

# Shenzhen SKYLink Technology Co.,Ltd

## Antenna Specification for Approval

Customer Name: Gadget Lab International Co., Ltd.

Product Name: NFC Antenna

Part NO.: CODY BLOCK. NFC

Write By: Damon Cui

Issued Date: 2024.06.27

### Customer

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

### SKYLink

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

## ● Specification Summary

| A. Electrical Characteristics            |                   |
|------------------------------------------|-------------------|
| Frequency                                | 13.56MHz          |
| Return Loss                              | /                 |
| Efficiency                               | /                 |
| Peak Gain                                | /                 |
| Impedance                                | 50 Ohm            |
| Polarization                             | Line              |
|                                          |                   |
| B. Material & Mechanical Characteristics |                   |
| Material of Radiator                     | Cu                |
| Cable Type                               | /                 |
| Connector Type                           | /                 |
| Dimension                                | At Attachment     |
| Heat-durability                          | 280±5℃, 10sec.    |
|                                          |                   |
| C. Environmental Characteristics         |                   |
| Operation Temperature                    | - 20 °C ~ + 80 °C |
| Storage Temperature                      | - 30 °C ~ + 85 °C |
|                                          |                   |

## ● Test Equipment & Conditions

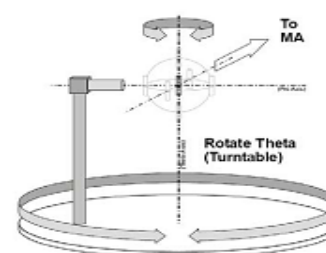
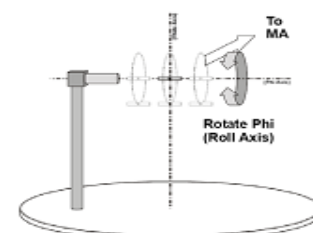
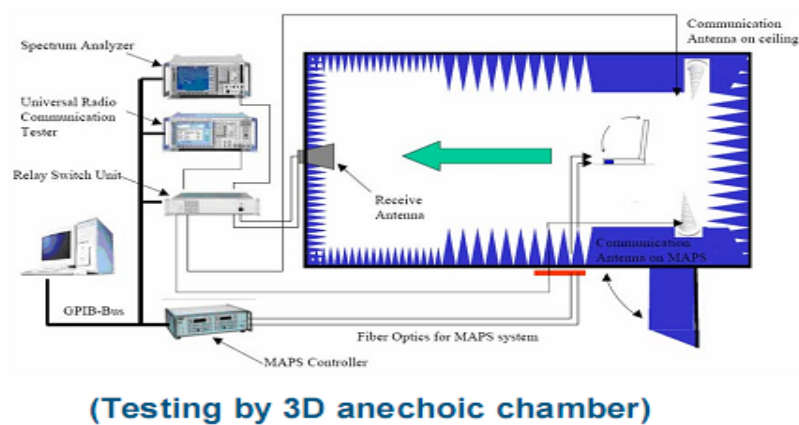
### 1. Network Analyzers :

