# The Main Antenna Sample Confirmation

| | | | | |
|---|---|---|---|---|
| Customer | | | | |
| Project Name | CB160 | | Date | 2023-04-21 |
| Project NO. | SN1045 | Notes | Metal | |
| Frequency Range | WIFI | | | |
| Designed By | RF Engineer | | Structural Engineer | |
| | | | | |
| Checked By | Engineering Manager | | | |
| | | | | |
| Client’ s Approval | | | | |

**Designer：SINAWELL Electronics(Shenzhen) Co., Ltd.**

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## Table of Contents

# 1. Specification description

This specification describes the status of the CB160 internal antenna with a frequency band of WIFI.

# 2. Antenna appearance

# 3. Electrical performance

## 3.1. Antenna band

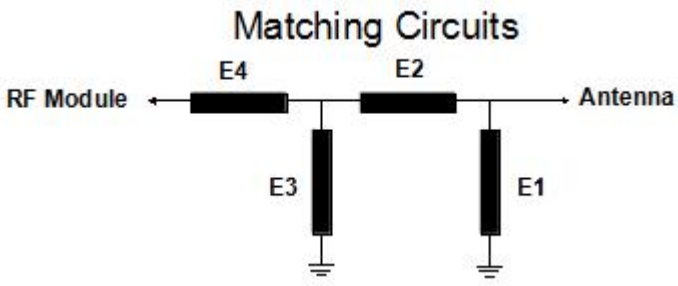
| | BT |
|---|---|
| Transmitting band(MHz) | 2400MHz-2500MHz |

## 3.2. Matching Circuit

After the test point is at the antenna connector (RF test port), see the figure below.

1. BT antenna matching。

| Element | Value |
|---|---|
| E1(0201) | NC |
| E2(0201) | 0 欧姆 |
| E3(0201) | NC |
| E4 | 0 欧姆 |



# 4. Appearance structure

## 4.1. Antenna Material

Metal

# 5. Notes

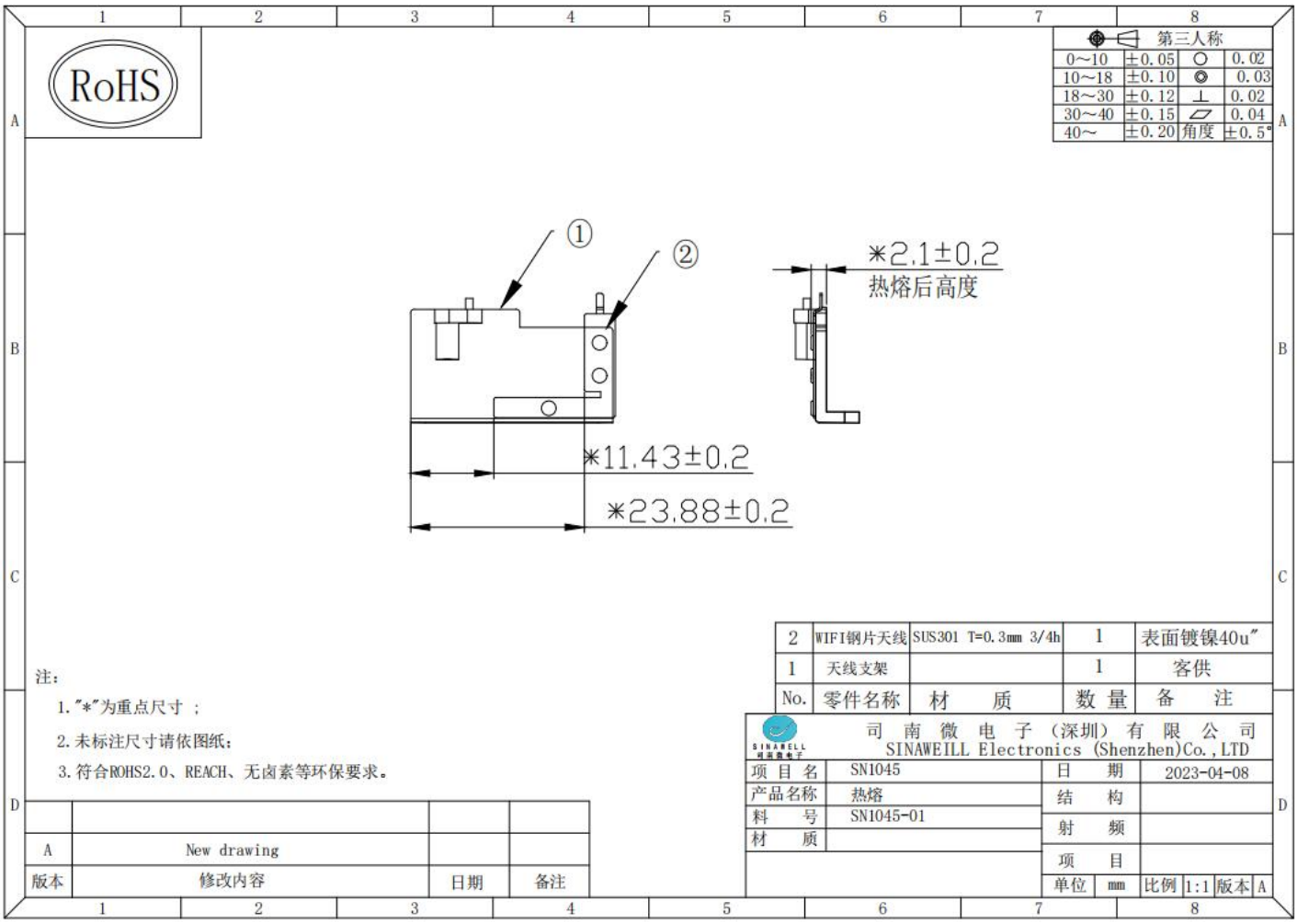
(Electrical Performance Test Report)
In the electrical performance test report, the 3D darkroom data for manufacturers are provided.

