



# SHUN DA CHENG TECHNOLOGY CO., LTD

## SPECIFICATION FOR APPROVAL

|                       |                    |                  |                  |
|-----------------------|--------------------|------------------|------------------|
| Customer Name         | Zhihexing          |                  |                  |
| Customer Project Name | HN-DC2173          | SDC Project Name | HN-DC2173        |
| Customer P/N          |                    | SDC P/N          | WF714B-1131L-250 |
| Band                  | WIFI2. 4G/5. 8G/BT |                  |                  |

| Approval  |              |              |              | Customer Approval |             |
|-----------|--------------|--------------|--------------|-------------------|-------------|
|           | Prepared By  | Checked By   | Approval By  | Checked By        | Approval By |
| Signature | Li Yaona     | Yang Yonghui | Fu Xuerong   |                   |             |
| Date      | 2026. 08. 11 | 2026. 08. 11 | 2026. 08. 11 |                   |             |

| Change Log |                    |                  |             |      |
|------------|--------------------|------------------|-------------|------|
| Version    | Change Description | Person in Charge | Approval By | Date |
|            |                    |                  |             |      |
|            |                    |                  |             |      |
|            |                    |                  |             |      |



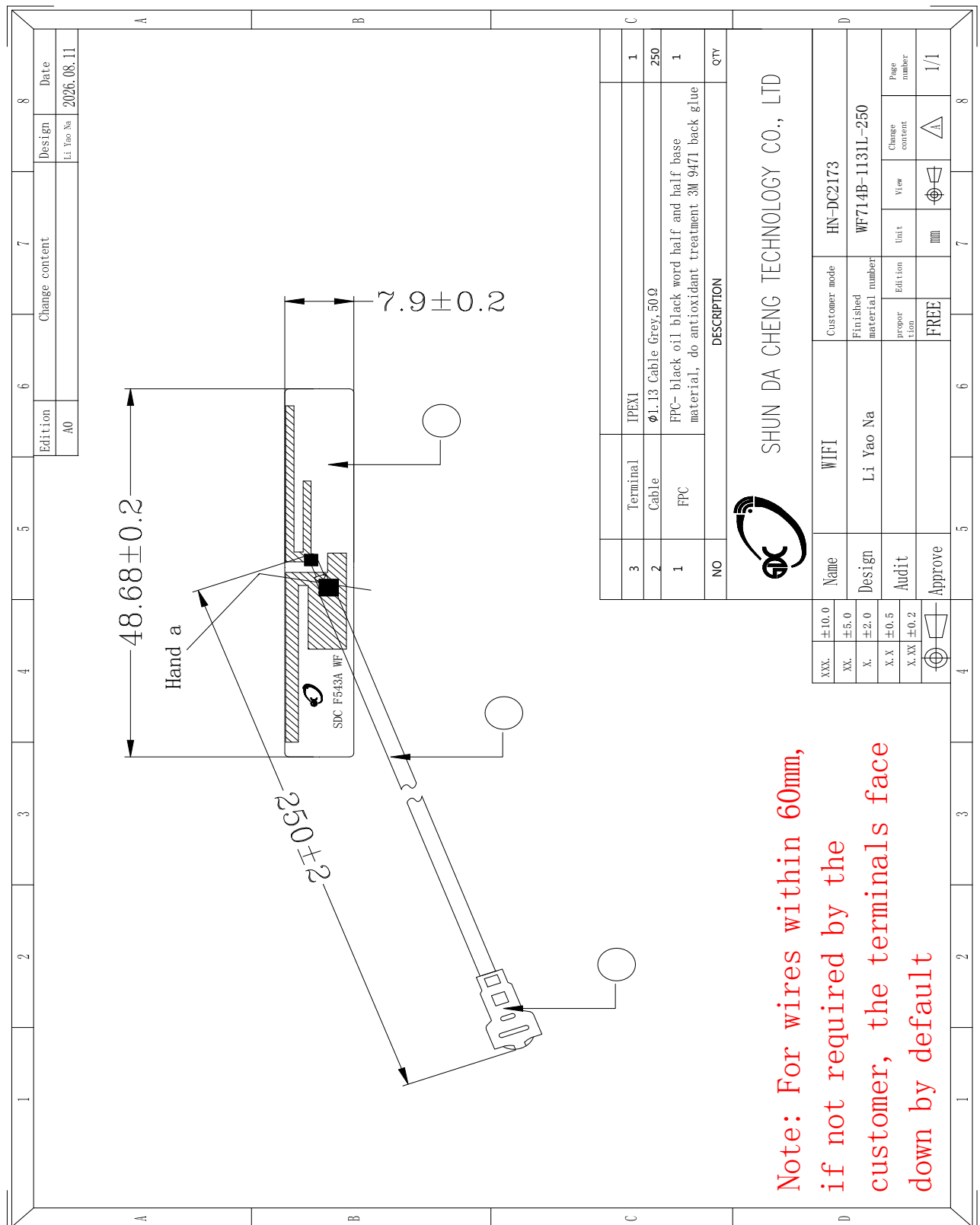
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# Catalogue

| No. | Item                         | Page No. |
|-----|------------------------------|----------|
| 1   | Drawing or Product Image     | 3        |
| 2   | Dimensions Test Report       | 4        |
| 3   | RF Performance Test Report   | 5-8      |
| 4   | Reliability Test Report1     | 9        |
| 5   | Package Document             | 10       |
| 6   | RoHS Control list for Sample | 11       |
| 7   | Install Wizard or Other      | 11       |
|     |                              |          |
|     |                              |          |



