

## The Main Antenna Sample Confirmation

|                    |                     |                     |                |
|--------------------|---------------------|---------------------|----------------|
| Customer           |                     |                     |                |
| Project Name       | CB160               |                     | Date2023-04-21 |
| Project NO.        | SN1045              | Notes               | Metal          |
| Frequency Range    | WIFI                |                     |                |
| Designed By        | RF Engineer         | Structural Engineer |                |
|                    |                     |                     |                |
| Checked By         | Engineering Manager |                     |                |
|                    |                     |                     |                |
| Client' s Approval |                     |                     |                |

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## 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

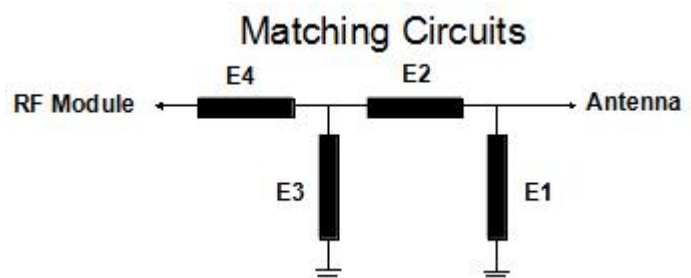
|                        | BT              |
|------------------------|-----------------|
| Transmitting band(MHz) | 2400MHz-2500MHz |

### 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)

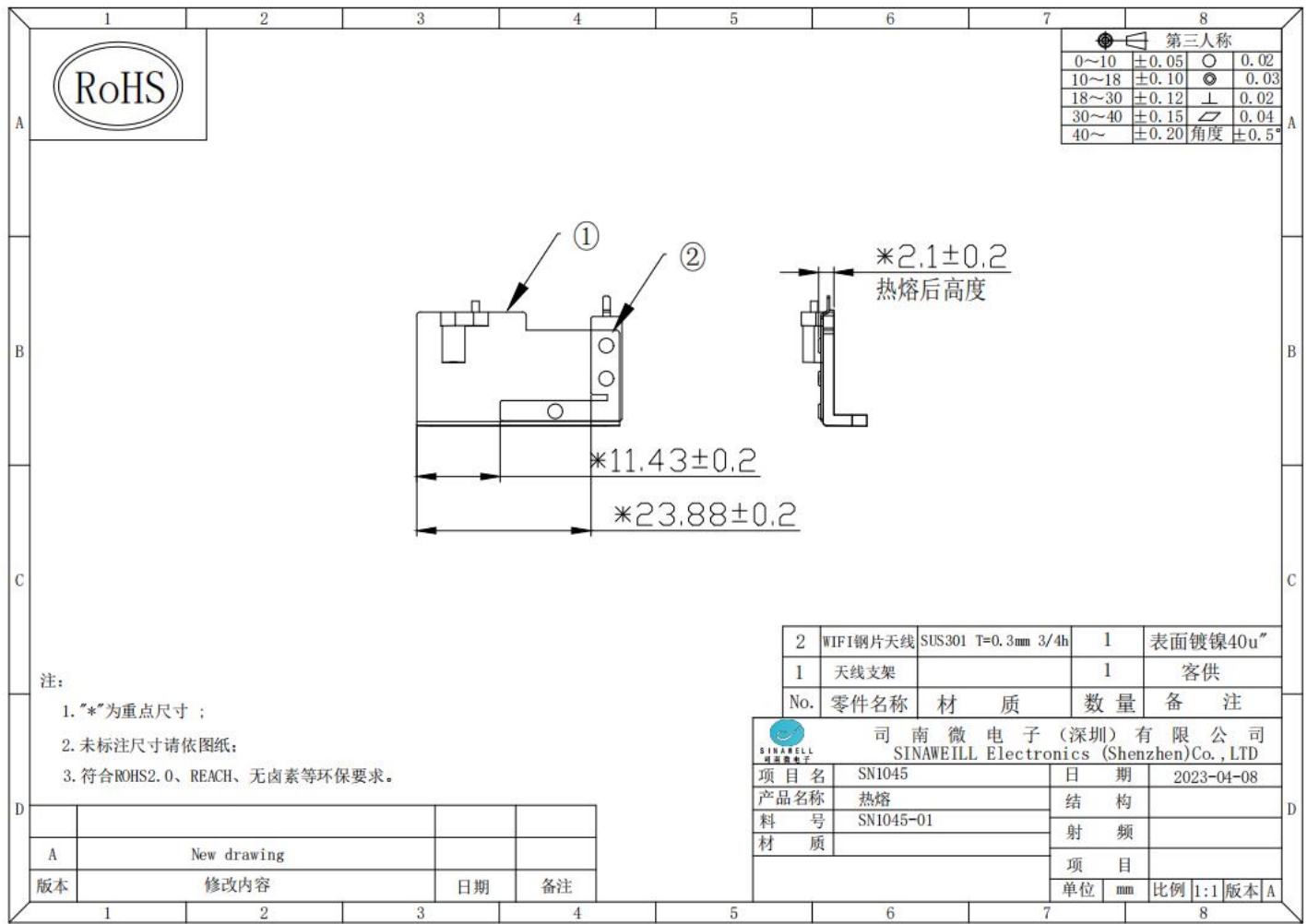
In the electrical performance test report, the 3D darkroom data for manufacturers are provided.