The following table format

# Appendix 1:（Mechanical drawing）

# Appendix II (Performance report)

# FPC Mechanical drawing(Annex I)



# 3D Test Report (Annex II)

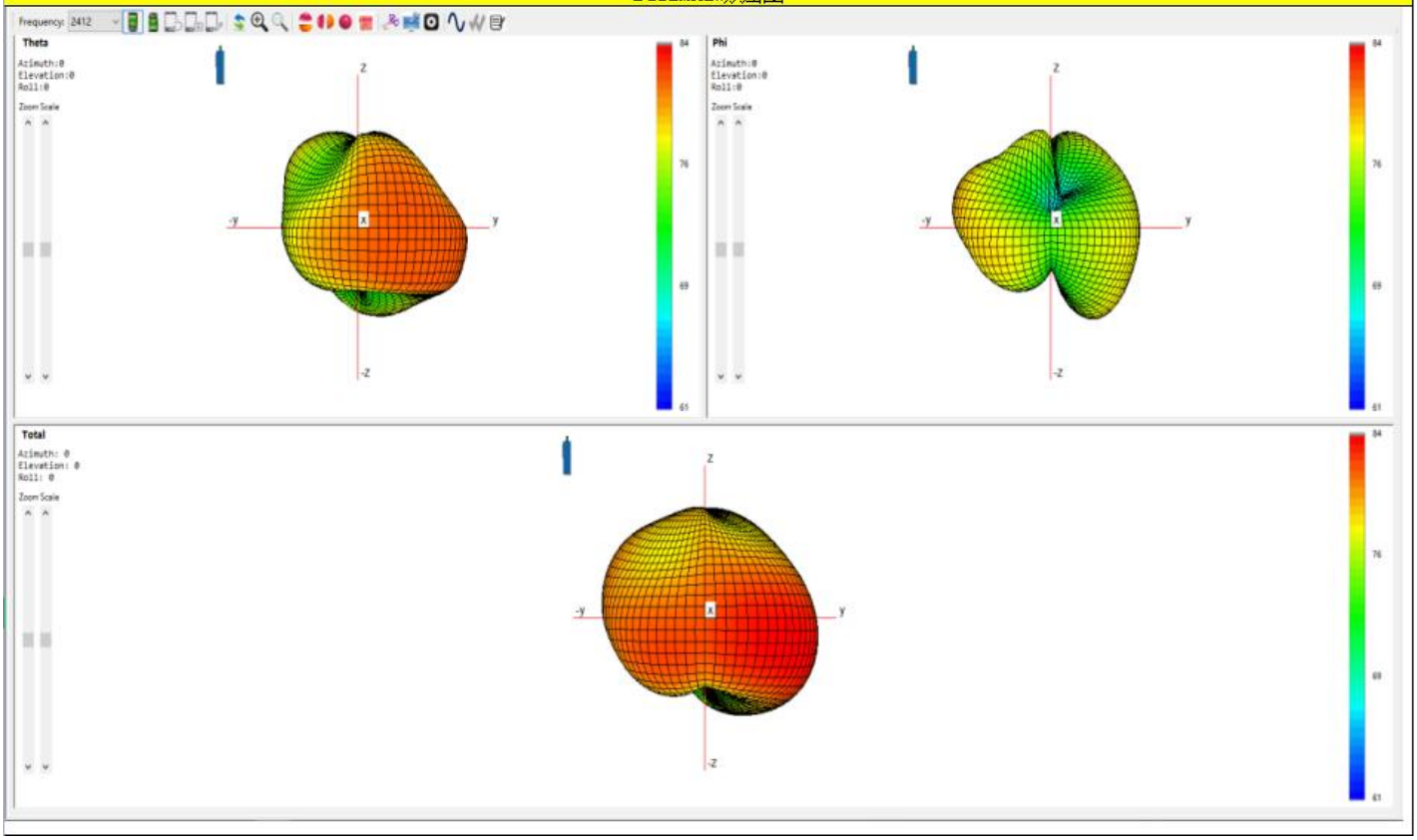
Efficiency test data

| Passive Test For wifi | | | |
|---|---|---|---|
| Freq (MHz) | Effi (%) | Effi (dB) | Gain (dBi) |
| 2400 | 48.97 | -3.1 | 0.09 |
| 2410 | 49.56 | -3.05 | 0.16 |
| 2420 | 46.71 | -3.31 | -0.1 |
| 2430 | 45.65 | -3.41 | 0 |
| 2440 | 44.8 | -3.49 | -0.01 |
| 2450 | 44.91 | -3.48 | 0.35 |
| 2460 | 43.83 | -3.58 | 0.5 |
| 2470 | 43.62 | -3.6 | 0.73 |
| 2480 | 43.83 | -3.58 | 0.88 |
| 2490 | 44.21 | -3.54 | 0.92 |
| 2500 | 44.56 | -3.51 | 0.9 |

