

## Appendix A

### RF Test Data for 2.4GWIFI (Conducted Measurement)

**Product Name: WIFI INSPECTION CAMERA**

**Test Model: ET30**

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 23.8°C    |
| Relative Humidity: | 52.1%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jay Luo   |
| Supervised by:     | Nick Peng |

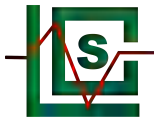




## A.1 -6dB Bandwidth

| Condition | Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | b    | 2412            | Ant1    | 8.097                 | $\geq 0.5$                  | Pass    |
| NVNT      | b    | 2437            | Ant1    | 8.09                  | $\geq 0.5$                  | Pass    |
| NVNT      | b    | 2462            | Ant1    | 8.069                 | $\geq 0.5$                  | Pass    |
| NVNT      | g    | 2412            | Ant1    | 16.068                | $\geq 0.5$                  | Pass    |
| NVNT      | g    | 2437            | Ant1    | 16.314                | $\geq 0.5$                  | Pass    |
| NVNT      | g    | 2462            | Ant1    | 16.279                | $\geq 0.5$                  | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 16.96                 | $\geq 0.5$                  | Pass    |
| NVNT      | n20  | 2437            | Ant1    | 17.231                | $\geq 0.5$                  | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 17.105                | $\geq 0.5$                  | Pass    |





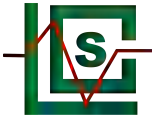
## Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1



-6dB Bandwidth NVNT b 2437MHz Ant1

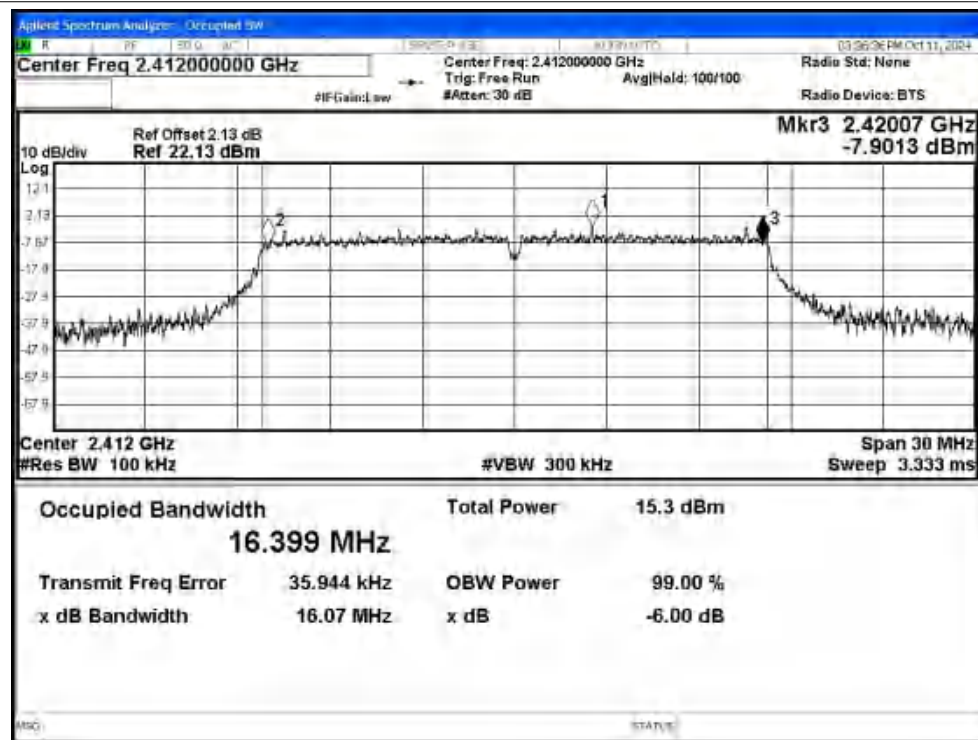


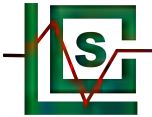


-6dB Bandwidth NVNT b 2462MHz Ant1

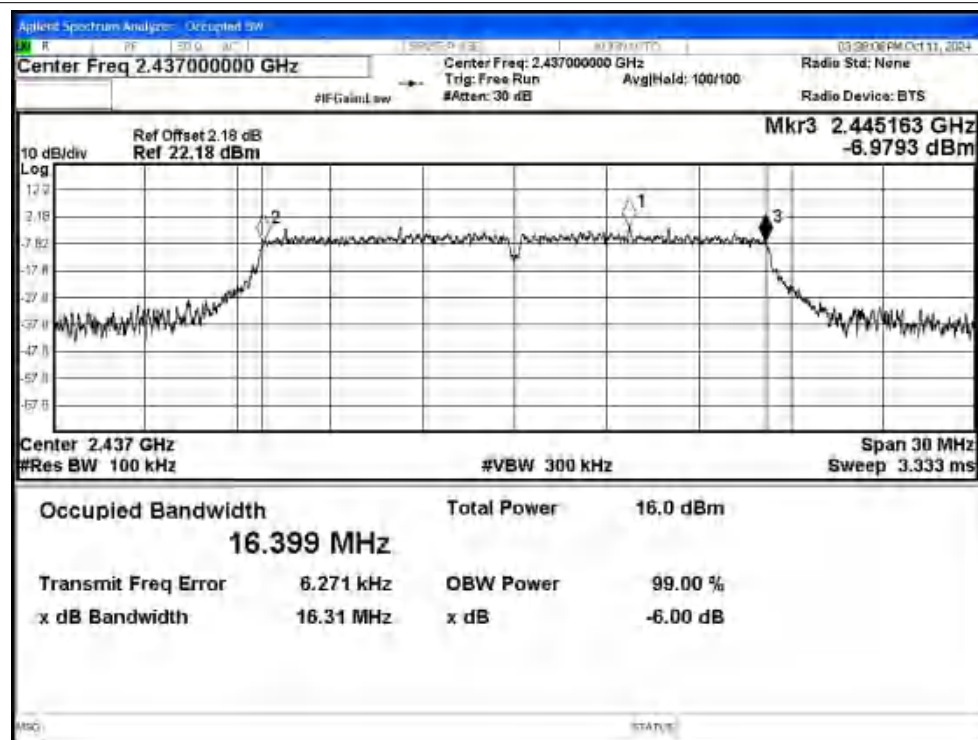


-6dB Bandwidth NVNT g 2412MHz Ant1

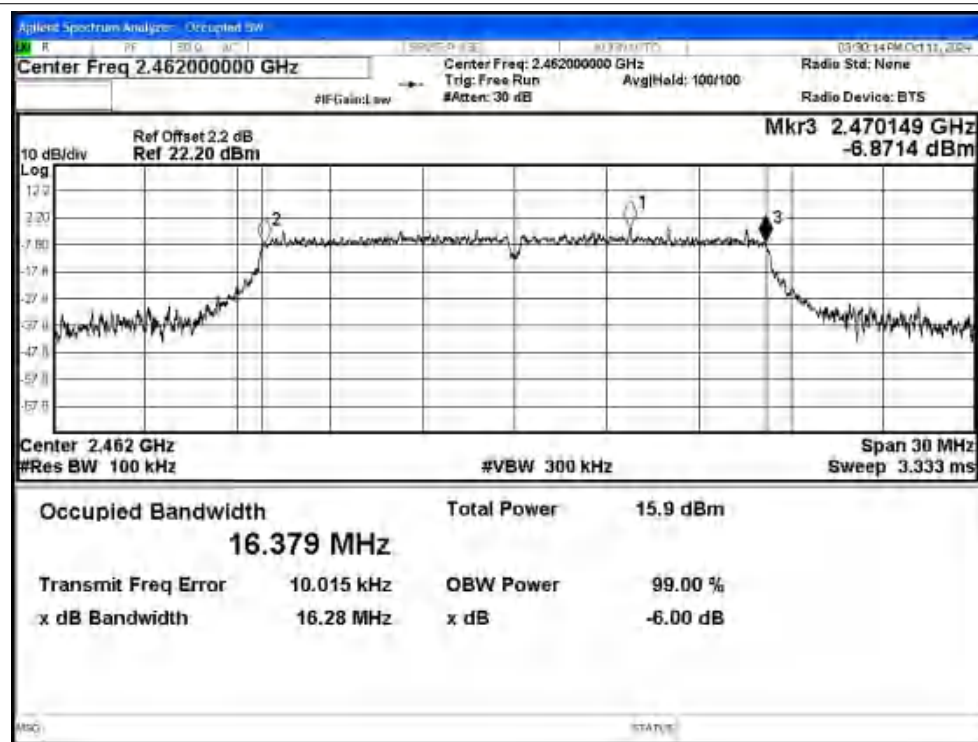


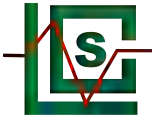


-6dB Bandwidth NVNT g 2437MHz Ant1

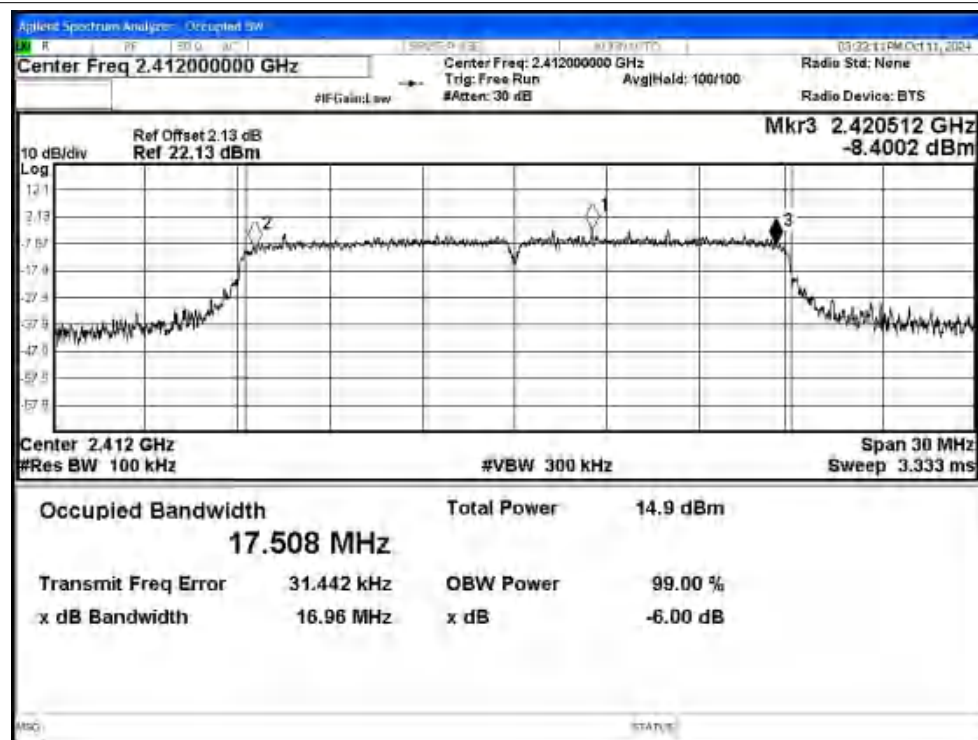


-6dB Bandwidth NVNT g 2462MHz Ant1

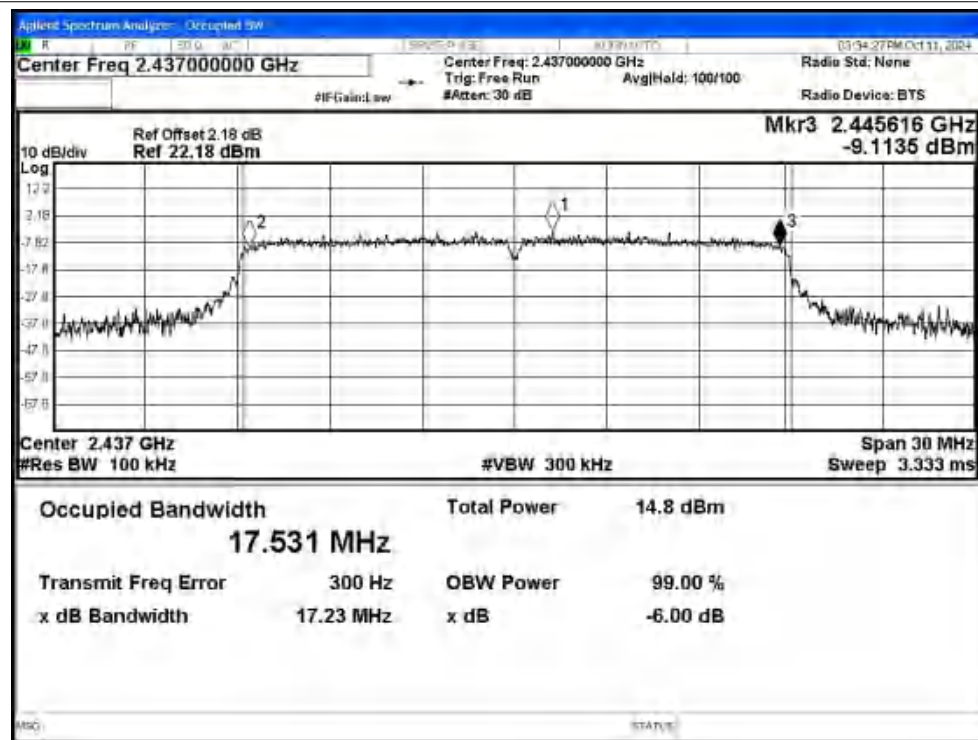




-6dB Bandwidth NVNT n20 2412MHz Ant1



-6dB Bandwidth NVNT n20 2437MHz Ant1

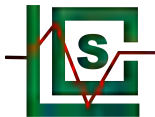


Shenzhen LCS Compliance Testing Laboratory Ltd.

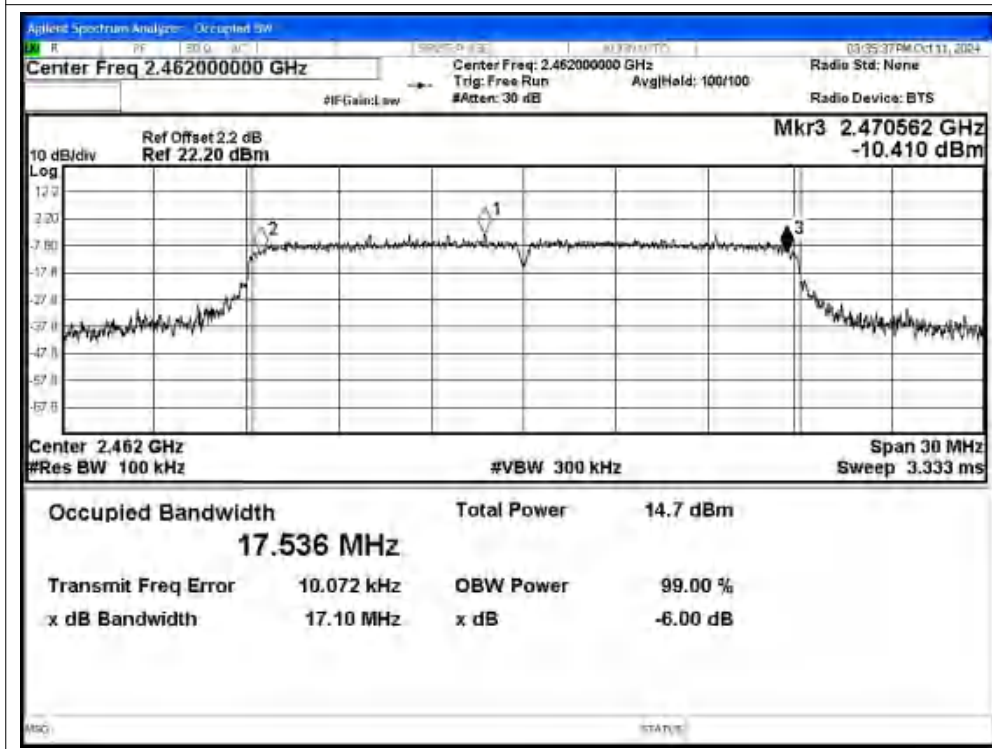
Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

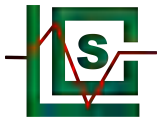
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



## -6dB Bandwidth NVNT n20 2462MHz Ant1

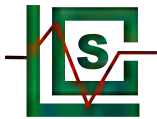




## A.2 Maximum Peak Conducted Output Power

| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|------|-----------------|---------|-----------------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | 2.58                  | 30          | Pass    |
| NVNT      | b    | 2437            | Ant1    | 2.44                  | 30          | Pass    |
| NVNT      | b    | 2462            | Ant1    | 2.22                  | 30          | Pass    |
| NVNT      | g    | 2412            | Ant1    | 2.10                  | 30          | Pass    |
| NVNT      | g    | 2437            | Ant1    | 2.86                  | 30          | Pass    |
| NVNT      | g    | 2462            | Ant1    | 2.72                  | 30          | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 2.51                  | 30          | Pass    |
| NVNT      | n20  | 2437            | Ant1    | 2.34                  | 30          | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 2.30                  | 30          | Pass    |





