

# TEST REPORT

**Product Name** : Wireless IP Camera  
**Model Number** : NC-FW5CFIT-5M

**Prepared for** : KSY Co., Ltd.  
**Address** : HONDA BUILDING 6F, 1-17-10, MISUJI TAITO-KU,  
TOKYO, 111-0055, JAPAN

**Prepared by** : EMTEK (DONGGUAN) CO., LTD.  
**Address** : Room 111&112, Building 8, -1&2/F., Office Building 2, Zone  
A, Zhongda Marine Biotechnology Research and  
Development Base, No.9, Xincheng Avenue, Songshan Lake  
High-Tech Industrial Development Zone, Dongguan,  
Guangdong, China

TEL: +86-0769-22807078  
FAX: +86-0769-22807079

**Report Number** : EDG2511200146E00101R  
**Date(s) of Tests** : November 26, 2025 to February 5, 2026  
**Date of issue** : February 5, 2026

## TEST RESULT CERTIFICATION

Applicant : KSY Co., Ltd.  
Address : HONDA BUILDING 6F, 1-17-10, MISUJI TAITO-KU,  
TOKYO, 111-0055, JAPAN  
Manufacturer : ShenZhen Foscam Intelligent Technology Co., Ltd.  
Address : Room 902, Building B, Building 1, Shenzhen International InnovationValley, Dashi  
1st Road, Xili Community, Xili Street, Nanshan District, Shenzhen City,Guangdong  
Province  
Factory : ShenZhen Foscam Intelligent Technology Co., Ltd.  
Address : Room 902, Building B, Building 1, Shenzhen International InnovationValley, Dashi  
1st Road, Xili Community, Xili Street, Nanshan District, Shenzhen City,Guangdong  
Province  
EUT : Wireless IP Camera  
Model Name : NC-FW5CFIT-5M  
Trademark : 

## Measurement Procedure Used:

| APPLICABLE STANDARDS             |                                     |             |
|----------------------------------|-------------------------------------|-------------|
| STANDARD                         | Test Procedure                      | TEST RESULT |
| Item 19 of Article 2 Paragraph 1 | MIC public notice 88:2004, annex 43 | PASS        |

The device described above is tested by EMTEK (DONGGUAN) CO., LTD. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and EMTEK (DONGGUAN) CO., LTD. is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) was measured according to the test methods of Ordinance Concerning Technical Regulations Conformity Certification etc. of Specified Radio Equipment in Annex 1, the Ministry of Internal Affairs and Communication notification in Annex "43" of Article 88, Paragraph 1 or the test method more than equivalent and the result is technically compliant with the ARIB STD T-66 requirements.

The test results of this report relate only to the tested sample identified in this report

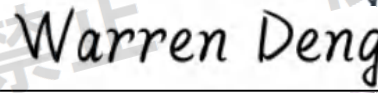
Date of Test :

November 26, 2025 to February 5, 2026

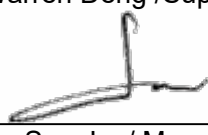
Prepared by :

  
Jessica Zhang /Editor

Reviewer :

  
Warren Deng /Supervisor

Approve &amp; Authorized Signer :

  
Sam Lv / Manager

## Modified Information

| Version | Report No.           | Revision Date | Summary         |
|---------|----------------------|---------------|-----------------|
| Ver.1.0 | EDG2511200146E00101R | /             | Original Report |
|         |                      |               |                 |
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## 1 EUT TECHNICAL DESCRIPTION

| Characteristics                              | Description                                                                                                                                                                                                                                                                                  |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product                                      | Wireless IP Camera                                                                                                                                                                                                                                                                           |
| Model Number                                 | NC-FW5CFIT-5M                                                                                                                                                                                                                                                                                |
| IEEE 802.11 WLAN Mode Supported              | <input checked="" type="checkbox"/> 802.11b<br><input checked="" type="checkbox"/> 802.11g<br><input checked="" type="checkbox"/> 802.11n(20MHz channel bandwidth)<br><input checked="" type="checkbox"/> 802.11n(40MHz channel bandwidth)                                                   |
| Modulation                                   | DSSS with DBPSK/DQPSK/CCK for 802.11b<br>OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n                                                                                                                                                                                                       |
| Operating Frequency Range                    | <input checked="" type="checkbox"/> 2412-2462MHz for 802.11b/g/n(HT20)<br><input checked="" type="checkbox"/> 2422-2452MHz for 802.11n(HT40)                                                                                                                                                 |
| Number of Channels                           | <input checked="" type="checkbox"/> 11 channels for 802.11b/g n(HT20)<br><input checked="" type="checkbox"/> 7 Channels for 802.11n(HT40)                                                                                                                                                    |
| bandwidth of Channels                        | <input checked="" type="checkbox"/> 802.11b(20MHz channel bandwidth)<br><input checked="" type="checkbox"/> 802.11g(20MHz channel bandwidth)<br><input checked="" type="checkbox"/> 802.11n(20MHz channel bandwidth)<br><input checked="" type="checkbox"/> 802.11n(40MHz channel bandwidth) |
| Rated Antenna power                          | SISO Mode:<br>10 mW/MHz for 802.11b;<br>10 mW/MHz for 802.11g;<br>10 mW/MHz for 802.11n(HT20);<br>2 mW/MHz for 802.11n(HT40)                                                                                                                                                                 |
| The subcarriers number for OFDM(pieces /MHz) | 2.4 pieces /MHz for 802.11g;<br>2.6 pieces /MHz for 802.11n(HT20);<br>2.7 pieces /MHz for 802.11n(HT40)                                                                                                                                                                                      |
| Antenna Type                                 | FPC Antenna                                                                                                                                                                                                                                                                                  |
| Antenna Gain                                 | ANT 1: 2.93 dBi                                                                                                                                                                                                                                                                              |
| Power Supply                                 | Adapter:<br>Model: SAW06C-050-1000JB<br>Input: 100~240VAC, 50/60Hz, 0.3A<br>Output:5VDC, 1A                                                                                                                                                                                                  |
| Temperature Range                            | -10°C ~ +40°C                                                                                                                                                                                                                                                                                |

**Note:** for more details, please refer to the User's manual of the EUT.

## 2 SUMMARY OF TEST RESULT

| TELEC RULES                 | Test Parameter                                        | Verdict | Remark |
|-----------------------------|-------------------------------------------------------|---------|--------|
| Item 19                     | RF Output Power                                       | PASS    |        |
| Item 19                     | Frequency Tolerance                                   | PASS    |        |
| Item 19                     | Occupied Bandwidth /Spreading Bandwidth/Spread Factor | PASS    |        |
| Item 19                     | Transmitter Spurious Emissions                        | PASS    |        |
| Item 19                     | Receiver Spurious Emissions                           | PASS    |        |
| Item 19                     | Interference Prevention Function                      | PASS    |        |
| NOTE: N/A (Not Applicable). |                                                       |         |        |

### 3 TEST METHODOLOGY

#### 3.1 GENERAL DESCRIPTION OF APPLIED STANDARDS

According to its specifications, the EUT must comply with the requirements of the following standards:

Item 19 of Article 2 Paragraph 1 of the TELEC rules for 2.4GHz band wide-band low-power data communication system. All measurements contained in this report were conducted with test method for radio equipment specified in MIC public notice 88:2004, annex 43 for certification. And measuring method for electric field intensity of radio station with remarkably weak radiowave transmitted.

#### 3.2 MEASUREMENT EQUIPMENT USED

| Equipment                         | Manufacturer      | Model No.            | Serial No. | Last Cal. | Cal. Interval | Calibration Method |
|-----------------------------------|-------------------|----------------------|------------|-----------|---------------|--------------------|
| Wireless Connectivity Tester      | R&S               | CMW270               | 102543     | 2025/4/28 | 1Year         | c                  |
| Automatic Control Unit            | Tonscend          | JS0806-2             | 21I8060480 | 2025/4/28 | 1Year         | c                  |
| Signal Analyzer                   | KEYSIGHT          | N9010B               | MY60242456 | 2025/4/28 | 1Year         | c                  |
| Analog Signal Generator           | KEYSIGHT          | N5173B               | MY61252625 | 2025/4/28 | 1Year         | c                  |
| UP/DOWN-Converter                 | R&S               | CMW-Z800A            | 100274     | 2025/4/28 | 1Year         | c                  |
| Vector Signal Generator           | KEYSIGHT          | N5182B               | MY61252674 | 2025/4/28 | 1Year         | c                  |
| Frequency Extender                | KEYSIGHT          | N5182BX07            | MY59362541 | 2025/4/28 | 1Year         | c                  |
| Temperature&Humidity test chamber | ESPEC             | EL-02KA              | 12107166   | 2025/4/28 | 1 Year        | c                  |
| 6 db attenuator                   | AR-WORLDDWI<br>DE | 6dB/50FH-006-1<br>00 | 324011     | 2025/4/28 | 1 Year        | c                  |

|                    |   |                                                                      |
|--------------------|---|----------------------------------------------------------------------|
| Calibration agency | : | Guangzhou LiSai Metrology & Test Co., Ltd.                           |
| Address            | : | Address: No.8.South Street ShiJi Institute Guangzhou.Guangdong.China |

#### Calibration Method:

- Calibration conducted by the National Institute of Information and Communications Technology (NICT) (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1).
- Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992).
- Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).
- Calibration conducted by using measuring instruments and other equipment listed Table attached hereto, which shall have been given any of calibration, etc. listed above from a) to c).

**Remark:** Each piece of equipment is scheduled for calibration once a year.

*For measurement cables(It is from the antenna end of EUT to the test port of test equipment.)*

| Equipment         | Manufacturer              | cable loss | Application frequency band | Measurement data of line loss comes from | Last Cal. | Cal. Interval |
|-------------------|---------------------------|------------|----------------------------|------------------------------------------|-----------|---------------|
| measurement cable | Provided by the applicant | 0.5 dBm    | 2400-2500MHZ               | Manufacturers claim themselves.          | N/A       | N/A           |

### 3.3 DESCRIPTION OF TEST MODES

The EUT has been tested under its typical operating condition.

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.

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

Test of channel included the lowest and middle and highest frequency to perform the test, then record on this report.

Those data rates (☒ 802.11b:1 Mbps; ☒ 802.11g: 6 Mbps; ☒ 802.11n(HT20): MCS0; ☒ 802.11n(HT40): MCS0) were used for all test.

Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

☒ Frequency and Channel list for 802.11b/g/n (HT20):

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) |
|---------|--------------------|---------|--------------------|---------|--------------------|
| 1       | 2412               | 6       | 2437               | 11      | 2462               |
| 2       | 2417               | 7       | 2442               | 12      | 2467               |
| 3       | 2422               | 8       | 2447               | 13      | 2472               |
| 4       | 2427               | 9       | 2452               |         |                    |
| 5       | 2432               | 10      | 2457               |         |                    |

☒ Frequency and Channel list for 802.11n (HT40):

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) |
|---------|--------------------|---------|--------------------|---------|--------------------|
|         |                    | 6       | 2437               | 11      | 2462               |
|         |                    | 7       | 2442               |         |                    |
| 3       | 2422               | 8       | 2447               |         |                    |
| 4       | 2427               | 9       | 2452               |         |                    |
| 5       | 2432               | 10      | 2457               |         |                    |

☒ Test Frequency and Channel for 802.11b/g/n (HT20):

| Lowest Frequency |                    | Middle Frequency |                    | Highest Frequency |                    |
|------------------|--------------------|------------------|--------------------|-------------------|--------------------|
| Channel          | Frequency<br>(MHz) | Channel          | Frequency<br>(MHz) | Channel           | Frequency<br>(MHz) |
| 1                | 2412               | 7                | 2442               | 13                | 2472               |

☒ Test Frequency and channel for 802.11n (HT40):

| Lowest Frequency |                    | Middle Frequency |                    | Highest Frequency |                    |
|------------------|--------------------|------------------|--------------------|-------------------|--------------------|
| Channel          | Frequency<br>(MHz) | Channel          | Frequency<br>(MHz) | Channel           | Frequency<br>(MHz) |
| 3                | 2422               | 7                | 2442               | 11                | 2462               |

### 3.4 SUPPORT EQUIPMENT

| EUT Cable List and Details |            |                     |                        |
|----------------------------|------------|---------------------|------------------------|
| Cable Description          | Length (m) | Shielded/Unshielded | With / Without Ferrite |
|                            |            |                     |                        |

| Auxiliary Cable List and Details |            |                     |                        |
|----------------------------------|------------|---------------------|------------------------|
| Cable Description                | Length (m) | Shielded/Unshielded | With / Without Ferrite |
|                                  |            |                     |                        |

| Auxiliary Equipment List and Details |              |       |               |
|--------------------------------------|--------------|-------|---------------|
| Description                          | Manufacturer | Model | Serial Number |
|                                      |              |       |               |

**Notes:**

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
3. Unless otherwise denoted as EUT in [Remark] column, device(s) used in tested system is a support equipment

## 4 FACILITIES AND ACCREDITATIONS

### 4.1 FACILITIES

All measurement facilities used to collect the measurement data are located at Room 111&112, Building 8, -1&2/F., Office Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base, No.9, Xincheng Avenue, Songshan Lake High-Tech Industrial Development Zone, Dongguan, Guangdong, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22."

### 4.2 LABORATORY ACCREDITATIONS AND LISTINGS

#### Site Description

EMC Lab. : Accredited by CNAS, 2024.07.06  
The certificate is valid until 2030.07.05  
The Laboratory has been assessed and proved to be in compliance with CNAS/CL01:2018  
The Certificate Registration Number is L3150

Accredited by FCC  
Designation Number: CN1300  
Test Firm Registration Number: 945551

Accredited by A2LA, April 03, 2027  
The Certificate Registration Number is 4321.02

Accredited by Industry Canada  
The Certificate Registration Number is CN0109

Name of Firm : EMTEK (DONGGUAN) CO., LTD.  
Site Location : Room 111&112, Building 8, -1&2/F., Office Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base, No.9, Xincheng Avenue, Songshan Lake High-Tech Industrial Development Zone, Dongguan, Guangdong, China

## 5 TEST SYSTEM UNCERTAINTY

The following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| Parameter                         | Uncertainty               |
|-----------------------------------|---------------------------|
| Radio Frequency                   | $\pm 1 \times 10^{-5}$    |
| Uncertainty for Output power test | $\pm 0.83\text{dB}$       |
| Conducted Emissions Test          | $\pm 2.0\text{dB}$        |
| Radiated Emission Test            | $\pm 2.0\text{dB}$        |
| Occupied Bandwidth Test           | $\pm 1.0\text{dB}$        |
| Power density test                | $\pm 1.85\text{dB}$       |
| All emission, radiated            | $\pm 3\text{dB}$          |
| Antenna Port Emission             | $\pm 3\text{dB}$          |
| Temperature                       | $\pm 0.5^{\circ}\text{C}$ |
| Humidity                          | $\pm 3\%$                 |

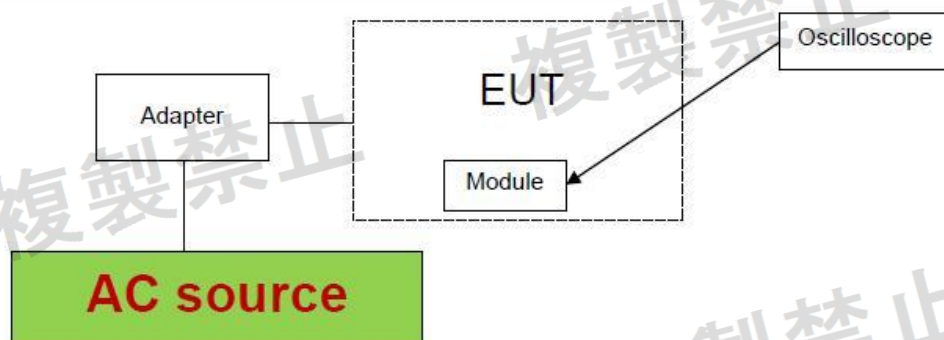
Measurement Uncertainty for a level of Confidence of 95%

## 6 WIRELESS MODULE VOLTAGE TEST IN EXTREME CONDITIONS

### 6.1 Applicable Standard

When there is a fluctuation of  $\pm 10\%$  input voltage from external power to the test equipment. If the fluctuation of input voltage to the circuit of the radio part (excl. power) in the test equipment is confirmed below  $\pm 1\%$ , Measurement shall be tested with the rated voltage.

### 6.2 Test Configuration



### 6.3 Test Results

| Test Voltage                   | DC 4.5V | DC5V | DC 5.5V |
|--------------------------------|---------|------|---------|
| Module Test voltage            | 3.31    | 3.30 | 3.31    |
| Module Ratedvoltage            | 3.30    | 3.30 | 3.30    |
| The Range of Module Voltage(%) | 0.3     | 0    | 0.3     |

Note: In extreme conditions, EUT module power is confirmed below  $\pm 1\%$ .

## 7 TEST REQUIREMENTS

### 7.1 FREQUENCY TOLERANCE

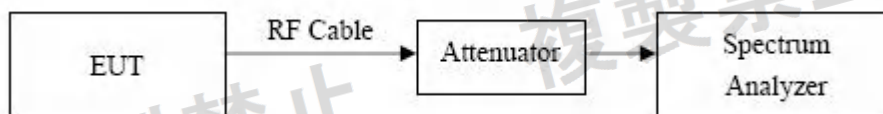
#### 7.1.1 Applicable Standard

According to Item 19 of Article 2 Paragraph 1.

#### 7.1.2 Conformance Limit

the maximum permit tolerance of frequency is 50ppm.

#### 7.1.3 Test Setup Block Diagram



#### 7.1.4 Test Procedure

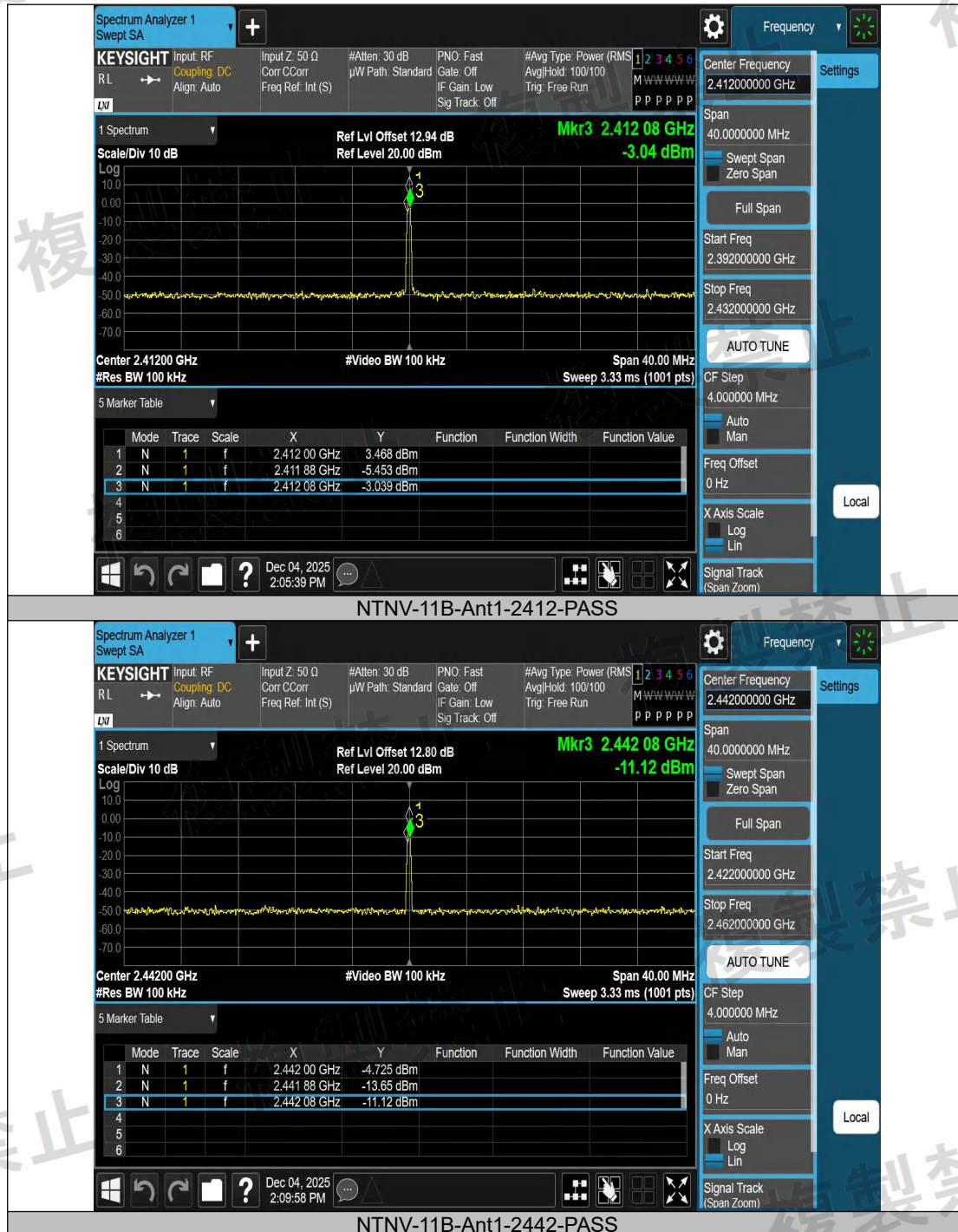
1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set center frequency of spectrum analyzer = operating frequency.
3. Set the spectrum analyzer as RBW, VBW=10KHz, Span = 1MHz.
- 4 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided emission is repetitive in nature.
5. Repeat above procedures until all frequency measured was complete.

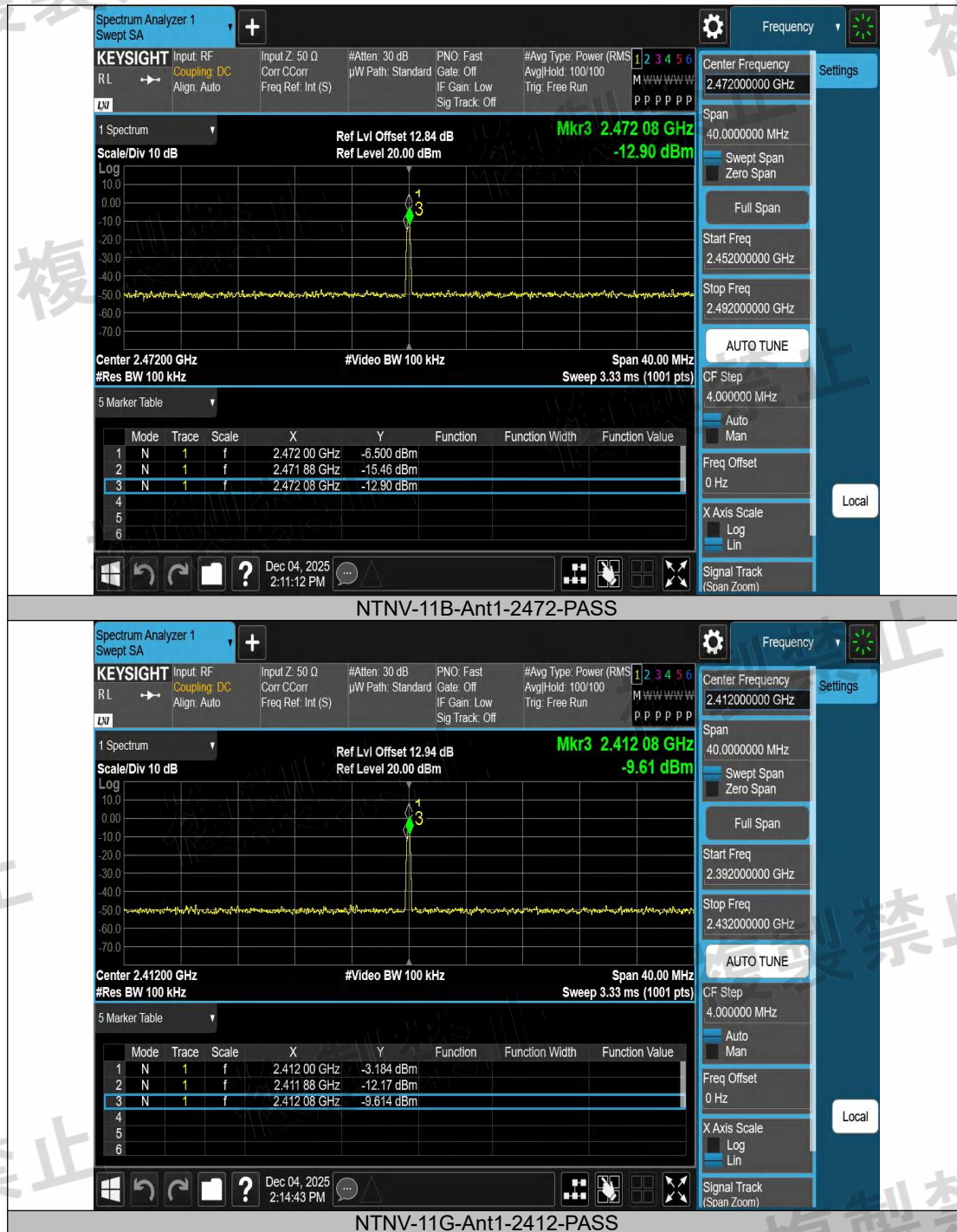
#### 7.1.5 Environmental Conditions

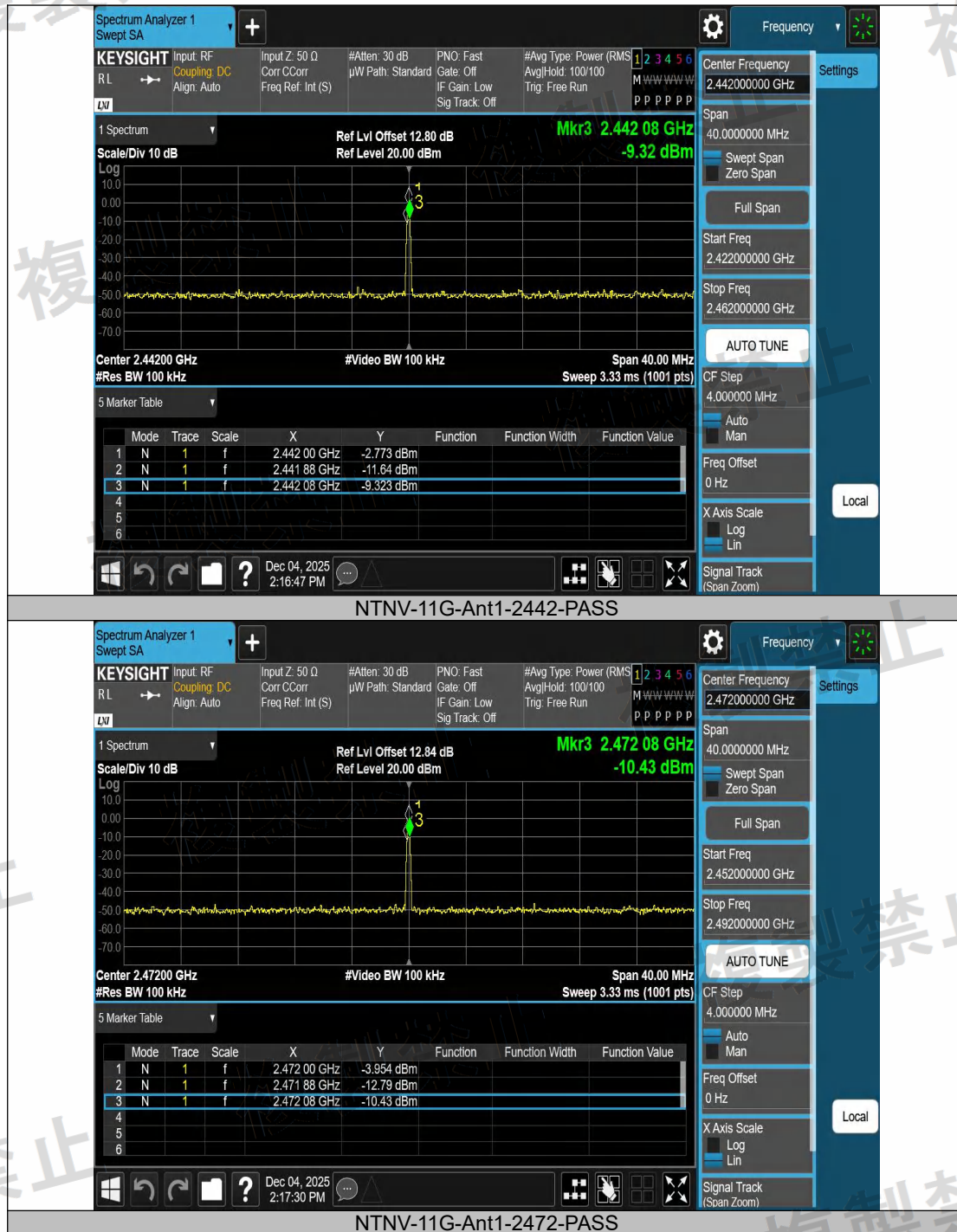
|                    |           |
|--------------------|-----------|
| Temperature:       | 25°C      |
| Relative Humidity: | 45%       |
| ATM Pressure:      | 1011 mbar |

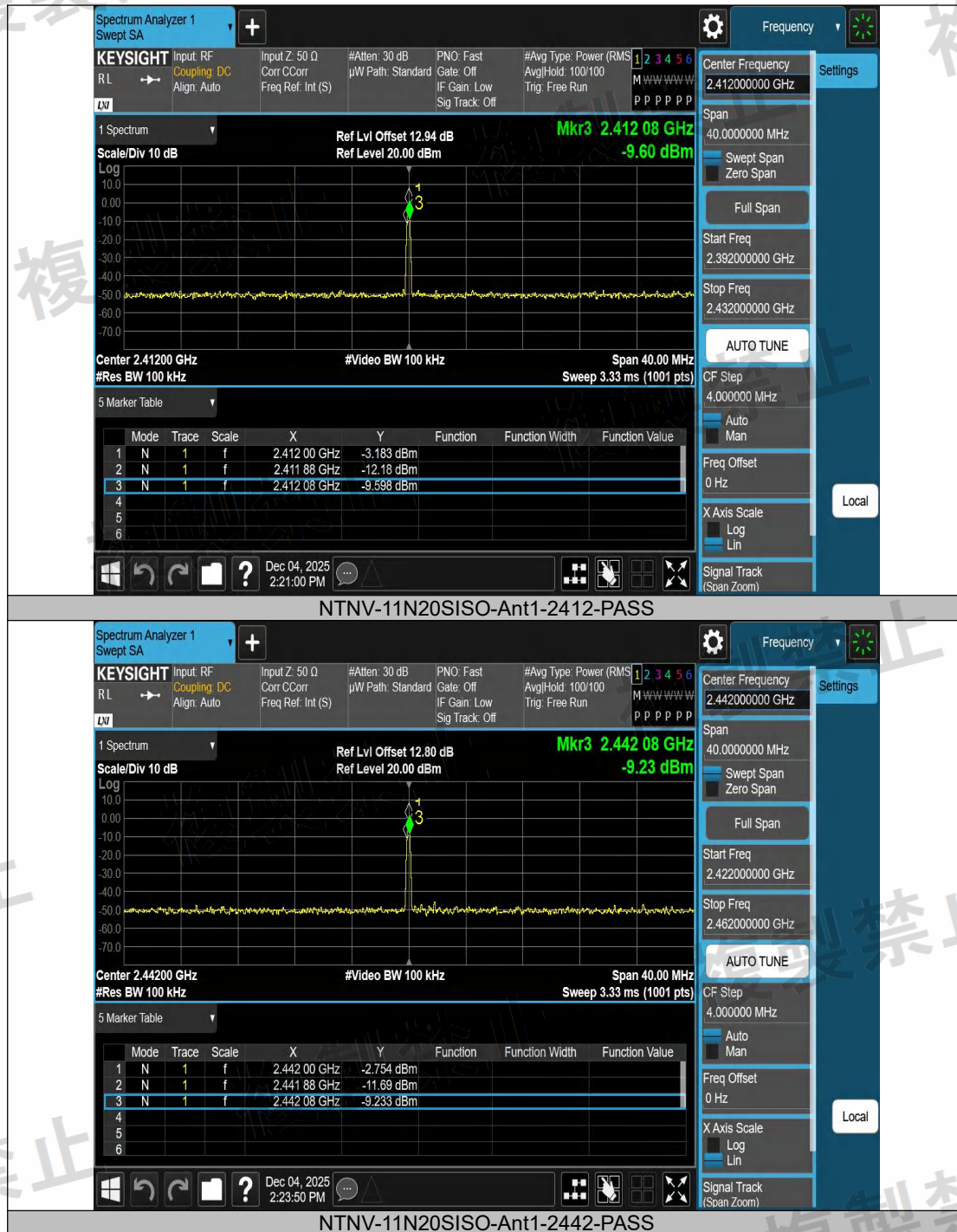
## 7.1.6 Test Results

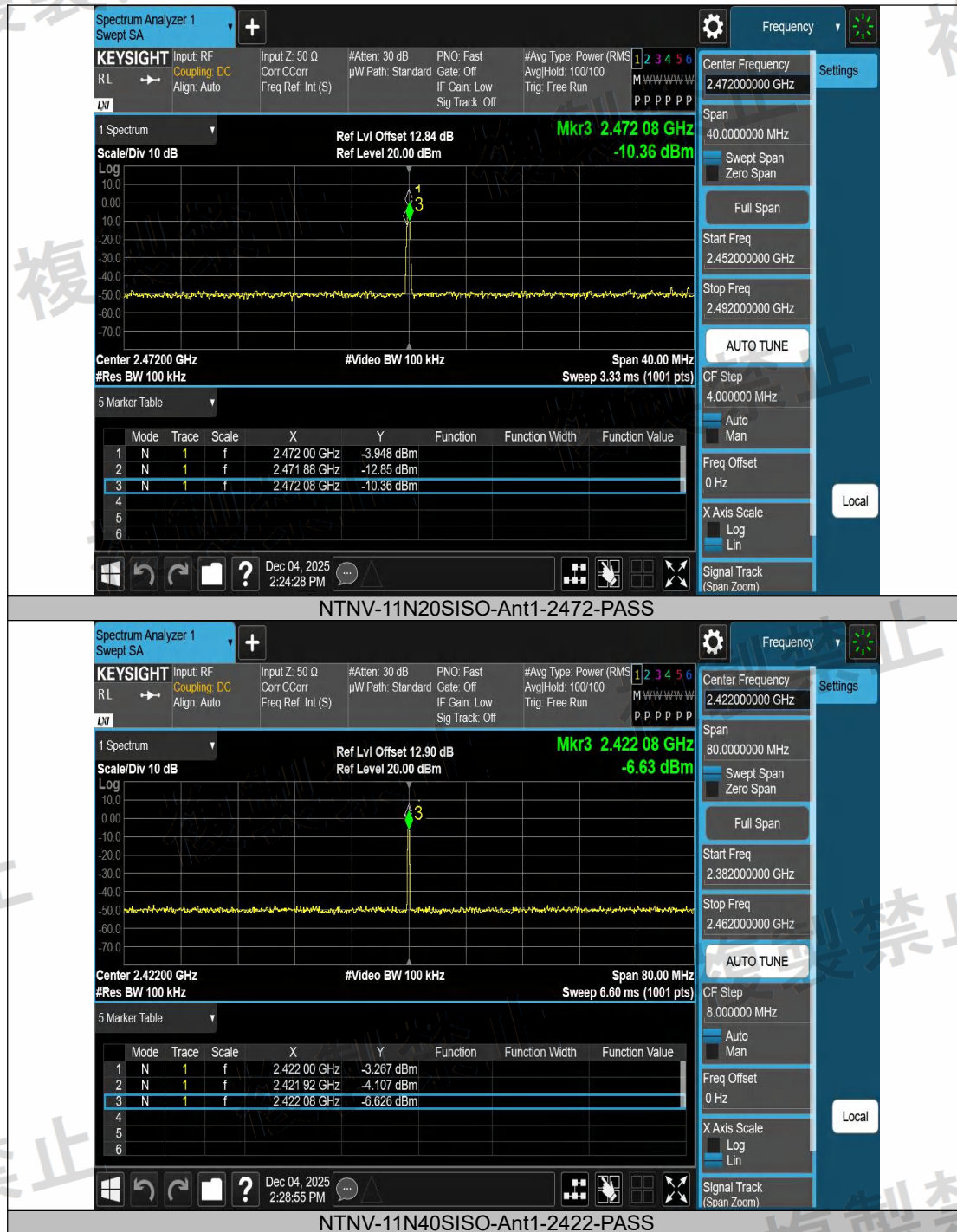
| TestCondition | TestMode  | Antenna | Frequency[MHz] | CenterFreq<br>[MHz] | Result[ppm] | Limit[ppm] | Verdict |
|---------------|-----------|---------|----------------|---------------------|-------------|------------|---------|
| NTNV          | 11B       | Ant1    | 2412           | 2412.08             | +33.167496  | ±50        | PASS    |
| NTNV          | 11B       | Ant1    | 2442           | 2442.08             | +32.760033  | ±50        | PASS    |
| NTNV          | 11B       | Ant1    | 2472           | 2472.08             | +32.362460  | ±50        | PASS    |
| NTNV          | 11G       | Ant1    | 2412           | 2412.08             | +33.167496  | ±50        | PASS    |
| NTNV          | 11G       | Ant1    | 2442           | 2442.08             | +32.760033  | ±50        | PASS    |
| NTNV          | 11G       | Ant1    | 2472           | 2472.08             | +32.362460  | ±50        | PASS    |
| NTNV          | 11N20SISO | Ant1    | 2412           | 2412.08             | +33.167496  | ±50        | PASS    |
| NTNV          | 11N20SISO | Ant1    | 2442           | 2442.08             | +32.760033  | ±50        | PASS    |
| NTNV          | 11N20SISO | Ant1    | 2472           | 2472.08             | +32.362460  | ±50        | PASS    |
| NTNV          | 11N40SISO | Ant1    | 2422           | 2422.08             | +33.030553  | ±50        | PASS    |
| NTNV          | 11N40SISO | Ant1    | 2442           | 2442.08             | +32.760033  | ±50        | PASS    |
| NTNV          | 11N40SISO | Ant1    | 2462           | 2462.08             | +32.493907  | ±50        | PASS    |

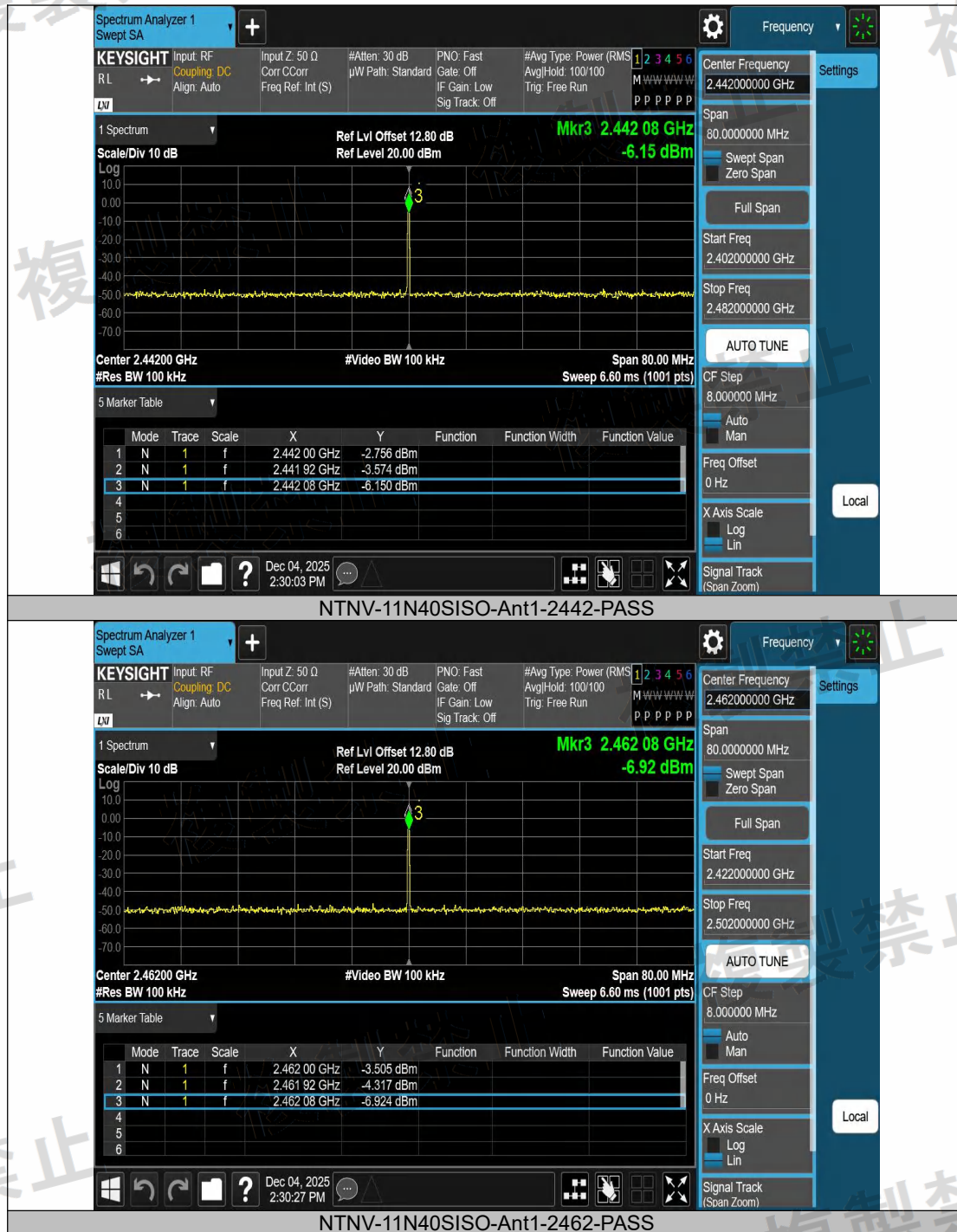












## 7.2 OCCUPIED BANDWIDTH

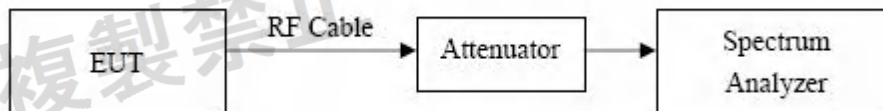
### 7.2.1 Applicable Standard

According to Item 19 of Article 2 Paragraph 1.

