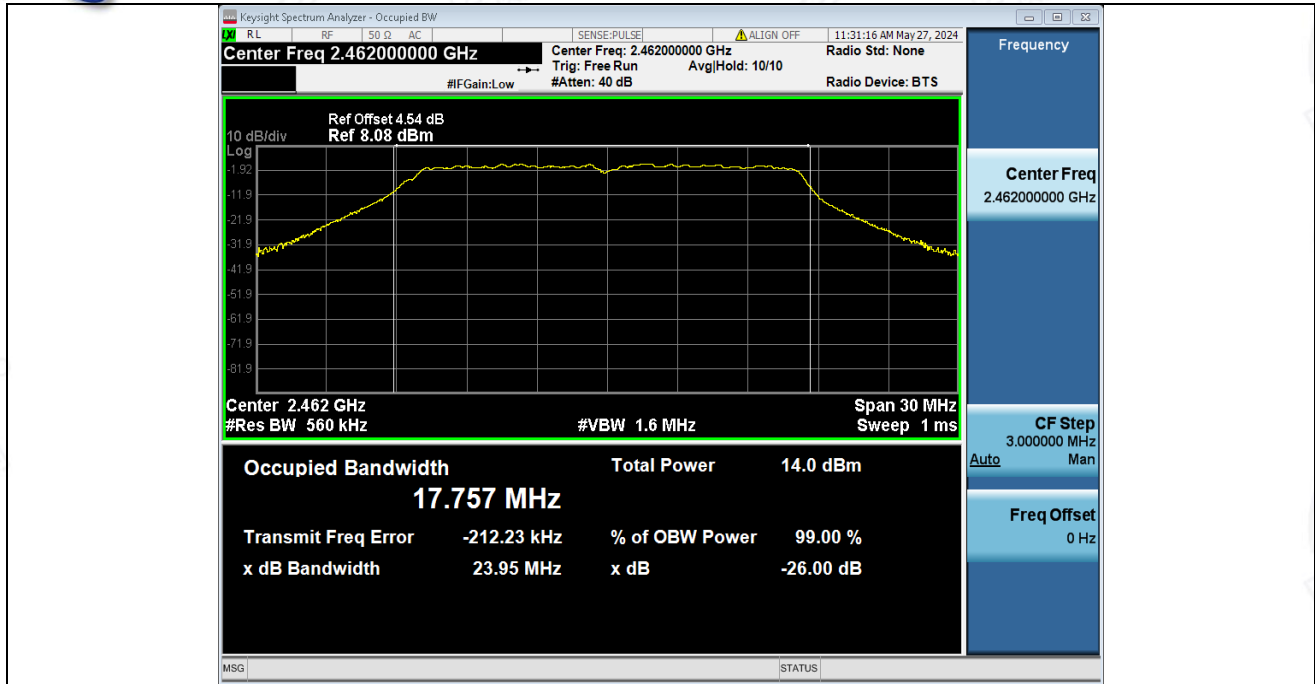
99%\_Occupied\_Bandwidth\_NVNT\_ANT1\_802\_11g\_2412





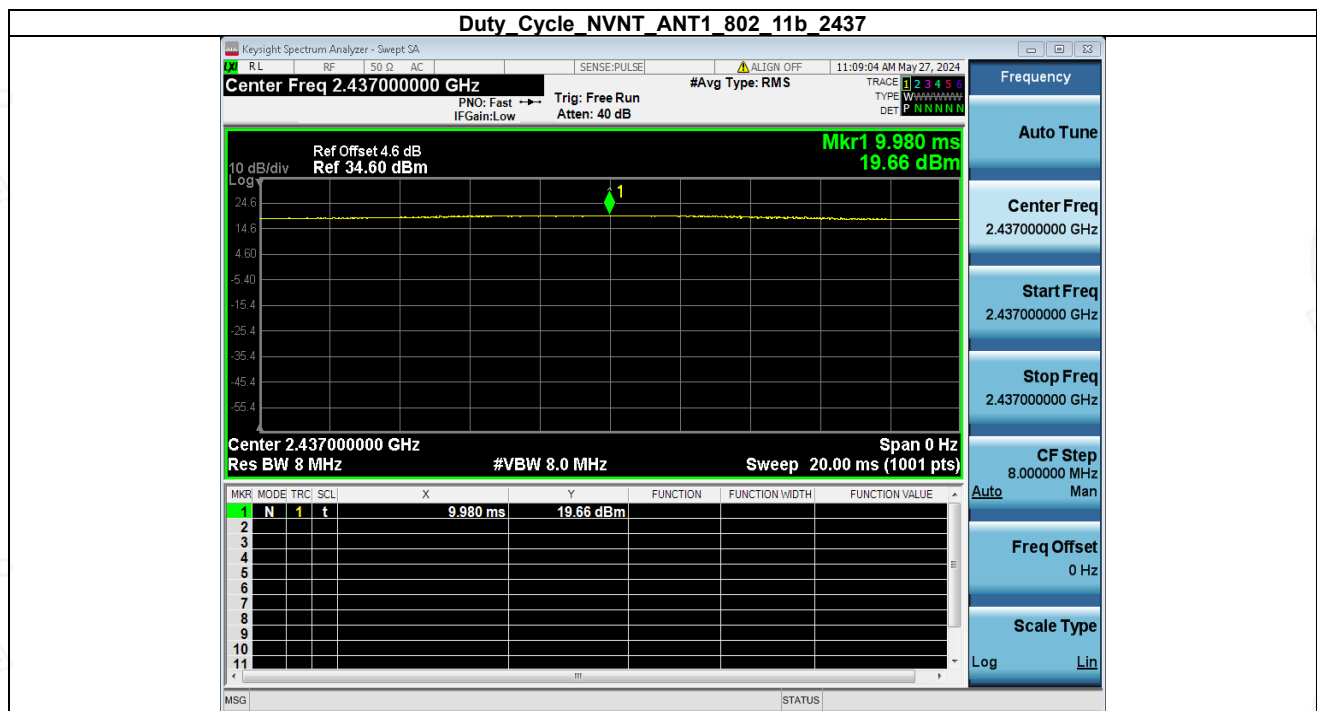
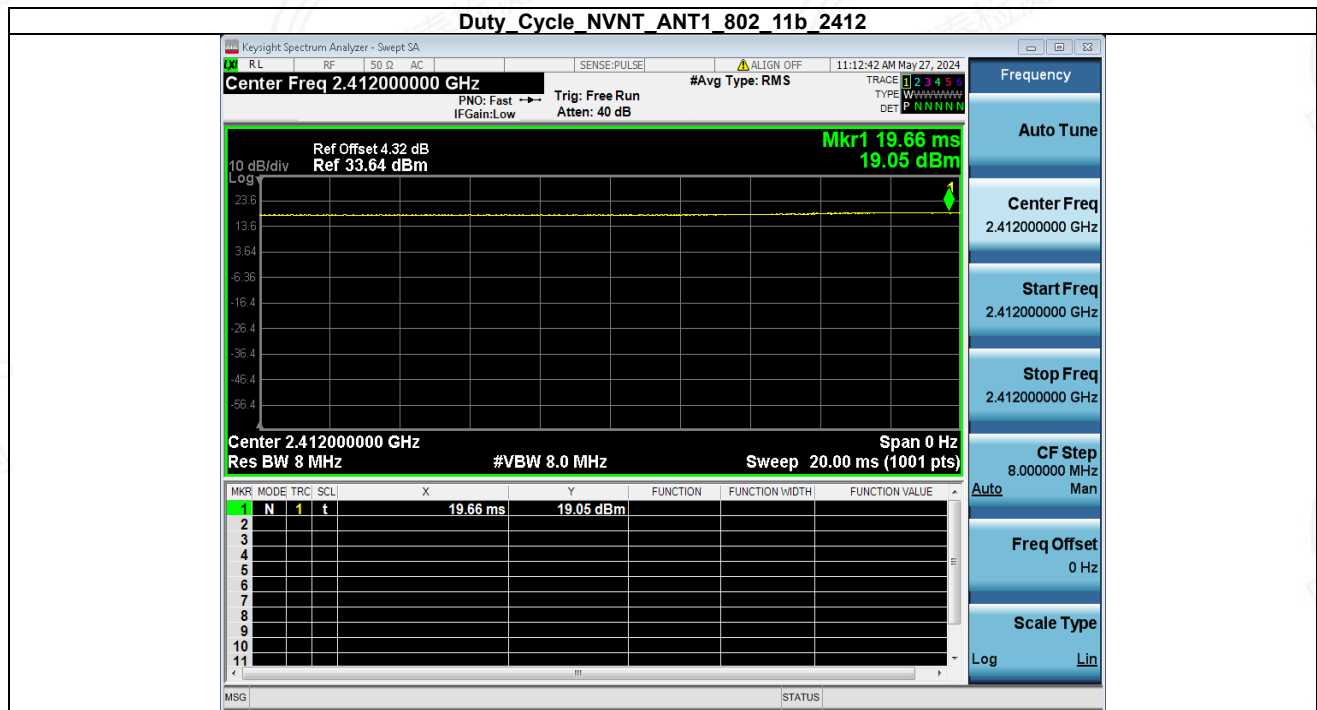
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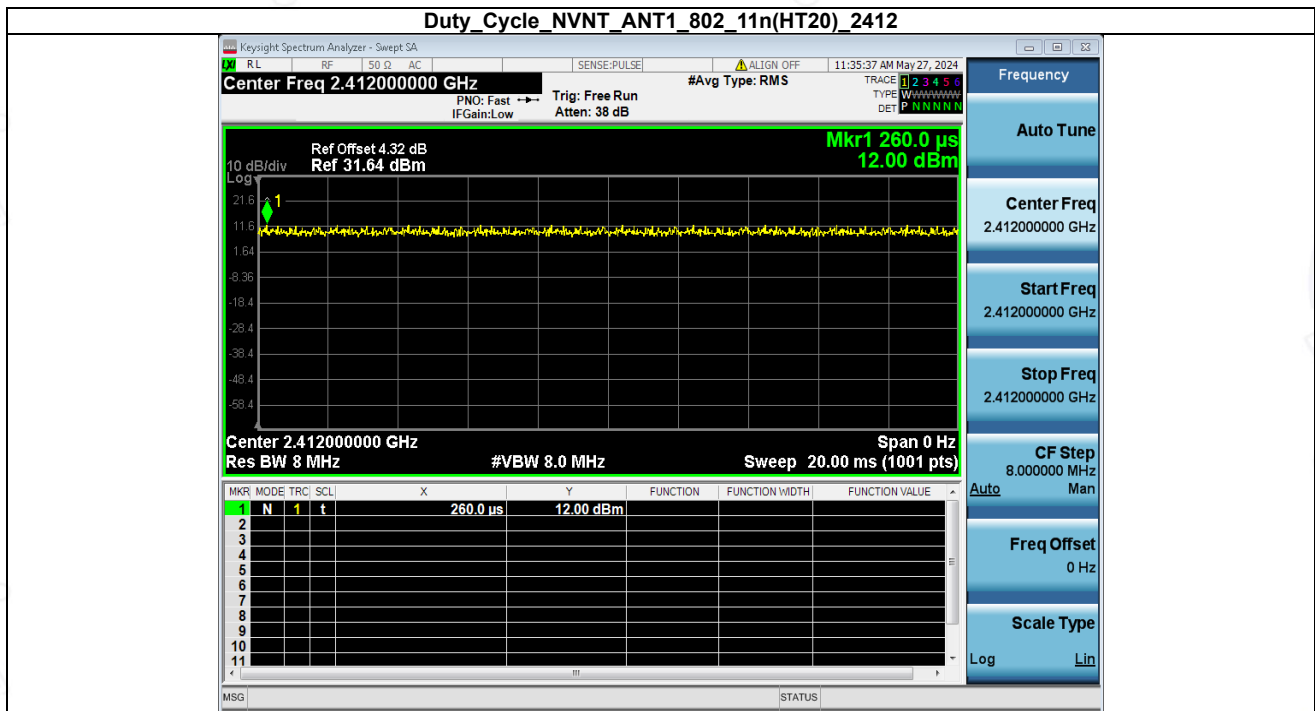
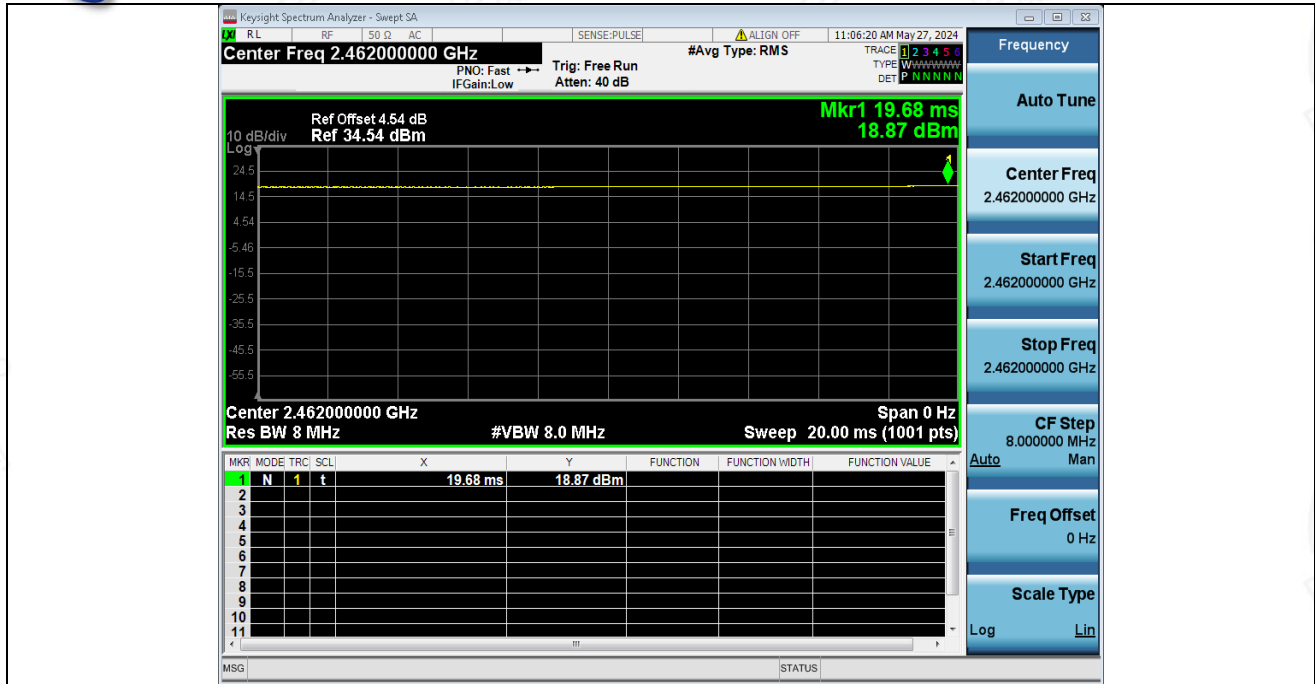


