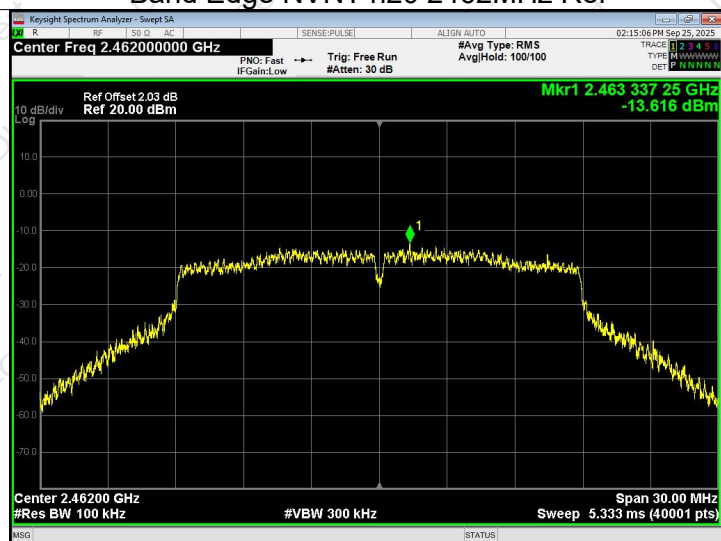
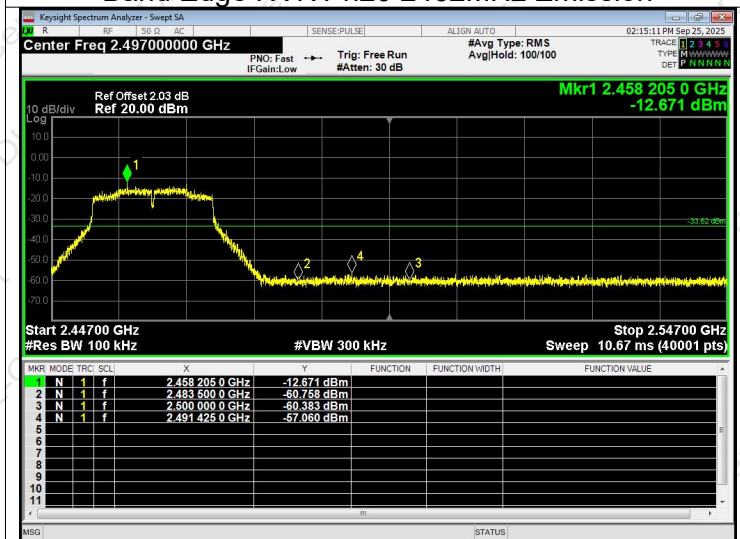