### 7.2.2 Conformance Limit

Occupied bandwidth:  $FH \leq 83.5 \text{ MHz}$ ;  $DS \leq 26 \text{ MHz}$ ;  $OFDM \leq 38 \text{ MHz}$ , Others  $\leq 26 \text{ MHz}$   
Spread Bandwidth:  $\geq 500 \text{ kHz}$  (FH, DS), Spread factor  $> 5$ .

### 7.2.3 Test Setup Block Diagram



### 7.2.4 Test Procedure

(1) Spectrum analyzer is set as below

|                      |                                                                                               |
|----------------------|-----------------------------------------------------------------------------------------------|
| Central Frequency    | Test frequency                                                                                |
| Sweeping Bandwidth   | 2 to 3.5 times the allowable value (SPAN=80MHz for 802.11n(HT40), SPAN=50MHz for the others)  |
| Resolution Bandwidth | Lower than 3 % of allowable value (RBW=300kHz)                                                |
| Video Bandwidth      | Equivalent to resolvable bandwidth                                                            |
| Y-Axis Scale         | 10 dB/Div                                                                                     |
| Input Level          | Carrier level is sufficiently higher than spectrum analyzer noise                             |
| Sweep Time           | Minimum time to assure the measurement accuracy (In case of burst wave, 1 burst per 1 sample) |
| Sampling points      | More than 400 points                                                                          |
| Sweep Mode           | Consecutive sweep                                                                             |
| Phase-Detection Mode | Positive peak                                                                                 |
| Trigger Condition    | Max-hold                                                                                      |

(2) Repeat the sweeping till no change was observed on the display and enter all values of data point to the computer as array variable.

(3) About all data, convert dB value to antilogarithm of electric power dimension.

(4) Add up the electric power of all data and record it as "Sum total of electric power".

(5) Adding up data in order from the lowest frequency to upper frequencies, look for a limit point where the value reaches to 0.5% (5% in case of diffusion bandwidth) of "Sum total of electric power". Convert the limit point to frequency and record as "Lowest limit frequency".

(6) Adding up data in order from the highest frequency to lower frequencies, look for a limit point

where the value reaches to 0.5% (5% in case of diffusion bandwidth) of "Sum total of electric power". Convert the limit point to frequency and record as "Highest limit frequency".

(7) Repeat above procedures until all frequency measured was complete.

(8) Spread Factor=Spread Bandwidth/modulation rate. The modulation rate: MR=1.375 for 802.11b, MR=1.5 for 802.11g/n20, MR=3 for 802.11n40.

#### 7.2.5 Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 25°C      |
| Relative Humidity: | 45%       |
| ATM Pressure:      | 1011 mbar |

## 7.2.6 Test Results

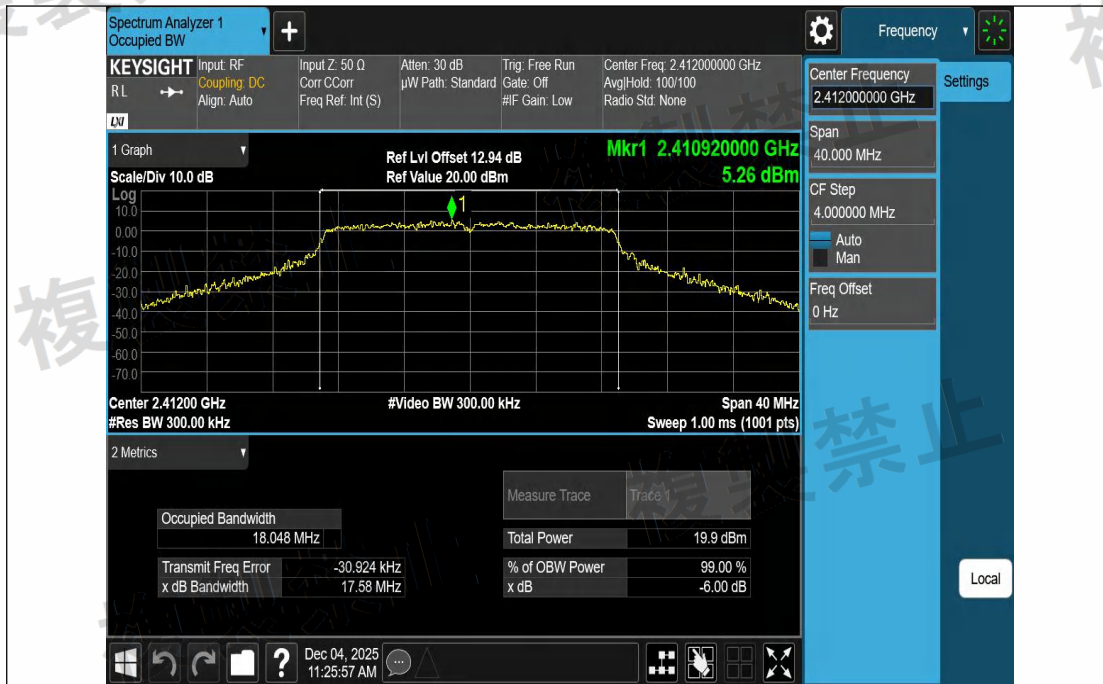
Occupied Bandwidth (99% Emission bandwidth)

| TestCondition | TestMode  | Antenna | Frequency[MHz] | Result [MHz] | Limit [MHz] | Verdict |
|---------------|-----------|---------|----------------|--------------|-------------|---------|
| NTNV          | 11B       | Ant1    | 2412           | 13.180       | ≤26         | PASS    |
| NTNV          | 11B       | Ant1    | 2442           | 13.174       | ≤26         | PASS    |
| NTNV          | 11B       | Ant1    | 2472           | 13.169       | ≤26         | PASS    |
| NTNV          | 11G       | Ant1    | 2412           | 16.854       | ≤26         | PASS    |
| NTNV          | 11G       | Ant1    | 2442           | 16.877       | ≤26         | PASS    |
| NTNV          | 11G       | Ant1    | 2472           | 16.934       | ≤26         | PASS    |
| NTNV          | 11N20SISO | Ant1    | 2412           | 18.048       | ≤26         | PASS    |
| NTNV          | 11N20SISO | Ant1    | 2442           | 18.069       | ≤26         | PASS    |
| NTNV          | 11N20SISO | Ant1    | 2472           | 18.076       | ≤26         | PASS    |
| NTNV          | 11N40SISO | Ant1    | 2422           | 36.214       | 26-40       | PASS    |
| NTNV          | 11N40SISO | Ant1    | 2442           | 36.152       | 26-40       | PASS    |
| NTNV          | 11N40SISO | Ant1    | 2462           | 36.179       | 26-40       | PASS    |

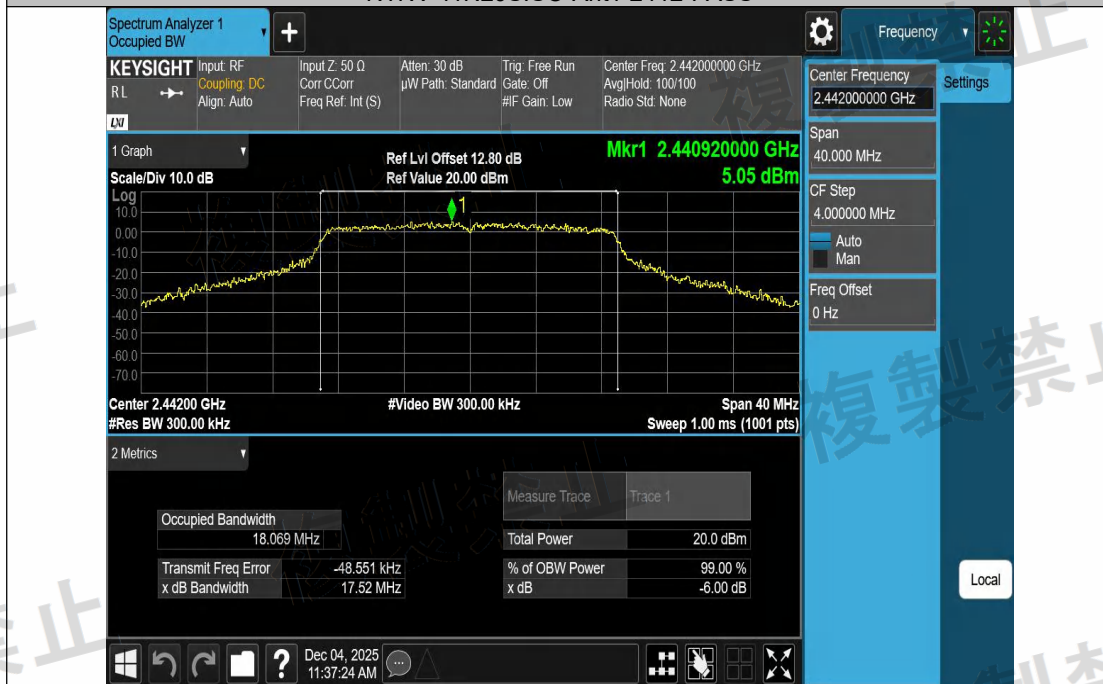




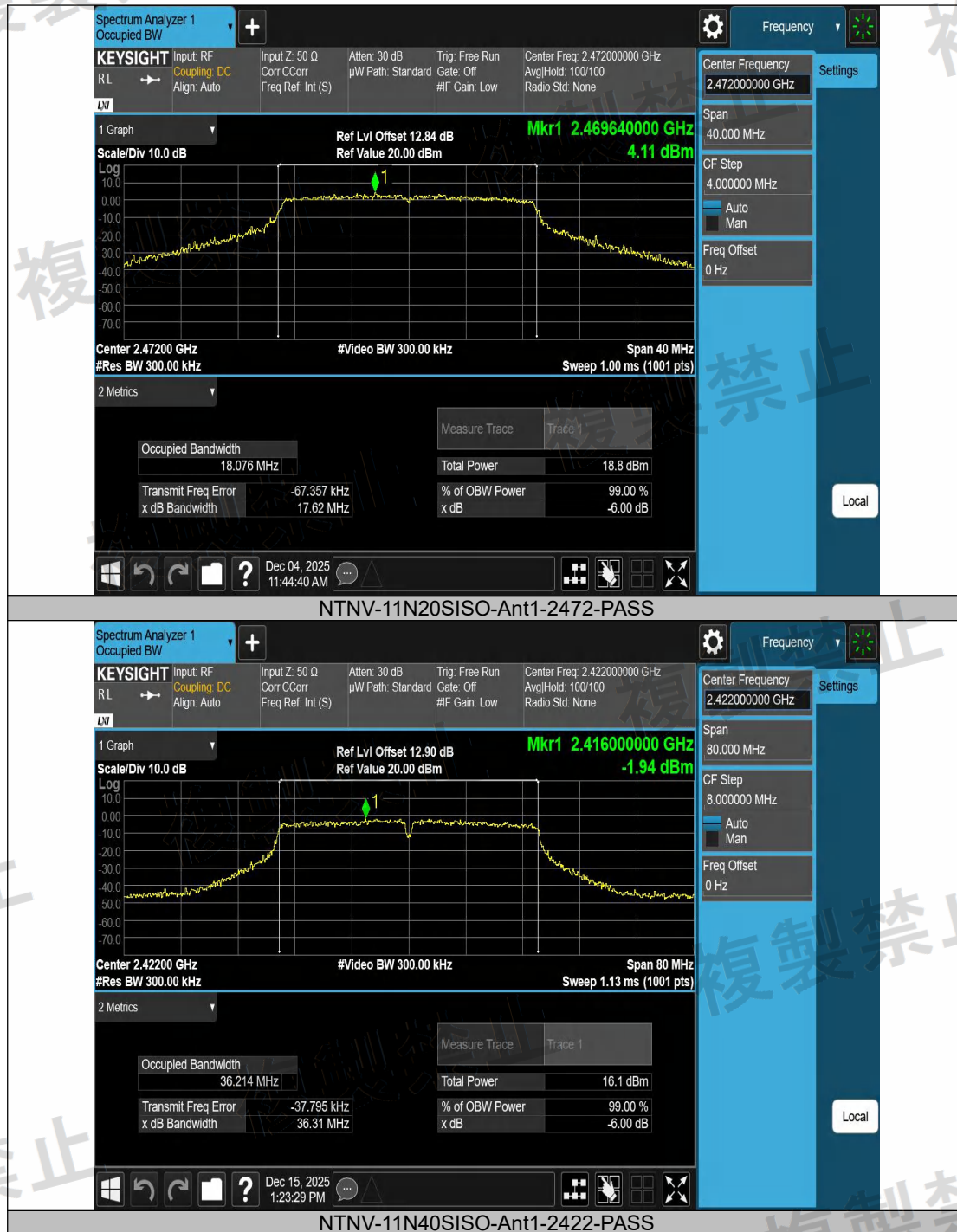


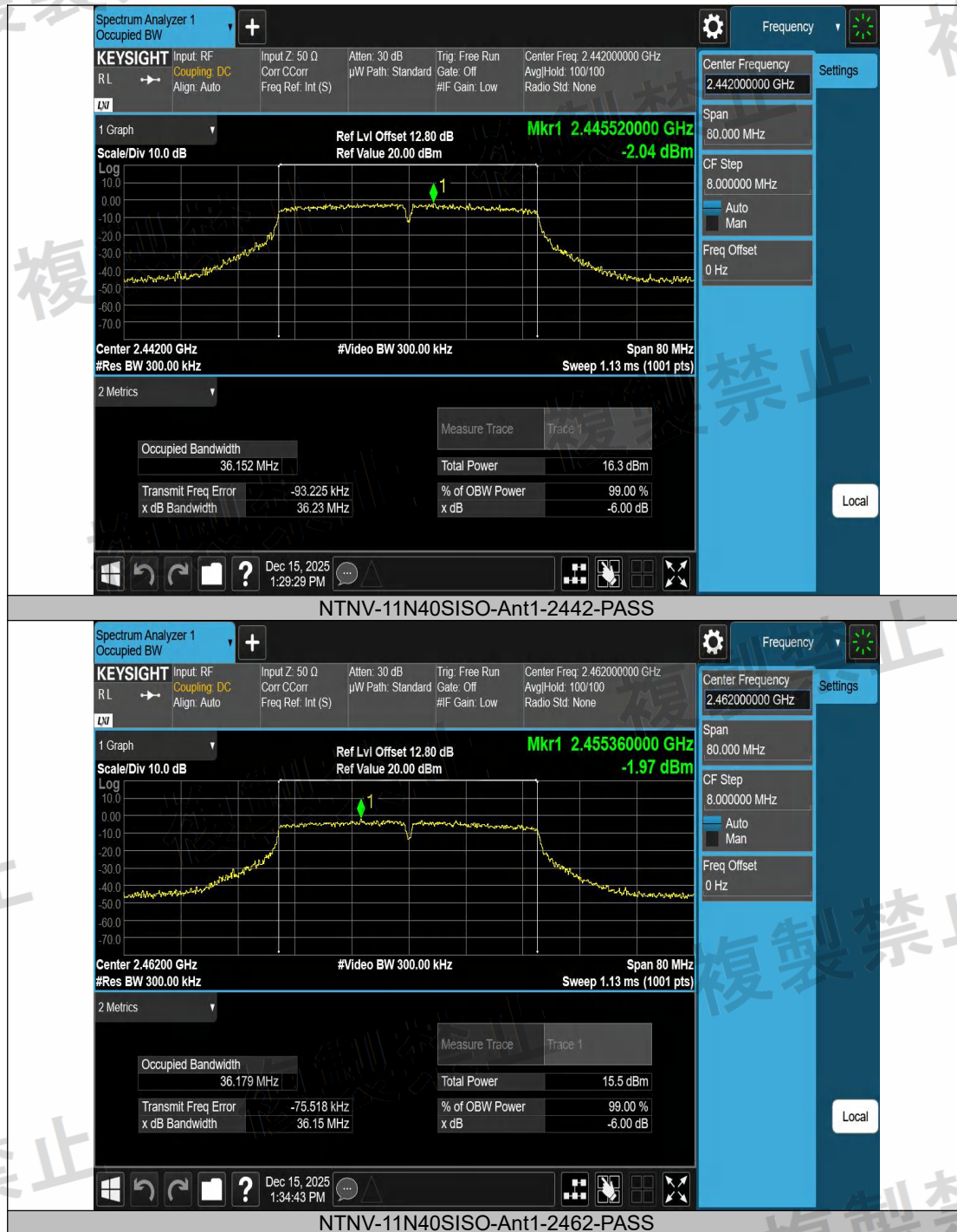


NTNV-11N20SISO-Ant1-2412-PASS



NTNV-11N20SISO-Ant1-2442-PASS



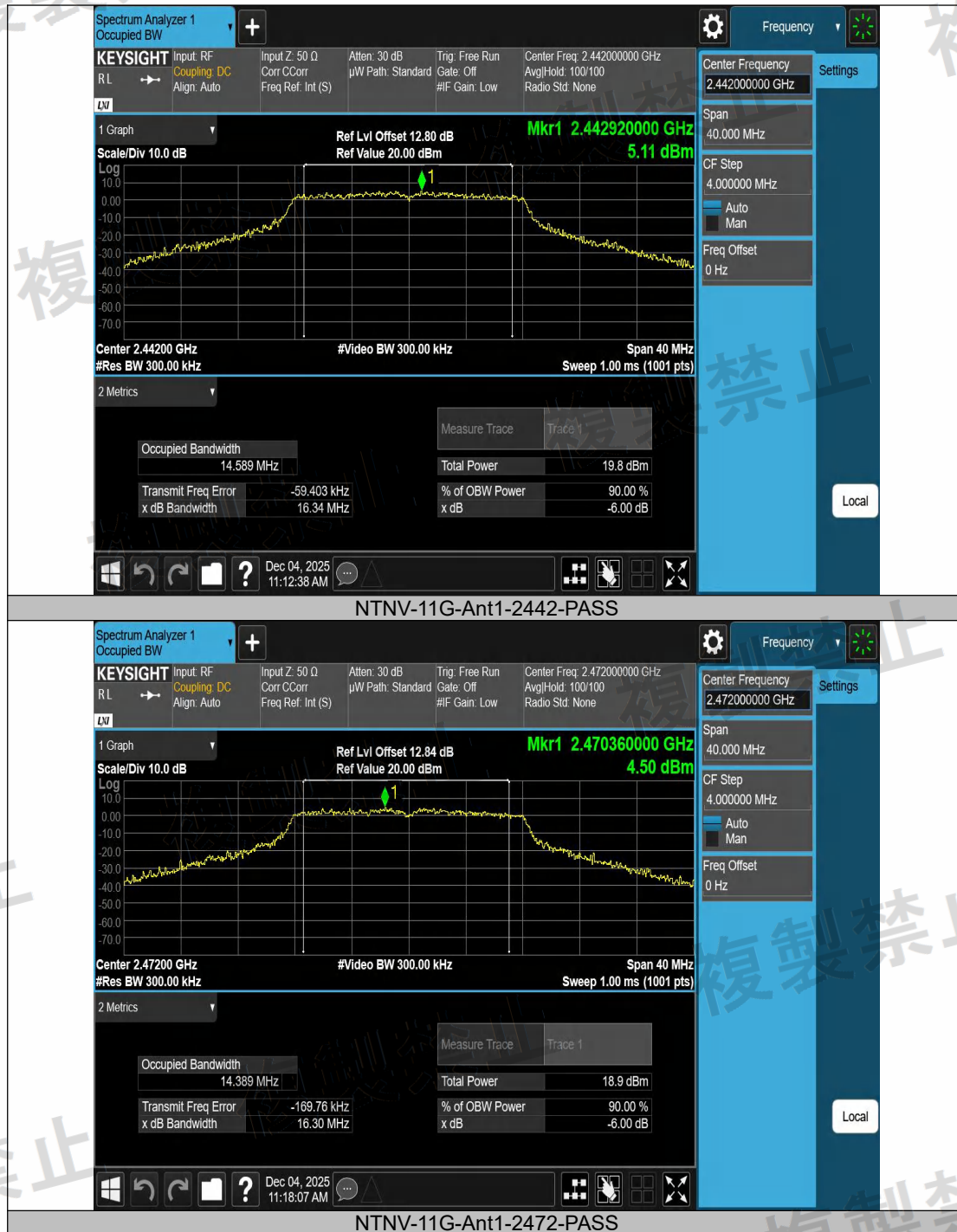


## Spread Bandwidth (90% Emission bandwidth)

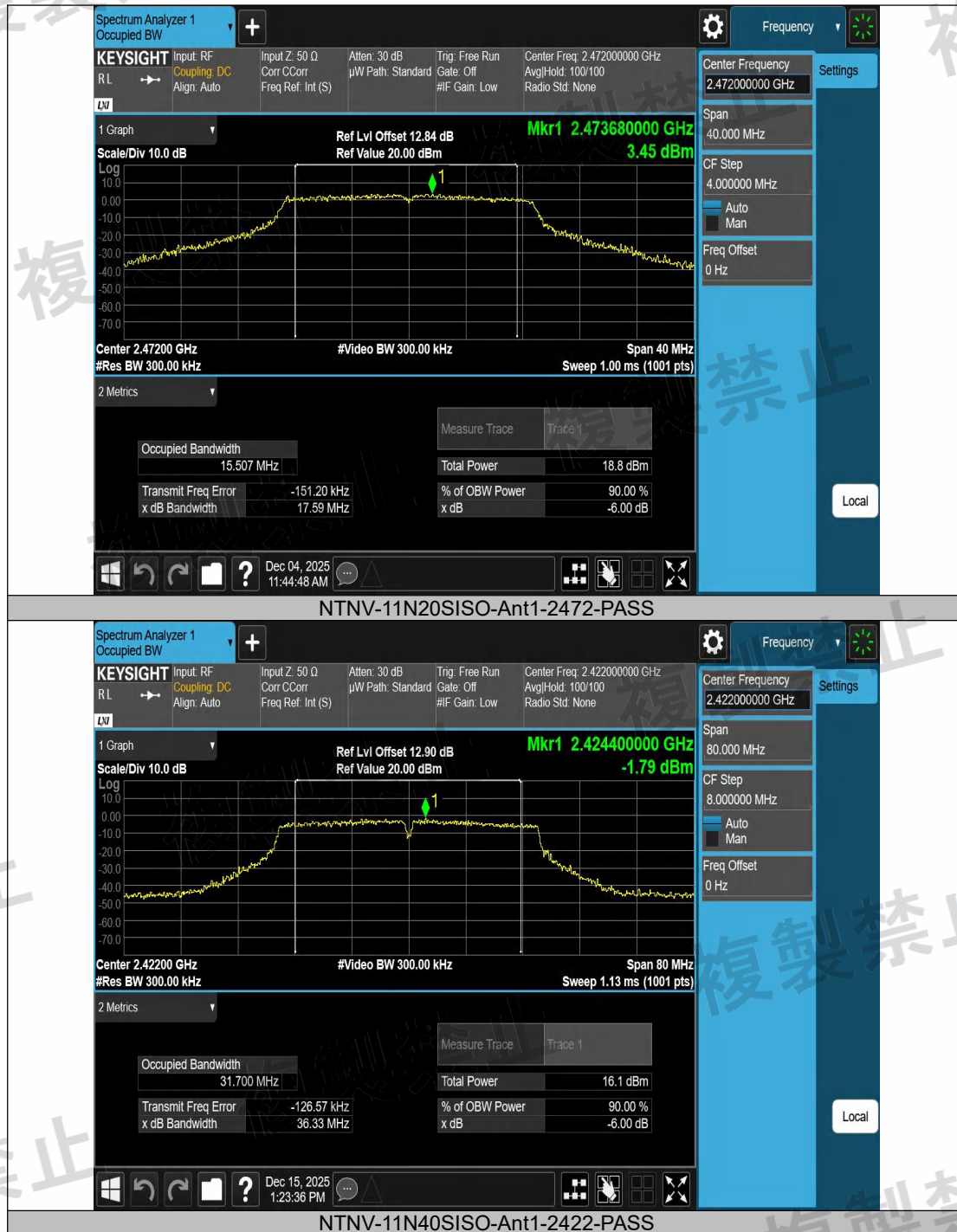
| TestCondition | TestMode  | Antenna | Frequency[MHz] | Result [MHz] | Limit [MHz] | SpreadFactor | Limit | Verdict |
|---------------|-----------|---------|----------------|--------------|-------------|--------------|-------|---------|
| NTNV          | 11B       | Ant1    | 2412           | 8.808        | ≥0.5        | 6.406        | >5    | PASS    |
| NTNV          | 11B       | Ant1    | 2442           | 8.832        | ≥0.5        | 6.423        | >5    | PASS    |
| NTNV          | 11B       | Ant1    | 2472           | 8.822        | ≥0.5        | 6.416        | >5    | PASS    |
| NTNV          | 11G       | Ant1    | 2412           | 14.478       | ≥0.5        | ---          | ---   | PASS    |
| NTNV          | 11G       | Ant1    | 2442           | 14.589       | ≥0.5        | ---          | ---   | PASS    |
| NTNV          | 11G       | Ant1    | 2472           | 14.389       | ≥0.5        | ---          | ---   | PASS    |
| NTNV          | 11N20SISO | Ant1    | 2412           | 15.403       | ≥0.5        | ---          | ---   | PASS    |
| NTNV          | 11N20SISO | Ant1    | 2442           | 15.494       | ≥0.5        | ---          | ---   | PASS    |
| NTNV          | 11N20SISO | Ant1    | 2472           | 15.507       | ≥0.5        | ---          | ---   | PASS    |
| NTNV          | 11N40SISO | Ant1    | 2422           | 31.700       | ≥0.5        | ---          | ---   | PASS    |
| NTNV          | 11N40SISO | Ant1    | 2442           | 31.715       | ≥0.5        | ---          | ---   | PASS    |
| NTNV          | 11N40SISO | Ant1    | 2462           | 31.543       | ≥0.5        | ---          | ---   | PASS    |

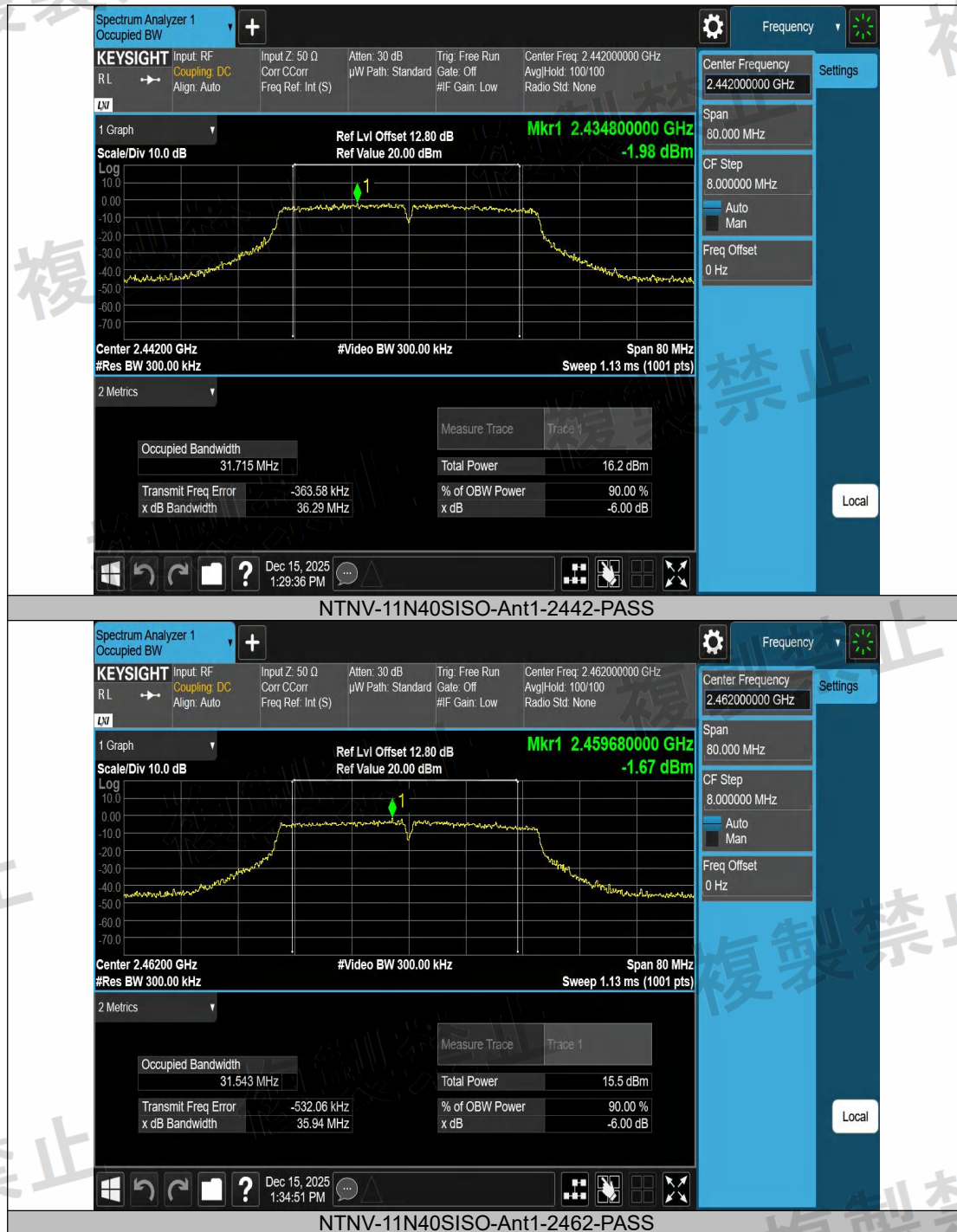












## 7.3 POWER TO ANTENNA (CONDUCTED)

### 7.3.1 Applicable Standard

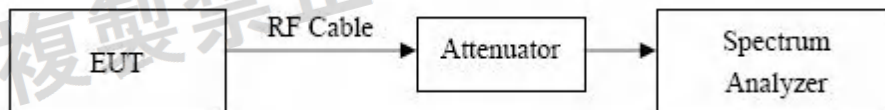
According to Equipment Regulations, art. 49.20,

### 7.3.2 Conformance Limit

The max permitted antenna power density shall not exceed 10mW/MHz and deviation of power density shall be within a range of +20% of declared power density.

Eirp: not exceed 12.14dBm/ MHz(OFDM.DS form 2400-2483.5 MHz)

### 7.3.3 Test Setup Block Diagram



### 7.3.4 Test Procedure

Set the EUT on the test frequency and the consecutive TX mode or continuous (constant period, constant burst length) burst TX mode.

In case of spreading code used, set on the test spreading code, then the modulation is performed with standard coding test signal.

(1) Measure the equivalent noise bandwidth at the spectrum analyzer for resolution bandwidth of 1 MHz, then read the value correcting the resolution bandwidth on the 1 MHz equivalent bandwidth. In case of a spreading bandwidth lower than 1 MHz, however, perform the correction only for a higher value than "Spreading bandwidth (MHz) / Equivalent noise bandwidth (MHz)".

(2) The attenuation value of the attenuator shall be set to achieve the optimal operating input level at the spectrum analyzer.

(3) Spectrum analyzer for seeking the maximum antenna power is set as below.

|                      |                                                                                                  |
|----------------------|--------------------------------------------------------------------------------------------------|
| Central Frequency    | Test frequency                                                                                   |
| Sweeping Bandwidth   | Approx. twice the Occupied Bandwidth                                                             |
| Resolution Bandwidth | 1 MHz                                                                                            |
| Video Bandwidth      | Approx. twice the resolution bandwidth (2MHz)                                                    |
| Y-Axis Scale         | 10 dB/Div                                                                                        |
| Sweep Time           | Minimum time to assure the measurement accuracy<br>(In case of burst wave, 1 burst per 1 sample) |
| Trigger Condition    | Free run                                                                                         |
| Data points          | More than 400 points                                                                             |
| Sweep Mode           | Consecutive sweep                                                                                |
| Phase-Detection Mode | Positive peak                                                                                    |
| Display mode         | Max-hold                                                                                         |

(4) Spectrum analyzer for measuring the antenna power is set as below. In this case, calibrate the indication of the RF Power Meter on the output of the EUT with the RF Power Meter connected to the IF output of the

spectrum analyzer.

|                      |                                                           |
|----------------------|-----------------------------------------------------------|
| Central Frequency    | Frequency to achieve the maximum power (sought frequency) |
| Sweeping Bandwidth   | 0 Hz                                                      |
| Resolution Bandwidth | 1 MHz                                                     |
| Video Bandwidth      | Same level as the resolution bandwidth                    |
| Sweep Mode           | Consecutive sweep                                         |
| Phase-Detection Mode | Sample                                                    |

#### Measurement Procedure

(1) No frequency hopping systems:

- Configure the settings of the spectrum analyzer to 2(3).
- After repeating sweeps (until no display changes are found), measure the maximum power frequency per MHz.
- Connect the high frequency power meter to the IF output of the spectrum analysers.
- Configure the settings of the spectrum analyzer to 2(4).
- Set the antenna power as follows:
  - Continuous waves: value indicated on the high frequency power meter, corrected according to 2(1).
  - Burst waves: value similarly corrected in the case of continuous waves and value calculated from the average power within bursts from rates of transmission times (i.e. correction on the duty-cycle, to find the average within the transmit burst)

#### 7.3.5 Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 25°C      |
| Relative Humidity: | 45%       |
| ATM Pressure:      | 1011 mbar |

#### 7.3.6 Test Results

| Test Condition | Test Mode     | Antenna | Frequency[MHz] | Result(dBm) | Result(mW/MHz) | Limit(mW/MHz) | Verdict |
|----------------|---------------|---------|----------------|-------------|----------------|---------------|---------|
| NTNV           | 11B           | Ant1    | 2412           | 8.96        | 7.8705         | ≤10           | PASS    |
| NTNV           | 11B           | Ant1    | 2442           | 8.19        | 6.5917         | ≤10           | PASS    |
| NTNV           | 11B           | Ant1    | 2472           | 6.46        | 4.4259         | ≤10           | PASS    |
| NTNV           | 11G           | Ant1    | 2412           | 8.84        | 7.6560         | ≤10           | PASS    |
| NTNV           | 11G           | Ant1    | 2442           | 9.18        | 8.2794         | ≤10           | PASS    |
| NTNV           | 11G           | Ant1    | 2472           | 9.19        | 8.2985         | ≤10           | PASS    |
| NTNV           | 11N20SI<br>SO | Ant1    | 2412           | 7.81        | 6.0395         | ≤10           | PASS    |
| NTNV           | 11N20SI<br>SO | Ant1    | 2442           | 8.68        | 7.3790         | ≤10           | PASS    |
| NTNV           | 11N20SI<br>SO | Ant1    | 2472           | 9.02        | 7.9799         | ≤10           | PASS    |
| NTNV           | 11N40SI<br>SO | Ant1    | 2422           | 1.74        | 1.4928         | ≤5            | PASS    |
| NTNV           | 11N40SI<br>SO | Ant1    | 2442           | 2.67        | 1.8493         | ≤5            | PASS    |
| NTNV           | 11N40SI<br>SO | Ant1    | 2462           | 0.56        | 1.1376         | ≤5            | PASS    |

| Test Condition | Test Mode     | Antenna | Frequency[MHz] | Power (mW/MHz) | RatedPower (mW/MHz) | Result (%) | Limit (%) | Verdict |
|----------------|---------------|---------|----------------|----------------|---------------------|------------|-----------|---------|
| NTNV           | 11B           | Ant1    | 2412           | 7.8705         | 10                  | -21.30     | +20       | PASS    |
| NTNV           | 11B           | Ant1    | 2442           | 6.5917         | 10                  | -34.08     | +20       | PASS    |
| NTNV           | 11B           | Ant1    | 2472           | 4.4259         | 10                  | -55.74     | +20       | PASS    |
| NTNV           | 11G           | Ant1    | 2412           | 7.6560         | 10                  | -23.44     | +20       | PASS    |
| NTNV           | 11G           | Ant1    | 2442           | 8.2794         | 10                  | -17.21     | +20       | PASS    |
| NTNV           | 11G           | Ant1    | 2472           | 8.2985         | 10                  | -17.01     | +20       | PASS    |
| NTNV           | 11N20SI<br>SO | Ant1    | 2412           | 6.0395         | 10                  | -39.61     | +20       | PASS    |
| NTNV           | 11N20SI<br>SO | Ant1    | 2442           | 7.3790         | 10                  | -26.21     | +20       | PASS    |
| NTNV           | 11N20SI<br>SO | Ant1    | 2472           | 7.9799         | 10                  | -20.20     | +20       | PASS    |
| NTNV           | 11N40SI<br>SO | Ant1    | 2422           | 1.4928         | 2                   | -25.36     | +20       | PASS    |
| NTNV           | 11N40SI<br>SO | Ant1    | 2442           | 1.8493         | 2                   | -7.54      | +20       | PASS    |
| NTNV           | 11N40SI<br>SO | Ant1    | 2462           | 1.1376         | 2                   | -43.12     | +20       | PASS    |

| Test Condition | Test Mode     | Antenna | Frequency[MHz] | Result(dBm/MHz) | EIRP(dBm/MHz) | Limit(dBm/MHz) | Verdict |
|----------------|---------------|---------|----------------|-----------------|---------------|----------------|---------|
| NTNV           | 11B           | Ant1    | 2412           | 8.96            | 11.89         | ≤12.14         | PASS    |
| NTNV           | 11B           | Ant1    | 2442           | 8.19            | 11.12         | ≤12.14         | PASS    |
| NTNV           | 11B           | Ant1    | 2472           | 6.46            | 9.39          | ≤12.14         | PASS    |
| NTNV           | 11G           | Ant1    | 2412           | 8.84            | 11.77         | ≤12.14         | PASS    |
| NTNV           | 11G           | Ant1    | 2442           | 9.18            | 12.11         | ≤12.14         | PASS    |
| NTNV           | 11G           | Ant1    | 2472           | 9.19            | 12.12         | ≤12.14         | PASS    |
| NTNV           | 11N20SI<br>SO | Ant1    | 2412           | 7.81            | 10.74         | ≤12.14         | PASS    |
| NTNV           | 11N20SI<br>SO | Ant1    | 2442           | 8.68            | 11.61         | ≤12.14         | PASS    |
| NTNV           | 11N20SI<br>SO | Ant1    | 2472           | 9.02            | 11.95         | ≤12.14         | PASS    |
| NTNV           | 11N40SI<br>SO | Ant1    | 2422           | 1.74            | 4.67          | ≤9.13          | PASS    |
| NTNV           | 11N40SI<br>SO | Ant1    | 2442           | 2.67            | 5.6           | ≤9.13          | PASS    |
| NTNV           | 11N40SI<br>SO | Ant1    | 2462           | 0.56            | 3.49          | ≤9.13          | PASS    |

## 7.4 SPURIOUS EMISSIONS INTENSITY

### 7.4.1 Applicable Standard

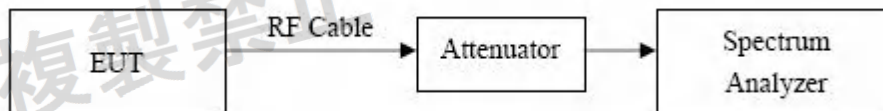
According to Item 19 of Article 2 Paragraph 1.