### 3. Duty Cycle

| 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    | 802.11n(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            |
| 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            |

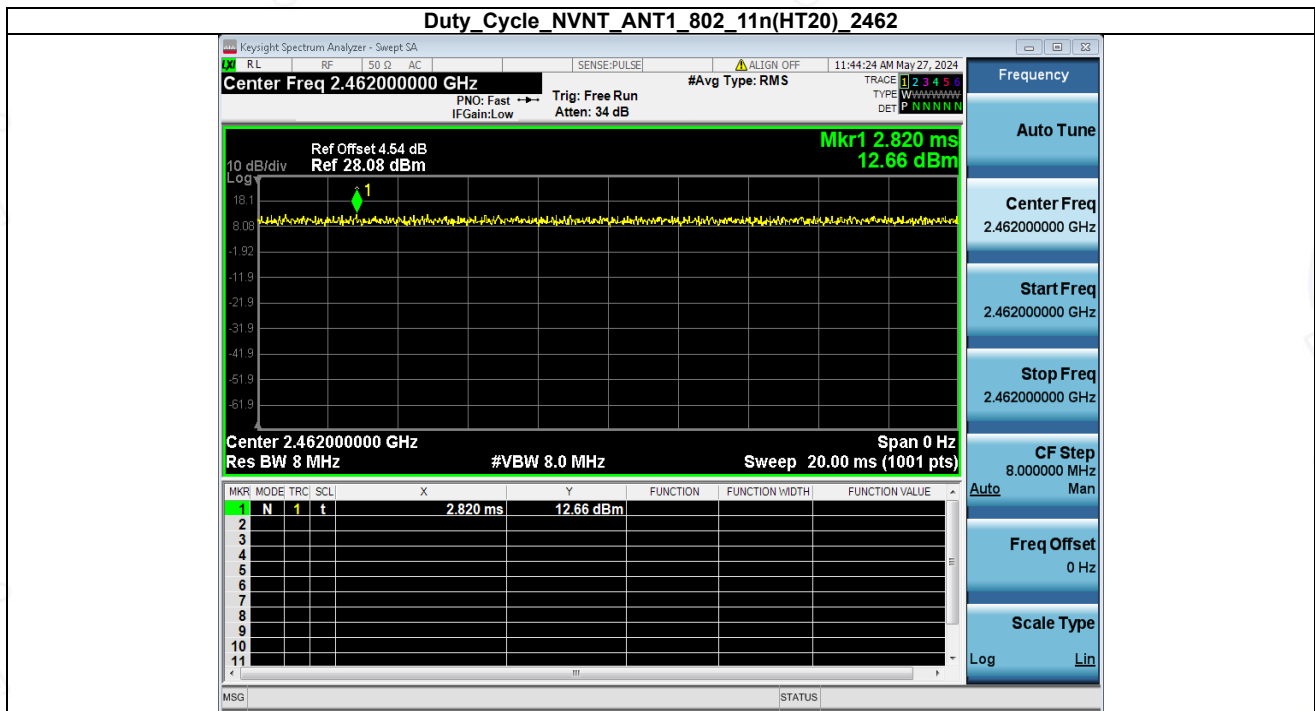
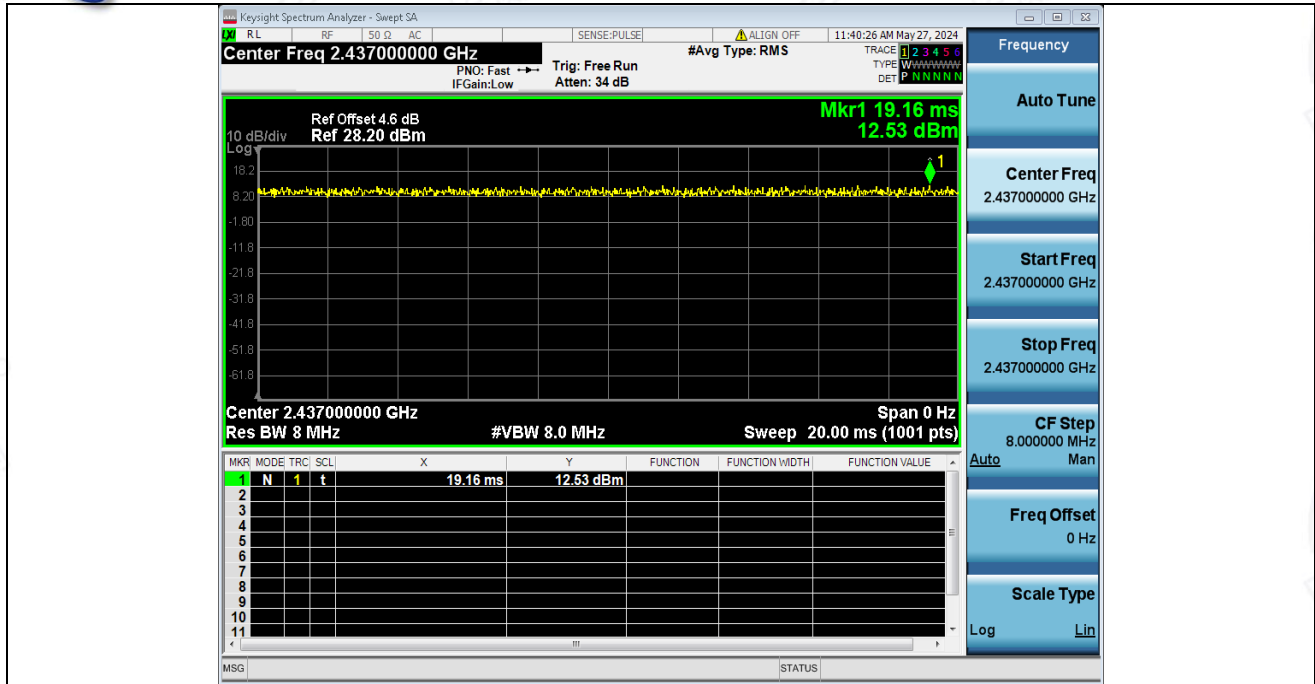






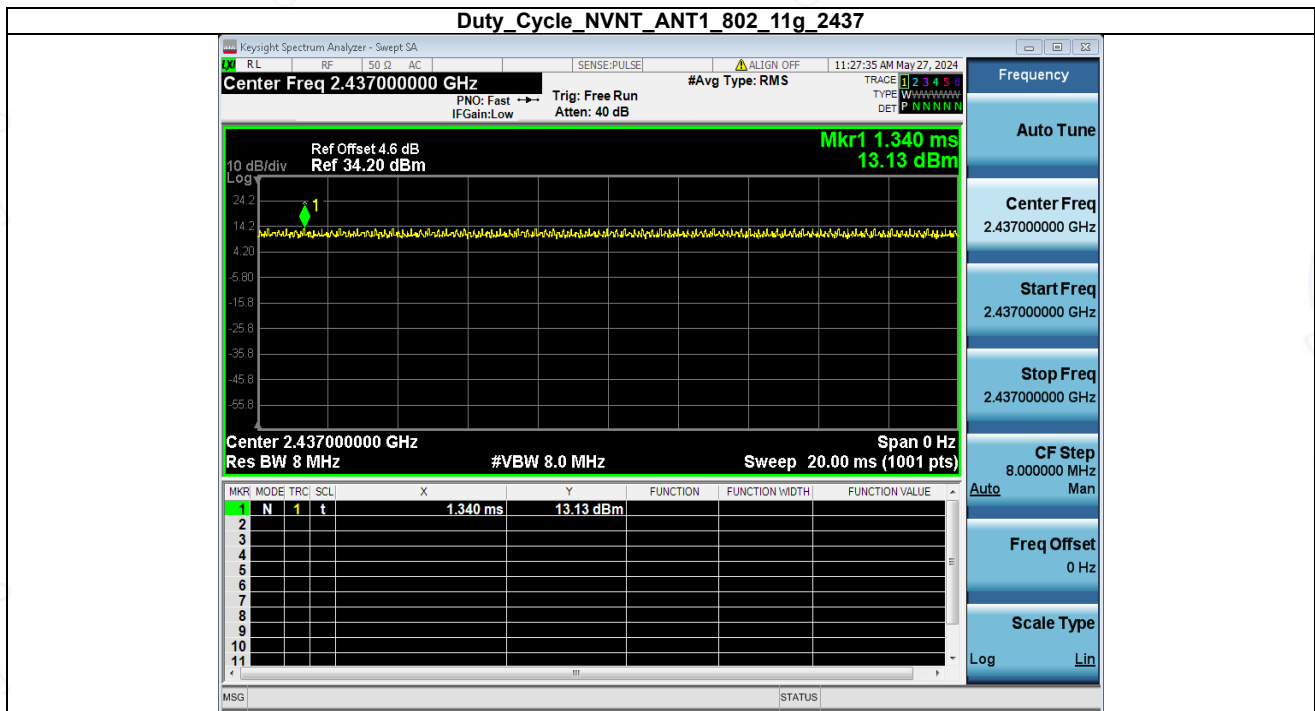
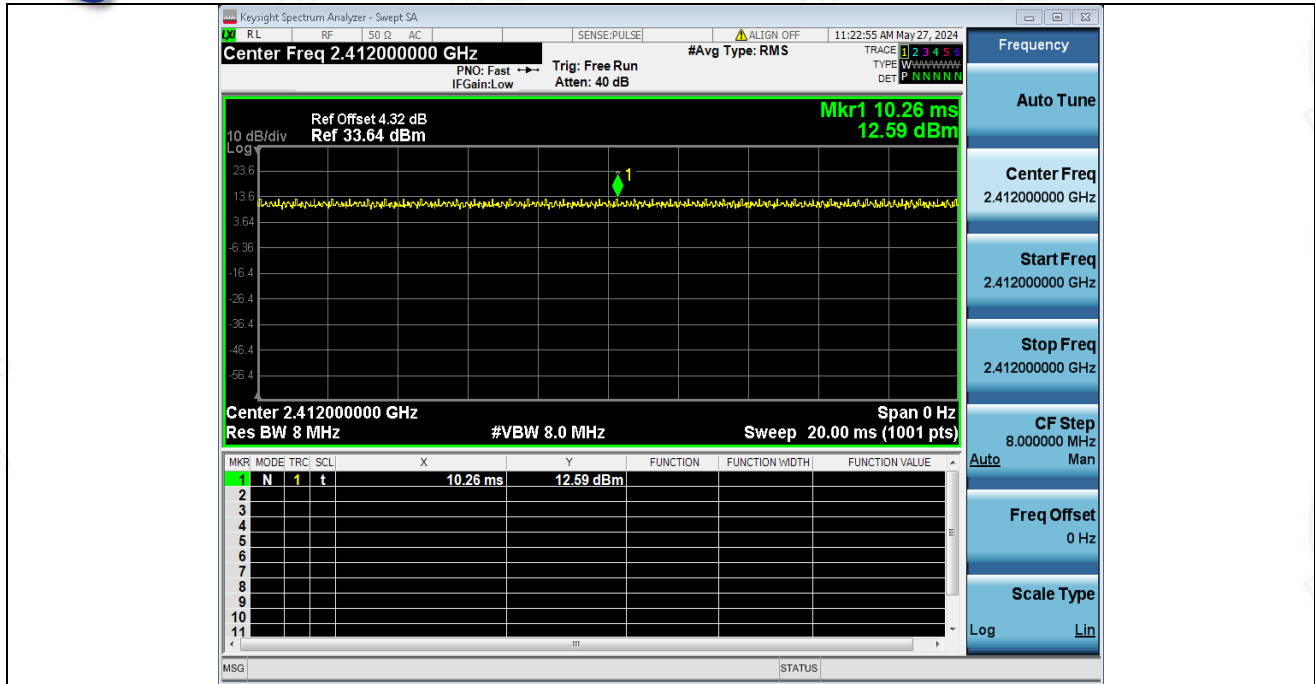
Duty Cycle NVNT\_ANT1\_802\_11n(HT20)\_2437





