



**Shenzhen Shuodian Electronic Technology Co.,Ltd**  
**Page number 1-10**

---

# Gauge book

for

**2.4G/5.8G WIFI FPC antenna**

Customer  
item

Material number of our company

SD653-2.4/5.8G-WIFI-FPC

Compilation: Zeng Xiaofeng

Audit: Li Ming Date: April 22,

2023

Shenzhen shuodian electronic  
technology co., ltd

Room 508, Building 64, Jinlong Industrial City,  
Ma Jialong, Nanshan District, Shenzhen.

E-mail: [sz\\_shuodian@163.com](mailto:sz_shuodian@163.com)

**Tel: 0755-86006322**

**Fax: 0755-86006323**

Shenzhen shuodian electronic technology co., ltd

---



## catalogue

Gauge book 1

Shenzhen shuodian electronic technology co., ltd.

1 Directory 2

1. Both parties confirm 3

2. General matters 4

3. General product specifications

4.Product specification details 5

4.1 Product Structure Parameters

4.2 Product electrical performance test data 7

5. Product packaging 9 Document resume 9



## 1.Both parties confirm

### 1.1 Customer confirmation signature

Customer:

| Customer department/position | Confirming signature | Confirmation date |
|------------------------------|----------------------|-------------------|
| Hardware/RF                  |                      |                   |
| structure                    |                      |                   |
| project manager              |                      |                   |
| Business/procurement         |                      |                   |
| check                        |                      |                   |

### 1.2 Shuodian Science and Technology Confirmation Signature

| Department/position   | Confirming signature | Confirmation date |
|-----------------------|----------------------|-------------------|
| Antenna engineer      |                      |                   |
| construction engineer |                      |                   |
| project manager       |                      |                   |
| QA                    |                      |                   |
| check                 |                      |                   |



## 2.General matters

### 2.1 area of application

2.4G/5.8G WIFI antenna

### 2.2 Operating temperature range

The temperature range of this product is -20 ~ +65°C

### 2.3 Preservation temperature range

This product is stored at -30 ~ +75°C

## 3.General product specifications

| NO.   | ITEMS                    | DETAILS                                                                              |
|-------|--------------------------|--------------------------------------------------------------------------------------|
| one   | type                     | 2.4G-5.8G WIFI                                                                       |
| 2     | frequency band           | 2400-2500MHZ 5100-5900MHZ                                                            |
| three | VSWR                     | $\leq 2.0$                                                                           |
| four  | Gain                     | 2.0dBi                                                                               |
| five  | Radiation Efficiency     | $\geq 50\%$                                                                          |
| six   | impedance                | 50Ω                                                                                  |
| seven | Antenna type             | dipole                                                                               |
| eight | Antenna realization form | FPC+1.13 coaxial line                                                                |
| nine  | Antenna picture          |  |



## **4.Product specification details**

### **4.1 Product structure parameters**

#### **4.11 Product material composition:**

| serial number | material     | Specification (MM)                           |
|---------------|--------------|----------------------------------------------|
| one           | FPC          | 36.54*8.64mm black                           |
| 2             | coaxial-line | 1st generation terminal Ø1.13 100MM<br>black |