### 7.4.2 Conformance Limit

Permissible mean power of spurious emission of each frequency supplied to a feeder, that is, mean power of spurious emission in the 1 MHz bandwidth at frequency  $f$  other than frequency band used shall be as follows:

- (1) Below 2387MHz:  $2.5\mu\text{W}/\text{MHz}$  (-26dB)
- (2) 2387 to 2400MHz:  $25\mu\text{W}/\text{MHz}$  (-16dB)
- (3) 2483.5 through 2496.5MHz:  $25\mu\text{W}/\text{MHz}$  (-16dB)
- (4) Over 2496.5MHz:  $2.5\mu\text{W}/\text{MHz}$  (-26dB)

### 7.4.3 Test Setup Block Diagram



### 7.4.4 Test Procedure

(1) Spectrum analyzer for seeking the spurious emission is set as below

|                      |                                                                                                        |
|----------------------|--------------------------------------------------------------------------------------------------------|
| Sweeping Bandwidth   | For seeking the spurious emission, from frequency lowest possible to the 5 times the carrier frequency |
| Resolution Bandwidth | 1 MHz                                                                                                  |
| Video Bandwidth      | Approx. As same as Resolution bandwidth (1 MHz)                                                        |
| Y-Axis Scale         | 10 dB/Div                                                                                              |
| Input Level          | Value of maximum dynamic range                                                                         |
| Sweep Time           | Minimum time to assure the measurement accuracy (Note 1)                                               |
| Sweep Mode           | Single sweep                                                                                           |
| Phase-Detection Mode | Positive peak                                                                                          |

(2) The settings of the spectrum analyzer while conducting spurious amplitude measurements are as follows:

- Central Frequency: Acquired spurious frequencies in (1)
- Sweep Frequency 0 Hz
- Resolution Bandwidth 1 MHz
- Video Bandwidth same as Resolution Bandwidth
- Note: take into account that the requirement limits the power in a bandwidth of 1 MHz.
- If the measurement is carried out with a bandwidth of 100 kHz (for frequencies below 1 GHz), the limit shall be reduced with 10 dB.
- For example  $2.5\text{ uW}$  in 1 MHz = -26 dBm limit, becomes -36 dBm for 100 kHz bandwidth.
- Y-Axis Scale 10 dB/Div
- Input Level: choose input level within the linear range of the SA mixer (so that no additional spurious are generated by the mixer)
- Sweep Time: Minimum amount of time to ensure measurement accuracy. However, in the case of burst waves, time exceeds duration of 1 burst.
- Data Points Over 400 points
- Sweep Mode: Single sweep

- Detection Mode Sample (BIN-Width  $\ll$  RBW, so that all spurious emissions are captured) [BIN-width is the frequency difference between 2 adjacent sample points on the display]

(3) Set EUT as occupied bandwidth is measure. That is, Set the EUT on the test frequency and the continuous

TX mode or continuous (constant period, constant burst length) burst TX mode. In case of spreading code used, set on the test spreading code, then the modulation is performed with standard coding test signal.

The spectrum analyzer is set as 2 (1). Seek the spurious emission If the amplitude of the sought spurious emission satisfies the specified value (in case of 2 (2) Note 1, the specified value is -3dB), the measurement of 2 (2) is not performed, then the estimated value is employed as the measured value.

In case the sought spurious emission amplitude exceeds the specified value, seek the spurious frequency by narrowing the sweeping band sequentially as 100 MHz, 10 MHz, 1 MHz for the purpose of higher accuracy of the spectrum analyzer. Set the spectrum analyzer as 2 (2). Estimate the mean value of the spurious amplitude, then employ it as the measured value (In case DSSS as well as OFDM with burst wave, the mean inside of the burst).

Sweep Bandwidth: 30MHz~2387MHz, 2483.5MHz~2496.5MHz, 2496.5MHz~12500MHz

Respectively mark the maximum results in the above sweep bandwidth.

#### 7.4.5 Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 25 °C     |
| Relative Humidity: | 45%       |
| ATM Pressure:      | 1011 mbar |

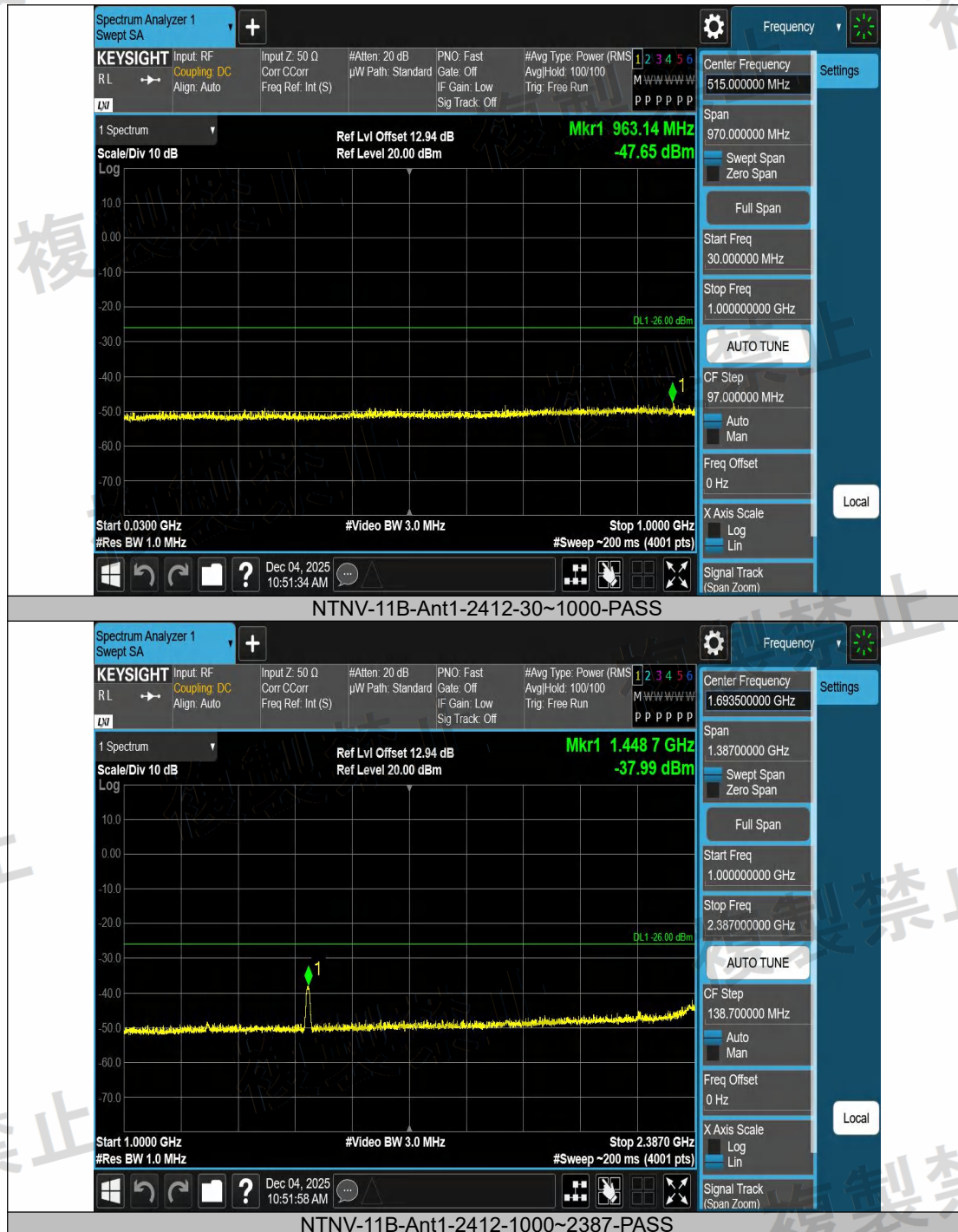
#### 7.4.6 Test Results

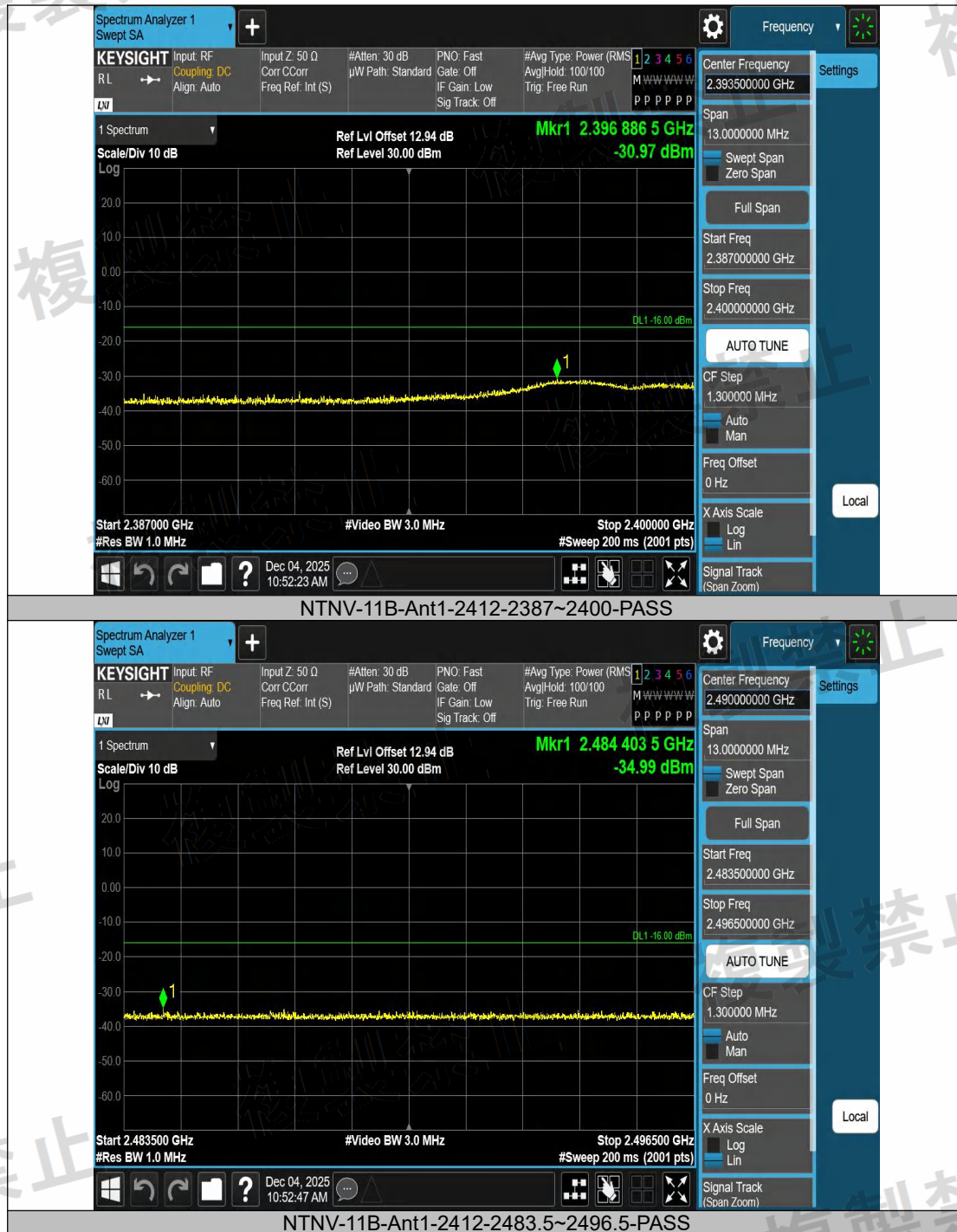
| TestCondition | TestMode      | Antenna | Frequen<br>cy[MHz] | Freq.Range<br>[MHz] | Freq.<br>[MHz] | Result<br>[dBm] | Limit<br>[dBm] | Result<br>[μW/MH<br>] | Limit<br>[μW/M<br>H] | Verdict               |
|---------------|---------------|---------|--------------------|---------------------|----------------|-----------------|----------------|-----------------------|----------------------|-----------------------|
| NTNV          | 11B           | Ant1    | 2412               | 30~1000             | 963.14         | -47.65          | ≤-26           | 0.01718               | ≤2.5                 | PASS                  |
| NTNV          | 11B           | Ant1    | 2412               | 1000~2387           | 1448.69        | -37.99          | ≤-26           | 0.15885               | ≤2.5                 | PASS                  |
| NTNV          | 11B           | Ant1    | 2412               | 2387~2400           | 2396.89        | -30.97          | ≤-16           | 0.79983               | ≤25                  | PASS                  |
| NTNV          | 11B           | Ant1    | 2412               | 2483.5~2496.5       | 2484.40        | -34.99          | ≤-16           | 0.31696               | ≤25                  | PASS                  |
| NTNV          | 11B           | Ant1    | 2412               | 2496.5~3000         | 2501.21        | -44.55          | ≤-26           | 0.03508               | ≤2.5                 | PASS                  |
| NTNV          | 11B           | Ant1    | 2412               | 3000~13000          | 4824.00        | -37.79          | ≤-26           | 0.16634               | ≤2.5                 | PASS                  |
| NTNV          | 11B           | Ant1    | 2442               | 30~1000             | 840.44         | -48.17          | ≤-26           | 0.01524               | ≤2.5                 | PASS                  |
| NTNV          | 11B           | Ant1    | 2442               | 1000~2387           | 1464.99        | -38.62          | ≤-26           | 0.13740               | ≤2.5                 | PASS                  |
| NTNV          | 11B           | Ant1    | 2442               | 2387~2400           | 2398.15        | -34.96          | ≤-16           | 0.31915               | ≤25                  | PASS                  |
| NTNV          | 11B           | Ant1    | 2442               | 2483.5~2496.5       | 2488.13        | -35.10          | ≤-16           | 0.30903               | ≤25                  | PASS                  |
| NTNV          | 11B           | Ant1    | 2442               | 2496.5~3000         | 2503.42        | -45.25          | ≤-26           | 0.02985               | ≤2.5                 | PASS                  |
| NTNV          | 11B           | Ant1    | 2442               | 3000~13000          | 4884.00        | -37.09          | ≤-26           | 0.19543               | ≤2.5                 | PASS                  |
| NTNV          | 11B           | Ant1    | 2472               | 30~1000             | 897.18         | -47.03          | ≤-26           | 0.01982               | ≤2.5                 | PASS                  |
| NTNV          | 11B           | Ant1    | 2472               | 1000~2387           | 1484.41        | -40.16          | ≤-26           | 0.09638               | ≤2.5                 | PASS                  |
| NTNV          | 11B           | Ant1    | 2472               | 2387~2400           | 2394.21        | -35.47          | ≤-16           | 0.28379               | ≤25                  | PASS                  |
| NTNV          | 11B           | Ant1    | 2472               | 2483.5~2496.5       | 2485.56        | -31.36          | ≤-16           | 0.73114               | ≤25                  | PASS                  |
| NTNV          | 11B           | Ant1    | 2472               | 2496.5~3000         | 2502.79        | -44.05          | ≤-26           | 0.03936               | ≤2.5                 | PASS                  |
| NTNV          | 11B           | Ant1    | 2472               | 3000~13000          | 4944.00        | -37.12          | ≤-26           | 0.19409               | ≤2.5                 | PASS                  |
| NTNV          | 11G           | Ant1    | 2412               | 30~1000             | 918.52         | -47.51          | ≤-26           | 0.01774               | ≤2.5                 | PASS                  |
| NTNV          | 11G           | Ant1    | 2412               | 1000~2387           | 2261.82        | -28.55          | ≤-26           | 1.39637               | ≤2.5                 | See<br>table<br>below |
| NTNV          | 11G           | Ant1    | 2412               | 2387~2400           | 2396.69        | -35.59          | ≤-16           | 0.27606               | ≤25                  | PASS                  |
| NTNV          | 11G           | Ant1    | 2412               | 2483.5~2496.5       | 2489.30        | -35.08          | ≤-16           | 0.31046               | ≤25                  | PASS                  |
| NTNV          | 11G           | Ant1    | 2412               | 2496.5~3000         | 2527.47        | -45.35          | ≤-26           | 0.02917               | ≤2.5                 | PASS                  |
| NTNV          | 11G           | Ant1    | 2412               | 3000~13000          | 5156.50        | -42.81          | ≤-26           | 0.05236               | ≤2.5                 | PASS                  |
| NTNV          | 11G           | Ant1    | 2442               | 30~1000             | 861.78         | -47.93          | ≤-26           | 0.01611               | ≤2.5                 | PASS                  |
| NTNV          | 11G           | Ant1    | 2442               | 1000~2387           | 2204.61        | -29.29          | ≤-26           | 1.17761               | ≤2.5                 | PASS                  |
| NTNV          | 11G           | Ant1    | 2442               | 2387~2400           | 2399.94        | -30.14          | ≤-16           | 0.96828               | ≤25                  | PASS                  |
| NTNV          | 11G           | Ant1    | 2442               | 2483.5~2496.5       | 2487.19        | -32.70          | ≤-16           | 0.53703               | ≤25                  | PASS                  |
| NTNV          | 11G           | Ant1    | 2442               | 2496.5~3000         | 2510.93        | -35.65          | ≤-26           | 0.27227               | ≤2.5                 | PASS                  |
| NTNV          | 11G           | Ant1    | 2442               | 3000~13000          | 4884.50        | -36.44          | ≤-26           | 0.22699               | ≤2.5                 | PASS                  |
| NTNV          | 11G           | Ant1    | 2472               | 30~1000             | 987.63         | -47.90          | ≤-26           | 0.01622               | ≤2.5                 | PASS                  |
| NTNV          | 11G           | Ant1    | 2472               | 1000~2387           | 2163.35        | -29.36          | ≤-26           | 1.15878               | ≤2.5                 | PASS                  |
| NTNV          | 11G           | Ant1    | 2472               | 2387~2400           | 2393.26        | -30.65          | ≤-16           | 0.86099               | ≤25                  | PASS                  |
| NTNV          | 11G           | Ant1    | 2472               | 2483.5~2496.5       | 2483.85        | -8.19           | ≤-16           | 151.705<br>04         | ≤25                  | See<br>table<br>below |
| NTNV          | 11G           | Ant1    | 2472               | 2496.5~3000         | 2781.13        | -45.76          | ≤-26           | 0.02655               | ≤2.5                 | PASS                  |
| NTNV          | 11G           | Ant1    | 2472               | 3000~13000          | 4033.50        | -42.44          | ≤-26           | 0.05702               | ≤2.5                 | PASS                  |
| NTNV          | 11N20SI<br>SO | Ant1    | 2412               | 30~1000             | 885.54         | -48.56          | ≤-26           | 0.01393               | ≤2.5                 | PASS                  |
| NTNV          | 11N20SI<br>SO | Ant1    | 2412               | 1000~2387           | 2385.96        | -30.94          | ≤-26           | 0.80538               | ≤2.5                 | PASS                  |
| NTNV          | 11N20SI<br>SO | Ant1    | 2412               | 2387~2400           | 2399.84        | -5.36           | ≤-16           | 291.071<br>71         | ≤25                  | See<br>table<br>below |
| NTNV          | 11N20SI<br>SO | Ant1    | 2412               | 2483.5~2496.5       | 2490.97        | -34.78          | ≤-16           | 0.33266               | ≤25                  | PASS                  |
| NTNV          | 11N20SI<br>SO | Ant1    | 2412               | 2496.5~3000         | 2978.50        | -44.63          | ≤-26           | 0.03443               | ≤2.5                 | PASS                  |
| NTNV          | 11N20SI<br>SO | Ant1    | 2412               | 3000~13000          | 11676.00       | -43.02          | ≤-26           | 0.04989               | ≤2.5                 | PASS                  |
| NTNV          | 11N20SI<br>SO | Ant1    | 2442               | 30~1000             | 849.41         | -48.53          | ≤-26           | 0.01403               | ≤2.5                 | PASS                  |
| NTNV          | 11N20SI<br>SO | Ant1    | 2442               | 1000~2387           | 2181.38        | -31.61          | ≤-26           | 0.69024               | ≤2.5                 | PASS                  |

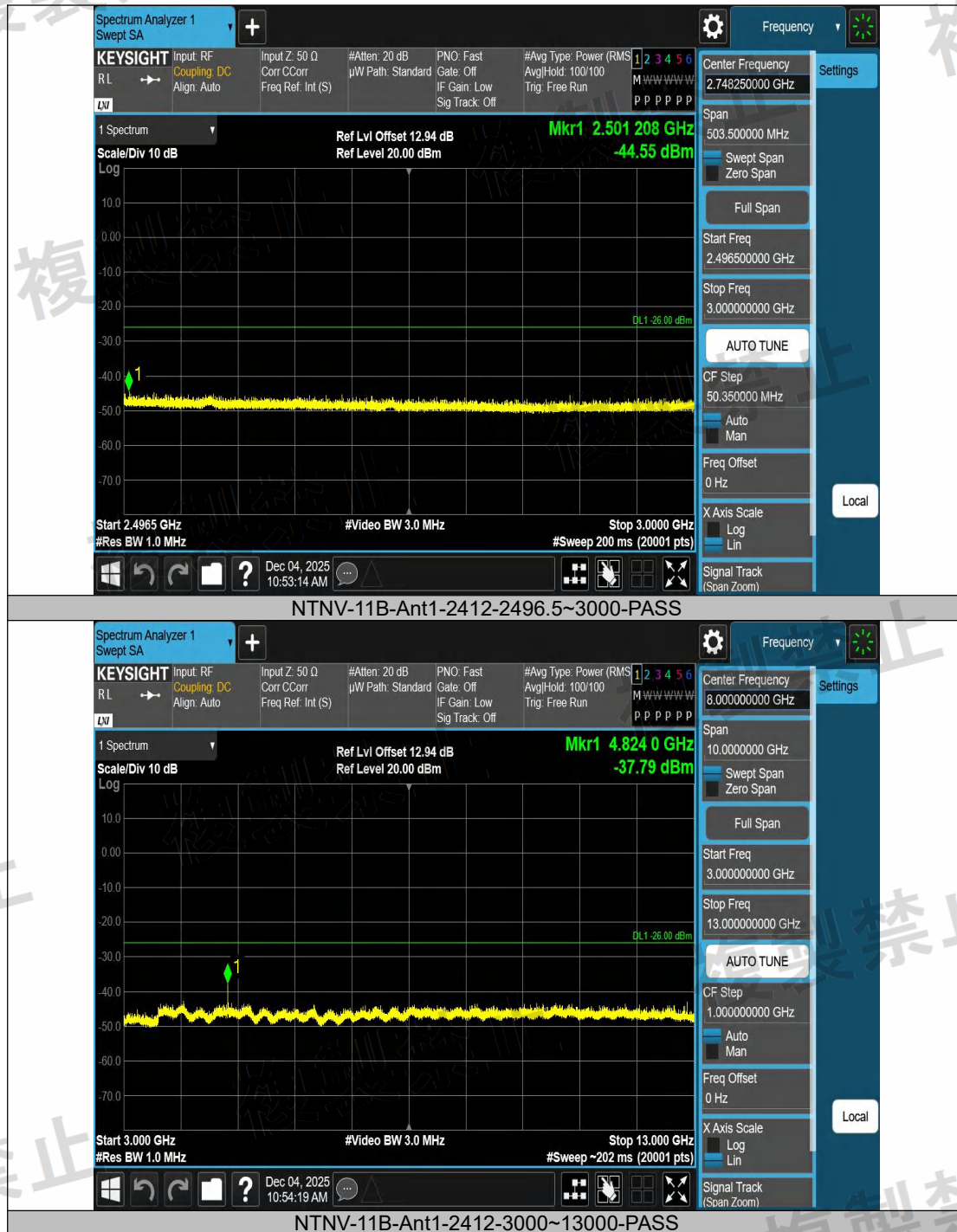
|      |               |      |      |               |         |        |      |               |      |                       |
|------|---------------|------|------|---------------|---------|--------|------|---------------|------|-----------------------|
| NTNV | 11N20SI<br>SO | Ant1 | 2442 | 2387~2400     | 2396.31 | -30.67 | ≤-16 | 0.85704       | ≤25  | PASS                  |
| NTNV | 11N20SI<br>SO | Ant1 | 2442 | 2483.5~2496.5 | 2494.89 | -33.58 | ≤-16 | 0.43853       | ≤25  | PASS                  |
| NTNV | 11N20SI<br>SO | Ant1 | 2442 | 2496.5~3000   | 2505.87 | -36.93 | ≤-26 | 0.20277       | ≤2.5 | PASS                  |
| NTNV | 11N20SI<br>SO | Ant1 | 2442 | 3000~13000    | 4889.50 | -37.73 | ≤-26 | 0.16866       | ≤2.5 | PASS                  |
| NTNV | 11N20SI<br>SO | Ant1 | 2472 | 30~1000       | 890.88  | -48.10 | ≤-26 | 0.01549       | ≤2.5 | PASS                  |
| NTNV | 11N20SI<br>SO | Ant1 | 2472 | 1000~2387     | 2343.66 | -31.49 | ≤-26 | 0.70958       | ≤2.5 | PASS                  |
| NTNV | 11N20SI<br>SO | Ant1 | 2472 | 2387~2400     | 2393.70 | -30.83 | ≤-16 | 0.82604       | ≤25  | PASS                  |
| NTNV | 11N20SI<br>SO | Ant1 | 2472 | 2483.5~2496.5 | 2483.77 | -6.50  | ≤-16 | 223.872<br>11 | ≤25  | See<br>table<br>below |
| NTNV | 11N20SI<br>SO | Ant1 | 2472 | 2496.5~3000   | 2499.55 | -45.81 | ≤-26 | 0.02624       | ≤2.5 | PASS                  |
| NTNV | 11N20SI<br>SO | Ant1 | 2472 | 3000~13000    | 4009.50 | -42.48 | ≤-26 | 0.05649       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2422 | 30~1000       | 901.30  | -48.89 | ≤-26 | 0.01291       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2422 | 1000~2387     | 2386.31 | -34.03 | ≤-26 | 0.39537       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2422 | 2387~2400     | 2399.99 | -13.85 | ≤-16 | 41.2097<br>5  | ≤25  | See<br>table<br>below |
| NTNV | 11N40SI<br>SO | Ant1 | 2422 | 2483.5~2496.5 | 2486.46 | -35.17 | ≤-16 | 0.30409       | ≤25  | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2422 | 2496.5~3000   | 2919.06 | -45.20 | ≤-26 | 0.03020       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2422 | 3000~13000    | 4014.00 | -43.02 | ≤-26 | 0.04989       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2442 | 30~1000       | 863.47  | -48.44 | ≤-26 | 0.01432       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2442 | 1000~2387     | 2232.70 | -32.64 | ≤-26 | 0.54450       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2442 | 2387~2400     | 2399.61 | -32.48 | ≤-16 | 0.56494       | ≤25  | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2442 | 2483.5~2496.5 | 2491.29 | -34.98 | ≤-16 | 0.31769       | ≤25  | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2442 | 2496.5~3000   | 2557.73 | -42.66 | ≤-26 | 0.05420       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2442 | 3000~13000    | 8080.00 | -42.41 | ≤-26 | 0.05741       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2462 | 30~1000       | 971.87  | -48.28 | ≤-26 | 0.01486       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2462 | 1000~2387     | 2233.04 | -33.33 | ≤-26 | 0.46452       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2462 | 2387~2400     | 2394.49 | -33.07 | ≤-16 | 0.49317       | ≤25  | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2462 | 2483.5~2496.5 | 2483.53 | -15.02 | ≤-16 | 31.4774<br>8  | ≤25  | See<br>table<br>below |
| NTNV | 11N40SI<br>SO | Ant1 | 2462 | 2496.5~3000   | 2595.82 | -45.99 | ≤-26 | 0.02518       | ≤2.5 | PASS                  |
| NTNV | 11N40SI<br>SO | Ant1 | 2462 | 3000~13000    | 4049.50 | -42.81 | ≤-26 | 0.05236       | ≤2.5 | PASS                  |

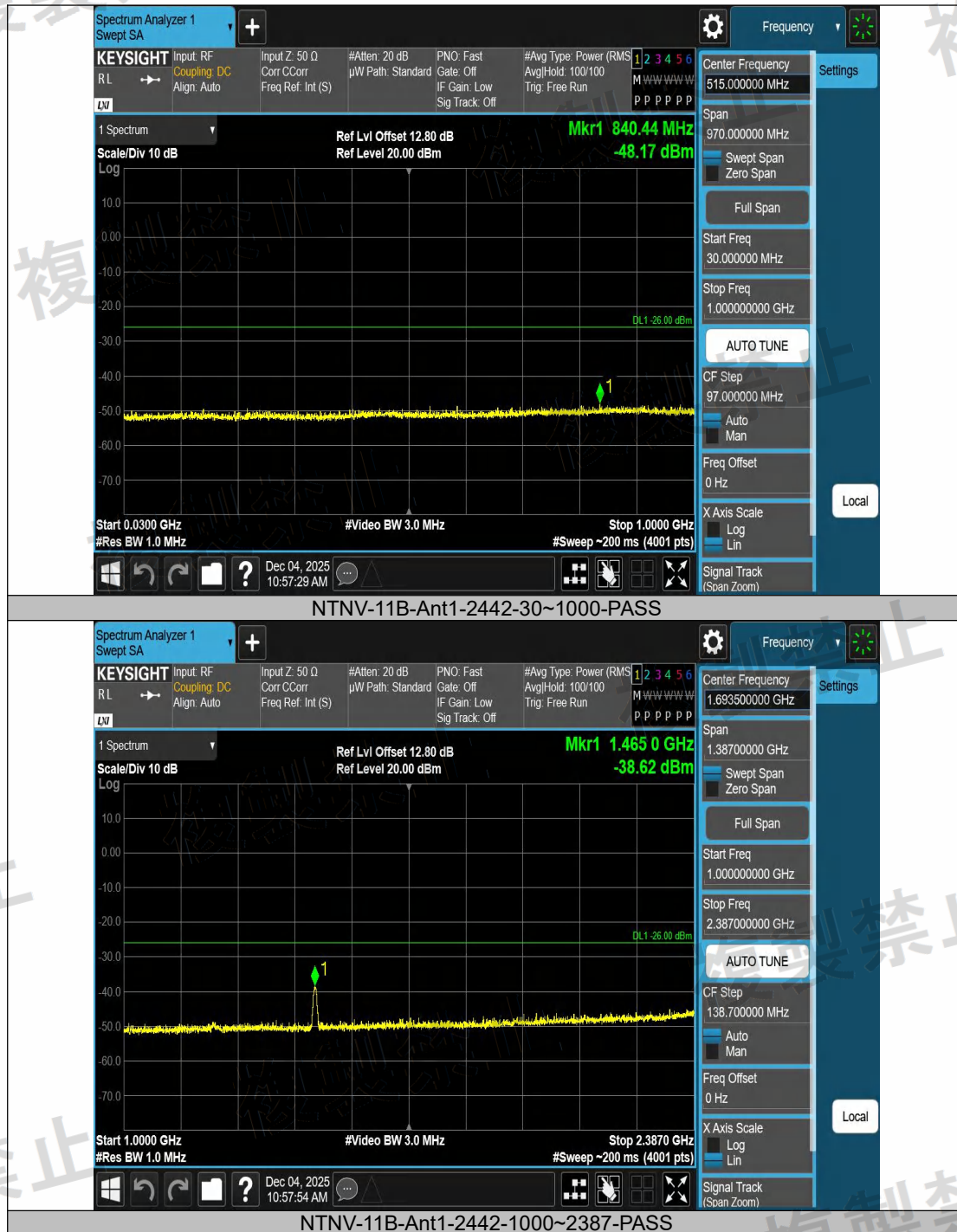
| TestCondition | TestMode | Antenna | Frequen<br>cy[MHz] | Freq.<br>[MHz] | Result<br>[dBm] | Gain<br>[dBi] | EIRP<br>Result | Result<br>[μW/MH] | Limit<br>[μW/M] | Verdict |
|---------------|----------|---------|--------------------|----------------|-----------------|---------------|----------------|-------------------|-----------------|---------|
|---------------|----------|---------|--------------------|----------------|-----------------|---------------|----------------|-------------------|-----------------|---------|

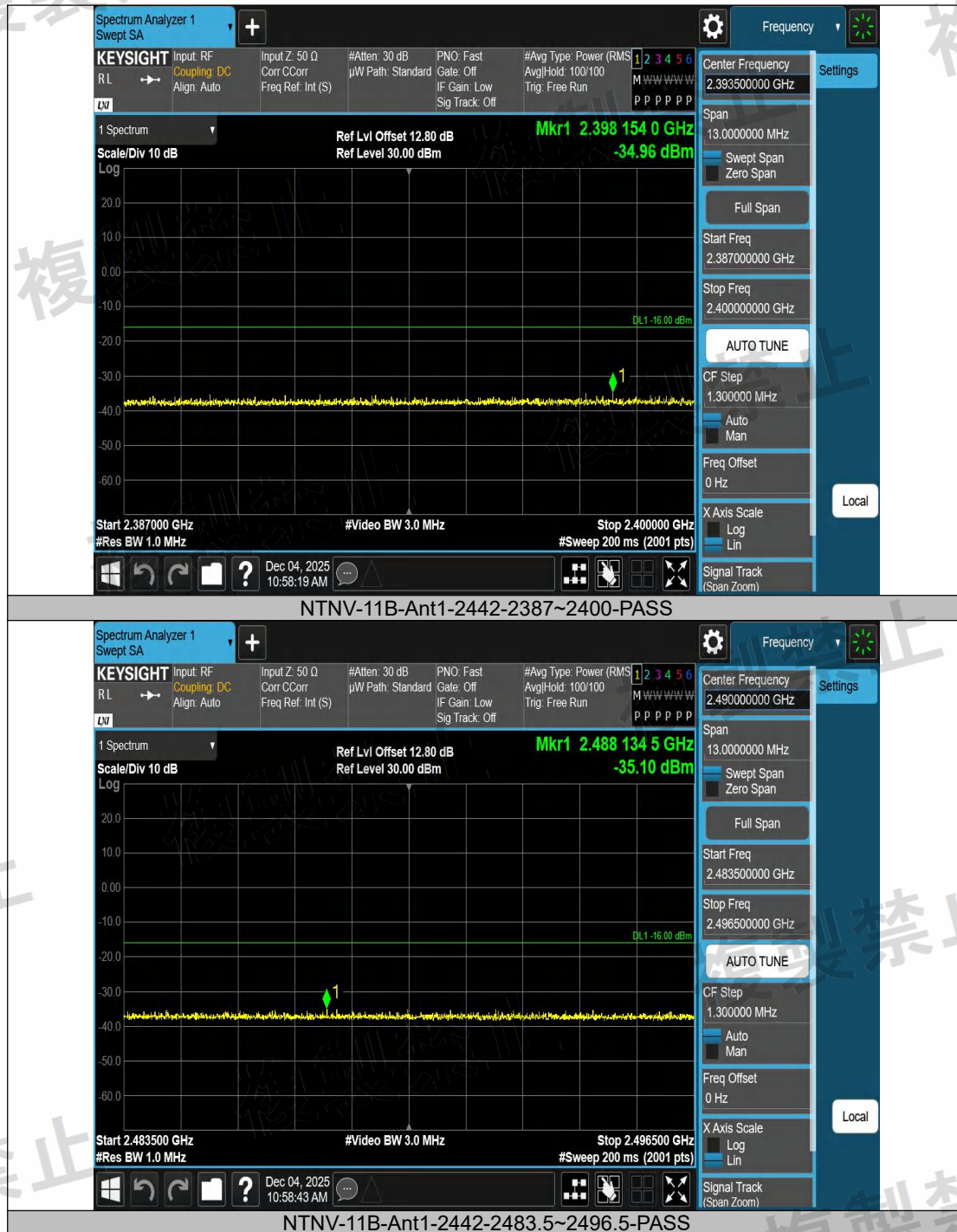
|      |               |      |      |         |        |   | [dBm]  |         | [H]  |      |
|------|---------------|------|------|---------|--------|---|--------|---------|------|------|
| NTNV | 11G           | Ant1 | 2412 | 2258.92 | -57.17 | 0 | -57.17 | 0.00192 | ≤2.5 | PASS |
| NTNV | 11G           | Ant1 | 2472 | 2483.50 | -57.02 | 0 | -57.02 | 0.00199 | ≤25  | PASS |
| NTNV | 11N20SI<br>SO | Ant1 | 2412 | 2399.87 | -56.67 | 0 | -56.67 | 0.00215 | ≤25  | PASS |
| NTNV | 11N20SI<br>SO | Ant1 | 2472 | 2483.52 | -57.02 | 0 | -57.02 | 0.00199 | ≤25  | PASS |
| NTNV | 11N40SI<br>SO | Ant1 | 2422 | 2399.86 | -56.49 | 0 | -56.49 | 0.00224 | ≤25  | PASS |
| NTNV | 11N40SI<br>SO | Ant1 | 2462 | 2483.56 | -56.95 | 0 | -56.95 | 0.00202 | ≤25  | PASS |

