



Lejin RF

Shenzhen Lejin radio frequency technology Co., LTD

## SPECIFICATIONS FOR APPROVAL

Customer Name: \_\_\_\_\_

Product Name: **2.4GHz Antenna**

Product Model: \_\_\_\_\_

Part Number: **LJW01-17091602-R0A**

Write By : **Huxuwen**

Issued Date: **2021-04-08**

Manufacturer: Shenzhen Dahao Technology Co., Ltd

Address: 16D, Fuchun Pavilion, Haifu Garden, 1017 Shennan East Road, Wenhua Community, Huangbei Street, Luohu District, Shenzhen, China

| REV  | MODIFIED DESCRIPTION  | DATE       | REMARK |
|------|-----------------------|------------|--------|
| V1.0 | Initial Draft Release | 2021/04/08 |        |
|      |                       |            |        |
|      |                       |            |        |



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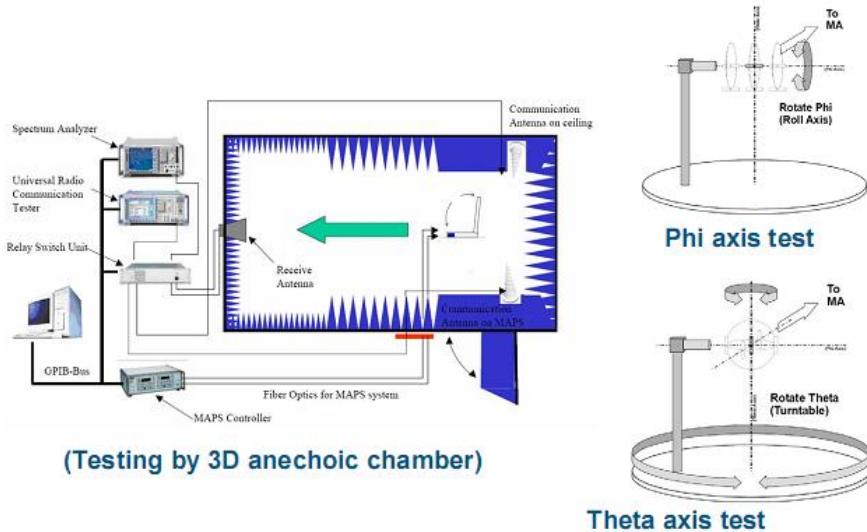
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### 3. Product Specification

| A. Electrical Characteristics            |                              |
|--|------------------------------|
| Frequency                                | 2400MHz ~2500 MHz            |
| Antenna Type                             | PIFA                         |
| VSWR                                     | <2.0                         |
| Efficiency                               | >40%                         |
| Impedance                                | 50Ohm                        |
| Polarization                             | Linear                       |
| Gain                                     | ≤1.71 dBi                    |
| B. Material & Mechanical Characteristics |                              |
| Material of Radiator                     | Metal                        |
| Cable Type                               | N/A                          |
| Connector Type                           | N/A                          |
| Dimension                                | Size: 8*40 mm, length: 80 mm |
| C. Environmental                         |                              |
| Operation Temperature                    | - 20 °C ~ + 70 °C            |
| Storage Temperature                      | - 30 °C ~ + 85 °C            |
| Humidity                                 | 40%~95%                      |

#### **4. Test Equipment & Conditions**

|                                  |                     |
|----------------------------------|---------------------|
| 1.Network Analyzers              | Agilent 8753D/5071C |
| 2.HSPA and LTE protocol test set | R&S CMW500 -PT      |
| 3.Communications Test Set        | Agilent 8960        |
| 4.3D Chamber Test System         |                     |