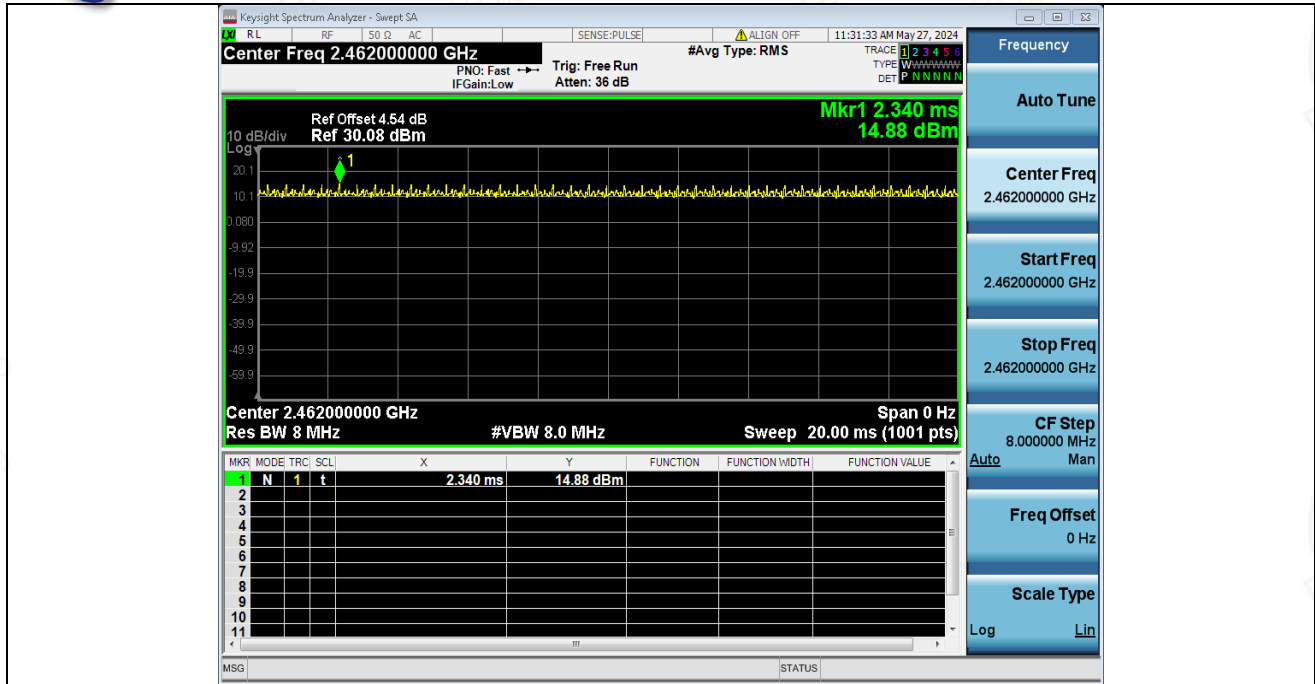
Duty Cycle NVNT\_ANT1\_802\_11g\_2412





Duty Cycle NVNT\_ANT1\_802\_11g\_2462





#### 4. MAX. Output Power

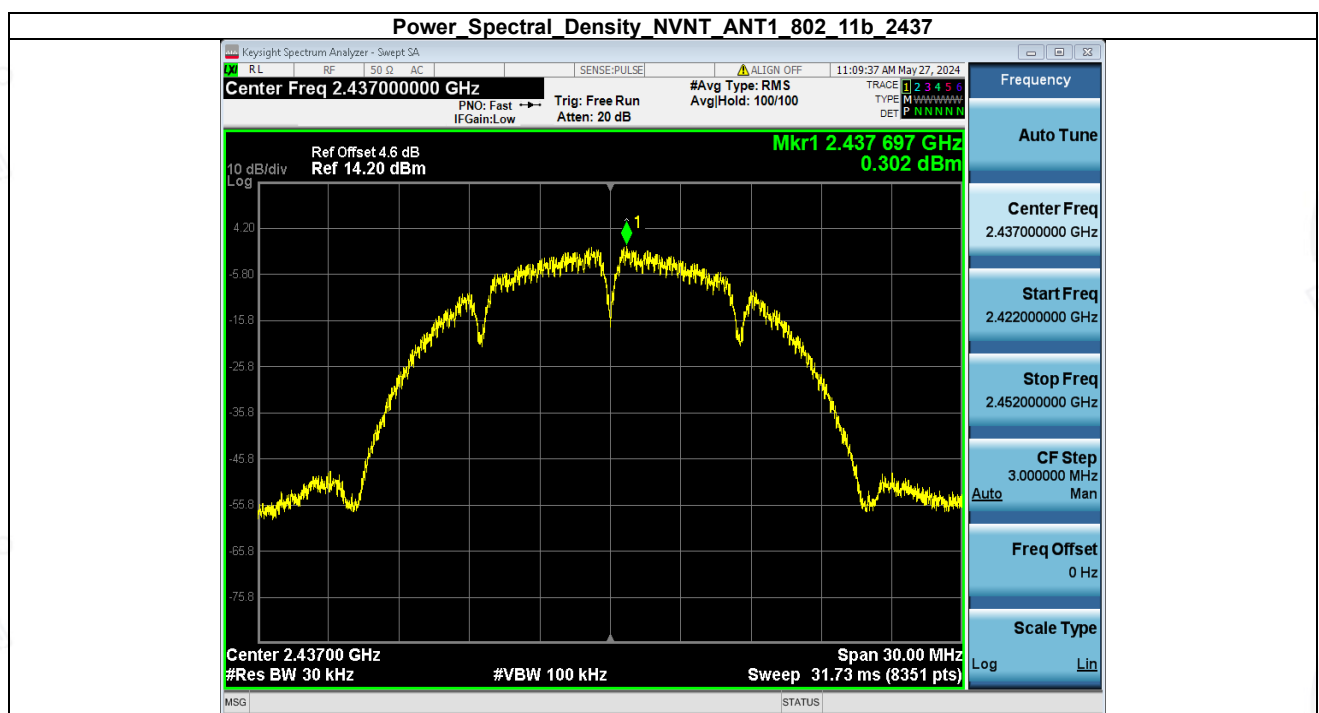
| Condition | Antenna | Modulation    | Frequency (MHz) | Detector | Conducted Power(dBm) | limit(dBm) | Result |
|-----------|---------|---------------|-----------------|----------|----------------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | Peak     | 16.98                | 30         | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00         | Peak     | 17.56                | 30         | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00         | Peak     | 17.84                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | Peak     | 13.05                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | Peak     | 13.61                | 30         | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | Peak     | 13.85                | 30         | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00         | Peak     | 14.16                | 30         | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00         | Peak     | 14.76                | 30         | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00         | Peak     | 15.00                | 30         | Pass   |

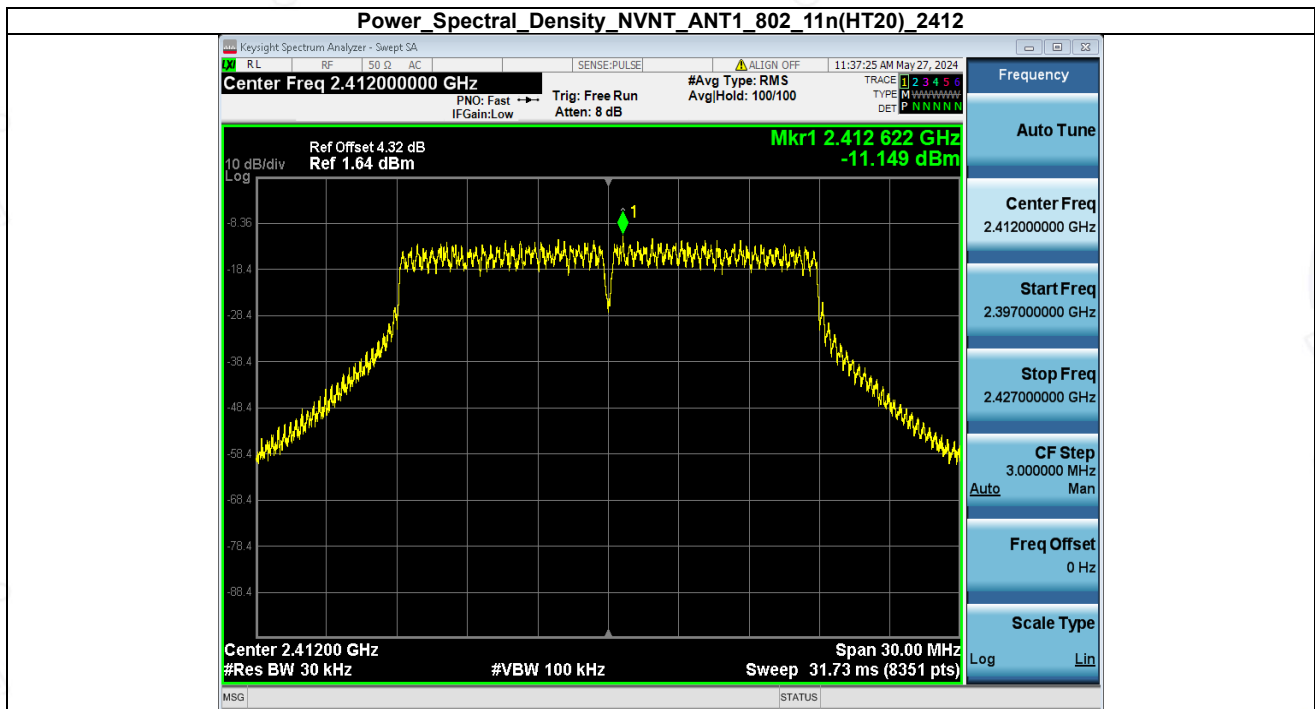




## 5. Power Spectral Density

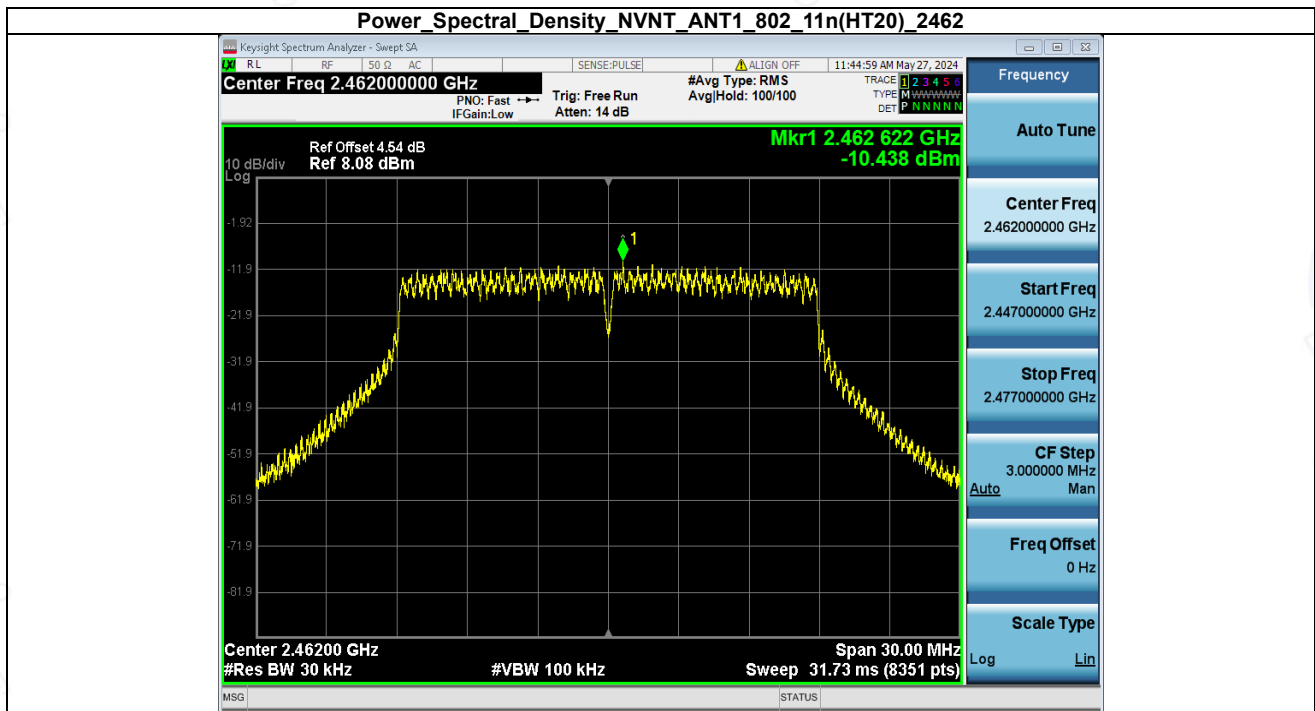
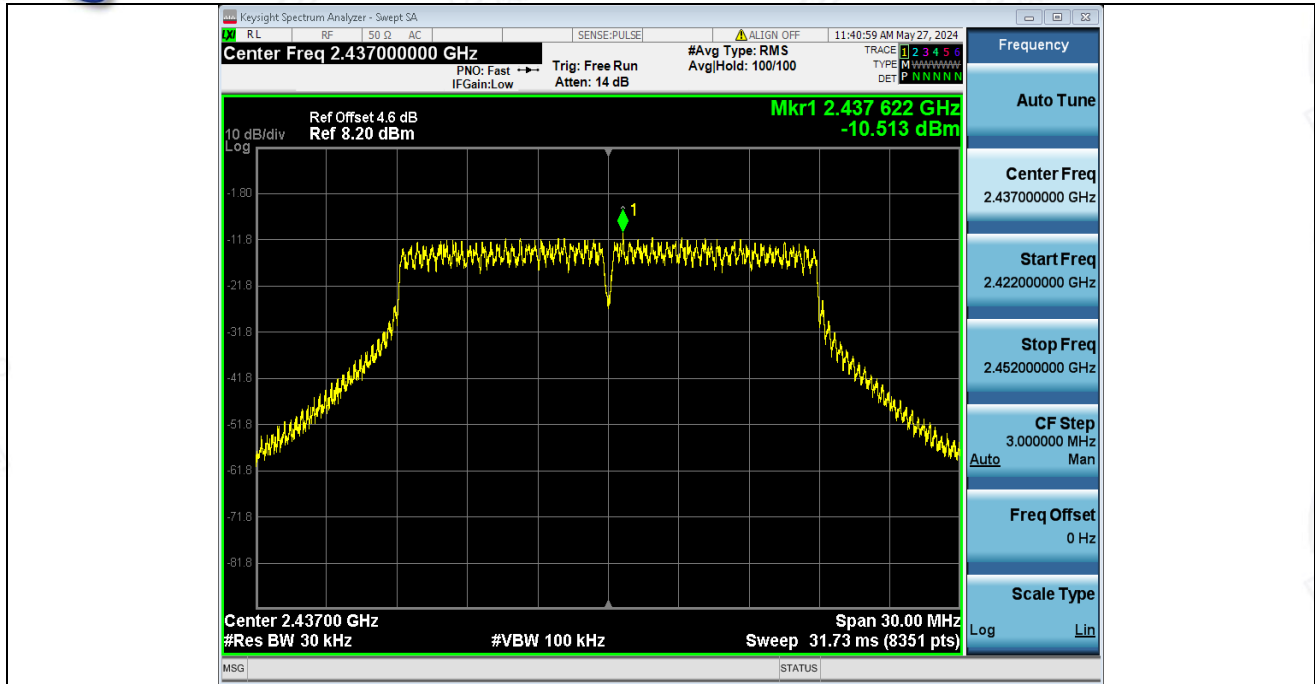
| Condition | Antenna | Modulation    | Frequency (MHz) | PSD(dBm/30kHz) | RB factor(dB) | PSD(dBm/3kHz) | limit(dBm/3kHz) | Result |
|-----------|---------|---------------|-----------------|----------------|---------------|---------------|-----------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00         | -0.25          | -10.00        | -10.25        | 8               | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00         | 0.30           | -10.00        | -9.70         | 8               | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00         | 0.43           | -10.00        | -9.57         | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00         | -11.15         | -10.00        | -21.15        | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00         | -10.51         | -10.00        | -20.51        | 8               | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00         | -10.44         | -10.00        | -20.44        | 8               | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00         | -10.55         | -10.00        | -20.55        | 8               | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00         | -9.98          | -10.00        | -19.98        | 8               | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00         | -9.80          | -10.00        | -19.80        | 8               | Pass   |





