



## Japan Test Report

Report Reference No. .... : **SZE2606050580ET01**

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Date of issue ..... : July 08, 2026

Testing Laboratory Name ..... : EUSACERT (Shenzhen) Testing Co., Ltd.

Address ..... : 103, 2F, Building A2 and 106, Building A3, No. 2082, Jincheng Road, Haoxiang Community, Shajing Street, Bao'an District, Shenzhen, People's Republic of China

Applicant's Name ..... : **CYBERTRONICS LIMITED**

Address ..... : Room 508, Building 12, Zhongguancun Entrepreneurship Street, Haidian District, Beijing, China

### Test Specification

Standard ..... : Article 2 paragraph 1 item(19)

TRF Originator ..... : EUSACERT (Shenzhen) Testing Co., Ltd.

Master TRF ..... : Dated 2025-06

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Product Name ..... : **Cyber-stage**

Trade Mark ..... : N/A

Model Name ..... : AiSpea-s02

Series Model(s) ..... : N/A

Hardware Version ..... : V1.0

Firmware Version ..... : V1.0

Operation Frequency ..... : From 2412-2472MHz

Ratings ..... : DC5V from Type-C or DC3.7V from Battery

Result ..... : **Pass**



|                         |                          |               |
|-------------------------|--------------------------|---------------|
| <b>Test Report No.:</b> | <b>SZE2606050580ET01</b> | July 08, 2026 |
|                         |                          | Date of issue |

Product Name : Cyber-stage

Model Name : AiSpea-s02

Series Model(s) : N/A

**Applicant : CYBERTRONICS LIMITED**

Address : Room 508, Building 12, Zhongguancun Entrepreneurship Street,  
Haidian District, Beijing, China

**Manufacturer : Shenzhen Jingchen Electronics Co., Ltd**

Address : C802, He Center, No. 60, Shenglong Road, Longgang District,  
Shenzhen City, Guangdong Province, China

|                    |             |
|--------------------|-------------|
| <b>Test Result</b> | <b>PASS</b> |
|--------------------|-------------|

The test report merely corresponds to the test sample.  
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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**\*\* Issued History \*\***

| Revision     | Description                 | Issued Date   | Remark |
|--------------|-----------------------------|---------------|--------|
| Revision 1.0 | Initial Test Report Release | July 08, 2026 |        |
|              |                             |               |        |
|              |                             |               |        |



## 1. Summary of Test Results

### 1.1 Test Procedures and Results

Test procedures according to the technical standards:

| Part | Rule Section | Description of Test                                 | Result |
|------|--------------|-----------------------------------------------------|--------|
| 4.1  | 3.2          | Frequency Error                                     | PASS   |
| 4.3  | 3.2          | Occupied Bandwidth (99%)                            | PASS   |
| 4.4  | 3.2          | Unwanted Emission Intensity                         | PASS   |
| 4.2  | 3.2          | Antenna Power Error                                 | PASS   |
| 4.5  | 3.2          | Limitation of Collateral Emission of Receiver       | PASS   |
| 4.6  | 3.2          | Transmission Antenna Gain (EIRP Antenna Power)      | N/A    |
| 4.7  | 3.2          | Transmission Radiation Angle Width (3dB Beam width) | N/A    |
| 4.8  | 3.2          | Radio Interference Prevention Capability            | PASS   |
| 4.9  | /            | Carrier Sense Capability                            | PASS   |
| 5.0  | /            | Number of carrier                                   | PASS   |

NOTE:

- (1) PASS: Test item meets the requirement.
- (2) Fail: Test item does not meet the requirement.
- (3) N/A: Test case does not apply to the test object.
- (4) The test result judgment is decided by the limit of test standard.
- (5) MIC Public Notice 88:2023, annex 1 and annex 43
- (6) MIC Ordinance Regulating Radio Equipment Section 4.17 of Article 49.20



## 1.2 Information of the Test Laboratory

EUSACERT (Shenzhen) Testing Co., Ltd.

103, 2F, Building A2 and 106, Building A3, No. 2082, Jincheng Road, Haoxiang Community, Shajing Street, Bao'an District, Shenzhen, People's Republic of China

## 1.3 Measurement Uncertainty

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

| No. | Item                | Uncertainty             |
|-----|---------------------|-------------------------|
| 1   | RF Power, Conducted | $\pm 0.15\text{dB}$     |
| 2   | Occupied Bandwidth  | $\pm 3.64\%$            |
| 3   | Temperature         | $\pm 0.1^\circ\text{C}$ |
| 4   | Humidity            | $\pm 1.0\%$             |



## 2. General Information

### 2.1 General Description of EUT

|                                                                                                                                                                                                                                                                                                                                                    |                                                                                       |            |                  |           |           |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------|------------------|-----------|-----------|------|
| Equipment                                                                                                                                                                                                                                                                                                                                          | Cyber-stage                                                                           |            |                  |           |           |      |
| Model Name                                                                                                                                                                                                                                                                                                                                         | AiSpea-s02                                                                            |            |                  |           |           |      |
| Series Model(s)                                                                                                                                                                                                                                                                                                                                    | N/A                                                                                   |            |                  |           |           |      |
| Model Difference                                                                                                                                                                                                                                                                                                                                   | N/A                                                                                   |            |                  |           |           |      |
| Antenna Type                                                                                                                                                                                                                                                                                                                                       | Internal Antenna                                                                      |            |                  |           |           |      |
| Antenna Gain                                                                                                                                                                                                                                                                                                                                       | 5.60dBi                                                                               |            |                  |           |           |      |
| Operation Frequency                                                                                                                                                                                                                                                                                                                                | WiFi 2.4G 802.11b/ g/ n(HT20):2412~2472 MHz<br>WiFi 2.4G 802.11n(HT40): 2422~2462 MHz |            |                  |           |           |      |
| Number of Channels                                                                                                                                                                                                                                                                                                                                 | 802.11b/ g/ n (HT20): 13CH<br>802.11n (HT40): 9CH                                     |            |                  |           |           |      |
| Modulation Type                                                                                                                                                                                                                                                                                                                                    | DSSS, OFDM                                                                            |            |                  |           |           |      |
| Power Source                                                                                                                                                                                                                                                                                                                                       | DC5V from Type-C or DC3.7V from Battery                                               |            |                  |           |           |      |
| Power Rating                                                                                                                                                                                                                                                                                                                                       | DC5V from Type-C or DC3.7V from Battery                                               |            |                  |           |           |      |
| Firmware Version                                                                                                                                                                                                                                                                                                                                   | V1.0                                                                                  |            |                  |           |           |      |
| Hardware Version                                                                                                                                                                                                                                                                                                                                   | V1.0                                                                                  |            |                  |           |           |      |
| Note:<br>1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.<br>2. Antenna gain Refer to the antenna specifications.<br>3. The cable loss data is obtained from the supplier.<br>4. The test results in the report only apply to the tested sample.<br>5. Table for Filed Antenna |                                                                                       |            |                  |           |           |      |
| Ant.                                                                                                                                                                                                                                                                                                                                               | Brand                                                                                 | Model Name | Antenna Type     | Connector | Gain(dBi) | NOTE |
| 1                                                                                                                                                                                                                                                                                                                                                  | N/A                                                                                   | N/A        | Internal Antenna | N/A       | 5.60      |      |



## 2.2 Operation Frequency of Channel

| Channel List for 802.11b/g/n (20MHz) |                 |         |                 |         |                 |         |                 |
|--------------------------------------|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|
| Channel                              | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 01                                   | 2412            | 05      | 2432            | 09      | 2452            | 13      | 2472            |
| 02                                   | 2417            | 06      | 2437            | 10      | 2457            |         |                 |
| 03                                   | 2422            | 07      | 2442            | 11      | 2462            |         |                 |
| 04                                   | 2427            | 08      | 2447            | 12      | 2467            |         |                 |

| Channel List for 802.11n(40MHz) |                 |         |                 |         |                 |         |                 |
|---------------------------------|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|
| Channel                         | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 03                              | 2422            | 06      | 2437            | 09      | 2452            |         |                 |
| 04                              | 2427            | 07      | 2442            | 10      | 2457            |         |                 |
| 05                              | 2432            | 08      | 2447            | 11      | 2462            |         |                 |

## 2.3 Description of Test Modes

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

| Pretest Mode | Description                        |
|--------------|------------------------------------|
| Mode 1       | B Mode(802.11b) (CH01 CH07 CH13)   |
| Mode 2       | G Mode(802.11g) (CH01 CH07 CH13)   |
| Mode 3       | N20 Mode(802.11n) (CH01 CH07 CH13) |
| Mode 4       | N40 Mode(802.11n) (CH03 CH07 CH11) |



## 2.4 Test Conditions

The WIFI module was tested while in a continuous transmitter/receiver mode. The EUT was tuned to a low, middle, and high channel for all tests. For all test case pre/scans were completed in all Modes to determine worst case levels.

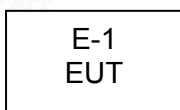
**Power Supply Voltage Fluctuation Test**

| Voltage mode                                                                                                                                                                    | Input Voltage | Radio Unit Voltage |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|
| DC Input                                                                                                                                                                        | DC 4.5V       | 3.31V              |
|                                                                                                                                                                                 | DC 5.0V       | 3.30V              |
|                                                                                                                                                                                 | DC 5.5V       | 3.30V              |
| Battery                                                                                                                                                                         | DC 3.33V      | 3.31V              |
|                                                                                                                                                                                 | DC 3.70V      | 3.30V              |
|                                                                                                                                                                                 | DC 4.07V      | 3.30V              |
| Note:<br>1. The radio unit Voltage with the module regulator IC regulator.<br>2. The radio unit less than 1%, so the test only rated voltage (Normal voltage) with the battery. |               |                    |

During the input supply voltage to the EUT from the external power source is varied by +/- 10%, if output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%. Exempt extremely high and low supply voltage condition test, EUT only operated in normal voltage to test all regulations.

## 2.5 Block Digram Showing the Configuration of System Tested

Mode 1:





## 2.6 Description of Support Units (Conducted Mode)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment   | Trade Mark | Model Name | Specification | Note |
|------|-------------|------------|------------|---------------|------|
| E-1  | Cyber-stage | N/A        | AiSpea-s02 | N/A           | EUT  |
|      |             |            |            |               |      |
|      |             |            |            |               |      |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
|      |               |              |        |      |
|      |               |              |        |      |

Note:

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

|                             |                         |
|-----------------------------|-------------------------|
| Test Software Version       | Wifi_Test_Tool_V1.7.8.1 |
| Transmit Antenna Number     | 1                       |
| Test Software setting value | 0                       |

**2.7 Equipments List for All Test Items**

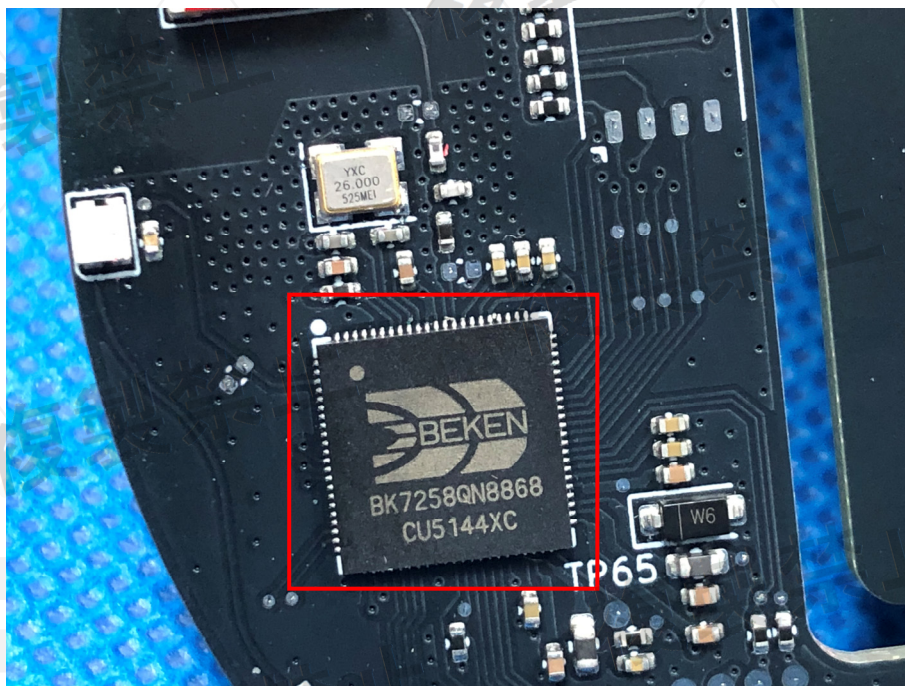
| Item | Equipment                       | Manufacturer | Model No.         | Equipment Number | Last Cal.  | Cal. Interval |
|------|---------------------------------|--------------|-------------------|------------------|------------|---------------|
| 1    | Spectrum analyzer               | Agilent      | N9020A            | EUSA-028         | 2025.07.14 | 1 Year        |
| 2    | RF Automatic control unit       | Tonscend     | JS0806-2          | EUSA-053         | 2025.07.14 | 1 Year        |
| 3    | High pass filter unit           | Tonscend     | JS0806-F          | EUSA-034         | 2025.07.14 | 1 Year        |
| 4    | Wireless Communication Test Set | R&S          | CMW500            | EUSA-029         | 2025.07.14 | 1 Year        |
| 5    | RF Test Software                | Tonscend     | JS 1120-3 V3.6.21 | EUSA-060         | /          | /             |
| 6    | Signal generator                | Agilent      | N5181A            | EUSA-019         | 2025.07.14 | 1 Year        |

Note: The calibration agency listed on the table corresponds to item ii c) of Article 24-2 paragraph 4.  
Calibration Institution: CHINA CERTIFICATION & INSPECTION GROUP METROLOGY CO, LTD.



### 3. RF Shielding Method

We apply the product for Japan RF certification. Number of terminals is 88, Terminal pitch is 1 mm.  
It is not easily removed. Please refer to following for photo for details.  
Red circle part of the RF module soldered on the PCB.





## 4. Test Result

### 4.1 Frequency Error

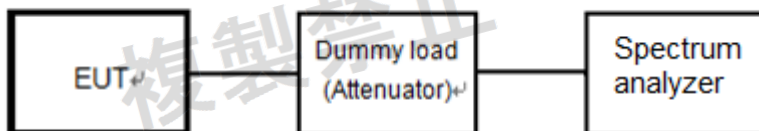
#### 4.1.1 Limit

| Item            | Limits   |
|-----------------|----------|
| Frequency Error | +/-50ppm |

#### 4.1.2 Test Procedures

1. The EUT was placed on a table which is 0.8m above ground plane.
2. The EUT was directly connected to the spectrum analyzer.

#### 4.1.3 Test Setup Layout



#### 4.1.4 EUT Operation during Test

The EUT was placed on the test table and programmed in un-modulation function.

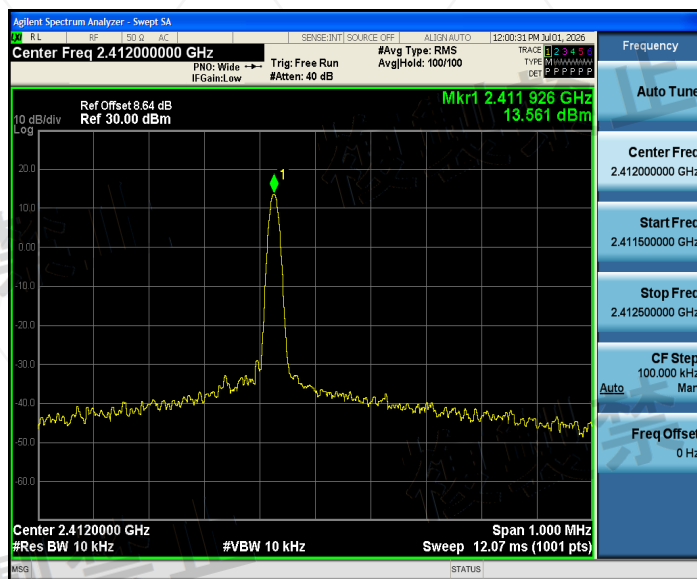
#### 4.1.5 Test Result

|                 |                                 |              |                |
|-----------------|---------------------------------|--------------|----------------|
| EUT:            | Cyber-stage                     | Test Date:   | July 01, 2026  |
| Temperature:    | 25 <sup>0</sup> C               | Tested by:   | Jones Pan      |
| Humidity:       | 55 % RH                         | Test Voltage | Normal Voltage |
| Operation Mode: | Normal Voltage- Carrier Tx Mode |              |                |

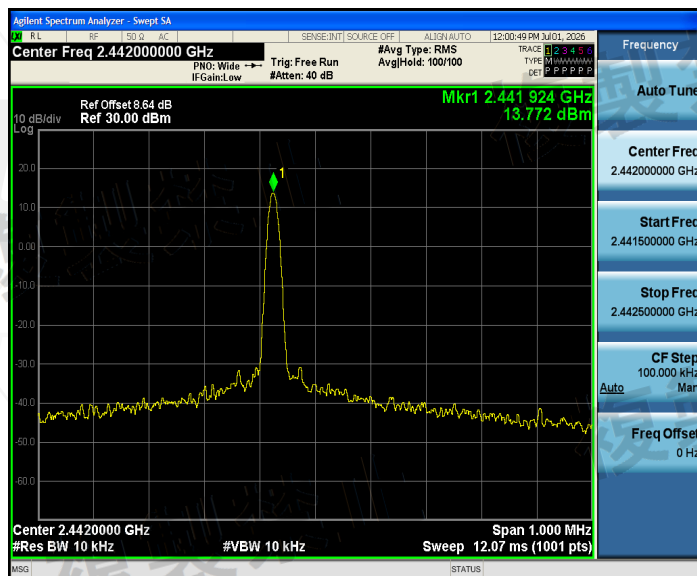
| Frequency (MHz)          | Measured MHz | Tolerance MHz | Result ppm | Limit ppm |
|--------------------------|--------------|---------------|------------|-----------|
| CH1:2412MHz              | 2411.926     | -0.074        | -30.67993  | +/-50     |
| CH7:2442MHz              | 2441.924     | -0.076        | -31.12203  | +/-50     |
| CH13:2472MHz             | 2471.923     | -0.077        | -31.14887  | +/-50     |
| CH3:2422MHz              | 2421.924     | -0.076        | -31.37903  | +/-50     |
| CH11:2462MHz             | 2461.923     | -0.077        | -31.27539  | +/-50     |
| <b>Conclusion : PASS</b> |              |               |            |           |



CH1:2412MHz

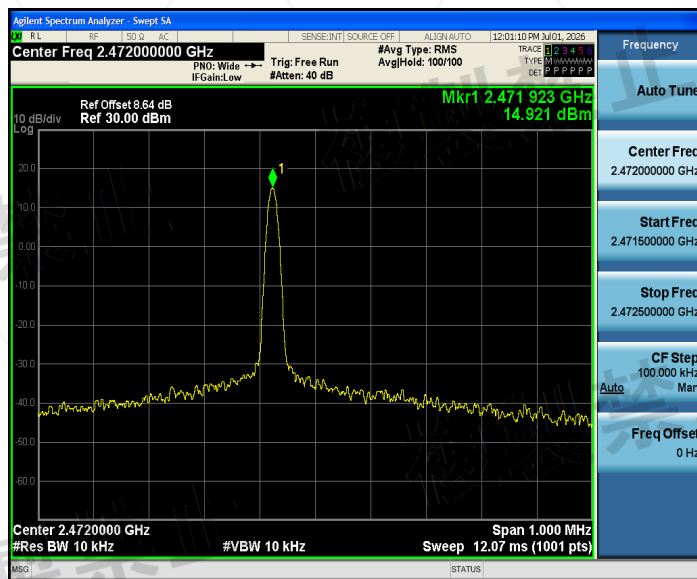


CH7:2442MHz

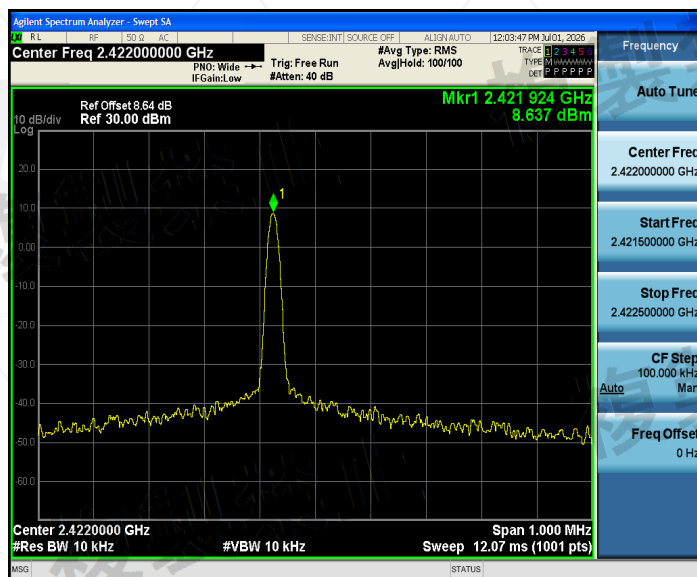




CH13:2472MHz

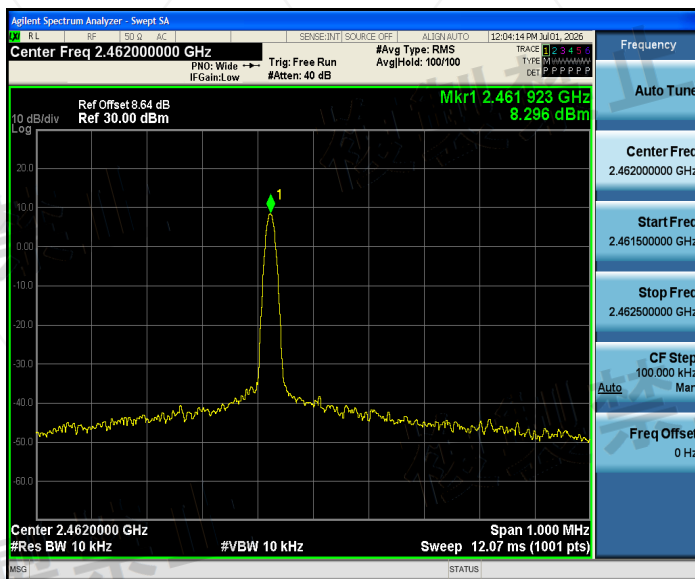


CH3:2422MHz





CH11:2462MHz





## 4.2 Antenna Power

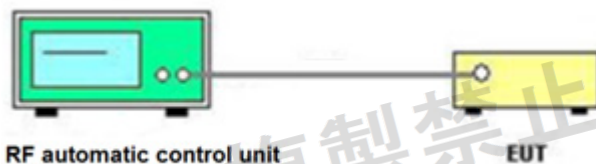
### 4.2.1 Limit

| Item                  | Limits                                                                                                                                                                                                                                |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antenna Power Density | $\leq 3\text{mW/MHz}$ (FH form 2427 - 2470.75 MHz)<br>$\leq 10\text{mW/MHz}$ (OFDM,DS from 2400~2483.5MHz)<br>$\leq 10\text{mW}$ (Other from 2400~2483.5MHz)<br>$\leq 5\text{mW}$ (OFDM,DS from 2400~2483.5MHz, when bandwidth 40MHz) |
| Antenna Power Error   | +20% (Base on manufacturer declare antenna power density)                                                                                                                                                                             |
| E.i.r.p               | $\leq 12.14\text{dBm/MHz}$ (OFDM,DS form 2400-2483.5MHz)<br>$\leq 9.13\text{dBm/MHz}$ (OFDM,DS from 2400~2483.5MHz, when bandwidth 40MHz)                                                                                             |

### 4.2.2 Measuring Instruments and Setting

1. The EUT was placed on a table which is 0.8m above ground plane.
2. The EUT was directly connected to the RF automatic control unit.

