

# Shenzhen SKYLink Technology Co.,Ltd

## Antenna Specification for Approval

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

Product Name: \_\_\_\_\_ 2.4G WIFI Antenna \_\_\_\_\_

Part NO. : \_\_\_\_\_ Z532.V4.C113.90B.221 \_\_\_\_\_

Write By: \_\_\_\_\_ Zhengfeng Fang \_\_\_\_\_

Issued Date: \_\_\_\_\_ 2023-06-20 \_\_\_\_\_

Customer

| R&D Dept | Business Dept | Approved By |
|----------|---------------|-------------|
|          |               |             |

SKYLink

| R&D Dept | Engineer Dept | Approval |
|----------|---------------|----------|
|          |               |          |

## ● Specification Summary

| A. Electrical Characteristics            |                   |
|------------------------------------------|-------------------|
| Frequency                                | 2400MHz ~2500MHz  |
| Return Loss                              | <-10dB            |
| Efficiency                               | >40%              |
| Peak Gain                                | 2.6dbi            |
| Impedance                                | 50 Ohm            |
| Polarization                             | Line              |
|                                          |                   |
| B. Material & Mechanical Characteristics |                   |
| Material of Radiator                     | FPC               |
| Cable Type                               | 1.13mm Black      |
| Connector Type                           | /                 |
| Dimension                                | At Attachment     |
| Heat-durability                          | 280±5°C, 10sec.   |
|                                          |                   |
| C. Environmental Characteristics         |                   |
| Operation Temperature                    | - 20 °C ~ + 80 °C |
| Storage Temperature                      | - 30 °C ~ + 85 °C |
|                                          |                   |

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## ● Test Equipment & Conditions

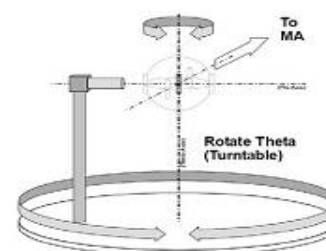
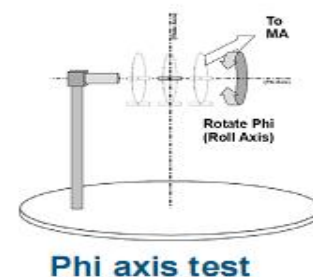
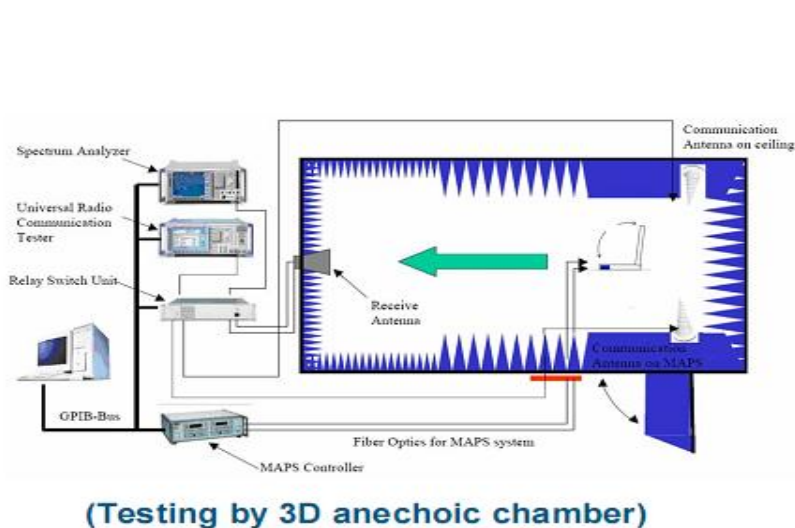
### 1. Network Analyzers :

Agilent 8753D 5071B

**Communications Test Set:**

Agilent E5515C CMW500

### 2. 3D Chamber Test System



## ◆ Return Loss



## ◆ Gain & Efficiency

| Freq<br>(MHz) | Effi<br>(%) | Gain<br>(dBi) |
|---------------|-------------|---------------|
| 2400          | 40.14       | 1.42          |
| 2410          | 41.6        | 1.21          |
| 2420          | 40.17       | 1.16          |
| 2430          | 41.74       | 1.26          |
| 2440          | 40.83       | 1.34          |
| 2450          | 40.1        | 1.24          |
| 2460          | 40.79       | 1.05          |
| 2470          | 41.79       | 1.35          |
| 2480          | 42.22       | 1.7           |
| 2490          | 47.18       | 2.46          |
| 2500          | 46.45       | 2.6           |

## ◆ Antenna Picture



## ◆ Reliability Test

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