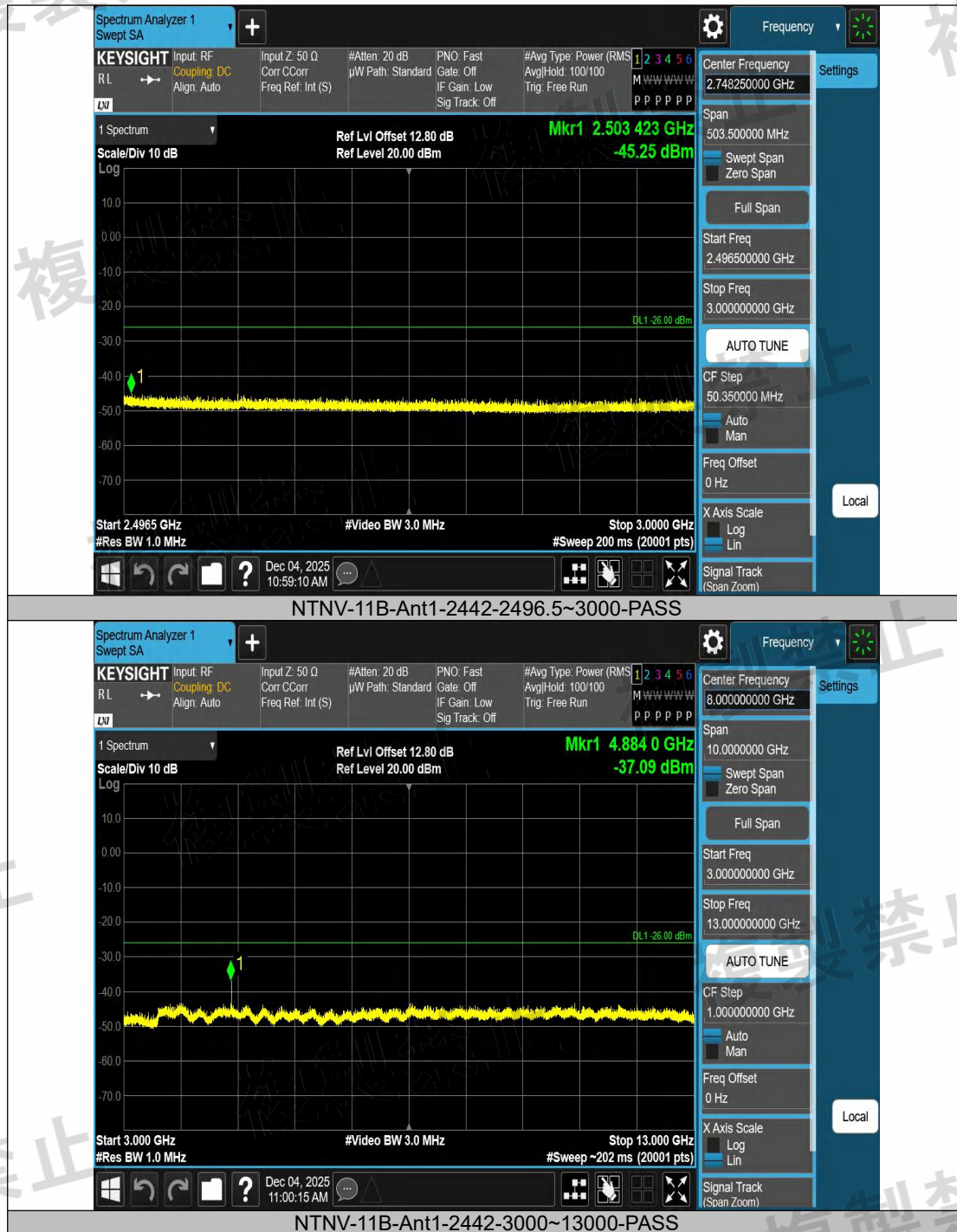


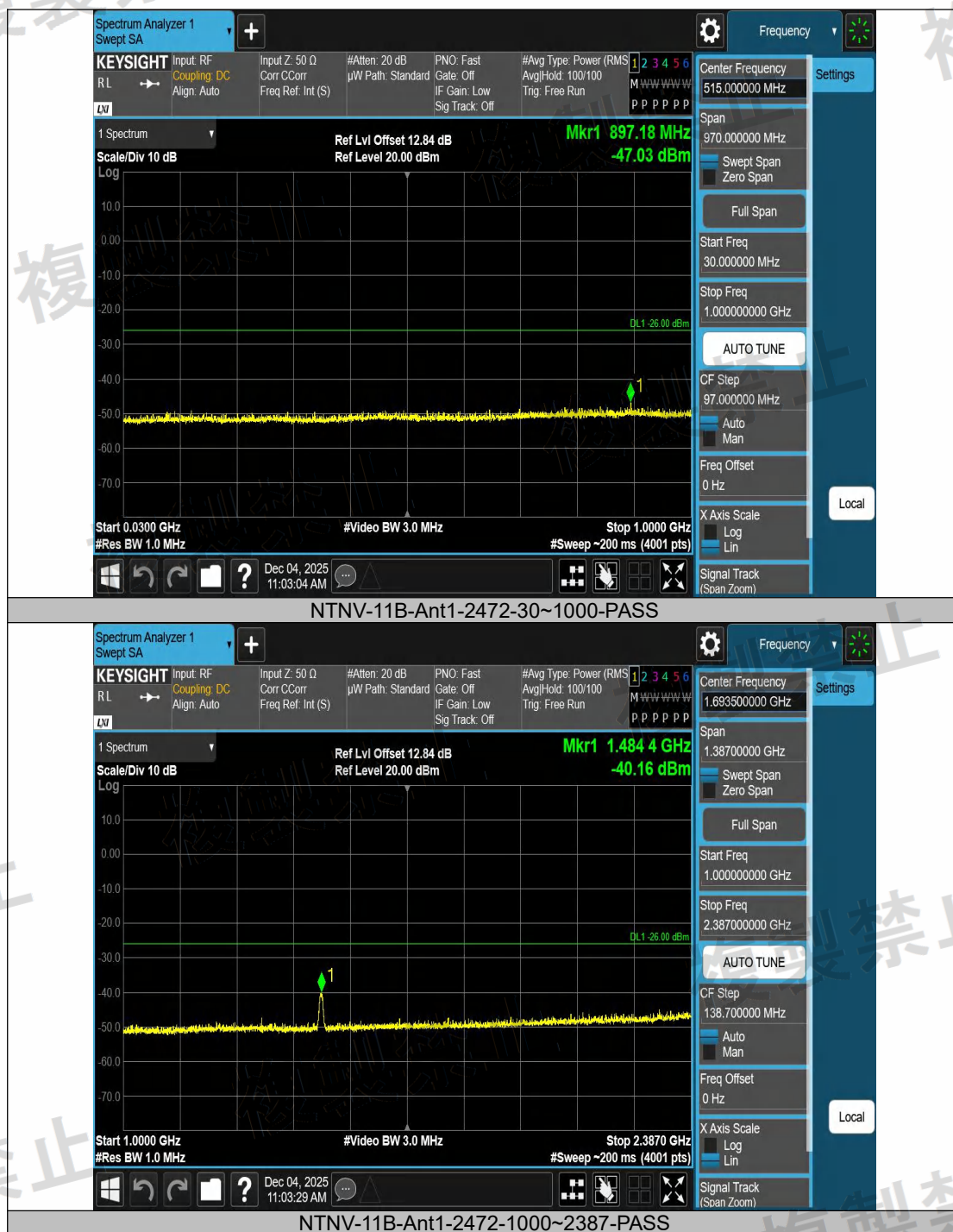


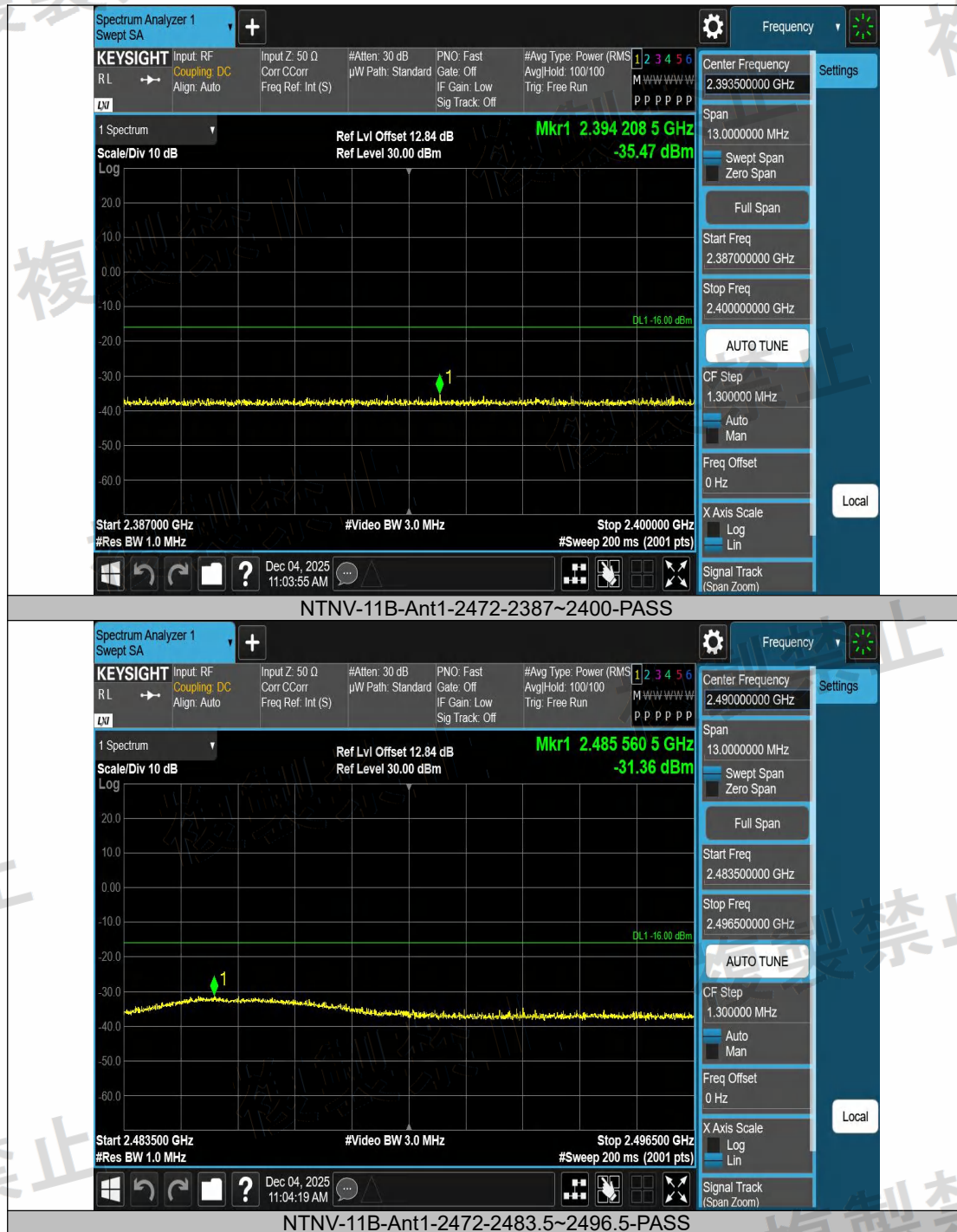


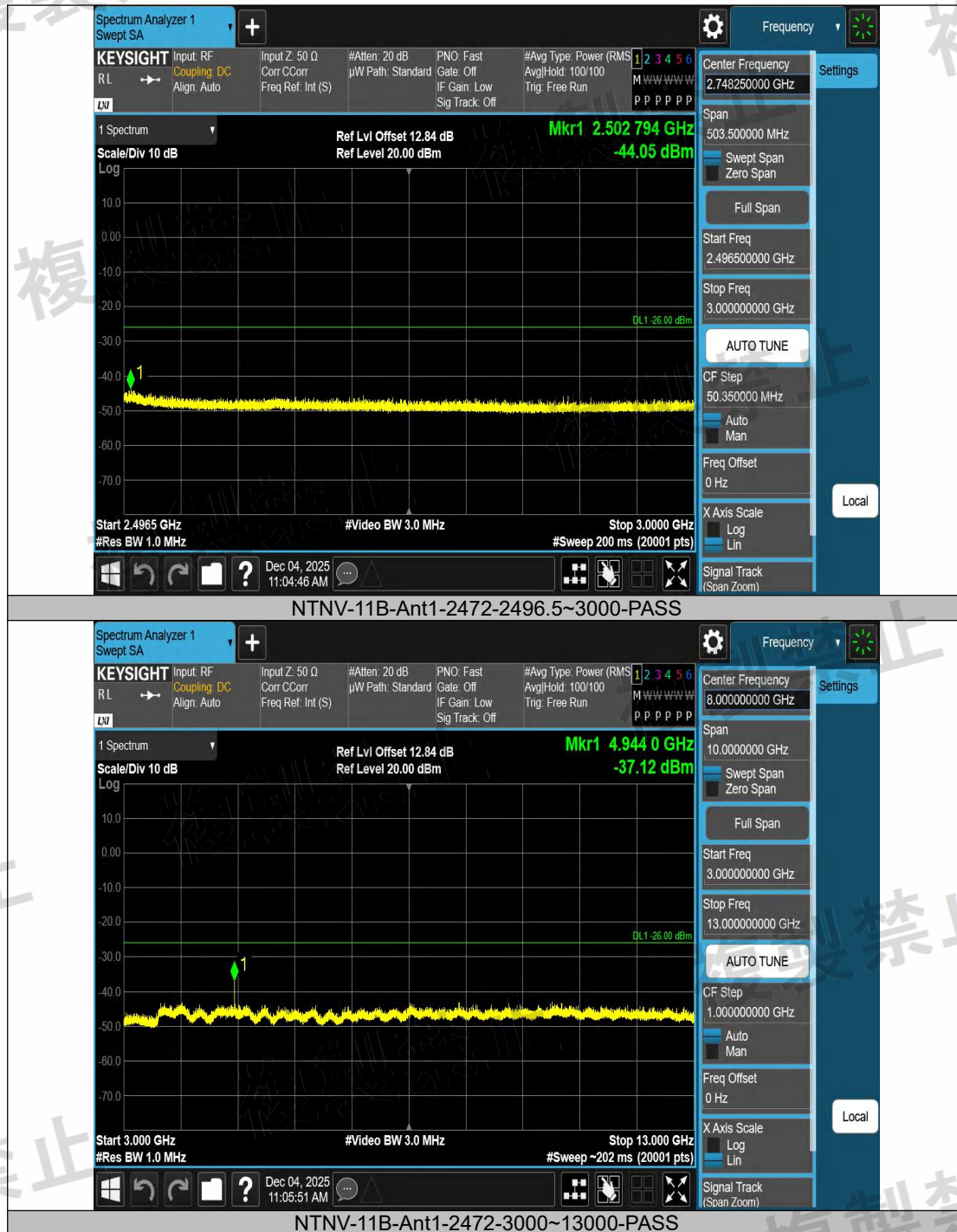


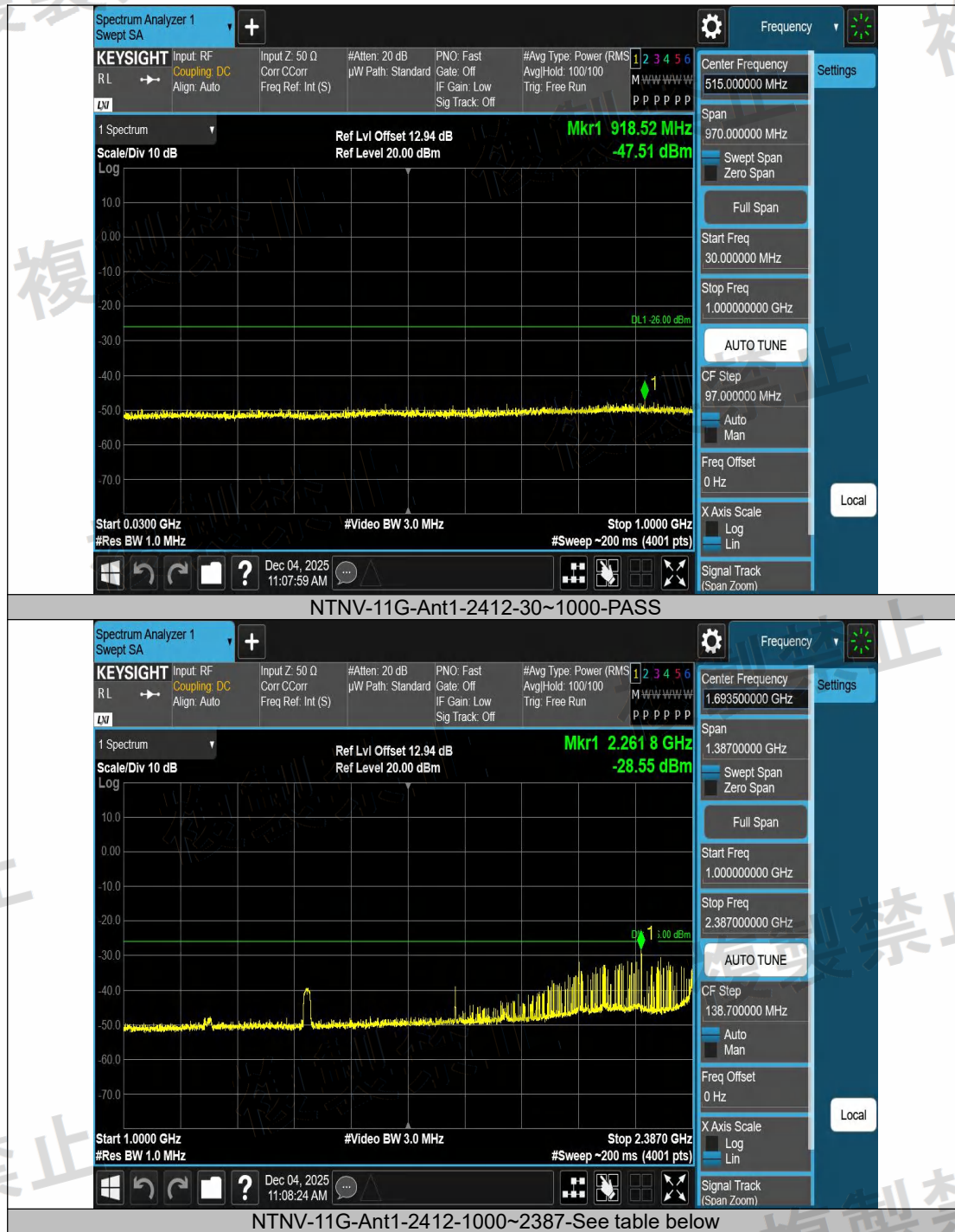


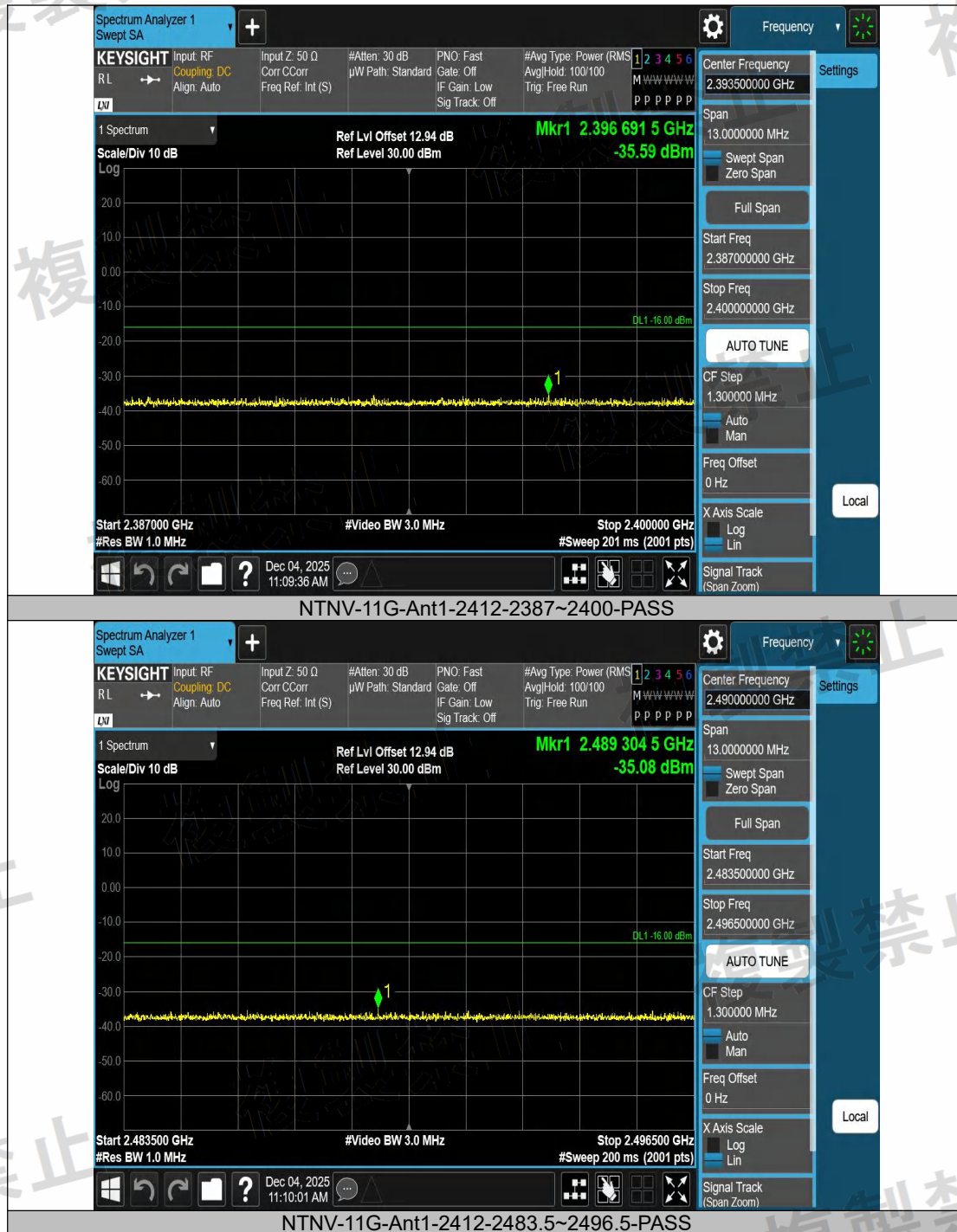


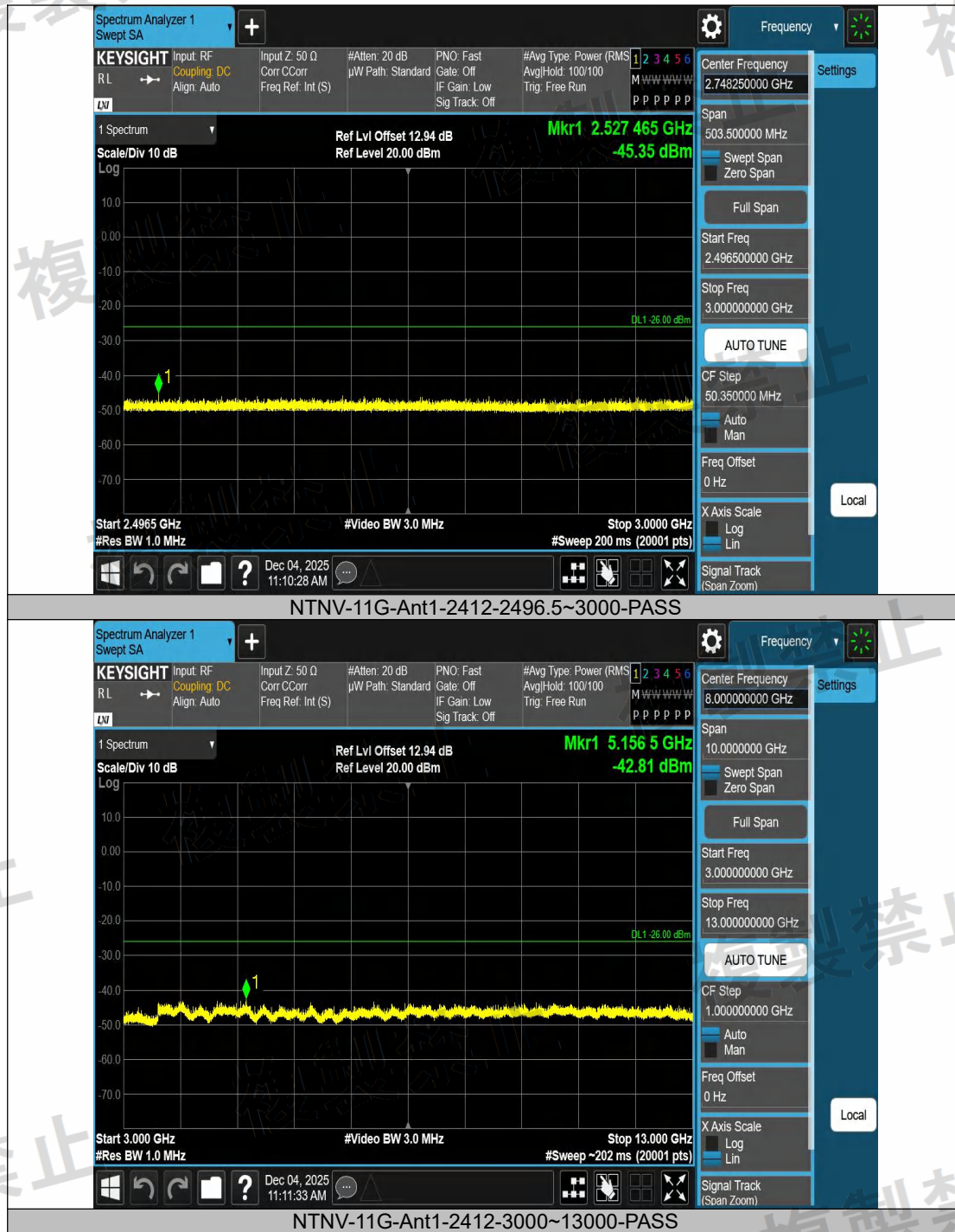


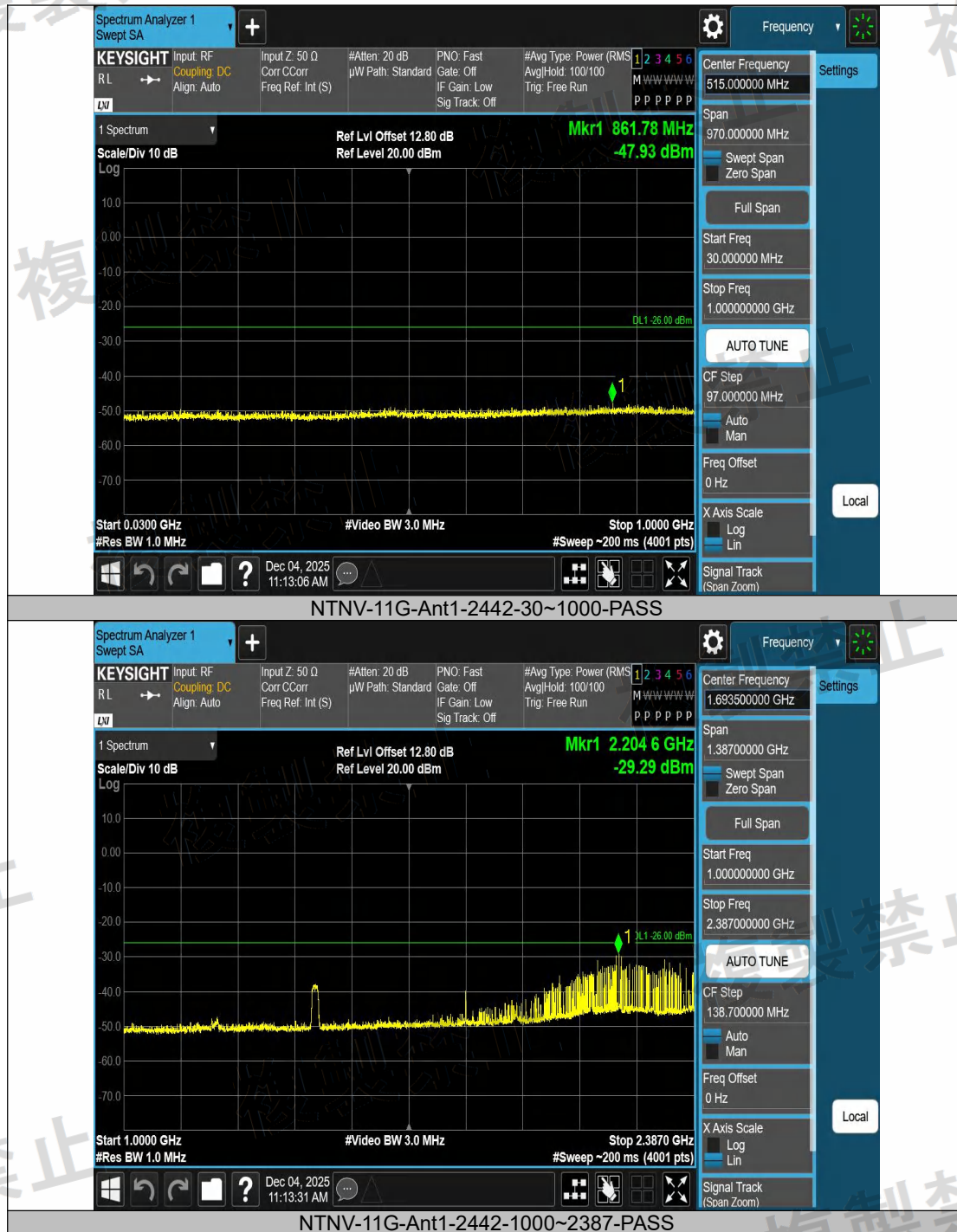


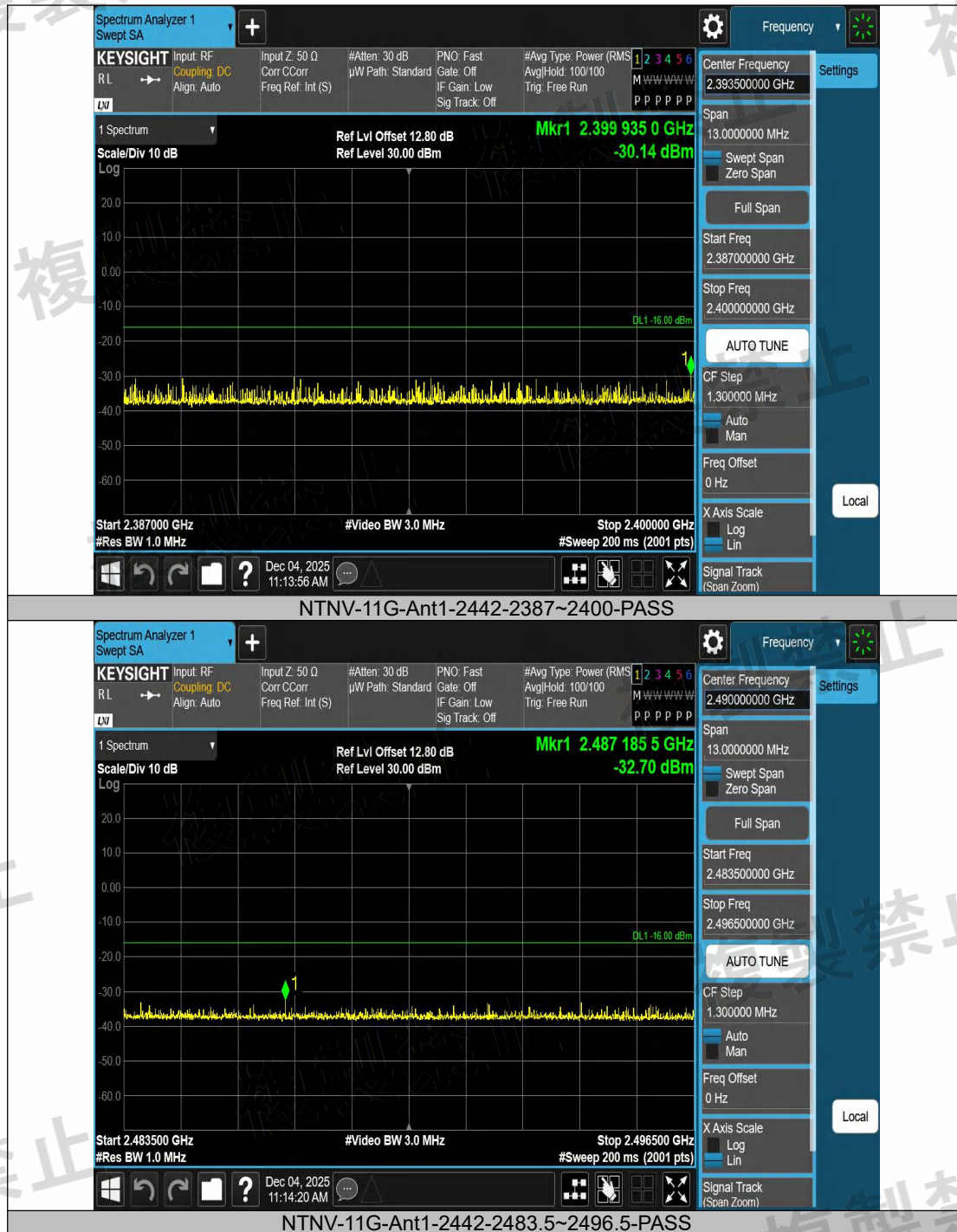


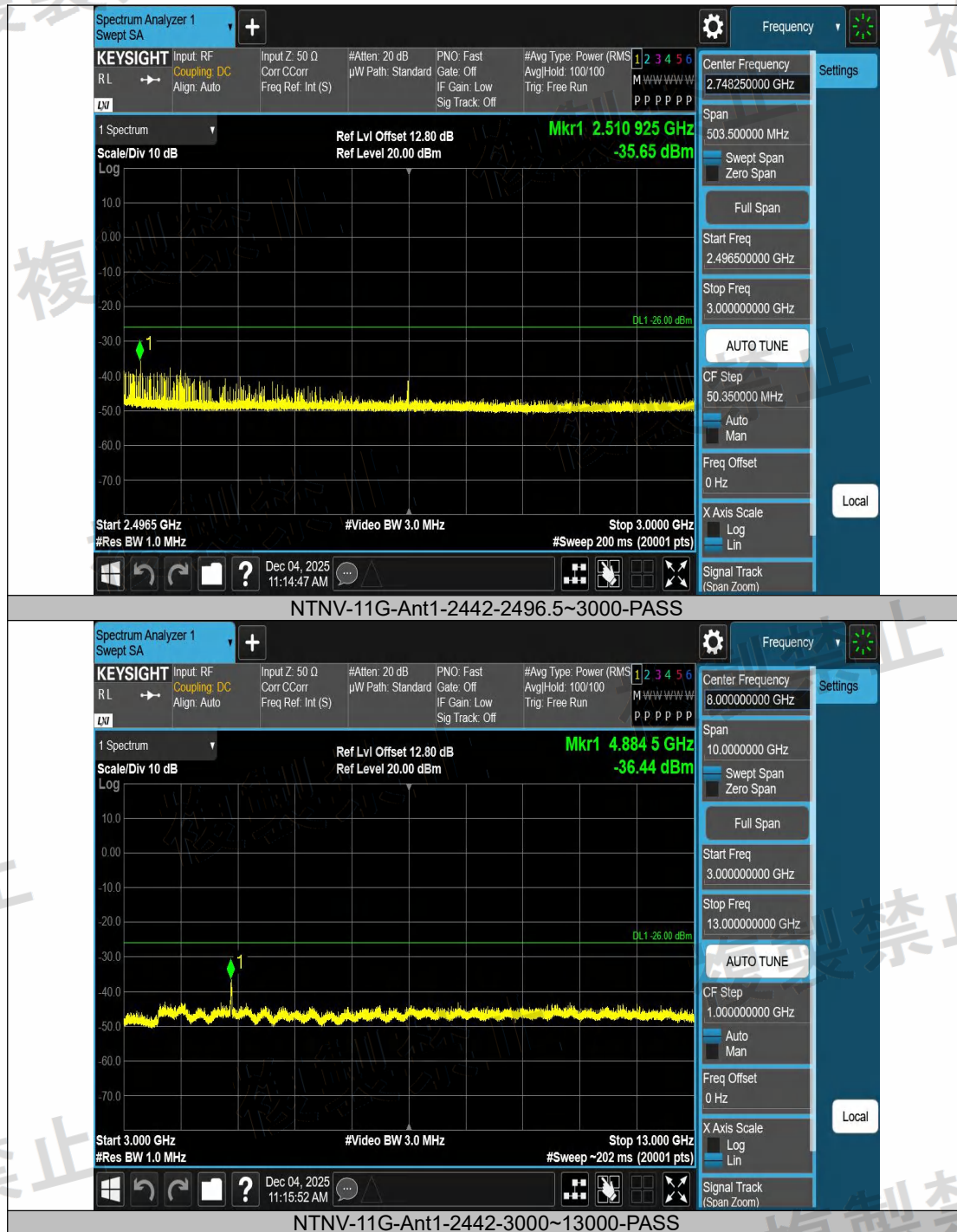


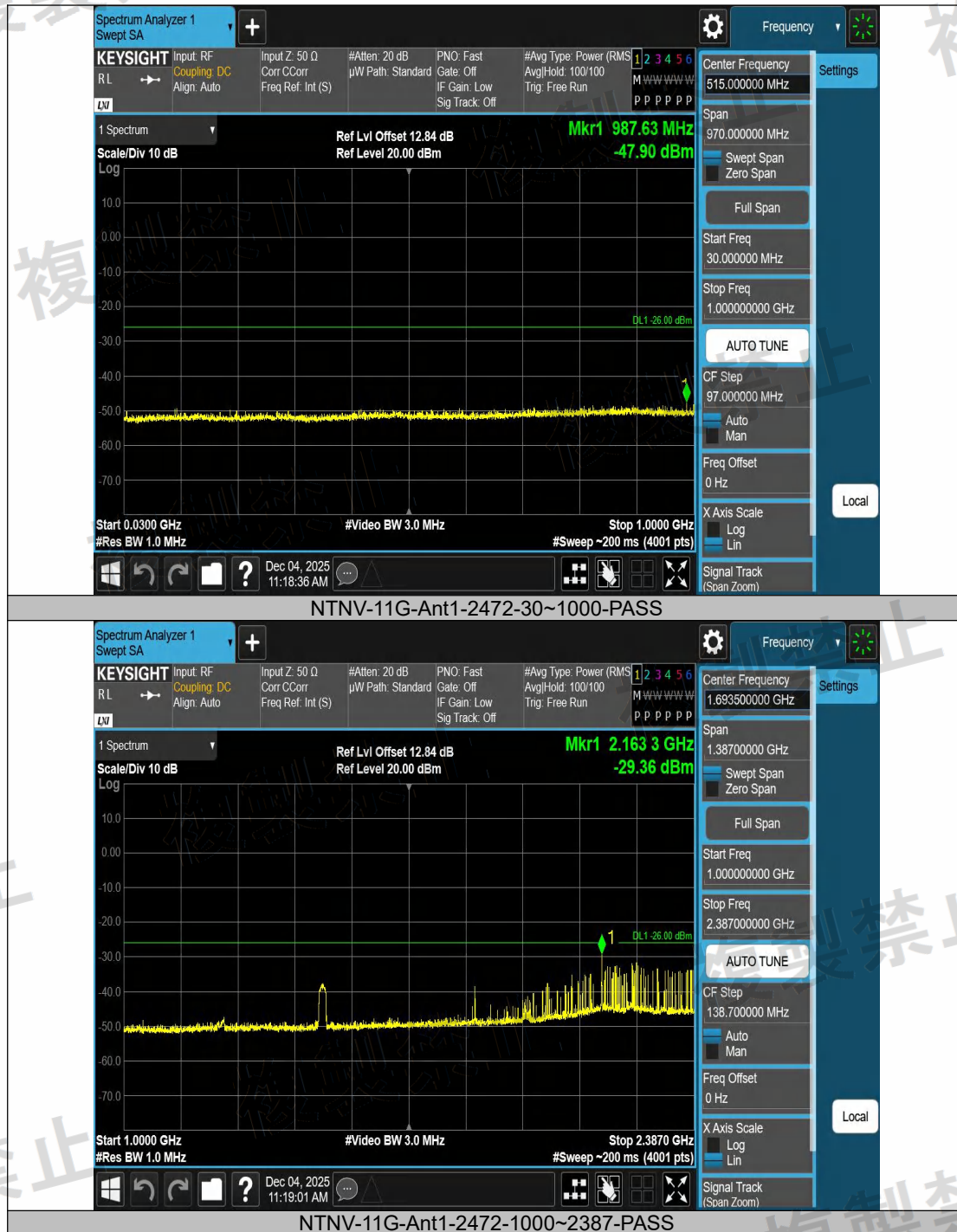


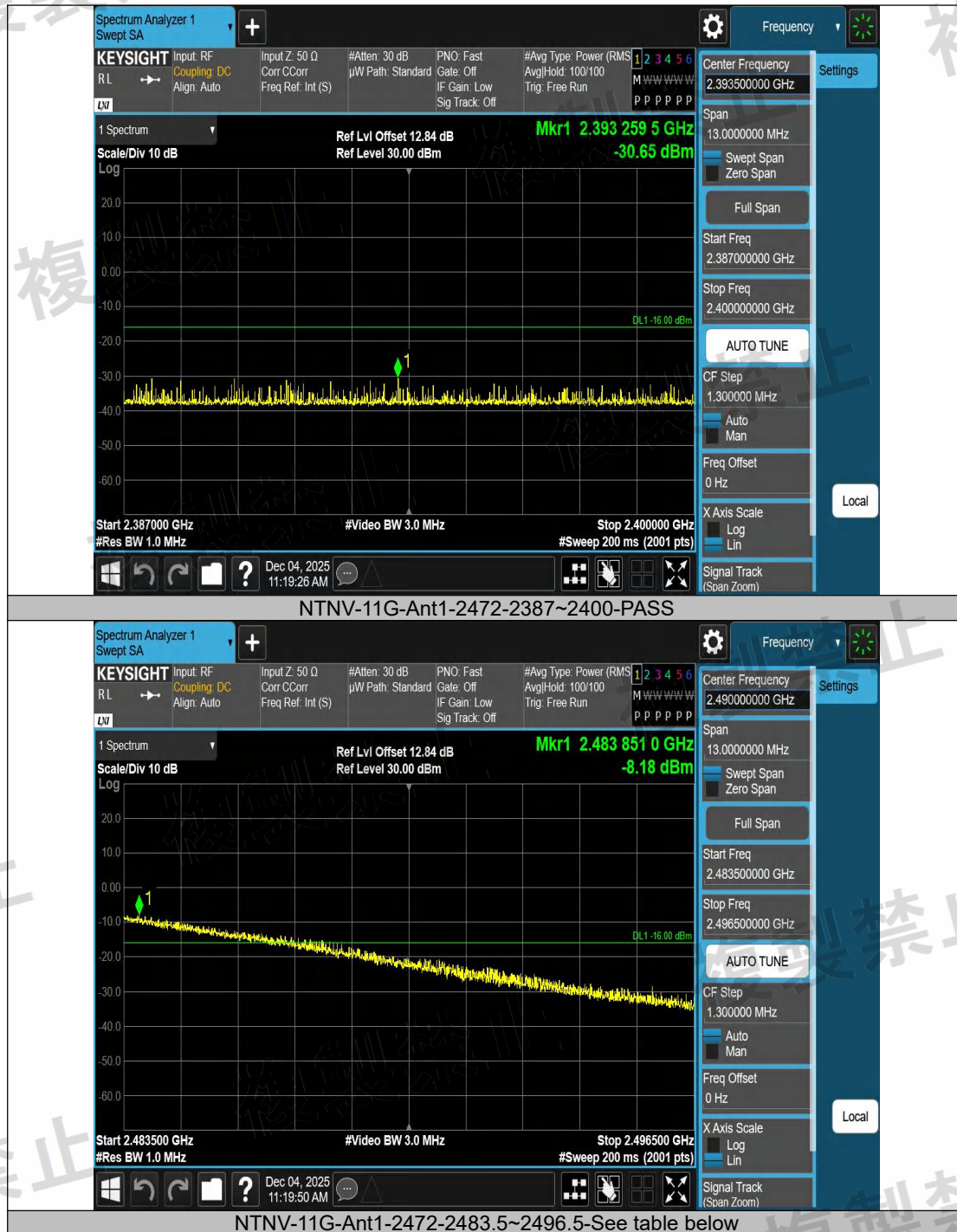


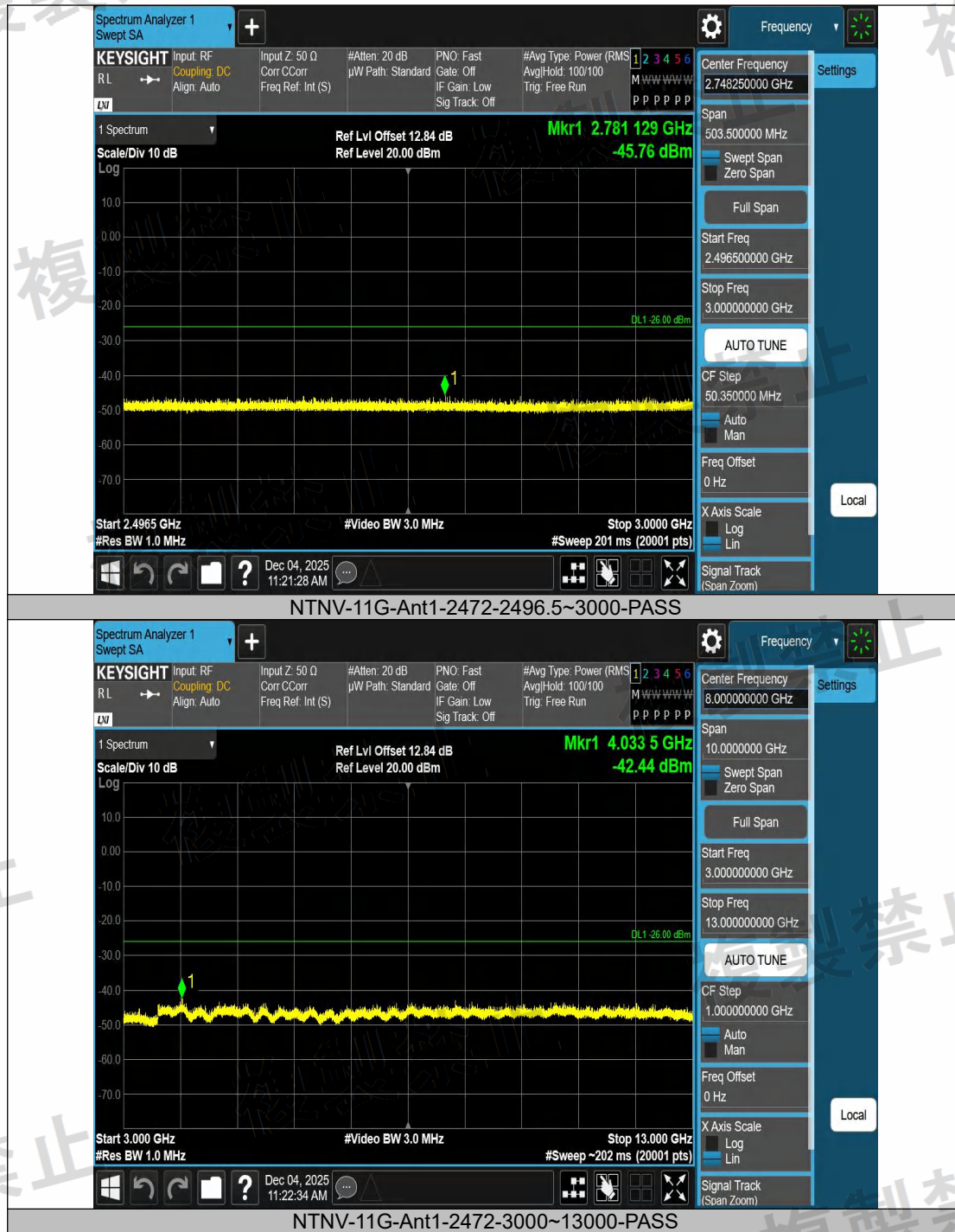


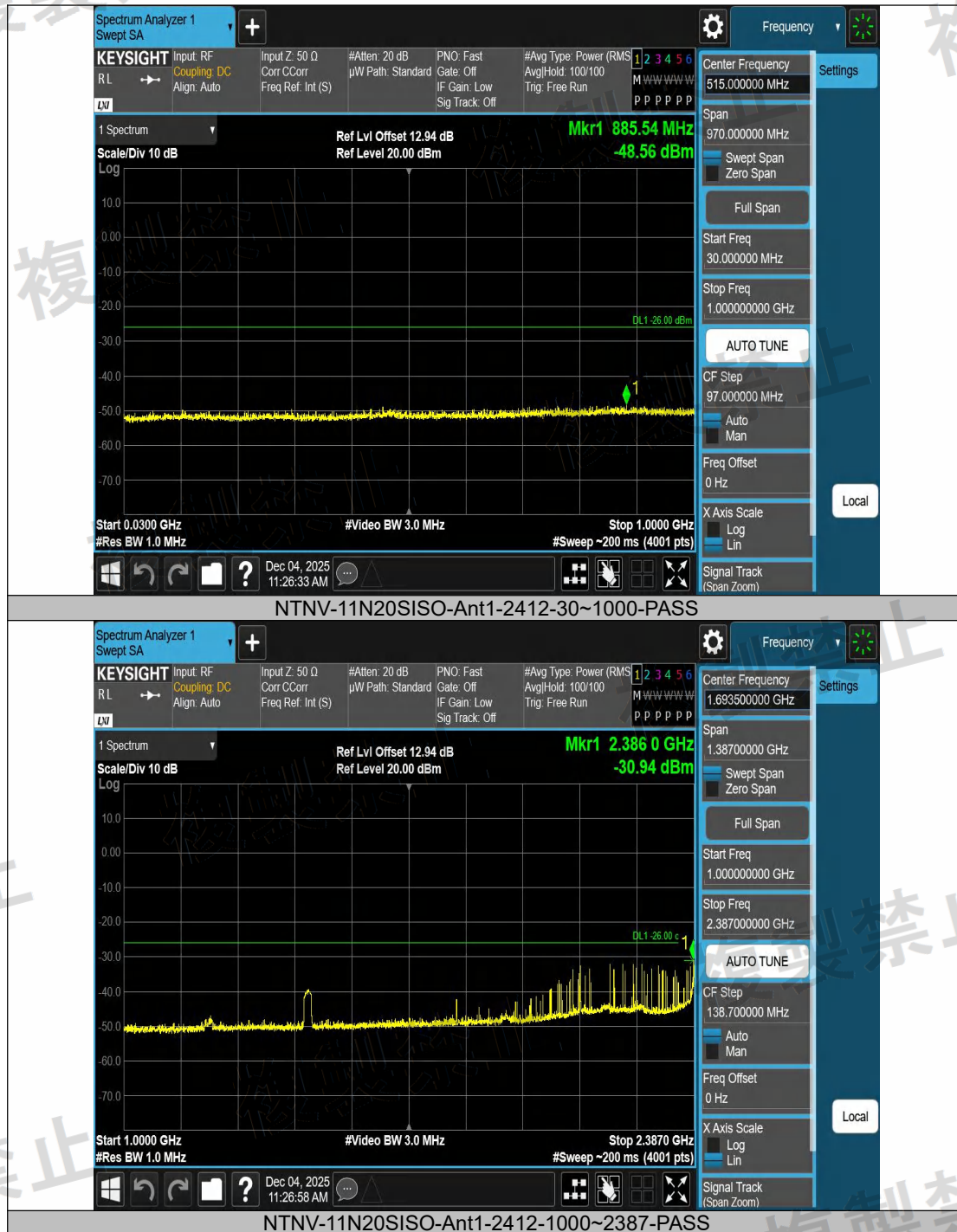


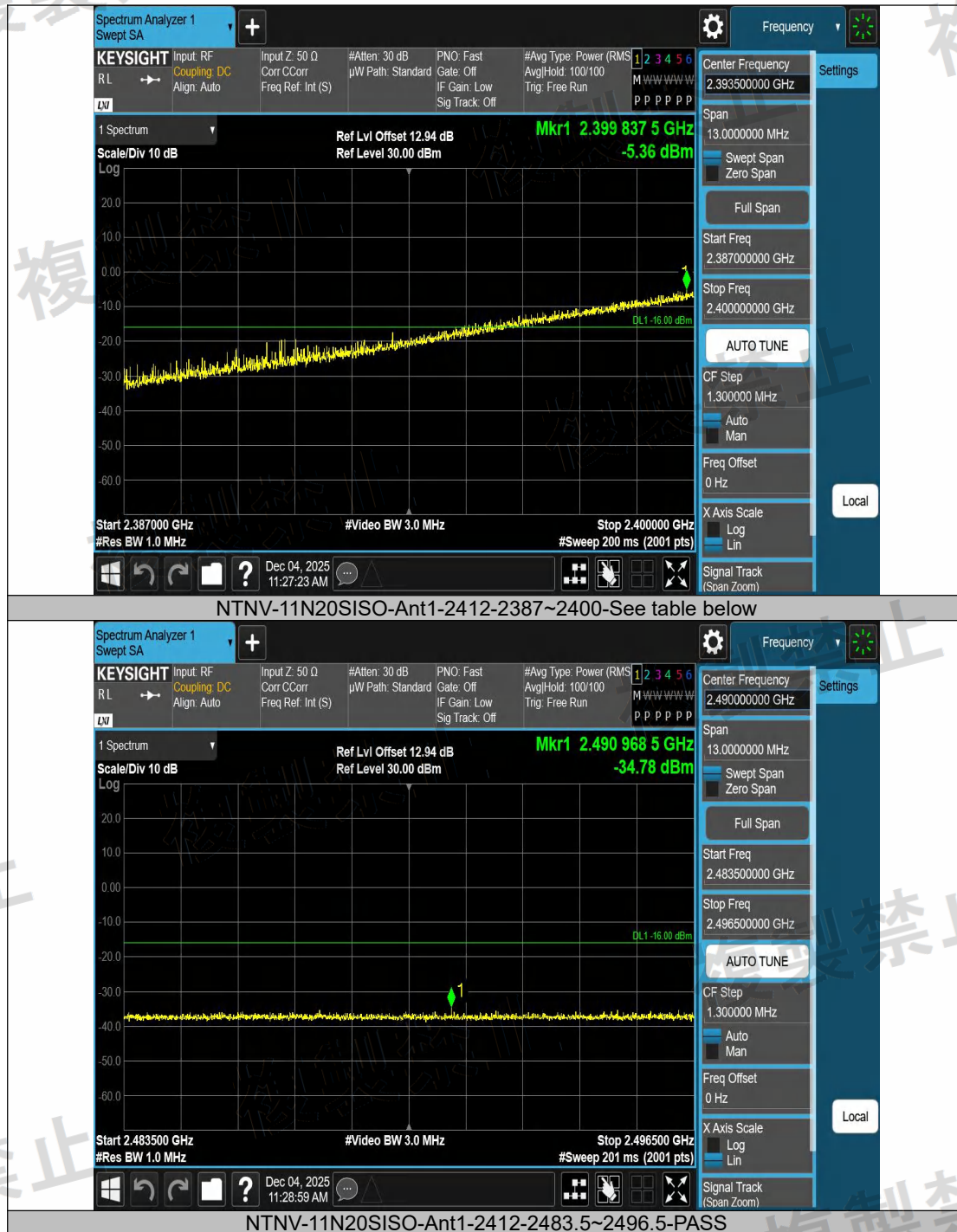


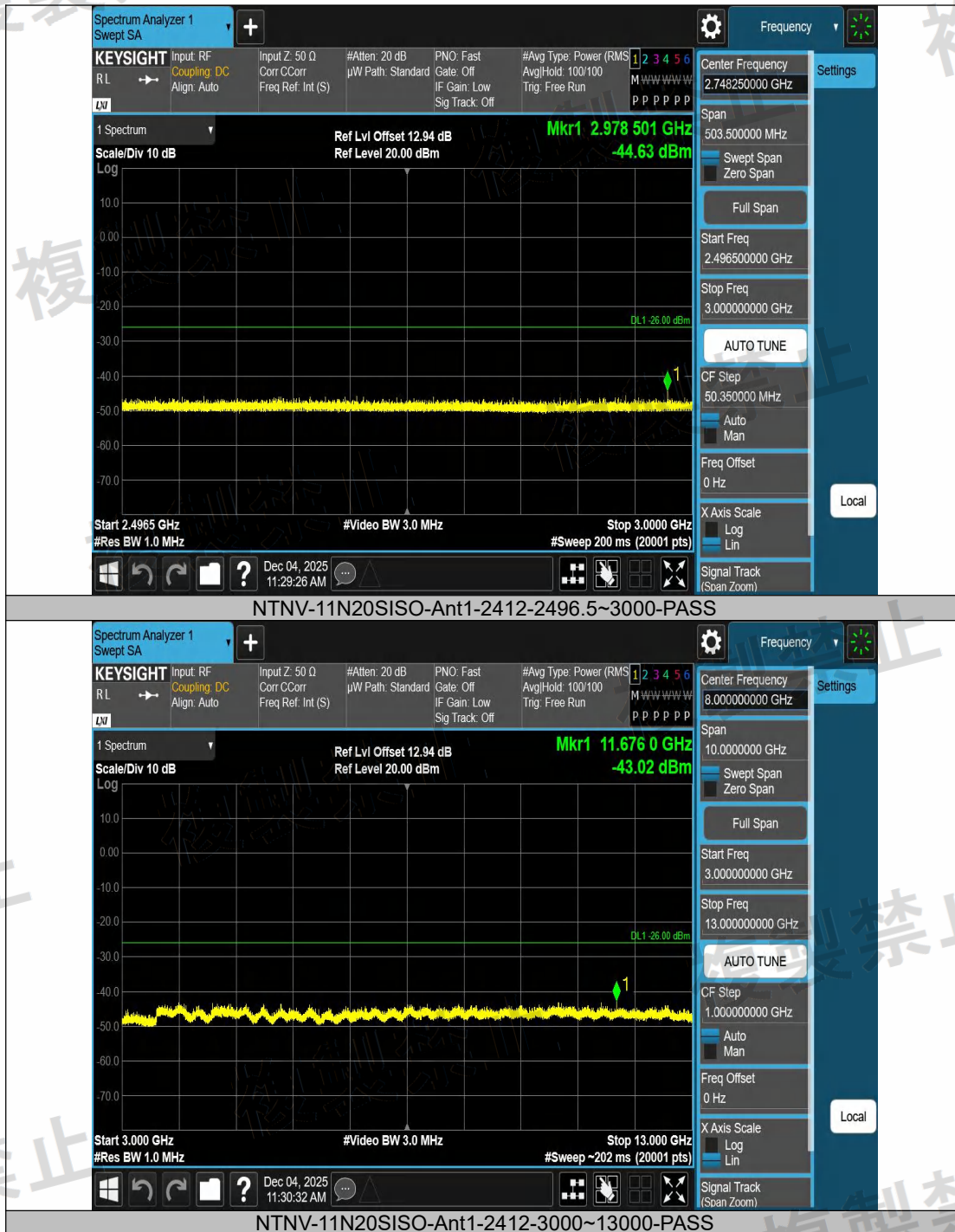


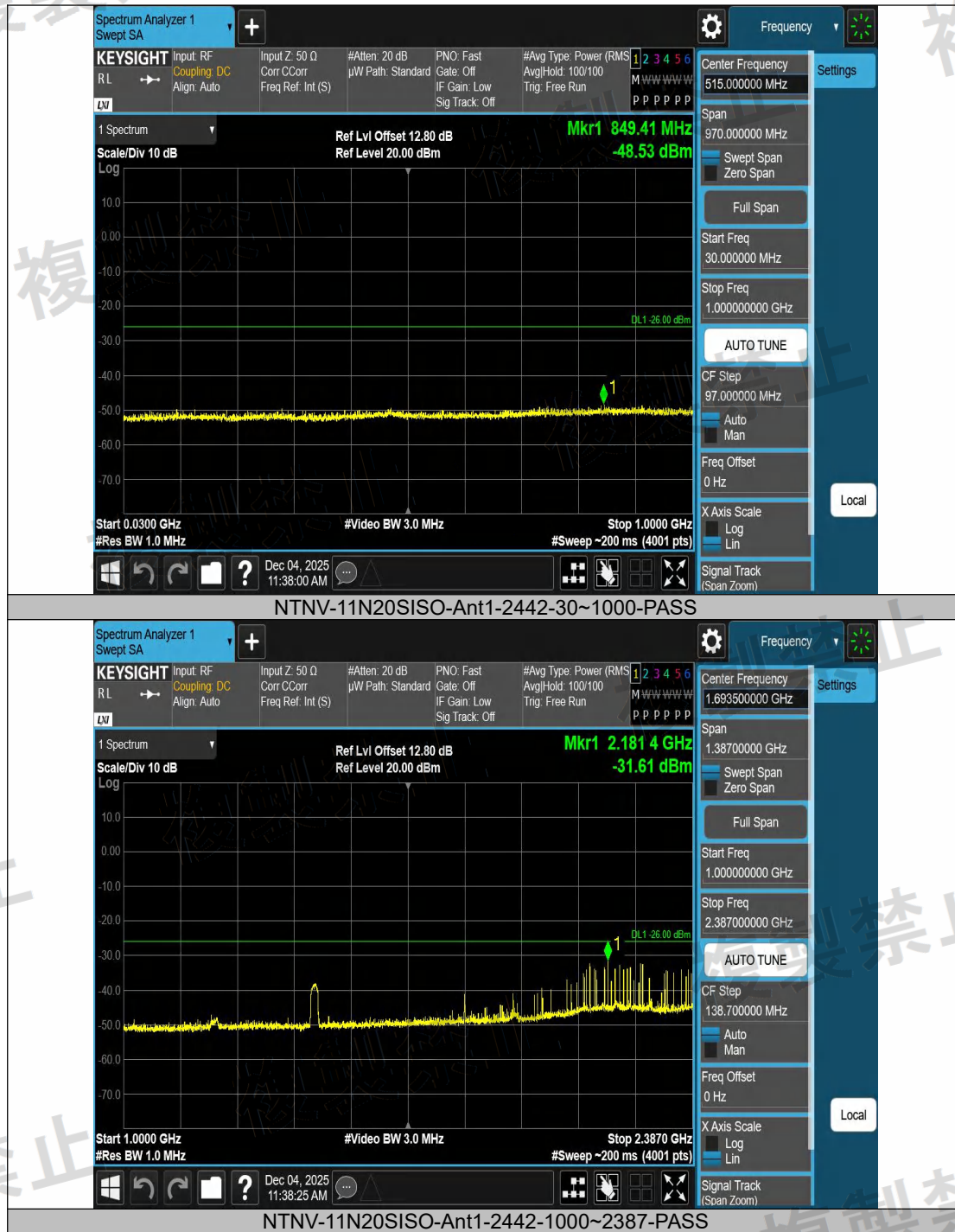


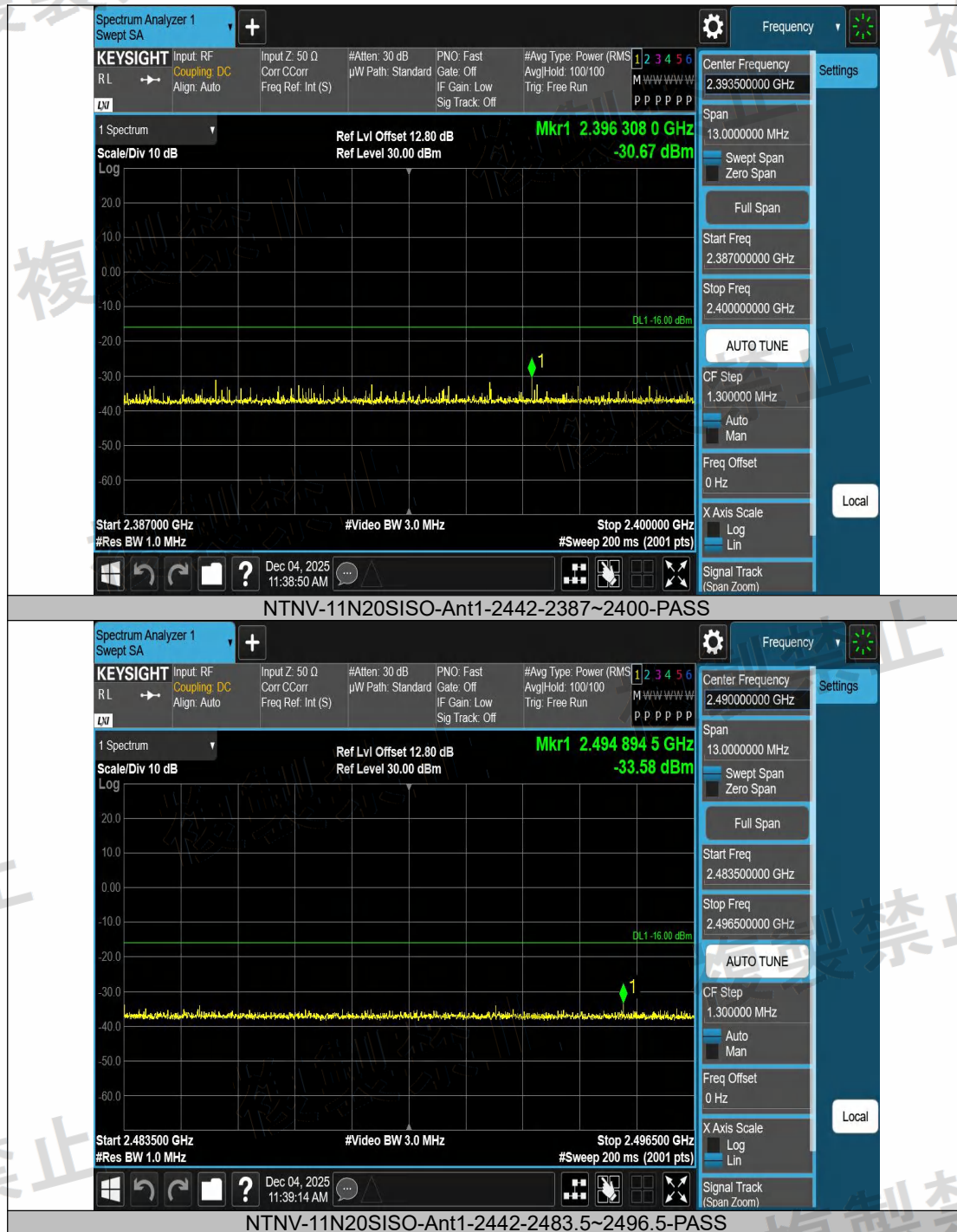


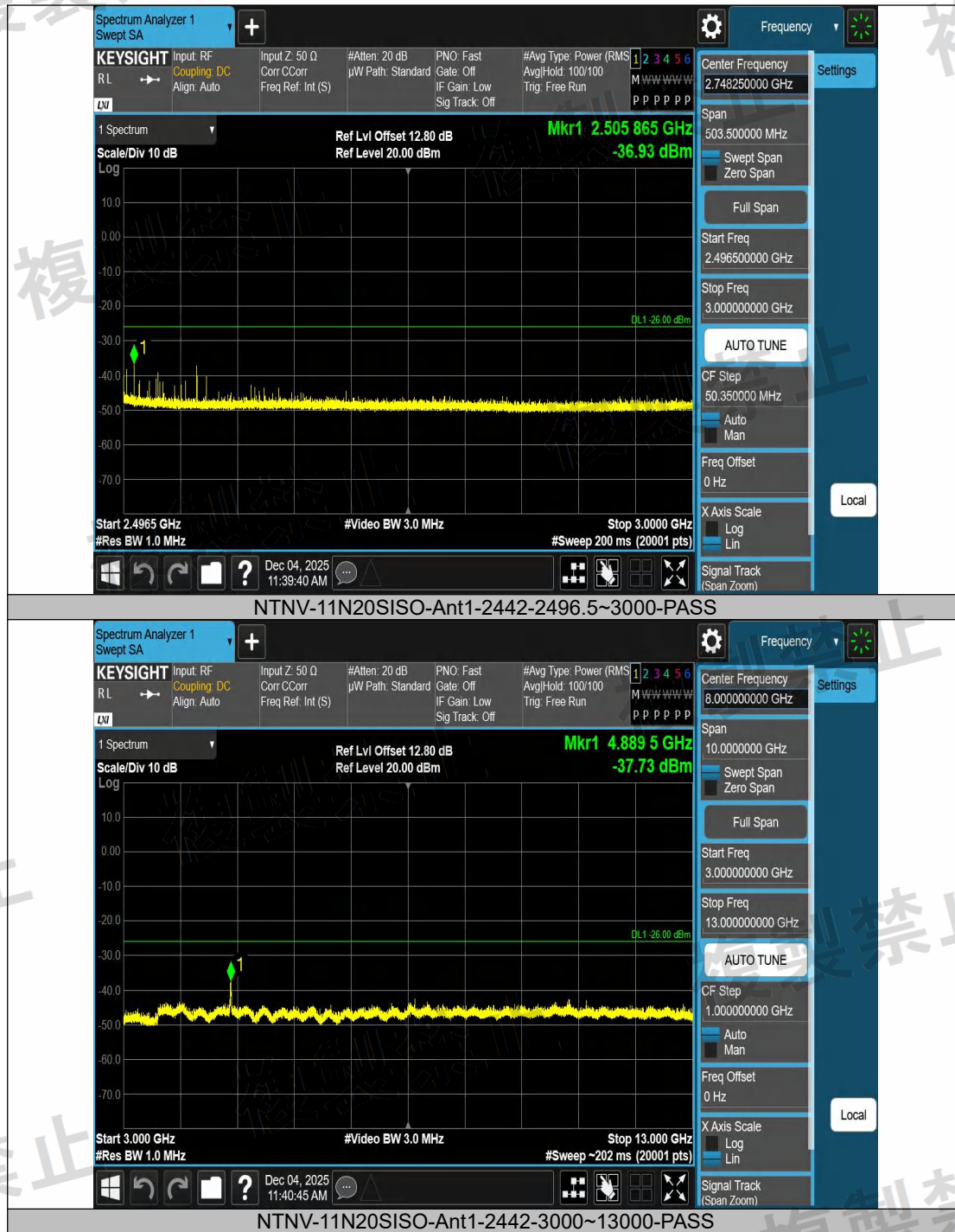


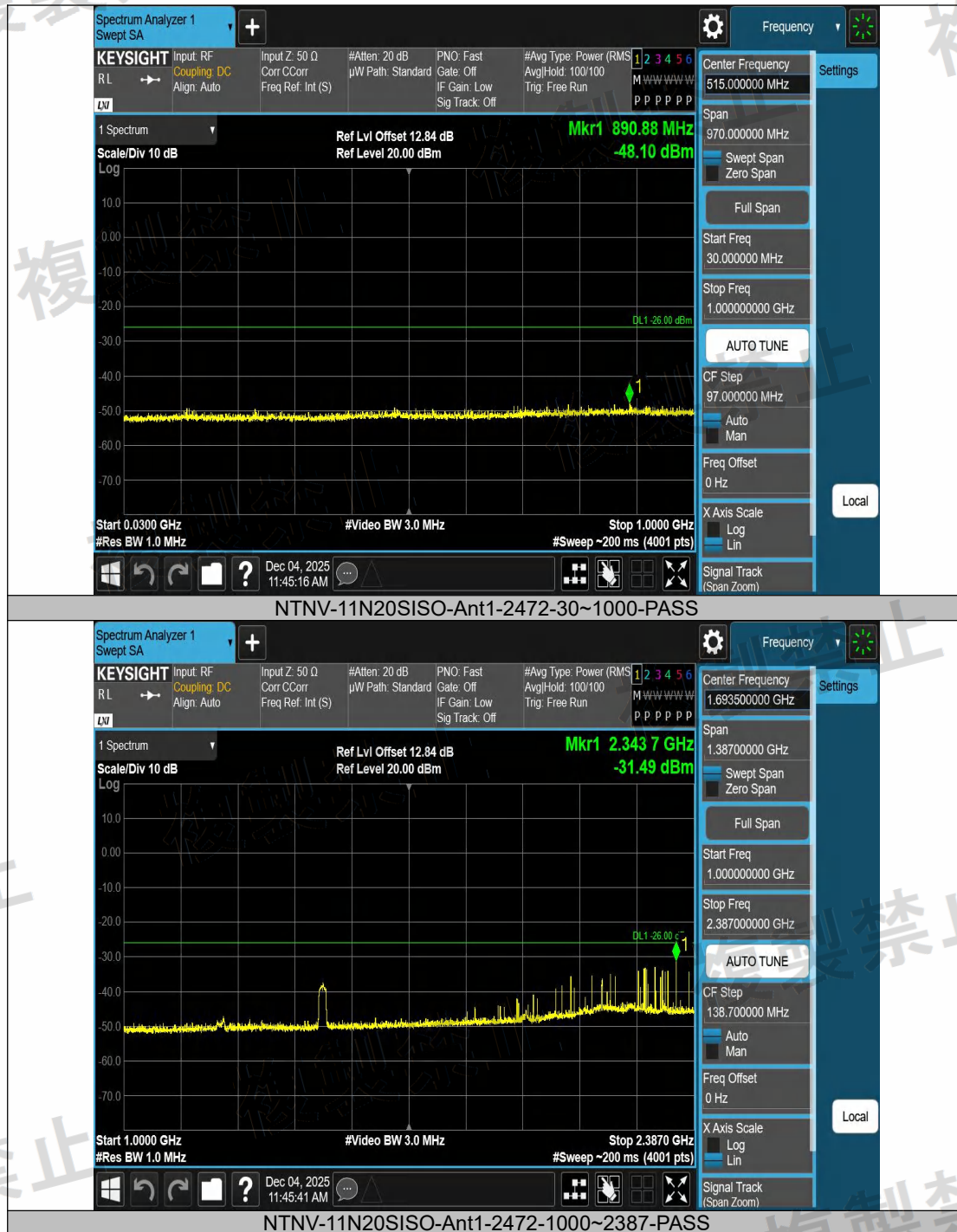


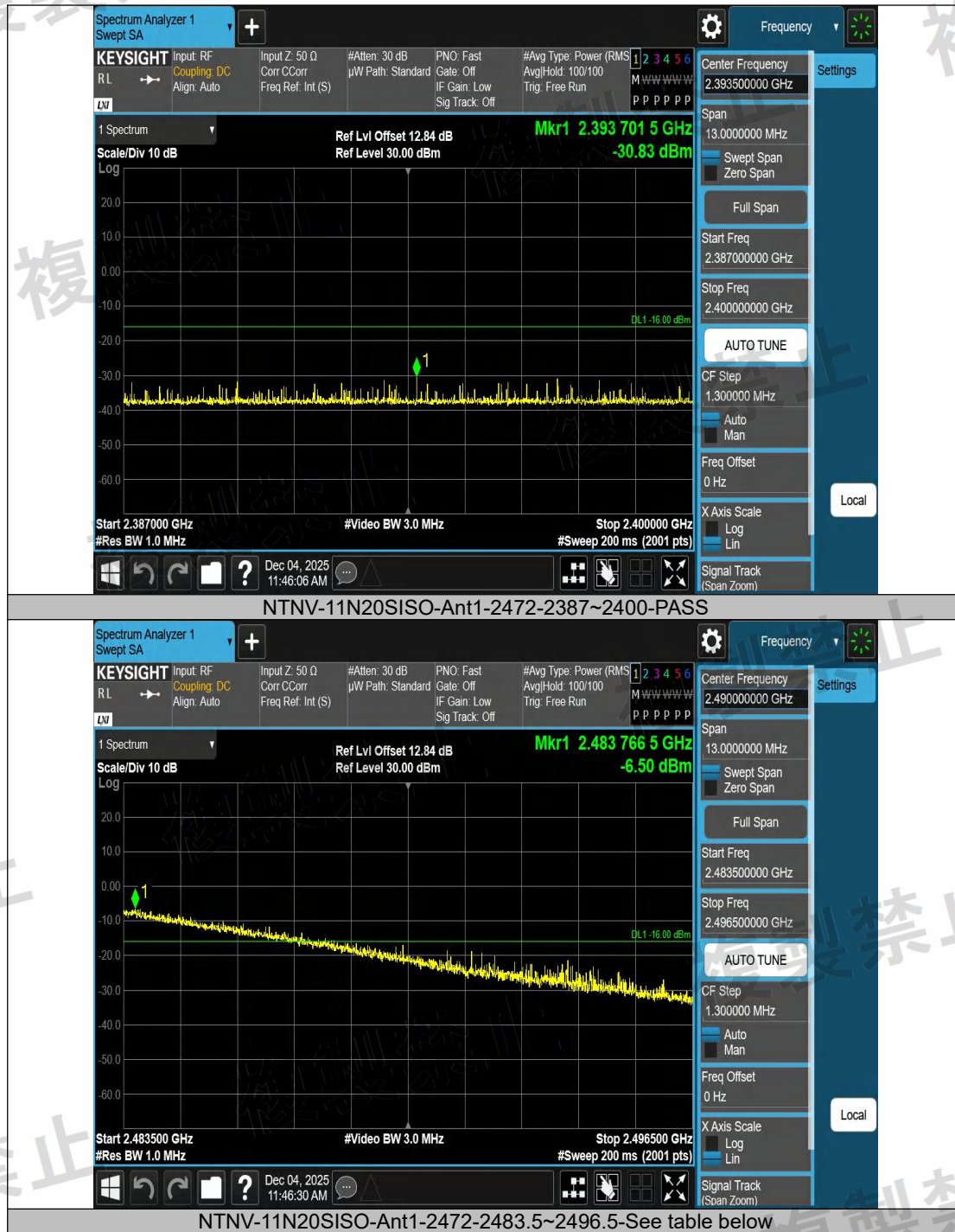


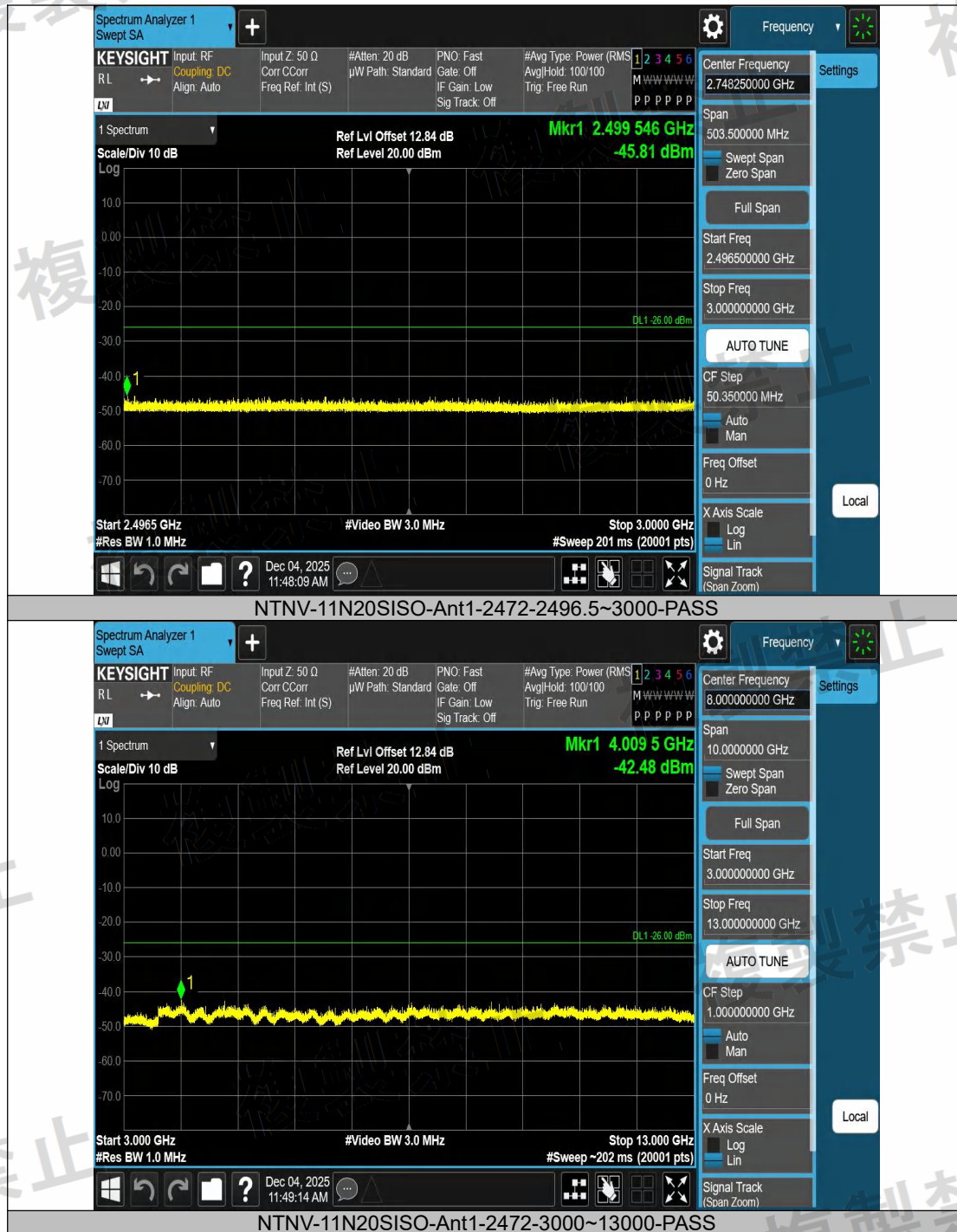


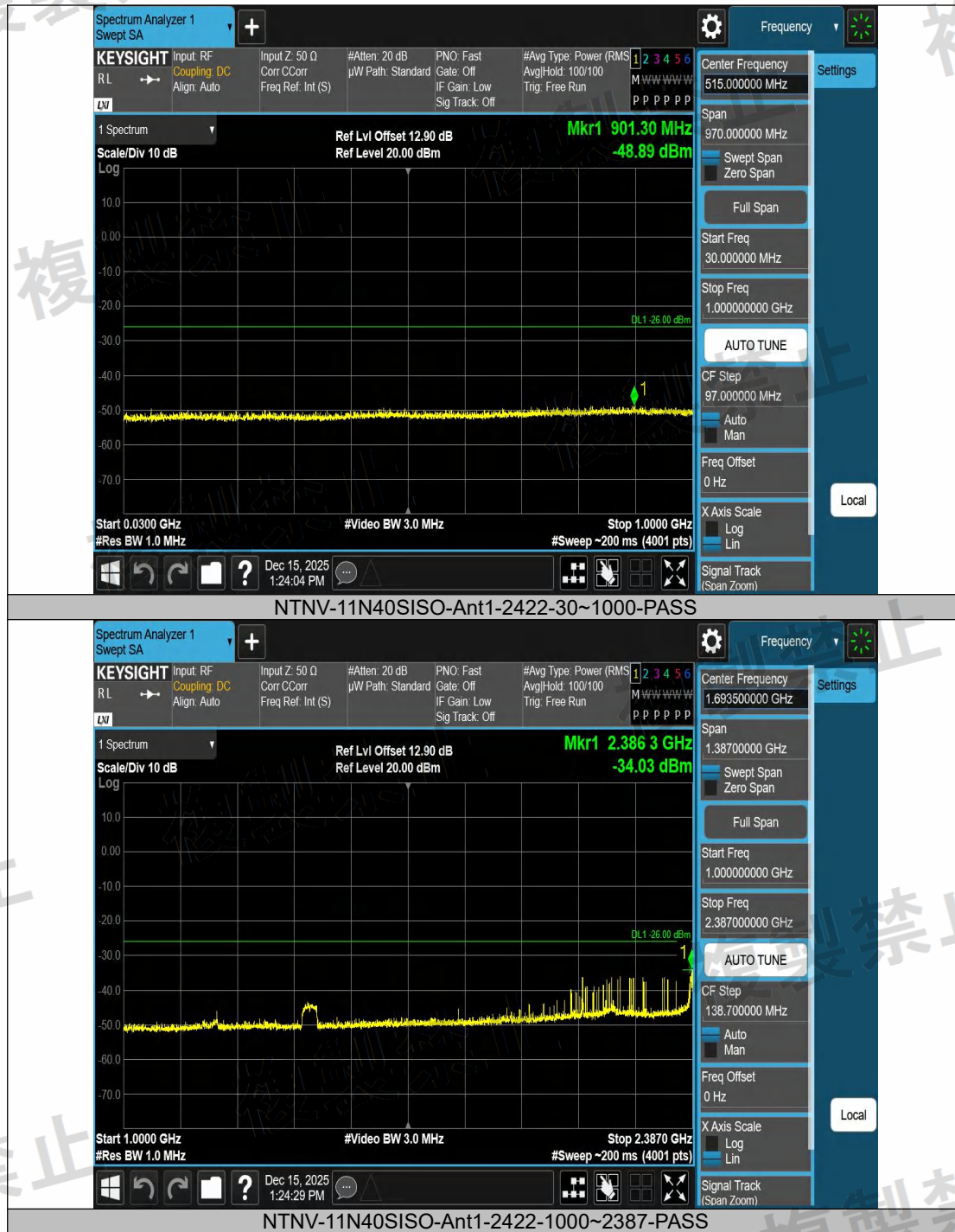


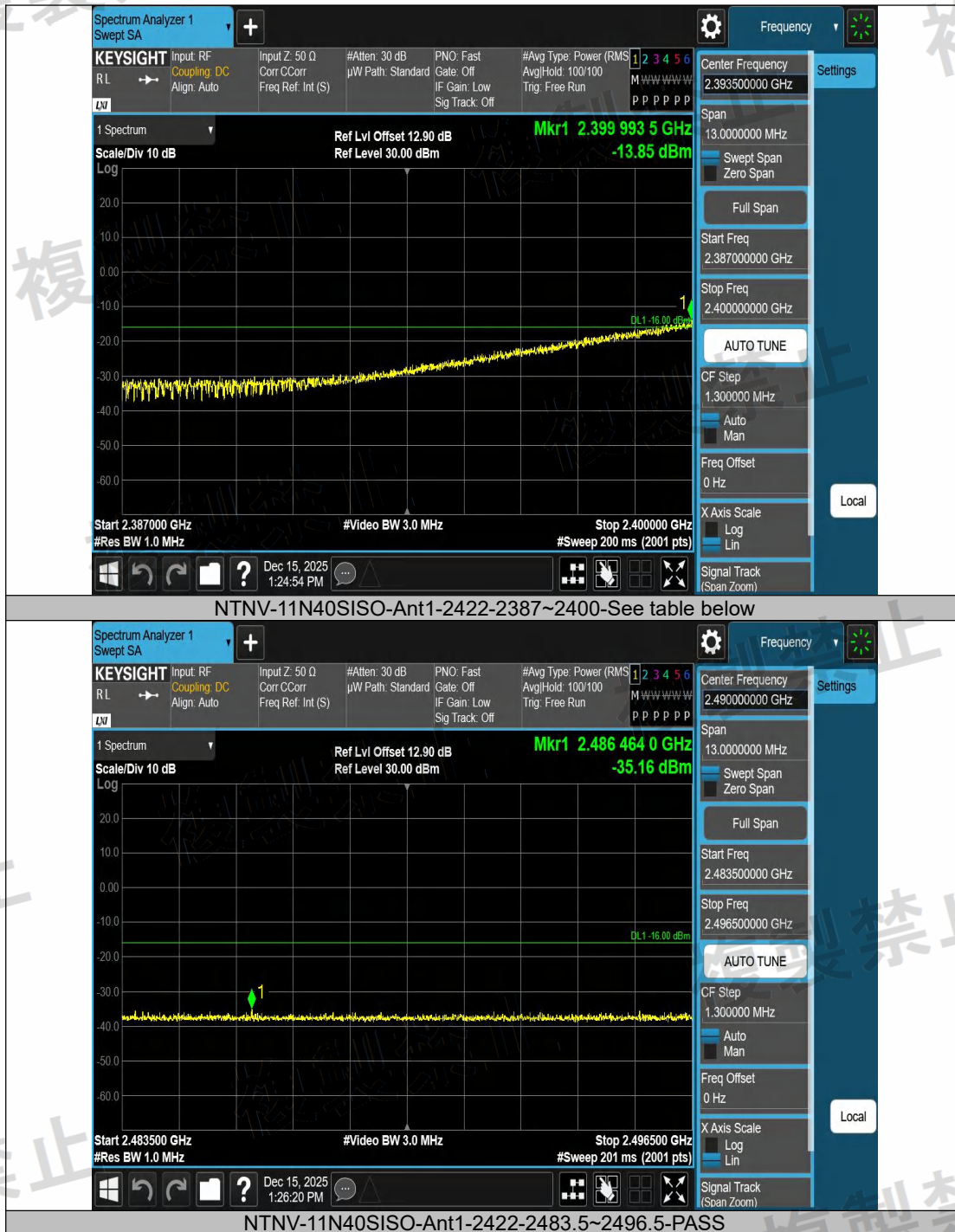


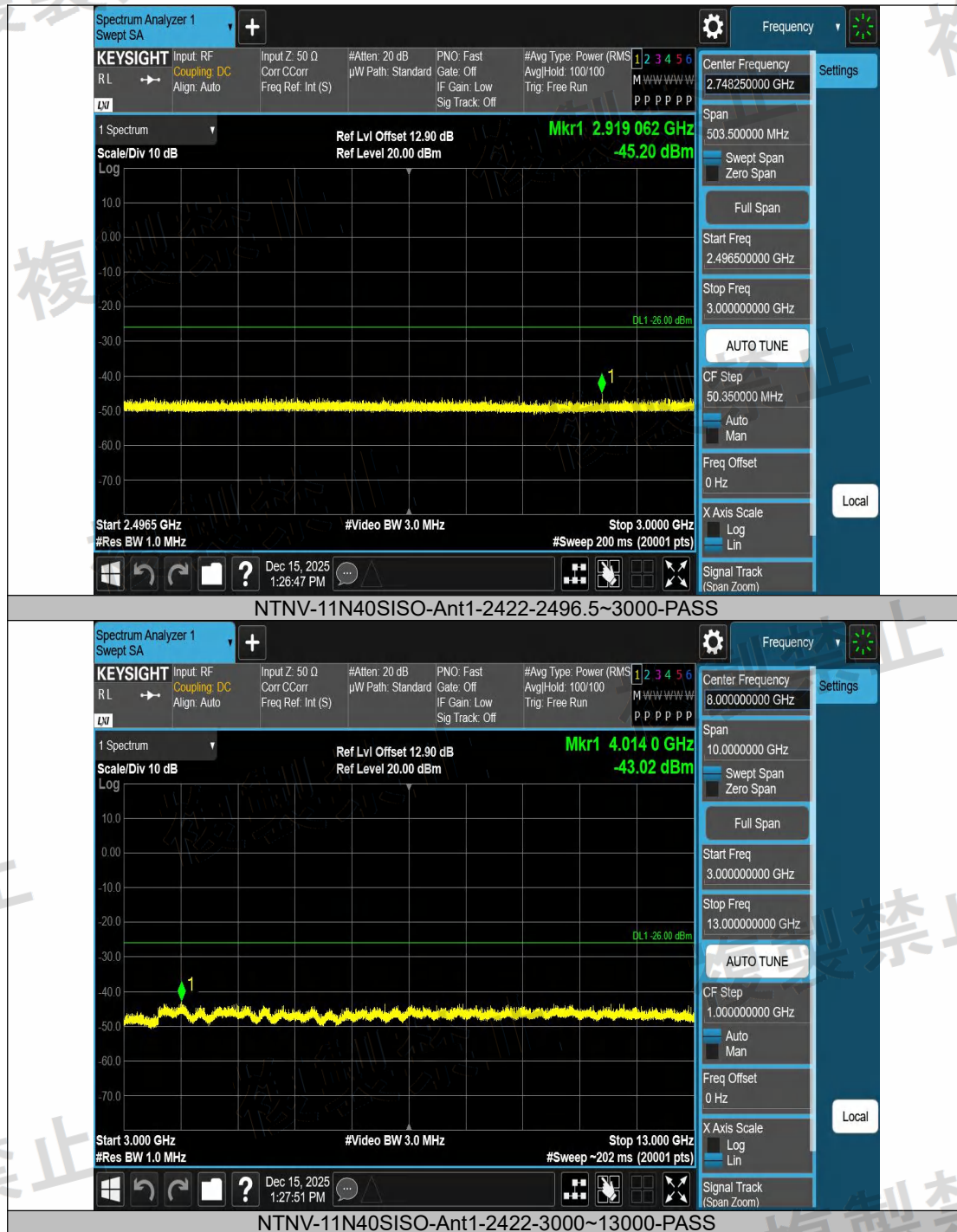


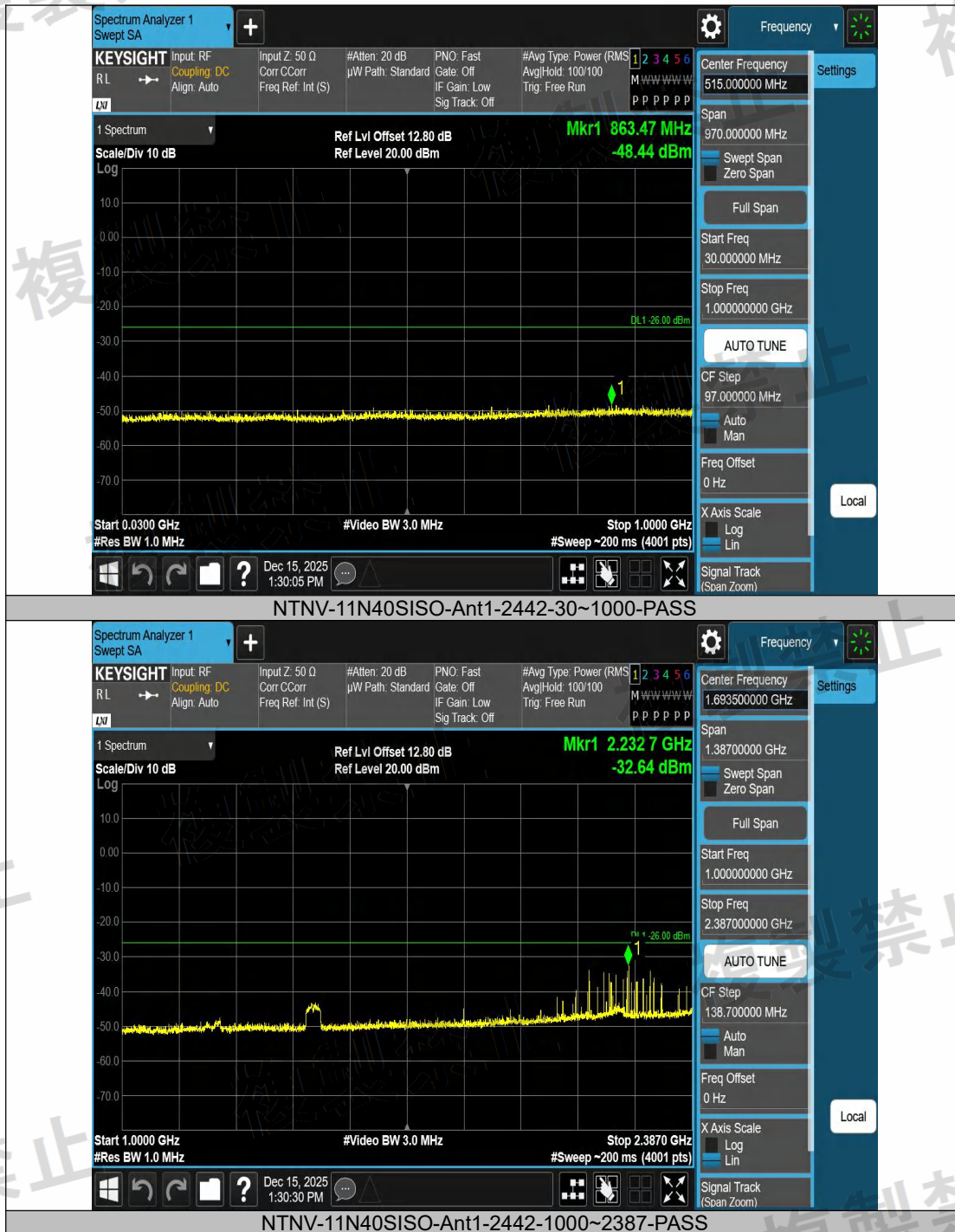


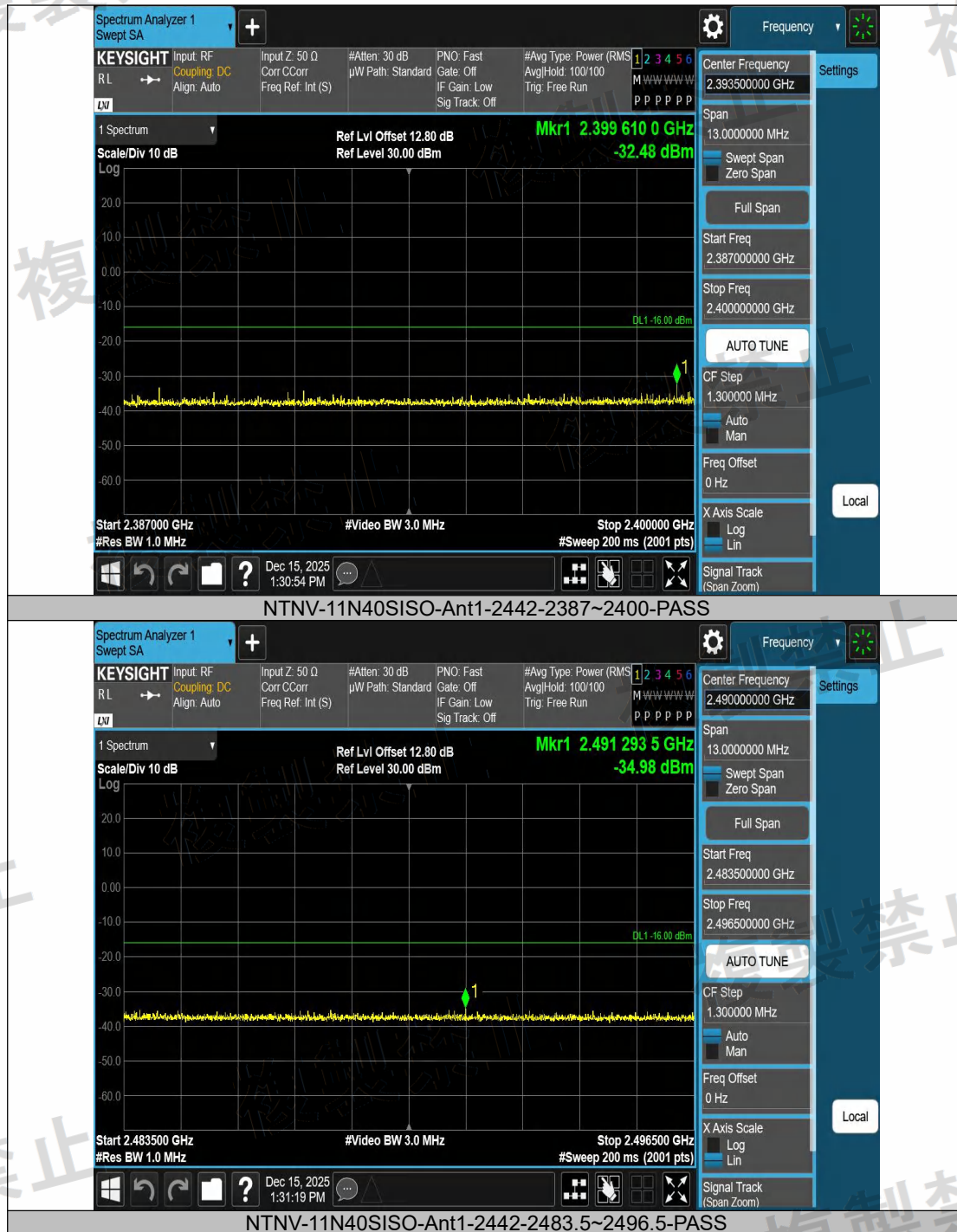


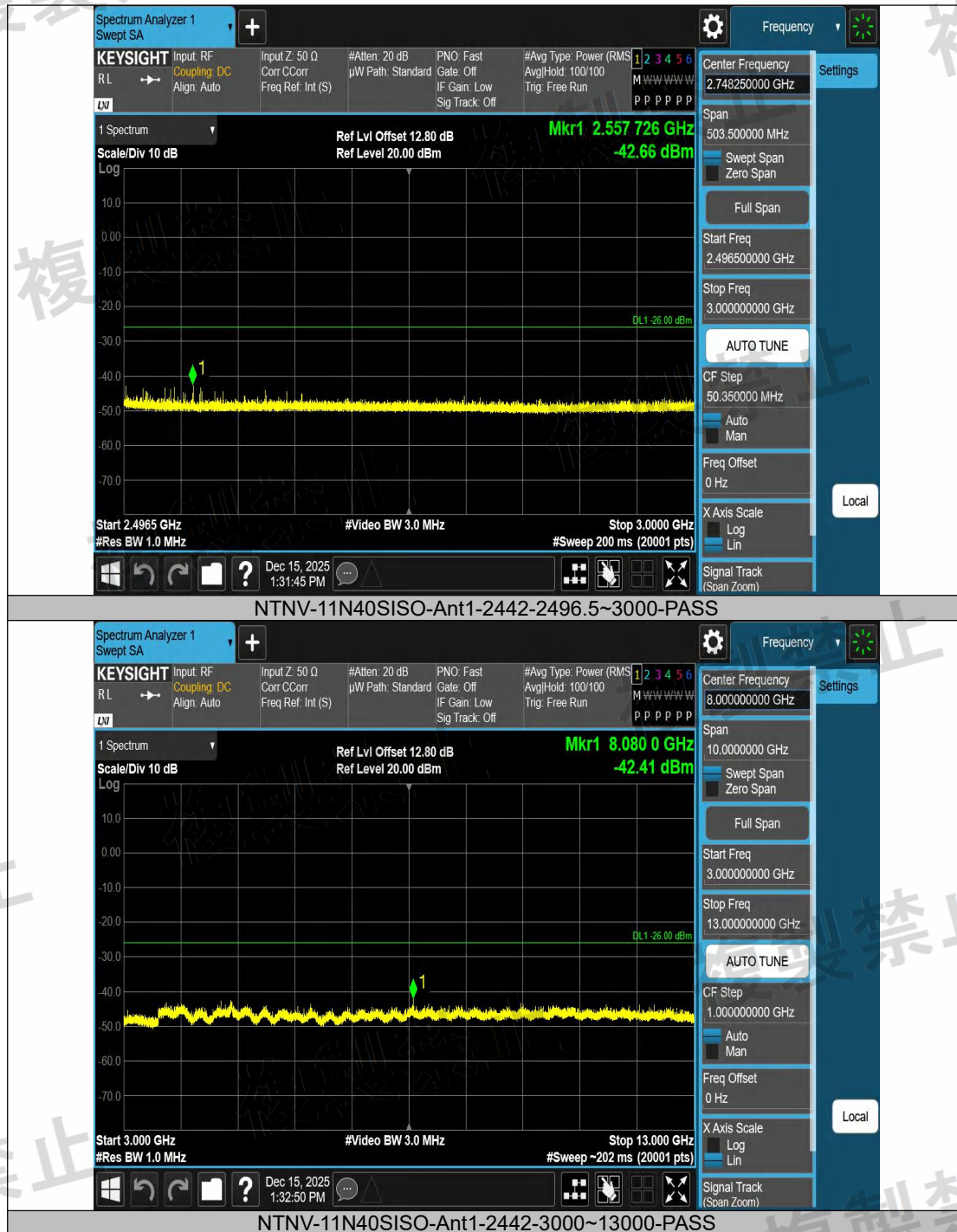


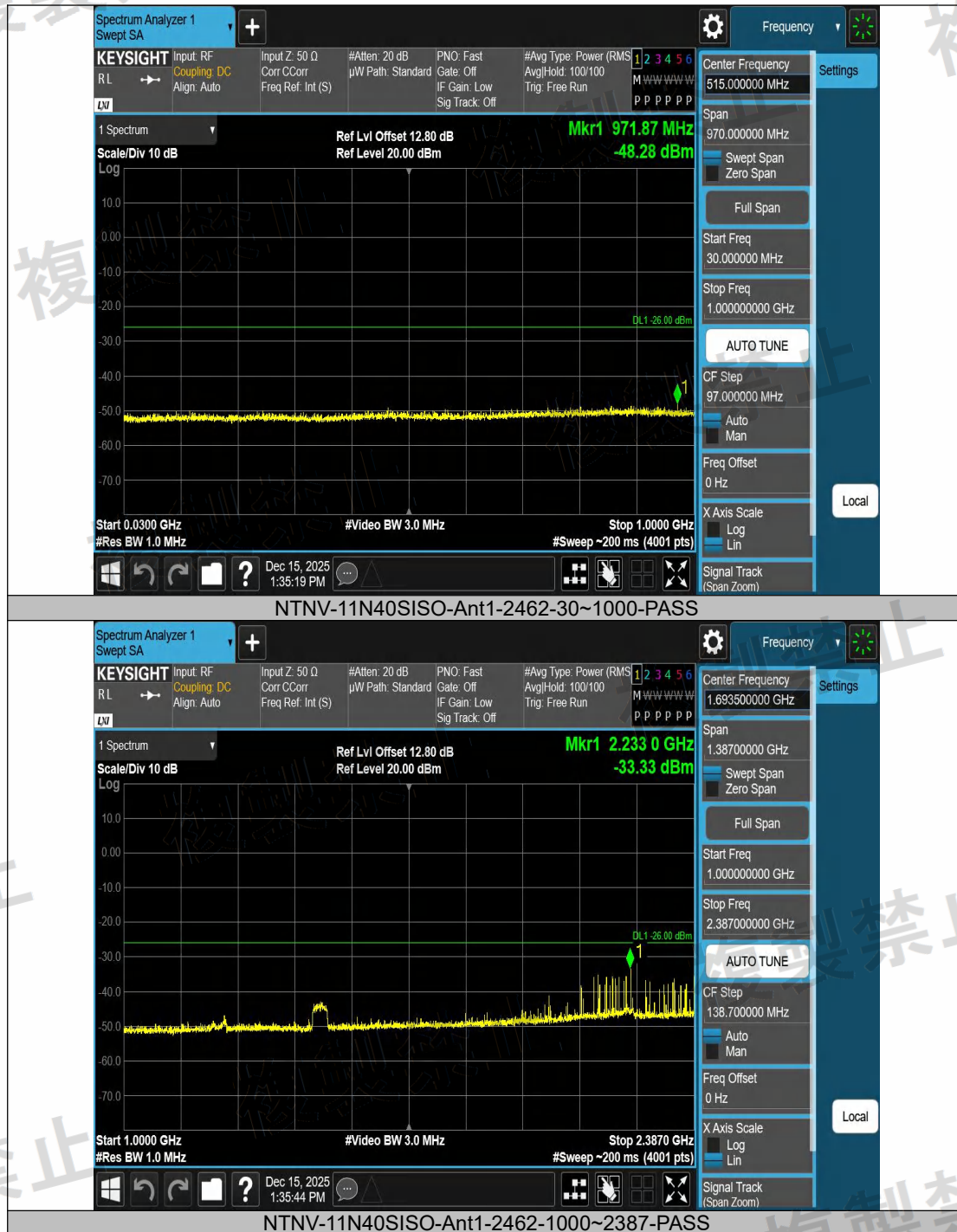


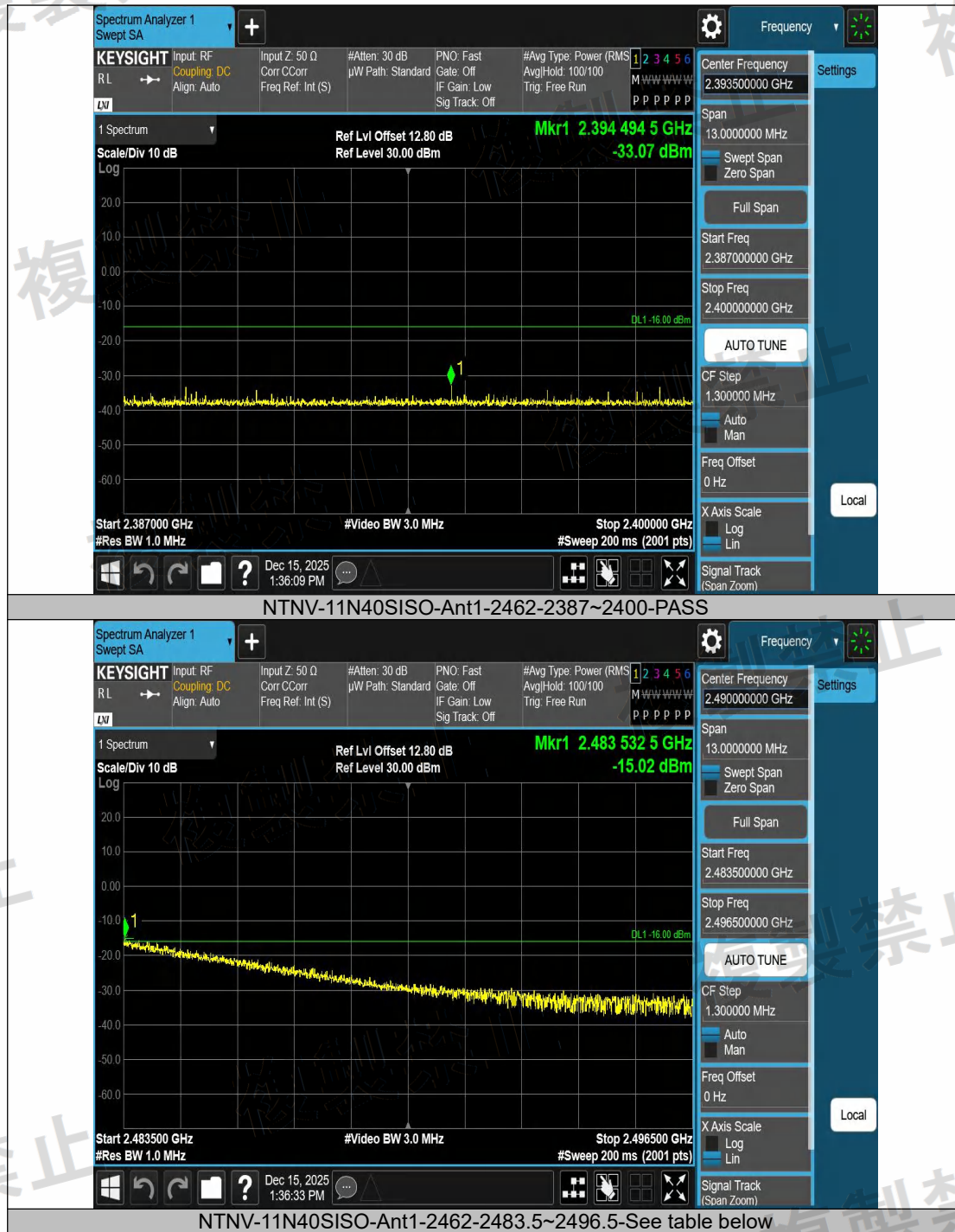


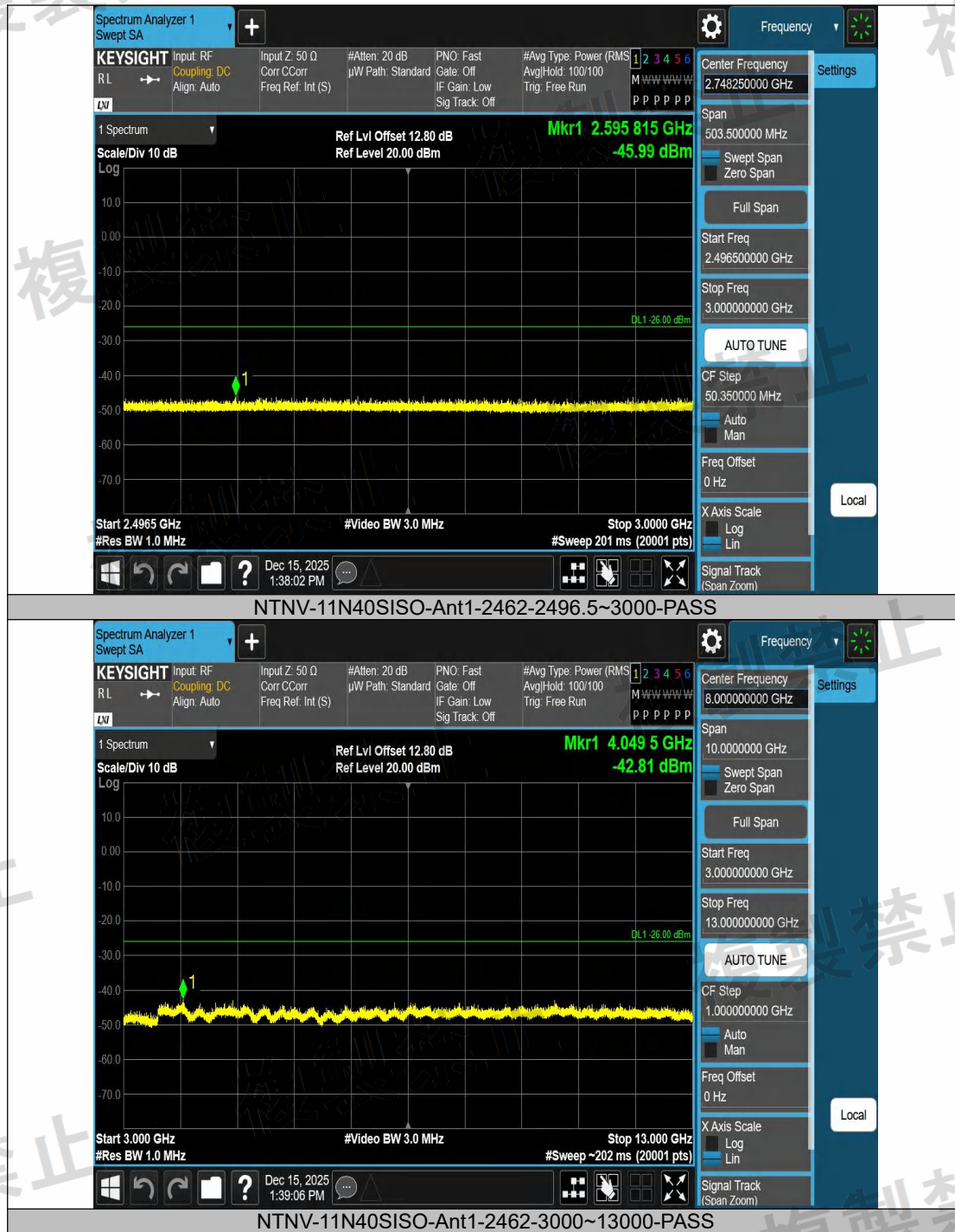




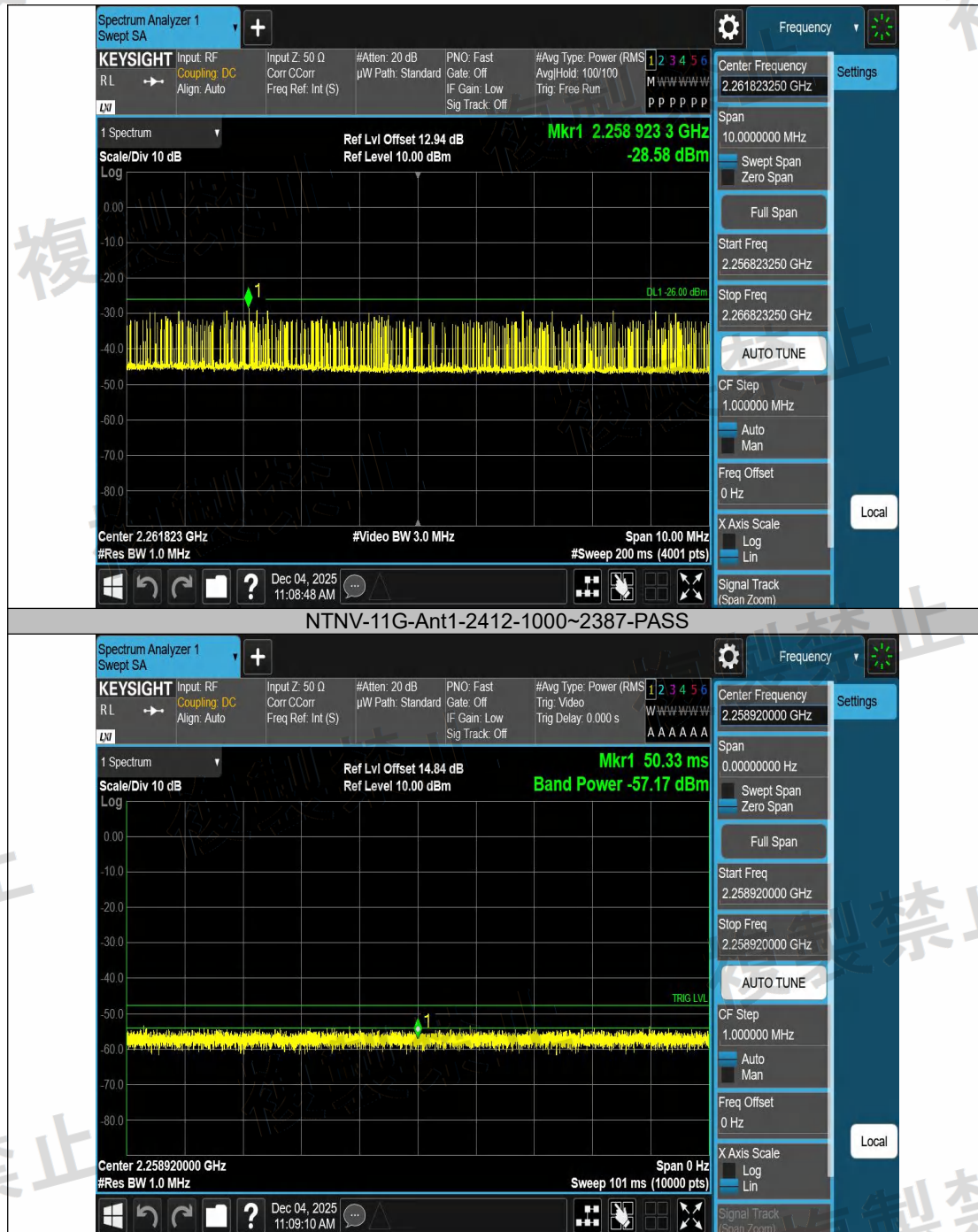