### 4.2.3 Test Setup Layout



### 4.2.4 Test Deviation

- (1) Configure EUT and assistant system according clause 2.5.
- (2) Set EUT work in test mode as described in clause 2.3.
- (3) Connected the EUT's antenna port to the RF automatic control unit.
- (4) Record the test data.



## 4.2.5 Test Result

|                 |                                 |              |                |
|-----------------|---------------------------------|--------------|----------------|
| EUT:            | Cyber-stage                     | Test Date:   | July 03, 2026  |
| Temperature:    | 25°C                            | Tested by:   | Jones Pan      |
| Humidity:       | 55 % RH                         | Test Voltage | Normal Voltage |
| Operation Mode: | Normal Voltage-B/G/N20/N40 mode |              |                |

| Mode          | Test Frequency | Measured Power (dBm/MHz) | Antenna Power (mW/MHz) | Rated power (mW/MHz) | Antenna Power Error (%) |
|---------------|----------------|--------------------------|------------------------|----------------------|-------------------------|
| 802.11b       | 2412MHz        | 2.87                     | 1.9364                 | 6                    | -67.73                  |
| 802.11b       | 2442MHz        | 3.68                     | 2.3335                 | 6                    | -61.11                  |
| 802.11b       | 2472MHz        | 3.11                     | 2.0464                 | 6                    | -65.89                  |
| 802.11g       | 2412MHz        | 2.30                     | 1.6982                 | 6                    | -71.70                  |
| 802.11g       | 2442MHz        | 3.41                     | 2.1928                 | 6                    | -63.45                  |
| 802.11g       | 2472MHz        | 3.97                     | 2.4946                 | 6                    | -58.42                  |
| 802.11n(HT20) | 2412MHz        | 4.47                     | 2.7990                 | 6                    | -53.35                  |
| 802.11n(HT20) | 2442MHz        | 4.57                     | 2.8642                 | 6                    | -52.26                  |
| 802.11n(HT20) | 2472MHz        | 3.89                     | 2.4491                 | 6                    | -59.18                  |
| 802.11n(HT40) | 2422MHz        | 1.53                     | 1.4223                 | 3                    | -52.59                  |
| 802.11n(HT40) | 2442MHz        | 2.60                     | 1.8197                 | 3                    | -39.34                  |
| 802.11n(HT40) | 2462MHz        | 2.83                     | 1.9187                 | 3                    | -36.04                  |

**Limit :**

1. +20% (Base on manufacturer declare antenna power density).
2. Antenna power limit is (HT20)10mW/MHz or less, (HT40) 5mW/MHz or less, Other is 10mW or less.



| Mode          | Test Frequency | Antenna Power (mW/MHz) | Antenna Power (dBm/MHz) | Antenna Gain (dBi) | EIRP (dBm/MHz) |
|---------------|----------------|------------------------|-------------------------|--------------------|----------------|
| 802.11b       | 2412MHz        | 1.9364                 | 2.87                    | 5.60               | 8.47           |
| 802.11b       | 2442MHz        | 2.3335                 | 3.68                    | 5.60               | 9.28           |
| 802.11b       | 2472MHz        | 2.0464                 | 3.11                    | 5.60               | 8.71           |
| 802.11g       | 2412MHz        | 1.6982                 | 2.30                    | 5.60               | 7.90           |
| 802.11g       | 2442MHz        | 2.1928                 | 3.41                    | 5.60               | 9.01           |
| 802.11g       | 2472MHz        | 2.4946                 | 3.97                    | 5.60               | 9.57           |
| 802.11n(HT20) | 2412MHz        | 2.7990                 | 4.47                    | 5.60               | 10.07          |
| 802.11n(HT20) | 2442MHz        | 2.8642                 | 4.57                    | 5.60               | 10.17          |
| 802.11n(HT20) | 2472MHz        | 2.4491                 | 3.89                    | 5.60               | 9.49           |
| 802.11n(HT40) | 2422MHz        | 1.4223                 | 1.53                    | 5.60               | 7.13           |
| 802.11n(HT40) | 2442MHz        | 1.8197                 | 2.60                    | 5.60               | 8.20           |
| 802.11n(HT40) | 2462MHz        | 1.9187                 | 2.83                    | 5.60               | 8.43           |

EIRP(dBm/MHz)= Antenna Power (dBm/MHz)+ Antenna Gain(dBi)

**Limit :**

≤12.14dBm/MHz(OFDM,DS form 2400-2483.5MHz)

≡ 9.13dBm/MHz (OFDM,DS from2400~2483.5MHz, when bandwidth 40MHz)



### 4.3 Occupied Bandwidth

#### 4.3.1 Limit

| Item                 | Limits                                                                            |
|----------------------|-----------------------------------------------------------------------------------|
| Occupied Band Width: | FH 83.5MHz, OFDM,DS $\leq$ 26MHz;<br>802.11n(HT40): 26-40MHz; Others $\leq$ 26MHz |

#### 4.3.2 Measuring Instruments and Setting

| Spectrum Parameter | Setting  |
|--------------------|----------|
| Attenuation        | Auto     |
| RB / VB            | 300kHz   |
| Detector           | Peak     |
| Trace              | Max Hold |
| Sweep Time         | Auto     |

#### 4.3.3 Test Procedures

- Setting of SA is following as: RB: 300kHz / VB: 300kHz / SPAN: 40/80MHz / AT: 40dB Ref: 30dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- EUT have transmitted the maximum modulation signal and fixed channelize (For DSSS or OFDM Device) or continuous maximum power of hopping mode (For FHSS Device). SA set to 99% of occupied bandwidth to measure occupied bandwidth. The limit is less than 26MHz (For DSSS or OFDM Device) or 83.5MHz (For FHSS Device). The limit of 802.11n (HT40) is 26MHz to 38MHz

#### 4.3.4 Test Setup Layout



#### 4.3.5 Test Deviation

There is no deviation with the original standard.

#### 4.3.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

**4.3.7 Test Result**

|                 |                                 |              |                |
|-----------------|---------------------------------|--------------|----------------|
| EUT:            | Cyber-stage                     | Test Date:   | July 02, 2026  |
| Temperature:    | 25°C                            | Tested by:   | Jones Pan      |
| Humidity:       | 55 % RH                         | Test Voltage | Normal Voltage |
| Operation Mode: | Normal Voltage-b/g/N20/N40 mode |              |                |

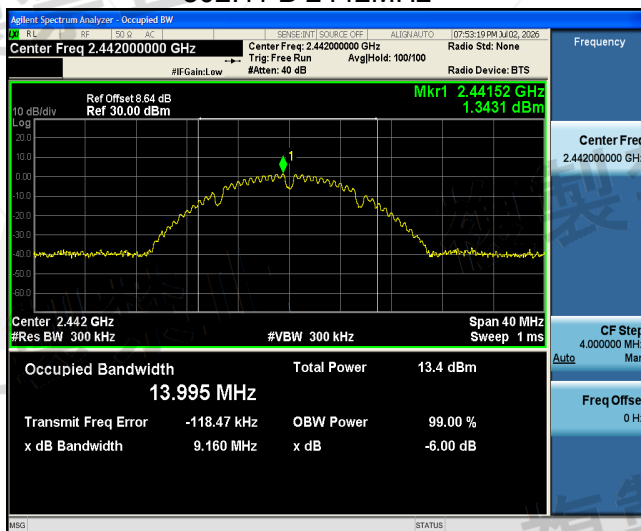
| Mode          | Test Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------------|----------------------|--------------------------|
| 802.11b       | 2412                 | 14.009                   |
| 802.11b       | 2442                 | 13.995                   |
| 802.11b       | 2472                 | 13.952                   |
| 802.11g       | 2412                 | 16.796                   |
| 802.11g       | 2442                 | 17.308                   |
| 802.11g       | 2472                 | 16.858                   |
| 802.11n(HT20) | 2412                 | 18.149                   |
| 802.11n(HT20) | 2442                 | 18.012                   |
| 802.11n(HT20) | 2472                 | 17.638                   |
| 802.11n(HT40) | 2422                 | 35.560                   |
| 802.11n(HT40) | 2442                 | 36.033                   |
| 802.11n(HT40) | 2462                 | 35.902                   |



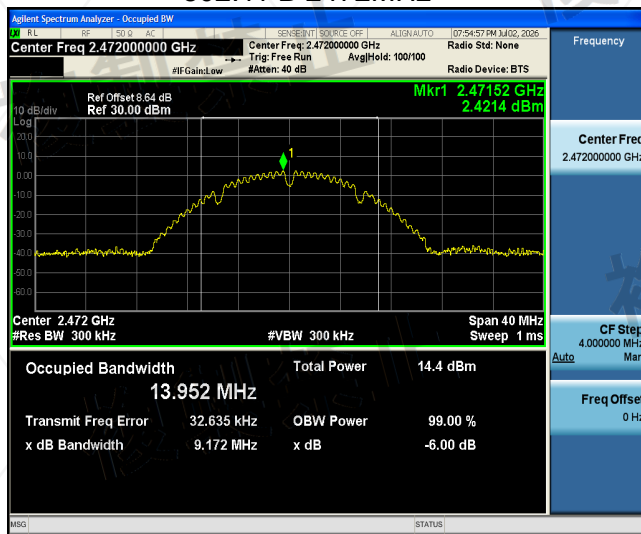
## 802.11 B 2412MHz



## 802.11 B 2442MHz

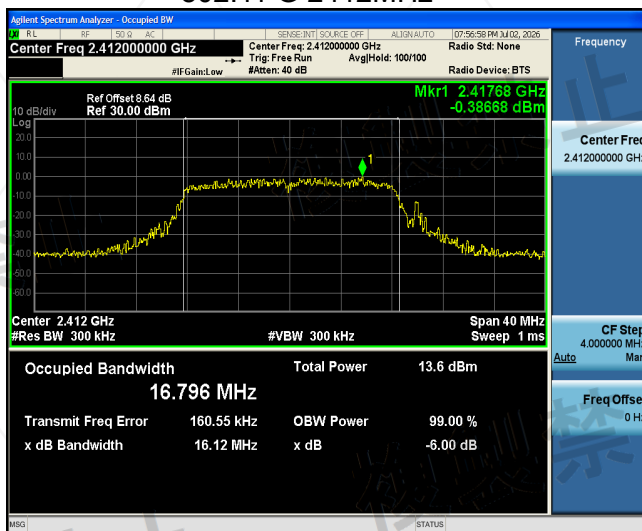


## 802.11 B 2472MHz

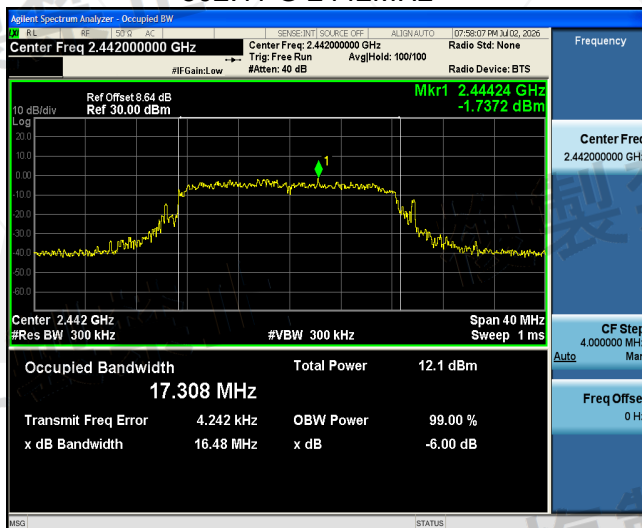




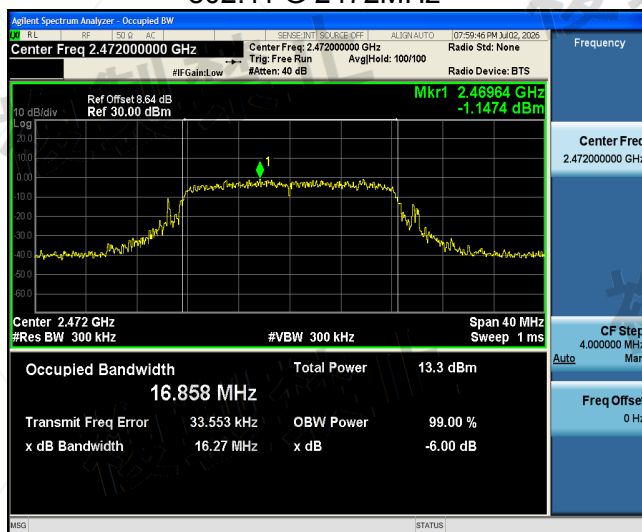
## 802.11 G 2412MHz



## 802.11 G 2442MHz

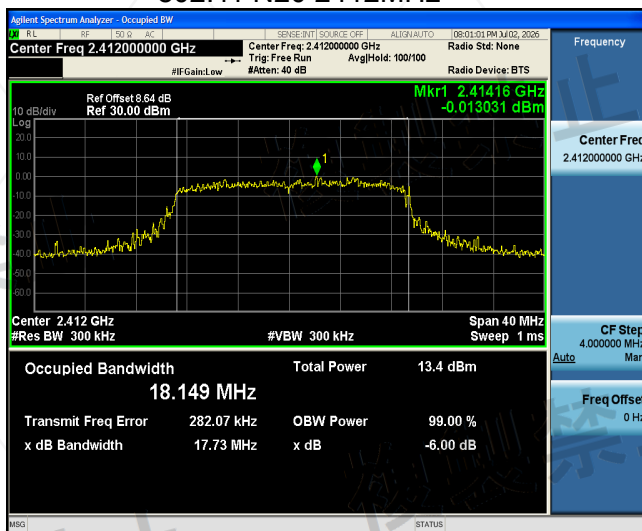


## 802.11 G 2472MHz

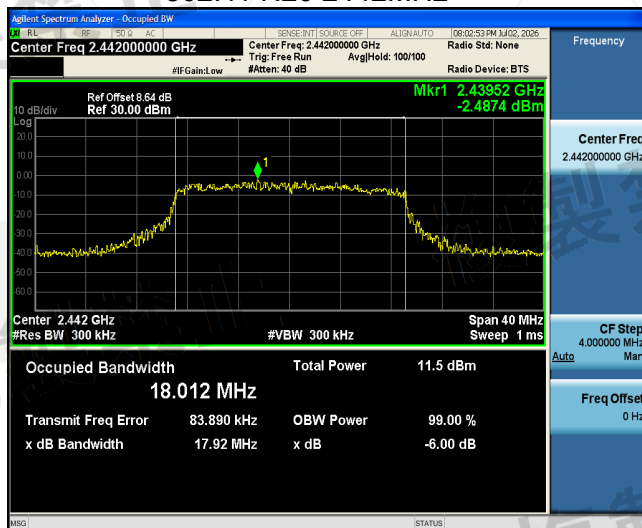




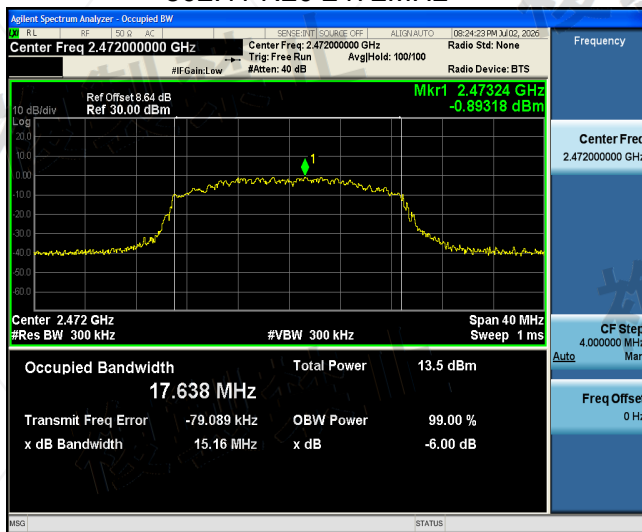
## 802.11 N20 2412MHz



## 802.11 N20 2442MHz

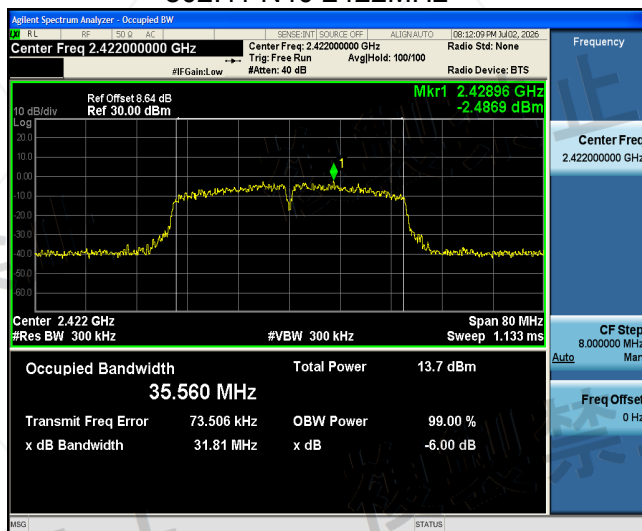


## 802.11 N20 2472MHz

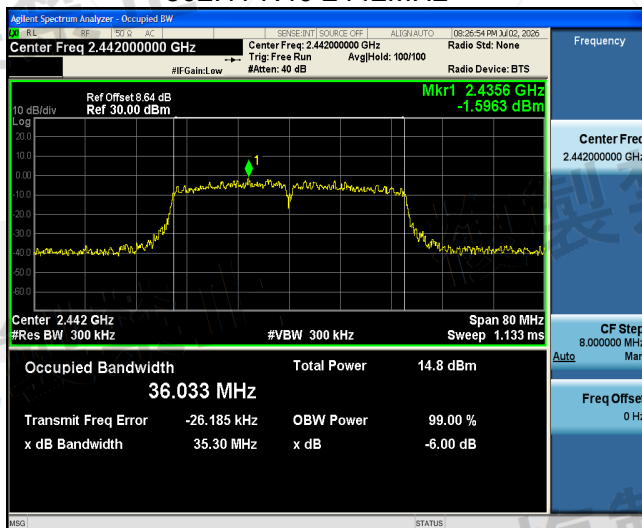




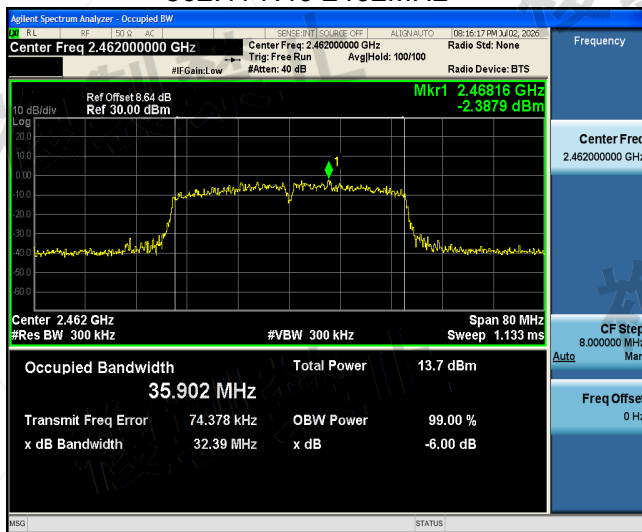
## 802.11 N40 2422MHz



## 802.11 N40 2442MHz



## 802.11 N40 2462MHz





#### 4.4 Unwanted Emission Intensity Measurement

##### 4.4.1 Limit

| Item                 | Limits                                                                 |
|----------------------|------------------------------------------------------------------------|
| TX Spurious Emission | $\leq 2.5 \mu\text{W}$ ( $30\text{MHz} < f \leq 2387\text{MHz}$ )      |
|                      | $\leq 25 \mu\text{W}$ ( $2387\text{MHz} < f \leq 2400\text{MHz}$ )     |
|                      | $\leq 25 \mu\text{W}$ ( $2483.5\text{MHz} \leq f < 2496.5\text{MHz}$ ) |
|                      | $\leq 2.5 \mu\text{W}$ ( $2496.5\text{MHz} \leq f < 12500\text{MHz}$ ) |

##### 4.4.2 Measuring Instruments and Setting

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

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

##### 4.4.3 Test Procedures

1. EUT have transmitted the maximum modulation signal and fixed channelize.
2. Setting of SA is following as: RB:1MHz / VB:1MHz / AT: Auto Ref: Auto / Sweep time: Auto  
Sweep Mode: Continuous sweep / Detect mode: Positive peak  
Trace mode: Max hold
3. Setting of SA is following as 30MHz and stop frequency 2387MHz Then to mark peak reading value + cable loss shall be less than 2.5 $\mu\text{W}$ .
4. SA adjusted to start frequency 2387MHz and stop frequency 2400MHz. Then to mark peak reading value + cable loss shall be less than 25 $\mu\text{W}$ .
5. SA adjusted to start frequency 2483.5MHz and stop frequency 2496.5MHz Then to mark peak reading value + cable loss shall be less than 25 $\mu\text{W}$
6. SA adjusted to start frequency 2496.5MHz and stop frequency 12500MHz Then to mark peak reading value + cable loss shall be less than 2.5 $\mu\text{W}$
7. Measure side band spurious as follows: For 2.4GHz band: 2374MHz~2400MHz and 2483.5MHz~2509.5MHz RBW = VBW = 30kHz, Result\_Value = Measured\_Value + 15.2 [dBm]
8. If the Result\_Value is over the requirement, take total sum of 1MHz band centered at the spur frequency like ACLP measurement as Result\_Value.