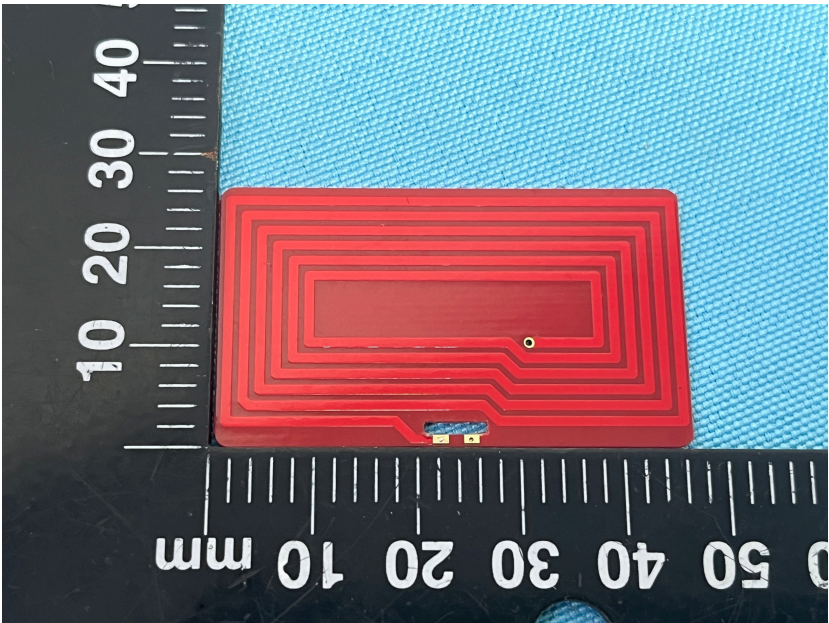
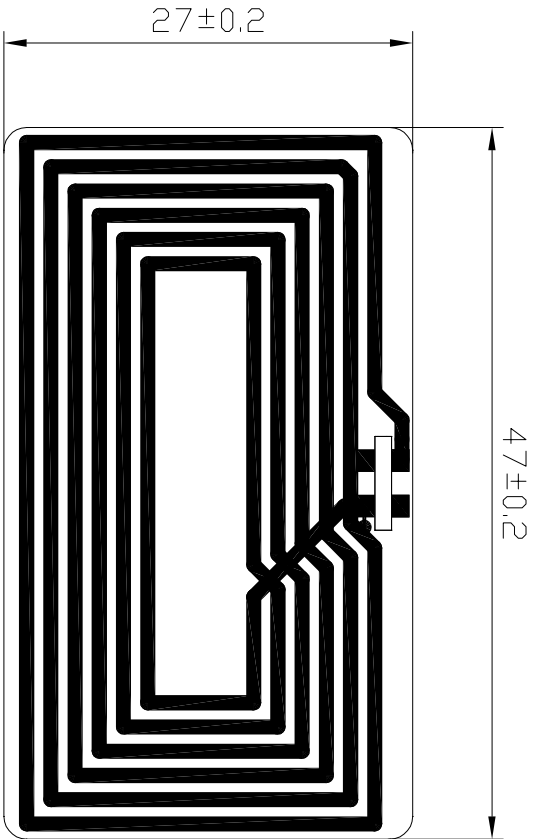
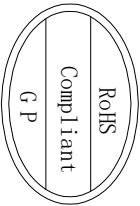
Agilent 8753D 5071B

