

# RF TEST REPORT

Test Report No.....: RF251107008-02-001

Product(s) Name.....: Mini PC

Model(s).....: IT15 Max, IT13 Max, IT14 Max, GT13 Max, GT14 Max, GT15 Max, XT13 Max, XT14 Max, XT15 Max

Trade Mark.....: GEEKOM

Applicant.....: Shenzhen Geekom Electronic Technology Co., Ltd

Address.....: B705, Tower B, Phrase II of Boton Science and Technology Park, No. 1044, Cha Guang Road, Shu Guang Community, Xi Li Street, Nan Shan District, Shen Zhen, China

Receipt Date.....: 2025.11.13

Test Date.....: 2025.11.21

Issued Date.....: 2025.12.02

Standards.....: MIC Notice No.88 Appendix No.43 Article 2, Paragraph 1, Item 19 Rules Section

Testing Laboratory.....: Shenzhen Haiyun Standard Technical Co., Ltd.

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## History of this test report

Original Report Issue Date: 2025.12.02

- ☒ No additional attachment
- ☐ Additional attachments were issued following record

| Attachment No. | Issue Date | Description |
|----------------|------------|-------------|
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## 1. GENERAL INFORMATION

### 1.1 Product Description for Equipment under Test (EUT)

|                      |                                                                                                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test sample no.      | POC251107008-S001                                                                                                                                               |
| Product name         | Mini PC                                                                                                                                                         |
| Model name           | IT15 Max, IT13 Max, IT14 Max, GT13 Max, GT14 Max, GT15 Max, XT13 Max, XT14 Max, XT15 Max                                                                        |
| Test model           | IT15 Max                                                                                                                                                        |
| Model difference     | Only the model name and colors are different                                                                                                                    |
| Trade Mark           | GEEKOM                                                                                                                                                          |
| Power supply         | DC 19V from adapter                                                                                                                                             |
| Adapter1 information | Model name: hyleton-120W-1906320<br>Input: 100-240V~, 50-60Hz, 2A Max<br>Output: 19.0V===6.32A, 120.0W                                                          |
| Adapter2 information | Model name: BSY120S1906323 D<br>Input: 100-240V~, 50/60Hz, 2.5A<br>Output: 19.0V===6.32A, 120.0W                                                                |
| Radio Type           | BDR+EDR                                                                                                                                                         |
| Type of Modulation   | GFSK, $\pi/4$ -DQPSK, 8-DPSK                                                                                                                                    |
| Frequency Range      | 2402-2480MHz                                                                                                                                                    |
| Rated Power          | 0.02mW/MHz                                                                                                                                                      |
| Antenna Type         | Integrated Antenna                                                                                                                                              |
| Antenna Gain         | Ant1: 2.99dBi                                                                                                                                                   |
| Applicant            | Shenzhen Geekom Electronic Technology Co., Ltd                                                                                                                  |
| Address              | B705, Tower B, Phrase II of Boton Science and Technology Park, No. 1044, Cha Guang Road, Shu Guang Community, Xi Li Street, Nan Shan District, Shen Zhen, China |
| Manufacturer         | Shenzhen Geekom Electronic Technology Co., Ltd                                                                                                                  |
| Address              | B705, Tower B, Phrase II of Boton Science and Technology Park, No. 1044, Cha Guang Road, Shu Guang Community, Xi Li Street, Nan Shan District, Shen Zhen, China |
| Sample/EUT Status    | Good condition                                                                                                                                                  |

## 1.2 System Test Configuration

### 1.2.1 Channel List

EUT was tested with Channel 2402MHz, 2441MHz, 2480MHz.

| 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            |         |                 |

The output power measurements were tested with DH1/3/5 during 1Mbps, 2Mbps, and 3Mbps, with the worst case being 1Mbps (DH5), 2Mbps (2DH5), and 3Mbps (3DH5), so the test project only recorded the worst case.

### 1.2.2 EUT Exercise Software

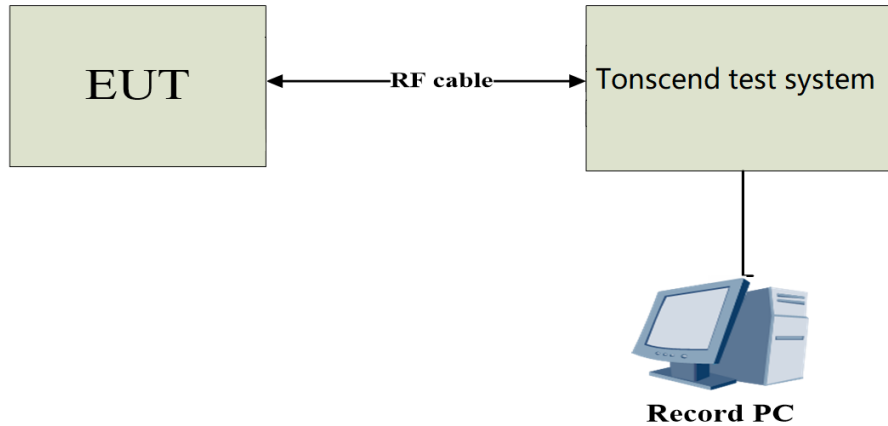
“DRTU” was used to test and the power level was set at 0.

The EUT was operated in the engineering mode to fix the Tx or RX, Carrier Tx frequency that was for the purpose of the measurements.

### 1.2.3 Support Equipment

| No. | Equipment          | Model    | Manufacturer | Series No |
|-----|--------------------|----------|--------------|-----------|
| 1   | Flat Panel Monitor | S2721QS  | DELL         | /         |
| 2   | Mouse              | DOK-680U | LENOVO       | 701E8328  |
| 3   | Keyboard           | SK-8827  | LENOVO       | 21R1ADL   |

#### 1.2.4 Block Diagram of Configuration



#### 1.2.5 Test Voltage

The EUT has its own voltage regulator principle from chip MP2015AGG, the output voltage of the chip is 3.3V and the fluctuation of power supply to the RF circuit of EUT is equal to or less than  $\pm 1\%$ . So exempt extremely high and low supply voltage condition tests, EUT only operated in normal voltage to test all regulations.

When an extreme voltage is supplied to the tablet, the power deviation of the tablet's output is less than 1%. Therefore, testing is only conducted under normal conditions.

| Condition | Input (V/AC) | Input (V/DC) |
|-----------|--------------|--------------|
| NV        | /            | 19           |
| LV        | /            | 17.1         |
| HV        | /            | 20.9         |

#### 1.2.6 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 15~35°C
- Humidity: 45~75%
- Atmospheric pressure: 86-106 kPa

#### 1.2.7 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

#### 1.2.8 Special Accessories

Not available for this EUT intended for grant.

### 1.3 Summary of Test Results

| MIC Notice No.88<br>Appendix No.43<br>Article 2, Paragraph 1,<br>Item 19 Rules Section | Description of Test                             | Test result    |
|----------------------------------------------------------------------------------------|-------------------------------------------------|----------------|
| 2                                                                                      | Frequency Error                                 | Compliant      |
| 3                                                                                      | Occupied Bandwidth and Spreading Bandwidth      | Compliant      |
| 4                                                                                      | Spurious emission intensity                     | Compliant      |
| 5                                                                                      | Antenna Output Power and Output Power Tolerance | Compliant      |
| 6                                                                                      | Limit Of Secondary Spurious Emissions           | Compliant      |
| 7                                                                                      | Transmission Antenna Gain                       | Not Applicable |
| 8                                                                                      | Transmission Radiation Angle Width              | Not Applicable |
| 9                                                                                      | Frequency Hopping Dwell Time                    | Compliant      |
| 10                                                                                     | Interference Prevention Function                | Compliant      |

Not Applicable

– This test item was not required for the output power less than 6.91dBm/MHz (E.I.R.P)

## 1.4 List of Test and Measurement Instruments

| Equipment           | Manufacturer | Model No              | Serial No. | Last Cal. | Cal Due Date | Calibration body                           | Classification |
|---------------------|--------------|-----------------------|------------|-----------|--------------|--------------------------------------------|----------------|
| MXA Signal Analyzer | Keysight     | N9021B                | MY60080169 | 2025/3/1  | 2026/2/28    | Guangzhou Lisai Metrology & Test co. ,Ltd. | (c)            |
| RF Control Unit     | dsusoft      | JS0806-2              | 21G8060449 | 2025/3/1  | 2026/2/28    | Guangzhou Lisai Metrology & Test co. ,Ltd. | (c)            |
| 10dB Attenuator     | Tonscend     | 10dB                  | N/A        | Each Time |              |                                            |                |
| Test software       | dsusoft      | JS1120-3 Ver.3.2.22.0 |            |           |              |                                            |                |

**Remark:**

- (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.
- (b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992) .
- (c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).
- (d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (c).
- From JRL Article 24-2, paragraph 4, Item 2

## 1.5 Measurement Uncertainty

| Uncertainty                 |                          |
|-----------------------------|--------------------------|
| Parameter                   | Uncertainty              |
| Occupied Channel Bandwidth  | $\pm 102\text{kHz}$      |
| Frequency Error             | $\pm 6.5 \times 10^{-8}$ |
| RF power conducted          | $\pm 0.243\text{dB}$     |
| Power Spectral Density      | $\pm 0.743\text{dB}$     |
| Conducted Spurious Emission | $\pm 1.328\text{dB}$     |
| Time                        | $\pm 0.19\%$             |

*This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$*

## 2. Frequency Error Measurement

### 2.1 Limit

| Standard            | Item                   | Limit          |
|---------------------|------------------------|----------------|
| Article 2-1 Item 19 | Tolerance of Frequency | ±50ppm or less |

### 2.2 Test Procedures

- Connect EUT antenna terminal to the Spectrum Analyzer.
- Set Spectrum Analyzer as below:

Frequency : Test Frequency  
 SPAN : 1MHz  
 RBW : 10kHz  
 VBW : 10kHz  
 Sweep Time : Auto  
 Detector Mode : Peak  
 Display Mode : Max Hold

### 2.3 Test Data

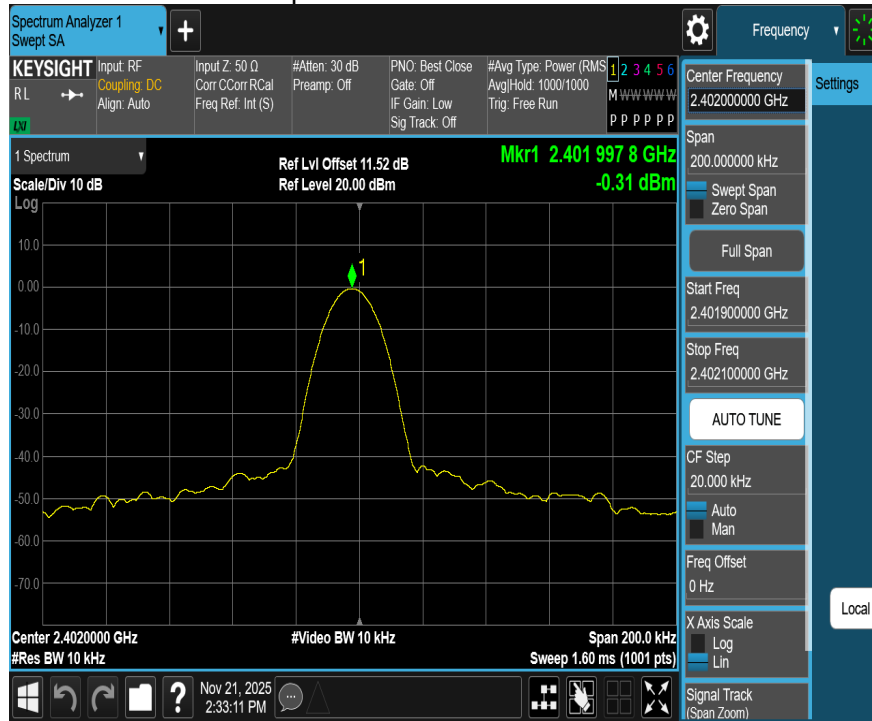
|              |              |             |            |
|--------------|--------------|-------------|------------|
| Temperature  | 23.5℃        | Humidity    | 51%        |
| ATM Pressure | 101.4kPa     | Time        | 2025.11.21 |
| Test by      | Freedom Zhuo | Test result | PASS       |

Please refer to following tables.

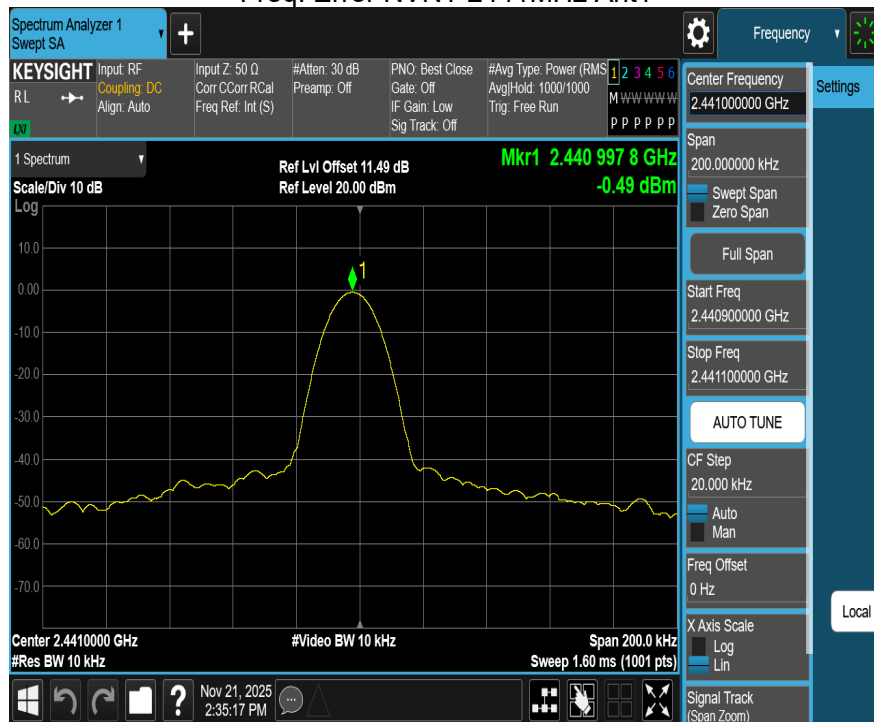
| Condition                                               | Frequency (MHz) | Measure Frequency (MHz) | Frequency Tolerance (ppm) | Limit (ppm) |
|---------------------------------------------------------|-----------------|-------------------------|---------------------------|-------------|
| NVNT                                                    | 2402            | 2401.9978               | -0.91590                  | ±50ppm      |
|                                                         | 2441            | 2440.9978               | -0.90127                  |             |
|                                                         | 2480            | 2479.9978               | -0.88710                  |             |
| Note: The EUT was programmed in un-modulation function. |                 |                         |                           |             |

Please refer to recording the spectrum plots in the worst conditions

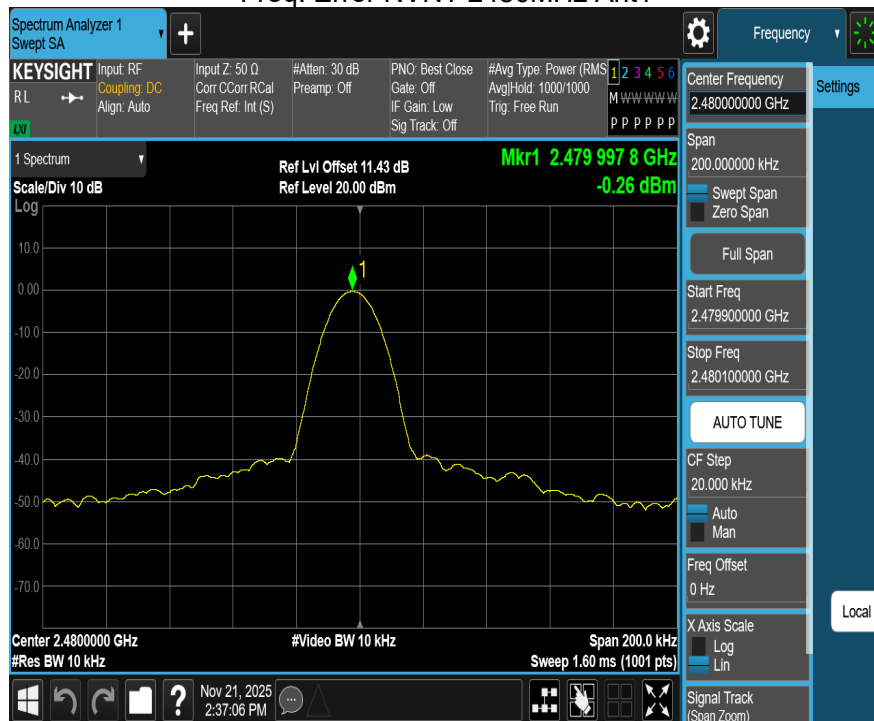
Freq. Error NVNT 2402MHz Ant1



Freq. Error NVNT 2441MHz Ant1



Freq. Error NVNT 2480MHz Ant1



### 3. Occupied Bandwidth (99%)

#### 3.1 Limit

| Standard            | Type   | Limit                 |
|---------------------|--------|-----------------------|
| Article 2-1 Item 19 | FHSS   | $\leq 83.5\text{MHz}$ |
|                     | DSSS   | $\leq 26\text{MHz}$   |
|                     | OFDM   | $\leq 38\text{MHz}$   |
|                     | others | $\leq 26\text{MHz}$   |

#### 3.2 Measurement Procedure

- Connect EUT antenna terminal to the Spectrum Analyzer.
- Set Spectrum Analyzer as below:

Frequency : Test Frequency  
 SPAN : 200MHz  
 RBW : 1MHz  
 VBW : 1MHz  
 Sweep Time : Auto (Minimum time to ensure measurement accuracy.)  
 Detector Mode : Peak  
 Display Mode : Max Hold  
 Data points : 400 points or more  
 Reference level : Enough level for maximum dynamic range  
 OBW : 99%

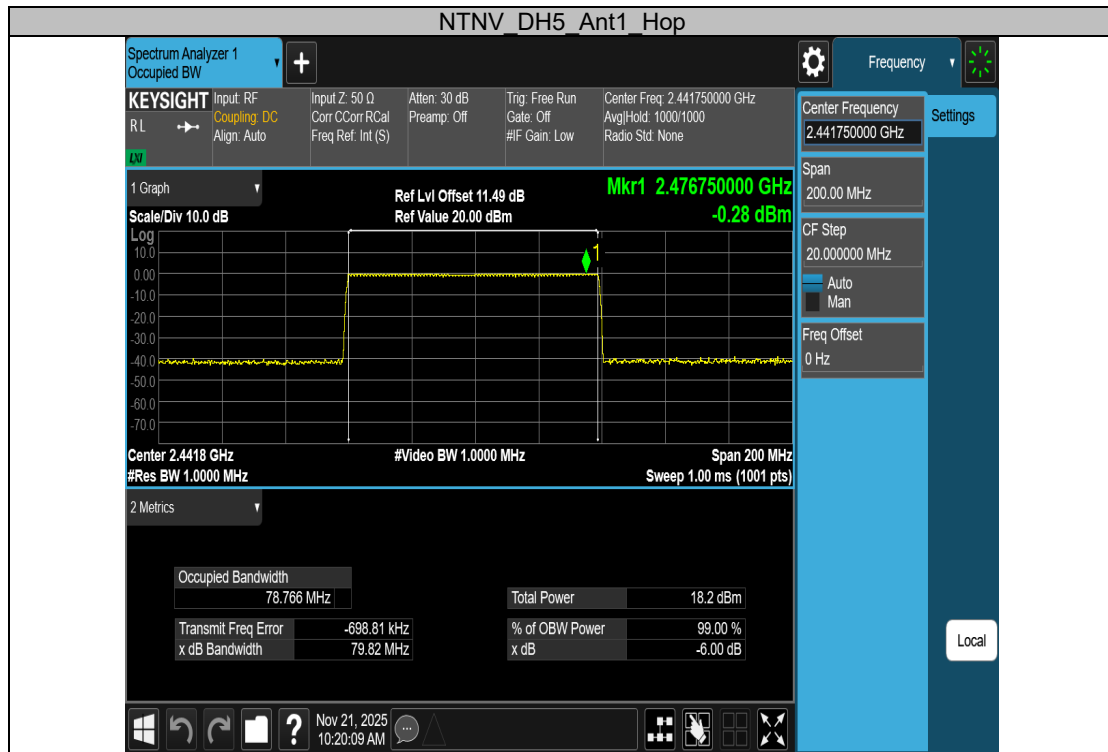
#### 3.3 Test Data

|              |              |             |            |
|--------------|--------------|-------------|------------|
| Temperature  | 23.5°C       | Humidity    | 51%        |
| ATM Pressure | 101.4kPa     | Time        | 2025.11.21 |
| Test by      | Freedom Zhuo | Test result | PASS       |

Please refer to following tables.

| Condition | Modulation mode | 99% OBW (MHz) | Limit (MHz) |
|-----------|-----------------|---------------|-------------|
| NVNT      | DH5             | 78.766        | ≤83.5       |
|           | 2DH5            | 78.888        | ≤83.5       |
|           | 3DH5            | 78.867        | ≤83.5       |

Please refer to recording the spectrum plots in the worst conditions





## 4. Spread-Spectrum Bandwidth (90%)/Spread Factor

### 4.1 Limit

| Standard            | Item                | Limit                |
|---------------------|---------------------|----------------------|
| Article 2-1 Item 19 | Spreading Bandwidth | $\geq 500\text{kHz}$ |
| Article 2-1 Item 19 | Spread factor       | $> 5$                |

### 4.2 Measurement Procedure

- Connect EUT antenna terminal to the Spectrum Analyzer.
- Set Spectrum Analyzer as below:

Frequency : Test Frequency  
 SPAN : 100MHz  
 RBW : 1MHz  
 VBW : 1MHz  
 Sweep Time : Auto (Minimum time to ensure measurement accuracy.)  
 Detector Mode : Peak  
 Display Mode : Max Hold  
 Data points : 400 points or more  
 Reference level : Enough level for maximum dynamic range  
 OBW : 90%