#### **4.12 exterior**

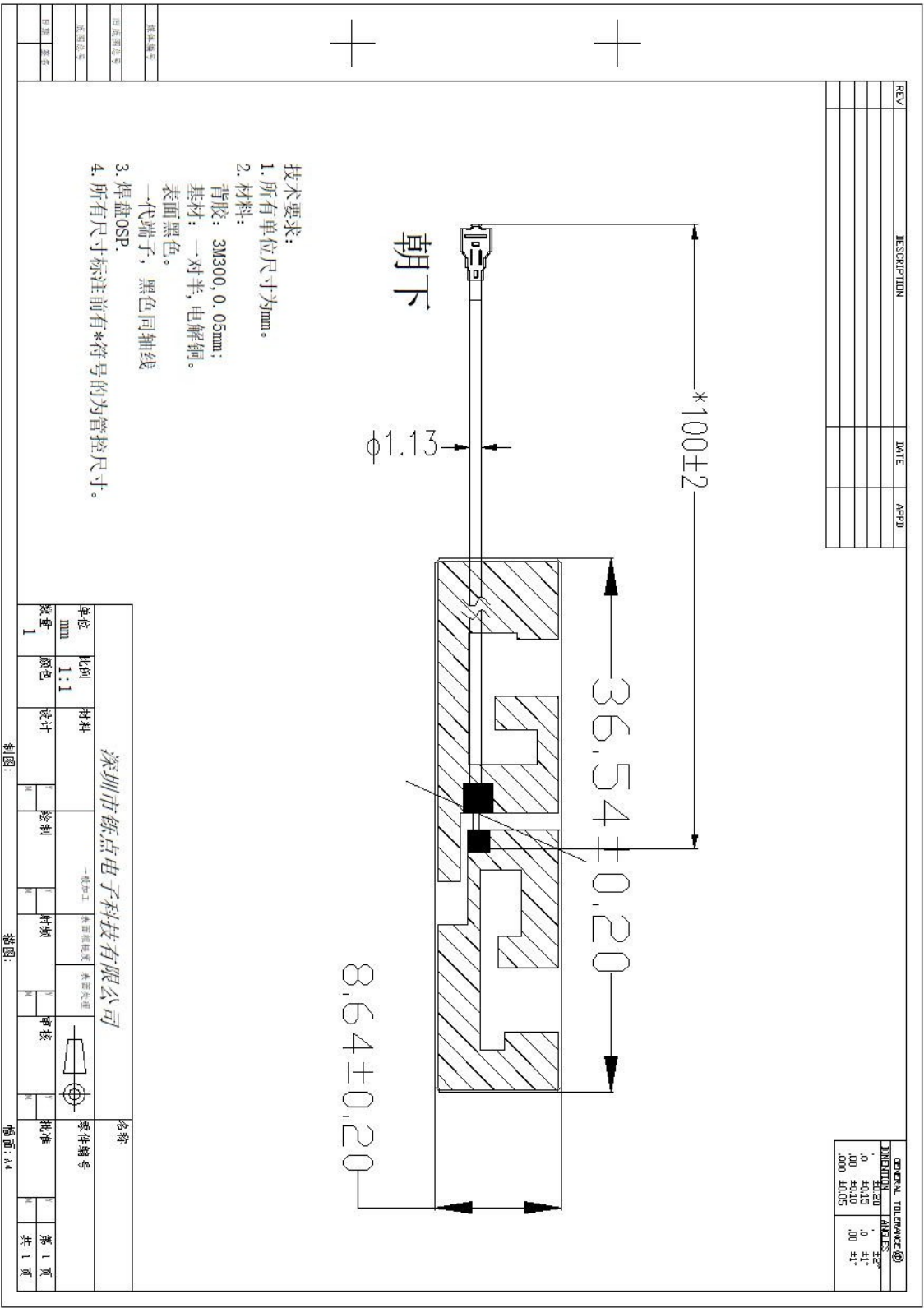
The product has a good appearance, and there are no scars, sweat marks, protrusions and other defects that seriously affect the appearance.

#### **4.13 physical dimension**

Refer to product drawings:



Product drawings:





