

# TEST REPORT

Report No.: BCTC2601737221-1E

Applicant: Shenzhen Zhuo Er Photographic Equipment Co., Ltd

Product Name: 5 INCH WIRELESSVLOG SELFIE MONITOR

Test Model: M5

Tested Date: 2026-01-13 to 2026-02-26

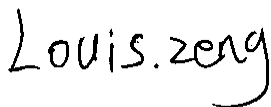
Issued Date: 2026-02-26

Shenzhen BCTC Technology Co., Ltd.



Product Name: 5 INCH WIRELESSVLOG SELFIE MONITOR  
Trademark: K&F CONCEPT  
Model/Type reference: M5  
Prepared For: Shenzhen Zhuo Er Photographic Equipment Co., Ltd  
Address: Room 712, Building No.2, YaoFengTong Industrial Park, No.1 Donghuan Road, Yousong Community, Longhua Street, Longhua District, Shenzhen, China  
Manufacturer: Shenzhen Zhuo Er Photographic Equipment Co., Ltd  
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Sample Received Date: 2026-01-13  
Sample tested Date: 2026-01-13 to 2026-02-26  
Issue Date: 2026-02-26  
Report No.: BCTC2601737221-1E  
Test Standards: Article 2 paragraph 1 of item 19  
MIC Notice No.88 Appendix No.43  
Test Results: PASS  
Remark: This is JAPAN RADIO test report.

Tested by:



Louis Zeng/ Project Handler

Approved by:



Sewen Guo/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Technology Co., Ltd., this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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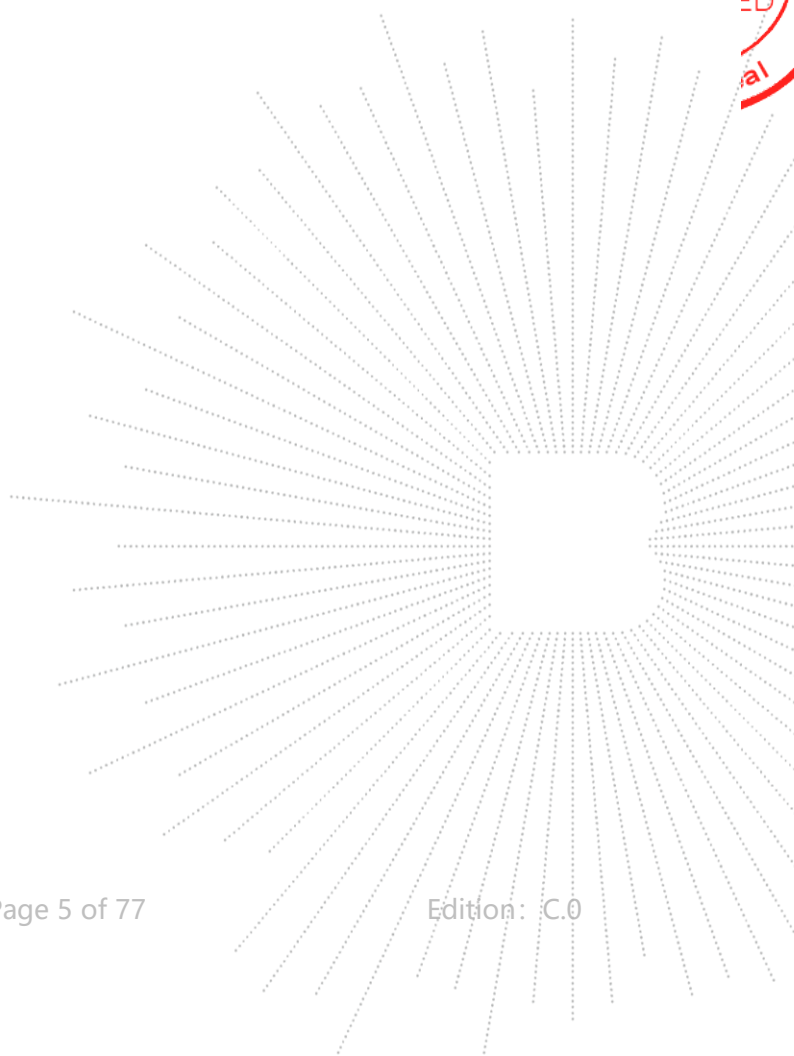
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(Note: N/A Means Not Applicable)

**1. Version**

| Report No.        | Issue Date | Description | Approved |
|-------------------|------------|-------------|----------|
| BCTC2601737221-1E | 2026-02-26 | Original    | Valid    |
|                   |            |             |          |



## 2. Test Summary

Test procedures according to the technical standards:

| Article 2 paragraph 1 of item 19          |                                                                                   |          |        |
|-------------------------------------------|-----------------------------------------------------------------------------------|----------|--------|
| Standard Section                          | Test Item                                                                         | Judgment | Remark |
| <b>General provisions</b>                 |                                                                                   |          |        |
| 5                                         | Frequency Error                                                                   | PASS     |        |
| 6                                         | Occupied Bandwidth                                                                | PASS     |        |
| 7                                         | Spurious Emissions Intensity                                                      | PASS     |        |
| 8                                         | Radio Interference Prevention Capability Measurement                              | PASS     |        |
| <b>Transmitting equipment</b>             |                                                                                   |          |        |
| 6                                         | Antenna Power                                                                     | PASS     |        |
| <b>Transmitting antenna</b>               |                                                                                   |          |        |
| 20                                        | Type, Configuration, etc., of Transmitting Antenna                                | PASS     |        |
| 22                                        | Direction Pattern of Transmitting Antenna (Provided at Individual Antenna Report) | PASS     |        |
| <b>Receiving antenna</b>                  |                                                                                   |          |        |
| 24                                        | Limitation of Collateral Emission of Receiver                                     | PASS     |        |
| 26                                        | Refer to All Articles for Transmitting Antenna                                    | PASS     |        |
| <b>Operating frequency 2400~2483.5MHz</b> |                                                                                   |          |        |
| 49.20(1);a                                | RF Shielding Method                                                               | PASS     |        |
| 49.20(1);a                                | Communication Method                                                              | PASS     |        |
| 49.20(1);b                                | Spread-spectrum Method                                                            | PASS     |        |
| 49.20(1);c                                | Antenna Power                                                                     | PASS     |        |
| 49.20(1);d                                | Absolute Antenna Gain (Provided at Individual Antenna Report)                     | PASS     |        |
| 49.20(1);e                                | Spread-Spectrum Bandwidth                                                         | PASS     |        |
| 49.20(1);f                                | Spreading Factor                                                                  | PASS     |        |
| 49.20(1);g                                | Hopping Frequency Dwell Time (FH employed)                                        | PASS     |        |

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report.

### 3. Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

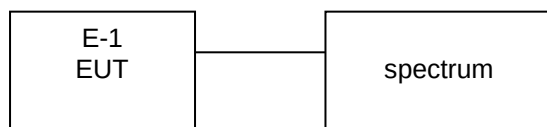
| No. | Item                         | Uncertainty         |
|-----|------------------------------|---------------------|
| 1   | Conducted Emission Test      | $\pm 3.2\text{dB}$  |
| 2   | Radiated Emission Test       | $\pm 4.7\text{dB}$  |
| 3   | RF power,conducted           | $\pm 0.16\text{dB}$ |
| 4   | Spurious emissions,conducted | $\pm 0.21\text{dB}$ |
| 5   | All emissions,radiated(<1G)  | $\pm 4.68\text{dB}$ |
| 6   | All emissions,radiated(>1G)  | $\pm 5.0\text{dB}$  |
| 7   | frequency error ppm          | $\pm 0.5\text{ppm}$ |

## 4. Product Information And Test Setup

### 4.1 Product Information

Model/Type reference: M5  
 Model differences: N/A  
 Bluetooth Version: 5.4  
 Hardware Version: EM05-A\_20251103  
 Software Version: EM05FOTA\_EM05\_2510141443  
 Operation Frequency: 2402-2480MHz  
 Type of Modulation: GFSK,  $\pi/4$ -DQPSK, 8DPSK  
 Number Of Channel: 79 CH  
 Antenna installation: Internal antenna  
 -1.19 dBi  
 Remark:  
☒ The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information.  
☐ The antenna gain of the product is provided by the customer, and the test data is affected by the customer information.  
 Ratings: Charging: DC 5V from adapter  
 Battery: DC 3.8V

### 4.2 Block Diagram Parameters Of Text Software Setting



### 4.3 Description Of Support Units (Conducted Mode)

| Item | Equipment                                | Mfr/Brand   | Model/Type No. | Series No. | Note |
|------|------------------------------------------|-------------|----------------|------------|------|
| E-1  | 5 INCH<br>WIRELESSVLOG<br>SELFIE MONITOR | K&F CONCEPT | M5             | N/A        | EUT  |

#### Notes:

1. The support equipment was authorized by Declaration of Confirmation.
2. For detachable type I/O cable should be specified the length in cm in 『Length』 column
3. “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

#### 4.4 Channel List

| Channel List |                 |         |                 |         |                 |
|--------------|-----------------|---------|-----------------|---------|-----------------|
| Channel      | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 00           | 2402            | 27      | 2429            | 54      | 2456            |
| 01           | 2403            | 28      | 2430            | 55      | 2457            |
| 02           | 2404            | 29      | 2431            | 56      | 2458            |
| 03           | 2405            | 30      | 2432            | 57      | 2459            |
| 04           | 2406            | 31      | 2433            | 58      | 2460            |
| 05           | 2407            | 32      | 2434            | 59      | 2461            |
| 06           | 2408            | 33      | 2435            | 60      | 2462            |
| 07           | 2409            | 34      | 2436            | 61      | 2463            |
| 08           | 2410            | 35      | 2437            | 62      | 2464            |
| 09           | 2411            | 36      | 2438            | 63      | 2465            |
| 10           | 2412            | 37      | 2439            | 64      | 2466            |
| 11           | 2413            | 38      | 2440            | 65      | 2467            |
| 12           | 2414            | 39      | 2441            | 66      | 2468            |
| 13           | 2415            | 40      | 2442            | 67      | 2469            |
| 14           | 2416            | 41      | 2443            | 68      | 2470            |
| 15           | 2417            | 42      | 2444            | 69      | 2471            |
| 16           | 2418            | 43      | 2445            | 70      | 2472            |
| 17           | 2419            | 44      | 2446            | 71      | 2473            |
| 18           | 2420            | 45      | 2447            | 72      | 2474            |
| 19           | 2421            | 46      | 2448            | 73      | 2475            |
| 20           | 2422            | 47      | 2449            | 74      | 2476            |
| 21           | 2423            | 48      | 2450            | 75      | 2477            |
| 22           | 2424            | 49      | 2451            | 76      | 2478            |
| 23           | 2425            | 50      | 2452            | 77      | 2479            |
| 24           | 2426            | 51      | 2453            | 78      | 2480            |
| 25           | 2427            | 52      | 2454            |         |                 |
| 26           | 2428            | 53      | 2455            |         |                 |

#### 4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| For All Mode | Description | Modulation Type |
|--------------|-------------|-----------------|
| Mode 1       | CH 00       | GFSK            |
| Mode 2       | CH 39       |                 |
| Mode 3       | CH 78       |                 |
| Mode 4       | RX          |                 |
| Mode 5       | CH 00       | $\pi/4$ -DQPSK  |
| Mode 6       | CH 39       |                 |
| Mode 7       | CH 78       |                 |
| Mode 8       | RX          |                 |
| Mode 9       | CH 00       | 8DPSK           |
| Mode 10      | CH 39       |                 |
| Mode 11      | CH 78       |                 |
| Mode 12      | RX          |                 |

#### 4.6 Test Conditions

The EUT was tested while in a continuous transmitter/receiver mode.

The EUT was tuned to a low, middle, and high channel for all tests. For all test case pre/scans were completed in all Modes to determine worst case levels.

##### Power Supply Voltage Fluctuation Test

| Voltage Fluctuation Test        | Normal Voltage | High Voltage +10% of Normal Voltage | Low Voltage -10% of Normal Voltage |
|---------------------------------|----------------|-------------------------------------|------------------------------------|
| Input DC Power                  | 3.8V           | 4.18V                               | 3.42V                              |
| output voltage(RF chip voltage) | 3.3V           | 3.3V                                | 3.3V                               |

Note:

Voltage Variation (%)

= (Output high or Low Voltage - Output Normal Voltage) / Output Normal Voltage \* 100

During the input supply voltage to the EUT from the external power source is varied by  $\pm 10\%$ ,  $\pm 10\%$  of the external power change, will not affect the voltage of the RF, so only operated in normal voltage to test all regulations.

#### 4.7 Table Of Parameters Of Test Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters

| Test software Version | CMD      |          |          |
|-----------------------|----------|----------|----------|
| Frequency             | 2402 MHz | 2441 MHz | 2480 MHz |
| Parameters            | DEF      | DEF      | DEF      |

## 5. Test Facility And Test Instrument Used

### 5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Technology Co., Ltd. Address: Room 101M, Unit 1, Building1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850

A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

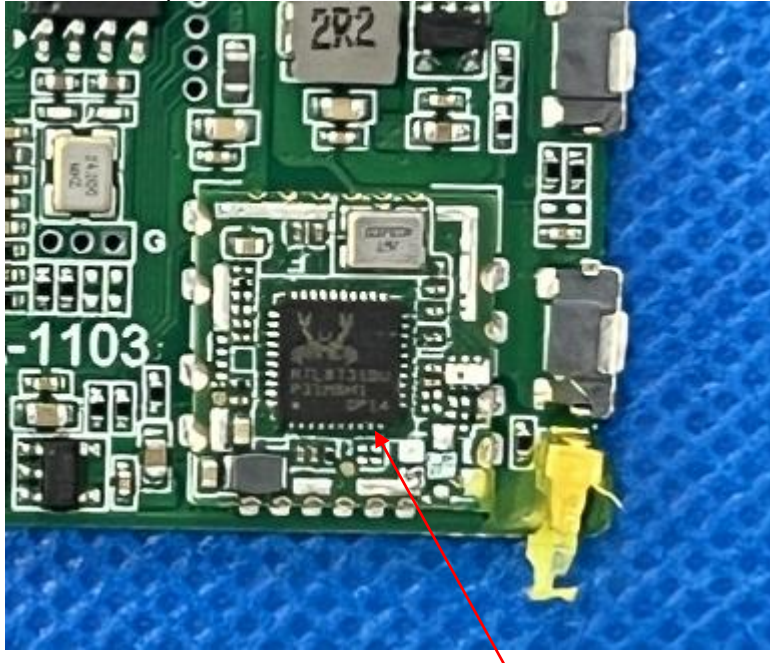
### 5.2 Test Instrument Used

| Item | Equipment                        | Manufacturer | Model#      | Serial#    | Last Cal.    | Next Cal.    |
|------|----------------------------------|--------------|-------------|------------|--------------|--------------|
| 1.   | Power Metter                     | Keysight     | E4419       | \          | May 14, 2025 | May 13, 2026 |
| 2.   | Signal Analyzer<br>20kHz-26.5GHz | Keysight     | N9020A      | MY49100060 | May 14, 2025 | May 13, 2026 |
| 3.   | D.C. Power Supply                | LongWei      | TPR-6405D   | \          | May 14, 2025 | May 13, 2026 |
| 4.   | Signal Generator                 | Keysight     | N5182B      | MY56200519 | May 14, 2025 | May 13, 2026 |
| 5.   | Pulse limiter                    | Schwarzbeck  | VTSD 9561-F | 01323      | May 14, 2025 | May 13, 2026 |
| 6.   | Hygrothermograph                 | Thermo       | HTC-1       | \          | May 19, 2025 | May 18, 2026 |

Calibration laboratory: CCIC(Shenzhen) Co., Ltd

## 6. Tamperproof Declaration

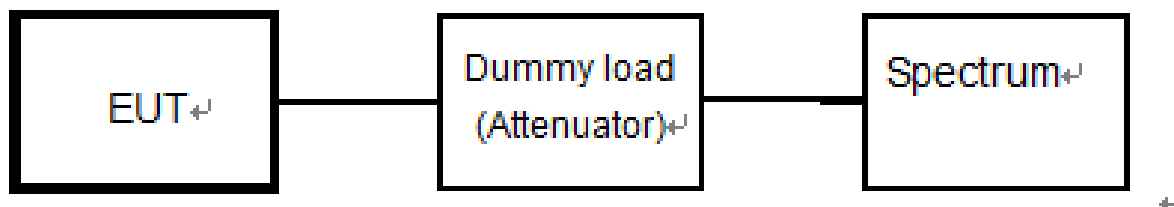
Number of the pins: 40 interval distance 0.4mm



CO., LTD.

## 7. Frequency Error

### 7.1 Block Diagram Of Test Setup



### 7.2 Limit

| Item            | Limits |
|-----------------|--------|
| Frequency Error | ±50ppm |

### 7.3 Measuring Instruments And Setting

The following table is the setting of Spectrum Analyzer.

| Spectrum Parameter | Setting  |
|--------------------|----------|
| Attenuation        | Auto     |
| RB / VB            | 10KHz    |
| Detector           | Peak     |
| Trace              | Max Hold |
| Sweep Time         | Auto     |

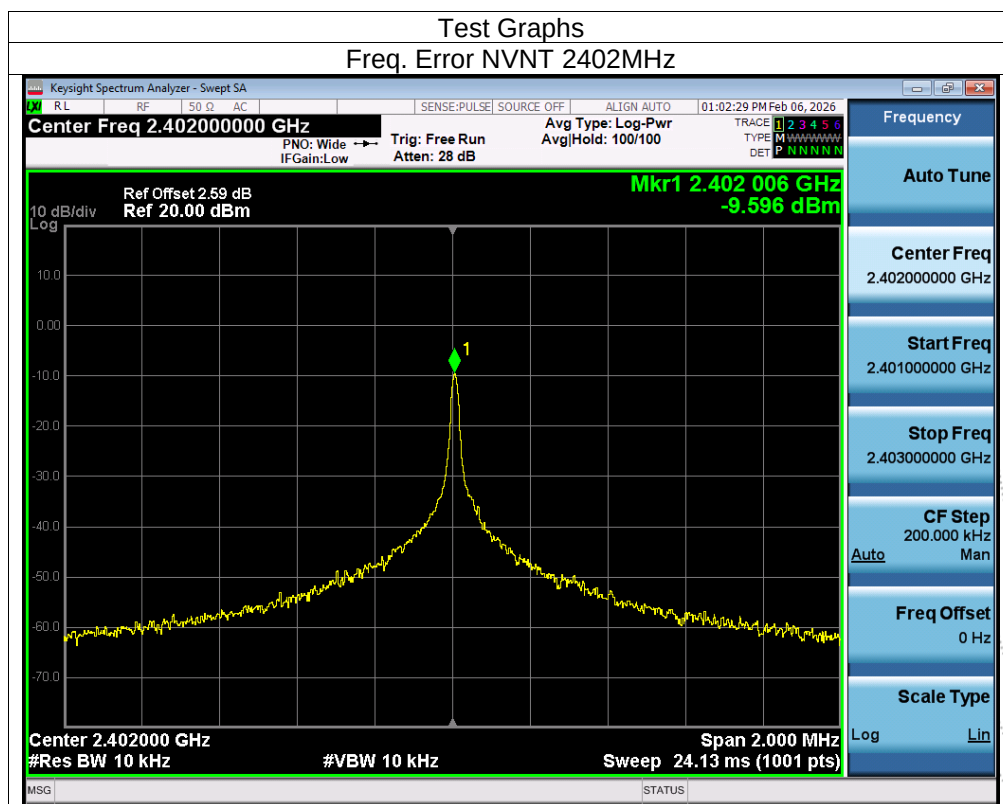
### 7.4 Test Procedure

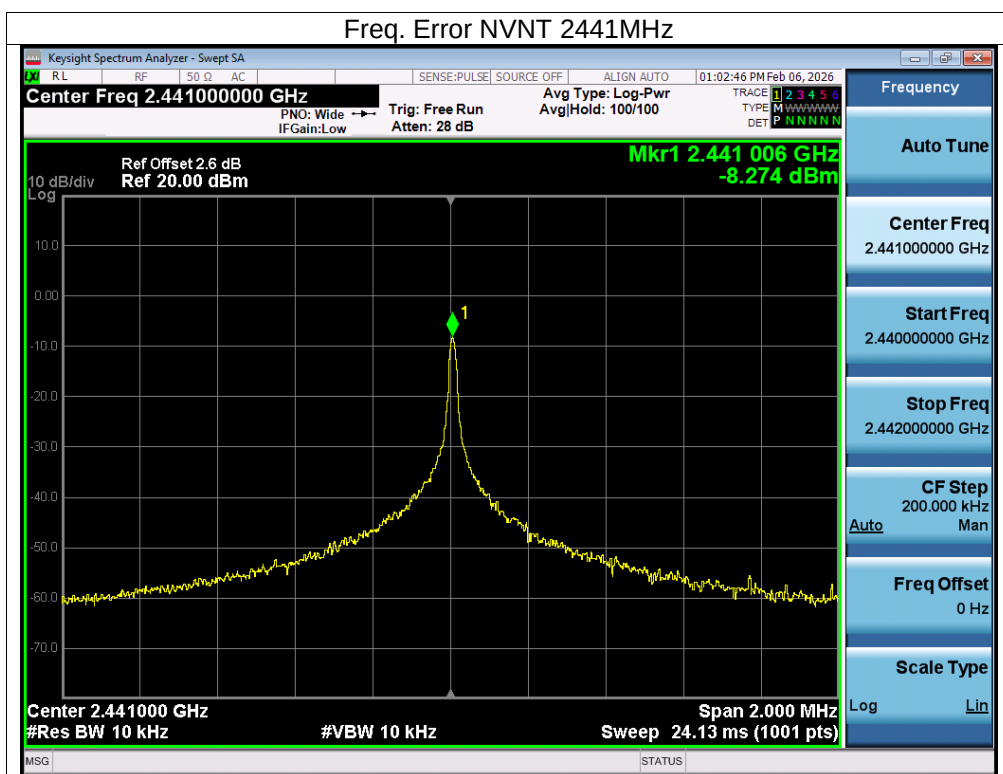
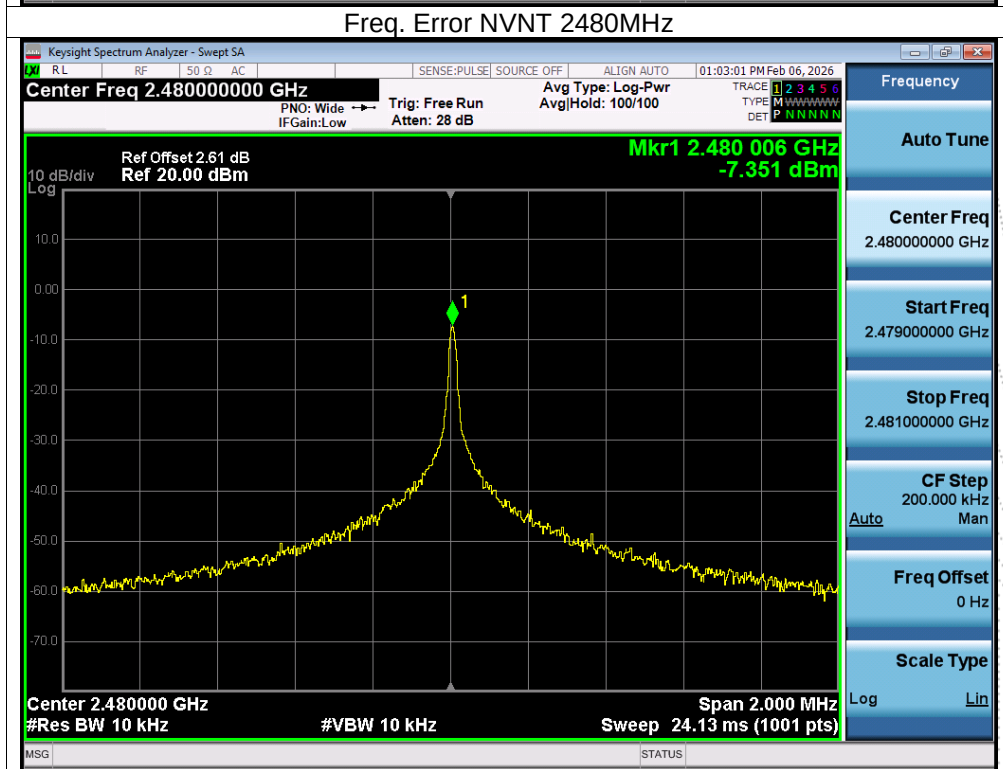
- (1) In the case of unmodulated signal (continuous or continuous burst), measure the frequency directly by a frequency meter.
  - (2) In the case of burst waves, the measurement shall be done for enough time in order to obtain the enough measuring accuracy, and the average of the measured values becomes the final value.
  - (3) In the case of a test mode with a specific frequency spectrum, measure the frequency of the specific spectrum by a spectrum analyzer.
  - (4) In the cases above, if the frequency equivalent to the test frequency is not directly measured in principle, it shall be obtained by necessary calculation.
- In the case of modulated signal, if there is no specific spectrum measurable by a spectrum analyzer but a specific dip is observed, it is allowed to measure the frequency with the signal generator (synthesized). That is, observe a signal of the signal generator concurrently (or alternately) with the tested signal using the spectrum analyzer while setting the frequency of the signal generator to the position of the dip on the screen of the spectrum analyzer, and determine the frequency of the signal generator at the time as a measured value.

## 7.5 Test Result

|              |         |              |         |
|--------------|---------|--------------|---------|
| Temperature: | 25°C    |              |         |
| Humidity:    | 55 % RH | Test Voltage | DC 3.8V |

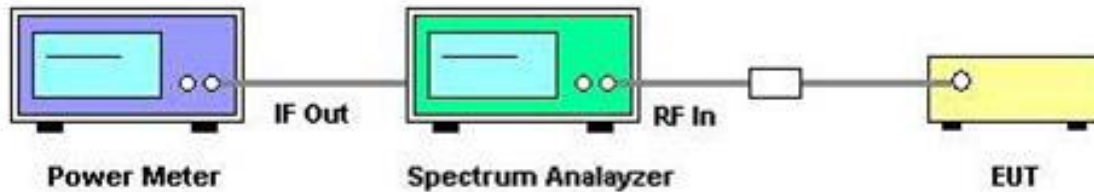
| Condition | Frequency (MHz) | Measured Frequency (MHz) | Frequency Error (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
|-----------|-----------------|--------------------------|----------------------|-----------------|-------------|---------|
| NVNT      | 2402            | 2402.006                 | 6000                 | 2.5             | 50          | Pass    |
| NVNT      | 2441            | 2441.006                 | 6000                 | 2.46            | 50          | Pass    |
| NVNT      | 2480            | 2480.006                 | 6000                 | 2.42            | 50          | Pass    |





## 8. Antenna Power

### 8.1 Block Diagram Of Test Setup



### 8.2 Limit

| Item                  | Limits                                                                                                                                                                                                                                                |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antenna Power Density | (1) $\leq 3\text{mW/MHz}$ (FH, FH+DS, FH+OFDM form 2400 - 2483.5 MHz)<br>(2) $\leq 10\text{mW/MHz}$ (OFDM OBW < 26MHz, DS, FH other than (1) )<br>(3) $\leq 5\text{mW/MHz}$ (OFDM OBW 26-38MHz)<br>(4) $\leq 10\text{mW}$ (Other than (1) & (2)& (3)) |
| Antenna Power Error   | +20%, -80% (Base on manufacturer declare antenna power density)                                                                                                                                                                                       |

### 8.3 Measuring Instruments And Setting

Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

| Spectrum Parameter | Setting  |
|--------------------|----------|
| Attenuation        | Auto     |
| RB / VB            | 1 MHz    |
| Detector           | Peak     |
| Trace              | Max Hold |
| Sweep Time         | Auto     |

### 8.4 Test Procedure

1. A power meter is connected on the IF output port of the spectrum analyzer.
2. Adjust the spectrum analyzer to have the center frequency the same with the measured carrier. RBW=VBW=1MHz, detector mode is positive peak. Turn off the averaging function and use zero span.
3. The calibrating signal power shall be reduced to 0 dBm and it shall be verified that the power meter reading also reduces by 10 dB.
4. Connect the equipment to be measured. Using the following settings of the spectrum analyzer in combination with "max hold" function, find the frequency of highest power output in the power envelope: center frequency equal to operating frequency; RBW & VBW: 1 MHz; detector mode: positive peak; averaging: off; span: 3 times the spectrum width; amplitude: adjust for middle of the instrument' range. The frequency found shall be recorded.
5. Set the center frequency of the spectrum analyzer to the found frequency and switch to zero span. The power meter indicates the measured power density "E".
6. Calculate antenna power density by the formula below  $PD = P / \text{Spread bandwidth}$ .
7. Antenna Power Error is definition that actual measure antenna power tolerance between + 20% to - 80% power range that base on manufacturer declare the conducted power density.

## 8.5 Test Result

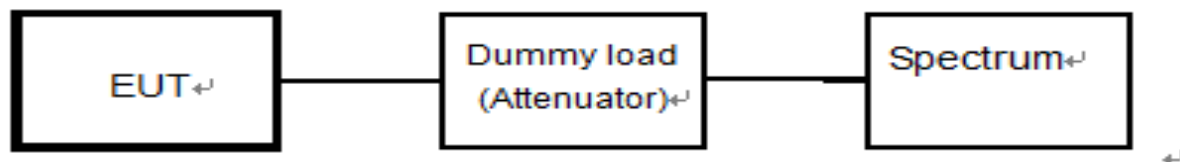
|              |         |              |         |
|--------------|---------|--------------|---------|
| Temperature: | 25°C    |              |         |
| Humidity:    | 55 % RH | Test Voltage | DC 3.8V |

| Condi-<br>tion                                                                 | Mode  | Power<br>(dBm) | Antenna<br>Power<br>(mW) | 90%<br>OBW<br>(MHz) | Conducted<br>RF<br>output<br>power<br>density<br>(mW/MHz) | Rated<br>power<br>density<br>(mW/<br>MHz) | Limit<br>(mW/<br>MHz) | Tolerance<br>(%) | Verdict |
|--------------------------------------------------------------------------------|-------|----------------|--------------------------|---------------------|-----------------------------------------------------------|-------------------------------------------|-----------------------|------------------|---------|
| NVNT                                                                           | 1-DH1 | -7.95          | 0.16                     | 0.0023              | 0.01                                                      | 3                                         | -77                   | 0.0023           | Pass    |
| NVNT                                                                           | 2-DH1 | -7.78          | 0.17                     | 0.0023              | 0.01                                                      | 3                                         | -77                   | 0.0023           | Pass    |
| NVNT                                                                           | 3-DH1 | -8.05          | 0.16                     | 0.0022              | 0.01                                                      | 3                                         | -78                   | 0.0022           | Pass    |
| Limit: +20%, -80% (Base on manufacturer declare antenna power density)         |       |                |                          |                     |                                                           |                                           |                       |                  |         |
| Conducted RF output power density=Antenna Power/ 90%Hopping Occupied bandwidth |       |                |                          |                     |                                                           |                                           |                       |                  |         |



## 9. Occupied Bandwidth

### 9.1 Block Diagram Of Test Setup



### 9.2 Limit

| Item                 | Limits                                               |
|----------------------|------------------------------------------------------|
| Occupied Band Width: | FH 83.5MHz; OFDM,DS $\leq$ 26MHz;Others $\leq$ 26MHz |
| Spreading Bandwidth: | $\geq$ 500 kHz (FH, DS)                              |
| Spreading Factor     | $\geq$ 5                                             |

### 9.3 Test Procedure

- Setting of SA is following as: RB: 1MHz / VB: 1 MHz / SPAN: 120MHz / AT: 20dB Ref: 10dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- EUT have transmitted the maximum modulation signal and fixed channelize (For DSSS or OFDM Device) or continuous maximum power of hopping mode (For FHSS Device). SA set to 99% of occupied bandwidth to measure occupied bandwidth. The limit is less than 26MHz (For DSSS or OFDM Device) or 83.5MHz (For FHSS Device).
- SA set to 90% of occupied bandwidth to measure Spread Spectrum Bandwidth and must greater than 500kHz.
- Spread Spectrum Factor = Spread Spectrum Bandwidth / modulation rate of EUT.
- Spread Spectrum Factor limit is greater than 5