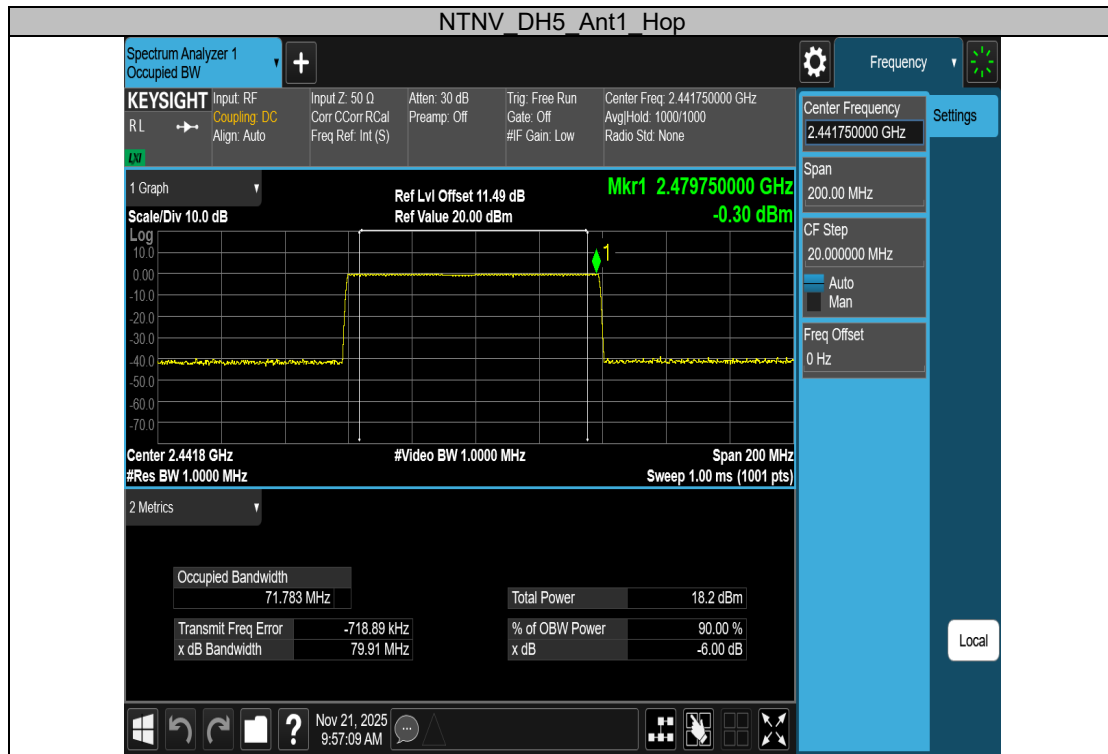
### 4.3 Test Data

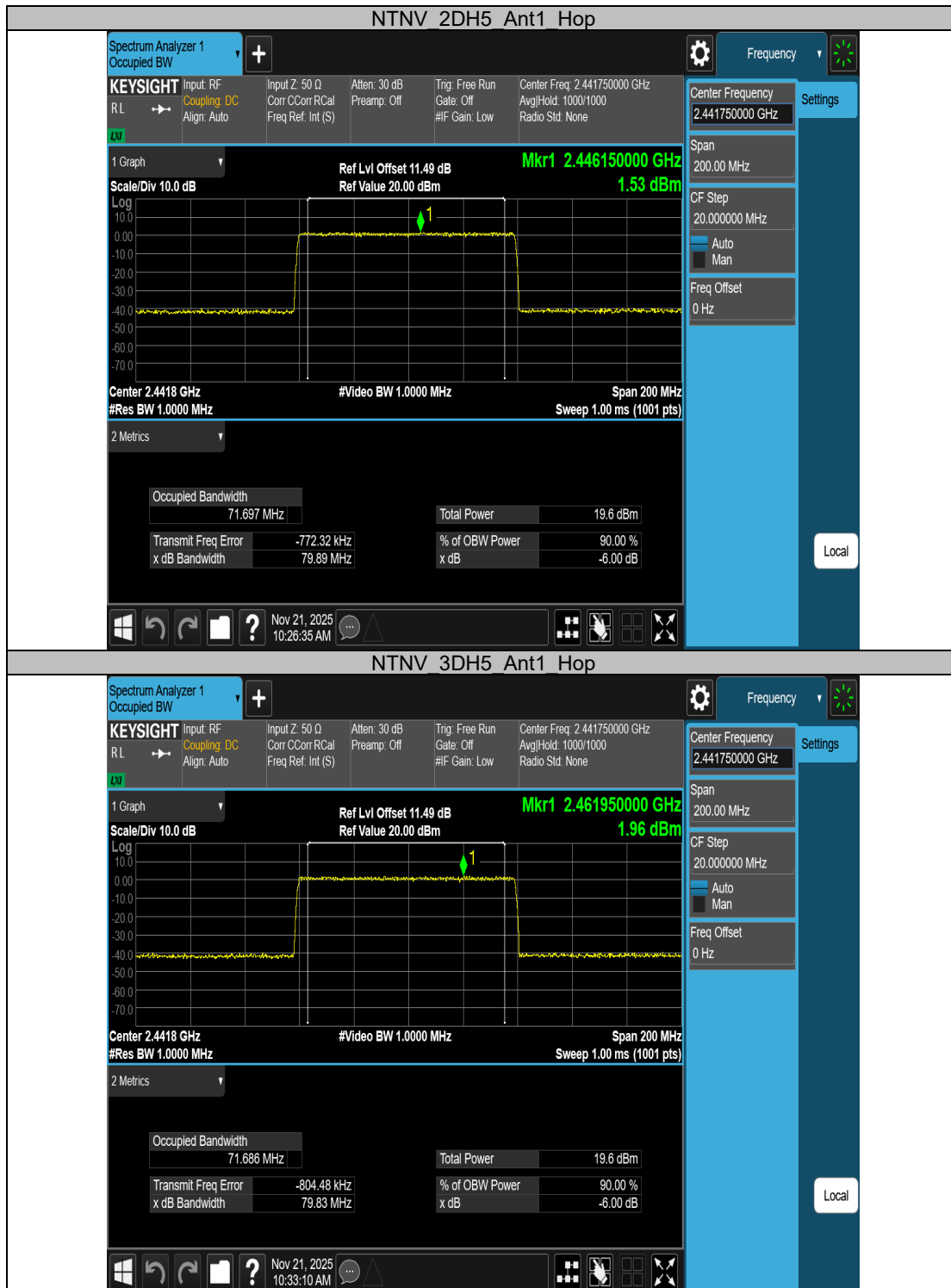
|              |              |             |            |
|--------------|--------------|-------------|------------|
| Temperature  | 23.5°C       | Humidity    | 51%        |
| ATM Pressure | 101.4kPa     | Time        | 2025.11.21 |
| Test by      | Freedom Zhuo | Test result | PASS       |

Please refer to following tables and plots.

| Test Condition | Test Mode | Antenna | Freq (MHz) | Result [MHz] | Limit [MHz] | Spread Factor | Limit | Verdict |
|----------------|-----------|---------|------------|--------------|-------------|---------------|-------|---------|
| NTNV           | DH5       | Ant1    | Hop        | 71.783       | $\geq 0.5$  | 71.783        | >5    | PASS    |
|                | 2DH5      | Ant1    | Hop        | 71.697       | $\geq 0.5$  | 71.697        | >5    | PASS    |
|                | 3DH5      | Ant1    | Hop        | 71.686       | $\geq 0.5$  | 71.686        | >5    | PASS    |

Please refer to recording the spectrum plots in the worst conditions





## 5. Spurious Emission Intensity

### 5.1 Limit

| Standard            | Item                 | Frequency           | Limit                   |
|---------------------|----------------------|---------------------|-------------------------|
| Article 2-1 Item 19 | TX Spurious Emission | 30 - 1000MHz        | 0.25 $\mu$ W/MHz/-36dBm |
|                     |                      | 1000 - 2387MHz      | 2.5 $\mu$ W/MHz/-26dBm  |
|                     |                      | 2387 - 2400MHz      | 25 $\mu$ W/MHz/-16dBm   |
|                     |                      | 2483.5 - 2496.5MHz  | 25 $\mu$ W/MHz/-16dBm   |
|                     |                      | 2496.5MHz - 12.5GHz | 2.5 $\mu$ W/MHz/-26dBm  |

### 5.2 Measurement Procedure

- Connect EUT antenna terminal to the Spectrum Analyzer.
- Set Spectrum Analyzer as below:

Frequency : 30- 1000MHz;  
 1000 - 2387MHz;  
 2387-2400MHz;  
 2483.5-2496.5MHz;  
 2496.5MHz-13GHz

RBW : 100kHz for Below 1GHz  
 1MHz for Above 1GHz

VBW : 100kHz for Below 1GHz  
 1MHz for Above 1GHz

Sweep Time : Auto (Minimum time to ensure measurement accuracy.)

Detector Mode : Peak

Display Mode : Max Hold

Data points : 400 points or more

Reference level : Enough level for maximum dynamic range

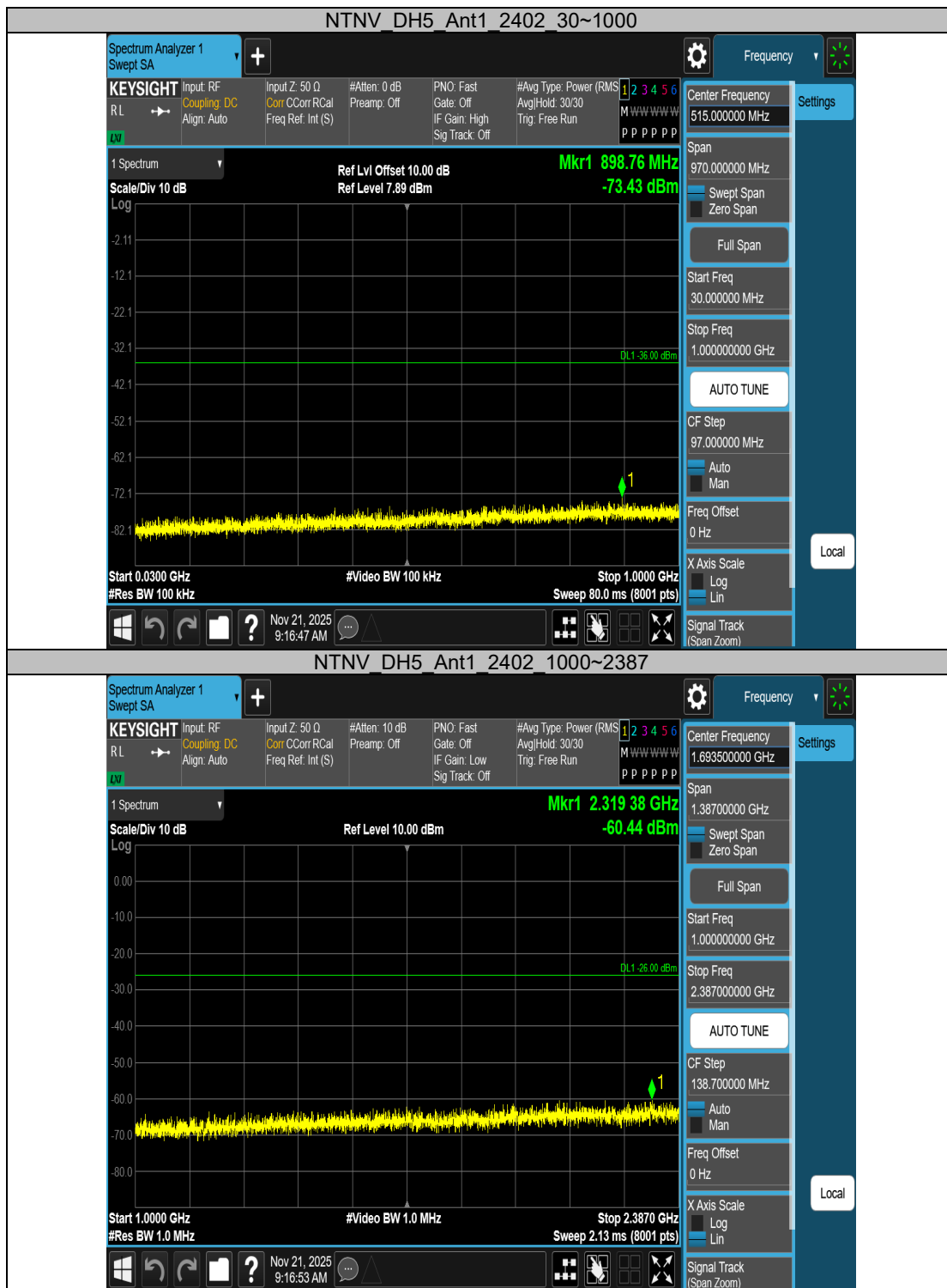
### 5.3 Test Data

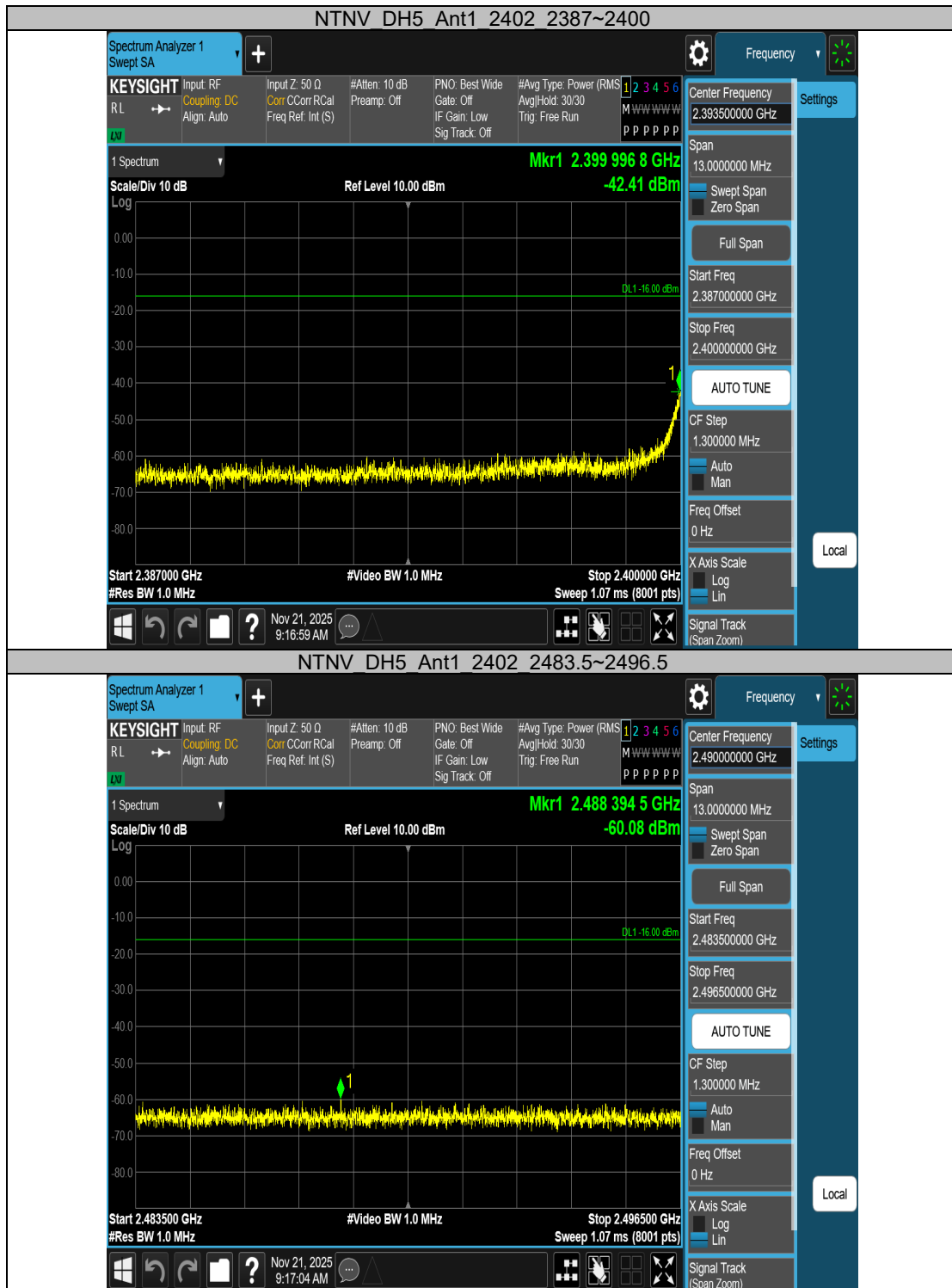
|              |              |             |            |
|--------------|--------------|-------------|------------|
| Temperature  | 23.5℃        | Humidity    | 51%        |
| ATM Pressure | 101.4kPa     | Time        | 2025.11.21 |
| Test by      | Freedom Zhuo | Test result | PASS       |

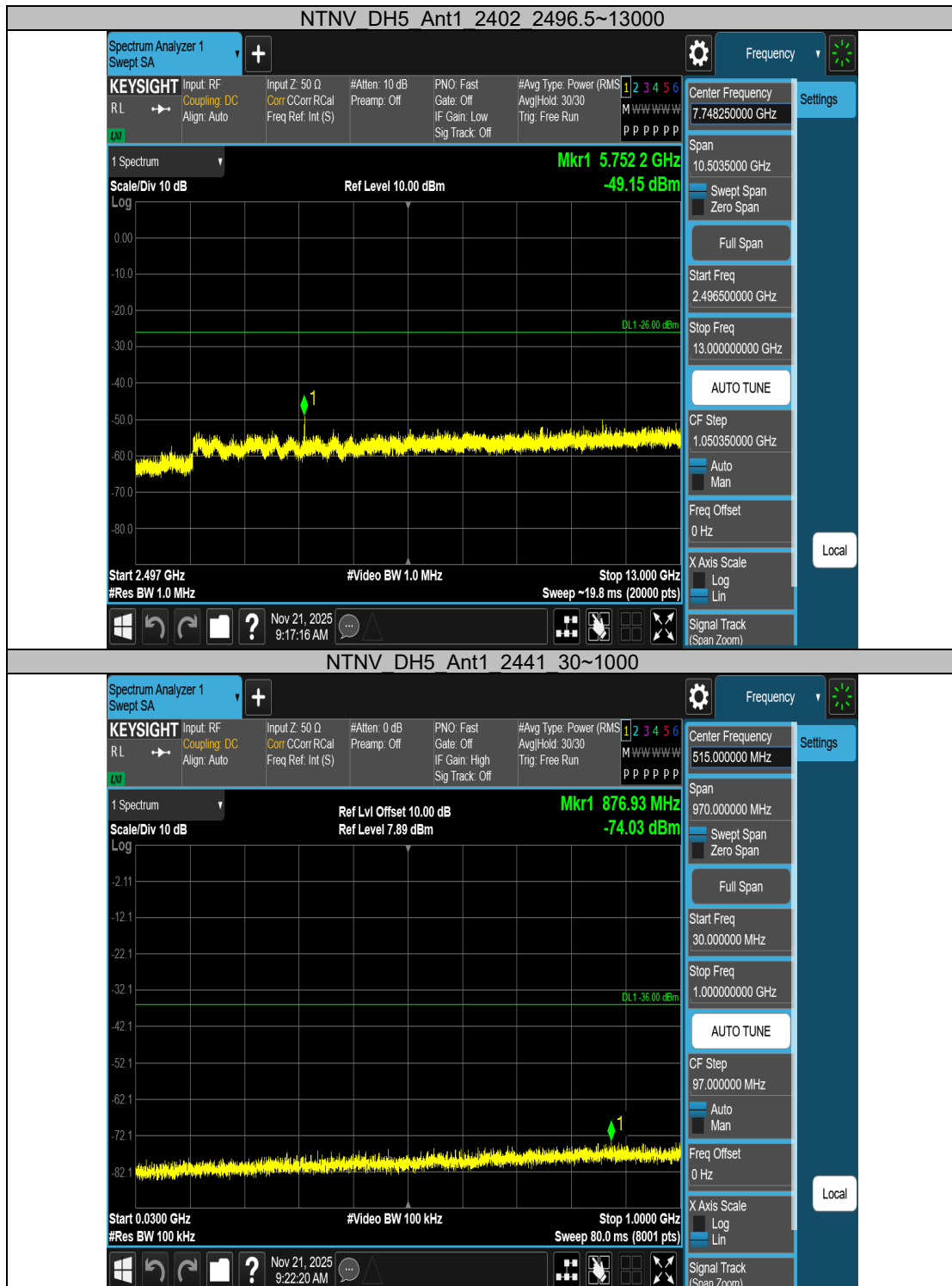
Please refer to following table and plots.

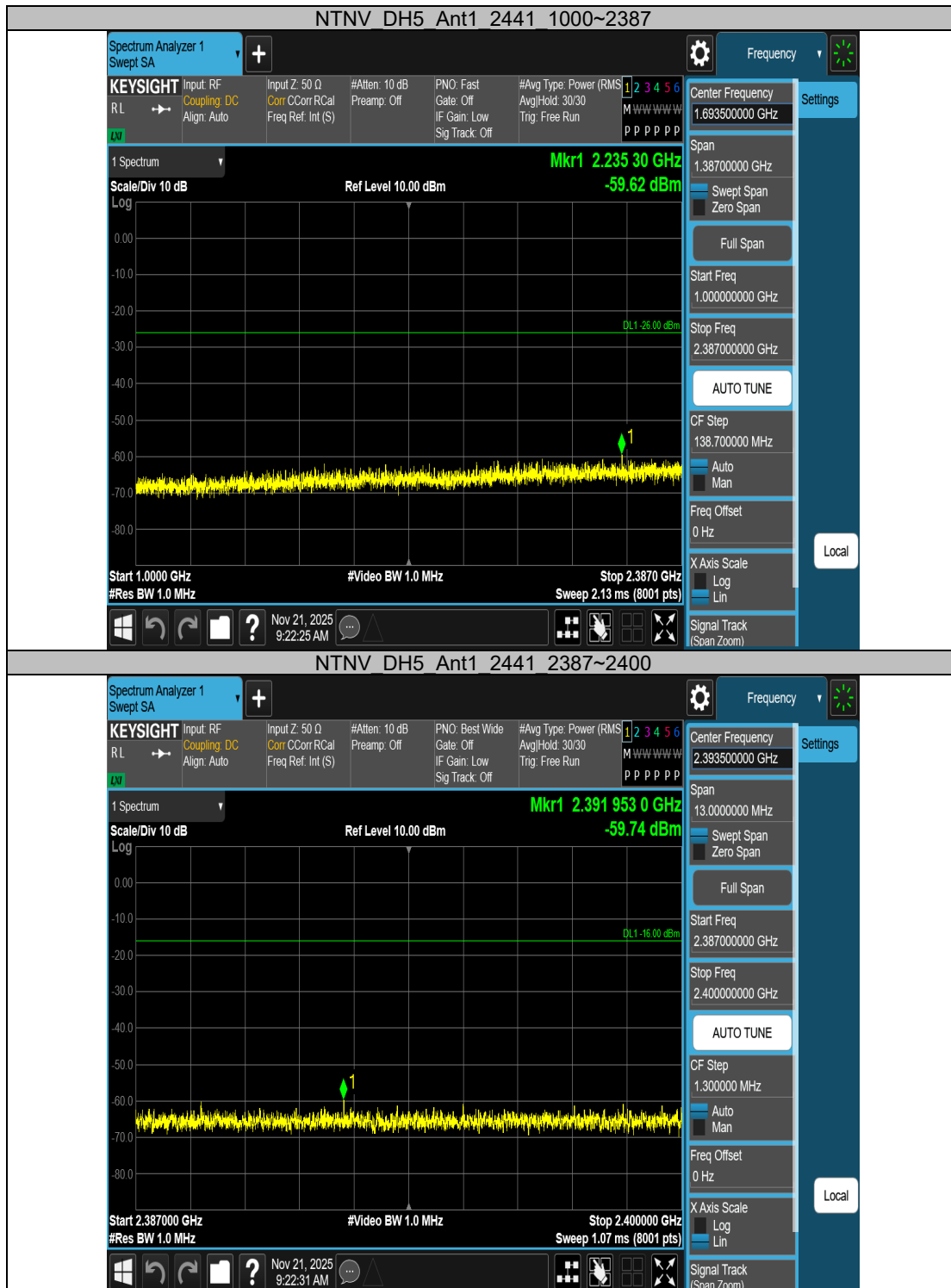
| Test Condition | Test Mode | Antenna | Freq(MHz) | Freq.Range [MHz] | Result [dBm] | Limit [dBm] | Verdict |
|----------------|-----------|---------|-----------|------------------|--------------|-------------|---------|
| NTNV           | DH5       | Ant1    | 2402      | 30~1000          | -73.43       | ≤-36        | PASS    |
|                |           |         |           | 1000~2387        | -60.44       | ≤-26        | PASS    |
|                |           |         |           | 2387~2400        | -42.41       | ≤-16        | PASS    |
|                |           |         |           | 2483.5~2496.5    | -60.08       | ≤-16        | PASS    |
|                |           |         |           | 2496.5~13000     | -49.15       | ≤-26        | PASS    |
|                |           |         | 2441      | 30~1000          | -74.03       | ≤-36        | PASS    |
|                |           |         |           | 1000~2387        | -59.62       | ≤-26        | PASS    |
|                |           |         |           | 2387~2400        | -59.74       | ≤-16        | PASS    |
|                |           |         |           | 2483.5~2496.5    | -60.26       | ≤-16        | PASS    |
|                |           |         |           | 2496.5~13000     | -50.39       | ≤-26        | PASS    |
|                |           |         | 2480      | 30~1000          | -73.39       | ≤-36        | PASS    |
|                |           |         |           | 1000~2387        | -59.51       | ≤-26        | PASS    |
|                |           |         |           | 2387~2400        | -61.19       | ≤-16        | PASS    |
|                |           |         |           | 2483.5~2496.5    | -58.05       | ≤-16        | PASS    |
|                |           |         |           | 2496.5~13000     | -51.13       | ≤-26        | PASS    |
|                | 2DH5      | Ant1    | 2402      | 30~1000          | -74.24       | ≤-36        | PASS    |
|                |           |         |           | 1000~2387        | -59.92       | ≤-26        | PASS    |
|                |           |         |           | 2387~2400        | -34.11       | ≤-16        | PASS    |
|                |           |         |           | 2483.5~2496.5    | -60.19       | ≤-16        | PASS    |
|                |           |         |           | 2496.5~13000     | -51.08       | ≤-26        | PASS    |
|                |           |         | 2441      | 30~1000          | -73.66       | ≤-36        | PASS    |
|                |           |         |           | 1000~2387        | -60.47       | ≤-26        | PASS    |
|                |           |         |           | 2387~2400        | -60.52       | ≤-16        | PASS    |
|                |           |         |           | 2483.5~2496.5    | -59.59       | ≤-16        | PASS    |
|                |           |         |           | 2496.5~13000     | -50.75       | ≤-26        | PASS    |
|                |           |         | 2480      | 30~1000          | -73.81       | ≤-36        | PASS    |
|                |           |         |           | 1000~2387        | -60.48       | ≤-26        | PASS    |
|                |           |         |           | 2387~2400        | -61.24       | ≤-16        | PASS    |
|                |           |         |           | 2483.5~2496.5    | -58.10       | ≤-16        | PASS    |
|                |           |         |           | 2496.5~13000     | -50.98       | ≤-26        | PASS    |
|                | 3DH5      | Ant1    | 2402      | 30~1000          | -73.61       | ≤-36        | PASS    |
|                |           |         |           | 1000~2387        | -59.19       | ≤-26        | PASS    |
|                |           |         |           | 2387~2400        | -34.30       | ≤-16        | PASS    |
|                |           |         |           | 2483.5~2496.5    | -60.57       | ≤-16        | PASS    |
|                |           |         |           | 2496.5~13000     | -50.61       | ≤-26        | PASS    |
|                |           |         | 2441      | 30~1000          | -73.23       | ≤-36        | PASS    |
|                |           |         |           | 1000~2387        | -59.72       | ≤-26        | PASS    |
|                |           |         |           | 2387~2400        | -60.26       | ≤-16        | PASS    |
|                |           |         |           | 2483.5~2496.5    | -59.87       | ≤-16        | PASS    |
|                |           |         |           | 2496.5~13000     | -51.37       | ≤-26        | PASS    |
|                |           |         | 2480      | 30~1000          | -73.68       | ≤-36        | PASS    |
|                |           |         |           | 1000~2387        | -59.85       | ≤-26        | PASS    |
|                |           |         |           | 2387~2400        | -60.28       | ≤-16        | PASS    |
|                |           |         |           | 2483.5~2496.5    | -58.07       | ≤-16        | PASS    |
|                |           |         |           | 2496.5~13000     | -50.93       | ≤-26        | PASS    |