## Chart 1 Test topology

## 5. Test Report

### 5.1 Voltage Standing Wave Ratio(VSWR).

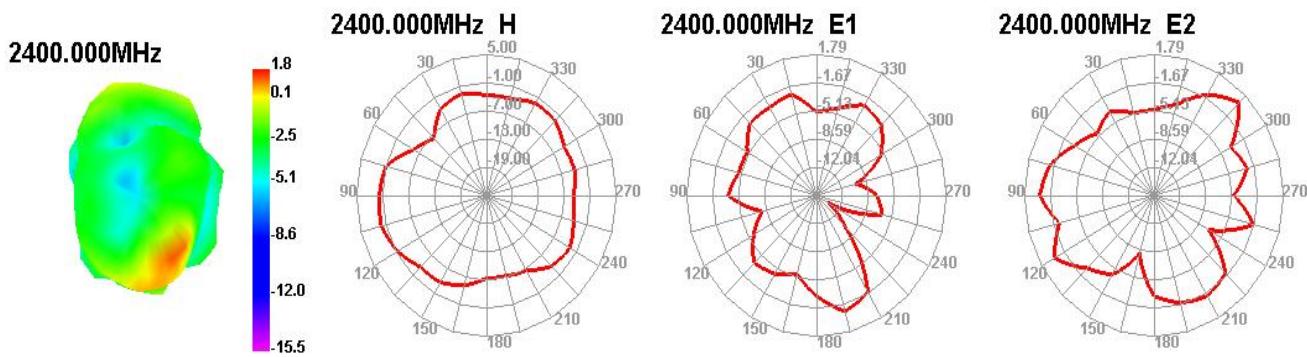


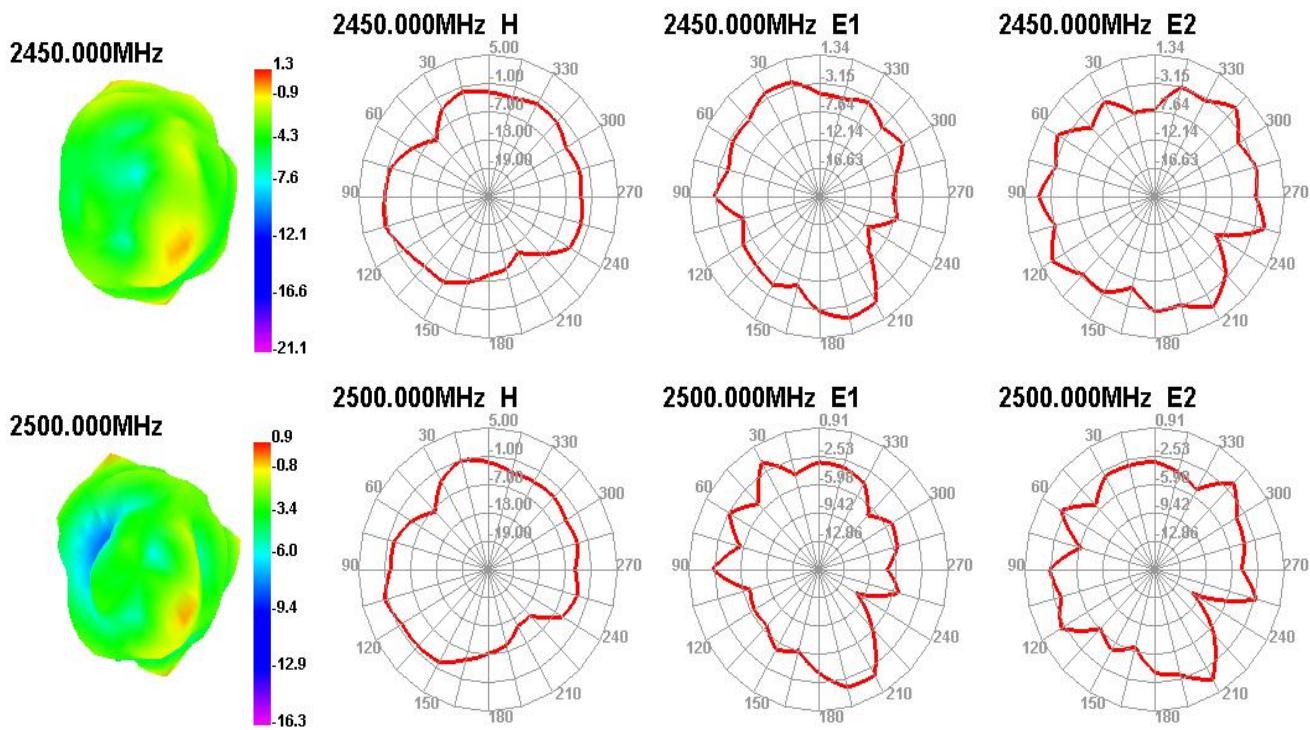
Chart 2 VSWR

### 5.2 Efficient and gain.

| Passive Test For | Freq(MHz) | 2400  | 2410  | 2420  | 2430  | 2440  | 2450  | 2460  | 2470  | 2480  | 2490  | 2500  |
|------------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| WIFI             | Effi(%)   | 42.62 | 46.84 | 51.47 | 55.07 | 53.54 | 48.06 | 51.80 | 49.38 | 44.21 | 42.77 | 40.64 |
| 2.4G             | Gain(dBi) | 1.71  | 1.44  | 1.56  | 1.65  | 1.54  | 1.31  | 1.62  | 1.59  | 1.62  | 1.37  | 0.36  |

### 5.3 Radiation pattern.





## 6. Reliability Test

| Test Item |                                    | Test condition  | Equipment         | Specification  | Result |
|-----------|------------------------------------|---|-------------------|--|--------|
| 1         | Low Temp. Storage Test             | Temperature: -30°C , Time:48hrs<br>Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25 °C and humidity is 65% for one hour, then step-down the temp. to -30 °C in one hour, store antenna for44 hours; step-up temp to 25 °C,test antenna after 2 hours.   | Temp.&Hum. Tester | No material deformation is allowed. Electronic Performance is ok . | PASS   |
| 2         | High Temp./High Humid Storage Test | Temperature: 85°C Humidity: 85% RH Time:48hrs<br>Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25 °C and humidity is 65% for one hour, then step-up the temp. to 80 °C and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25 °C ,test antenna after 2 hours. | Temp.&Hum. Tester | No material deformation is allowed. Electronic Performance is ok . | PASS   |
| 3         | Salt-Spray 6 pray Test             | Placing antenna in the Salt-Spray Tester ,set the test condition , Temp: $35 \pm 2$ °C Humidity: 85% NaCl salt spray : $5 \pm 1$ %.PH value :6.5~7.2 Testtime:24hours   | Salt-Spray Tester | No color change<br>No appear rusting                               | PASS   |

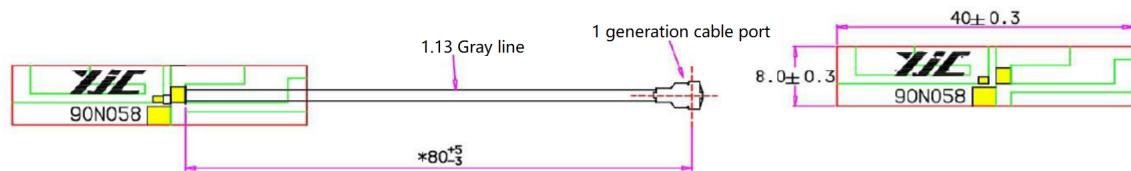
## 7. Assemble type(omitted)

## 8. Product Drawing



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Unit: mm