### A.3 Maximum Power Spectral Density Level

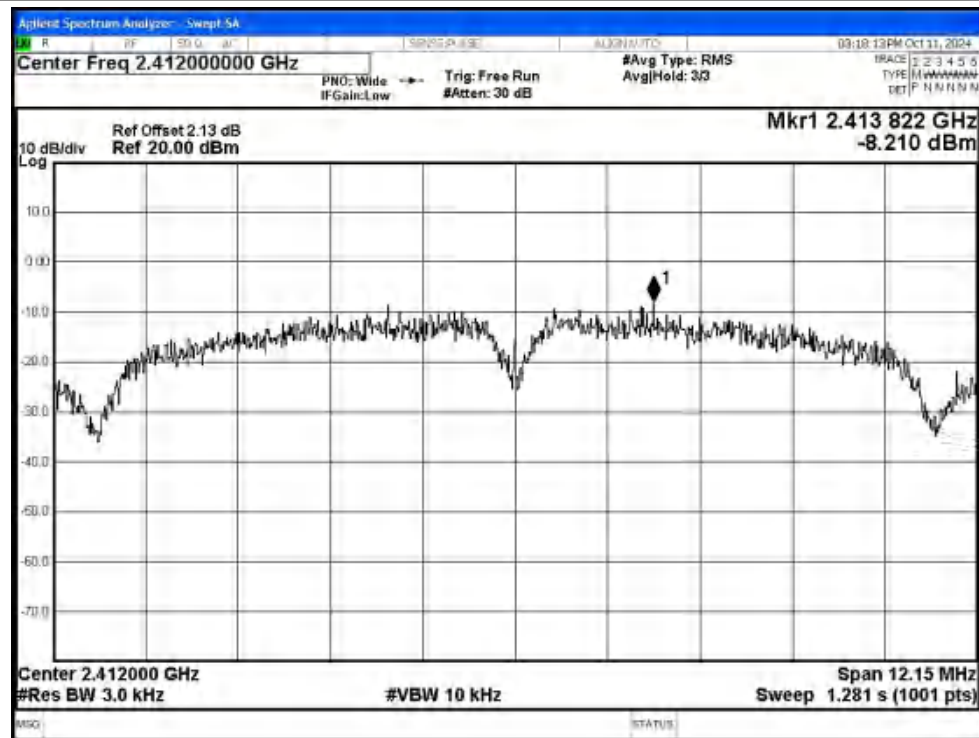
| Condition | Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
|-----------|------|-----------------|---------|--------------------------|------------------|---------|
| NVNT      | b    | 2412            | Ant1    | -8.21                    | 8                | Pass    |
| NVNT      | b    | 2437            | Ant1    | -8.98                    | 8                | Pass    |
| NVNT      | b    | 2462            | Ant1    | -10.22                   | 8                | Pass    |
| NVNT      | g    | 2412            | Ant1    | -16.59                   | 8                | Pass    |
| NVNT      | g    | 2437            | Ant1    | -16.05                   | 8                | Pass    |
| NVNT      | g    | 2462            | Ant1    | -14.12                   | 8                | Pass    |
| NVNT      | n20  | 2412            | Ant1    | -15.56                   | 8                | Pass    |
| NVNT      | n20  | 2437            | Ant1    | -17.5                    | 8                | Pass    |
| NVNT      | n20  | 2462            | Ant1    | -17.29                   | 8                | Pass    |