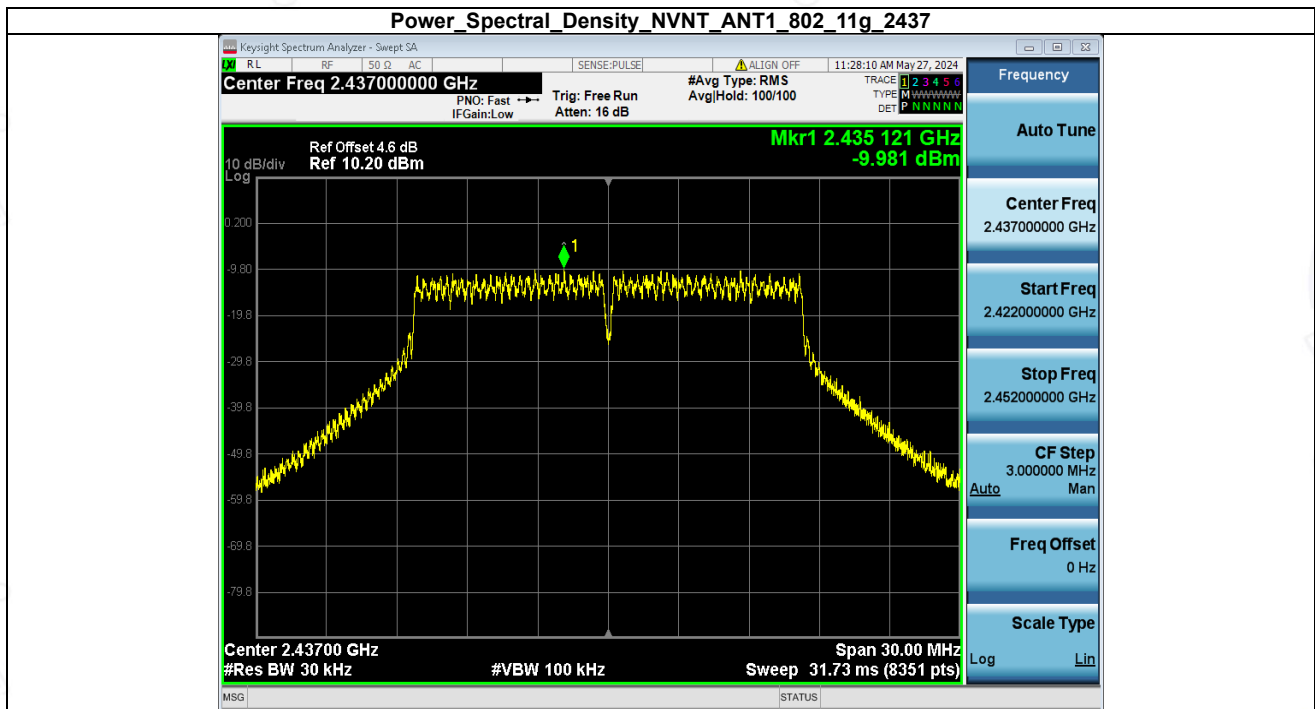
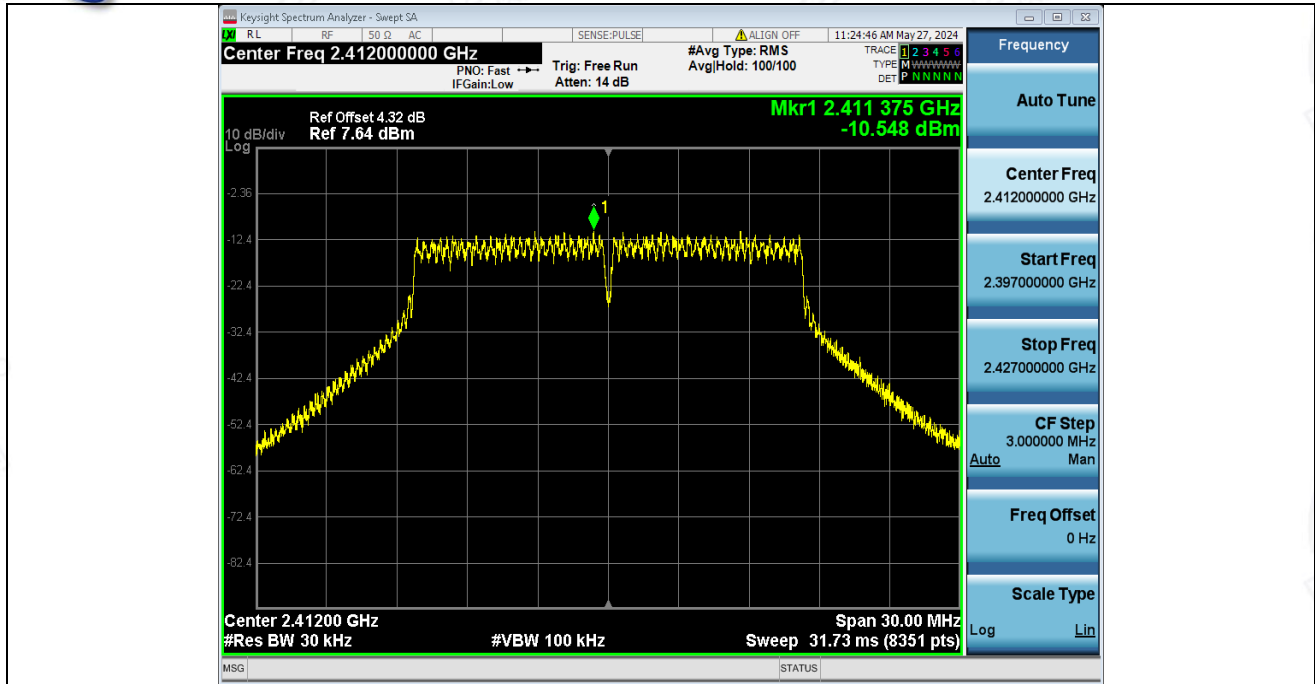
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11n(HT20)\_2437





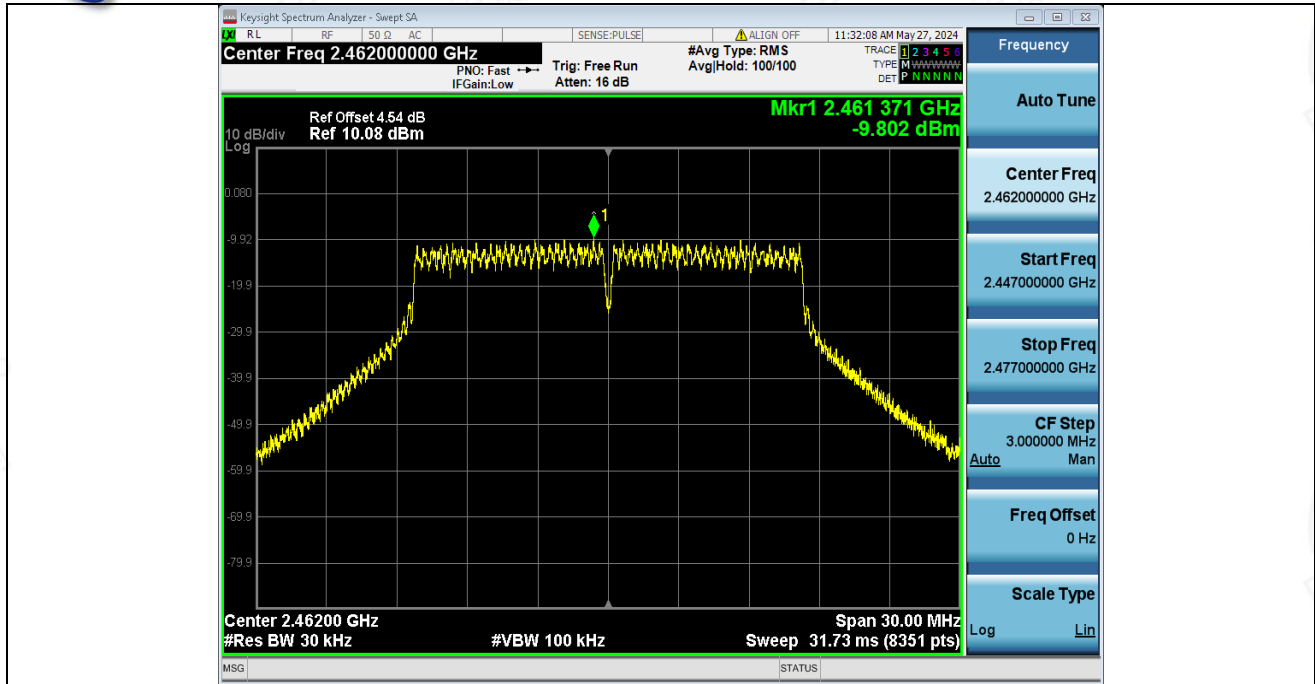
Power\_Spectral\_Density\_NVNT\_ANT1\_802\_11g\_2412





Power Spectral Density NVNT\_ANT1\_802\_11g\_2462

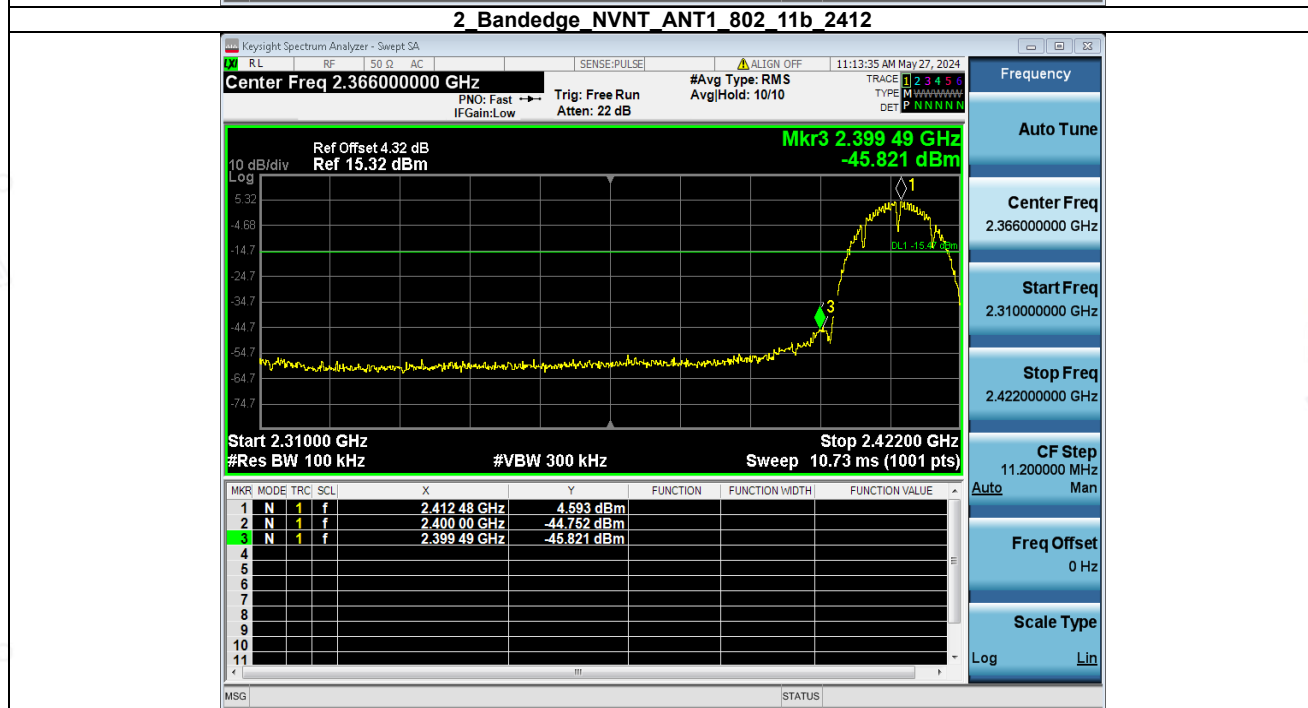
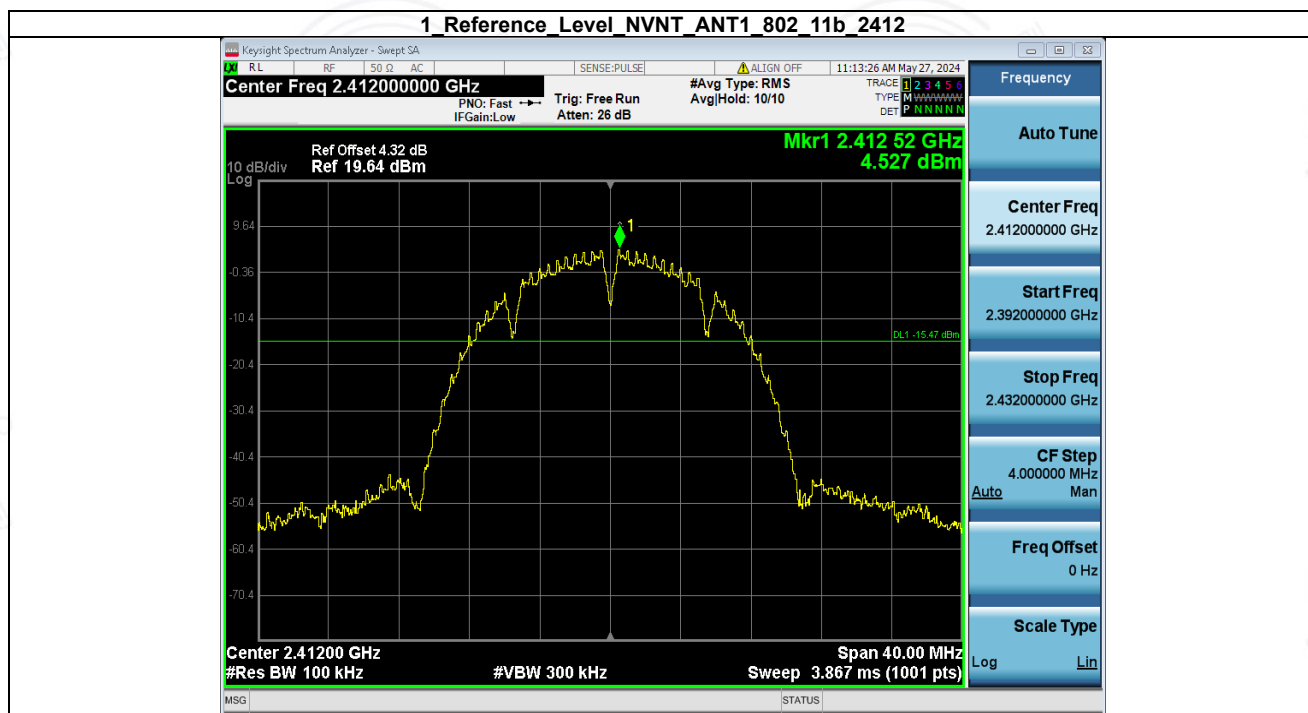