The following table format

## Appendix 1: (Mechanical drawing)

## Appendix II (Performance report)

**FPC Mechanical drawing(Annex I)**



## 3D Test Report (Annex II)

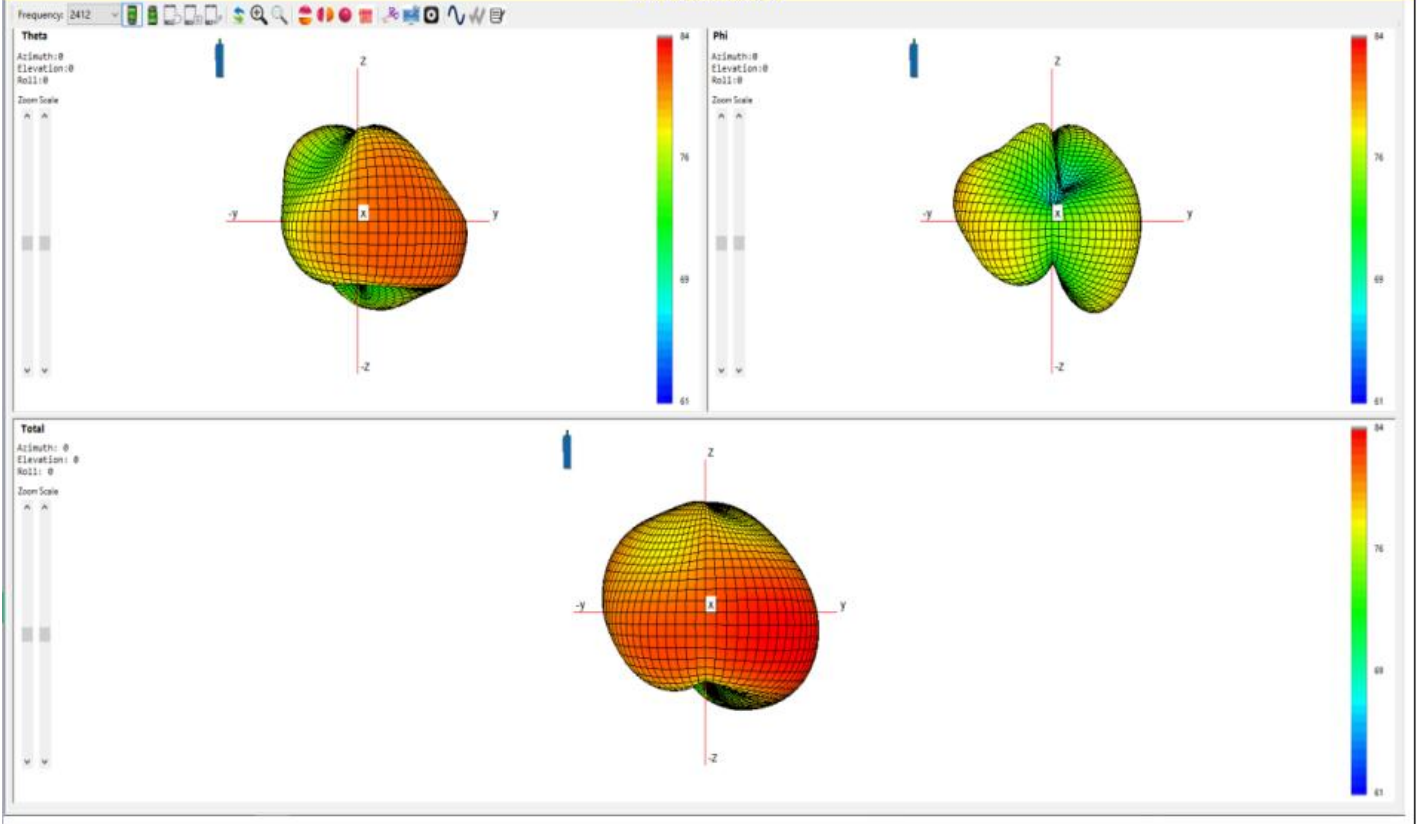
### Efficiency test data

| Passive Test For wifi |       |       |       |
|-----------------------|-------|-------|-------|
| Freq                  | Effi  | Effi  | Gain  |
| (MHz)                 | (%)   | (dB)  | (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   |