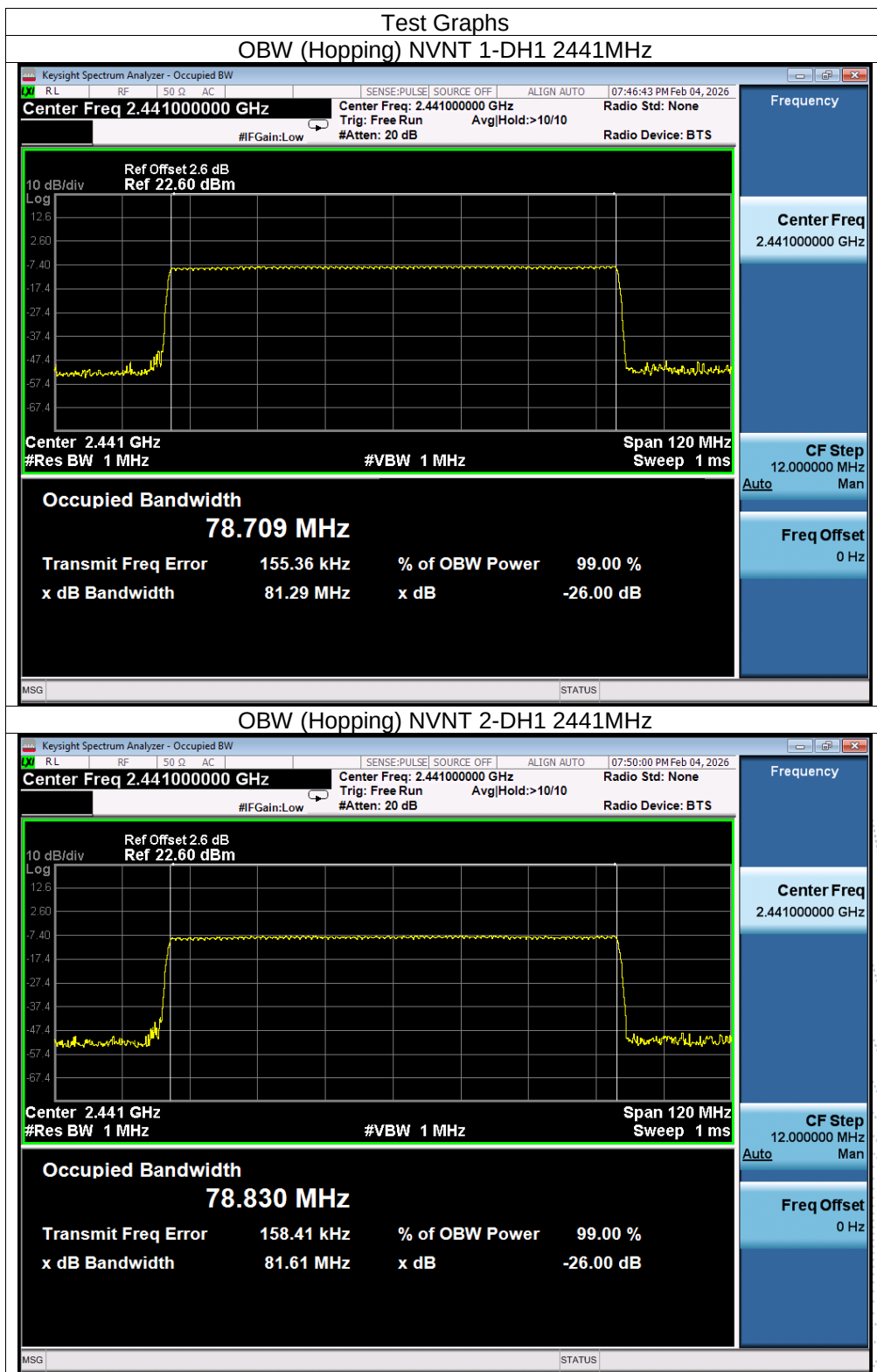
### 9.4 Test Result

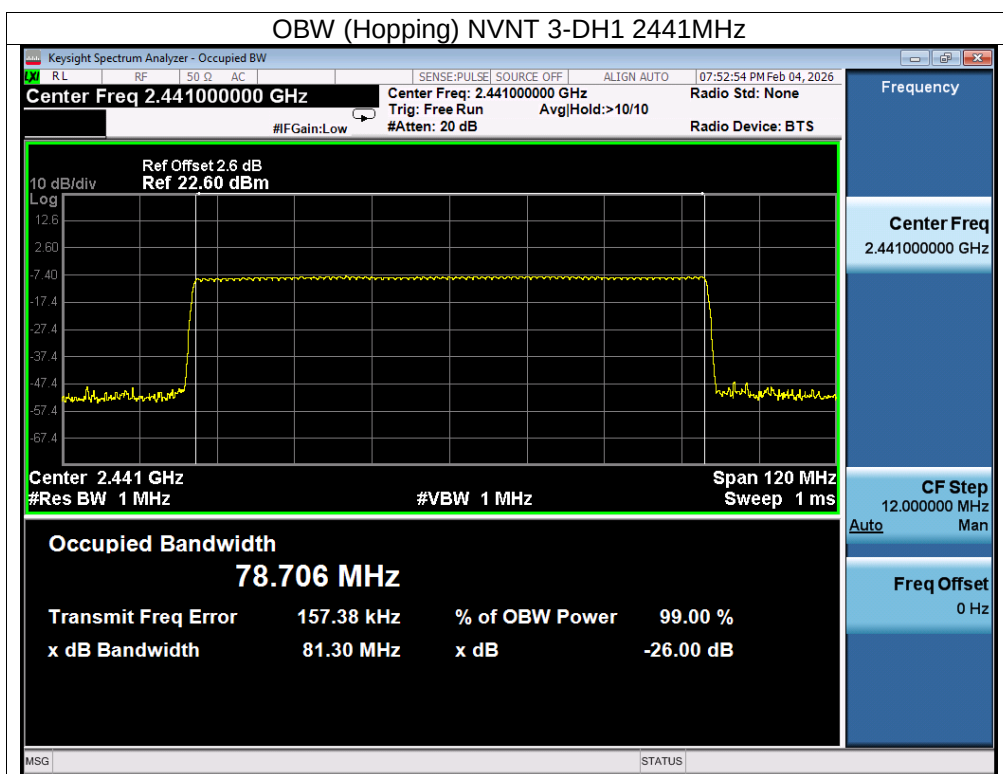
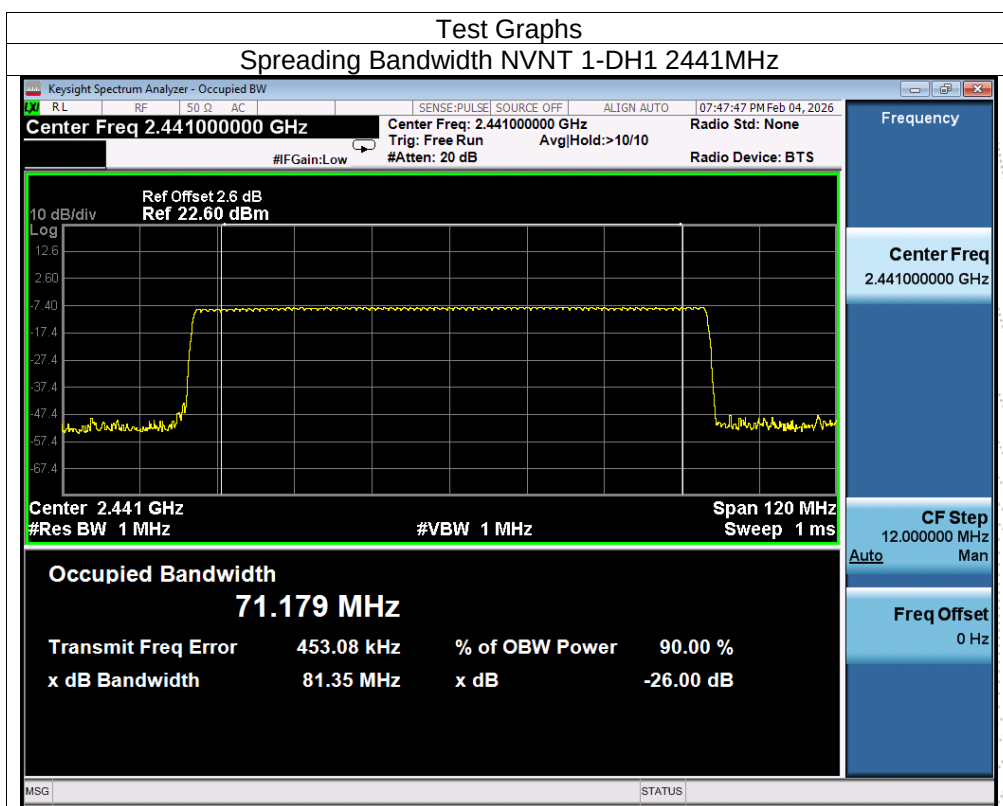
|              |         |              |         |
|--------------|---------|--------------|---------|
| Temperature: | 25°C    |              |         |
| Humidity:    | 55 % RH | Test Voltage | DC 3.8V |

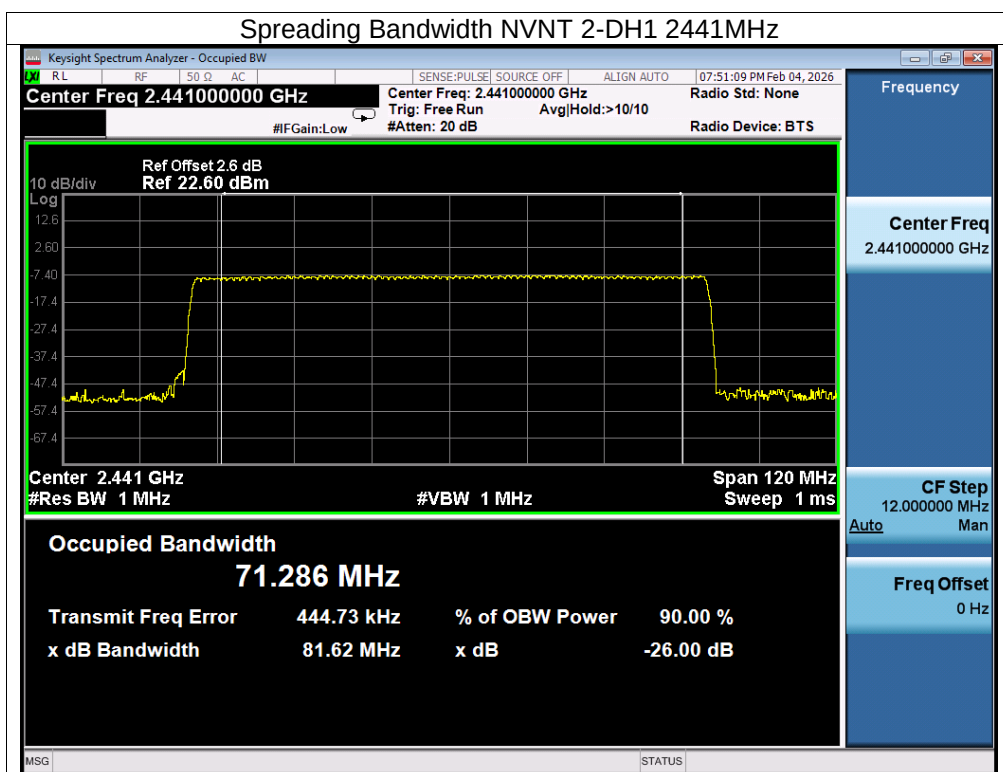
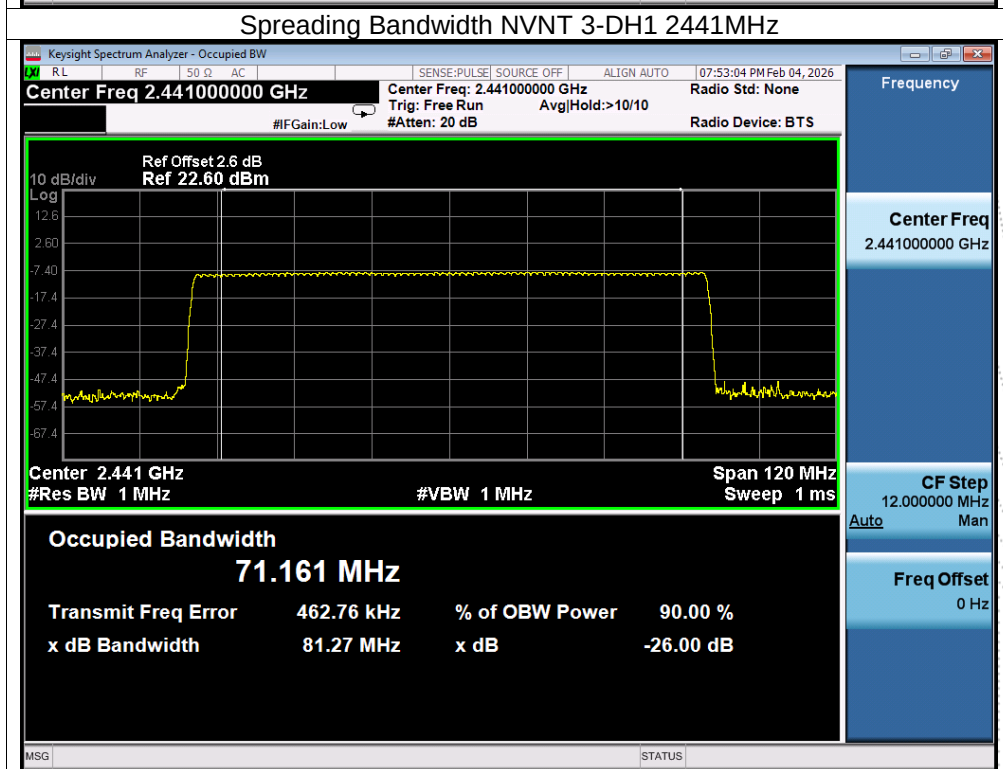
| Test Condition | Mode           | 99% OBW (MHz) | 90% OBW (MHz) | Spreading Factor | Verdict |
|----------------|----------------|---------------|---------------|------------------|---------|
| NVNT           | GFSK           | 78.709        | 71.179        | 71.179           | Pass    |
| NVNT           | $\pi/4$ -DQPSK | 78.83         | 71.286        | 35.643           | Pass    |
| NVNT           | 8DPSK          | 78.706        | 71.148        | 23.716           | Pass    |

Remark:

- Spreading Factor = (90%Hopping Mode(Occupied bandwidth)) / (transmission rate);
- Transmission Rate=(GFSK=1Mbps,  $\pi/4$ -DQPSK=2Mbps, 8DPSK=3Mbps)

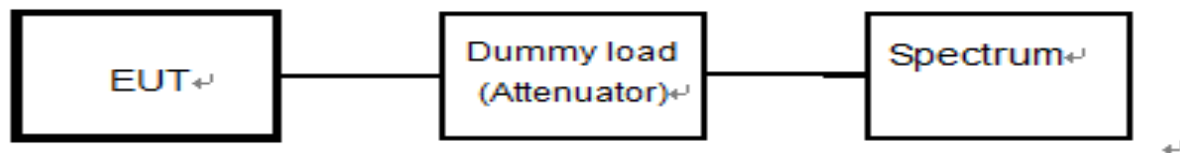






## 10. Unwanted Emission Intensity Measurement

### 10.1 Block Diagram Of Test Setup



### 10.2 Limit

| Item                 | RB / VB | Limits                                                                          |
|----------------------|---------|---------------------------------------------------------------------------------|
| TX Spurious Emission | 100KHz  | $\leq 0.25 \mu\text{W}$ (-36dBm) ( $30\text{MHz} \leq f \leq 1000\text{MHz}$ )  |
|                      | 1 MHz   | $\leq 2.5 \mu\text{W}$ (-26dBm ( $1000\text{MHz} < f \leq 2387\text{MHz}$ ))    |
|                      | 1 MHz   | $\leq 25 \mu\text{W}$ (-16dBm ( $2387\text{MHz} < f \leq 2400\text{MHz}$ ))     |
|                      | 1 MHz   | $\leq 25 \mu\text{W}$ (-16dBm ( $2483.5\text{MHz} \leq f < 2496.5\text{MHz}$ )) |
|                      | 1 MHz   | $\leq 2.5 \mu\text{W}$ (-26dBm ( $2496.5\text{MHz} \leq f < 12500\text{MHz}$ )) |

### 10.3 Measuring Instruments And Setting

Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

| Spectrum Parameter | Setting  |
|--------------------|----------|
| Attenuation        | Auto     |
| RB / VB            | 1 MHz    |
| Detector           | Peak     |
| Trace              | Max Hold |
| Sweep Time         | Auto     |

### 10.4 Test Procedure

- EUT have transmitted the maximum modulation signal and fixed channelize.
- Setting of SA is following as: Below 1GHz RB: 100 KHz / VB 100 KHz  
Above 1GHz RB: 1 MHz / VB: 1 MHz / AT: 20dB Ref: 10dBm / Sweep time: Auto  
Sweep Mode: Continuous sweep / Detect mode: Positive peak  
Trace mode: Max hold
- Setting of SA is following as 30MHz and stop frequency 1000MHz Then to mark peak reading value + cable loss shall be less than 0.25 $\mu\text{W}$ .
- Setting of SA is following as 1000MHz and stop frequency 2387MHz Then to mark peak reading value + cable loss shall be less than 2.5 $\mu\text{W}$ .
- SA adjusted to start frequency 2387MHz and stop frequency 2400MHz: Then to mark peak reading value + cable loss shall be less than 25 $\mu\text{W}$ .
- SA adjusted to start frequency 2483.5MHz and stop frequency 2496.5MHz Then to mark peak reading value + cable loss shall be less than 25 $\mu\text{W}$
- SA adjusted to start frequency 2496.5MHz and stop frequency 12500MHz Then to mark peak reading value + cable loss shall be less than 2.5 $\mu\text{W}$

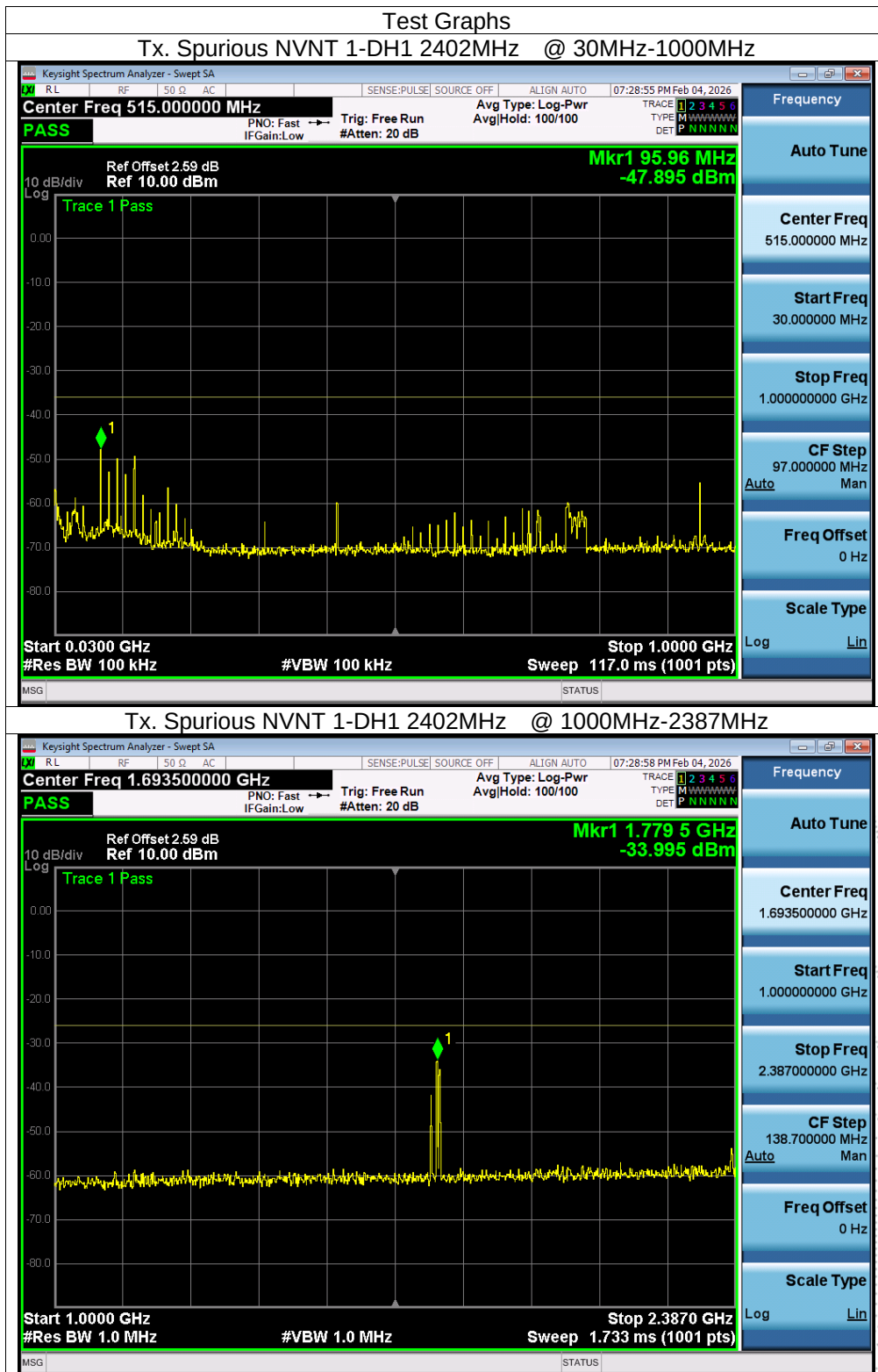
## 10.5 Test Result

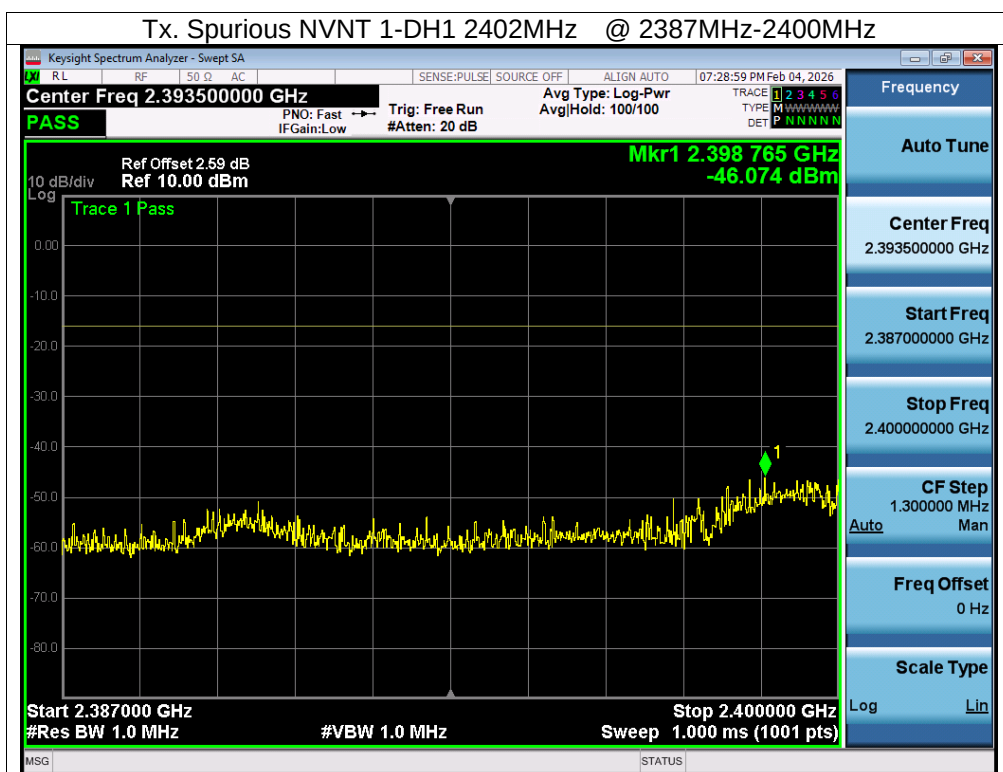
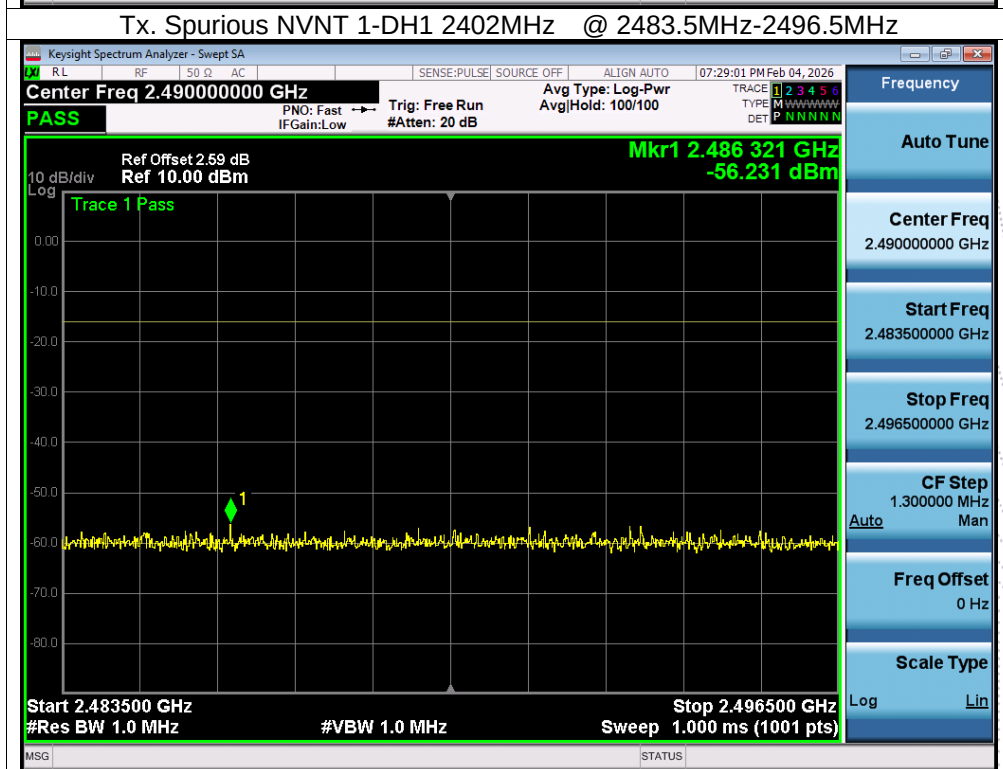
|              |            |              |         |
|--------------|------------|--------------|---------|
| Temperature: | 25°C       |              |         |
| Humidity:    | 55 % RH    | Test Voltage | DC 3.8V |
| Test Mode:   | No-hopping |              |         |

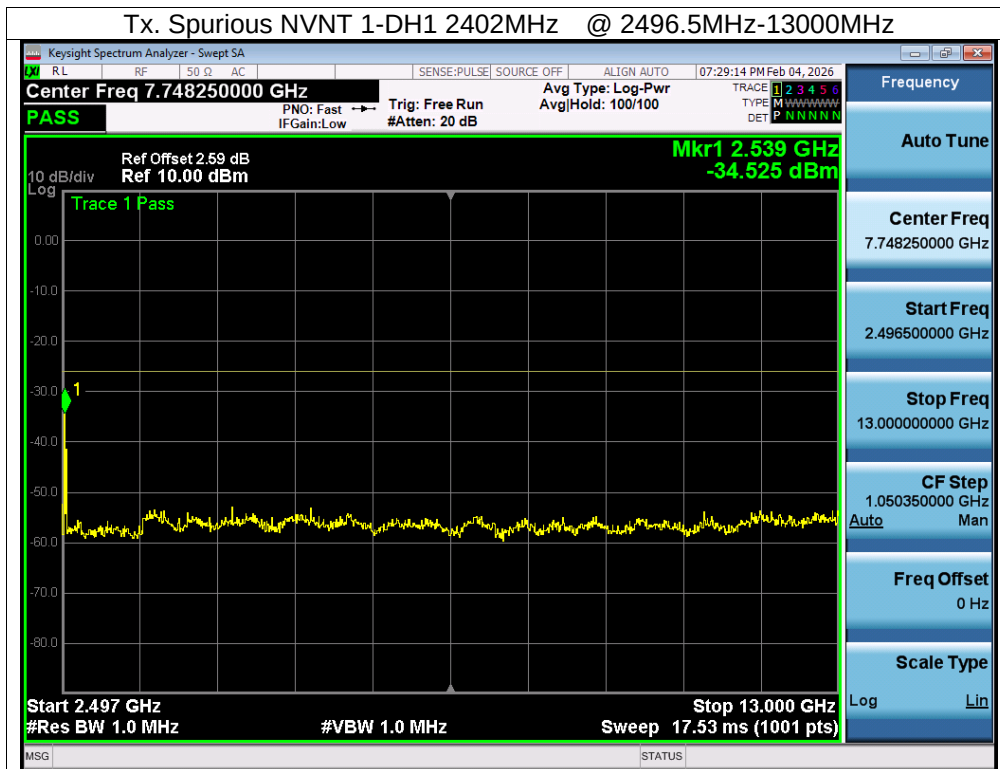
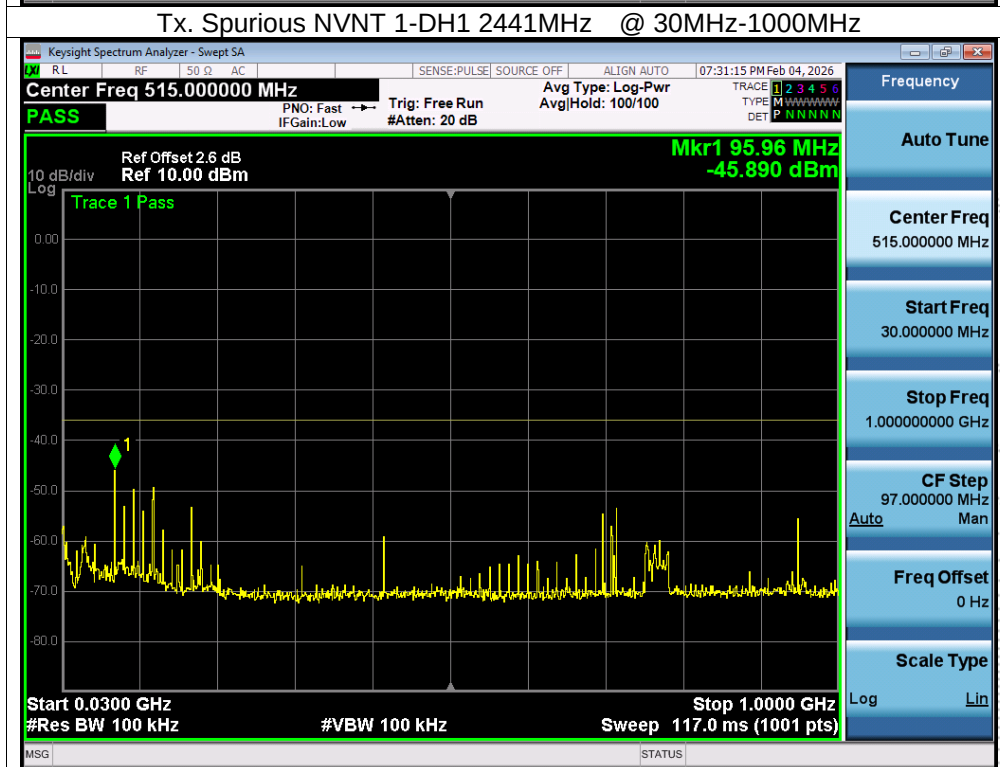
| Condition | Mode  | Frequency (MHz) | Range (MHz)   | Emission Frequency (MHz) | Max Value (dBm) | Limit Start (dBm) | Limit Stop (dBm) | Verdict |
|-----------|-------|-----------------|---------------|--------------------------|-----------------|-------------------|------------------|---------|
| NVNT      | 1-DH1 | 2402            | 30-1000       | 95.96                    | -47.9           | -36               | -36              | Pass    |
| NVNT      | 1-DH1 | 2402            | 1000-2387     | 1779.49                  | -33.99          | -26               | -26              | Pass    |
| NVNT      | 1-DH1 | 2402            | 2387-2400     | 2398.77                  | -46.07          | -16               | -16              | Pass    |
| NVNT      | 1-DH1 | 2402            | 2483.5-2496.5 | 2486.32                  | -56.23          | -16               | -16              | Pass    |
| NVNT      | 1-DH1 | 2402            | 2496.5-13000  | 2538.51                  | -34.53          | -26               | -26              | Pass    |
| NVNT      | 1-DH1 | 2441            | 30-1000       | 95.96                    | -45.89          | -36               | -36              | Pass    |
| NVNT      | 1-DH1 | 2441            | 1000-2387     | 1767.01                  | -31.21          | -26               | -26              | Pass    |
| NVNT      | 1-DH1 | 2441            | 2387-2400     | 2393.99                  | -56.29          | -16               | -16              | Pass    |
| NVNT      | 1-DH1 | 2441            | 2483.5-2496.5 | 2488.91                  | -56.71          | -16               | -16              | Pass    |
| NVNT      | 1-DH1 | 2441            | 2496.5-13000  | 2549.02                  | -34.18          | -26               | -26              | Pass    |
| NVNT      | 1-DH1 | 2480            | 30-1000       | 95.96                    | -48.07          | -36               | -36              | Pass    |
| NVNT      | 1-DH1 | 2480            | 1000-2387     | 2371.74                  | -56.24          | -26               | -26              | Pass    |
| NVNT      | 1-DH1 | 2480            | 2387-2400     | 2398.96                  | -56.5           | -16               | -16              | Pass    |
| NVNT      | 1-DH1 | 2480            | 2483.5-2496.5 | 2488.71                  | -50.77          | -16               | -16              | Pass    |
| NVNT      | 1-DH1 | 2480            | 2496.5-13000  | 2528.01                  | -39.2           | -26               | -26              | Pass    |
| NVNT      | 2-DH1 | 2402            | 30-1000       | 95.96                    | -48.09          | -36               | -36              | Pass    |
| NVNT      | 2-DH1 | 2402            | 1000-2387     | 2378.68                  | -52.69          | -26               | -26              | Pass    |
| NVNT      | 2-DH1 | 2402            | 2387-2400     | 2399.73                  | -42.78          | -16               | -16              | Pass    |
| NVNT      | 2-DH1 | 2402            | 2483.5-2496.5 | 2485.06                  | -56.7           | -16               | -16              | Pass    |
| NVNT      | 2-DH1 | 2402            | 2496.5-13000  | 2517.51                  | -29.14          | -26               | -26              | Pass    |
| NVNT      | 2-DH1 | 2441            | 30-1000       | 95.96                    | -48.23          | -36               | -36              | Pass    |
| NVNT      | 2-DH1 | 2441            | 1000-2387     | 1785.04                  | -47.99          | -26               | -26              | Pass    |
| NVNT      | 2-DH1 | 2441            | 2387-2400     | 2399.48                  | -56.88          | -16               | -16              | Pass    |
| NVNT      | 2-DH1 | 2441            | 2483.5-2496.5 | 2488.93                  | -48.69          | -16               | -16              | Pass    |
| NVNT      | 2-DH1 | 2441            | 2496.5-13000  | 2538.51                  | -33.12          | -26               | -26              | Pass    |
| NVNT      | 2-DH1 | 2480            | 30-1000       | 95.96                    | -47.22          | -36               | -36              | Pass    |
| NVNT      | 2-DH1 | 2480            | 1000-2387     | 1767.01                  | -27.49          | -26               | -26              | Pass    |
| NVNT      | 2-DH1 | 2480            | 2387-2400     | 2400                     | -55.41          | -16               | -16              | Pass    |
| NVNT      | 2-DH1 | 2480            | 2483.5-2496.5 | 2492.38                  | -51.76          | -16               | -16              | Pass    |
| NVNT      | 2-DH1 | 2480            | 2496.5-13000  | 2528.01                  | -32.32          | -26               | -26              | Pass    |
| NVNT      | 3-DH1 | 2402            | 30-1000       | 95.96                    | -48.61          | -36               | -36              | Pass    |
| NVNT      | 3-DH1 | 2402            | 1000-2387     | 1767.01                  | -39.39          | -26               | -26              | Pass    |
| NVNT      | 3-DH1 | 2402            | 2387-2400     | 2399.84                  | -45.01          | -16               | -16              | Pass    |
| NVNT      | 3-DH1 | 2402            | 2483.5-2496.5 | 2488.62                  | -56.51          | -16               | -16              | Pass    |
| NVNT      | 3-DH1 | 2402            | 2496.5-13000  | 5174.89                  | -50.16          | -26               | -26              | Pass    |
| NVNT      | 3-DH1 | 2441            | 30-1000       | 95.96                    | -48.13          | -36               | -36              | Pass    |
| NVNT      | 3-DH1 | 2441            | 1000-2387     | 2345.39                  | -55.29          | -26               | -26              | Pass    |