## Band Edge NVNT n20 2462MHz Ref

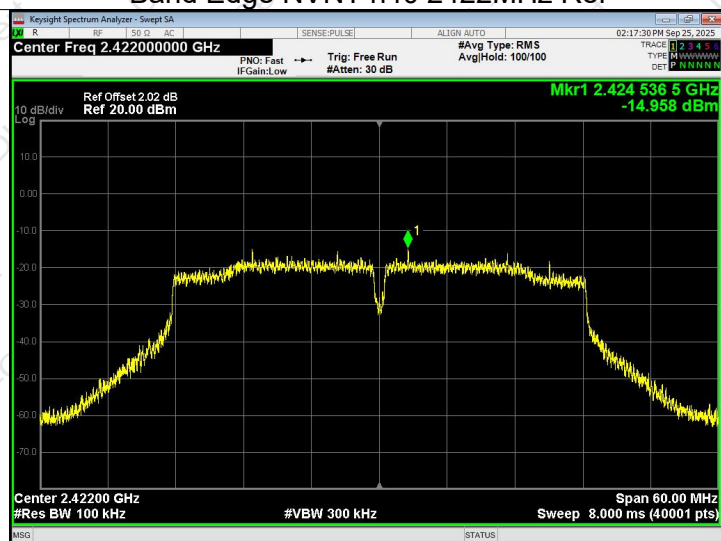


## Band Edge NVNT n20 2462MHz Emission

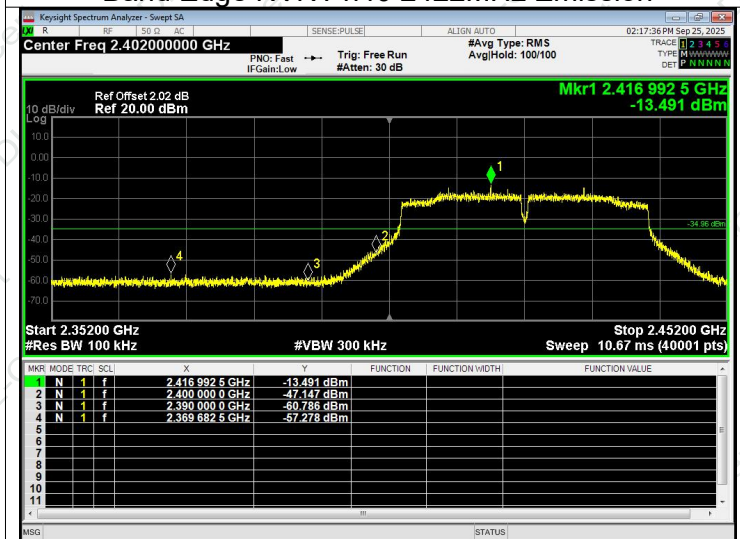




## Band Edge NVNT n40 2422MHz Ref

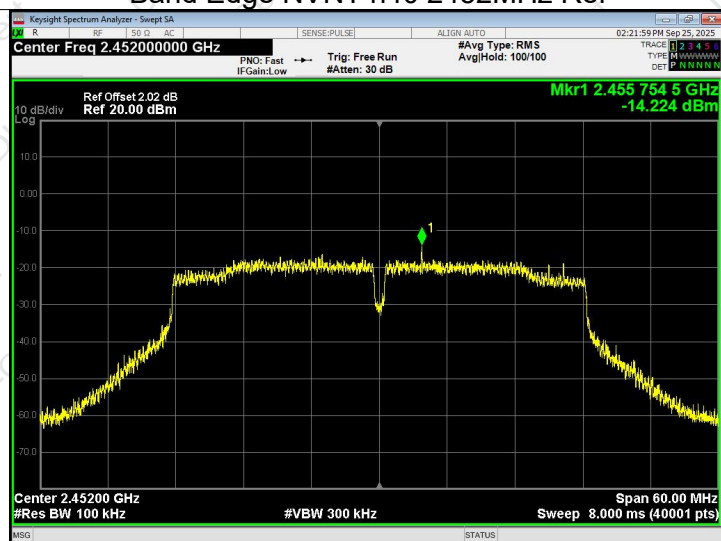


## Band Edge NVNT n40 2422MHz Emission

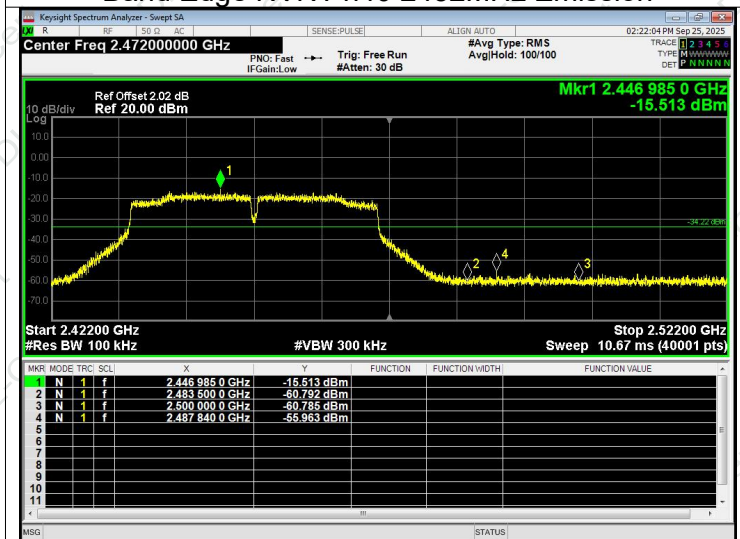




## Band Edge NVNT n40 2452MHz Ref



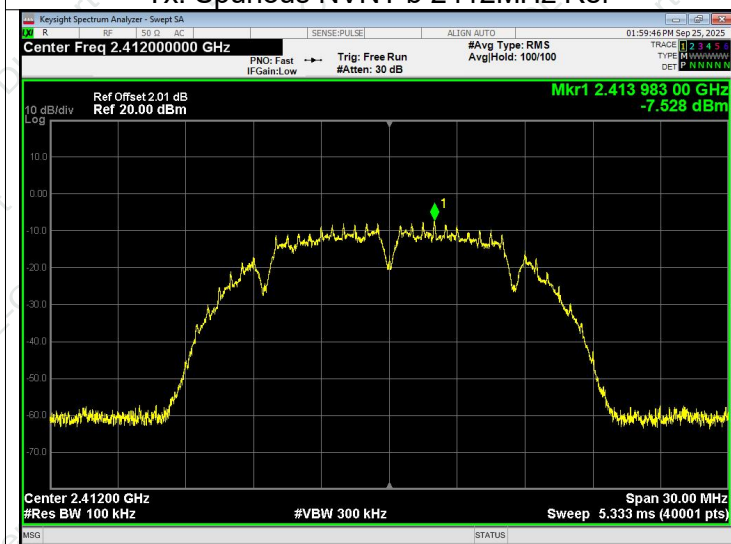
## Band Edge NVNT n40 2452MHz Emission



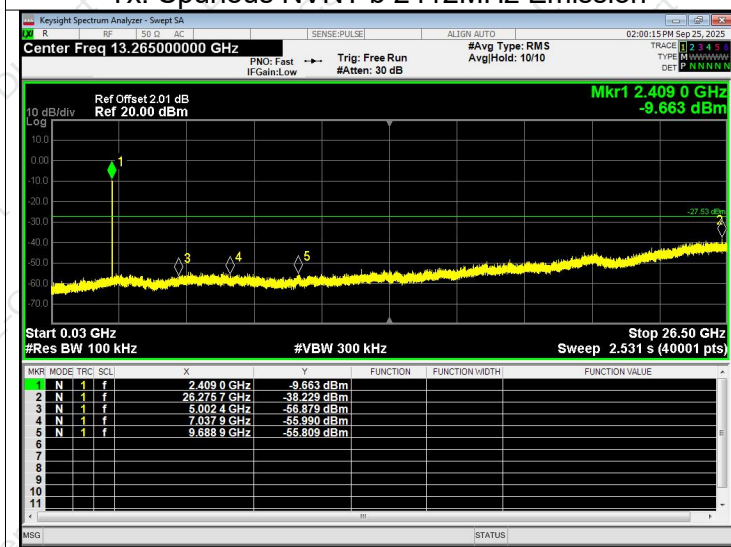


## Test Graphs

## Tx. Spurious NVNT b 2412MHz Ref

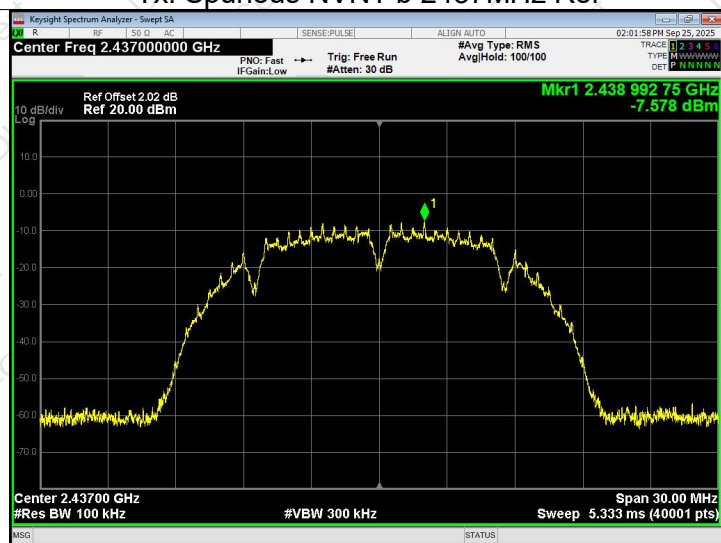


## Tx. Spurious NVNT b 2412MHz Emission

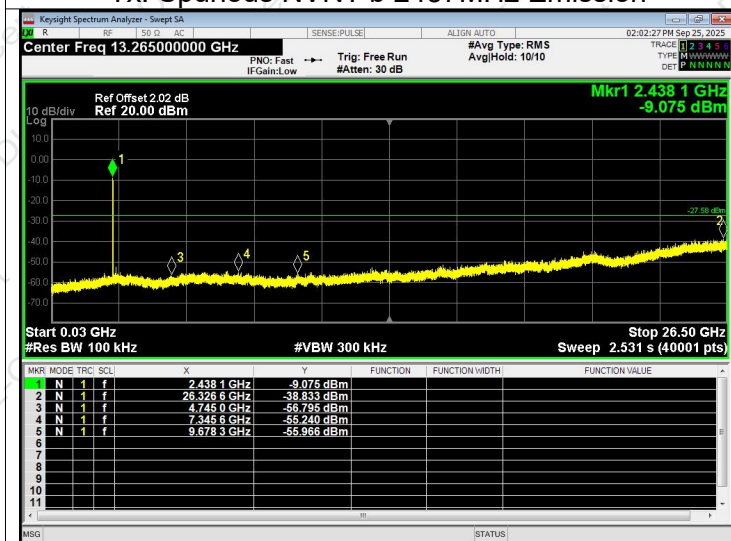




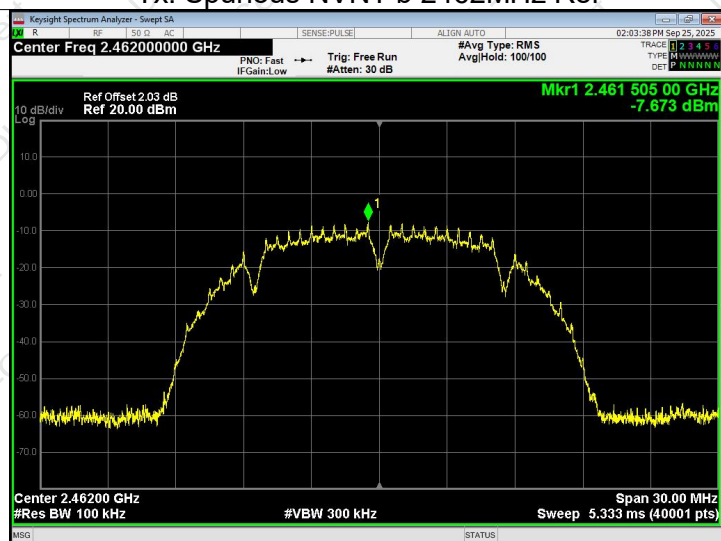
## Tx. Spurious NVNT b 2437MHz Ref



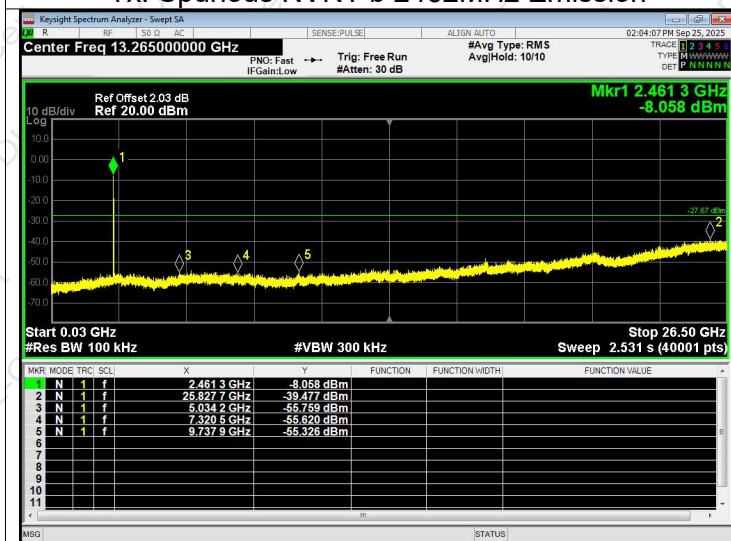