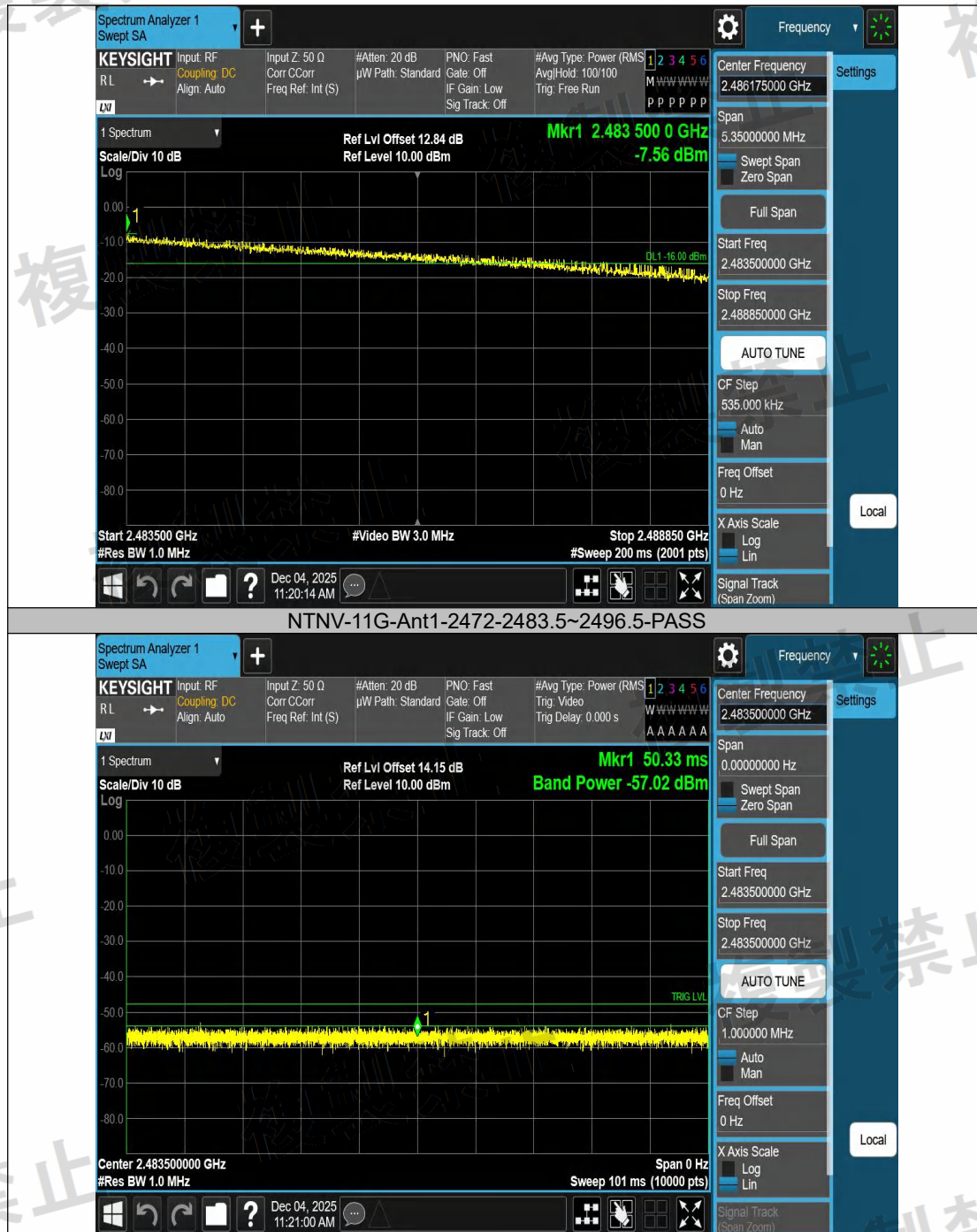


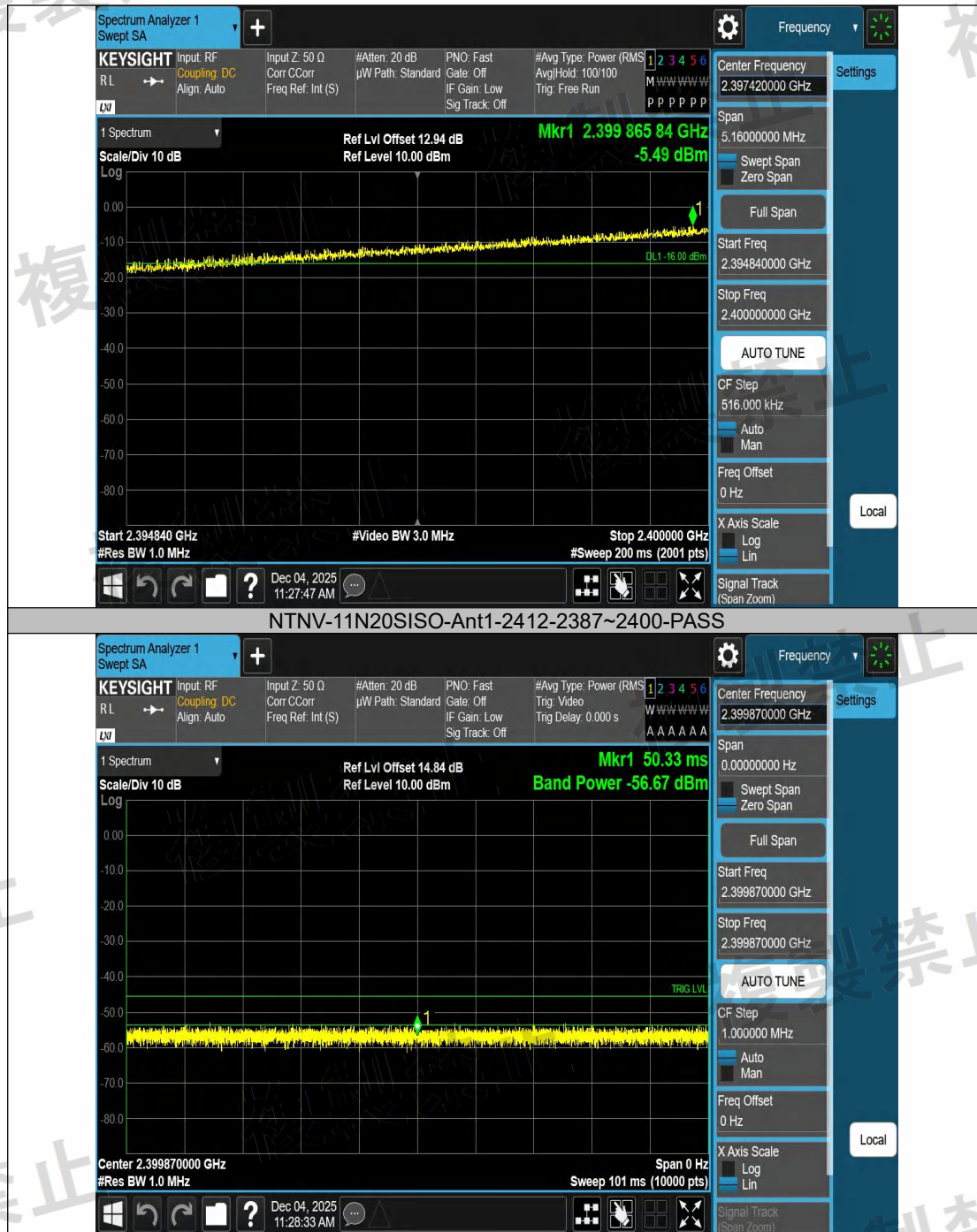


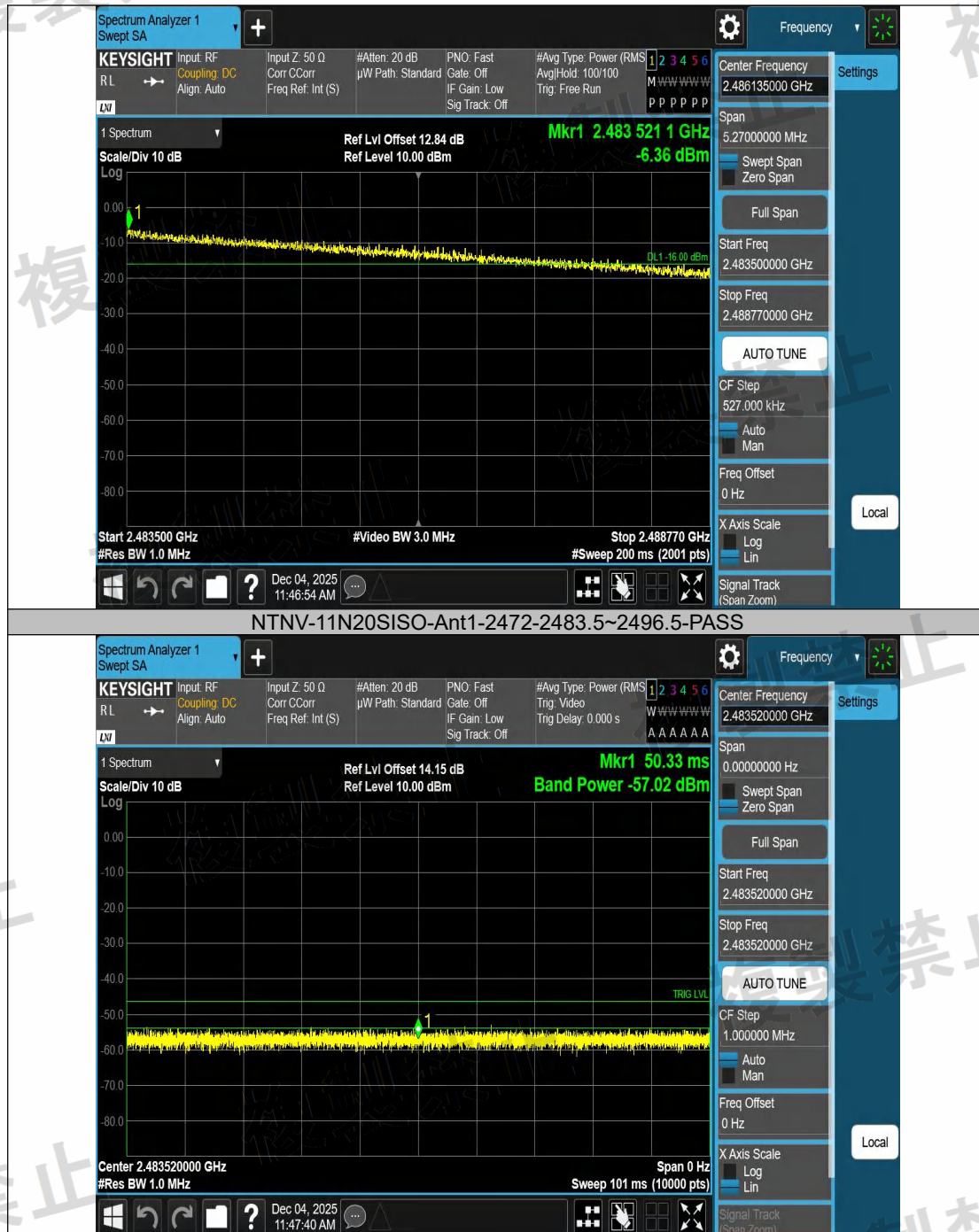


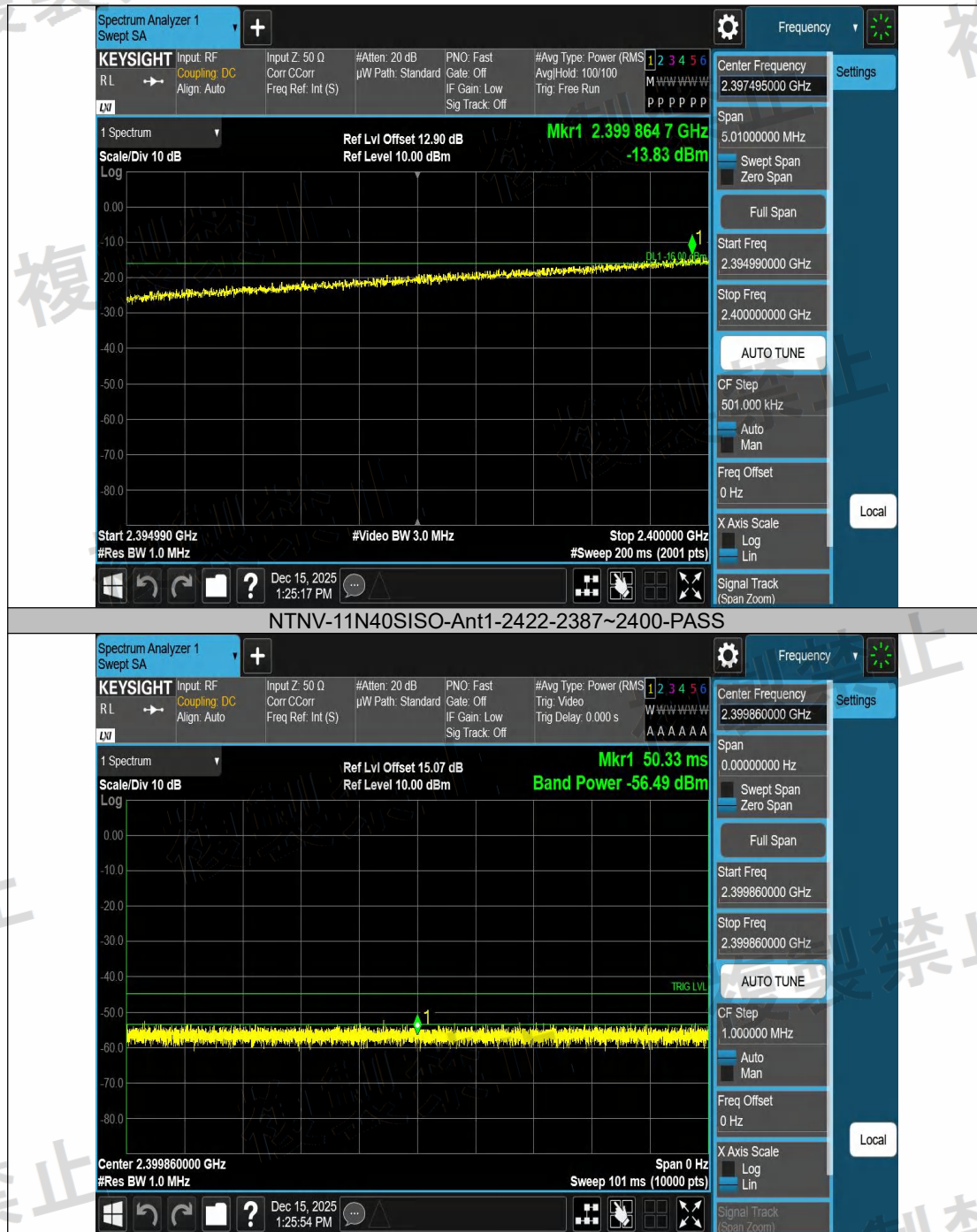
Step2

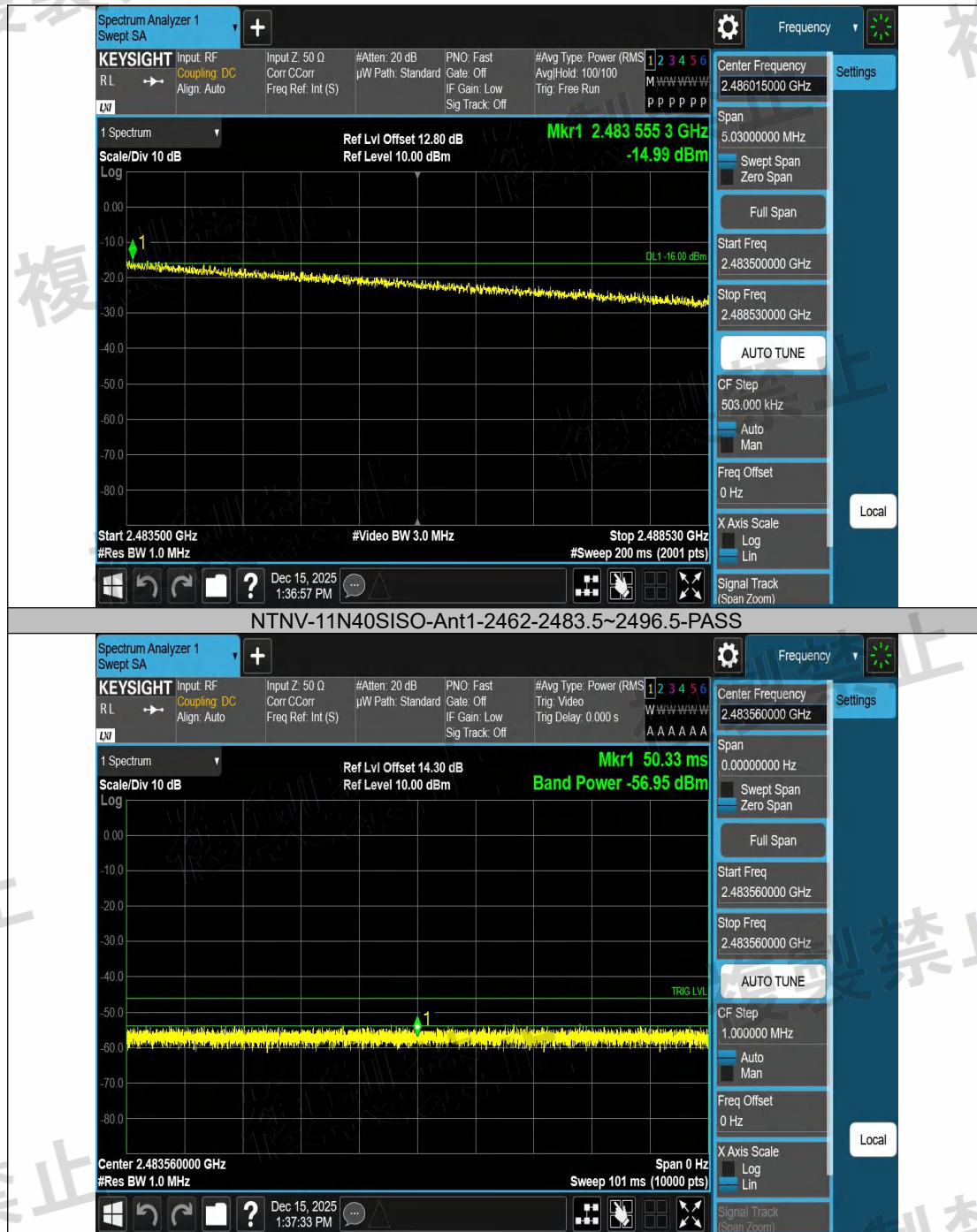












## 7.5 COLLATERAL EMISSIONS OF RECEIVER

### 7.5.1 Applicable Standard

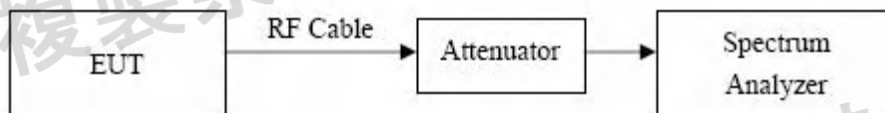
According to Item 19 of Article 2 Paragraph 1.

### 7.5.2 Conformance Limit

The limit on secondary emissions radiated from the receiving equipment within which the function of other radio equipment will not be impaired shall be, in terms of the power of a dummy antenna circuit that has the same electrical constant as the receiving antenna, 4nW (-54dBm) or less at a frequency below 1 GHz and 20 nW(-47dBm) or less at a frequency of 1 GHz or higher as measured using the circuit.

- |                      |                       |
|----------------------|-----------------------|
| a. 30 MHz - 1000 MHz | 4 nW (-54dBm) or less |
| b. 1GHz – 12.5 GHz   | 20 nW(-47dBm) or less |

### 7.5.3 Test Setup Block Diagram



### 7.5.4 Test Procedure

Set the EUT so that the test frequency is can be measured receipt consecutively all the time.

(1) Set the attenuation value of the dummy load lowest as possible, due to low level of the measured object.

(2) Set Spectrum analyzer for seeking the collateral emission is set as below.