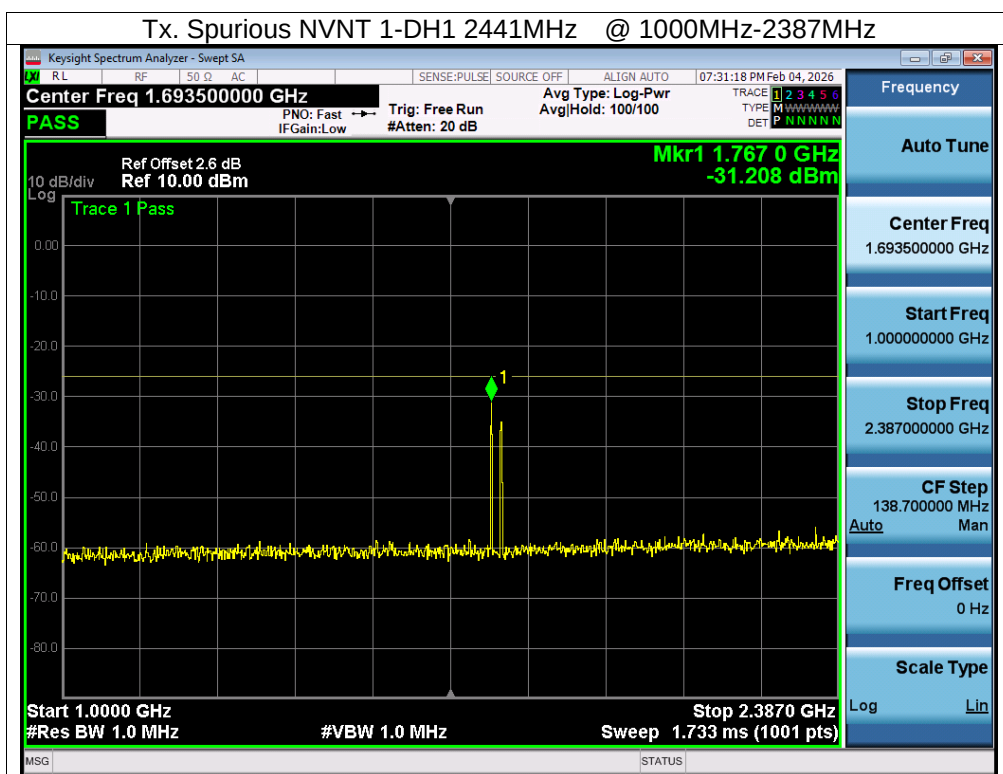
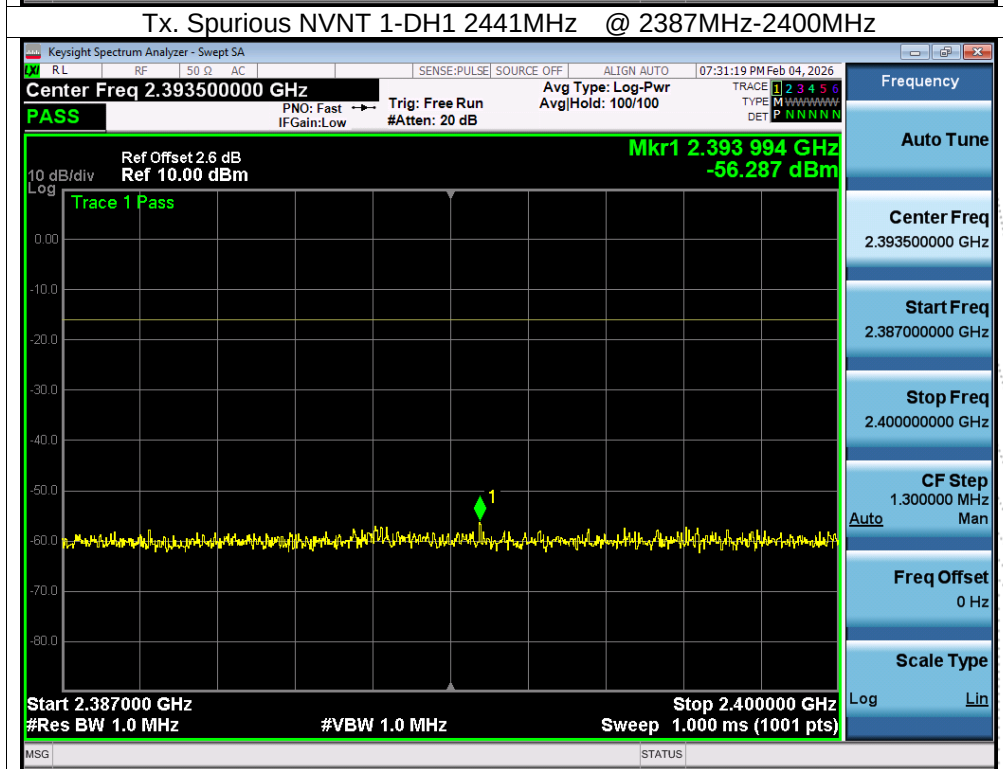
|      |       |      |               |         |        |     |     |      |
|------|-------|------|---------------|---------|--------|-----|-----|------|
| NVNT | 3-DH1 | 2441 | 2387-2400     | 2393.02 | -51.91 | -16 | -16 | Pass |
| NVNT | 3-DH1 | 2441 | 2483.5-2496.5 | 2489.09 | -50.67 | -16 | -16 | Pass |
| NVNT | 3-DH1 | 2441 | 2496.5-13000  | 5174.89 | -46.42 | -26 | -26 | Pass |
| NVNT | 3-DH1 | 2480 | 30-1000       | 721.61  | -47.82 | -36 | -36 | Pass |
| NVNT | 3-DH1 | 2480 | 1000-2387     | 2384.23 | -53.87 | -26 | -26 | Pass |
| NVNT | 3-DH1 | 2480 | 2387-2400     | 2396.74 | -56.57 | -16 | -16 | Pass |
| NVNT | 3-DH1 | 2480 | 2483.5-2496.5 | 2492.33 | -48.17 | -16 | -16 | Pass |
| NVNT | 3-DH1 | 2480 | 2496.5-13000  | 3441.82 | -39.28 | -26 | -26 | Pass |

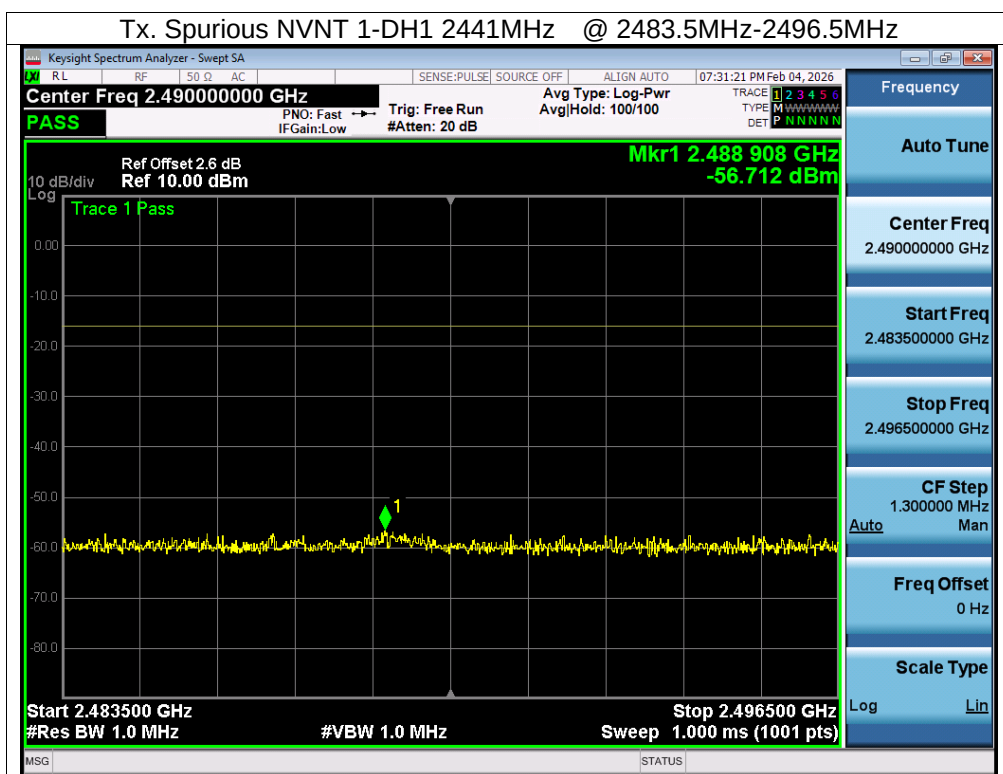
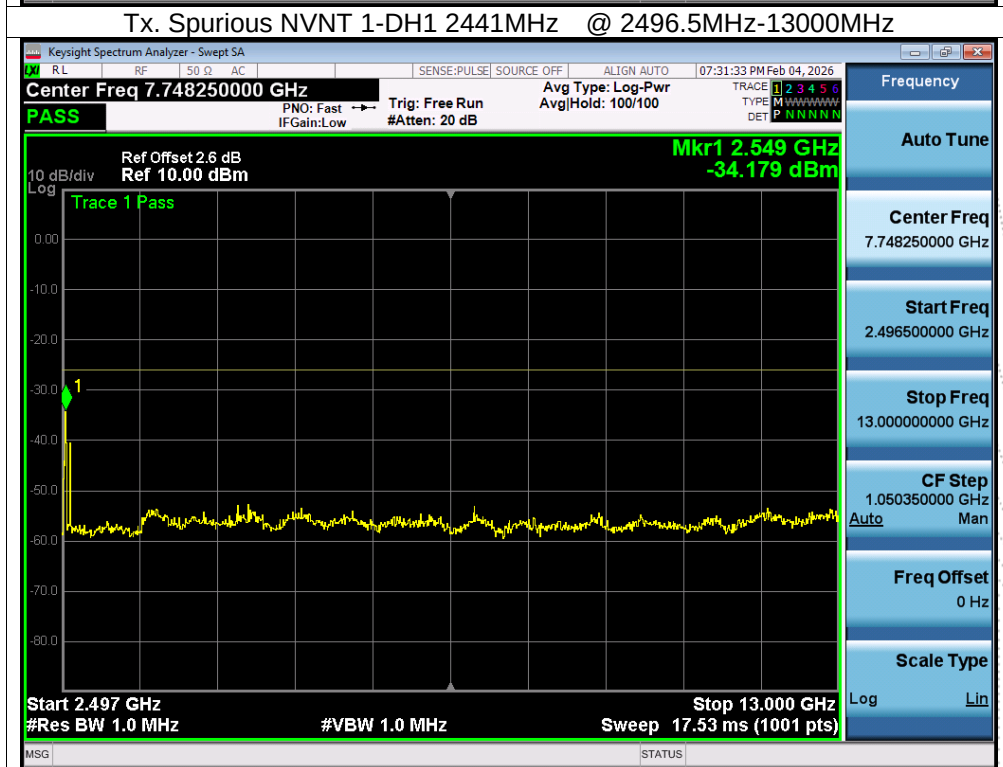
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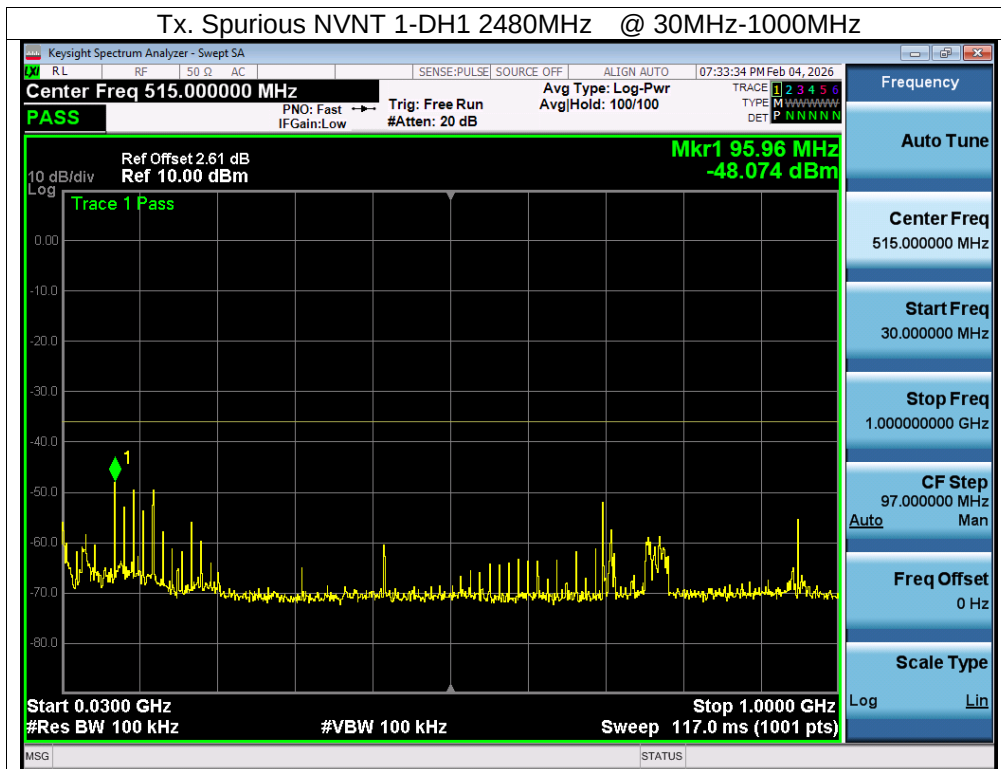
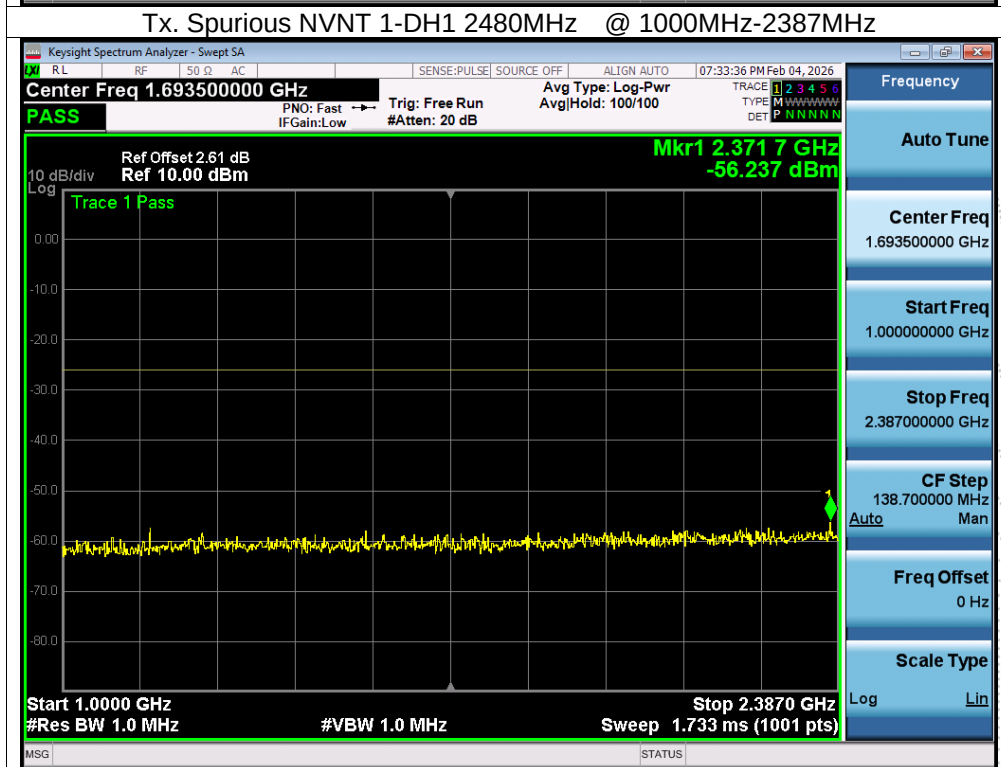


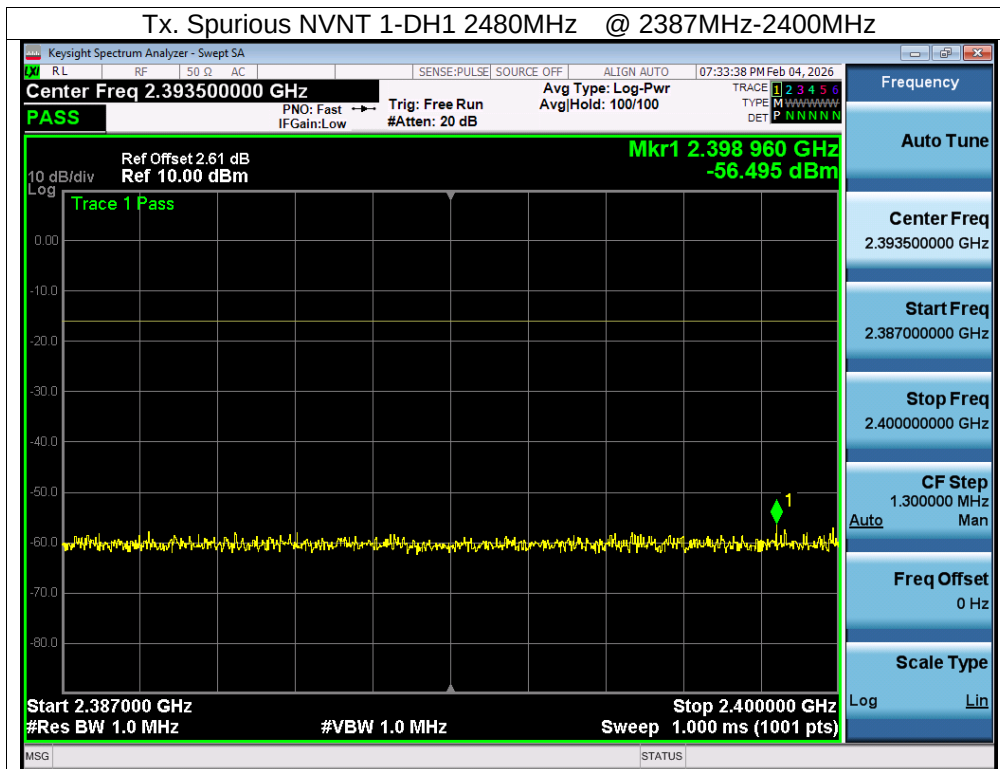
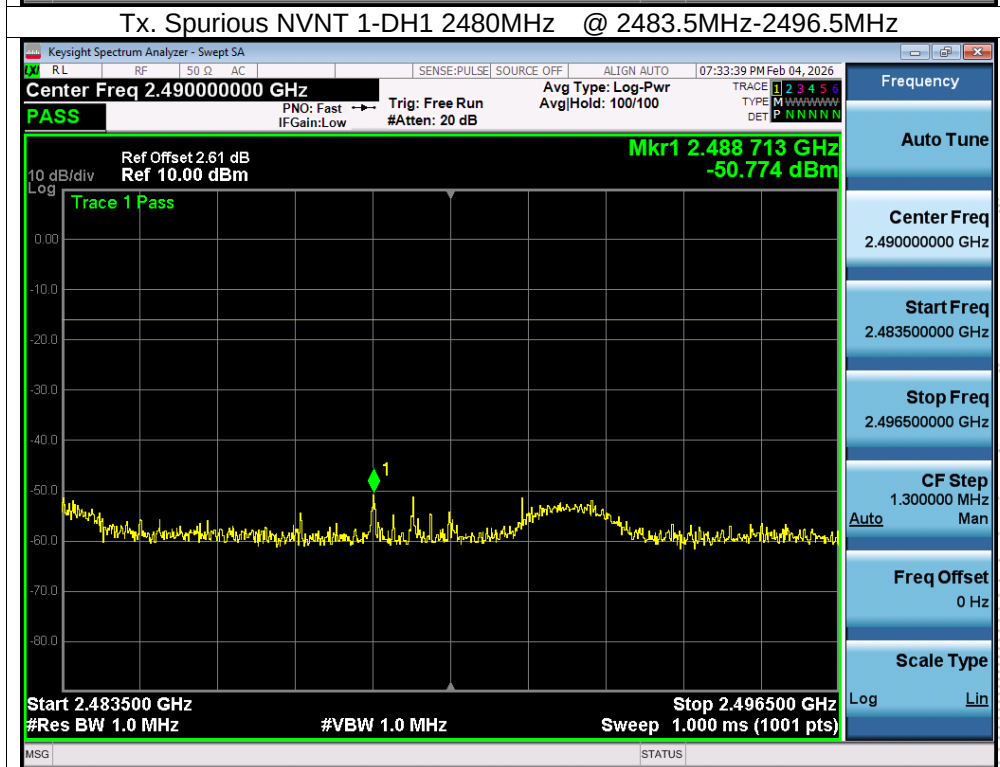


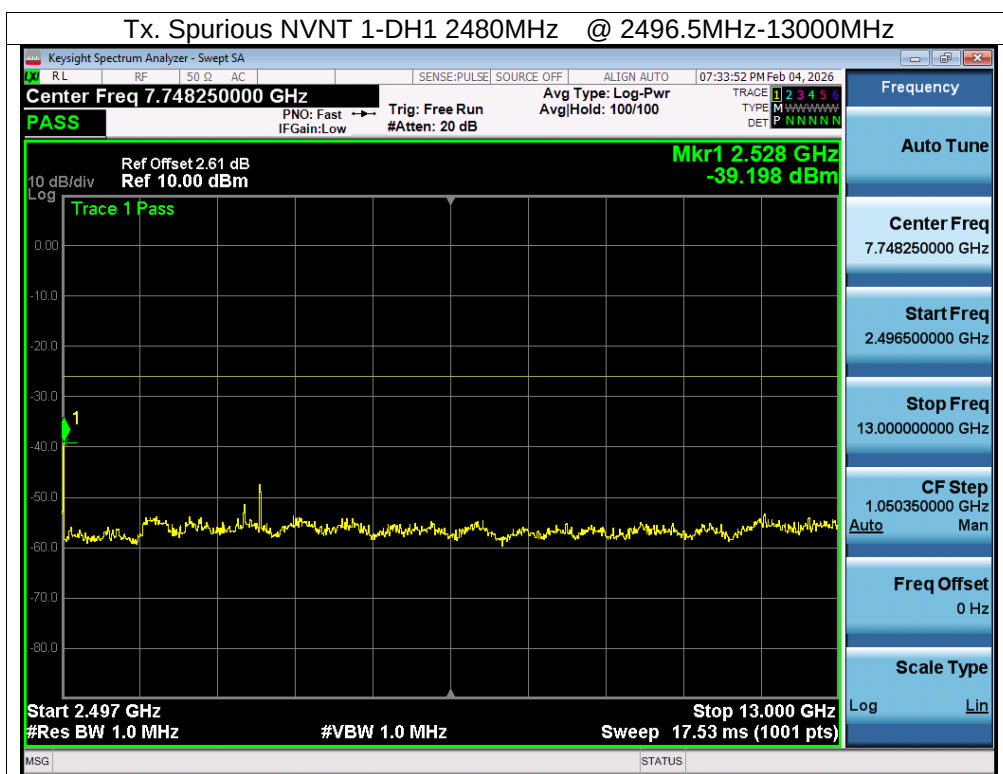
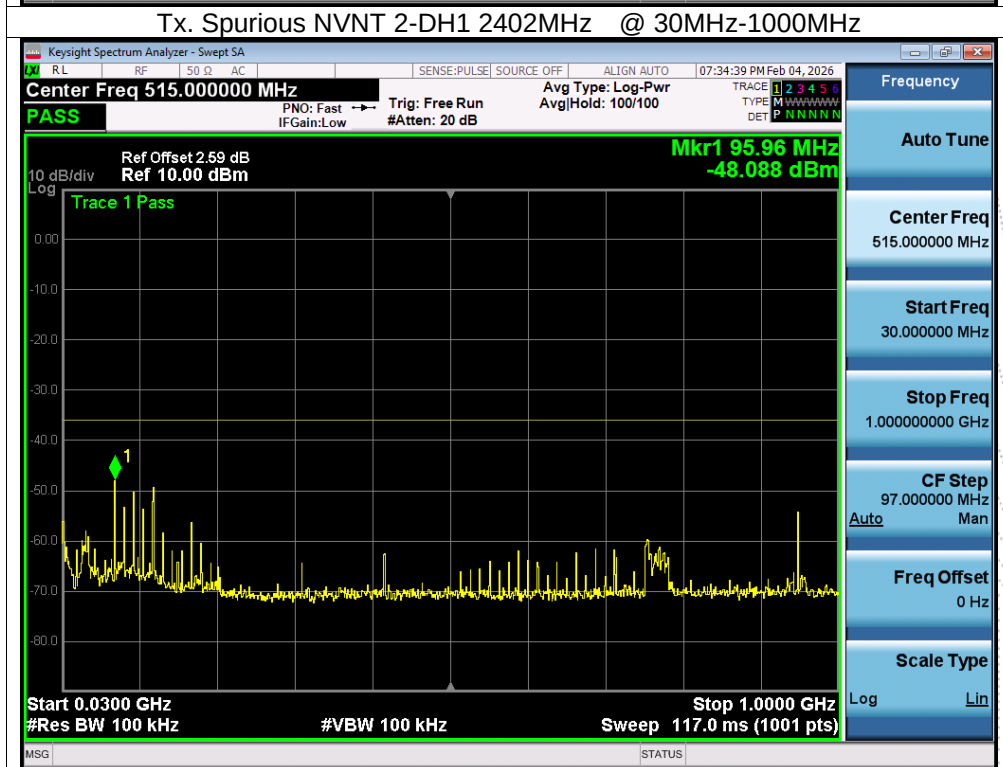


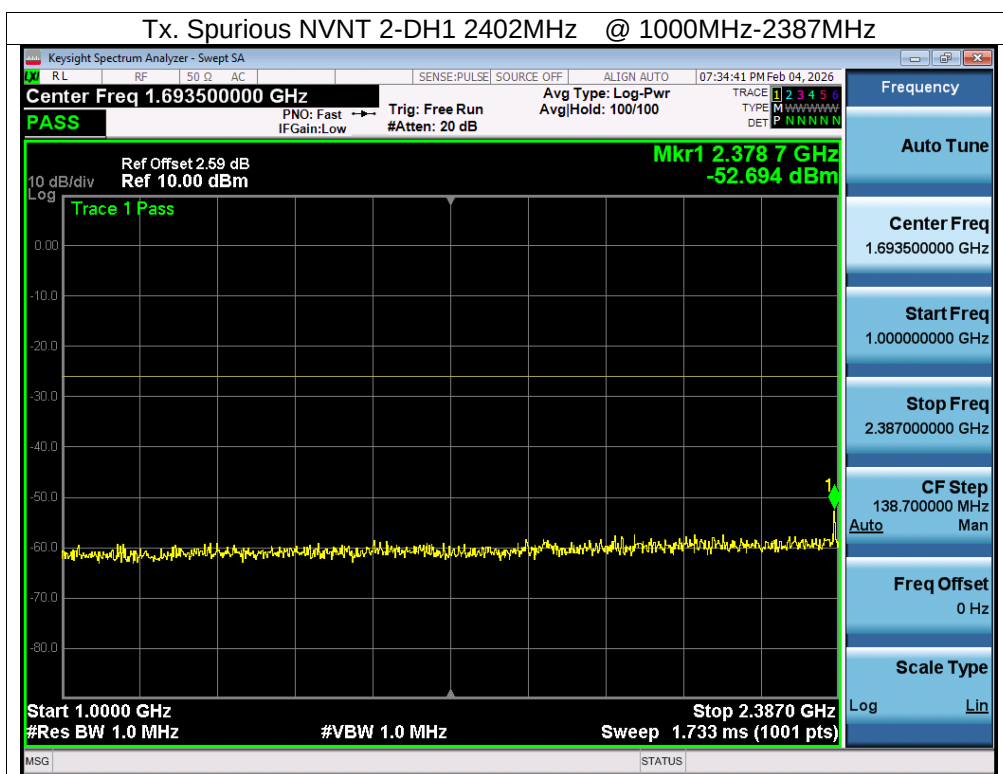
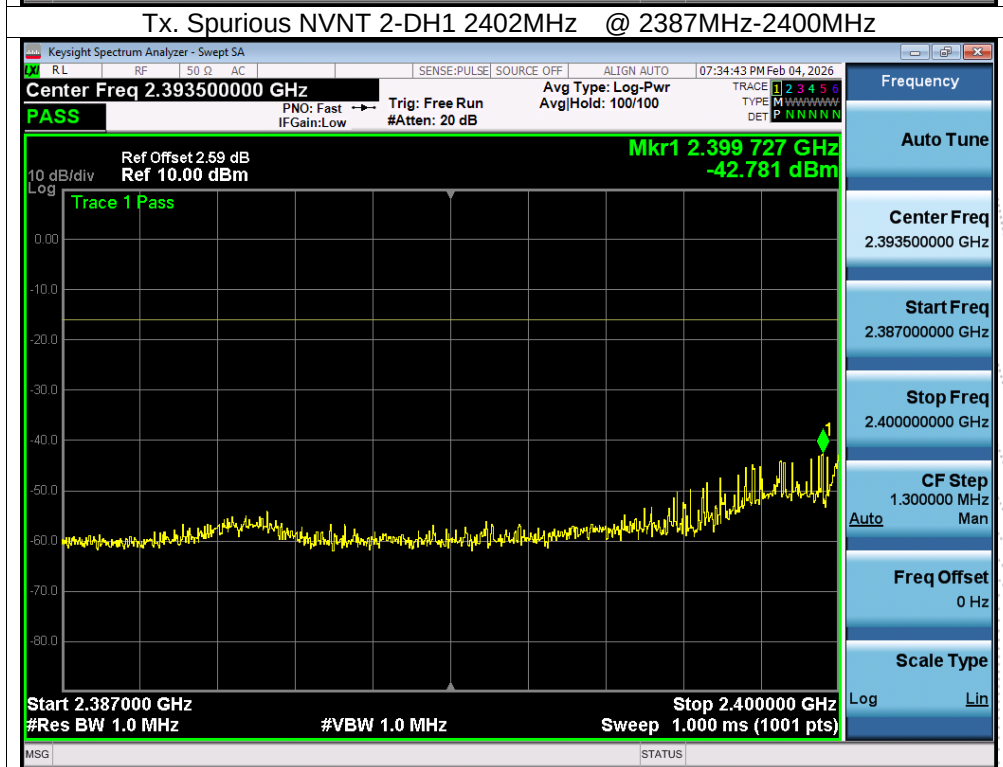


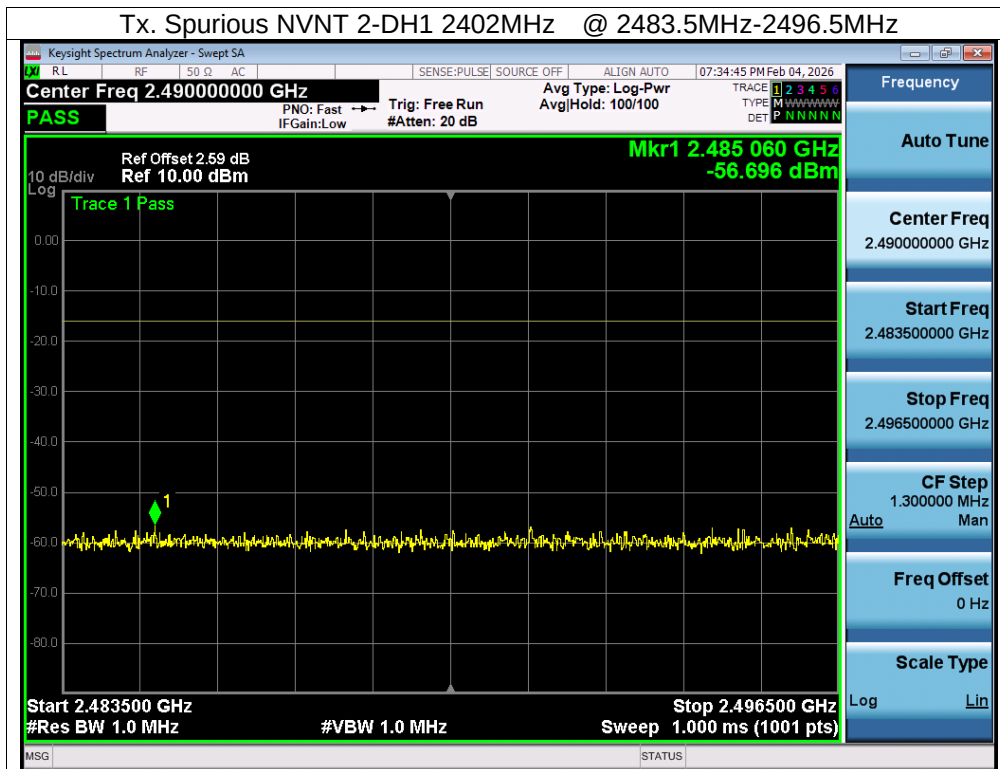
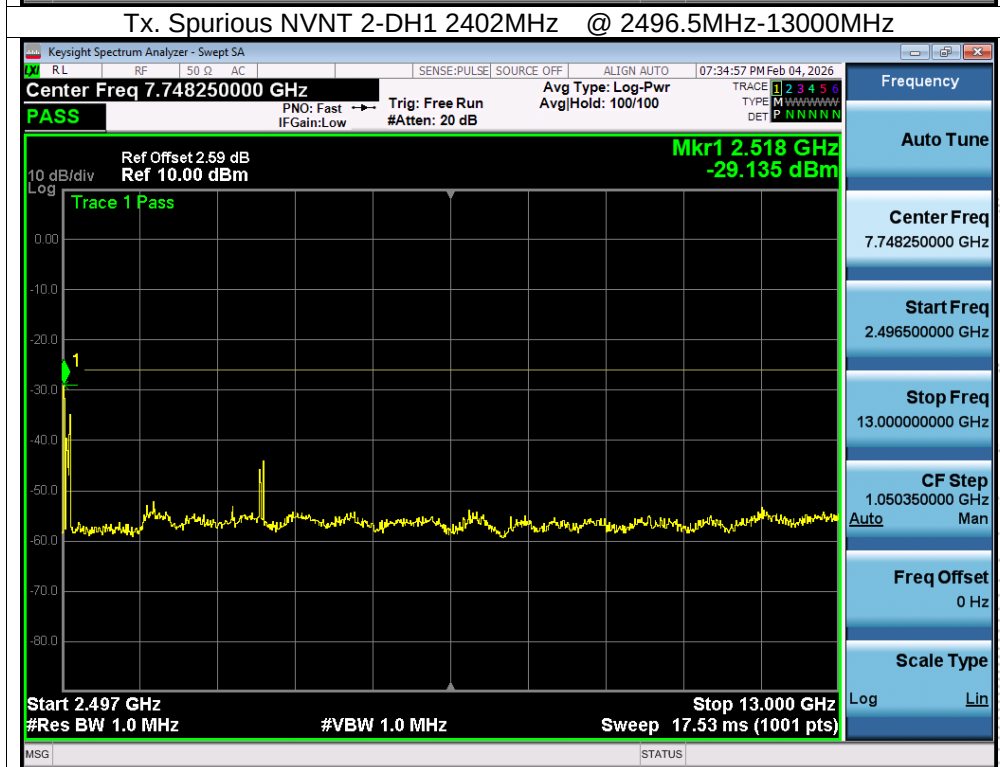