## Tx. Spurious NVNT b 2437MHz Emission



## Tx. Spurious NVNT b 2462MHz Ref

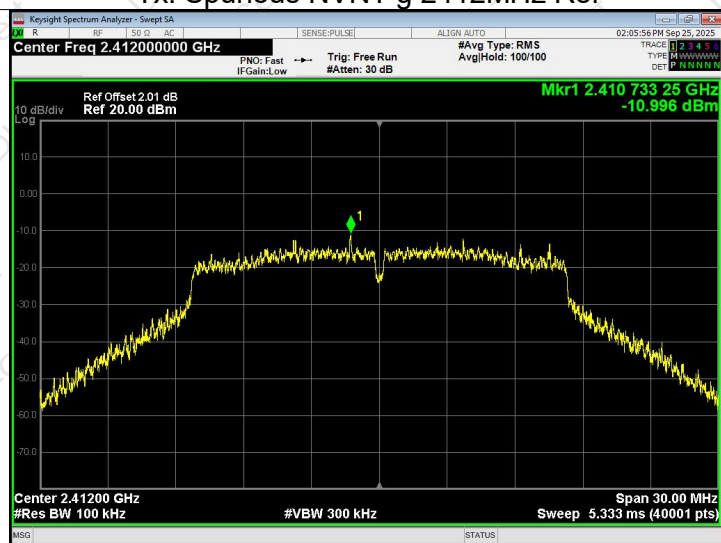


## Tx. Spurious NVNT b 2462MHz Emission

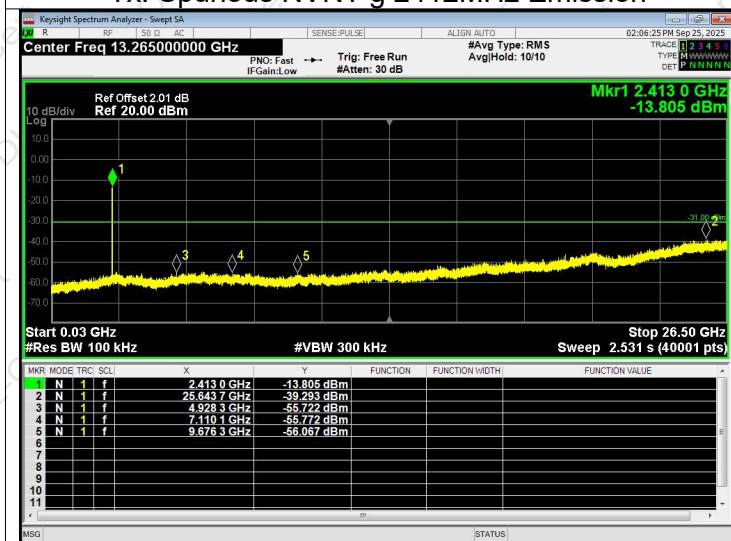




## Tx. Spurious NVNT g 2412MHz Ref

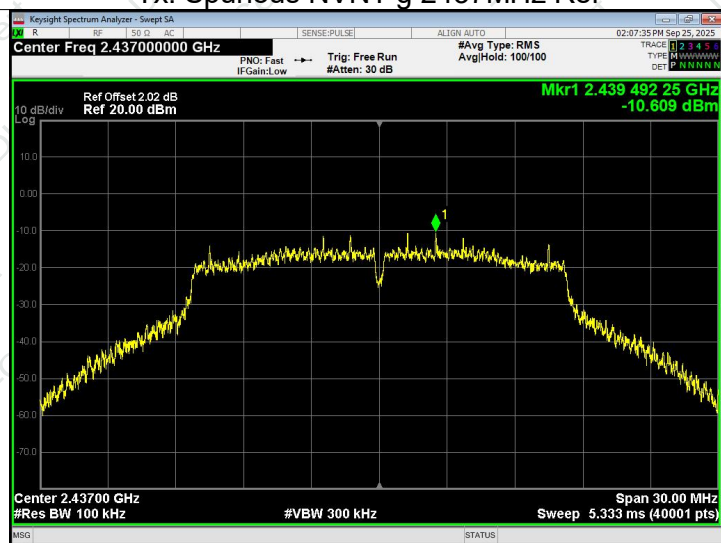


## Tx. Spurious NVNT g 2412MHz Emission

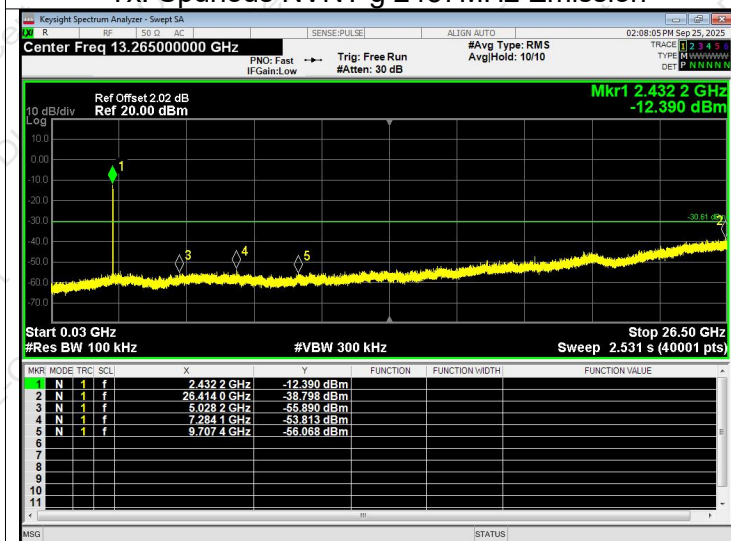




## Tx. Spurious NVNT g 2437MHz Ref

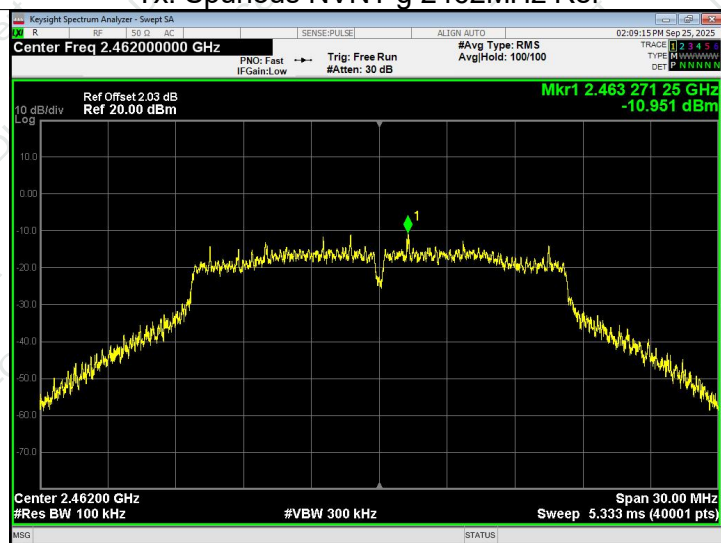


## Tx. Spurious NVNT g 2437MHz Emission

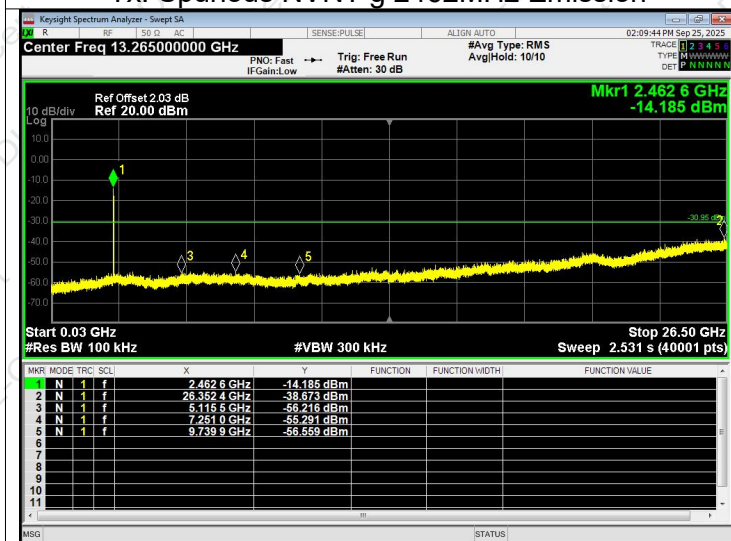




## Tx. Spurious NVNT g 2462MHz Ref

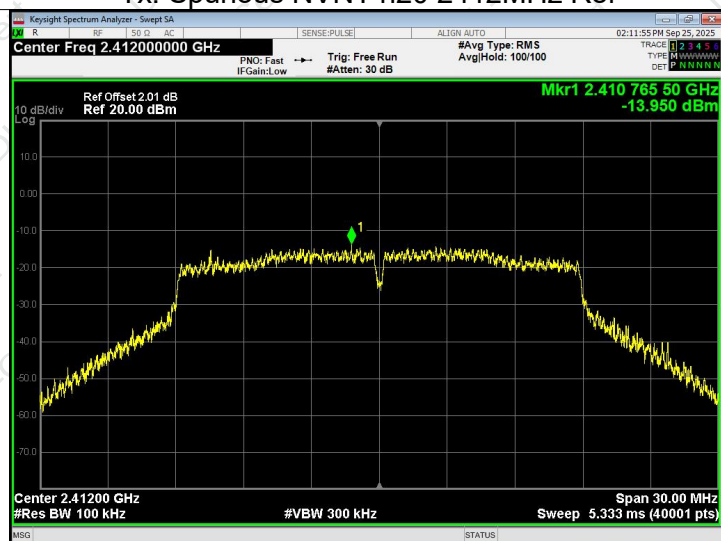


## Tx. Spurious NVNT g 2462MHz Emission

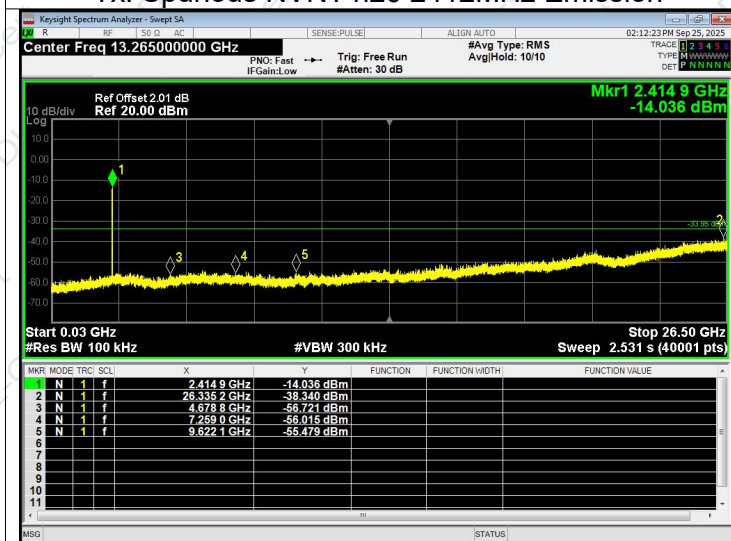




## Tx. Spurious NVNT n20 2412MHz Ref

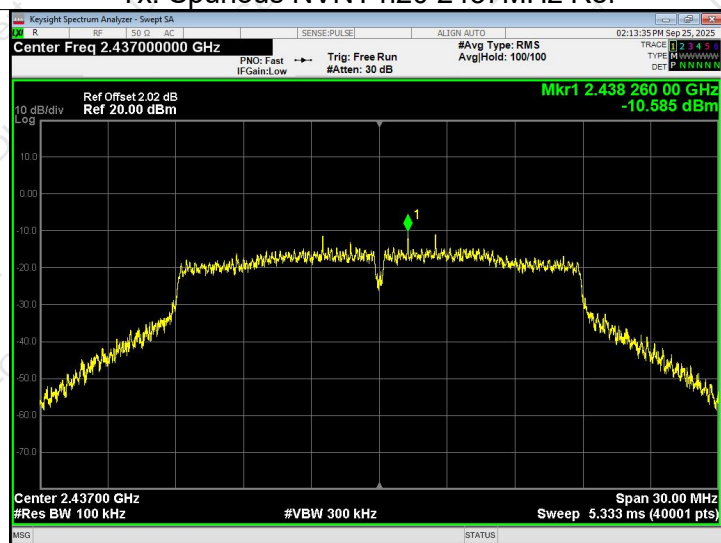