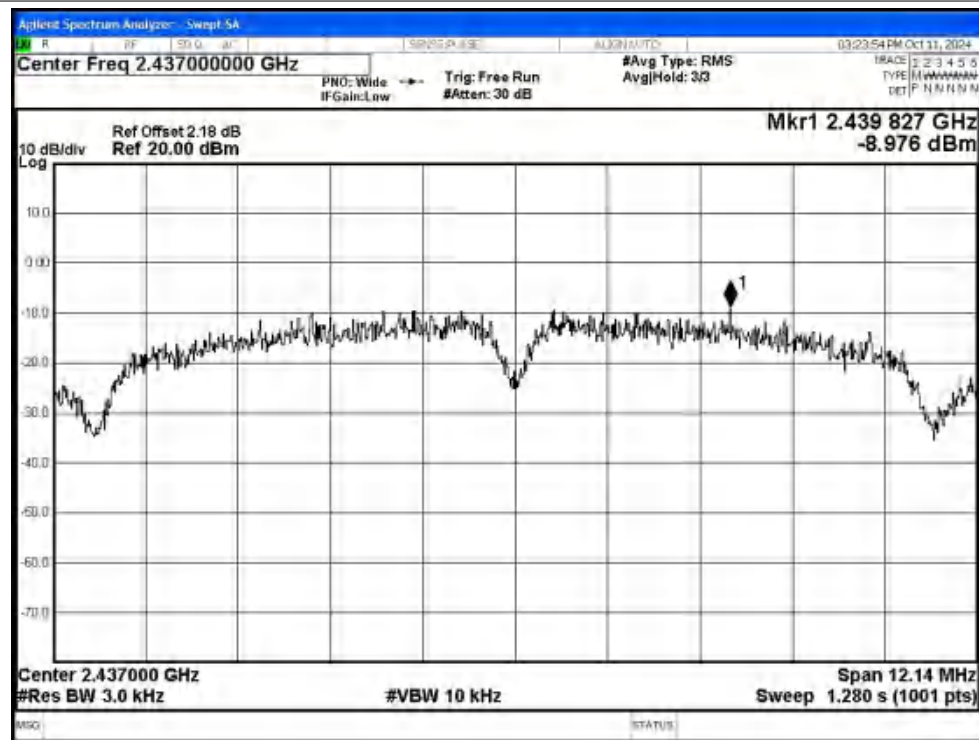


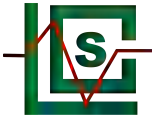
## Test Graphs

PSD NVNT b 2412MHz Ant1

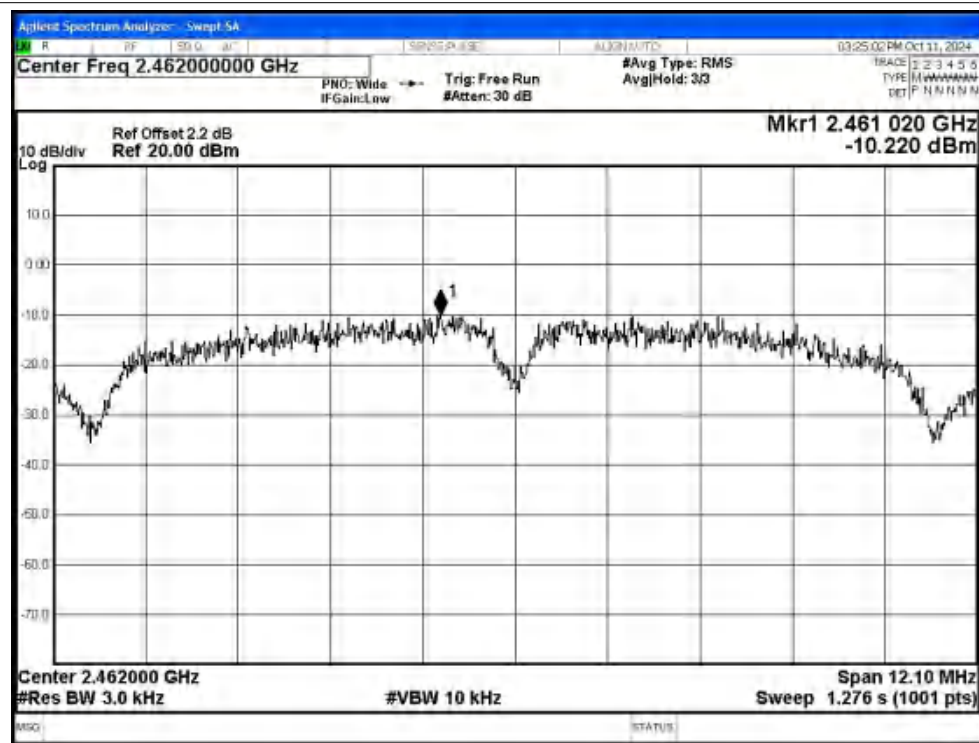


PSD NVNT b 2437MHz Ant1

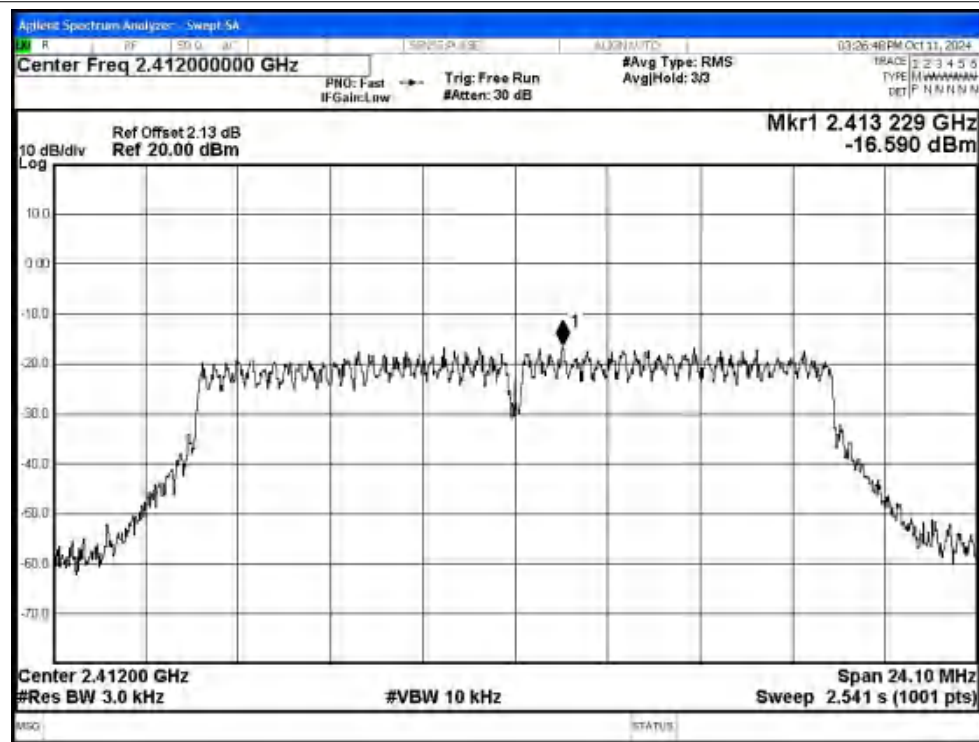


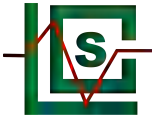


PSD NVNT b 2462MHz Ant1

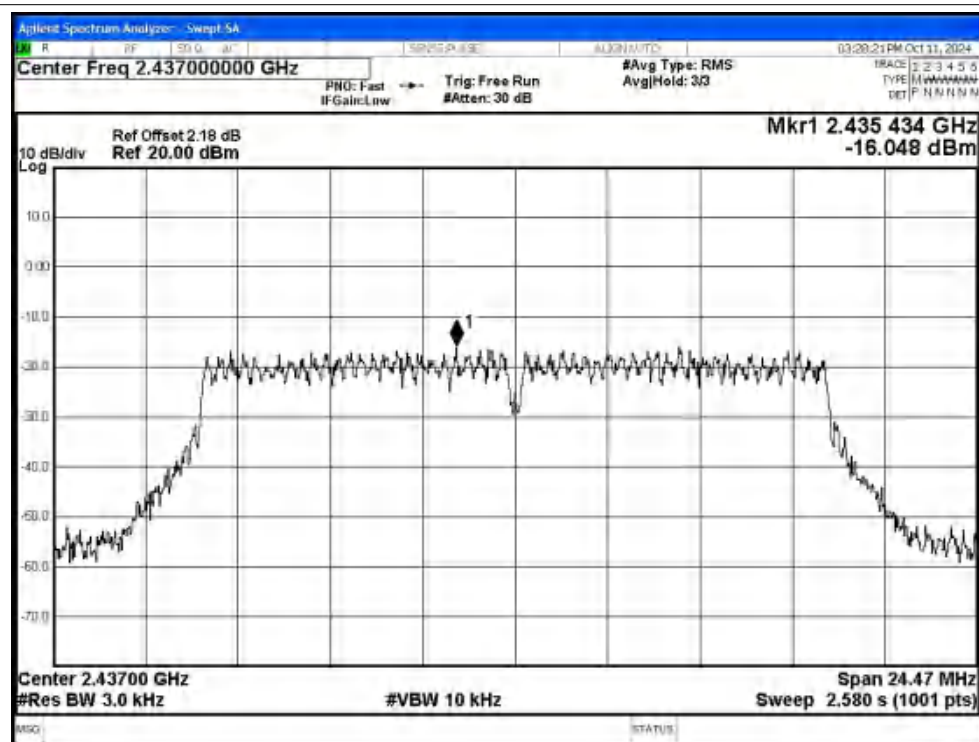


PSD NVNT g 2412MHz Ant1

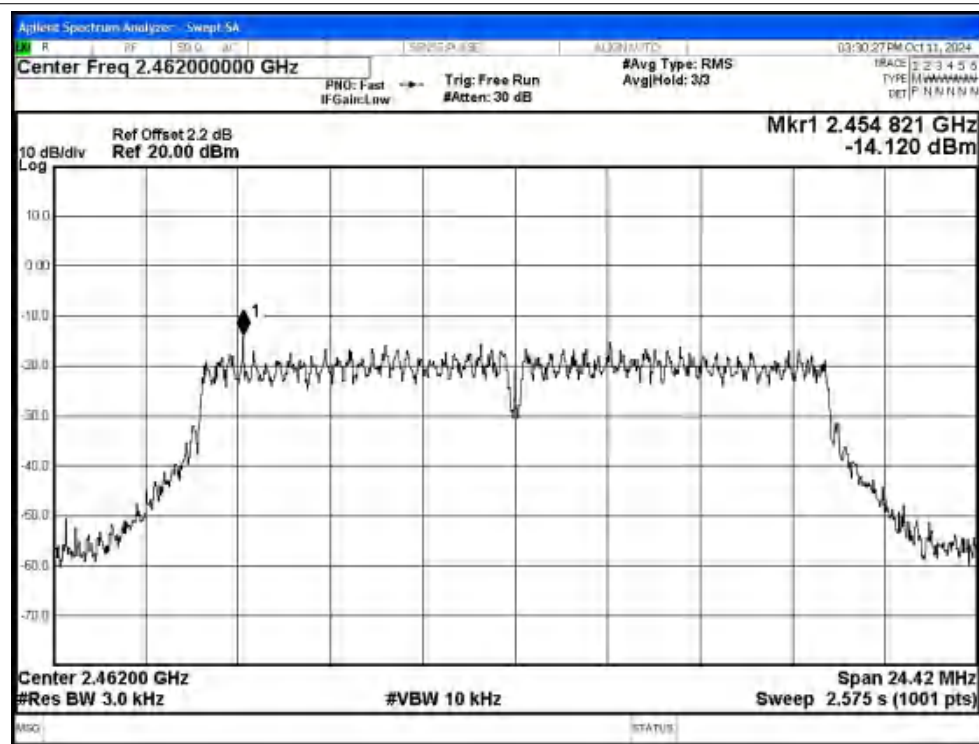


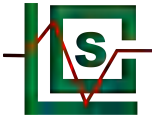


PSD NVNT g 2437MHz Ant1

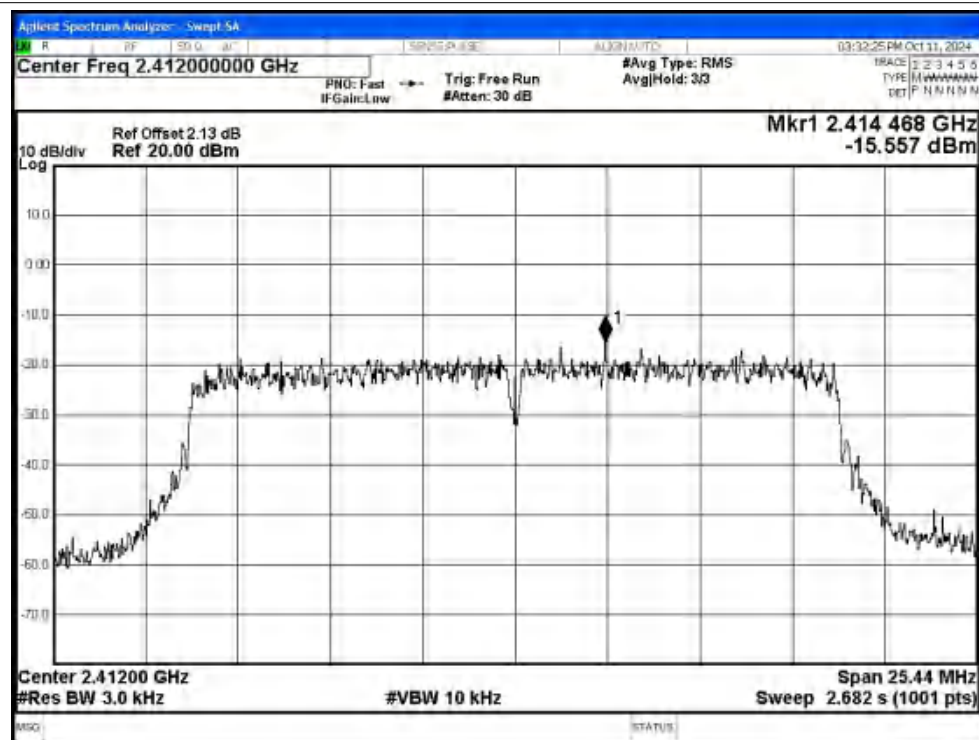


PSD NVNT g 2462MHz Ant1

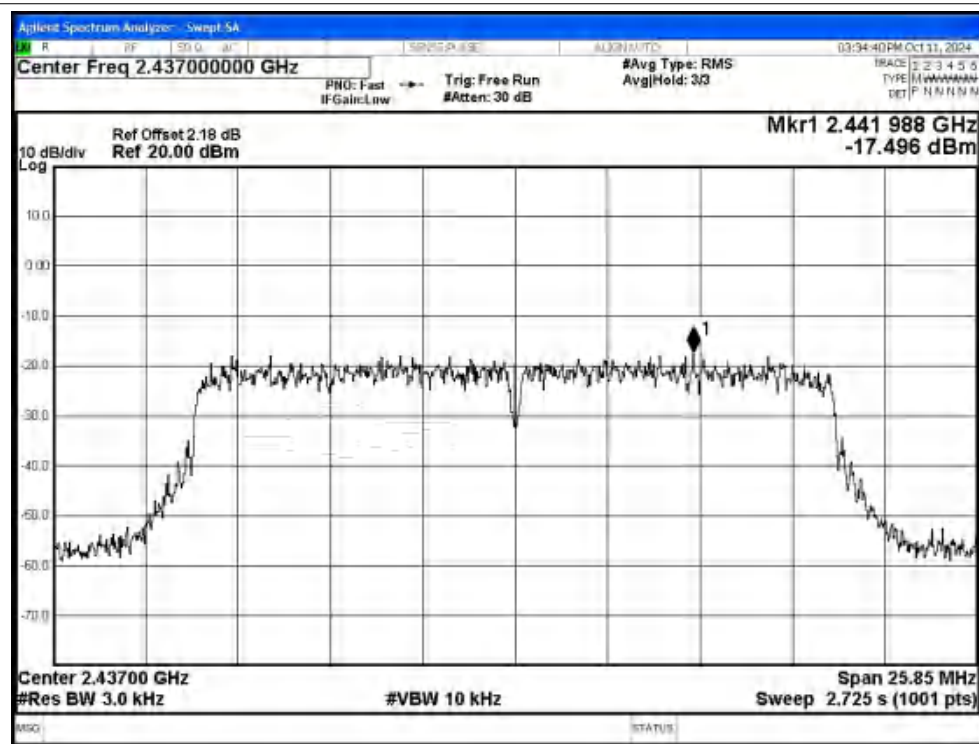


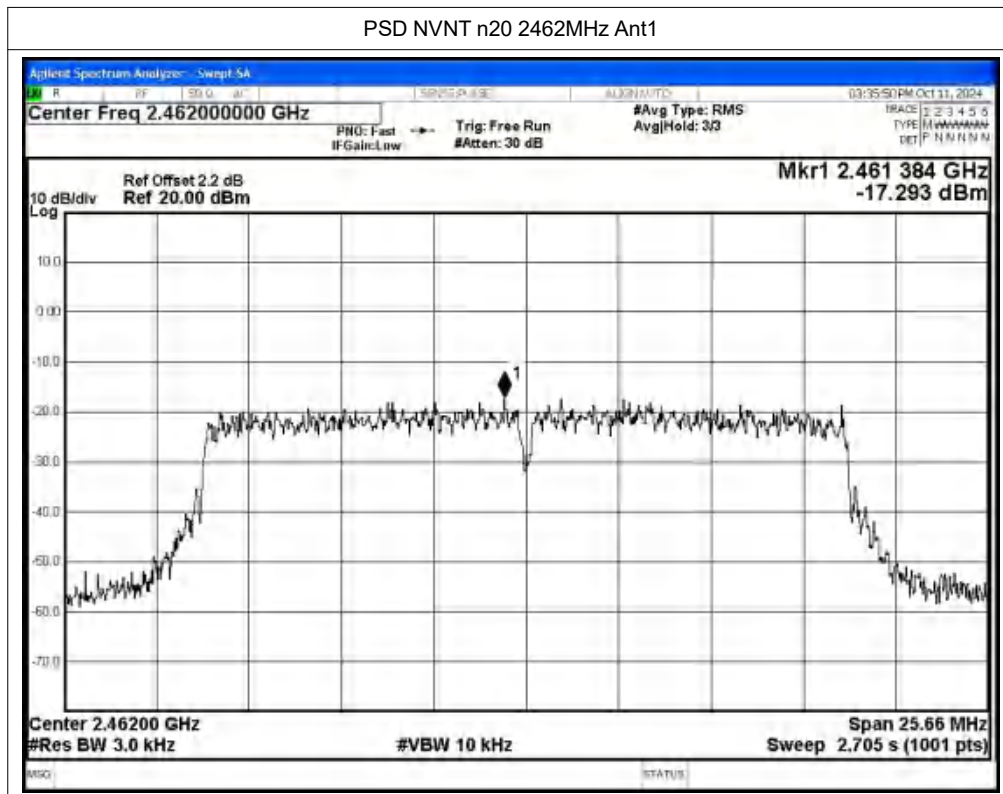


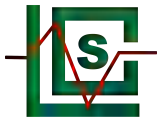
PSD NVNT n20 2412MHz Ant1



PSD NVNT n20 2437MHz Ant1



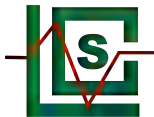




## A.4 Band Edge

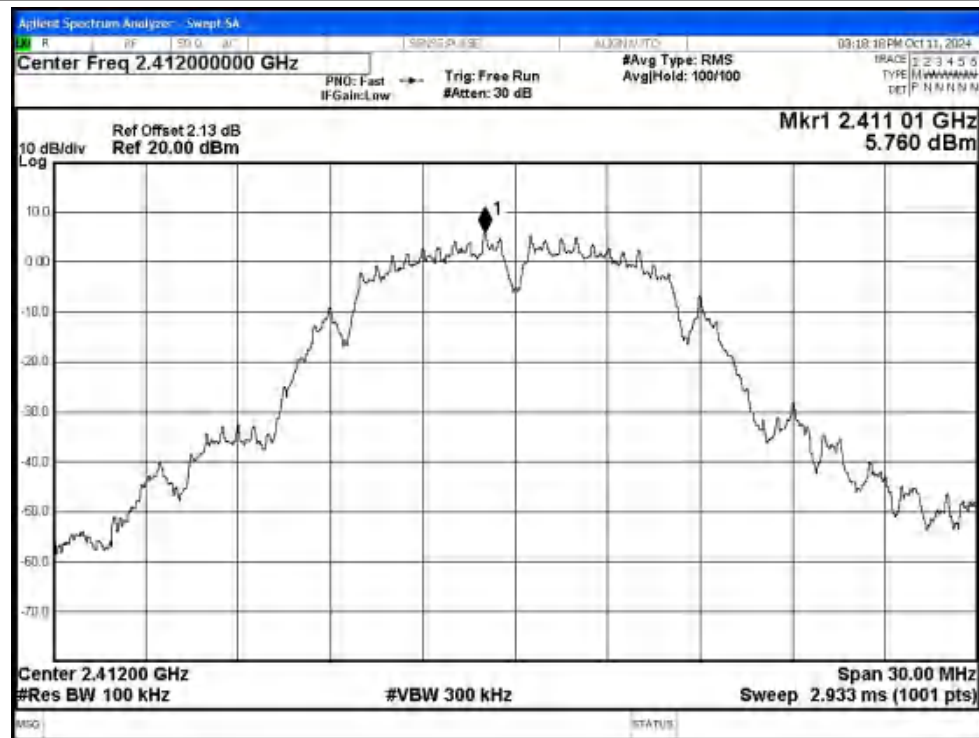
| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | -48.33          | -20         | Pass    |
| NVNT      | b    | 2462            | Ant1    | -60.4           | -20         | Pass    |
| NVNT      | g    | 2412            | Ant1    | -31.87          | -20         | Pass    |
| NVNT      | g    | 2462            | Ant1    | -42.2           | -20         | Pass    |
| NVNT      | n20  | 2412            | Ant1    | -30.23          | -20         | Pass    |
| NVNT      | n20  | 2462            | Ant1    | -40.86          | -20         | Pass    |





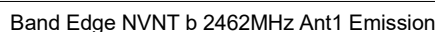
## Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref

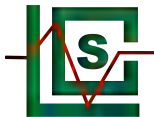


Band Edge NVNT b 2412MHz Ant1 Emission

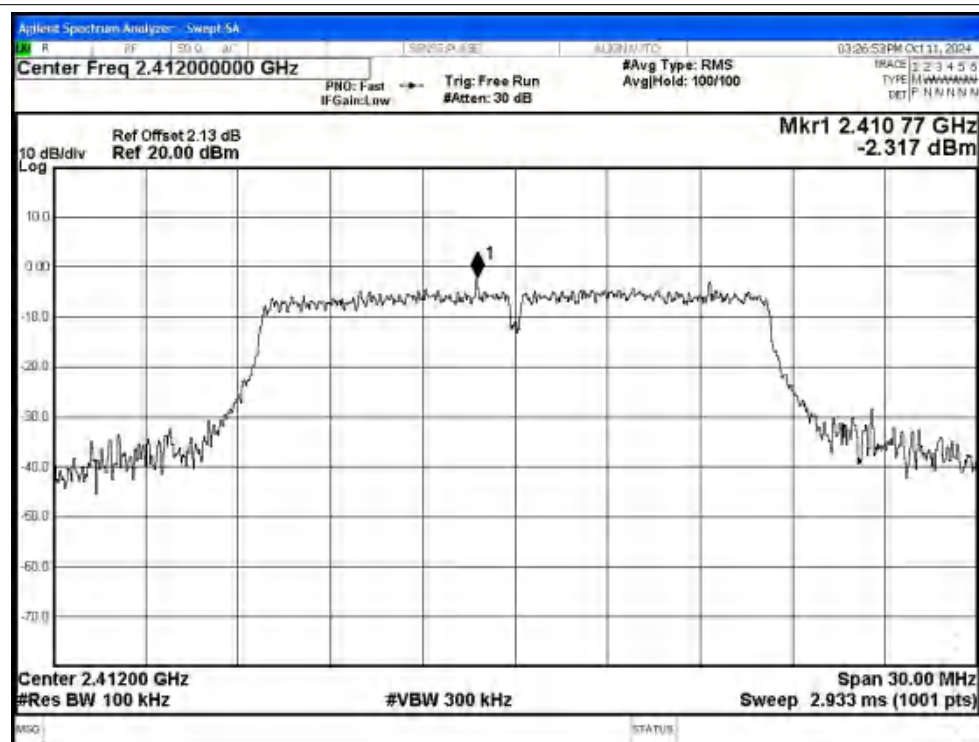




Shenzhen LCS Compliance Testing Laboratory Ltd.  
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen,  
518000, China  
Tel: +(86) 0755-82591330 | E-mail: [webmaster@lcs-cert.com](mailto:webmaster@lcs-cert.com) | Web: [www.lcs-cert.com](http://www.lcs-cert.com)  
Scan code to check authenticity