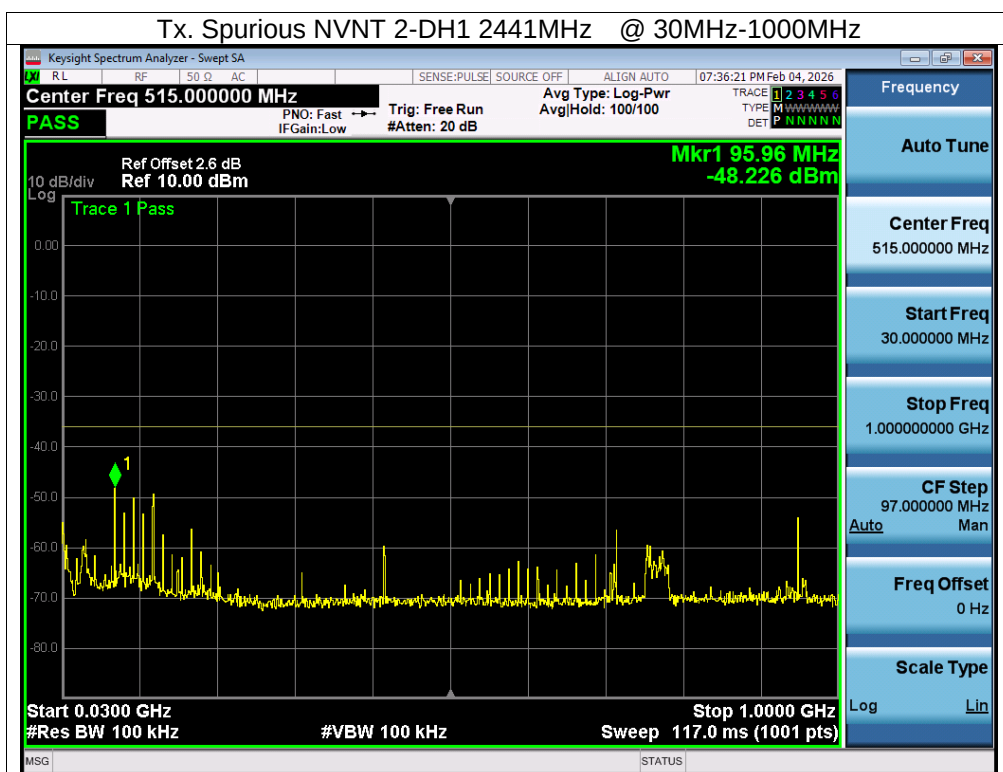
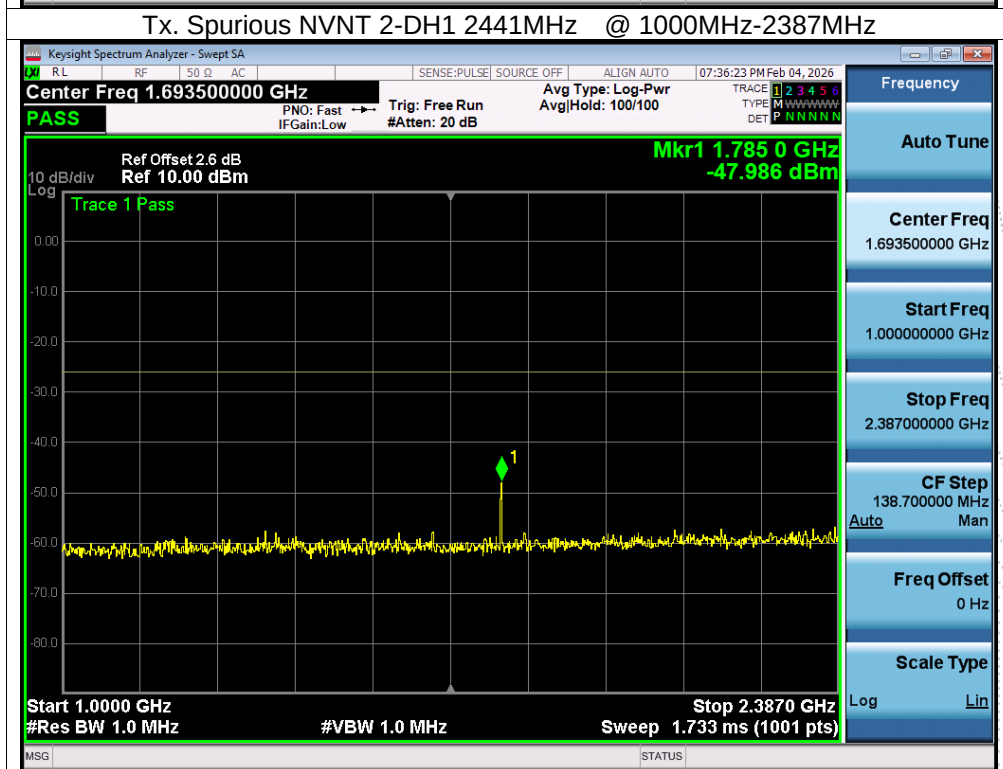


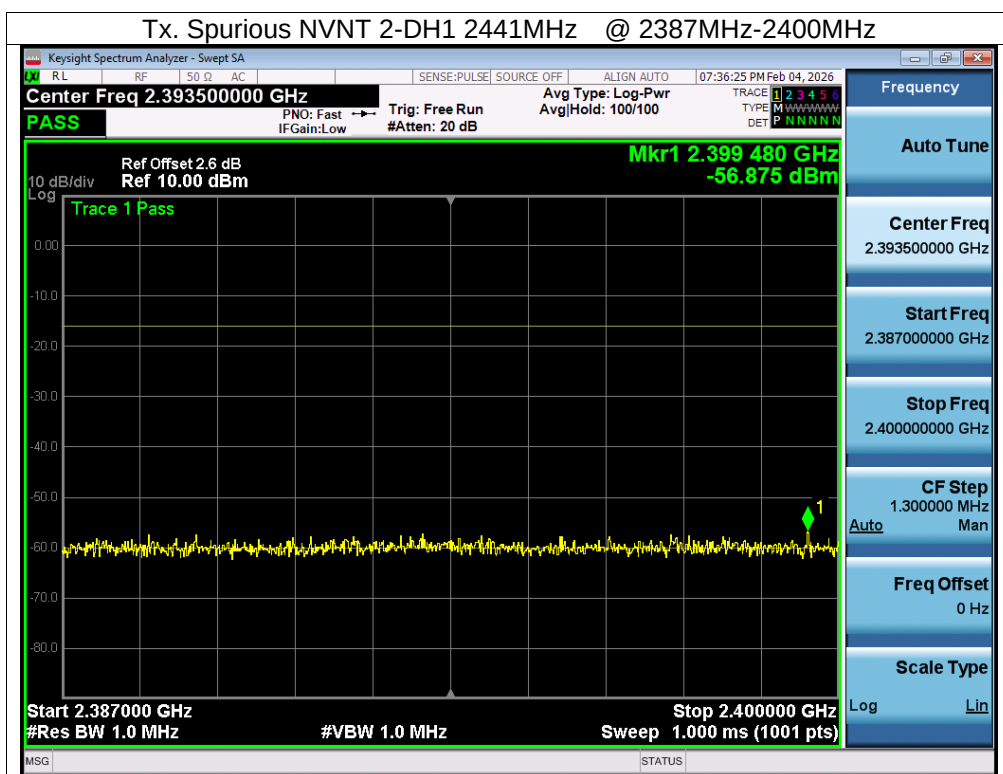
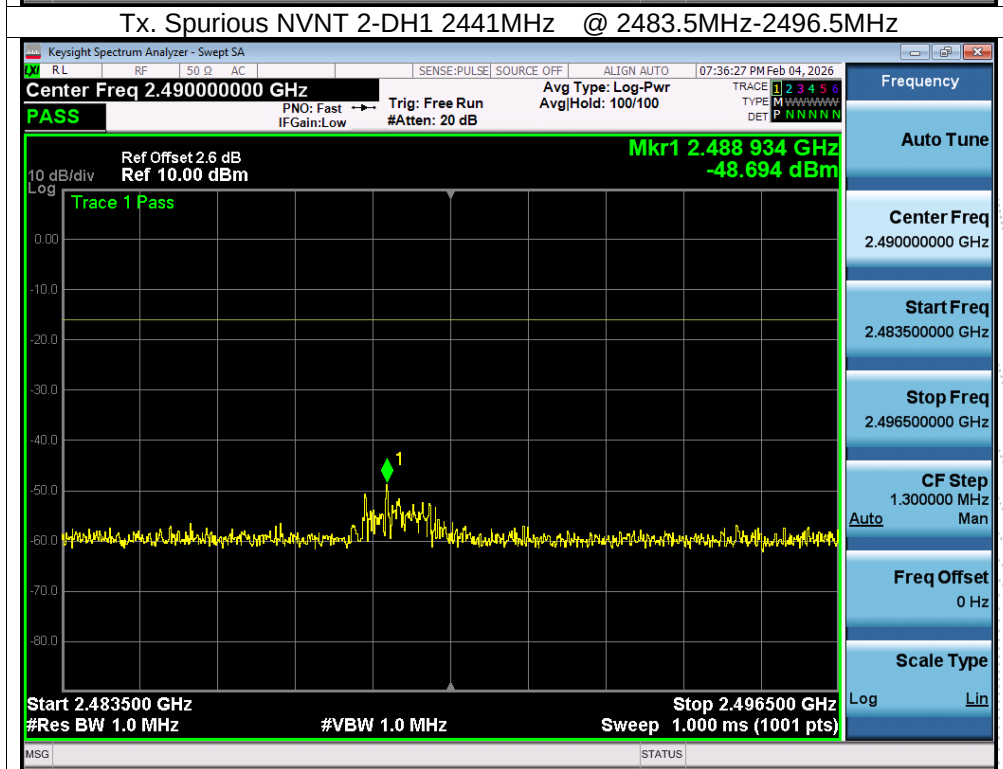


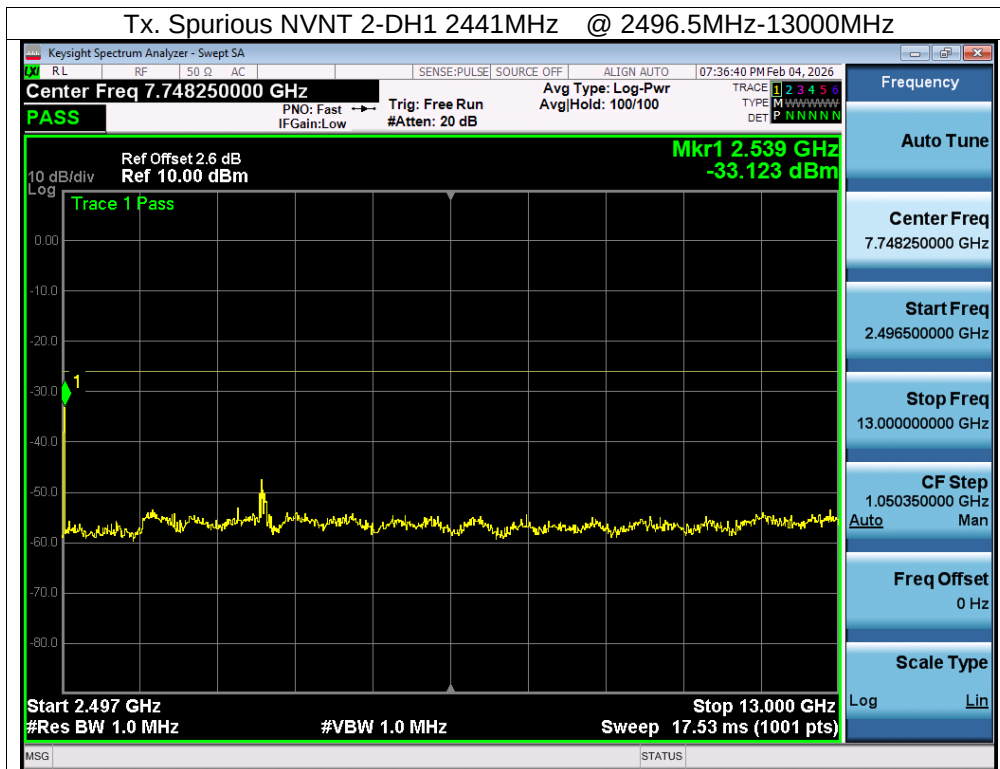
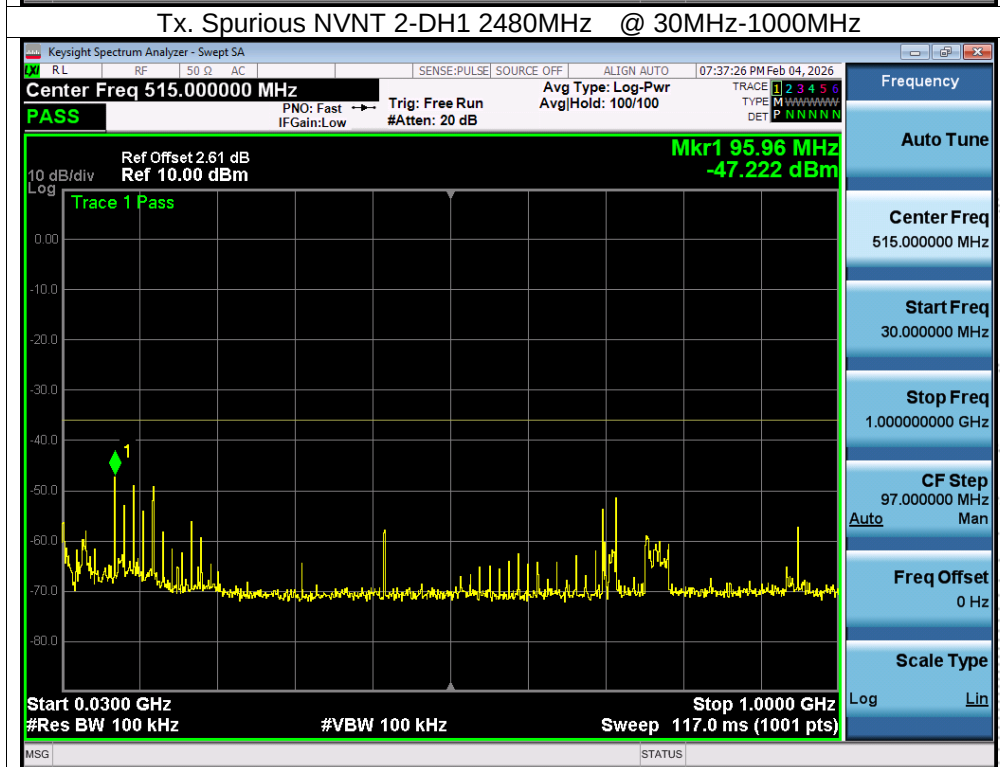


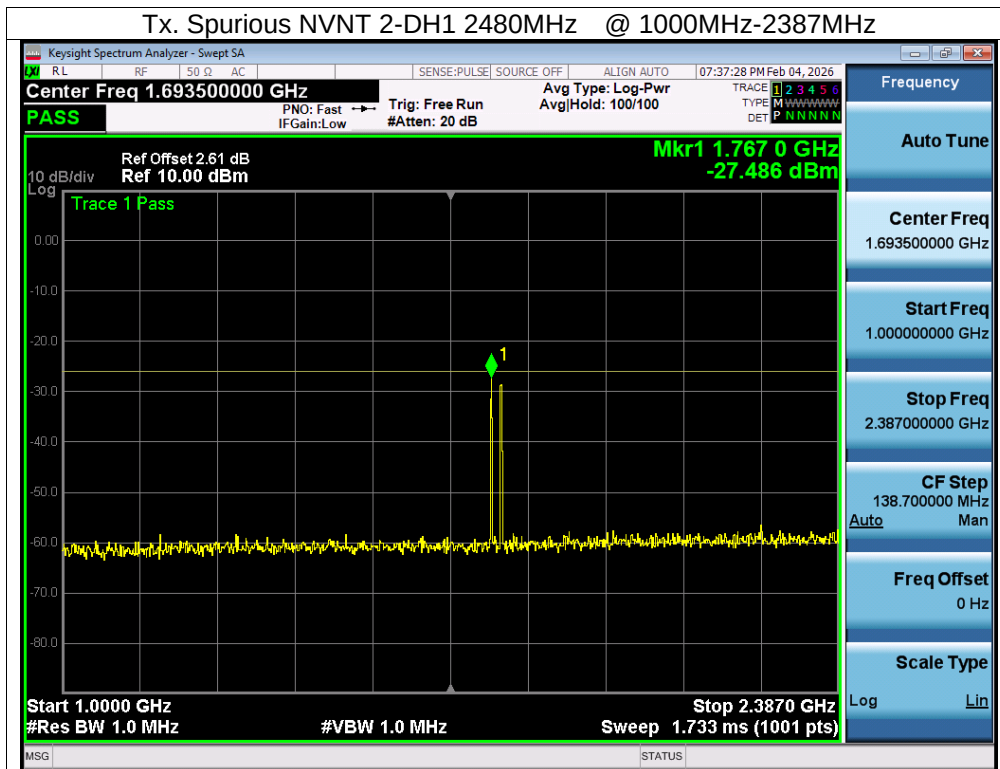
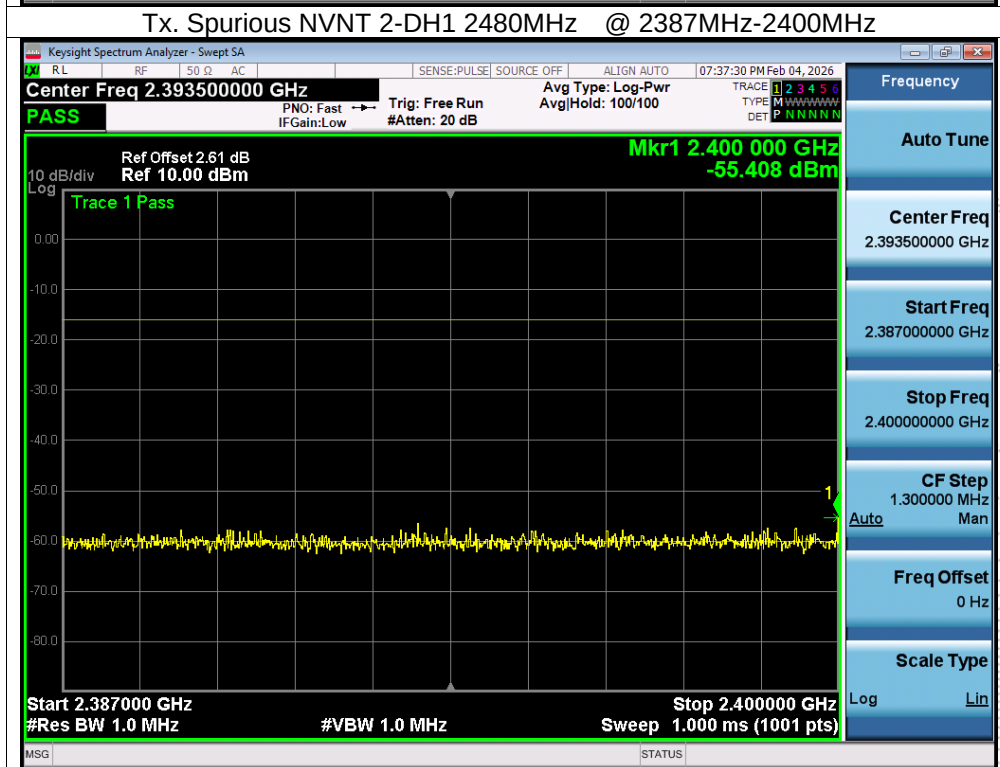


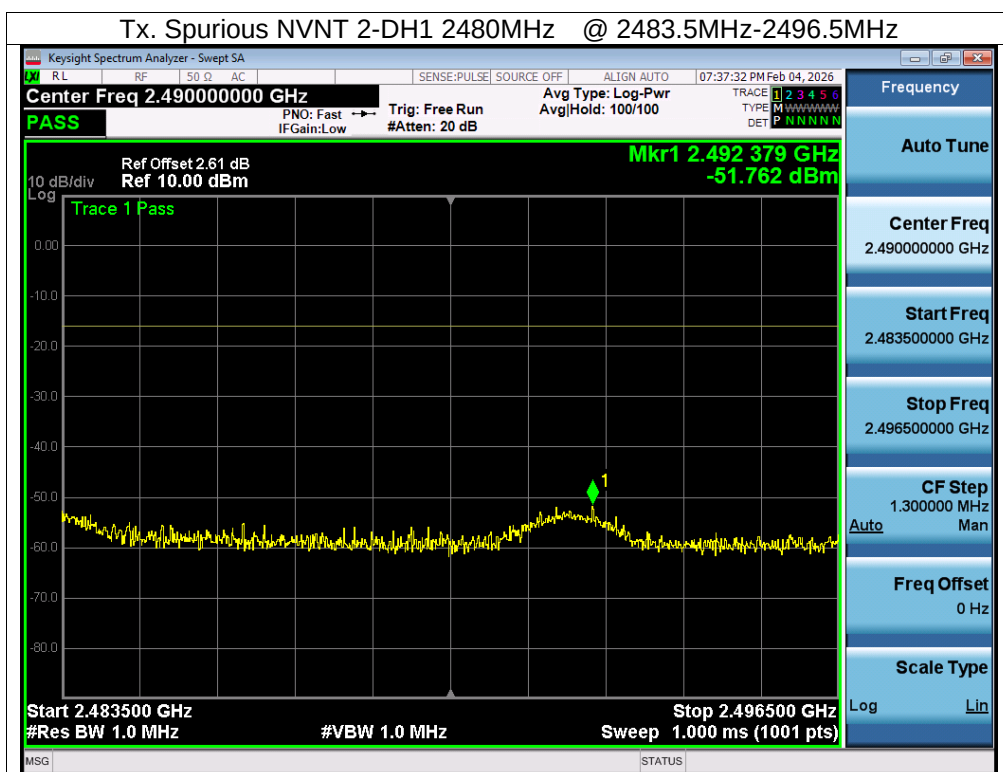
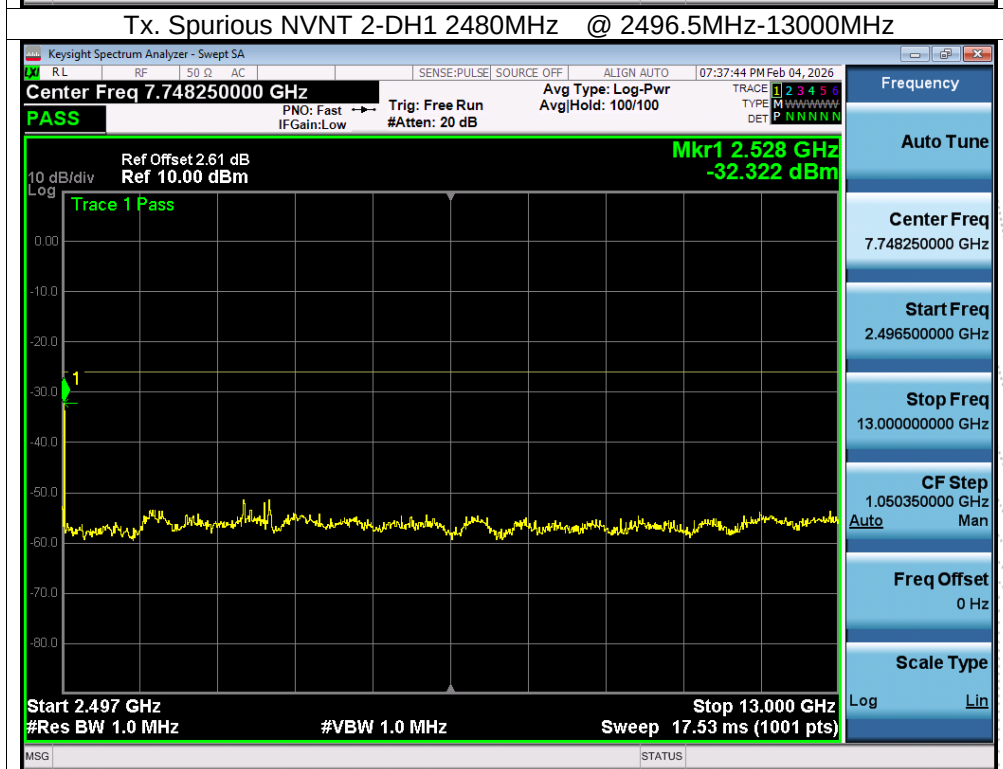


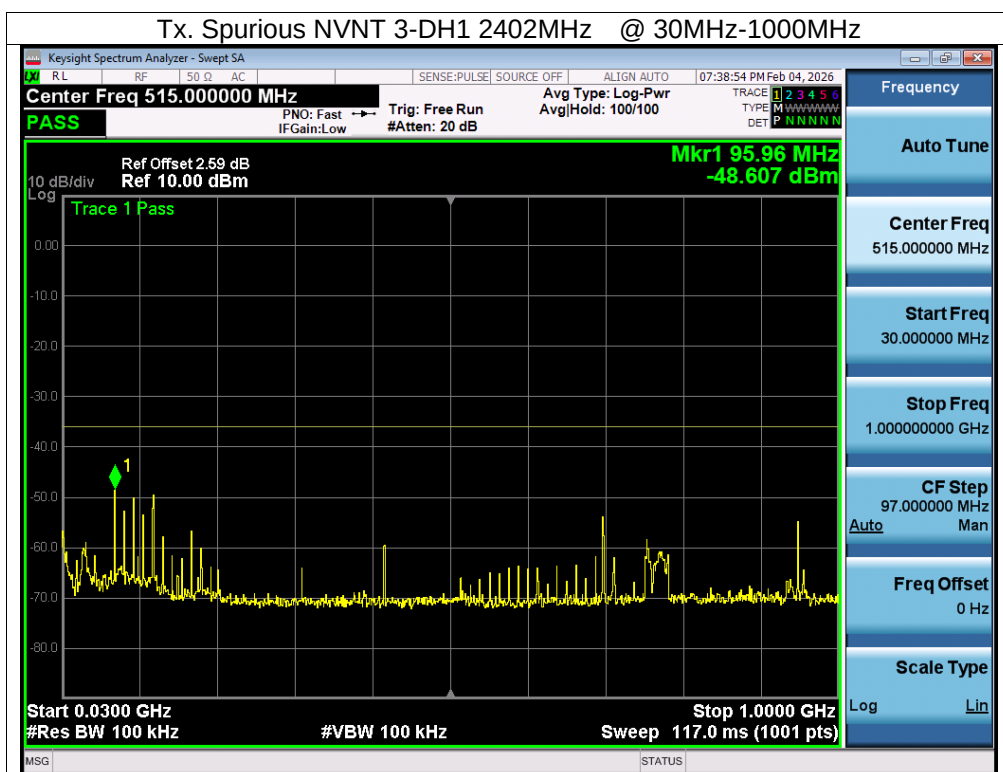
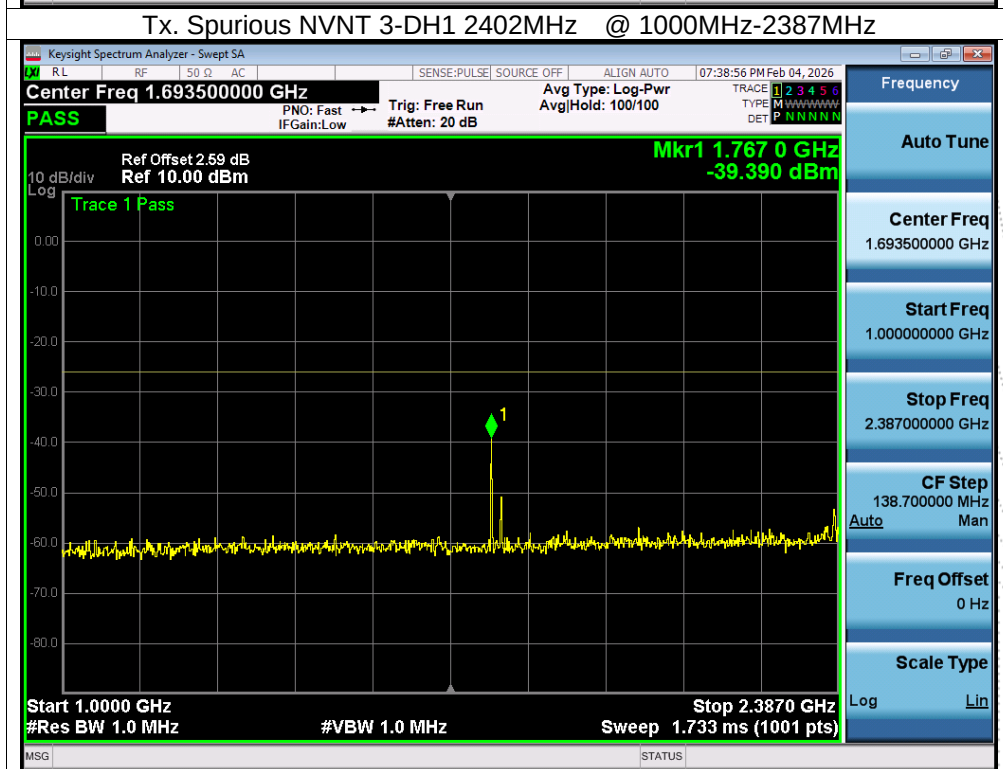


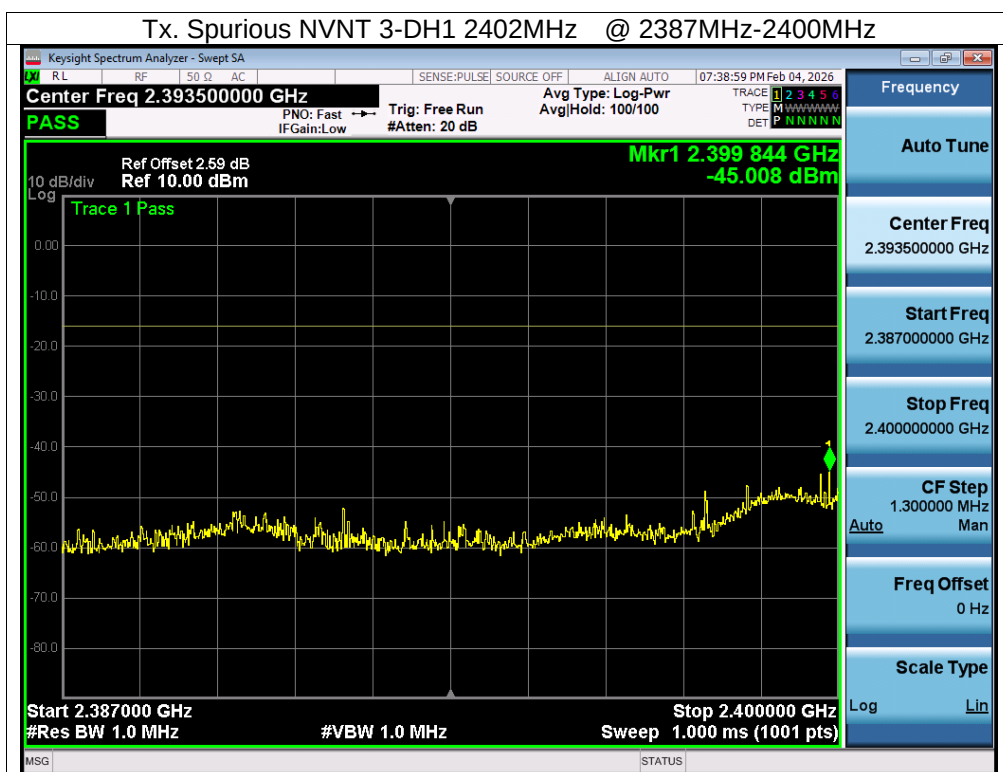
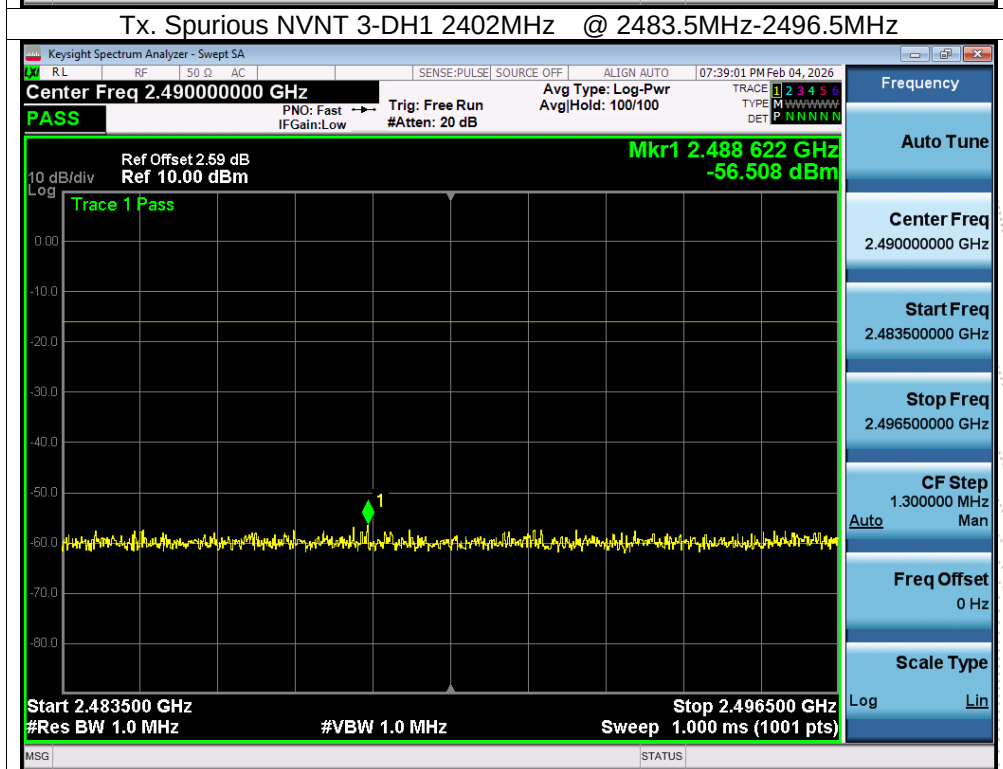