#### 4.4.4 Test Setup Layout



#### 4.4.5 Test Deviation

There is no deviation with the original standard.

**4.4.6 Test Result**

|                 |                                 |              |                |
|-----------------|---------------------------------|--------------|----------------|
| EUT:            | Cyber-stage                     | Test Date:   | July 06, 2026  |
| Temperature:    | 25 <sup>0</sup> C               | Tested by:   | Jones Pan      |
| Humidity:       | 55 % RH                         | Test Voltage | Normal Voltage |
| Operation Mode: | Normal Voltage-B/G/N20/N40 mode |              |                |

| Test Mode     | Test channel | StartFre [MHz] | StopFre [MHz] | Mkr Fre (MHz) | Max.Level [dBm] | Max.Level [μW/MHz] | Limit [μW/ MHz] | Verdict |
|---------------|--------------|----------------|---------------|---------------|-----------------|--------------------|-----------------|---------|
| 802.11b       | 2412         | 30             | 2387          | 2277.10       | -44.14          | 0.0385             | <2.5            | PASS    |
| 802.11b       | 2412         | 2387           | 2400          | 2397.92       | -38.14          | 0.1535             | <25             | PASS    |
| 802.11b       | 2412         | 2483.5         | 2496.5        | 2486.76       | -40.45          | 0.0902             | <25             | PASS    |
| 802.11b       | 2412         | 2496.5         | 13000         | 2572.13       | -45.03          | 0.0314             | <2.5            | PASS    |
| 802.11b       | 2442         | 30             | 2387          | 2281.52       | -43.19          | 0.0480             | <2.5            | PASS    |
| 802.11b       | 2442         | 2387           | 2400          | 2399.58       | -40.52          | 0.0887             | <25             | PASS    |
| 802.11b       | 2442         | 2483.5         | 2496.5        | 2495.23       | -40.93          | 0.0807             | <25             | PASS    |
| 802.11b       | 2442         | 2496.5         | 13000         | 2518.03       | -46.37          | 0.0231             | <2.5            | PASS    |
| 802.11b       | 2472         | 30             | 2387          | 2312.46       | -42.37          | 0.0579             | <2.5            | PASS    |
| 802.11b       | 2472         | 2387           | 2400          | 2393.13       | -40.35          | 0.0923             | <25             | PASS    |
| 802.11b       | 2472         | 2483.5         | 2496.5        | 2486.11       | -35.50          | 0.2818             | <25             | PASS    |
| 802.11b       | 2472         | 2496.5         | 13000         | 2632.53       | -45.98          | 0.0252             | <2.5            | PASS    |
| 802.11g       | 2412         | 30             | 2387          | 2252.06       | -43.55          | 0.0442             | <2.5            | PASS    |
| 802.11g       | 2412         | 2387           | 2400          | 2399.58       | -31.18          | 0.7621             | <25             | PASS    |
| 802.11g       | 2412         | 2483.5         | 2496.5        | 2486.43       | -40.02          | 0.0995             | <25             | PASS    |
| 802.11g       | 2412         | 2496.5         | 13000         | 2572.13       | -44.24          | 0.0377             | <2.5            | PASS    |
| 802.11g       | 2442         | 30             | 2387          | 2282.11       | -40.67          | 0.0857             | <2.5            | PASS    |
| 802.11g       | 2442         | 2387           | 2400          | 2397.01       | -40.01          | 0.0998             | <25             | PASS    |
| 802.11g       | 2442         | 2483.5         | 2496.5        | 2490.73       | -40.15          | 0.0966             | <25             | PASS    |
| 802.11g       | 2442         | 2496.5         | 13000         | 2602.07       | -46.18          | 0.0241             | <2.5            | PASS    |
| 802.11g       | 2472         | 30             | 2387          | 2312.17       | -42.29          | 0.0590             | <2.5            | PASS    |
| 802.11g       | 2472         | 2387           | 2400          | 2392.45       | -39.61          | 0.1094             | <25             | PASS    |
| 802.11g       | 2472         | 2483.5         | 2496.5        | 2483.76       | -28.18          | 1.5205             | <25             | PASS    |
| 802.11g       | 2472         | 2496.5         | 13000         | 2632.53       | -44.57          | 0.0349             | <2.5            | PASS    |
| 802.11n(HT20) | 2412         | 30             | 2387          | 2252.06       | -44.04          | 0.0394             | <2.5            | PASS    |
| 802.11n(HT20) | 2412         | 2387           | 2400          | 2399.62       | -32.71          | 0.5358             | <25             | PASS    |
| 802.11n(HT20) | 2412         | 2483.5         | 2496.5        | 2484.31       | -39.73          | 0.1064             | <25             | PASS    |
| 802.11n(HT20) | 2412         | 2496.5         | 13000         | 2572.13       | -43.52          | 0.0445             | <2.5            | PASS    |

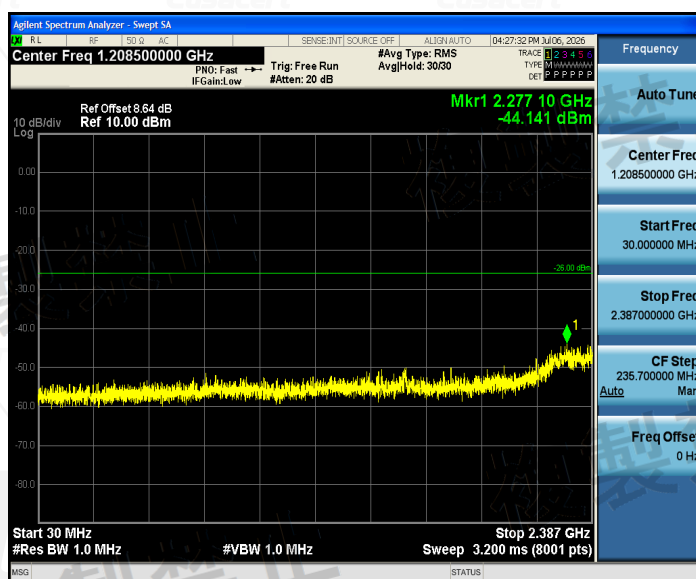


|               |      |        |        |         |        |        |      |      |
|---------------|------|--------|--------|---------|--------|--------|------|------|
| 802.11n(HT20) | 2442 | 30     | 2387   | 2322.77 | -42.22 | 0.0600 | <2.5 | PASS |
| 802.11n(HT20) | 2442 | 2387   | 2400   | 2388.69 | -40.12 | 0.0973 | <25  | PASS |
| 802.11n(HT20) | 2442 | 2483.5 | 2496.5 | 2491.52 | -39.98 | 0.1005 | <25  | PASS |
| 802.11n(HT20) | 2442 | 2496.5 | 13000  | 2602.59 | -44.80 | 0.0331 | <2.5 | PASS |
| 802.11n(HT20) | 2472 | 30     | 2387   | 2286.83 | -41.81 | 0.0659 | <2.5 | PASS |
| 802.11n(HT20) | 2472 | 2387   | 2400   | 2388.62 | -39.44 | 0.1138 | <25  | PASS |
| 802.11n(HT20) | 2472 | 2483.5 | 2496.5 | 2483.64 | -27.87 | 1.6331 | <25  | PASS |
| 802.11n(HT20) | 2472 | 2496.5 | 13000  | 2536.94 | -44.95 | 0.0320 | <2.5 | PASS |
| 802.11n(HT40) | 2422 | 30     | 2387   | 2262.08 | -41.93 | 0.0641 | <2.5 | PASS |
| 802.11n(HT40) | 2422 | 2387   | 2400   | 2399.75 | -37.07 | 0.1963 | <25  | PASS |
| 802.11n(HT40) | 2422 | 2483.5 | 2496.5 | 2485.99 | -39.19 | 0.1205 | <25  | PASS |
| 802.11n(HT40) | 2422 | 2496.5 | 13000  | 2582.11 | -43.81 | 0.0416 | <2.5 | PASS |
| 802.11n(HT40) | 2442 | 30     | 2387   | 2282.41 | -41.87 | 0.0650 | <2.5 | PASS |
| 802.11n(HT40) | 2442 | 2387   | 2400   | 2393.98 | -39.96 | 0.1009 | <25  | PASS |
| 802.11n(HT40) | 2442 | 2483.5 | 2496.5 | 2486.46 | -39.52 | 0.1117 | <25  | PASS |
| 802.11n(HT40) | 2442 | 2496.5 | 13000  | 2602.07 | -44.44 | 0.0360 | <2.5 | PASS |
| 802.11n(HT40) | 2462 | 30     | 2387   | 2301.85 | -41.78 | 0.0664 | <2.5 | PASS |
| 802.11n(HT40) | 2462 | 2387   | 2400   | 2388.92 | -39.96 | 0.1009 | <25  | PASS |
| 802.11n(HT40) | 2462 | 2483.5 | 2496.5 | 2483.64 | -34.44 | 0.3597 | <25  | PASS |
| 802.11n(HT40) | 2462 | 2496.5 | 13000  | 2622.02 | -45.46 | 0.0284 | <2.5 | PASS |

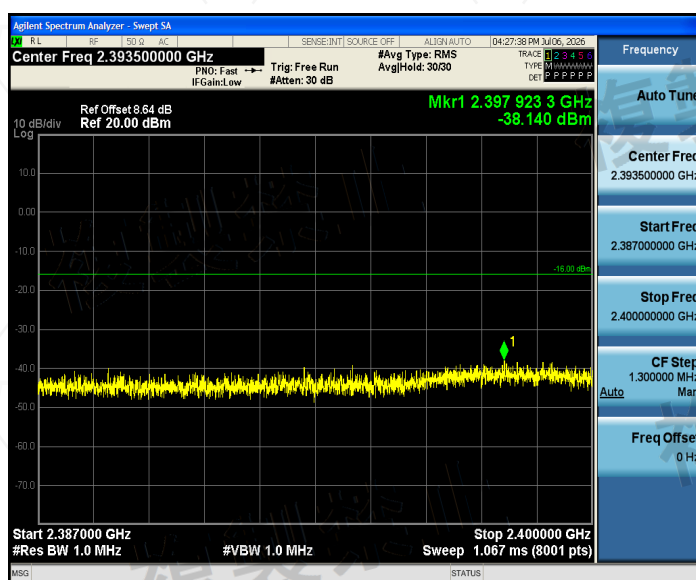


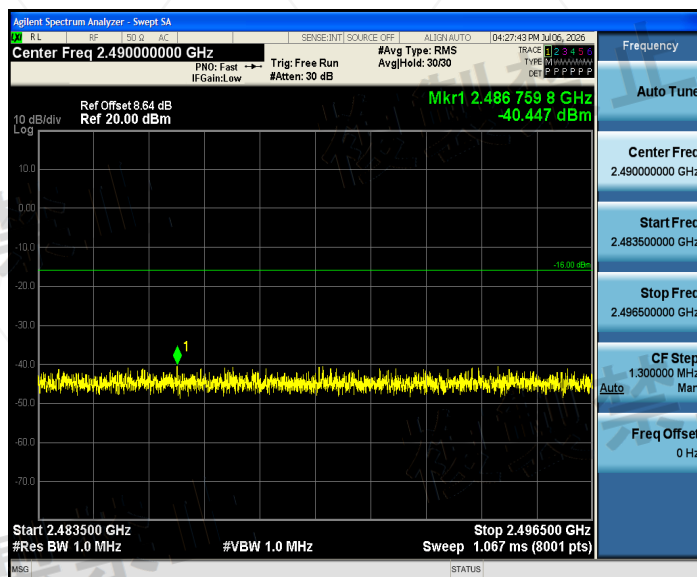
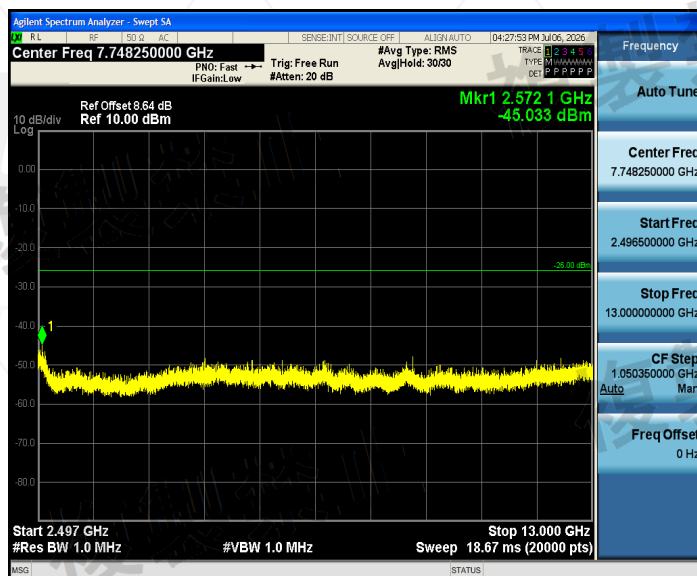
|                 |                       |              |                |
|-----------------|-----------------------|--------------|----------------|
| EUT:            | Cyber-stage           | Test Date:   | July 06, 2026  |
| Temperature:    | 25°C                  | Tested by:   | Jones Pan      |
| Humidity:       | 55 % RH               | Test Voltage | Normal Voltage |
| Operation Mode: | Normal Voltage-B mode |              |                |

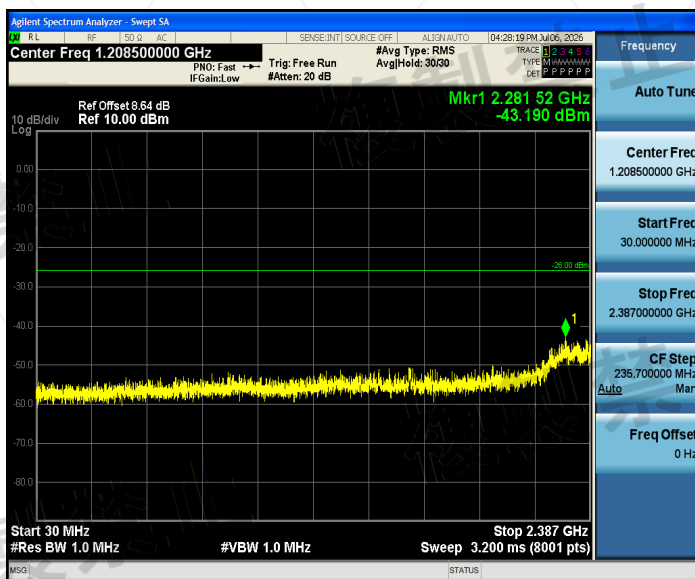
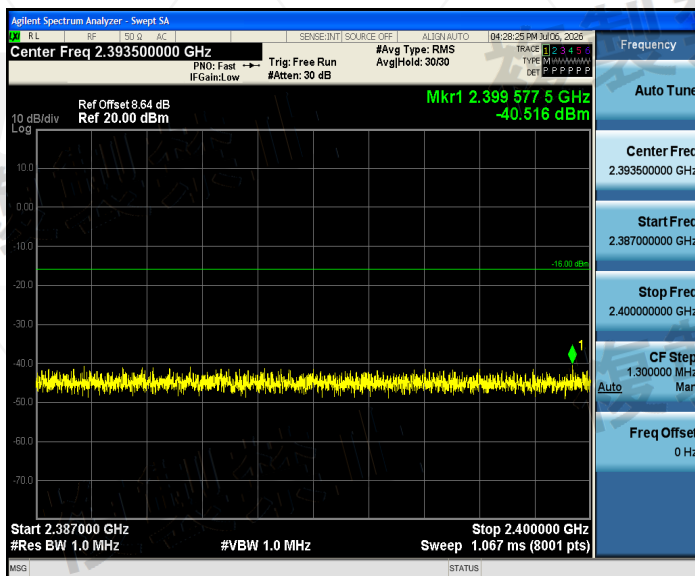
## CH 01:2412MHz - Frequency Band 1 (30 MHz $\leq$ f $\leq$ 2387 MHz)

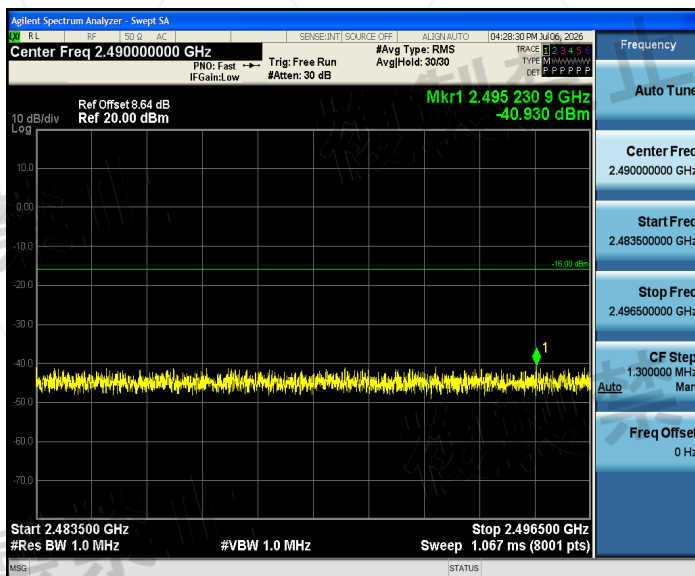
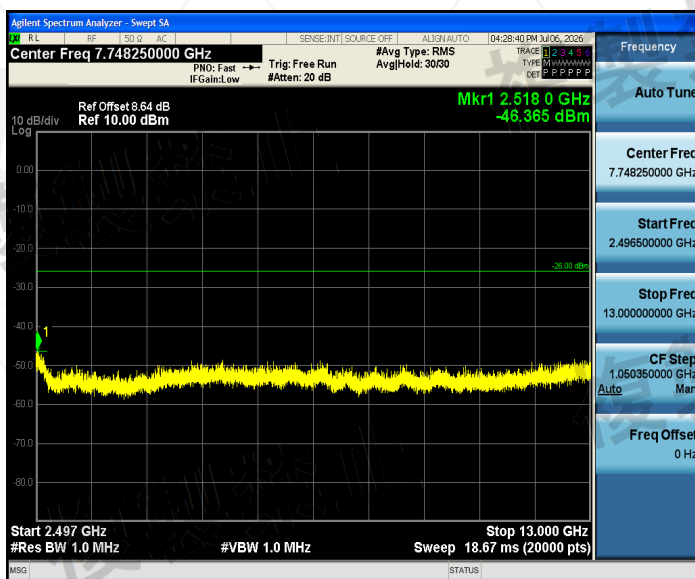