## Tx. Spurious NVNT n20 2412MHz Emission

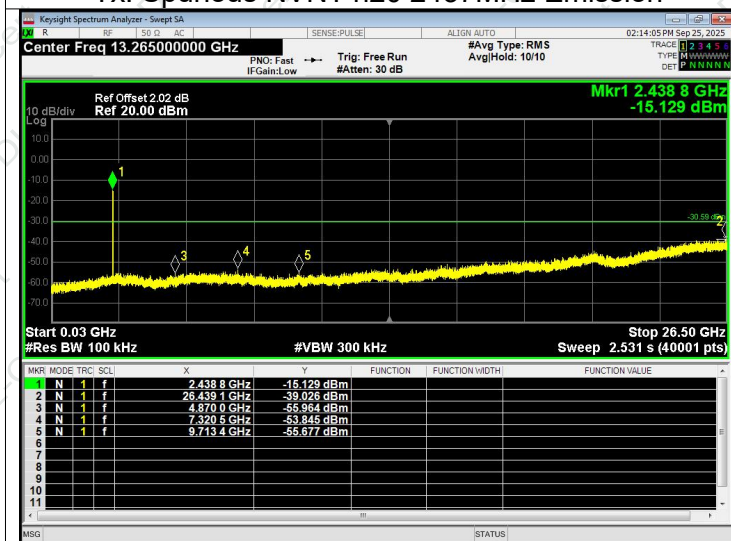




## Tx. Spurious NVNT n20 2437MHz Ref

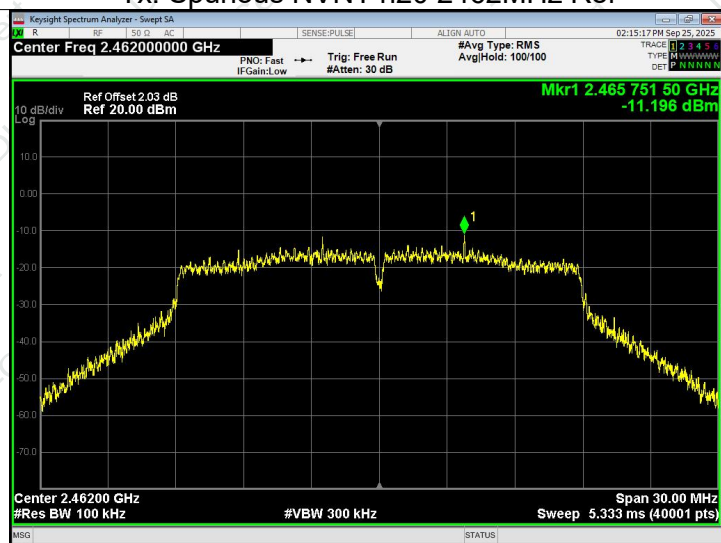


## Tx. Spurious NVNT n20 2437MHz Emission

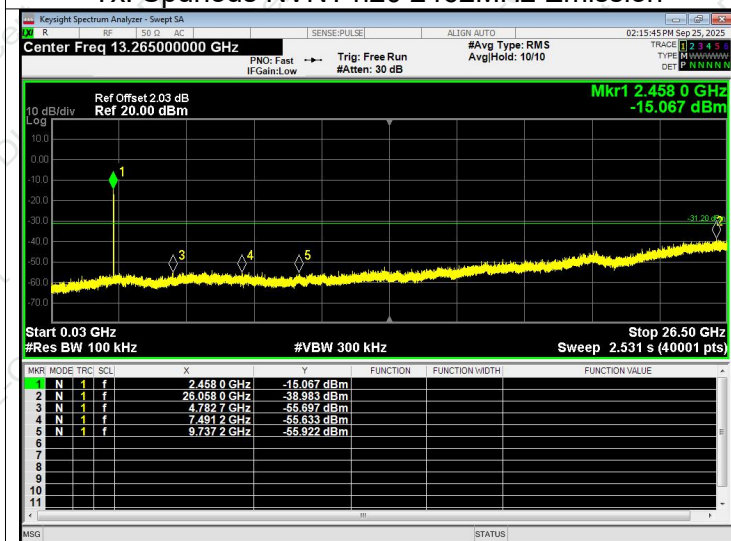




## Tx. Spurious NVNT n20 2462MHz Ref

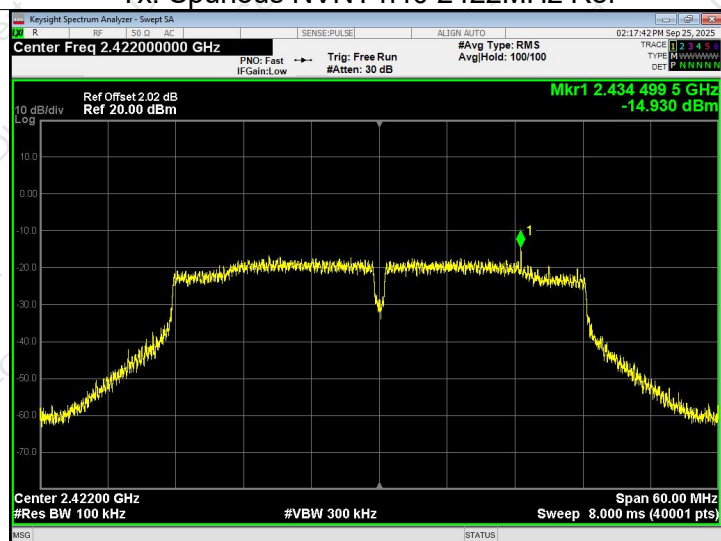


## Tx. Spurious NVNT n20 2462MHz Emission

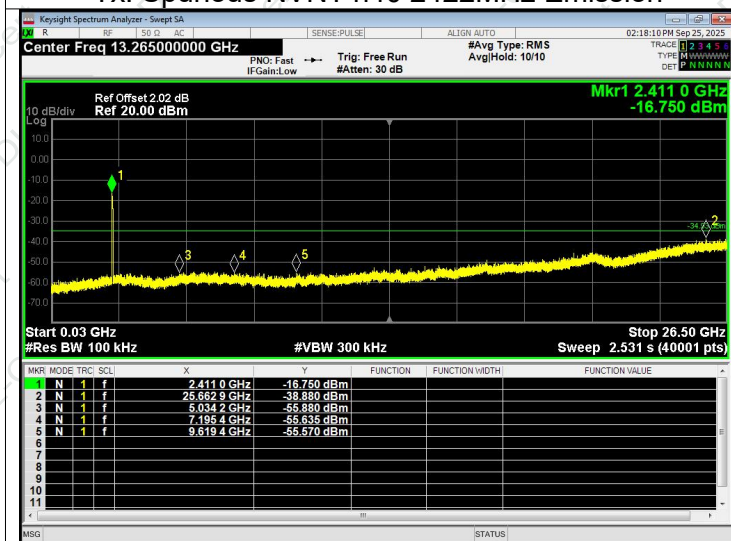




## Tx. Spurious NVNT n40 2422MHz Ref



## Tx. Spurious NVNT n40 2422MHz Emission





Keysight Spectrum Analyzer - Swept SA

Center Freq 13.265000000 GHz

PNO: Fast IF Gain: Low

Trig: Free Run

#Avg: 7

RMS

Avg/Hold: 10/10

02:20:22 PM Sep 25, 2015

TRACE 1 1 1 1 1

TYPE M W W W W W W W

DET P N N N N N N N

10 dB/div