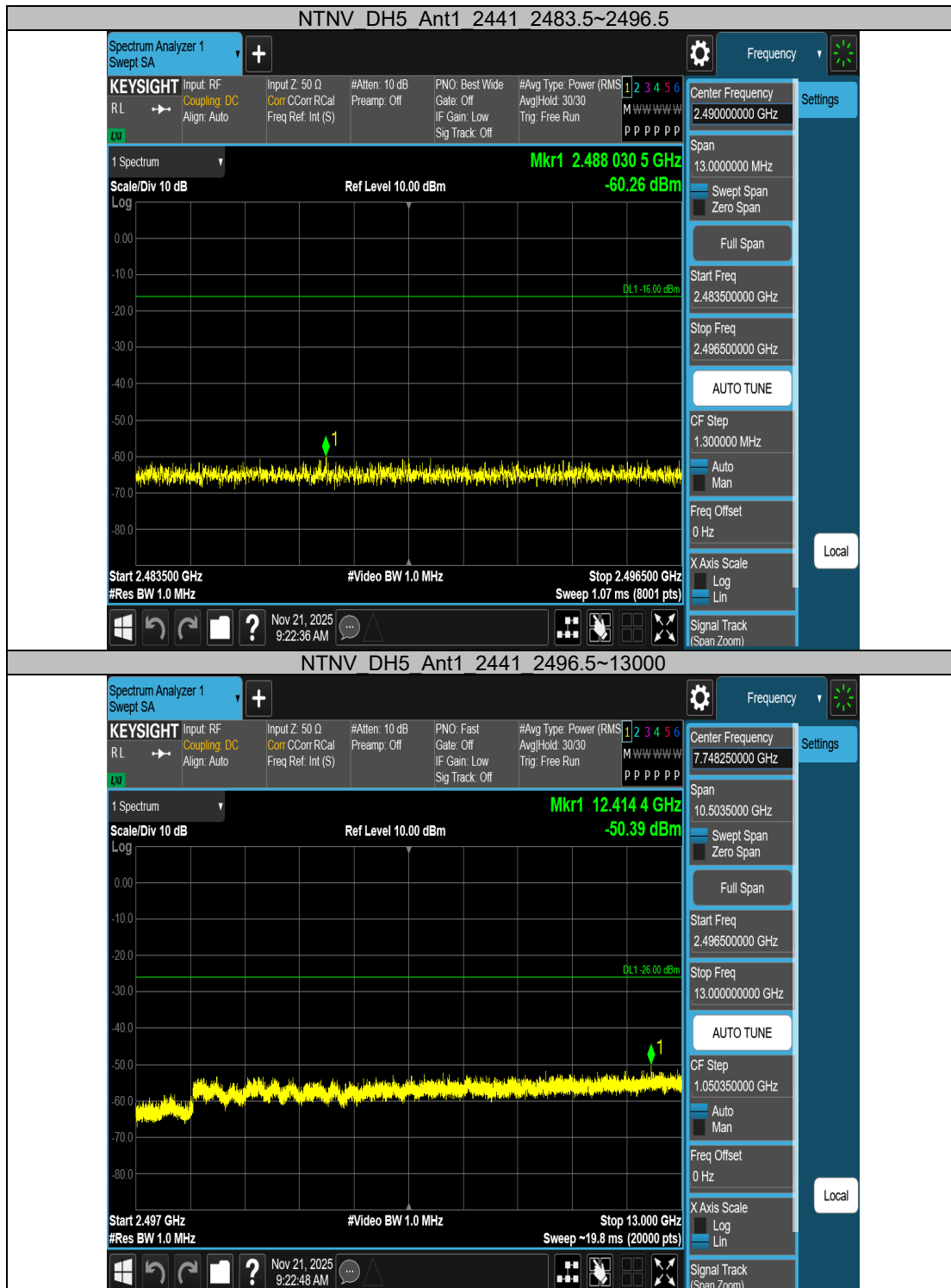
Please refer to recording the spectrum plots in the worst conditions