Drawing or Product Image





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## Sample Dimensions Test Report

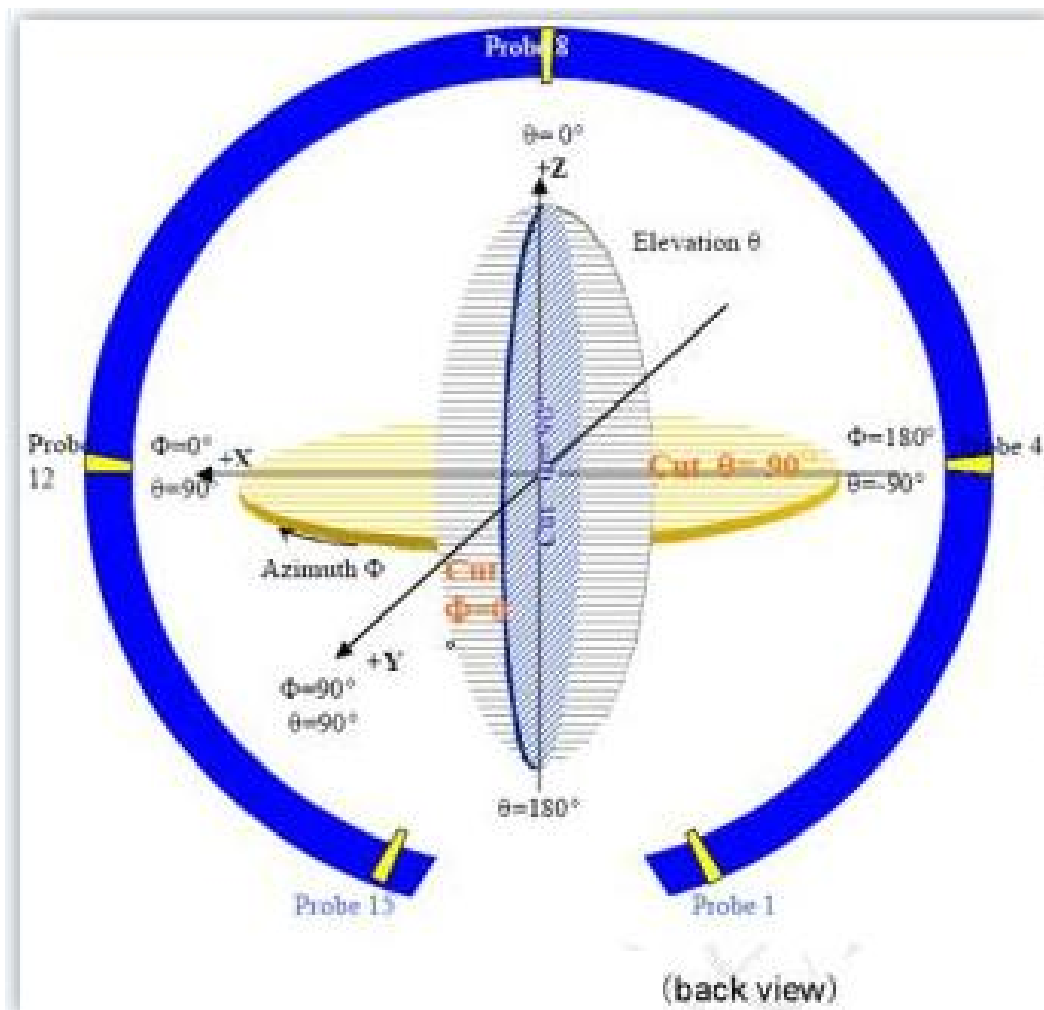
|                  |                         |             |                 |           |            |
|------------------|-------------------------|-------------|-----------------|-----------|------------|
| Test Date        | 2026. 08. 11            | Sample Qty. | 3               | Inspector | Xu Yanfang |
| Dimension No.    | Standard                | Sample 1    | Sample 2        | Sample 3  | Pass/NG    |
| ①length          | 48. 68±0. 2mm           | 48. 7       | 48. 8           | 48. 8     | Pass       |
| ②width           | 7. 9±0. 2mm             | 7. 9        | 8. 0            | 8. 0      | Pass       |
| ③thickness       | 0. 1±0. 03mm            | 0. 1        | 0. 1            | 0. 1      | Pass       |
| ④wire length     | 250±2mm                 | 250         | 251             | 250       | Pass       |
|                  |                         |             |                 |           |            |
|                  |                         |             |                 |           |            |
|                  |                         |             |                 |           |            |
|                  |                         |             |                 |           |            |
|                  |                         |             |                 |           |            |
| Conclusion       |                         |             |                 |           | PASS       |
| Inspector & Date | Xu Yanfang 2026. 08. 11 |             | Approval & Date |           |            |