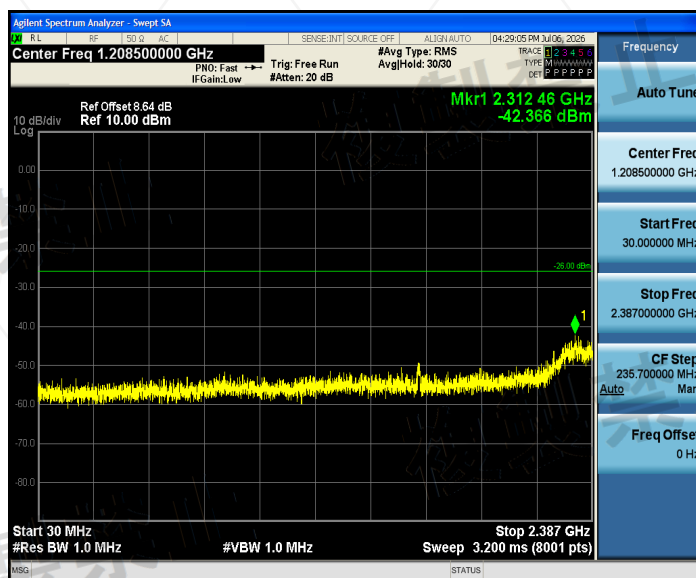
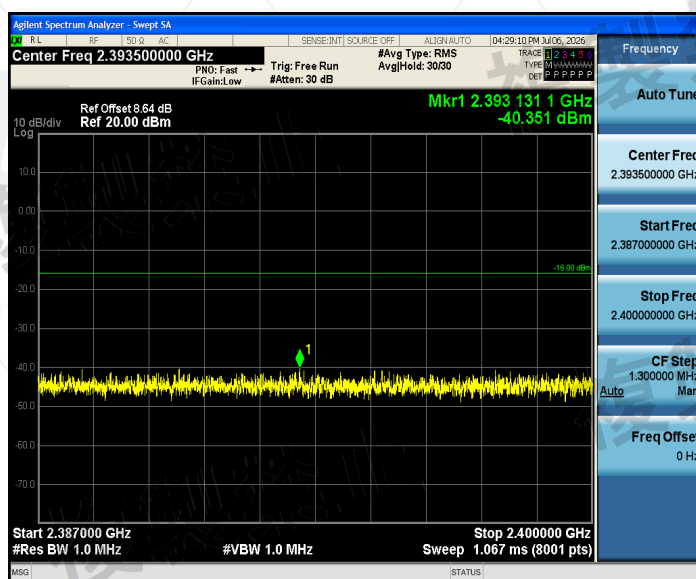
## CH 01:2412MHz - Frequency Band 2 (2387 MHz < f $\leq$ 2400 MHz)

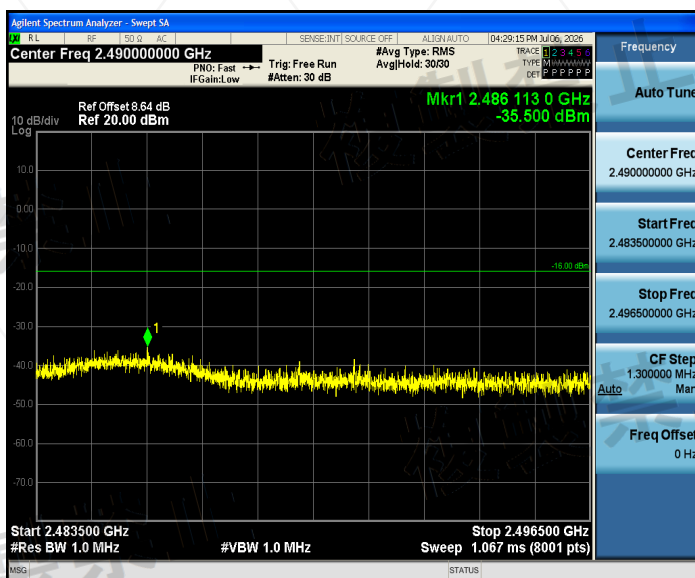
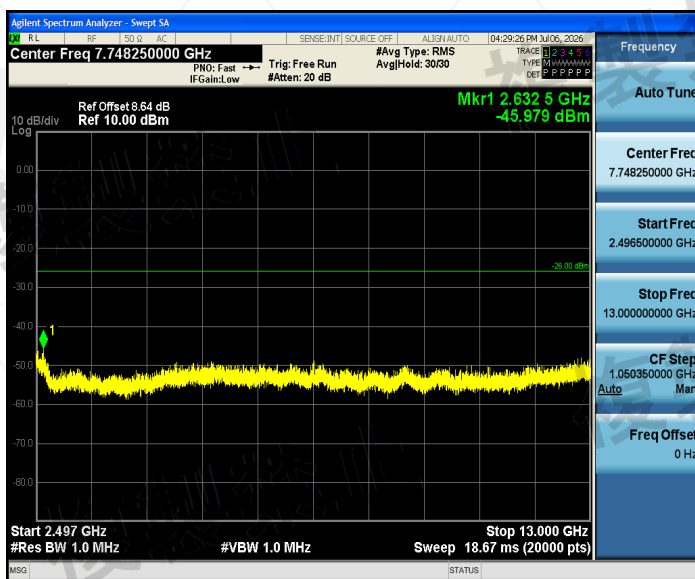


CH 01:2412MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 01:2412MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

CH 07:2442MHz - Frequency Band 1 ( $30 \text{ MHz} \leq f \leq 2387 \text{ MHz}$ )CH 07:2442MHz - Frequency Band 2 ( $2387 \text{ MHz} < f \leq 2400 \text{ MHz}$ )

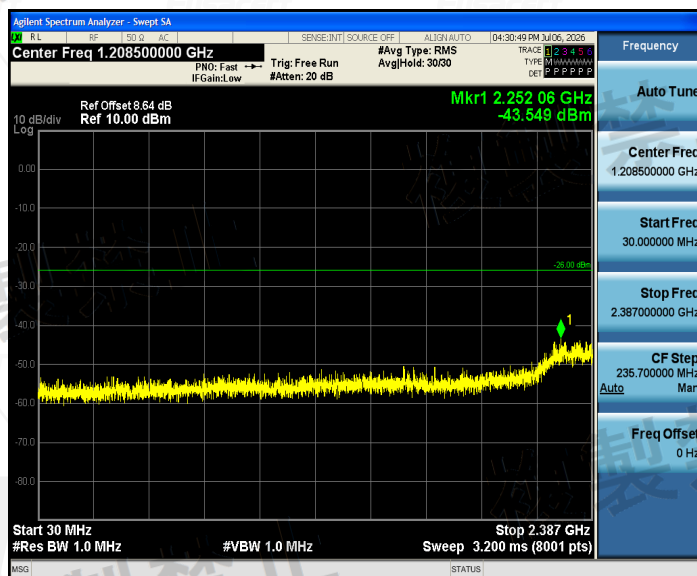
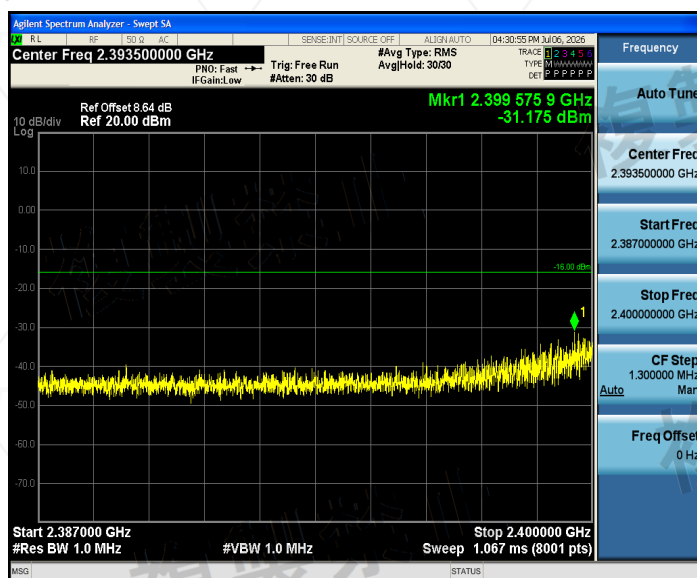
CH 07:2442MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 07:2442MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

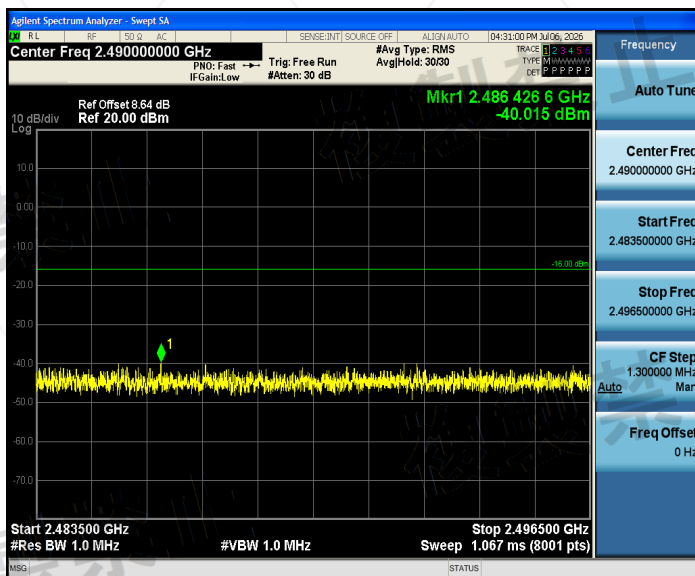
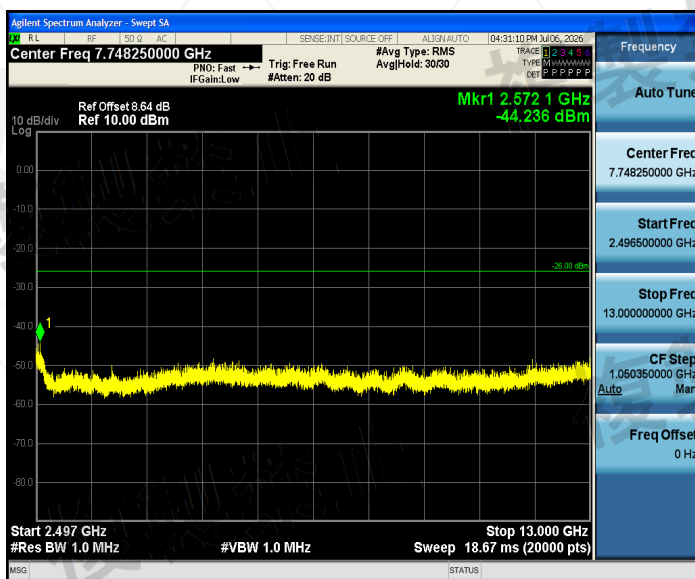
CH 13:2472MHz - Frequency Band 1 ( $30 \text{ MHz} \leq f \leq 2387 \text{ MHz}$ )CH 13:2472MHz - Frequency Band 2 ( $2387 \text{ MHz} < f \leq 2400 \text{ MHz}$ )

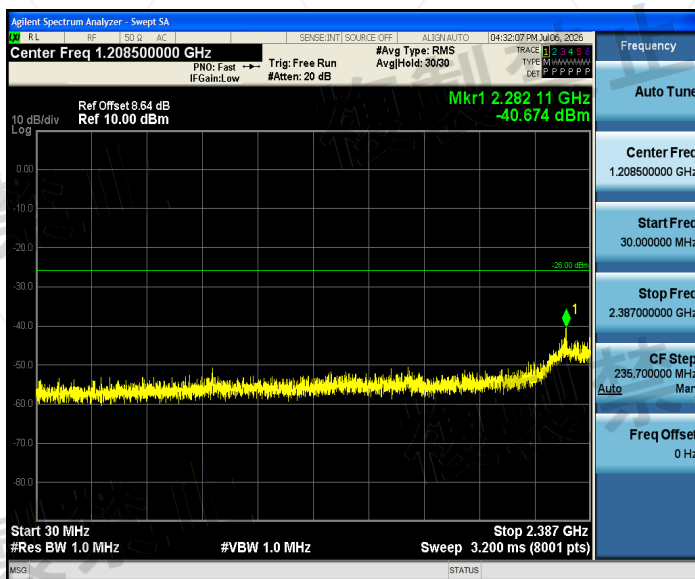
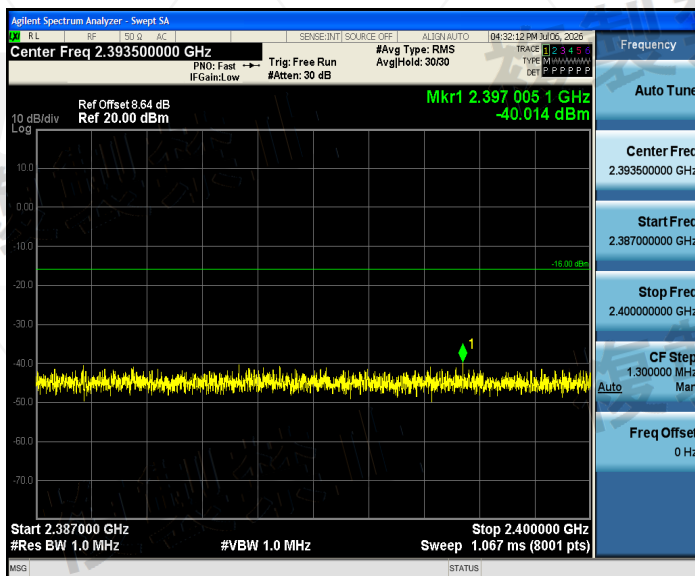
CH 13:2472MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 13:2472MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

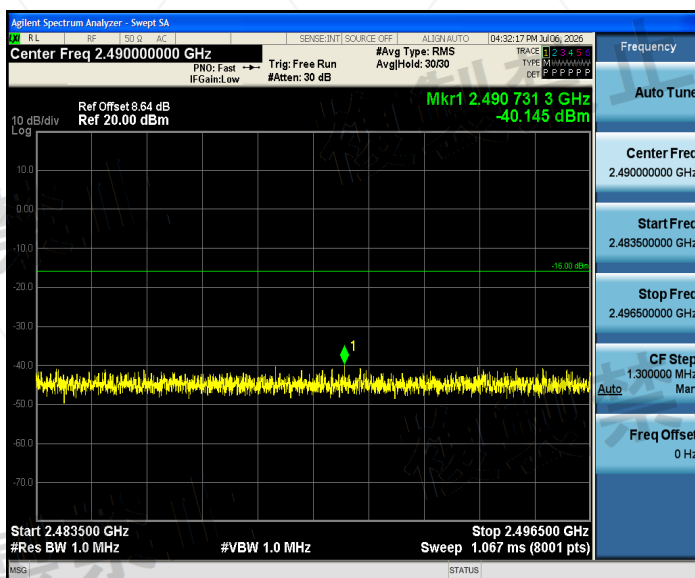
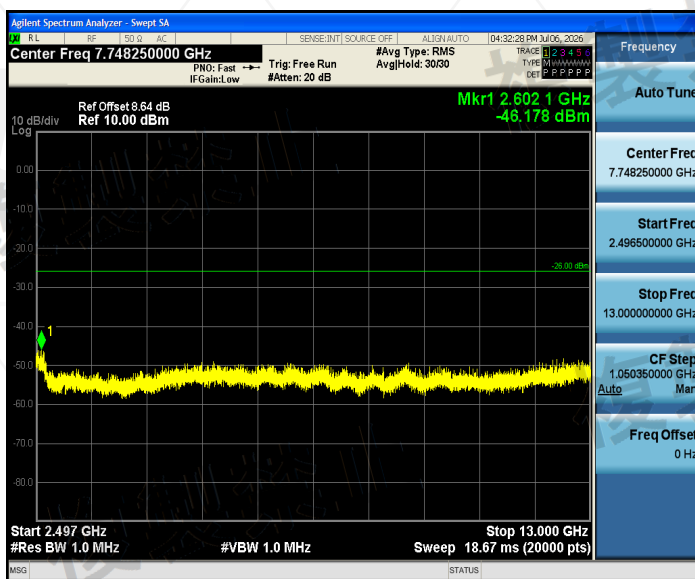


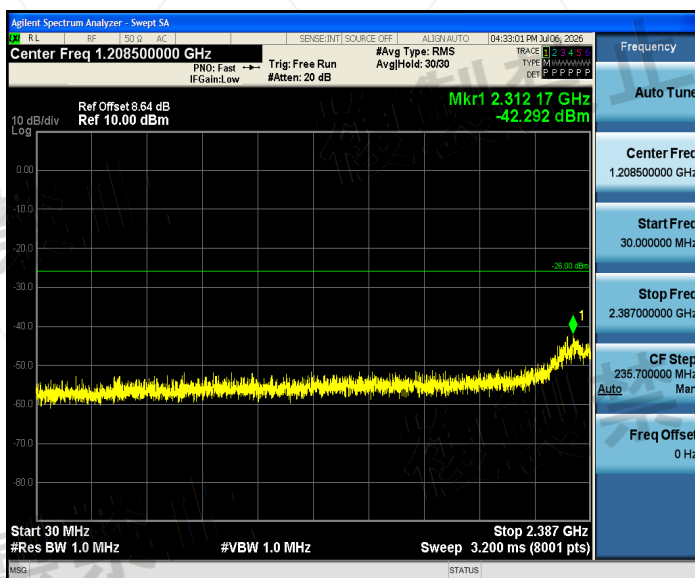
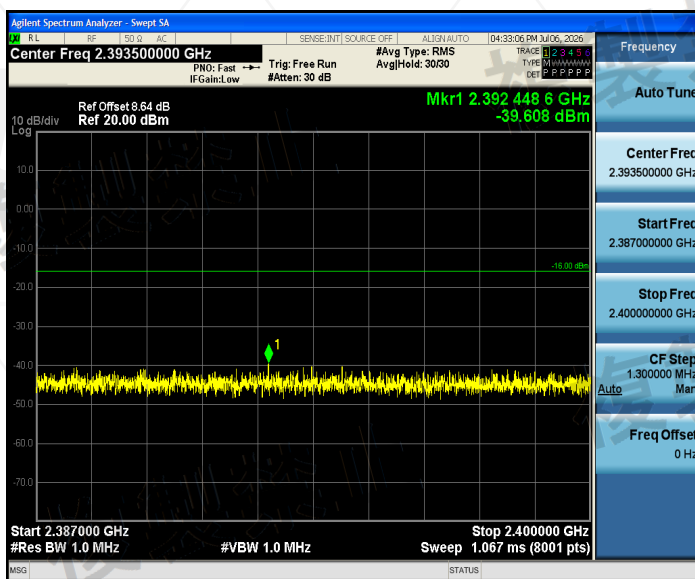
|                 |                       |              |                |
|-----------------|-----------------------|--------------|----------------|
| EUT:            | Cyber-stage           | Test Date:   | July 06, 2026  |
| Temperature:    | 25°C                  | Tested by:   | Jones Pan      |
| Humidity:       | 55 % RH               | Test Voltage | Normal Voltage |
| Operation Mode: | Normal Voltage-G mode |              |                |

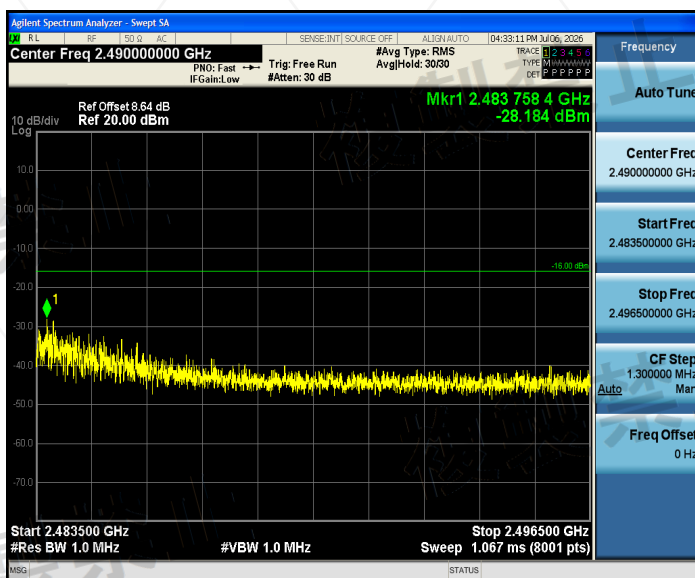
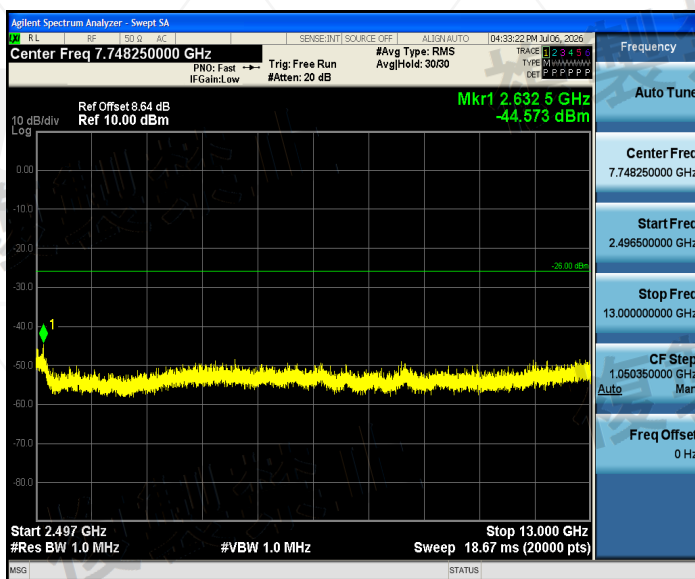
CH 01:2412MHz - Frequency Band 1 (30 MHz  $\leq$  f  $\leq$  2387 MHz)CH 01:2412MHz - Frequency Band 2 (2387 MHz < f  $\leq$  2400 MHz)

CH 01:2412MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 01:2412MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

CH 07:2442MHz - Frequency Band 1 ( $30 \text{ MHz} \leq f \leq 2387 \text{ MHz}$ )CH 07:2442MHz - Frequency Band 2 ( $2387 \text{ MHz} < f \leq 2400 \text{ MHz}$ )