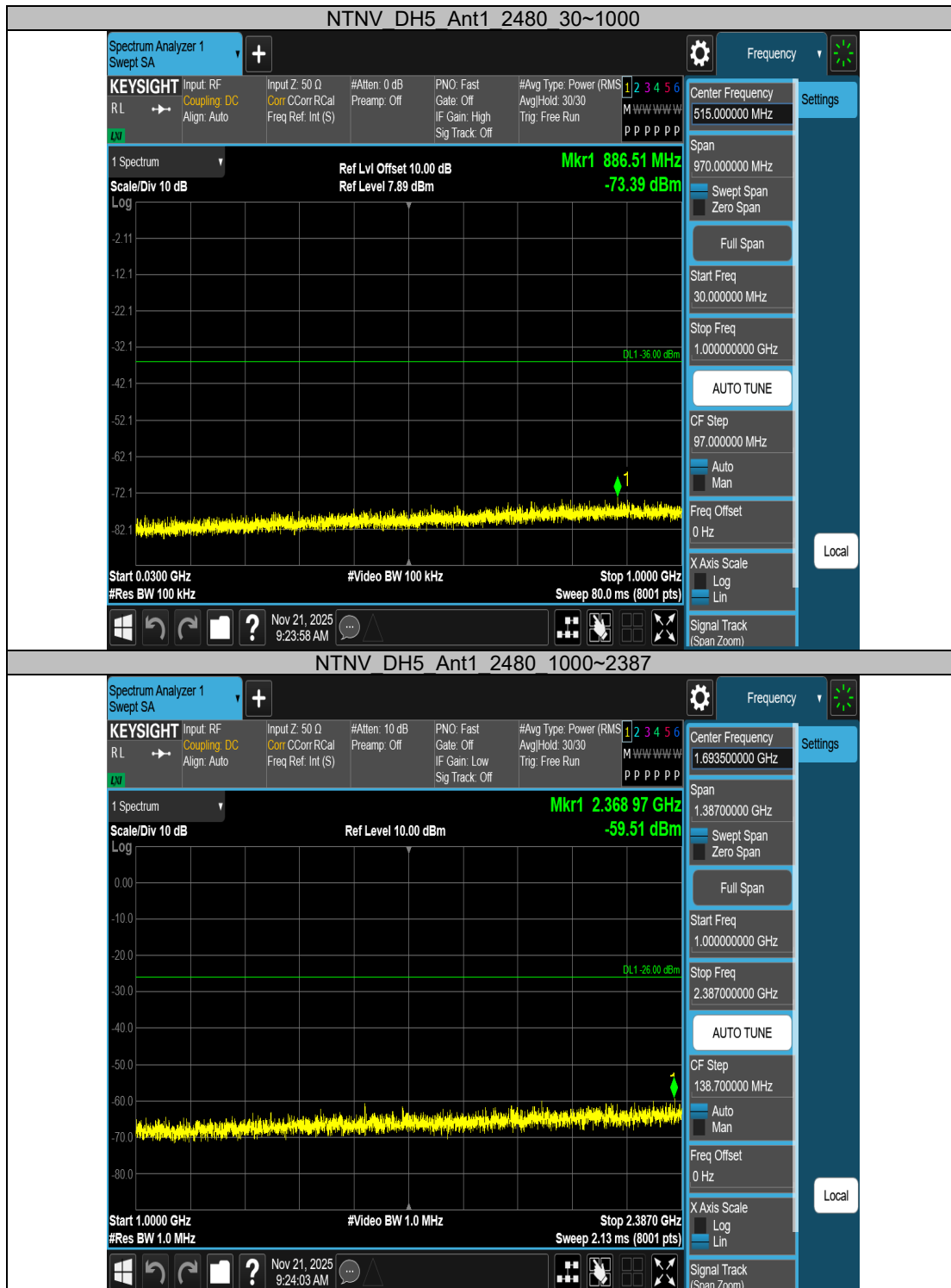


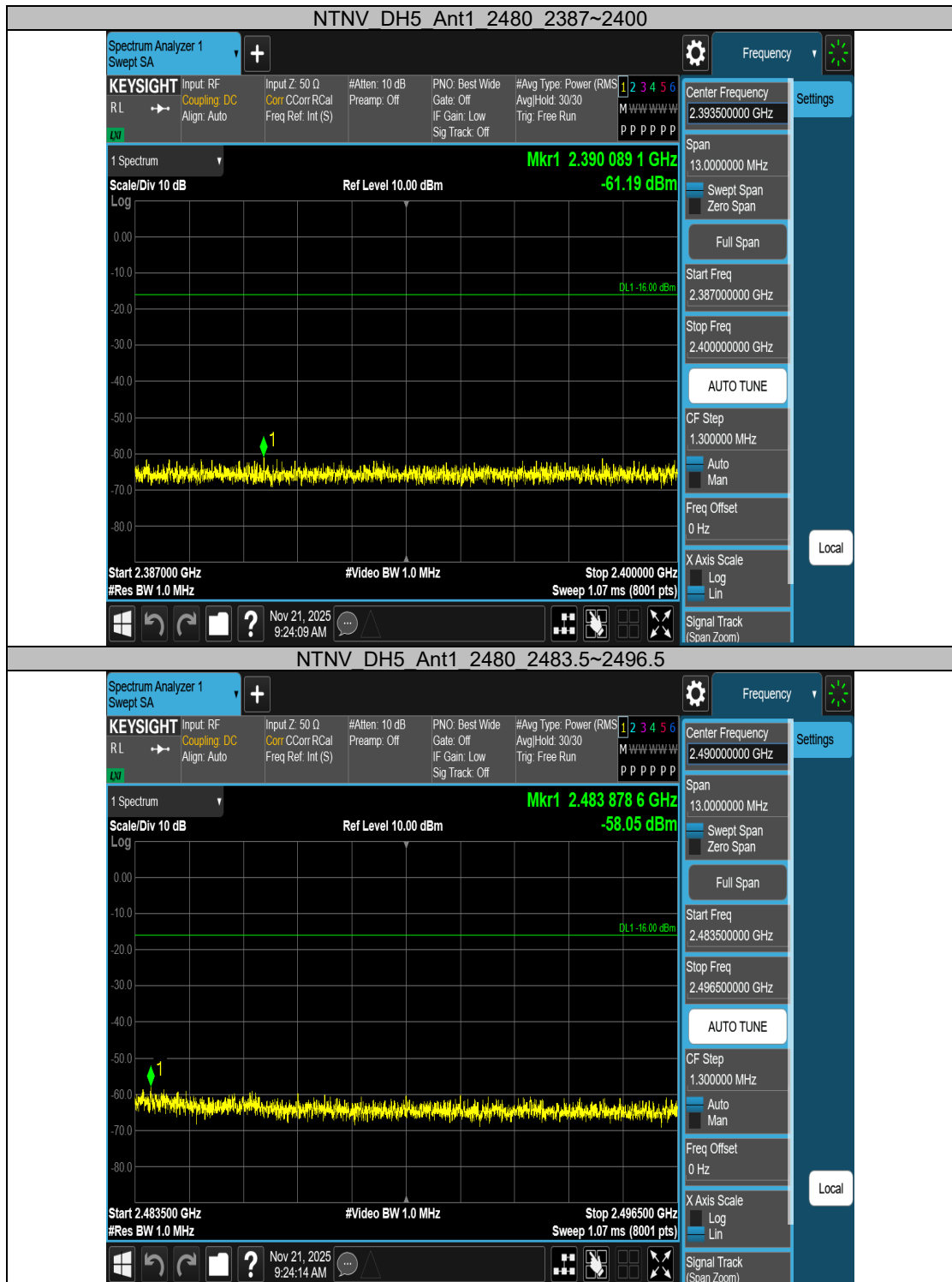


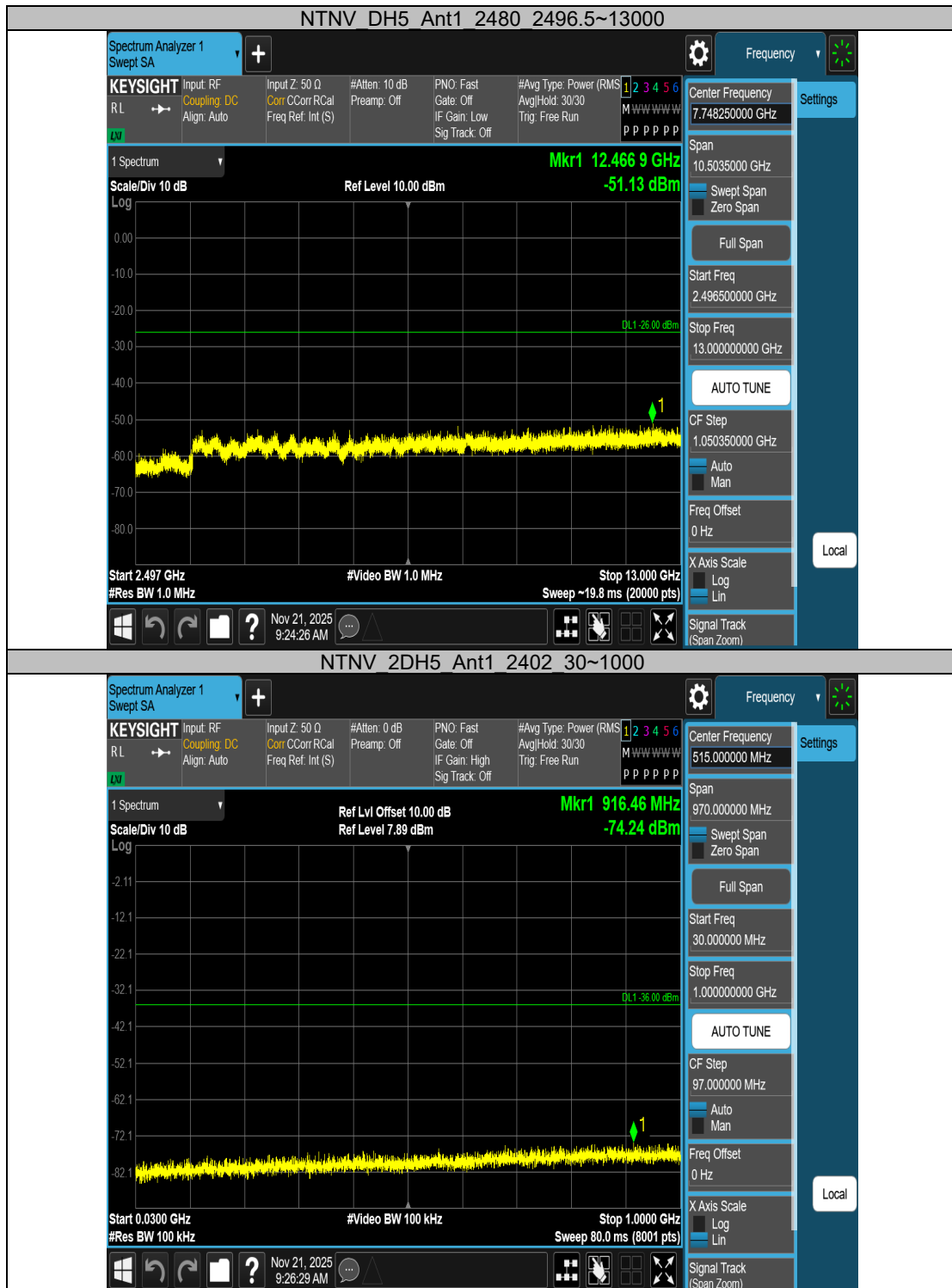


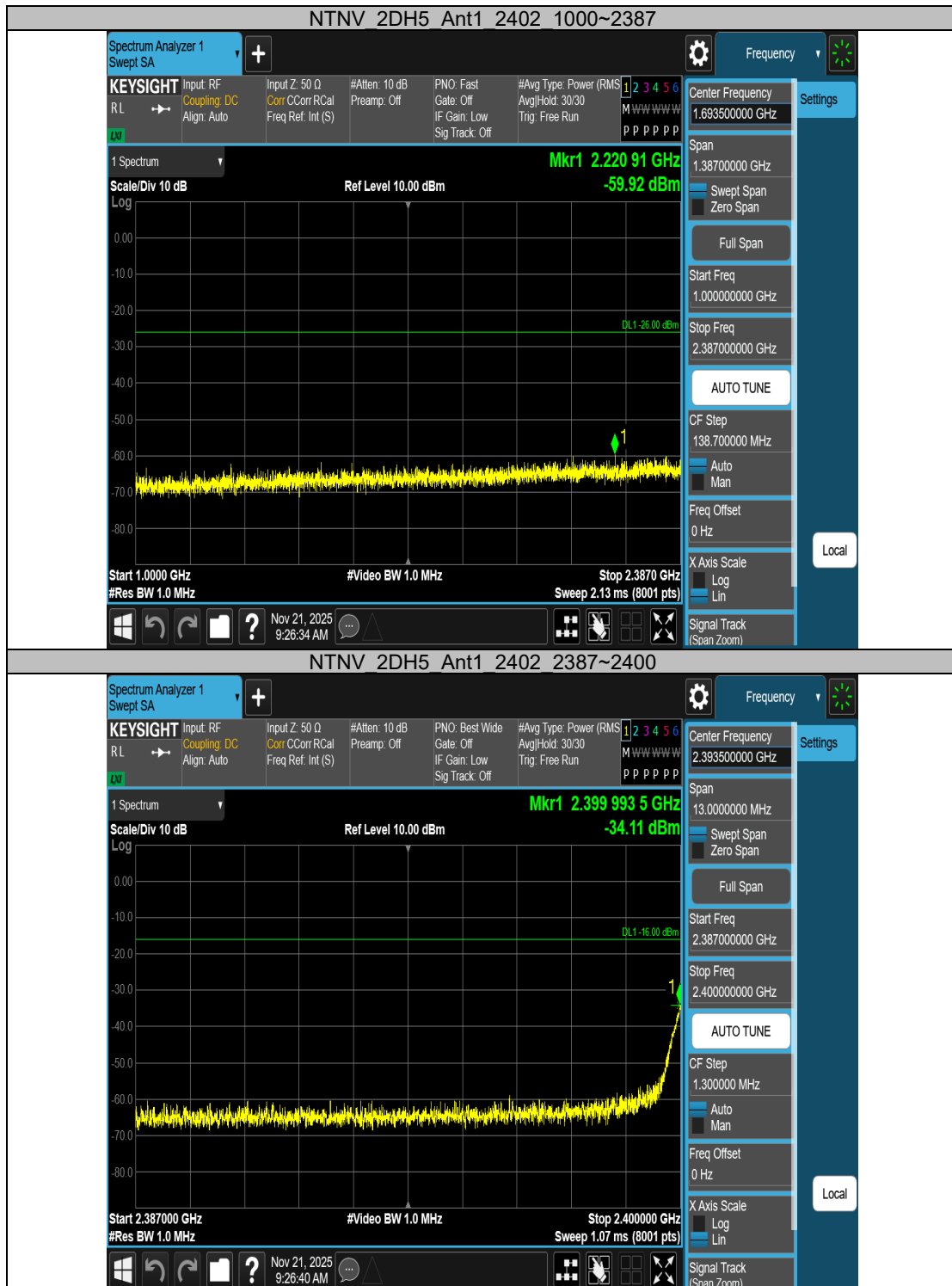


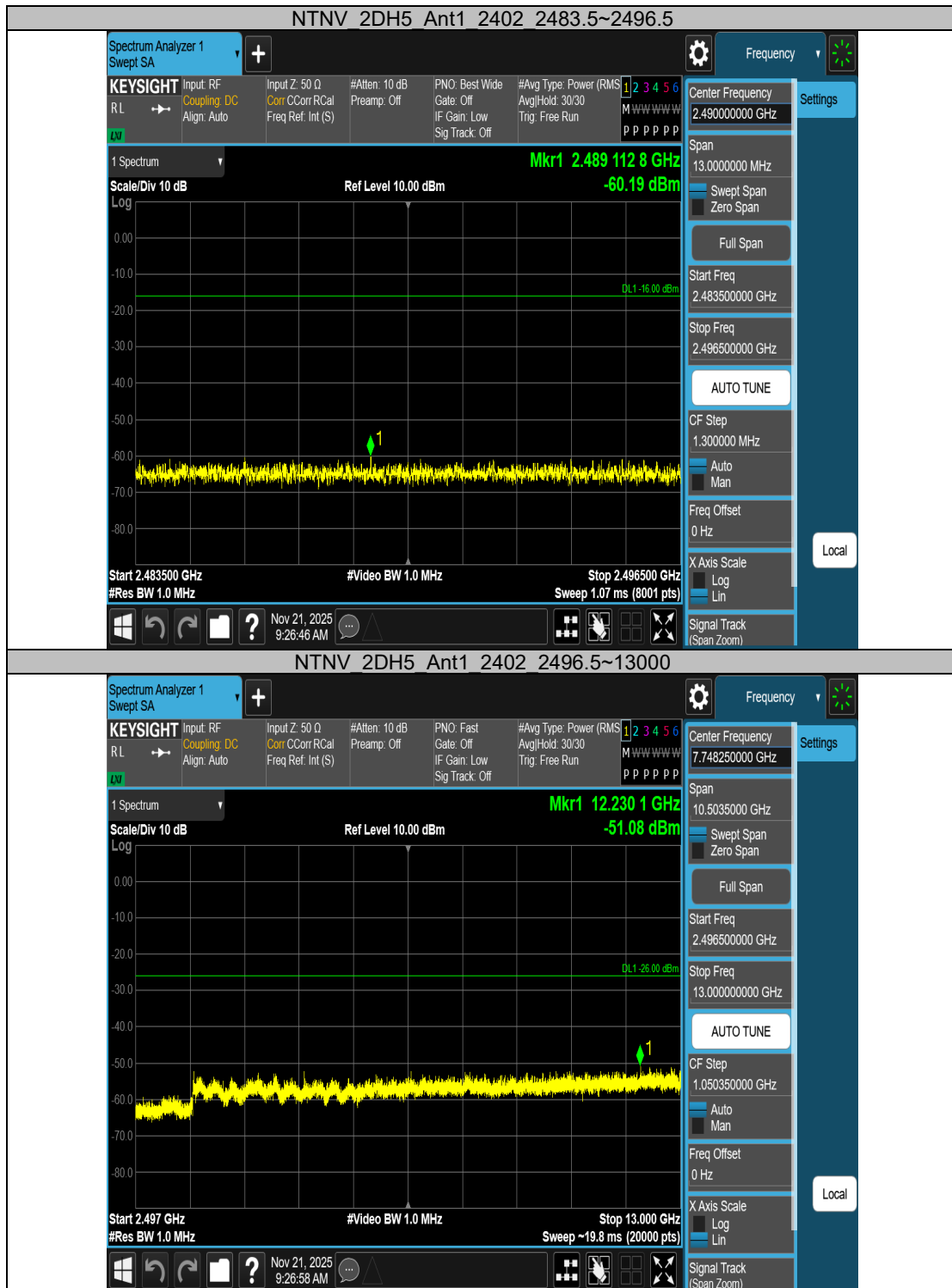


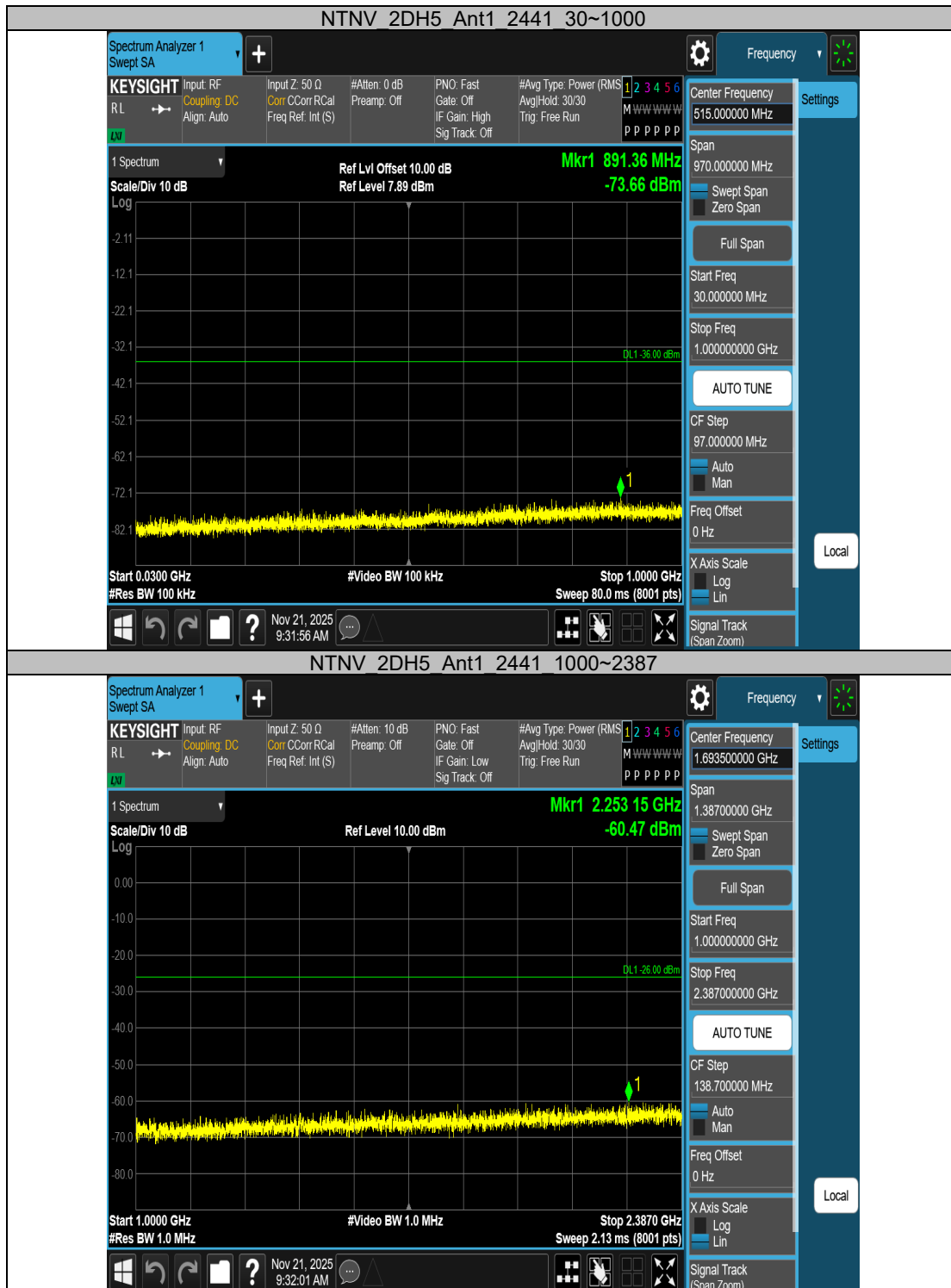


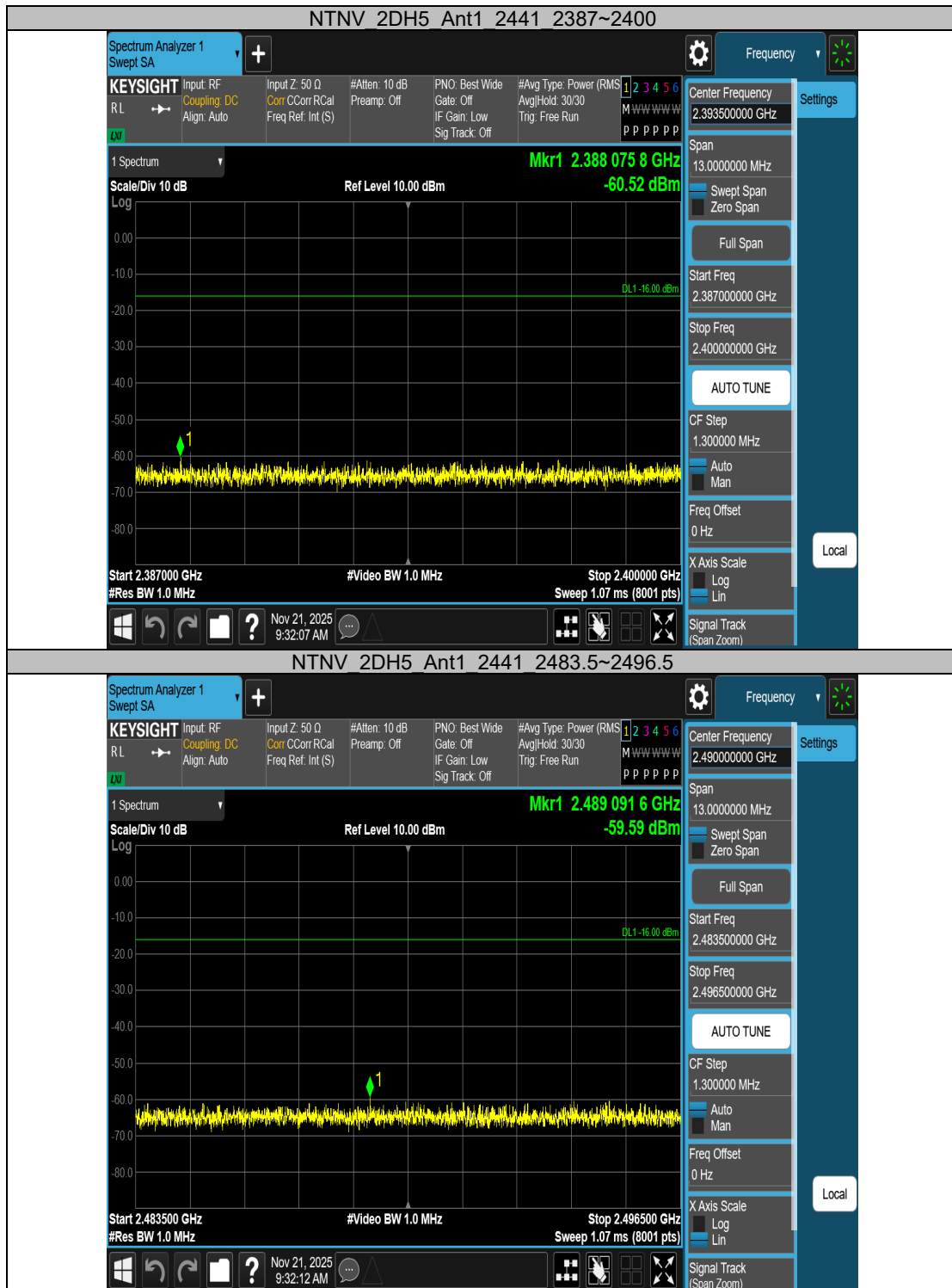


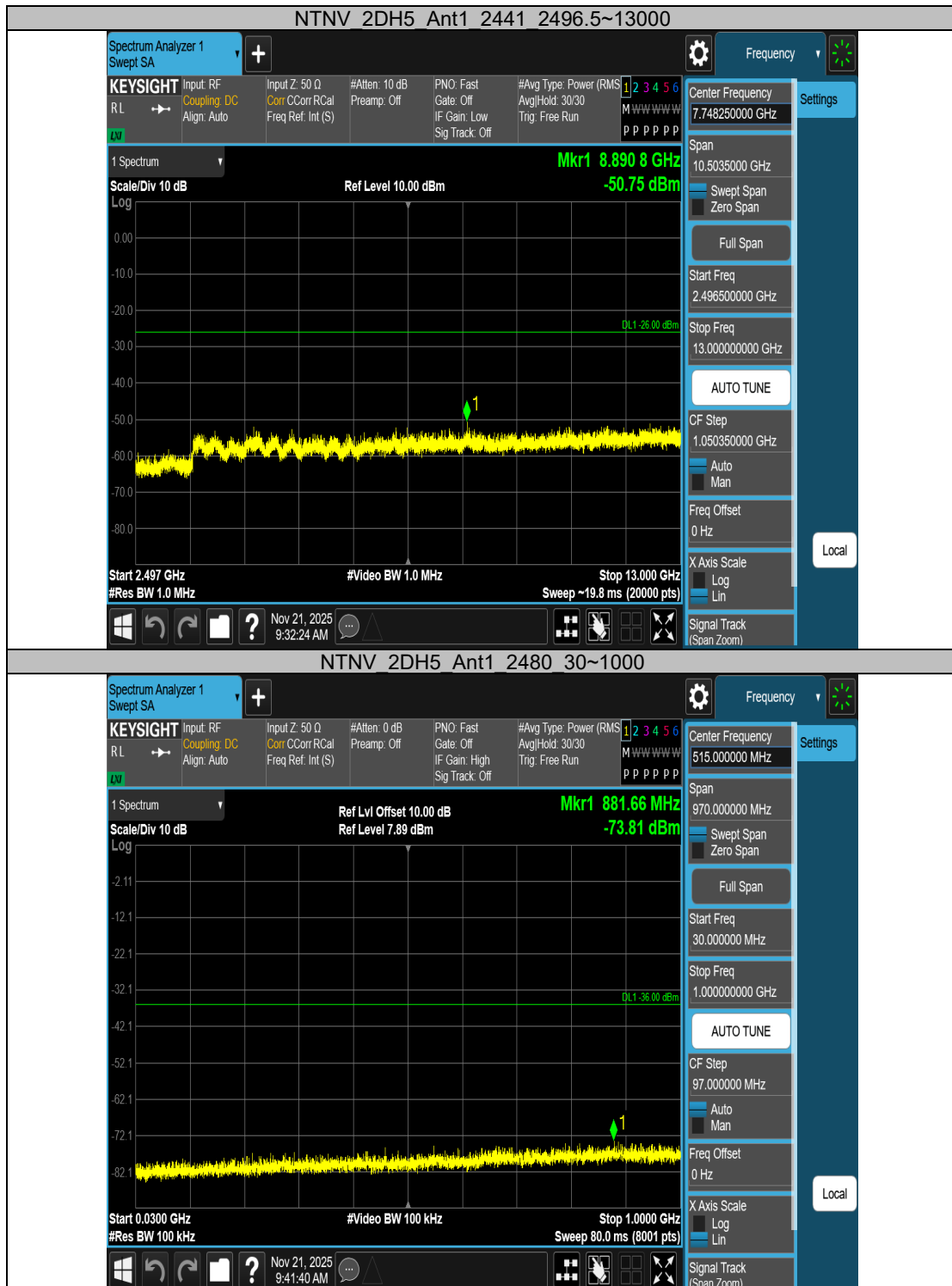


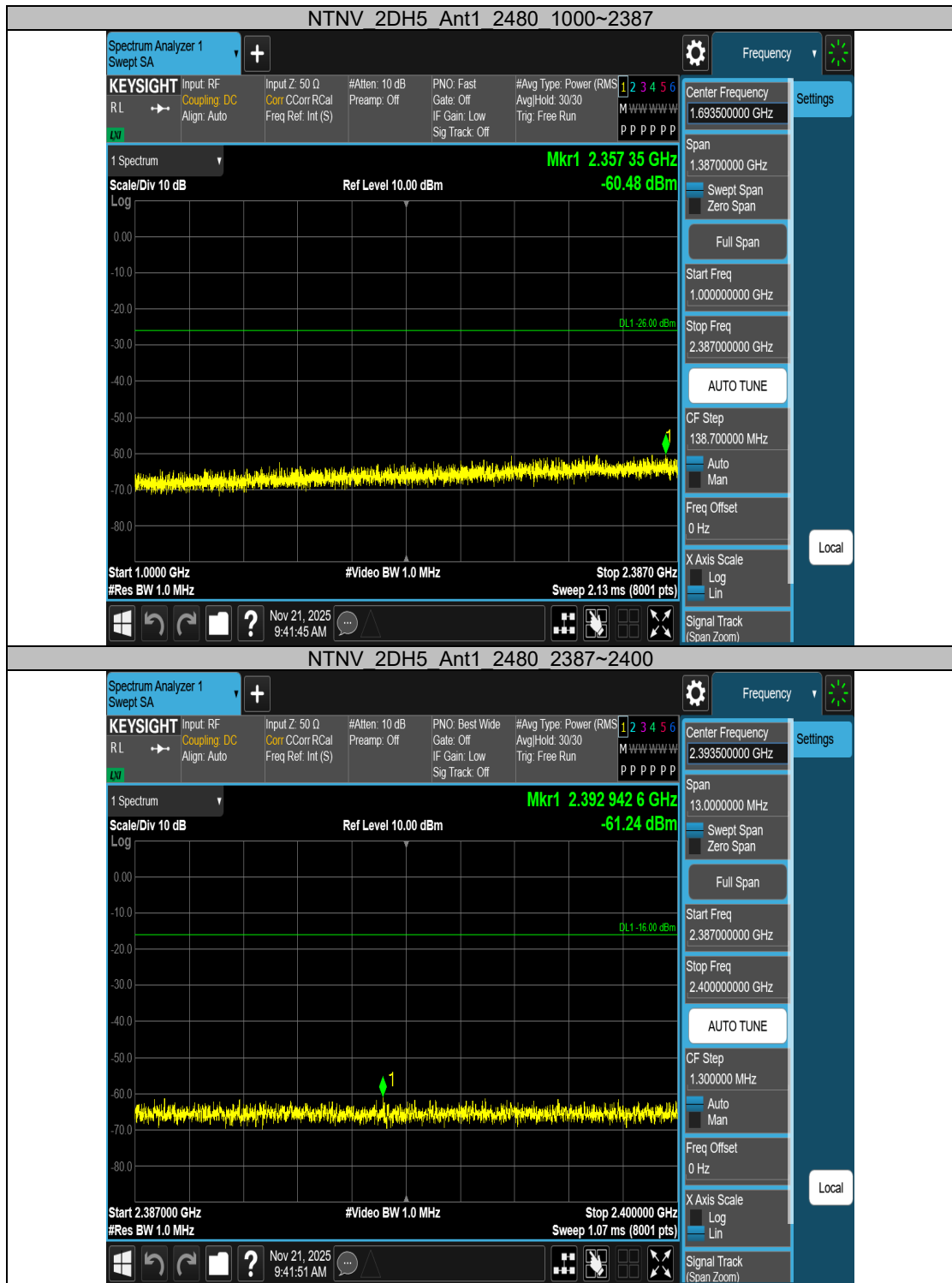


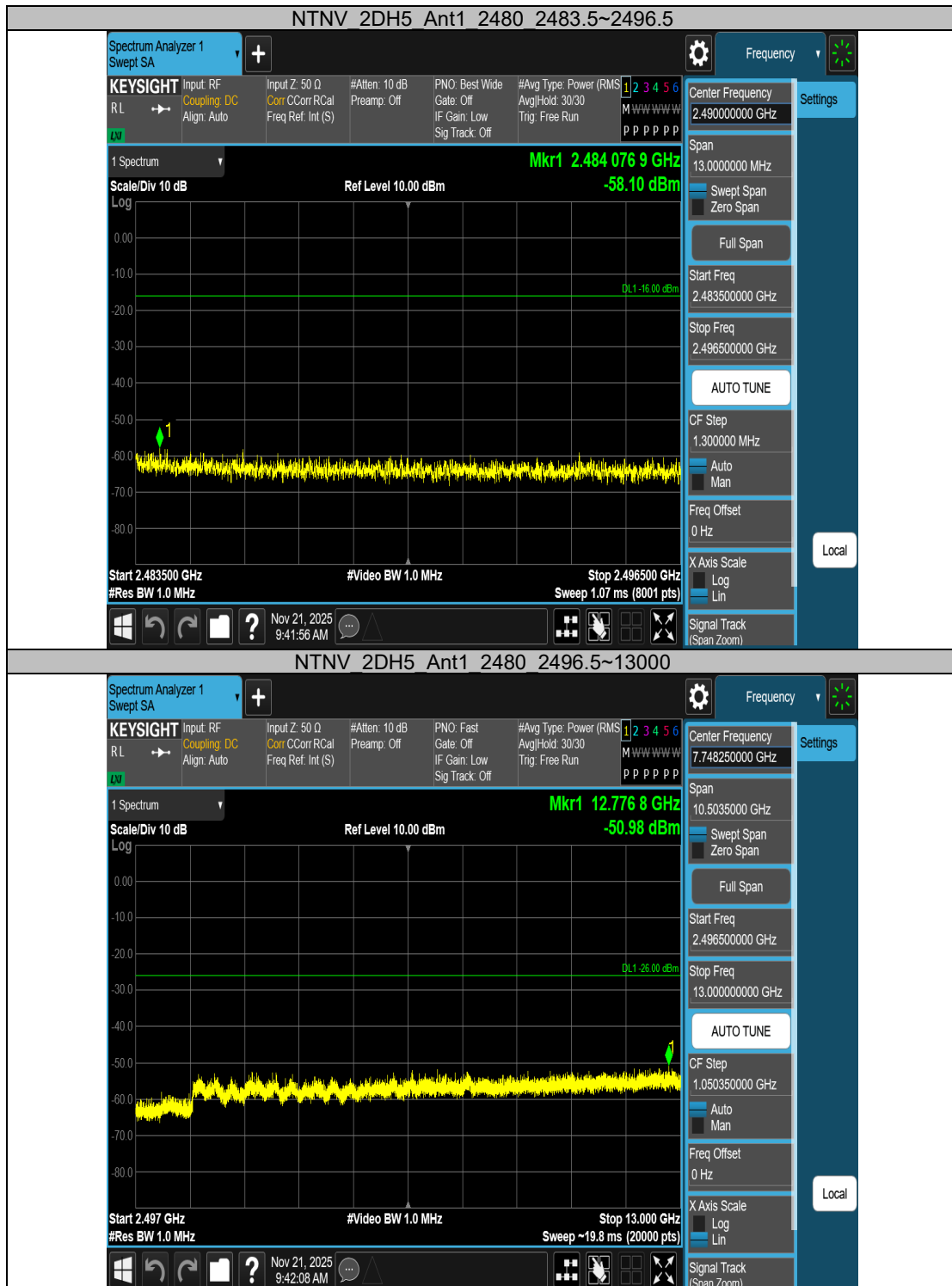


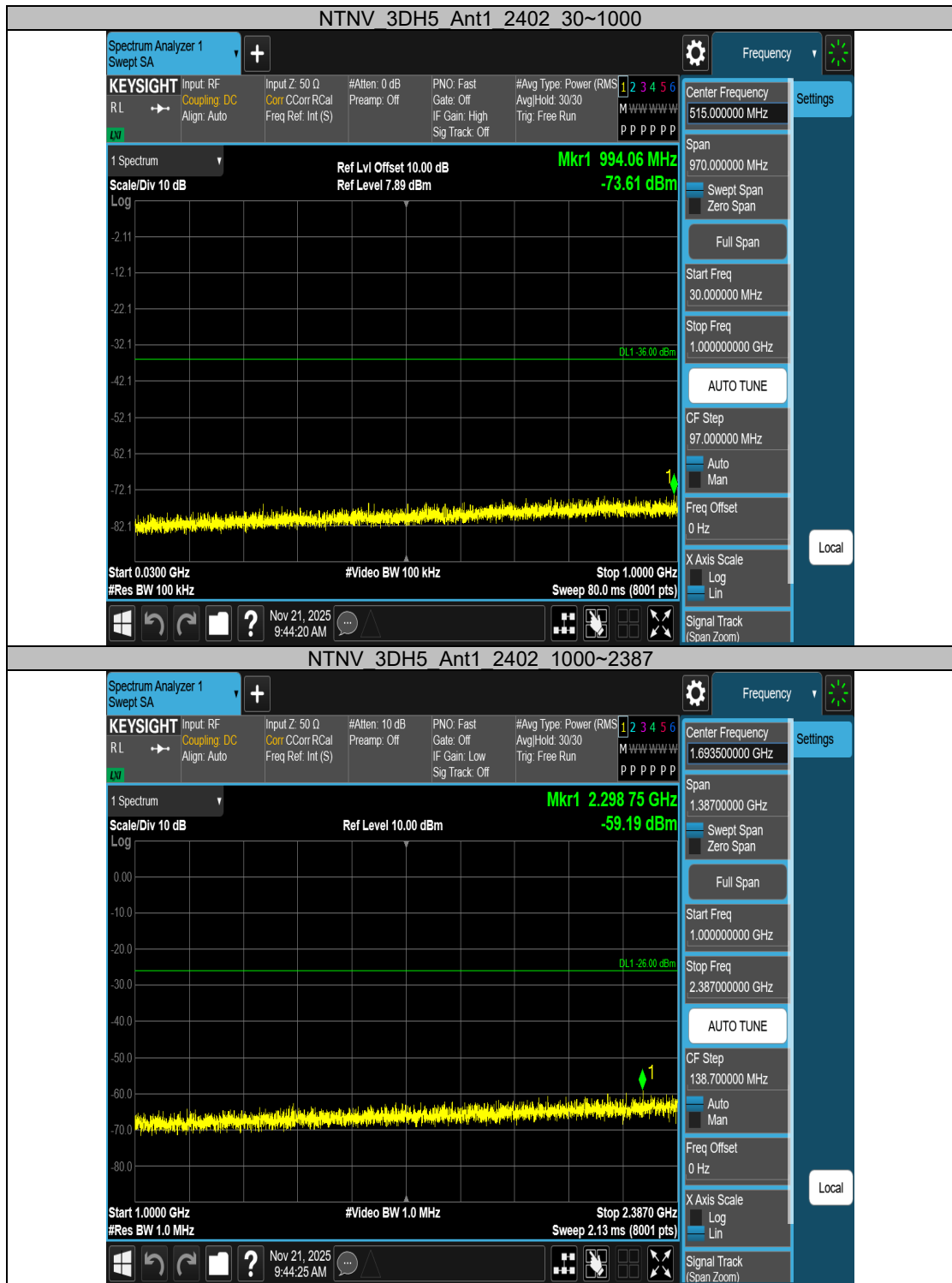


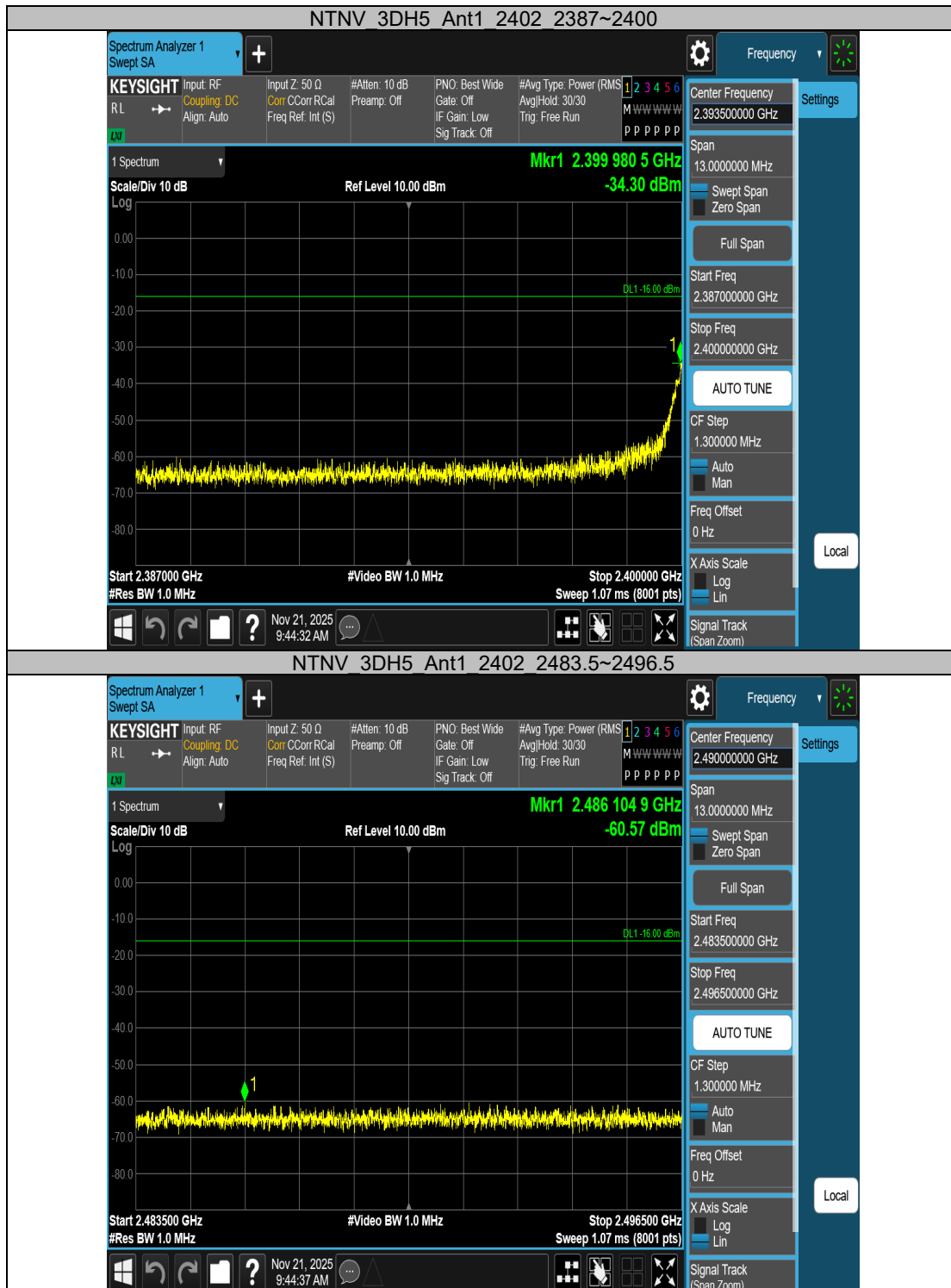


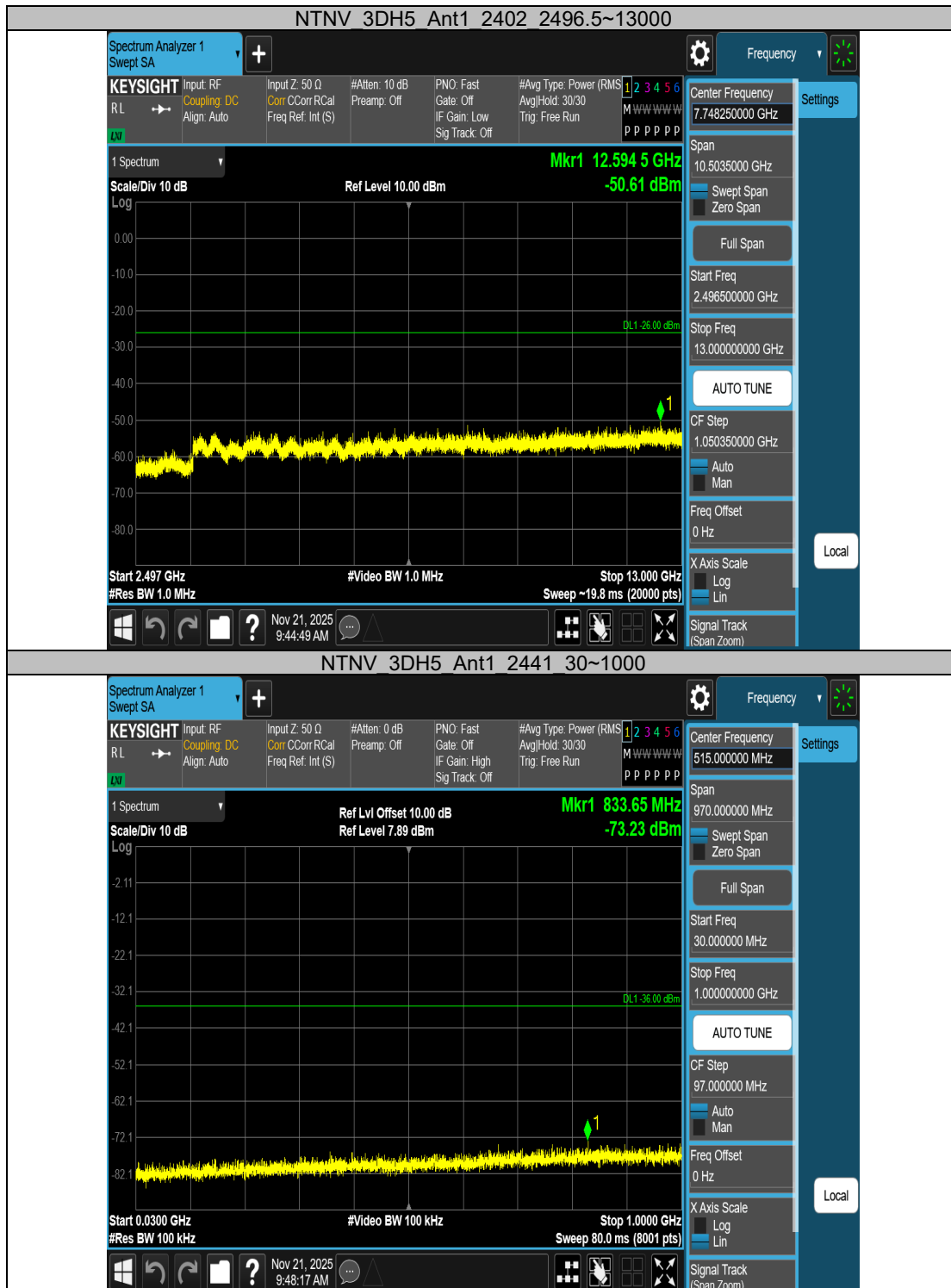


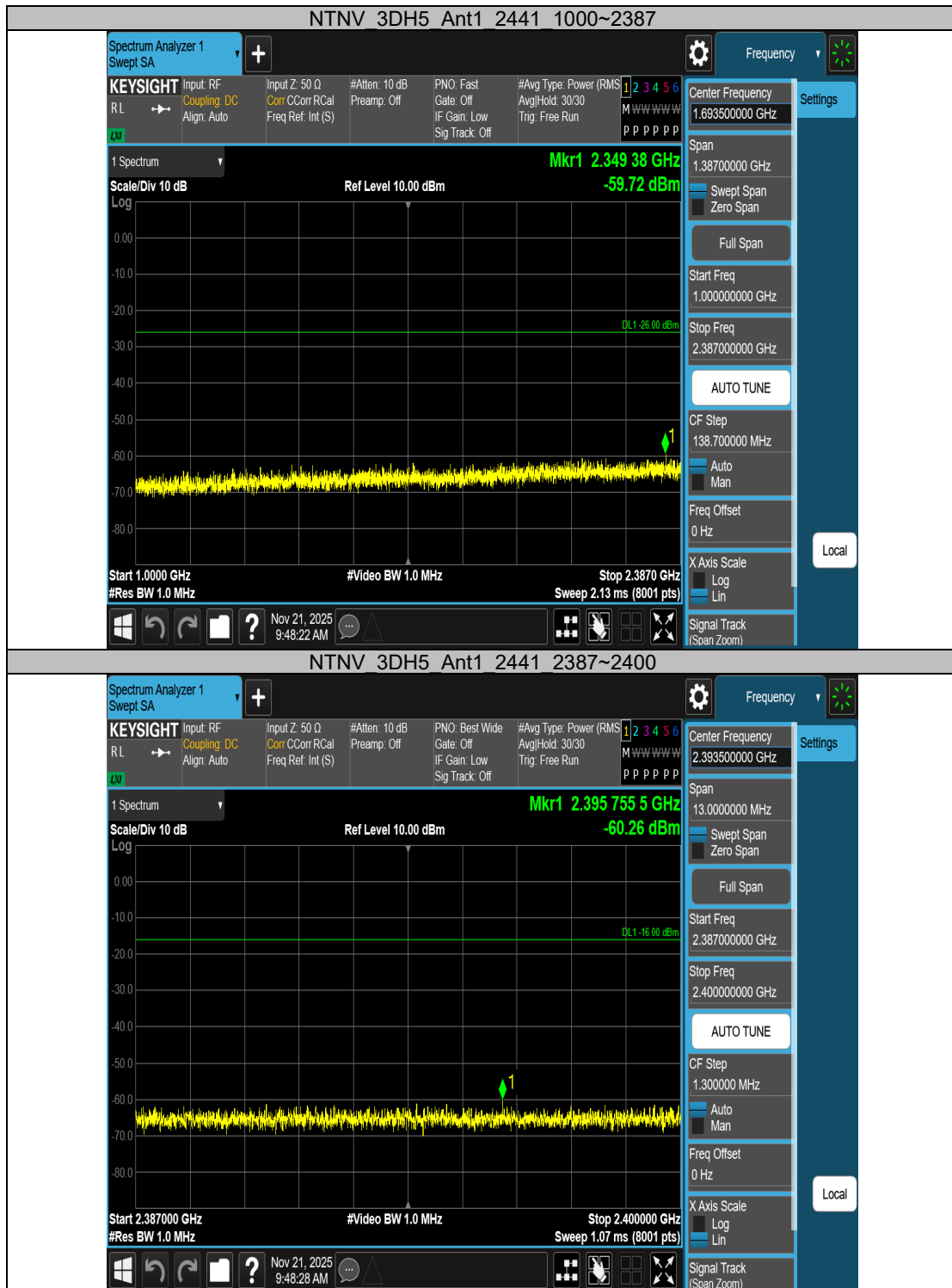


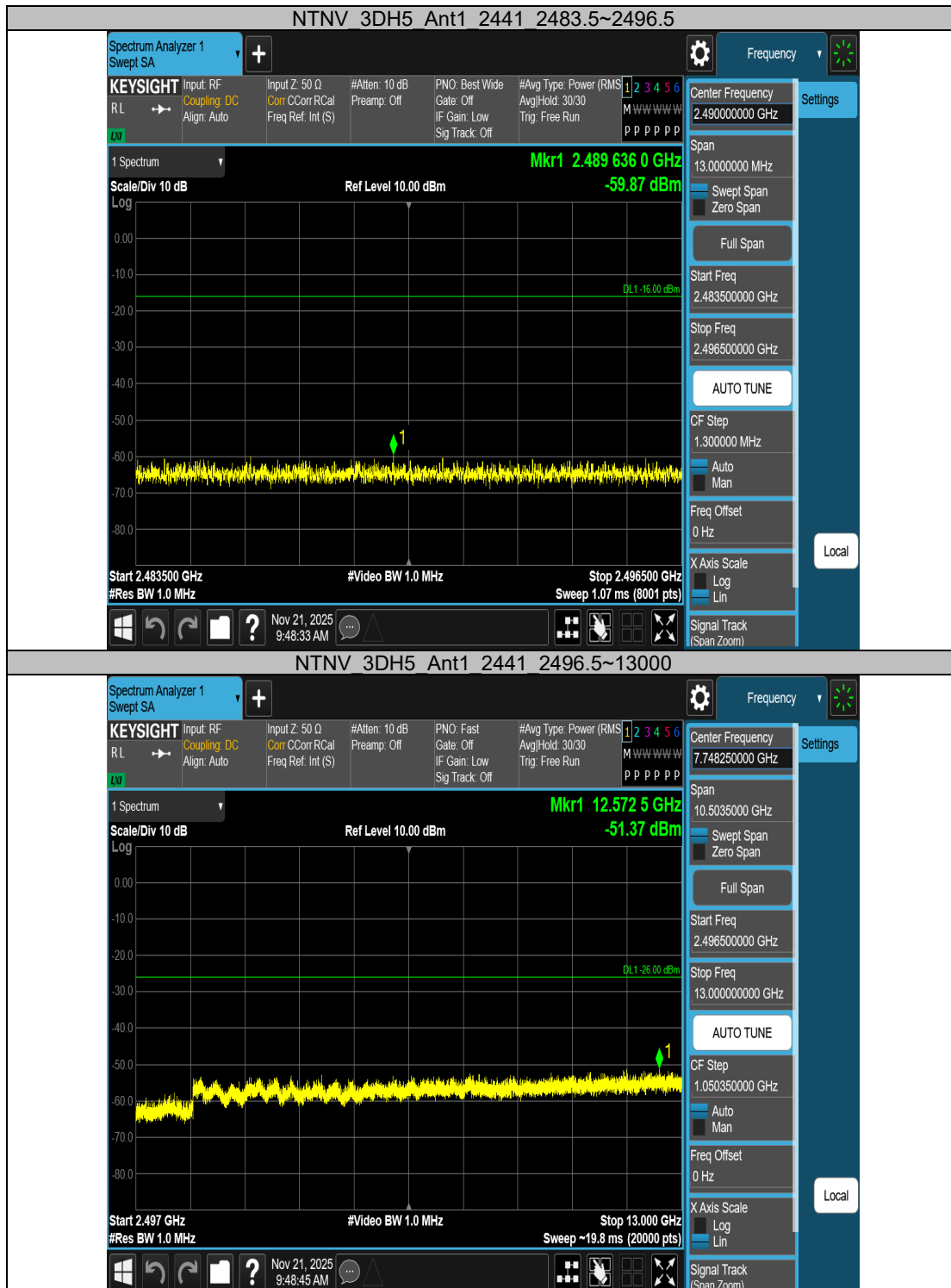


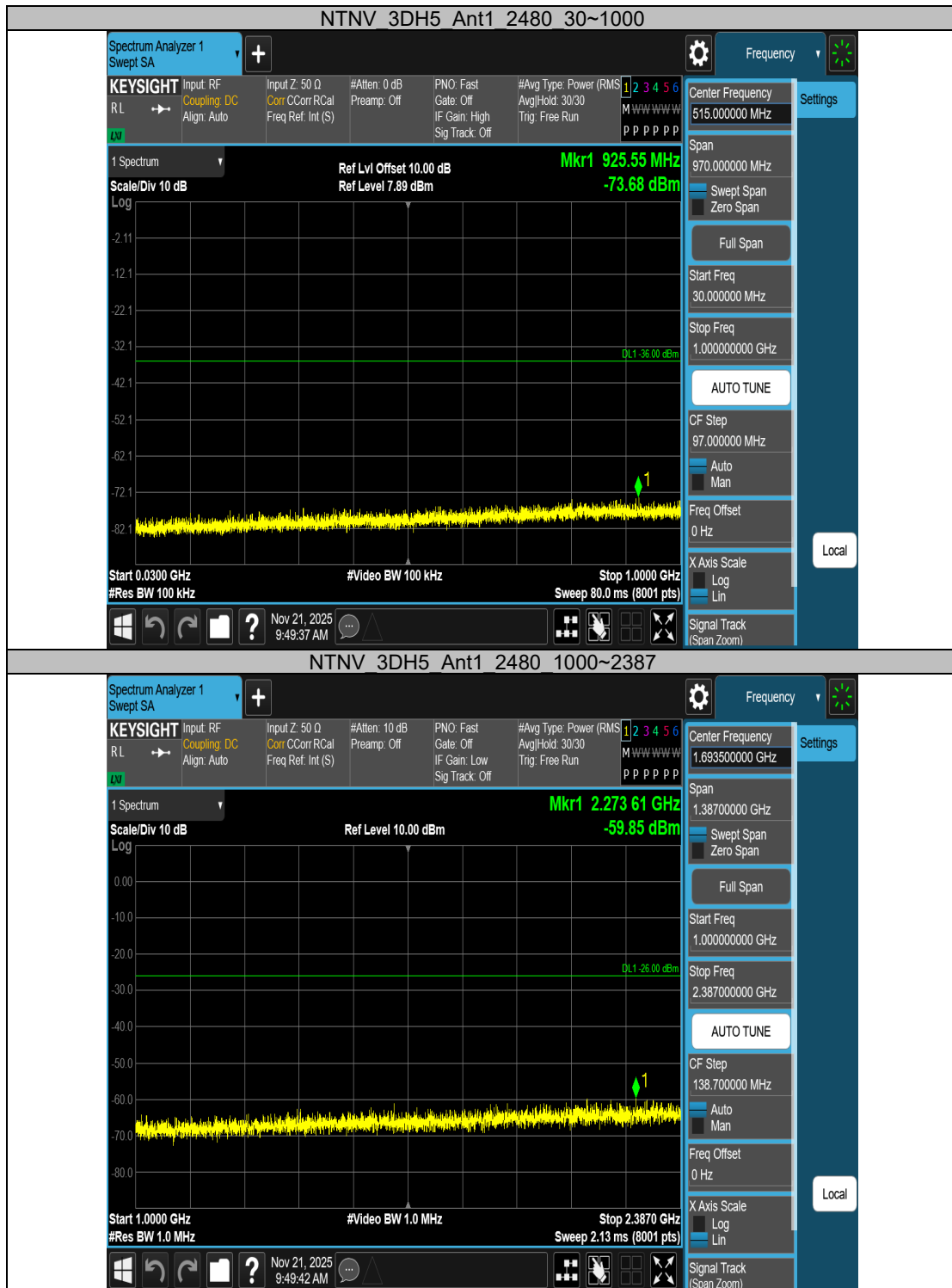


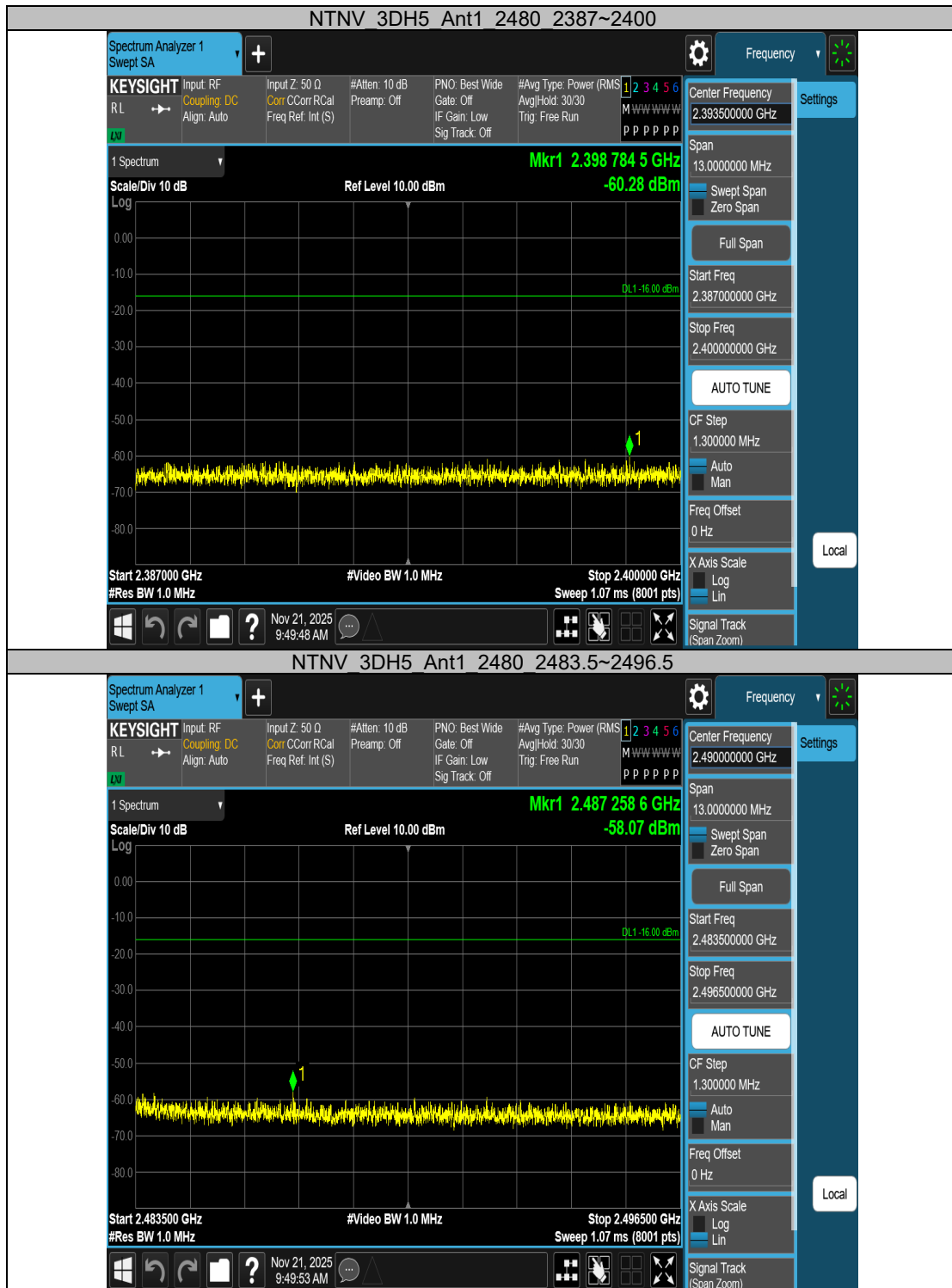


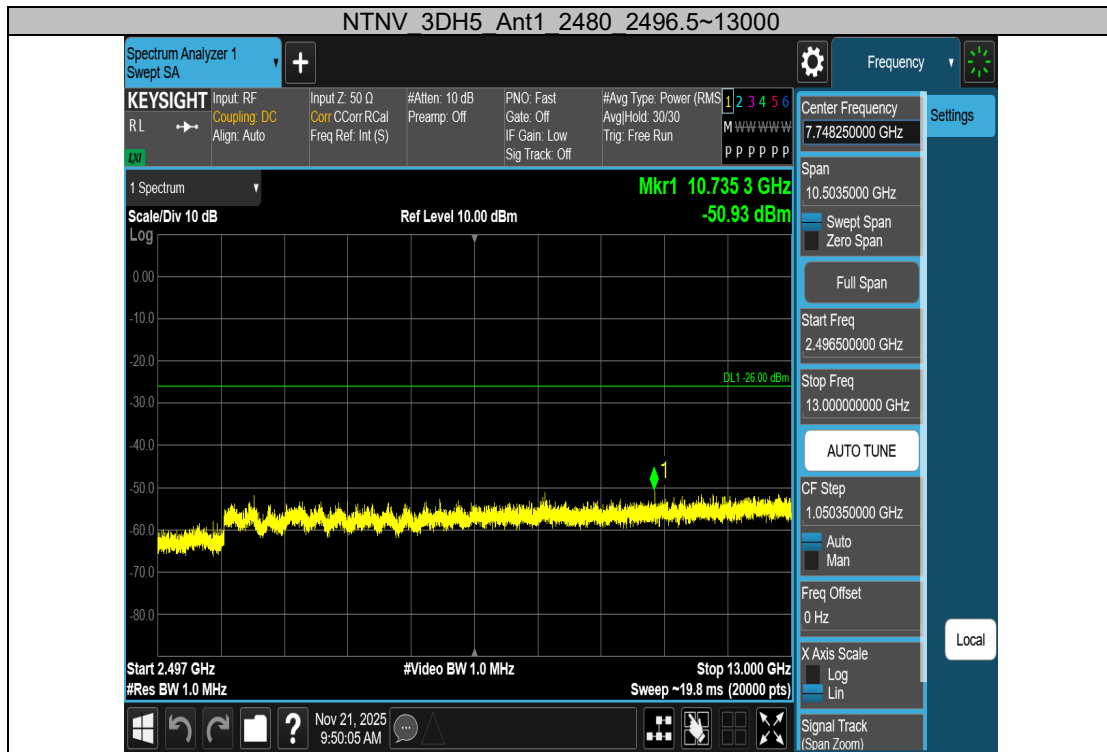












## 6. Limit of Secondary Spurious Emissions

### 6.1 Limit

| Standard            | Item              | Frequency  | Limit            |
|---------------------|-------------------|------------|------------------|
| Article 2-1 Item 19 | Spurious Emission | Below 1GHz | 4nW/MHz /-54dBm  |
|                     |                   | Above 1GHz | 20nW/MHz /-47dBm |

### 6.2 Measurement Procedure

- Connect EUT antenna terminal to the Spectrum Analyzer.
- Set Spectrum Analyzer as below:

Frequency : Below 1GHz(30MHz-1GHz)  
               Above 1GHz(1-13GHz)  
 RBW : 100kHz for Below 1GHz  
        1MHz for Above 1GHz  
 VBW : 100kHz for Below 1GHz  
        1MHz for Above 1GHz  
 Sweep Time : Auto  
 Detector Mode : Peak  
 Display Mode : Max Hold