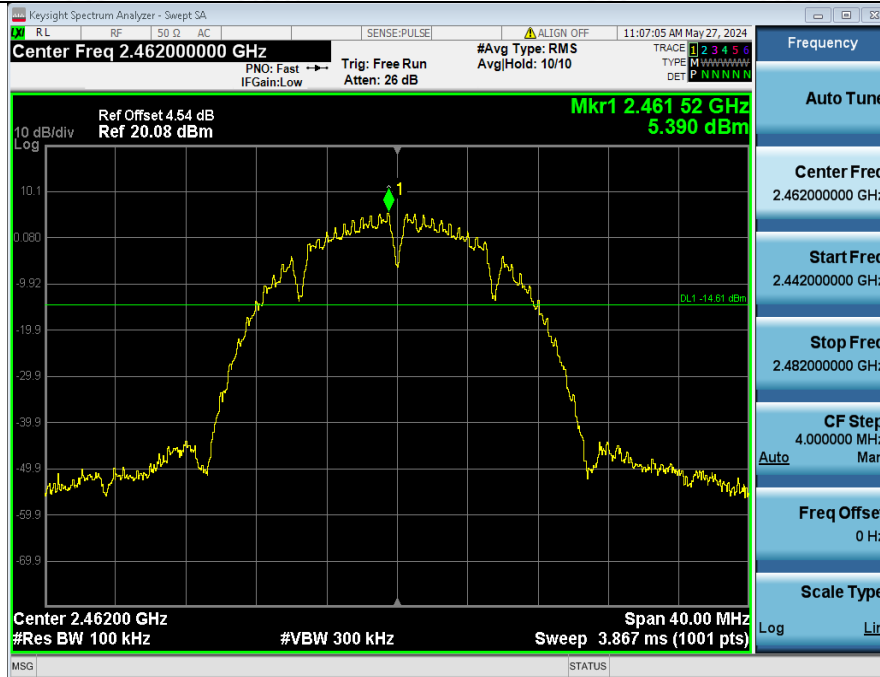
## 6. Bandedge

| Condition | Antenna | Modulation    | TX_Frequency (MHz) | Max. Mark frequency(MHz) | Spurious level(dBm) | limit(dBm) | Result |
|-----------|---------|---------------|--------------------|--------------------------|---------------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00            | 2399.488                 | -45.821             | -15.473    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00            | 2484.832                 | -53.879             | -14.610    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00            | 2399.936                 | -40.911             | -29.030    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00            | 2483.584                 | -62.606             | -27.755    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00            | 2399.824                 | -39.042             | -27.614    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00            | 2485.360                 | -61.324             | -26.829    | Pass   |