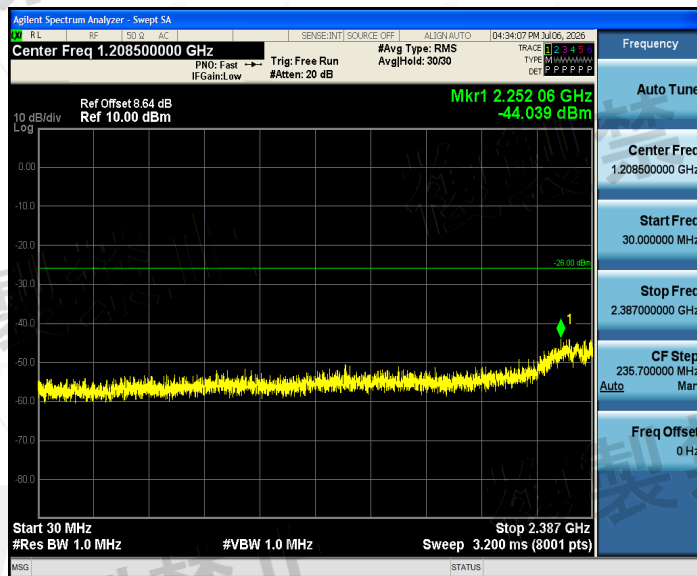
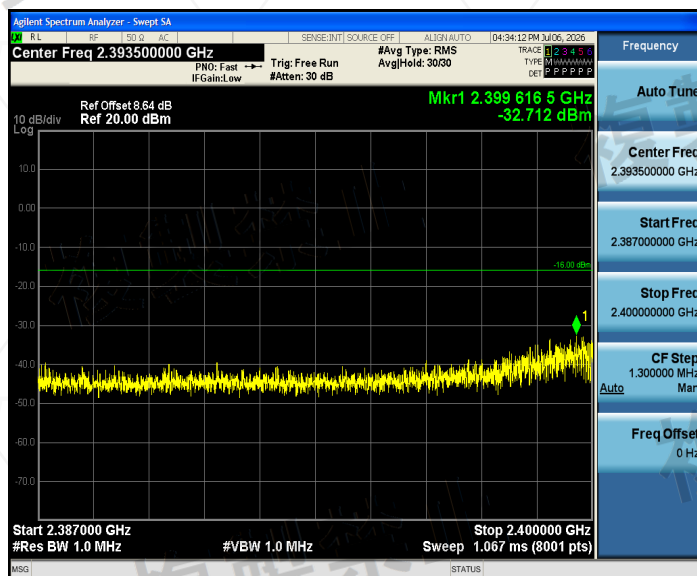
CH 07:2442MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 07:2442MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

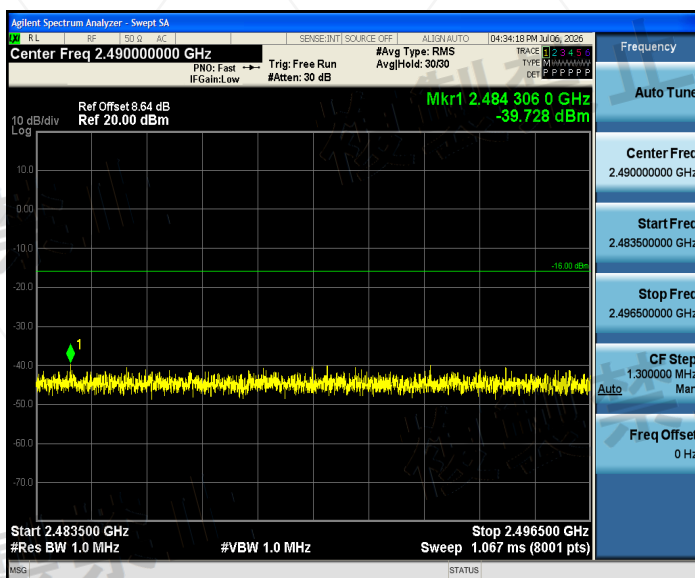
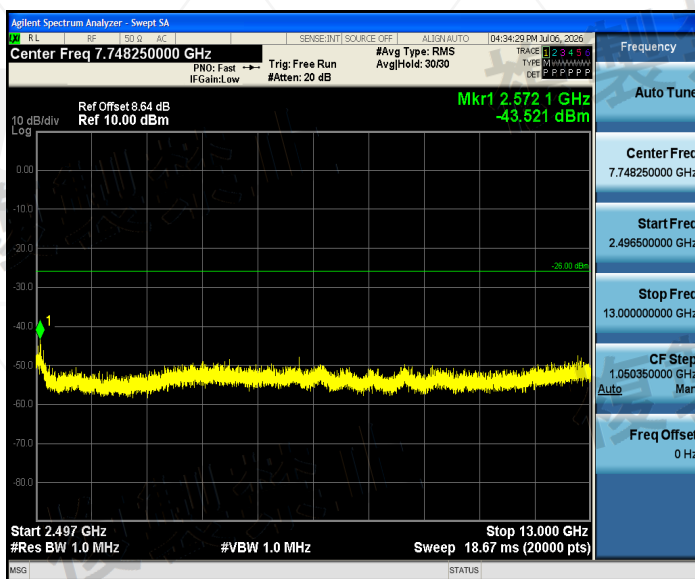
CH 13:2472MHz - Frequency Band 1 ( $30 \text{ MHz} \leq f \leq 2387 \text{ MHz}$ )CH 13:2472MHz - Frequency Band 2 ( $2387 \text{ MHz} < f \leq 2400 \text{ MHz}$ )

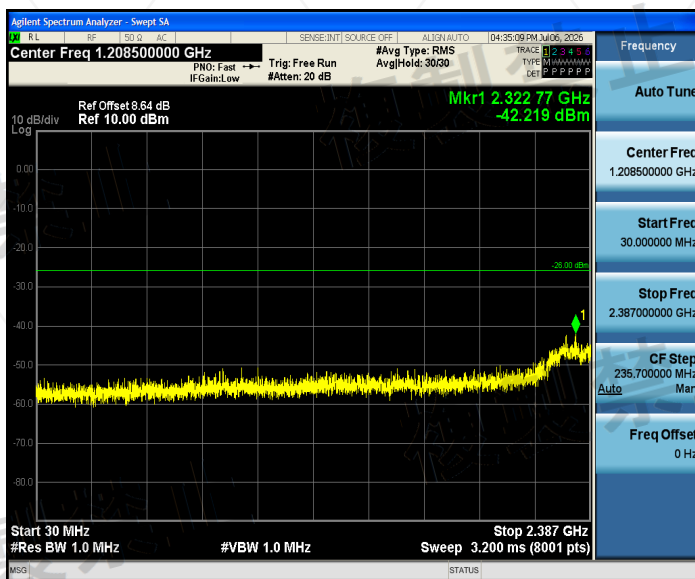
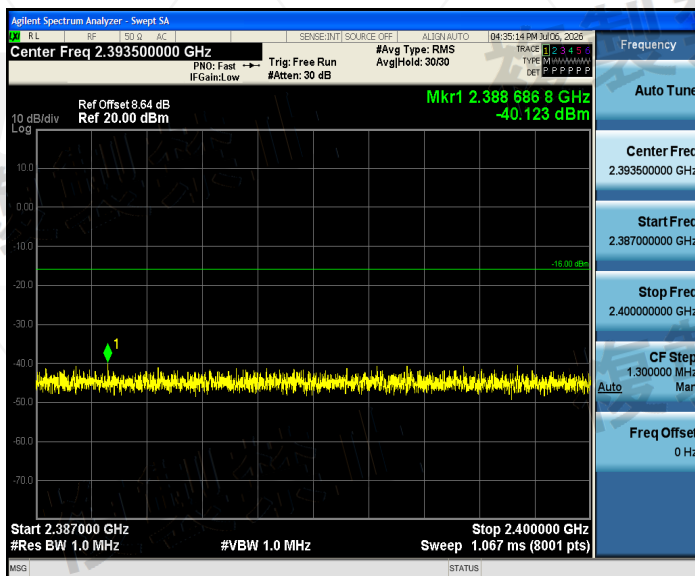
CH 13:2472MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 13:2472MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

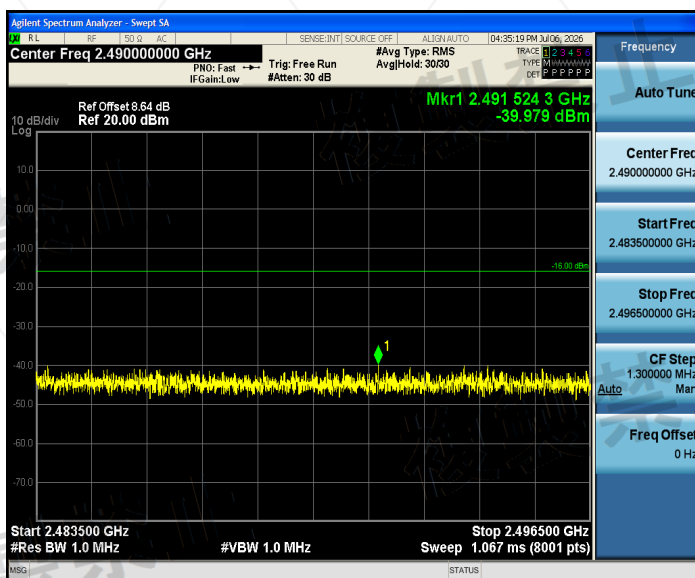
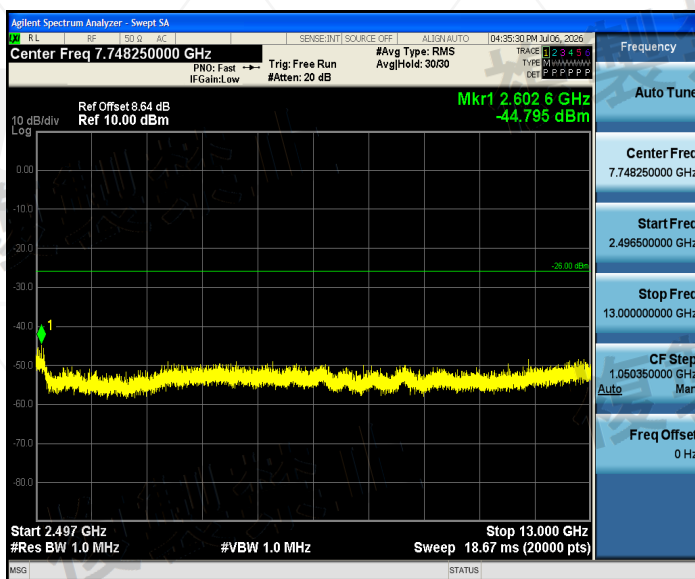


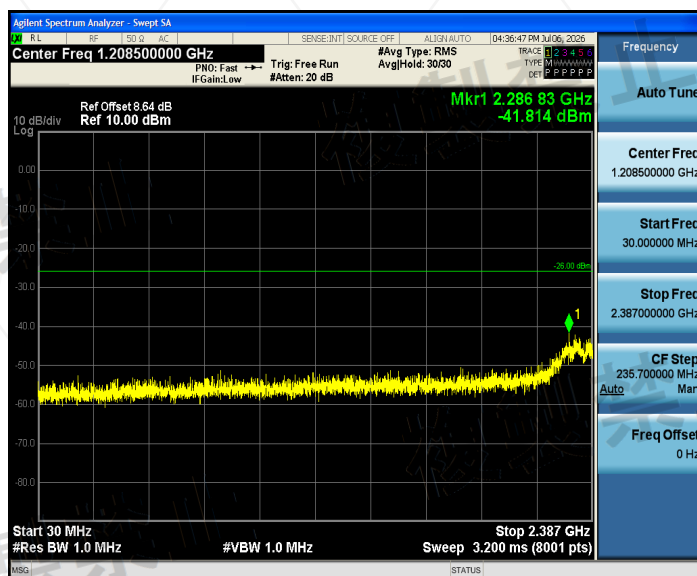
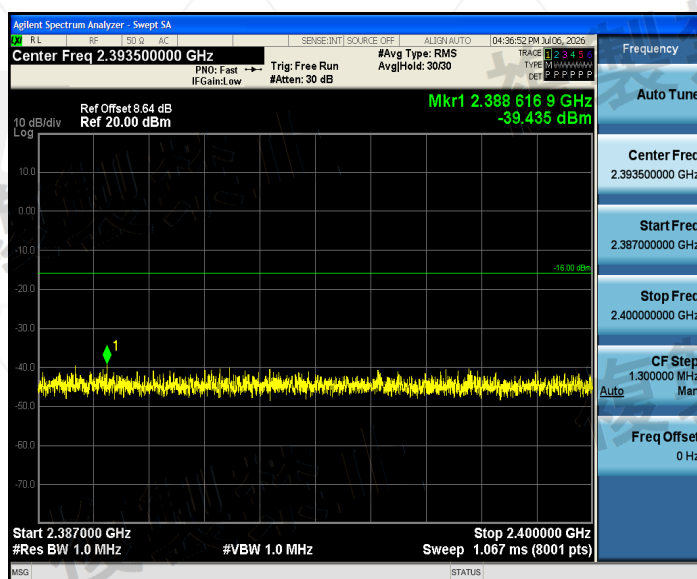
|                 |                         |               |                |
|-----------------|-------------------------|---------------|----------------|
| EUT:            | Cyber-stage             | Test Date:    | July 06, 2026  |
| Temperature:    | 250C                    | Tested by:    | Jones Pan      |
| Humidity:       | 55 % RH                 | Test Voltage: | Normal Voltage |
| Operation Mode: | Normal Voltage-N20 mode |               |                |

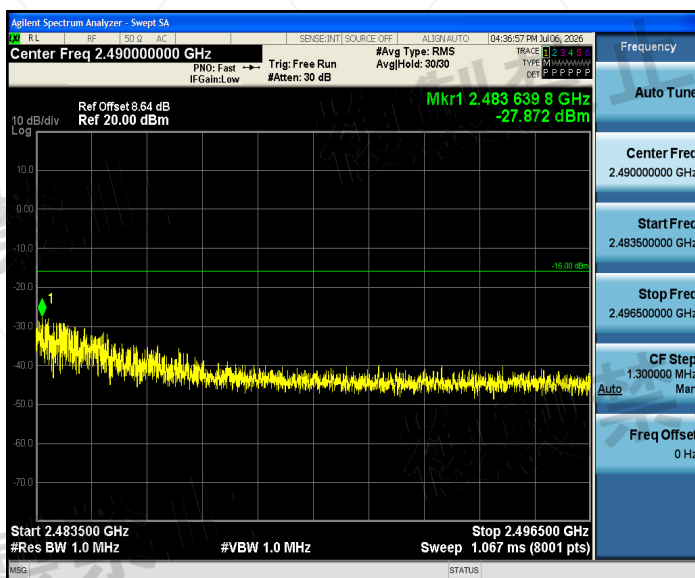
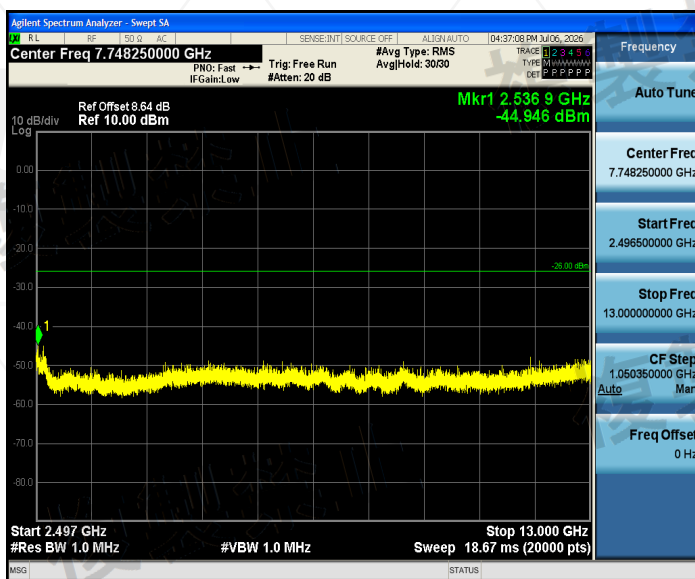
CH 01:2412MHz - Frequency Band 1 ( $30 \text{ MHz} \leq f \leq 2387 \text{ MHz}$ )CH 01:2412MHz - Frequency Band 2 ( $2387 \text{ MHz} < f \leq 2400 \text{ MHz}$ )

CH 01:2412MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 01:2412MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

CH 07:2442MHz - Frequency Band 1 ( $30 \text{ MHz} \leq f \leq 2387 \text{ MHz}$ )CH 07:2442MHz - Frequency Band 2 ( $2387 \text{ MHz} < f \leq 2400 \text{ MHz}$ )

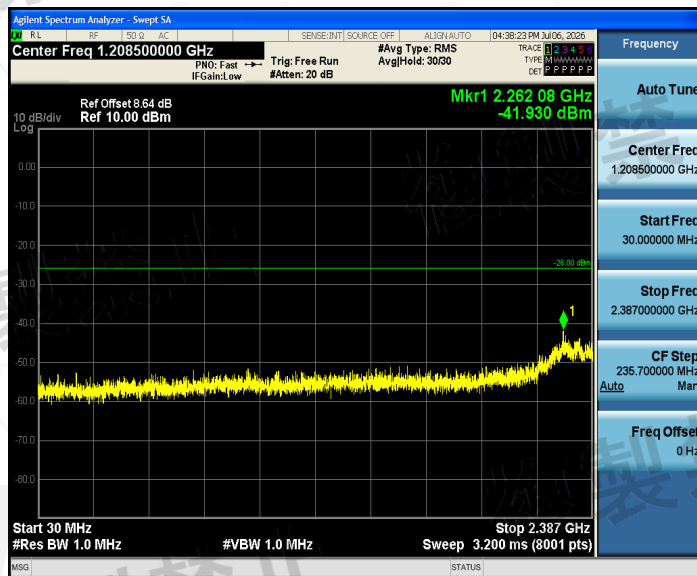
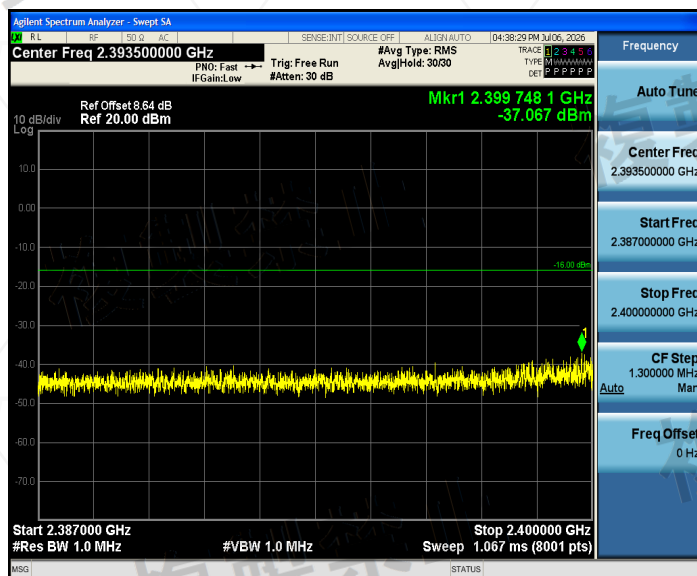
CH 07:2442MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 07:2442MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

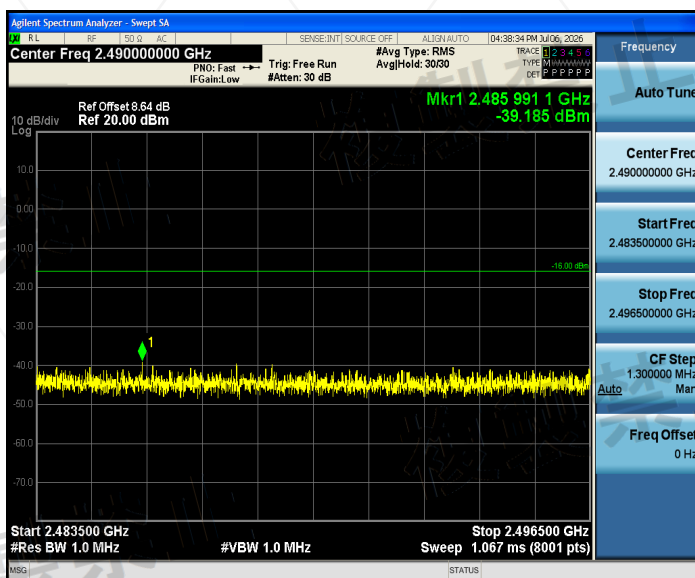
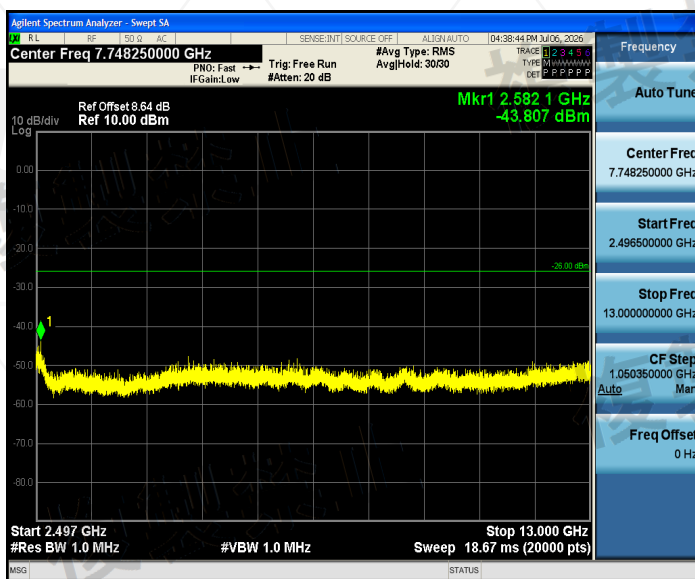
CH 13:2472MHz - Frequency Band 1 ( $30 \text{ MHz} \leq f \leq 2387 \text{ MHz}$ )CH 13:2472MHz - Frequency Band 2 ( $2387 \text{ MHz} < f \leq 2400 \text{ MHz}$ )

