

Acknowledgement

SPECIFICATION FOR APPROVA

|                                                                                 |                                                                     |                       |                       |          |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------|-----------------------|----------|
| Customer Name:                                                                  | Shenzhen Suicai Technology Development Co., Ltd.                    |                       |                       |          |
| Your material number:                                                           |                                                                     |                       |                       |          |
| Our company name:                                                               | Shenzhen Bojia Communication Equipment Co., Ltd.                    |                       |                       |          |
| Product Model:                                                                  | IPX 4th Generation/WiFi & BT FPC Antenna, Length 37CM, RF1.13 Black |                       |                       |          |
| Our material number:                                                            |                                                                     |                       |                       |          |
| 1. Newly Approved <input checked="" type="checkbox"/>                           |                                                                     |                       |                       |          |
| 2. Material Approved <input type="checkbox"/>                                   |                                                                     |                       |                       |          |
| 3. Specification change re-approval (Material <input type="checkbox"/> pproved) |                                                                     |                       |                       |          |
| VERSION                                                                         | DATE                                                                | PREPARED BY           | CHECKED               | APPROVED |
| V3.0                                                                            | 20 24-11-07                                                         | Zhang Wei             | Xiang Jianjun         | Liu Yuan |
| Bojia acknowledges (signature)                                                  |                                                                     |                       |                       |          |
| Quality Control Department                                                      |                                                                     | Production Department | Technology Department |          |
| Name:                                                                           |                                                                     | Name:                 | Name:                 |          |
| Telephone:                                                                      |                                                                     | Telephone:            | Telephone:            |          |
| Customer acknowledgement (signature)                                            |                                                                     |                       |                       |          |

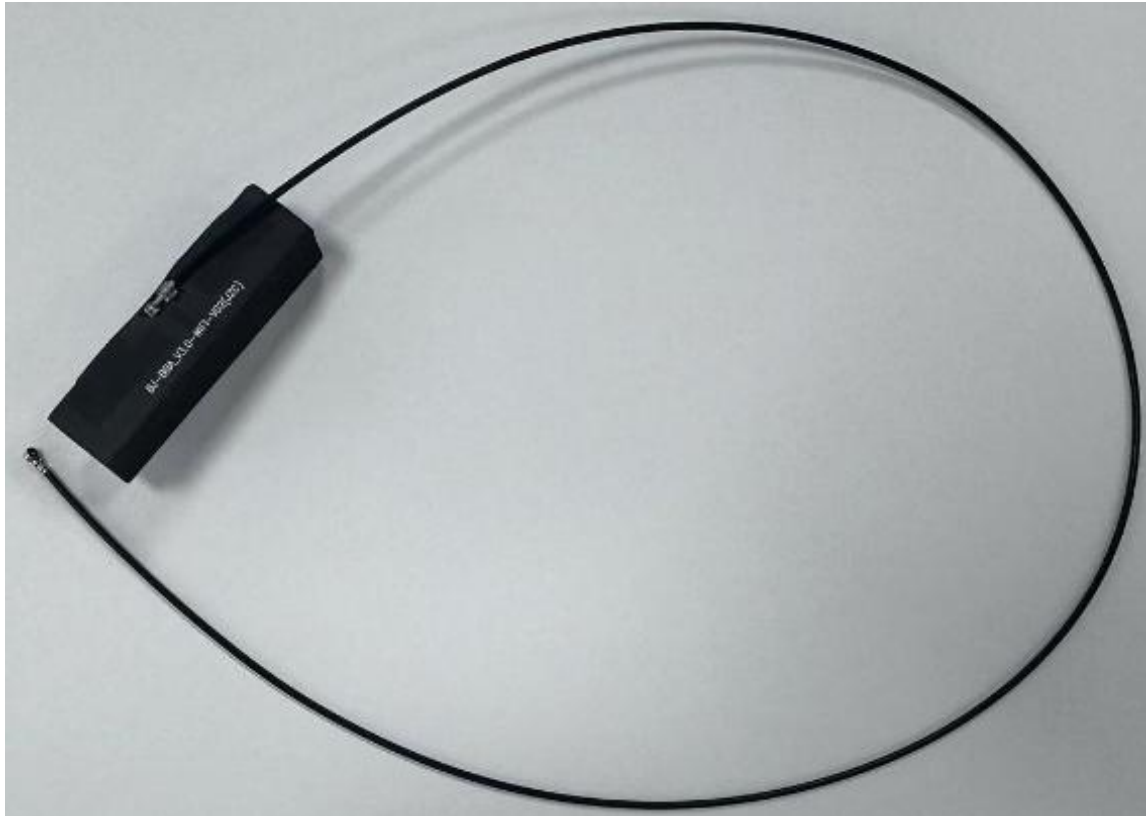
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## 1. Project information and electrical specifications