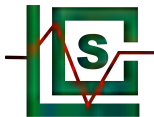


Band Edge NVNT g 2412MHz Ant1 Ref

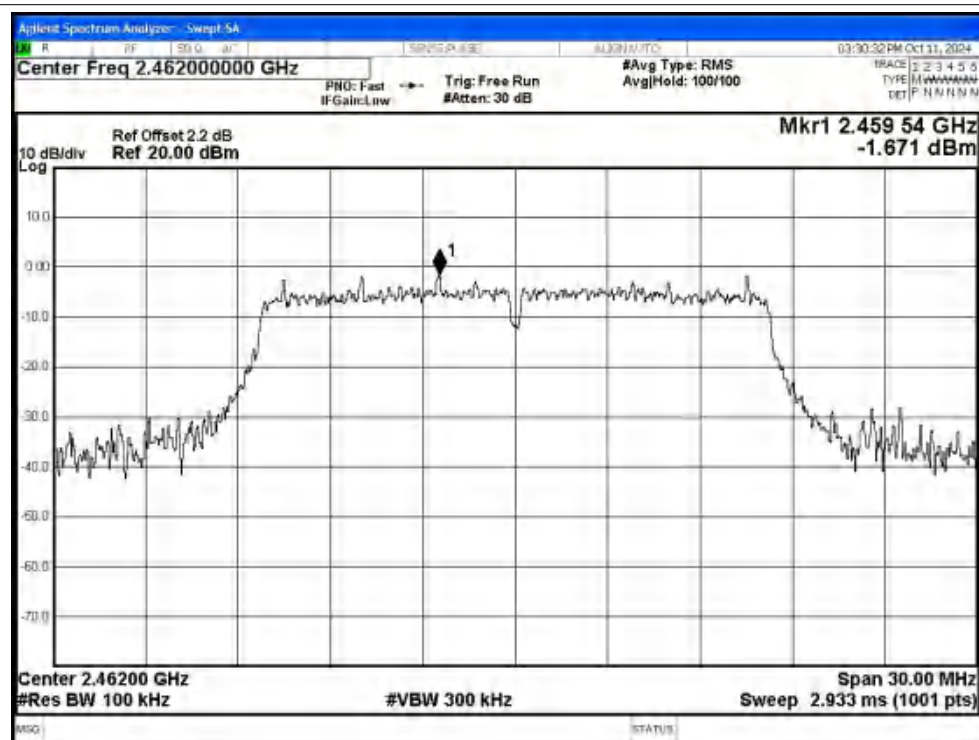


Band Edge NVNT g 2412MHz Ant1 Emission



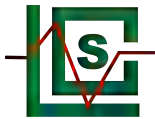


Band Edge NVNT g 2462MHz Ant1 Ref

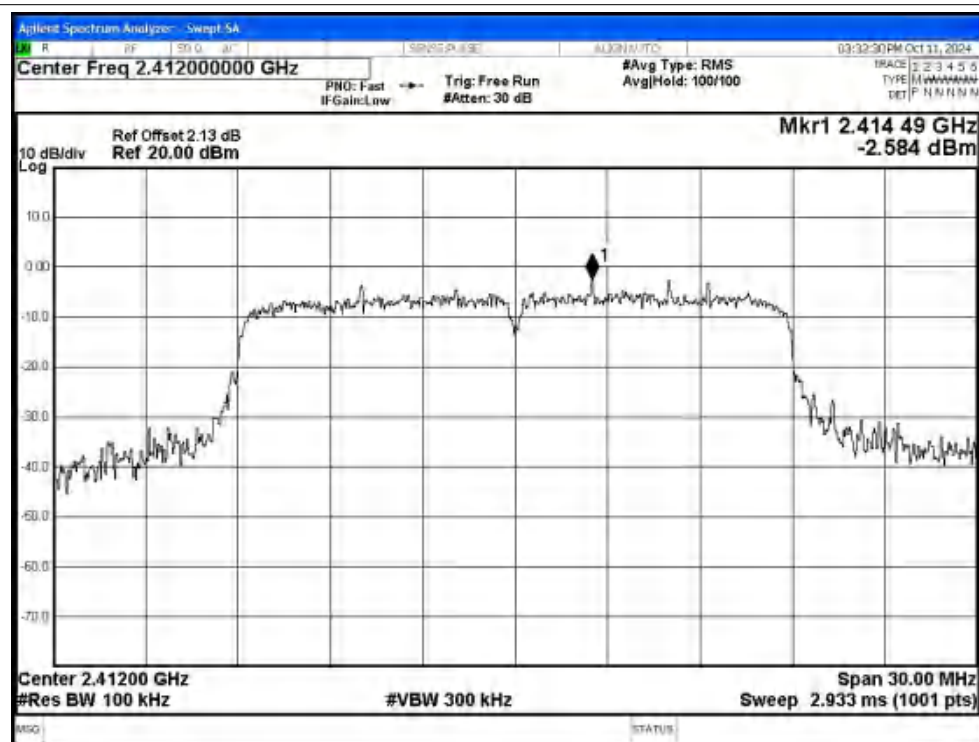


Band Edge NVNT g 2462MHz Ant1 Emission



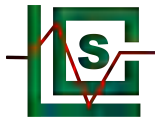


Band Edge NVNT n20 2412MHz Ant1 Ref

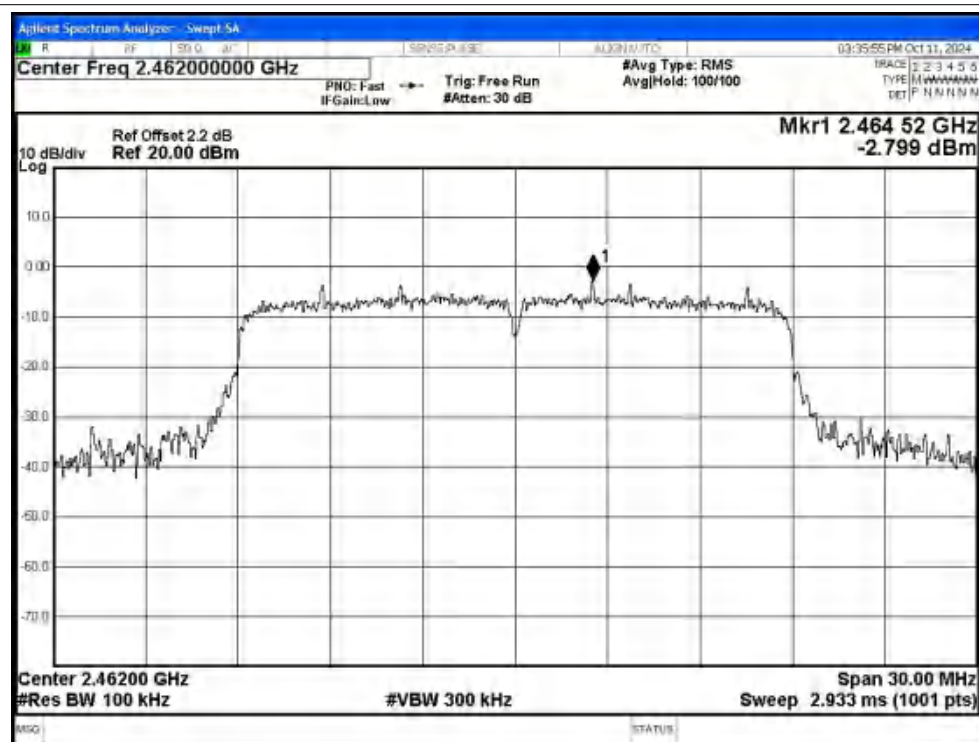


Band Edge NVNT n20 2412MHz Ant1 Emission

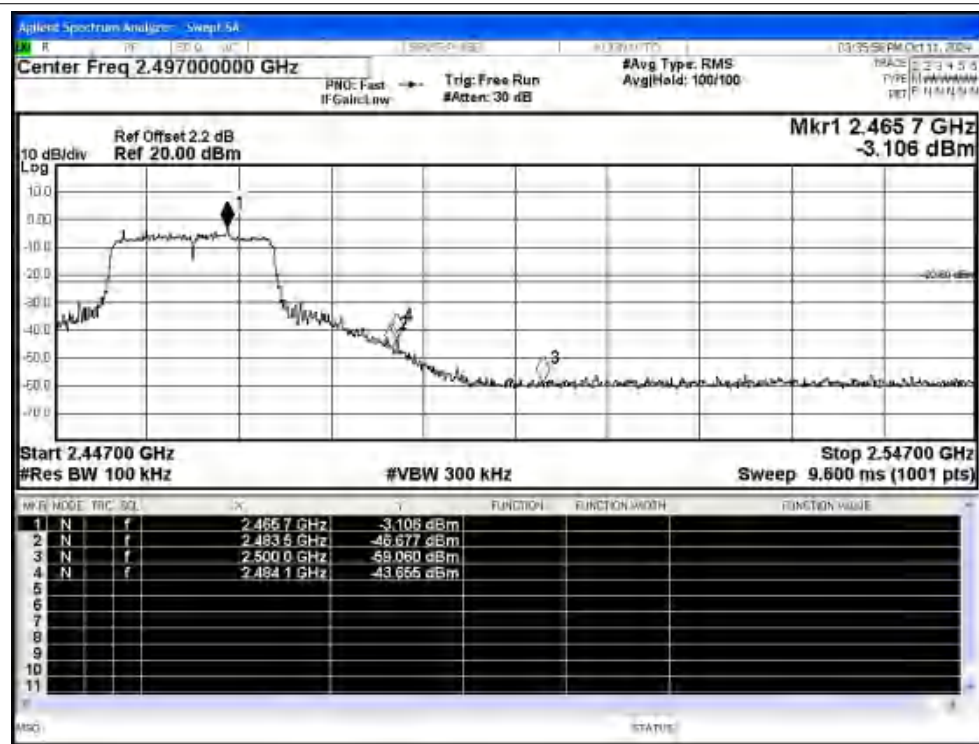




Band Edge NVNT n20 2462MHz Ant1 Ref



Band Edge NVNT n20 2462MHz Ant1 Emission

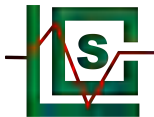




## A.5 Conducted RF Spurious Emission

| Condition | Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | b    | 2412            | Ant1    | -52.13          | -20         | Pass    |
| NVNT      | b    | 2437            | Ant1    | -51.81          | -20         | Pass    |
| NVNT      | b    | 2462            | Ant1    | -51.43          | -20         | Pass    |
| NVNT      | g    | 2412            | Ant1    | -44.09          | -20         | Pass    |
| NVNT      | g    | 2437            | Ant1    | -44.18          | -20         | Pass    |
| NVNT      | g    | 2462            | Ant1    | -45.01          | -20         | Pass    |
| NVNT      | n20  | 2412            | Ant1    | -42.64          | -20         | Pass    |
| NVNT      | n20  | 2437            | Ant1    | -41.96          | -20         | Pass    |
| NVNT      | n20  | 2462            | Ant1    | -41.46          | -20         | Pass    |



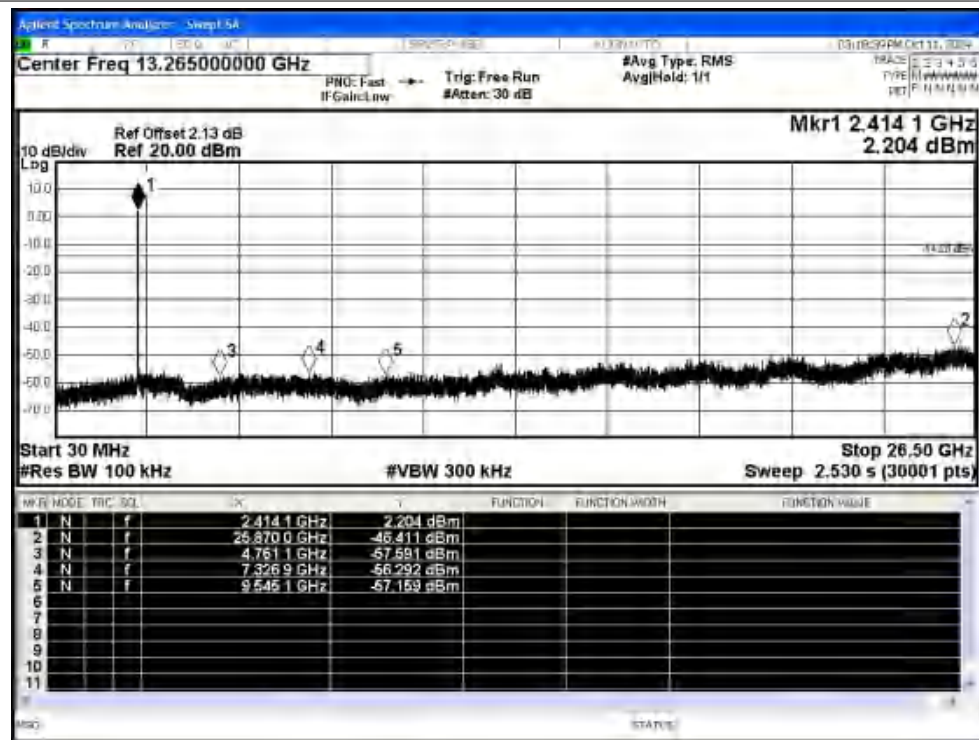


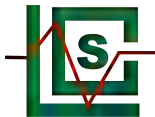
## Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 Ref



