



Document number: QX-FM-EN-M4

# Shenzhen Qinxin Technology Co., LTD

SHEN ZHEN SHI QIN XIN TECHNOLOGY CO.,LTD

## Antenna acknowledgment

### ANTENNA APPROVAL SHEET

|                                 |                                              |                                  |                          |
|---------------------------------|----------------------------------------------|----------------------------------|--------------------------|
| <b>customer name</b>            | <b>Shenzhen YunTian Intelligent Co., LTD</b> | <b>Project frequency band</b>    | <b>wifi2.4G/wifi5.8G</b> |
| <b>project name</b>             | <b>M8695</b>                                 | <b>Tab date</b>                  | <b>2025/10/28</b>        |
| <b>Machine type number</b>      |                                              | <b>date changed</b>              | <b>--</b>                |
| <b>Customer material number</b> |                                              | <b>order of the edition</b>      | <b>1.0</b>               |
|                                 |                                              |                                  |                          |
| <b>The RF Engineer / RF</b>     | <b>Huang Wenbo</b>                           | <b>construction engineer /MD</b> | <b>Xiao-ping ye</b>      |
| <b>project manager /PM</b>      |                                              |                                  |                          |
| <b>Customer confirmation</b>    |                                              |                                  |                          |

|                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shenzhen Qinxin Technology Co., LTD</b>                                                                                                                                                                                                                  | <b>SHENZHEN QIN XIN INDUSTRY CO.,LTD</b>                                                                                                                                                                                                                     |
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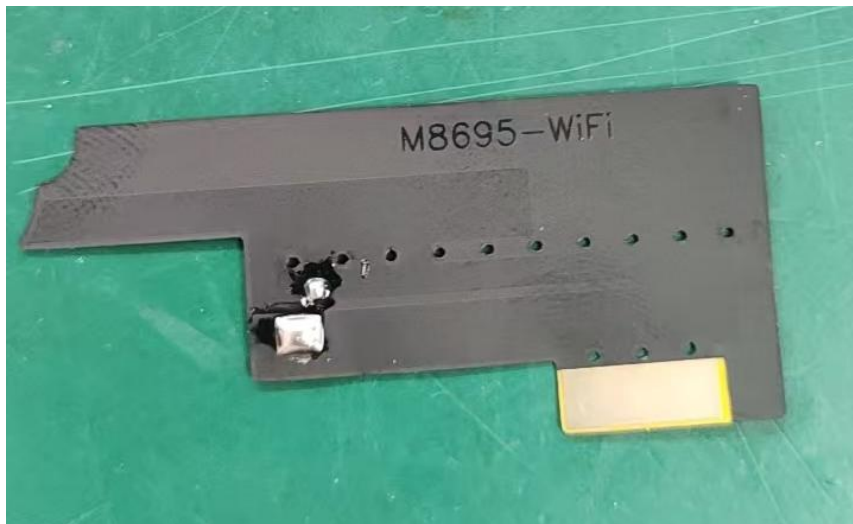
# Catalogue

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# 1 Antenna profile

## 1.1 Antenna sample



## 1.2 Composition of the antenna

There are one kinds of antenna supports: upper bracket and lower bracket:

2.4GWIFI-/5.8GWIFI, composed of FPC. The whole antenna provided by our company is as shown in Table 1-1.

Table 1-1, Detailed table of the antenna

|                  |                   |  |  |
|------------------|-------------------|--|--|
| name             | M8695-wifi        |  |  |
| material quality | FPC+coaxial cable |  |  |
| quantity (pcs)   | 1                 |  |  |

## 2 The antenna test environment

### 2.1 External test environment

Our main test equipment is shown in the table below.