*These specifications are defined specifically for the WIFI model and all characteristics are measured under the mobile phone test fixture for that model.*

1-1 Project Photos



1-2 Band:

| Frequency Band | MHz                      |
|----------------|--------------------------|
| WiFi           | 2400-2500                |
|                | 5150-5350      5700-5850 |

### 1-3 Impedance matching

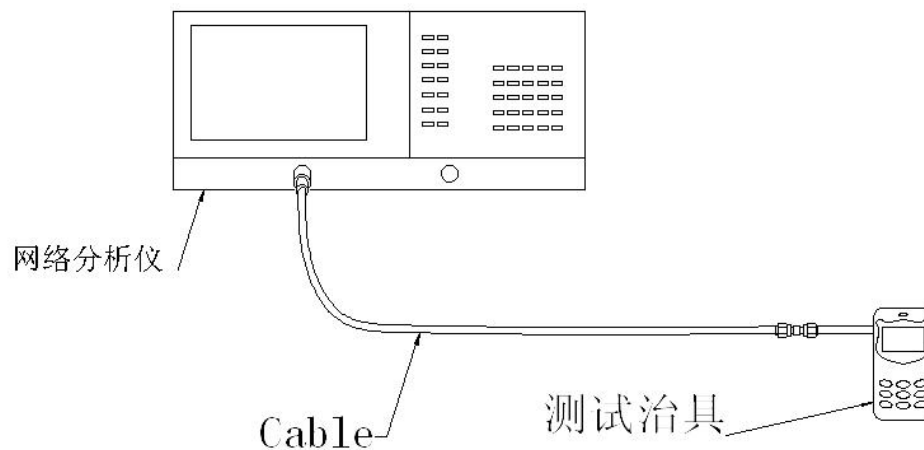
### Antenna original matching

## 2.VSWR

### 2-1 Measuring Method:

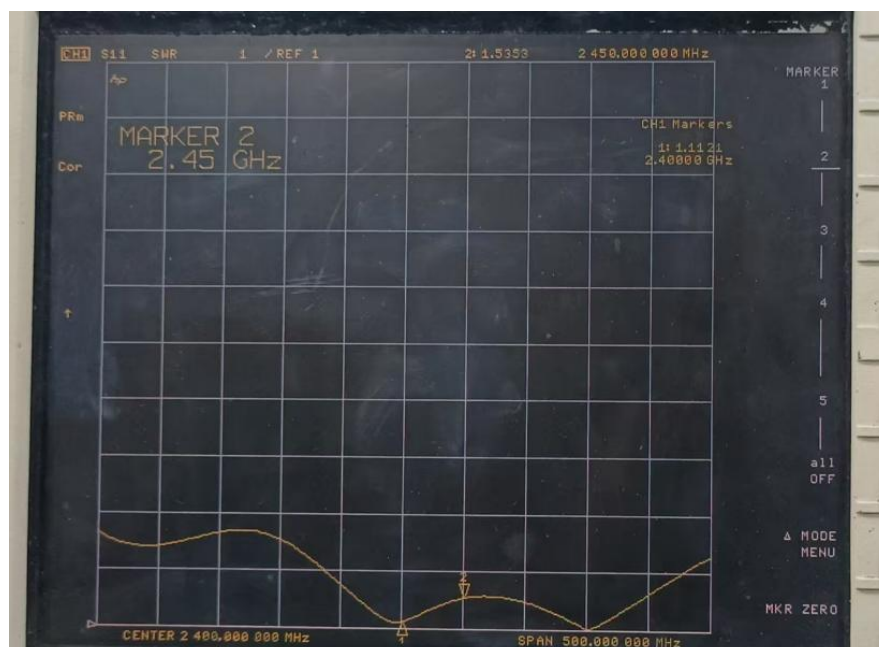
1. A  $50\ \Omega$  coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR,
2. Keeping this jig away from metal at least 20cm.