## RF Performance Test Report

### Antenna Test Equipment Introduction

Test of antenna input characteristics using **Agilent E5071C** and **Agilent 5062A** vector network analyzer; The radiation pattern of the antenna are tested using the guangping 3D near field Anechoic Chamber, and the instrument is used to agilent8960 E5515 and Agilent E4438C. The test coordinates of the darkroom are as follows:

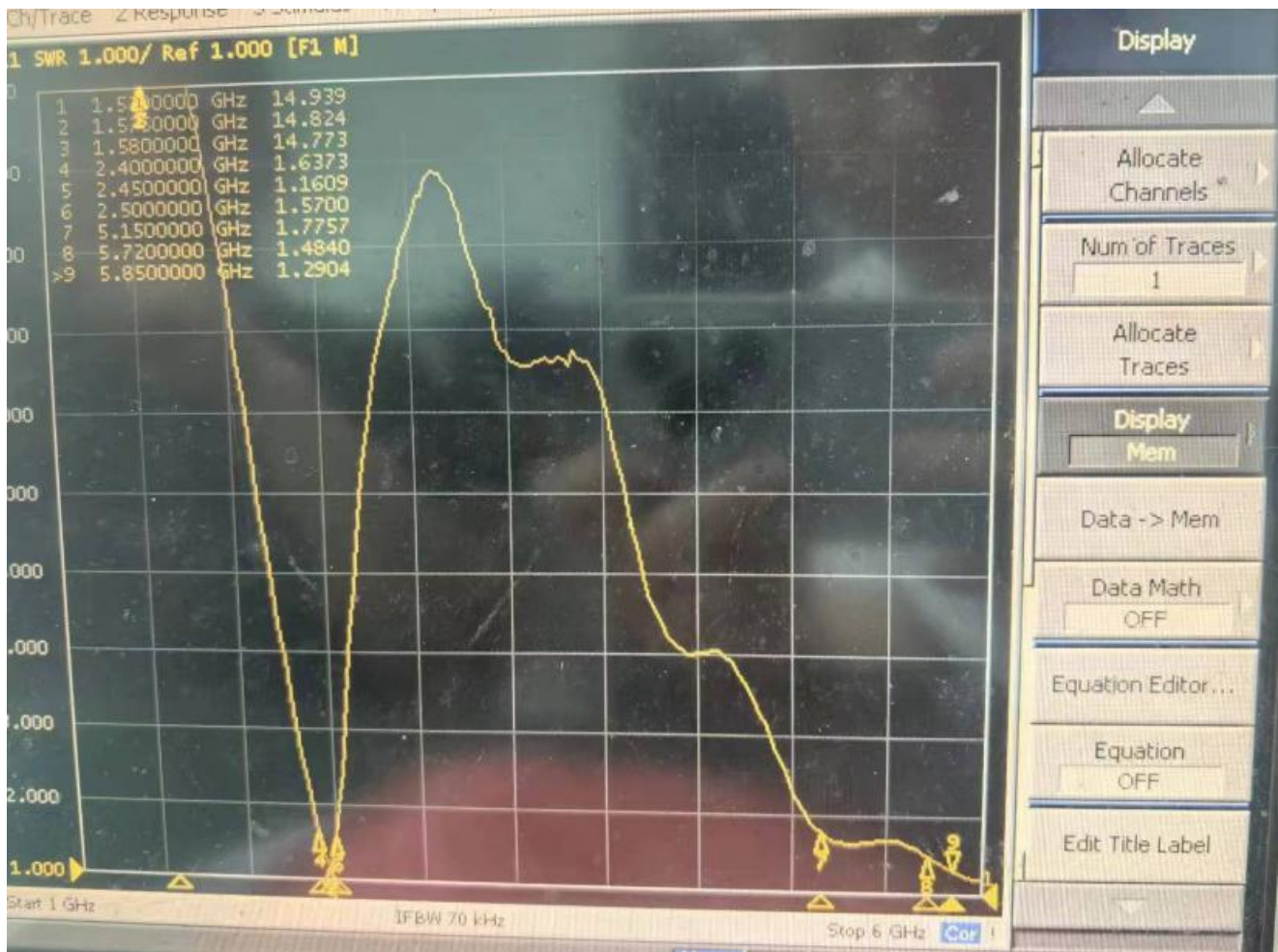


### 1. S11 Parameter-VSWR

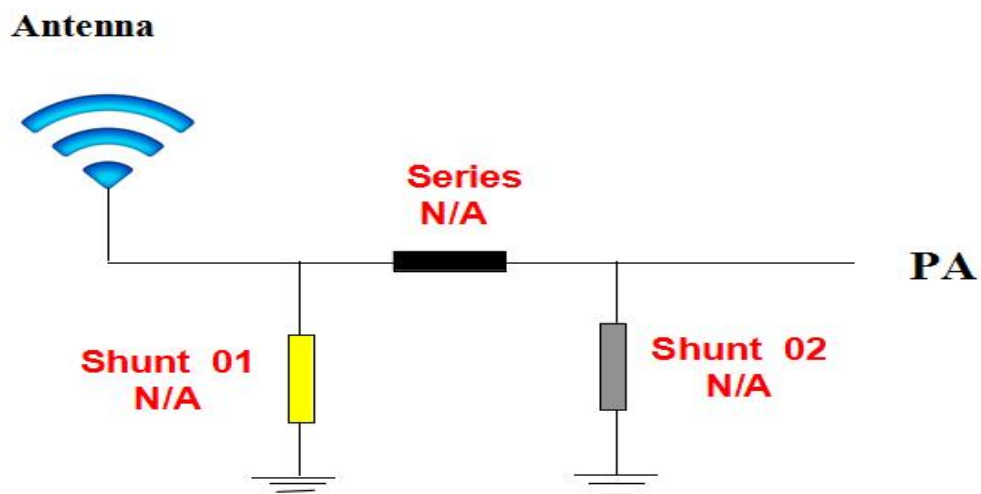
Measuring Method is a 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.