Table 2-2. Main test equipment

| order number | device name                               | Device pictures                                                                     | Measurement index          | operational environment           |
|--------------|-------------------------------------------|-------------------------------------------------------------------------------------|----------------------------|-----------------------------------|
| 1            | <b>Agilent 8960 Integrated tester</b>     |    | <b>Active performance</b>  | Normal temperature and humidity   |
| 2            | Microwave darkroom                        |   |                            |                                   |
| 3            | <b>ADVANTEST R3765BH Network analyzer</b> |  | <b>Passive performance</b> | There is no large metal around it |
|              |                                           |                                                                                     |                            | Normal temperature and humidity   |



## **2.1.1 A passive test**

The connection of the test device is: network analyzer test line test equipment.

## **2.1.2 Active testing**

**The main performance indicators of active testing: total radiation power (TRP), omnidirectional sensitivity (TIS).**

### **Test site**

Microwave dark room: the frequency range is 700 MHz-6GHz, the static area range is 50cm circumference, and the reflectivity is less than-50 dB.

### **Test instrument**

Network analyzer, CMW500, standard horn antenna, GTS1800 test system, printer, etc



## 3 Main antenna

### 3.1 Matching circuit

The board end matching has not been changed

### 3.2 Test result

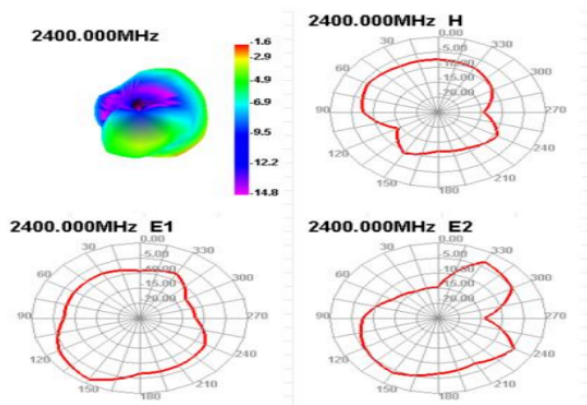
The antenna operating frequency band is at 2400 MHz~ 2500 MHz, 5180MHz~5870MHz. It is the index of the electrical performance of our designed and mass-produced antenna.