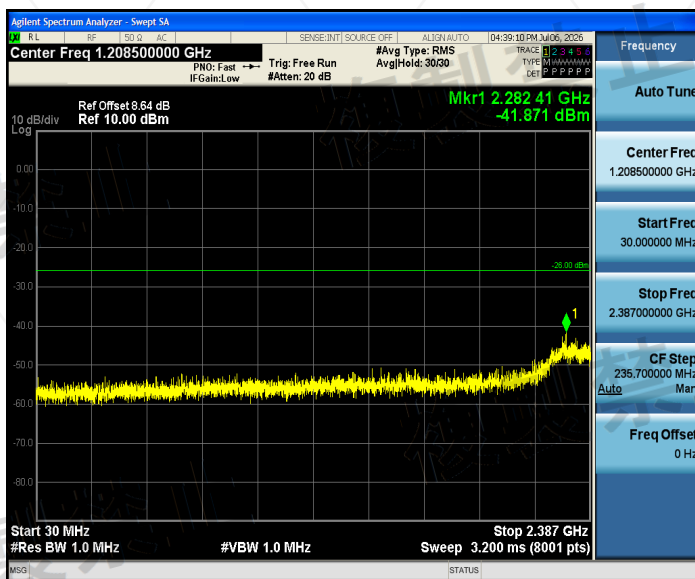
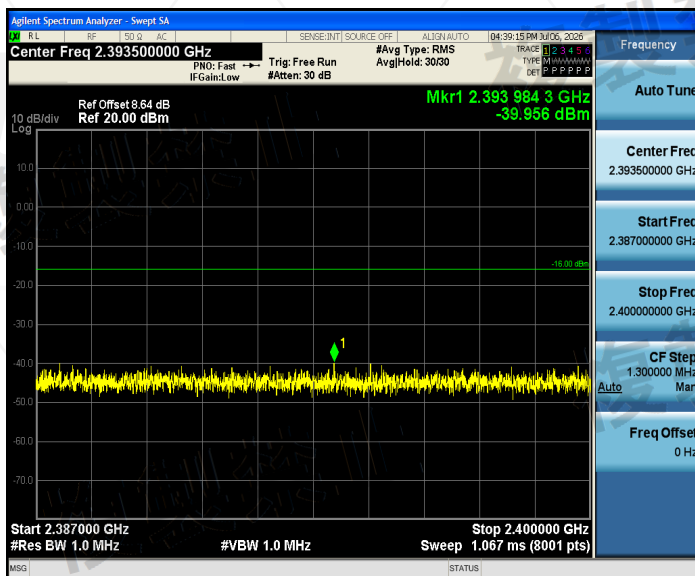
CH 13:2472MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 13:2472MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

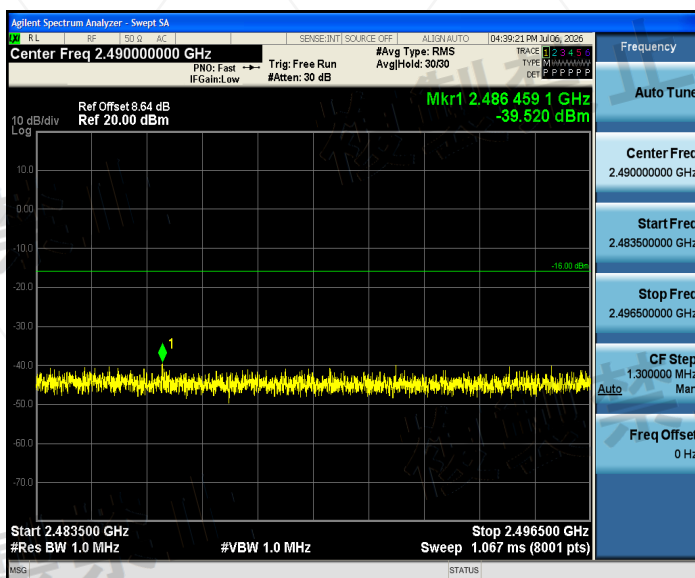
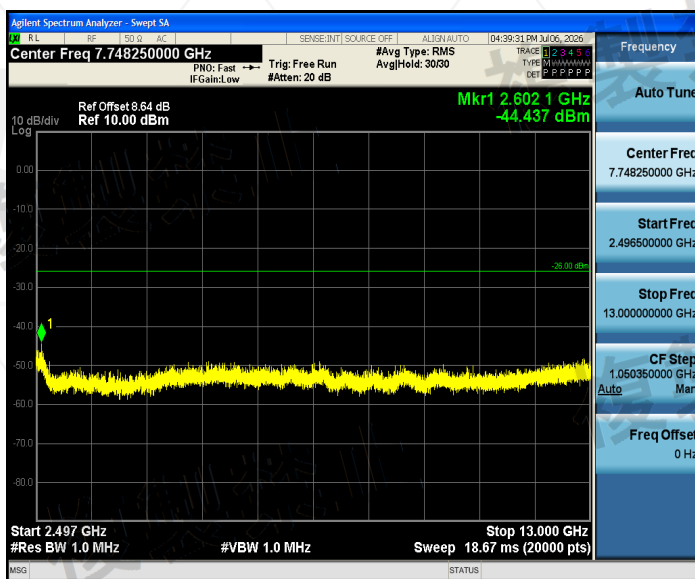


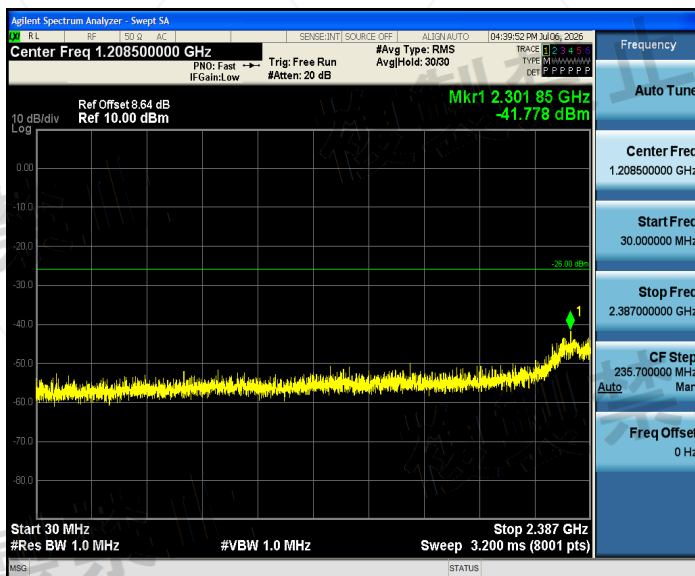
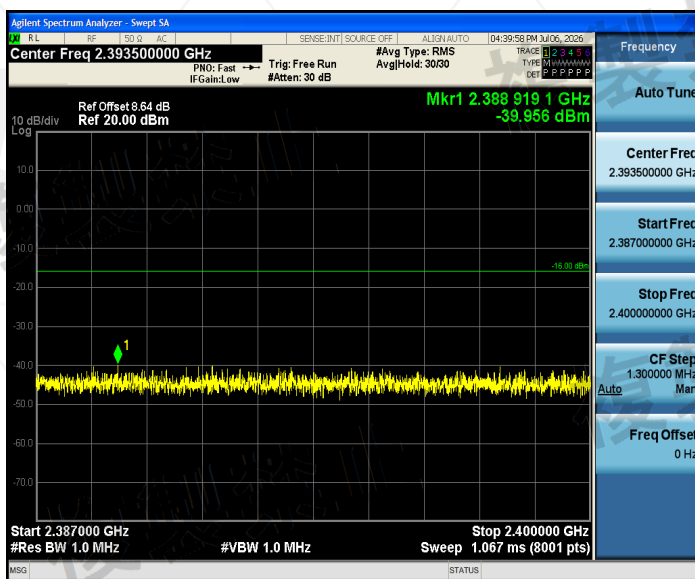
|                 |                         |              |                |
|-----------------|-------------------------|--------------|----------------|
| EUT:            | Cyber-stage             | Test Date:   | July 06, 2026  |
| Temperature:    | 250C                    | Tested by:   | Jones Pan      |
| Humidity:       | 55 % RH                 | Test Voltage | Normal Voltage |
| Operation Mode: | Normal Voltage-N40 mode |              |                |

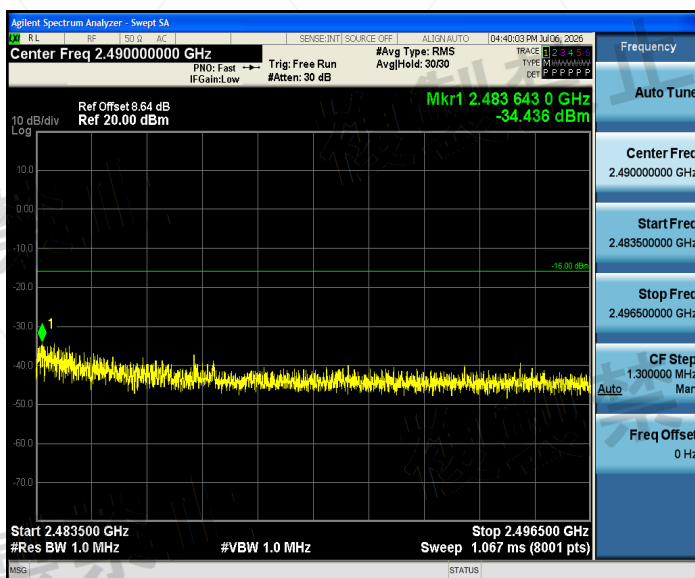
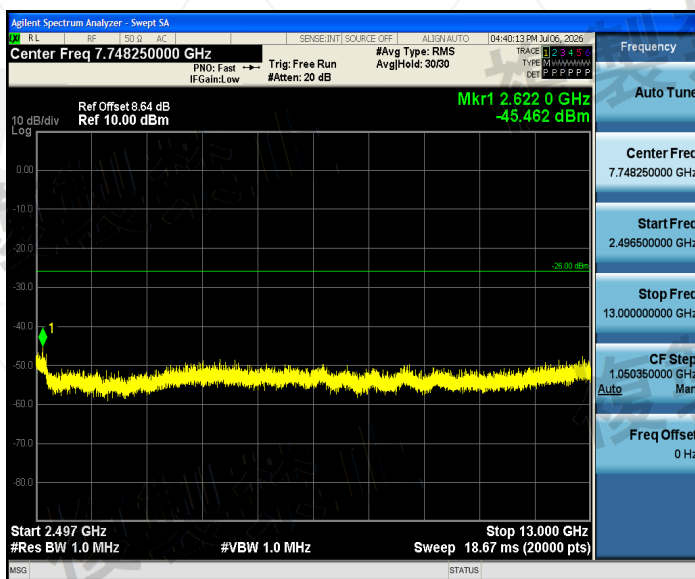
CH 03:2422MHz - Frequency Band 1 ( $30 \text{ MHz} \leq f \leq 2387 \text{ MHz}$ )CH 03:2422MHz - Frequency Band 2 ( $2387 \text{ MHz} < f \leq 2400 \text{ MHz}$ )

CH 03:2422MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 03:2422MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

CH 07:2442MHz - Frequency Band 1 ( $30 \text{ MHz} \leq f \leq 2387 \text{ MHz}$ )CH 07:2442MHz - Frequency Band 2 ( $2387 \text{ MHz} < f \leq 2400 \text{ MHz}$ )

CH 07:2442MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 07:2442MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

CH 11:2462MHz - Frequency Band 1 ( $30 \text{ MHz} \leq f \leq 2387 \text{ MHz}$ )CH 11:2462MHz - Frequency Band 2 ( $2387 \text{ MHz} < f \leq 2400 \text{ MHz}$ )

CH 11:2462MHz - Frequency Band 3 ( $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$ )CH 11:2462MHz - Frequency Band 4 ( $2496.5 \text{ MHz} \leq f < 13000 \text{ MHz}$ )



## 4.5 Imitation of Collateral Emission of Receiver Measurement

### 4.5.1 Limit

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

### 4.5.2 Measuring Instruments and Setting

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

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

### 4.5.3 Test Procedures

1. EUT have the continuous reception mode and fixed only one channelize.
2. Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz (Above 1GHz emissions) /  
AT: 10dB / Ref: 0dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
3. SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW
4. SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW
5. If power level of lower emissions are more than 1/10 of limit (.0.4nW for  $f < 1\text{GHz}$ , 2nW for  $f \geq 1\text{GHz}$ ), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.



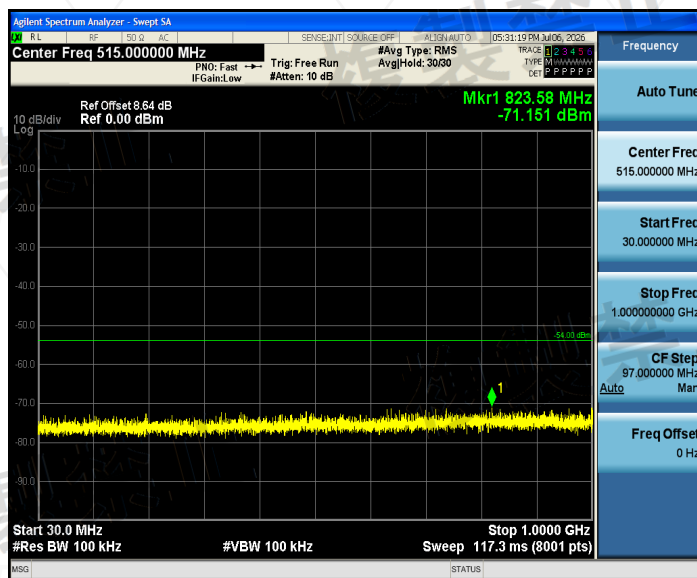
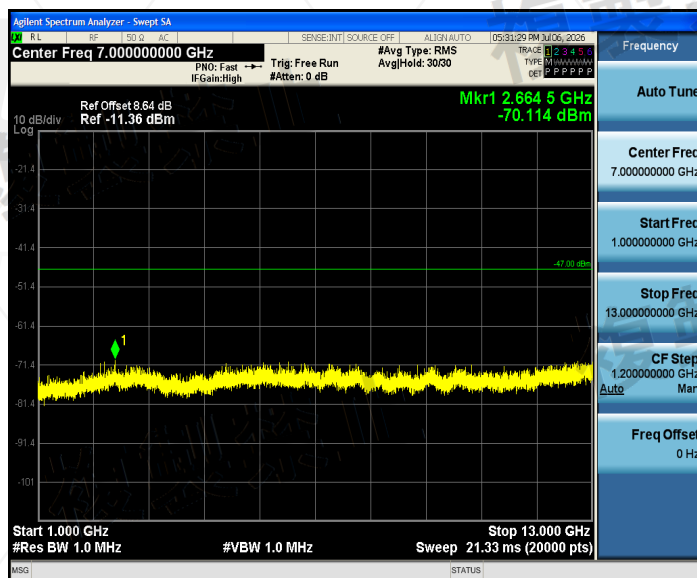
## 4.5.4 Test Result

|                 |                |              |                |
|-----------------|----------------|--------------|----------------|
| EUT:            | Cyber-stage    | Test Date:   | July 06, 2026  |
| Temperature:    | 25°C           | Tested by:   | Jones Pan      |
| Humidity:       | 55 % RH        | Test Voltage | Normal Voltage |
| Operation Mode: | Normal Voltage |              |                |

| Test Mode     | Test Channel | StartFre [MHz] | StopFre [MHz] | Mkr Fre [MHz] | Max.Level [dBm] | Max.Level [nW] | Limit[nW] | Verdict |
|---------------|--------------|----------------|---------------|---------------|-----------------|----------------|-----------|---------|
| 802.11b       | 2412         | 30             | 1000          | 823.58        | -71.15          | 0.0767         | <4        | PASS    |
| 802.11b       | 2412         | 1000           | 13000         | 2664.48       | -70.11          | 0.0975         | <20       | PASS    |
| 802.11b       | 2442         | 30             | 1000          | 740.40        | -71.09          | 0.0778         | <4        | PASS    |
| 802.11b       | 2442         | 1000           | 13000         | 12858.39      | -70.14          | 0.0968         | <20       | PASS    |
| 802.11b       | 2472         | 30             | 1000          | 903.24        | -71.19          | 0.0760         | <4        | PASS    |
| 802.11b       | 2472         | 1000           | 13000         | 2430.47       | -66.07          | 0.2472         | <20       | PASS    |
| 802.11g       | 2412         | 30             | 1000          | 874.99        | -70.85          | 0.0822         | <4        | PASS    |
| 802.11g       | 2412         | 1000           | 13000         | 2434.67       | -63.08          | 0.4920         | <20       | PASS    |
| 802.11g       | 2442         | 30             | 1000          | 790.36        | -71.16          | 0.0766         | <4        | PASS    |
| 802.11g       | 2442         | 1000           | 13000         | 3179.31       | -70.06          | 0.0986         | <20       | PASS    |
| 802.11g       | 2472         | 30             | 1000          | 936.71        | -71.26          | 0.0748         | <4        | PASS    |
| 802.11g       | 2472         | 1000           | 13000         | 2437.07       | -65.89          | 0.2576         | <20       | PASS    |
| 802.11n(HT20) | 2412         | 30             | 1000          | 803.33        | -70.70          | 0.0851         | <4        | PASS    |
| 802.11n(HT20) | 2412         | 1000           | 13000         | 2432.27       | -52.42          | 5.7280         | <20       | PASS    |
| 802.11n(HT20) | 2442         | 30             | 1000          | 965.20        | -71.11          | 0.0774         | <4        | PASS    |
| 802.11n(HT20) | 2442         | 1000           | 13000         | 2439.47       | -69.88          | 0.1028         | <20       | PASS    |
| 802.11n(HT20) | 2472         | 30             | 1000          | 925.07        | -71.12          | 0.0773         | <4        | PASS    |
| 802.11n(HT20) | 2472         | 1000           | 13000         | 12301.57      | -69.72          | 0.1067         | <20       | PASS    |
| 802.11n(HT40) | 2422         | 30             | 1000          | 780.17        | -70.81          | 0.0830         | <4        | PASS    |
| 802.11n(HT40) | 2422         | 1000           | 13000         | 6405.67       | -69.35          | 0.1161         | <20       | PASS    |
| 802.11n(HT40) | 2442         | 30             | 1000          | 804.91        | -71.03          | 0.0789         | <4        | PASS    |
| 802.11n(HT40) | 2442         | 1000           | 13000         | 12878.19      | -69.98          | 0.1005         | <20       | PASS    |
| 802.11n(HT40) | 2462         | 30             | 1000          | 223.39        | -71.50          | 0.0708         | <4        | PASS    |
| 802.11n(HT40) | 2462         | 1000           | 13000         | 11955.35      | -69.85          | 0.1035         | <20       | PASS    |

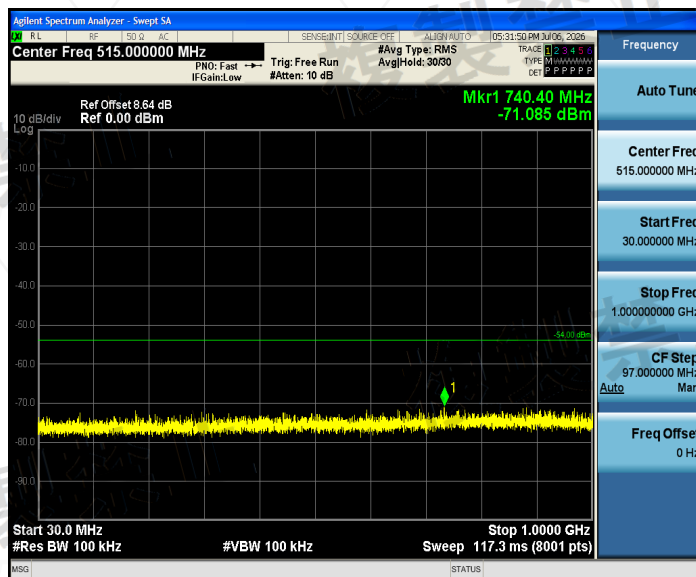
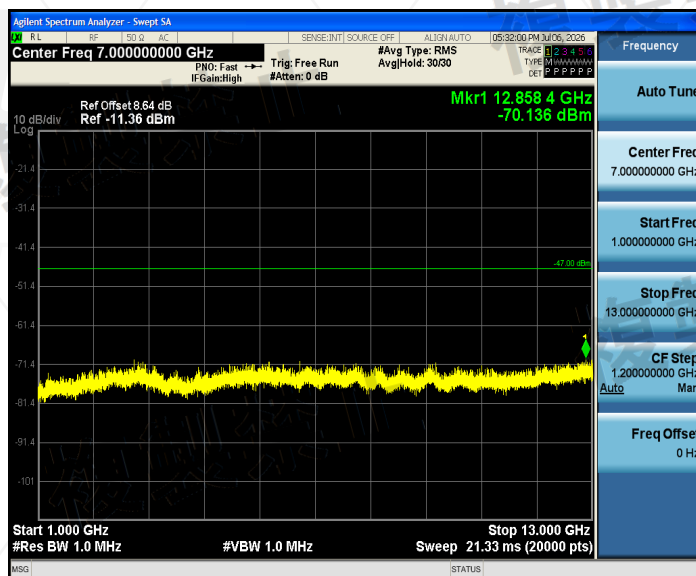


802.11 B 2412MHz

RX-Frequency Band 1 ( $30 \text{ MHz} \leq f < 1000 \text{ MHz}$ )RX-Frequency Band 2 ( $1000 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