Tx. Spurious NVNT b 2412MHz Ant1 Emission

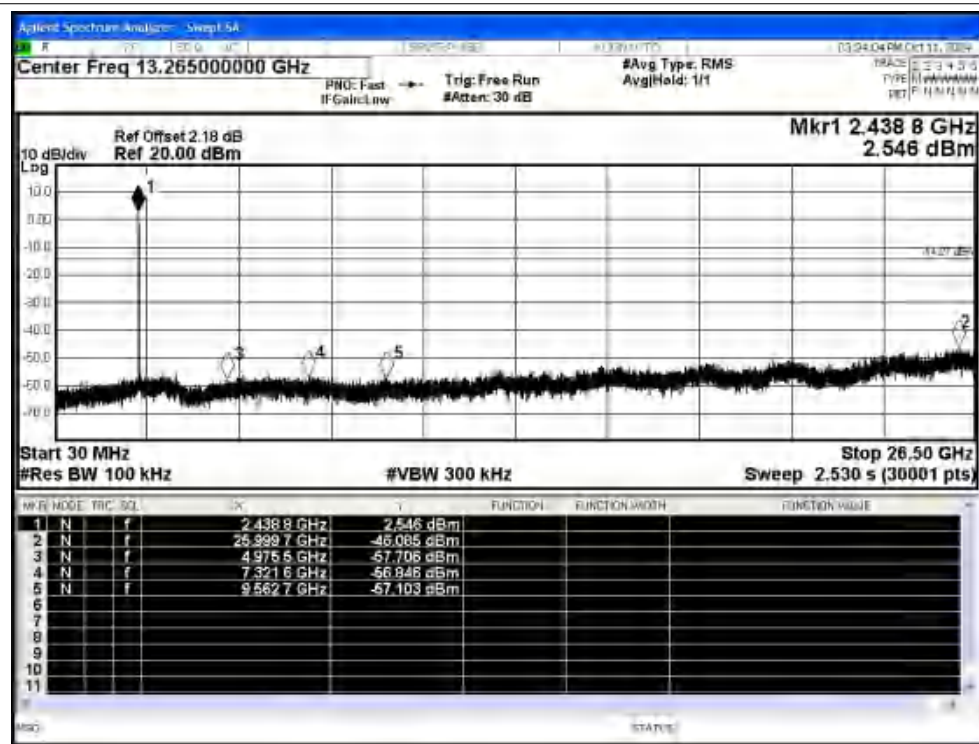


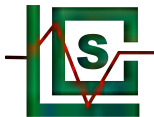


Tx. Spurious NVNT b 2437MHz Ant1 Ref

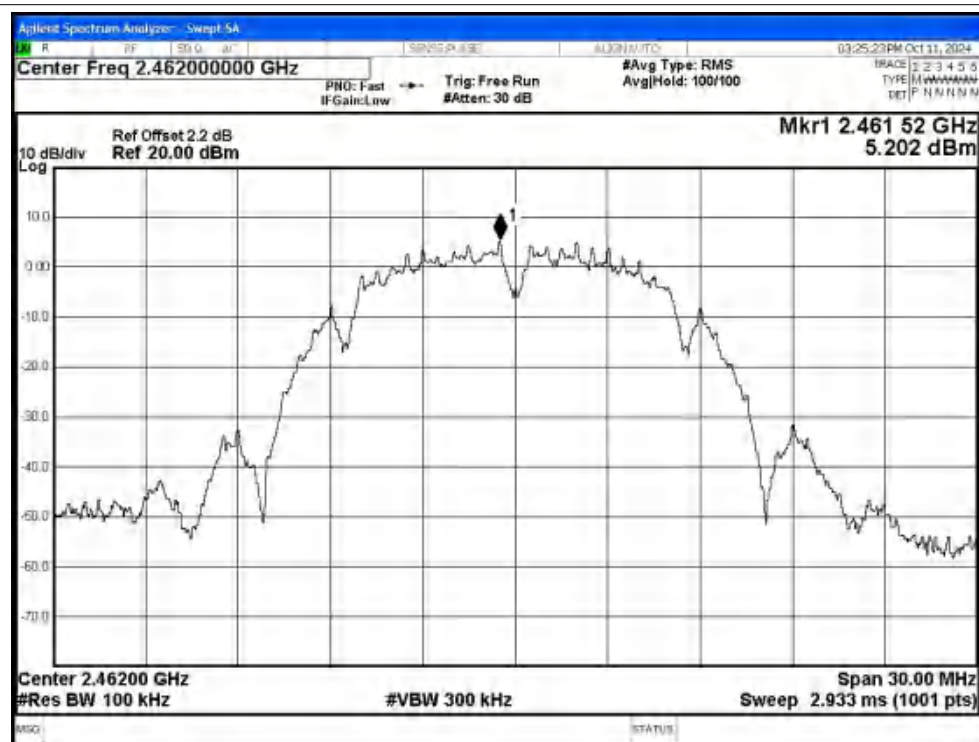


Tx. Spurious NVNT b 2437MHz Ant1 Emission

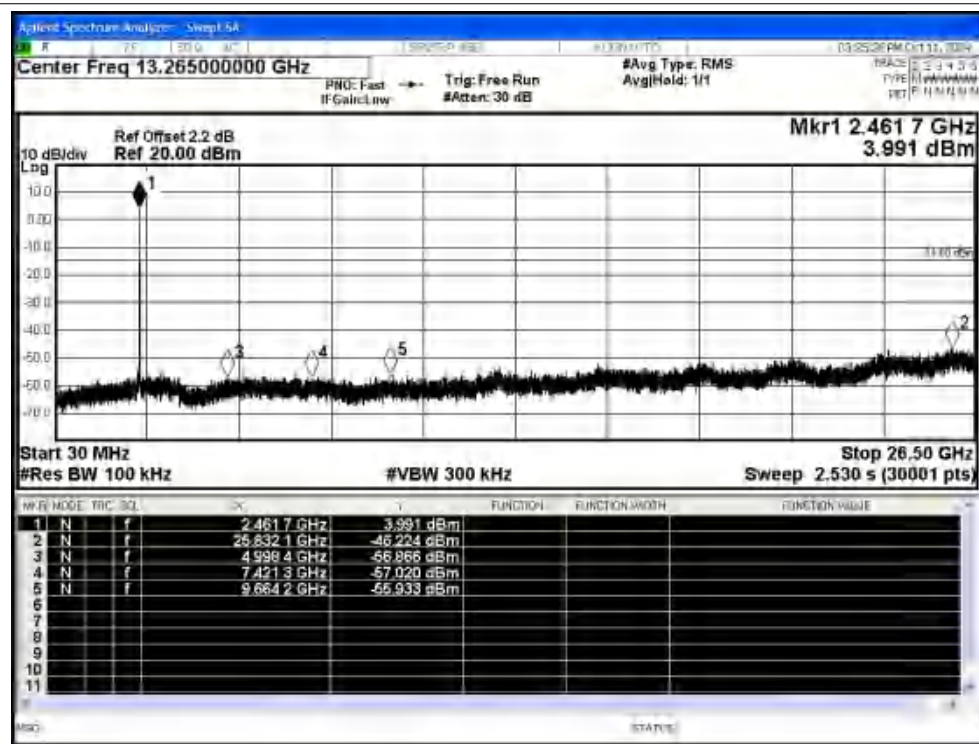


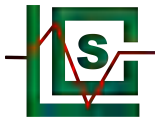


Tx. Spurious NVNT b 2462MHz Ant1 Ref

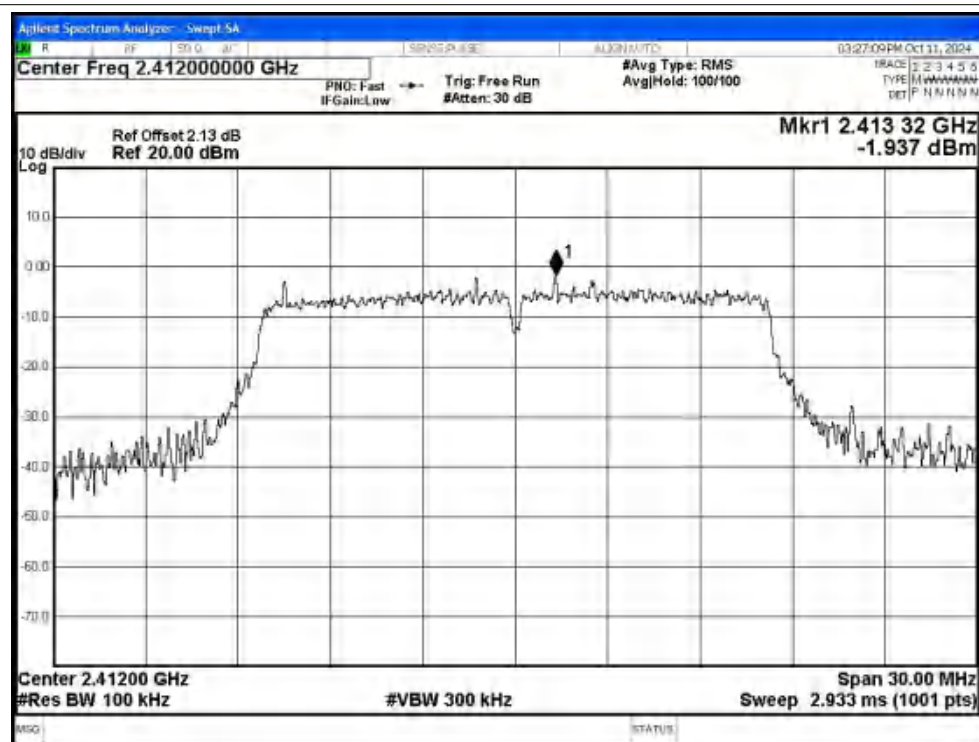


Tx. Spurious NVNT b 2462MHz Ant1 Emission

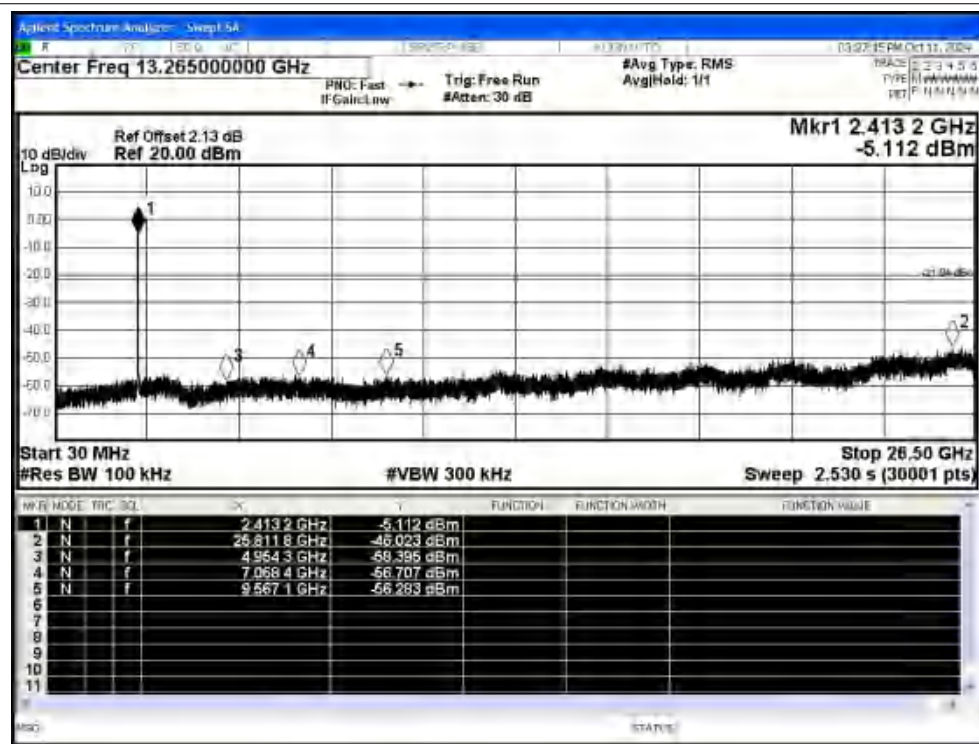


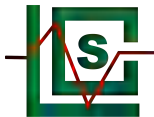


Tx. Spurious NVNT g 2412MHz Ant1 Ref

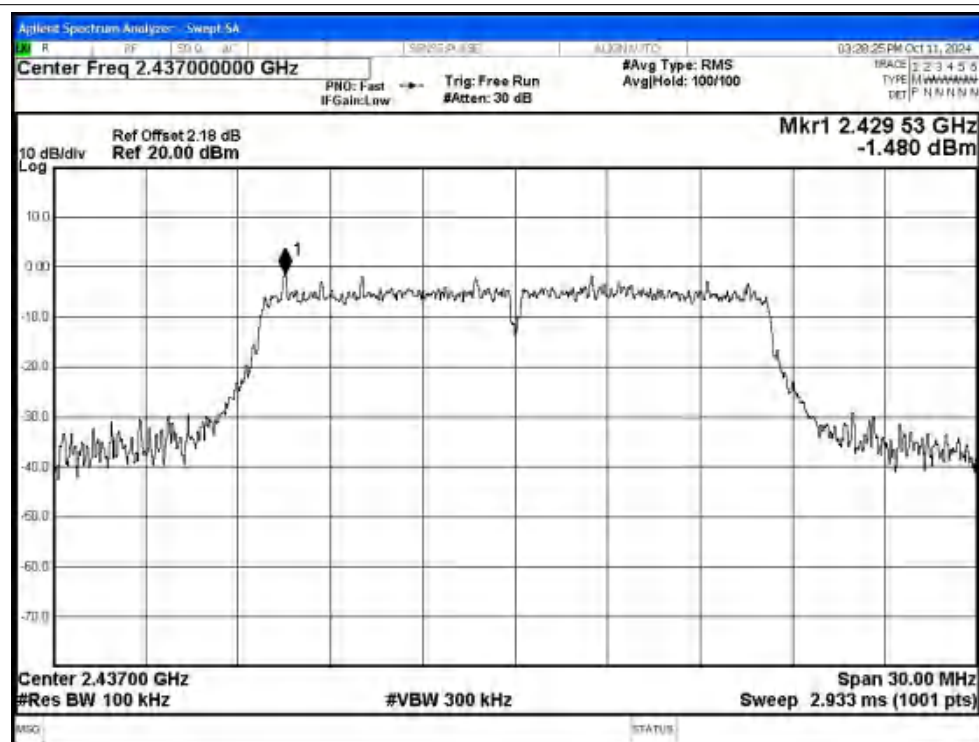


Tx. Spurious NVNT g 2412MHz Ant1 Emission

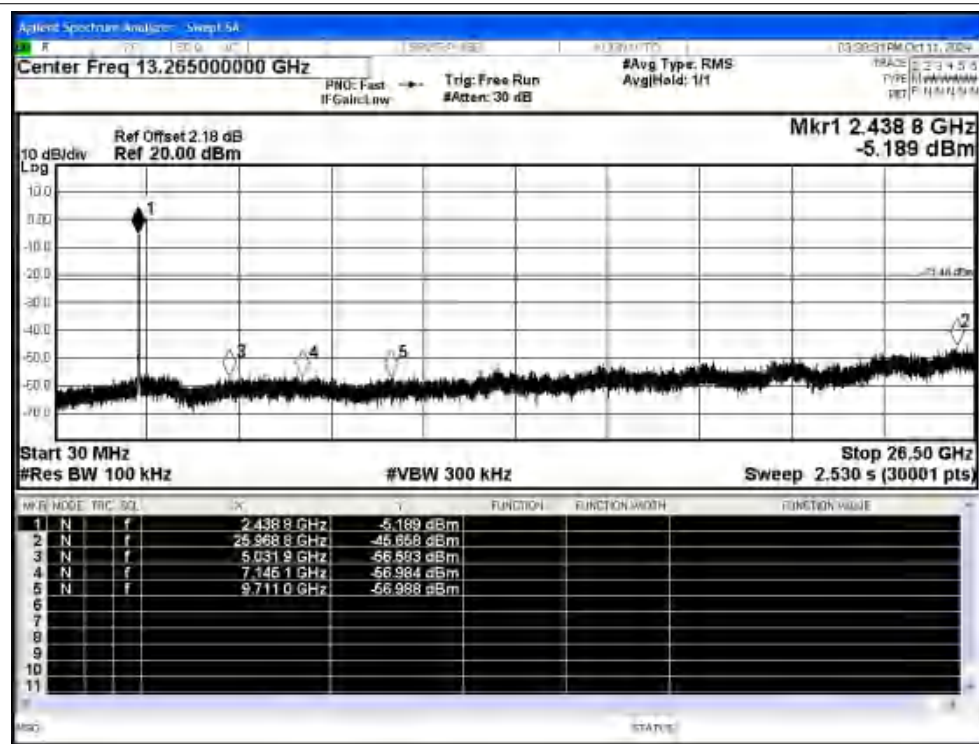


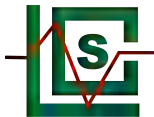


Tx. Spurious NVNT g 2437MHz Ant1 Ref

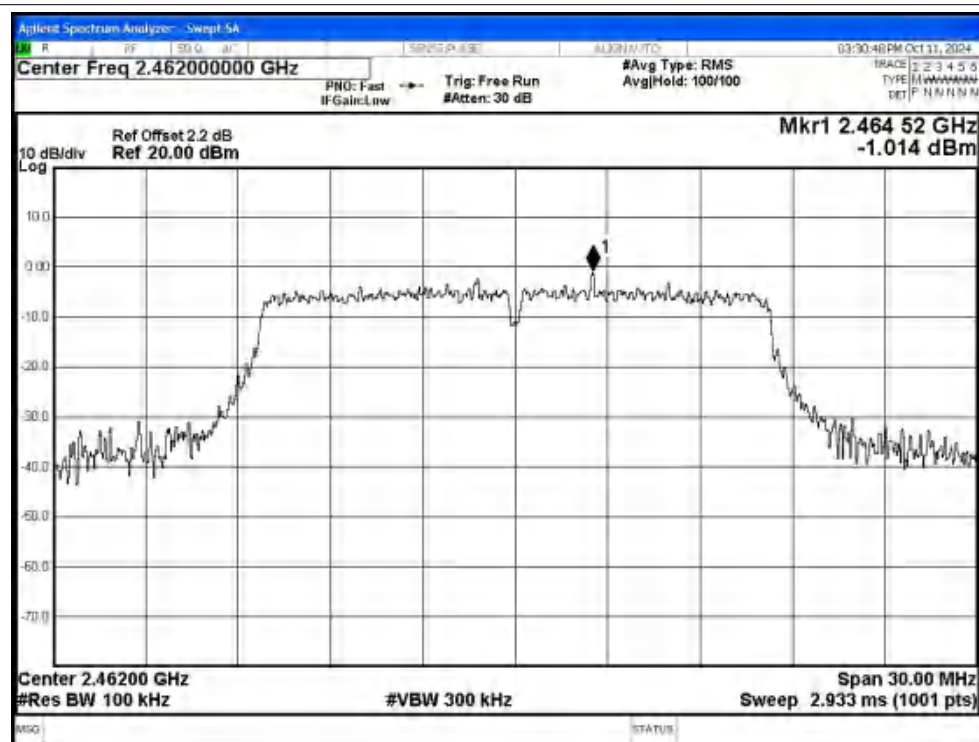


Tx. Spurious NVNT g 2437MHz Ant1 Emission

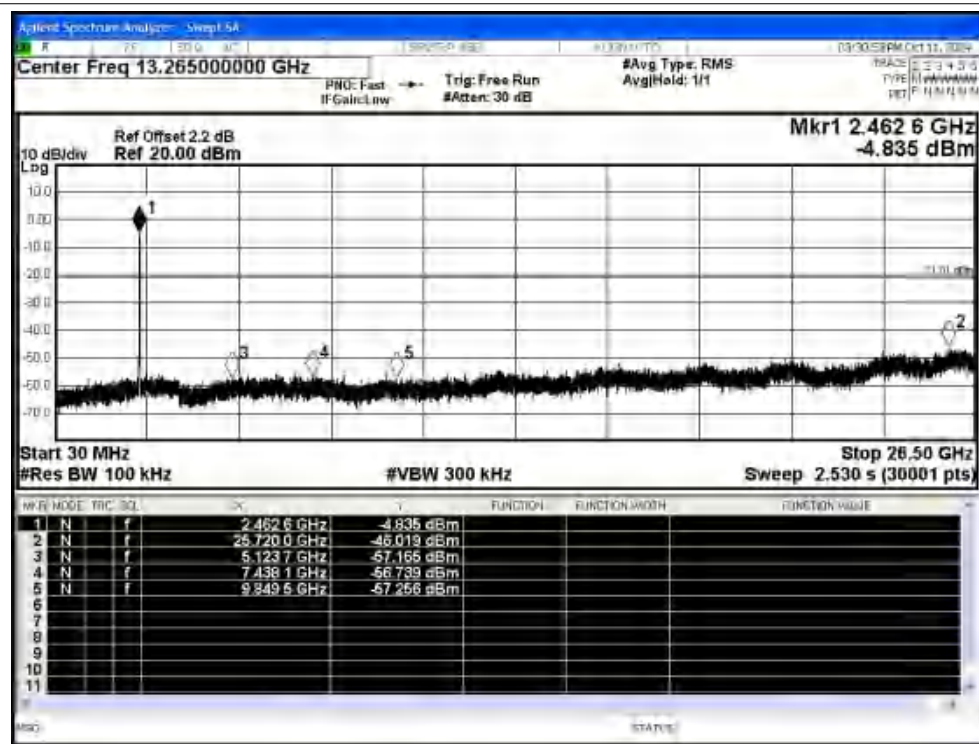


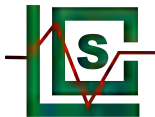


Tx. Spurious NVNT g 2462MHz Ant1 Ref

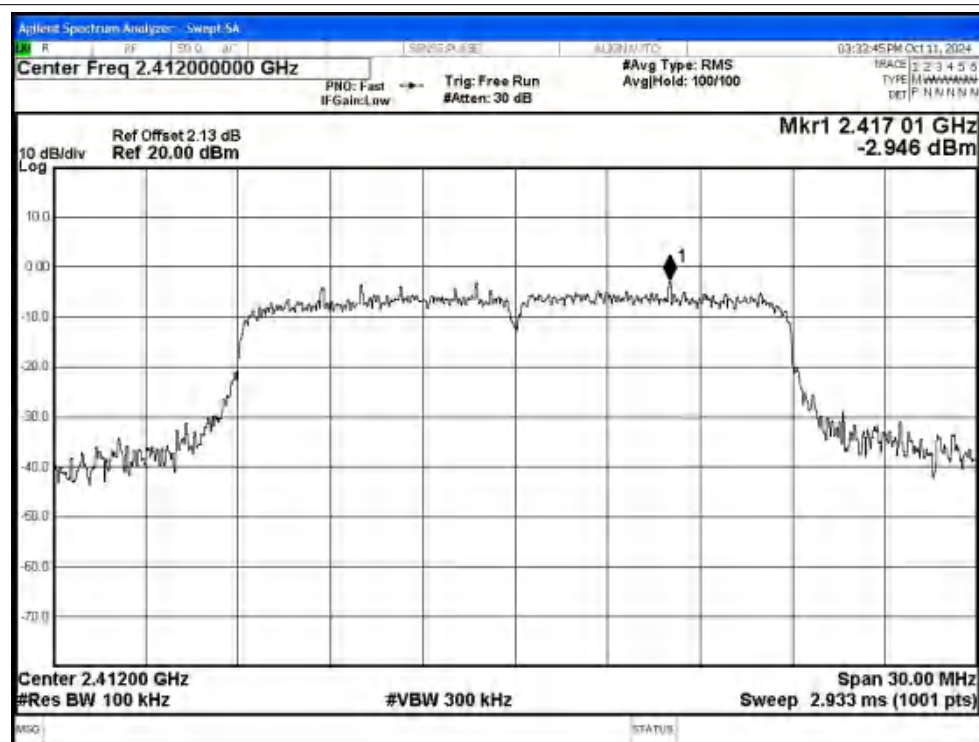


Tx. Spurious NVNT g 2462MHz Ant1 Emission

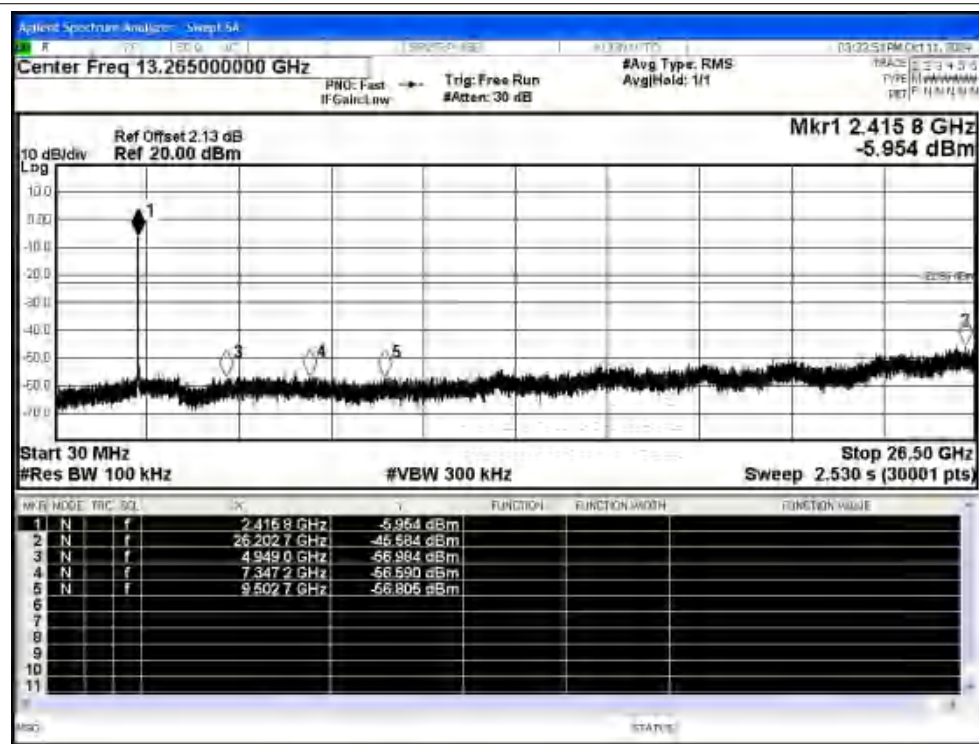


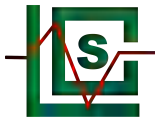


Tx. Spurious NVNT n20 2412MHz Ant1 Ref

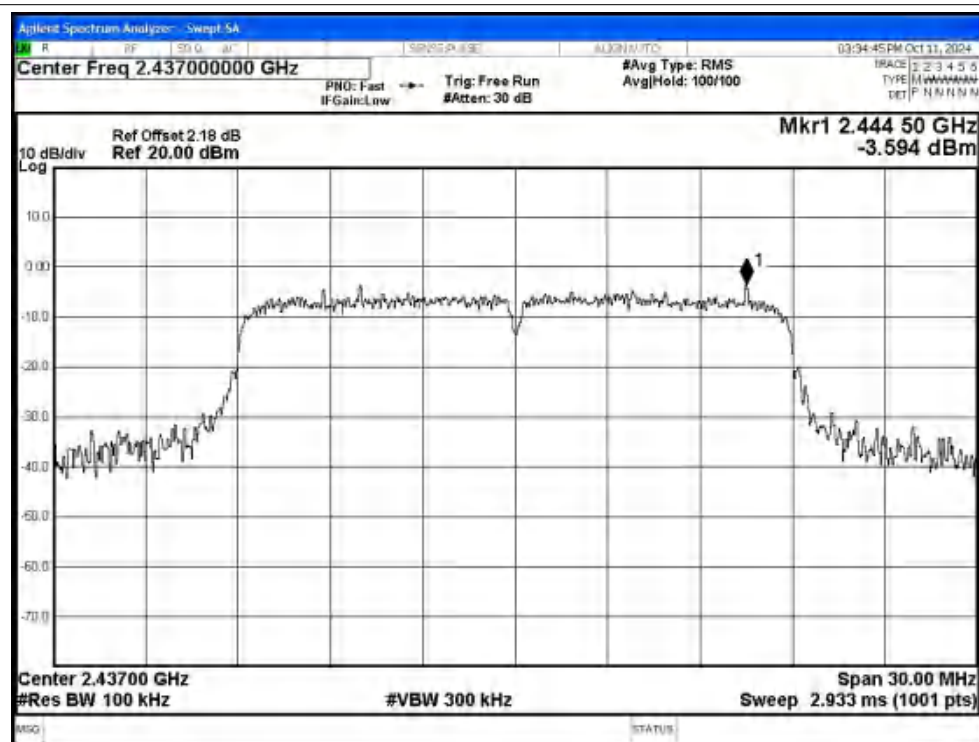


Tx. Spurious NVNT n20 2412MHz Ant1 Emission

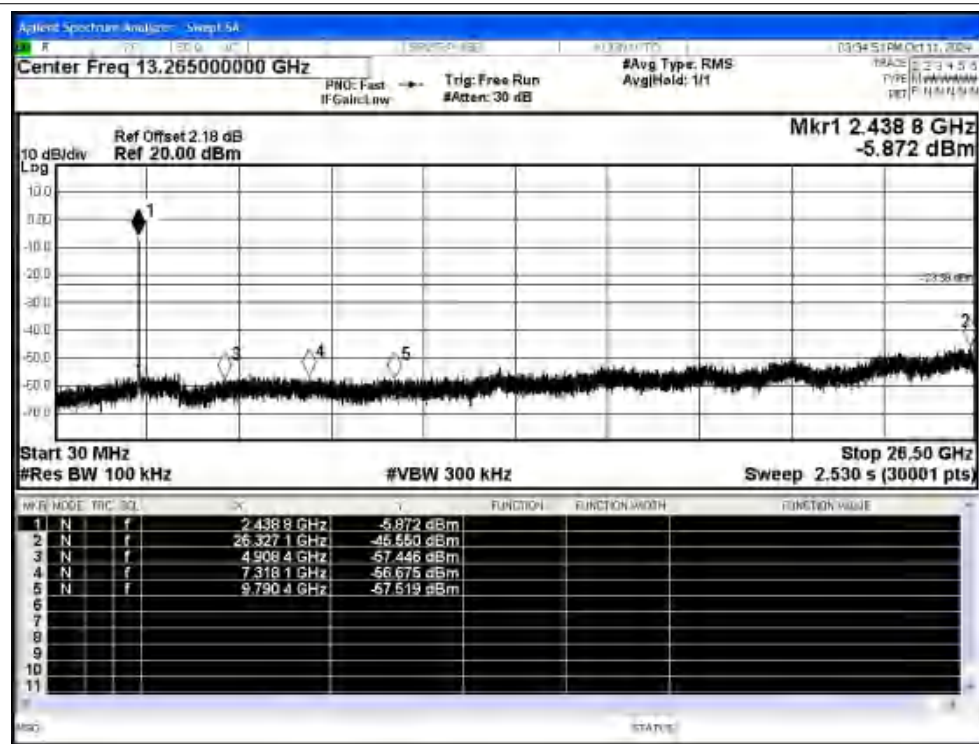


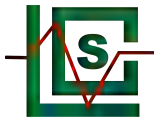


