

深圳市安威无线科技有限公司

承认书

APPROVAL SHEET

|                     |                    |                       |           |
|---------------------|--------------------|-----------------------|-----------|
| 客户<br>Customer      | 维拍                 | 规格型号<br>Specs         | BW4-A     |
| 安威料号<br>Part Number | AW006-BW4-A-021-A0 | 频 段<br>Frequency Band | 2.4G-WIFI |
| 颜 色<br>Color        | 黑色                 | 版 本<br>Edition        | REV:A0    |
| 销 售<br>Salesperson  | 黄河                 | 设 计<br>Design         | 黄河        |
| 结 构<br>Structure    | 覃云林                | 确 认<br>Confirm        |           |
| 日 期<br>Date         | 2022.12.16         | 签字日期<br>Signing Date  |           |

客户确认 Customer confirmation:

携手共进 共创未来

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1. Product specifications

The report mainly provides the parameter test of BW4 antenna performance.  
The BW4 antenna is a WIFI antenna. (As shown in Figure 1 below)

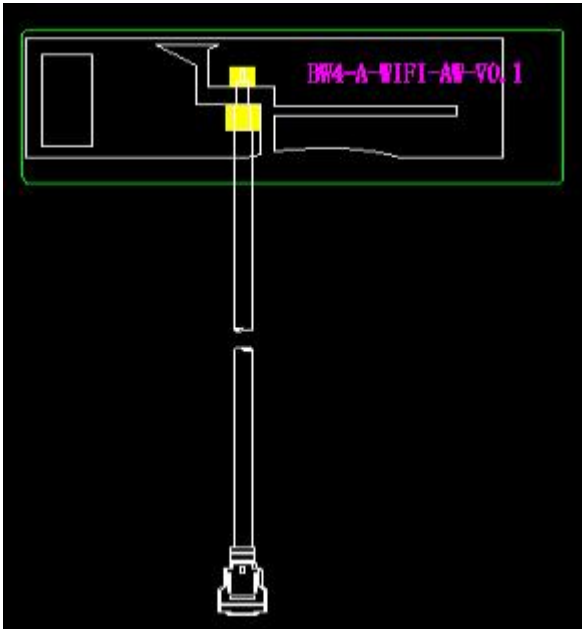


Figure 1 BW4 antenna

2. Electrical performance

1. Specifications and standards

The BW4 antenna operates at 2450mhz and resonates in this frequency band.

2. Antenna matching circuit

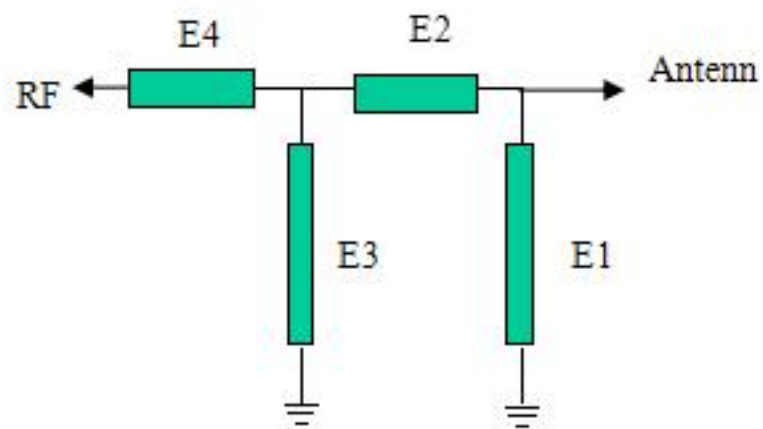
Antenna structure: FPC+ coaxial line

匹配电路（Matching circuit）

|          | 主天线<br>Main Antenna | BGW   | DRX   | GPS   |
|----------|---------------------|-------|-------|-------|
| Element  | Value               | Value | Value | Value |
| E1（0201） |                     |       |       |       |
| E2（0201） |                     |       |       |       |
| E3（0201） |                     |       |       |       |

|           |  |  |  |  |
|-----------|--|--|--|--|
| E4 (0201) |  |  |  |  |
|-----------|--|--|--|--|

( 匹配值的精度建议采用高些的 )



|     |     |     |
|-----|-----|-----|
| RF1 | N/A | N/A |
| RF2 | N/A | N/A |
| RF3 | N/A | N/A |
| RF4 | N/A | N/A |

3. Parameter testing

1. Test Settings

The VSWR test device is connected in sequence as follows:



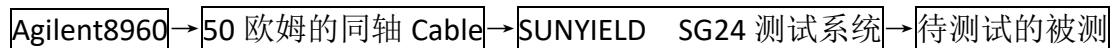
Treatment of test fixtures:  
From the antenna 50 ohm test point on the PCB of the phone, a hard cable is used to lead out the SMA-J connector, which is connected to the copper tube with the choke, and then connected to the other devices in turn.