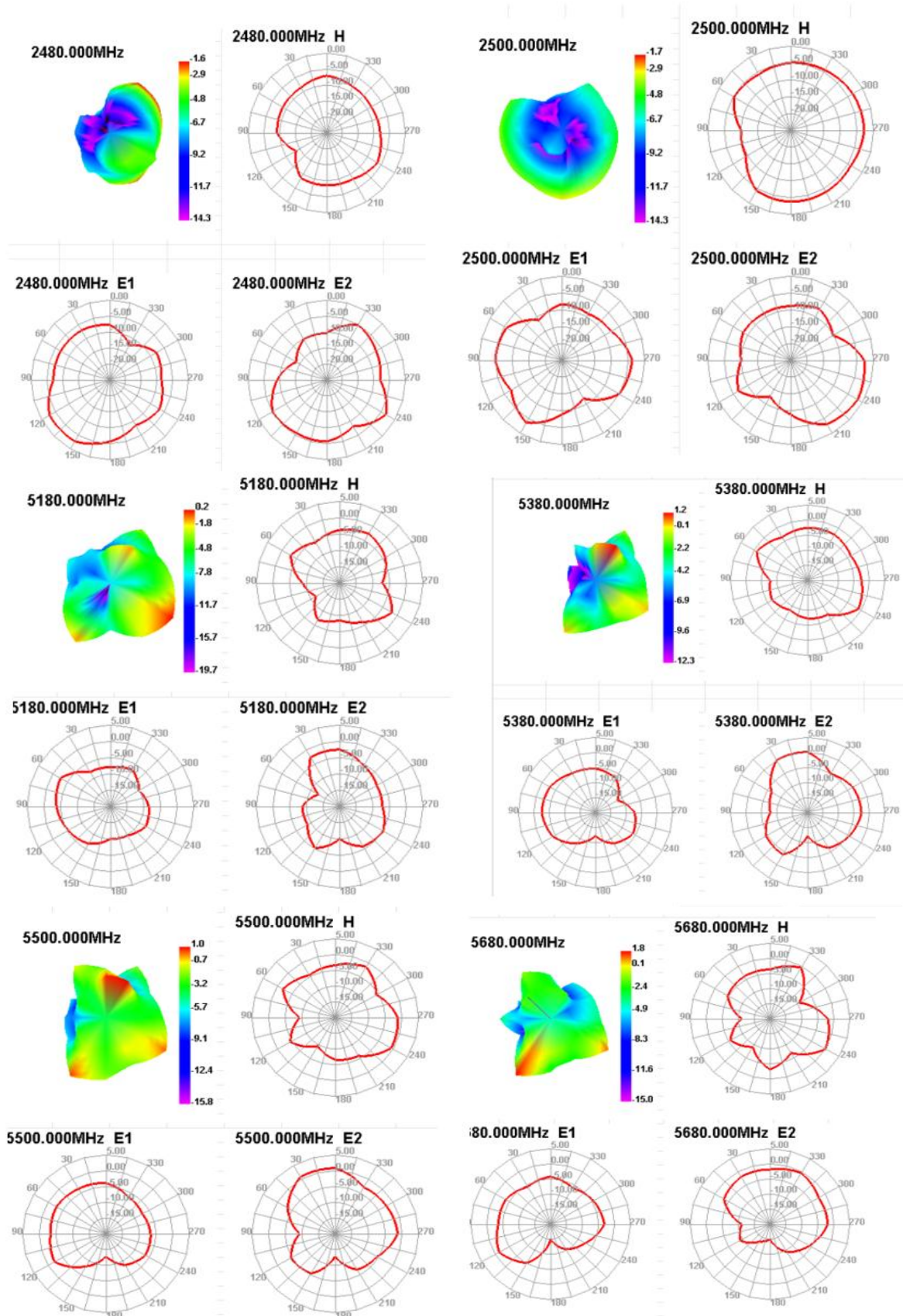
**The TRP and TIS values are shown in the following table:**

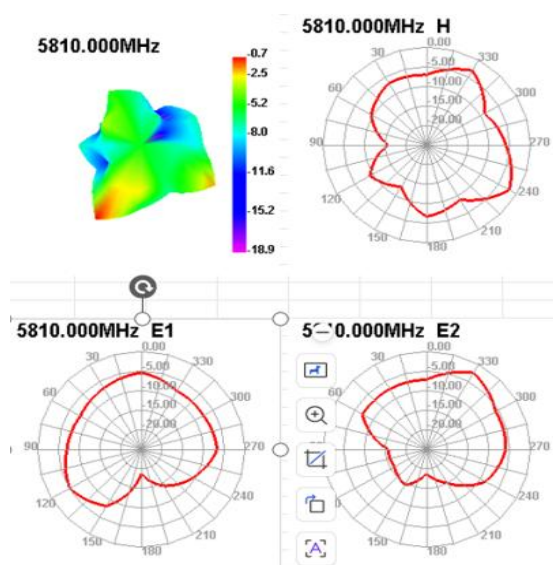
|                       | CHannel | TRP    | TIS    |
|-----------------------|---------|--------|--------|
| 2. 4G 802. 11B-11Mbps | 1       | 12. 26 | -81. 6 |
|                       | 7       | 13. 35 | -82. 5 |
|                       | 13      | 13. 52 | -82. 8 |
|                       |         |        |        |
| 5. 8G 802. 11A-54Mbps | 36      | 11. 82 | -71. 2 |
|                       | 149     | 11. 63 | -70. 6 |
|                       | 165     | 11. 22 | -71. 3 |