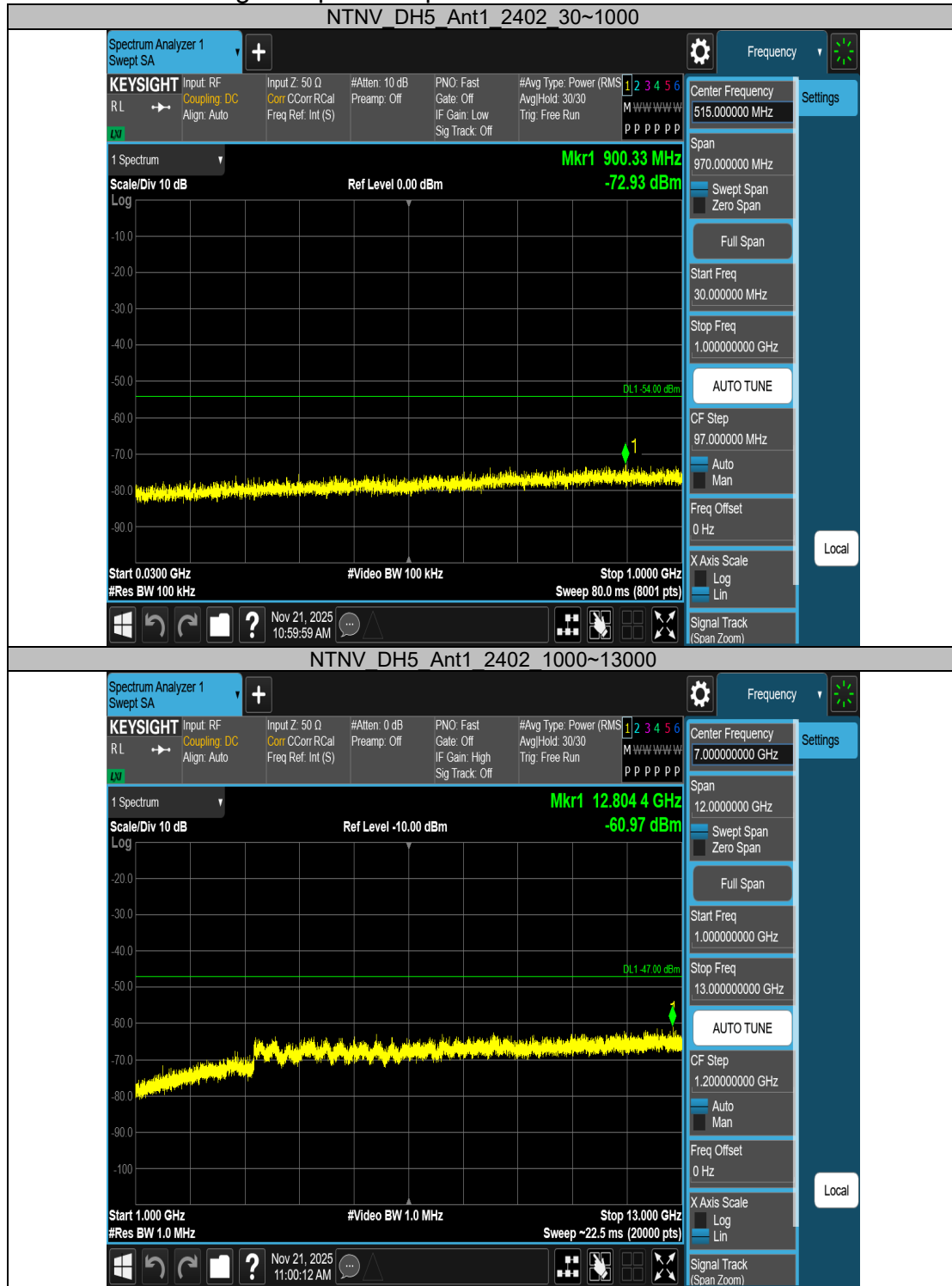
### 6.3 Test Data

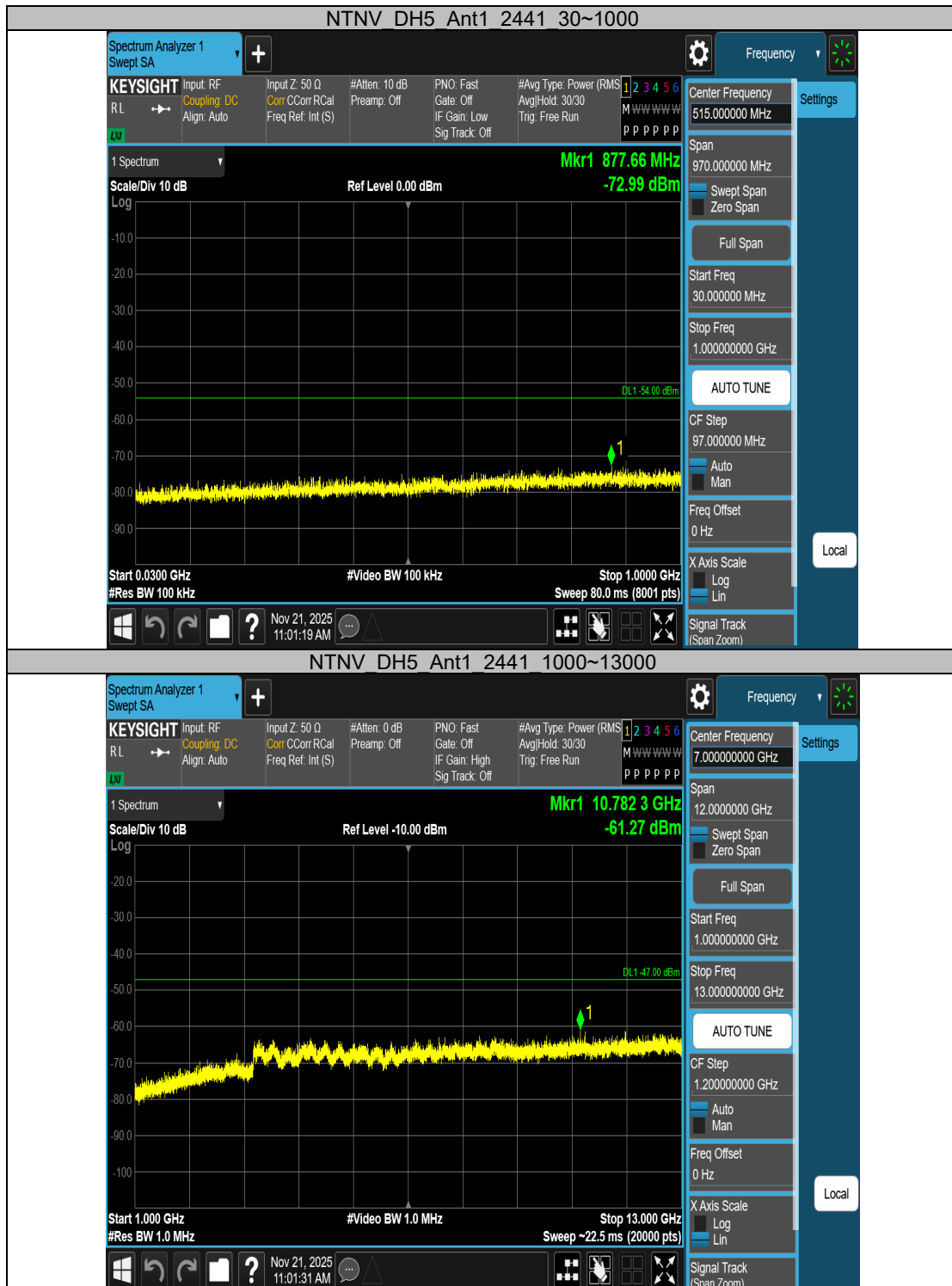
|              |              |             |            |
|--------------|--------------|-------------|------------|
| Temperature  | 23.5℃        | Humidity    | 51%        |
| ATM Pressure | 101.4kPa     | Time        | 2025.11.21 |
| Test by      | Freedom Zhuo | Test result | PASS       |

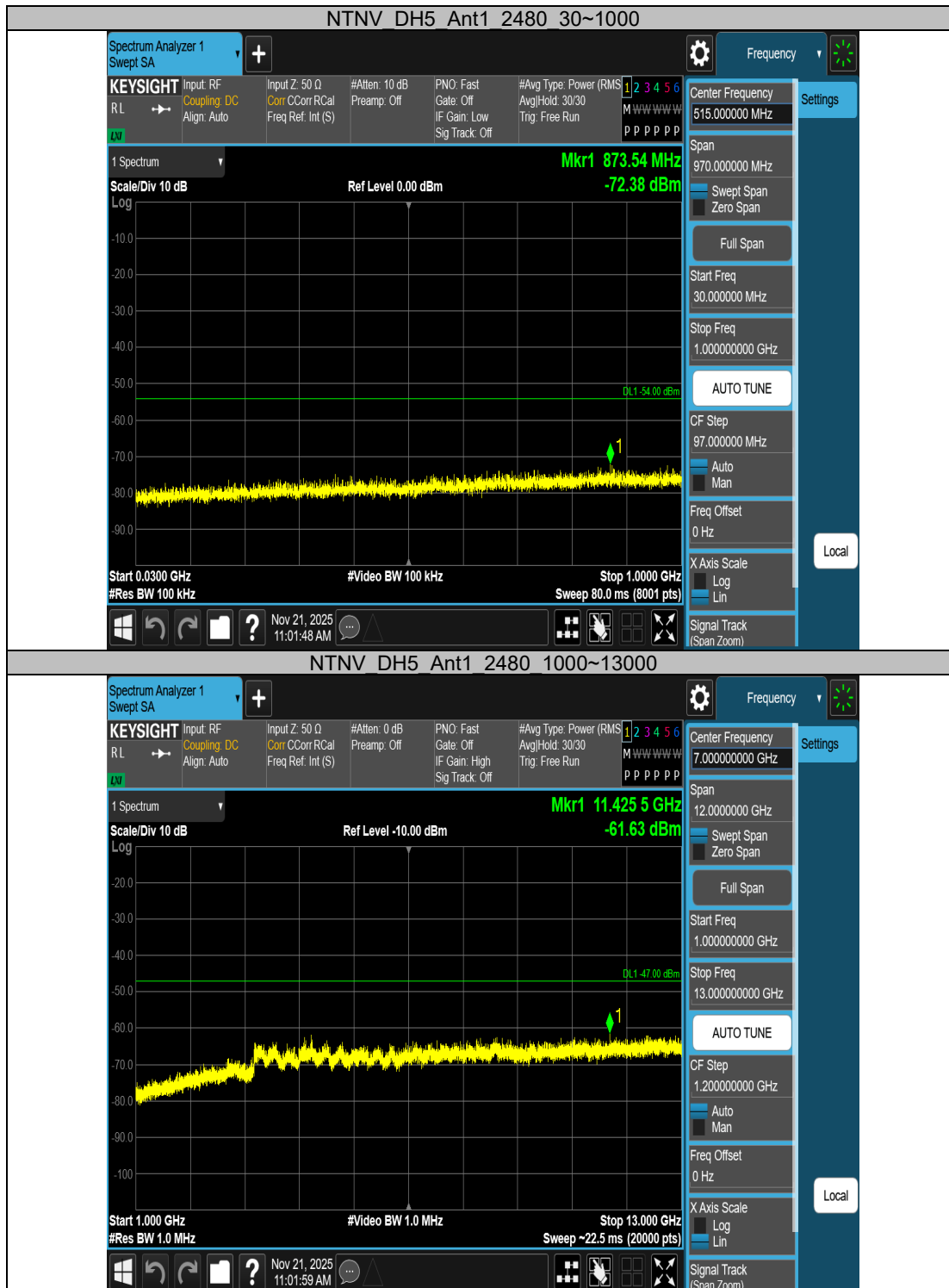
Please refer to following table and plots.

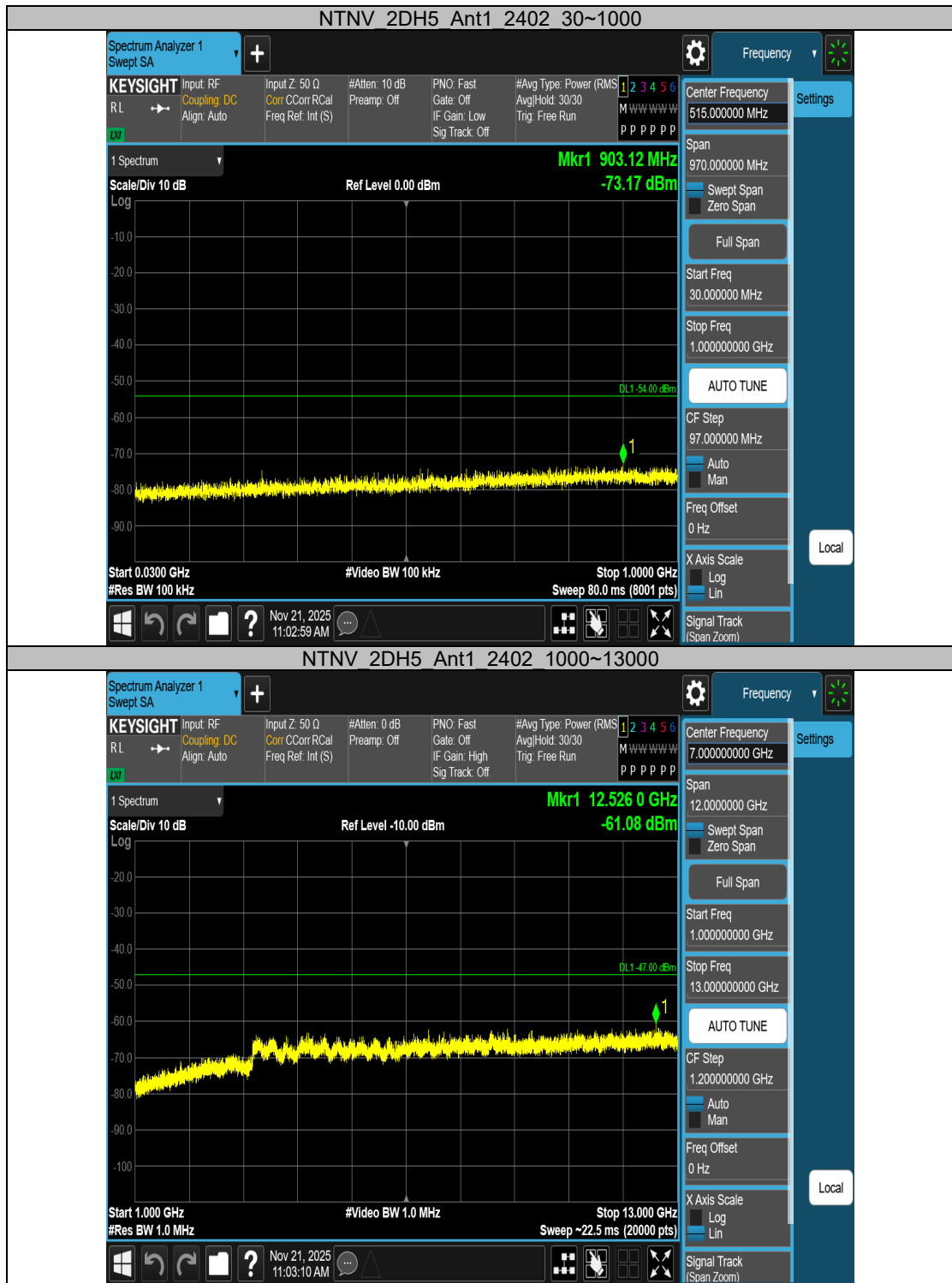
| Test Condition | Test Mode | Antenna | Freq(MHz) | Freq.Range [MHz] | Result [dBm] | Limit [dBm] | Verdict |
|----------------|-----------|---------|-----------|------------------|--------------|-------------|---------|
| NTNV           | DH5       | Ant1    | 2402      | 30~1000          | -72.93       | ≤-54        | PASS    |
|                |           |         |           | 1000~13000       | -60.98       | ≤-47        | PASS    |
|                |           |         | 2441      | 30~1000          | -72.99       | ≤-54        | PASS    |
|                |           |         |           | 1000~13000       | -61.27       | ≤-47        | PASS    |
|                |           |         | 2480      | 30~1000          | -72.38       | ≤-54        | PASS    |
|                |           |         |           | 1000~13000       | -61.63       | ≤-47        | PASS    |
|                | 2DH5      | Ant1    | 2402      | 30~1000          | -73.17       | ≤-54        | PASS    |
|                |           |         |           | 1000~13000       | -61.08       | ≤-47        | PASS    |
|                |           |         | 2441      | 30~1000          | -72.82       | ≤-54        | PASS    |
|                |           |         |           | 1000~13000       | -61.45       | ≤-47        | PASS    |
|                |           |         | 2480      | 30~1000          | -72.66       | ≤-54        | PASS    |
|                |           |         |           | 1000~13000       | -61.66       | ≤-47        | PASS    |
|                | 3DH5      | Ant1    | 2402      | 30~1000          | -72.09       | ≤-54        | PASS    |
|                |           |         |           | 1000~13000       | -61.47       | ≤-47        | PASS    |
|                |           |         | 2441      | 30~1000          | -72.15       | ≤-54        | PASS    |
|                |           |         |           | 1000~13000       | -60.78       | ≤-47        | PASS    |
|                |           |         | 2480      | 30~1000          | -72.77       | ≤-54        | PASS    |
|                |           |         |           | 1000~13000       | -61.17       | ≤-47        | PASS    |

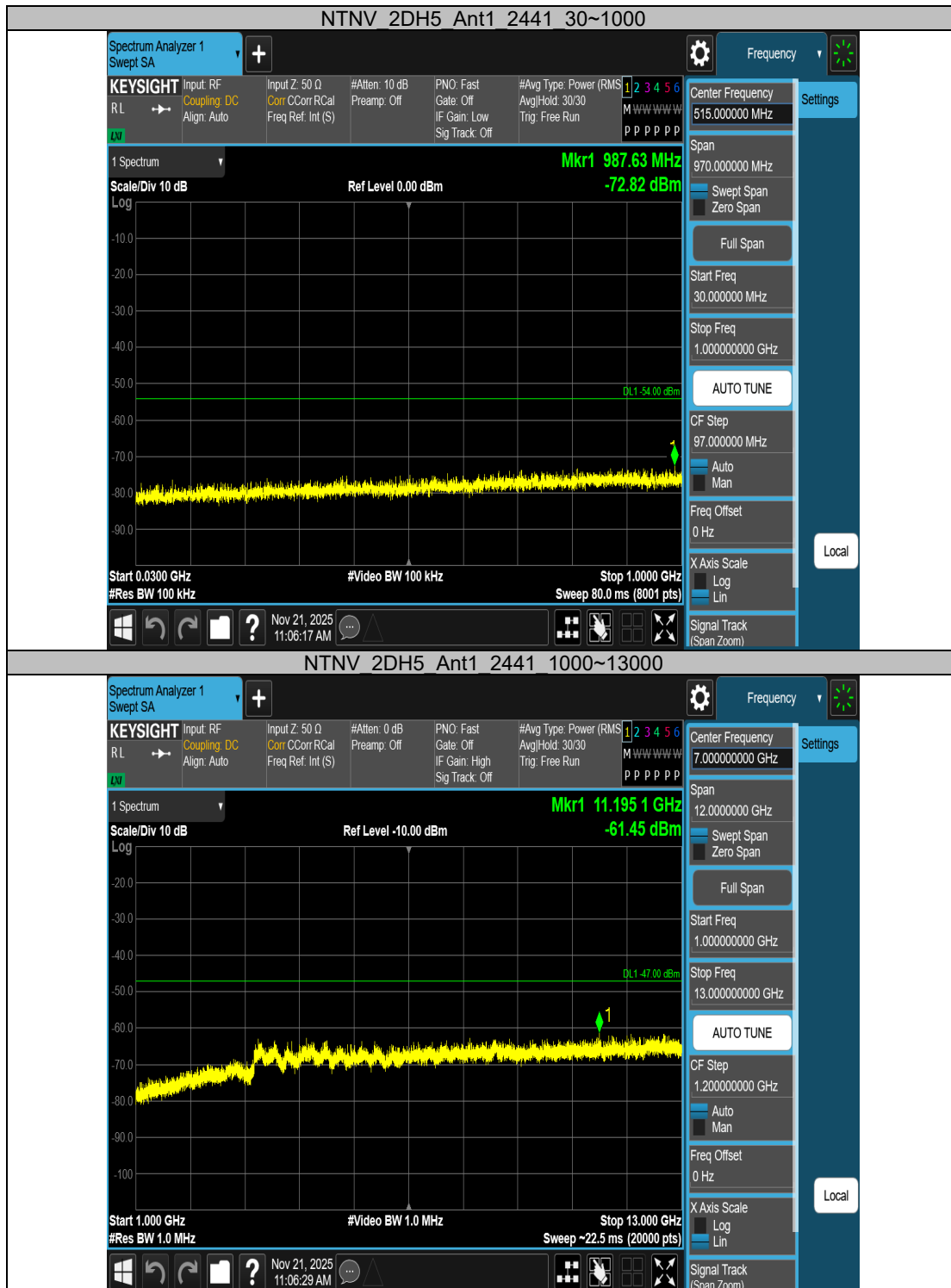
Please refer to recording the spectrum plots in the worst conditions