## 4. 2 product electrical performance test data

### 4.21 Test environment and instruments and equipment

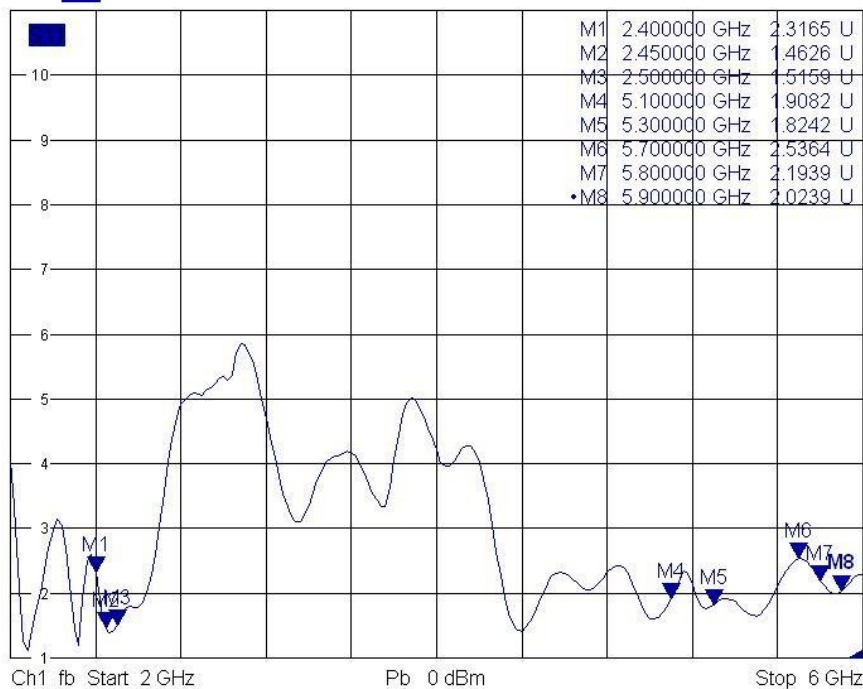
|                                                                              |                                                                                          |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Test environment:<br>Temper 10°C——+30°C<br>Relative humidity:<br>≤80%(+40°C) | Test equipment:<br>Network analyzer<br>KEYSIGHT<br>E5071C<br>24-probe microwave darkroom |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|

### 4.22.1 Product electrical performance test data:

S11 diagram of antenna:

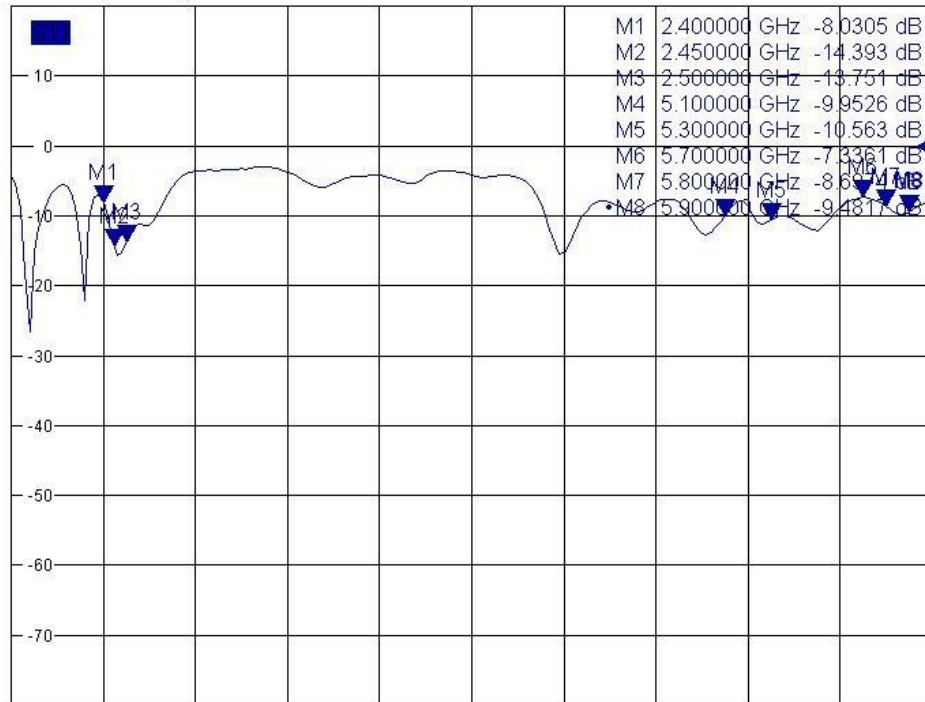
| Marker     | 2400MH<br>z | 2450MH<br>Z | 2500MH<br>z | 5100MH<br>z | 5300MH<br>Z | 5700MH<br>z | 5800MH<br>Z | 5900MH<br>z |
|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Returnloss | -8.0        | -14.3       | -13.7       | -9.9        | -10.5       | -7.3        | -8.6        | -9.4        |
| VSWR       | 2.3         | 1.4         | 1.5         | 1.9         | 1.8         | 2.5         | 2.1         | 2.0         |