## 4. Efficiency gain and direction diagram

| Freq  | Effi  | Gain  | Freq  | Effi  | Gain  | 5490 | 49.15 | 4.44 |
|-------|-------|-------|-------|-------|-------|------|-------|------|
| (MHz) | (%)   | (dBi) | (MHz) | (%)   | (dBi) | 5500 | 48.02 | 4.49 |
| 2400  | 37.42 | 1.6   | 5180  | 40.88 | 3.88  | 5510 | 46.07 | 4.23 |
| 2410  | 37.2  | 1.49  | 5190  | 38.73 | 3.68  | 5520 | 45.99 | 4.24 |
| 2420  | 38.18 | 1.54  | 5200  | 37.04 | 3.5   | 5530 | 46.65 | 4.4  |
| 2430  | 37.89 | 1.45  | 5210  | 37.52 | 3.55  | 5540 | 46.07 | 4.48 |
| 2440  | 38.25 | 1.43  | 5220  | 39.09 | 3.68  | 5550 | 47.12 | 4.6  |
| 2450  | 38.95 | 1.57  | 5230  | 42.6  | 4.12  | 5560 | 45.3  | 4.39 |
| 2460  | 38.36 | 1.5   | 5240  | 43.01 | 4.1   | 5570 | 44.74 | 4.3  |
| 2470  | 38.32 | 1.44  | 5250  | 40.95 | 3.98  | 5580 | 44.32 | 4.41 |
| 2480  | 39.06 | 1.56  | 5260  | 41.11 | 4.02  | 5590 | 43.02 | 4.42 |
| 2490  | 38.14 | 1.39  | 5270  | 39.79 | 3.79  | 5600 | 46.86 | 4.75 |
| 2500  | 35.41 | 0.96  | 5280  | 40.28 | 3.87  | 5610 | 45.99 | 4.76 |
|       |       |       | 5290  | 43.28 | 4.13  | 5620 | 45.8  | 4.75 |
|       |       |       | 5300  | 42.34 | 3.95  | 5630 | 46.28 | 4.75 |
|       |       |       | 5310  | 41.84 | 3.93  | 5640 | 46.42 | 4.82 |
|       |       |       | 5320  | 43.17 | 4.06  | 5650 | 47.59 | 5.21 |
|       |       |       | 5330  | 41.94 | 3.77  | 5660 | 48.7  | 5.32 |
|       |       |       | 5340  | 44.47 | 3.97  | 5670 | 49.99 | 5.48 |
|       |       |       | 5350  | 46.52 | 4.13  | 5680 | 48    | 5.31 |
|       |       |       | 5360  | 44.37 | 3.85  | 5690 | 45.01 | 5.07 |
|       |       |       | 5370  | 46.03 | 3.97  | 5700 | 45.75 | 5.28 |
|       |       |       | 5380  | 43.49 | 3.74  | 5710 | 45.72 | 5.32 |
|       |       |       | 5390  | 41.93 | 3.51  | 5720 | 46.97 | 5.6  |
|       |       |       | 5400  | 48.55 | 4.38  | 5730 | 47.05 | 5.7  |
|       |       |       | 5410  | 48.47 | 4.34  | 5740 | 45.11 | 5.48 |
|       |       |       | 5420  | 49.66 | 4.46  | 5750 | 44.98 | 5.42 |
|       |       |       | 5430  | 48.53 | 4.32  | 5760 | 41.85 | 5.27 |
|       |       |       | 5440  | 47.58 | 4.22  | 5770 | 44.28 | 5.49 |
|       |       |       | 5450  | 48.62 | 4.26  | 5780 | 46.49 | 5.7  |
|       |       |       | 5460  | 46.66 | 4.23  | 5790 | 43.72 | 5.6  |
|       |       |       | 5470  | 49.04 | 4.39  | 5800 | 45.11 | 5.84 |
|       |       |       | 5480  | 49.16 | 4.47  | 5810 | 42.21 | 5.49 |