Tx. Spurious NVNT n20 2437MHz Ant1 Ref

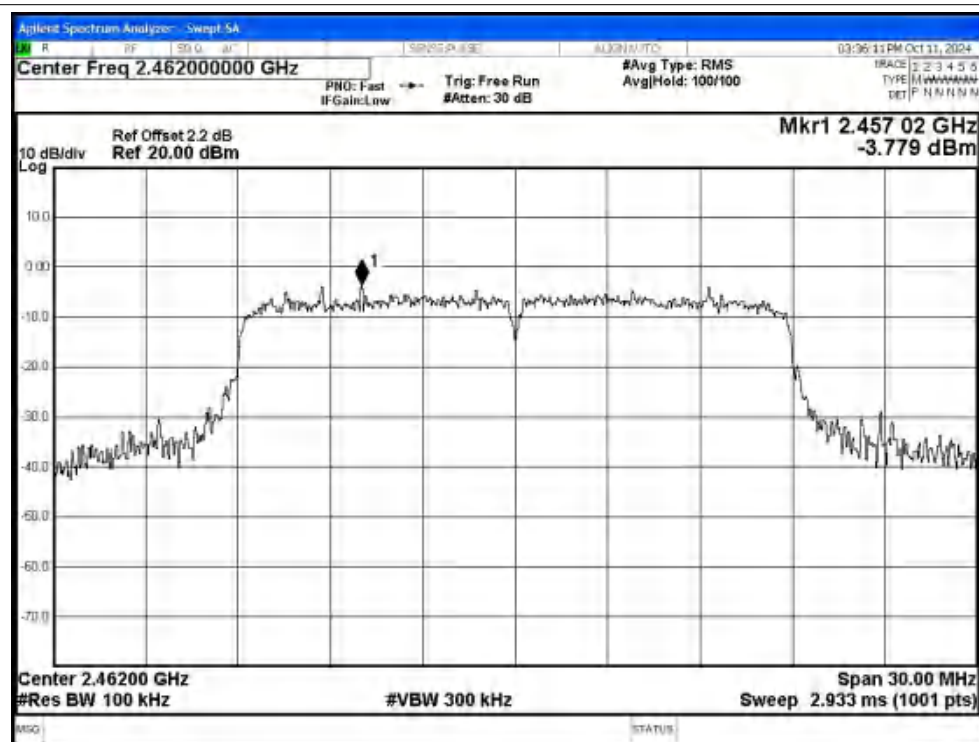


Tx. Spurious NVNT n20 2437MHz Ant1 Emission

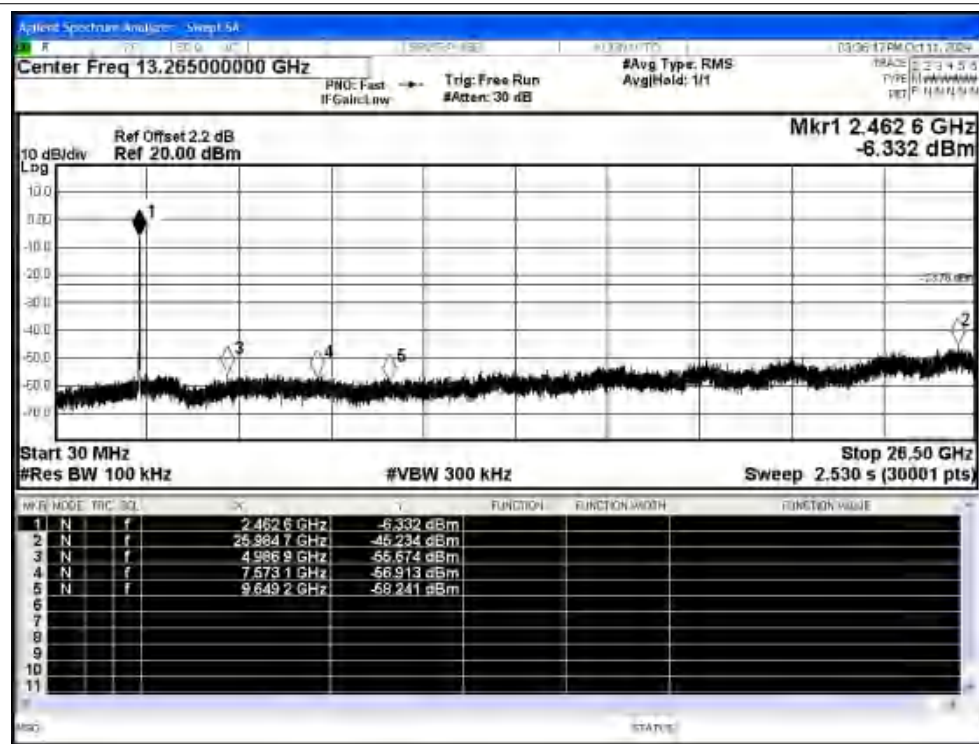


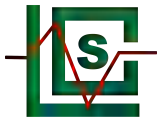


Tx. Spurious NVNT n20 2462MHz Ant1 Ref



Tx. Spurious NVNT n20 2462MHz Ant1 Emission

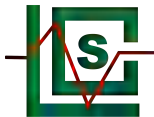




## A.6 Duty Cycle

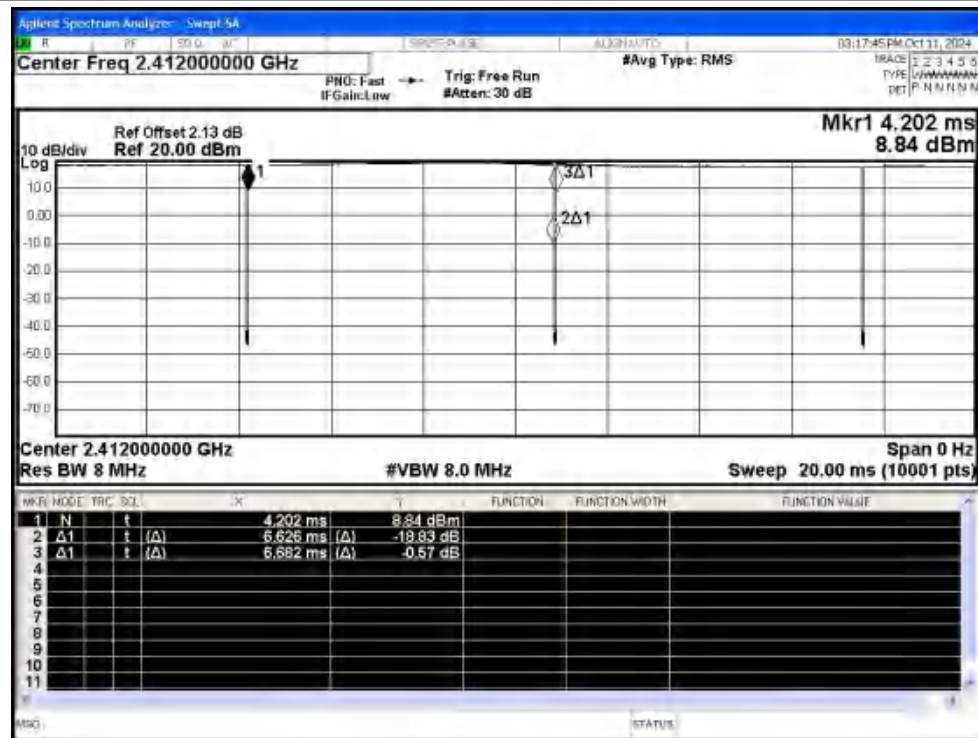
| Condition | Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | b    | 2412            | Ant1    | 99.16          | 0                      | 0.15      |
| NVNT      | b    | 2437            | Ant1    | 99.16          | 0                      | 0.15      |
| NVNT      | b    | 2462            | Ant1    | 99.13          | 0                      | 0.15      |
| NVNT      | g    | 2412            | Ant1    | 97.75          | 0.1                    | 0.37      |
| NVNT      | g    | 2437            | Ant1    | 97.68          | 0.1                    | 0.37      |
| NVNT      | g    | 2462            | Ant1    | 97.75          | 0.1                    | 0.37      |
| NVNT      | n20  | 2412            | Ant1    | 97.33          | 0.12                   | 0.44      |
| NVNT      | n20  | 2437            | Ant1    | 97.33          | 0.12                   | 0.44      |
| NVNT      | n20  | 2462            | Ant1    | 97.33          | 0.12                   | 0.44      |