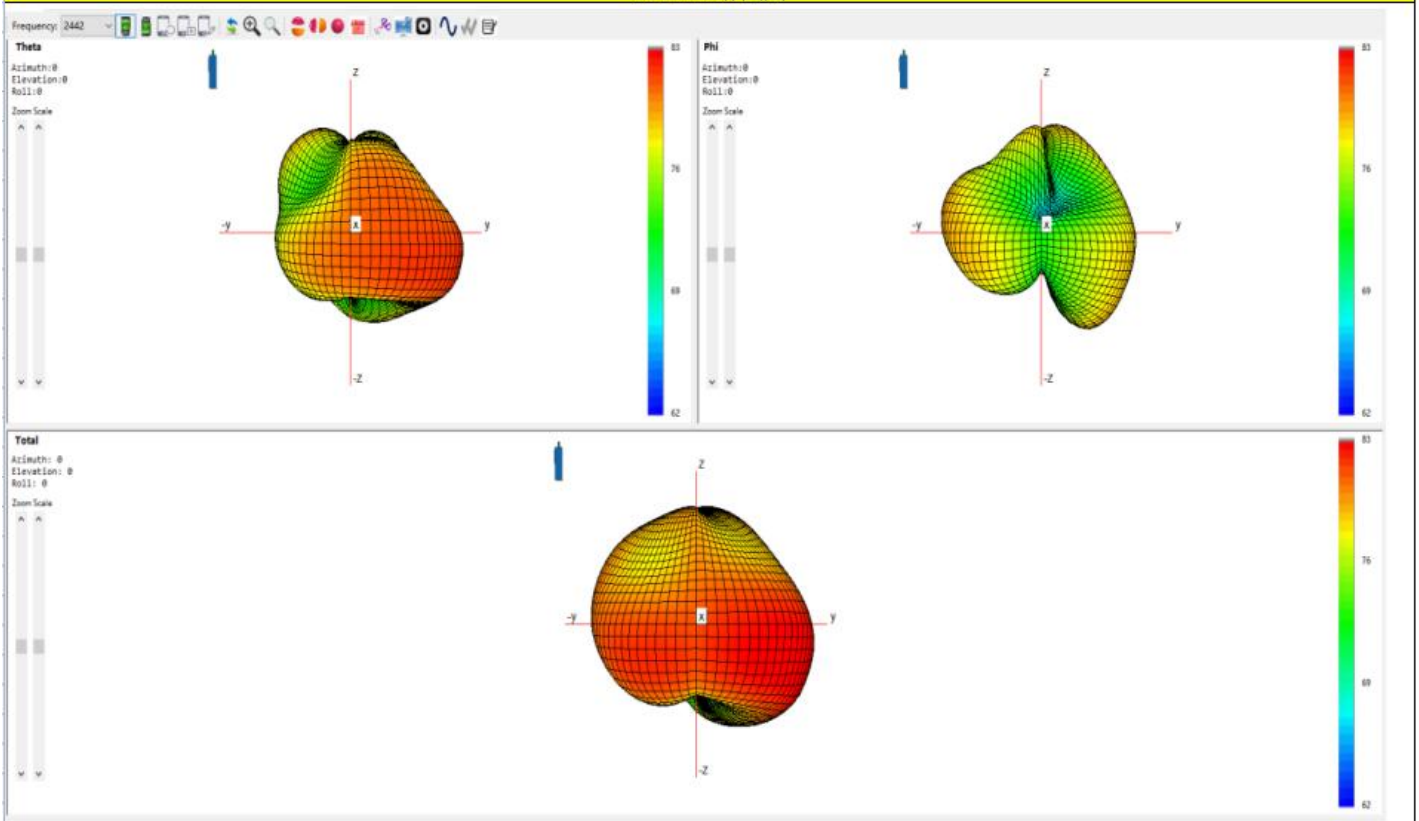
### Active testing

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

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 | Tolerance | Measure 1        | Measure 2 | Measure 3 | Measure 4        | Measure 5 | determine |
| 1  | 14.43     | $\pm 0.2$ | 14.34            | 14.37     | 14.36     | 14.34            | 14.35     | OK        |
| 2  | 23.88     | $\pm 0.2$ | 23.81            | 23.84     | 23.83     | 23.83            | 23.82     | OK        |
| 3  | 2.1       | $\pm 0.2$ | 2.15             | 2.13      | 2.16      | 2.12             | 2.14      | OK        |
| 4  |           |           |                  |           |           |                  |           |           |
| 5  |           |           |                  |           |           |                  |           |           |
| 6  |           |           |                  |           |           |                  |           |           |
| 7  |           |           |                  |           |           |                  |           |           |
| 8  |           |           |                  |           |           |                  |           |           |
| 9  |           |           |                  |           |           |                  |           |           |
| 10 |           |           |                  |           |           |                  |           |           |
| 11 |           |           |                  |           |           |                  |           |           |
| 12 |           |           |                  |           |           |                  |           |           |
| 13 |           |           |                  |           |           |                  |           |           |
| 14 |           |           |                  |           |           |                  |           |           |
| 15 |           |           |                  |           |           |                  |           |           |
| 16 |           |           |                  |           |           |                  |           |           |
| 17 |           |           |                  |           |           |                  |           |           |
| 18 |           |           |                  |           |           |                  |           |           |
| 19 |           |           |                  |           |           |                  |           |           |
| 20 |           |           |                  |           |           |                  |           |           |
| 21 |           |           |                  |           |           |                  |           |           |
| 22 |           |           |                  |           |           |                  |           |           |

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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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