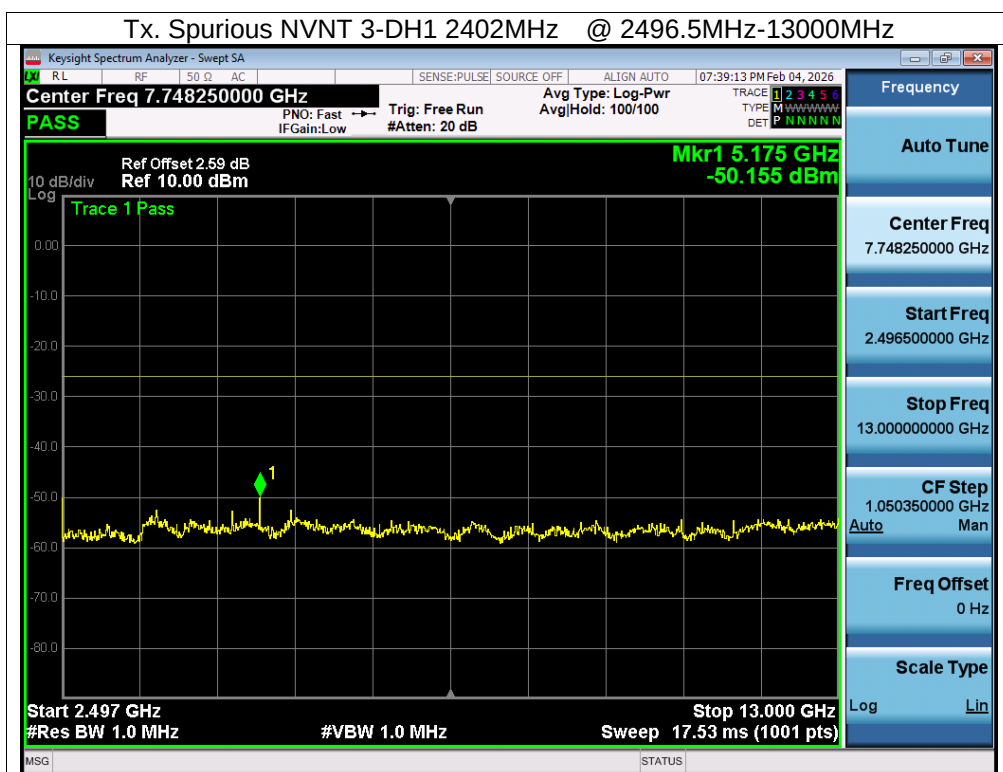
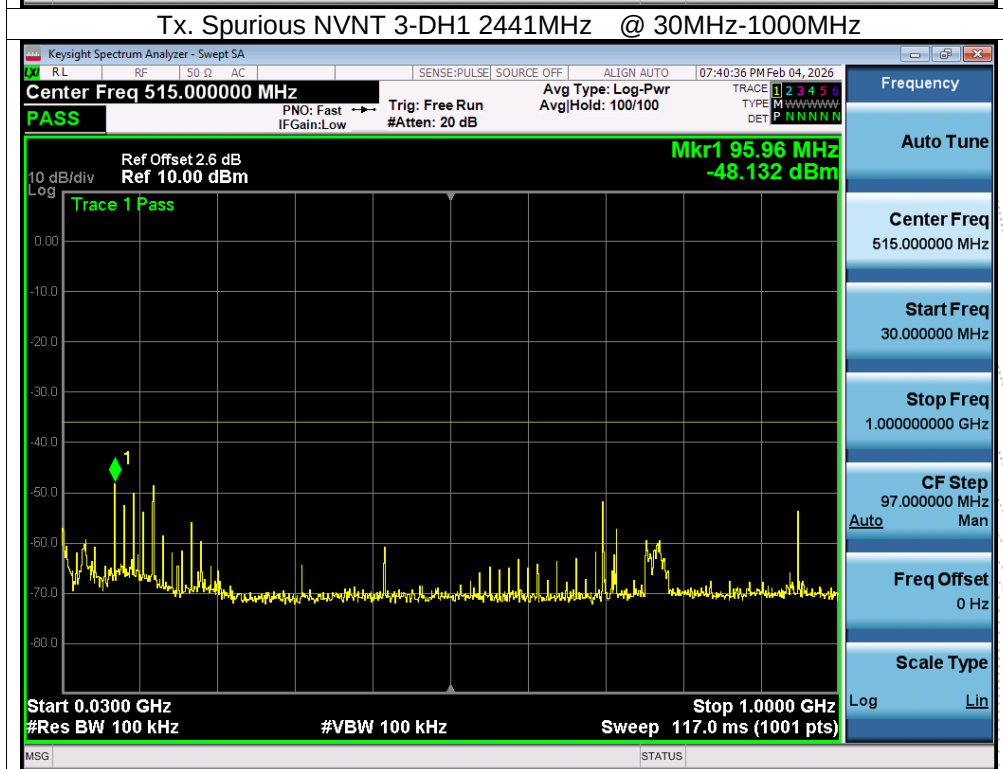




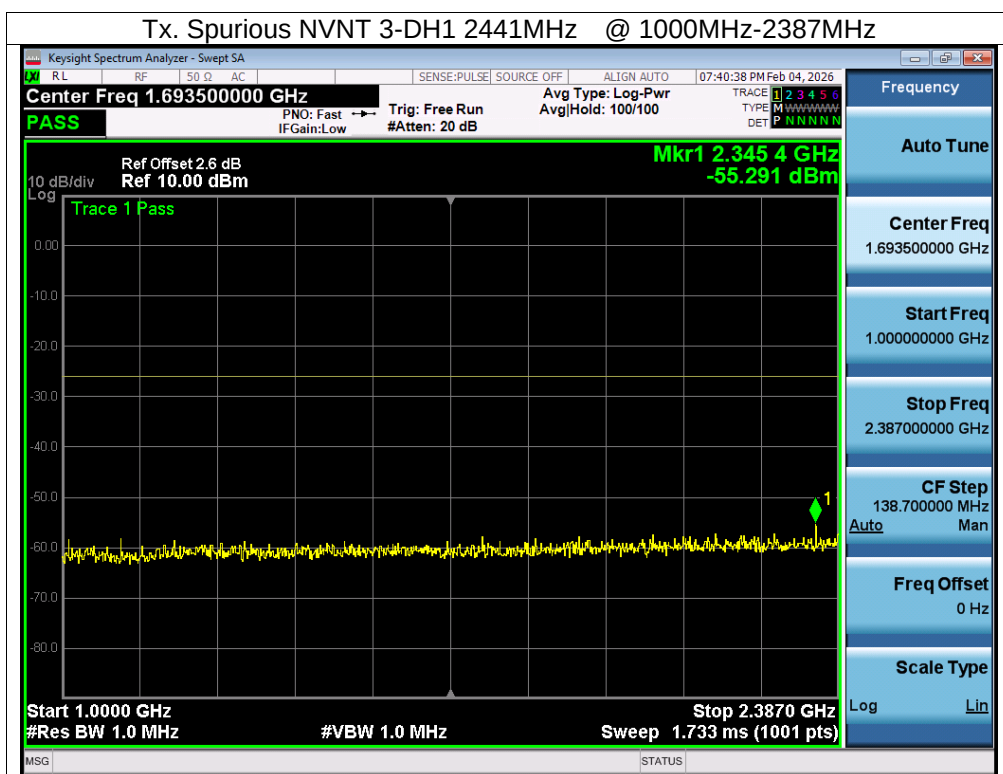
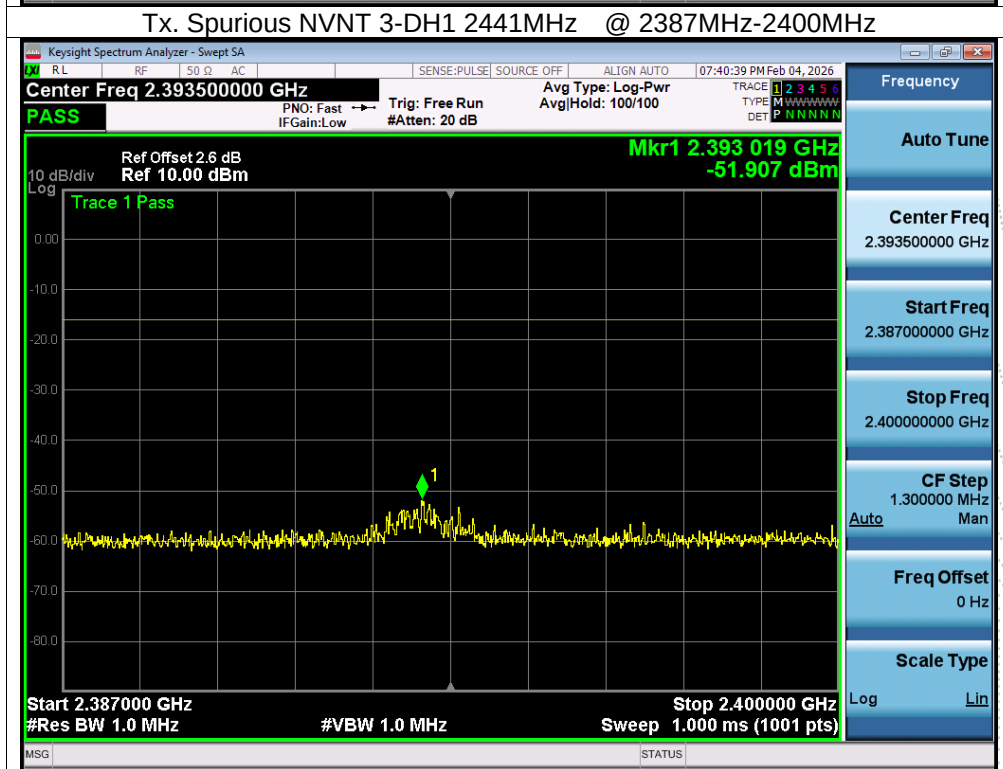


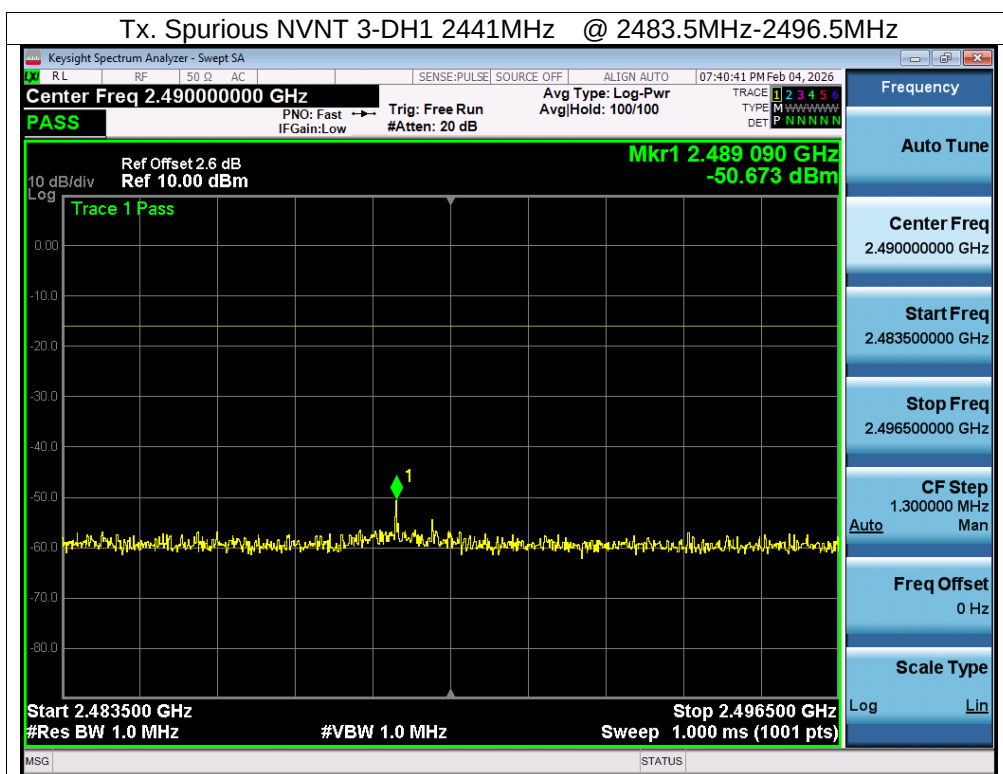
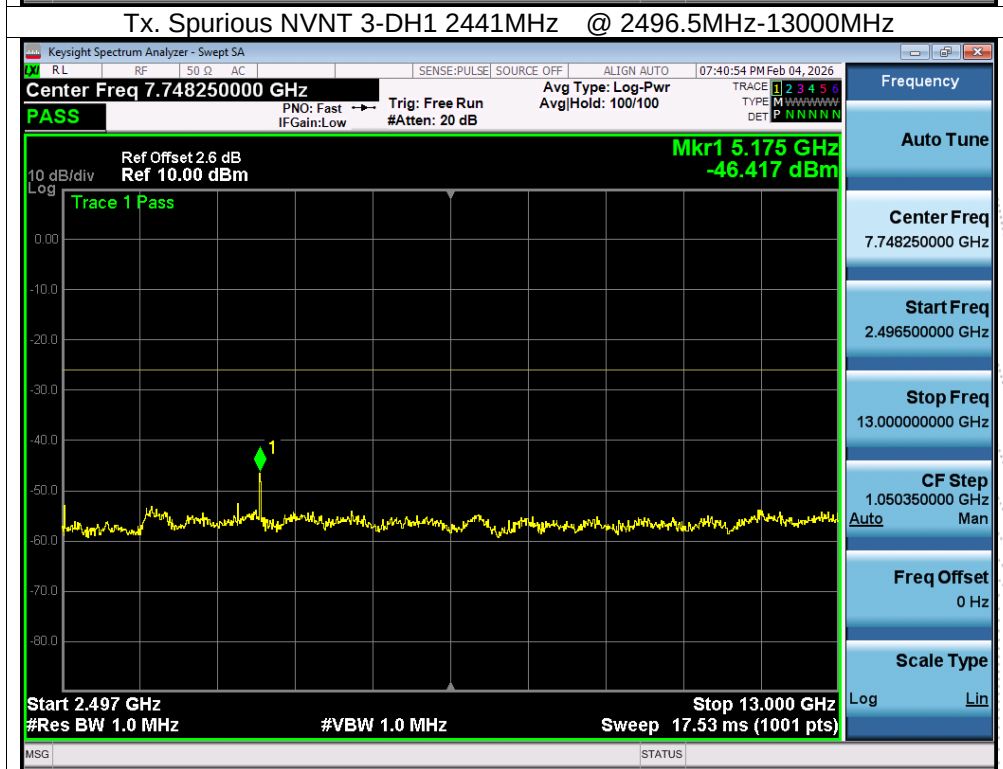


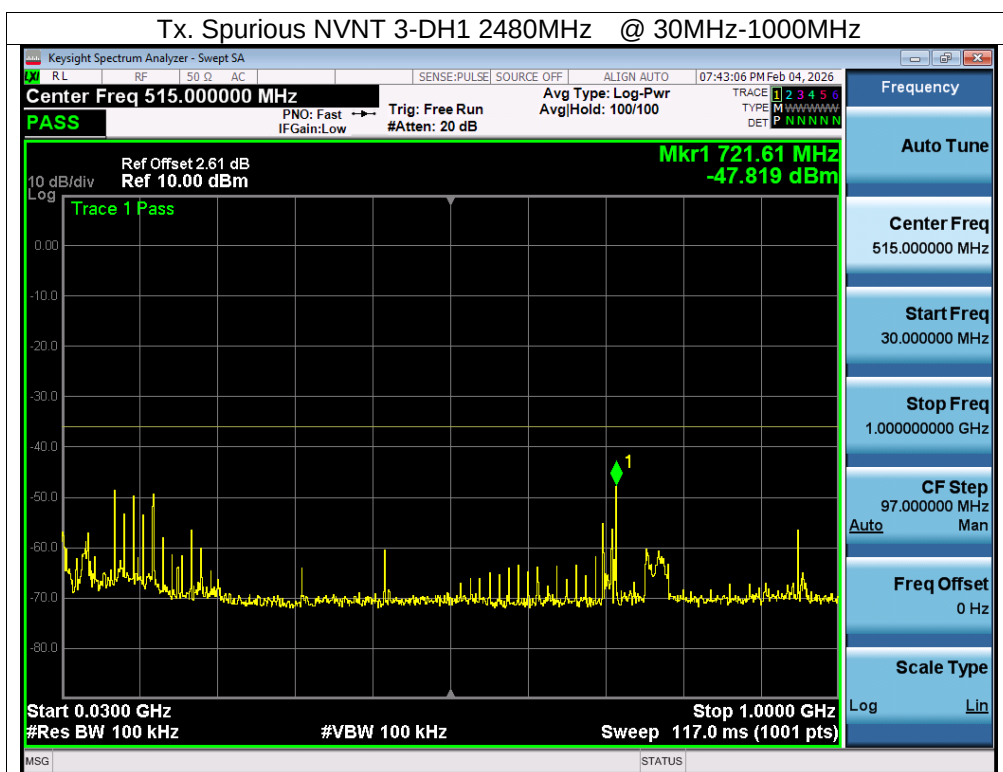
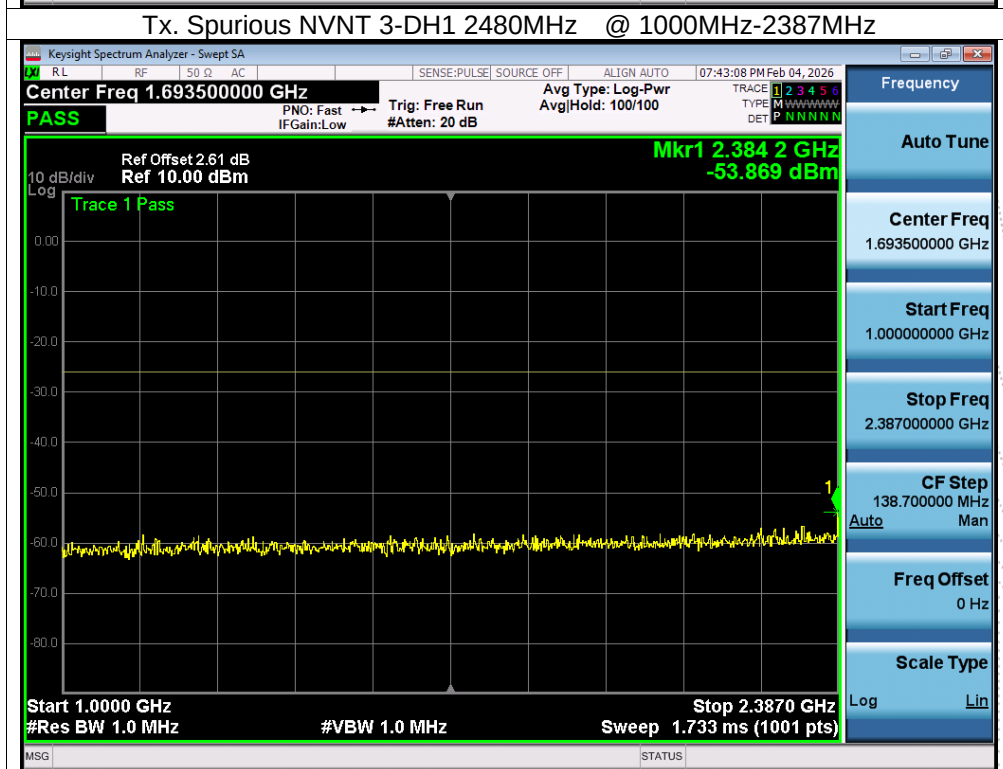


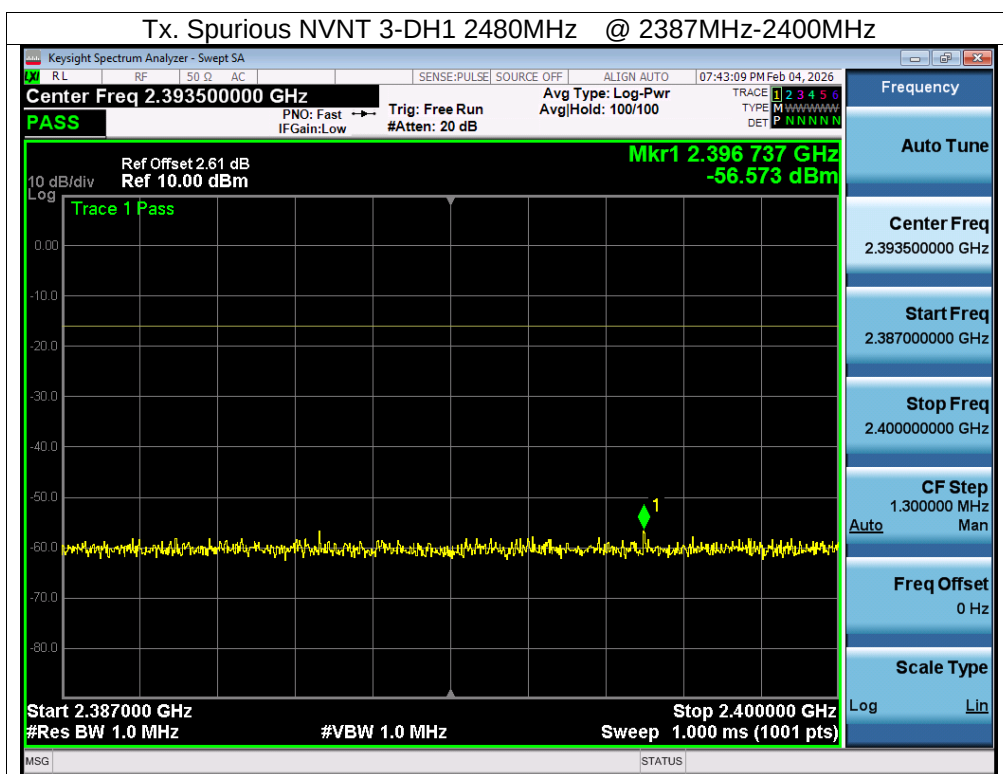
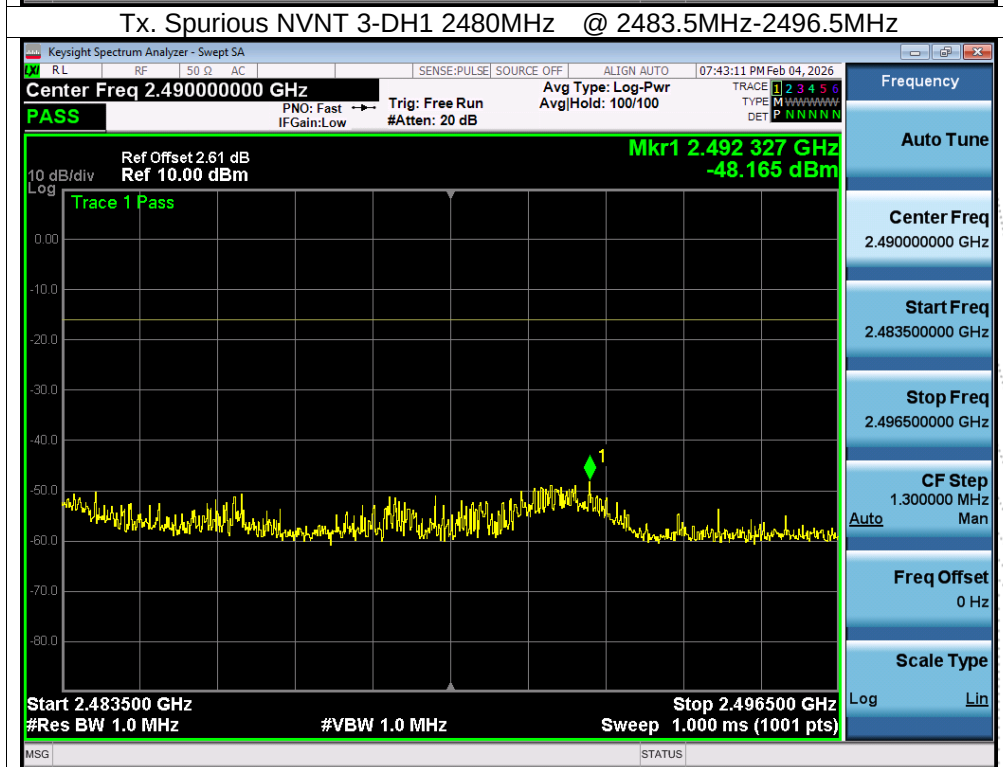


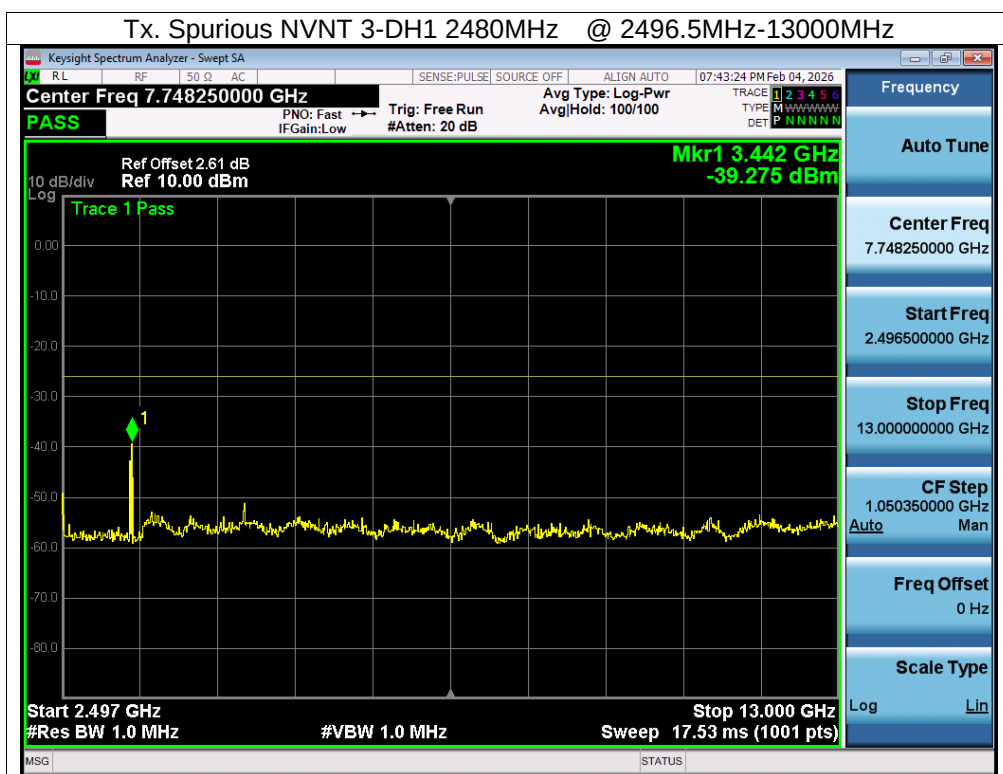
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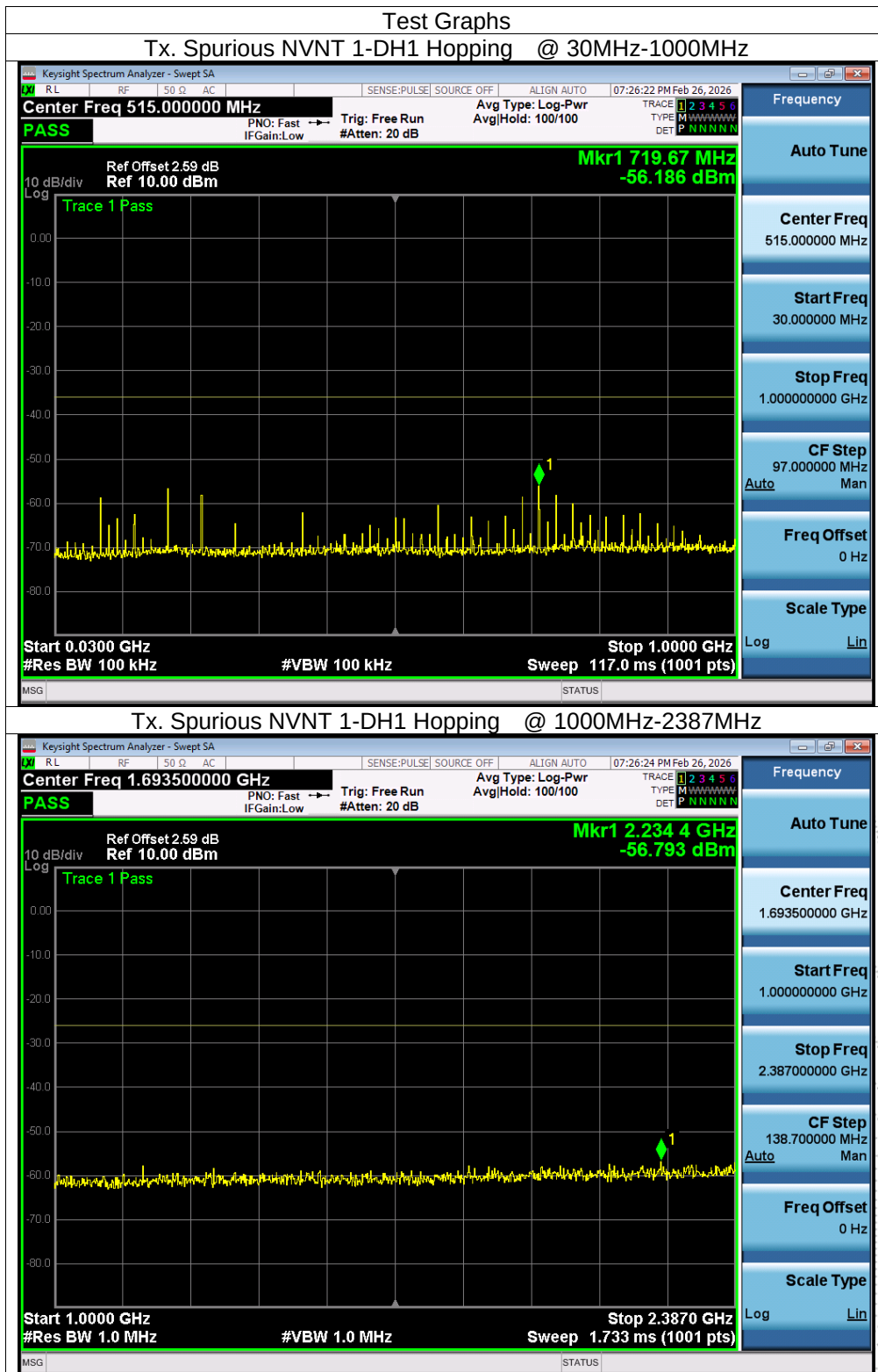


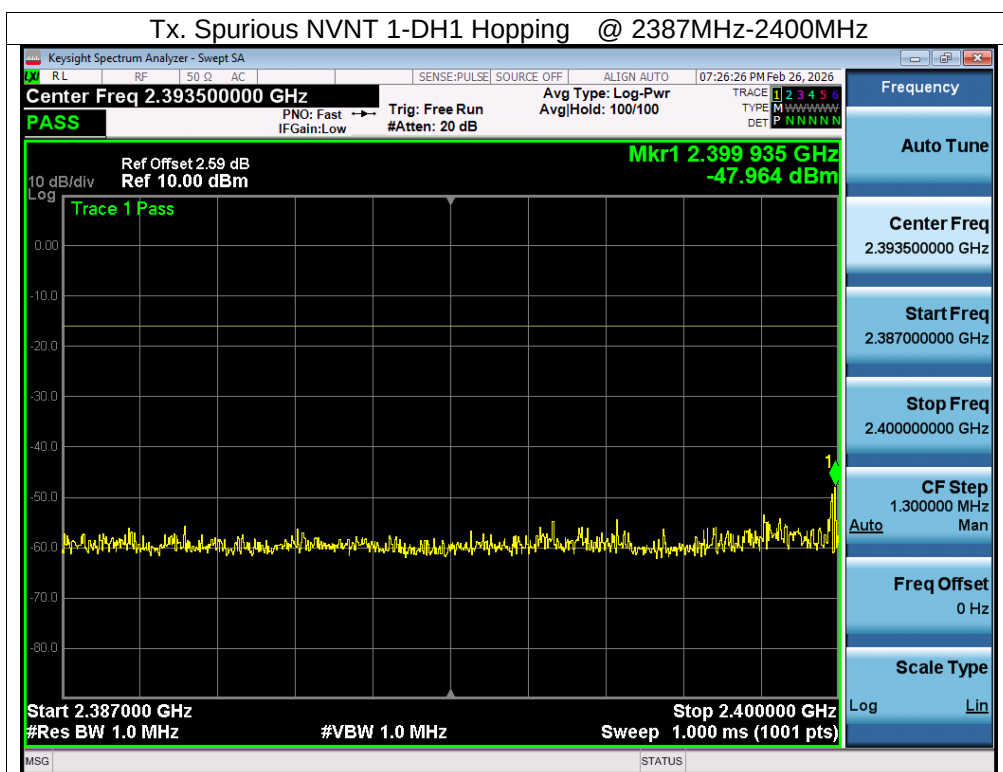
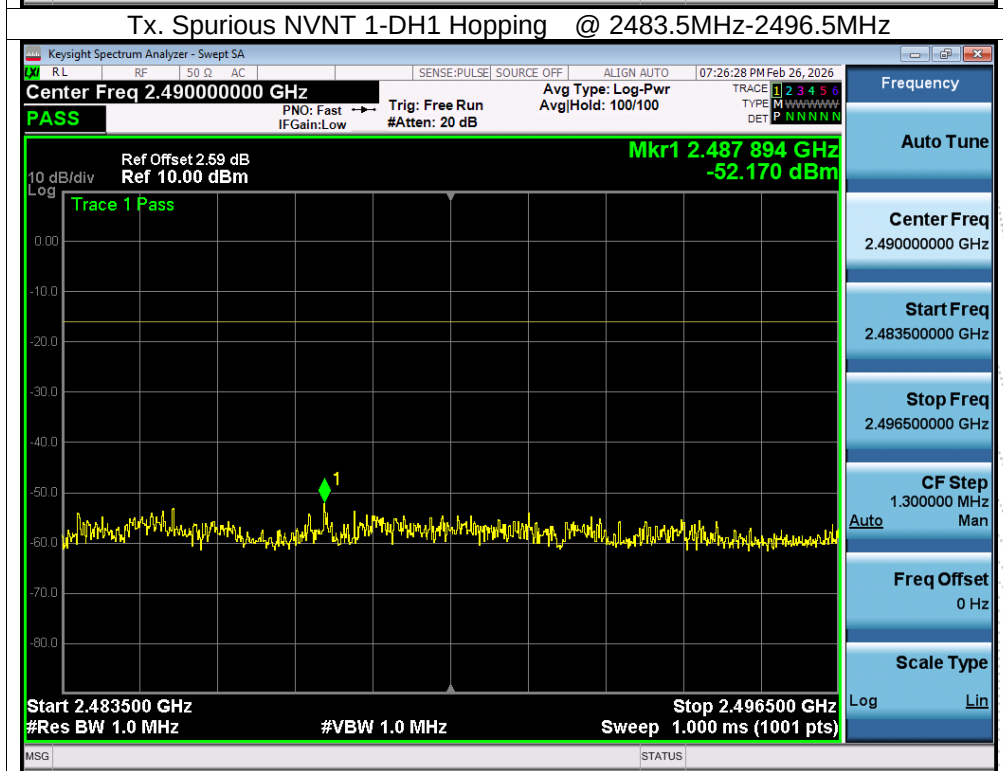
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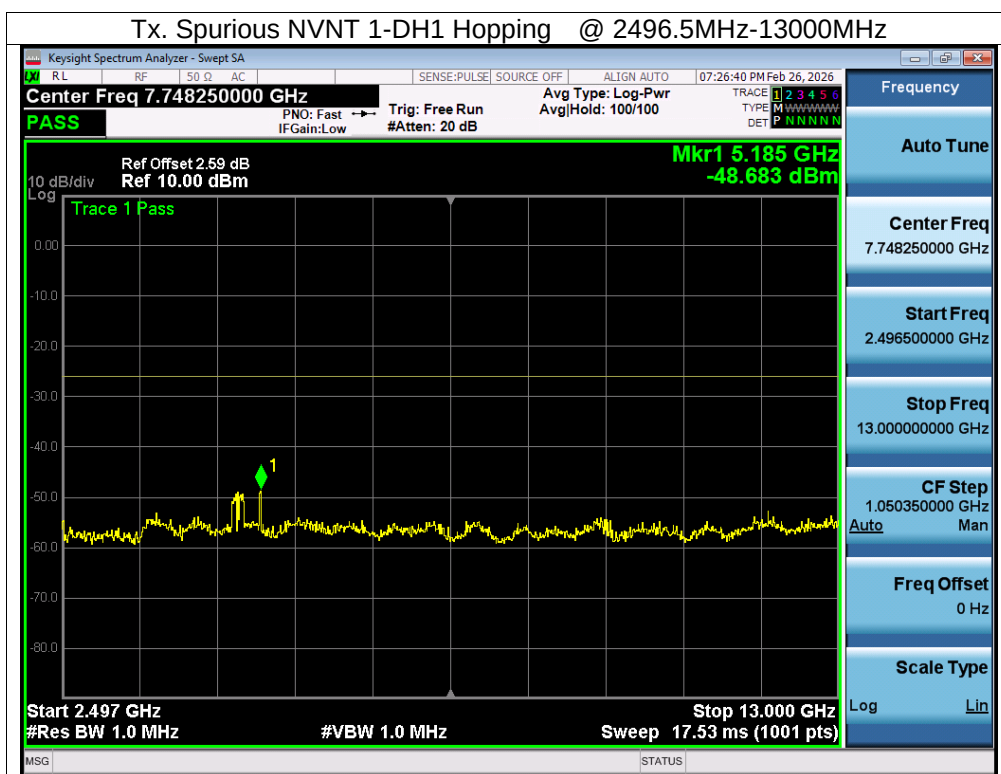
|              |         |              |         |
|--------------|---------|--------------|---------|
| Temperature: | 25°C    |              |         |
| Humidity:    | 55 % RH | Test Voltage | DC 3.8V |
| Test Mode:   | Hopping |              |         |

| Condi-<br>tion | Mode  | Range<br>(MHz) | Emission<br>Frequency<br>(MHz) | Max<br>Value<br>(dBm) | Limit<br>Start<br>(dBm) | Limit<br>Stop<br>(dBm) | Verdict |
|----------------|-------|----------------|--------------------------------|-----------------------|-------------------------|------------------------|---------|
| NVNT           | 1-DH1 | 30-1000        | 719.67                         | -56.19                | -36                     | -36                    | Pass    |
| NVNT           | 1-DH1 | 1000-2387      | 2234.43                        | -56.79                | -26                     | -26                    | Pass    |
| NVNT           | 1-DH1 | 2387-2400      | 2399.94                        | -47.96                | -16                     | -16                    | Pass    |
| NVNT           | 1-DH1 | 2483.5-2496.5  | 2487.89                        | -52.17                | -16                     | -16                    | Pass    |
| NVNT           | 1-DH1 | 2496.5-13000   | 5185.4                         | -48.68                | -26                     | -26                    | Pass    |