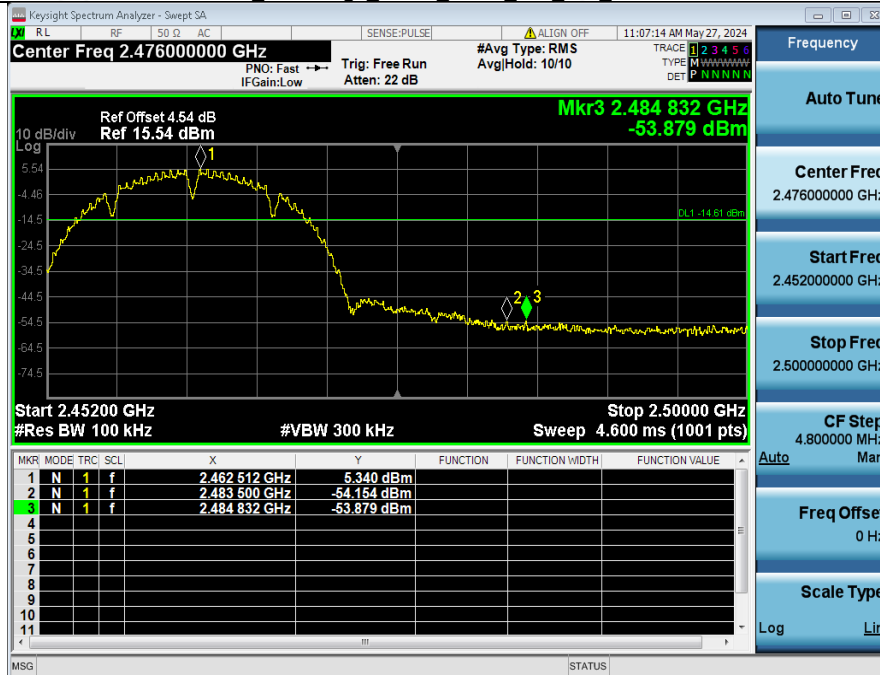


### 1 Reference\_Level\_NVNT\_ANT1\_802\_11b\_2462



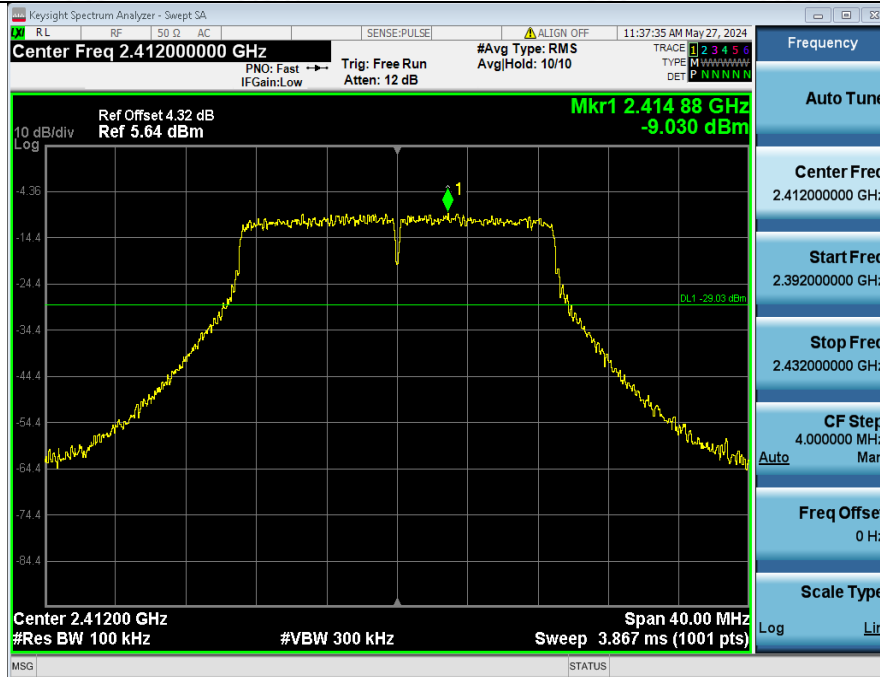


## 2\_Bandedge\_NVNT\_ANT1\_802\_11b\_2462

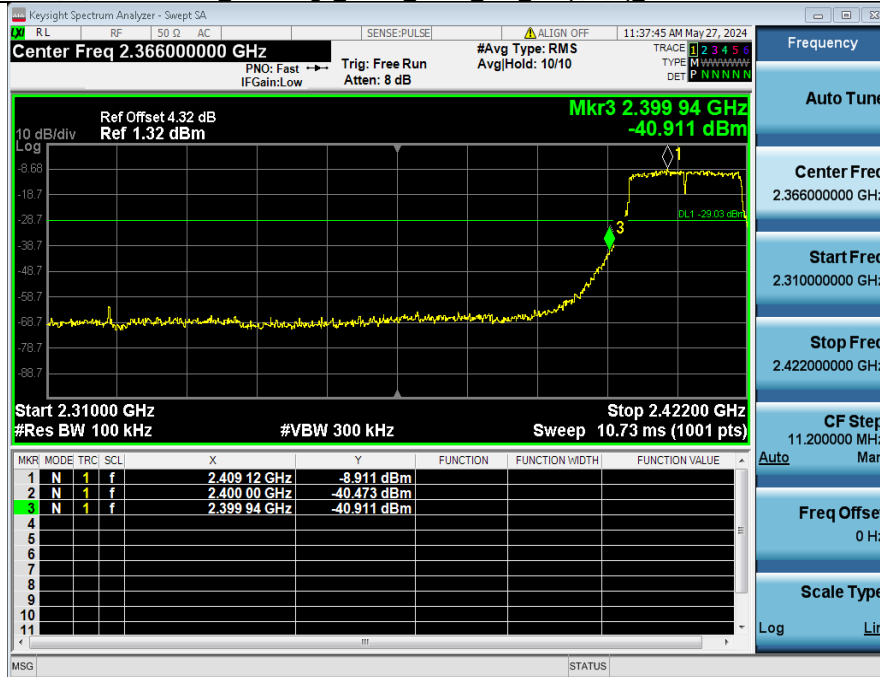


## 1\_Reference\_Level\_NVNT\_ANT1\_802\_11n(HT20)\_2412



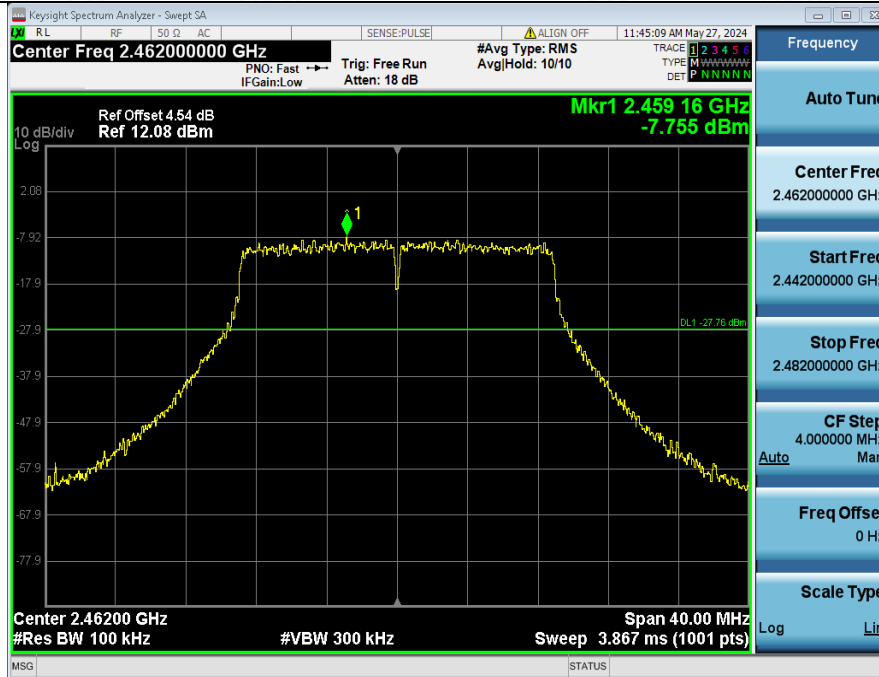


## 2\_Bandedge\_NVNT\_ANT1\_802\_11n(HT20)\_2412

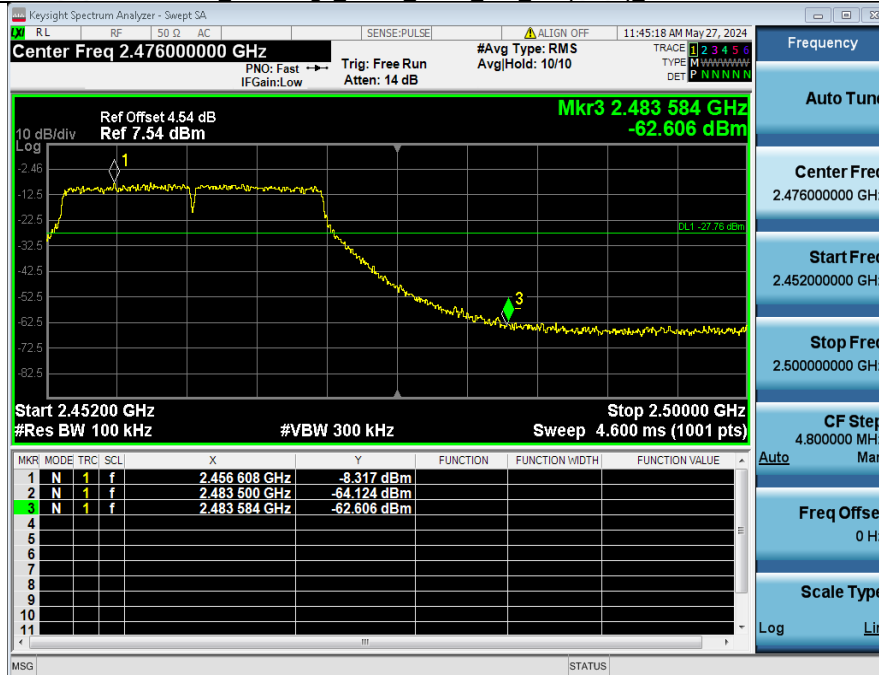


## 1\_Reference\_Level\_NVNT\_ANT1\_802\_11n(HT20)\_2462



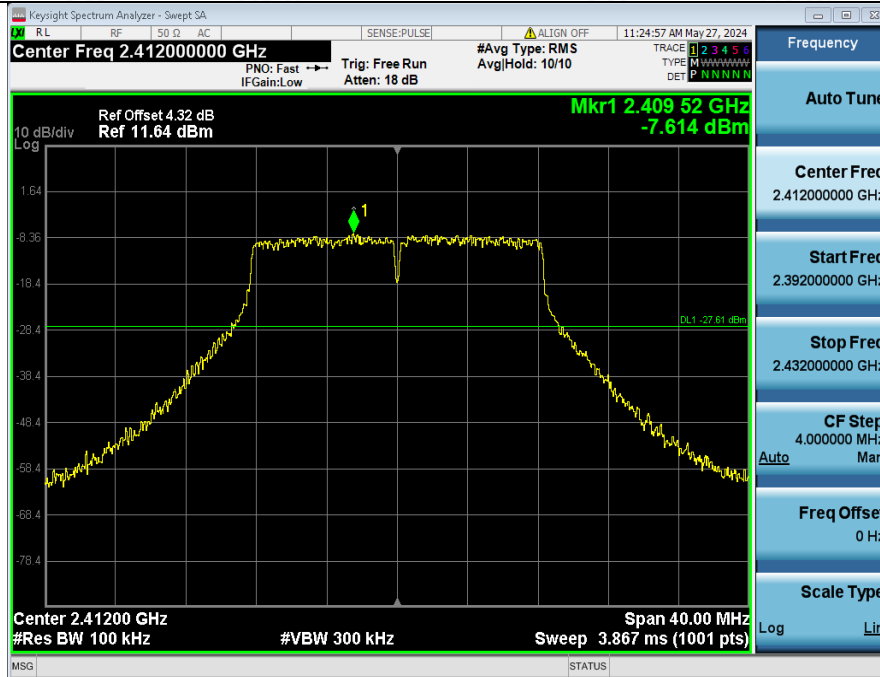


## 2\_Bandedge\_NVNT\_ANT1\_802\_11n(HT20)\_2462

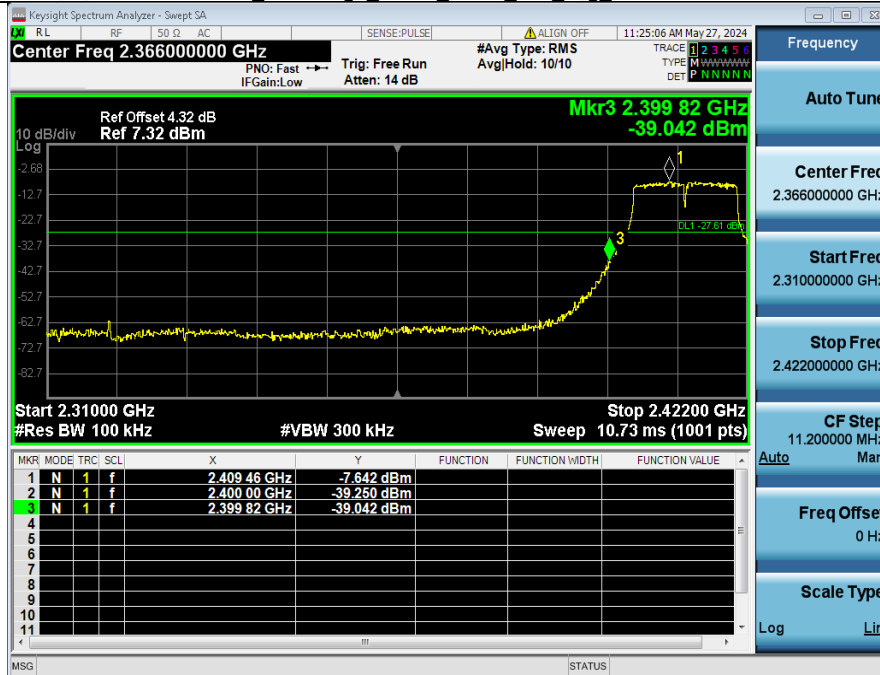


## 1\_Reference\_Level\_NVNT\_ANT1\_802\_11g\_2412





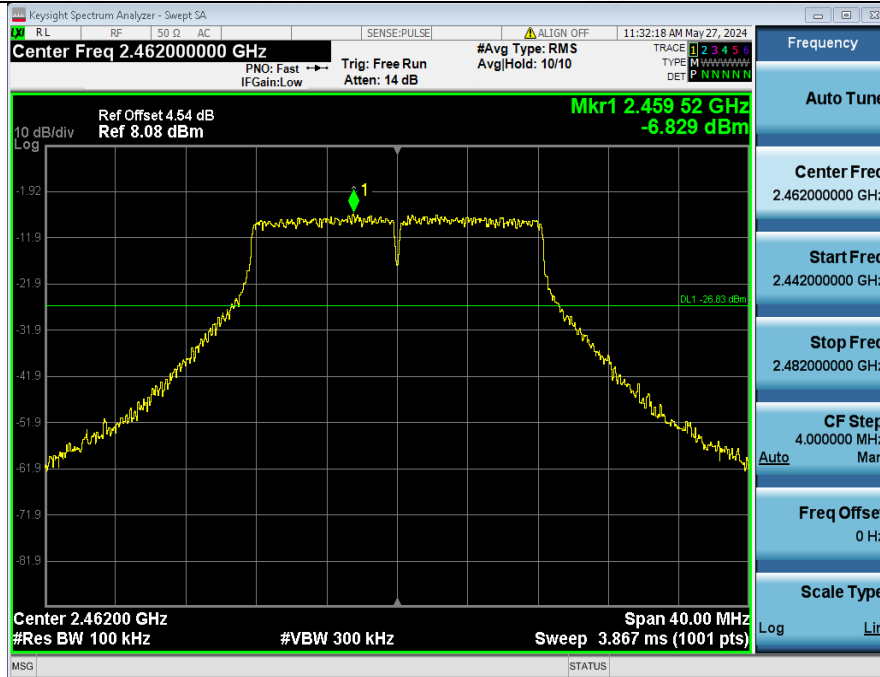
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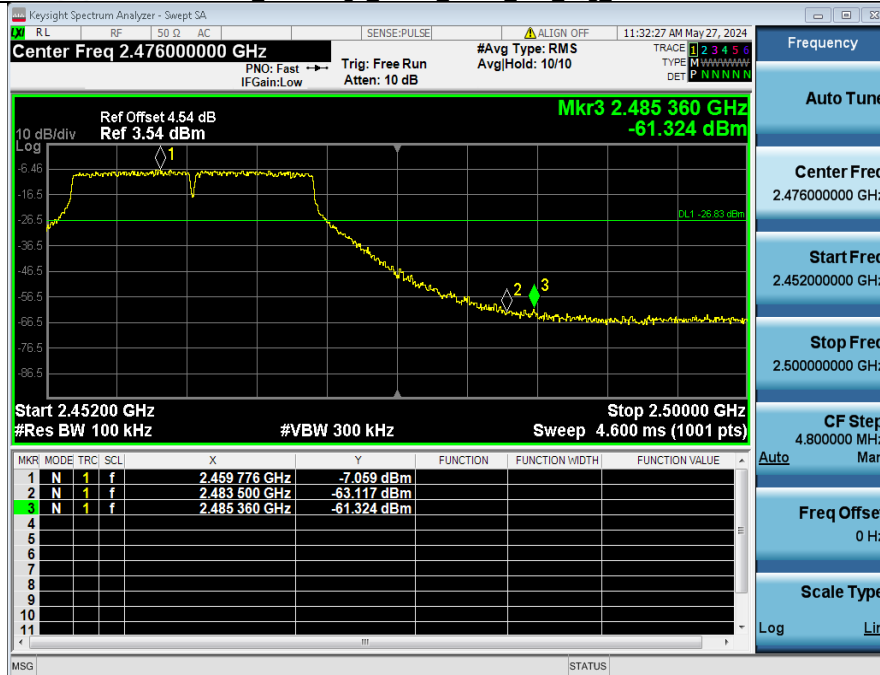
## 1\_Reference\_Level\_NVNT\_ANT1\_802\_11g\_2462







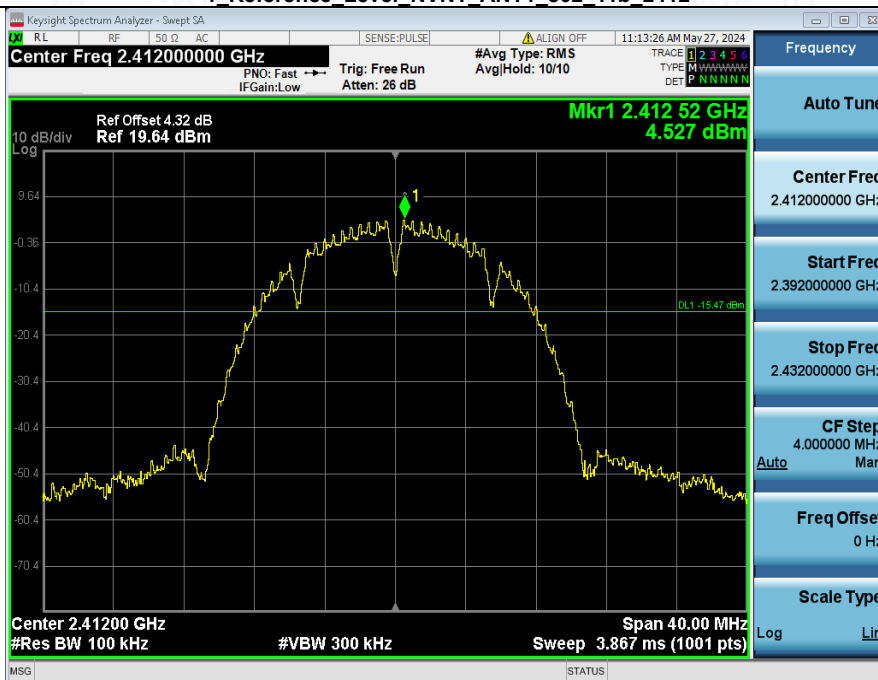
## 2\_Bandedge\_NVNT\_ANT1\_802\_11g\_2462



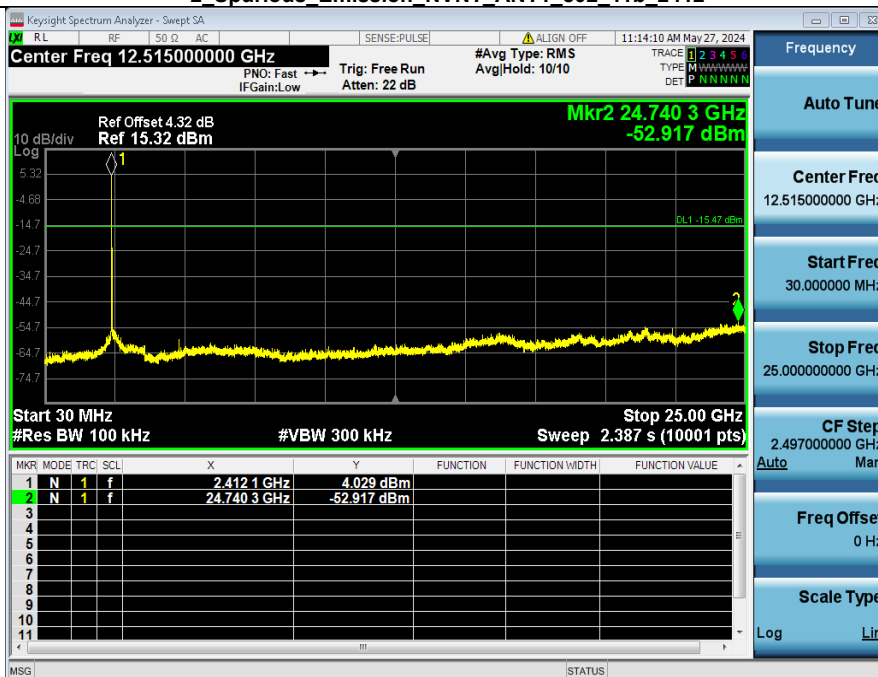
## 7. Spurious Emission

| Condition | Antenna | Modulation    | TX_Frequency (MHz) | Max. Mark frequency(MHz) | Spurious level(dBm) | limit(dBm) | Result |
|-----------|---------|---------------|--------------------|--------------------------|---------------------|------------|--------|
| NVNT      | ANT1    | 802.11b       | 2412.00            | 24740.312                | -52.917             | -15.473    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2437.00            | 24880.144                | -52.427             | -14.917    | Pass   |
| NVNT      | ANT1    | 802.11b       | 2462.00            | 24782.761                | -52.115             | -14.610    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2412.00            | 2559.461                 | -61.605             | -29.030    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2437.00            | 2559.461                 | -60.839             | -27.799    | Pass   |
| NVNT      | ANT1    | 802.11n(HT20) | 2462.00            | 24750.300                | -60.577             | -27.755    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2412.00            | 2559.461                 | -60.673             | -27.614    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2437.00            | 2559.461                 | -61.337             | -27.021    | Pass   |
| NVNT      | ANT1    | 802.11g       | 2462.00            | 2534.491                 | -60.312             | -26.829    | 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

ShenZhen BANTEK Testing Co.,Ltd.