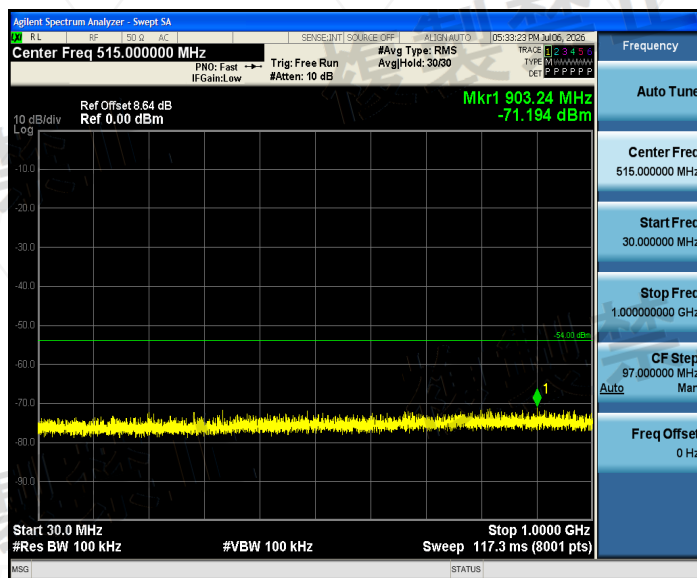
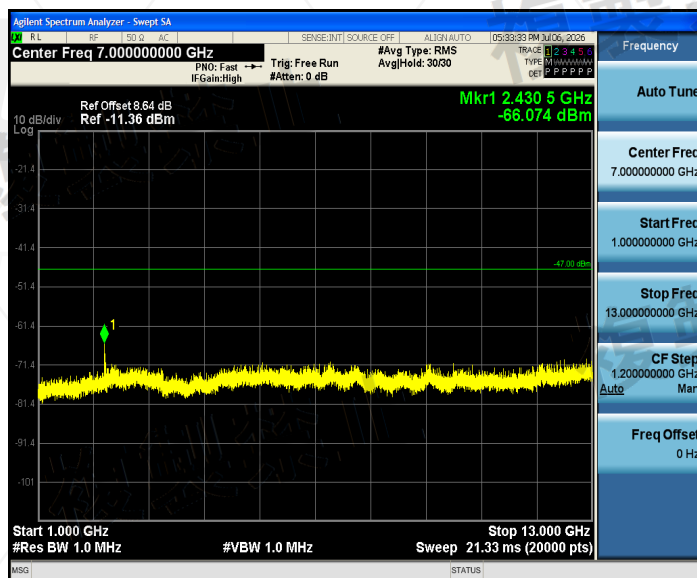


802.11 B 2442MHz

RX-Frequency Band 1 (30 MHz  $\leq$  f < 1000 MHz)RX-Frequency Band 2 (1000 MHz  $\leq$  f < 13000 MHz)

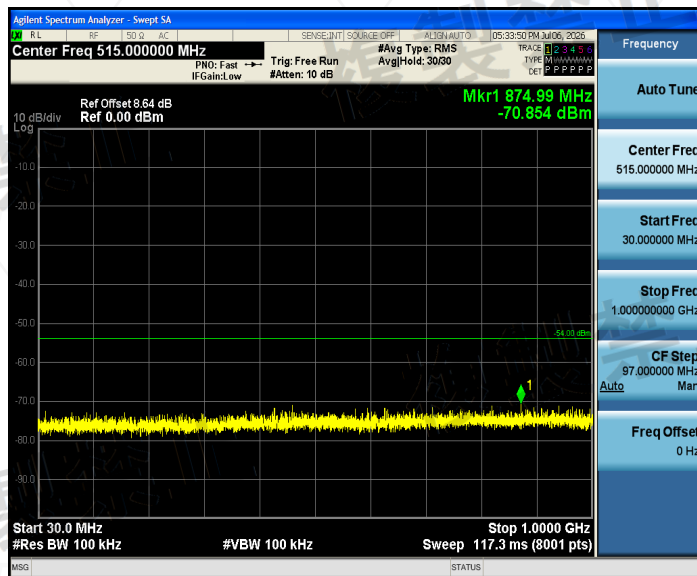
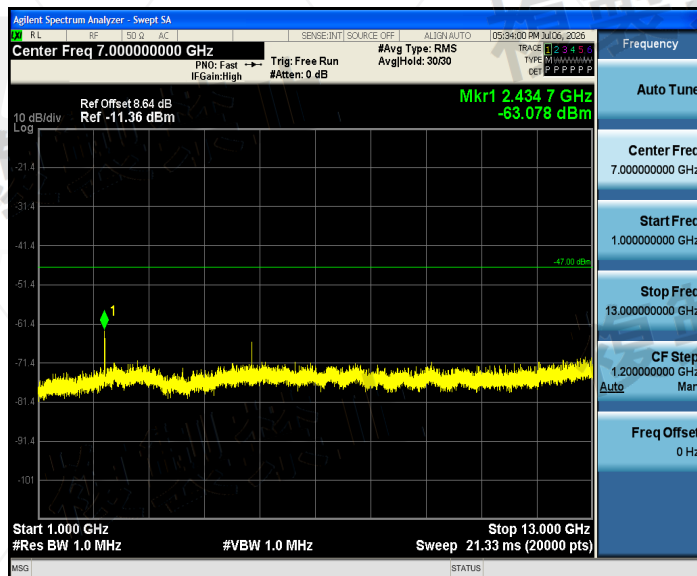


802.11 B 2472MHz

RX-Frequency Band 1 (30 MHz  $\leq$  f < 1000 MHz)RX-Frequency Band 2 (1000 MHz  $\leq$  f < 13000 MHz)

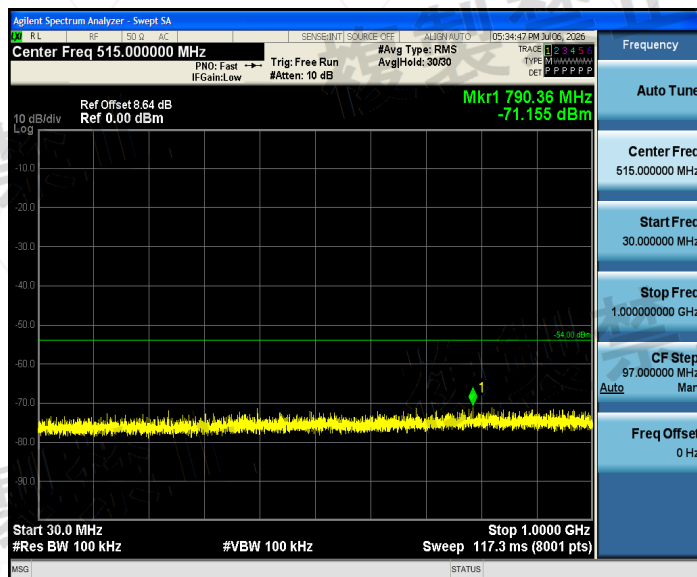
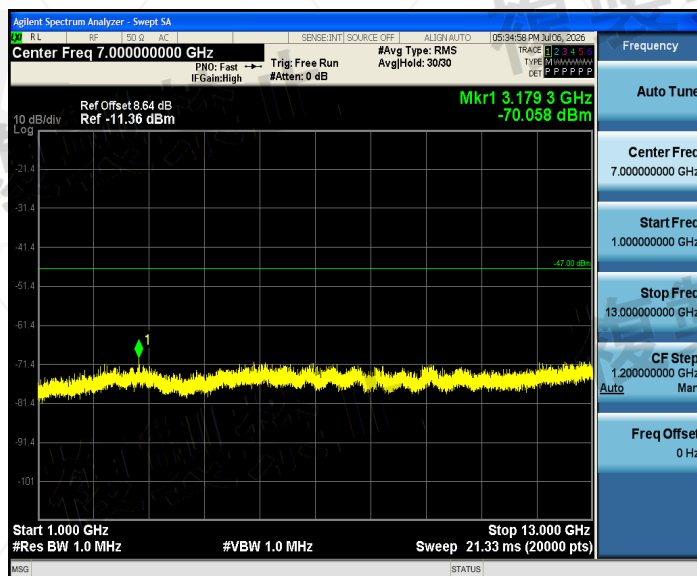


802.11 G 2412MHz

RX-Frequency Band 1 ( $30 \text{ MHz} \leq f < 1000 \text{ MHz}$ )RX-Frequency Band 2 ( $1000 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

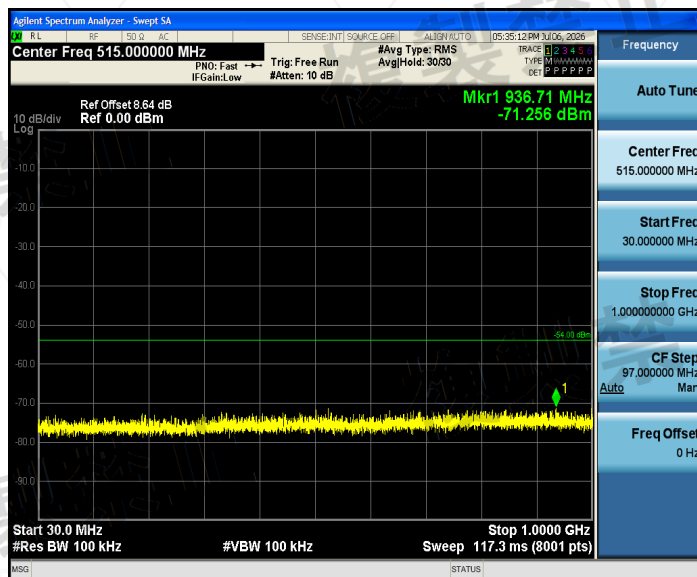
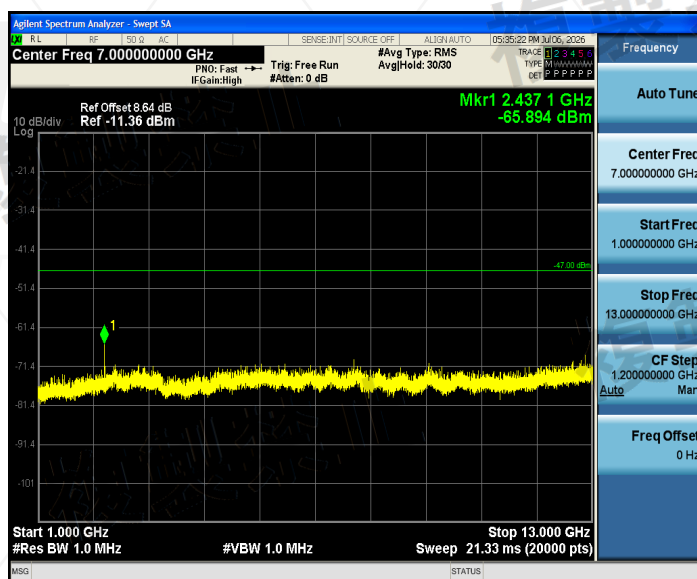


802.11 G 2442MHz

**RX-Frequency Band 1 (30 MHz  $\leq$  f < 1000 MHz)****RX-Frequency Band 2 (1000 MHz  $\leq$  f < 13000 MHz)**

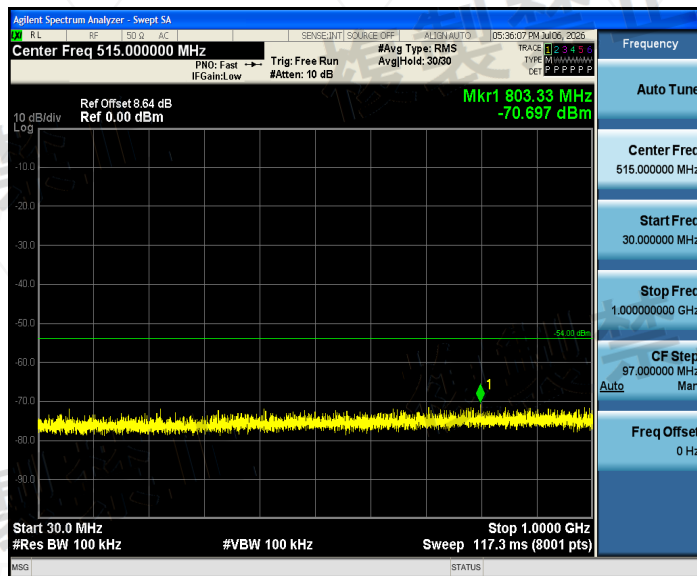
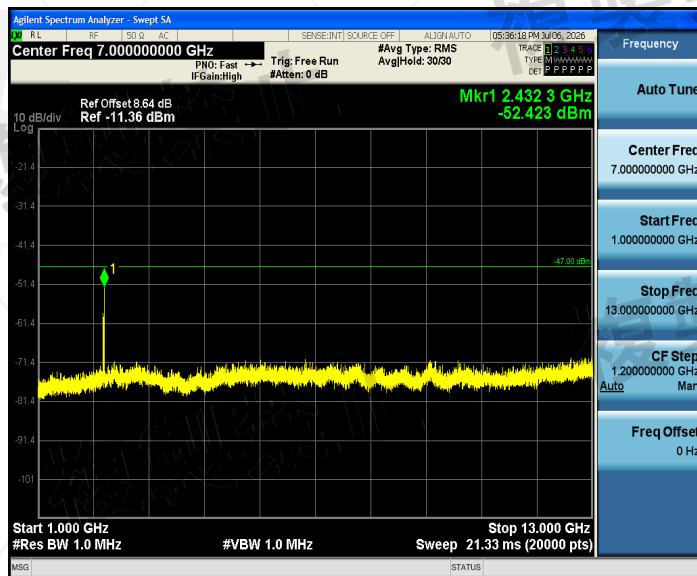


802.11 G 2472MHz

RX-Frequency Band 1 ( $30 \text{ MHz} \leq f < 1000 \text{ MHz}$ )RX-Frequency Band 2 ( $1000 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

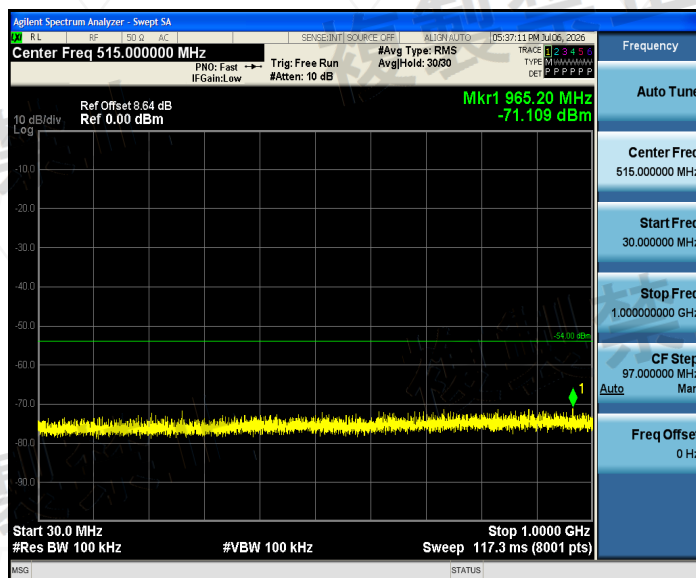
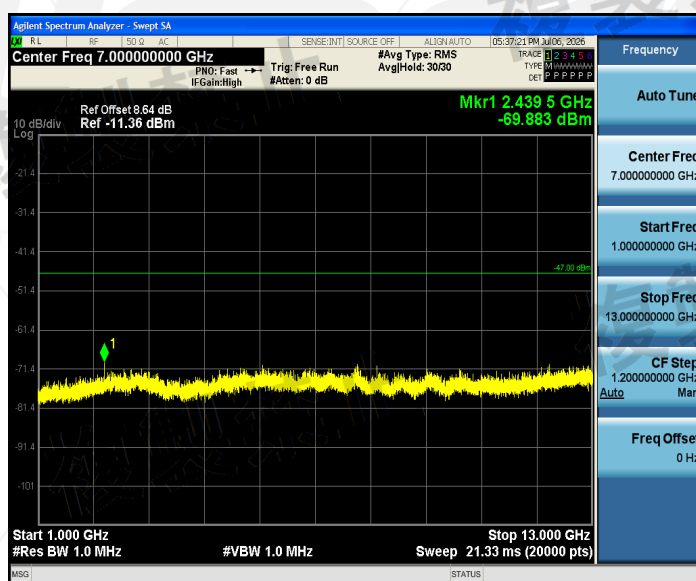


802.11 N20 2412MHz

RX-Frequency Band 1 (30 MHz  $\leq$  f < 1000 MHz)RX-Frequency Band 2 (1000 MHz  $\leq$  f < 13000 MHz)

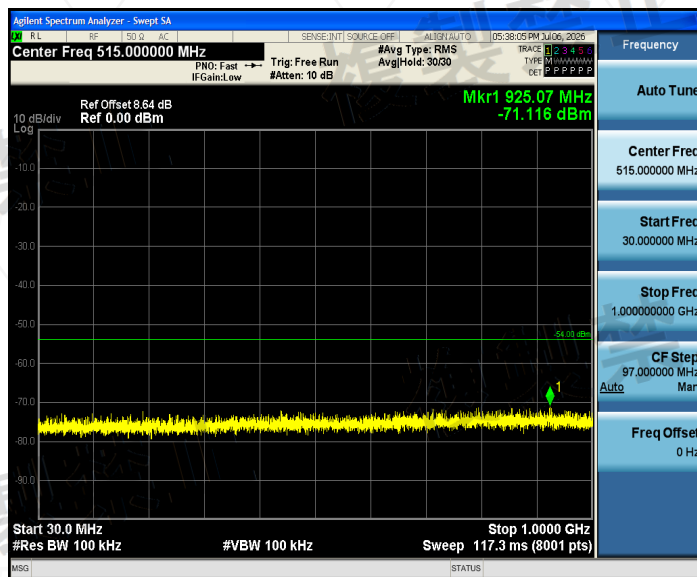
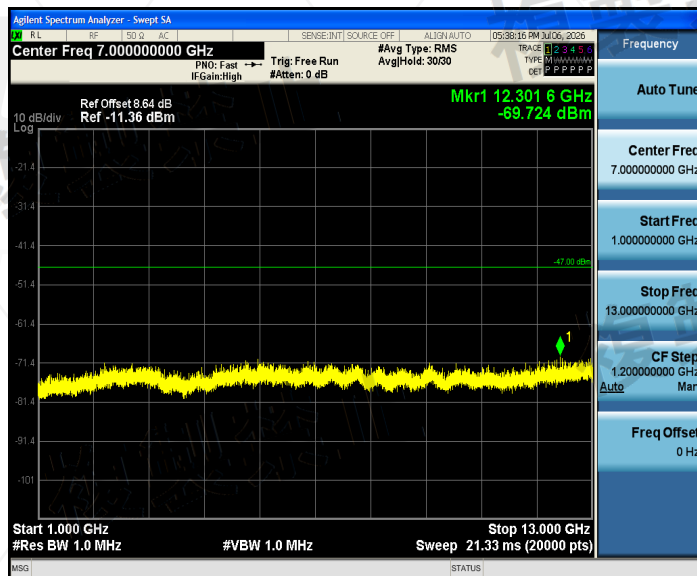


802.11 N20 2442MHz

RX-Frequency Band 1 (30 MHz  $\leq f < 1000$  MHz)RX-Frequency Band 2 (1000 MHz  $\leq f < 13000$  MHz)

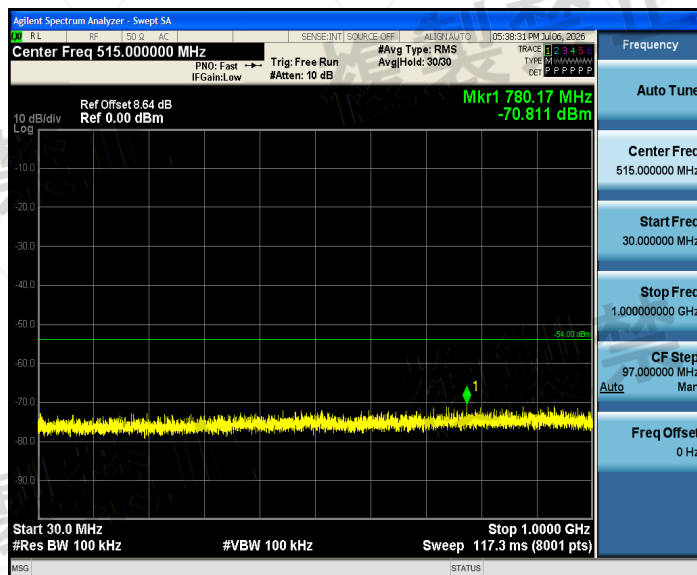
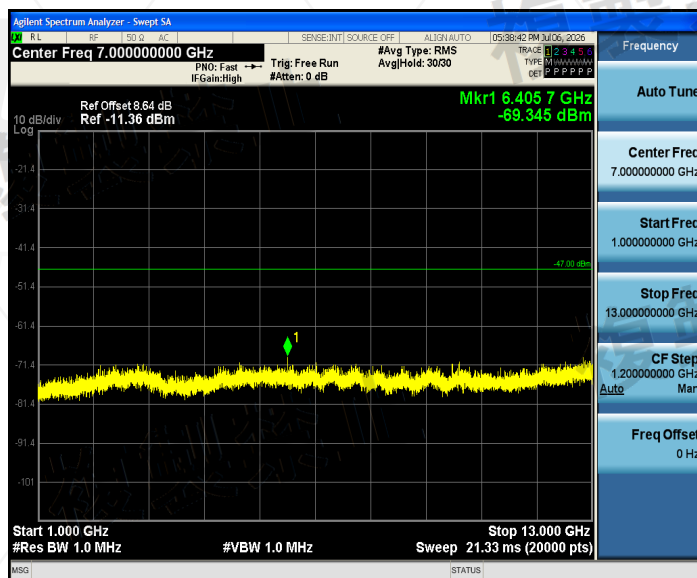