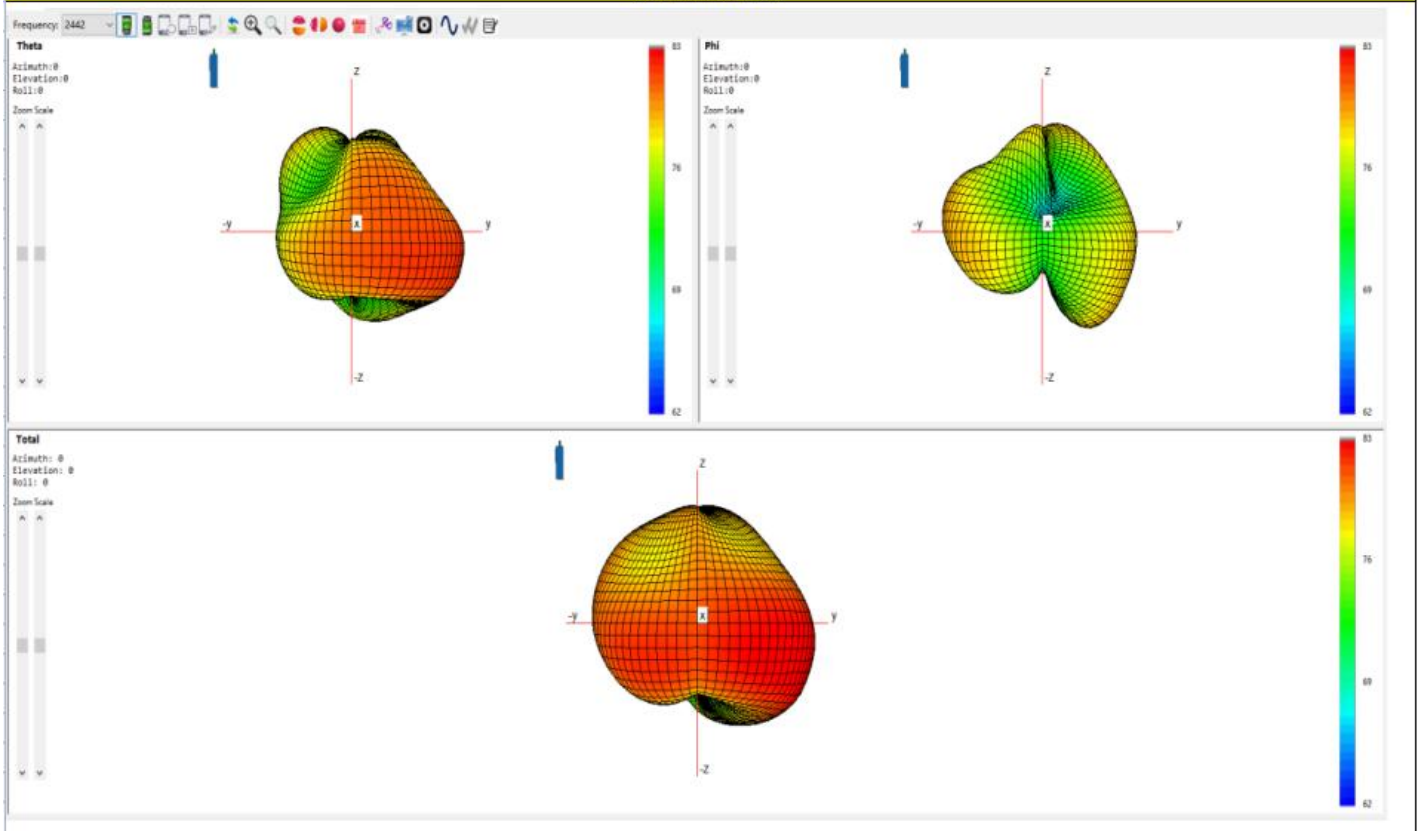
Active testing

| Band | | CH | TRP | TIS |
|---|---|---|---|---|
| WIFI | 11B | 1 | 15.03 | -80.95 |
| | | 7 | 14.15 | -80.66 |
| | | 13 | 15.52 | -80.09 |
| | 11G | 1 | 13.74 | -59.88 |
| | | 7 | 12.12 | -60.02 |
| | | 13 | 12.6 | -57.54 |
| | 11N | 1 | 12.19 | -60.21 |
| | | 6 | 10.89 | -60.37 |
| | | 11 | 11.56 | -60.5 |

2412MHz场强图




2442MHz场强图



# Size Report

| | Customer | | Project Name | CB160 | | Measurement Date | 2023-4-20 | |
|---|---|---|---|---|---|---|---|---|
| | Supplier | sinawell | Measurement Tool | Quadratic | | Unit | mm | |
| NO | dimension | Toleranca | Measure 1 | Measure 2 | Measure 3 | Measure 4 | Measure 5 | determine |
| 1 | 14.43 | ±0.2 | 14.34 | 14.37 | 14.36 | 14.34 | 14.35 | OK |
| 2 | 23.88 | ±0.2 | 23.81 | 23.84 | 23.83 | 23.83 | 23.82 | OK |
| 3 | 2.1 | ±0.2 | 2.15 | 2.13 | 2.16 | 2.12 | 2.14 | OK |
| 4 | | | | | | | | |
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DRAWN BY： Shimei Yang APPROVED BY：De Chen

# Salt fog Report

| | | | | | |
|---|---|---|---|---|---|
| Customer Name | | Corax | CB160 | Tester | De Chen |
| Test Quantity | 5PCS | Test Item | Salt fog | Test Date | 2023-4-20 |
| Test conditions | 1.Temperature：35℃ | | |  | |
| | 2.Humidity：98%，PH：6.5-7.2 | | | | |
| | 3.Temperature in the box：37℃ | | | | |
| | 4.Test duration：24hours | | | | |
| | 5.Drug concentration：5%NaCl | | | | |
| Testing procedure | 1.Put the product in the salt mist box. | | | | |
| | 2.Place the product at the right angle. | | | | |
| | 3.set the relevant parameters and start the spray. | | | | |
| | 4.Complete the removal of the experimental product. Before inspection, wash the product with clean water and place it at room temperature for two hours. | | | | |
| TEST | Projects | Before testing | After testing | test result | remarks |
| | Coating | / | / | / | |
| | Conductivity | Well | Well | qualified | |
| | Resistance | Well | Well | qualified | |
| | Cohesion | Well | Well | qualified | |

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