Add : A5&A6, Building B1&B2, No.45 Gangtou Road, Bogang Community, Shajing Street

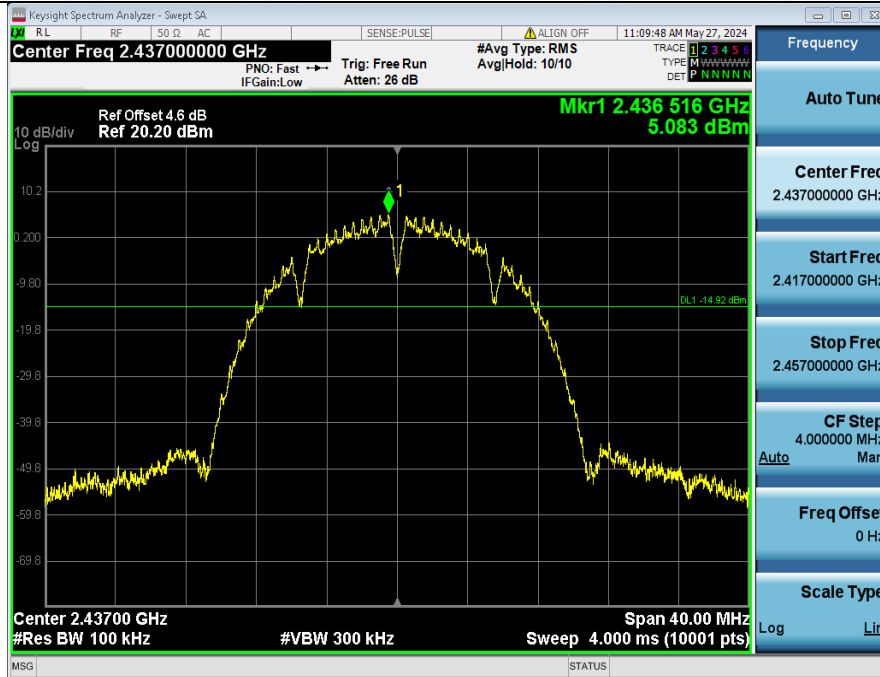
Bao'an District, Shenzhen, Guangdong, China 518104

Tel : +(86)755-2334 4200

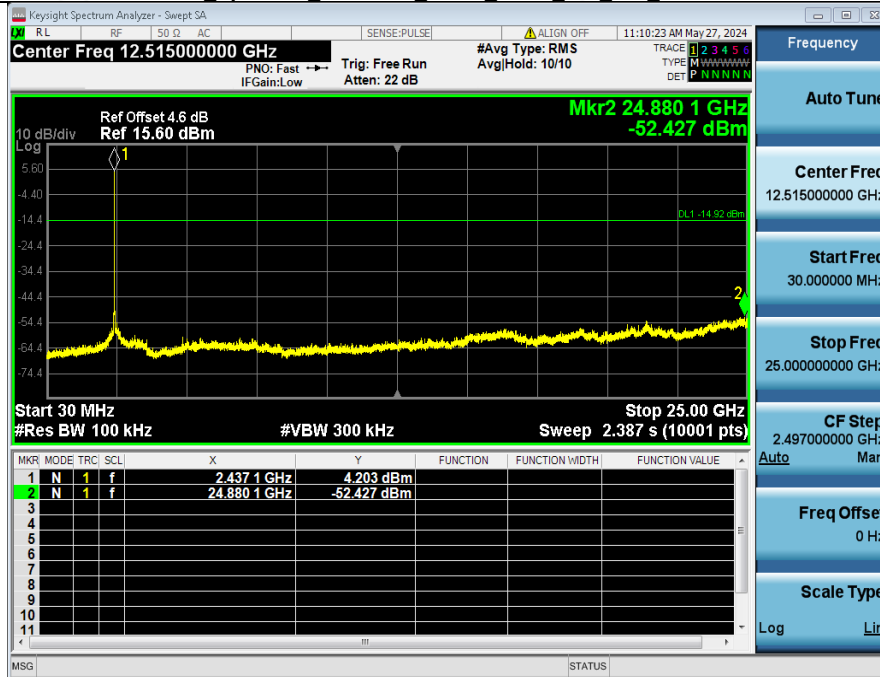
E-mail : Service@btek-lab.com

Web : www.btek-lab.com



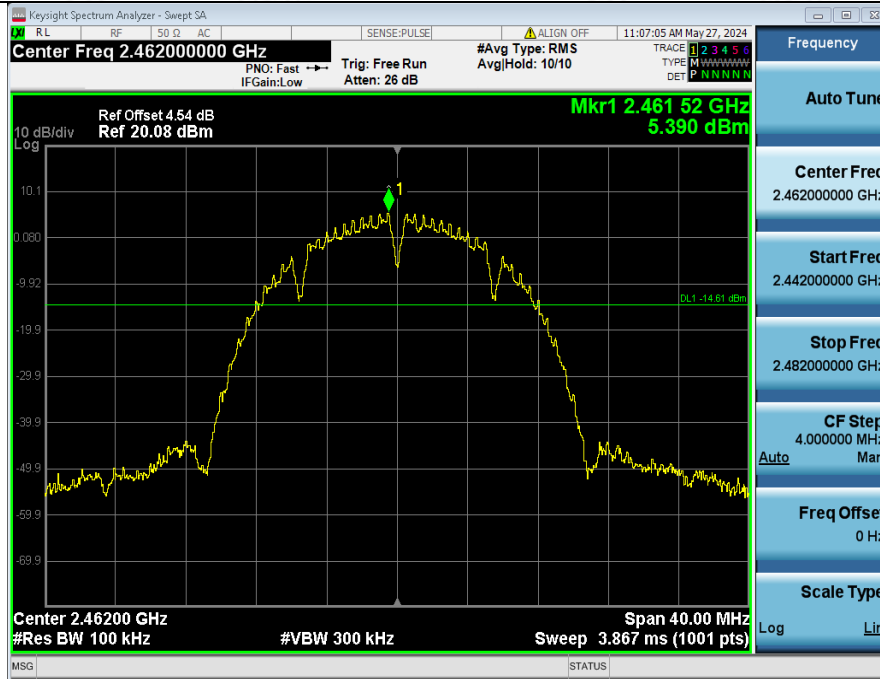


## 2 Spurious Emission NVNT\_ANT1\_802\_11b\_2437

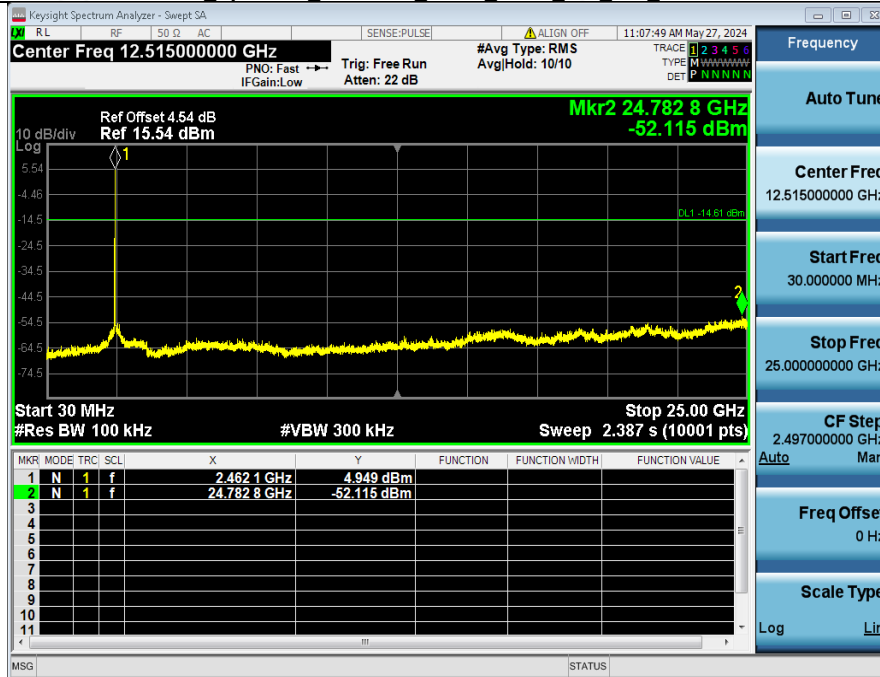


## 1 Reference Level NVNT\_ANT1\_802\_11b\_2462



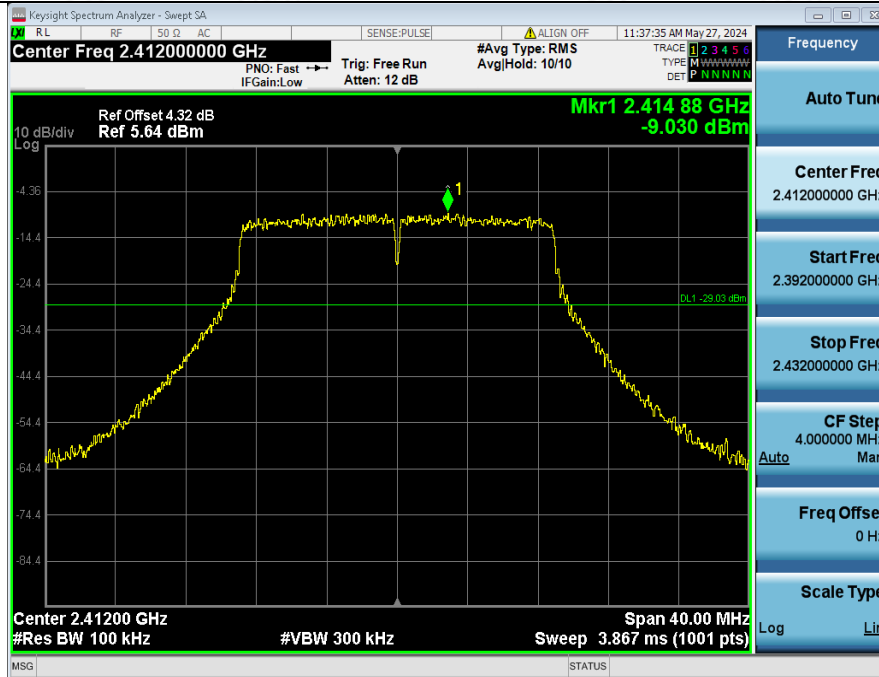


## 2 Spurious Emission NVNT\_ANT1\_802\_11b\_2462

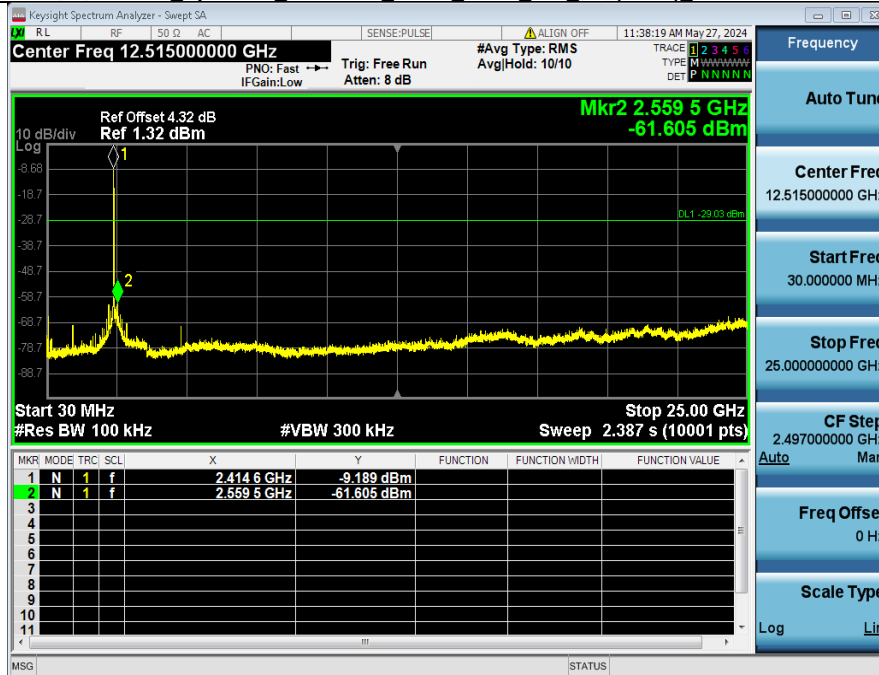


## 1 Reference Level NVNT\_ANT1\_802\_11n(HT20) 2412





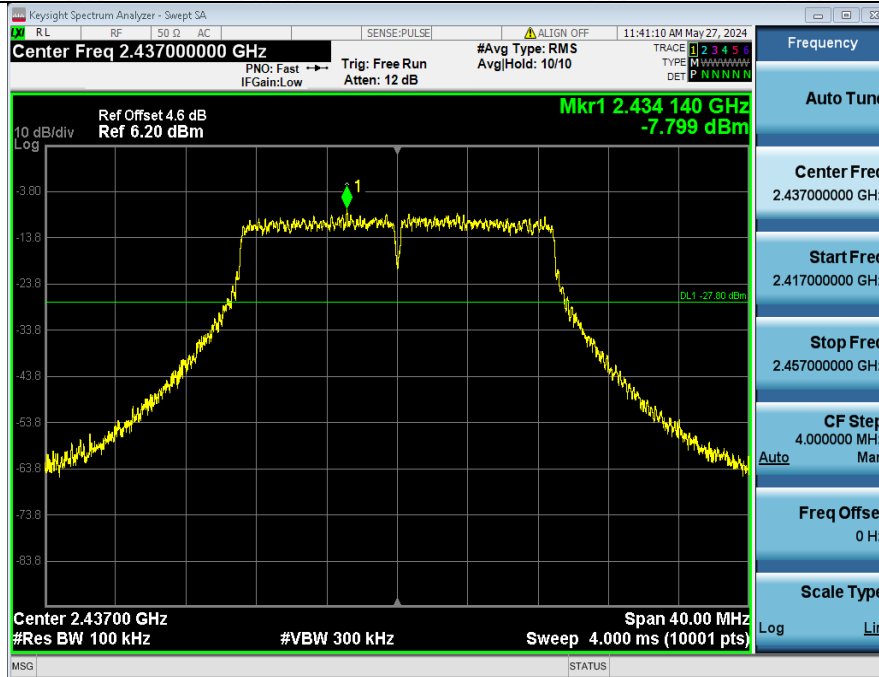
## 2. Spurious Emission NVNT\_ANT1\_802\_11n(HT20)\_2412



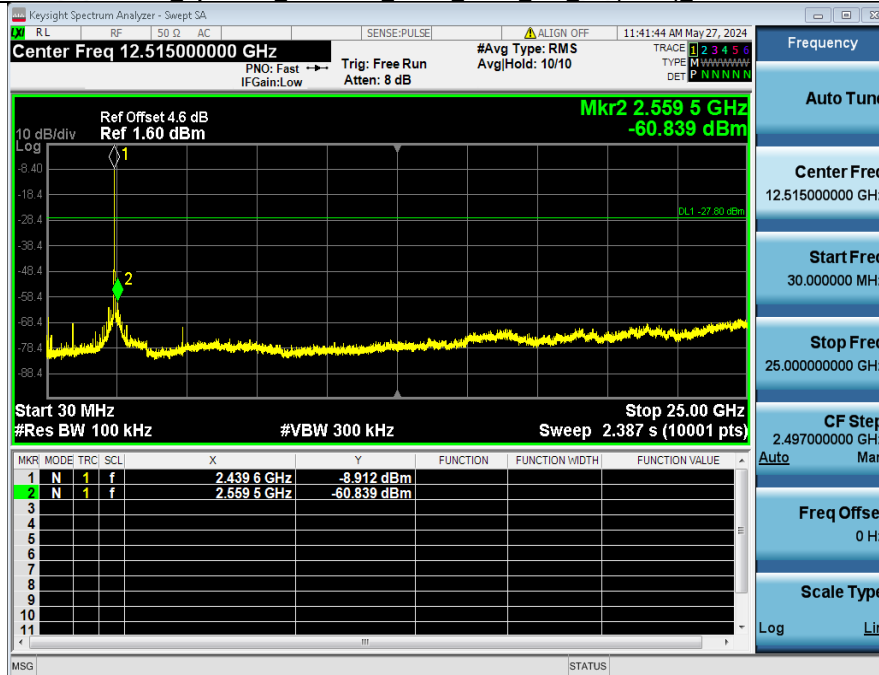
## 1. Reference Level NVNT\_ANT1\_802\_11n(HT20)\_2437