|                      |                                                                                          |
|----------------------|------------------------------------------------------------------------------------------|
| Sweeping Bandwidth   | 30MHz to 5 times of carrier frequency                                                    |
| Resolution Bandwidth | In case of frequency lower than 1 GHz, 100 kHz<br>In case of frequency higher than 1 MHz |
| Video Bandwidth      | Same level as the resolution bandwidth                                                   |
| Sweep Time           | Minimum time to assure the measurement accuracy                                          |
| Y-Axis Scale         | 10 dB/Div                                                                                |
| Sweep Mode           | Single sweep                                                                             |
| Phase-Detection Mode | Positive peak                                                                            |

(3) Spectrum analyzer for measuring the collateral emission is set as below.

|                      |                                                                                          |
|----------------------|------------------------------------------------------------------------------------------|
| Central Frequency    | Collateral emission frequency                                                            |
| Sweeping Bandwidth   | 0 Hz                                                                                     |
| Resolution Bandwidth | In case of frequency lower than 1 GHz, 100 kHz<br>In case of frequency higher than 1 MHz |
| Video Bandwidth      | Same level as the resolution bandwidth                                                   |
| Sweep Mode           | Single sweep                                                                             |
| Detection Mode       | Sample                                                                                   |

Set the spectrum analyzer as (2), seek the maximum amplitude of the collateral emission.

In case of sought result lower than 1/10 limit value, employ the sought value as the measured value.

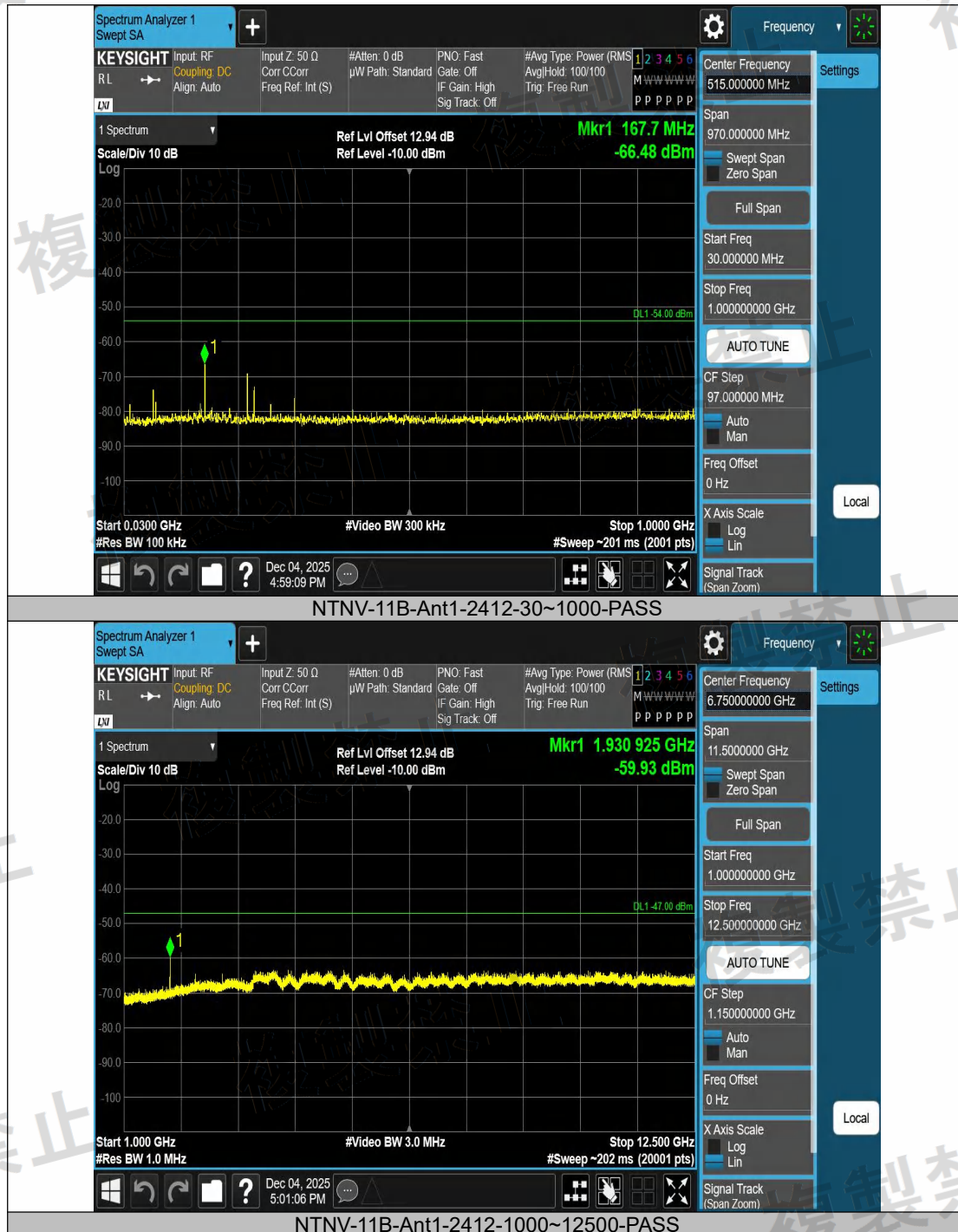
In case the sought value exceeds 1/10 limit value, seek the collateral emission frequency by narrowing the sweeping band sequentially to 1/10 for the purpose of higher accuracy of the spectrum analyzer. Set the spectrum analyzer as (3).

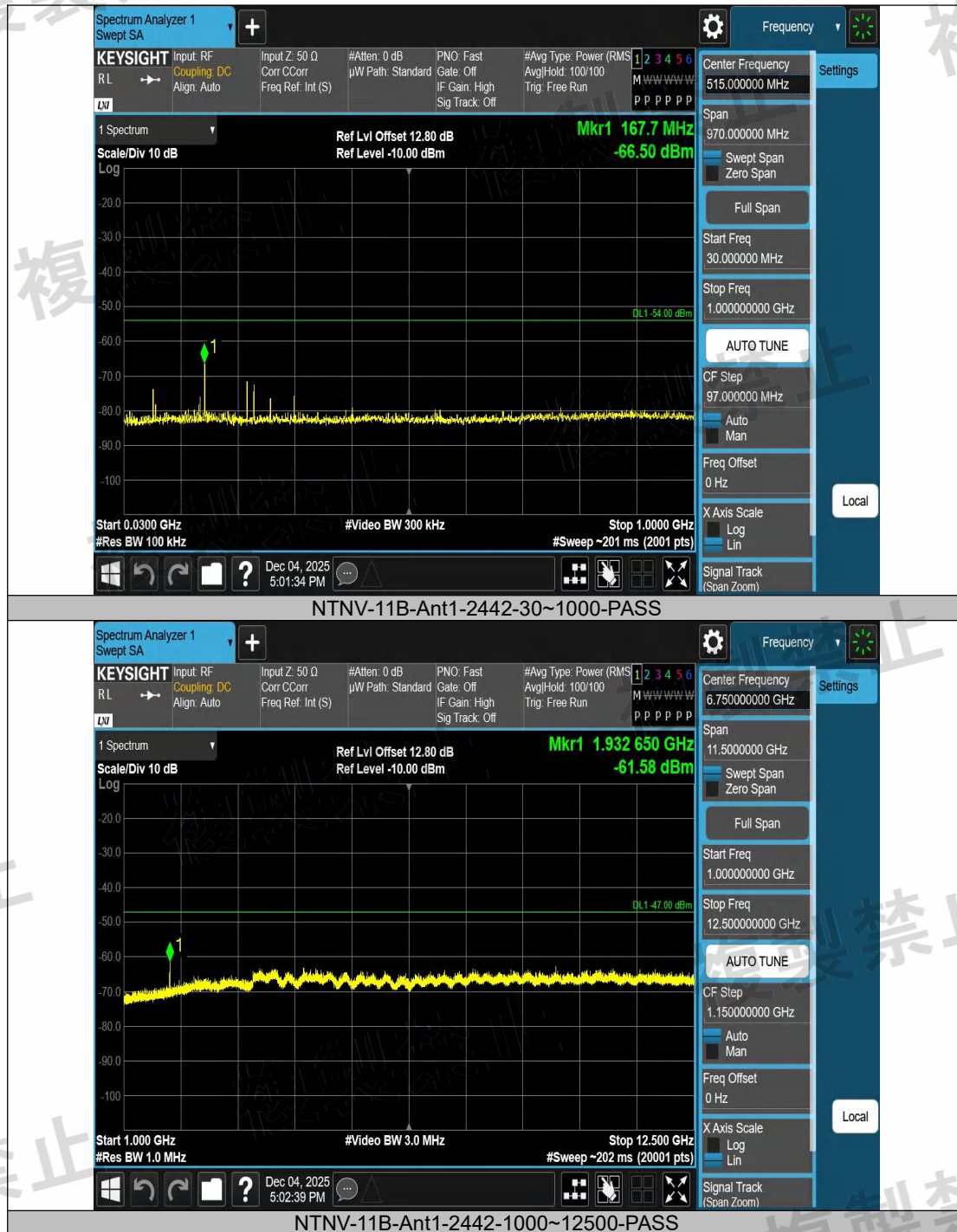
### 7.5.5 Environmental Conditions

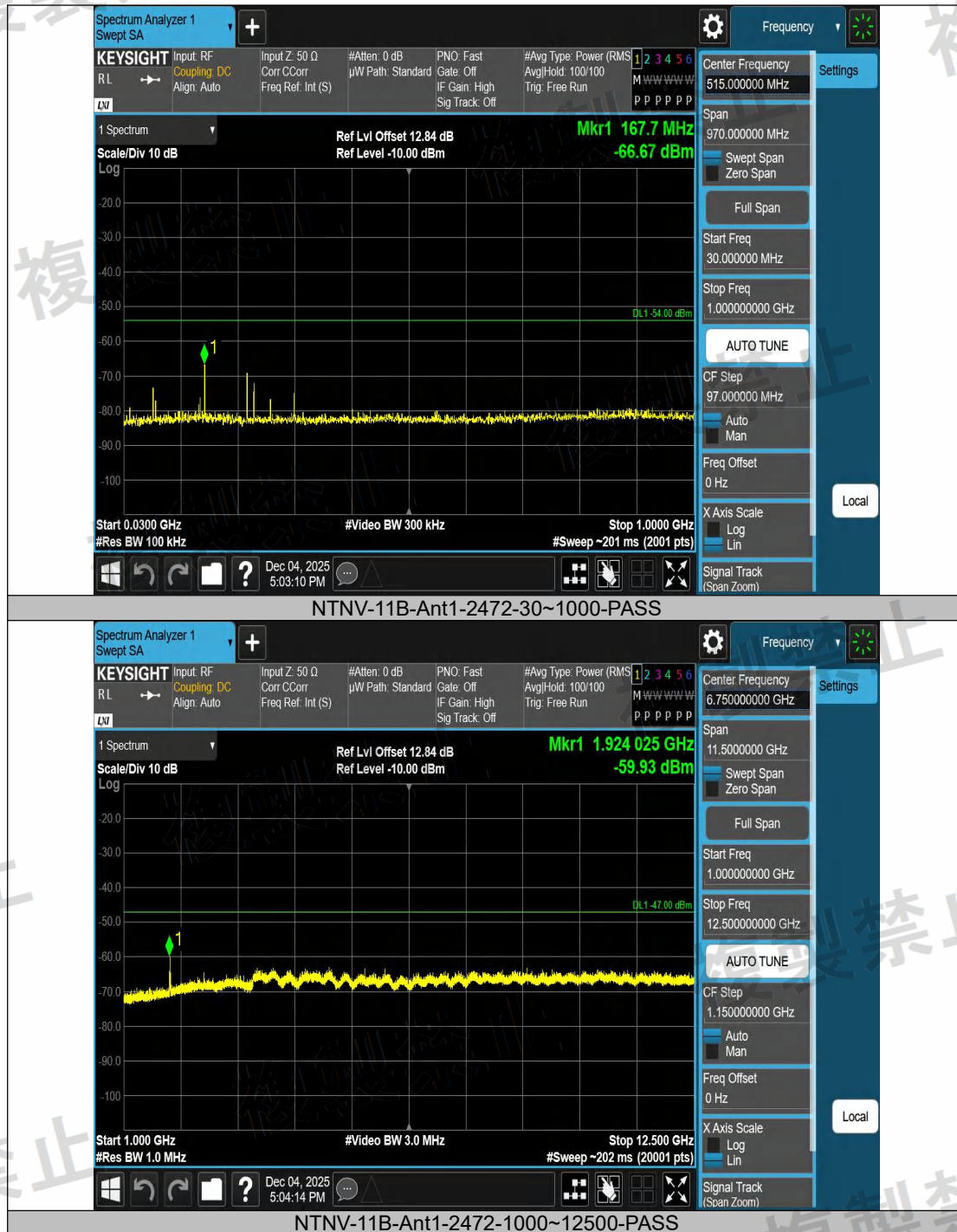
|                    |           |
|--------------------|-----------|
| Temperature:       | 25 °C     |
| Relative Humidity: | 45%       |
| ATM Pressure:      | 1011 mbar |