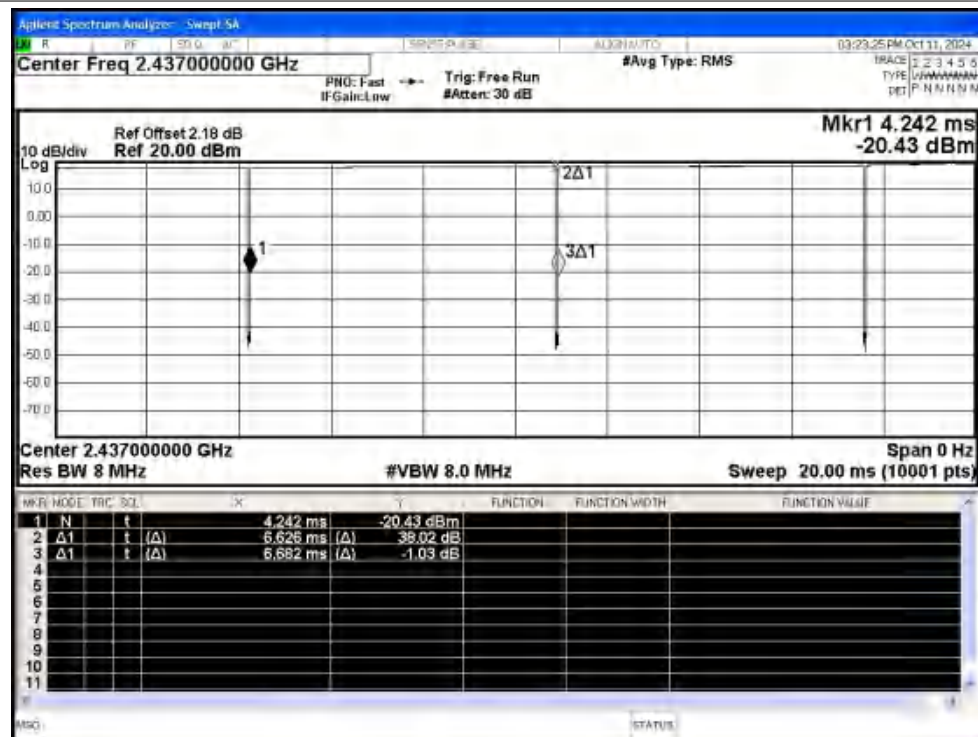


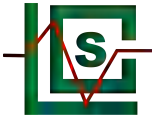
## Test Graphs

## Duty Cycle NVNT b 2412MHz Ant1

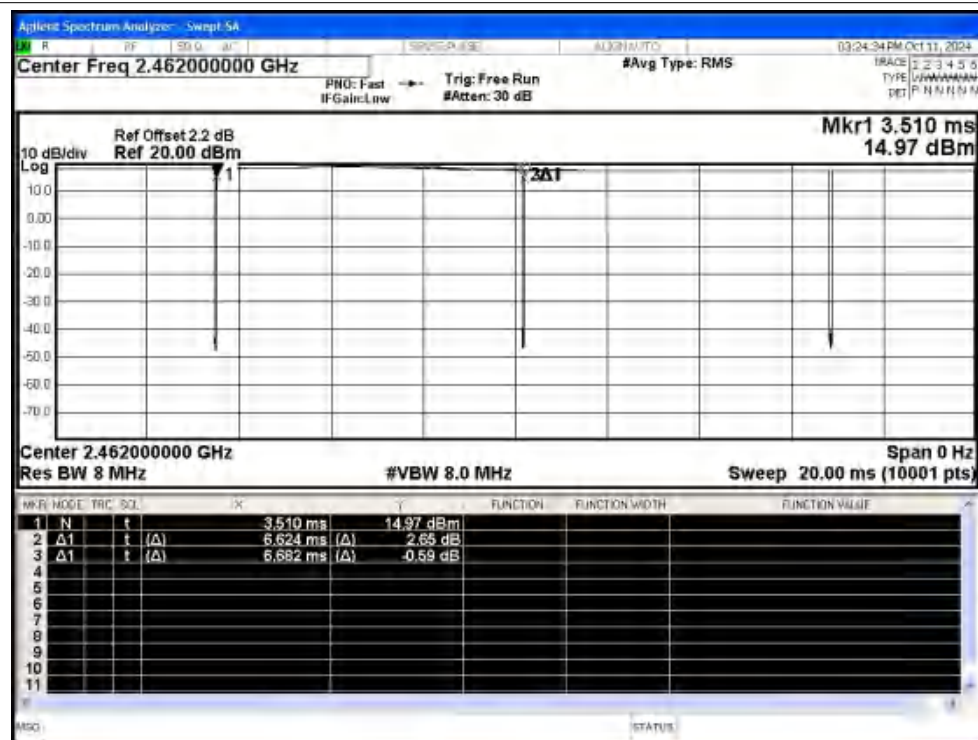


## Duty Cycle NVNT b 2437MHz Ant1

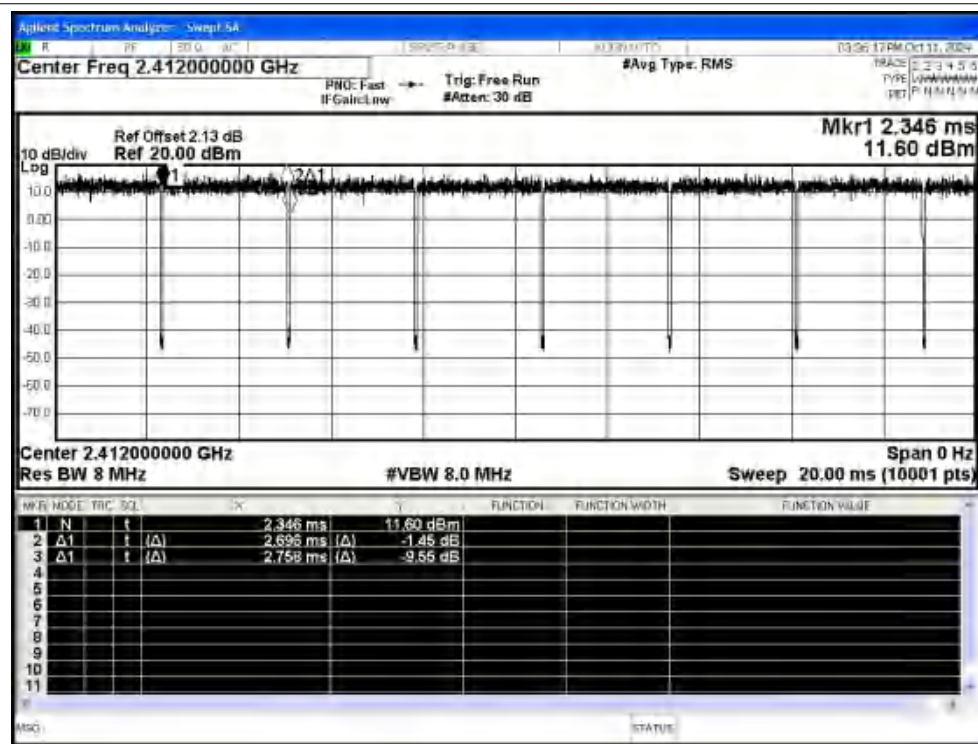


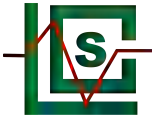


Duty Cycle NVNT b 2462MHz Ant1

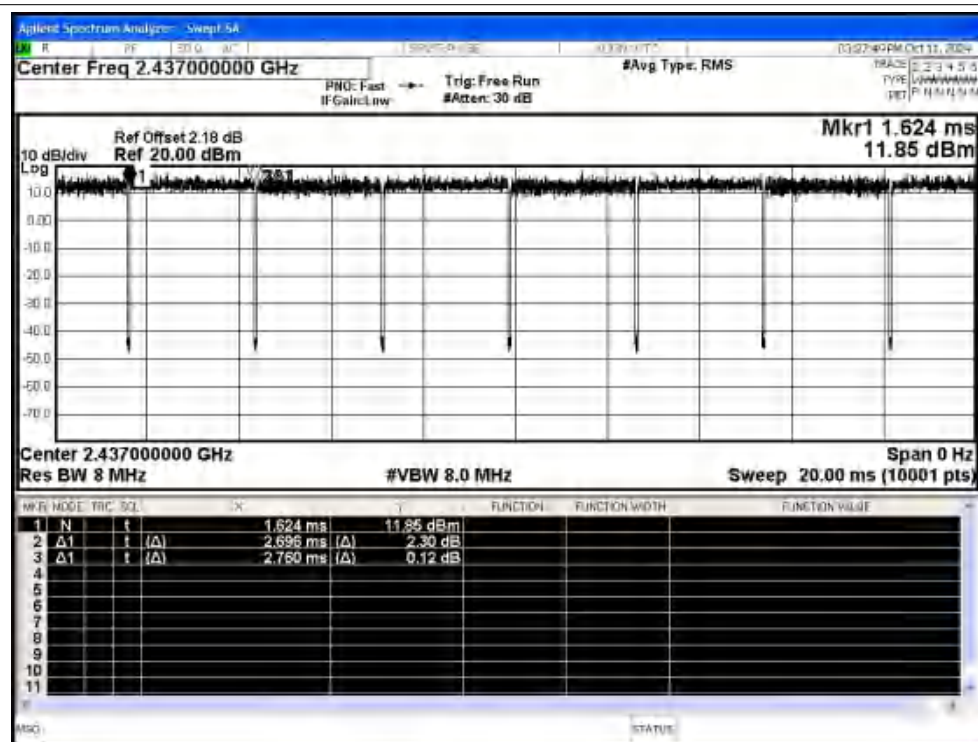


Duty Cycle NVNT g 2412MHz Ant1

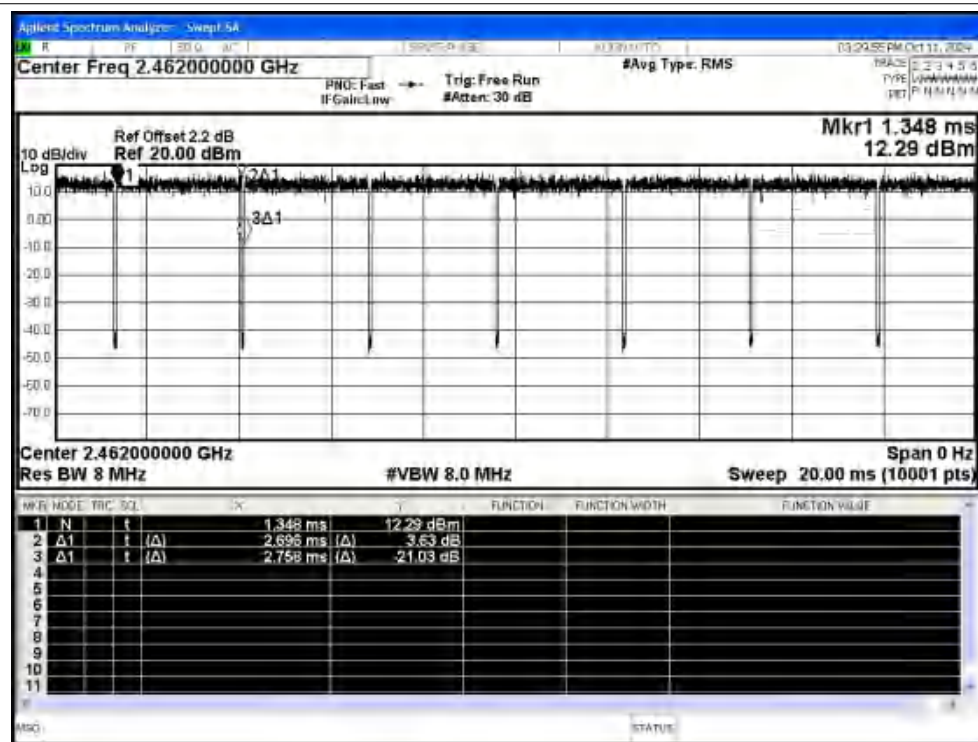




Duty Cycle NVNT g 2437MHz Ant1

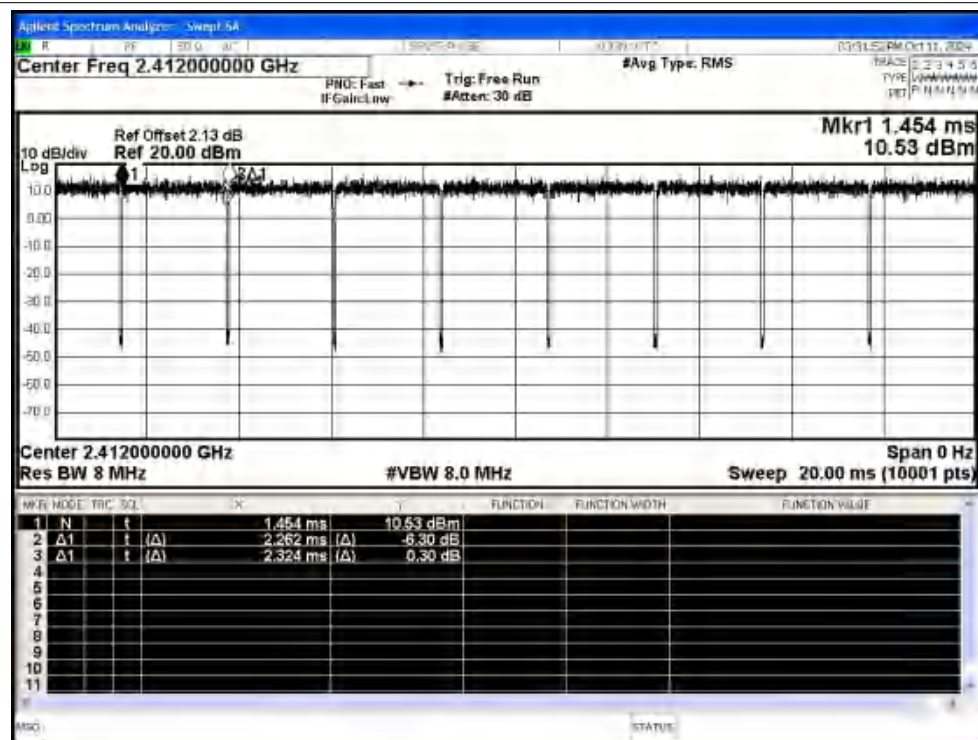


Duty Cycle NVNT g 2462MHz Ant1

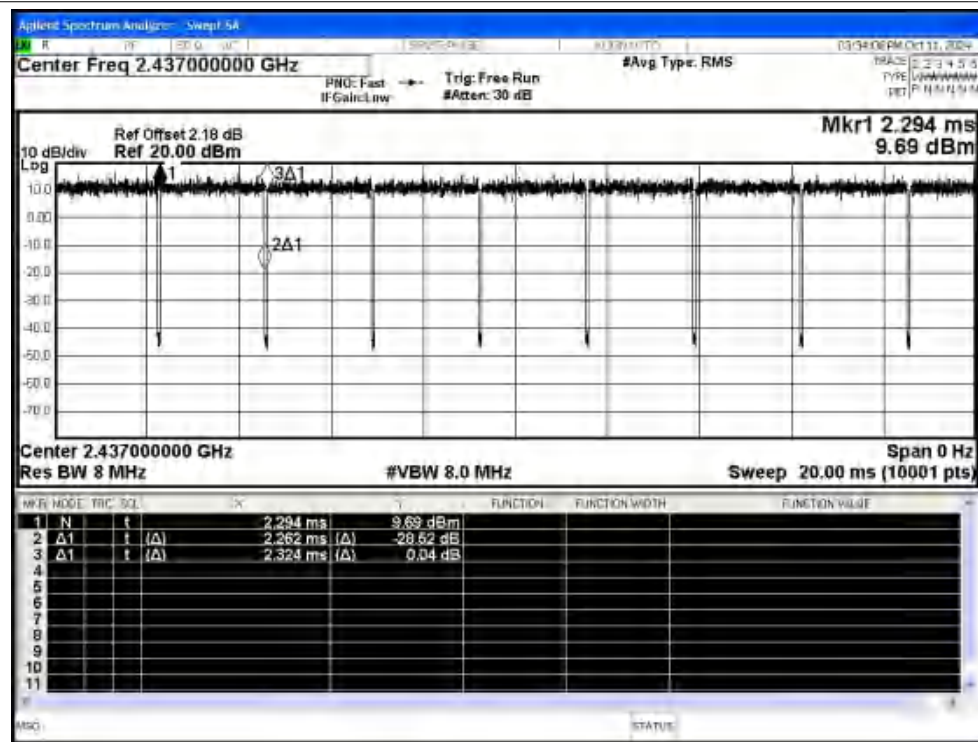


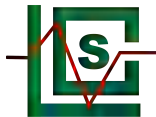


Duty Cycle NVNT n20 2412MHz Ant1

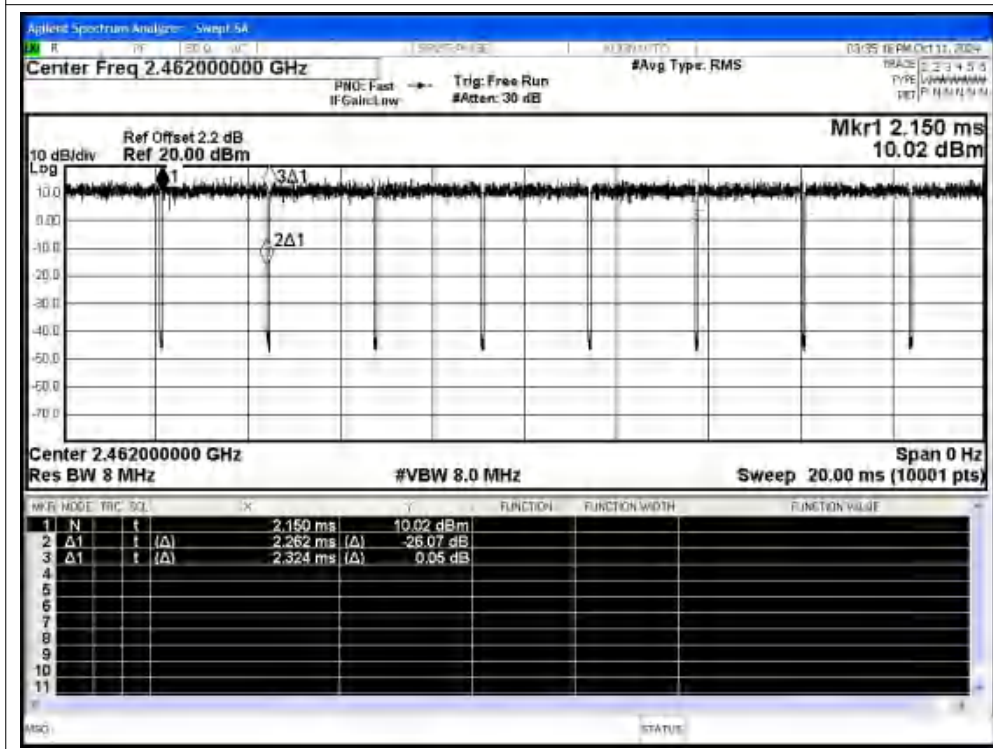


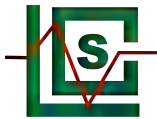
Duty Cycle NVNT n20 2437MHz Ant1





## Duty Cycle NVNT n20 2462MHz Ant1





## A.7 Restrict Band

| Condition | Mode | Frequency (MHz) | Antenna | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | Duty Factor (dB) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|-----------|------|-----------------|---------|-----------------|-------------|------------|------------------|------------|----------|----------------|---------|
| NVNT      | b    | 2412            | Ant1    | 2310            | -49.69      | 2          | -                | 47.57      | Peak     | 74             | Pass    |
| NVNT      | b    | 2412            | Ant1    | 2310            | -58.73      | 2          | 0                | 38.53      | Average  | 54             | Pass    |
| NVNT      | b    | 2412            | Ant1    | 2387.688        | -47.14      | 2          | -                | 50.12      | Peak     | 74             | Pass    |
| NVNT      | b    | 2412            | Ant1    | 2389.794        | -56.3       | 2          | 0                | 40.96      | Average  | 54             | Pass    |
| NVNT      | b    | 2412            | Ant1    | 2390            | -47.55      | 2          | -                | 49.71      | Peak     | 74             | Pass    |
| NVNT      | b    | 2412            | Ant1    | 2390            | -56.06      | 2          | 0                | 41.2       | Average  | 54             | Pass    |
| NVNT      | b    | 2462            | Ant1    | 2483.5          | -45.83      | 2          | -                | 51.43      | Peak     | 74             | Pass    |
| NVNT      | b    | 2462            | Ant1    | 2483.5          | -53.98      | 2          | 0                | 43.28      | Average  | 54             | Pass    |
| NVNT      | b    | 2462            | Ant1    | 2484.365        | -43.04      | 2          | -                | 54.22      | Peak     | 74             | Pass    |
| NVNT      | b    | 2462            | Ant1    | 2483.623        | -53.7       | 2          | 0                | 43.56      | Average  | 54             | Pass    |
| NVNT      | b    | 2462            | Ant1    | 2500            | -47.8       | 2          | -                | 49.46      | Peak     | 74             | Pass    |
| NVNT      | b    | 2462            | Ant1    | 2500            | -57.99      | 2          | 0                | 39.27      | Average  | 54             | Pass    |
| NVNT      | g    | 2412            | Ant1    | 2310            | -50.9       | 2          | -                | 46.36      | Peak     | 74             | Pass    |
| NVNT      | g    | 2412            | Ant1    | 2310            | -58.8       | 2          | 0.1              | 38.56      | Average  | 54             | Pass    |
| NVNT      | g    | 2412            | Ant1    | 2388.858        | -34.27      | 2          | -                | 62.99      | Peak     | 74             | Pass    |
| NVNT      | g    | 2412            | Ant1    | 2388.741        | -52.67      | 2          | 0.1              | 44.69      | Average  | 54             | Pass    |
| NVNT      | g    | 2412            | Ant1    | 2390            | -38.1       | 2          | -                | 59.16      | Peak     | 74             | Pass    |
| NVNT      | g    | 2412            | Ant1    | 2390            | -53.18      | 2          | 0.1              | 44.18      | Average  | 54             | Pass    |
| NVNT      | g    | 2462            | Ant1    | 2483.5          | -38.26      | 2          | -                | 59         | Peak     | 74             | Pass    |
| NVNT      | g    | 2462            | Ant1    | 2483.5          | -55.58      | 2          | 0.1              | 41.78      | Average  | 54             | Pass    |
| NVNT      | g    | 2462            | Ant1    | 2484.471        | -37.9       | 2          | -                | 59.36      | Peak     | 74             | Pass    |
| NVNT      | g    | 2462            | Ant1    | 2483.835        | -54.02      | 2          | 0.1              | 43.34      | Average  | 54             | Pass    |
| NVNT      | g    | 2462            | Ant1    | 2500            | -50.51      | 2          | -                | 46.75      | Peak     | 74             | Pass    |
| NVNT      | g    | 2462            | Ant1    | 2500            | -58.21      | 2          | 0.1              | 39.15      | Average  | 54             | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 2310            | -50.37      | 2          | -                | 46.89      | Peak     | 74             | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 2310            | -58.8       | 2          | 0.12             | 38.58      | Average  | 54             | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 2389.56         | -35.81      | 2          | -                | 61.45      | Peak     | 74             | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 2389.443        | -52.42      | 2          | 0.12             | 44.96      | Average  | 54             | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 2390            | -35.94      | 2          | -                | 61.32      | Peak     | 74             | Pass    |
| NVNT      | n20  | 2412            | Ant1    | 2390            | -54.41      | 2          | 0.12             | 42.97      | Average  | 54             | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 2483.5          | -38.9       | 2          | -                | 58.36      | Peak     | 74             | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 2483.5          | -54.76      | 2          | 0.12             | 42.62      | Average  | 54             | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 2484.047        | -37.67      | 2          | -                | 59.59      | Peak     | 74             | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 2483.888        | -52.12      | 2          | 0.12             | 45.26      | Average  | 54             | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 2500            | -49.35      | 2          | -                | 47.91      | Peak     | 74             | Pass    |
| NVNT      | n20  | 2462            | Ant1    | 2500            | -58.16      | 2          | 0.12             | 39.22      | Average  | 54             | Pass    |

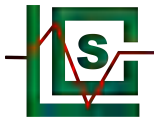


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

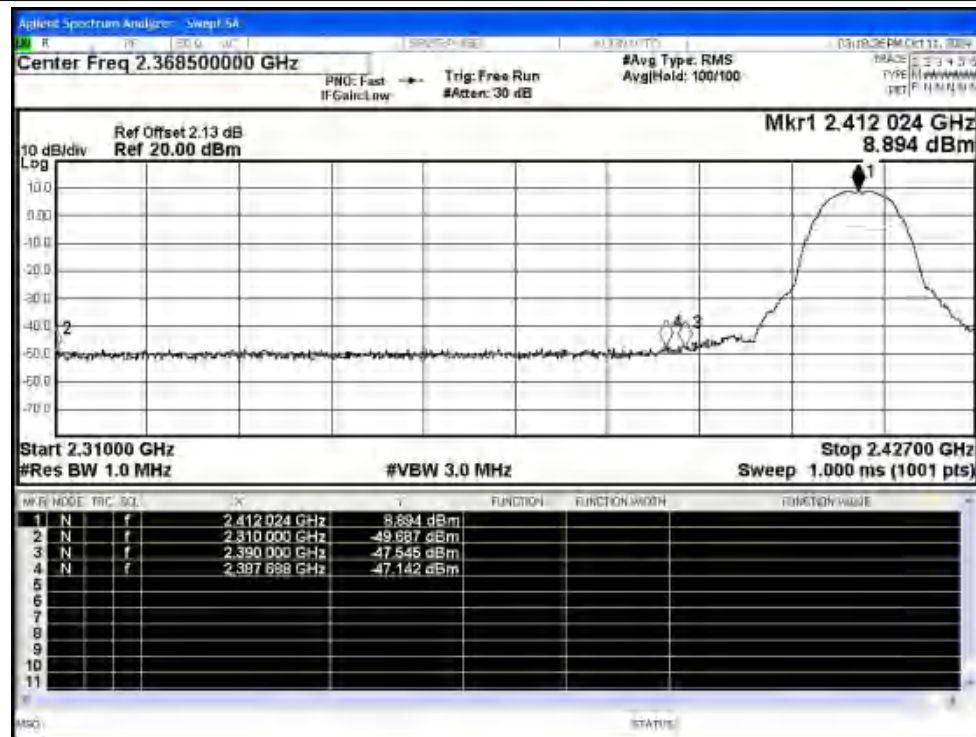
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