## S11 Parameter-VSWR



## 2. Antenna Matching Network





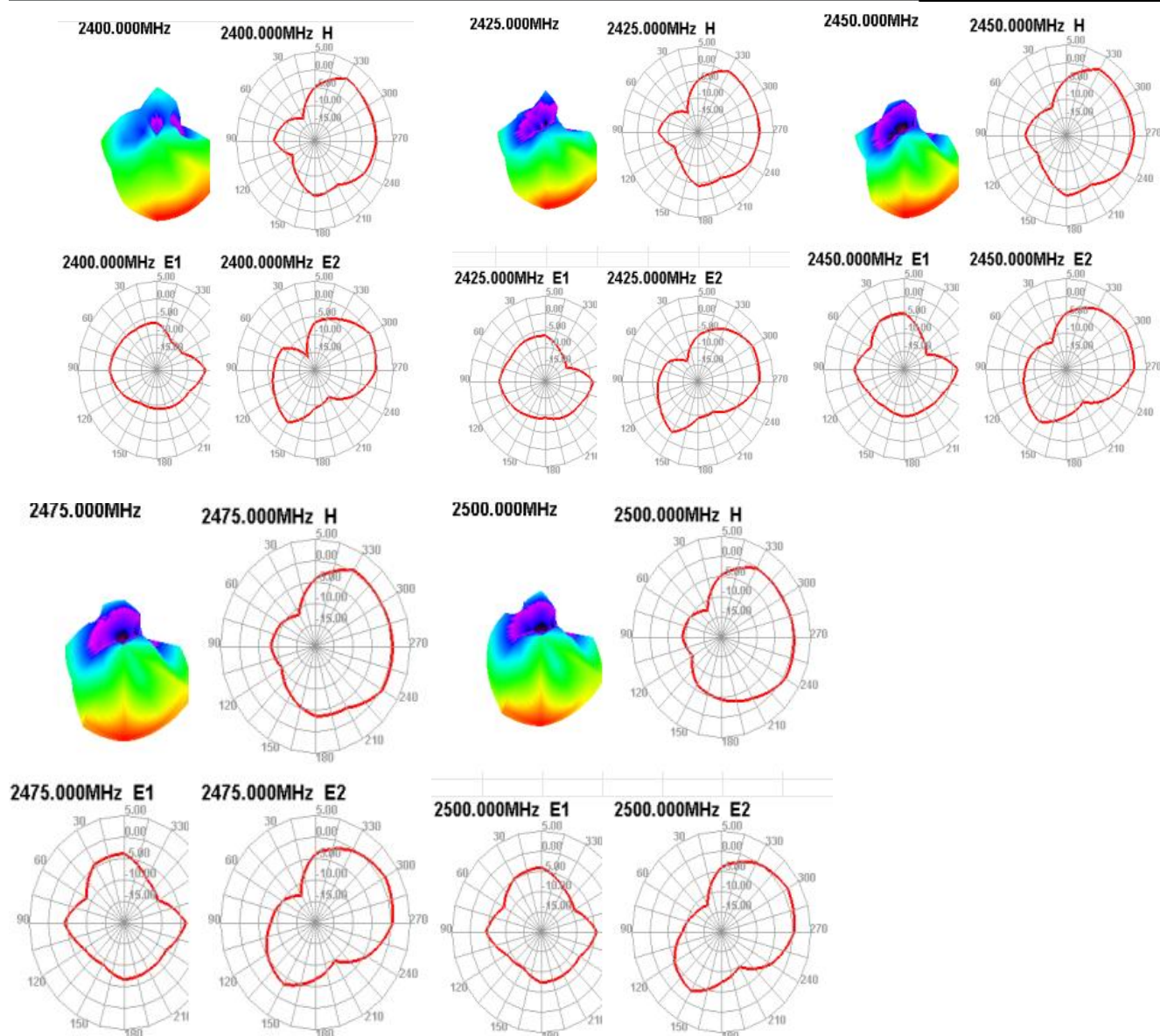
### 3.Electrical parameter:

| Electrical parameter |                                                                                                                                                                                           |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (Frequency range)    | 2400-2500MHz 5150-5850MHz                                                                                                                                                                 |
| Polarization mode    | Horizontal and vertical polarization                                                                                                                                                      |
| Antenna gain         | 1.37dbi@ 2400-2500MHz                                                                                                                                                                     |
| standing-wave ratio  | <2.0                                                                                                                                                                                      |
| Measurement program  | /                                                                                                                                                                                         |
| Test equipment       | Agilent(5071B) /ROHDE&SCHWARZ (CMW500)                                                                                                                                                    |
| Test Settings        | Prepare the tested object with a fixture and place it on the testing turntable for preparation. Open the testing software and select the corresponding frequency band to conduct the test |
| Testing location     | OTA microwave anechoic chamber                                                                                                                                                            |
| Antenna manufacturer | Shenzhen Shundacheng Technology Co., Ltd                                                                                                                                                  |
| Debugging mode       | PIFA                                                                                                                                                                                      |
| Antenna material     | FPC+coaxial line                                                                                                                                                                          |