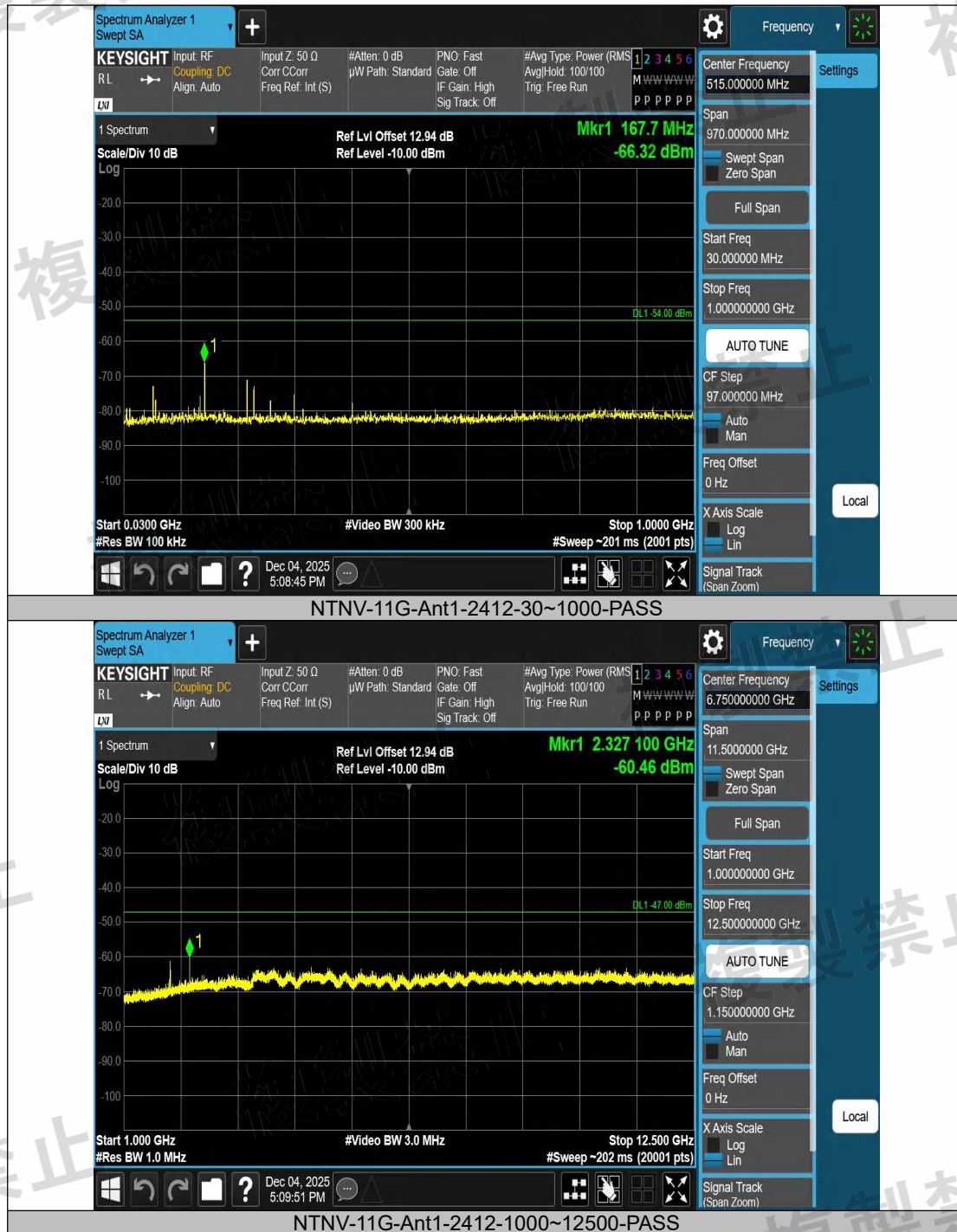
### 7.5.6 Test Results

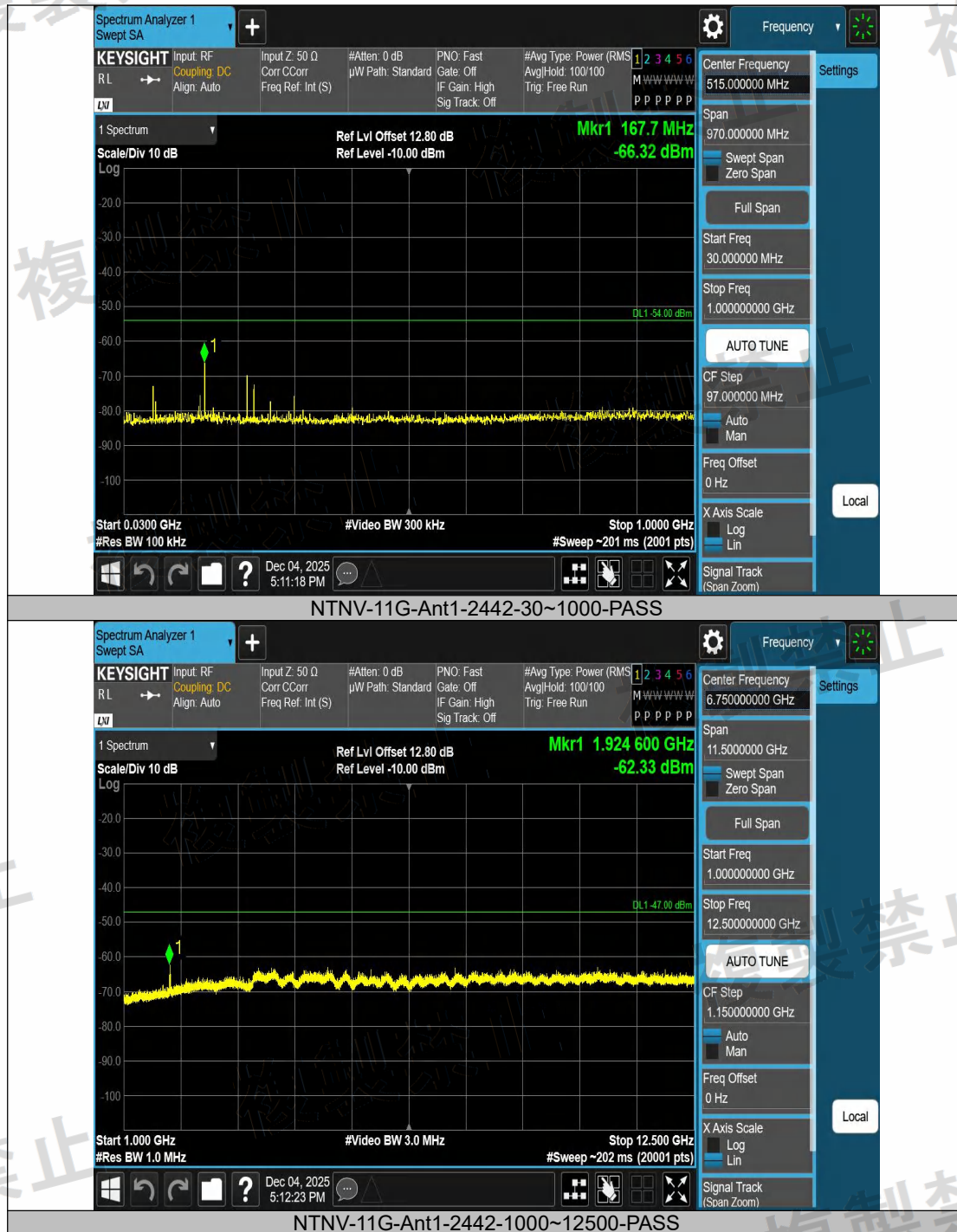
| TestCondition | TestMode   | Antenna | Frequency[MHz] | Freq.Range [MHz] | Freq. [MHz] | Result [dBm] | Limit [dBm] | Result [nW/MHz] | Limit [nW/MHz] | Verdict |
|---------------|------------|---------|----------------|------------------|-------------|--------------|-------------|-----------------|----------------|---------|
| NTNV          | 11B        | Ant1    | 2412           | 30~1000          | 167.74      | -66.48       | ≤-54        | 0.22491         | ≤4             | PASS    |
| NTNV          | 11B        | Ant1    | 2412           | 1000~12500       | 1930.93     | -59.93       | ≤-47        | 1.01625         | ≤20            | PASS    |
| NTNV          | 11B        | Ant1    | 2442           | 30~1000          | 167.74      | -66.50       | ≤-54        | 0.22387         | ≤4             | PASS    |
| NTNV          | 11B        | Ant1    | 2442           | 1000~12500       | 1932.65     | -61.59       | ≤-47        | 0.69343         | ≤20            | PASS    |
| NTNV          | 11B        | Ant1    | 2472           | 30~1000          | 167.74      | -66.67       | ≤-54        | 0.21528         | ≤4             | PASS    |
| NTNV          | 11B        | Ant1    | 2472           | 1000~12500       | 1924.03     | -59.93       | ≤-47        | 1.01625         | ≤20            | PASS    |
| NTNV          | 11G        | Ant1    | 2412           | 30~1000          | 167.74      | -66.32       | ≤-54        | 0.23335         | ≤4             | PASS    |
| NTNV          | 11G        | Ant1    | 2412           | 1000~12500       | 2327.10     | -60.46       | ≤-47        | 0.89950         | ≤20            | PASS    |
| NTNV          | 11G        | Ant1    | 2442           | 30~1000          | 167.74      | -66.32       | ≤-54        | 0.23335         | ≤4             | PASS    |
| NTNV          | 11G        | Ant1    | 2442           | 1000~12500       | 1924.60     | -62.33       | ≤-47        | 0.58479         | ≤20            | PASS    |
| NTNV          | 11G        | Ant1    | 2472           | 30~1000          | 167.74      | -66.30       | ≤-54        | 0.23442         | ≤4             | PASS    |
| NTNV          | 11G        | Ant1    | 2472           | 1000~12500       | 3999.78     | -62.09       | ≤-47        | 0.61802         | ≤20            | PASS    |
| NTNV          | 11N20SI SO | Ant1    | 2412           | 30~1000          | 167.74      | -66.22       | ≤-54        | 0.23878         | ≤4             | PASS    |
| NTNV          | 11N20SI SO | Ant1    | 2412           | 1000~12500       | 3732.40     | -62.68       | ≤-47        | 0.53951         | ≤20            | PASS    |
| NTNV          | 11N20SI SO | Ant1    | 2442           | 30~1000          | 167.74      | -66.02       | ≤-54        | 0.25003         | ≤4             | PASS    |
| NTNV          | 11N20SI SO | Ant1    | 2442           | 1000~12500       | 10673.80    | -62.90       | ≤-47        | 0.51286         | ≤20            | PASS    |
| NTNV          | 11N20SI SO | Ant1    | 2472           | 30~1000          | 167.74      | -66.34       | ≤-54        | 0.23227         | ≤4             | PASS    |
| NTNV          | 11N20SI SO | Ant1    | 2472           | 1000~12500       | 8525.03     | -61.74       | ≤-47        | 0.66988         | ≤20            | PASS    |
| NTNV          | 11N40SI SO | Ant1    | 2422           | 30~1000          | 167.74      | -66.40       | ≤-54        | 0.22909         | ≤4             | PASS    |
| NTNV          | 11N40SI SO | Ant1    | 2422           | 1000~12500       | 2325.95     | -60.20       | ≤-47        | 0.95499         | ≤20            | PASS    |
| NTNV          | 11N40SI SO | Ant1    | 2442           | 30~1000          | 167.74      | -66.58       | ≤-54        | 0.21979         | ≤4             | PASS    |
| NTNV          | 11N40SI SO | Ant1    | 2442           | 1000~12500       | 3972.75     | -62.98       | ≤-47        | 0.50350         | ≤20            | PASS    |
| NTNV          | 11N40SI SO | Ant1    | 2462           | 30~1000          | 167.74      | -66.46       | ≤-54        | 0.22594         | ≤4             | PASS    |
| NTNV          | 11N40SI SO | Ant1    | 2462           | 1000~12500       | 1928.63     | -58.85       | ≤-47        | 1.30317         | ≤20            | PASS    |

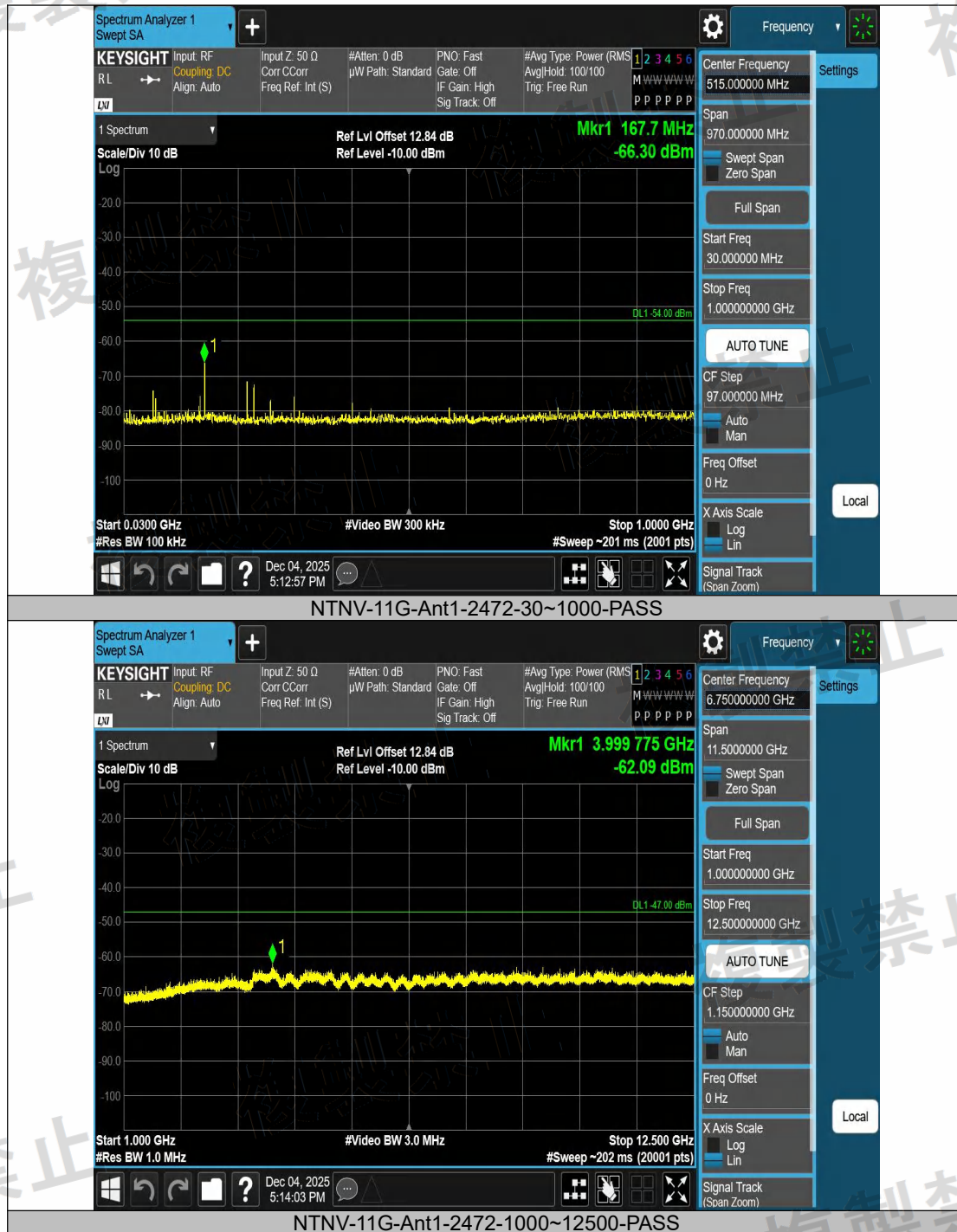


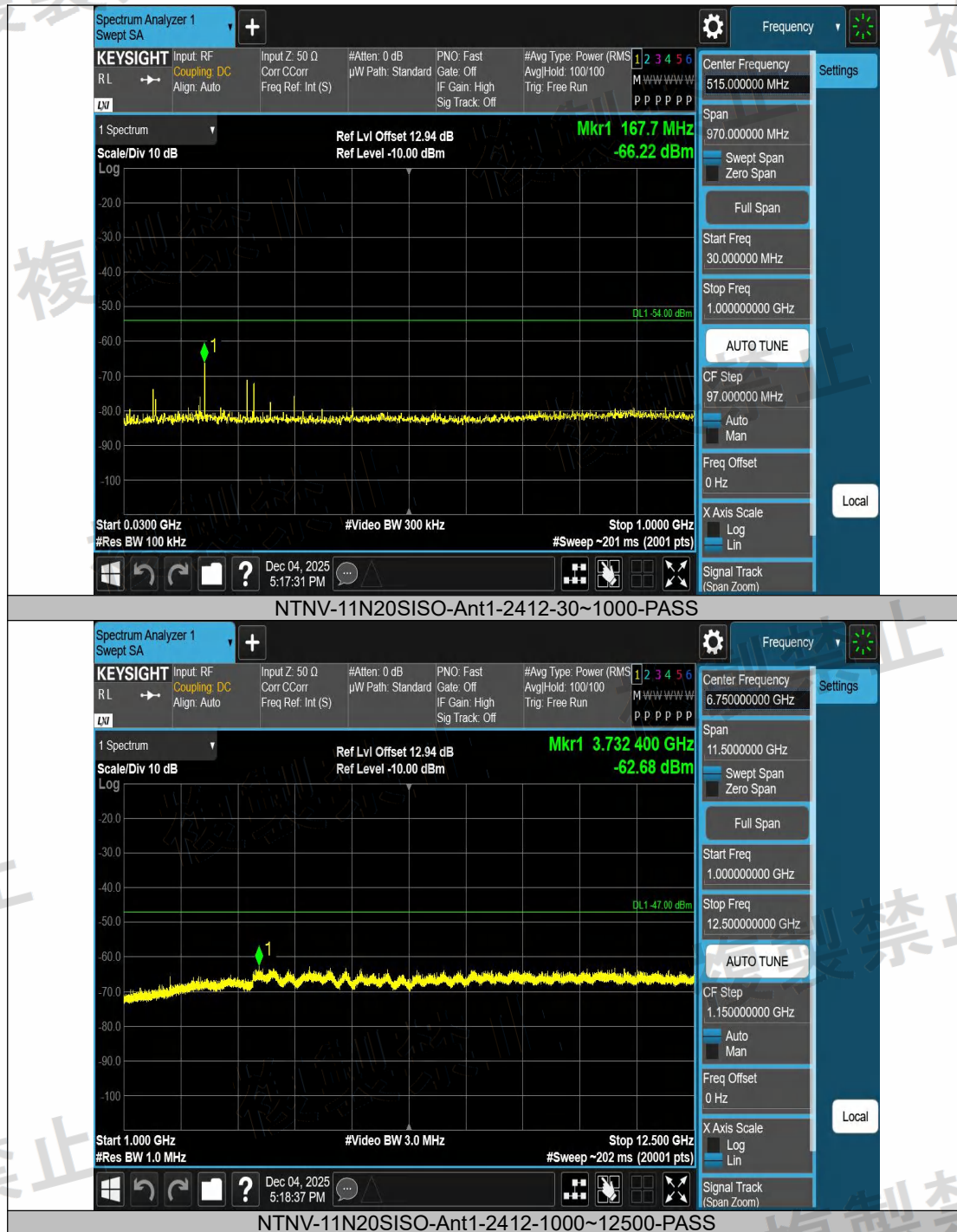


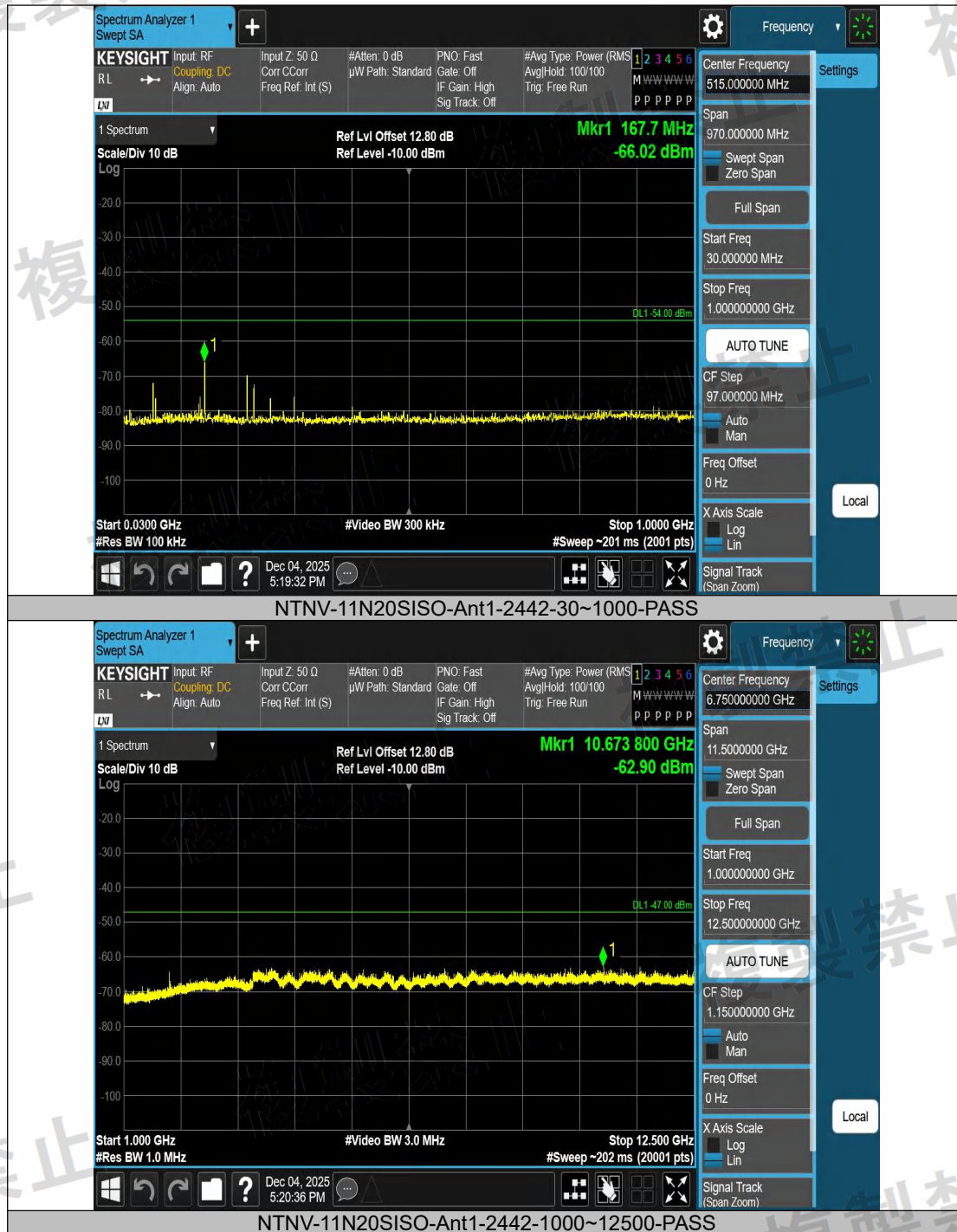


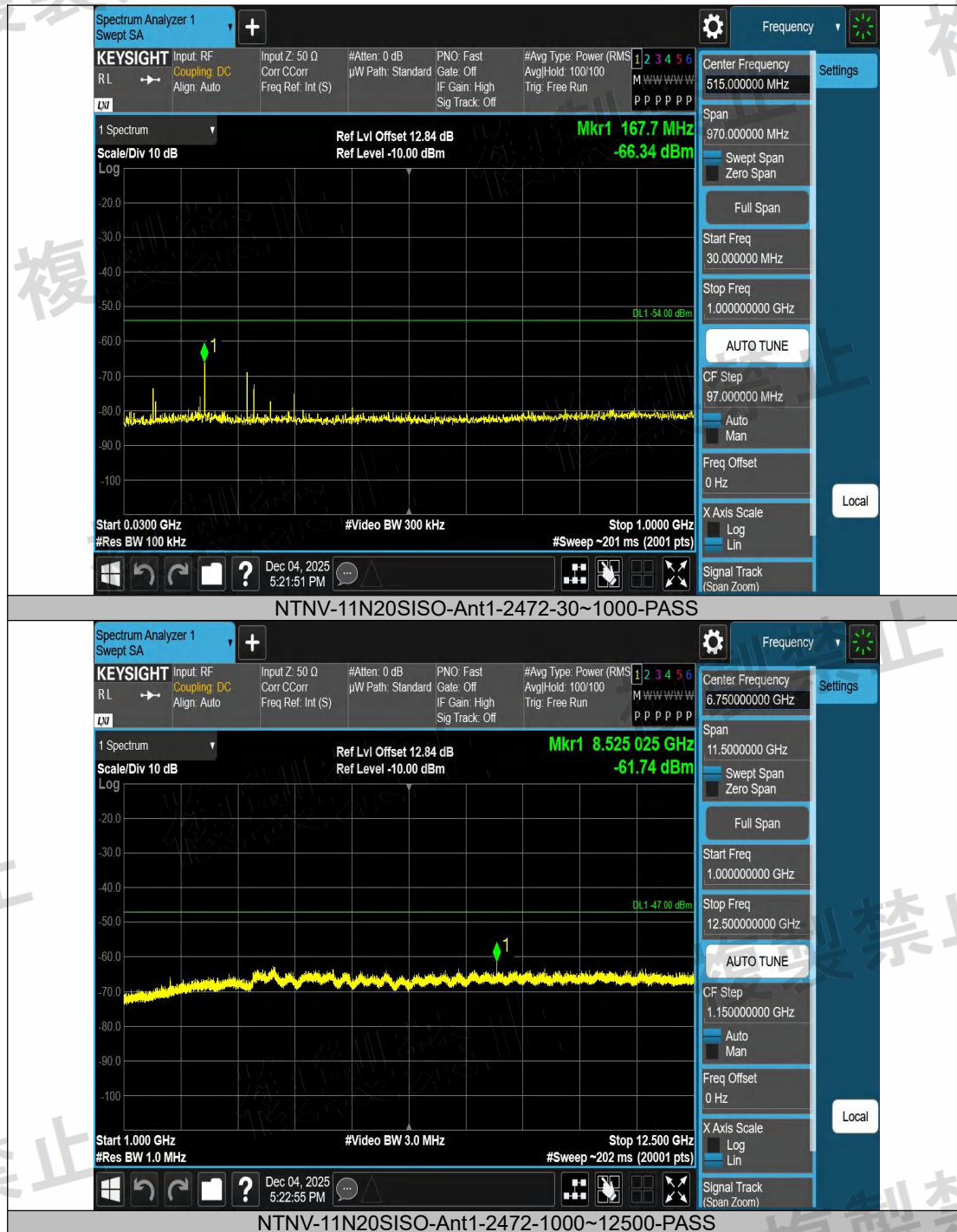


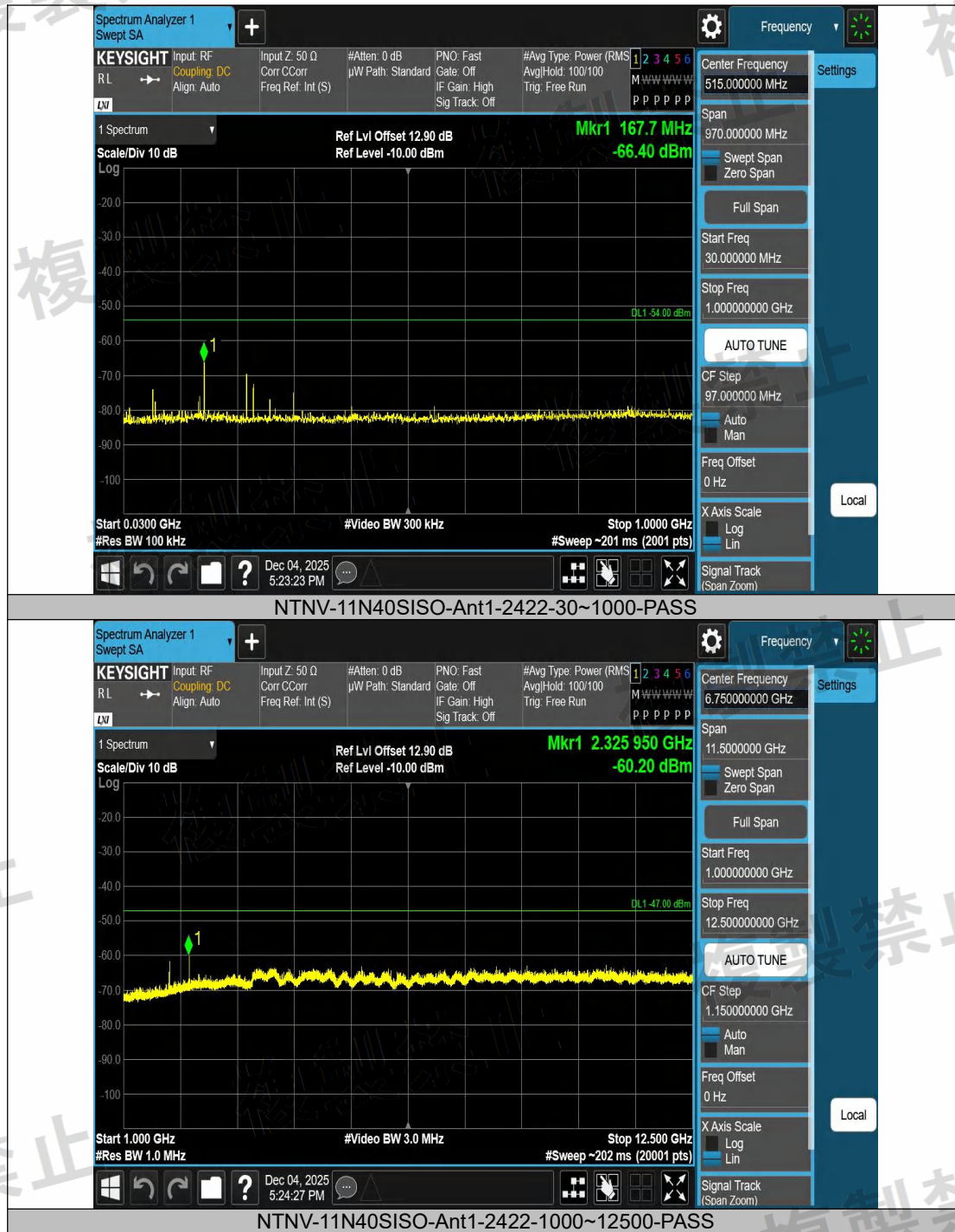


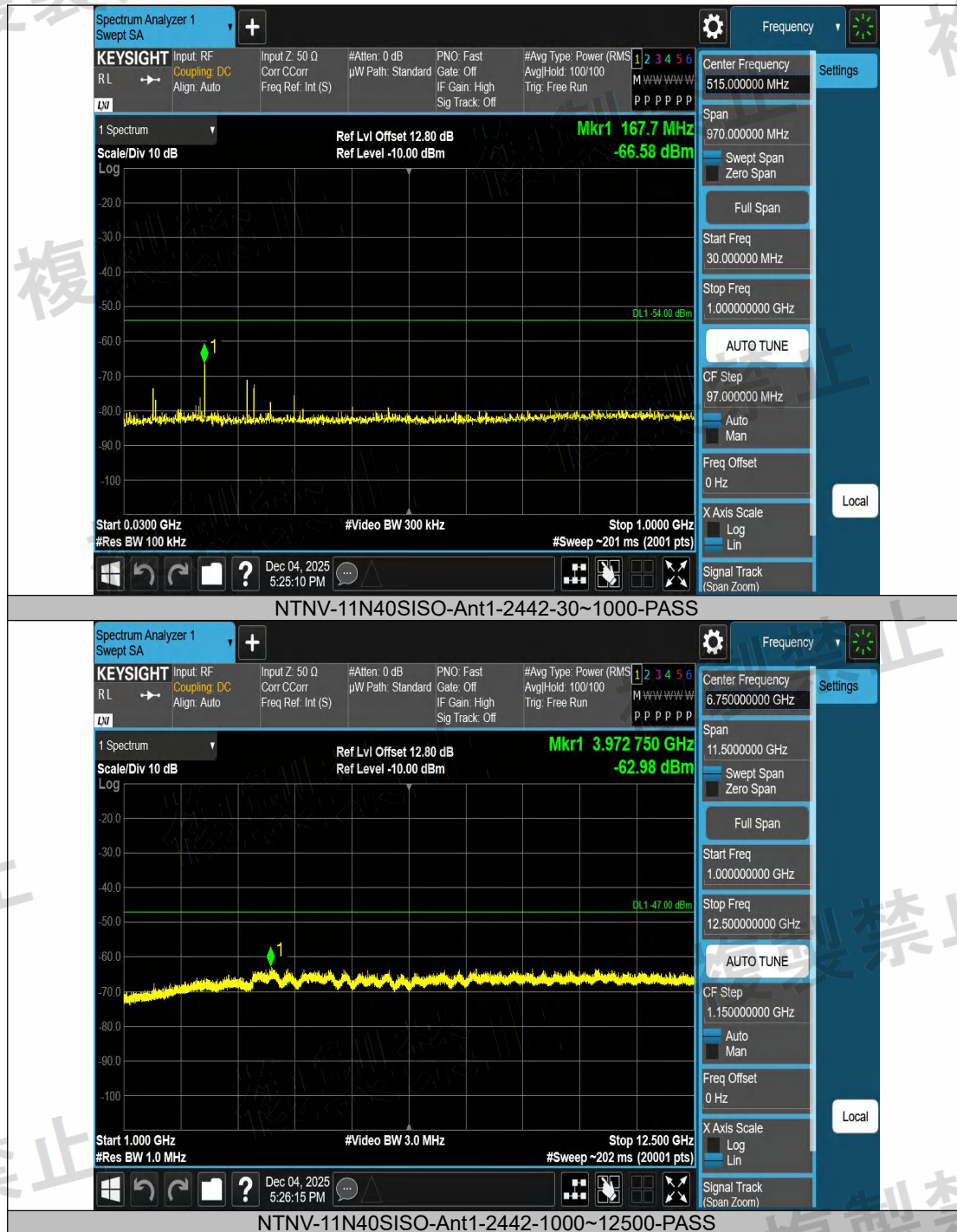


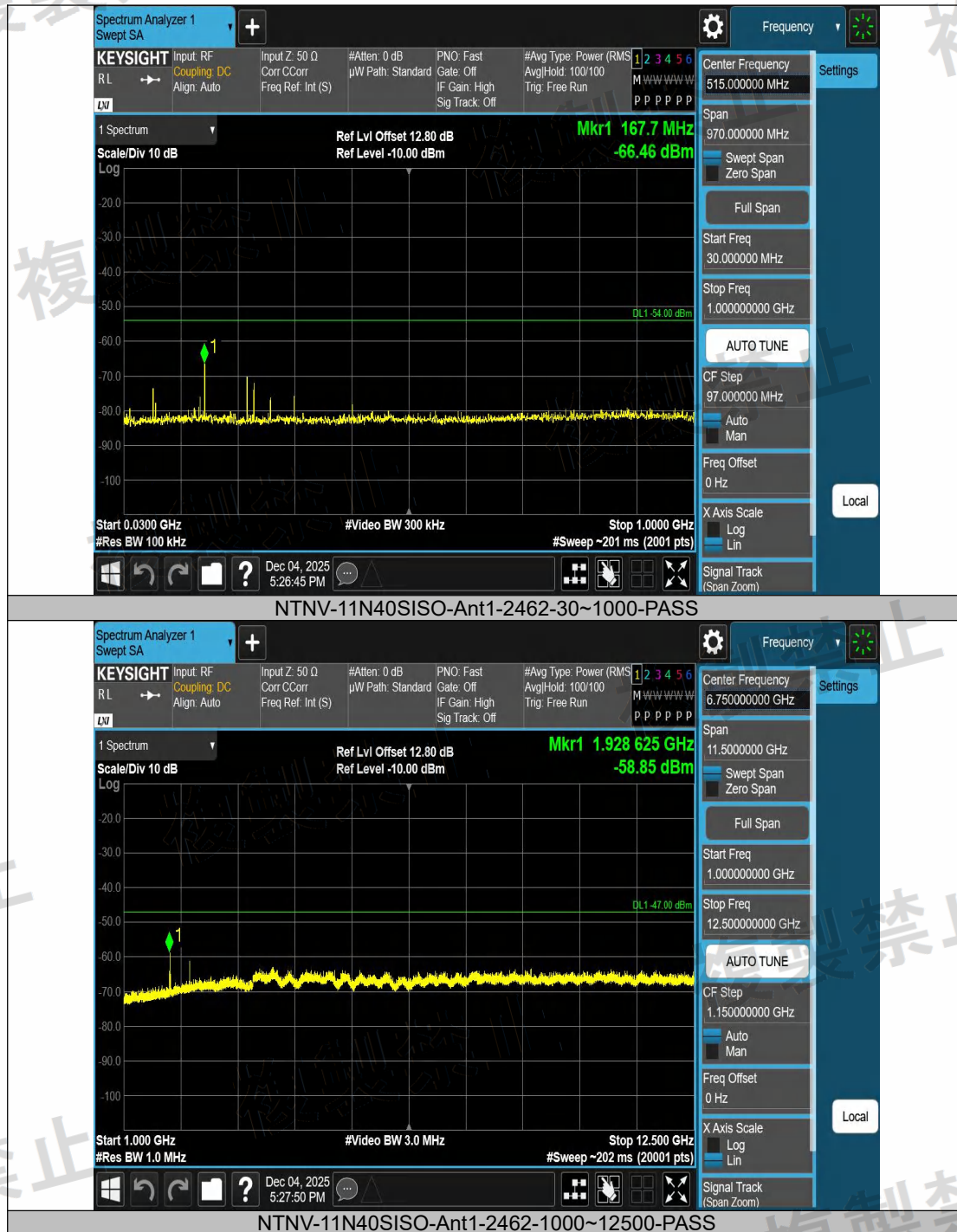










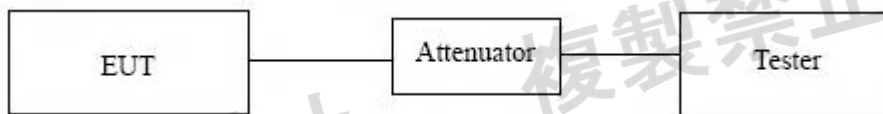


## 7.6 INTERFERENCE PREVENTION FUNCTION

### 7.6.1 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.

### 7.6.2 Test Setup Block Diagram



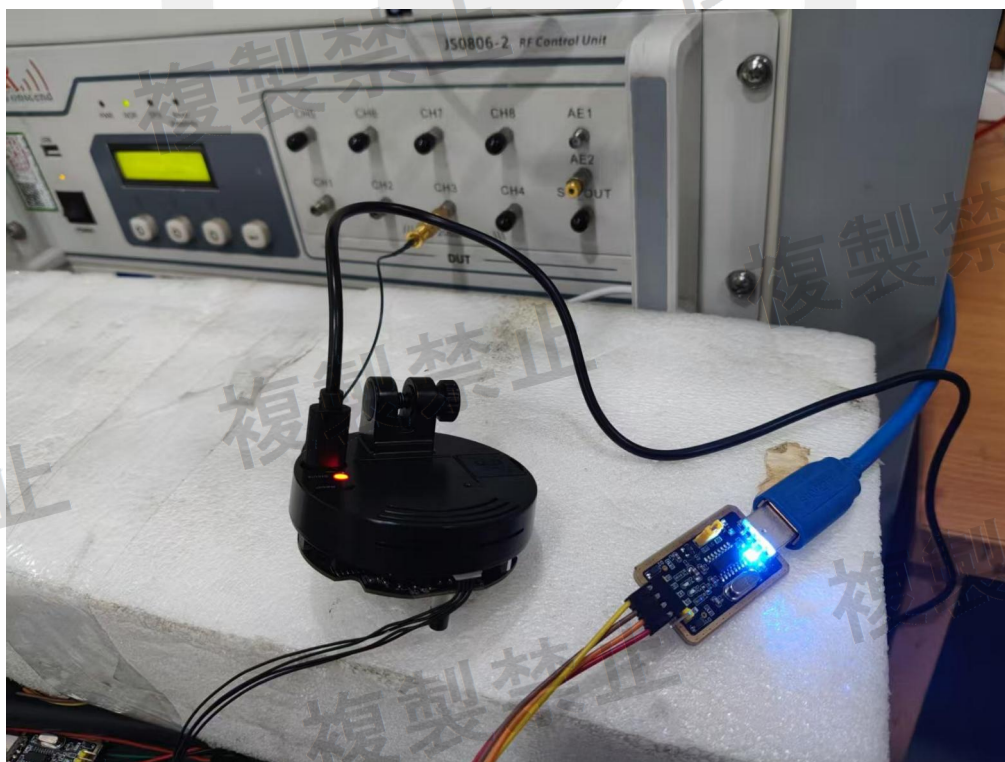
### 7.6.3 Test Procedure

1. Set the EUT in the usual operation condition
2. The radio equipment with automatic transmitting function of identification code
  - A. Transmit the assigned identification code from the radio equipment.
  - B. Confirm the identification code received by the demodulator.
3. The radio equipment with automatic receiving function of identification code
  - A. Transmit the assigned identification code from the opposite equipment.
  - B. Confirm that the usual communication is available.
  - C. Transmit the identification code distinct from the assigned one from the opposite equipment.
  - D. Confirm that the radio equipment is stopped or an indication is displayed as the identification code is different.
4. The identification function shall be recorded with "Good" or "No".

### 7.6.4 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 |
| Mark Address                                 | 00:1B:63:45:67:89                                                                          |

## 8 APPENDIX PHOTOGRAPHS OF TEST SETUP



--- End of Report ---