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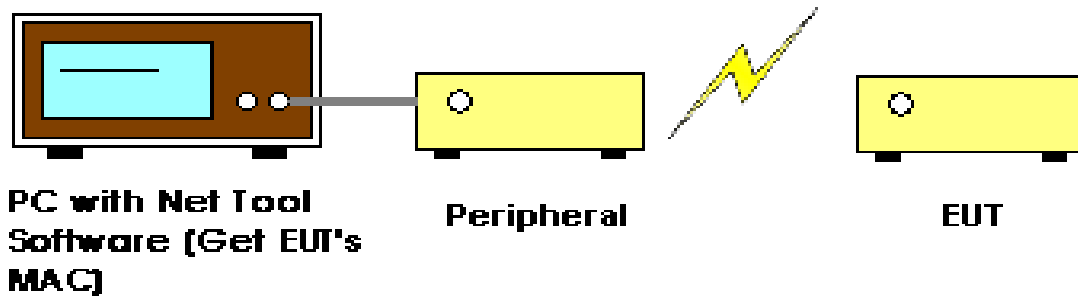






## 11. Radio Interference Prevention Capability Measurement

### 11.1 Block Diagram Of Test Setup



### 11.2 Limit

| Item                | Limits         |
|---------------------|----------------|
| Identification code | $\geq 48$ bits |

### 11.3 Measuring Instruments And Setting

| Item        | Limits   |
|-------------|----------|
| MAC IP List | MAC Scan |

### 11.4 Test Procedure

1. In the case that the EUT has the function of automatically transmitting the identification code:
  - a. Transmit the predetermined identification codes form EUT.
  - b. Check the transmitted identification codes with the demodulator.
2. In the case of receiving the identification ocde:
  - a. Transmit the predetermined identification codes form the counterpart.
  - b. Check if communication is normal.
  - c. Transmit the signals other than predetermined ID codes form the counterpart.
  - d. check if the EUT stops the transmission, or if it displays that idnetification codes are different from the predetermined ones.

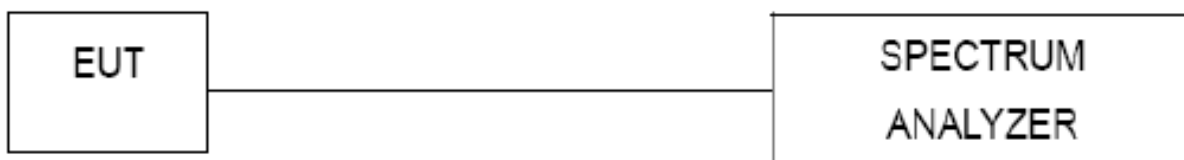
### 11.5 Test Result

|              |         |              |         |
|--------------|---------|--------------|---------|
| Temperature: | 25°C    |              |         |
| Humidity:    | 55 % RH | Test Voltage | DC 3.8V |

1. Bluetooth Device Address: 56-2b-6c-b8-8f-43
2. Test result PASS

## 12. Dwell Time

### 12.1 Block Diagram Of Test Setup



### 12.2 Limit

| Item                     | Limits                                                                     |
|--------------------------|----------------------------------------------------------------------------|
| Hopping Freq. Dwell Time | $\leq 0.4 \text{ sec (In } 0.4 \text{ sec} \times \text{ spreading rate)}$ |

### 12.3 Measuring Instruments And Setting

Please refer to section 5 in this report. The following table is the setting of the spectrum analyzer.

| Spectrum Parameter | Setting    |
|--------------------|------------|
| Attenuation        | Auto       |
| Span Frequency     | 0 Hz       |
| RB                 | 1 MHz      |
| VB                 | 1 MHz      |
| Detector           | Peak       |
| Trace              | Max Hold   |
| Sweep              | Continuous |

### 12.4 Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer
2. Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz.
3. Use a video trigger with the trigger level set to enable triggering only on full pulses.
4. Sweep Time is more than once pulse time.
5. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
6. Measure the maximum time duration of one single pulse.
7. Set the EUT for DH5, DH3 and DH1 packet transmitting.
8. Measure the maximum time duration of one single pulse.
9. Dwell time =  $[\text{spreading rate}/79] \times \text{duty-cycle} \times 0.4 \text{ seconds}$ . (to be determined for each mode, DH1, DH3, DH5)

## 12.5 Test Result

|              |         |              |         |
|--------------|---------|--------------|---------|
| Temperature: | 25°C    |              |         |
| Humidity:    | 55 % RH | Test Voltage | DC 3.8V |

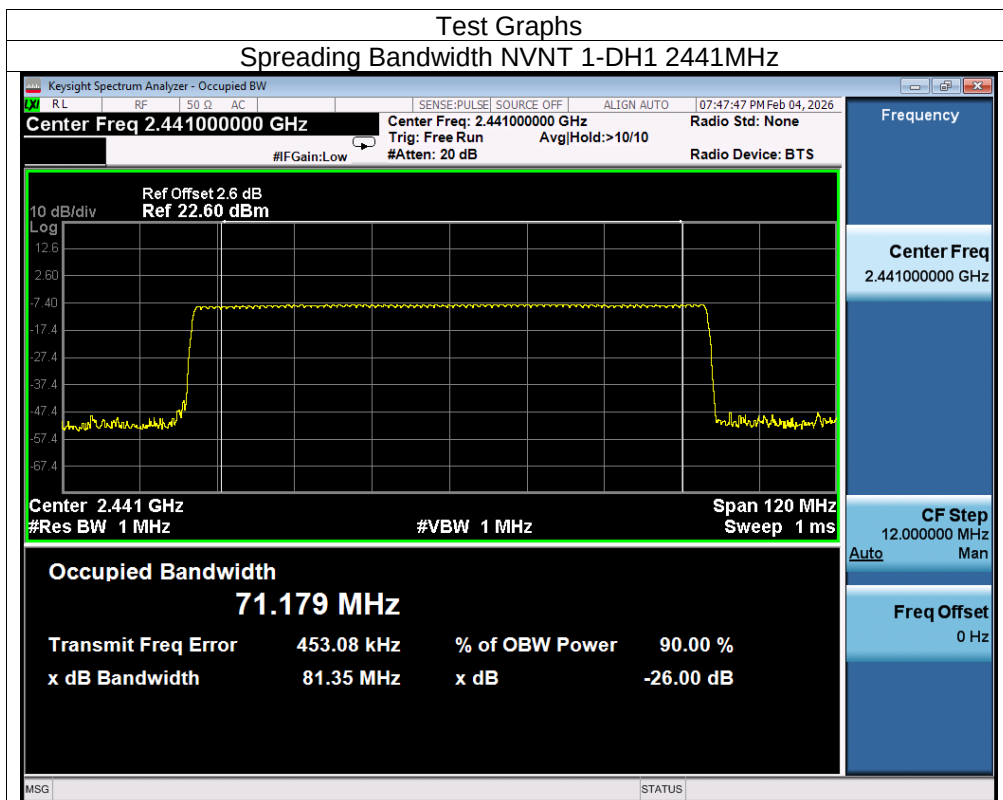
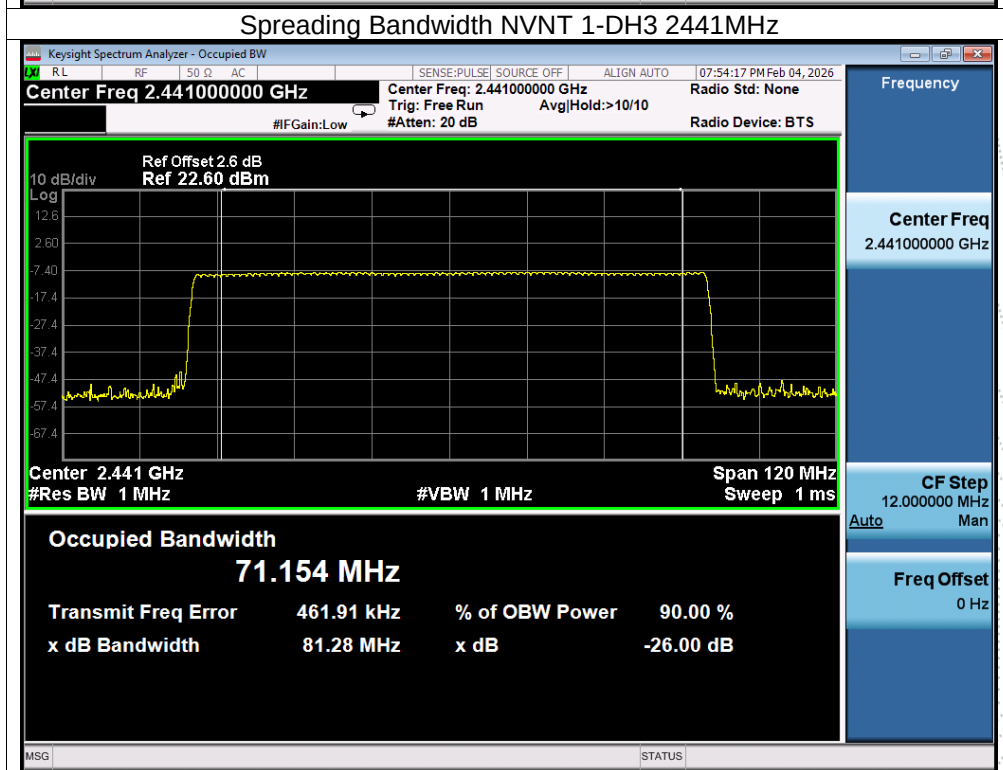
| Condition | Mode  | Frequency (MHz) | Spreading Bandwidth (MHz) | Pulse Time (ms) | Total Dwell Time (ms) | Burst Count | Period Time (ms) | Limit (ms) | Verdict |
|-----------|-------|-----------------|---------------------------|-----------------|-----------------------|-------------|------------------|------------|---------|
| NVNT      | 1-DH1 | 2441            | 71.179                    | 0.382           | 109.252               | 286         | 28471.6          | 400        | Pass    |
| NVNT      | 1-DH3 | 2441            | 71.155                    | 1.638           | 226.044               | 138         | 28462            | 400        | Pass    |
| NVNT      | 1-DH5 | 2441            | 71.135                    | 2.887           | 317.57                | 110         | 28454            | 400        | Pass    |
| NVNT      | 2-DH1 | 2441            | 71.286                    | 0.386           | 110.396               | 286         | 28514.4          | 400        | Pass    |
| NVNT      | 2-DH3 | 2441            | 71.152                    | 1.645           | 235.235               | 143         | 28460.8          | 400        | Pass    |
| NVNT      | 2-DH5 | 2441            | 71.4                      | 2.886           | 285.714               | 99          | 28560            | 400        | Pass    |
| NVNT      | 3-DH1 | 2441            | 71.148                    | 6.668           | 286.724               | 43          | 28459.2          | 400        | Pass    |
| NVNT      | 3-DH3 | 2441            | 71.373                    | 0.652           | 92.584                | 142         | 28549.2          | 400        | Pass    |
| NVNT      | 3-DH5 | 2441            | 71.206                    | 0.897           | 82.524                | 92          | 28482.4          | 400        | Pass    |

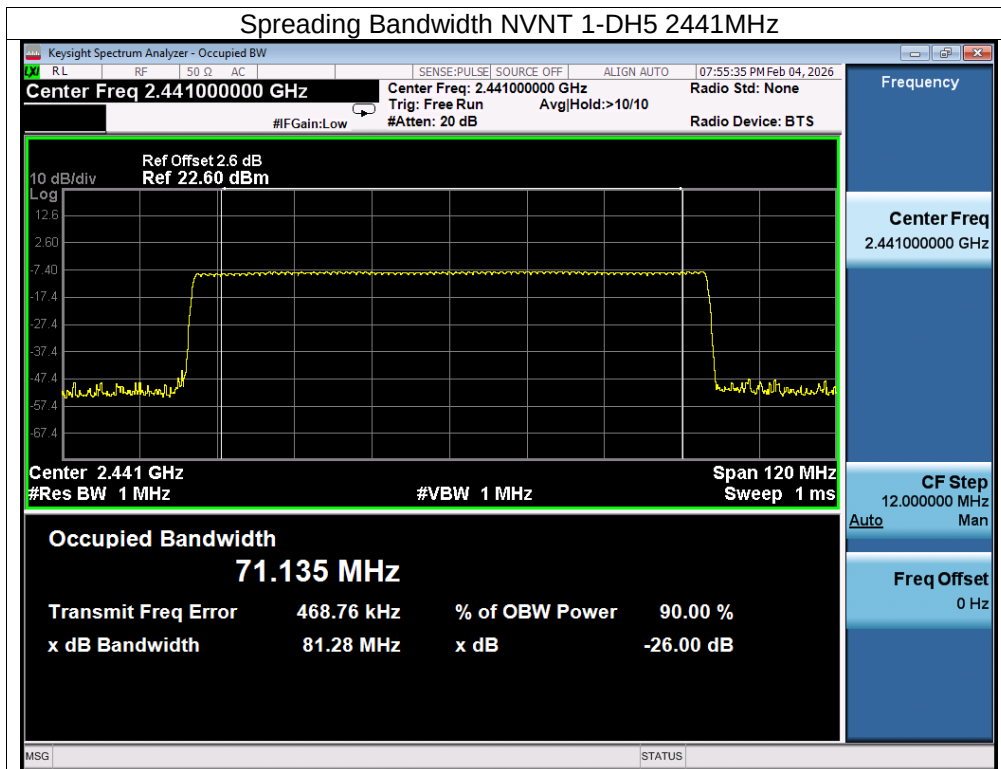
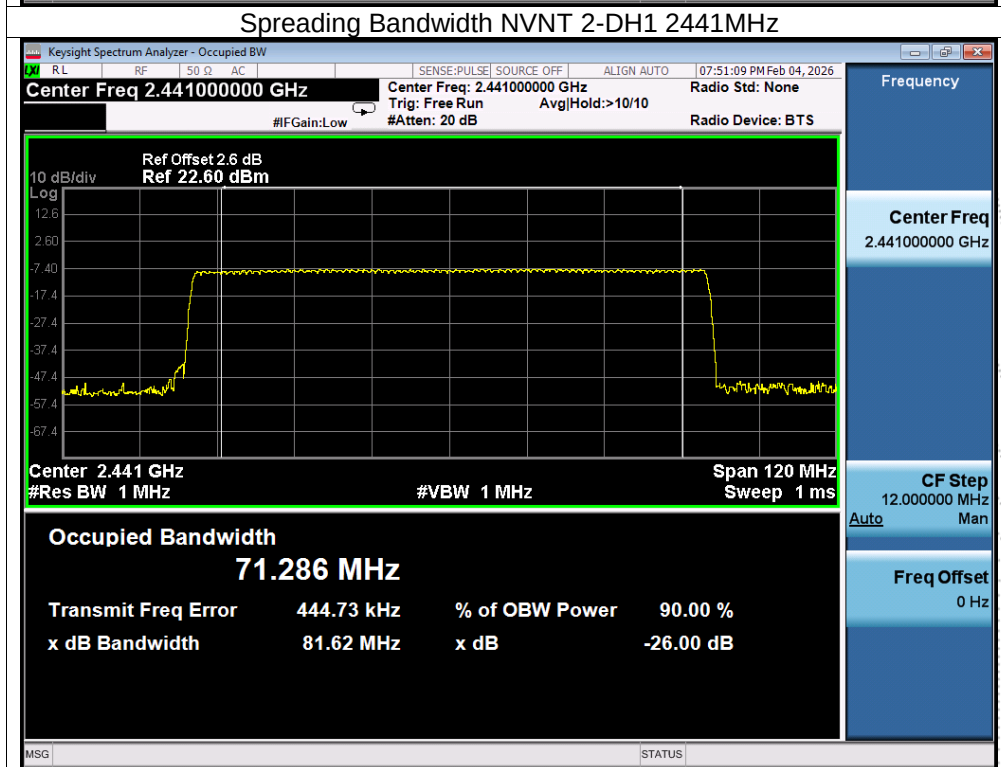
Note:

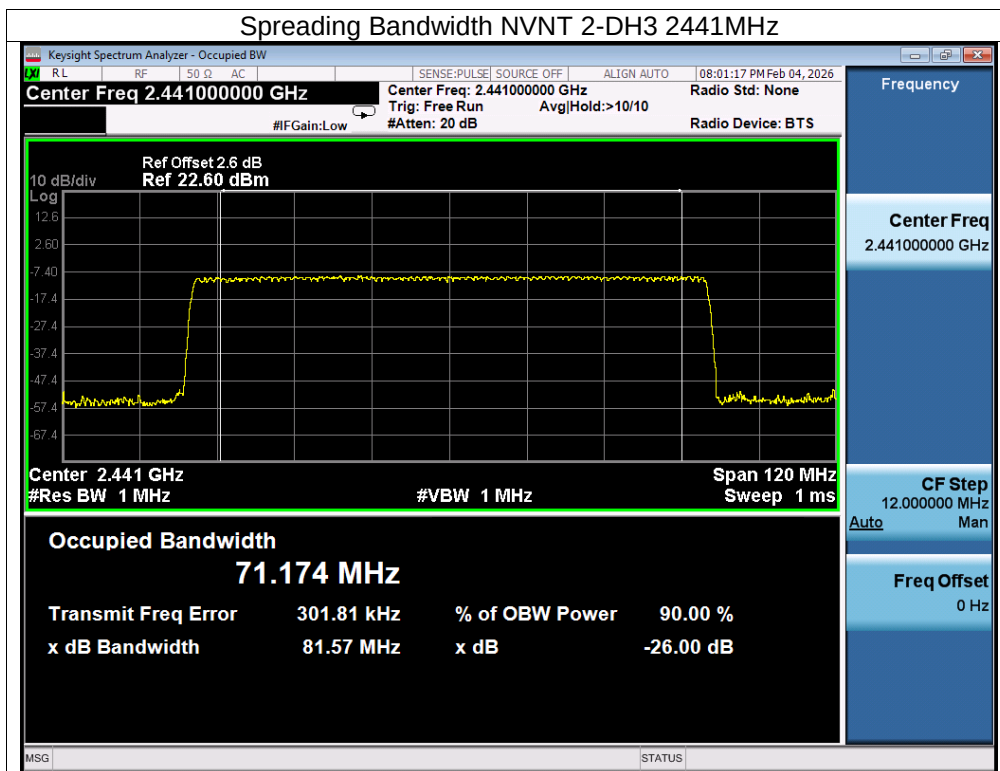
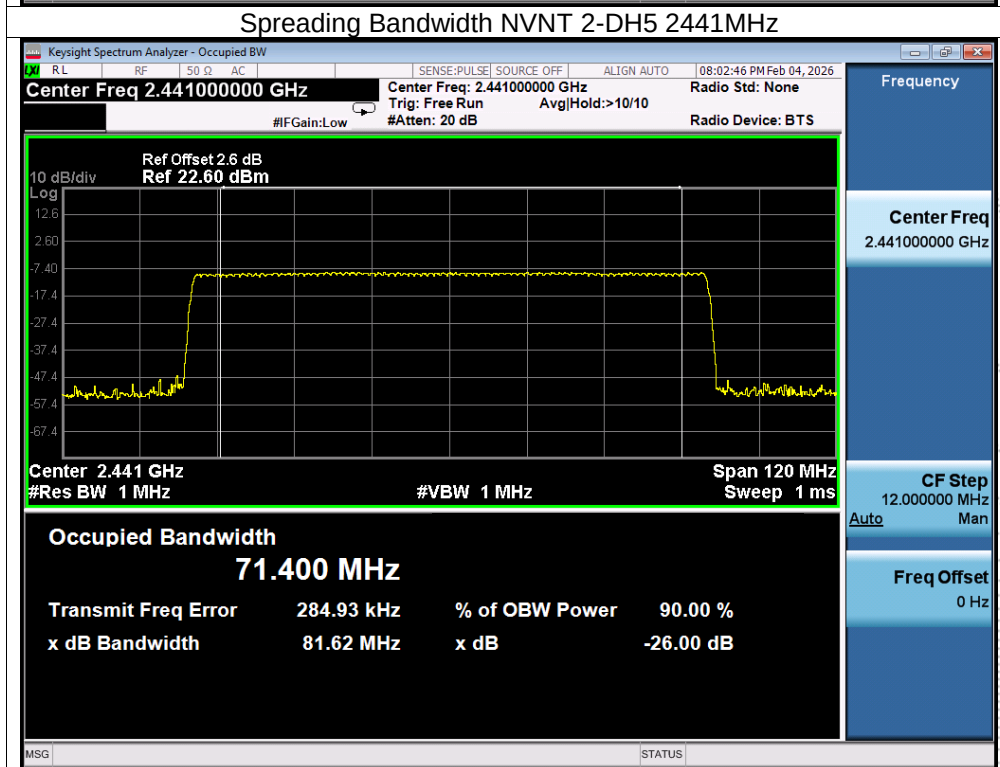
Period Time= Spreading Bandwidth \*0.4

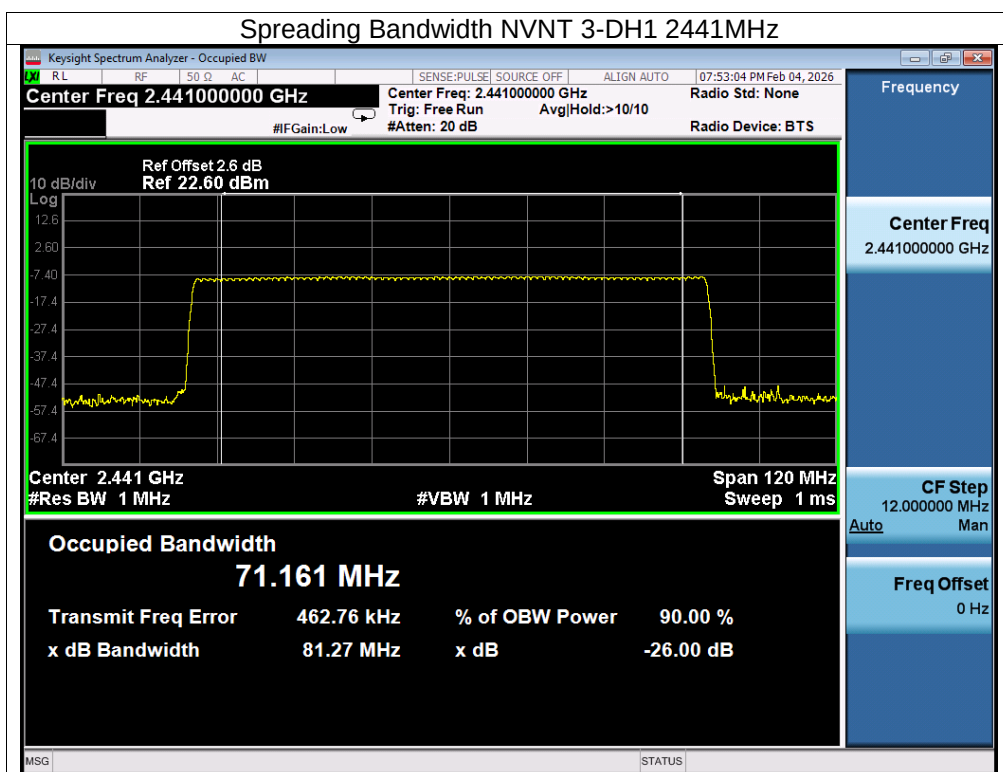
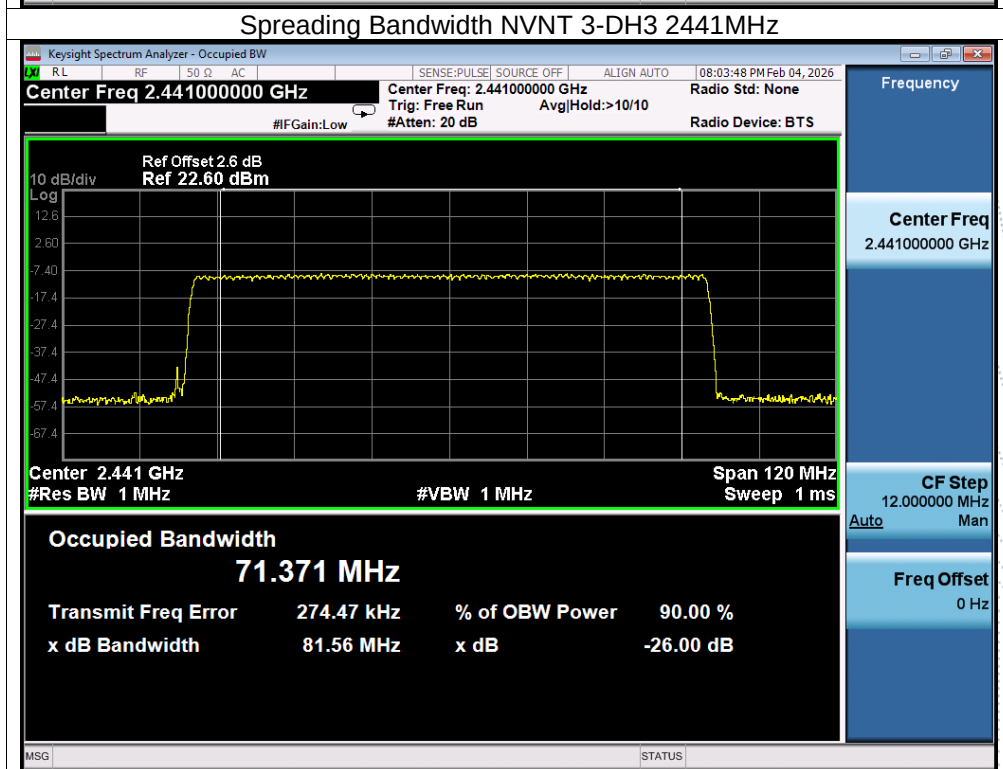
Dwell Time= Pulse Time\* Burst Count

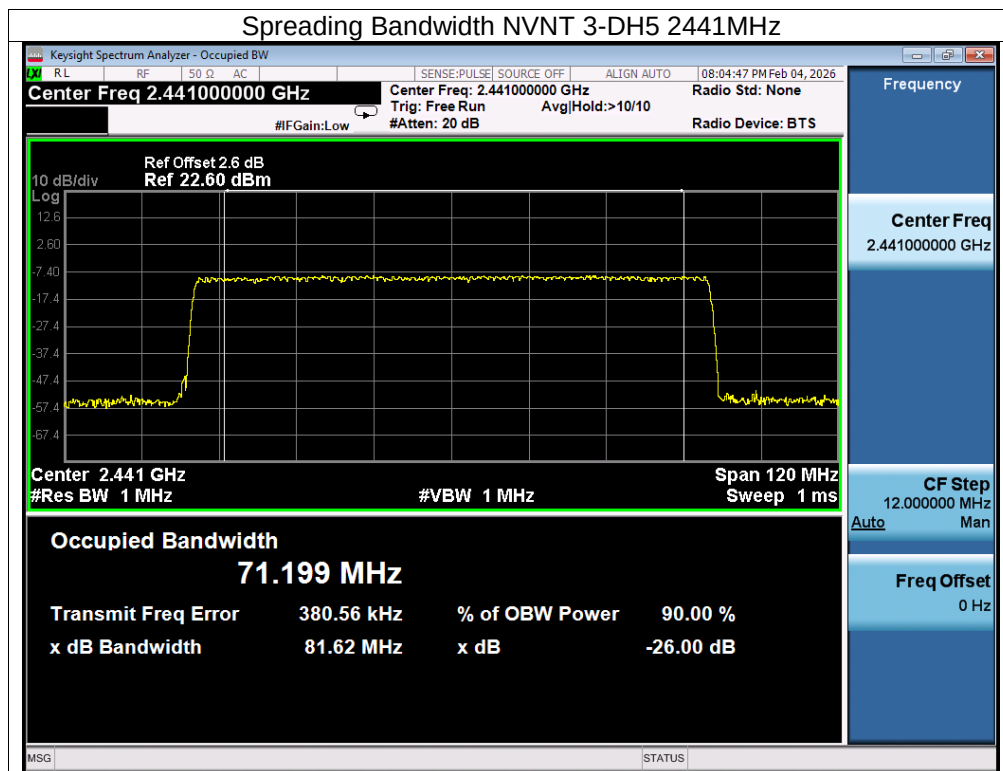
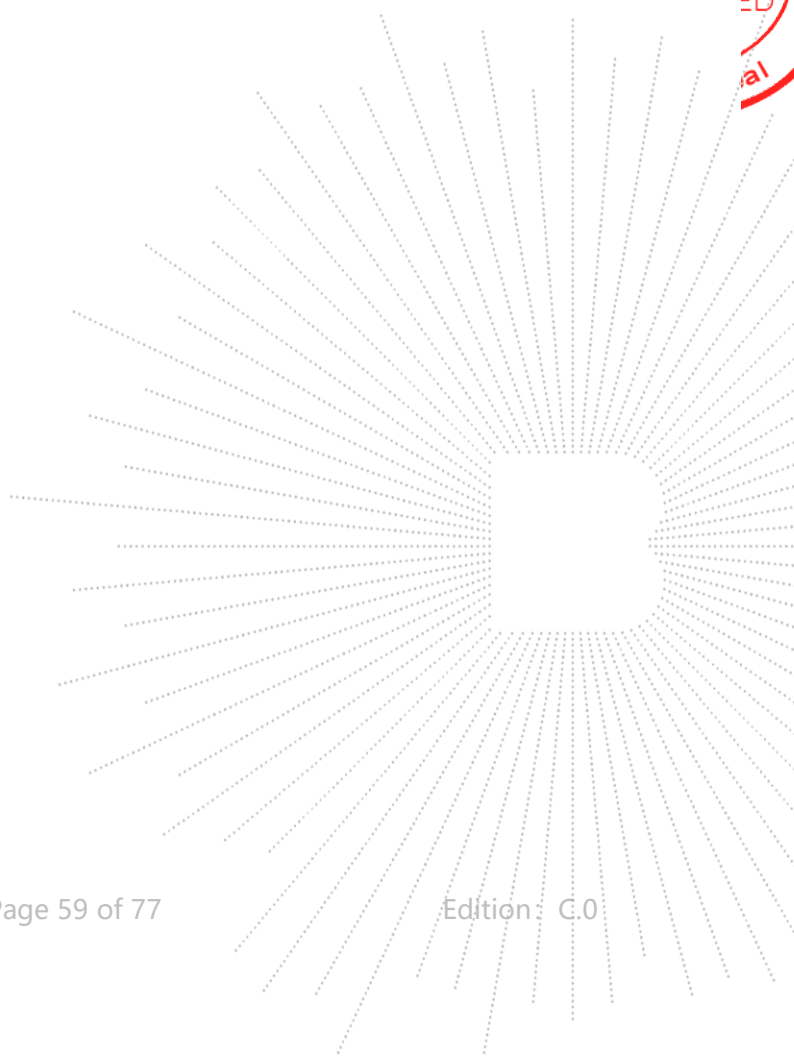
CO., LTD