## 4. Gain & Efficiency

| Passive Test For 2.4G |             |               |               |            |            |             |             |                     |                    |              |              |
|-----------------------|-------------|---------------|---------------|------------|------------|-------------|-------------|---------------------|--------------------|--------------|--------------|
| Freq<br>(MHz)         | Effi<br>(%) | Gain<br>(dBi) | Gain<br>(dBd) | UHS<br>(%) | DHS<br>(%) | Max<br>(dB) | Min<br>(dB) | irectivity<br>(dBi) | Beamwidth<br>(3dB) | AttH<br>(dB) | AttV<br>(dB) |
| 2400                  | 39.61       | 0.25          | -1.9          | 16.602     | 14.012     | 0.25        | -21.34      | 5.39                | 0                  | 47.77        | 47.82        |
| 2425                  | 39.13       | 0.81          | -1.34         | 18.5       | 15.628     | 0.81        | -15.64      | 5.48                | 30                 | 48.06        | 48.12        |
| 2450                  | 39.95       | 1.22          | -0.93         | 21.614     | 18.334     | 1.22        | -12.96      | 5.2                 | 30                 | 48.56        | 48.53        |
| 2475                  | 38.6        | 1.29          | -0.86         | 21.371     | 17.228     | 1.29        | -14.5       | 5.43                | 0                  | 48.46        | 48.26        |
| 2500                  | 40.58       | 1.37          | -0.78         | 20.543     | 16.038     | 1.37        | -14.85      | 5.74                | 30                 | 48.42        | 48.12        |

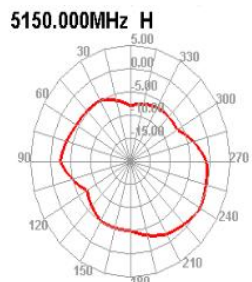




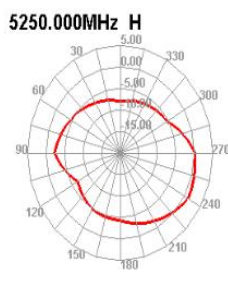
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| Passive Test For 5.8G |          |            |            |         |         |          |          |                   |                 |           |           |
|-----------------------|----------|------------|------------|---------|---------|----------|----------|-------------------|-----------------|-----------|-----------|
| Freq (MHz)            | Effi (%) | Gain (dBi) | Gain (dBd) | UHS (%) | DHS (%) | Max (dB) | Min (dB) | Directivity (dBi) | Beamwidth (3dB) | AttH (dB) | AttV (dB) |
| 5150                  | 39.33    | 0.57       | -1.58      | 18.854  | 17.473  | 0.57     | -16.6    | 4.97              | 30              | 58.6      | 58.01     |
| 5250                  | 38.55    | 1.67       | -0.48      | 19.703  | 18.846  | 1.67     | -12.69   | 5.81              | 60              | 58.53     | 57.74     |
| 5350                  | 44.16    | 1.97       | -0.18      | 21.743  | 22.419  | 1.97     | -14.31   | 5.52              | 60              | 57.99     | 57.08     |
| 5450                  | 47.04    | 2.55       | 0.4        | 23.711  | 25.326  | 2.55     | -17.69   | 5.65              | 30              | 59.19     | 57.9      |
| 5550                  | 46.04    | 2.28       | 0.13       | 21.538  | 24.5    | 2.28     | -17.56   | 5.64              | 30              | 60.21     | 58.81     |
| 5650                  | 45.68    | 2.26       | 0.11       | 21.539  | 24.142  | 2.26     | -19.36   | 5.66              | 30              | 60.31     | 59.42     |
| 5750                  | 46.08    | 2.46       | 0.31       | 21.594  | 24.486  | 2.46     | -17.82   | 5.83              | 30              | 60.88     | 60.28     |
| 5850                  | 43.56    | 1.7        | -0.45      | 20.569  | 22.986  | 1.7      | -13.37   | 5.31              | 90              | 61.09     | 60.41     |