#### Communications Test Set:

Agilent E5515C CMW500

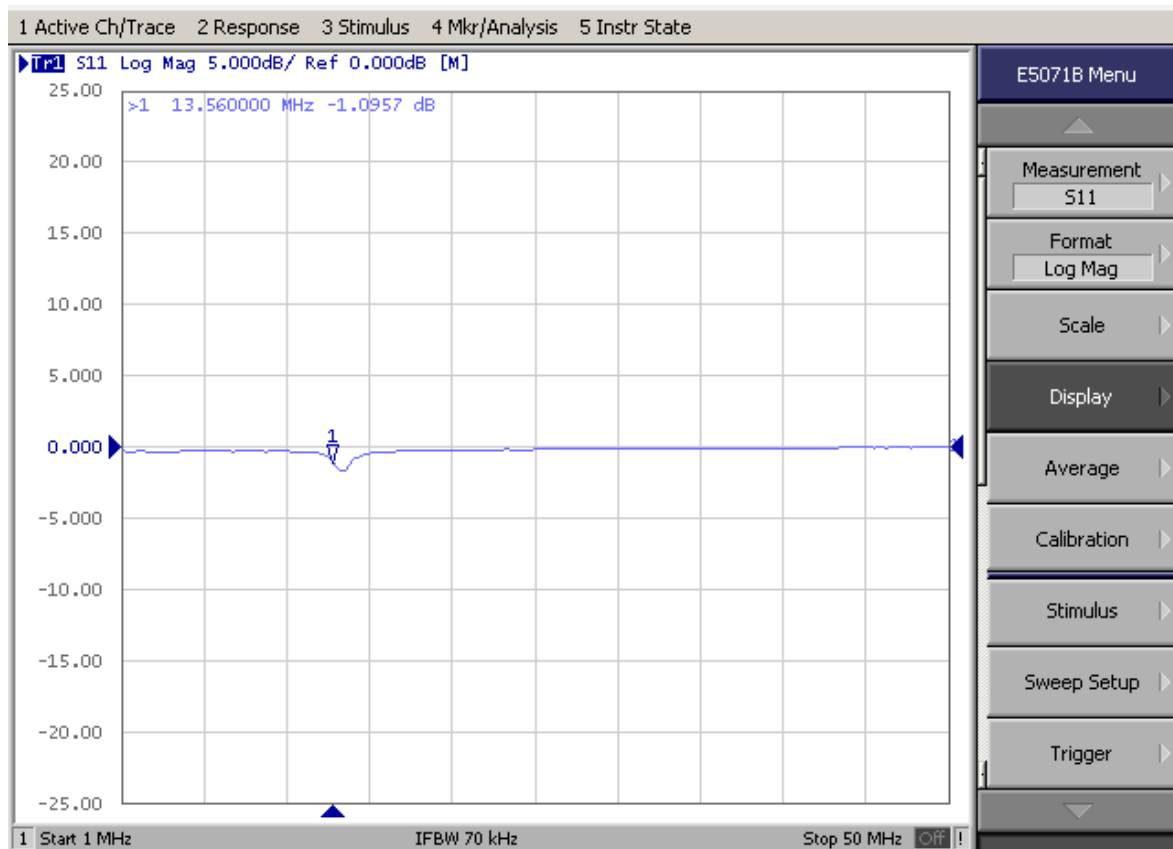
### 2. 3D Chamber Test System



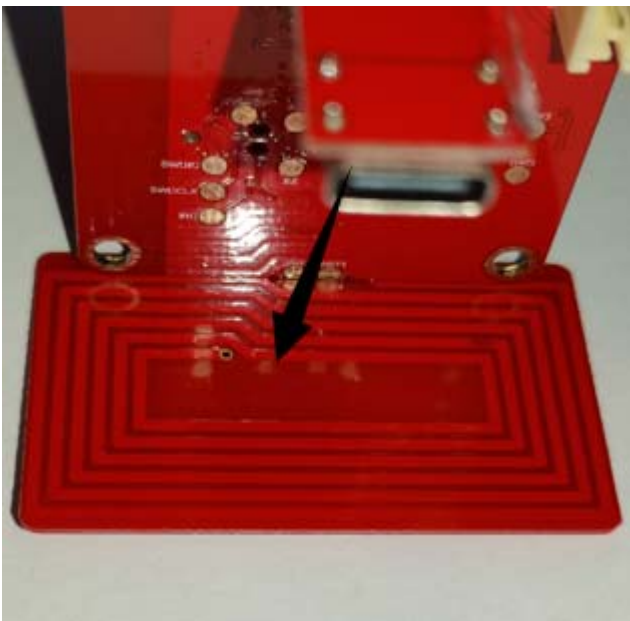


|                    |   |   |   |                              |   |   |   |
|--------------------|---|---|---|------------------------------|---|---|---|
| 1                  | 2 | 3 | 4 | 5                            | 6 | 7 | 8 |
| A                  |   |   |   | A                            |   |   |   |
| B                  |   |   |   | B                            |   |   |   |
| C                  |   |   |   | C                            |   |   |   |
| D                  |   |   |   | D                            |   |   |   |
| RoHS Compliant G-P |   |   |   | SHEN ZHEN SKYLINK CO., LTD   |   |   |   |
| Rev                |   |   |   | Project                      |   |   |   |
| A                  |   |   |   | Part Name                    |   |   |   |
| New drawing        |   |   |   | Part No. CB 2.0 Antenna V2.2 |   |   |   |
| Description        |   |   |   | Material                     |   |   |   |
| Date               |   |   |   | DWG No.                      |   |   |   |
| Remark             |   |   |   | Approved by                  |   |   |   |
| Location           |   |   |   | Unit mm                      |   |   |   |
| 1                  |   |   |   | Scale 1:1 Rev A              |   |   |   |
| 2                  |   |   |   |                              |   |   |   |
| 3                  |   |   |   |                              |   |   |   |
| 4                  |   |   |   |                              |   |   |   |
| 5                  |   |   |   |                              |   |   |   |
| 6                  |   |   |   |                              |   |   |   |
| 7                  |   |   |   |                              |   |   |   |
| 8                  |   |   |   |                              |   |   |   |

## ◆ Return Loss



## ◆ 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   |