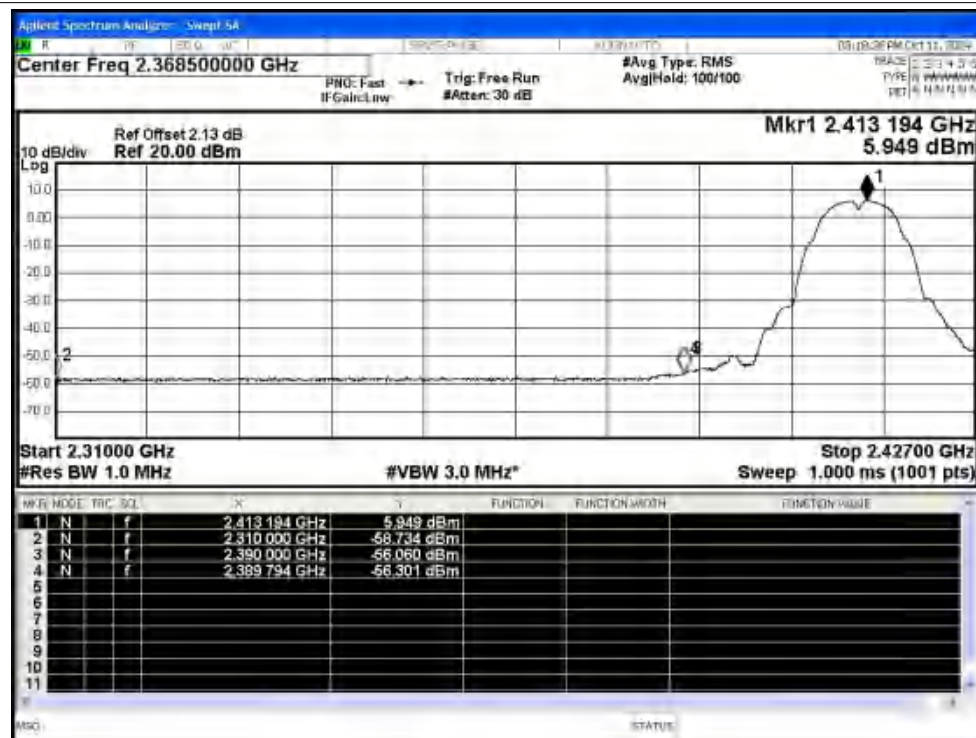


## Test Graphs

## Restrict Band NVNT b 2412MHz Ant1 Peak

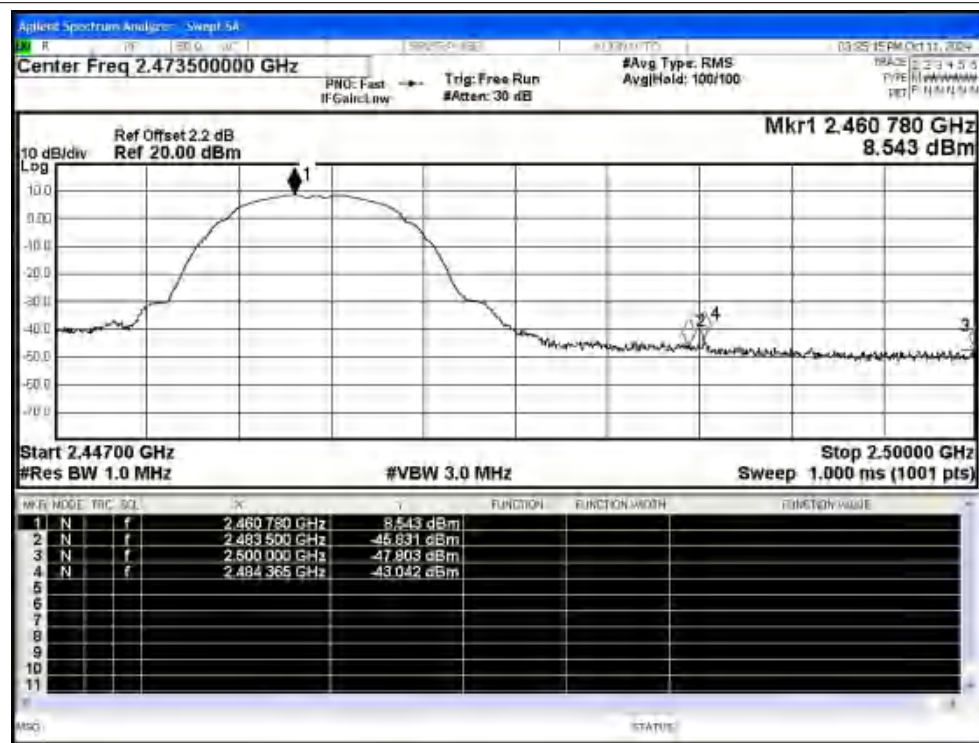


## Restrict Band NVNT b 2412MHz Ant1 Average

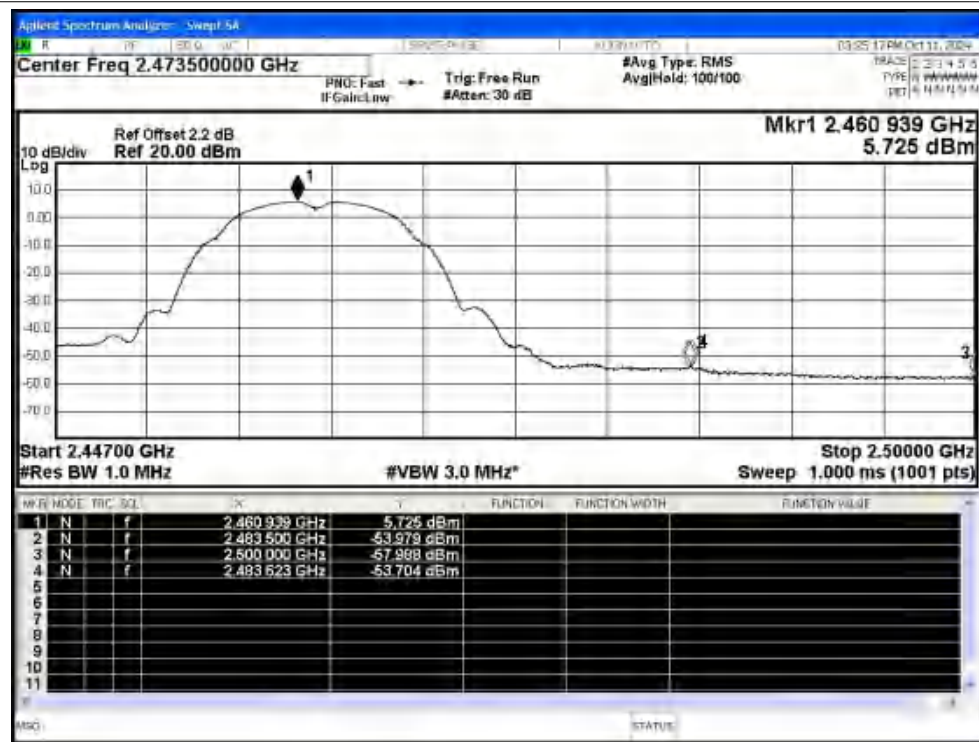


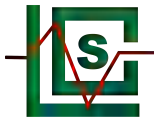


## Restrict Band NVNT b 2462MHz Ant1 Peak



## Restrict Band NVNT b 2462MHz Ant1 Average



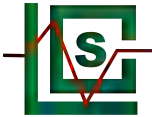


## Restrict Band NVNT g 2412MHz Ant1 Peak



## Restrict Band NVNT g 2412MHz Ant1 Average

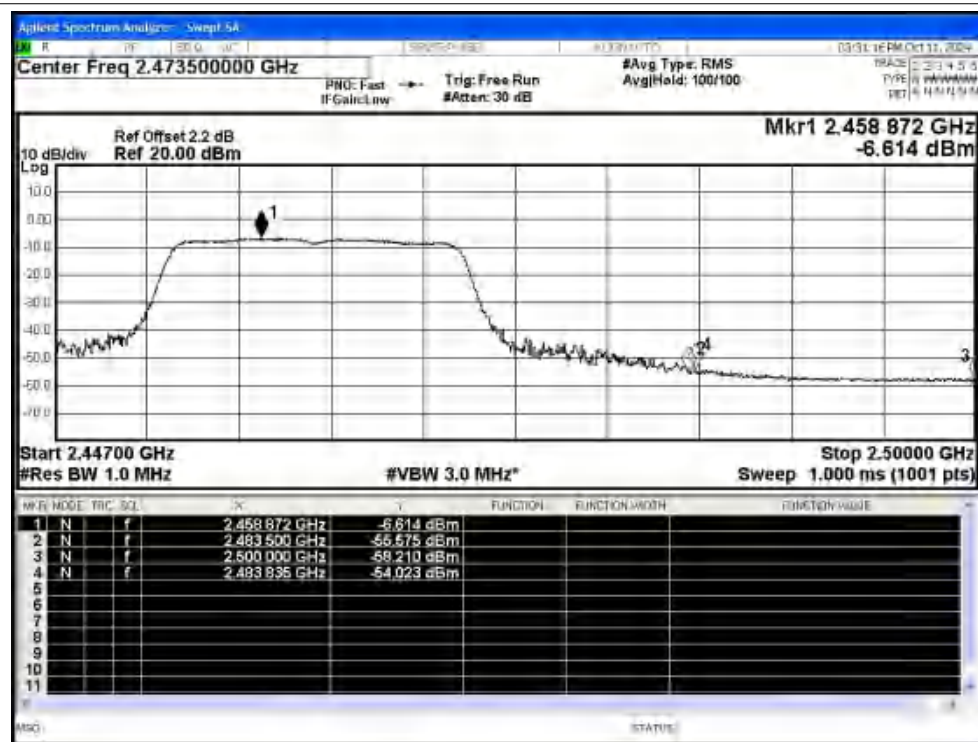


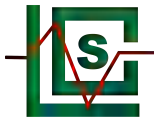


Restrict Band NVNT g 2462MHz Ant1 Peak

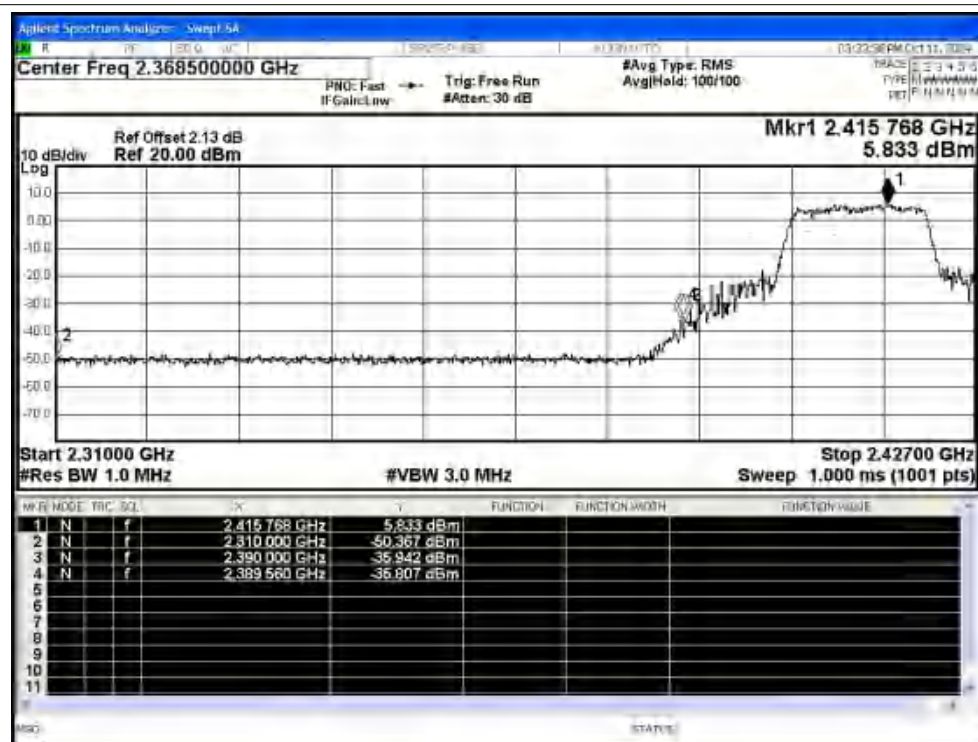


Restrict Band NVNT g 2462MHz Ant1 Average

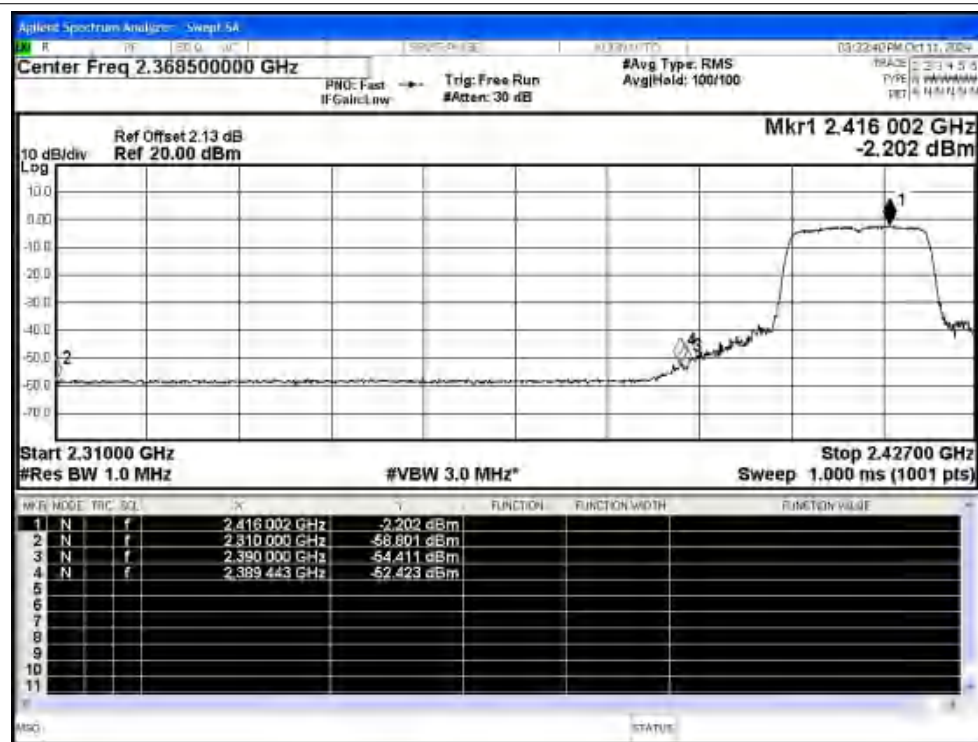


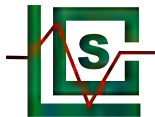


## Restrict Band NVNT n20 2412MHz Ant1 Peak

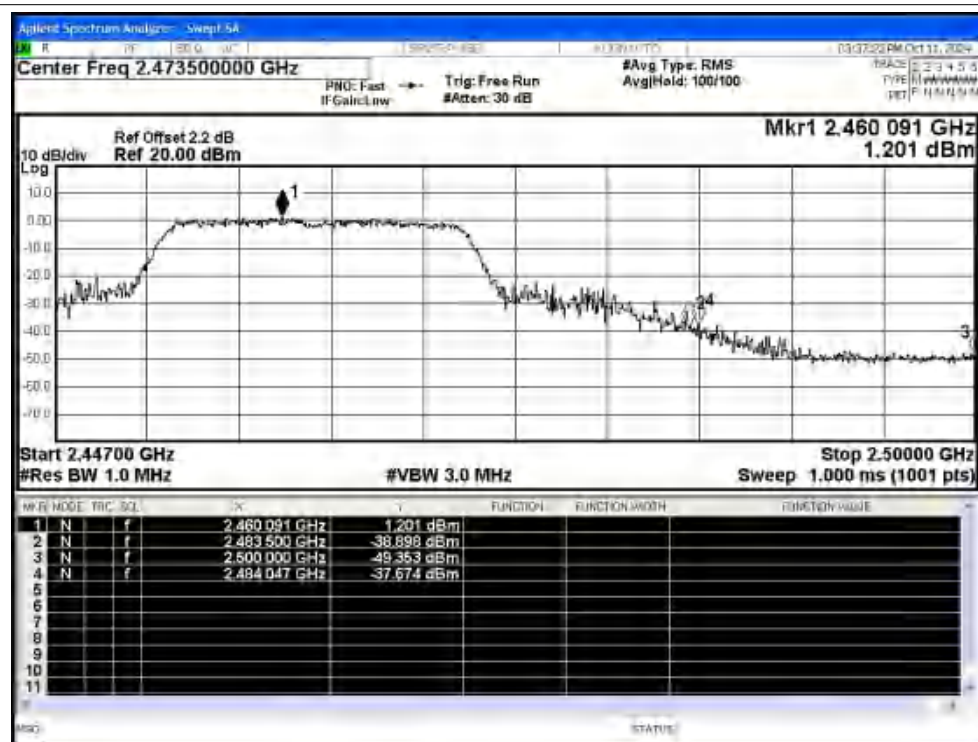


## Restrict Band NVNT n20 2412MHz Ant1 Average





## Restrict Band NVNT n20 2462MHz Ant1 Peak



## Restrict Band NVNT n20 2462MHz Ant1 Average