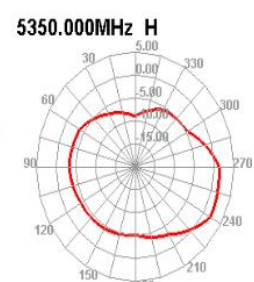
5150.000MHz



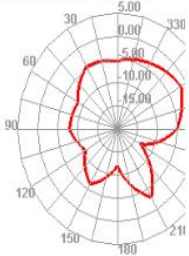
5250.000MHz



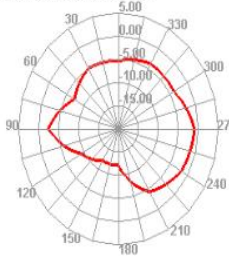
5350.000MHz



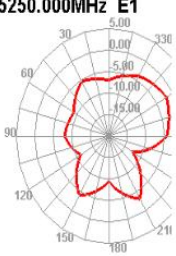
5150.000MHz E1



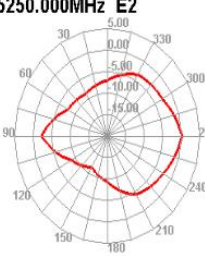
5150.000MHz E2



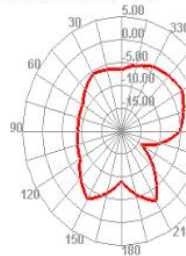
5250.000MHz E1



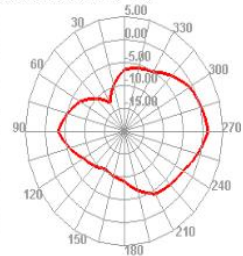
5250.000MHz E2



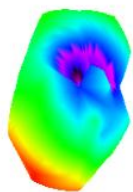
5350.000MHz E1



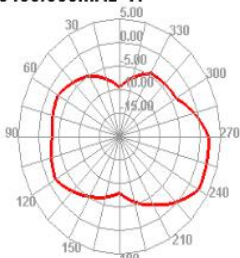
5350.000MHz E2



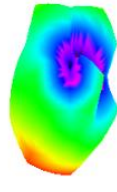
5450.000MHz



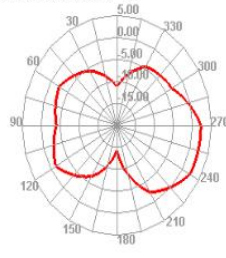
5450.000MHz H



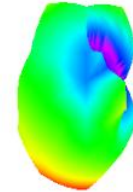
5550.000MHz



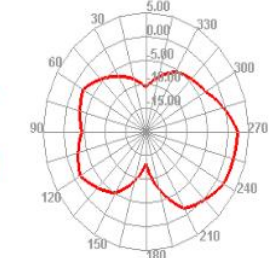
5550.000MHz H



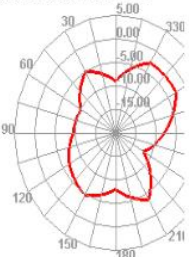
5650.000MHz



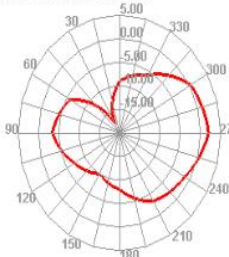
5650.000MHz H



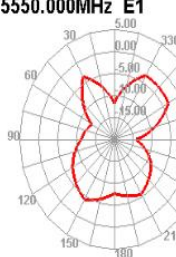
5450.000MHz E1



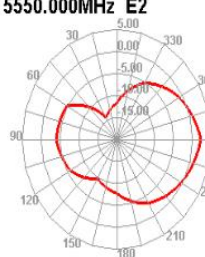
5450.000MHz E2



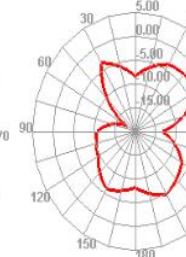
5550.000MHz E1



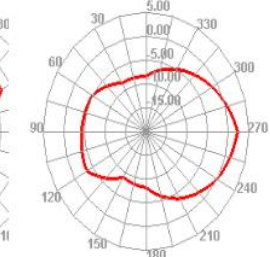
5550.000MHz E2



5650.000MHz E1



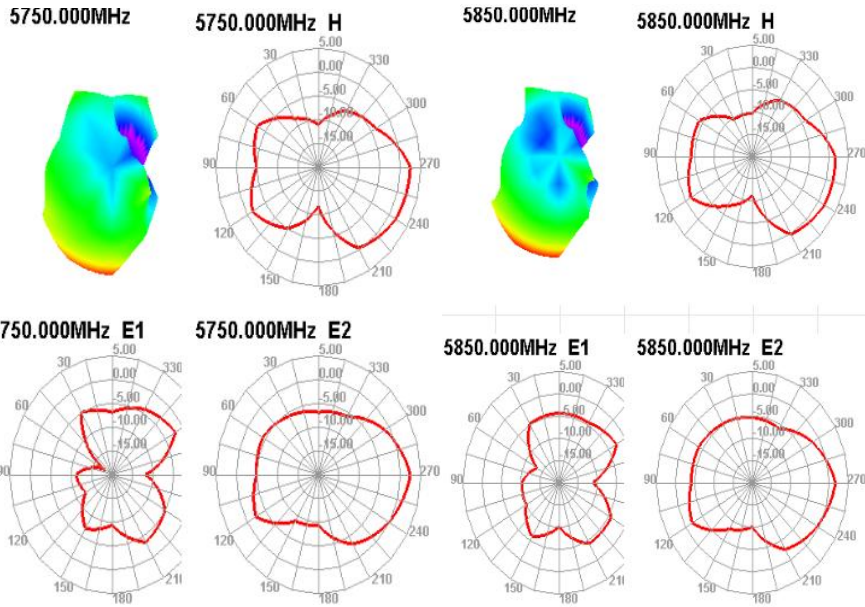
5650.000MHz E2



Company Address: 4th Floor, Building B5, Xinfu Industrial Park, Chongqing Road, Fuyong Town, Baoan District, Shenzhen Telephone :0755-27211658 Fax :0755-29485750