The test diagram is as follows:



### 2-2 S11 parameter values

|                   |       |        |
|-------------------|-------|--------|
| Frequency ( MHz ) | 2400  | 2 45 0 |
| Standing Wave     | 1. 53 | 1.11   |



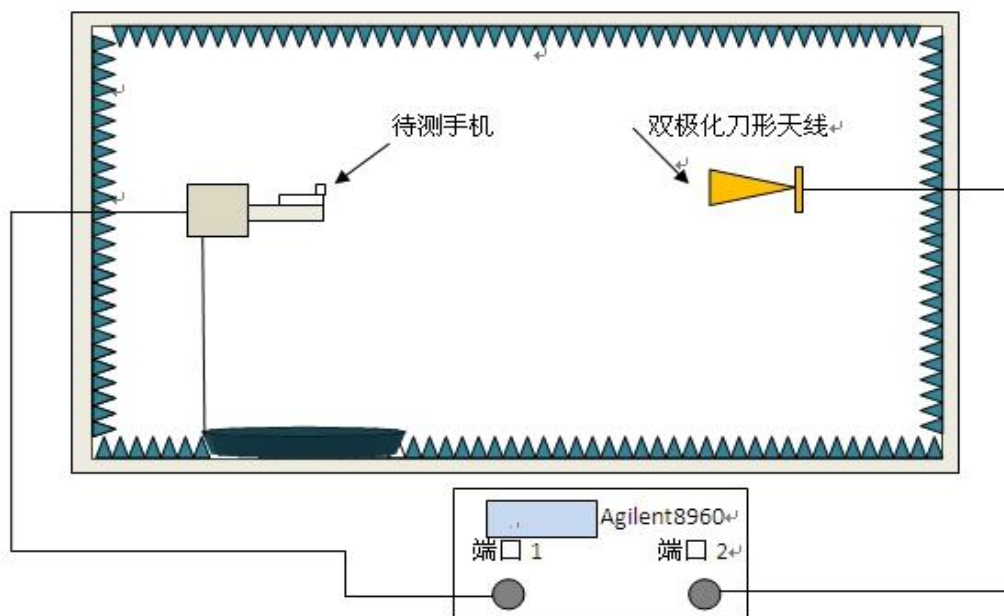
### 3. Efficiency and Gain

#### **\*measuring and testing instruments:**

Microwave darkroom, Agilent network analyzer, Agilent spectrum analyzer, 8960 integrated tester, standard antenna

#### **\*test method:**

The equipment is fixed with its H surface at the center of the turntable, on the same horizontal line as the center of the horn antenna.