802.11 N20 2472MHz

RX-Frequency Band 1 ( $30 \text{ MHz} \leq f < 1000 \text{ MHz}$ )RX-Frequency Band 2 ( $1000 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

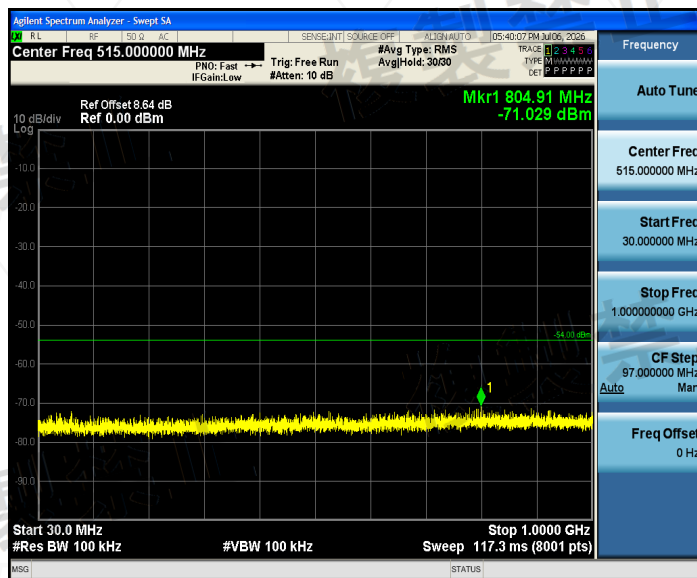
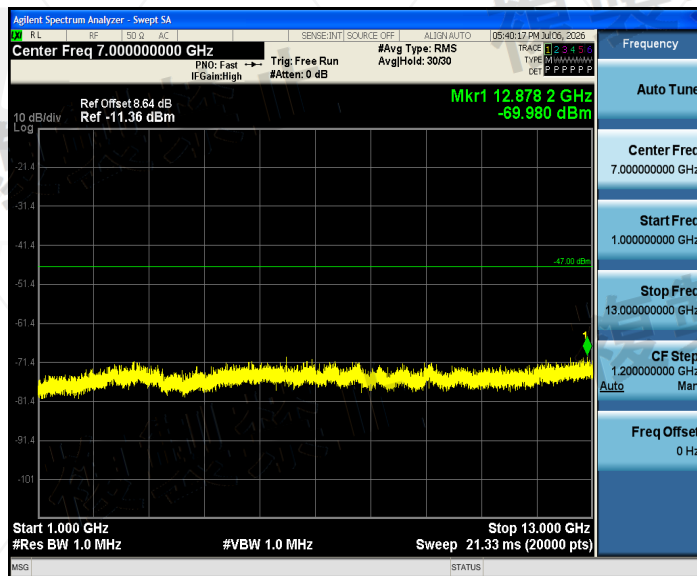


802.11 N40 2422MHz

RX-Frequency Band 1 ( $30 \text{ MHz} \leq f < 1000 \text{ MHz}$ )RX-Frequency Band 2 ( $1000 \text{ MHz} \leq f < 13000 \text{ MHz}$ )

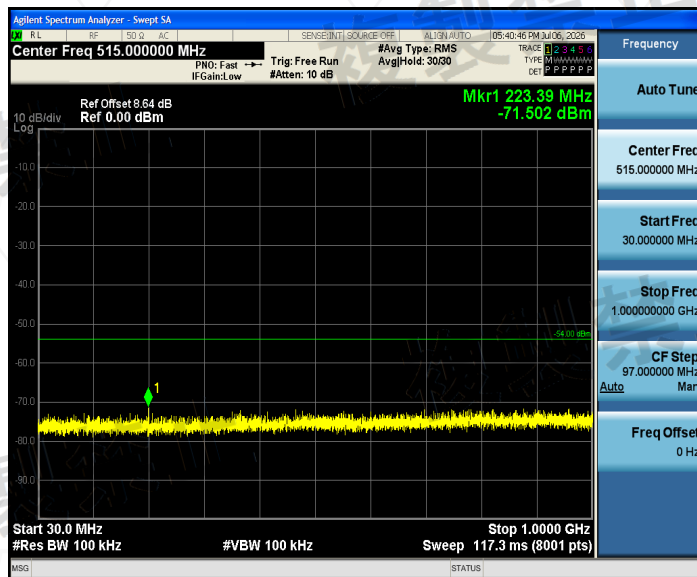
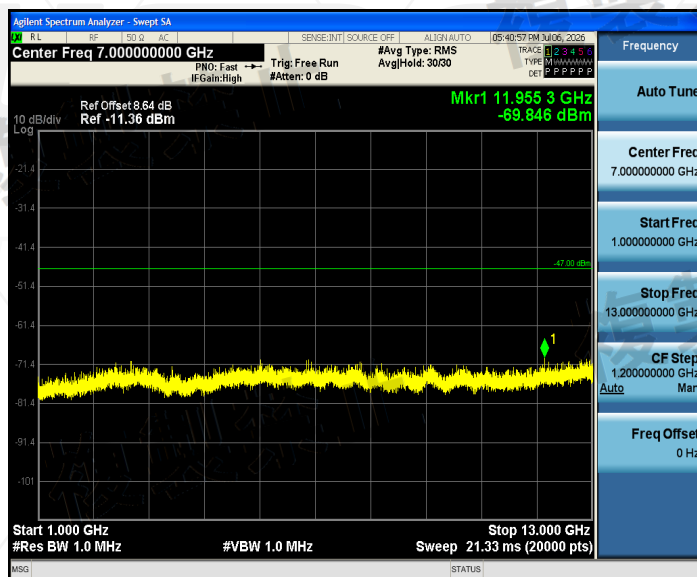


802.11 N40 2442MHz

RX-Frequency Band 1 (30 MHz  $\leq$  f < 1000 MHz)RX-Frequency Band 2 (1000 MHz  $\leq$  f < 13000 MHz)



802.11 N40 2462MHz

RX-Frequency Band 1 ( $30 \text{ MHz} \leq f < 1000 \text{ MHz}$ )RX-Frequency Band 2 ( $1000 \text{ MHz} \leq f < 13000 \text{ MHz}$ )



#### 4.6 Transmission Antenna Gain (EIRP Antenna Power) Measurement

##### 4.6.1 Limit

| Item                                                                                                                                                                                                                                                                                          | Limits                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EIRP Power Density                                                                                                                                                                                                                                                                            | $\leq 16.91\text{dBm/MHz}$ (FH form 2427 - 2470.75 MHz)<br>$\leq 22.14\text{dBm/MHz}$ (OFDM,DS from 2400~2483.5MHz)<br>$\leq 22.14\text{dBm}$ (Other from 2400~2483.5MHz) |
| Note: This test item is not applied for radio equipment with equivalent isotropic radiation power lower than 12.14dBm/MHz, but Antenna Power(Conducted) limit is 10 mW/MHz (10 dBm/MHz), So the test item will not be applied to the transmission antenna which has a gain of 2.14dBi or less |                                                                                                                                                                           |

##### 4.6.2 Measuring Instruments and Setting

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

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

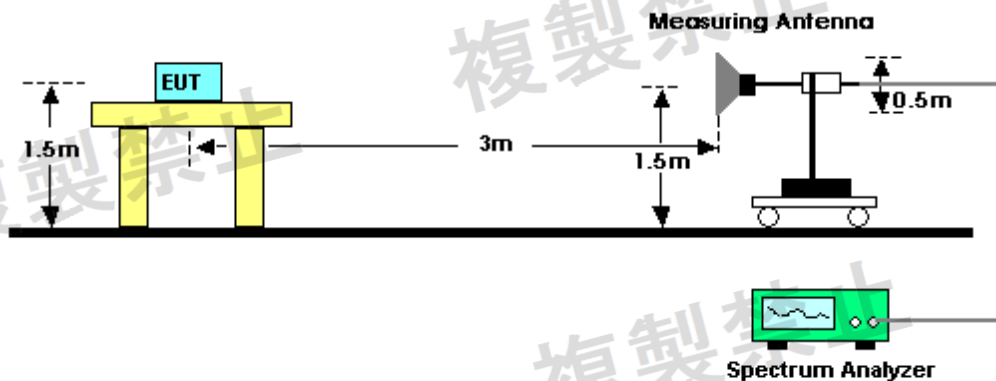
##### 4.6.3 Test Procedures

1. Set EUT ad measuring antenna at the same height and roughly facing each other.
2. Move the measuring antenna height up and down within  $\pm 50\text{cm}$  of EUT height and swing it to find the maximum output of the measuring antenna. The output level at the spectrum analyzer is read sa "E".
3. Remove the EUT from the turn table and put the replacing antenna facing to measuring antenna at same height. Set the standard signal generator (SSG) at same frequency and transmit on then receive the signal
4. Swing the replacing antenna give a maximum receiving level.
5. Move the measuring antenna height up and down within  $\pm 50\text{cm}$  of replacing antenna height and swing it to find the maximum receiving level.
6. Set SSG output power at Pt to give the equivalent output level of "E" or caluate Pt with SSG output which gives the nearest of "E" and difference ( $\pm 1\text{dB}$ ). Record the Pt.
7. Calculate EIRP by the formula below  $\text{EIRP} = \text{Gt} - \text{L} + \text{Pt}$ .  
Gt: gain of replacing antenna (dBi)  
L: feeder loss between SSG and replacing antenna  
Pt: Output power of the SSG
8. If the antenna for the EUT has circular polarization, sum of V-field and H-field will be result if measuring antenna is linear polarization.

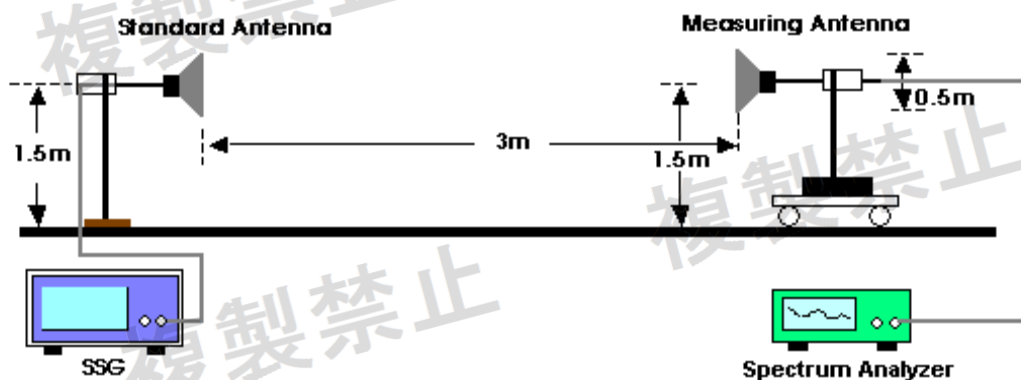


#### 4.6.4 Test Setup Layout

For EUT radiation measurement



For standard antenna measurement



#### 4.6.5 Test Deviation

There is no deviation with the original standard.

#### 4.6.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

#### 4.6.7 Results of Transmission Antenna Gain

This test item is not applied for radio equipment with equivalent isotropic radiation power lower than 12.14dBm/MHz.



#### 4.7 Transmission Radiation Angle Width (3dB Beam width) Measurement

##### 4.7.1 Limit

| Item                                                                                                                                                                                                                                                                                          | Limits                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3dB antenna beam width                                                                                                                                                                                                                                                                        | $360/A$ (If $A < 1$ ; then $A = 1$ )<br>$A = \{\text{EIRP Power [mW]} / 16.36 \text{ for DS, OFDM}\}$ or<br>$A = \{\text{EIRP Power [mW]} / 4.9 \text{ for FH}\}$ |
| Note: This test item is not applied for radio equipment with equivalent isotropic radiation power lower than 12.14dBm/MHz, but Antenna Power(Conducted) limit is 10 mW/MHz (10 dBm/MHz), So the test item will not be applied to the transmission antenna which has a gain of 2.14dBi or less |                                                                                                                                                                   |

##### 4.7.2 Measuring Instruments and Setting

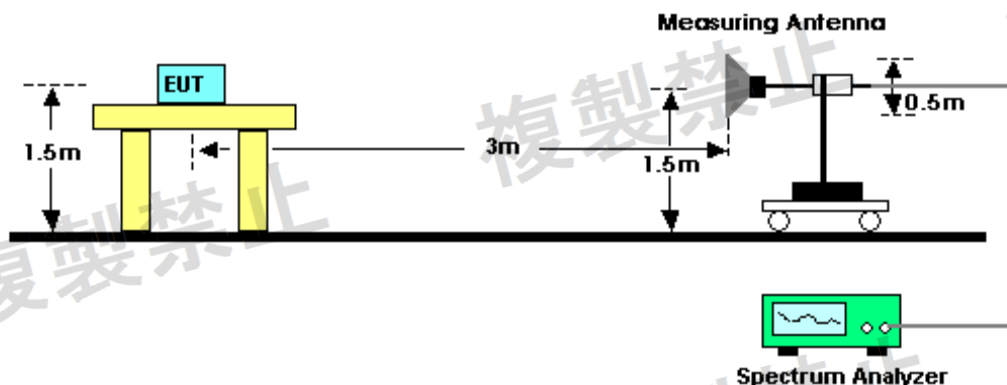
| Spectrum Parameter | Setting  |
|--------------------|----------|
| Attenuation        | Auto     |
| Span Frequency     | 0 MHz    |
| RB                 | 1 MHz    |
| VB                 | 1 kHz    |
| Detector           | Peak     |
| Trace              | Max Hold |
| Sweep Time         | Auto 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

##### 4.7.3 Test Procedures

1. Set EUT and measuring antenna at the same height and roughly facing each other.
2. Set spectrum analyzer with condition in section 4.7.2 and tune reference level to observe receiving signal position.
3. Rotate directions of the EUT horizontally and vertically to find the maximum receiving power.
4. Move the measuring antenna height up and down within  $\pm 50\text{cm}$  of EUT height and swing it to find the maximum output of measuring antenna. The output level at the spectrum analyzer is read as "E"
5. Calculate permitted radiation angle in horizontal and vertical using EIRP measured in another test method.
6. Calculate 3dB antenna beam width by the formula below  $360/A$  (If  $A < 1$ ; then  $A = 1$ ).  
 $A = \{\text{EIRP Power [mW]} / 16.36 \text{ for DS, OFDM}\}$  or  
 $A = \{\text{EIRP Power [mW]} / 4.9 \text{ for FH}\}$



#### 4.7.4 Test Setup Layout



#### 4.7.5 Test Deviation

There is no deviation with the original standard.

#### 4.7.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

#### 4.7.7 Test Result of Transmission Radiation Angle Width (3dB Beam width)

**Note:** This test item is not applied for radio equipment with equivalent isotropic radiation power lower than 12.14dBm/MHz.



## 4.8 Radio Interference Prevention Capability Measurement

### 4.8.1 Limit

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

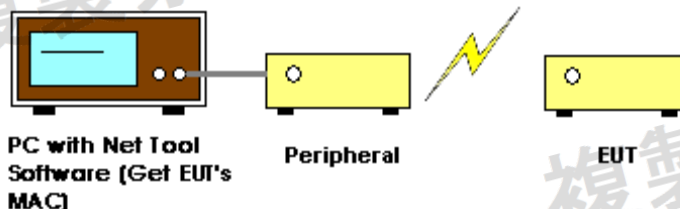
### 4.8.2 Measuring Id Code Software

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

### 4.8.3 Test Procedures

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

### 4.8.4 Test Setup Layout



### 4.8.5 Test Deviation

There is no deviation with the original standard.

### 4.8.6 EUT Operation during Test

The EUT was programmed to be in normal transmitting mode.

### 4.8.7 Test Result of Radio Interference Prevention Capability

|              |                                          |            |               |
|--------------|------------------------------------------|------------|---------------|
| EUT:         | Cyber-stage                              | Test Date: | July 06, 2026 |
| Temperature: | 25°C                                     | Tested by: | Jones Pan     |
| Humidity:    | 55 % RH                                  |            |               |
| Test Result: | CONFORM (MAC IP LIST: c8:47:8c:2a:32:a7) |            |               |



## 4.9 Carrier Sensing Function

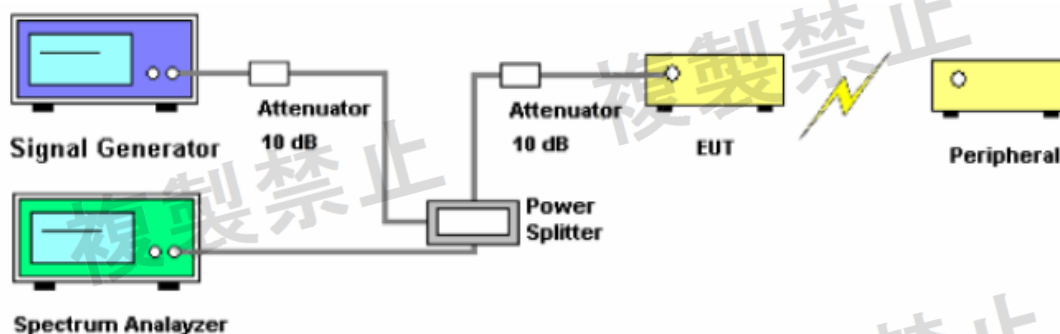
### 4.9.1 Test Requirement

MIC Notice No.88 Appendix No.43

Article 2, Paragraph 1, Item 19 Rules Section 10

### 4.9.2 Block Diagram of Test Setup

#### ❖ Measurement System Diagram



#### ❖ Conditions of Application Equipment (EUT)

- The EUT state shall be “normal mode link with wireless router”.

### 4.9.3 Test Procedure

1. SG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SG and power level is  $(on\ 22.79+G-20*\log(f)dBm)$  (G is the antenna gain, f is the test frequency).
2. Turn off the RF signal of the SG.
3. EUT have transmitted the maximum modulation signal and fixed channelize.
4. Setting of SA: RBW/VBW=1MHz/1MHz, Span=50MHz, Sweep time=auto, Sweep mode=continuous, Detect mode=positive peak
5. SG RF signal on.
6. EUT shall be stop the transmitted any signal and SG RF signal off, the EUT will be continuous

**4.9.4 Test Result**

|                                                                                                                                                                                                       |                               |            |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------|---------------|
| EUT:                                                                                                                                                                                                  | Cyber-stage                   | Test Date: | July 06, 2026 |
| Temperature:                                                                                                                                                                                          | 25 <sup>0</sup> C             | Tested by: | Jones Pan     |
| Humidity:                                                                                                                                                                                             | 55 % RH                       |            |               |
| Test Result:                                                                                                                                                                                          | CONFORM for IEE 802.11 N/HT40 |            |               |
| Note: The Cyber-stage cannot transmit radio when the field strength at maximal gain direction of receiving antenna power is over 100mV/m; and The Tablet can start to transmit after carrier sensing. |                               |            |               |

**4.9.5 Number of Carriers****Limit**

The number of Carriers: 1 or more/MHz

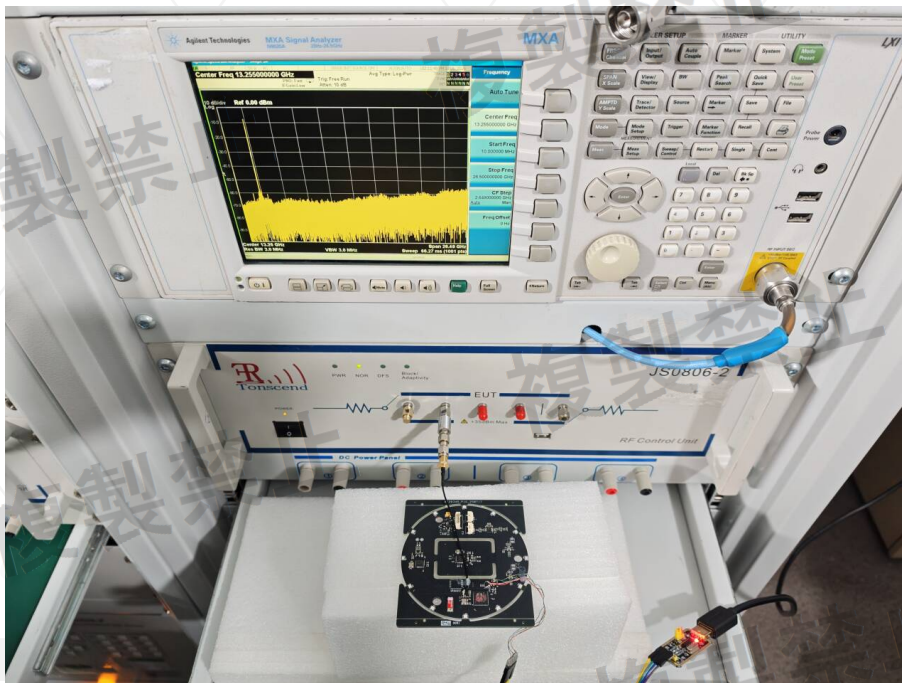
**Test Results**

This device has more than 1 subcarrier in 1MHz, compliances with the requirement



## 5. Test Setup Photos of the EUT

### Measurement Photos





## 6. Photos of the EUT

Reference to the report: ANNEX A of external photos and ANNEX B of internal photos

-----End of test report-----