Trc1 S11 SWR: 1 U / Ref: 1 U





Trc1 S11 dB Mag 10 dB / Ref 0 dB

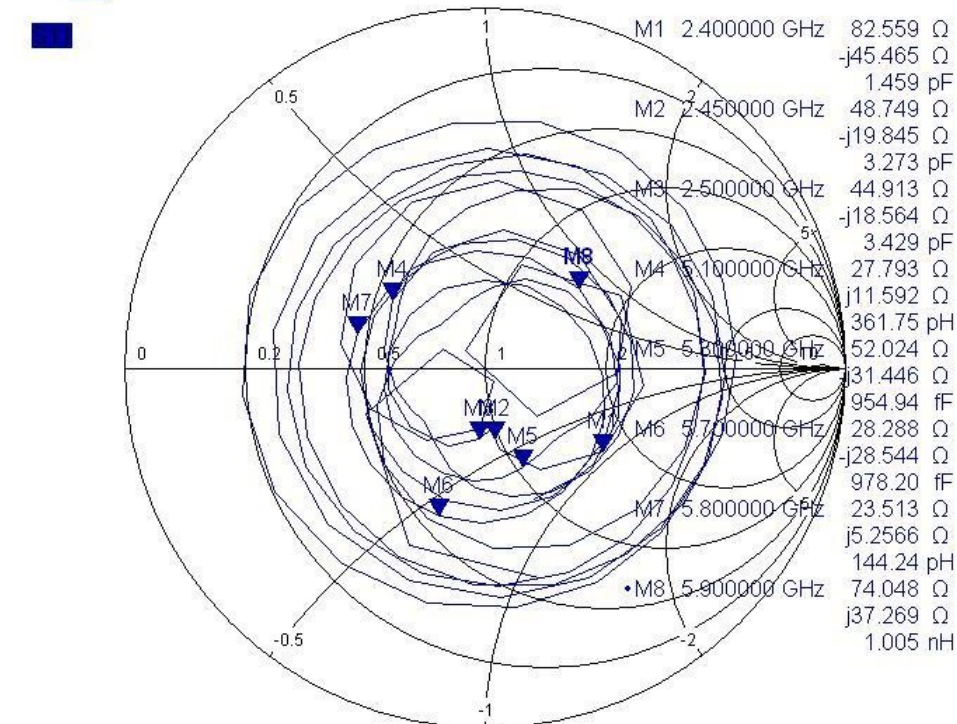


Ch1 fb Start 2 GHz

Pb 0 dBm

Stop 6 GHz

Trc1 S11 Smith Ref 1 U



Ch1 fb Start 2 GHz

Pb 0 dBm

Stop 6 GHz



## 5. Product packaging mode

Packing method:

Self-sealed bag, 200PCS each.

## 6. Document resume

|                                  |            |
|----------------------------------|------------|
| File number<br>Document No.      |            |
| date<br>Release Date             | 2023/04/22 |
| authorized<br>strength<br>Author | Hungjie    |
| check<br>Review                  | WH         |

List of previous documents

### Revised History

| Date       | Version | Revised Record |
|------------|---------|----------------|
| 2023/04/22 | 1.00    | New Project    |
|            |         |                |