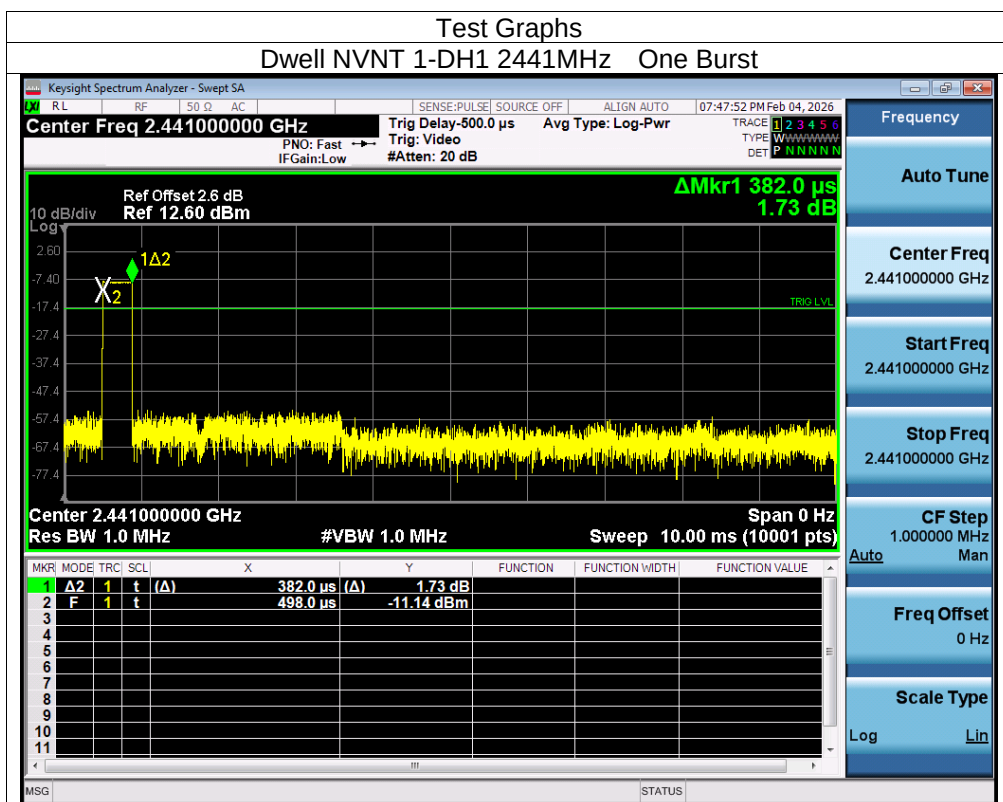
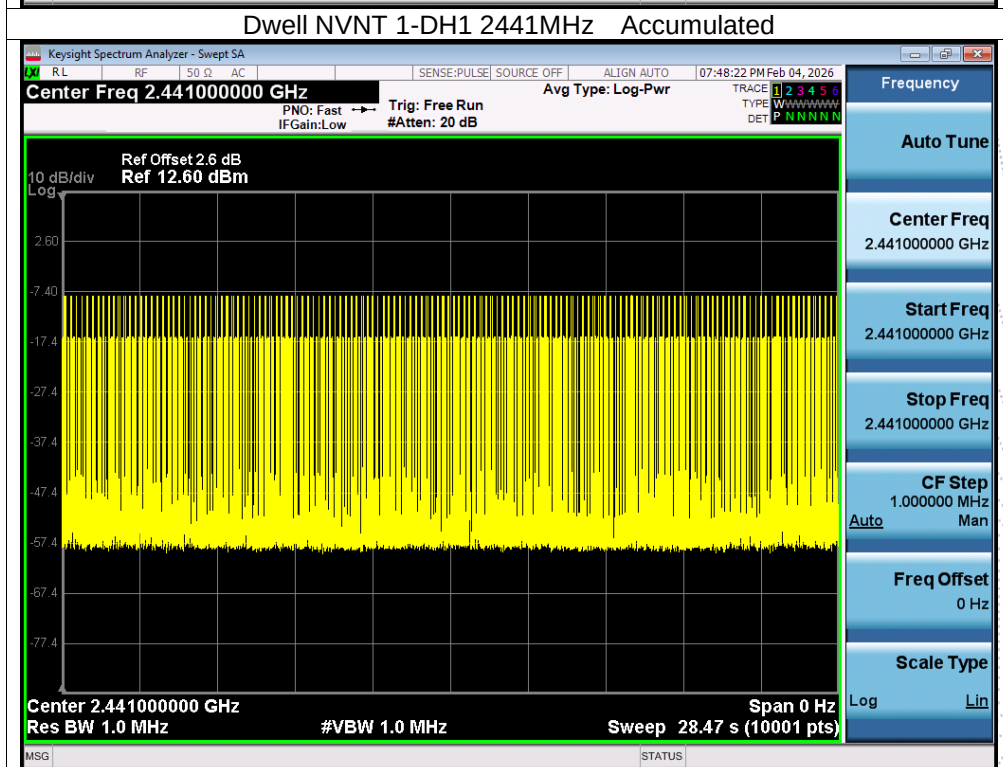


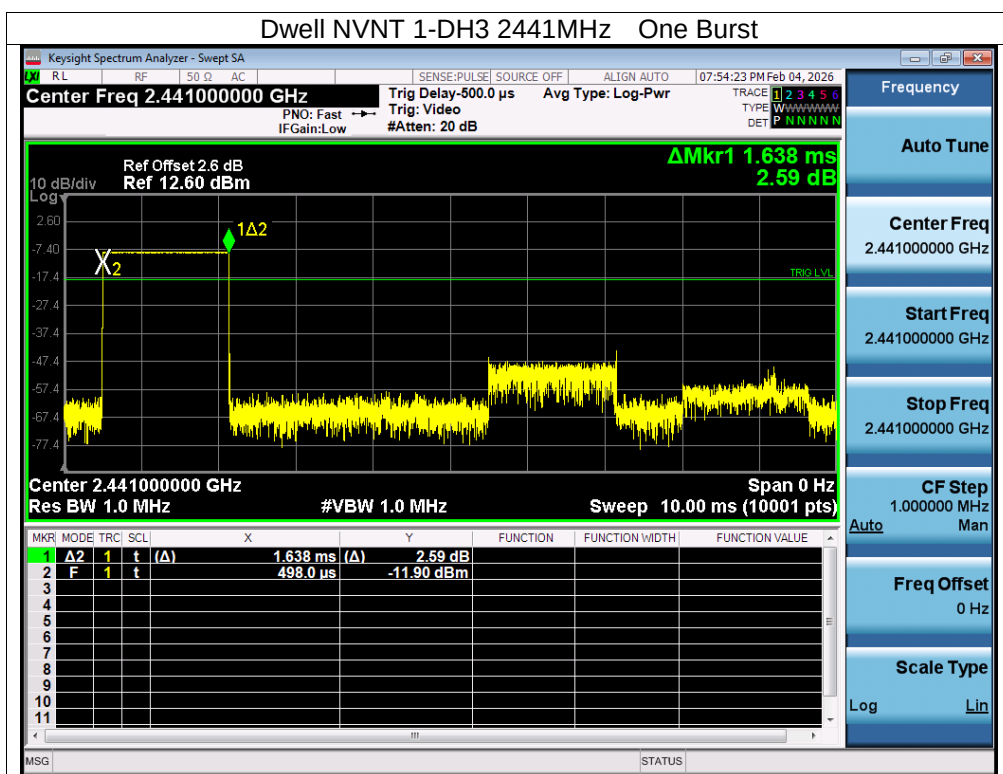
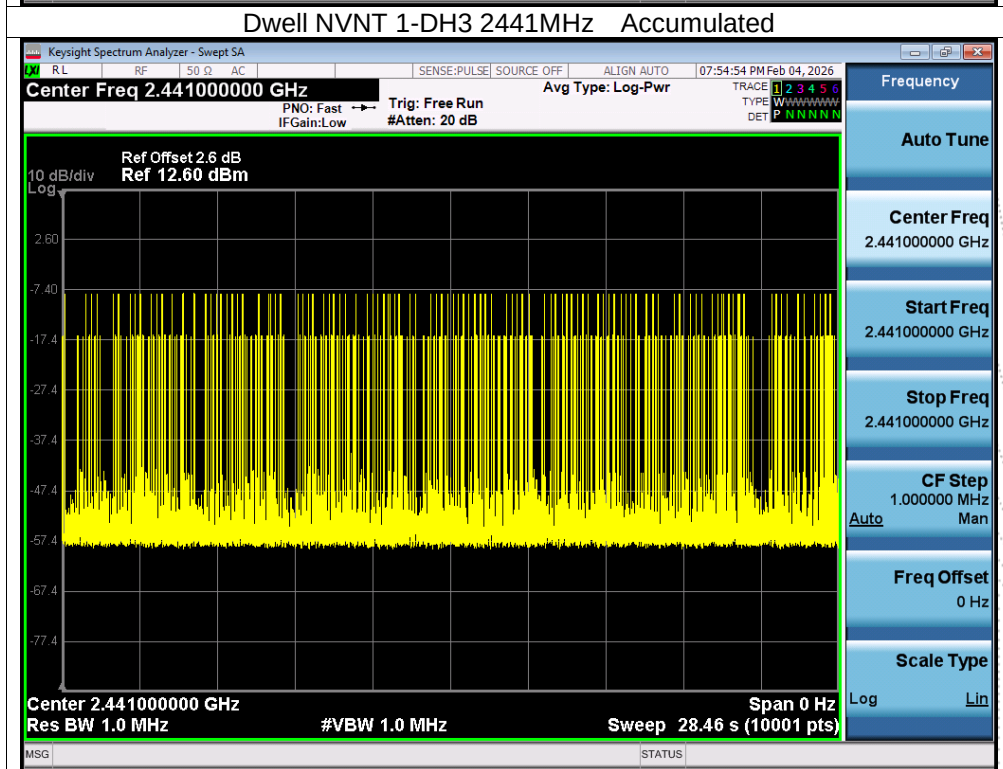


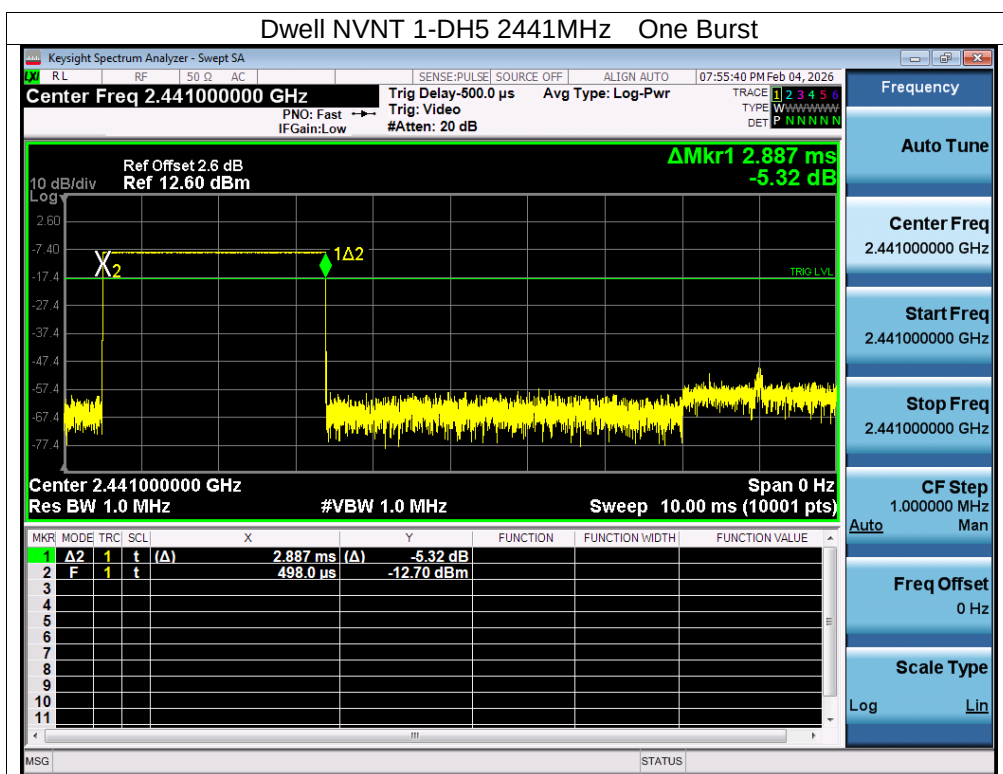
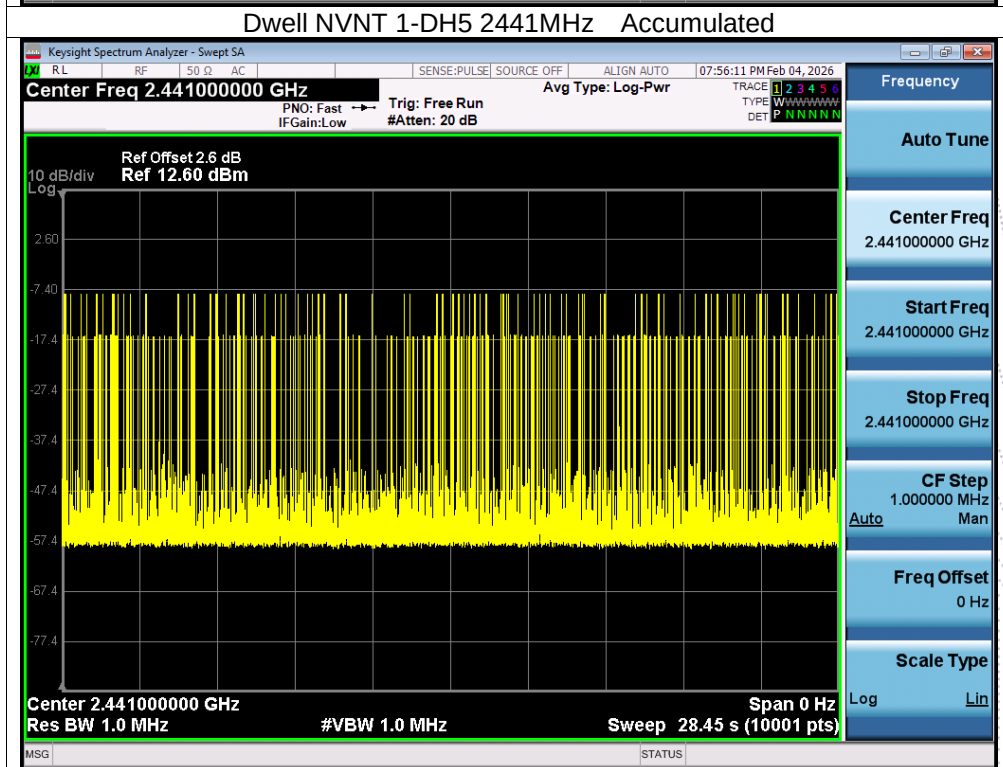


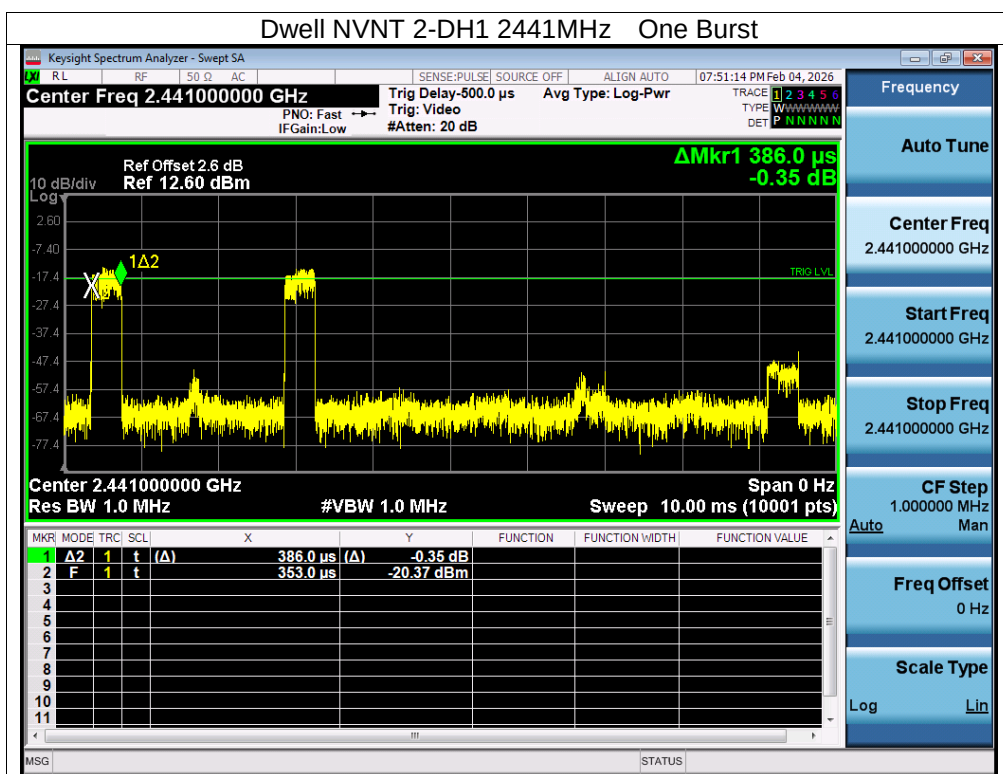
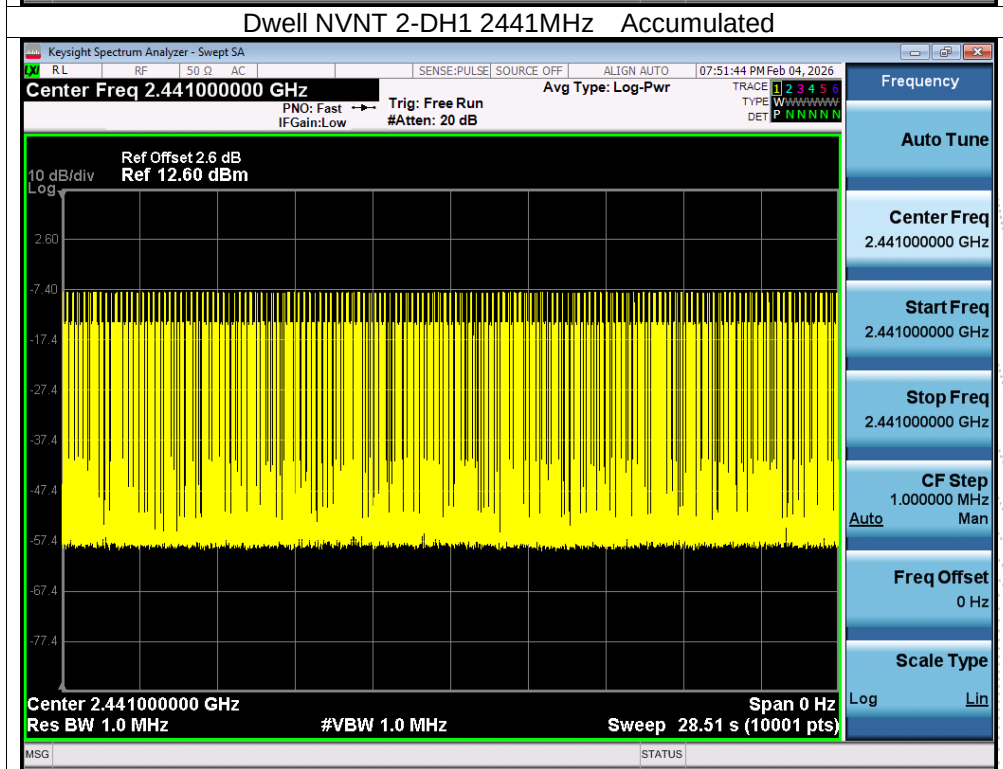


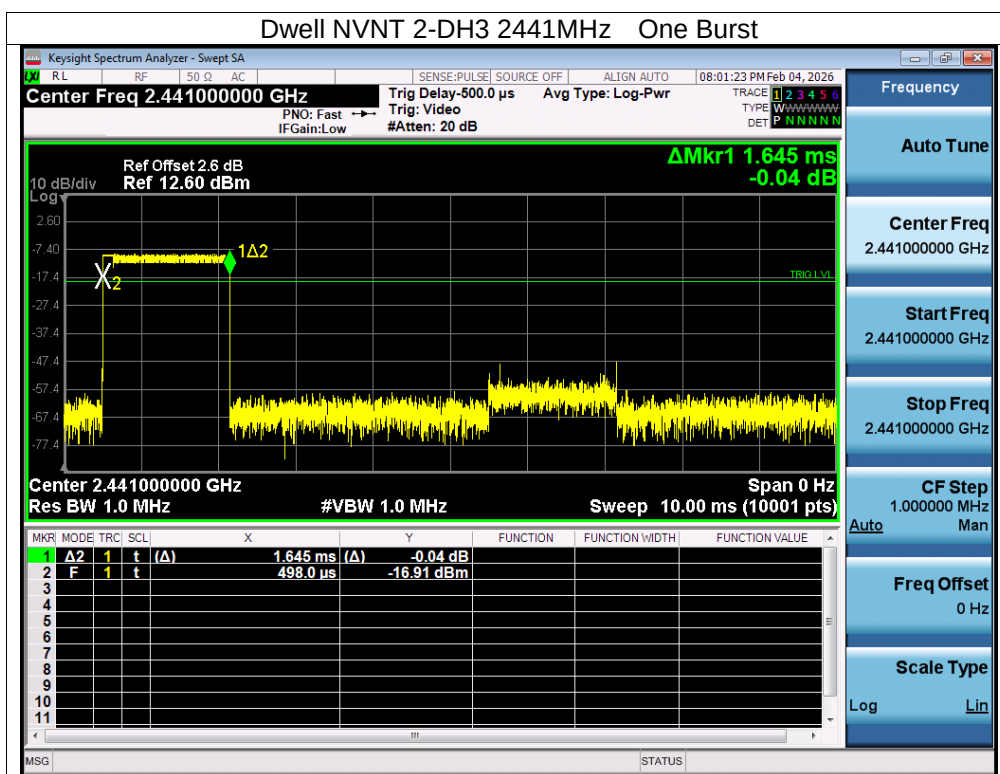
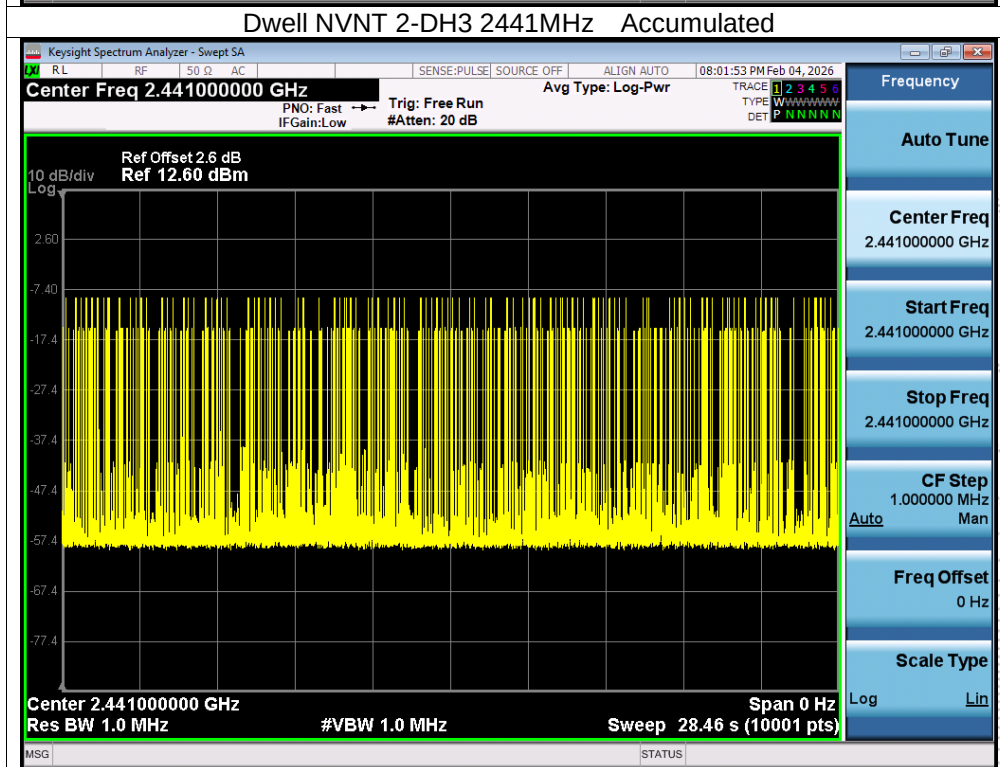


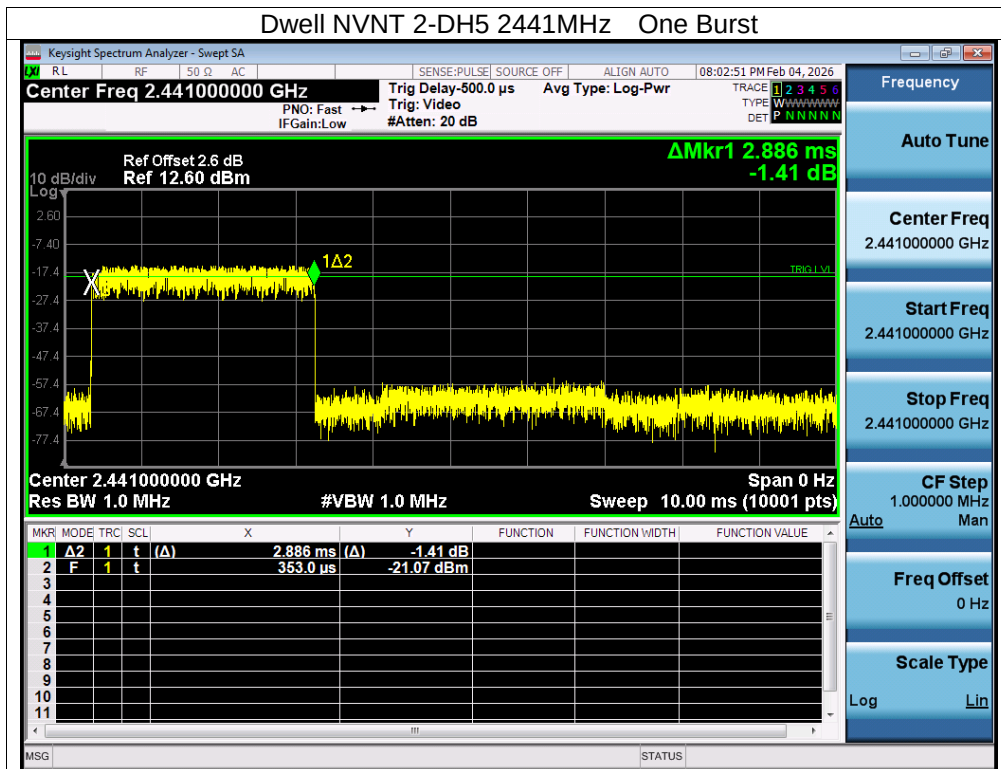
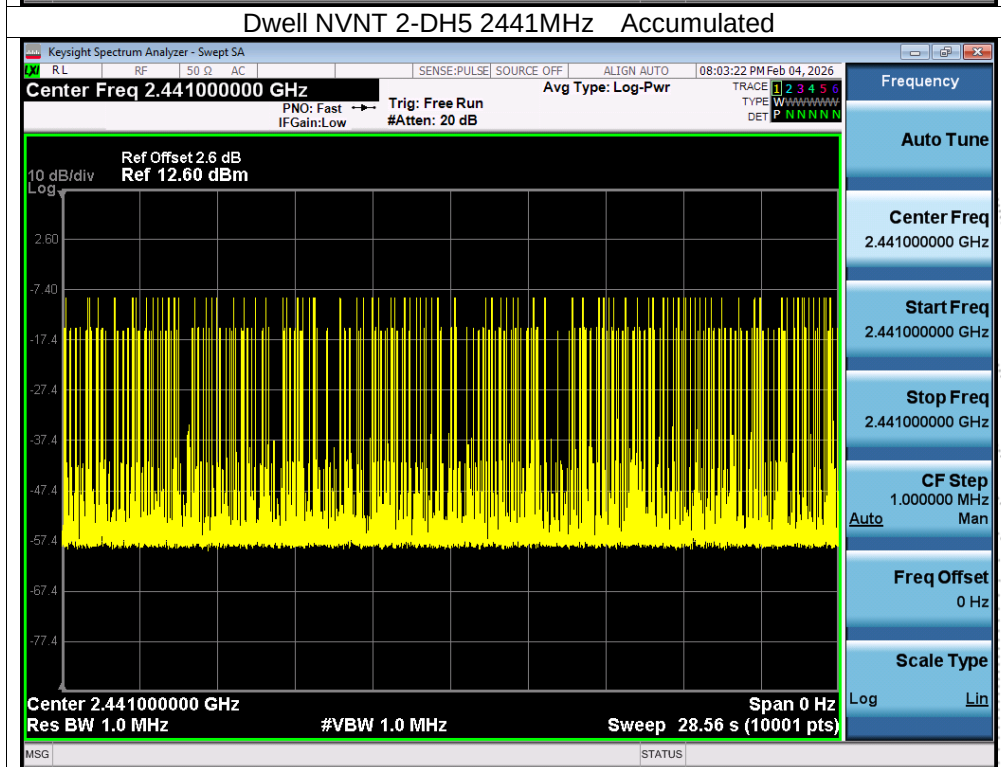


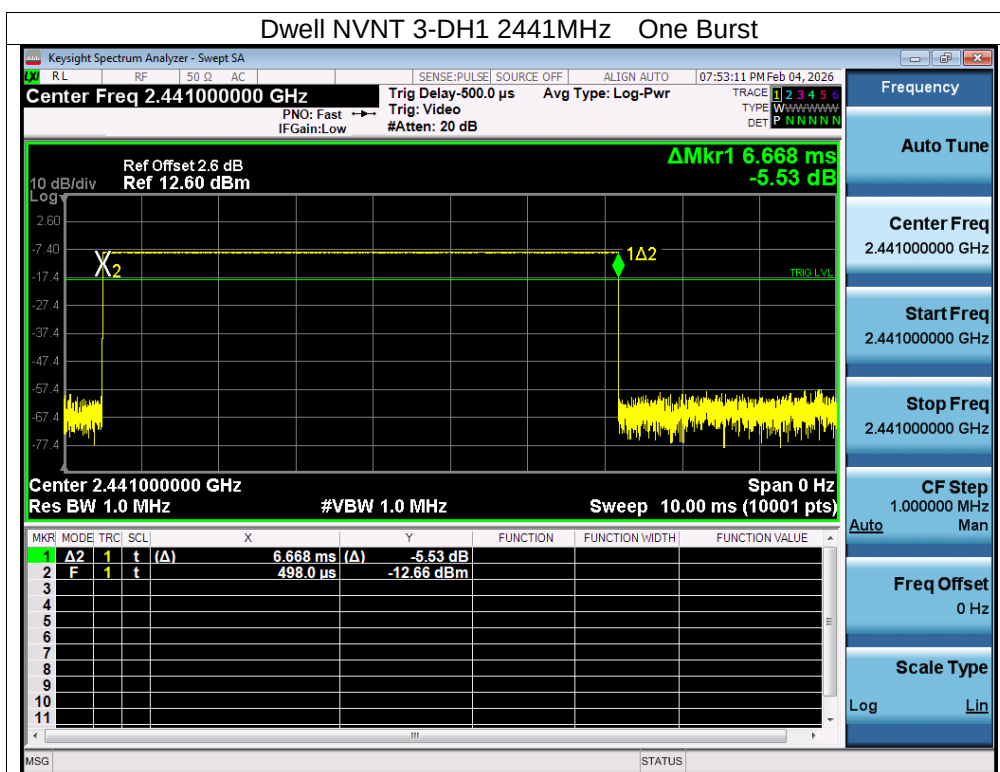
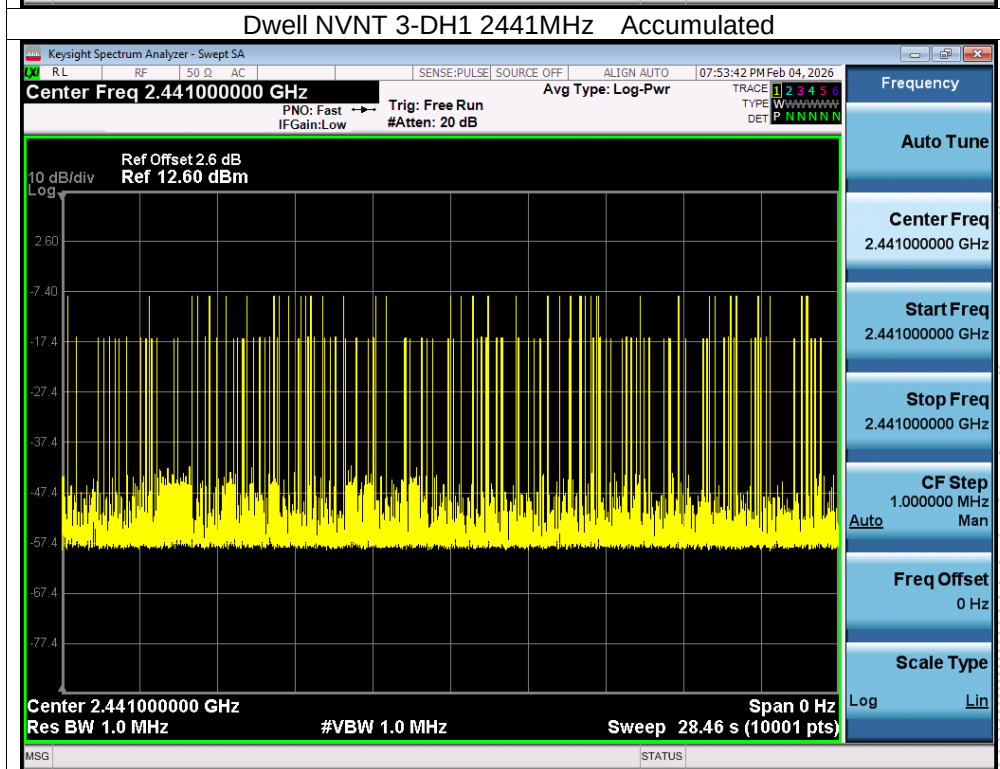