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### 5. WiFi OTA Data

|             |                            |        |        |
|-------------|----------------------------|--------|--------|
| <b>2.4G</b> | <b>802.11b, (2.4G) 11M</b> |        |        |
| Channel     | CH1                        | CH6    | CH11   |
| TRP         | 14.37                      | 13.1   | 13.06  |
| TIS         | -79.66                     | -79.32 | -80.84 |
| <b>5.8G</b> | <b>802.11a, (5.8G) 54M</b> |        |        |
| Channel     | CH36                       | CH60   | CH161  |
| TRP         | 12.15                      | 11.24  | 11.28  |
| TIS         | -68.85                     | -69.5  | -68.44 |



# SHUN DA CHENG TECHNOLOGY CO., LTD

## Reliability Test Report

|                                      |                                                                                                                                                                 |                                       |                 |           |            |         |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------|-----------|------------|---------|
| Test Date                            | 2026. 08. 11                                                                                                                                                    | Sample Qty.                           | 3               | Inspector | Xu Yanfang |         |
| Test Item                            | Requirement                                                                                                                                                     | testing equipment                     | Sample 1        | Sample 2  | Sample 3   | PASS/NG |
| High temperature storage             | The test was carried out after 24H exposure at +85℃ and 2H recovery                                                                                             | Constant temperature and humidity box | OK              | OK        | OK         | Pass    |
| Low temperature storage              | The test was carried out after 24H exposure at -40℃ and 2H recovery                                                                                             | Constant temperature and humidity box | OK              | OK        | OK         | Pass    |
| High temperature work                | At +60℃ for 24H                                                                                                                                                 | Constant temperature and humidity box | OK              | OK        | OK         | Pass    |
| Work in low temperature              | At -20℃ under the condition of power work for 24H                                                                                                               | Constant temperature and humidity box | OK              | OK        | OK         | Pass    |
| Salt spray test                      | The pH value was 6.5 ~ 7.2, and the temperature of the experimental chamber was (35±2)℃<br><input type="checkbox"/> 24H <input checked="" type="checkbox"/> 48H | Salt spray testing machine            | OK              | OK        | OK         | Pass    |
| Connector riveting and drawing force | 1. 13Wire diameter ≥ 10N<br>0. 81Wire diameter ≥ 8N<br>RG174 ≥60N<br>RG178 ≥50N                                                                                 | Push pull meter                       | ≥10N            | ≥10N      | ≥10N       | Pass    |
| Conclusion                           |                                                                                                                                                                 |                                       |                 |           |            | Pass    |
| Inspector & Date                     | Xu Yanfang 2026. 08. 11                                                                                                                                         |                                       | Approval & Date |           |            |         |

Company Address: 4th Floor, Building B5, Xinfu Industrial Park, Chongqing Road, Fuyong Town, Baoan District, Shenzhen Telephone :0755-27211658 Fax :0755-29485750



## Packing rules

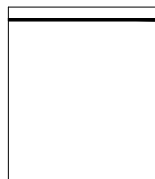
Project name: HN-DC2173

Product name: FPC antenna

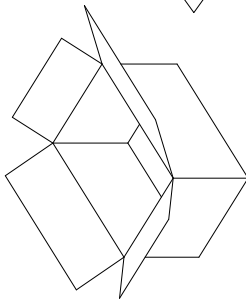
FPC antenna (one)



(two) Each PE bag contains 100pcs of products (subject to actual packaging)



(three) Then put the small antenna bag neatly into (Figure 3) and fill 10 small bags (the actual packaging shall prevail).



(four) The packaged antenna can be put into a carton, which can hold 5 large bags, each box can hold 5000PCS (Figure 4). (Subject to actual packaging)



|                           |  |
|---------------------------|--|
| supplier                  |  |
| purchase order number     |  |
| material code             |  |
| specifications and models |  |
| quantity                  |  |
| date                      |  |

(five) After the packaging is completed, the shipping label should be affixed (Figure 5).