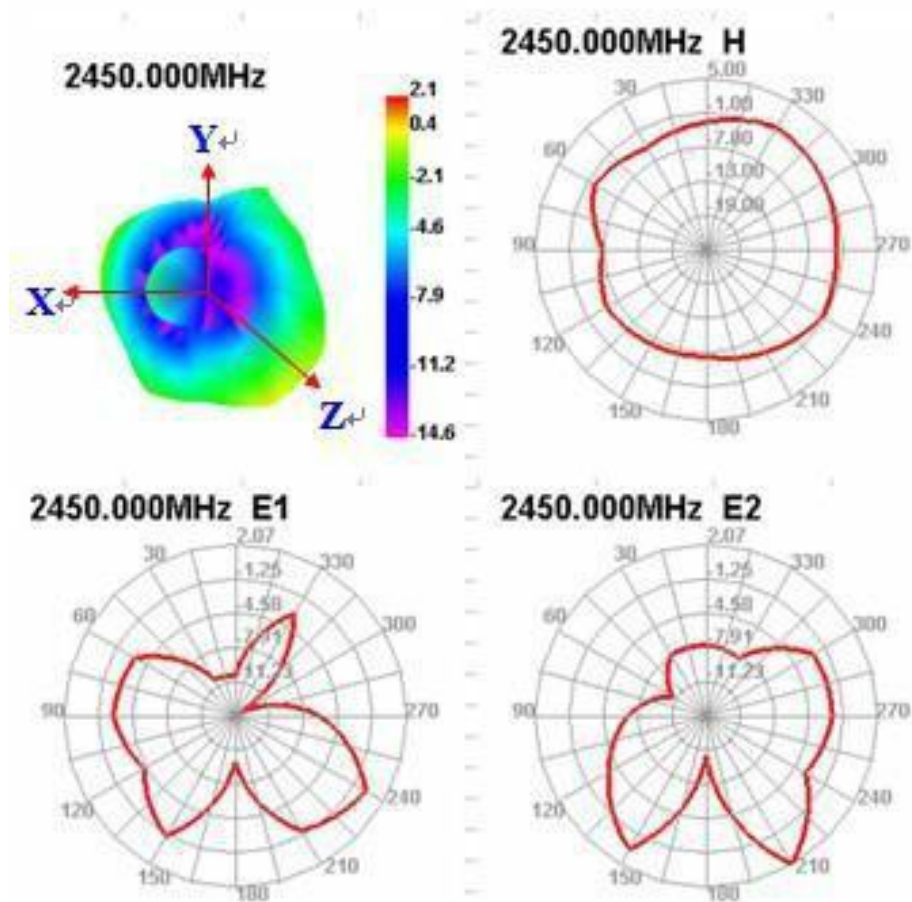


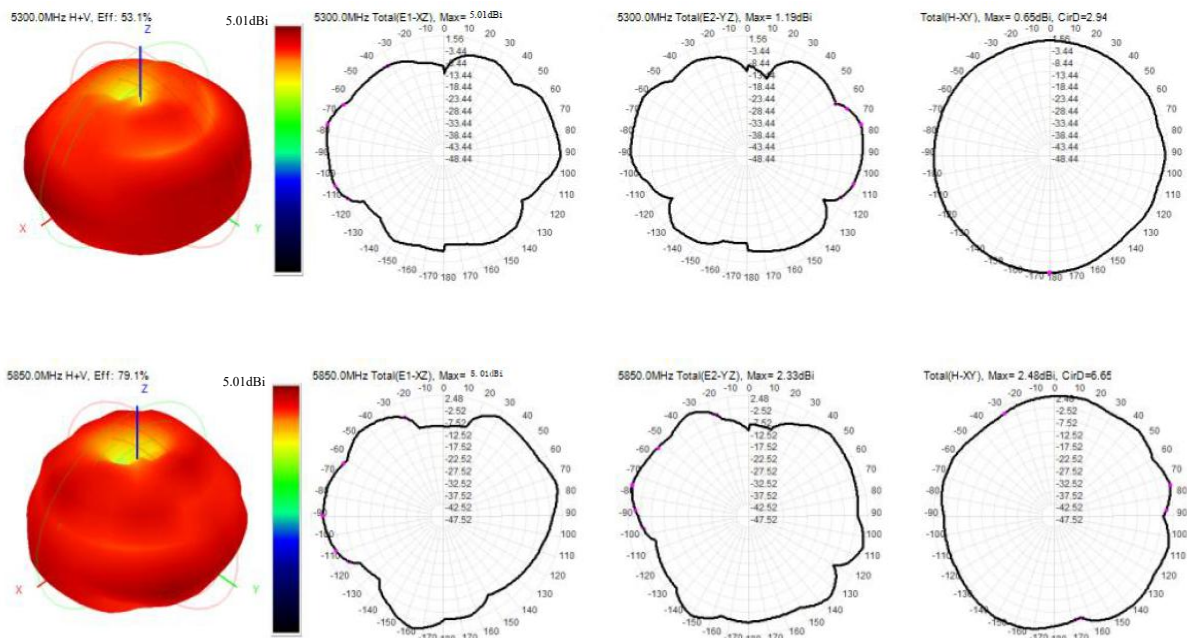
### 3-1 Efficiency/Peak Gain- WIFI

| BAND                | Wi -Fi |        |        |       |       |       |       |
|---------------------|--------|--------|--------|-------|-------|-------|-------|
| Frequency [MHZ]     | 2400   | 24 5 0 | 2 5 00 | 5150  | 5250  | 5300  | 5350  |
| efficiency[%]       | 40.12  | 42.52  | 43.22  | 43.99 | 45.31 | 45.31 | 43.12 |
| Peak Gain [decibel] | 1.57   | 2.0    | 1.97   | 4.87  | 4.31  | 5.01  | 4.97  |

| band            | W i F i |       |       |       |
|-----------------|---------|-------|-------|-------|
| Freq.[MHZ]      | 5700    | 5750  | 5800  | 5850  |
| Eff.[%]         | 49.55   | 52.14 | 55.34 | 53.07 |
| Peak Gain [dBi] | 4.88    | 4.21  | 4.37  | 5.01  |

### 3-2 Pattern





#### 4. The production index

When the antenna is mass-produced, the standing wave ratio is used as the mass production test standard.

According to the differences of the project itself, the following standards are given:

| frequency               | Mass production standards                                    |
|-------------------------|--------------------------------------------------------------|
| Wi - Fi (2400-2500MHZ ) | VSWR (mass production product) <VSWR ( design sample ) + 0.5 |

5. Structural drawings