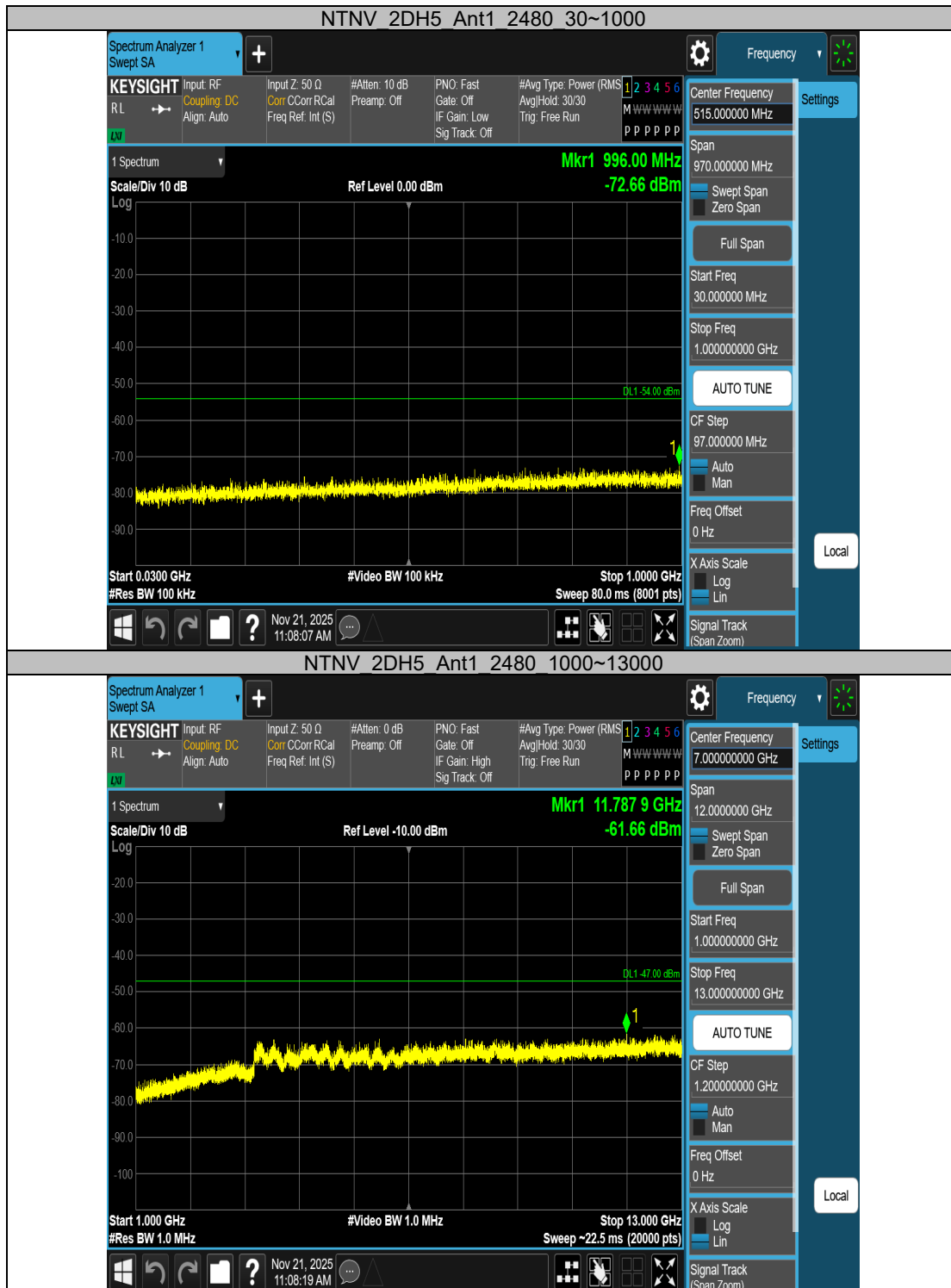


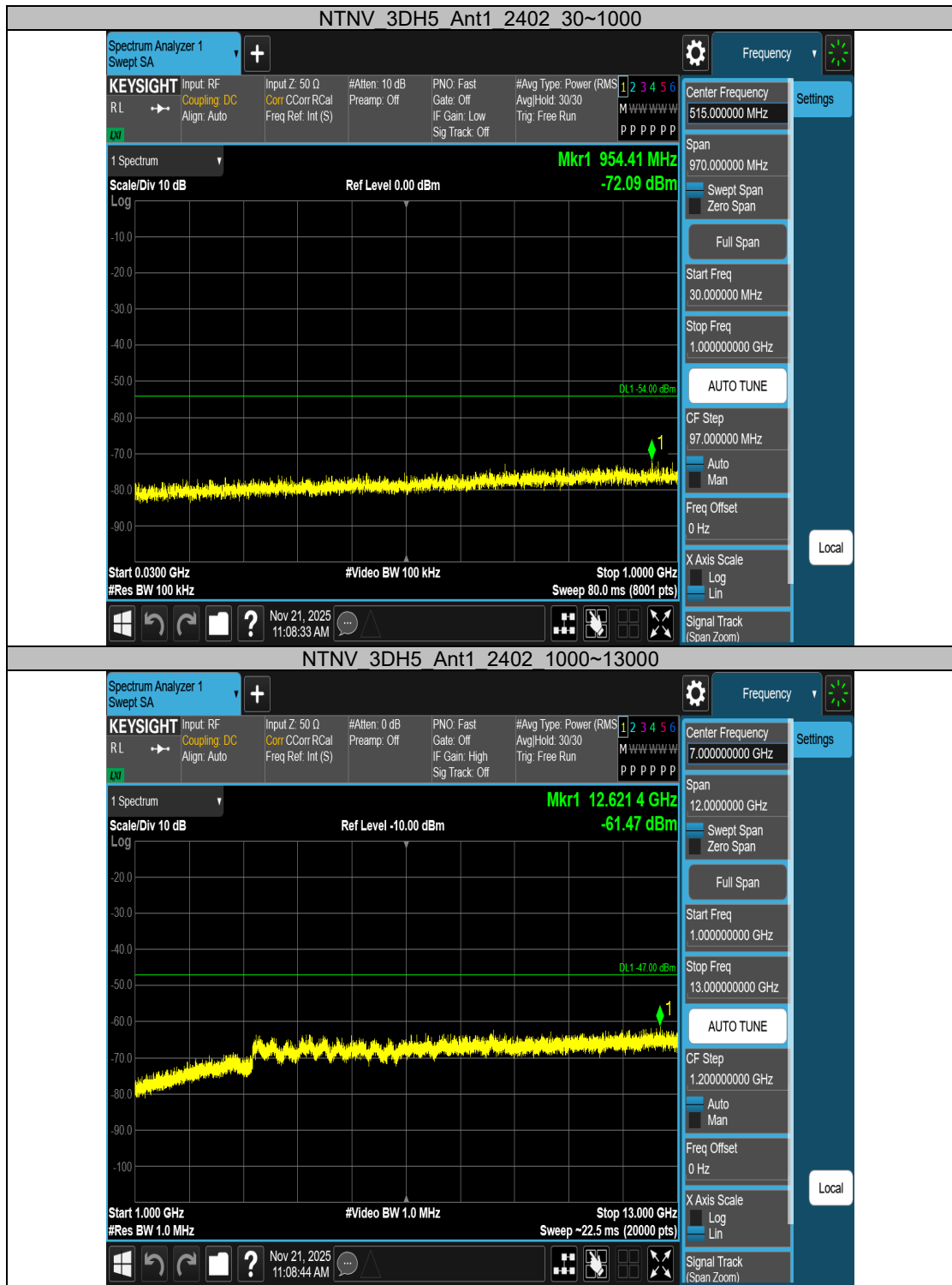


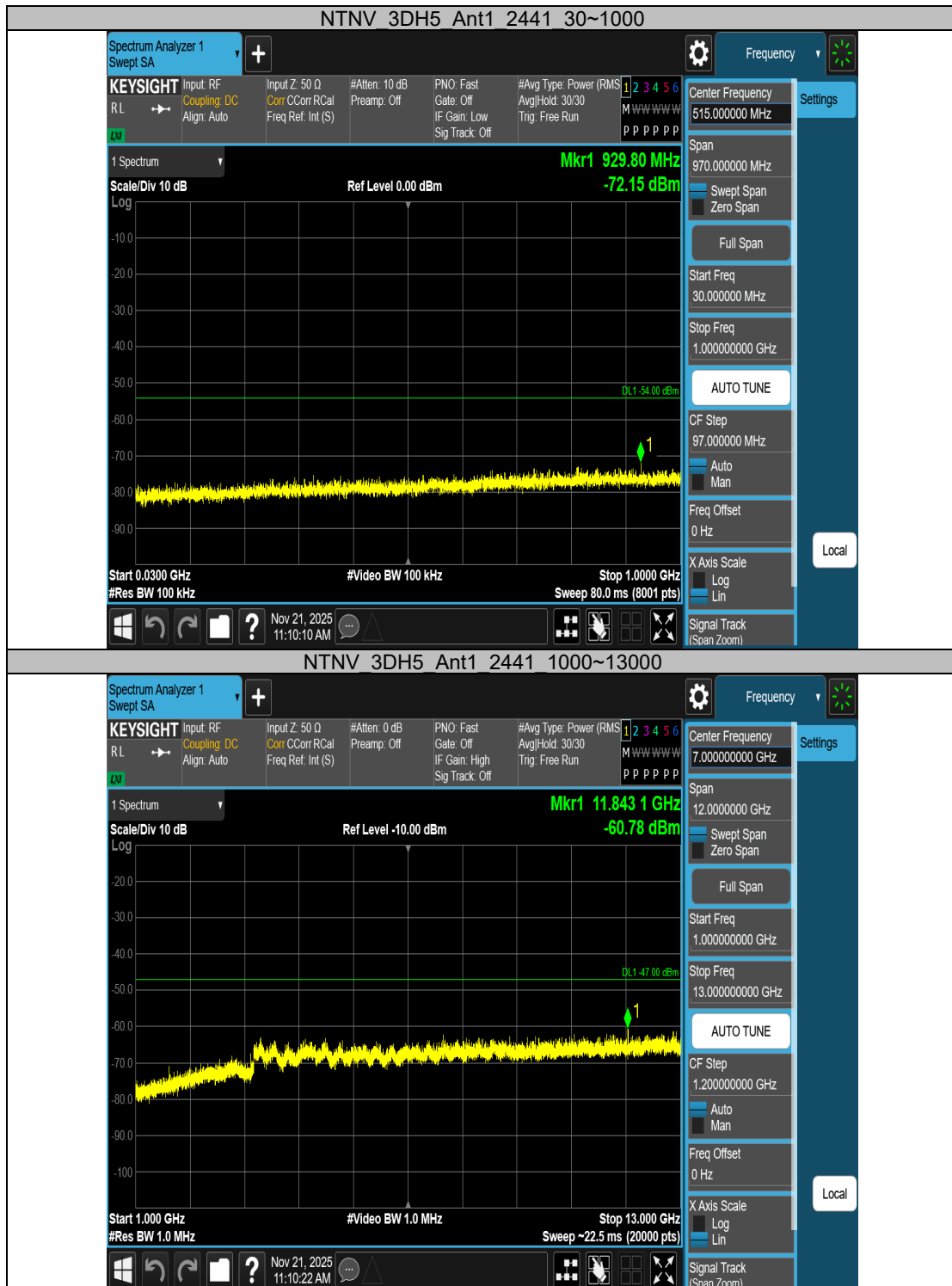


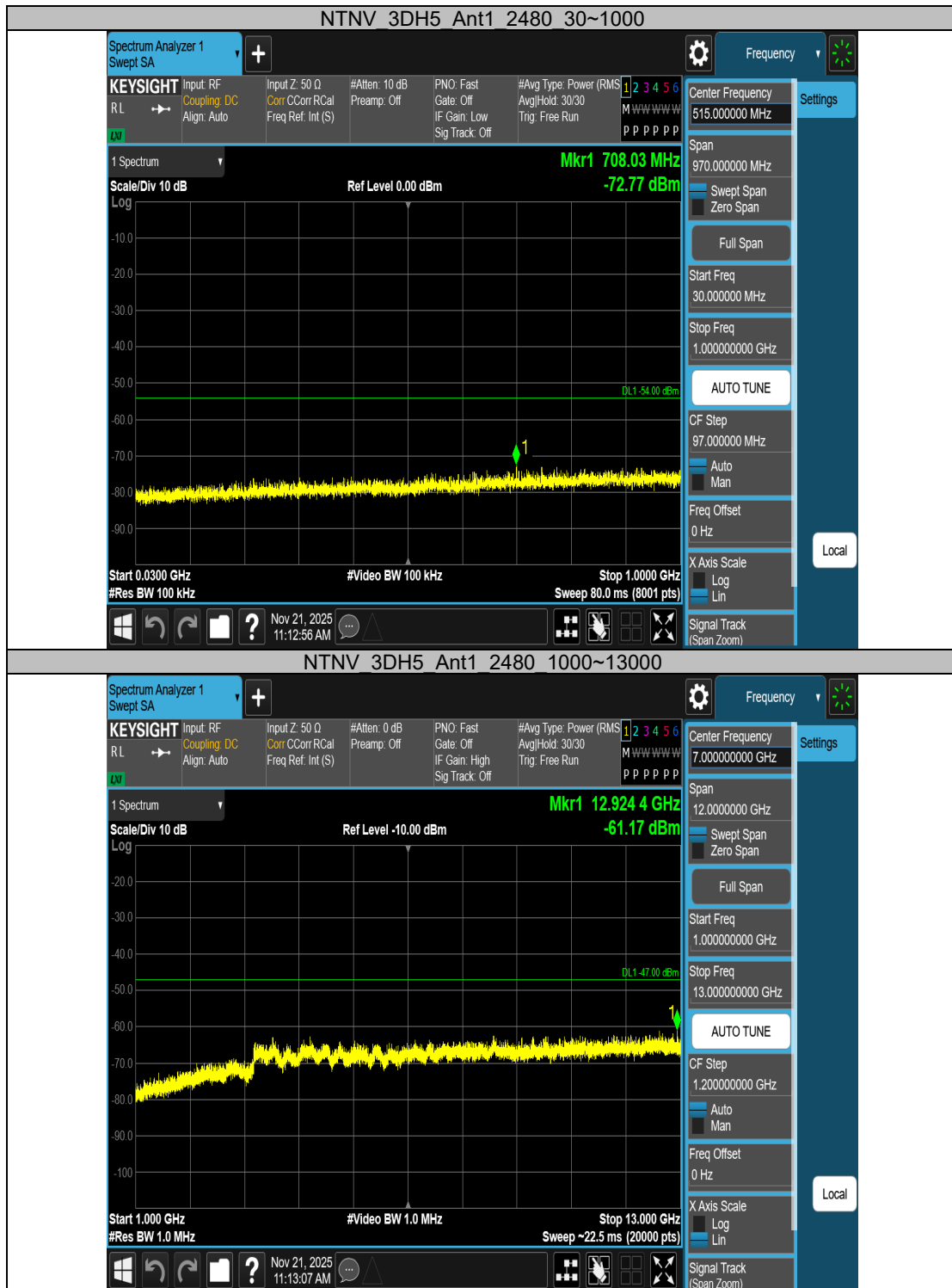












## 7. Antenna Power Measurement

### 7.1 Limit

| Standard            | Item                  | Limit      |
|---------------------|-----------------------|------------|
| Article 2-1 Item 19 | Antenna Power Density | 3mW /MHz   |
|                     | Antenna Power Error   | +20%, -80% |

### 7.2 Measurement Procedure

For FHSS UUT:

Step 1: Measure the total power by Power Meter in a state of hopping mode (with Average Sensor)

Step 2: If it's the burst wave, please measure the burst ratio. Then calculate the real total power by burst ratio.

Step 3: Calculate the mean power per 1MHz by dividing the total power by spread bandwidth

Output Power Density (mW/MHz) = Total Output Power (mW) / Burst Ratio / Spread Bandwidth (MHz)

### 7.3 Test Data

|              |              |             |            |
|--------------|--------------|-------------|------------|
| Temperature  | 23.5℃        | Humidity    | 51%        |
| ATM Pressure | 101.4kPa     | Time        | 2025.11.21 |
| Test by      | Freedom Zhuo | Test result | PASS       |

Please refer to following table.

**Declared power=0.02mW/MHz**

**Normal Voltage**

| ITEM                               | GFSK   | $\pi/4$ -DQPSK | 8DPSK  | Limit     |
|------------------------------------|--------|----------------|--------|-----------|
| Antenna Output Power (dBm)         | 0.34   | 0.53           | 0.96   | /         |
| Spread Bandwidth (MHz)             | 71.783 | 71.697         | 71.686 |           |
| Antenna Output Power (mW/MHz)      | 0.015  | 0.016          | 0.017  | 3         |
| Antenna Output Power Tolerance (%) | -25.00 | -20.00         | -15.00 | -80 ~ +20 |
| EIRP(dBm/MHz)                      | -15.49 | -14.97         | -14.71 | 6.91      |

Note:

1. Declared Power by manufacturer.
2. Antenna output power(mW/MHz) = Antenna output power (mW)/spread bandwidth (MHz)
3. Antenna output power tolerance = (Antenna output power - declared power)/declared power\*100%
4. EIRP (dBm/MHz) =  $10\log$ \*Antenna Output Power (mW/MHz)+Antenna Gain

## 8. FREQUENCY HOPPING DWELL TIME

### 8.1 Limit

According to Radio Law Radio Equipment Regulations Article 49-20, frequency dwell time is 0.4 seconds or below.

### 8.2 Measurement Procedure

Conditions of Application Equipment (EUT)

- Set the application equipment (EUT) to the measurement frequency.
- The modulation state shall be “continuous (burst) transmission mode”. If impossible, it shall be “continuous frequency-hopping mode”.

Spectrum Analyzer Conditions

Step 1:

- Center Frequency: 2441 MHz
- Span: ZERO SPAN
- RBW: 1MHz, VBW: 1MHz
- Log scale: 10dB/Div, Data points: 8000 points (400 points or more)
- Reference level: Enough level for maximum dynamic range
- Detection: Positive Peak
- Sweep mode: Continuous

Step 2:

- Center Frequency: 2441 MHz
- RBW: 1MHz, VBW: 1MHz
- Span: ZERO SPAN
- Reference level: Enough level for maximum dynamic range
- Detection: Positive Peak
- Sweep mode: Continuous
- Sweep time: 3.16s

Dwell time = Time per one hopping (On time) \* hopping numbers

Note: because  $0.4 * 71.888 = 28.7552 < 3.16 * 10 = 31.6$ , Therefore, the  $3.16 * 10$  test will be more rigorous.

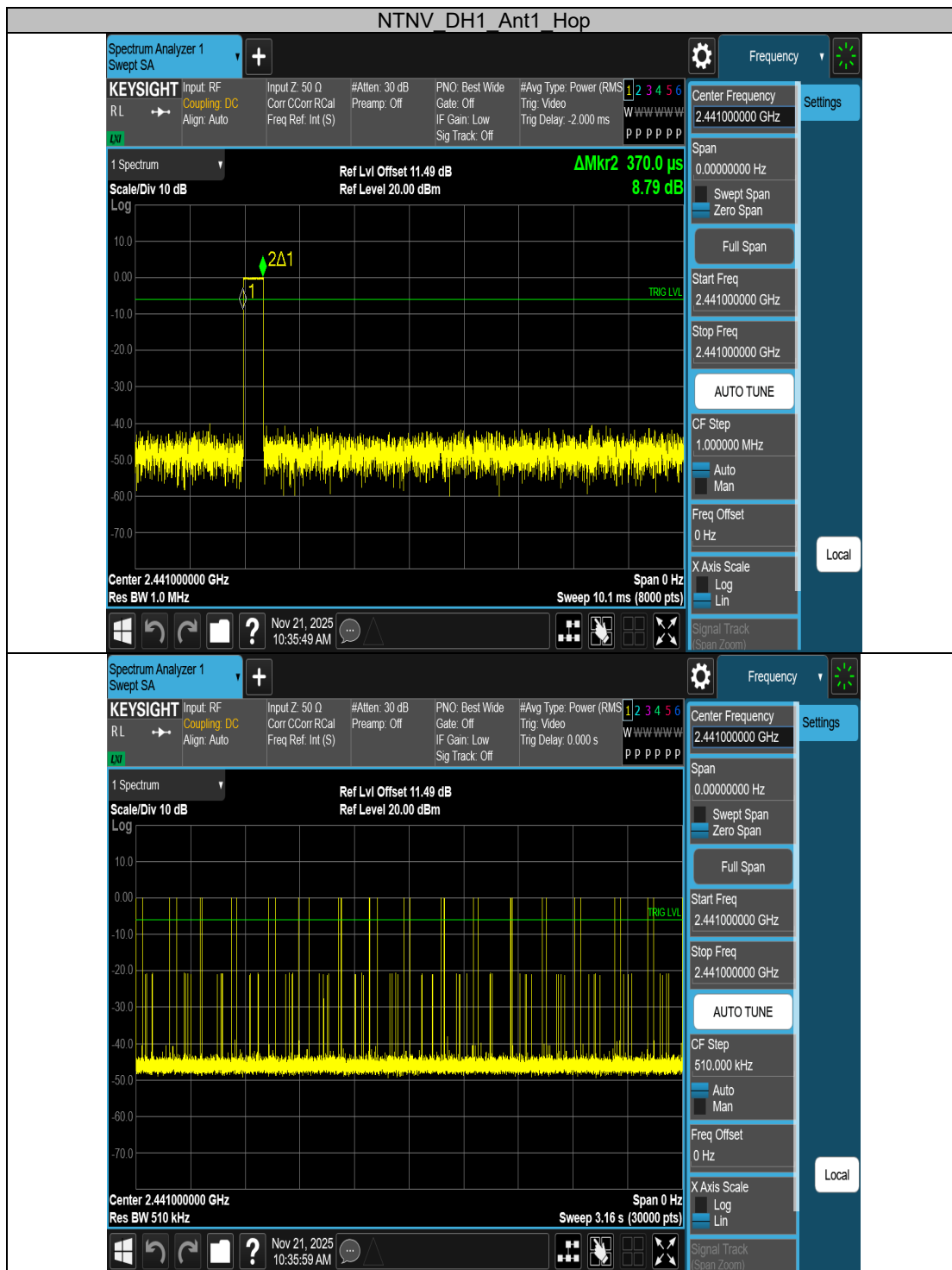
### 8.3 Test Data

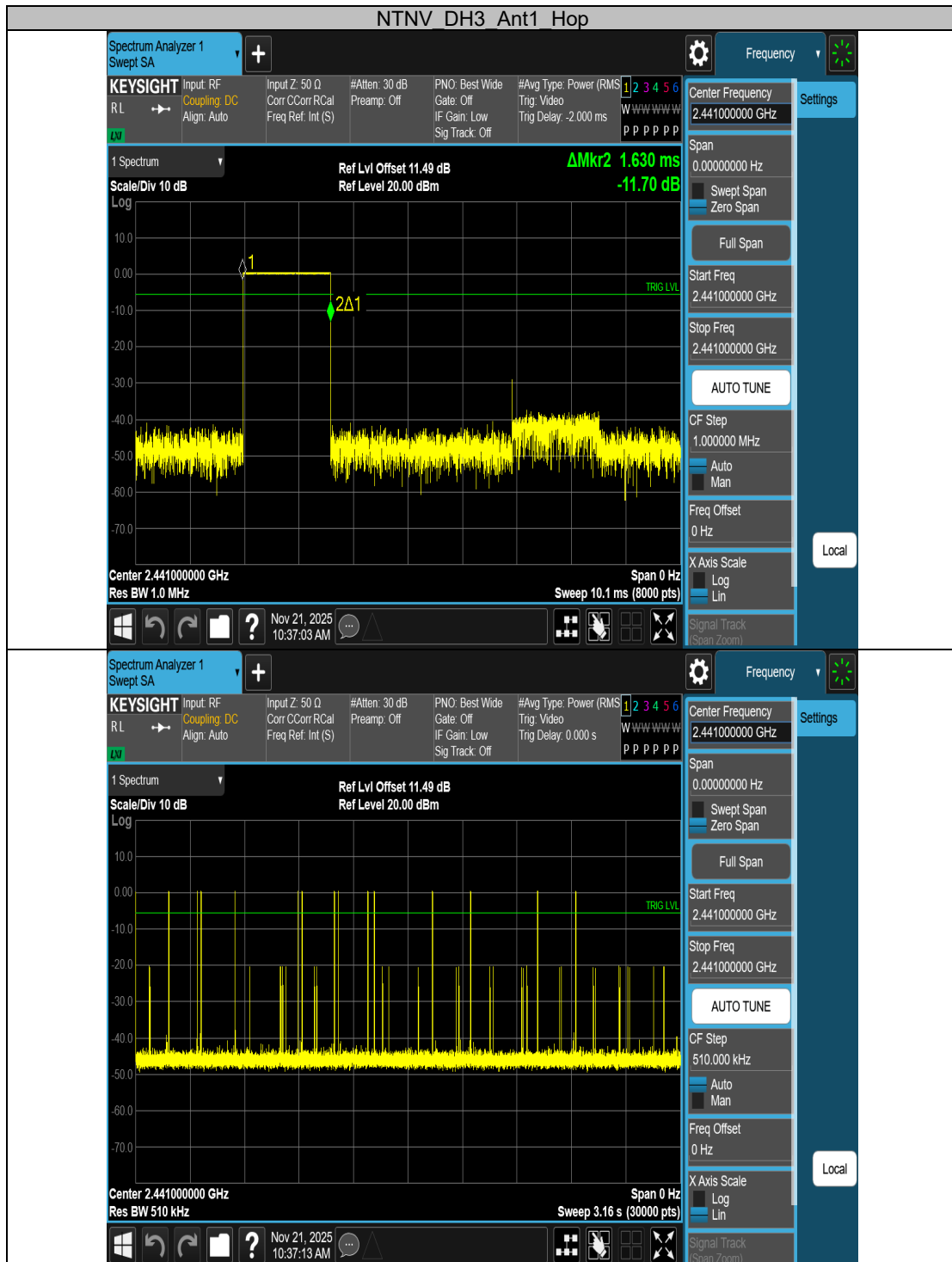
|              |              |             |            |
|--------------|--------------|-------------|------------|
| Temperature  | 23.5℃        | Humidity    | 51%        |
| ATM Pressure | 101.4kPa     | Time        | 2025.11.21 |
| Test by      | Freedom Zhuo | Test result | PASS       |

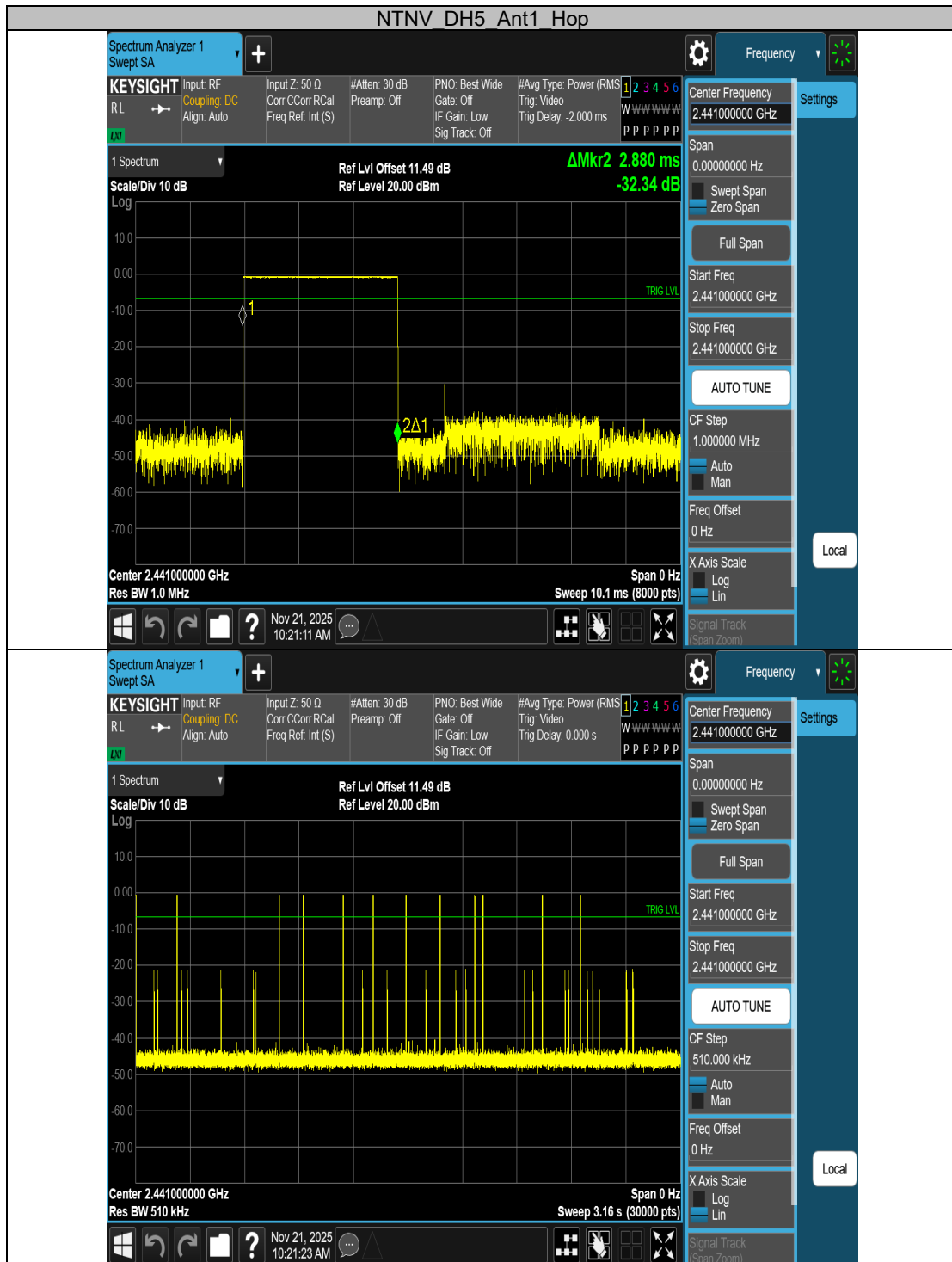
Please refer to following table and plots.