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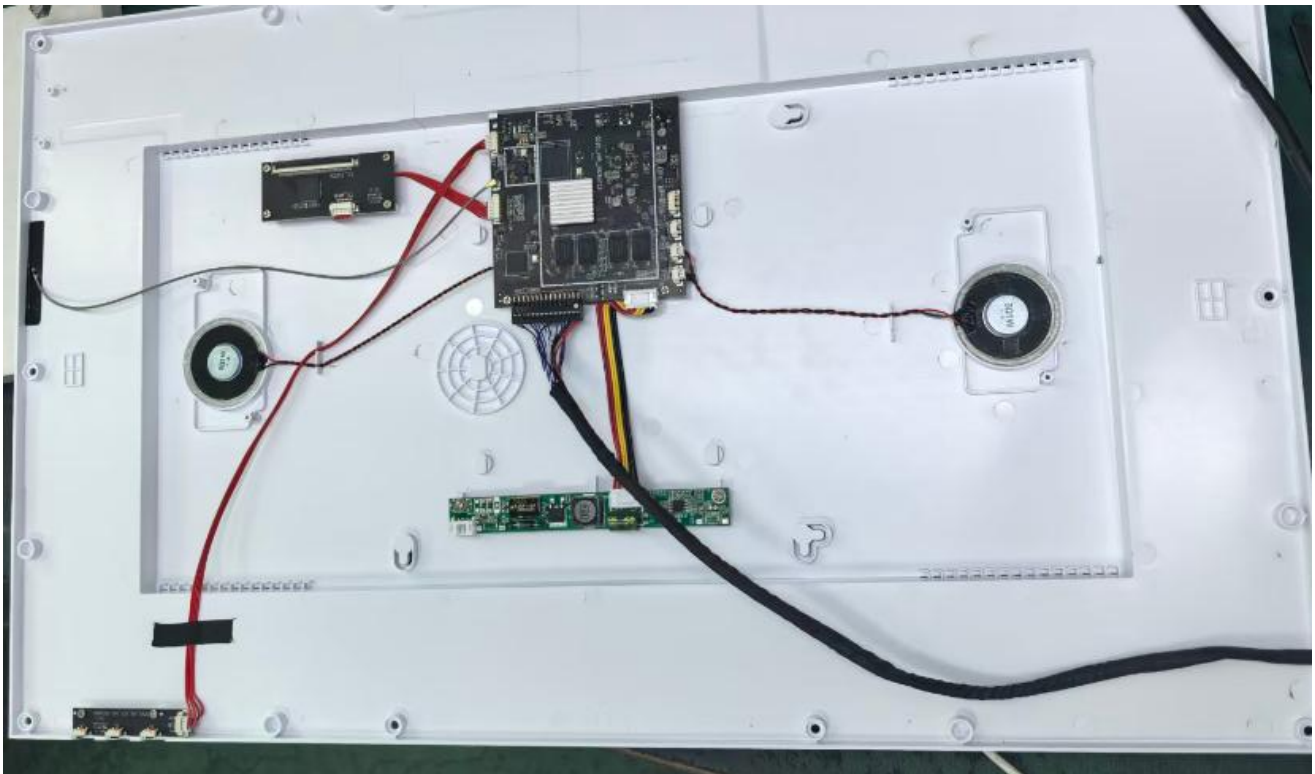
Install Wizard or Other

Installation process:

Take 1PCS of products and tear off the release paper on the back of the FPC by hand. Then align the positioning holes of the FPC with the positioning holes of the shell (positioning bars or positioning wires) and attach them to the shell smoothly. The specific positions are shown in the figure below:

Precautions for installation:

- ☐ After attaching the antenna, ensure that the FPC is fully attached to the shell;
- ☐ The positioning hole is aligned with the position of the housing positioning column;
- ☐ FPC edges are aligned with housing edges;
- ☐ When connecting the antenna with terminal to the PCBA end of the motherboard, align the terminal first and then close it vertically.
- ☐ When removing the antenna terminal, use a tool (such as a dedicated crowbar) to lift the terminal vertically. Do not pull the cable to remove the terminal directly.





SHUN DA CHENG TECHNOLOGY CO., LTD

ROHS

*Certificate*

Certificate Number: UNIB25072421HC-01



Product: 5G/4G/WIFI/GPS/BT antenna/M808 antenna  
Applicant: ShenZhen ShunDaCheng Technology Co., Ltd.  
4th Floor, Building B5, Xinfu Industrial Zone, Fuyong Chongqing Road,  
Baoan District, Shenzhen  
Manufacturer: ShenZhen ShunDaCheng Technology Co., Ltd.  
4th Floor, Building B5, Xinfu Industrial Zone, Fuyong Chongqing Road,  
Baoan District, Shenzhen  
Model No.: N/A  
Trade Mark: N/A  
Test Methods: IEC 62321-2:2021, IEC 62321-3-1:2013, IEC 62321-4:2013 +A1:2017,  
IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015  
IEC 62321-7-2:2017, IEC 62321-8:2017

The laboratory tested the product provided by the applicant according to the above test methods. According to the test results, the product conforms to RoHS Directive [(2011/65/EU and Amendment (EU) 2015/863)] issued by the European Commission. It is possible to use CE marking to demonstrate the compliance with RoHS Directive.

The certificate applies to the tested sample above mentioned only and shall not imply an assessment of the whole production. It is only valid in connection with the test report number: UNIB25072421HR-01.

**Note:** According to the requirements of the applicant for testing, details are shown in the test report.

**RoHS**

Aug. 28, 2025  
Issue Date

Hoffer Lau

Shenzhen United Testing Technology Co., Ltd.

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Tel: +86-755-86180996/+86-020-39277769

Web Site: www.uni-lab.hk/ E-mail: hofferlau@uni-lab.hk



Certificate of Compliance

Company Address: 4th Floor, Building B5, Xinfu Industrial Park, Chongqing Road, Fuyong Town, Baoan District, Shenzhen Telephone :0755-27211658 Fax :0755-29485750