2. Test results

一切正常。

## 4. Setup of active test

The active test device is connected in sequence as follows:



### 1. Test site

AW microwave darkroom: The test frequency range is 400MHz - 6GHz, the static zone range is 40cm circle, and the reflectivity is less than -90 dB.

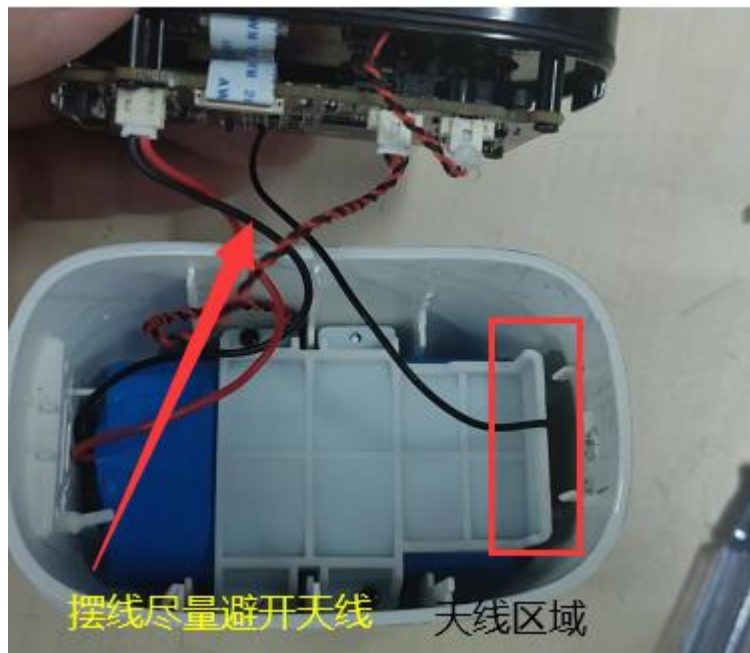
### 2. Test results.

The following is the test result of WIFI antenna of BW4 project:

| Gain&Efficiency<br>增益和效率 |                  |                       |                      |
|--------------------------|------------------|-----------------------|----------------------|
| frequency<br>频率 (MHz)    | gain<br>增益 (dBi) | mingain<br>最小增益 (dBi) | efficiency<br>效率 (%) |
| 2400                     | 3.53             | -16.8                 | 61.41                |
| 2410                     | 3.58             | -17.65                | 59.23                |
| 2420                     | 3.22             | -19.52                | 58.47                |
| 2430                     | 3.37             | -20.93                | 58.92                |
| 2440                     | 3.55             | -24.45                | 57.07                |
| 2450                     | 3.48             | -29.42                | 59.26                |
| 2460                     | 3.09             | -21.96                | 57.24                |
| 2470                     | 3.45             | -18.65                | 58.13                |
| 2480                     | 3.49             | -16.51                | 58.88                |
| 2490                     | 3.41             | -14.96                | 58.08                |
| 2500                     | 3.35             | -14.4                 | 55.72                |

|        | Channel | TRP (dBm) | TIS (dBm) |
|--------|---------|-----------|-----------|
| WIFI-B | L       | 17.84     | -83.45    |
|        | M       | 17.19     | -83.36    |
|        | H       | 17.09     | -83.09    |
| WIFI-G | L       | 17.02     | -70.23    |
|        | M       | 16.55     | -69.96    |
|        | H       | 16.78     | -69.82    |
| WIFI-N | L       | 17.64     | -66.42    |
|        | M       | 16.97     | -66.26    |
|        | H       | 16.15     | -65.37    |

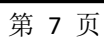
### 3. Environmental treatment & installation method



### 5. Suggestions and Conclusions.

This report is based on the antenna electrical performance measured by the terminal provided by the customer, please check it carefully.

### 6. Structural drawings



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