Ref Offset 2.02 dB

Ref 20.00 dBm

Log

Mkr1 2.429 5 GHz

-16.710 dBm

Start 0.03 GHz

#Res BW 100 kHz

#VBW 300 kHz

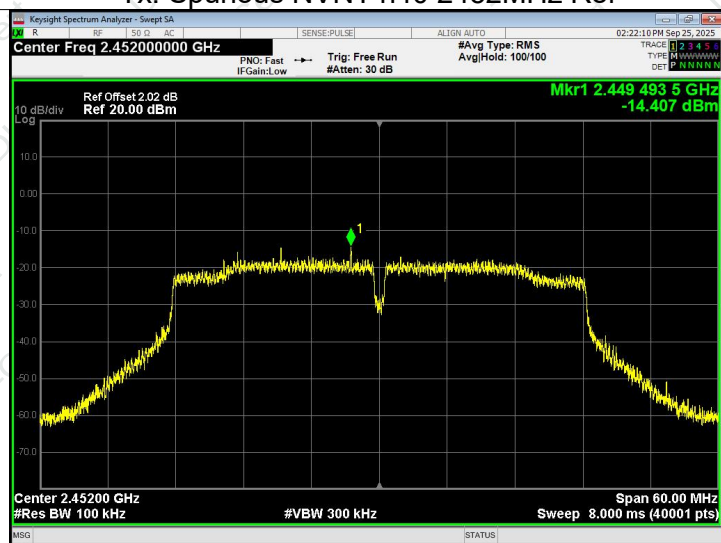
Stop 26.50 GHz

Sweep 2.531 s (40001 pts)

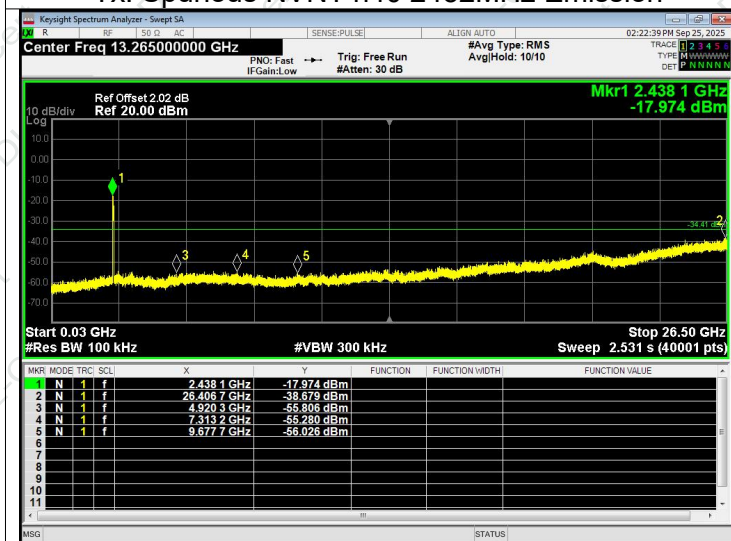
| MNR | MODE | TRC | SCU | X            | Y           | FUNCTION | FUNCTION WIDTH | FUNCTION VALUE |
|-----|------|-----|-----|--------------|-------------|----------|----------------|----------------|
| 1   | N    | 1   | f   | 2.429 5 GHz  | -16.710 dBm |          |                |                |
| 2   | N    | 1   | f   | 26.416 8 GHz | -39.277 dBm |          |                |                |
| 3   | N    | 1   | f   | 4.925 8 GHz  | -58.471 dBm |          |                |                |
| 4   | N    | 1   | f   | 7.337 7 GHz  | -55.111 dBm |          |                |                |
| 5   | N    | 1   | f   | 9.696 2 GHz  | -55.845 dBm |          |                |                |
| 6   |      |     |     |              |             |          |                |                |
| 7   |      |     |     |              |             |          |                |                |
| 8   |      |     |     |              |             |          |                |                |
| 9   |      |     |     |              |             |          |                |                |
| 10  |      |     |     |              |             |          |                |                |
| 11  |      |     |     |              |             |          |                |                |