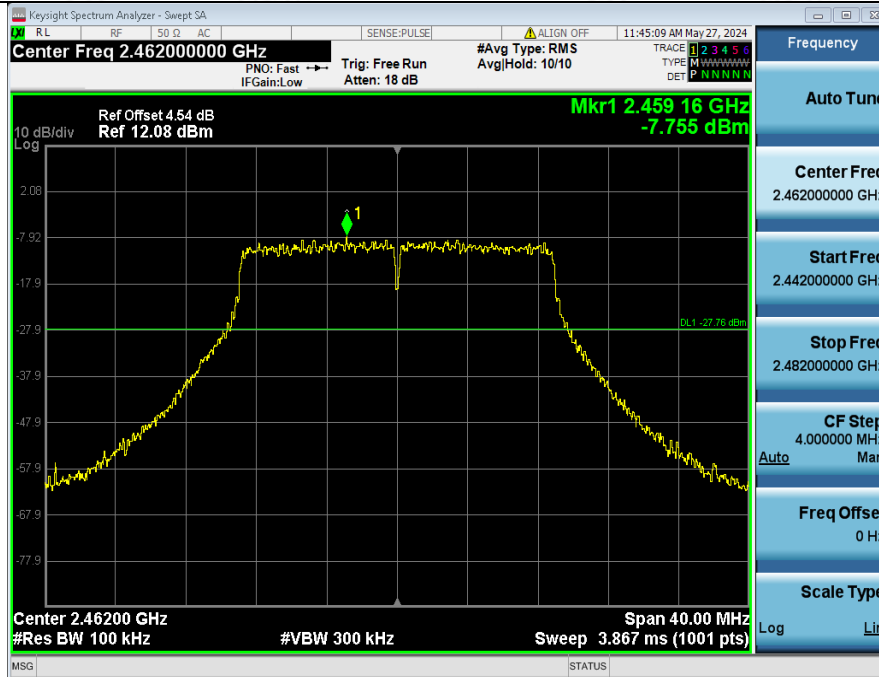


## 2 Spurious Emission NVNT\_ANT1\_802\_11n(HT20)\_2437

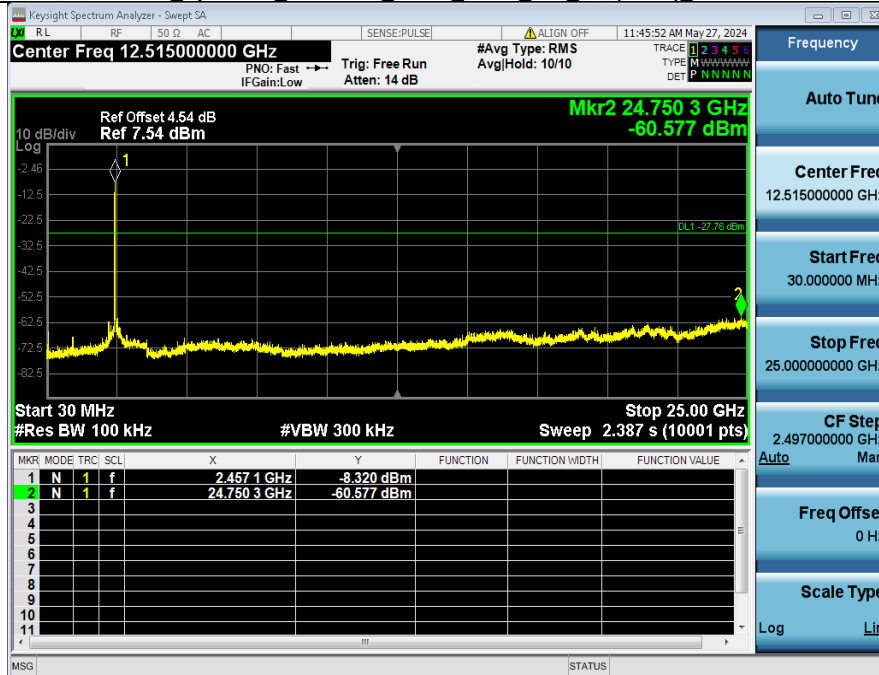


## 1 Reference Level NVNT\_ANT1\_802\_11n(HT20)\_2462



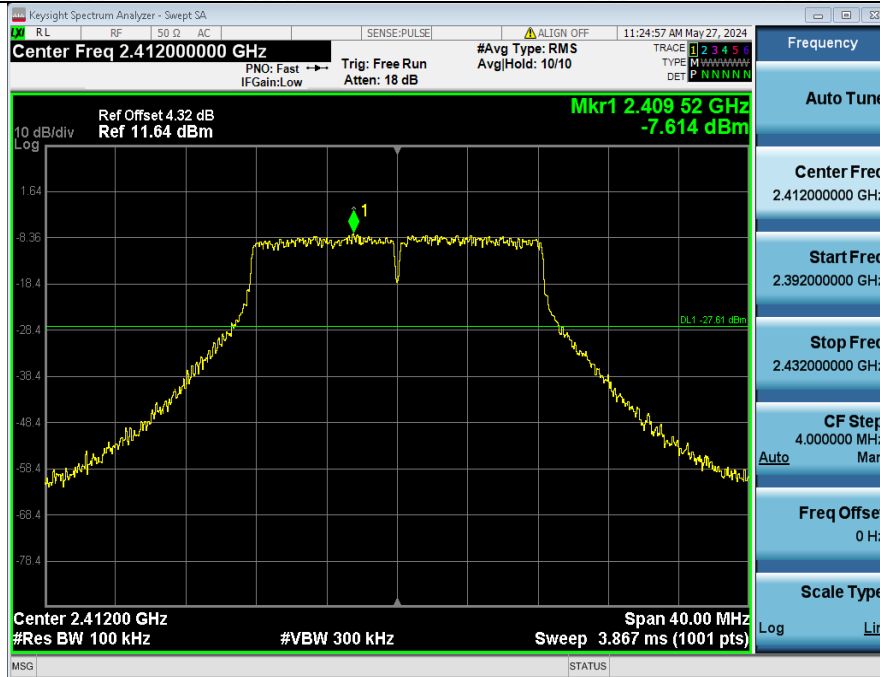


## 2 Spurious Emission NVNT\_ANT1\_802\_11n(HT20)\_2462

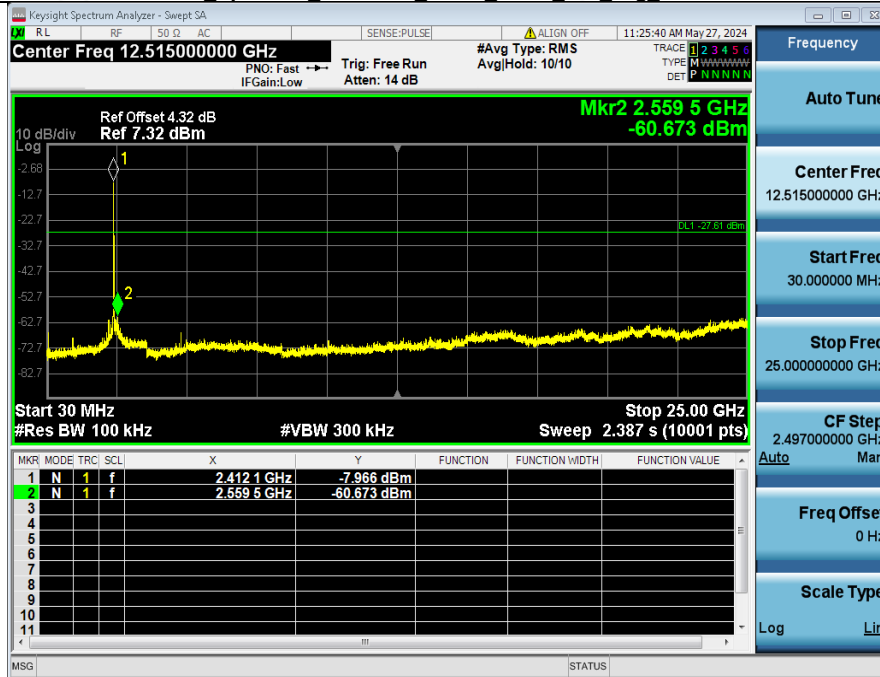


## 1 Reference Level NVNT\_ANT1\_802\_11g\_2412



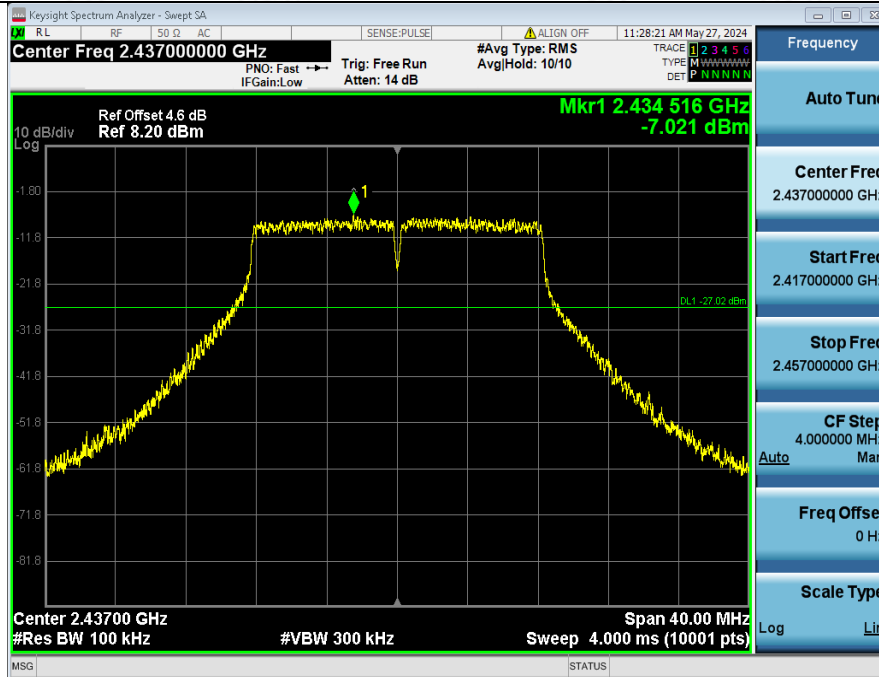


## 2 Spurious Emission NVNT\_ANT1\_802\_11g\_2412

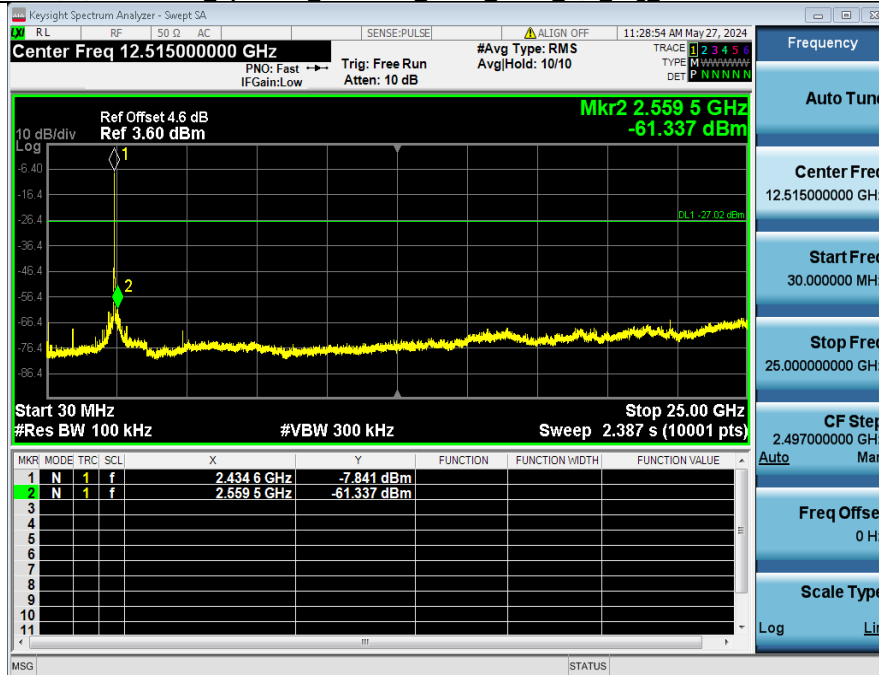


## 1 Reference Level NVNT\_ANT1\_802\_11g\_2437



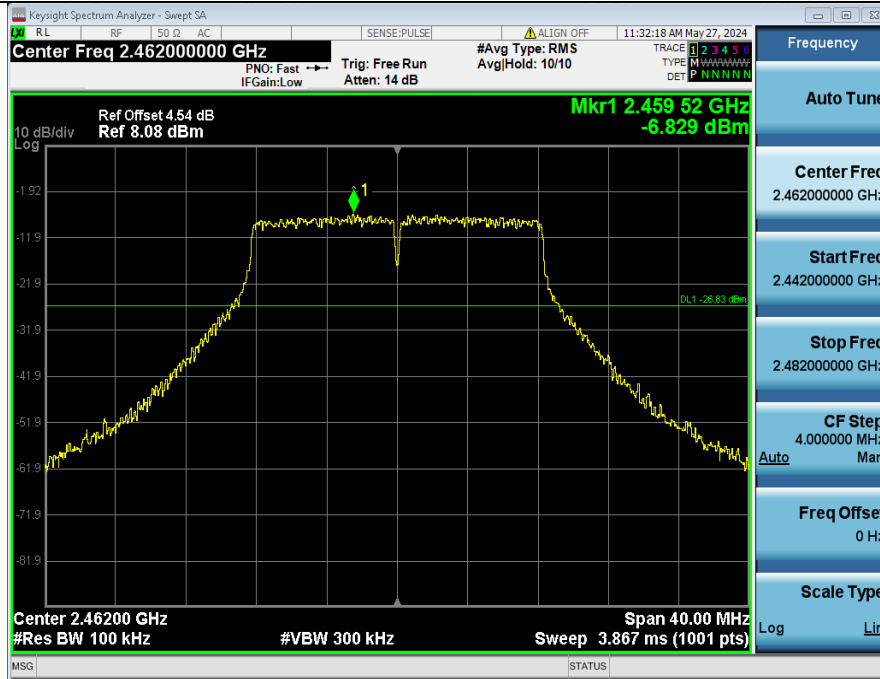


## 2 Spurious Emission NVNT\_ANT1\_802\_11g\_2437



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





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