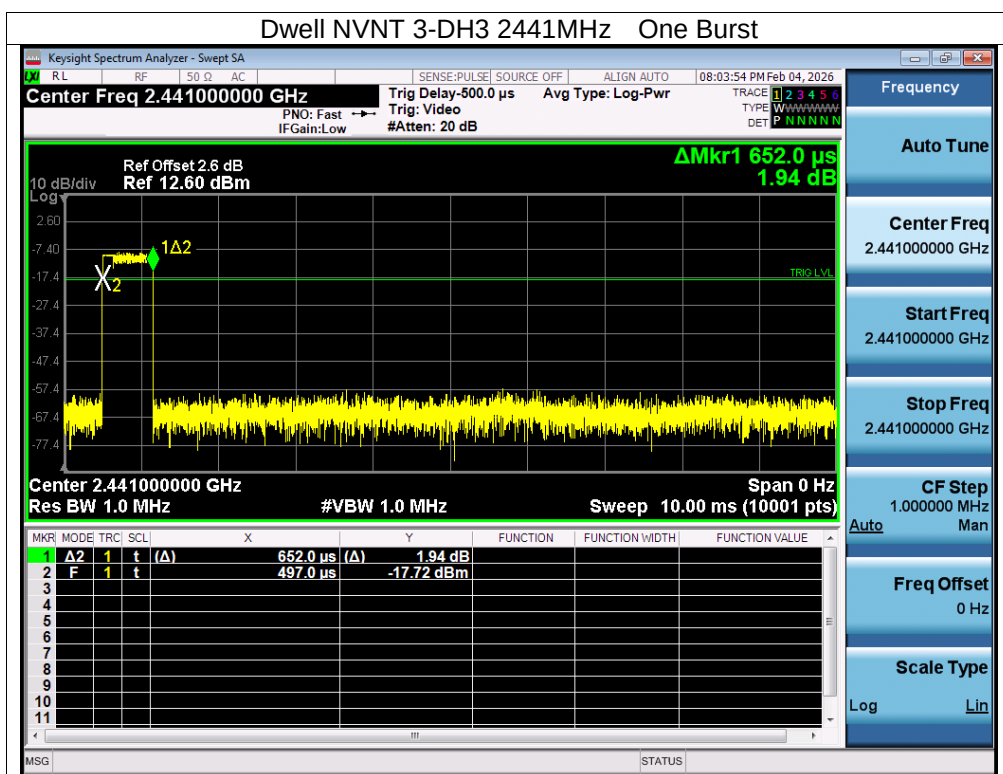
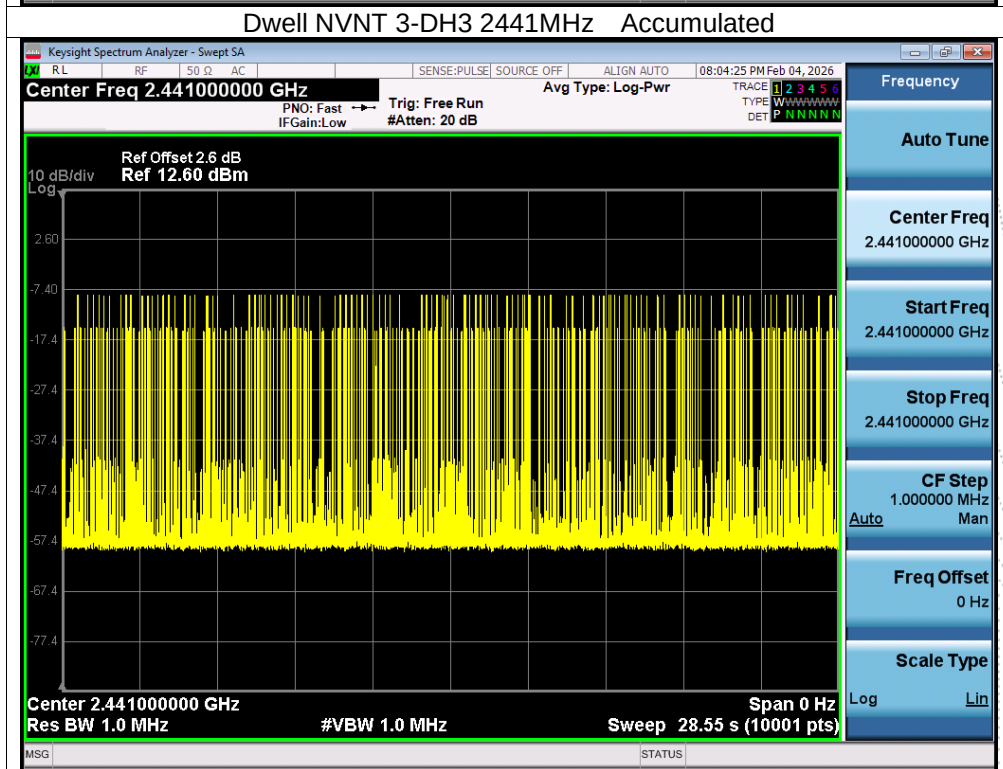


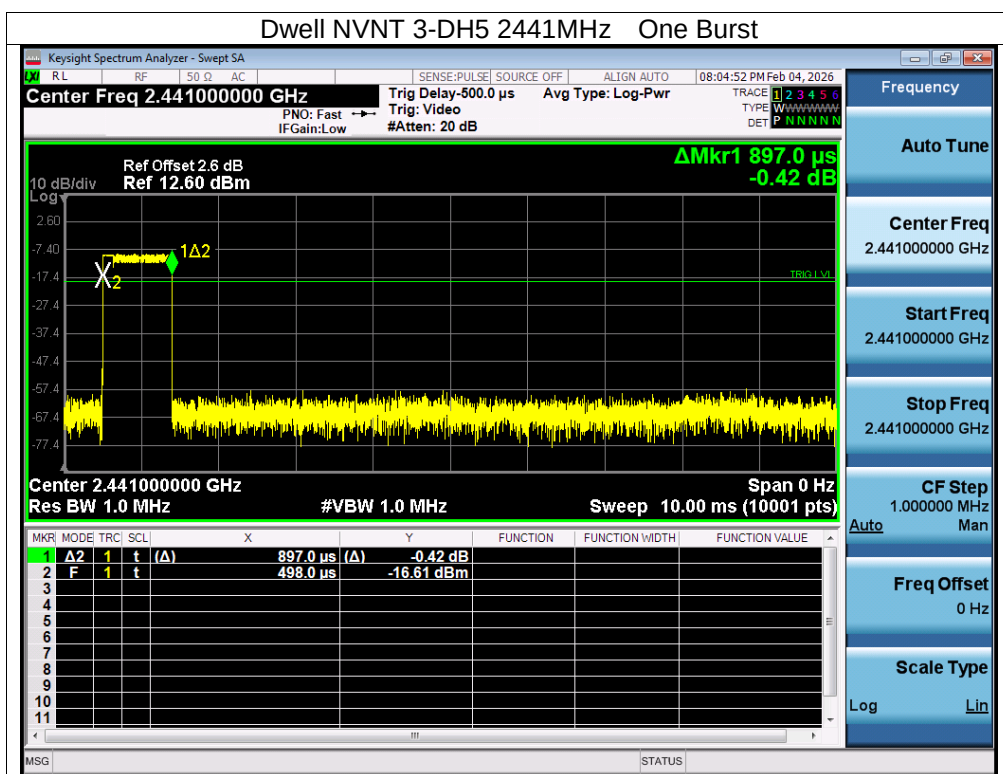
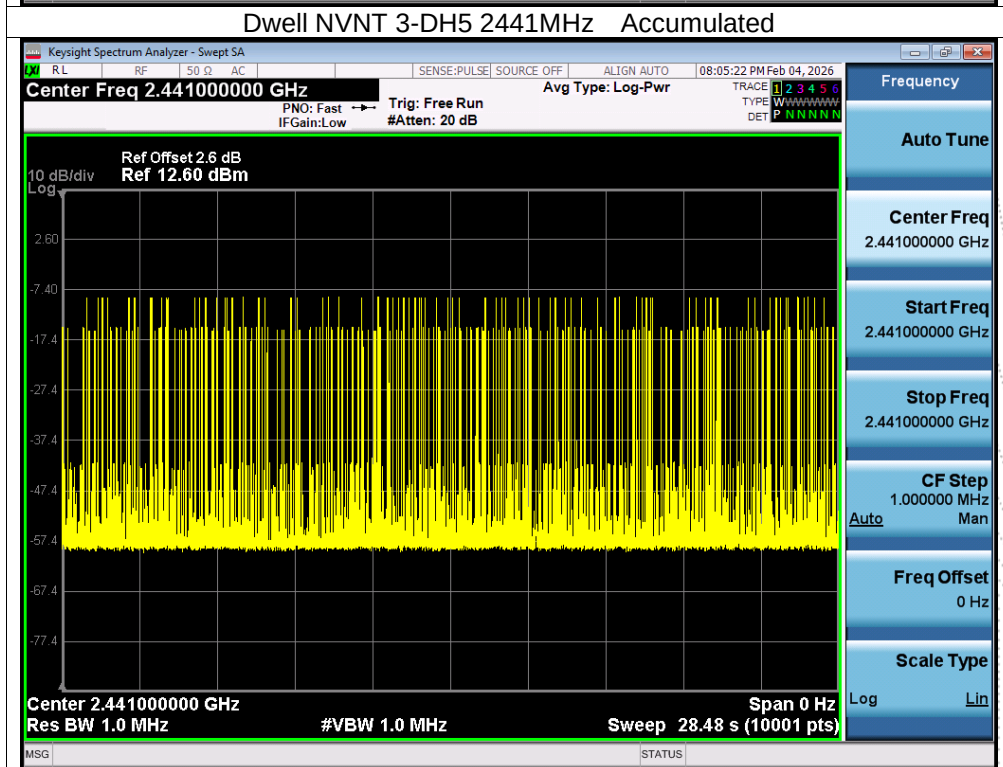










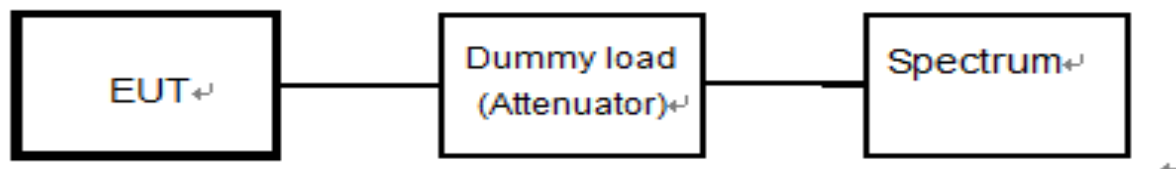


### 13. Carrier Sense

Not applicable, Since the EUT belong to Bluetooth

## 14. Imitation Of Collateral Emission Of Receiver Measurement

### 14.1 Block Diagram Of Test Setup



### 14.2 Limit

| Item                  | Limits                                               |
|-----------------------|------------------------------------------------------|
| RX Spurious Emission: | $\leq 4\text{nW}$ (-54dBm) ( $f < 1\text{GHz}$ )     |
|                       | $\leq 20\text{nW}$ (-47dBm) ( $1\text{GHz} \leq f$ ) |

### 14.3 Measuring Instruments And Setting

Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

| Spectrum Parameter | Setting                                                        |
|--------------------|----------------------------------------------------------------|
| Attenuation        | Auto                                                           |
| RB                 | 100 kHz (below 1GHz emissions)<br>1 MHz (above 1GHz emissions) |
| VB                 | 100 kHz (below 1GHz emissions)<br>1 MHz (above 1GHz emissions) |
| Detector           | Peak                                                           |
| Trace              | Max Hold                                                       |
| Sweep Time         | Auto                                                           |

### 14.4 Test Procedure

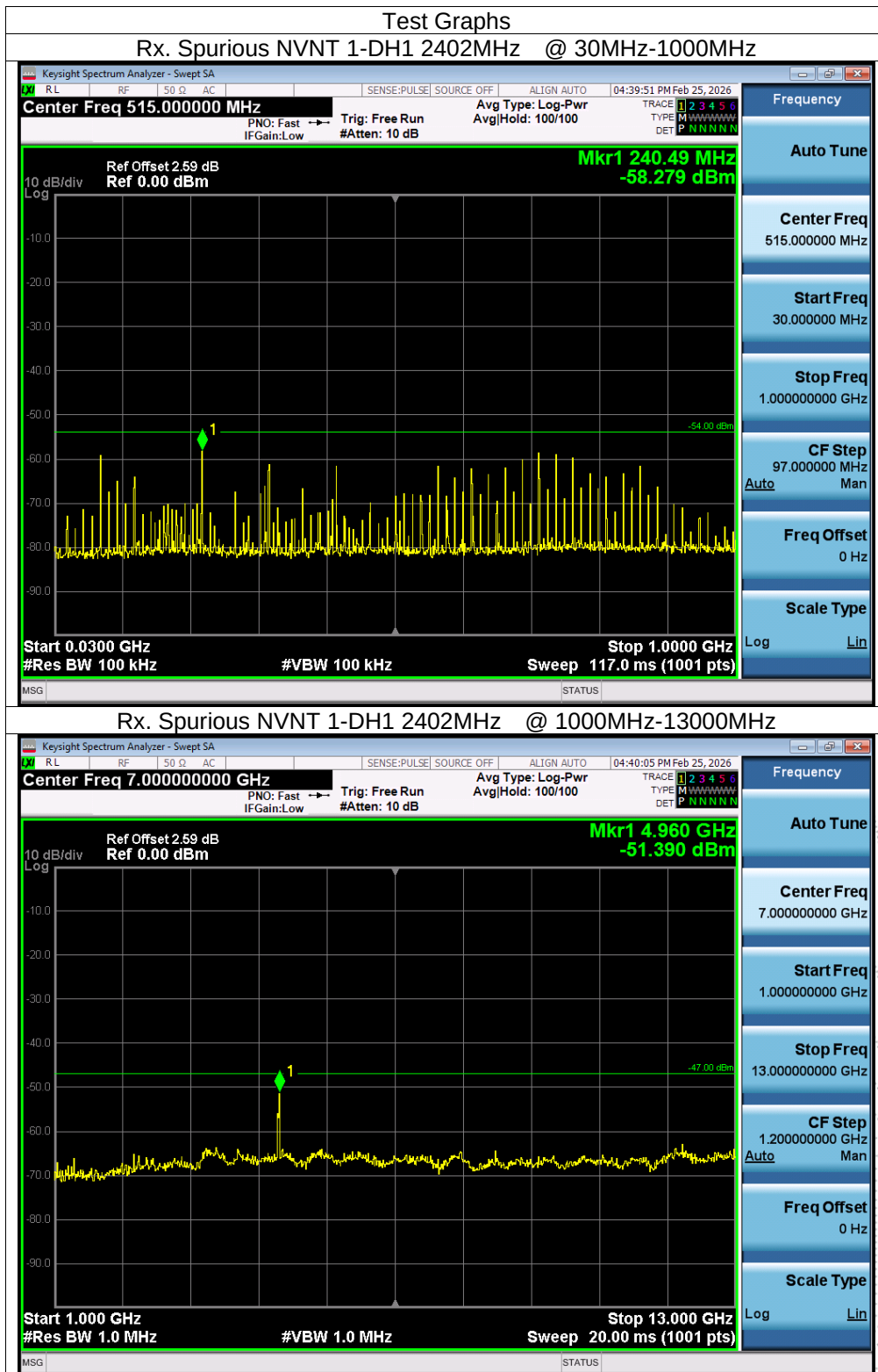
- EUT have the continuous reception mode and fixed only one channelize.
- Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions)/  
AT: 6dB / Ref: -20dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak/  
Trace mode: Max hold
- SA set RB: 100 kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW
- SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW
- If power level of lower emissions are more than 1/10 of limit (.0.4nW for  $f < 1\text{GHz}$ , 2nW for  $f \geq 1\text{GHz}$ ), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.

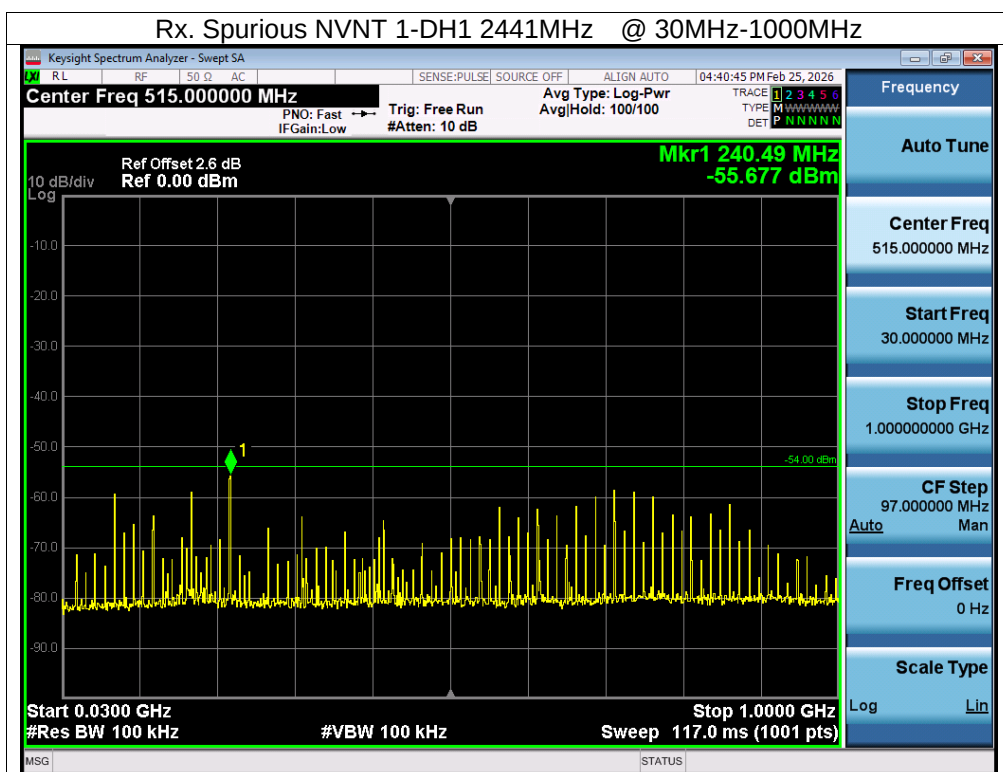
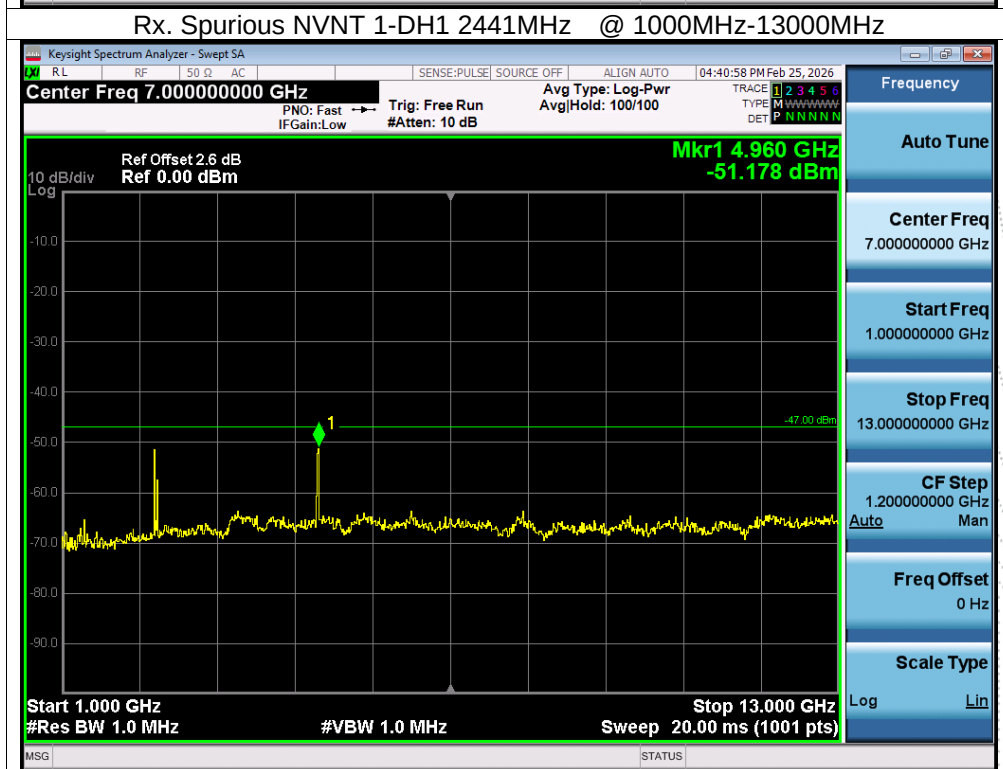
## 14.5 Test Result

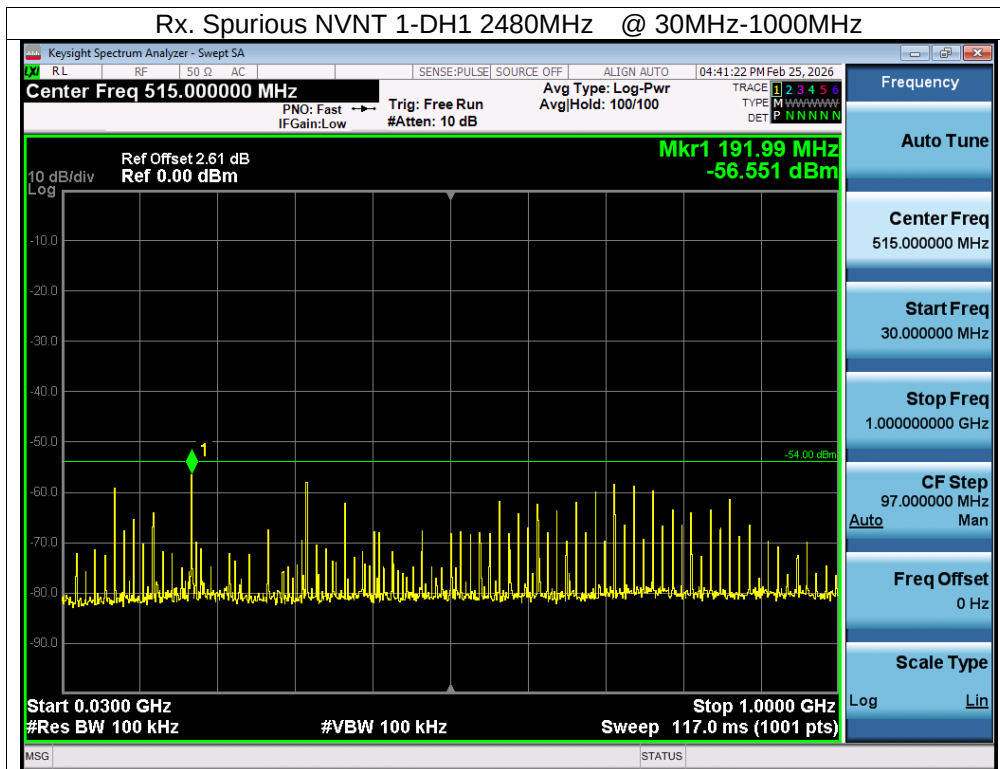
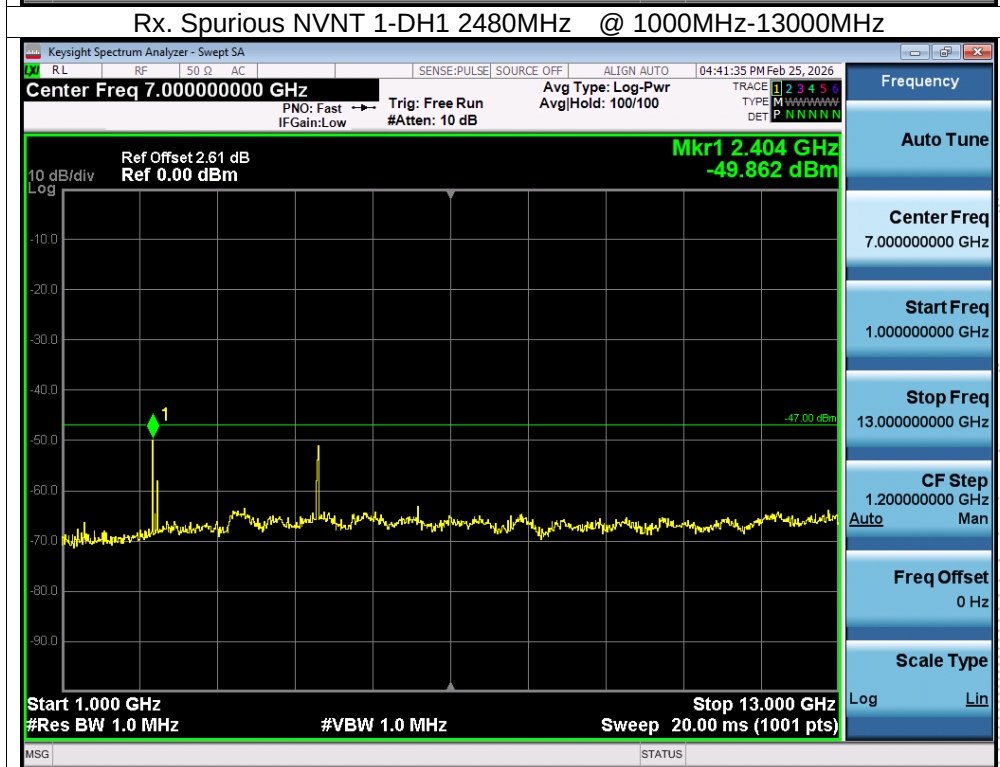
|              |         |              |         |
|--------------|---------|--------------|---------|
| Temperature: | 25°C    |              |         |
| Humidity:    | 55 % RH | Test Voltage | DC 3.8V |

| Condition | Mode  | Frequency (MHz) | Range (MHz) | Emission Frequency (MHz) | Max Value (dBm) | Limit (dBm) | Verdict |
|-----------|-------|-----------------|-------------|--------------------------|-----------------|-------------|---------|
| NVNT      | 1-DH1 | 2402            | 30-1000     | 240.49                   | -58.28          | -54         | Pass    |
| NVNT      | 1-DH1 | 2402            | 1000-13000  | 4960                     | -51.39          | -47         | Pass    |
| NVNT      | 1-DH1 | 2441            | 30-1000     | 240.49                   | -55.68          | -54         | Pass    |
| NVNT      | 1-DH1 | 2441            | 1000-13000  | 4960                     | -51.18          | -47         | Pass    |
| NVNT      | 1-DH1 | 2480            | 30-1000     | 191.99                   | -56.55          | -54         | Pass    |
| NVNT      | 1-DH1 | 2480            | 1000-13000  | 2404                     | -49.86          | -47         | Pass    |

All the modes were tested and only recorded the worst mode in the report.

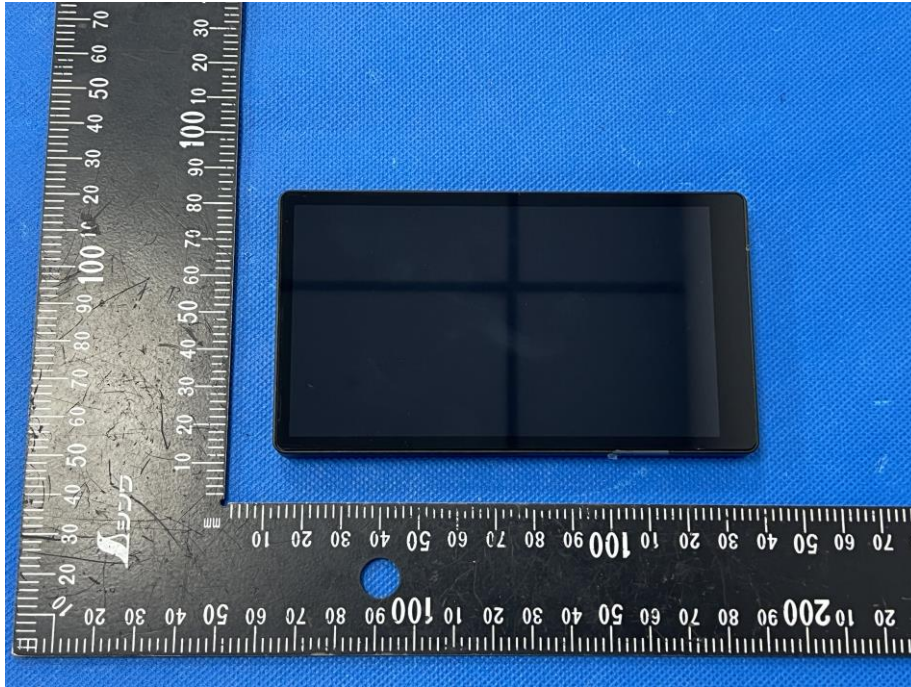




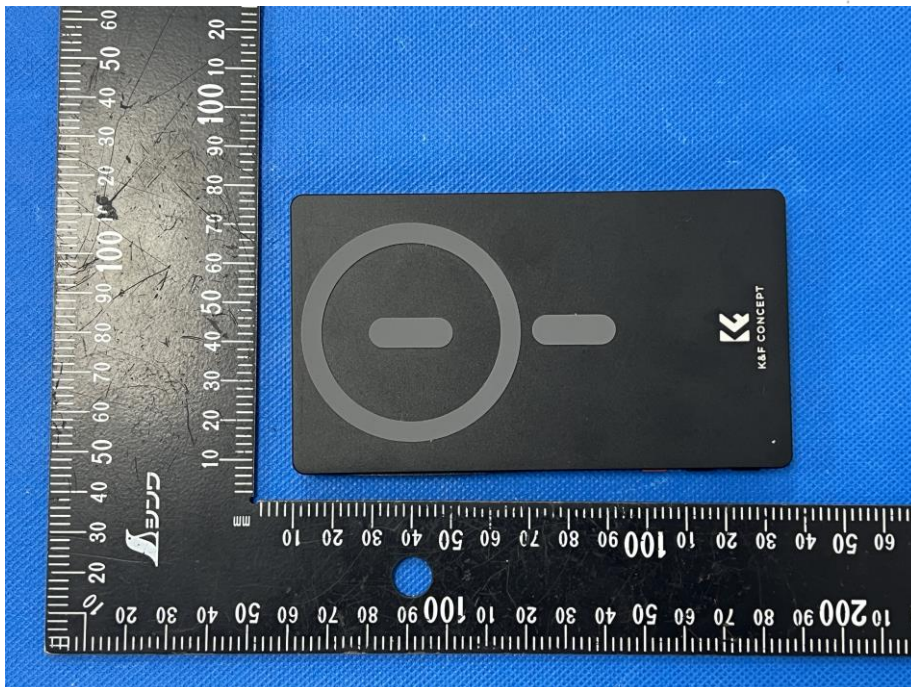


## 15. EUT Photographs

EUT Photo 1



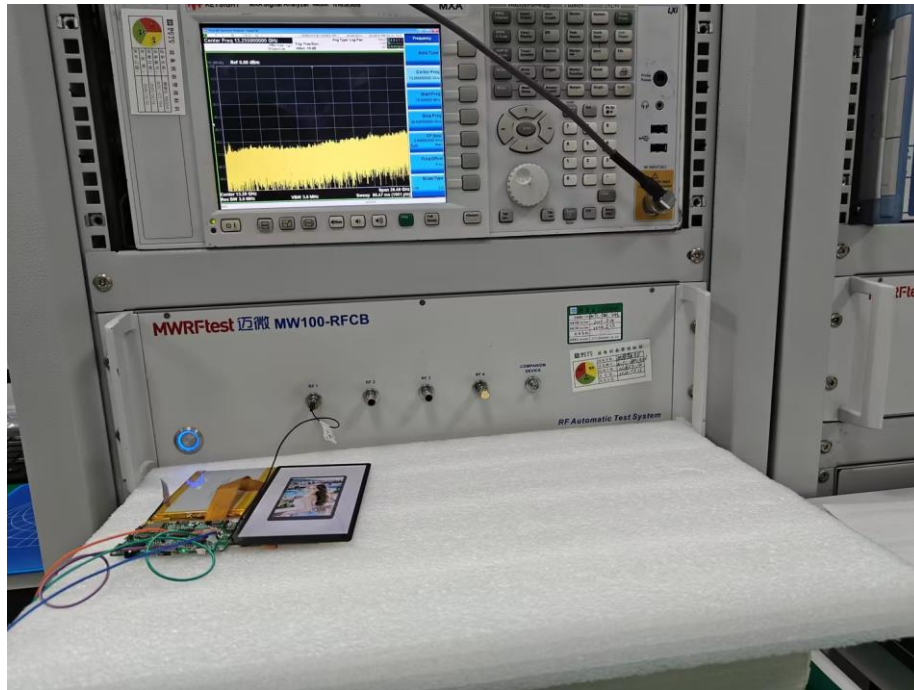
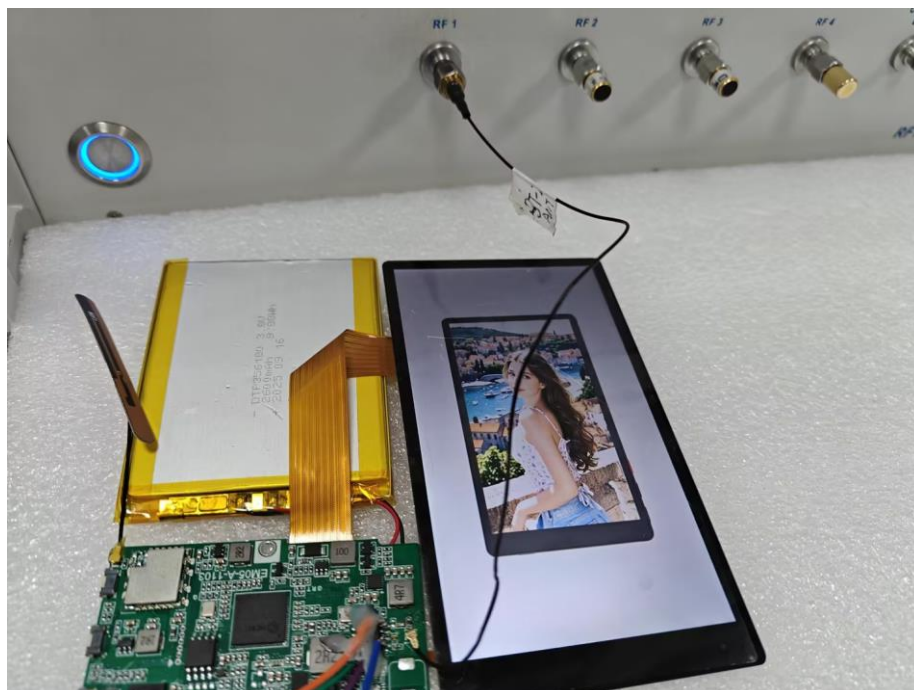
EUT Photo 2



NOTE: Appendix-Photographs Of EUT Constructional Details.

## 16. EUT Test Setup Photographs

### Measurement Photos



TECHNOLOGY  
 C  
 /ED  
 Seal

**STATEMENT**

1. The equipment lists are traceable to the national reference standards.
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without the "special seal for inspection and testing".
4. The test report is invalid without the signature of the approver.
5. The test process and test result is only related to the Unit Under Test.
6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. The quality system of our laboratory is in accordance with ISO/IEC17025.
8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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Complaint/Advice E-mail: [advice@bctc-lab.com.cn](mailto:advice@bctc-lab.com.cn)

\*\*\*\*\* END \*\*\*\*\*

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