## Tx. Spurious NVNT n40 2452MHz Ref



## Tx. Spurious NVNT n40 2452MHz Emission





## 10. DUTY CYCLE

|              |                  |
|--------------|------------------|
| Test Method: | ANSI C63.10:2020 |
|--------------|------------------|

### 10.1 APPLIED PROCEDURES / LIMIT

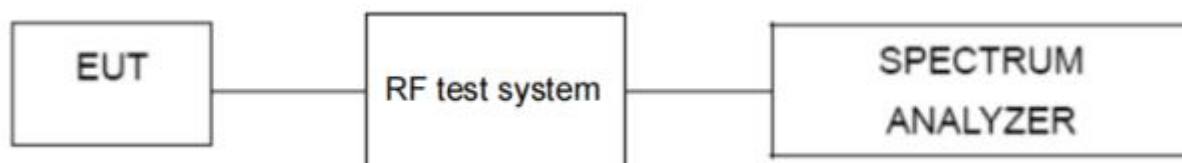
Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

- A diode detector and an oscilloscope that together have a sufficiently short response time to permit accurate measurements of the ON and OFF times of the transmitted signal.
- The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:
  - Set the center frequency of the instrument to the center frequency of the transmission.
  - Set  $RBW \geq OBW$  if possible; otherwise, set RBW to the largest available value.
  - Set  $VBW \geq RBW$ . Set detector = peak or average.
  - The zero-span measurement method shall not be used unless both RBW and VBW are  $> 50/T$  and the number of sweep points across duration  $T$  exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if  $T \leq 16.7 \mu s$ .)

### 10.2 DEVIATION FROM STANDARD

No deviation.

### 10.3 TEST SETUP

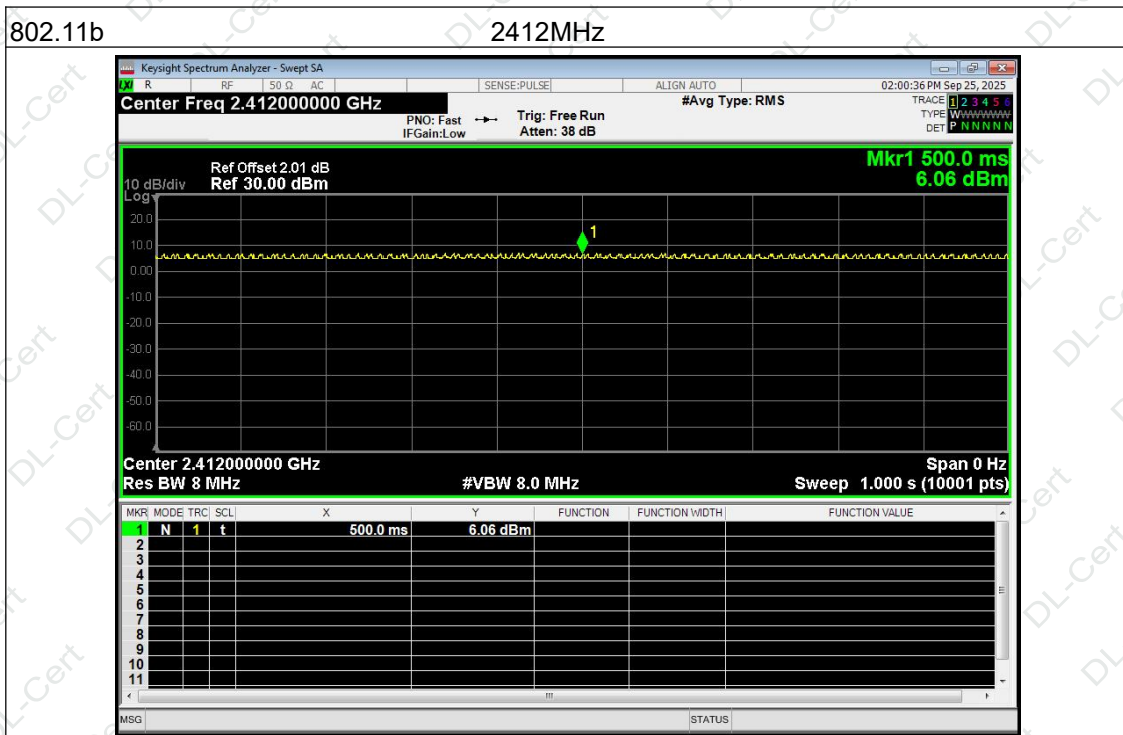




## 10.4 TEST RESULTS

|               |        |                     |       |
|---------------|--------|---------------------|-------|
| Temperature : | 26℃    | Relative Humidity : | 54%   |
| Pressure :    | 101kPa | Test Voltage :      | DC 5V |