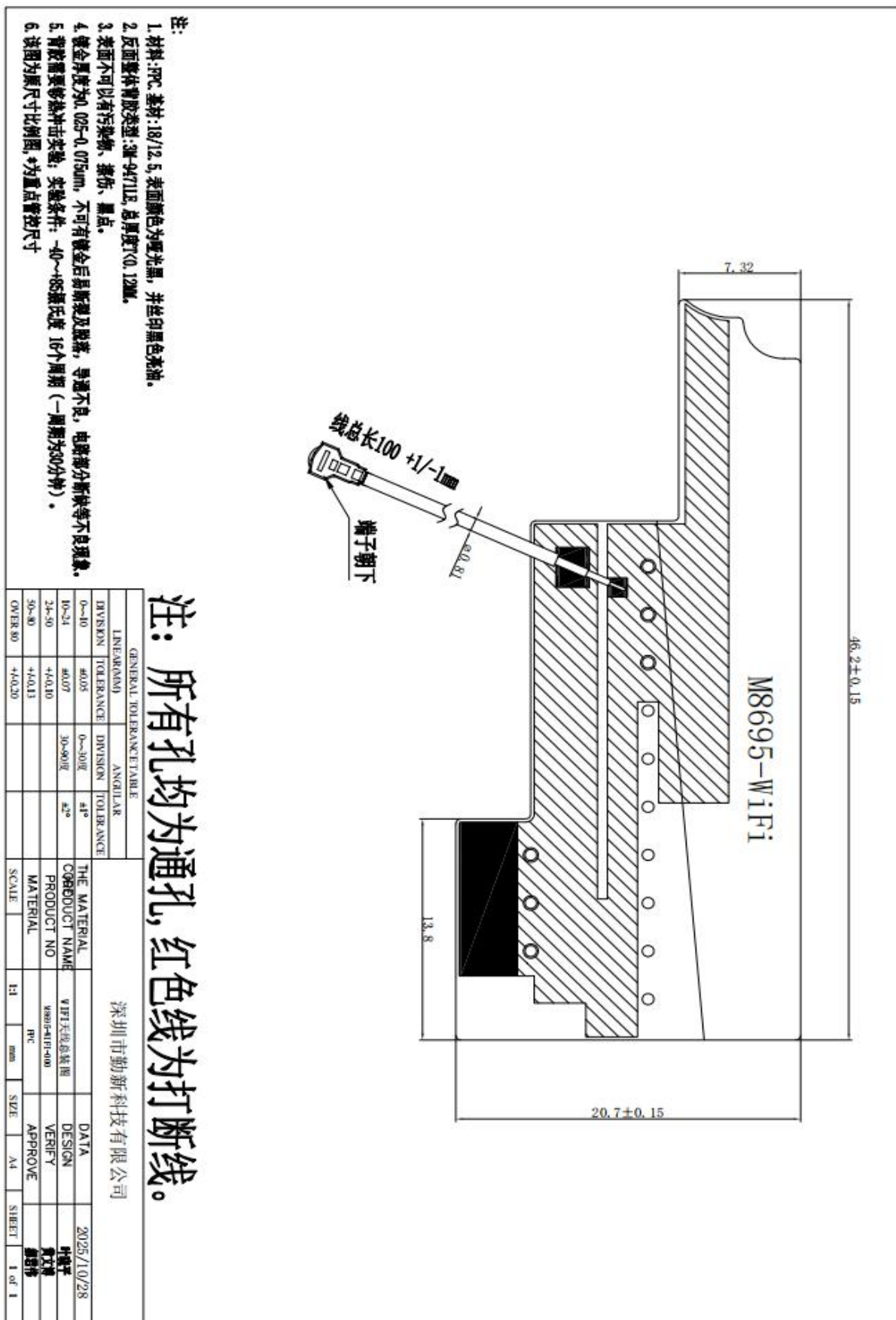
## 5. Project pictures



## 6、 conclusion

The antenna is designed on the basis of the customer-provided prototype. Electrical parameters and structural performance have met the technical requirements. Please confirm!

## 7、assembly drawing





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