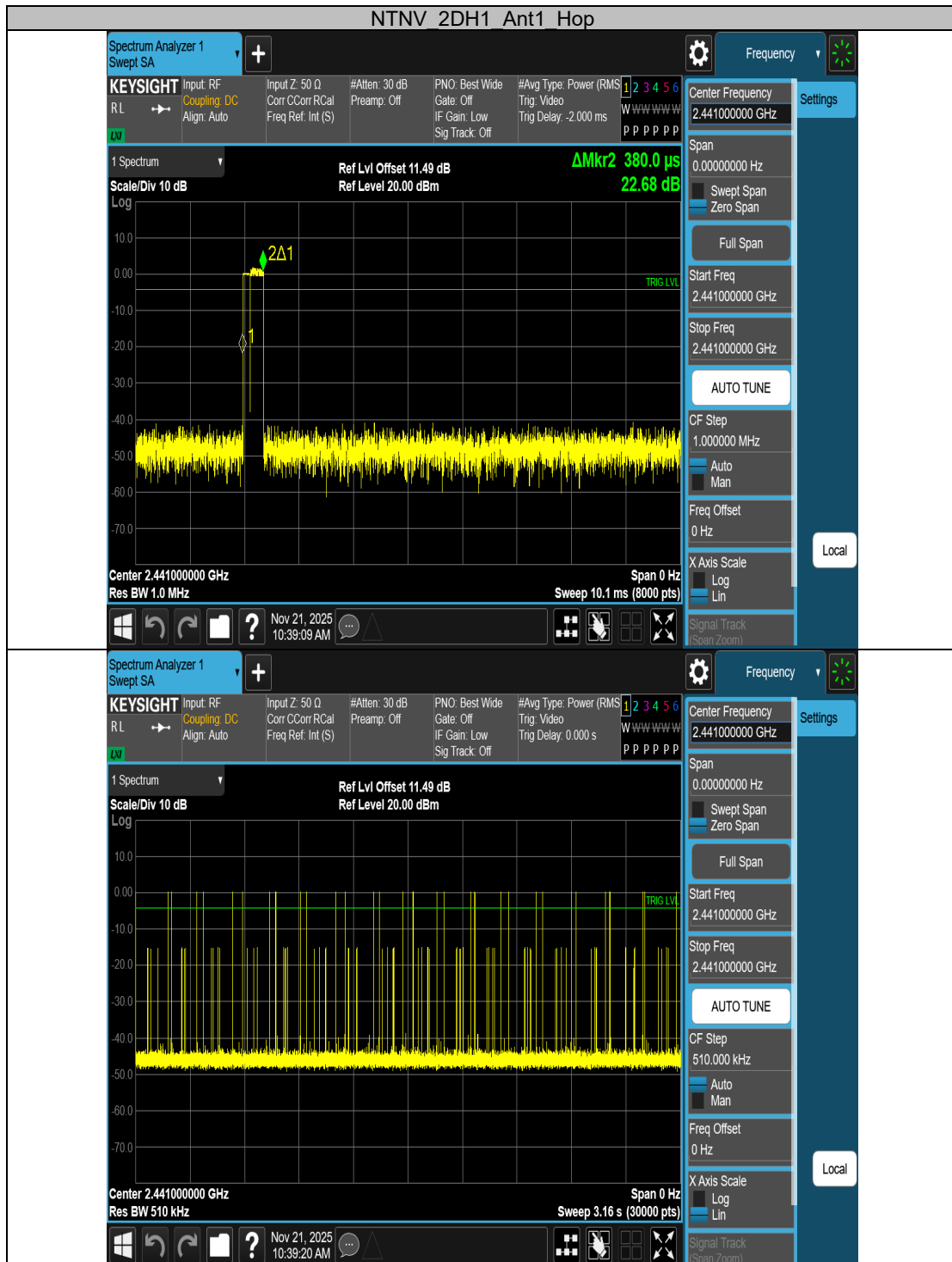
| Test Condition | Test Mode | Antenna | Frequency [MHz] | BurstWidth [ms] | TotalHops [Num] | Result[s] | Limit [s] | Verdict |
|----------------|-----------|---------|-----------------|-----------------|-----------------|-----------|-----------|---------|
| NTNV           | DH1       | Ant1    | Hop             | 0.37            | 330             | 0.122     | ≤0.4      | PASS    |
| NTNV           | DH3       | Ant1    | Hop             | 1.63            | 150             | 0.245     | ≤0.4      | PASS    |
| NTNV           | DH5       | Ant1    | Hop             | 2.88            | 120             | 0.346     | ≤0.4      | PASS    |
| NTNV           | 2DH1      | Ant1    | Hop             | 0.38            | 320             | 0.122     | ≤0.4      | PASS    |
| NTNV           | 2DH3      | Ant1    | Hop             | 1.63            | 140             | 0.228     | ≤0.4      | PASS    |
| NTNV           | 2DH5      | Ant1    | Hop             | 2.88            | 100             | 0.288     | ≤0.4      | PASS    |
| NTNV           | 3DH1      | Ant1    | Hop             | 0.38            | 330             | 0.125     | ≤0.4      | PASS    |
| NTNV           | 3DH3      | Ant1    | Hop             | 1.63            | 160             | 0.261     | ≤0.4      | PASS    |
| NTNV           | 3DH5      | Ant1    | Hop             | 2.88            | 120             | 0.346     | ≤0.4      | PASS    |

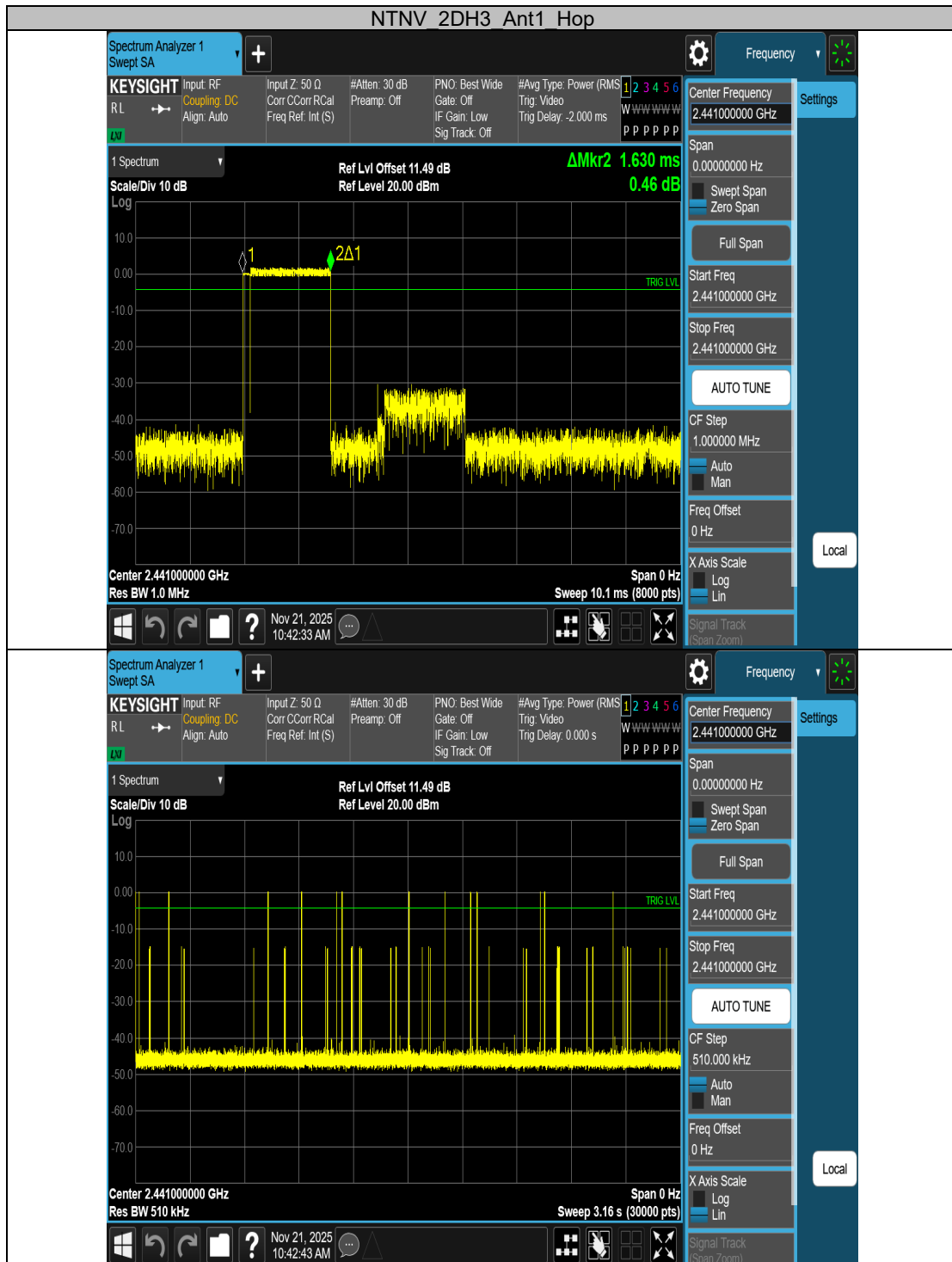
Please refer to recording the spectrum plots in the worst conditions

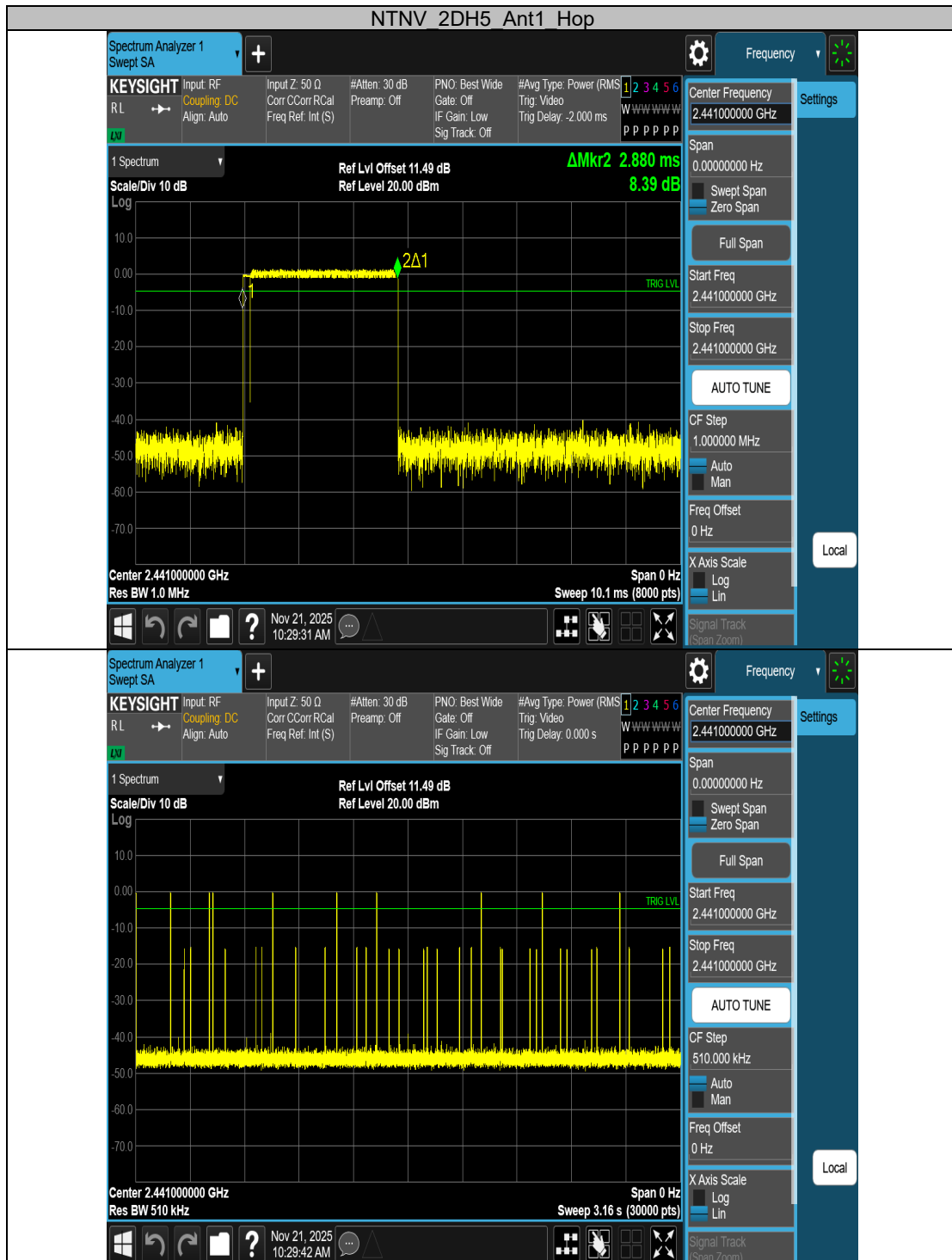


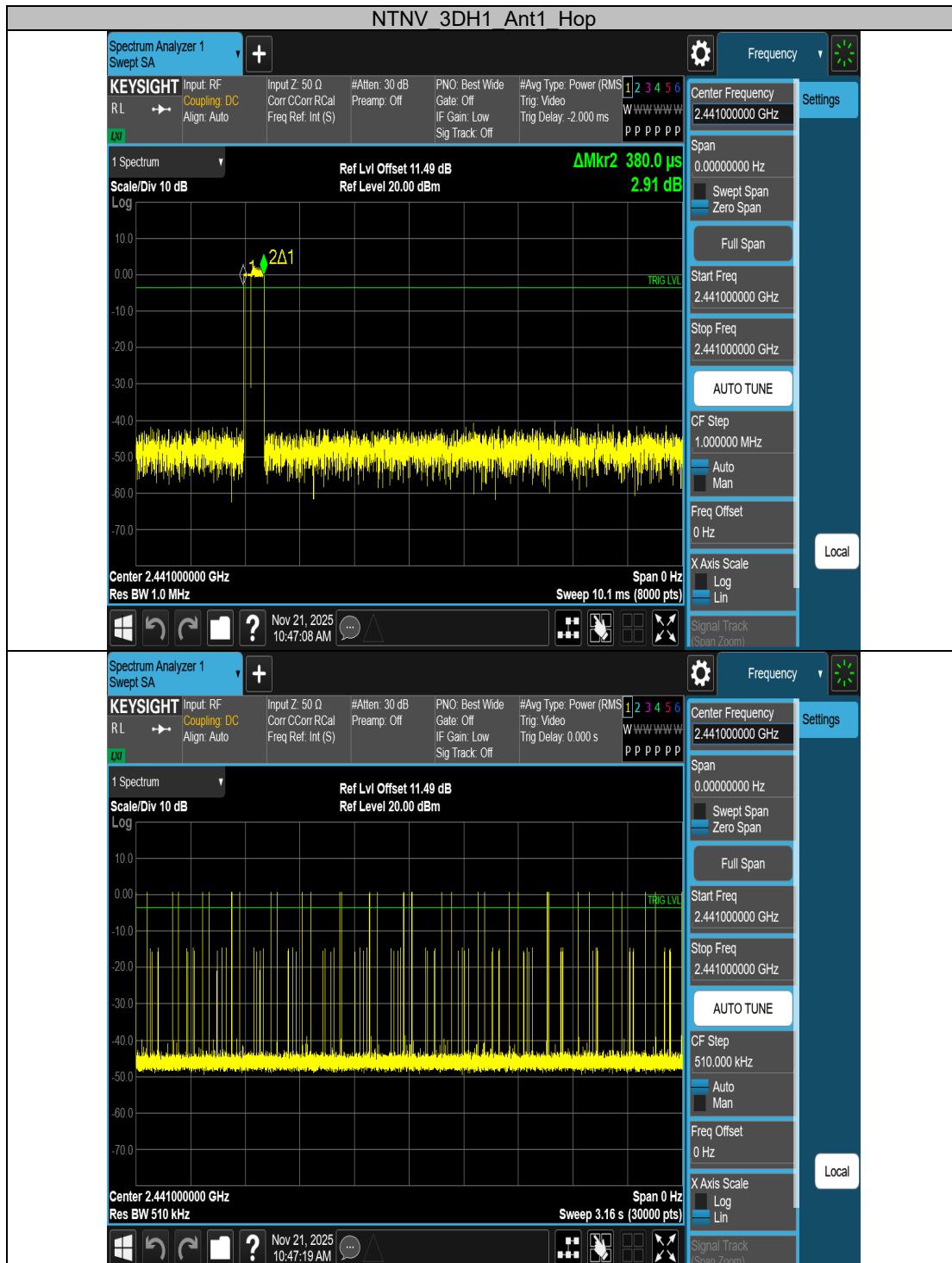


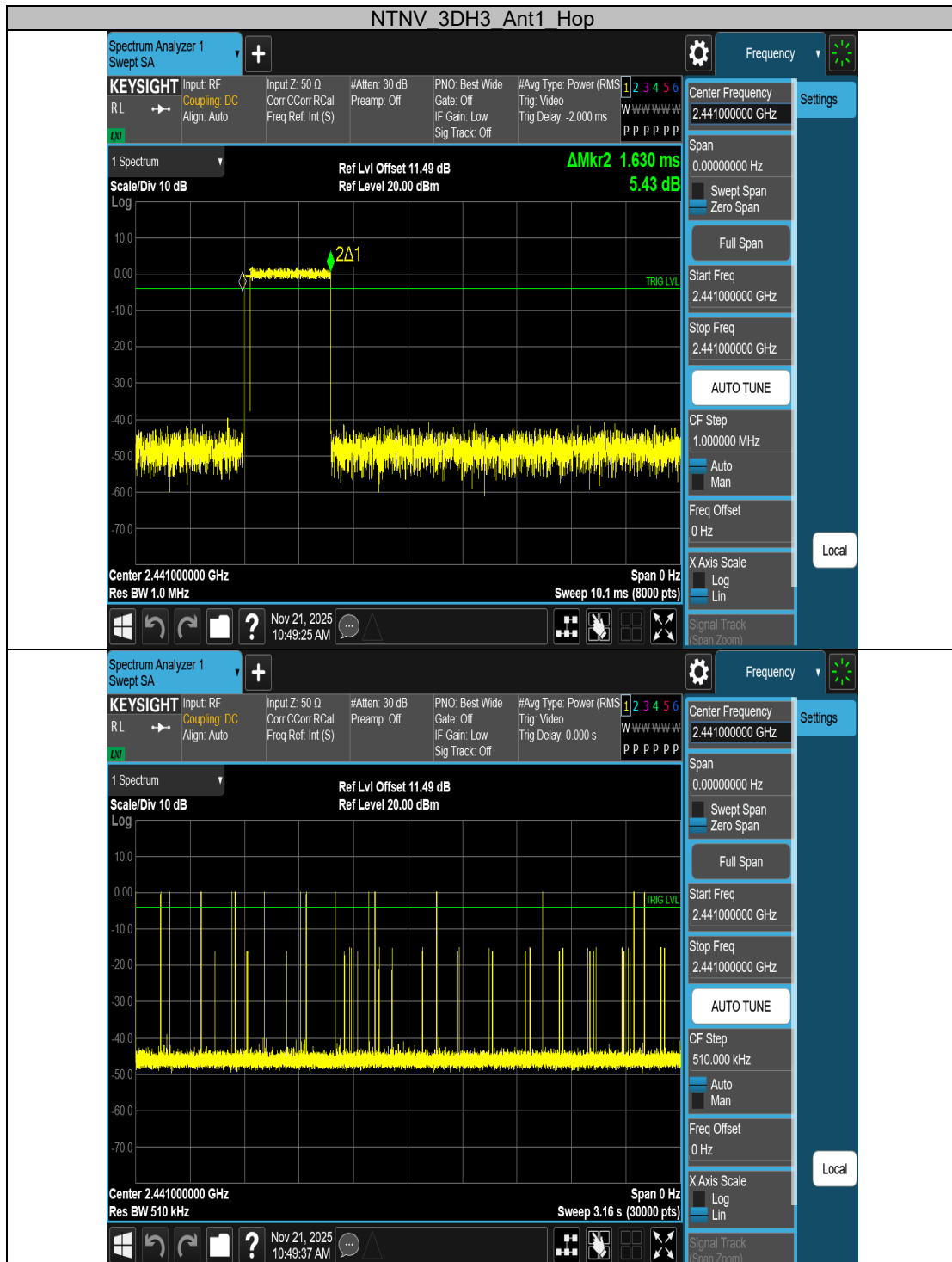


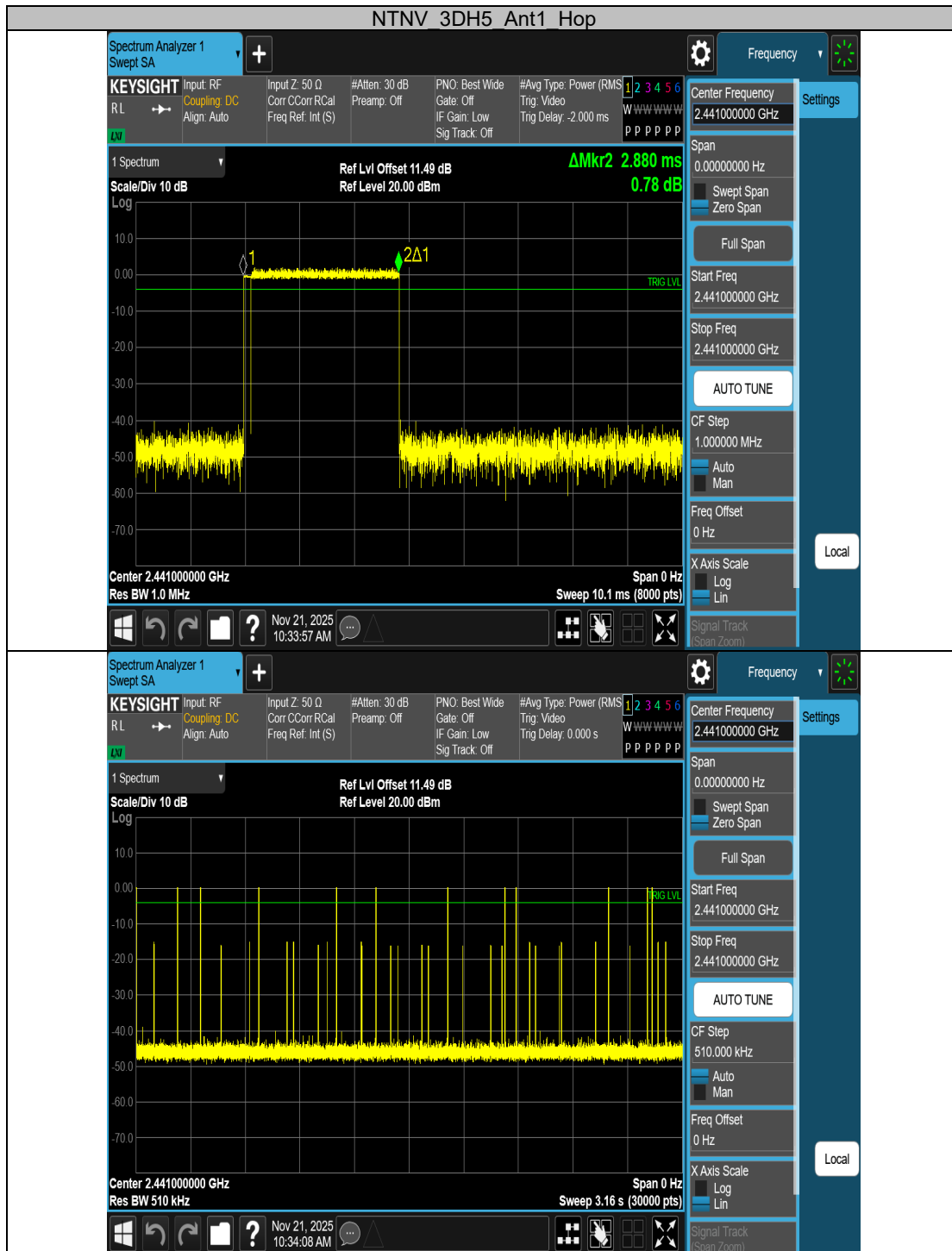












## 9. INTERFERENCE PREVENTION FUNCTION

### 9.1 Standard Applicable

According to Item 19 of Article 2 Paragraph 1. The device shall have the function of automatic transmission or reception of identification code.

### 9.2 Test Procedure

In the case that the EUT has the function of automatically transmitting the identification code:

1. Transmit the predetermined identification codes from EUT
2. Check the transmitted identification codes with the demodulator.

In the case of receiving the identification codes:

1. Transmit the predetermined identification codes from the counterpart.
2. Check if communication is normal
3. Transmit the signal other than predetermined ID codes from the counterpart.
4. Check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

### 9.3 Summary of Test Results/Plots

| Test Item                                    | Test Result                                                                                |
|----------------------------------------------|--------------------------------------------------------------------------------------------|
| Transmitting Function of Identification Code | The device have the function of automatic transmission or reception of identification code |
| Receiving Function of Identification Code    | The device have the function of automatic transmission or reception of identification code |

Note: The MAC address is: D4:AB:61:47:F6:D9

## Statement

1. The report is invalid without the official seal or special seal of Shenzhen Haiyun Standard Technical Co., Ltd. (hereinafter referred to as the unit).
2. The report is invalid without the signature of the approver.
3. The report is invalid if altered arbitrarily.
4. The report shall not be partially copied without the written approval of the unit.
5. The reported test results are only valid for the tested samples.
6. If there is any objection to the test report, it shall be submitted to the test unit within 15 days from the date of receiving the report, and the overdue shall not be accepted.

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