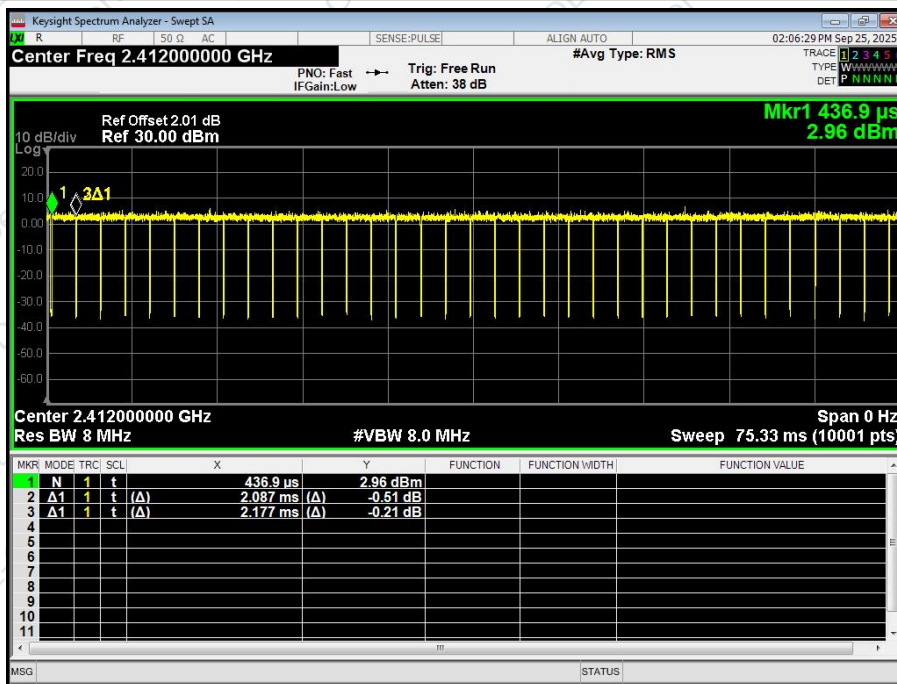
| Test Mode | Test Frequency<br>(MHz) | Duty Cycle<br>(%) | Factor<br>(dB) | Result |
|-----------|-------------------------|-------------------|----------------|--------|
| 802.11b   | 2412                    | 100               | 0              | Pass   |
| 802.11g   | 2412                    | 95.87             | 0.18           | Pass   |
| 802.11n20 | 2412                    | 98.88             | 0              | Pass   |
| 802.11n40 | 2422                    | 99                | 0              | Pass   |





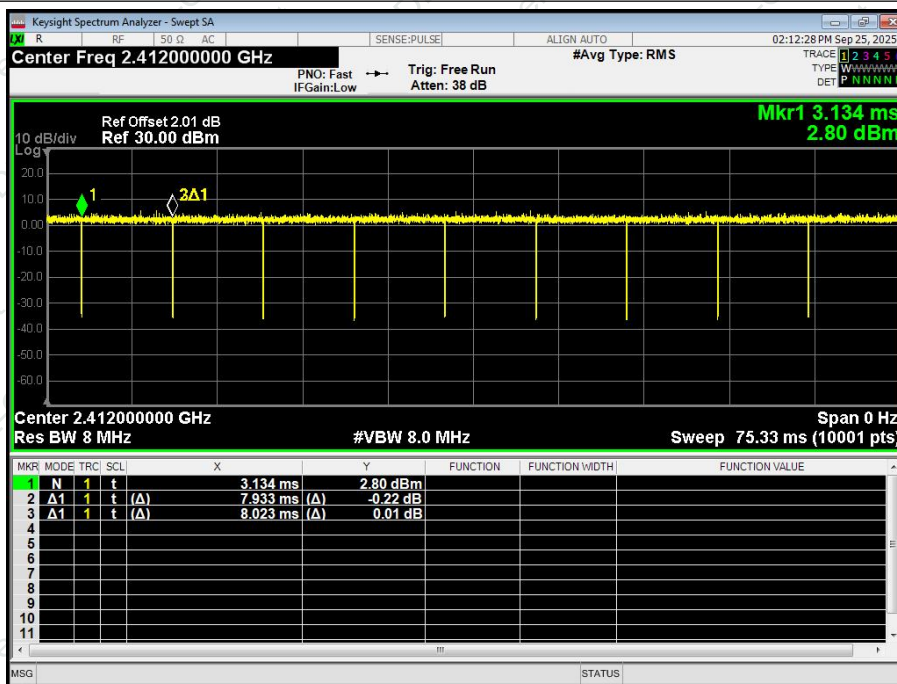
802.11g

2412MHz



802.11n20

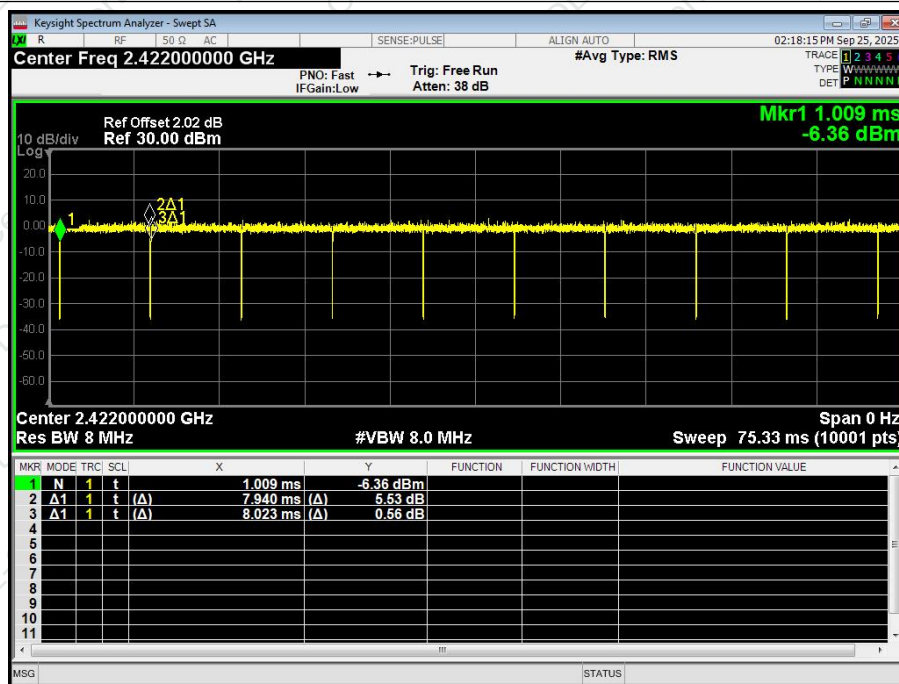
2412MHz





802.11n40

2422MHz



Note: All channel have been tested, and the report only reflects the worst case data.

Duty Cycle = Ton / Total \* 100%;

Duty Cycle Correction Factor = 10log (1/Duty Cycle).



## 11. ANTENNA REQUIREMENT

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Standard requirement:                                                                                                                                                                                                                                                                                                                                                                                                                                                     | FCC Part15 C Section 15.203 /247(c) |
| 15.203 requirement:<br>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. |                                     |
| 15.247(c) (1)(i) requirement:<br>(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.                                                                                |                                     |
| EUT Antenna:                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                     |
| The antenna is PCB Antenna, the best case gain of the antenna is 2.499 dBi, reference to the appendix II for details.                                                                                                                                                                                                                                                                                                                                                     |                                     |



## 12. TEST SETUP PHOTO

Reference to the appendix I for details.

## 13. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

\*\*\*\*\* END OF REPORT \*\*\*\*\*